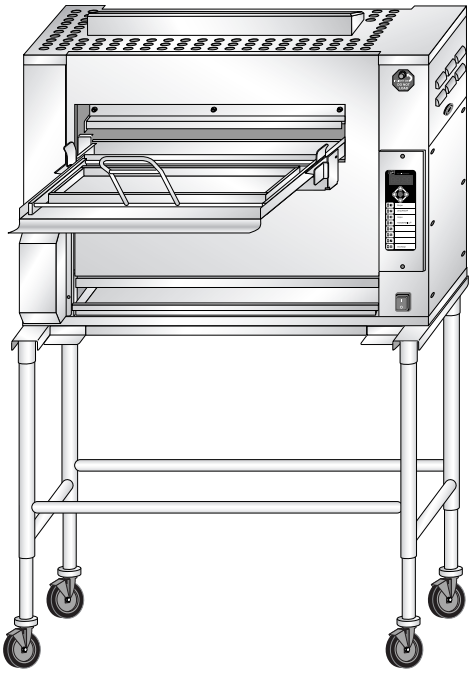
INSTRUCTIONS

Your Solutions Partner

FLEXIBLE BATCH BROILER - CONVERTING FROM G25 GAS TO G25.1 GAS INSTRUCTIONS



Items required for this installation:

- Cross Tip Screwdriver

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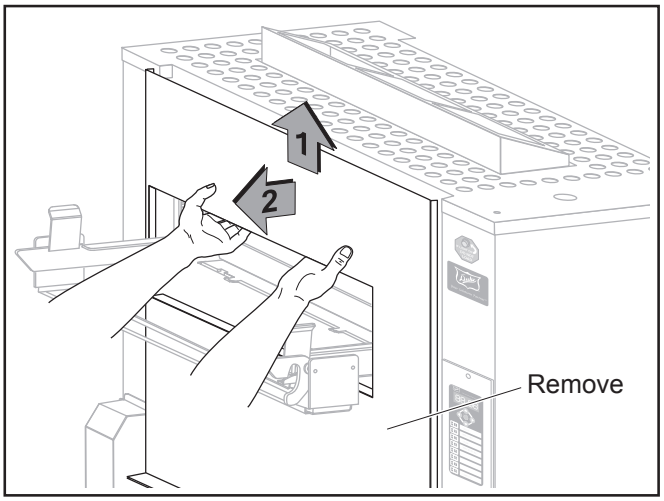
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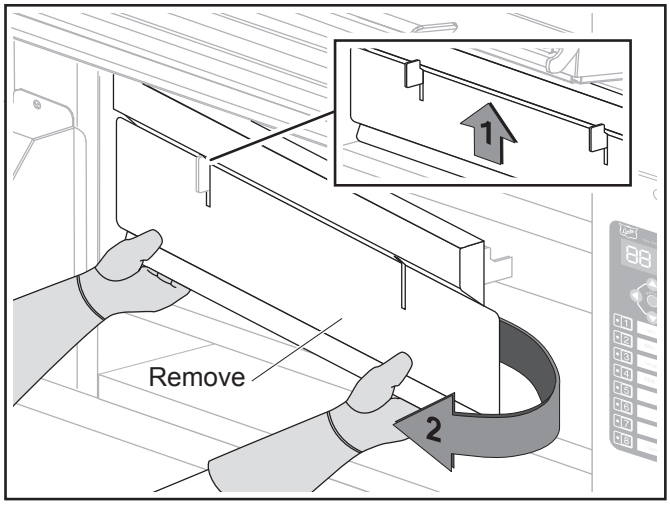
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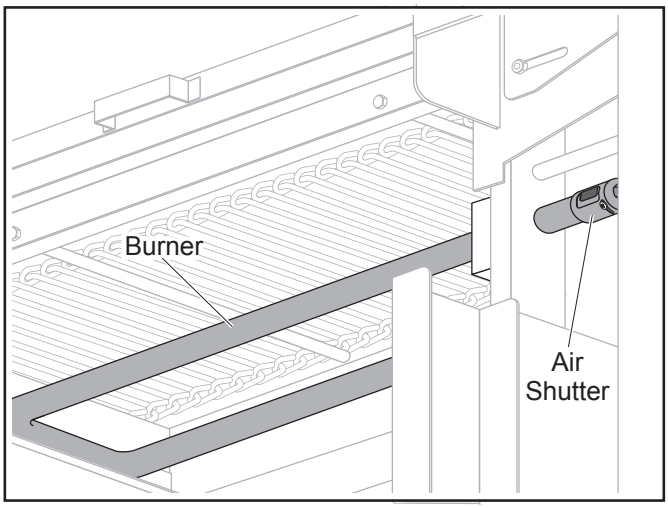
1. Unplug broiler. Remove **Exterior Front Panel**.



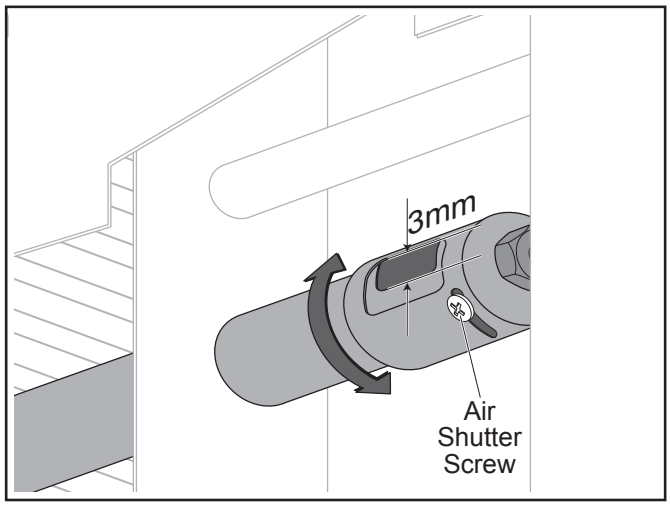
2. Remove **Cook Chamber Front Panel**.



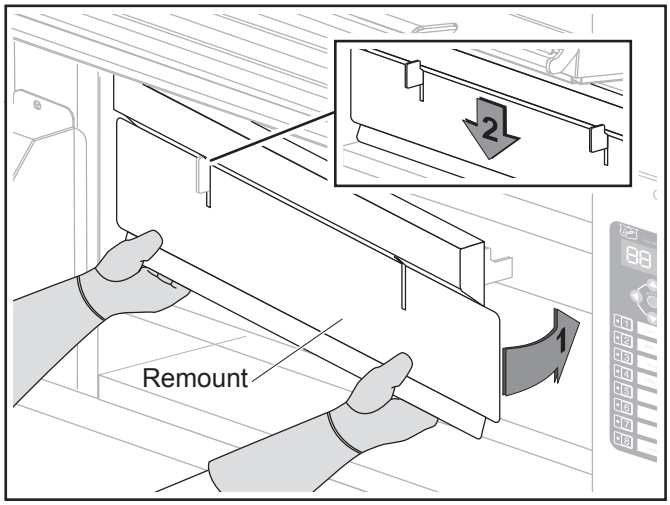
3. Locate the air shutter on the **Bottom Burner Assembly**.



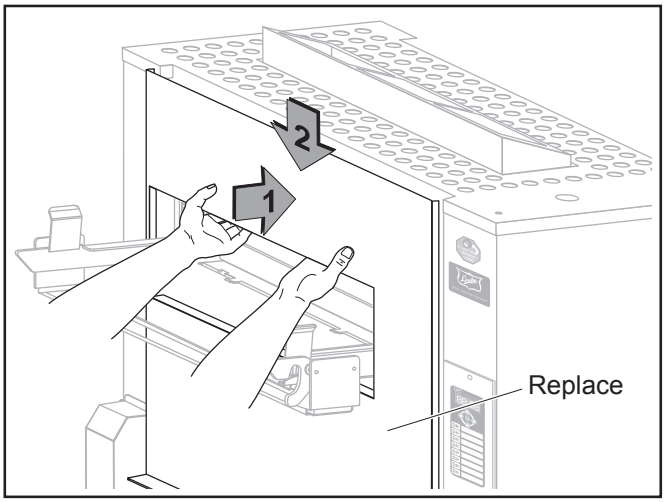
4. Measure the air opening on the Burner Air Shutter. If opening measures larger than 3mm, loosen the **Air Shutter Locking Screw**, and adjust opening to 3mm for optimum performance for G25.1 Gas. Retighten screw.



5. Remount **Cook Chamber Front Panel** back into position.



6. Remount **Exterior Front Panel** back into position.



7. Plug in Broiler. Turn power on and observe broiler performance. Reference Operators Manual for all other adjustments.

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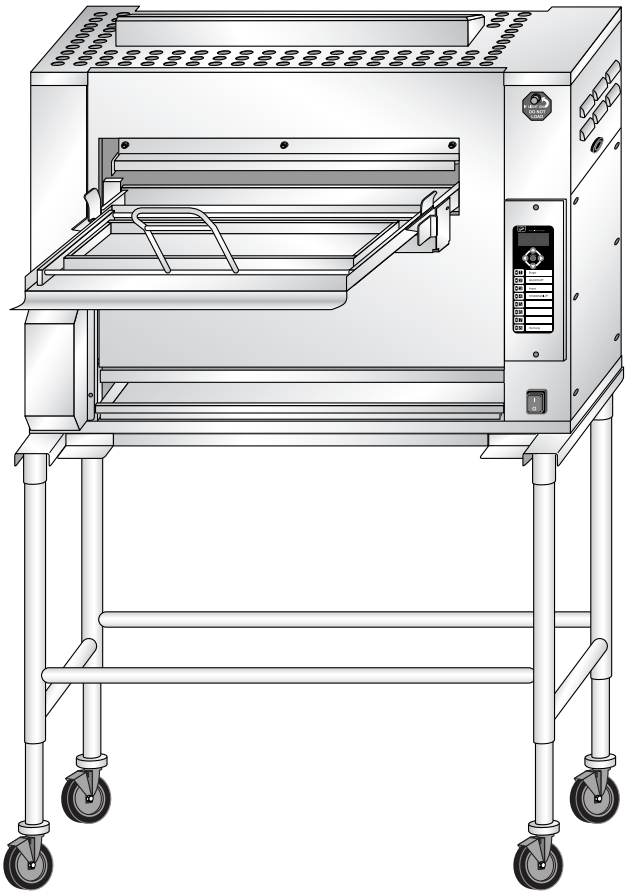
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UTASÍTÁSOK

RUGALMAS SÜTETADAGÚ GRILLSÜTŐ – UTASÍTÁSOK G25-ÖS GÁZRÓL G25.1-ES GÁZRA VALÓ ÁTÁLLÁSHOZ



A beszereléshez szükséges eszközök:

- Keresztvégű csavarhúzó

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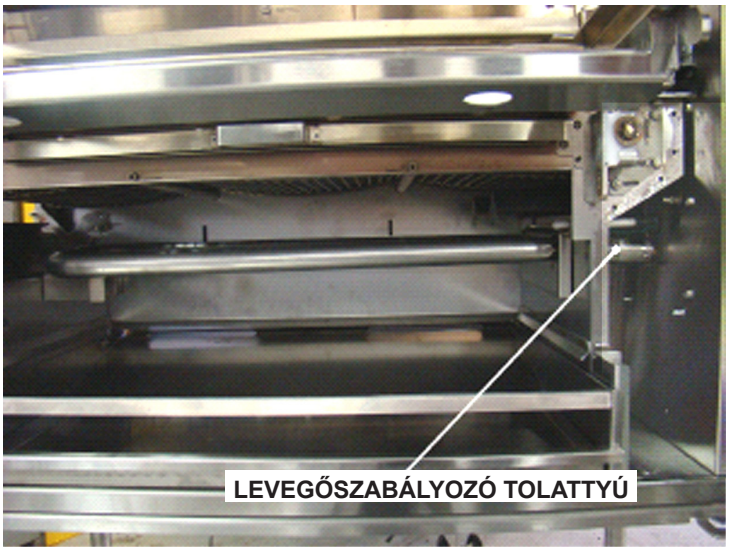
1. Csatlakoztassa le a grillsütőt a hálózatról. Távolítsa el a **külső elülső panelt.**

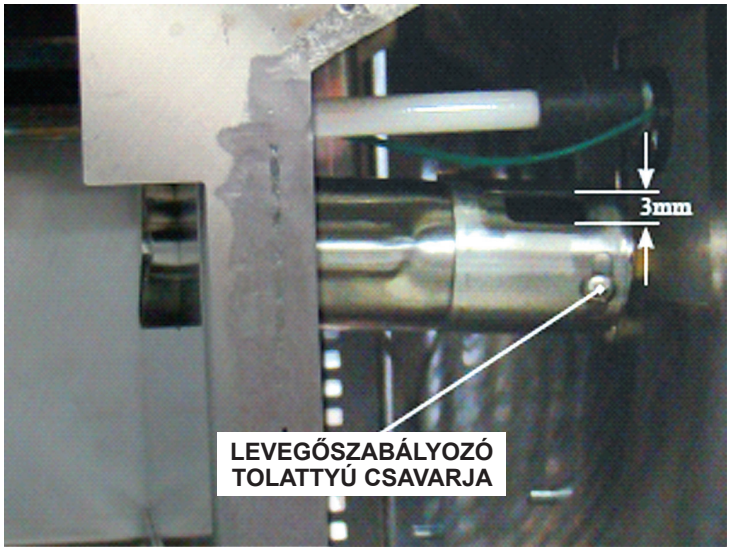


2. Távolítsa el a **sütőkamra elülső paneljét.**



3. Keresse meg a levegőszabályozó tolattyút az alsó **égőfej egységben**.





4. Mérje meg a levegőnyílást az égőfej levegőszabályozó tolattyúján. Ha a nyílás 3 mm-nél nagyobb, lazítsa meg a **levegőszabályozó tolattyú rögzítőcsavarját**, majd állítsa a nyílást 3 mm-esre, a G25.1-es gázzal való optimális teljesítmény biztosítására. Szorítsa újra meg a csavart.



5. Tegye vissza a helyére a **sütőkamra elülső paneljét**.



6. Tegye vissza a helyére a **külső elülső panelt**.

7. Csatlakoztassa a grillsütőt a hálózatra. Kapcsolja be a teljesítménykapcsolót, és figyelje meg a grillsütő teljesítményét. Minden egyéb beállítás utasításait a Kezelői kézikönyvben találja.

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Flexible Batch Broiler Discharge Chute Bracket Instructions For Duke Kit 600330

Install one bracket on the broiler discharge area as outlined below:

1. **Using broiler mitt, remove Discharge Hood and Discharge Chute from broiler.**
2. **Place Discharge Chute Bracket on broiler Side Panel as shown below.**





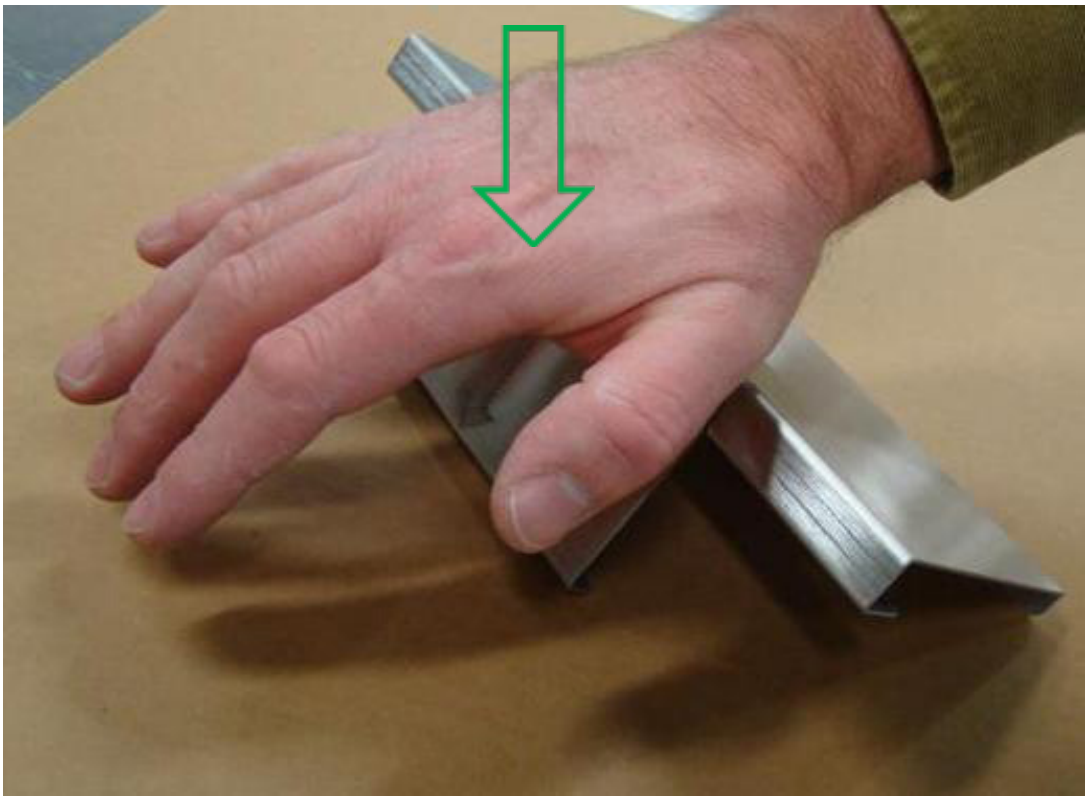
3. **Replace the Discharge Chute. When placed properly, the Discharge Chute will rest against the newly installed Bracket.**



4. **Check fit. If the Discharge Chute Bracket is not in contact with the Discharge Chute. Remove the Bracket and adjust until it is in contact with the Chute when installed (as shown).**







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Mini Performance Maintenance Checklist
FBB (Flexible Batch Broiler)

Restaurant Number:		Model:	
Address:		Serial Number:	
		PM Date:	
City:		Service Company:	
State:		Technician Name:	
Zip:		Service Co. Phone:	

COMPLETED

COMPONENT CHECK

☐	1	Remove and inspect Air Adjustment Cover. Clean Cones, Bolts, and IR Burner inlets				
☐	2	Replace IR Burner Orifices / Holder	FRONT IR Burner Orifice Size:		REAR IR Burner Orifice Size:	
		a) Refer to instructions for orifice sizes				
☐	3	Replace Lower Burner Orifice a) Refer to instructions for orifice sizes	LOWER Orifice Size:			

OPERATIONAL CHECK

☐	1	Run Broiler through Pre-Heat cycle			
☐	2	Confirm proper inlet gas supply pressure a) Refer to Instructions	Measurement after any adjustments:		W.C. mbar
☐	3	Confirm proper gas pressure to Lower Burner a) Refer to Instructions	Measurement after any adjustments:		W.C. mbar
☐	4	Confirm proper gas pressure to Upper IR Burners a) Refer to Instructions	Measurement after any adjustments:		W.C. mbar
☐	5	Inspect IR Burner appearance (Perform proper air adjustment)			
☐	6	Ensure Proper Flame Sense Current (Lower Module) a) Greater than 0.7 µA DC (S1) b) Optimal range when hot is 1.5 µA - 6 µA DC	LOWER Flame Sense Measurement:		µA
☐	7	Ensure Proper Flame Sense Current (Upper Module) a) Greater than 0.7 µA DC (S1 & S2) b) Optimal range when hot is 1.5 µA - 6 µA DC	FRONT Flame Sense		µA
			REAR Flame Sense Measurement:		µA
☐	8	Check all joints, unions, and compression fittings for gas leakage			
☐	9	Check Gas Hose and Quick Disconnect for gas leakage / damage			

Comments:

Technician's Signature: **Manager's Signature**

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Instructions

MINI PERFORMANCE MAINTENANCE INSTRUCTIONS FBB (FLEXIBLE BATCH BROILER)

ENGLISH
GERMAN
FRENCH
SPANISH

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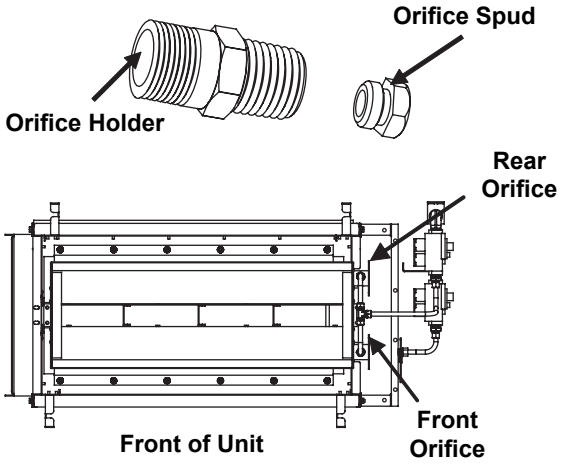
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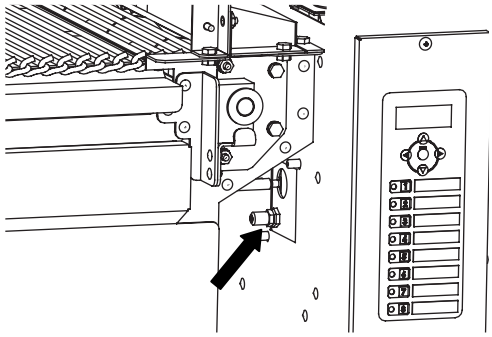
Before performing the steps below, ensure Broiler is turned off and completely disconnected from power. Turn off gas supply to Broiler.

COMPONENT CHECK

1. Remove Air Box Cover and clean inside of cover and Air Adjustment Cones with scrub pad and Duke recommended cleaner. Cleaner type and local distributor information may be obtained by accessing the following web site (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
2. Remove and replace both IR burner orifices and holders. Torque specifications for orifice to holder is 20in lbs (2.3 N.m.). Ensure correct front and back location when re-installing. See chart below.



3. Remove and replace lower burner orifice. Torque orifice to 60in lbs (6.7 N.m.). See chart below.



Natural Gas
175814 ORIFICE, IR FRONT, 2.35mm, G I2H/I2E(G20) & I2L(G25)
175735 ORIFICE, IR FRONT, 2.49mm, #40, BURNER--SO SPECS
175815 ORIFICE, IR REAR, 2.50mm, G I2H/I2E(G20) & I2L(G25)
175736 ORIFICE, IR REAR, 2.70mm, #36, BURNER BLUE--SO SPECS
175823 ORIFICE, LOWER , 3.05mm, #31 , I2H/I2E(G20) & I2L(G25)
175935 ORIFICE, LOWER, 3.26mm, I2H/I2E(G20), I2L(G25) HA
176387 ORIFICE, LOWER, 3.45mm, #29, I2H/I2E(G20) & I2L(G25)

Propane Gas
175818 ORIFICE, IR FRONT, 1.40mm, #54, I3B/P(G30)
175816 ORIFICE, IR FRONT, 1.55mm, I3P(G31)
175817 ORIFICE, IR REAR ,1.61mm, #52, I3P(G31)
175819 ORIFICE, IR REAR, 1.51mm, #53, I3B/P(G30)
175768 ORIFICE, LOWER BURNER , 1.70mm, #51, 13B/P(G30)
175737 ORIFICE, LOWER BURNER, 1.85mm, #49, 13P(G31)
176388 ORIFICE, LOWER BURNER, 2.00mm, I3P(G31)
176522 ORIFICE, LOWER BURNER, 1.75mm

OPERATIONAL CHECK

All the steps in this section can be performed during the Pre-Heat cycle. The broiler and gas supply should be turned off briefly when connecting meters to measure gas pressure.

1. Run Broiler through Pre-Heat cycle.
2. Confirm proper inlet gas supply pressure (Refer to Service Manual if outside of the USA, Canada, or Mexico):
   a. Natural Gas 7” – 12” W.C.
   b. Propane 10” – 12” W.C.
3. Confirm proper gas pressure to Lower Burner:
   a. Natural Gas 3.75” W.C.
   b. Propane 8” W.C.
4. Confirm proper gas pressure to Upper IR Burners
   a. Natural Gas 3.75” W.C.
   b. Propane 8” W.C.
5. Inspect IR Burner appearance. When sufficiently hot, IR Burners should appear as in Fig. 1 below. An IR Burner out of adjustment may have blue or orange rolling flames coming off of the tile surface or hints of blue around the burner perimeter. IR Burners may even be completely out of air adjustment due to cleaning of air box and blower motor in previous section, which may cause IR Burner to not light. If it is determined that an adjustment is necessary, make the following adjustment.
   - Locate the air adjustment screws in the upper portion of the control compartment.
   - Loosen the lock nuts for both IR Burners.
   - Turn both screws in (clockwise, decreasing air) ¼ turn at a time until a uniform blue flame or haze is observed below each of the infrared burner surfaces.
   - Back the screws out (counter-clockwise, increasing air) ¼ turn *at a time* until the blue flame or haze just disappears.
   - Back the screws out an additional ¼ turn.
   - Tighten the lock nuts while ensuring the screws stay in position.

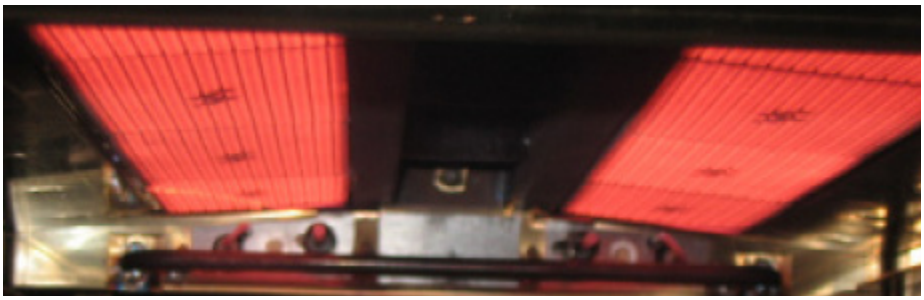


FIG. 1

6. Ensure proper Flame Sense Current (Lower Module)
   a. Greater than 0.7µA DC
      i. S1 = FC (Measured at FC Terminals)
      ii. (Optimal range when hot is 1.5µA - 6µA)

7. Ensure proper Flame Sense Current (Upper Module)
    a. Greater than 0.7µA DC
        i. S1 = FC1, S2 = FC2 (Measured at FC1 and FC2 Terminals)
        ii. (Optimal range when hot is 1.5µA - 6µA)

8. Check all joints, unions, and compression fittings (internal and external) for gas leakage.
9. Check Gas Hose and Quick Disconnect for gas leakage / damage.

Provide Checklist to Manager and explain areas which may require immediate or future attention.

MINI PERFORMANCE MAINTENANCE CHECKLIST
FBB (FLEXIBLE BATCH BROILER)

Restaurant Number:	Model:
Address:	Serial Number:
	PM Date:
City:	Service Company:
State:	Technician Name:
Zip:	Service Co. Phone:

COMPLETED

COMPONENT CHECK

☐	1	Remove and inspect Air Adjustment Cover. Clean Cones, Bolts, and IR Burner inlets				
☐	2	Replace IR Burner Orifices / Holder	FRONT IR Burner Orifice Size:		REAR IR Burner Orifice Size:	
		a) Refer to instructions for orifice sizes				
☐	3	Replace Lower Burner Orifice	LOWER Orifice Size:			
		a) Refer to instructions for orifice sizes				

OPERATIONAL CHECK

☐	1	Run Broiler through Pre-Heat cycle			
☐	2	Confirm proper inlet gas supply pressure	Measurement after any adjustments:		
		a) Refer to Instructions			
☐	3	Confirm proper gas pressure to Lower Burner	Measurement after any adjustments:		"W.C. mbar"
		a) Refer to Instructions			
☐	4	Confirm proper gas pressure to Upper IR Burners	Measurement after any adjustments:		"W.C. mbar"
		a) Refer to Instructions			
☐	5	Inspect IR Burner appearance (Perform proper air adjustment)			
☐	6	Ensure Proper Flame Sense Current (Lower Module)	LOWER Flame Sense Measurement:		µA
		a) Greater than 0.7 µA DC (S1)			
		b) Optimal range when hot is 1.5 µA - 6 µA DC			
☐	7	Ensure Proper Flame Sense Current (Upper Module)	FRONT Flame Sense Measurement:		µA
		a) Greater than 0.7 µA DC (S1 & S2)	REAR Flame Sense Measurement:		µA
		b) Optimal range when hot is 1.5 µA - 6 µA DC			
☐	8	Check all joints, unions, and compression fittings for gas leakage			
☐	9	Check Gas Hose and Quick Disconnect for gas leakage / damage			

Comments:

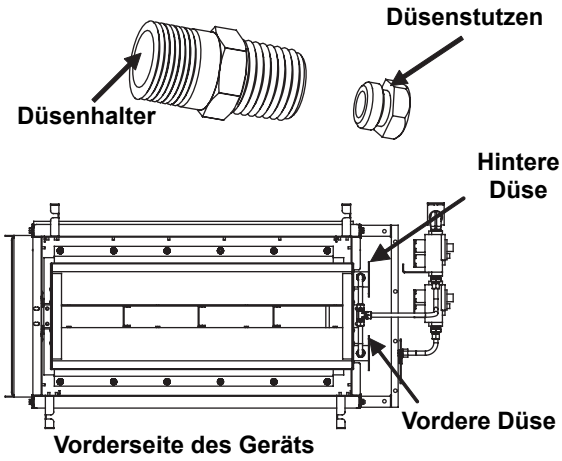
Technician's Signature: Manager's Signature:

TEAR HERE

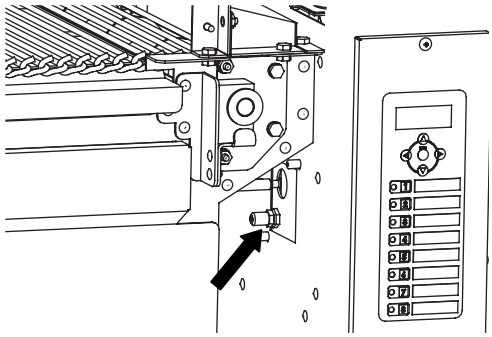
Vor Durchführung der nachfolgenden Schritte sicherstellen, dass der Bratrost ausgeschaltet und vollständig von der Stromversorgung getrennt ist. Gaszufuhr zum Bratrost ausschalten.

ÜBERPRÜFUNG DER KOMPONENTEN

1. Die Luftfilterabdeckung entfernen und die Innenseite der Abdeckung und die Luftregulierungskegel mit einem Scheuerpad und dem von Duke empfohlenen Reiniger säubern. Informationen über den Reinigertyp und Vertriebshändler vor Ort können über die folgende Website bezogen werden (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
2. Die IR-Brennerdüsen und Halter entfernen und austauschen. Das Anziehdrehmoment für die Düsen am Halter beträgt 2,3 Nm (20in lbs). Beim Wiedereinbau die richtige Position vorne und hinten sicherstellen (siehe Abbildung unten).



Die untere Brennerdüse entfernen und austauschen. Die Düse mit 6,7 Nm (60in lbs) anziehen (siehe Abbildung unten).



Erdgas
175814 DÜSE, IR VORNE, 2,35 mm, G I2H/I2E(G20) und I2L(G25)
175735 DÜSE, IR VORNE, 2,49 mm, #40, BRENNER--SO SPEZIFIKATIONEN
175815 DÜSE, IR HINTEN, 2,50 mm, G I2H/I2E(G20) und I2L(G25)
175736 DÜSE, IR HINTEN, 2,70 mm, #36, BRENNER BLAU--SO SPEZIFIKATIONEN
175823 DÜSE, UNTERE, 3,05 mm, #31, I2H/I2E(G20) und I2L(G25)
175935 DÜSE, UNTERE, 3,26 mm, I2H/I2E(G20), I2L(G25) HA
176387 DÜSE, UNTERE, 3,45 mm, #29, I2H/I2E(G20) und I2L(G25)

Propangas
175818 DÜSE, IR VORNE, 1,40 mm, #54, I3B/P(G30)
175816 DÜSE, IR VORNE, 1,55 mm, I3P(G31)
175817 DÜSE, IR HINTEN, 1,61 mm, #52, I3P(G31)
175819 DÜSE, IR HINTEN, 1,51 mm, #53, I3B/P(G30)
175768 DÜSE, UNTERER BRENNER, 1,70 mm, #51, I3B/P(G30)
175737 DÜSE, UNTERER BRENNER, 1,85 mm, #49, 13P(G31)
176388 DÜSE, UNTERER BRENNER, 2,00 mm, I3P(G31)
176522 DÜSE, UNTERER BRENNER, 1,75 mm

FUNKTIONSPRÜFUNG

Sämtliche Schritte in diesem Abschnitt können während des Vorheizzyklus durchgeführt werden. Der Bratrost und die Gaszufuhr müssen kurz ausgeschaltet werden, wenn die Messgeräte zur Messung des Gasdrucks angeschlossen werden.

1. Bratrost durch Vorheizzyklus laufen lassen.
2. Ordnungsgemäßen Eingangs-Gasdruck bestätigen (siehe Servicehandbuch, falls außerhalb von USA, Kanada, oder Mexiko):
   a. Erdgas 178 - 305 mmH2O
   b. Propan 254 - 305 mmH2O
3. Ordnungsgemäßen Gasdruck zum unteren Brenner bestätigen:
   a. Erdgas 95 mmH2O
   b. Propan 203 mmH2O
4. Ordnungsgemäßen Gasdruck zu oberen IR-Brennern bestätigen
   a. Erdgas 95 mmH2O
   b. Propan 203 mmH2O
5. Erscheinungsbild der IR-Brenner prüfen. Bei ausreichender Hitze sollten IR-Brenner wie in Abb. 1 unten aussehen. Bei einem verstellten IR-Brenner können blaue oder orangefarbene Flammen aus der Plattenoberfläche schießen oder Anzeichen von Blau um den Brennerrand herum sichtbar werden. IR-Brenner können durch die Reinigung des Luftfilters und des Gebläsemotors im vorherigen Abschnitt sogar vollständig verstellt werden, was dazu führen kann, dass der IR-Brenner nicht zündet. Wenn festgestellt wird, dass eine Einstellung erforderlich ist, gehen Sie wie folgt vor.
   - Die Luftregulierungsschrauben im oberen Bereich des Bedienfachs ausfindig machen.
   - Die Feststellmuttern für beide IR-Brenner lösen.
   - Beide Schrauben gleichzeitig um eine Viertelumdrehung (im Uhrzeigersinn, um Luftzufuhr zu drosseln) drehen, bis unter jeder der IR-Brennerflächen eine gleichmäßig blaue Flamme oder Lufttrübung erkennbar ist.
   - Die Schrauben gleichzeitig um eine Viertelumdrehung (gegen den Uhrzeigersinn, um Luftzufuhr zu steigern) herausdrehen, bis die blaue Flamme oder Lufttrübung gerade verschwindet.
   - Die Schrauben um eine zusätzliche Viertelumdrehung herausdrehen.
   - Die Feststellmuttern festziehen und gleichzeitig sicherstellen, dass die Schrauben in Position bleiben.

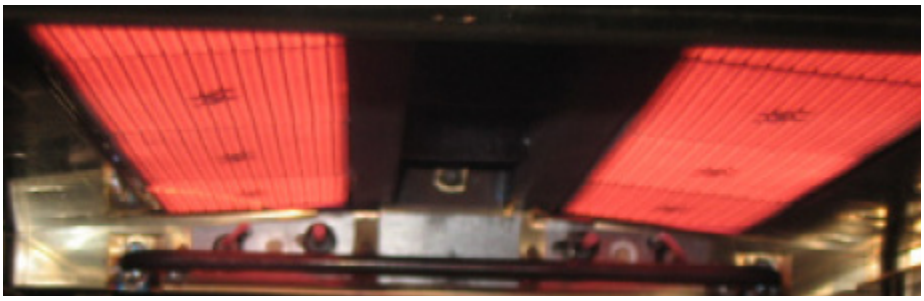


ABB. 1

6. Ordnungsgemäße Stromstärke für Flammenfühler sicherstellen (unteres Modul)
   a. Mehr als 0,7 µA Gleichstrom
      i. S1 = FC (gemessen an FC-Klemmen)
      ii. (Optimaler Bereich im Heißzustand ist 1,5 µA - 6 µA)

7. Ordnungsgemäße Stromstärke für Flammenfühler sicherstellen (oberes Modul)
   a. Mehr als 0,7 µA Gleichstrom
      i. S1 = FC1, S2 = FC2 (gemessen an den Klemmen FC1 and FC2)

      ii. (Optimaler Bereich im Heißzustand ist 1,5 µA - 6 µA)

8. Alle Gelenke, Verbindungen und Klemmringverschraubungen (innen und außen) auf Gasaustritt prüfen.
9. Gasschlauch und Schnelltrennkupplung auf Gasaustritt/Schäden überprüfen.

Prüfliste an Manager übergeben und Bereiche erläutern, die sofortiger und zukünftiger Aufmerksamkeit bedürfen.

PRÜFLISTE FÜR DIE KLEINE WARTUNG
FBB (FLEXIBLER CHARGEN-BRATROST)

Restaurant-Nummer:	Modell:
Adresse:	Seriennummer:
	PM-Datum:
Ort:	Wartungsunternehmen:
Bundesland:	Name des Technikers:
Postleitzahl:	Wartungsunternehmen - Telefon:

ABGESCHLOSSEN

ÜBERPRÜFUNG DER KOMPONENTEN

☐	1	Abdeckung der Luftregulierung abnehmen und prüfen. Kegel, Bolzen und IR-Brennereinlässe reinigen				
☐	2	IR-Brennerdüsen / Halter austauschen a) Düsengrößen siehe Anweisungen	Größe der VORDEREN IR-Brennerdüse:		Größe der HINTEREN IR-Brennerdüse:	
☐	3	Untere Brennerdüse austauschen a) Düsengrößen siehe Anweisungen	Größe der UNTEREN Düse:			

FUNKTIONSPRÜFUNG

☐	1	Bratrost durch Vorheizzyklus laufen lassen				
☐	2	Ordnungsgemäßen Eingangs-Gasdruck bestätigen a) Siehe Anweisungen	Messwert nach allen Einstellungen:			
☐	3	Ordnungsgemäßen Gasdruck zum unteren Brenner bestätigen a) Siehe Anweisungen	Messwert nach allen Einstellungen:			„mmH2O“
☐	4	Ordnungsgemäßen Gasdruck zu oberen IR-Brennern bestätigen a) Siehe Anweisungen	Messwert nach allen Einstellungen:			„mmH2O“
☐	5	Erscheinungsbild der IR-Brenner prüfen (ordnungsgemäße Luftregulierung vornehmen)				
☐	6	Ordnungsgemäße Stromstärke für Flammenfühler sicherstellen (unteres Modul) a) Mehr als 0,7 µA Gleichstrom (S1) b) Optimaler Bereich im Heißzustand ist 1,5 µA - 6 µA Gleichstrom	Messwert des UNTEREN Flammenfühlers:			µA
☐	7	Ordnungsgemäße Stromstärke für Flammenfühler sicherstellen (oberes Modul)	Messwert des VORDEREN Flammenfühlers:			µA
		a) Mehr als 0,7 µA Gleichstrom (S1 und S2) b) Optimaler Bereich im Heißzustand ist 1,5 µA - 6 µA Gleichstrom	Messwert des HINTEREN Flammenfühlers:			µA
☐	8	Alle Gelenke, Verbindungen und Klemmringverschraubungen auf Gasaustritt prüfen				
☐	9	Gasschlauch und Schnelltrennkupplung auf Gasaustritt/Schäden überprüfen				

Anmerkungen:

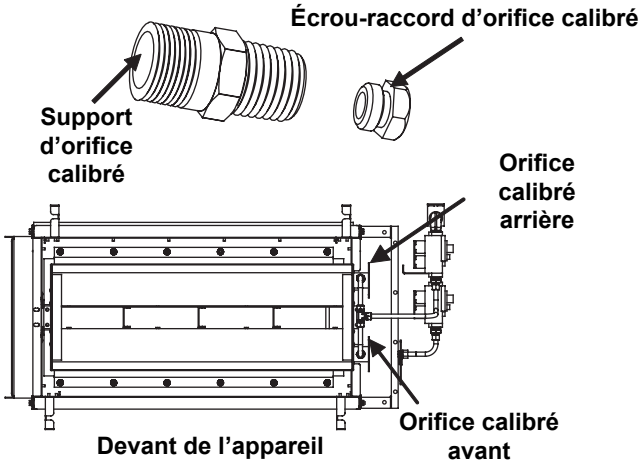
Unterschrift des Technikers: Unterschrift des Managers:

HIER AUFREISSEN

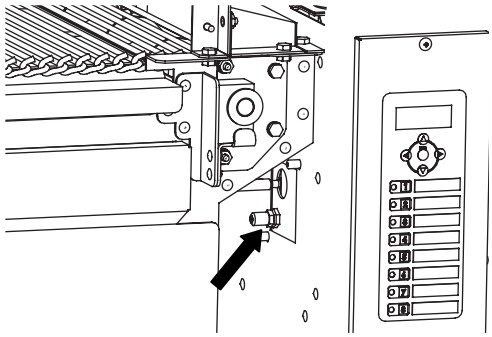
Avant d'effectuer les opérations qui suivent, s'assurer que la rôtissoire est hors tension et débranchée de l'alimentation électrique. Couper l'arrivée de gaz de la rôtissoire.

VÉRIFICATION DES ÉLÉMENTS

1. Enlever le couvercle de boîte à air puis en nettoyer l'intérieur et les cônes de réglage d'air avec un tampon à récurer et un nettoyant recommandé par Duke. On peut obtenir des renseignements sur le type de nettoyant à employer et le distributeur local sur le site Web suivant : http://www.chemtronics.com/p-746-electro-wash-nxo.aspx.
2. Retirer et remplacer les deux orifices calibrés de brûleur IR et leurs supports. Un orifice calibré doit être serré sur son support à un couple de 2,3 Nm (20 lb-po). S'assurer que les orifices avant et arrière sont dans la position correcte lors de leur remise en place. Voir le tableau ci-dessous.



Retirer et remplacer l'orifice calibré de brûleur inférieur. Serrer l'orifice à 6,7 N.m (60 lb-po). Voir le tableau ci-dessous.



Gaz naturel
175814 ORIFICE CALIBRÉ, BRÛLEUR IR AVANT , 2,35 mm, G-12H/12E(G20) et I2L(G25)
175735 ORIFICE CALIBRÉ, BRÛLEUR IR AVANT, 2,49 mm, #40, BRÛLEUR--SPÉC. SO
175815 ORIFICE CALIBRÉ, BRÛLEUR IR ARRIÈRE , 2,50 mm, G-12H/12E(G20) et I2L(G25)
175736 ORIFICE CALIBRÉ, BRÛLEUR IR ARRIÈRE, 2,70 mm, #36, BRÛLEUR BLEU--SPÉC. SO
175823 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 3,05 mm, #31, 12H/12E(G20) et I2L(G25)
175935 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 3,26 mm, 12H/12E(G20), I2L(G25) HA
176387 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 3,45 mm, #29, 12H/12E(G20) et I2L(G25)

Gaz propane
175818 ORIFICE CALIBRÉ, BRÛLEUR IR AVANT, 1,40 mm, #54, I3B/P(G30)
175816 ORIFICE CALIBRÉ, BRÛLEUR IR AVANT, 1,55 mm, I3P(G31)
175817 ORIFICE CALIBRÉ, BRÛLEUR IR ARRIÈRE, 1,61 mm, #52, I3P(G31)
175819 ORIFICE CALIBRÉ, BRÛLEUR IR ARRIÈRE, 1,51 mm, #53, I3B/P(G30)
175768 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 1,70 mm, #51, I3B/P(G30)
175737 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 1,85 mm, #49, I3P(G31)
176388 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 2,00 mm, I3P(G31)
176522 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 1,75 mm

VÉRIFICATION DU FONCTIONNEMENT

Toutes les opérations décrites dans cette section peuvent être effectuées pendant le cycle de préchauffage. Mettre la rôtissoire et l'alimentation brièvement hors tension lors du raccordement des manomètres pour mesurer la pression de gaz.

1. Exécuter le cycle de préchauffage dans la rôtissoire.
2. S'assurer que la pression d'arrivée du gaz est correcte (en dehors des Etats-Unis, du Canada et du Mexique, consulter le manuel d'entretien).
   a. Gaz naturel 7 – 12 po à la colonne d'eau.
   b. Propane 10 – 12 po à la colonne d'eau.
3. Vérifier que la pression d'alimentation en gaz du brûleur inférieur est correcte :
   a. Gaz naturel 3,75 po à la colonne d'eau
   b. Propane 8 po à la colonne d'eau
4. Vérifier que la pression d'alimentation en gaz des brûleurs IR supérieurs est correcte
   a. Gaz naturel 3,75 po à la colonne d'eau
   b. Propane 8 po à la colonne d'eau
5. Contrôler l'aspect des brûleurs IR. Lorsqu'ils sont suffisamment chauds, les brûleurs IR doivent se présenter comme sur la Fig. 1 ci-dessous.
   Lorsqu'un brûleur IR est déréglé, des flammes bleues ou oranges instables peuvent sortir de la plaque ou des reflets bleus peuvent apparaître autour du brûleur. L'air peut même être complètement déréglé dans les brûleurs IR après le nettoyage de la boîte à air et du moteur de soufflante décrit dans la section précédente, ce qui peut empêcher l'allumage des brûleurs. Si on détermine qu'un réglage s'avère nécessaire, procéder comme suit.
   - Repérer les vis de réglage d'air dans la partie supérieur du compartiment de commande.
   - Desserrer les écrous de blocage des brûleurs IR.
   - Serrer les deux vis (sens horaire, réduction de l'air) de 1/4 de tour à la fois jusqu'à ce qu'on observe une flamme ou aura uniformément bleue en dessous de la surface de chaque brûleur infrarouge.
   - Desserrer les vis (sens antihoraire, augmentation de l'air) de 1/4 de tour à la fois jusqu'à ce que la flamme ou aura bleue vienne de disparaître.
   - Serrer les vis de 1/4 de tour de plus.
   - Resserrer les écrous de blocage tout en veillant à ce que les vis restent en position.

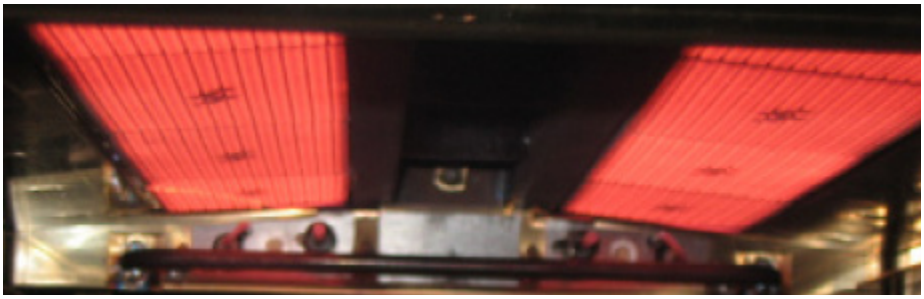


FIG. 1

6. Vérifier que l'intensité de détection de flamme est correcte (module inférieur)
   a. Supérieure à 0,7 µA c.c.
      i. S1 = FC (mesuré aux bornes FC)
      ii. (la plage optimale lorsque chaud est de 1,5 à 6 µA)

7. Vérifier que l'intensité de détection de flamme est correcte (module supérieur)
   a. Supérieure à 0,7µA c.c.
      i. S1 = FC1, S2 = FC2 (mesuré aux bornes FC1 et FC2)

      ii. (la plage optimale lorsque chaud est de 1,5 à 6 µA)

8. Contrôler l'étanchéité de l'ensemble des jointures, raccords-union et raccord universels (intérieurs et extérieurs).
9. Vérifier le tuyau de gaz et son raccord rapide pour voir s'ils fuient ou sont endommagés.

Présenter une liste de vérifications au gérant et indiquer ce qui pourrait demander une attention immédiate ou future.

LISTE DE VÉRIFICATIONS ABRÉGÉES DES PERFORMANCES
RÔTISSOIRE À FOURNÉES FLEXIBLES

Numéro du restaurant :	Modèle :
Adresse :	Numéro de série :
	Date vérif. perm. :
Ville :	Société de réparation :
Province :	Nom du technicien :
Code postal :	N° tél. soc. répar. :

EFFECTUÉ

VÉRIFICATION DES ÉLÉMENTS

☐	1	Retirer et contrôler le couvercle de réglage d'air. Nettoyer les cônes, boulons et entrées de brûleurs IR				
☐	2	Remplacer les orifices calibrés / support des brûleurs IR a) Voir les instructions pour les tailles d'orifices calibrés	Taille d'orifice calibré de brûleur IR AVANT :		Taille d'orifice calibré de brûleur IR ARRIÈRE :	
☐	3	Remplacer l'orifice calibré de brûleur inférieur a) Voir les instructions pour les tailles d'orifices calibrés	Taille d'orifice calibré de brûleur INFÉRIEUR			

VÉRIFICATION DU FONCTIONNEMENT

☐	1	Exécuter le cycle de préchauffage dans la rôtissoire			
☐	2	Vérifier la pression correcte de l'arrivée de gaz a) Voir les instructions	Mesure après tout réglage :		
☐	3	Vérifier la pression correcte d'alimentation en gaz du brûleur inférieur a) Voir les instructions	Mesure après tout réglage :		po à la colonne d'eau, mbar
☐	4	Vérifier la pression correcte d'alimentation en gaz des brûleurs IR supérieurs a) Voir les instructions	Mesure après tout réglage :		po à la colonne d'eau, mbar
☐	5	Contrôler l'aspect des brûleur IR (réglage d'air correct)			
☐	6	Vérifier l'intensité de détection de flamme correcte (module inférieur) a) Supérieure à 0,7 µA c.c. (S1) b) Plage optimale quand chaud : 1,5 à 6 µA c.c.	Mesure d'intensité de détection de flamme, brûleur INFÉRIEUR :		µA
☐	7	Vérifier l'intensité de détection de flamme correcte (module supérieur)	Mesure d'intensité de détection de flamme, brûleur AVANT :		µA
		a) Supérieure à 0,7 µA c.c. (S1 et S2) b) Plage optimale quand chaud : 1,5 à 6 µA c.c.	Mesure d'intensité de détection de flamme, brûleur ARRIÈRE :		µA
☐	8	Contrôler l'étanchéité de l'ensemble des jointures, raccords-union et raccords universels			
☐	9	Vérifier le tuyau de gaz et son raccord rapide pour voir s'ils fuient ou sont endommagés			

Observations :

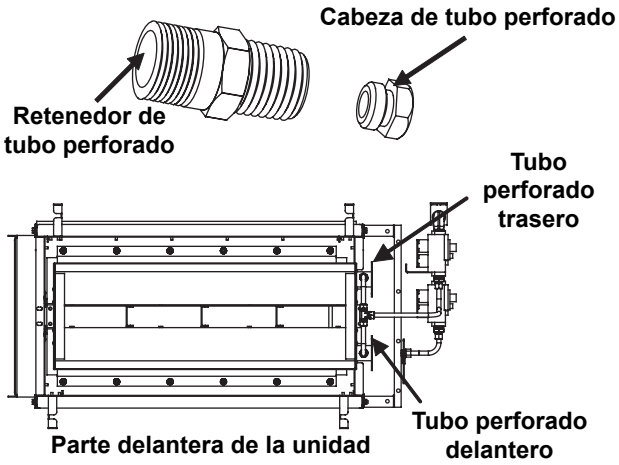
Signature du technicien : Signature du gérant :

DÉCHIRER ICI

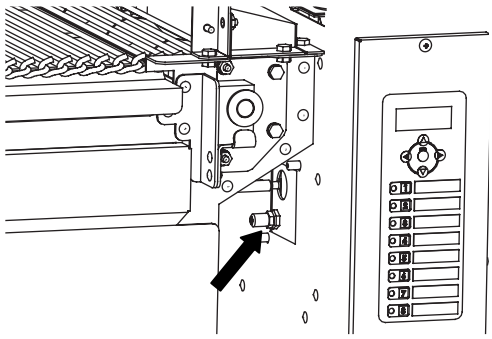
Antes de efectuar los pasos siguientes, asegúrese de que el asador esté apagado y completamente desconectado de la corriente. Corte el suministro de gas al asador.

COMPROBACIÓN DE COMPONENTES

1. Quite la tapa de la caja de aire y limpie el interior de la tapa y de los conos de ajuste de aire con un estropajo y el limpiador recomendado de Duke. La información sobre el tipo de limpiador y el distribuidor local puede obtenerse accediendo al siguiente sitio web (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
2. Quite y reemplace ambos tubos perforados y retenedores de los quemadores de rayos infrarrojos. El par de apriete especificado del tubo perforado es de 20 lb-pulg (2.3 Nm). Asegúrese de la ubicación correcta delantera y trasera al volver a instalar. Vea la tabla de abajo.



Quite y reemplace el tubo perforado del quemador inferior. Apriete el tubo perforado a 60 lb-pulg (6.7 Nm) Vea la tabla de abajo.



Gas natural
175814 TUBO PERFORADO DELANTERO DE RI, 2.35 mm, G I2H/I2E(G20) Y I2L(G25)
175735 TUBO PERFORADO DELANTERO DE RI, 2.49 mm, No. 40, QUEMADOR--ESPEC SO
175815 TUBO PERFORADO TRASERO DE RI, 2.50 mm, G I2H/I2E(G20) Y I2L(G25)
175736 TUBO PERFORADO TRASERO DE RI, 2.70mm, No. 36, QUEMADOR AZUL--ESPEC SO
175823 TUBO PERFORADO INFERIOR, 3.05 mm, NO. 31, I2H/I2E(G20) Y I2L(G25)
175935 TUBO PERFORADO INFERIOR, 3.26 mm, I2H/I2E(G20) Y I2L(G25) HA
176387 TUBO PERFORADO INFERIOR, 3.45 mm, no. 29, I2H/I2E(G20) Y I2L(G25)

Gas propano
175818 TUBO PERFORADO DELANTERO DE RI, 1.40mm, No. 54, 13B/P(G30)
175816 TUBO PERFORADO DELANTERO DE RI, 1.55 mm, I3P(G31)
175817 TUBO PERFORADO TRASERO DE RI, 1.61 mm, NO. 52, I3P(G31)
175819 TUBO PERFORADO TRASERO DE RI, 1.51 mm, NO. 53, I3B/P(G30)
175768 TUBO PERFORADO DEL QUEMADOR INFERIOR, 1.70 mm, NO. 51, I3B/P(G30)
175737 TUBO PERFORADO DEL QUEMADOR INFERIOR, 1.85 mm, NO. 49, I3P(G31)
176388 TUBO PERFORADO DEL QUEMADOR INFERIOR, 2.00 mm, I3P(G31)
176522 TUBO PERFORADO DEL QUEMADOR INFERIOR, 1.75 mm

COMPROBACIÓN DE LA OPERACIÓN

Todos los pasos de esta sección pueden efectuarse durante el ciclo de precalentamiento. El asador y el suministro de gas deben desconectarse brevemente al conectar manómetros para medir la presión del gas.

1. Haga funcionar el asador durante el ciclo de precalentamiento.
2. Confirme la presión de suministro apropiada del gas de entrada (consulte el manual de servicio si está fuera de EE.UU., Canadá o México):
   a. Gas natural 7” – 12” de columna de agua
   b. Propano 10” – 12” de columna de agua
3. Confirme la presión de gas apropiada en el quemador inferior:
   a. Gas natural 3.75” de columna de agua
   b. Propano 8” de columna de agua
4. Confirme la presión de gas apropiada en los quemadores de rayos infrarrojos superiores:
   a. Gas natural 3.75” de columna de agua
   b. Propano 8” de columna de agua
5. Inspeccione el aspecto de los quemadores de rayos infrarrojos. Cuando estén suficientemente calientes, los quemadores de rayos infrarrojos deben aparecer como en la Fig. 1 de abajo.
   Un quemador de rayos infrarrojos desajustado puede tener llamas azules o anaranjadas saliendo de la superficie de las baldosas o indicios de color azul alrededor del perímetros de los quemadores Los quemadores de rayos infrarrojos pueden incluso tener el aire completamente desajustado debido a la limpieza de la caja de aire y del motor del soplador en la sección anterior, lo que puede hacer que el quemador de rayos infrarrojos no se encienda. Si se determina que es necesario hacer un ajuste, haga el ajuste siguiente.
   - Localice los tornillos de ajuste de aire en la parte superior del compartimiento de control.
   - Afloje las tuercas de traba de ambos quemadores de rayos infrarrojos.
   - Gire ambos tornillos hacia adentro (a la derecha, disminuyendo el aire) ¼ de vuelta de una vez hasta que se observe una llama o neblina de color azul uniforme debajo de cada una de las superficies de los quemadores de rayos infrarrojos.
   - Afloje los tornillos (a la izquierda, aumentando el aire) ¼ de vuelta de una vez hasta que la llama o neblina azul desaparezca.
   - Afloje los tornillos ¼ de vuelta adicional.
   - Apriete las tuercas de traba mientras se asegura que los tornillos estén colocados.

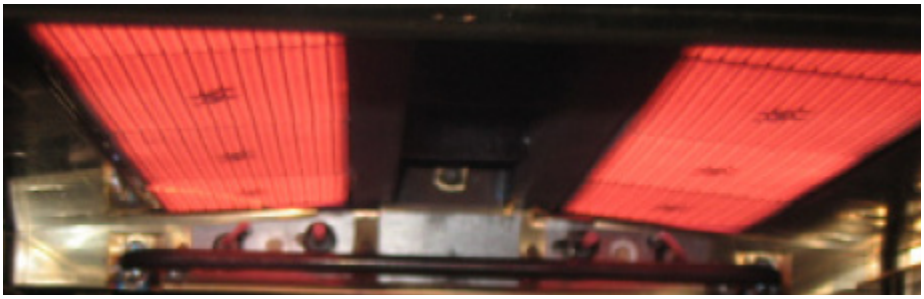


FIG. 1

6. Asegúrese que la corriente de detección de llamas sea apropiada (módulo inferior)
   a. Mayor que 0.7µA de CC
      i. S1 = FC (medido en los terminales FC)
      ii. (La gama óptima cuando esté caliente es 1.5 a 6 µA)

7. Asegúrese de que la corriente de detección de llamas sea apropiada (módulo superior)
   a. Mayor que 0.7µA de CC
      i. S1 = FC1, S2 = FC2 (medida en los terminales FC1 y FC2)

      ii. (La gama óptima cuando esté caliente es 1.5 a 6 µA)

8. Compruebe todas las juntas, uniones y conexiones de compresión (internas y externas) para ver si hay fugas de gas.
9. Compruebe la manguera de gas y la desconexión rápida para ver si hay fugas de gas / daños.

Proporciona una lista de comprobación al gerente y explique las áreas que puedan requerir una atención inmediata o futura.

DESGARRAR POR AQUÍ

LISTA DE COMPROBACIÓN DE MINIMANTENIMIENTO DE RENDIMIENTO
FBB (ASADOR FLEXIBLE POR TANDAS)

Número de restaurante:	Modelo:
Dirección:	Número de serie:
	Fecha de MP:
Ciudad:	Compañía de servicio:
Estado:	Nombre del técnico:
Código postal:	Teléfono de la Compañía de servicio:

COMPROBACIÓN

DE COMPONENTES COMPLETADA

☐	1	Quite e inspeccione la tapa de ajuste de aire. Limpie los conos, los pernos y las entradas de los quemadores de rayos infrarrojos			
☐	2	Reemplace los tubos perforados de RI y retenedores de los quemadores a) Consulte las instrucciones para los tamaños de los orificios	Tamaño del orificio del quemador infrarrojo DELANTERO:	El tamaño del orificio del quemador infrarrojo TRASERO:	
☐	3	Reemplace el tubo perforado del quemador inferior a) Consulte las instrucciones para los tamaños de los orificios	Tamaño del orificio INFERIOR:		

COMPROBACIÓN DE LA OPERACIÓN

☐	1	Haga funcionar el asador durante el ciclo de precalentamiento.			
☐	2	Confirme la presión de suministro de gas de entrada apropiada a) Consulte las instrucciones	Medición después de los ajustes:		
☐	3	Confirme la presión de gas apropiada en el quemador inferior: a) Consulte las instrucciones	Medición después de los ajustes:		"milibares de columna de agua"
☐	4	Confirme la presión de gas apropiada en los quemadores de rayos infrarrojos superiores: a) Consulte las instrucciones	Medición después de los ajustes:		"milibares de columna de agua"
☐	5	Inspeccione el aspecto de los quemadores de rayos infrarrojos (efectúe el ajuste de aire apropiado)			
☐	6	Asegúrese que la corriente de detección de llama sea apropiada (módulo inferior) a) Mayor que 0.7 µA de CC (S1) b) La gama óptima cuando esté caliente es de 1.5 a 6 µA de CC	Medición de detección de llama INFERIOR		µA
☐	7	Asegúrese de que la corriente de detección de llamas sea apropiada (módulo superior)	Medición de detección de llamas DELANTERA		µA
		a) Mayor que 0.7 µA de CC (S1 y S2) b) La gama óptima cuando esté caliente es de 1.5 a 6 µA de CC	Medición de detección de llamas TRASERA		µA
☐	8	Compruebe todas las juntas, uniones y conexiones de compresión para ver si hay fugas de gas.			
☐	9	Compruebe la manguera de gas y la desconexión rápida para ver si hay fugas / daños de gas.			

Comentarios::

Firma del técnico: Firma del gerente:

Your Solutions Partner

Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074

www.dukemfg.com

FBB Mylar Replacement Instructions

Tools Required:

Phillips Screwdriver

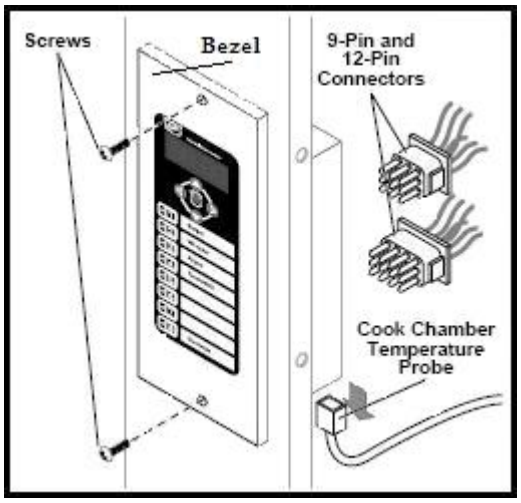
Items Included:

176013 Overlay, Broiler Control

176019 Alcohol Pad

Mylar Installation

1) Remove (2) screws which secure the Control Bezel to the front of the broiler.
2) Carefully remove Control and Bezel up and out from the broiler. Remove the 9-Pin, 12-Pin, and Temperature Probe connectors by squeezing the appropriate tabs and gently removing.



3) Peel Mylar away from one corner of the Control. Set aside Product Key labels to use later. Once fully removed, peel away ALL remaining adhesive on the metal shroud.

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4) Use the Alcohol Pad to clean the metal shroud surface only. Allow a few minutes to dry.

5) Remove backing from new Mylar, taking care not to touch adhesive side of Mylar. Starting at either the top or bottom, use the screw holes on the new Mylar to locate it onto the Control. If the holes do not match exactly, remove and re-apply.

6) Ensure each button can be depressed once Mylar is in position.

7) Smooth over the entire Mylar surface with thumbs to ensure proper adhesion.

8) Replace Product Key labels in the proper order by inserting them through the slits on the right hand side.

9) Re-mount the Control into the Bezel, ensuring it sits within the Bezel gasket.

10) Re-connect each connector using the proper orientation.

11) Locate the Control and Bezel back down and into the panel and secure with (2) screws.

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER _____

TELEPHONE _____

SERVICER _____

TELEPHONE _____

Duke Corporate, Canada, Latin America
2305 N. Broadway
St. Louis, MO 63102
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Toll Free: 800-735-3853
Fax: 314-231-5074
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Duke EMEA - Europe, Middle East, Africa, Russia
Duke Manufacturing CR, s.r.o.
Zdebradska 92
Jazlovice, Ricany
Building number DC 4 on the ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 257 741 033
Fax: +420 257 741 039

Duke EMEA – UK, Ireland, Nordic Countries
Duke Manufacturing UK Ltd.
Unit 10, Greendale Business Park
Woodbury Salterton
Exeter, EX5 1EW
Phone: +44 (0) 1395 234140
Fax: +44 (0) 1395 234154

Duke Asia Pacific
Duke Manufacturing
No.3 Building
Lane 28, Yu Lv Road
Malu Town, Jiading District
Shanghai 201801, China
Phone: +86 21 59153525 / 59153526
Fax: +86 21 33600628

Performance Maintenance Checklist
FBB (Flexible Batch Broiler)

Restaurant Number:		Model:	
Address:		Serial Number:	
		PM Date:	
City:		Service Company:	
State:		Technician Name:	
Zip:		Service Co. Phone:	

CHECKED AND OKAY

MAY REQUIRE FUTURE ATTENTION

REQUIRES IMMEDIATE REPLACEMENT

COMPONENT CHECK

☐	☐	☐	1	Inspect Power cord and plug			
☐	☐	☐	2	Inspect Catalyst (if applicable). Instruct on proper care			
☐	☐	☐	3	Inspect all Panels, removable parts, and ensure casters are secure			
☐	☐	☐	4	Inspect Lower Burner / Any spare Lower Burners			
☐	☐	☐	5	Inspect Flame Arrestor / Any spare Flame Arrestors			
☐	☐	☐	6	Inspect and clean Blower Motor Hose (with supplied cleaner)			
☐	☐	☐	7	Replace Motor			
☐	☐	☐	8	Remove and inspect Air Adjustment Cover. Clean Cones, Bolts, and IR Burner inlets			
☐	☐	☐	9	Replace IR Burner Orifices / Holder a) Refer to instructions for orifice sizes	FRONT IR Burner Orifice Size:		REAR IR Burner Orifice Size:
☐	☐	☐	10	Replace Lower Burner Orifice a) Refer to instructions for orifice sizes	LOWER Orifice Size:		
☐	☐	☐	11	Replace (1) Lower and (2) Upper Igniters			
☐	☐	☐	12	Replace (1) Lower and (2) Upper Flame Sensors			
☐	☐	☐	13	Clean Flame Sensor Tubes with brush (with supplied brush)			
☐	☐	☐	14	Inspect and clean (1) Lower and (2) Upper Ignition Cables			
☐	☐	☐	15	Clean Temperature Probe (with supplied alcohol pads and scrub pad)			
☐	☐	☐	16	Clean Temperature Probe Tube (with supplied brush)			
☐	☐	☐	17	Inspect Cook Chain for damaged links			
☐	☐	☐	18	Inspect Drive Chain and Drive Sprockets			
☐	☐	☐	19	Inspect Drive Motor. Clean wire connections (with supplied cleaner)			
☐	☐	☐	20	Inspect (4) Teflon Bushing Blocks for wear			
☐	☐	☐	21	Clean any grease accumulation in electrical control compartment, including wire connections (with supplied cleaner)			
☐	☐	☐	22	Ensure all wire connections are firmly seated			
☐	☐	☐	23	Confirm Troubleshooting Label is in place on Control Compartment			

OPERATIONAL CHECK

☐	☐	☐	1	Run Broiler through Pre-Heat cycle			
☐	☐	☐	2	Confirm proper inlet gas supply pressure a) Refer to Instructions	Measurement after any adjustments:		W.C. mbar
☐	☐	☐	3	Confirm proper gas pressure to Lower Burner a) Refer to Instructions	Measurement after any adjustments:		W.C. mbar
☐	☐	☐	4	Confirm proper gas pressure to Upper IR Burners a) Refer to Instructions	Measurement after any adjustments:		W.C. mbar
☐	☐	☐	5	Inspect IR Burner appearance (Perform proper air adjustment)			
☐	☐	☐	6	Ensure Proper Flame Sense Current (Lower Module) a) Greater than 0.7 µA DC (S1) b) Optimal range when hot is 1.5 µA - 6 µA DC	LOWER Flame Sense Measurement:		µA
☐	☐	☐	7	Ensure Proper Flame Sense Current (Upper Module) a) Greater than 0.7 µA DC (S1 & S2) b) Optimal range when hot is 1.5 µA - 6 µA DC	FRONT Flame Sense Measurement: REAR Flame Sense Measurement:		µA µA
☐	☐	☐	8	Check all joints, unions, and compression fittings for gas leakage			
☐	☐	☐	9	Check Gas Hose and Quick Disconnect for gas leakage / damage.			
☐	☐	☐	10	Ensure all Control functions work properly a) Button functionality b) Access to all 4 programming modes c) Access to Fine Adjustment mode d) Ensure cook light operates			
☐	☐	☐	11	Check discharge function and smoothness of operation			
☐	☐	☐	12	Check Loader, Loader Tray, Loader Bracket, and Loader Ramp for smooth loading operation			
☐	☐	☐	13	Review monthly cleaning of Flame Sensors and provide supplied brush to Restaurant Manager			

Comments:

Technician's Signature: **Manager's Signature**

Your Solutions Partner

Instructions

FULL PERFORMANCE MAINTENANCE INSTRUCTIONS FBB (FLEXIBLE BATCH BROILER)

ENGLISH
GERMAN
FRENCH
SPANISH

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Duke Manufacturing Co.

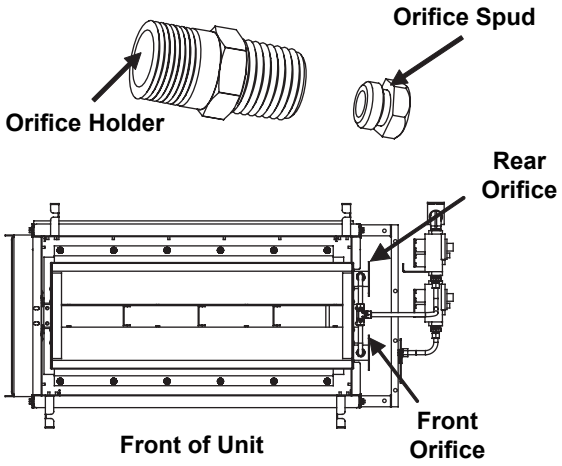
2305 N. Broadway
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www.dukemfg.com

P/N 175266H
04/06/2016

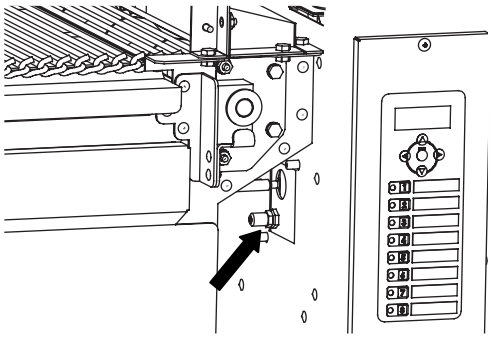
Before performing the steps below, ensure Broiler is turned off and completely disconnected from power. Turn off gas supply to Broiler.

COMPONENT CHECK

1. Inspect power cord for damaged insulation or plug.
2. (If applicable) Inspect catalyst for uncommon wear. Instruct customer on proper care.
3. Inspect panels and all other removable parts for damage which may inhibit broiler from operating correctly. Inspect and tighten casters in legs.
4. Inspect Lower Burner (and any spare burners in the restaurant) for damage. A paper clip may be used to clear any accumulated deposits in burner ports. If this can not be effectively cleaned, Duke suggests the purchase of a new lower burner.
5. Inspect Flame Arrestor (and any spare Flame Arrestors in restaurant) for wear. A Flame Arrestor which has not been cleaned properly may show signs of deterioration (Burn through of perforated stainless). If Flame Arrestor is deteriorated beyond cleaning, Duke suggests the purchase of a new Flame Arrestor.
6. Inspect Blower Motor Hose for punctures or other damage. If necessary, clean with the Duke recommended cleaner. Cleaner type and local distributor information may be obtained by accessing the following web site (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
7. Replace Blower Motor.
8. Remove Air Box Cover and clean inside of cover and Air Adjustment Cones with scrub pad and Duke recommended cleaner. Cleaner type and local distributor information may be obtained by accessing the following web site (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
9. Remove and replace both IR burner orifices and holders. Torque specifications for orifice to holder is 20in lbs (2.3 N.m.). Ensure correct front and back location when re-installing. See chart below.



10. Remove and replace lower burner orifice. Torque orifice to 60in lbs (6.7 N.m.). See chart below.



Natural Gas
175814 ORIFICE, IR FRONT, 2.35mm, G I2H/I2E(G20) & I2L(G25)
175735 ORIFICE, IR FRONT, 2.49mm, #40, BURNER--SO SPECS
175815 ORIFICE, IR REAR, 2.50mm, G I2H/I2E(G20) & I2L(G25)
175736 ORIFICE, IR REAR, 2.70mm, #36, BURNER BLUE--SO SPECS
175823 ORIFICE, LOWER , 3.05mm, #31 , I2H/I2E(G20) & I2L(G25)
175935 ORIFICE, LOWER, 3.26mm, I2H/I2E(G20), I2L(G25) HA
176387 ORIFICE, LOWER, 3.45mm, #29, I2H/I2E(G20) & I2L(G25)

Propane Gas
175818 ORIFICE, IR FRONT, 1.40mm, #54, I3B/P(G30)
175816 ORIFICE, IR FRONT, 1.55mm, I3P(G31)
175817 ORIFICE, IR REAR ,1.61mm, #52, I3P(G31)
175819 ORIFICE, IR REAR, 1.51mm, #53, I3B/P(G30)
175768 ORIFICE, LOWER BURNER , 1.70mm, #51, 13B/P(G30)
175737 ORIFICE, LOWER BURNER, 1.85mm, #49, 13P(G31)
176388 ORIFICE, LOWER BURNER, 2.00mm, I3P(G31)
176522 ORIFICE, LOWER BURNER, 1.75mm

11. Replace (1) Lower Igniter and (2) Upper Igniters. Spark gap should measure approximately 1/8”. If old igniters are in reasonable condition, they can be left with the restaurant for emergency use
12. Replace (1) Lower Flame Sensor and (2) Upper Flame Sensors. If old Flame Sensors are in reasonable condition, they can be left with the restaurant for emergency use.
13. Clean (3) Flame Sensor Tubes with supplied Brush Tool to remove any undesired debris.
14. Inspect (1) Lower Ignition cable and (2) Upper Ignition cables for damage. Clean contact terminals if necessary.
15. Clean Temperature Probe with supplied alcohol pads and scrub pad.
16. Clean Temperature Probe tube with supplied brush tool to remove any undesired debris.
17. Inspect Cook Chain for damaged links. There are no master links. Individual links can be replaced or bent back to position.
18. Inspect Drive Chain for proper tension. Drive Chain deflection should be approximately 3/16”. Inspect Drive Sprockets for wear.
19. Ensure Drive Motor is mounted securely. If necessary, clean wire connections with Duke recommended cleaner. Cleaner type and local distributor information may be obtained by accessing the following web site (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx). (Avoid spraying cleaner directly onto any exposed electrical motor windings or gear box)
20. Inspect (4) Teflon Bushing Blocks for uncommon wear.
21. Clean any grease accumulation in the entire Electrical Control Compartment with scrub pad and Duke recommended cleaner. Cleaner type and local distributor information may be obtained by accessing the following web site (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx). Refer to Cleaning Instructions provided (175116).
22. Ensure all wire connections are firmly seated.
23. Confirm Troubleshooting label is in place on Control Compartment.

OPERATIONAL CHECK

All the steps in this section can be performed during the Pre-Heat cycle. The broiler and gas supply should be turned off briefly when connecting meters to measure gas pressure.

1. Run Broiler through Pre-Heat cycle.
2. Confirm proper inlet gas supply pressure (Refer to Service Manual if outside of the USA, Canada, or Mexico):
   a. Natural Gas 7” – 12” W.C.
   b. Propane 10” – 12” W.C.
3. Confirm proper gas pressure to Lower Burner:
   a. Natural Gas 3.75” W.C.
   b. Propane 8” W.C.
4. Confirm proper gas pressure to Upper IR Burners
   a. Natural Gas 3.75” W.C.
   b. Propane 8” W.C.
5. Inspect IR Burner appearance. When sufficiently hot, IR Burners should appear as in Fig. 1 below.
6. An IR Burner out of adjustment may have blue or orange rolling flames coming off of the tile surface or hints of blue around the burner perimeter. IR Burners may even be completely out of air adjustment due to cleaning of air box and blower motor in previous section, which may cause IR Burner to not light. If it is determined that an adjustment is necessary, make the following adjustment.
   - Locate the air adjustment screws in the upper portion of the control compartment.
   - Loosen the lock nuts for both IR Burners.
   - Turn both screws in (clockwise, decreasing air) ¼ turn *at a time* until a uniform blue flame or haze is observed below each of the infrared burner surfaces.
   - Back the screws out (counter-clockwise, increasing air) ¼ turn *at a time* until the blue flame or haze just disappears.
   - Back the screws out an additional ¼ turn.
   - Tighten the lock nuts while ensuring the screws stay in position.

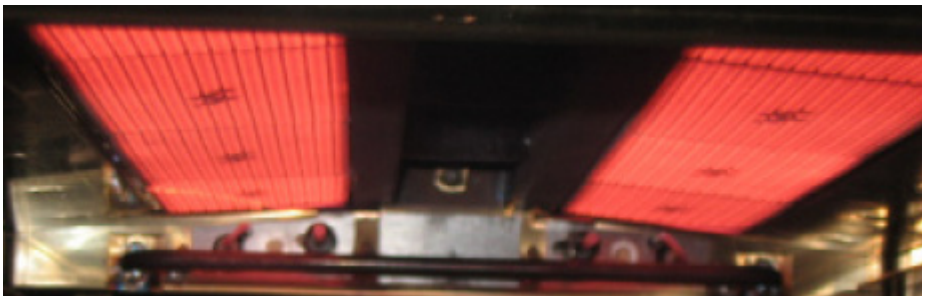


FIG. 1

7. Ensure proper Flame Sense Current (Lower Module)
    a. Greater than 0.7µA DC
        i. S1 = FC (Measured at FC Terminals)
        ii. (Optimal range when hot is 1.5µA - 6µA)
8. Ensure proper Flame Sense Current (Upper Module)
    a. Greater than 0.7µA DC
        i. S1 = FC1, S2 = FC2 (Measured at FC1 and FC2 Terminals)
        ii. (Optimal range when hot is 1.5µA - 6µA)
9. Check all joints, unions, and compression fittings (internal and external) for gas leakage.
10. Check Gas Hose and Quick Disconnect for gas leakage / damage.
11. Ensure all Control functions work properly:
    a. Button functionality
    b. Access to all 4 programming modes
        i. Codes (Hold down ENTER button to display “CODE”, use ENTER to progress through programming)
            1. Global Parameters – (3645)
            2. Cook Recipes – (1827)
            3. Cook & Failure Counts – (1234)
            4. Diagnostic – (3424)
    c. Access to Fine Adjustment mode
        i. Hold UP and DOWN arrows together to access.
    d. Cook light functions properly.
12. Check discharge function and smoothness of operation
    a. If in “RDY” mode, select “Discharge” numerous times.
    b. If not in “RDY” mode, Enter Diagnostic mode and run Drive Motor (DOWN arrow) **(Do not run Drive Motor for more than 6 seconds at a time)**
13. Check Loader, Loader Tray, Loader Bracket, and Loader Ramp for smooth loading operation.
14. Flame Sensors are recommended to be cleaned on a monthly basis. Review monthly cleaning of Flame Sensors and provide supplied brush to Restaurant Manager.

Provide Checklist to Manager and explain areas which may require immediate or future attention.

FULL PERFORMANCE MAINTENANCE CHECKLIST
FBB (FLEXIBLE BATCH BROILER)

Your Solutions Partner

Restaurant Number:	Model:
Address:	Serial Number:
	PM Date:
City:	Service Company:
State:	Technician Name:
Zip:	Service Co. Phone:

TEAR HERE

CHECKED AND OKAY

MAY REQUIRE FUTURE ATTENTION

REQUIRES IMMEDIATE REPLACEMENT

				COMPONENT CHECK				
☐	☐	☐	1	Inspect Power cord and plug				
☐	☐	☐	2	Inspect Catalyst (if applicable). Instruct on proper care				
☐	☐	☐	3	Inspect all Panels, removable parts, and ensure casters are secure				
☐	☐	☐	4	Inspect Lower Burner / Any spare Lower Burners				
☐	☐	☐	5	Inspect Flame Arrestor / Any spare Flame Arrestors				
☐	☐	☐	6	Inspect and clean Blower Motor Hose (with Duke recommended cleaner)				
☐	☐	☐	7	Replace Motor				
☐	☐	☐	8	Remove and inspect Air Adjustment Cover. Clean Cones, Bolts, and IR Burner inlets				
☐	☐	☐	9	Replace IR Burner Orifices / Holder a) Refer to instructions for orifice sizes	FRONT IR Burner Orifice Size:		REAR IR Burner Orifice Size:	
☐	☐	☐	10	Replace Lower Burner Orifice a) Refer to instructions for orifice sizes	LOWER Orifice Size:			
☐	☐	☐	11	Replace (1) Lower and (2) Upper Igniters				
☐	☐	☐	12	Replace (1) Lower and (2) Upper Flame Sensors				
☐	☐	☐	13	Clean Flame Sensor Tubes with brush (with supplied brush)				
☐	☐	☐	14	Inspect and clean (1) Lower and (2) Upper Ignition Cables				
☐	☐	☐	15	Clean Temperature Probe (with supplied alcohol pads and scrub pad)				
☐	☐	☐	16	Clean Temperature Probe Tube (with supplied brush)				
☐	☐	☐	17	Inspect Cook Chain for damaged links				
☐	☐	☐	18	Inspect Drive Chain and Drive Sprockets				
☐	☐	☐	19	Inspect Drive Motor. Clean wire connections (with Duke recommended cleaner)				
☐	☐	☐	20	Inspect (4) Teflon Bushing Blocks for wear				
☐	☐	☐	21	Clean any grease accumulation in electrical control compartment, including wire connections (with Duke recommended cleaner)				
☐	☐	☐	22	Ensure all wire connections are firmly seated				
☐	☐	☐	23	Confirm Troubleshooting Label is in place on Control Compartment				

CHECKED AND OKAY

MAY REQUIRE FUTURE ATTENTION

REQUIRES IMMEDIATE REPLACEMENT

OPERATIONAL CHECK

☐	1	Run Broiler through Pre-Heat cycle				
☐	2	Confirm proper inlet gas supply pressure a) Refer to Instructions	Measurement after any adjustments:			"W.C. mbar"
☐	3	Confirm proper gas pressure to Lower Burner a) Refer to Instructions	Measurement after any adjustments:			"W.C. mbar"
☐	4	Confirm proper gas pressure to Upper IR Burners a) Refer to Instructions	Measurement after any adjustments:			"W.C. mbar"
☐	5	Inspect IR Burner appearance (Perform proper air adjustment)				
☐	6	Ensure Proper Flame Sense Current (Lower Module) a) Greater than 0.7 µA DC (S1) b) Optimal range when hot is 1.5 µA - 6 µA DC	LOWER Flame Sense Measurement:			µA
☐	7	Ensure Proper Flame Sense Current (Upper Module) a) Greater than 0.7 µA DC (S1 & S2) b) Optimal range when hot is 1.5 µA - 6 µA DC	FRONT Flame Sense Measurement:			µA
			REAR Flame Sense Measurement:			µA
☐	8	Check all joints, unions, and compression fittings for gas leakage				
☐	9	Check Gas Hose and Quick Disconnect for gas leakage / damage.				
☐	10	Ensure all Control functions work properly a) Button functionality b) Access to all 4 programming modes c) Access to Fine Adjustment mode d) Ensure cook light operates				
☐	11	Check discharge function and smoothness of operation				
☐	12	Check Loader, Loader Tray, Loader Bracket, and Loader Ramp for smooth loading operation				
☐	13	Review monthly cleaning of Flame Sensors and provide supplied brush to Restaurant Manager				

Comments:

Technician's Signature:

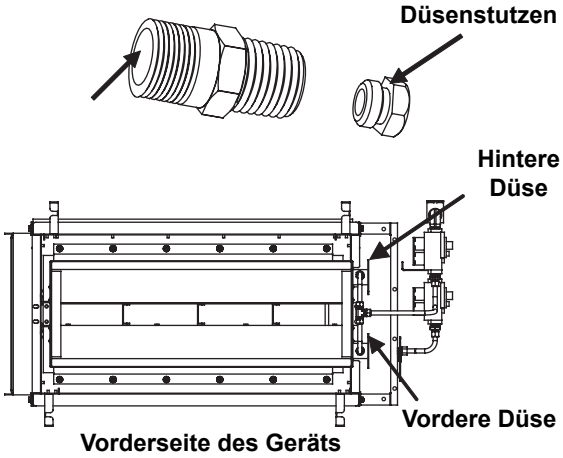
Manager's Signature:

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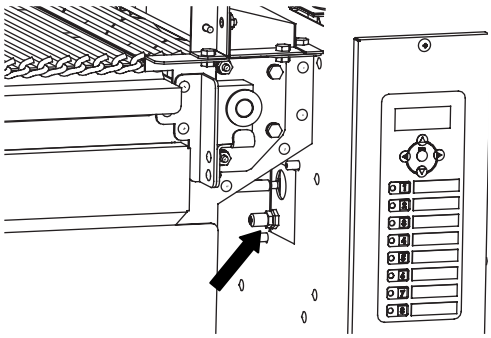
Vor Durchführung der nachfolgenden Schritte sicherstellen, dass der Bratrost ausgeschaltet und vollständig von der Stromversorgung getrennt ist. Gaszufuhr zum Bratrost ausschalten.

ÜBERPRÜFUNG DER KOMPONENTEN

1. Das Netzkabel auf beschädigte Isolierung oder beschädigten Stecker prüfen.
2. Den Katalysator (gegebenenfalls) auf ungewöhnlichen Verschleiß prüfen. Den Kunden über die ordnungsgemäße Pflege instruieren.
3. Die Platten und alle anderen abnehmbaren Teile auf Schäden prüfen, die den korrekten Betrieb des Bratrosts behindern können. Die Laufrollen in den Stellfüßen prüfen und festziehen.
4. Unteren Brenner (und alle Reservebrenner im Restaurant) auf Schäden prüfen. Mit einer Büroklammer können angesammelte Ablagerungen in Brenneröffnungen entfernt werden. Wenn die Öffnungen nicht effektiv gereinigt werden können, legt Duke den Erwerb eines neuen unteren Brenners nahe.
5. Flammensperre (und alle Reserve-Flammensperren im Restaurant) auf Verschleiß prüfen. Eine Flammensperre, die nicht ordnungsgemäß gereinigt wurde, kann Anzeichen von Abnutzung zeigen (Durchbrand des gelochten Edelstahls). Wenn die Flammensperre auch nach der Reinigung abgenutzt ist, legt Duke den Erwerb einer neuen Flammensperre nahe.
6. Den Schlauch des Gebläsemotors auf Löcher oder andere Schäden prüfen. Gegebenenfalls mit dem von Duke empfohlenen Reiniger säubern. Informationen über den Reinigertyp und Vertriebshändler vor Ort können über die folgende Website bezogen werden (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
7. Den Lüftungsmotor austauschen.
8. Die Luftfilterabdeckung entfernen und die Innenseite der Abdeckung und die Luftregulierungskegel mit einem Scheuerpad und dem von Duke empfohlenen Reiniger säubern. Informationen über den Reinigertyp und Vertriebshändler vor Ort können über die folgende Website bezogen werden (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
9. Die IR-Brennerdüsen und Halter entfernen und austauschen. Das Anziehdrehmoment für die Düsen am Halter beträgt 2,3 Nm (20in lbs). Beim Wiedereinbau die richtige Position vorne und hinten sicherstellen (siehe Abbildung unten).



10. Die untere Brennerdüse entfernen und austauschen. Die Düse mit 6,7 Nm (60in lbs) anziehen (siehe Abbildung unten).



Erdgas
175814 DÜSE, IR VORNE, 2,35 mm, G I2H/I2E(G20) und I2L(G25)
175735 DÜSE, IR VORNE, 2,49 mm, #40, BRENNER--SO SPEZIFIKATIONEN
175815 DÜSE, IR HINTEN, 2,50 mm, G I2H/I2E(G20) und I2L(G25)
175736 DÜSE, IR HINTEN, 2,70 mm, #36, BRENNER BLAU--SO SPEZIFIKATIONEN
175823 DÜSE, UNTERE, 3,05 mm, #31, I2H/I2E(G20) und I2L(G25)
175935 DÜSE, UNTERE, 3,26 mm, I2H/I2E(G20), I2L(G25) HA
176387 DÜSE, UNTERE, 3,45 mm, #29, I2H/I2E(G20) und I2L(G25)

Propangas
175818 DÜSE, IR VORNE, 1,40 mm, #54, I3B/P(G30)
175816 DÜSE, IR VORNE, 1,55 mm, I3P(G31)
175817 DÜSE, IR HINTEN, 1,61 mm, #52, I3P(G31)
175819 DÜSE, IR HINTEN, 1,51 mm, #53, I3B/P(G30)
175768 DÜSE, UNTERER BRENNER, 1,70 mm, #51, I3B/P(G30)
175737 DÜSE, UNTERER BRENNER, 1,85 mm, #49, 13P(G31)
176388 DÜSE, UNTERER BRENNER, 2,00 mm, I3P(G31)
176522 DÜSE, UNTERER BRENNER, 1,75 mm

11. Die untere Zündvorrichtung (1) und die oberen Zündvorrichtungen (2) austauschen. Die Funkenstrecke sollte etwa 3,2 mm (1/8”) betragen. Wenn alte Zündvorrichtungen in einem akzeptablen Zustand sind, können sie für Notfälle im Restaurant aufbewahrt werden.
12. Den unteren Flammenfühler (1) und die oberen Flammenfühler (2) austauschen. Wenn alte Flammenfühler in einem akzeptablen Zustand sind, können sie für Notfälle im Restaurant aufbewahrt werden.
13. Die Flammenfühlerröhren (3) mit dem beigefügten Bürstenwerkzeug reinigen, um unerwünschte Rückstände zu entfernen.
14. Das untere Zündkabel (1) und die oberen Zündkabel (2) auf Schäden prüfen. Die Massenschlussklemmen gegebenenfalls reinigen.
15. Den Temperaturfühler mit den beigefügten Alkoholpads und dem Scheuerpad reinigen.
16. Die Temperaturfühlerröhre mit dem beigefügten Bürstenwerkzeug reinigen, um unerwünschte Rückstände zu entfernen.
17. Die Kochkette auf beschädigte Glieder prüfen. Es gibt keine Hauptglieder. Einzelne Glieder können ausgetauscht oder in Position zurückgebogen werden.
18. Die Antriebskette auf ordnungsgemäße Spannung prüfen. Die Durchbiegung der Antriebskette sollte etwa 4,8 mm (3/16”) betragen. Die Antriebsritzel auf Verschleiß prüfen.
19. Sicherstellen, dass der Antriebsmotor fest montiert ist. Kabelverbindungen gegebenenfalls mit dem von Duke empfohlenen Reiniger säubern. Informationen über den Reinigertyp und Vertriebshändler vor Ort können über die folgende Website bezogen werden (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx). (Reiniger nicht direkt auf frei liegende Motorwicklungen oder das Getriebe sprühen.)
20. Die Teflonhülsenblöcke (4) auf ungewöhnlichen Verschleiß prüfen.
21. Jede Ansammlung von Fett im gesamten elektrischen Bedienfach mit einem Scheuerpad und dem von Duke empfohlenen Reiniger säubern. Informationen über den Reinigertyp und Vertriebshändler vor Ort können über die folgende Website bezogen werden (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx). Siehe die mitgelieferten Reinigungsanweisungen (175116).
22. Sicherstellen, dass alle Kabelverbindungen fest sitzen.
23. Bestätigen, dass das Fehlerbehebungs-Schild am Bedienfach angebracht ist.

FUNKTIONSPRÜFUNG

Sämtliche Schritte in diesem Abschnitt können während des Vorheizzyklus durchgeführt werden. Der Bratrost und die Gaszufuhr müssen kurz ausgeschaltet werden, wenn die Messgeräte zur Messung des Gasdrucks angeschlossen werden.

1. Bratrost durch Vorheizzyklus laufen lassen.
2. Ordnungsgemäßen Eingangs-Gasdruck bestätigen (siehe Servicehandbuch, falls außerhalb von USA, Kanada, oder Mexiko):
   a. Erdgas 178 - 305 mmH2O
   b. Propan 254 - 305 mmH2O
3. Ordnungsgemäßen Gasdruck zum unteren Brenner bestätigen:
   a. Erdgas 95 mmH2O
   b. Propan 203 mmH2O
4. Ordnungsgemäßen Gasdruck zu oberen IR-Brennern bestätigen
   a. Erdgas 95 mmH2O
   b. Propan 203 mmH2O
5. Erscheinungsbild der IR-Brenner prüfen. Bei ausreichender Hitze sollten IR-Brenner wie in Abb. 1 unten aussehen. Bei einem verstellten IR-Brenner können blaue oder orangefarbene Flammen aus der Plattenoberfläche schießen oder Anzeichen von Blau um den Brennerrand herum sichtbar werden. IR-Brenner können durch die Reinigung des Luftfilters und des Gebläsemotors im vorherigen Abschnitt sogar vollständig verstellt werden, was dazu führen kann, dass der IR
6. Brenner nicht zündet. Wenn festgestellt wird, dass eine Einstellung erforderlich ist, gehen Sie wie folgt vor.
   - Die Luftregulierungsschrauben im oberen Bereich des Bedienfachs ausfindig machen.
   - Die Feststellmuttern für beide IR-Brenner lösen.
   - Beide Schrauben gleichzeitig um eine Viertelumdrehung (im Uhrzeigersinn, um Luftzufuhr zu drosseln) drehen, bis unter jeder der IR-Brennerflächen eine gleichmäßig blaue Flamme oder Lufttrübung erkennbar ist.
   - Die Schrauben gleichzeitig um eine Viertelumdrehung (gegen den Uhrzeigersinn, um Luftzufuhr zu steigern) herausdrehen, bis die blaue Flamme oder Lufttrübung gerade verschwindet.
   - Die Schrauben um eine zusätzliche Viertelumdrehung herausdrehen.
   - Die Feststellmuttern festziehen und gleichzeitig sicherstellen, dass die Schrauben in Position bleiben.
   -

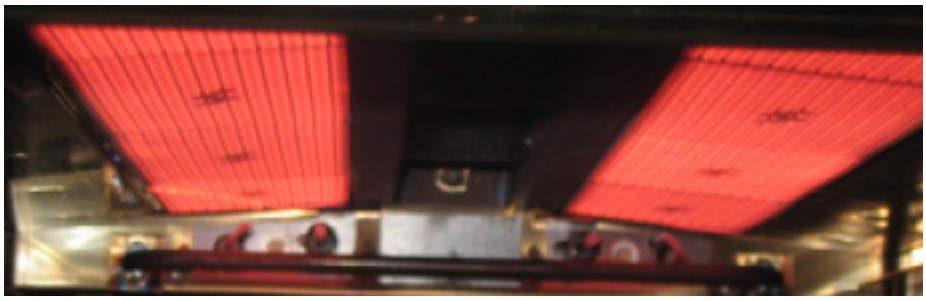


FIG. 1

7. Ordnungsgemäße Stromstärke für Flammenfühler sicherstellen (unteres Modul)
   a. Mehr als 0,7 µA Gleichstrom
      i. S1 = FC (gemessen an FC-Klemmen)
      ii. (Optimaler Bereich im Heißzustand ist 1,5 µA - 6 µA)
8. Ordnungsgemäße Stromstärke für Flammenfühler sicherstellen (oberes Modul)
   a. Mehr als 0,7 µA Gleichstrom
      i. S1 = FC1, S2 = FC2 (gemessen an den Klemmen FC1 and FC2)
      ii. (Optimaler Bereich im Heißzustand ist 1,5 µA - 6 µA)
9. Alle Gelenke, Verbindungen und Klemmringverschraubungen (innen und außen) auf Gasaustritt prüfen.
10. Gasschlauch und Schnelltrennkupplung auf Gasaustritt/Schäden überprüfen.
11. Sicherstellen, dass alle Bedienfunktionen ordnungsgemäß arbeiten:
    a. Funktion der Tasten
    b. Zugriff auf alle vier Programmiermodi
       i. Codes (ENTER-Taste gedrückt halten, um „CODE“ anzuzeigen, mit ENTER die Programmierung fortsetzen)
          1. Globale Parameter – (3645)
          2. Kochrezepte – (1827)
          3. Koch- und Fehlerzähler – (1234)
          4. Diagnose – (3424)
    c. Zugriff auf Feineinstellungsmodus
       i. Zum Zugriffe NACH OBEN- und NACH UNTEN-Pfeil gleichzeitig drücken.
    d. Kochleuchte funktioniert ordnungsgemäß.
12. Entladungsfunktion und reibungslosen Betrieb überprüfen.
    a. Im Modus „RDY“ mehrere Male „Discharge“ wählen.
    b. Ist der Modus „RDY“ nicht aktiv, Diagnosemodus starten und Antriebsmotor laufen lassen. (Pfeil-NACH-UNTEN) **(Antriebsmotor jeweils nicht länger als 6 Sekunden laufen lassen.)**
13. Compruebe el cargador, la bandeja del cargador, el soporte del cargador y la rampa del cargador para ver si la operación de carga es suave.
14. Se recomienda limpiar mensualmente los detectores de llamas. Revise mensualmente la limpieza de los sensores de llamas y proporcione el cepillo suministrado al gerente del restaurante.

Prüfliste an Manager übergeben und Bereiche erläutern, die sofortiger und zukünftiger Aufmerksamkeit bedürfen.

PRÜFLISTE FÜR DIE VOLLSTÄNDIGE WARTUNG FBB (FLEXIBLER CHARGEN-BRATROST)

Restaurant-Nummer:	Modell:
Adresse:	Seriennummer:
	PM-Datum:
Ort:	Wartungsunternehmen:
Bundesland:	Name des Technikers:
Postleitzahl:	Wartungsunternehmen - Telefon:

HIER AUFREISSEN

GEPRÜFT UND IN ORDNUNG

IN ZUKUNFT U. U. AUFMERKSAMKEIT ERFORDERLICH

UNVERZÜGLICHER AUSTAUSCH ERFORDERLICH

ÜBERPRÜFUNG DER KOMPONENTEN

☐	☐	☐	1	Netzkabel und Stecker prüfen				
☐	☐	☐	2	Katalysator prüfen (falls zutreffend). Über die ordnungsgemäße Pflege instruieren.				
☐	☐	☐	3	Alle Platten und abnehmbaren Teile prüfen und sicherstellen, dass die Laufrollen fest sitzen				
☐	☐	☐	4	Unteren Brenner / alle unteren Reservebrenner prüfen				
☐	☐	☐	5	Flammensperre / alle Reserveflammensperren prüfen				
☐	☐	☐	6	Schlauch des Gebläsemotors prüfen und reinigen (mit dem von Duke empfohlenen Reiniger)				
☐	☐	☐	7	Motor austauschen				
☐	☐	☐	8	Abdeckung der Luftregulierung abnehmen und prüfen. Kegel, Bolzen und IR-Brennereinlässe reinigen				
☐	☐	☐	9	IR-Brennerdüsen / Halter austauschen a) Düsengrößen siehe Anweisungen	Größe der VORDEREN IR-Brennerdüse:		Größe der HINTEREN IR-Brennerdüse:	
☐	☐	☐	10	Untere Brennerdüse austauschen a) Düsengrößen siehe Anweisungen	Größe der UNTEREN Düse:			
☐	☐	☐	11	Untere (1) und obere (2) Zündvorrichtungen austauschen				
☐	☐	☐	12	Untere (1) und obere (2) Flammenfühler austauschen				
☐	☐	☐	13	Flammenfühlerröhren mit Bürste reinigen (mit mitgelieferter Bürste)				
☐	☐	☐	14	Untere (1) und obere (2) Zündkabel prüfen und reinigen				
☐	☐	☐	15	Temperaturfühler reinigen (mit den beigefügten Alkoholpads und dem Scheuerpad)				
☐	☐	☐	16	Temperaturfühlerröhre reinigen (mit mitgelieferter Bürste)				
☐	☐	☐	17	Kochkette auf beschädigte Glieder prüfen				
☐	☐	☐	18	Antriebskette und Antriebsritzel prüfen				
☐	☐	☐	19	Antriebsmotor prüfen. Kabelverbindungen reinigen (mit dem von Duke empfohlenen Reiniger)				
☐	☐	☐	20	Teflonhülsenblöcke (4) auf Verschleiß prüfen				
☐	☐	☐	21	Jede Ansammlung von Fett im elektrischen Bedienfach einschließlich der Kabelverbindungen reinigen (mit einem Scheuerpad und dem von Duke empfohlenen Reiniger)				
☐	☐	☐	22	Sicherstellen, dass alle Kabelverbindungen fest sitzen				
☐	☐	☐	23	Bestätigen, dass das Fehlerbehebungs-Schild am Bedienfach angebracht ist				

GEPRÜFT UND IN ORDNUNG

IN ZUKUNFT U. U. AUFMERKSAMKEIT ERFORDERLICH

UNVERZÜGLICHER AUSTAUSCH ERFORDERLICH

FUNKTIONSPRÜFUNG

☐	☐	☐	1	Bratrost durch Vorheizzyklus laufen lassen			
☐	☐	☐	2	Ordnungsgemäßen Eingangs-Gasdruck bestätigen a) Siehe Anweisungen	Messwert nach allen Einstellungen:		mmH2O mbar”
☐	☐	☐	3	Ordnungsgemäßen Gasdruck zum unteren Brenner bestätigen a) Siehe Anweisungen	Messwert nach allen Einstellungen:		mmH2O mbar”
☐	☐	☐	4	Ordnungsgemäßen Gasdruck zu oberen IR-Brennern bestätigen a) Siehe Anweisungen	Messwert nach allen Einstellungen:		mmH2O mbar”
☐	☐	☐	5	Erscheinungsbild der IR-Brenner prüfen (ordnungsgemäße Luftregulierung vornehmen)			
☐	☐	☐	6	Ordnungsgemäße Stromstärke für Flammenfühler sicherstellen (unteres Modul) a) Mehr als 0,7 µA Gleichstrom (S1) b) Optimaler Bereich im Heißzustand ist 1,5 µA - 6 µA Gleichstrom	UNTERER Flammenfühler Messwert:		µA
☐	☐	☐	7	Ordnungsgemäße Stromstärke für Flammenfühler sicherstellen (oberes Modul) a) Mehr als 0,7 µA Gleichstrom (S1 und S2) b) Optimaler Bereich im Heißzustand ist 1,5 µA - 6 µA Gleichstrom	VORDERER Flammenfühler Messwert:		µA
					HINTERER Flammenfühler Messwert:		µA
☐	☐	☐	8	Alle Gelenke, Verbindungen und Klemmringverschraubungen auf Gasaustritt prüfen			
☐	☐	☐	9	Gasschlauch und Schnelltrennkupplung auf Gasaustritt/Schäden überprüfen			
☐	☐	☐	10	Sicherstellen, dass alle Bedienfunktionen ordnungsgemäß arbeiten a) Funktion der Tasten b) Zugriff auf alle vier Programmiermodi c) Zugriff auf Feineinstellungsmodus d) Sicherstellen, dass die Kochleuchte funktioniert			
☐	☐	☐	11	Vérifier la fonction d’éjection et la régularité de fonctionnement			
☐	☐	☐	12	Vérifier le fonctionnement régulier du système, du plateau, du support et de la rampe de chargement			
☐	☐	☐	13	S’assurer du nettoyage mensuel des détecteurs de flamme et fournir la brosse prévue à cet effet au gérant du restaurant			

Anmerkungen:

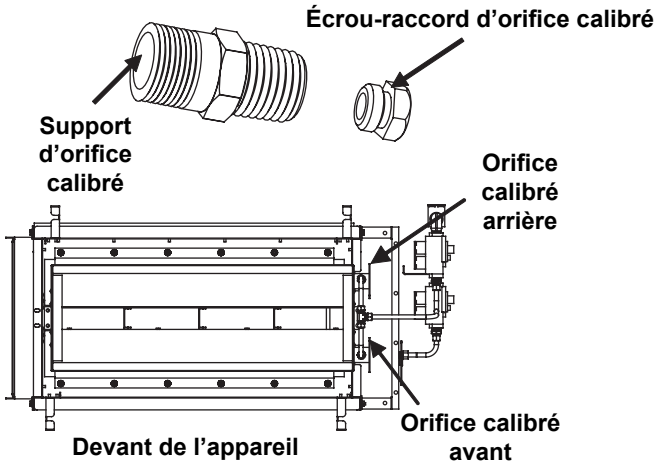
Unterschrift des Technikers: Unterschrift des Managers:

HIER AUFREISSEN

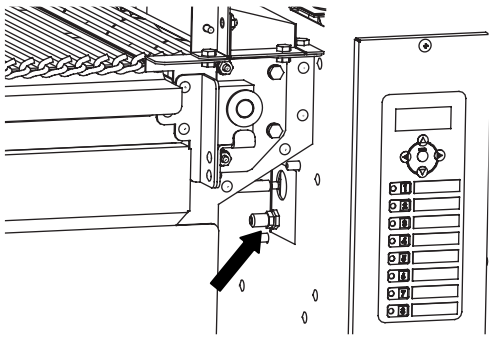
Avant d'effectuer les opérations qui suivent, s'assurer que la rôtissoire est hors tension et débranchée de l'alimentation électrique. Couper l'arrivée de gaz de la rôtissoire.

VÉRIFICATION DES ÉLÉMENTS

1. Examiner le cordon d'alimentation pour voir si sa gaine ou sa fiche est endommagé.
2. (Le cas échéant) Examiner le catalyseur pour voir si son usure est inhabituelle. Inviter le client à effectuer l'entretien correct.
3. Examiner les panneaux et toutes les autres pièces amovibles pour voir s'ils sont endommagés, ce qui pourrait empêcher la rôtissoire de fonctionner correctement. Examiner les roulettes et les serrer dans les pieds.
4. Examiner le brûleur inférieur (et tout brûleur de rechange dans le restaurant) pour voir s'il est endommagé. On peut se servir d'un trombone pour dégager les orifices du brûleur selon le besoin. S'il est impossible de bien nettoyer le brûleur inférieur, Duke recommande d'en acheter un neuf.
5. Examiner le pare-flammes (et tout pare-flammes de rechange dans le restaurant) pour voir s'il est usé. Un pare-flammes qui a été mal nettoyé peut présenter des signes de détérioration (marques de brûlure sur l'acier perforé). Si le pare-flammes est trop détérioré pour être nettoyable, Duke recommande d'en acheter un neuf.
6. Examiner le flexible du moteur de soufflante pour voir s'il est perforé ou autrement endommagé. Si nécessaire, le nettoyer à l'aide du produit recommandé par Duke. On peut obtenir des renseignements sur le type de nettoyant à employer et le distributeur local sur le site Web suivant : http://www.chemtronics.com/p-746-electro-wash-nxo.aspx.
7. Remplacer le moteur de soufflante.
8. Enlever le couvercle de boîte à air puis en nettoyer l'intérieur et les cônes de réglage d'air avec un tampon à récurer et un nettoyant recommandé par Duke. On peut obtenir des renseignements sur le type de nettoyant à employer et le distributeur local sur le site Web suivant : http://www.chemtronics.com/p-746-electro-wash-nxo.aspx.
9. Retirer et remplacer les deux orifices calibrés de brûleur IR et leurs supports. Un orifice calibré doit être serré sur son support à un couple de 2,3 Nm (20 lb-po). S'assurer que les orifices avant et arrière sont dans la position correcte lors de leur remise en place. Voir le tableau ci-dessous.



10. Retirer et remplacer l'orifice calibré de brûleur inférieur. Serrer l'orifice à 6,7 N.m (60 lb-po). Voir le tableau ci-dessous.



Gaz naturel
175814 ORIFICE CALIBRÉ, BRÛLEUR IR AVANT , 2,35 mm, G-12H/12E(G20) et I2L(G25)
175735 ORIFICE CALIBRÉ, BRÛLEUR IR AVANT, 2,49 mm, #40, BRÛLEUR--SPÉC. SO
175815 ORIFICE CALIBRÉ, BRÛLEUR IR ARRIÈRE , 2,50 mm, G-12H/12E(G20) et I2L(G25)
175736 ORIFICE CALIBRÉ, BRÛLEUR IR ARRIÈRE, 2,70 mm, #36, BRÛLEUR BLEU--SPÉC. SO
175823 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 3,05 mm, #31, 12H/12E(G20) et I2L(G25)
175935 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 3,26 mm, 12H/12E(G20), I2L(G25) HA
176387 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 3,45 mm, #29, 12H/12E(G20) et I2L(G25)

Gaz propane
175818 ORIFICE CALIBRÉ, BRÛLEUR IR AVANT, 1,40 mm, #54, I3B/P(G30)
175816 ORIFICE CALIBRÉ, BRÛLEUR IR AVANT, 1,55 mm, I3P(G31)
175817 ORIFICE CALIBRÉ, BRÛLEUR IR ARRIÈRE, 1,61 mm, #52, I3P(G31)
175819 ORIFICE CALIBRÉ, BRÛLEUR IR ARRIÈRE, 1,51 mm, #53, I3B/P(G30)
175768 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 1,70 mm, #51, I3B/P(G30)
175737 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 1,85 mm, #49, I3P(G31)
176388 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 2,00 mm, I3P(G31)
176522 ORIFICE CALIBRÉ, BRÛLEUR INFÉRIEUR, 1,75 mm

11. Remplacer (1) l'allumeur inférieur et (2) les allumeurs supérieurs. L'intervalle d'étincelle doit mesurer 3 mm (1/8 po) environ. Si les anciens allumeurs sont dans un état raisonnablement bon, il peuvent être conservés dans le restaurant pour les cas d'urgence.
12. Remplacer (1) le détecteur de flamme inférieur et (2) les détecteurs de flamme supérieurs. Si les anciens détecteurs de flamme sont dans un état raisonnablement bon, il peuvent être conservés dans le restaurant pour les cas d'urgence.
13. Nettoyer (3) les tubes des détecteurs de flamme avec la brosse fournie pour en enlever tous les débris indésirables.
14. Examiner (1) le câble d'allumage inférieur et (2) les câbles d'allumage supérieurs pour voir s'ils sont endommagés. Nettoyer les bornes de contact si nécessaire.
15. Nettoyer la sonde de température avec les tampons imbibés d'alcool et le tampon nettoyant fournis.
16. Nettoyer la sonde de température avec la brosse fournie pour en enlever tous les débris indésirables.
17. Examiner la chaîne de cuisson pour voir si des maillons sont endommagés. Il n'y a aucun chaînon. Il est possible de remplacer les maillons individuels ou de les détordre pour les remettre en position.
18. Examiner la chaîne d'entraînement pour voir si elle est tendue correctement. Sa flexion doit être de 9 mm (3/16 po) environ. Examiner les pignons d'entraînement pour voir s'ils sont usés.
19. S'assurer que le moteur d'entraînement est monté solidement. Si nécessaire, nettoyer les connexions électriques à l'aide du nettoyant recommandé par Duke. On peut obtenir des renseignements sur le type de nettoyant à employer et le distributeur local sur le site Web suivant : http://www.chemtronics.com/p-746-electro-wash-nxo.aspx. (Éviter de pulvériser du nettoyant directement sur tout bobinage ou boîte d'engrenages à découvert du moteur électrique.)
20. Examiner (4) les blocs de douilles en téflon pour voir si leur usure est inhabituelle.
21. Enlever toute accumulation de graisse dans l'ensemble du compartiment de commande électrique avec un tampon nettoyant et le nettoyant recommandé par Duke. On peut obtenir des renseignements sur le type de nettoyant à employer et le distributeur local sur le site Web suivant : http://www.chemtronics.com/p-746-electro-wash-nxo.aspx. Voir les instructions de nettoyage données (175116).
22. S'assurer que toutes les connexions électriques sont bien en place.
23. Vérifier que l'autocollant de dépannage est en place sur le compartiment de commande.

VÉRIFICATION DU FONCTIONNEMENT

Toutes les opérations décrites dans cette section peuvent être effectuées pendant le cycle de préchauffage. Mettre la rôtissoire et l'alimentation brièvement hors tension lors du raccordement des manomètres pour mesurer la pression de gaz.

1. Exécuter le cycle de préchauffage dans la rôtissoire.
2. S'assurer que la pression d'arrivée du gaz est correcte (en dehors des Etats-Unis, du Canada et du Mexique, consulter le manuel d'entretien).
   a. Gaz naturel 7 – 12 po à la colonne d'eau.
   b. Propane 10 – 12 po à la colonne d'eau.
3. Vérifier que la pression d'alimentation en gaz du brûleur inférieur est correcte :
   a. Gaz naturel 3,75 po à la colonne d'eau
   b. Propane 8 po à la colonne d'eau
4. Vérifier que la pression d'alimentation en gaz des brûleurs IR supérieurs est correcte
   a. Gaz naturel 3,75 po à la colonne d'eau
   b. Propane 8 po à la colonne d'eau
5. Contrôler l'aspect des brûleurs IR. Lorsqu'ils sont suffisamment chauds, les brûleurs IR doivent se présenter comme sur la Fig. 1 ci-dessous.
6. Lorsqu'un brûleur IR est déréglé, des flammes bleues ou oranges instables peuvent sortir de la plaque ou des reflets bleus peuvent apparaître autour du brûleur. L'air peut même être complètement déréglé dans les brûleurs IR après le nettoyage de la boîte à air et du moteur de soufflante décrit dans la section précédente, ce qui peut empêcher l'allumage des brûleurs. Si on détermine qu'un réglage s'avère nécessaire, procéder comme suit.
   - Repérer les vis de réglage d'air dans la partie supérieur du compartiment de commande.
   - Desserrer les écrous de blocage des brûleurs IR.
   - Serrer les deux vis (sens horaire, réduction de l'air) de 1/4 de tour à la fois jusqu'à ce qu'on observe une flamme ou aura uniformément bleue en dessous de la surface de chaque brûleur infrarouge.
   - Desserrer les vis (sens antihoraire, augmentation de l'air) de 1/4 de tour à la fois jusqu'à ce que la flamme ou aura bleue vienne de disparaître.
   - Serrer les vis de 1/4 de tour de plus.
   - Resserrer les écrous de blocage tout en veillant à ce que les vis restent en position.

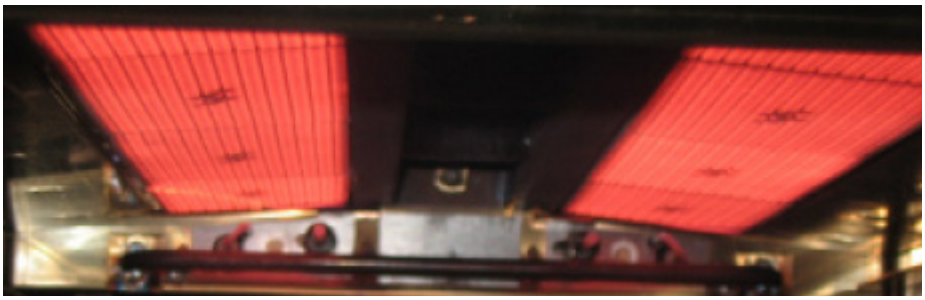


FIG. 1

7. Vérifier que l'intensité de détection de flamme est correcte (module inférieur)
    a. Supérieure à 0,7µA c.c.
        i. S1 = FC (mesuré aux bornes FC)
        ii. (la plage optimale lorsque chaud est de 1,5 à 6 µA)
8. Vérifier que l'intensité de détection de flamme est correcte (module supérieur)
    a. Supérieure à 0,7 ìA c.c.
        i. S1 = FC1, S2 = FC2 (mesuré aux bornes FC1 et FC2)
        ii. ii. (la plage optimale lorsque chaud est de 1,5 à 6 ìA)
9. Contrôler l'étanchéité de l'ensemble des jointures, raccords-union et raccord universels (intérieurs et extérieurs).
10. Vérifier le tuyau de gaz et son raccord rapide pour voir s'ils fuient ou sont endommagés.
11. S'assurer que toutes les commandes fonctionnent correctement :
    a. Fonctions des touches
    b. Accès aux 4 modes de programmation
        i. Codes (appuyer sans la relâcher sur la touche ENTER (entrée) pour afficher « CODE » et l'utiliser pour effectuer les étapes de programmation)
            1. Paramètres globaux – (3645)
            2. Recettes de cuisine – (1827)
            3. Cuisson et décompte d'incidents – (1234)
            4. Diagnostic – (3424)
    c. Accès au mode de réglage fin
        i. Appuyer en même temps sans les relâcher sur les touches fléchées VERS LE HAUT et VERS LE BAS pour obtenir l'accès.
    d. Fonctionnement correct du témoin de cuisson.
12. Vérifier la fonction d'éjection et la régularité de fonctionnement
    a. Si on est en mode « RDY » (prêt), sélectionner « Discharge » (éjection) à plusieurs reprises.
    b. b. Si on n'est pas en mode « RDY », passer en mode Diagnostic et faire fonctionner le moteur d'entraînement (touche fléchée VERS LE BAS) **(ne pas faire fonctionner le moteur d'entraînement pendant plus de 6 secondes à la fois)**
13. Vérifier le fonctionnement régulier du système, du plateau, du support et de la rampe de chargement.
14. Il est recommandé de nettoyer les détecteurs de flamme sur une base mensuelle. S'assurer du nettoyage mensuel des détecteurs de flamme et fournir la brosse prévue à cet effet au gérant du restaurant.

Présenter une liste de vérifications au gérant et indiquer ce qui pourrait demander une attention immédiate ou future.

LISTE DE VÉRIFICATIONS COMPLÈTE DES PERFORMANCES
RÔTISSOIRE À FOURNÉES FLEXIBLES

Numéro du restaurant :	Modèle :
Adresse :	Numéro de série :
	Date vérif. perm. :
Ville :	Société de réparation :
Province :	Nom du technicien :
Code postal :	N° tél. soc. répar. :

DÉCHIRER ICI

CONTRÔLÉ ET OK

POURRAIT EXIGER L'ATTENTION À L'AVENIR

EXIGE UN REMPLACEMENT IMMÉDIAT

VÉRIFICATION DES ÉLÉMENTS

☐	☐	☐	1	Examiner le cordon d'alimentation et sa fiche				
☐	☐	☐	2	Examiner le catalyseur (le cas échéant). Inviter à effectuer l'entretien correct.				
☐	☐	☐	3	Examiner tous les panneaux et pièces amovibles, et s'assurer que les roulettes sont solidement en place.				
☐	☐	☐	4	Examiner le brûleur inférieur et tout brûleur inférieur de rechange				
☐	☐	☐	5	Examiner le pare-flammes et tout pare-flammes de rechange				
☐	☐	☐	6	Examiner et nettoyer le flexible de moteur de soufflante (avec le nettoyant recommandé par Duke)				
☐	☐	☐	7	Remplacer le moteur				
☐	☐	☐	8	Retirer et contrôler le couvercle de réglage d'air. Nettoyer les cônes, boulons et entrées de brûleurs IR				
☐	☐	☐	9	Remplacer les orifices calibrés / support des brûleurs IR a) Voir les instructions pour les tailles d'orifices calibrés	Taille d'orifice calibré de brûleur IR AVANT :		Taille d'orifice calibré de brûleur IR ARRIÈRE :	
☐	☐	☐	10	Remplacer l'orifice calibré de brûleur inférieur a) Voir les instructions pour les tailles d'orifices calibrés	Taille d'orifice calibré de brûleur INFÉRIEUR			
☐	☐	☐	11	Remplacer (1) l'allumeur inférieur et (2) les allumeurs supérieurs				
☐	☐	☐	12	Remplacer les détecteurs de flamme (1) inférieur et (2) supérieurs				
☐	☐	☐	13	Nettoyer les tubes de détecteurs de flamme avec une brosse (fournie)				
☐	☐	☐	14	Examiner et nettoyer les câbles d'allumeur (1) inférieur et (2) supérieurs				
☐	☐	☐	15	Nettoyer la sonde de température (avec les tampons imbibés d'alcool et le tampon nettoyant fournis)				
☐	☐	☐	16	Nettoyer le tube de sonde de température (avec la brosse fournie)				
☐	☐	☐	17	Examiner la chaîne de cuisson pour voir si des maillons sont endommagés				
☐	☐	☐	18	Examiner la chaîne et les pignons d'entraînement				
☐	☐	☐	19	Examiner le moteur d'entraînement. Nettoyer les connexions électriques (avec du nettoyant recommandé par Duke)				
☐	☐	☐	20	Examiner (4) les blocs de douilles en téflon pour voir s'ils sont usés				
☐	☐	☐	21	Enlever toute graisse accumulée dans le compartiment de commande électrique, y compris sur les connexions électriques (avec du nettoyant recommandé par Duke)				
☐	☐	☐	22	S'assurer que toutes les connexions électriques sont bien en place				
☐	☐	☐	23	Vérifier que l'autocollant de dépannage est en place sur le compartiment de commande				

CONTRÔLÉ ET OK

POURRAIT EXIGER L'ATTENTION À L'AVENIR

EXIGE UN REMPLACEMENT IMMÉDIAT

VÉRIFICATION DU FONCTIONNEMENT

☐	☐	☐	1	Exécuter le cycle de préchauffage dans la rôtissoire		
☐	☐	☐	2	Confirm proper inlet gas supply pressure a) Refer to Instructions	Mesure après tout réglage :	po à la colonne d'eau, mbar
☐	☐	☐	3	Confirm proper gas pressure to Lower Burner a) Refer to Instructions	Mesure après tout réglage :	po à la colonne d'eau, mbar
☐	☐	☐	4	Confirm proper gas pressure to Upper IR Burners a) Refer to Instructions	Mesure après tout réglage :	po à la colonne d'eau, mbar
☐	☐	☐	5	Contrôler l'aspect des brûleurs IR (effectuer le réglage d'air correct)		
☐	☐	☐	6	Vérifier que l'intensité de détection de flamme est correcte (module inférieur) a) Supérieure à 0,7 ìA c.c. (S1) b) Plage optimale quand chaud : 1,5 à 6 ìA c.c.	LOWER Flame Sense Measurement:	µA
☐	☐	☐	7	Vérifier que l'intensité de détection de flamme est correcte (module supérieur) a) Supérieure à 0,7 ìA c.c. (S1 et S2) b) Plage optimale quand chaud : 1,5 à 6 ìA c.c.	FRONT Flame Sense Measurement: REAR Flame Sense Measurement:	µA µA
☐	☐	☐	8	Contrôler l'étanchéité de l'ensemble des jointures, raccords-union et raccords universels		
☐	☐	☐	9	Vérifier le tuyau de gaz et son raccord rapide pour voir s'ils fuient ou sont endommagés		
☐	☐	☐	10	S'assurer que toutes les commandes fonctionnent correctement a) Fonctions des touches b) Accès aux 4 modes de programmation c) Accès au mode de réglage fin d) Vérification du fonctionnement du témoin de cuisson		
☐	☐	☐	11	Vérifier la fonction d'éjection et la régularité de fonctionnement		
☐	☐	☐	12	Vérifier le fonctionnement régulier du système, du plateau, du support et de la rampe de chargement		
☐	☐	☐	13	S'assurer du nettoyage mensuel des détecteurs de flamme et fournir la brosse prévue à cet effet au gérant du restaurant		

Observations

Signature du technicien :

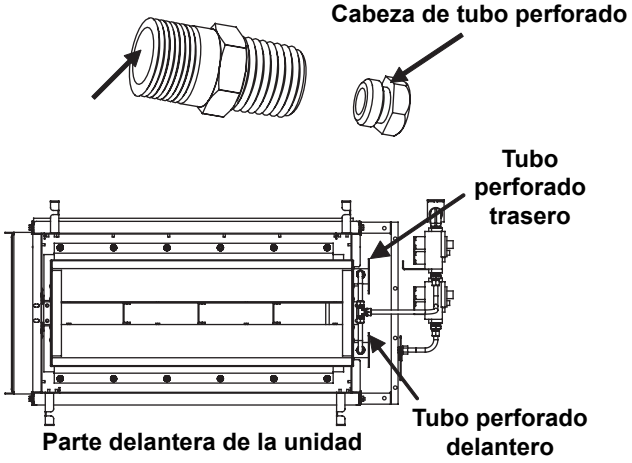
Signature du gérant :

DÉCHIRER ICI

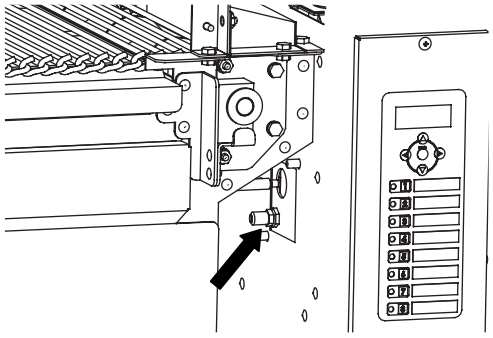
Antes de efectuar los pasos siguientes, asegúrese de que el asador esté apagado y completamente desconectado de la corriente. Corte el suministro de gas al asador.

COMPROBACIÓN DE COMPONENTES

1. Inspeccione el cordón de alimentación para ver si el aislamientos o el enchufe está dañado.
2. (Si corresponde) Inspeccione el catalizador para ver si hay un desgaste que no sea común. Indique al cliente cómo efectuar los cuidados apropiados.
3. Inspeccione los paneles y las demás piezas desmontables para ver si tienen daños que puedan inhibir la operación correcta del asador. Inspeccione y apriete las ruedas en las patas.
4. Inspeccione el quemador inferior (y cualquier quemador de repuesto en el restaurante) para ver si tiene daños. Se puede usar un sujetapapeles para quitar los depósitos acumulados en los orificios del quemador. Si no se puede limpiar esto de manera efectiva, Duke recomienda la compra de un nuevo quemador inferior.
5. Inspeccione el apagallamas (y cualquier apagallamas de repuesto del restaurante) para ver si está desgastado. Un apagallamas que no se haya limpiado debidamente puede mostrar indicios de deterioro (quemaduras de perforación del acero inoxidable). Si el apagallamas está deteriorado de forma que no se pueda limpiar, Duke recomienda la compra de un apagallamas nuevo.
6. Inspeccione la manguera del motor del soplador para ver si tiene perforaciones u otros daños. Si es necesario, limpie con el limpiador recomendado por Duke. La información sobre el tipo de limpiador y el distribuidor local puede obtenerse accediendo al siguiente sitio web (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
7. Reemplace el motor del soplador.
8. Quite la tapa de la caja de aire y limpie el interior de la tapa y de los conos de ajuste de aire con un estropajo y el limpiador recomendado por Duke. La información sobre el tipo de limpiador y el distribuidor local puede obtenerse accediendo al siguiente sitio web (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx).
9. Quite y reemplace ambos tubos perforados y retenedores de los quemadores de rayos infrarrojos. El par de apriete especificado del tubo perforado es de 20 lb-pulg (2.3 Nm). Asegúrese de la ubicación correcta delantera y trasera al volver a instalar. Vea la tabla de abajo.



10. Quite y reemplace el tubo perforado del quemador inferior. Apriete el tubo perforado a 60 lb-pulg (6.7 Nm) Vea la tabla de abajo.



Gas natural
175814 TUBO PERFORADO DELANTERO DE RI, 2.35 mm, G I2H/I2E(G20) Y I2L(G25)
175735 TUBO PERFORADO DELANTERO DE RI, 2.49 mm, No. 40, QUEMADOR--ESPEC SO
175815 TUBO PERFORADO TRASERO DE RI, 2.50 mm, G I2H/I2E(G20) Y I2L(G25)
175736 TUBO PERFORADO TRASERO DE RI, 2.70mm, No. 36, QUEMADOR AZUL--ESPEC SO
175823 TUBO PERFORADO INFERIOR, 3.05 mm, NO. 31, I2H/I2E(G20) Y I2L(G25)
175935 TUBO PERFORADO INFERIOR, 3.26 mm, I2H/I2E(G20) Y I2L(G25) HA
176387 TUBO PERFORADO INFERIOR, 3.45 mm, no. 29, I2H/I2E(G20) Y I2L(G25)

Gas propano
175818 TUBO PERFORADO DELANTERO DE RI, 1.40mm, No. 54, 13B/P(G30)
175816 TUBO PERFORADO DELANTERO DE RI, 1.55 mm, I3P(G31)
175817 TUBO PERFORADO TRASERO DE RI, 1.61 mm, NO. 52, I3P(G31)
175819 TUBO PERFORADO TRASERO DE RI, 1.51 mm, NO. 53, I3B/P(G30)
175768 TUBO PERFORADO DEL QUEMADOR INFERIOR, 1.70 mm, NO. 51, I3B/P(G30)
175737 TUBO PERFORADO DEL QUEMADOR INFERIOR, 1.85 mm, NO. 49, I3P(G31)
176388 TUBO PERFORADO DEL QUEMADOR INFERIOR, 2.00 mm, I3P(G31)
176522 TUBO PERFORADO DEL QUEMADOR INFERIOR, 1.75

11. Reemplace el (1) encendedor inferior y los (2) encendedores superiores. La distancia entre electrodos debe ser de aproximadamente 1/8”. Si los encendedores usados están en condiciones razonablemente aceptables, pueden dejarse en el restaurante para casos de emergencia.
12. Reemplace el (1) sensor de llamas inferior y los (2) sensores de llamas superiores. Si los sensores de llamas usados están en condiciones razonablemente aceptables, pueden dejarse en el restaurante para casos de emergencia.
13. Limpie los tubos de los sensores de llamas (3) con una herramienta para cepillos suministrada a fin de quitar los residuos no deseados.
14. Inspeccione (1) el cable de encendido inferior y (2) los cables de encendido superiores para ver si están dañados. Limpie los terminales de contacto si es necesario.
15. Limpie la sonda de temperatura con algodones empapados en alcohol y un estropajo.
16. Limpie el tubo de la sonda de temperatura con una herramienta para cepillos suministrada a fin de quitar los residuos no deseados.
17. Inspeccione la cadena de cocción para ver si hay eslabones dañados. No hay eslabones principales. Los eslabones individuales se pueden reemplazar o doblar hacia atrás hasta colocarse.
18. Inspeccione la cadena de impulsión para ver si está a la tensión apropiada. La comba de la cadena de impulsión debe ser de aproximadamente 3/16”. Inspeccione las ruedas motrices dentadas para ver si están desgastadas.
19. Asegúrese de que el motor de impulsión esté bien montado. Si es necesario, limpie las conexiones de cables con el limpiador suministrado. La información sobre el tipo de limpiador y el distribuidor local puede obtenerse accediendo al siguiente sitio web (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx). (No rocíe directamente el limpiador en ningún devanado de motor eléctrico expuesto o caja de engranajes)
20. Inspeccione los (4) bloques de bujes de Teflon para ver si tienen un desgaste poco inusual.
21. Limpie la grasa acumulada en todo el compartimiento de control eléctrico con el estropajo y el limpiador recomendado por Duke. La información sobre el tipo de limpiador y el distribuidor local puede obtenerse accediendo al siguiente sitio web (http://www.chemtronics.com/p-746-electro-wash-nxo.aspx). Consulte las instrucciones de limpieza provistas (175116).
22. Asegúrese de que todas las conexiones estén firmemente asentadas.
23. Confirme que la etiqueta de Resolución de fallas esté colocada en el compartimiento de control.

COMPROBACIÓN DE LA OPERACIÓN

Todos los pasos de esta sección pueden efectuarse durante el ciclo de precalentamiento. El asador y el suministro de gas deben desconectarse brevemente al conectar manómetros para medir la presión del gas.

1. Haga funcionar el asador durante el ciclo de precalentamiento.
2. Confirme la presión de suministro apropiada del gas de entrada (consulte el manual de servicio si está fuera de EE.UU., Canadá o México):
   a. Gas natural 7” – 12” de columna de agua
   b. Propano 10” – 12” de columna de agua
3. Confirme la presión de gas apropiada en el quemador inferior:
   a. Gas natural 3.75” de columna de agua
   b. Propano 8” de columna de agua
4. Confirme la presión de gas apropiada en los quemadores de rayos infrarrojos superiores:
   a. Gas natural 3.75” de columna de agua
   b. Propano 8” de columna de agua
5. Inspeccione el aspecto de los quemadores de rayos infrarrojos. Cuando estén suficientemente calientes, los quemadores de rayos infrarrojos deben aparecer como en la Fig. 1 de abajo.
   Un quemador de rayos infrarrojos desajustado puede tener llamas azules o anaranjadas saliendo de la superficie de las baldosas o indicios de color azul alrededor del perímetros de los quemadores Los quemadores de rayos infrarrojos pueden incluso tener el aire completamente desajustado debido a la limpieza de la caja de aire y del motor del soplador en la sección anterior, lo que puede hacer que el quemador de rayos infrarrojos no se encienda.
6. Si se determina que es necesario hacer un ajuste, haga el ajuste siguiente.
   - Localice los tornillos de ajuste de aire en la parte superior del compartimiento de control.
   - Afloje las tuercas de traba de ambos quemadores de rayos infrarrojos.
   - Gire ambos tornillos hacia adentro (a la derecha, disminuyendo el aire) ¼ de vuelta de una vez hasta que se observe una llama o neblina de color azul uniforme debajo de cada una de las superficies de los quemadores de rayos infrarrojos.
   - Afloje los tornillos (a la izquierda, aumentando el aire) ¼ de vuelta de una vez hasta que la llama o neblina azul desaparezca.
   - Afloje los tornillos ¼ de vuelta adicional.
   - Apriete las tuercas de traba mientras se asegura que los tornillos estén colocados.

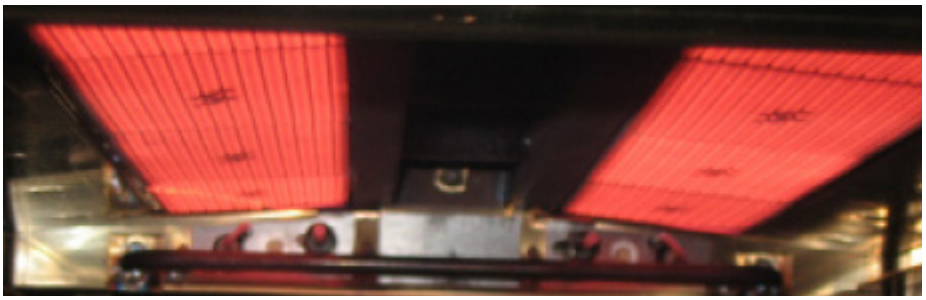


FIG. 1

7. Asegúrese que la corriente de detección de llamas sea apropiada (módulo inferior)
   a. Mayor que 0.7µA de CC
      i. S1 = FC (medido en los terminales FC)
      ii. (La gama óptima cuando esté caliente es 1.5 a 6 µA)
8. Asegúrese de que la corriente de detección de llamas sea apropiada (módulo superior)
   a. Mayor que 0.7µA de CC
      i. S1 = FC1, S2 = FC2 (medida en los terminales FC1 y FC2)
      ii. (La gama óptima cuando esté caliente es 1.5 a 6 µA)
9. Compruebe todas las juntas, uniones y conexiones de compresión (internas y externas) para ver si hay fugas de gas.
10. Compruebe la manguera de gas y la desconexión rápida para ver si hay fugas de gas / daños.
11. Asegúrese de que todas las funciones de control funcionen debidamente.
   a. Funcionalidad de los botones
   b. Acceso a las 4 modalidades de programación
      i. Códigos (oprima sin soltar el botón INTRO para mostrar “CODE”, use INTRO para recorrer la programación)
         1. Parámetros globales – (3645)
         2. Recetas de cocina – (1827)
         3. Recuentos de cocción y fallas – (1234)
         4. Diagnóstico – (3424)
   c. Acceso a la modalidad de ajuste fino
      i. Oprima sin soltar las flechas ARRIBA y ABAJO juntas para tener acceso.
   d. La luz de cocción funciona debidamente.
12. Compruebe la función de descarga y la suavidad de la operación.
   a. Si se está en la modalidad “RDY” (Listo), seleccione “Discharge” (Descarga) numerosas veces.
   b. Si no está en la modalidad “RDY”, pase a la modalidad de Diagnóstico y haga funcionar el motor de impulsión (flecha ABAJO) **(No haga funcionar el motor de impulsión durante más de 6 segundos a la vez)**
13. Ladevorrichtung, Ladeschiene, Ladebügel und Ladeklappe auf reibungslosen Beladen überprüfen.
14. Flammenfühler sollten monatlich gereinigt werden. Die monatliche Reinigung der Flammenfühler überprüfen und mitgelieferte Bürste an Restaurant-Manager übergeben.

Proporciona una lista de comprobación al gerente y explique las áreas que puedan requerir una atención inmediata o futura.

Your Solutions Partner

LISTA DE COMPROBACIÓN DE MANTENIMIENTO COMPLETO DE RENDIMIENTO
FBB (ASADOR FLEXIBLE POR TANDAS)

Número de restaurante:	Modelo:
Dirección:	Número de serie:
	Fecha de MP:
Ciudad:	Compañía de servicio:
Estado:	Nombre del técnico:
Código postal:	Teléfono de la Compañía de servicio:

DESGARRAR POR AQUÍ

COMPROBADO Y BIEN

PUEDE REQUERIR ATENCIÓN EN EL FUTURO

REQUIERE UN REEMPLAZO INMEDIATO

COMPROBACIÓN DE COMPONENTES

☐	☐	☐	1	Inspeccione el cordón de alimentación y el enchufe				
☐	☐	☐	2	Inspeccione el catalizador (si corresponde). Indique cómo efectuar los cuidados apropiados.				
☐	☐	☐	3	Inspeccione todos los paneles, piezas desmontables, y cerciórese de que las ruedas estén fijas				
☐	☐	☐	4	Inspeccione el quemador inferior / cualquier quemador inferior de repuesto				
☐	☐	☐	5	Inspeccione el apagallamas / cualquier apagallamas de respuesto				
☐	☐	☐	6	Inspeccione y limpie la manguera del motor del soplador (con limpiador recomendado por Duke)				
☐	☐	☐	7	Reemplace el motor				
☐	☐	☐	8	Quite e inspeccione la tapa de ajuste de aire. Limpie los conos, los pernos y las entradas de los quemadores de rayos infrarrojos				
☐	☐	☐	9	Reemplace los tubos perforados de RI y retenedores de los quemadores a) Consulte las instrucciones para los tamaños de los orificios	Tamaño del orificio del quemador infrarrojo DELANTERO:		El tamaño del orificio del quemador infrarrojo trasero cambió a:	
☐	☐	☐	10	Reemplace el tubo perforado del quemador inferior a) Consulte las instrucciones para los tamaños de los orificios	Tamaño del orificio INFERIOR:			
☐	☐	☐	11	Reemplace el (1) encendedor inferior y los (2) encendedores superiores.				
☐	☐	☐	12	Reemplace el (1) sensor de llama inferior y los (2) sensores de llama superiores.				
☐	☐	☐	13	Limpie los tubos de los sensores de llamas con un cepillo (con un cepillo suministrado)				
☐	☐	☐	14	Inspeccione y limpie los (1) cables de encendido inferior y (2) superior				
☐	☐	☐	15	Limpie la sonda de temperatura con algodones empapados en alcohol y un estropajo.				
☐	☐	☐	16	Limpie el tubo de la sona de temperatura (con un cepillo suministrado)				
☐	☐	☐	17	Inspeccione la cadena de cocción para ver si hay eslabones dañados.				
☐	☐	☐	18	Inspeccione la cadena de impulsión y las ruedas dentadas de impulsión				
☐	☐	☐	19	Inspeccione el motor de impulsión. Limpie las conexiones de cables (con el limpiador recomendado por Duke)				
☐	☐	☐	20	Inspeccione los (4) bloques de bujes de Teflon para ver si están desgastados				
☐	☐	☐	21	Limpie la grasa acumulada en todo el compartimiento de control, incluidas las conexiones de cables (con el limpiador recomendado de Duke)				
☐	☐	☐	22	Asegúrese de que todas las conexiones de cables estén firmemente asentadas.				
☐	☐	☐	23	Confirme que la etiqueta de Resolución de fallas esté colocada en el compartimiento de control.				

COMPROBADO Y BIEN

PUEDE REQUERIR ATENCIÓN EN EL FUTURO

REQUIERE UN REEMPLAZO INMEDIATO

COMPROBACIÓN DE LA OPERACIÓN

☐	☐	☐	1	Haga funcionar el asador durante el ciclo de precalentamiento.			
☐	☐	☐	2	Confirme la presión de suministro de gas de entrada apropiada a) Consulte las instrucciones	Medición después de los ajustes:		“milibares de columna de agua”
☐	☐	☐	3	Confirme la presión de gas apropiada en el quemador inferior: a) Consulte las instrucciones	Medición después de los ajustes:		“milibares de columna de agua”
☐	☐	☐	4	Confirme la presión de gas apropiada en los quemadores de rayos infrarrojos superiores: a) Consulte las instrucciones	Medición después de los ajustes:		“milibares de columna de agua”
☐	☐	☐	5	Inspeccione el aspecto de los quemadores de rayos infrarrojos (efectúe el ajuste de aire apropiado)			
☐	☐	☐	6	Asegúrese que la corriente de detección de llamas sea apropiada (módulo inferior) a) Mayor que 0.7 µA de CC (S1) b) La gama óptima cuando esté caliente es de 1.5 a 6 µA de CC)	Medición de detección de llamas INFERIOR:		µA
☐	☐	☐	7	Asegúrese de que la corriente de detección de llamas sea apropiada (módulo superior) a) Mayor que 0.7 µA de CC (S1 y S2) b) La gama óptima cuando esté caliente es de 1.5 a 6 µA de CC)	Medición de detección de llamas DELANTERA:		µA
					Medición de detección de llamas TRASERA:		µA
☐	☐	☐	8	Compruebe todas las juntas, uniones y conexiones de compresión para ver si hay fugas de gas.			
☐	☐	☐	9	Compruebe la manguera de gas y la desconexión rápida para ver si hay fugas de gas / daños.			
☐	☐	☐	10	Asegúrese de que todas las funciones de control funcionen debidamente. a) Funcionalidad de los botones b) Acceso a las 4 modalidades de programación c) Acceso a la modalidad de ajuste fino d) Asegúrese de que funcione la luz de cocción			
☐	☐	☐	11	Compruebe la función de descarga y la uniformidad de la operación.			
☐	☐	☐	12	Compruebe el cargador, la bandeja del cargador, el soporte del cargador y la rampa del cargador para ver si la operación de carga es uniforme.			
☐	☐	☐	13	Revise mensualmente la limpieza de los sensores de llamas y proporcione el cepillo suministrado al gerente del restaurante.			

Comentarios::

Firma del técnico: Firma del gerente:

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Checkliste für die vorbeugende Wartung
FBB (Flexibles Batch-Grillgerät)

Restaurantnummer: _____ Serviceagentur: _____

Modellnr.: _____ Telefonnr. der Serviceagentur: _____

Seriennummer: _____ Wartungsdatum: _____

Installationsdatum des Geräts: _____ Nächstes Wartungsdatum: _____

GEPRÜFT UND OK

ERFORDERT ZUKÜNFTIGE BEACHTUNG

ERFORDERT UNVERZÜGLICHEN AUSTAUSCH

KOMPONENTENPRÜFUNG

☐	☐	☐	1	Netzkabel und -stecker prüfen
☐	☐	☐	2	Katalysator prüfen (falls vorhanden)
☐	☐	☐	3	Platten und alle anderen abnehmbaren Teile prüfen
☐	☐	☐	4	Unteren Brenner (und jegliche Ersatzbrenner) prüfen
☐	☐	☐	5	Flammschutz (und jegliche Ersatz-Flammschutzvorrichtungen) prüfen
☐	☐	☐	6	Gebläseschlauch prüfen und nach Bedarf (mit dem mitgelieferten Reinigungsmittel) reinigen
☐	☐	☐	7	Gebläsemotor-Flügelrad auf Fettansammlungen/Schäden prüfen und nach Bedarf (mit dem mitgelieferten Reinigungsmittel) reinigen
☐	☐	☐	8	Luftversorgungskegel prüfen und reinigen
☐	☐	☐	9	Düsen des IR-Brenners prüfen und reinigen
☐	☐	☐	10	Düse des unteren Brenners prüfen und reinigen (HINWEIS: Düse mit 6,7 Nm (60 in-lbs) festziehen.
☐	☐	☐	11	Unteres Zündmodul austauschen (empfohlen nach 2 Jahren Betrieb)
☐	☐	☐	12	(1) untere Zündvorrichtung und (2) obere Zündvorrichtungen austauschen
☐	☐	☐	13	(1) unteren Flammsensor und (2) obere Flammsensoren austauschen
☐	☐	☐	14	Flammsensorrohre mit (der mitgelieferten) Bürste reinigen
☐	☐	☐	15	(1) unteres Zündkabel und (2) obere Zündkabel prüfen
☐	☐	☐	16	Temperaturfühler (mit den mitgelieferten Alkoholpads) reinigen
☐	☐	☐	17	Temperaturfühlerrohr mit (der mitgelieferten) Bürste reinigen
☐	☐	☐	18	Kochkette auf beschädigte Kettenglieder prüfen
☐	☐	☐	19	Kochkette und Kettenräder prüfen
☐	☐	☐	20	Antriebsmotor prüfen und Kabelanschlüsse nach Bedarf (mit dem mitgelieferten Reinigungsmittel) reinigen
☐	☐	☐	21	(4) Teflon-Buchsen-Blöcke auf Verschleiß prüfen
☐	☐	☐	22	Jegliche Fettansammlungen im Elektrik-/Steuergehäuse, inkl. Kabelanschlüsse, mit dem mitgelieferten Reinigungsmittel reinigen
☐	☐	☐	23	Sicherstellen, dass alle Kabelanschlüsse fest sitzen
☐	☐	☐	24	Bestätigen, dass das Fehlersuchschild am Steuergehäuse angebracht ist

FUNKTIONSPRÜFUNG

☐	☐	☐	1	Grillgerät durch den Vorheizgang laufen lassen (28 Minuten)
☐	☐	☐	2	Korrekten Gasversorgungsdruck bestätigen a) Siehe Anleitung
☐	☐	☐	3	Korrekten Gasdruck zum unteren Brenner bestätigen a) Siehe Anleitung
☐	☐	☐	4	Korrekten Gasdruck zu den oberen IR-Brennern bestätigen a) Siehe Anleitung
☐	☐	☐	5	Erscheinungsbild des IR-Brenners prüfen (ggf. Lufteinstellung vornehmen)
☐	☐	☐	6	Sicherstellen, dass der Flammsensorstrom (unteres Modul) korrekt ist a) Größer als 0,7 µA DC (S1)
☐	☐	☐	7	Sicherstellen, dass der Flammsensorstrom (oberes Modul) korrekt ist a) Größer als 0,7 µA DC (S1 und S2)
☐	☐	☐	8	Alle Verbindungsstellen, Anschlussstücke und Klemmringverschraubungen auf Gaslecks prüfen
☐	☐	☐	9	Gasschlauch und Schnellanschluss auf Gaslecks/Schäden prüfen
☐	☐	☐	10	Sicherstellen, dass alle Bedienelemente ordnungsgemäß funktionieren a) Funktion der Tasten b) Aufrufen aller 4 Programmiermodi c) Aufrufen des Feineinstellungsmodus
☐	☐	☐	11	Auswurffunktion und reibungslosen Betrieb des Geräts prüfen
☐	☐	☐	12	Ladevorrichtung, Ladefach, Ladevorrichtungs-Montagehalterung und Laderampe auf ordnungsgemäßen Ladebetrieb prüfen
☐			13	Monatliche Reinigung der Flammsensoren prüfen und dem Restaurantleiter die mitgelieferte Bürste zur Verfügung stellen

Kommentare:

_____

_____

_____

Unterschrift des Servicetechnikers: _____ **Unterschrift des Restaurantleiters:** _____

Lista de comprobación de mantenimiento preventivo
FBB (asador flexible por tandas)

Número de restaurante: _____ Compañía de servicio: _____

Modelo: _____ Teléfono de la compañía de servicio: _____

Número de serie: _____ Fecha de MP: _____

Fecha de instalación del asador: _____ Siguiente fecha de MP: _____

COMPROBADO Y EN BUENAS CONDICIONES

TAL VEZ REQUIERA ATENCIÓN EN EL FUTURO

REQUIERE UN REEMPLAZO INMEDIATO

COMPROBACIÓN DE COMPONENTES

☐	☐	☐	1	Inspeccione el cordón de alimentación y el enchufe
☐	☐	☐	2	Inspeccione el catalizador (si corresponde)
☐	☐	☐	3	Inspeccione los paneles y todas las piezas desmontables
☐	☐	☐	4	Inspeccione el quemador inferior / cualquier quemador inferior de repuesto
☐	☐	☐	5	Inspeccione el apagallamas / cualquier apagallamas de repuesto
☐	☐	☐	6	Inspeccione la manguera del motor del soplador, limpie si es necesario (con limpiador suministrado)
☐	☐	☐	7	Inspeccione la rueda del motor del soplador para ver si hay grasa acumulada / daños, limpie si es necesario (con el limpiador suministrado)
☐	☐	☐	8	Inspeccione y limpie los conos de ajuste de aire
☐	☐	☐	9	Inspeccione y limpie los orificios del quemador de rayos infrarrojos
☐	☐	☐	10	Inspeccione y limpie el orificio del quemador inferior (NOTA: Apriete el orificio a 60 lb-pulg (6.7 N.m))
☐	☐	☐	11	Reemplace el módulo de encendido inferior (recomendado a los 2 años de operación)
☐	☐	☐	12	Reemplace los encendedores (1) inferior y (2) superior.
☐	☐	☐	13	Reemplace los sensores de llama (1) inferior y (2) superior
☐	☐	☐	14	Limpie los tubos de los sensores de llamas con un cepillo (con el cepillo suministrado)
☐	☐	☐	15	Inspeccione los cables de encendido (1) inferior y (2) superior
☐	☐	☐	16	Limpie la sonda de temperatura (con los algodones empapados en alcohol suministrados)
☐	☐	☐	17	Limpie el tubo de sonda de temperatura con cepillo (con el cepillo suministrado)
☐	☐	☐	18	Inspeccione la cadena de cocción para ver si hay eslabones dañados
☐	☐	☐	19	Inspeccione la cadena de impulsión, ruedas motrices dentadas
☐	☐	☐	20	Inspeccione el motor de impulsión, limpie las conexiones si es necesario (con el limpiador suministrado)
☐	☐	☐	21	Inspeccione los (4) bloques de bujes de Teflon para ver si están desgastados
☐	☐	☐	22	Limpie la grasa acumulada en el compartimiento de control eléctrico, incluidas las conexiones (con el limpiador suministrado)
☐	☐	☐	23	Asegúrese de que todas las conexiones estén firmemente asentadas
☐	☐	☐	24	Confirme que la etiqueta de localización y resolución de fallas esté colocada en el compartimiento de control

COMPROBACIÓN OPERACIONAL

☐	☐	☐	1	Haga funcionar el asador durante el ciclo de precalentamiento (28 min)
☐	☐	☐	2	Confirme la presión de suministro de gas de entrada apropiada a) Consulte las instrucciones
☐	☐	☐	3	Confirme la presión del gas paropiada al quemador inferior a) Consulte las instrucciones
☐	☐	☐	4	Confirme la presión del gas apropiada a los quemadores de rayos infrarrojos superiores a) Consulte las instrucciones
☐	☐	☐	5	Inspeccione el aspecto de los quemadores de rayos infrarrojos (efectúe el ajuste de aire si es necesario)
☐	☐	☐	6	Asegúrese de que la corriente de detección de llamas sea apropiada (módulo inferior) a) Mayor que 0.7 µA CC (S1)
☐	☐	☐	7	Asegúrese de que la corriente de detección de llamas sea apropiada (módulo superior) a) Mayor que 0.7 µA CC (S1 y S2)
☐	☐	☐	8	Compruebe todas las juntas, uniones y conexiones de compresión para ver si hay fugas de gas
☐	☐	☐	9	Compruebe la manguera de gas y la desconexión rápida para ver si hay fugas de gas / daños
☐	☐	☐	10	Asegúrese de que todas las funciones de control operen de forma apropiada a) Funcionalidad de los botones b) Acceso a las 4 modalidades de programación c) Acceso a la modalidad de ajuste fino
☐	☐	☐	11	Compruebe la función de descarga y la suavidad de la operación
☐	☐	☐	12	Compruebe el cargador, la bandeja del cargador, el soporte del cargador y la rampa del cargador para ver si funciona debidamente
☐			13	Revise mensualmente la limpieza de los sensores de llamas y proporcione el cepillo incluido al gerente del restaurante

Comentarios:

_____

_____

_____

Firma del técnico: _____ **Firma del gerente** _____

Anweisungen für die vorbeugende Wartung
FBB (Flexibles Batch-Grillgerät)

Your Solutions Partner

Stellen Sie vor der Durchführung der nachfolgenden Schritte sicher, dass das Grillgerät ausgeschaltet und von der Stromversorgung getrennt ist.
Stellen Sie die Gasversorgung des Grillgeräts ab.

Komponentenprüfung

1) Prüfen Sie das Netzkabel auf beschädigte Isolierung und einen beschädigten Stecker.
2) (Falls zutreffend) Prüfen Sie den Katalysator auf ungewöhnlichen Verschleiß.
3) Prüfen Sie die Platten und alle anderen abnehmbaren Teile auf Schäden, die die ordnungsgemäße Funktion des Grillgeräts beeinträchtigen können.
4) Prüfen Sie den unteren Brenner (und jegliche Ersatzbrenner im Restaurant) auf Schäden. Zum Entfernen von Ablagerungen aus den Brenneranschlüssen kann eine Büroklammer verwendet werden. Wenn der Brenner nicht ordnungsgemäß gereinigt werden kann, empfiehlt Duke den Kauf eines neuen unteren Brenners.
5) Prüfen Sie den Flammschutz (und jegliche Ersatz-Flammschutzvorrichtungen im Restaurant) auf Verschleiß. Ein Flammschutz, der nicht ordnungsgemäß gereinigt wurde, kann Verschleißerscheinungen aufweisen (durchgebranntes perforiertes Edelstahl). Wenn der Flammschutz so stark verschlissen ist, dass er nicht mehr gereinigt werden kann, empfiehlt Duke den Kauf eines neuen Flammschutzes.
6) Prüfen Sie den Gebläsemotorschlauch auf Einstichstellen und andere Schäden. Reinigen Sie den Schlauch nach Bedarf mit dem mitgelieferten Reinigungsmittel.
7) Prüfen Sie das Gebläsemotor-Flügelrad auf übermäßige Fettansammlungen. Der Gebläsemotor kann nach Bedarf ausgebaut werden, um den Zugang zum Flügelrad für die Reinigung mit dem mitgelieferten Reinigungsmittel zu erleichtern. **(Sprühen Sie das Reinigungsmittel nicht direkt auf freiliegende Motorwicklungen.)**
8) Entfernen Sie die Abdeckung des Luftkastens und reinigen Sie die Innenseite der Abdeckung und die Luftversorgungskegel mit dem mitgelieferten Reinigungsmittel und falls erforderlich mit einem Scheuerschwamm.
9) Entfernen Sie die Düsen des IR-Brenners und spülen Sie die Düsen gründlich mit heißem Wasser aus. Die Düse kann nach Bedarf mit einem Düsenbohrer der richtigen Größe gereinigt werden, solange die Düsenöffnung nicht erweitert wird. Die Düsen des IR-Brenners haben unterschiedliche Größen. Achten Sie darauf, dass die Düsen beim Einbau wieder im richtigen Brenner installiert werden.
10) Entfernen Sie die Düse des unteren Brenners und spülen Sie die Düse gründlich mit heißem Wasser aus. Die Düse kann nach Bedarf mit einem Düsenbohrer der richtigen Größe gereinigt werden, solange die Düsenöffnung nicht erweitert wird. Ziehen Sie die Düse mit einem Drehmoment von 6,7 Nm (60 in-lbs) fest.

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11) (Empfehlung nach 2 Betriebsjahren) Es wird empfohlen, während dieser Prüfung das untere Zündmodul auszutauschen. Wenn das alte Modul ordnungsgemäß funktioniert, kann es für den Einsatz im Notfall im Restaurant verbleiben.
12) Es wird empfohlen, während dieser Prüfung alle Zündvorrichtungen auszutauschen. Prüfen Sie die einzelne (1) untere Zündvorrichtung und die beiden (2) oberen Zündvorrichtungen. Der Elektrodenabstand sollte 3 mm (1/8“) betragen. Wenn alte Zündvorrichtungen in akzeptablem Zustand sind, können sie für den Einsatz im Notfall im Restaurant verbleiben.
13) Es wird empfohlen, während dieser Prüfung alle Flammsensoren auszutauschen. Wenn alte Flammsensoren in akzeptablem Zustand sind, können sie für den Einsatz im Notfall im Restaurant verbleiben.
14) Reinigen Sie die drei (3) Flammsensorrohre mit dem mitgelieferten Bürstenwerkzeug, um unerwünschte Fremdkörper zu entfernen.
15) Prüfen Sie das einzelne (1) untere Zündkabel und die beiden (2) oberen Zündkabel auf Schäden. Reinigen Sie die Anschlussklemmen nach Bedarf.
16) Reinigen Sie den Temperaturfühler mit den mitgelieferten Alkoholpads.
17) Reinigen Sie das Temperaturfühlerrohr mit dem mitgelieferten Bürstenwerkzeug, um unerwünschte Fremdkörper zu entfernen.
18) Prüfen Sie die Kochkette auf beschädigte Kettenglieder. Die Kette hat kein Hauptkettenglied. Einzelne Kettenglieder können ausgetauscht oder geradegebogen werden.
19) Prüfen Sie die Kochkette auf korrekte Spannung. Der Durchhang der Kette sollte ca. 5 mm (3/16“) betragen. Prüfen Sie die Kettenräder auf Verschleiß.
20) Stellen Sie sicher, dass der Antriebsmotor ordnungsgemäß befestigt ist. Reinigen Sie die Kabelanschlüsse nach Bedarf mit dem mitgelieferten Reinigungsmittel. **(Sprühen Sie das Reinigungsmittel nicht direkt auf freiliegende Motorwicklungen oder den Getriebekasten.)**
21) Prüfen Sie die vier (4) Teflon-Buchsen-Blöcke auf ungewöhnlichen Verschleiß.
22) Entfernen Sie jegliche Fettansammlungen im gesamten Elektrik-/Steuergehäuse mit dem mitgelieferten Reinigungsmittel und Scheuerschwamm. Verwenden Sie die mitgelieferte Reinigungsanleitung (175116).
23) Stellen Sie sicher, dass alle Kabelanschlüsse fest sitzen.
24) Bestätigen Sie, dass das Fehlersuchschild am Steuergehäuse angebracht ist.

Funktionsprüfung

Alle in diesem Abschnitt aufgeführten Schritte können während des Vorheizgangs durchgeführt werden. Beim Anschließen von Messgeräten zum Messen des Gasdrucks muss die Strom- und Gasversorgung kurzzeitig getrennt bzw. abgestellt werden.

1) Lassen Sie das Grillgerät durch den Vorheizgang laufen (28 Minuten).
2) Bestätigen Sie den korrekten Gasversorgungsdruck (siehe Servicehandbuch):
   a. Erdgas 7" – 12" W.C.
   b. Propangas 10" – 12" W.C.
3) Bestätigen Sie den korrekten Gasdruck zum unteren Brenner:
   a. Erdgas 3,75" W.C.
   b. Propangas 8" W.C.
4) Korrekten Gasdruck zu den oberen IR-Brennern bestätigen
   a. Erdgas 3,75" W.C.
   b. Propangas 8" W.C.
5) Prüfen Sie das Erscheinungsbild der IR-Brenner. IR-Brenner versuchen die Zündung bei 260 °C (500 º F) und sollten das in Abb. 1 dargestellte Erscheinungsbild aufweisen, wenn sie ausreichend heiß sind. Ein falsch eingestellter IR-Brenner weist ggf. blaue oder orangefarbene rollende Flammen an der Keramikplatte oder Anzeichen von blauen Flecken am Rand des Brenners auf. Wenn die Lufteinstellung des IR-Brenners aufgrund der im vorherigen Abschnitt beschriebenen Reinigung des Luftkastens und Gebläsemotors stark verändert wurde, zündet der IR-Brenner ggf. überhaupt nicht. Falls eine Einstellung erforderlich ist, das folgende Verfahren verwenden.

- Identifizieren Sie die Luftversorgungs-Einstellschrauben im oberen Teil des Bedienfeldgehäuses.
- Lockern Sie die Kontermuttern beider IR-Brenner.
- Drehen Sie beide Schrauben maximal eine Vierteldrehung auf einmal (im Uhrzeigersinn, Verringerung der Luftzufuhr) ein, bis eine gleichmäßige blaue Flamme oder ein gleichmäßiges Flimmern unter jeder Oberfläche der IR-Brenner sichtbar ist.
- Drehen Sie die Schrauben maximal eine Vierteldrehung auf einmal (gegen den Uhrzeigersinn, Erhöhung der Luftzufuhr) heraus, bis die blaue Flamme oder das Flimmern gerade verschwinden.
- Drehen Sie die Schrauben eine zusätzliche Vierteldrehung heraus.
- Ziehen Sie die Kontermuttern fest, um die Position der Schrauben zu arretieren.

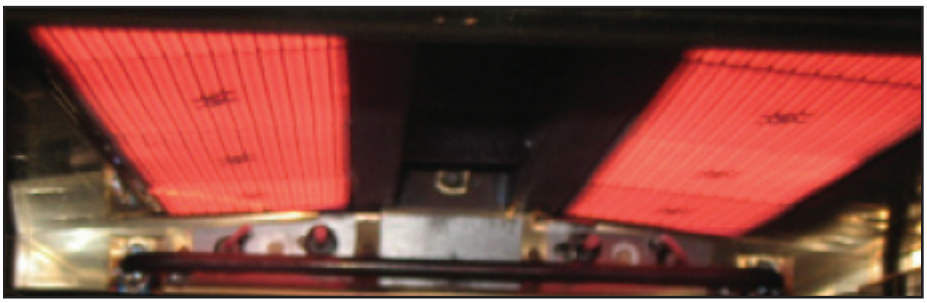


ABB. 1

6) Stellen Sie sicher, dass der Flammsensorstrom (unteres Modul) korrekt ist:
   a. Größer als 0,7µA DC
      i. S1 = FC (gemessen an der Klemme FC)
      ii. (optimaler Bereich im heißen Zustand: 1,5 µA - 6 µA)
7) Stellen Sie sicher, dass der Flammsensorstrom (oberes Modul) korrekt ist:
   a. Größer als 0,7µA DC
      i. S1 = FC1, S2 = FC2 (gemessen an den Klemmen FC1 und FC2)
      ii. (optimaler Bereich im heißen Zustand: 1,5 µA - 6 µA)
8) Prüfen Sie alle Verbindungsstellen, Anschlussstücke und Klemmringverschraubungen (intern und extern) auf Gaslecks.
9) Gasschlauch und Schnellanschluss auf Gaslecks/Schäden prüfen
10) Stellen Sie sicher, dass alle Bedienelemente ordnungsgemäß funktionieren:
   a. Funktion der Tasten
   b. Aufrufen aller 4 Programmiermodi
      i. Codes (halten Sie die Eingabetaste gedrückt, um „CODE“ anzuzeigen und durchlaufen Sie die Programmierung mit der Eingabetaste)
         1. Globale Parameter (3645)
         2. Kochrezepte (1827)
         3. Koch- und Fehlerzählwerte (1234)
         4. Diagnose (3424)
   c. Aufrufen des Feineinstellungsmodus
      i. Halten Sie die Aufwärts- und Abwärtspfeiltasten gleichzeitig gedrückt.
11) Prüfen Sie die Auswurffunktion und den reibungslosen Betrieb des Geräts:
   a. Wählen Sie im Bereitschaftsmodus („RDY“) mehrmals die Auswurffunktion („Discharge“).
   b. Rufen Sie den Diagnosemodus auf und gehen Sie zu „Antriebsmotor“ (Drive Motor) **(Abwärtspfeiltaste) (Betätigen Sie den Antriebsmotor maximal 6 Sekunden auf einmal.)**
12) Prüfen Sie Ladevorrichtung, Ladefach, Ladevorrichtungs-Montagehalterung und Laderampe auf ordnungsgemäßen Ladebetrieb.
13) Es wird empfohlen, die Flammsensoren einmal pro Monat zu reinigen. Prüfen Sie, ob die Flammsensoren monatlich gereinigt wurden, und stellen Sie dem Restaurantleiter die mitgelieferte Bürste zur Verfügung.

Übergeben Sie dem Restaurantleiter die Checkliste und erläutern Sie Bereiche, die ggf. sofortige oder zukünftige Beachtung erfordern.



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Instrucciones de mantenimiento preventivo FBB (asador flexible por tandas)

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Antes de efectuar los pasos siguientes, asegúrese de que el asador esté apagado y completamente desconectado de la corriente.
Corte el suministro de gas al asador.

Comprobación de componentes

1) Inspeccione el cordón de alimentación para ver si hay aislamientos o enchufes dañados.
2) (Si corresponde) Inspeccione el catalizador para ver si hay un desgaste que no sea común.
3) Inspeccione los paneles y las demás piezas desmontables para ver si tienen daños que puedan inhibir la operación correcta del asador.
4) Inspeccione el quemador inferior (y cualquier quemador de repuesto en el restaurante) para ver si tienen daños. Se puede usar un sujetapapeles para quitar los depósitos acumulados en los orificios del quemador. Si no se puede limpiar esto de manera efectiva, Duke recomienda la compra de un nuevo quemador inferior.
5) Inspeccione el apagallamas (y cualquier apagallamas de repuesto del restaurante) para ver si está desgastado. Un apagallamas que no se haya limpiado debidamente puede mostrar indicios de deterioro (quemaduras de perforación del acero inoxidable). Si el apagallamas está deteriorado de forma que no se pueda limpiar, Duke recomienda la compra de un apagallamas nuevo.
6) Inspeccione la manguera del motor del soplador para ver si tiene perforaciones u otros daños. Si es necesario, limpie con el limpiador suministrado.
7) Inspeccione la rueda del motor del soplador para ver si hay una acumulación excesiva de grasa. Si es necesario, se puede quitar el motor del soplador para facilitar el acceso a la rueda para limpiar con el limpiador suministrado. **(No rocíe directamente el limpiador en ningún devanado de motor eléctrico expuesto)**
8) Quite la tapa de la caja de aire y limpie el interior de la tapa y de los conos de ajuste de aire con el limpiador suministrado y el estropajo, si es necesario.
9) Quite los orificios de los quemadores de rayos infrarrojos y enjuáguelos completamente con agua caliente. Tal vez sea necesario usar una broca de perforación del tamaño correcto para escariar el orificio siempre que el tamaño del orificio no sea vea afectado. Los orificios de los quemadores de rayos infrarrojos son de distintos tamaños. Asegúrese de la ubicación correcta al volverlos a instalar.
10) Quite el orificio del quemador inferior y enjuáguelo completamente con agua caliente. Tal vez sea necesario usar una broca de perforación del tamaño correcto para escariar el orificio siempre que el tamaño del orificio no sea vea afectado. Apriete el orificio a 60 lb-pulg (6.7 Nm)

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N/P 176339C

11) (Recomendado a los 2 años de operación) Se recomienda reemplazar el módulo de encendido inferior durante esta inspección. Si funciona el módulo anterior, puede dejarse en el restaurante para casos de emergencia.
12) Se recomienda reemplazar todos los encendedores durante esta inspección. Inspeccione el (1) encendedor inferior y los (2) encendedores superiores. La distancia entre electrodos debe ser de aproximadamente 1/8". Si los encendedores anteriores están en condiciones razonablemente aceptables, pueden dejarse en el restaurante para casos de emergencia.
13) Se recomienda reemplazar todos los sensores de llamas durante esta inspección. Si los sensores de llamas anteriores están en condiciones razonablemente aceptables, pueden dejarse en el restaurante para casos de emergencia.
14) Limpie los tubos de los sensores de llamas (3) con una herramienta para cepillos suministrada a fin de quitar los residuos no deseados.
15) Inspeccione el cable de (1) encendido inferior y los cables de (2) encendido superiores para ver si están dañados. Limpie los terminales de contacto si es necesario.
16) Limpie la sonda de temperatura con los algodones empapados en alcohol incluidos.
17) Limpie el tubo de la sonda de temperatura con una herramienta para cepillos suministrada a fin de quitar los residuos no deseados.
18) Inspeccione la cadena de cocción para ver si hay eslabones dañados. No hay eslabones principales. Los eslabones individuales se pueden reemplazar o doblar hacia atrás hasta colocarse.
19) Inspeccione la cadena de impulsión para ver si está a la tensión apropiada. La comba de la cadena de impulsión debe ser de aproximadamente 3/16". Inspeccione las ruedas motrices dentadas para ver si están desgastadas.
20) Asegúrese de que el motor de impulsión esté bien montado. Si es necesario, limpie las conexiones de cables con el limpiador suministrado. **(No rocíe directamente el limpiador en ningún devanado de motor eléctrico expuesto o caja de engranajes.)**
21) Inspeccione los (4) bloques de bujes de Teflon para ver si tienen un desgaste poco inusual.
22) Limpie la grasa acumulada en todo el compartimiento de control eléctrico con el limpiador y el estropajo suministrados. Consulte las instrucciones de limpieza provistas (175116).
23) Asegúrese de que todas las conexiones estén firmemente asentadas.
24) Confirme que la etiqueta de Localización y resolución de fallas esté colocada en el compartimiento de control.

Comprobación de operación

Todos los pasos de esta sección pueden efectuarse durante el ciclo de precalentamiento. El asador y el suministro de gas deben desconectarse brevemente al conectar manómetros para medir la presión del gas.

1) Haga funcionar el asador durante el ciclo de precalentamiento (28 minutos)
2) Confirme la presión de suministro apropiada del gas de entrada (consulte el manual de servicio si está fuera de EE.UU., Canadá o México):
   a. Gas natural 7" – 12" de columna de H2O.
   b. Propano 10" – 12" de columna de H2O.
3) Confirme la presión de gas apropiada en el quemador inferior:
   a. Gas natural 3,75" de columna de H2O
   b. Propano 8" de columna de H2O
4) Confirme la presión de gas apropiada en los quemadores de rayos infrarrojos superiores:
   a. Gas natural 3,75" de columna de H2O
   b. Propano 8" de columna de H2O
5) Inspeccione el aspecto de los quemadores de rayos infrarrojos. Los quemadores de rayos infrarrojos tratan de encenderse a 500º F y cuando estén suficientemente calientes, deben tener el aspecto de la Fig. 1 de abajo. Un quemador de rayos infrarrojos desajustado puede tener llamas azules o anaranjadas saliendo de la superficie de las baldosas o indicios de color azul alrededor del perímetros de los quemadores Los quemadores de rayos infrarrojos pueden incluso tener el aire completamente desajustado debido a la limpieza de la caja de aire y del motor del soplador en la sección anterior, lo que puede hacer que el quemador de rayos infrarrojos no se encienda. Si se determina que es necesario hacer un ajuste, haga el ajuste siguiente.

- Localice los tornillos de ajuste de aire en la parte superior del compartimiento de control.
- Afloje las tuercas de traba de ambos quemadores de rayos infrarrojos.
- Gire ambos tornillos hacia adentro (a la derecha, disminuyendo el aire) ¼ de vuelta de una vez hasta que se observe una llama o neblina de color azul uniforme debajo de cada una de las superficies de los quemadores de rayos infrarrojos.
- Afloje los tornillos (a la izquierda, aumentando el aire) ¼ de vuelta de una vez hasta que la llama o neblina azul desaparezca.
- Afloje los tornillos ¼ de vuelta adicional.
- Apriete las tuercas de traba mientras se asegura que los tornillos estén colocados.

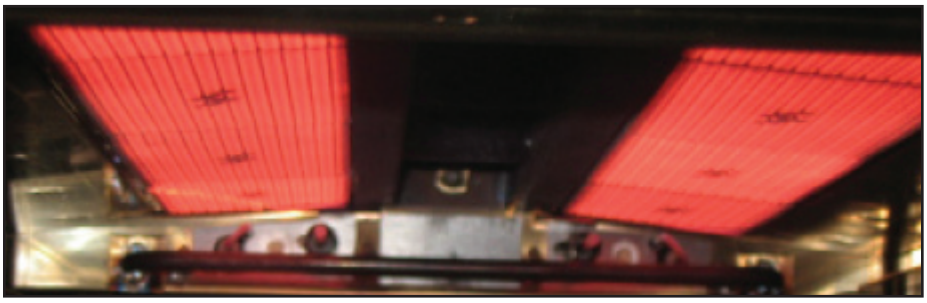


FIG. 1

6) Asegúrese que la corriente de detección de llama sea apropiada (módulo inferior)
   a. Mayor que 0.7µA de CC
      i. S1 = FC (medido en los terminales FC)
      ii. (La gama óptima cuando esté caliente es 1.5µA - 6µA)
7) Asegúrese de que la corriente de detección de llama sea apropiada (módulo superior)
   a. Mayor que 0.7µA de CC
      i. S1 = FC1, S2 = FC2 (medida en los terminales FC1 y FC2)
      ii. (La gama óptima cuando esté caliente es 1.5µA - 6µA)
8) Compruebe todas las juntas, uniones y conexiones de compresión (internas y externas) para ver si hay fugas de gas.
9) Compruebe la manguera de gas y la desconexión rápida para ver si hay fugas de gas / daños.
10) Asegúrese de que todas las funciones de control funcionen debidamente.
   a. Funcionalidad de los botones
   b. Acceso a las 4 modalidades de programación
      i. Códigos (oprima sin soltar el botón ENTER para mostrar "CODE", use ENTER para recorrer la programación)
         1. Parámetros globales – (3645)
         2. Recetas de cocina – (1827)
         3. Recuentos de cocción y fallas – (1234)
         4. Diagnóstico – (3424)
   c. Acceso a la modalidad de ajuste fino
      i. Oprima sin soltar las flechas ARRIBA y ABAJO juntas para tener acceso.
11) Compruebe la función de descarga y la suavidad de la operación.
   a. Si se está en la modalidad "RDY" (Listo), seleccione "Discharge" (Descarga) numerosas veces.
   b. Si no está en la modalidad "RDY", pase a la modalidad de Diagnóstico y haga funcionar el motor de impulsión (flecha ABAJO) **(No haga funcionar el motor de impulsión durante más de 6 segundos a la vez)**
12) Compruebe el cargador, la bandeja del cargador, el soporte del cargador y la rampa del cargador para ver si la operación de carga es suave.
13) Se recomienda limpiar mensualmente los detectores de llamas. Revise mensualmente la limpieza de los sensores de llamas y proporcione el cepillo suministrado al gerente del restaurante.

Proporciona una lista de comprobación al gerente y explique las áreas que puedan requerir una atención inmediata o futura.



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GAS UTILIZATION ADJUSTMENT INSTRUCTIONS FOR GAS FIRED FLEXIBLE BATCH BROILER

IMPORTANT INFORMATION, READ BEFORE USE.
PLEASE SAVE THESE INSTRUCTIONS.

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175145B

Items required for this procedure:

(2) Calibrated Slack Tubes(Manometer)
(1) Straight Blade Screwdriver
(1) Philips Tip Screwdriver
(1) Set of Standard Allen Wrenches
(1) Hand Held Calculator

Instructions:

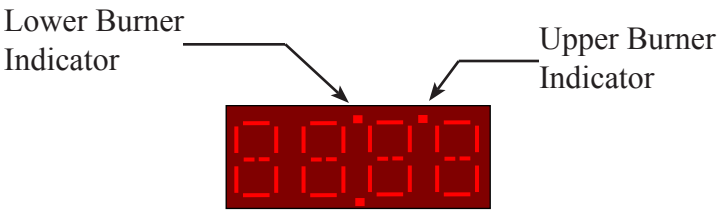
1. Remove service panel to gain access to the Broiler's control compartment.
2. Connect slack tubes to the test port on the gas valves.
3. Verify/adjust the gas manifold pressure settings:

a. Natural Gas	3.75 in. w.c (9.34 mbar)
b. Propane Gas	8.00 in. w.c (19.93 mbar)
c. Propane/Butane Mixture Gas	8.00 in. w.c (19.93 mbar)
d. I2H/I2E (G20)	3.75 in. w.c (9.34 mbar)
e. I2L (G25)	5.20 in. w.c (12.95 mbar)
f. I3P (G31)	8.00 in. w.c (19.93 mbar)
g. I3P/B G30)	8.00 in. w.c (19.93 mbar)

4. Place a catalyst and catalyst guard in the Broiler's flue.
5. Redirect any fans that are blowing toward the broiler.
6. Turn power on to Broiler.
7. Press and hold the ENTER key for 3 seconds.
8. Enter programming code 1-8-2-7 and press ENTER.
9. Select a product recipe button that is currently not being utilized.
10. Enter the following recipe:

Cook Setting Temp. 900 ° F
ON1 4min.
OFF1 0min.
ON2 0min.
OFF2 0min.
Total 4min.

11. Let the Broiler get to the READY status.
12. Wait an additional 10 minutes.
13. Wait for the bottom burner indicator to illuminate.



14. Monitor the bottom burner temperature with the ▲ key.
15. When the Broiler's temperature reaches 670°F, begin a test cook cycle with the newly created recipe.*
16. Monitor the Broiler during the cook cycle.
17. When the cook cycle finishes, observe and record the Broiler's current temperature during discharge.
18. Wait 5 minutes for cool down.
19. Repeat steps 13-18 for 4 trials.
20. Average the temperature results.(add the four temperatures together and divide by 4)

TRIAL	TEMPERATURE
1	
2	
3	
4	
AVERAGE (Total÷4)	

21. Reference your average temperature in the chart below and make the necessary adjustments.

AVERAGE TEMPERATURE	RECOMMENDED ADJUSTMENT
Below 765°F(407°C)	None
766°-784°F(408°-417°C)	Lower manifold pressure by 0.25"w.c.(0.62mbar)
785°-800°F(418°-426°C)	Lower manifold pressure by 0.50"w.c.(1.25mbar)

22. Repeat steps 13-21.
23. Run either the **BURGER** or **WHOPPER** recipe with product and evaluate the temperature of the finished product. It should be 155°F(68°C) -170°F(77°C) [165°F(74°C) optimum].
24. Adjust the individual product cookout, if necessary.
    a. Press and hold the ▲and ▼ simultaneously for 3 seconds.
    b. Press the desired product key.
    c. Press the ▲ to raise the cooking temperature, or ▼ to lower the cooking temperature.
    d. Press the ENTER twice to exit.
25. The Broiler is now ready for use.

*Test cook cycle to be performed without product in Broiler.

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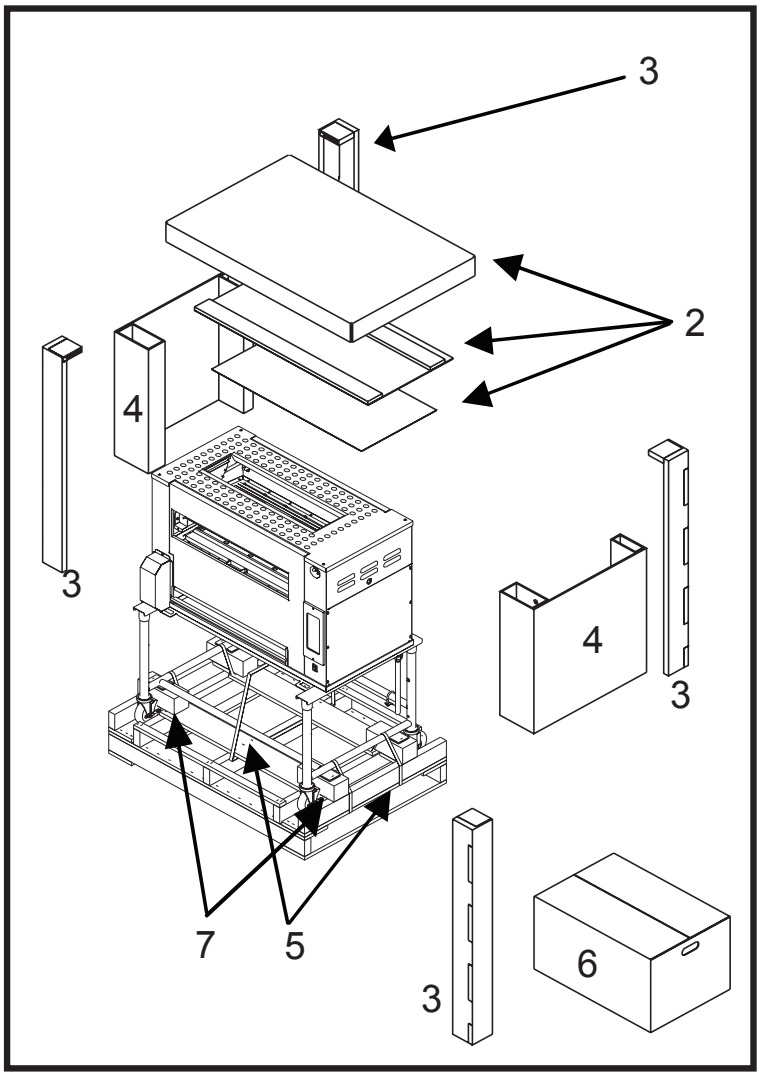
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Flexible Batch Broiler Unpacking Instructions



Caution: The Broiler is very heavy!
Use adequate help for lifting.

1. Using a utility knife, cut away plastic wrap (Not shown).
2. Remove the top cardboard and inner cap.
3. Remove cardboard from the corners (4 places).
4. Remove cardboard on the ends (2 places).
5. Remove banding straps (Cut with utility knife or scissors: 5 places).
6. Remove box of attachable parts & accessories from the front.
7. Safely lift one end of broiler and tap block towards center and then sideways to remove. Repeat for remaining blocks. This allows casters to touch the pallet.
8. Remove the broiler from the shipping pallet using 3 people to guide and distribute it's weight (approx 335 lbs) accordingly. While carefully supporting the broiler. Roll it forward until the front casters are clear of the pallet. Lift the broiler 6-8 inches above and away from the pallet, and gently place on floor to avoid damage to casters.
9. Remove protective blue tape from broiler panels, double checking that no tape remains.

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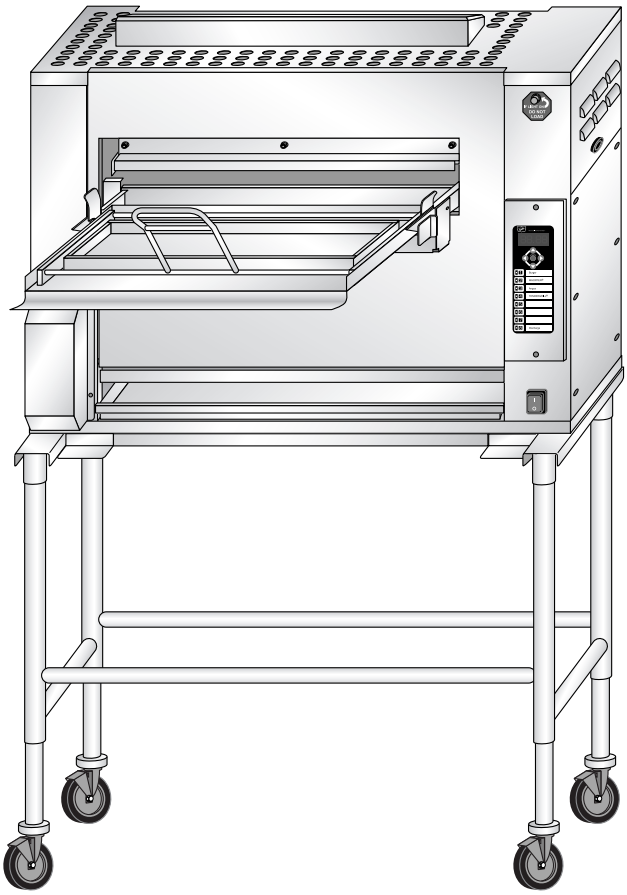
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Installation Instructions

FLEXIBLE BATCH BROILER

HIGH ALTITUDE ADJUSTMENT KIT:

175949



ENGLISH

ESPAÑOL

FRANÇAIS

PORTUGUÊS DO BRASIL

CAUTION: **Please read this manual completely before attempting to install, operate or service this equipment**

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P/N 175941
REV F 08/14/2018

HIGH ALTITUDE ADJUSTMENT KIT INSTRUCTIONS

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FLEXIBLE BATCH BROILER

Note: This broiler has been agency approved to CSA Z83.11 to allow for larger orifice sizes at higher altitudes. This allows for similar cooking performance at altitude.

This kit contains:

(1) Orifice, #30, Lower Burner 175935
(1) Orifice, #48, Lower Burner 175936
(1) Orifice, #37, IR Burner 175937
(1) Orifice, #34, IR Burner 175938
(1) Orifice, #31, IR Burner 175939
(1) Orifice, #50, IR Burner 175940
(1) Orifice, #51, IR Burner 175768
(3) 1/8” Pop Rivet 168106

Items required for this installation:

- (1) Torque Wrench
- (1) 5/8” Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- (1) 3/16” Hex Key Wrench
- (1) Straight Blade Screwdriver
- (1) Digital or Slack Tube Manometer
- (1) Power Drill
- (1) #30 Drill Bit
- (1) Rivet Installation Tool
- Gas Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. QUALIFIED PERSONNEL

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

The installation must conform with local codes, or in the absence of local codes, to the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information at the bottom of this page.

B. PROCEDURE

This broiler requires airshutter adjustments and orifice size changes when used at higher altitudes. To ensure proper cooking performance, the following procedure must be followed.

The chart below indicates if airshutter adjustment and orifice sizes changes are required for various altitude ranges. It also indicates the correct orifices for these altitude ranges.

Natural Gas

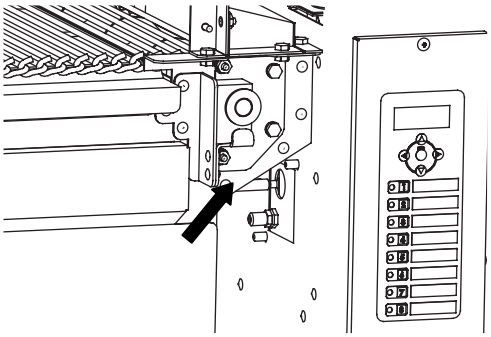
Elevation Range	Lower Burner Airshutter Adjustment Required	Lower Burner Orifice Size	IR Burner Airshutter Adjustment Required	Front IR Burner Orifice Size	Rear IR Burner Orifice Size
0 - 3999 Feet	No Airshutter Adjustments or Orifice Size Changes Required				
4000 - 4999 Feet	Yes	No Change	Yes	No Change	No Change
5000 - 7499 Feet	Yes	#30	Yes	#37	#34
7500+ Feet	Yes	#30	Yes	#34	#31

Propane Gas

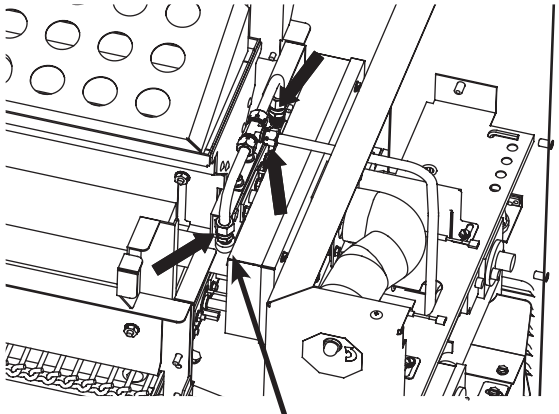
Elevation Range	Lower Burner Airshutter Adjustment Required	Lower Burner Orifice Size	IR Burner Airshutter Adjustment Required	Front IR Burner Orifice Size	Rear IR Burner Orifice Size
0 - 4999 Feet	No Airshutter Adjustments or Orifice Size Changes Required				
5000+ Feet	Yes	#48	Yes	#51	#50

High Altitude Adjustment Kit Instructions For Flexible Batch Broiler Units

1. TAKE THE ORIFICE SIZES SELECTED FROM THE TABLE ON THE PREVIOUS PAGE, AND MARK THEM ON THE HIGH ALTITUDE WARNING LABEL.
2. UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.
3. REMOVE LOWER BURNER (SEE INSTALLATION/ OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. BE SURE TO APPLY THREAD SEALANT TO ORIFICE HOLDER THREADS. TORQUE ORIFICE TO 60 IN LBS (6.7 N.m.).

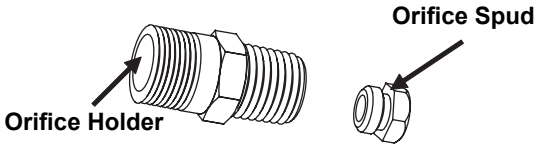


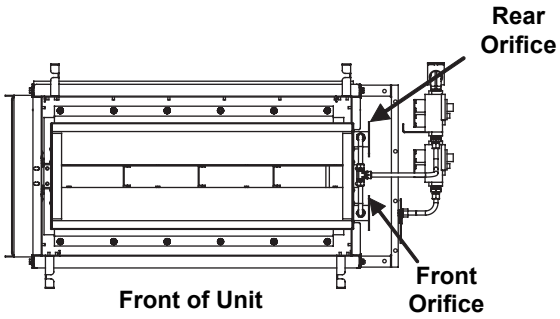
4. REINSTALL BURNER
5. REMOVE BROILER TOP COVER PANEL TO ACCESS IR BURNER PIPING AND ORIFICES.
6. WITH 5/8” WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.



Orifice Holder With Compression Fitting

7. WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH PROPER ORIFICE SPUD FROM TABLE.





8. REASSEMBLE FITTINGS, GAS LINES AND REINSTALL TOP OF UNIT.
9. CONNECT TO GAS AND ELECTRICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

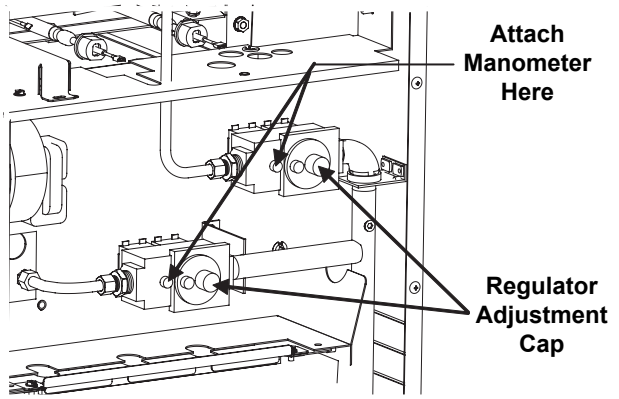
10. ON UPPER VALVE, REMOVE 1/8" PIPE PLUG AND ATTACHED MANOMETER. SWITCH BROILER "ON". WITH A SCREW DRIVER, REMOVE SLOTTED CAP FROM REGULATOR AND ADJUST UNTIL MANOMETER READING IS:

    3.75" W.C. FOR NATURAL GAS

    8.00" W.C. FOR PROPANE GAS

    REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.

NOTE: THE UPPER INFRARED BURNER VALVE WILL NOT COME ON UNTIL THE BROILER TEMPERATURE REACHES 500 F. INSTALL GREASE PANS AND IMPEDANCE PAN TO SPEED UP THE HEATING PROCESS.



11. WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.

12. MAKE THE LOWER BURNER AIRSHUTTER ADJUSTMENT

NOTE 1: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE 2: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

    i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

    ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

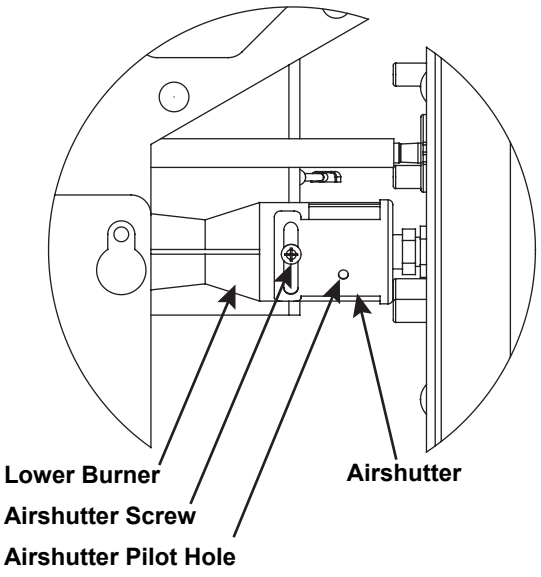
b. TIGHTEN THE AIRSHUTTER SCREW.

c. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/OPERATIONS MANUAL)

d. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

e. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

f. REINSTALL THE BURNER INTO THE BROILER.



13. MAKE THE INFRARED BURNER AIRSHUTTER ADJUSTMENTS

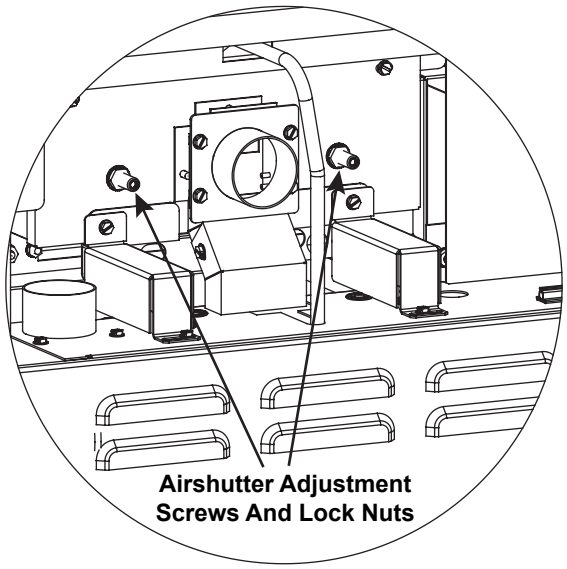
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16" WRENCH AND 3/16" HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

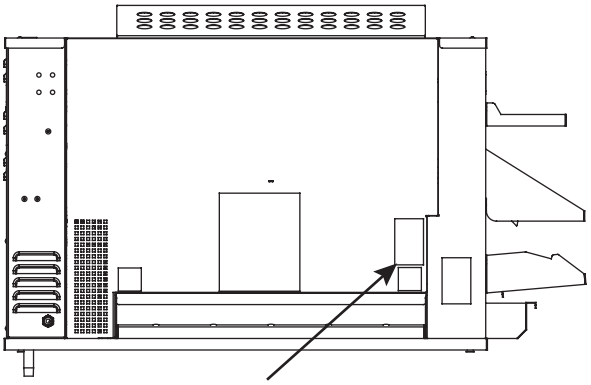
WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.



Airshutter Adjustment Screws And Lock Nuts

14, **REMOVE THE HIGH ALTITUDE WARNING LABEL THAT IS COVERING THE CONTROLLER AND PLACE ON BACK OF UNIT AS SHOWN BELOW.** CONVERSION IS COMPLETE.



Place High Altitude Warning Label Here

Rear of Broiler

INSTRUCCIONES DEL JUEGO DE AJUSTE DE ELEVADA ALTITUD

Your Solutions Partner

ASADOR FLEXIBLE POR TANDAS

Nota: Este asador ha sido aprobado por la agencia según CSA Z83.11 para permitir mayores tamaños de orificios a mayores altitudes. Esto permite un rendimiento de cocción similar a elevadas altitudes.

Este juego contiene lo siguiente:

(1) Orificio N° 30 del quemador inferior 175935
(1) Orificio N° 48 del quemador inferior 175936
(1) Orificio N° 37 del quemador de rayos infrarrojos 175937
(1) Orificio N° 34 del quemador de rayos infrarrojos 175938
(1) Orificio N° 31 del quemador de rayos infrarrojos 175939
(1) Orificio N° 50 del quemador de rayos infrarrojos 175940
(1) Orificio N° 51 del quemador de rayos infrarrojos 175768
(3) Remache de 1/8” 168106

Artículos requeridos para esta instalación:

- (1) Llave dinamométrica
- (1) Llave de boca de 5/8”
- (1) Cubo de 1/2”
- (1) Llave de boca de 3/8”
- (1) Llave hexagonal de 3/16”
- (1) Destornillador de hoja recta
- (1) Manómetro digital o “Slack Tube”
- (1) Taladro eléctrico
- (1) Broca de taladro N° 30
- (1) Herramienta para la instalación de remaches
- Fluido de detección de fugas de gas.

INSTRUCCIONES DE INSTALACIÓN

A. PERSONAL CAPACITADO

Estas instrucciones de instalación son para el uso exclusivo del personal de instalación y servicio capacitado. La instalación o el servicio por parte de personal que no esté capacitado puede provocar daños en el asador y lesiones al operador.

El personal de instalación capacitado son aquellos individuos, firmas, compañías o corporaciones que en persona o por medio de un agente participe y sea responsable de lo siguiente:

- La instalación o el reemplazo de tuberías de gas o la conexión, la instalación, la reparación o el servicio de equipos, que tengan experiencia en dicho trabajo, que estén familiarizados con todas las precauciones requeridas, y que hayan cumplido con todos los requisitos de las autoridades estatales y locales que tengan jurisdicción. Vea: Código Nacional para Gases Combustibles NFPA 54 (ANSI Z223.1).

La instalación debe cumplir con los códigos locales, o en ausencia de los mismos, con el Código Nacional de Gases Combustibles, ANSI Z223.1/NFPA 54, o con el Código de Instalación de Gas Natural y Propano, CSA B149.1 según corresponda, incluido lo siguiente:

Para un asador montado sobre ruedas, la instalación debe hacerse con un conector que cumpla con la norma para conectores de aparatos de gas móviles, ANSI Z21.69/CSA 6.16 y un dispositivo de desconexión rápida que cumpla con la norma para dispositivos de desconexión rápida para usar con combustible gaseoso, ANSI Z21.4/CSA 6.9. Al instalar el asador con ruedas y una manguera de desconexión rápida, se deben proporcionar medios adecuados para limitar el movimiento del asador sin depender del conector y del dispositivo de desconexión rápida o sus tuberías asociadas para limitar el movimiento del asador. Se puede conectar un medio de sujeción a la parte vertical del bastidor de la base en la parte trasera del asador.

Se dispone de instrucciones de instalación detalladas del asador en el manual de instalación y operación del asador flexible por tandas. Si falta este manual, debe solicitar uno usando la información de contacto de la parte inferior de esta página.

B. PROCEDIMIENTO

Este asador requiere ajustes del obturador de aire y cambios del tamaño de los orificios cuando se use a elevadas altitudes. Para asegurar un rendimiento de cocción apropiado, se debe seguir el siguiente procedimiento.

El cuadro siguiente indica si se requieren ajustes del obturador y cambios del tamaño de los orificios para diversas altitudes. También indica los orificios correctos para estas altitudes.

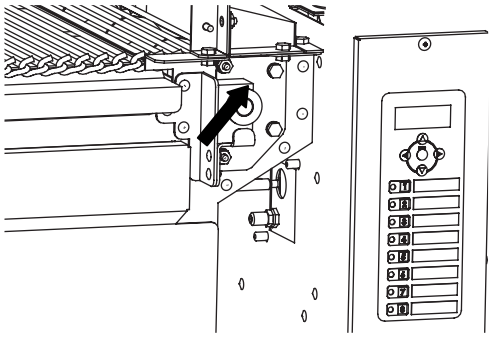
Gas natural

Gama de elevación	Se necesita ajustar el obturador del quemador inferior	Tamaño del orificio del quemador inferior	Se necesita ajustar el obturador del quemador de RI	Tamaño del orificio del quemador delantero de RI	Tamaño del orificio del quemador trasero de RI
0 - 3999 pies	No Airshutter Adjustments or Orifice Size Changes Required				
4000 - 4999 pies	Sí	No Change	Sí	No Change	No Change
5000 - 7499 pies	Sí	N° 30	Sí	N° 37	N° 34
7500+ pies	Sí	N° 30	Sí	N° 34	N° 31

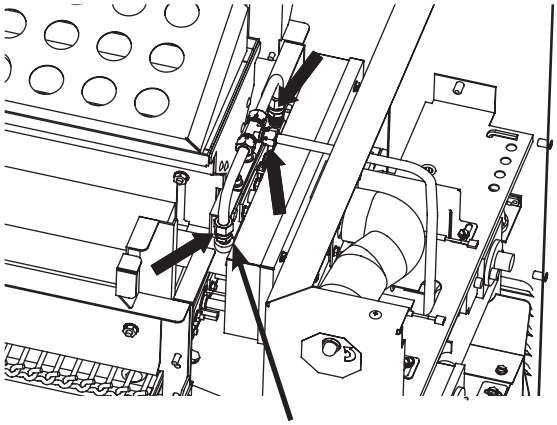
Gas propano

Elevation Range	Se necesita ajustar el obturador del quemador inferior	Tamaño del orificio del quemador inferior	Se necesita ajustar el obturador del quemador de RI	Tamaño del orificio del quemador delantero de RI	Tamaño del orificio del quemador trasero de RI
0 - 4999 pies	No Airshutter Adjustments or Orifice Size Changes Required				
5000+ pies	Sí	N° 48	Sí	N° 51	N° 50

1. TOME LOS TAMAÑOS DE LOS ORIFICIOS SELECCIONADOS DE LA TABLA EN LA PÁGINA ANTERIOR, Y MÁRQUELOS EN LA ETIQUETA DE ADVERTENCIA DE ALTITUD ELEVADA.
2. DESENCHUFE EL ASADOR DE LA RED ELÉCTRICA. CIERRE LA VÁLVULA DE GAS PRINCIPAL Y DESCONECTE LA TUBERÍA DE SUMINISTRO.
3. QUITE EL QUEMADOR INFERIOR (VEA EL MANUAL DE INSTALACIÓN/OPERACIONES) PARA TENER ACCESO A LA CAPERUZA DE LA VÁLVULA DE ORIFICIO. USE UN CUBO DE 1/2" PARA QUITAR LA CAPERUZA DE LA VÁLVULA DE ORIFICIO Y REEMPLACE POR LA NUEVA VÁLVULA DE ORIFICIO. ASEGÚRESE DE APLICAR SELLANTE A LAS ROSCAS DEL RETENEDOR DE LA VÁLVULA DE ORIFICIO. APRIETE LA VÁLVULA DE ORIFICIO A 60 LB-PULG (6.7 N.m.).

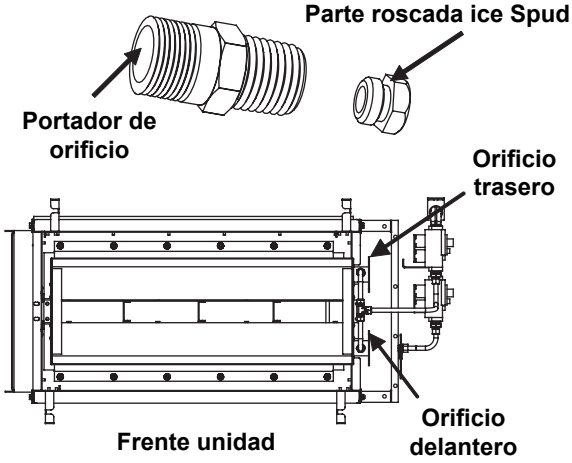


4. VUELVA A INSTALAR EL QUEMADOR
5. QUITE EL PANEL DE LA CUBIERTA SUPERIOR DEL ASADOR PARA TENER ACCESO A LAS TUBERÍAS Y ORIFICIOS DEL QUEMADOR DE RI.
6. USE UNA LLAVE DE 5/8” PARA QUITAR LAS CONEXIONES DE COMPRESIÓN DE LA TUBERÍA DE GAS SUPERIOR (3 LUGARES) QUE CONECTAN AMBOS QUEMADORES DE RI.



Portador de orificio con conexión de compresión

7. CON LAS TUBERÍAS DE GAS QUITADAS, QUITE LOS PORTADORES DE LOS ORIFICIOS DE LOS QUEMADORES CON UNA LLAVE DE 5/8”. QUITE LA PARTE ROSCADA DEL ORIFICO DEL PORTADOR CON UNA LLAVE DE 3/8”. REEMPLACE POR LA PARTE ROSCADA DEL ORIFICIO DE LA TABLA.



8. VUELVA A MONTAR LAS CONEXIONES, TUBERÍAS DE GAS Y VUELVA A INSTALAR LA PARTE SUPERIOR DE LA UNIDAD.
9. CONECTE AL SERVICIO DE GAS Y ELÉCTRICO. SI SE TRATA DE UNA NUEVA INSTALACIÓN, DEBE SEGUIR LAS INSTRUCCIONES DE INSTALACIÓN Y OPERACIÓN DEL ASADOR FLEXIBLE POR TANDAS.

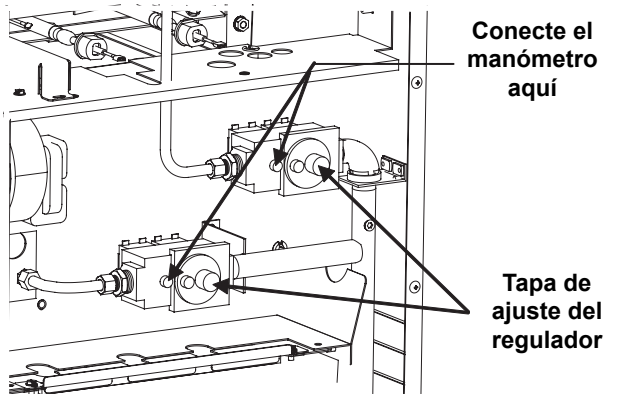
10. EN LA VÁLVULA SUPERIOR, QUITE EL TAPÓN DE TUBERÍA DE 1/8" Y EL MANÓMETRO CONECTADO. ENCIENDA EL ASADOR. USE UN DESTORNILLADOR PARA QUITAR LA TAPA RANURADA DEL REGULADOR Y AJÚSTELA HASTA QUE LA LECTURA DEL MANÓMETRO SEA:

    3.75" DE COLUMNA DE AGUA PARA EL GAS NATURAL

    8.00" DE COLUMNA DE AGUA PARA EL GAS PROPANO

    VUELVA A COLOCAR LA TAPA. APAGUE EL ASADOR. QUITE EL MANÓMETRO Y REEMPLACE EL TAPÓN DE TUBERÍA. REPITA ESO PARA LA VÁLVULA INFERIOR.

NOTA: LA VÁLVULA DEL QUEMADOR DE RAYOS INFRARROJOS SUPERIOR NO SE ABRIRÁ HASTA QUE LA TEMPERATURA DEL ASADOR ALCANCE LOS 500°F. INSTALE COLECTORES DE GRASA Y LA BANDEJA DE IMPEDANCIA PARA ACELERAR EL PROCESO DE CALENTAMIENTO.



11. COMPRUEBE SI HAY FUGAS EN TODAS LAS CONEXIONES CON EL ASADOR EN FUNCIONAMIENTO.

NOTA: LOS DETECTORES DE FUGAS ELECTRÓNICOS DARÁN FALSAS LECTURAS EN LA PARTE SUPERIOR DEL ASADOR CERCA DE LOS ORIFICIOS DE RI Y DE LAS TUBERÍAS DE GAS. ESTO SE DEBE A PRODUCTOS DE COMBUSTIÓN CERCA DEL CONDUCTO DE HUMOS. USE UN FLUIDO DE COMPROBACIÓN DE FUGAS O SOLUCIÓN JABONOSA EN ESTA ÁREA.

12. EFECTÚE EL AJUSTE DEL OBTURADOR DE AIRE DEL QUEMADOR INFERIOR

NOTA 1: ES NECESARIO EFECTUAR ESTE AJUSTE CON LOS COLECTORES DE GRASA Y LOS PANELES DE ACCESO DEL QUEMADOR INFERIOR INSTALADOS.

NOTA 2: ES NECESARIO EFECTUAR ESTE AJUSTE DEL QUEMADOR EN EL ASADOR ASÍ COMO EN CUALQUIER OTRO QUEMADOR DE REPUESTO EN JUEGOS DE PIEZAS DE REPUESTO O en JUEGOS DE PIEZAS REEMPLAZABLES POR EL USUARIO. SE DEBEN FIJAR TODOS LOS QUEMADORES PARA LA MISMA ABERTURA DEL OBTURADOR DE AIRE.

a. AFLOJE EL TORNILLO DEL OBTURADOR DE AIRE Y AJÚSTELO PARA LOGRAR LAS CARACTERÍSTICAS APROPIADAS DE LA LLAMA SEGÚN SE DEFINEN ABAJO:

    i. GAS NATURAL – LA LLAMA DEBE SER PRINCIPALMENTE AZUL CON PUNTAS LIGERAMENTE AMARILLAS EN LOS DOS EXTREMOS DEL QUEMADOR. NO SE DEBE LEVANTAR LA LLAMA.

    ii. GAS PROPANO – LA LLAMA DEBE SER PRINCIPALMENTE AZUL CON PUNTAS LIGERAMENTE AMARILLAS A LO LARGO DE TODO EL QUEMADOR. NO SE DEBE LEVANTAR LA LLAMA.

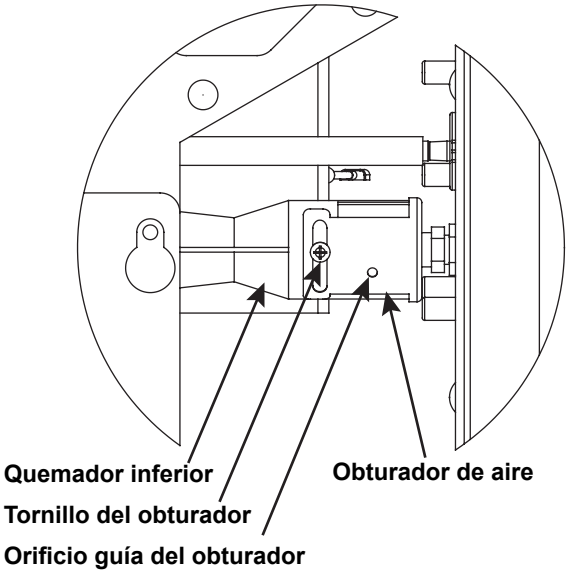
b. APRIETE EL TORNILLO DEL OBTURADOR DE AIRE.

c. QUITE EL QUEMADOR INFERIOR DE LA UNIDAD (VEA EL MANUAL DE INSTALACIÓN/ OPERACIÓN)

d. USE LOS DOS ORIFICIOS GUÍA DEL OBTURADOR DE AIRE PARA PERFORAR ORIFICIOS DEL N° 30 A TRAVÉS DEL OBTURADOR DE AIRE Y DEL QUEMADOR.

e. USE LOS REMACHES INCLUIDOS PARA TRABAR EL QUEMADOR EN POSICIÓN.

f. VUELVA A INSTALAR EL QUEMADOR EN EL ASADOR.



13. EFECTÚE EL AJUSTE DEL OBTURADOR DE AIRE DEL QUEMADOR DE RAYOS INFRARROJOS.

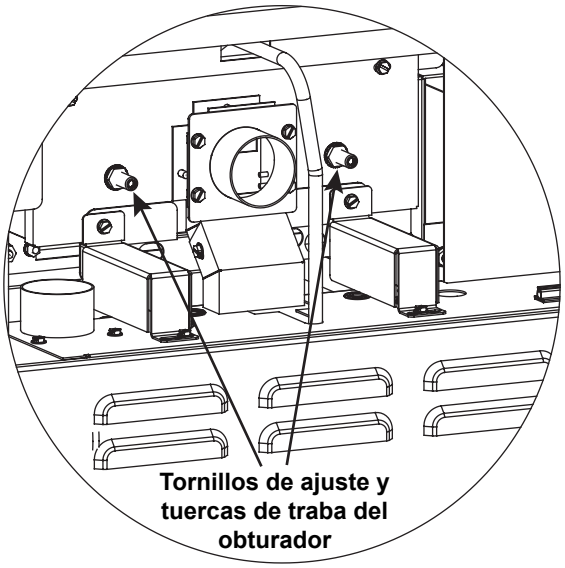
a. QUITE LA TAPA DE CONTROL SUPERIOR DEL EXTREMO DE LA UNIDAD PARA TENER ACCESO A LOS TORNILLOS DE AJUSTE DEL OBTURADOR DE AIRE.

b. USE UNA LLAVE DE 9/16" Y UNA LLAVE HEXAGONAL DE 3/16" PARA AFLOJAR LAS TUERCAS DE TRABA DE LOS TORNILLOS DE AJUSTE.

c. AJUSTE LOS QUEMADORES PARA OBTENER LAS CARACTERÍSTICAS APROPIADAS DE LA LLAMA.

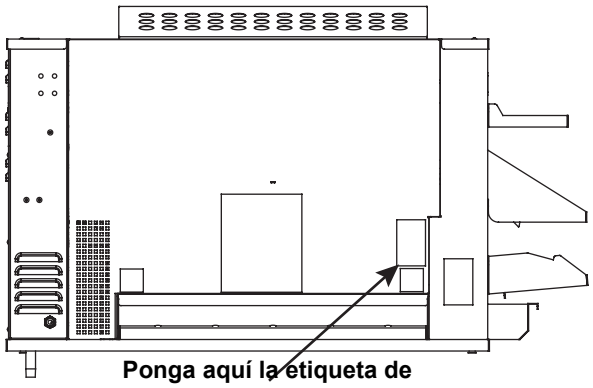
   CON LA UNIDAD BIEN CALENTADA, GIRE CADA TORNILLO A LA DERECHA ¼" DE VUELTA EN INCREMENTOS HASTA QUE SE OBSERVE UNA LLAMA O NEBLINA AZUL DEBAJO DE LOS QUEMADORES. DESPUÉS GIRE CADA TORNILLO A LA IZQUIERDA ¼" DE VUELTA EN INCREMENTOS HASTA QUE NO SE OBSERVE UNA LLAMA O NEBLINA AZUL DEBAJO DE LOS QUEMADORES.

d. VUELVA A APRETAR LAS TUERCAS EN LOS TORNILLOS DE AJUSTE.



Tornillos de ajuste y tuercas de traba del obturador

14. **QUITE LA ETIQUETA DE ADVERTENCIA DE ELEVADA ALTITUD QUE CUBRE EL CONTROLADOR Y VUELVA A COLOCARLA EN LA PARTE TRASERA DE LA UNIDAD SEGÚN SE MUESTRA ABAJO.** LA CONVERSIÓN ESTÁ COMPLETA.



Ponga aquí la etiqueta de advertencia de altitud elevada

Parte trasera asador

INSTRUCTIONS POUR KIT DE RÉGLAGE POUR HAUTE ALTITUDE

Your Solutions Partner

RÔTISSOIRE À FOURNÉE VARIABLE

Remarque : cette rôtissoire a été certifiée conforme à la norme ACNOR Z83.11 pour permettre l'utilisation d'orifices calibrés de plus grand diamètre à haute altitude. Cela permet une aussi bonne cuisson en altitude.

Composition du kit :

(1) Orifice calibré, n° 30, brûleur inférieur 175935
(1) Orifice calibré, n° 48, brûleur inférieur 175936
(1) Orifice calibré, n° 37, brûleur infrarouge 175937
(1) Orifice calibré, n° 34, brûleur infrarouge 175938
(1) Orifice calibré, n° 31, brûleur infrarouge 175939
(1) Orifice calibré, n° 50, brûleur infrarouge 175940
(1) Orifice calibré, n° 51, brûleur infrarouge 175768
(3) Rivet aveugle 1/8 po 168106

Accessoires nécessaires pour cette installation:

- (1) Clé dynamométrique
- (1) Clé à fourche de 5/8 po
- (1) Douille de 1/2 po
- (1) Clé à fourche de 3/8 po
- (1) Clé Allen de 3/16 po
- (1) Tournevis plat
- (1) Manomètre numérique ou Slack Tube®
- (1) Perceuse électrique
- (1) Foret n° 30
- (1) Riveteuse
- Liquide pour détection des fuites de gaz.

INSTRUCTIONS D'INSTALLATION

A. PERSONNEL QUALIFIÉ

Ces instructions d'installation sont destinées à un personnel d'installation et d'entretien qualifié uniquement. Une installation ou un entretien effectué par quiconque autre que du personnel qualifié peut entraîner des dégâts pour la rôtissoire et/ou des blessures pour l'opérateur.

Par personnel d'installation qualifié on entend les personnes ou entreprises qui, directement ou par l'intermédiaire d'un agent, se chargent et sont responsables de ce qui suit :

- Pose ou remplacement de canalisations de gaz, ou raccordement, installation, réparation ou entretien du matériel. Ce personnel doit avoir une solide expérience de ce genre de travail, être familiarisé avec toutes les précautions à prendre et avoir satisfait à toutes les conditions exigées par les autorités provinciales et locales compétentes. Voir : National Fuel Gas Code (Code national des combustibles gazeux), NFPA 54 (ANSI Z223.1).

L'installation doit être conforme aux codes locaux ou, en leur absence, au National Fuel Gas Code, ANSI Z223.1/ NFPA 54 ou au Natural Gas and Propane Installation Code (Code des installations au gaz naturel et au propane), ACNOR B149.1 selon le cas, y compris :

Pour une rôtissoire montée sur des roulettes, l'installation doit être effectuée en utilisant un raccord conforme à la norme applicable aux raccords pour appareils à gaz mobiles, ANSI Z21.69/ACNOR 6.16 et un dispositif à débranchement rapide conforme à la norme applicable à ce type de raccord pour combustible gazeux, ANSI Z21.4/ACNOR 6.9. Lors de l'installation d'une rôtissoire à roulettes et tuyau à débranchement rapide, des dispositions suffisantes doivent être prises pour limiter le déplacement de la rôtissoire indépendamment du raccord et du dispositif à débranchement rapide ou de la tuyauterie associée. Il est possible de fixer un limiteur à la partie verticale du châssis à l'arrière de la rôtissoire.

Des instructions détaillées d'installation de la rôtissoire à fournée variable sont données dans son manuel d'installation et d'utilisation. Si on a perdu ce manuel, on peut en demander un autre en utilisant les informations sur les contacts figurant au bas de cette page.

B. MARCHE À SUIVRE

Cette rôtissoire exige des réglages d'obturateurs d'air et des changements de diamètre des orifices calibrés pour être utilisée à haute altitude. Procéder comme suit pour garantir une bonne cuisson.

Le tableau ci-dessous indique si un réglage d'obturateurs d'air et des changements de diamètre des orifices calibrés sont nécessaires à diverses altitudes. Il indique également les orifices calibrés corrects pour ces altitudes.

Gaz naturel

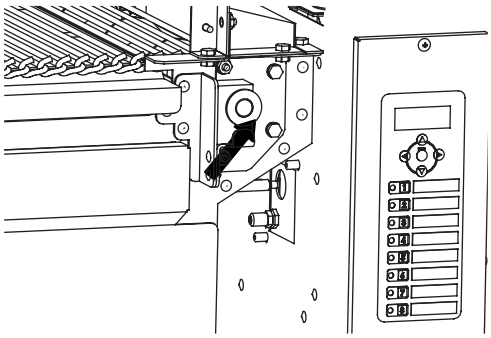
Altitudes	Réglage d'obturateur d'air de brûleur inférieur nécessaire	Diamètre d'orifice calibré de brûleur inférieur	Réglage d'obturateur d'air de brûleur infrarouge nécessaire	Diamètre d'orifice calibré de brûleur infrarouge avant	Diamètre d'orifice calibré de brûleur infrarouge arrière
0 - 3999 pieds	Aucun réglage d'obturateur d'air ni de changement de diamètre d'orifice calibré nécessaire				
4000 - 4999 pieds	Oui	Aucun change-ment	Yes	Aucun change-ment	Aucun change-ment
5000 - 7499 pieds	Oui	N° 30	Oui	N° 37	N° 34
7500+ pieds	Oui	N° 30	Oui	N° 34	N° 31

Gaz propane

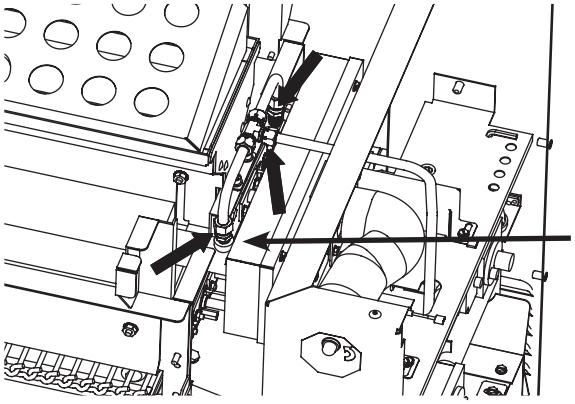
Altitudes	Réglage d'obturateur d'air de brûleur inférieur nécessaire	Diamètre d'orifice calibré de brûleur inférieur	Réglage d'obturateur d'air de brûleur infrarouge nécessaire	Diamètre d'orifice calibré de brûleur infrarouge avant	Diamètre d'orifice calibré de brûleur infrarouge arrière
0 - 4999 pieds	Aucun réglage d'obturateur d'air ni de changement de diamètre d'orifice calibré nécessaire				
5000+ pieds	Oui	N° 48	Oui	N° 51	N° 50

High Altitude Adjustment Kit Instructions For Flexible Batch Broiler Units

1. RELEVER LES DIAMÈTRES D'ORIFICES CALIBRÉS SÉLECTIONNÉS SUR LE TABLEAU DE LA PAGE, PRÉCÉDENTE ET LES INDIQUER SUR L'ÉTIQUETTE D'AVERTISSEMENT POUR UTILISATION À HAUTE ALTITUDE.
2. DÉBRANCHER LA RÔTISSOIRE DE LA PRISE DE COURANT. FERMER LA VANNE D'ALIMENTATION PRINCIPALE ET DÉBRANCHER LE TUYAU D'ALIMENTATION.
3. DÉPOSER LE BRÛLEUR INFÉRIEUR (VOIR LE MANUEL D'INSTALLATION/UTILISATION) POUR ACCÉDER AU CHAPEAU D'ORIFICE CALIBRÉ. ENLEVER LE CHAPEAU D'ORIFICE À L'AIDE D'UNE DOUILLE DE 1/2 PO ET REMPLACER L'ORIFICE PAR UN NEUF. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR LE FILETAGE DU PORTE-ORIFICE. SERRER L'ORIFICE À 6,7 N.m (60 PO-LBS.)

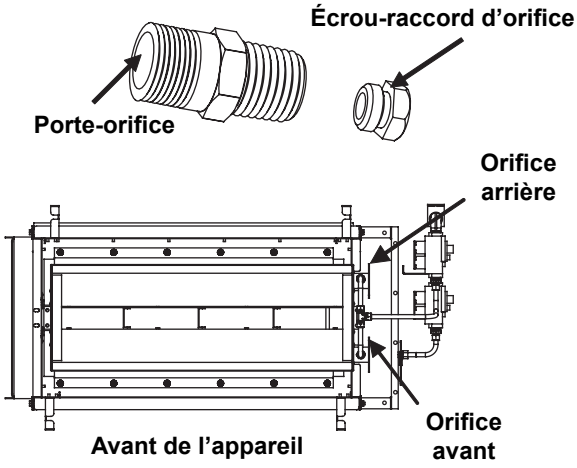


4. REMETTRE LE BRÛLEUR EN PLACE
5. DÉPOSER LE PANNEAU PROTECTEUR SUPÉRIEUR DE LA RÔTISSOIRE POUR ACCÉDER À LA TUYAUTERIE ET AUX ORIFICES CALIBRÉS DES BRÛLEURS INFRAROUGES.
6. À L'AIDE D'UNE CLÉ DE 5/8 PO, RETIRER LES RACCORDS À COMPRESSION DE LA CANALISATION SUPÉRIEURE DE GAZ (3 ENDROITS) QUI RELIE LES DEUX BRÛLEURS INFRAROUGES.



Porte-orifice avec raccord à compression

7. LES CANALISATIONS DE GAZ ÉTANT DÉBRANCHÉES, DÉPOSER LES PORTES-ORIFICE DES BRÛLEURS À L'AIDE D'UNE CLÉ DE 5/8 PO. RETIRER L'ÉCROU-RACCORD DU PORTE-ORIFICE À L'AIDE D'UNE CLÉ DE 3/8 PO. LE REMPLACER PAR L'ÉCROU-RACCORD CORRECT INDIQUÉ SUR LE TABLEAU.



8. RÉASSEMBLER LES RACCORDS, LES CANALISATIONS DE GAZ ET REMETTRE LE HAUT DE L'APPAREIL EN PLACE.
9. RACCORDER L'APPAREIL À L'ARRIVÉE DE GAZ ET AU SECTEUR. S'IL S'AGIT D'UNE NOUVELLE INSTALLATION, SUIVRE LES INSTRUCTIONS D'INSTALLATION ET D'UTILISATION DE LA RÔTISSOIRE À FOURNÉE VARIABLE.

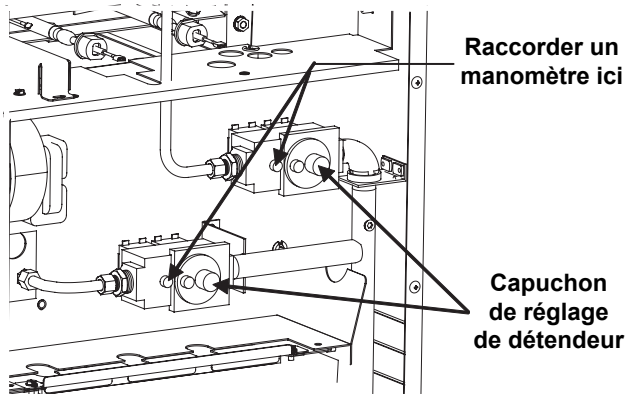
10. ENLEVER LE BOUCHON TUBULAIRE DE 1/8 PO DU ROBINET SUPÉRIEUR ET POSER UN MANOMÈTRE. ALLUMER LA RÔTISSOIRE. À L'AIDE D'UN TOURNEVIS, ENLEVER LE CAPUCHON À FENTE DU DÉTENDEUR ET RÉGLER CELUI-CI JUSQU'À CE QUE LE MANOMÈTRE INDIQUE :

    3,75 PO C.E. POUR LE GAZ NATUREL

    8,00 PO C.E. POUR LE GAZ PROPANE

    REMETTRE LE CAPUCHON EN PLACE. ÉTEINDRE LA RÔTISSOIRE. RETIRER LE MANOMÈTRE ET REMETTRE LE BOUCHON TUBULAIRE EN PLACE. RÉPÉTER L'OPÉRATION POUR LE ROBINET INFÉRIEUR.

REMARQUE : LE BRÛLEUR INFRAROUGE SUPÉRIEUR NE S'ALLUME QUE LORSQUE LA TEMPÉRATURE DE LA RÔTISSOIRE ATTEINT 500 °F. METTRE DES BACS À GRAISSE ET UN BAC À IMPÉDANCE POUR ACCÉLÉRER LE CHAUFFAGE.



11. LA RÔTISSOIRE ÉTANT EN MARCHE, CONTRÔLER L'ÉTANCHÉITÉ DE TOUS LES RACCORDS.

REMARQUE : LES DÉCELEURS DE FUITES ÉLECTRONIQUES DONNERONT DES INDICATIONS ERRONÉES SUR LE DESSUS DE LA RÔTISSOIRE PRÈS DES ORIFICES CALIBRÉS DES BRÛLEURS INFRAROUGES ET DE LA TUYAUTERIE DE GAZ. CELA EST DÛ AUX PRODUITS DE COMBUSTION PRÉSENTS PRÈS DU TUYAU D'ÉVACUATION DES FUMÉES. UTILISER UN LIQUIDE DE CONTRÔLE D'ÉTANCHÉITÉ OU DE L'EAU SAVONNEUSE DANS CETTE ZÔNE.

12. RÉGLER L'OBTURATEUR D'AIR DU BRÛLEUR INFÉRIEUR

REMARQUE 1 : CE RÉGLAGE DOIT ÊTRE EFFECTUÉ AVEC LES BACS À GRAISSE ET LES PANNEAUX D'ACCÈS AUX BRÛLEURS INFÉRIEURS EN PLACE.

REMARQUE 2 : CE RÉGLAGE DOIT ÊTRE EFFECTUÉ SUR LE BRÛLEUR QUI SE TROUVE À L'INTÉRIEUR DE LA RÔTISSOIRE AINSI QUE SUR TOUT AUTRE BRÛLEUR DE RÉSERVE FAISANT PARTIE DE KITS DE PIÈCES DE RECHANGE OU DE PIÈCES REMPLAÇABLES PAR L'UTILISATEUR. RÉGLER TOUS LES BRÛLEURS À LA MÊME OUVERTURE D'OBTURATEUR D'AIR.

a. DESSERRER LA VIS D'OBTURATEUR D'AIR ET RÉGLER CELUI-CI POUR OBTENIR LES CARACTÉRISTIQUES DE FLAMME CORRECTES TELLES QUE DÉFINIES CI-DESSOUS :

    i. GAZ NATUREL – LA FLAMME DOIT ÊTRE BLEUE AVEC DES POINTES LÉGÈREMENT JAUNES AUX DEUX EXTRÉMITÉS DU BRÛLEUR. IL NE DOIT Y AVOIR AUCUN ALLONGEMENT DE LA FLAMME.

    ii. GAZ PROPANE – LA FLAMME DOIT ÊTRE BLEUE AVEC DES POINTES LÉGÈREMENT JAUNES SUR LA TOTALITÉ DU BRÛLEUR. IL NE DOIT Y AVOIR AUCUN ALLONGEMENT DE LA FLAMME.

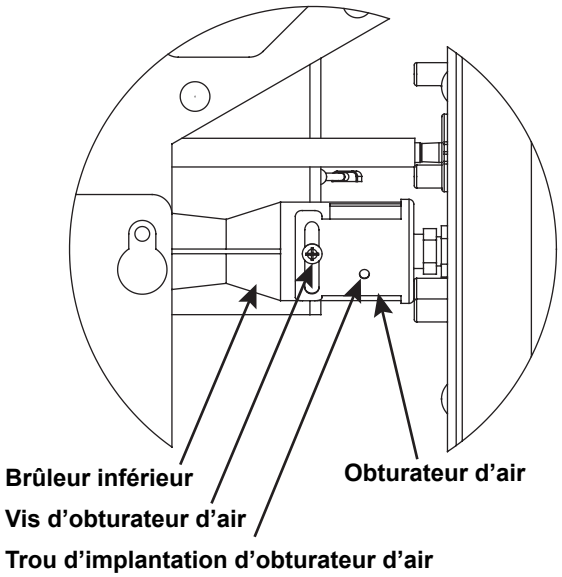
b. RESSERRER LA VIS DE L'OBTURATEUR D'AIR.

c. DÉPOSER LE BRÛLEUR INFÉRIEUR DE L'APPAREIL (VOIR LE MANUEL D'INSTALLATION/ UTILISATION)

d. UTILISER LES DEUX TROUS D'IMPLANTATION DE L'OBTURATEUR D'AIR POUR PERCER DES TROUS N° 30 DANS L'OBTURATEUR ET LE BRÛLEUR.

e. UTILISER LES RIVETS FOURNIS POUR VERROUILLER LE BRÛLEUR EN POSITION.

f. REMETTRE LE BRÛLEUR EN PLACE DANS LA RÔTISSOIRE.



13. EFFECTUER LES RÉGLAGES D'OBTURATEURS D'AIR DE BRÛLEURS INFRAROUGES

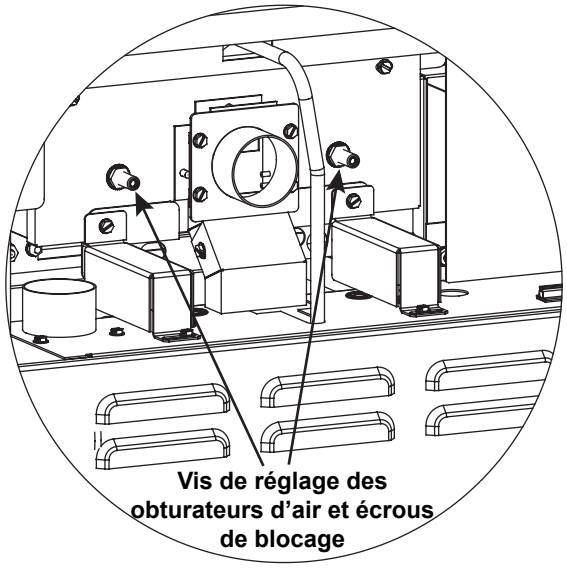
a. RETIRER LE COUVERCLE DE COMMANDES SUPÉRIEUR DE L'EXTRÉMITÉ DE L'APPAREIL POUR ACCÉDER AUX VIS DE RÉGLAGE DES OBTUTATEURS D'AIR.

b. DESSERRER LES ÉCROUS DE BLOCAGE DES VIS DE RÉGLAGE À L'AIDE D'UNE CLÉ DE 9/16 PO ET D'UNE CLÉ ALLEN DE 3/16 PO.

c. RÉGLER LES BRÛLEURS POUR OBTENIR LES CARACTÉRISTIQUES DE FLAMME CORRECTES.

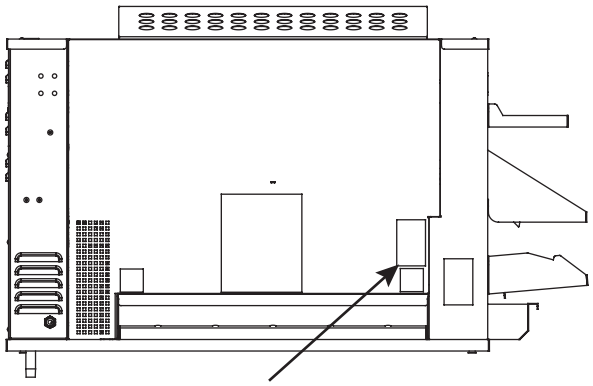
L'APPAREIL ÉTANT BIEN CHAUD, TOURNER CHAQUE VIS DE ¼ DE TOUR À LA FOIS DANS LE SENS HORAIRE JUSQU'À CE QU'UNE FLAMME NETTE OU FLOUE BLEUE APPARAISSE EN DESSOUS DES BRÛLEURS. TOURNER ENSUITE CHAQUE VIS DE ¼ DE TOUR À LA FOIS DANS LE SENS ANTIHORAIRE JUSQU'À CE QU'AUCUNE FLAMME NETTE OU FLOUE BLEUE N'APPARAISSE EN DESSOUS DES BRÛLEURS.

d. RESERRER LES ÉCROUS DES VIS DE RÉGLAGE.



Vis de réglage des obturateurs d'air et écrous de blocage

14. **ENLEVER L'ÉTIQUETTE D'AVERTISSEMENT POUR UTILISATION À HAUTE ALTITUDE QUI RECOUVRE LE CONTRÔLEUR ET LA PLACER AU DOS DE L'APPAREIL COMME INDIQUÉ CI-DESSOUS.** LA CONVERSION EST ALORS TERMINÉE.



Placer l'étiquette d'avertissement pour utilisation à haute altitude ici

Arrière de la rôtissoire

KIT DE AJUSTE PARA GRANDES ALTITUDES INSTRUÇÕES

Your Solutions Partner

GRELHA MULTIPRODUTO

Observação: Esta grelha foi aprovada por órgãos públicos como padrão CSA Z83.11 para permitir tamanhos de orifícios maiores em grandes altitudes. Isso possibilita um desempenho semelhante na cocção em locais de grande altitude.

Este kit contém:

(1) Orifício, nº 30, queimador inferior 175935
(1) Orifício, nº 48, queimador inferior 175936
(1) Orifício, nº 37, queimador infravermelho 175937
(1) Orifício, nº 34, queimador infravermelho..... 175938
(1) Orifício, nº 31, queimador infravermelho 175939
(1) Orifício, nº 50, queimador infravermelho 175940
(1) Orifício, nº 51, queimador infravermelho..... 175768
(3) Rebites 1/8” 168106

Itens necessários para esta instalação:

- Torquímetro
- Chave de boca de 5/8”
- soquete de 1/2”
- Chave fixa de 3/8”
- Chave sextavada de 3/16”
- Chave de fenda reta
- Manômetro digital ou Slack Tube
- Furadeira
- Broca nº 30
- Rebitadora
- Fluido de detecção de vazamento de gás

INSTRUÇÕES DE INSTALAÇÃO

A. TÉCNICOS QUALIFICADOS

Estas instruções de instalação devem ser usadas apenas por técnicos qualificados de instalação e serviço. A instalação ou serviço feito por outra pessoa que não um técnico qualificado pode causar danos à grelha e/ou ferimentos ao operador.

Técnicos de instalação qualificados são pessoas, firmas, companhias ou empresas que, seja pessoalmente ou através de um agente, executem e se responsabilizem pelo seguinte:

- Instalação ou substituição da tubulação de gás ou a conexão, instalação, conserto ou manutenção do equipamento, que tenham experiência com esse tipo de trabalho, conheçam todas as medidas de precaução necessárias e atendam a todos os requisitos exigidos pelos órgãos estaduais e municipais competentes. Veja: Código Nacional de Gás Combustível dos EUA NFPA 54 (ANSI Z223.1).

A instalação deve obedecer os códigos locais ou, na ausência de códigos locais, o Código Nacional de Gás Combustível dos EUA, ANSI Z223.1/NFPA 54, ou o Código de Instalação de Gás Natural ou Propano dos EUA, CSA B149.1, se for o caso, incluindo o seguinte:

No caso de grelhas montadas sobre rodízios, a instalação deverá ser feita com um conector que obedeça o Padrão de Conectores para Equipamento Móvel a Gás, ANSI Z21.69/CSA 6.16, e um dispositivo de desconexão rápida que atenda o Padrão de Dispositivos de Desconexão Rápida para Uso com Gás Combustível, ANSI Z21.4/CSA 6.9. Ao instalar a grelha com rodízios e mangueira de desconexão rápida, é preciso providenciar métodos adequados para limitar o movimento da grelha sem depender do conector e do dispositivo de desconexão rápida ou ainda da tubulação associada para limitar o movimento da grelha. Um elemento de restrição pode ser afixado na porção vertical da estrutura da base, na traseira da grelha.

O "Manual de instalação e operação da Grelha Multiproduto" contém instruções detalhadas para instalação da grelha. Se não encontrar o manual, peça um usando as informações de contato no final desta página.

B. PROCEDIMENTO

Esta grelha exige ajustes no obturador de ar e no tamanho dos orifícios quando usada em grandes altitudes. Para garantir um desempenho de cocção adequado, siga o procedimento abaixo.

A tabela abaixo indica se há necessidade de se fazer um ajuste no obturador de ar e mudanças nos tamanhos dos orifícios em diferentes faixas de altitude. Também indica os orifícios corretos para essas faixas de altitude.

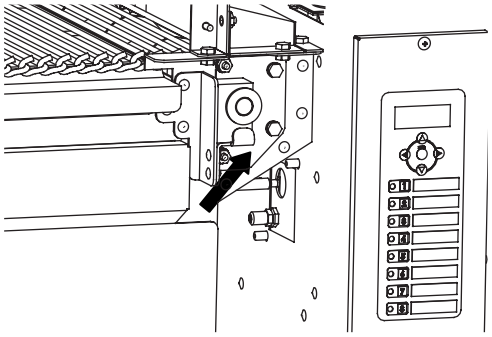
Gás natural

Faixa de elevação	Necessário fazer o ajuste do obturador de ar do queimador inferior	Tamanho do orifício do queimador inferior	Necessário fazer ajuste no obturador de ar do queimador infravermelho	Tamanho do orifício do queimador infravermelho dianteiro	Tamanho do orifício do queimador infravermelho traseiro
0 - 1219 metros	Não é necessário fazer nenhum ajuste no obturador de ar nem mudanças nos tamanhos dos orifícios				
1220 – 1524 metros	Sim	Nenhuma mudança	Sim	Nenhuma mudança	Nenhuma mudança
1525 – 2284 metros	Sim	Nº 30	Sim	Nº 37	Nº 34
+ de 2285 metros	Sim	Nº 30	Sim	Nº 34	Nº 31

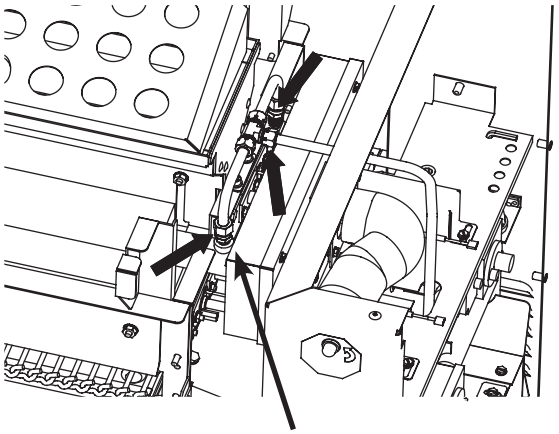
Propane Gas

Faixa de elevação	Necessário fazer o ajuste do obturador de ar do queimador inferior	Tamanho do orifício do queimador inferior	Necessário fazer ajuste no obturador de ar do queimador infravermelho	Tamanho do orifício do queimador infravermelho dianteiro	Tamanho do orifício do queimador infravermelho traseiro
0 - 1523 metros	Não é necessário fazer nenhum ajuste no obturador de ar nem mudanças nos tamanhos dos orifícios				
+ de 1524 metros	Sim	Nº 48	Sim	Nº 51	Nº 50

1. COPIE OS TAMANHOS DE ORIFÍCIOS SELECIONADOS NA TABELA DA PÁGINA ANTERIOR NA ETIQUETA DE AVISO SOBRE GRANDES ALTITUDES.
2. DESLIGUE A GRELHA DA TOMADA ELÉTRICA. FECHE A VÁLVULA PRINCIPAL E DESCONECTE A LINHA DE ALIMENTAÇÃO DE GÁS.
3. REMOVA O QUEIMADOR INFERIOR (VEJA O MANUAL DE INSTALAÇÃO/OPERAÇÕES) PARA ACESSAR A TAMPA DO ORIFÍCIO. USANDO UM SOQUETE DE 1/2", REMOVA A TAMPA DO ORIFÍCIO E COLOQUE O NOVO ORIFÍCIO. LEMBRE-SE DE APLICAR O SELANTE DE ROSCA NAS ROSCAS DO RETENTOR DO ORIFÍCIO. APLIQUE UM TORQUE DE 6,7 Nm (60 lbs).

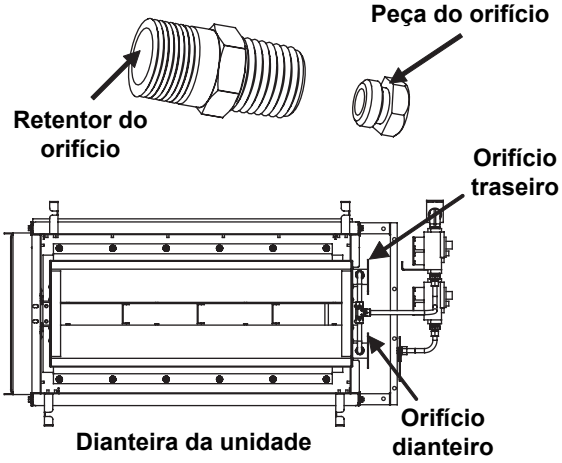


4. REINSTALE O QUEIMADOR
5. REMOVA O PAINEL DA TAMPA SUPERIOR DA GRELHA PARA ACESSAR OS ORIFÍCIOS E TUBULAÇÃO DO QUEIMADOR INFRAVERMELHO.
6. COM UMA CHAVE DE 5/8”, REMOVA OS ENCAIXES DE COMPRESSÃO DA TUBULAÇÃO DE GÁS SUPERIOR (3 PONTOS) QUE CONECTAM OS DOIS QUEIMADORES INFRAVERMELHOS.



Retentor do orifício com encaixe de compressão

7. COM OS TUBOS DE GÁS REMOVIDOS, RETIRE OS RETENTORES DOS ORIFÍCIOS DOS QUEIMADORES COM UMA CHAVE DE 5/8”. REMOVA A PEÇA DO ORIFÍCIO DO RETENTOR COM UMA CHAVE DE 3/8”. SUBSTITUA PELA PEÇA DE ORIFÍCIO DA MESA.



8. RECOLOQUE OS ENCAIXES E TUBOS DE GÁS E REINSTALE A PARTE DE CIMA DA UNIDADE.
9. FAÇA A CONEXÃO COM A ALIMENTAÇÃO DE GÁS E ELETRICIDADE. SE ESTA FOR UMA INSTALAÇÃO NOVA, SIGA AS INSTRUÇÕES DE INSTALAÇÃO E OPERAÇÃO DA GRELHA MULTIPRODUTO.

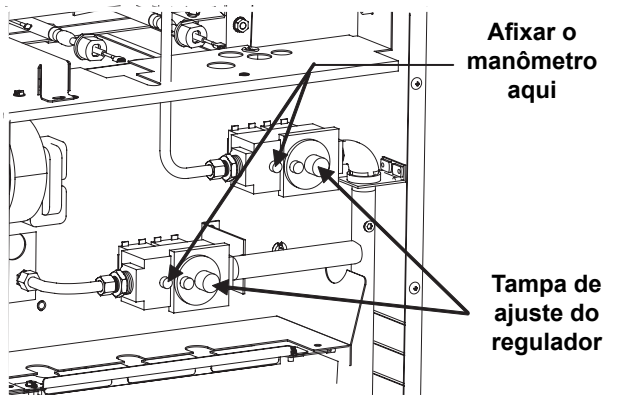
10. NA VÁLVULA SUPERIOR, RETIRE O BUJÃO DO TUBO DE 1/8" E O MANÔMETRO. LIGUE A GRELHA. COM UMA CHAVE DE FENDA, RETIRE A TAMPA FENDIDA DO REGULADOR E AJUSTE ATÉ QUE O VISOR DO MANÔMETRO ACUSE:

    3.75" W.C. (Coluna de água de 9,5 cm) PARA GÁS NATURAL

    8.00" W.C. (Coluna de água de 20 cm) PARA GÁS PROPANO

    RECOLOQUE A TAMPA. DESLIGUE A GRELHA. RETIRE O MANÔMETRO E RECOLOQUE O BUJÃO DO TUBO. REPITA O MESMO PROCEDIMENTO COM A VÁLVULA INFERIOR.

OBSERVAÇÃO: A VÁLVULA DO QUEIMADOR INFRAVERMELHO SUPERIOR SÓ SERÁ ATIVADA QUANDO A TEMPERATURA DA GRELHA ATINGIR 260 °C. INSTALE AS BANDEJAS DE GORDURA E A BANDEJA DE IMPEDÂNCIA PARA ACELERAR O PROCESSO DE AQUECIMENTO.



11. COM A GRELHA LIGADA, EXAMINE TODOS OS ENCAIXES PARA VER SE HÁ VAZAMENTOS

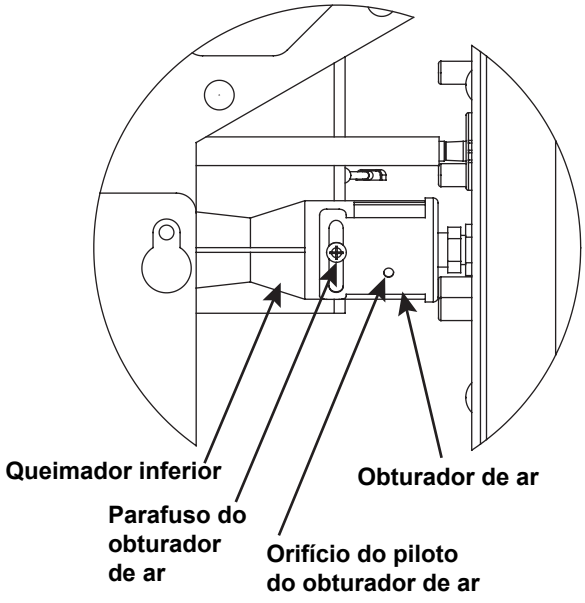
OBSERVAÇÃO: OS DETECTORES ELETRÔNICOS DE VAZAMENTO PRODUZIRÃO LEITURAS FALSAS NA PARTE SUPERIOR DA GRELHA PERTO DOS ORIFÍCIOS DE INFRAVERMELHO E DA TUBULAÇÃO DE GÁS. ISSO É CAUSADO PELOS PRODUTOS DE COMBUSTÃO PRÓXIMOS À CHAMINÉ. USE UM FLUIDO DE VERIFICAÇÃO DE VAZAMENTO OU ÁGUA E SABÃO NESTA ÁREA.

12. FAÇA O AJUSTE DO OBTURADOR DE AR DO QUEIMADOR INFERIOR

1ª OBSERVAÇÃO: ESTE AJUSTE PRECISA SER FEITO COM AS BANDEJAS DE GORDURA E COM OS PAINÉIS DE ACESSO DO QUEIMADOR INFERIOR INSTALADOS.

2ª OBSERVAÇÃO: ESTE AJUSTE DEVE SER FEITO NO QUEIMADOR INSTALADO NA GRELHA E EM TODOS OS OUTROS QUEIMADORES SOBRESSALENTES DOS KITS DE PEÇAS SOBRESSALENTES OU DOS KITS DE PEÇAS SUBSTITUÍVEIS PELO USUÁRIO. TODOS OS QUEIMADORES DEVEM SER AJUSTADOS COM A MESMA ABERTURA NO OBTURADOR DE AR.

a. AFROUXE O PARAFUSO DO OBTURADOR DE AR E FAÇA O AJUSTE PARA OBTER AS CARACTERÍSTICAS CORRETAS DA CHAMA, CONFORME DEFINIDO ABAIXO:
    i. GÁS NATURAL – A CHAMA DEVE SER BASICAMENTE AZUL COM A PONTA LIGEIRAMENTE AMARELA NAS DUAS EXTREMIDADES DO QUEIMADOR. NÃO DEVE HAVER DESCOLAMENTO DA CHAMA.
    ii. GÁS PROPANO - A CHAMA DEVE SER BASICAMENTE AZUL COM A PONTA LIGEIRAMENTE AMARELA EM TODO O QUEIMADOR. NÃO DEVE HAVER DESCOLAMENTO DA CHAMA.
b. APERTE O PARAFUSO DO OBTURADOR DE AR.
c. REMOVA O QUEIMADOR INFERIOR DA UNIDADE (VEJA O MANUAL DE INSTALAÇÃO/ OPERAÇÕES)
d. USANDO OS DOIS ORIFÍCIOS DO PILOTO NO OBTURADOR DE AR, FURE ORIFÍCIOS Nº 30 EM TODO O OBTURADOR E QUEIMADOR.
e. USE OS REBITES FORNECIDOS PARA AFIXAR O QUEIMADOR EM SUA POSIÇÃO.{
f. REINSTALE O QUEIMADOR DENTRO DA GRELHA.



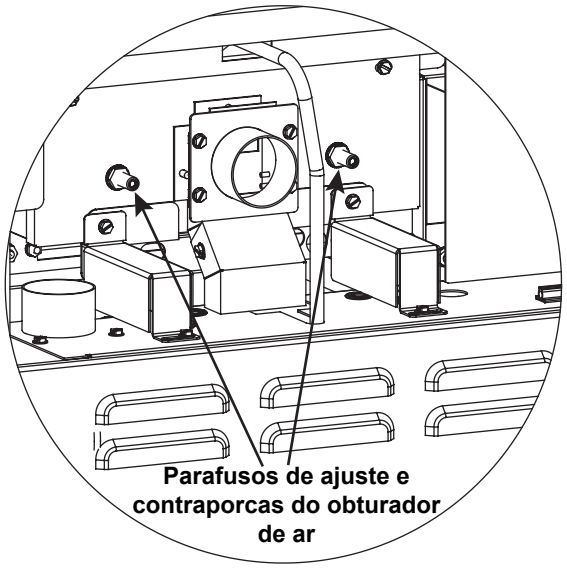
13. FAÇA OS AJUSTES DO OBTURADOR DE AR DO QUEIMADOR INFRAVERMELHO

a. REMOVA A TAMPA DO CONTROLE SUPERIOR DA EXTREMIDADE DA UNIDADE PARA TER ACESSO AOS PARAFUSOS DE AJUSTE DO OBTURADOR DE AR.

b. USE UMA CHAVE DE 9/16” E UMA CHAVE SEXTAVADA DE 3/16” PARA AFROUXAR AS CONTRAPORCAS DO PARAFUSO DE AJUSTE.

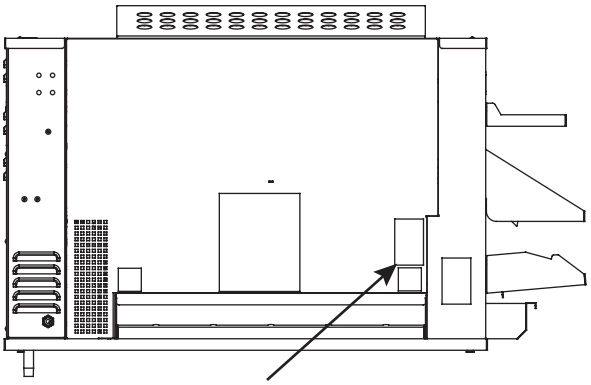
c. REGULE OS QUEIMADORES PARA OBTER AS CARACTERÍSTICAS CORRETAS DA CHAMA. COM A UNIDADE AQUECIDA, GIRE CADA UM DOS PARAFUSOS NO SENTIDO HORÁRIO, EM INCREMENTOS DE ¼ DE VOLTA, ATÉ VER UMA BRUMA OU CHAMA AZUL ABAIXO DOS QUEIMADORES. EM SEGUIDA, GIRE CADA UM DOS PARAFUSOS NO SENTIDO ANTI-HORÁRIO, EM INCREMENTOS DE ¼ DE VOLTA, ATÉ NÃO VER NENHUMA BRUMA OU CHAMA AZUL ABAIXO DOS QUEIMADORES.

d. REAPERTE AS PORCAS NOS PARAFUSOS DE AJUSTE.



Parafusos de ajuste e contraporcas do obturador de ar

14. **RETIRE A ETIQUETA DE ADVERTÊNCIA DE GRANDE ALTITUDE QUE COBRE O CONTROLADOR E COLOQUE-A NA TRASEIRA DA UNIDADE COMO MOSTRADO ABAIXO.** A CONVERSÃO ESTÁ TERMINADA.



Coloque a etiqueta de advertência de grande altitude aqui

Traseira da grelha

NOTES:

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER:	**SERIAL NUMBER:**
DATE OF PURCHASE:	
DEALER:	**TELEPHONE:**
SERVICER:	**TELEPHONE:**

DUKE CORPORATE, CANADA, LATIN AMERICA

2305 N. Broadway
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Fax: +420 257 741 039
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DUKE EMEA – UK, IRELAND, NORDIC COUNTRIES

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Fax: +44 (0) 1395 234154
service.exeter@duke-emea.com

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

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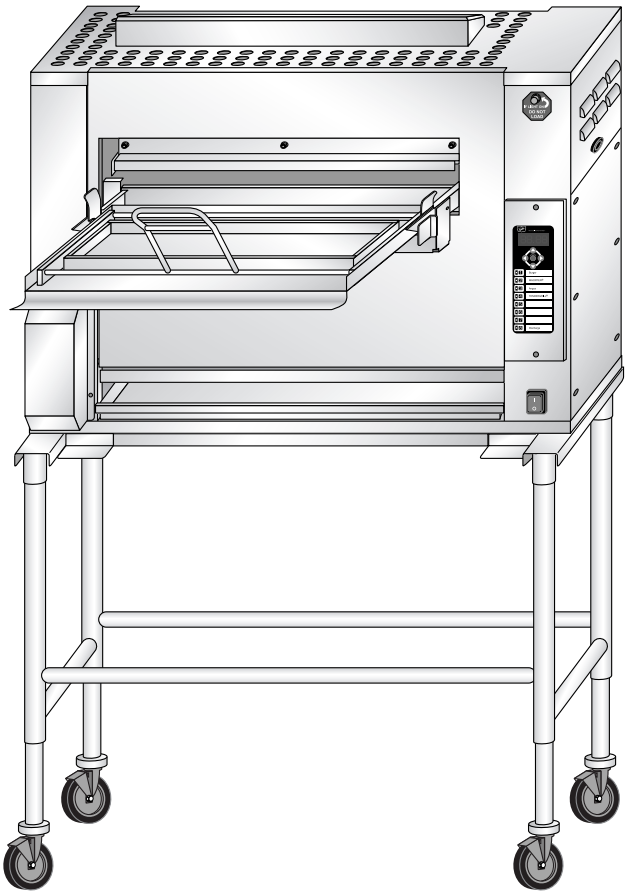
Duke EMEA – UK, Ireland, Nordic Countries
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Your Solutions Partner

HIGH ALTITUDE ADJUSTMENT LOWER BURNER UPGRADE KIT INSTRUCTIONS

FLEXIBLE BATCH BROILER



Please read this manual completely before attempting to install, operate or service this equipment

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P/N 176515A

> ***Note: This broiler has been agency approved to CSA Z83.11 to allow for larger orifice sizes at higher altitudes. This allows for similar cooking performance at altitude.***

This kit contains:

(1) Orifice, #25, Lower Burner 176485
(1) Orifice, #2.25mm, Lower Burner 176486
(1) Orifice, #28mm, Lower Burner 176487
(1) Orifice, #37, IR Burner 175937
(1) Orifice, #34, IR Burner 175938
(1) Orifice, #31, IR Burner 175939
(1) Orifice, #50, IR Burner 175940
(1) Orifice, #51, IR Burner 175768
(3) 1/8” Pop Rivet 168106

Items required for this installation:

- (1) Torque Wrench
- (1) 5/8” Open End Wrench
- (1) 5/8” Deep Well Socket
- (1) 3/8” Open End Wrench
- (1) 3/16” Hex Key Wrench
- (1) Straight Blade Screwdriver
- (1) Digital or Slack Tube Manometer
- (1) Power Drill
- (1) #30 Drill Bit
- (1) Rivet Installation Tool
- Gas Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. QUALIFIED PERSONNEL

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

The installation must conform with local codes, or in the absence of local codes, to the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information at the bottom of this page.

B. PROCEDURE

This broiler requires airshutter adjustments and orifice size changes when used at higher altitudes. To ensure proper cooking performance, the following procedure must be followed.

The chart below indicates if airshutter adjustment and orifice sizes changes are required for various altitude ranges. It also indicates the correct orifices for these altitude ranges.

Natural Gas

Elevation Range	Lower Burner Airshutter Adjustment Required	Lower Burner Orifice Size	IR Burner Airshutter Adjustment Required	Front IR Burner Orifice Size	Rear IR Burner Orifice Size
0 - 3999 Feet	No	#30	No Airshutter Adjustments or Orifice Size Changes Required		
4000 - 4999 Feet	No	#30	Yes	No Change	No Change
5000 - 7499 Feet	No	#28	Yes	#37	#34
7500+ Feet	No	#25	Yes	#34	#31

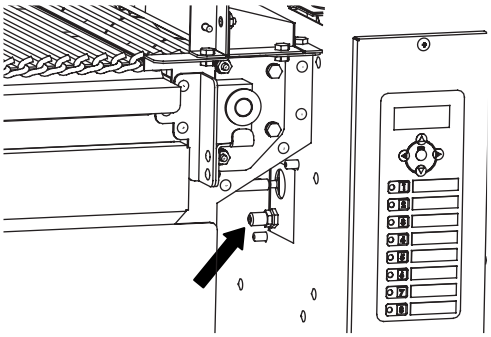
Propane Gas

Elevation Range	Lower Burner Airshutter Adjustment Required	Lower Burner Orifice Size	IR Burner Airshutter Adjustment Required	Front IR Burner Orifice Size	Rear IR Burner Orifice Size
0 - 4999 Feet	No	#46	No Airshutter Adjustments or Orifice Size Changes Required		
5000+ Feet	No	2.25mm	Yes	#51	#50

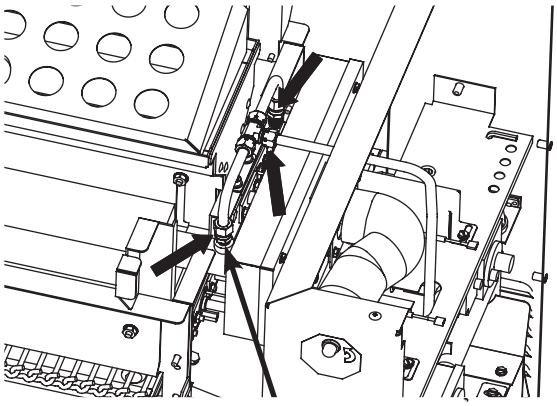
High Altitude Adjustment Kit Instructions For Flexible Batch Broiler Units

1. Take the orifice sizes selected from the table on the previous page, and mark them on the high altitude warning label.
2. Unplug the broiler from electrical power. Close main gas supply valve and disconnect supply line.
3. Remove lower burner (see installation/ operations manual) to access orifice hood. Using a 5/8" deep well socket or 5/8" wrench, remove orifice hood and replace with new orifice. Torque orifice to 125 in-lbs (14.1 N.m.).

NOTE: EXCESSIVE OVER-TIGHTENING OF ORIFICE DOWN ON TO ORIFICE HOLDER CAN CAUSE HOLDER TO BREAK.

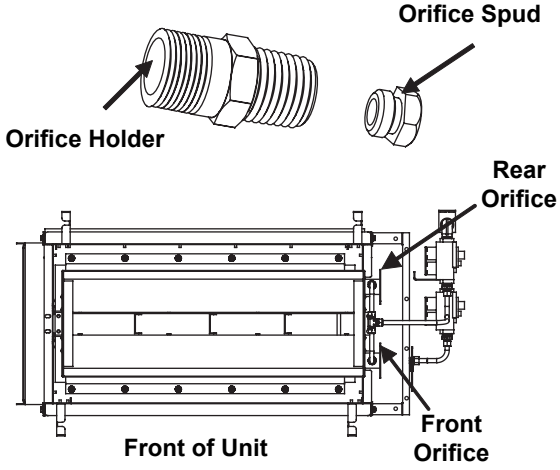


4. Reinstall burner
5. Remove broiler top cover panel to access IR burner piping and orifices.
6. With 5/8” wrench, remove upper gas line compression fittings (3 places) that connect both IR burners.



Orifice Holder With Compression Fitting

7. With gas lines removed, remove orifice holders from burners with 5/8” wrench. Remove orifice spud from holder with 3/8” wrench. Replace with proper orifice spud from table.



8. Reassemble fittings, gas lines and reinstall top of unit.
9. Connect to gas and electrical service. If this is a new installation, you must follow the flexible batch broiler installation and operation instructions.

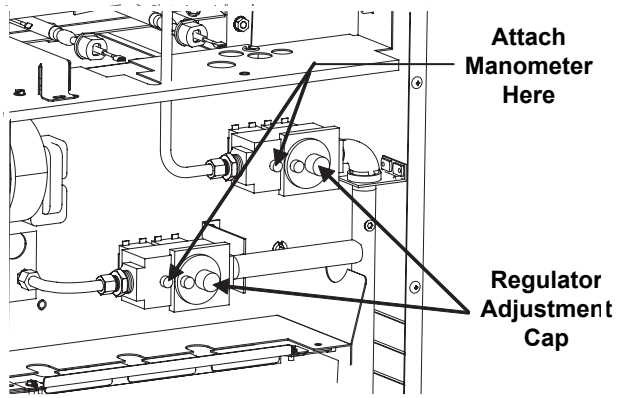
10. On upper valve, remove 1/8" pipe plug and attached manometer. Switch broiler "ON". With a screw driver, remove slotted cap from regulator and adjust until manometer reading is:

    3.75" W.C. for Natural Gas

    8.00" W.C. for Propane Gas

    Replace cap. Shut broiler "OFF". Remove manometer and replace pipe plug. Repeat for bottom valve.

NOTE: THE UPPER INFRARED BURNER VALVE WILL NOT COME ON UNTIL THE BROILER TEMPERATURE REACHES 400 F. INSTALL GREASE PANS AND IMPEDANCE PAN TO SPEED UP THE HEATING PROCESS.



11. With the broiler running, check for leaks on all fittings.

NOTE: ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.

12. Verify proper lower burner flame appearance:

    I. Natural Gas –The flame should be primarily blue with slight yellow tipping at the two ends of the burner. There should be no flame lifting.

    II. Propane Gas - The flame should be primarily blue with slight yellow tipping along the entire burner. There should be no flame lifting.

NOTE: THE FLAME APPEARANCE NEEDS TO BE VERIFIED WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THE ADJUSTMENT FOR THE LOWER BURNER AIR SUPPLY IS FACTORY SET AND SHOULD NOT NEED TO BE CHANGED. THE AIR SHUTTER OPENING ON FACTORY J BURNERS IS PRESET TO 3/8" OPEN.

Complete steps A through F only if necessary to obtain proper flame characteristics:

A. Loosen the airshutter screw and adjust for proper flame characteristics.

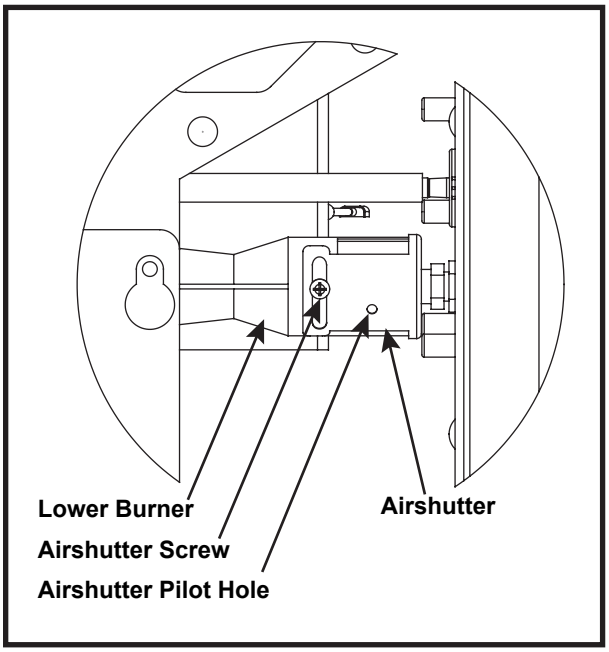
B. Tighten the airshutter screw.

C. Remove the lower burner from the unit (see installation/operations manual).

D. Using the two pilot holes on the airshutter, drill #30 holes through the airshutter and burner.

E. Use the supplied rivets to lock the burner in position.

F. Reinstall the burner into the broiler.



NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

13. Make the infrared burner airshutter adjustments

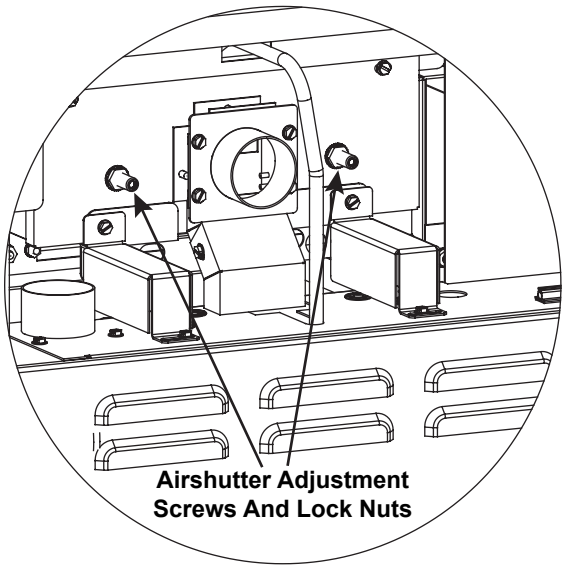
A. Remove the upper control cover from the end of the unit to access the airshutter adjustment screws.

B. Use a 9/16” wrench and 3/16” hex key wrench to loosen the adjustment screw lock nuts.

C. Adjust the burners for proper flame characteristics.

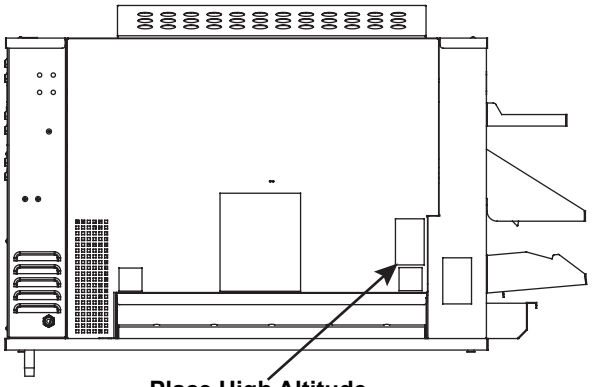
With the unit well heated, turn each screw clockwise in ¼ turn increments until a blue flame or haze is observed below the burners. Then turn each screw counter clockwise in ¼ turn increments until no blue flame or haze is observed below the burners.

D. Retighten the nuts on the adjustment screws.



Airshutter Adjustment Screws And Lock Nuts

14. **Remove the high altitude warning label that is covering the controller and place on back of unit as shown below.** Conversion is complete.



Place High Altitude Warning Label Here

Rear of Broiler

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER:	**SERIAL NUMBER:**
DATE OF PURCHASE:	
DEALER:	**TELEPHONE:**
SERVICER:	**TELEPHONE:**

**DUKE CORPORATE,
CANADA, LATIN AMERICA**

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service-dispatch@dukemfg.com**

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Fax: +86 21 33600628**

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Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

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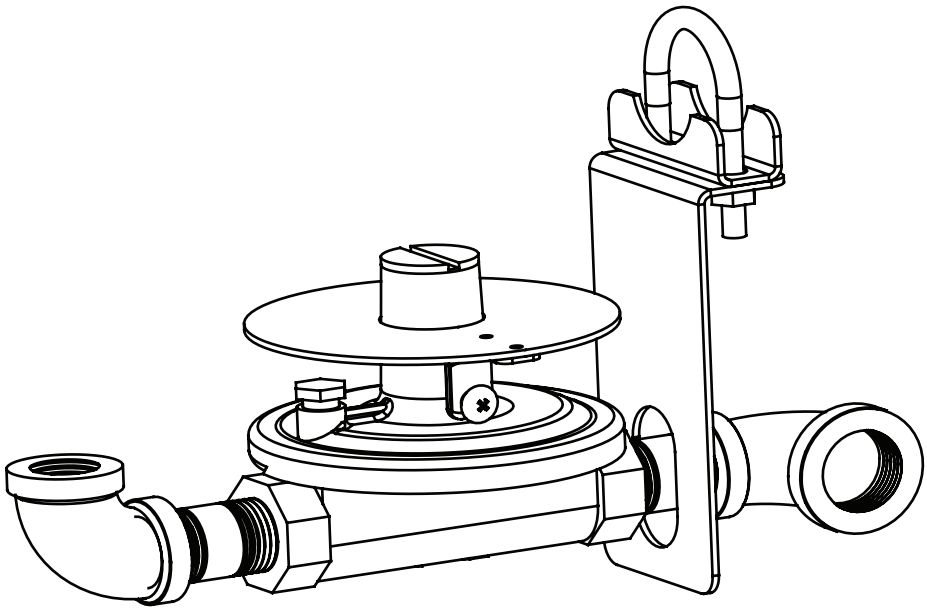
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INSTALLATION INSTRUCTIONS

FLEXIBLE BATCH BROILER
HIGH SERVICE PRESSURE REGULATOR KIT
P/N 175689



NOTICE TO INSTALLER:

THIS KIT SHALL BE INSTALLED ON THE FLEXIBLE BATCH BROILER WHEN THE GAS SUPPLY PRESSURE IS IN EXCESS OF 12" W.C.

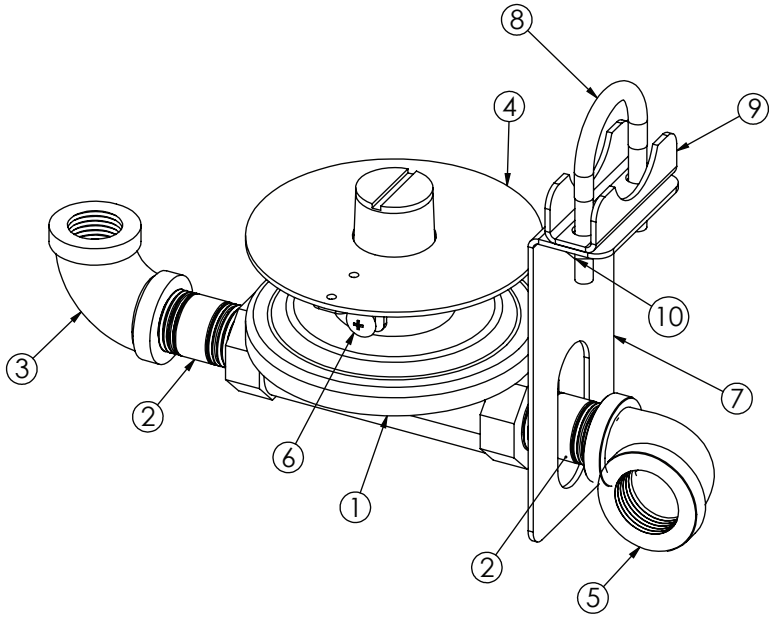
ENGLISH

SPANISH

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INSTALLATION INSTRUCTIONS

FLEXIBLE BATCH BROILER
HIGH SERVICE PRESSURE REGULATOR KIT
P/N 175689



NOTICE TO INSTALLER:

THIS KIT SHALL BE INSTALLED ON THE FLEXIBLE BATCH BROILER WHEN THE GAS SUPPLY PRESSURE IS IN EXCESS OF 12” W.C.

Items required for this installation:

- Thread sealant rated for Natural or LP gas.
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- Straight blade screw driver
- 3/16 hex key wrench
- Digital or slack tube manometer with 1/8” male pipe thread hose barb.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	175621	REGULATOR, HIGH SUPPLY PRES.	1
2	175665	NIPPLE,1-2 X 2,BLK	2
3	0108600	ELBOW, BLACK IRON, 1/2	1
4	175489	WLDMNT, GAS VALVE VENT SHIELD	1
5	175668	ELBOW, B.I., REDUCING, 3/4x1/2	1
6	0280400	SCREW,10-24 x 3/8" TR PH SS	1
7	175707	BRKT, RESTRAINT, HI SERV. PRES.	1
8	175565	U-BOLT,1/4-20x1-1/4, ZNC PLT STL, Inv.Sales 500265	1
9	175708	SADDLE, CLAMP, HI SERV. PRES.	1
10	147355	NUT, 1/4-20, HEX, ZP	2

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Installation Instructions

A. Qualified Personnel

These installation instructions are for the use of **qualified installation and service personnel only**. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator. Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

- The installation of electrical wiring from the electric meter, main control box or service outlet to the electrical appliance. Qualified installation personnel must be familiar with all precautions required and have complied with all requirements of state and local authorities having jurisdiction. See: National Electrical Code, ANSI/NFPA70.

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

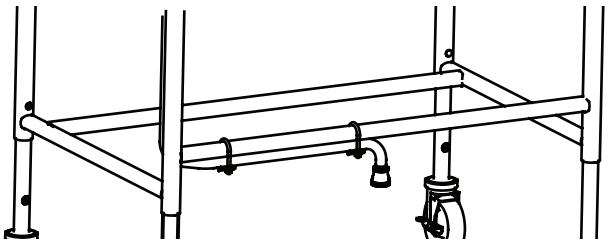
- The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psi (3.5 kPa).

- The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi (3.5 kPa).

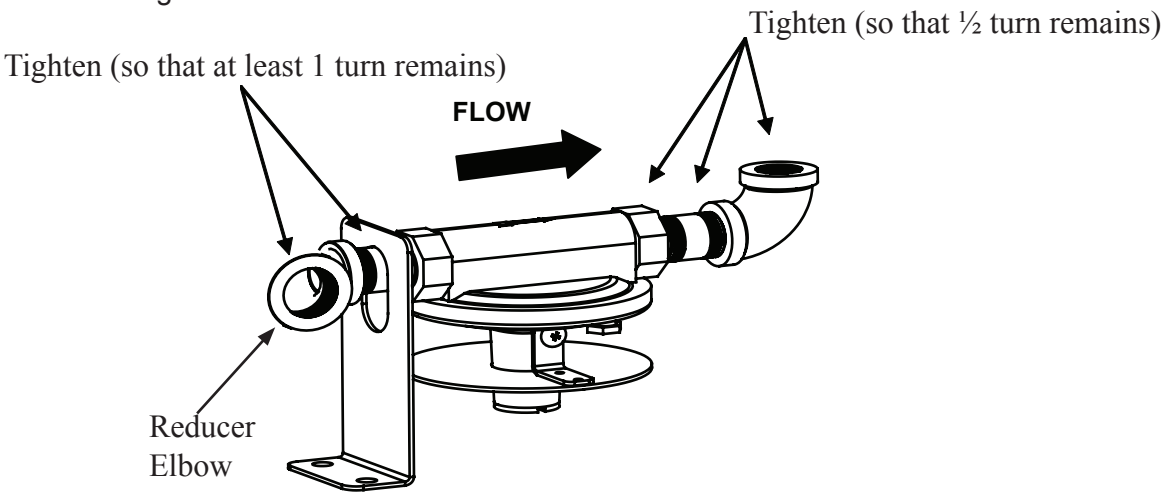
For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

B. Procedure

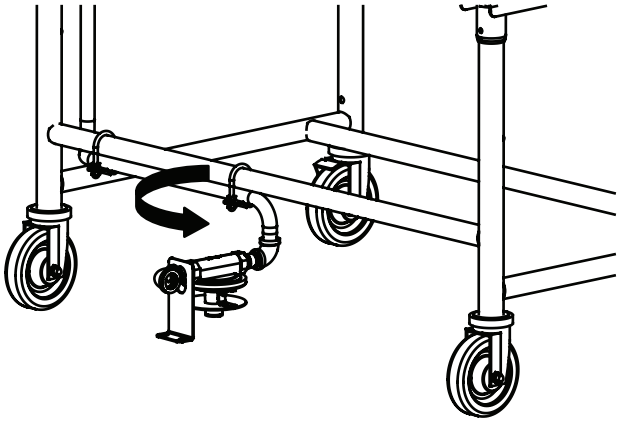
1. REMOVE THE FACTORY SUPPLIED BELL REDUCER FROM THE GAS INLET



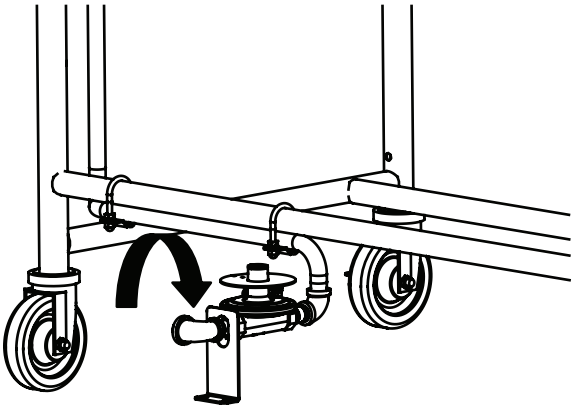
2. ASSEMBLE FITTINGS TO REGULATOR WITH THREAD SEALANT AS SHOWN.



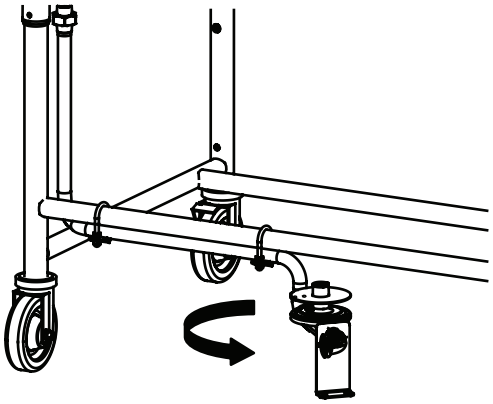
3. ADD THREAD SEALANT AND SPIN REGULATOR ASSEMBLY ON UNTIL TIGHT IN THE LOCATION SHOWN.

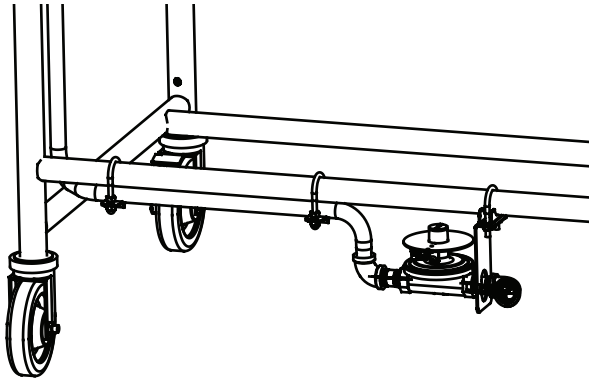


4. TIGHTEN ALL FITTINGS SO THAT REGULATOR IS UPRIGHT AND FITTINGS ARE IN THE LOCATION SHOWN.



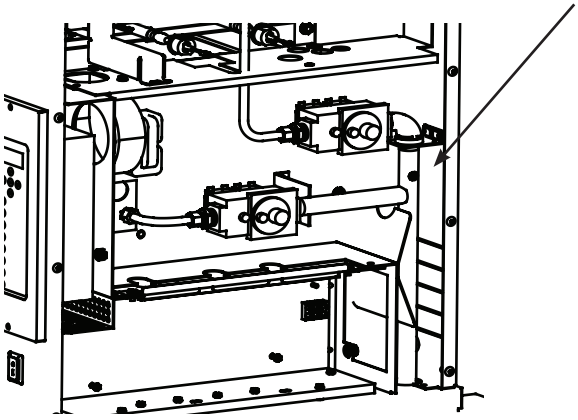
5. SNUG THE REGULATOR ASSEMBLY UP TO THE FINAL LOCATION SHOWN. (ASSEMBLY SHOULD BE TIGHT ENOUGH TO REQUIRE A WRENCH FOR MOVEMENT)

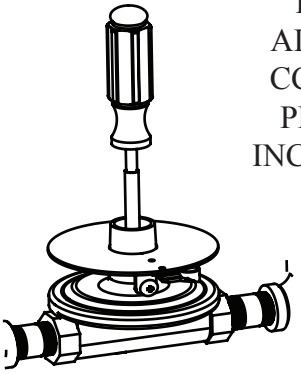




6. CONNECT THE BROILER TO THE GAS SUPPLY AS OUTLINED IN THE INSTALLATION AND OPERATIONS MANUAL. LEAVE MAIN SHUT-OFF VALVE CLOSED.

7. REMOVE 1/8" PIPE PLUG AND ATTACH MANOMETER. OPEN MAIN VALVE. WITH A SCREW DRIVER, REMOVE SLOTTED CAP FROM REGULATOR AND ADJUST UNTIL MANOMETER READING IS: NATURAL GAS - 7" W.C.
PROPANE GAS – 11" W.C.





ADJUSTMENT:
TURN PRESSURE ADJUSTING SCREW CCW TO DECREASE PRESSURE, CW TO INCREASE PRESSURE.

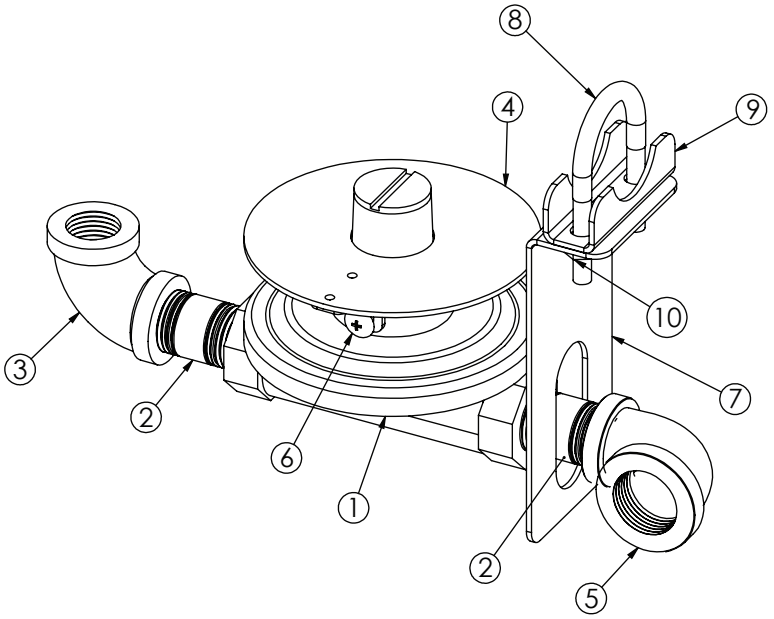
8. REINSTALL PLUG AND REGULATOR CAP.

9. ATTACH RESTRAINING BRACKET WITH U BOLT CLAMP PER PHOTO.

10. CHECK ALL JOINTS FOR GAS LEAKS. INSTALLATION IS COMPLETE

INSTRUCCIONES DE INSTALACIÓN

ASADOR FLEXIBLE POR TANDAS
JUEGO DE REGULADOR DE PRESIÓN DE SERVICIO ALTA
N/P 175689



AVISO AL INSTALADOR:

ESTE JUEGO DEBE INSTALARSE EN EL ASADOR FLEXIBLE POR TANDAS CUANDO LA PRESIÓN DEL GAS DE SUMINISTRO SEA MAYOR QUE 12” DE AGUA.

Artículos requeridos para esta instalación:

- Sellante de roscas para gas natural o LP.
- (2) Llaves para tubos o (1) llave para tubos y (1) llave ajustable
- Destornillador de hoja recta
- Llave hexagonal de 3/16”
- Manómetro digital o “Snack Tube” con arpón de manguera roscado de tubo macho de 1/8”.

Nº DE ARTÍCULO	N/P	DESCRIPCIÓN	CANTIDAD
1	175621	REGULADOR, ALTA FUENTE PRES.	1
2	175665	NIPPLE ,1-2 X 2, NEGRO	2
3	0108600	CODO, NEGRO DE HIERRO, 1/2	1
4	175489	WLDMNT, VÁLVULAS DE GAS VENT SHIELD	1
5	175668	CODO, B.I., REDUCIR, 3/4X1/2	1
6	0280400	SCREW,10-24 x 3/8" TR PH SS	1
7	175707	BRKT, LA MODERACIÓN, HI SERV. PRES.	1
8	175565	U-BOLT,1/4-20x1-1/4, ZNC PLT STL, Inv.Sales 500265	1
9	175708	UNA SILLA, CLAMP, HI SERV. PRES.	1
10	147355	NUT, 1/4-20, HEX, ZP	2

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Instrucciones de instalación

A. Personal capacitado

Estas instrucciones de instalación son para el uso exclusivo del personal de instalación y servicio capacitado. La instalación o el servicio por parte de personal que no esté capacitado puede provocar daños en el asador y lesiones al operador.
El personal de instalación capacitado son aquellos individuos, firmas, compañías o corporaciones que en persona o por medio de un agente participe y sea responsable de lo siguiente:

- La instalación o el reemplazo de tuberías de gas o la conexión, la instalación, la reparación o el servicio de equipos, que tengan experiencia en dicho trabajo, que estén familiarizados con todas las precauciones requeridas, y que hayan cumplido con todos los requisitos de las autoridades estatales y locales que tengan jurisdicción. Vea: Código Nacional para Gases Combustibles NFPA 54 (ANSI Z223.1).

- La instalación de cables eléctricos del medidor eléctrico, caja de control principal o toma de servicio al aparato eléctrico. El personal de instalación capacitado debe estar familiarizado con todas las precauciones requeridas y haber cumplido con todos los requisitos de las autoridades estatales y locales que tengan jurisdicción. Vea: Código Eléctrico Nacional, ANSI/NFPA70.

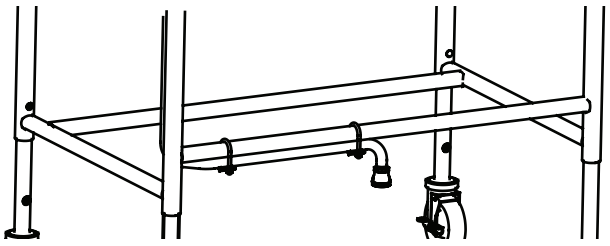
La instalación debe cumplir con los códigos locales, o en ausencia de los mismos, con el Código Nacional de Gases Combustibles, ANSI Z223.1/NFPA 54, o con el Código de Instalación de Gas Natural y Propano, CSA B149.1 según corresponda, incluido lo siguiente:

- El aparato y su válvula de corte individual deben estar desconectados del sistema de tuberías de suministro de gas durante cualquier prueba de presión a presiones de prueba de más de ½ psi (3,5 kPa).
- El aparato debe estar aislado del sistema de tuberías de suministro de gas cerrando su válvula de corte manual individual durante cualquier prueba de presión del sistema de tuberías de suministro de gas a presiones de prueba menores o iguales que ½ psi (3,5 kPa).

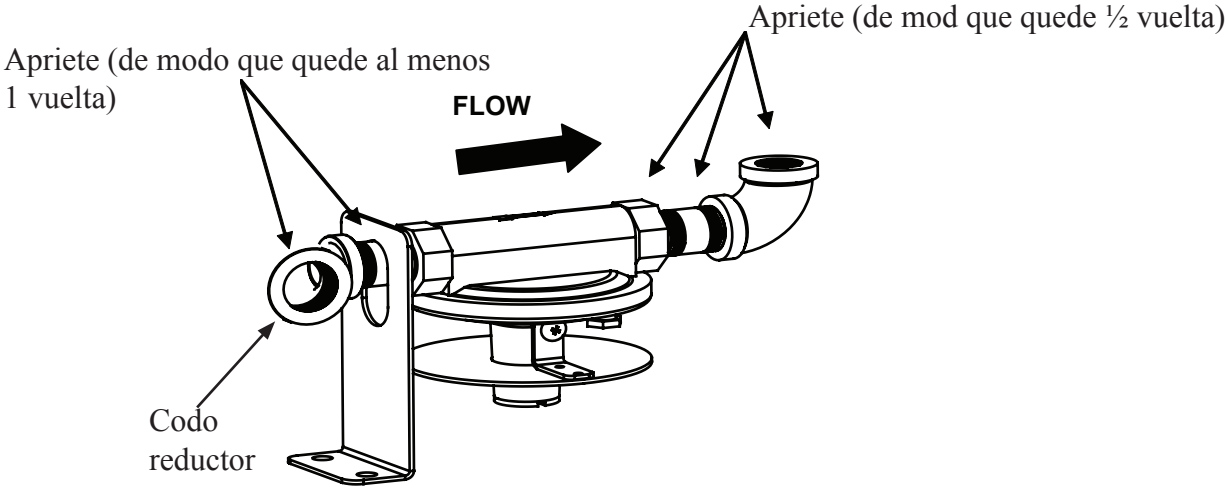
Para un asador montado sobre ruedas, la instalación debe hacerse con un conector que cumpla con la norma para conectores de aparatos de gas móviles, ANSI Z21.69/CSA 6.16 y un dispositivo de desconexión rápida que cumpla con la norma para dispositivos de desconexión rápida para usar con combustible gaseoso, ANSI Z21.4/CSA 6.9. Al instalar el asador con ruedas y una manguera de desconexión rápida, se deben proporcionar medios adecuados para limitar el movimiento del asador sin depender del conector y del dispositivo de desconexión rápida o sus tuberías asociadas para limitar el movimiento del asador. Se puede conectar un medio de sujeción a la parte vertical del bastidor de la base en la parte trasera del asador.

B. Procedimiento

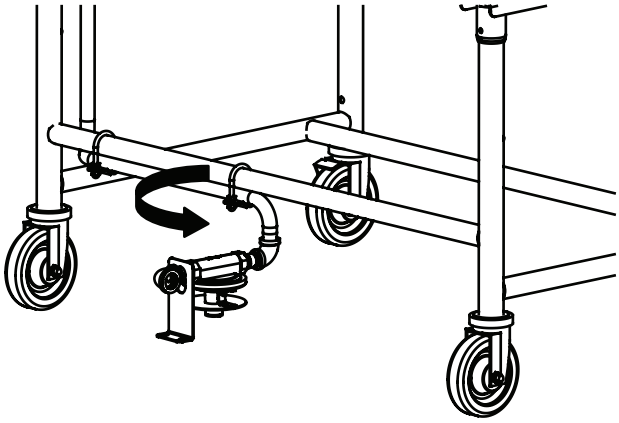
1. QUITE DE LA ENTRADA DE GAS EL REDUCTOR ACAMPANADO SUMINISTRADO EN FÁBRICA



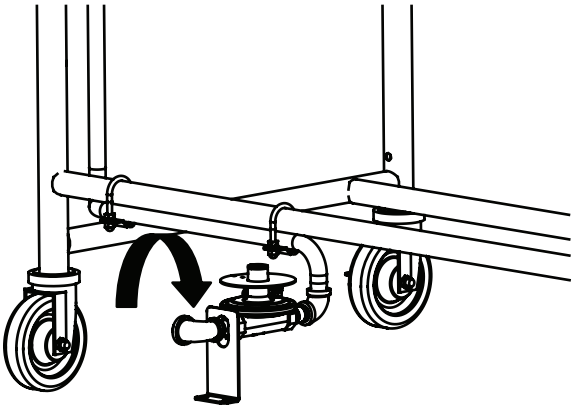
2. MONTE LAS CONEXIONES EN EL REGULADOR CON EL SELLADOR DE ROSCAS SEGÚN SE MUESTRA.



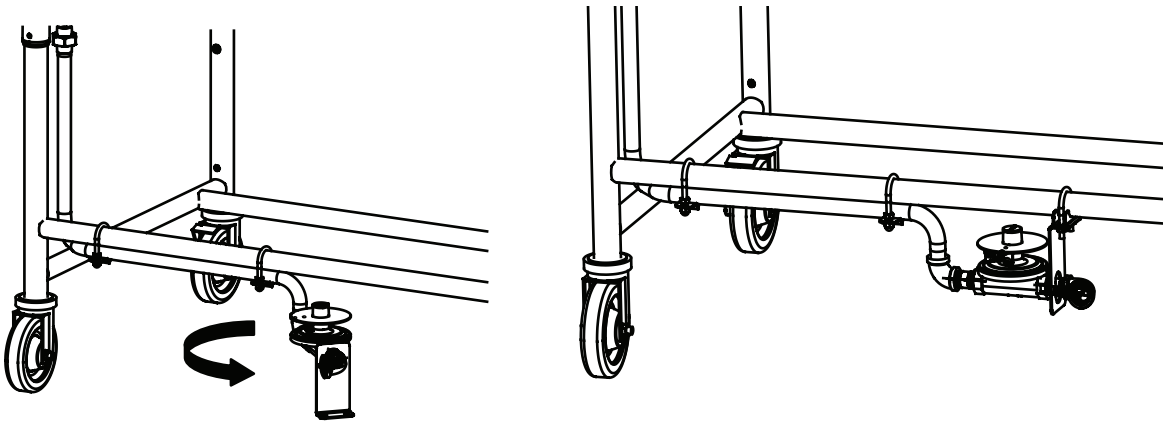
3. AÑADA SELLANTE DE ROSCAS Y GIRE EL CONJUNTO DE REGULADOR HASTA QUE QUEDE APRETADO EN LA POSICIÓN MOSTRADA.



4. APRIETE TODAS LAS CONEXIONES DE MODO QUE EL REGULADOR QUEDE VERTICAL Y LAS CONEXIONES ESTÉN EN LA POSICIÓN MOSTRADA.

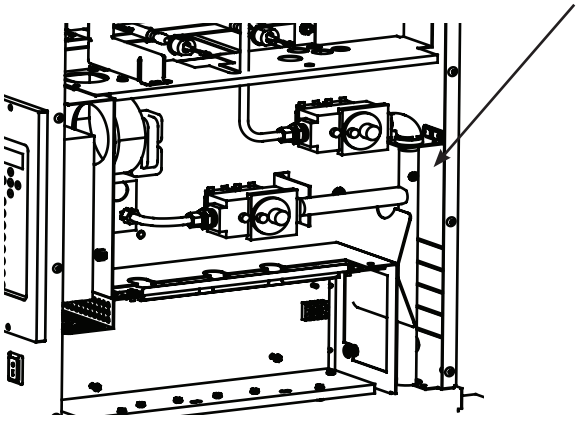


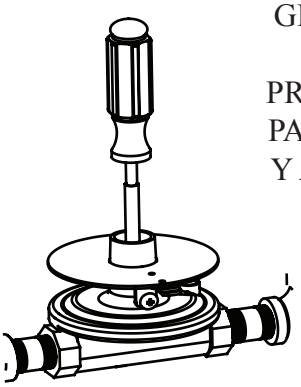
5. APRIETE EL CONJUNTO DE REGULADOR A LA POSICIÓN FINAL MOSTRADA. (EL CONJUNTO DEBE ESTAR LO SUFICIENTEMENTE APRETADO PARA REQUERIR UNA LLAVE PARA PODER MOVERLO)



6. CONECTE EL ASADOR AL SUMINISTRO DE GAS SEGÚN SE DESCRIBE EN EL MANUAL DE INSTALACIÓN Y OPERACIÓN. DEJE LA VÁLVULA DE CORTE PRINCIPAL CERRADA.

7. 14) QUITE EL TAPÓN DE TUBO DE 1/8" Y CONECTE EL MANÓMETRO. ABRA LA VÁLVULA PRINCIPAL. USE UN DESTORNILLADOR PARA QUITAR LA TAPA RANURADA DEL REGULADOR Y AJÚSTELA HASTA QUE LA LECTURA DEL MANÓMETRO SEA:
   GAS NATURAL – 7" DE AGUA
   GAS PROPANO – 11" DE AGUA





AJUSTE:
GIRE EL TORNILLO DE AJUSTE DE PRESIÓN A LA IZDA. PARA DISMINUIRLA Y A LA DCHA. PARA AUMENTARLA.

8. VUELVA A INSTALAR EL TAPÓN Y LA TAPA DEL REGULADOR.

9. CONECTE EL SOPORTE DE RETENCIÓN CON LA ABRAZADERA DE PERNO EN "U" SEGÚN 13)

10. COMPRUEBE TODAS LAS JUNTAS PARA VER SI HAY FUGAS DE GAS. LA INSTALACIÓN ESTÁ COMPLETA.

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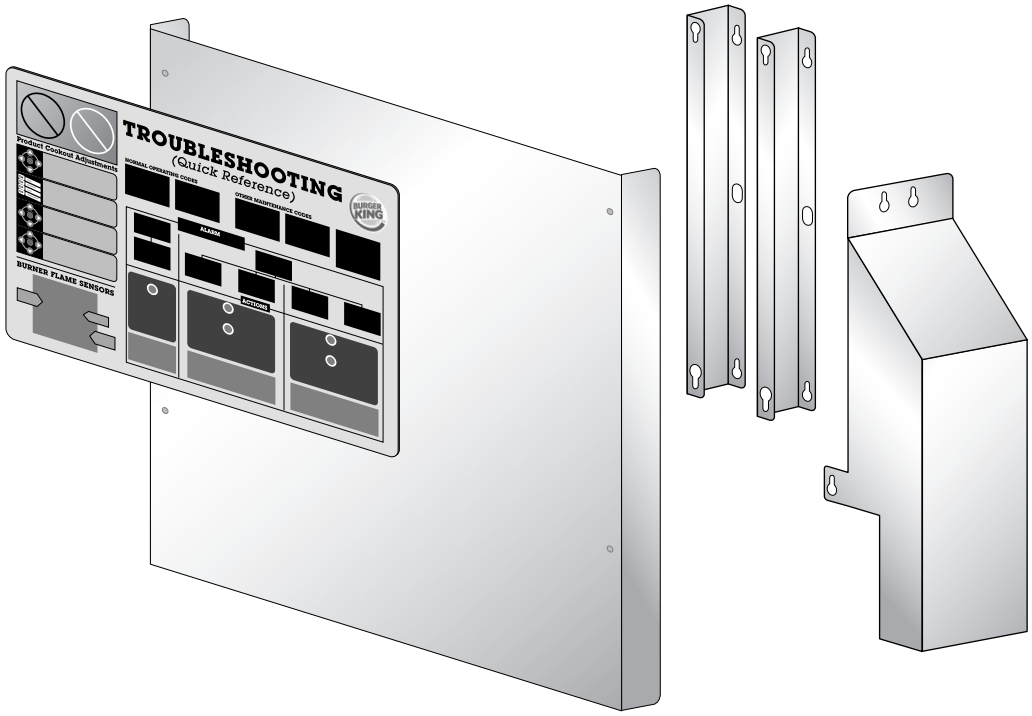
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Flexible Batch Broiler

Grease Shield Installation Instructions



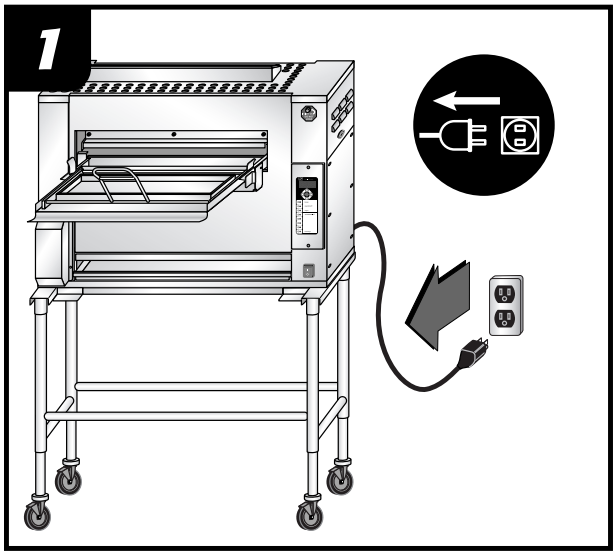
Please read this manual completely before attempting to install, operate or service this equipment

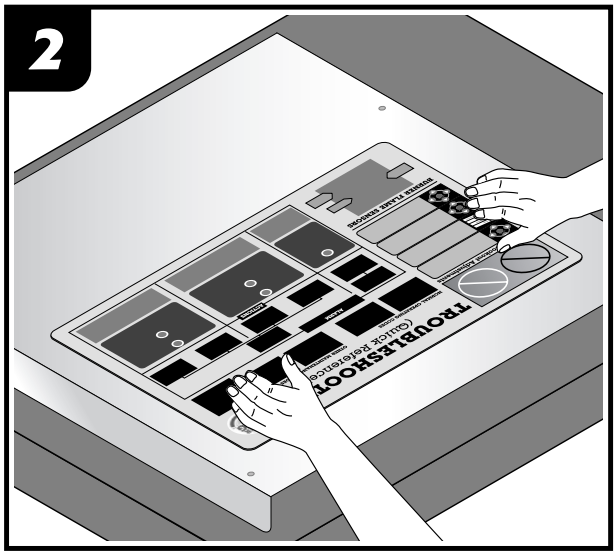
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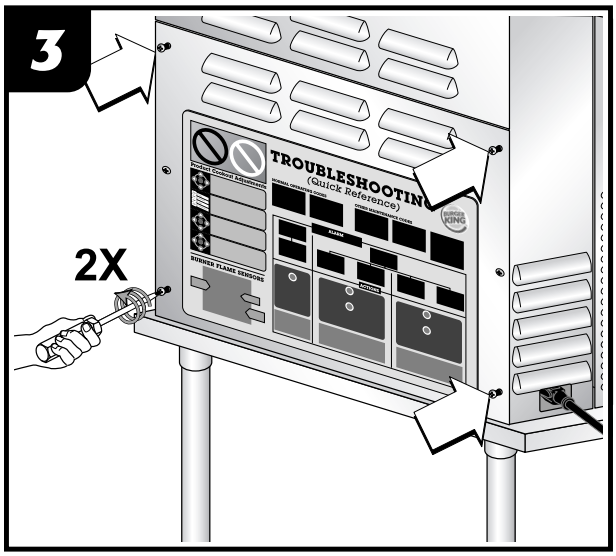
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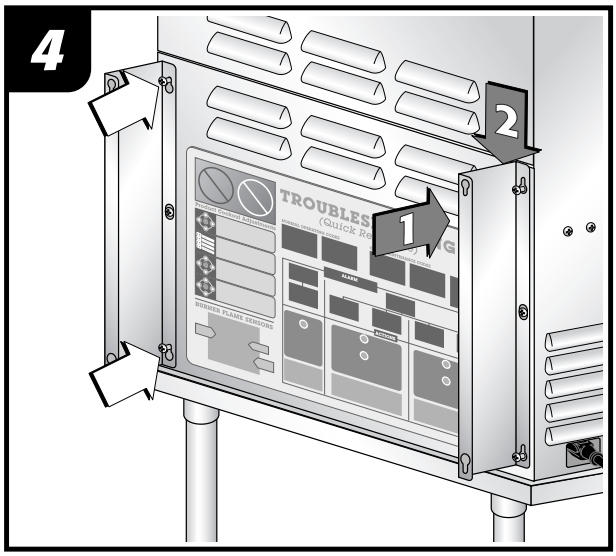
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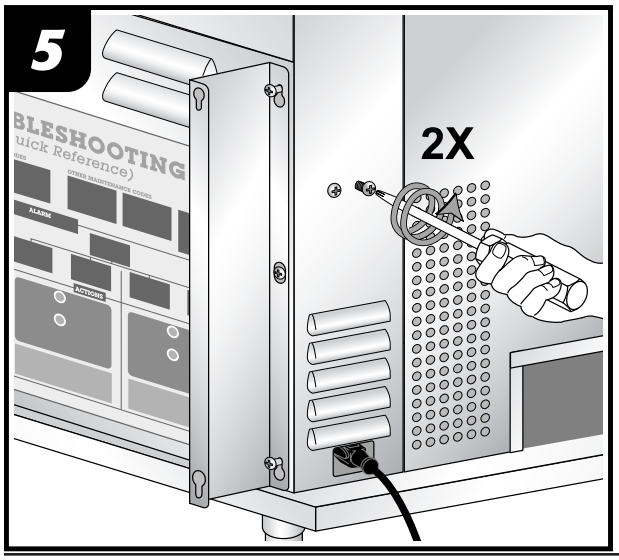
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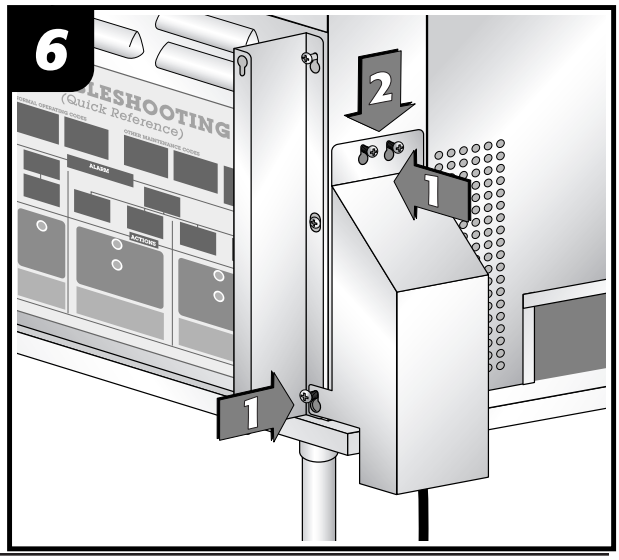

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TROUBLESHOOT
(Quick Reference)

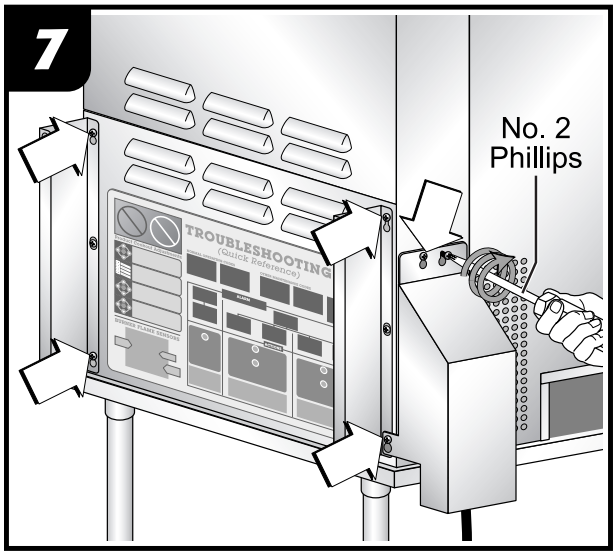

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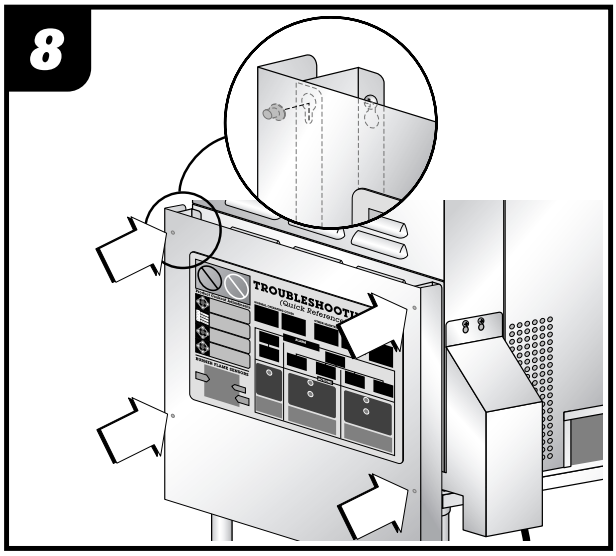

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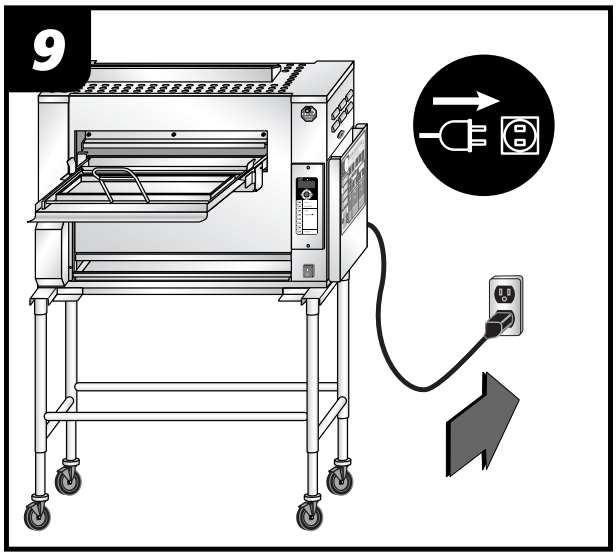
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No. 2
Phillips
TROUBLESHOOTING
(Quick Reference)

8


TROUBLESHOOTING

9



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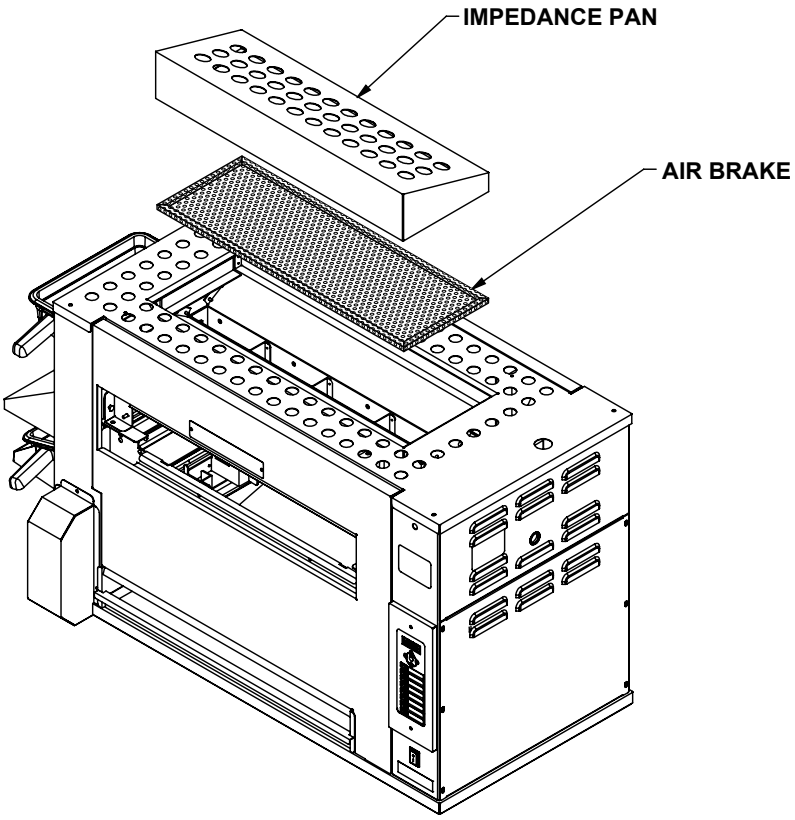
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AIR BRAKE INSTALLATION AND CLEANING INSTRUCTIONS FOR DUKE KITS 600406 AND 600407



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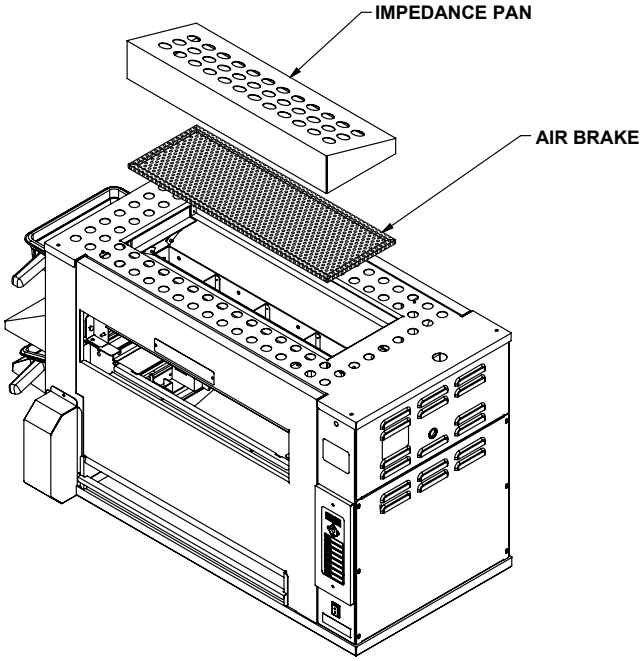
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P/N 176748C
04/30/2015

AIR BRAKE INSTALLATION AND CLEANING INSTRUCTIONS

INSTALLATION INSTRUCTIONS



1. REMOVE IMPEDANCE PAN FROM FLUE OPENING.
2. INSERT AIR BRAKE IN FLUE OPENING - FLAT SIDE DOWN.
3. REPLACE IMPEDANCE PAN IN FLUE OPENING ON TOP OF AIR BRAKE.

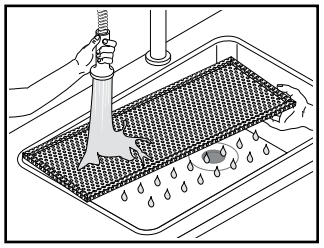
CLEANING INSTRUCTIONS

The Air Brake is normally part of a combustion system, and the general safety practices observed with such systems should be practiced. The following considerations are specific to the Air Brake portion.

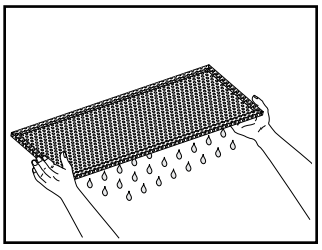
a. Remove power: Before removing the Air Brake, disconnect power to the broiler and allow to cool to room temperature. Remove the Impedance Pan and set aside for re-installation after the Air Brake has been cleaned.

b. Handling Air Brake: Care should be taken so that the Air Brake is not dropped or damaged in handling. If the unit is going to be handled soon after a cooking cycle, care should be taken to protect one's hands from any hot surfaces by wearing gloves designated for this purpose. Allow the Air Brake to cool to room temperature before starting the cleaning process.

c. Operation: Understand and follow the system instructions provided with the broiler included in the installation and operations manual. It is very important that you make sure that the ducts above the cooking appliance are clean of any grease, prior to the initial operation of the appliance with the Air Brake in place.



Remove the Air Brake and rinse thoroughly with hot water until Air Brake is free of build up. The typical restaurant dish washing spray nozzle (low pressure, high volume) is perfect for this operation. Work the spray slowly over the entire surface both front and back to assure the removal of any particles caught in the Air Brake.



Shake the remaining water from the Air Brake and then let it air dry overnight.

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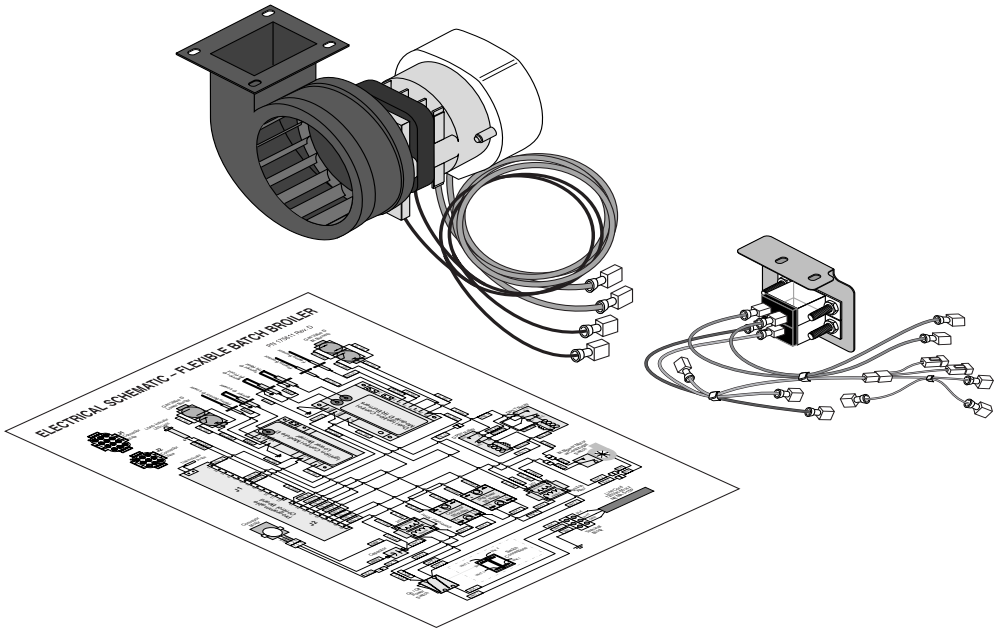
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Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

INSTALLATION INSTRUCTIONS

Your Solutions Partner

FLEXIBLE BATCH BROILER CENTRIFUGAL SWITCH MOTOR DOMESTIC RETROFIT KIT INSTRUCTIONS FOR DUKE KIT #600250



This kit contains:

- 176188 Assy, Harness Relay, Blower
- 600249 Kit, Domestic Blower
- 175611 Schematic, FBB, Domestic 120V

Items required for this installation:

- Cross Tip Screwdriver
- Straight Screwdriver
- 5/16" Nutdriver

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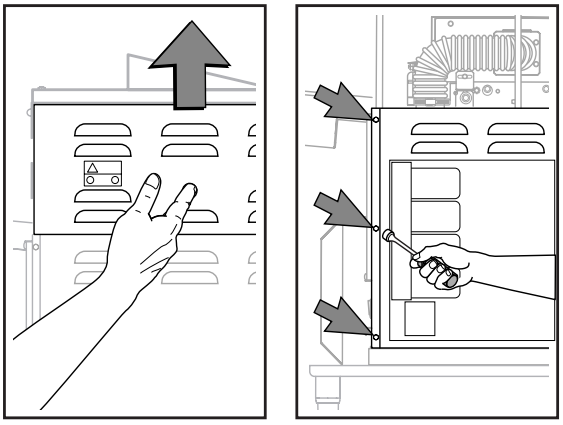
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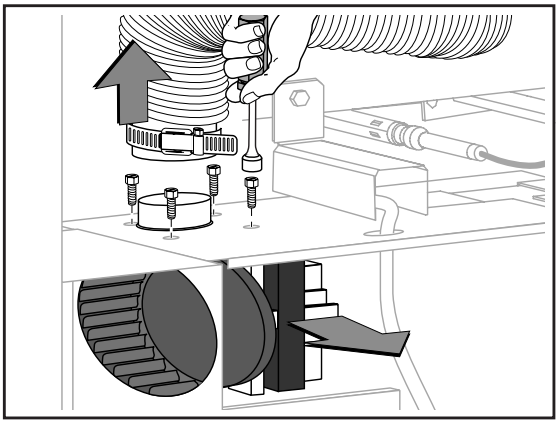
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1) UNPLUG THE BROILER FROM ELECTRICAL POWER.

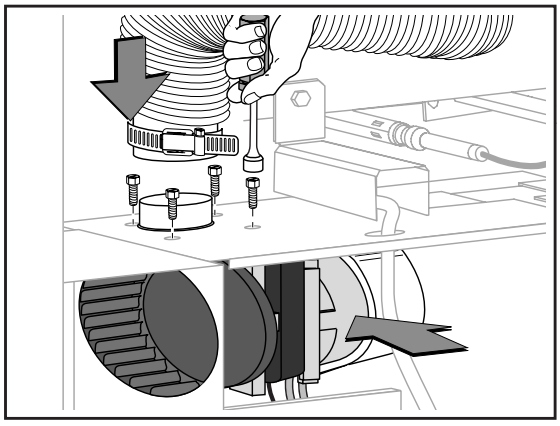
2) REMOVE THE UPPER AND LOWER CONTROL ACCESS PANELS.



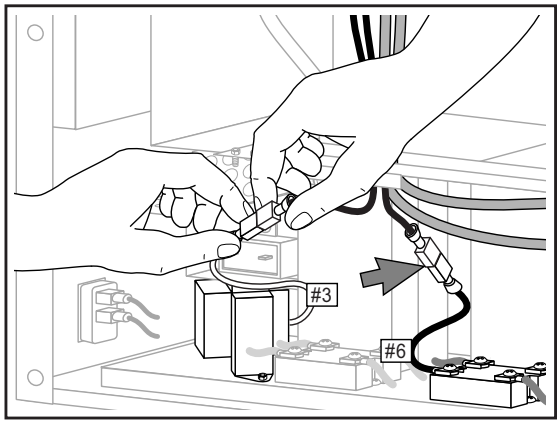
3) REMOVE THE EXISTING BLOWER MOTOR.



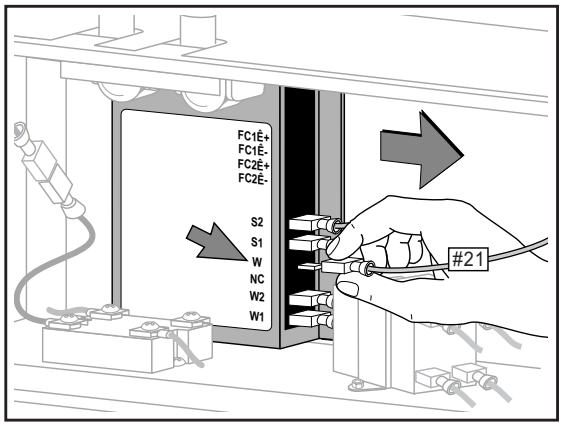
4) INSTALL NEW BLOWER MOTOR.



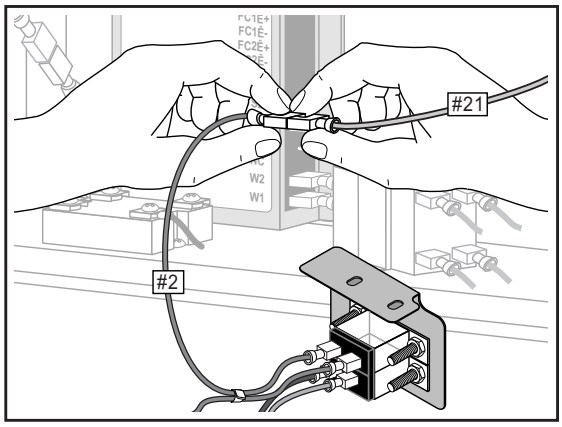
5) MAKE BLOWER SUPPLY WIRE (BLACK) CONNECTIONS TO WIRE #3 (WHITE) AND #6 (BLACK).



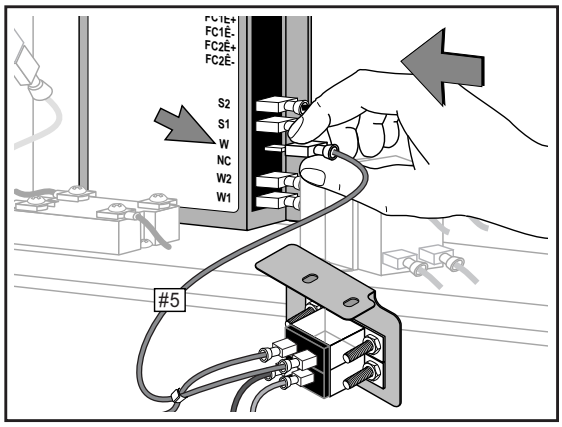
6) DISCONNECT WIRE #21 (YELLOW) FROM THE "W" TERMINAL ON DUAL IGNITION MODULE.



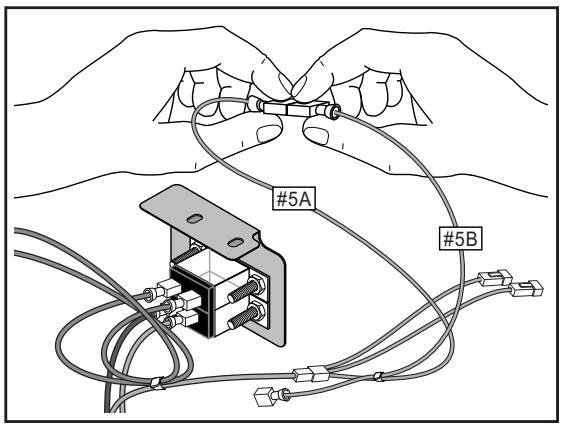
7) RECONNECT WIRE #21 (YELLOW) TO WIRE #2 (RED) FROM THE RELAY ASSEMBLY.



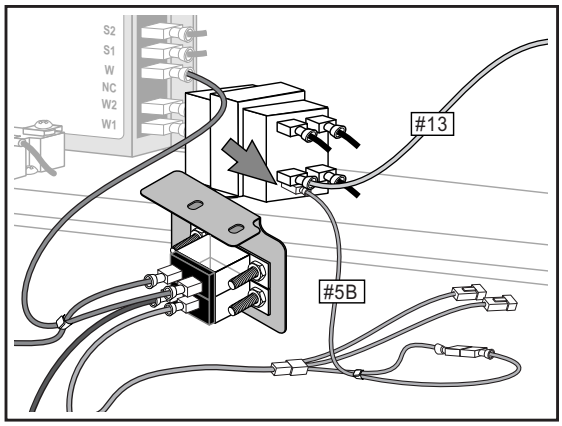
8) CONNECT WIRE #5 (RED) FROM THE RELAY ASSEMBLY TO THE "W" TERMINAL ON DUAL IGNITION MODULE.



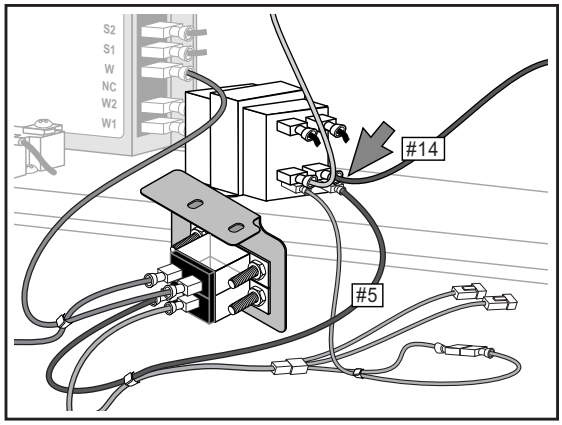
9) CONNECT WIRE #5A (ORANGE) FROM THE RELAY ASSEMBLY TO WIRE #5B (ORANGE) FROM THE RELAY ASSEMBLY.



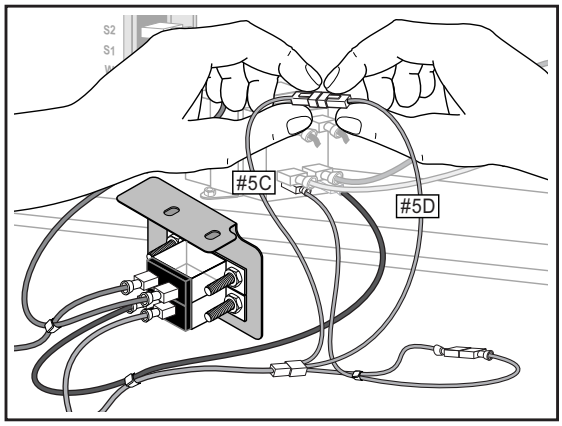
10) CONNECT WIRE #5B (ORANGE) FROM THE RELAY ASSEMBLY TO WIRE #13 YELLOW AT THE IGNITION TRANSFORMER.



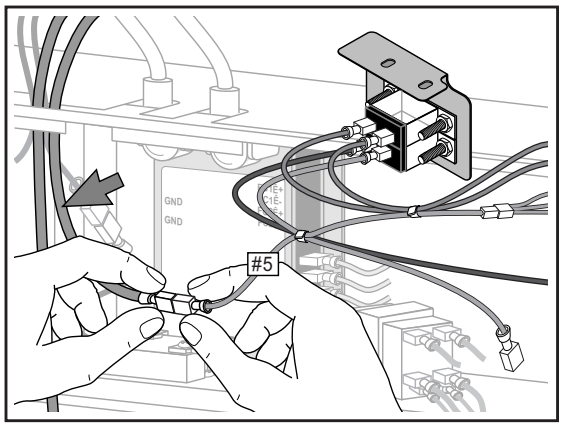
11) CONNECT WIRE #5 (BLUE) FROM THE RELAY ASSEMBLY TO WIRE #14 BLUE AT THE IGNITION TRANSFORMER.



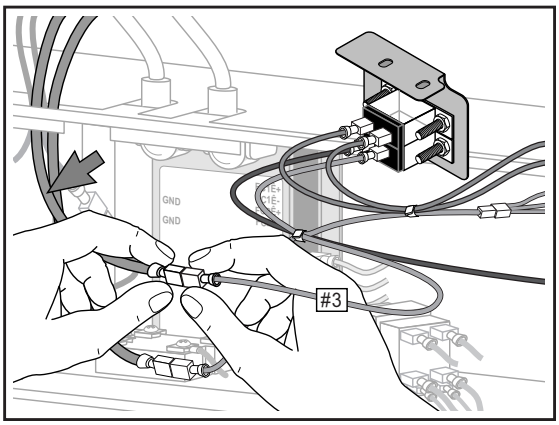
12) CONNECT THE TWO WHITE “J” CONNECTORS TOGETHER ON THE RELAY ASSEMBLY [#5C(ORANGE) AND #5D(ORANGE)].



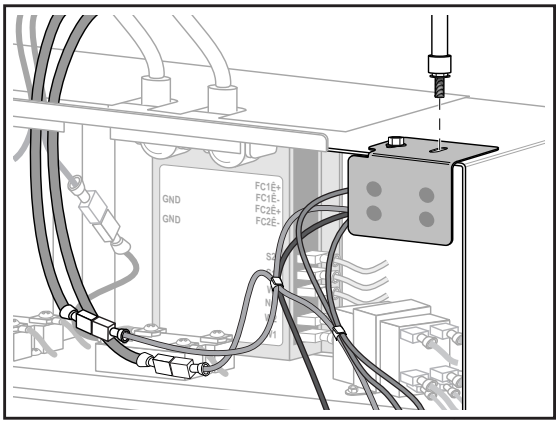
13) CONNECT WIRE #5 (ORANGE) FROM THE RELAY ASSEMBLY TO ONE OF THE ORANGE WIRES FROM THE BLOWER.



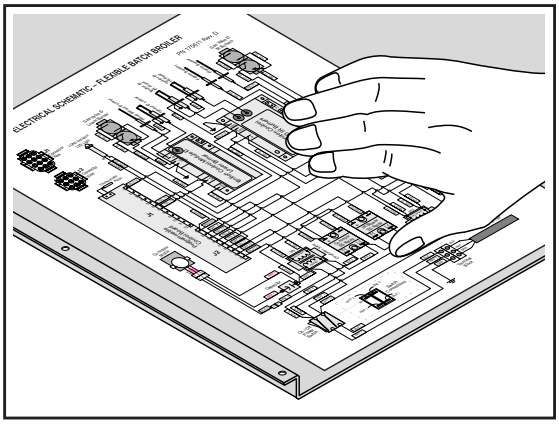
14) CONNECT WIRE #3 (ORANGE) FROM THE RELAY ASSEMBLY TO THE OTHER ORANGE WIRE FROM THE BLOWER.



15) INSTALL RELAY ASSEMBLY USING THE 2 EXISTING SCREWS.



16) APPLY NEW SCHEMATIC. (175611)



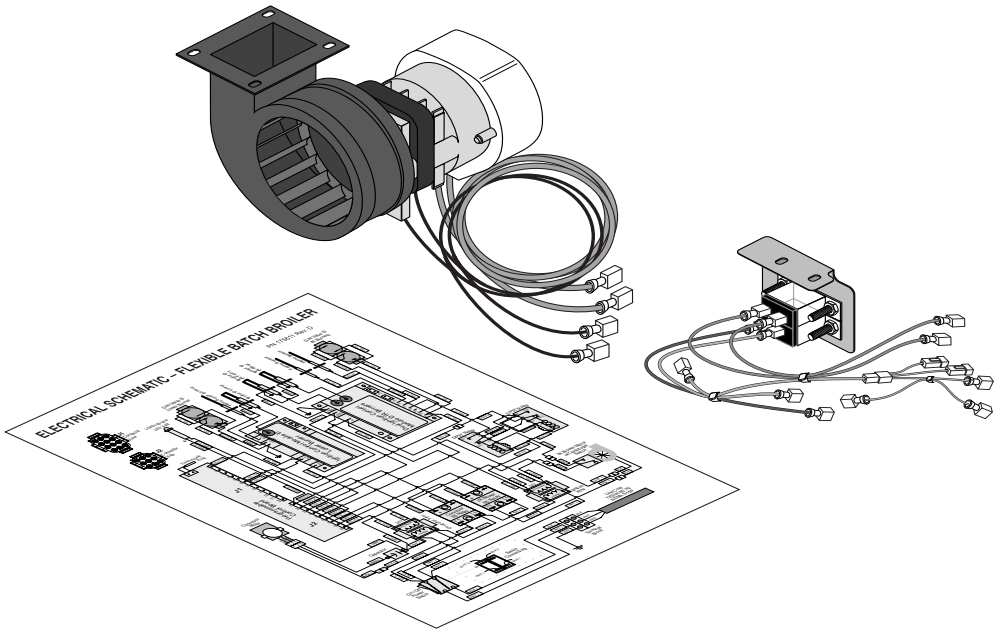
17) RE-INSTALL ALL PANELS.

18) PLUG IN, TURN THE UNIT ON AND CONFIRM THAT THE UPPER BURNERS LIGHT PROPERLY.

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INSTRUCTIONS D'INSTALLATION

MOTEUR À INTERRUPTEUR CENTRIFUGE DE RÔTISSOIRE À FOURNÉES FLEXIBLES
INSTRUCTIONS POUR KIT DE CONVERSION
DUKE N° 600250



Composition du kit :

- Ensemble 176188, faisceau et relais, soufflante
- Kit 600249, soufflante pour le marché intérieur
- Schéma 175611, rôtissoire à fournées flexibles, marché intérieur, 120 V

Outils nécessaires pour cette installation :

- Tournevis cruciforme
- Tournevis plat
- Clé à douille de 5/16 po

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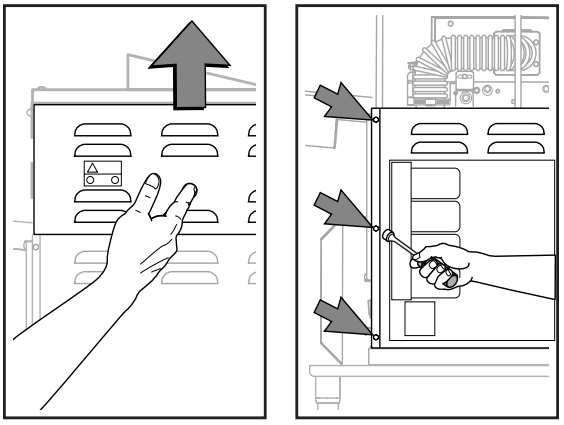
Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102 USA.
Téléphone : 314-231-1130
Sans frais : 1-800-735-3853
Fax : 314-231-5074

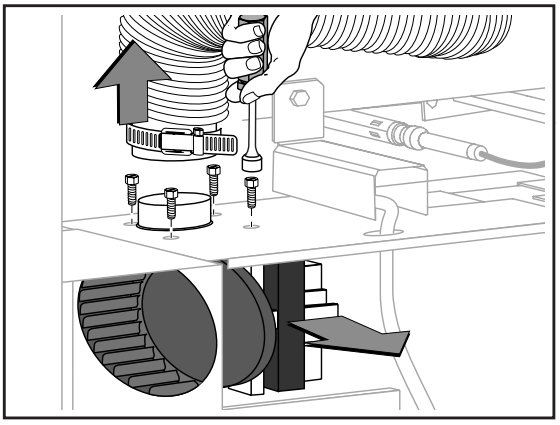
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1) DÉBRANCHER LA RÔTISSOIRE DE LA PRISE ÉLECTRIQUE.

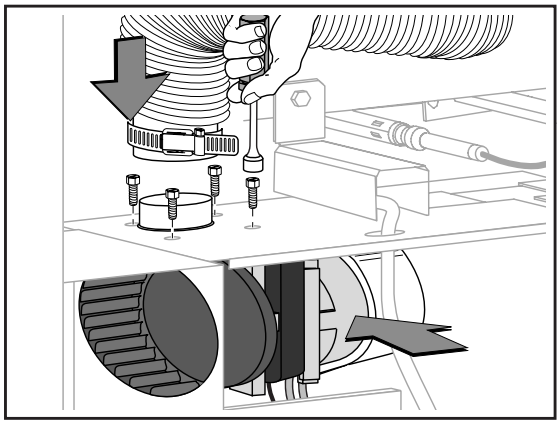
2) DÉPOSER LES PANNEAUX D'ACCÈS SUPÉRIEUR ET INFÉRIEUR AUX COMMANDES.



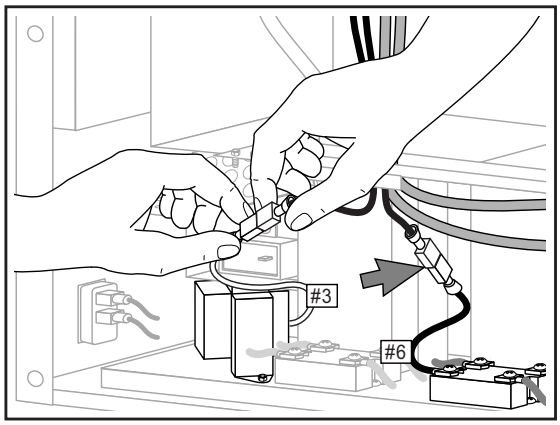
3) DÉPOSER LE MOTEUR DE SOUFFLANTE EXISTANT.



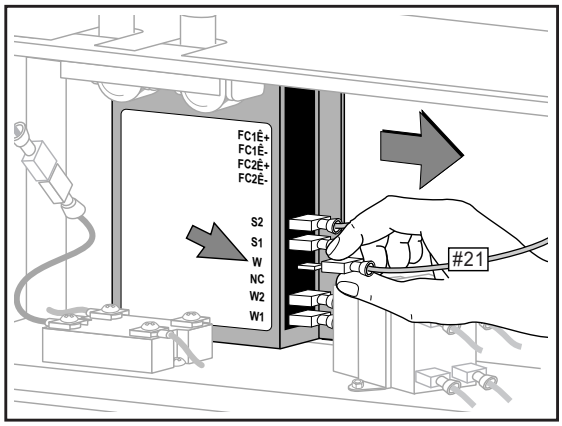
4) METTRE LE NOUVEAU MOTEUR DE SOUFFLANTE EN PLACE.



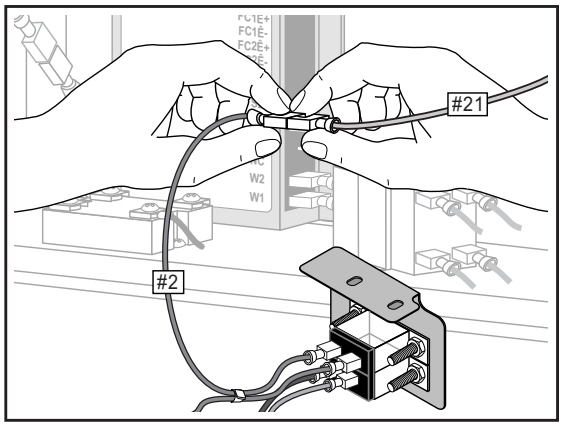
5) RACCORDER LES FILS (NOIRS) D'ALIMENTATION DE LA SOUFFLANTE AUX FILS N° 3 (BLANC) ET N° 8 (NOIR).



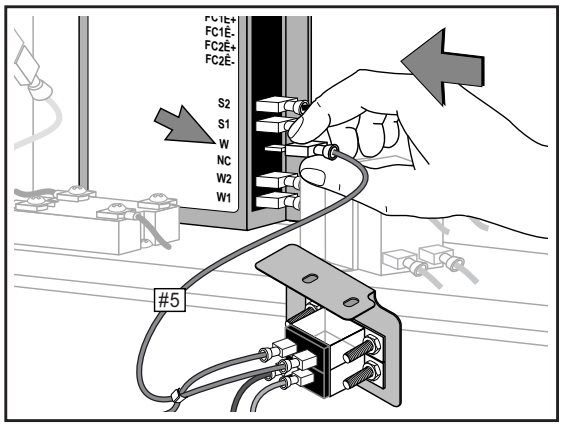
6) DÉBRANCHER LE FIL N° 21 (JAUNE) DE LA BORNE « W » DU DOUBLE MODULE D'ALLUMAGE.



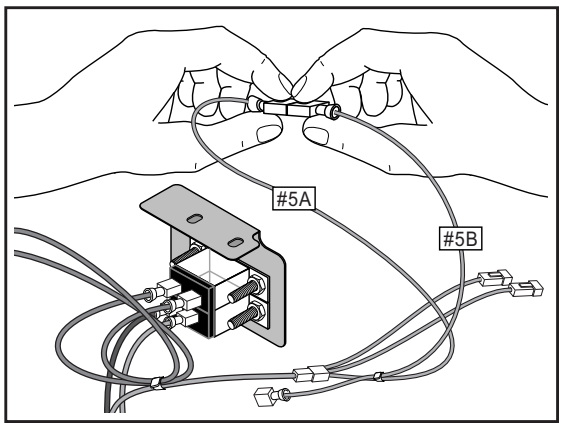
7) RACCORDER LE FIL N° 21 (JAUNE) AU FIL N° 2 (ROUGE) DU RELAIS.



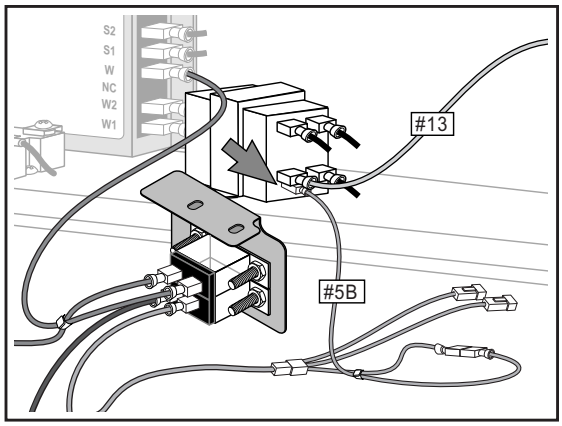
8) RACCORDER LE FIL N° 5 (ROUGE) DU RELAIS À LA BORNE « W » DU DOUBLE MODULE D'ALLUMAGE.



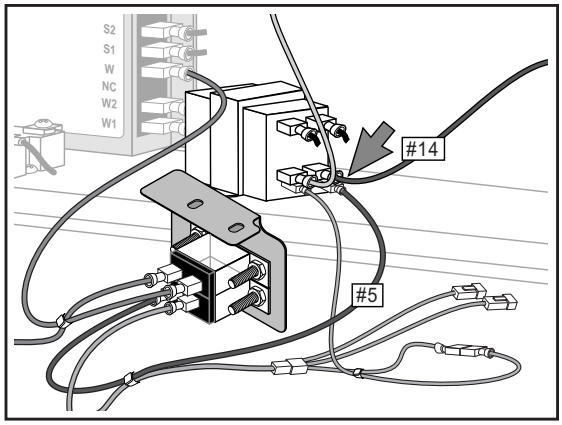
9) RACCORDER LE FIL N° 5A (ORANGE) DU RELAIS AU FIL N° 5B (ORANGE) DU RELAIS.



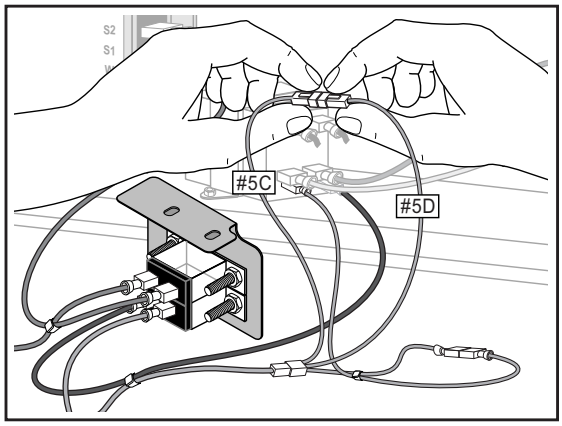
10) RACCORDER LE FIL N° 5B (ORANGE) DU RELAIS AU FIL N° 13 (JAUNE) DU TRANSFORMATEUR D'ALLUMAGE.



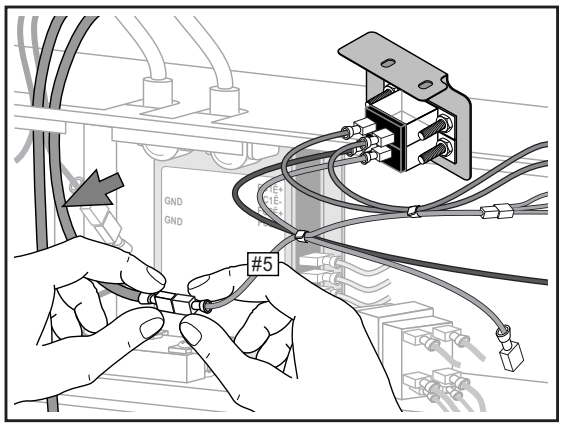
11) RACCORDER LE FIL N° 5 (BLEU) DU RELAIS AU FIL N° 14 (BLEU) DU TRANSFORMATEUR D'ALLUMAGE.



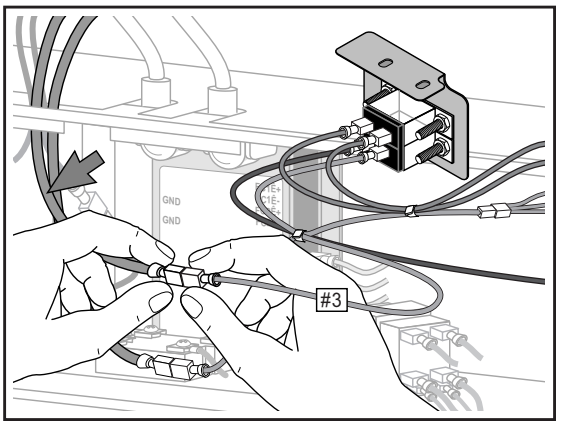
12) RACCORDER L'UN À L'AUTRE LES DEUX CONNECTEURS « J » BLANCS SUR LE RELAIS [N° 5C (ORANGE) ET N° 5D (ORANGE].



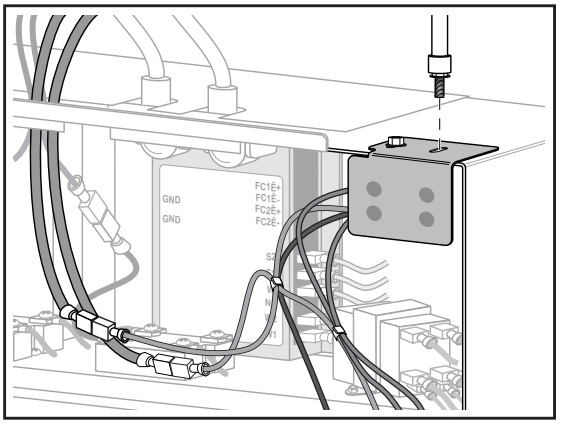
13) RACCORDER LE FIL N° 5 (ORANGE) DU RELAIS À UN DES FILS ORANGES DE LA SOUFFLANTE.



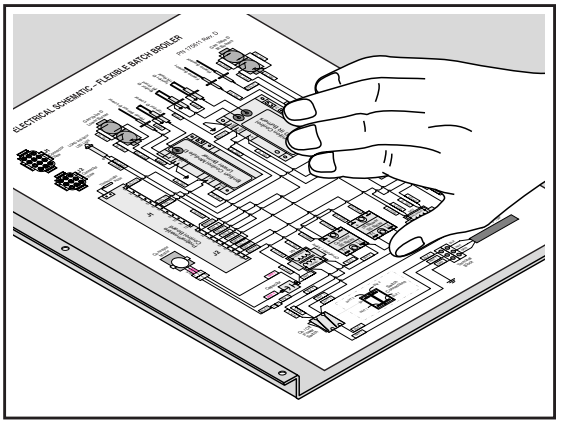
14) RACCORDER LE FIL N° 3 (ORANGE) DU RELAIS À L'AUTRE FIL ORANGE DE LA SOUFFLANTE.



15) METTRE LE RELAIS EN PLACE AU MOYEN DES 2 VIS EXISTANTES.



16) APPOSER LE NOUVEAU SCHÉMA. (175611)



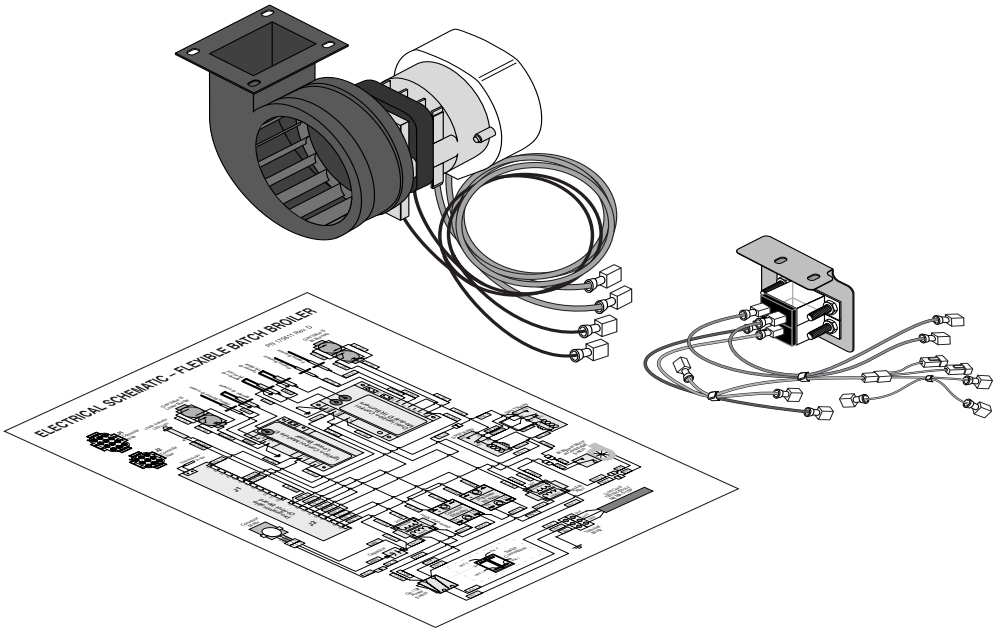
17) REMETTRE TOUS LES PANNEAUX EN PLACE.

18) BRANCHER L'APPAREIL, LE METTRE EN MARCHE ET S'ASSURER QUE LES BRÛLEURS SUPÉRIEURS S'ALLUMENT CORRECTEMENT.

INSTRUCCIONES DE INSTALACIÓN

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INSTRUCCIONES DEL JUEGO DE MODIFICACIÓN NACIONAL DEL MOTOR DEL INTERRUPTOR CENTRÍFUGO DEL ASADOR FLEXIBLE POR TANDAS PARA EL JUEGO DE DUKE 600250



Este juego contiene lo siguiente:

- 176188 Conjunto de relé del mazo de cables del soplador
- 600249 Juego de soplador nacional
- 175611 Esquema del asador flexible por tandas nacional de 120V

Artículos requeridos para esta instalación:

- Destornillador de punta en cruz
- Destornillador de ranura
- Aprietatuercas de 5/16"

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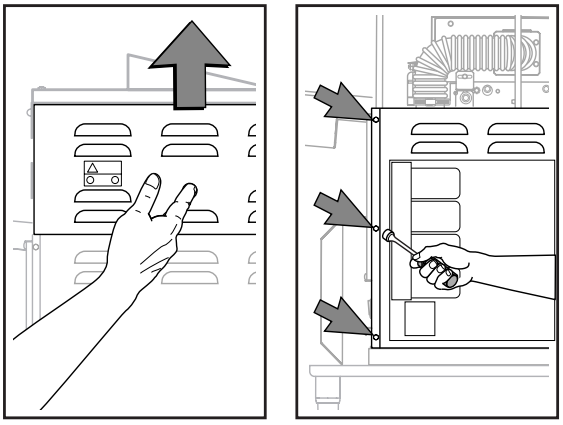
Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102
Teléfono: 314-231-1130
Teléfono gratuito: 1-800-735-3853
Fax: 314-231-5074

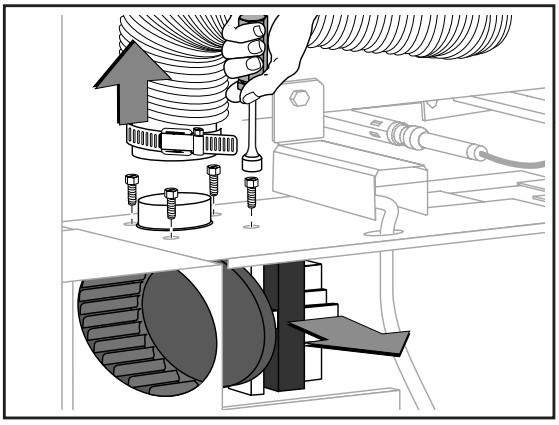
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1) DESENCHUFE EL ASADOR DE LA RED ELÉCTRICA.

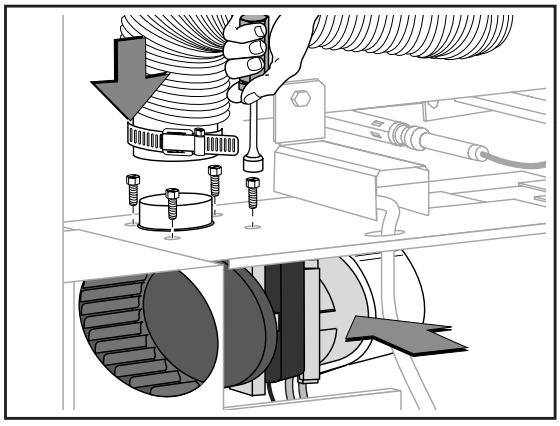
2) QUITE LOS PANELES DE ACCESO DE CONTROL SUPERIOR E INFERIOR



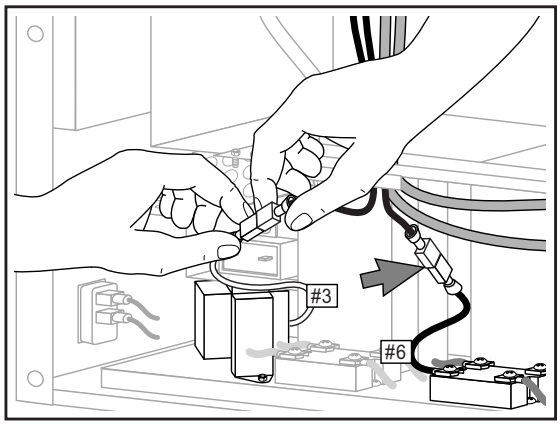
3) QUITE EL MOTOR DEL SOPLADOR EXISTENTE.



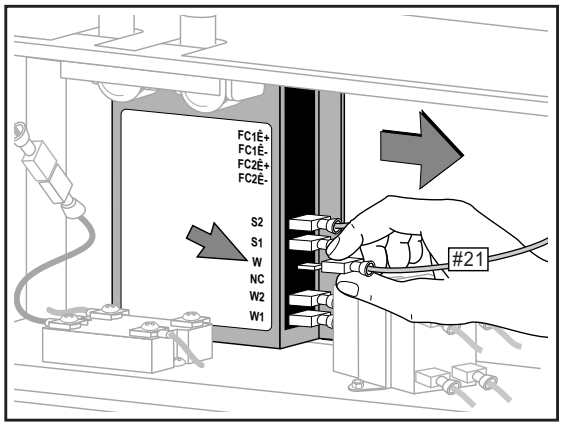
4) INSTALE EL NUEVO MOTOR DEL SOPLADOR.



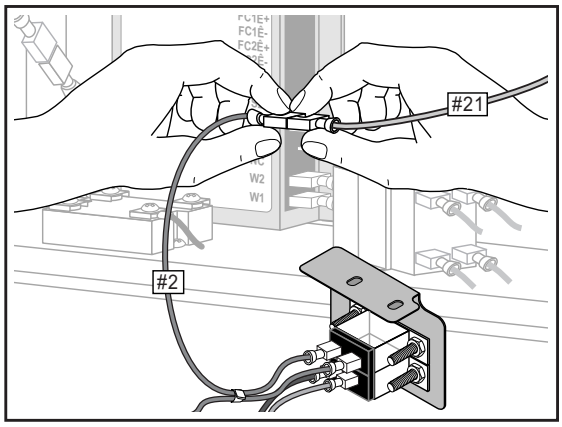
5) EFECTÚE LAS CONEXIONES DE LOS CABLES DE ALIMENTACIÓN (NEGROS) A LOS CABLES 3 (BLANCO) Y 6 (NEGRO).



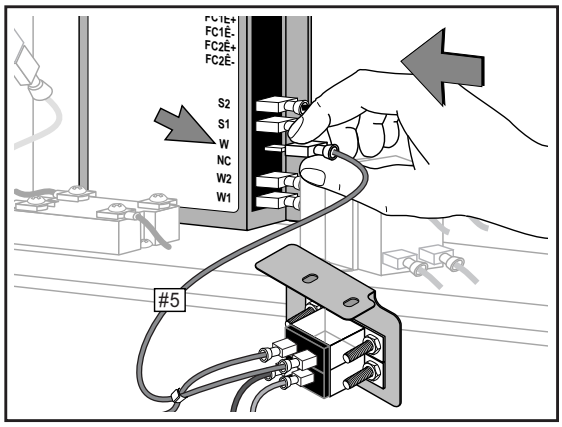
6) DESCONECTE EL CABLE 21 (AMARILLO) DEL TERMINAL “W” DEL MÓDULO DE ENCENDIDO DOBLE.



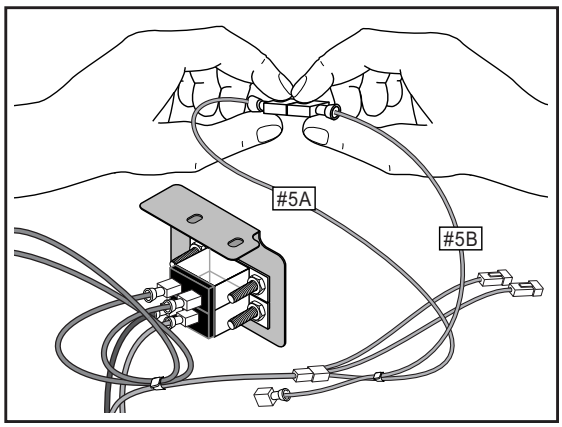
7) RECONECTE EL CABLE 21 (AMARILLO) AL CABLE 2 (ROJO) DEL CONJUNTO DE RELÉ.



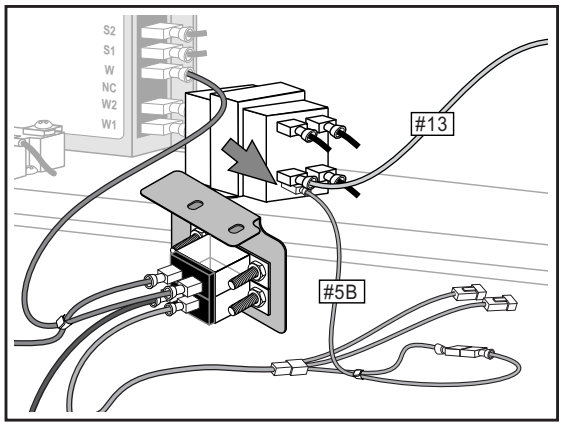
8) CONECTE EL CABLE 5 (ROJO) DEL CONJUNTO DE RELÉ AL TERMINAL “W” DEL MÓDULO DE ENCENDIDO DOBLE.



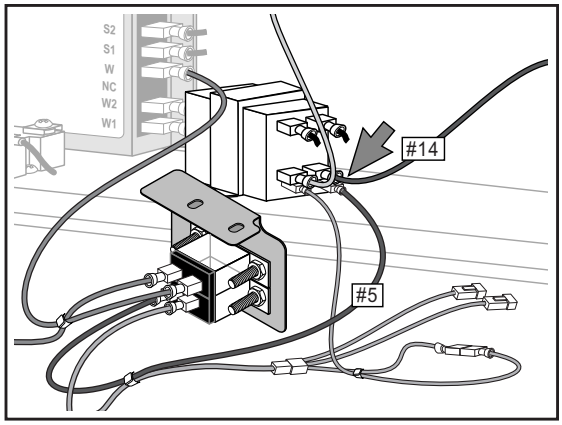
9) CONECTE EL CABLE 5A (ANARANJADO) DEL CONJUNTO DE RELÉ AL CABLE 5B (ANARANJADO) DEL CONJUNTO DE RELÉ.



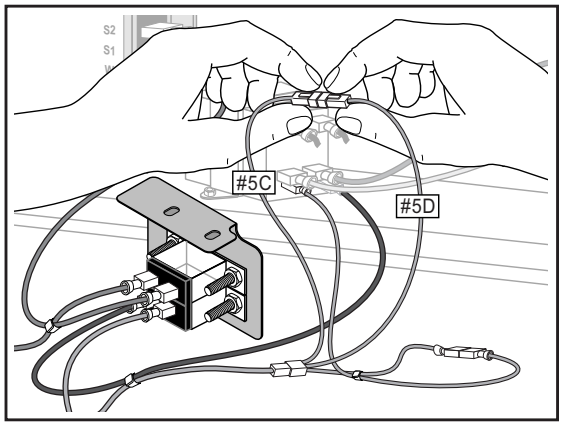
10) CONECTE EL CABLE 5B (ANARANJADO) DEL CONJUNTO DE RELÉ AL CABLE 13 AMARILLO EN EL TRANSFORMADOR DE ENCENDIDO.



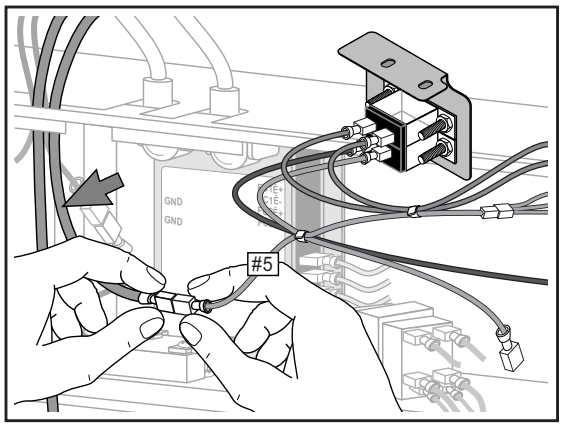
11) CONECTE EL CABLE 5B (AZUL) DEL CONJUNTO DE RELÉ AL CABLE 14 AZUL EN EL TRANSFORMADOR DE ENCENDIDO.



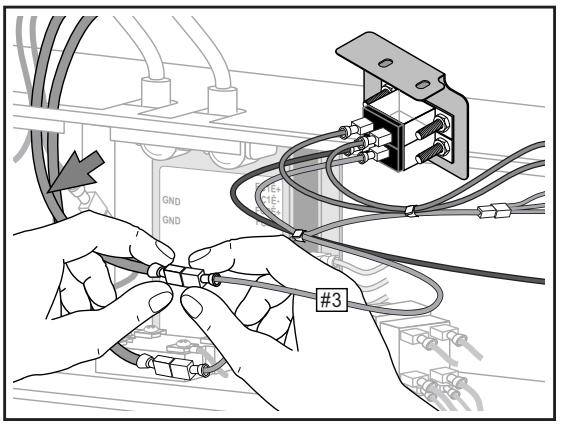
12) CONECTE LOS DOS CONECTORES “J” BLANCOS JUNTOS EN EL CONJUNTO DE RELÉ [5C (ANARANJADO) Y 5D (ANARANJADO)].



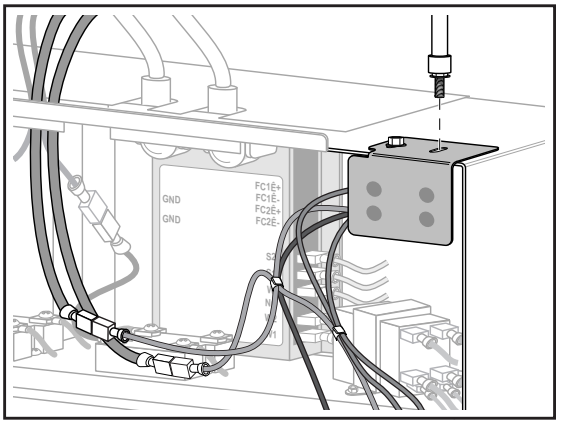
13) CONECTE EL CABLE 5 (ANARANJADO) DEL CONJUNTO DE RELÉ A UNO DE LOS CABLES ANARANJADOS DEL SOPLADOR.



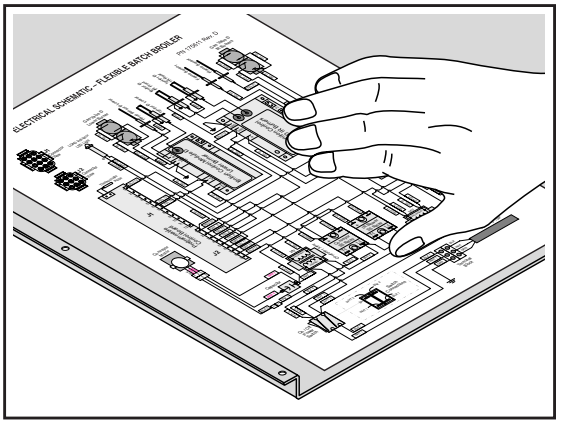
14) CONECTE EL CABLE 3 (ANARANJADO) DEL CONJUNTO DE RELÉ AL OTRO CABLE ANARANJADO DEL SOPLADOR.



15) INSTALE EL CONJUNTO DE RELÉ CON LOS 2 TORNILLOS EXISTENTES.



16) APLIQUE EL NUEVO ESQUEMA. (175611)



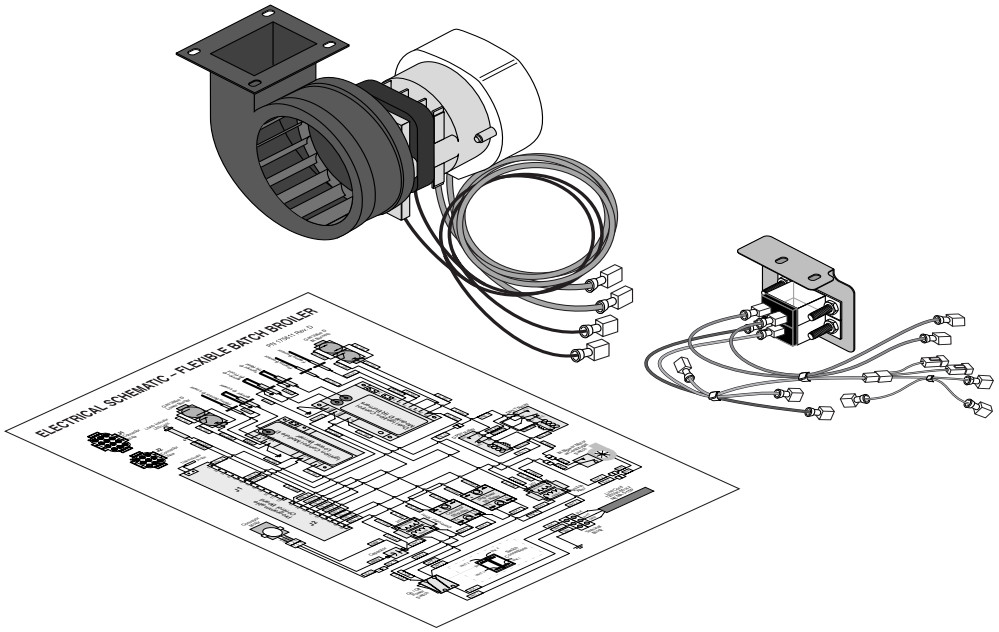
17) VUELVA A INSTALAR TODOS LOS PANELES.

18) ENCHUFE, ENCIENDA LA UNIDAD Y CONFIRME QUE LOS QUEMADORES SUPERIORES SE ENCIENDAN DEBIDAMENTE.

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INSTRUÇÕES DE INSTALAÇÃO

INSTRUÇÕES DO KIT DE MODERNIZAÇÃO (EUA) DO MOTOR COM CHAVE CENTRÍFUGA DA GRELHA MULTIPRODUTO DO KIT Nº 600250 DA DUKE



Este kit contém:

- Unidade 176188, chicote do relé, soprador
- Kit 600249, soprador nacional (EUA)
- Diagrama 175611, grelha multiproduto, nacional (EUA) 120 V

Itens necessários para esta instalação:

- Chave com ponta em cruz
- Chave de fenda
- Chave tipo canhão de 5/16"

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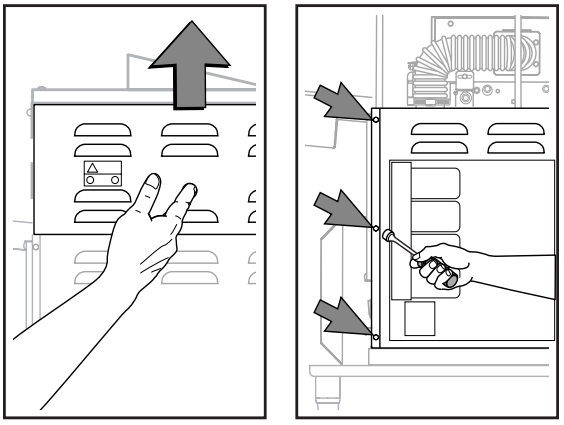
Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102 EUA
Fone: +1-314-231-1130
Ligação grátis (nos EUA): 1-800-735-3853
Fax: +1-314-231-5074

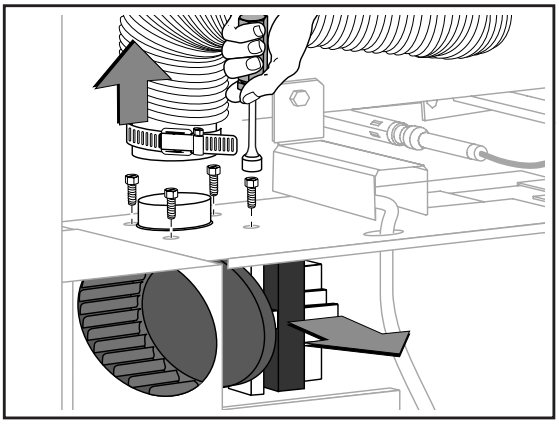
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1) DESLIGUE A GRELHA DA TOMADA ELÉTRICA.

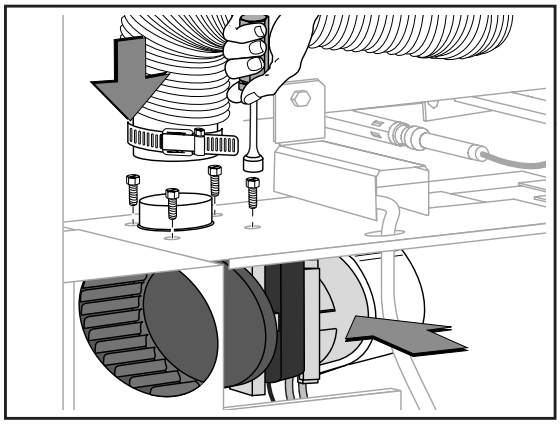
2) RETIRE O PAINEL SUPERIOR E INFERIOR DE ACESSO AO CONTROLE .



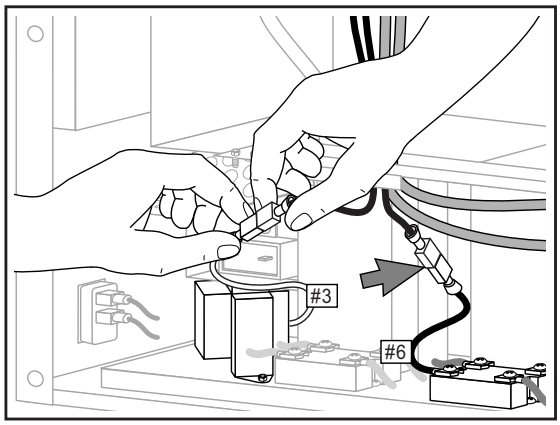
3) RETIRE O MOTOR DO SOPRADOR EXISTENTE.



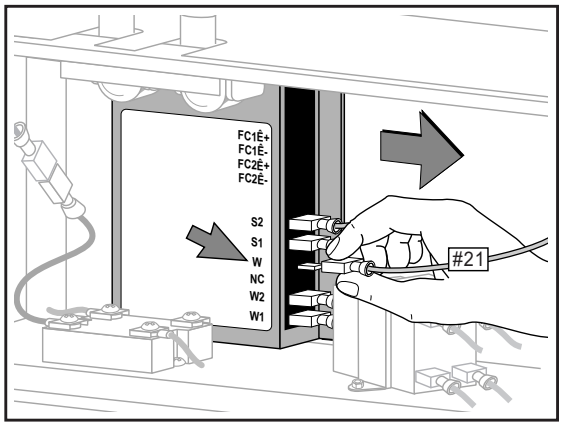
4) COLOQUE O NOVO MOTOR DO SOPRADOR.



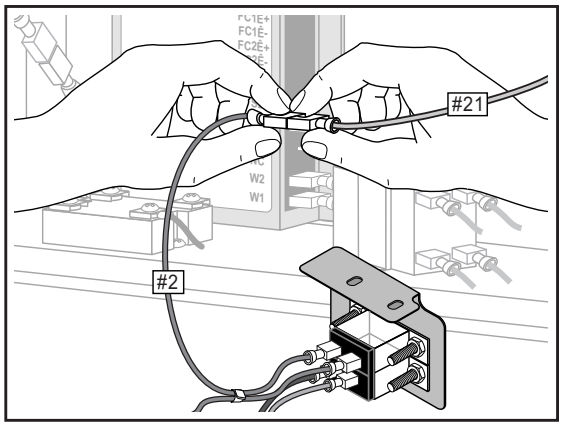
5) FAÇA AS CONEXÕES DE ALIMENTAÇÃO DOS FIOS (PRETO) DO SOPRADOR AO FIO 3 (BRANCO) E 6 (PRETO).



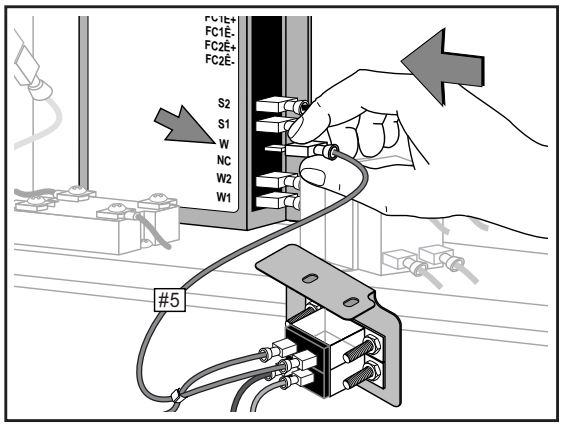
6) DESLIGUE O FIO 21 (AMARELO) DO TERMINAL "W" NO MÓDULO DE IGNIÇÃO DUPLA.



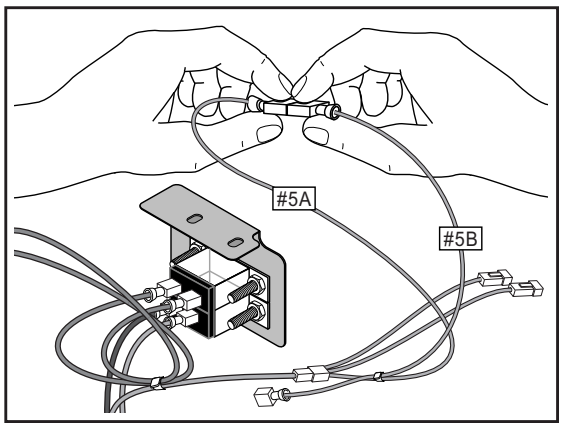
7) RELIGUE O FIO 21 (AMARELO) AO FIO 2 (VERMELHO) DA UNIDADE RELÉ.



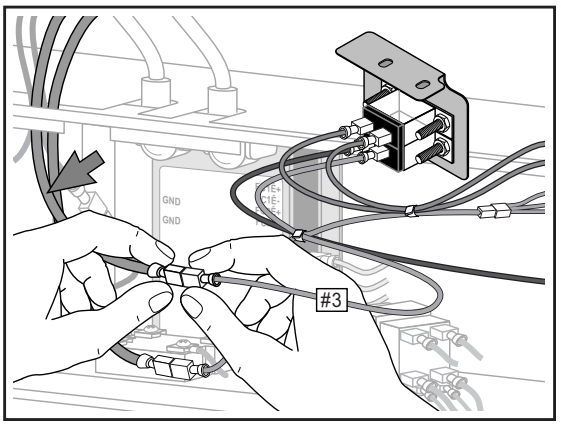
8) LIGUE O FIO 5 (VERMELHO) DA UNIDADE RELÉ AO TERMINAL "W" DO MÓDULO DE IGNIÇÃO DUPLA.



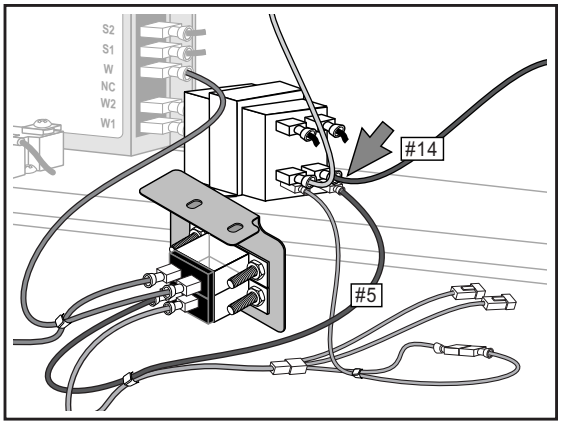
9) LIGUE O FIO 5A (LARANJA) DA UNIDADE RELÉ AO FIO 5B (LARANJA) DA UNIDADE RELÉ.



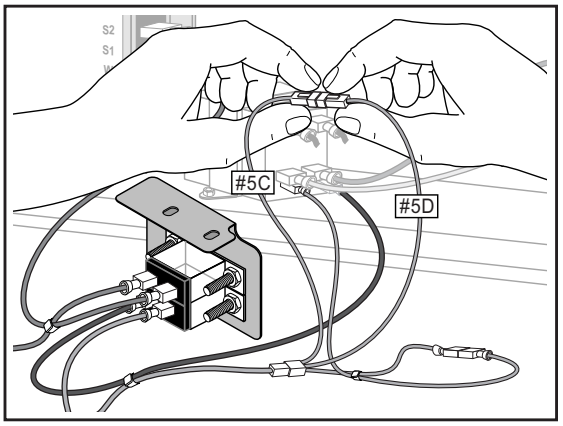
10) LIGUE O FIO 5B (LARANJA) DA UNIDADE RELÉ AO FIO 13 (AMARELO) NO TRANSFORMADOR DE IGNIÇÃO.



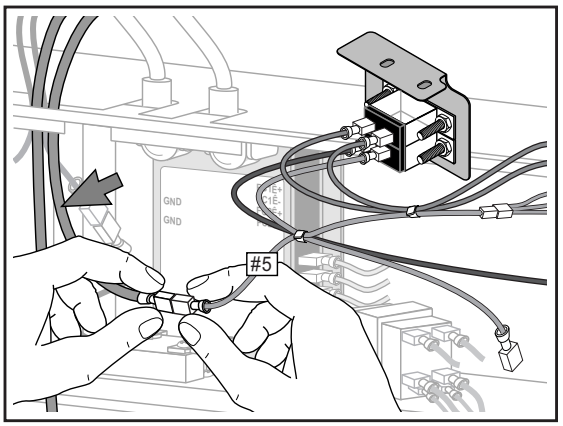
11) LIGUE O FIO 5 (AZUL) DA UNIDADE RELÉ AO FIO 14 (AZUL) NO TRANSFORMADOR DE IGNIÇÃO.



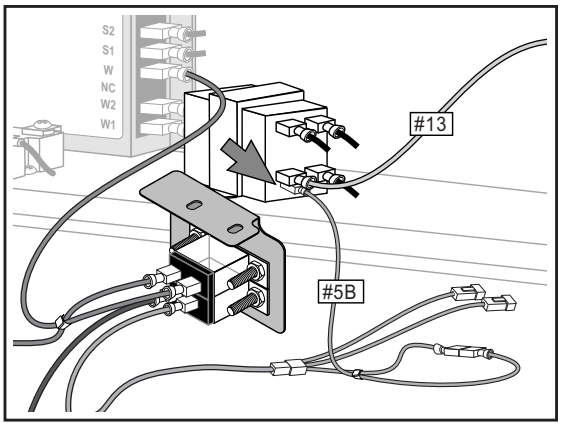
12) LIGUE OS DOIS CONECTORES BRANCOS “J” NA UNIDADE RELÉ [5C (LARANJA) E 5D (LARANJA)].



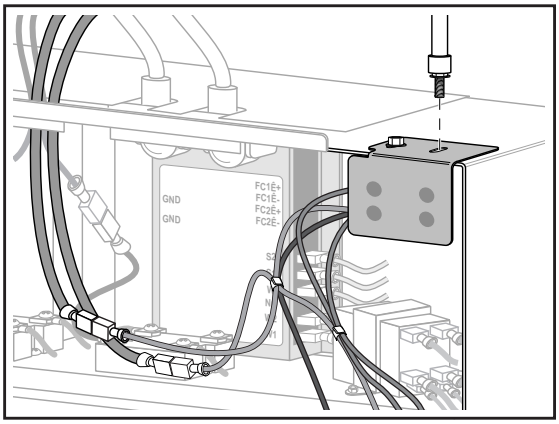
13) LIGUE O FIO 5 (LARANJA) DA UNIDADE RELÉ A UM DOS FIOS LARANJA DO SOPRADOR.



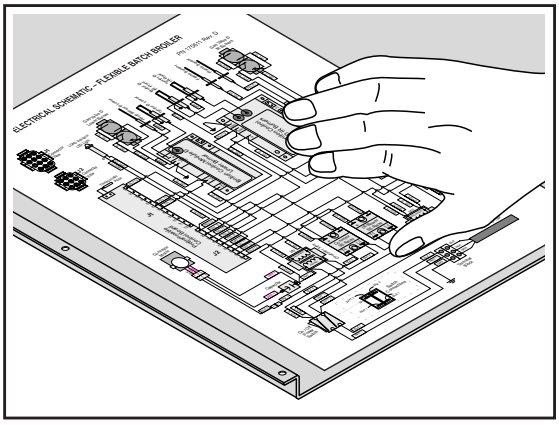
14) LIGUE O FIO 3 (LARANJA) DA UNIDADE RELÉ AO OUTRO FIO LARANJA DO SOPRADOR.



15) COLOQUE A UNIDADE RELÉ USANDO OS DOIS PARAFUSOS EXISTENTES.



16) USE O NOVO DIAGRAMA. (175611)



17) RECOLOQUE TODOS OS PAINÉIS.

18) LIGUE NA TOMADA, LIGUE A UNIDADE E VEJA SE OS QUEIMADORES SUPERIORES SE ACENDEM CORRETAMENTE.

NOTES:

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER:	**SERIAL NUMBER:**
DATE OF PURCHASE:	
DEALER:	**TELEPHONE:**
SERVICER:	**TELEPHONE:**

FOR WARRANTY, PARTS & SERVICE:

DUKE CORPORATE, CANADA, LATIN AMERICA

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 800-735-3853
Fax: 314-231-2460
service-dispatch@dukemfg.com

DUKE ASIA PACIFIC

Duke Manufacturing
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Malu Town, Jiading District
Shanghai 201801, China
Phone: +86 21 59153525 / 59153526
Fax: +86 21 33600628

DUKE EMEA - EUROPE, MIDDLE EAST, AFRICA, RUSSIA

Duke Manufacturing CR, s.r.o.
Zdebradska 92
Jazlovice, Ricany
Building number DC 4 on the
ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 257 741 033
Fax: +420 257 741 039
service.prague@duke-emea.com

DUKE EMEA – UK, IRELAND, NORDIC COUNTRIES

Duke Manufacturing UK Ltd.
Unit 10, Greendale Business Park
Woodbury Salterton
Exeter, EX5 1EW
Phone: +44 (0) 1395 234140
Fax: +44 (0) 1395 234154
service.exeter@duke-emea.com

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

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Duke Corporate, Canada, Latin America
2305 N. Broadway
St. Louis, MO 63102
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Fax: 314-231-5074
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Duke EMEA - Europe, Middle East, Africa, Russia
Duke Manufacturing CR, s.r.o.
Zdebradska 92
Jazlovice, Ricany
Building number DC 4 on the
ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 257 741 033
Fax: +420 257 741 039

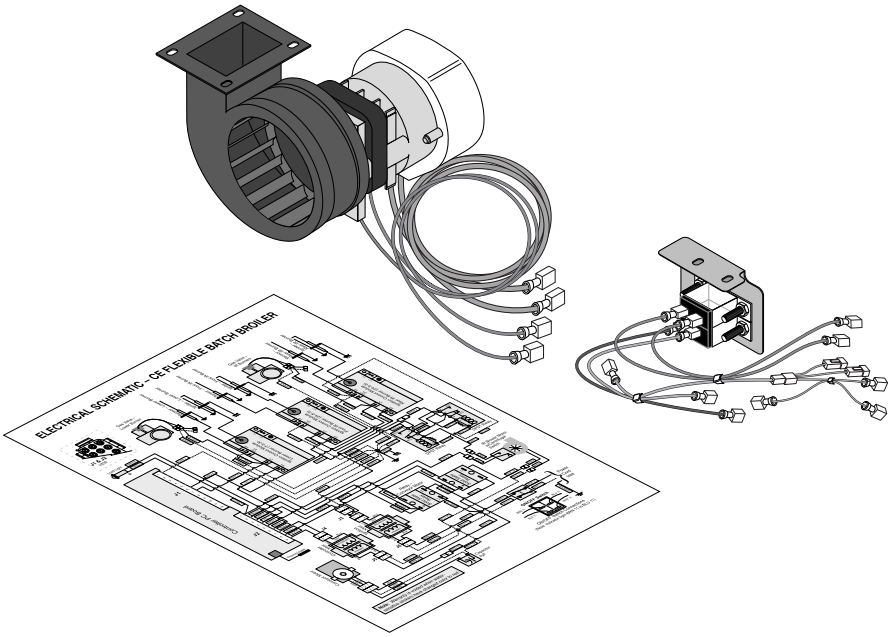
Duke EMEA – UK, Ireland, Nordic Countries
Duke Manufacturing UK Ltd.
Unit 10, Greendale Business Park
Woodbury Salterton
Exeter, EX5 1EW
Phone: +44 (0) 1395 234140
Fax: +44 (0) 1395 234154

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Duke Manufacturing
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Shanghai 201801, China
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Fax: +86 21 33600628

INSTALLATION INSTRUCTIONS

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FLEXIBLE BATCH BROILER CENTRIFUGAL SWITCH MOTOR CE RETROFIT KIT INSTRUCTIONS FOR DUKE KIT #600251



This kit contains:

- 176188 Assy, Harness Relay, Blower
- 600248 Kit, CE Blower
- 175806 Schematic, FBB, CE 230V

Items required for this installation:

- Cross Tip Screwdriver
- Straight Screwdriver
- 5/16" Nutdriver

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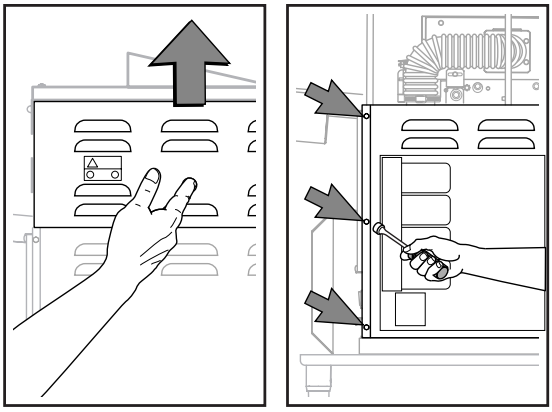
2305 N. Broadway
St. Louis, MO 63102
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Toll Free: 1-800-735-3853
Fax: 314-231-5074

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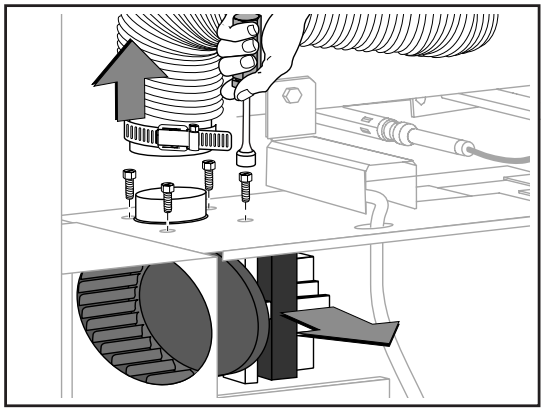
P/N 176190E

1) UNPLUG THE BROILER FROM ELECTRICAL POWER.

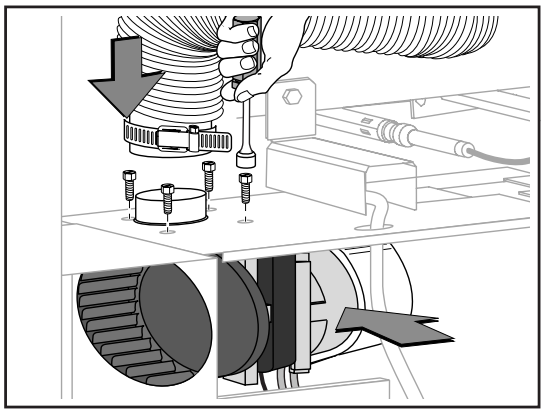
2) REMOVE THE UPPER AND LOWER CONTROL ACCESS PANELS.



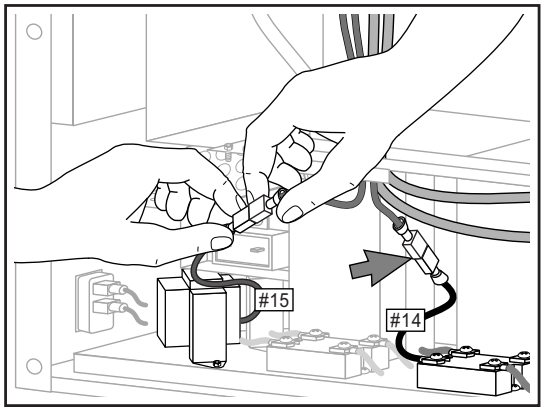
3) REMOVE THE EXISTING BLOWER MOTOR.



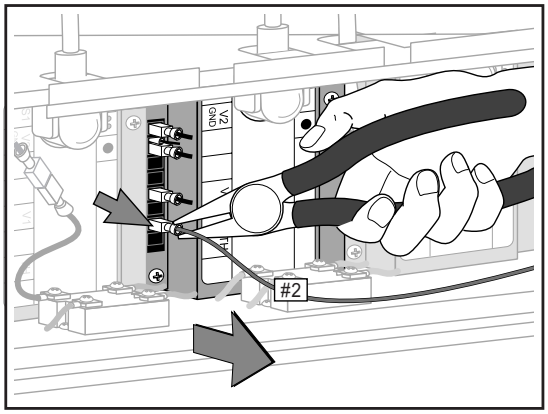
4) INSTALL NEW BLOWER MOTOR.



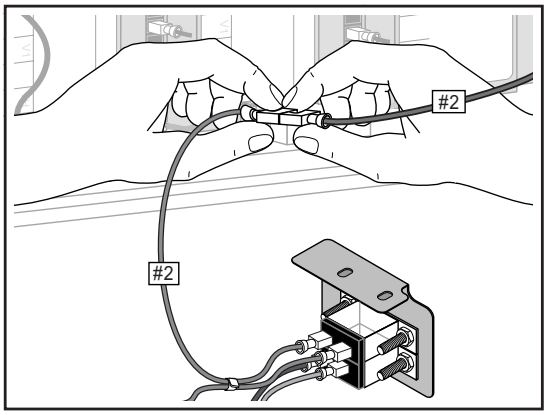
5) MAKE BLOWER SUPPLY WIRES (RED) CONNECTIONS TO WIRE #15 (BLUE) AND #14 (BLACK).



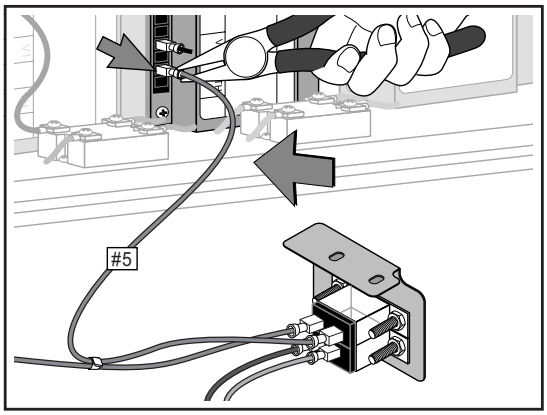
6) DISCONNECT WIRE #2 (RED) FROM THE "TH" TERMINAL ON THE CENTER IGNITION MODULE



7) RECONNECT WIRE #2 (RED) TO WIRE #2 (RED) FROM THE RELAY ASSEMBLY.

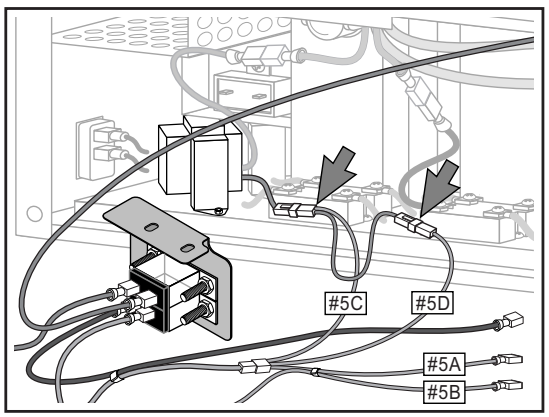


8) CONNECT WIRE #5 (RED) FROM THE RELAY ASSEMBLY TO THE "TH" TERMINAL ON THE CENTER IGNITION MODULE.

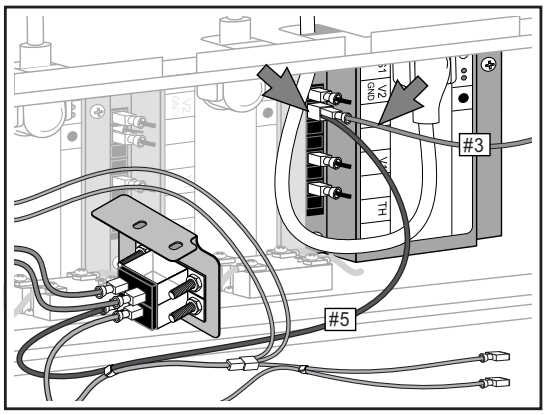


9) DISCONNECT J3 CONNECTOR ON IGNITION TRANSFORMER AND CONNECT IN J3 CONNECTORS FROM RELAY ASSEMBLY [#5C(ORANGE) AND #5D(ORANGE)].

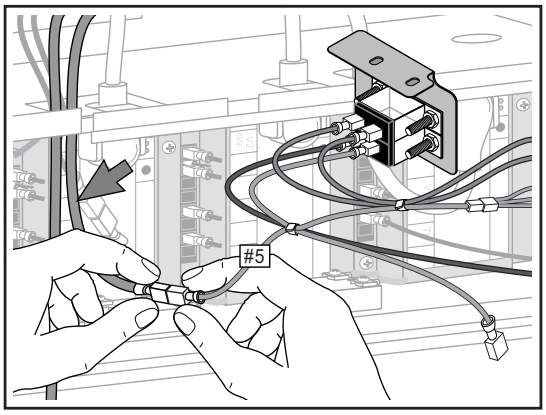
NOTE: TERMINALS ON WIRES 5A(ORANGE) AND 5B(ORANGE) ARE NOT USED.



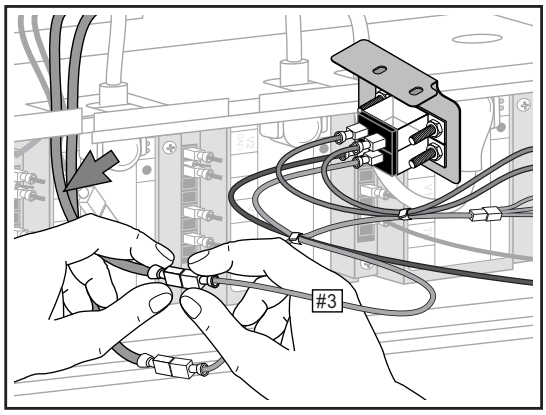
10) DISCONNECT WIRE #3 (GREEN) FROM THE "V2" TERMINAL ON THE THIRD IGNITION MODULE. CONNECT WIRE #3 (GREEN) TO WIRE #5 (BLUE) ON THE RELAY ASSEMBLY AND RECONNECT BOTH THESE WIRES BACK ONTO THE "V2" TERMINAL ON THE THIRD IGNITION MODULE.



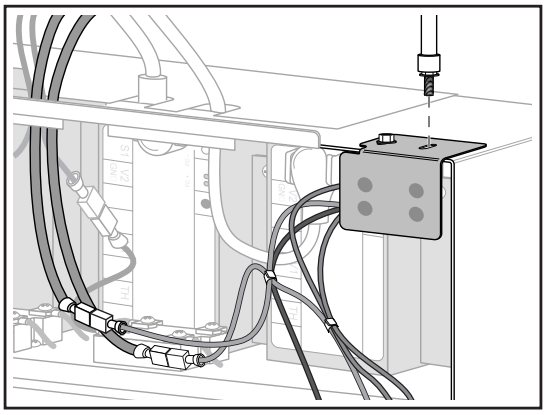
11) CONNECT WIRE #5 (ORANGE) FROM THE RELAY ASSEMBLY TO ONE OF THE ORANGE WIRES FROM THE BLOWER.



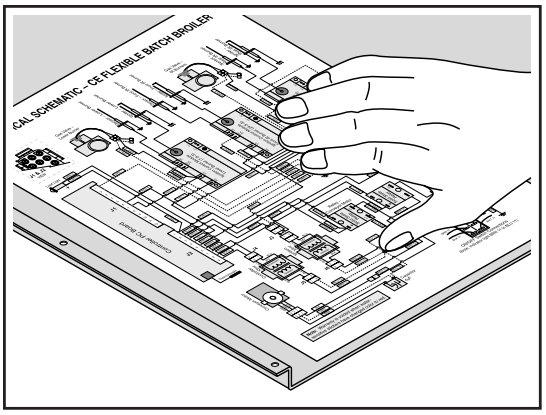
12) CONNECT WIRE #3 (ORANGE) FROM THE RELAY ASSEMBLY TO THE OTHER ORANGE WIRE FROM THE BLOWER.



13) INSTALL RELAY ASSEMBLY USING THE 2 EXISTING SCREWS.



14) APPLY NEW SCHEMATIC. (175806)



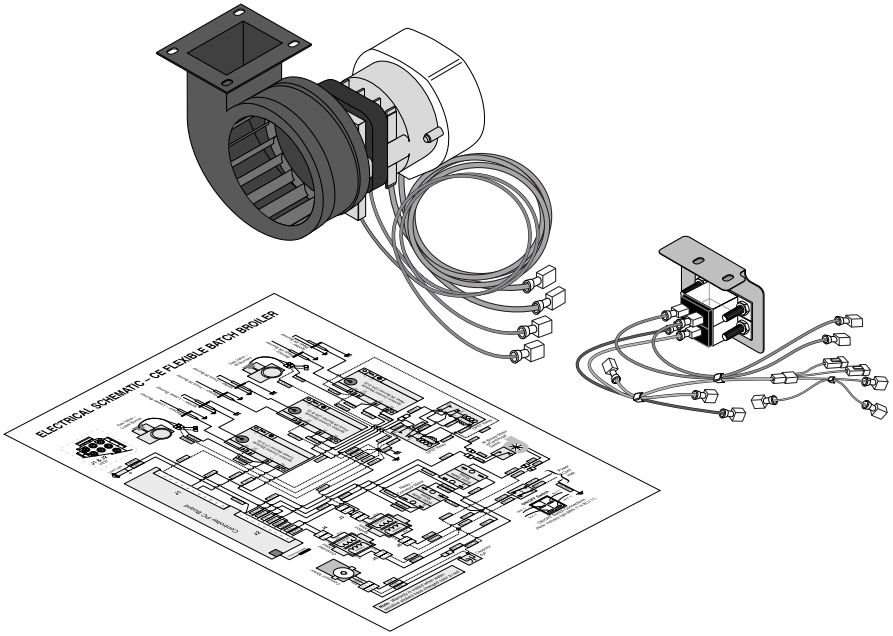
15) RE-INSTALL ALL PANELS.

16) PLUG IN, TURN THE UNIT ON AND CONFIRM THAT THE UPPER BURNERS LIGHT PROPERLY.

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INSTALLATIONS-ANWEISUNGEN

NACHRÜSTSATZ FÜR CE-GEBLÄSEMOTOR MIT FLIEHKRAFTSCHALTER FÜR FLEXIBLE BATCH-GRILLGERÄTE FÜR DUKE KIT NR. 600251



Teile im Satz:

- 176188 kpl., Kabelbaumrelais, Gebläse
- 600248 Satz, CE-Gebläse
- 175806 Schaltplan, Flexibles Batch-Grillgerät, CE 230 V

Für den Einbau erforderliches Werkzeug:

- Kreuzschlitzschraubendreher
- Schlitzschraubendreher
- 5/16-Zoll-Steckschlüssel

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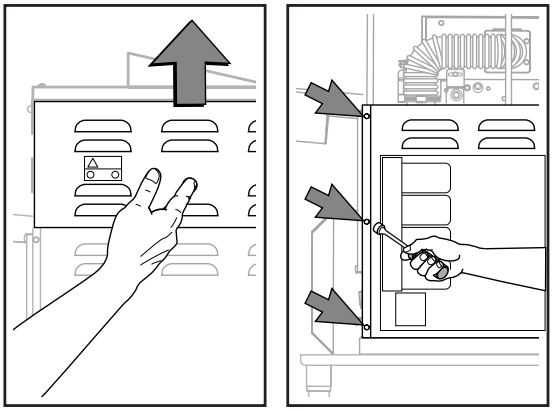
Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102, USA
Telefon: 314-231-1130
Gebührenfrei (Nordamerika): 1-800-735-3853
Telefax: 314-231-5074

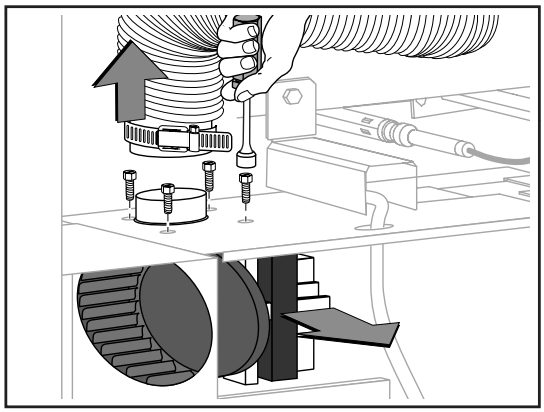
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1) TRENNEN SIE DIE STROMVERSORGUNG DES GRILLGERÄTS.

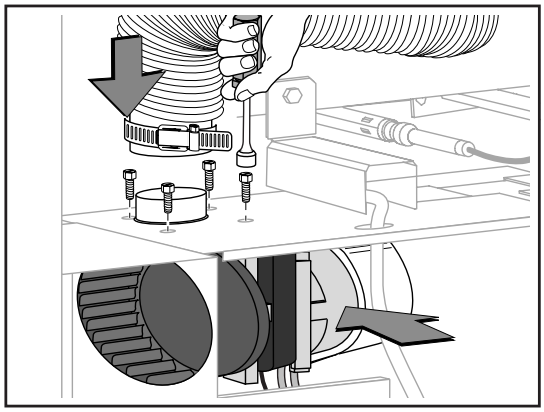
2) ENTFERNEN SIE DIE OBERE UND UNTERE BEDIENFELD-ZUGANGSPLATTE.



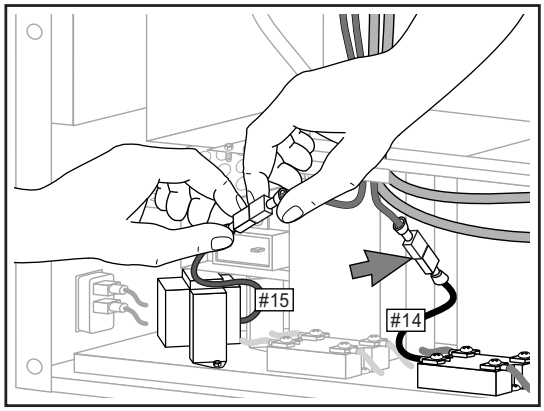
3) BAUEN SIE DEN VORHANDENEN GEBLÄSEMOTOR AUS.



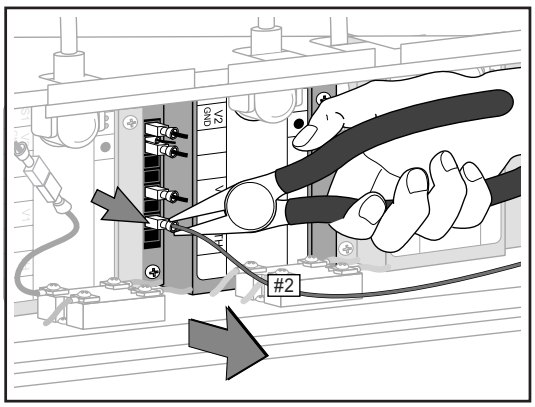
4) BAUEN SIE DEN NEUEN GEBLÄSEMOTOR EIN.



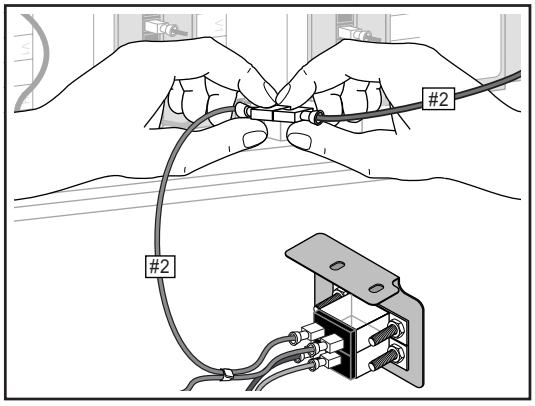
5) SCHLIESSEN SIE DIE (ROTEN) GEBLÄSEMOTOR-STROMVERSORGUNGSKABEL AN DAS (BLAUE) KABEL NR. 15 UND DAS (SCHWARZE) KABEL NR. 14 AN.



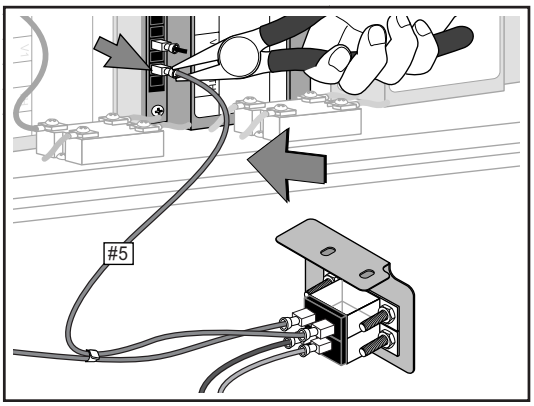
6) TRENNEN SIE DAS (ROTE) KABEL NR. 2 VON DER KLEMME „TH“ AM MITTLEREN ZÜNDMODUL.



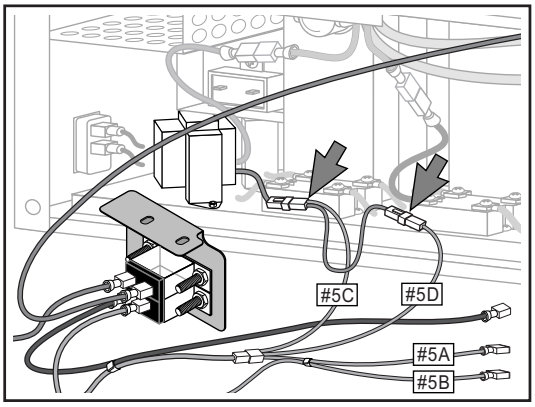
7) VERBINDEN SIE DAS (ROTE) KABEL NR. 2 MIT DEM VOM RELAIS KOMMENDEN (ROTEN) KABEL NR. 2.



8) SCHLIESSEN SIE DAS VOM RELAIS KOMMENDE (ROTE) KABEL NR. 5 AN DIE KLEMME „TH“ AM MITTLEREN ZÜNDMODUL AN.

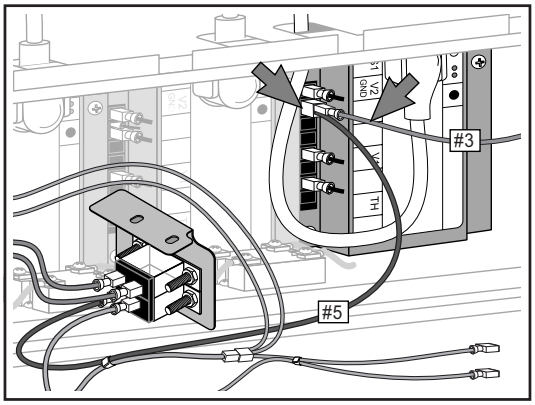


9) TRENNEN SIE DEN STECKVERBINDER J3 AM ZÜNDMODUL-TRANSFORMATOR UND SCHLIESSEN SIE AN DESSEN STELLE DIE VOM RELAIS KOMMENDEN STECKVERBINDER J3 (5C [ORANGE] UND 5D [ORANGE]) AN.

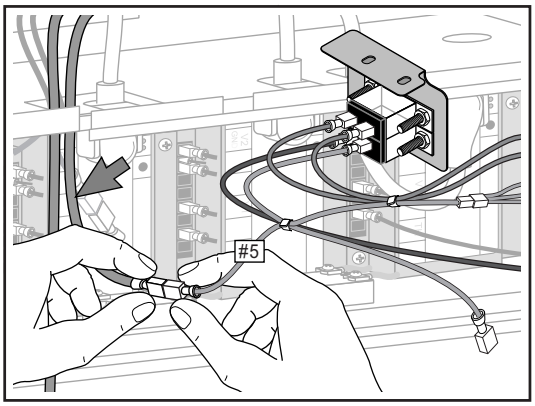


HINWEIS: DIE KLEMMEN AN DEN KABELN 5A (ORANGE) UND 5B (ORANGE) WERDEN NICHT VERWENDET.

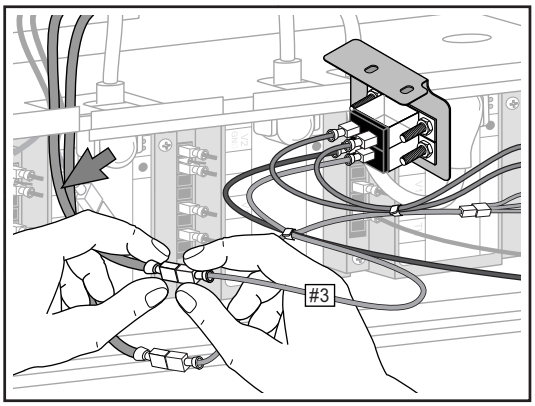
10) TRENNEN SIE DAS (GRÜNE) KABEL NR. 3 VON DER KLEMME „V2“ AM DRITTEN ZÜNDMODUL. SCHLIESSEN SIE DAS (GRÜNE) KABEL NR. 3 AN DAS (BLAUE) KABEL NR. 5 AM RELAIS AN UND VERBINDEN SIE DIESE BEIDEN KABEL WIEDER MIT DER KLEMME „V2“ AM DRITTEN ZÜNDMODUL.



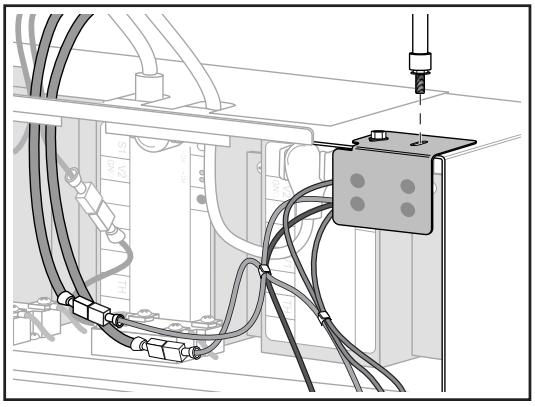
11) SCHLIESSEN SIE DAS VOM RELAIS KOMMENDE (ORANGE) KABEL NR. 5 AN EINES DER ORANGEN KABEL VOM GEBLÄSE AN.



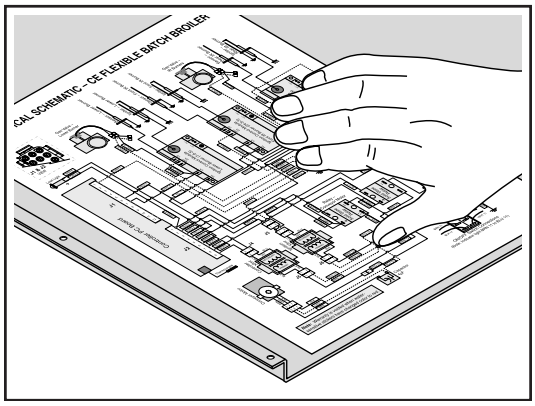
12) SCHLIESSEN SIE DAS VOM RELAIS KOMMENDE (ORANGE) KABEL NR. 3 AN DAS ANDERE ORANGE KABEL VOM GEBLÄSE AN.



13) BEFESTIGEN SIE DAS RELAIS MIT DEN BEIDEN VORHANDENEN SCHRAUBEN.



14) BRINGEN SIE DEN NEUEN SCHALTPLAN AN. (175806)



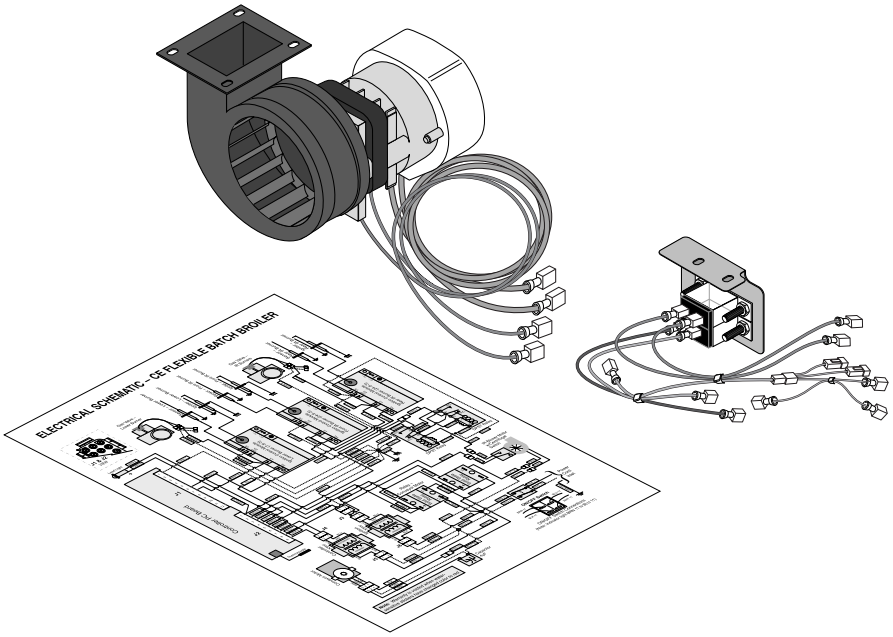
15) BAUEN SIE ALLE ZUGANGSPLATTEN WIEDER EIN.

16) SCHLIESSEN SIE DAS GRILLGERÄT AN DIE STROMVERSORGUNG AN, SCHALTEN SIE DAS GERÄT EIN UND BESTÄTIGEN SIE, DASS DIE OBEREN BRENNER ORDNUNGSGEMÄSS GEZÜNDET WERDEN.

INSTRUCCIONES DE INSTALACIÓN

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INSTRUCCIONES DEL JUEGO DE MODIFICACIÓN CE DEL MOTOR DEL INTERRUPTOR CENTRÍFUGO DEL ASADOR FLEXIBLE POR TANDAS PARA EL JUEGO DE DUKE 600251



Este juego contiene lo siguiente:

- 176188 Conjunto de relé del mazo de cables del soplador
- 600248 Juego de soplador CE
- 175806 Esquema del asador flexible por tandas CE 230V

Artículos requeridos para esta instalación:

- Destornillador de punta en cruz
- Destornillador de ranura
- Aprietatuercas de 5/16"

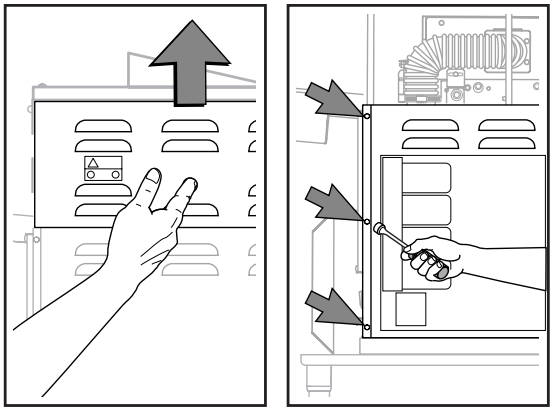
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Fax: 314-231-5074

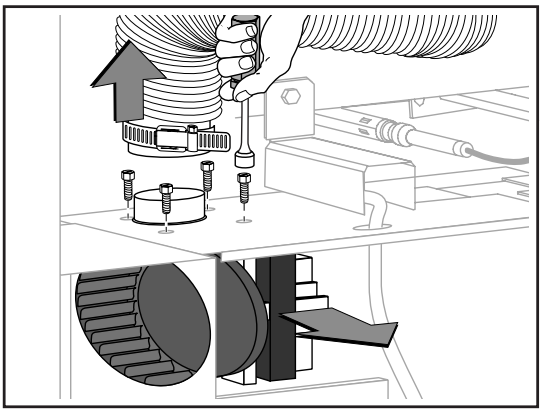
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1) DESENCHUFE EL ASADOR DE LA RED ELÉCTRICA.

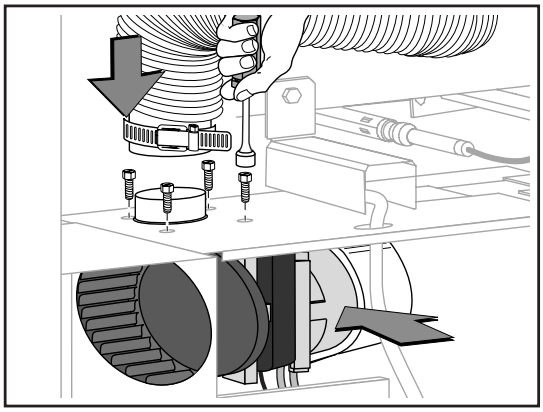


2) QUITE LOS PANELES DE ACCESO DE CONTROL SUPERIOR E INFERIOR

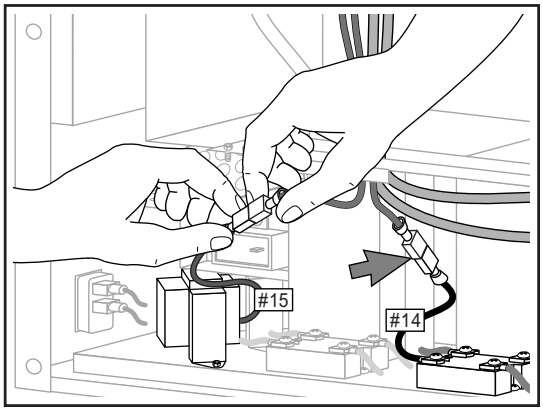
3) QUITE EL MOTOR DEL SOPLADOR EXISTENTE.



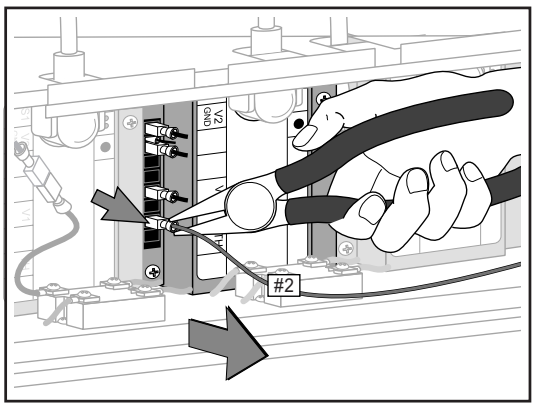
4) INSTALE EL NUEVO MOTOR DEL SOPLADOR.



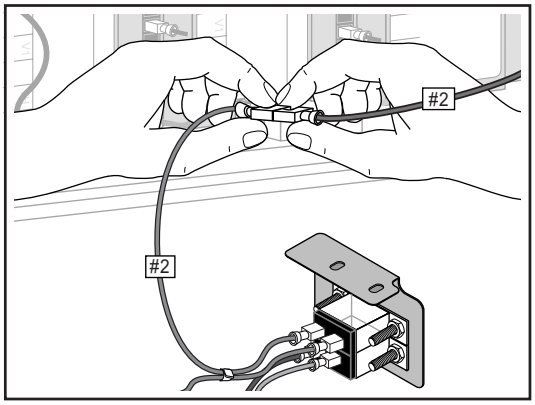
5) EFECTÚE LAS CONEXIONES DE LOS CABLES DE ALIMENTACIÓN (ROJOS) A LOS CABLES 15 (AZUL) Y 14 (NEGRO).



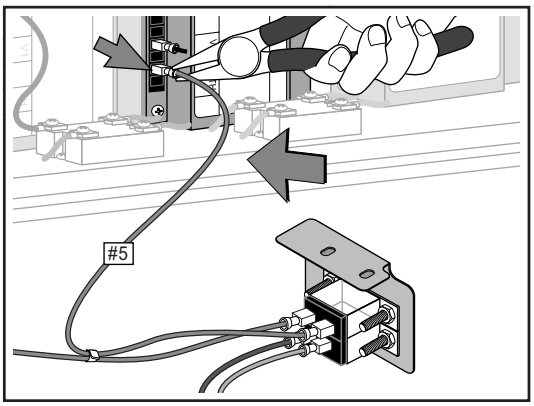
6) DESCONECTE EL CABLE 2 (ROJO) DEL TERMINAL "TH" DEL MÓDULO DE ENCENDIDO CENTRAL.



7) RECONECTE EL CABLE 2 (ROJO) AL CABLE 2 (ROJO) DEL CONJUNTO DE RELÉ.

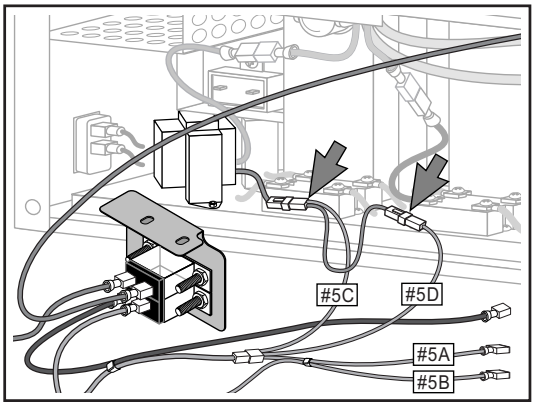


8) CONECTE EL CABLE 5 (ROJO) DEL CONJUNTO DE RELÉ AL TERMINAL "TH" DEL MÓDULO DE ENCENDIDO CENTRAL.

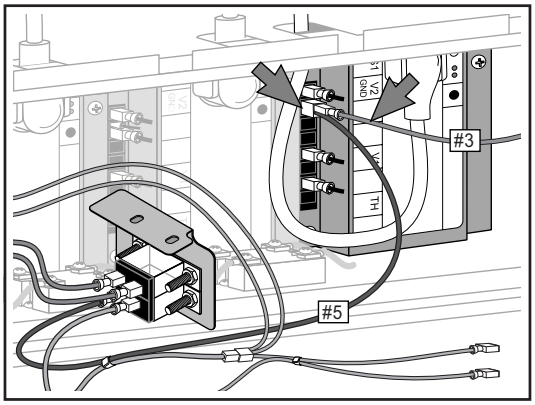


9) DESCONECTE EL CONECTOR J3 DEL TRANSFORMADOR DE ENCENDIDO Y CONECTE EN LOS CONECTORES J3 DEL CONJUNTO DE RELÉ [5C (ANARANJADO) Y 5D (ANARANJADO)].

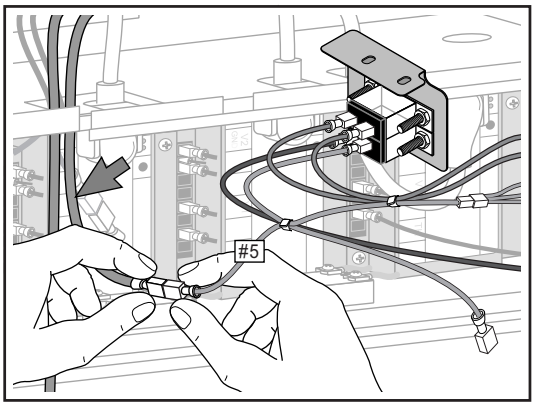
NOTA: NO SE DEBEN USAR LOS TERMINALES EN LOS CABLES 5A (ANARANJADO) Y 5B (ANARANJADO).



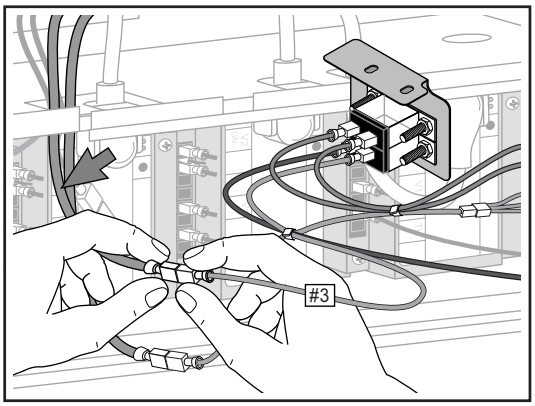
10) DESCONECTE EL CABLE 3 (VERDE) DEL TERMINAL “V2” DEL TERCER MÓDULO DE ENCENDIDO. CONECTE EL CABLE 3 (VERDE) AL CABLE 5 (AZUL) DEL CONJUNTO DE RELÉ Y RECONECTE ESTOS DOS CABLES AL TERMINAL “V2” DEL TERCER MÓDULO DE ENCENDIDO.



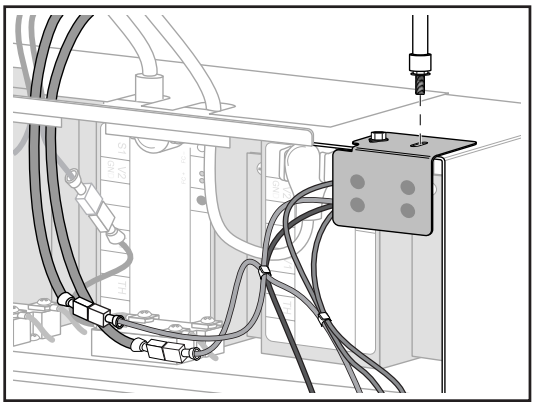
11) CONECTE EL CABLE 5 (ANARANJADO) DEL CONJUNTO DE RELÉ A UNO DE LOS CABLES ANARANJADOS DEL SOPLADOR.



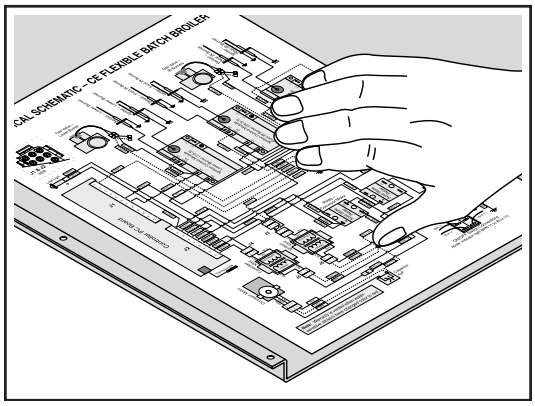
12) CONECTE EL CABLE 3 (ANARANJADO) DEL CONJUNTO DE RELÉ AL OTRO CABLE ANARANJADO DEL SOPLADOR.



13) INSTALE EL CONJUNTO DE RELÉ CON LOS 2 TORNILLOS EXISTENTES.



14) APLIQUE EL NUEVO ESQUEMA. (175806)



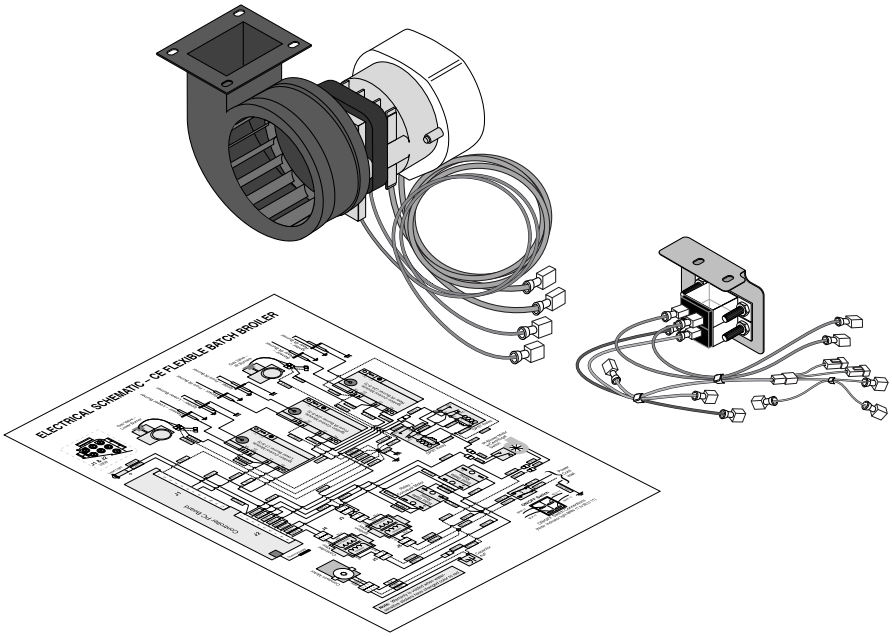
15) VUELVA A INSTALAR TODOS LOS PANELES.

16) ENCHUFE, ENCIENDA LA UNIDAD Y CONFIRME QUE LOS QUEMADORES SUPERIORES SE ENCIENDAN DEBIDAMENTE.

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INSTRUÇÕES DE INSTALAÇÃO

INSTRUÇÕES DO KIT DE MODERNIZAÇÃO (COMUNIDADE EUROPEIA) DO MOTOR COM CHAVE CENTRÍFUGA DA GRELHA MULTIPRODUTO DO KIT Nº 600251 DA DUKE



Este kit contém:

- Unidade 176188, chicote do relé, soprador
- Kit 600248, soprador (Comunidade Europeia)
- Diagrama 175806, grelha multiproduto, (Comunidade Europeia) 230 V

Itens necessários para esta instalação:

- Chave com ponta em cruz
- Chave de fenda
- Chave tipo canhão de 5/16"

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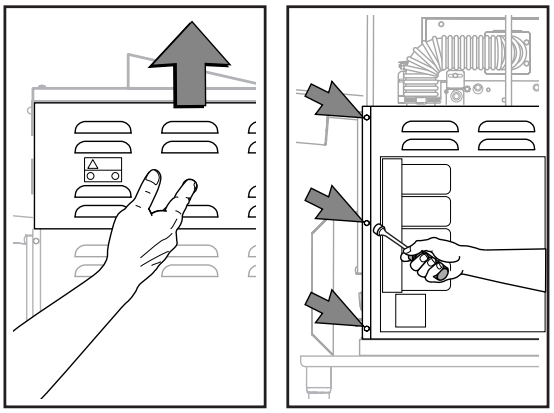
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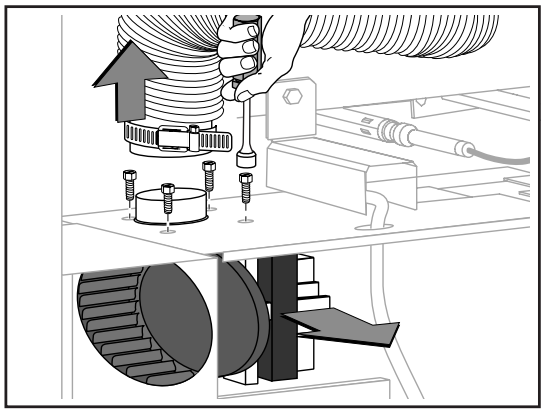
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1) DESLIGUE A GRELHA DA TOMADA ELÉTRICA.

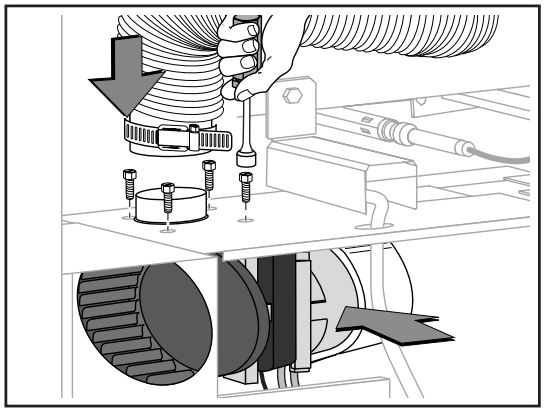
2) RETIRE O PAINEL SUPERIOR E INFERIOR DE ACESSO AO CONTROLE .



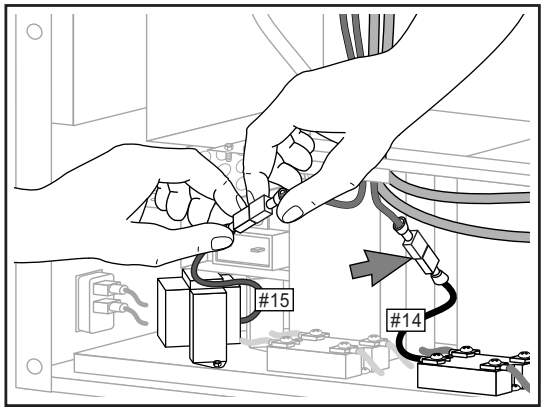
3) RETIRE O MOTOR DO SOPRADOR EXISTENTE.



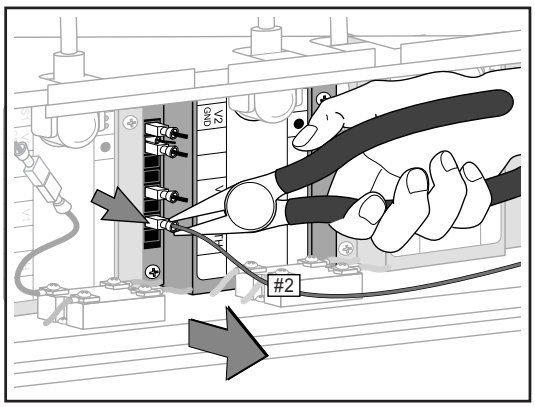
4) COLOQUE O NOVO MOTOR DO SOPRADOR.



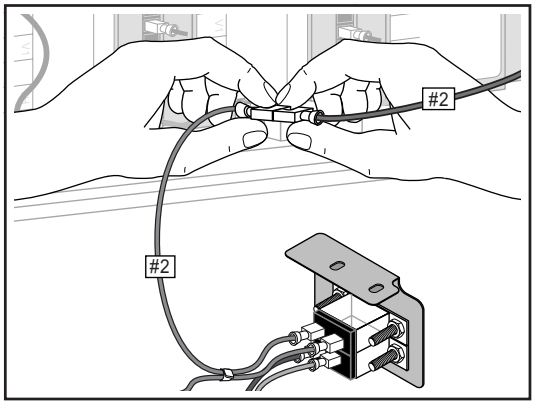
5) FAÇA AS CONEXÕES DE ALIMENTAÇÃO DOS FIOS (VERMELHO) DO SOPRADOR AO FIO 15 (AZUL) E 14 (PRETO).



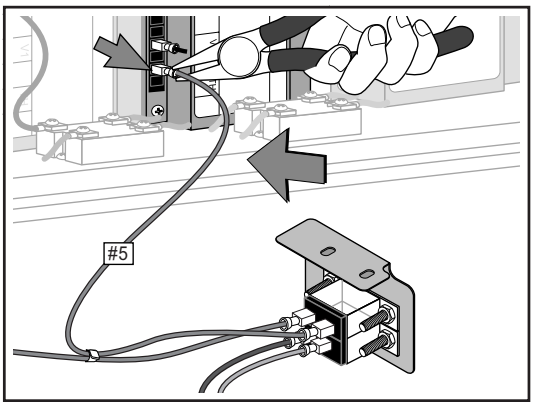
6) DESLIGUE O FIO 2 (VERMELHO) DO TERMINAL "TH" DO MÓDULO DE IGNIÇÃO CENTRAL.



7) RELIGUE O FIO 2 (VERMELHO) AO FIO 2 (VERMELHO) DA UNIDADE RELÉ.

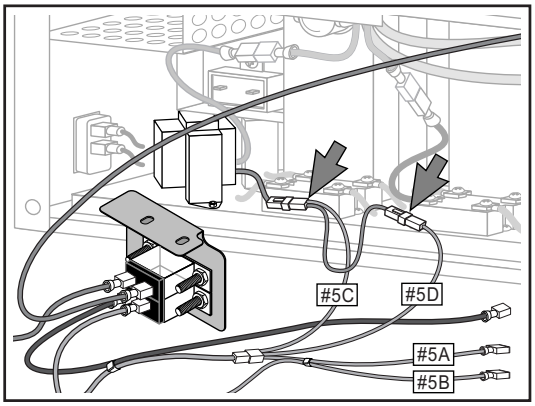


8) LIGUE O FIO 5 (VERMELHO) DA UNIDADE RELÉ AO TERMINAL "TH" DO MÓDULO DE IGNIÇÃO CENTRAL.

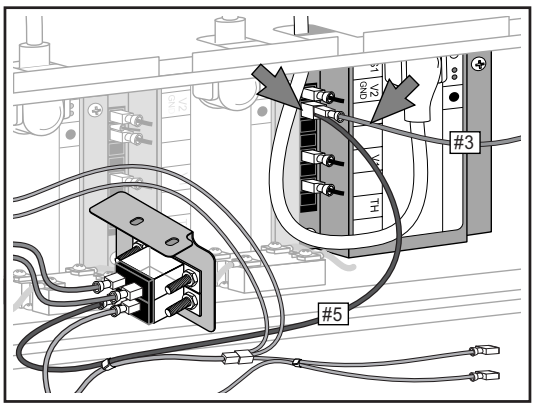


9) DESLIGUE O CONECTOR J3 DO TRANSFORMADOR DE IGNIÇÃO E LIGUE OS CONECTORES J3 DA UNIDADE RELÉ [5C (LARANJA) E 5D (LARANJA)].

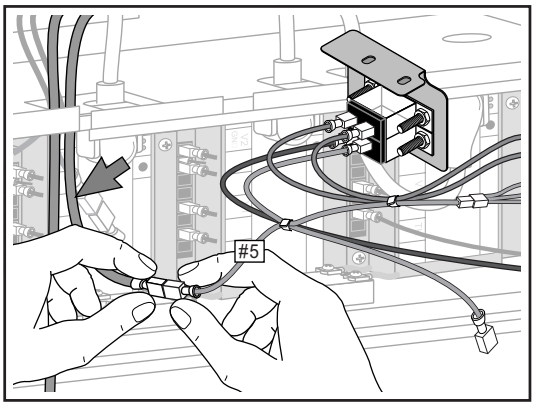
OBSERVAÇÃO: OS TERMINAIS DOS FIOS 5A (LARANJA) E 5B (LARANJA) NÃO SÃO USADOS.



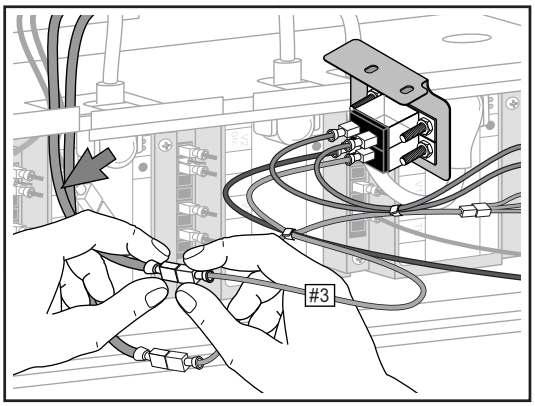
10) DESLIGUE O FIO 3 (VERDE) DO TERMINAL “V2” DO TERCEIRO MÓDULO DE IGNIÇÃO. LIGUE O FIO 3 (VERDE) AO FIO 5 (AZUL) DA UNIDADE RELÉ E RELIGUE AMBOS OS FIOS DE VOLTA NO TERMINAL “V2” DO TERCEIRO MÓDULO DE IGNIÇÃO.



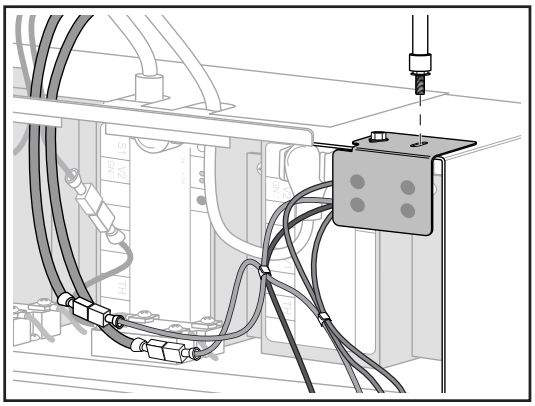
11) LIGUE O FIO 5 (LARANJA) DA UNIDADE RELÉ A UM DOS FIOS LARANJA DO SOPRADOR.



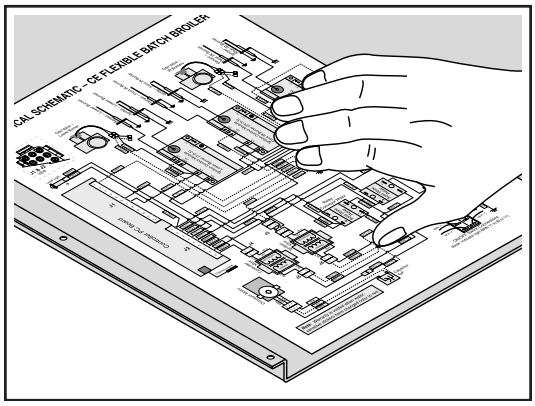
12) LIGUE O FIO 3 (LARANJA) DA UNIDADE RELÉ AO OUTRO FIO LARANJA DO SOPRADOR.



13) COLOQUE A UNIDADE RELÉ USANDO OS DOIS PARAFUSOS EXISTENTES.



14) USE O NOVO DIAGRAMA. (175806)



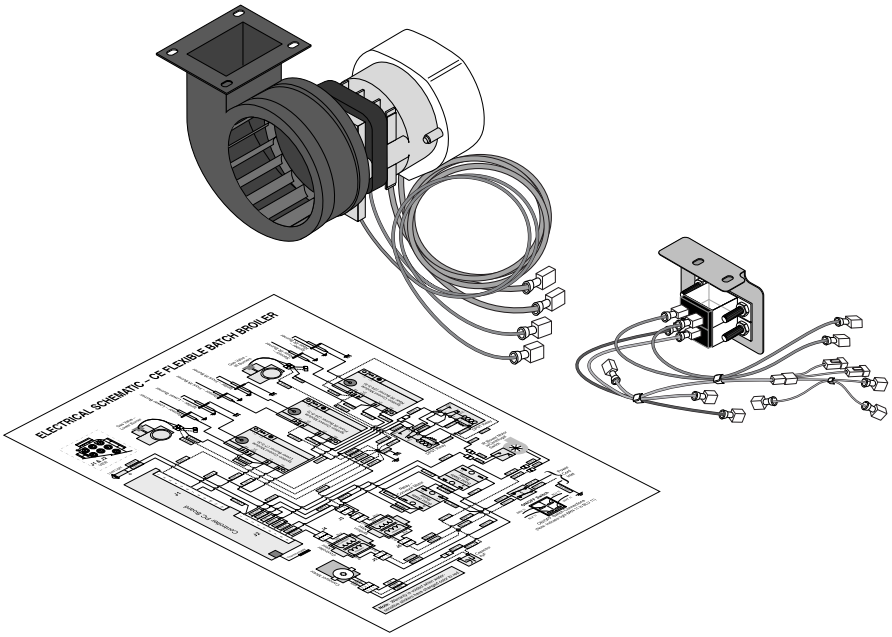
15) RECOLOQUE TODOS OS PAINÉIS.

16) LIGUE NA TOMADA, LIGUE A UNIDADE E VEJA SE OS QUEIMADORES SUPERIORES SE ACENDEM CORRETAMENTE.

Your Solutions Partner

INSTALLATIE-INSTRUCTIES

INSTRUCTIES VOOR CE-RETROFITSET VOOR CENTRIFUGALE SCHAKELMOTOR VOOR BRAADROOSTER VOOR FLEXIBELE PORTIES VOOR DUKE SETNR. 600251



Deze set bevat:
- 176188 draadboomrelais & ventilator
- 600248 set, CE-ventilator
- 175806 schema, BVFP, CE 230V

Gereedschap vereist voor deze installatie:
- Kruiskopschroevendraaier
- Rechte schroevendraaier
- 5/16" moersleutel

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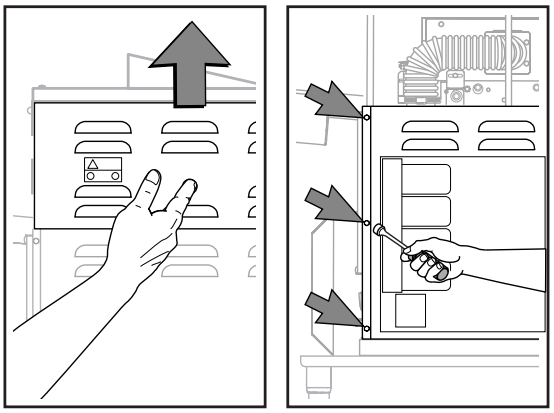
Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102
Tel.: 314-231-1130
Gratis tel.nr.: 1-800-735-3853 (in de VS)
Fax: 314-231-5074

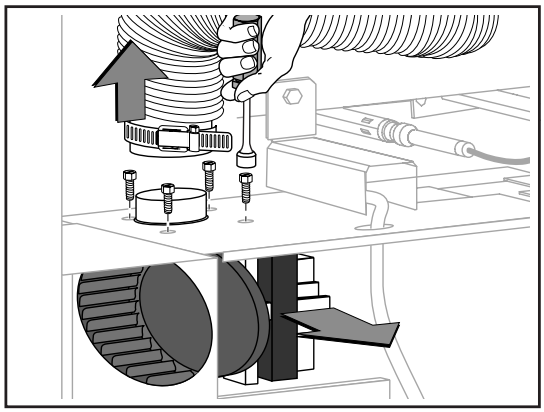
www.dukemfg.com

1) TREK DE STEKKER VAN HET BRAADROOSTER UIT HET STOPCONTACT.

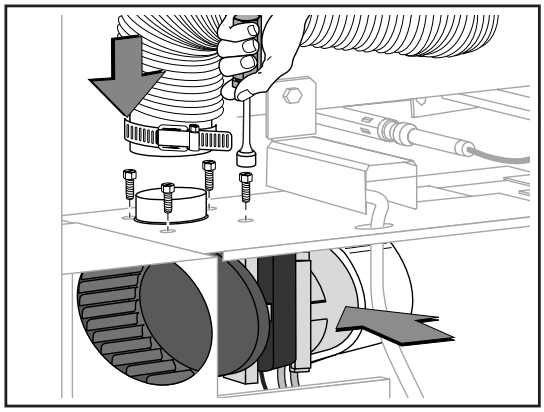
2) VERWIJDER DE ONDERSTE EN BOVENSTE AFDEKPLATEN VAN HET BEDIENINGSPANEEL.



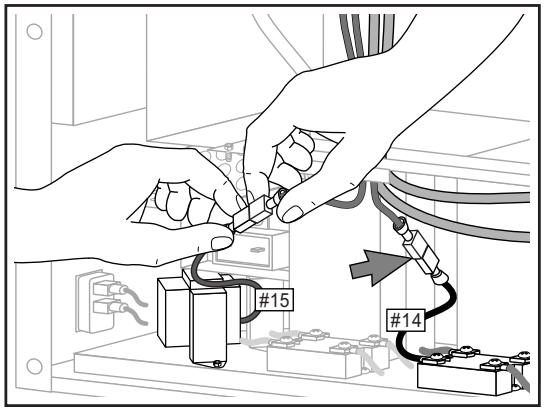
3) VERWIJDER DE BESTAANDE VENTILATORMOTOR.



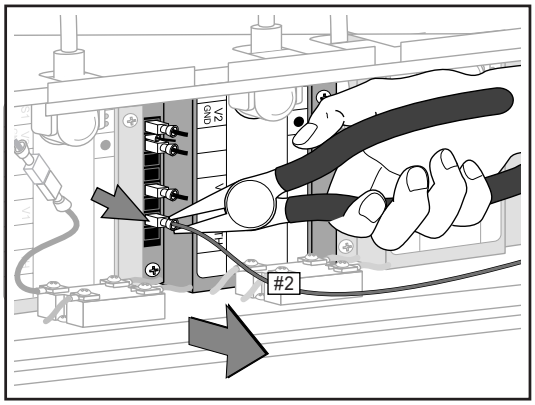
4) INSTALLEER DE NIEUWE VENTILATORMOTOR.



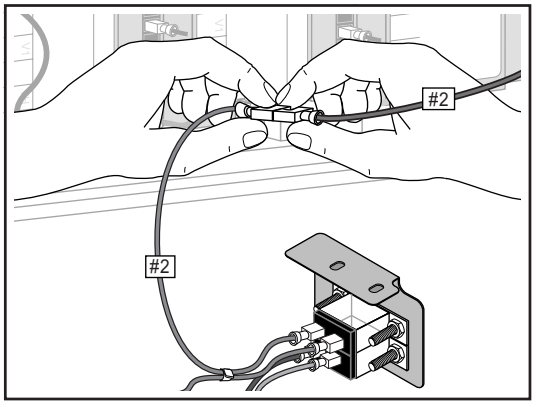
5) SLUIT DE VENTILATORVOEDINGSDRADEN (ROOD) AAN OP DRAADNR. 15 (BLAUW) EN NR. 14 (ZWART).



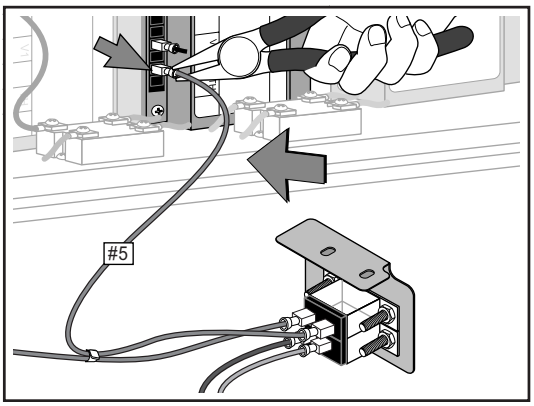
6) VERWIJDER DRAADNR. 2 (ROOD) VAN DE “TH”-KLEM OP DE MIDDELSTE ONTSTEKINGSMODULE.



7) SLUIT DRAADNR. 2 (ROOD) WEER AAN OP DRAADNR. 2 (ROOD) VAN HET RELAIS.

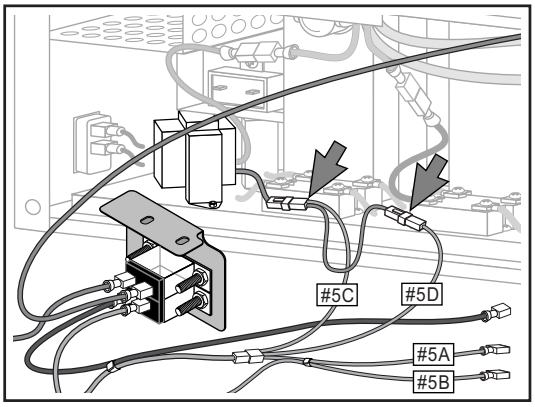


8) SLUIT DRAADNR. 5 (ROOD) VAN HET RELAIS AAN OP DE “TH”-KLEM VAN DE MIDDELSTE ONTSTEKINGSMODULE.

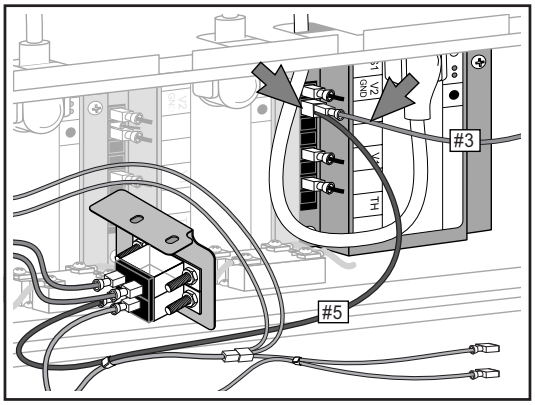


9) VERWIJDER DE J3-CONNECTOR VAN DE ONTSTEKINGSTRANSFORMATOR EN SLUIT DEZE AAN OP DE J3- CONNECTORS VAN HET RELAIS [NR. 5C (ORANJE) EN NR. 5D (ORANJE)].

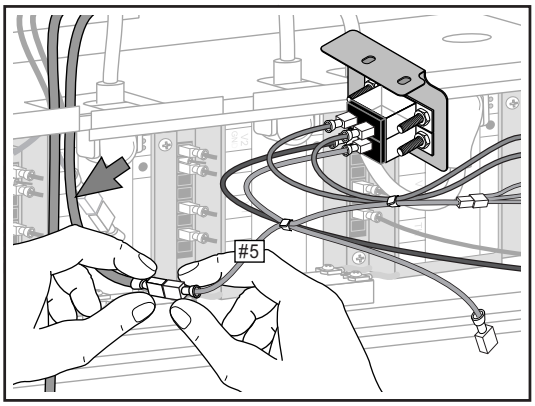
OPM.: DE KLEMMEN OP DRAAD 5A (ORANJE) EN 5B (ORANJE) WORDEN NIET GEBRUIKT.



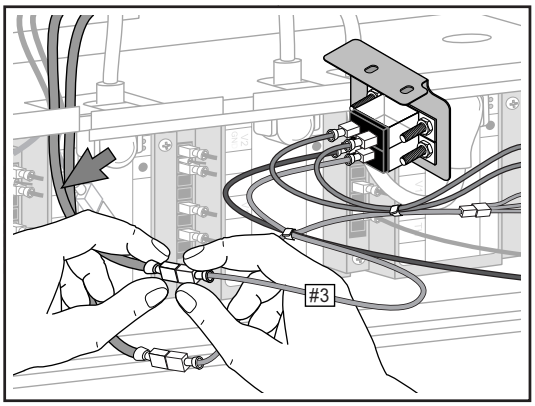
10) VERWIJDER DRAADNR. 3 (GROEN) VAN DE "V2"-KLEM VAN DE DERDE ONTSTEKINGSMODULE. SLUIT DRAADNR. 3 (GROEN) AAN OP DRAADNR. 5 (BLAUW) OP HET RELAIS EN SLUIT DEZE TWEE DRADEN WEER AAN OP DE "V2"-KLEM VAN DE DERDE ONTSTEKINGSMODULE.



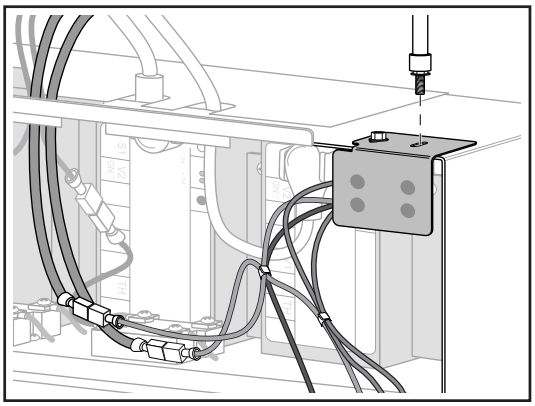
11) SLUIT DRAADNR. 5 (ORANJE) VAN HET RELAIS AAN OP EEN VAN DE ORANJE DRADEN VAN DE VENTILATOR.



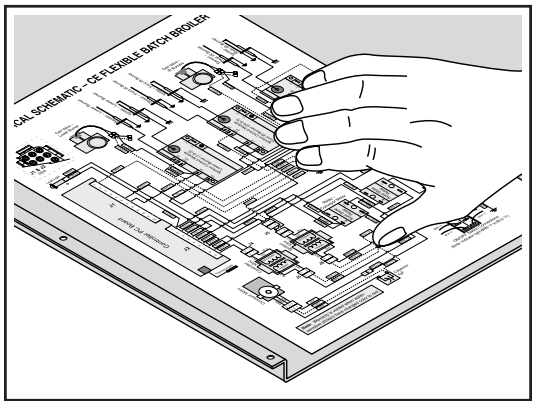
12) SLUIT DRAADNR.3 (ORANJE) VAN HET RELAIS AAN OP DE ANDERE ORANJE DRAAD VAN DE VENTILATOR.



13) INSTALLEER HET RELAIS MET BEHULP VAN DE 2 BESTAANDE SCHROEVEN.



14) GEBRUIK HET NIEUWE SCHEMA. (175806)



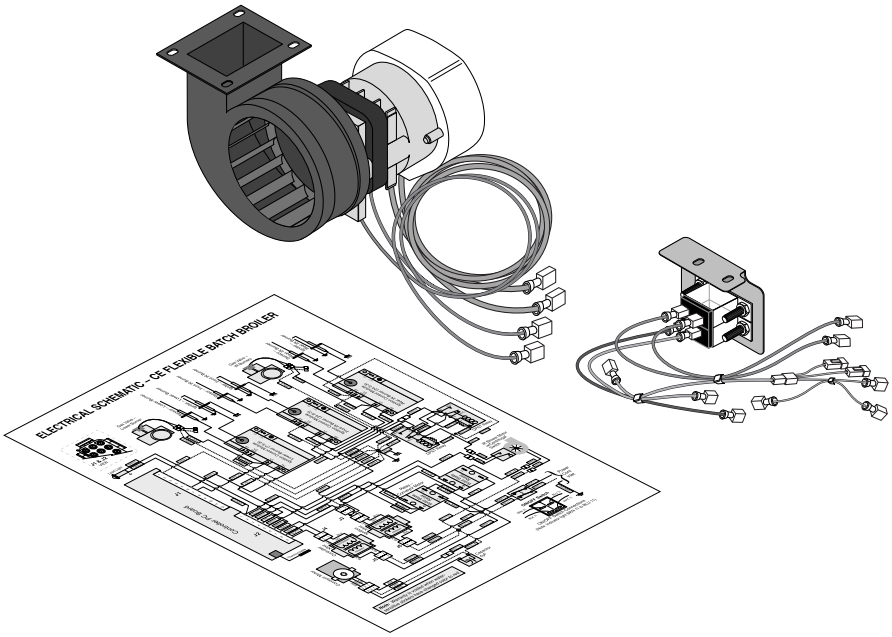
15) MONTEER ALLE PANELEN WEER.

16) STEEK DE STEKKER IN HET STOPCONTACT, SCHAKEL HET APPARAAT IN EN CONTROLEER OF DE BOVENSTE BRANDERS GOED KUNNEN WORDEN AANGESTOKEN.

MONTERINGSANVISNINGER

Your Solutions Partner

FLEXIBLE BATCH BROILER CENTRIFUGALAFBRYDERMOTOR CE BRUGSANVISNING TIL EFTERMONSTERINGSKIT TIL DUKE KIT #600251



Dette kit indeholder:

- 176188 samling, ophængningsrelæ, blæser
- 600248 Kit, CE blæser
- 175806 principskitse, FBB, CE 230 V

Nødvendigt værktøj til montering:

- Stjerneskruetrækker
- Lige skruetrækker
- 5/16 tommers (5/16") topnøgle

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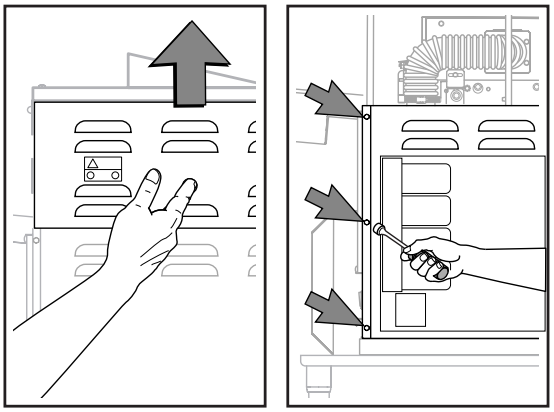
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St. Louis, MO 63102, USA
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Frikaldsnummer i USA: 1-800-735-3853
Fax: 314-231-5074

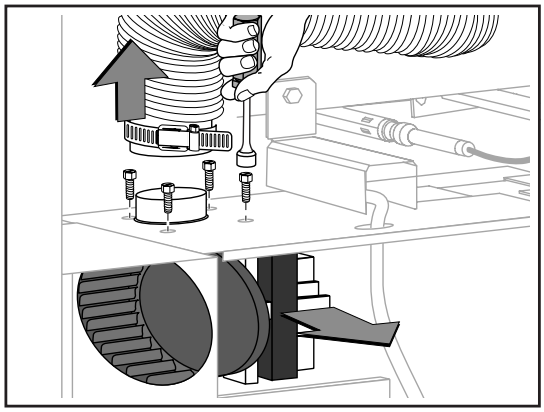
www.dukemfg.com

1) TRÆK GRILLAPPARATETS LEDNING UD AF EL-KONTAKTEN.

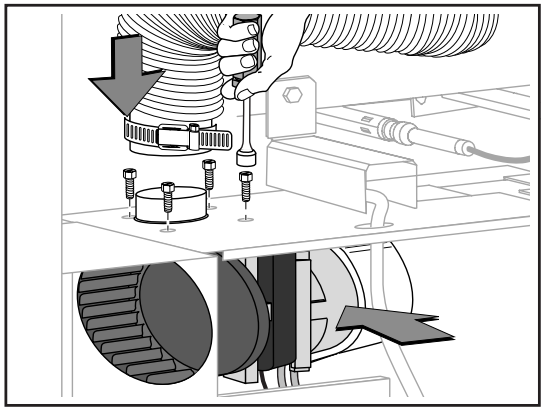
2) FJERN DE ØVERSTE OG NEDERSTE ADGANGSPANELER TIL BETJENINGSTASTERNE.



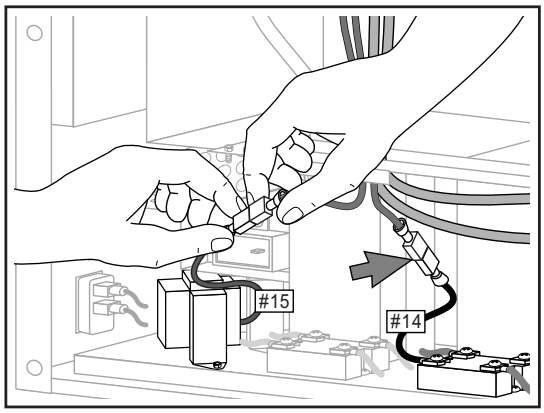
3) FJERN DEN NUVÆRENDE BLÆSERMOTOR.



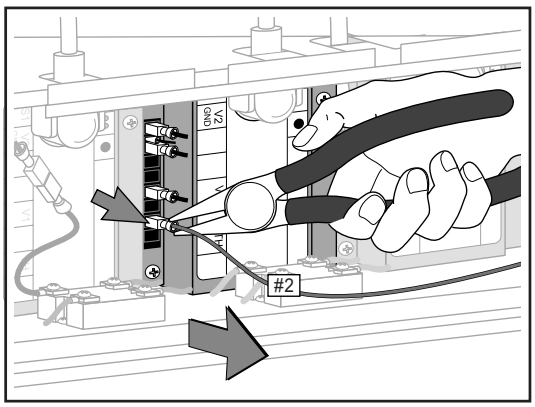
4) MONTER DEN NYE BLÆSERMOTOR.



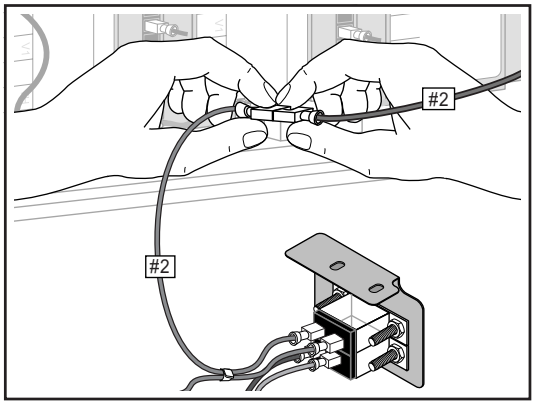
5) TILSLUT BLÆSERFORSYNINGSLEDNINGERNE (RØDE) TIL LEDNING NR. 15 (BLÅ) OG NR. 14 (SORT).



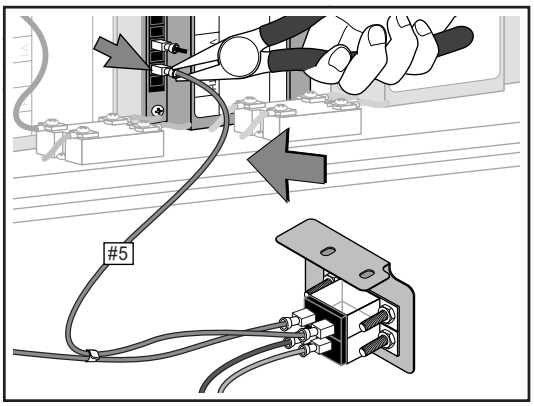
6) AFBRYD LEDNING NR. 2 (RØD) FRA "TH" POLKLEMMEN PÅ MIDTERSTE ANTÆNDINGSMODUL



7) TILSLUT LEDNING NR. 2 (RØD) IGEN TIL LEDNING NR. 2 (RØD) FRA RELÆSAMLINGEN.

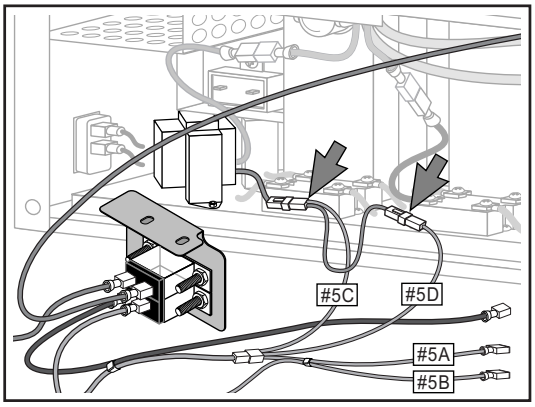


8) TILSLUT LEDNING NR. 5 (RØD) FRA RELÆSAMLINGEN TIL "TH" POLKLEMMEN PÅ MIDTERSTE ANTÆNDINGSMODUL.

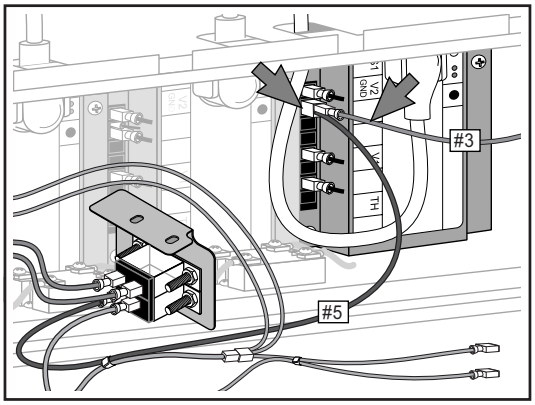


9) AFBRYD J3 MUFFEN PÅ ANTÆNDINGSTRANSFORMEREN OG TILSLUT DEN TIL J3 MUFFERNE FRA RELÆSAMLINGEN [NR. 5C (ORANGE) OG NR. 5D (ORANGE)].

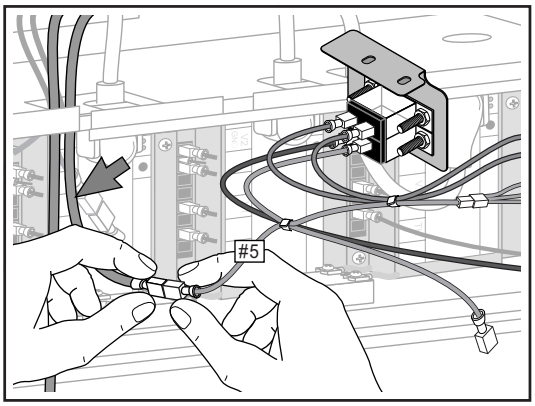
BEMÆRK: POLKLEMMER PÅ LEDNINGERNE 5A (ORANGE) OG 5B (ORANGE) ER IKKE I BRUG.



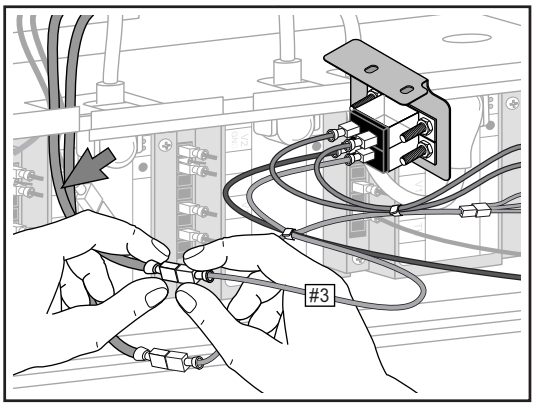
10) AFBRYD LEDNING NR. 3 (GRØN) FRA “V2” POLKLEMMEN PÅ DET TREDJE ANTÆNDINGSMODUL. TILSLUT LEDNING NR. 3 (GRØN) TIL LEDNING NR. 5 (BLÅ) PÅ RELÆSAMLINGEN, OG TILSLUT BEGGE DISSE LEDNINGER IGEN TIL “V2” POLKLEMMEN PÅ TREDJE ANTÆNDELSESMODUL.



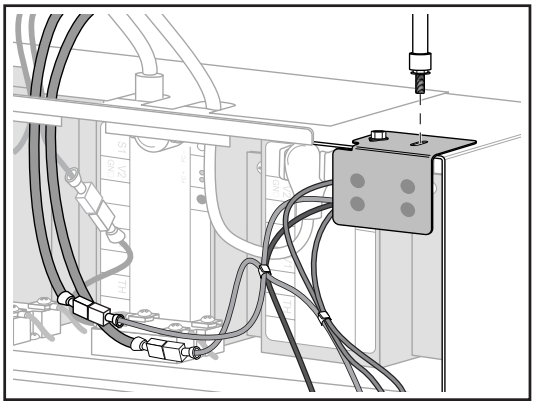
11) TILSLUT LEDNING NR. 5 (ORANGE) FRA RELÆSAMLINGEN TIL EN AF DE ORANGE LEDNINGER FRA BLÆSEREN.



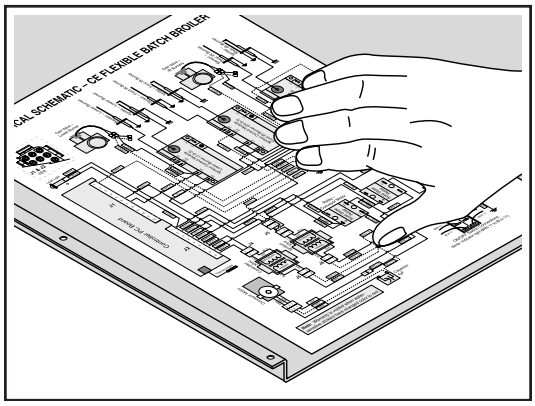
12) TILSLUT LEDNING NR. 3 (ORANGE) FRA RELÆSAMLINGEN TIL DEN ANDEN ORANGE LEDNING FRA BLÆSEREN.



13) MONTER RELÆSAMLINGEN VED HJÆLP AF DE TO EKSISTERENDE SKRUER.



14) ANVEND DEN NYE PRINCIPSKITSE. (175806)



15) GENMONTER ALLE PANELER.

16) TILSLUT ENHEDEN, TÆND FOR DEN OG BEKRÆFT, AT DE ØVERSTE BRÆNDERE TÆNDES KORREKT.

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER:	**SERIAL NUMBER:**
DATE OF PURCHASE:	
DEALER:	**TELEPHONE:**
SERVICER:	**TELEPHONE:**

FOR WARRANTY, PARTS & SERVICE:

DUKE CORPORATE, CANADA, LATIN AMERICA

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Toll Free: 800-735-3853
Fax: 314-231-2460
service-dispatch@dukemfg.com

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TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

Your Solutions Partner

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Prague 251 01
Czech Republic
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Fax: +44 (0) 1395 234154

Duke Asia Pacific
Duke Manufacturing
No.3 Building
Lane 28, Yu Lv Road
Malu Town, Jiading District
Shanghai 201801, China
Phone: +86 21 59153525 / 59153526
Fax: +86 21 33600628

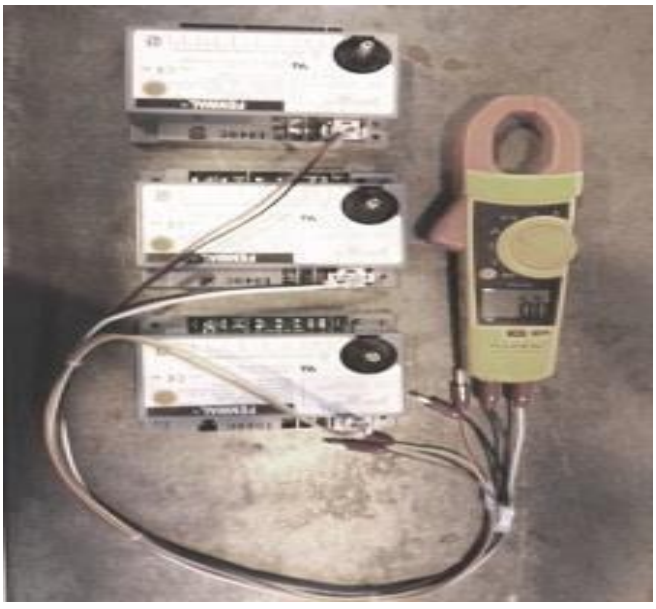
Instructions for Burger King CE Flame Sensor Test Harness Part #176343

The test harness provides a quick and simple method for testing the flame sensor micro-amp readings through the Fenwal Ignition Modules.

The test harness allows the technician to use the plugs provided on the Fenwal Ignition Module and plug directly into a multi-meter. The jacks provided will allow the harness to be plugged into numerous brands of multi-meters.

Both ends of the harness are labeled to provide quick conversions from each of the three flame sensors. Simply plug one end of the harness into the marked terminals on the Fenwal Ignition Module and rotate the opposite ends of the appropriate jacks into the multi-meter making sure the multi-meter is set to read dc micro-amps. The minimum reading must be .7 micro-amps for the system to be satisfied.

Meter should be capable of measuring a dc micro amp



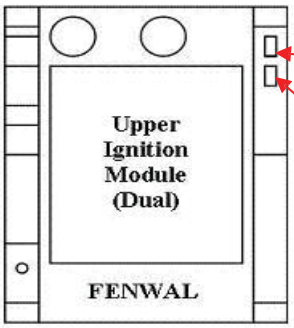
With the test harness plugged into the Fenwal Ignition Modules the technician now simply plugs into the multi-meter the appropriate jacks from the harness which are also marked similar to the opposite end that have been plugged into the modules. Measurement should be taken as a dc micro amp reading.

Instructions for Burger King
Flame Sensor Test Harness
Part #175479

The test harness provides a quick and simple method for testing the flame sensor micro-amp readings through the Fenwal Ignition Modules.

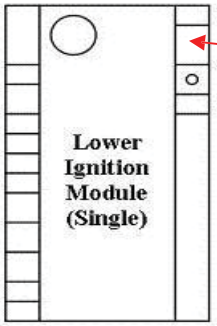
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Both ends of the harness are labeled to provide quick conversions from each of the three flame sensors. Simply plug one end of the harness into the marked terminals on the Fenwal Ignition Module and rotate the opposite ends of the appropriate jacks into the multi-meter making sure the multi-meter is set to read micro-amps. The minimum reading must be .7 micro-amps for the system to be satisfied.



Plug in the end of the test harness marked "FRONT FC1" into the upper ignition module onto the terminal marked "FC1+ FC1-"

Plug in the end of the test harness marked "REAR FC2" into the upper ignition module onto the terminal marked "FC2+ FC2-"



Plug in the end of the test harness marked "LOWER" into the lower ignition module onto the terminal marked "FC– FC+"

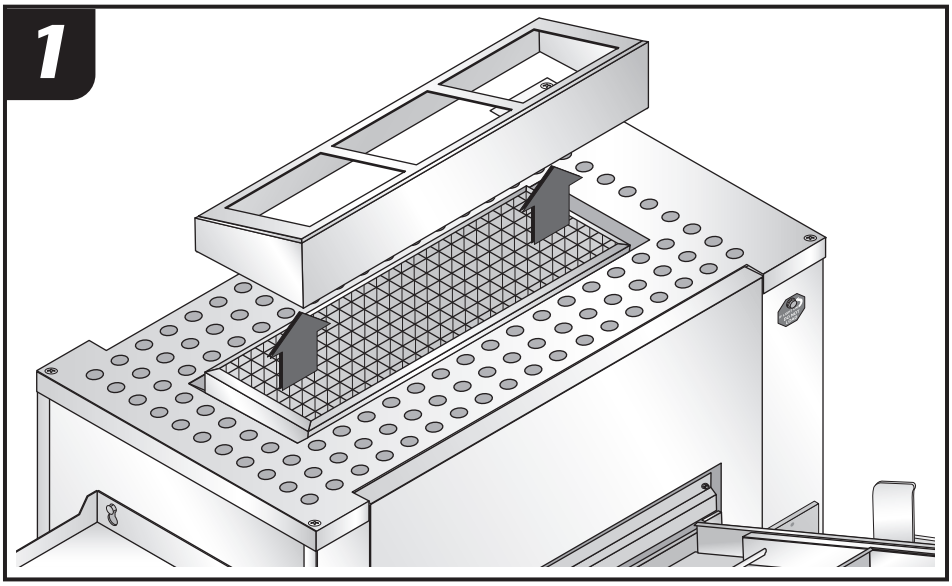


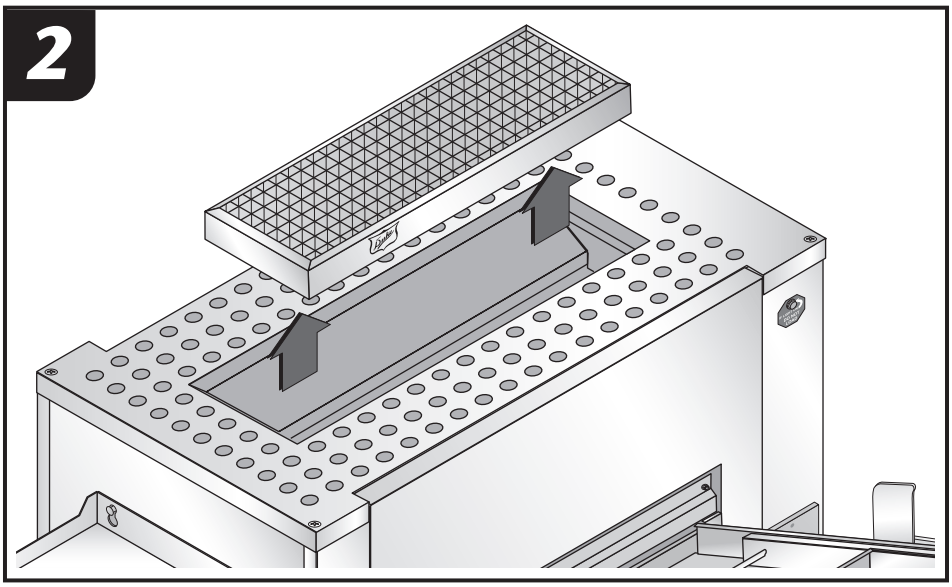
With the test harness plugged into the Fenwal Ignition Modules the technician now simply plugs into the multi-meter the appropriate jacks from the harness which are also marked similar to the opposite end that have been plugged into the modules.
"REAR" "FRONT FC1" & "REAR FC2"

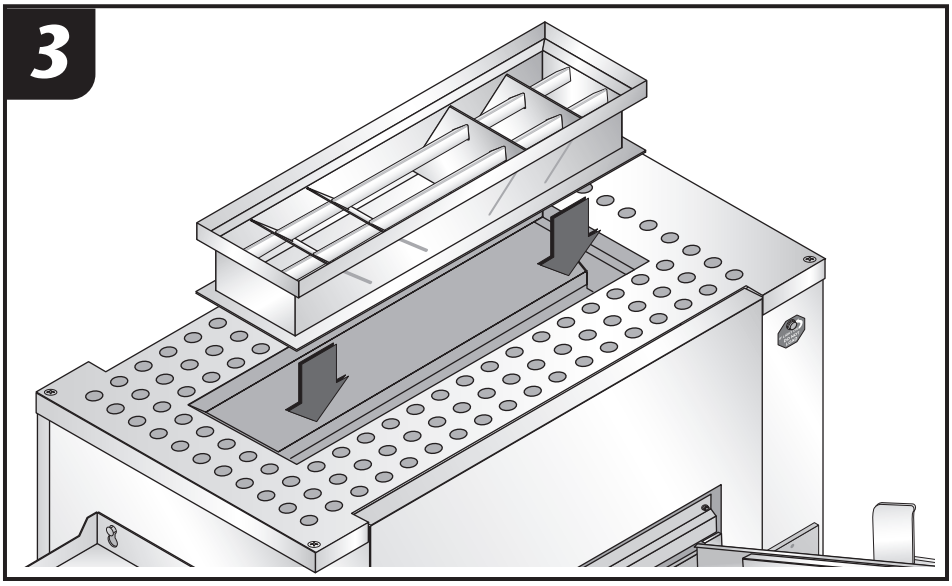
176570A

Flexible Batch Broiler

Catalyst Riser Installation Instructions







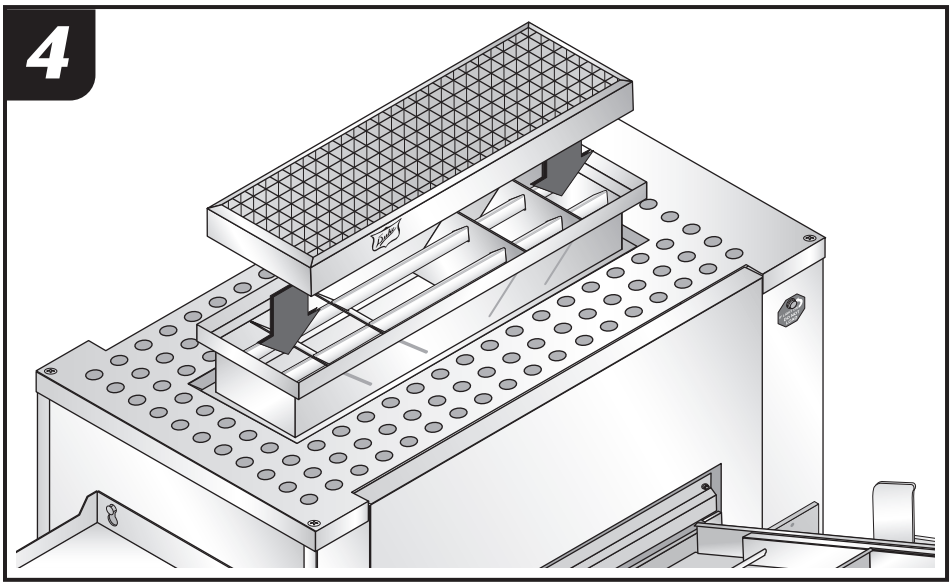
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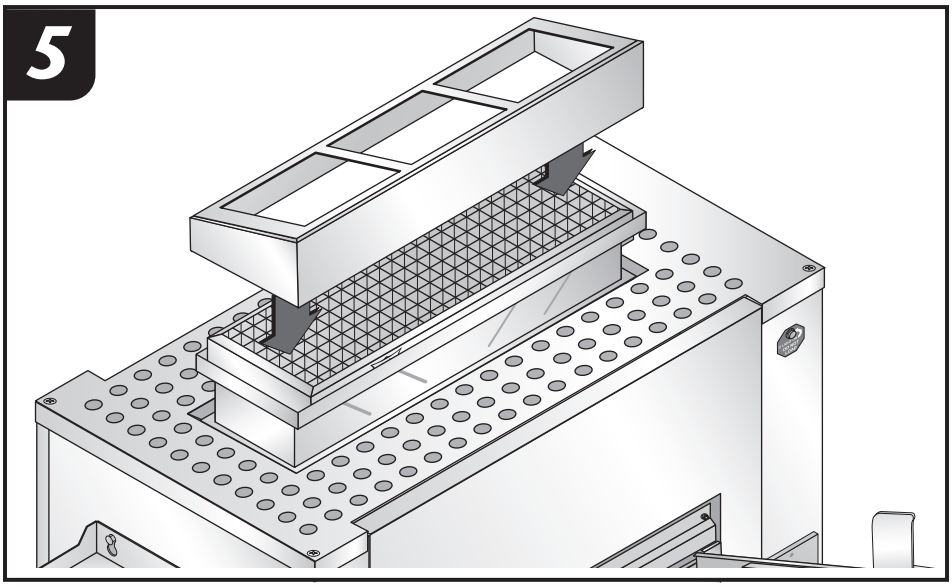
Duke Manufacturing Co.

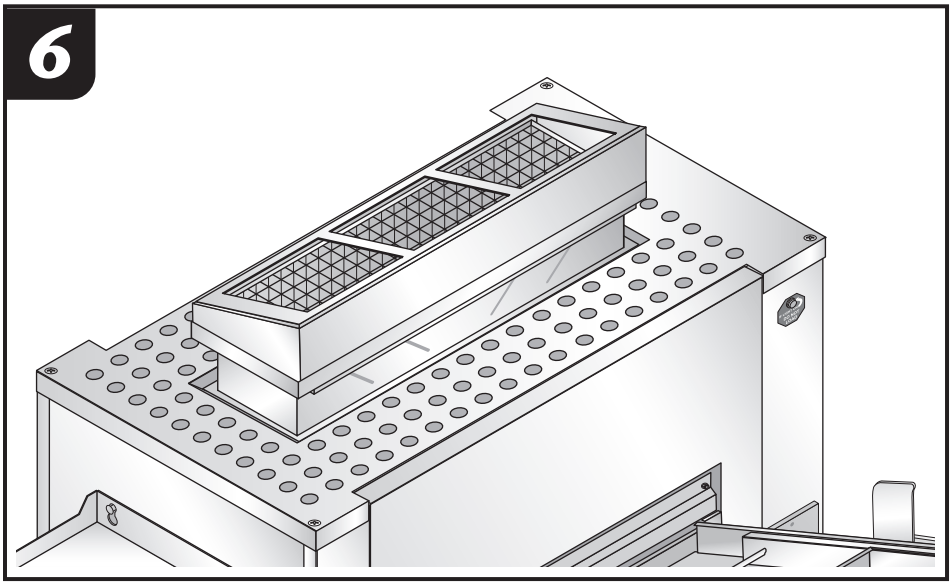
2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074

www.dukemfg.com

P/N 176330B







TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER _____

TELEPHONE _____

SERVICER _____

TELEPHONE _____

Duke Corporate, Canada, Latin America
2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 800-735-3853
Fax: 314-231-5074
www.dukemfg.com

Duke EMEA - Europe, Middle East, Africa, Russia
Duke Manufacturing CR, s.r.o.
Zdebradska 92
Jazlovice, Ricany
Building number DC 4 on the ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 257 741 033
Fax: +420 257 741 039

Duke EMEA – UK, Ireland, Nordic Countries
Duke Manufacturing UK Ltd.
Unit 10, Greendale Business Park
Woodbury Salterton
Exeter, EX5 1EW
Phone: +44 (0) 1395 234140
Fax: +44 (0) 1395 234154

Duke Asia Pacific
Duke Manufacturing
No.3 Building
Lane 28, Yu Lv Road
Malu Town, Jiading District
Shanghai 201801, China
Phone: +86 21 59153525 / 59153526
Fax: +86 21 33600628

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Electric Flexible Batch Broiler Power Cord Replacement

Duke Kit # 177014



This kit contains:

- 177013 CE Power Cord Assy

Items required for this installation:

- Flat Head Screwdriver
- Cross Tip Screwdriver
- 12" Adjustable Pliers
- 1/2" Wrench

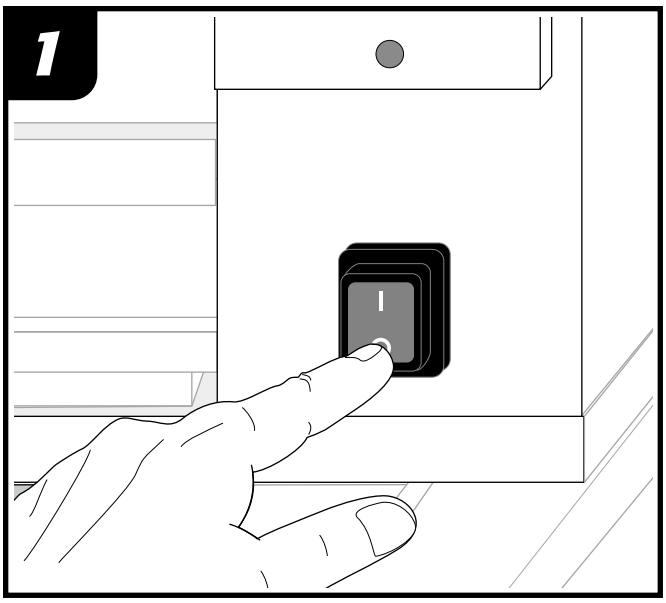
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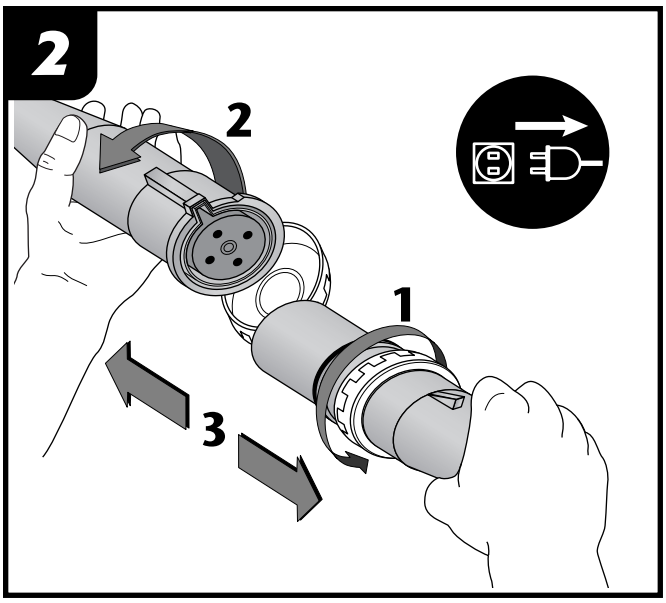
Duke Manufacturing Co.

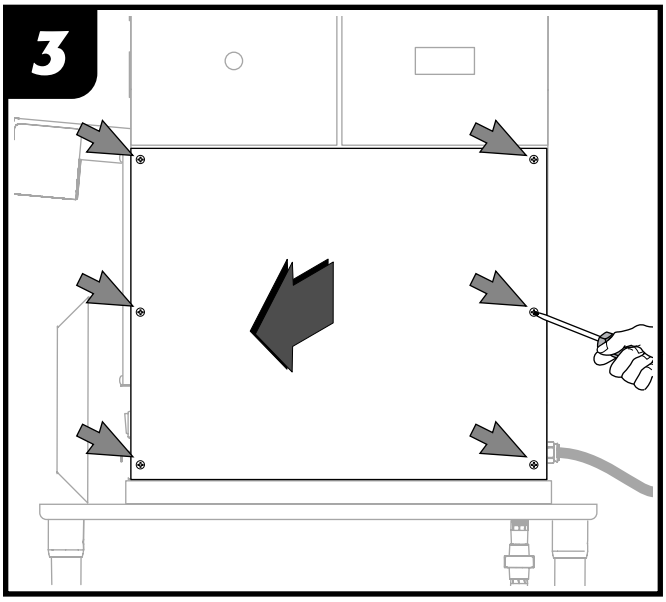
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Toll Free: 1-800-735-3853
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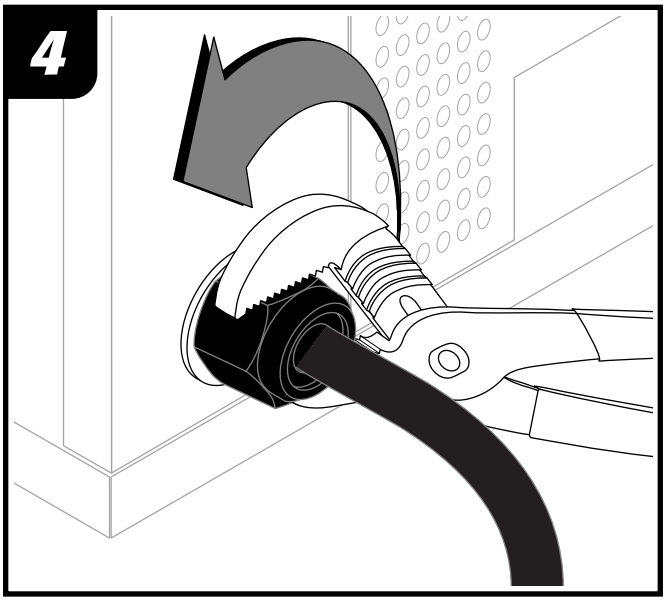
www.dukemfg.com

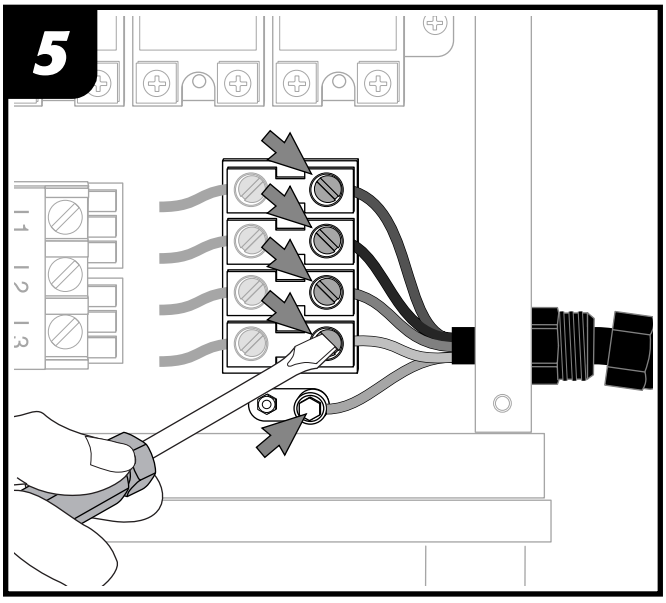
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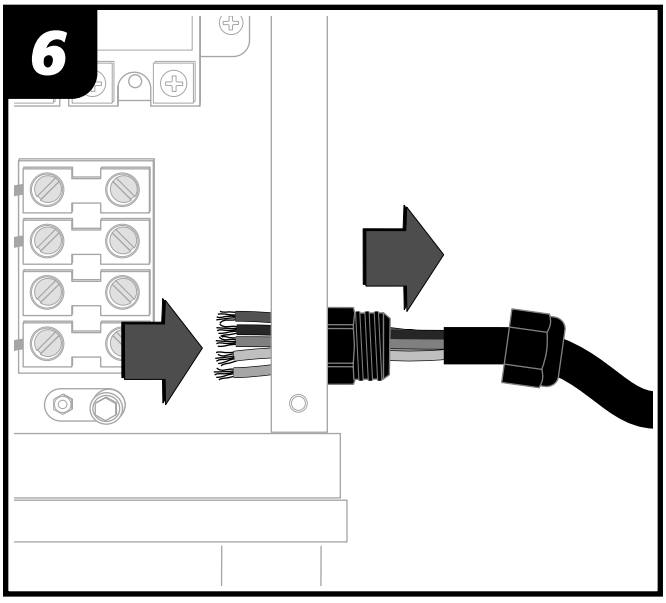

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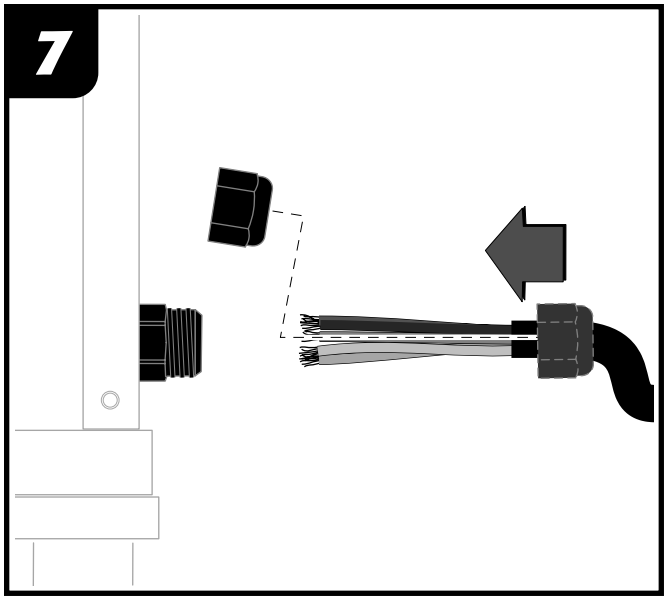

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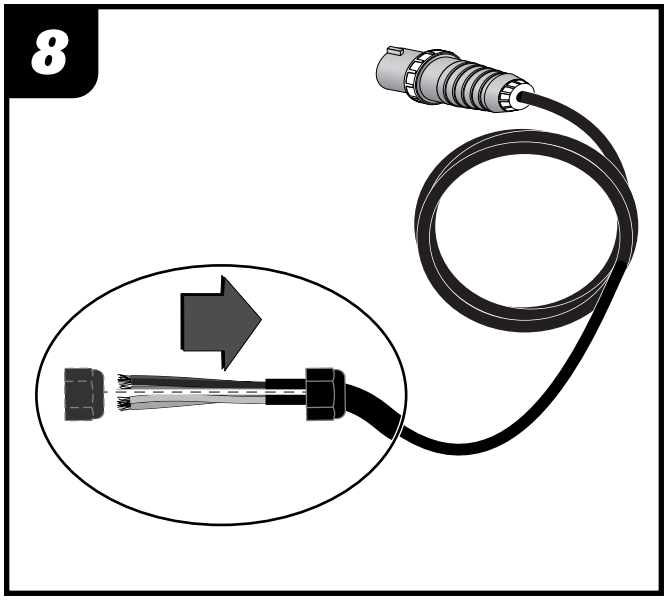

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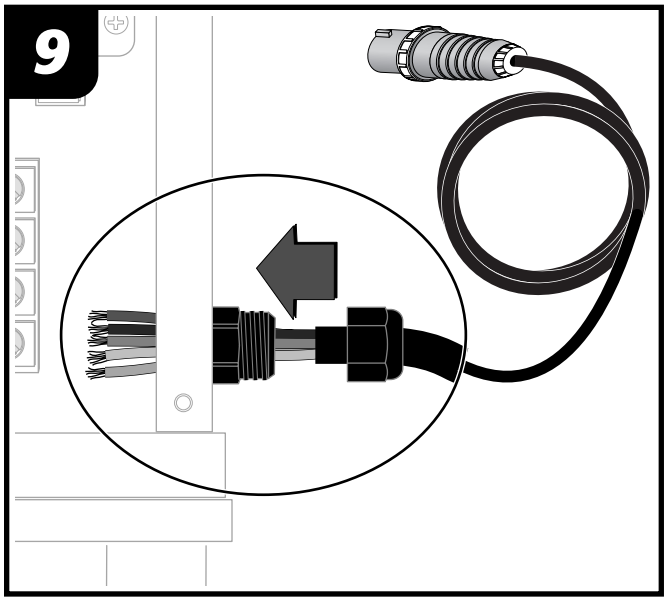
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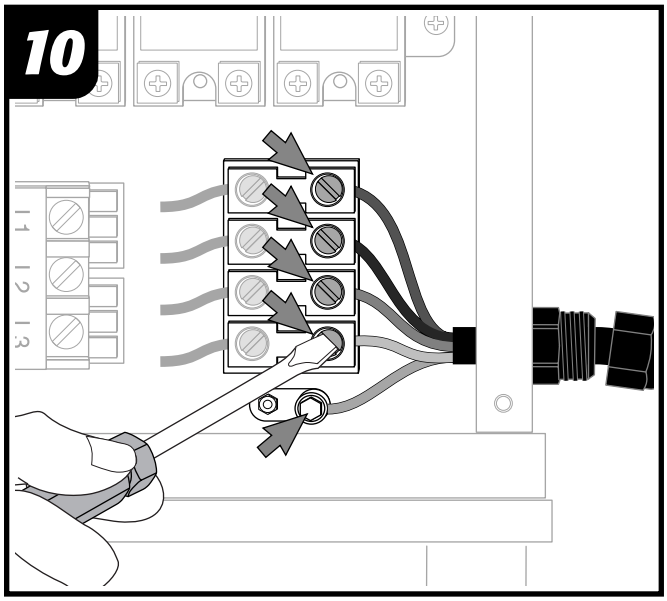
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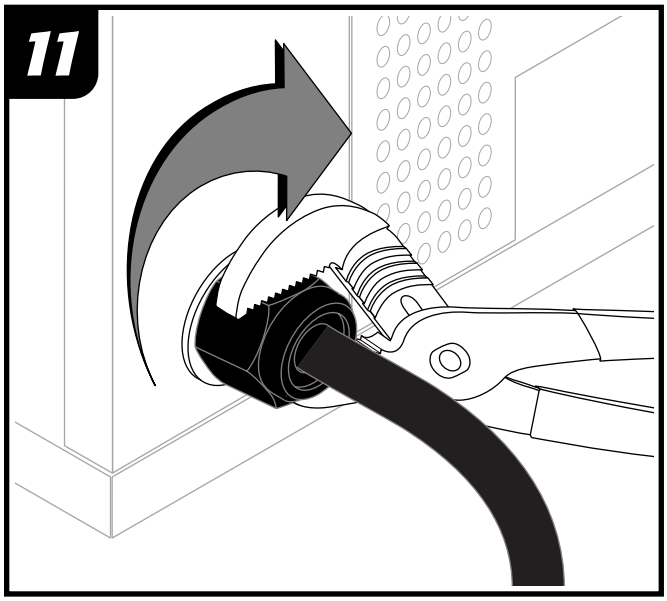
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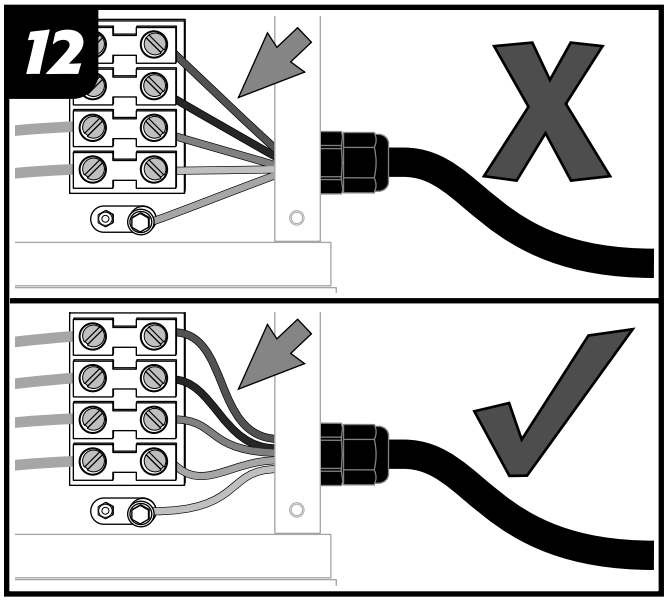
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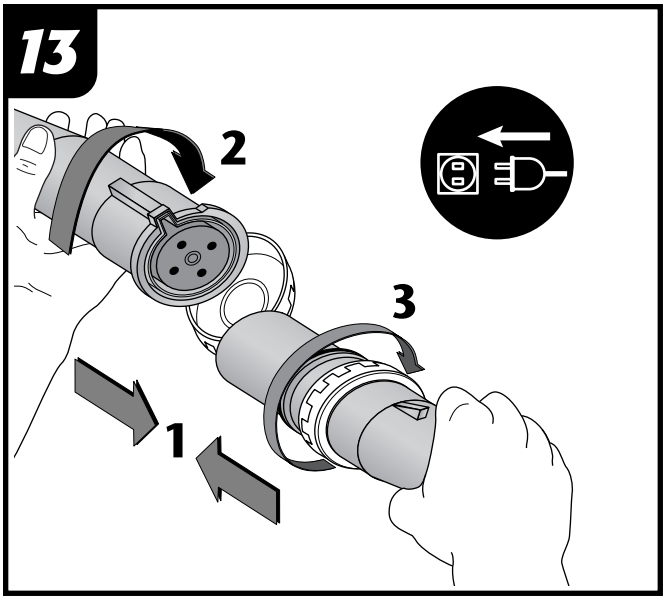


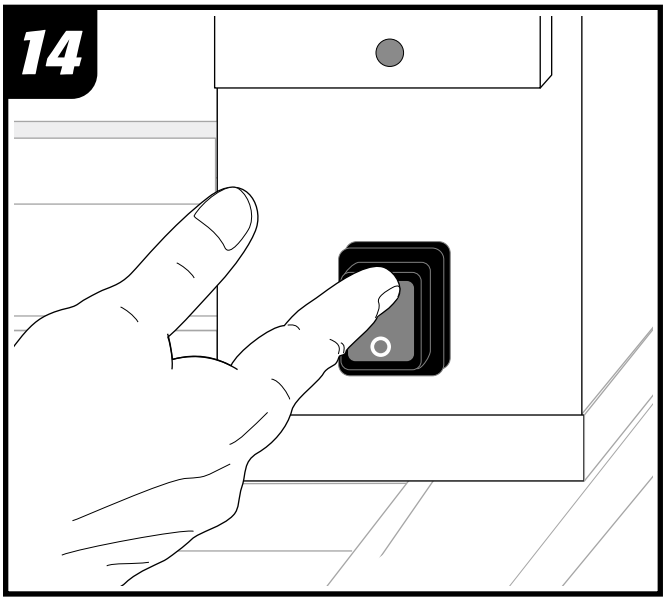
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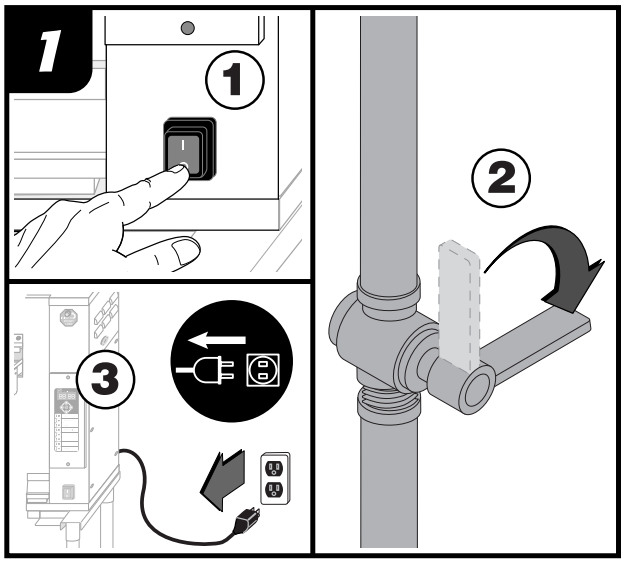


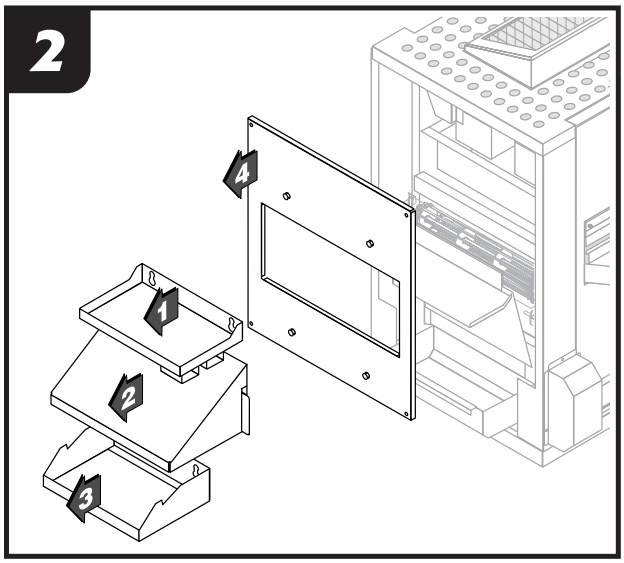

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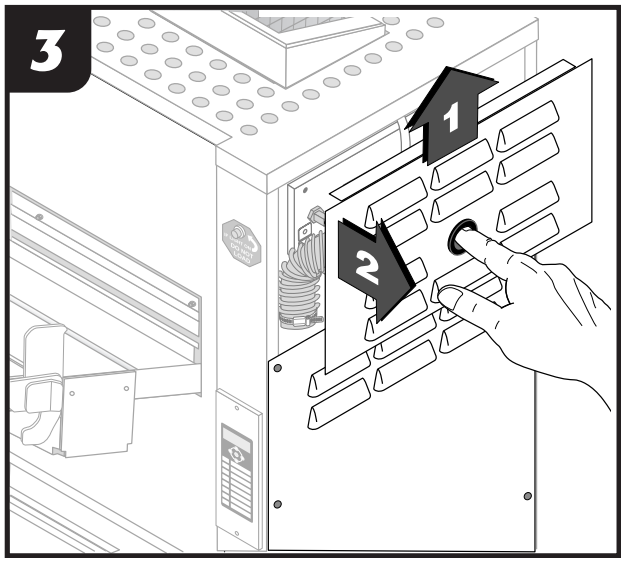

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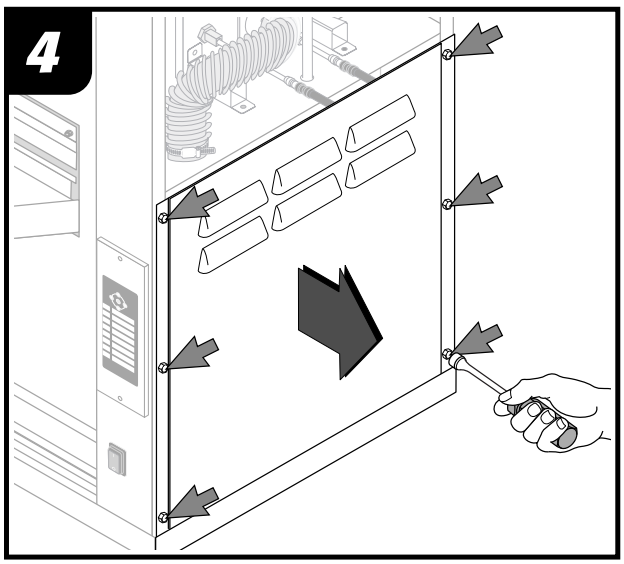
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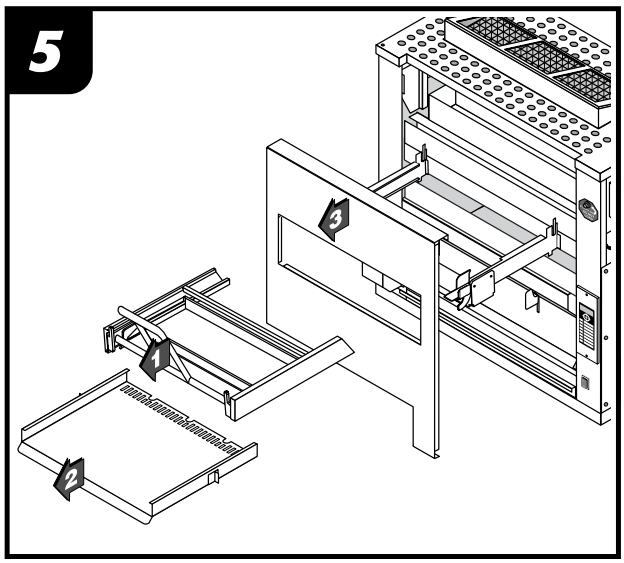
FBB Broiler Lower Orifice Holder Replacement Instructions

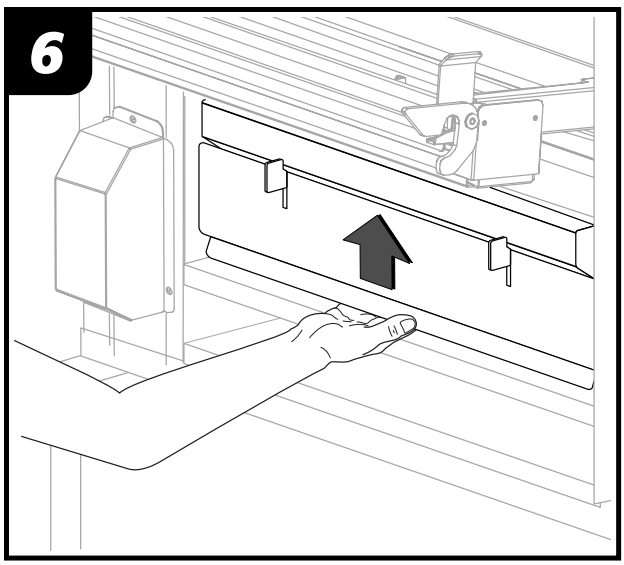




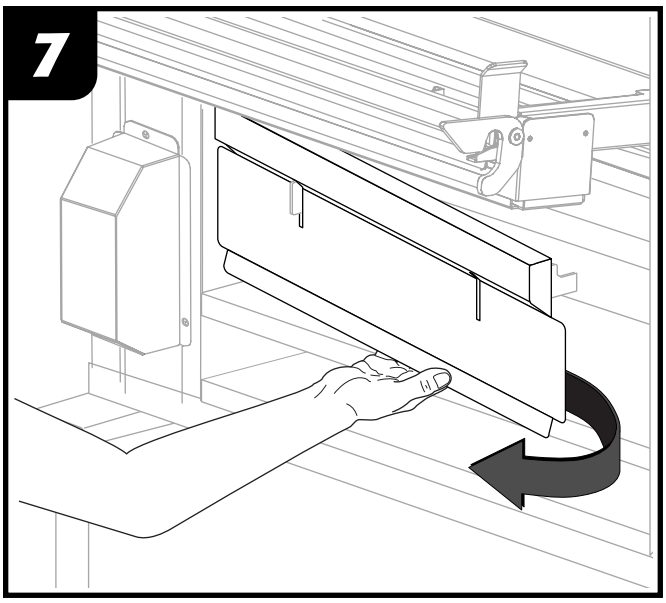


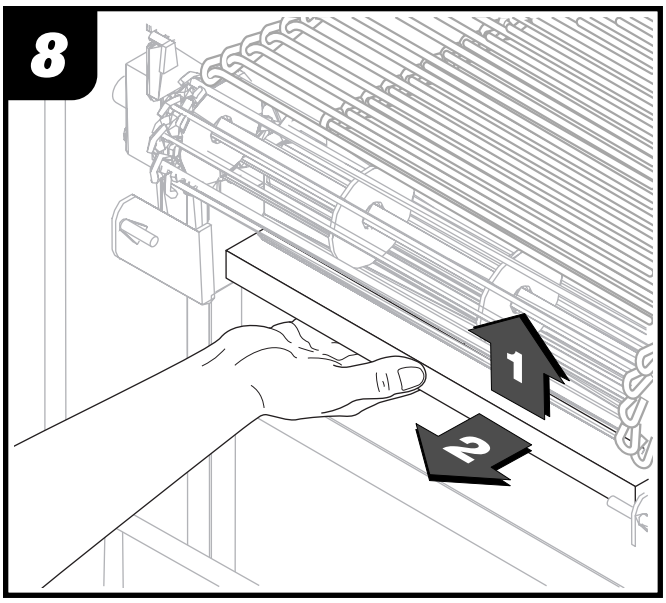


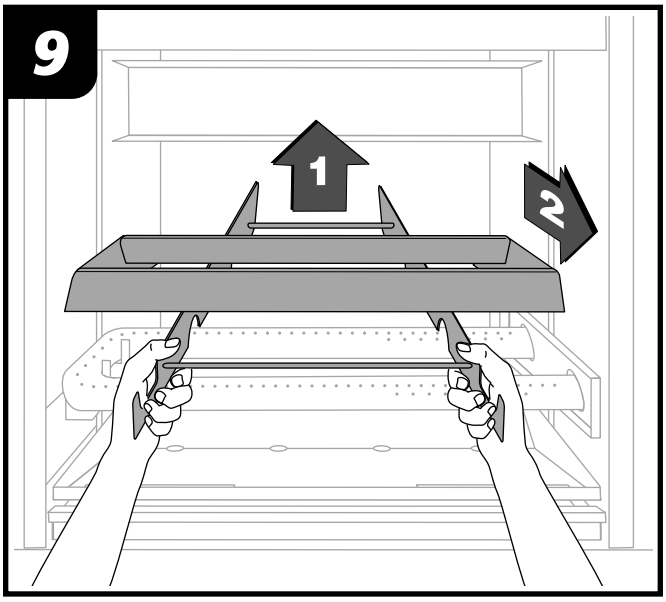


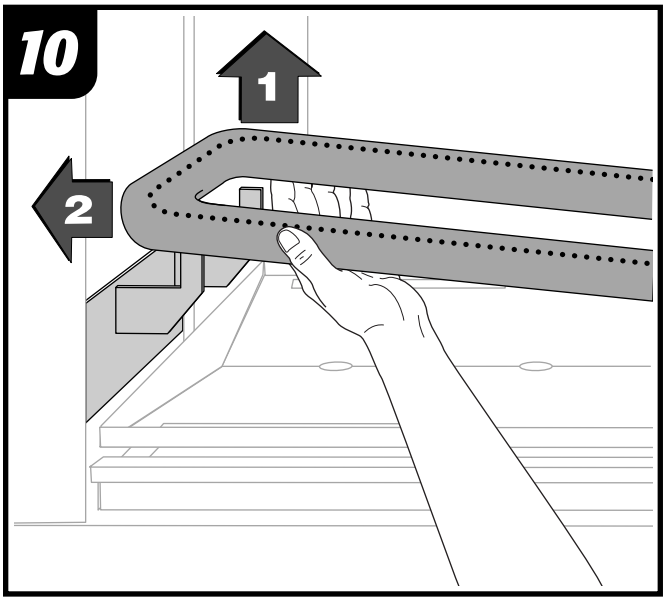


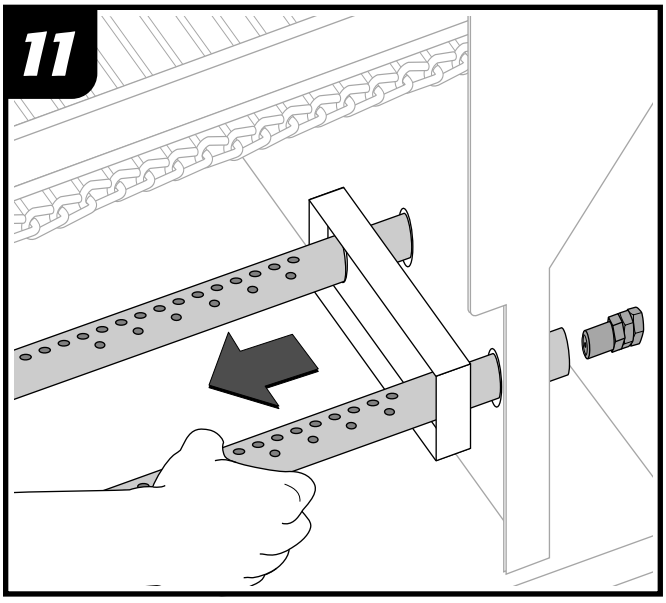
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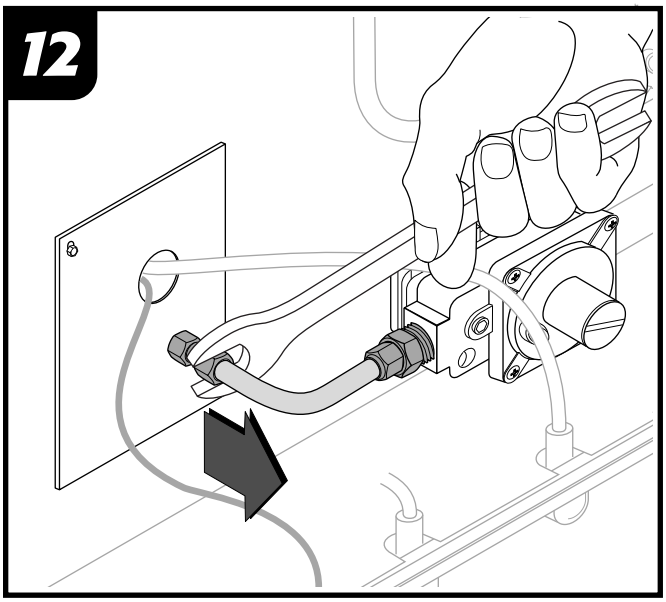

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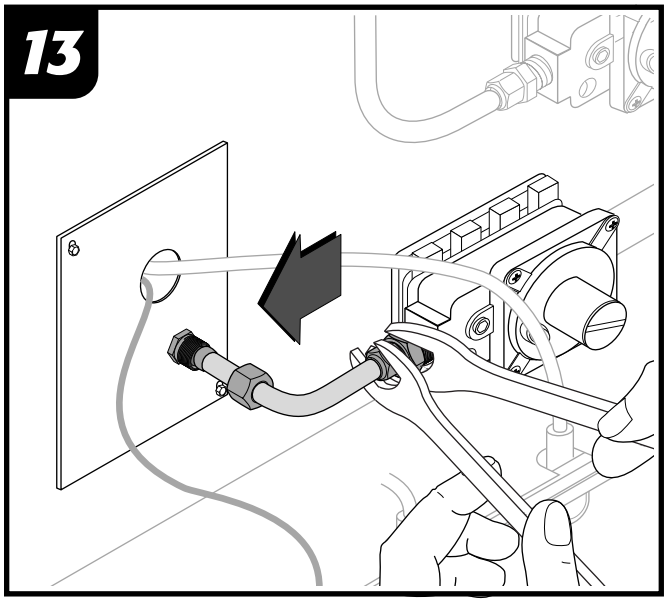

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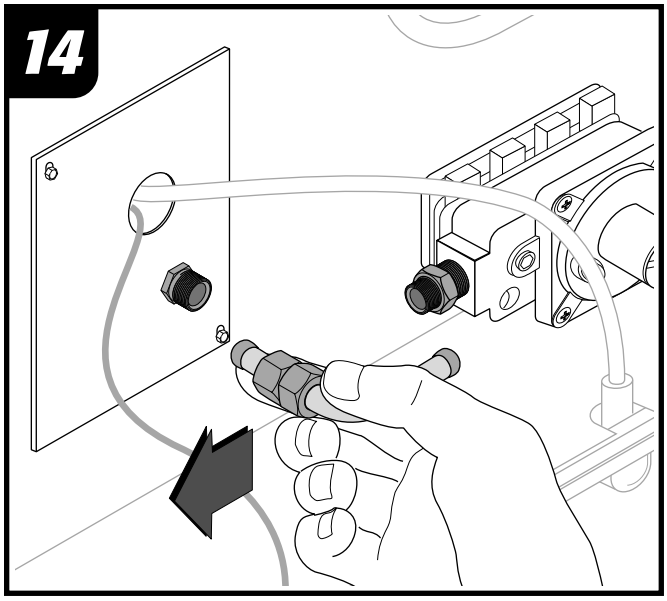

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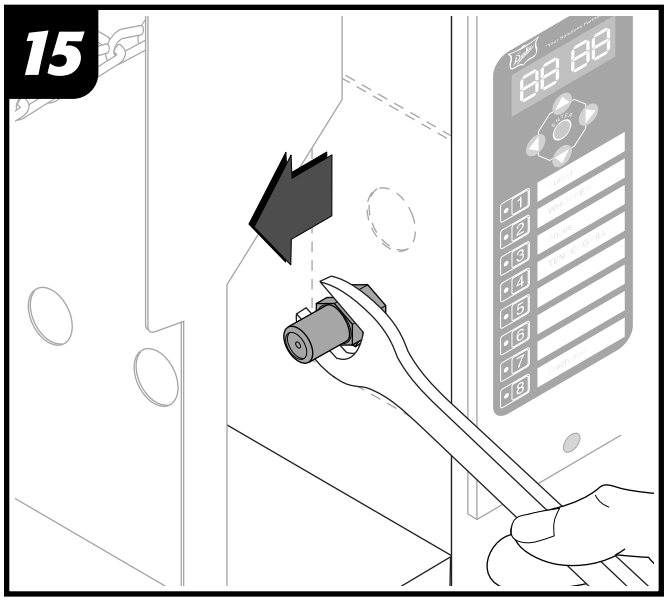
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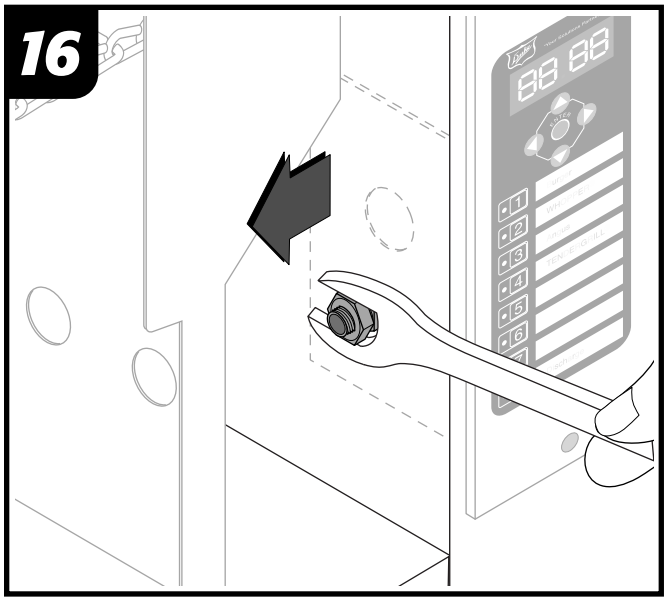
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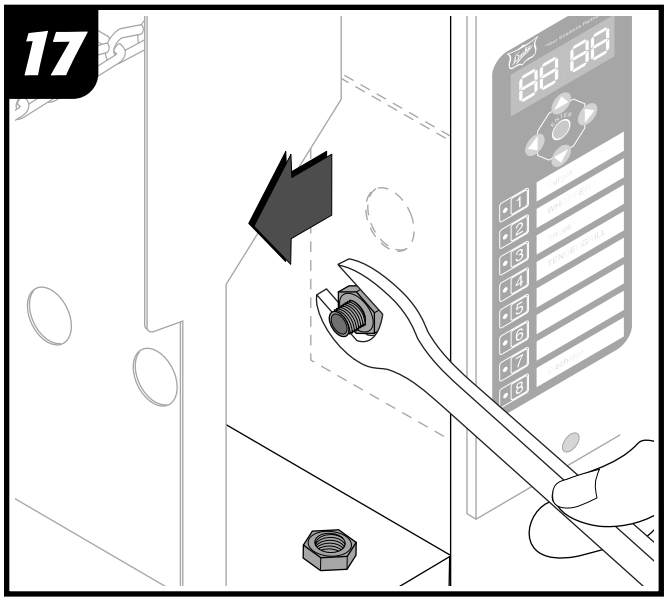
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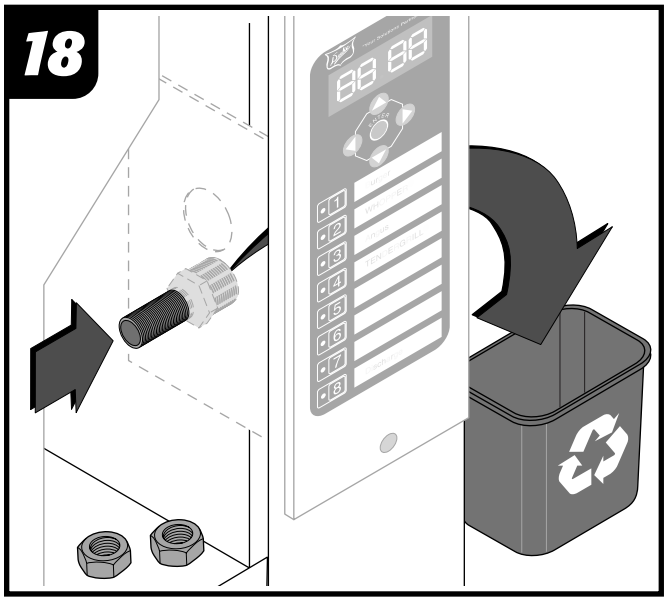
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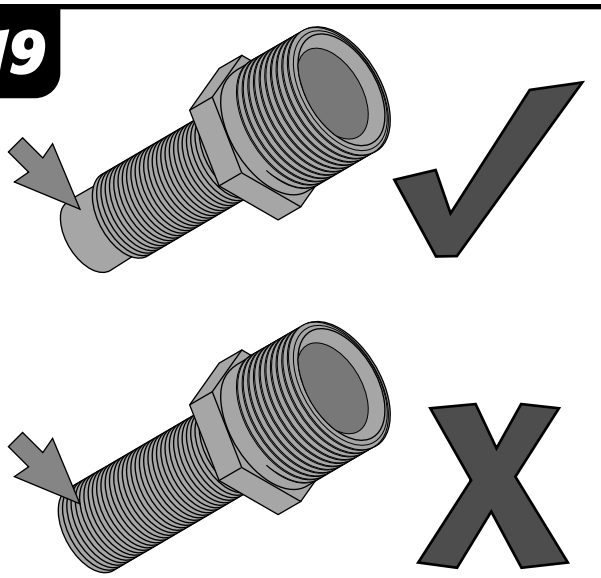
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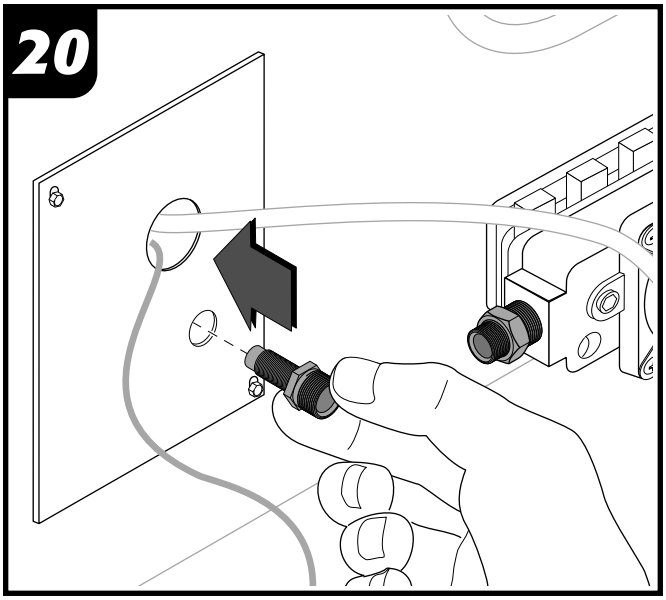
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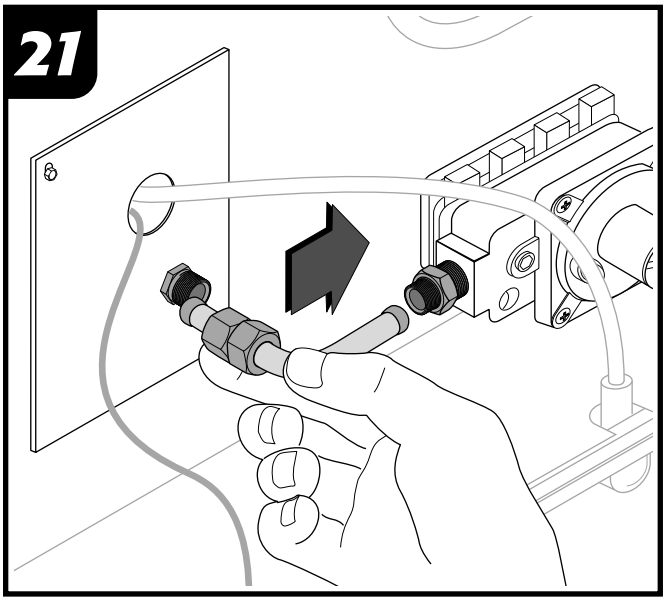
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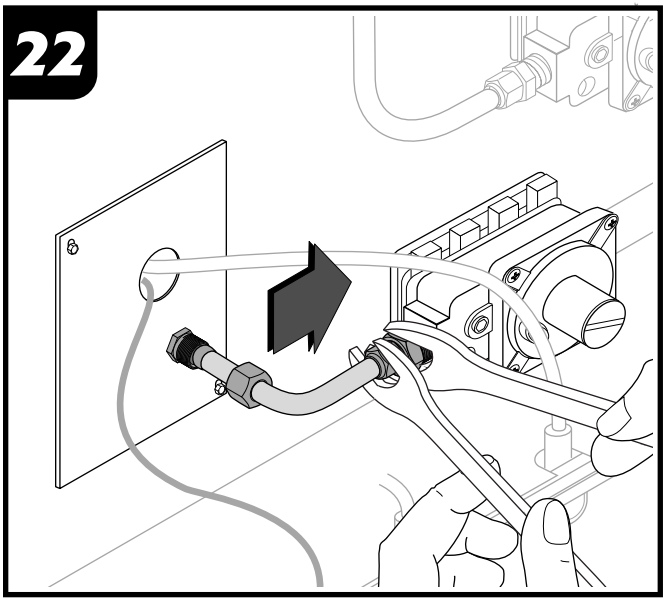
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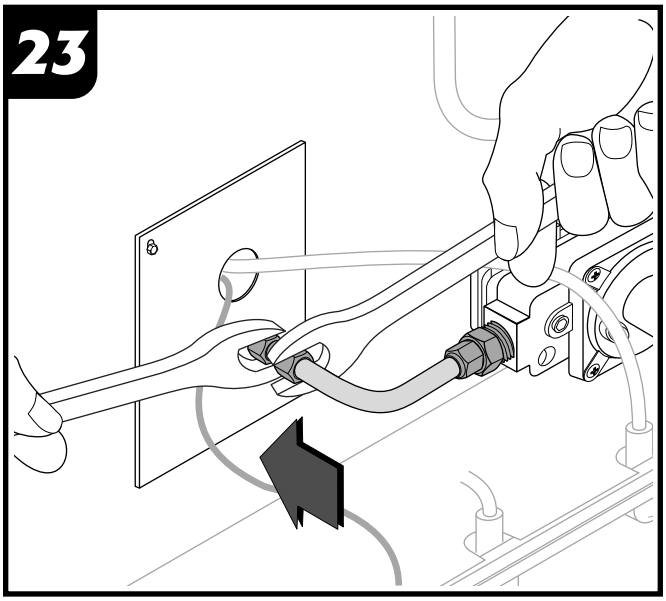
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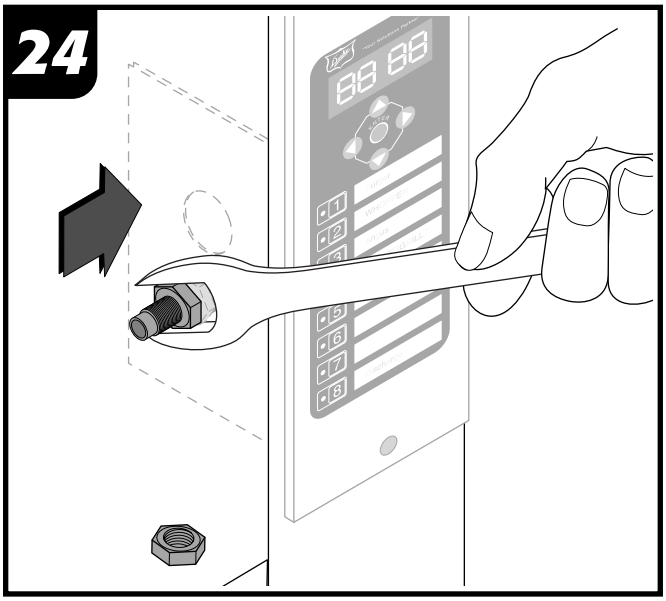
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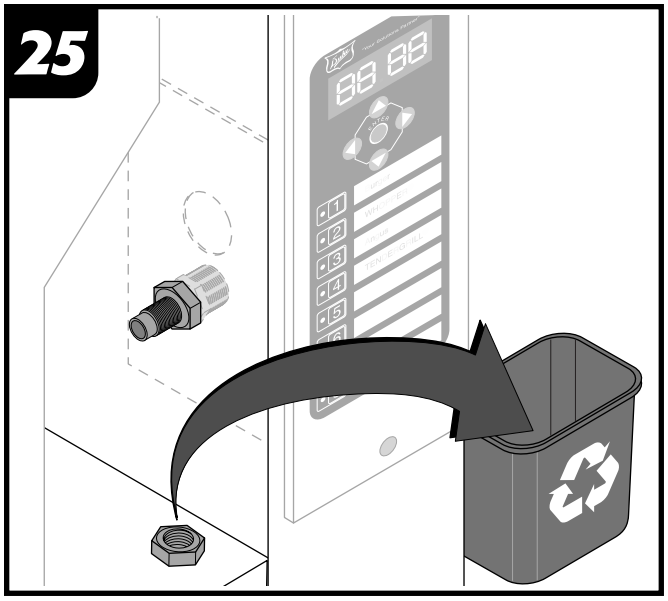


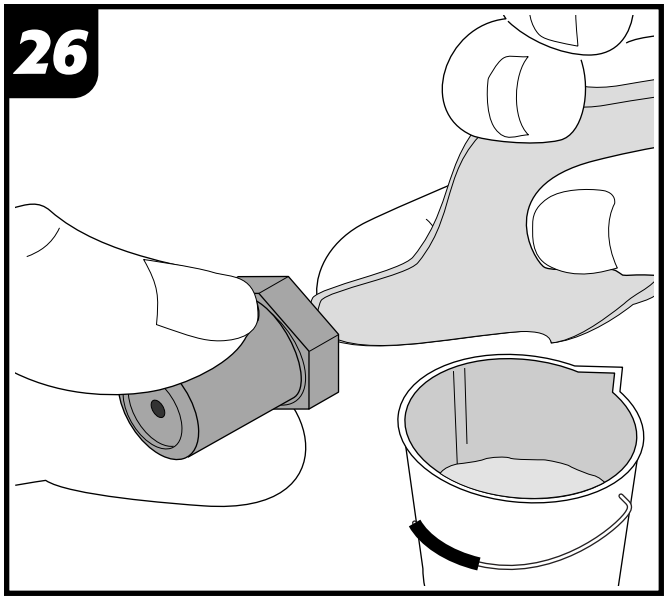
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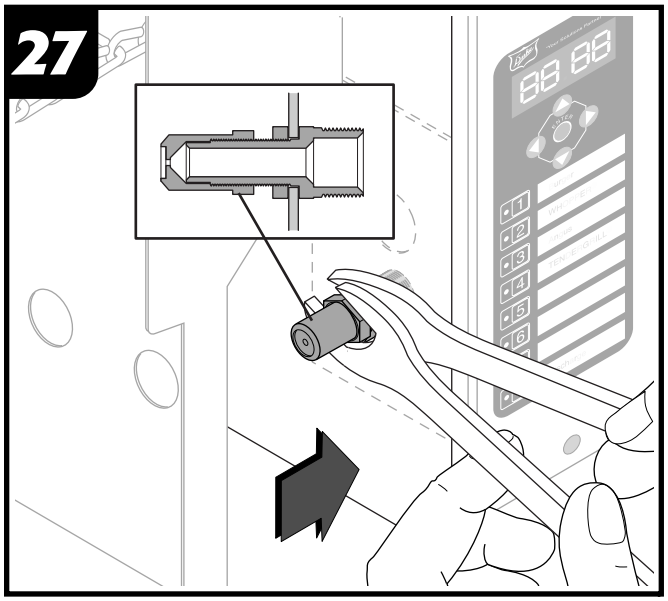


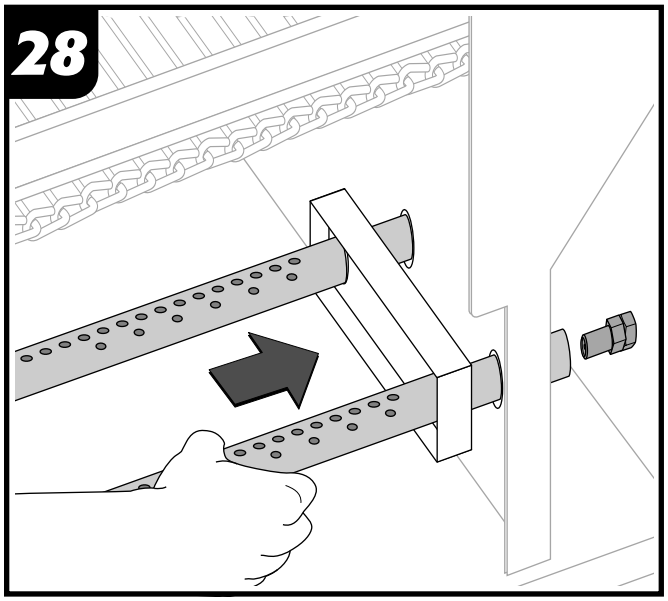
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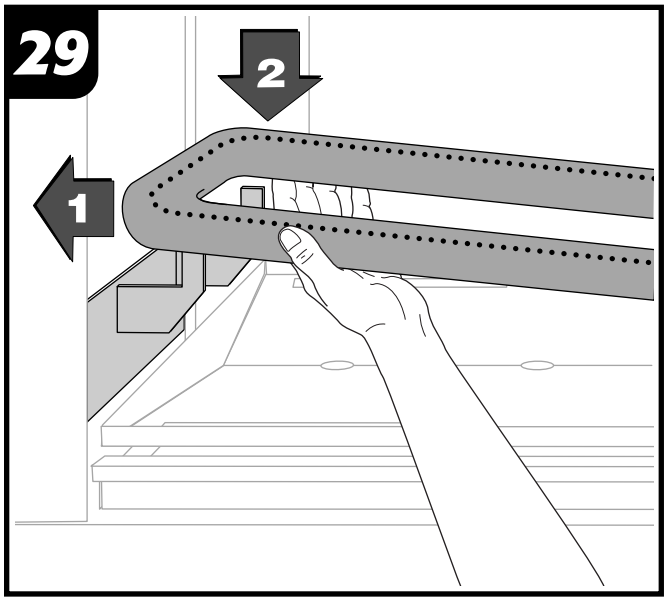


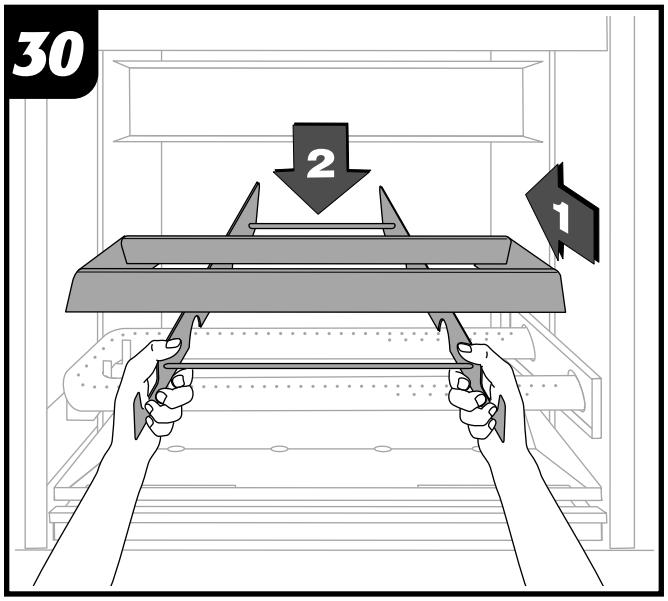

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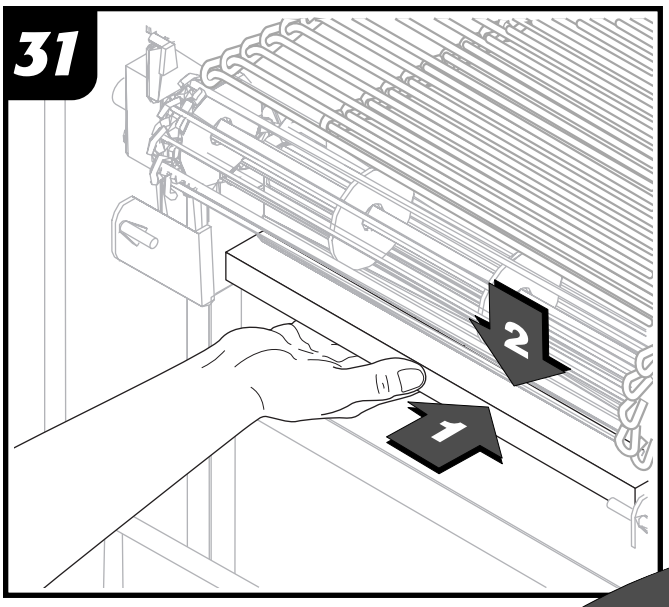

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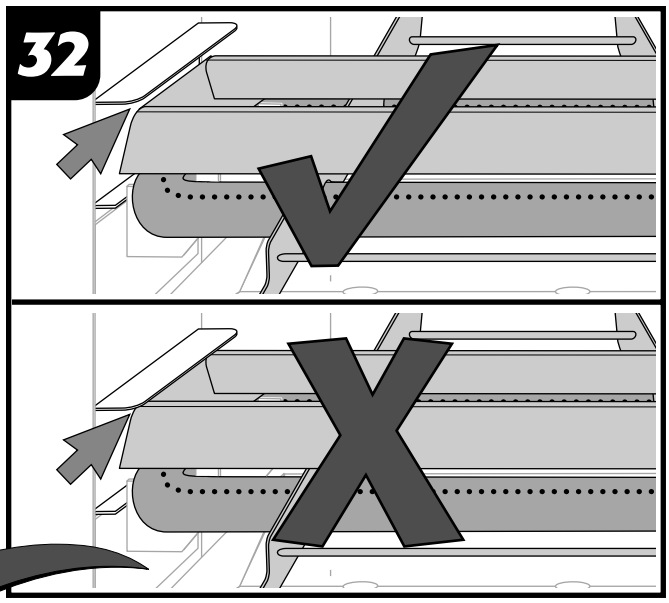

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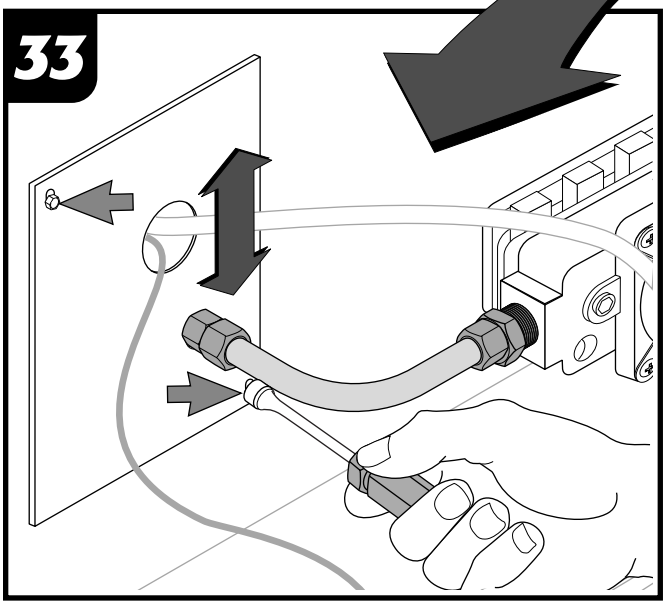

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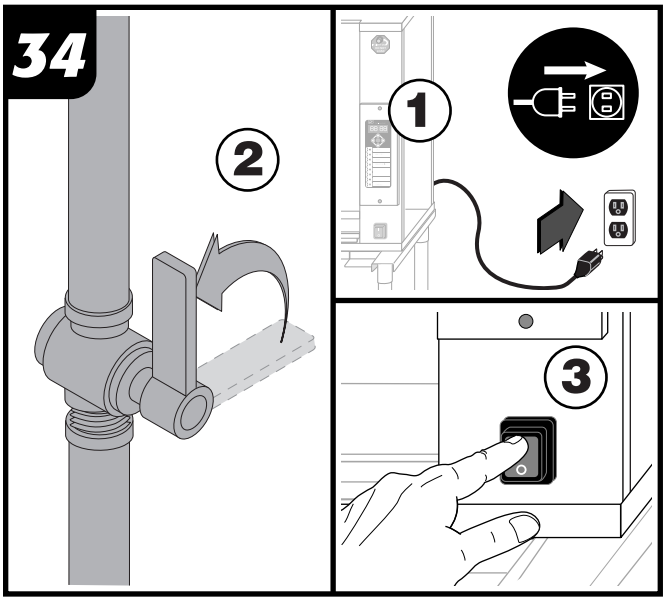

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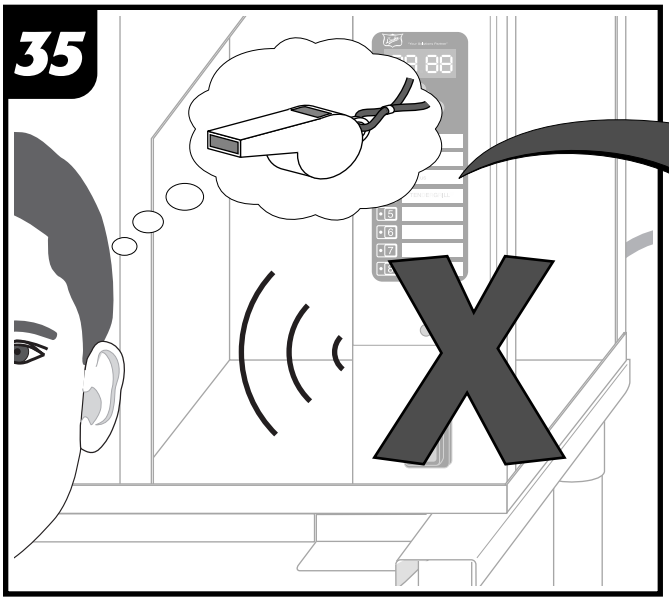

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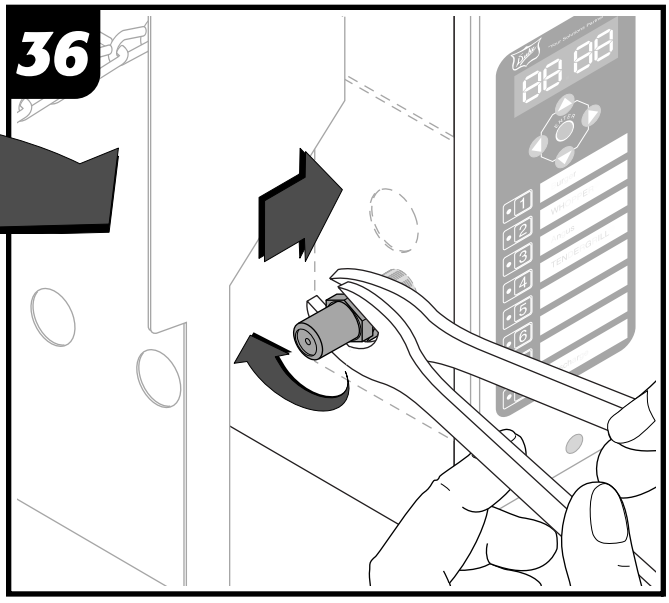

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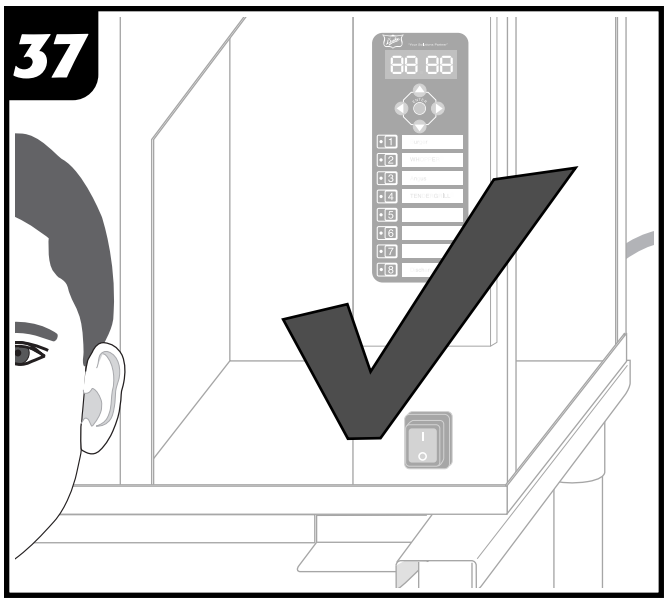

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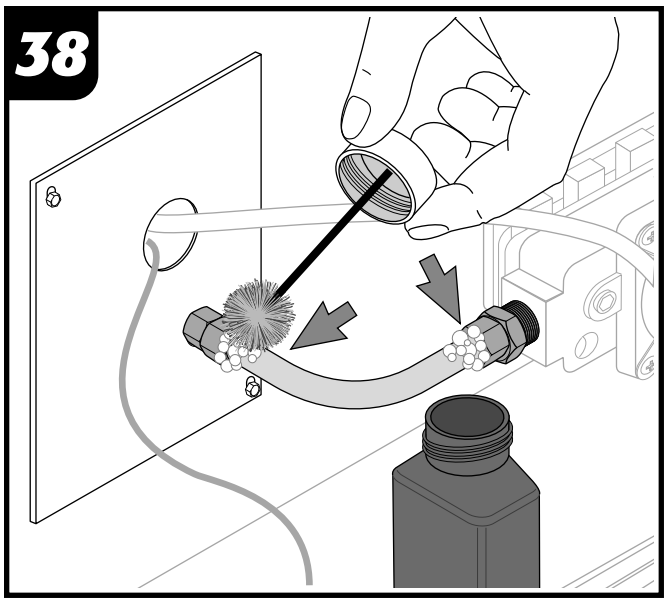

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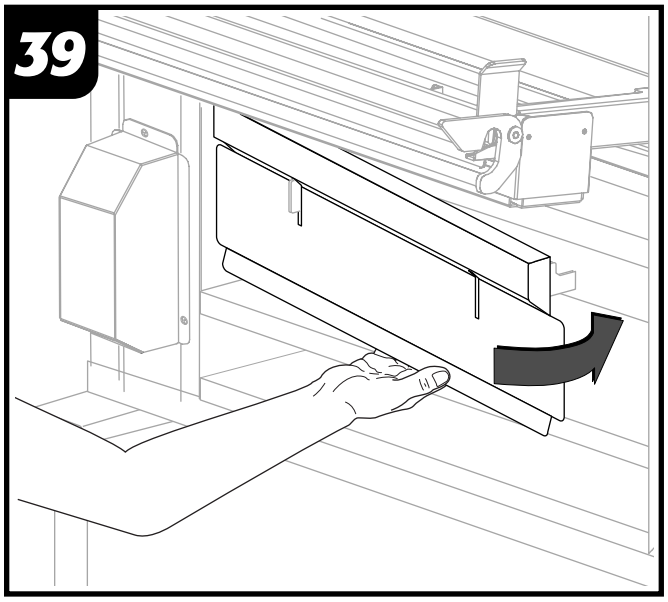

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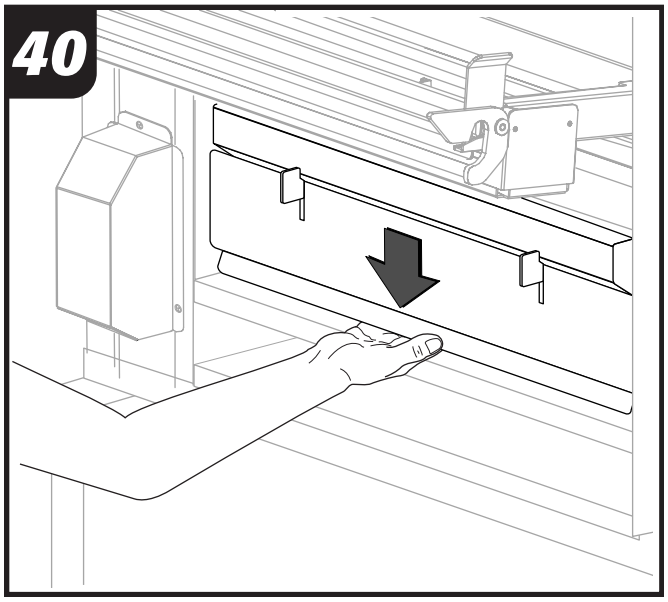

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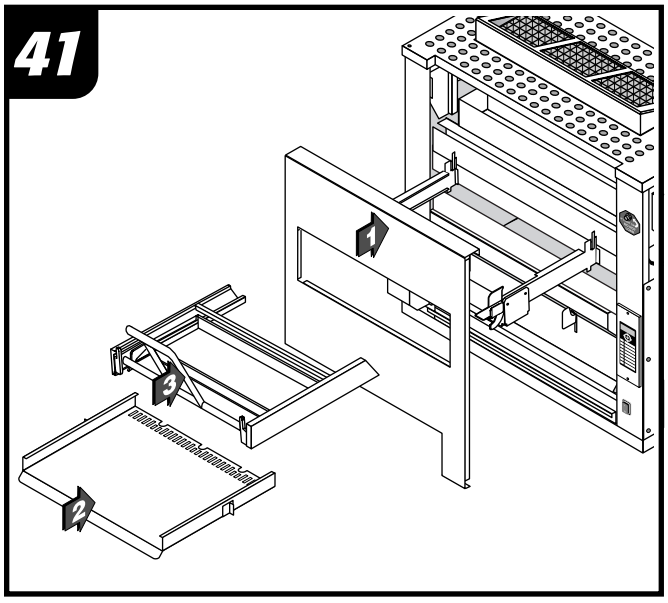

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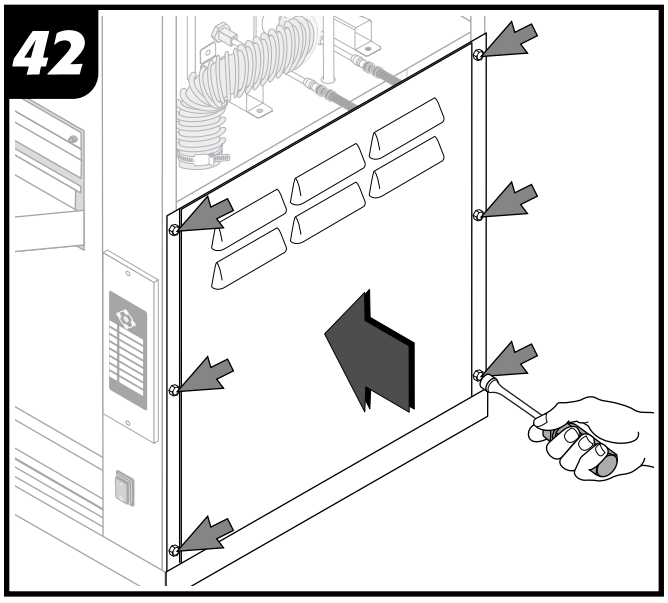

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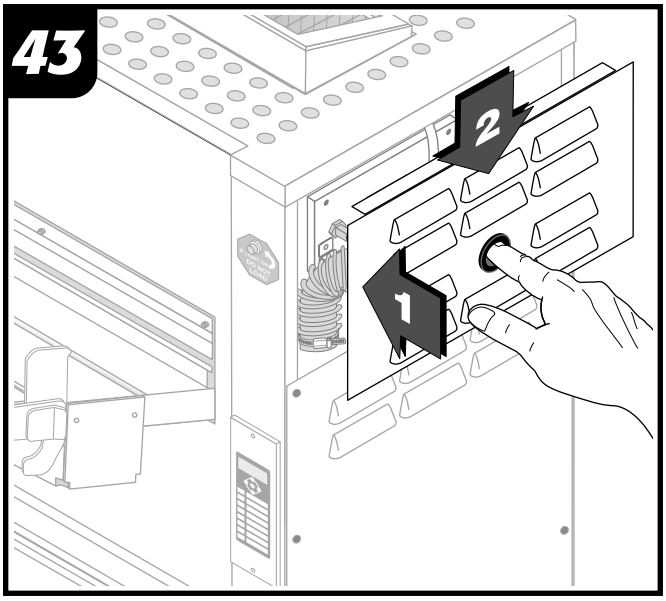

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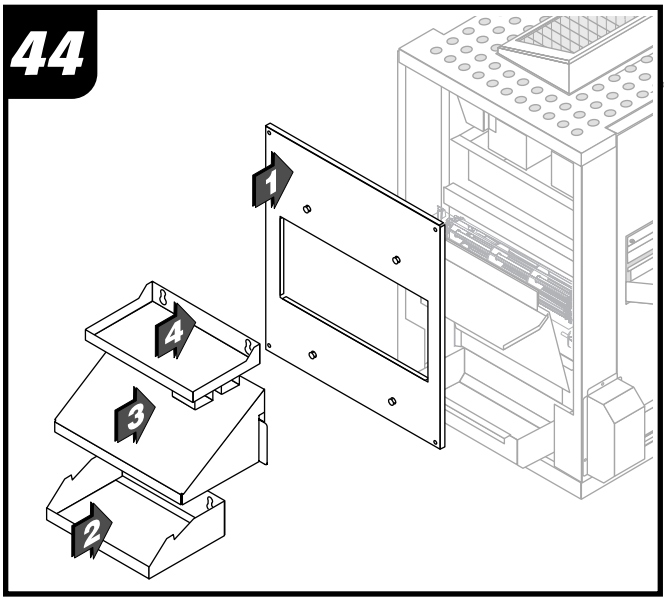

39


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41
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42





CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER _____

TELEPHONE _____

SERVICER _____

TELEPHONE _____

Duke Corporate, Canada, Latin America
2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 800-735-3853
Fax: 314-231-5074
www.dukemfg.com

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Duke Manufacturing CR, s.r.o.
Zdebradska 92
Jazlovice, Ricany
Building number DC 4 on the
ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 257 741 033
Fax: +420 257 741 039

Duke EMEA – UK, Ireland, Nordic Countries
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Duke Manufacturing
No.3 Building
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Malu Town, Jiading District
Shanghai 201801, China
Phone: +86 21 59153525 / 59153526
Fax: +86 21 33600628

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

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FBB Broiler Lower Orifice With Low Calorific Gas Replacement Instructions

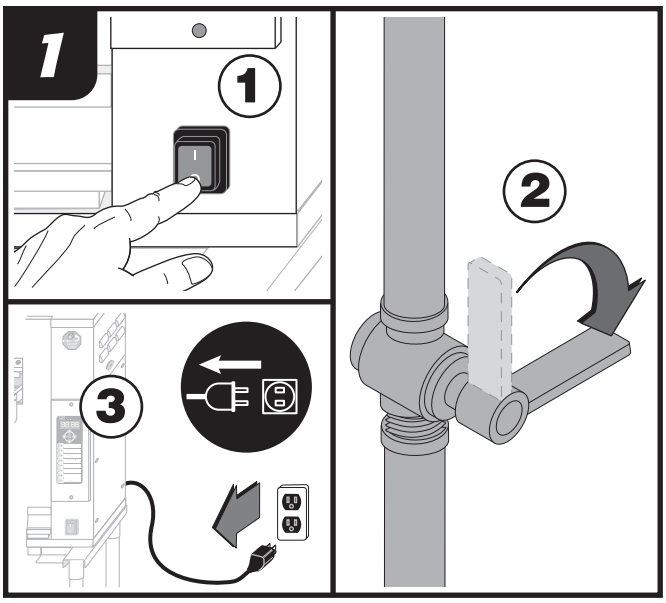
Please read this manual completely before attempting to install, operate or service this equipment

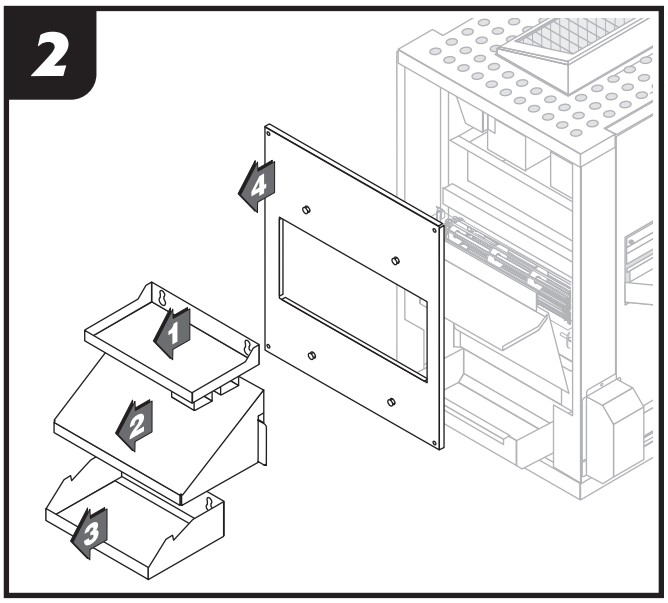
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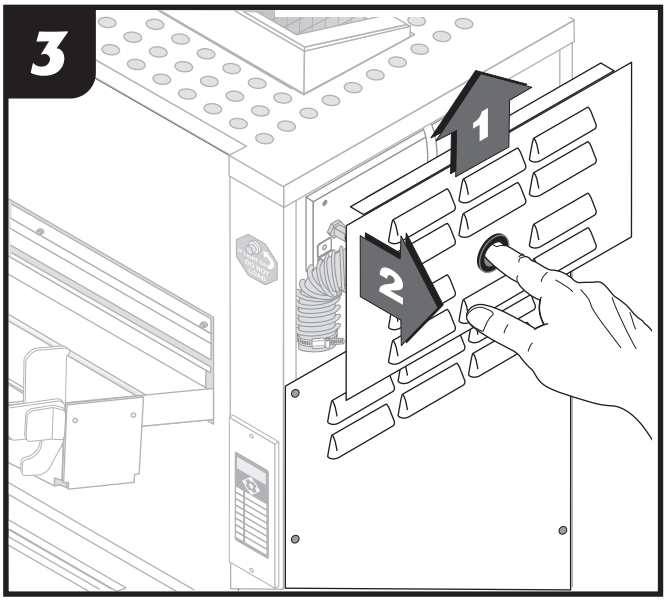
Duke Manufacturing Co.

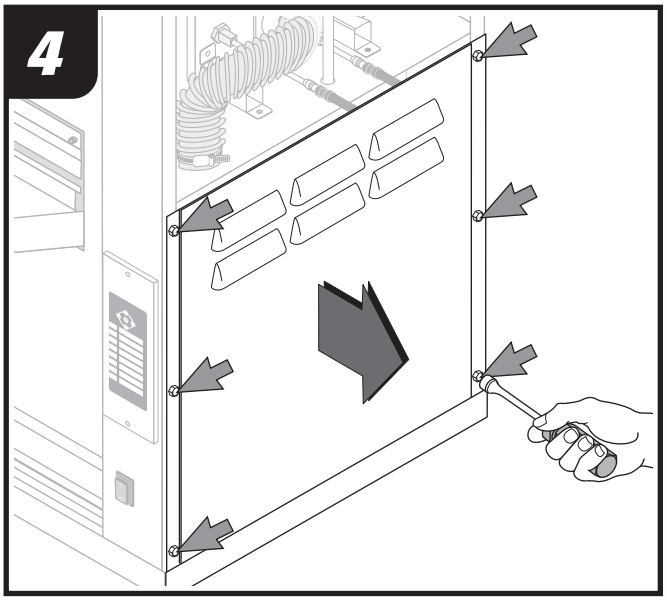
2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074
www.dukemfg.com

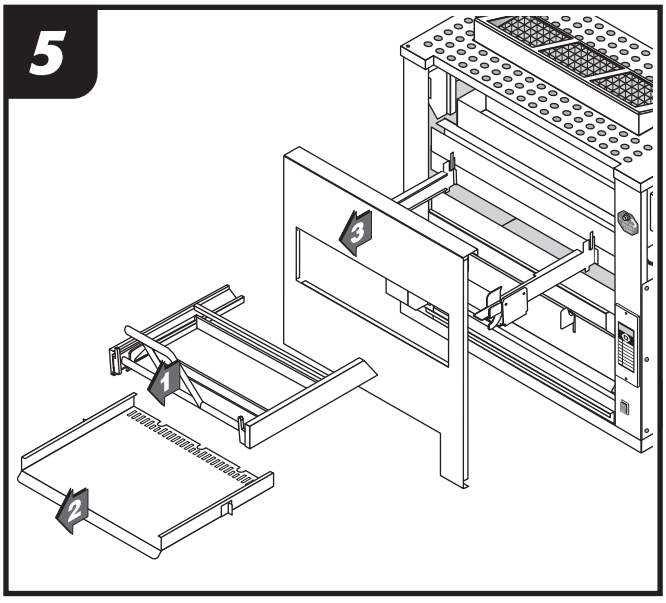
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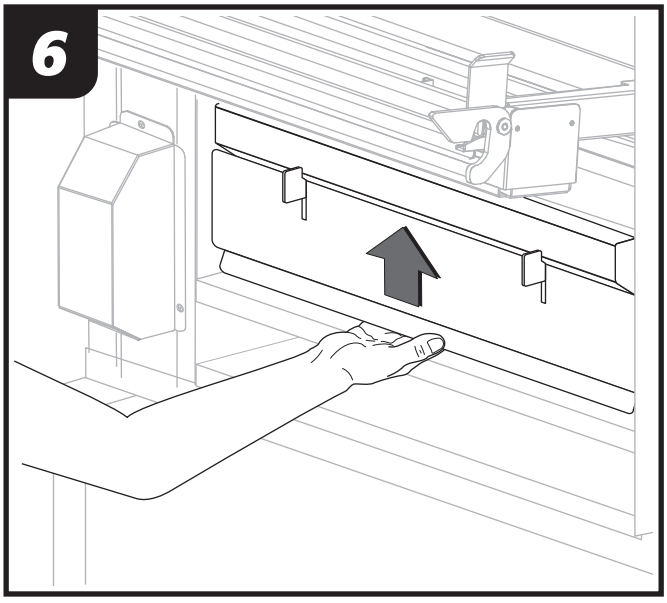

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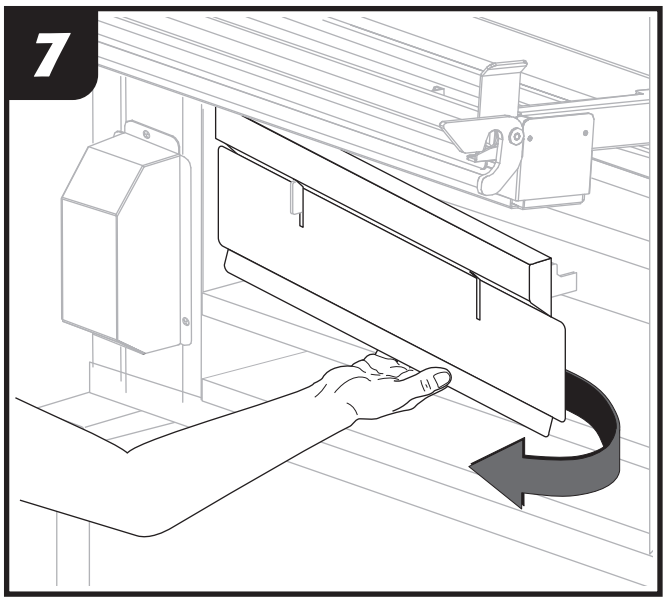

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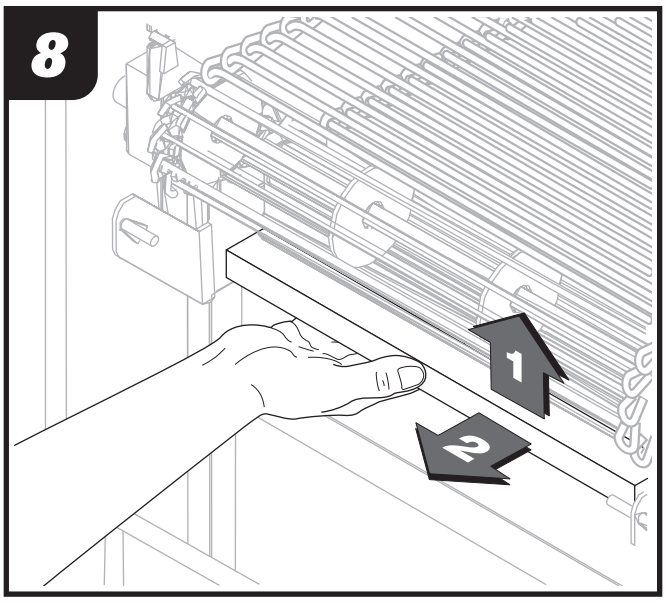

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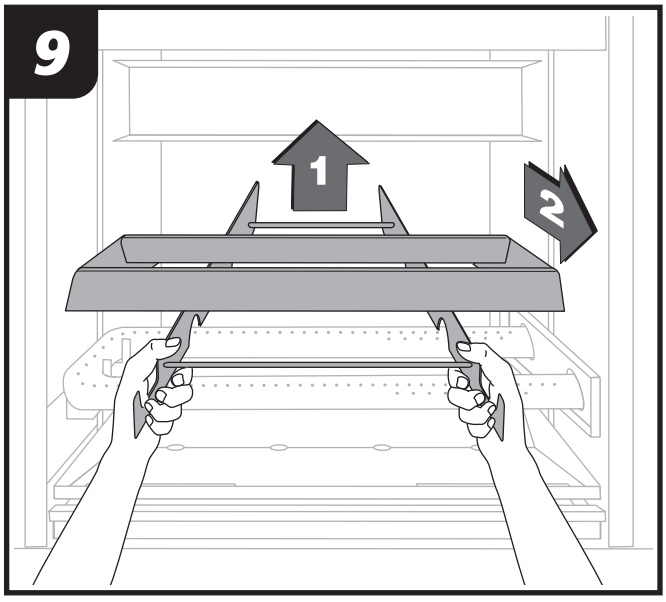

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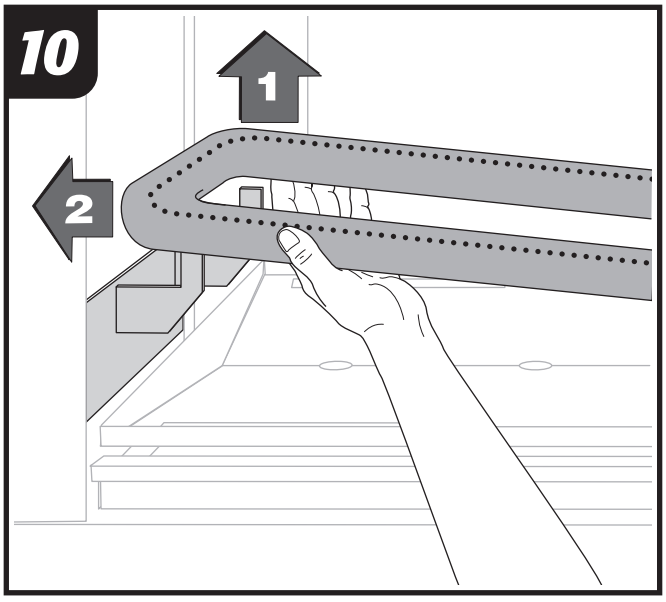

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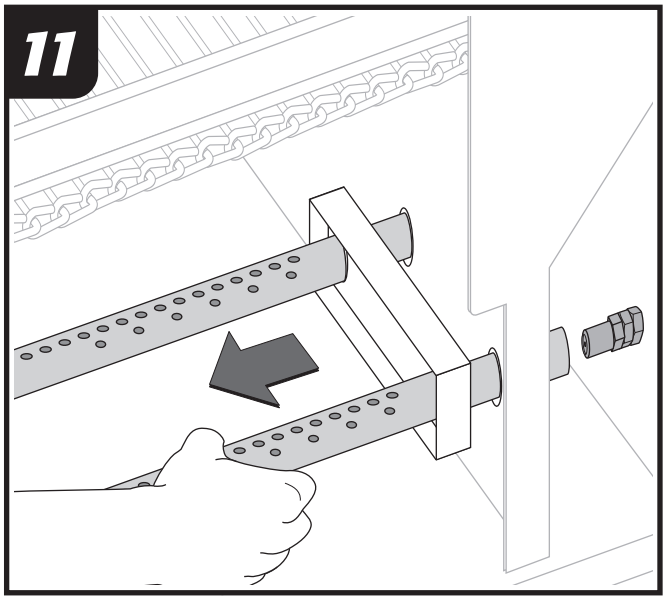

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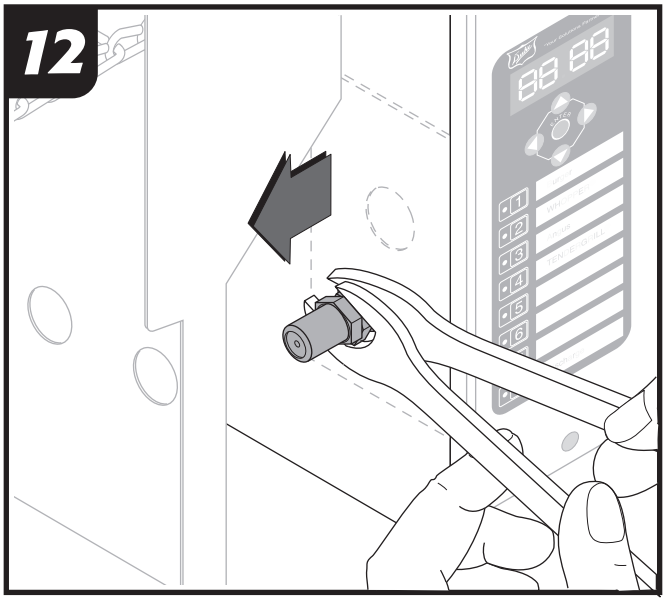

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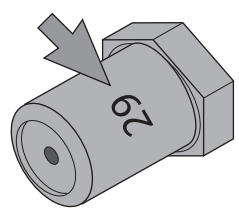

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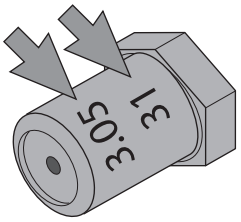

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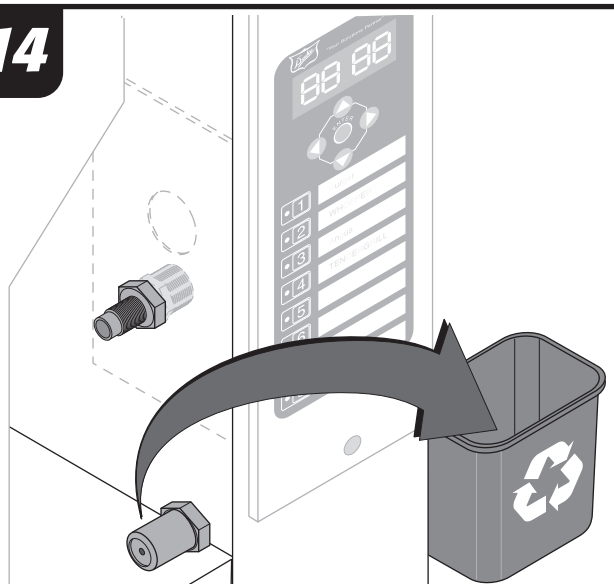

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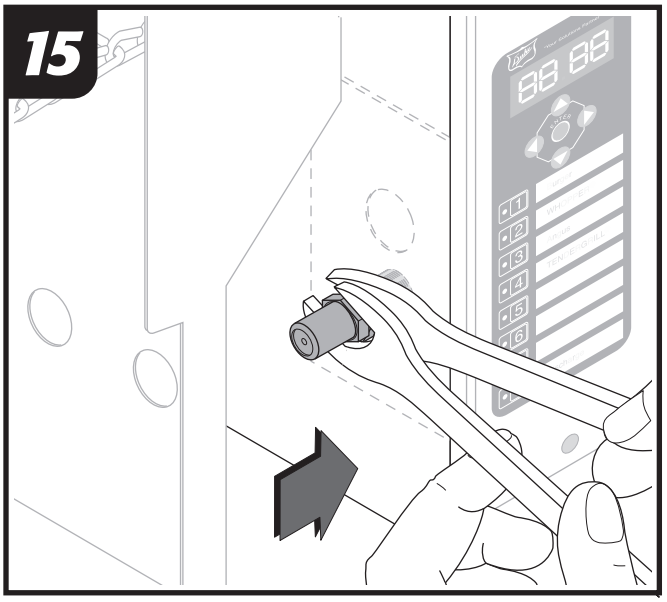




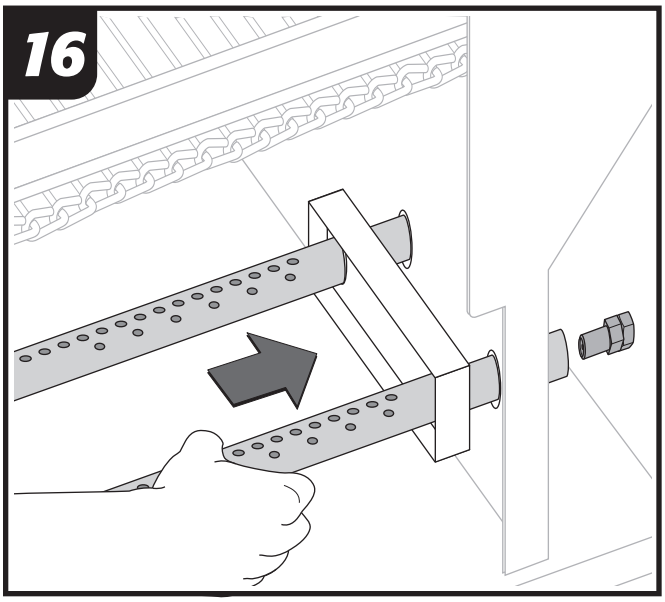
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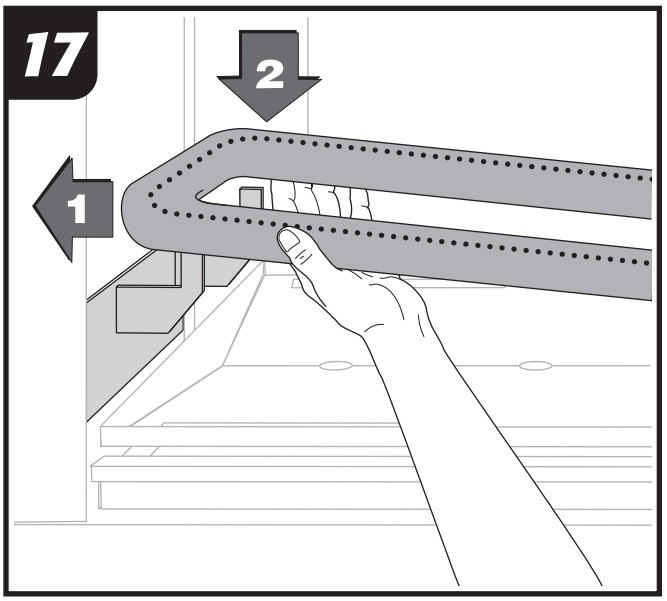
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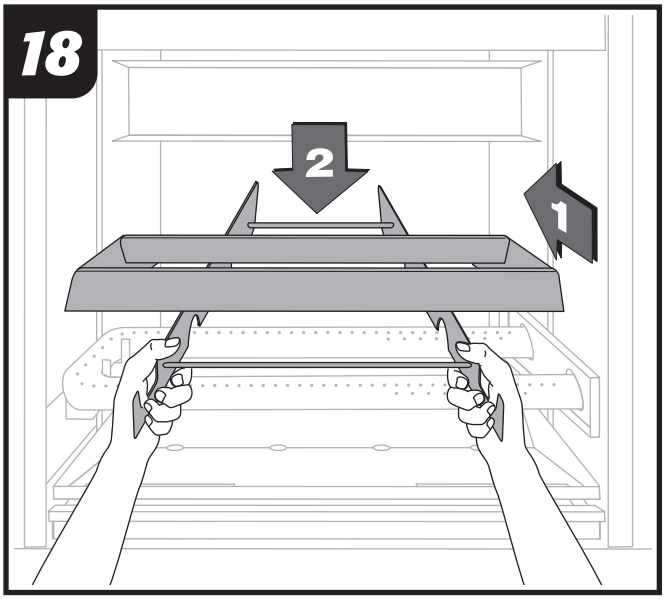
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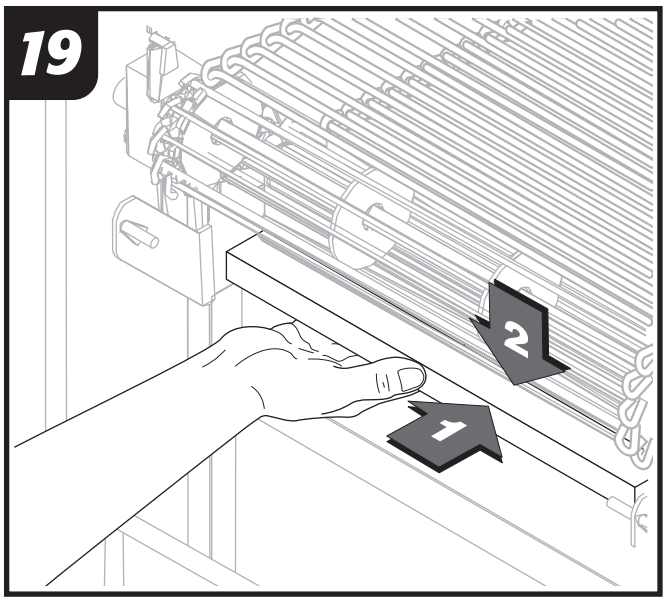


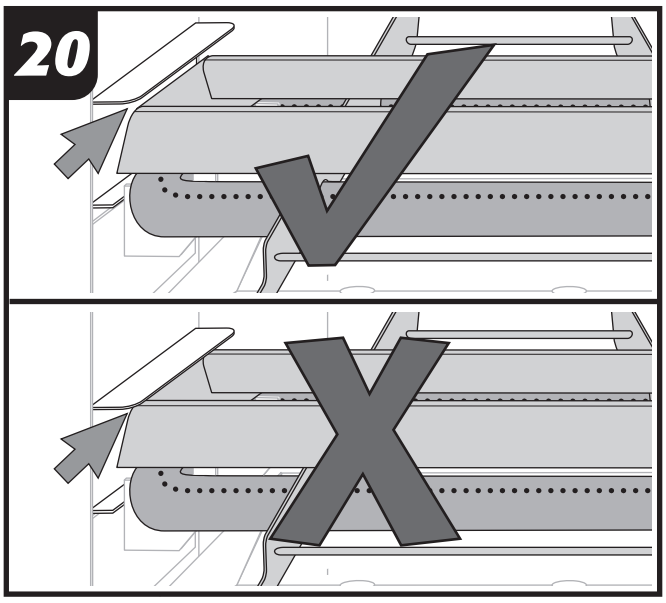
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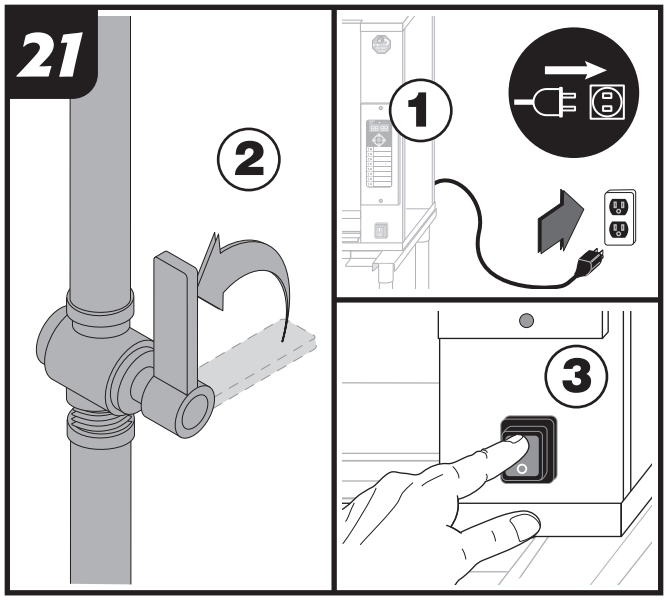


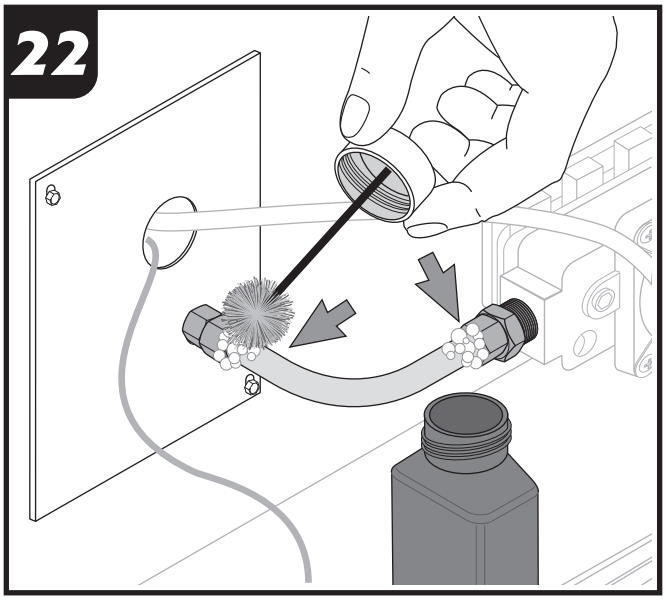
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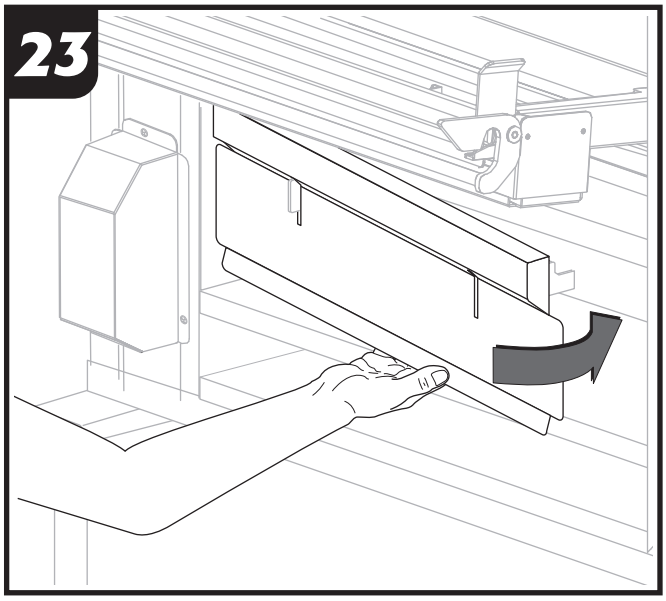


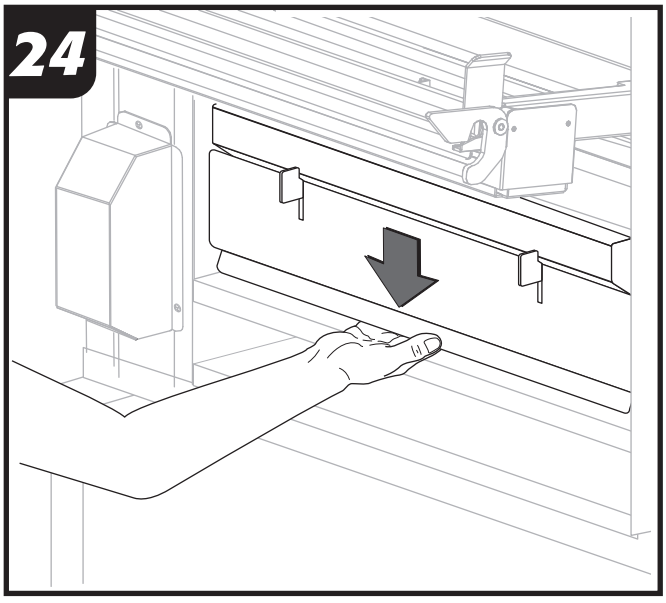

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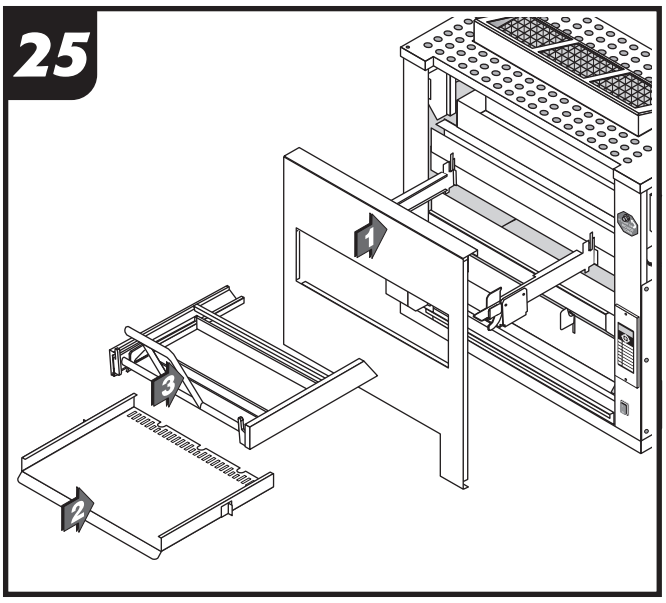

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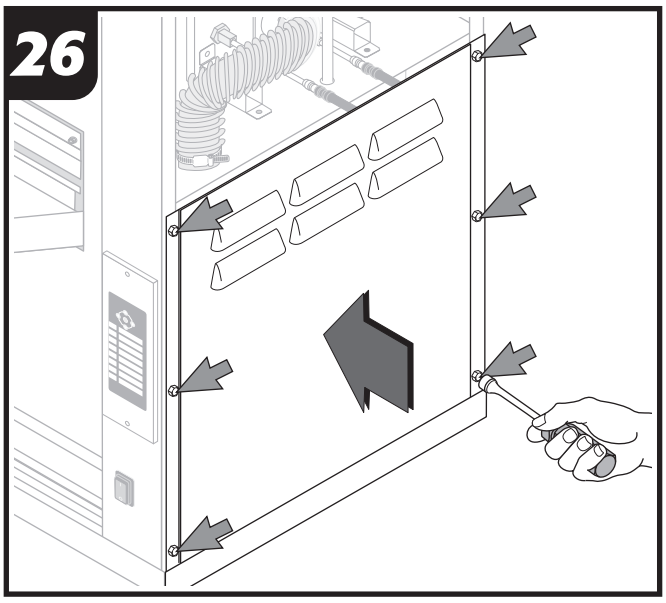

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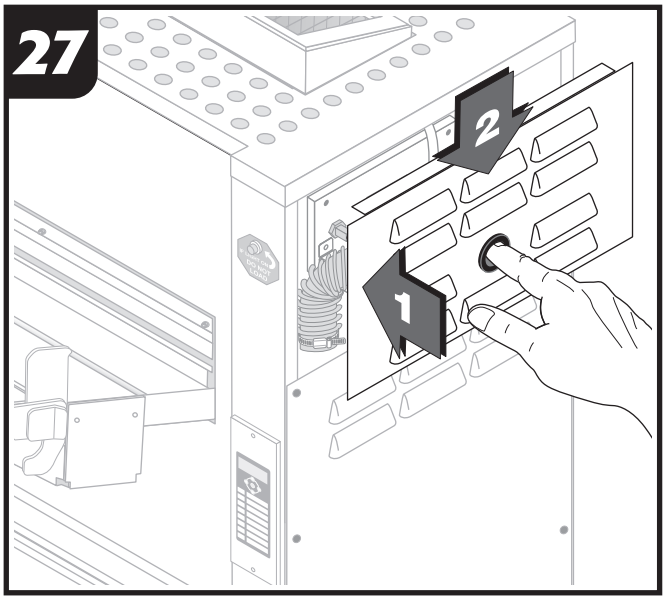

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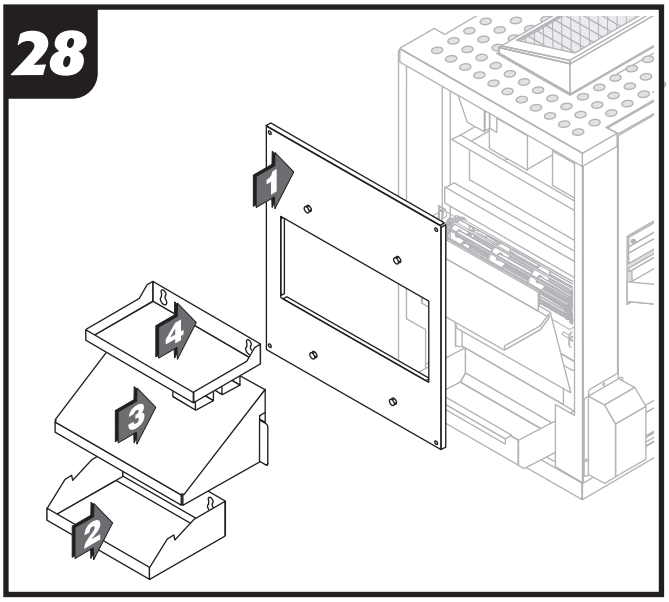

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25
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27
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28
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CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER:	**SERIAL NUMBER:**
DATE OF PURCHASE:	
DEALER:	**TELEPHONE:**
SERVICER:	**TELEPHONE:**

FOR WARRANTY, PARTS & SERVICE:

DUKE CORPORATE, CANADA, LATIN AMERICA

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 800-735-3853
Fax: 314-231-2460
service-dispatch@dukemfg.com

DUKE ASIA PACIFIC

Duke Manufacturing
No.3 Building
Lane 28, Yu Lv Road
Malu Town, Jiading District
Shanghai 201801, China
Phone: +86 21 59153525 / 59153526
Fax: +86 21 33600628

DUKE EMEA - EUROPE, MIDDLE EAST, AFRICA, RUSSIA

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Zdebradska 92
Jazlovice, Ricany
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ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 257 741 033
Fax: +420 257 741 039
service.prague@duke-emea.com

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Woodbury Salterton
Exeter, EX5 1EW
Phone: +44 (0) 1395 234140
Fax: +44 (0) 1395 234154
service.exeter@duke-emea.com

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Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.



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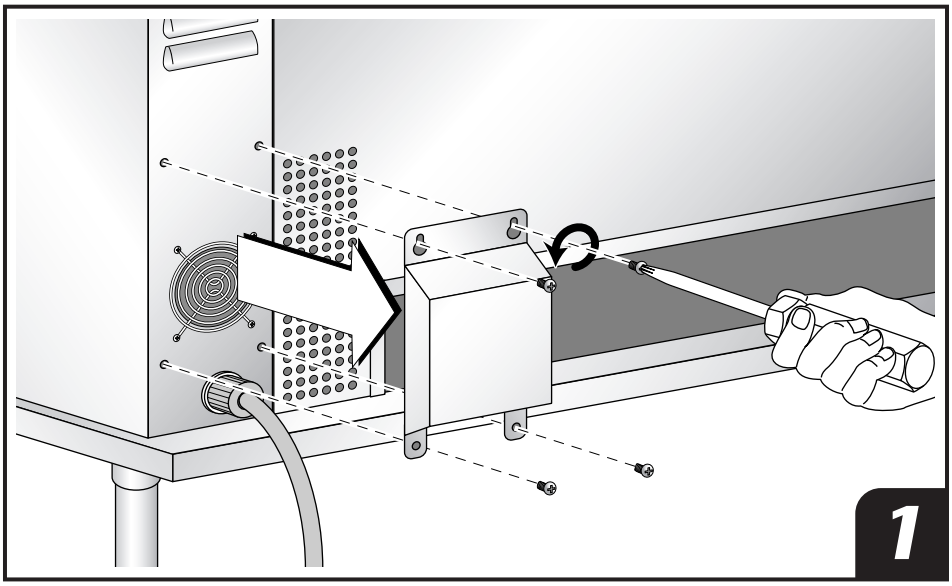
Duke EMEA - Europe, Middle East, Africa, Russia
Duke Manufacturing CR, s.r.o.
Zdebradska 92
Jazlovice, Ricany
Building number DC 4 on the
ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 257 741 033
Fax: +420 257 741 039

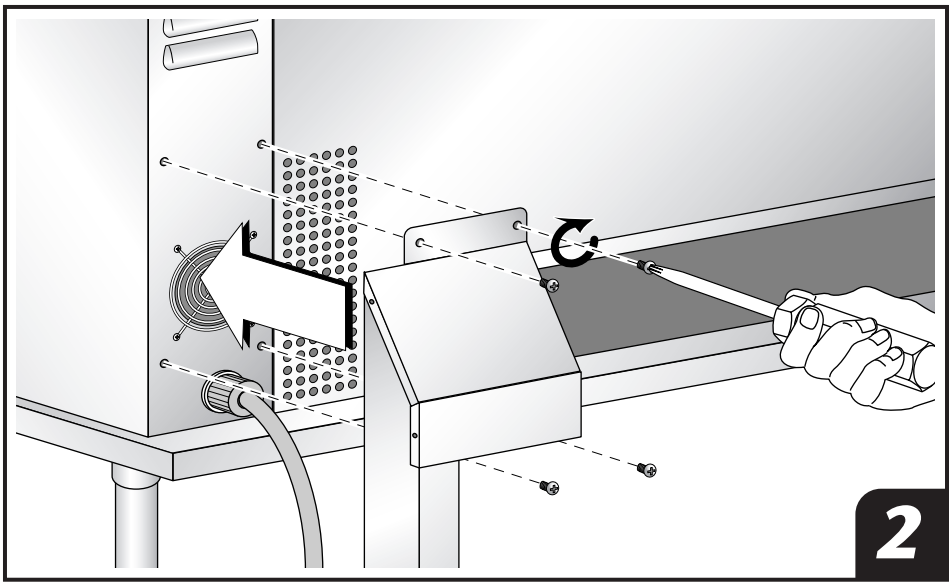
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Duke Manufacturing UK Ltd.
Unit 10, Greendale Business Park
Woodbury Salterton
Exeter, EX5 1EW
Phone: +44 (0) 1395 234140
Fax: +44 (0) 1395 234154

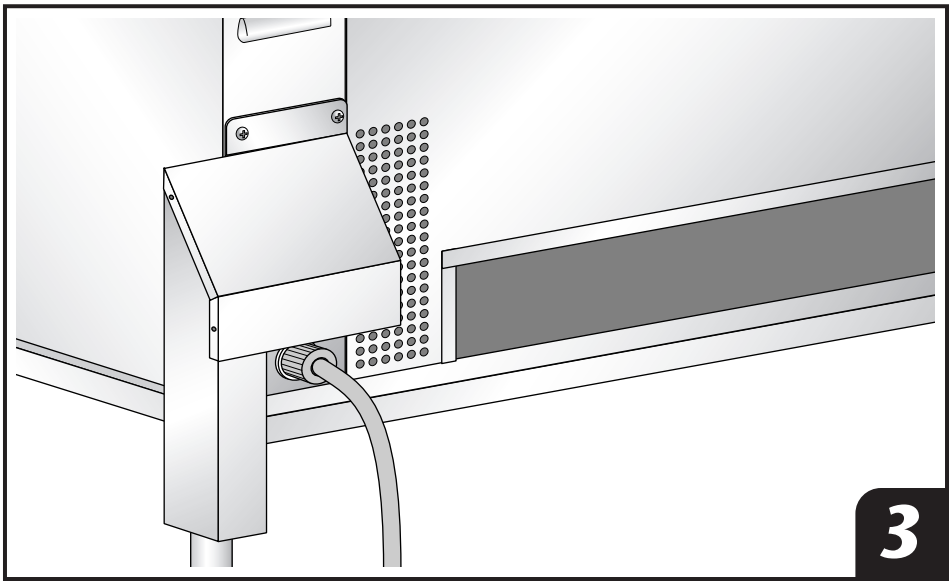
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Duke Manufacturing
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Malu Town, Jiading District
Shanghai 201801, China
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Electric Flexible Batch Broiler

Grease Shield Installation Instructions







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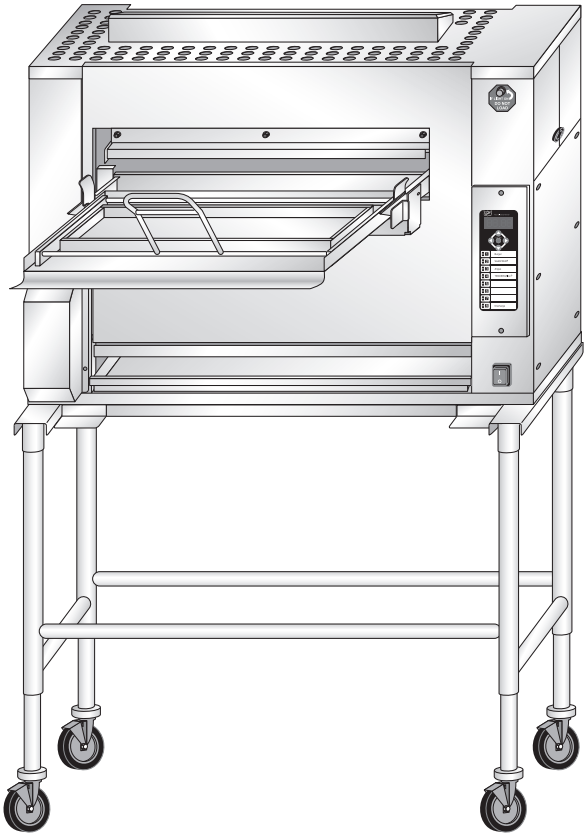
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P/N 177745A

Illustrated Parts List

Your Solutions Partner

FLEXIBLE BATCH BROILER – ELECTRIC DOMESTIC AND INTERNATIONAL



MODELS

FBB-EO-208
FBB-EC-208
FBB-EO-230
FBB-EC-230
FBB-EO-240
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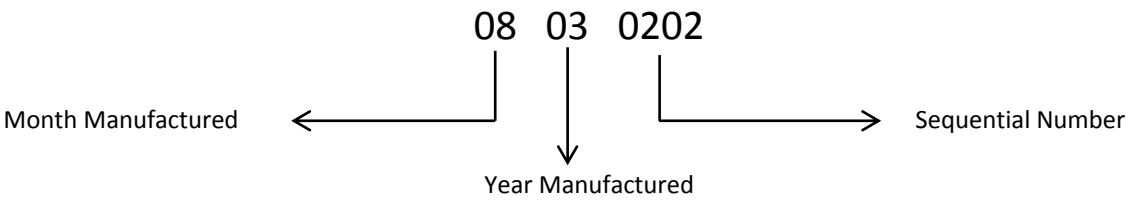
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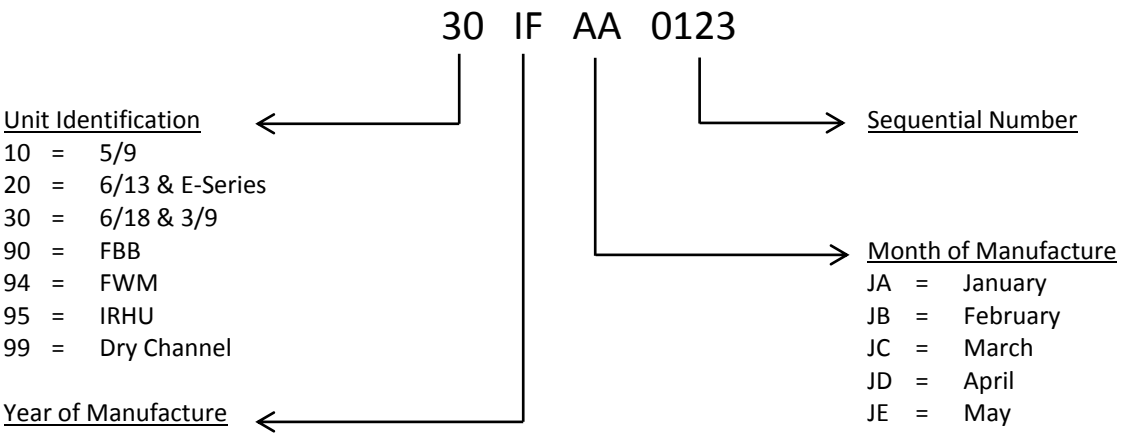
How to Determine Manufacture Date from Duke Equipment Serial Numbers

All units currently manufactured in St. Louis and Sedalia, Missouri (After 2/1/2013):



(Example: 08030202 = Indicates the unit was manufactured in August of 2003)

Units Manufactured in St. Louis, Missouri (Before 2/1/2013):



Unit Identification
- 10 = 5/9
- 20 = 6/13 & E-Series
- 30 = 6/18 & 3/9
- 90 = FBB
- 94 = FWM
- 95 = IRHU
- 99 = Dry Channel

Year of Manufacture
- A = 1
- B = 2
- C = 3
- D = 4
- E = 5
- F = 6
- G = 7
- H = 8
- I = 9
- J = 0

(Examples)
(JJ = 2000)
(JA = 2001)
(JB = 2002)

Sequential Number

Month of Manufacture
- JA = January
- JB = February
- JC = March
- JD = April
- JE = May
- JF = June
- JG = July
- JH = August
- JI = September
- AJ = October
- AA = November
- AB = December

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WIRE SCHEMATIC CE 13

PANELS, COVERS & PANS

ITEM	DESCRIPTION	P/N
1	PRODUCT HOLDING PAN	156634
2	REAR PANEL	177052
3	INTERLOCK, SAFETY, MAGNET, BACK PANEL MOUNTED	177567
4	BODY TOP	177303
5	CATALYST, GUARD	175482
6	IMPEDANCE PAN (IF NO OPTIONAL CATALYST)	175226
7	CATALYST (OPTIONAL)	175480
8	INTERLOCK, SAFETY, MAGNET, CONTROL COMPARTMENT MOUNTED	177568
9	PANEL, ELEMENT CONNECTION ACCESS	177054
10	PANEL, FUSE ACCESS PANEL	177053
11	PANEL, ACCESS ELECTRICAL	177101
12	FRONT PANEL	175300K
13	LOADER RAMP	175741K
14	WELDMENT, HINGED DOOR	175429K
15	LOADER MOUNTING BRACKET	175878K
16	LOADER	175444K
Not Shown	KIT, HOT DOG LOADER	176818
17	LOADER TRAY	175430K
18	MAIN GREASE PAN	175329
19	“V” GREASE PAN	177011
20	PANEL, FRONT COOK CHAMBER	177154
21	KIT, FLAME ARRESTOR	600222
22	REFLECTOR, HEATING ELEMENT, LOWER	177012
23	HEATING ELEMENT KIT, 3300 W, #1, TOP, LEFT, 208 VAC	600204
	HEATING ELEMENT KIT, 3300 W, #1, TOP, LEFT 230 VAC	600205K
	HEATING ELEMENT KIT, 3300 W, #1, TOP, LEFT 240 VAC	600206
24	HEATING ELEMENT KIT, 3300 W, #2, TOP, CENTER, 208 VAC	600207
	HEATING ELEMENT KIT, 3300 W, #2, TOP, CENTER, 230 VAC	600208K
	HEATING ELEMENT KIT, 3300 W, #2, TOP, CENTER, 240 VAC	600209
25	HEATING ELEMENT KIT, 3300 W, #3, TOP, RIGHT 208 VAC	600210
	HEATING ELEMENT KIT, 3300 W, #3, TOP, RIGHT 230 VAC	600211K
	HEATING ELEMENT KIT, 3300 W, #3, TOP, RIGHT 240 VAC	600212
26	HEATING ELEMENT KIT, 3800/2200 W, #4, BOTTOM, LEFT, 208 VAC	600213K
	HEATING ELEMENT KIT, 3800/2200 W, #4, BOTTOM, LEFT 230 VAC	600214K
	HEATING ELEMENT KIT, 3800/2200 W, #4, BOTTOM, LEFT 240 VAC	600215
27	HEATING ELEMENT KIT, 3800 W, #5, BOTTOM, CENTER, 208 VAC	600216K
	HEATING ELEMENT KIT, 3800 W, #5, BOTTOM, CENTER, 230 VAC	600217K
	HEATING ELEMENT KIT, 3800 W, #5, BOTTOM, CENTER, 240 VAC	600218
28	HEATING ELEMENT KIT, 3800 W, #6, BOTTOM, RIGHT 208 VAC	600219
	HEATING ELEMENT KIT, 3800 W, #6, BOTTOM, RIGHT 230 VAC	600220K
	HEATING ELEMENT KIT, 3800 W, #6, BOTTOM, RIGHT 240 VAC	600221
29	MOTOR COVER, CONVEYOR DRIVE MOTOR	175177
30	DISCHARGE SHIELD	177155
31	PIVOT ASH SCRAPER	175150K
Not Shown	PIVOT SCRAPER MOUNTING BRACKET	175019
32	PANEL, ACCESS DISCHARGE	175866
Not Shown	KIT, BRACKET, DISCHARGE CHUTE	600330
33	DISCHARGE CHUTE	175340
34	PRODUCT PAN SHELF	175353
35	DISCHARGE HOOD	175778K

Table: PL-1 Panels, Covers & Pans

PANELS, COVERS & PANS

36	DISCHARGE PAN	175358K
37	GREASE PAN, SIDE	175357K
Not Shown	LATCH, PIN	177527
Not Shown	LATCH, TOGGLE	177525

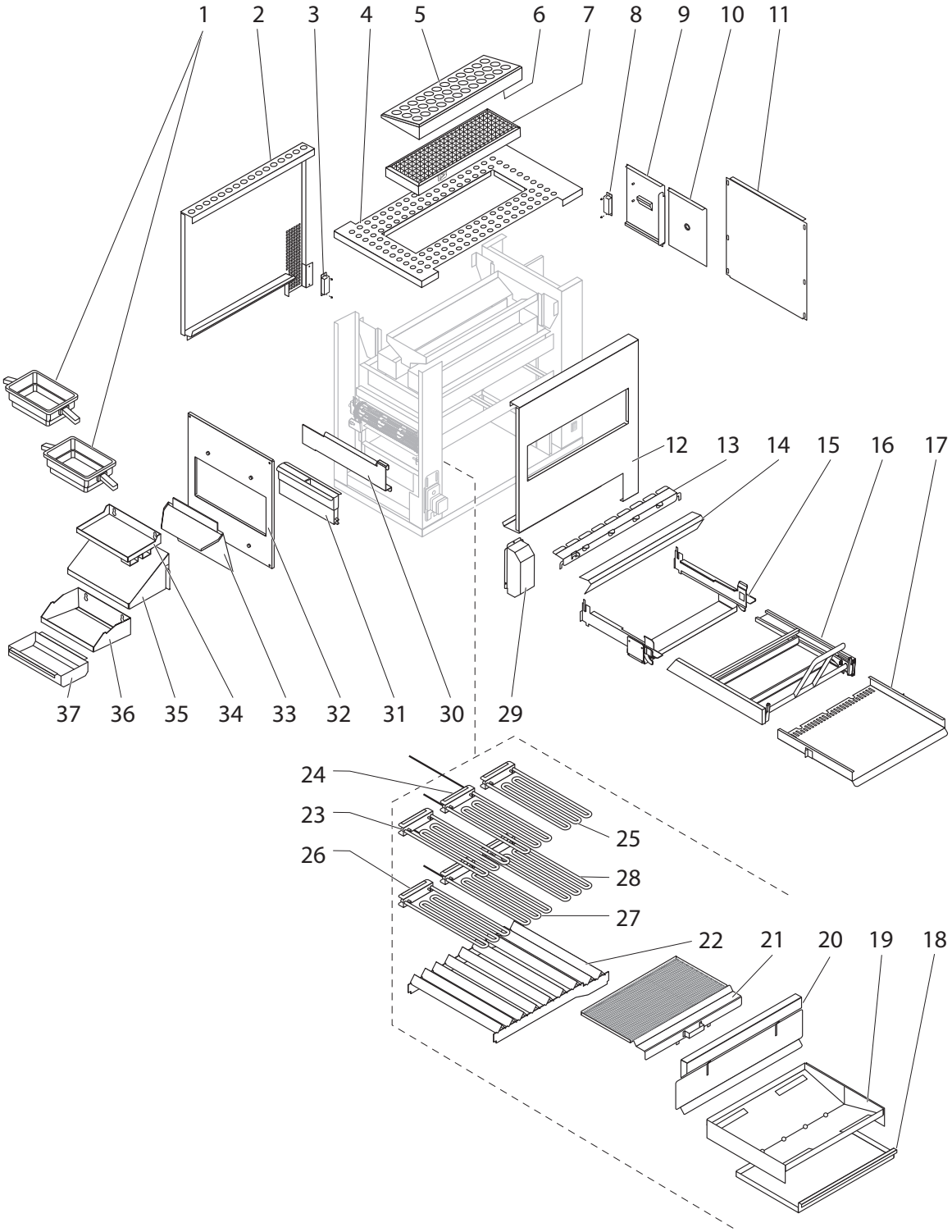
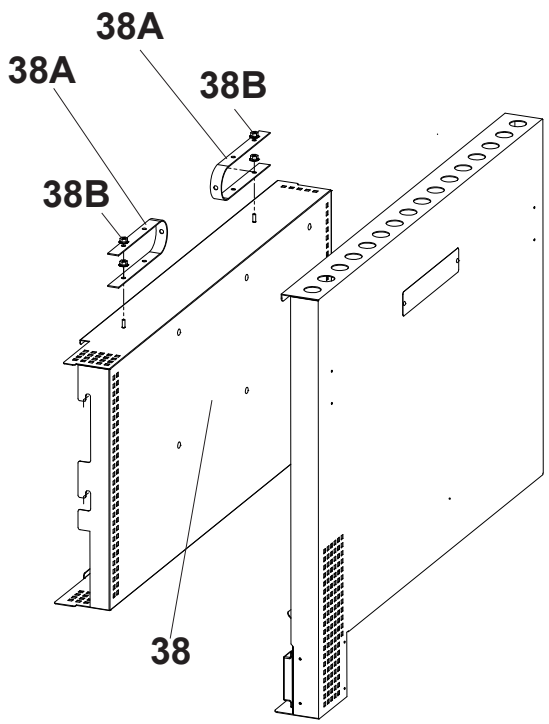


Figure: PL-1 Panels, Covers & Pans

REAR & DISCHARGE COMPONENTS

ITEM	DESCRIPTION	P/N
38	BACK ELEMENT COVER	177097
38A	HARNESS, GROUND STRAP	177598
38B	NUT, 10-32 SERRATED, S/S	168144
39	PLUG, PIN & SLEEVE	177569
40	POWER CORD	177094
41	STRAIN RELIEF	177575
42	KIT, TEMPERATURE PROBE	175977K
43	BUSHING BLOCK, CONVEYOR	175525
44	MOUNTING BRACKET, CONVEYOR BUSHING BLOCK, LEFT SIDE	175022
45	SHAFT, DISCHARGE SIDE	175037K
46	CHAIN, DRIVE	175551
47	CHAIN, COOK	175674

Table: PL-2 Rear & Discharge Components



REAR & DISCHARGE COMPONENTS

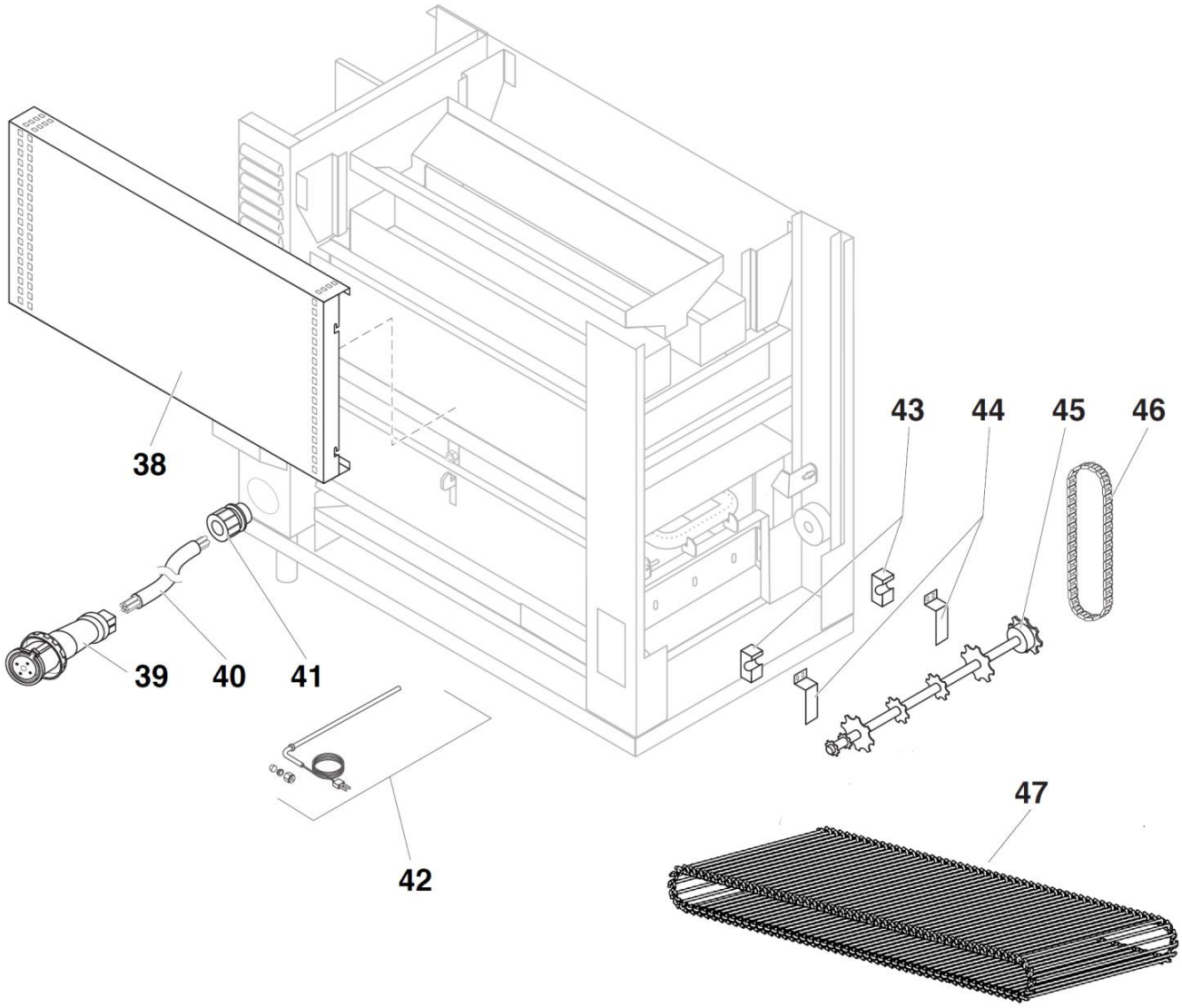


Figure: PL-2 Rear & Discharge Components

TOP, FRONT & ELECTRICAL COMPONENTS

ITEM	DESCRIPTION	P/N
48	MOTOR, CONVEYOR	175875K
49	MOUNTING BRACKET, MOTOR	175176
50	SPROCKET, B21X3/8 BORE (MOTOR)	175517
51	ASSEMBLY, FUSEHOLDER PANEL 208/230/240V	177099
52	INTERLOCK SAFETY SWITCH, REAR PANEL	177044
53	CIRCUIT BREAKER, 10 AMP	177562
54	FUSE	177637
55	COOLING FAN	177329
56	FUSE HOLDER	177513
57	INTERLOCK SAFETY SWITCH, ELECTRICAL ACCESS PANEL	177042
58	SENSOR, CURRENT	167614
59	LIGHT, COOK	175550
60	GASKET, CONTROL BEZEL	175510
61	ASSEMBLY, CONTROLLER, DOMESTIC, 208 VAC	177091
	ASSEMBLY, CONTROLLER, CE 230 VAC	177092K
	ASSEMBLY, CONTROLLER, DOMESTIC, 240 VAC	177337
Not Shown	KIT, MYLAR REPLACEMENT	176039
62	BEZEL, CONTROL	175356
63	SWITCH, LIGHTED, DPST	175503
64	SHAFT, RIGHT SIDE	175038
65	BUSHING BLOCK, CONVEYOR	175525
66	CONTROL, DIAGNOSTIC BOARD	177331
67	MECHANICAL RELAY, DPDT, 10A	177571
68	TRANSFORMER, 40VA, 230VAC-24VAC	175765
69	RELAY, SOLID STATE, 10 AMP, CONVEYOR	175870K
70	CAPACITOR, MOTOR-CONVEYOR	175802
71	CONTACTOR	177330
72	TERMINAL BLOCK, SUPPLY 3P 175A (208/240V)	177502
	TERMINAL BLOCK, SUPPLY 4P 80A (230V)	177503
73	RELAY, SOLID STATE, 50 AMP, DC INPUT, HEATING ELEMENT	177096
74	RELAY, SOLID STATE, 50 AMP, AC INPUT, HEATING ELEMENT	177095K
75	THERMOSTAT, HEAT SINK	168324
76	TERMINAL BLOCK, HEAT ELEMENTS DOMESTIC (208/240V)	177504
	TERMINAL BLOCK, HEAT ELEMENTS CE (230V)	177505
HARNESSES		
Not Shown	HARNESS, SSR SUPPLY	177601
Not Shown	HARNESS, TB & CT MAIN POWER	177602
Not Shown	HARNESS, SSR FUSE AND TERMINAL	177724
Not Shown	HARNESS, CURRENT SENSORS	177605
Not Shown	HARNESS, CONTROL AC POWER	177606
Not Shown	HARNESS, LOW VOLTAGE	177607
Not Shown	HARNESS, CONTROL TO DIAGNOSTIC BOARD	177597
Not Shown	HARNESS, FUSES & ELEMENT PLUGS	177599
Not Shown	HARNESS, CONVEYOR MOTOR	175609

Table: PL-3 Top, Front & Electrical Components

TOP, FRONT & ELECTRICAL COMPONENTS

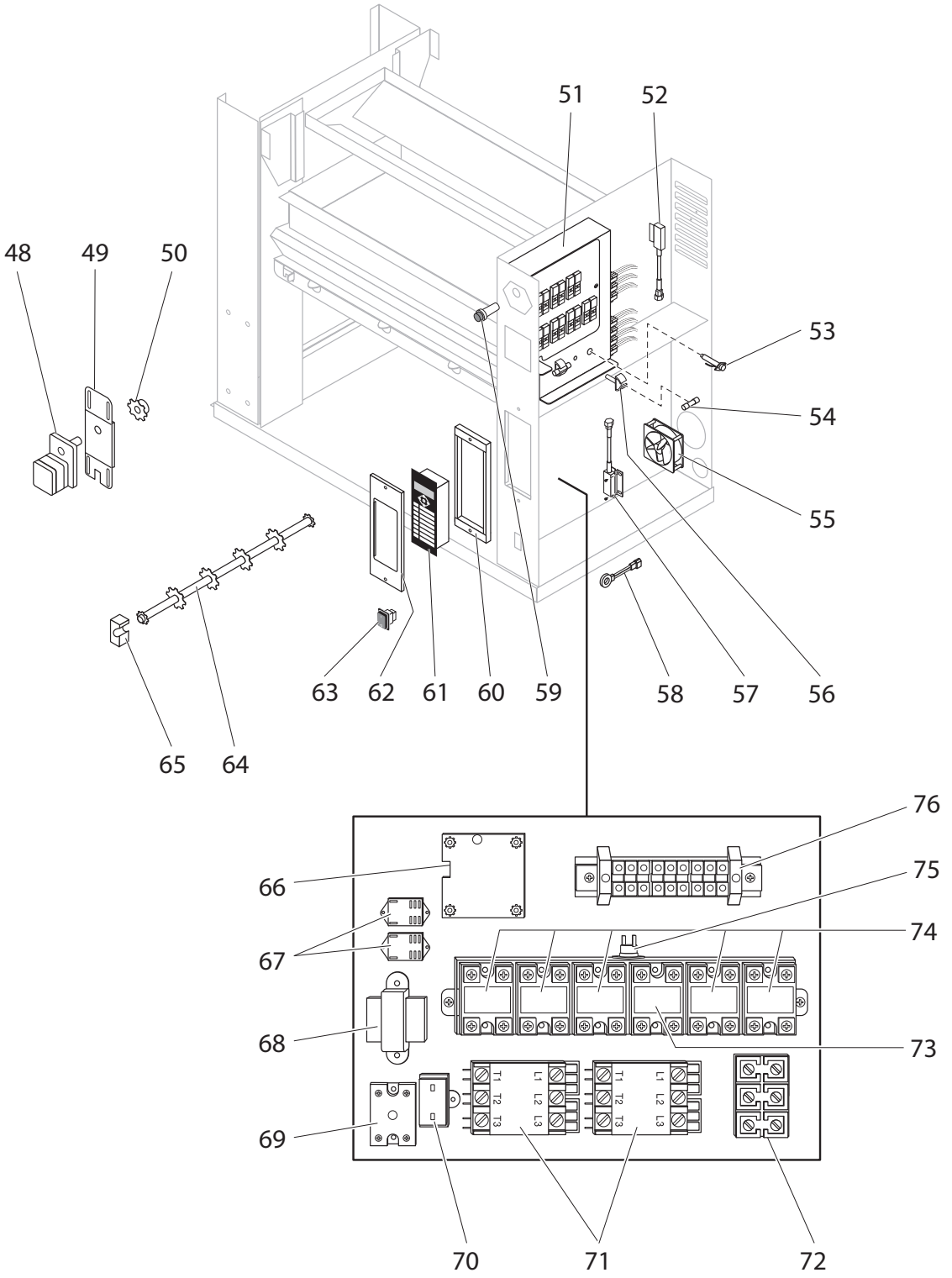


Figure: PL-3 Top, Front & Electrical Components

STAND COMPONENTS

ITEM	DESCRIPTION	P/N
77	WELDMENT, KD WELDED BROILER STAND	175999
78	ASSEMBLY, LEG EXTENTENSION W/BRAKE	175462PC
Not Shown	CASTER, STEM W/BRAKE	175562
79	ASSEMBLY, LEG EXTENSION W/O BRAKE	175463PC
Not Shown	CASTER, STEM W/O BRAKE	175563
80	WELDMENT, TOP BROILER STAND	175961PC
81	WELDMENT, SANITIZER BRACKET	175748
82	SCREW, 5/16-18 X 3/4 BT SKT S	175468
83	SADDLE, U-BOLT	175459
84	U-BOLT, 1/4-20 X 1-1/4	175565
85	NUT, 1/4-20 ACORN SS	0220750SED
86	PIPING, GAS SUPPLY	175570
87	SCREW, 10-24 X 3/8" PTHMS SS	213028
88	KIT, NYLON RIVET	175722PC
89	WELDMENT, CLEANING TOOL	177301
90	SANITATION PAIL	175842

Table: PL-3 Stand Components

STAND COMPONENTS

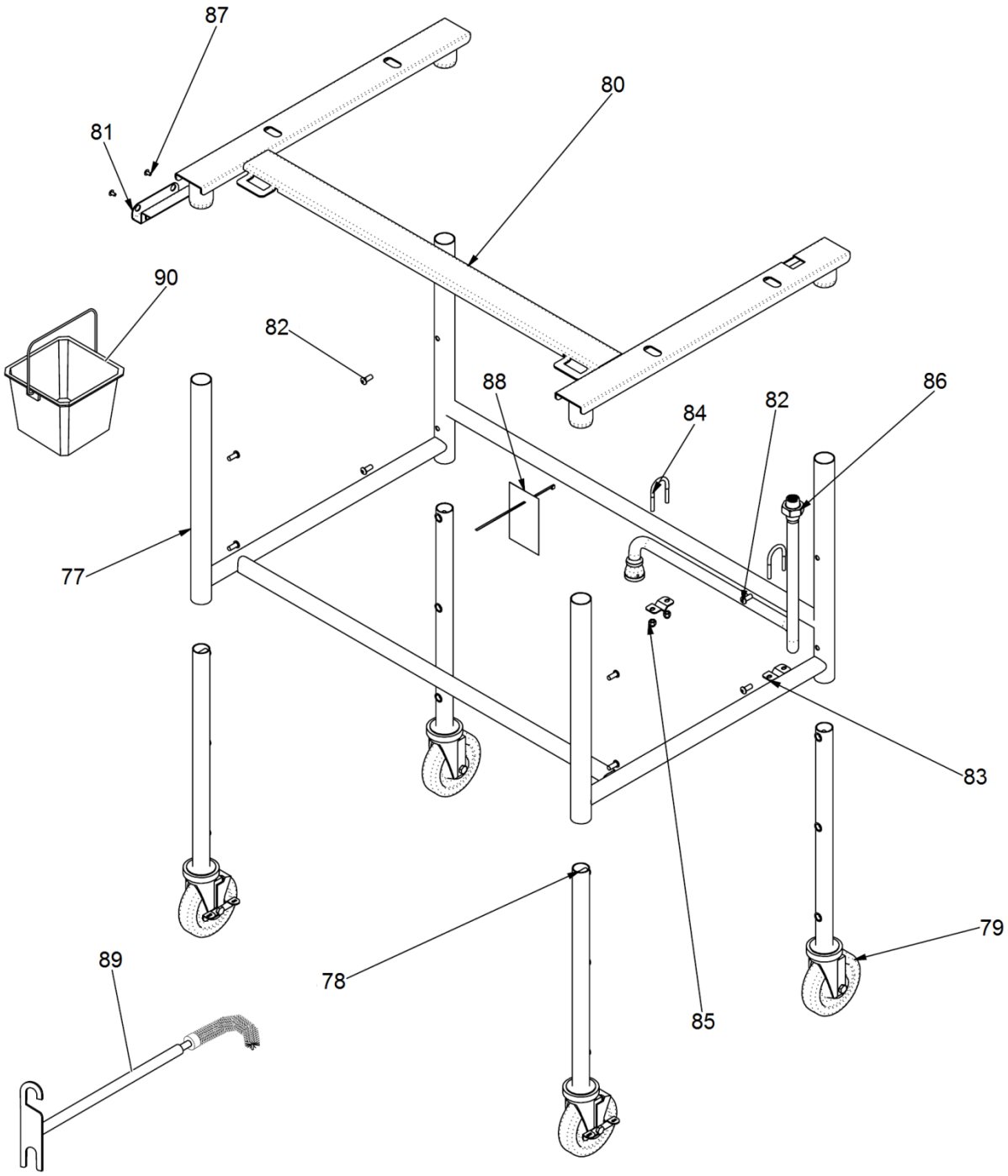
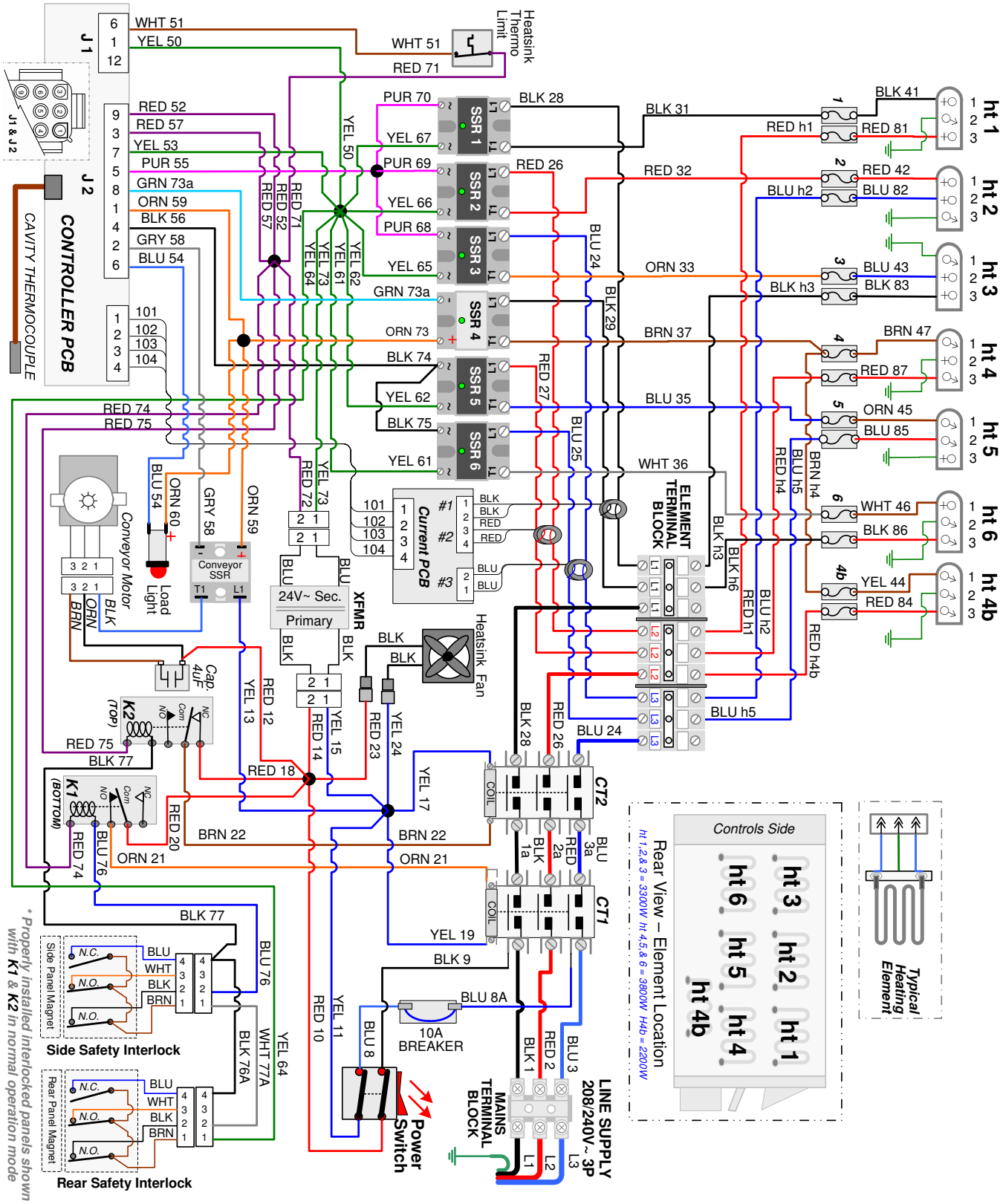


Figure: PL-3 Stand Components

177623D
09/07/17

Wire Diagram - Electric FBB, 208/240V~ 3P

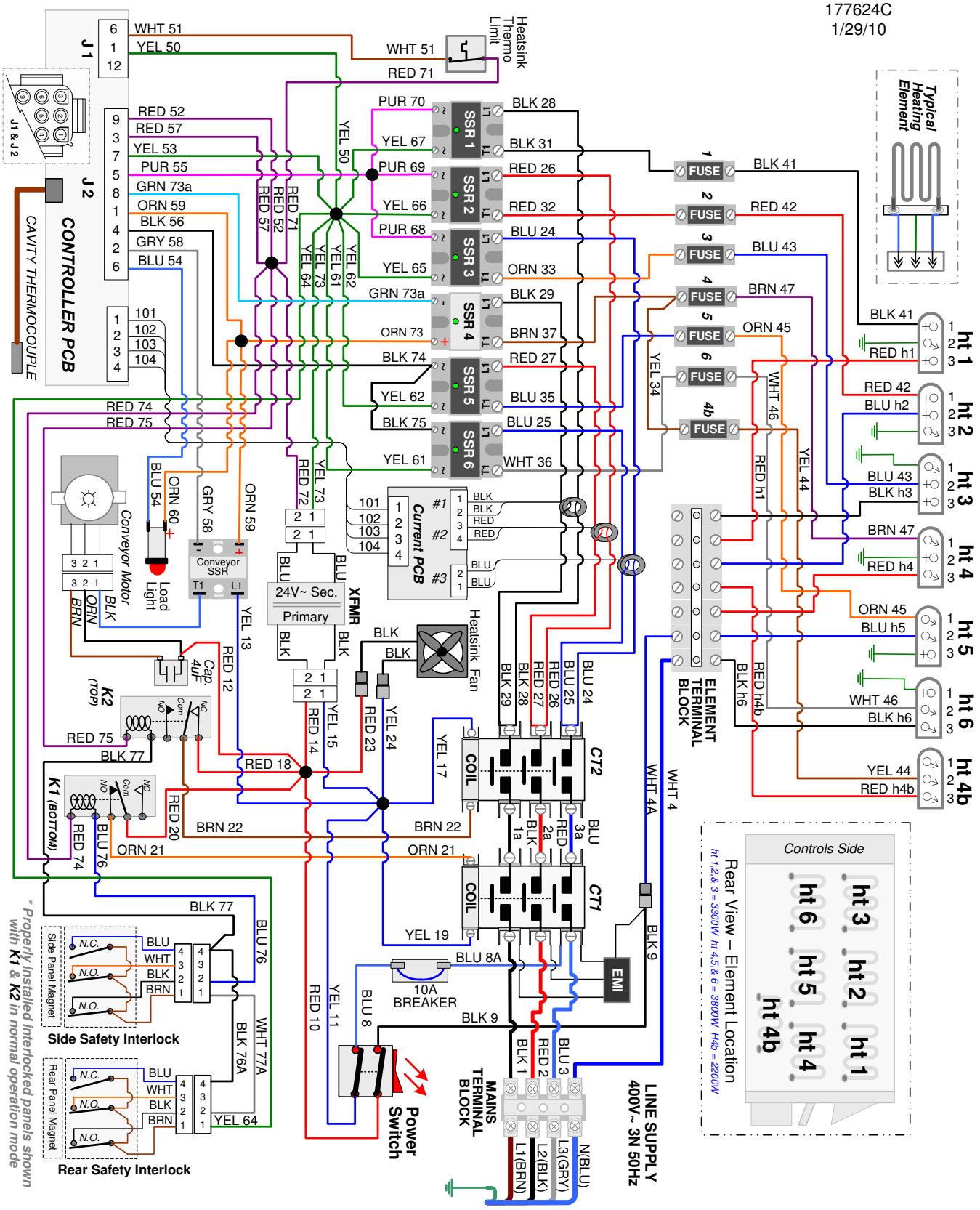
** Shown with power ON & in normal operation mode*



Wire Diagram - Electric FBB, 400 3N 50Hz

** Shown with power ON & in normal operation mode*

177624C
1/29/10



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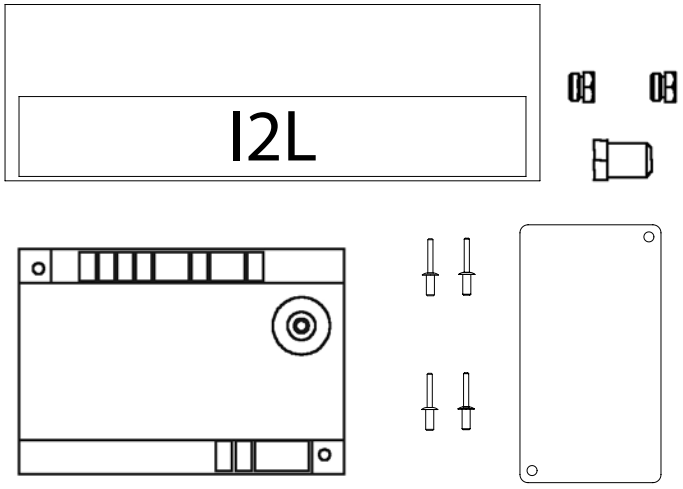
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Low Heating Value/G25 Gas Conversion Kit Instructions EMEA

FLEXIBLE BATCH BROILER

KIT P/N 176577



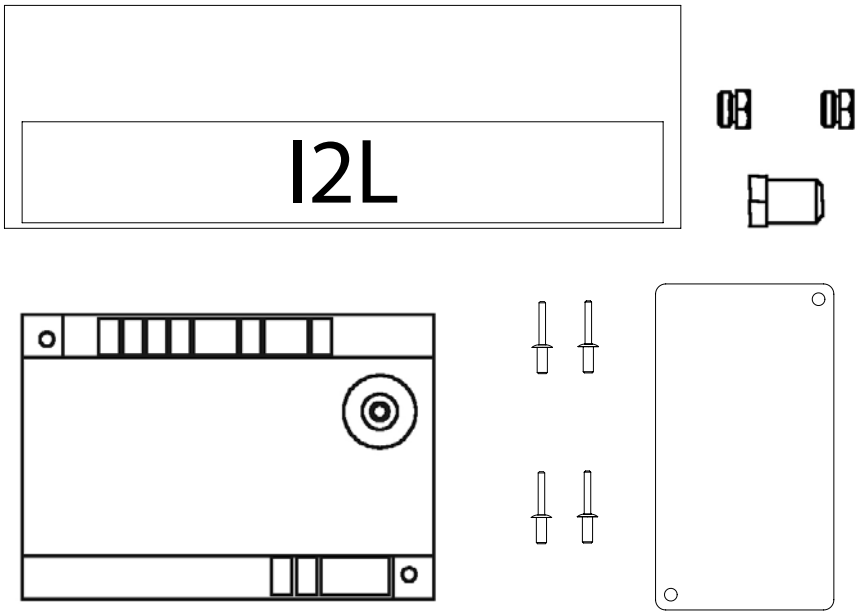
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P/N 176575A
01/21/2015

LOW HEATING VALUE/G25 GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 176577

This kit contains:

(1)	Orifice, IR Burner 2.35mm (Front Burner)	175814
(1)	Orifice, IR Burner 2.50mm (Rear Burner)	175815
(1)	Orifice, Lower Burner 3.26mm	175935
(1)	Broiler Conversion Data Plate	176573
(1)	Module, Ignition, Lower Burner, Natural Gas	175877
(1)	Label, I2L	175908
(4)	Rivets	168106

Items required for this installation:

- Torque Wrench
- Rivet Installation Tool
- Thread sealant rated for Natural Gas and LP gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 9/16 Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Small Straight blade screw driver
- Phillips Head screw driver
- 3/16" Hex key wrench
- #30 Drill Bit
- Digital or slack tube manometer with 1/8” male pipe thread hose barb
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

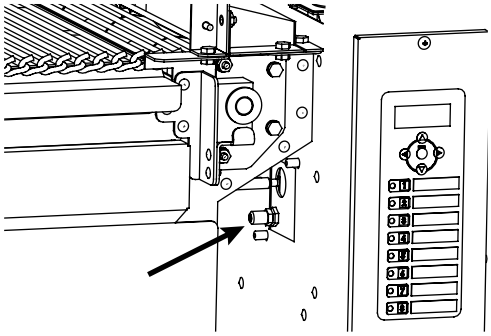
These installation instructions are for the use of Duke authorized service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information at the end of this manual.

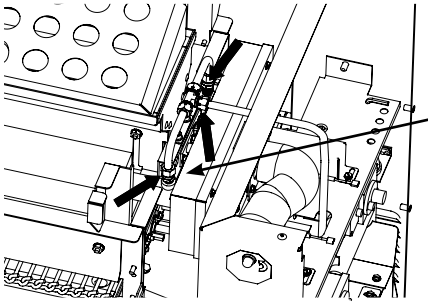
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

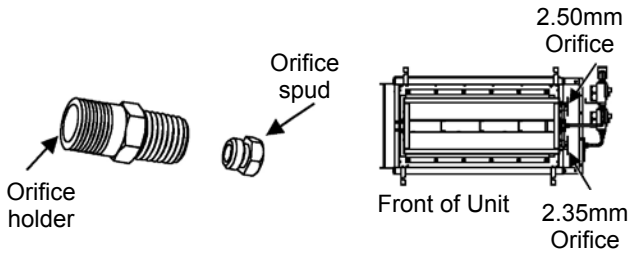
2) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 6.7 N.m. (60 IN LBS).



3) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

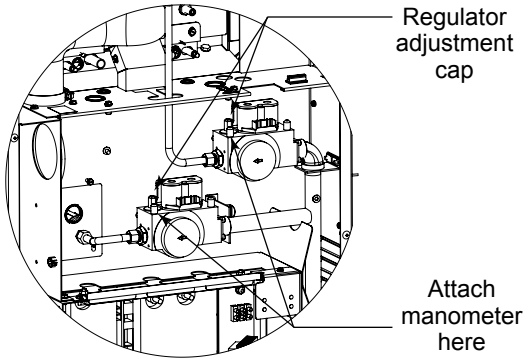


4) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 4.5 N.m. (40 in-lb.) REASSEMBLE FITTINGS AND GAS LINES.



5) CONNECT TO GAS AND ELECTRICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

6) ON UPPER VALVE, OPEN THE MANIFOLD PRESSURE TAP AND ATTACH MANOMETER. SWITCH BROILER "ON". WITH THE HEX KEY WRENCH ADJUST UNTIL MANOMETER READING IS 12.95mbar (5.20" W.C.). SHUT BROILER "OFF". REMOVE MANOMETER AND CLOSE THE PRESSURE TAP. REPEAT FOR BOTTOM VALVE. REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



7) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

8) CHECK THE LOWER BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. DRILL OUT THE RIVETS IN THE AIRSHUTTER OF THE BURNERS.

b. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

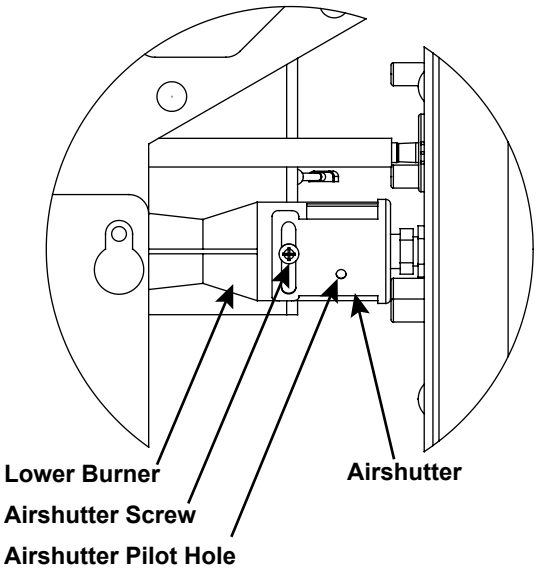
c. TIGHTEN THE AIRSHUTTER SCREW.

d. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/ OPERATIONS MANUAL)

e. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

f. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

g. REINSTALL THE BURNER INTO THE BROILER.



9) CHECK THE IR BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

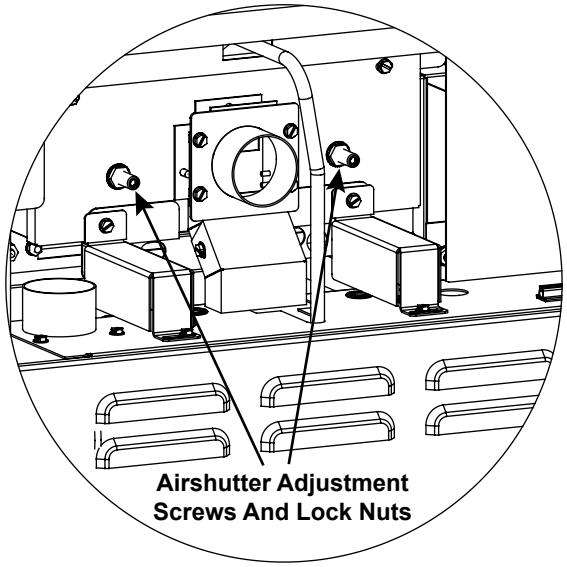
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16” WRENCH AND 3/16” HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

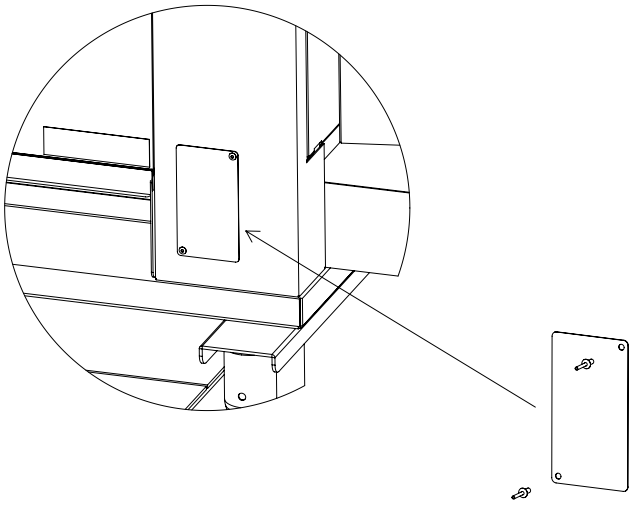
c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.



10) DRILL OUT RIVETS IN RATING TAG AND APPLY NEW RATINGS TAG OVER EXISTING TAG. USE SUPPLIED RIVETS TO RIVET THROUGH BOTH TAGS.



11) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS COMPLETE.

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LP Gas Conversion Kit Instructions

FLEXIBLE BATCH BROILER

KIT P/N 175612

ENGLISH

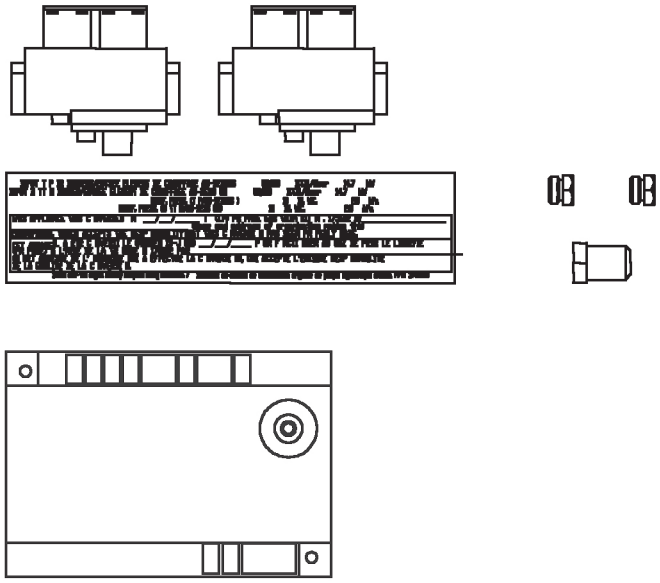
SPANISH

FRENCH

BRAZILIAN PORTUGUESE

JAPANESE

CHINESE



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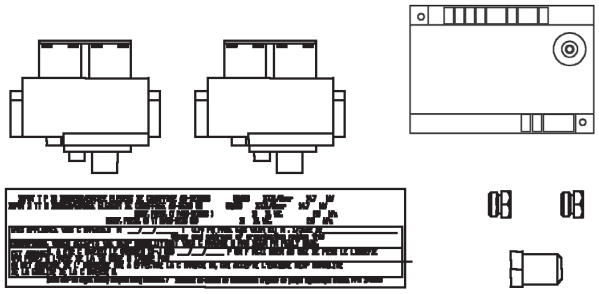
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Fax: 314-231-5074
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P/N 175686H

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LP GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 175612

This kit contains:

(2)	Valve, Combo, LP	175766
(1)	Orifice, IR Burner #52 mm (Front Burner)	175767
(1)	Orifice, IR Burner #51 mm (Rear Burner)	175768
(1)	Orifice, Lower Burner #49	175737
(1)	Broiler Conversion Label Nat.>Prop	175605
(1)	Module, Ignition, Lower Burner, Propane	175843

Items required for this installation:

- Torque Wrench
- Thread sealant rated for LP gas
- (2) Pipe Wrenches or
  (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Straight blade screw driver
- 3/16 hex key wrench
- Digital or slack tube manometer with 1/8” male pipe thread hose barb.
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual (Duke p/n 175500). If the manual is missing you must request one using the contact information at the end of this manual.

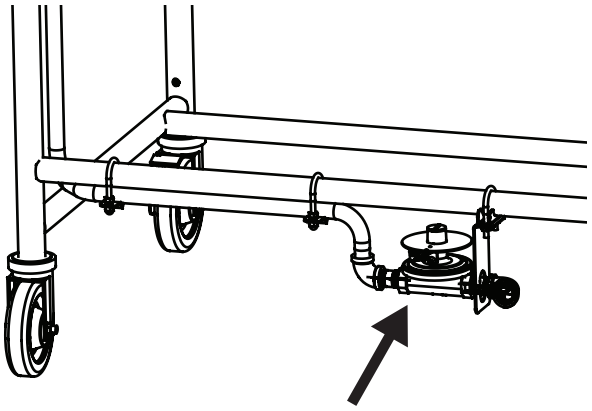
NOTICE TO INSTALLER:

THIS APPLIANCE SHALL NOT BE CONNECTED TO A GAS SUPPLY IN EXCESS OF ½ PSI (12" W.C.).

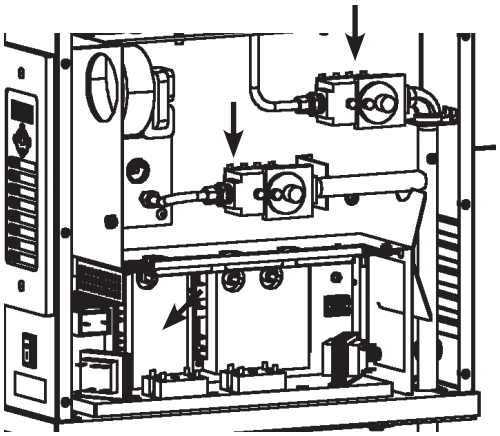
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

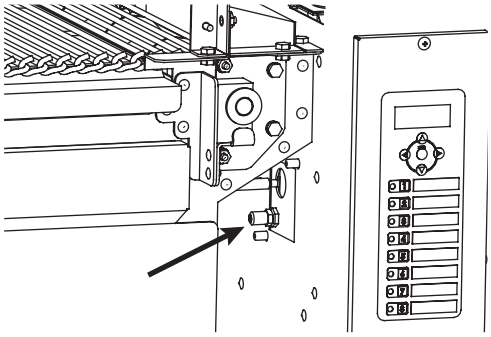
2) REMOVE OPTIONAL PRESSURE REGULATOR (IF INSTALLED). RECONNECT FITTINGS AS REQUIRED.



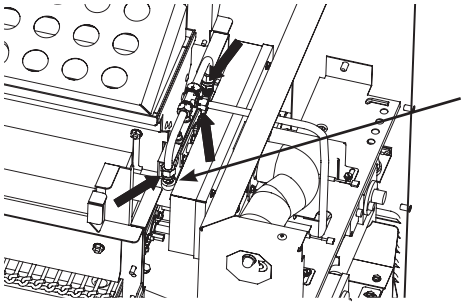
3) REMOVE (2) GAS VALVES AND REPLACE WITH NEW VALVES. BE SURE TO APPLY THREAD SEALANT TO ALL PIPE THREAD CONNECTIONS. REMOVE LOWER BURNER IGNITION MODULE AND REPLACE WITH NEW MODULE. SEE WIRING DIAGRAM ON CONTROL ACCESS PANEL FOR PROPER CONNECTIONS.



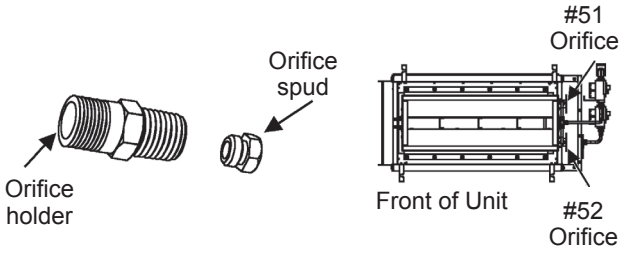
4) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. BE SURE TO APPLY THREAD SEALANT TO ORIFICE HOLDER THREADS. TORQUE ORIFICE TO 60 IN LBS (6.7 N.m.).



5) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

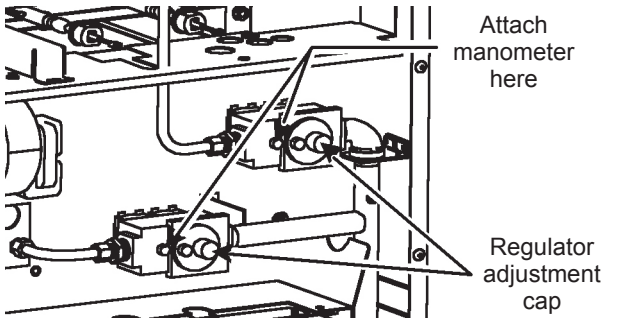


6) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8" WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8" WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 40 in-lb. REASSEMBLE FITTINGS AND GAS LINES.



7) CONNECT TO GAS AND ELECTICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

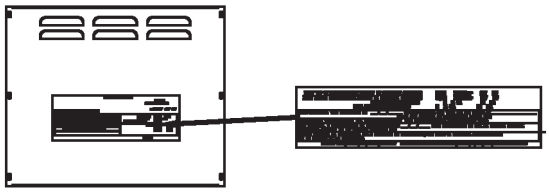
8) ON UPPER VALVE, REMOVE 1/8" PIPE PLUG AND ATTACHED MANOMETER. SWITCH BROILER "ON". WITH A SCREW DRIVER, REMOVE SLOTTED CAP FROM REGULATOR AND ADJUST UNTIL MANOMETER READING IS 8" W.C. REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



9) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

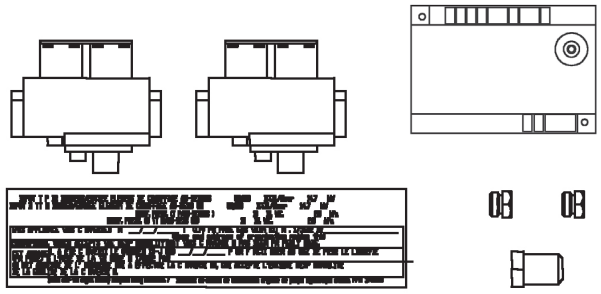
10) APPLY NEW RATINGS TAG OVER EXISTING RATINGS INFORMATION. FILL OUT BLANK AREAS ON NEW TAG AS INDICATED. CONVERSION IS COMPLETE.



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INSTRUCCIONES DEL JUEGO DE CONVERSIÓN DE GAS LP



ASADOR FLEXIBLE POR TANDAS JUEGO N/P 175612

Este juego contiene lo siguiente:

(2)	Válvula combinada de LP.	175766
(1)	Orificio de quemador de RI de 52 mm (quemador delantero)	175767
(1)	Orificio de quemador de RI de 51 mm (quemador trasero)	175768
(1)	Orificio de quemador inferior N° 49	175737
(1)	Etiqueta de conversión de asador Natural>Propano	175605
(1)	Módulo de encendido del quemador inferior, propano	175843

Artículos requeridos para esta instalación:

- Llave dinamométrica
- Sellante de roscas para gas LP.
- (2) Llaves para tubos o (1) llave para tubos y (1) llave ajustable
- (1) Llave de boca de 5/8”
- (1) Cubo de 1/2”
- (1) Llave de boca de 3/8”
- Destornillador de hoja recta
- Llave hexagonal de 3/16”
- Manómetro digital o “Snack Tube” con arpón de manguera roscado de tubo macho de 1/8”.
- Fluido de detección de fugas.

INSTRUCCIONES DE INSTALACIÓN

A. Personal capacitado

Estas instrucciones de instalación son para el uso exclusivo del personal de instalación y servicio capacitado. La instalación o el servicio por parte de personal que no esté capacitado puede provocar daños en el asador y lesiones al operador.

El personal de instalación capacitado son aquellos individuos, firmas, compañías o corporaciones que en persona o por medio de un agente participe y sea responsable de lo siguiente:

- La instalación o el reemplazo de tuberías de gas o la conexión, la instalación, la reparación o el servicio de equipos, que tengan experiencia en dicho trabajo, que estén familiarizados con todas las precauciones requeridas, y que hayan cumplido con todos los requisitos de las autoridades estatales y locales que tengan jurisdicción. Vea: Código Nacional para Gases Combustibles NFPA 54 (ANSI Z223.1).

La instalación debe cumplir con los códigos locales, o en ausencia de los mismos, con el Código Nacional de Gases Combustibles, ANSI Z223.1/NFPA 54, o con el Código de Instalación de Gas Natural y Propano, CSA B149.1 según corresponda, incluido lo siguiente:

Para un asador montado sobre ruedas, la instalación debe hacerse con un conector que cumpla con la norma para conectores de aparatos de gas móviles, ANSI Z21.69/CSA 6.16 y un dispositivo de desconexión rápida que cumpla con la norma para dispositivos de desconexión rápida para usar con combustible gaseoso, ANSI Z21.4/CSA 6.9. Al instalar el asador con ruedas y una manguera de desconexión rápida, se deben proporcionar medios adecuados para limitar el movimiento del asador sin depender del conector y del dispositivo de desconexión rápida o sus tuberías asociadas para limitar el movimiento del asador. Se puede conectar un medio de sujeción a la parte vertical del bastidor de la base en la parte trasera del asador.

Se dispone de instrucciones de instalación detalladas del asador en el manual de operación del asador flexible por tandas (N/P de Duke 175500). Si falta este manual, debe solicitar uno usando la información de contacto de la parte inferior de esta página.

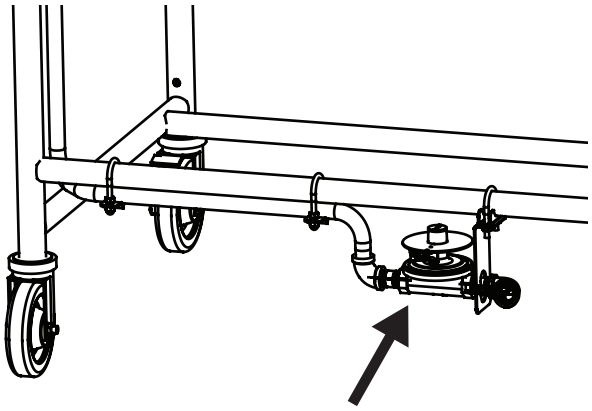
AVISO AL INSTALADOR:

ESTE JUEGO DEBE INSTALARSE EN EL ASADOR FLEXIBLE POR TANDAS CUANDO LA PRESIÓN DEL GAS DE SUMINISTRO SEA MAYOR QUE 12” DE AGUA.

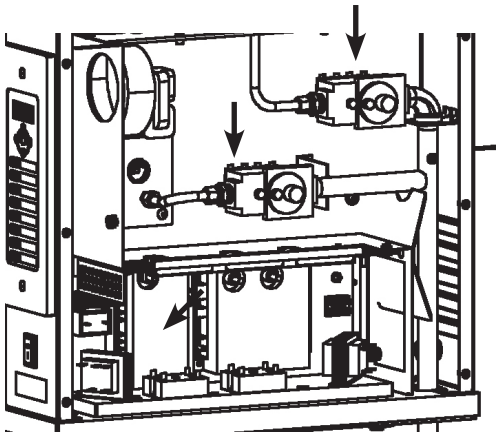
B. Procedimiento

1) DESENCHUFE EL ASADOR DE LA RED ELÉCTRICA. CIERRE LA VÁLVULA DE GAS PRINCIPAL Y DESCONECTE LA TUBERÍA DE SUMINISTRO.

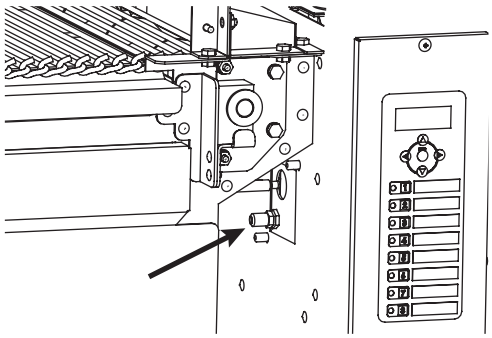
2) QUITE EL REGULADOR DE PRESIÓN OPCIONAL (SI LO TIENE INSTALADO). VUELVA A CONECTAR LAS CONEXIONES SEGÚN SEA NECESARIO.



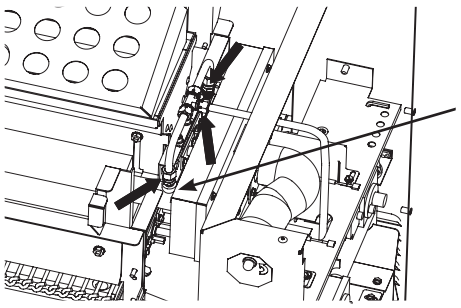
3) QUITE (2) VÁLVULAS DE GAS Y REEMPLÁCELAS POR VÁLVULAS NUEVAS. ASEGÚRESE DE APLICAR SELLANTE PARA ROSCAS A TODAS LAS CONEXIONES ROSCADAS DE TUBOS. QUITE EL MÓDULO DE ENCENDIDO DEL QUEMADOR INFERIOR Y REEMPLACE POR EL NUEVO MÓDULO. VEA EL DIAGRAMA DE CONEXIONES EN EL TABLERO DE ACCESO DE CONTROL PARA VER SI LAS CONEXIONES SON APROPIADAS.



4) QUITE EL QUEMADOR INFERIOR (VEA EL MANUAL DE INSTALACIÓN/OPERACIONES) PARA TENER ACCESO A LA CAPERUZA DE LA VÁLVULA DE ORIFICIO. USE UN CUBO DE 1/2" PARA QUITAR LA CAPERUZA DE LA VÁLVULA DE ORIFICIO Y REEMPLACE POR LA NUEVA VÁLVULA DE ORIFICIO. ASEGÚRESE DE APLICAR SELLANTE A LAS ROSCAS DEL RETENEDOR DE LA VÁLVULA DE ORIFICIO. APRIETE LA VÁLVULA DE ORIFICIO A 60 LB-PULG (6.7 N.m.

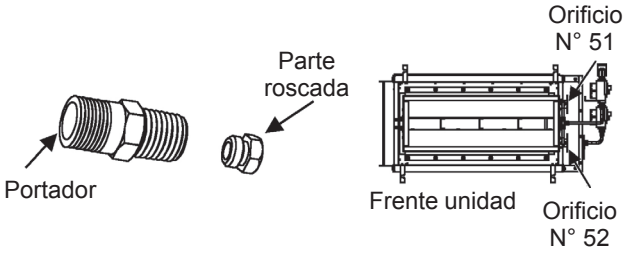


5) USE UNA LLAVE DE 5/8” PARA QUITAR LAS CONEXIONES DE COMPRESIÓN DE LA TUBERÍA DE GAS SUPERIOR (3 LUGARES) QUE CONECTAN AMBOS QUEMADORES DE RI.



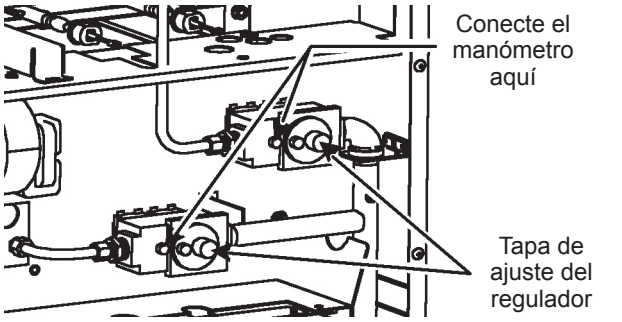
Portador de orificio con conexión de compresión.

6) CON LAS TUBERÍAS DE GAS QUITADAS, QUITE LOS PORTADORES DE LOS ORIFICIOS DE LOS QUEMADORES CON UNA LLAVE DE 5/8". QUITE LA PARTE ROSCADA DEL ORIFICO DEL PORTADOR CON UNA LLAVE DE 3/8". REEMPLACE POR UNA NUEVA PARTE ROSCADA DEL ORIFICIO A 40 LB-PULG. VUELVA A MONTAR LAS CONEXIONES Y LAS TUBERÍAS DE GAS.



7) CONECTE AL SERVICIO DE GAS Y ELÉCTRICO. SI SE TRATA DE UNA NUEVA INSTALACIÓN, DEBE SEGUIR LAS INSTRUCCIONES DE INSTALACIÓN Y OPERACIÓN DEL ASADOR FLEXIBLE POR TANDAS.

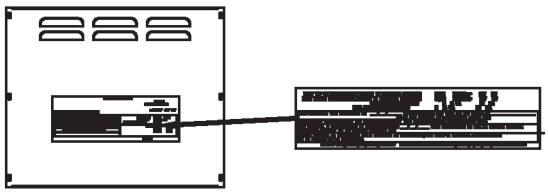
8) EN LA VÁLVULA SUPERIOR, QUITE EL TAPÓN DE TUBERÍA DE 1/8" Y EL MANÓMETRO CONECTADO. ENCIENDA EL ASADOR. USE UN DESTORNILLADOR PARA QUITAR LA TAPA RANURADA DEL REGULADOR Y AJÚSTELA HASTA QUE LA LECTURA DEL MANÓMETRO SEA DE 8" DE AGUA: VUELVA A COLOCAR LA TAPA. APAGUE EL ASADOR. QUITE EL MANÓMETRO Y REEMPLACE EL TAPÓN DE TUBERÍA. REPITA ESO PARA LA VÁLVULA INFERIOR.



9) COMPRUEBE SI HAY FUGAS EN TODAS LAS CONEXIONES CON EL ASADOR EN FUNCIONAMIENTO.

NOTA: *LOS DETECTORES DE FUGAS ELECTRÓNICOS DARÁN FALSAS LECTURAS EN LA PARTE SUPERIOR DEL ASADOR CERCA DE LOS ORIFICIOS DE RI Y DE LAS TUBERÍAS DE GAS. ESTO SE DEBE A PRODUCTOS DE COMBUSTIÓN CERCA DEL CONDUCTO DE HUMOS. USE UN FLUIDO DE COMPROBACIÓN DE FUGAS O SOLUCIÓN JABONOSA EN ESTA ÁREA.*

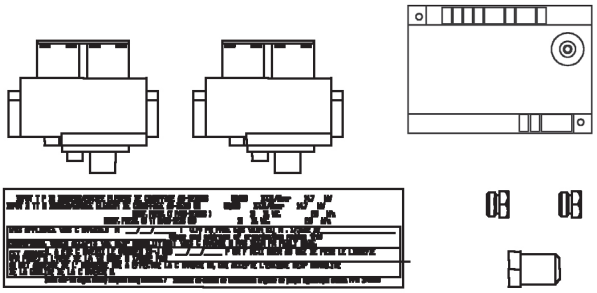
10) APLIQUE LA ETIQUETA DE NUEVOS VALORES NOMINALES SOBRE LA INFORMACIÓN DE VALORES NOMINALES EXISTENTE. RELLENE LAS ÁREAS EN BLANCO DE LA NUEVA ETIQUETA SEGÚN SE INDICA. LA CONVERSIÓN ESTÁ COMPLETA.



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INSTRUCTIONS POUR KIT DE CONVERSION AU PROPANE LIQUÉFIÉ



RÔTISSOIRE À FOURNÉE VARIABLE KIT N° 175612

Composition du kit :

(2) Robinet, mixte, propane liquéfié 175766

(1) Orifice calibré, brûleur inf. n° 52 mm (brûleur avant) 175767

(1) Orifice calibré, brûleur inf. n° 51 mm (brûleur arrière) 175768

(1) Orifice calibré, brûleur inférieur n° 49 175737

(1) Étiquette conversion de rôtissoire gaz nat.>prop. 175605

(1) Module, allumage, brûleur inférieur, propane 175843

Accessoires nécessaires pour cette installation :

- Clé dynamométrique
- Pâte d'étanchéité pour raccords filetés adaptée au propane liquéfiée
- (2) Clés à tube ou (1) clé à tube et (1) clé à molette
- (1) Clé à fourche de 5/8 po
- (1) Douille de 1/2 po
- (1) Clé à fourche de 3/8 po
- Tournevis plat
- Clé Allen de 3/16 po
- Manomètre numérique ou Slack Tube® à raccord cannelé à filetage extérieur de 1/8 po.
- Liquide pour détection des fuites.

INSTRUCTIONS D'INSTALLATION

A. Personnel qualifié

Ces instructions d'installation sont destinées à un personnel d' installation et d'entretien qualifié uniquement. Une installation ou un entretien effectué par quiconque autre que du personnel qualifié peut entraîner des dégâts pour la rôtissoire et/ou des blessures pour l'opérateur.

Par personnel d'installation qualifié on entend les personnes ou entreprises qui, directement ou par l'intermédiaire d'un agent, se chargent et sont responsables de ce qui suit :

- Pose ou remplacement de canalisations de gaz, ou raccordement, installation, réparation ou entretien du matériel. Ce personnel doit avoir une solide expérience de ce genre de travail, être familiarisé avec toutes les précautions à prendre et avoir satisfait à toutes les conditions exigées par les autorités provinciales et locales compétentes. Voir : National Fuel Gas Code (Code national des combustibles gazeux), NFPA 54 (ANSI Z223.1).

L'installation doit être conforme aux codes locaux ou, en leur absence, au National Fuel Gas Code, ANSI Z223.1/NFPA 54 ou au Natural Gas and Propane Installation Code (Code des installations au gaz naturel et au propane), ACNOR B149.1 selon le cas, y compris :

Pour une rôtissoire montée sur des roulettes, l'installation doit être effectuée en utilisant un raccord conforme à la norme applicable aux raccords pour appareils à gaz mobiles, ANSI Z21.69/ACNOR 6.16 et un dispositif à débranchement rapide conforme à la norme applicable à ce type de raccord pour combustible gazeux, ANSI Z21.4/ACNOR 6.9. Lors de l'installation d'une rôtissoire à roulettes et tuyau à débranchement rapide, des dispositions suffisantes doivent être prises pour limiter le déplacement de la rôtissoire indépendamment du raccord et du dispositif à débranchement rapide ou de la tuyauterie associée. Il est possible de fixer un limiteur à la partie verticale du châssis à l'arrière de la rôtissoire.

Des instructions détaillées d'installation de la rôtissoire à fournée variable sont données dans son manuel d'installation et d'utilisation (n° réf. Duke 175500). Si on a perdu ce manuel, on peut en demander un autre en utilisant les informations sur les contacts figurant au bas de cette page.

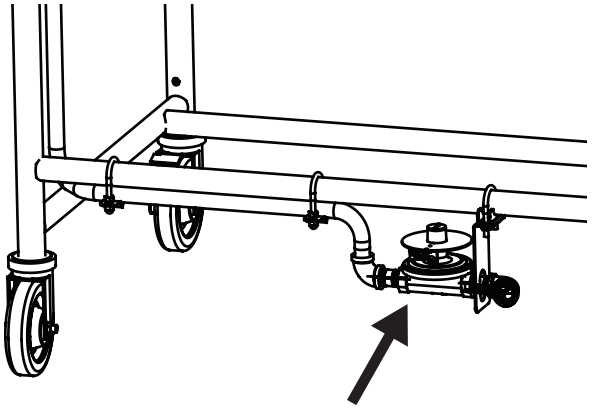
AVIS À L'INSTALLATEUR :

CET APPAREIL NE DOIT PAS ÊTRE RACCORDÉ À UNE ALIMENTATION EN GAZ DONT LA PRESSION DEPASSE 3,4 KPA (½ PSI) (12 PO C.E.).

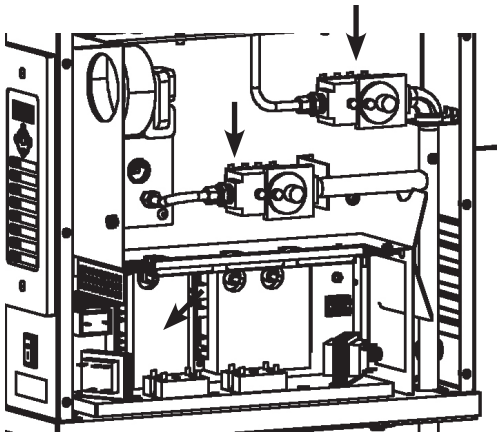
B. Marche à suivre

1) DÉBRANCHER LA RÔTISSOIRE DE LA PRISE DE COURANT. FERMER LA VANNE D'ALIMENTATION PRINCIPALE ET DÉBRANCHER LE TUYAU D'ALIMENTATION.

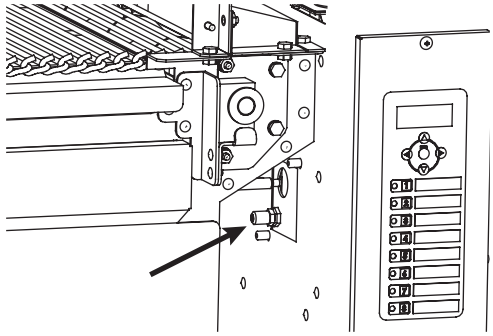
2) DÉPOSER LE DÉTENDEUR EN OPTION (LE CAS ÉCHÉANT). REBRANCHER LES RACCORDS SELON LE BESOIN.



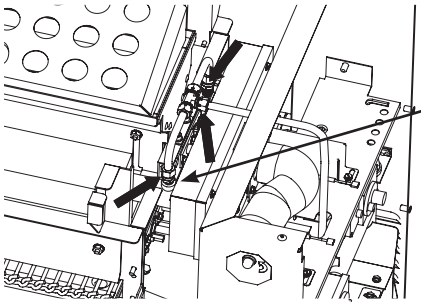
3) DÉPOSER LES (2) ROBINETS À GAZ ET LES REMPLACER PAR LES NOUVEAUX. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR TOUS LES JOINTS. DÉPOSER LE MODULE D'ALLUMAGE DU BRÛLEUR INFÉRIEUR ET LE REMPLACER PAR LE NOUVEAU. VOIR LE SCHÉMA DE CÂBLAGE SUR LE PANNEAU D'ACCÈS AUX COMMANDES POUR LES RACCORDEMENTS CORRECTS.



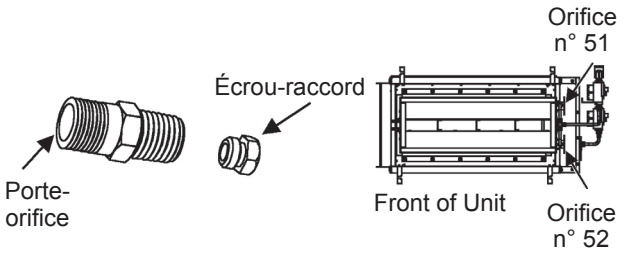
4) DÉPOSER LE BRÛLEUR INFÉRIEUR (VOIR LE MANUEL D'INSTALLATION/UTILISATION) POUR ACCÉDER AU CHAPEAU D'ORIFICE CALIBRÉ. ENLEVER LE CHAPEAU D'ORIFICE À L'AIDE D'UNE DOUILLE DE 1/2 PO ET REMPLACER L'ORIFICE PAR UN NEUF. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR LE FILETAGE DU PORTE-ORIFICE. SERRER L'ORIFICE À 6,7 N.m (60 PO-LBS.)



5) À L'AIDE D'UNE CLÉ DE 5/8 PO, RETIRER LES RACCORDS À COMPRESSION DE LA CANALISATION SUPÉRIEURE DE GAZ (3 ENDROITS) QUI RELIE LES DEUX BRÛLEURS INFRAROUGES.

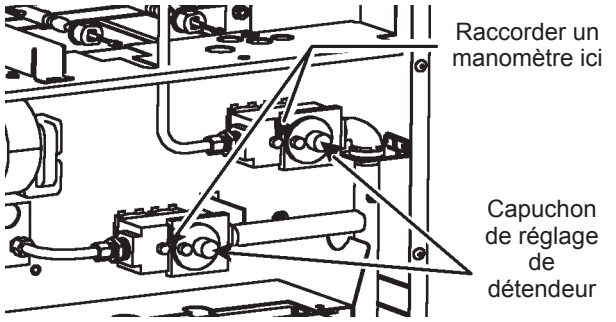


6) LES CANALISATIONS DE GAZ ÉTANT DÉBRANCHÉES, DÉPOSER LES PORTES-ORIFICE DES BRÛLEURS À L'AIDE D'UNE CLÉ DE 5/8 PO. RETIRER L'ÉCROU-RACCORD DU PORTE-ORIFICE À L'AIDE D'UNE CLÉ DE 3/8 PO. LE REMPLACER PAR LE NOUVEAU ET LE SERRER À 4,5 Nm (40 lb-po). RÉASSEMBLER LES RACCORDS ET LES CANALISATIONS DE GAZ.



7) RACCORDER L'APPAREIL À L'ARRIVÉE DE GAZ ET AU SECTEUR. S'IL S'AGIT D'UNE NOUVELLE INSTALLATION, SUIVRE LES INSTRUCTIONS D'INSTALLATION ET D'UTILISATION DE LA RÔTISSOIRE À FOURNÉE VARIABLE.

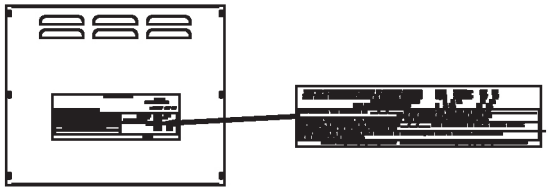
8) ENLEVER LE BOUCHON TUBULAIRE DE 1/8 PO DU ROBINET SUPÉRIEUR ET POSER UN MANOMÈTRE. ALLUMER LA RÔTISSOIRE. À L'AIDE D'UN TOURNEVIS, ENLEVER LE CAPUCHON À FENTE DU DÉTENDEUR ET RÉGLER CELUI-CI JUSQU'À CE QUE LE MANOMÈTRE INDIQUE 8 POC.E. REMETTRE EN CAPUCHON EN PLACE. ÉTEINDRE LA RÔTISSOIRE. RETIRER LE MANOMÈTRE ET REMETTRE LE BOUCHON TUBULAIRE EN PLACE. RÉPÉTER L'OPÉRATION POUR LE ROBINET INFÉRIEUR.



9) LA RÔTISSOIRE ÉTANT EN MARCHE, CONTRÔLER L'ÉTANCHÉITÉ DE TOUS LES RACCORDS.

REMARQUE : *LES DÉCELEURS DE FUITES ÉLECTRONIQUES DONNERONT DES INDICATIONS ERRONÉES SUR LE DESSUS DE LA RÔTISSOIRE PRÈS DES ORIFICES CALIBRÉS DES BRÛLEURS INFRAROUGES ET DE LA TUYAUTERIE DE GAZ. CELA EST DÛ AUX PRODUITS DE COMBUSTION PRÉSENTS PRÈS DU TUYAU D'ÉVACUATION DES FUMÉES. UTILISER UN LIQUIDE DE CONTRÔLE D'ÉTANCHÉITÉ OU DE L'EAU SAVONNEUSE DANS CETTE ZONE.*

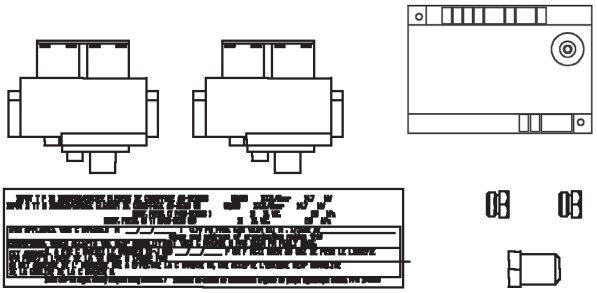
10) APPLIQUER LA NOUVELLE ÉTIQUETTE DE CARACTÉRISTIQUES NOMINALES PAR-DESSUS LES INFORMATIONS CORRESPONDANTES EXISTANTES. REMPLIR LES PARTIES VIDES DE L'ÉTIQUETTE COMME INDIQUÉ. LA CONVERSION EST ALORS TERMINÉE.



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INSTRUÇÕES DO KIT DE CONVERSÃO DE GÁS LP



GRELHA MULTIPRODUTO KIT Nº DA PEÇA 175612

Este kit contém:

(2)	Válvula, combinação, gás LP.	175766
(1)	Orifício, queimador infravermelho nº 52 mm (queimador dianteiro)	175767
(1)	Orifício, queimador infravermelho nº 51 mm (queimador traseiro)	175768
(1)	Orifício, queimador inferior nº 49	175737
(1)	Etiqueta de conversão da grelha de gás natural para propano	175605
(1)	Módulo, acendimento, queimador inferior, propano	175843

Itens necessários para esta instalação:

- Torquímetro
- Selante de rosca para gás LP.
- (2) Chaves de grifo ou
  (1) Chave de grifo e (1) Chave inglesa
- Chave de boca de 5/8"
- Soquete de 1/2”
- Chave de boca de 3/8"
- Chave de fenda reta
- Chave sextavada de 3/16”
- Manômetro digital ou Slack Tube com rebarba de mangueira roscada de tubo macho de 1/8”
- Fluido de detecção de vazamento.

INSTRUÇÕES DE INSTALAÇÃO

A. Técnicos qualificados

Estas instruções de instalação devem ser usadas apenas por técnicos qualificados de instalação e serviço. A instalação ou serviço feito por outra pessoa que não um técnico qualificado pode causar danos à grelha e/ou ferimentos ao operador.

Técnicos de instalação qualificados são pessoas, firmas, companhias ou empresas que, seja pessoalmente ou através de um agente, executem e se responsabilizem pelo seguinte:

- Instalação ou substituição da tubulação de gás ou a conexão, instalação, conserto ou manutenção do equipamento, que tenham experiência com esse tipo de trabalho, conheçam todas as medidas de precaução necessárias e atendam a todos os requisitos exigidos pelos órgãos estaduais e municipais competentes. Veja: Código Nacional de Gás Combustível dos EUA NFPA 54 (ANSI Z223.1).

A instalação deve obedecer os códigos locais ou, na ausência de códigos locais, o Código Nacional de Gás Combustível dos EUA, ANSI Z223.1/NFPA 54, ou o Código de Instalação de Gás Natural ou Propano dos EUA, CSA B149.1, se for o caso, incluindo o seguinte:

No caso de grelhas montadas sobre rodízios, a instalação deverá ser feita com um conector que obedeça o Padrão de Conectores para Equipamento Móvel a Gás, ANSI Z21.69/CSA 6.16, e um dispositivo de desconexão rápida que atenda o Padrão de Dispositivos de Desconexão Rápida para Uso com Gás Combustível, ANSI Z21.4/CSA 6.9. Ao instalar a grelha com rodízios e mangueira de desconexão rápida, é preciso providenciar métodos adequados para limitar o movimento da grelha sem depender do conector e do dispositivo de desconexão rápida ou ainda da tubulação associada para limitar o movimento da grelha. Um elemento de restrição pode ser afixado na porção vertical da estrutura da base, na traseira da grelha.

O “Manual de instalação e operação da Grelha Multiproduto” (nº da peça Duke 175500) contém instruções detalhadas para a instalação da grelha. Se não encontrar o manual, peça um usando as informações de contato no final desta página.

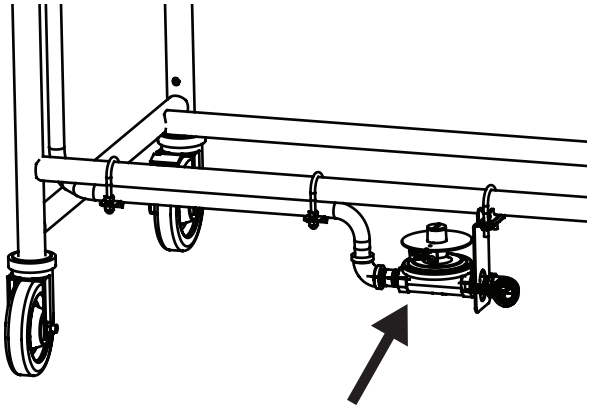
AVISO AO INSTALADOR:

ESTE APARELHO NÃO DEVE SER CONECTADO A UMA PRESSÃO DE FORNECIMENTO DE GÁS SUPERIOR A 30 CM C.A.

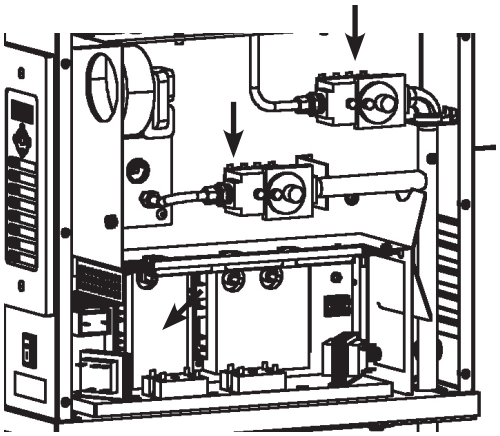
B. Procedimento

1) DESLIGUE A GRELHA DA TOMADA ELÉTRICA. FECHE A VÁLVULA PRINCIPAL E DESCONECTE A LINHA DE ALIMENTAÇÃO DE GÁS.

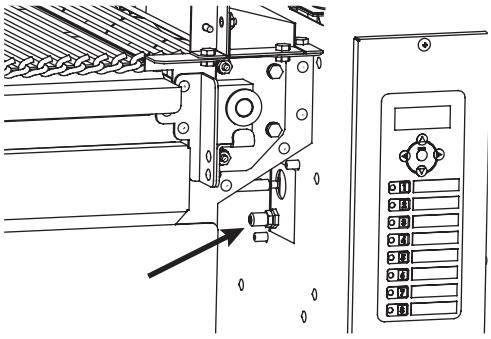
2) REMOVA O REGULADOR DE PRESSÃO OPCIONAL (SE INSTALADO). RECONECTE OS ENCAIXES CONFORME NECESSÁRIO.



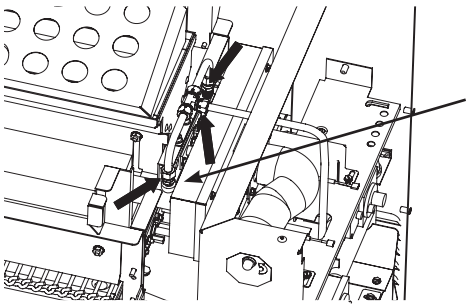
3) REMOVA (2) VÁLVULAS DE GÁS E SUBSTITUA-AS POR VÁLVULAS NOVAS. LEMBRE-SE DE APLICAR SELANTE DE ROSCA EM TODAS AS CONEXÕES ROSCADAS DOS TUBOS. REMOVA O MÓDULO DE ACENDIMENTO DO QUEIMADOR INFERIOR E SUBSTITUA-O POR UM MÓDULO NOVO. CONSULTE O DIAGRAMA ELÉTRICO NO PAINEL DE ACESSO DO CONTROLE PARA VER AS CONEXÕES CERTAS.



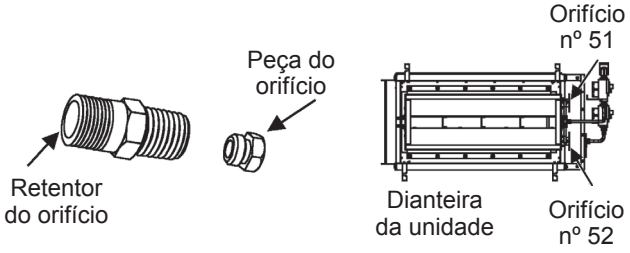
4) REMOVA O QUEIMADOR INFERIOR (VEJA O MANUAL DE INSTALAÇÃO/OPERAÇÕES) PARA ACESSAR A TAMPA DO ORIFÍCIO. USANDO UM SOQUETE DE 1/2", REMOVA A TAMPA DO ORIFÍCIO E COLOQUE O NOVO ORIFÍCIO. LEMBRE-SE DE APLICAR O SELANTE DE ROSCA NAS ROSCAS DO RETENTOR DO ORIFÍCIO. APLIQUE UM TORQUE DE 6,7 Nm (60 lbs.



5) COM UMA CHAVE DE 5/8", REMOVA OS ENCAIXES DE COMPRESSÃO DA TUBULAÇÃO DE GÁS SUPERIOR (3 PONTOS) QUE CONECTAM OS DOIS QUEIMADORES INFRAVERMELHOS.

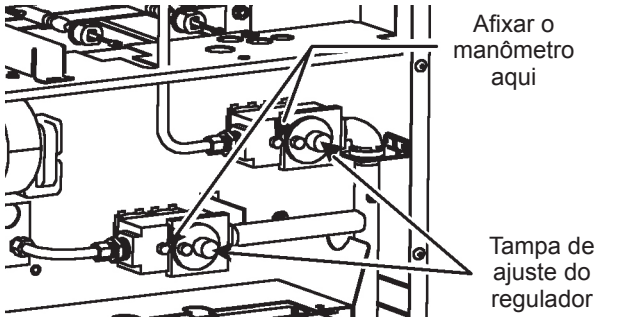


6) COM OS TUBOS DE GÁS REMOVIDOS, RETIRE OS RETENTORES DOS ORIFÍCIOS DOS QUEIMADORES COM UMA CHAVE DE 5/8". REMOVA A PEÇA DO ORIFÍCIO DO RETENTOR COM UMA CHAVE DE 3/8". SUBSTITUA-A POR UMA NOVA PEÇA DO ORIFÍCIO DO KIT E APERTE COM UM TORQUE DE 40 pol-lb. REMONTE OS ENCAIXES E TUBOS DE GÁS.



7) CONECTE À REDE DE GÁS E ELETRICIDADE. SE ESTA FOR UMA INSTALAÇÃO NOVA, SIGA AS INSTRUÇÕES DE INSTALAÇÃO E OPERAÇÃO DA GRELHA MULTIPRODUTO.

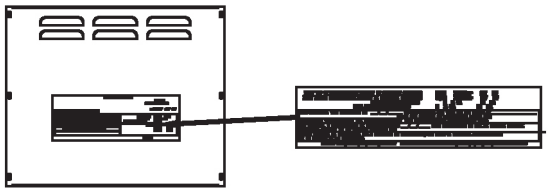
8) NA VÁLVULA SUPERIOR, RETIRE O BUJÃO DO TUBO DE 1/8" E O MANÔMETRO. LIGUE A GRELHA. COM UMA CHAVE DE FENDA, RETIRE A TAMPA FENDIDA DO REGULADOR E AJUSTE ATÉ QUE O VISOR DO MANÔMETRO ACUSE 20 cm C.A. DESLIGUE A GRELHA. RETIRE O MANÔMETRO E RECOLOQUE O BUJÃO DO TUBO. REPITA O MESMO PROCEDIMENTO COM A VÁLVULA INFERIOR.



9) COM A GRELHA LIGADA, EXAMINE TODOS OS ENCAIXES PARA VER SE HÁ VAZAMENTOS.

OBSERVAÇÃO: *OS DETECTORES ELETRÔNICOS DE VAZAMENTO PRODUZIRÃO LEITURAS FALSAS NA PARTE SUPERIOR DA GRELHA PERTO DOS ORIFÍCIOS DE INFRAVERMELHO E DA TUBULAÇÃO DE GÁS. ISSO É CAUSADO POR PRODUTOS DE COMBUSTÃO PRÓXIMOS À CHAMINÉ. USE UM FLUIDO DE VERIFICAÇÃO DE VAZAMENTO OU ÁGUA E SABÃO NESTA ÁREA.*

10) AFIXAR A NOVA ETIQUETA DE ESPECIFICAÇÕES SOBRE AS INFORMAÇÕES DE ESPECIFICAÇÕES EXISTENTES. PREENCHA AS ÁREAS EM BRANCO DA ETIQUETA NOVA COMO INDICADO. A CONVERSÃO ESTÁ TERMINADA.



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LPガス変換キット使用方法



フレキシブル バッチ ブロイラー**KIT P/N 175612**

キットの内容：

(2) バルブ、コンボ、LP 175766

(1) オリフィス、赤外線バーナー#52mm（フロント バーナー） 175767

(1) オリフィス、赤外線バーナー#51 mm（リア バーナー） 175768

(1) オリフィス、下部バーナー#49 175737

(1) ブロイラー変換ラベル Nat.>Prop（天然ガス>プロパンガス） 175605

(1) モジュール、点火装置、下部バーナー、プロパン 175843

本品の設置に必要な工具：

- トルクレンチ
- LPガス定格のスレッド シーラント。
- パイプレンチ2つ、またはパイプレンチ1つと可動レンチ1つ
- 5/8インチのオープンエンド レンチ
- 1/2インチソケット
- 3/8インチのオープンエンド レンチ
- マイナス ドライバ
- 3/16 六角レンチ
- 1/8インチの雄パイプスレッド・ホースバルブを備えた、デジタル圧力計またはスラックチューブ圧力計。
- リーク検出溶液。

設置方法

A. 正規技術者

ここに記載されている設置方法は、設置点検を行う正規技術者のために作成されたものです。正規技術者以外が設置や保守作業を行うと、ブロイラーの故障や負傷事故の原因となります。

正規技術者とは、以下の業務を専門とする会社にて、またはその会社を通して、作業員としての資格を有する人物を示します。

- ガス配管、機器の接続取付、修理保守の経験、および所定の注意事項に関する知識を有し、国や管轄地域の法令に準拠している。参照：業務用ガス基準 NFPA 54 (ANSI Z223.1)

設置は現地の規制に準拠する必要があります。現地国に規制がない場合は、『National Fuel Gas Code』のANSI Z223.1/NFPA 54、または『Natural Gas and Propane Installation Code』CSA B149 が適用されて、次の内容が含まれます。

キャスター付ブロイラーには、動式ガス器具の配管接続に関する『ANSI Z21.69/CSA 6.16』の基準に準拠した継手と、ガス燃料用迅速交換式装置に関する『ANSIZ21.4/CSA 6.9』の基準に準拠した迅速交換式装置を使用してください。キャスターと迅速交換式ホースを備えたブロイラーを設置する際は、コネクタ、迅速交換式装置、関連配管に依存することなく、ブロイラーが動かないように適切な固定手段を行ってください。固定具は、ブロイラー後部の本体縦枠の垂直部分に取り付けることが可能です。

ブロイラー設置に関する詳細説明は、『フレキシブルバッチ ブロイラーの設置と使用説明書（Duke p/n 175500）』に記載されています。説明書が欠落している場合は、本ページの下部にある連絡先に請求してください。

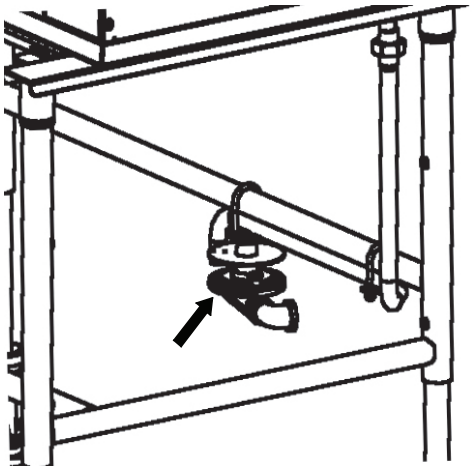
設置者への注意：

本装置は、**½ PSI (12″ W.C.)** 以上のガス配管に接続しないでください。

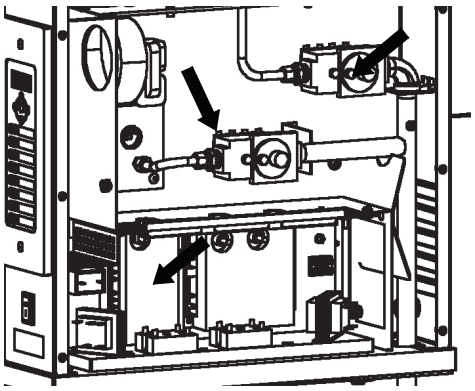
B. 手順

1) ブロイラーのプラグを電源から抜きます。主要ガス配管バルブを閉じて配管を取り外します。

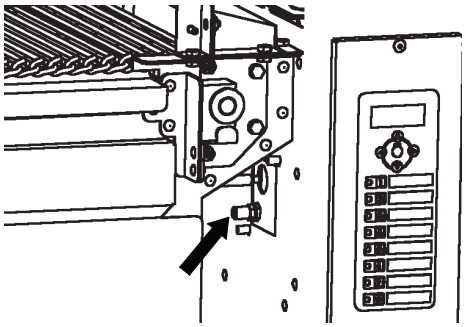
2) オプションの圧力レギュレーターが設置されている場合は取り外します。必要に応じて継手を再接続します。



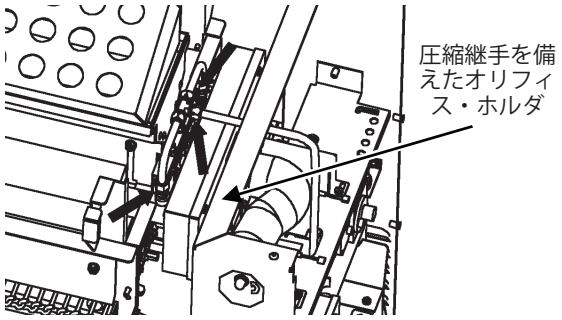
3) 2つのガスバルブを取り外し、新規バルブと交換します。パイプ・スレッド接続部分すべてにスレッド・シーラントを必ず取り付けてください。下部バーナーの点火装置モジュールを取り外し、新しいモジュールと交換します。コントロール・アクセスパネルの配線図を見て、正しく接続してください。



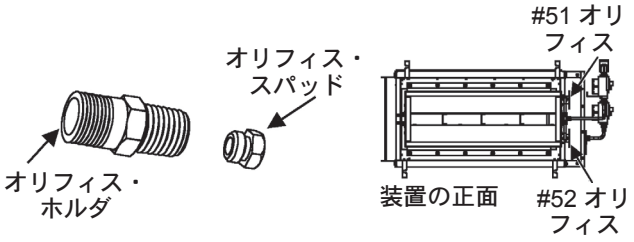
4) 下部バーナーを取り外し（設置/使用説明書を参照）、オリフィスフードにアクセスできるようにします。1/2インチのソケットを使用してオリフィスフードを取り外し、新しいオリフィスと交換します。オリフィス・ホルダのスレッド部分にスレッド・シーラントを必ず適用してください。オリフィスのトルクを60インチポンド（6.7 Nm）に調節してください。



5) 5/8インチのレンチを使用して、両方のバーナーに接続している上部のガス管圧縮継手（3箇所）を取り外します。

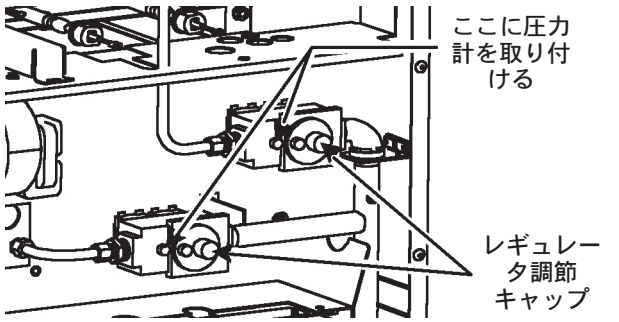


6) ガス配管を取り外すと、5/8インチのレンチを使用してオリフィス・ホルダをバーナーから取り外します。3/8インチのレンチを使用して、ホルダからオリフィススパッドを取り外します。キットの新しいオリフィススパッドと交換し、40インチポンドに固定します。継手をガス配管に再び取り付けます。



7) ガスと電気に接続します。新しい装置を取り付ける場合は、『フレキシブルバッチブロイラーの設置と使用説明』に従ってください。

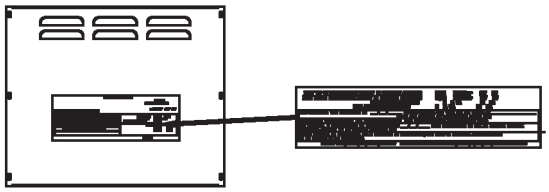
8) 上部バルブにて、1/8インチのパイプ・プラグと接続された圧力計を取り外します。ブロイラーをオンにします。ドライバを使ってレギュレータからスロット入りのキャップを取り外し、圧力計が「8” W.C. 」を示すように調節して、キャップを交換します。ブロイラーをオフにします。圧力計を外し、パイプ・プラグを再設置します。下部のバルブについても同様に行います。



9) ブロイラーを作動させて、すべての継手部分でリークがないか確認します。

注：電気リーク検知器は、オリフィスとガス配管近くにある場合、ブロイラー上で不正確な数値を示すことがあります。これは燃料近くに可燃性製品があるためです。この箇所では、リーク検出溶液か洗剤水を使用してください。

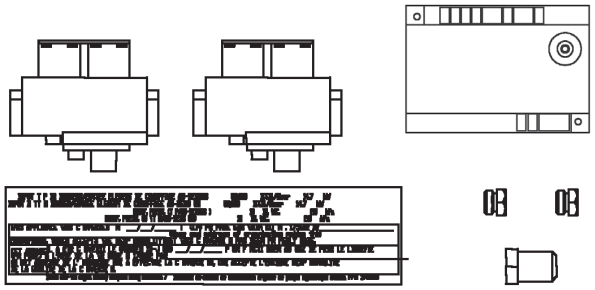
10) 既存の定格情報ではなく、新しい定格情報を記したタグを適用します。表示のとおり、新しいタグの空白部分を記入します。これで変換作業は終了です。



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液化氣更換組件說明



多用途批量烤爐組件料號175612

內含：

(2) 液化氣組合氣閥 175766

(1) 噴嘴、#52毫米紅外爐頭（前爐頭）175767

(1) 噴嘴、#51毫米紅外爐頭（後爐頭）175768

(1) 噴嘴、#49下爐頭 175737

(1) 烤爐更換標籤 天然氣>丙烷液化氣 175605

(1) 模件、點火器、下爐頭、丙烷液化氣 175843

安裝需用工具

- 扭矩扳手。
- 適用於液化氣的螺紋密封膠。
- 兩個管道扳手，或者1個管道扳手和1個可調節扳手
- 5/8英寸開口扳手
- 1/2套筒扳手
- 3/8英寸開口扳手
- 一字型改錐
- 3/16六角扳手
- 數位壓力計或帶有1/8英寸外螺紋軟管接頭的松管壓力計。
- 檢漏液。

安裝說明

A. 專業人員

這些安裝說明僅供專業安裝和維修人員使用。由非專業人員進行安裝或維修可能損壞烤爐和/或傷害操作人員。

專業安裝人員可以是個人、公司或企業，他們親自或通過代理參與並負責：

- 安裝或更換煤氣管或接頭，安裝、修理或維護設備。他們在此類工作上擁有豐富的經驗，熟悉所有必需的預防措施，符合當地國家和地方當局的所有要求。參見：美國《國家燃氣規範》NFPA 54 (ANSI Z223.1)。

安裝必須符合當地標準，如果當地沒有標準，則必須符合適用的美國《國家燃氣規範》ANSI Z223.1/NFPA 54或《天然氣和丙烷安裝規範》CSA B149.1，包括：

對於安裝有輪腳的烤爐，必須使用符合《移動燃氣設備連接規範》ANSI Z21.69/CSA6.16的插座和符合《與燃氣一起使用的快速斷開裝置規範》ANSI Z21.4/CSA 6.9的快速斷開裝置。當安裝帶有輪腳和快速斷開軟管的烤爐時，必須採取充分的措施來限制烤爐移動，不要依賴插座和快速斷開裝置或與其相關聯的管道來限制烤爐移動。可將烤爐後部基座框架的垂直部分固定以限制其移動。

烤爐安裝細節載於多用途批量烤爐安裝和操作手冊 (Duke p/n 175500)。如果本手冊遺失，請通過本頁底部的聯繫方式索取副本。

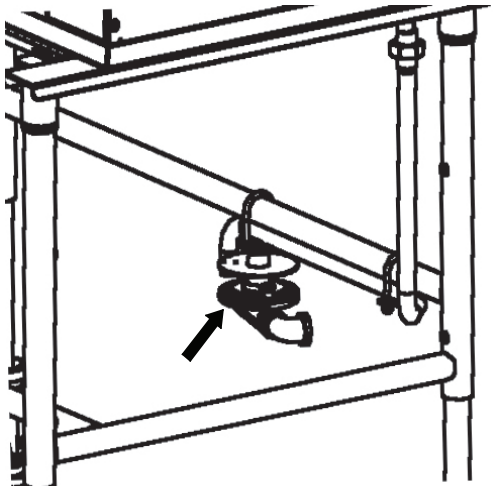
安裝人員須知：

不得將此設備連接至壓力大於½ PSI（12英寸水柱）的燃氣供應裝置。

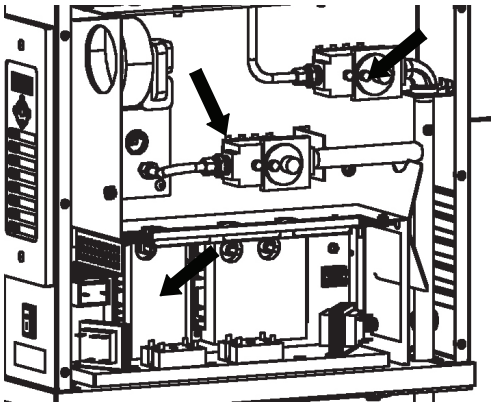
B. 步驟

1) 切斷烤爐電源。關閉供氣閥並斷開供氣線路。

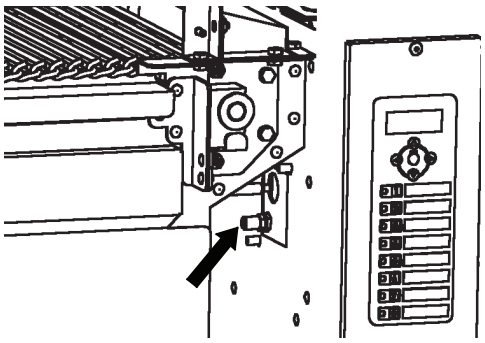
2) 卸下供選的氣壓調節器（如果已安裝）。根據需要重新連接各種裝置。



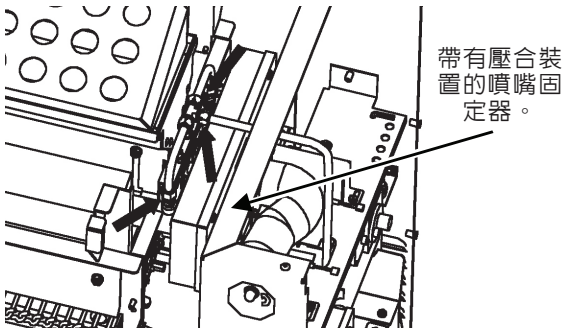
3) 卸下2個氣閥並更換為新的氣閥。確保使用了螺紋密封膠來密封所有管道的螺紋接頭。將下爐頭點火器模件更換為新模件。根據控制台上的佈線圖進行正確連接。



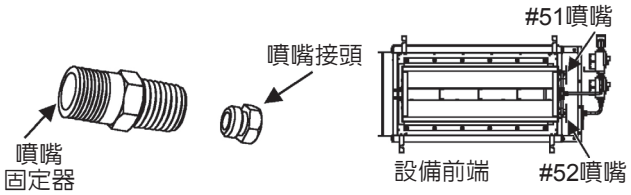
4) 卸下下爐頭（參見安裝/操作手冊），以方便操作噴嘴防護罩。使用1/2英寸套筒扳手卸下噴嘴防護罩，並更換噴嘴。
確保使用了螺紋密封膠來密封噴嘴固定器螺紋。
噴嘴扭矩上緊至60磅・英寸(6.7 牛頓・米）。



5) 使用5/8英寸扳手卸下頂部連接兩個紅外爐頭的燃氣線路壓合裝置（3處）。

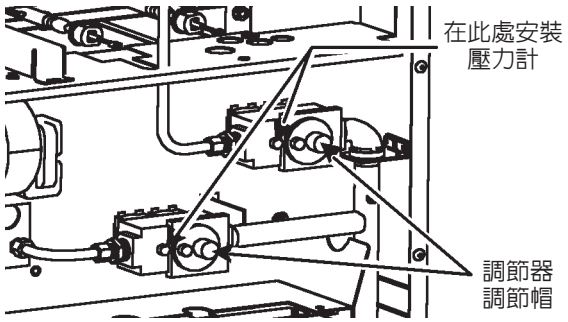


6) 卸下燃氣線路後，使用5/8英寸扳手從爐頭上卸下噴嘴固定器。使用3/8英寸扳手從固定器上卸下噴嘴接頭。安裝新的噴嘴接頭，擰緊至40英寸-磅。重新裝配壓合裝置和燃氣線路。



7) 連通氣源和電源。如果進行全新安裝，必須按照多用途批量烤爐安裝和操作說明進行操作。

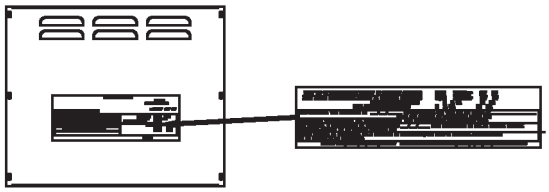
8) 在上氣閥上，卸下1/8英寸的管道插頭和附帶的壓力計。將烤爐調至“ON”。使用改錐從調節器上卸下帶槽的螺帽，調節氣壓，直至壓力計讀數為8英寸水柱。復位螺帽。將烤爐調至“OFF”。卸下壓力計並重定管道插頭。對底部氣閥重複上述操作。



9) 在烤爐運行時，檢查所有配合裝置是否存在洩漏。

注意：*在烤爐上方接近紅外噴嘴和燃氣管的地方，電子測漏器會顯示錯誤的讀數。這是由於煙道附近存在氣體燃燒產物而引起的。請在此區域使用檢漏液或肥皂液檢查。*

10) 在現有的額定值資訊之上貼上新的額定值標籤。根據說明，填寫新標籤上的空白區域。更換完畢。



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www.dukemfg.com

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____ **SERIAL NUMBER** _____

DATE OF PURCHASE _____

DEALER _____ **TELEPHONE** _____

SERVICER _____ **TELEPHONE** _____

DUKE CORPORATE, CANADA, LATIN AMERICA

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Fax: +44 (0) 1395 234154
service.exeter@duke-emea.com

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

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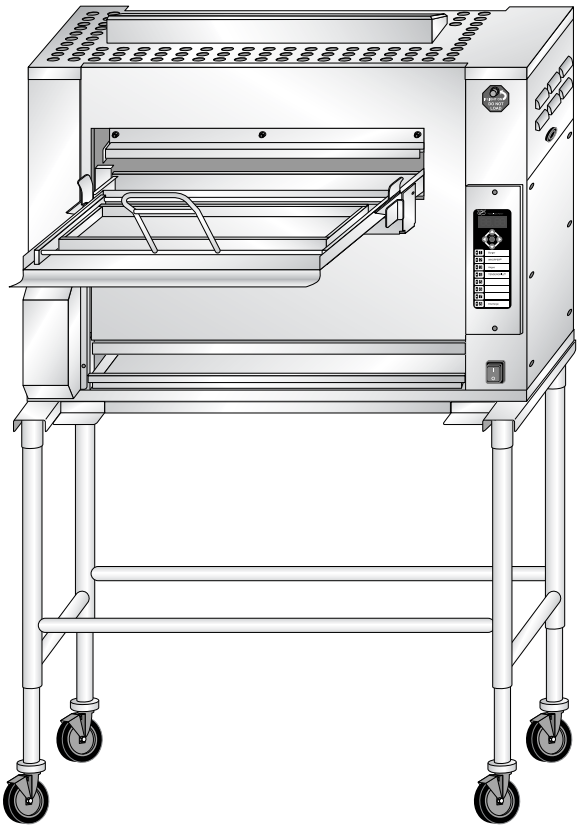
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Your Solutions Partner

Installation and Operation Manual

BURGER KING FLEXIBLE BATCH BROILER - LOWER BURNER UPGRADE



Please read this manual completely before attempting to install, operate or service this equipment

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10/1/2014

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IMPORTANT WARNING AND SAFETY INFORMATION

POST IN A PROMINENT LOCATION instructions to be followed in the event the user smells gas. This information shall be obtained by consulting the local gas supplier.

FOR YOUR SAFETY:

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

⚠ WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE.

I. GENERAL INFORMATION

A. Batch Broiler Specifications

FLEXIBLE BATCH BROILER SPECIFICATIONS				
	NATURAL GAS		**PROPANE**	
ALTITUDE (MAXIMUM)	2000 FT	607 m	2000 FT	607 m
GAS PIPE CONNECTION	3/4" F-NPT		3/4" F-NPT	
INLET PRESSURE RANGE	7" – 12" W.C.		10" – 12" W.C.	
	MANIFOLD PRESSURE		**MANIFOLD PRESSURE**	
INFRARED BURNERS (TOP)	3.75" W.C.	0.93 kPa	8.0" W.C.	2.0kPa
LOWER BURNER	3.75" W.C.	0.93 kPa	8.0" W.C.	2.0kPa
TOTAL ENERGY RATE	94,000 – 100,000 BTU/HR	27.5 – 29.3 kW	94,000 – 100,000 BTU/HR	27.5 – 29.3 kW
	BURNER ORIFICE SIZE		**BURNER ORIFICE SIZE**	
FRONT INFRARED BURNER	#40	2.49mm	#52	1.61mm
BACK INFRARED BURNER	#36	2.70mm	#51	1.70mm
LOWER BURNER	#30	3.26mm	#46	2.06mm

SHIPPING WEIGHT: 482 lbs (219 Kg)

SHIPPING DIMENSIONS: 47” x 34” x 68” (119.4 x 86.4 x 172.7 cm)

MODEL NUMBER	ELECTRIC	NATURAL & LP GAS
FBB-NO-120	120VAC, 2A, 60Hz	94,000 – 100,000 BTU/HR
FBB-NC-120	120VAC, 2A, 60Hz	94,000 – 100,000 BTU/HR
FBB-PO-120	120VAC, 2A, 60Hz	94,000 – 100,000 BTU/HR
FBB-PC-120	120VAC, 2A, 60Hz	94,000 – 100,000 BTU/HR

A-1.0 Model Number Key

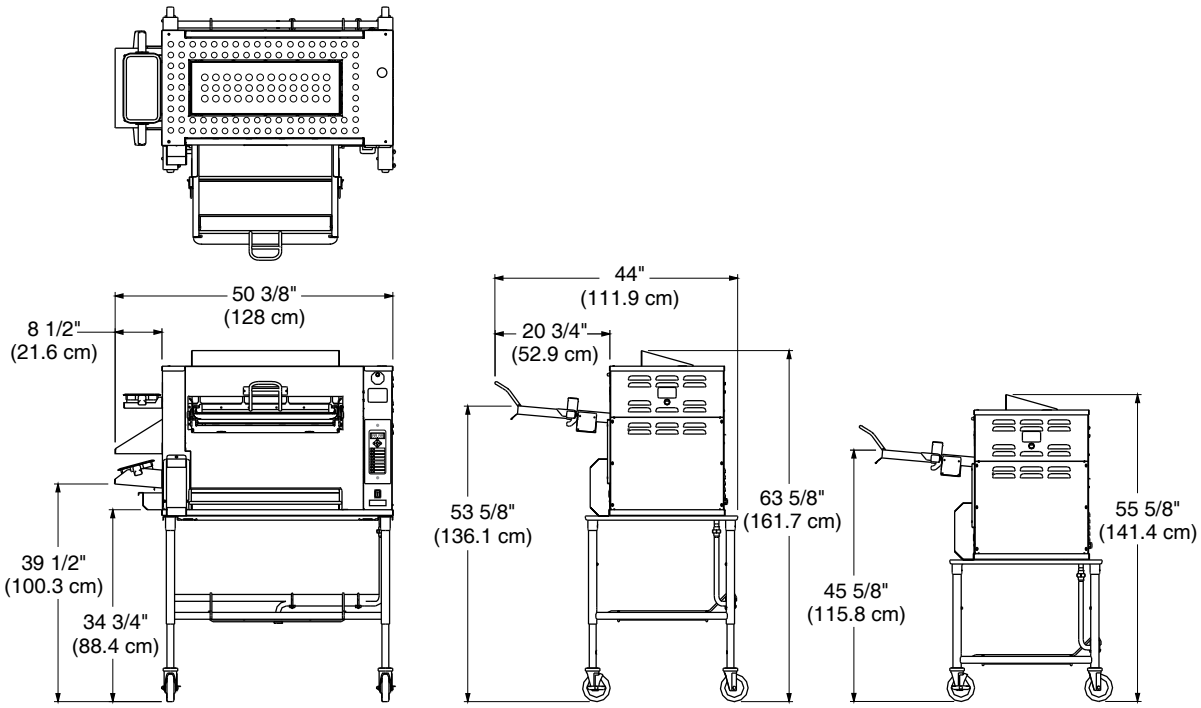
FBB-X Y -120

X = N (NATURAL GAS) OR P (PROPANE / LP GAS)

Y = O (NO CATALYST) OR C (CATALYST)

120 = 120 VOLTS

A-2.0 Broiler Dimensions



II. INSTALLATION INSTRUCTIONS

A. QUALIFIED PERSONNEL

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).
- The installation of electrical wiring from the electric meter, main control box or service outlet to the electrical appliance. Qualified installation personnel must be familiar with all precautions required and have complied with all requirements of state and local authorities having jurisdiction. See: National Electrical Code, ANSI/NFPA70.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

- The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psi (3.5 kPa).
- The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi (3.5 kPa).

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

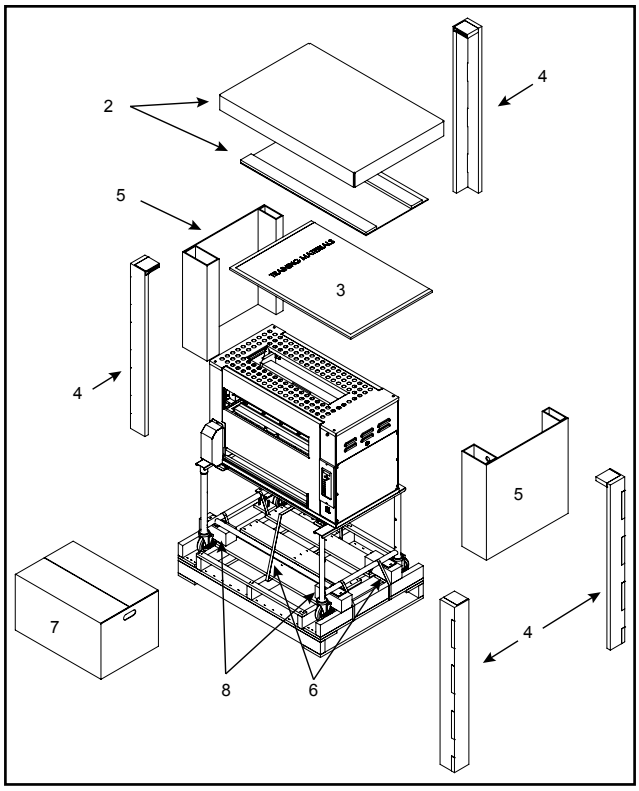
B. DELIVERY AND INSPECTION

Duke Manufacturing Co. does everything within its power to insure you received your broiler in good condition. They are strapped down on heavy wooden skids and packed to prevent shipping damage. They have all been carefully inspected before they were packaged and consigned to the carrier.

Upon delivery of your Duke broiler:

- Look over the shipping container, carefully noting any exterior damage on the delivery receipt, which must also be signed by the driver/ delivery person.
- Unpack and check for any damage, which was not evident on the outside of the shipping container.
- Check for concealed damage. The carrier must be notified within fifteen (15) days of the delivery of the broiler and the carton, skid and all packaging materials must be retained for inspection.

Duke Manufacturing Co. cannot assume liability for loss or damage suffered in transit. The carrier assumes full responsibility for delivery in good order when the shipment was accepted. However, we are prepared to assist you in filing your claim.



Caution: The broiler is very heavy!
Use adequate help when lifting.

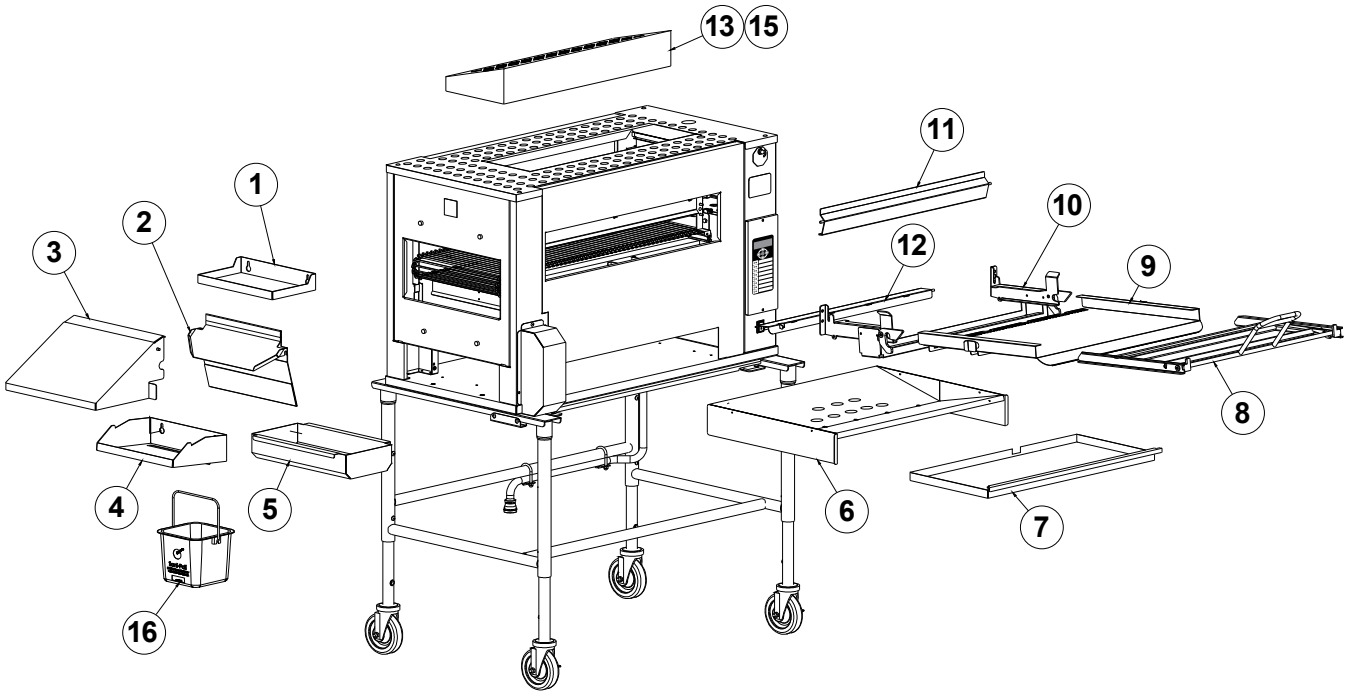
1) Using a utility knife, cut away plastic wrap (Not shown).
2) Remove the top cardboard and inner cap.
3) Remove Training Material Box
4) Remove cardboard from the corners (4 places).
5) Remove cardboard on the ends (2 places).
6) Remove banding straps (Cut with utility knife or scissors: 5 places).
7) Remove box of attachable parts & accessories from the front.
8) Safely lift one end of broiler and tap block towards center and then sideways to remove. Repeat for remaining blocks. This allows casters to touch the pallet.
9) Remove the broiler from the shipping pallet using 3 people to guide and distribute it's weight (approx 335 lbs) accordingly. While carefully supporting the broiler. Roll it forward until the front casters are clear of the pallet. Lift the broiler 6-8 inches above and away from the pallet, and gently place on floor to avoid damage to casters.
10) Remove protective blue tape from broiler panels, double checking that no tape remains.

C. BROILER ASSEMBLY

Before assembling and installing the broiler, please check to make sure that all necessary parts are present.

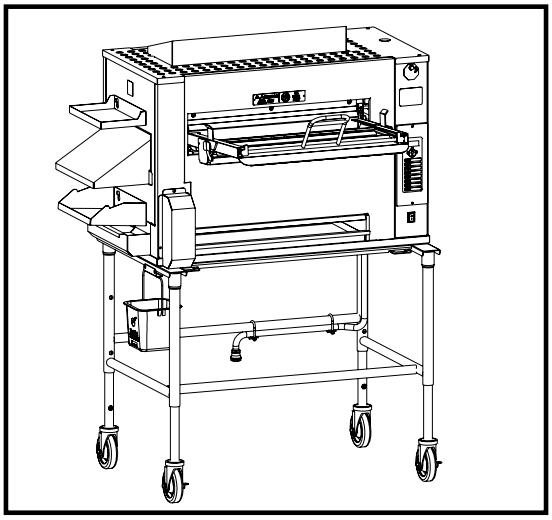
ITEM	PART NAME	PT.NO.
1	PRODUCT PAN SHELF	175353
2	DISCHARGE CHUTE	175340
3	DISCHARGE HOOD	175778
4	DISCHARGE PAN HOLDER	175358
5	DISCHARGE GREASE PAN	175357
6	"V" GREASE PAN	176397
7	MAIN GREASE PAN	176398
8	LOADER	175444
9	LOADER TRAY	175430
10	LOADER BRACKET	175438
11	DOOR	175429
12	LOADER RAMP	175741
13	IMPEDANCE PAN	175226
14	CATALYST (OPTIONAL)	175480
15	CATALYST GUARD (OPTIONAL)	175482
16	SANITATION PAIL	175842
17	KIT, CLEANING TOOLS/ INSTALLATION TOOL CLEANING – LOWER BURNER FLAME ROD TUBE CLEANER BRUSH, TUBE CLEANER TOOL– LOADER INSTALL WRENCH, ALLEN, 3/16"	175700
18	KIT – BROILER SVC. PARTS, NAT. GAS W/ CONTROLLER W/COOK CHAIN (OPTIONAL)	600310
19	KIT – BROILER SVC. PARTS, PROPANE, W/ CONTROLLER W/ COOK CHAIN (OPTIONAL)	600314

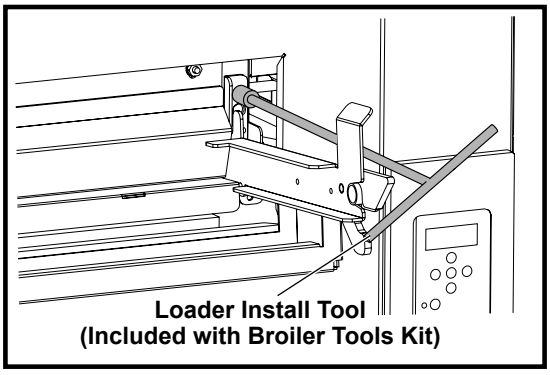
ITEM	PART NAME	PT.NO.
20	KIT – USER REPLACEABLE, BOTTOM BURNER, FLAME ARRESTOR, LOADER & BURNER SHIELD (OPTIONAL)	600311
21	KIT – USER REPLACEABLE, BOTTOM BURNER & FLAME ARRESTOR (OPTIONAL)	600312
22	KIT – GAS HOSE CONNECTOR ASSEMBLY (OPTIONAL)	175690
23	KIT – HIGH SUPPLY GAS PRESSURE REGULATOR (OPTIONAL)	175689
24	KIT – BROILER SVC. PARTS, NAT. GAS, W/ CONTROLLER W/ COOK CHAIN (OPTIONAL), ADJUSTABLE – FOR HIGH ALTITUDE & INTERNATIONAL UNITS	600331
25	KIT – USER REPLACEABLE, BOTTOM BURNER, FLAME ARRESTOR, LOADER & BURNER SHIELD (OPTIONAL) – FOR HIGH ALTITUDE & INTERNATIONAL UNITS	600332
26	KIT – USER REPLACEABLE, BOTTOM BURNER & FLAME ARRESTOR (OPTIONAL) – FOR HIGH ALTITUDE & INTERNATIONAL UNITS	600333
27	KIT – BROILER SVC. PARTS, PROPANE, W/ CONTROLLER W/ COOK CHAIN (OPTIONAL) – FOR HIGH ALTITUDE & INTERNATIONAL UNITS	600334



Setup

Install all items as shown below.





Install loader bracket with (4) 1/4-20 nuts.

Use supplied extension tool to remove and reinstall nuts. (Nuts are shipped installed on loader mounting studs.)

D. ADJUSTMENTS AT INSTALLATION

Each broiler section and all its component parts have been tested thoroughly and inspected before your broiler was shipped from the factory. However, it is sometimes necessary to further test or adjust the broiler once it has been installed. Such adjustments are the responsibility of the Dealer or Installer. These types of adjustments are not considered defects, rather a normal and routine part of the proper installation of the equipment.

These adjustments include but are not limited to:

• Adjustments to the gas pressure regulator

• Broiler height adjustment (if required)

No installation should be considered complete without proper inspection and, if necessary, any adjustments by qualified service or installation personnel.

It is also important not to obstruct the natural flow of combustion and ventilation air if the broiler is to operate properly. This broiler should not be installed on a curb base or sealed to the wall. Either condition can restrict the flow of air to the combustion compartment or prevent proper ventilation of the unit. Before making any connections to the broiler, check the ratings plate to be sure the broiler specifications concur with the type of gas and voltage to be supplied to the broiler.

The rating plate is located on the back of the control compartment cover panel on the right end of the unit.

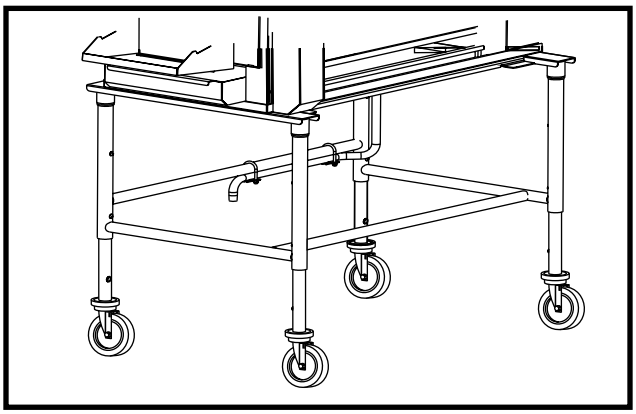
The plate bearing the broiler's model number and serial number is attached to the back side of the unit.

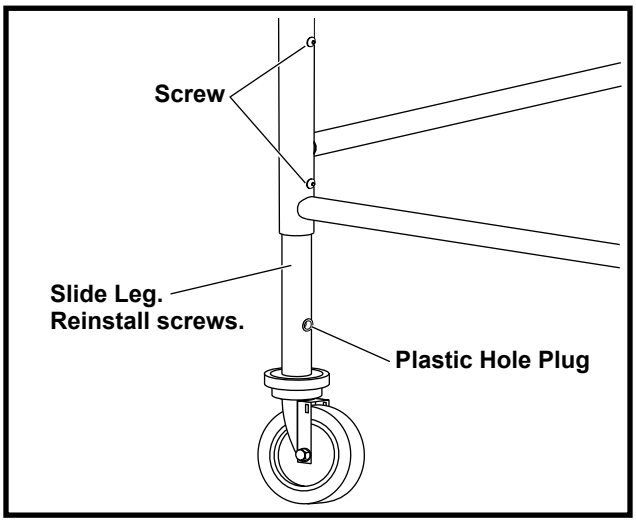
Raise or Lower Broiler

The broiler height can be adjusted via two screws on each leg.

Caution: The Broiler is very heavy! Use adequate help for lifting.

1. Lift one end of the broiler onto a wide, sturdy stand (not supplied).
2. Remove (2) screws per leg and raise/lower to threaded holes. Reinstall screws.
3. Remove stand and safely raise/lower broiler.
4. Place plastic hole plugs (supplied attach to stand) in any unused holes.





E. LOCATION OF THE BROILER

Proper planning and placement of the broiler will give you the best results in terms of long-term user convenience and satisfactory performance. We urge you to give adequate thought in the placement of your broiler prior to its arrival.

- The broiler should be placed in an area that is free from drafts and accessible for proper operation and servicing.
- The area around the broiler must be kept clear of combustible materials. A minimum clearance of:

	COMBUSTIBLE	NON-COMBUSTIBLE
Discharge End	12" (305)	12" (305)
Access Panel End	3" (76)	3" (76)
Rear	4" (102)	4" (102)
Floor/Table	0" (0)	0" (0)

F. GAS PIPING

The standard broiler consumes gas at a total of 100,000 BTU/hr. In order to achieve the degree of performance for which the unit has been designed, the overall piping plan of the kitchen, properly sized, is essential. The installation of this broiler must conform with all local codes, or in the absence of any local codes, to the National Fuel Gas Code, NFPA 54 and ANSI Z 223.1.

Your local gas supplier should consult the National Fuel Gas Code for proper sizing and installation of gas piping. Generally, piping should be sized to provide a gas supply sufficient to meet the maximum demand of all gas appliances on a line without undue loss of pressure at the outlet to the equipment. The total BTU requirements of the equipment being served and the length of the piping from the meter to the appliances are major considerations in the proper design of the gas supply system.

NOTICE: Using the Loader Tray to support heavy items or an individual's body weight can damage components of the broiler.

NOTICE TO INSTALLER:

THIS APPLIANCE SHALL BE CONNECTED TO A GAS SUPPLY IN THE RANGE OF:

NATURAL GAS 7" TO 12" W.C.

PROPANE GAS 10" TO 12" W.C.

Gas supply pressure must be checked prior to installation. If supply pressure is in excess of 12" W.C., The *HIGH SUPPLY PRESSURE KIT*, Duke P/N 175689 shall be installed and adjusted, per kit instructions, for an outlet pressure of:

Natural Gas - 7" W.C.

Propane Gas – 11" W.C.

NOTE: A fixed restraint of the proper length must be incorporated to secure the broiler to a non-movable surface to eliminate strain on the gas connector. If the broiler is removed from its normal position, the restraint must then be reattached when returned.

G. ELECTRICAL CONNECTIONS

Your broiler is supplied for connection to a dedicated 120 volt, grounded circuit. The electric motors, indicator lights and control circuits are connected through a seven-foot electric supply cord found at the rear of the broiler.

Before making any connections to these units, check the rating plate to assure that the voltage and phase of the broiler is compatible with the electrical supply. When installing, all broilers must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70 (in Canada - CSA Std. C22.2). Wiring diagrams are located in the control compartment area of the broiler. Standard wiring schematics are also provided with this manual.

⚠ WARNING: This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. DO NOT cut or otherwise remove the grounding prong from this plug.

H. VENTILATION

This appliance shall be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of substances harmful to health in the room in which the appliance is installed.

Venting to a Canopy Exhaust Hood

A mechanically driven exhaust hood must have a minimum capacity of 1700 m3/hr (1000 cfm) with a minimum 100cm by 130cm (39.4 in by 51.2 in) opening to adequately vent this appliance. The specified capacity and opening is required in a dedicated hood for this appliance or in addition to other appliance vented through a common canopy exhaust hood.

Maintenance of Ventilation System

The ventilation system must be maintained and annually inspected by Qualified Personnel concurrent as part of or in addition to governmental requirements.

This inspection/maintenance should consist of, but not be limited to:

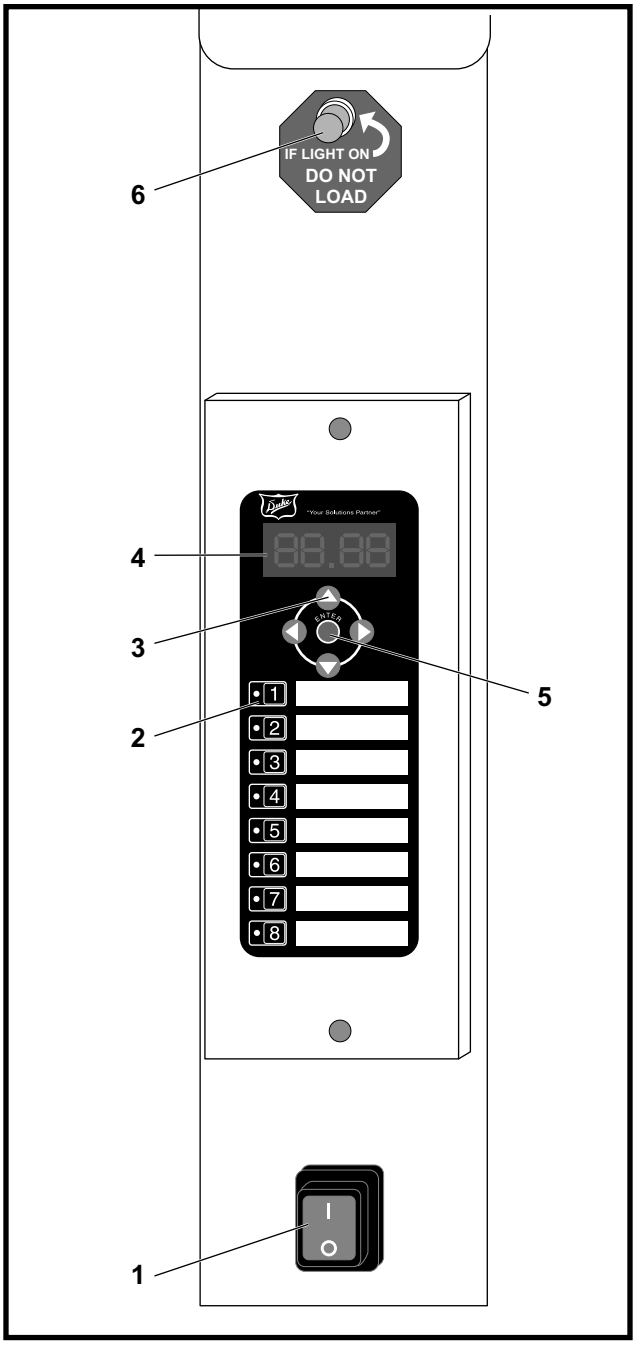
- Inspection for blockages or build up which might interfere with the venting of the broiler.
- Repair of such blockages.
- Inspection of the venting canopy, its drive motors and bells, etc.

NOTICE: Do not place any objects such as sheet pans, food containers or aluminum foil on the top of the broiler. This will obstruct the venting of cooking vapors and airflow through the unit—resulting in poor cooking performance.

III. OPERATION INSTRUCTIONS

The information in this section is intended for the use of qualified operating personnel. Qualified Operating Personnel are those individuals who have carefully read the information contained in this manual, are familiar with the function of the broiler and/or have had experience with operating the equipment described. We recommend following these instructions to insure optimum performance, long life and trouble-free service from your broiler.

The controller is pre-programmed at the factory for known recipes at the time of manufacture. The product keys must be programmed with an approved recipe and the broiler properly calibrated prior to use.



A. BROILER CONTROLS

1. **Power Switch** – Turns the broiler ON or OFF. The broiler is self-lighting.
2. **Product Selection Keys** – Selects the product recipe to run. Also functions as number keys 1-8 in programming mode.
3. **Arrow Keys**

   Up-Arrow: Displays the current broiler temperature when pressed in run mode. Scrolls backward through parameters when pressed in program mode.

   Down-Arrow: Displays the broiler set-point temperature when pressed in run mode. Scrolls backward through parameters when pressed in program mode.

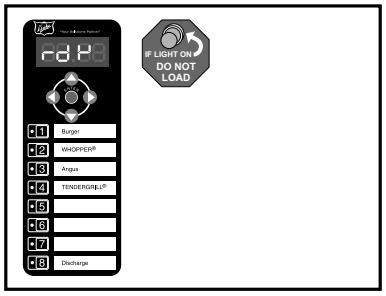
   Left-Right Arrows: Moves between characters or parameters in program mode. Also used as numerals 0 and 9 keys.
4. **Display**
5. **Enter Key** – Press and hold for 5 seconds to enter program mode. Also used to move though and enter parameters in programming mode.
6. **Cook Light** – This light is lit during preheat and the entire cook. The operator should not load the broiler while the light is lit.

B. COOKING PRODUCT

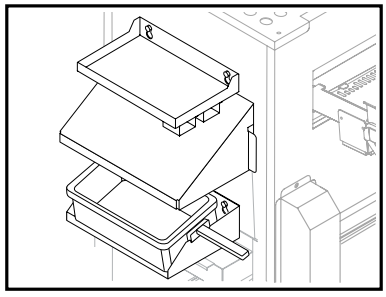
B-1.0 Lighting the Broiler

- Start Ventilation System.
- Turn ON/OFF switch to the ON (1) position.
- The control will display PrE during the pre-heat cycle.
- The LED's next to all product keys with non-zero cook times will be red.
- The control will display rdY at the completion of the pre-heat cycle and the LED's next to all product keys with non-zero cook times will be green.
- (To shutdown the broiler, see section B-8.0)

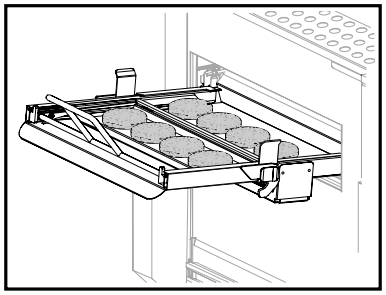
B-2.0 Cook Product



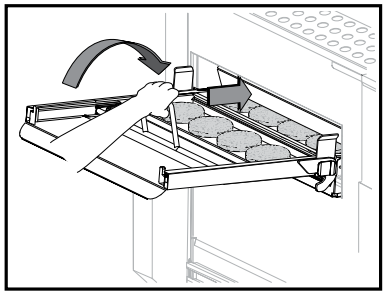
Broiler displays rdY and Cook light is not on.



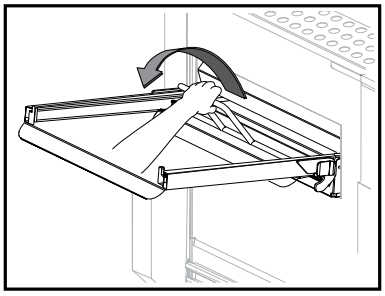
Place holding pan at discharge.



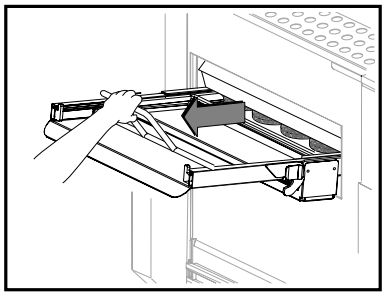
Place product in front and back rows.



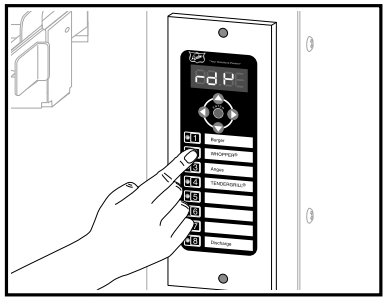
Load product. Push forward as shown.



Rotate handle down to lift inside bar over product.



Pull out loader with handle rotated.

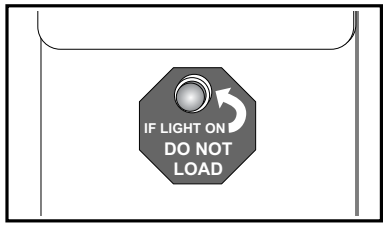


Press appropriate product key.

You will have 15 seconds to press another product key if a wrong selection is made.

The display will alternately display the time remaining and the four-character product identifier.

The LED next to the selected product key will flash red.



The cook light will be lit.

B-3.0 Cook Cycle Complete

The chain will rotate and discharge the product.

Do not load product into broiler until the cook light has gone off and rdY is displayed on the control!

To prevent thawing of product, it is recommended not to place product onto the loader more than five minutes prior to loading.

B-4.0 Fine Cooking Adjustment

Use this function to add or subtract up to 30 seconds from a product cook cycle recipe. This should be used in the event product cooking needs to be optimized outside of the programming environment. This function works as follows:

Press and hold the ▲ and ▼ keys for 3 seconds.

The control will display AdJ.

All product LED's for products with a programmed time will light red.

Select a product key to adjust.

The selected product LED will remain red and all other product LED's will go blank.

The control will flash AdJ followed by the product identifier.

The ▲ and ▼ keys are used to set the fine cooking adjustment.

The first press of the ▲ or ▼ key brings up the adjustment screen. The control will display the total product cook time including the previous fine cooking adjustment.

Subsequent presses of the ▲ or ▼ key adds or subtracts 1 second from the cook time.

The cook time can be increased or decreased by up to 30 seconds with this function.

To exit this function and save the setting, press the ENTER key.

B-5.0 Cancel a Cook Cycle

Pressing and holding a product key for 3 seconds will cancel a cook cycle and discharge the product.

B-6.0 Checking the Broiler Temperature

Pressing the ▲ key at any time (other than in programming mode) will display the actual cavity temperature.

B-7.0 Checking the Set Point Temperature

Pressing the ▼ key at any time (other than in programming mode) will display the set-point cavity temperature.

B-8.0 Shutdown the Broiler

Turn ON/OFF switch to the OFF (O) position.

C. CLEANING

The exterior stainless steel on your broiler can be kept clean with a good non-abrasive stainless steel cleaner, many of which are on the market. Moisten a cloth and wipe down the broiler while it is COLD. Wiping down a broiler while it is hot will cause streaking and otherwise unsatisfactory results. Once the broiler is clean it can be wiped down with light oil.

To help make your use of this broiler trouble-free and to maintain the warranty, the following recommendations must be followed:

A. Do not expose the broiler to prolonged contact with detergents, cleansers, bleaches, etc. Shield the IR burners and flame sensing rods from all cleaning fluids. Do not spray IR burners with any foreign materials. Chemical cleaners, degreasers, bleaches and soap solutions must never be allowed to come into contact with the IR burner metal housings or ceramic burner tiles as they may damage these surfaces and/or cause broiler malfunction and will void the warranty. To prevent damage to the ceramic burner tiles, never allow physical contact with cleaning tools or other objects that may scratch or mar the tile surfaces or cause blockage of the gas ports in the tile faces. Do not spray flame sensing rods with any foreign materials. Chemical cleaners, degreasers and soap solutions must never be allowed to come into contact with the flame sensing rods as they may damage these surfaces or cause broiler malfunction and will void the warranty. If required, clean the flame sensing rods only after allowing to cool off to room temperature, and using a light wiping action with a pre-saturated alcohol pad to remove any carbon buildup.

B. Never leave the chemical compounds, particularly those containing chlorine, on broiler parts over night. Chlorine will cause pitting and corrosion.

C. Never use chemicals in a stronger concentration than recommended by the manufacturer.

D. Use clean water and a soft cloth to wipe cleaning residue from surfaces.

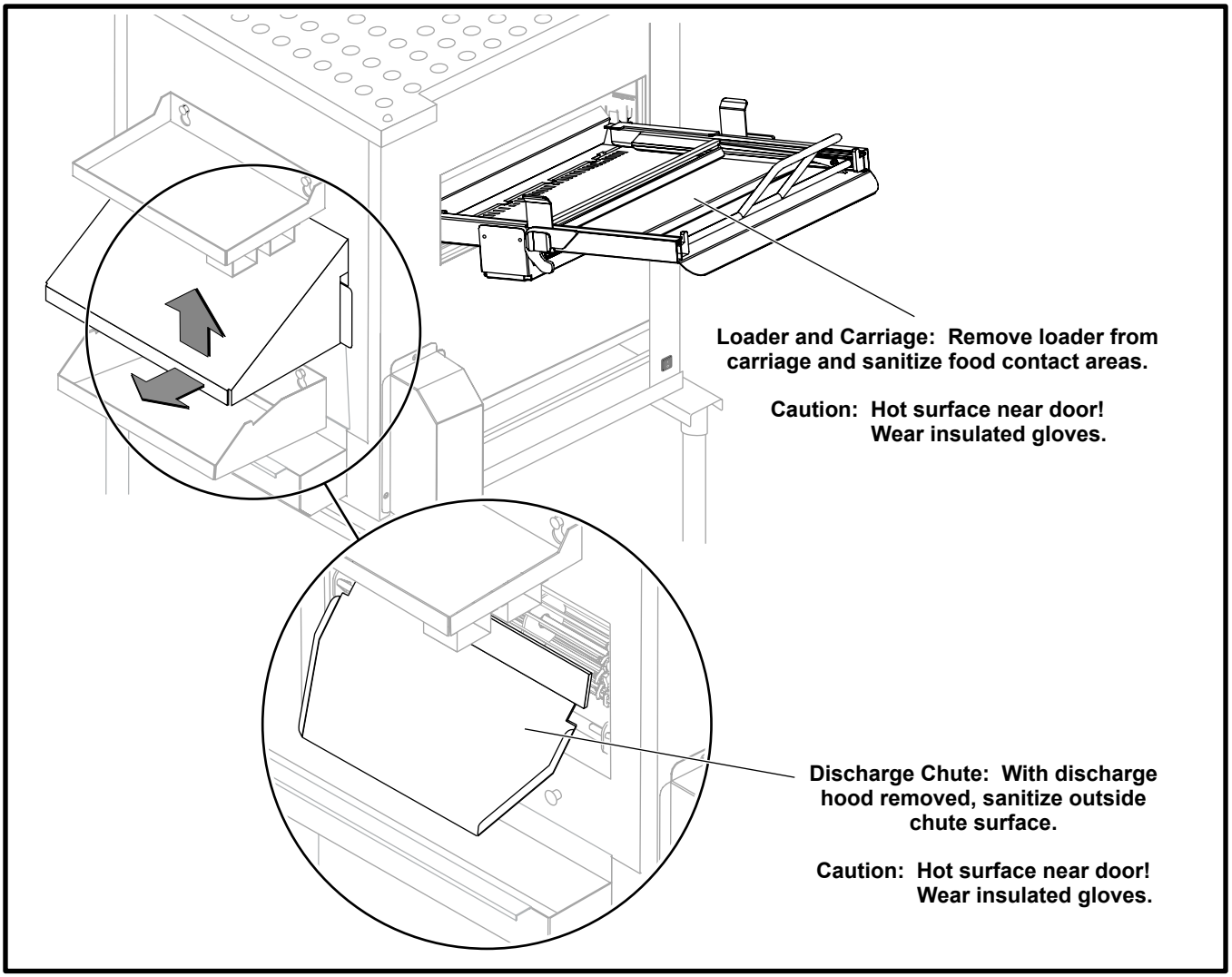
E. Never use ordinary steel wool or scouring pads on the surfaces: use non-abrasive broiler de-greasers and soft cloths

Carefully following these recommendations will help this broiler to give satisfactory services to extend its life.

CLEANING SCHEDULE		
WHAT'S TO BE CLEANED	BROILER COOL	DISCONNECT POWER
4 HOUR CLEANING (Sanitize in place)		
SANITIZE LOADER & TRAY (CAUTION: HOT SURFACES, WEAR INSULATED GLOVES WHILE CLEANING)		
SANITIZE DISCHARGE CHUTE		
DAILY CLEANING (Remove and Wash/Rinse/Sanitize)		
DISCHARGE PAN (CAUTION: HOT SURFACES, WEAR INSULATED GLOVES WHILE CLEANING)		
DISCHARGE HOOD	X	
DISCHARGE GREASE PANS	X	
MAIN GREASE PANS	X	
DISCHARGE END PANEL	X	
DISCHARGE SCRAPER	X	
LOADER & TRAY (CAUTION: HOT SURFACES, WEAR INSULATED GLOVES WHILE CLEANING)		
DISCHARGE CHUTE	X	
LOADER RAMP	X	
WEEKLY CLEANING		
LOWER TUBE BURNER	X	X
BROILER FLIPPER DOOR	X	X
FLAME ARRESTOR	X	X
CATALYST	X	X
MONTHLY CLEANING		
FLAME SENSOR (UPPER BURNERS)	X	X
FLAME SENSOR (LOWER BURNERS)	X	X
FLAME SENSOR TUBE (UPPER BURNERS)	X	X

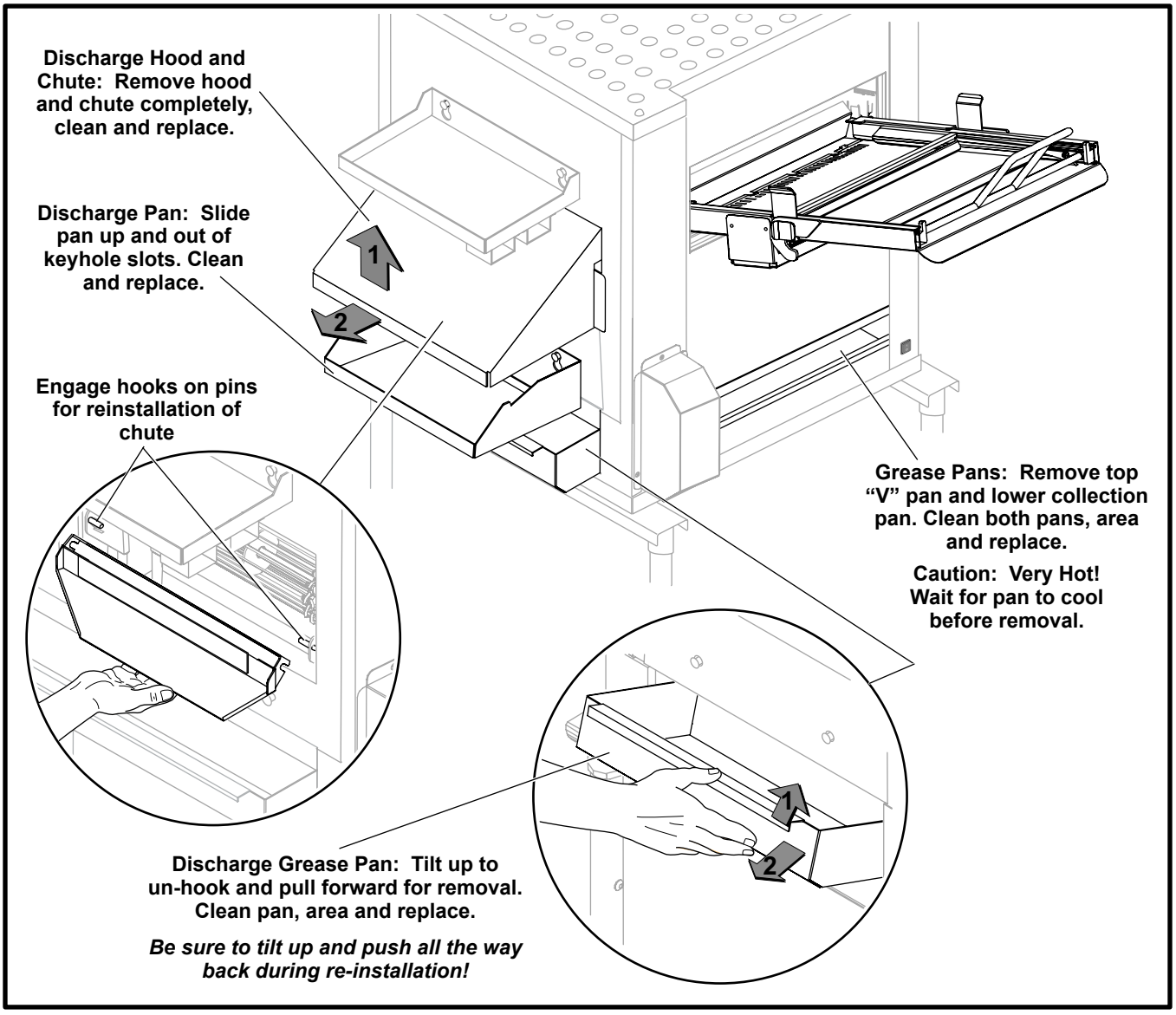
C-1. Four (4) Hour Cleaning

All components that are in contact with food product must be cleaned and sanitized every 4 hours.

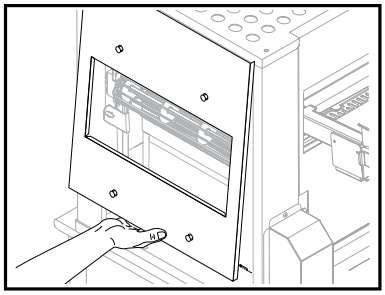


C-2. Daily Cleaning

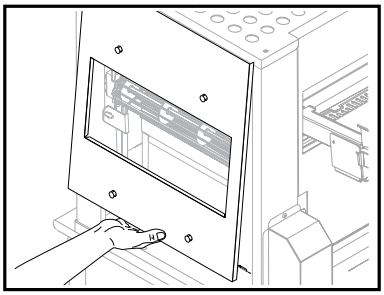
Daily cleaning should also include all items listed in the 4 hour cleaning schedule.



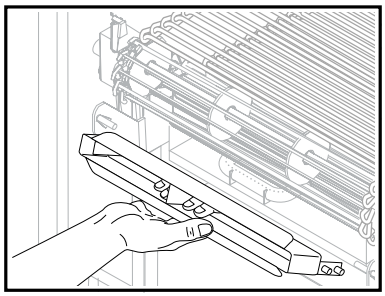
C-2. Daily Cleaning (cont'd.)



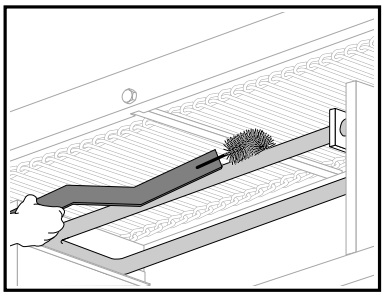
**Discharge End Panel:
Remove discharge accessories and lift panel up while swinging out and down.**



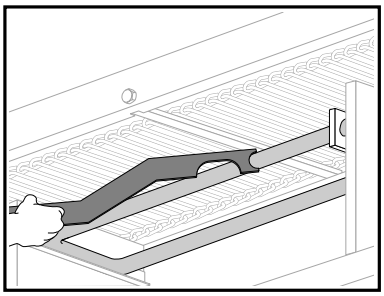
**Discharge Scraper:
Lift up and pull forward.**



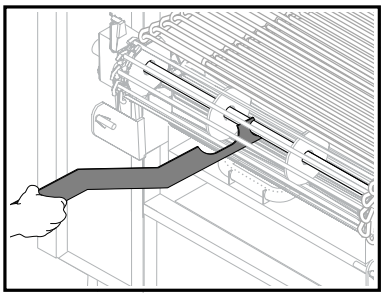
**Discharge Scraper:
Pull out removing locating pins from slots. Clean scraper and area. Replace.**



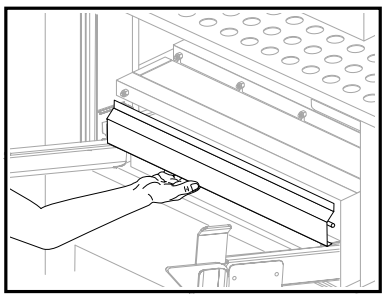
Clean the top of the burner with the brush end of the "Tube Burner Cleaning Tool".



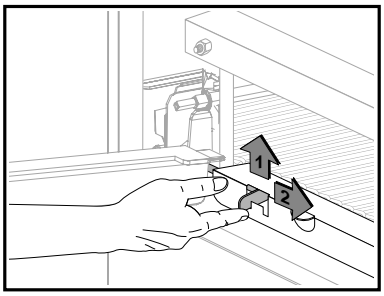
For heavy build-up, use the scraper end of the "Tube Burner Cleaning Tool".



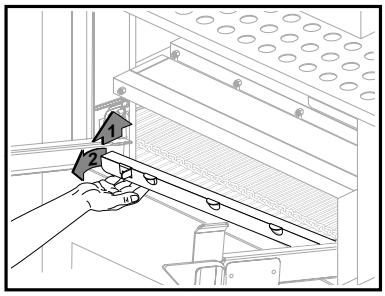
Use the end of the tool to clean the discharge shaft of the conveyor.



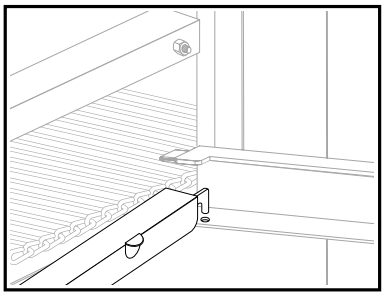
**With the broiler cool, lift and remove the flipper door.
Clean and set aside.**



Lift and slide retaining bolt right.

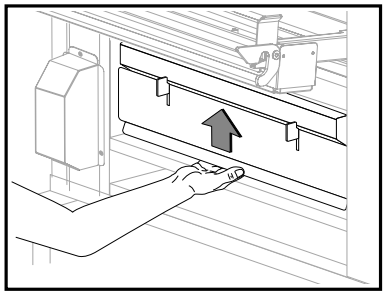


Lift slightly and remove loader ramp as shown.

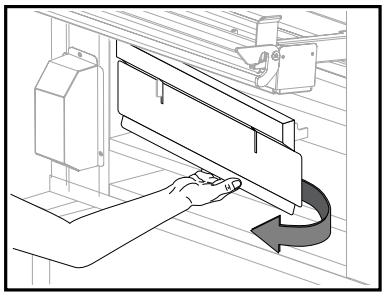


**Disengage pin from pivot hole.
Clean and set aside.**

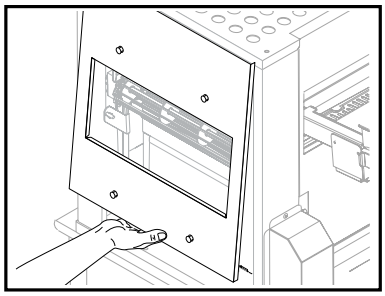
C-3. Weekly Cleaning

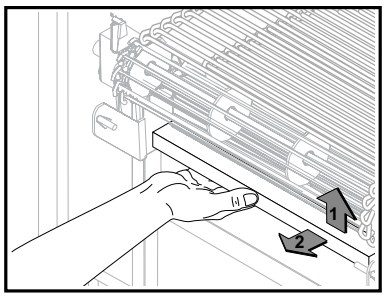


With outer front panel removed, lift up the combustion chamber panel.

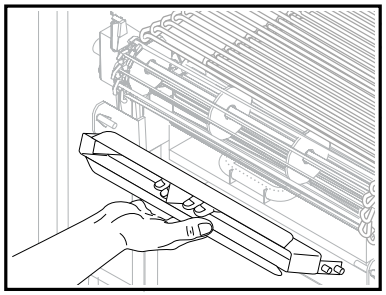


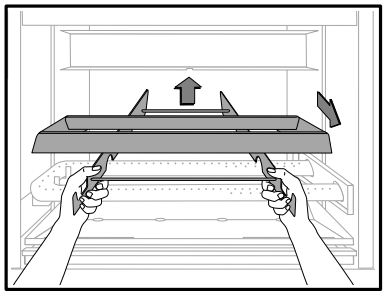
Swing the right side of the panel out as shown. Clean and set aside.



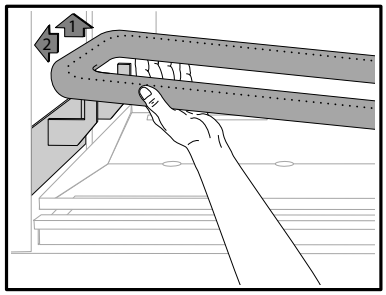


Remove discharge panel and scraper as was performed for daily cleaning.

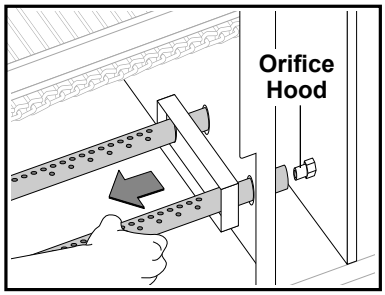




Remove burner shield.

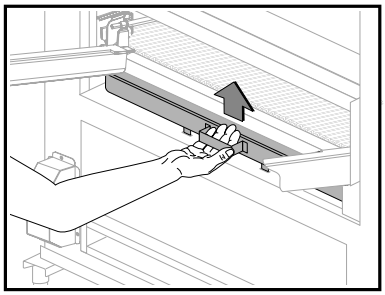


Lift rear of burner out of saddle and continue to hold it.

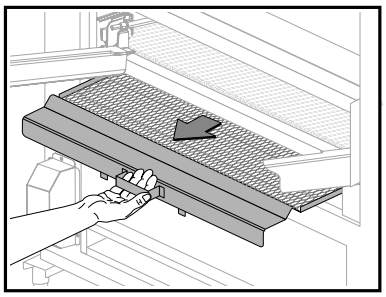


Pull burner off of orifice and through broiler wall. Remove from chamber. Clean, empty any remaining water from the burner and replace.

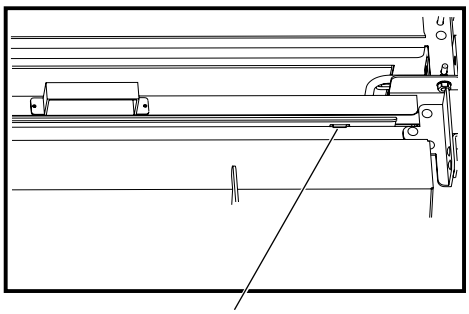
Thoroughly dry out all burner ports!



Lift flame arrestor up to disengage tabs from slots. Tabs are located under the front of the arrestor.



Pull flame arrestor out. Clean and reinstall.



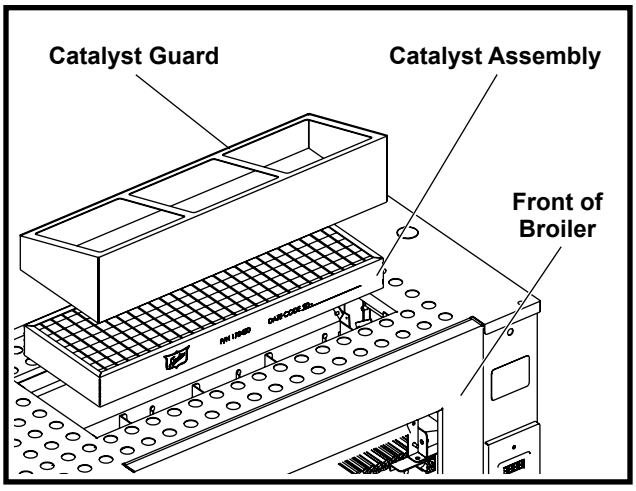
TAB ON THE BOTTOM OF THE FLAME ARRESTOR DROPS INTO SLOT

C-3. Weekly Cleaning (cont'd)

CLEANING CONSIDERATIONS

⚠ WARNING: Do not use soap, detergents, degreasers, silicone, sodium salts, bleaches, anti-oxidants or any other commercial cleaning agents to clean the catalyst. Use of these chemicals will damage the catalyst and render it inoperable

NOTE: Do not clean catalyst in a dishwasher or ultrasonic cleaner. In no case should any abrasive material or abrasive scrubber be used for cleaning.



SAFETY CONSIDERATIONS

The catalytic converter (catalyst) is normally part of a combustion system, and the general safety practices observed with such systems should be practiced. The following considerations are specific to the catalyst portion.

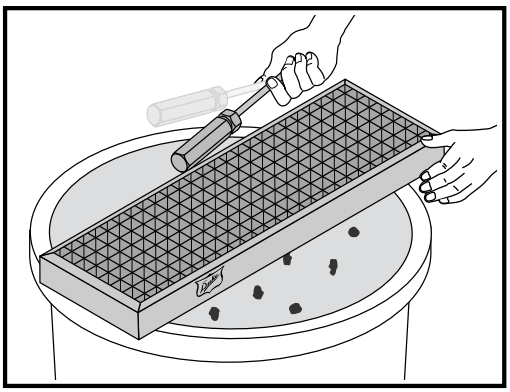
A: Remove power: Before removing the catalyst, disconnect power to the broiler and allow to cool to room temperature. Remove the catalyst guard and set aside for re-installation after the catalyst has been cleaned.

B: Handling catalyst: Care should be taken so that the catalyst is not dropped or damaged in handling. If the unit is going to be handled soon after a cooking cycle, care should be taken to protect one's hands from any hot surfaces by wearing gloves designated for this purpose. There are no moving parts or electrical hookups associated with the catalyst, therefore there should be no danger of a shock hazard when washing the unit. Allow the catalyst to cool to room temperature before starting the cleaning process.

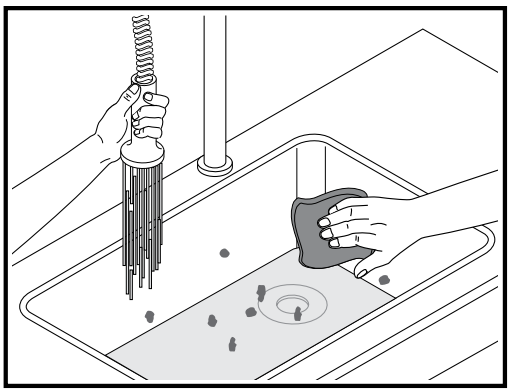
C: Operation: Understand and follow the system instructions provided with the broiler included in the installation and operations manual. It is very important that you make sure that the ducts above the cooking appliance are clean of any grease, prior to the initial operation of the appliance with the catalytic converter in place.

IF NATURAL GAS IS PART OF THE EXHAUST STREAM, BE SURE THAT THE NATURAL GAS DOES NOT BUILD UP TO AN EXPLOSIVE MIXTURE IN THE EXHAUST SYSTEM.

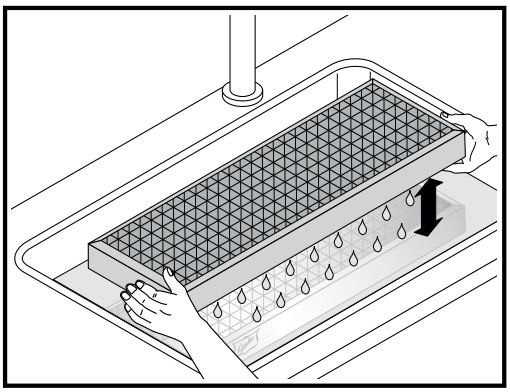
C-3. Weekly Cleaning (cont'd)



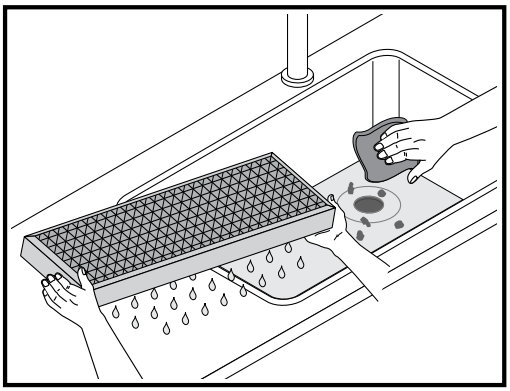
Gently tap frame of the catalyst while holding over a waste bin to dislodge any loose ash/carbon particles.



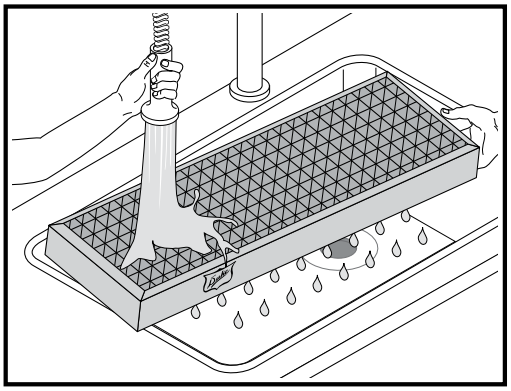
Begin with a clean sink and remove all foreign matter from any wash basin used, before starting the catalyst washing process.



Partially fill wash basin, that is large enough to accommodate the catalyst, with enough <u>clean hot water</u> (100-130ºF) to completely cover the catalyst when placed into the basin. Agitate the catalyst up and down in the water a few times and then let it soak for 20 minutes.

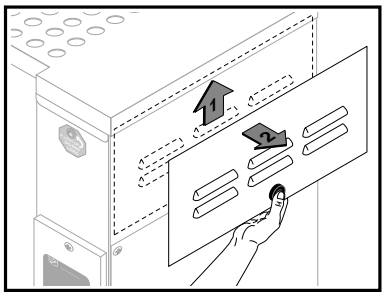


Remove the catalyst and shake out the excess water. Drain and clean the basin thoroughly and then repeat previous step .

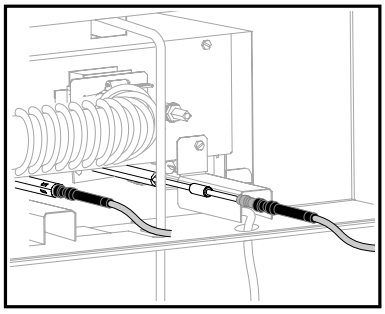


Remove the catalyst and rinse thoroughly with a large volume of hot water. The typical restaurant dishwashing spray nozzle (low pressure, high volume) is perfect for this operation. Work the spray slowly over the entire surface both front and back to assure the removal of any particles caught in the catalyst face or behind the frame. Shake the remaining water from the catalyst and then let it air dry overnight. The catalyst can then be reinstalled in the broiler. Ensure that the catalyst guard is re-installed over the catalyst prior to turning on the broiler.

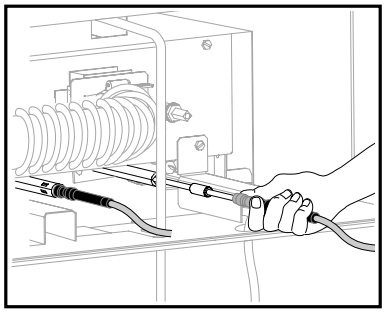
C-4. Monthly Cleaning



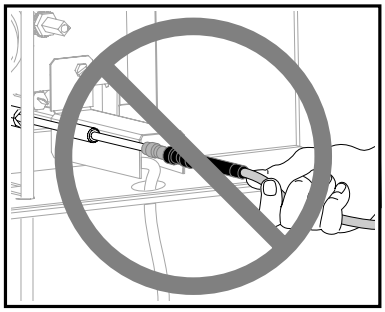
Remove top panel by lifting up and out.



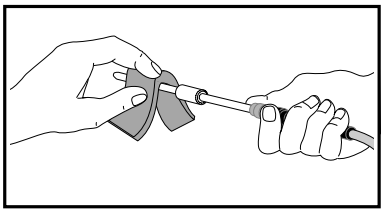
Locate the flame sensors for the upper burners.



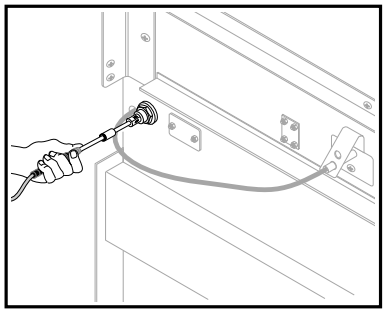
Use caution and safely remove the sensor by holding onto the black boot at the base of the sensor.



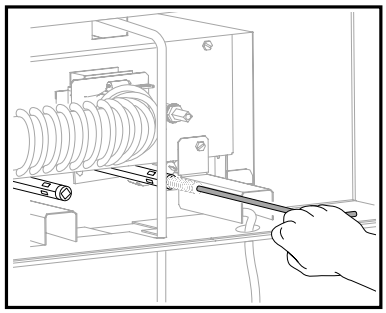
DO NOT REMOVE BY PULLING ON THE BRAIDED WIRE.



Using an alcohol swab, clean the entire metal portion of the sensor rod to remove any buildup. Clean the white ceramic insulator using the alcohol swab until all residue has been removed.



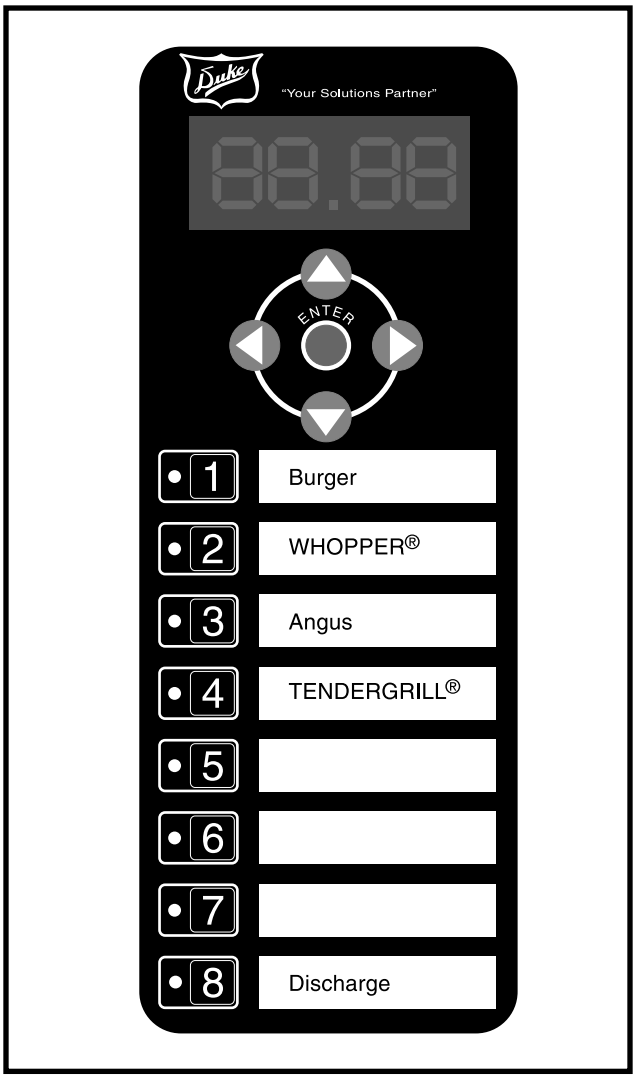
Remove the back panel of the broiler and carefully remove the sensor for the lower burner. Follow the same procedures as those for the upper burners.



After the sensor is removed, use the T-handled cleaning tool by inserting it completely into the sensor tubes and remove. Repeat the process at least five (5) times to remove any residue inside the tube.

Once the cleaning procedures are complete, replace the sensors and panels. Wait at least 30 minutes before starting the broiler.

D. PROGRAMMING THE CONTROL



D-1.0 Entering Program Mode

There are two levels of control Programming.

Level 1: Recipe related programming.

Level 2: Broiler functionality programming.

Press and hold the ENTER button for 5 seconds.

The control will then display CodE. Enter a password that is specific to the level of programming.

D-2.0 Navigating the Programming Screens

The ENTER key is used to move forward though the list of parameters. The first press of the ENTER key brings up the parameter name and the next press bring up the editable parameter setting.

The ▲ and ▼ keys will move backward through the parameters.

The ◄ and ► keys will scroll through parameter settings and also function as numbers 0 and 9.

Product keys 1-8 also function as number keys 1-8.

D-3.0 Level 1 Programming

Enter the password 1-8-2-7 and press the ENTER key.

At this point the control will display PROD and all Product LED's will turn green.

Select a product key for a product that you wish to change. The LED next to the selected product will turn green. All other product LED will be blank.

D-3.1 Product Identifier AbCd

This parameter allows the user to define a four digit alphanumeric product name to associate with each product button.

The ▲ and ▼ keys are used to move through the character set.

The ◄ and ► keys are used to move to the next or previous character. The character that is active will flash.

Hitting ► after the last character will take you to the next parameter.

D-3.2 Cook Temperature Sett

This is the set-point temperature for the broiler during this products cook cycle.

The product keys 1-8 are used for entering numbers 1-8. The ◄ and ► keys are used to enter numbers 0 and 9.

D-3.3 Cooking Profile
on 1, oFF1, on 2, oFF2, …

Defines the cycling parameters for the upper infrared burner and the overall cook time.

These parameters will have 6 segments. Each segment consists of one On/Off cycle.

The On portion of the cycle will come first.

The product keys 1-8 are used for entering numbers 1-8. The ◄ and ► keys are used to enter numbers 0 and 9.

The control will display the total cook time (the sum of all ON and OFF cycles) as a final non-changeable parameter.

As an example:

	ON	OFF
Segment #1	0:00	1:00
Segment #2	2:00	0:00
Segment #3	0:00	0:00
Segment #4	0:00	0:00
Segment #5	0:00	0:00
Segment #6	0:00	0:00

After entering this last parameter; Hitting the ► key will take you back to the Product selection, so that you can select another product to program.

D-3.4 Exit Program Mode

To exit programming and save new entries press the ENTER key until the control displays RdY, PrE or Lo .

To exit programming without saving entries, cycle the main On/Off switch off and on.

D-4.0 Level 2 Programming

Enter the password 3-6-4-5 and press the ENTER key.

D-4.1 ºF or ºC Parameter dEg

Changes temperature displayed between Fahrenheit (F) and Celsius (C).

The ◄ and ► keys are used scroll through the settings.

D-4.2 Change the Idle Temperature Sett

This is the set-point temperature for the broiler during the preheat and idle cycles.

The default for this parameter is 680 ºF.

The product keys 1-8 are used for entering numbers 1-8. The ◄ and ► keys are used to enter numbers 0 and 9.

D-4.3 Additional Factory Parameters

The remaining parameters in this section are factory settings and should not be changed. These settings are as follows:

- oFSt
- Hton
- Lo t
- Hi t
- Cdti
- BEEP
- IrSt
- PCr
- AFCr

D-4.4 Exit Program Mode

To exit programming and save new entries press the ENTER key until the control displays RdY, PrE or Lo .

To exit programming without saving entries, cycle the main On/Off switch off and on.

E. TROUBLESHOOTING

SYMPTOM	CAUSE	REMEDY
Control display does not light up	No power	Ensure broiler is plugged into a proper voltage/Hz receptacle (per name plate rating) and receptacle as power. Check dedicated circuit breaker.
Raw or undercooked product with no controller error messages displayed.	Product not loaded properly. Product button was depressed prior to loading product. Wrong product button was depressed. Lower burner not lighting properly. (Observe bottom burner through slits in lower grease tray) Infrared burners not lighting properly. (Observe Infrared through discharge end of broiler. Note: Burners should remain lit in idle mode)	Review loading technique. Ensure product button is depressed immediately after product is loaded into broiler. Ensure proper product button is being depressed. If broiler is hot, attempt to clean burner in place with broiler cleaning tool. If broiler is cold or allowed to cool down, remove lower burner by removing access panels, clean, and reinstall. Remove lower flame sensor and clean with a soft cloth and isopropyl alcohol. Remove upper control compartment panel and clean two upper flame sensors with a soft cloth and isopropyl alcohol. Clean flame sensor tube with flame sensing tube cleaning brush.
Conveyor belt will not move to discharge product.	Conveyor belt is being obstructed	Observe for obstructions by manually rotating conveyor belt from discharge end of broiler using broiler cleaning tool. Ensure discharge scraper is properly in place. Ensure docking plate is properly in place. Ensure flame arrestor is properly in place.
Loader is not able to be pushed completely into cooking chamber.	Docking plate is not properly in place.	Ensure docking plate and locking tab are correctly in place.
Product is getting stuck or mangled upon loading	Docking plate is not properly in place Flame arrestor is not properly in place	Ensure docking plate and locking tab are correctly in place. Ensure flame arrestor is correctly in place and tabs are slotted correctly.
Control display is reading “Hi”		Contact Duke Manufacturing Co. or a Duke Authorized Service agent.
Control display is reading “Lo”	Lower burner not lighting properly. (Observe bottom burner through slits in lower grease tray) Infrared burners not lighting properly. (Observe Infrared through discharge end of broiler. Note: Burners should remain lit in idle mode) Grease pan is not installed Impedance pan or catalyst is not installed.	If broiler is hot, attempt to clean burner in place with broiler cleaning tool. If broiler is cold or allowed to cool down, remove lower burner by removing access panels, clean, and reinstall. Remove lower flame sensor and clean with a soft cloth and isopropyl alcohol. Remove upper control compartment panel and clean 2 upper flame sensors with a soft cloth and isopropyl alcohol. Clean flame sensor tube with flame sensing tube cleaning brush. Install grease pan. Install impedance pan or catalyst.
Control display is reading “Prob”		Contact Duke Manufacturing Co. or a Duke Authorized Service agent.

E. TROUBLESHOOTING (CONT'D)

SYMPTOM	CAUSE	REMEDY
Control Display is reading "tESt Prod"	Lower burner not lighting properly. (Observe bottom burner through slits in lower grease tray)	If broiler is hot, attempt to clean burner in place with broiler cleaning tool. If broiler is cold or allowed to cool down, remove lower burner by removing access panels, clean, and reinstall. Remove lower flame sensor and clean with a soft cloth and isopropyl alcohol.
	Infrared burners not lighting properly. (Observe Infrared through discharge end of broiler. Note: Burners should remain lit in idle mode)	Remove upper control compartment panel and clean 2 upper flame sensors with a soft cloth and isopropyl alcohol. Clean flame sensor tube with flame sensing tube cleaning brush.
Control display is reading "gAS toP"	Broiler not receiving gas supply.	Ensure that gas valve(s) in line with the broiler are in the ON position.
	Infrared burners not lighting properly. (Observe Infrared through discharge end of broiler. Note: Burners should remain lit in idle mode)	Remove upper control compartment panel and clean 2 upper flame sensors with a soft cloth and isopropyl alcohol. Clean flame sensor tube with flame sensing tube cleaning brush.
Control display is reading "gAS bot"		Cycle broiler off and back on. If this error persists, proceed with the next steps.
	Broiler not receiving gas supply.	Ensure that gas valve(s) in line with the broiler are in the ON position.
	Lower burner not lighting properly. (Observe bottom burner through slits in lower grease tray)	If broiler is hot, attempt to clean burner in place with broiler cleaning tool. If broiler is cold or allowed to cool down, remove lower burner by removing access panels, clean, and reinstall. Remove lower flame sensor and clean with a soft cloth and isopropyl alcohol.
Control display is reading "gAS SEnt"	Infrared burners not lighting properly. (Observe Infrared through discharge end of broiler. Note: Burners should remain lit in idle mode)	Remove upper control compartment panel and clean 2 upper flame sensors with a soft cloth and isopropyl alcohol. Clean flame sensor tube with flame sensing tube cleaning brush.
Control display is reading "gAS SEnb"	Lower burner not lighting properly. (Observe bottom burner through slits in lower grease tray)	If broiler is hot, attempt to clean burner in place with broiler cleaning tool. If broiler is cold or allowed to cool down, remove lower burner by removing access panels, clean, and reinstall. Remove lower flame sensor and clean with a soft cloth and isopropyl alcohol.

IV. SERVICE AND REPAIR

A-1. WARNINGS

⚠ WARNING: Disconnect the power supply to the appliance before servicing.

⚠ WARNING: Units provided with casters have a restraint to limit the movement of the broiler. If this restraint is disconnected during servicing it must be reconnected after the appliance has been returned to its original installed position.

NOTE: Proper clearances must be maintained during servicing.

Maintenance is to be performed by qualified service personnel only. Service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified service personnel are those individuals, firms, companies or corporations which either in person or through an agent are engaged in and responsible for repair or servicing of commercial food preparation equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction.

If you should require assistance in the selection of a qualified service agency, please contact Duke Manufacturing Co.'s Service Department at 800-735-3853.

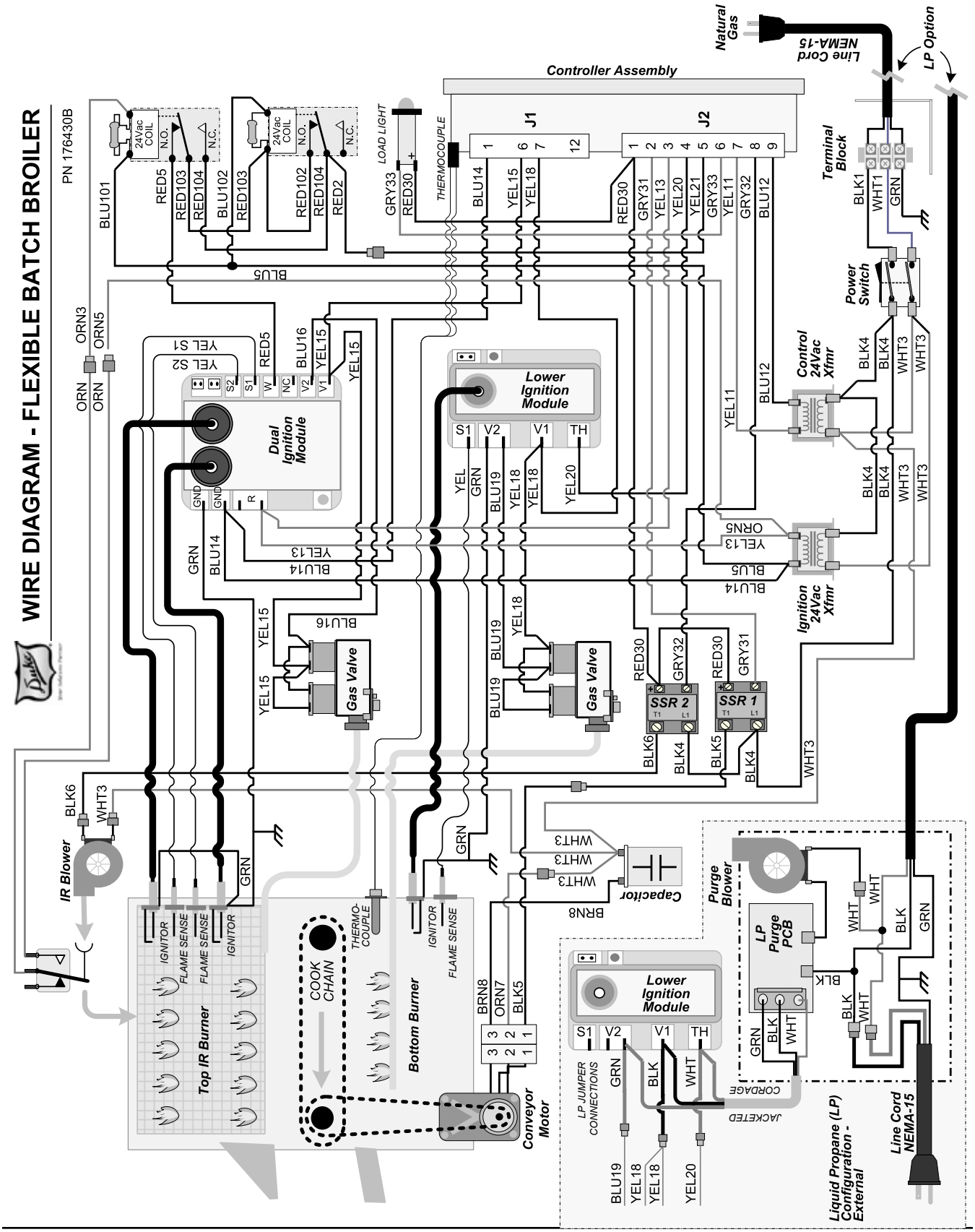
V. REPLACEMENT PARTS LIST

ITEM	DESCRIPTION	P/N
1	SWITCH, LIGHTED, DPST	175503
2	BURNER, INFRARED	175780
3	BURNER, TUBE, J STYLE (FOR USE IN US & CANADA)	176370
	KIT, BURNER, ADJUSTABLE - LOWER BURNER UPGRADE (FOR USE OUTSIDE US & CANADA)	600313
4	MOTOR-CONVEYOR	175867
5	SPROCKET, B21X3/8 BORE (MOTOR)	175517
6	SHAFT, DISCHARGE SIDE	175037
7	SHAFT, RIGHT SIDE	175038
8	CAPACITOR, MOTOR-CONVEYOR	175507
9	MODULE, IGNITION (LOWER BURNER –NATURAL GAS)	175877
	MODULE, IGNITION (LOWER BURNER – PROPANE)	175872
10	MODULE, IGNITION (UPPER BURNERS)	175869
11	TRANSFORMER,40VA, 120VAC-24VAC	175526
12	PROBE, TEMP., C-CHAMBER	175977
13	LIGHT, COOK	175550
14	RELAY - SOLID STATE	175870
15	CHAIN, DRIVE	175551
16	CONTROLLER	175575
17	GASKET, CONTROL BEZEL	175510
18	GASKET, BLOWER INLET	175511
19	BLOWER, 120V 60HZ W/ CENTRIFUGAL SWITCH	176185
20	HOSE, BLOWER	175189
21	ORIFICE HOLDER, IR	175542
22	VALVE, LP - GAS, COMBO 24VAC (PROPANE ONLY)	175766
	VALVE, NAT - GAS COMBO 24VAC (NATURAL GAS ONLY)	175531
23	ORIFICE, LOWER BURNER #30/3.26mm, (NAT. GAS ONLY)	176404
	ORIFICE, LOWER BURNER #46/2.06mm (PROPANE ONLY)	176412
24	ORIFICE, IR FRONT #40 (NATURAL GAS ONLY)	175735
	ORIFICE, IR FRONT #52 (PROPANE GAS ONLY)	175767
25	ORIFICE, IR REAR, #36 (NATURAL GAS ONLY)	175736
	ORIFICE, IR REAR, #51 (PROPANE GAS ONLY)	175768
26	ORIFICE HOLDER 3/8 COMP. STRGHT X BULKHEAD	176368
27	TUBING-TEE TO VALVE, KIT	175477
28	TUBING-TEE TO IR, KIT	175476
29	TUBING-LOWER BURNER TO VALVE ,KIT	175478
30	SENSOR-LOWER BURNER	175534
31	SENSOR-IR BURNER	175535

V. REPLACEMENT PARTS LIST (CONT'D)

ITEM	DESCRIPTION	P/N
32	IGNITER	175536
33	IGNITION SUPPRESSION CABLE-IR	175537
34	IGNITION SUPPRESSION CABLE-LOWER	175538
35	CHAIN, COOK	175674
36	BUSHING BLOCK, CONVEYOR	175525
37	LOADER TRAY	175430
38	LOADER MOUNTING BRACKET	175438
39	LOADER	175444
40	LOADER RAMP	175741
41	DOOR	175429
42	FLAME ARRESTOR	175293
43	BURNER SHIELD	175200
44	DISCHARGE CHUTE	175340
45	DISCHARGE HOOD	175778
46	PRODUCT PAN SHELF	175363
47	DISCHARGE PAN	175358
48	MAIN GREASE PAN, LOWER BURNER UPGRADE	176398
49	“V” GREASE PAN, LOWER BURNER UPGRADE	176397
50	SIDE, GREASE PAN	175357
51	PIVOT ASH SCRAPER	175150
52	REAR PANEL	175305
53	FRONT PANEL	175300
54	PANEL, UPPER, LIFT OFF	175392
55	PANEL, ACCESS ELECTRICAL	175383
56	PANEL, ACCESS DISCHARGE	175250
57	IMPEDANCE PAN (IF NO OPTIONAL CATALYST)	175226
58	CATALYST (OPTIONAL)	175480
59	CATALYST, GUARD	175482
60	TUBE BURNER CLEANING TOOL	175485
61	FLAME ROD TUBE CLEANER	175701
62	BRUSH, FLAME ROD TUBE CLEANER	175705
63	SANITATION PAIL	175842
64	RELAY, 10A, 24VAC	175184

VI. WIRING SCHEMATIC



NOTES

NOTES

NOTES



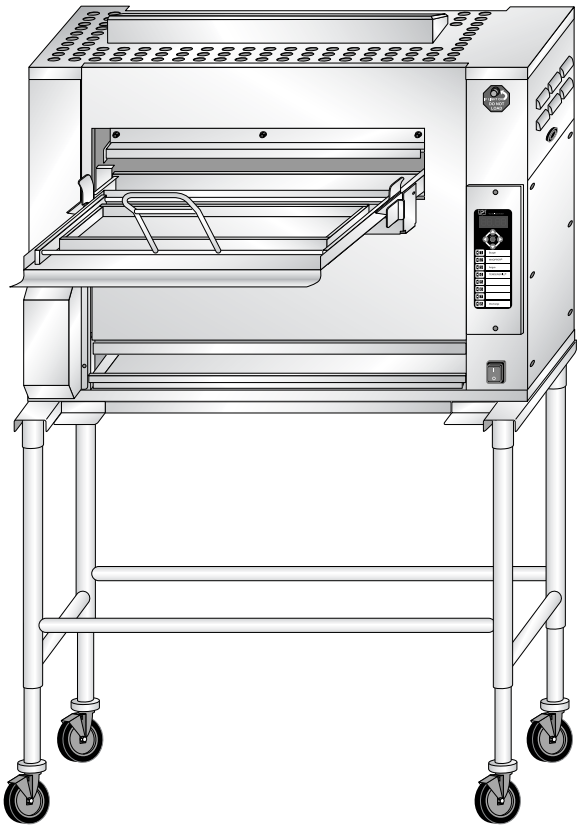
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www.dukemfg.com

Your Solutions Partner

Manuel d'installation et de fonctionnement



BURGER KING GRILLOIR À FOURNÉES MULTI-PROGRAMMABLE - D'AMELIORATION DU BRULEUR INFERIEUR

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10/1/2014

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AVERTISSEMENT IMPORTANT ET INFORMATION DE SÉCURITÉ

PLACER DANS UN ENDROIT BIEN EN VUE les instructions à suivre au cas où l'utilisateur détecte des odeurs de gaz. Ces informations doivent être obtenues auprès d'un fournisseur de gaz local.

POUR VOTRE SÉCURITÉ :

Ne pas entreposer ou utiliser d'essence, de substances produisant des vapeurs inflammables ou de liquides inflammables à proximité de cet appareil ou de tout autre appareil.

⚠ AVERTISSEMENT : Une installation, un réglage, une altération, une réparation ou un entretien incorrects peuvent causer des dommages matériels et des blessures, voire la mort. Lire les instructions d'installation, de fonctionnement et d'entretien dans leur intégralité avant d'installer ou de réparer cet appareil.

CE MANUEL DOIT ÊTRE CONSERVÉ POUR RÉFÉRENCE FUTURE.

I. GÉNERALITÉS

A. SPÉCIFICATIONS DU GRILLOIR

SPÉCIFICATIONS DU GRILLOIR À FOURNÉES MULTI-PROGRAMMABLE				
	GAZ NATUREL		**PROPANE**	
ALTITUDE (MAXIMUM)	2000 FT	607 m	2000 FT	607 m
RACCORDEMENT DE LA TUYAUTERIE DE GAZ	3/4 IN. F-NPT		3/4 IN. F-NPT	
PLAGE DE PRESSION D'ADMISSION	7 – 12 IN. C.E.		10 – 12 IN. C.E.	
	PRESSION DU MANIFOLD		**PRESSION DU MANIFOLD**	
BRÛLEURS À INFRAROUGE (SUPÉRIEURS)	3,75 IN. C.E.	0,93 kPa	8,0 IN. C.E.	2,0 kPa
BRÛLEUR INFÉRIEUR	3,75 IN. C.E.	0,93 kPa	8,0 IN. C.E.	2,0 kPa
CONSOMMATION ÉNERGÉTIQUE TOTALE	94,000 – 100,000 BTU/H	27,5 – 29,3 kW	94,000 – 100,000 BTU/H	27,5 – 29,3 kW
	TAILLE DES ORIFICES DES BRÛLEURS		**TAILLE DES ORIFICES DES BRÛLEURS**	
BRÛLEUR À INFRAROUGE AVANT	n° 40	2,49 mm	n° 52	1,61 mm
BRÛLEUR INFRAROUGE ARRIÈRE	n° 36	2,70 mm	n° 51	1,70 mm
BRÛLEUR INFÉRIEUR	n° 30	3,26 mm	n° 46	2,06 mm

POIDS D'EXPÉDITION : 219 kg (482 lb)
DIMENSIONS D'EXPÉDITION : 119,4 x 86,4 x 172,7 cm (47 x 34 x 68 in.)

NUMÉRO DE MODÈLE	ÉLECTRIQUE	GAZ NATUREL ET GPL
FBB-NO-120	120 V CA, 2 A, 60 Hz	94,000 – 100,000 BTU/H
FBB-NC-120	120 V CA, 2 A, 60 Hz	94,000 – 100,000 BTU/H
FBB-PO-120	120 V CA, 2 A, 60 Hz	94,000 – 100,000 BTU/H
FBB-PC-120	120 V CA, 2 A, 60 Hz	94,000 – 100,000 BTU/H

A-1.0 Identifiant du numéro de modèle

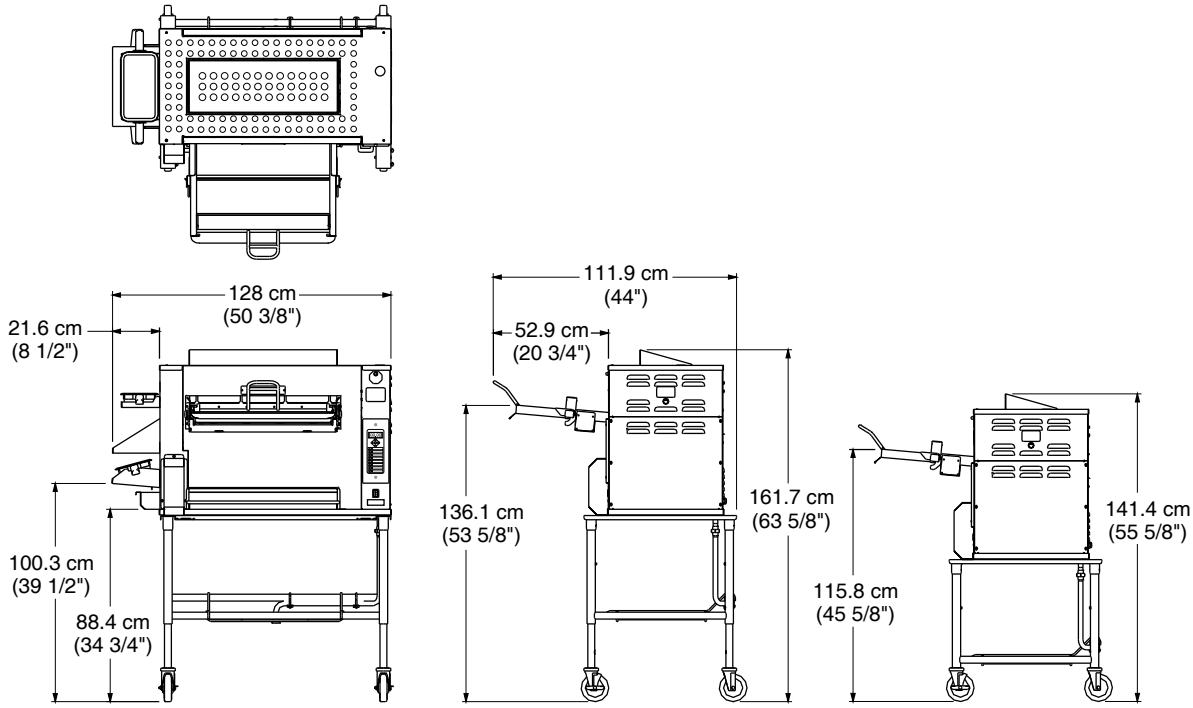
FBB-X Y -120

X = N (GAZ NATUREL) OU P (PROPANE / GPL)

Y = O (PAS DE CATALYSEUR) OU C (CATALYSEUR)

120 = 120 VOLTS

A-2.0 Dimensions du grilloir



II. INSTRUCTIONS D'INSTALLATION

A. PERSONNEL QUALIFIÉ

Ces instructions d'installation sont destinées à des techniciens d'installation et d'entretien qualifiés uniquement. Une installation ou un entretien non effectués par un personnel qualifié peuvent endommager le grilloir et/ou blesser l'opérateur.

Le personnel d'installation qualifié comprend les personnes, les sociétés, les entreprises ou les compagnies, qui en personne ou par l'intermédiaire d'un agent, participent et sont responsables des activités suivantes :

- L'installation ou le remplacement de la tuyauterie de gaz ou le branchement, l'installation, la réparation ou l'entretien de l'équipement, par des personnes possédant l'expérience requise en la matière, connaissant toutes les précautions à prendre et travaillant en conformité avec les autorités locales et nationales compétentes. Voir : Code national des gaz combustibles NFPA 54 (ANSI Z223.1).
- L'installation du câblage électrique à partir du compteur électrique, de la boîte de commande principale ou de la sortie vers l'appareil électrique. Le personnel d'installation qualifié doit connaître les précautions à prendre et travailler en conformité avec les autorités locales et nationales compétentes. Voir : Code électrique national, ANSI/NFPA70.
- Cet appareil n'est pas conçu pour être utilisé par des personnes (y compris des enfants) dont les aptitudes physiques, sensorielles ou mentales sont diminuées, ou dont l'expérience et la compétence sont insuffisantes, sauf si elles ont bénéficié d'un contrôle ou d'une formation à l'utilisation de l'appareil de la part d'une personne responsable de leur sécurité.

L'installation doit être conforme aux codes locaux, et en l'absence de codes locaux, avec le code national des gaz combustibles, ANSI Z223.1/NFPA 54, ou avec le code d'installation du gaz naturel et du propane, CSA B149.1 selon le cas, notamment :

- L'appareil et son robinet de sectionnement doivent être débranchés de l'arrivée de gaz durant tout essai de pression si la pression d'essai est supérieure à 1/2 psi (3,5 kPa).
- L'arrivée de gaz doit être coupée en ferment le robinet de sectionnement de l'appareil à la main durant tout essai de pression du système de tuyauterie d'alimentation en gaz si la pression est égale ou inférieure à 1/2 psi (3,5 kPa).

Pour les grilloirs montés sur roue, l'installation doit être effectuée avec un connecteur conforme aux normes pour les connecteurs des appareils à gaz mobiles (Standard for Connectors for Movable Gas Appliances), ANSI Z21.69/CSA 6.16, ainsi qu'avec un dispositif de débranchement rapide conforme à la norme des appareils à débranchement rapide pour une utilisation avec du gaz (Standard for Quick-Disconnect Devices for Use with Gas Fuel), ANSI Z21.4/CSA 6.9. Lors de l'installation du grilloir avec des roulettes et un tuyau à débranchement rapide, un système adéquat doit être fourni pour limiter le mouvement du grilloir sans dépendre du connecteur et du dispositif de débranchement rapide ou de la tuyauterie associée. Un système de retenue doit être attaché à la section verticale du cadre de la base à l'arrière du grilloir.

B. LIVRAISON ET INSPECTION

Duke Manufacturing Co. met tout en œuvre pour garantir une réception en parfait état du grilloir. Le grilloir est attaché au moyen de sangles sur des patins en bois et emballé de sorte à éviter les dommages durant le transport. Tous les grilloirs sont soumis à une inspection soigneuse avant d'être emballés et consignés auprès du transporteur.

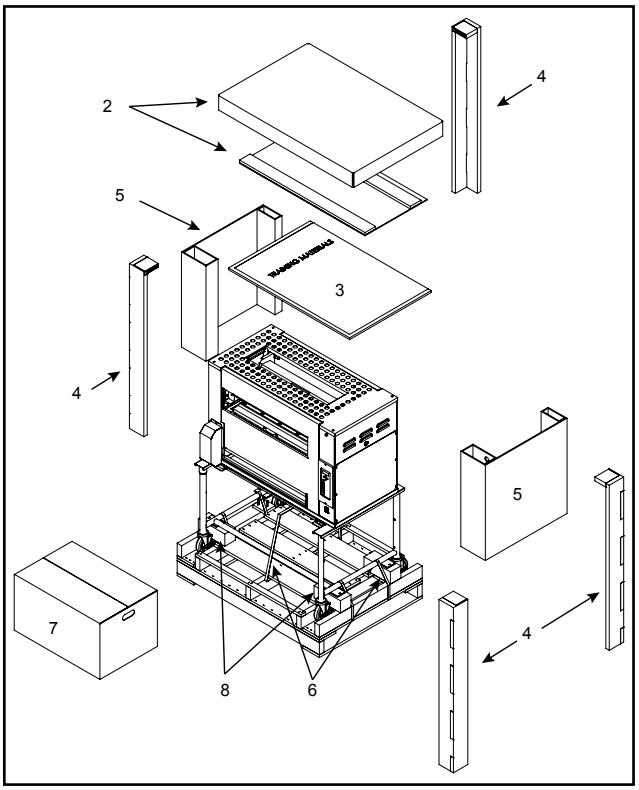
À réception du grilloir Duke :

- Examiner le conteneur d'expédition, en notant avec soin tout dommage extérieur sur le reçu de livraison qui doit également être signé par le livreur/ le transporteur.
- Déballer et vérifier l'absence de dommages non visibles à l'extérieur du conteneur d'expédition.
- Vérifier qu'il n'y a pas de dommages cachés. Le transporteur doit être notifié dans les quinze (15) jours suivant la livraison du grilloir, et le carton, les patins de palette et tout le matériel d'emballage doivent être conservés pour l'inspection.

Duke Manufacturing Co. ne peut être tenu responsable des pertes et des dommages ayant lieu durant le transport. Le transporteur est entièrement responsable de la livraison en bonne et due forme lorsque le produit expédié a été accepté. Nous acceptons cependant d'aider le client à soumettre sa réclamation.

Prudence : Le grilloir est très lourd!
Utiliser une aide approprié pour le relevage.

1. À l'aide d'un couteau, couper l'emballage en plastique (non illustré).
2. Retirer le carton supérieur et l'opercule interne.
3. Retirer la boîte contenant le matériel de formation.
4. Retirer le carton des quatre coins.
5. Retirer le carton aux deux extrémités.
6. Retirer les sangles (couper avec un couteau ou des ciseaux à 5 emplacements).
7. Retirer la boîte des pièces et des accessoires à attacher de la partie avant.
8. Relever une extrémité du grilloir et taper sur les blocs vers le centre puis sur les côtés pour les retirer. Répéter pour tous les blocs. Ceci permet aux roulettes de toucher la palette.
9. Retirer le grilloir de la palette d'expédition en se faisant aider de 3 personnes pour guider et distribuer le poids (environ 335 lb) en fonction. Tout en soutenant avec précaution le grilloir, le faire rouler vers l'avant jusqu'à ce que les roulettes avant soient dégagées de la palette. Relever le grilloir de 6 à 8 pouces au-dessus et à l'écart de la palette, et le placer sur le sol avec soin pour éviter d'endommager les roulettes.
10. Retirer le ruban de protection bleu des panneaux du grilloir en veillant à ne pas en laisser.

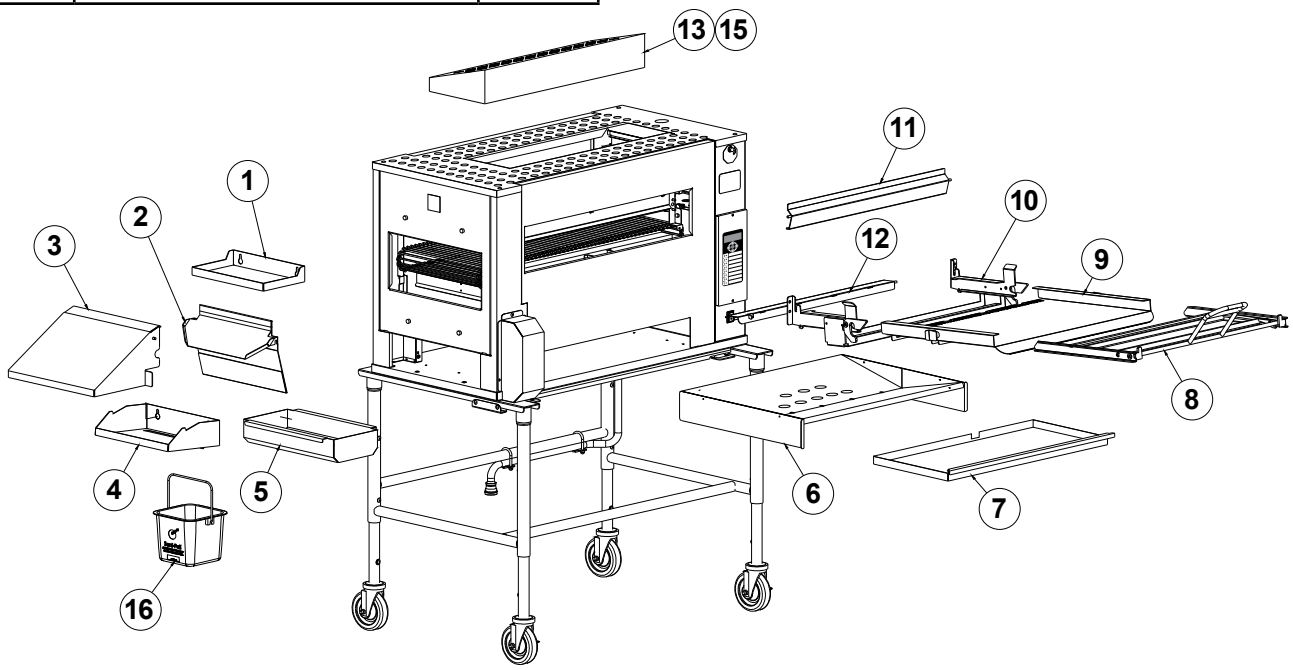


C. ASSEMBLAGE DU GRILLOIR

Avant d'assembler et d'installer le grilloir, s'assurer que toutes les pièces nécessaires sont présentes.

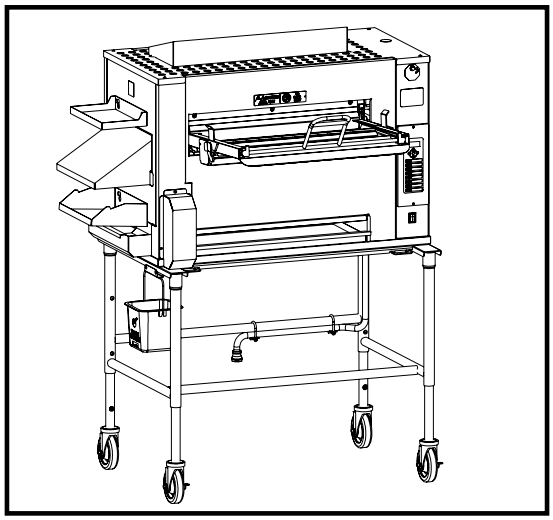
ARTICLE	NOM DE LA PIÈCE	RÉF.
1	TABLETTE DE PRODUCTION	175353
2	CHUTE DE DÉCHARGEMENT	175340
3	DÔME DE DÉCHARGEMENT	175778
4	SUPPORT DE BAC DE DÉCHARGEMENT	175358
5	BAC À GRAISSE DE DÉCHARGEMENT	175357
6	BAC À GRAISSE EN "V"	176397
7	BAC À GRAISSE PRINCIPAL	176398
8	CHARGEUR	175444
9	PLATEAU DU CHARGEUR	175430
10	SUPPORT DU CHARGEUR	175438
11	PORTE	175429
12	RAMPE DU CHARGEUR	175741
13	BAC D'IMPÉDANCE	175226
14	CATALYSEUR (EN OPTION)	175480
15	GARANT DE CATALYSEUR (EN OPTION)	175482
16	BAC DE NETTOYAGE	175842
17	KIT, OUTILS DE NETTOYAGE/NETTOYAGE DE L'OUTIL D'INSTALLATION – BROSSE DE NETTOYAGE DU TUBE À FLAMME DU BRÛLEUR INFÉRIEUR, OUTIL DE NETTOYAGE DU TUBE, CLÉ ALLEN DE 3/16 PO POUR L'INSTALLATION DU CHARGEUR	175700
18	KIT – PIÈCES D'ENTRETIEN DU GRILLOIR, GAZ NATUREL AVEC CONTRÔLEUR AVEC CHAÎNE DE CUISSON (EN OPTION)	600310
19	KIT – PIÈCES D'ENTRETIEN DU GRILLOIR, PROPANE AVEC CONTRÔLEUR AVEC CHAÎNE DE CUISSON (EN OPTION) GRILLOIR, GAZ NATUREL AVEC CONTRÔLEUR AVEC CHAÎNE DE CUISSON (EN OPTION)	600314

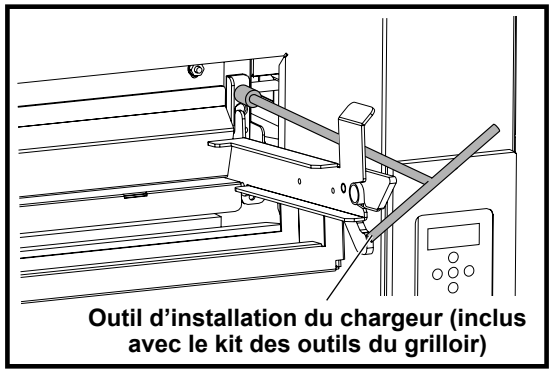
ARTICLE	NOM DE LA PIÈCE	RÉF.
20	KIT – REMPLACEMENT PAR L'UTILISATEUR, BRÛLEUR INFÉRIEUR, PARE-FLAMMES, CHARGEUR ET GARANT DE BRÛLEUR (EN OPTION)	600311
21	KIT – REMPLACEMENT PAR L'UTILISATEUR, BRÛLEUR INFÉRIEUR ET PARE-FLAMMES (EN OPTION)	600312
22	KIT – CONNECTEUR DE TUYAU DE GAZ (EN OPTION)	175690
23	KIT – RÉGULATEUR DE HAUTE PRESSION D'ALIMENTATION EN GAZ (EN OPTION)	175689
24	KIT – PIÈCES RECH. DE RÔTISSOIRE, GAZ NAT. AVEC CONTRÔLEUR ET CHAÎNE DE CUISSON (EN OPTION), RÉGLABLE – APPAREILS POUR HAUTE ALTITUDE ET DESTINÉS AU MARCHÉ INTERNATIONAL	600331
25	KIT – BRÛLEUR INFÉRIEUR, PARE-FLAMMES, SYSTÈME DE CHARGEMENT ET PROTECTION DE BRÛLEUR (EN OPTION) REMPLAÇABLES PAR L'UTILISATEUR – APPAREILS POUR HAUTE ALTITUDE ET DESTINÉS AU MARCHÉ INTERNATIONAL	600332
26	KIT – BRÛLEUR INFÉRIEUR ET PARE-FLAMMES (EN OPTION) REMPLAÇABLES PAR L'UTILISATEUR – APPAREILS POUR HAUTE ALTITUDE ET DESTINÉS AU MARCHÉ INTERNATIONAL	600333
27	KIT – PIÈCES RECH. DE RÔTISSOIRE, PROPANE AVEC CONTRÔLEUR ET CHAÎNE DE CUISSON (EN OPTION) – APPAREILS POUR HAUTE ALTITUDE ET DESTINÉS AU MARCHÉ INTERNATIONAL	600334



Préparation

Installer tous les éléments comme illustré ci-dessous.





Outil d'installation du chargeur (inclus avec le kit des outils du grilloir)

Installer le support du grilloir avec (4) écrous 1/4-20.

Utiliser l'outil de rallonge fourni pour retirer et réinstaller les écrous. (Les écrous sont expédiés installés sur les tiges de fixation du chargeur.)

D. RÉGLAGES LORS DE L'INSTALLATION

Chaque section du grilloir et tous les composants du grilloir ont été intégralement testés et inspectés avant de quitter l'usine. Cependant, il est parfois nécessaire d'effectuer des tests supplémentaires ou de régler le grilloir après son installation. Ces réglages relèvent de la responsabilité du distributeur ou de l'installateur. Ces types de réglages ne sont pas considérés comme des défauts, mais plutôt comme une étape normale et courante faisant partie de l'installation adéquate de l'équipement.

Ces réglages incluent notamment :

- Réglages du régulateur de pression
- Réglage de la hauteur du grilloir (selon le besoin)

Aucune installation ne doit être considérée achevée sans une inspection adéquate et, si nécessaires, les réglages appropriés par un personnel d'installation ou d'entretien qualifié.

Il est également important de ne pas obstruer le débit de combustion naturel et l'air de ventilation pour obtenir un bon fonctionnement du grilloir. Ce grilloir ne doit pas être installé sur un muret ou scellé au mur. Ceci obstruerait le débit d'air vers le compartiment de combustion ou nuirait à la bonne ventilation de l'unité. Avant d'effectuer tout raccordement vers le grilloir, vérifier les plaques signalétiques pour s'assurer que les spécifications du grilloir sont adaptées au type de gaz et à la tension alimentant le grilloir.

La plaque signalétique est située au dos du panneau du couvercle du compartiment de commande du côté droit de l'unité.

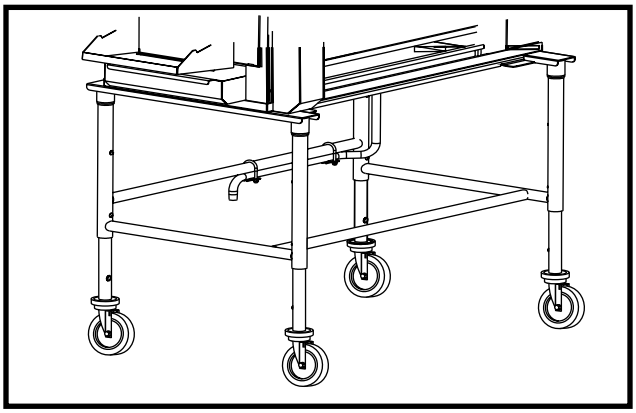
La plaque indiquant le numéro de modèle et le numéro de série du grilloir est attachée au dos de l'unité.

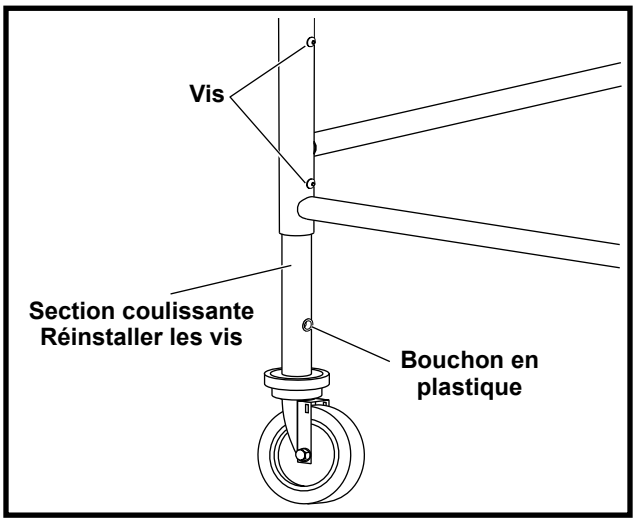
Relevage ou abaissement du grilloir

La hauteur du grilloir peut être réglée à l'aide des deux vis sur chaque pied.

Prudence : Le grilloir est très lourd! Utiliser une aide approprié pour le relevage.

1. Relever une extrémité du grilloir sur un support large et robuste (non fourni).
2. Retirer (2) vis par pied et relever/abaisser dans les trous filetés. Réinstaller les vis.
3. Retirer le support et abaisser/relever le grilloir en toute sécurité.
4. Placer des bouchons en plastique (fournis attachés au support) dans tous les trous non utilisés.





E. EMPLACEMENT DU GRILLOIR

Une préparation et un placement adéquats du grilloir procureront les meilleurs résultats en termes de commodité de l'utilisateur à long terme et de performance satisfaisante. Il est fortement recommandé de prévoir avec soin l'emplacement du grilloir avant son arrivée.

- Le grilloir doit être placé dans une zone à l'abri des courants d'air et favorable à un accès pour le fonctionnement et l'entretien.
- La zone autour du grilloir doit être dégagée de tous matériaux combustibles. Les dégagements minimum sont :

	COMBUSTIBLE MM (PO)	NON COMBUSTIBLE MM (PO)
Extrémité de déchargement	305 (12)	305 (12)
Extrémité de panneau d'accès	76 (3)	76 (3)
Arrière	102 (4)	102 (4)
Sol/table	0 (0)	0 (0)

F. TUYAUTERIE DE GAZ

Un grilloir standard consomme un total de gaz de 100 000 BTU/h. Afin d'atteindre le degré de performance pour lequel l'unité a été conçue, le plan de tuyauterie générale de la cuisine de dimensions adéquates est essentiel. L'installation de ce grilloir doit être conforme à tous les codes locaux, et en l'absence de tous codes locaux, au code national des gaz combustibles, NFPA 54 et ANSI Z 223.1.

Le fournisseur de gaz local doit consulter le code national des gaz combustibles pour une installation et un dimensionnement adéquat de la tuyauterie de gaz. Généralement, la tuyauterie doit être dimensionnée de façon à fournir une alimentation en gaz suffisante pour répondre à la demande maximum de tous les appareils fonctionnant au gaz sur une ligne sans perte excessive de pression à la sortie de l'équipement. Les exigences en BTU totales de l'équipement à alimenter et la longueur totale du compteur aux appareils sont des considérations majeures à prendre en compte pour une conception adéquate du système d'alimentation en gaz.

REMARQUE : L'utilisation du plateau du chargeur pour soulever de lourds articles ou le poids du corps peut endommager les composants du grilloir.

AVIS À L'INSTALLATEUR :

CET APPAREIL DOIT ÊTRE RACCORDÉ À UNE ALIMENTATION EN GAZ AVEC UNE PLAGE DE PRESSION DE :

GAZ NATUREL 7 À 12 po (177 À 304 mm) C.E.

GAZ PROPANE 10 À 12 po (254 À 304 mm) C.E

La pression d'alimentation en gaz doit être contrôlée avant l'installation. Si elle dépasse 12 po (304 mm) C.E., le *KIT POUR HAUTE PRESSION D'ALIMENTATION*, pièce Duke n° 75689, doit être installé et réglé, conformément aux instructions qui l'accompagnent, à une pression de sortie de :

Gaz naturel – 7 po (177 mm) C.E.

Gaz propane – 11 po (279 mm) C.E.

REMARQUE : Un dispositif de retenue fixe d'une longueur correcte doit être incorporé pour attacher le grilloir à une surface fixe pour éliminer la tension sur le connecteur de gaz. Si le grilloir est déplacé de sa position normale, le dispositif de retenue doit être réattaché une fois le grilloir réinstallé.

G. BRANCHEMENTS ÉLECTRIQUES

Le grilloir est destiné à être connecté à un circuit mis à la terre de 120 V dédié. Les moteurs électriques, voyants et circuits de commande sont connectés par l'intermédiaire d'un cordon d'alimentation électrique de sept pieds situé à l'arrière du grilloir.

Avant d'effectuer tout raccordement vers ces unités, vérifier la plaque signalétique pour s'assurer que la tension et la phase du grilloir sont compatibles avec l'alimentation électrique. Lors de l'installation, tous les grilloirs doivent être mis à la terre électriquement conformément aux codes locaux, ou en l'absence de codes locaux, avec le code électrique national américain, ANSI/NFPA 70 (au Canada, normes CSA C22.2). Les schémas de câblage sont situés dans la zone du compartiment de commande du grilloir. Les schémas de câblage standard sont également fournis dans ce manuel.

⚠ AVERTISSEMENT : Cet appareil est équipé d'un connecteur de mise à la terre à 3 broches, fournissant une protection contre les chocs électriques, qui doit être branché directement dans une prise à 3 broches correctement mise à la terre. NE PAS couper ou autrement retirer la broche de mise à la terre de ce connecteur.

H. ÉVACUATION

Cet appareil doit être installé avec un système d'évacuation capable d'empêcher des concentration inacceptables de substances nocives dans la pièce dans laquelle l'appareil est installé.

Évacuation par hotte

Une hotte à commande mécanique doit avoir une capacité d'au moins 1700 m³/h (1000 pi³/min) et une ouverture d'au moins 100 x 130 cm (39,4 x 51,2 po) pour permettre une évacuation adéquate. La capacité et l'ouverture spécifiées s'appliquent à une hotte réservée à cet appareil ou se cumulent aux spécifications minima si celui-ci partage une hotte commune avec un autre appareil.

Entretien du système d'évacuation

Le système d'évacuation doit être entretenu et contrôlé tous les ans par du personnel qualifié dans le cadre ou en plus des prescriptions des autorités compétentes.

Ce contrôle/entretien doit consister entre autres en ce qui suit:

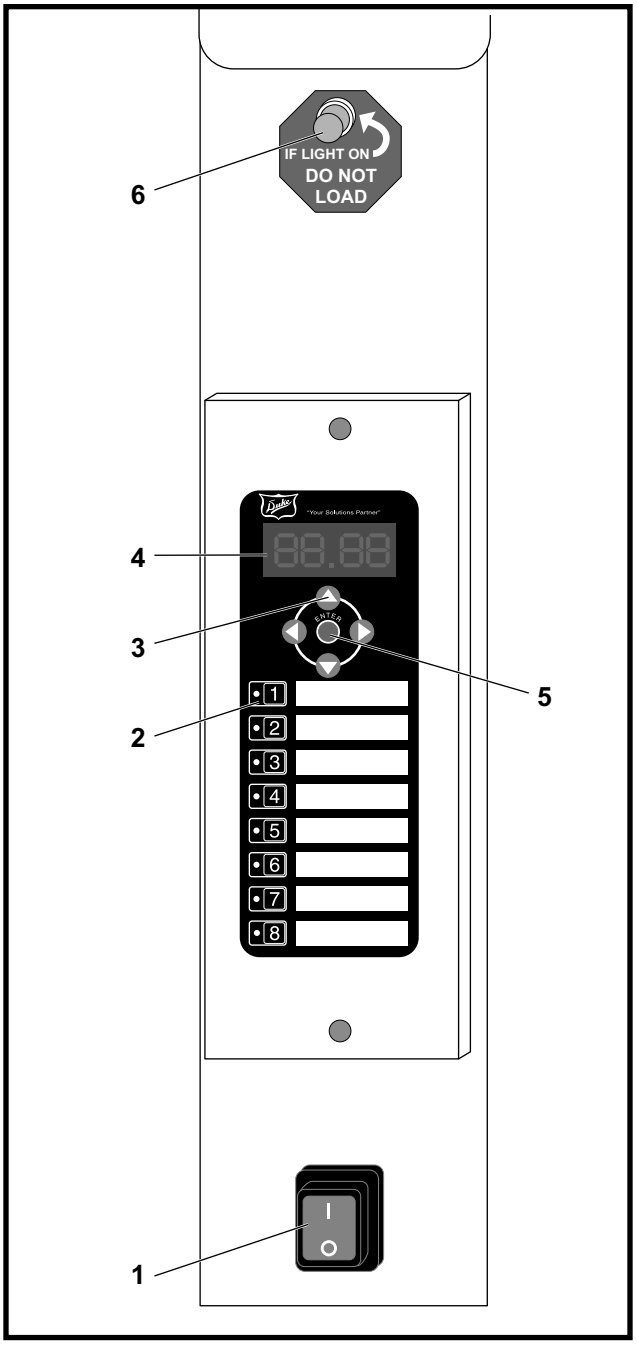
- Recherche des obstructions ou accumulations pouvant gêner l'évacuation de la rôtissoire.
- Élimination de telles obstructions.
- Contrôle de la hotte, de ses moteurs et courroies de commande, etc.

REMARQUE : Ne pas placer des objets tels que plats en tôle, contenants d'aliments ou feuille d'aluminium sur le dessus de la rôtissoire. Cela gênera l'évacuation des vapeurs de cuisson et la circulation d'air dans l'appareil, ce qui entraînera une cuisson médiocre.

III. INSTRUCTIONS DE FONCTIONNEMENT

Les informations dans cette section sont destinées à un personnel technique qualifié. Le personnel technique qualifié comprend les personnes qui ont lu avec soin les informations contenues dans ce manuel, qui savent comment utiliser le grilloir et/ou qui sont déjà familiarisés avec le fonctionnement de l'équipement décrit. Il est recommandé de suivre ces instructions pour assurer une performance optimale, une longue durée de vie et un fonctionnement sans problèmes du grilloir.

Le contrôleur est préprogrammé en usine pour les recettes connues lors de la fabrication. Les touches de produit doivent être programmées conformément aux recettes approuvées et le grilloir doit être correctement réglé avant l'utilisation.



A. COMMANDES DU GRILLOIR

1. **Interrupteur d'alimentation** – Allume ou éteint le grilloir. Le grilloir s'allume automatiquement..
2. **Touches de sélection de produit** – Permettent de sélectionner la recette à utiliser. Fonctionnent également en tant que touches numériques 1 à 8 en mode de programmation.
3. **Touches fléchées**

   Vers le haut : Affiche la température en cours du grilloir lorsqu'elle est activée en mode de fonctionnement. Fait défiler les paramètres en à reculons lorsqu'elle est activée en mode de programmation.

   Flèche vers le bas : Affiche la température du point de réglage lorsqu'elle est activée en mode de fonctionnement. Fait défiler les paramètres en à reculons lorsqu'elle est activée en mode de programmation.

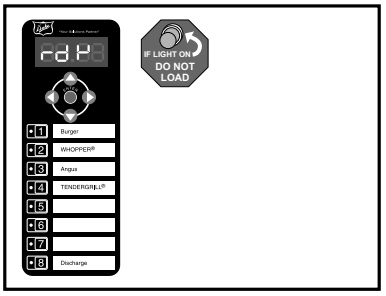
   Flèches vers la droite/gauche : Permet de passer d'un caractère ou d'un paramètre à l'autre en mode de programmation. Également utilisées en tant que touches numériques de 0 et 9.
4. **Affichage**
5. **Touche Enter** – Appuyer sans relâcher pendant 5 secondes pour accéder au mode de programmation. Permet également de faire défiler et d'accéder aux paramètres en mode de programmation.
6. **Voyant de cuisson** – Ce voyant est allumé durant le préchauffage et tout le cycle de cuisson. L'opérateur ne doit pas charger le grilloir lorsque ce voyant est allumé.

B. CUISSON

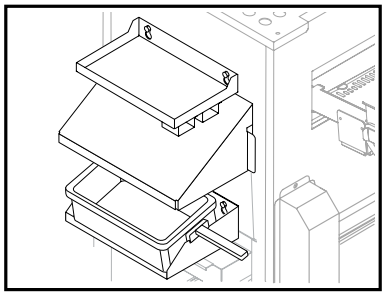
B-1.0 Allumage du grilloir

- Mettre le système de ventilation en marche.
- Mettre l'interrupteur de marche/arrêt sur Marche (positin 1).
- L'affichage indique PrE durant le cycle de préchauffage.
- Les voyants près de toutes les touches de produit avec des durées de cuisson autres que zéro sont rouges.
- L'affichage indique rdY à la fin du cycle de préchauffage et les voyants près des touches de produits avec des durées de cuisson autres que zéro sont verts.
- (Pour éteindre le grilloir, voir la section B-8.0)

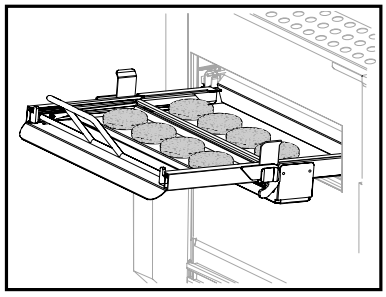
B-2.0 Cuisson du produit



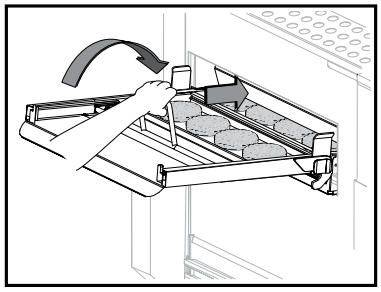
Le grilloir affiche rdY et le voyant de cuisson n'est pas allumé.



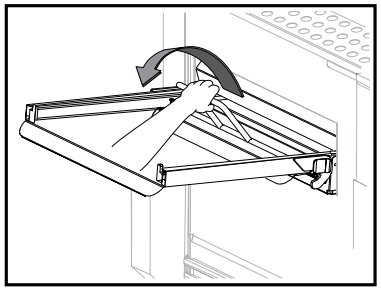
Placer le bac de réception au niveau du déchargement.



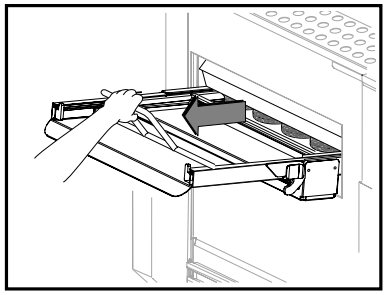
Placer le produit dans les rangs avant et arrière.



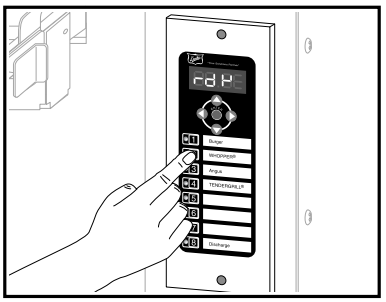
Charger le produit. Pousser vers l'avant comme indiqué.



Faire tourner la poignée vers le bas pour relever la barre interne sur le produit.



Tirer le chargeur avec la poignée tournée.

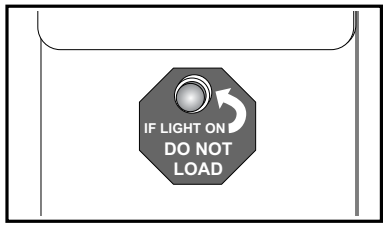


Appuyer sur la touche de produit appropriée.

En cas d'erreur de sélection, un délai de 15 secondes permet de choisir un autre produit.

L'affichage indique en alternance la durée restante et l'identifiant du produit à quatre caractères.

Le voyant près de la touche de produit sélectionnée clignote en rouge.



Le voyant de cuisson est allumé.

B-3.0 Fin du cycle de cuisson

La chaîne tourne et décharge le produit.

Ne pas charger le produit dans le grilloir tant que le voyant de cuisson ne s'est pas éteint et que rdY n'est pas affiché.

Pour empêcher la décongélation des aliments, il est recommandé de ne pas les placer sur le chargeur plus de cinq minutes avant de les enfourner.

B-4.0 Réglage de précision de la cuisson

Utiliser cette fonction pour ajouter ou soustraire jusqu'à 30 secondes du cycle de cuisson d'une recette. Cette fonction doit être utilisée pour optimiser la cuisson d'un produit hors de l'environnement de programmation. Cette fonction est activée de la façon suivante :

Appuyer sur les touches ▲ et ▼ pendant 3 secondes.

L'affichage indique AdJ.

Tous les voyants des produits ayant une durée programmée s'allument en rouge.

Sélectionner une touche de produit pour effectuer un réglage.

Le voyant du produit sélectionné reste rouge et les voyants des autres produits s'éteignent.

La commande fait clignoter AdJ suivi de l'identifiant du produit.

Les touches ▲ et ▼ sont utilisées pour le réglage de précision de la cuisson.

Appuyer une fois sur la touche ▲ ou ▼ pour afficher l'écran de réglage. La commande affiche la durée de cuisson totale du produit incluant le réglage de précision de la cuisson précédent.

Les pressions suivantes des touches ▲ ou ▼ permettent d'ajouter ou d'ôter 1 seconde à la durée de cuisson.

La durée de cuisson peut être augmentée ou réduite jusqu'à 30 secondes grâce à cette fonction.

Pour quitter cette fonction et enregistrer le réglage, appuyer sur la touche ENTER.

B-5.0 Annulation d'un cycle de cuisson

Appuyer sur une touche de produit pendant 3 secondes pour annuler un cycle de cuisson et décharger le produit.

B-6.0 Vérification de la température du grilloir

Appuyer sur la touche ▲ à tout moment (sauf en mode de programmation) pour afficher la température actuelle de la cavité.

B-7.0 Vérification de la température du point de réglage

Appuyer sur la touche ▼ à tout moment (sauf en mode de programmation) pour afficher la température de réglage de la cavité.

B-8.0 Extinction du grilloir

Mettre l'interrupteur de marche/arrêt sur Arrêt (0).

C. NETTOYAGE

Pour maintenir la propreté de l'extérieur en acier inoxydable du grilloir, utiliser un produit nettoyant pour inox non abrasif de bonne qualité disponible dans le commerce. Humidifier un chiffon et essuyer le grilloir lorsqu'il est FROID. Le nettoyage laissera des traces et sera insatisfaisant si le grilloir est essuyé à chaud. Une fois le grilloir propre, il peut être essuyé avec de l'huile légère.

Pour maintenir des performances sans problèmes et la validité de la garantie, respecter les recommandations suivantes :

A. Ne pas exposer le grilloir à un contact prolongé avec des détergents, des nettoyants, des javellisants, etc. Protéger les brûleurs à infrarouge et les tubes de détection de flamme des produits de nettoyage. Ne pas pulvériser de matières étrangères sur les brûleurs à infrarouge. Les produits de nettoyage chimiques, les dégraisseurs, les javellisants et les solutions savonneuses ne doivent jamais entrer en contact avec les boîtiers en métal des brûleurs à infrarouge ou avec les carreaux en céramiques des brûleurs, car ils pourraient endommager ces surfaces, causer un dysfonctionnement du grilloir et annuler la garantie. Pour éviter d'endommager les carreaux des brûleurs en céramique, ne jamais laisser un produit de nettoyage ou un autre objet pouvant rayer ou endommager les surfaces, ou obstruer les orifices de gaz des carreaux, entrer en contact avec les carreaux. Ne pas pulvériser de matières étrangères sur les tubes de détection de flammes. Les produits de nettoyage chimiques, les dégraisseurs et les solutions savonneuses ne doivent jamais entrer en contact avec les tubes de détection de flamme car ils pourraient endommager ces surfaces, causer un dysfonctionnement du grilloir et annuler la garantie. Si nécessaire, nettoyer les tubes de détection de flamme uniquement après qu'ils ont atteint la température ambiante, et utiliser un léger mouvement d'essuyage avec un tampon d'alcool pour retirer les accumulations de carbone.

B. Ne jamais laisser de produits chimiques, en particulier ceux contenant du chlore, reposer sur les pièces du grilloir jusqu'au lendemain. Le chlore cause les piqûres et la corrosion.

C. Ne jamais utiliser de produits chimiques en concentration plus forte que celle recommandée par le fabricant.

D. Utiliser de l'eau propre et un chiffon doux pour essuyer les résidus de nettoyage des surfaces.

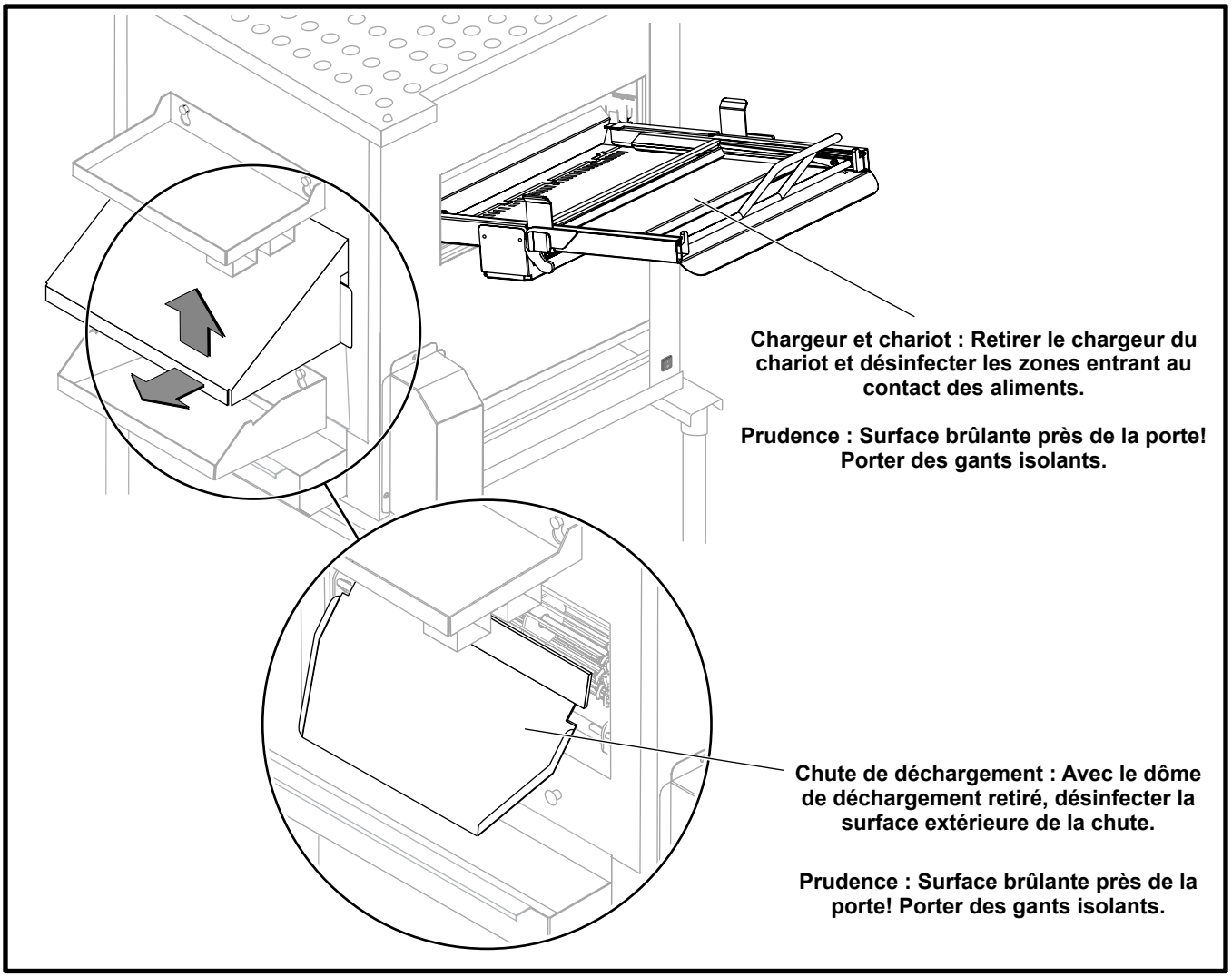
E. Ne jamais utiliser de paille de fer ou des tampons de récurage ordinaires sur les surfaces : utiliser des dégraisseurs pour grilloirs non abrasifs et des chiffons doux

Respecter ces recommandations avec attention pour obtenir des résultats satisfaisants et prolonger la durée de vie du grilloir.

CALENDRIER DE NETTOYAGE		
ÉLÉMENTS À NETTOYER	GRILLOIR FROID	ALIMENTATION DÉBRANCHÉE
NETTOYAGE DES 4 HEURES (désinfection sur place)		
DÉSINFECTER LE CHARGEUR ET LE PLATEAU (PRUDENCE : SURFACES CHAUDES, PORTER DES GANTS ISOLANTS LORS DU NETTOYAGE)		
DÉSINFECTER LA CHUTE DE DÉCHARGEMENT		
NETTOYAGE QUOTIDIEN (retirer et laver/rincer/désinfecter)		
BAC DE DÉCHARGEMENT (PRUDENCE : SURFACES CHAUDES, PORTER DES GANTS ISOLANTS LORS DU NETTOYAGE)		
DÔME DE DÉCHARGEMENT	X	
BACS À GRAISSE DE DÉCHARGEMENT	X	
BACS À GRAISSE PRINCIPAUX	X	
PANNEAU DE DÉCHARGEMENT D'EXTRÉMITÉ	X	
RACLOIR DE DÉCHARGEMENT	X	
CHARGEUR ET PLATEAU (PRUDENCE : SURFACES CHAUDES, PORTER DES GANTS ISOLANTS LORS DU NETTOYAGE)		
CHUTE DE DÉCHARGEMENT	**X**	
RAMPE DU CHARGEUR	**X**	
NETTOYAGE HEBDOMADAIRE		
BRÛLEUR INFÉRIEUR	**X**	**X**
PORTE PIVOTANTE DU GRILLOIR	**X**	**X**
PARE-FLAMMES	**X**	**X**
CATALYSEUR	**X**	**X**
NETTOYAGE MENSUEL		
DÉTECTEUR DE FLAMME (BRÛLEURS SUPÉRIEURS)	**X**	**X**
DÉTECTEUR DE FLAMME (BRÛLEURS INFÉRIEURS)	**X**	**X**
TUBE DE DÉTECTEUR DE FLAMME (BRÛLEURS SUPÉRIEURS)	**X**	**X**

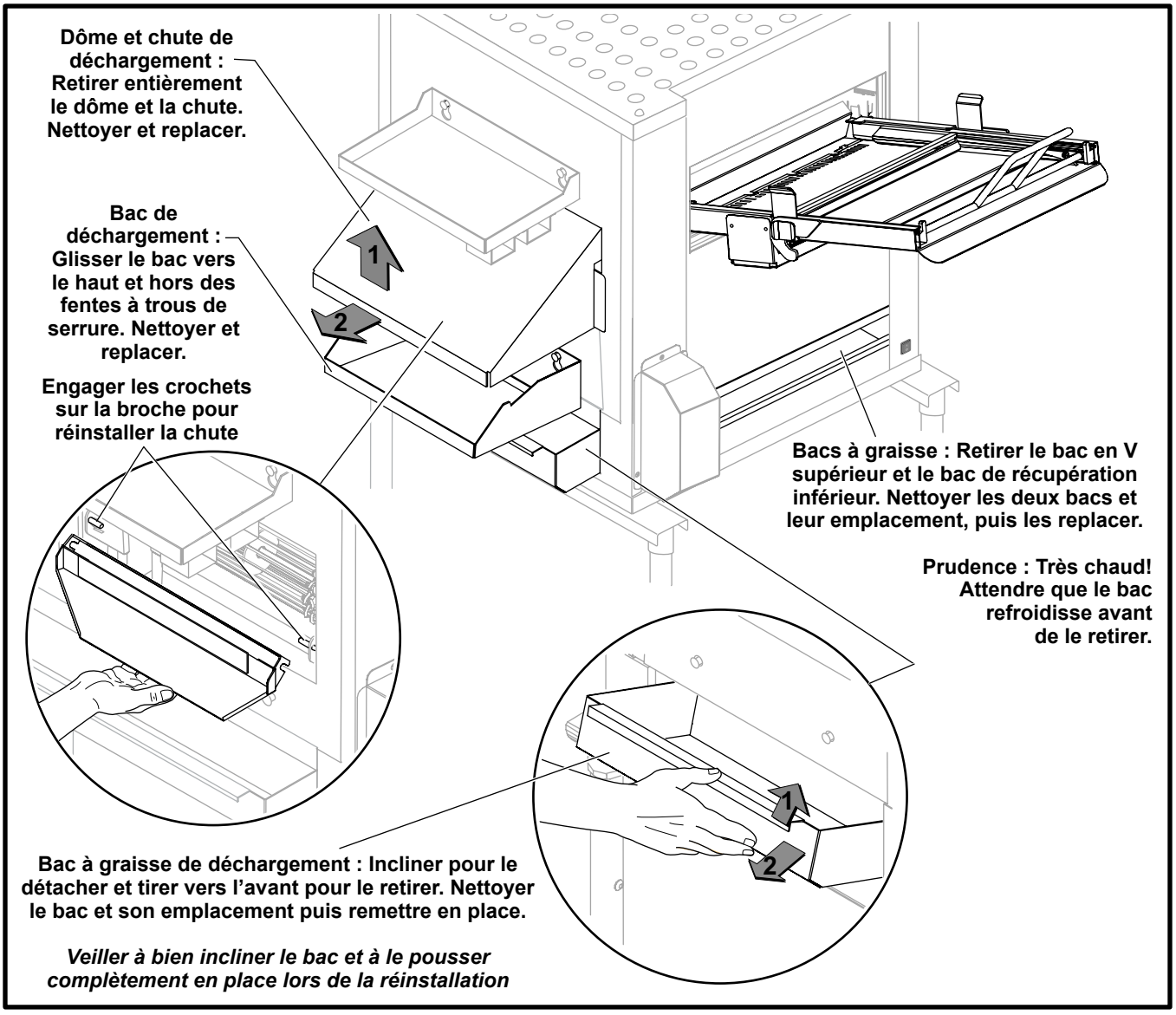
C-1. Nettoyage des quatre (4) heures

Tous les composants qui sont en contact avec les produits alimentaires doivent être nettoyés et désinfectés toutes les 4 heures.

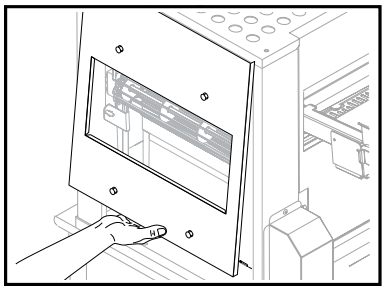


C-2. Nettoyage quotidien

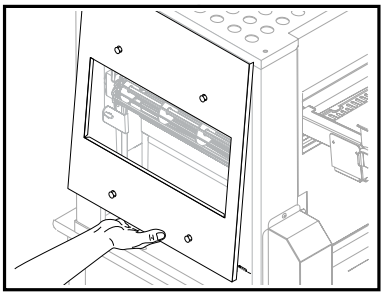
Le nettoyage quotidien doit également inclure tous les éléments indiqués dans le calendrier de nettoyage des 4 heures.



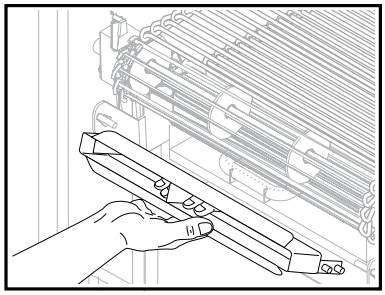
C-2. Nettoyage quotidien (suite)



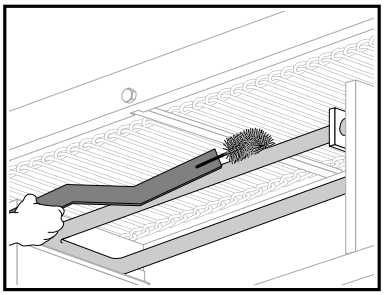
Panneau d'extrémité de déchargement : Retirer les accessoires de déchargement et relever le panneau vers le haut tout en le faisant basculer vers l'extérieur et vers le bas.



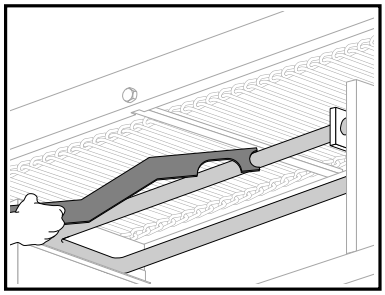
Racloir de déchargement : Relever et tirer vers l'avant.



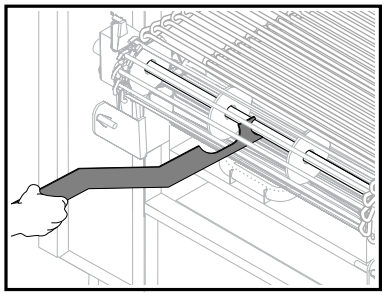
Racloir de déchargement : Tirer en ôtant les broches de positionnement des fentes. Nettoyer le racloir et son emplacement. Replacer.



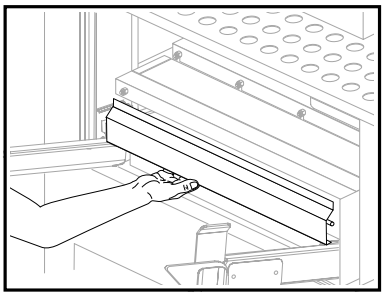
Nettoyer le haut du brûleur avec l'extrémité à brosse de l'outil de nettoyage du brûleur.



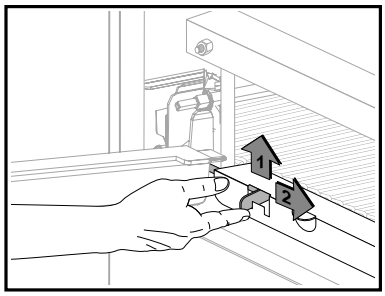
Pour les accumulations épaisses, utiliser l'extrémité à racloir de l'outil de nettoyage du brûleur.



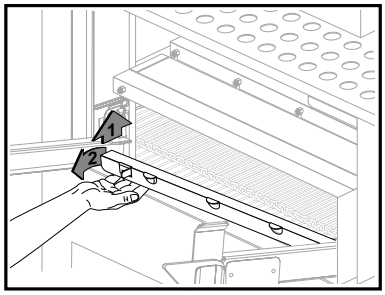
Utiliser l'extrémité de l'outil pour nettoyer l'arbre de déchargement du convoyeur.



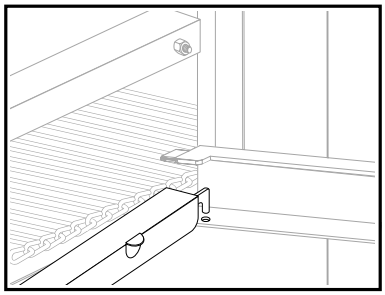
Une fois le grilloir refroidi, relever et retirer la porte pivotante. Nettoyer et mettre de côté.



Relever et faire glisser la targette de retenue à droite

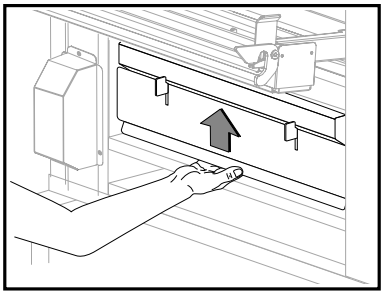


Relever légèrement et retirer la rampe du chargeur comme illustré.

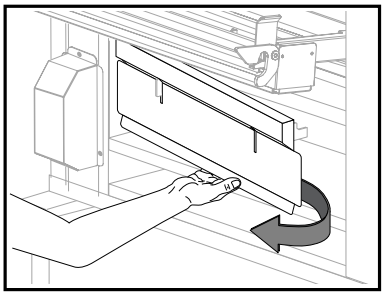


Désengager la broche du trou à pivot. Nettoyer et mettre de côté.

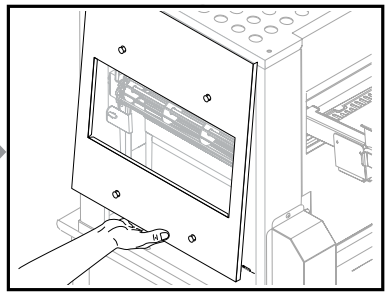
C-3. Nettoyage hebdomadaire

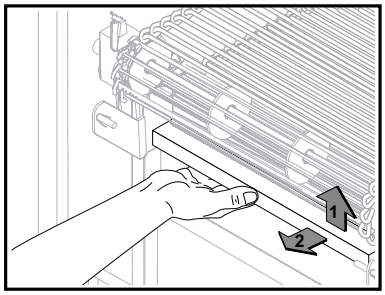


Avec le panneau extérieur avant retiré, relever le panneau de la chambre de combustion.

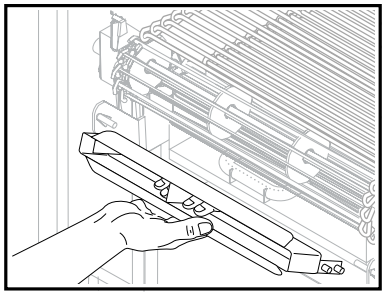


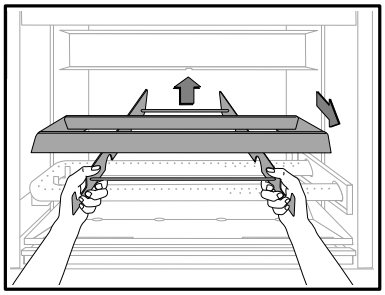
Faire pivoter le côté droit du panneau vers l'extérieur comme illustré. Nettoyer et mettre de côté.



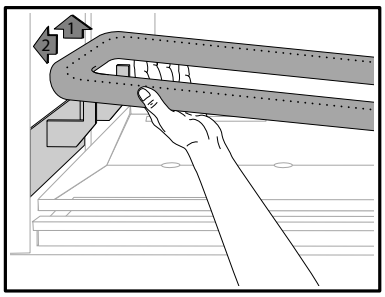


Retirer le panneau de déchargement et le racloir comme pour le nettoyage quotidien.

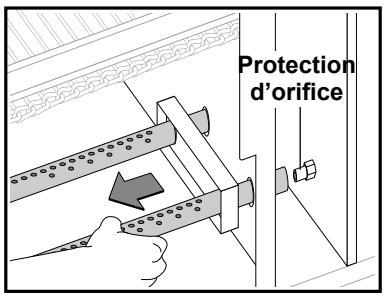




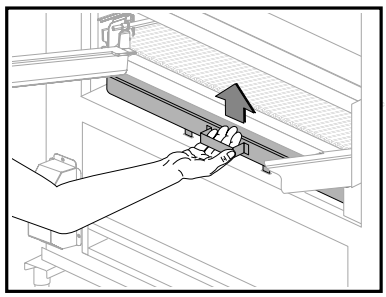
Retirer le garant du brûleur.



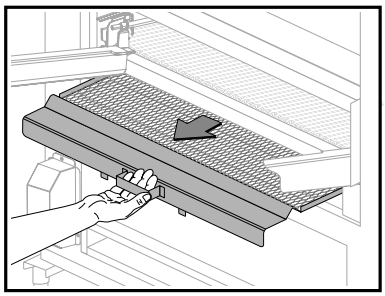
Relever l'arrière du brûleur du support et continuer à le tenir.



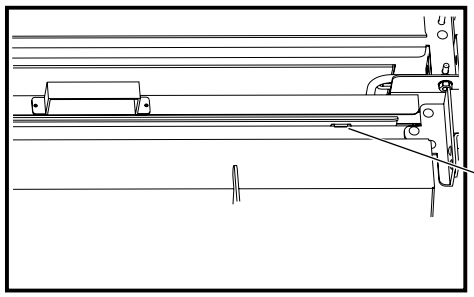
Retirer le brûleur de l'orifice et par la paroi du brûleur. Retirer de la chambre. Vider et nettoyer toute l'eau restante du brûleur et replacer. Sécher entièrement tous les orifices des brûleurs!



Relever le pare-flammes pour retirer les languettes des fentes. Les languettes sont situées sous l'avant du pare-flammes.



Retirer le pare-flammes. Nettoyer et replacer.



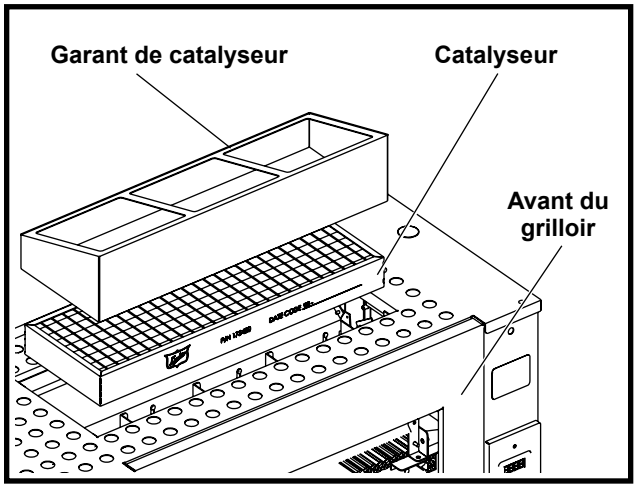
LA LANGUETTE AU BAS DU PARE-FLAMME S'INSÈRE DANS LA FENTE

C-3. Nettoyage hebdomadaire (suite)

CONCERNANT LE NETTOYAGE

⚠ AVERTISSEMENT : Ne pas utiliser de savons, de détergents, de dégraisseurs, de silicone, de sels de sodium, d'agents blanchissants, d'antioxydants ou d'autres agents de nettoyage commerciaux pour nettoyer le catalyseur. L'utilisation de ces produits chimiques endommagerait le catalyseur et le rendrait inopérant.

REMARQUE : Ne pas nettoyer le catalyseur dans un lave-vaisselle ou un appareil de nettoyage à ultrasons. N'utiliser en aucun cas un produit abrasif ou une éponge abrasive pour le nettoyage.



REMARQUES CONCERNANT LA SÉCURITÉ

Le convertisseur catalytique (catalyseur) est un composant standard du système de combustion, et les pratiques de sécurité habituelles concernant de tels systèmes doivent être respectées. Les remarques suivantes concernent le catalyseur en particulier.

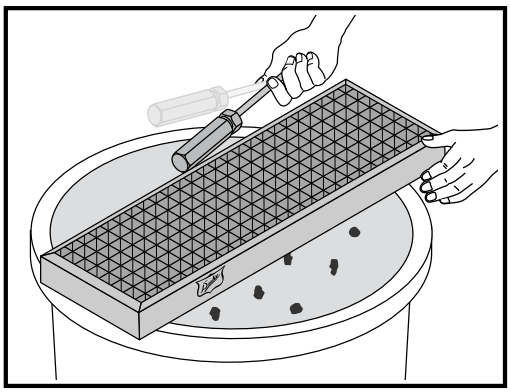
A: Mise hors tension: Avant de retirer le catalyseur, débrancher l'alimentation du grilloir et le laisser refroidir à la température ambiante. Retirer le garant du catalyseur et le mettre de côté pour le réinstaller après le nettoyage du catalyseur.

B: Manipulation du catalyseur: Veiller à ne pas faire tomber ou endommager le catalyseur lors de la manipulation. Si l'unité doit être manipulée suite à un cycle de cuisson, veiller à se protéger les mains des surfaces brûlantes en portant de gants conçus à cet effet. Il n'y a pas de pièces mobiles ou de raccordements électriques associés au catalyseur, et il ne doit y avoir en conséquence aucun danger de chocs électriques lors du lavage de l'unité. Laisser le catalyseur refroidir à la température ambiante avant de commencer le nettoyage.

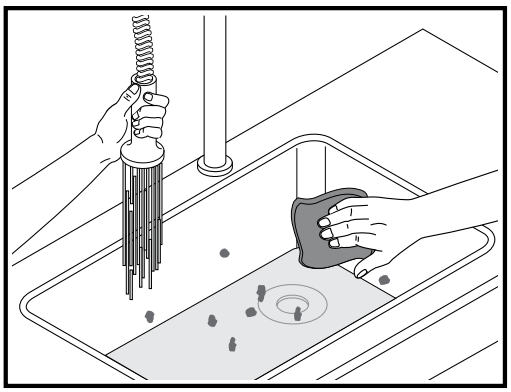
C: Fonctionnement: Lire et comprendre les instructions concernant le système fournies avec le grilloir incluses dans le manuel d'installation et de fonctionnement. Il est très important de s'assurer que les conduits au-dessus de l'appareil de cuisson sont exempts de toute graisse avant le fonctionnement initial de l'appareil avec le convertisseur catalytique en place.

SI DU GAZ NATUREL FAIT PARTIE DU DÉBIT D'ÉCHAPPEMENT, S'ASSURER QU'IL NE S'ACCUMULE PAS POUR CRÉER UN MÉLANGE EXPLOSIF DANS LE SYSTÈME D'ÉCHAPPEMENT.

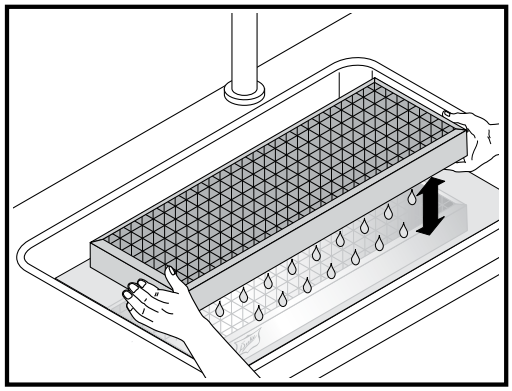
C-3. Nettoyage hebdomadaire (suite)



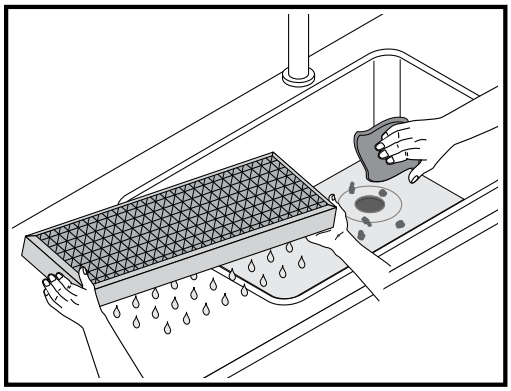
Taper légèrement sur le cadre du catalyseur tout en tenant un bac à déchets pour déloger toutes les particules de cendre et de carbone.



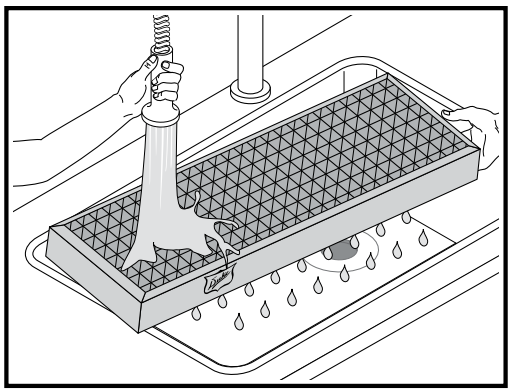
Commencer avec un évier propre et retirer toutes les matières étrangères de tout bassin de lavage utilisé avant de commencer la procédure de lavage du catalyseur.



Remplir partiellement le bassin de lavage, qui doit être suffisamment grand pour contenir le catalyseur, d'eau chaude propre (100 à 130 °F) de façon à recouvrir entièrement le catalyseur placé dans le bassin. Agiter le catalyseur vers le haut ou vers le bas dans l'eau quelques fois et le laisser tremper pendant 20 minutes.

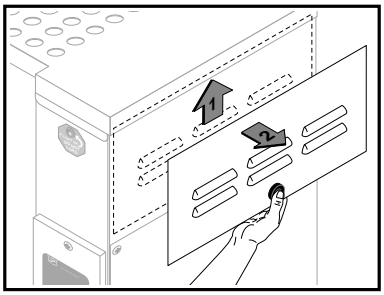


Retirer le catalyseur et le secouer pour ôter l'eau en excès. Enlever le catalyseur et le secouer pour évacuer l'excédent d'eau. Bien vider et nettoyer la cuvette, puis répéter l'opération précédente.

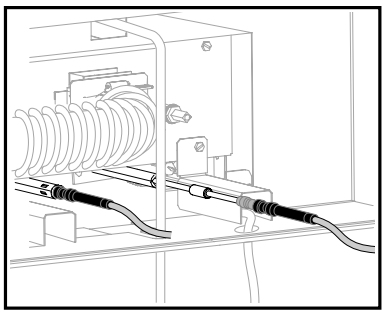


Retirer le catalyseur et rincer entièrement avec beaucoup d'eau chaude. Les embouts de pulvérisation de lavage des plats de restauration ordinaires (basse pression, volume élevé) sont parfaits pour cette opération. Passer le pulvérisateur lentement sur toute la surface à l'avant et à l'arrière pour garantir que toutes les particules sur la face du catalyseur ou derrière le cadre sont retirées. Secouer le catalyseur pour retirer l'excédent d'eau et le laisser sécher à l'air jusqu'au lendemain. Le catalyseur peut ensuite être réinstallé dans le grilloir. S'assurer que le garant du catalyseur est réinstallé sur le catalyseur avant d'allumer le grilloir.

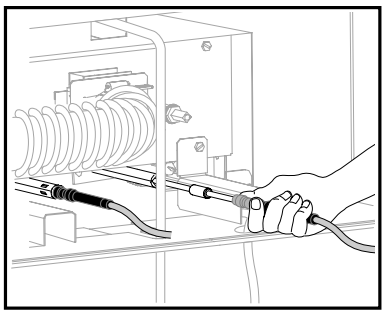
C-4. Nettoyage mensuel



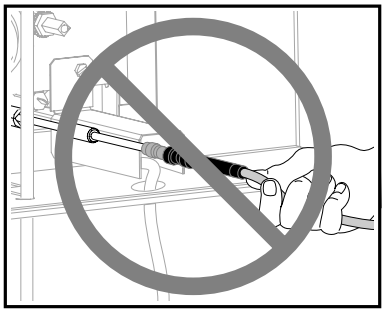
Enlever le panneau supérieur en le soulevant vers l'extérieur.



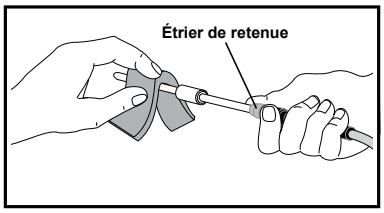
Repérer les détecteurs de flamme des brûleurs supérieurs.



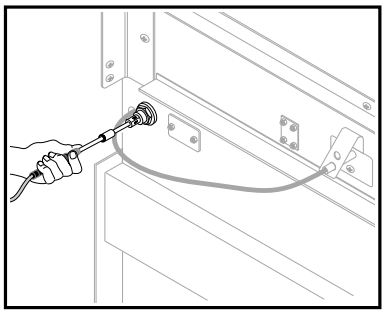
Faire preuve de prudence pour enlever le détecteur en toute sécurité en tenant le manchon noir qui se trouve au bas du détecteur.



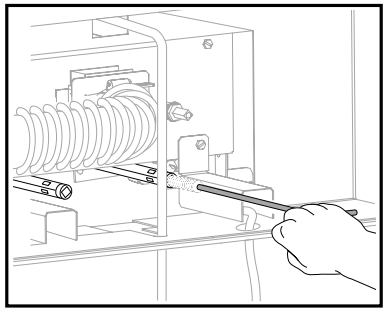
NE PAS ENLEVER LE DÉTECTEUR EN LE TIRANT PAR LE FIL TRESSÉ.



Nettoyer l'ensemble de la partie métallique de la tige du détecteur avec un porte-coton imbibé d'alcool pour enlever tous les résidus accumulés. Nettoyer l'isolateur en céramique blanche avec le porte-coton imbibé d'alcool jusqu'à ce que tous les résidus aient été enlevés.



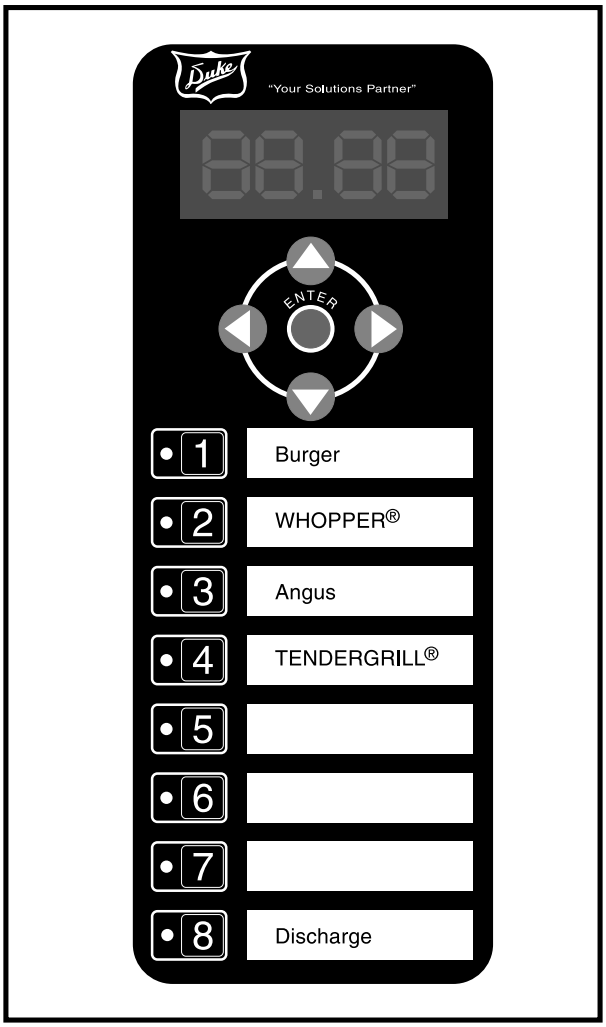
Enlever le panneau arrière de la rôtissoire et retirer le détecteur du brûleur inférieur avec précaution. Procéder de la même façon que pour les brûleurs supérieurs.



Une fois que le détecteur est déposé, utiliser l'outil de nettoyage à poignée en T en l'enfonçant complètement dans les tubes de détecteur et en le retirant. Répéter l'opération au moins cinq (5) fois pour enlever tout résidu de l'intérieur du tube.

Une fois le nettoyage terminé, remettre les détecteurs et les panneaux en place. Attendre au moins 30 minutes avant d'allumer la rôtissoire.

D. PROGRAMMATION DES COMMANDES



D-1.0 Accès au mode de programmation

Il y a deux niveaux de programmation des commandes.

Niveau 1 : Programmation associée aux recettes.

Niveau 2 : Programmation des fonctions du grilloir.

Appuyer sur **ENTER** pendant 5 secondes.

L'affichage indique **CodE** . Entrer le mot de passe associé au niveau de programmation.

D-2.0 Navigation parmi les écrans de programmation

La touche ENTER sert à avancer dans la liste des paramètres. Appuyer une fois sur la touche ENTER pour afficher le nom du paramètre et appuyer une fois de plus pour modifier le paramètre.

Les touches ▲ et ▼ font défiler les paramètres à reculons.

Les touches ◄ et ► permettent de défiler par les réglages des paramètres et servent également de touches numériques de 0 et 9.

Les touches de produit 1 à 8 fonctionnement également comme touches numériques 1 à 8.

D-3.0 Programmation de Niveau 1

Saisir le mot de passe 1-8-2-7 et appuyer sur la touche ENTER .

À ce stade, la commande affiche PROD et tous les voyants de produit passent au vert.

Sélectionner une touche de produit correspondant à un produit à modifier.

Le voyant près de la touche de produit sélectionnée passe au vert. Tous les autres voyants de produit sont éteints.

D-3.1 Identifiant de produit **AbCd**

Ce paramètre permet à l'utilisateur de définir un nom de produit alphanumérique à quatre caractères à associer avec chaque bouton de produit.

Les touches ▲ et ▼ sont utilisées pour défiler parmi les caractères.

Les touches ◄ et ► sont utilisées pour passer au caractère suivant ou précédent. Le caractère activé clignote.

Appuyer sur ► après le dernier caractère pour passer au paramètre suivant.

D-3.2 Température de cuisson **Sett**

Ceci est la température du point de réglage du grilloir durant le cycle de cuisson du produit sélectionné.

Les touches de produit 1 à 8 sont utilisées pour entrer les numéros 1 à 8. Les touches ◄ et ► sont utilisées pour entrer les numéros 0 et 9.

D-3.3 Profil de cuisson **on 1**, **oFF1**, **on 2**, **oFF2**, …

Cette fonction permet de définir les paramètres de cycle du brûleur à infrarouge supérieur et la durée de cuisson globale.

Ces paramètres ont 6 segments. Chaque segment est constitué d'un cycle de marche/arrêt.

La portion Marche du cycle survient en premier.

Les touches de produit 1 à 8 sont utilisées pour entrer les numéros 1 à 8. Les touches ◄ and ► sont utilisées pour entrer les numéros 0 et 9.

La commande affiche la durée de cuisson totale (la somme des cycles Marche et Arrêt) en tant que paramètre final non modifiable.

Exemple :

	MARCHE	ARRÊT
Segment n° 1	0:00	1:00
Segment n° 2	2:00	0:00
Segment n° 3	0:00	0:00
Segment n° 4	0:00	0:00
Segment n° 5	0:00	0:00
Segment n° 6	0:00	0:00

Après avoir entré le dernier paramètre, appuyer sur la touche ► pour revenir à la sélection des produits, afin de pouvoir sélectionner un autre produit à programmer.

D-3.4 Quitter le mode de programmation

Pour quitter le mode de programmation et enregistrer de nouvelles entrées, appuyer sur la touche ENTER jusqu'à ce que RdY, PrE ou Lo s'affiche.

Pour quitter le mode de programmation sans sauvegarder les entrées, actionner l'interrupteur de marche/arrêt principal sur arrêt et marche.

D-4.0 Programmation de Niveau 2

Saisir le mot de passe 3-6-4-5 et appuyer sur la touche ENTER.

D-4.1 Paramètre ºF ou ºC dEg

Permet de modifier la température affichée en unités Fahrenheit (F) et Celsius (C).

Les touches ◄ et ► permettent de faire défiler les réglages.

D-4.2 Modification de la température de marche à vide Sett

Ceci est la température du point de réglage du grilloir durant le cycle de préchauffage et à vide.

Le paramètre par défaut est 680 ºF.

Les touches de produit 1 à 8 sont utilisées pour entrer les numéros 1 à 8. Les touches ◄ et ► sont utilisées pour entrer les numéros 0 et 9.

D-4.3 Paramètres d'usine supplémentaires

Les paramètres restants dans cette section sont les réglages d'usine et ne doivent pas être modifiés. Les voici :

- oFSt
- Hton
- Lo t
- Hi t
- Cdti
- BEEP
- IrSt
- PCr
- AFCr

D-4.4 Quitter le mode de programmation

Pour quitter le mode de programmation et enregistrer de nouvelles entrées, appuyer sur la touche ENTER jusqu'à ce que RdY, PrE ou Lo s'affiche.

To Pour quitter le mode de programmation *sans sauvegarder les entrées*, actionner l'interrupteur de marche/arrêt principal sur arrêt et marche.

E. DÉPANNAGE

SYMPTÔME	CAUSE	SOLUTION
L'affichage ne s'allume pas	Pas d'alimentation	S'assurer que le grilloir est branché dans une prise de tension et de fréquence adéquate (conforme à la plaque signalétique). Vérifier le disjoncteur dédié.
Produit cru ou pas assez cuit sans affichage d'un message d'erreur .	Le produit est mal chargé .	Revoir la technique de chargement.
	Le bouton de produit a été activé avant de charger le produit	S'assurer que les boutons de produit sont activés immédiatement après que le produit est chargé dans le grilloir.
	Le bouton de produit incorrect a été activé	S'assurer que le bouton de produit adéquat est activé .
	Le brûleur inférieur ne s'allume pas correctement. (Observer le brûleur inférieur par les fentes dans le plateau à graisse inférieur.)	Si le grilloir est chaud, essayer de nettoyer le brûleur en place avec l'outil de nettoyage pour brûleur. Si le grilloir est froid ou s'est refroidi, retirer le brûleur inférieur en retirant les panneaux d'accès, nettoyer et réinstaller. Retirer le détecteur de flamme inférieur et nettoyer avec un chiffon doux et de l'alcool isopropylique.
	Les brûleurs à infrarouge ne s'allument pas correctement. (Observer les brûleurs à infrarouge par l'extrémité de déchargement du grilloir. Remarque : Les brûleurs doivent rester allumés en mode de fonctionnement à vide)	Retirer le panneau du compartiment supérieur et nettoyer les deux détecteurs de flamme supérieurs avec un chiffon doux et de l'alcool isopropylique. Nettoyer le tube du détecteur de flamme avec la brosse de nettoyage du tube de détection de flamme.
La courroie du convoyeur ne se déplace par pour décharger le produit.	La courroie du convoyeur est obstruée	Détecter les obstructions en faisant tourner manuellement la courroie du convoyeur de l'extrémité de déchargement du grilloir en utilisant l'outil de nettoyage du grilloir. S'assurer que le racloir de déchargement est bien installé. S'assurer que la plaque d'ancrage est bien installée. S'assurer que le pare-flammes est bien installé.
Le chargeur ne peut pas être complètement poussé dans la chambre de cuisson	La plaque d'ancrage est mal installée .	S'assurer que la plaque d'ancrage et la languette de verrouillage sont bien en place .
Le produit se coince ou est déchiré lors du chargement	La plaque d'ancrage est mal installée.	S'assurer que la plaque d'ancrage et la languette de verrouillage sont bien en place.
	Le pare-flammes est mal installé.	S'assurer que le pare-flammes est bien en place et que les languettes sont bien insérées.
L'affichage indique « Hi ».		Contacter Duke Manufacturing Co. ou un technicien d'entretien agréé par Duke.
L'affichage indique « Lo ».	Le brûleur inférieur ne s'allume pas correctement. (Observer le brûleur inférieur par les fentes dans le plateau à graisse inférieur.)	Si le grilloir est chaud, essayer de nettoyer le brûleur en place avec l'outil de nettoyage pour brûleur. Si le grilloir est froid ou s'est refroidi, retirer le brûleur inférieur en retirant les panneaux d'accès, nettoyer et réinstaller. Retirer le détecteur de flamme inférieur et nettoyer avec un chiffon doux et de l'alcool isopropylique.
	Les brûleurs à infrarouge ne s'allument pas correctement. (Observer les brûleurs à infrarouge par l'extrémité de déchargement du grilloir. Remarque : Les brûleurs doivent rester allumés en mode de fonctionnement à vide.	Retirer le panneau du compartiment supérieur et nettoyer les deux détecteurs de flamme supérieurs avec un chiffon doux et de l'alcool isopropylique. Nettoyer le tube du détecteur de flamme avec la brosse de nettoyage du tube de détection de flamme.
	Le bac à graisse n'est pas installé.	Installer le bac à graisse.
	Le bac d'impédance ou le catalyseur n'est pas installé.	Installer le bac d'impédance ou le catalyseur.
L'affichage indique « Prob ».		Contacter Duke Manufacturing Co. ou un technicien d'entretien agréé par Duke.

E. DÉPANNAGE (SUITE)

SYMPTÔME	CAUSE	SOLUTION
L'affichage indique « tESt Prod ».	Le brûleur inférieur ne s'allume pas correctement. (Observer le brûleur inférieur par les fentes dans le plateau à graisse inférieur.)	Si le grilloir est chaud, essayer de nettoyer le brûleur en place avec l'outil de nettoyage pour brûleur. Si le grilloir est froid ou s'est refroidi, retirer le brûleur inférieur en retirant les panneaux d'accès, nettoyer et réinstaller. Retirer le détecteur de flamme inférieur et nettoyer avec un chiffon doux et de l'alcool isopropylique.
	Les brûleurs à infrarouge ne s'allument pas correctement. (Observer les brûleurs à infrarouge par l'extrémité de déchargement du grilloir. Remarque : Les brûleurs doivent rester allumés en mode de fonctionnement à vide.)	Retirer le panneau du compartiment supérieur et nettoyer les deux détecteurs de flamme supérieurs avec un chiffon doux et de l'alcool isopropylique. Nettoyer le tube du détecteur de flamme avec la brosse de nettoyage du tube de détection de flamme.
L'affichage indique « gAS toP ».	Le grilloir n'est pas alimenté en gaz.	S'assurer que le ou les robinets de gaz en ligne avec le grilloir sont ouverts.
	Les brûleurs à infrarouge ne s'allument pas correctement. (Observer les brûleurs à infrarouge par l'extrémité de déchargement du grilloir. Remarque : Les brûleurs doivent rester allumés en mode de fonctionnement à vide.)	Retirer le panneau du compartiment supérieur et nettoyer les deux détecteurs de flamme supérieurs avec un chiffon doux et de l'alcool isopropylique. Nettoyer le tube du détecteur de flamme avec la brosse de nettoyage du tube de détection de flamme.
L'affichage indique « gAS bot ».		Éteindre puis rallumer le grilloir. Si cette erreur persiste, passer aux étapes suivantes.
	Le grilloir n'est pas alimenté en gaz.	S'assurer que le ou les robinets de gaz en ligne avec le grilloir sont ouverts.
	Le brûleur inférieur ne s'allume pas correctement. (Observer le brûleur inférieur par les fentes dans le plateau à graisse inférieur.)	Si le grilloir est chaud, essayer de nettoyer le brûleur en place avec l'outil de nettoyage pour brûleur. Si le grilloir est froid ou s'est refroidi, retirer le brûleur inférieur en retirant les panneaux d'accès, nettoyer et réinstaller. Retirer le détecteur de flamme inférieur et nettoyer avec un chiffon doux et de l'alcool isopropylique.
L'affichage indique « gAS Sent ».	Les brûleurs à infrarouge ne s'allument pas correctement. (Observer les brûleurs à infrarouge par l'extrémité de déchargement du grilloir. Remarque : Les brûleurs doivent rester allumés en mode de fonctionnement à vide.)	Retirer le panneau du compartiment supérieur et nettoyer les deux détecteurs de flamme supérieurs avec un chiffon doux et de l'alcool isopropylique. Nettoyer le tube du détecteur de flamme avec la brosse de nettoyage du tube de détection de flamme.
L'affichage indique « gAS SEnb ».	Le brûleur inférieur ne s'allume pas correctement. (Observer le brûleur inférieur par les fentes dans le plateau à graisse inférieur.)	Si le grilloir est chaud, essayer de nettoyer le brûleur en place avec l'outil de nettoyage pour brûleur. Si le grilloir est froid ou s'est refroidi, retirer le brûleur inférieur en retirant les panneaux d'accès, nettoyer et réinstaller. Retirer le détecteur de flamme inférieur et nettoyer avec un chiffon doux et de l'alcool isopropylique.

IV. ENTRETIEN ET RÉPARATION

A-1. AVERTISSEMENTS

⚠ AVERTISSEMENT : Débrancher l'alimentation vers l'appareil avant de procéder à l'entretien.

⚠ AVERTISSEMENT : Les unités à roulettes sont équipés d'un dispositif de retenue pour limiter le mouvement du grilloir. Si ce dispositif de retenue est détaché durant l'entretien, il doit être rattaché une fois que l'appareil est réinstallé à sa position d'origine.

Remarque : Les dégagements adéquats doivent être maintenus durant l'entretien.

L'entretien doit être effectué par un personnel d'entretien qualifié uniquement. Un entretien non effectué par un personnel qualifié peut endommager le grilloir et/ou blesser l'opérateur.

Le personnel d'entretien qualifié comprend les personnes, les sociétés, les entreprises ou les compagnies, qui en personne ou par l'intermédiaire d'un agent, participent et sont responsables de la réparation ou de l'entretien de l'équipement de préparation alimentaire commercial, possédant l'expérience requise en la matière, connaissant toutes les précautions à prendre et travaillant en conformité avec les autorités locales et nationales compétentes.

Pour obtenir de l'aide pour sélectionner une agence d'entretien qualifié, contacter le département d'entretien de Duke Manufacturing Co. au 800-735-3853.

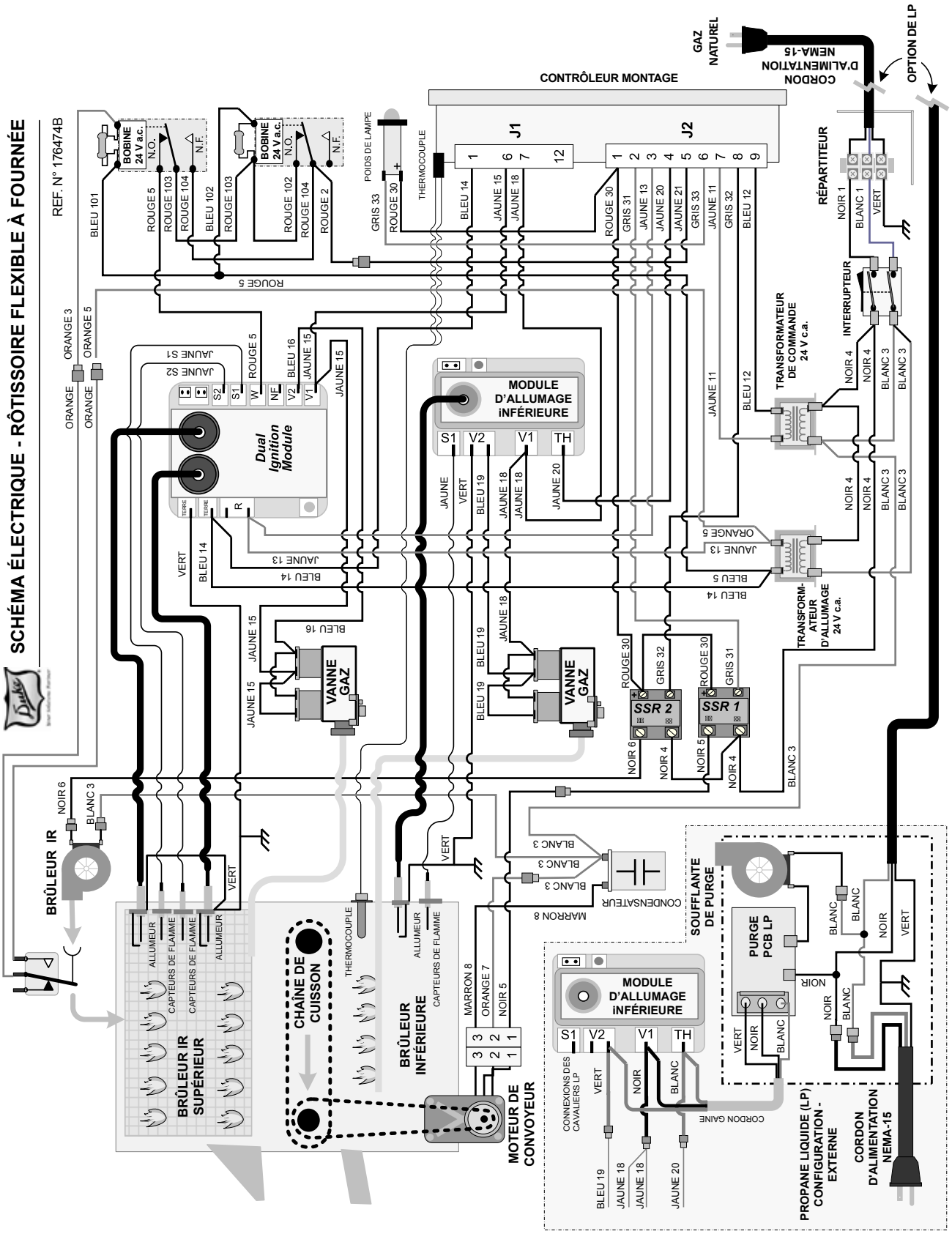
V. LISTE DES PIÈCES DE RECHANGE

ARTICLE	DESCRIPTION	RÉF.
1	INTERRUPTEUR, ALIMENTATION PRINCIPALE	175503
2	BRÛLEUR INFRAROUGE	175780
3	BRÛLEUR, TUBE, TYPE J (POUR UTILISATION AUX É.-U. ET AU CANADA)	176370
	KIT, BRÛLEUR, RÉGLABLE D'AMELIORATION DU BRULEUR INFERIEUR (POUR UTILISATION EN DEHORS DES É.-U. ET DU CANADA)	600313
4	MOTEUR – CONVOYEUR	175867
5	PIGNON, ALÉSAGE B21X3/8 (MOTEUR)	175517
6	ARBRE, CÔTÉ DÉCHARGEMENT	175037
7	ARBRE, CÔTÉ DROIT	175038
8	CONDENSATEUR, MOTEUR - CONVOYEUR	175507
9	MODULE D'ALLUMAGE (BRÛLEUR INFÉRIEUR – GAZ NATUREL)	175877
	MODULE D'ALLUMAGE (BRÛLEUR INFÉRIEUR – PROPANE)	175872
10	MODULE D'ALLUMAGE (BRÛLEURS SUPÉRIEURS)	175869
11	TRANSFORMATEUR, 40 VA, 120 VCA-24 VCA	175516
12	SONDE DE TEMP., CHAMBRE C	175977
13	ÉCLAIRAGE, CUISSON	175550
14	RELAIS – SEMI-CONDUCTEUR	175870
15	CHAÎNE, ENTRAÎNEMENT	175551
16	CONTRÔLEUR	175873
17	JOINT, PLAQUE DE COMMANDE	175510
18	JOINT, ENTRÉE DE SOUFFLANTE	175511
19	SOUFFLANTE, 60 HZ 115 V	176185
20	TUYAU, SOUFFLANTE	175532
21	PORTE-ORIFICE, INFRAROUGE	175542
22	ROBINET, GAZ NATUREL, COMBINÉ 24 V (UNITÉ FONCTIONNANT AU GAZ NATUREL UNIQUEMENT)	175531
	ROBINET, GPL, COMBINÉ 24 V (UNITÉ FONCTIONNANT AU GPL UNIQUEMENT)	175766
23	ORIFICE BRÛLEUR INFÉRIEUR, D'AMELIORATION DU BRULEUR INFERIEUR, N° 30, 3,26 mm (UNITÉ FONCTIONNANT AU GAZ NATUREL UNIQUEMENT)	176404
	ORIFICE BRÛLEUR INFÉRIEUR, D'AMELIORATION DU BRULEUR INFERIEUR, N° 46, 2.06 mm (UNITÉ FONCTIONNANT AU GPL UNIQUEMENT)	176412
24	ORIFICE, INFRAROUGE, AVANT, N° 40 (UNITÉ FONCTIONNANT AU GAZ NATUREL UNIQUEMENT)	175735
	ORIFICE, INFRAROUGE, AVANT, N° 52 (UNITÉ FONCTIONNANT AU GPL UNIQUEMENT)	175767
25	ORIFICE, INFRAROUGE, ARRIÈRE, N° 36 (UNITÉ FONCTIONNANT AU GAZ NATUREL UNIQUEMENT)	175736
	ORIFICE, INFRAROUGE, ARRIÈRE, N° 51 (UNITÉ FONCTIONNANT AU GPL UNIQUEMENT)	175768
26	PORTE-ORIFICE 3/8 DROIT X PASSE-CLOISON	176368
27	TUBAGE – TÉ À ROBINET, KIT	175477

V. LISTE DES PIÈCES DE RECHANGE (SUITE)

ARTICLE	DESCRIPTION	RÉF.
28	TUBAGE – TÉ À INFRAROUGE, KIT	175476
29	TUYAU - ENTRE ROBINET INFÉRIEUR ET KIT D'ORIFICES CALIBRÉS	175478
30	DÉTECTEUR – BRÛLEUR INFÉRIEUR	175534
31	DÉTECTEUR – BRÛLEUR INFRAROUGE	175535
32	ALLUMEUR	175536
33	CÂBLE DE SUPPRESSION D'ALLUMAGE - INFRAROUGE	175537
34	CÂBLE DE SUPPRESSION D'ALLUMAGE - INFÉRIEUR	175538
35	CHAÎNE, CUISSON	175674
36	BLOC DE DOUILLES, CONVOYEUR	175525
37	PLATEAU DU CHARGEUR	175430
38	SUPPORT DE MONTAGE DU CHARGEUR	175438
39	CHARGEUR	175444
40	RAMPE DU CHARGEUR	175741
41	PORTE	175429
42	PARE-FLAMMES	175293
43	GARANT DE BRÛLEUR	175200
44	CHUTE DE DÉCHARGEMENT	175340
45	CAPOT DE DÉCHARGEMENT	175778
46	TABLETTE POUR PRODUIT	175363
47	BAC DE DÉCHARGEMENT	175358
48	BAC À GRAISSE PRINCIPAL, D'AMELIORATION DU BRULEUR INFERIEUR	176398
49	BAC À GRAISSE EN V, D'AMELIORATION DU BRULEUR INFERIEUR	176397
50	BAC À GRAISSE LATÉRAL	175357
51	RACLOIR PIVOTANT	175150
52	PANNEAU ARRIÈRE	175305
53	PANNEAU AVANT	175300
54	PANNEAU SUPÉRIEUR RELEVABLE	175392
55	PANNEAU D'ACCÈS AU COMPARTIMENT ÉLECTRIQUE	175383
56	PANNEAU D'ACCÈS DÉCHARGEMENT	175250
57	BAC D'IMPÉDANCE (SI PAS DE CATALYSEUR EN OPTION)	175226
58	CATALYSEUR (EN OPTION)	175480
59	CATALYSEUR, GARANT	175482
60	OUTIL DE NETTOYAGE DE BRÛLEUR	175485
61	NETTOYEUR DE TUBE À FLAMME	175701
62	BROSSE DE NETTOYEUR DE TUBE À FLAMME	175705
63	BAC DE NETTOYAGE	175842
64	RELAIS, 10A, 24VAC	175184

VI. SCHÉMA DE CÂBLAGE



REMARQUES

REMARQUES

REMARQUES



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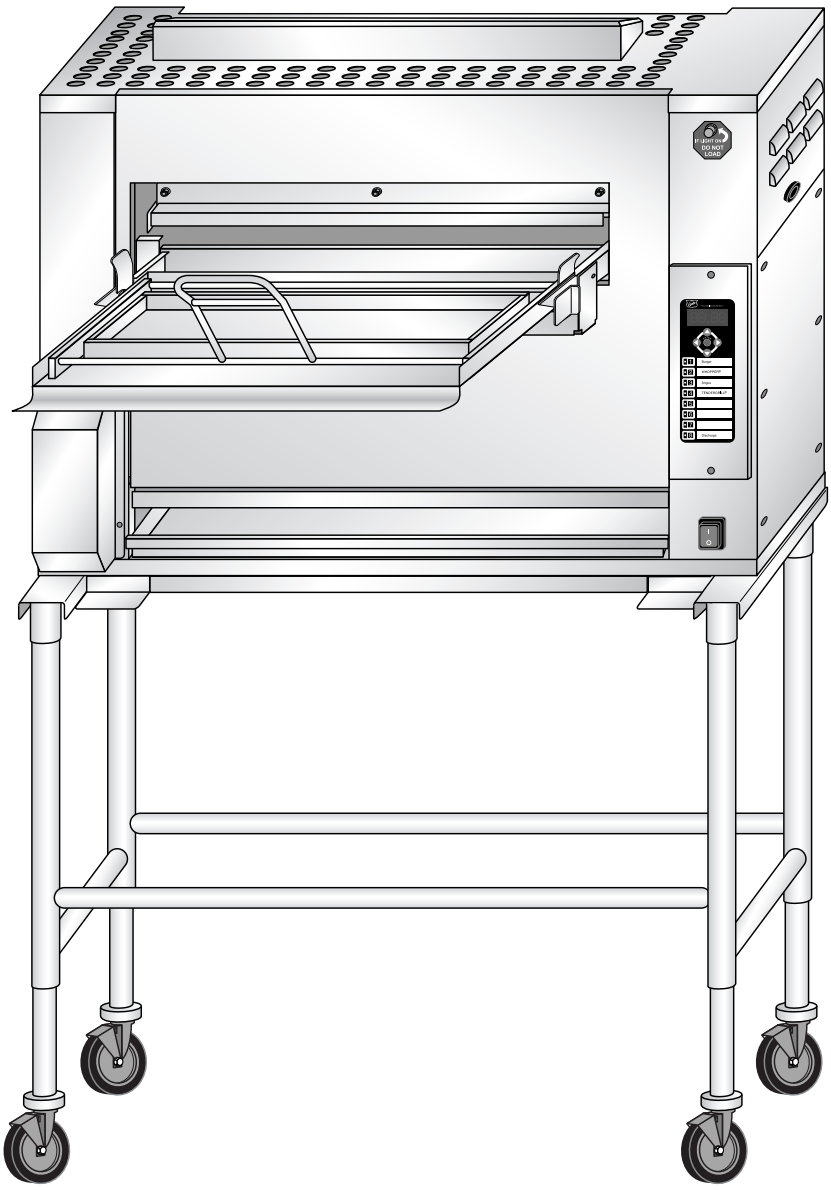
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重要警告和安全資訊

用戶在嗅到燃氣時應遵循的說明張貼在醒目之處。此資訊可以通過諮詢當地燃氣供應商獲取。

為了保證您的安全：

不要在此設備或任何其他設備附近存貯或使用汽油或其他易燃的氣體或液體。

⚠警告：不合理的安裝、調節、改造、維修或維護可能導致財產損壞和人員傷亡。在安裝或維修此設備之前應完整閱讀安裝、操作和維修說明。

必須保留本手冊，以供未來參考。

I. 一般資訊

A. 批量烤爐的規格

多用途批量烤爐的規格				
	天然氣		丙烷	
海拔（最高）	2000 英尺	607米	2000 英尺	607米
燃氣管接頭	3/4英寸內螺紋		3/4英寸內螺紋	
入口壓力範圍	7 – 12英寸水柱		10 – 12英寸水柱	
	進氣歧管壓力		進氣歧管壓力	
紅外爐頭（頂部）	3.75英寸水柱	0.93 千帕	8.0英寸水柱	2.0千帕
底部爐頭	3.75英寸水柱	0.93 千帕	8.0英寸水柱	2.0千帕
總能率	87000 – 111,000 BTU/小時	25.5 – 32.5 千瓦	79,000 – 105,000 BTU/小時	23.2 – 30.7 千瓦
	爐頭噴嘴尺寸		爐頭噴嘴尺寸	
前端紅外爐頭	#40	2.49毫米	#52	1.61毫米
後端紅外爐頭	#36	2.70毫米	#51	1.70毫米
底部爐頭	#31	3.05毫米	#49	1.85毫米

裝運重量：482磅/219千克

裝運尺寸：47 x 34 x 68英寸（119.4 x 86.4 x 172.7釐米）

型號	電氣規格	天然氣和液化氣
FBB-NO-120	120VAC, 2A, 60Hz	87,000 – 111,000 BTU/小時
FBB-NC-120	120VAC, 2A, 60Hz	87,000 – 111,000 BTU/小時
FBB-PO-120	120VAC, 2A, 60Hz	79,000 – 105,000 BTU/小時
FBB-PC-120	120VAC, 2A, 60Hz	79,000 – 105,000 BTU/小時

A-1.0 型號關鍵字

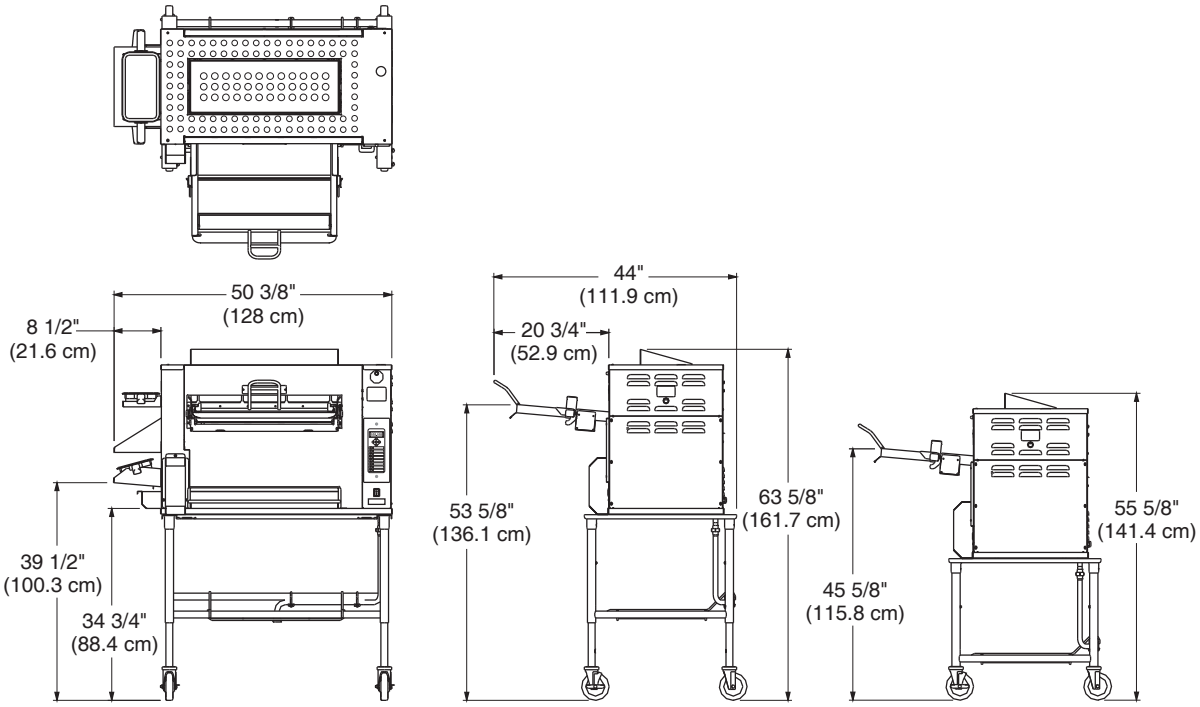
FBB-X Y-120

X=N（天然氣）或 P（丙烷/液化氣）

Y=O（無催化器）或 C（有催化器）

120=120伏

A-2.0 烤爐尺寸


50 3/8"
(128 cm)
8 1/2"
(21.6 cm)
39 1/2"
(100.3 cm)
34 3/4"
(88.4 cm)
44"
(111.9 cm)
20 3/4"
(52.9 cm)
53 5/8"
(136.1 cm)
63 5/8"
(161.7 cm)
45 5/8"
(115.8 cm)
55 5/8"
(141.4 cm)

II. 安裝說明

A. 專業人員

只有專業人員可以根據本手冊安裝和維修設備。由非專業人員安裝和維修設備可能導致烤爐損壞乃至操作人員受傷。

這裏，專業人員是指直接或通過代理參與下列事宜並對其負責的個人或公司：

- 所述專業人員應在安裝/替換氣管和設備連接，安裝，修理和保養等業務方面有經驗，瞭解必要的預防措施並滿足所在州和當地政府所有規定。參見：美國《國家燃氣規範》NFPA 54 (ANSI Z223.1)。
- 安裝從電錶、主控箱、維修口到電氣設備的電線。專業安裝人員必須熟悉所有必需的預防措施，符合具有司法權的國家和地方當局的所有要求。參見：美國《國家電氣規範》ANSI/NFPA70。
- 除非在安全負責人的監視或指導之下，本設備不適合有身體障礙、感覺或精神障礙、缺少使用經驗和相關知識的人群（包括兒童）使用。

本安裝必須合乎當地規範。當地無規範時，應合乎美國《國家燃料氣體規範》ANSI Z223.1/NFPA 54或適用的《丙烷安裝規範》CSA B149.1，包括：

- 在大於½ psi (3.5 kPa)的測試壓力下對燃氣供應管道系統進行任何壓力測試期間，電器及其斷路開關必須與燃氣供應管道系統斷開。
- 在等於或小於½ psi (3.5 kPa)的測試壓力下對燃氣供應管道系統進行任何壓力測試期間，必須關閉電器的各個手動斷路開關，以將其與燃氣供應管道系統隔離。

對於安裝有腳輪的烤爐，必須使用符合《移動燃氣設備連接規範》ANSI Z21.69/CSA 6.16的插座和符合《與燃氣一起使用的快速斷開裝置規範》ANSI Z21.4/CSA 6.9的快速斷開裝置。當安裝帶有腳輪和快速斷開軟管的烤爐時，必須採取充分的措施來限制烤爐移動，不要依賴插座和快速斷開裝置或其相關聯的管道來限制烤爐移動。可將烤爐後部基座框架的垂直部分固定以限制其移動。

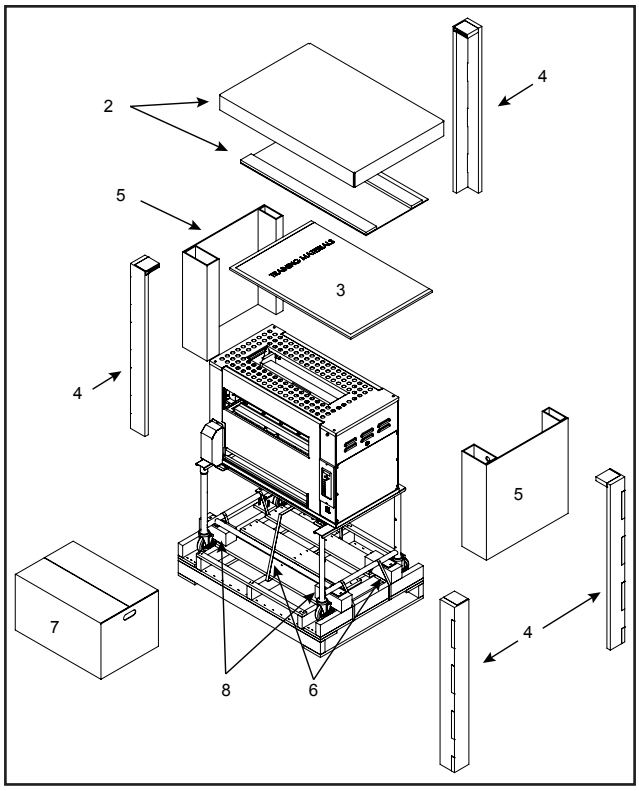
B. 送抵和檢查

Duke製造公司竭盡所能確保您收到的烤爐處於良好的狀態。被固定在厚重的墊木框架中並進行了充分的包裝，以防止裝運損壞。它們在包裝和託付給運送商之前都經過了仔細檢查。

在收到您的Duke烤爐時：

- 檢查包裝箱，仔細查看是否在運送過程中出現外部損傷，這些損傷必須由駕駛員/運送商簽認。
- 拆開包裝並檢查在包裝外部難以發現的任何損傷。
- 檢查隱蔽的損傷。必須在收到烤爐的十五（15）日內通知運送商，必須保留紙箱、滑行裝置和所有包裝材料供檢查。

對於運送過程中的丟失或損傷，Duke製造公司不負任何責任。在交付裝運以後，運送商必須對運送過程中出現的問題負全部責任。不過，我們已準備好在您的索賠過程中提供幫助。



注意：烤爐非常重！
在搬運時請尋求充分的幫助。

1) 使用工具刀割開塑膠包裝（未顯示）。
2) 移除頂部的紙板和內部的填充物。
3) 取出培訓材料盒
4) 移除4個角上的紙板（4個位置）。
5) 移除兩端的紙板（2個位置）。
6) 移除捆綁帶（使用工具刀砍斷或使用剪刀剪斷：5個位置）。
7) 從前端取出零部件和附件盒。
8) 安全地抬起烤爐的一端，向中間輕拍底部木板，然後向側面輕拍，籍此移去木板。對其他部分的底部木板重複此操作。這樣可以使烤爐腳輪接觸到墊板。
9) 將烤爐從裝運墊板上搬下來，大概需要3人，這樣可以引導和分擔其重量（約335磅）。小心扶著烤爐。緩緩向前滾動，直到前端腳輪離開墊板。將烤爐抬高6-8英寸，抬離墊板，然後輕放在地板上，以避免損壞腳輪。
10) 從烤爐面板上移除藍色保護帶，仔細檢查，確保沒有遺留任何帶子。

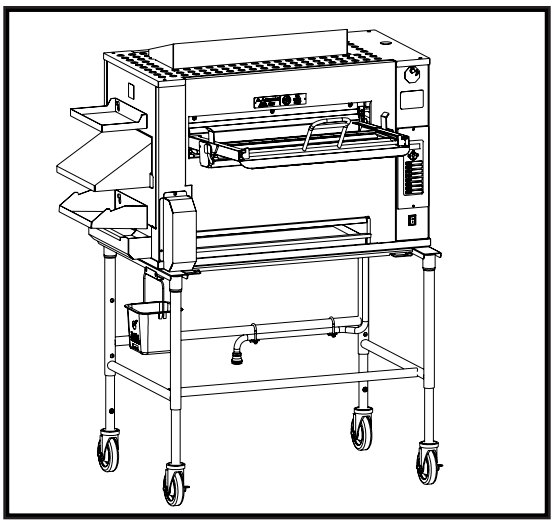
C. 烤爐組裝

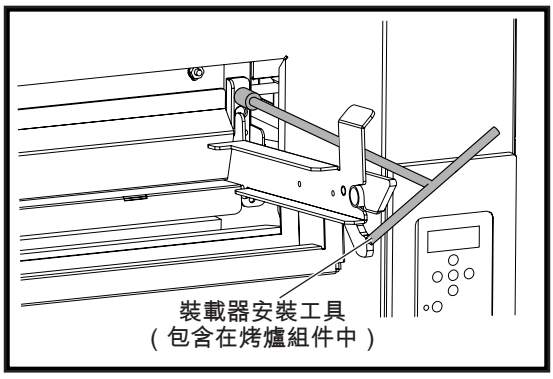
在組裝和安裝烤爐之前，請仔細檢查是否所有必需部件都已齊全。

項目	部件名稱	部件編號
1	產品盤架	175353
2	卸料槽	175340
3	卸料罩	175778
4	卸料盤固定器	175358
5	卸油盤	175357
6	“V”形油脂盤	175325
7	主油脂盤	175329
8	裝載器	175444
9	裝載器託盤	175430
10	裝載器托架	175438
11	門	175429
12	裝載器滑軌	175741
13	遮阻網	175226
14	催化器（供選）	175480
15	催化器防護罩（供選）	175482
16	清潔桶	175842
17	清潔/安裝工具組件 — 底部爐頭火焰感應杆管道清潔刷，管道清潔工具， 裝載器安裝扳手，3/16英寸ALLEN扳手	175700
18	組件 — 烤爐維修部件，天然氣爐含控制器和傳送帶(供選)	175725
19	組件 — 烤爐維修部件，丙烷爐含控制器和傳送帶(供選)	175740
20	組件 — 用戶可更換部件，底部爐頭，消焰器，裝載器和爐頭護罩（供選）	175726
21	組件 — 用戶可更換部件，底部爐頭和消焰器（供選）	175750
22	組件 — 燃氣管接頭裝配件（供選）	175690
23	組件 — 高燃氣供應壓力調節器（供選）	175689

安裝

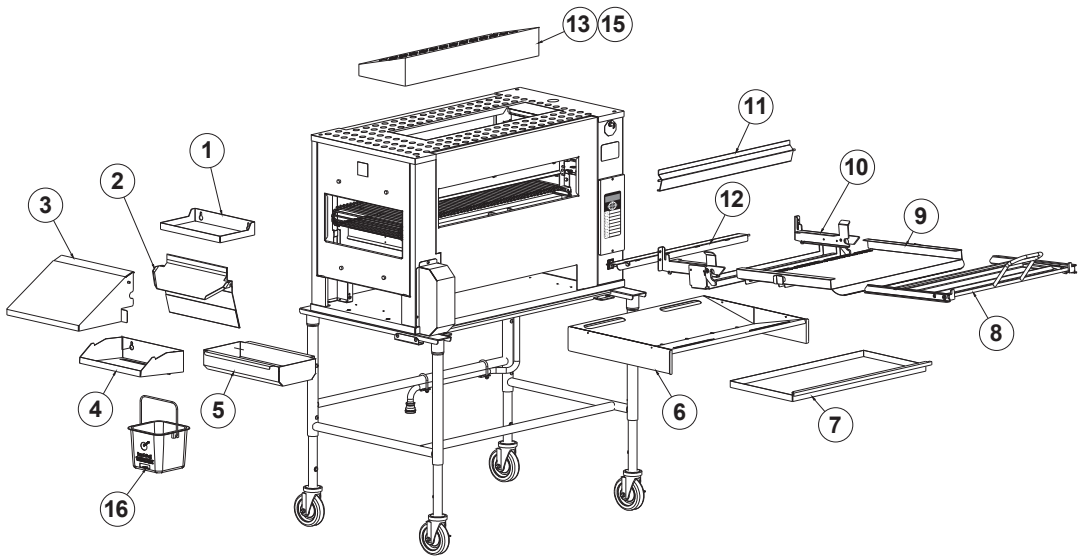
按照如下說明安裝所有部件。





使用(4) 1/4-20螺帽安裝裝載器托架。

使用提供的擴展工具移除和重新安裝螺帽。（螺帽已安裝在裝載器安裝軸上。）



D. 調整安裝

在從工廠裝運之前，烤爐的各個部分及其所有零部件都經過了全面測試和檢測。但是，有時候仍然有必要在安裝烤爐之後對其進行進一步測試或調整。此類調整應由經銷商或安裝人員負責。不應將這種類型的調整看作是缺陷，而是正確安裝設備的一項常規工作。

這些調整包括但不限於：

• 調整氣壓調節器

• 調整烤爐高度（如有必要）

只有經過適當檢測並且在必要時由合格服務或安裝人員進行適當調整之後，才應認為安裝完成。

同樣重要的是，要使烤爐正常工作，廢氣和通風空氣的自然流動不得受到任何阻礙。此烤爐不應安裝在牆腳或鑲嵌在牆上。這兩種安裝方法都會限制燃燒室的空氣流通，或者影響該單元的良好通風。在對烤爐進行任何連接之前，請檢查其銘牌，確保烤爐規格與提供給烤爐的燃氣類型和電壓相符。

額定值銘牌位於設備右端控制盒蓋板的背部。

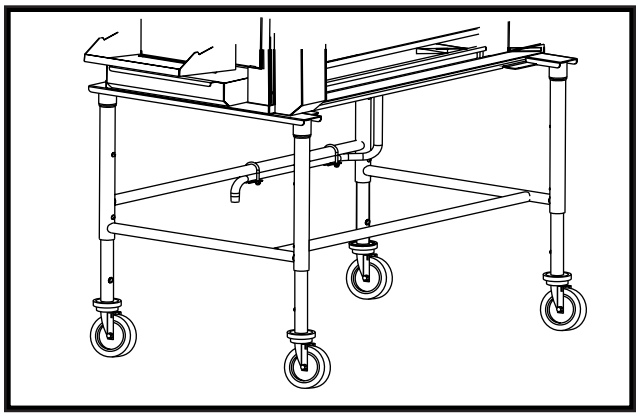
產品銘牌附著在設備的背部，上面標有烤爐的型號和序號。

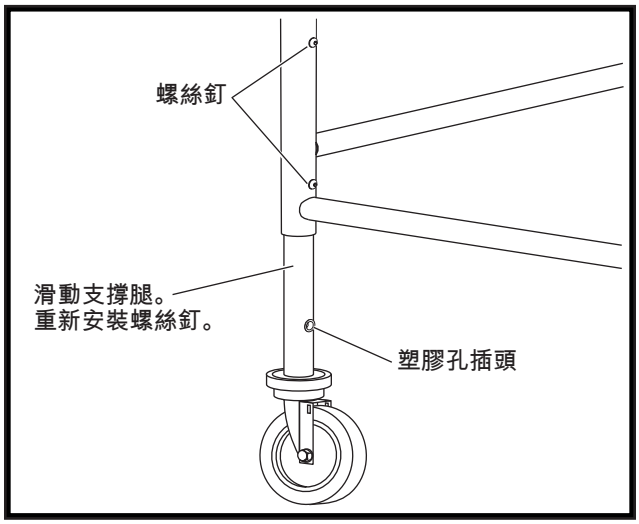
升高或降低烤爐

可以通過每條支撐腿上的兩顆螺絲釘調整烤爐的高度。

注意：烤爐非常重！在升降時請尋求充分的幫助。

1. 將烤爐的一端升高到一個寬的、堅固的平臺上（未提供）。
2. 取出每條腿的兩顆螺絲釘，然後升高/降低螺紋孔。重新安裝螺絲釘。
3. 移走平臺並安全地升高/降低烤爐。
4. 將提供的塑膠孔插頭放置到任何未使用的孔中。





E. 烤爐位置

適當規劃和放置烤爐將獲得長期的使用方便性和最佳性能。我們建議您在收到烤爐之前充分考慮其放置位置。

- 烤爐應該放置在無氣流並且易於操作和維修的區域。
- 烤爐必須遠離易燃物。最低的間隙要求：

	易燃物	非易燃物
卸料端	12" (305)	12" (305)
面板端	3" (76)	3" (76)
後側	4" (102)	4" (102)
地板/桌面	0" (0)	0" (0)

F. 燃氣管道

標準烤爐每小時消耗燃氣100,000 BTU。要獲得烤爐所設計的性能水準，對廚房的管道進行總體規劃和適當調整至關重要。此烤爐的安裝必須符合所有當地規範，如果沒有當地規範，則應該遵守美國《國家燃氣規範》NFPA 54和ANSI Z 223.1。

您當地的燃氣供應商應該參照美國《國家燃氣規範》對燃氣管道進行適當調整和安裝。一般而言，管道大小以提供的燃氣足以滿足連接在管道上的所有燃氣設備的最大需求為宜，同時並保持設備出口處的壓力適當。所使用設備的總BTU需求以及從儀錶到電器的管道長度是合理設計燃氣供應系統的主要考慮因素。

⚠ 注意：使用裝載器託盤來支撐較重的物品，否則各物品本身的重量可能損壞烤爐的部件。

安裝人員須知：

此設備應連接到以下壓力範圍內的燃氣供應裝置：

天然氣7到12英寸水柱

丙烷燃氣10到12英寸水柱

在安裝之前必須檢查燃氣供應壓力。如果供應壓力大於12英寸水柱，應該根據相應說明安裝和調整高供應壓力組件Duke P/N 175689，將輸出壓力調整為：

天然氣 — 7英寸水柱

丙烷燃氣 — 11英寸水柱

注意：必須安裝一個具有適當長度的固定限制器，將烤爐固定到不會移動的表面，以消除燃氣連接器的張力。如果烤爐移離其正常位置，那麼必須在移回烤爐時重新連接限制器。

G. 電氣連接

您的烤爐必須連接到專用的120伏接地電路。電動機、指示燈和控制電路通過烤爐背後的一個7英尺電源線連接。

在對這些單元進行任何連接之前，請檢查額定值銘牌，確保烤爐的電壓和相位與所供電力規格一致。在安裝時，所有烤爐必須根據當地規範進行接地，如果沒有當地規範，則必須符合美國《國家電氣規範》ANSI/NFPA 70（加拿大為CSA規範C22.2）。佈線圖位於烤爐的控制盒區域。本手冊中還提供了標準的佈線方案。

⚠ 警告：此設備配備了一個三腳（接地）插頭，以保護您免受電擊，該插頭應該直接插在正確接地的三孔插座上。不要剪斷或移除插頭的接地腳。

H. 通風

此設備應安裝在能夠充分通風的地方，以避免有害物質密集，進而影響安裝設備的房間內的空氣品質。

保溫爐排風罩通風

機械式排風罩的容量不得小於1700立方米/小時(1000立方英尺)，出風口不得小於100釐米×130釐米（39.4英寸×51.2英寸），以保證此設備的充分通風。針對此設備或通過公用保溫爐排風罩進行通風的其他設備的專用遮罩，須具備規定的容量和出風口大小。

通風系統維護

通風系統必須由專業人員進行維護和每年檢查，同時這也是政府要求的一部分，或是另外的要求。

這種檢查/維護應該包括但不限於：

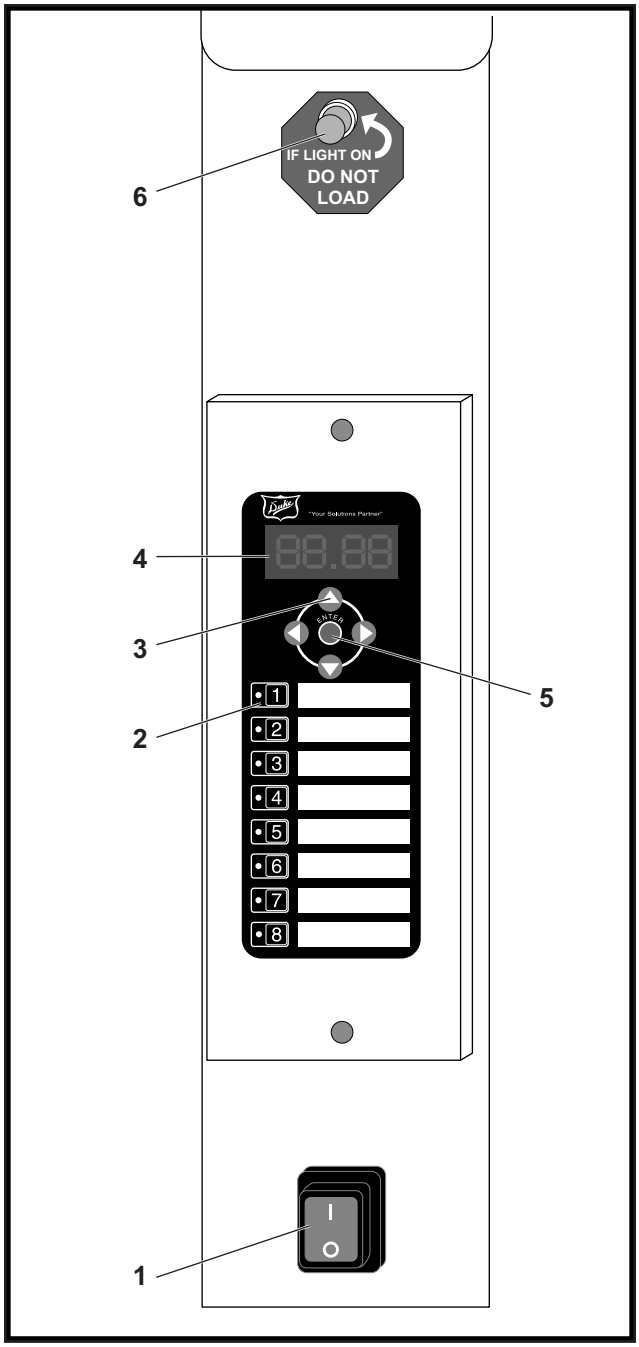
- 檢查可能妨礙烤爐通風的堵塞物。
- 修復這類堵塞。
- 檢查通風頂蓋，其驅動馬達和電鈴等。

⚠ 注意：不要將任何物體，比如烤盤、食物容器或鋁箔，放在烤爐頂部。這將阻塞烹飪水蒸汽和氣流在裝置中流通，導致較差的烹飪效果。

III. 操作說明

本部分中的資訊適用於專業操作人員。專業操作人員是指仔細閱讀了本手冊中資訊、熟悉烤爐的功能和/或擁有按上述步驟操作設備的經驗的個人。我們建議按照這些說明進行操作，以保證您的烤爐具有最優的性能、較長的使用壽命且不會出現故障。

控制器已在出廠前按照已知菜譜預先編程。產品鍵必須根據已核准的菜譜進行編程，烤爐在使用前需要適當調校。



A. 烤爐控制

1. 電源開關 – 打開或關閉烤爐。烤爐自帶照明系統。
2. 產品選擇鍵 – 選擇要製作的產品菜譜。在編程模式下也可用作數位鍵1-8。
3. 方向鍵

   向上箭頭： 在運行模式中按下時，顯示當前烤爐溫度。在編程模式中按下時，向後滾動各種參數。

   向下箭頭： 在運行模式中按下時， 顯示當前烤爐溫度。在編程模式中按下時，向後滾動各種參數。

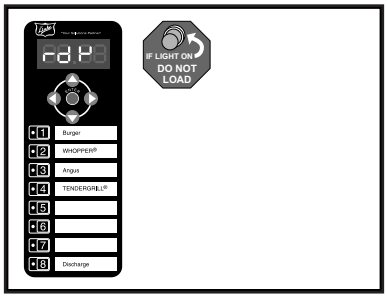
   左右箭頭： 在編程模式下在字元或參數之間移動。也可以用作數位0和9鍵。
4. 顯示
5. Enter鍵 – 按下5秒進入編程模式。也可用於在編程模式下移動和輸入參數。
6. 烹飪燈 – 此燈在預熱和整個烹飪過程中一直發亮。操作人員不得在此燈發亮時向烤爐裝載食物。

B. 烹飪產品

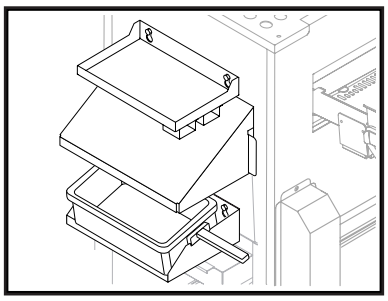
B-1.0 烤爐照明

- 啟動通風系統。
- 將ON/OFF開關調到ON(1)位置。
- 在預熱期間控制板將顯示 PrE 。
- 所有具有非零烹飪時間的產品鍵旁邊的LED燈將為紅色。
- 在預熱完成後，控制板將顯示 rdY ，所有具有非零烹飪時間的產品鍵旁邊的LED燈將為綠色。
- （要關閉烤爐，請參見B-8.0）

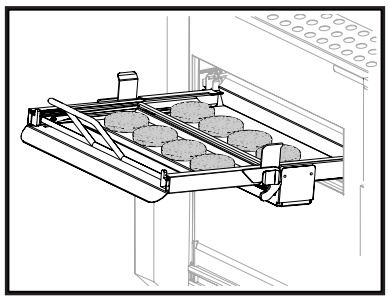
B-2.0 烹飪產品



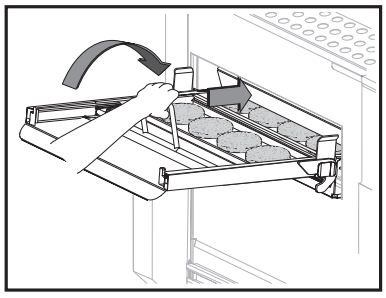
烤爐顯示 rdY ，
烹飪燈未打開。



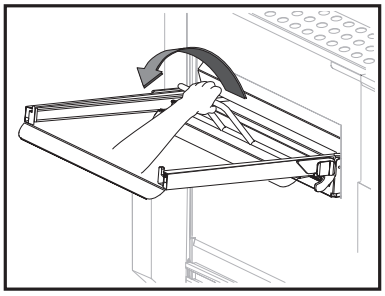
在未通電狀態下放置底盤。



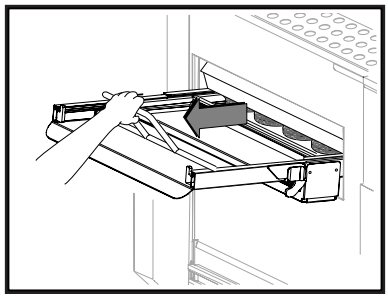
在前一排和
後一排放置產品。



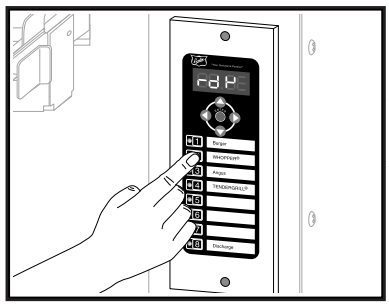
裝載產品。
如圖所示向前推動。



向下旋轉把手，
將內部杆提至產品上方。



旋轉把手，
拉出裝載器。

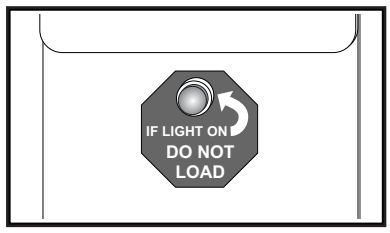


按下適當的產品鍵。

如果選擇錯誤，可在15秒內按另一產品鍵。

顯示板將顯示剩餘時間和4個字元的產品識別字。

所選產品鍵旁邊的LED燈將發出閃爍的紅光。



烹飪燈將變亮。

B-3.0 烹飪週期完成

產品傳送帶將轉動並卸下產品。

在烹飪燈熄滅並且控制板上顯示 rdY 之前，不要向烤爐裝載產品！

為了防止產品熔化，建議產品裝載之前在裝載器上停留的時間不要超過5分鐘。

B-4.0 烹飪微調

使用此功能可將產品烹飪週期增加或減少多達30秒。此功能應該在非編程環境下優化產品烹飪時使用。使用此功能的方法如下：

按下 ▲ 和 ▼ 鍵3秒。

控制板將顯示 AdJ。

設定了時間的產品的所有產品LED燈將發出紅光。

選擇要調節的產品鍵。

所選的產品LED燈仍將發出紅光，所有其他產品LED燈將熄滅。

控制板上將在產品識別字後顯示閃爍的 AdJ。

▲ 和 ▼ 鍵將用於設定烹飪微調時間。

第一次按下 ▲ 或 ▼ 將調出微調螢幕。控制板將顯示總產品烹飪時間，包括以前的烹飪微調時間。

繼續按下 ▲ 或 ▼ 鍵將烹飪時間增加或減少1秒。

使用此功能可以增加或減少烹飪時間至多30秒。

要退出此功能並保存設置，請按下ENTER鍵。

B-5.0 取消烹飪週期

按下產品鍵3秒將取消烹飪週期並卸下產品。

B-6.0 檢查烤爐溫度

在任何時刻（在編程模式下除外）按下 ▲ 鍵將顯示烹飪室內的實際溫度。

B-7.0 檢查設定溫度

在任何時刻（在編程模式下除外）按下 ▼ 鍵將顯示烹飪室內的設定溫度。

B-8.0 關閉烤爐

將ON/OFF開關調到OFF (O)位置。

C. 清潔

烤爐外部的不銹鋼可以使用非磨砂性不銹鋼清潔劑進行清潔，市場上有許多這類產品。在烤爐冷卻時使用濕布進行擦拭。在烤爐很熱時進行擦拭將留下擦拭痕跡，導致不滿意的清潔效果。清潔之後，可以用輕質油擦拭烤爐。

為了幫助您正常使用此烤爐並享受保修服務，必須遵循以下建議：

A. 不要使烤爐長時間接觸洗滌劑、清潔劑、漂白劑等物質。紅外爐頭和火焰感應杆遠離清潔液體。不要向紅外爐頭噴射任何異物。一定不要讓化學清潔劑、去污劑、漂白劑和皂堿液接觸紅外爐頭金屬外殼或陶瓷爐頭噴頭，因為它們可能損壞這些表面和/或導致烤爐故障，從而導致保修協議失效。為了防止損壞陶瓷爐頭瓦，一定不要讓其接觸清潔工具或其他可能留下劃痕或損壞陶瓷表面或導致陶瓷燃氣口阻塞的物體。不要向火焰感應杆噴射任何異物。一定不要讓化學清潔劑、去污劑和皂堿液接觸火焰感應杆，因為它們可能損壞這些表面或導致烤爐故障，從而導致保修協議失效。如果有必要，只能在冷卻到室溫之後清潔火焰感應杆，使用浸有酒精的軟布輕輕擦拭，以清除任何碳類堵塞物。

B. 不要將化合物，尤其是含有氯的化合物放在烤爐部件上過夜，氯會導致蝕損斑和腐蝕。

C. 不要使用比製造商建議濃度更強的化學物質。

D. 使用清水和軟布擦拭清潔表面上的殘留物。

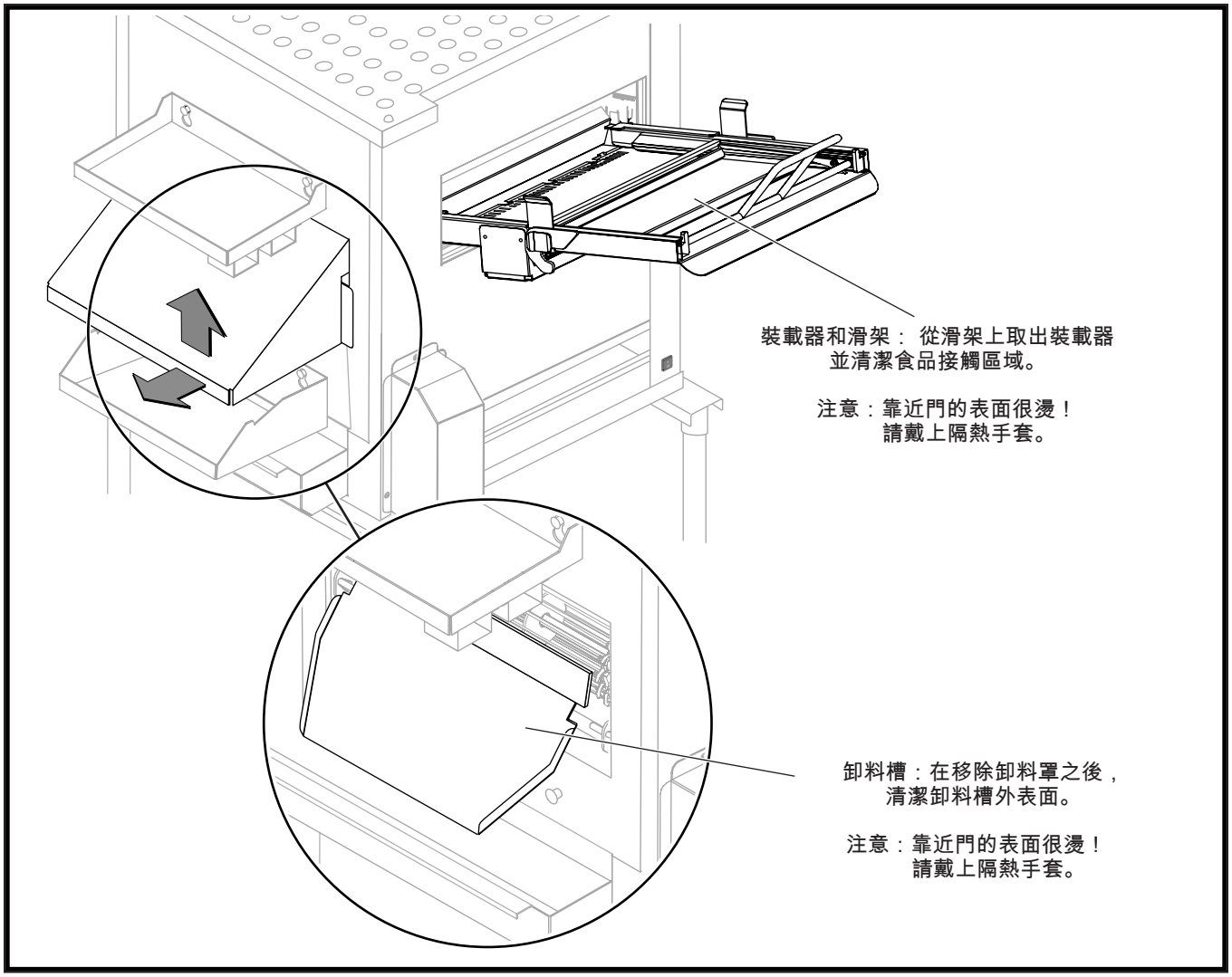
E. 不要在表面上使用普通鋼絲棉或洗刷板：使用非磨砂性烤爐去污劑和軟布。

嚴格遵循這些建議將有助於此烤爐提供滿意的服務，延長其壽命。

清潔計畫		
要清潔的部件	烤爐 冷卻	斷開 電源
4小時清潔（就地清潔）		
清潔裝載器和託盤（注意：表面很燙， 清潔時請戴上隔熱手套）		
清潔卸料槽		
每日清潔（卸下並清洗/刷洗/清潔）		
卸料盤（注意：表面很燙， 清潔時請戴上隔熱手套）		
卸料罩	X	
卸油盤	X	
主油脂盤	X	
卸料端面板	X	
卸料刮刀	X	
裝載器和託盤（注意：表面很燙， 清潔時請戴上隔熱手套）		
卸料槽	X	
裝載器滑軌	X	
每週清潔		
底部管狀爐頭	X	X
烤爐橫式推門	X	X
消焰器	X	X
催化器	X	X
每月清潔		
火焰感應器（頂部爐頭）	X	X
火焰感應器（底部爐頭）	X	X
火焰感應管道（頂部爐頭）	X	X

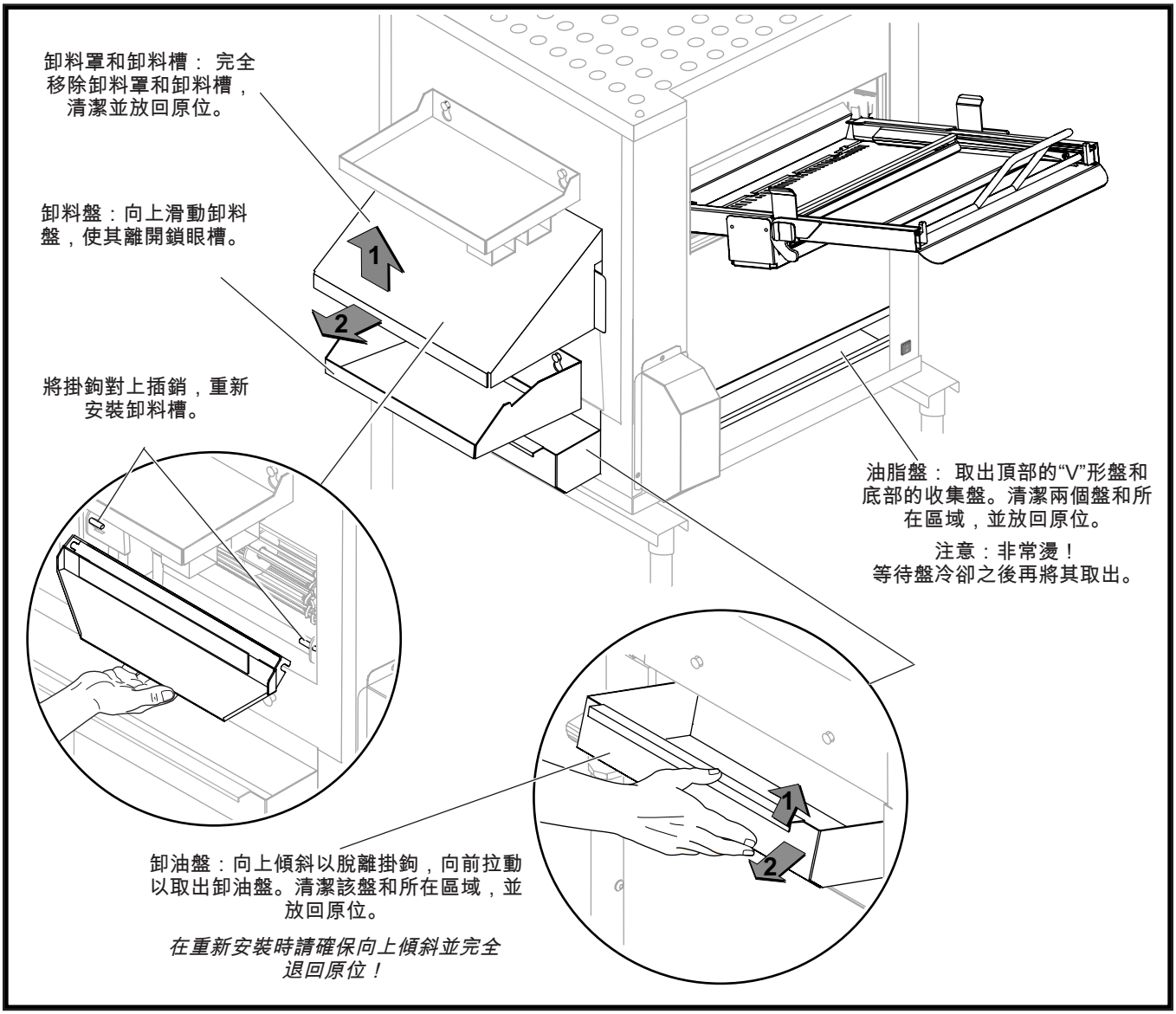
C-1. 四（4）小時清潔

接觸食品的所有組件都必須每隔4小時清洗和清潔一次。

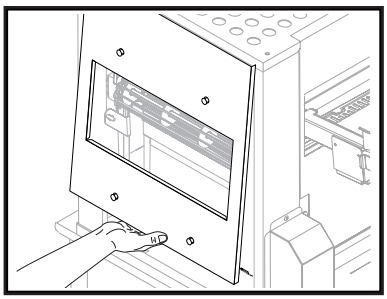


C-2. 每日清潔

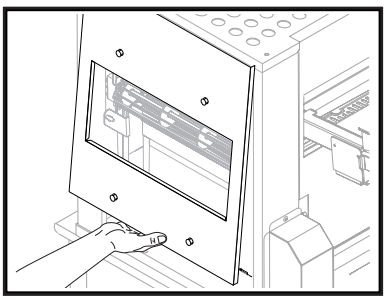
每日清潔也應該包括4小時清潔計畫中列出的所有項目。



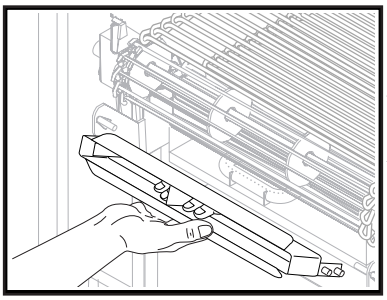
C-2. 每日清潔（續）



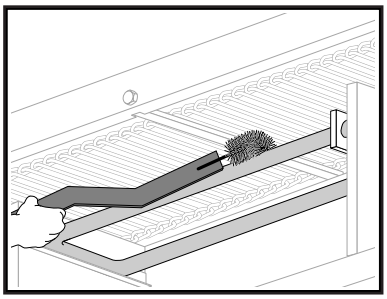
卸料端面板：
取出卸料附屬設備並升高面板，
同時向外和向下擺動。



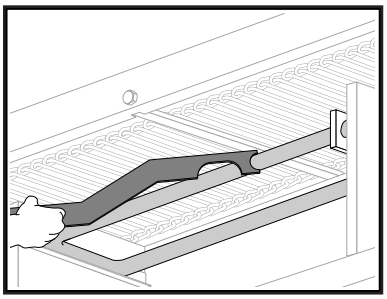
卸料刮刀：
升高並向前拉動。



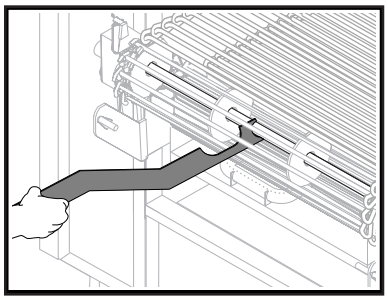
卸料刮刀：
從滑槽中拉出並取出定位銷。清潔
刮刀區域。放回原位。



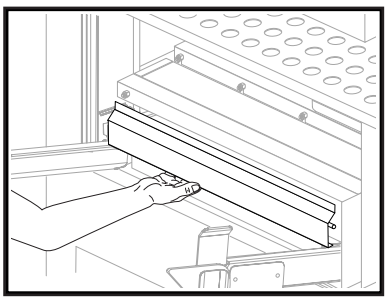
使用“管狀爐頭清潔工具”的刷毛端清
潔爐頭頂部。



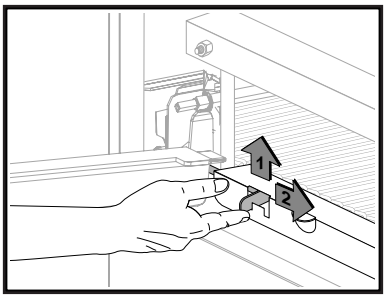
對於較厚的堵塞物，使用“管狀爐頭
清潔工具”的刮刀端。



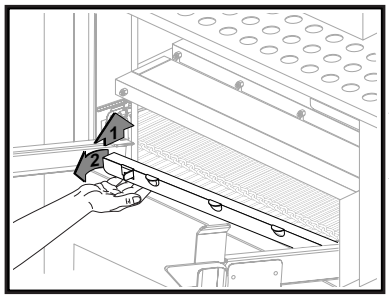
使用該工具的刮刀端清潔
傳送帶的卸料軸。



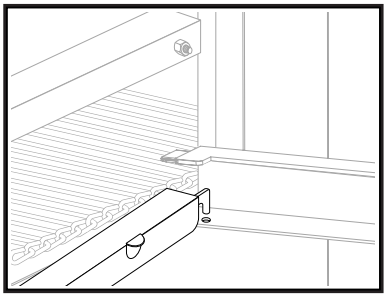
在烤爐冷卻時，升高並取出橫式
推門。清潔並放在一邊。



升高並向右滑動留下的門閂。

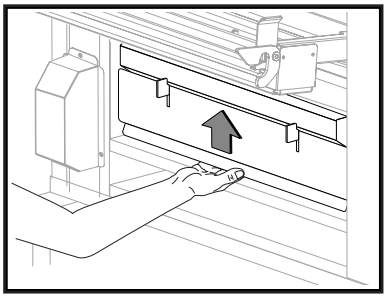


稍微升高並移動裝載器滑軌，
如圖所示。

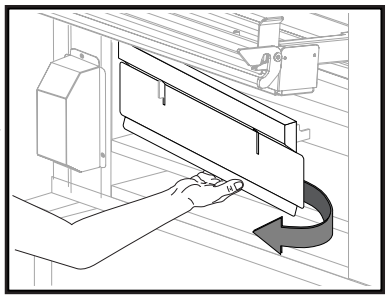


將插銷脫離樞軸孔。
清潔並放在一邊。

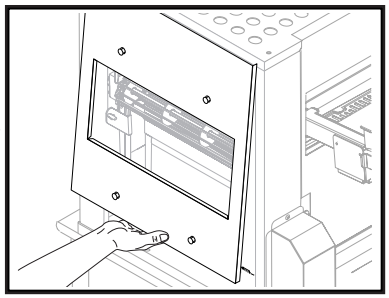
C-3. 每週清潔

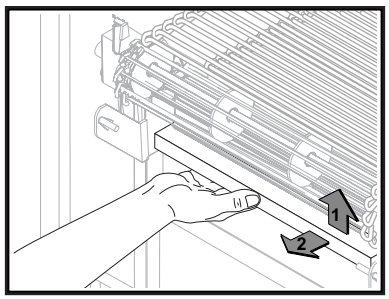


取出外部前端的
面板，升高
燃燒室面板。

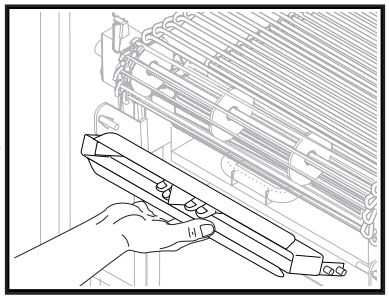


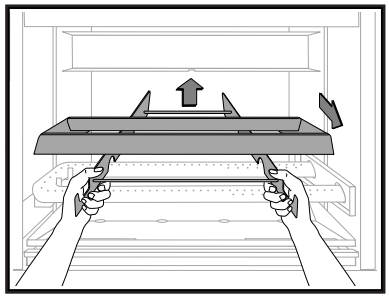
向外擺動面板
右側，如圖所示。
清潔並回歸原位。



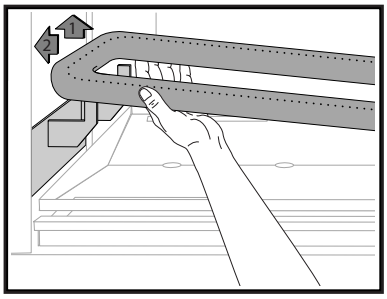


像每日清潔中所做的那樣清潔卸
料面板和刮刀。

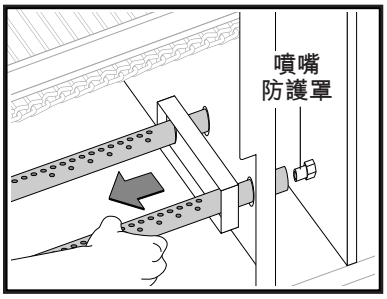




移除爐頭護罩。

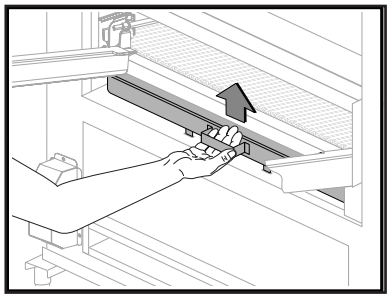


升高爐頭後部，使其脫離
支撐鞍並繼續
抓住它。

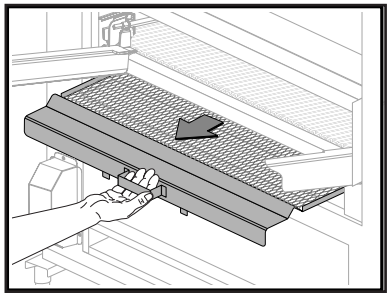


將爐頭拉離孔口並穿過烤爐壁。從燃燒室取出。
清潔、清空爐頭中剩下的任何水並將其放回原位。

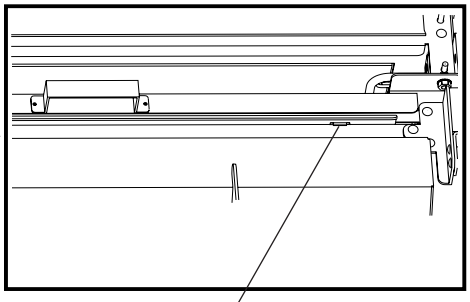
徹底晾乾爐頭的所有部件！



升高消焰器，使拉環脫
離滑槽。拉環位於消焰
器前端下面。



拉出消焰器。清潔並
重新安裝上。



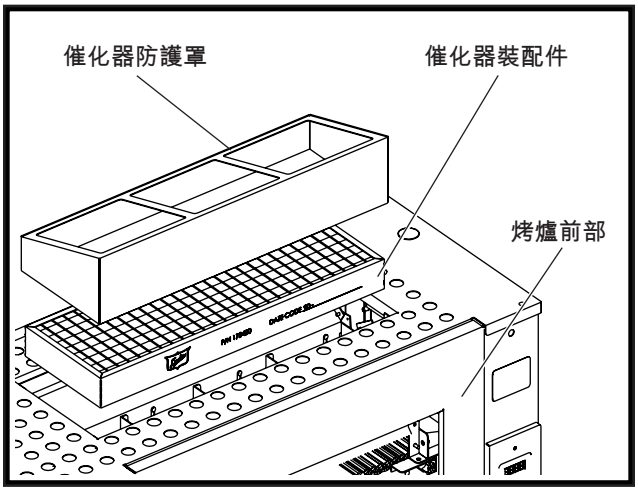
消焰器底部的拉環會掉入滑槽

C-3. 每週清潔（續）

清潔注意事項

⚠警告：不要使用肥皂、洗滌劑、去污劑、矽酮、氯化鈉、漂白劑、非氧化劑或任何其他化學清洗劑來清潔催化器。使用這些化學物將損壞催化器並使其無法工作。

注意：不要在洗碗機或超聲波清潔器裡清潔催化器。一定不要使用任何磨砂性材料或磨砂性擦洗工具來進行清理。



安全注意事項

催化轉換器（催化器）是燃燒系統的一個常規部件，應該遵循使用此類系統的一般安全做法。以下注意事項是專門針對催化器部件的。

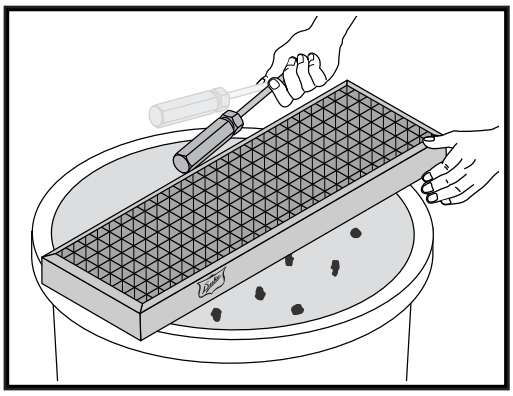
A：關閉電源：在取出催化器之前，斷開烤爐的電源並將其冷卻至室溫。取出催化器防護罩並放在一邊，以便在清潔完催化器之後重新安裝上。

B：處理催化器：在處理時應該謹慎，防止催化器掉落或損壞。如果是在烹飪完之後處理此裝置，應戴上專門針對此用途的手套，以避免人手燙傷。沒有與催化器相關聯的部件或電線，因此在清洗此裝置時不會有電擊危險。在開始清潔過程之前先讓催化器冷卻到室溫。

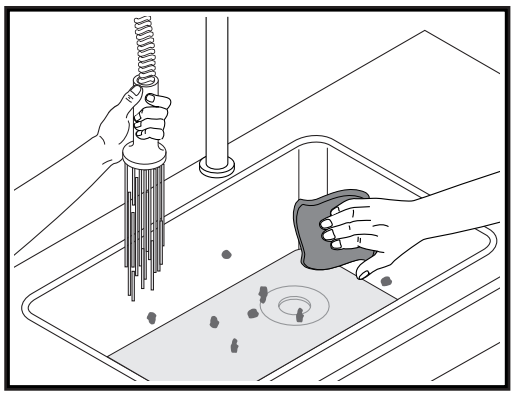
C: 操作：理解並遵照與烤爐一起提供的安裝和操作手冊中的系統說明進行操作。在初次操作配有催化轉化器的設備之前，確保烹飪設備上方的管道上沒有任何油脂，這一點很重要。

如果排氣流中包含天然氣，請確保天然氣不會在排氣系統中形成爆炸性混合物。

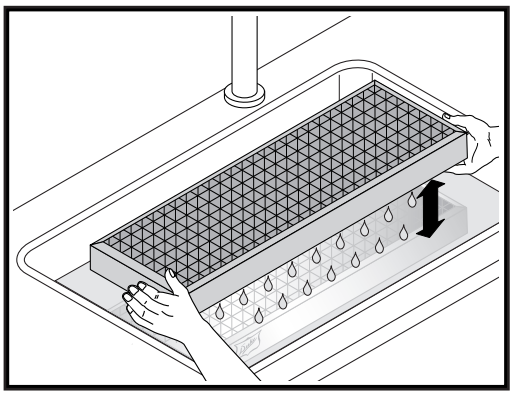
C-3. 每週清潔（續）



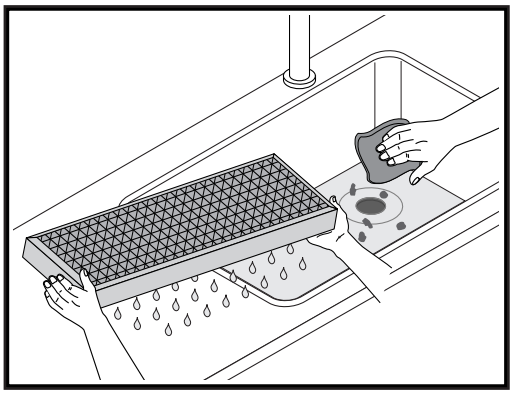
將催化器框架放在垃圾筐上方並輕輕拍打它，以拍落任何鬆散的灰塵/碳微粒。



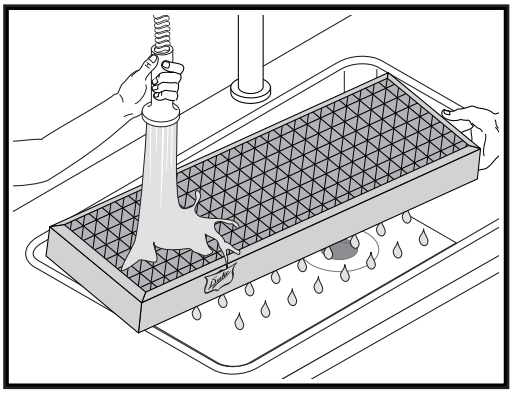
首先清洗水槽並清除所使用的盥洗池中的外來物質，然後開始清洗催化器。



在足夠容納催化器的盥洗池中灌上足夠的乾淨熱水（100-130ºF華氏度），應完全覆蓋放入盥洗池的催化器。在水中上下搖動催化器數次，並將其浸泡20分鐘。

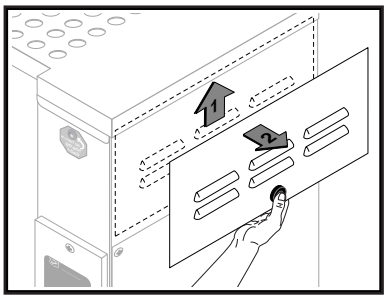


取出催化器並抖掉過多的水分。將水完全放幹並清潔盥洗池，然後重複上一步。

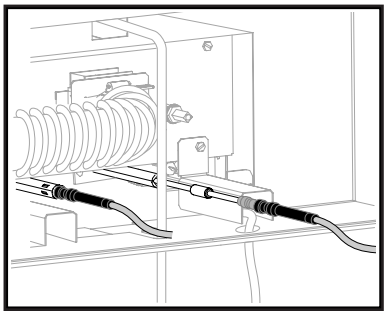


取出催化器並用大量熱水全面沖涮。普通的飯店洗碗池的水龍頭是此操作的理想選擇（低壓力，高水量）。用水慢慢地噴灑整個表面，包括前面和後面，確保沖洗掉附著在催化器表面或框架背後的任何微粒。抖幹催化器上剩餘的水分，然後將其在空氣中放置一晚上以風乾。然後可以將催化器重新安裝到烤爐中。在打開烤爐之前，確保催化器防護罩已重新安裝到催化器上方。

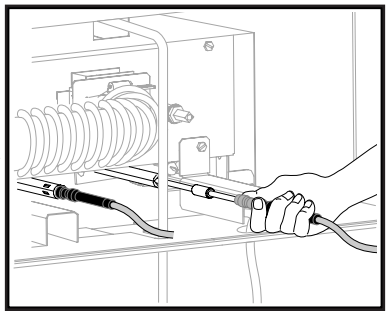
C-4. 每月清潔



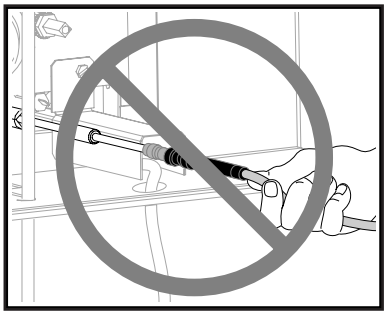
升高並取出頂部
面板。



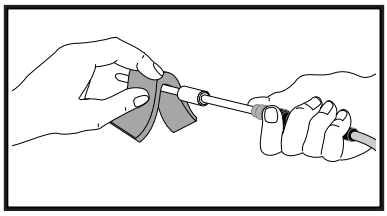
找到頂部爐頭的
火焰感應器。



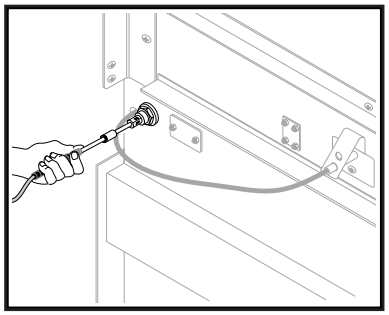
抓住感應器一端的黑色保護罩，
小心、安全地取出感應器。



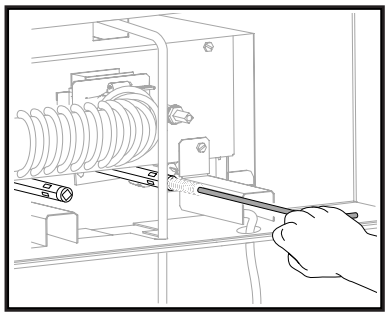
不要拉動編織線來移出感應器。



使用沾有酒精的海綿清理感應杆的整個
金屬部分，以移除任何堵塞物。使用酒精
海綿清潔白色陶瓷絕緣器，直到所有殘留
物都已清除。



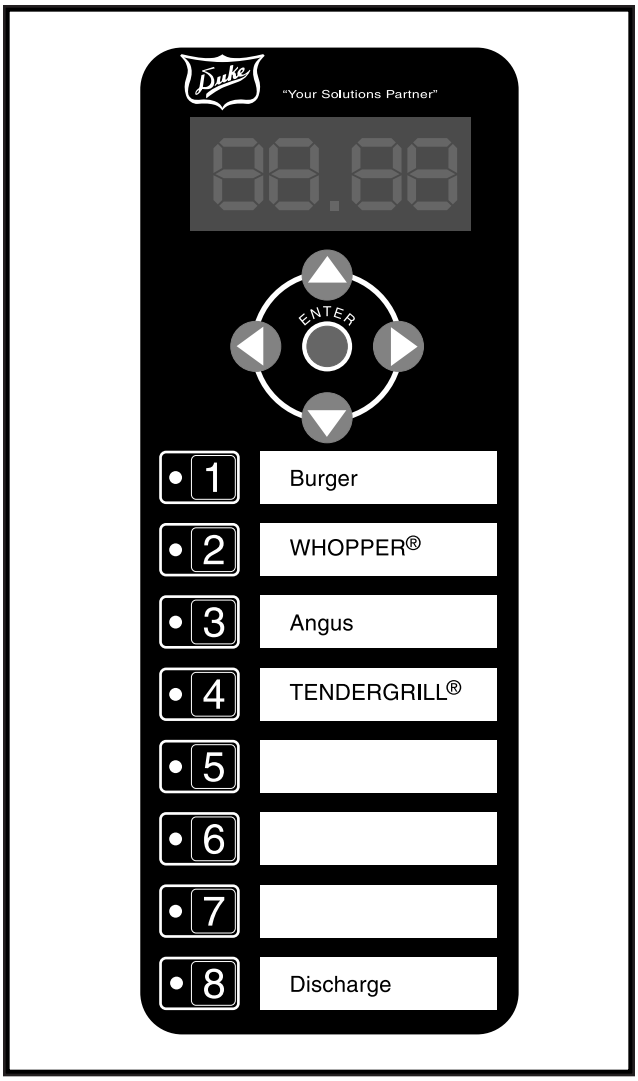
移除烤爐的後面板，小心地取出底部爐
頭的感應器。執行與清潔頂部爐頭相同
的步驟。



移除感應器之後，將帶T型手柄的清
理工具完全插入到感測器管道中並
移出。重複此過程至少五（5）次，
以清除管道內部的任何殘留物。

完成清潔過程之後，重新裝回感應器和麵板。在啟動烤爐之前至少等待30分鐘。

D. 編程控制



D-1.0 進入編程模式

控制板編程分兩種級別。

級別1：與菜譜相關的編程。

級別2：烤爐功能編程。

按下ENTER按鈕5秒。

然後控制板將顯示CodE。輸入特定編程級別的密碼。

D-2.0 編程螢幕導航

ENTER鍵用於在參數列表中向前移動。第一次按下ENTER鍵將調出參數名稱，第二次按下將調出可編輯的參數設置。

▲和▼鍵將向後移動參數。

◀和▶鍵將滾動參數設置，也可用作數字0和9。

產品鍵1-8也可用作數字鍵1-8。

D-3.0 編程級別1

輸入密碼1-8-2-7並按下ENTER鍵。

此時控制板將顯示PROD，所有產品LED燈將變綠。

選擇您希望更改的產品的產品鍵。所選產品旁邊的LED燈將變為綠色。所有其他產品LED燈將熄滅。

D-3.1 產品識別字AbCd

此參數允許使用者定義由4位元字母數位組成的產品名稱來關聯每個產品按鈕。

▲和▼鍵用於在字元集中移動。

◀和▶鍵用於移動到下一個或上一個字元。活動的字元將會閃爍。

在最後一個字元後按▶將移至下一個參數。

D-3.2 烹飪溫度設定Sett

這是烤爐在此次產品烹飪週期內的設定溫度。

產品鍵1-8用於輸入數位1-8。◀和▶鍵用於輸入數位0和9。

D-3.3 烹飪配置資訊

on 1，oFF1，on 2，oFF2，…

定義頂部紅外爐頭的週期參數和總烹飪時間。

這些參數將有6個部分。每個部分包括一個On/Off週期。

首先出現週期的On部分。

產品鍵1-8用於輸入數位1-8。◀ 和 ▶ 鍵用於輸入數位0和9。

控制板將顯示總烹飪時間（所有ON和OFF週期之和），這些參數是最終參數，無法更改。

例如：

	ON	OFF
Segment #1	0:00	1:00
Segment #2	2:00	0:00
Segment #3	0:00	0:00
Segment #4	0:00	0:00
Segment #5	0:00	0:00
Segment #6	0:00	0:00

輸入最後一個參數後，按 ▶ 鍵將返回產品選擇，以便您選擇另一個產品進行編程。

D-3.4 退出編程模式

要退出編程模式並保存新的設置，請按下ENTER鍵，直到控制板顯示 RdY 、 PrE 或 Lo 。

要退出編程模式而不保存設置，在Off 和On之間迴圈切換主On/Off開關。

D-4.0 編程級別2

輸入密碼3-6-4-5並按下ENTER鍵。

D-4.1 華氏度或攝氏度參數 dEg

在華氏度(F)和攝氏度(C)之間更改顯示的溫度。

◀ 和 ▶ 鍵用於滾動設置。

D-4.2 更改閒置溫度設定 Sett

這是烤爐在預熱和閒置週期內的設定溫度。

此參數的預設值為680º華氏度。

產品鍵1-8用於輸入數位1-8。◀ 和 ▶ 鍵用於輸入數位0和9。

D-4.3 其他工廠參數

本部分中未提及的參數為工廠設置，不應被更改。這些設置如下所示：

- oFSt
- Hton
- Lo t
- Hi t
- Cdti
- BEEP
- IrSt
- PCr
- AFCr

D-4.4 退出編程模式

要退出編程模式並保存新的設置，請按下ENTER鍵，直到控制板顯示 RdY , PrE 或 Lo 。

要退出編程模式而不保存設置，在Off 和On之間迴圈切換主On/Off開關。

E. 故障排除

現象	原因	解決辦法
控制板顯示幕不亮	未供電	確保將烤爐插入到具有合適電壓/功率的插座（每個額定值銘牌的值）。檢查專用的電路斷路器。
烹飪出的產品是生的或不太熟，但未顯示控制器錯誤消息。	產品未正確裝載。 在裝載產品之前按下了產品按鈕。 按下了錯誤的產品按鈕。 底部爐頭未正確點燃。（通過底部油脂盤中的縫隙觀察底部爐頭） 紅外爐頭未正常點燃。（通過烤爐的卸料端觀察紅外爐頭。注意：在閒置模式下爐頭應該保持點燃狀態。）	檢查裝載方法。 確保在將產品裝載到烤爐中之後立即按下了產品按鈕。 確保按下了正確的產品按鈕。 如果烤爐很燙，嘗試使用烤爐清潔工具就地清潔烤爐。 如果烤爐已冷卻或者可以進行冷卻，移除面板，取出底部爐頭，清潔並重新安裝。取出底部消焰器並使用軟布和異丙醇清洗。 取出頂部的控制盒面板並使用軟布和異丙醇清洗兩個頂部焰感應器。 使用火焰感應管清潔刷清洗火焰感應管。
傳送帶不動，無法卸出產品。	傳送帶被阻塞。	使用烤爐清潔工具從烤爐卸料端手動旋轉傳送帶，觀察是否有阻塞。 確保正確放置了卸料刮刀。 確保正確放置了對接板。 確保正確放置了消焰器。
裝載器無法完全推入到烹飪室中。	對接板未正確放置。	確保正確放置了對接板和鎖定拉環。
產品在裝載時被粘住或撕裂	對接板未正確放置。 消焰器未正確放置。	確保正確放置了對接板和鎖定拉環。 確保正確放置了消焰器並正確插入了拉環。
控制板顯示“Hi”		聯繫Duke製造公司或Duke授權的服務代理機構。
控制板顯示 “Lo”	底部爐頭未正確點燃。（通過底部油脂盤中的縫隙觀察底部爐頭） 紅外爐頭未正常點燃。（通過烤爐的卸料端觀察紅外爐頭。注意：爐頭在閒置模式下應該保持點燃） 油脂盤未安裝 遮阻網或催化器未安裝。	如果烤爐很燙，嘗試使用烤爐清潔工具就地清潔烤爐。 如果烤爐已冷卻或者可以進行冷卻，移除面板，取出底部爐頭，清潔並重新安裝。取出底部消焰器並使用軟布和異丙醇清洗。 取出頂部的控制盒面板並使用軟布和異丙醇清洗兩個頂部火焰感應器。 使用火焰感應管清潔刷清洗火焰感應管。 安裝油脂盤。 安裝遮阻網或催化器。
控制板顯示 “Prob”		聯繫Duke製造公司或Duke授權的服務代理機構。

E. 故障排除（續）

現象	原因	解決辦法
控制板顯示“tESt Prod”	底部爐頭未正確點燃。（通過底部油脂盤中的縫隙觀察底部爐頭）	如果烤爐很燙，嘗試使用烤爐清潔工具就地清潔烤爐。 如果烤爐已冷卻或者可以進行冷卻，移除面板，取出底部爐頭，清潔並重新安裝。取出底部消焰器並使用軟布和異丙醇清洗。
	紅外爐頭未正常點燃。（通過烤爐的卸料端觀察紅外爐頭。注意： 在閒置模式下爐頭應該保持點燃狀態。）	取出頂部的控制盒面板並使用軟布和異丙醇清洗兩個頂部火焰感應器。 使用火焰感應管清潔刷清洗火焰感應管。
控制板顯示“gAS toP”	烤爐沒有燃氣供應。	確保連接到烤爐的氣閥處於打開位置。
	紅外爐頭未正確點燃。（通過烤爐的卸料端觀察紅外爐頭。注意： 在閒置模式下爐頭應該保持點燃狀態。）	取出頂部的控制盒面板並使用軟布和異丙醇清洗兩個頂部火焰感應器。 使用火焰感應管清潔刷清洗火焰感應管。
控制板顯示“gAS bot”		關閉烤爐，然後再打開。如果此錯誤仍然存在，繼續執行後面的步驟。
	烤爐沒有燃氣供應。	確保連接到烤爐的氣閥處於打開位置。
	底部爐頭未正確點燃。（通過底部油脂盤中的縫隙觀察底部爐頭）	如果烤爐很燙，嘗試使用烤爐清潔工具就地清潔烤爐。 如果烤爐已冷卻或者可以進行冷卻，移除面板，取出底部爐頭，清潔並重新安裝。取出底部消焰器並使用軟布和異丙醇清洗。
控制板顯示“gAS SEnt”	紅外爐頭未正常點燃。（通過烤爐的卸料端觀察紅外爐頭。注意：爐頭在閒置模式下應該保持點燃）	取出頂部的控制盒面板並使用軟布和異丙醇清洗兩個頂部火焰感應器。 使用火焰感應管清潔刷清洗火焰感應管。
控制板顯示“gAS SEnb”	底部爐頭未正確點燃。（通過底部油脂盤中的縫隙觀察底部爐頭） 油脂盤未安裝	如果烤爐很燙，嘗試使用烤爐清潔工具就地清潔烤爐。 如果烤爐已冷卻或者可以進行冷卻，移除面板，取出底部爐頭，清潔並重新安裝。取出底部消焰器並使用軟布和異丙醇清洗。

IV. 維護和修理

A-1. 警告

⚠警告：在維修之前斷開設備的電源。

⚠警告：帶腳輪的設備裝有一個限制器，用於限制烤爐移動。如果限制器在維修期間斷開了，在將設備返回到其原來的安裝位置之後必須重新連接限制器。

注意： 在維修期間必須進行適當的清潔。

維修必須僅由專業維修人員執行。由非專業人員進行維修可能損壞烤爐和/或傷害操作人員。

專業維修人員可以是個人、公司或企業，他們親自或通過代理參與和負責修理或維護商用食品設備，在此類工作上擁有豐富的經驗，熟悉所有必需的預防措施，符合具有司法權的國家和地方當局的所有要求。

如果您在選擇專業服務機構時需要幫助，請撥打800-735-3853聯繫Duke製造公司的服務部。

V. 更換部件列表

項目	描述	零件編號
1	開關，指示燈，雙刀單擲開關	175503
2	爐頭，紅外	176901
3	爐頭，管道，J型（適用於美國和加拿大）	175505
	組件，爐頭，可調節（適用於美國和加拿大以外的地區）	175950
4	電動機-傳送帶	175867
5	傳送輪齒，B21X3/8孔徑（電動機）	175517
6	軸，卸料側	175037
7	軸，右側	175038
8	電容器，電動機-傳送帶	175507
9	模件，點火器（底部爐頭 – 天然氣）	175508
	模件，點火器（底部爐頭 – 丙烷）	175843
10	模件，點火器（頂部爐頭）	175509
11	變壓器，40VA，120VAC-24VAC 瓦/離心開關	175526
12	探針，溫度，燃燒室	175977
13	指示燈，烹飪	175550
14	繼電器 - 固態	175870
15	傳送帶，驅動裝置	175551
16	控制器	175575
17	墊圈，控制窗	175510
18	墊圈，鼓風機入口	175511
19	鼓風機，120V 60HZ	176185
20	軟管，鼓風機	175189
21	噴嘴固定器，紅外	175542
22	氣閥，液化氣，混合 24VAC（僅適用於丙烷）	175766
	氣閥，天然氣，混合 24VAC（僅適用於天然氣）	175531
23	噴嘴，底部爐頭 #31/3.05毫米（僅適用於天然氣）	175823
	噴嘴，底部爐頭 #49（僅適用於丙烷）	175737
24	噴嘴，紅外爐頭前部 #40（僅適用於天然氣）	175735
	噴嘴，紅外爐頭前部 #52（僅適用於丙烷）	175767
25	噴嘴，紅外爐頭後部 #36（僅適用於天然氣）	175736
	噴嘴，紅外爐頭後部 #51（僅適用於丙烷）	175768
26	噴嘴固定器，3/8英寸，銅合金制,直通爐頭擋板	176368
27	管道 - T型，接氣閥，組件	175477
28	管道 - T型，接紅外爐頭，組件	175476
29	管道 - 底部爐頭到氣閥，組件	175478
30	感應器 - 底部爐頭	175534
31	感應器 - 紅外爐頭	175535
32	點火器	175536

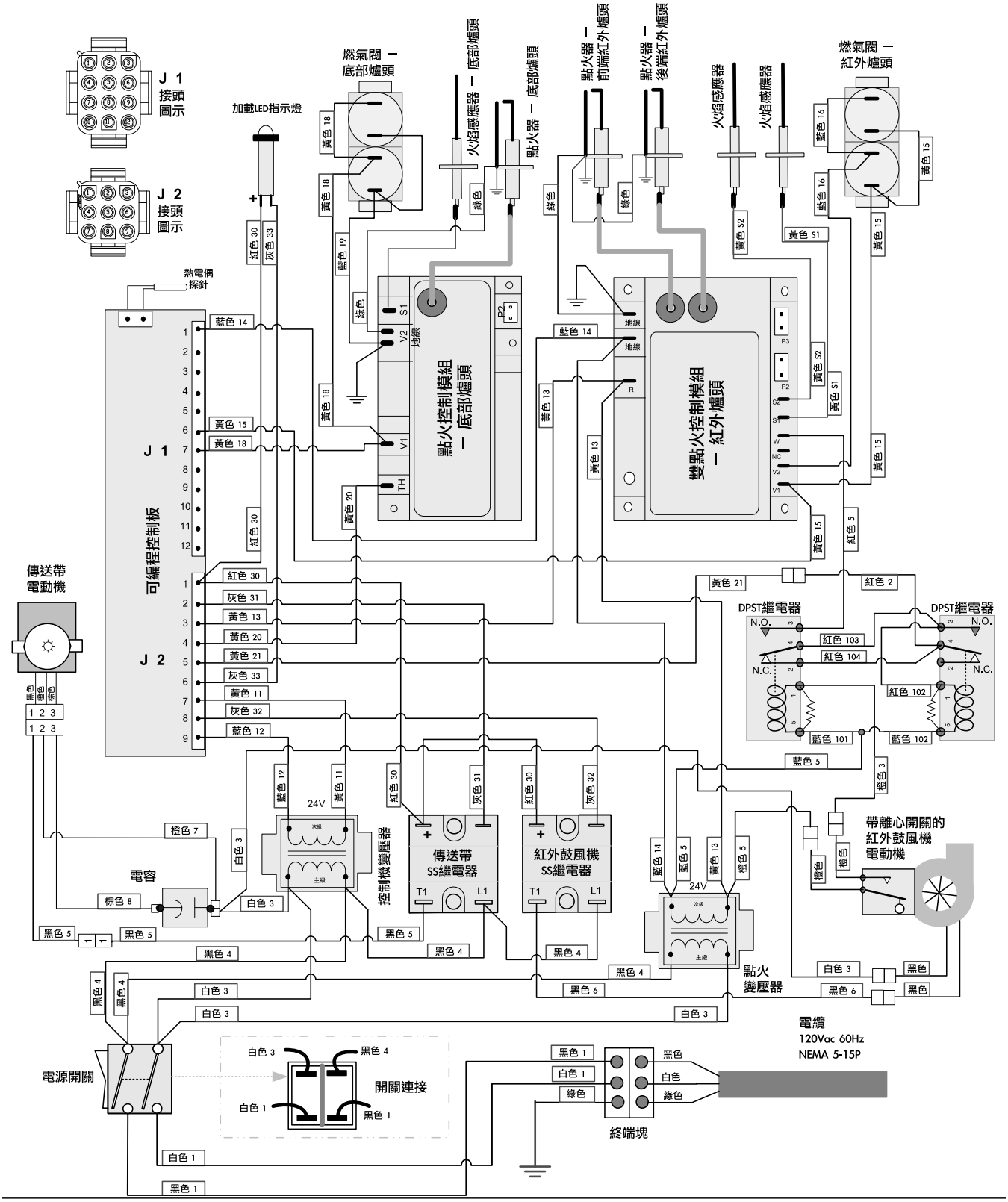
V. 更換部件列表（續）

項目	描述	零件編號
33	防燃線纜 - 紅外爐頭	175537
34	防燃線纜 - 底部爐頭	175538
35	傳送帶，烹飪	175674
36	絕緣管蓋帽，傳送帶	175525
37	裝載器託盤	175430
38	裝載器安裝托架	175438
39	裝載器	175444
40	裝載器滑軌	175741
41	門	175429
42	消焰器	175293
43	爐頭護罩	175200
44	卸料槽	175340
45	卸料罩	175778
46	產品盤架	175363
47	卸料盤	175358
48	主油脂盤	175329
49	“V”形油脂盤	175325
50	側面，油脂盤	175357
51	樞軸灰燼刮刀	175150
52	後面板	175305
53	前面板	175300
54	面板，上部，卸下	175392
55	面板，電氣裝置	175383
56	面板，卸料	175250
57	遮阻網（如果沒有選用催化器)	175226
58	催化器（供選）	175480
59	催化器，防護罩	175482
60	管狀爐頭清潔工具	175485
61	火焰感應杆管狀清潔器	175701
62	刷子，火焰感應杆管狀清潔器	175705
63	清潔桶	175842
64	繼電器, 10A, 24VAC	175184

VI. 佈線示意圖

電路圖 – 多用途批量烤爐

DUKE MFG. PN 176012 修訂版 E



備註

備註

備註

Your Solutions Partner

Natural Gas Conversion Kit Instructions 120V International

FLEXIBLE BATCH BROILER

KIT P/N 175613

ENGLISH

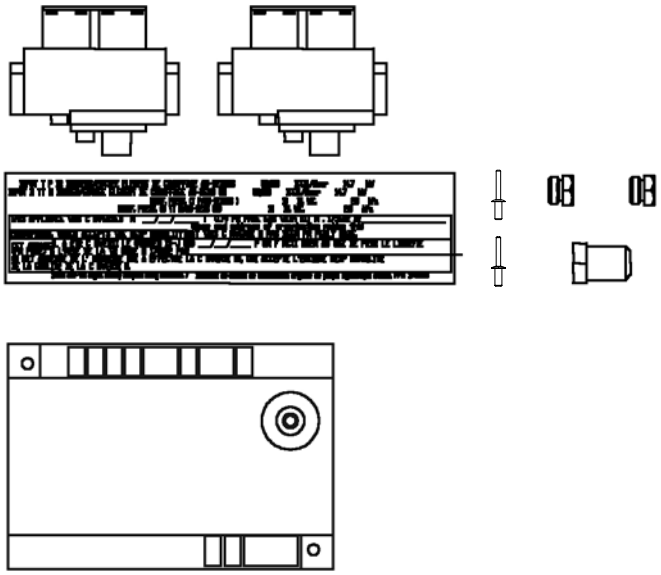
SPANISH

FRENCH

BRAZILIAN PORTUGUESE

JAPANESE

CHINESE



NATURAL GAS

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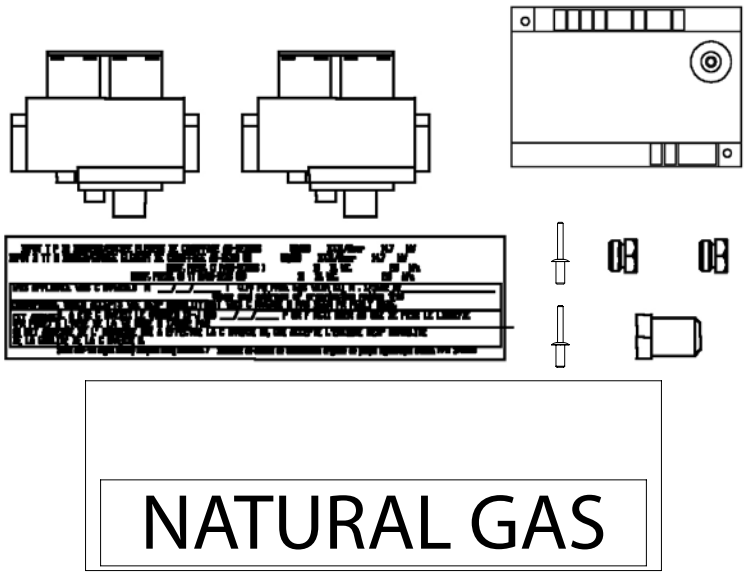
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NATURAL GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 175613

This kit contains:

(2)	Valve, Combo, Natural Gas	175531
(1)	Orifice, IR Burner #40 mm (Front Burner)	175735
(1)	Orifice, IR Burner #36 mm (Rear Burner)	175736
(1)	Orifice, Lower Burner #31	175823
(1)	Broiler Conversion Label LP>Nat.	175606
(1)	Module, Ignition, Lower Burner, Natural Gas	175877
(1)	Label - Natural Gas	175775
(2)	Rivet	168106

Items required for this installation:

- Torque Wrench
- Rivet Installation Tool
- Thread sealant rated for natural gas.
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 9/16” Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Straight blade screw driver
- Phillips Head screw driver
- 3/16 hex key wrench
- #30 Drill Bit
- Digital or slack tube manometer with 1/8” male pipe thread hose barb.
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

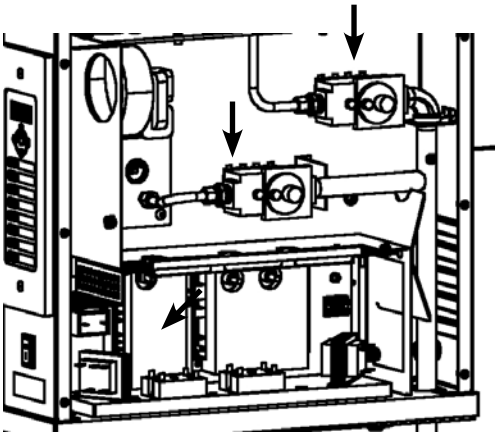
Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual (Duke p/n 175500). If the manual is missing you must request one using the contact information at the end of this manual.

NOTICE TO INSTALLER:

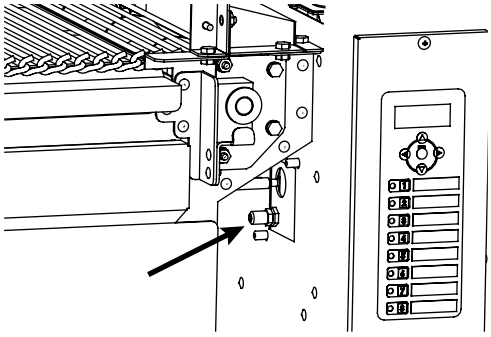
THIS APPLIANCE SHALL NOT BE CONNECTED TO A GAS SUPPLY PRESSURE IN EXCESS OF 12" W.C. Gas supply pressure must be checked prior to installation. If supply pressure is in excess of 12" W.C., the HIGH SUPPLY PRESSURE KIT, Duke P/N 175689 shall be installed and adjusted, per kit instructions, for an outlet pressure of 7" W.C.

B. Procedure

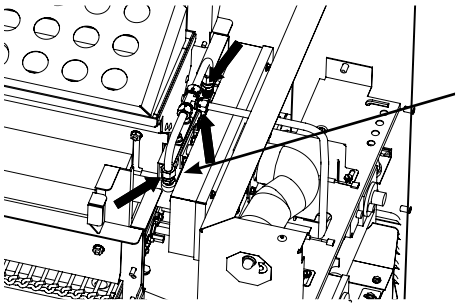
1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.
2) REMOVE (2) GAS VALVES AND REPLACE WITH NEW VALVES. BE SURE TO APPLY THREAD SEALANT TO ALL PIPE THREAD CONNECTIONS. REMOVE LOWER BURNER IGNITION MODULE AND REPLACE WITH NEW MODULE. SEE WIRING DIAGRAM ON CONTROL ACCESS PANEL FOR PROPER CONNECTIONS.



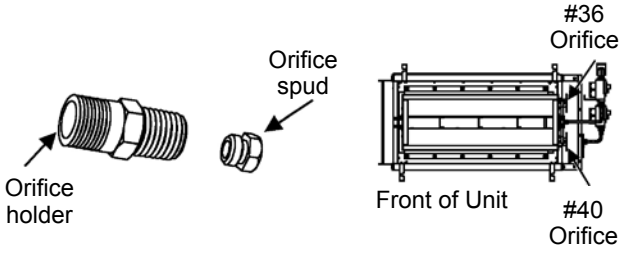
3) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 60 IN LBS (6.7 N.m.).



4) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

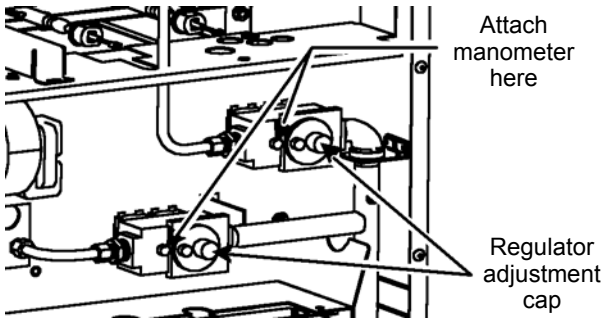


5) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 40 in-lb. REASSEMBLE FITTINGS AND GAS LINES.



6) CONNECT TO GAS AND ELECTICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

7) ON UPPER VALVE, REMOVE 1/8" PIPE PLUG AND ATTACHED MANOMETER. SWITCH BROILER “ON”. WITH A SCREW DRIVER, REMOVE SLOTTED CAP FROM REGULATOR AND ADJUST UNTIL MANOMETER READING IS 3.75" W.C. REPLACE CAP. SHUT BROILER “OFF”. REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



8) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

9) CHECK THE LOWER BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

LOWER BURNER AIRSHUTTER ADJUSTMENT PROCEDURE

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. DRILL OUT THE RIVETS IN THE AIRSHUTTER OF THE BURNERS.

b. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

   i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

   ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

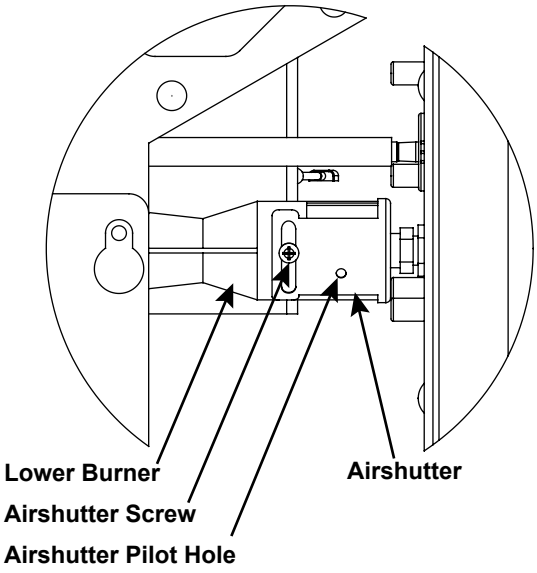
c. TIGHTEN THE AIRSHUTTER SCREW.

d. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/ OPERATIONS MANUAL)

e. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

f. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

g. REINSTALL THE BURNER INTO THE BROILER.



10) CHECK THE IR BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

INFRARED BURNER AIRSHUTTER ADJUSTMENT PROCEDURE

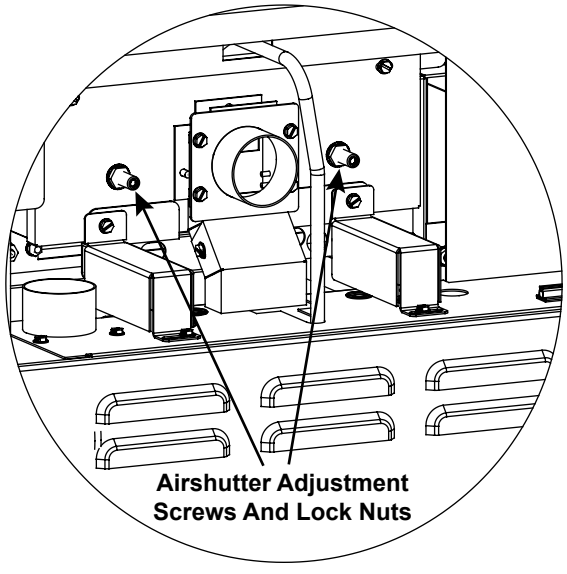
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16" WRENCH AND 3/16" HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

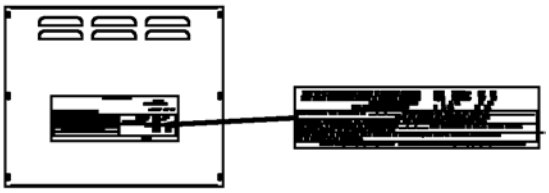
c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

   WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.

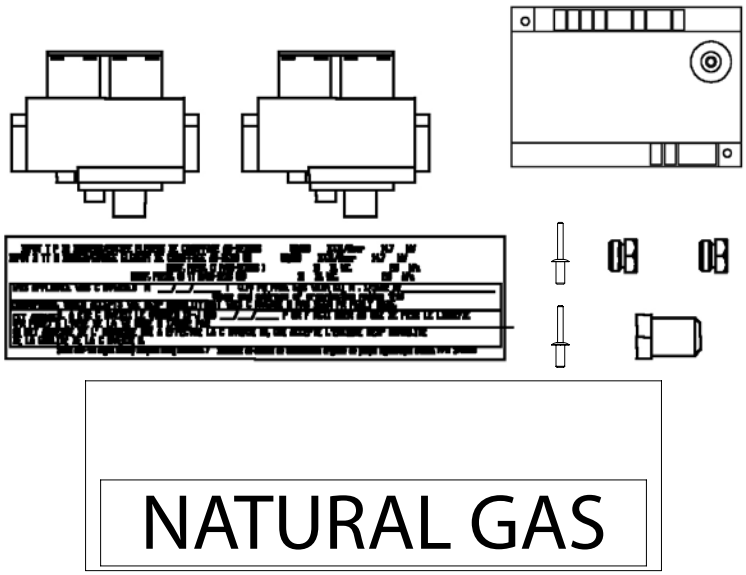


11) APPLY NEW RATINGS TAG ON THE INSIDE OF THE LOWER ELECTRICAL ENCLOSURE COVER. APPLY IN ANY OPEN AREA.



12) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS NOW COMPLETE.

INSTRUCCIONES DEL JUEGO DE CONVERSIÓN DE GAS NATURAL



ASADOR FLEXIBLE POR TANDAS JUEGO N/P 175613

Este juego contiene lo siguiente:

(2)	Válvula combinada de gas natural	175531
(1)	Orificio de quemador de RI N° 40 (quemador delantero)	175735
(1)	Orificio de quemador de RI N° 36 (quemador trasero)	175736
(1)	Orificio de quemador inferior N° 31	175823
(1)	Etiqueta de conversión de asador LP>natural	175606
(1)	Módulo de encendido del quemador inferior, gas natural	175877
(1)	Etiqueta - Gas natural	175775
(2)	Remache	168106

Artículos requeridos para esta instalación:

- Llave dinamométrica
- Herramienta para la instalación de remaches
- Sellante de roscas para gas natura
- (2) Llaves para tubos o (1) llave para tubos y (1) llave ajustable
- (1) Llave de boca de 5/8”
- (1) Llave de boca de 9/16”
- (1) Cubo de 1/2”
- (1) Llave de boca de 3/8”
- Destornillador de hoja recta
- Destornillador Phillips
- Llave hexagonal de 3/16”
- Broca de taladro N° 30
- Manómetro digital o “Slack Tube” con arpón de manguera roscado de tubo macho de 1/8”.
- Fluido de detección de fugas.

INSTRUCCIONES DE INSTALACIÓN

A. Personal capacitado

Estas instrucciones de instalación son para el uso exclusivo del personal de instalación y servicio capacitado. La instalación o el servicio por parte de personal que no esté capacitado puede provocar daños en el asador y lesiones al operador.

El personal de instalación capacitado son aquellos individuos, firmas, compañías o corporaciones que en persona o por medio de un agente participe y sea responsable de lo siguiente:

- La instalación o el reemplazo de tuberías de gas o la conexión, la instalación, la reparación o el servicio de equipos, que tengan experiencia en dicho trabajo, que estén familiarizados con todas las precauciones requeridas, y que hayan cumplido con todos los requisitos de las autoridades estatales y locales que tengan jurisdicción. Vea: Código Nacional para Gases Combustibles NFPA 54 (ANSI Z223.1).

La instalación debe cumplir con los códigos locales, o en ausencia de los mismos, con el Código Nacional de Gases Combustibles, ANSI Z223.1/NFPA 54, o con el Código de Instalación de Gas Natural y Propano, CSA B149.1 según corresponda, incluido lo siguiente:

Para un asador montado sobre ruedas, la instalación debe hacerse con un conector que cumpla con la norma para conectores de aparatos de gas móviles, ANSI Z21.69/CSA 6.16 y un dispositivo de desconexión rápida que cumpla con la norma para dispositivos de desconexión rápida para usar con combustible gaseoso, ANSI Z21.4/CSA 6.9. Al instalar el asador con ruedas y una manguera de desconexión rápida, se deben proporcionar medios adecuados para limitar el movimiento del asador sin depender del conector y del dispositivo de desconexión rápida o sus tuberías asociadas para limitar el movimiento del asador. Se puede conectar un medio de sujeción a la parte vertical del bastidor de la base en la parte trasera del asador.

Se dispone de instrucciones de instalación detalladas del asador en el manual de operación del asador flexible por tandas (N/P de Duke 175500). Si falta este manual, debe solicitar uno usando la información de contacto de la parte inferior de esta página.

AVISO AL INSTALADOR:

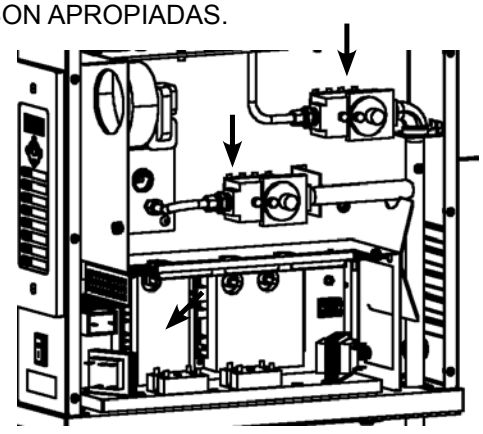
ESTE JUEGO DEBE INSTALARSE EN EL ASADOR FLEXIBLE POR TANDAS CUANDO LA PRESIÓN DEL GAS DE SUMINISTRO SEA MAYOR QUE 12" DE AGUA.

SE DEBE COMPROBAR LA PRESIÓN DEL GAS DE SIMINISTRO ANTES DE LA INSTALACIÓN. SI LA PRESIÓN ES MAYOR QUE 12" DE AGUA, SE DEBE INSTALAR Y AJUSTAR EL JUEGO DE ALTA PRESIÓN DE SUMINISTRO, N/P DE DUKE 175689, SEGÚN LAS INSTRUCCIONES DEL JUEGO, PARA UNA PRESIÓN DE SALIDA DE 7" DE AGUA.

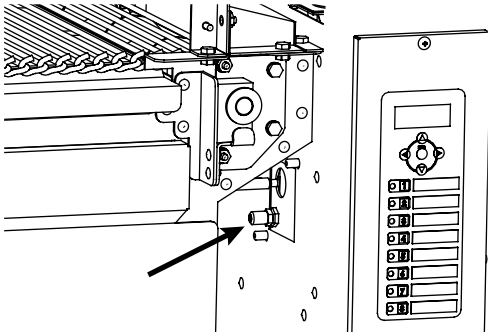
B. Procedimiento

1) DESENCHUFE EL ASADOR DE LA RED ELÉCTRICA. CIERRE LA VÁLVULA DE GAS PRINCIPAL Y DESCONECTE LA TUBERÍA DE SUMINISTRO.

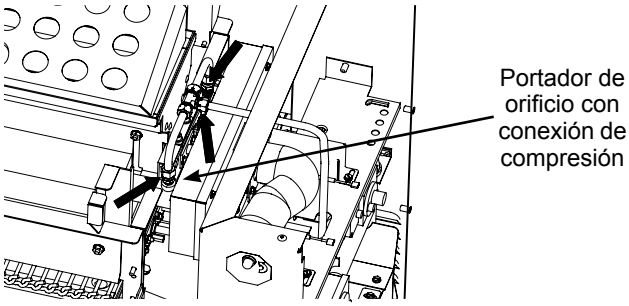
2) QUITE (2) VÁLVULAS DE GAS Y REEMPLÁCELAS POR VÁLVULAS NUEVAS. ASEGÚRESE DE APLICAR SELLANTE PARA ROSCAS A TODAS LAS CONEXIONES ROSCADAS DE TUBOS. QUITE EL MÓDULO DE ENCENDIDO DEL QUEMADOR INFERIOR Y REEMPLACE POR EL NUEVO MÓDULO. VEA EL DIAGRAMA DE CONEXIONES EN EL TABLERO DE ACCESO DE CONTROL PARA VER SI LAS CONEXIONES SON APROPIADAS.



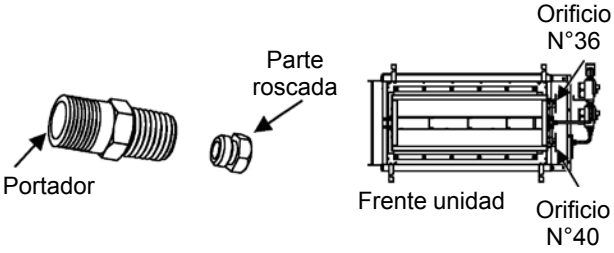
3) QUITE EL QUEMADOR INFERIOR (VEA EL MANUAL DE INSTALACIÓN/OPERACIONES) PARA TENER ACCESO A LA CAPERUZA DE LA VÁLVULA DE ORIFICIO. USE UN CUBO DE 1/2" PARA QUITAR LA CAPERUZA DE LA VÁLVULA DE ORIFICIO Y REEMPLACE POR LA NUEVA VÁLVULA DE ORIFICIO. APRIETE LA VÁLVULA DE ORIFICIO A 60 LB-PULG (6.7 N.m.).



4) USE UNA LLAVE DE 5/8” PARA QUITAR LAS CONEXIONES DE COMPRESIÓN DE LA TUBERÍA DE GAS SUPERIOR (3 LUGARES) QUE CONECTAN AMBOS QUEMADORES DE RI.

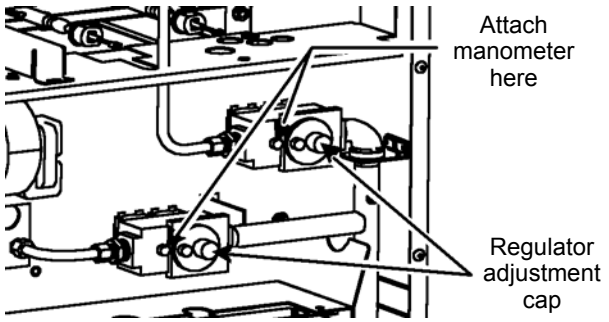


5) CON LAS TUBERÍAS DE GAS QUITADAS, QUITE LOS PORTADORES DE LOS ORIFICIOS DE LOS QUEMADORES CON UNA LLAVE DE 5/8”. QUITE LA PARTE ROSCADA DEL ORIFICO DEL PORTADOR CON UNA LLAVE DE 3/8”. REEMPLACE POR UNA NUEVA PARTE ROSCADA DEL ORIFICIO A 40 LB-PULG. VUELVA A MONTAR LAS CONEXIONES Y TUBERÍAS DE GAS.



6) CONECTE AL SERVICIO DE GAS Y ELÉCTRICO. SI SE TRATA DE UNA NUEVA INSTALACIÓN, DEBE SEGUIR LAS INSTRUCCIONES DE INSTALACIÓN Y OPERACIÓN DEL ASADOR FLEXIBLE POR TANDAS.

7) EN LA VÁLVULA SUPERIOR, QUITE EL TAPÓN DE TUBERÍA DE 1/8” Y EL MANÓMETRO CONECTADO. ENCIENDA EL ASADOR. USE UN DESTORNILLADOR PARA QUITAR LA TAPA RANURADA DEL REGULADOR Y AJÚSTELA HASTA QUE LA LECTURA DEL MANÓMETRO SEA DE 3,75” DE AGUA: VUELVA A COLOCAR LA TAPA. APAGUE EL ASADOR. QUITE EL MANÓMETRO Y REEMPLACE EL TAPÓN DE TUBERÍA. REPITA ESO PARA LA VÁLVULA INFERIOR.



8) COMPRUEBE SI HAY FUGAS EN TODAS LAS CONEXIONES CON EL ASADOR EN MARCHA.

NOTA: *LOS DETECTORES DE FUGAS ELECTRÓNICOS DARÁN FALSAS LECTURAS EN LA PARTE SUPERIOR DEL ASADOR CERCA DE LOS ORIFICIOS DE RI Y DE LAS TUBERÍAS DE GAS. ESTO SE DEBE A PRODUCTOS DE COMBUSTIÓN CERCA DEL CONDUCTO DE HUMOS. USE UN FLUIDO DE COMPROBACIÓN DE FUGAS O SOLUCIÓN JABONOSA EN ESTA ÁREA.*

9) COMPRUEBE LAS CARACTERÍSTICAS DE LA LLAMA DEL QUEMADOR INFERIOR Y EFECTÚE UN AJUSTE DEL OBTURADOR DE AIRE SI ES NECESARIO.

PROCEDIMIENTO DE AJUSTE DEL OBTURADOR DE AIRE DEL QUEMADOR INFERIOR

NOTA: *ES NECESARIO EFECTUAR ESTE AJUSTE CON LOS COLECTORES DE GRASA Y LOS PANELES DE ACCESO DEL QUEMADOR INFERIOR INSTALADOS.*

NOTA: *ES NECESARIO EFECTUAR ESTE AJUSTE DEL QUEMADOR EN EL ASADOR ASÍ COMO EN CUALQUIER OTRO QUEMADOR DE REPUESTO EN JUEGOS DE PIEZAS DE REPUESTO O EN JUEGOS DE PIEZAS REEMPLAZABLES POR EL USUARIO. SE DEBEN FIJAR TODOS LOS QUEMADORES A LA MISMA ABERTURA DEL OBTURADOR DE AIRE.*

a. PERFORE TODOS LOS REMACHES EN LOS OBTURADORES DE AIRE DE LOS QUEMADORES.

b. AFLOJE EL TORNILLO DEL OBTURADOR DE AIRE Y AJUSTE PARA LAS CARACTERÍSICAS APROPIADAS DE LA LLAMA SEGÚN SE DEFINEN ABAJO:

   i. GAS NATURAL – LA LLAMA DEBE SER PRINCIPALMENTE AZUL CON LA PARTE SUPERIOR LIGERAMENTE AMARILLA EN LOS DOS EXTREMOS DEL QUEMADOR. NO SE DEBE LEVANTAR LA LLAMAG.

   ii. GAS PROPANO – LA LLAMA DEBE SER PRINCIPALMENTE AZUL CON PUNTAS LIGERAMENTE AMARILLAS A LO LARGO DE TODO EL QUEMADOR. NO SE DEBE LEVANTAR LA LLAMA.

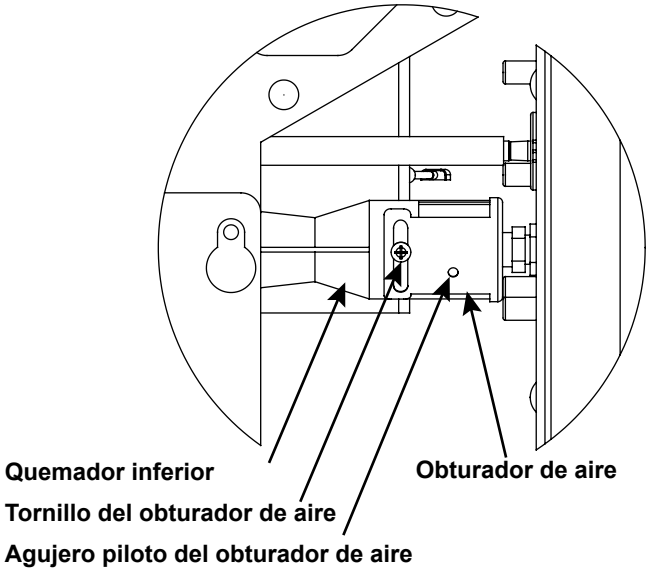
c. APRIETE EL TORNILLO DEL OBTURADOR DE AIRE.

d. QUITE EL QUEMADOR INFERIOR DE LA UNIDAD (VEA EL MANUAL DE INSTALACIÓN/OPERACIÓN)

e. USE LOS DOS AGUJEROS PILOTO DEL OBTURADOR DE AIRE PARA PERFORAR AGUJEROS DEL N° 30 POR EL OBTURADOR DE AIRE Y QUEMADOR.

f. USE LOS REMACHES SUMINISTRADOS PARA TRABAR EL QUEMADOR E N POSICIÓNN.

g. VUELVA A INSTALAR EL QUEMADOR EN EL ASADOR.



10) COMPRUEBE LAS CARACTERÍSTICAS DE LA LLAMA DEL QUEMADOR INFERIOR INFRARROJO Y EFECTÚE UN AJUSTE DEL OBTURADOR DE AIRE SI ES NECESARIO.

PROCEDIMIENTO DE AJUSTE DEL OBTURADOR DEL QUEMADOR INFRARROJO

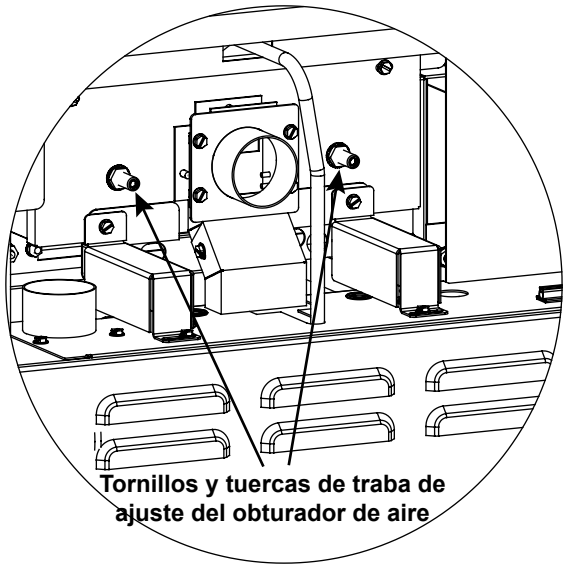
a. QUITE LA CUBIERTA DE CONTROL SUPERIOR DEL EXTREMO DE LA UNIDAD PARA ACCEDER A LOS TORNILLOS DE AJUSTE DEL OBTURADOR DE AIRE.

b. USE UNA LLAVE DE 9/16" Y UNA LLAVE HEXAGONAL DE 3/16" PARA AFLOJAR LAS TUERCAS DE TRABA DE LOS TORNILLOS DE AJUSTE.

c. AJUSTE LOS QUEMADORES PARA OBTENER LAS CARACTERÍSTICAS APROPIADAS DE LA LLAMA.

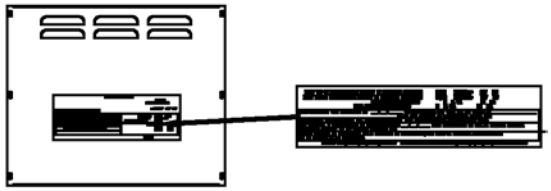
   CON LA UNIDAD BIEN CALENTADA, GIRE CADA TORNILLO A LA DERECHA ¼ DE VUELTA EN INCREMENTOS HASTA QUE SE OBSERVE UNA LLAMA O NEBLINA AZUL DEBAJO DE LOS QUEMADORES. DESPUÉS, GIRE CADA TORNILLO A LA IZQUIERDA ¼ DE VUELTA EN INCREMENTOS HASTA QUE NO SE OBSERVE UNA LLAMA O NEBLINA AZUL DEBAJO DE LOS QUEMADORES.

d. VUELVA A APRETAR LAS TUERCAS EN LOS TORNILLOS DE AJUSTE.



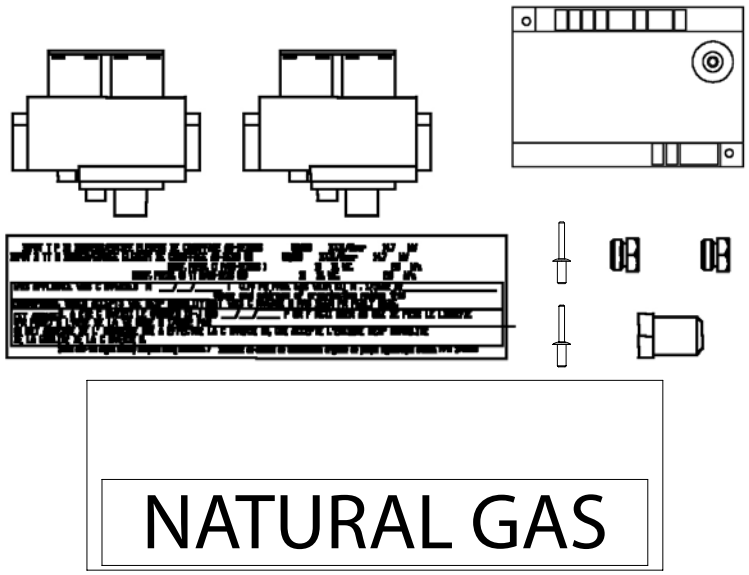
Tornillos y tuercas de traba de ajuste del obturador de aire

11) ADHIERA LA NUEVA ETIQUETA DE VALORES NOMINALES EN EL INTERIOR DE LA CUBIERTA DEL RECINTO ELÉCTRICO INFERIOR. ADHIERA EN UN ÁREA ABIERTA.



12) ADHIERA LA ETIQUETA DE TIPO DE GAS SUMINISTRADO ENCIMA DE LA ETIQUETA EXISTENTE EN EL SOPORTE. LA CONVERSIÓN ESTÁ COMPLETA AHORA.

INSTRUCTIONS POUR KIT DE CONVERSION AU GAZ NATUREL



RÔTISSOIRE À FOURNÉE VARIABLE KIT N° 175613

Composition du kit :

(2)	Robinet, mixte, gaz naturel	175531
(1)	Orifice calibré, brûleur infrarouge n°40 (brûleur avant)	175735
(1)	Orifice calibré, brûleur infrarouge n° 36 (brûleur arrière)	175736
(1)	Orifice calibré, brûleur inférieur n° 31	175823
(1)	Étiquette conversion de rôtissoire propane liq.>gaz nat.	175606
(1)	Module, allumage, brûleur inférieur, gaz naturel	175877
(1)	Étiquette - Gaz naturel	175775
(2)	Rivet	168106

Accessoires nécessaires pour cette installation :

- Clé dynamométrique
- Outil d'installation de rivet
- Pâte d'étanchéité pour raccords filetés adaptée au gaz naturel
- (2) Clés à tube ou (1) clé à tube et (1) clé à molette
- (1) Clé à fourche de 5/8 po
- (1) Clé à fourche de 9/16 po
- (1) Douille de 1/2 po
- (1) Clé à fourche de 3/8 po
- Tournevis plat
- Tournevis cruciforme
- Clé Allen de 3/16 po
- Mèche de forage #30
- Manomètre numérique ou Slack Tube® à raccord cannelé à filetage extérieur de 1/8 po.
- Liquide pour détection des fuites.

INSTRUCTIONS D'INSTALLATION

A. Personnel qualifié

Ces instructions d'installation sont destinées à un personnel d' installation et d'entretien qualifié uniquement. Une installation ou un entretien effectué par quiconque autre que du personnel qualifié peut entraîner des dégâts pour la rôtissoire et/ou des blessures pour l'opérateur.

Par personnel d'installation qualifié on entend les personnes ou entreprises qui, directement ou par l'intermédiaire d'un agent, se chargent et sont responsables de ce qui suit :

- Pose ou remplacement de canalisations de gaz, ou raccordement, installation, réparation ou entretien du matériel. Ce personnel doit avoir une solide expérience de ce genre de travail, être familiarisé avec toutes les précautions à prendre et avoir satisfait à toutes les conditions exigées par les autorités provinciales et locales compétentes. Voir : National Fuel Gas Code (Code national des combustibles gazeux), NFPA 54 (ANSI Z223.1).

L'installation doit être conforme aux codes locaux ou, en leur absence, au National Fuel Gas Code, ANSI Z223.1/ NFPA 54 ou au Natural Gas and Propane Installation Code (Code des installations au gaz naturel et au propane), ACNOR B149.1 selon le cas, y compris :

Pour une rôtissoire montée sur des roulettes, l'installation doit être effectuée en utilisant un raccord conforme à la norme applicable aux raccords pour appareils à gaz mobiles, ANSI Z21.69/ACNOR 6.16 et un dispositif à débranchement rapide conforme à la norme applicable à ce type de raccord pour combustible gazeux, ANSI Z21.4/ACNOR 6.9. Lors de l'installation d'une rôtissoire à roulettes et tuyau à débranchement rapide, des dispositions suffisantes doivent être prises pour limiter le déplacement de la rôtissoire indépendamment du raccord et du dispositif à débranchement rapide ou de la tuyauterie associée. Il est possible de fixer un limiteur à la partie verticale du châssis à l'arrière de la rôtissoire.

Des instructions détaillées d'installation de la rôtissoire à fournée variable sont données dans son manuel d'installation et d'utilisation (n° réf. Duke 175500). Si on a perdu ce manuel, on peut en demander un autre en utilisant les informations sur les contacts figurant au bas de cette page.

AVIS À L'INSTALLATEUR :

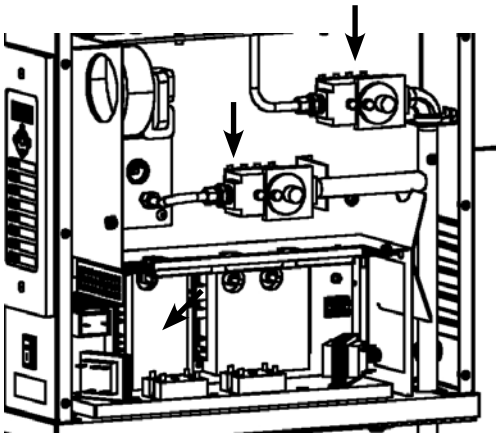
CET APPAREIL NE DOIT PAS ÊTRE RACCORDÉ À UNE ALIMENTATION EN GAZ DONT LA PRESSION DEPASSE 3,4 KPA (12 PO C.E.).

VÉRIFIER LA PRESSION DE L'ALIMENTATION EN GAZ AVANT DE PROCÉDER À L'INSTALLATION. SI ELLE DÉPASSE 3,4 KPA 12 PO C.E., INSTALLER LE KIT POUR HAUTE PRESSION D'ALIMENTATION, N° RÉF. DUKE 175689, ET LE RÉGLER POUR UNE PRESSION DE SORTIE DE 7 PO C.E.

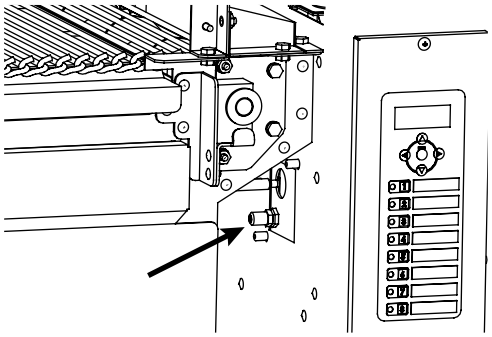
B. Marche à suivre

1) DÉBRANCHER LA RÔTISSOIRE DE LA PRISE DE COURANT. FERMER LA VANNE D'ALIMENTATION PRINCIPALE ET DÉBRANCHER LE TUYAU D'ALIMENTATION.

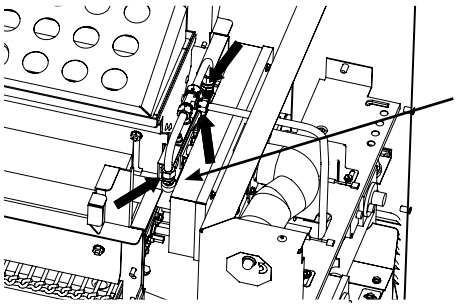
2) DÉPOSER LES (2) ROBINETS À GAZ ET LES REMPLACER PAR LES NOUVEAUX. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR TOUS LES JOINTS. DÉPOSER LE MODULE D'ALLUMAGE DU BRÛLEUR INFÉRIEUR ET LE REMPLACER PAR LE NOUVEAU. VOIR LE SCHÉMA DE CÂBLAGE SUR LE PANNEAU D'ACCÈS AUX COMMANDES POUR LES RACCORDEMENTS CORRECTS.



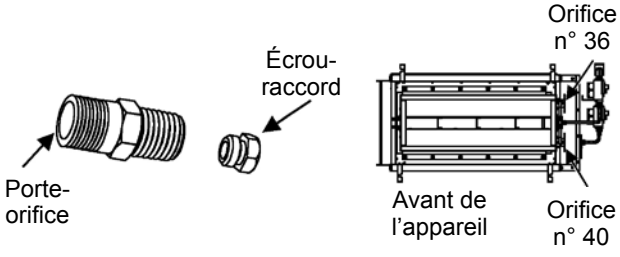
3) DÉPOSER LE BRÛLEUR INFÉRIEUR (VOIR LE MANUEL D'INSTALLATION/UTILISATION) POUR ACCÉDER AU CHAPEAU D'ORIFICE CALIBRÉ. ENLEVER LE CHAPEAU D'ORIFICE À L'AIDE D'UNE DOUILLE DE 1/2 PO ET REMPLACER L'ORIFICE PAR UN NEUF. SERRER L'ORIFICE À 6,7 N.m (60 PO-LBS.)



4) À L'AIDE D'UNE CLÉ DE 5/8 PO, RETIRER LES RACCORDS À COMPRESSION DE LA CANALISATION SUPÉRIEURE DE GAZ (3 ENDROITS) QUI RELIE LES DEUX BRÛLEURS INFRAROUGES.

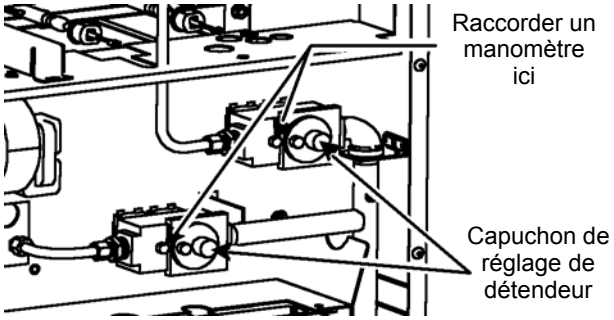


5) LES CANALISATIONS DE GAZ ÉTANT DÉBRANCHÉES, DÉPOSER LES PORTES-ORIFICE DES BRÛLEURS À L'AIDE D'UNE CLÉ DE 5/8 PO. RETIRER L'ÉCROU-RACCORD DU PORTE-ORIFICE À L'AIDE D'UNE CLÉ DE 3/8 PO. LE REMPLACER PAR LE NOUVEAU ET LE SERRER À 4,5 Nm (40 lb-po). RÉASSEMBLER LES RACCORDS ET LES CANALISATIONS DE GAZ.



6) RACCORDER L'APPAREIL À L'ARRIVÉE DE GAZ ET AU SECTEUR. S'IL S'AGIT D'UNE NOUVELLE INSTALLATION, SUIVRE LES INSTRUCTIONS D'INSTALLATION ET D'UTILISATION DE LA RÔTISSOIRE À FOURNÉE VARIABLE.

7) ENLEVER LE BOUCHON TUBULAIRE DE 1/8 PO DU ROBINET SUPÉRIEUR ET POSER UN MANOMÈTRE. ALLUMER LA RÔTISSOIRE. À L'AIDE D'UN TOURNEVIS, ENLEVER LE CAPUCHON À FENTE DU DÉTENDEUR ET RÉGLER CELUI-CI JUSQU'À CE QUE LE MANOMÈTRE INDIQUE 3.75 PO C.E. REMETTRE EN CAPUCHON EN PLACE. ÉTEINDRE LA RÔTISSOIRE. RETIRER LE MANOMÈTRE ET REMETTRE LE BOUCHON TUBULAIRE EN PLACE. RÉPÉTER L'OPÉRATION POUR LE ROBINET INFÉRIEUR.



8) LA RÔTISSOIRE ÉTANT EN MARCHE, CONTRÔLER L'ÉTANCHÉITÉ DE TOUS LES RACCORDS.

REMARQUE : *LES DÉCELEURS DE FUITES ÉLECTRONIQUES DONNERONT DES INDICATIONS ERRONÉES SUR LE DESSUS DE LA RÔTISSOIRE PRÈS DES ORIFICES CALIBRÉS DES BRÛLEURS INFRAROUGES ET DE LA TUYAUTERIE DE GAZ. CELA EST DÛ AUX PRODUITS DE COMBUSTION PRÉSENTS PRÈS DU TUYAU D'ÉVACUATION DES FUMÉES. UTILISER UN LIQUIDE DE CONTRÔLE D'ÉTANCHÉITÉ OU DE L'EAU SAVONNEUSE DANS CETTE ZONE.*

9) VÉRIFIER LES CARACTÉRISTIQUES DE FLAMME DU BRÛLEUR INFÉRIEUR ET RÉALISER UN AJUSTEMENT D'OBTURATEUR LE CAS ÉCHÉANT.

PROCÉDURE D'AJUSTEMENT D'OBTURATEUR DE BRÛLEUR INFÉRIEUR

***REMARQUE*:** *CET AJUSTEMENT DOIT ÊTRE RÉALISÉ AVEC LES RÉCIPIENTS À GRAISSE ET LES PANNEAUX D'ACCÈS DU BRÛLEUR INFÉRIEUR INSTALLÉS.*

***REMARQUE*:** *CET AJUSTEMENT DOIT ETRE RÉALISÉ SUR LE BRÛLEUR DANS LE GRILLOIR AINSI QUE SUR TOUT AUTRE BRÛLEUR DE RECHANGE DANS L'ENSEMBLE DE PIÈCES DE RECHANGE OU DANS L'ENSEMBLE DE PIÈCES REMPLAÇABLE PAR L'UTILISATEUR. TOUS LES BRÛLEURS DOIVENT ÊTRE RÉGLÉS SUR LA MÊME OUVERTURE D'OBTURATEUR.*

a. EXTRAYEZ TOUT RIVET DANS LES OBTURATEURS DES BRÛLEURS.

b. DESSERRER LA VIS DE L'OBTURATEUR ET AJUSTER POUR OBTENIR DES BONNES CARACTÉRISTIQUES DE FLAMME COMME INDIQUÉ CI-DESSOUS :

   i. GAZ NATUREL - LA FLAMME DEVRAIT ÊTRE PREMIÈREMENT BLEUE AVEC UN SOUPÇON DE JAUNE AUX POINTES AUX DEUX EXTRÉMITÉS DU BRÛLEUR. IL NE DEVRAIT PAS Y AVOIR DE LEVAGE DE FLAMME.

   ii. GAZ PROPANE - LA FLAMME DEVRAIT ÊTRE PREMIÈREMENT BLEUE AVEC UN SOUPÇON DE JAUNE AUX POINTES SUR L'ENSEMBLE DU BRÛLEUR. IL NE DEVRAIT PAS Y AVOIR DE LEVAGE DE FLAMME.

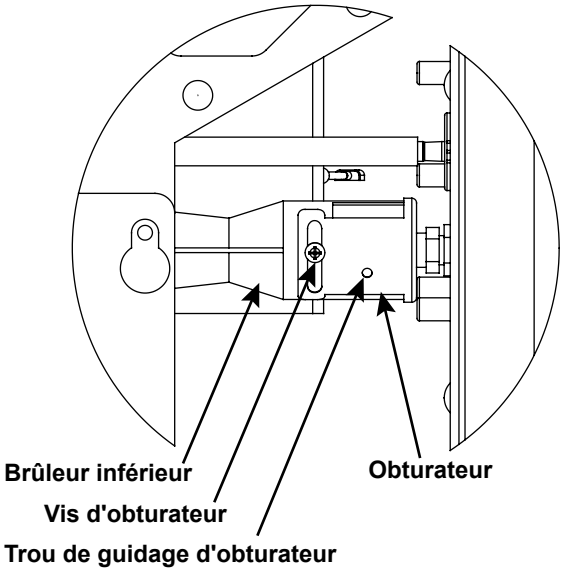
c. RESSERRER LA VIS DE L'OBTURATEUR.

d. RETIRER LE BRÛLEUR INFÉRIEUR DE L'UNITÉ (VOIR LE GUIDE D'INSTALLATION/OPERATION)

e. À L'AIDE DES TROUS DE GUIDAGE SUR L'OBTURATEUR, PERCER DES TROUS DE #30 À TRAVERS L'OBTURATEUR ET LE BRÛLEUR.

f. UTILISER LES RIVETS FOURNIS POUR VERROUILLER LE BRÛLEUR EN POSITION.

g. RÉINSTALLER LE BRÛLEUR DANS LE GRILLOIR.



10) VÉRIFIER LES CARACTÉRISTIQUES DE FLAMME DU BRÛLEUR IR ET RÉALISER DES AJUSTEMENTS D'OBTURATEUR LE CAS ÉCHÉANT.

PROCÉDURE D'AJUSTEMENT DE L'OBTURATEUR DU BRÛLEUR INFRAROUGE

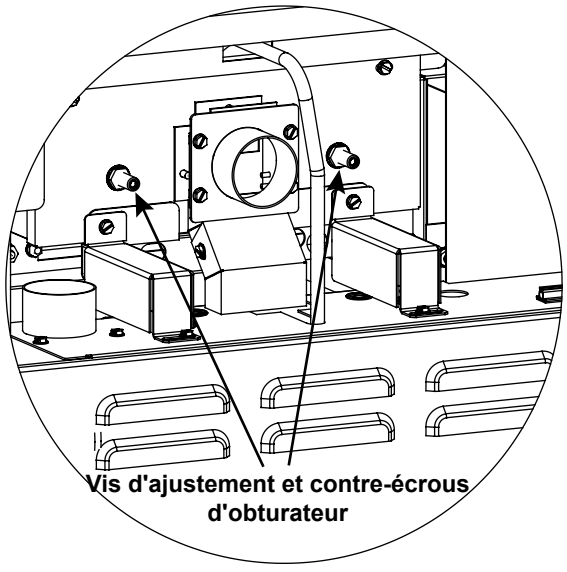
a. RETIRER LE COUVERCLE DE CONTRÔLE SUPÉRIEUR DE L'EXTRÉMITÉ DE L'UNITÉ POUR AVOIR ACCÈS AUX VIS D'AJUSTEMENT D'OBTURATEUR.

b. UTILISER UNE CLÉ DE 9/16" ET UNE CLÉ HEXAGONALE POUR DESSERRER LES CONTRE-ÉCROUSDESVISD'AJUSTEMENT.

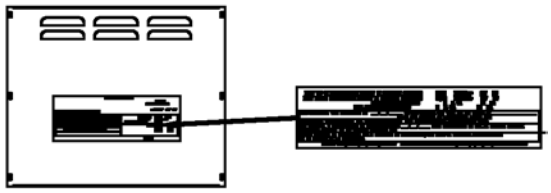
c. AJUSTER LES BRÛLEURS POUR DES BONNES CARACTÉRISTIQUES DE FLAMME.

   UNE FOIS L'UNITÉ BIEN RÉCHAUFFÉE, TOURNER CHAQUE VIS DANS LE SENS DES AIGUILLES DANS DES INCRÉMENTS DE TOUR D' 1/4 JUSQU'À L'ARRIVÉE D'UNE FLAMME BLEUE OU D'UNE BRUME EN DESSOUS DES BRÛLEURS.

d. RESSERRER LES ÉCROUS SUR LES VIS D'AJUSTEMENT.

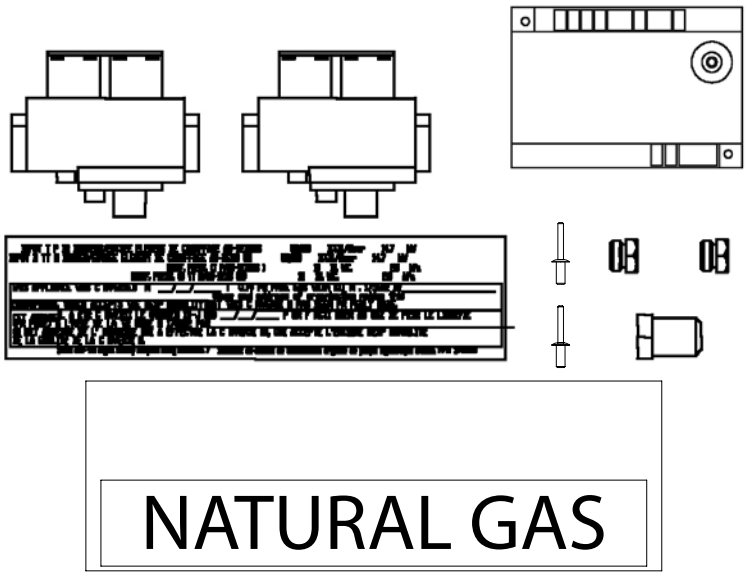


11) APPLIQUER UNE NOUVELLE ÉTIQUETTE DE CLASSEMENT À L'INTÉRIEUR DU COUVERCLE INFÉRIEUR DU BOÎTIER ÉLECTRIQUE. APPLIQUER DANS TOUTE ZONE OUVERTE.



12) APPLIQUER L'ÉTIQUETTE DU TYPE DE GAZ FOURNI PAR DESSUS L'ÉTIQUETTE EXISTANTE SUR LE STAND. LA CONVERSION EST DÉSORMAIS COMPLÈTE.

INSTRUÇÕES DO KIT DE CONVERSÃO DE GÁS NATURAL



GRELHA MULTIPRODUTO KIT
Nº DA PEÇA 175613

Este kit contém:

(2)	Válvula, combinação, gás natural	175531
(1)	Orifício, queimador infravermelho nº 40 (queimador dianteiro)	175735
(1)	Orifício, queimador infravermelho nº 36 (queimador traseiro)	175736
(1)	Orifício, queimador inferior nº 31	175823
(1)	Etiqueta de conversão da grelha, gás LP>natural	175606
(1)	Módulo, acendimento, queimador inferior, gás natural	175877
(1)	Etiqueta - Gás Natural	175775
(2)	Rebite	168106

Itens necessários para esta instalação:

- Torquímetro
- Ferramenta de Instalação do Rebite
- Selante de rosca para gás natural.
- (2) Grifos ou (1) Grifo e (1) Chave inglesa
- Chave de boca de 5/8"
- Chave de boca de 9/16"
- soquete de 1/2”
- Chave de boca de 3/8"
- Chave de fenda reta
- Chave de Fenda Phillips
- Chave sextavada de 3/16”
- Broca Nº 30
- Manômetro digital ou Slack Tube com rebarba de mangueira roscada de tubo macho de 1/8"
- Fluido de detecção de vazamento.

INSTRUÇÕES DE INSTALAÇÃO

A. Técnicos qualificados

Estas instruções de instalação devem ser usadas apenas por técnicos qualificados de instalação e serviço. A instalação ou serviço feito por outra pessoa que não um técnico qualificado pode causar danos à grelha e/ou ferimentos ao operador.

Técnicos de instalação qualificados são pessoas, firmas, companhias ou empresas que, seja pessoalmente ou através de um agente, executem e se responsabilizem pelo seguinte:

•Instalação ou substituição da tubulação de gás ou a conexão, instalação, conserto ou manutenção do equipamento, que tenham experiência com esse tipo de trabalho, conheçam todas as medidas de precaução necessárias e atendam a todos os requisitos exigidos pelos órgãos estaduais e municipais competentes. Veja: Código Nacional de Gás Combustível dos EUA NFPA 54 (ANSI Z223.1).

A instalação deve obedecer os códigos locais ou, na ausência de códigos locais, o Código Nacional de Gás Combustível dos EUA, ANSI Z223.1/NFPA 54, ou o Código de Instalação de Gás Natural ou Propano dos EUA, CSA B149.1, se for o caso, incluindo o seguinte:

No caso de grelhas montadas sobre rodízios, a instalação deverá ser feita com um conector que obedeça o Padrão de Conectores para Equipamento Móvel a Gás, ANSI Z21.69/CSA 6.16, e um dispositivo de desconexão rápida que atenda o Padrão de Dispositivos de Desconexão Rápida para Uso com Gás Combustível, ANSI Z21.4/CSA 6.9. Ao instalar a grelha com rodízios e mangueira de desconexão rápida, é preciso providenciar métodos adequados para limitar o movimento da grelha sem depender do conector e do dispositivo de desconexão rápida ou ainda da tubulação associada para limitar o movimento da grelha. Um elemento de restrição pode ser afixado na porção vertical da estrutura da base, na traseira da grelha.

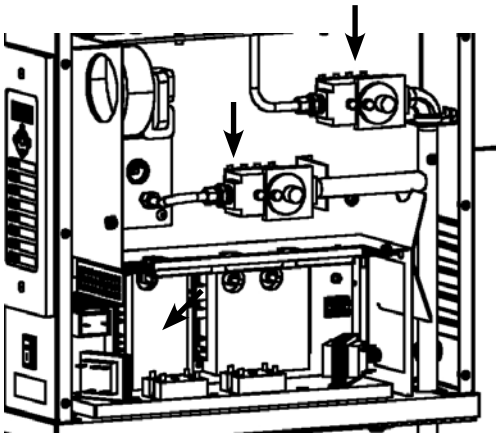
O “Manual de instalação e operação da Grelha Multiproduto” (nº da peça Duke 175500) contém instruções detalhadas para a instalação da grelha. Se não encontrar o manual, peça um usando as informações de contato no final desta página.

AVISO AO INSTALADOR:

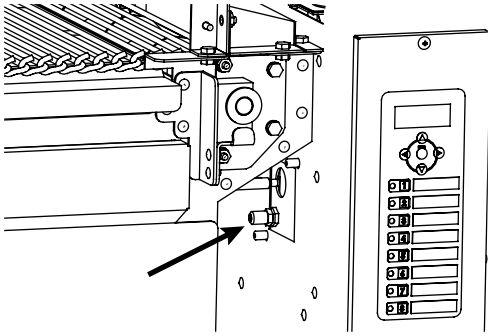
ESTE APARELHO NÃO DEVE SER CONECTADO A UMA PRESSÃO DE FORNECIMENTO DE GÁS SUPERIOR A 30 CM C.A.
A pressão do fornecimento de gás deve ser verificada antes da instalação. Se a pressão de fornecimento for superior a 30 cm C.A., o KIT DE PRESSÃO ALTA DE FORNECIMENTO, nº da peça 175689 da Duke, deverá ser instalado e ajustado, de acordo com as instruções do kit, para uma pressão de saída de 18 cm C.A.

B. Procedimento

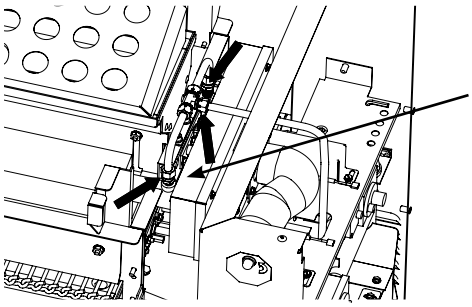
1) DESLIGUE A GRELHA DA TOMADA ELÉTRICA. FECHE A VÁLVULA PRINCIPAL E DESCONECTE A LINHA DE ALIMENTAÇÃO DE GÁS.
2) REMOVA (2) VÁLVULAS DE GÁS E SUBSTITUA-AS POR VÁLVULAS NOVAS. LEMBRE-SE DE APLICAR SELANTE DE ROSCA EM TODAS AS CONEXÕES ROSCADAS DOS TUBOS. REMOVA O MÓDULO DE ACENDIMENTO DO QUEIMADOR INFERIOR E SUBSTITUA-O POR UM MÓDULO NOVO. CONSULTE O DIAGRAMA ELÉTRICO NO PAINEL DE ACESSO DO CONTROLE PARA VER AS CONEXÕES CERTAS.



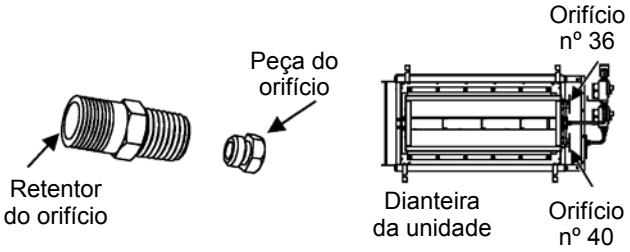
3) REMOVA O QUEIMADOR INFERIOR (VEJA O MANUAL DE INSTALAÇÃO/OPERAÇÕES) PARA ACESSAR A TAMPA DO ORIFÍCIO. USANDO UM SOQUETE DE 1/2", REMOVA A TAMPA DO ORIFÍCIO E COLOQUE O NOVO ORIFÍCIO. APLIQUE UM TORQUE DE 6,7 Nm (60 lbs).



5) COM UMA CHAVE DE 5/8", REMOVA OS ENCAIXES DE COMPRESSÃO DA TUBULAÇÃO DE GÁS SUPERIOR (3 PONTOS) QUE CONECTAM OS DOIS QUEIMADORES INFRAVERMELHOS.

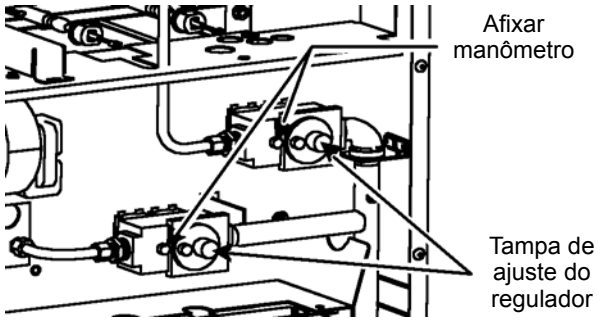


5) COM OS TUBOS DE GÁS REMOVIDOS, RETIRE OS RETENTORES DOS ORIFÍCIOS DOS QUEIMADORES COM UMA CHAVE DE 5/8". REMOVA A PEÇA DO ORIFÍCIO DO RETENTOR COM UMA CHAVE DE 3/8". SUBSTITUA-A POR UMA NOVA PEÇA DO ORIFÍCIO DO KIT E APERTE COM UM TORQUE DE 40 pol-lb. REMONTE OS ENCAIXES E TUBOS DE GÁS.



6) CONECTE À REDE DE GÁS E ELETRICIDADE. SE ESTA FOR UMA INSTALAÇÃO NOVA, SIGA AS INSTRUÇÕES DE INSTALAÇÃO E OPERAÇÃO DA GRELHA MULTIPRODUTO.

7) NA VÁLVULA SUPERIOR, RETIRE O BUJÃO DO TUBO DE 1/8" E O MANÔMETRO. LIGUE A GRELHA. COM UMA CHAVE DE FENDA, RETIRE A TAMPA FENDIDA DO REGULADOR E AJUSTE ATÉ QUE O VISOR DO MANÔMETRO ACUSE 9,50 cm C.A. DESLIGUE A GRELHA. RETIRE O MANÔMETRO E RECOLOQUE O BUJÃO DO TUBO. REPITA O MESMO PROCEDIMENTO COM A VÁLVULA INFERIOR.



8) COM A GRELHA LIGADA, EXAMINE TODOS OS ENCAIXES PARA VER SE HÁ VAZAMENTOS.

OBSERVAÇÃO: *OS DETECTORES ELETRÔNICOS DE VAZAMENTO PRODUZIRÃO LEITURAS FALSAS NA PARTE SUPERIOR DA GRELHA PERTO DOS ORIFÍCIOS DE INFRAVERMELHO E DA TUBULAÇÃO DE GÁS. ISSO É CAUSADO POR PRODUTOS DE COMBUSTÃO PRÓXIMOS À CHAMINÉ. USE UM FLUIDO DE VERIFICAÇÃO DE VAZAMENTO OU ÁGUA E SABÃO NESTA ÁREA.*

9) VERIFIQUE AS CARACTERÍSTICAS DA CHAMA DO QUEIMADOR INFERIOR E FAZER UM AJUSTE DO OBTURADOR DE AR SE NECESSÁRIO.

PROCEDIMENTO DE AJUSTE DO OBTURADOR DE AR DO QUEIMADOR INFERIOR.

OBSERVAÇÃO: *ESTE AJUSTE DEVE SER FEITO COM AS PANELAS DE GORDURA E OS PAINÉIS DE ACESSO AOS QUEIMADORES INFERIORES INSTALADOS.*

OBSERVAÇÃO: *ESTE AJUSTE DEVE SER FEITO TANTO NO QUEIMADOR DA GRELHA, COMO EM TODOS OS OUTROS QUEIMADORES DE RESERVA, NOS KITS DE PEÇAS DE REPOSIÇÃO OU KITS DE PEÇAS SUBSTITUÍVEIS PELO USUÁRIO. TODOS OS QUEIMADORES DEVEM SER AJUSTADOS COM A MESMA ABERTURA DO OBTURADOR DE AR.*

a. FURAR TODOS OS REBITES DOS OBTURADORES DOS QUEIMADORES.

b. SOLTE O PARAFUSO DO OBTURADOR DE AR E AJUSTE-O ÀS CARACTERÍSTICAS DE CHAMA APROPRIADAS CONFORME DEFINIDO ABAIXO:

   i. GÁS NATURAL - A CHAMA DEVE SER PRIMARIAMENTE AZUL COM LIGEIRO TOM DE AMARELO NAS DUAS EXTREMIDADES DO QUEIMADOR. NÃO DEVE HAVER PROPAGAÇÃO DA CHAMA.

   ii. GÁS PROPANO - A CHAMA DEVE SER PRIMEIRAMENTE AZUL COM LIGEIRO TOM DE AMARELO AO LONGO DE O TODO QUEIMADOR. NÃO DEVE HAVER PROPAGAÇÃO DA CHAMA.

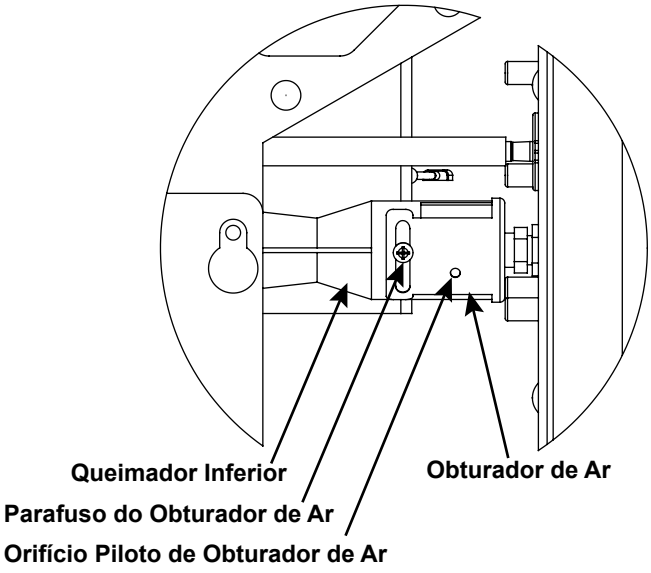
c. APERTE O PARAFUSO DO OBTURADOR DE AR.

d. REMOVA O QUEIMADOR INFERIOR DA UNIDADE(CONSULTE O MANUAL DE INSTALAÇÃO/OPERAÇÃO)

e. USANDO OS DOIS FUROS PILOTO NO OBTURADOR, COM BROCA Nº 30 FURE EM TODA SUPERFÍCIE DO OBTURADOR E QUEIMADOR.

f. UTILIZE OS REBITES FORNECIDOS PARA FIXAR O QUEIMADOR NA POSIÇÃO.

g. REINSTALE O QUEIMADOR NA GRELHA.



10) VERIFIQUE AS CARACTERÍSTICAS DA CHAMA DO QUEIMADOR INFRA-VERMELHO E FAZER AJUSTES DO OBTURADOR DE AR SE NECESSÁRIO.

PROCEDIMENTO DE AJUSTE DO QUEIMADOR INFRAVERMELHO DO OBTURADOR DE AR

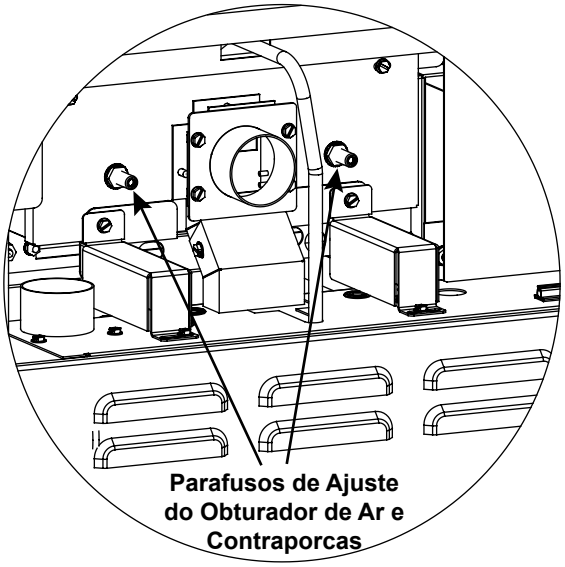
a. REMOVER A TAMPA SUPERIOR DO CONTROLE NA EXTREMIDADE DA UNIDADE PARA ALCANÇAR OS PARAFUSOS DE AJUSTE DO OBTURADOR DE AR.

b. USAR UMA CHAVE INGLESA 9/16" E UMA CHAVE HEXAGONAL DE 3/16" PARA SOLTAR AS PORCAS DE FIXAÇÃO DO PARAFUSO DE AJUSTE.

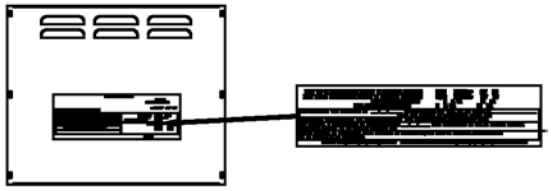
c. AJUSTAR OS QUEIMADORES PARA AS CARACTERÍSTICAS DE CHAMA APROPRIADAS.

   COM A UNIDADE BEM AQUECIDA, GIRE CADA PARAFUSO NO SENTIDO HORÁRIO EM ESTÁGIOS DE ¼ ATÉ QUE SEJA OBSERVADA UMA CHAMA AZUL OU EMBAÇAMENTO EM BAIXO DOS QUEIMADORES. DEPOIS GIRE CADA CONTADOR DO PARAFUSO NO SENTIDO HORÁRIO EM ESTÁGIOS DE ¼ ATÉ QUE NÃO SEJAM OBSERVADAS CHAMA AZUL OU EMBAÇAMENTO EM BAIXO DOS QUEIMADORES.

d. REAPERTE AS PORCAS DOS PARAFUSOS DE AJUSTE.

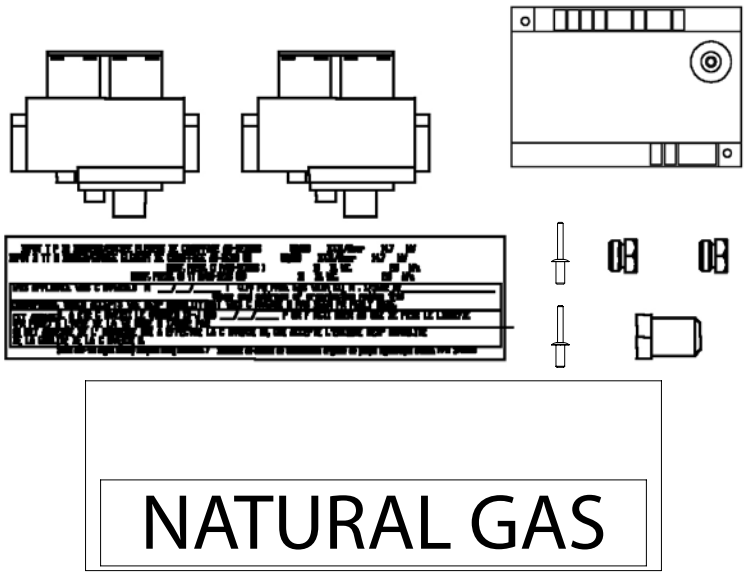


11) APLICAR AS NOVAS ETIQUETAS DE ÍNDICES NO INTERIOR DA TAMPA INFERIOR DO GABINETE ELÉTRICO. APLIQUE EM QUALQUER ÁREA ABERTA.



12) APLICAR A ETIQUETA DO TIPO DE GÁS FORNECIDO SOBRE A ETIQUETA EXISTENTE NO LOCAL. A CONVERSÃO AGORA ESTÁ COMPLETA.

天然ガス変換キット説明書



フレキシブル バッチ ブロイラーKIT P/N 175613

キットの内容：

(2) バルブ、コンボ、天然ガス 175531

(1) オリフィス、赤外線バーナー#40mm（フロントバーナー） 175735

(1) オリフィス、赤外線バーナー#36mm（リアバーナー） 175736

(1) オリフィス、下部バーナー#31 175823

(1) ブロイラー変換ラベル LP> Nat.（プロパン>天然ガス） 175606

(1) モジュール、点火装置、下部バーナー、天然ガス 175877

(1) ラベル - 天然ガス 175775

(2) リベット 168106

本品の設置に必要な工具：

- トルクレンチ
- リベット取り付けツール
- 天然ガス定格のスレッドシーラント。
- パイプレンチ2つ、またはパイプレンチ1つと可動レンチ1つ
- 5/8インチのオープンエンド・レンチ
- 9/16インチのオープンエンド・レンチ
- 1/2インチのオープンエンド・レンチ
- 3/8インチのオープンエンド・レンチ
- マイナス ドライバ
- プラスネジ回し
- 3/16 六角レンチ
- φ3.3 mm ドリル
- 1/8インチの雄パイプスレッド・ホースバルブを備えた、デジタル圧力計またはスラックチューブ圧力計。
- リーク検出溶液。

設置方法

A. 正規技術者

ここに記載されている設置方法は、設置点検を行う正規技術者のために作成されたものです。正規技術者以外が設置や保守作業を行うと、ブロイラーの故障や負傷事故の原因となります。

正規技術者とは、以下の業務を専門とする会社にて、またはその会社を通して、作業員としての資格を有する人物を示します。

- ガス配管、機器の接続取付、修理保守の経験、および所定の注意事項に関する知識を有し、国や管轄地域の法令に準拠している。参照：業務用ガス基準 NFPA 54 (ANSI Z223.1)

設置は現地の規制に準拠する必要があります。現地国に規制がない場合は、『National Fuel Gas Code』のANSI Z223.1/NFPA 54、または『Natural Gas and Propane Installation Code』CSA B149 が適用されて、次の内容が含まれます。

キャスター付ブロイラーには、動式ガス器具の配管接続に関する『ANSI Z21.69/CSA 6.16』の基準に準拠した継手と、ガス燃料用迅速交換式装置に関する『ANSIZ21.4/CSA 6.9』の基準に準拠した迅速交換式装置を使用してください。キャスターと迅速交換式ホースを備えたブロイラーを設置する際は、コネクタ、迅速交換式装置、関連配管に依存することなく、ブロイラーが動かないように適切な固定手段を講じてください。固定具は、ブロイラー後部の本体縦枠の垂直部分に取り付けることが可能です。

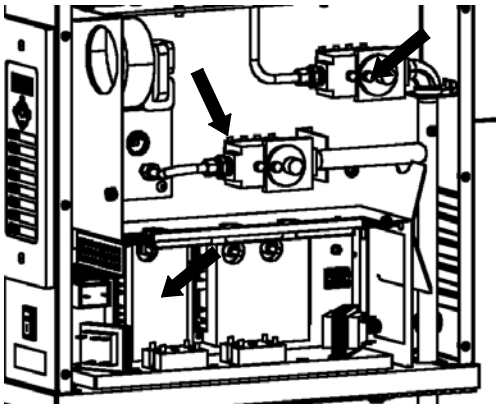
ブロイラー設置に関する詳細説明は、『フレキシブルバッチ ブロイラーの設置と使用説明書（Duke p/n 175500）』に記載されています。説明書が欠落している場合は、本ページの下部にある連絡先に請求してください。

設置者への注意：

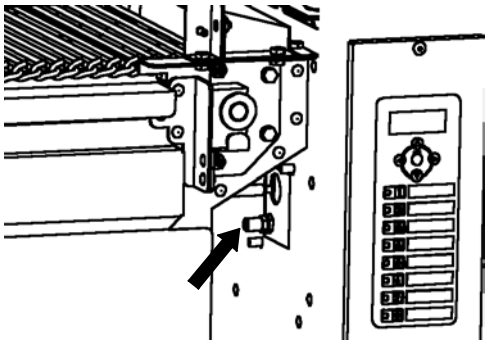
本装置は、½ PSI（12"W.C.）以上のガス配管に接続しないでください。
取り付け前にガス供給圧力を確認する必要があります。供給圧力が12"W.C.を超える場合は、HIGH SUPPLY PRESSURE KIT, Duke P/N 175689 を設置し、キットの説明書に従って出力圧力を 7"W.C.に調節する必要があります。

B. 手順

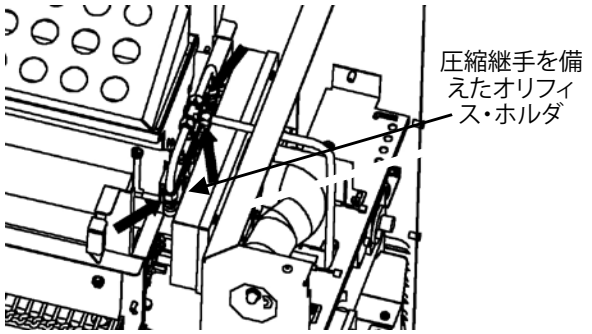
1) ブロイラーのプラグを電源から抜きます。主要ガス配管バルブを閉じて配管を取り外します。
2) 2つのガスバルブを取り外し、新規バルブと交換します。パイプ・スレッド接続部分すべてにスレッド・シーラントを必ず適用してください。下部バーナーの点火装置モジュールを取り外し、新しいモジュールと交換します。コントロールアクセスパネルの配線図を見て、正しく接続してください。



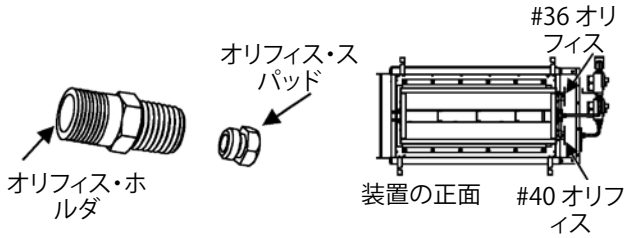
3) 下部バーナーを取り外し（設置/使用説明書を参照）、オリフィスフードにアクセスできるようにします。1/2インチのレンチを使用してオリフィスフードを取り外し、新しいオリフィスと交換します。60インチポンドに固定します。



4) 5/8インチのレンチを使用して、両方のバーナーに接続している上部のガス管圧縮継手（3箇所）を取り外します。

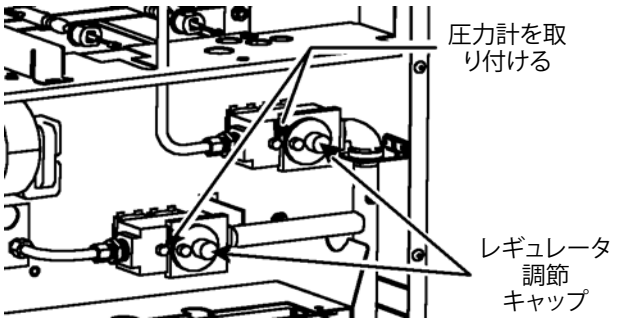


5) ガス配管を外すと、5/8インチのレンチを使用してオリフィス・ホルダをバーナーから外します。3/8インチのレンチを使用して、ホルダからオリフィス・スパッドを取り外します。キットの新しいオリフィススパッドと交換し、40インチポンドに固定します。継手をガス配管に再び取り付けます。



6) ガスと電気に接続します。新しい装置を取り付ける場合は、『フレキシブルバッチブロイラーの設置と使用説明』に従ってください。

7) 上部バルブから、1/8インチのパイプ・プラグと取り付け済みの圧力計を外します。ブロイラーをオンにします。ドライバを使ってレギュレータからスロット入りのキャップを取り外し、圧力計が「3.75″W.C.」を示すように調節して、キャップを交換します。ブロイラーをオフにします。圧力計を外し、パイプ・プラグを再設置します。下部のバルブについても同様に行います。



8) ブロイラーを作動させて、すべての継手部分でリークがないか確認します。

注：電気リーク検知器は、オリフィスとガス配管近くにある場合、ブロイラー上で不正確な数値を示すことがあります。これは燃料近くに可燃性製品があるためです。この箇所では、リーク検出溶液または洗剤水を使用してください。

9) ロアーバーナーの炎の状態を確認し、必要に応じエアーシャッターを調整します。

ロアーバーナーのエアーシャッターの調整手順

注： この調整手順は、グリースパンおよびロアーバーナーアクセスパネルを取り付けた状態で行う必要があります。

注：この調整は、スペアパーツキットや交換パーツキットに含まれている予備バーナーを含め、ブロイラーのバーナーも調整しなければなりません。全てのバーナーでエアーシャッターの開度が同じになるようにします。

a. バーナーのエアーシャッターを止めているリベットをドリルでさらいます。

b. エアーシャッターネジを緩め、下記のように炎の状態が正しくなるよう調整します。

   i. 天然ガス – 炎は、全体が青色で、バーナーの端2個所の先端のみかすかに黄色になるようにします。炎が浮いてはいけません。

   ii. プロパンガス - 炎は、全体が青色で、バーナー全体で先端のみかすかに黄色になるようにします。炎が浮いてはいけません。

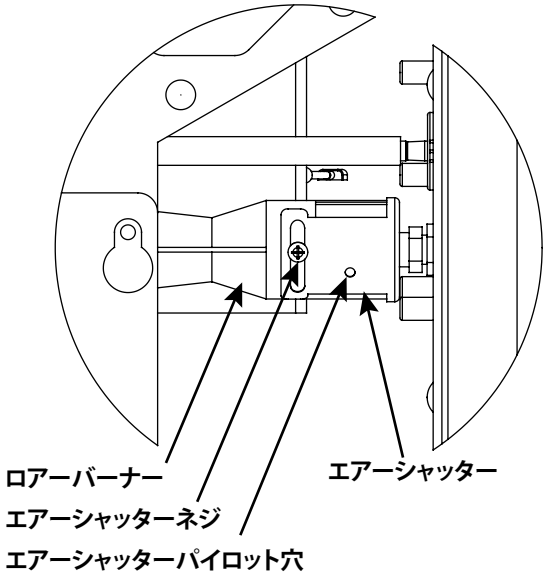
c. エアーシャッターのネジを締めます。

d. ロアーバーナーを本体から取り外します (取扱説明書を参照)。

e. エアーシャッターのパイロット穴 2 個を利用して、エアーシャッターとバーナーをに φ3.264 mm のドリルで穴を開けます。

f. 同梱のリベットを用いて、バーナーを固定します。

g. バーナーをブロイラーに再度取り付けます。



10) IR バーナーの炎の状態を確認し、必要に応じエアーシャッターを調整します。

赤外線バーナーのエアーシャッターの調整手順

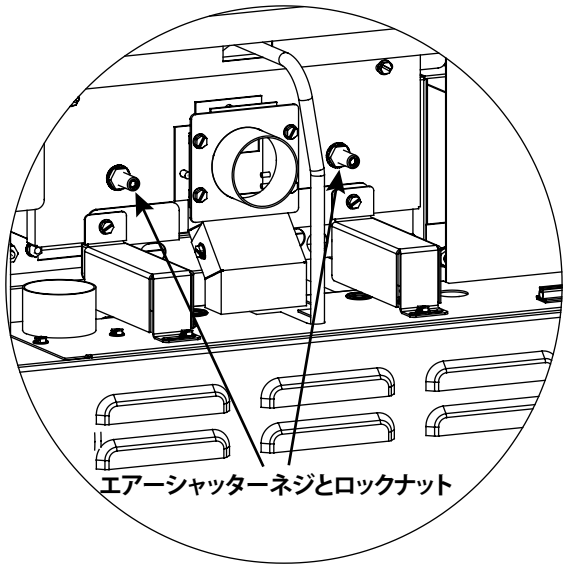
a. 本体の端のアッパーコントロールカバーを外し、エアーシャッター調整ネジが回せるようにします。

b. 9/16 インチレンチと 3/16 インチ六角棒レンチを用いて、調整ネジのロックナットを緩めます。

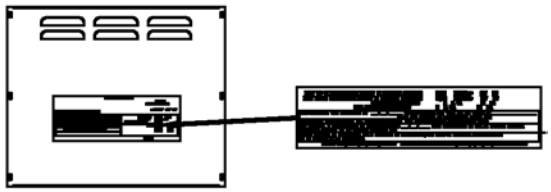
c. 炎が正しい状態になるようバーナーを調整します。

本体が充分暖まったところで、バーナーの下に青い炎がかすかに見えるまで、各ネジを1/4回ずつ右に回して調整します。次に、バーナーの下に青い炎が見えなくなるまで、各ネジを 1/4 回ずつ左に回して調整します。

d. 調整ネジのナットを再度締め付けます。

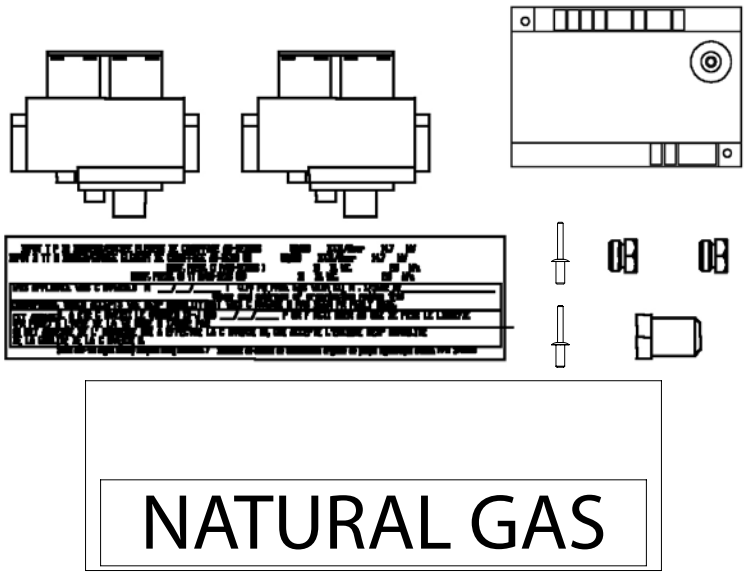


11) 新しい定格タグをロアー電気ボックスカバー内に取り付けてください。風通しの良い場所で実施してください。



12) スタンドに貼付されている既存のラベルに重ねて該当するガスの種類のラベルを貼付します。これで改造が完了です。

天然氣更換組件說明



多用途批量烤爐組件料號175613

內含：

(2)　天然氣組合氣閥	175531
(1) 噴嘴、#40紅外爐頭（前爐頭）	175735
(1) 噴嘴、#36紅外爐頭（後爐頭）	175736
(1) 噴嘴、#31下爐頭	175823
(1) 烤爐更換標籤　液化氣>天然氣	175606
(1) 模件、點火器、下爐頭、天然氣	175877
(1) 標籤 – 天然氣	175775
(2) 鉚釘	168106

安裝需用工具

- 扭力扳手
- 鉚釘安裝工具
- 適用於天然氣的螺紋密封膠。
- 兩個管道扳手，或者1個管道扳手和1個可調節扳手
- 5/8英寸開口扳手
- 9/16英寸開口扳手
- 1/2英寸開口扳手
- 3/8英寸開口扳手
- 一字型改錐
- 十字頭螺絲刀
- 3/16六角扳手
- #30 鑽頭
- 數位壓力計或帶有1/8英寸外螺紋軟管接頭的松管壓力計。
- 檢漏液。

安裝說明

A. 專業人員

這些安裝說明僅供專業安裝和維修人員使用。由非專業人員進行安裝或維修可能損壞烤爐和/或傷害操作人員。

專業安裝人員可以是個人、公司或企業，他們親自或通過代理參與並負責：

- 安裝或更換煤氣管或接頭，安裝、修理或維護設備。他們在此類工作上擁有豐富的經驗，熟悉所有必需的預防措施，符合當地國家和地方當局的所有要求。參見：美國《國家燃氣規範》NFPA 54 (ANSI Z223.1)。

安裝必須符合當地標準，如果當地沒有標準，則必須符合適用的美國《國家燃氣規範》ANSI Z223.1/NFPA 54或《天然氣和丙烷安裝規範》CSA B149.1，包括：

對於安裝有輪腳的烤爐，必須使用符合《移動燃氣設備連接規範》ANSI Z21.69/CSA 6.16的插座和符合《與燃氣一起使用的快速斷開裝置規範》ANSI Z21.4/CSA 6.9的快速斷開裝置。當安裝帶有輪腳和快速斷開軟管的烤爐時，必須採取充分的措施來限制烤爐移動，不要依賴插座和快速斷開裝置或與其相關聯的管道來限制烤爐移動。可將烤爐後部基座框架的垂直部分固定以限制其移動。

烤爐安裝細節載於多用途批量烤爐安裝和操作手冊 (Duke p/n 175500)。如果本手冊遺失，請通過本頁底部的聯繫方式索取副本。

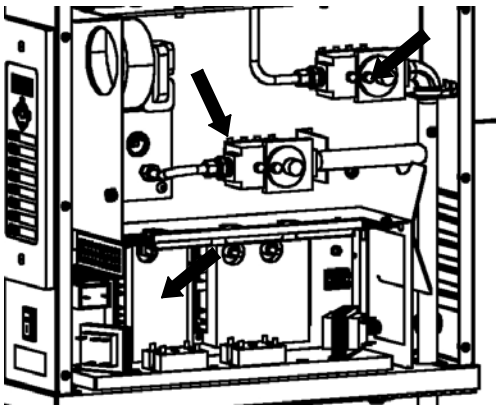
安裝人員須知：

不得將此設備連接至壓力大於12英寸水柱的燃氣供應裝置。

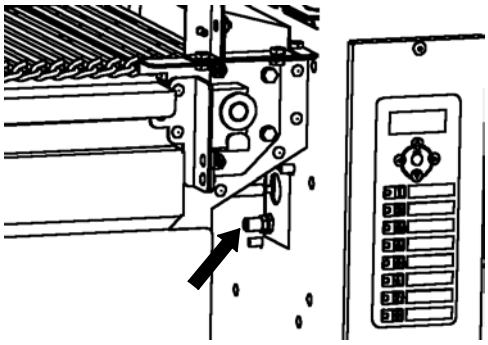
在安裝之前必須檢查燃氣供應壓力。如果供應壓力大於12英寸水柱，應該根據相應說明安裝和調整高供應壓力元件Duke P/N 175689，將輸出壓力調整為7英寸水柱。

B. 步驟

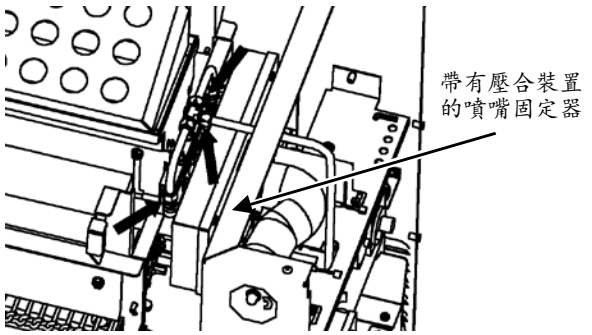
1) 切斷烤爐電源。關閉供氣閥並斷開供氣線路。
2) 卸下2個氣閥並更換為新的氣閥。確保使用了螺紋密封膠來密封所有管道的螺紋接頭。將下爐頭點火器模件更換為新模件。根據控制台上的佈線圖進行正確連接。



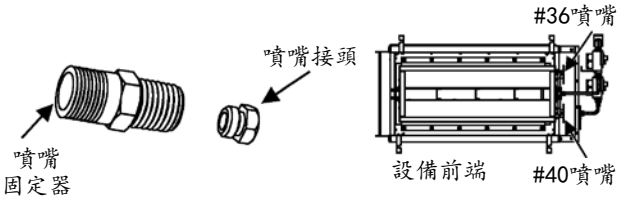
3) 卸下下爐頭（參見安裝/操作手冊），以方便操作噴嘴防護罩。使用1/2英寸扳手卸下噴嘴防護罩，並更換噴嘴。 擰緊至60英寸-磅。



4) 使用5/8英寸扳手卸下頂部連接兩個紅外爐頭的燃氣線路壓合裝置（3處）。

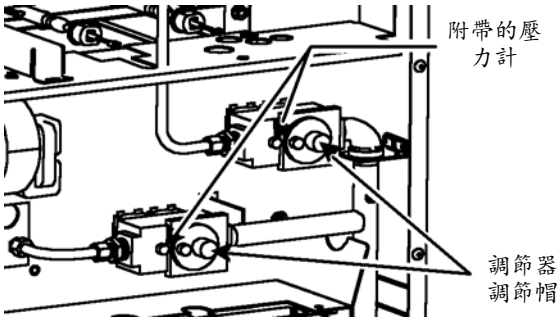


5) 卸下燃氣線路後，使用5/8英寸扳手從爐頭上卸下噴嘴固定器。使用3/8英寸扳手從固定器上卸下噴嘴接頭。安裝新的噴嘴接頭，擰緊至40英寸-磅。重新裝配壓合裝置和燃氣線路。



6) 連通氣源和電源。如果進行全新安裝，必須按照多用途批量烤爐安裝和操作說明進行操作。

7) 在上氣閥上，卸下1/8英寸的管道插頭和附帶的壓力計。將烤爐調至“ON”。使用改錐從調節器上卸下帶槽的螺帽，調節氣壓，直至壓力計讀數為3.75英寸水柱。復位螺帽。將烤爐調至“OFF”。卸下壓力計並重定管道插頭。對底部氣閥重複上述操作。



8) 在烤爐運行時，檢查所有配合裝置是否存在洩漏。

注意：在烤爐上方接近紅外噴嘴和燃氣管的地方，電子測漏器會顯示錯誤的讀數。這是由於煙道附近存在氣體燃燒產物而引起的。請在此區域使用檢漏液或肥皂液檢查。

9) 觀察下爐頭火焰的特徵，必要情況下調節風門。

下爐頭風門調整程式

注意：此調節需要在油脂盤和下爐頭檢修蓋板安裝之後完成。

注意：應同時對烤爐中的爐頭、備用零件包中的爐頭或使用者更換零件包中的其他備用爐頭執行此調節。所有爐頭的風門開啟狀態均應保持相同。

a. 拆出爐頭風門上的全部鉚釘。

b. 擰鬆風門螺絲，調整至看到適當的火焰特徵，定義如下：

   i. 天然氣 - 火焰應基本為藍色，爐頭兩端的火焰頂端略帶黃色。不應出現脫火現象。

ii. 丙烷氣 – 火焰應基本為藍色，整個爐頭上的火焰頂端略帶黃色。不應出現脫火現象。

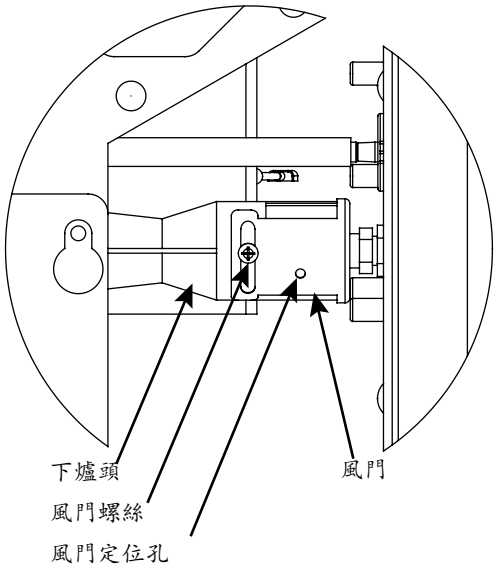
c. 擰緊風門螺絲。

d. 將下爐頭從設備上拆下（請參見安裝/操作手冊）

e. 使用風門上的兩個定位孔，在風門和爐頭上鑽兩個 #30 的通孔。

f. 使用隨附的鉚釘將爐頭固定到位。

g. 將爐頭重新安裝到烤爐上。



10) 觀察 IR 爐頭的火焰的特徵，必要情況下調節風門。

紅外爐頭風門調節程式

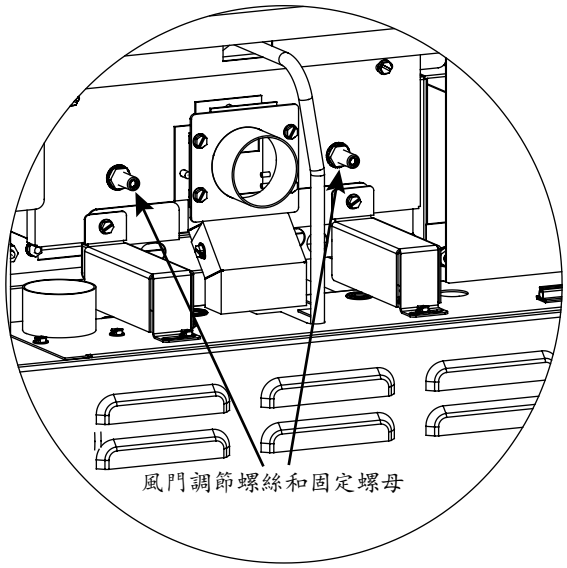
a. 從設備一端取下上控制蓋，以便處理風門調節螺絲。

b. 使用一個 9/16” 的扳手和 3/16” 六角扳手擰鬆螺絲的鎖緊螺母。

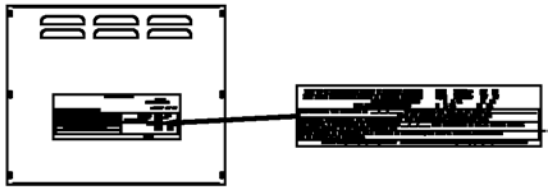
c. 調節爐頭，直至看到適當的火焰特徵。

在設備完全加熱後，將各螺絲順時針擰 1/4” 圈，直至看到爐頭下方出現藍色火焰或冒煙。然後將各螺絲逆時針擰 1/4” 圈，直至爐頭下方不再有藍色火焰或冒煙。

d. 重新擰緊調節螺絲上的螺母。



11) 在下方的電氣外殼蓋內側貼上新的額定標籤。置標籤於明顯位置。



12) 用隨附的氣體類型標籤蓋住支架上的原有標籤。轉換即已完成。

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Natural Gas Conversion Kit Instructions

FLEXIBLE BATCH BROILER

KIT P/N 175613

ENGLISH

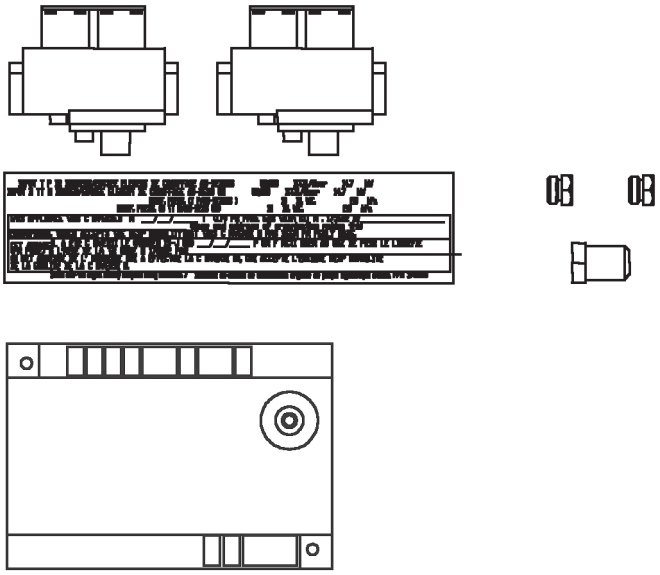
SPANISH

FRENCH

BRAZILIAN PORTUGUESE

JAPANESE

CHINESE



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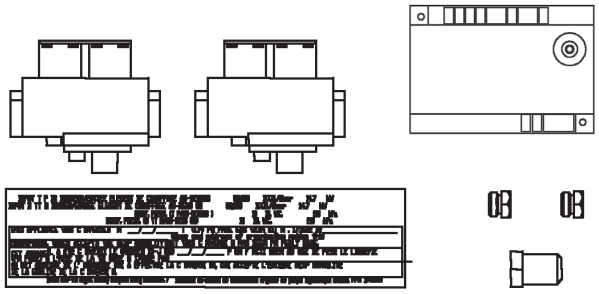
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P/N 175687H

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NATURAL GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 175613

This kit contains:

(2)	Valve, Combo, LP	175531
(1)	Orifice, IR Burner #40 mm (Front Burner)	175735
(1)	Orifice, IR Burner #36 mm (Rear Burner)	175736
(1)	Orifice, Lower Burner #31	175734
(1)	Broiler Conversion Label LP>Nat.	175606
(1)	Module, Ignition, Lower Burner, Natural Gas	175508

Items required for this installation:

- Torque Wrench
- Thread sealant rated for natural gas.
- (2) Pipe Wrenches or
  (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Straight blade screw driver
- 3/16 hex key wrench
- Digital or slack tube manometer with 1/8” male pipe thread hose barb.
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual (Duke p/n 175500). If the manual is missing you must request one using the contact information at the end of this manual.

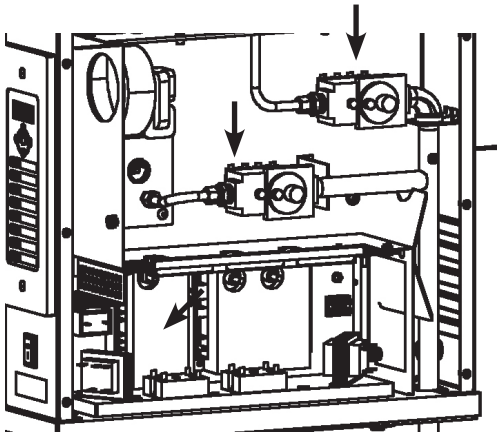
NOTICE TO INSTALLER:

THIS APPLIANCE SHALL NOT BE CONNECTED TO A GAS SUPPLY PRESSURE IN EXCESS OF 12" W.C. Gas supply pressure must be checked prior to installation. If supply pressure is in excess of 12" W.C., the HIGH SUPPLY PRESSURE KIT, Duke P/N 175689 shall be installed and adjusted, per kit instructions, for an outlet pressure of 7" W.C.

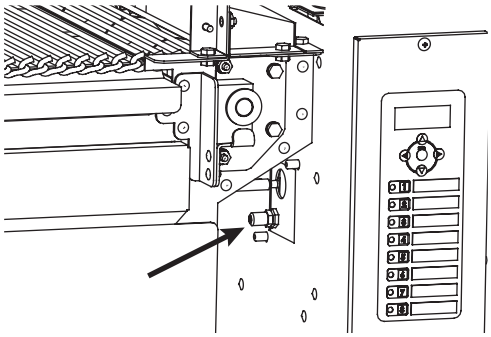
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

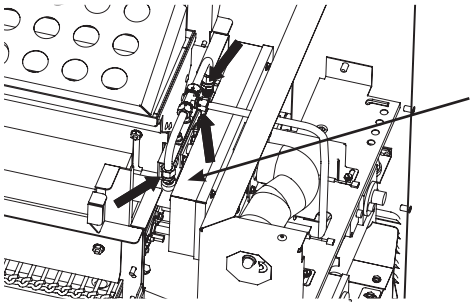
2) REMOVE (2) GAS VALVES AND REPLACE WITH NEW VALVES. BE SURE TO APPLY THREAD SEALANT TO ALL PIPE THREAD CONNECTIONS. REMOVE LOWER BURNER IGNITION MODULE AND REPLACE WITH NEW MODULE. SEE WIRING DIAGRAM ON CONTROL ACCESS PANEL FOR PROPER CONNECTIONS.



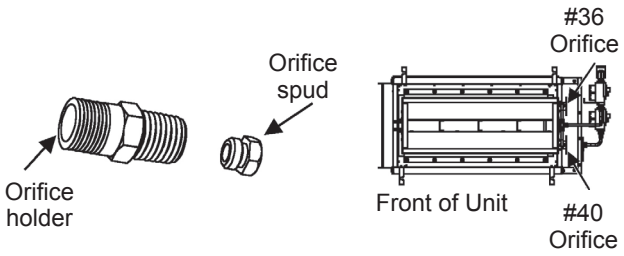
3) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. BE SURE TO APPLY THREAD SEALANT TO ORIFICE HOLDER THREADS. TORQUE ORIFICE TO 60 IN LBS (6.7 N.m.).



4) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

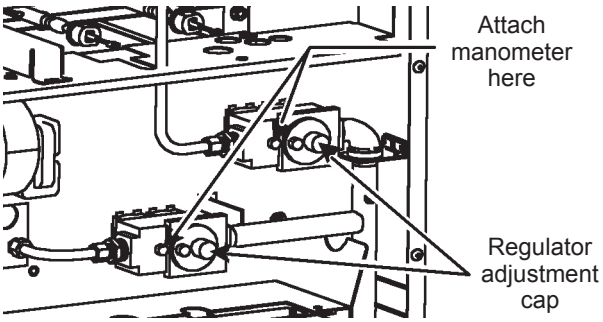


5) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8" WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8" WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 40 in-lb. REASSEMBLE FITTINGS AND GAS LINES.



6) CONNECT TO GAS AND ELECTICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

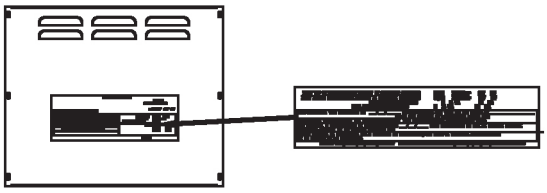
7) ON UPPER VALVE, REMOVE 1/8" PIPE PLUG AND ATTACHED MANOMETER. SWITCH BROILER “ON”. WITH A SCREW DRIVER, REMOVE SLOTTED CAP FROM REGULATOR AND ADJUST UNTIL MANOMETER READING IS 3.75" W.C. REPLACE CAP. SHUT BROILER “OFF”. REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



8) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

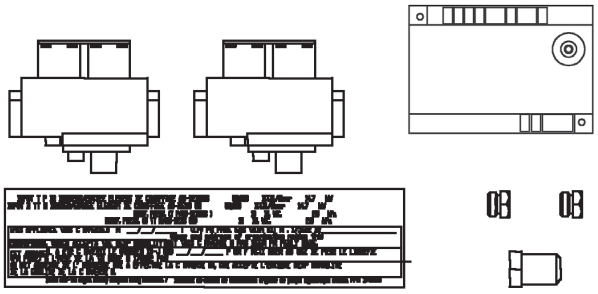
9) APPLY NEW RATINGS TAG OVER EXISTING RATINGS INFORMATION. FILL OUT BLANK AREAS ON NEW TAG AS INDICATED. CONVERSION IS COMPLETE.



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INSTRUCCIONES DEL JUEGO DE CONVERSIÓN DE GAS NATURAL



ASADOR FLEXIBLE POR TANDAS JUEGO N/P 175613

Este juego contiene lo siguiente:

(2)	Válvula combinada de gas natural	175531
(1)	Orificio de quemador de RI N° 40 (quemador delantero)	175735
(1)	Orificio de quemador de RI N° 36 (quemador trasero)	175736
(1)	Orificio de quemador inferior N° 31	175734
(1)	Etiqueta de conversión de asador LP>natural	175606
(1)	Módulo de encendido del quemador inferior, gas natural	175508

Artículos requeridos para esta instalación:

- Llave dinamométrica
- Sellante de roscas para gas LP.
- (2) Llaves para tubos o (1) llave para tubos y (1) llave ajustable
- (1) Llave de boca de 5/8”
- (1) Cubo de 1/2”
- (1) Llave de boca de 3/8”
- Destornillador de hoja recta
- Llave hexagonal de 3/16”
- Manómetro digital o “Snack Tube” con arpón de manguera roscado de tubo macho de 1/8”.
- Fluido de detección de fugas.

INSTRUCCIONES DE INSTALACIÓN

A. Personal capacitado

Estas instrucciones de instalación son para el uso exclusivo del personal de instalación y servicio capacitado. La instalación o el servicio por parte de personal que no esté capacitado puede provocar daños en el asador y lesiones al operador.

El personal de instalación capacitado son aquellos individuos, firmas, compañías o corporaciones que en persona o por medio de un agente participe y sea responsable de lo siguiente:

- La instalación o el reemplazo de tuberías de gas o la conexión, la instalación, la reparación o el servicio de equipos, que tengan experiencia en dicho trabajo, que estén familiarizados con todas las precauciones requeridas, y que hayan cumplido con todos los requisitos de las autoridades estatales y locales que tengan jurisdicción. Vea: Código Nacional para Gases Combustibles NFPA 54 (ANSI Z223.1).

La instalación debe cumplir con los códigos locales, o en ausencia de los mismos, con el Código Nacional de Gases Combustibles, ANSI Z223.1/NFPA 54, o con el Código de Instalación de Gas Natural y Propano, CSA B149.1 según corresponda, incluido lo siguiente:

Para un asador montado sobre ruedas, la instalación debe hacerse con un conector que cumpla con la norma para conectores de aparatos de gas móviles, ANSI Z21.69/CSA 6.16 y un dispositivo de desconexión rápida que cumpla con la norma para dispositivos de desconexión rápida para usar con combustible gaseoso, ANSI Z21.4/CSA 6.9. Al instalar el asador con ruedas y una manguera de desconexión rápida, se deben proporcionar medios adecuados para limitar el movimiento del asador sin depender del conector y del dispositivo de desconexión rápida o sus tuberías asociadas para limitar el movimiento del asador. Se puede conectar un medio de sujeción a la parte vertical del bastidor de la base en la parte trasera del asador.

Se dispone de instrucciones de instalación detalladas del asador en el manual de operación del asador flexible por tandas (N/P de Duke 175500). Si falta este manual, debe solicitar uno usando la información de contacto de la parte inferior de esta página.

AVISO AL INSTALADOR:

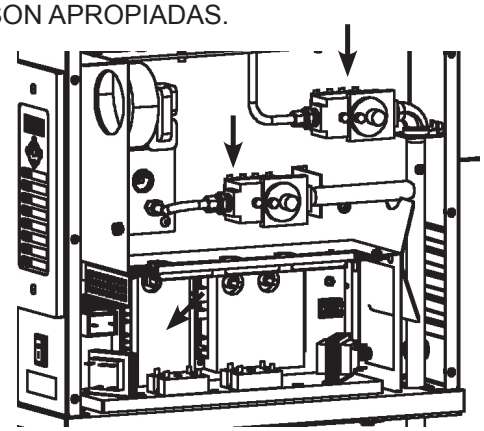
ESTE JUEGO DEBE INSTALARSE EN EL ASADOR FLEXIBLE POR TANDAS CUANDO LA PRESIÓN DEL GAS DE SUMINISTRO SEA MAYOR QUE 12" DE AGUA.

SE DEBE COMPROBAR LA PRESIÓN DEL GAS DE SIMINISTRO ANTES DE LA INSTALACIÓN. SI LA PRESIÓN ES MAYOR QUE 12" DE AGUA, SE DEBE INSTALAR Y AJUSTAR EL JUEGO DE ALTA PRESIÓN DE SUMINISTRO, N/P DE DUKE 175689, SEGÚN LAS INSTRUCCIONES DEL JUEGO, PARA UNA PRESIÓN DE SALIDA DE 7" DE AGUA.

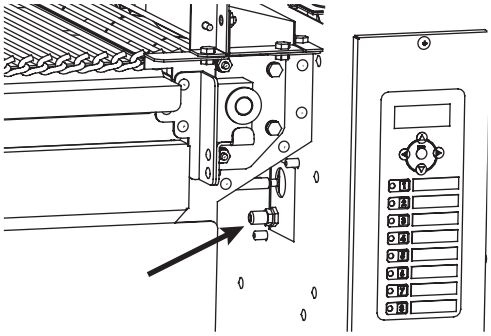
B. Procedimiento

1) DESENCHUFE EL ASADOR DE LA RED ELÉCTRICA. CIERRE LA VÁLVULA DE GAS PRINCIPAL Y DESCONECTE LA TUBERÍA DE SUMINISTRO.

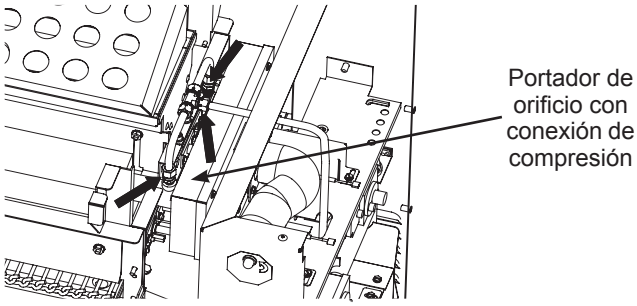
2) QUITE (2) VÁLVULAS DE GAS Y REEMPLÁCELAS POR VÁLVULAS NUEVAS. ASEGÚRESE DE APLICAR SELLANTE PARA ROSCAS A TODAS LAS CONEXIONES ROSCADAS DE TUBOS. QUITE EL MÓDULO DE ENCENDIDO DEL QUEMADOR INFERIOR Y REEMPLACE POR EL NUEVO MÓDULO. VEA EL DIAGRAMA DE CONEXIONES EN EL TABLERO DE ACCESO DE CONTROL PARA VER SI LAS CONEXIONES SON APROPIADAS.



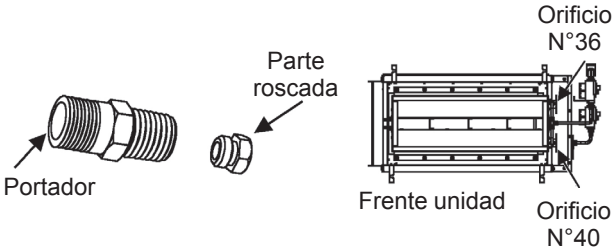
3) QUITE EL QUEMADOR INFERIOR (VEA EL MANUAL DE INSTALACIÓN/OPERACIONES) PARA TENER ACCESO A LA CAPERUZA DE LA VÁLVULA DE ORIFICIO. USE UN CUBO DE 1/2" PARA QUITAR LA CAPERUZA DE LA VÁLVULA DE ORIFICIO Y REEMPLACE POR LA NUEVA VÁLVULA DE ORIFICIO. ASEGÚRESE DE APLICAR SELLANTE A LAS ROSCAS DEL RETENEDOR DE LA VÁLVULA DE ORIFICIO. APRIETE LA VÁLVULA DE ORIFICIO A 60 LB-PULG (6.7 N.m.).



4) USE UNA LLAVE DE 5/8" PARA QUITAR LAS CONEXIONES DE COMPRESIÓN DE LA TUBERÍA DE GAS SUPERIOR (3 LUGARES) QUE CONECTAN AMBOS QUEMADORES DE RI.

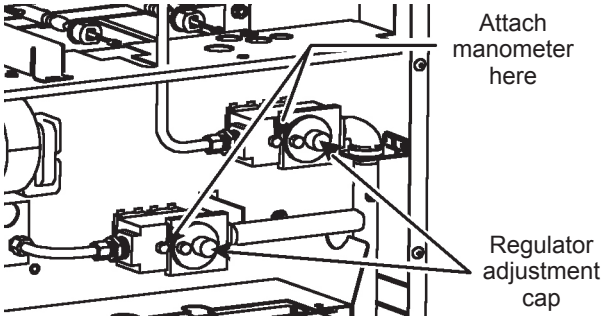


5) CON LAS TUBERÍAS DE GAS QUITADAS, QUITE LOS PORTADORES DE LOS ORIFICIOS DE LOS QUEMADORES CON UNA LLAVE DE 5/8". QUITE LA PARTE ROSCADA DEL ORIFICO DEL PORTADOR CON UNA LLAVE DE 3/8". REEMPLACE POR UNA NUEVA PARTE ROSCADA DEL ORIFICIO A 40 LB-PULG. VUELVA A MONTAR LAS CONEXIONES Y TUBERÍAS DE GAS.



6) CONECTE AL SERVICIO DE GAS Y ELÉCTRICO. SI SE TRATA DE UNA NUEVA INSTALACIÓN, DEBE SEGUIR LAS INSTRUCCIONES DE INSTALACIÓN Y OPERACIÓN DEL ASADOR FLEXIBLE POR TANDAS.

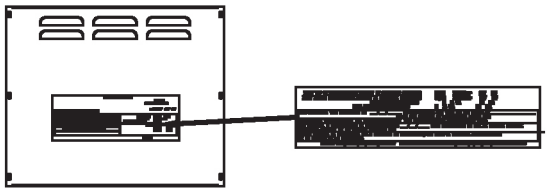
7) EN LA VÁLVULA SUPERIOR, QUITE EL TAPÓN DE TUBERÍA DE 1/8” Y EL MANÓMETRO CONECTADO. ENCIENDA EL ASADOR. USE UN DESTORNILLADOR PARA QUITAR LA TAPA RANURADA DEL REGULADOR Y AJÚSTELA HASTA QUE LA LECTURA DEL MANÓMETRO SEA DE 3,75” DE AGUA: VUELVA A COLOCAR LA TAPA. APAGUE EL ASADOR. QUITE EL MANÓMETRO Y REEMPLACE EL TAPÓN DE TUBERÍA. REPITA ESO PARA LA VÁLVULA INFERIOR.



8) COMPRUEBE SI HAY FUGAS EN TODAS LAS CONEXIONES CON EL ASADOR EN MARCHA.

NOTA: *LOS DETECTORES DE FUGAS ELECTRÓNICOS DARÁN FALSAS LECTURAS EN LA PARTE SUPERIOR DEL ASADOR CERCA DE LOS ORIFICIOS DE RI Y DE LAS TUBERÍAS DE GAS. ESTO SE DEBE A PRODUCTOS DE COMBUSTIÓN CERCA DEL CONDUCTO DE HUMOS. USE UN FLUIDO DE COMPROBACIÓN DE FUGAS O SOLUCIÓN JABONOSA EN ESTA ÁREA.*

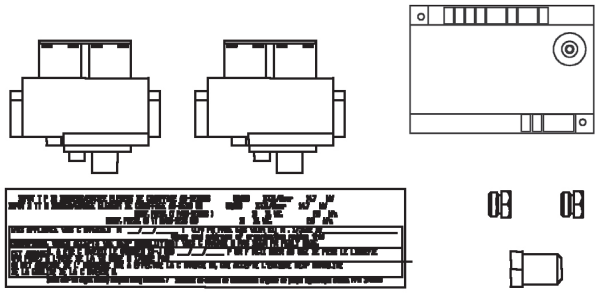
9) APLIQUE LA ETIQUETA DE NUEVOS VALORES NOMINALES SOBRE LA INFORMACIÓN DE VALORES NOMINALES EXISTENTE. RELLENE LAS ÁREAS EN BLANCO DE LA NUEVA ETIQUETA SEGÚN SE INDICA. LA CONVERSIÓN ESTÁ COMPLETA.



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INSTRUCTIONS POUR KIT DE CONVERSION AU GAZ NATUREL



RÔTISSOIRE À FOURNÉE VARIABLE KIT N° 175613

Composition du kit :

(2)	Robinet, mixte, gaz nat.	175531
(1)	Orifice calibré, brûleur infrarouge n°40 (brûleur avant)	175735
(1)	Orifice calibré, brûleur infrarouge n° 36 (brûleur arrière)	175736
(1)	Orifice calibré, brûleur inférieur n° 31	175734
(1)	Étiquette conversion de rôtissoire propane liq.>gaz nat.	175606
(1)	Module, allumage, brûleur inférieur, gaz naturel	175508

Accessoires nécessaires pour cette installation :

- Clé dynamométrique
- Pâte d'étanchéité pour raccords filetés adaptée au propane liquéfiée
- (2) Clés à tube ou (1) clé à tube et (1) clé à molette
- (1) Clé à fourche de 5/8 po
- (1) Douille de 1/2 po
- (1) Clé à fourche de 3/8 po
- Tournevis plat
- Clé Allen de 3/16 po
- Manomètre numérique ou Slack Tube® à raccord cannelé à filetage extérieur de 1/8 po.
- Liquide pour détection des fuites.

INSTRUCTIONS D'INSTALLATION

A. Personnel qualifié

Ces instructions d'installation sont destinées à un personnel d' installation et d'entretien qualifié uniquement. Une installation ou un entretien effectué par quiconque autre que du personnel qualifié peut entraîner des dégâts pour la rôtissoire et/ou des blessures pour l'opérateur.

Par personnel d'installation qualifié on entend les personnes ou entreprises qui, directement ou par l'intermédiaire d'un agent, se chargent et sont responsables de ce qui suit :

- Pose ou remplacement de canalisations de gaz, ou raccordement, installation, réparation ou entretien du matériel. Ce personnel doit avoir une solide expérience de ce genre de travail, être familiarisé avec toutes les précautions à prendre et avoir satisfait à toutes les conditions exigées par les autorités provinciales et locales compétentes. Voir : National Fuel Gas Code (Code national des combustibles gazeux), NFPA 54 (ANSI Z223.1).

L'installation doit être conforme aux codes locaux ou, en leur absence, au National Fuel Gas Code, ANSI Z223.1/NFPA 54 ou au Natural Gas and Propane Installation Code (Code des installations au gaz naturel et au propane), ACNOR B149.1 selon le cas, y compris :

Pour une rôtissoire montée sur des roulettes, l'installation doit être effectuée en utilisant un raccord conforme à la norme applicable aux raccords pour appareils à gaz mobiles, ANSI Z21.69/ACNOR 6.16 et un dispositif à débranchement rapide conforme à la norme applicable à ce type de raccord pour combustible gazeux, ANSI Z21.4/ACNOR 6.9. Lors de l'installation d'une rôtissoire à roulettes et tuyau à débranchement rapide, des dispositions suffisantes doivent être prises pour limiter le déplacement de la rôtissoire indépendamment du raccord et du dispositif à débranchement rapide ou de la tuyauterie associée. Il est possible de fixer un limiteur à la partie verticale du châssis à l'arrière de la rôtissoire.

Des instructions détaillées d'installation de la rôtissoire à fournée variable sont données dans son manuel d'installation et d'utilisation (n° réf. Duke 175500). Si on a perdu ce manuel, on peut en demander un autre en utilisant les informations sur les contacts figurant au bas de cette page.

AVIS À L'INSTALLATEUR :

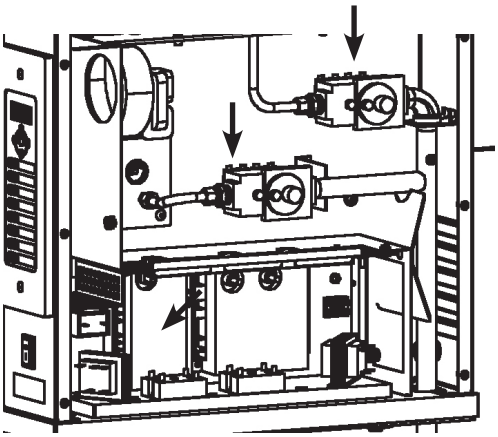
CET APPAREIL NE DOIT PAS ÊTRE RACCORDÉ À UNE ALIMENTATION EN GAZ DONT LA PRESSION DEPASSE 3,4 KPA (12 PO C.E.).

VÉRIFIER LA PRESSION DE L'ALIMENTATION EN GAZ AVANT DE PROCÉDER À L'INSTALLATION. SI ELLE DÉPASSE 3,4 KPA 12 PO C.E., INSTALLER LE KIT POUR HAUTE PRESSION D'ALIMENTATION, N° RÉF. DUKE 175689, ET LE RÉGLER POUR UNE PRESSION DE SORTIE DE 7 PO C.E.

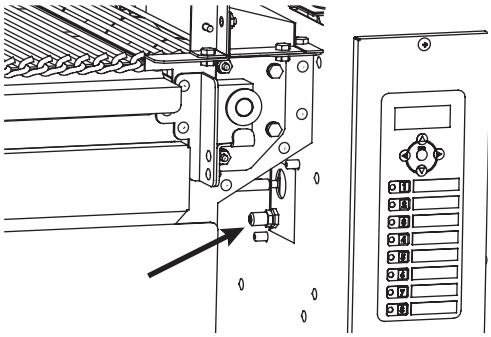
B. Marche à suivre

1) DÉBRANCHER LA RÔTISSOIRE DE LA PRISE DE COURANT. FERMER LA VANNE D'ALIMENTATION PRINCIPALE ET DÉBRANCHER LE TUYAU D'ALIMENTATION.

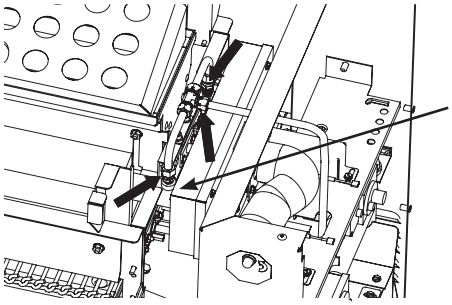
2) DÉPOSER LES (2) ROBINETS À GAZ ET LES REMPLACER PAR LES NOUVEAUX. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR TOUS LES JOINTS. DÉPOSER LE MODULE D'ALLUMAGE DU BRÛLEUR INFÉRIEUR ET LE REMPLACER PAR LE NOUVEAU. VOIR LE SCHÉMA DE CÂBLAGE SUR LE PANNEAU D'ACCÈS AUX COMMANDES POUR LES RACCORDEMENTS CORRECTS.



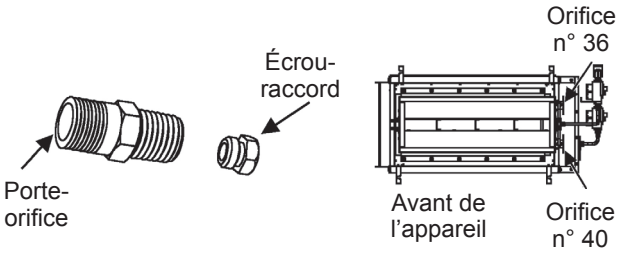
3) DÉPOSER LE BRÛLEUR INFÉRIEUR (VOIR LE MANUEL D'INSTALLATION/UTILISATION) POUR ACCÉDER AU CHAPEAU D'ORIFICE CALIBRÉ. ENLEVER LE CHAPEAU D'ORIFICE À L'AIDE D'UNE DOUILLE DE 1/2 PO ET REMPLACER L'ORIFICE PAR UN NEUF. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR LE FILETAGE DU PORTE-ORIFICE. SERRER L'ORIFICE À 6,7 N.m (60 PO-LBS.)



4) À L'AIDE D'UNE CLÉ DE 5/8 PO, RETIRER LES RACCORDS À COMPRESSION DE LA CANALISATION SUPÉRIEURE DE GAZ (3 ENDROITS) QUI RELIE LES DEUX BRÛLEURS INFRAROUGES.

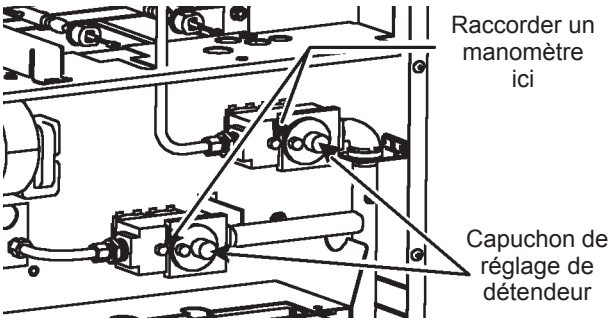


5) LES CANALISATIONS DE GAZ ÉTANT DÉBRANCHÉES, DÉPOSER LES PORTES-ORIFICE DES BRÛLEURS À L'AIDE D'UNE CLÉ DE 5/8 PO. RETIRER L'ÉCROU-RACCORD DU PORTE-ORIFICE À L'AIDE D'UNE CLÉ DE 3/8 PO. LE REMPLACER PAR LE NOUVEAU ET LE SERRER À 4,5 Nm (40 lb-po). RÉASSEMBLER LES RACCORDS ET LES CANALISATIONS DE GAZ.



6) RACCORDER L'APPAREIL À L'ARRIVÉE DE GAZ ET AU SECTEUR. S'IL S'AGIT D'UNE NOUVELLE INSTALLATION, SUIVRE LES INSTRUCTIONS D'INSTALLATION ET D'UTILISATION DE LA RÔTISSOIRE À FOURNÉE VARIABLE.

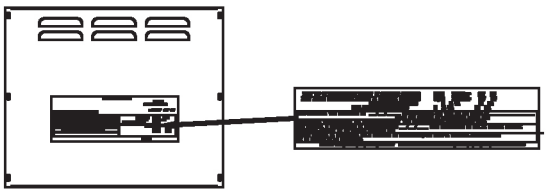
7) ENLEVER LE BOUCHON TUBULAIRE DE 1/8 PO DU ROBINET SUPÉRIEUR ET POSER UN MANOMÈTRE. ALLUMER LA RÔTISSOIRE. À L'AIDE D'UN TOURNEVIS, ENLEVER LE CAPUCHON À FENTE DU DÉTENDEUR ET RÉGLER CELUI-CI JUSQU'À CE QUE LE MANOMÈTRE INDIQUE 8 PO C.E. REMETTRE EN CAPUCHON EN PLACE. ÉTEINDRE LA RÔTISSOIRE. RETIRER LE MANOMÈTRE ET REMETTRE LE BOUCHON TUBULAIRE EN PLACE. RÉPÉTER L'OPÉRATION POUR LE ROBINET INFÉRIEUR.



8) LA RÔTISSOIRE ÉTANT EN MARCHE, CONTRÔLER L'ÉTANCHÉITÉ DE TOUS LES RACCORDS.

REMARQUE : *LES DÉCELEURS DE FUITES ÉLECTRONIQUES DONNERONT DES INDICATIONS ERRONÉES SUR LE DESSUS DE LA RÔTISSOIRE PRÈS DES ORIFICES CALIBRÉS DES BRÛLEURS INFRAROUGES ET DE LA TUYAUTERIE DE GAZ. CELA EST DÛ AUX PRODUITS DE COMBUSTION PRÉSENTS PRÈS DU TUYAU D'ÉVACUATION DES FUMÉES. UTILISER UN LIQUIDE DE CONTRÔLE D'ÉTANCHÉITÉ OU DE L'EAU SAVONNEUSE DANS CETTE ZONE.*

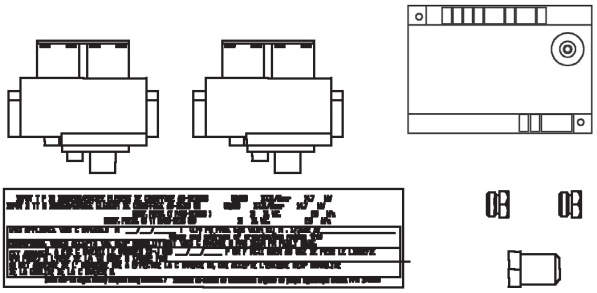
9) APPLIQUER LA NOUVELLE ÉTIQUETTE DE CARACTÉRISTIQUES NOMINALES PAR-DESSUS LES INFORMATIONS CORRESPONDANTES EXISTANTES. REMPLIR LES PARTIES VIDES DE L'ÉTIQUETTE COMME INDIQUÉ. LA CONVERSION EST ALORS TERMINÉE.



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INSTRUÇÕES DO KIT DE CONVERSÃO DE GÁS NATURAL



GRELHA MULTIPRODUTO KIT
Nº DA PEÇA 175613

Este kit contém:

(2)	Válvula, combinação, gás natural	175531
(1)	Orifício, queimador infravermelho nº 40 (queimador dianteiro)	175735
(1)	Orifício, queimador infravermelho nº 36 (queimador traseiro)	175736
(1)	Orifício, queimador inferior nº 31	175734
(1)	Etiqueta de conversão da grelha, gás LP>natural	175606
(1)	Módulo, acendimento, queimador inferior, gás natural	175508

Itens necessários para esta instalação:

- Torquímetro
- Selante de rosca para gás natural.
- (2) Grifos ou (1) Grifo e (1) Chave inglesa
- Chave de boca de 5/8"
- soquete de 1/2”
- Chave de boca de 3/8"
- Chave de fenda reta
- Chave sextavada de 3/16”
- Manômetro digital ou Slack Tube com rebarba de mangueira roscada de tubo macho de 1/8"
- Fluido de detecção de vazamento.

INSTRUÇÕES DE INSTALAÇÃO

A. Técnicos qualificados

Estas instruções de instalação devem ser usadas apenas por técnicos qualificados de instalação e serviço. A instalação ou serviço feito por outra pessoa que não um técnico qualificado pode causar danos à grelha e/ou ferimentos ao operador.

Técnicos de instalação qualificados são pessoas, firmas, companhias ou empresas que, seja pessoalmente ou através de um agente, executem e se responsabilizem pelo seguinte:

•Instalação ou substituição da tubulação de gás ou a conexão, instalação, conserto ou manutenção do equipamento, que tenham experiência com esse tipo de trabalho, conheçam todas as medidas de precaução necessárias e atendam a todos os requisitos exigidos pelos órgãos estaduais e municipais competentes. Veja: Código Nacional de Gás Combustível dos EUA NFPA 54 (ANSI Z223.1).

A instalação deve obedecer os códigos locais ou, na ausência de códigos locais, o Código Nacional de Gás Combustível dos EUA, ANSI Z223.1/NFPA 54, ou o Código de Instalação de Gás Natural ou Propano dos EUA, CSA B149.1, se for o caso, incluindo o seguinte:

No caso de grelhas montadas sobre rodízios, a instalação deverá ser feita com um conector que obedeça o Padrão de Conectores para Equipamento Móvel a Gás, ANSI Z21.69/CSA 6.16, e um dispositivo de desconexão rápida que atenda o Padrão de Dispositivos de Desconexão Rápida para Uso com Gás Combustível, ANSI Z21.4/CSA 6.9. Ao instalar a grelha com rodízios e mangueira de desconexão rápida, é preciso providenciar métodos adequados para limitar o movimento da grelha sem depender do conector e do dispositivo de desconexão rápida ou ainda da tubulação associada para limitar o movimento da grelha. Um elemento de restrição pode ser afixado na porção vertical da estrutura da base, na traseira da grelha.

O “Manual de instalação e operação da Grelha Multiproduto” (nº da peça Duke 175500) contém instruções detalhadas para a instalação da grelha. Se não encontrar o manual, peça um usando as informações de contato no final desta página.

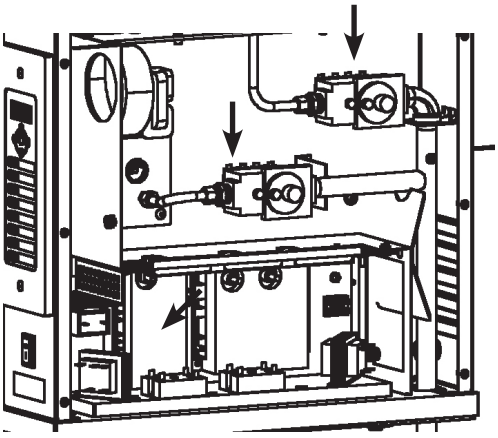
AVISO AO INSTALADOR:

ESTE APARELHO NÃO DEVE SER CONECTADO A UMA PRESSÃO DE FORNECIMENTO DE GÁS SUPERIOR A 30 CM C.A.
A pressão do fornecimento de gás deve ser verificada antes da instalação. Se a pressão de fornecimento for superior a 30 cm C.A., o KIT DE PRESSÃO ALTA DE FORNECIMENTO, nº da peça 175689 da Duke, deverá ser instalado e ajustado, de acordo com as instruções do kit, para uma pressão de saída de 18 cm C.A.

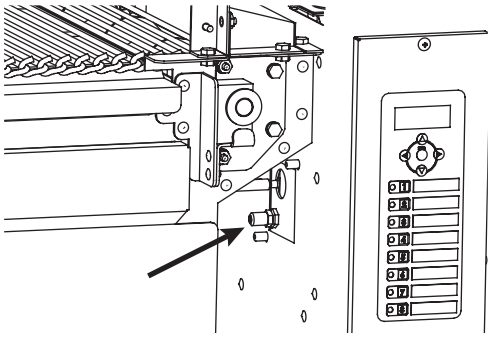
B. Procedimento

1) DESLIGUE A GRELHA DA TOMADA ELÉTRICA. FECHE A VÁLVULA PRINCIPAL E DESCONECTE A LINHA DE ALIMENTAÇÃO DE GÁS.

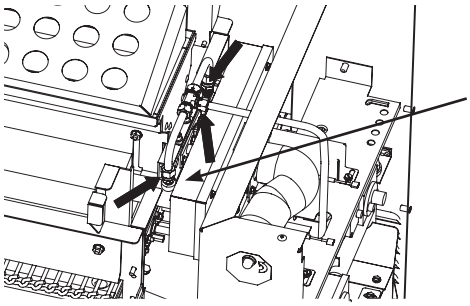
2) REMOVA (2) VÁLVULAS DE GÁS E SUBSTITUA-AS POR VÁLVULAS NOVAS. LEMBRE-SE DE APLICAR SELANTE DE ROSCA EM TODAS AS CONEXÕES ROSCADAS DOS TUBOS. REMOVA O MÓDULO DE ACENDIMENTO DO QUEIMADOR INFERIOR E SUBSTITUA-O POR UM MÓDULO NOVO. CONSULTE O DIAGRAMA ELÉTRICO NO PAINEL DE ACESSO DO CONTROLE PARA VER AS CONEXÕES CERTAS.



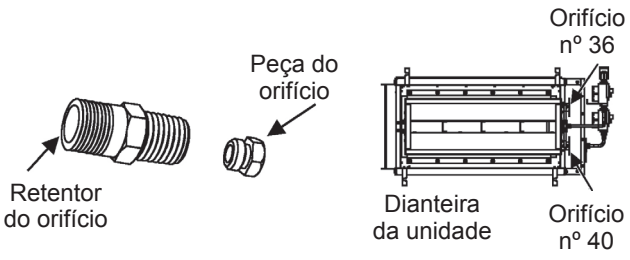
3) REMOVA O QUEIMADOR INFERIOR (VEJA O MANUAL DE INSTALAÇÃO/OPERAÇÕES) PARA ACESSAR A TAMPA DO ORIFÍCIO. USANDO UM SOQUETE DE 1/2", REMOVA A TAMPA DO ORIFÍCIO E COLOQUE O NOVO ORIFÍCIO. LEMBRE-SE DE APLICAR O SELANTE DE ROSCA NAS ROSCAS DO RETENTOR DO ORIFÍCIO. APLIQUE UM TORQUE DE 6,7 Nm (60 lbs).



5) COM UMA CHAVE DE 5/8”, REMOVA OS ENCAIXES DE COMPRESSÃO DA TUBULAÇÃO DE GÁS SUPERIOR (3 PONTOS) QUE CONECTAM OS DOIS QUEIMADORES INFRAVERMELHOS.

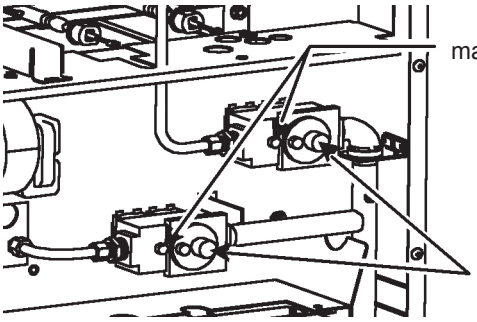


5) COM OS TUBOS DE GÁS REMOVIDOS, RETIRE OS RETENTORES DOS ORIFÍCIOS DOS QUEIMADORES COM UMA CHAVE DE 5/8”. REMOVA A PEÇA DO ORIFÍCIO DO RETENTOR COM UMA CHAVE DE 3/8”. SUBSTITUA-A POR UMA NOVA PEÇA DO ORIFÍCIO DO KIT E APERTE COM UM TORQUE DE 40 pol-lb. REMONTE OS ENCAIXES E TUBOS DE GÁS.



6) CONECTE À REDE DE GÁS E ELETRICIDADE. SE ESTA FOR UMA INSTALAÇÃO NOVA, SIGA AS INSTRUÇÕES DE INSTALAÇÃO E OPERAÇÃO DA GRELHA MULTIPRODUTO.

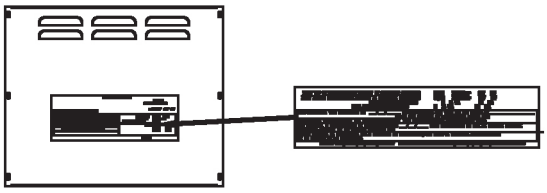
7) NA VÁLVULA SUPERIOR, RETIRE O BUJÃO DO TUBO DE 1/8" E O MANÔMETRO. LIGUE A GRELHA. COM UMA CHAVE DE FENDA, RETIRE A TAMPA FENDIDA DO REGULADOR E AJUSTE ATÉ QUE O VISOR DO MANÔMETRO ACUSE 9,50 cm C.A. DESLIGUE A GRELHA. RETIRE O MANÔMETRO E RECOLOQUE O BUJÃO DO TUBO. REPITA O MESMO PROCEDIMENTO COM A VÁLVULA INFERIOR.



8) COM A GRELHA LIGADA, EXAMINE TODOS OS ENCAIXES PARA VER SE HÁ VAZAMENTOS.

OBSERVAÇÃO: *OS DETECTORES ELETRÔNICOS DE VAZAMENTO PRODUZIRÃO LEITURAS FALSAS NA PARTE SUPERIOR DA GRELHA PERTO DOS ORIFÍCIOS DE INFRAVERMELHO E DA TUBULAÇÃO DE GÁS. ISSO É CAUSADO POR PRODUTOS DE COMBUSTÃO PRÓXIMOS À CHAMINÉ. USE UM FLUIDO DE VERIFICAÇÃO DE VAZAMENTO OU ÁGUA E SABÃO NESTA ÁREA.*

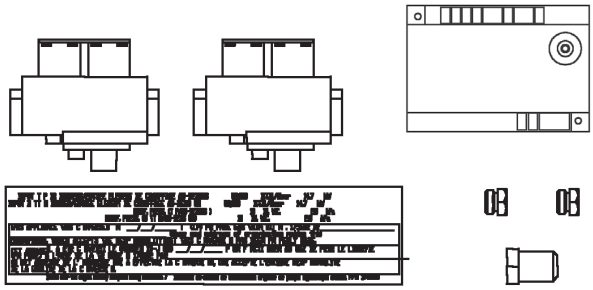
9) AFIXAR A NOVA ETIQUETA DE ESPECIFICAÇÕES SOBRE AS INFORMAÇÕES DE ESPECIFICAÇÕES EXISTENTES. PREENCHA AS ÁREAS EM BRANCO DA ETIQUETA NOVA COMO INDICADO. A CONVERSÃO ESTÁ TERMINADA.



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800-735-3853 • 314-231-1130 • Fax 314-231-5074
www.dukemfg.com

大然ガス変換キット説明書



フレキシブル バッチ ブロイラー**KIT P/N 175613**

キットの内容：

(2) バルブ、コンボ、天然ガス	175531
(1) オリフィス、赤外線バーナー#40mm（フロントバーナー）	175735
(1) オリフィス、赤外線バーナー#36mm（リアバーナー）	175736
(1) オリフィス、下部バーナー#31	175734
(1)ブロイラー変換ラベル LP> Nat.（プロパン>天然ガス）	175606
(1) モジュール、点火装置、下部バーナー、天然ガス	175508

本品の設置に必要な工具：

- トルクレンチ
- 天然ガス定格のスレッドシーラント。
- パイプレンチ2つ、またはパイプレンチ1つと可動レンチ1つ
- 5/8インチのオープンエンド・レンチ
- 1/2インチソケット
- 3/8インチのオープンエンド・レンチ
- マイナス ドライバ
- 3/16 六角レンチ
- 1/8インチの雄パイプスレッド・ホースバルブを備えた、デジタル圧力計またはスラックチューブ圧力計。
- リーク検出溶液。

設置方法

A. 正規技術者

ここに記載されている設置方法は、設置点検を行う正規技術者のために作成されたものです。正規技術者以外が設置や保守作業を行うと、ブロイラーの故障や負傷事故の原因となります。

正規技術者とは、以下の業務を専門とする会社にて、またはその会社を通して、作業員としての資格を有する人物を示します。

- ガス配管、機器の接続取付、修理保守の経験、および所定の注意事項に関する知識を有し、国や管轄地域の法令に準拠している。参照：業務用ガス基準 NFPA 54 (ANSI Z223.1)

設置は現地の規制に準拠する必要があります。現地国に規制がない場合は、『National Fuel Gas Code』のANSI Z223.1/NFPA 54、または『Natural Gas and Propane Installation Code』CSA B149 が適用されて、次の内容が含まれます。

キャスター付ブロイラーには、動式ガス器具の配管接続に関する『ANSI Z21.69/CSA 6.16』の基準に準拠した継手と、ガス燃料用迅速交換式装置に関する『ANSIZ21.4/CSA 6.9』の基準に準拠した迅速交換式装置を使用してください。キャスターと迅速交換式ホースを備えたブロイラーを設置する際は、コネクタ、迅速交換式装置、関連配管に依存することなく、ブロイラーが動かないように適切な固定手段を講じてください。固定具は、ブロイラー後部の本体縦枠の垂直部分に取り付けることが可能です。

ブロイラー設置に関する詳細説明は、『フレキシブルバッチ ブロイラーの設置と使用説明書（Duke p/n 175500）』に記載されています。説明書が欠落している場合は、本ページの下部にある連絡先に請求してください。

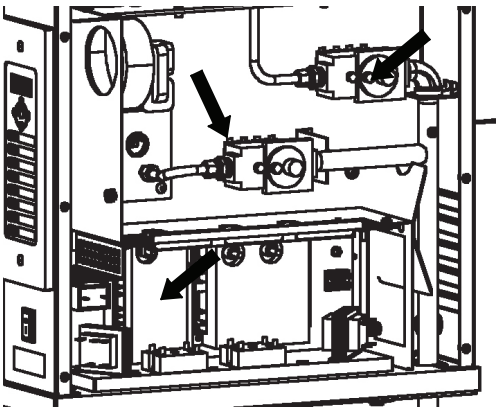
設置者への注意：

本装置は、½ **PSI (12″ W.C.)** 以上のガス配管に接続しないでください。
取り付け前にガス供給圧力を確認する必要があります。供給圧力が**12″ W.C.**を超える場合は、**HIGH SUPPLY PRESSURE KIT, Duke P/N 175689** を設置し、キットの説明書に従って出力圧力を **7″ W.C.**に調節する必要があります。

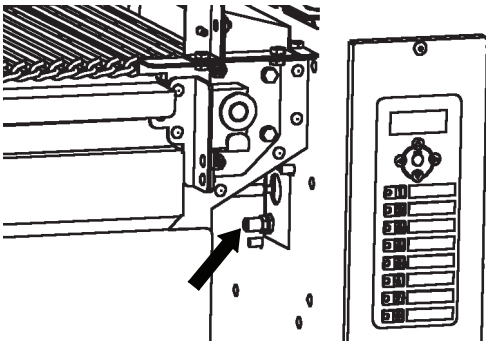
B. 手順

1) ブロイラーのプラグを電源から抜きます。主要ガス配管バルブを閉じて配管を取り外します。

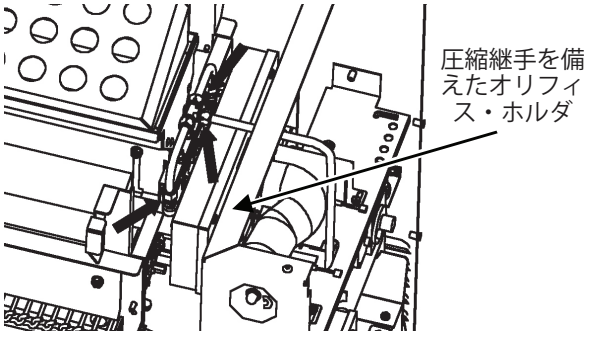
2) 2つのガスバルブを取り外し、新規バルブと交換します。パイプ・スレッド接続部分すべてにスレッド・シーラントを必ず適用してください。下部バーナーの点火装置モジュールを取り外し、新しいモジュールと交換します。コントロールアクセスパネルの配線図を見て、正しく接続してください。



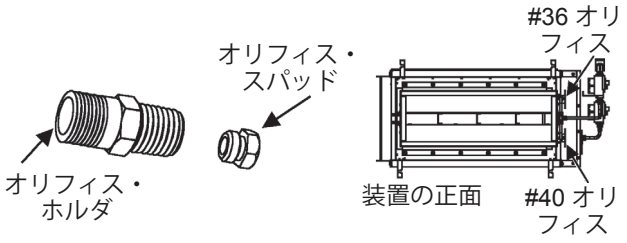
3) 下部バーナーを取り外し（設置/使用説明書を参照）、オリフィスフードにアクセスできるようにします。1/2インチのソケットを使用してオリフィスフードを取り外し、新しいオリフィスと交換します。オリフィス・ホルダのスレッド部分にスレッド・シーラントを必ず適用してください。オリフィスのトルクを60インチポンド（6.7 Nm）に調節してください。



4) 5/8インチのレンチを使用して、両方のバーナーに接続している上部のガス管圧縮継手（3箇所）を取り外します。

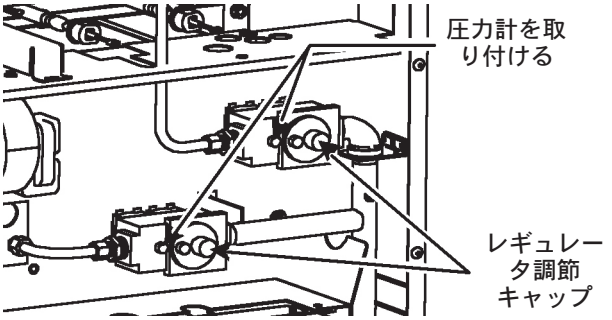


5) ガス配管を外すと、5/8インチのレンチを使用してオリフィス・ホルダをバーナーから外します。3/8インチのレンチを使用して、ホルダからオリフィス・スパッドを取り外します。キットの新しいオリフィススパッドと交換し、40インチポンドに固定します。継手をガス配管に再び取り付けます。



6) ガスと電気に接続します。新しい装置を取り付ける場合は、『フレキシブルバッチブロイラーの設置と使用説明』に従ってください。

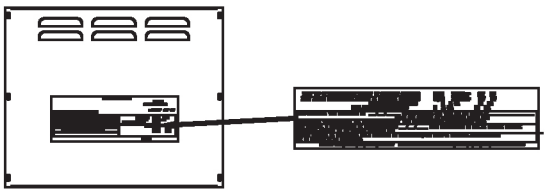
7) 上部バルブから、1/8インチのパイプ・プラグと取り付け済みの圧力計を外します。ブロイラーをオンにします。ドライバを使ってレギュレータからスロット入りのキャップを取り外し、圧力計が「3.75” W.C. 」を示すように調節して、キャップを交換します。ブロイラーをオフにします。圧力計を外し、パイプ・プラグを再設置します。下部のバルブについても同様に行います。



8) ブロイラーを作動させて、すべての継手部分でリークがないか確認します。

注：*電気リーク検知器は、オリフィスとガス配管近くにある場合、ブロイラー上で不正確な数値を示すことがあります。これは燃料近くに可燃性製品があるためです。この箇所では、リーク検出溶液または洗剤水を使用してください。*

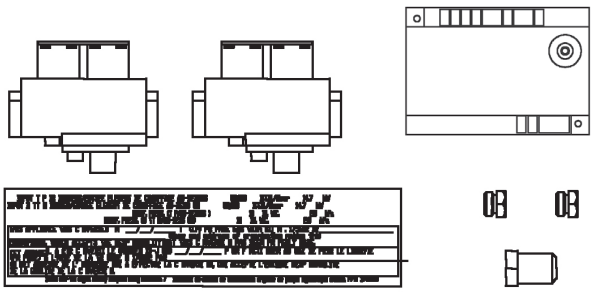
9) 既存の定格情報ではなく、新しい定格情報を記したタグを適用します。表示のとおり、新しいタグの空白部分を記入します。これで変換作業は終了です。



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天然氣更換組件說明



多用途批量烤爐組件料號175613

內含：

(2)	天然氣組合氣閥	175531
(1)	噴嘴、#40紅外爐頭（前爐頭）	175735
(1)	噴嘴、#36紅外爐頭（後爐頭）	175736
(1)	噴嘴、#31下爐頭	175734
(1)	烤爐更換標籤 液化氣>天然氣	175606
(1)	模件、點火器、下爐頭、天然氣	175508

安裝需用工具

- 扭矩扳手。
- 適用於天然氣的螺紋密封膠。
- 兩個管道扳手，或者1個管道扳手和1個可調節扳手
- 5/8英寸開口扳手
- 1/2套筒扳手
- 3/8英寸開口扳手
- 一字型改錐
- 3/16六角扳手
- 數位壓力計或帶有1/8英寸外螺紋軟管接頭的松管壓力計。
- 檢漏液。

安裝說明

A. 專業人員

這些安裝說明僅供專業安裝和維修人員使用。由非專業人員進行安裝或維修可能損壞烤爐和/或傷害操作人員。

專業安裝人員可以是個人、公司或企業，他們親自或通過代理參與並負責：

- 安裝或更換煤氣管或接頭，安裝、修理或維護設備。他們在此類工作上擁有豐富的經驗，熟悉所有必需的預防措施，符合當地國家和地方當局的所有要求。參見：美國《國家燃氣規範》NFPA 54 (ANSI Z223.1)。

安裝必須符合當地標準，如果當地沒有標準，則必須符合適用的美國《國家燃氣規範》ANSI Z223.1/NFPA 54或《天然氣和丙烷安裝規範》CSA B149.1，包括：

對於安裝有輪腳的烤爐，必須使用符合《移動燃氣設備連接規範》ANSI Z21.69/CSA 6.16的插座和符合《與燃氣一起使用的快速斷開裝置規範》ANSI Z21.4/CSA 6.9的快速斷開裝置。當安裝帶有輪腳和快速斷開軟管的烤爐時，必須採取充分的措施來限制烤爐移動，不要依賴插座和快速斷開裝置或與其相關聯的管道來限制烤爐移動。可將烤爐後部基座框架的垂直部分固定以限制其移動。

烤爐安裝細節載於多用途批量烤爐安裝和操作手冊 (Duke p/n 175500)。如果本手冊遺失，請通過本頁底部的聯繫方式索取副本。

安裝人員須知：

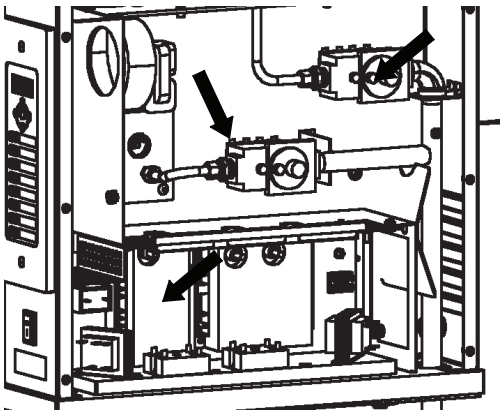
不得將此設備連接至壓力大於12英寸水柱的燃氣供應裝置。

在安裝之前必須檢查燃氣供應壓力。如果供應壓力大於12英寸水柱，應該根據相應說明安裝和調整高供應壓力元件Duke P/N 175689，將輸出壓力調整為7英寸水柱。

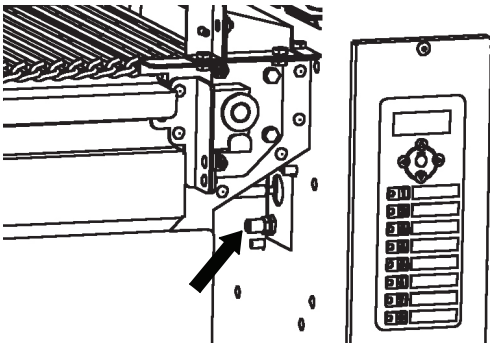
B. 步驟

1) 切斷烤爐電源。關閉供氣閥並斷開供氣線路。

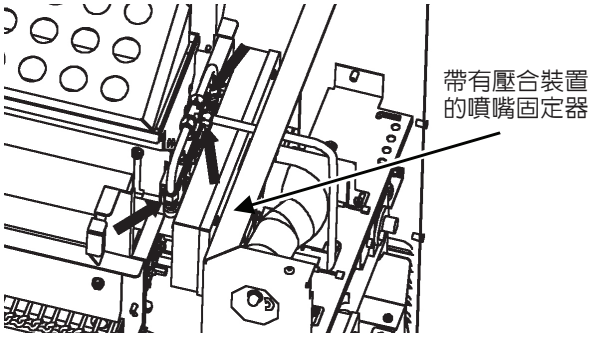
2) 卸下2個氣閥並更換為新的氣閥。確保使用了螺紋密封膠來密封所有管道的螺紋接頭。將下爐頭點火器模件更換為新模件。根據控制台上的佈線圖進行正確連接。



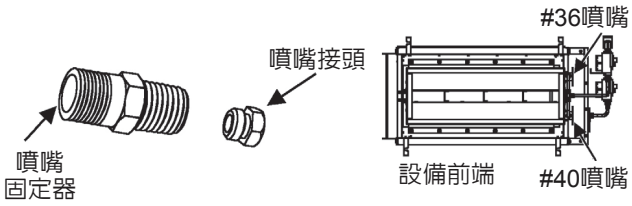
3) 卸下下爐頭（參見安裝/操作手冊），
以方便操作噴嘴防護罩。使用1/2英寸套筒扳手卸下噴嘴防護罩，並更換噴嘴。
確保使用了螺紋密封膠來密封噴嘴固定器螺紋。
噴嘴扭矩上緊至60磅・英寸(6.7 牛頓・米）。



4) 使用5/8英寸扳手卸下頂部連接兩個紅外爐頭的燃氣線路壓合裝置（3處）。

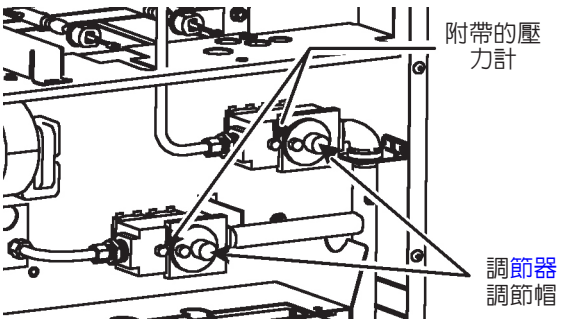


5) 卸下燃氣線路後，使用5/8英寸扳手從爐頭上卸下噴嘴固定器。使用3/8英寸扳手從固定器上卸下噴嘴接頭。安裝新的噴嘴接頭，擰緊至40英寸-磅。重新裝配壓合裝置和燃氣線路。



6) 連通氣源和電源。如果進行全新安裝，必須按照多用途批量烤爐安裝和操作說明進行操作。

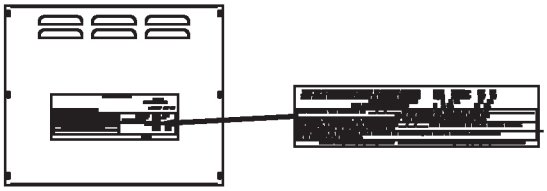
7) 在上氣閥上，卸下1/8英寸的管道插頭和附帶的壓力計。將烤爐調至“ON”。使用改錐從調節器上卸下帶槽的螺帽，調節氣壓，直至壓力計讀數為3.75英寸水柱。復位螺帽。將烤爐調至“OFF”。卸下壓力計並重定管道插頭。對底部氣閥重複上述操作。



8) 在烤爐運行時，檢查所有配合裝置是否存在洩漏。

注意：*在烤爐上方接近紅外噴嘴和燃氣管的地方，電子測漏器會顯示錯誤的讀數。這是由於煙道附近存在氣體燃燒產物而引起的。請在此區域使用檢漏液或肥皂液檢查。*

9) 在現有的額定值資訊之上貼上新的額定值標籤。根據說明，填寫新標籤上的空白區域。更換完畢。



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CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____ **SERIAL NUMBER** _____

DATE OF PURCHASE _____

DEALER _____ **TELEPHONE** _____

SERVICER _____ **TELEPHONE** _____

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TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

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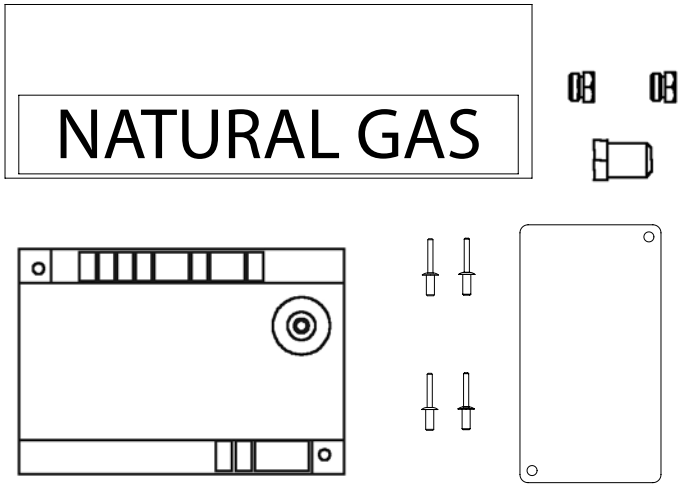
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Your Solutions Partner

Natural Gas Conversion Kit Instructions International

FLEXIBLE BATCH BROILER

KIT P/N 176579



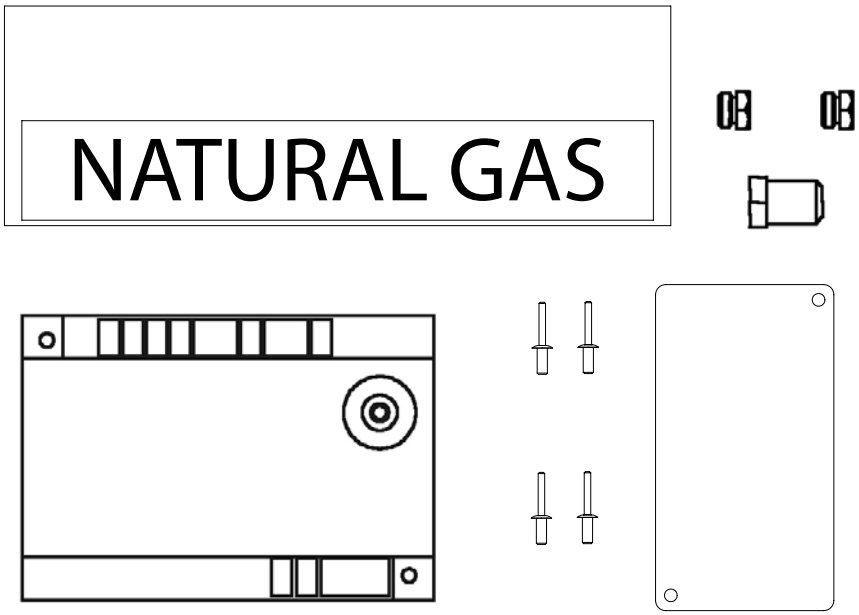
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P/N 176580A
01/21/2015

NATURAL GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 17657779

This kit contains:

(1)	Orifice, IR Burner 2.35mm (Front Burner)	175814
(1)	Orifice, IR Burner 2.50mm (Rear Burner)	175815
(1)	Orifice, Lower Burner 3.05mm	175823
(1)	Broiler Conversion Data Plate	176530
(1)	Module, Ignition, Lower Burner, Natural Gas	175877
(1)	Label, Natural Gas	175775
(4)	Rivets	168106

Items required for this installation:

- Torque Wrench
- Rivet Installation Tool
- Thread sealant rated for Natural Gas and LP gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 9/16 Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Small Straight blade screw driver
- Phillips Head screw driver
- 3/16" Hex key wrench
- #30 Drill Bit
- Digital or slack tube manometer with 1/8” male pipe thread hose barb
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

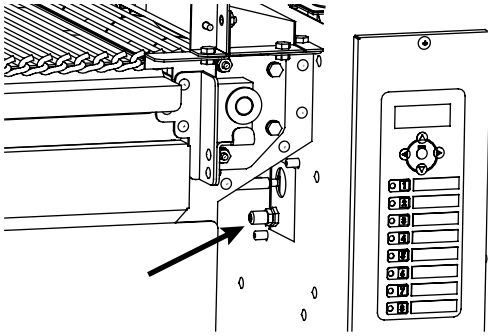
These installation instructions are for the use of Duke authorized service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information at the end of this manual.

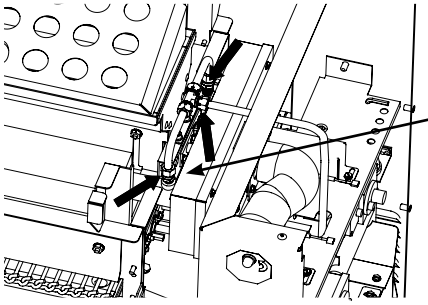
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

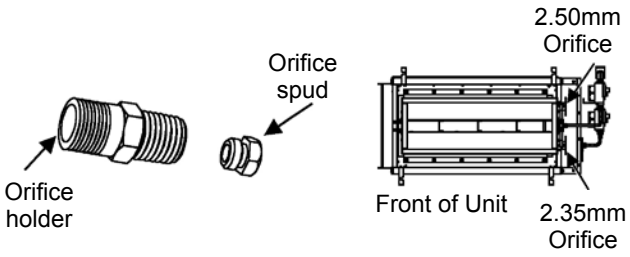
2) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 6.7 N.m. (60 IN LBS).



3) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

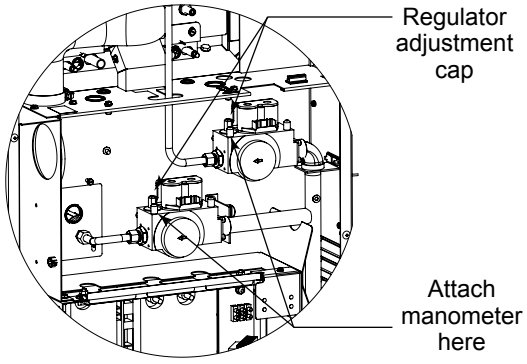


4) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 4.5 N.m. (40 in-lb.) REASSEMBLE FITTINGS AND GAS LINES.



5) CONNECT TO GAS AND ELECTRICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

6) ON UPPER VALVE, OPEN THE MANIFOLD PRESSURE TAP AND ATTACH MANOMETER. SWITCH BROILER "ON". WITH THE HEX KEY WRENCH ADJUST UNTIL MANOMETER READING IS 9.34mbar (3.75" W.C.). SHUT BROILER "OFF". REMOVE MANOMETER AND CLOSE THE PRESSURE TAP. REPEAT FOR BOTTOM VALVE.REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



7) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

8) CHECK THE LOWER BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. DRILL OUT THE RIVETS IN THE AIRSHUTTER OF THE BURNERS.

b. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

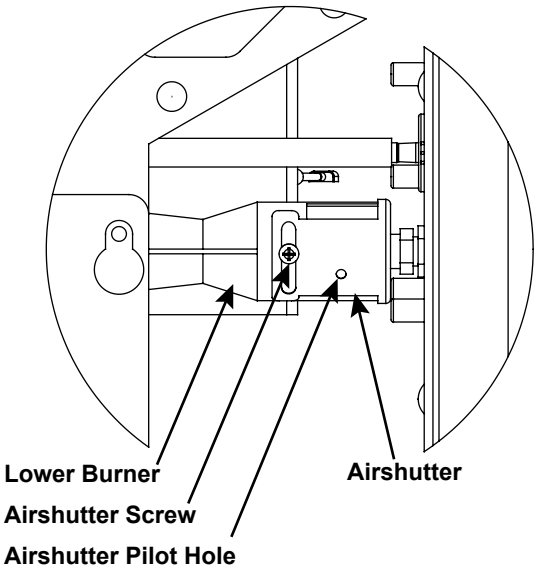
c. TIGHTEN THE AIRSHUTTER SCREW.

d. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/ OPERATIONS MANUAL)

e. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

f. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

g. REINSTALL THE BURNER INTO THE BROILER.



9) CHECK THE IR BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

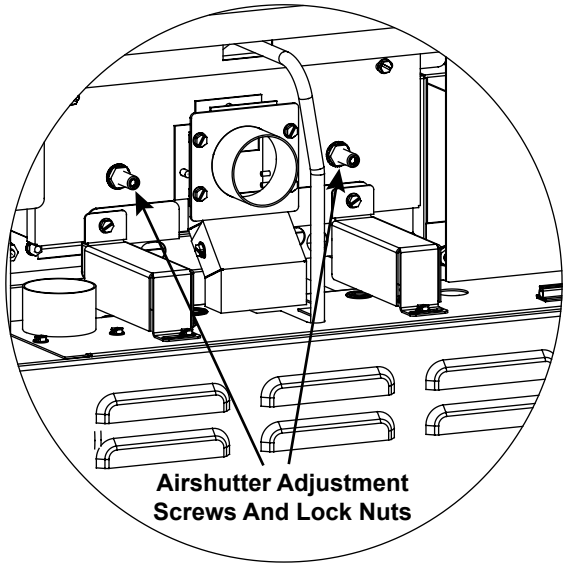
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16” WRENCH AND 3/16” HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

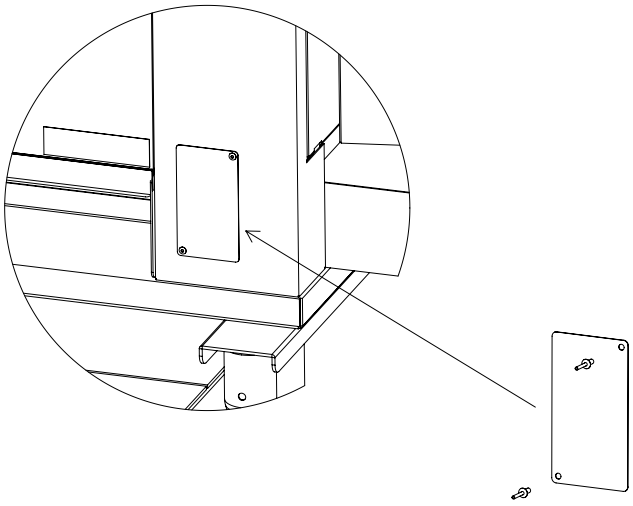
c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.



10) DRILL OUT RIVETS IN RATING TAG AND APPLY NEW RATINGS TAG OVER EXISTING TAG. USE SUPPLIED RIVETS TO RIVET THROUGH BOTH TAGS.



11) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS COMPLETE.

Your Solutions Partner

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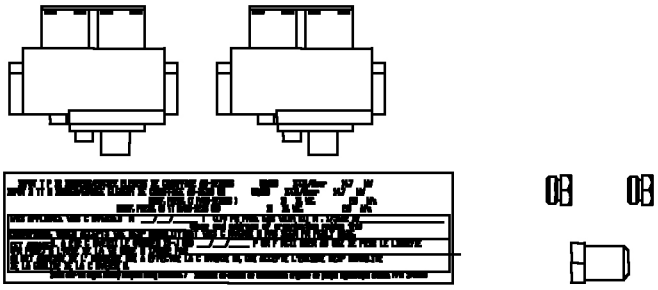
Natural Gas Conversion Kit Instructions US and Canada

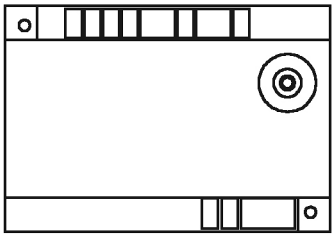
FLEXIBLE BATCH BROILER

KIT P/N 176538

ENGLISH

FRENCH





NATURAL GAS

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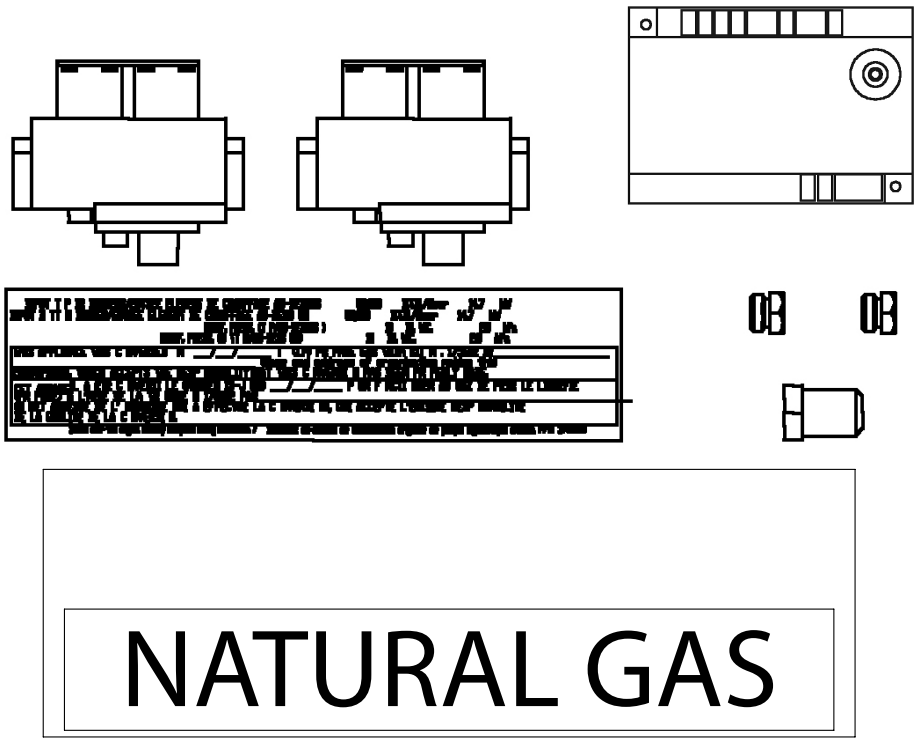
P/N 176541A
01/21/2015

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NATURAL GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 176538

This kit contains:

(2)	Valve, Combo, Natural Gas	175531
(1)	Orifice, IR Burner #40 mm (Front Burner)	175735
(1)	Orifice, IR Burner #36 mm (Rear Burner)	175736
(1)	Orifice, Lower Burner #30	176404
(1)	Broiler Conversion Label LP>Nat.	176539
(1)	Module, Ignition, Lower Burner, Natural Gas	175877
(1)	Label, Natural Gas	175775

Items required for this installation:

- Torque Wrench
- Thread sealant rated for LP gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Straight blade screw driver
- 3/16 hex key wrench
- Digital or slack tube manometer with 1/8” male pipe thread hose barb.
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual (Duke p/n 176483). If the manual is missing you must request one using the contact information at the end of this manual.

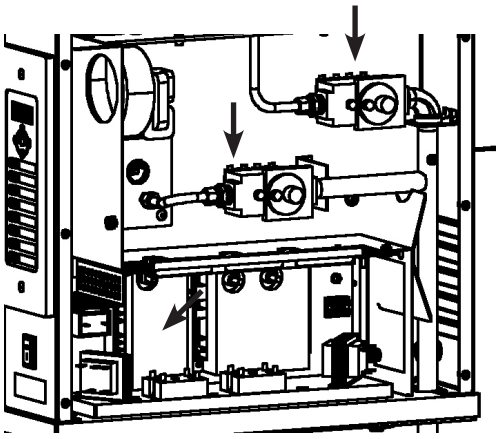
NOTICE TO INSTALLER:

THIS APPLIANCE SHALL NOT BE CONNECTED TO A GAS SUPPLY PRESSURE IN EXCESS OF 12" W.C. GAS SUPPLY PRESSURE MUST BE CHECKED PRIOR TO INSTALLATION. IF SUPPLY PRESSURE IS IN EXCESS OF 12" W.C., THE HIGH SUPPLY PRESSURE KIT, DUKE P/N 175689 SHALL BE INSTALLED AND ADJUSTED, PER KIT INSTRUCTIONS, FOR AN OUTLET PRESSURE OF 7" W.C.

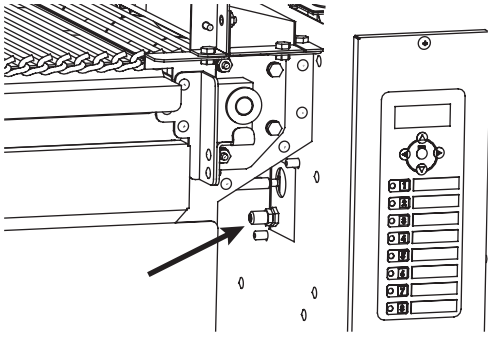
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

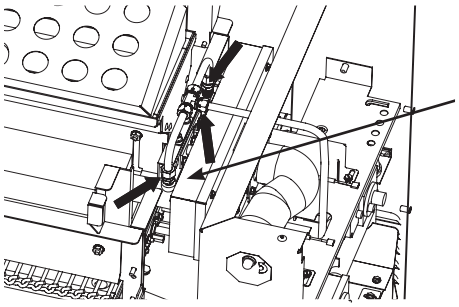
2) REMOVE (2) GAS VALVES AND REPLACE WITH NEW VALVES. BE SURE TO APPLY THREAD SEALANT TO ALL PIPE THREAD CONNECTIONS. REMOVE LOWER BURNER IGNITION MODULE AND REPLACE WITH NEW MODULE. SEE WIRING DIAGRAM ON CONTROL ACCESS PANEL FOR PROPER CONNECTIONS.



3) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 60 IN LBS (6.7 N.m.).

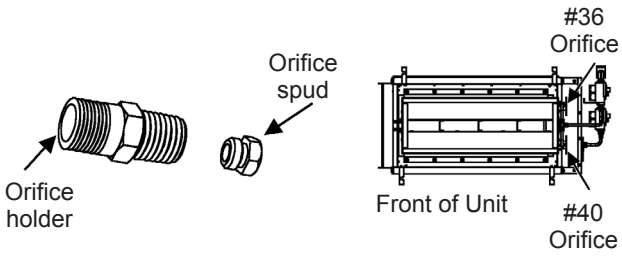


4) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.



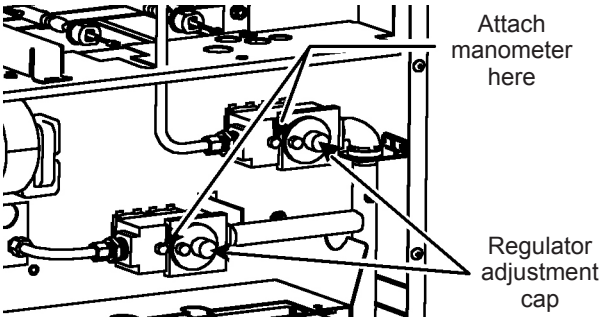
Orifice holder with compression fitting.

5) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8" WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8" WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 40 in-lb. REASSEMBLE FITTINGS AND GAS LINES.



6) CONNECT TO GAS AND ELECTICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

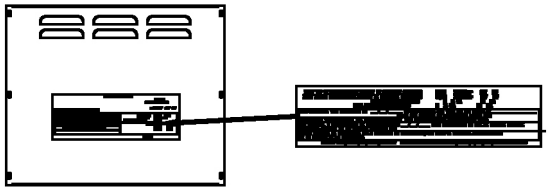
7) ON UPPER VALVE, REMOVE 1/8" PIPE PLUG AND ATTACHED MANOMETER. SWITCH BROILER "ON". WITH A SCREW DRIVER, REMOVE SLOTTED CAP FROM REGULATOR AND ADJUST UNTIL MANOMETER READING IS 3.75" W.C. REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



8) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

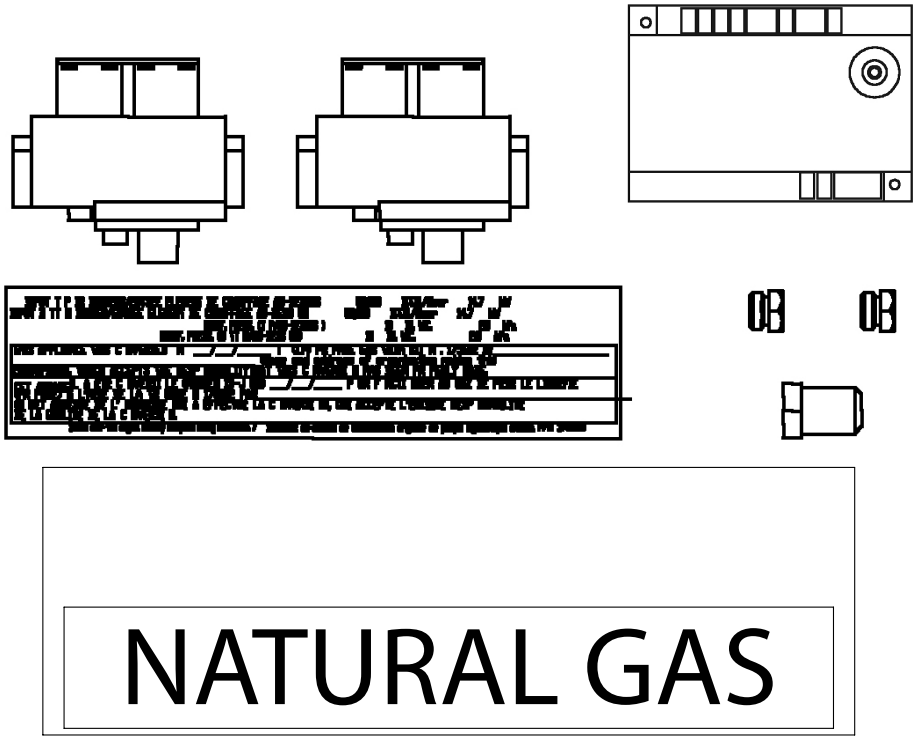
NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

9) APPLY NEW RATINGS TAG ON THE INSIDE OF THE LOWER ELECTRICAL ENCLOSURE COVER. APPLY IN ANY OPEN AREA.



10) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS NOW COMPLETE.

INSTRUCTIONS POUR KIT DE CONVERSION AU GAZ NATUREL



RÔTISSOIRE À FOURNÉE VARIABLE KIT N° 176538

Composition du kit :

(2)	Robinet, mixte, Gaz naturel	175531
(1)	Orifice calibré, brûleur inf. n° 40 mm (brûleur avant)	175735
(1)	Orifice calibré, brûleur inf. n° 36 mm (brûleur arrière)	175736
(1)	Orifice calibré, brûleur inférieur n° 30	176404
(1)	Étiquette conversion de rôtissoire propane liq.>gaz nat.	176539
(1)	Module, allumage, brûleur inférieur, Gaz naturel	175508
(1)	Étiquette - Gaz naturel	176094

Accessoires nécessaires pour cette installation :

- Clé dynamométrique
- Pâte d'étanchéité pour raccords filetés adaptée au Gaz naturel
- (2) Clés à tube ou (1) clé à tube et (1) clé à molette
- (1) Clé à fourche de 5/8 po
- (1) Douille de 1/2 po
- (1) Clé à fourche de 3/8 po
- Tournevis plat
- Clé Allen de 3/16 po
- Manomètre numérique ou Slack Tube® à raccord cannelé à filetage extérieur de 1/8 po.
- Liquide pour détection des fuites.

INSTRUCTIONS D'INSTALLATION

A. Personnel qualifié

Ces instructions d'installation sont destinées à un personnel d' installation et d'entretien qualifié uniquement. Une installation ou un entretien effectué par quiconque autre que du personnel qualifié peut entraîner des dégâts pour la rôtissoire et/ou des blessures pour l'opérateur.

Par personnel d'installation qualifié on entend les personnes ou entreprises qui, directement ou par l'intermédiaire d'un agent, se chargent et sont responsables de ce qui suit :

- Pose ou remplacement de canalisations de gaz, ou raccordement, installation, réparation ou entretien du matériel. Ce personnel doit avoir une solide expérience de ce genre de travail, être familiarisé avec toutes les précautions à prendre et avoir satisfait à toutes les conditions exigées par les autorités provinciales et locales compétentes. Voir : National Fuel Gas Code (Code national des combustibles gazeux), NFPA 54 (ANSI Z223.1).

L'installation doit être conforme aux codes locaux ou, en leur absence, au National Fuel Gas Code, ANSI Z223.1/NFPA 54 ou au Natural Gas and Propane Installation Code (Code des installations au gaz naturel et au propane), ACNOR B149.1 selon le cas, y compris :

Pour une rôtissoire montée sur des roulettes, l'installation doit être effectuée en utilisant un raccord conforme à la norme applicable aux raccords pour appareils à gaz mobiles, ANSI Z21.69/ACNOR 6.16 et un dispositif à débranchement rapide conforme à la norme applicable à ce type de raccord pour combustible gazeux, ANSI Z21.4/ACNOR 6.9. Lors de l'installation d'une rôtissoire à roulettes et tuyau à débranchement rapide, des dispositions suffisantes doivent être prises pour limiter le déplacement de la rôtissoire indépendamment du raccord et du dispositif à débranchement rapide ou de la tuyauterie associée. Il est possible de fixer un limiteur à la partie verticale du châssis à l'arrière de la rôtissoire.

Des instructions détaillées d'installation de la rôtissoire à fournée variable sont données dans son manuel d'installation et d'utilisation (n° réf. Duke 176484). Si on a perdu ce manuel, on peut en demander un autre en utilisant les informations sur les contacts figurant au bas de cette page.

AVIS À L'INSTALLATEUR :

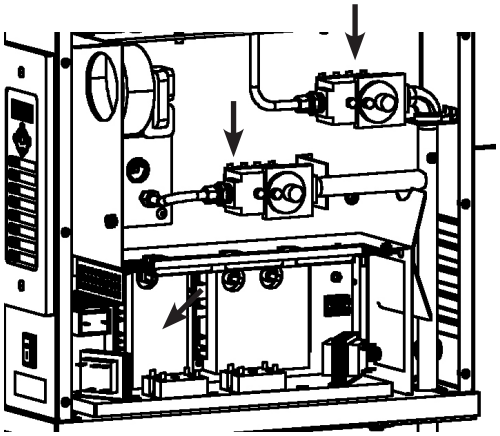
CET APPAREIL NE DOIT PAS ÊTRE RACCORDÉ À UNE ALIMENTATION EN GAZ DONT LA PRESSION DEPASSE 3,4 KPA (12 PO C.E.).

VÉRIFIER LA PRESSION DE L'ALIMENTATION EN GAZ AVANT DE PROCÉDER À L'INSTALLATION. SI ELLE DÉPASSE 3,4 KPA 12 PO C.E., INSTALLER LE KIT POUR HAUTE PRESSION D'ALIMENTATION, N° RÉF. DUKE 175689, ET LE RÉGLER POUR UNE PRESSION DE SORTIE DE 7 PO C.E.

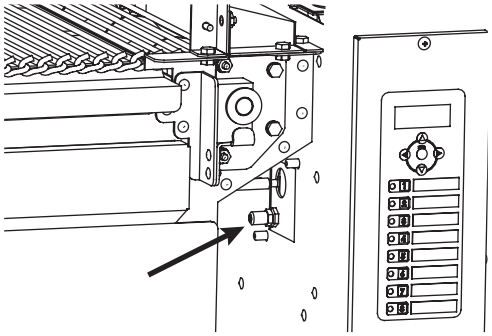
B. Marche à suivre

1) DÉBRANCHER LA RÔTISSOIRE DE LA PRISE DE COURANT. FERMER LA VANNE D'ALIMENTATION PRINCIPALE ET DÉBRANCHER LE TUYAU D'ALIMENTATION.

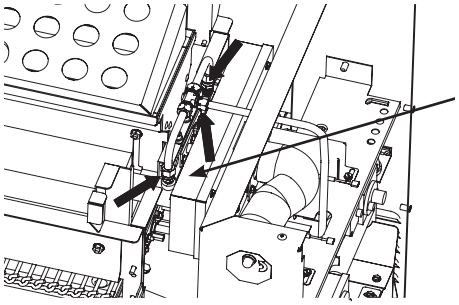
2) DÉPOSER LES (2) ROBINETS À GAZ ET LES REMPLACER PAR LES NOUVEAUX. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR TOUS LES JOINTS. DÉPOSER LE MODULE D'ALLUMAGE DU BRÛLEUR INFÉRIEUR ET LE REMPLACER PAR LE NOUVEAU. VOIR LE SCHÉMA DE CÂBLAGE SUR LE PANNEAU D'ACCÈS AUX COMMANDES POUR LES RACCORDEMENTS CORRECTS.



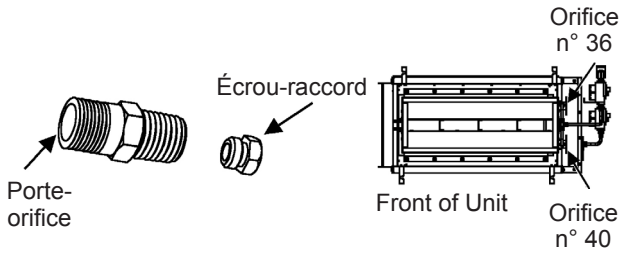
3) DÉPOSER LE BRÛLEUR INFÉRIEUR (VOIR LE MANUEL D'INSTALLATION/UTILISATION) POUR ACCÉDER AU CHAPEAU D'ORIFICE CALIBRÉ. ENLEVER LE CHAPEAU D'ORIFICE À L'AIDE D'UNE DOUILLE DE 1/2 PO ET REMPLACER L'ORIFICE PAR UN NEUF. SERRER L'ORIFICE À 6,7 N.m (60 PO-LBS.)



4) À L'AIDE D'UNE CLÉ DE 5/8 PO, RETIRER LES RACCORDS À COMPRESSION DE LA CANALISATION SUPÉRIEURE DE GAZ (3 ENDROITS) QUI RELIE LES DEUX BRÛLEURS INFRAROUGES.



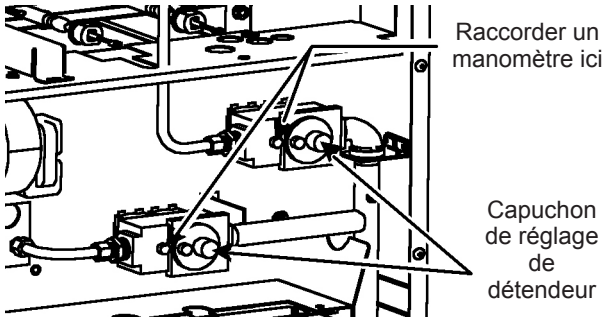
5) LES CANALISATIONS DE GAZ ÉTANT DÉBRANCHÉES, DÉPOSER LES PORTES-ORIFICE DES BRÛLEURS À L'AIDE D'UNE CLÉ DE 5/8 PO. RETIRER L'ÉCROU-RACCORD DU PORTE-ORIFICE À L'AIDE D'UNE CLÉ DE 3/8 PO. LE REMPLACER PAR LE NOUVEAU ET LE SERRER À 4,5 Nm (40 lb-po). RÉASSEMBLER LES RACCORDS ET LES CANALISATIONS DE GAZ.



6) RACCORDER L'APPAREIL À L'ARRIVÉE DE GAZ ET AU SECTEUR. S'IL S'AGIT D'UNE NOUVELLE INSTALLATION, SUIVRE LES INSTRUCTIONS D'INSTALLATION ET D'UTILISATION DE LA RÔTISSOIRE À FOURNÉE VARIABLE.

7) ENLEVER LE BOUCHON TUBULAIRE DE 1/8 PO DU ROBINET SUPÉRIEUR ET POSER UN MANOMÈTRE. ALLUMER LA RÔTISSOIRE. À L'AIDE D'UN TOURNEVIS, ENLEVER LE CAPUCHON À FENTE DU DÉTENDEUR ET RÉGLER CELUI-CI JUSQU'À CE QUE LE MANOMÈTRE INDIQUE 3.75 PO C.E. REMETTRE EN

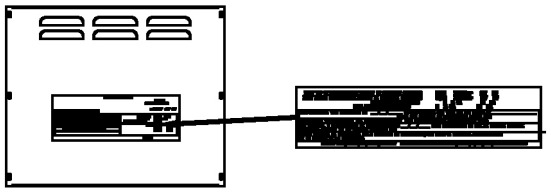
CAPUCHON EN PLACE. ÉTEINDRE LA RÔTISSOIRE. RETIRER LE MANOMÈTRE ET REMETTRE LE BOUCHON TUBULAIRE EN PLACE. RÉPÉTER L'OPÉRATION POUR LE ROBINET INFÉRIEUR.



8) LA RÔTISSOIRE ÉTANT EN MARCHE, CONTRÔLER L'ÉTANCHÉITÉ DE TOUS LES RACCORDS.

REMARQUE : *LES DÉCELEURS DE FUITES ÉLECTRONIQUES DONNERONT DES INDICATIONS ERRONÉES SUR LE DESSUS DE LA RÔTISSOIRE PRÈS DES ORIFICES CALIBRÉS DES BRÛLEURS INFRAROUGES ET DE LA TUYAUTERIE DE GAZ. CELA EST DÛ AUX PRODUITS DE COMBUSTION PRÉSENTS PRÈS DU TUYAU D'ÉVACUATION DES FUMÉES. UTILISER UN LIQUIDE DE CONTRÔLE D'ÉTANCHÉITÉ OU DE L'EAU SAVONNEUSE DANS CETTE ZONE.*

9) APPLIQUER UNE NOUVELLE ÉTIQUETTE DE CLASSEMENT À L'INTÉRIEUR DU COUVERCLE INFÉRIEUR DU BOÎTIER ÉLECTRIQUE. APPLIQUER DANS TOUTE ZONE OUVERTE.



10) APPLIQUER L'ÉTIQUETTE DU TYPE DE GAZ FOURNI PAR DESSUS L'ÉTIQUETTE EXISTANTE SUR LE STAND. LA CONVERSION EST DÉSORMAIS COMPLÈTE.

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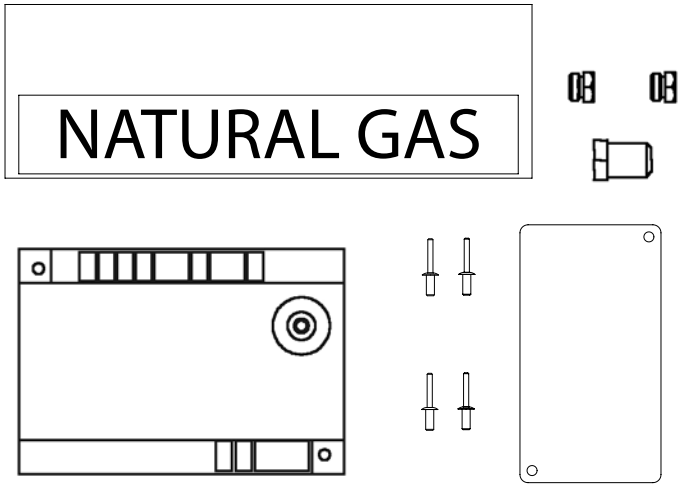
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Natural/G20 Gas Conversion Kit Instructions EMEA

FLEXIBLE BATCH BROILER

KIT P/N 176524



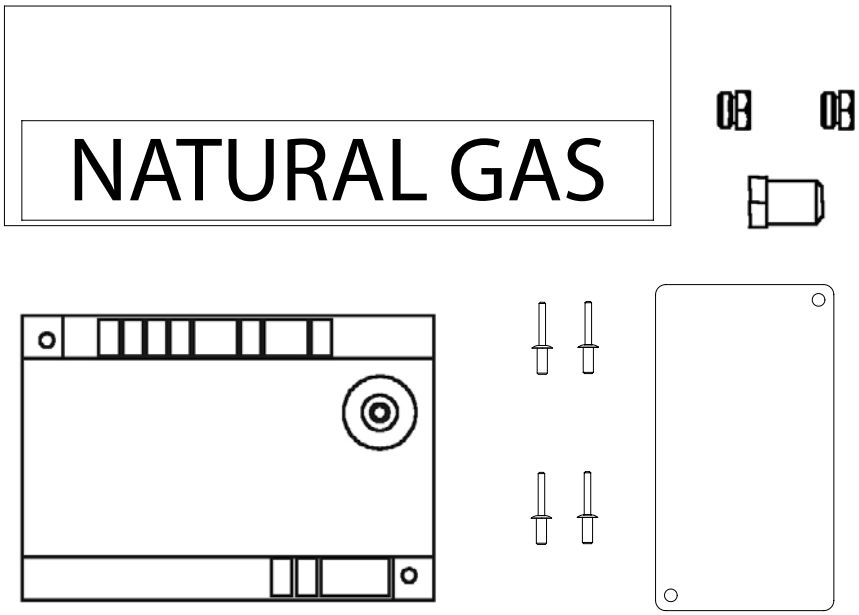
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P/N 176533A
01/21/2015

NATURAL/G20 GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 176524

This kit contains:

(1)	Orifice, IR Burner 2.35mm (Front Burner)	175814
(1)	Orifice, IR Burner 2.50mm (Rear Burner)	175815
(1)	Orifice, Lower Burner 3.05mm	175823
(1)	Broiler Conversion Data Plate	176532
(1)	Module, Ignition, Lower Burner, Natural Gas	175877
(1)	Label, Natural Gas	175775
(4)	Rivets	168106

Items required for this installation:

- Torque Wrench
- Rivet Installation Tool
- Thread sealant rated for Natural Gas and LP gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 9/16 Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Small Straight blade screw driver
- Phillips Head screw driver
- 3/16" Hex key wrench
- #30 Drill Bit
- Digital or slack tube manometer with 1/8” male pipe thread hose barb
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

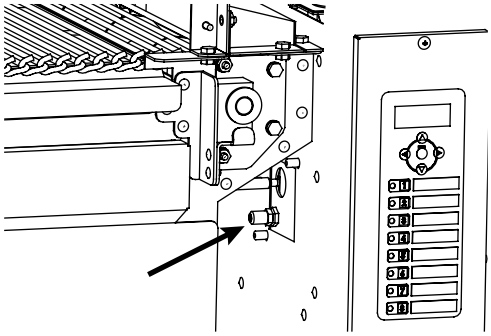
These installation instructions are for the use of Duke authorized service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information at the end of this manual.

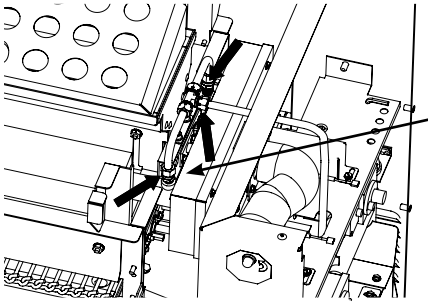
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

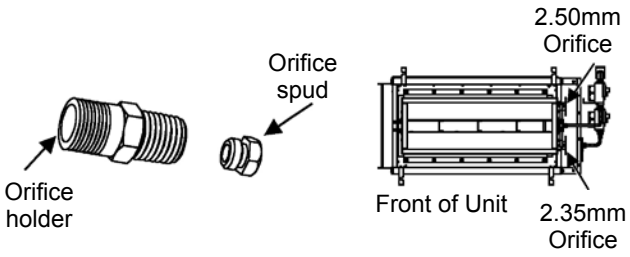
2) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 6.7 N.m. (60 IN LBS).



3) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

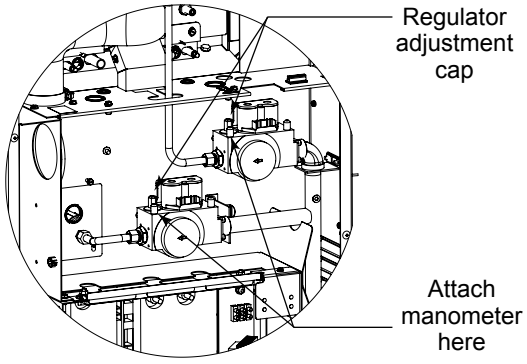


4) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 4.5 N.m. (40 in-lb.) REASSEMBLE FITTINGS AND GAS LINES.



5) CONNECT TO GAS AND ELECTRICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

6) ON UPPER VALVE, OPEN THE MANIFOLD PRESSURE TAP AND ATTACH MANOMETER. SWITCH BROILER "ON". WITH THE HEX KEY WRENCH ADJUST UNTIL MANOMETER READING IS 9.34mbar (3.75" W.C.). SHUT BROILER "OFF". REMOVE MANOMETER AND CLOSE THE PRESSURE TAP. REPEAT FOR BOTTOM VALVE.REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



7) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

8) CHECK THE LOWER BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. DRILL OUT THE RIVETS IN THE AIRSHUTTER OF THE BURNERS.

b. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

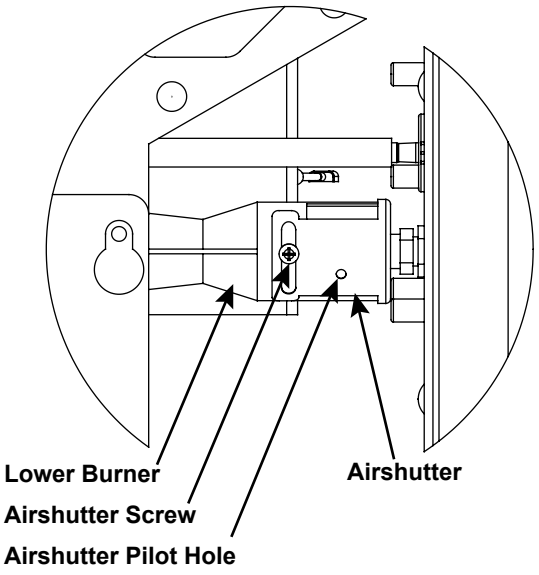
c. TIGHTEN THE AIRSHUTTER SCREW.

d. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/ OPERATIONS MANUAL)

e. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

f. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

g. REINSTALL THE BURNER INTO THE BROILER.



9) CHECK THE IR BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

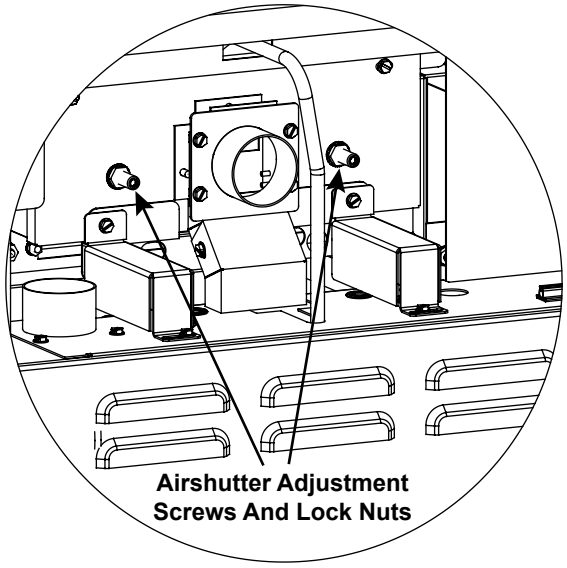
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16” WRENCH AND 3/16” HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

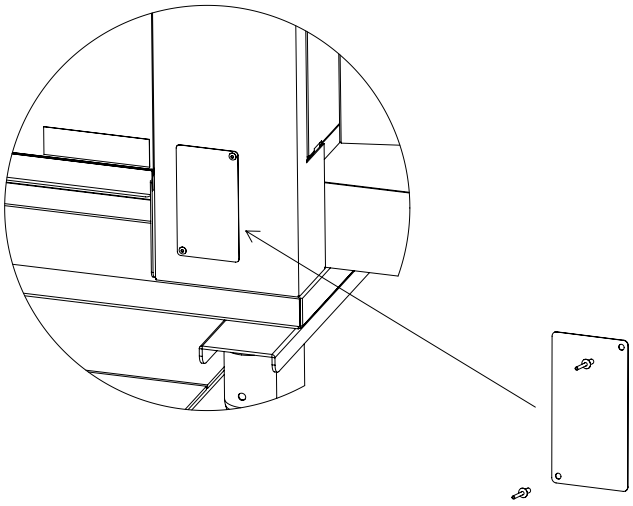
c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.



10) DRILL OUT RIVETS IN RATING TAG AND APPLY NEW RATINGS TAG OVER EXISTING TAG. USE SUPPLIED RIVETS TO RIVET THROUGH BOTH TAGS.



11) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS COMPLETE.

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INSTALLATION INSTRUCTIONS

NATURAL GAS HIGH ALTITUDE LOWER BURNER UPGRADE KIT INSTRUCTIONS FOR USE ON DUKE MODELS: FBB-NO-120 AND FBB-NC-120

KIT 600345

Items required for this installation:

- 1/2" Deep well socket and ratchet or 1/2" wrench
- 5/8" Deep well socket and ratchet or 5/8" wrench
- 7/16" Wrench
- 11/32" Wrench
- Cross tip screwdriver
- 3/8” Open End Wrench
- 3/16” Hex Key Wrench
- Straight Blade Screwdriver
- Digital or Slack Tube Manometer
- Power Drill
- #30 Drill Bit
- Rivet Installation Tool
- Gas Leak detection fluid.

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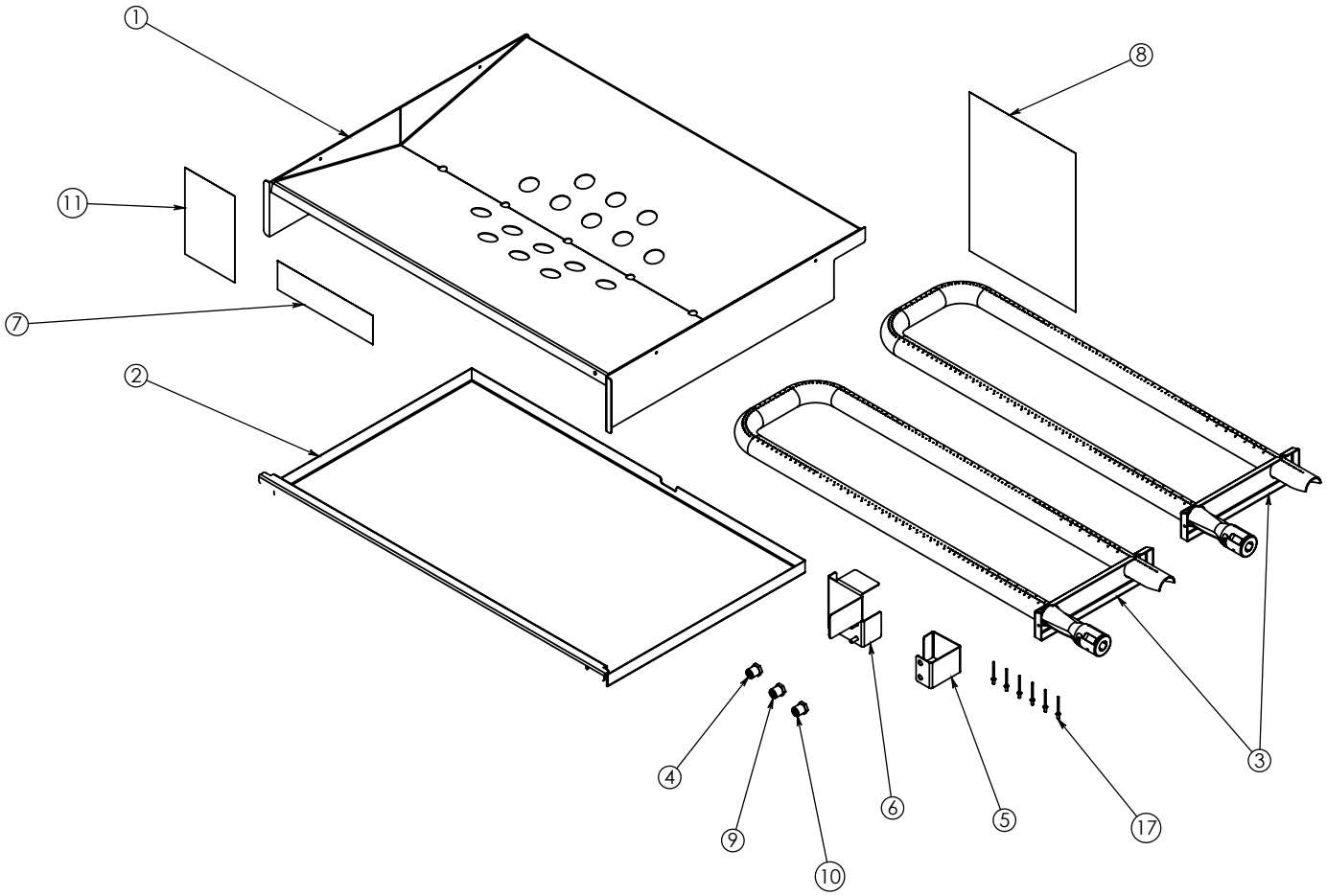
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P/N 176501A

Kit 600345



Kit 600345:			
Locator	**P/N**	**Description**	**Qty**
1	176397	WELDMENT, AGP., CENTER AIR FLOW	1
2	176398	DGP, CENTER AIR FLOW	1
3	176421	BURNER, LOWER, CENTER AIR FLOW	2
4	176404	ORIFICE, LOWER BURNER #30	1
5	176419	Stop, V-Pan, Universal	1
6	176420	Assy., Angle, Mtg.,	1
7	176500	LABEL, CONVERSION NAT. LBU	1
8	176501	INSTRU., NAT. LBU, HIGH ALT.	1
9	176485	ORIFICE, LOWER BURNER #25	1
10	176487	ORIFICE, LOWER BURNER #28	1
11	175942	LABEL, HIGH ALTITUDE	1
12	213042	Nut, 1/4-20 *	2
13	404886	Screw, #8 - 32 X 1/2" *	2
14	513158	Nut, #8-32 *	2
15	176470	Configuration/Recipes Sheet *	1
16	175556	Overlay, Name Plate *	1
17	168106	RIVET, 1/8" SS	6

CAUTION:

THESE INSTALLATION INSTRUCTIONS ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY.

INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN SEVERE PERSONAL INJURY TO THE OPERATOR OR OTHERS, DAMAGE TO THE BROILER, OR OTHER PROPERTY DAMAGE.

⚠ WARNING

FOR YOUR SAFETY, THESE INSTRUCTIONS MUST BE FOLLOWED TO MINIMIZE THE RISK OF FIRE OR EXPLOSION, ELECTRIC SHOCK, AND TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE.

A. QUALIFIED PERSONNEL:

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).
- The installation of electrical wiring from the electric meter, main control box or service outlet to the electrical appliance. Qualified installation personnel must be familiar with all precautions required and have complied with all requirements of state and local authorities having jurisdiction. See: National Electrical Code, ANSI/NFPA70.

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

- The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).
- The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information on the rear cover of these instructions.

B. PROCEDURE

⚠ WARNING

THIS CONVERSION KIT SHALL BE INSTALLED BY A QUALIFIED SERVICE AGENCY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. IF THE INFORMATION IN THESE INSTRUCTIONS IS NOT FOLLOWED EXACTLY, A FIRE, AN EXPLOSION OR PRODUCTION OF CARBON MONOXIDE MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE. THE QUALIFIED SERVICE AGENCY IS RESPONSIBLE FOR THE PROPER INSTALLATION OF THIS KIT. THE INSTALLATION IS NOT PROPER AND COMPLETE UNTIL THE OPERATION OF THE CONVERTED APPLIANCE IS CHECKED AS SPECIFIED IN THE MANUFACTURER'S INSTRUCTIONS SUPPLIED WITH THIS KIT.

NOTE:

INPUT RATING IS THE GAS-BURNING CAPACITY OF THE APPLIANCE IN BTU PER HOUR AS SPECIFIED BY THE MANUFACTURER. APPLIANCE INPUT RATINGS ARE BASED ON SEA LEVEL OPERATION AND NEED NOT TO BE CHANGED FOR THE OPERATION UP TO 2,000 FT (610 M) ELEVATION. FOR OPERATION AT ELEVATIONS ABOVE 2,000 FT (610 M), INPUT RATINGS SHOULD BE REDUCED AT THE RATE OF 4 PERCENT FOR EACH 1,000 FT (305 M) ABOVE SEA LEVEL OR AS SPECIFIED BY THE MANUFACTURER. FOR THE DUKE BROILER MODELS: FBB-NO-120 AND FBB-NC-120, NO AIR SHUTTER ADJUSTMENTS OR ORIFICE SIZE CHANGES ARE REQUIRED FOR AN ELEVATION RANGE OF 0-3,999 FT (0-1218 M). FOR OPERATION AT ELEVATIONS OF 4,000 FT (1219 M) AND HIGHER REFER TO THE CHART BELOW.

THIS CHART INDICATES IF AIRSHUTTER ADJUSTMENT AND ORIFICE SIZES CHANGES ARE REQUIRED FOR VARIOUS ALTITUDE RANGES. IT ALSO INDICATES THE CORRECT ORIFICES FOR THESE ALTITUDE RANGES.

Natural Gas

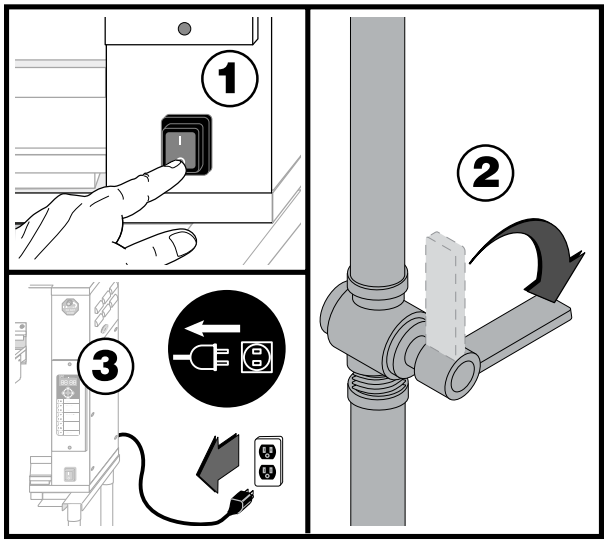
Elevation Range	Lower Burner Airshutter Adjustment Required	Lower Burner Orifice Size	IR Burner Airshutter Adjustment Required	Front IR Burner Orifice Size	Rear IR Burner Orifice Size
0 - 3999 Feet	No	#30	No Airshutter Adjustments or Orifice Size Changes Required		
4000 - 4999 Feet	No	#30	Yes	No Change	No Change
5000 - 7499 Feet	No	#28	Yes	#37	#34
7500+ Feet	No	#25	Yes	#34	#31

NOTE: THIS BROILER HAS BEEN PREVIOUSLY ADJUSTED FOR HIGH ALTITUDE. THE PROPER IR BURNER ORIFICE SIZES SHOULD ALREADY BE INSTALLED.

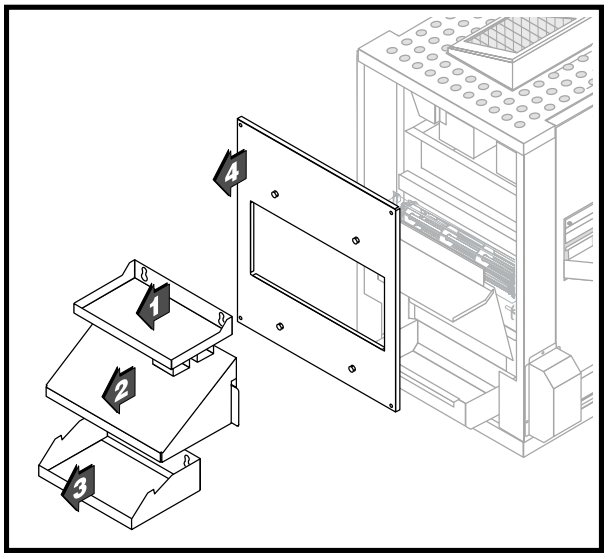
Orifice, Burner, Stop and Pans Installation:

CAUTION: THE GAS SUPPLY SHALL BE SHUT OFF PRIOR TO DISCONNECTING THE ELECTRICAL POWER, BEFORE PROCEEDING WITH THE CONVERSION.

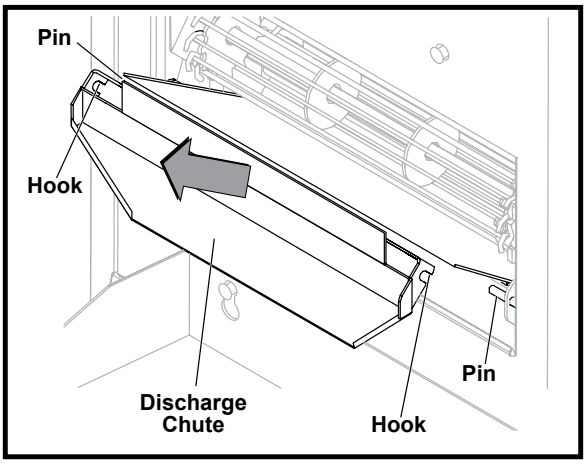
1. Turn the broiler off. Close the main gas supply valve and disconnect supply line. Unplug the broiler from electrical power.



2. Remove discharge end components.

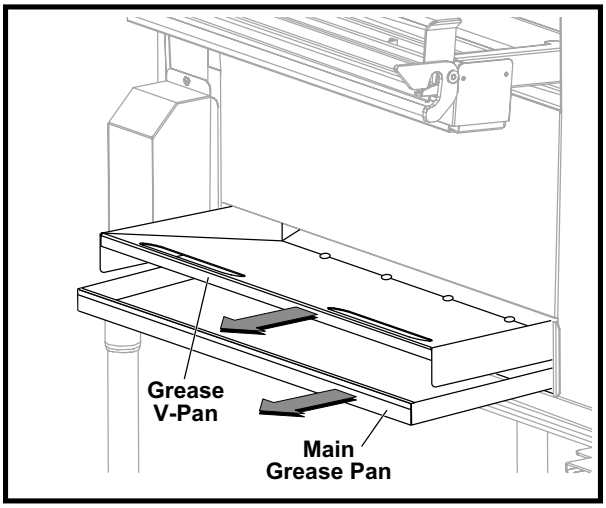


3. Remove Discharge Chute

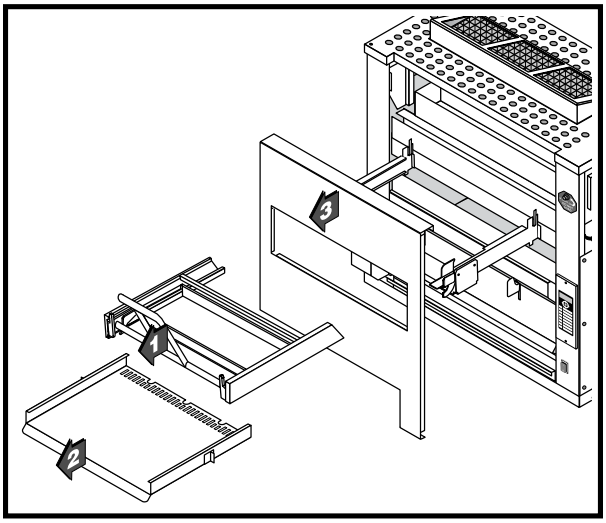


4. Remove lower main grease pan and V-Shaped pan.

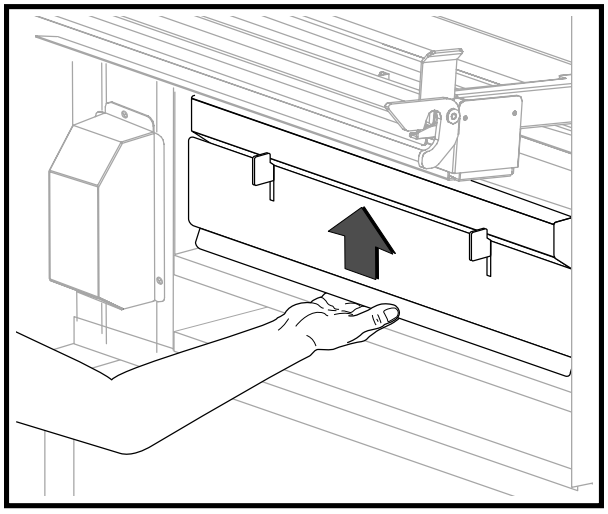
NOTE: REMOVE AND DISCARD OLD V-SHAPED PAN AND MAIN GREASE PAN COMPLETELY FROM RESTAURANT. THEY ARE NOT COMPATIBLE WITH NEW COMPONENTS.

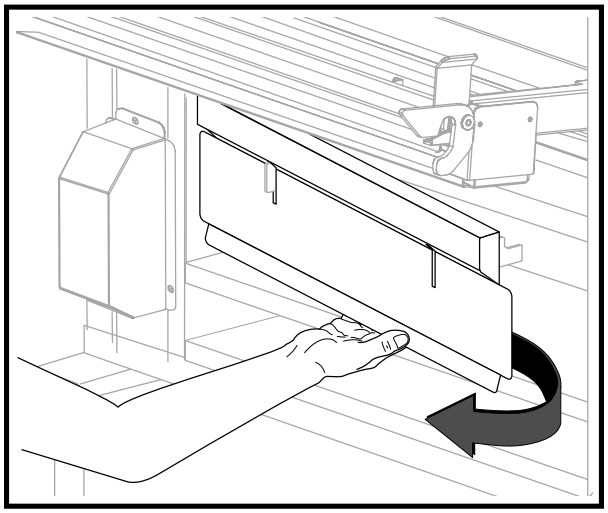


5. Remove loader, loader tray and front panel.

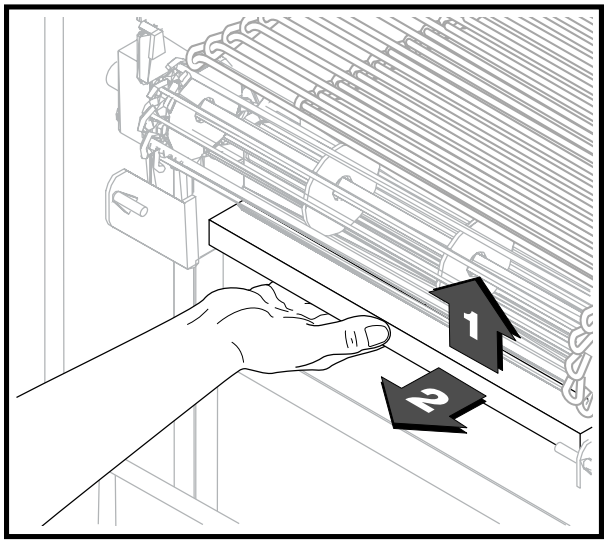


6. Lift up lower burner panel and rotate outward to remove from hanger bracket.

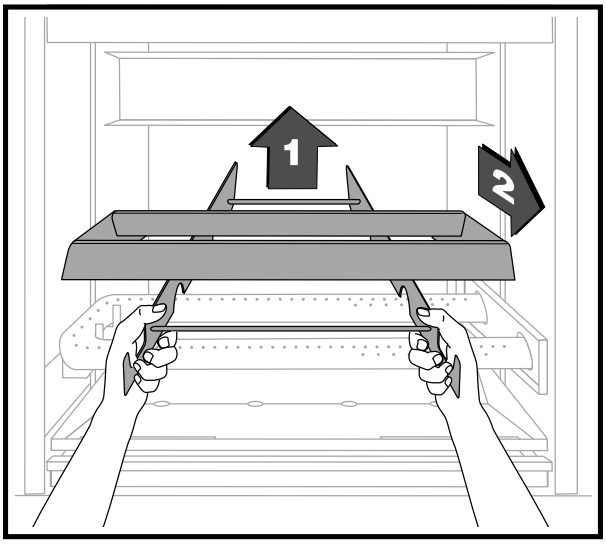




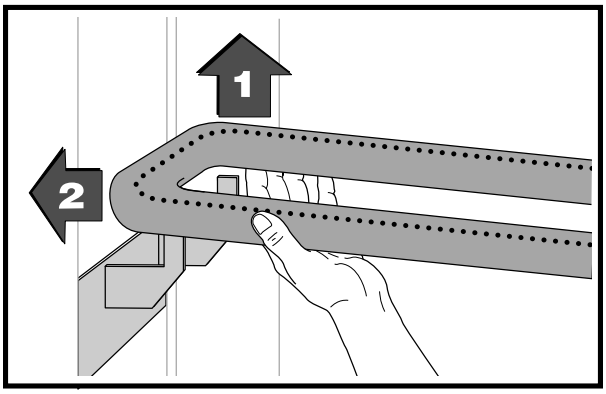
7. Remove ash scraper on discharge end.

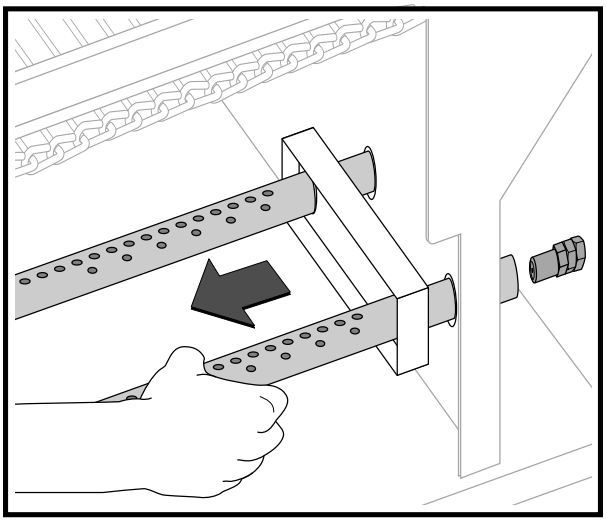


8. Remove lower burner shield.



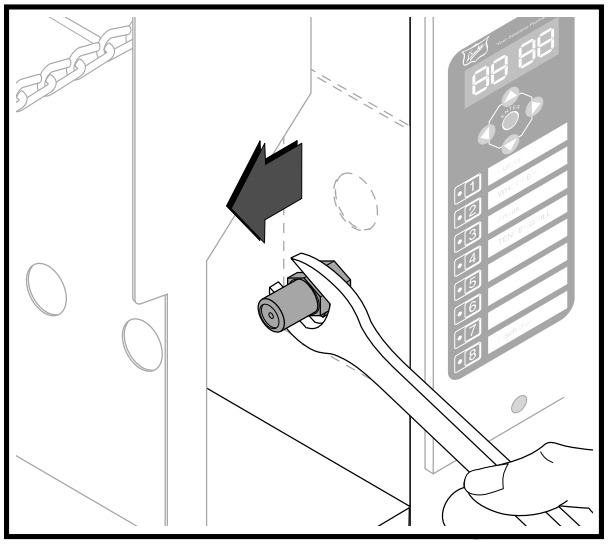
9. Remove lower burner and **DISCARD**. Locate and **DISCARD** any spare burners as well.





10. Remove and **DISCARD** lower orifice (#49) using a 1/2" deep well socket or 1/2" wrench.

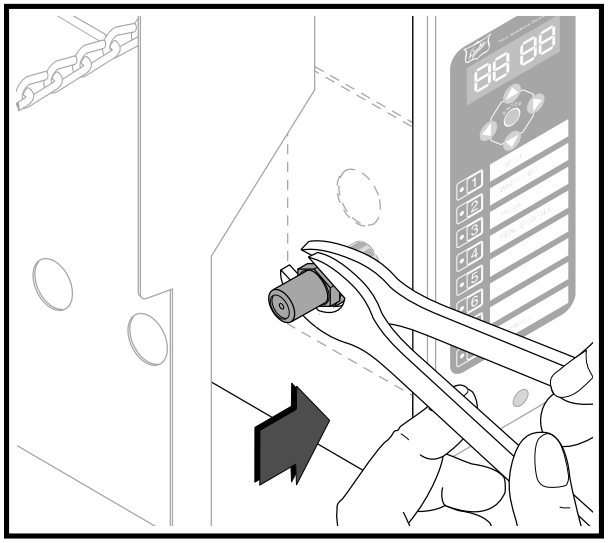
    NOTE: REMOVE AND DISCARD ALL OLD BURNERS (INCLUDING ANY SPARE BURNERS THAT ARE LOCATED) AND THE ORIFICE COMPLETELY FROM THE RESTAURANT. THEY ARE NOT COMPATIBLE WITH NEW COMPONENTS.



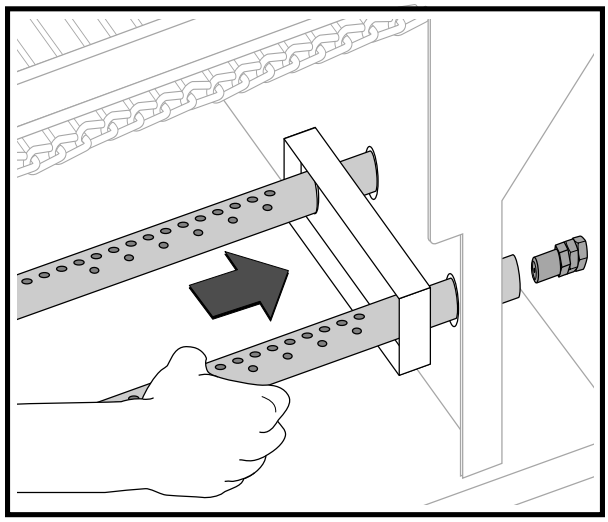
11. Using a 5/8" deep well socket or 5/8" wrench, replace lower orifice with orifice provided in kit per the table below.

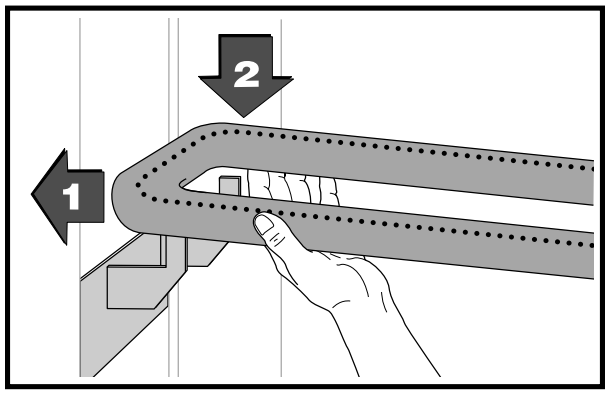
    NOTE: EXCESSIVE OVER-TIGHTENING OF ORIFICE DOWN ON TO ORIFICE HOLDER CAN CAUSE HOLDER TO BREAK.

Orifice sizing - Natural Gas	
0 - 4999 Feet	#30 (green)
5000 - 7499 Feet	#28
7500+ Feet	#25

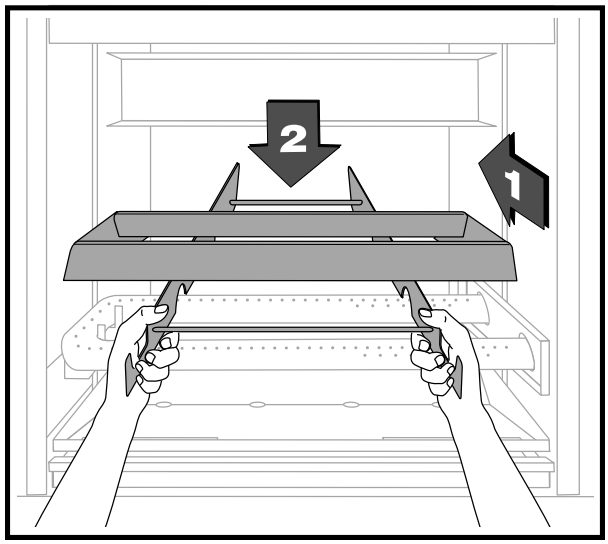


12. Replace lower burner with new lower burner provided in kit. Provide additional spare burner to restaurant manager.



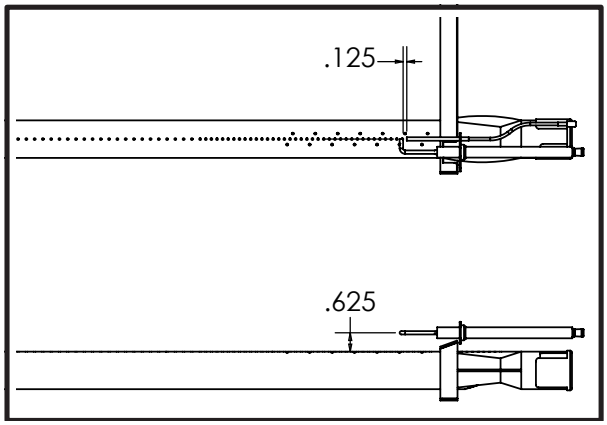


13. Replace lower burner shield.

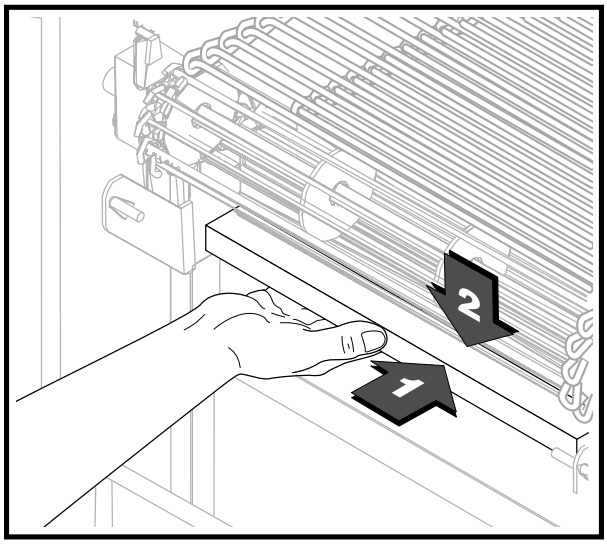


14. Check the Igniter as follows:

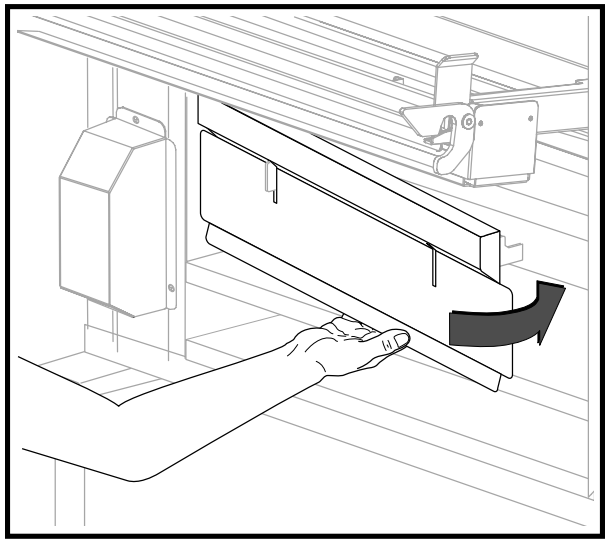
- Verify the spark gap is 1/8″(.125”).
- Verify proper location of the igniter. It should be approximately 5/8″ (3/4” max) from the lower burner.
- Replace Igniter if the electrodes are damaged.

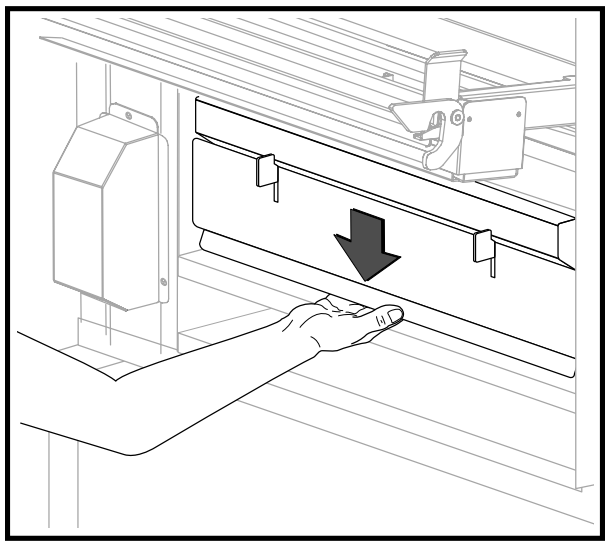


15. Replace ash scraper on discharge end.

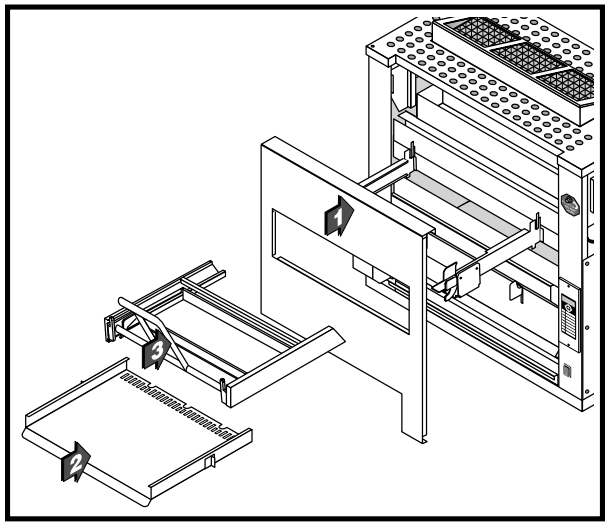


16. Replace lower burner panel.

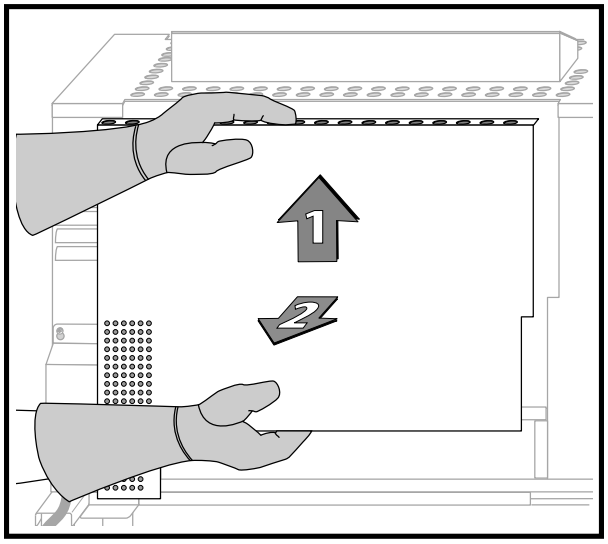




17. Replace front panel, loader, and loader tray.

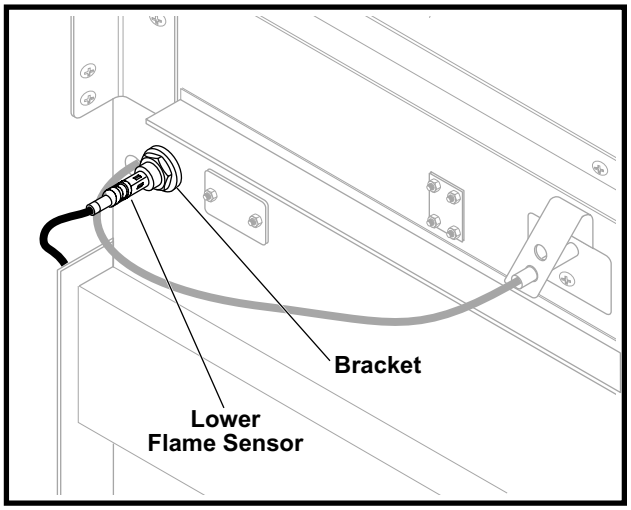


18. Remove back panel.



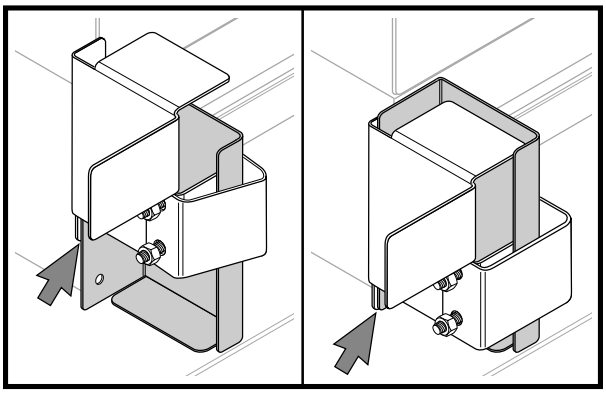
19. Check the Lower Flame Sensor Assembly as follows:

- The Lower Flame Sensor Assembly is accessible from the back of the broiler.
- The Lower Flame Sensor Assembly is positively located with the guide and bracket.
- To visually inspect the Flame Sensor Assembly, disengage Lower Flame Sensor from guide and bracket and pull out of guide and bracket.
  - o If the Flame Sensor is dirty, allow the Flame Sensor to cool and clean it with an alcohol pad.
  - o Replace a Flame Sensor with damaged porcelain.
  - o Check for debris between the Flame Sensor tip and burner.
  - o Adjust the Flame Sensor if the tip is touching ground.
- Make sure all of the Flame Sensor connections are tight.
- Re-install the Lower Flame Sensor Assembly by positively locating and seating it within the guide and bracket.

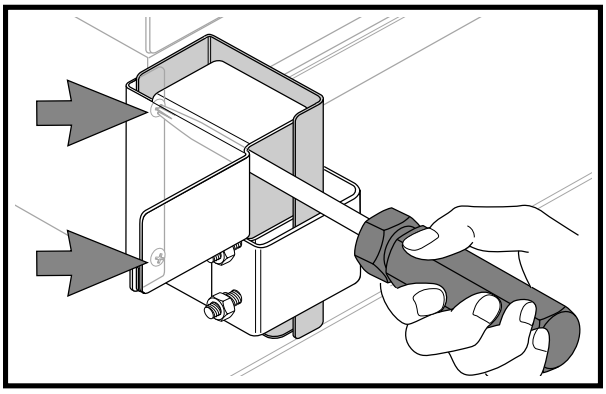


20. Install Stop Assembly as shown:

NOTE: THE STOP BRACKET FLANGE IS FITTED BEHIND THE EXISTING CAVITY BRACKET FLANGE.

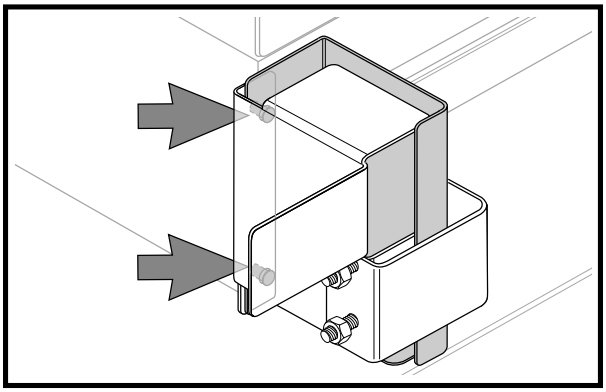


A. If the mounting holes are open:
Install with #8-32 screws and nuts.

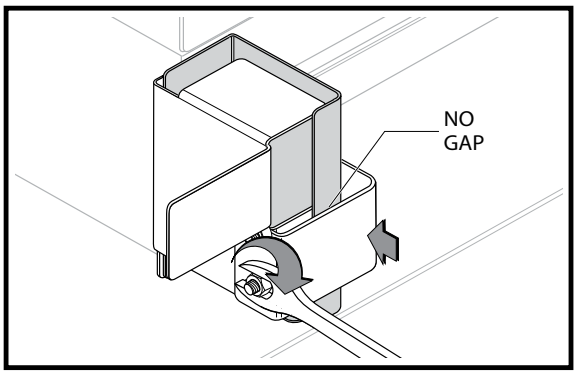


OR

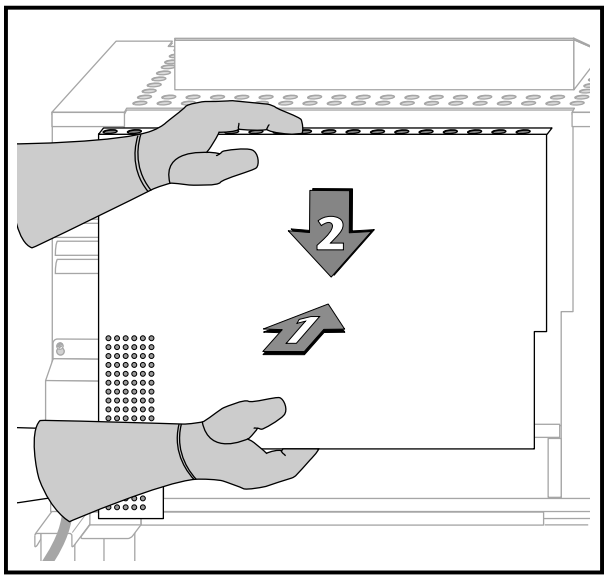
B. If there are rivets in the mounting holes:
The bracket simply is fitted over the clenched rivets.



21. Adjust and tighten Stop Bracket. (Ensure bracket is tightly against Broiler Bracket Flange, NO GAP).

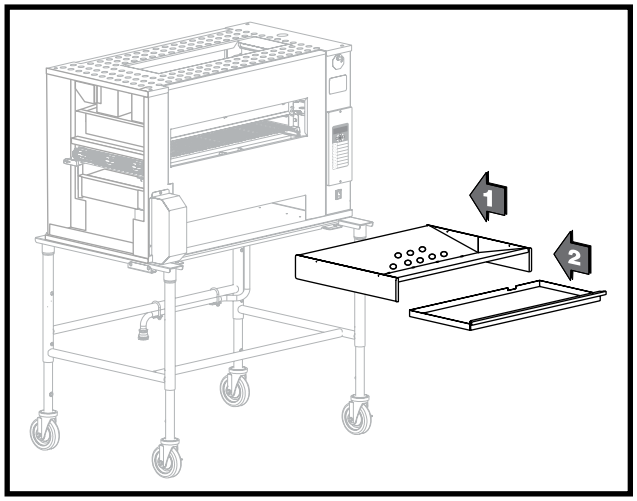


22. Replace back panel.

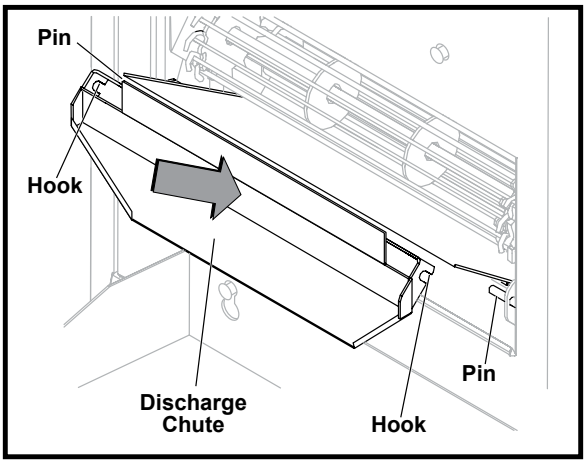


23. Install new V-shaped pan and main grease pan provided in kit.

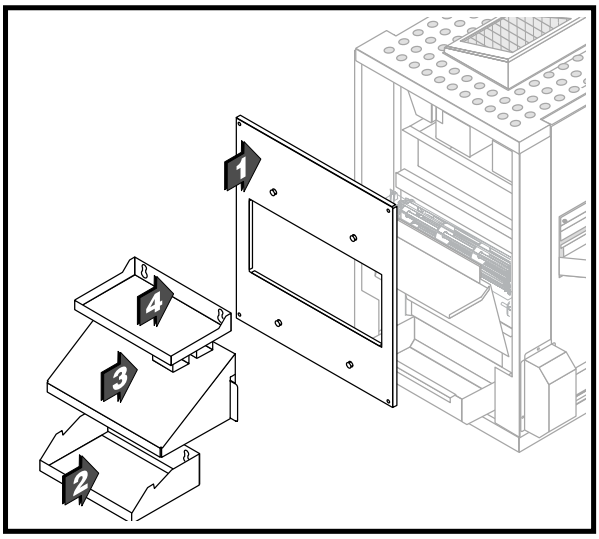
NOTE: REMOVE VINYL PLASTIC FROM NEW GREASE PAN.



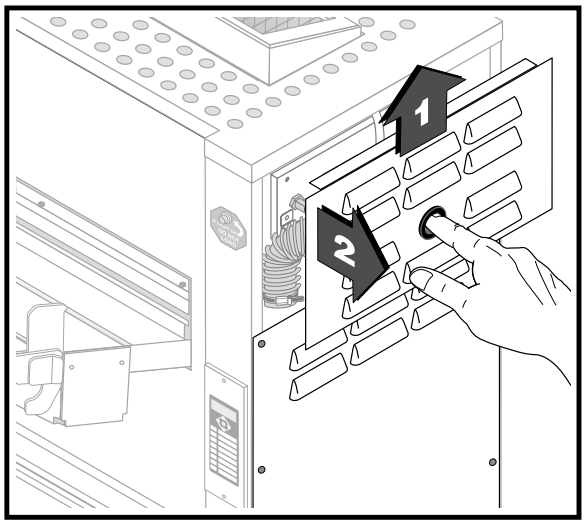
24. Replace Discharge Chute.



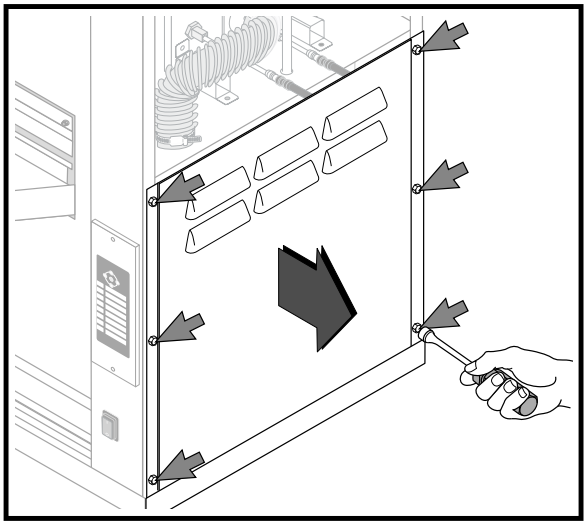
25. Replace discharge end components.



26. Remove Electrical Panel Cover.

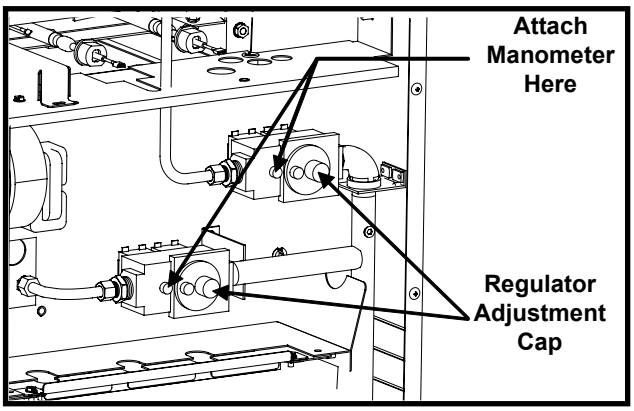


27. Remove Electrical Service Panel Cover.

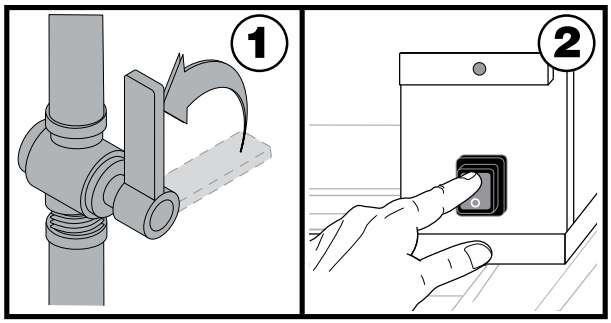


Manifold Pressure and Flame Appearance:

28. On upper valve, remove 1/8” pipe plug and attach manometer.



29. Connect the gas supply line, open the main gas supply valve and turn on the unit.

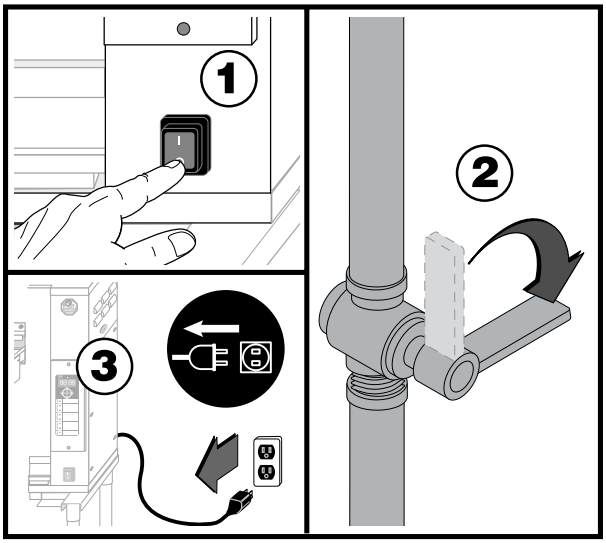


30. With a screw driver, remove slotted cap from regulator and adjust until manometer reading is:

    3.75” w.c. for natural gas and replace regulator cap.

    NOTE: THE UPPER INFRARED BURNER VALVE WILL NOT COME ON UNTIL THE BROILER TEMPERATURE REACHES 500 F. INSTALL GREASE PANS AND IMPEDANCE PAN TO SPEED UP THE HEATING PROCESS.

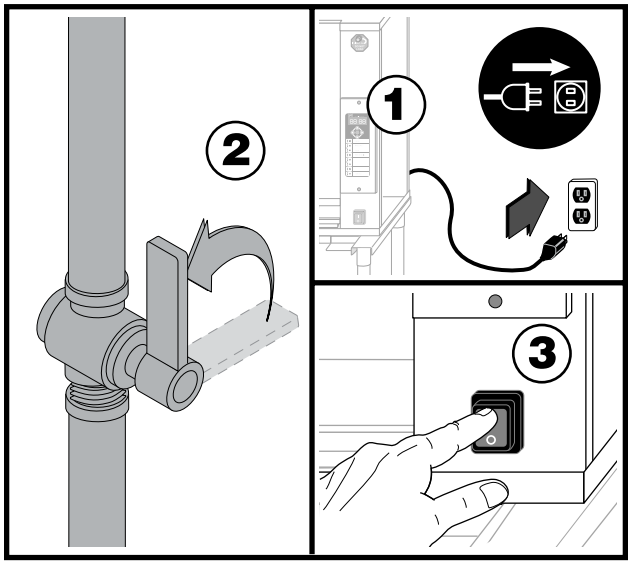
31. Turn the broiler off. Close the main gas supply valve and disconnect supply line. Unplug the broiler from electrical power.



32. Remove manometer and replace pipe plug.

33. Repeat procedure for bottom valve.

34. Upon supplying electrical power, gas supply, and turning the unit on, a gas leakage test should be performed where the orifice meets the orifice holder.



NOTE: ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.

35. Verify Proper Lower Burner Flame Appearance for Natural gas, the flame should be primarily blue with slight yellow tipping at the two ends of the burner. There should be no flame lifting.

NOTE: THE FLAME APPEARANCE NEEDS TO BE VERIFIED WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THE ADJUSTMENT FOR THE LOWER BURNER AIR SUPPLY IS FACTORY SET AND SHOULD NOT NEED TO BE CHANGED. THE AIR SHUTTER OPENING ON FACTORY J BURNERS IS PRESET TO 3/8" OPEN.

Complete steps a through f only if necessary to obtain proper flame characteristics:

a. Loosen the airshutter screw and adjust for proper flame characteristics.

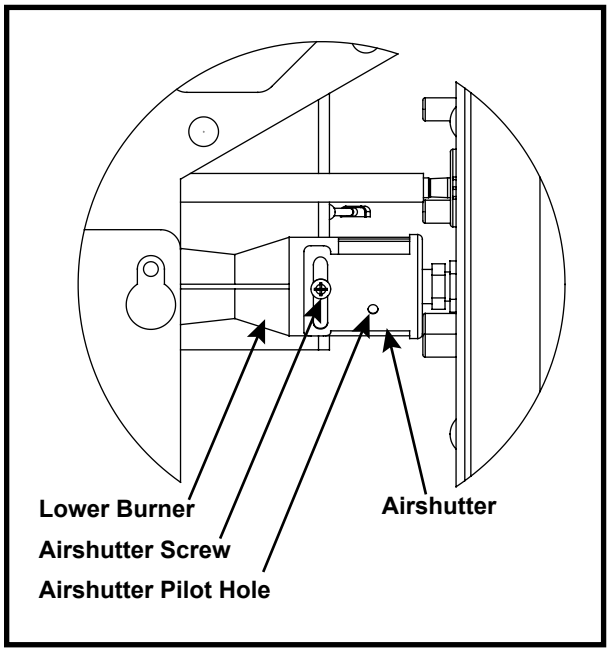
b. Tighten the airshutter screw.

c. Remove the lower burner from the unit (see installation/ operations manual)

d. Using the two pilot holes on the airshutter, drill #30 holes through the airshutter and burner.

e. Use the supplied rivets to lock the burner in position.

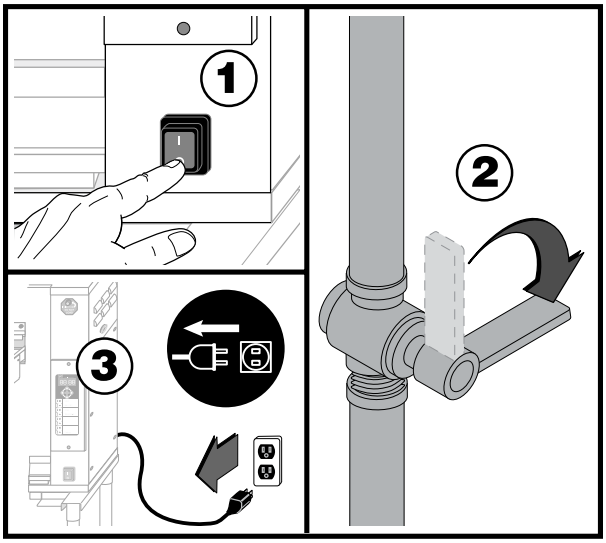
f. Reinstall the burner into the broiler.



NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

36. Reprogram the broiler per the Configurations/ Settings Update Sheet included in the upgrade kit.

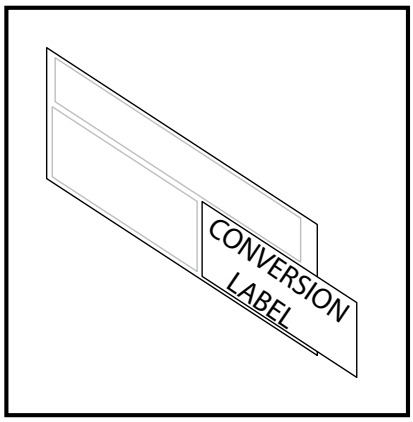
37. Turn the broiler off. Close the main gas supply valve and disconnect supply line. Unplug the broiler from electrical power.

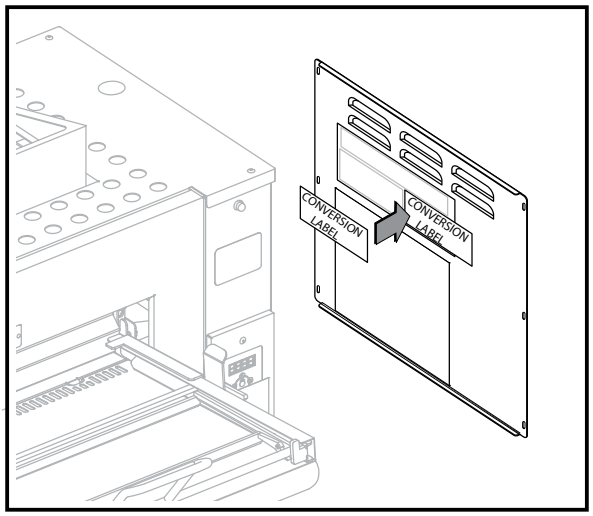


38. Clean Electrical Service Panel Cover surface to be free of grease and debris.

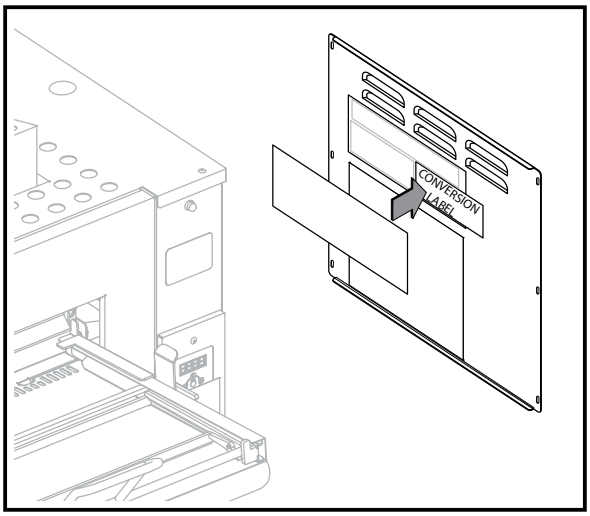
39. Apply new Gas Ratings Conversion label over existing ratings information. Fill out and complete blank areas on new label as indicated.

    NOTE: THE NEW GAS RATINGS CONVERSION LABEL SHOULD BE PLACED ON THE BOTTOM RIGHT CORNER. THE NEW LABEL MUST NOT COVER THE MIN. CLEARANCE SECTION OF THE CURRENT LABEL.

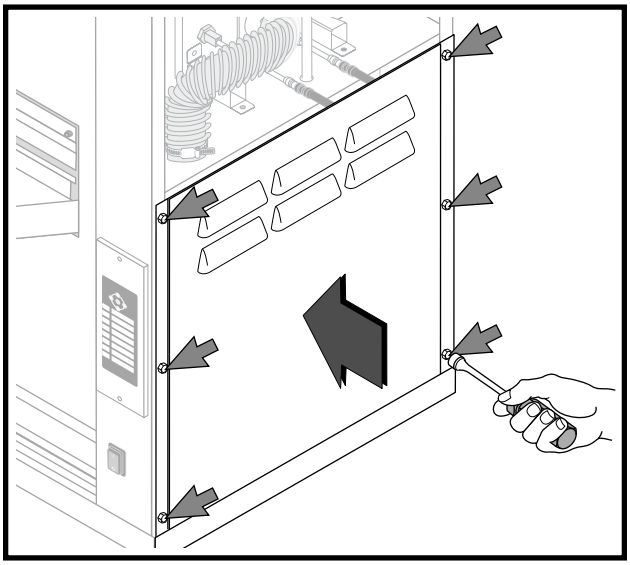




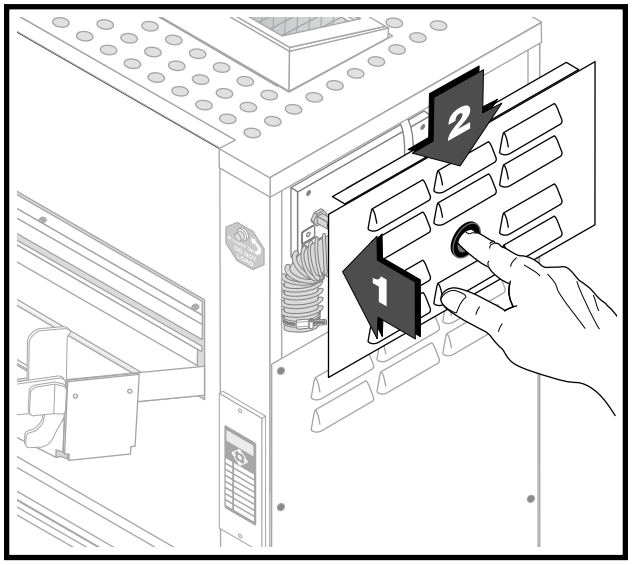
40. Install Nameplate Overlay (clear protective sheet).



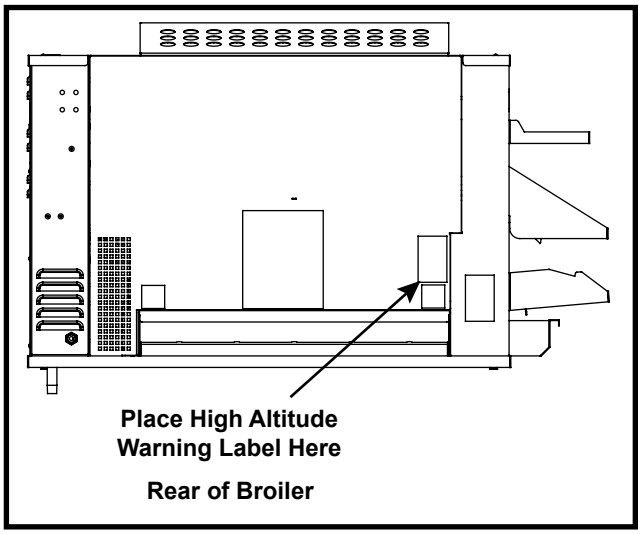
41. Re-Install Electrical Panel Cover.



42. Re-Install Electrical Service Panel Cover.



43. Mark the orifice sizes selected from the table on the high altitude warning label (included) and place on back of unit as shown below.



44. This completes the installation of the kit..

NOTE: REMOVE AND DISCARD ALL OLD COMPONENTS FROM THE RESTAURANT. THEY ARE NOT COMPATIBLE WITH THE NEW COMPONENTS. THESE COMPONENTS ARE:

- **V-SHAPED PAN**
- **MAIN GREASE PAN**
- **ORIFICE**
- **ALL BURNERS (INCLUDING SPARES)**

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER _____

TELEPHONE _____

SERVICER _____

TELEPHONE _____

Duke Corporate, Canada, Latin America
2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 800-735-3853
Fax: 314-231-5074
www.dukemfg.com

Duke EMEA - Europe, Middle East, Africa, Russia
Duke Manufacturing CR, s.r.o.
Zdebradska 92
Jazlovice, Ricany
Building number DC 4 on the ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 257 741 033
Fax: +420 257 741 039

Duke EMEA – UK, Ireland, Nordic Countries
Duke Manufacturing UK Ltd.
Unit 10, Greendale Business Park
Woodbury Salterton
Exeter, EX5 1EW
Phone: +44 (0) 1395 234140
Fax: +44 (0) 1395 234154

Duke Asia Pacific
Duke Manufacturing
No.3 Building
Lane 28, Yu Lv Road
Malu Town, Jiading District
Shanghai 201801, China
Phone: +86 21 59153525 / 59153526
Fax: +86 21 33600628

TO ACCESS INTERNET: www.dukemfg.com

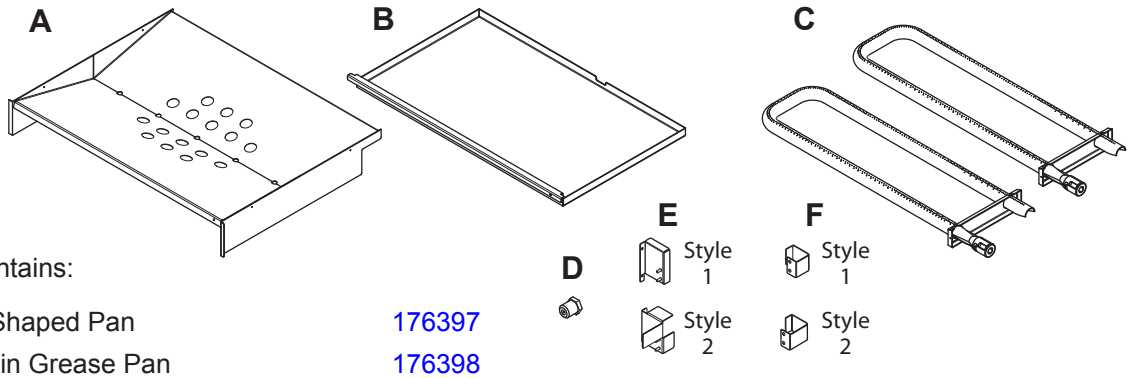
Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

Your Solutions Partner

INSTALLATION INSTRUCTIONS

NATURAL GAS LOWER BURNER UPGRADE KIT INSTRUCTIONS

DUKE KIT#s: 600295 (Style 1) and 600300 (Style 2)



This kit contains:

A.	(1) V-Shaped Pan	176397
B.	(1) Main Grease Pan	176398
C.	(2) Burner, Lower, Center Air Flow * 1 installed/1 spare	176370
D.	(1) Orifice, Lower Burner #30	176404
E.	(1) Assembly, Mounting, Grease Pan Stop	
	Style 1	176405
	Style 2	176420
F.	(1) Stop, V-Pan	
	Style 1	176402
	Style 2	176419
G.	(2) Nut, 1/4 - 20	213042
H.	(2) Screw, #8 - 32 x 1/2"	404886
I.	(2) Nut, #8-32	513158
J.	(1) Label, Gas Rating	176413
K.	(1) Configuration/Recipe Update Sheet	176470
L.	(1) Overlay, Name Plate	175556

Items required for this installation:

- 1/2" deep well socket and ratchet or 1/2" wrench
- 5/8" deep well socket and ratchet or 5/8" wrench
- 7/16" wrench
- 11/32" wrench
- Cross Tip Screwdriver

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Duke Manufacturing Co.

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St. Louis, MO 63102
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Toll Free: 1-800-735-3853
Fax: 314-231-5074

www.dukemfg.com

P/N 176422C

CAUTION:

THESE INSTALLATION INSTRUCTIONS ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY.

INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN SEVERE PERSONAL INJURY TO THE OPERATOR OR OTHERS, DAMAGE TO THE BROILER, OR OTHER PROPERTY DAMAGE.

⚠ WARNING

FOR YOUR SAFETY, THESE INSTRUCTIONS MUST BE FOLLOWED TO MINIMIZE THE RISK OF FIRE OR EXPLOSION, ELECTRIC SHOCK, AND TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE.

A. Qualified Personnel:

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).
- The installation of electrical wiring from the electric meter, main control box or service outlet to the electrical appliance. Qualified installation personnel must be familiar with all precautions required and have complied with all requirements of state and local authorities having jurisdiction. See: National Electrical Code, ANSI/NFPA70.

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

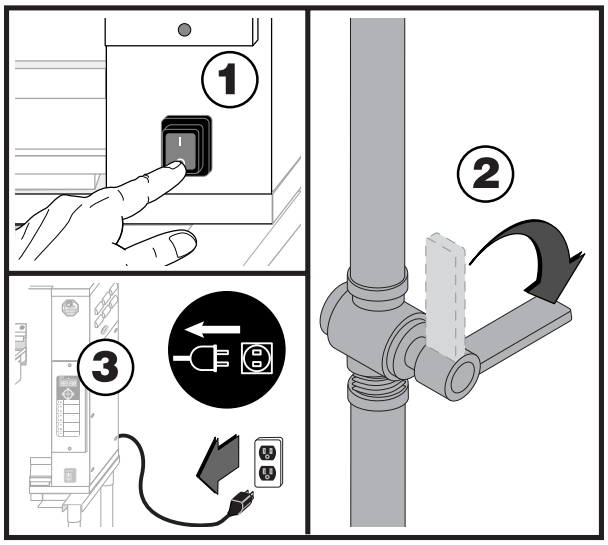
- The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).
- The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

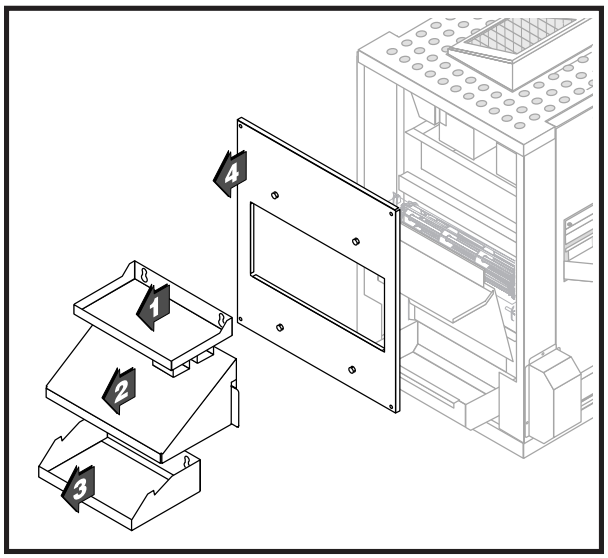
Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information on page 12.

B. Procedure

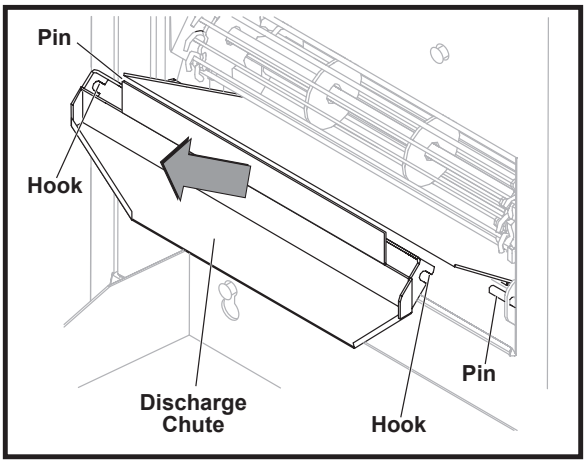
1. Turn the broiler off and unplug the broiler from electrical power. Close the main gas supply valve and disconnect supply line.



2. Remove discharge end components.

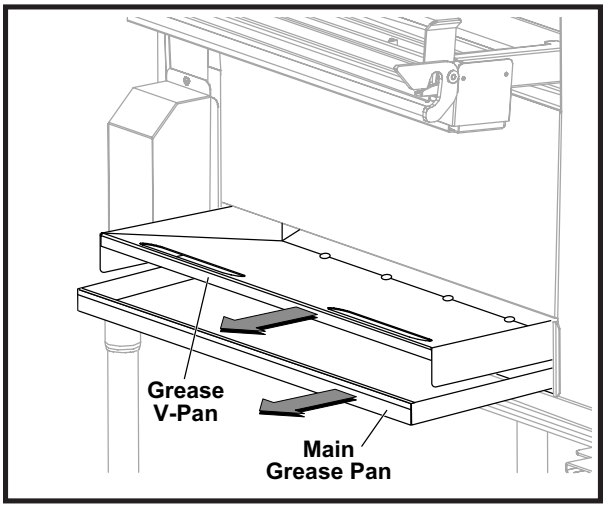


3. Remove Discharge Chute

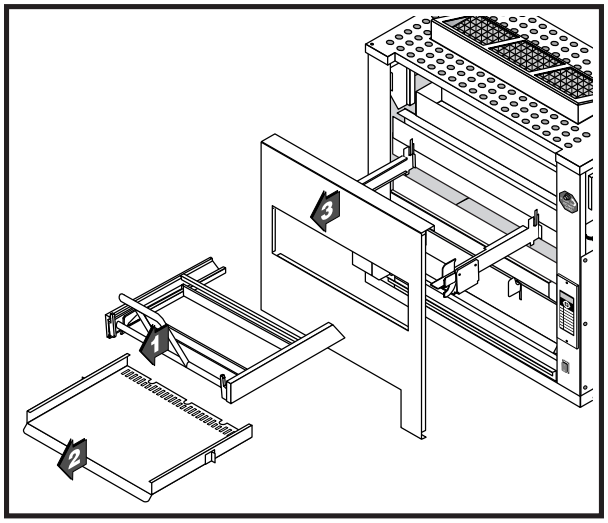


4. Remove lower main grease pan and V-Shaped pan.

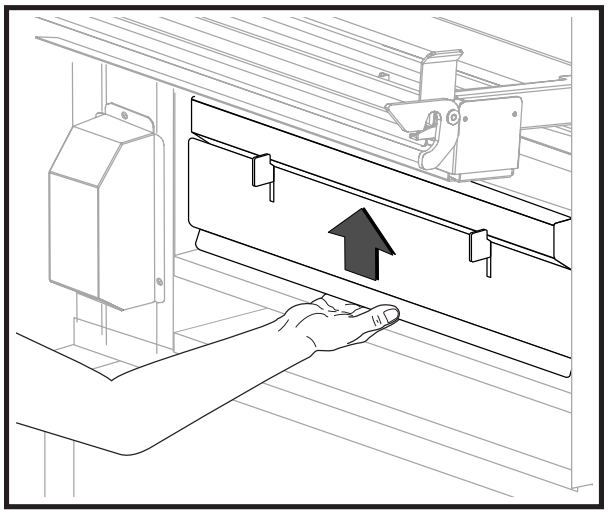
NOTE: REMOVE AND DISCARD OLD V-SHAPED PAN AND MAIN GREASE PAN COMPLETELY FROM RESTAURANT. THEY ARE NOT COMPATIBLE WITH NEW COMPONENTS.

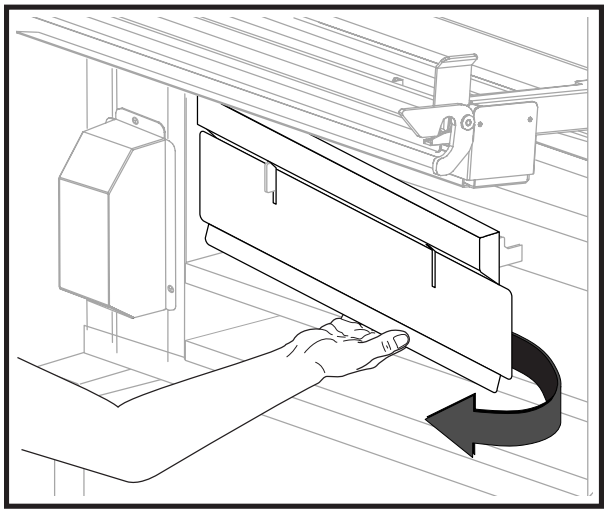


5. Remove loader, loader tray and front panel.

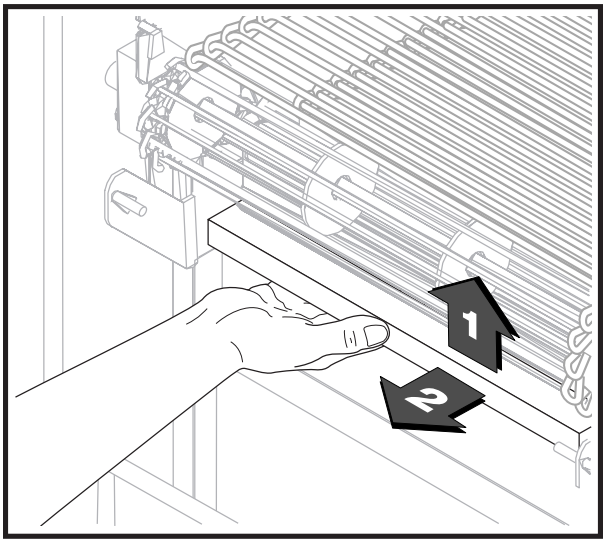


6. Lift up lower burner panel and rotate outward to remove from hanger bracket.

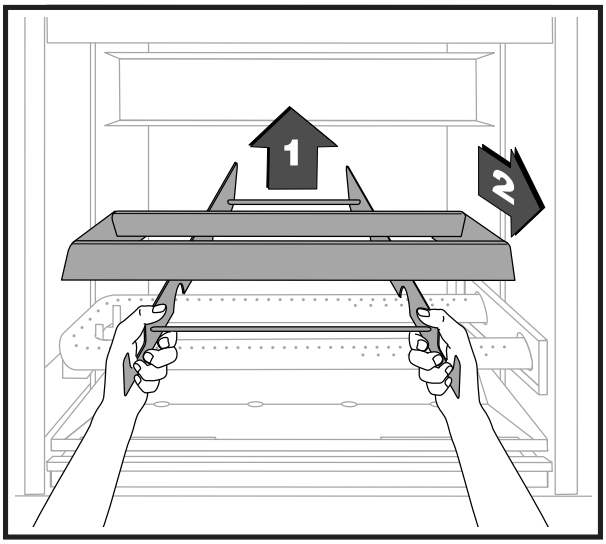




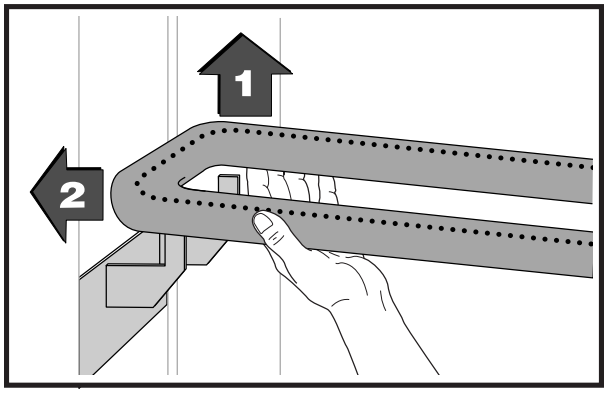
7. Remove ash scraper on discharge end.

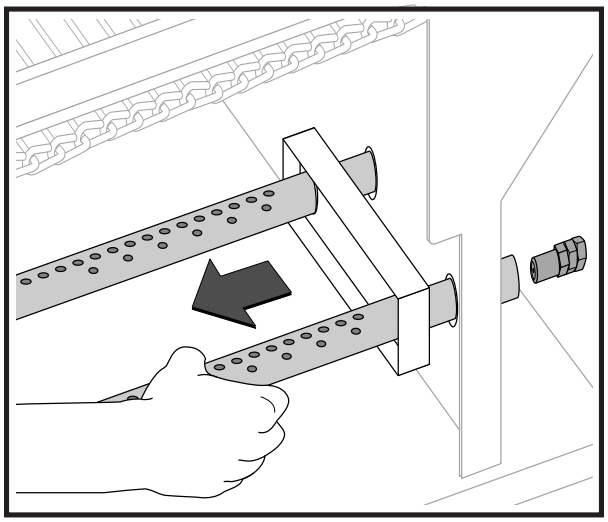


8. Remove lower burner shield.



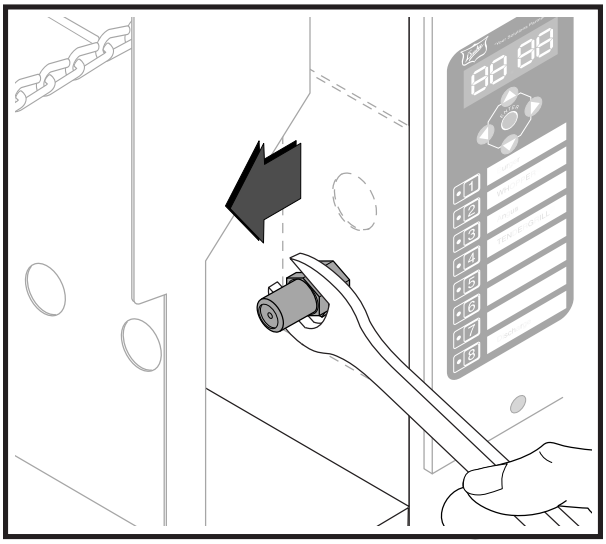
9. Remove lower burner and **DISCARD**. Locate and **DISCARD** any spare burners as well.





10. Remove and **DISCARD** lower orifice (#31) using a 1/2" deep well socket or 1/2" wrench.

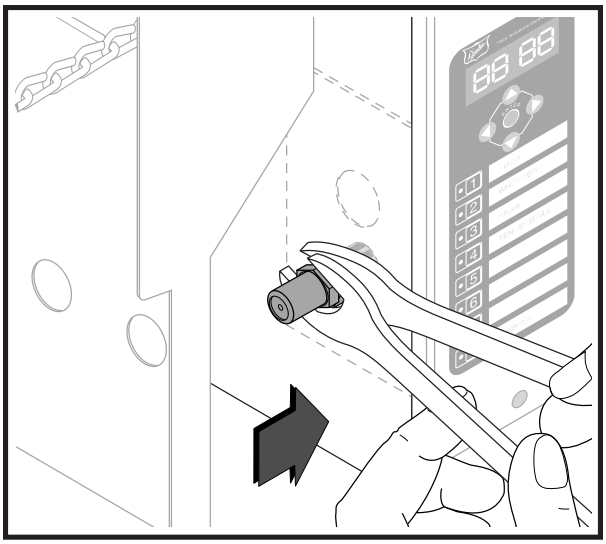
NOTE: REMOVE AND DISCARD ALL OLD BURNERS (INCLUDING ANY SPARE BURNERS THAT ARE LOCATED) AND THE ORIFICE COMPLETELY FROM THE RESTAURANT. THEY ARE NOT COMPATIBLE WITH NEW COMPONENTS.



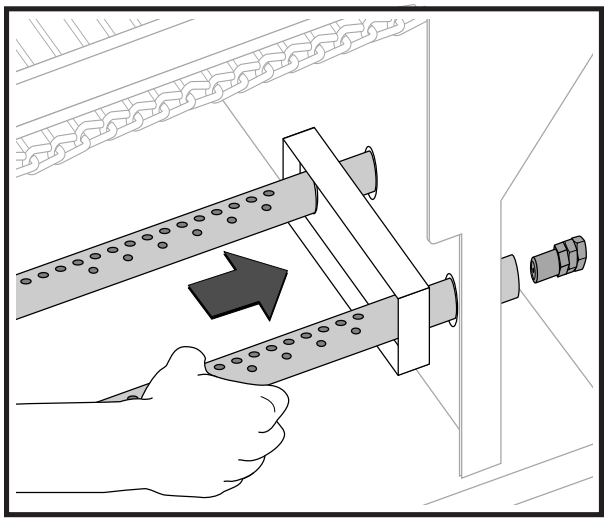
11. Using a 5/8" deep well socket or 5/8" wrench, replace lower orifice with orifice provided in kit per the table below.

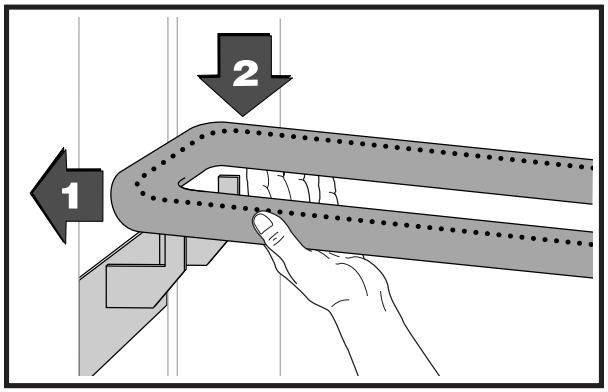
NOTE: EXCESSIVE OVER-TIGHTENING OF ORIFICE DOWN ON TO ORIFICE HOLDER CAN CAUSE HOLDER TO BREAK.

Orifice sizing (color code)	
Natural Gas	#30 (green)

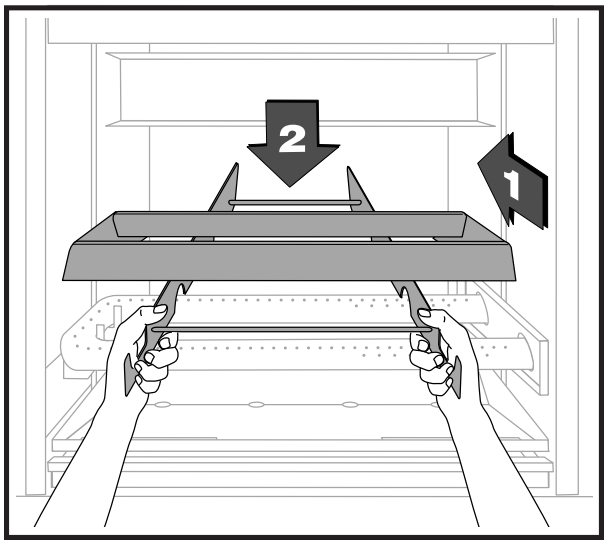


12. Replace lower burner with new lower burner provided in kit. Provide additional spare burner to restaurant manager.

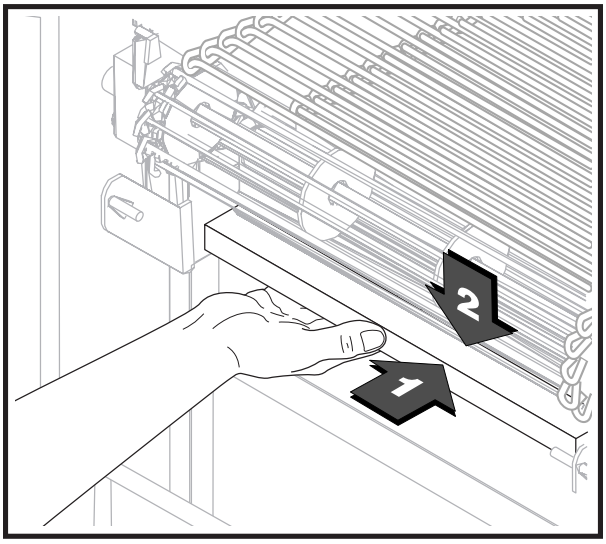




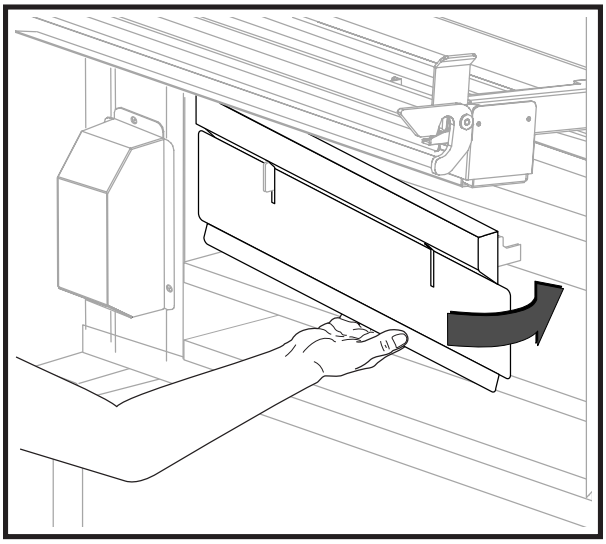
13. Replace lower burner shield.

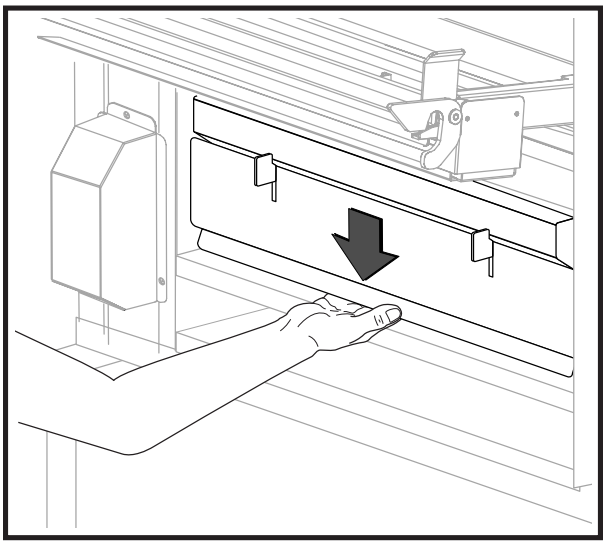


14. Replace ash scraper on discharge end.

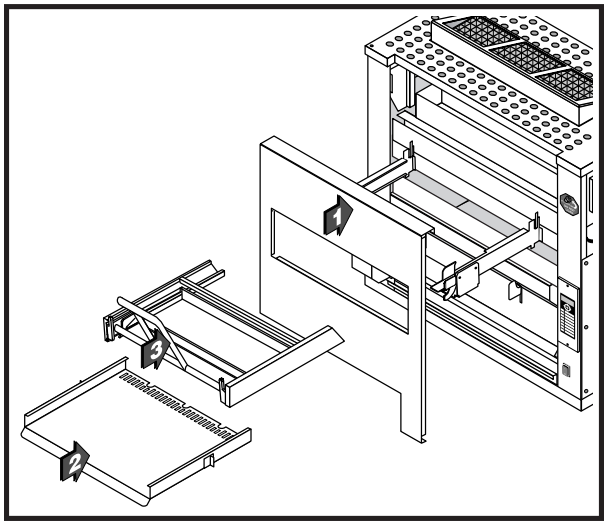


15. Replace lower burner panel.

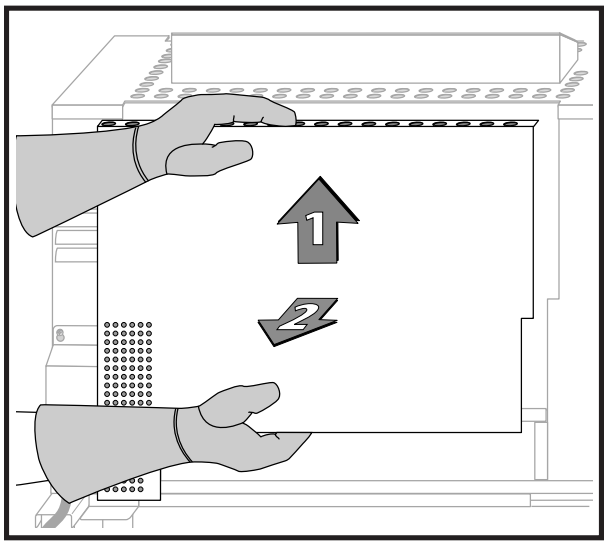




16. Replace front panel, loader, and loader tray.

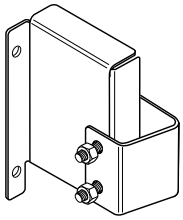


17. Remove back panel.

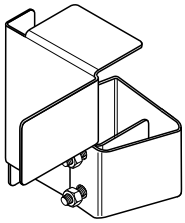


18. Determine whether your Stop Assembly is Style 1 or Style 2, and install as shown.

STYLE 1

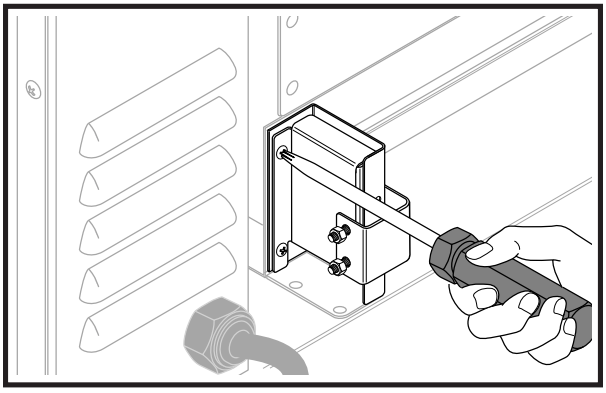


STYLE 2



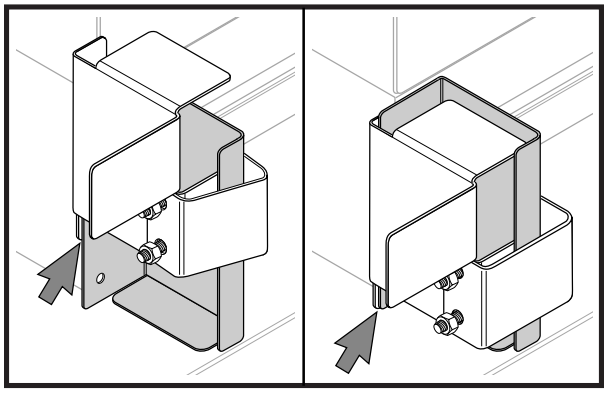
STYLE 1:

Install with #8-32 screws and nuts.

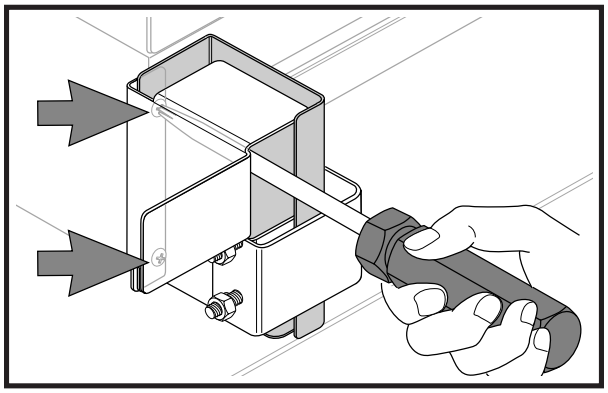


STYLE 2:

NOTE: The stop bracket flange is fitted behind the existing cavity bracket flange.

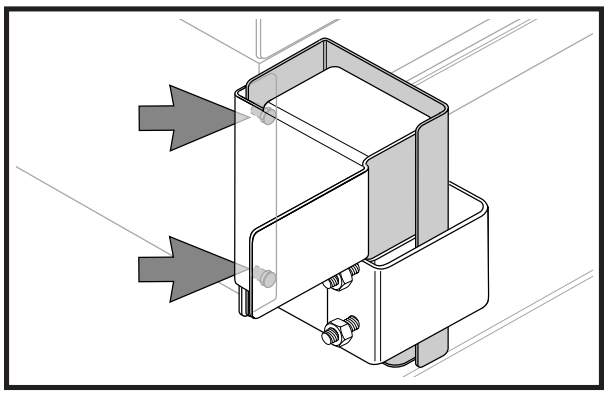


A. If the mounting holes are open:
Install with #8-32 screws and nuts.



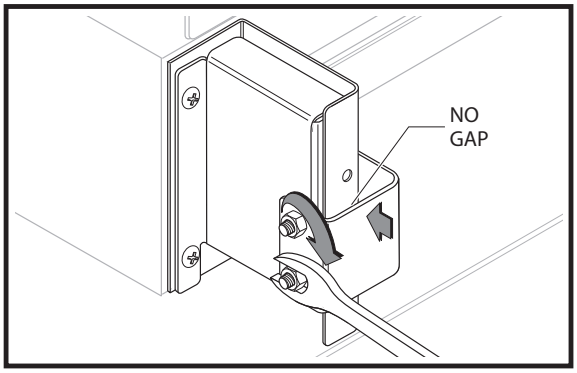
OR

B. If there are rivets in the mounting holes:
The bracket simply is fitted over the clenched rivets.

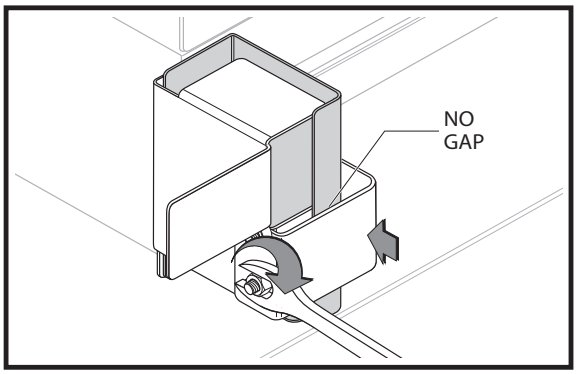


19. Adjust and tighten Stop Bracket. (Ensure bracket is tightly against Broiler Bracket Flange, NO GAP).

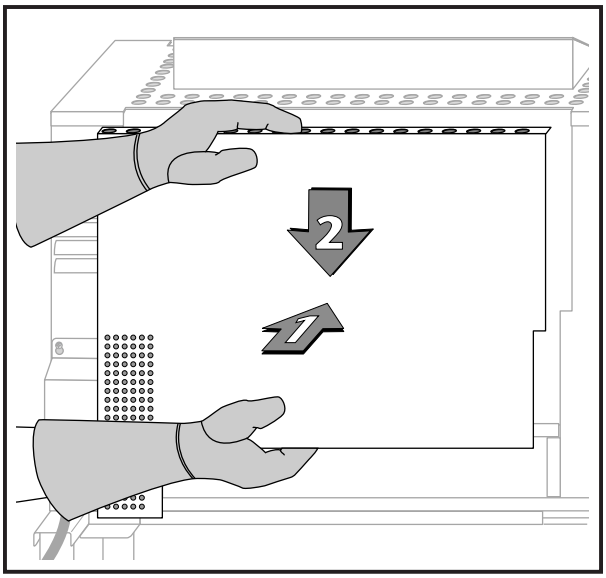
STYLE 1:



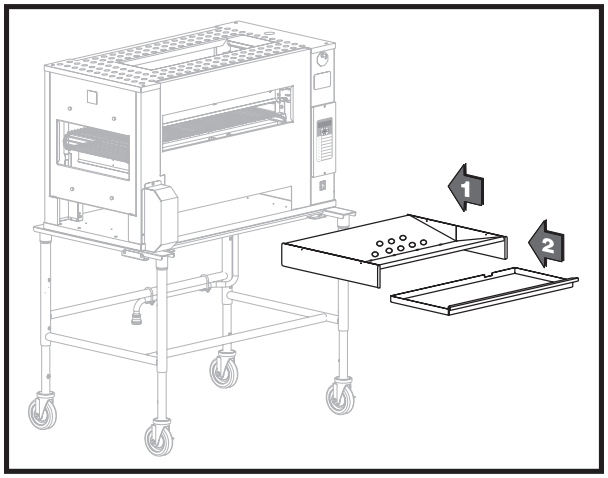
STYLE 2:



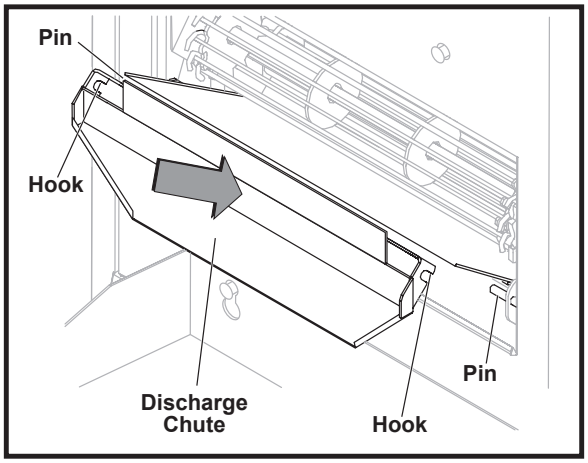
20. Replace back panel.



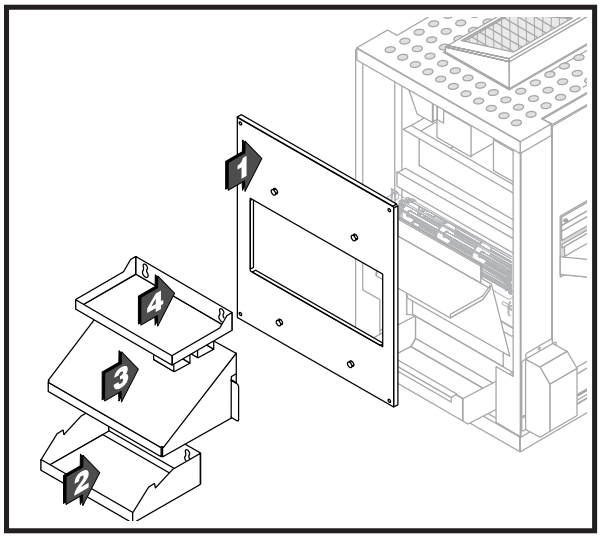
21. Install new V-shaped pan and main grease pan provided in kit.



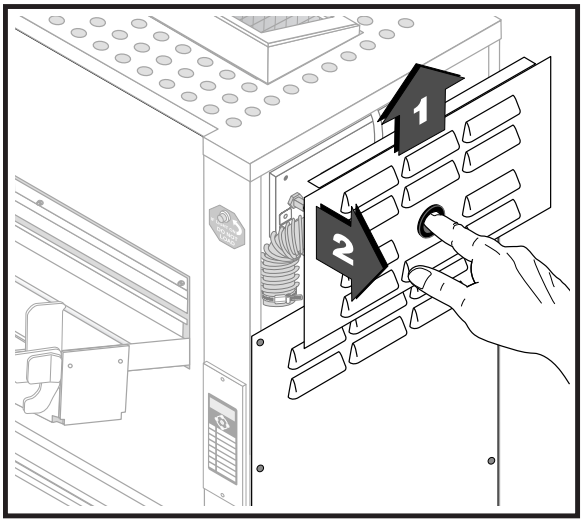
22. Replace Discharge Chute



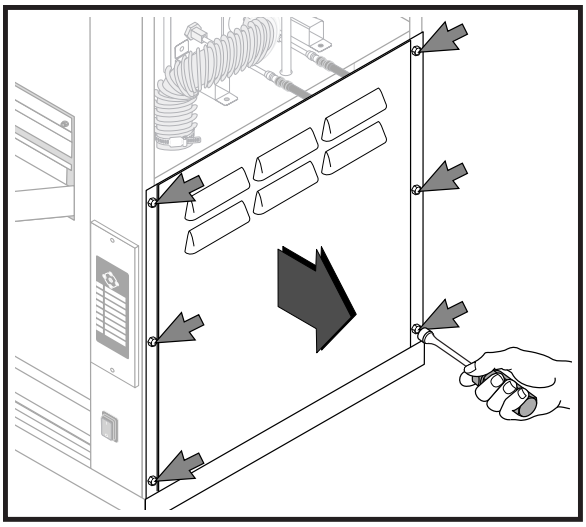
23. Replace discharge end components.



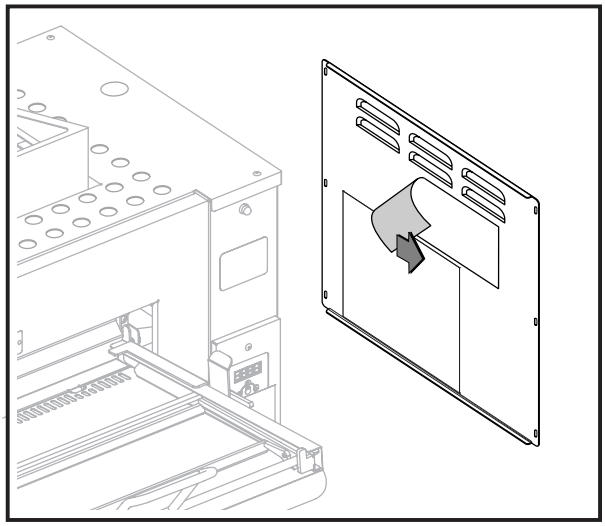
24. Remove Electrical Panel Cover.



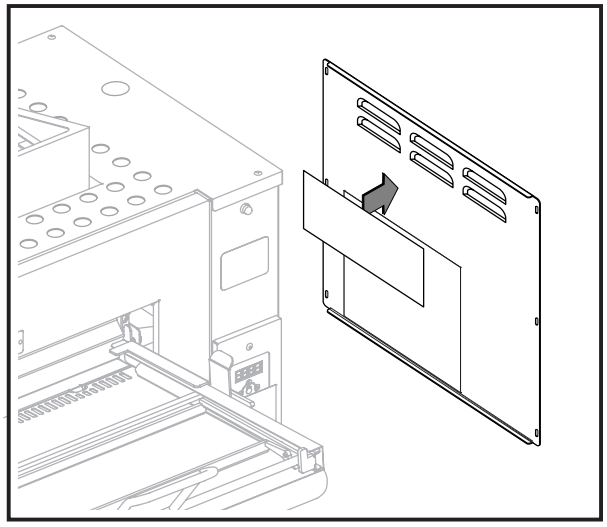
25. Remove Electrical Service Panel Cover.



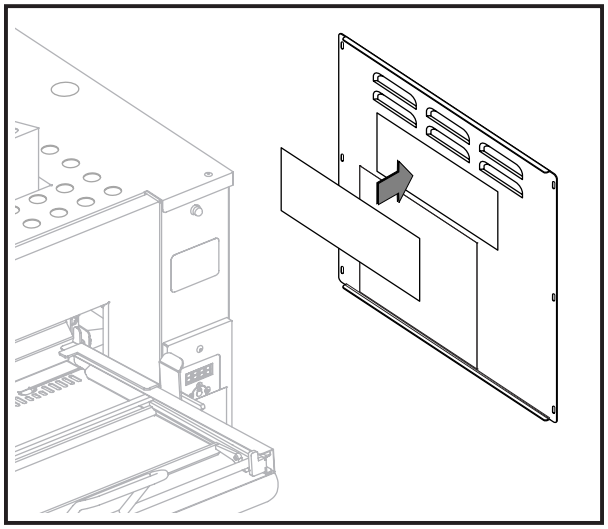
26. Remove Gas Ratings label.



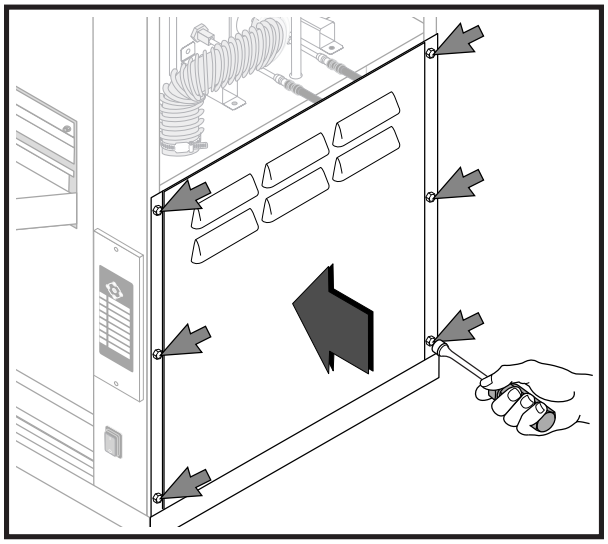
27. Apply new Gas Ratings label.



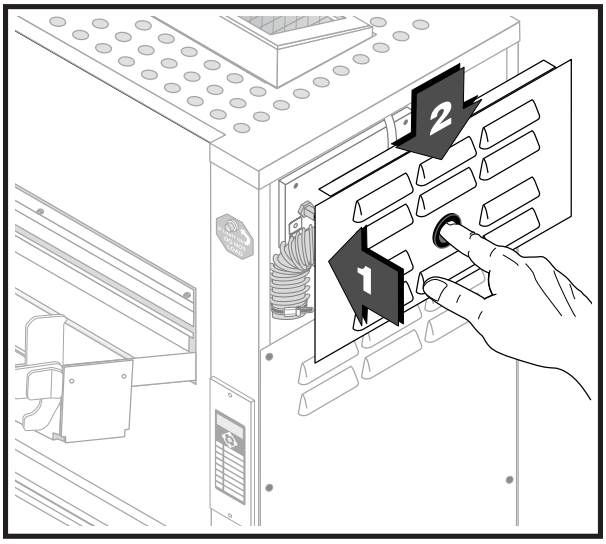
28. Install Nameplate Overlay (clear protective sheet).



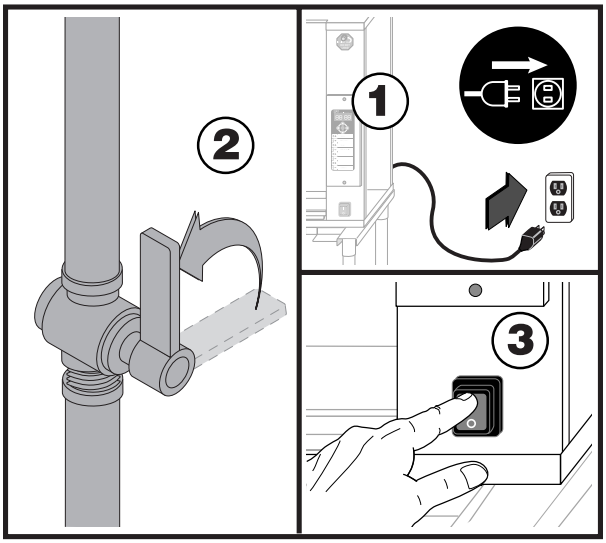
29. Re-Install Electrical Panel Cover.



30. Re-Install Electrical Service Panel Cover.



31. Upon supplying electrical power, gas supply, and turning the unit on, a gas leakage test should be performed where the orifice meets the orifice holder.



32. Reprogram the broiler per the Configurations/ Settings Update Sheet included in the upgrade kit.

NOTE: ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.

NOTE: REMOVE AND DISCARD ALL OLD COMPONENTS FROM THE RESTAURANT. THEY ARE NOT COMPATIBLE WITH THE NEW COMPONENTS. THESE COMPONENTS ARE:

- **V-SHAPED PAN**
- **MAIN GREASE PAN**
- **ORIFICE**
- **ALL BURNERS (INCLUDING SPARES)**

Your Solutions Partner

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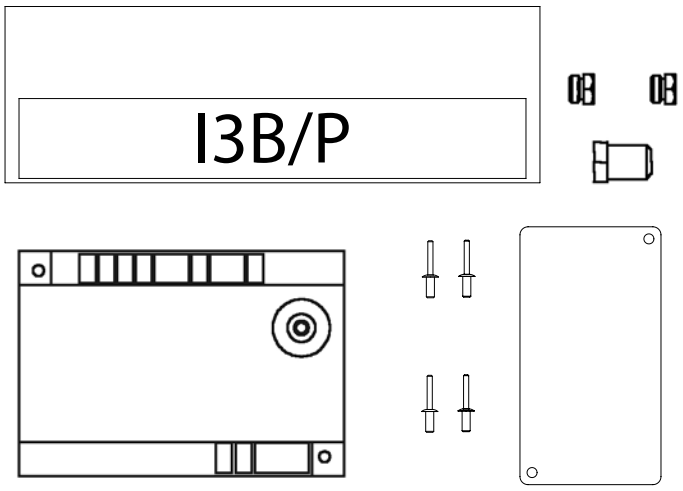
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Fax: +86 21 33600628

Your Solutions Partner

Propane-Butane Mix/ G30 Gas Conversion Kit Instructions EMEA

FLEXIBLE BATCH BROILER

KIT P/N 176578



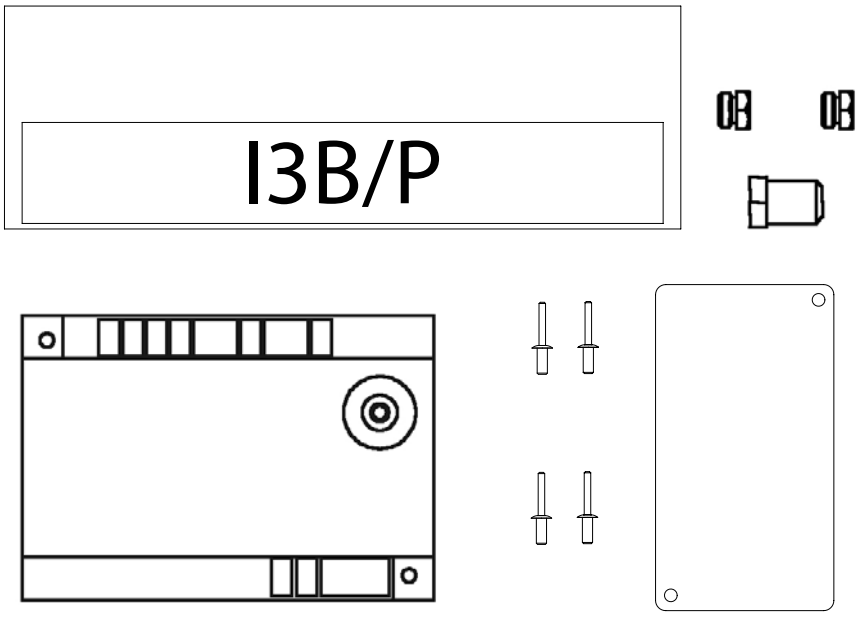
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P/N 176576A
01/21/2015

PROPANE-BUTANE MIX/G30 GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 176578

This kit contains:

(1)	Orifice, IR Burner 1.40mm (Front Burner)	175818
(1)	Orifice, IR Burner 1.51mm (Rear Burner)	175819
(1)	Orifice, Lower Burner 1.70mm	175952
(1)	Broiler Conversion Data Plate	176574
(1)	Module, Ignition, Lower Burner, Propane Gas	175876
(1)	Label, I3B/P Gas	175910
(4)	Rivets	168106

Items required for this installation:

- Torque Wrench
- Rivet Installation Tool
- Thread sealant rated for Natural Gas and LP gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 9/16 Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Small Straight blade screw driver
- Phillips Head screw driver
- 3/16" Hex key wrench
- #30 Drill Bit
- Digital or slack tube manometer with 1/8” male pipe thread hose barb
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

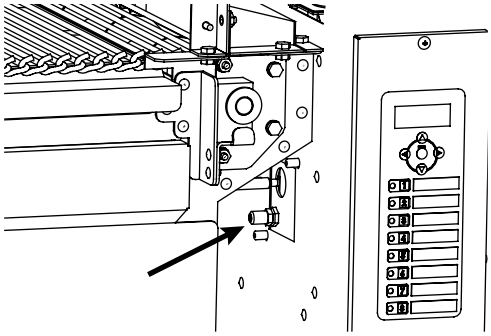
These installation instructions are for the use of Duke authorized service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information at the end of this manual.

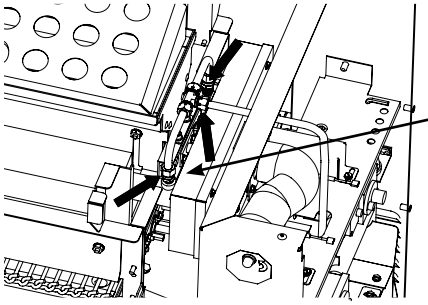
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

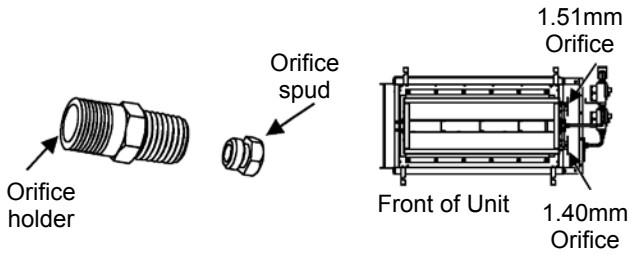
2) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 6.7 N.m. (60 IN LBS).



3) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

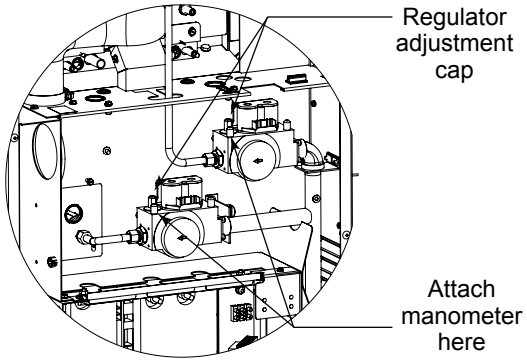


4) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 4.5 N.m. (40 in-lb.) REASSEMBLE FITTINGS AND GAS LINES.



5) CONNECT TO GAS AND ELECTRICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

6) ON UPPER VALVE, OPEN THE MANIFOLD PRESSURE TAP AND ATTACH MANOMETER. SWITCH BROILER "ON". WITH THE HEX KEY WRENCH ADJUST UNTIL MANOMETER READING IS 19.93mbar (8.00" W.C.). SHUT BROILER "OFF". REMOVE MANOMETER AND CLOSE THE PRESSURE TAP. REPEAT FOR BOTTOM VALVE. REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



7) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

8) CHECK THE LOWER BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. DRILL OUT THE RIVETS IN THE AIRSHUTTER OF THE BURNERS.

b. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

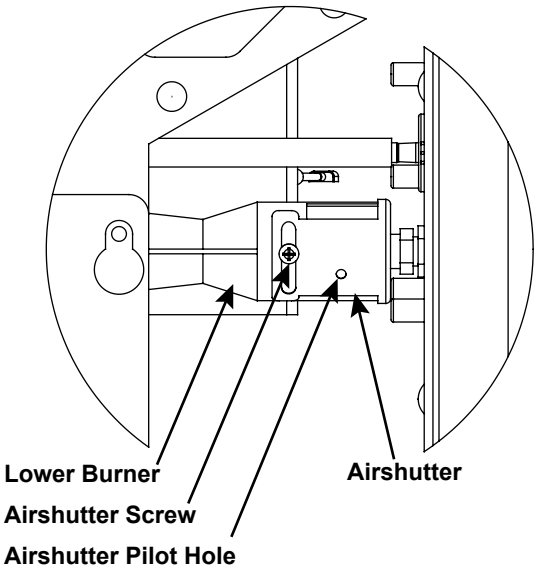
c. TIGHTEN THE AIRSHUTTER SCREW.

d. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/ OPERATIONS MANUAL)

e. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

f. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

g. REINSTALL THE BURNER INTO THE BROILER.



9) CHECK THE IR BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

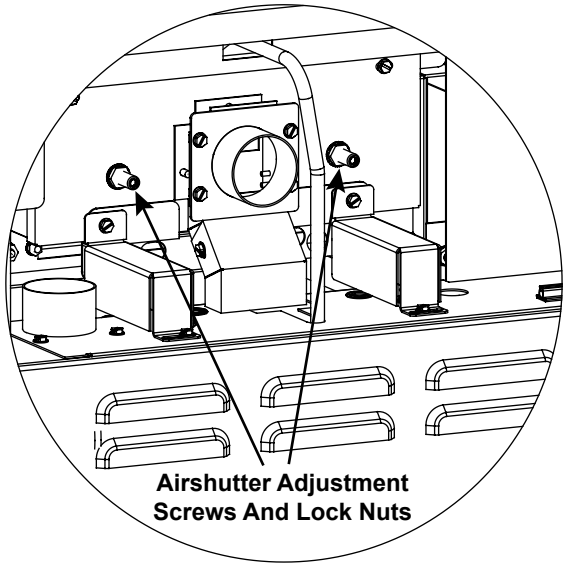
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16” WRENCH AND 3/16” HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

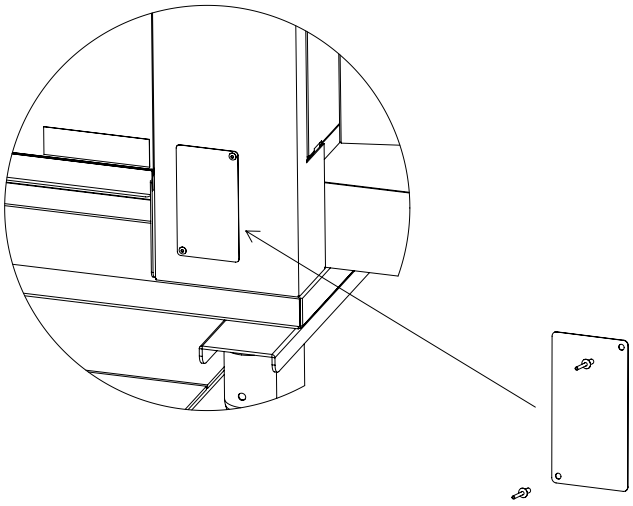
c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.



10) DRILL OUT RIVETS IN RATING TAG AND APPLY NEW RATINGS TAG OVER EXISTING TAG. USE SUPPLIED RIVETS TO RIVET THROUGH BOTH TAGS.



11) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS COMPLETE.

Your Solutions Partner

Duke Manufacturing Co.

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Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074

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Your Solutions Partner

Propane Gas Conversion Kit Instructions 120V International

FLEXIBLE BATCH BROILER

KIT P/N 175612

ENGLISH

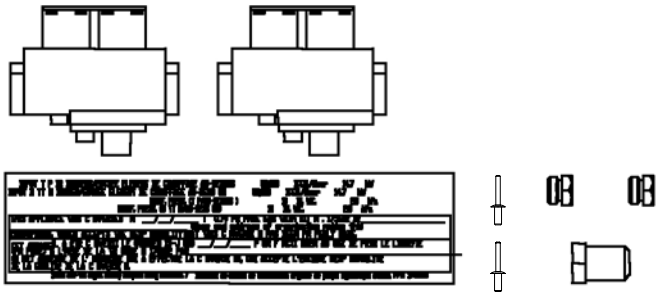
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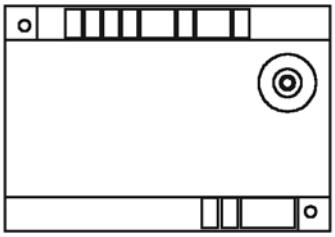
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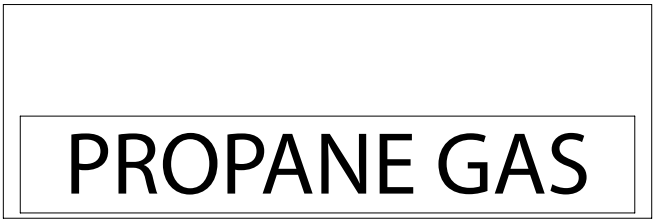
BRAZILIAN PORTUGUESE

JAPANESE

CHINESE







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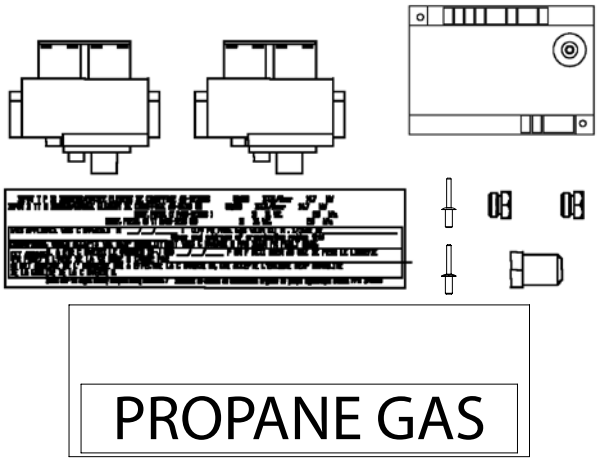
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P/N 175686J
02/11/2015

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PROPANE GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 175612

This kit contains:

(2)	Valve, Combo, Propane	175766
(1)	Orifice, IR Burner #52 mm (Front Burner)	175767
(1)	Orifice, IR Burner #51 mm (Rear Burner)	175768
(1)	Orifice, Lower Burner #49	175737
(1)	Broiler Conversion Label Nat.>Prop	175605
(1)	Module, Ignition, Lower Burner, Propane	175843
(1)	Label - Propane Gas	175776
(2)	Rivet	168106

Items required for this installation:

- Torque Wrench
- Rivet Installation Tool
- Thread sealant rated for Propane gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 9/16” Open End Wrench
- (1) 5/8” Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Straight blade screw driver
- Phillips Head Screwdriver
- 3/16 hex key wrench
- #30 Drill Bit
- Digital or slack tube manometer with 1/8” male pipe thread hose barb.
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

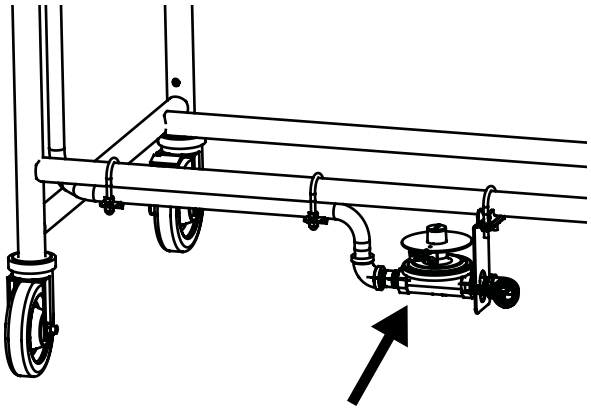
Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual (Duke p/n 175500). If the manual is missing you must request one using the contact information at the end of this manual.

NOTICE TO INSTALLER:

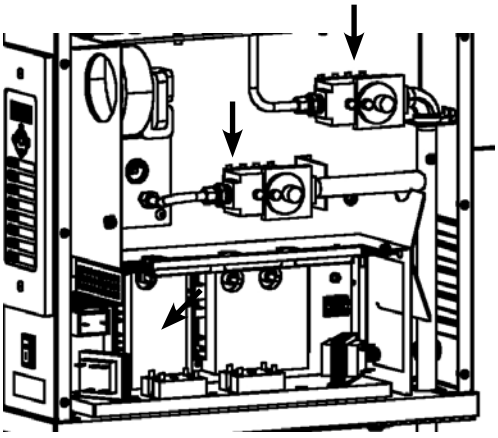
THIS APPLIANCE SHALL NOT BE CONNECTED TO A GAS SUPPLY IN EXCESS OF ½ PSI (12" W.C.).

B. Procedure

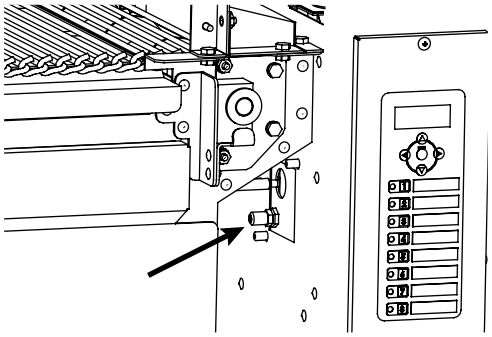
1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.
2) REMOVE OPTIONAL PRESSURE REGULATOR (IF INSTALLED). RECONNECT FITTINGS AS REQUIRED.



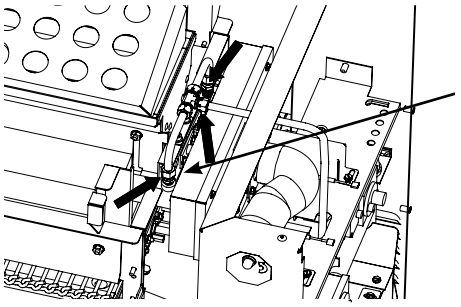
3) REMOVE (2) GAS VALVES AND REPLACE WITH NEW VALVES. BE SURE TO APPLY THREAD SEALANT TO ALL PIPE THREAD CONNECTIONS. REMOVE LOWER BURNER IGNITION MODULE AND REPLACE WITH NEW MODULE. SEE WIRING DIAGRAM ON CONTROL ACCESS PANEL FOR PROPER CONNECTIONS.



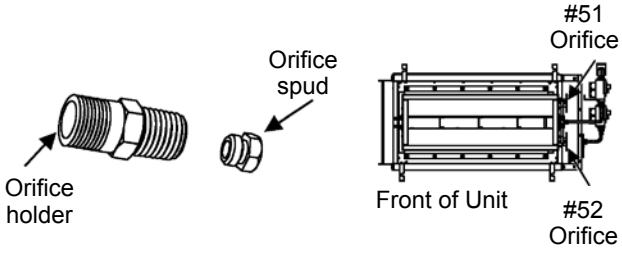
4) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 60 IN LBS (6.7 N.m.).



5) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

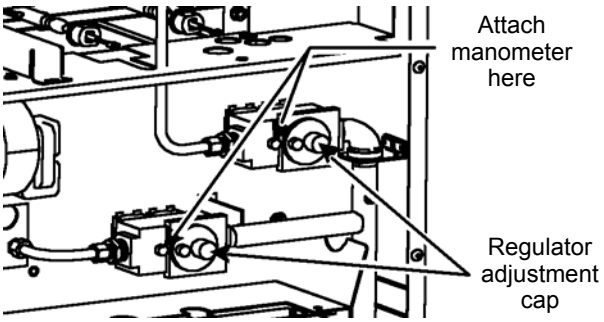


6) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 40 in-lb. REASSEMBLE FITTINGS AND GAS LINES.



7) CONNECT TO GAS AND ELECTICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

8) ON UPPER VALVE, REMOVE 1/8" PIPE PLUG AND ATTACHED MANOMETER. SWITCH BROILER “ON”. WITH A SCREW DRIVER, REMOVE SLOTTED CAP FROM REGULATOR AND ADJUST UNTIL MANOMETER READING IS 8” W.C. REPLACE CAP. SHUT BROILER “OFF”. REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



9) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

10) CHECK THE LOWER BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

LOWER BURNER AIRSHUTTER ADJUSTMENT PROCEDURE

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. DRILL OUT THE RIVETS IN THE AIRSHUTTER OF THE BURNERS.

b. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

   i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

   ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

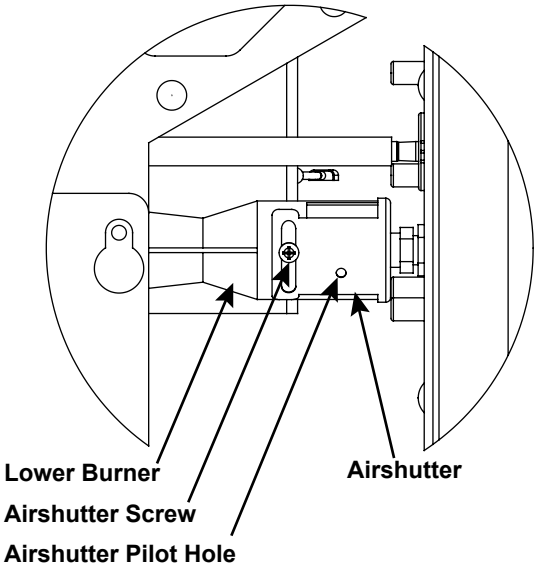
c. TIGHTEN THE AIRSHUTTER SCREW.

d. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/ OPERATIONS MANUAL)

e. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

f. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

g. REINSTALL THE BURNER INTO THE BROILER.



11) CHECK THE IR BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

INFRARED BURNER AIRSHUTTER ADJUSTMENT PROCEDURE

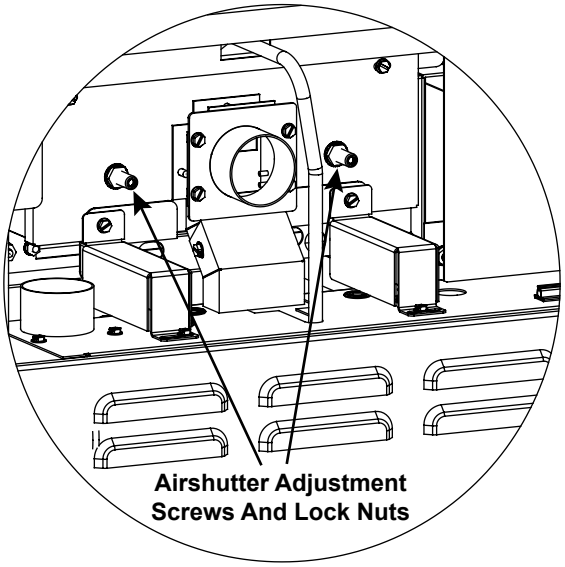
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16" WRENCH AND 3/16" HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

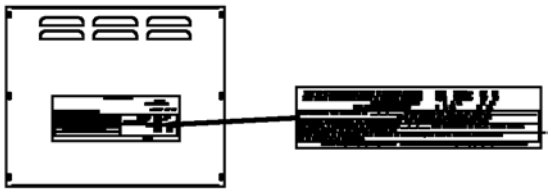
c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

   WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.

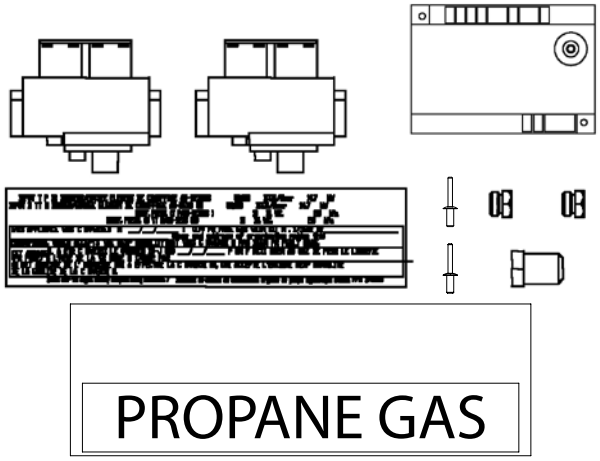


12) APPLY NEW RATINGS TAG ON THE INSIDE OF THE LOWER ELECTRICAL ENCLOSURE COVER. APPLY IN ANY OPEN AREA.



13) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS NOW COMPLETE.

INSTRUCCIONES DEL JUEGO DE CONVERSIÓN DE GAS PROPANO



ASADOR FLEXIBLE POR TANDAS
JUEGO N/P 175612

Este juego contiene lo siguiente:

(2)	Válvula combinada de propano	175766
(1)	Orificio de quemador de RI de 52 mm (quemador delantero)	175767
(1)	Orificio de quemador de RI de 51 mm (quemador trasero)	175768
(1)	Orificio de quemador inferior N° 49	175737
(1)	Etiqueta de conversión de asador Natural>Propano	175605
(1)	Módulo de encendido del quemador inferior, propano	175843
(1)	Etiqueta - Gas propano	175776
(2)	Remache	168106

Artículos requeridos para esta instalación:

- Llave dinamométrica
- Herramienta para la instalación de remaches
- Sellante de roscas para gas propano
- (2) Llaves para tubos o (1) llave para tubos y (1) llave ajustable
- (1) Llave de boca de 9/16”
- (1) Llave de boca de 5/8”
- (1) Cubo de 1/2”
- (1) Llave de boca de 3/8”
- Destornillador de hoja recta
- Destornillador Phillips
- Llave hexagonal de 3/16”
- Broca de taladro N° 30
- Manómetro digital o “Slack Tube” con arpón de manguera roscado de tubo macho de 1/8”.
- Fluido de detección de fugas.

INSTRUCCIONES DE INSTALACIÓN

A. Personal capacitado

Estas instrucciones de instalación son para el uso exclusivo del personal de instalación y servicio capacitado. La instalación o el servicio por parte de personal que no esté capacitado puede provocar daños en el asador y lesiones al operador.

El personal de instalación capacitado son aquellos individuos, firmas, compañías o corporaciones que en persona o por medio de un agente participe y sea responsable de lo siguiente:

- La instalación o el reemplazo de tuberías de gas o la conexión, la instalación, la reparación o el servicio de equipos, que tengan experiencia en dicho trabajo, que estén familiarizados con todas las precauciones requeridas, y que hayan cumplido con todos los requisitos de las autoridades estatales y locales que tengan jurisdicción. Vea: Código Nacional para Gases Combustibles NFPA 54 (ANSI Z223.1).

La instalación debe cumplir con los códigos locales, o en ausencia de los mismos, con el Código Nacional de Gases Combustibles, ANSI Z223.1/NFPA 54, o con el Código de Instalación de Gas Natural y Propano, CSA B149.1 según corresponda, incluido lo siguiente:

Para un asador montado sobre ruedas, la instalación debe hacerse con un conector que cumpla con la norma para conectores de aparatos de gas móviles, ANSI Z21.69/CSA 6.16 y un dispositivo de desconexión rápida que cumpla con la norma para dispositivos de desconexión rápida para usar con combustible gaseoso, ANSI Z21.4/CSA 6.9. Al instalar el asador con ruedas y una manguera de desconexión rápida, se deben proporcionar medios adecuados para limitar el movimiento del asador sin depender del conector y del dispositivo de desconexión rápida o sus tuberías asociadas para limitar el movimiento del asador. Se puede conectar un medio de sujeción a la parte vertical del bastidor de la base en la parte trasera del asador.

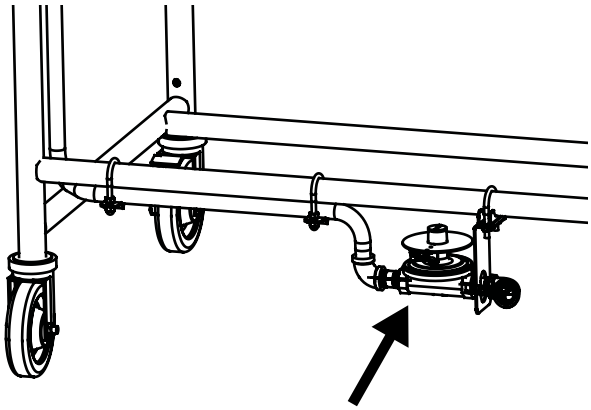
Se dispone de instrucciones de instalación detalladas del asador en el manual de operación del asador flexible por tandas (N/P de Duke 175500). Si falta este manual, debe solicitar uno usando la información de contacto de la parte inferior de esta página.

AVISO AL INSTALADOR:

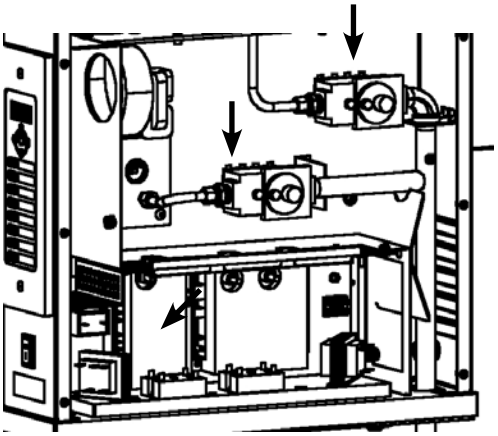
ESTE JUEGO DEBE INSTALARSE EN EL ASADOR FLEXIBLE POR TANDAS CUANDO LA PRESIÓN DEL GAS DE SUMINISTRO SEA MAYOR QUE 12” DE AGUA.

B. Procedimiento

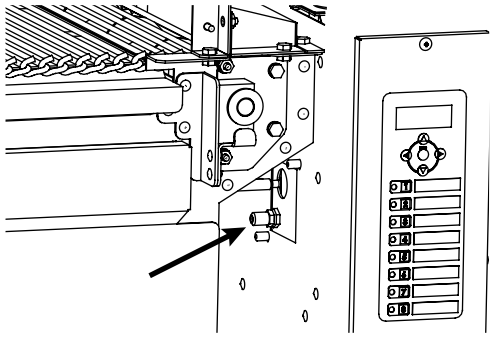
1) DESENCHUFE EL ASADOR DE LA RED ELÉCTRICA. CIERRE LA VÁLVULA DE GAS PRINCIPAL Y DESCONECTE LA TUBERÍA DE SUMINISTRO.
2) QUITE EL REGULADOR DE PRESIÓN OPCIONAL (SI LO TIENE INSTALADO). VUELVA A CONECTAR LAS CONEXIONES SEGÚN SEA NECESARIO.



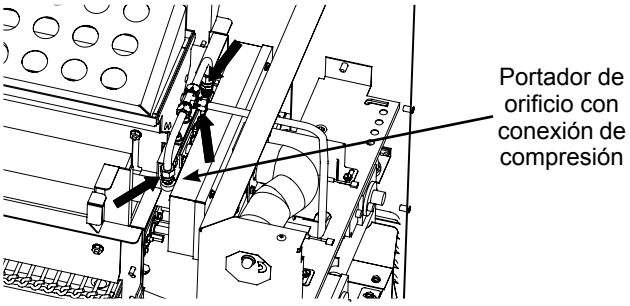
3) QUITE (2) VÁLVULAS DE GAS Y REEMPLÁCELAS POR VÁLVULAS NUEVAS. ASEGÚRESE DE APLICAR SELLANTE PARA ROSCAS A TODAS LAS CONEXIONES ROSCADAS DE TUBOS. QUITE EL MÓDULO DE ENCENDIDO DEL QUEMADOR INFERIOR Y REEMPLACE POR EL NUEVO MÓDULO. VEA EL DIAGRAMA DE CONEXIONES EN EL TABLERO DE ACCESO DE CONTROL PARA VER SI LAS CONEXIONES SON APROPIADAS.



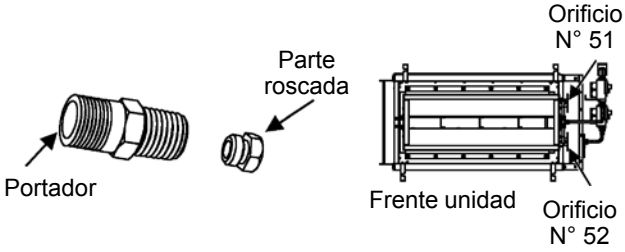
4) QUITE EL QUEMADOR INFERIOR (VEA EL MANUAL DE INSTALACIÓN/OPERACIONES) PARA TENER ACCESO A LA CAPERUZA DE LA VÁLVULA DE ORIFICIO. USE UN CUBO DE 1/2" PARA QUITAR LA CAPERUZA DE LA VÁLVULA DE ORIFICIO Y REEMPLACE POR LA NUEVA VÁLVULA DE ORIFICIO. APRIETE LA VÁLVULA DE ORIFICIO A 60 LB-PULG (6.7 N.m.



5) USE UNA LLAVE DE 5/8" PARA QUITAR LAS CONEXIONES DE COMPRESIÓN DE LA TUBERÍA DE GAS SUPERIOR (3 LUGARES) QUE CONECTAN AMBOS QUEMADORES DE RI.



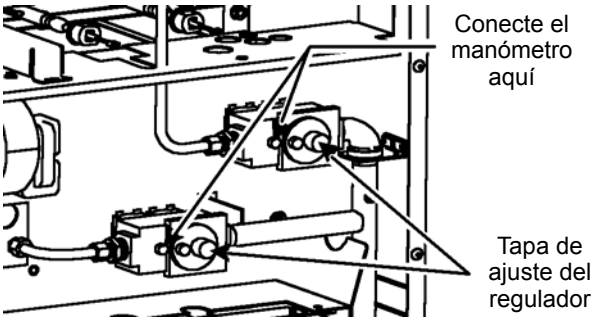
6) CON LAS TUBERÍAS DE GAS QUITADAS, QUITE LOS PORTADORES DE LOS ORIFICIOS DE LOS QUEMADORES CON UNA LLAVE DE 5/8". QUITE LA PARTE ROSCADA DEL ORIFICO DEL PORTADOR CON UNA LLAVE DE 3/8". REEMPLACE POR UNA NUEVA PARTE ROSCADA DEL ORIFICIO A 40 LB-PULG. VUELVA A MONTAR LAS CONEXIONES Y LAS TUBERÍAS DE GAS.



7) CONECTE AL SERVICIO DE GAS Y ELÉCTRICO. SI SE TRATA DE UNA NUEVA INSTALACIÓN, DEBE SEGUIR LAS INSTRUCCIONES DE INSTALACIÓN Y OPERACIÓN DEL ASADOR FLEXIBLE

POR TANDAS.

8) EN LA VÁLVULA SUPERIOR, QUITE EL TAPÓN DE TUBERÍA DE 1/8" Y EL MANÓMETRO CONECTADO. ENCIENDA EL ASADOR. USE UN DESTORNILLADOR PARA QUITAR LA TAPA RANURADA DEL REGULADOR Y AJÚSTELA HASTA QUE LA LECTURA DEL MANÓMETRO SEA DE 8" DE AGUA: VUELVA A COLOCAR LA TAPA. APAGUE EL ASADOR. QUITE EL MANÓMETRO Y REEMPLACE EL TAPÓN DE TUBERÍA. REPITA ESO PARA LA VÁLVULA INFERIOR.



9) COMPRUEBE SI HAY FUGAS EN TODAS LAS CONEXIONES CON EL ASADOR EN FUNCIONAMIENTO.

NOTA: *LOS DETECTORES DE FUGAS ELECTRÓNICOS DARÁN FALSAS LECTURAS EN LA PARTE SUPERIOR DEL ASADOR CERCA DE LOS ORIFICIOS DE RI Y DE LAS TUBERÍAS DE GAS. ESTO SE DEBE A PRODUCTOS DE COMBUSTIÓN CERCA DEL CONDUCTO DE HUMOS. USE UN FLUIDO DE COMPROBACIÓN DE FUGAS O SOLUCIÓN JABONOSA EN ESTA ÁREA.*

10) COMPRUEBE LAS CARACTERÍSTICAS DE LA LLAMA DEL QUEMADOR INFERIOR Y EFECTÚE UN AJUSTE DEL OBTURADOR DE AIRE SI ES NECESARIO.

PROCEDIMIENTO DE AJUSTE DEL OBTURADOR DE AIRE DEL QUEMADOR INFERIOR

NOTA: *ES NECESARIO EFECTUAR ESTE AJUSTE CON LOS COLECTORES DE GRASA Y LOS PANELES DE ACCESO DEL QUEMADOR INFERIOR INSTALADOS.*

NOTA: *ES NECESARIO EFECTUAR ESTE AJUSTE DEL QUEMADOR EN EL ASADOR ASÍ COMO EN CUALQUIER OTRO QUEMADOR DE REPUESTO EN JUEGOS DE PIEZAS DE REPUESTO O EN JUEGOS DE PIEZAS REEMPLAZABLES POR EL USUARIO. SE DEBEN FIJAR TODOS LOS QUEMADORES A LA MISMA ABERTURA DEL OBTURADOR DE AIRE.*

a. PERFORE TODOS LOS REMACHES EN LOS OBTURADORES DE AIRE DE LOS QUEMADORES.

b. AFLOJE EL TORNILLO DEL OBTURADOR DE AIRE Y AJUSTE PARA LAS CARACTERÍSICAS APROPIADAS DE LA LLAMA SEGÚN SE DEFINEN ABAJO:

   i. GAS NATURAL – LA LLAMA DEBE SER PRINCIPALMENTE AZUL CON LA PARTE SUPERIOR LIGERAMENTE AMARILLA EN LOS DOS EXTREMOS DEL QUEMADOR. NO SE DEBE LEVANTAR LA LLAMAG.

   ii. GAS PROPANO – LA LLAMA DEBE SER PRINCIPALMENTE AZUL CON PUNTAS LIGERAMENTE AMARILLAS A LO LARGO DE TODO EL QUEMADOR. NO SE DEBE LEVANTAR LA LLAMA.

c. APRIETE EL TORNILLO DEL OBTURADOR DE AIRE.

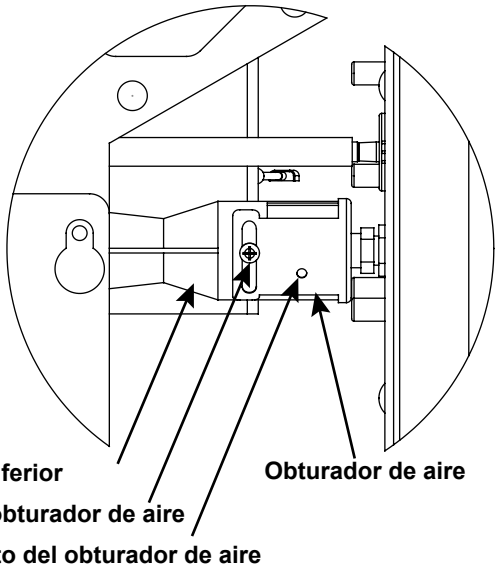
d. QUITE EL QUEMADOR INFERIOR DE LA UNIDAD (VEA EL MANUAL DE INSTALACIÓN/OPERACIÓN)

e. USE LOS DOS AGUJEROS PILOTO DEL OBTURADOR DE AIRE PARA PERFORAR AGUJEROS DEL N° 30 POR EL OBTURADOR DE AIRE Y QUEMADOR.

f. USE LOS REMACHES SUMINISTRADOS

PARA TRABAR EL QUEMADOR E N POSICIÓNN.

g. VUELVA A INSTALAR EL QUEMADOR EN EL ASADOR.



11) COMPRUEBE LAS CARACTERÍSTICAS DE LA LLAMA DEL QUEMADOR INFERIOR INFRARROJO Y EFECTÚE UN AJUSTE DEL OBTURADOR DE AIRE SI ES NECESARIO.

PROCEDIMIENTO DE AJUSTE DEL OBTURADOR DEL QUEMADOR INFRARROJO

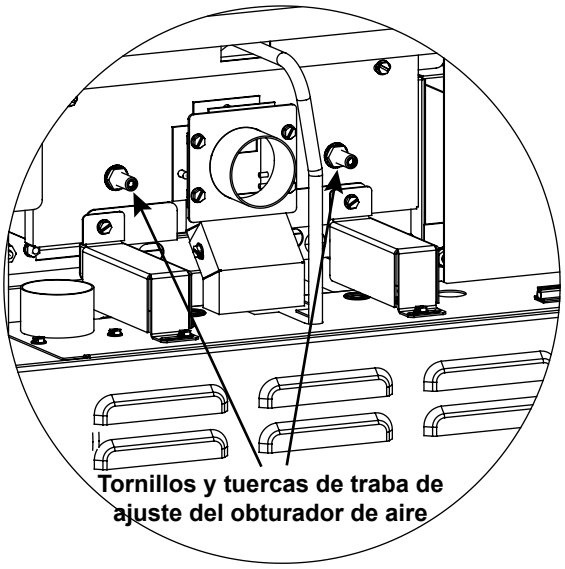
a. QUITE LA CUBIERTA DE CONTROL SUPERIOR DEL EXTREMO DE LA UNIDAD PARA ACCEDER A LOS TORNILLOS DE AJUSTE DEL OBTURADOR DE AIRE.

b. USE UNA LLAVE DE 9/16" Y UNA LLAVE HEXAGONAL DE 3/16" PARA AFLOJAR LAS TUERCAS DE TRABA DE LOS TORNILLOS DE AJUSTE.

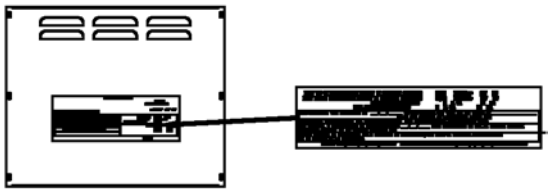
c. AJUSTE LOS QUEMADORES PARA OBTENER LAS CARACTERÍSTICAS APROPIADAS DE LA LLAMA.

CON LA UNIDAD BIEN CALENTADA, GIRE CADA TORNILLO A LA DERECHA ¼ DE VUELTA EN INCREMENTOS HASTA QUE SE OBSERVE UNA LLAMA O NEBLINA AZUL DEBAJO DE LOS QUEMADORES. DESPUÉS, GIRE CADA TORNILLO A LA IZQUIERDA ¼ DE VUELTA EN INCREMENTOS HASTA QUE NO SE OBSERVE UNA LLAMA O NEBLINA AZUL DEBAJO DE LOS QUEMADORES.

d. VUELVA A APRETAR LAS TUERCAS EN LOS TORNILLOS DE AJUSTE.

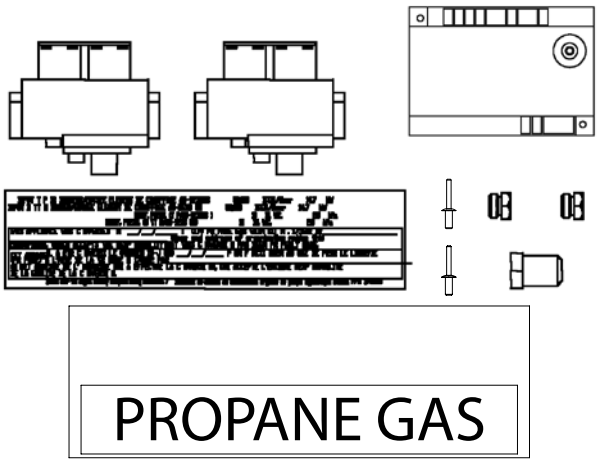


12) ADHIERA LA NUEVA ETIQUETA DE VALORES NOMINALES EN EL INTERIOR DE LA CUBIERTA DEL RECINTO ELÉCTRICO INFERIOR. ADHIERA EN UN ÁREA ABIERTA.



13) ADHIERA LA ETIQUETA DE TIPO DE GAS SUMINISTRADO ENCIMA DE LA ETIQUETA EXISTENTE EN EL SOPORTE. LA CONVERSIÓN ESTÁ COMPLETA AHORA.

INSTRUCTIONS POUR KIT DE CONVERSION AU PROPANE LIQUÉFIÉ



RÔTISSOIRE À FOURNÉE VARIABLE KIT N° 175612

Composition du kit :

(2)	Robinet, mixte, propane liquéfié	175766
(1)	Orifice calibré, brûleur inf. n° 52 mm (brûleur avant)	175767
(1)	Orifice calibré, brûleur inf. n° 51 mm (brûleur arrière)	175768
(1)	Orifice calibré, brûleur inférieur n° 49	175737
(1)	Étiquette conversion de rôtissoire gaz nat.>prop.	175605
(1)	Module, allumage, brûleur inférieur, propane	175843
(1)	Étiquette - Gaz propane	175776
(2)	Rivet	168106

Accessoires nécessaires pour cette installation :

- Clé dynamométrique
- Outil d'installation de rivet
- Pâte d'étanchéité pour raccords filetés adaptée au propane liquéfiée
- (2) Clés à tube ou (1) clé à tube et (1) clé à molette
- (1) Clé à fourche de 9/16 po
- (1) Clé à fourche de 5/8 po
- (1) Douille de 1/2 po
- (1) Clé à fourche de 3/8 po
- Tournevis plat
- Tournevis cruciforme
- Clé Allen de 3/16 po
- Mèche de forage #30
- Manomètre numérique ou Slack Tube® à raccord cannelé à filetage extérieur de 1/8 po.
- Liquide pour détection des fuites.

INSTRUCTIONS D'INSTALLATION

A. Personnel qualifié

Ces instructions d'installation sont destinées à un personnel d' installation et d'entretien qualifié uniquement. Une installation ou un entretien effectué par quiconque autre que du personnel qualifié peut entraîner des dégâts pour la rôtissoire et/ou des blessures pour l'opérateur.

Par personnel d'installation qualifié on entend les personnes ou entreprises qui, directement ou par l'intermédiaire d'un agent, se chargent et sont responsables de ce qui suit :

- Pose ou remplacement de canalisations de gaz, ou raccordement, installation, réparation ou entretien du matériel. Ce personnel doit avoir une solide expérience de ce genre de travail, être familiarisé avec toutes les précautions à prendre et avoir satisfait à toutes les conditions exigées par les autorités provinciales et locales compétentes. Voir : National Fuel Gas Code (Code national des combustibles gazeux), NFPA 54 (ANSI Z223.1).

L'installation doit être conforme aux codes locaux ou, en leur absence, au National Fuel Gas Code, ANSI Z223.1/NFPA 54 ou au Natural Gas and Propane Installation Code (Code des installations au gaz naturel et au propane), ACNOR B149.1 selon le cas, y compris :

Pour une rôtissoire montée sur des roulettes, l'installation doit être effectuée en utilisant un raccord conforme à la norme applicable aux raccords pour appareils à gaz mobiles, ANSI Z21.69/ACNOR 6.16 et un dispositif à débranchement rapide conforme à la norme applicable à ce type de raccord pour combustible gazeux, ANSI Z21.4/ACNOR 6.9. Lors de l'installation d'une rôtissoire à roulettes et tuyau à débranchement rapide, des dispositions suffisantes doivent être prises pour limiter le déplacement de la rôtissoire indépendamment du raccord et du dispositif à débranchement rapide ou de la tuyauterie associée. Il est possible de fixer un limiteur à la partie verticale du châssis à l'arrière de la rôtissoire.

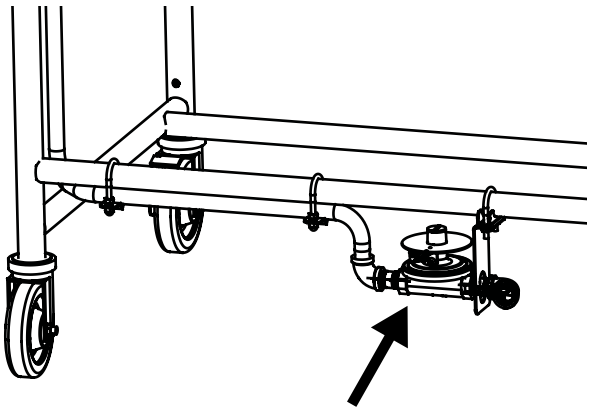
Des instructions détaillées d'installation de la rôtissoire à fournée variable sont données dans son manuel d'installation et d'utilisation (n° réf. Duke 175500). Si on a perdu ce manuel, on peut en demander un autre en utilisant les informations sur les contacts figurant au bas de cette page.

AVIS À L'INSTALLATEUR :

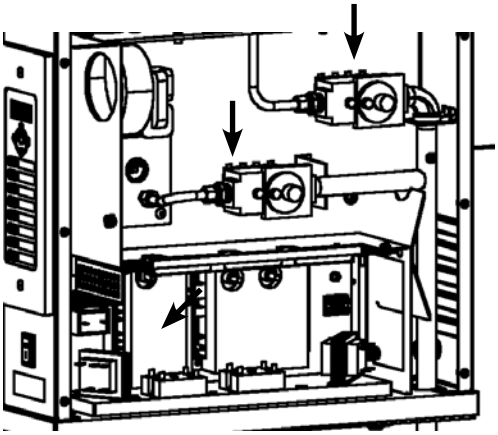
CET APPAREIL NE DOIT PAS ÊTRE RACCORDÉ À UNE ALIMENTATION EN GAZ DONT LA PRESSION DEPASSE 3,4 KPA (½ PSI) (12 PO C.E.).

B. Marche à suivre

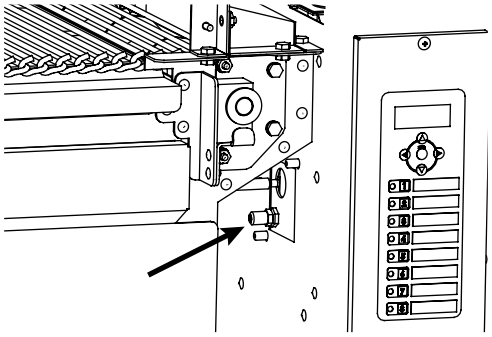
1) DÉBRANCHER LA RÔTISSOIRE DE LA PRISE DE COURANT. FERMER LA VANNE D'ALIMENTATION PRINCIPALE ET DÉBRANCHER LE TUYAU D'ALIMENTATION.
2) DÉPOSER LE DÉTENDEUR EN OPTION (LE CAS ÉCHÉANT). REBRANCHER LES RACCORDS SELON LE BESOIN.



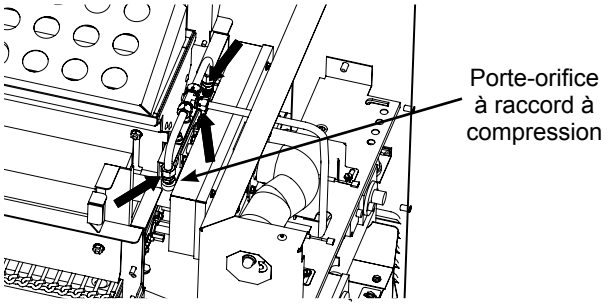
3) DÉPOSER LES (2) ROBINETS À GAZ ET LES REMPLACER PAR LES NOUVEAUX. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR TOUS LES JOINTS. DÉPOSER LE MODULE D'ALLUMAGE DU BRÛLEUR INFÉRIEUR ET LE REMPLACER PAR LE NOUVEAU. VOIR LE SCHÉMA DE CÂBLAGE SUR LE PANNEAU D'ACCÈS AUX COMMANDES POUR LES RACCORDEMENTS CORRECTS.



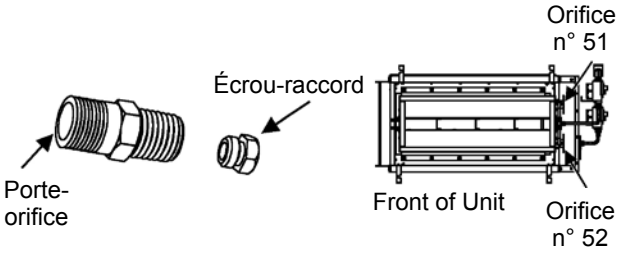
4) DÉPOSER LE BRÛLEUR INFÉRIEUR (VOIR LE MANUEL D'INSTALLATION/UTILISATION) POUR ACCÉDER AU CHAPEAU D'ORIFICE CALIBRÉ. ENLEVER LE CHAPEAU D'ORIFICE À L'AIDE D'UNE DOUILLE DE 1/2 PO ET REMPLACER L'ORIFICE PAR UN NEUF. SERRER L'ORIFICE À 6,7 N.m (60 PO-LBS.)



5) À L'AIDE D'UNE CLÉ DE 5/8 PO, RETIRER LES RACCORDS À COMPRESSION DE LA CANALISATION SUPÉRIEURE DE GAZ (3 ENDROITS) QUI RELIE LES DEUX BRÛLEURS INFRAROUGES.

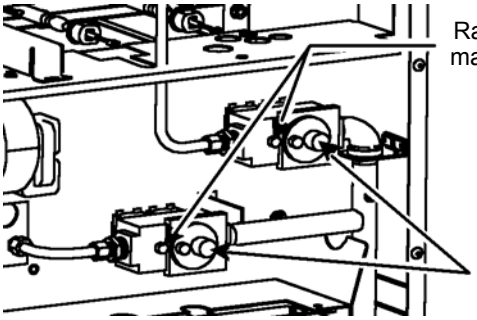


6) LES CANALISATIONS DE GAZ ÉTANT DÉBRANCHÉES, DÉPOSER LES PORTES-ORIFICE DES BRÛLEURS À L'AIDE D'UNE CLÉ DE 5/8 PO. RETIRER L'ÉCROU-RACCORD DU PORTE-ORIFICE À L'AIDE D'UNE CLÉ DE 3/8 PO. LE REMPLACER PAR LE NOUVEAU ET LE SERRER À 4,5 Nm (40 lb-po). RÉASSEMBLER LES RACCORDS ET LES CANALISATIONS DE GAZ.



7) RACCORDER L'APPAREIL À L'ARRIVÉE DE GAZ ET AU SECTEUR. S'IL S'AGIT D'UNE NOUVELLE INSTALLATION, SUIVRE LES INSTRUCTIONS D'INSTALLATION ET D'UTILISATION DE LA RÔTISSOIRE À FOURNÉE VARIABLE.

8) ENLEVER LE BOUCHON TUBULAIRE DE 1/8 PO DU ROBINET SUPÉRIEUR ET POSER UN MANOMÈTRE. ALLUMER LA RÔTISSOIRE. À L'AIDE D'UN TOURNEVIS, ENLEVER LE CAPUCHON À FENTE DU DÉTENDEUR ET RÉGLER CELUI-CI JUSQU'À CE QUE LE MANOMÈTRE INDIQUE 8 PO C.E. REMETTRE EN CAPUCHON EN PLACE. ÉTEINDRE LA RÔTISSOIRE. RETIRER LE MANOMÈTRE ET REMETTRE LE BOUCHON TUBULAIRE EN PLACE. RÉPÉTER L'OPÉRATION POUR LE ROBINET INFÉRIEUR.



9) LA RÔTISSOIRE ÉTANT EN MARCHE, CONTRÔLER L'ÉTANCHÉITÉ DE TOUS LES RACCORDS.

REMARQUE : *LES DÉCELEURS DE FUITES ÉLECTRONIQUES DONNERONT DES INDICATIONS ERRONÉES SUR LE DESSUS DE LA RÔTISSOIRE PRÈS DES ORIFICES CALIBRÉS DES BRÛLEURS INFRAROUGES ET DE LA TUYAUTERIE DE GAZ. CELA EST DÛ AUX PRODUITS DE COMBUSTION PRÉSENTS PRÈS DU TUYAU D'ÉVACUATION DES FUMÉES. UTILISER UN LIQUIDE DE CONTRÔLE D'ÉTANCHÉITÉ OU DE L'EAU SAVONNEUSE DANS CETTE ZONE.*

10) VÉRIFIER LES CARACTÉRISTIQUES DE FLAMME DU BRÛLEUR INFÉRIEUR ET RÉALISER UN AJUSTEMENT D'OBTURATEUR LE CAS ÉCHÉANT.

PROCÉDURE D'AJUSTEMENT D'OBTURATEUR DE BRÛLEUR INFÉRIEUR

REMARQUE**:** *CET AJUSTEMENT DOIT ÊTRE RÉALISÉ AVEC LES RÉCIPIENTS À GRAISSE ET LES PANNEAUX D'ACCÈS DU BRÛLEUR INFÉRIEUR INSTALLÉS.*

REMARQUE**:** *CET AJUSTEMENT DOIT ETRE RÉALISÉ SUR LE BRÛLEUR DANS LE GRILLOIR AINSI QUE SUR TOUT AUTRE BRÛLEUR DE RECHANGE DANS L'ENSEMBLE DE PIÈCES DE RECHANGE OU DANS L'ENSEMBLE DE PIÈCES REMPLAÇABLE PAR L'UTILISATEUR. TOUS LES BRÛLEURS DOIVENT ÊTRE RÉGLÉS SUR LA MÊME OUVERTURE D'OBTURATEUR.*

a. EXTRAYEZ TOUT RIVET DANS LES OBTURATEURS DES BRÛLEURS.

b. DESSERRER LA VIS DE L'OBTURATEUR ET AJUSTER POUR OBTENIR DES BONNES CARACTÉRISTIQUES DE FLAMME COMME INDIQUÉ CI-DESSOUS :

   i. GAZ NATUREL - LA FLAMME DEVRAIT ÊTRE PREMIÈREMENT BLEUE AVEC UN SOUPÇON DE JAUNE AUX POINTES AUX DEUX EXTRÉMITÉS DU BRÛLEUR. IL NE DEVRAIT PAS Y AVOIR DE LEVAGE DE FLAMME.

   ii. GAZ PROPANE - LA FLAMME DEVRAIT ÊTRE PREMIÈREMENT BLEUE AVEC UN SOUPÇON DE JAUNE AUX POINTES SUR L'ENSEMBLE DU BRÛLEUR. IL NE DEVRAIT PAS Y AVOIR DE LEVAGE DE FLAMME.

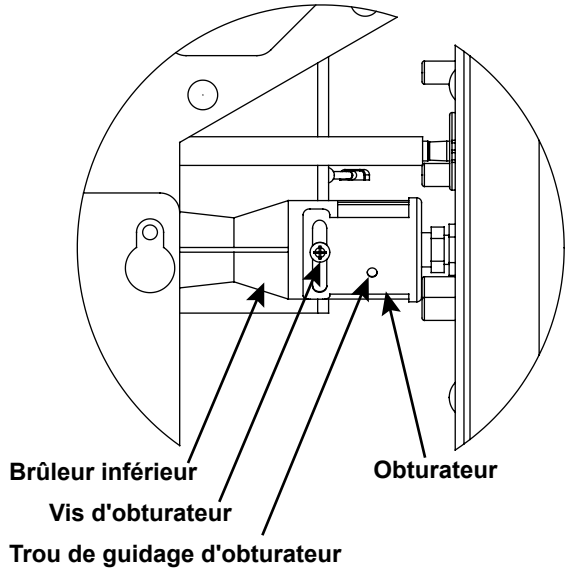
c. RESSERRER LA VIS DE L'OBTURATEUR.

d. RETIRER LE BRÛLEUR INFÉRIEUR DE L'UNITÉ (VOIR LE GUIDE D'INSTALLATION/OPERATION)

e. À L'AIDE DES TROUS DE GUIDAGE SUR L'OBTURATEUR, PERCER DES TROUS DE #30 À TRAVERS L'OBTURATEUR ET LE BRÛLEUR.

f. UTILISER LES RIVETS FOURNIS POUR VERROUILLER LE BRÛLEUR EN POSITION.

g. RÉINSTALLER LE BRÛLEUR DANS LE GRILLOIR.



11) VÉRIFIER LES CARACTÉRISTIQUES DE FLAMME DU BRÛLEUR IR ET RÉALISER DES AJUSTEMENTS D'OBTURATEUR LE CAS ÉCHÉANT.

PROCÉDURE D'AJUSTEMENT DE L'OBTURATEUR DU BRÛLEUR INFRAROUGE

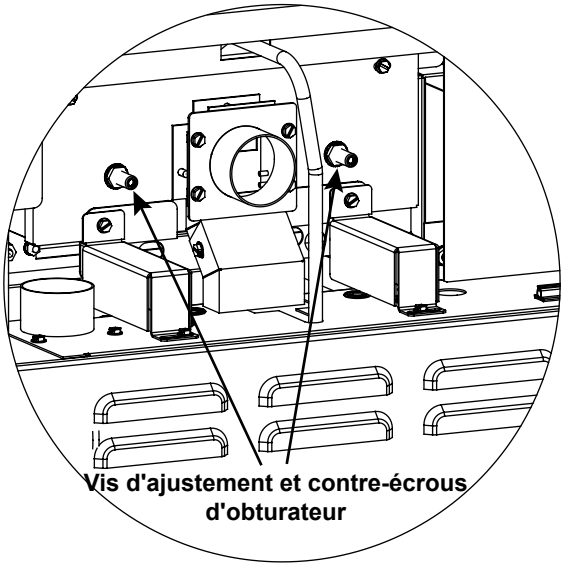
a. RETIRER LE COUVERCLE DE CONTRÔLE SUPÉRIEUR DE L'EXTRÉMITÉ DE L'UNITÉ POUR AVOIR ACCÈS AUX VIS D'AJUSTEMENT D'OBTURATEUR.

b. UTILISER UNE CLÉ DE 9/16" ET UNE CLÉ HEXAGONALE POUR DESSERRER LES CONTRE-ÉCROUSDESVISD'AJUSTEMENT.

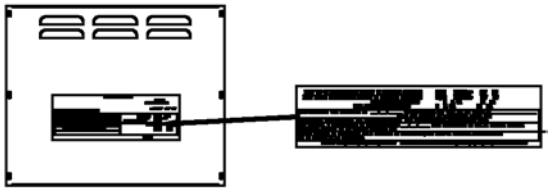
c. AJUSTER LES BRÛLEURS POUR DES BONNES CARACTÉRISTIQUES DE FLAMME.

UNE FOIS L'UNITÉ BIEN RÉCHAUFFÉE, TOURNER CHAQUE VIS DANS LE SENS DES AIGUILLES DANS DES INCRÉMENTS DE TOUR D' 1/4 JUSQU'À L'ARRIVÉE D'UNE FLAMME BLEUE OU D'UNE BRUME EN DESSOUS DES BRÛLEURS.

d. RESSERRER LES ÉCROUS SUR LES VIS D'AJUSTEMENT.

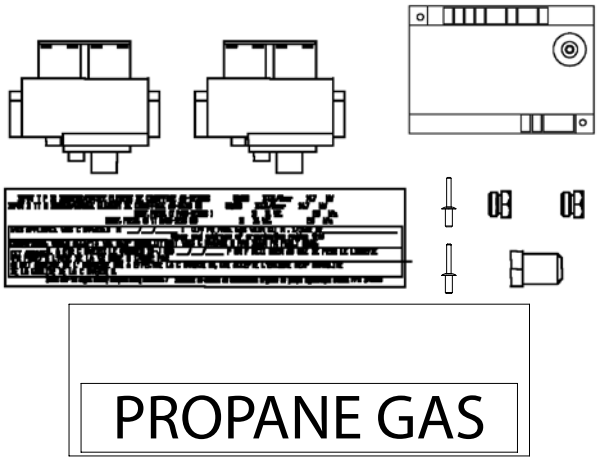


12) APPLIQUER UNE NOUVELLE ÉTIQUETTE DE CLASSEMENT À L'INTÉRIEUR DU COUVERCLE INFÉRIEUR DU BOÎTIER ÉLECTRIQUE. APPLIQUER DANS TOUTE ZONE OUVERTE.



13) APPLIQUER L'ÉTIQUETTE DU TYPE DE GAZ FOURNI PAR DESSUS L'ÉTIQUETTE EXISTANTE SUR LE STAND. LA CONVERSION EST DÉSORMAIS COMPLÈTE.

INSTRUÇÕES DO KIT DE CONVERSÃO DE GÁS PROPANO



GRELHA MULTIPRODUTO KIT Nº DA PEÇA 175612

Este kit contém:

(2) Válvula, combinação, gás Propano 175766

(1) Orifício, queimador infravermelho nº 52 mm (queimador dianteiro) 175767

(1) Orifício, queimador infravermelho nº 51 mm (queimador traseiro) 175768

(1) Orifício, queimador inferior nº 49 175737

(1) Etiqueta de conversão da grelha de gás natural para propano 175605

(1) Módulo, acendimento, queimador inferior, propano 175843

(1) Etiqueta - Gás Propano 175776

(2) Rebite 168106

Itens necessários para esta instalação:

- Torquímetro
- Ferramenta de Instalação do Rebite
- Selante de rosca para gás Gás Propano
- (2) Chaves de grifo ou
  (1) Chave de grifo e (1) Chave inglesa
- Chave de boca de 5/8"
- Soquete de 1/2”
- Chave de boca de 9/16"
- Chave de boca de 3/8"
- Chave de fenda reta
- Chave de Fenda Phillips
- Chave sextavada de 3/16”
- Broca Nº 30
- Manômetro digital ou Slack Tube com rebarba de mangueira roscada de tubo macho de 1/8”
- Fluido de detecção de vazamento.

INSTRUÇÕES DE INSTALAÇÃO

A. Técnicos qualificados

Estas instruções de instalação devem ser usadas apenas por técnicos qualificados de instalação e serviço. A instalação ou serviço feito por outra pessoa que não um técnico qualificado pode causar danos à grelha e/ou ferimentos ao operador.

Técnicos de instalação qualificados são pessoas, firmas, companhias ou empresas que, seja pessoalmente ou através de um agente, executem e se responsabilizem pelo seguinte:

- Instalação ou substituição da tubulação de gás ou a conexão, instalação, conserto ou manutenção do equipamento, que tenham experiência com esse tipo de trabalho, conheçam todas as medidas de precaução necessárias e atendam a todos os requisitos exigidos pelos órgãos estaduais e municipais competentes. Veja: Código Nacional de Gás Combustível dos EUA NFPA 54 (ANSI Z223.1).

A instalação deve obedecer os códigos locais ou, na ausência de códigos locais, o Código Nacional de Gás Combustível dos EUA, ANSI Z223.1/NFPA 54, ou o Código de Instalação de Gás Natural ou Propano dos EUA, CSA B149.1, se for o caso, incluindo o seguinte:

No caso de grelhas montadas sobre rodízios, a instalação deverá ser feita com um conector que obedeça o Padrão de Conectores para Equipamento Móvel a Gás, ANSI Z21.69/CSA 6.16, e um dispositivo de desconexão rápida que atenda o Padrão de Dispositivos de Desconexão Rápida para Uso com Gás Combustível, ANSI Z21.4/CSA 6.9. Ao instalar a grelha com rodízios e mangueira de desconexão rápida, é preciso providenciar métodos adequados para limitar o movimento da grelha sem depender do conector e do dispositivo de desconexão rápida ou ainda da tubulação associada para limitar o movimento da grelha. Um elemento de restrição pode ser afixado na porção vertical da estrutura da base, na traseira da grelha.

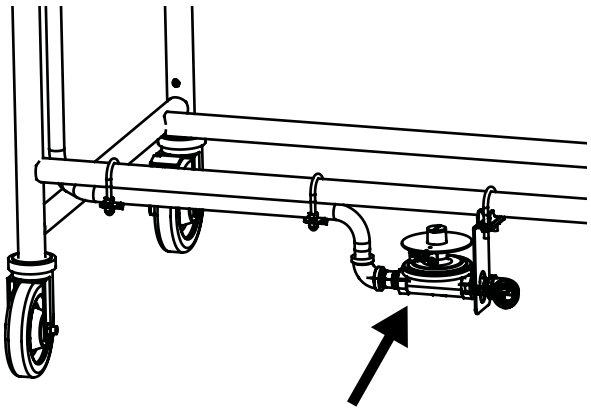
O “Manual de instalação e operação da Grelha Multiproduto” (nº da peça Duke 175500) contém instruções detalhadas para a instalação da grelha. Se não encontrar o manual, peça um usando as informações de contato no final desta página.

AVISO AO INSTALADOR:

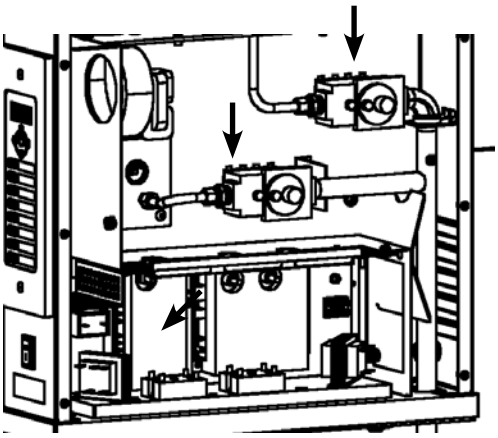
ESTE APARELHO NÃO DEVE SER CONECTADO A UMA PRESSÃO DE FORNECIMENTO DE GÁS SUPERIOR A 30 CM C.A.

B. Procedimento

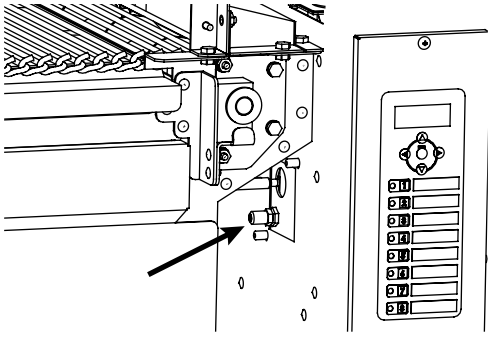
1) DESLIGUE A GRELHA DA TOMADA ELÉTRICA. FECHE A VÁLVULA PRINCIPAL E DESCONECTE A LINHA DE ALIMENTAÇÃO DE GÁS.
2) REMOVA O REGULADOR DE PRESSÃO OPCIONAL (SE INSTALADO). RECONECTE OS ENCAIXES CONFORME NECESSÁRIO.



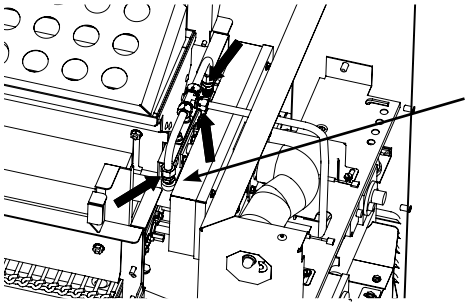
3) REMOVA (2) VÁLVULAS DE GÁS E SUBSTITUA-AS POR VÁLVULAS NOVAS. LEMBRE-SE DE APLICAR SELANTE DE ROSCA EM TODAS AS CONEXÕES ROSCADAS DOS TUBOS. REMOVA O MÓDULO DE ACENDIMENTO DO QUEIMADOR INFERIOR E SUBSTITUA-O POR UM MÓDULO NOVO. CONSULTE O DIAGRAMA ELÉTRICO NO PAINEL DE ACESSO DO CONTROLE PARA VER AS CONEXÕES CERTAS.



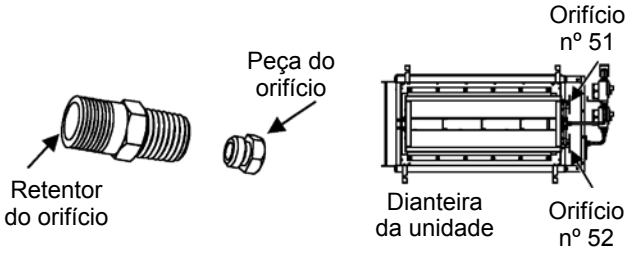
4) REMOVA O QUEIMADOR INFERIOR (VEJA O MANUAL DE INSTALAÇÃO/OPERAÇÕES) PARA ACESSAR A TAMPA DO ORIFÍCIO. USANDO UM SOQUETE DE 1/2", REMOVA A TAMPA DO ORIFÍCIO E COLOQUE O NOVO ORIFÍCIO. APLIQUE UM TORQUE DE 6,7 Nm (60 lbs.



5) COM UMA CHAVE DE 5/8", REMOVA OS ENCAIXES DE COMPRESSÃO DA TUBULAÇÃO DE GÁS SUPERIOR (3 PONTOS) QUE CONECTAM OS DOIS QUEIMADORES INFRAVERMELHOS.

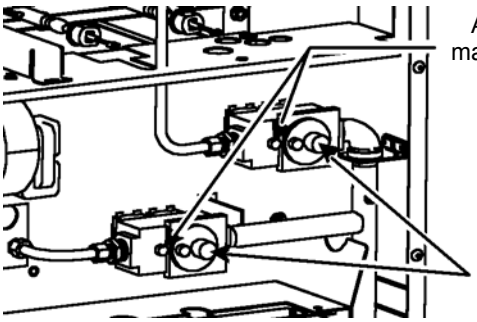


6) COM OS TUBOS DE GÁS REMOVIDOS, RETIRE OS RETENTORES DOS ORIFÍCIOS DOS QUEIMADORES COM UMA CHAVE DE 5/8”. REMOVA A PEÇA DO ORIFÍCIO DO RETENTOR COM UMA CHAVE DE 3/8”. SUBSTITUA-A POR UMA NOVA PEÇA DO ORIFÍCIO DO KIT E APERTE COM UM TORQUE DE 40 pol-lb. REMONTE OS ENCAIXES E TUBOS DE GÁS.



7) CONECTE À REDE DE GÁS E ELETRICIDADE. SE ESTA FOR UMA INSTALAÇÃO NOVA, SIGA AS INSTRUÇÕES DE INSTALAÇÃO E OPERAÇÃO DA GRELHA MULTIPRODUTO.

8) NA VÁLVULA SUPERIOR, RETIRE O BUJÃO DO TUBO DE 1/8" E O MANÔMETRO. LIGUE A GRELHA. COM UMA CHAVE DE FENDA, RETIRE A TAMPA FENDIDA DO REGULADOR E AJUSTE ATÉ QUE O VISOR DO MANÔMETRO ACUSE 20 cm C.A. DESLIGUE A GRELHA. RETIRE O MANÔMETRO E RECOLOQUE O BUJÃO DO TUBO. REPITA O MESMO PROCEDIMENTO COM A VÁLVULA INFERIOR.



9) COM A GRELHA LIGADA, EXAMINE TODOS OS ENCAIXES PARA VER SE HÁ VAZAMENTOS.

OBSERVAÇÃO: *OS DETECTORES ELETRÔNICOS DE VAZAMENTO PRODUZIRÃO LEITURAS FALSAS NA PARTE SUPERIOR DA GRELHA PERTO DOS ORIFÍCIOS DE INFRAVERMELHO E DA TUBULAÇÃO DE GÁS. ISSO É CAUSADO POR PRODUTOS DE COMBUSTÃO PRÓXIMOS À CHAMINÉ. USE UM FLUIDO DE VERIFICAÇÃO DE VAZAMENTO OU ÁGUA E SABÃO NESTA ÁREA.*

10) VERIFIQUE AS CARACTERÍSTICAS DA CHAMA DO QUEIMADOR INFERIOR E FAZER UM AJUSTE DO OBTURADOR DE AR SE NECESSÁRIO.

PROCEDIMENTO DE AJUSTE DO OBTURADOR DE AR DO QUEIMADOR INFERIOR.

OBSERVAÇÃO: *ESTE AJUSTE DEVE SER FEITO COM AS PANELAS DE GORDURA E OS PAINÉIS DE ACESSO AOS QUEIMADORES INFERIORES INSTALADOS.*

OBSERVAÇÃO: *ESTE AJUSTE DEVE SER FEITO TANTO NO QUEIMADOR DA GRELHA, COMO EM TODOS OS OUTROS QUEIMADORES DE RESERVA, NOS KITS DE PEÇAS DE REPOSIÇÃO OU KITS DE PEÇAS SUBSTITUÍVEIS PELO USUÁRIO. TODOS OS QUEIMADORES DEVEM SER AJUSTADOS COM A MESMA ABERTURA DO OBTURADOR DE AR.*

a. FURAR TODOS OS REBITES DOS OBTURADORES DOS QUEIMADORES.

b. SOLTE O PARAFUSO DO OBTURADOR DE AR E AJUSTE-O ÀS CARACTERÍSTICAS DE CHAMA APROPRIADAS CONFORME DEFINIDO ABAIXO:

   i. GÁS NATURAL - A CHAMA DEVE SER PRIMARIAMENTE AZUL COM LIGEIRO TOM DE AMARELO NAS DUAS EXTREMIDADES DO QUEIMADOR. NÃO DEVE HAVER PROPAGAÇÃO DA CHAMA.

   ii. GÁS PROPANO - A CHAMA DEVE SER PRIMEIRAMENTE AZUL COM LIGEIRO TOM DE AMARELO AO LONGO DE O TODO QUEIMADOR. NÃO DEVE HAVER PROPAGAÇÃO DA CHAMA.

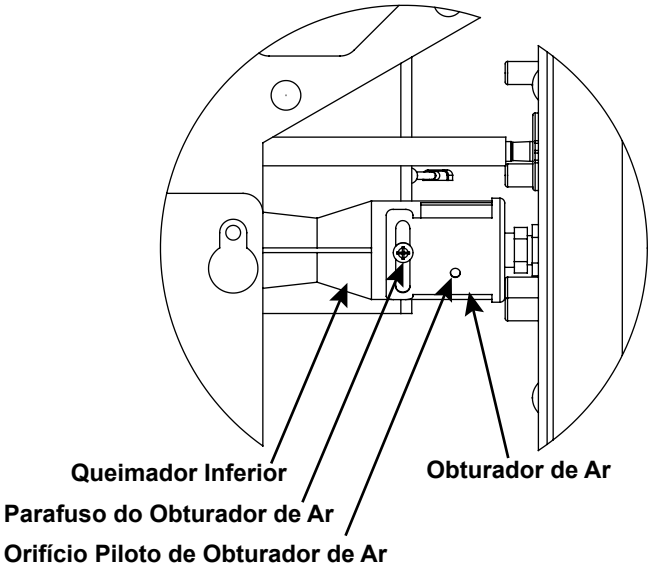
c. APERTE O PARAFUSO DO OBTURADOR DE AR.

d. REMOVA O QUEIMADOR INFERIOR DA UNIDADE(CONSULTE O MANUAL DE INSTALAÇÃO/OPERAÇÃO)

e. USANDO OS DOIS FUROS PILOTO NO OBTURADOR, COM BROCA Nº 30 FURE EM TODA SUPERFÍCIE DO OBTURADOR E QUEIMADOR.

f. UTILIZE OS REBITES FORNECIDOS PARA FIXAR O QUEIMADOR NA POSIÇÃO.

g. REINSTALE O QUEIMADOR NA GRELHA.



11) VERIFIQUE AS CARACTERÍSTICAS DA CHAMA DO QUEIMADOR INFRA-VERMELHO E FAZER AJUSTES DO OBTURADOR DE AR SE NECESSÁRIO.

PROCEDIMENTO DE AJUSTE DO QUEIMADOR INFRAVERMELHO DO OBTURADOR DE AR

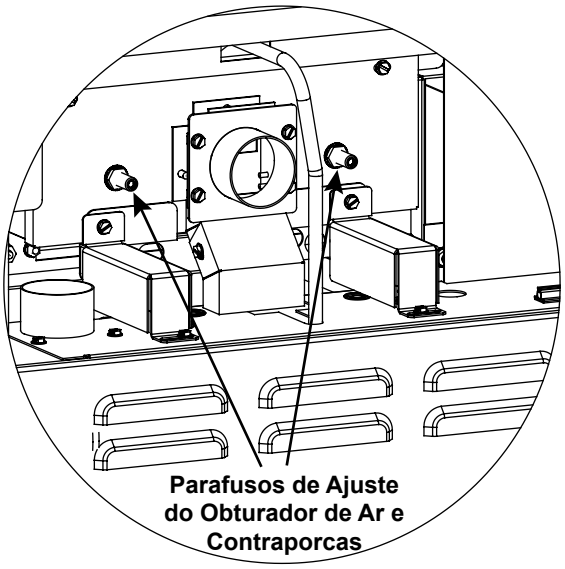
a. REMOVER A TAMPA SUPERIOR DO CONTROLE NA EXTREMIDADE DA UNIDADE PARA ALCANÇAR OS PARAFUSOS DE AJUSTE DO OBTURADOR DE AR.

b. USAR UMA CHAVE INGLESA 9/16" E UMA CHAVE HEXAGONAL DE 3/16" PARA SOLTAR AS PORCAS DE FIXAÇÃO DO PARAFUSO DE AJUSTE.

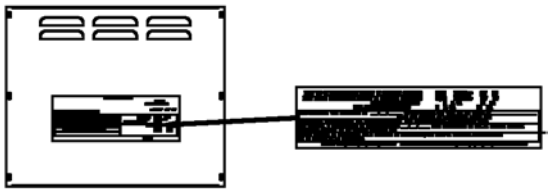
c. AJUSTAR OS QUEIMADORES PARA AS CARACTERÍSTICAS DE CHAMA APROPRIADAS.

COM A UNIDADE BEM AQUECIDA, GIRE CADA PARAFUSO NO SENTIDO HORÁRIO EM ESTÁGIOS DE ¼ ATÉ QUE SEJA OBSERVADA UMA CHAMA AZUL OU EMBAÇAMENTO EM BAIXO DOS QUEIMADORES. DEPOIS GIRE CADA CONTADOR DO PARAFUSO NO SENTIDO HORÁRIO EM ESTÁGIOS DE ¼ ATÉ QUE NÃO SEJAM OBSERVADAS CHAMA AZUL OU EMBAÇAMENTO EM BAIXO DOS QUEIMADORES.

d. REAPERTE AS PORCAS DOS PARAFUSOS DE AJUSTE.

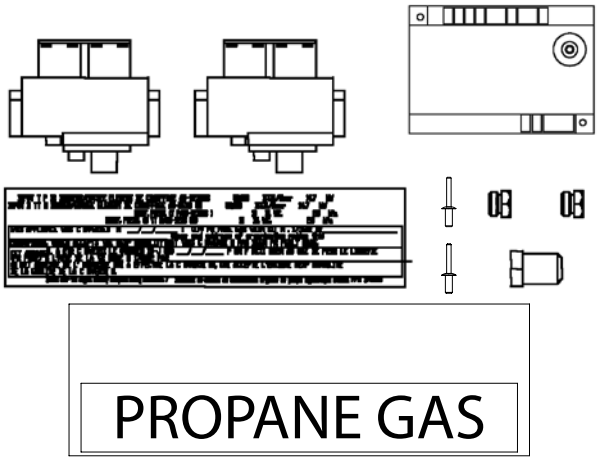


12) APLICAR AS NOVAS ETIQUETAS DE ÍNDICES NO INTERIOR DA TAMPA INFERIOR DO GABINETE ELÉTRICO. APLIQUE EM QUALQUER ÁREA ABERTA.



13) APLICAR A ETIQUETA DO TIPO DE GÁS FORNECIDO SOBRE A ETIQUETA EXISTENTE NO LOCAL. A CONVERSÃO AGORA ESTÁ COMPLETA.

プロパンガスガス変換キット使用方法



フレキシブル バッチ ブロイラーKIT P/N 175612

キットの内容：

(2) バルブ、コンボ、プロパンガス	175766
(1) オリフィス、赤外線バーナー#52mm（フロント バーナー）	175767
(1) オリフィス、赤外線バーナー#51 mm（リア バーナー）	175768
(1) オリフィス、下部バーナー#49	175737
(1) ブロイラー変換ラベル Nat.>Prop（天然ガス>プロパンガス）	175605
(1) モジュール、点火装置、下部バーナー、プロパン	175843
(1) ラベル - プロパンガス	175776
(2) リベット	168106

本品の設置に必要な工具：

- トルクレンチ
- リベット取り付けツール
- LPガス定格のスレッド シーラント。
- パイプレンチ2つ、またはパイプレンチ1つと可動レンチ1つ
- 9/16インチのオープンエンド レンチ
- 5/8インチのオープンエンド レンチ
- 1/2インチのオープンエンド レンチ
- 3/8インチのオープンエンド レンチ
- マイナス ドライバ
- プラスネジ回し
- 3/16 六角レンチ
- φ3.3 mm ドリル
- 1/8インチの雄パイプスレッド・ホースバルブを備えた、デジタル圧力計またはスラックチューブ圧力計。
- リーク検出溶液。

設置方法

A. 正規技術者

ここに記載されている設置方法は、設置点検を行う正規技術者のために作成されたものです。正規技術者以外が設置や保守作業を行うと、ブロイラーの故障や負傷事故の原因となります。

正規技術者とは、以下の業務を専門とする会社にて、またはその会社を通して、作業員としての資格を有する人物を示します。

- ガス配管、機器の接続取付、修理保守の経験、および所定の注意事項に関する知識を有し、国や管轄地域の法令に準拠している。参照：業務用ガス基準 NFPA 54 (ANSI Z223.1)

設置は現地の規制に準拠する必要があります。現地国に規制がない場合は、『National Fuel Gas Code』のANSI Z223.1/NFPA 54、または『Natural Gas and Propane Installation Code』CSA B149 が適用されて、次の内容が含まれます。

キャスター付ブロイラーには、動式ガス器具の配管接続に関する『ANSI Z21.69/CSA 6.16』の基準に準拠した継手と、ガス燃料用迅速交換式装置に関する『ANSIZ21.4/CSA 6.9』の基準に準拠した迅速交換式装置を使用してください。キャスターと迅速交換式ホースを備えたブロイラーを設置する際は、コネクタ、迅速交換式装置、関連配管に依存することなく、ブロイラーが動かないように適切な固定手段を行ってください。固定具は、ブロイラー後部の本体縦枠の垂直部分に取り付けることが可能です。

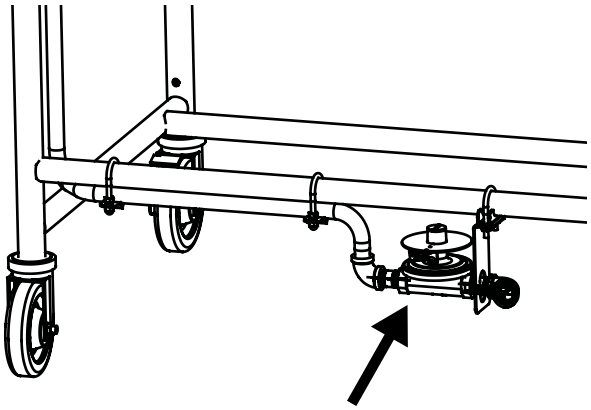
ブロイラー設置に関する詳細説明は、『フレキシブルバッチ ブロイラーの設置と使用説明書（Duke p/n 175500）』に記載されています。説明書が欠落している場合は、本ページの下部にある連絡先に請求してください。

設置者への注意：

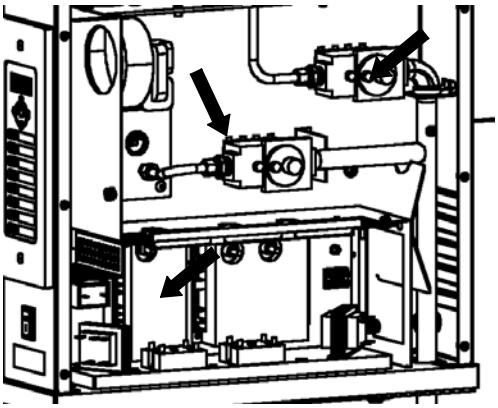
本装置は、½ PSI (12"W.C.) 以上のガス配管に接続しないでください。

B. 手順

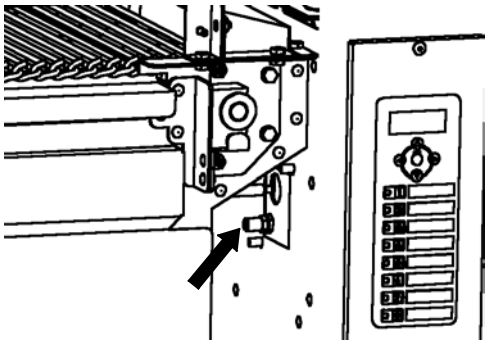
1) ブロイラーのプラグを電源から抜きます。主要ガス配管バルブを閉じて配管を取り外します。
2) オプションの圧力レギュレーターが設置されている場合は取り外します。必要に応じて継手を再接続します。



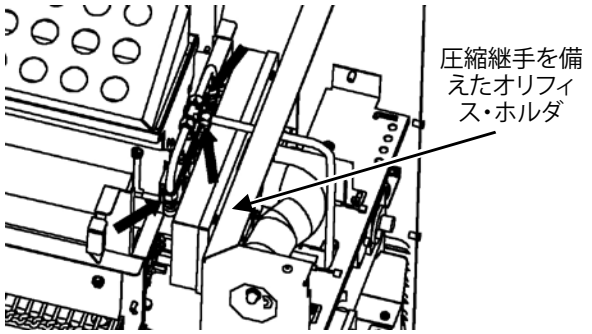
3) 2つのガスバルブを取り外し、新規バルブと交換します。パイプ・スレッド接続部分すべてにスレッド・シーラントを必ず取り付けてください。下部バーナーの点火装置モジュールを取り外し、新しいモジュールと交換します。コントロール・アクセスパネルの配線図を見て、正しく接続してください。



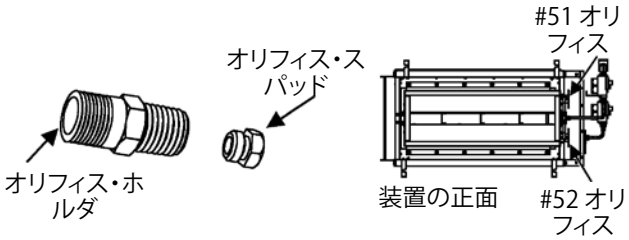
4) 下部バーナーを取り外し（設置/使用説明書を参照）、オリフィスフードにアクセスできるようにします。1/2インチのレンチを使用してオリフィスフードを取り外し、新しいオリフィスと交換します。60インチポンドに固定します。



5) 5/8インチのレンチを使用して、両方のバーナーに接続している上部のガス管圧縮継手（3箇所）を取り外します。

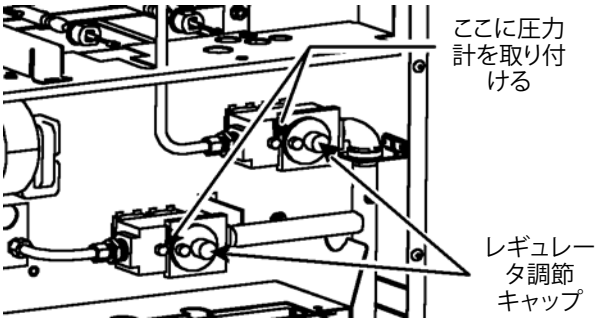


6) ガス配管を取り外すと、5/8インチのレンチを使用してオリフィス・ホルダをバーナーから取り外します。3/8インチのレンチを使用して、ホルダからオリフィススパッドを取り外します。キットの新しいオリフィススパッドと交換し、40インチポンドに固定します。継手をガス配管に再び取り付けます。



7) ガスと電気に接続します。新しい装置を取り付ける場合は、『フレキシブルバッチブロイラーの設置と使用説明』に従ってください。

8) 上部バルブにて、1/8インチのパイプ・プラグと接続された圧力計を取り外します。ブロイラーをオンにします。ドライバを使ってレギュレータからスロット入りのキャップを取り外し、圧力計が「8" W.C.」を示すように調節して、キャップを交換します。ブロイラーをオフにします。圧力計を外し、パイプ・プラグを再設置します。下部のバルブについても同様に行います。



9) ブロイラーを作動させて、すべての継手部分でリークがないか確認します。

注：電気リーク検知器は、オリフィスとガス配管近くにある場合、ブロイラー上で不正確な数値を示すことがあります。これは燃料近くに可燃性製品があるためです。この箇所では、リーク検出溶液か洗剤水を使用してください。

10) ロアーバーナーの炎の状態を確認し、必要に応じエアーシャッターを調整します。

ロアーバーナーのエアーシャッターの調整手順

注： この調整手順は、グリースパンおよびロアーバーナーアクセスパネルを取り付けた状態で行う必要があります。

注：この調整は、スペアパーツキットや交換パーツキットに含まれている予備バーナーを含め、ブロイラーのバーナーも調整しなければなりません。全てのバーナーでエアーシャッターの開度が同じになるようにします。

a. バーナーのエアーシャッターを止めているリベットをドリルでさらいます。

b. エアーシャッターネジを緩め、下記のように炎の状態が正しくなるよう調整します。

i. 天然ガス–炎は、全体が青色で、バーナーの端2個所の先端のみかすかに黄色になるようにします。炎が浮いてはいけません。

ii. プロパンガス-炎は、全体が青色で、バーナー全体で先端のみかすかに黄色になるようにします。炎が浮いてはいけません。

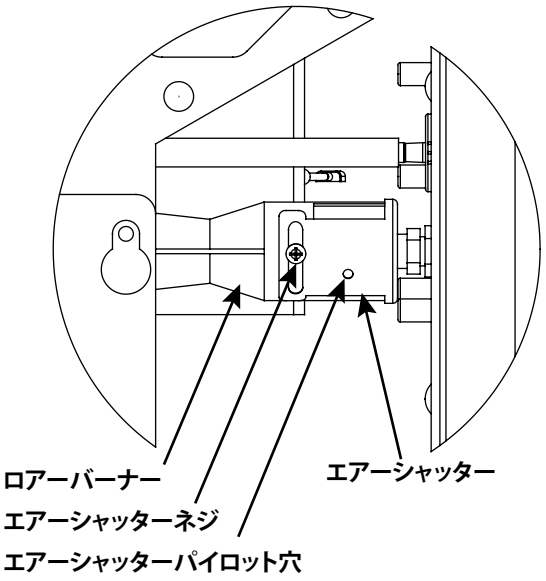
c. エアーシャッターのネジを締めます。

d. ロアーバーナーを本体から取り外します (取扱説明書を参照)。

e. エアーシャッターのパイロット穴 2 個を利用して、エアーシャッターとバーナーをに φ3.264 mm のドリルで穴を開けます。

f. 同梱のリベットを用いて、バーナーを固定します。

g. バーナーをブロイラーに再度取り付けます。



11) IR バーナーの炎の状態を確認し、必要に応じエアーシャッターを調整します。

赤外線バーナーのエアーシャッターの調整手順

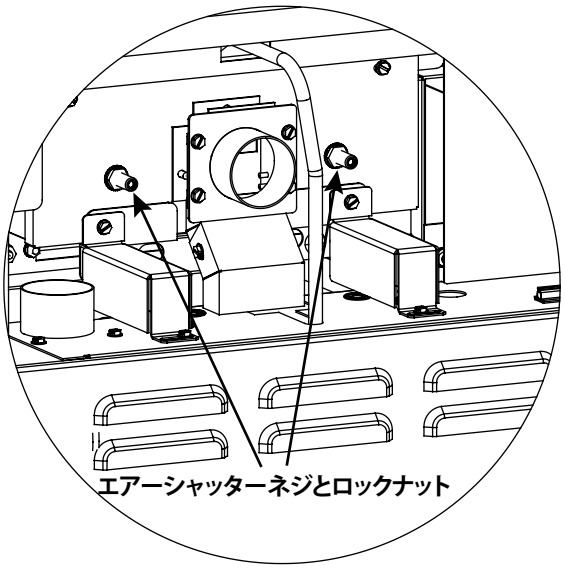
a. 本体の端のアッパーコントロールカバーを外し、エアーシャッター調整ネジが回せるようにします。

b. 9/16 インチレンチと3/16 インチ六角棒レンチを用いて、調整ネジのロックナットを緩めます。

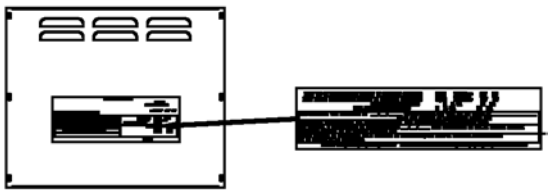
c. 炎が正しい状態になるようバーナーを調整します。

本体が充分暖まったところで、バーナーの下に青い炎がかすかに見えるまで、各ネジを1/4回ずつ右に回して調整します。次に、バーナーの下に青い炎が見えなくなるまで、各ネジを 1/4 回ずつ左に回して調整します。

d. 調整ネジのナットを再度締め付けます。

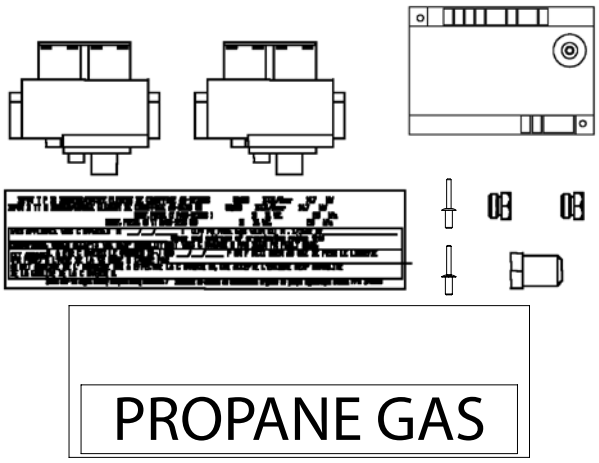


12) 新しい定格タグをロアー電気ボックスカバー内に取り付けてください。風通しの良い場所で実施してください。



13) スタンドに貼付されている既存のラベルに重ねて該当するガスの種類のラベルを貼付します。これで改造が完了です。

液化氣更換組件說明



多用途批量烤爐組件料號175612

內含:

(2)	液化氣組合氣閥	175766
(1)	噴嘴、#52毫米紅外爐頭（前爐頭）	175767
(1)	噴嘴、#51毫米紅外爐頭（後爐頭）	175768
(1)	噴嘴、#49下爐頭	175737
(1)	烤爐更換標籤 天然氣>丙烷液化氣	175605
(1)	模件、點火器、下爐頭、丙烷液化氣	175843
(1)	標籤 – 丙烷氣	175776
(2)	鉚釘	168106

安裝需用工具

- 扭力扳手
- 鉚釘安裝工具
- 適用於液化氣的螺紋密封膠。
- 兩個管道扳手，或者1個管道扳手和1個可調節扳手
- 9/16英寸開口扳手
- 5/8英寸開口扳手
- 1/2英寸開口扳手
- 3/8英寸開口扳手
- 一字型改錐
- 十字頭螺絲刀
- 3/16六角扳手
- #30 鑽頭
- 數位壓力計或帶有1/8英寸外螺紋軟管接頭的松管壓力計。
- 檢漏液。

安裝說明

A. 專業人員

這些安裝說明僅供專業安裝和維修人員使用。由非專業人員進行安裝或維修可能損壞烤爐和/或傷害操作人員。

專業安裝人員可以是個人、公司或企業，他們親自或通過代理參與並負責:

- 安裝或更換煤氣管或接頭，安裝、修理或維護設備。他們在此類工作上擁有豐富的經驗，熟悉所有必需的預防措施，符合當地國家和地方當局的所有要求。參見: 美國《國家燃氣規範》NFPA 54 (ANSI Z223.1)。

安裝必須符合當地標準，如果當地沒有標準，則必須符合適用的美國《國家燃氣規範》ANSI Z223.1/NFPA 54或《天然氣和丙烷安裝規範》CSA B149.1，包括:

對於安裝有輪腳的烤爐，必須使用符合《移動燃氣設備連接規範》ANSI Z21.69/CSA 6.16的插座和符合《與燃氣一起使用的快速斷開裝置規範》ANSI Z21.4/CSA 6.9的快速斷開裝置。當安裝帶有輪腳和快速斷開軟管的烤爐時，必須採取充分的措施來限制烤爐移動，不要依賴插座和快速斷開裝置或與其相關聯的管道來限制烤爐移動。可將烤爐後部基座框架的垂直部分固定以限制其移動。

烤爐安裝細節載於多用途批量烤爐安裝和操作手冊 (Duke p/n 175500)。如果本手冊遺失，請通過本頁底部的聯繫方式索取副本。

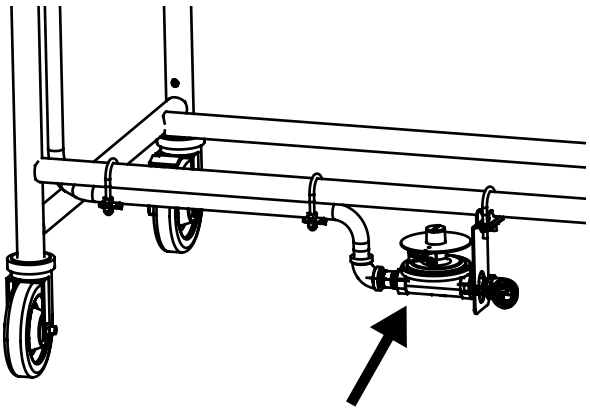
安裝人員須知:

不得將此設備連接至壓力大於½ PSI (12英寸水柱）的燃氣供應裝置。

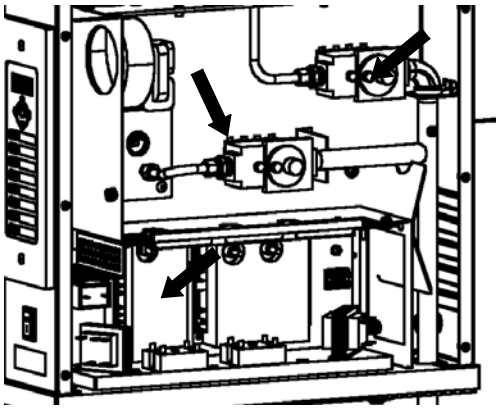
B. 步驟

1) 切斷烤爐電源。關閉供氣閥並斷開供氣線路。

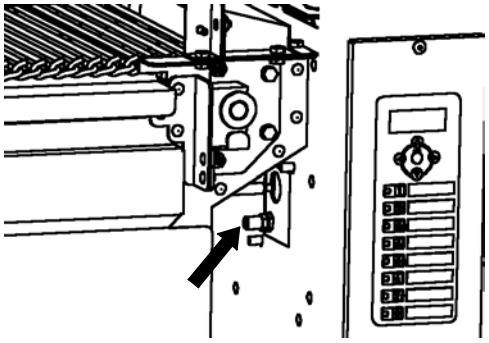
2) 卸下供選的氣壓調節器（如果已安裝）。根據需要重新連接各種裝置。



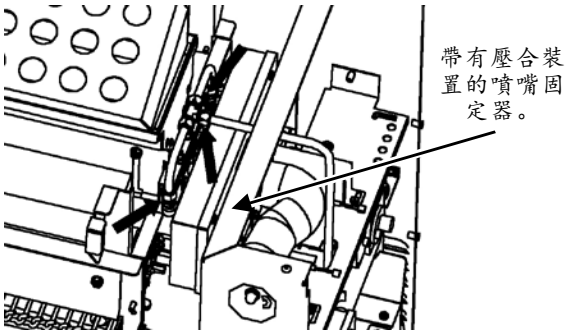
3) 卸下2個氣閥並更換為新的氣閥。確保使用了螺紋密封膠來密封所有管道的螺紋接頭。將下爐頭點火器模件更換為新模件。根據控制台上的佈線圖進行正確連接。



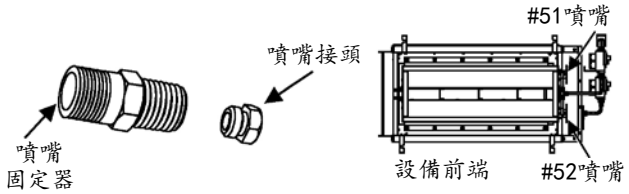
4) 卸下下爐頭（參見安裝/操作手冊），以方便操作噴嘴防護罩。使用1/2英寸扳手卸下噴嘴防護罩，並更換噴嘴。 擰緊至60英寸-磅。



5) 使用5/8英寸扳手卸下頂部連接兩個紅外爐頭的燃氣線路壓合裝置（3處）。

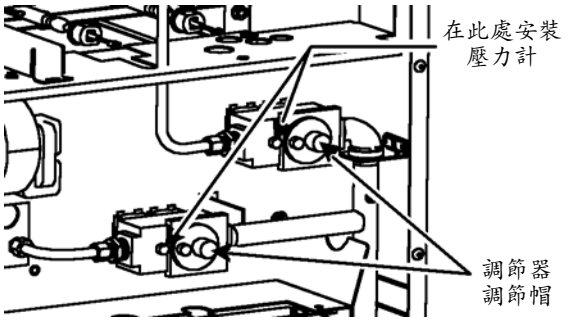


6) 卸下燃氣線路後，使用5/8英寸扳手從爐頭上卸下噴嘴固定器。使用3/8英寸扳手從固定器上卸下噴嘴接頭。安裝新的噴嘴接頭，擰緊至40英寸-磅。重新裝配壓合裝置和燃氣線路。



7) 連通氣源和電源。如果進行全新安裝，必須按照多用途批量烤爐安裝和操作說明進行操作。

8) 在上氣閥上，卸下1/8英寸的管道插頭和附帶的壓力計。將烤爐調至“ON”。使用改錐從調節器上卸下帶槽的螺帽，調節氣壓，直至壓力計讀數為8英寸水柱。復位螺帽。將烤爐調至“OFF”。卸下壓力計並重定管道插頭。對底部氣閥重複上述操作。



9) 在烤爐運行時，檢查所有配合裝置是否存在洩漏。

注意：在烤爐上方接近紅外噴嘴和燃氣管的地方，電子測漏器會顯示錯誤的讀數。這是由於煙道附近存在氣體燃燒產物而引起的。請在此區域使用檢漏液或肥皂液檢查。

10) 觀察下爐頭火焰的特徵，必要情況下調節風門。

下爐頭風門調整程式

注意：此調節需要在油脂盤和下爐頭檢修蓋板安裝之後完成。

注意：應同時對烤爐中的爐頭、備用零件包中的爐頭或使用者更換零件包中的其他備用爐頭執行此調節。所有爐頭的風門開啟狀態均應保持相同。

a. 拆出爐頭風門上的全部鉚釘。

b. 擰鬆風門螺絲，調整至看到適當的火焰特

徵，定義如下：

i. 天然氣 – 火焰應基本為藍色，爐頭兩端的火焰頂端略帶黃色。不應出現脫火現象。

ii. 丙烷氣 – 火焰應基本為藍色，整個爐頭上的火焰頂端略帶黃色。不應出現脫火現象。

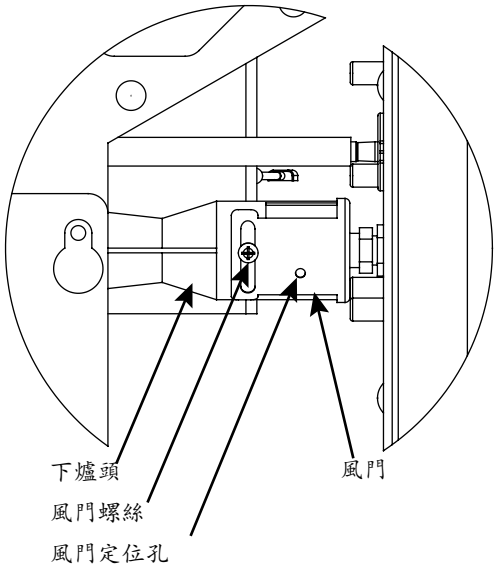
c. 擰緊風門螺絲。

d. 將下爐頭從設備上拆下（請參見安裝/操作手冊）

e. 使用風門上的兩個定位孔，在風門和爐頭上鑽兩個 #30 的通孔。

f. 使用隨附的鉚釘將爐頭固定到位。

g. 將爐頭重新安裝到烤爐上。



11) 觀察 IR 爐頭的火焰的特徵，必要情況下調節風門。

紅外爐頭風門調節程式

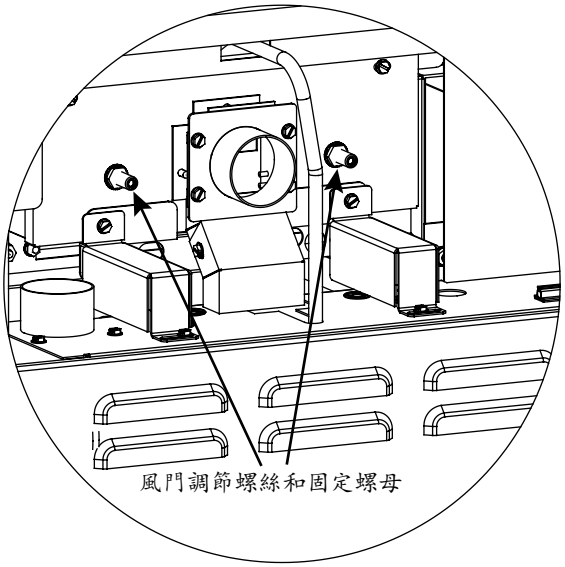
a. 從設備一端取下上控制蓋，以便處理風門調節螺絲。

b. 使用一個 9/16” 的扳手和 3/16” 六角扳手擰鬆螺絲的鎖緊螺母。

c. 調節爐頭，直至看到適當的火焰特徵。

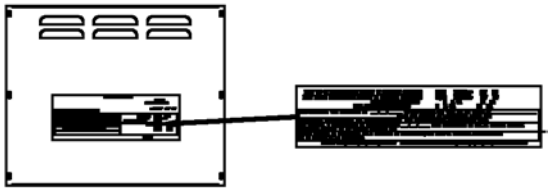
在設備完全加熱後，將各螺絲順時針擰 1/4” 圈，直至看到爐頭下方出現藍色火焰或冒煙。然後將各螺絲逆時針擰 1/4” 圈，直至爐頭下方不再有藍色火焰或冒煙。

d. 重新擰緊調節螺絲上的螺母。



12) 在下方的電氣外殼蓋內側貼上新的額定標籤。

置標籤於明顯位置。



13) 用隨附的氣體類型標籤蓋住支架上的原有標籤。轉換即已完成。

Your Solutions Partner

Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074

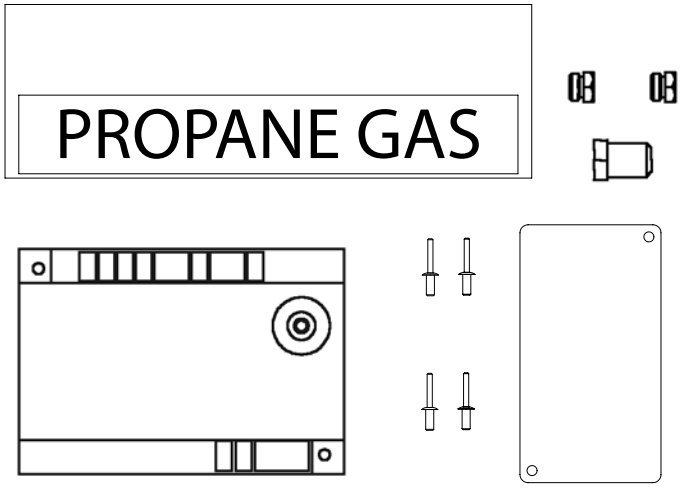
www.dukemfg.com

Propane Gas Conversion Kit Instructions International

Your Solutions Partner

FLEXIBLE BATCH BROILER

KIT P/N 176527



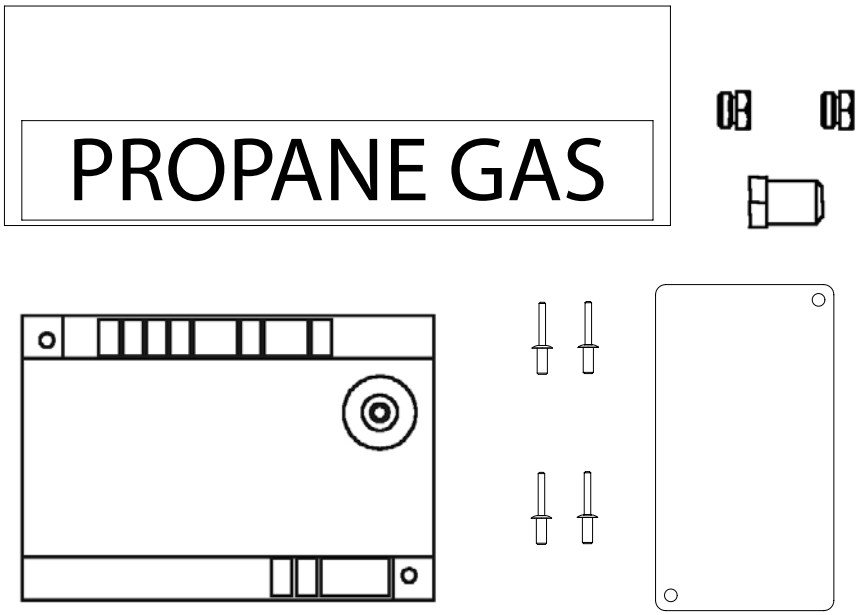
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P/N 176536A
01/21/2015

PROPANE GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 176527

This kit contains:

(1)	Orifice, IR Burner 1.55mm (Front Burner)	175816
(1)	Orifice, IR Burner 1.61mm (Rear Burner)	175817
(1)	Orifice, Lower Burner 1.85mm	175953
(1)	Broiler Conversion Data Plate	176529
(1)	Module, Ignition, Lower Burner, Propane Gas	175876
(1)	Label, Propane Gas	175776
(4)	Rivets	168106

Items required for this installation:

- Torque Wrench
- Rivet Installation Tool
- Thread sealant rated for Natural Gas and LP gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 9/16 Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Small Straight blade screw driver
- Phillips Head screw driver
- 3/16" Hex key wrench
- #30 Drill Bit
- Digital or slack tube manometer with 1/8” male pipe thread hose barb
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

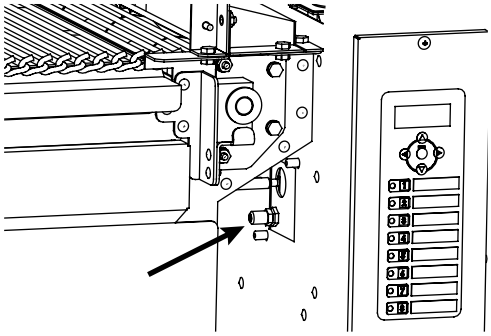
These installation instructions are for the use of Duke authorized service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information at the end of this manual.

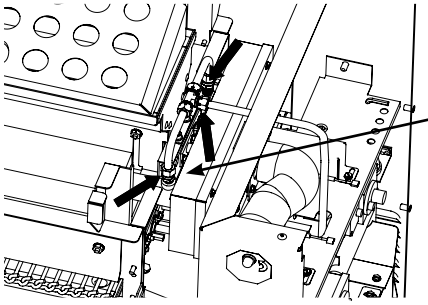
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

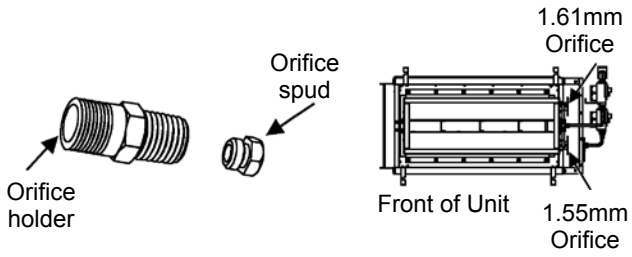
2) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 6.7 N.m. (60 IN LBS).



3) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

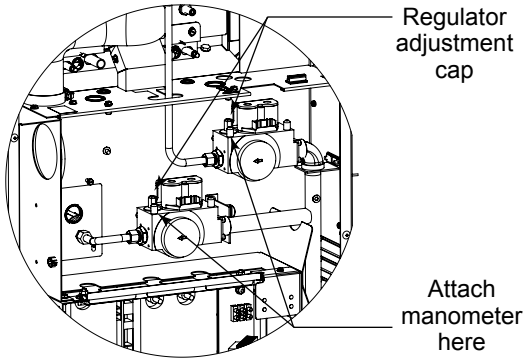


4) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 4.5 N.m. (40 in-lb.) REASSEMBLE FITTINGS AND GAS LINES.



5) CONNECT TO GAS AND ELECTRICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

6) ON UPPER VALVE, OPEN THE MANIFOLD PRESSURE TAP AND ATTACH MANOMETER. SWITCH BROILER "ON". WITH THE HEX KEY WRENCH ADJUST UNTIL MANOMETER READING IS 19.93mbar (8.00" W.C.). SHUT BROILER "OFF". REMOVE MANOMETER AND CLOSE THE PRESSURE TAP. REPEAT FOR BOTTOM VALVE. REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



7) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

8) CHECK THE LOWER BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. DRILL OUT THE RIVETS IN THE AIRSHUTTER OF THE BURNERS.

b. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

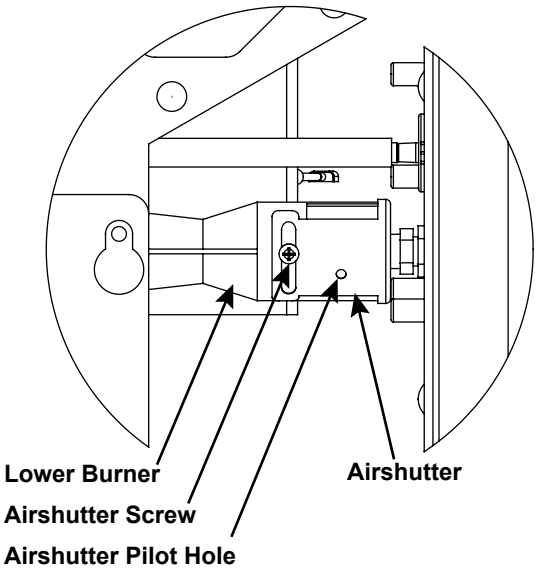
c. TIGHTEN THE AIRSHUTTER SCREW.

d. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/ OPERATIONS MANUAL)

e. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

f. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

g. REINSTALL THE BURNER INTO THE BROILER.



9) CHECK THE IR BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

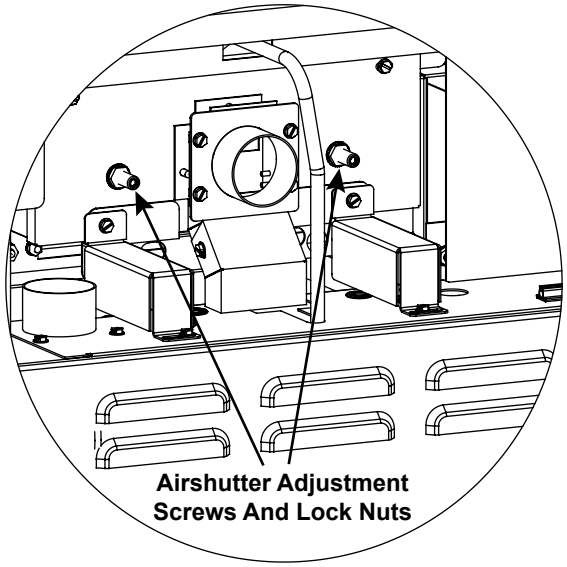
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16” WRENCH AND 3/16” HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

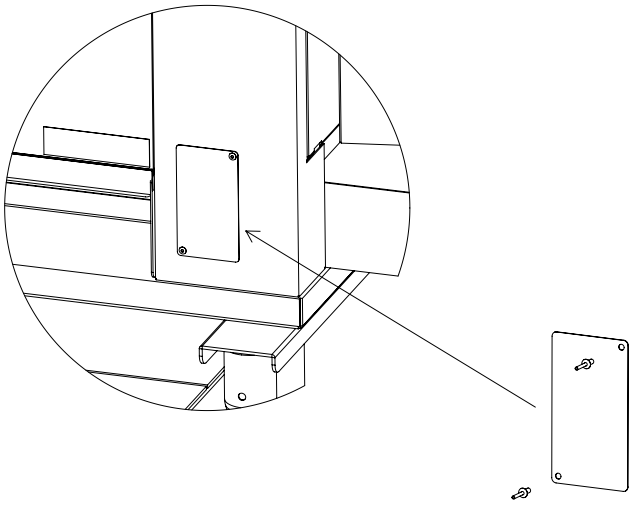
c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.



10) DRILL OUT RIVETS IN RATING TAG AND APPLY NEW RATINGS TAG OVER EXISTING TAG. USE SUPPLIED RIVETS TO RIVET THROUGH BOTH TAGS.



11) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS COMPLETE.

Your Solutions Partner

Duke Manufacturing Co.

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Toll Free: 1-800-735-3853
Fax: 314-231-5074

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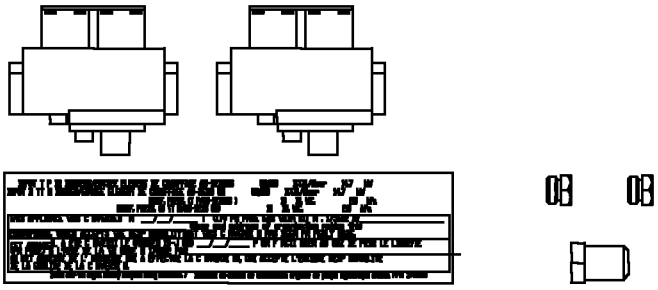
Propane Gas Conversion Kit Instructions US and Canada

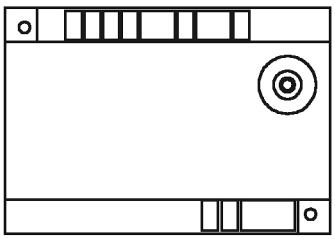
FLEXIBLE BATCH BROILER

KIT P/N 176543 OR 176571

ENGLISH

FRENCH







NOTE: Purge Blower Kit not Shown

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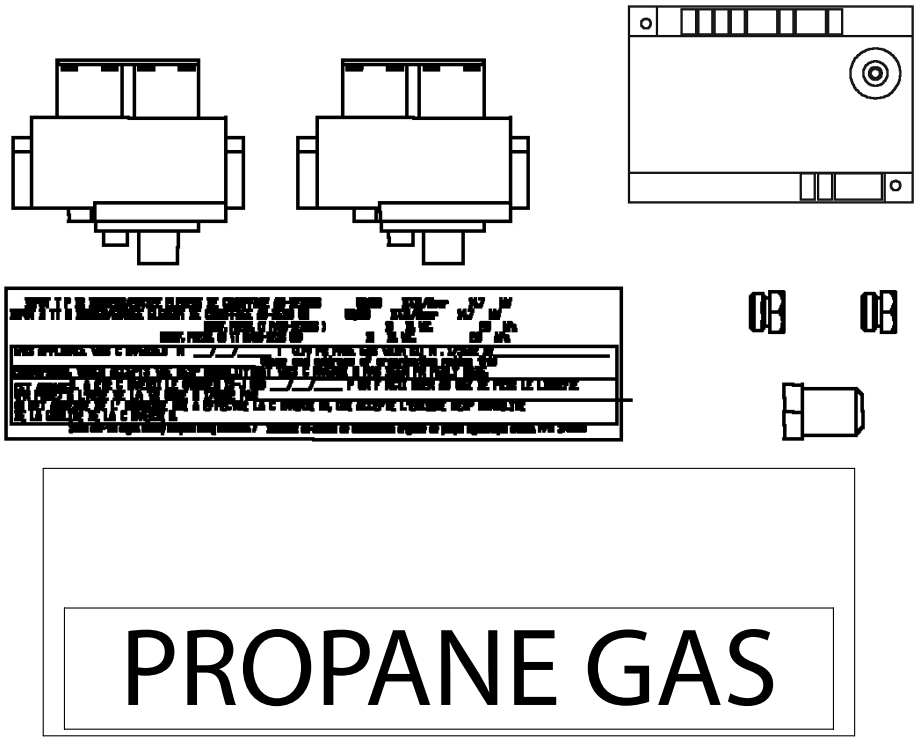
P/N 176542A
01/21/2015

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PROPANE GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 176543 OR 176571

This kit contains:

(2)	Valve, Combo, Propane Gas	175766
(1)	Orifice, IR Burner #52 mm (Front Burner)	175767
(1)	Orifice, IR Burner #51 mm (Rear Burner)	175768
(1)	Orifice, Lower Burner #46	176412
(1)	Broiler Conversion Label Nat.>Prop	176540 or 176572
(1)	Module, Ignition, Lower Burner, Propane	175876
(1)	Label, Propane Gas	175776
(1)	Kit, Purge Blower	600343 or 600344

Items required for this installation:

- Torque Wrench
- Thread sealant rated for propane gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Straight blade screw driver
- 3/16 hex key wrench
- Digital or slack tube manometer with 1/8” male pipe thread hose barb.
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

These installation instructions are for the use of qualified installation and service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual (Duke p/n 176483). If the manual is missing you must request one using the contact information at the end of this manual.

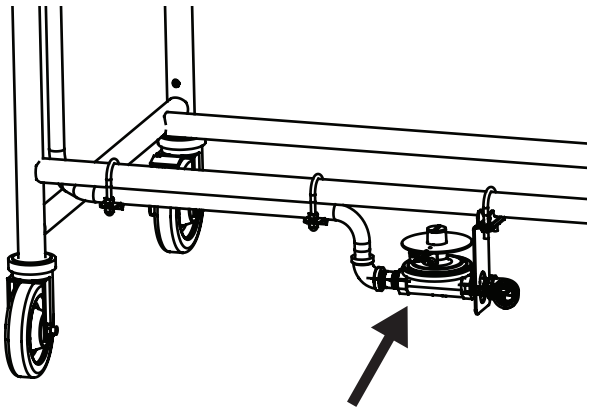
NOTICE TO INSTALLER:

THIS APPLIANCE SHALL NOT BE CONNECTED TO A GAS SUPPLY IN EXCESS OF ½ PSI (12" W.C.).

B. Procedure

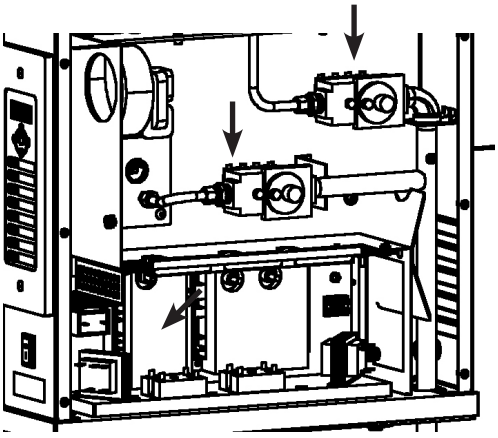
1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

2) REMOVE OPTIONAL PRESSURE REGULATOR (IF INSTALLED). RECONNECT FITTINGS AS REQUIRED.

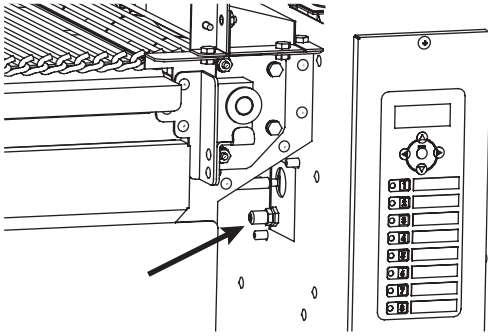


3) INSTALL THE PURGE BLOWER KIT THAT WAS PROVIDED WITH THIS CONVERSION KIT. SEE INSTRUCTIONS PROVIDED WITH THE PURGE BLOWER KIT.

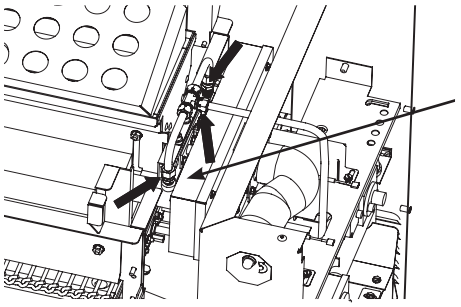
4) REMOVE (2) GAS VALVES AND REPLACE WITH NEW VALVES. BE SURE TO APPLY THREAD SEALANT TO ALL PIPE THREAD CONNECTIONS. REMOVE LOWER BURNER IGNITION MODULE AND REPLACE WITH NEW MODULE. SEE WIRING DIAGRAM ON CONTROL ACCESS PANEL FOR PROPER CONNECTIONS.



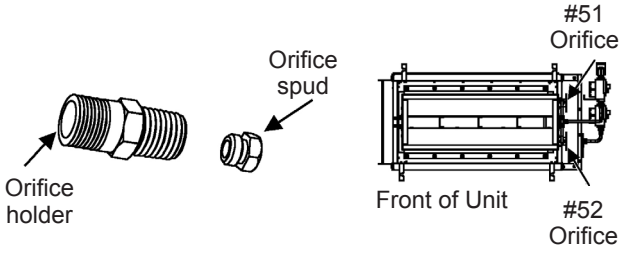
5) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 60 IN LBS (6.7 N.m.).



6) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

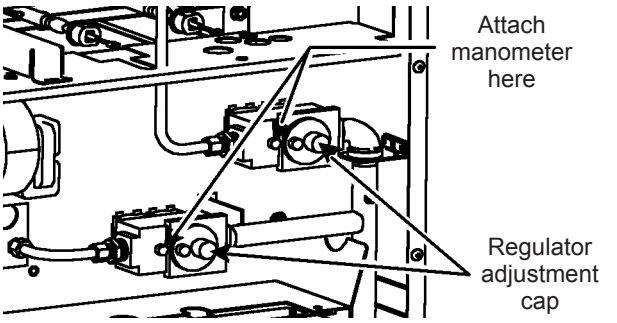


7) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 40 in-lb. REASSEMBLE FITTINGS AND GAS LINES.



8) CONNECT TO GAS AND ELECTICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

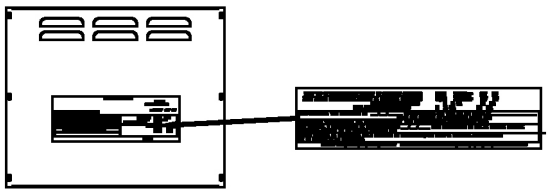
9) ON UPPER VALVE, REMOVE 1/8" PIPE PLUG AND ATTACHED MANOMETER. SWITCH BROILER “ON”. WITH A SCREW DRIVER, REMOVE SLOTTED CAP FROM REGULATOR AND ADJUST UNTIL MANOMETER READING IS 8” W.C. REPLACE CAP. SHUT BROILER “OFF”. REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



10) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

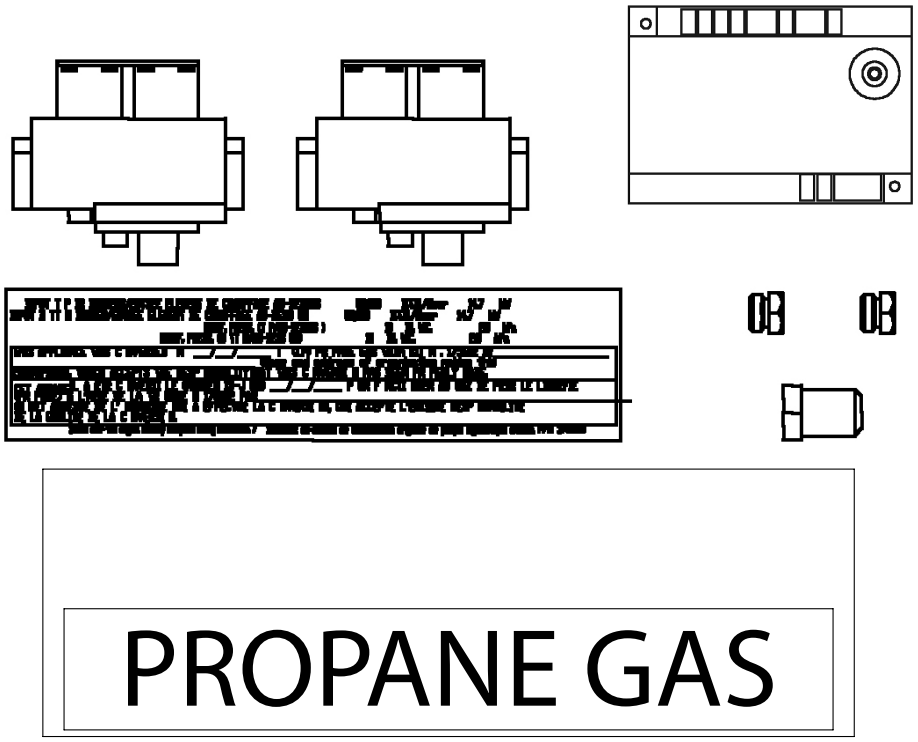
NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

11) APPLY NEW RATINGS TAG ON THE INSIDE OF THE LOWER ELECTRICAL ENCLOSURE COVER. APPLY IN ANY OPEN AREA.



12) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS NOW COMPLETE.

INSTRUCTIONS POUR KIT DE CONVERSION AU PROPANE LIQUÉFIÉ



RÔTISSOIRE À FOURNÉE VARIABLE KIT N° 176543 OU 176571

Composition du kit :

(2)	Robinet, mixte, propane liquéfié	175766
(1)	Orifice calibré, brûleur inf. n° 52 mm (brûleur avant)	175767
(1)	Orifice calibré, brûleur inf. n° 51 mm (brûleur arrière)	175768
(1)	Orifice calibré, brûleur inférieur n° 46	176412
(1)	Étiquette conversion de rôtissoire gaz nat.>prop.	176540 ou 176572
(1)	Module, allumage, brûleur inférieur, propane	175876
(1)	Étiquette - Gaz propane	175776
(1)	Combinaison soufflante de purge	600343 ou 600344

Accessoires nécessaires pour cette installation :

- Clé dynamométrique
- Pâte d'étanchéité pour raccords filetés adaptée au propane liquéfiée
- (2) Clés à tube ou (1) clé à tube et (1) clé à molette
- (1) Clé à fourche de 5/8 po
- (1) Douille de 1/2 po
- (1) Clé à fourche de 3/8 po
- Tournevis plat
- Clé Allen de 3/16 po
- Manomètre numérique ou Slack Tube® à raccord cannelé à filetage extérieur de 1/8 po.
- Liquide pour détection des fuites.

INSTRUCTIONS D'INSTALLATION

A. Personnel qualifié

Ces instructions d'installation sont destinées à un personnel d' installation et d'entretien qualifié uniquement. Une installation ou un entretien effectué par quiconque autre que du personnel qualifié peut entraîner des dégâts pour la rôtissoire et/ou des blessures pour l'opérateur.

Par personnel d'installation qualifié on entend les personnes ou entreprises qui, directement ou par l'intermédiaire d'un agent, se chargent et sont responsables de ce qui suit :

- Pose ou remplacement de canalisations de gaz, ou raccordement, installation, réparation ou entretien du matériel. Ce personnel doit avoir une solide expérience de ce genre de travail, être familiarisé avec toutes les précautions à prendre et avoir satisfait à toutes les conditions exigées par les autorités provinciales et locales compétentes. Voir : National Fuel Gas Code (Code national des combustibles gazeux), NFPA 54 (ANSI Z223.1).

L'installation doit être conforme aux codes locaux ou, en leur absence, au National Fuel Gas Code, ANSI Z223.1/NFPA 54 ou au Natural Gas and Propane Installation Code (Code des installations au gaz naturel et au propane), ACNOR B149.1 selon le cas, y compris :

Pour une rôtissoire montée sur des roulettes, l'installation doit être effectuée en utilisant un raccord conforme à la norme applicable aux raccords pour appareils à gaz mobiles, ANSI Z21.69/ACNOR 6.16 et un dispositif à débranchement rapide conforme à la norme applicable à ce type de raccord pour combustible gazeux, ANSI Z21.4/ACNOR 6.9. Lors de l'installation d'une rôtissoire à roulettes et tuyau à débranchement rapide, des dispositions suffisantes doivent être prises pour limiter le déplacement de la rôtissoire indépendamment du raccord et du dispositif à débranchement rapide ou de la tuyauterie associée. Il est possible de fixer un limiteur à la partie verticale du châssis à l'arrière de la rôtissoire.

Des instructions détaillées d'installation de la rôtissoire à fournée variable sont données dans son manuel d'installation et d'utilisation (n° réf. Duke 176484). Si on a perdu ce manuel, on peut en demander un autre en utilisant les informations sur les contacts figurant au bas de cette page.

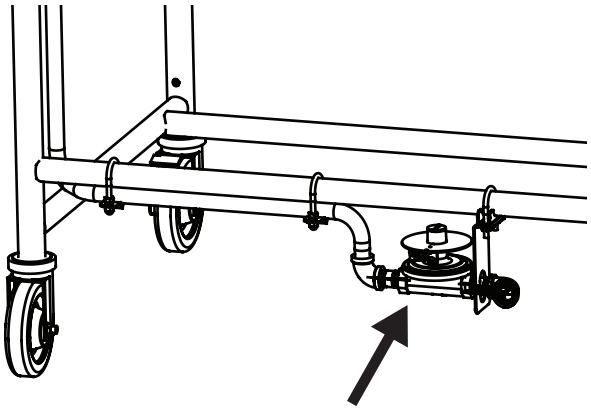
AVIS À L'INSTALLATEUR :

CET APPAREIL NE DOIT PAS ÊTRE RACCORDÉ À UNE ALIMENTATION EN GAZ DONT LA PRESSION DEPASSE 3,4 KPA (½ PSI) (12 PO C.E.).

B. Marche à suivre

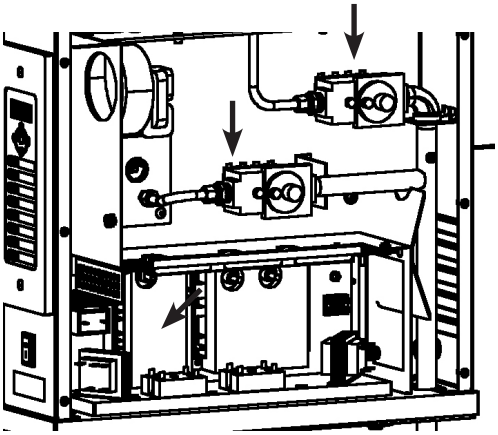
1) DÉBRANCHER LA RÔTISSOIRE DE LA PRISE DE COURANT. FERMER LA VANNE D'ALIMENTATION PRINCIPALE ET DÉBRANCHER LE TUYAU D'ALIMENTATION.

2) DÉPOSER LE DÉTENDEUR EN OPTION (LE CAS ÉCHÉANT). REBRANCHER LES RACCORDS SELON LE BESOIN.

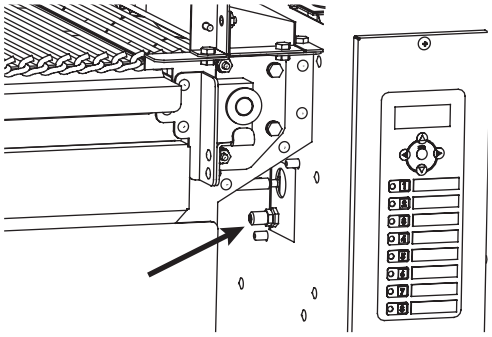


3) INSTALLER LA COMBINAISON SOUFFLANTE DE PURGE FOURNIE AVEC CETTE TROUSSE DE CONVERSION. VOIR LES CONSIGNES FOURNIES AVEC LA COMBINAISON SOUFFLANTE DE PURGE.

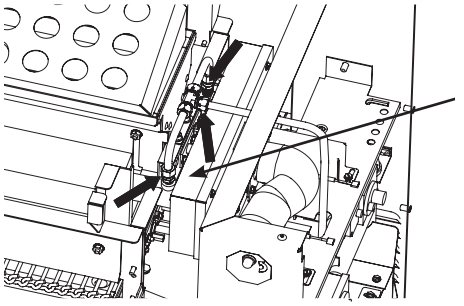
4) DÉPOSER LES (2) ROBINETS À GAZ ET LES REMPLACER PAR LES NOUVEAUX. VEILLER À APPLIQUER DE LA PÂTE D'ÉTANCHÉITÉ POUR RACCORDS FILETÉS SUR TOUS LES JOINTS. DÉPOSER LE MODULE D'ALLUMAGE DU BRÛLEUR INFÉRIEUR ET LE REMPLACER PAR LE NOUVEAU. VOIR LE SCHÉMA DE CÂBLAGE SUR LE PANNEAU D'ACCÈS AUX COMMANDES POUR LES RACCORDEMENTS CORRECTS.



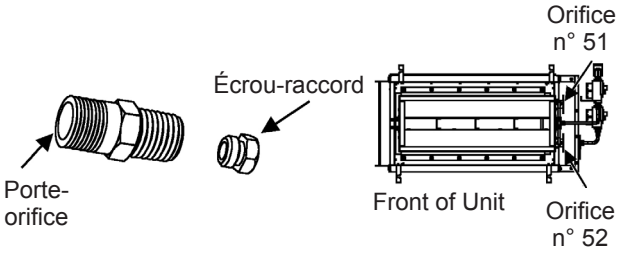
5) DÉPOSER LE BRÛLEUR INFÉRIEUR (VOIR LE MANUEL D'INSTALLATION/UTILISATION) POUR ACCÉDER AU CHAPEAU D'ORIFICE CALIBRÉ. ENLEVER LE CHAPEAU D'ORIFICE À L'AIDE D'UNE DOUILLE DE 1/2 PO ET REMPLACER L'ORIFICE PAR UN NEUF. SERRER L'ORIFICE À 6,7 N.m (60 PO-LBS.)



6) À L'AIDE D'UNE CLÉ DE 5/8 PO, RETIRER LES RACCORDS À COMPRESSION DE LA CANALISATION SUPÉRIEURE DE GAZ (3 ENDROITS) QUI RELIE LES DEUX BRÛLEURS INFRAROUGES.

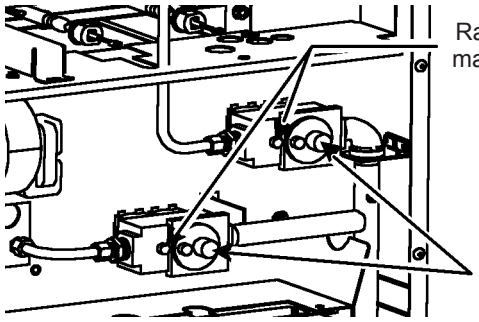


7) LES CANALISATIONS DE GAZ ÉTANT DÉBRANCHÉES, DÉPOSER LES PORTES-ORIFICE DES BRÛLEURS À L'AIDE D'UNE CLÉ DE 5/8 PO. RETIRER L'ÉCROU-RACCORD DU PORTE-ORIFICE À L'AIDE D'UNE CLÉ DE 3/8 PO. LE REMPLACER PAR LE NOUVEAU ET LE SERRER À 4,5 Nm (40 lb-po). RÉASSEMBLER LES RACCORDS ET LES CANALISATIONS DE GAZ.



8) RACCORDER L'APPAREIL À L'ARRIVÉE DE GAZ ET AU SECTEUR. S'IL S'AGIT D'UNE NOUVELLE INSTALLATION, SUIVRE LES INSTRUCTIONS D'INSTALLATION ET D'UTILISATION DE LA RÔTISSOIRE À FOURNÉE VARIABLE.

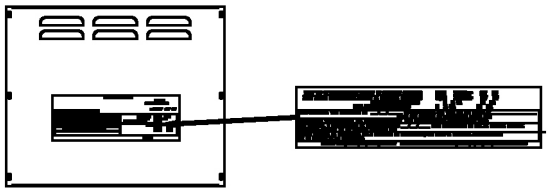
9) ENLEVER LE BOUCHON TUBULAIRE DE 1/8 PO DU ROBINET SUPÉRIEUR ET POSER UN MANOMÈTRE. ALLUMER LA RÔTISSOIRE. À L'AIDE D'UN TOURNEVIS, ENLEVER LE CAPUCHON À FENTE DU DÉTENDEUR ET RÉGLER CELUI-CI JUSQU'À CE QUE LE MANOMÈTRE INDIQUE 8 PO C.E. REMETTRE EN CAPUCHON EN PLACE. ÉTEINDRE LA RÔTISSOIRE. RETIRER LE MANOMÈTRE ET REMETTRE LE BOUCHON TUBULAIRE EN PLACE. RÉPÉTER L'OPÉRATION POUR LE ROBINET INFÉRIEUR.



10) LA RÔTISSOIRE ÉTANT EN MARCHE, CONTRÔLER L'ÉTANCHÉITÉ DE TOUS LES RACCORDS.

REMARQUE : *LES DÉCELEURS DE FUITES ÉLECTRONIQUES DONNERONT DES INDICATIONS ERRONÉES SUR LE DESSUS DE LA RÔTISSOIRE PRÈS DES ORIFICES CALIBRÉS DES BRÛLEURS INFRAROUGES ET DE LA TUYAUTERIE DE GAZ. CELA EST DÛ AUX PRODUITS DE COMBUSTION PRÉSENTS PRÈS DU TUYAU D'ÉVACUATION DES FUMÉES. UTILISER UN LIQUIDE DE CONTRÔLE D'ÉTANCHÉITÉ OU DE L'EAU SAVONNEUSE DANS CETTE ZONE.*

11) APPLIQUER UNE NOUVELLE ÉTIQUETTE DE CLASSEMENT À L'INTÉRIEUR DU COUVERCLE INFÉRIEUR DU BOÎTIER ÉLECTRIQUE. APPLIQUER DANS TOUTE ZONE OUVERTE.



12) APPLIQUER L'ÉTIQUETTE DU TYPE DE GAZ FOURNI PAR DESSUS L'ÉTIQUETTE EXISTANTE SUR LE STAND. LA CONVERSION EST DÉSORMAIS COMPLÈTE.

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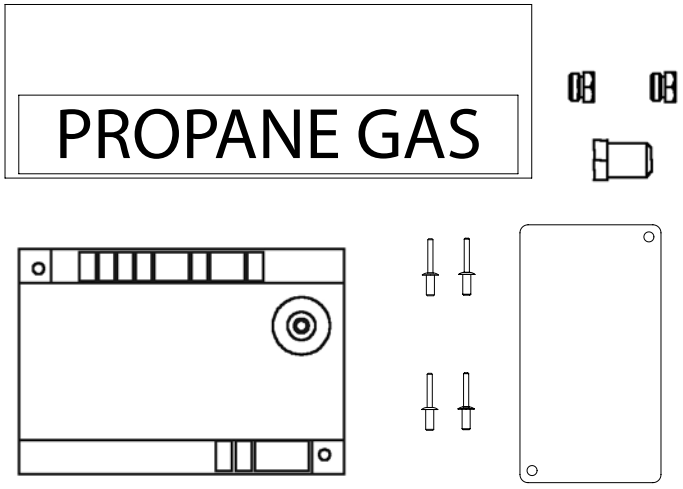
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Propane/G31 Gas Conversion Kit Instructions EMEA

FLEXIBLE BATCH BROILER

KIT P/N 176526



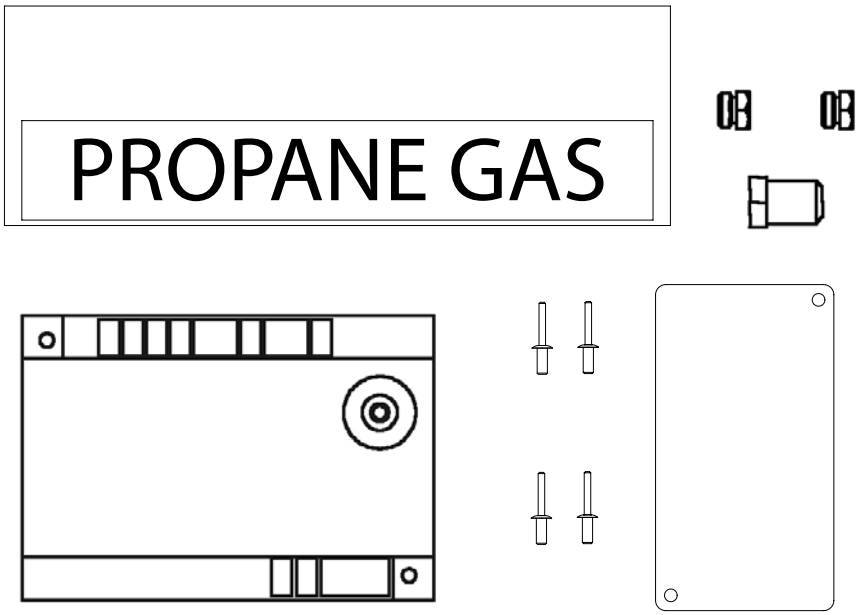
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P/N 176535A
01/21/2015

PROPANE/G31 GAS CONVERSION KIT INSTRUCTIONS



FLEXIBLE BATCH BROILER KIT P/N 176526

This kit contains:

(1)	Orifice, IR Burner 1.55mm (Front Burner)	175816
(1)	Orifice, IR Burner 1.61mm (Rear Burner)	175817
(1)	Orifice, Lower Burner 2.00mm	176388
(1)	Broiler Conversion Data Plate	176531
(1)	Module, Ignition, Lower Burner, Propane Gas	175876
(1)	Label, Propane Gas	175776
(4)	Rivets	168106

Items required for this installation:

- Torque Wrench
- Rivet Installation Tool
- Thread sealant rated for Natural Gas and LP gas
- (2) Pipe Wrenches or (1) Pipe Wrench and (1) Adjustable Wrench
- (1) 5/8” Open End Wrench
- (1) 9/16 Open End Wrench
- (1) 1/2” Socket
- (1) 3/8” Open End Wrench
- Small Straight blade screw driver
- Phillips Head screw driver
- 3/16" Hex key wrench
- #30 Drill Bit
- Digital or slack tube manometer with 1/8” male pipe thread hose barb
- Leak detection fluid.

INSTALLATION INSTRUCTIONS

A. Qualified Personnel

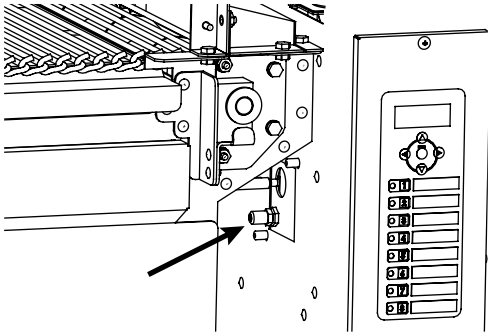
These installation instructions are for the use of Duke authorized service personnel only. Installation or service by other than qualified personnel may result in damage to the broiler and/or injury to the operator.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information at the end of this manual.

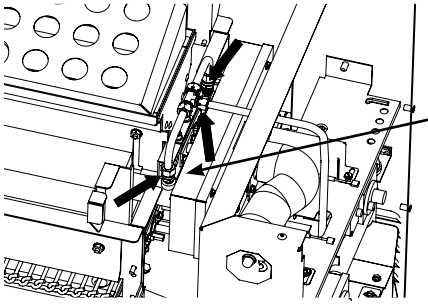
B. Procedure

1) UNPLUG THE BROILER FROM ELECTRICAL POWER. CLOSE MAIN GAS SUPPLY VALVE AND DISCONNECT SUPPLY LINE.

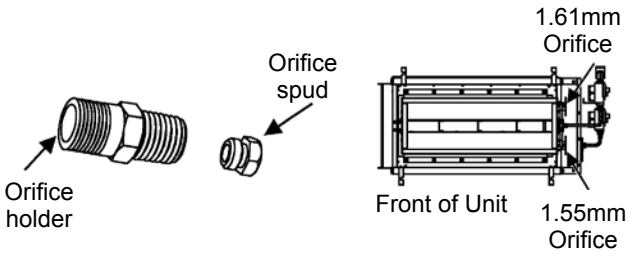
2) REMOVE LOWER BURNER (SEE INSTALLATION/OPERATIONS MANUAL) TO ACCESS ORIFICE HOOD. USING A 1/2" SOCKET, REMOVE ORIFICE HOOD AND REPLACE WITH NEW ORIFICE. TORQUE ORIFICE TO 6.7 N.m. (60 IN LBS).



3) WITH 5/8" WRENCH, REMOVE UPPER GAS LINE COMPRESSION FITTINGS (3 PLACES) THAT CONNECT BOTH IR BURNERS.

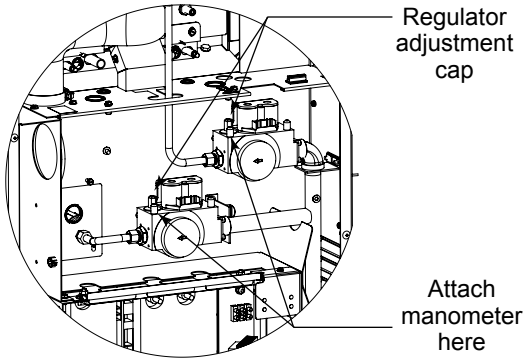


4) WITH GAS LINES REMOVED, REMOVE ORIFICE HOLDERS FROM BURNERS WITH 5/8” WRENCH. REMOVE ORIFICE SPUD FROM HOLDER WITH 3/8” WRENCH. REPLACE WITH NEW KIT ORIFICE SPUD, AND TIGHTEN TO 4.5 N.m. (40 in-lb.) REASSEMBLE FITTINGS AND GAS LINES.



5) CONNECT TO GAS AND ELECTRICAL SERVICE. IF THIS IS A NEW INSTALLATION, YOU MUST FOLLOW THE FLEXIBLE BATCH BROILER INSTALLATION AND OPERATION INSTRUCTIONS.

6) ON UPPER VALVE, OPEN THE MANIFOLD PRESSURE TAP AND ATTACH MANOMETER. SWITCH BROILER "ON". WITH THE HEX KEY WRENCH ADJUST UNTIL MANOMETER READING IS 19.93mbar (8.00" W.C.). SHUT BROILER "OFF". REMOVE MANOMETER AND CLOSE THE PRESSURE TAP. REPEAT FOR BOTTOM VALVE. REPLACE CAP. SHUT BROILER "OFF". REMOVE MANOMETER AND REPLACE PIPE PLUG. REPEAT FOR BOTTOM VALVE.



7) WITH THE BROILER RUNNING, CHECK FOR LEAKS ON ALL FITTINGS.

NOTE: *ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.*

8) CHECK THE LOWER BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

a. DRILL OUT THE RIVETS IN THE AIRSHUTTER OF THE BURNERS.

b. LOOSEN THE AIRSHUTTER SCREW AND ADJUST FOR PROPER FLAME CHARACTERISTICS AS DEFINED BELOW:

i. NATURAL GAS – THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING AT THE TWO ENDS OF THE BURNER. THERE SHOULD BE NO FLAME LIFTING.

ii. PROPANE GAS - THE FLAME SHOULD BE PRIMARILY BLUE WITH SLIGHT YELLOW TIPPING ALONG THE ENTIRE BURNER. THERE SHOULD BE NO FLAME LIFTING.

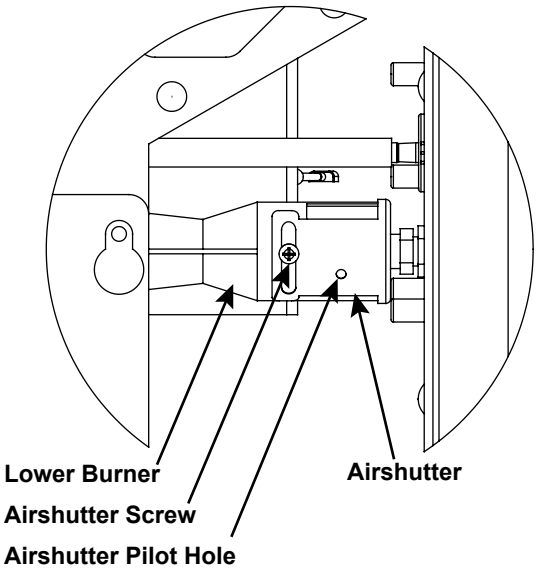
c. TIGHTEN THE AIRSHUTTER SCREW.

d. REMOVE THE LOWER BURNER FROM THE UNIT (SEE INSTALLATION/ OPERATIONS MANUAL)

e. USING THE TWO PILOT HOLES ON THE AIRSHUTTER, DRILL #30 HOLES THROUGH THE AIRSHUTTER AND BURNER.

f. USE THE SUPPLIED RIVETS TO LOCK THE BURNER IN POSITION.

g. REINSTALL THE BURNER INTO THE BROILER.



9) CHECK THE IR BURNER FLAME CHARACTERISTICS AND MAKE AN AIRSHUTTER ADJUSTMENT IF NECESSARY.

REFER TO THE FOLLOWING PROCEDURE.

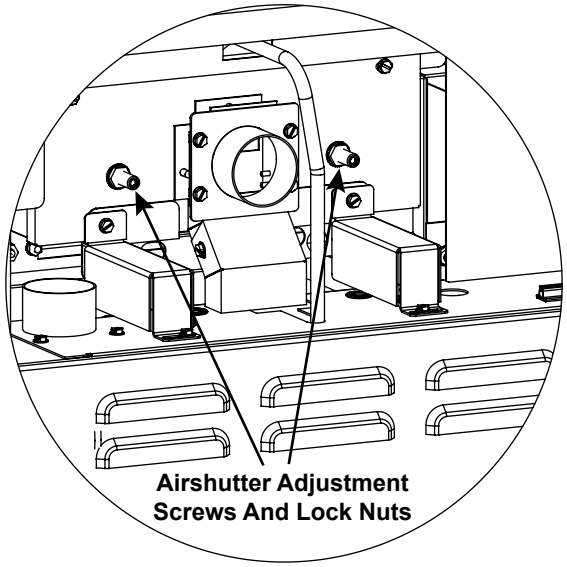
a. REMOVE THE UPPER CONTROL COVER FROM THE END OF THE UNIT TO ACCESS THE AIRSHUTTER ADJUSTMENT SCREWS.

b. USE A 9/16” WRENCH AND 3/16” HEX KEY WRENCH TO LOOSEN THE ADJUSTMENT SCREW LOCK NUTS.

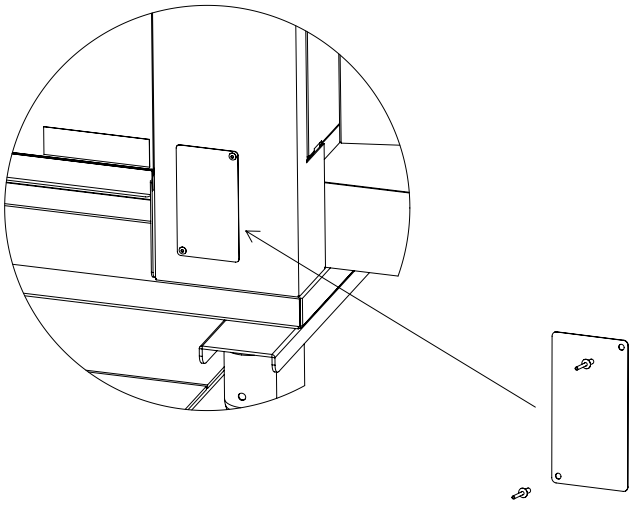
c. ADJUST THE BURNERS FOR PROPER FLAME CHARACTERISTICS.

WITH THE UNIT WELL HEATED, TURN EACH SCREW CLOCKWISE IN ¼ TURN INCREMENTS UNTIL A BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS. THEN TURN EACH SCREW COUNTER CLOCKWISE IN ¼ TURN INCREMENTS UNTIL NO BLUE FLAME OR HAZE IS OBSERVED BELOW THE BURNERS.

d. RETIGHTEN THE NUTS ON THE ADJUSTMENT SCREWS.



10) DRILL OUT RIVETS IN RATING TAG AND APPLY NEW RATINGS TAG OVER EXISTING TAG. USE SUPPLIED RIVETS TO RIVET THROUGH BOTH TAGS.



11) APPLY SUPPLIED GAS TYPE LABEL OVER THE EXISTING LABEL ON THE STAND. CONVERSION IS COMPLETE.

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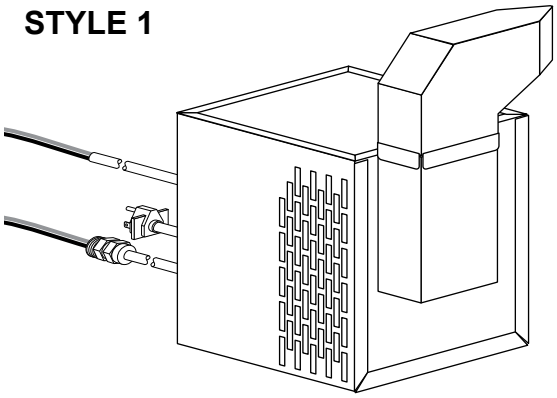
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INSTALLATION INSTRUCTIONS

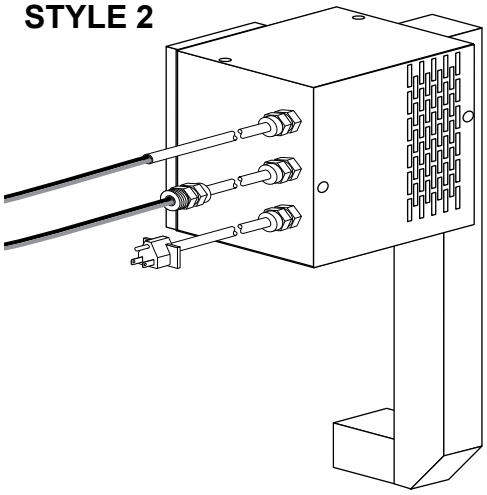
PROPANE GAS HIGH ALTITUDE LOWER BURNER UPGRADE KIT INSTRUCTIONS FOR USE ON DUKE MODELS: FBB-PO-120 AND FBB-PC-120

KIT 600346 (BASE MOUNT) KIT 600347 (BACK MOUNT)

STYLE 1



STYLE 2



Items required for this installation:

- 1/2" Deep well socket and ratchet or 1/2" wrench
- 5/8" Deep well socket and ratchet or 5/8" wrench
- 7/16" Wrench
- 11/32" Wrench
- Cross tip screwdriver
- 3/8” or ½” drill (corded or cordless)
- 24mm Wrench
- 27mm Wrench
- 3/8” Wrench or 3/8” nutdriver
- 3/16” Hex Key Wrench
- Center punch
- Cutting fluid
- Digital or Slack Tube Manometer
- Gas Leak detection fluid
- Straight Blade Screwdriver
- #30 Drill Bit

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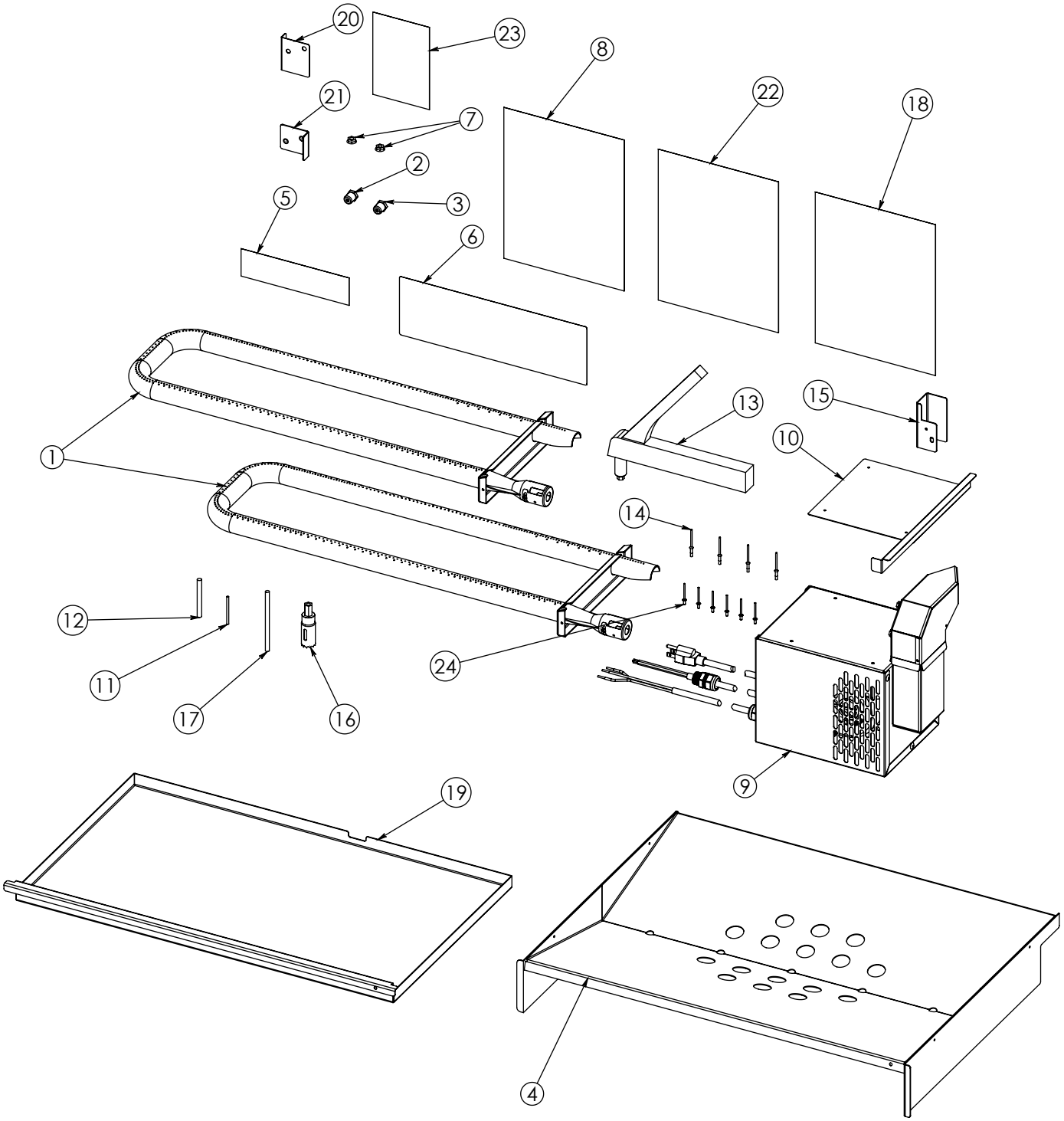
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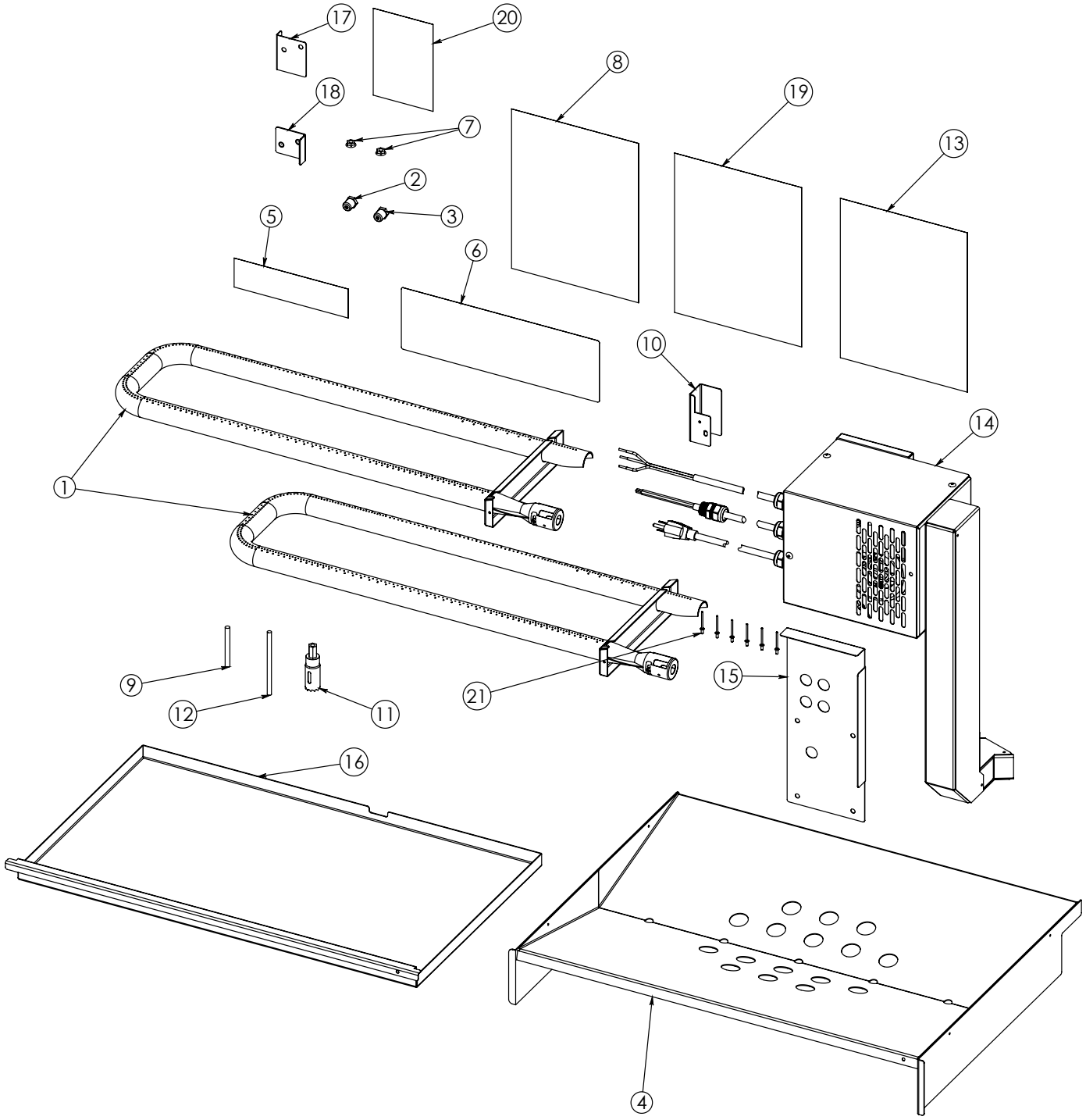
P/N 176502A

Kit 600346 (Base Mount)



Kit 600346 (Base Mount) contains:			
Locator	**P/N**	**Description**	**Qty**
1	176421	BURNER, LOWER, CENTER AIR FLOW	2
2	176412	ORIFICE, LOWER BURNER #46	1
3	176486	ORIFICE, LOWER BURNER 2.25 mm	1
4	176397	WELDMENT, AGP., CENTER AIR FLOW	1
5	176461	LABEL, CONVERSION	1
6	175556	OVERLAY-BROILER NAMEPLATE	1
7	213042	NUT, 1/4-20 SERRATED FLANGE ZP	2
8	176470	RECIPES, FFB	1
9	176447	ASY, BLOWER BOX & DUCT, BASE	1
10	176445	TEMPLATE, BLOWER BOX MTG, BASE	1
11	176042	BIT, DRILL, #30	1
12	PT3003860	BIT, DRILL, 9/32	1
13	176041	RIVET GUN, HAND	1
14	213336	RIVET, POP, 1/8 SS	4
15	176458	GUARD, DRILL / TEMPLATE, CORD	1
16	176459	SAW, HOLE W/ ARBOR, 7/8	1
17	176460	BIT, DRILL, PILOT, 1/4"	1
18	176430	WIRING DIAGRAM, FBB W/ PURGE	1
19	176398	DGP, CENTER AIR FLOW	1
20	176469	TEMPLATE, STOP, V-PAN	1
21	176467	ASSEMBLY, STOP, V-PAN	1
22	176502	INSTRU., LP LBU, HIGH ALT.	1
23	175942	LABEL, HIGH ALTITUDE	1
24	168106	RIVET,1/8"SS	6

Kit 600347 (Back Mount)



Kit 600347 (Back Mount) contains:			
Locator	**P/N**	**Description**	**Qty**
1	176421	BURNER, LOWER, CENTER AIR FLOW	2
2	176412	ORIFICE, LOWER BURNER #46	1
3	176486	ORIFICE, LOWER BURNER 2.25 mm	1
4	176397	WELDMENT, AGP., CENTER AIR FLOW	1
5	176461	LABEL, CONVERSION	1
6	175556	OVERLAY-BROILER NAMEPLATE	1
7	213042	NUT, 1/4-20 SERRATED FLANGE ZP	2
8	176470	RECIPES, FFB	1
9	PT3003860	BIT, DRILL, 9/32	1
10	176458	GUARD, DRILL / TEMPLATE, CORD	1
11	176459	SAW, HOLE W/ ARBOR, 7/8	1
12	176460	BIT, DRILL, PILOT, 1/4"	1
13	176430	WIRING DIAGRAM, FBB W/ PURGE	1
14	176432	ASY, BLOWER BOX & DUCT, BACK	1
15	176444	TEMPLATE, BACK BLOWER BOX MTG.	1
16	176398	DGP, CENTER AIR FLOW	1
17	176469	TEMPLATE, STOP, V-PAN	1
18	176467	ASSEMBLY, STOP, V-PAN	1
19	176502	INSTRU., LP LBU, HIGH ALT.	1
20	175942	LABEL, HIGH ALTITUDE	1
21	168106	RIVET,1/8"SS	6

CAUTION:

THESE INSTALLATION INSTRUCTIONS ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY.

INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN SEVERE PERSONAL INJURY TO THE OPERATOR OR OTHERS, DAMAGE TO THE BROILER, OR OTHER PROPERTY DAMAGE.

⚠ WARNING

FOR YOUR SAFETY, THESE INSTRUCTIONS MUST BE FOLLOWED TO MINIMIZE THE RISK OF FIRE OR EXPLOSION, ELECTRIC SHOCK, AND TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE.

A. QUALIFIED PERSONNEL:

Qualified installation personnel are those individuals, firms, companies or corporations which either in person or through an agent is engaged in and responsible for:

- The installation or replacement of gas piping or the connection, installation, repair or servicing of equipment, who are experienced in such work, familiar with all precautions required, and have complied with all requirements of state and local authorities having jurisdiction. See: National Fuel Gas Code NFPA 54 (ANSI Z223.1).
- The installation of electrical wiring from the electric meter, main control box or service outlet to the electrical appliance. Qualified installation personnel must be familiar with all precautions required and have complied with all requirements of state and local authorities having jurisdiction. See: National Electrical Code, ANSI/NFPA70.

The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable, including:

- The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).
- The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

For a broiler mounted on casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69/CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.4/CSA 6.9. When installing the broiler with casters and quick-disconnect hose, adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick disconnect device or its associated piping to limit the broiler movement. A means for restraining may be attached to the vertical portion of the base frame in the rear of the broiler.

Detailed broiler installation instructions are available in the Flexible Batch Broiler Installation and Operation Manual. If the manual is missing you must request one using the contact information on the rear cover of these instructions.

B. PROCEDURE

⚠ WARNING

THIS CONVERSION KIT SHALL BE INSTALLED BY A QUALIFIED SERVICE AGENCY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. IF THE INFORMATION IN THESE INSTRUCTIONS IS NOT FOLLOWED EXACTLY, A FIRE, AN EXPLOSION OR PRODUCTION OF CARBON MONOXIDE MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE. THE QUALIFIED SERVICE AGENCY IS RESPONSIBLE FOR THE PROPER INSTALLATION OF THIS KIT. THE INSTALLATION IS NOT PROPER AND COMPLETE UNTIL THE OPERATION OF THE CONVERTED APPLIANCE IS CHECKED AS SPECIFIED IN THE MANUFACTURER'S INSTRUCTIONS SUPPLIED WITH THIS KIT.

NOTE:

INPUT RATING IS THE GAS-BURNING CAPACITY OF THE APPLIANCE IN BTU PER HOUR AS SPECIFIED BY THE MANUFACTURER. APPLIANCE INPUT RATINGS ARE BASED ON SEA LEVEL OPERATION AND NEED NOT TO BE CHANGED FOR THE OPERATION UP TO 2,000 FT (610 M) ELEVATION. FOR OPERATION AT ELEVATIONS ABOVE 2,000 FT (610 M), INPUT RATINGS SHOULD BE REDUCED AT THE RATE OF 4 PERCENT FOR EACH 1,000 FT (305 M) ABOVE SEA LEVEL OR AS SPECIFIED BY THE MANUFACTURER. FOR THE DUKE BROILER MODELS: FBB-PO-120 AND FBB-PC-120, NO AIR SHUTTER ADJUSTMENTS OR ORIFICE SIZE CHANGES ARE REQUIRED FOR AN ELEVATION RANGE OF 0-4,999 FT (0-1524 M). FOR OPERATION AT ELEVATIONS OF 5,000 FT (1525 M) AND HIGHER REFER TO THE CHART BELOW.

THIS CHART INDICATES IF AIRSHUTTER ADJUSTMENT AND ORIFICE SIZES CHANGES ARE REQUIRED FOR VARIOUS ALTITUDE RANGES. IT ALSO INDICATES THE CORRECT ORIFICES FOR THESE ALTITUDE RANGES.

Propane Gas

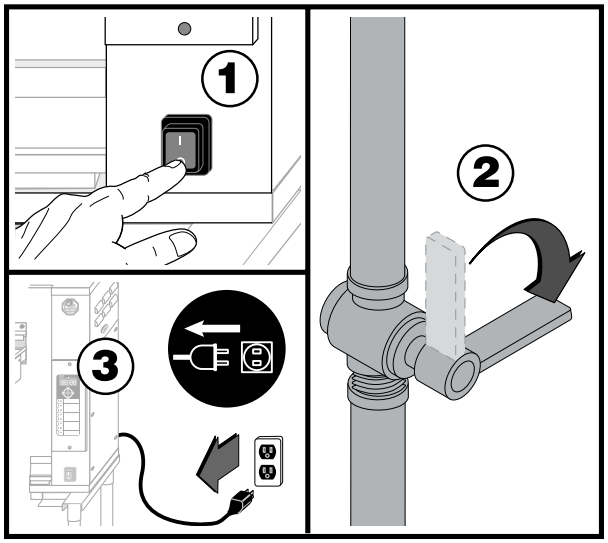
Elevation Range	Lower Burner Airshutter Adjustment Required	Lower Burner Orifice Size	IR Burner Airshutter Adjustment Required	Front IR Burner Orifice Size	Rear IR Burner Orifice Size
0 - 4999 Feet	No	#46	No Airshutter Adjustments or Orifice Size Changes Required		
5000+ Feet	No	2.25mm	Yes	#51	#50

NOTE: THIS BROILER HAS BEEN PREVIOUSLY ADJUSTED FOR HIGH ALTITUDE. THE PROPER IR BURNER ORIFICE SIZES SHOULD ALREADY BE INSTALLED.

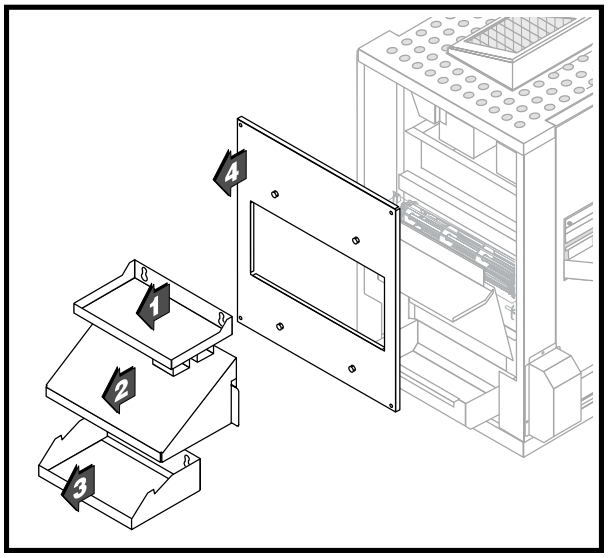
Orifice, Burner, Stop and Pans Installation:

CAUTION: THE GAS SUPPLY SHALL BE SHUT OFF PRIOR TO DISCONNECTING THE ELECTRICAL POWER, BEFORE PROCEEDING WITH THE CONVERSION.

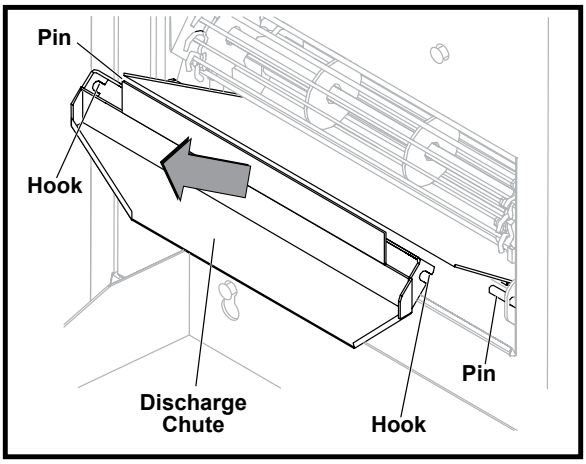
1. Turn the broiler off. Close the main gas supply valve and disconnect supply line. Unplug the broiler from electrical power.



2. Remove discharge end components.

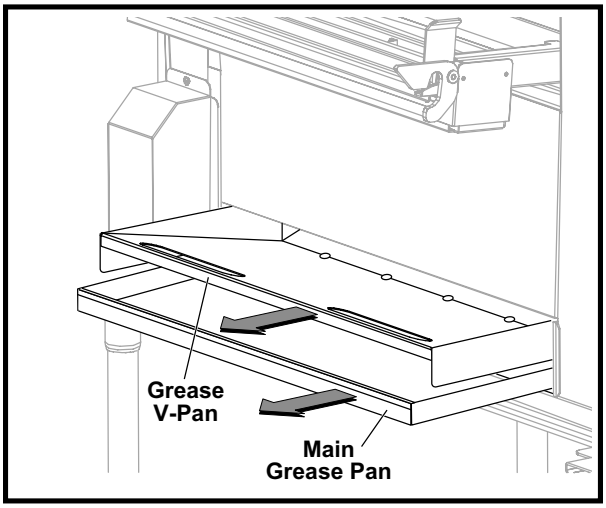


3. Remove Discharge Chute

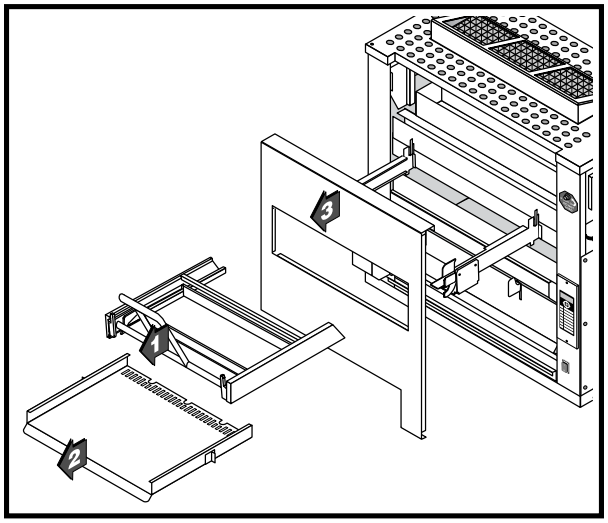


4. Remove lower main grease pan and V-Shaped pan.

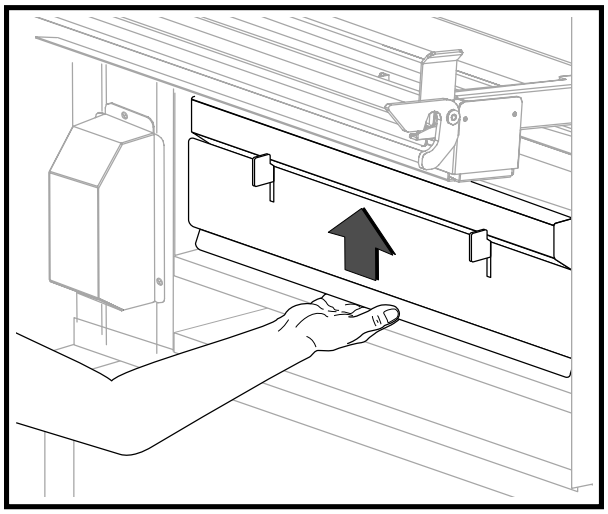
NOTE: REMOVE AND DISCARD OLD V-SHAPED PAN AND MAIN GREASE PAN COMPLETELY FROM RESTAURANT. THEY ARE NOT COMPATIBLE WITH NEW COMPONENTS.

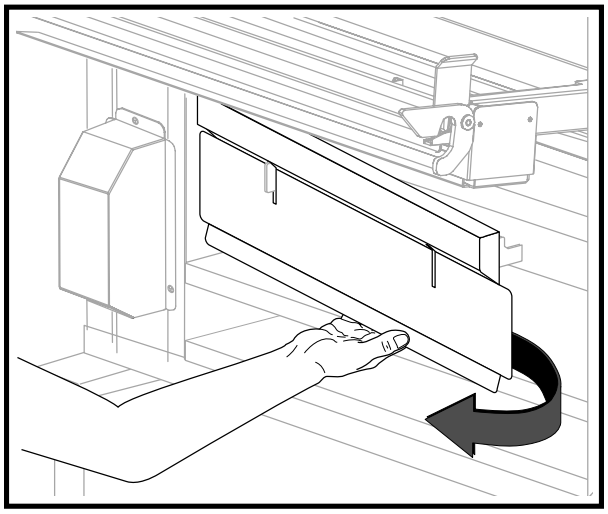


5. Remove loader, loader tray and front panel.

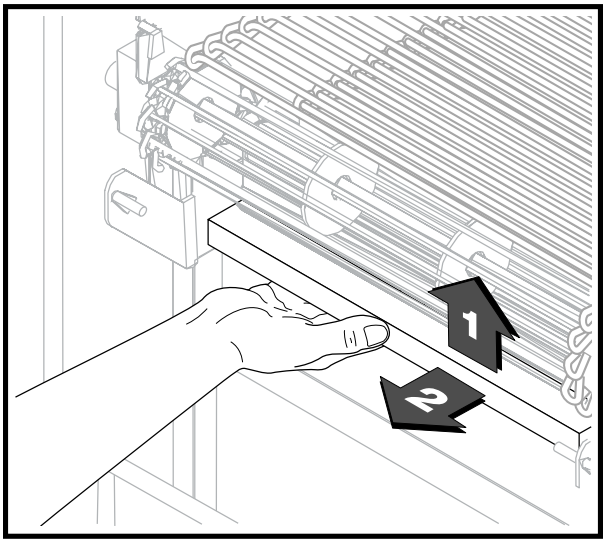


6. Lift up lower burner panel and rotate outward to remove from hanger bracket.

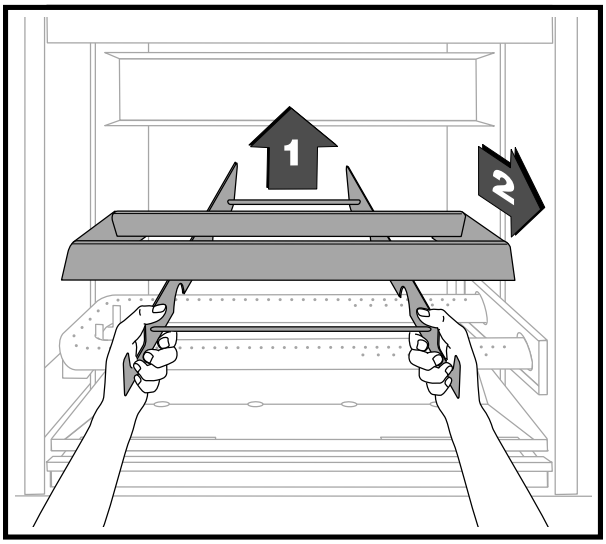




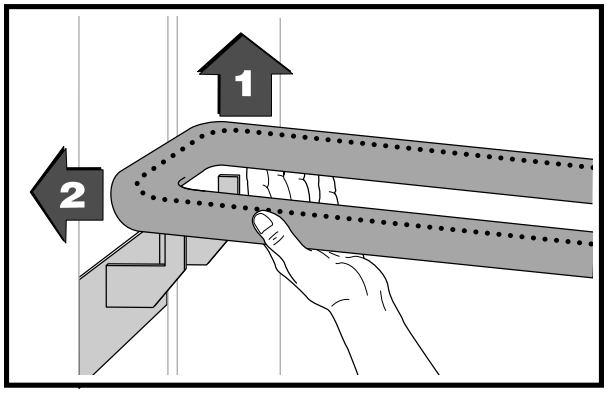
7. Remove ash scraper on discharge end.

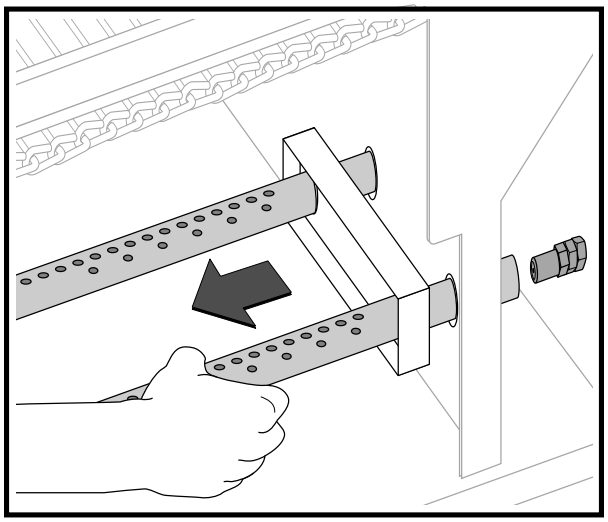


8. Remove lower burner shield.



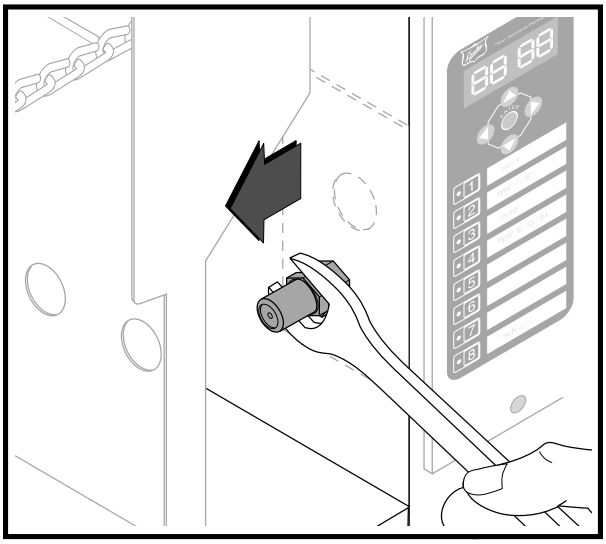
9. Remove lower burner and **DISCARD**. Locate and **DISCARD** any spare burners as well.





10. Remove and **DISCARD** lower orifice (#49) using a 1/2" deep well socket or 1/2" wrench.

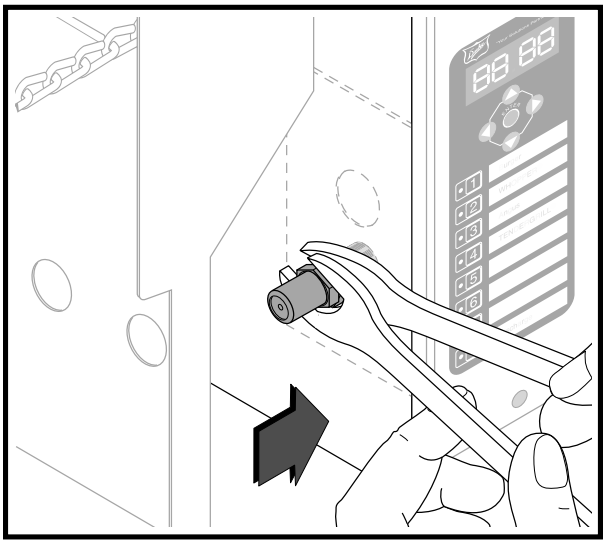
NOTE: REMOVE AND DISCARD ALL OLD BURNERS (INCLUDING ANY SPARE BURNERS THAT ARE LOCATED) AND THE ORIFICE COMPLETELY FROM THE RESTAURANT. THEY ARE NOT COMPATIBLE WITH NEW COMPONENTS.



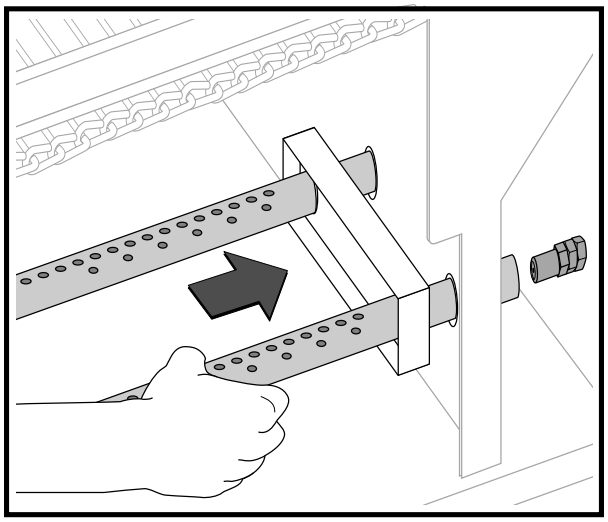
11. Using a 5/8" deep well socket or 5/8" wrench, replace lower orifice with orifice provided in kit per the table below.

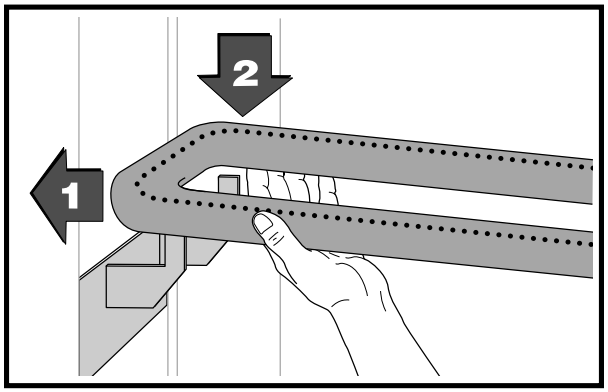
NOTE: EXCESSIVE OVER-TIGHTENING OF ORIFICE DOWN ON TO ORIFICE HOLDER CAN CAUSE HOLDER TO BREAK.

Orifice sizing - Propane Gas	
0 - 4999 Feet	#46 (blue)
5000+ Feet	2.25mm

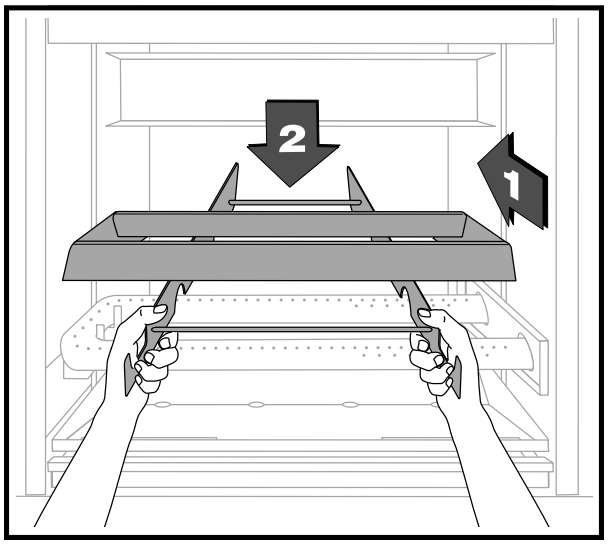


12. Replace lower burner with new lower burner provided in kit. Provide additional spare burner to restaurant manager.



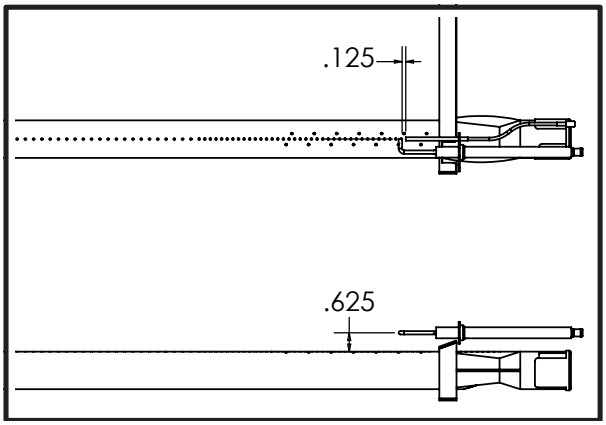


13. Replace lower burner shield.

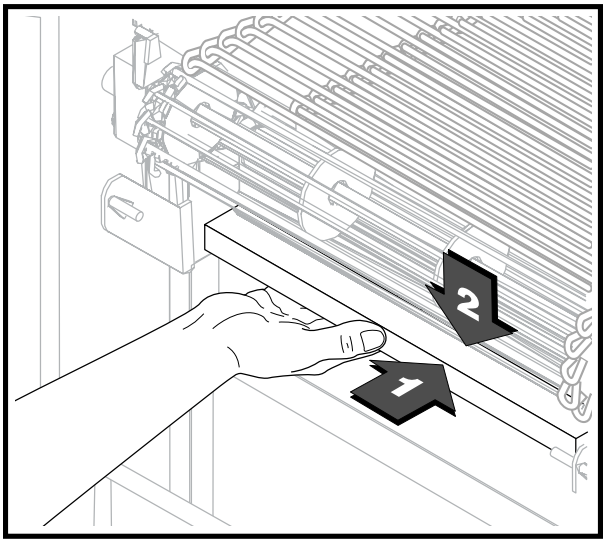


14. Check the Igniter as follows:

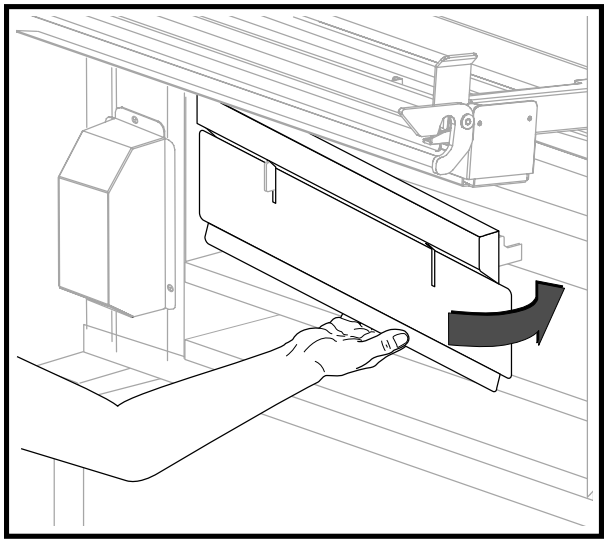
- Verify the spark gap is 1/8″(.125”).
- Verify proper location of the igniter. It should be approximately 5/8″ (3/4” max) from the lower burner.
- Replace Igniter if the electrodes are damaged.

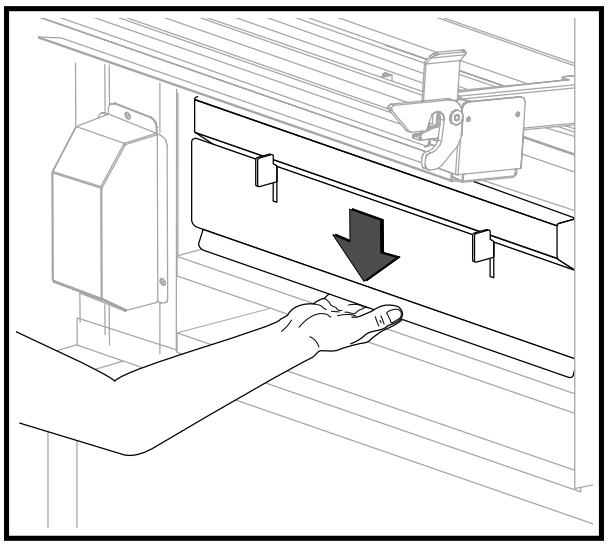


15. Replace ash scraper on discharge end.

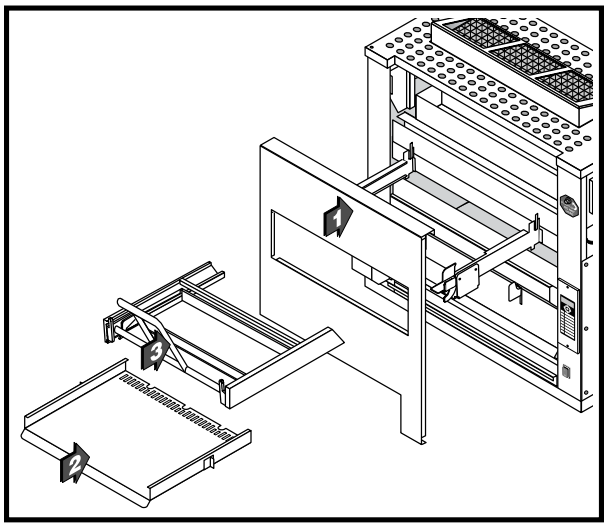


16. Replace lower burner panel.

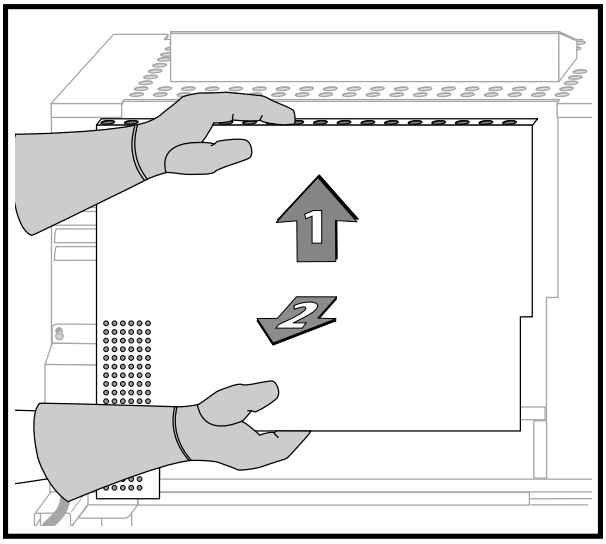




17. Replace front panel, loader, and loader tray.

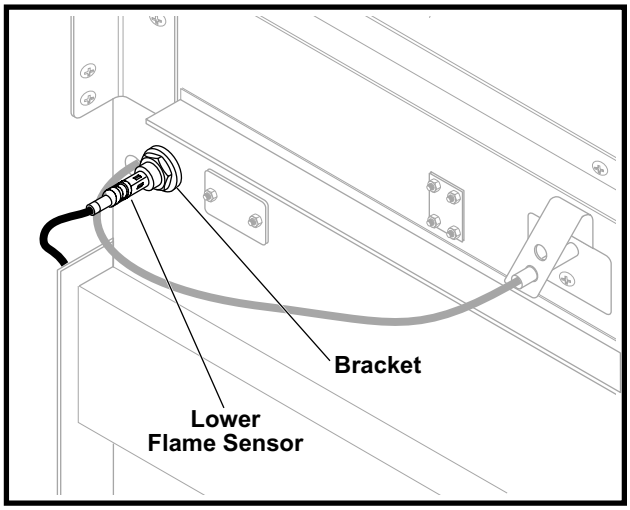


18. Remove back panel.



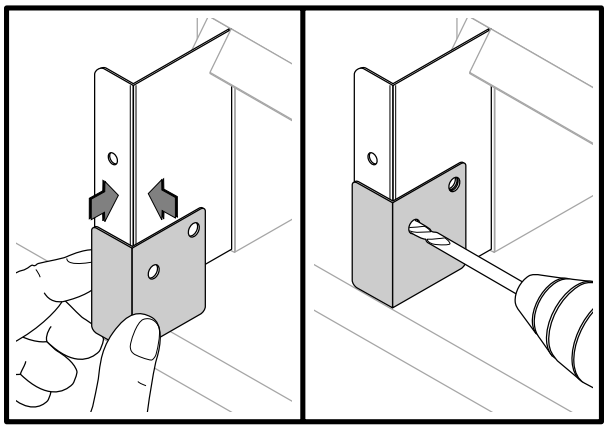
19. Check the Lower Flame Sensor Assembly as follows:

- The Lower Flame Sensor Assembly is accessible from the back of the broiler.
- The Lower Flame Sensor Assembly is positively located with the guide and bracket.
- To visually inspect the Flame Sensor Assembly, disengage Lower Flame Sensor from guide and bracket and pull out of guide and bracket.
  - o If the Flame Sensor is dirty, allow the Flame Sensor to cool and clean it with an alcohol pad.
  - o Replace a Flame Sensor with damaged porcelain.
  - o Check for debris between the Flame Sensor tip and burner.
  - o Adjust the Flame Sensor if the tip is touching ground.
- Make sure all of the Flame Sensor connections are tight.
- Re-install the Lower Flame Sensor Assembly by positively locating and seating it within the guide and bracket.

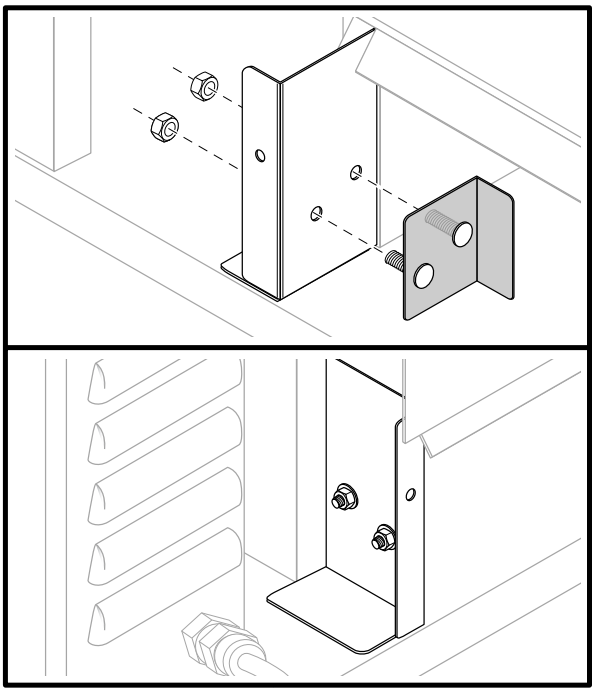


20. Locate the drill template for the V-Pan Stop. Mark the 2 holes and drill with the 9/32" drill bit (supplied).

    NOTE: THESE HOLES NEED TO BE ACCURATELY LOCATED TO ENSURE PROPER ALIGNMENT WITH THE V-PAN STOP.

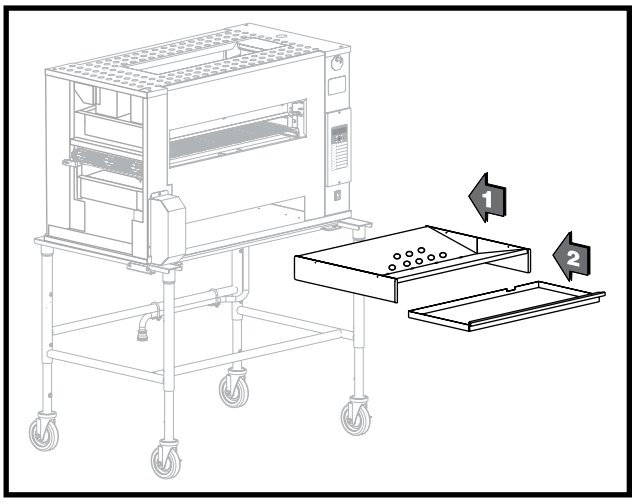


21. Assemble the V-Pan Stop as shown using the two #1/4-20 nuts (supplied).

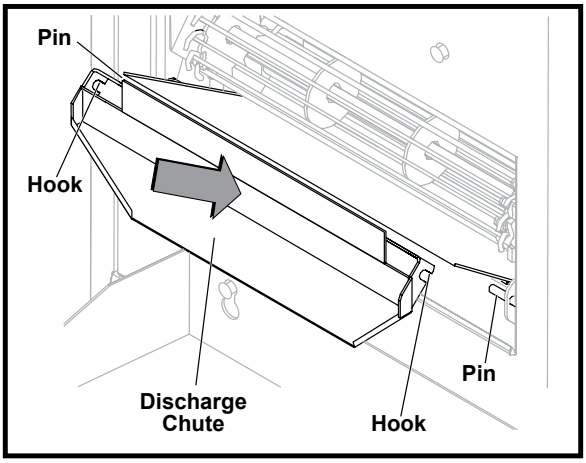


22. Install new V-shaped pan and main grease pan provided in kit.

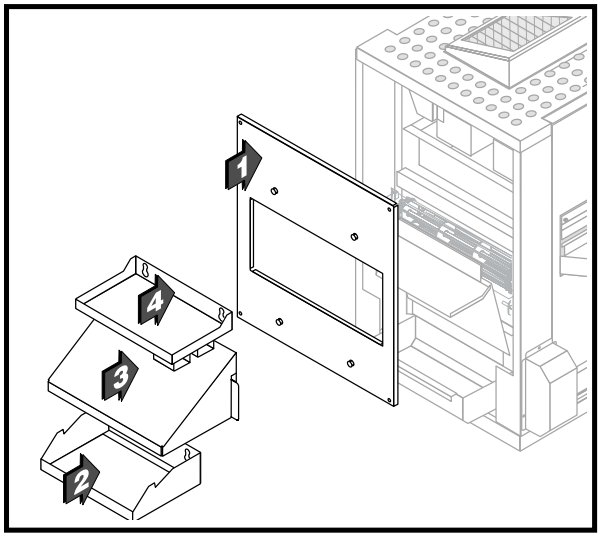
    NOTE: REMOVE VINYL PLASTIC FROM NEW GREASE PAN.



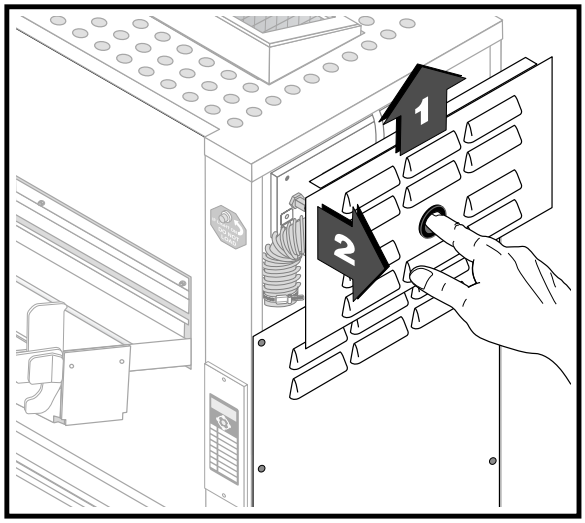
23. Replace Discharge Chute.



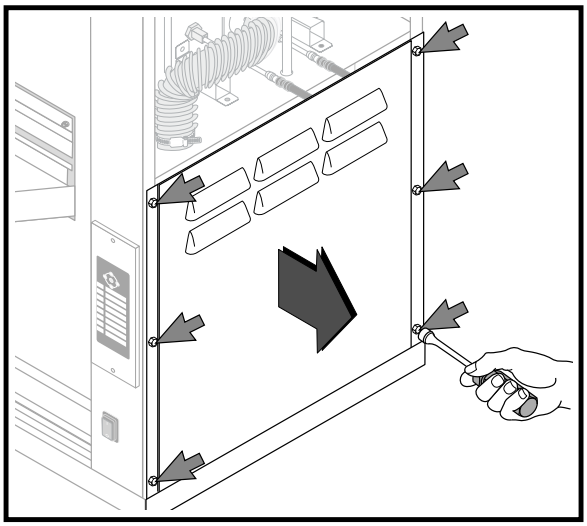
24. Replace discharge end components.



25. Remove Electrical Panel Cover.

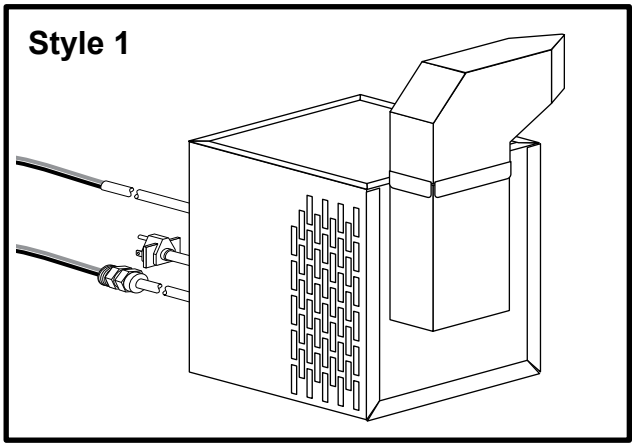


26. Remove Electrical Service Panel Cover.

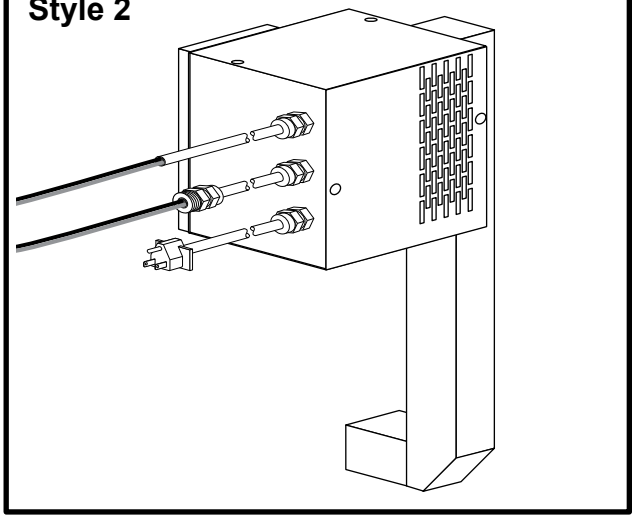


27. Identify the Style of Blower Assembly. If you have Style 1 proceed with the following steps. If you have Style 2 SKIP to section titled Style 2.

Style 1



Style 2

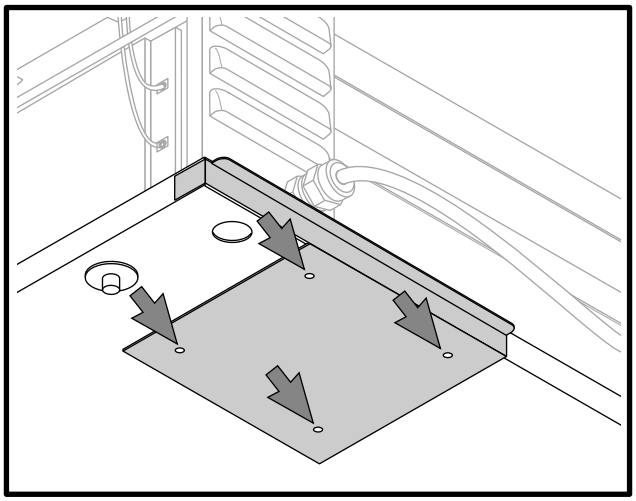


Style 1:

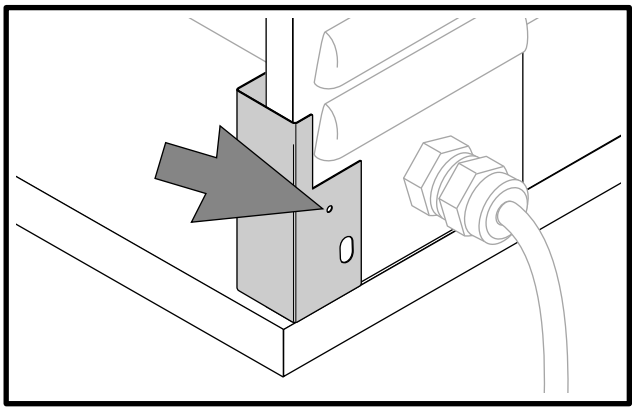
28. Locate the drill template for the base blower box mounting. Mark all 4 holes. Center punch and drill with the #30 drill bit (supplied).

    NOTE: THESE HOLES NEED TO BE ACCURATELY LOCATED TO ENSURE PROPER ALIGNMENT WITH THE BLOWER BOX ASSEMBLY TO BE POP RIVETED.

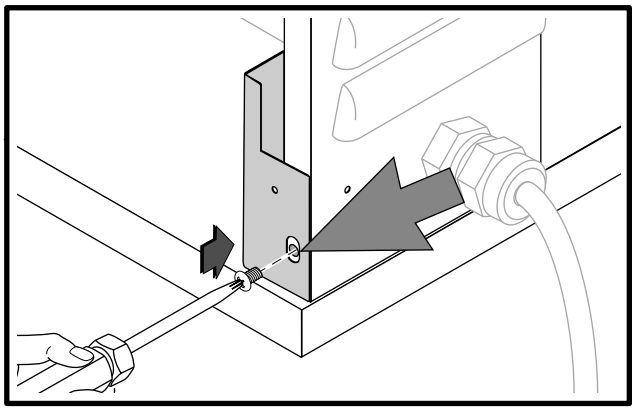
    NOTE: DRILL AT A SLOW SPEED AND USE CUTTING FLUID TO NOT DAMAGE THE DRILL BIT.



29. Locate the drill / hole saw template for the harness strain relief mounting. Mark the pilot drill hole.

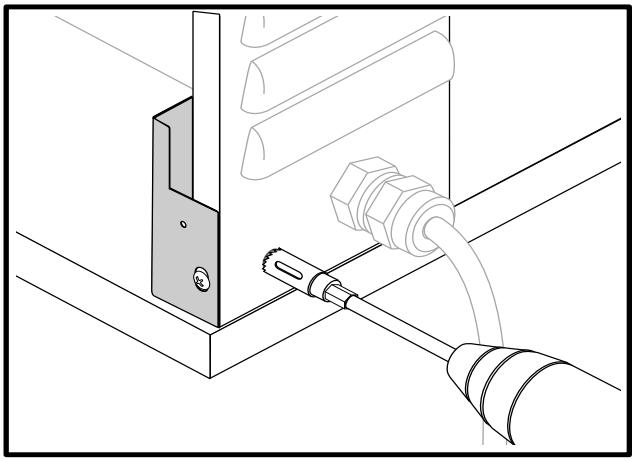


30. Relocate the drill / hole saw template to the guard position to protect the gas line while drilling. Fasten with a screw (Previously removed with Electrical Service Panel Cover).

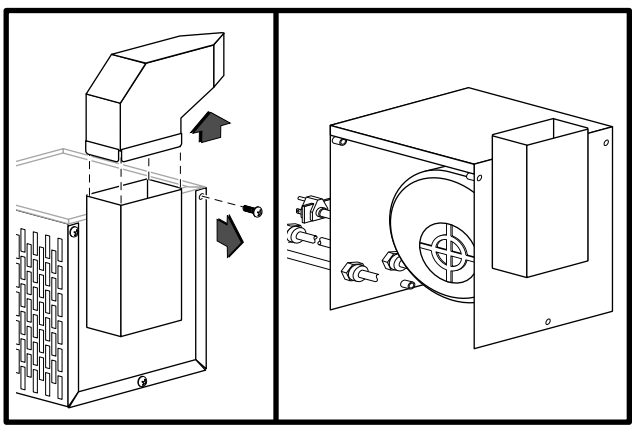


31. Assemble the hole saw to the pilot drill. Drill the 7/8" diameter hole for the strain relief / harness. After the hole is drilled, remove the template/guard and all metal filings and burrs.

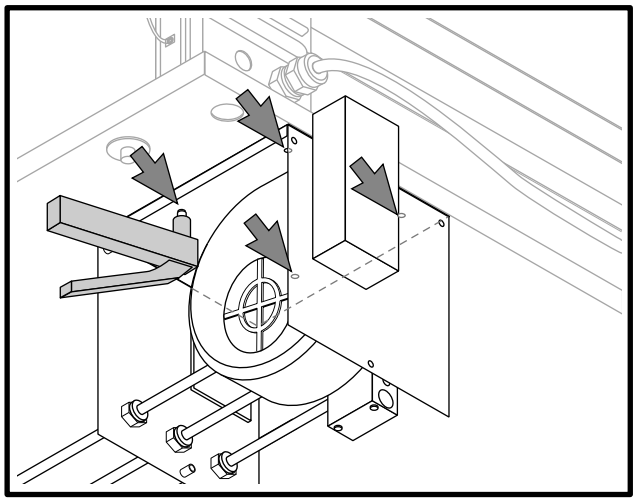
    NOTE: DRILL AT A SLOW SPEED AND USE CUTTING FLUID TO NOT DAMAGE THE DRILL BIT AND/OR HOLE SAW.



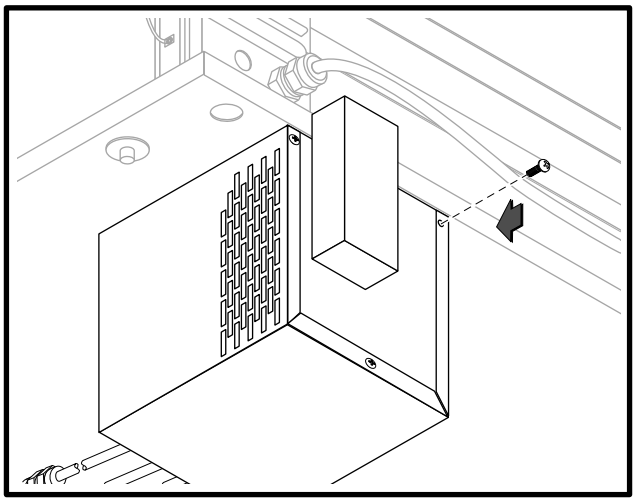
32. Remove the upper duct and cover from the box assembly.



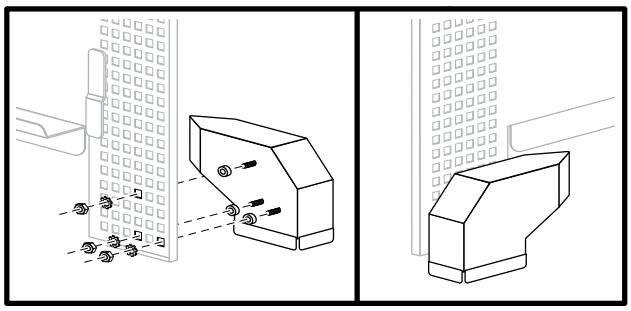
33. Locate blower box assembly and align with drilled mounting holes. Carefully attach with the 4 pop rivets (supplied) ensuring the box is firmly held tight to the bottom of the broiler. (NOTE: Some harnessing not shown for clarity.)



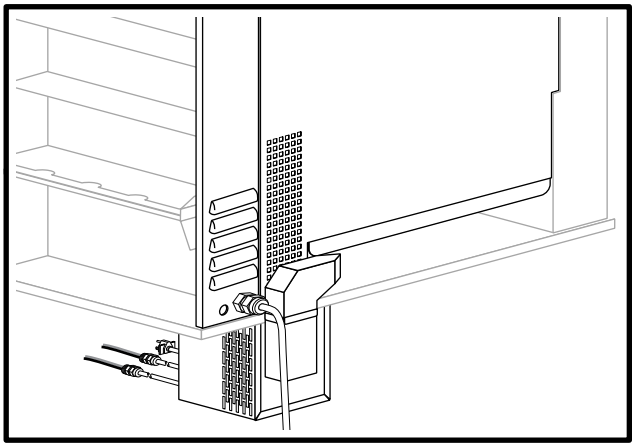
34. Reassemble the blower box cover to the assembly.



35. Assemble the upper duct to the back assembly, utilizing the 0.25” spacers, lock washers and 10-32” nuts (supplied). NOTE: Make sure the duct is assembled with the mounting studs in the proper locations shown in the square perforated pattern.



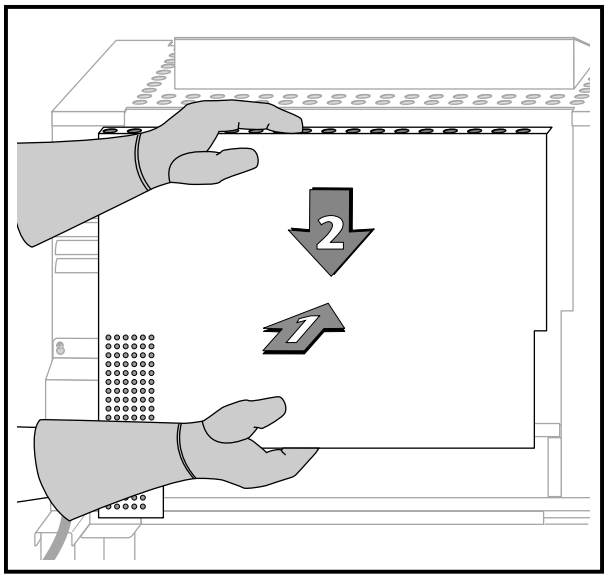
36. Replace back panel assembly and ensure the upper duct assembly mates properly to the blower assembly.



Proceed to Unit Wiring section of these instructions.

Style 2:

37. Replace back panel.

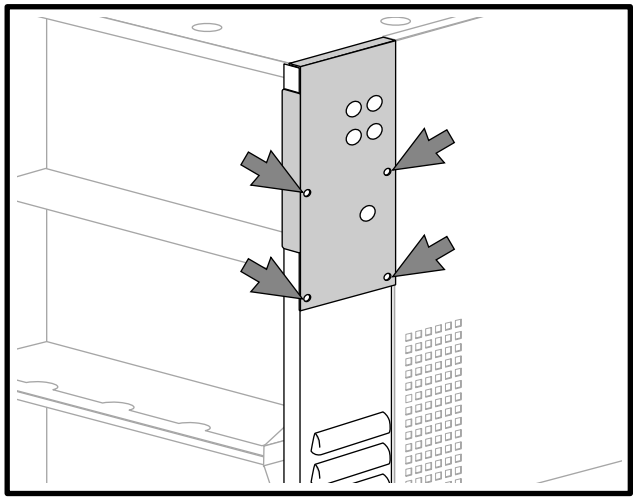


38. Locate the drill template for the back blower box mounting. Mark all 4 holes. Center punch and drill with the 9/32” drill bit (supplied).

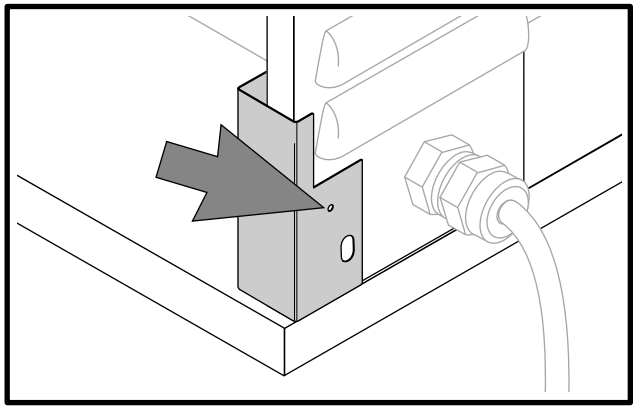
    NOTE: THESE HOLES NEED TO BE ACCURATELY LOCATED TO ENSURE PROPER ALIGNMENT WITH THE BLOWER BOX ASSEMBLY TO BE FASTENED.

    NOTE: PROTECT AND SHIELD ALL ELECTRICAL COMPONENTS FROM METAL FILINGS, ETC. WHILE DRILLING.

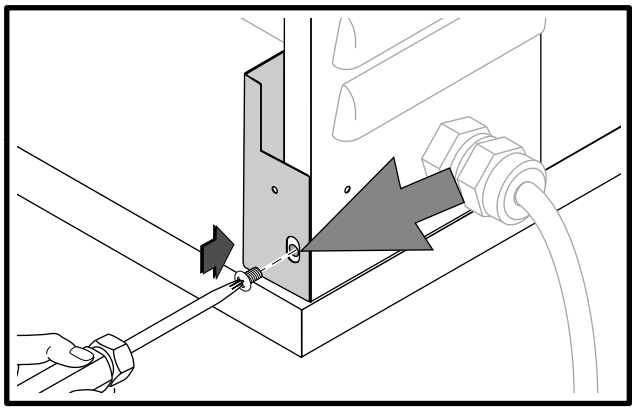
    NOTE: DRILL AT A SLOW SPEED AND USE CUTTING FLUID TO NOT DAMAGE THE DRILL BIT.



39. Locate the drill / hole saw template for the harness strain relief mounting. Mark the pilot drill hole.

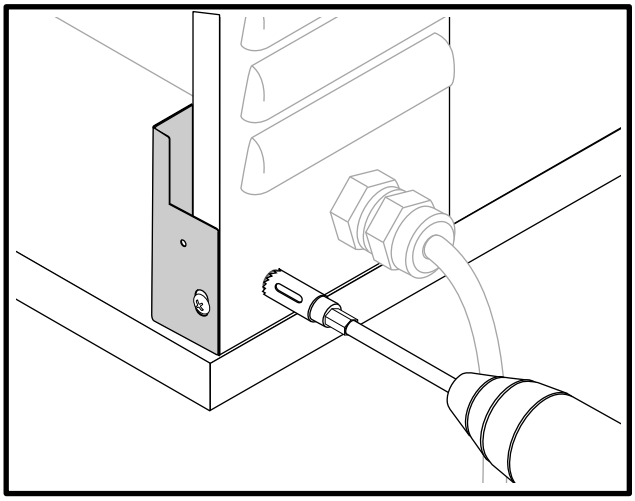


40. Relocate the drill / hole saw template to the guard position to protect the gas line while drilling. Fasten with a screw (Previously removed with Electrical Service Panel Cover).

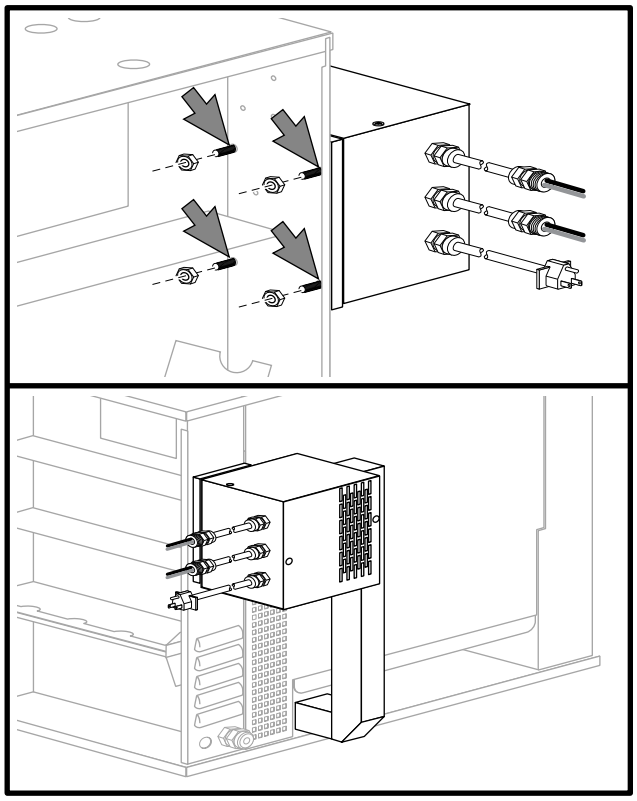


41. Assemble the hole saw to the pilot drill. Drill the 7/8” diameter hole for the strain relief / harness. After the hole is drilled, remove the template/guard and all metal filings and burrs.

    NOTE: DRILL AT A SLOW SPEED AND USE CUTTING FLUID TO NOT DAMAGE THE DRILL BIT AND/OR HOLE SAW.

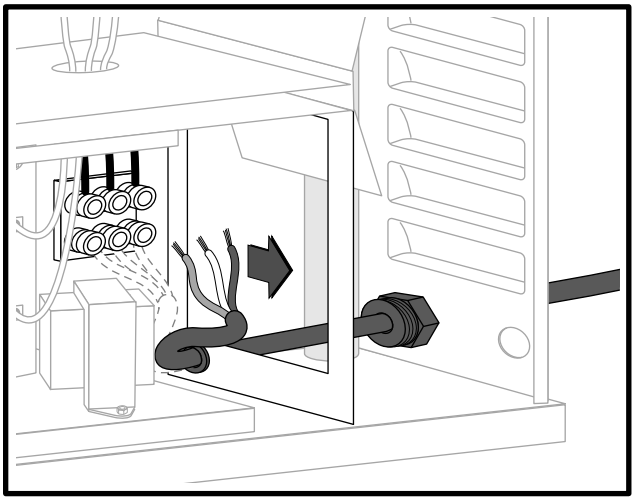


42. Locate blower box assembly and align with drilled mounting holes. Carefully attach with the ¼”-20 nuts (supplied) ensuring the box is firmly fastened to the broiler. (NOTE: Some harnessing not shown for clarity.)

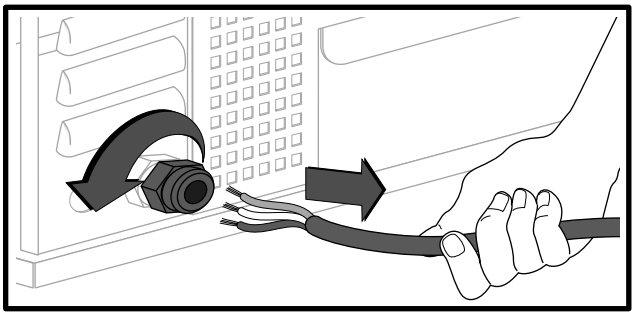


Unit Wiring:

43. Disconnect the main power cord from the terminal block.



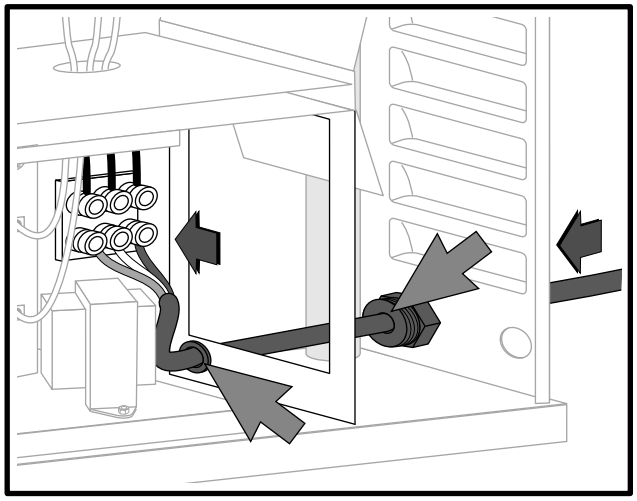
44. Loosen the strain relief nut and remove the power cord from the unit.



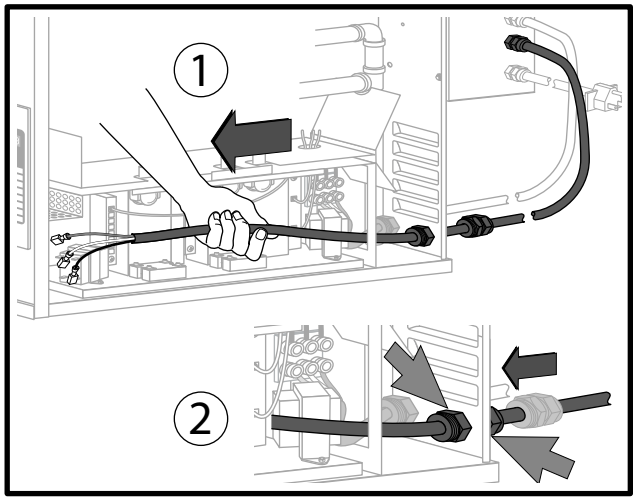
45. Route the harness power cord (preassembled in the blower assembly) through the strain relief and the bushing in the divider wall.

46. Connect the harness to the terminal block as shown and per the enclosed wire diagram.

47. Firmly tighten the nut on the strain relief to secure the cord.

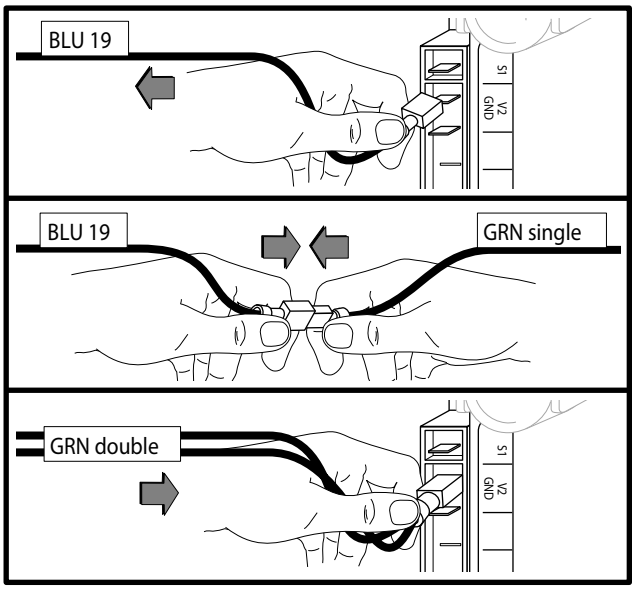


48. Remove the bulkhead jam nut from the strain relief and route the harness through the strain relief hole drilled previously. Once the harness is routed through the hole, re-install the bulkhead jam nut and fasten the strain relief to the panel/bulkhead. Make sure the harness length is long enough to make the connections to the ignition module and firmly tighten the nut to secure the cord.

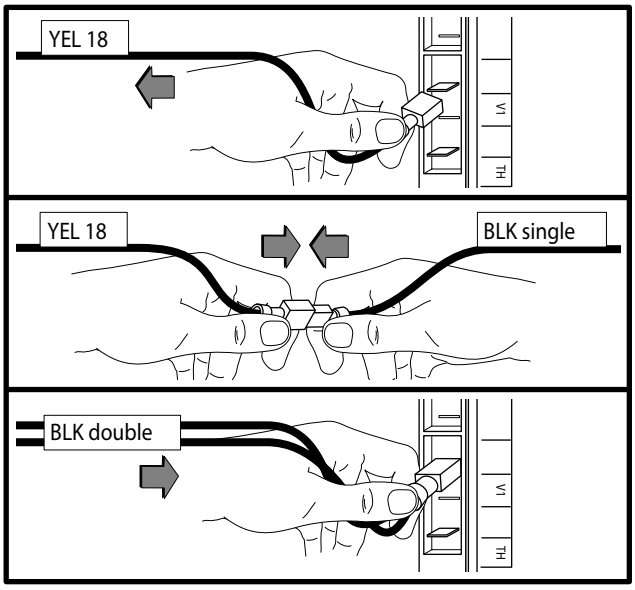


49. Following the wire diagram, make the following connections on the ignition module:

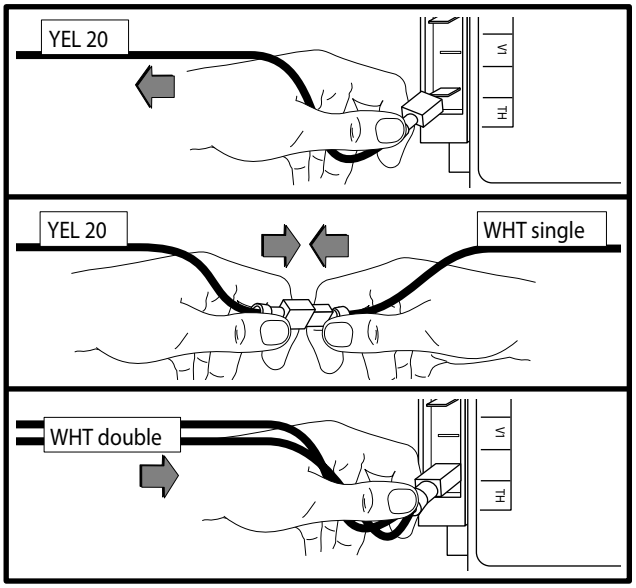
    i. Disconnect BLU 19 from V2 and connect with the GRN wire (single wire). Connect the GRN double crimp to V2.

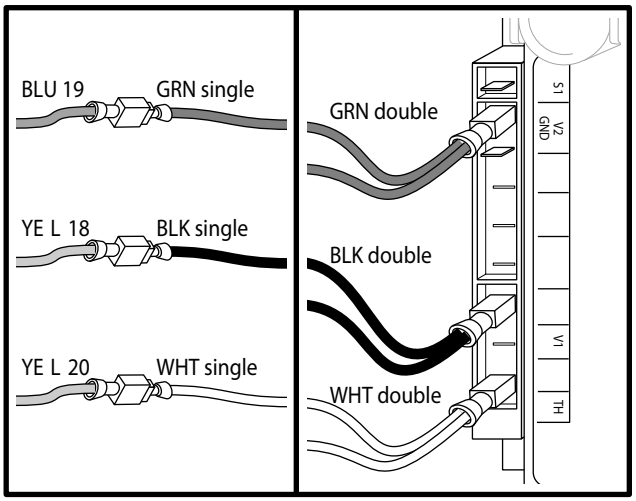


    ii. Disconnect YEL 18 from V1 and connect with the BLK wire (single wire). Connect the BLK double crimp to V1.



iii. Disconnect YEL 20 from TH and connect with the WHT wire (single wire). Connect the WHT double crimp to TH.

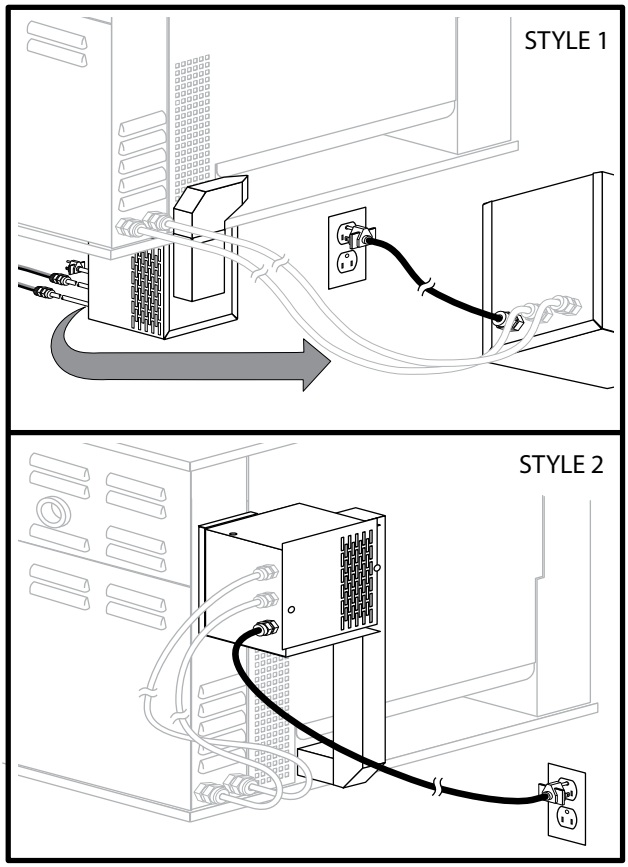




NOTE: ENSURE THAT ALL CONNECTIONS ARE TIGHT.

Blower Assembly Test:

50. Connect the power cord on the blower box assembly to the facility electrical power. (Only one outlet is required to power the broiler).



NOTE: THE FOLLOWING STEPS WILL CONDUCT A FUNCTIONAL TEST ON THE BLOWER ASSEMBLY. WITH THE GAS SUPPLY TURNED OFF, THE BLOWER ASSEMBLY SHOULD RUN AFTER THE FIRST FAILED BURNER IGNITION.

51. With the gas supply off, turn on the broiler.

52. Verify the blower turns on after approximately 7 seconds. It will stay on for approximately 5 seconds until the re-attempt cycle.

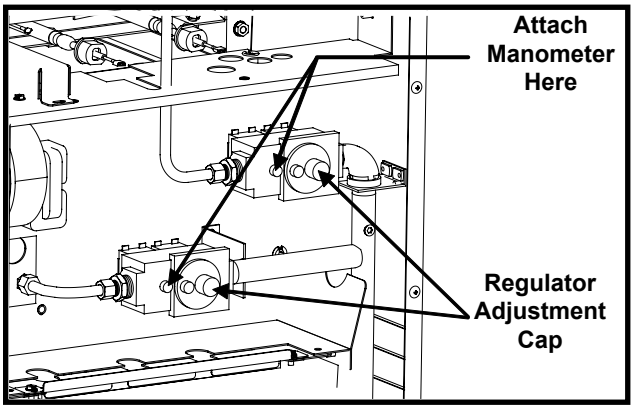
A. If you confirm the blower turns on:
Turn off the broiler and proceed to the next step.

OR

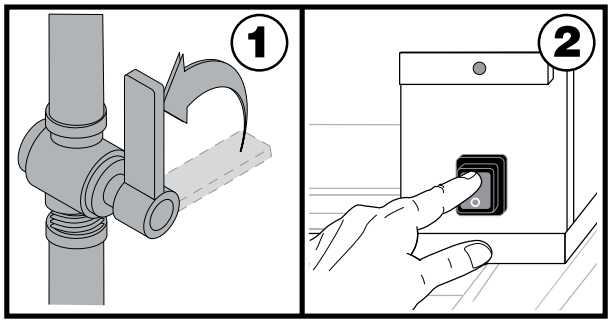
B. If the blower does not turn on:
STOP and call for Service.

Manifold Pressure and Flame Appearance:

53. On upper valve, remove 1/8” pipe plug and attach manometer.



54. Connect the gas supply line, open the main gas supply valve and turn on the unit.

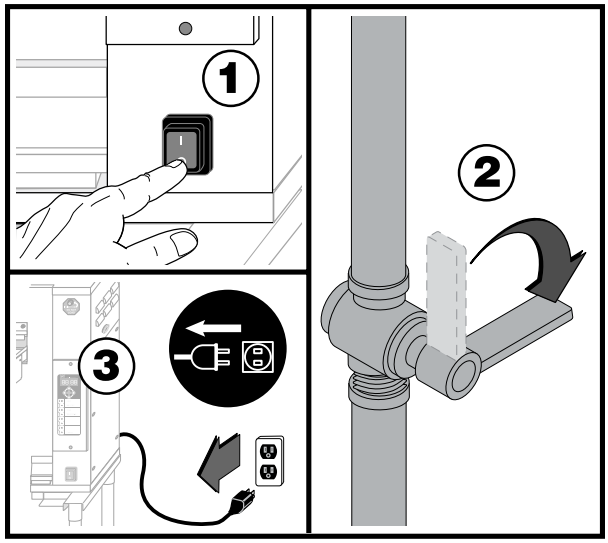


55. With a screw driver, remove slotted cap from regulator and adjust until manometer reading is:

    8.00” w.c. for propane gas and replace regulator cap.

NOTE: THE UPPER INFRARED BURNER VALVE WILL NOT COME ON UNTIL THE BROILER TEMPERATURE REACHES 500 F. INSTALL GREASE PANS AND IMPEDANCE PAN TO SPEED UP THE HEATING PROCESS.

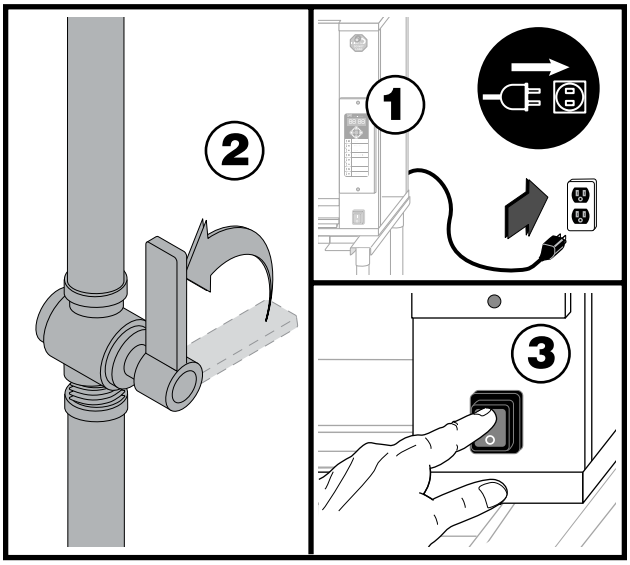
56. Turn the broiler off. Close the main gas supply valve and disconnect supply line. Unplug the broiler from electrical power.



57. Remove manometer and replace pipe plug.

58. Repeat procedure for bottom valve.

59. Upon supplying electrical power, gas supply, and turning the unit on, a gas leakage test should be performed where the orifice meets the orifice holder.



NOTE: ELECTRONIC LEAK DETECTORS WILL GIVE FALSE READINGS ON TOP OF THE BROILER NEAR THE IR ORIFICES AND GAS PIPING. THIS IS DUE TO PRODUCTS OF COMBUSTION NEAR THE FLUE. USE A LEAK CHECK FLUID OR SOAP SOLUTION IN THIS AREA.

60. Verify Proper Lower Burner Flame Appearance for Propane gas, the flame should be primarily blue with slight yellow tipping along the entire burner. There should be no flame lifting.

    NOTE: THE FLAME APPEARANCE NEEDS TO BE VERIFIED WITH THE GREASE PANS AND LOWER BURNER ACCESS PANELS INSTALLED.

    NOTE: THE ADJUSTMENT FOR THE LOWER BURNER AIR SUPPLY IS FACTORY SET AND SHOULD NOT NEED TO BE CHANGED. THE AIR SHUTTER OPENING ON FACTORY J BURNERS IS PRESET TO 3/8" OPEN.

    Complete steps a through f only if necessary to obtain proper flame characteristics:

a. Loosen the airshutter screw and adjust for proper flame characteristics.

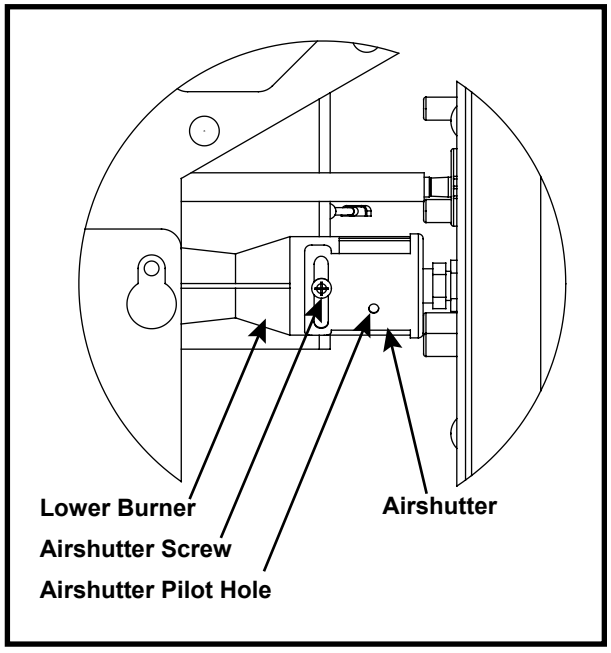
b. Tighten the airshutter screw.

c. Remove the lower burner from the unit (see installation/ operations manual)

d. Using the two pilot holes on the airshutter, drill #30 holes through the airshutter and burner.

e. Use the supplied rivets to lock the burner in position.

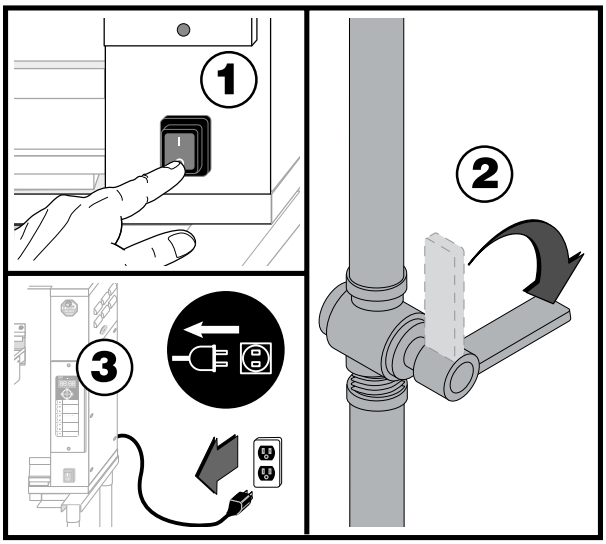
f. Reinstall the burner into the broiler.



NOTE: THIS ADJUSTMENT NEEDS TO BE MADE TO THE BURNER IN THE BROILER AS WELL AS ANY OTHER SPARE BURNERS IN SPARE PARTS KITS OR USER REPLACEABLE PARTS KITS. ALL BURNERS SHOULD BE SET TO THE SAME AIRSHUTTER OPENING.

61. Reprogram the broiler per the Configurations/ Settings Update Sheet included in the upgrade kit.

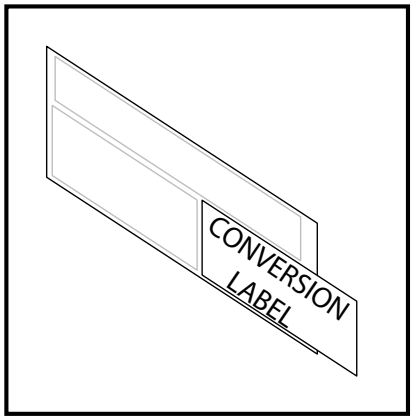
62. Turn the broiler off. Close the main gas supply valve and disconnect supply line. Unplug the broiler from electrical power.

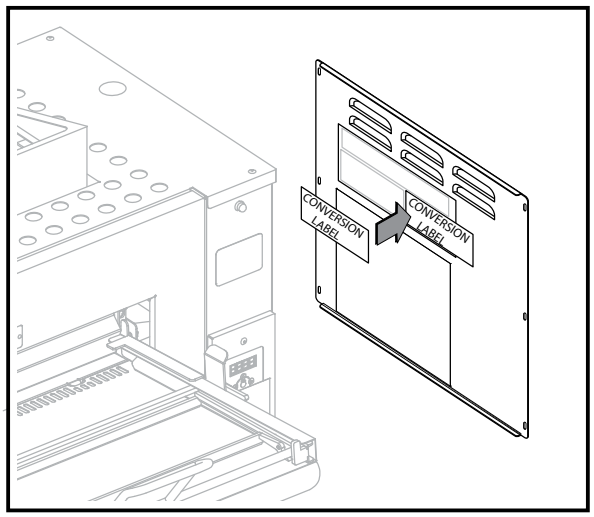


63. Clean Electrical Service Panel Cover surface to be free of grease and debris.

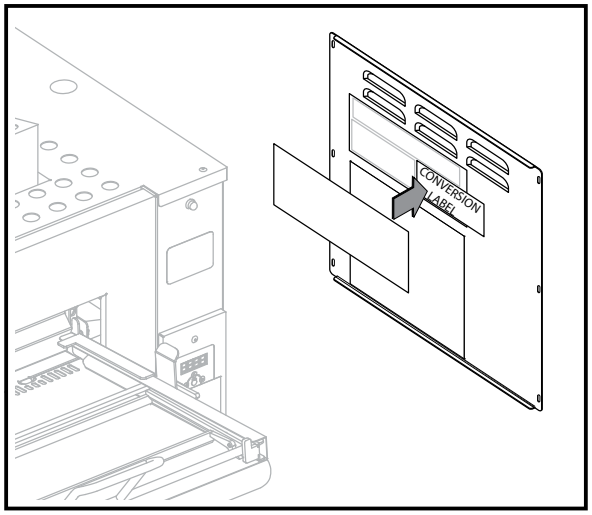
64. Apply new Gas Ratings Conversion label over existing ratings information. Fill out and complete blank areas on new label as indicated.

    NOTE: THE NEW GAS RATINGS CONVERSION LABEL SHOULD BE PLACED ON THE BOTTOM RIGHT CORNER. THE NEW LABEL MUST NOT COVER THE MIN. CLEARANCE SECTION OF THE CURRENT LABEL.

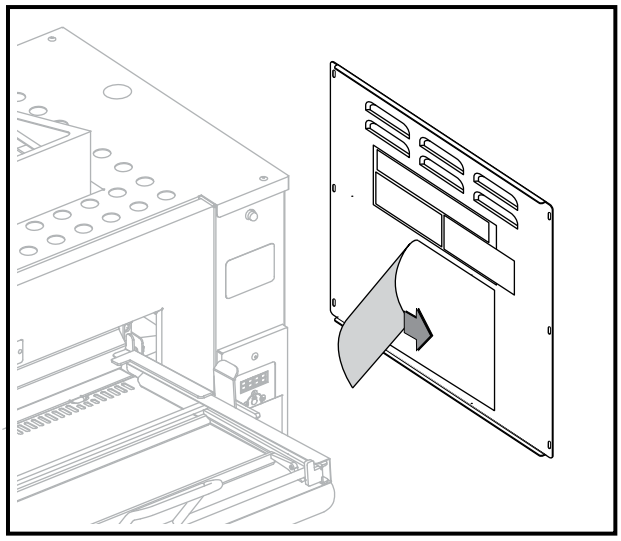




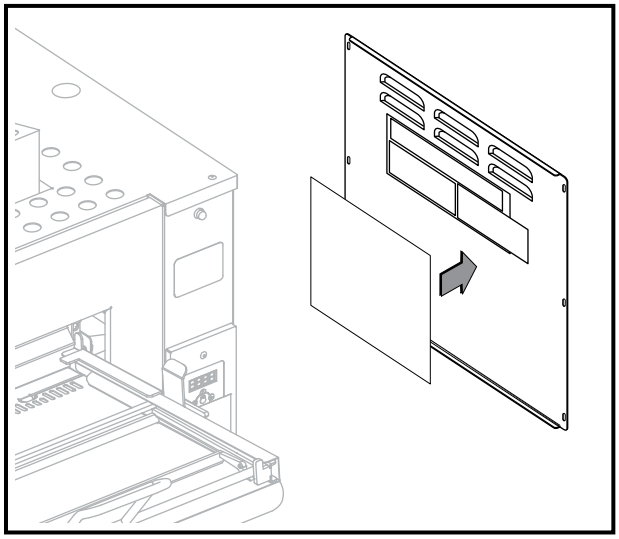
65. Install Nameplate Overlay (clear protective sheet).



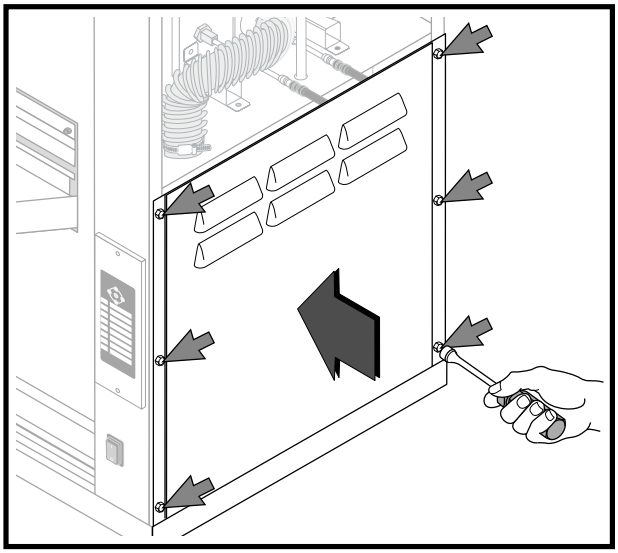
66. Remove the wire diagram (electrical schematic).



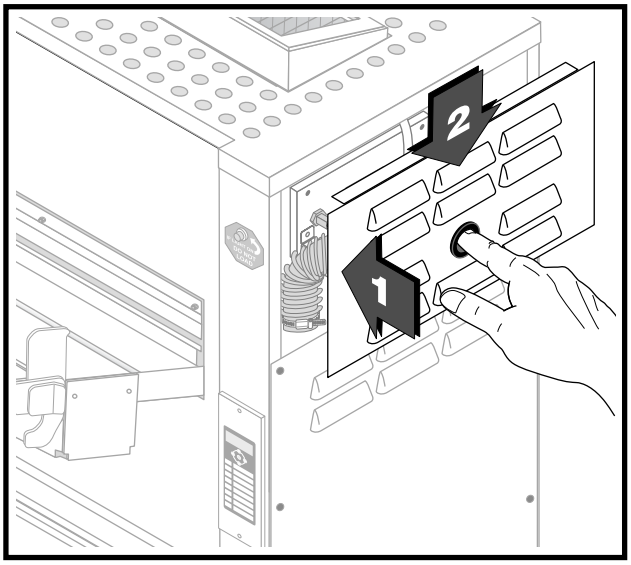
67. Apply new Wire Diagram



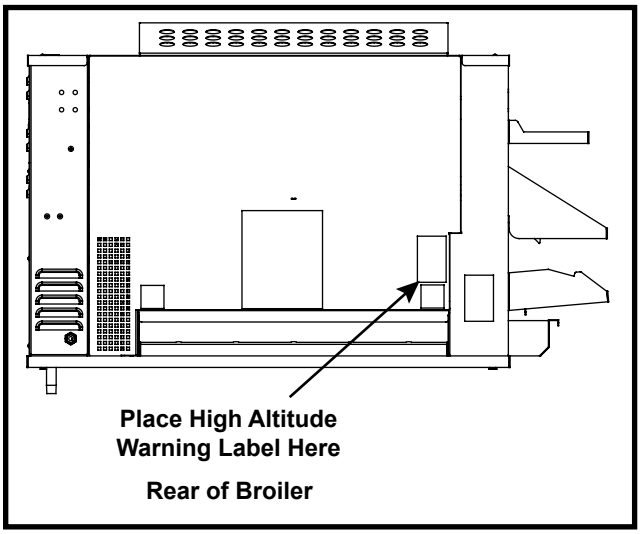
68. Re-Install Electrical Panel Cover.



69. Re-Install Electrical Service Panel Cover.



70. Mark the orifice sizes selected from the table on the high altitude warning label (included) and place on back of unit as shown below.



71. This completes the installation of the kit.

NOTE: REMOVE AND DISCARD ALL OLD COMPONENTS FROM THE RESTAURANT. THEY ARE NOT COMPATIBLE WITH THE NEW COMPONENTS. THESE COMPONENTS ARE:

- **V-SHAPED PAN**
- **MAIN GREASE PAN**
- **ORIFICE**
- **ALL BURNERS (INCLUDING SPARES)**

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER _____

TELEPHONE _____

SERVICER _____

TELEPHONE _____

Duke Corporate, Canada, Latin America
2305 N. Broadway
St. Louis, MO 63102
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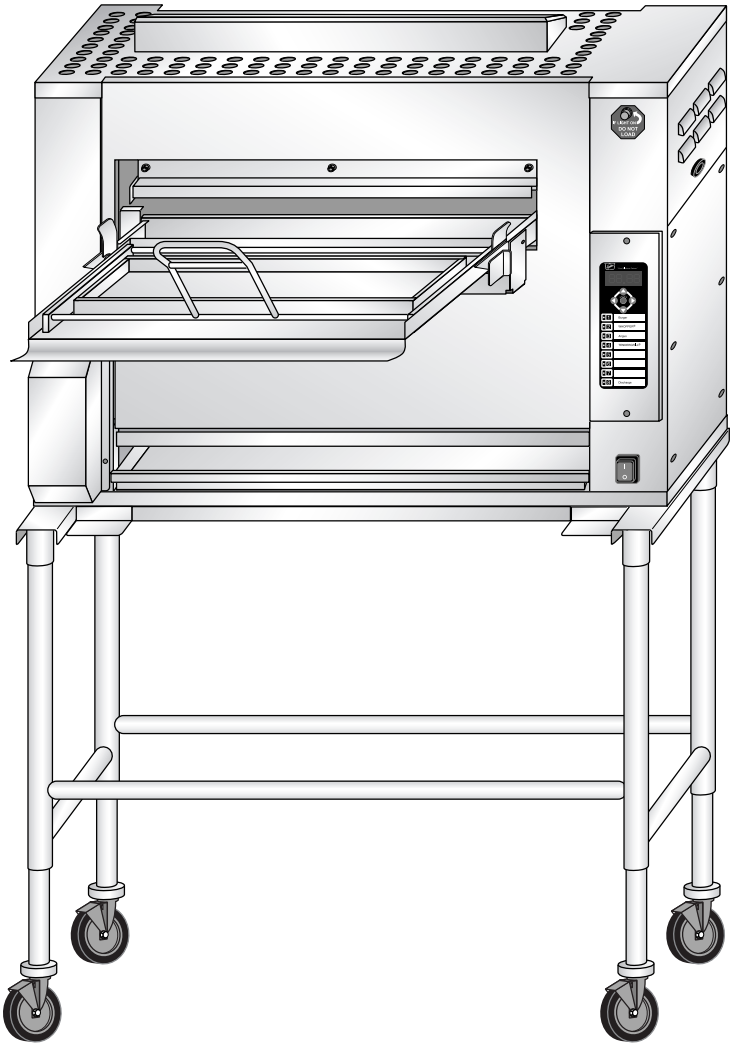
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Installation Instructions

REFURBISHMENT KITS

176838 - Natural Gas

176841 - Propane



CAUTION: **Please read this manual completely before attempting to install, operate or service this equipment**

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P/N 529091
REV C 3/29/2018

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IMPORTANT SAFETY INSTRUCTIONS

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.

WARNING — **Indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

CAUTION — **Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.**

CAUTION — **Indicates Important Information**

Indicates electrical shock hazard which, if not avoided, could result in death or serious injury and/or equipment damage.

Indicates hot surface which, if not avoided, could result in minor or moderate injury.

CAUTION Electrical shock hazard. Do not wash with water jet or hose.

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In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to remove or disconnect the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual.
- Do not use corrosive chemicals in this equipment.
- Do not use caustic cleaners, acids, ammonia products or abrasive cleaners or abrasive cloths. These can damage the stainless steel and plastic surfaces.
- Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This equipment shall be serviced by qualified personnel only. Contact the nearest Duke authorized service facility for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.
- If the supply cord is damaged, it must be replaced by a special cord assembly available from Duke Manufacturing Co. or its service agent.

  Note: Refer to the specifications data plate when ordering or replacing a cord set.

The following warnings and cautions appear throughout this manual and shall be carefully observed.

- Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.
- The procedures in this manual may include the use of chemical products. You must read the Material Safety Data Sheets before using any of these products.
- The unit shall be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with dedicated electrical lines, protected by fuses or circuit breaker of the proper rating, in accordance with all applicable regulations.
- Disposal of the unit must be in accordance with local environmental codes and/or any other applicable codes.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- CAUTION: Never use a high-pressure water wash for this cleaning procedure as water can damage electrical components

Tools Needed for Installation - Not Included



Nut Driver Set



Standard 6 PT Socket Set



Adjustable Wrenches



Screw Driver Set



Pipe Wrench



Needle Nose



Gas Pipe Sealant

Hardware in Kit



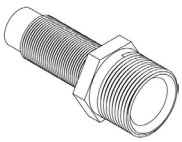
175682 - 3ea. Coupling, nut



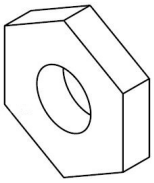
TA-7 - 3ea. Lock Washer



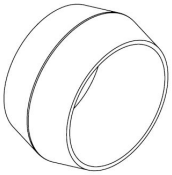
281310 - 2ea. 10-24X1-1/4 Screw



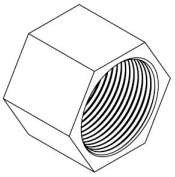
176368 - 1ea. Orifice Holder Bottom Burner



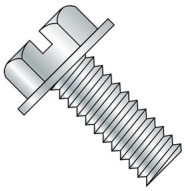
175546 - 1ea. Nut, Orifice Holder



175547 - ea. Sleeve, 3/8 Compression



175548 - 1ea. Nut, 3/8" Compression



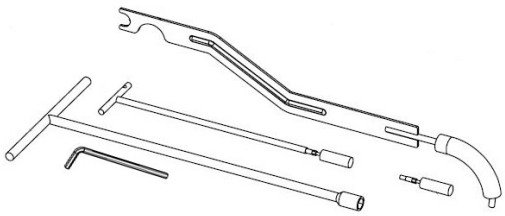
175587 - 4ea. 10-24X3/8" Hex Head Slotted



213042 - 2ea. 1/4-20 Serrated Flange Nut



213041 - 4ea. 10-24 Serrated Flange Nut



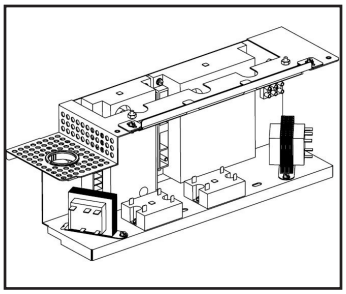
175700 Kit, Cleaning 1ea.



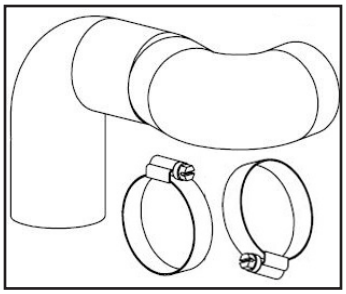
175540 - 2ea. 3/8X1/2" MNPT Fitting Straight Compression

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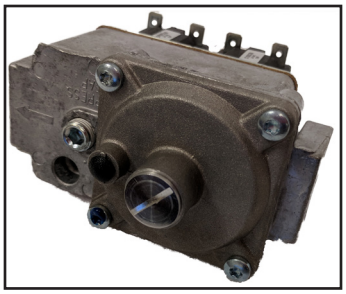
Parts in Kit



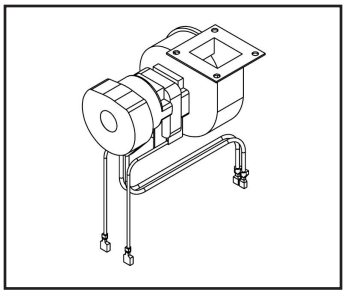
175391 Asm, Electrical Component Shelf -1ea.



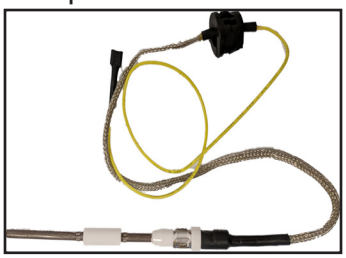
175549 Hose Clamp 2ea.
175189 Hose, Blower 1ea



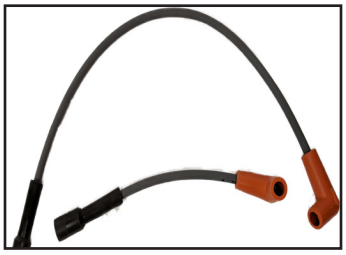
175531 Valve, Gas 2ea. NG
175766 Valve, Gas 2ea. LP



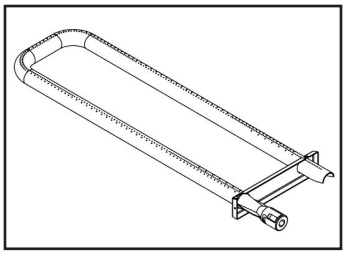
600249 Domestic Blower 1ea.



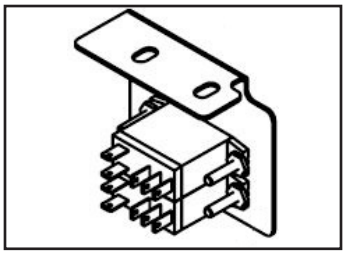
175534 Sensor - Lower (short) 1 ea.



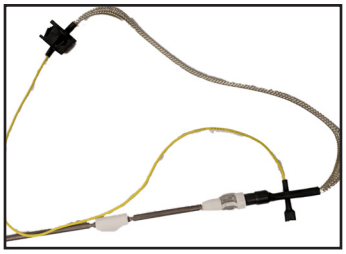
175538 Cable 8" 1 ea.
175537 Cable 16" 2 ea.



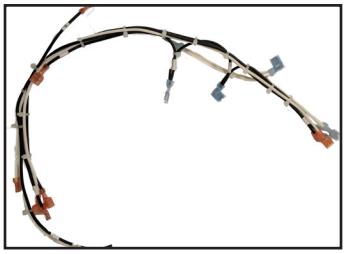
176370 Burner, Lower .375 Air shutter 1ea.



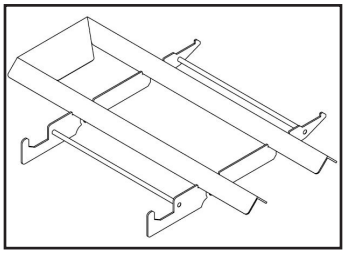
176188 Blower Relay 1ea. (wire harness not shown)



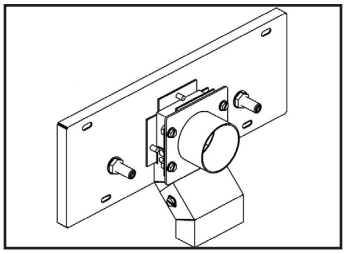
175535 Sensor - Upper IR (long) 2 ea.



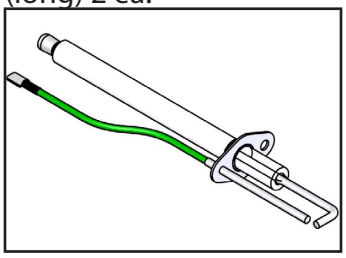
175608 Harness High Voltage 1ea.



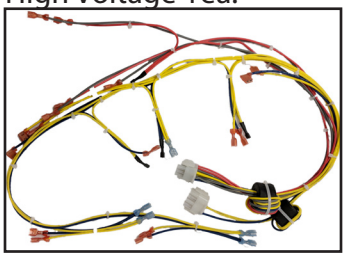
175200 Burner Shield 1ea.



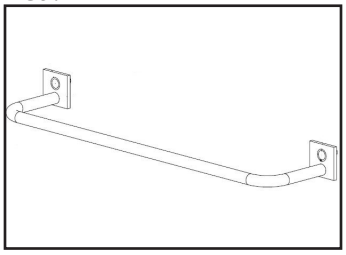
175108 Assy, Blower Box with Plungers 1ea.



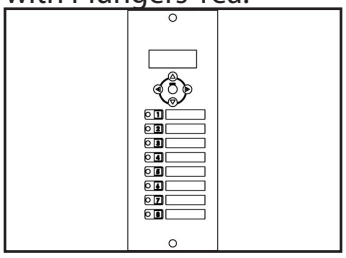
175536 Igniter, Spark 3 ea.



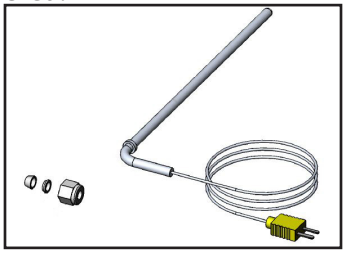
175607 Harness Low Voltage 1ea.



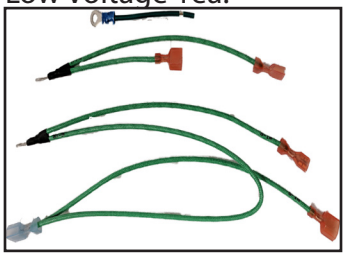
175095 Igniter Guard 1ea.



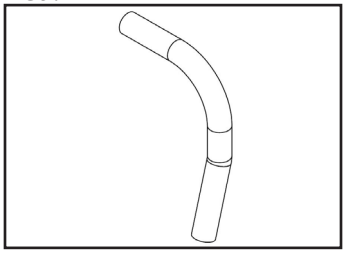
176039 Mylar, Control 1ea.



175977 Kit, Temperature Probe 1ea.



175610 Harness Ground 1ea.



175478 Lower Burner Tube 1ea.

Items Not Shown

175727 Shim 16Ga 8ea.
175361 Shim 18Ga 5ea.
175360 Shim 20Ga 5ea.
175611 Wire Diagram 1ea.

Your Solutions Partner

I. Getting Started

Step 1
Disconnect all power to Broiler and allow to cool..

Step 2
Shut off main gas to Broiler and disconnect.

WARNING

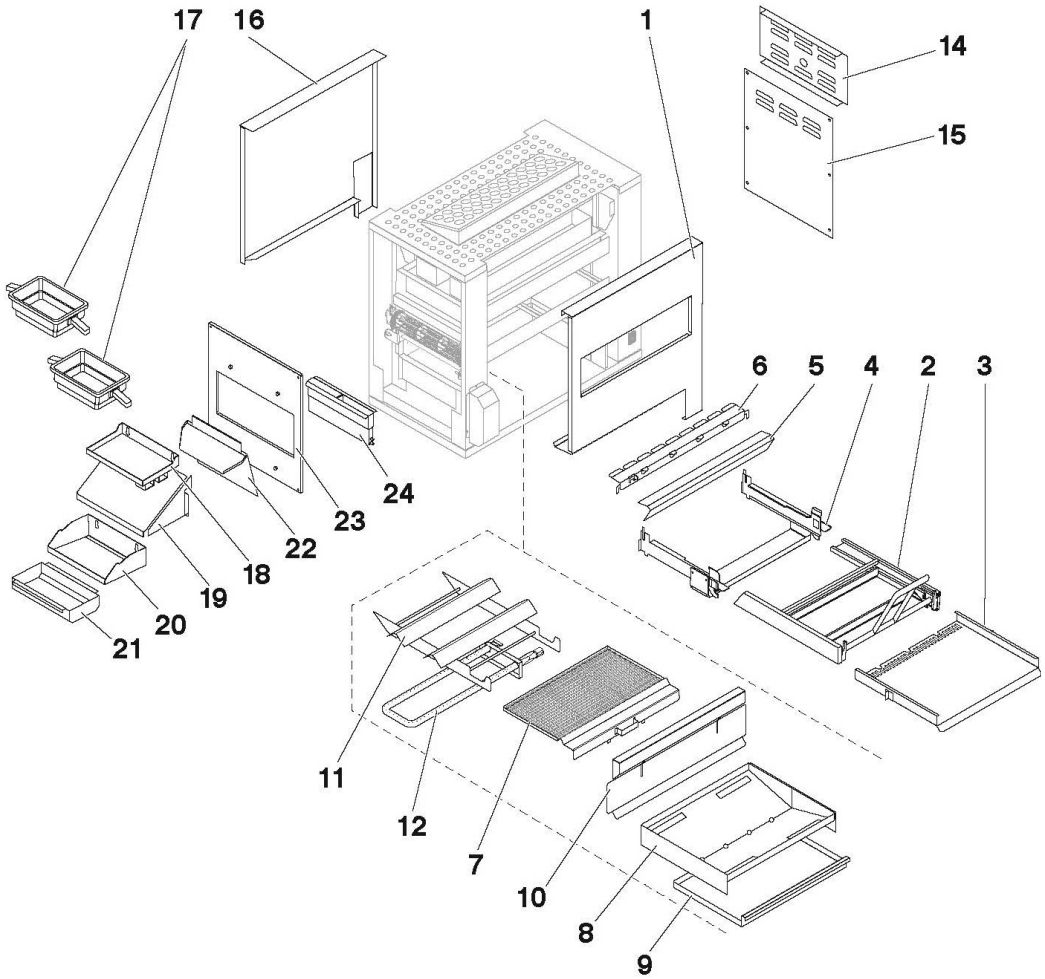
If not completed, could result in death or serious injury.

II. Tear Down

Note: Some new fasteners have been supplied. Save all Fasteners for reuse.

Step 1
Remove all removeable parts as indicated below.

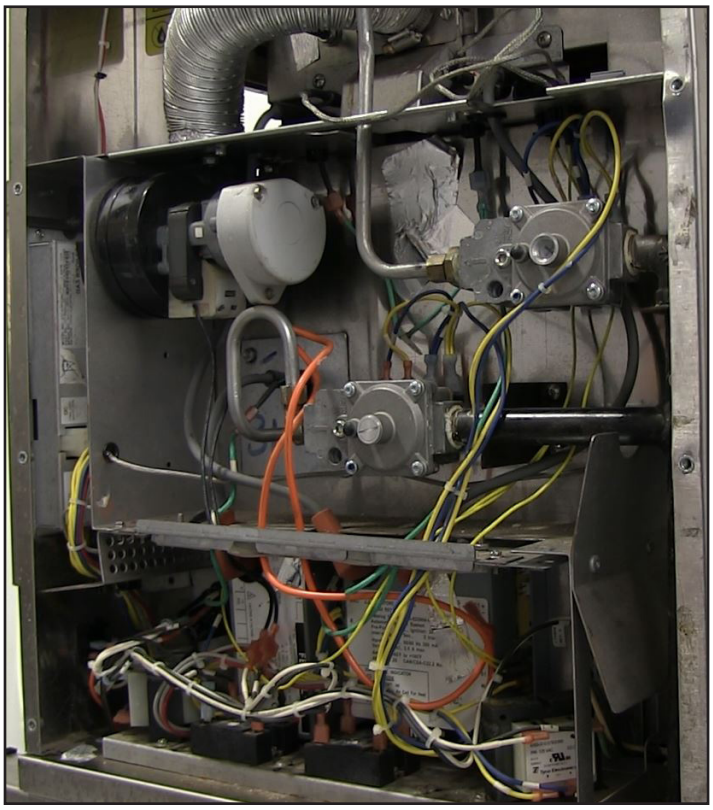
1. Front Panel
2. Loader
3. Loader Tray
4. Loader Mounting Bracket
5. Door
6. Loader Ramp
7. Flame Arrester
8. "V" Grease Pan
9. Main Grease Pan
11. Burner Shield - **discard**
12. Lower Burner - **discard**
14. Electrical Panel Upper
15. Electrical Panel Lower
16. Rear Access Panel
17. Pan
18. Pan Shelf
19. Discharge Hood
20. Discharge Pan
21. Grease Pan
22. Discharge Chute
23. Access Panel Discharge
24. Pivot Ash Scraper



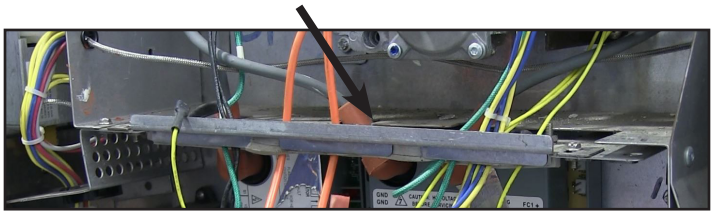
Your Solutions Partner

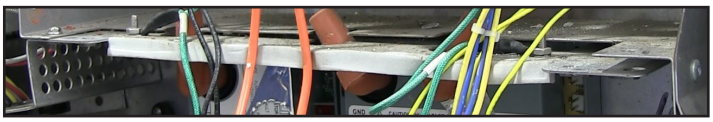
II. Tear Down - continued

Step 2
Disconnect all connections of the **High** and **Low Voltage** wire harnesses.



Step 3
Remove the wire retainer bar.





Step 4
Diconnect harness from Light (top front panel)

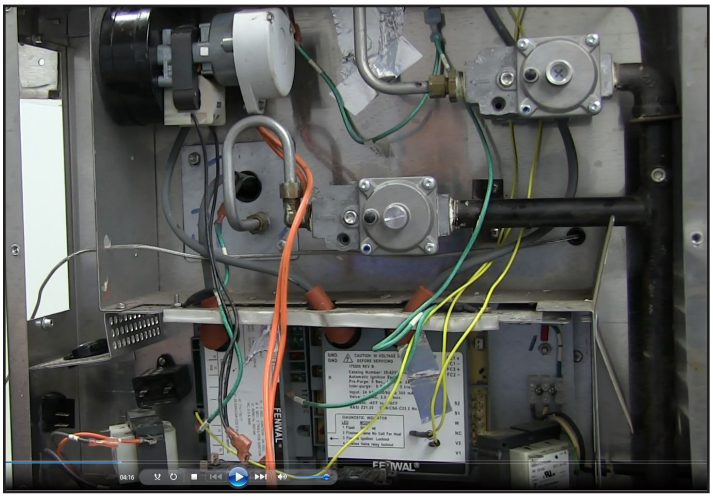


Step 5
Remove Control Panel and disconnect Molex connections and thermocouple.

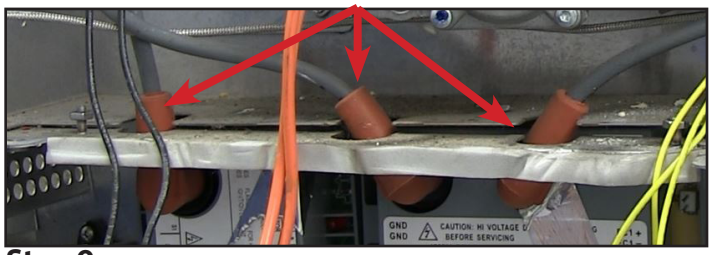
Note: Make sure you save all Heyco bushings to re-install later.

Step 6
Remove High and Low voltage wire harnesses and discard.

Step 7
Disconnect all ground wires and discard.

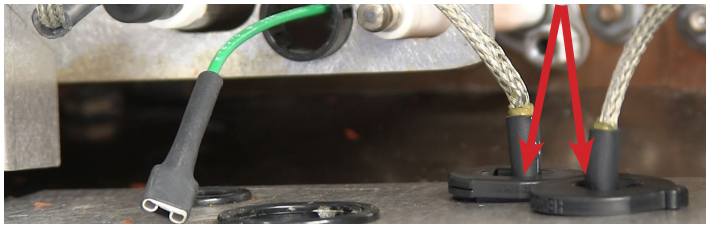


Step 8
Disconnect the three Ignition wires from the ignition modules and the Igniters then remove. (discard)



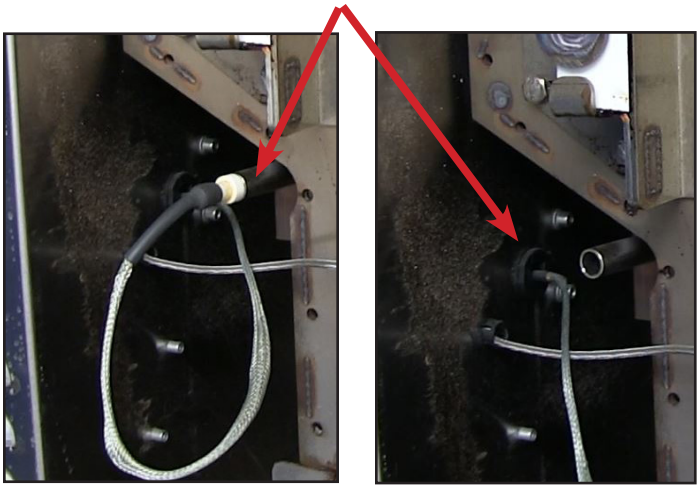
Step 9
Pull out the top two sensors and then remove. (discard)

Note: The sensors have a three point spring clip.

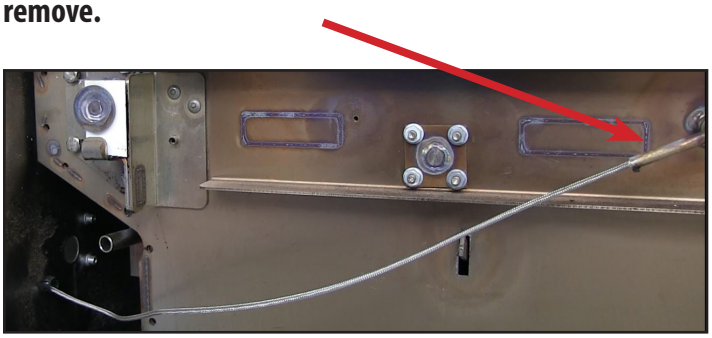


II. Tear Down - continued

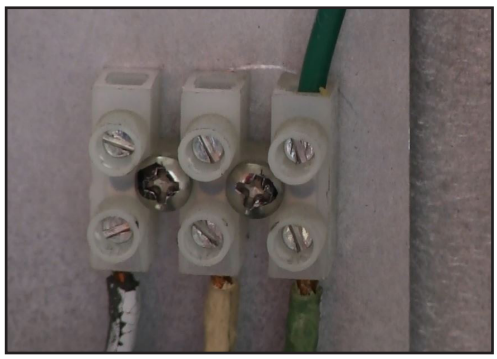
Step 10
Repeat for lower sensor. (discard)
Note: The lower sensor is located from the back of the unit.



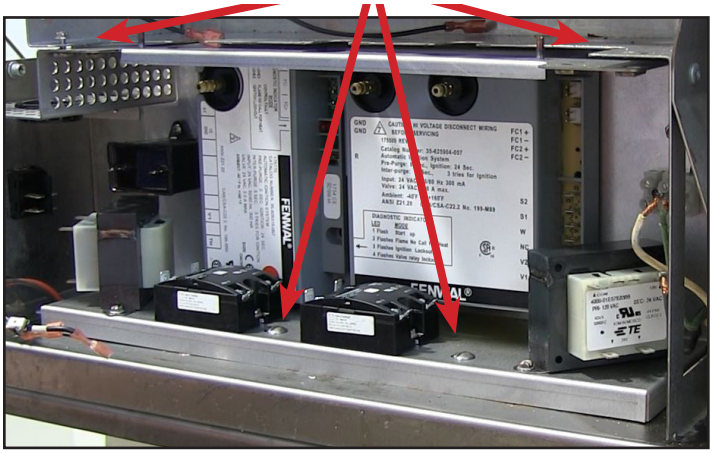
Step 11
Remove the thermal sensor from the back of the broiler. (discard)
Note: The the nut should be only hand tight.
In some cases the wire will have to be cut to completely remove.



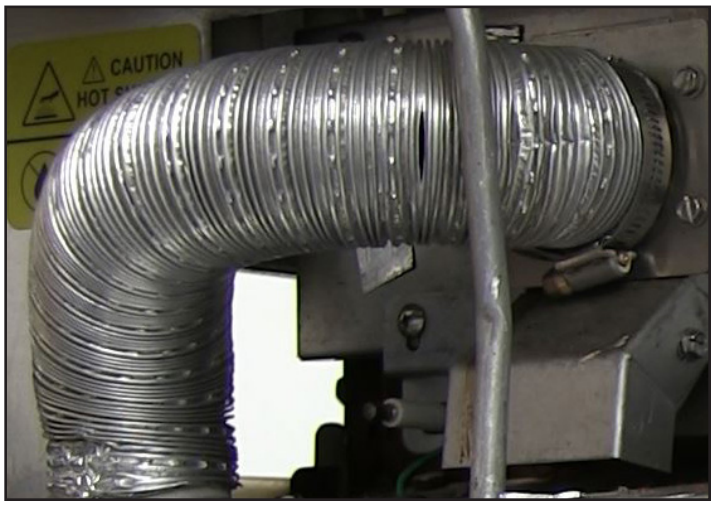
Step 12
Disconnect power cord from terminal block.



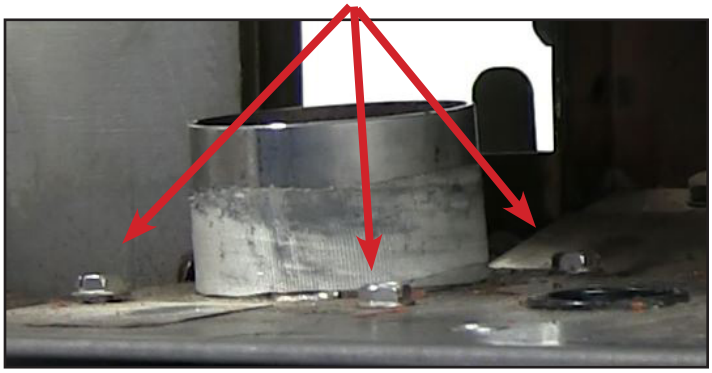
Step 13
Remove the four screws holding the ignition assembly and remove complete assembly. (discard)



Step 14
Loosen the two hose clamps and remove the hose.



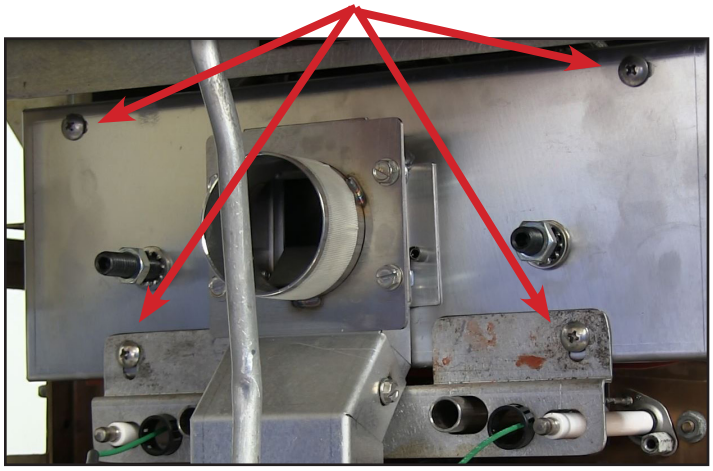
Step 15
Remove the three bolts and nuts holding the fan motor in place and remove the fan motor. (discard)



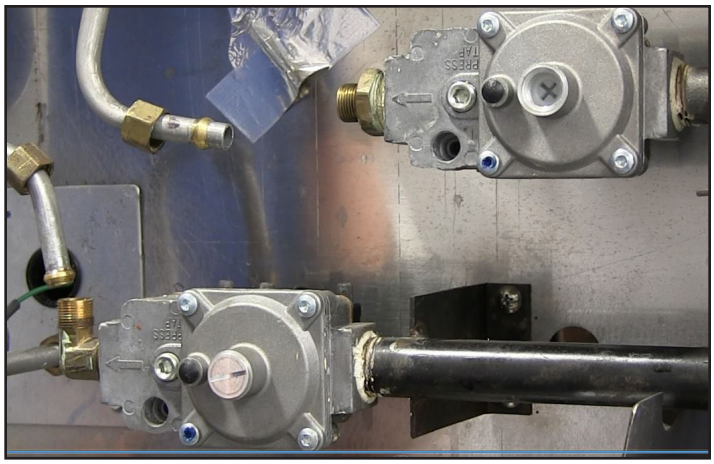
Your Solutions Partner

II. Tear Down - continued

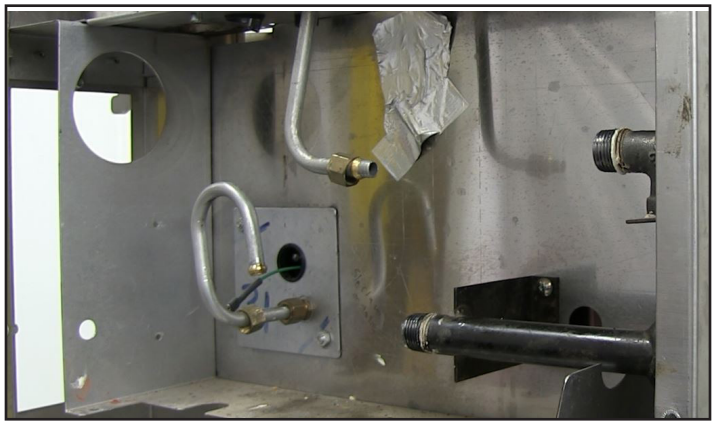
Step 16
Remove the screws holding the igniter bracket and blower box cover. (discard bracket and box cover)



Step 17
Disconnect gas lines from gas valves.



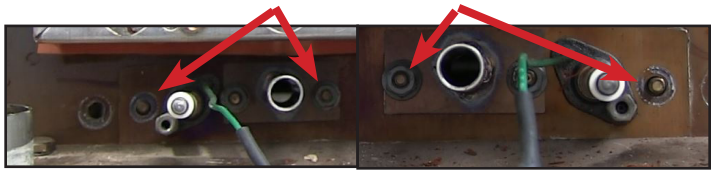
Step 18
Remove both gas vales. (discard)



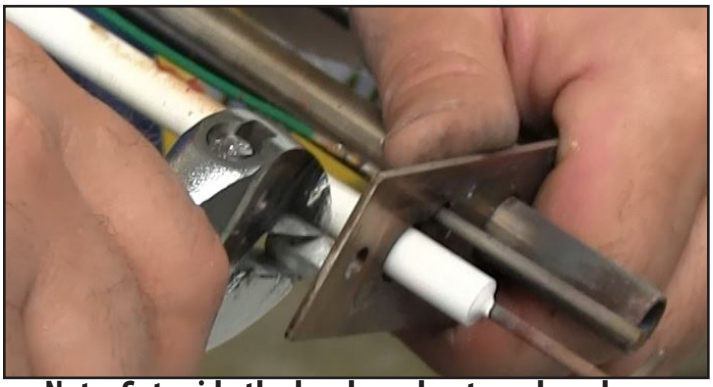
Step 19
Remove two nuts holding the Ignighter Guard and remove.



Step 20
Remove four nuts holding the igniters plate in place.



Step 21
Remove upper igniters from plate. (discard)



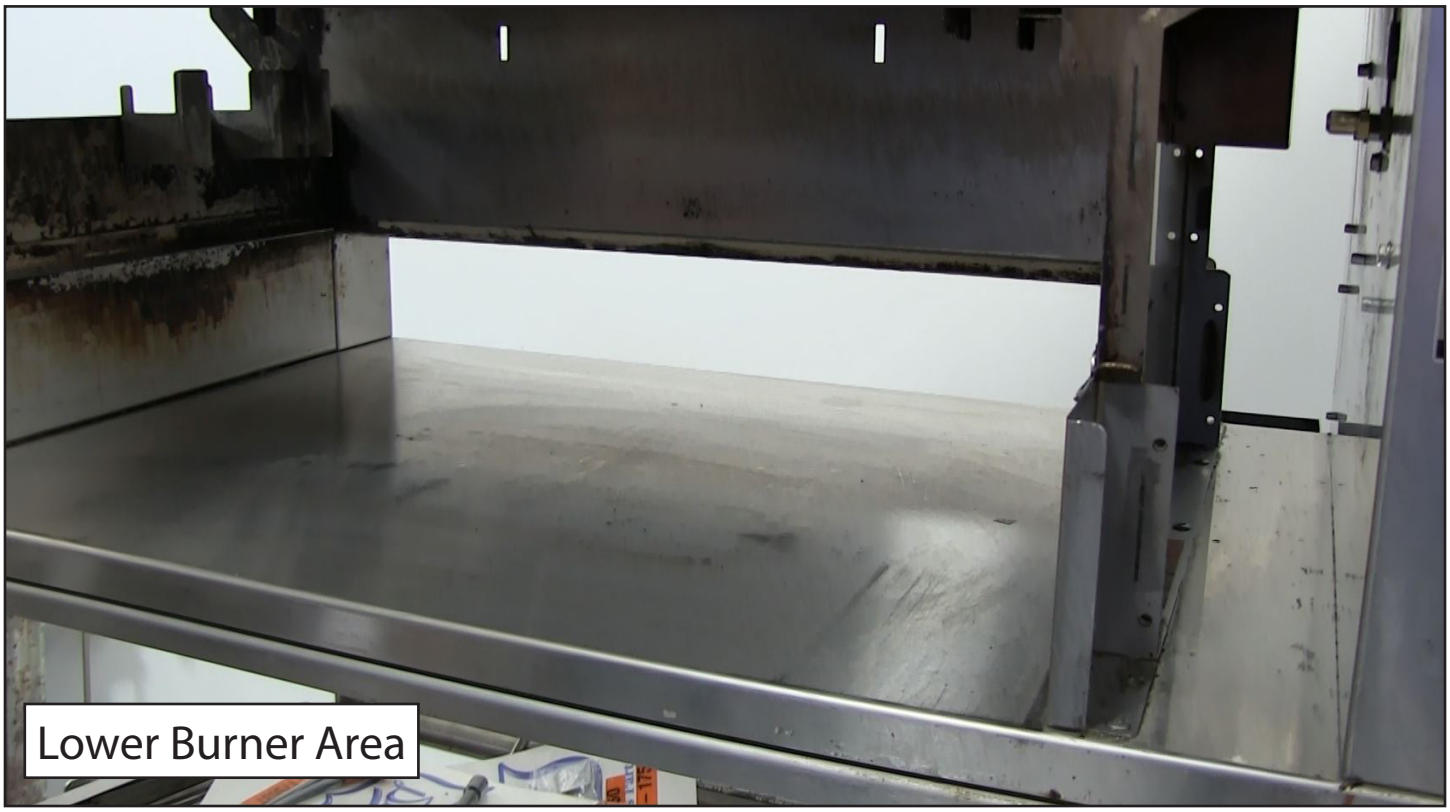
Note: Set aside the hex barrel nuts and washers.

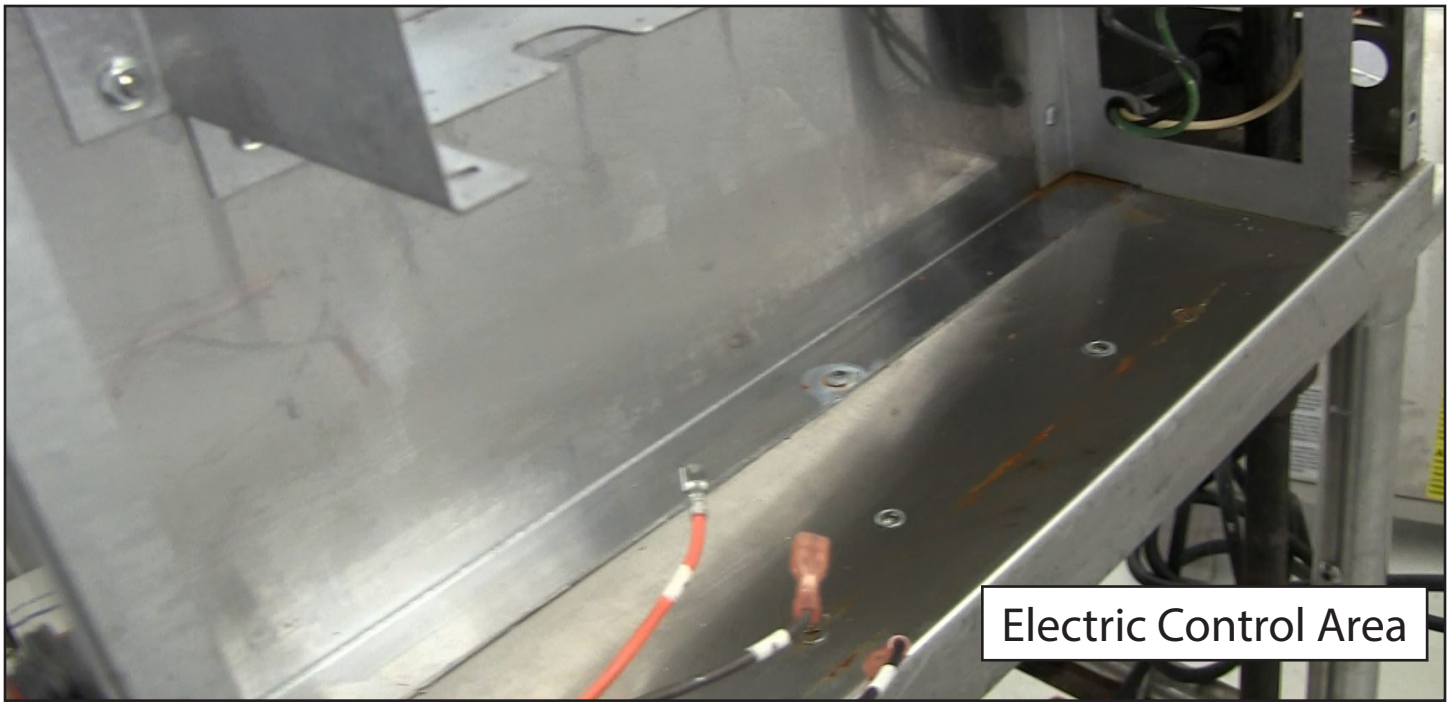
Step 22
Remove lower igniters from broiler. (discard)
Note: Save star washer and hex barrel nut.



III. Clean Broiler

Using only Burger King approved cleaners take this time to completly clean the Broiler including the control area.

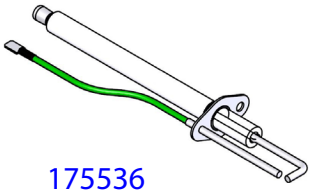




IV. Rebuilding Broiler

CAUTION **Remove all tape from all parts.**
Failure to remove tape could cause smoke or fire at start up.

Step 1 - Lower Igniter
Install the lower Igniter.



175536



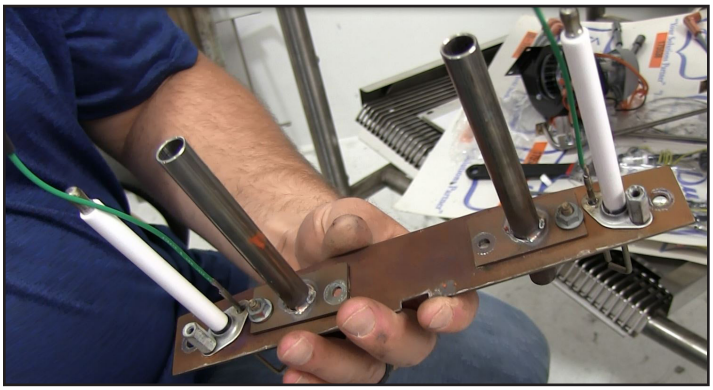
175682



TA-7



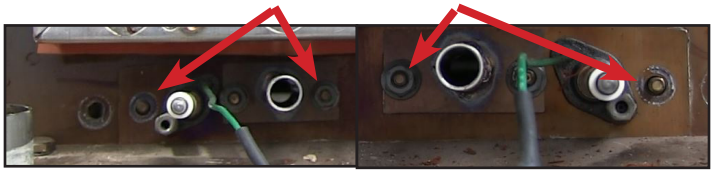
Step 2 - Upper Igniters
Install two igniters on the old igniter plate. Using star washers and hex barrel nuts.



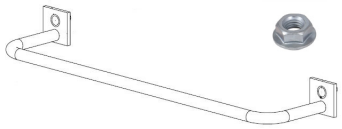
Step 3- Igniter assembly
Install the assembled igniter plate in Broiler with 4 flanged nuts.



213041v

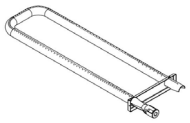


Step 4 - Igniter Guard
Install the igniter guard in the broiler using 2 1/4-20 Flannged Nuts 213042.



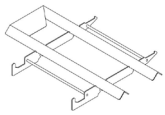


Step 5 - Lower Burner
Install the new lower burner.
176370



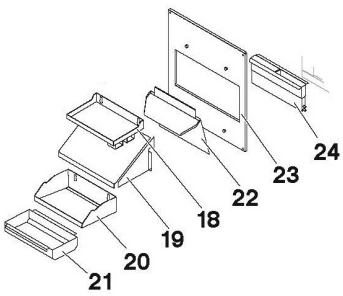


Step 6 - Lower Burner Guard
Install the new burner guard.
175200





Step 7 - Misc. Parts
After cleaning all of the following parts can be re-installed on the end of the broiler.

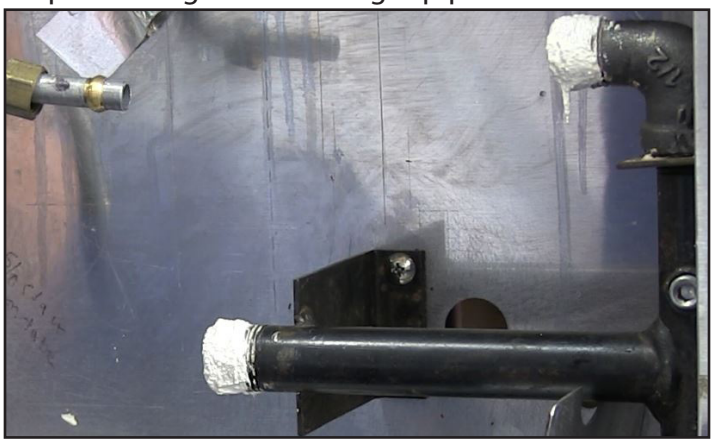


24. Pivot Ash Scraper
23. Access Panel Discharge
22. Discharge Chute
21. Grease Pan
20. Discharge Pan
19. Discharge Hood
18. Pan Shelf

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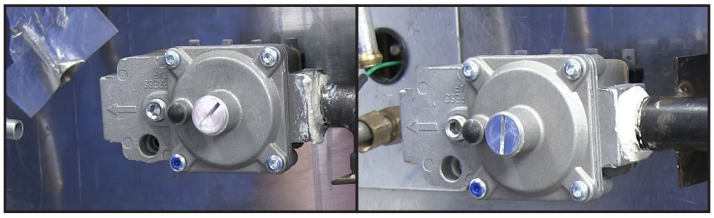
IV. Rebuilding Broiler - Continued

Step 8 - Gas Lines
Prep the two gas lines with gas pipe sealant.



Step 9 - Gas Valves
Install the two gas valves.





Note: Make sure both gas valves have the solenoids in the back with terminals pointing up.

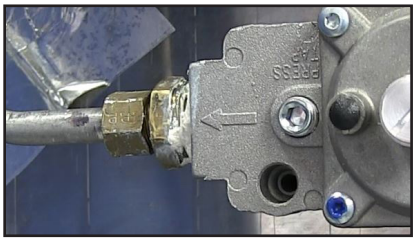
Step 10 - Upper gas fitting
In upper gas valve install new brass compression fitting.



175540



Step 11 - Upper Gas Line
Re-connect upper gas line.



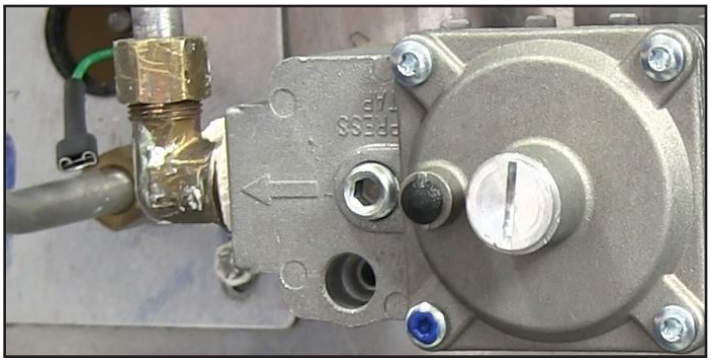
CAUTION
Over tightening nut could cause nut to split.

Step 12 - Lower Gas Fitting
For the lower gas valve there are two options for brass fittings and gas line.

Option 1 - Using old 90deg. Brass fitting.

Option 1a - Models with U shaped gas line
Remove brass fitting from old gas valve. Apply new sealant and attach to new gas valve.

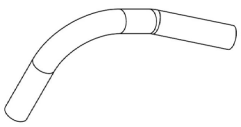
Option 1b - 90deg. Brass Fitting
Reconnect lower gas line.



Option 2 - Straight brass fitting with new L shaped gas tube.



175540



175478

Option 2a - Remove U Gas Line
If present remove the "U" shaped gas line.
Note: If newer L shaped gas line is already installed skip this step



Your Solutions Partner

IV. Rebuilding Broiler - Continued

Option 2b - Lower Gas Fitting
Using the nut and ferrule left from the upper burner install the L shaped gas line where the old gas line was removed.

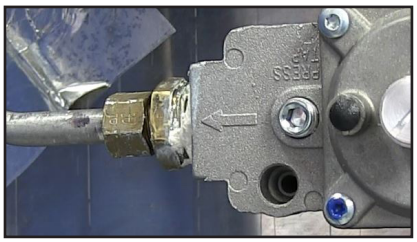
Option 2c
Install the second brass fitting into the gas valve.



175540



Option 2d - Lower gas line
Using the Nut and Ferrule connect the L shaped gas line to the gas valve.



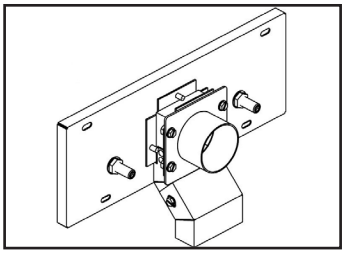
CAUTION

Over tightening nut could cause nut to split.

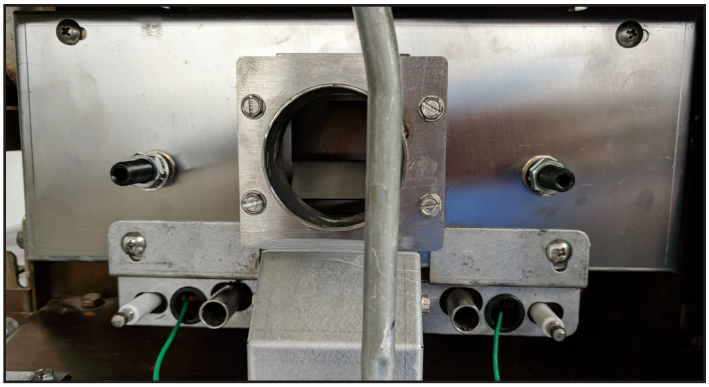
Note:
Extra parts for the orifice holder have been supplied if needed.

Step 13 - Blower Box
Install new Blower Box with Plungers and lower bracket. (brkt.not in kit)

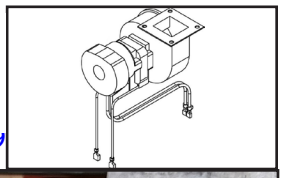
Note: Make sure the orientation of the bracket is correct.



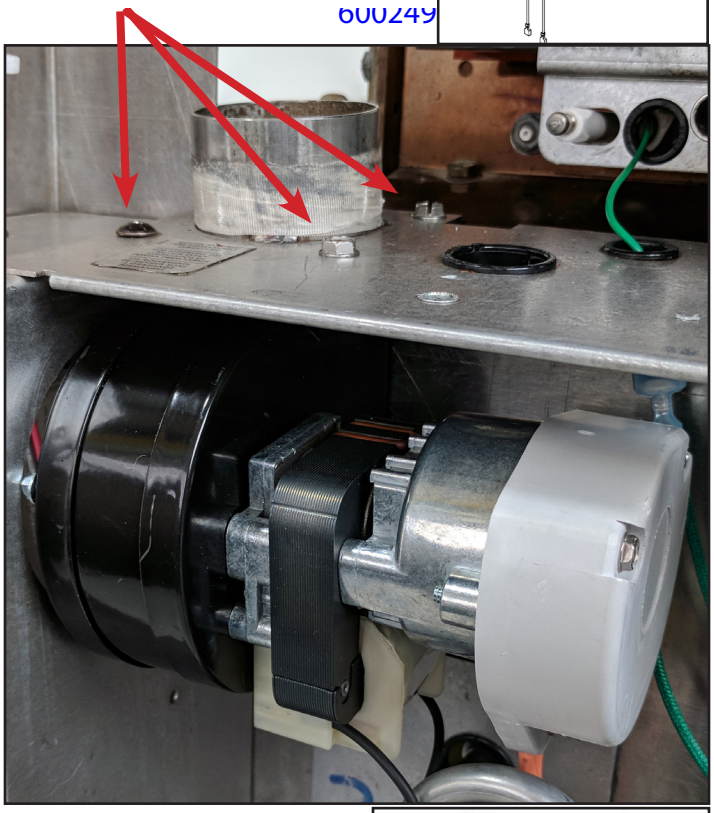
175108



Step 14 - Blower Motor
Install the new centrifugal switch blower motor.

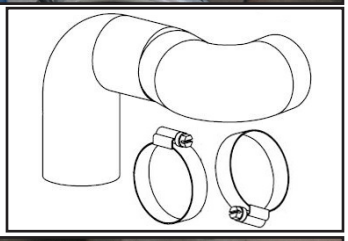


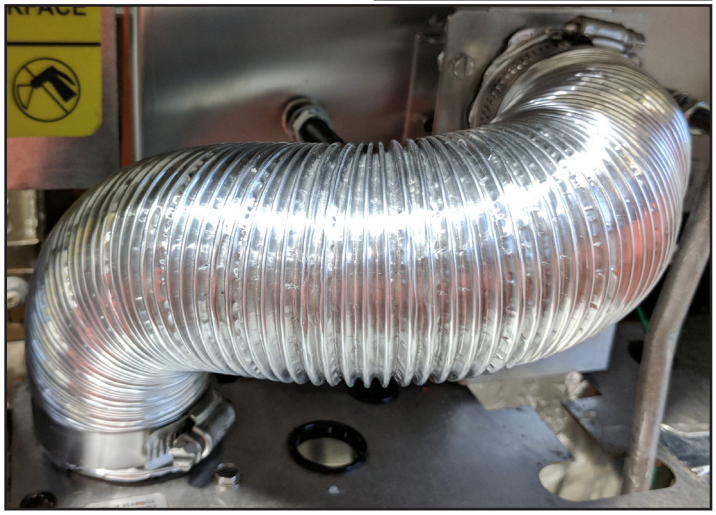
600249



Step 15 - Hose
Using two hose clamps install the blower hose.

175549 Hose Clamp 2ea.
175189 Hose, Blower 1ea

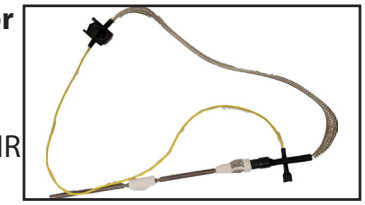


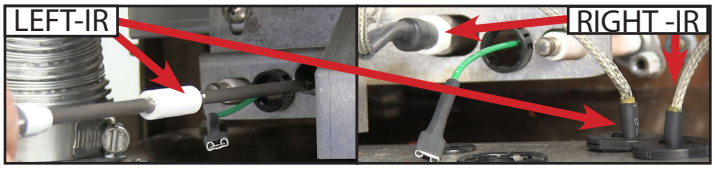


IV. Rebuilding Broiler - Continued

Step 16 - Upper IR Sensor
Install the two long upper IR sensors.

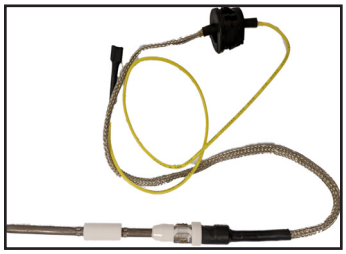
175535 Sensor - Upper IR (long) 2 ea.





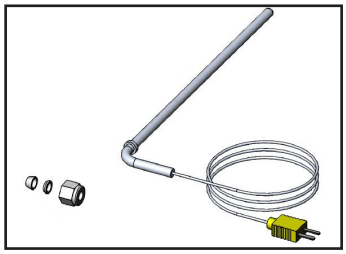
Step 17 - Lower IR Sensor
From the back side of the broiler install the lower short IR sensor

175534 Sensor - Lower (short) 1 ea.

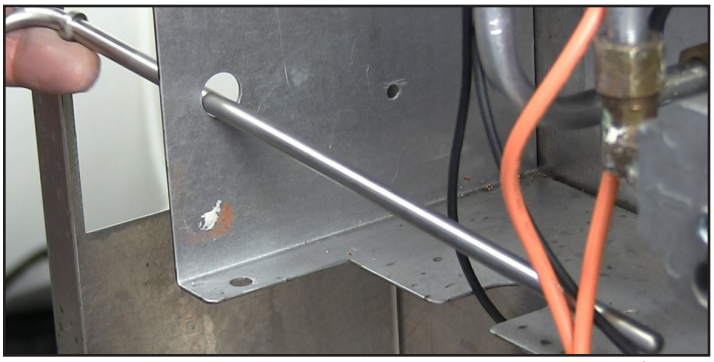




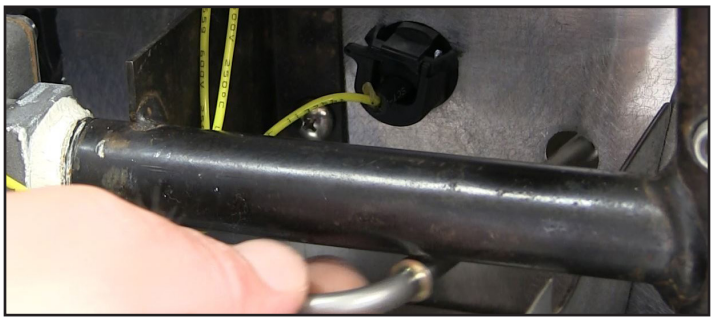
Step 18 - Thempurature Probe
18a
From the front of the broiler, fish the Temperature probe through the hole in the Gas valve chamber.



175977 Kit, Temperature Probe 1ea.



18b
Just behind the lower gas line feed the probe through the back wall of the Gas Chamber.

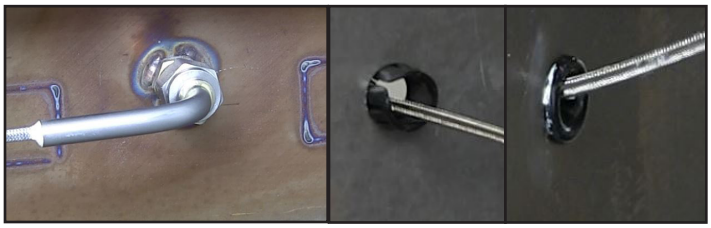


18c
Slide the Nut and fittings onto the probe.

CAUTION **Make sure the fittings are orientated correctly.**



18d
Slide the Nut and fittings onto the probe.
Make sure to reinstall Heyco bushings at both locations where the wire goes through metal.



V. Electrical

CAUTION

Reference Wire Diagram 175611 for all electrical.

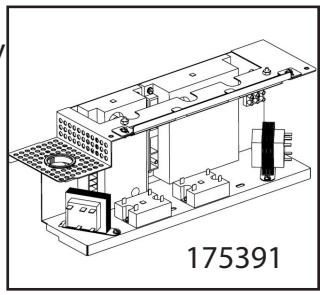
Electrical Diagam included with Kit and available on last page of these instructions.

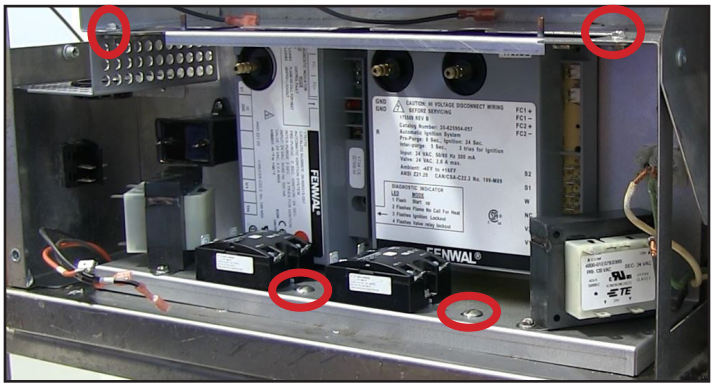
For LP Lower burner with Purge Blower, see page 24.

Step 1 - Electrical Assemby
Install the electrical assembly shelf using 2ea.-10-24X1-1/4 Screws and 2ea. 10-24X3/8" Hex Head slotted.


281310


175587


175391



Step 2 - Power Cord
Connect the main power cord to the terminal block.

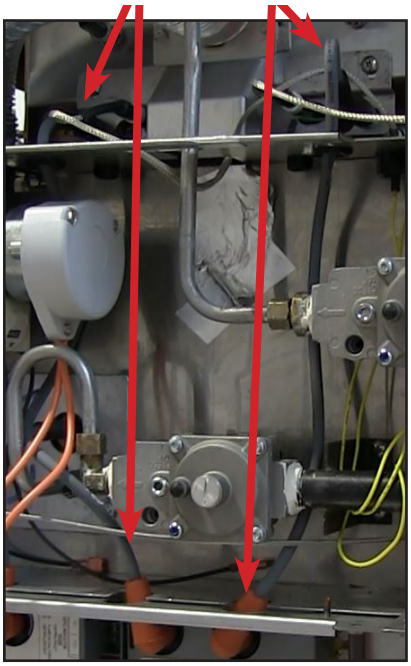




Step 3 - Lower Igniter cable
Install the lower Igniter cable.


175538

Step 4 - Upper igniter cables
Install the upper Igniter cables. - 2ea.

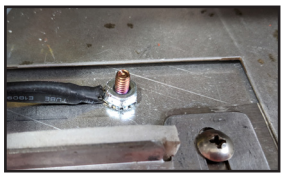



175537

Step 5 - Upper Igniter Ground Wire



5a
Connect the eyelet to the ground lug on the right side of the Electrical Shelf



5b-d
Connect the two male ends to the two upper igniters. Connect the Female end to the ground location of the dual ignition module.


Left Igniter


Right Igniter

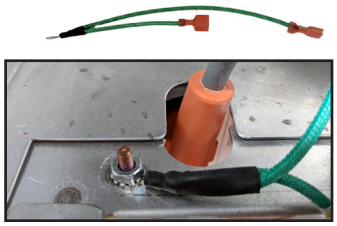


Dual Module

Your Solutions Partner

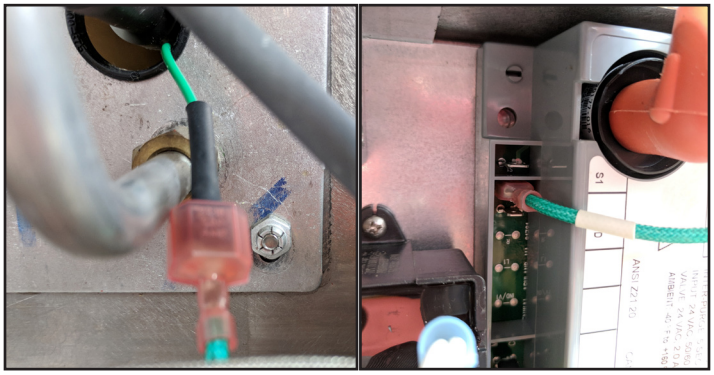
V. Electrical - Continued
Reference Wire Diagram 175611

Step 6 - Lower Igniter Ground Wire

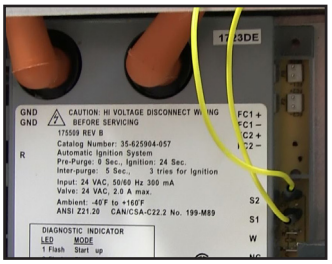


6a
Connect the eyelet to the ground lug on the left side of the Electrical Shelf

6b-c
Connect the male end to the lower igniters.
Connect the Female end to the ground location of the single ignition module.



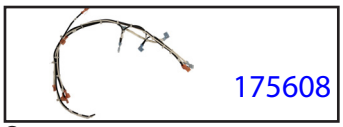
Step 7 - Upper IR Sensors
Connect the upper IR Sensors into the dual Ignition Module.
Right Sensor - S1
Left Sensor - S2



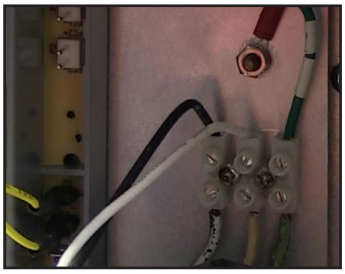


Step 8 - Lower IR Sensors
Connect the lower IR Sensors into the single Ignition Module.
lower Sensor - S1

Step 9 - High Voltage Wire Harness



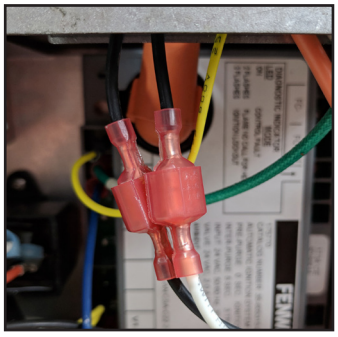
9a
Connect the hot and neutral to the terminal block





9b
Connect the 3 and 4 female flag terminals to the high voltage side of the transformer.

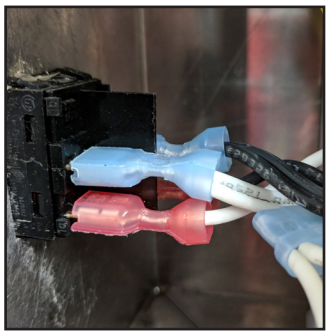
9c
Connect the Black 6 and Wht 3 male terminals to the black leads off of the blower motor.

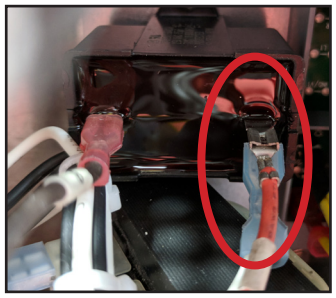




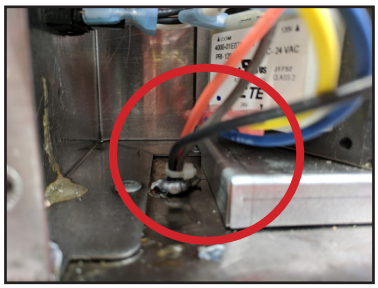
9d
Connect dual wht 3 and dual blk 4 to the high voltage side of the second transformer.

9e
Connect the following to the power switch:
#2 Blk Bottom Back
#4 Blk Top Back
#1 Wht bottom front
#3 Wht top front





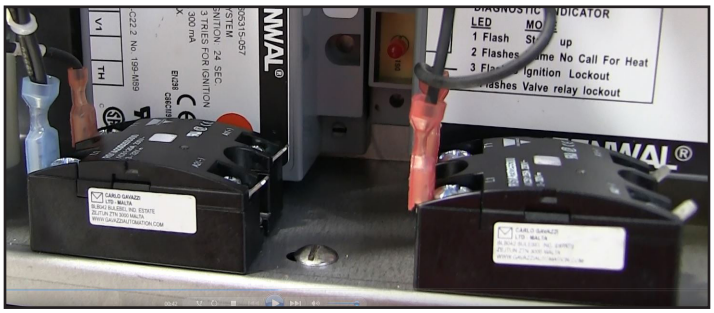
9f
Connect #3 Wht dual female to the Orange wire from the bottom pan of the broiler with the spade terminal and connect to the capacitor.



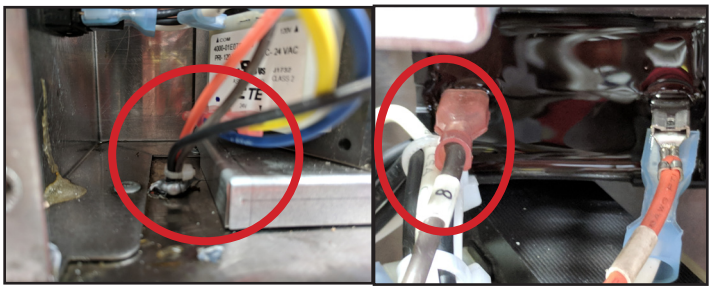
Your Solutions Partner

V. Electrical - Continued
Refference Wire Diagram 175611

9g
Connect the remaining #4 wires to L1 on the relays.



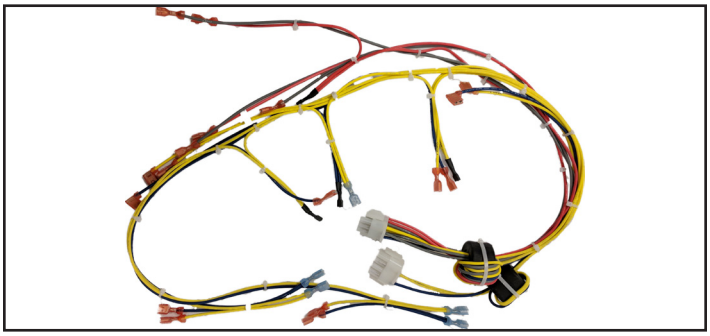
Step 10
Connect the Brown #8 wire to the capacitor.



Step 11
Connect the Black #1 wire to T1 on the Conveyor relay.

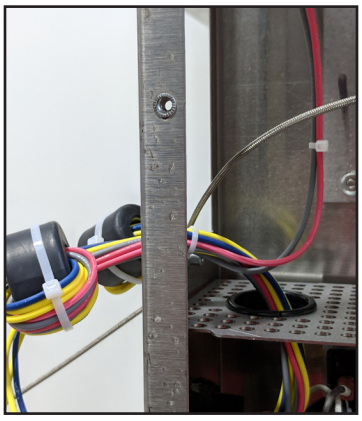


Step 12 - Low Voltage Wire Harness

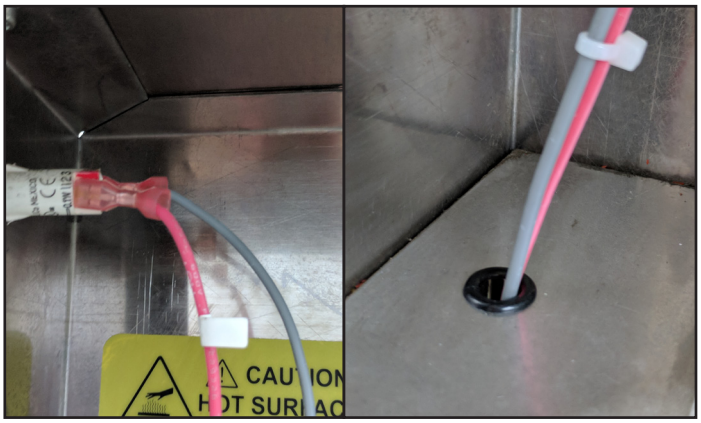


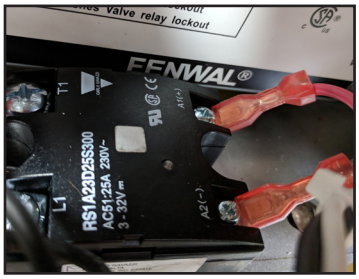
175607 Harness, LOW VOLTAGE 1ea.

12a
From the front of the unit feed all the wires except Red #30 and Grey # 33 down through the large grommet in the electrical assembly.



12b
Feed Red #30 and Grey #33 up through the heyco bushing and connect to the light.





12c
In the lower electrical area connect Red #30 to the positive and Grey #32 to the negative of the IR Blower Relay (right)

12d
In the lower electrical area connect the dual Red #30 to the positive and Grey #31 to the negative of the Conveyor relay (left)

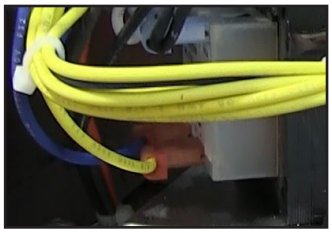


Note: At this point the only wires to connect on the low voltage harness are Yellow and blue

Your Solutions Partner

V. Electrical - Continued
Reference Wire Diagram 175611

12e
Connect #11 Yellow and #12 Blue flag terminals to the Low voltage side of the controller transformer



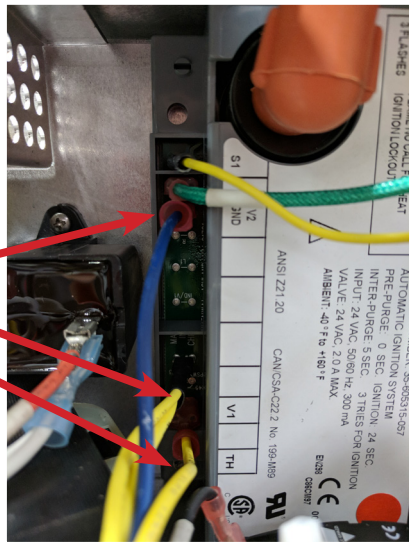
12f
Connect the following to the Ignition Control Module Lower Burner:

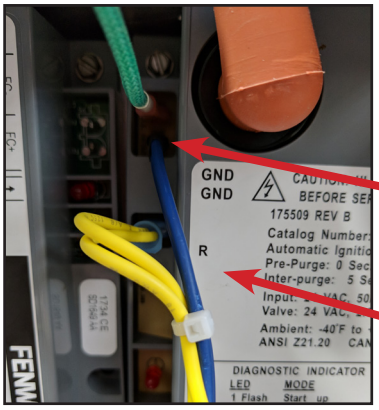
Blue #19 to V2 GND

Yellow #18 to V1

Yellow #20 to TH

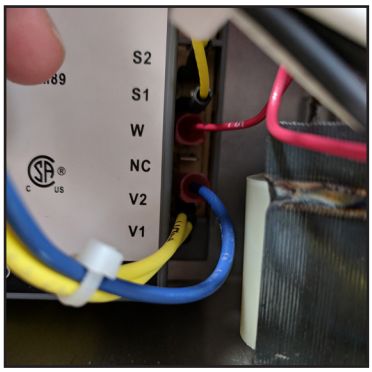
NOTE: For LP units with Purge Blower see page 23 for more instructions.





12g
Connect the following to the Ignition Control Module IR Burner: (Dual Module)
Blue #14 - GND

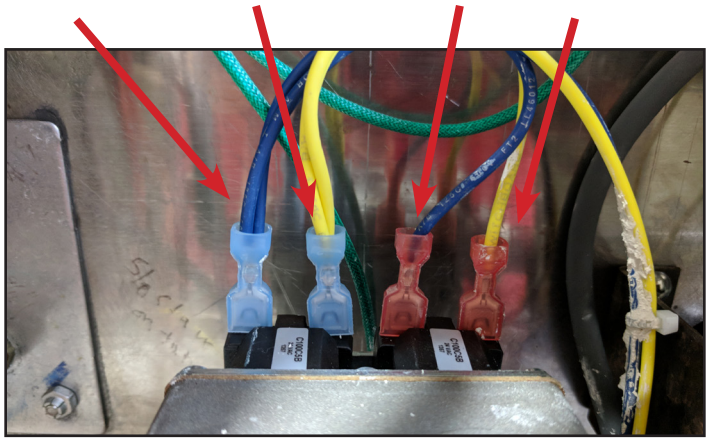
Yellow #13 - R



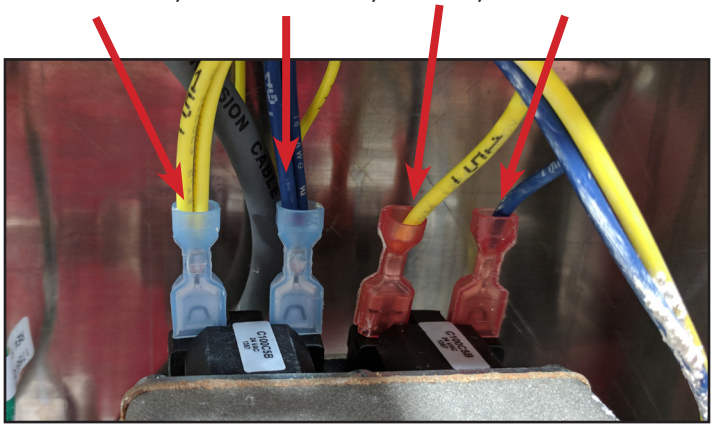
12h
Connect the following to the Ignition Control Module IR Burner: (Dual Module)
Blue #16 - V2

Yellow #15 - V1

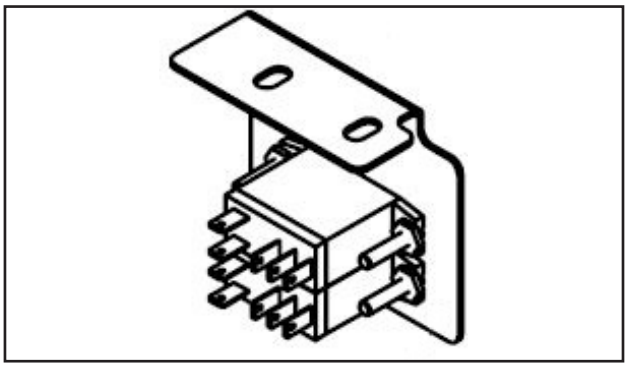
12j
Connect the following to the **Lower Gas Valve**:
Blue #19 - Dual, Yel #18 - Dual, Blue #19, Yel #18



12k
Connect the following to the **Upper Gas Valve:**
Yel #15 Dual , Blue #16 Dual, Yel #15, Blue #16



Step 13 - Blower Relay
Note: This should be installed on all units.

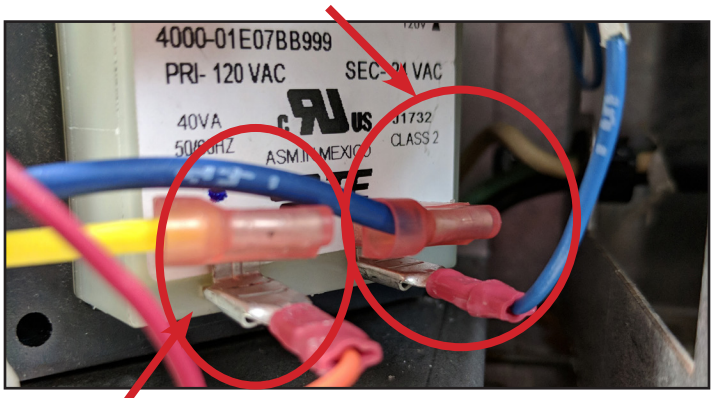


176188 Blower Relay 1ea. (wire harness not shown)
Note: Unit is shipped with harness attached.

Your Solutions Partner

V. Electrical - Continued
Reference Wire Diagram 175611

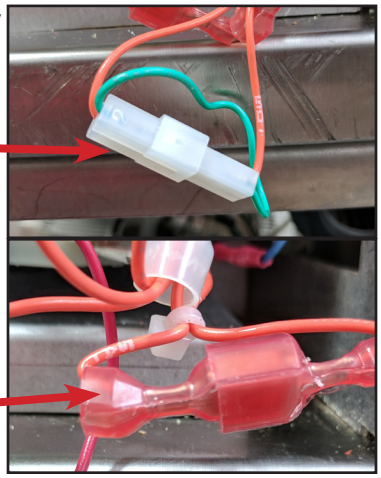
13a
Connect blue #5 wire to the Ignition Module Transformer. Then connect the Blue #14 flag terminal on the Low Voltage Wire harness to the #5 blue wire.

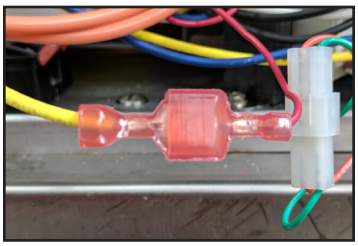


13b
Locate the Orange #5a wire with the spade piggy-back terminal and connect to the Ignition Modual transformer. Then connect the Yellow #13 with Flag terminal on the Low Voltage Wire harness to the spade with the Orange wire. (**see Above**)

13c - For Domestic Only
- Locate the two Molex connections and plug together.

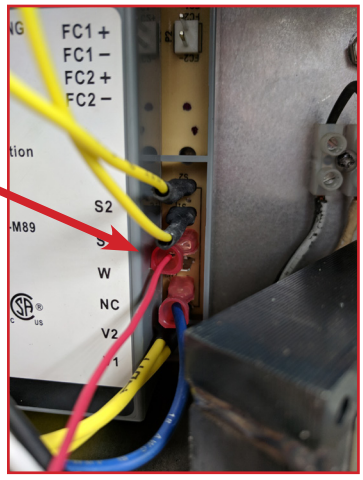
- Locate the male and female connections #5a and connect togather.



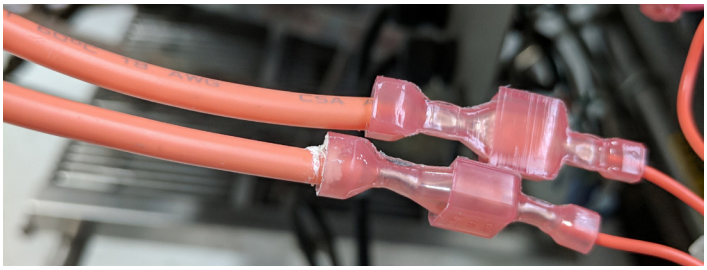


13d
Connect #2 red to #21 of the low voltage harness.

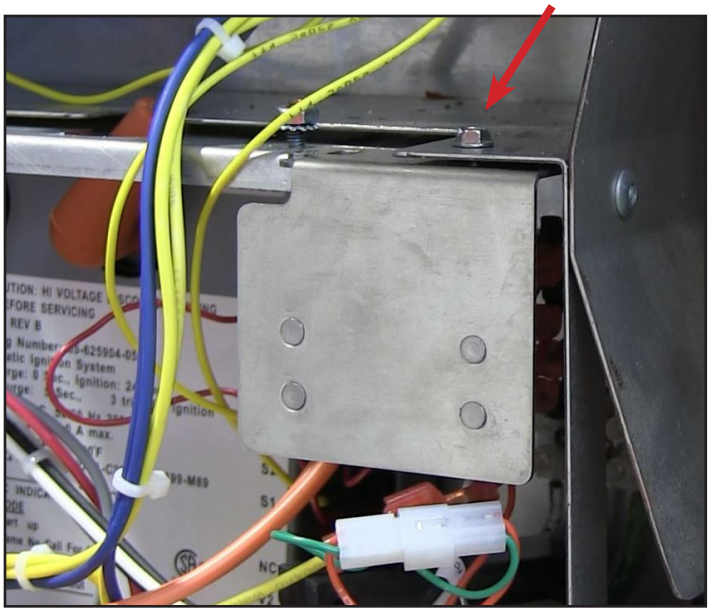
13e
Connect red #5 to position W on the Ignition Module for the IR burners.



13f
Connect the two Male connections Orange #3 and #5 to the orange wires from the blower motor.



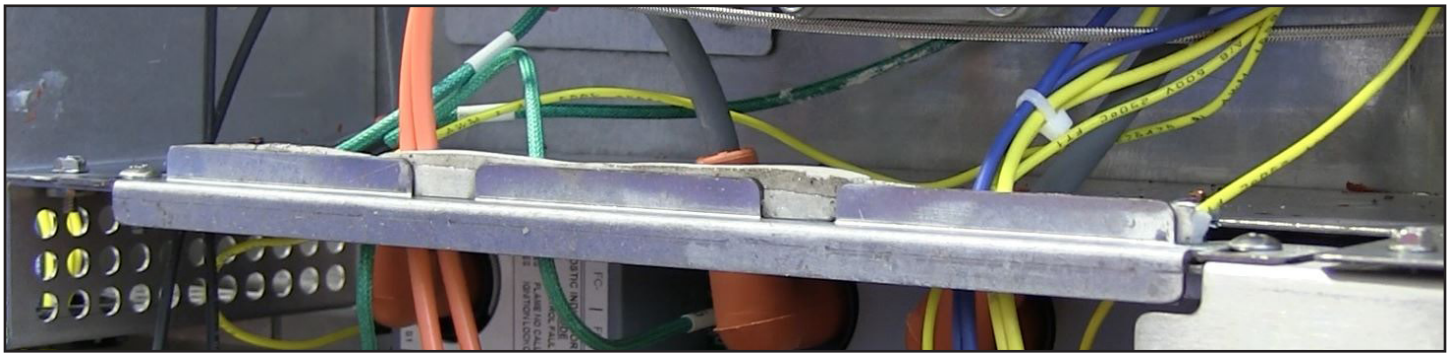
Step 14 - Blower Relay
Mount the blower relay using the 8/32 bolt holding the electrical shelf in place. (See Picture below)



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V. Electrical - Continued
Reference Wire Diagram 175611

Step 15 - Wire Retaining Bracket
Using (2) 10/24 Bolts, install the wire retention bracket making sure none of the wires are pinched.



Step 16 - Control Panel - Mylar
Follow the instructions enclosed with the new Mylar to replace the old control Mylar.



Step 17 - Control Panel
Connect the thermocouple to the bottom of the control panel. Attach the two Molex connections and then mount the control panel to the Broiler.



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VI. Safety Testing

WARNING **Failure to complete these tests could result in damage, injury or death.**

Step 1 - Continuity Check
Before connecting the broiler to power complete a continuity test at the terminal block by:

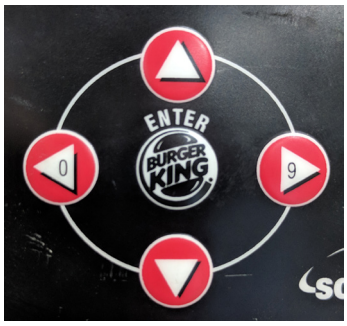
A. Checking Common line to Ground **Should test positive.**

B. Checking Line to Ground **Should test negative.**

Note: If either of these test fail refer back to the Wire Diagram to troubleshoot.

Step 2 - Reconnect to Power

Step 3 - Gas Leak Test
Reconnect the unit to the Gas Line. Check the unit for any gas leaks up to the Gas Valves.



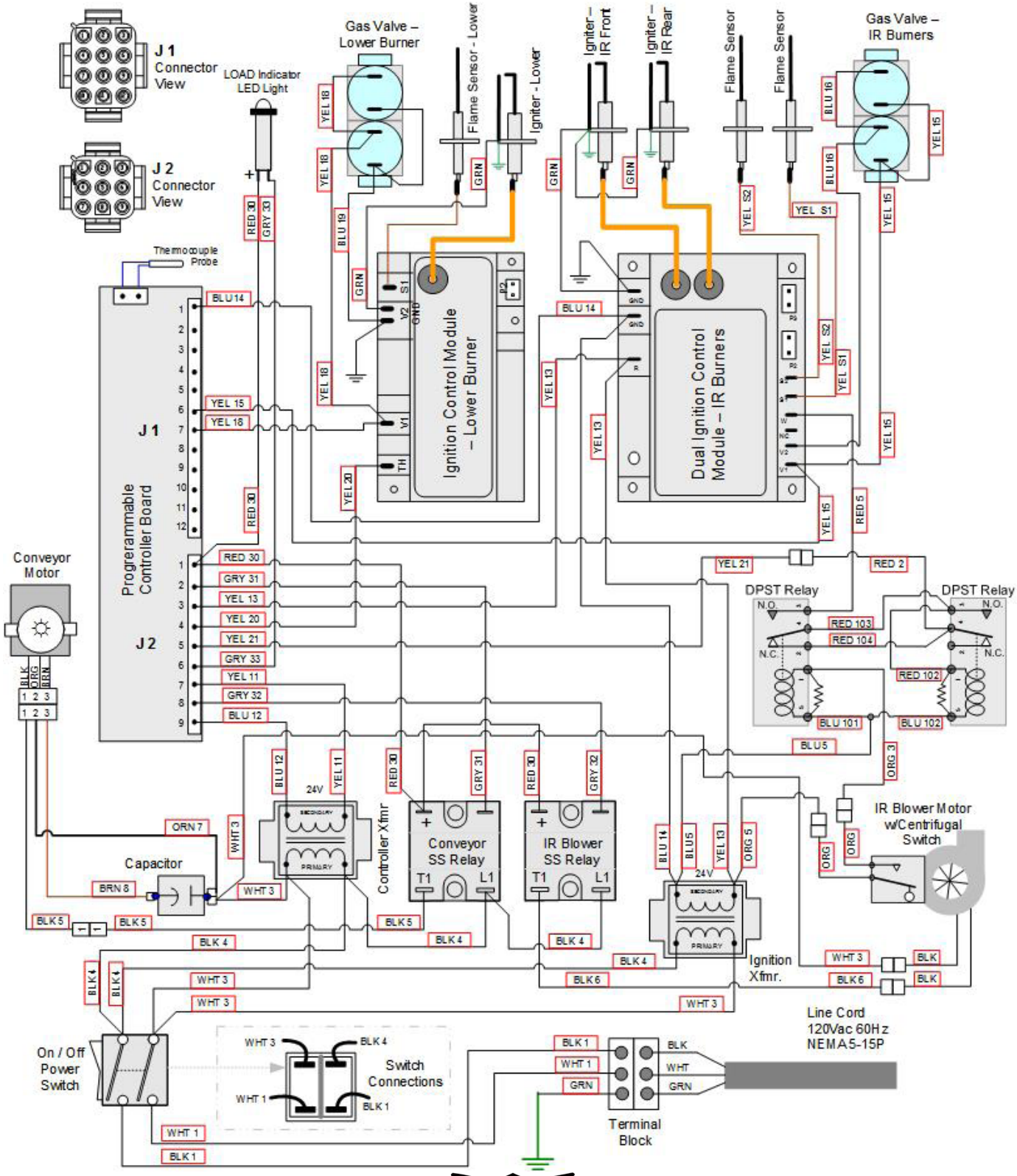
Place the broiler into Diagnostic mode by:
A. Press and hold the ***BK Logo*** for five Seconds. - Displays "***CODE***"
B. Enter ***3424*** then press the ***BK Logo*** - Displays "***8888***"
C. Press the ***up arrow*** 1 time. The lower burner will turn on.
Check all fittings to the lower burner for any Gas Leaks
D. Press the ***up arrow*** 1 time and the lower burner will turn off and the upper burners will turn on.
Check all fittings to the upper burners for any Gas Leaks
E. Press the ***up arrow*** 1 time and the broiler will go into ***standby***.
F. Press the ***down arrow*** 1 time to start the conveyor.
G. Press the ***down arrow*** 1 time and the conveyor turns off.
Note: Do not let the chain run for more than 10 seconds.
Press the ***BK Logo*** to exit ***Diagnostic*** mode.

Step 4 - Set Gas Pressure
Turn unit on and let it heat to 400 degrees so both burners are on.
- For Natural Gas adjust each valve to 3.75 WC
- For LP gas, adjust each valve to 8.0 WC

Step 5 - Replace all Panels
Install all remaining panels making sure wires are not pinched or exposed.

ELECTRICAL SCHEMATIC – FLEXIBLE BATCH BROILER

DUKE MFG. PN 175611 Rev. E

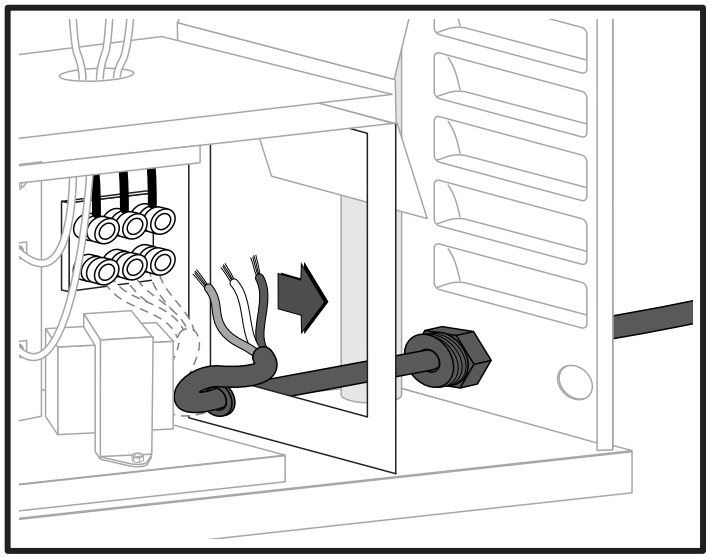


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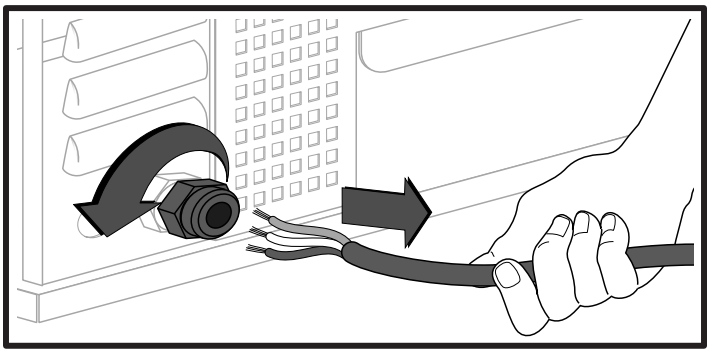
VII. LP With Purge Blower

Unit Wiring:

Step 1 - Disconnect the main power cord from the terminal block.



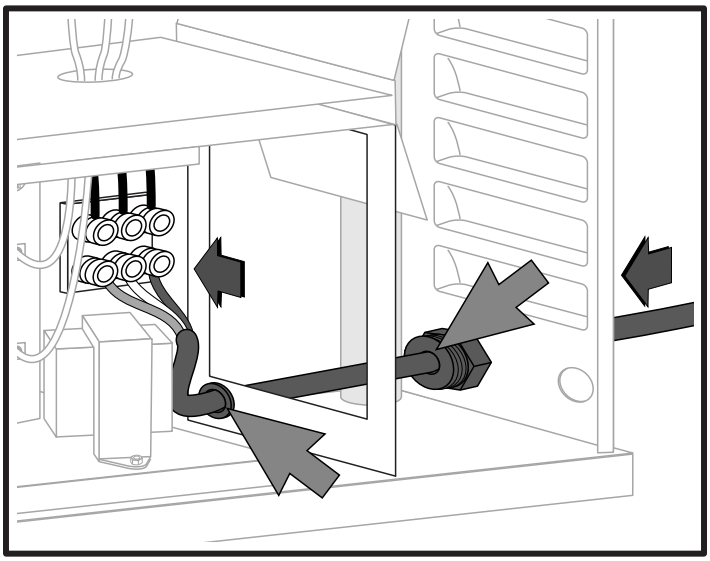
STEP 2 - Loosen the strain relief nut and remove the power cord from the unit.



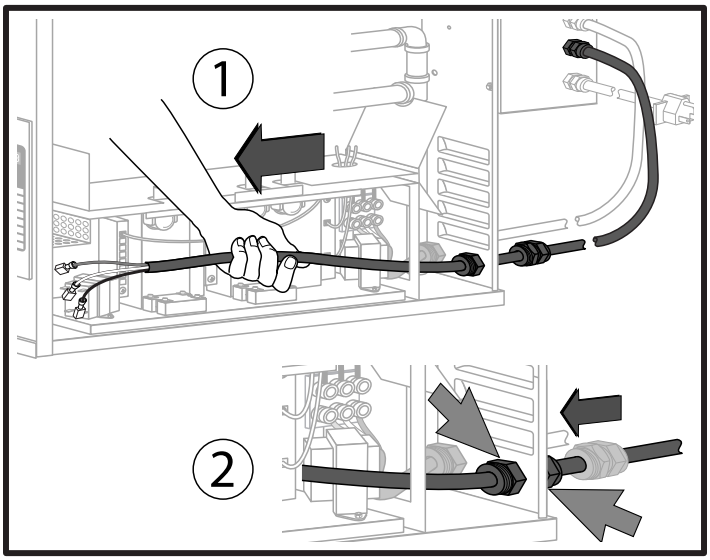
STEP 3 - Route the harness power cord (preassembled in the blower assembly) through the strain relief and the bushing in the divider wall.

STEP 4 - Connect the harness to the terminal block as shown and per the enclosed wire diagram.

STEP 5 - Firmly tighten the nut on the strain relief to secure the cord.



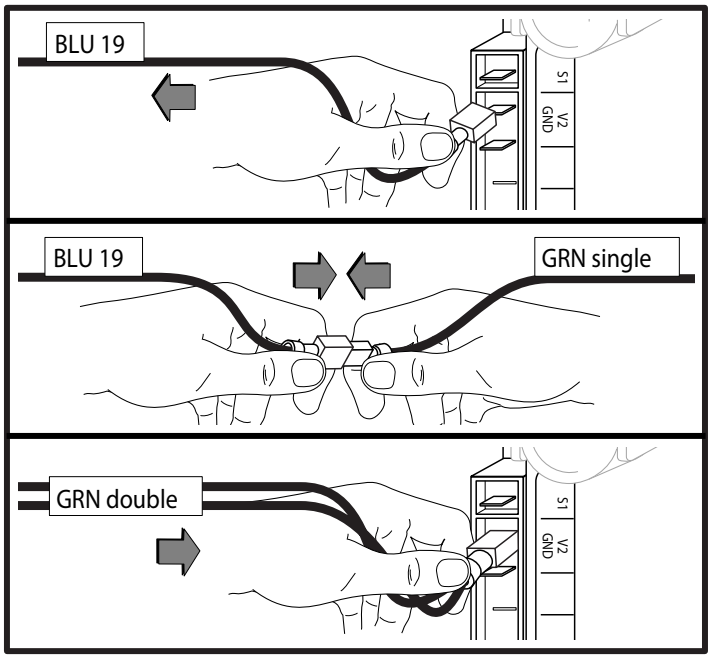
STEP 6 - Remove the bulkhead jam nut from the strain relief and route the harness through the strain relief hole drilled previously. Once the harness is routed through the hole, re-install the bulkhead jam nut and fasten the strain relief to the panel/ bulkhead. Make sure the harness length is long enough to make the connections to the ignition module and firmly tighten the nut to secure the cord.



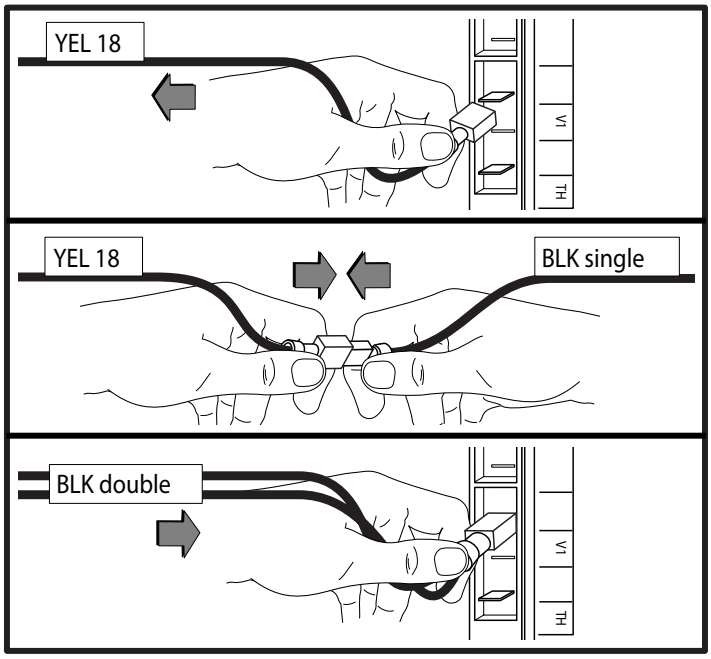
VII. LP With Purge Blower - continued

STEP 7 - Following the wire diagram, make the following connections on the ignition module:

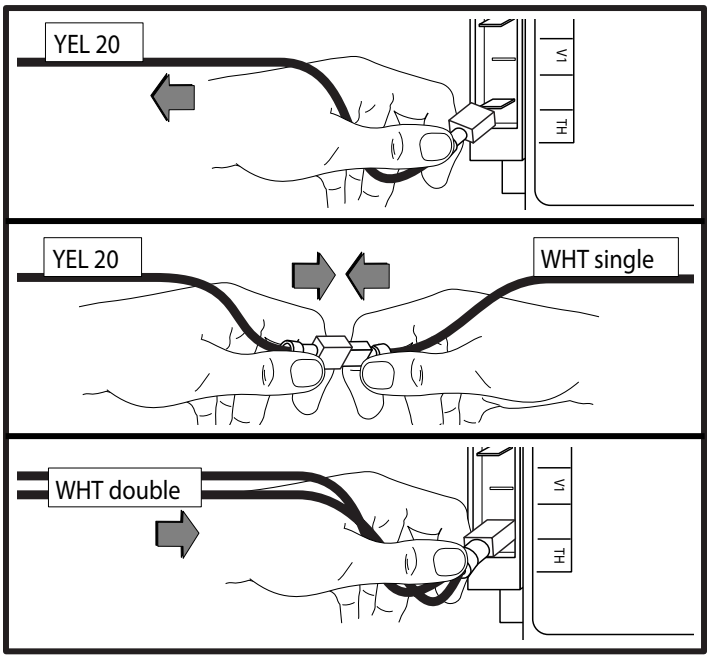
a. Disconnect BLU 19 from V2 and connect with the GRN wire (single wire). Connect the GRN double crimp to V2.

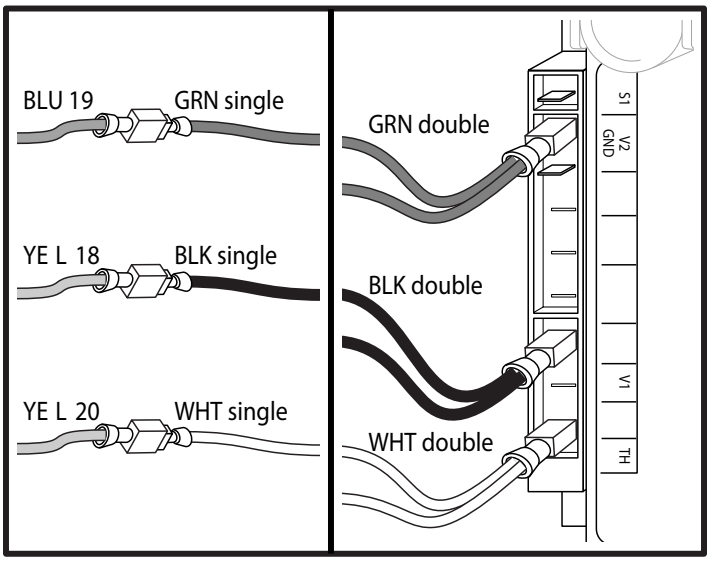


b. Disconnect YEL 18 from V1 and connect with the BLK wire (single wire). Connect the BLK double crimp to V1.



c. Disconnect YEL 20 from TH and connect with the WHT wire (single wire). Connect the WHT double crimp to TH.





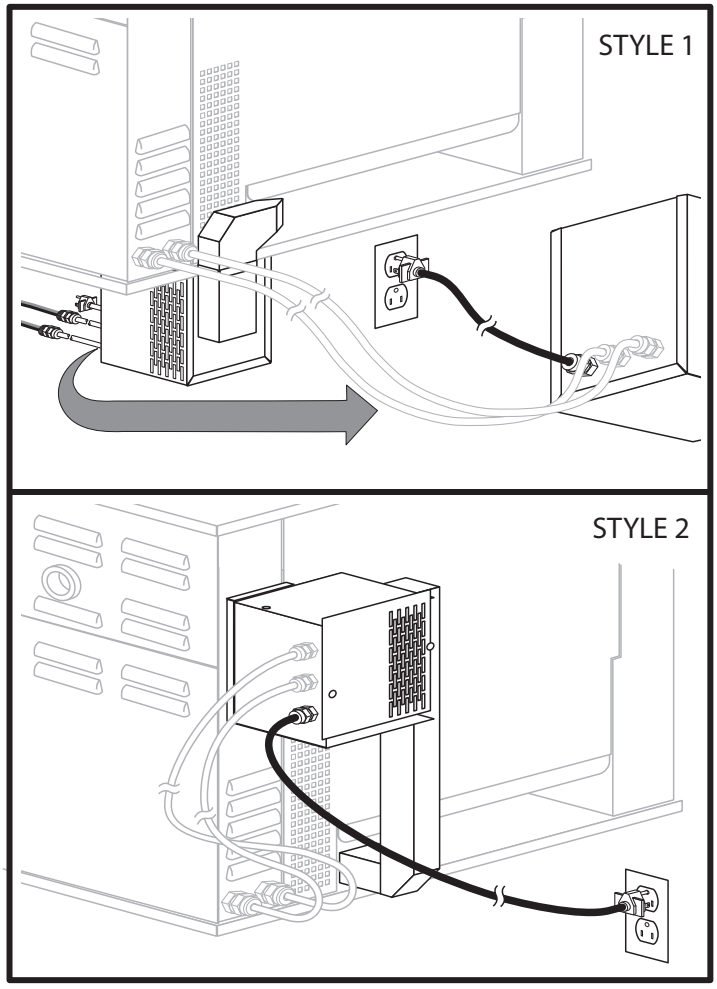
NOTE: ENSURE THAT ALL CONNECTIONS ARE TIGHT.

VII. LP With Purge Blower - continued

Blower Assembly Test:

STEP 1 - Connect the power cord on the blower box assembly to the facility electrical power.

NOTE: Only one outlet is required to power the broiler.



CAUTION

The following steps will conduct a functional test on the blower assembly. With the gas supply turned off, the blower assembly should run after the first failed burner ignition.

STEP 2 - With the gas supply off, turn on the broiler.

STEP 3 - Verify the blower turns on after approximately 7 seconds. It will stay on for approximately 5 seconds until the re-attempt cycle.

a. **If you confirm the blower turns on:** Turn off the broiler and proceed to the next step.

b. **If the blower does not turn on: STOP** and call for Service.

NOTES

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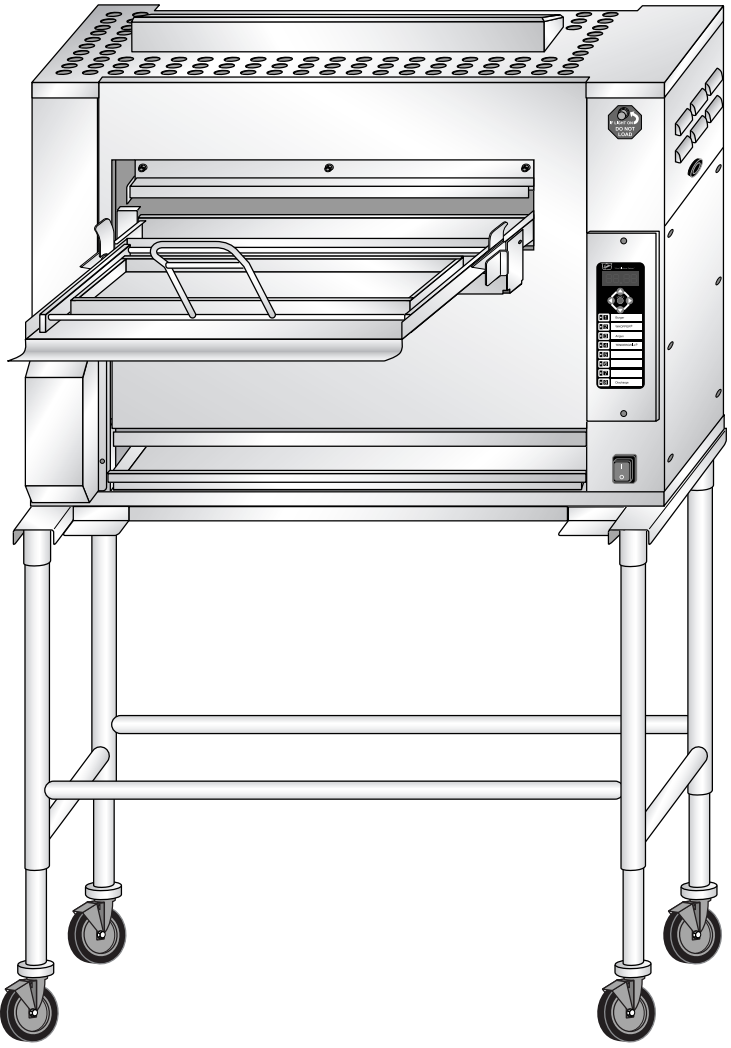
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St. Louis, MO 63102
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Toll Free: 1-800-735-3853
Fax: 314-231-5074

www.dukemfg.com

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Instrucciones de instalación

JUEGOS DE RENOVACIÓN
176838 - Gas natural
176841 - Propano



PRECAUCIÓN: **Lea este manual completamente antes de tratar de instalar, operar o efectuar el servicio de este equipo.**

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P/N 529092
REV C 03/29/2018

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INSTRUCCIONES DE SEGURIDAD IMPORTANTES

En todo este manual, encontrará las palabras y los símbolos de seguridad siguientes que representan temas de seguridad importantes con respecto a la operación o al mantenimiento del equipo.

⚠ ADVERTENCIA — **Indica una situación peligrosa que, de no evitarse, puede causar lesiones graves o la muerte.**

⚠ PRECAUCIÓN — **Indica una situación peligrosa que, de no evitarse, puede causar lesiones menores o moderadas.**

PRECAUCIÓN — **Indica información importante.**

 **Indica el peligro de descarga eléctrica que, de no evitarse, puede resultar en lesiones graves o la muerte y daños en el equipo.**

 **Indica una superficie que, de no evitarse, puede causar lesiones menores o moderadas.**

PRECAUCIÓN — Peligro de descarga eléctrica No lave con un chorro ni una manguera de agua.

Además de las advertencias y precauciones de este manual, use las guías siguientes para la operación segura de la unidad.

- Lea todas las instrucciones antes de usar el equipo.
- Para su seguridad, el equipo está provisto de un conector de cordón debidamente conectado a tierra. No trate de retirar o desconectar el conector puesto a tierra
- Instale o ubique el equipo sólo para su uso previsto según se describe en este manual.
- No use productos químicos corrosivos en este equipo.
- No utilice limpiadores cáusticos, ácidos, productos a base de amoníaco o limpiadores o trapos abrasivos. Estos pueden dañar las superficies de acero inoxidable y plástico.
- No opere este equipo si tiene un cordón o un enchufe dañados, si no funciona debidamente, o si se ha dañado o se ha dejado caer.
- El servicio de este equipo debe ser llevado a cabo solamente por personal capacitado. Póngase en contacto con la instalación de servicio autorizada de Duke para su ajuste o reparación.
- No bloquee ni tape las aberturas de la unidad.
- No sumerja el cordón o el enchufe en agua.
- No acerque el cordón a las superficies calentadas.
- No deje que el cordón cuelgue sobre el borde de la mesa o del mostrador.
- Si está dañado el cordón de alimentación, debe reemplazarse por un conjunto de cordón especial disponible de Duke Manufacturing Co. o su agente de servicio.

  Nota: Consulte la placa de datos de especificaciones al pedir o reemplazar un conjunto de cordón.

En este manual aparecen las siguientes advertencias y precauciones, que deben observarse cuidadosamente.

- Apague la unidad, desconecte la fuente de alimentación y deje que se enfríe la unidad antes de efectuar cualquier tarea de servicio o mantenimiento en la unidad.
- Los procedimientos de este manual pueden incluir el uso de productos químicos Debe leer las hojas de datos de seguridad de materiales antes de usar cualquiera de estos productos.
- La unidad debe conectarse a tierra según los códigos eléctricos locales para impedir la posibilidad de que se produzca una descarga eléctrica. Requiere un receptáculo conectado a tierra con líneas eléctricas especiales, protegidas por fusibles o disyuntores de las capacidades nominales apropiadas, según todos los reglamentos correspondientes.
- El desechado de la unidad debe efectuarse según los códigos medioambientales locales y cualquier otro código correspondiente.
- Este aparato no está diseñado para ser utilizado por personas (incluidos niños) con capacidades físicas, sensoriales o mentales reducidas, o con falta de experiencia y conocimientos, a menos que una persona responsable de su seguridad les haya supervisado o les haya instruido en el uso del aparato para su seguridad.
- PRECAUCIÓN: No use nunca un lavado de agua a alta presión para este procedimiento de limpieza, ya que el agua puede dañar los componentes eléctricos.

Herramientas necesarias para la instalación - No se incluyen



Conjunto de aprietatuercas



Juego de cubos estándar de 6 puntas



Llaves ajustables



Conjunto de destornilladores



Llave para tuberías



BIKEPARTS360.COM

Alicates de punta de aguja



Sellante de tuberías de gas

Herrajes en el juego



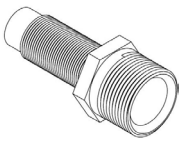
175682 - Tres acoplamientos de tuerca



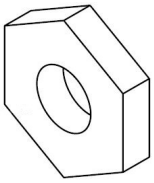
TA-7 - Tres arandelas de traba



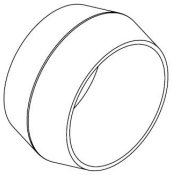
281310 - Dos tornillos 10-24 x 1-1/4



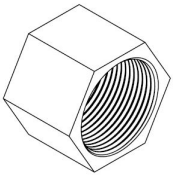
176368 - Un portador perforado del quemador inferior



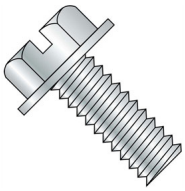
175546 - Una tuerca del portador perforado



175547 - Un manguito de compresión de 3/8″



175548 - Una tuerca de compresión de 3/8″



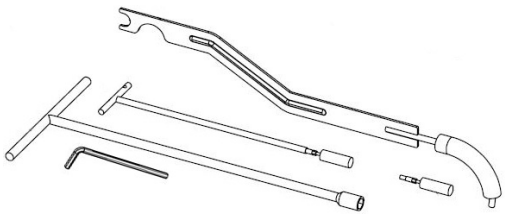
175587 - Cuatro tornillos de cabeza hexagonal ranurada 10-24 x 3/8″



213042 - Dos tuercas serradas embridadas de 1/4-20



213041 - Cuatro tuercas serradas embridadas de 10-24



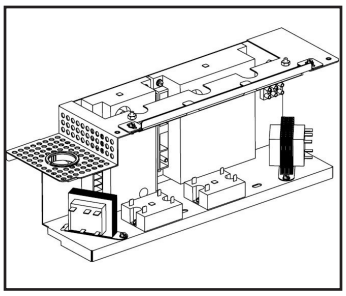
175700 Un juego de limpieza



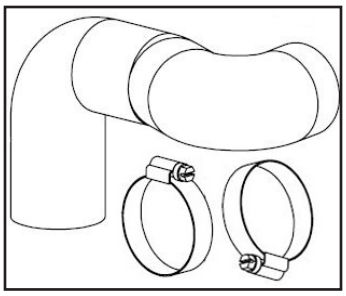
175540 - Dos conexiones rectas de compresión MNPT de 3/8 x 1/2″

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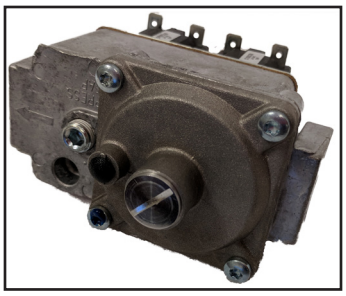
Piezas en el juego



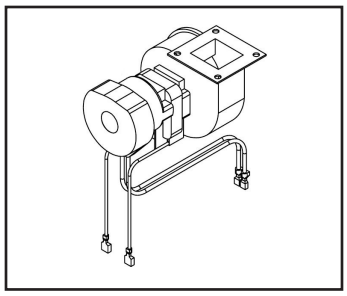
175391 Un conjunto de estante de componentes eléctricos



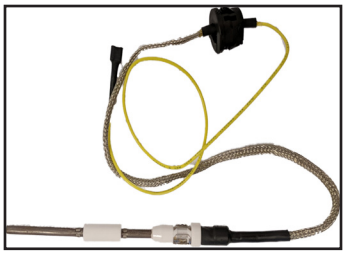
175549 Dos abrazaderas de manguera
175189 Dos abrazaderas de soplador



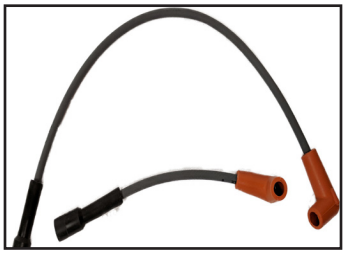
175531 Dos válvulas de gas Gas natural
175766 Dos válvulas de gas Gas LP



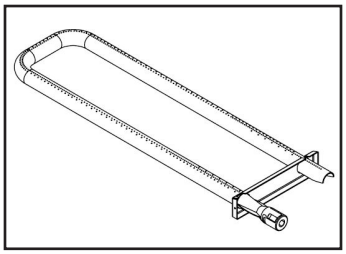
600249 Un soplador nacional



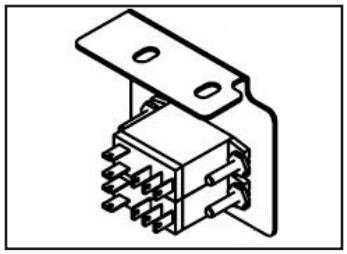
175534 Un sensor inferior (corto)



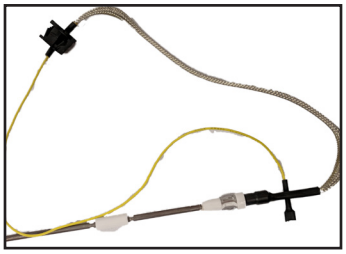
175538 Un cable de 8″
175537 Dos cables de 16″



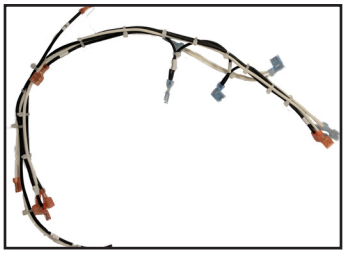
176370 Un quemador inferior con obturador de aire de 0.375″



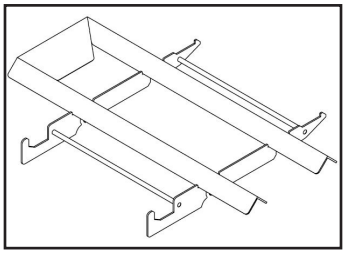
176188 Un relé del soplador (no se muestra el arnés de cables)



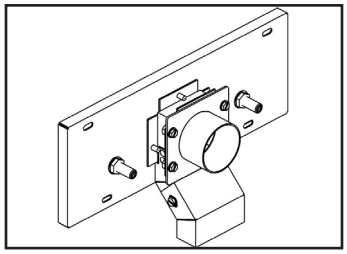
175535 Dos sensores superiores (largos)



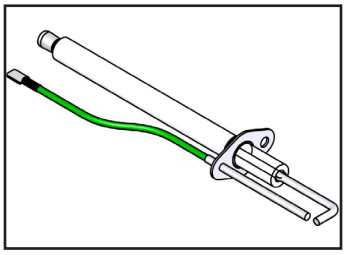
175608 Un arnés de alto voltaje



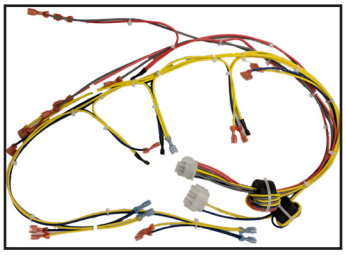
175200 Un protector de quemador



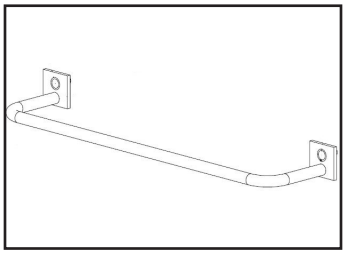
175108 Un conjunto de caja de soplador con émbolos



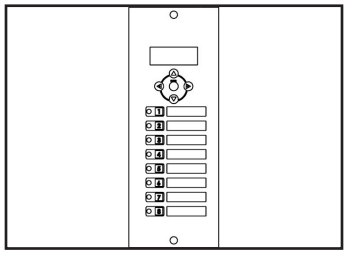
175536 Tres encendedores de chispa



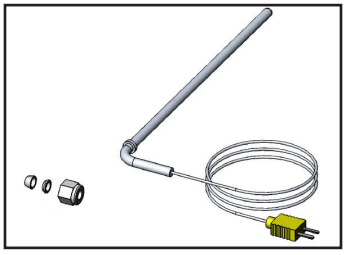
175607 Un arnés de bajo voltaje



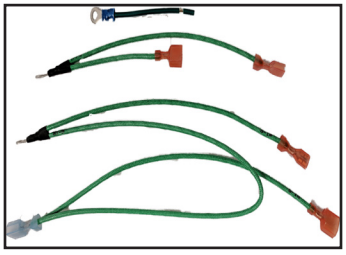
175095 Un protector de encendedor



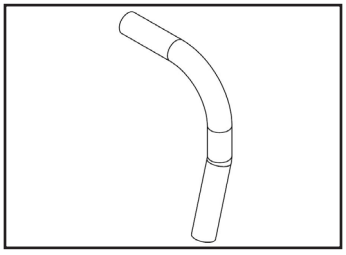
176039 Un Mylar de control



175977 Un juego de sondas de temperatura



175610 Un arnés de tierra



175478 Un tubo de quemador inferior

Artículos no mostrados

175727 Ocho calces de calibre 16
175361 Cinco calces de calibre 18 cada
175360 Cinco calces de calibre 20
175611 Un diagrama de conexiones

Your Solutions Partner

I. Inicio

Paso 1
Desconecte toda la corriente del asador y deje que se enfríe.

Paso 2
Cierra la válvula principal de gas al asador y desconecte.

⚠ ADVERTENCIA

Si no se completa, podrían producirse lesiones graves o mortales.

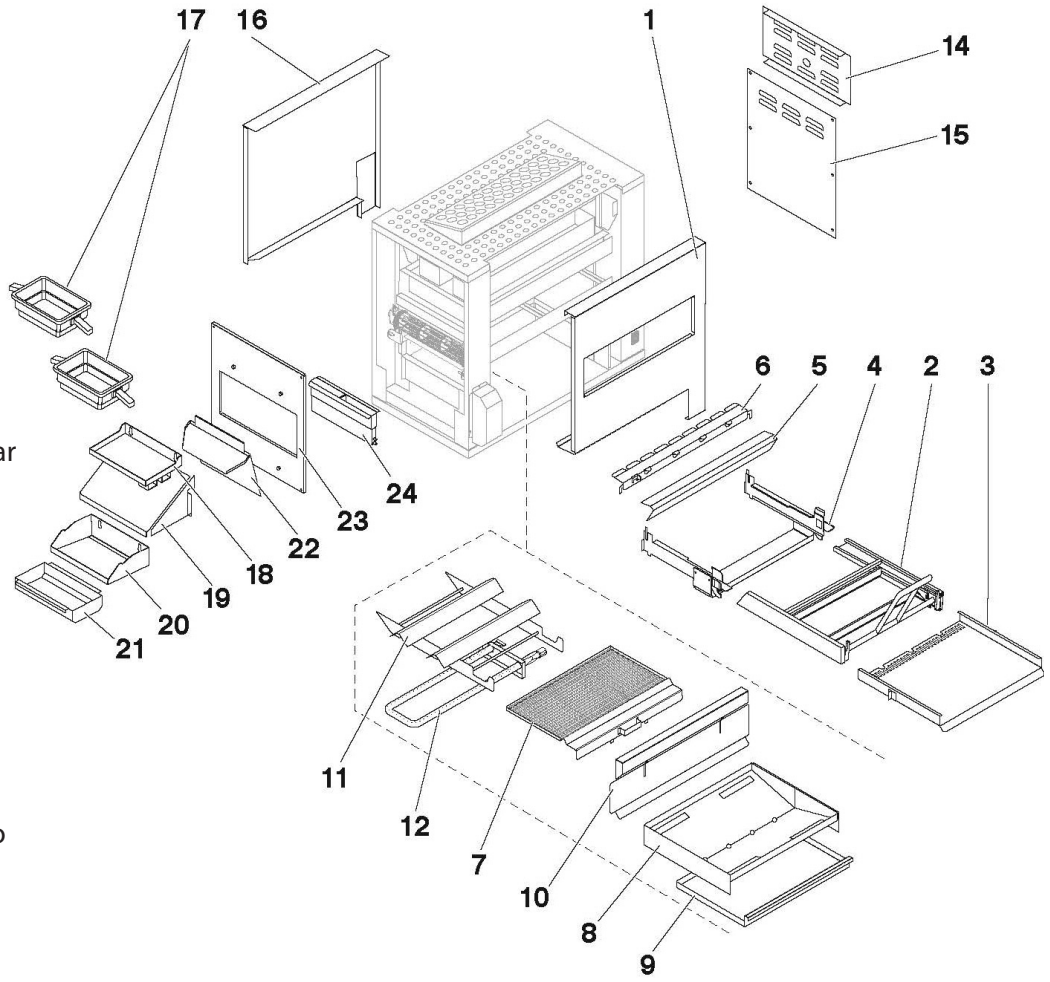
II. Desmantelamiento

Nota: Se han suministrado algunos sujetadores nuevos. Guarde todos los sujetadores para su reutilización.

Paso 1

Quite todas las piezas desmontables según se indica abajo.

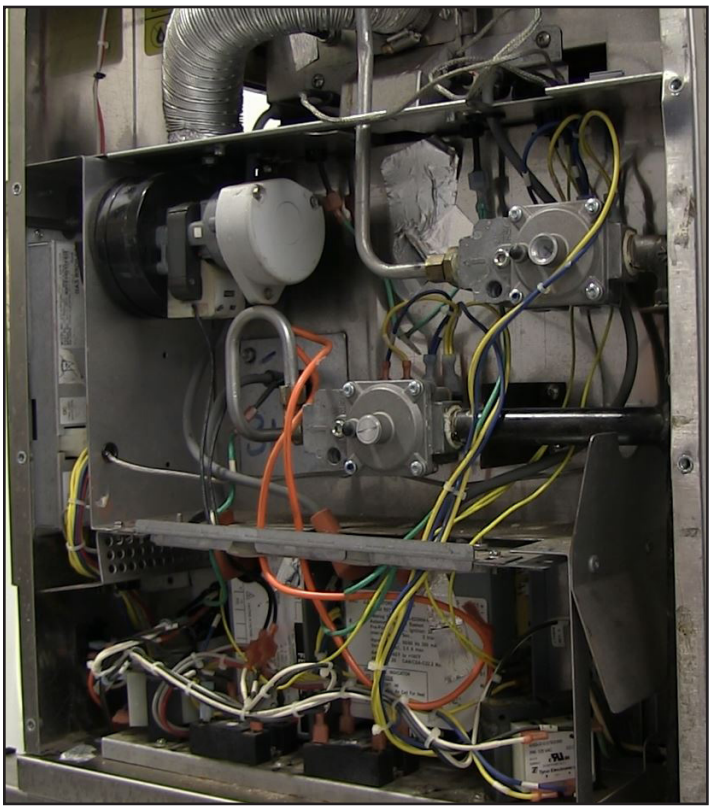
1. Panel delantero
2. Cargador
3. Bandeja del cargador
4. Soporte de montaje del cargador
5. Puerta
6. Rampa del cargador
7. Apagallamas
8. Bandeja de grasa en V
9. Bandeja de grasa principal
11. Protector de quemador - desechar
12. Quemador inferior - desechar
14. Tablero eléctrico superior
15. Tablero eléctrico inferior
16. Panel de acceso trasero
17. Bandeja
18. Estante de bandeja
19. Campana de descarga
20. Bandeja de descarga
21. Bandeja de grasa
22. Conducto de descarga
23. Extremo del panel de acceso
24. Raspador de cenizas de pivote



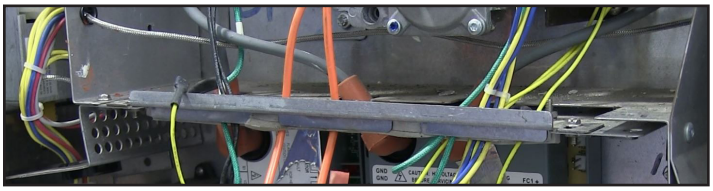
Your Solutions Partner

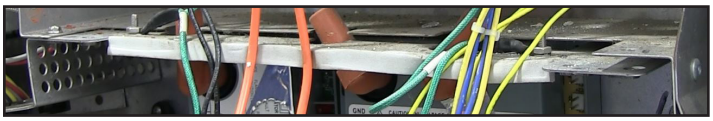
II. Desmantelamiento - continuación

Paso 2
Desconecte todas las conexiones de los arneses de cables de **alto** y **bajo voltaje**.



Paso 3
Quite la barra de retención de cables.





Paso 4
Desconecte el arnés de la luz (panel delantero superior).

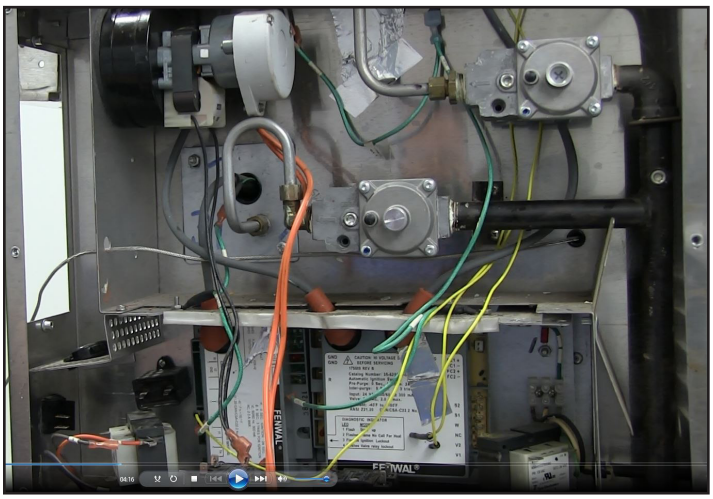


Paso 5
Quite el tablero de control y desconecte las conexiones Molex y el termopar.

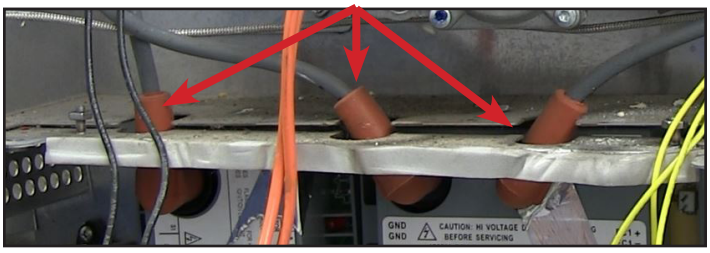
Nota: Asegúrese de guardar todos los bujes Heyco para volver a instalarlos después.

Paso 6
Quite los arneses de cables de alto y bajo voltaje y deséchelos.

Paso 7
Desconecte todos los cables de tierra y deséchelos.

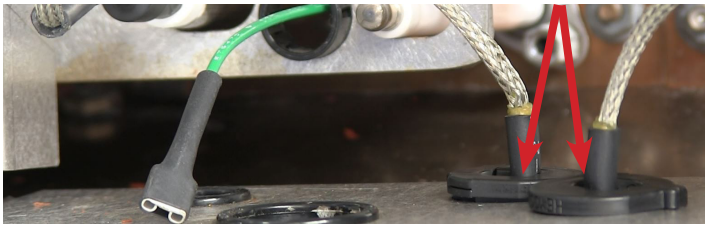


Paso 8
Desconecte los tres cables de ignición de los módulos de ignición y de los encendedores y luego quite. (Desechar)



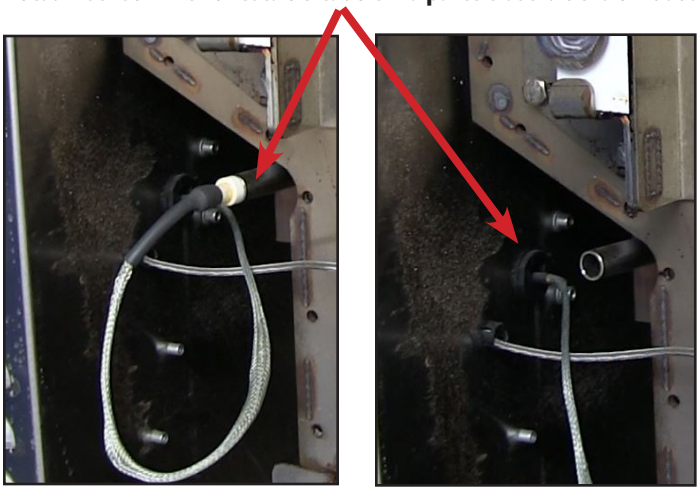
Paso 9
Tire de los dos sensores superiores y después quítelos. (Desechar)

Nota: Los sensores tiene una presilla de resorte de tres puntas.



II. Desmantelamiento - continuación

Paso 10
Repita esto para el sensor inferior. (Desechar)
Nota: El sensor inferior está ubicado en la parte trasera de la unidad.



Paso 11
Quite el sensor térmico de la parte trasera del asador. (Desechar)

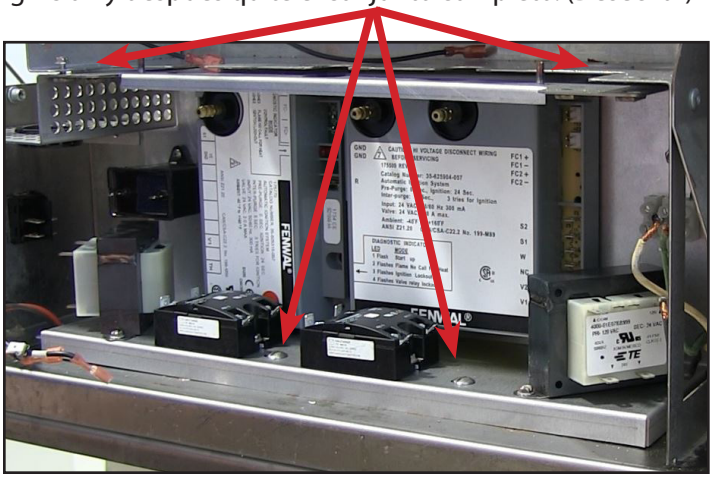
Nota: La tuerca debe apretarse a mano solamente.
En algunos casos el cable tendrá que cortarse para quitarse por completo.



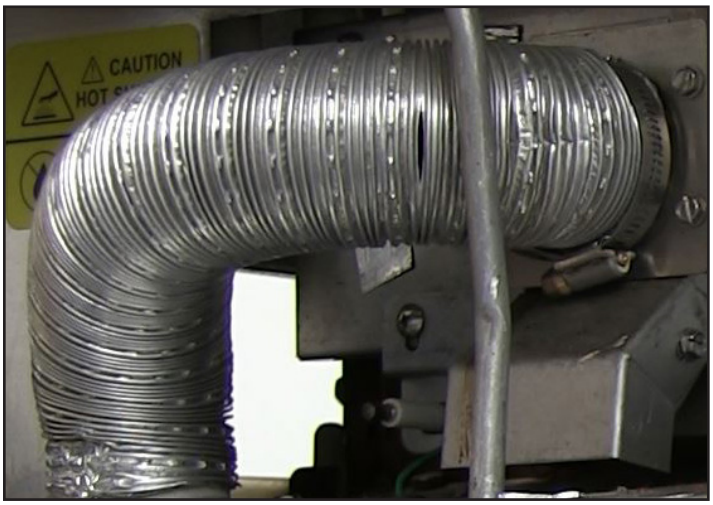
Paso 12
Desconecte el cordón de alimentación del bloque de terminales.



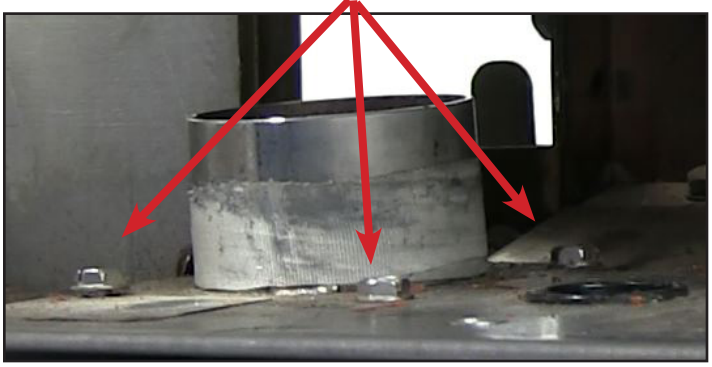
Paso 13
Quite los cuatro tornillos que sujetan el conjunto de ignición y después quite el conjunto completo. (Desechar)



Paso 14
Afloje las dos nuevas abrazaderas de manguera y quite la manguera.

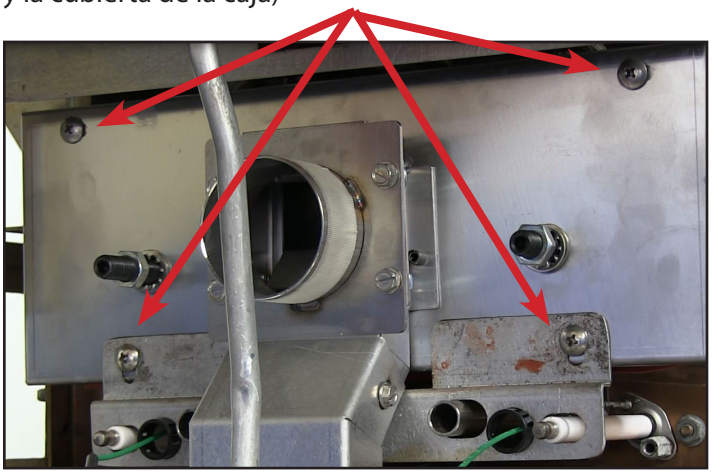


Paso 15
Quite los tres pernos y tuercas que sujetan el motor del ventilador en posición y quite el motor del ventilador. (Desechar)

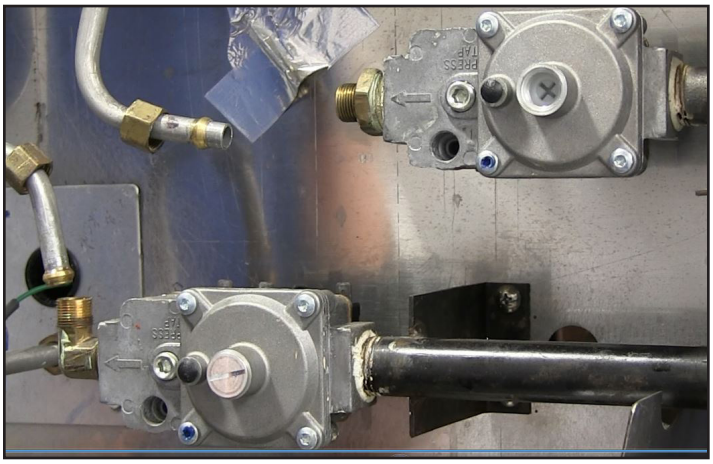


II. Desmantelamiento - continuación

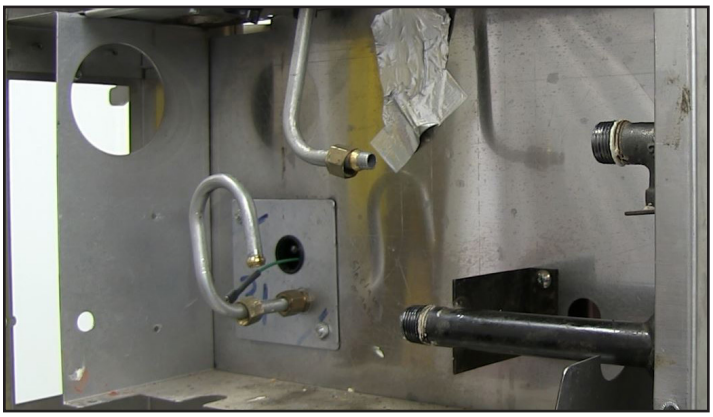
Paso 16
Quite los tornillos que sujetan el soporte del encendedor y la cubierta de la caja del soplador. (Desechar el soporte y la cubierta de la caja)



Paso 17
Desconecte las líneas de gas de las válvula de gas.



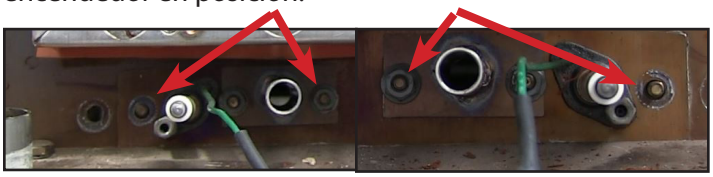
Paso 18
Quite ambas válvulas de gas. (Desechar)



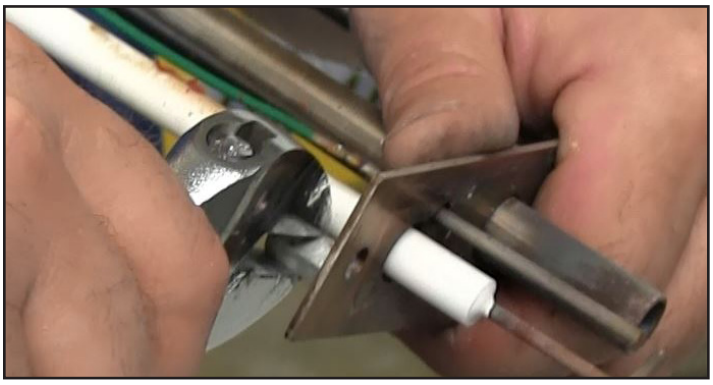
Paso 19
Quite las dos tuercas que sujetan el protector del encendedor y quite.



Paso 20
Quite las cuatro tuercas que sujetan la placa del encendedor en posición.



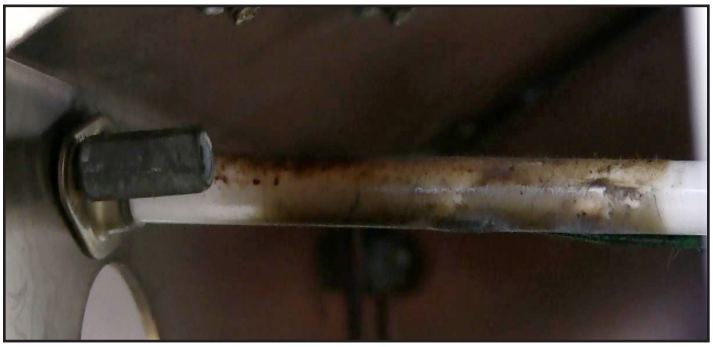
Paso 21
Quite los encendedores superiores de la placa. (Desechar)



Nota: Aparte las seis tuercas de espiga hexagonales y arandelas.

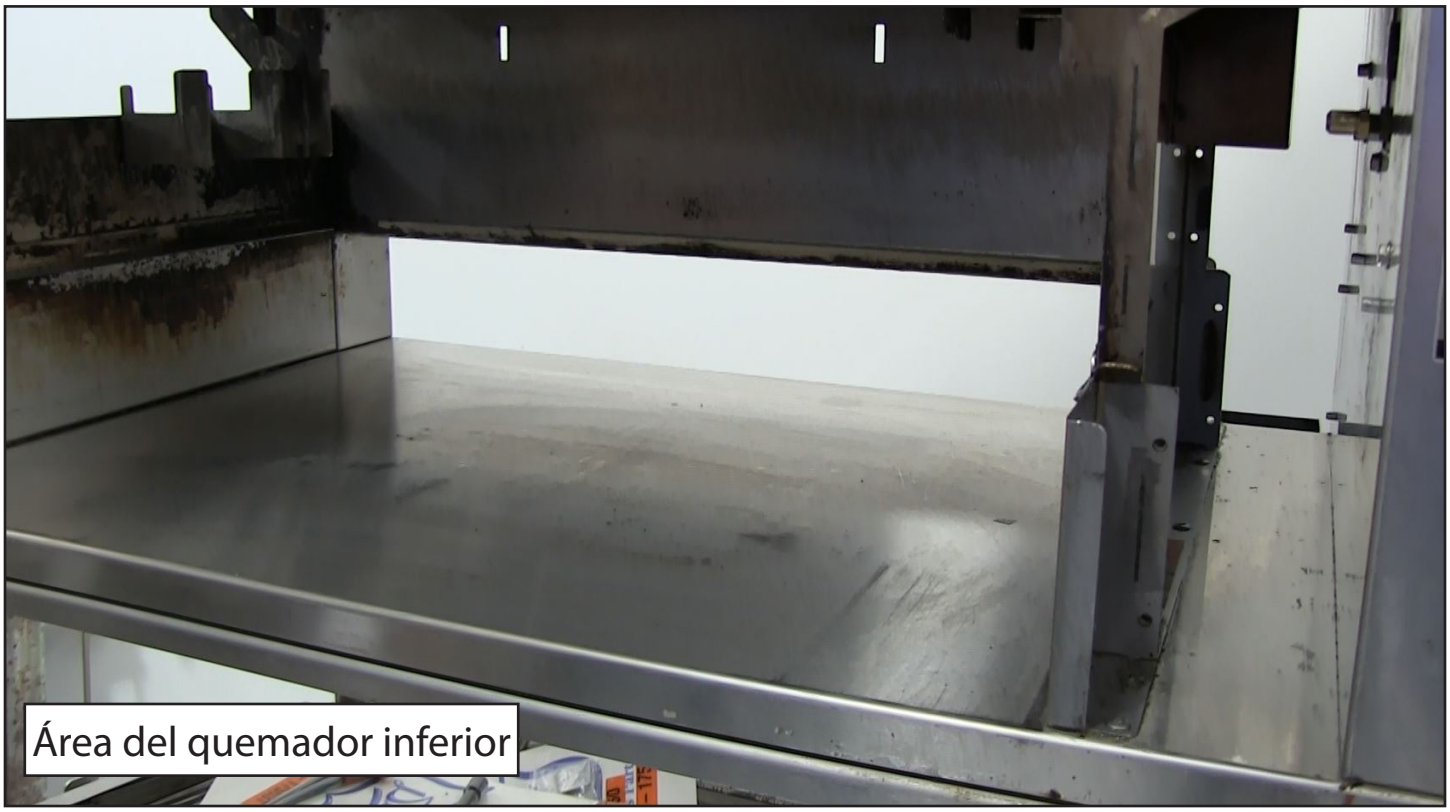
Paso 22
Quite los encendedores inferiores del asador. (Desechar)

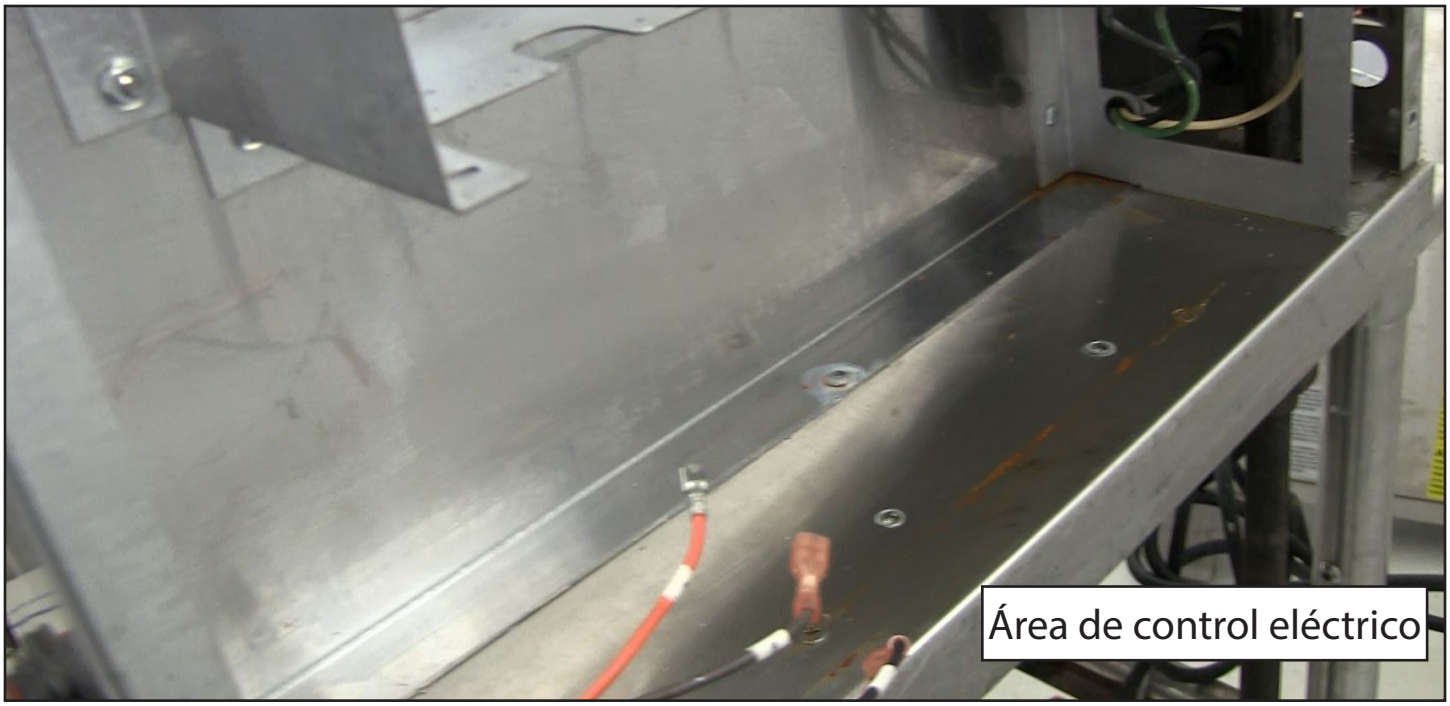
Nota: Guarde la arandela de estrella y la tuerca de espiga hexagonal.



III. Limpieza del asador

Use solo limpiadores aprobados por Burger King y tómese el tiempo para limpiar completamente el asador incluida el área de control.

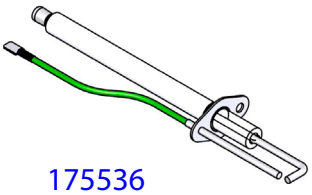




IV. Reconstrucción del asador

PRECAUCIÓN **Quite toda la cinta adhesiva de todas las piezas**
De no quitar la cinta adhesiva podría causar la formación de humo o un incendio durante la puesta en marcha.

Paso 1 - Encendedor inferior
Instale el encendedor inferior.

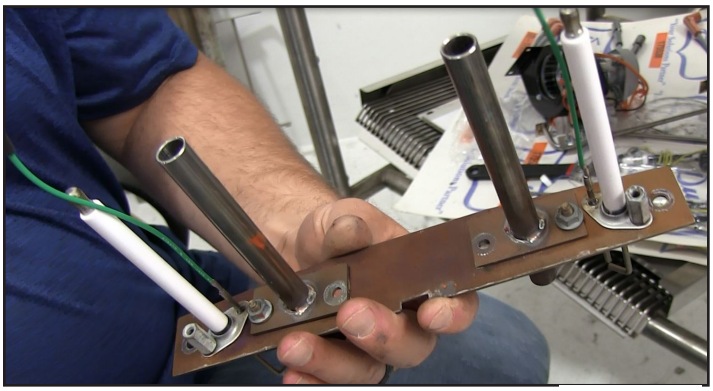

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TA-7

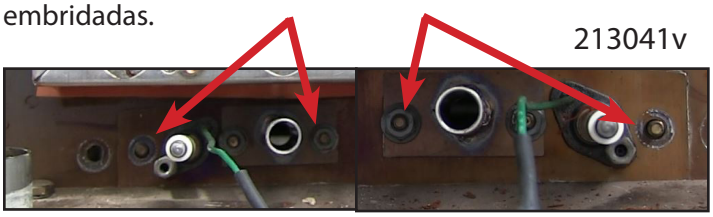


Paso 2 - Encendedores superiores
Instale los dos encendedores en la placa de encendedores vieja. Uso de arandelas de estrella y tuercas de espiga hexagonales.

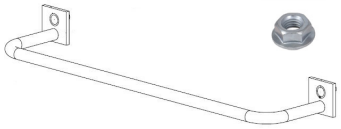


Step 3 - Conjunto de encendedores
Instale la placa de encendedores montada en el asador con 4 tuercas embridadas.


213041v

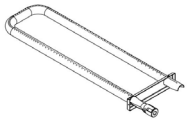


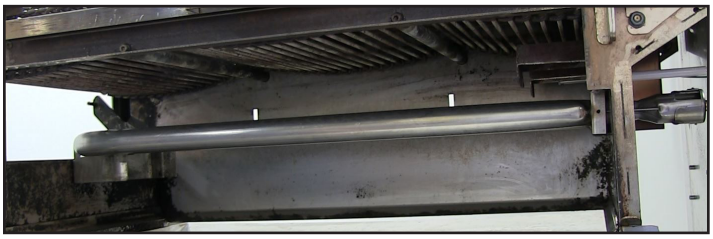
Paso 4 - Protector de encendedor
Instale el protector de encendedor en el asador usando 2 tuercas embridadas 1/4-20 (213042).



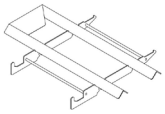


Paso 5 - Quemador inferior
Instale el nuevo quemador inferior.
176370



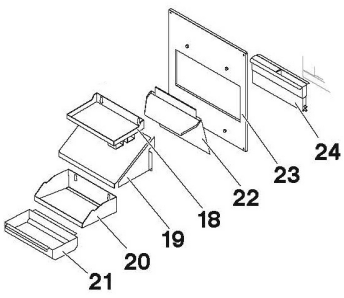


Paso 6 - Protector de quemador inferior
Instale el nuevo protector de quemador.
175200





Paso 7 - Piezas diversas
Después de limpiar todas las piezas siguientes se pueden volver a instalar en el extremo del asador.

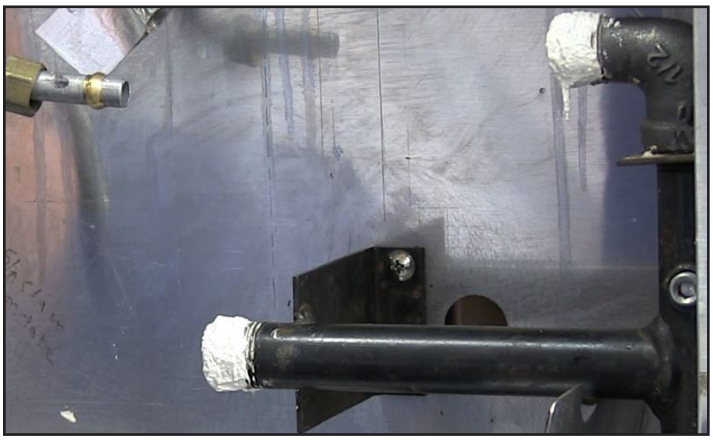


24. Raspador de cenizas de pivote
23. Extremo del panel de acceso
22. Conducto de descarga
21. Bandeja de grasa
20. Bandeja de descarga
19. Campana de descarga
18. Estante de bandeja

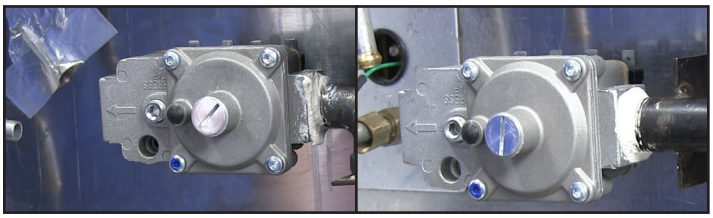
Your Solutions Partner

IV. Reconstrucción del asador - Continuación

Paso 8 - Líneas de gas
Prepare las dos líneas de gas con sellante de tuberías de gas.



Paso 9 - Válvulas de gas
Instale las dos válvulas de gas.



Nota: Asegúrese de que ambas válvulas de gas tengan los solenoides en la parte trasera con los terminales apuntando hacia arriba.

Conexión de gas superior
Instale una nueva conexión de compresión de latón en la válvula de gas superior.

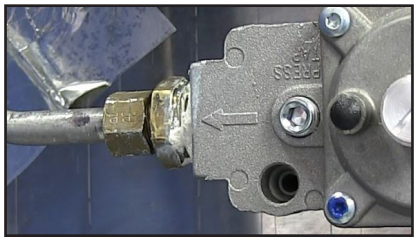


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Paso 11 - Línea de gas superior
Reconecte la línea de gas superior.

PRECAUCIÓN **El apriete excesivo de la tuerca podría partir la tuerca.**

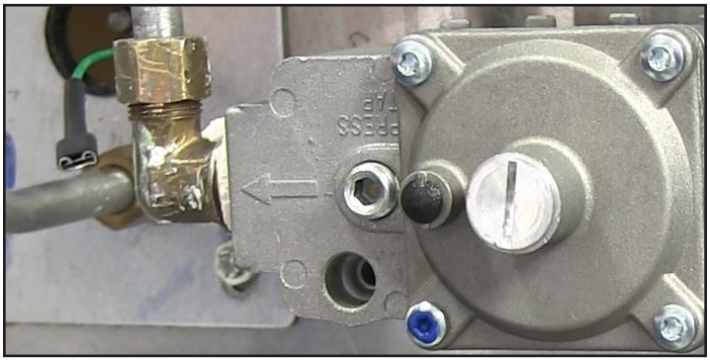


Paso 12 - Conexión de gas inferior
Para la válvula de gas inferior hay dos opciones para conexiones de latón y línea de gas.

Opción 1 - Uso de una conexión de latón de 90°.

Opción 1a - Modelos con línea de gas en forma de U
Quite la conexión de latón de la válvula de gas vieja.
Aplique sellante nuevo y conecte a la válvula de gas nueva.

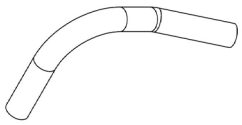
Opción 1b - Conexión de latón de 90°
Reconecte la línea de gas inferior.



Opción 2 - Conexión recta de latón con la nueva tubería de gas en forma de L.



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Opción 2a - Quite la línea de gas en forma de U
Si está presente, quite la línea de gas en forma de "U".

Nota: Si ya hay instalada una línea de gas más reciente en forma de L, omita este paso.



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IV. Reconstrucción del asador - Continuación

Opción 2b - Conexión de gas inferior
Use la tuerca y virola dejadas del quemador superior e instale la línea de gas en forma de L donde se quitó la línea de gas vieja.

Opción 2c
Instale la segunda conexión de latón en la válvula de gas.

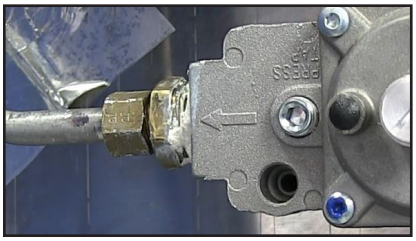


175540



Opción 2d - Línea de gas inferior
Use la tuerca y la virola para conectar la línea de gas en forma de L a la válvula de gas.

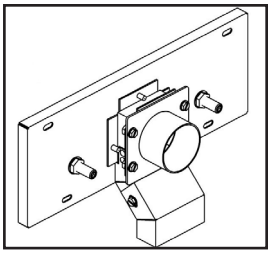
PRECAUCIÓN **El apriete excesivo de la tuerca podría partir la tuerca.**



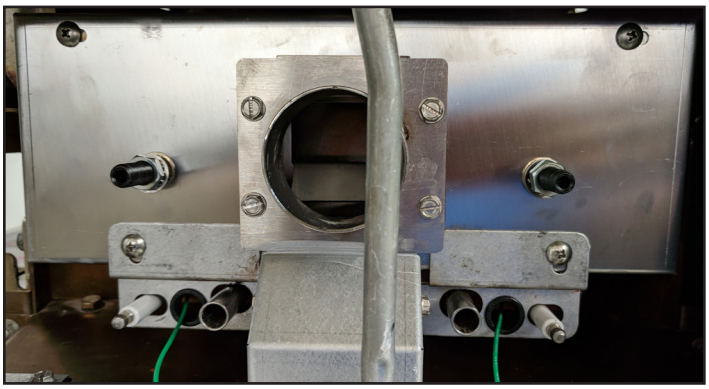
Nota:
Se han suministrado piezas adicionales para el portador perforado si es necesario.

Paso 13 - Caja de soplador
Instale la nueva caja del soplador con émbolos y soporte inferior. (El soporte no está en el juego)

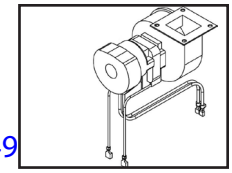
Nota: Asegúrese de que la orientación del soporte sea correcta.



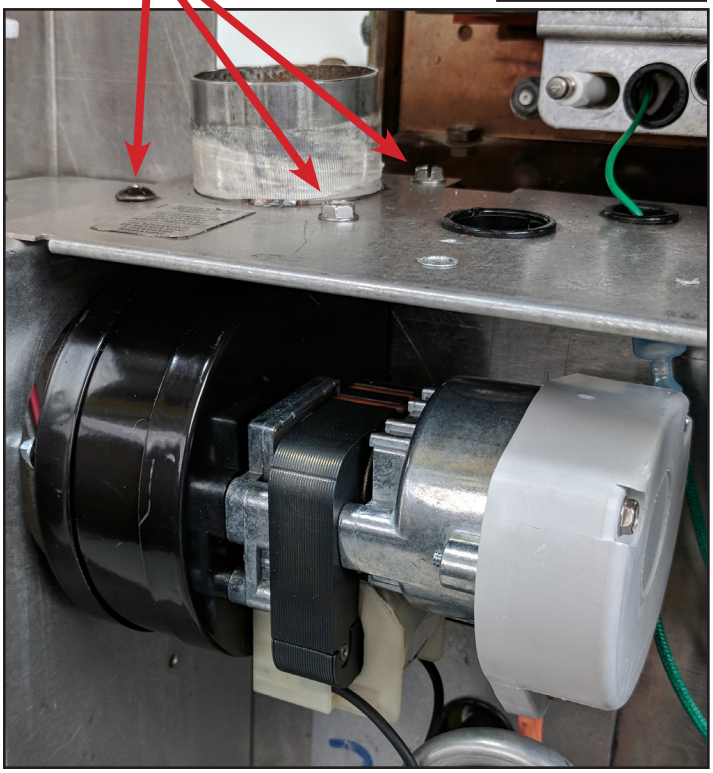
175108



Paso 14 - Motor del soplador
Instale el nuevo motor del soplador del interruptor centrífugo.

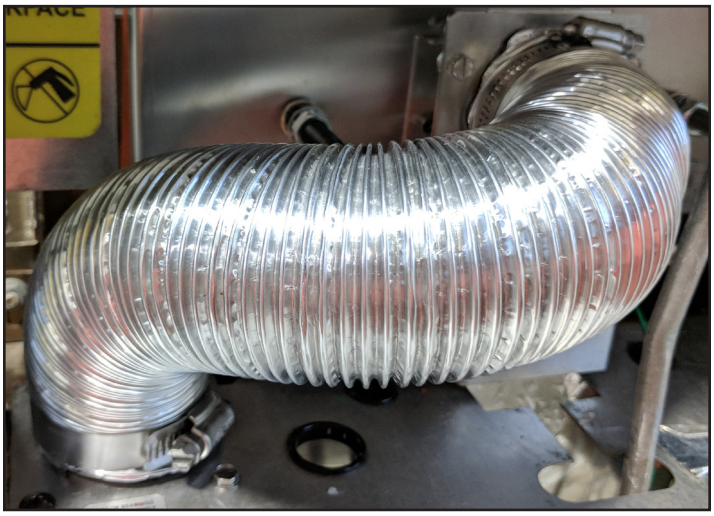


600249



Paso 15 - Manguera
Use dos abrazaderas de manguera para instalar la manguera del soplador.

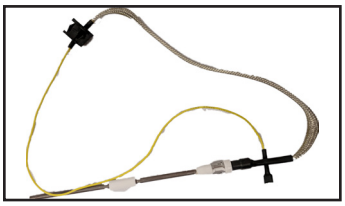
175549 - Dos abrazaderas de manguera
175189 - Una manguera de soplador

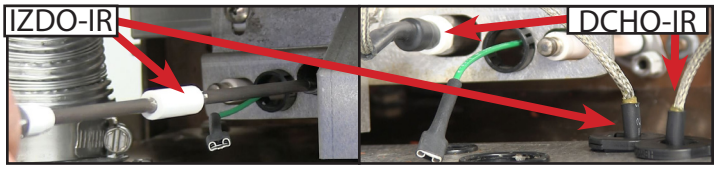


IV. Reconstrucción del asador - Continuación

Paso 16 - Sensor IR superior
Instale los dos sensores IR largos superiores.

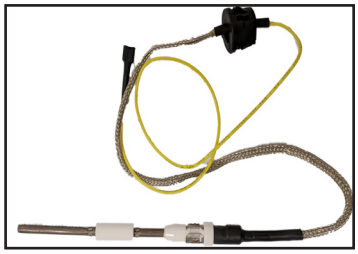
175535 - Dos sensores IR superiores (largos)





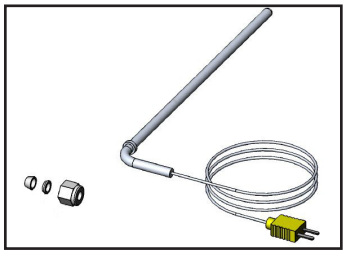
Paso 17 - Sensor IR inferior
Instale el sensor IR inferior corto por la parte trasera del asador.

175534 - Un sensor inferior (corto)

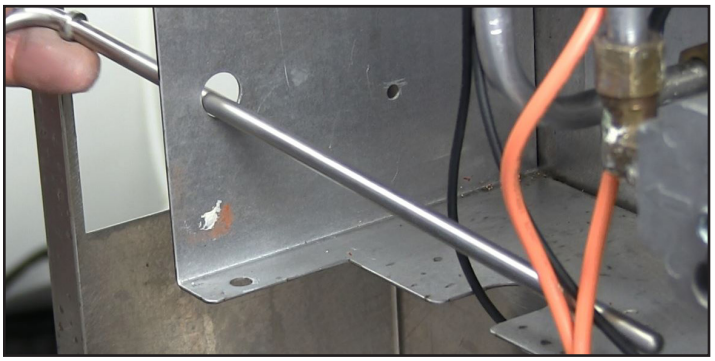




Paso 18 - Sonda de temperatura
18a
Pase la sonda de temperatura por el agujero en la cámara de válvula de gas por la parte delantera del asador.



175977 - Un juego de sondas de temperatura



18b
Pase la sonda por la pared trasera de la cámara de gas, justo detrás de la línea de gas inferior.

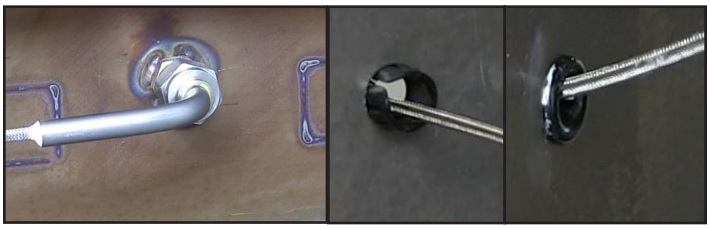


18c
Deslice la tuerca y las conexiones en la sonda.

PRECAUCIÓN **Asegúrese de que las conexiones estén bien orientadas.**



18d
Deslice la tuerca y las conexiones por la sonda. Asegúrese de volver a instalar los bujes Heyco en ambos lugares donde el cable atraviesa el metal.



V. Sistema eléctrico

Consulte el diagrama de conexiones 175611 para todo el sistema eléctrico.

PRECAUCIÓN

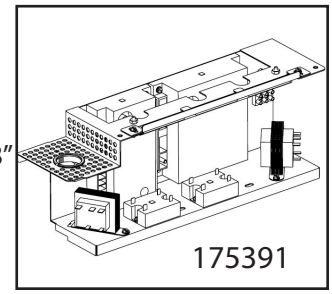
Diagrama de conexiones incluido con el juego y disponible en la última página de estas instrucciones.

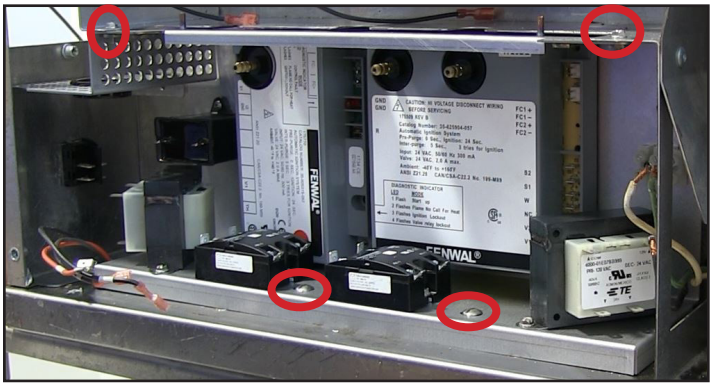
Vea en la página 24 el quemador inferior de gas LP con soplador de purga.

Paso 1 - Conjunto eléctrico
Instale el estante del conjunto eléctrico usando 2 tornillos 10-24 x 1-1/4 y 2 de cabeza hexagonal ranurada 10-24 x 3/8".


281310


175587


175391



Paso 2 - Cordón de alimentación
Conecte el cordón de alimentación principal al bloque de terminales.

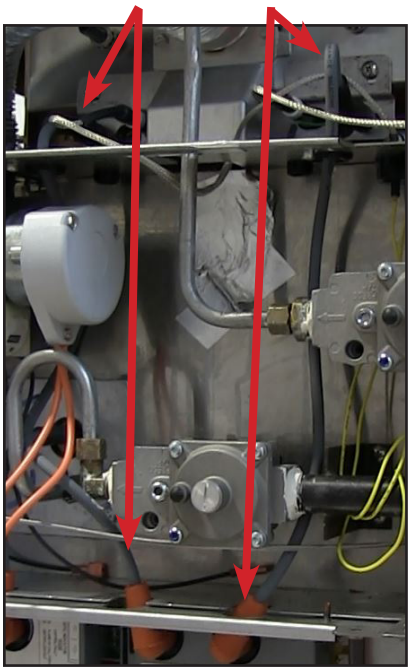


Paso 3 - Cable del encendedor inferior
Instale el cable del encendedor inferior.




175538

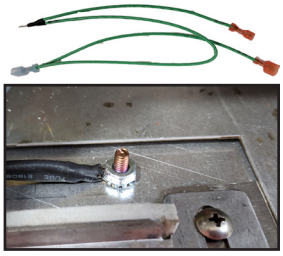
Paso 4 - Cables de los encendedores superiores
Instale los 2 cables de los encendedores superiores.




175537

Paso 5 - Cable de tierra de los encendedores superiores

5a
Conecte el ojal al terminal de tierra en el lado derecho del estante eléctrico.



5b-d
Conecte los dos extremos macho a los dos encendedores superiores. Conecte el extremo hembra a la conexión de tierra del módulo de ignición doble.


Encendedor izquierdo


Encendedor derecho

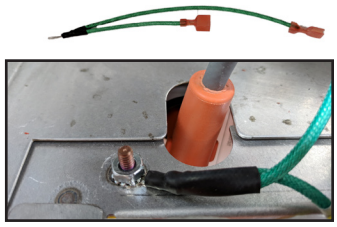


Módulo doble

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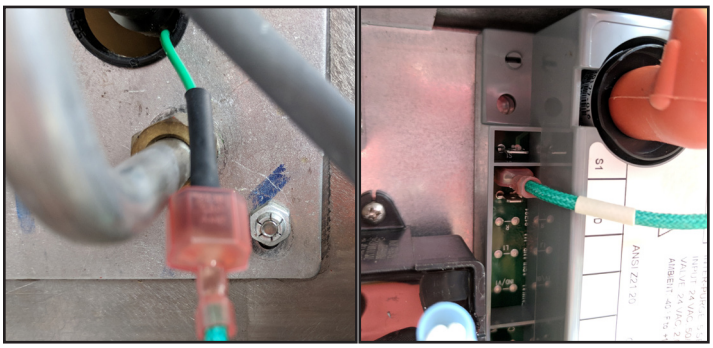
V. Sistema eléctrico - Continuación
Consulte el diagrama de conexiones 175611

Paso 6 - Cable de tierra del encendedor inferior

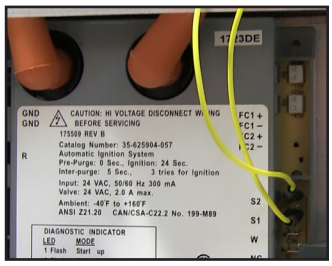


6a
Conecte el ojal al terminal de tierra en el lado izquierdo del estante eléctrico.

6b-c
Conecte el extremo macho a los encendedores inferiores. Conecte el extremo hembra a la conexión de tierra del módulo de ignición individual.



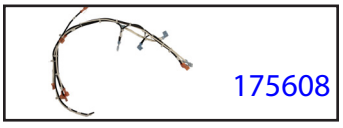
Paso 7 - Sensores IR superiores
Conecte el sensor IR superior al módulo de ignición doble.
Sensor derecho - S1
Sensor izquierdo - S2



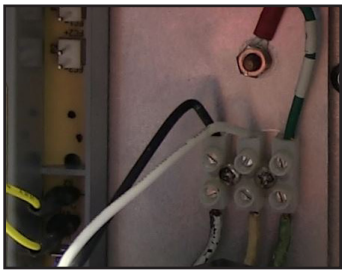


Paso 8 - Sensores IR inferiores
Conecte el sensor IR inferior al módulo de ignición individual.
Sensor inferior - S1

Paso 9 - Arnés de cables de alto voltaje



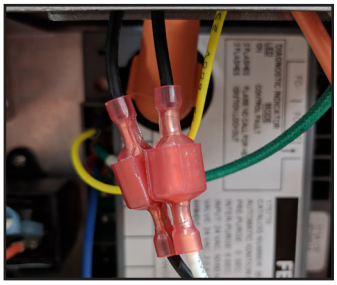
9a
Conecte el cable activado y neutral al bloque de terminales.





9b
Conecte los terminales hembra de bandera 3 y 4 al lado de alto voltaje del transformador.

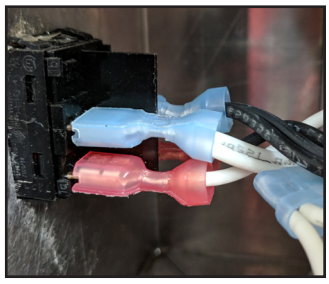
9c
Conecte los terminales macho negro 6 y blanco 3 a los cables principales negros del motor del soplador.

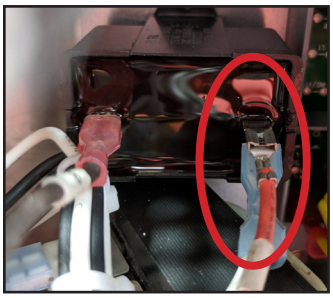




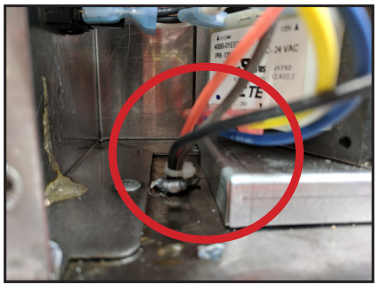
9d
Conecte el terminal blanco doble 3 y el negro doble 4 al lado de alto voltaje del segundo transformador.

9e
Conecte lo siguiente al interruptor de alimentación:
Negro 2 trasero inferior
Negro 4 trasero superior
Blanco 1 delantero inferior
Blanco 3 delantero superior





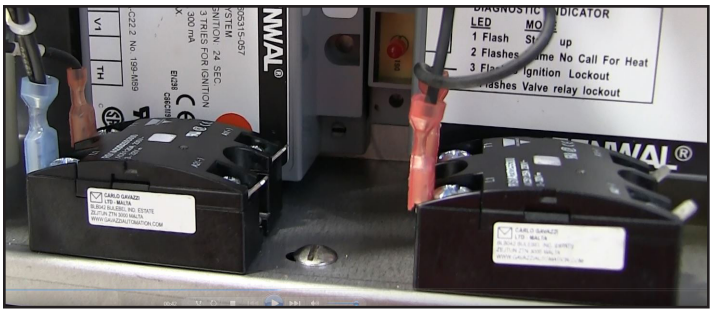
9f
Conecte el terminal hembra blanco doble 3 al cable anaranjado desde la bandeja inferior del asador con el terminal plano y conecte al capacitor.



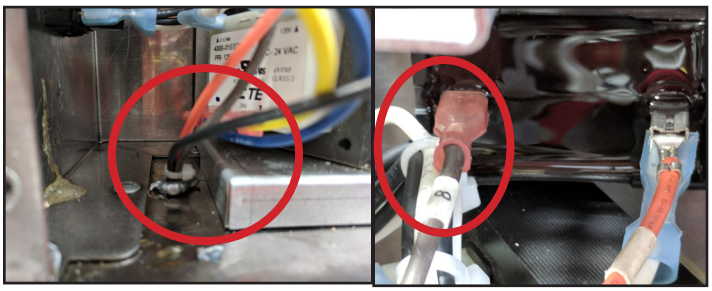
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V. Sistema eléctrico - Continuación
Consulte el diagrama de conexiones 175611

9g
Conecte los cables 4 restantes a L1 en los relés.



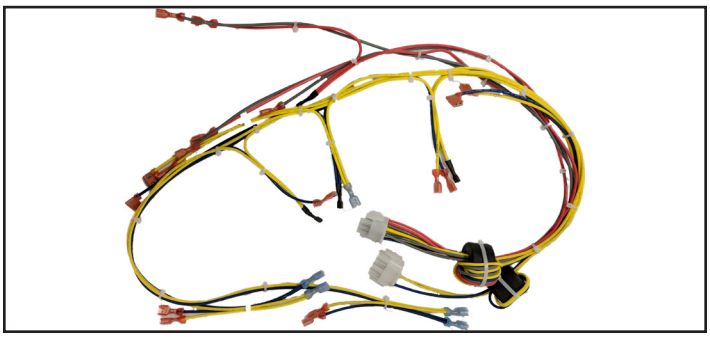
Paso 10
Conecte el cable café 8 al capacitor.



Paso 11
Conecte el cable negro 1 a T1 en el relé del transportador.

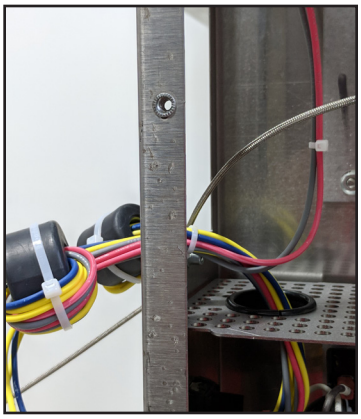


Paso 12 - Arnés de cables de bajo voltaje

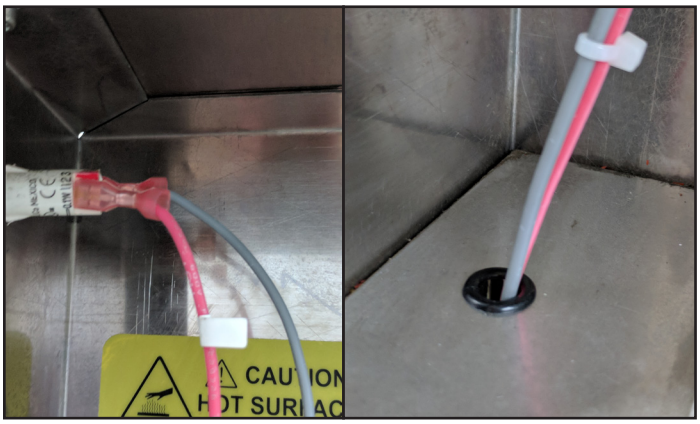


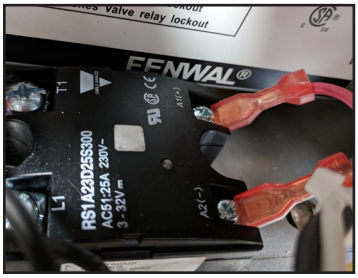
175607 - Un arnés de bajo voltaje

12a
Pase, desde la parte delantera de la unidad, todos los cables excepto el rojo 30 y el gris 33 por el ojal grande del conjunto eléctrico.



12b
Pase los cables rojo 30 y gris 33 hasta el buje Heyco y conecte a la luz.





12c
En el área eléctrica inferior, conecte el cable rojo 30 al positivo y el cable gris 32 al negativo del relé del soplador IR. (Derecho)

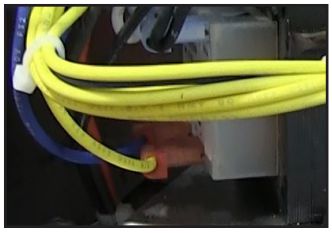
12d
En el área eléctrica inferior, conecte el cable doble rojo 30 al positivo y el cable gris 31 al negativo del relé del transportador. (Izquierdo)



Nota: En este punto los únicos cables para conectar al arnés de bajo voltaje son amarillo y azul.

V. Sistema eléctrico - Continuación
Consulte el diagrama de conexiones 175611

12e
Conecte los terminales se bandera amarillo 11 y azul 12 al lado de bajo voltaje del transformador del controlador.



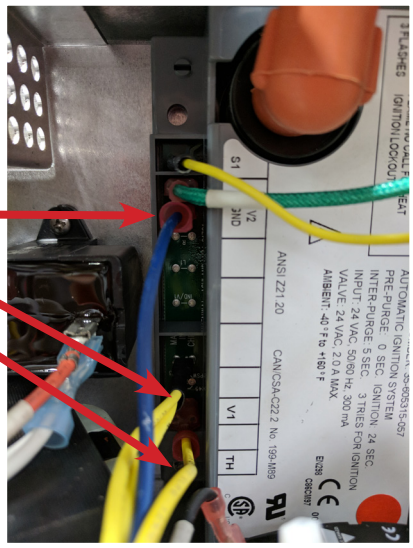
12f
Conecte lo siguiente al quemador inferior del módulo de control de ignición:

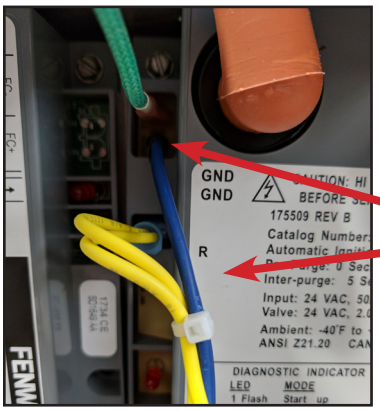
Azul 19 a tierra V2

Amarillo 18 a V1

Amarillo 20 a TH

NOTA: Para unidades de gas LP con soplador de purga, vea instrucciones adicionales en la página 23.

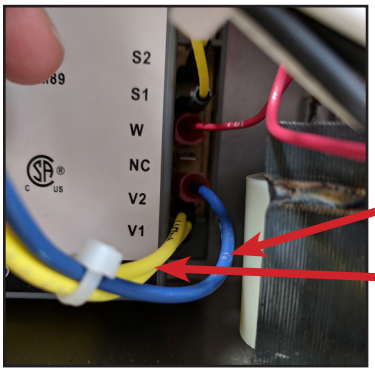




12g
Conecte lo siguiente al quemador IR del módulo de control de ignición: (Módulo doble)

Azul 14 - TIERRA

Amarillo 13 - R

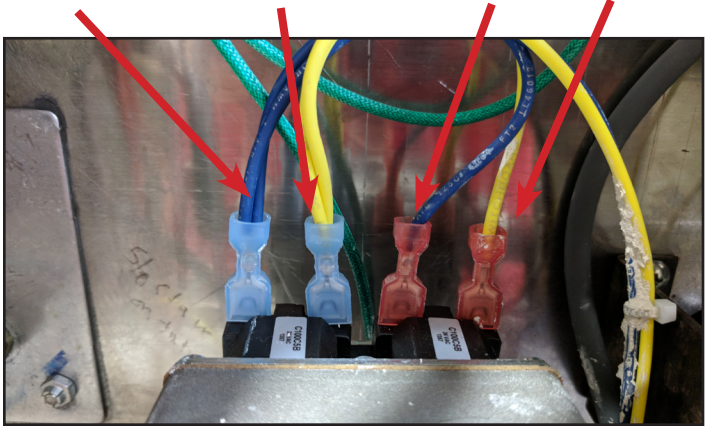


12h
Conecte lo siguiente al quemador IR del módulo de control de ignición: (Módulo doble)

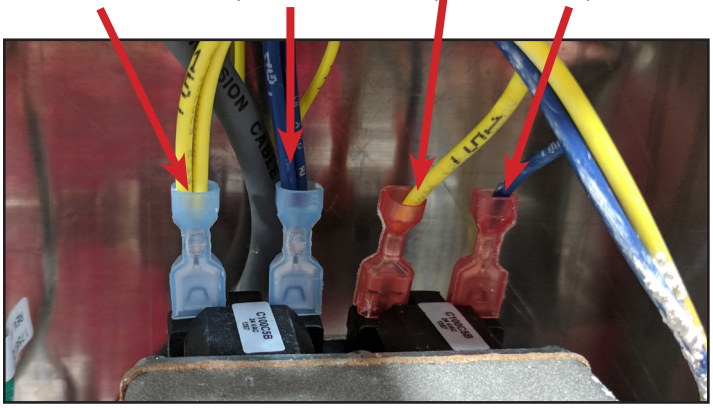
Azul 16 - V2

Amarillo 15 - V1

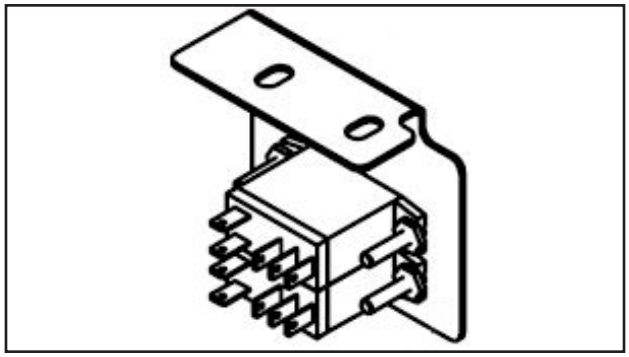
12j
Conecte lo siguiente a la válvula de gas inferior:
Azul 19 - Doble, Amarillo 18 - Doble, Azul 19, Amarillo 18



12k
Conecte lo siguiente a la válvula de gas superior:
Amarillo 15 - Doble, Azul 16 - Doble, Amarillo 15, Azul 16



Paso 13 - Relé del soplador
Nota: Esto debe instalarse en todas las unidades.

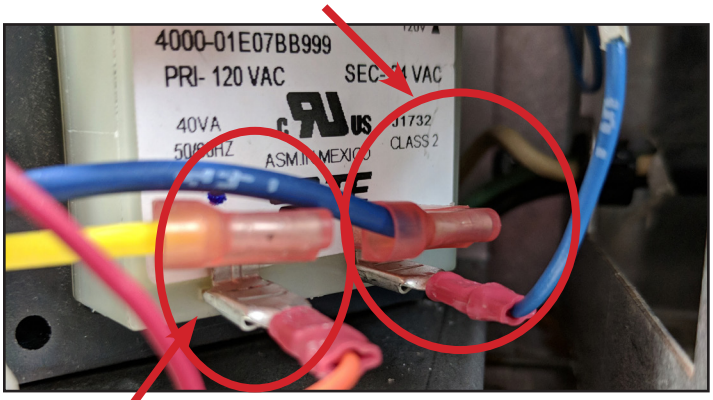


176188 - Un relé del soplador (no se muestra el arnés de cables)

Nota: La unidad se envía con arnés conectado.

V. Sistema eléctrico - Continuación
Consulte el diagrama de conexiones 175611

13a
Conecte el cable azul 5 al transformador del módulo de ignición. Conecte después el terminal de bandera azul 14 del arnés de cables de bajo voltaje al cable azul 5.

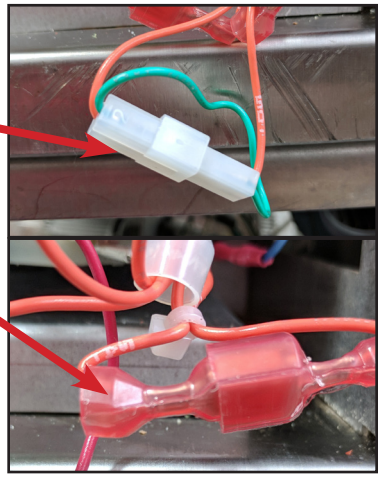


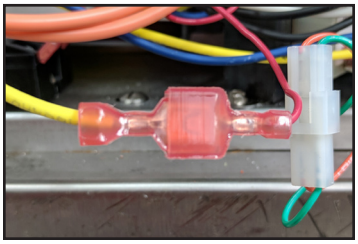
13b
Localice el cable anaranjado 5a con el terminal plano combinado y conecte al transformador del módulo de ignición. Conecte después el cable amarillo 13 con terminal de bandera del arnés de cables de bajo voltaje al terminal plano con el cable anaranjado. (Vea arriba)

13c - Para modelo nacional solamente

- Localice las dos conexiones Molex y conéctelas entre sí.

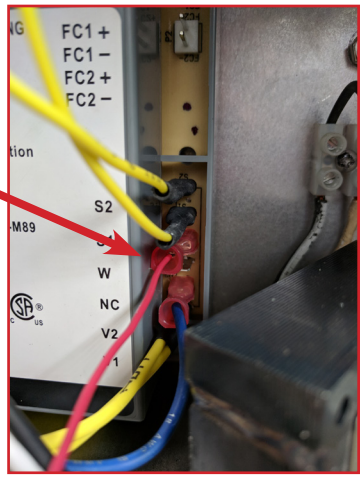
- Localice las conexiones macho y hembra 5a y conéctelas entre sí.



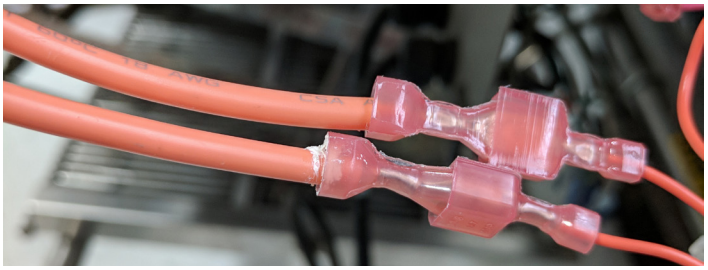


13d
Conecte el cable rojo 2 al cable 21 del arnés de bajo voltaje.

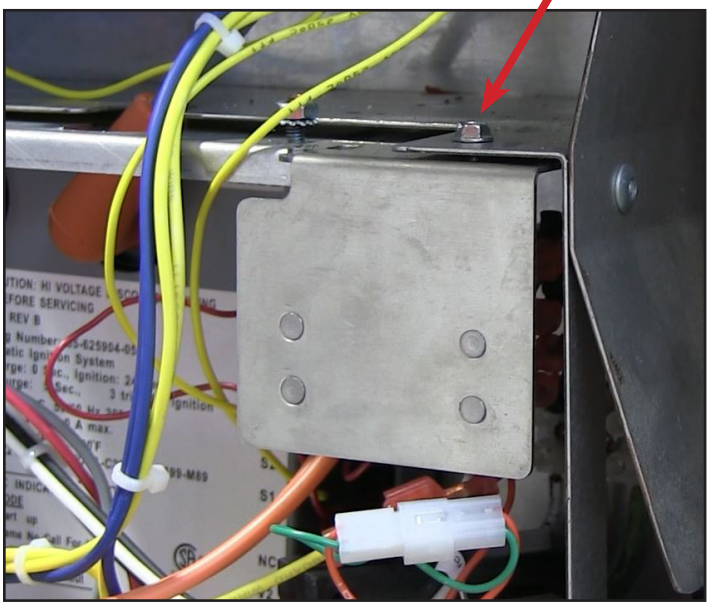
13e
Conecte el cable rojo 5 a la posición W del módulo de ignición para los quemadores IR.



13f
Conecte las dos conexiones macho anaranjadas 3 y 5 a los cables anaranjados del motor del soplador.

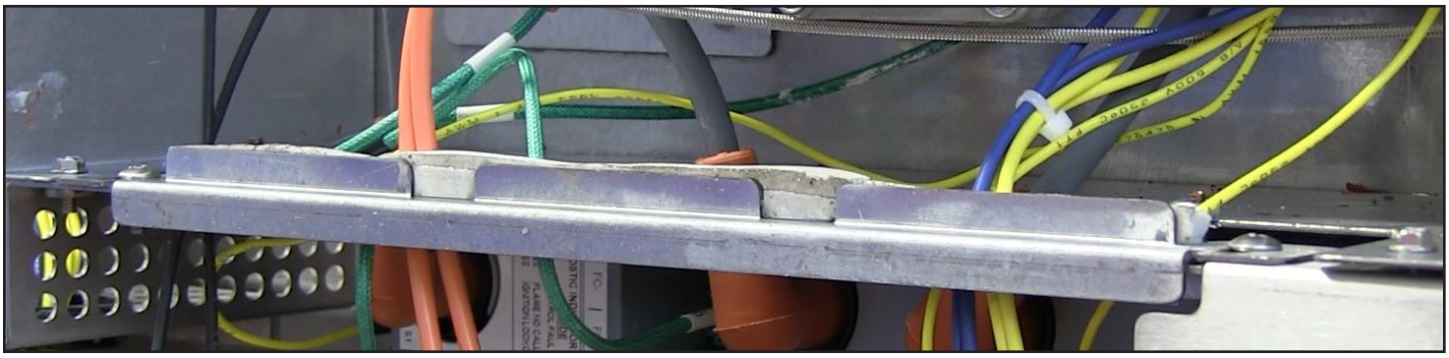


Paso 14 - Relé del soplador
Monte el relé del soplador usando el perno de 8/32" que sujeta el estante eléctrico en posición. (Vea la imagen de abajo)



V. Sistema eléctrico - Continuación
Consulte el diagrama de conexiones 175611

Paso 15 - Soporte de retención del cables
Use dos (2) pernos 10/24 para instalar los soportes de retención de cables asegurándose de que ninguno de los cables esté aprisionado.



Paso 16 - Tablero de control - Mylar
Siga las instrucciones incluidas con el nuevo Mylar para reemplazar el Mylar de control anterior.



Paso 17 - Tablero de control
Conecte el termopar a la parte inferior del tablero de control. Conecte las dos conexiones Molex y después monte el tablero de control en el asador.



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VI. Pruebas de seguridad

⚠ ADVERTENCIA **De no completar estas pruebas se podrían producir daños, lesiones o la muerte.**

Paso 1 - Comprobación de continuidad

Antes de conectar el asador a la corriente, complete una prueba de continuidad en el bloque de terminales haciendo lo siguiente:

A. Compruebe la línea común a tierra **Si la prueba es positiva.**

B. Compruebe la línea a tierra **Si la prueba es negativa.**

Nota: Si falla una de estas pruebas, consulte el diagrama de conexiones para resolver y localizar el problema.

Paso 2 - Reconecte a la corriente

Paso 3 - Prueba de fugas de gas

Reconecte la unidad a la línea de gas.

Compruebe la unidad para ver si hay fugas de gas hasta las válvulas de gas.

Coloque el asador en la modalidad de diagnóstico haciendo lo siguiente:

A. Oprima sin soltar **BK Logo** durante cinco segundos - Muestra "**CODE**".

B. Introduzca **3424** y después oprima el **logotipo BK**- Muestra "**8888**".

C. Oprima la **flecha arriba** una vez. Se encenderá el quemador inferior.

Compruebe todas las conexiones al quemador inferior para ver si hay fugas de gas.

D. Oprima la **flecha arriba** una vez. Se apagará el quemador inferior y se encenderán los quemadores superiores.

Compruebe todas las conexiones a los quemadores superiores para ver si hay fugas de gas.

E. Oprima la **flecha arriba** una vez y el asador pasará a **reserva**.

F. Oprima la **flecha abajo** una vez para arrancar el transportador.

G. Oprima la **flecha abajo** una vez para apagar el transportador.

Nota: No deje que la cadena funcione durante más de 10 segundos.

Oprima el **logotipo de BK** para salir de la modalidad de **Diagnóstico**.

Paso 4 - Fije la presión de gas

Encienda la unidad y deje que se caliente a 400 grados, de modo que ambos quemadores estén encendidos.

• Para gas natural, ajuste cada válvula a 3.75" de columna de agua

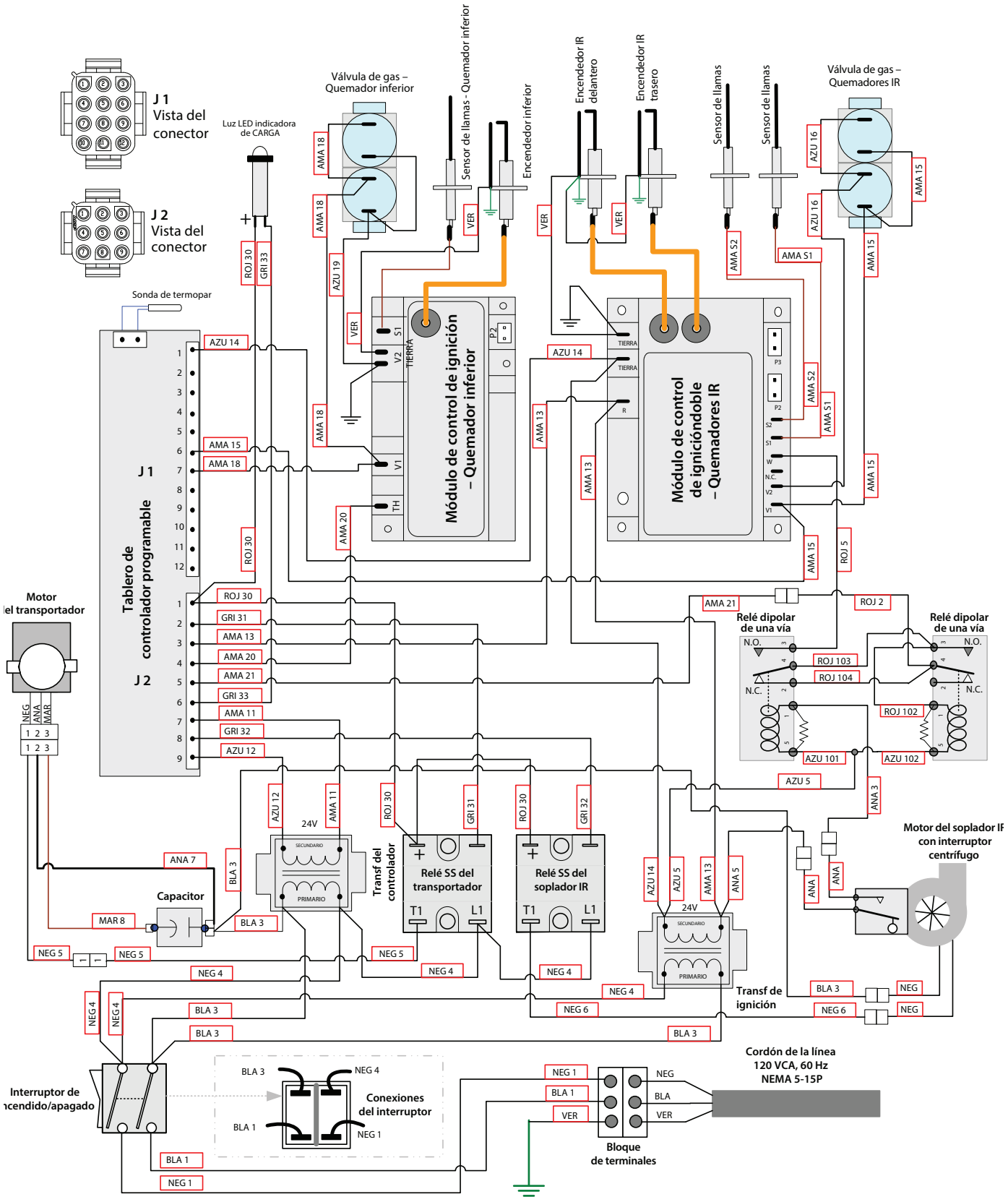
• Para gas LP, ajuste cada válvula a 8.0" de columna de agua

Paso 5 - Vuelva a colocar todos los paneles

Instale los paneles restantes asegurándose de que los cables no estén aprisionados o expuestos.

ESQUEMA ELÉCTRICO - ASADOR POR TANDAS FLEXIBLE

DUKE MFG. N/P 175611 Rev. E

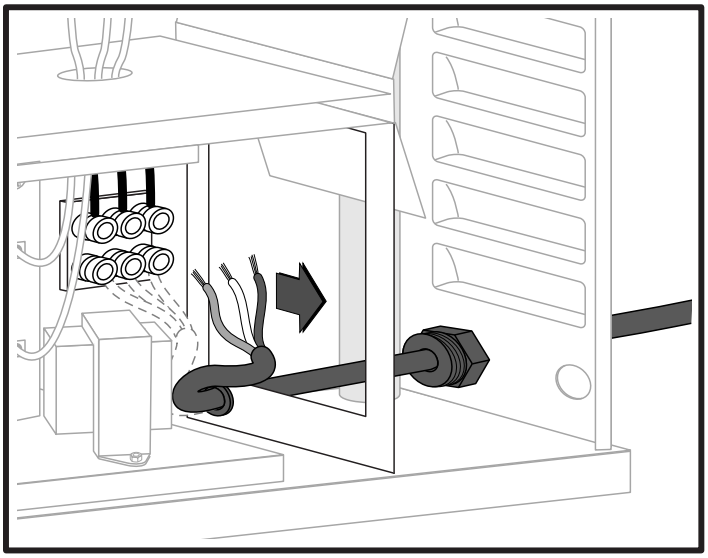


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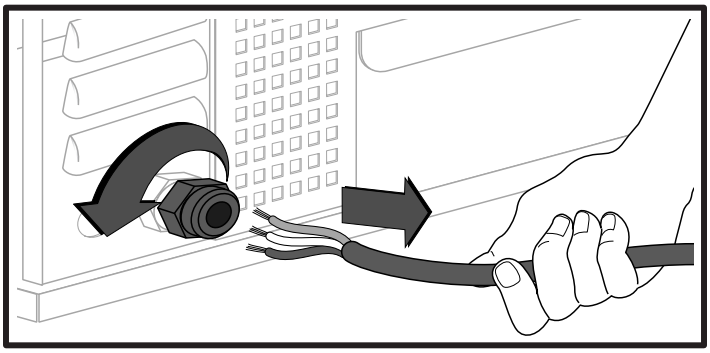
VII. LP con soplador de purga

Conexiones de la unidad

PASO 1 - Desconecte el cordón de alimentación principal del bloque de terminales.



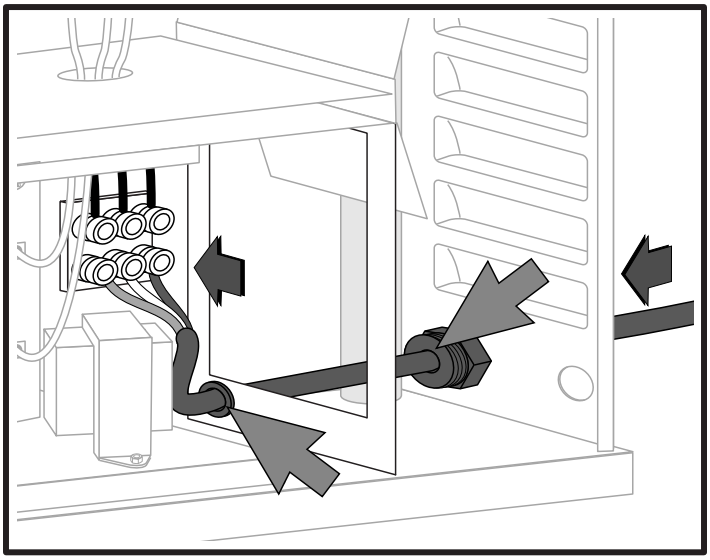
PASO 2 - Afloje la tuerca protectora contra tirones y desconecte el cordón de alimentación de la unidad.



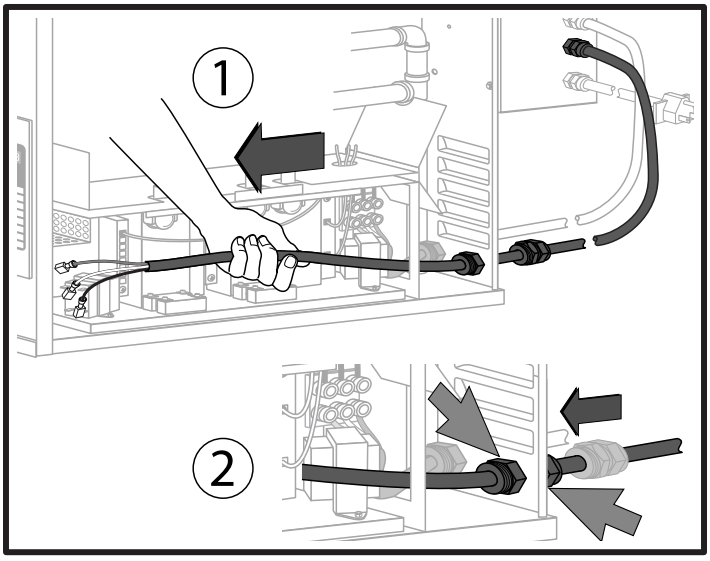
PASO 3 - Tienda el cable de alimentación del arnés (premontado en el conjunto de soplador) por el protector contra tirones y el buje en el tabique.

PASO 4 - Conecte el arnés al bloque de terminales según se muestra y de acuerdo al diagrama de cables incluido.

PASO 5 - Apriete firmemente la tuerca en el protector contra tirones para fijar el cordón.



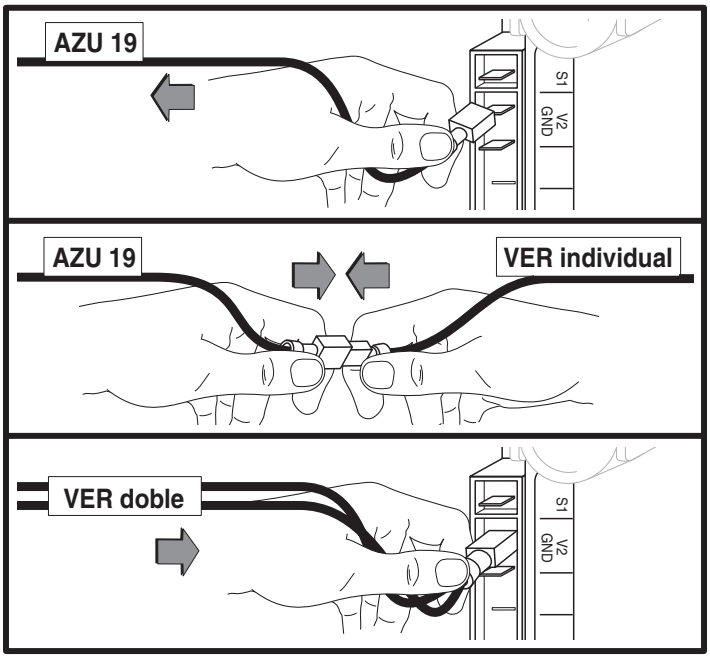
PASO 6 - Quite la contratuerca de la mampara del protector contra tirones y tienda el arnés por el agujero del protector perforado de antemano. Una vez que el arnés se haya pasado por el agujero, vuelva a instalar la contratuerca de mampara y sujete el protector contra tirones al panel / mampara. Asegúrese de que la longitud del arnés sea suficientemente larga para hacer que las conexiones al módulo de ignición y apriete firmemente la tuerca para fijar el cordón.



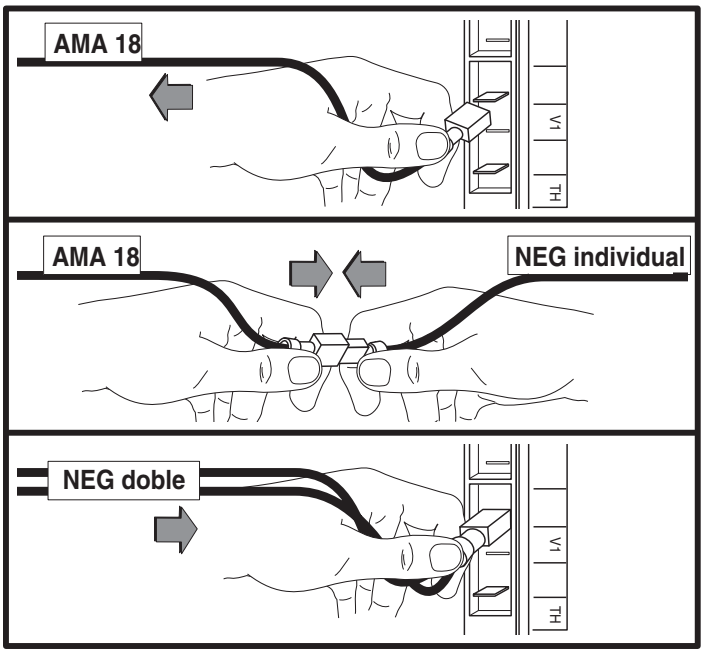
VII. Gas LP con soplador de purga - continuación

PASO 7 - Siguiendo el diagrama de conexiones, haga las conexiones siguientes en el módulo de encendido:

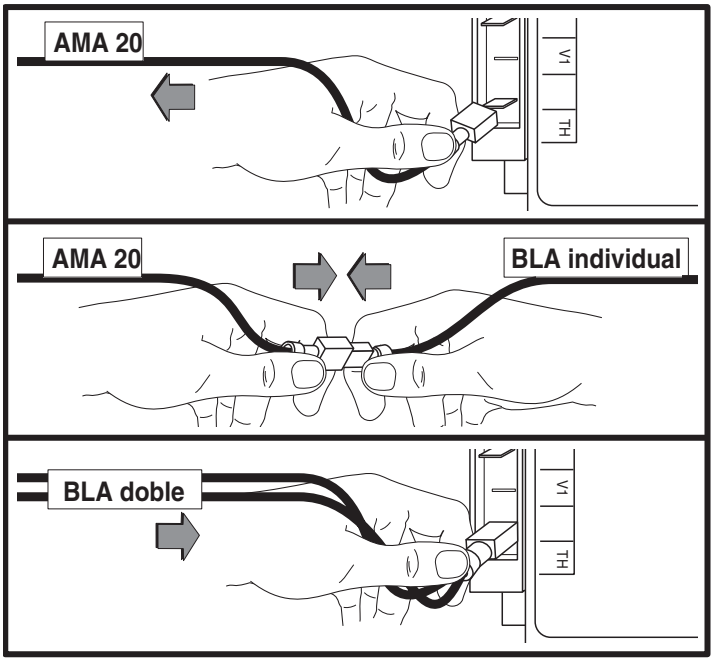
a. Desconecte el cable azul 19 de V2 y conecte con el cable verde (cable individual). Conecte el engarzado doble verde a V2.

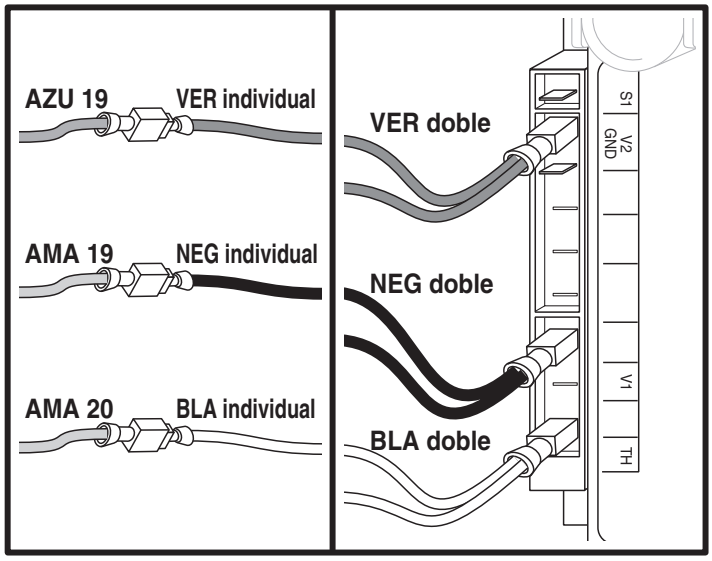


b. Desconecte el cable amarillo 18 de V1 y conecte al cable negro (cable individual). Conecte el engarzado doble negro a V1.



c. Desconecte el cable amarillo 20 de TH y conecte al cable blanco (cable individual). Conecte el engarzado doble blanco a TH.





NOTA: ASEGÚRESE DE QUE TODAS LAS CONEXIONES ESTÉN APRETADAS

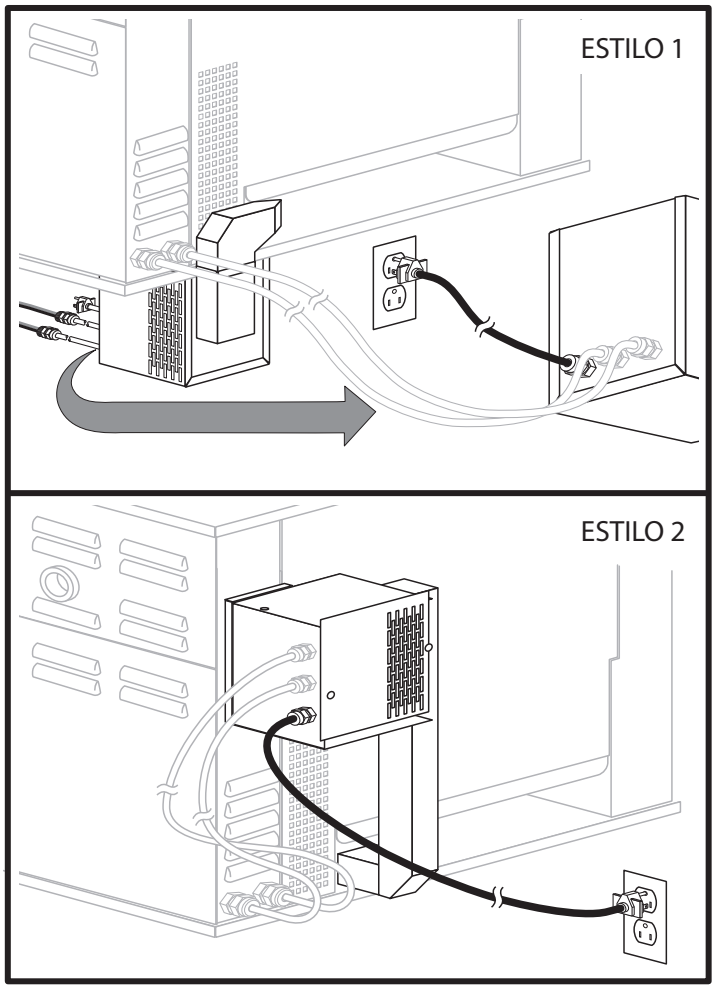
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VII. Gas LP con soplador de purga - continuación

Prueba de conjunto de soplador:

PASO 1 - Conecte el cordón de alimentación del conjunto de caja de soplador a la corriente eléctrica de la instalación.

NOTA: Solamente se requiere una toma de corriente para alimentar el asador.



PRECAUCIÓN

Los pasos siguientes efectuarán una prueba funcional en el conjunto de soplador. Con el suministro de gas cerrado, el conjunto de soplador debe funcionar después del primer encendido fallido del quemador.

PASO 2 - Encienda el asador con el suministro de gas cerrado.

PASO 3 - Verifique que el soplador se encienda después de aproximadamente 7 segundos. Permanecerá encendido durante unos 5 segundos hasta que se vuelva a intentar el ciclo.

a. **Si confirma que el soplador se enciende:** Apague el asador y vaya al paso siguiente.

b. **Si el soplador no se enciende: PARE** y llame al departamento de servicio.

NOTAS



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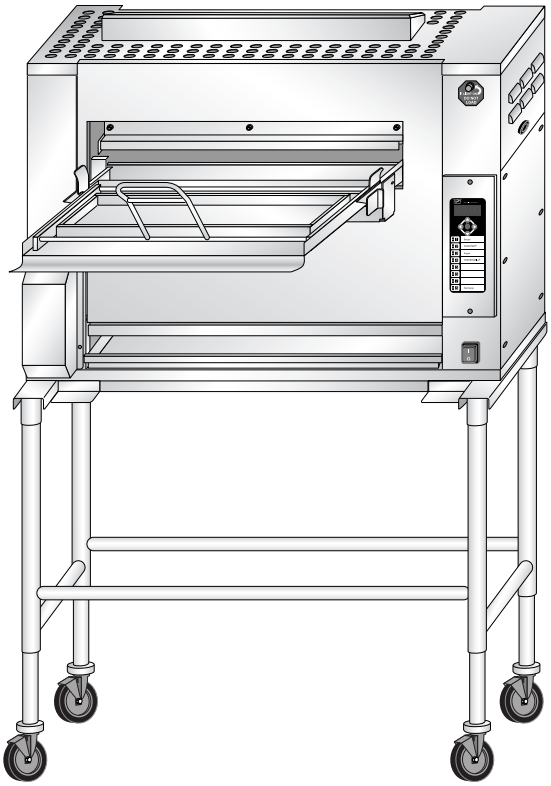
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Teléfono gratuito: 1-800-735-3853
Fax: 314-231-5074

www.dukemfg.com

Service Manual

Your Solutions Partner

FLEXIBLE BATCH BROILER



MODELS

FBB-NO-120
FBB-NC-120
FBB-PO-120
FBB-PC-120

Please read this manual completely before attempting to install, operate or service this equipment

This document is prepared for trained Duke service technicians. It is not to be used by anyone not properly qualified to perform these procedures.

This Service Manual is not all encompassing. If you have not been trained on servicing this product, be sure to read the manual completely before attempting servicing. Be sure all necessary tools, test equipment, and skills are available. Those procedures for which you do not have the proper skills and test equipment must be performed only by a qualified Duke trained service technician.

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P/N 175782C

IMPORTANT WARNING AND SAFETY INFORMATION

IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT. THE QUALIFIED INSTALLER SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

IMPORTANT

THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED SHOULD BE POSTED IN A PROMINENT LOCATION. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN BROILER AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

IMPORTANT FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

WARNING

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

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INTRODUCTION

INSTALLATION

For detailed installation instructions, refer to the Installation and Operation Manual.

OPERATION

For specific operating instructions, refer to the Installation and Operation Manual.

CLEANING

For specific cleaning instructions, refer to the Installation and Operation Manual.

SPECIFICATIONS

	NATURAL GAS		PROPANE	
MANIFOLD PRESS. TOP BURNERS	3.75″ WC	0.93 kPa	8″ WC	2.0 kPa
MANIFOLD PRESS. BOT. BURNER	3.75″ WC	0.93 kPa	8″ WC	2.0 kPa
ALTITUDE (MAXIMUM)	2000 FT	607 m	2000 FT	607 m
GAS PIPE CONNECTION	3/4" F-NPT		3/4" F-NPT	
INLET PRESSURE RANGE	7"–12" W.C.		10"–12" W.C.	
TOTAL ENERGY RATE	87,000 – 111,000 BTU/HR	25.5 –32.5 kW	79,000 –105,000 BTU/HR	23.2 –30.7 kW
BURNER ORIFICE SIZE BURNER ORIFICE SIZE				
FRONT INFRARED BURNER	#40	2.49mm	#52	1.61mm
BACK INFRARED BURNER	#36	2.70mm	#51	1.70mm
LOWER BURNER	#31	2.05mm	#49	1.85mm
ELECTRICAL				
MODEL NUMBER	VOLTAGE	AMPS	CYCLE	PLUG
*FBB-NO-120	120	2	60	NEMA 5-15P
*FBB-NC-120	120	2	60	NEMA 5-15P
*FBB-PO-120	120	2	60	NEMA 5-15P
*FBB-PC-120	120	2	60	NEMA 5-15P
SHIPPING WEIGHT	lbs	Kg		
BATCH BROILER (STANDARD)	482	219		
SHIPPING DIMENSIONS	Standard		Metric (cm)	
L X W X H	47″ X 34″ X 68″		119.4 X 86.4 X 172.7	

* Model Number Information:

- FBB-NO-120: Natural Gas No Catalyst
- FBB-NC-120: Natural Gas with Catalyst
- FBB-PO-120: Propane Gas No Catalyst
- FBB-PC-120: Propane Gas with Catalyst

TOOLS

Standard

- Standard set of hand tools.
- VOM with AC current tester (Any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Manometer
- Pyrometer
- Gas Leakage Tester or method to test for gas leaks
- Conveyor Link Removal Pliers
- Duke Testing Harness

WARNING

THIS BROILER IS DESIGNED TO OPERATE WITH INCOMING NATURAL GAS PRESSURES BETWEEN 7" AND 12" WATER COLUMN (WC). SERVICE PRESSURES ABOVE 12" WC OR LESS THAN 2 PSI, WILL REQUIRE DUKE'S HIGH SUPPLY NATURAL GAS KIT (P/N 175689). THE KIT INCLUDES COMPONENTS TO ADD AN EXTERNAL REGULATOR TO THE BROILER. THE REGULATOR SHOULD BE ADJUSTED AFTER INSTALLATION TO 7" WC PER THE ENCLOSED INSTRUCTIONS. FOR INCOMING PRESSURE LESS THAN 7" WC CONTACT GAS SUPPLIER.

REMOVAL AND REPLACEMENT OF COMPONENTS

COVERS AND PANELS

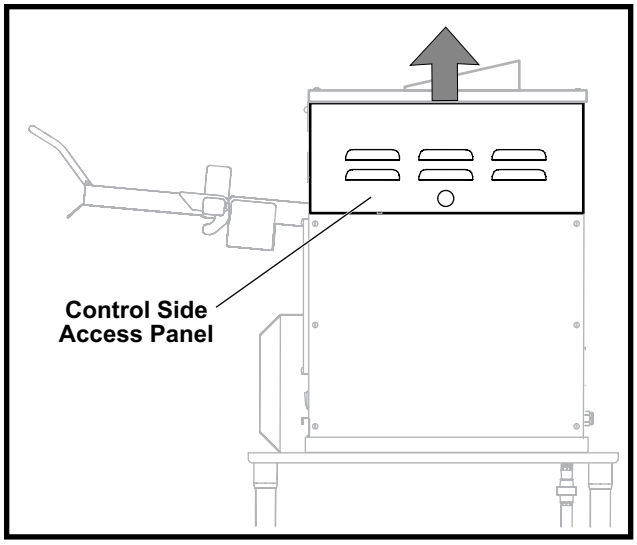
> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

Caution: If the broiler has been operating, broiler panels and components may be hot. Use PROPER PROTECTION.

Upper Lift Off Panel

The Upper Lift Off Panel provides access to the Upper Flame Sensors, Igniters and Blower Hose.

1. Remove Upper Lift Off Panel by lifting up and removing from broiler.
2. Install Upper Lift Off Panel by lowering into the side grooves.

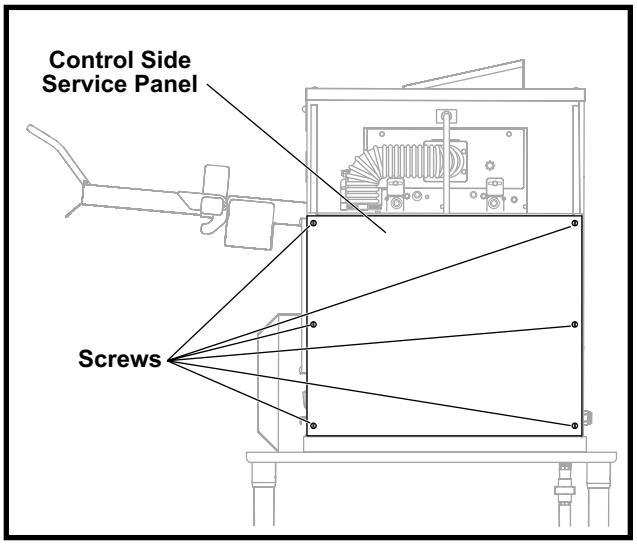


Upper Lift Off Panel

Lower Control Side Service Panel

The Lower Control Side Service Panel provides access to the Combo Gas Valves, Ignition Modules, Transformers, Blower Motor, Conveyor Motor Capacitor, and electrical connections to the Control Board.

1. Remove the six screws securing the Lower Control Side Service Panel.
2. Remove the panel from the broiler.
3. Reverse procedure to install the Lower Control Side Service Panel.

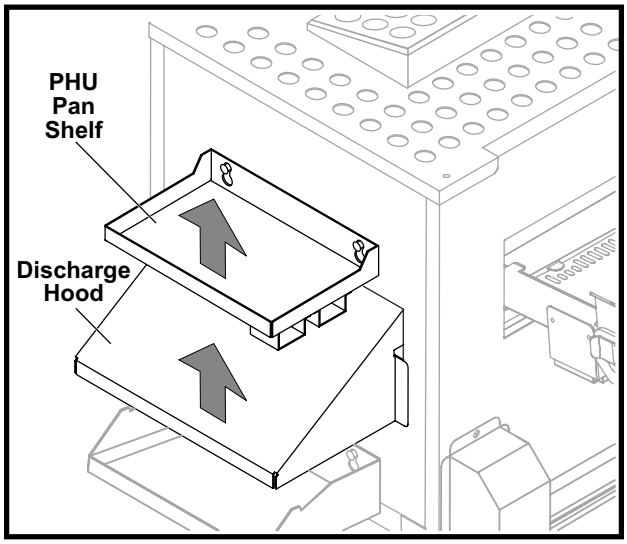


Lower Control Side Service Panel

PHU Pan Shelf

The PHU Pan Shelf is located on the discharge side of the broiler and holds the unused holding pans.

1. Lift the pan shelf up and remove.
2. To install the pan shelf, slide the keyholes over the two screws and slide pan shelf down.



PHU Pan Shelf and Discharge Hood

Discharge Hood

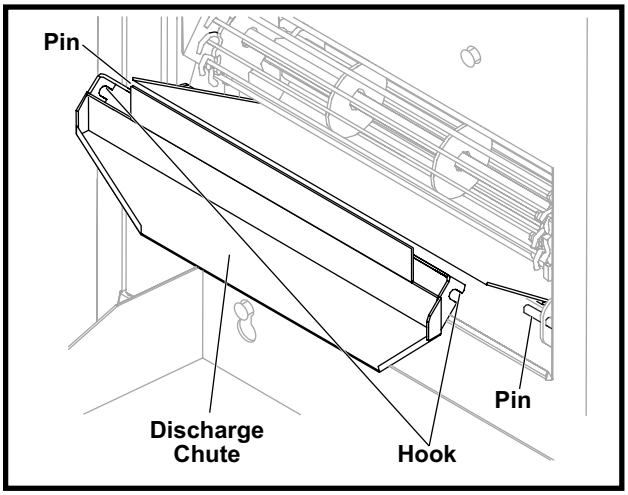
The Discharge Hood is located on the discharge side of the broiler under the PHU Pan Shelf.

1. Remove the PHU Pan Shelf.
2. Remove the Discharge Hood by lifting out.
3. Install Discharge Hood by lowering into the side grooves.
4. Reinstall the PHU Pan Shelf.

Discharge Chute

The Discharge Chute is located under the Discharge Hood and guides the patties from the conveyor into the Discharge Pan.

1. Remove PHU Pan Shelf.
2. Remove the Discharge Hood.
3. Remove Discharge Chute by lifting off of the two side pins.
4. Reverse procedure to install Discharge Chute, being sure to rest the hooks onto the pins on both sides.

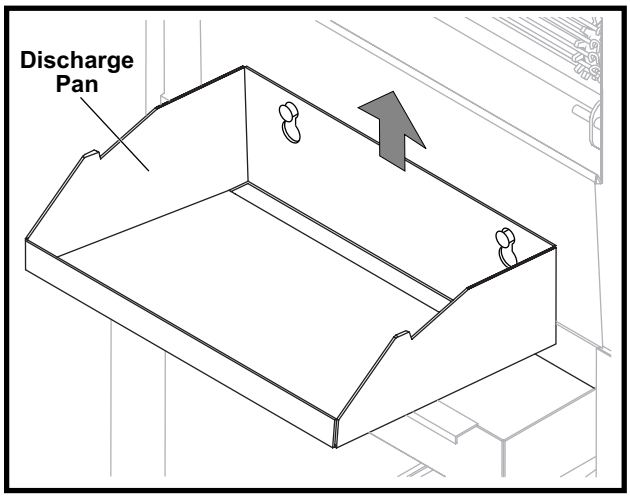


Discharge Chute

Discharge Pan

The Discharge Pan is located on the discharge side of the broiler below the Discharge Hood and is used to support the PHU Holding Pan (not supplied).

1. Remove the PHU Holding Pan if present.
2. Slide Discharge Pan up and out of keyhole slots.
3. Install Discharge Pan by lowering it into the thumbscrews.



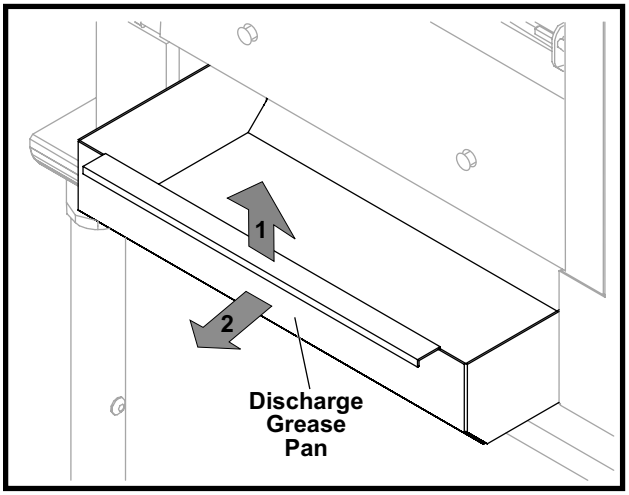
Discharge Pan

Discharge Grease Pan

The Discharge Grease Pan is located below the Discharge Pan and catches any grease drippings.

1. Tilt Discharge Grease Pan up to unhook and pull forward to remove.
2. When installing the Discharge Grease Pan, be sure to tilt up and push all the way back.

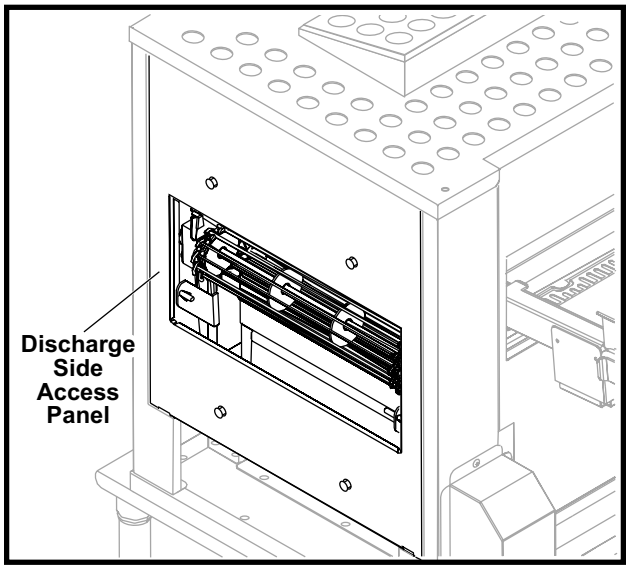
NOTE: Correct positioning will not allow pan removal without upward tilt.



Discharge Grease Pan

Discharge Access Panel

1. Remove the PHU Pan Shelf.
2. Remove Discharge Hood.
3. Remove Discharge Chute.
4. Remove Discharge Pan.
5. Remove Discharge Grease Pan.
6. Remove Discharge Access Panel by lifting it up and out.
7. Reverse procedure to install Discharge Access Panel.



Discharge Access Panel

Main Grease Pan

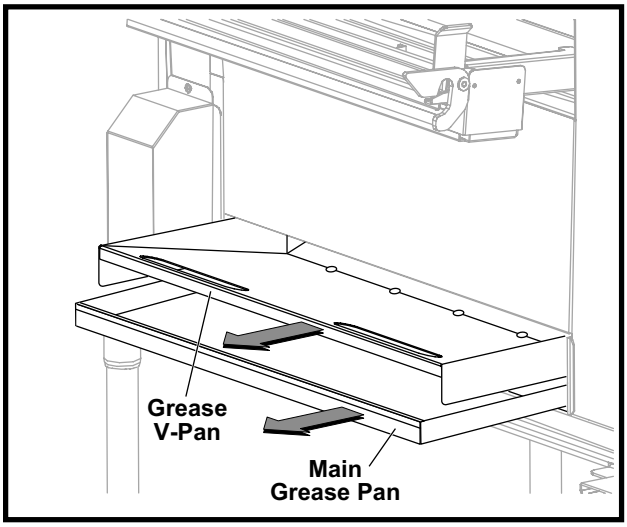
The Main Grease Pan is located on the front of the broiler under the V Grease Pan.

Remove the Main Grease Pan by sliding straight out of broiler.

V Grease Pan

The V Grease Pan is located on the front of the broiler under the Loader Tray.

Remove pan by sliding straight out from broiler.

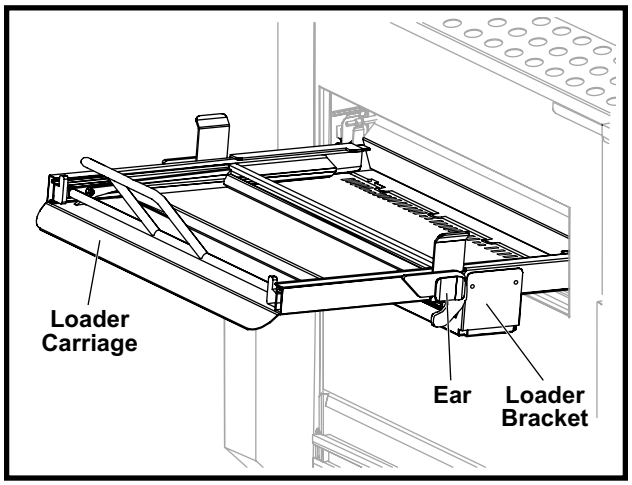


V Grease Pan and Main Grease Pan

Loader Tray

The Loader Tray is located on the front of the broiler and slides into the channels on the Loader Brackets.

1. Remove Loader by sliding it out of the Loader Tray.
2. Remove Loader Tray from the Loader Brackets by pulling forward and disengaging ears on Loader Tray from keepers on the Loader Brackets.
3. Install Loader Tray by sliding it into bracket and engaging ears with keepers.

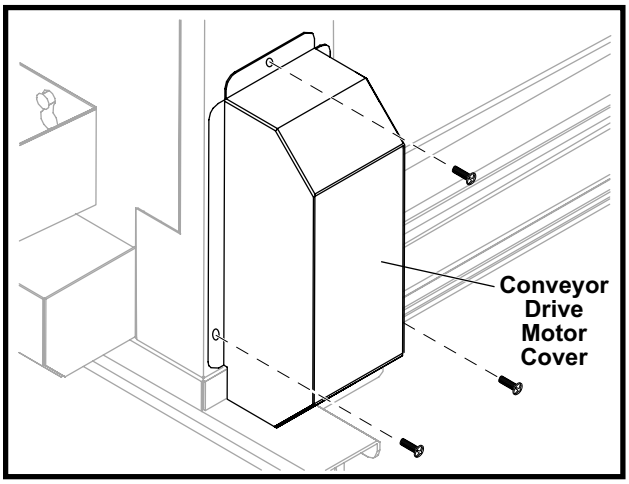


Loader Tray

Conveyor Drive Motor Cover

The Conveyor Drive Motor Cover, located on the lower front of the broiler on the discharge side, covers the Drive Chain Motor.

1. Remove the Main Grease Pan and the V Grease Pan.
2. Remove the three screws securing the cover to the broiler.
3. Lift Conveyor Drive Motor Cover off the broiler.

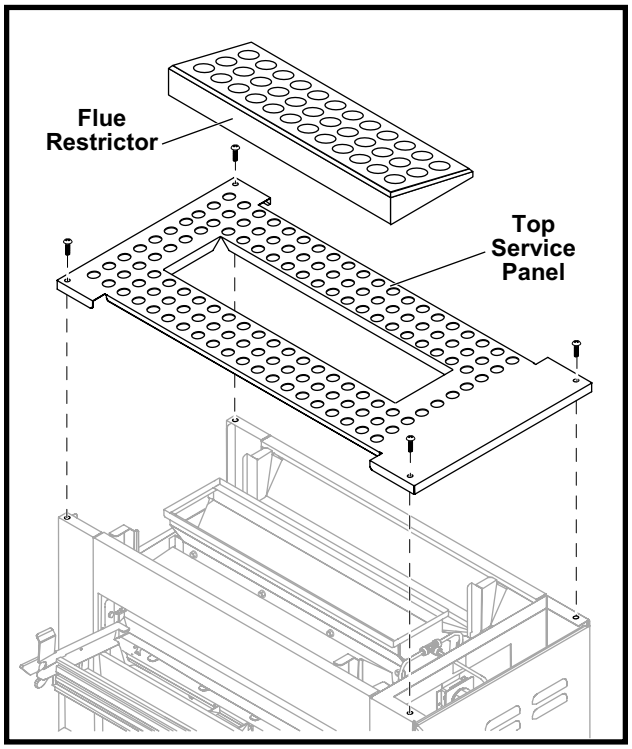


Conveyor Drive Motor Cover

Top Service Panel

The perforated Top Service Panel provides access to the two Infrared Burners

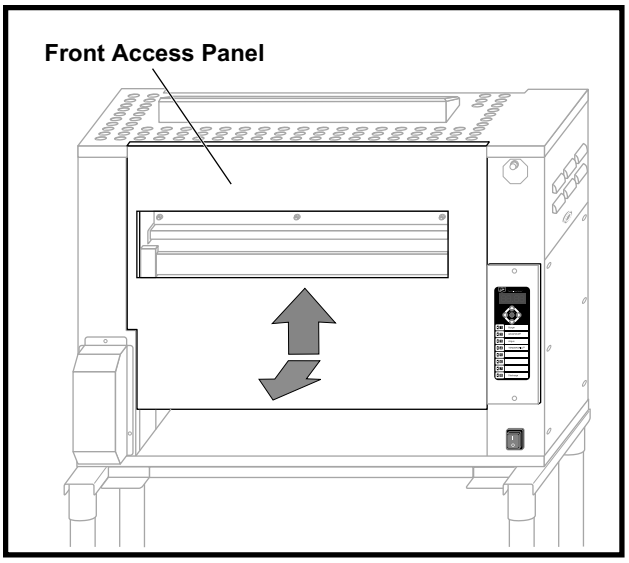
1. Remove the four screws securing the perforated Top Service Panel.
2. Remove the perforated Top Service Panel from the broiler.
3. Reverse procedure to install the perforated Top Service Panel.



Top Service Panel

Removing the Front Panel

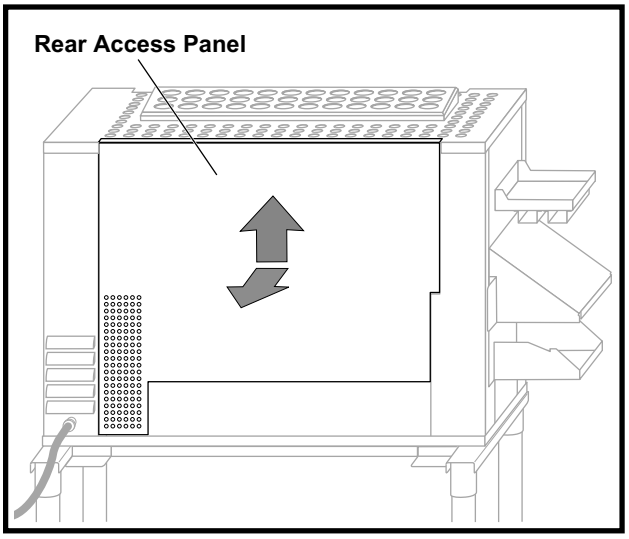
1. Slide the Loader out of the Loader Tray.
2. Unlatch the Loader Tray and slide it out of the Loader Tray Mounting Brackets.
3. Pull the Main Grease Pan out of the front of the broiler.
4. Pull the V Grease Pan out of the front of the broiler.
5. Lift the Front Panel up and away from the broiler.
6. Reverse these steps to reinstall these parts.



Front Panel

Removing the Rear Panel

1. Lift the Rear Panel up and away from the broiler.
2. Reverse to reinstall the Rear Panel.



Rear Panel

COMPONENT REMOVAL

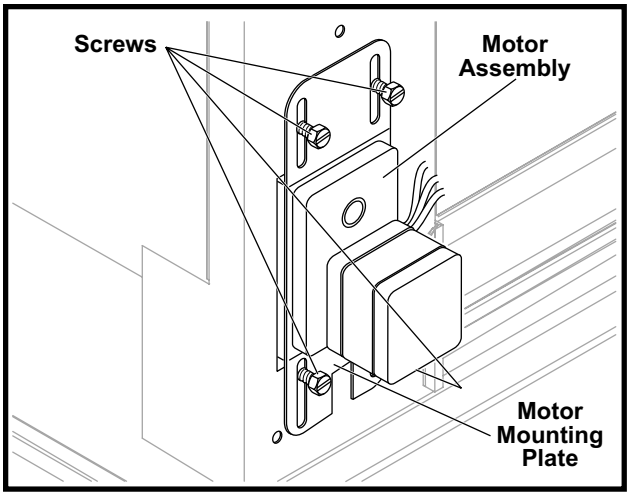
CONVEYOR DRIVE MOTOR ASSEMBLY

The Conveyor Drive Motor Assembly is located in the lower front of the broiler at the discharge end. The motor drives the Conveyor by use of a drive chain.

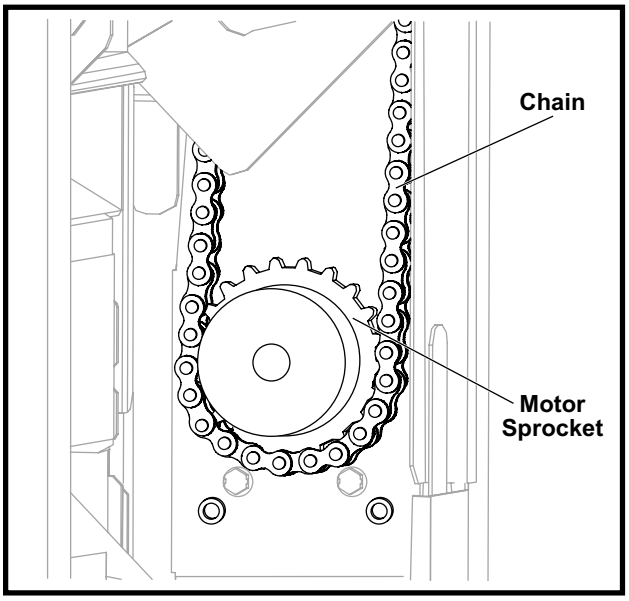
> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires to motor.
3. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
4. Remove four screws securing motor to mounting plate and remove motor.
5. Raise motor mounting plate to disengage drive chain from motor pulley.
6. Remove sprocket from motor shaft. Sprocket is secured to motor shaft by two set screws.
7. Reverse procedure to install a new motor. Ensure that one of the sprocket set screws is tightened to the flat side of the motor shaft.

NOTE: When installing the new motor, be sure to engage the chain on the motor sprocket. Adjust the tension on the chain to allow 3/16″ chain deflection, as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.



Conveyor Drive Motor Assembly



Motor Sprocket and Drive Chain

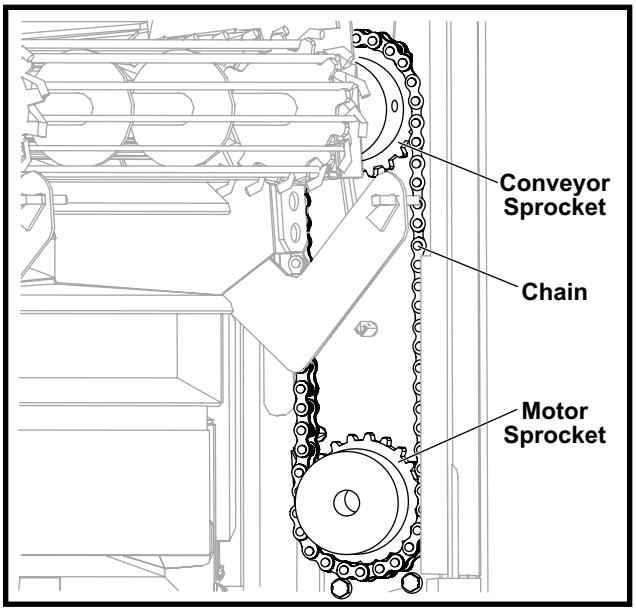
Conveyor Drive Chain

The Conveyor Drive Chain connects the drive motor to the Conveyor.

> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect motor wires.
4. Remove four screws securing motor mounting plate.
5. Raise motor mounting plate to disengage drive chain from motor sprocket.
6. Disengage chain from conveyor sprocket.
7. Remove chain from broiler by removing the master link.
8. Reverse procedure to install a new chain.

NOTE: When installing the new chain, be sure to engage the chain on the motor sprocket and conveyor sprocket. Then adjust the tension on the chain to allow 3/16″ chain deflection, as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.



Drive Chain and Sprockets

Conveyor Drive Motor Sprocket

The Conveyor Drive Motor Sprocket is attached to the motor shaft.

> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect the motor wires.
4. Remove the four screws securing motor mounting plate.
5. Raise motor mounting plate to disengage drive chain from motor sprocket.
6. Disengage drive chain from motor sprocket.
7. Loosen the two setscrews on motor sprocket and remove sprocket from motor shaft.

8. Reverse procedure to install a new Conveyor Drive Motor Sprocket, ensuring that one set screw is tightened to the flat side of the motor shaft.

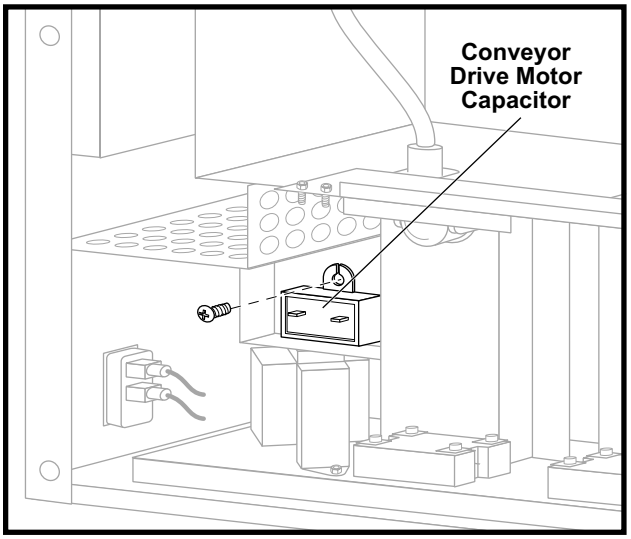
NOTE: When installing the new Conveyor Drive Motor Sprocket, be sure to engage the chain on the motor sprocket and conveyor sprocket, then adjust the tension on the chain to allow 3/16″ chain deflection as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.

Conveyor Drive Motor Capacitor

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect wires to Conveyor Drive Motor Capacitor.
4. Discharge the capacitor. Ground the two leads to the broiler frame.
5. Remove screw securing capacitor to frame and remove Conveyor Drive Motor Capacitor.
6. Reverse procedure to install a new Conveyor Drive Motor Capacitor.



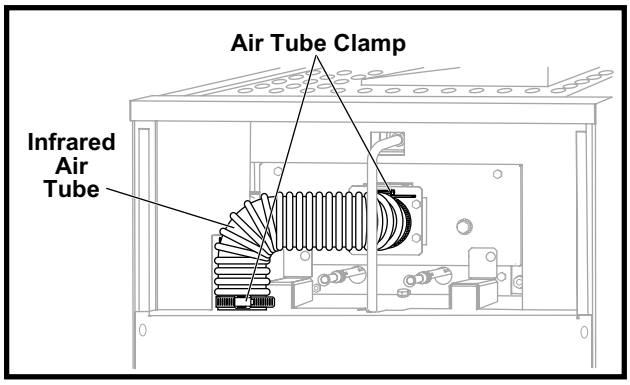
Conveyor Drive Motor Capacitor

Blower Hose

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Loosen Blower Hose clamp at output of Blower Motor.
3. Loosen hose clamp at center of air supply to upper burners.
4. Remove Blower Hose.
5. Reverse procedure to install Blower Hose.



Blower Hose

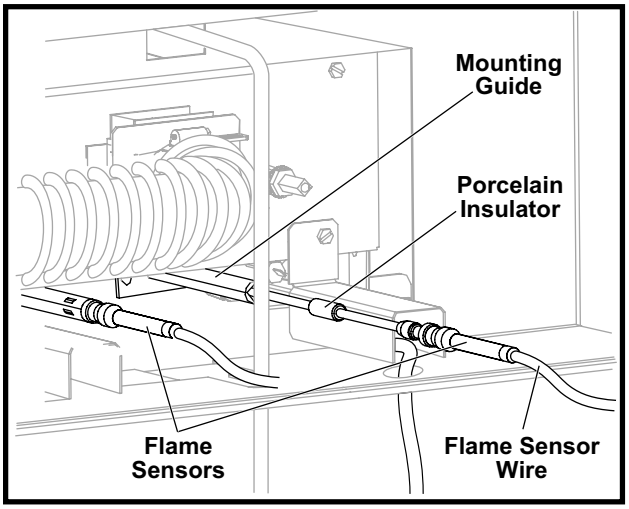
Upper Flame Sensor Assemblies

The Upper Flame Sensor Assemblies are accessible by removing the Upper Lift Off Panel. Each upper burner has a corresponding Flame Sensor Assembly.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Control Side Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disengage Upper Flame Sensor from guide and bracket, and pull out of guide and bracket.



Upper Flame Sensor

4. Disconnect Upper Flame Sensor wire from Ignition Module and remove Upper Flame Sensor Assembly.
5. Pinch the tabs on the wire grommets to remove them.
6. Feed wire through shelf to completely remove the Flame Sensor Assembly.
7. Reverse procedure to install a new Upper Flame Sensor Assembly.

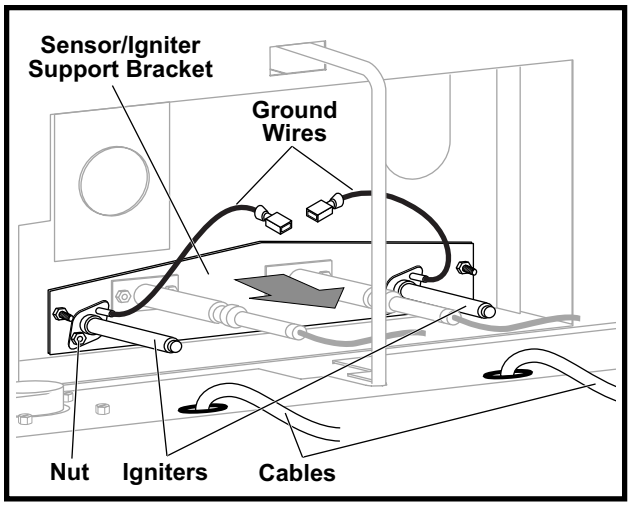
Upper Igniter Assemblies

The Upper Igniter Assemblies are accessible by removing the Upper Lift Off Panel. Each upper burner has a corresponding Igniter Assembly

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Remove two screws securing igniter cover.



Upper Igniters

4. Disconnect the cable and ground wire from the Igniter.
5. Remove Blower Hose.
6. Remove the two remaining screws that secure the Air Box Cover and remove the Air Box Cover.
7. Remove the Sensor/Igniter Support Bracket.
8. Remove the nut securing the Igniter.
9. Reverse procedure to install a new Upper Igniter, ensuring the replacement Igniter has the proper 1/8" spark gap. For proper ignition, the spark should be approximately 3/16" away from the surface of the IR burner tile.

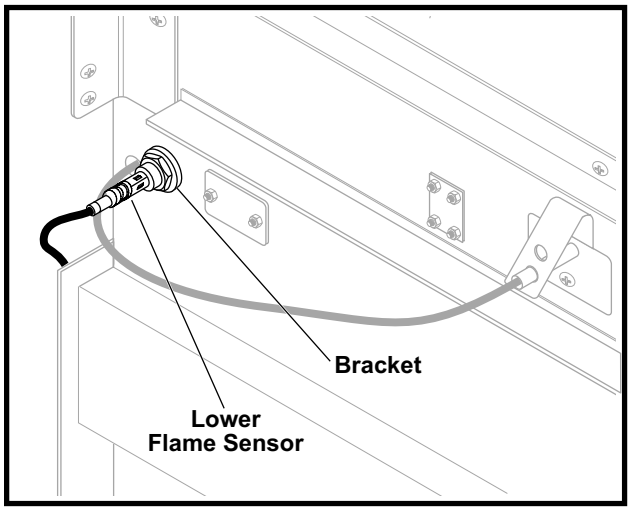
Lower Flame Sensor Assembly

The Lower Flame Sensor Assembly is accessible from the back of the broiler.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Rear Panel. Refer to the COVERS and PANELS section of the manual.
3. Disengage Lower Flame Sensor from guide and bracket and pull out of guide and bracket.



Lower Flame Sensor

4. Disconnect Lower Flame Sensor wire from Lower Ignition Module, and remove Lower Flame Sensor Assembly.
5. Pinch the tabs on the wire grommet to remove it.
6. Feed the wire through the hole to fully remove the Flame Sensor Assembly.
7. Reverse procedure to install a new Lower Flame Sensor Assembly.

Lower Igniter Assembly

The Lower Igniter Assembly is accessible by removing the Upper Lift Off Panel.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect Lower Igniter cable and ground wire from the Igniter.
3. Remove the nut securing the Igniter.

4. Reverse procedure to install a new Lower Igniter Assembly, ensuring the replacement Igniter has the proper 1/8" spark gap. For proper ignition, the spark should be approximately 3/4" above the lower burner.

Upper Infrared Burner Assembly

There are two Infrared Burners located on the top of the broiler. These Infrared Burners can be accessed by removing the Top Service Panel and Impedance Pan.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING

SHUT OFF THE GAS SUPPLY BEFORE SERVICING THE UNIT.

WARNING

CHECK ALL GAS JOINTS DISTURBED DURING SERVICING FOR LEAKS. CHECK USING A SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

Caution: If the broiler has been operating, broiler panels and components may be hot. Use proper protection.

1. Remove Impedance Pan. Refer to the COVERS and PANELS section of the manual.
2. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect gas line at input to top Infrared Burner Assembly to be removed.
4. Remove nuts which run along the length of the burner.
5. Remove both Igniter Guards.
6. Remove Blower Hose.
7. Remove Air Box Cover.
8. Remove the four screws that secure the Burner Venturi to the Air Box.
9. Use a putty knife to gently pry the Burner Venturi from the Air Box.
10. Lift Infrared Burner Assembly out of top of broiler, by sliding the burner forward, up and out of the broiler.
11. Reverse procedure to install a new Infrared Burner Assembly.

NOTE: Use Anti-Seize Technologies TFE1400 pipe thread sealant on all gas line fittings when reassembling the Infrared Burner gas lines.

NOTE: Clean excess silicone sealer from Air Box and Burner Venturi if reinstalling burner. Reapply high temp silicone sealer before installing burner.

Lower J Burner Assembly

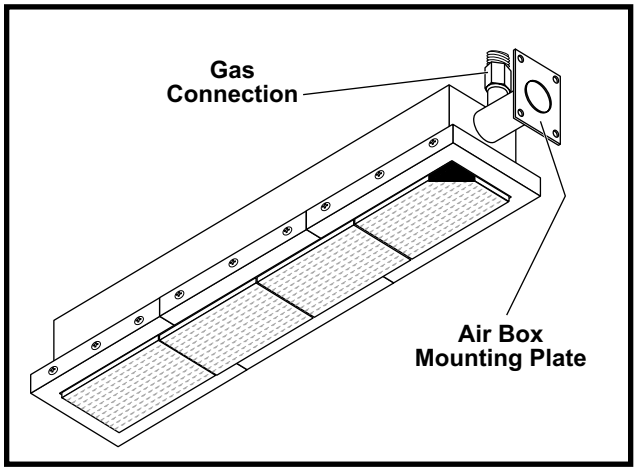
The Lower J Burner Assembly is located under the Conveyor and can be accessed at the discharge end of the broiler and from the front of the broiler.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove PHU Pan Shelf.
2. Remove Discharge Hood.
3. Remove Discharge Chute.
4. Remove Discharge Pan.
5. Remove the Discharge Grease Pan
6. Remove the Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
7. Remove the Ash Scraper, by pulling thetop of the Ash Scrapper out, away from the broiler and lifting it up and out.

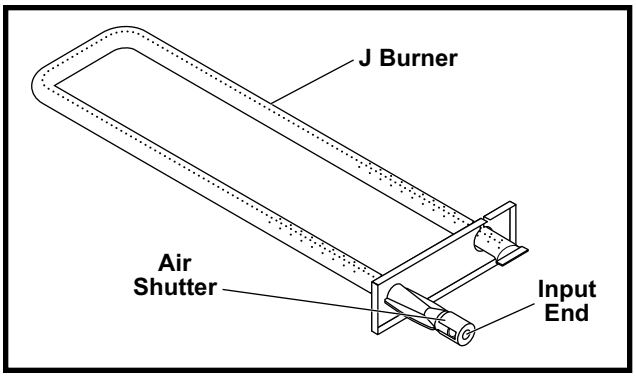
8. Remove the Main Grease Pan and V Grease Pan.
9. Remove Front Panel. Refer to the COVERS and PANELS section of the manual.
10. Disengage J Burner bracket from stud at discharge end, and move J Burner toward discharge end to disengage from its orifice.
11. Carefully slide J Burner Assembly out of front of broiler, taking care not to damage the Igniter Assembly.



Infrared Burner Assembly

12. Reverse procedure to install a new J Burner Assembly.

NOTE: Be sure J Burner input end engages the gas orifice and that the discharge end of the J Burner sits securely in the burner bracket.



Lower J Burner Assembly

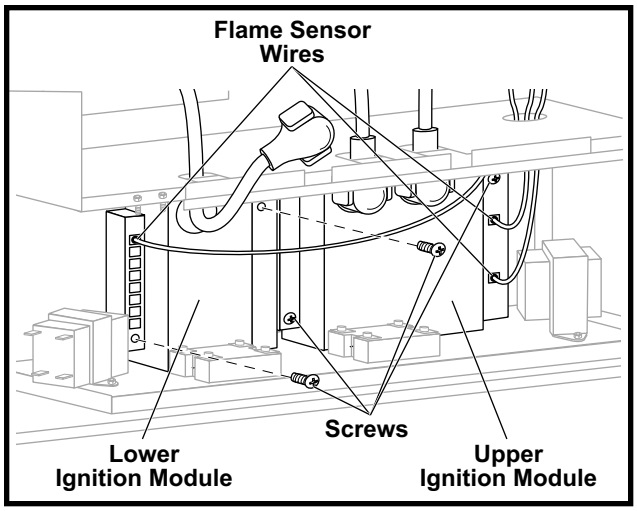
Ignition Modules

The Ignition Modules are accessible by removing the Lower Control Side Service Panel. The Ignition Modules are at the bottom of the compartment behind the Relays.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Tag and disconnect the wires to the Ignition Module to be removed.
3. Disconnect the Flame Sensor wire/s.
4. Remove the two screws attaching Ignition Module to frame and remove the module.
5. Reverse this procedure to replace an Ignition Module.



Ignition Modules

Combo Gas Valves

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING

SHUT OFF THE GAS SUPPLY BEFORE SERVICING THE BROILER.

WARNING

CHECK ALL GAS JOINTS DISTURBED DURING SERVICING FOR LEAKS. CHECK USING A SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

WARNING

ALL JOINTS PRIOR TO THE COMBO GAS VALVE MUST BE CHECKED BEFORE LIGHTING THE UNIT.

WARNING

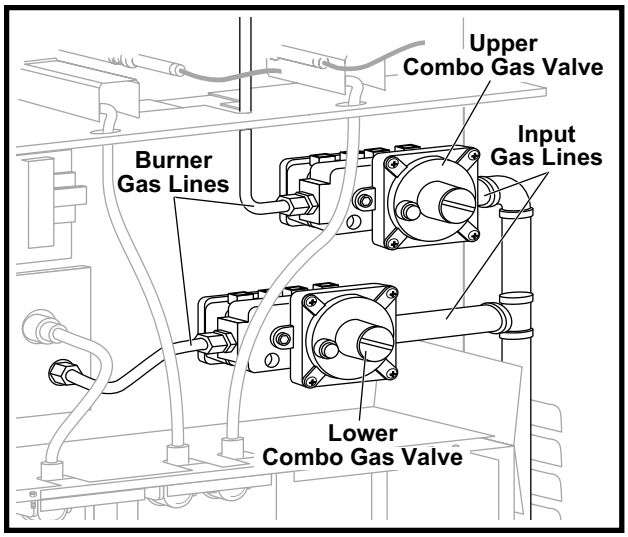
ALL JOINTS BEYOND THE COMBO GAS VALVE MUST BE CHECKED AFTER UNIT IS LIT.

NOTE: Combo Gas Valves are not serviceable and must not be disassembled.

1. Shut off gas to broiler.
2. Remove the Upper Lift Off Panel and Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect gas line going to the burner assembly at the Combo Gas Valve.
4. Tag and disconnect wires to the Combo Gas Valve.
5. Using a pipe wrench unscrew the Combo Gas Valve from the input gas line.
6. Reverse procedure to install a Combo Gas Valve. Make sure the new Combo Gas Valve is installed in the right direction.

NOTE: Use Anti-Seize Technologies TFE1400 pipe thread sealant on all gas line fittings when replacing the Combo Gas Valves.

7. Check all gas connections for leaks.
8. Ensure proper gas valve pressure.



Combo Gas Valves

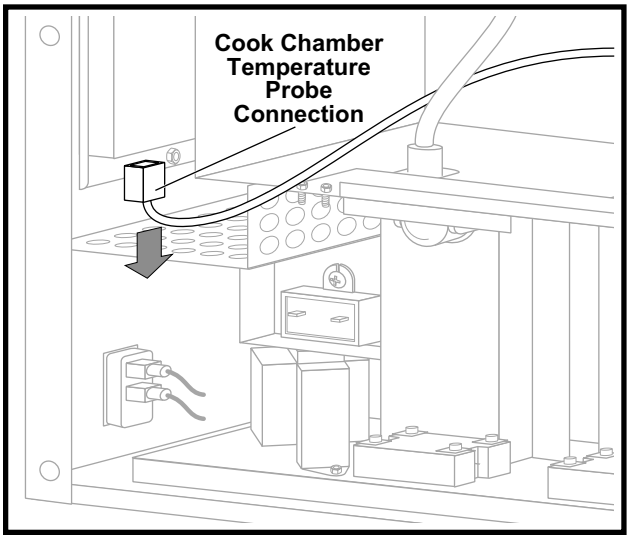
Cook Chamber Temperature Probe

The Cook Chamber Temperature Probe connects to the bottom of the Control Board and is located on the back of the broiler.

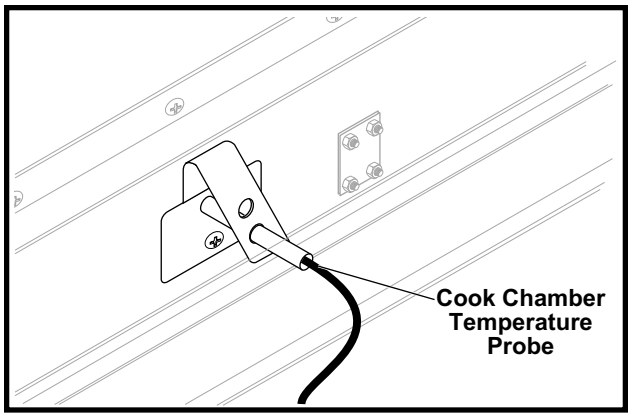
WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove the Rear Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect the Cook Chamber Temperature Probe connector at the bottom of the Control Board.
4. Remove the Cook Chamber Temperature Probe from the bracket by pushing down gently on the bracket.
5. Pinch the two grommets in the electrical compartment to remove them.
6. Slide the Cook Chamber Temperature Probe out of the broiler.
7. Reverse procedure to install a Cook Chamber Temperature Probe, ensuring the two grommets are reinstalled.
8. Ensure the Cook Chamber Temperature Probe is seated correctly on the its mounting bracket. The notch on the sheath must be locked on the bracket.



Cook Chamber Temperature Probe Connection



Cook Chamber Temperature Probe Mounting

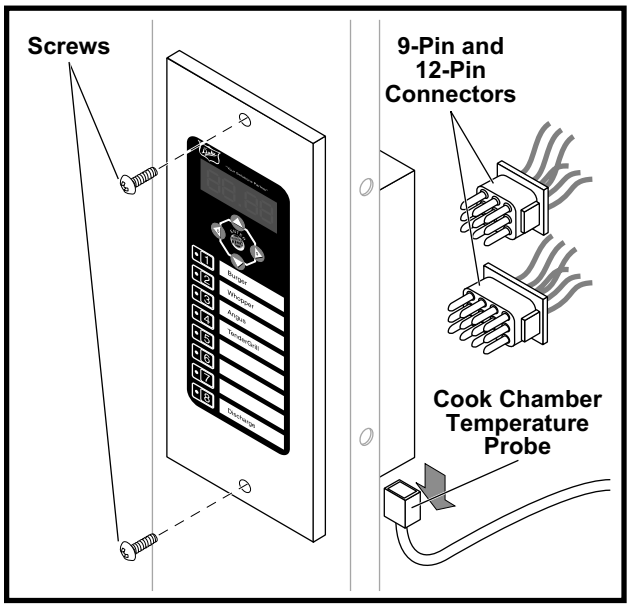
Control Board

The Control Board is located on the front of the broiler. Control Board programming is preset at the factory with standard BURGER KING® recipes. Any fine adjustments made at the restaurant level are the responsibility of the restaurant manager.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect the Cook Chamber Temperature Probe connector at the bottom of the Control Board.
3. Disconnect the 9-pin and 12-pin connectors from the back of the Control Board.
4. Remove the two screws on the front of the Control Board.
5. Remove Control Board from broiler.
6. Reverse procedure to install a new Control Board.
7. Alert the restaurant manager the Control Board has been replaced and fine adjustments may be required.



Control Board

Step-Down Transformers

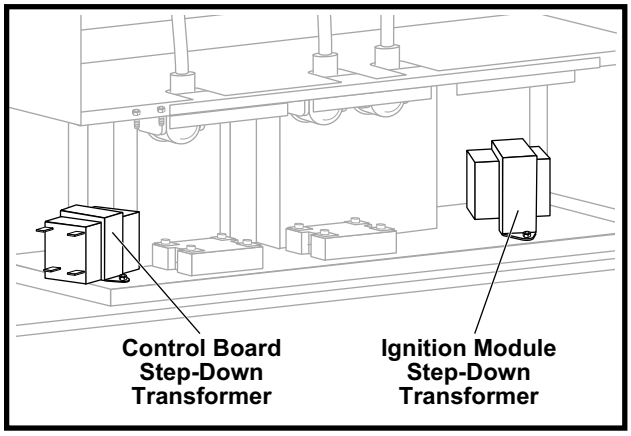
Two Step-down Transformers are accessible by removing the Lower Control Side Service Panel. Both Transformers reduce the incoming 120VAC to 24VAC. The left Transformer provides 24VAC to the Control Board. The right Transformer provides 24VAC to operate the Solid-State Relays.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires from the Transformer to be removed.

3. Remove screws securing Transformer to frame.
4. Remove Transformer.
5. Reverse procedure to install a Transformer.



Step-Down Transformers

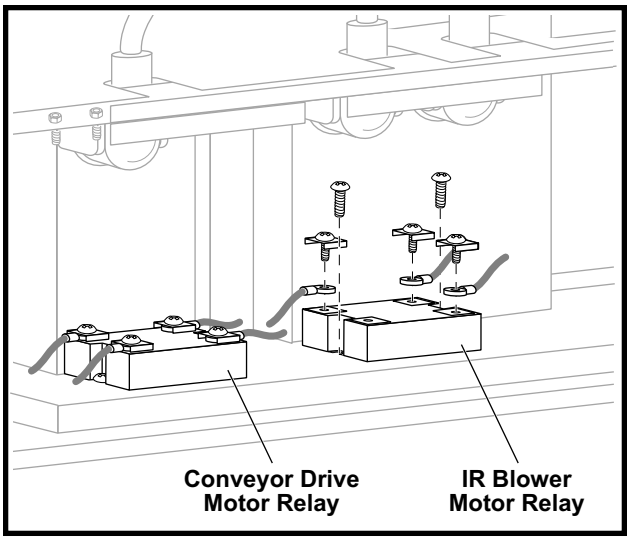
Solid-State Relays

Two Solid-State Relays are accessible by removing the Lower Control Side Service Panel. The left Solid-State Relay controls the Conveyor Drive Motor. The right Solid-State Relay controls the Blower Motor.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires from the Solid-State Relay to be removed.
3. Remove screws securing Solid-State Relay to frame.
4. Remove Solid-State Relay.
5. Reverse procedure to install a Solid-State Relay.



Solid-State Relays

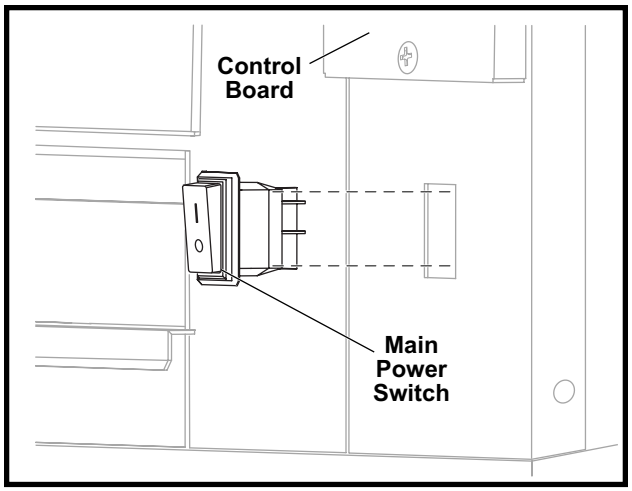
Main Power Switch

The Main Power Switch is located on the front of the broiler below the Control Board.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect switch wires.
3. Pinch the spring tabs on the top and bottom of the switch and slide out through front of panel.
4. Reverse procedure to install a new Main Power Switch.



Main Power Switch

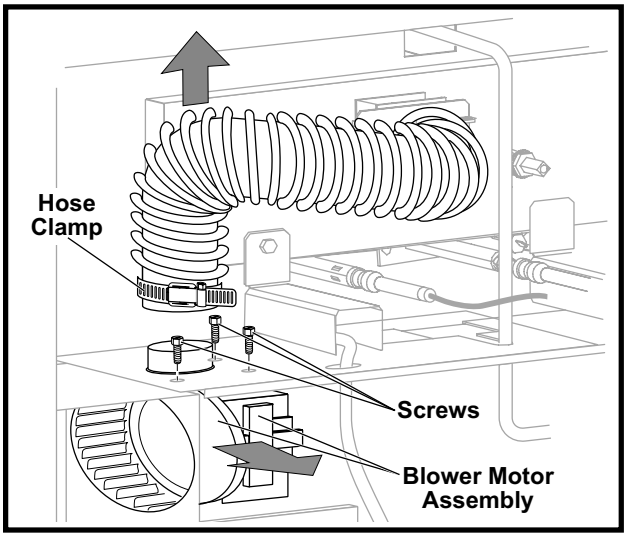
Blower Motor

The Blower Motor is located on the Control Board side of the broiler and is accessed by removal of the Upper Lift Off and Lower Control Side Service Panels.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect wires from the Blower Motor.
4. Loosen Blower Hose clamp and disconnect the hose from top of Blower Motor.
5. Remove three screws attaching Blower Motor to frame.
6. Reverse procedure to install a new Blower Motor. Replace gasket when installing new Blower Motor.



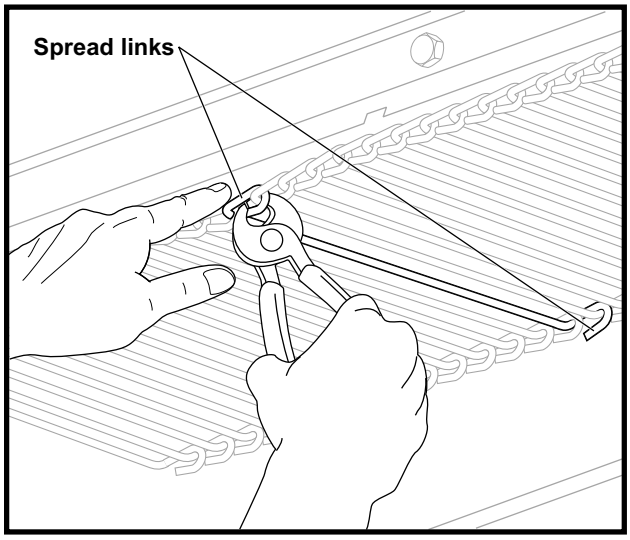
Blower Motor

Replacing Conveyor Links

> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn off and unplug the broiler.
2. Remove the front operator parts and panels. Refer to the COVERS and PANELS section of the manual.
3. Spread the damaged link with Link Tool at both ends.
4. Remove the damaged link.
5. Install the new link.
6. Use pliers to close both ends of the link.
7. Check for proper operation. It may be necessary to add or remove shims behind or under the bushing blocks to ensure proper tension.

NOTE: Never remove a link without replacing a link.



Conveyor Links

ADJUSTMENTS

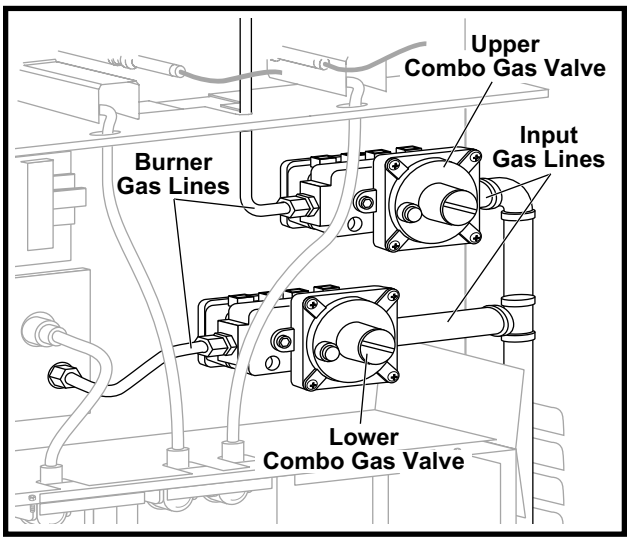
INCOMING GAS PRESSURE

WARNING

THE BROILER IS DESIGNED TO OPERATE WITH INCOMING NATURAL GAS PRESSURES BETWEEN 7" AND 12" WATER COLUMN (WC). SERVICE PRESSURES ABOVE 12" WC AND LESS THAN 2 PSI, WILL REQUIRE DUKE'S HIGH SUPPLY NATURAL GAS KIT (P/N 175689). THE KIT INCLUDES COMPONENTS TO ADD AN EXTERNAL REGULATOR TO THE BROILER. THE REGULATOR SHOULD BE ADJUSTED AFTER INSTALLATION TO 7" WC PER THE ENCLOSED INSTRUCTIONS.

COMBO GAS VALVE

The two Combo Gas Valves are located next to each other and are accessible by removing the Lower Control Side Service Panel. One gas valve is for the Lower J Burner and the other gas valve is for the Upper Infrared Burners. The gas pressure has been preset at the factory for the type of gas specified on the rating plate; however, it is sometimes necessary to adjust the gas pressure after the unit has been installed. Always check the incoming gas pressure at the tap provided on the inlet pipe before making any valve pressure adjustments. Valve adjustments must be made when both valves are fully open with all burners operating.



Combo Gas Valve

1. Turn the incoming gas supply to the broiler off.
2. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.

NOTE: Do not disconnect any wiring.

3. Remove the pressure tap plug and replace with the fitting for a gas pressure meter, Slack Tube or Manometer.
4. Attach the meter.
5. Turn gas supply on.

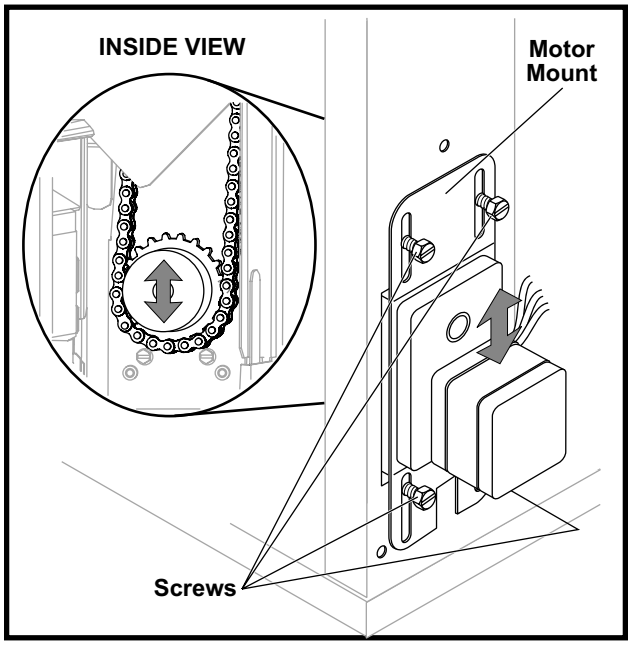
NOTE: The pressure regulator is an integral part of the Combo Gas Valve.

6. Locate the adjustment screw by removing the slotted aluminum cap.
7. Adjust pressure reading to 3.75" WC for natural gas or 8.0" WC for Propane Gas.
8. Turn gas supply off.
9. Disconnect meter.
10. Remove fitting and reinstall pressure tap plug.
11. Turn gas supply back on.
12. Check for any gas leaks.
13. Check broiler operation.

DRIVE CHAIN DEFLECTION ADJUSTMENT

The Drive Chain connects the drive motor to the Conveyor.

1. Check that the deflection in the Drive Chain does not exceed 3/16″ inch maximum. If the chain requires adjustment, proceed to step 2.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Remove Conveyor Drive Motor Cover.
4. Loosen the four screws securing the motor mount to the frame.
5. Move the motor mount up or down as necessary to provide 3/16″ deflection at center of chain.
6. Secure the motor mount in place by tightening the four motor mount screws.
7. Install Conveyor Drive Motor Cover.
8. Install Discharge Access Panel.



Drive Chain Deflection

CONVEYOR POSITION ADJUSTMENT

The Conveyor position is adjusted by adding shims between the Conveyor Shaft Bearing and the frame.

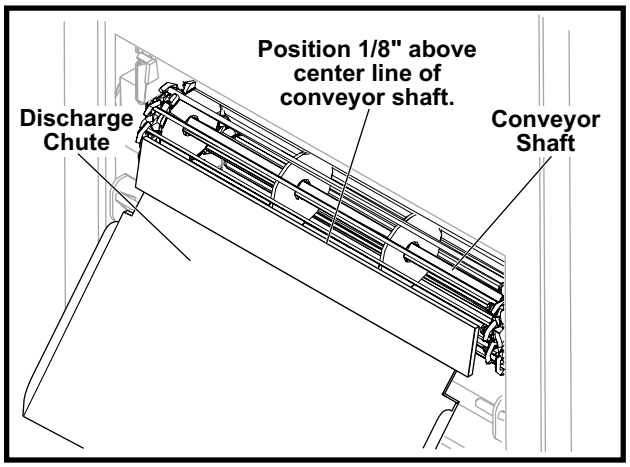
1. Remove Discharge Hood to provide visual access to the Conveyor.
2. Adjust Conveyor height as described in the following illustration.
3. Remove the two screws securing the bearing to the frame.
4. Insert shims as necessary between the bearing assembly and the frame.
5. Check Conveyor position.

NOTE: Leading edge of Discharge Chute should be about an 1/8″ above the center line of the Conveyor shaft. When correctly adjusted, the Conveyor link should just graze the backside of the chute. If adjusted too high, the link will roll over the top of the leading edge of the Discharge Chute causing a Conveyor jam.

6. If additional shims are required, repeat step 4.

NOTE: Additional shims are located inside the Drive Motor Cover.

7. Run Conveyor for several full revolutions to confirm that no jamming occurs.



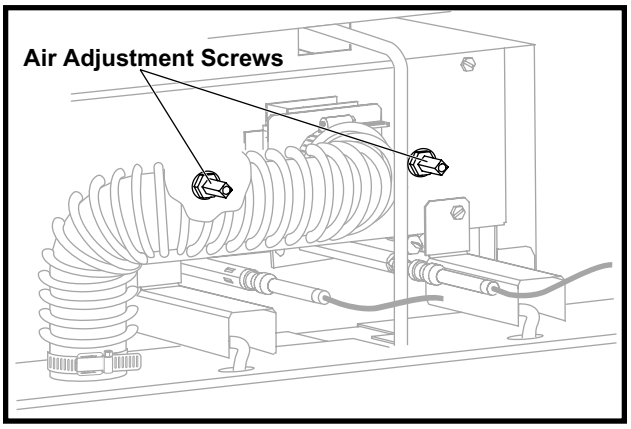
Conveyor Discharge Shaft Adjustment

UPPER IR BURNER AIR SUPPLY

The adjustments for the Upper IR Burner air supply are accessible by removing the Upper Lift Off Panel. There are two air adjustment screws located on each side of the blower hose.

NOTE: The air adjustment is factory set and must not be changed unless authorized to do so by Duke Manufacturing.

1. Remove the Upper Lift Off Panel.
2. If found loose, reset to exposed thread measurement to the setting indicated on the broiler.



IR Burner Air Adjustment Screws

LOWER BURNER AIR SUPPLY

The adjustment for the lower burner air supply is factory set and must not be changed. A properly adjusted natural gas burner has a blue flame around the burner bend with no yellow tips on the flame. A propane gas burner may have a small amount of yellow tips on the flames. The Air Shutter opening on factory J Burners is preset and welded to 3/8" open. If replacing the J Burner, verify this opening before installing it.

TROUBLESHOOTING

The following troubleshooting information includes checking procedures for various electrical components in order to help identify faulty components. The troubleshooting guide below is designed to identify various symptoms and provide the suggested remedy.

COMPONENT CHECK PROCEDURES

Checking the Power Switch

The Power Switch has a built-in LED that lights red when the switch is in the on position. Check the following before replacing the switch.

- Make sure the power cord is plugged into the correct receptacle. The broiler operates on 120VAC 60Hz line current.
- Check the circuit breaker assigned to the broiler.
- Try a different receptacle before replacing the switch.
- It's possible for the LED in the switch to fail. Turn the switch on and check the Control Board display. If the display is active, the LED is burned out, replace the switch.

Checking the Control Board

Under normal conditions, the Control Board displays the current status of the broiler. It can be used as a diagnostic tool, when it is working properly.

Try the following before replacing the Control Board.

- Cycle the broiler off and on; observe the Control Board.
- Try running the Control Board through a couple of different cook cycles.

NOTE: If the Control Board is still not performing properly, try these procedures:

1. Turn the broiler off.
2. Remove the Control Board.
3. Check each connection on the back of the Control Board. Make sure they are all connected correctly.
4. Loosely attach the Control Board, turn the broiler on. Observe the display and product key LEDs.
5. Turn the power off and reattach the Control Board if the problem is solved.

Checking the Conveyor Drive Motor

The Conveyor Drive Motor is located on the front of the broiler on the lower discharge side. Before replacing it, check the Conveyor for jammed meat product. Next, try turning the Conveyor discharge shaft with the Multipurpose Broiler Tool. If the Conveyor does not turn, check the following items:

- Check the Discharge Chute.
- Check the Loader Ramp.
- Check the Ash Scraper.
- Check the Cook Chain (Conveyor).
- Check the Flame Arrestor.

Testing the Conveyor Drive Motor

The Conveyor Drive Motor may be tested without removing it from the broiler.

> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn off and disconnect the broiler.
2. Remove the Conveyor Drive Motor Cover.
3. Tag and disconnect the wires.
4. Use an Ohmmeter to measure resistance.
5. Attempt to run the Drive Motor when its disengaged from the Drive Chain.

NORMAL MOTOR RESISTANCE (120V, 60 HZ)	
Wires to Test	Resistance
Black and Brown	24.2 Ω
Black and Orange	24.2 Ω
Brown and Orange3	49.2 Ω

CHECKING CONVEYOR DRIVE MOTOR CAPACITOR

If the motor tests OK, check the Capacitor. The Capacitor is located in the service area on the control side of the broiler.

> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect the wires connected to the Capacitor.
3. Discharge the Capacitor by shorting both terminals to ground at the same time.
4. Use an Ohmmeter to test the Capacitor.

NOTE: If both the Drive Motor and Capacitor test OK, the problem is probably with the Drive Motor Relay.

CHECKING AND TESTING THE BLOWER MOTOR

The Blower Motor provides air to the Upper Infrared Burners. These burners will not function properly if the Blower Motor is not supplying a sufficient amount of air to them. The first thing to check is the Blower Wheel for grease and debris build up. Also, inspect for a loose or damaged Blower Hose.

> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Make sure the broiler is off and unplugged.
2. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Remove the Blower Motor Assembly.
4. Check and clean the Blower Wheel as needed.
5. Check that the wheel turns freely.
6. Measure the resistance of the Blower Motor winding. The normal resistance across the Blower Motor winding should be 22.2Ω ± 2.2Ω.

NOTE: If the resistance is low, the winding may be shorted. If the resistance is high the winding is open.

If the Blower Motor tests OK, the problem is probably with the Blower Motor Relay.

TESTING THE RELAYS

There are two 24VDC Solid-State Relays in the broiler. One controls the Blower Motor, while the other controls the Conveyor Drive Motor.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Turn on the Main Power Switch.
3. The Blower Motor only runs when there is a call for ignition of the upper Infrared Burners. The Conveyor Drive Motor only runs for 6 seconds at the end of a cook cycle. To test the relay, check for 24VDC on the input of the relay. At the same time, monitor AC current to either the Blower Motor or the Conveyor Drive Motor. When no relay input voltage is present, there will be no amperage draw on the output of the relay.
4. Using an Ohmmeter, check for continuity across output terminals. If Ohmmeter indicates continuity, Relay is OK. If Ohmmeter indicates no continuity, Relay is faulty.

Testing the Transformers

There are two 24-volt Step-Down Transformers in the broiler. One supplies power to the Control Board, the other provides power to the Ignition Modules. Either a voltage or a resistance check can be used to test the Transformers.

Voltage Test

1. Make sure the broiler is turned off.
2. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect the secondary winding.
4. Turn the broiler on.
5. Using a VOM, test the voltage output across the secondary winding. Voltage should be 24VAC.

Resistance Check

> ⚠ WARNING
>
> DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn the broiler off.
2. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Tag and disconnect the wires of the Transformer to be tested.
4. Measure the resistance across the primary. Primary Resistance = 21.8Ω ±10%.
5. Measure resistance across secondary.
6. Secondary Resistance = 0.8Ω ±10%.

Lower Ignition Module Testing

When the Cook Chamber Temperature Probe calls for heat, the Control Board will send 24VAC to terminals TH and GND on the Lower Ignition Module. The Lower Ignition Module first performs a diagnostic check. After the diagnostic, the Lower Ignition Module is activated.

- 24VAC is applied across terminal V1 opening the Lower Combo Gas Valve.
- High voltage spark is generated at terminal HV.
- When the Flame Sensor detects a current flow of not less than 0.7uA, the Igniter stops sparking.

The Lower Ignition Module performs a self-diagnostic check. It is equipped with an LED that has three states, indicating the type of diagnostic failure:

1. Steady On: Indicates internal failure of the module. The module must be replaced.
2. Two Flashes of the LED: Indicates the burner is lit but no call for heat exists.
3. Three Flashes of the LED: Indicates ignition lockout has occurred.

Upper Ignition Module

The Upper Ignition Module works in the same manner as the Lower Ignition Module, but it has two Igniters and Flame Sensors. The Control Board will send 24VAC to terminals W and GND on the Upper Ignition Module.

- 24VAC is applied to terminal W and Ground, which opens the Upper Combo Gas Valve.
- High voltage spark is generated at terminals HV1 and HV2.
- When the Flame Sensors detect a current flow of not less than 0.7uA, the Igniters stop sparking.

The Upper Ignition Module performs a self-diagnostic.

Upper Ignition Module Diagnostic Indicators:

1. Steady On: Indicates an internal control failure.
2. Two Flashes: Indicates the burner is lit but no call for heat exists.
3. Three Flashes: Indicates ignition lockout has occurred.

Checking the Flame Sensors

Typically, an Ignition Module Lockout is caused by dirty Flame Sensors.

Here are some Flame Sensor tips:

- If one Flame Sensor is dirty, clean them all. Allow the Flame Sensor to cool and clean it with an alcohol pad.
- Replace a Flame Sensor with damaged porcelain.
- Check for debris between the Flame Sensor tip and burner.
- Adjust the Flame Sensor if the tip is touching ground.
- Make sure all of the Flame Sensor connections are tight.

Checking the Igniters

Another item to check, if the broiler is not lighting properly, is the Igniters. It is possible for these to get bumped during routine cleaning, causing the gap between the electrodes to change.

- The spark gap should be 1/8″.
- Replace Igniter if the electrodes are damaged.
- Check all connections on the Ignition Module and Igniter.
- If gas and spark are present but burner does not light, verify proper location of the upper igniter with regard to burner. The igniters on the the top IR burners should be approximately 3/16" away from the surface of the IR burner tile. The lower igniter should be approximately 3/4″ from the lower burner.

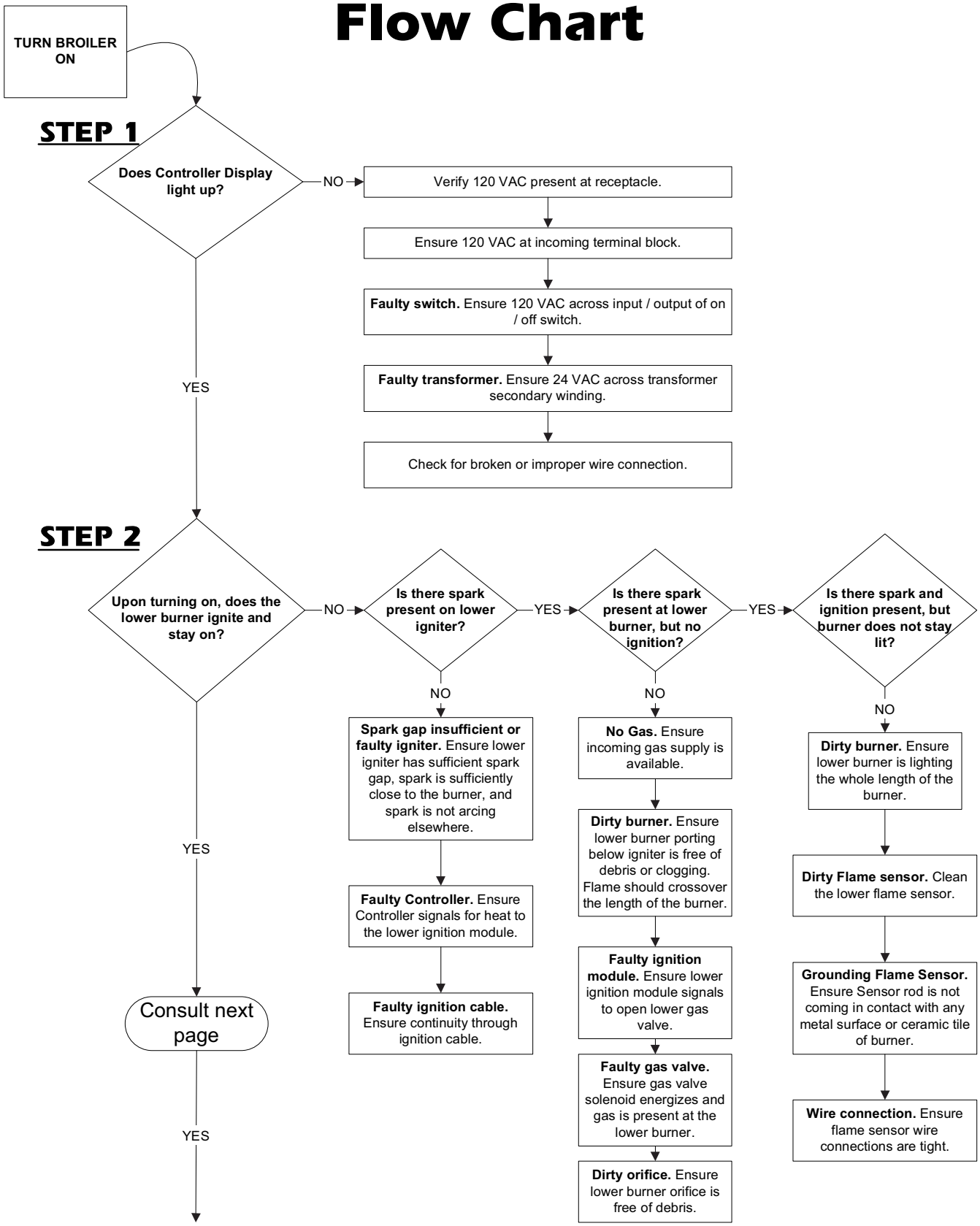
Troubleshooting Flow Chart

Quick Index

Define the Problem...

	Complaint...	Consult STEP...			
1	Display flashing “gAS” and….	bot	toP	SEnb	SEnt
		STEP 2	STEP 3	STEP 2	STEP 3
2	Display flashing “tESt” and “Prod”	STEP 2-3 and 6			
3	Display showing “Hi”	STEP 2			
4	Display showing “Lo”	STEP 2			
5	Display showing “Prob”	**Faulty Probe.** Test and replace probe.			
6	Conveyor jammed / running all the time	STEP 7			

Troubleshooting Flow Chart



Troubleshooting Flow Chart

YES

STEP 3

Upon reaching 500°F, do the upper infrared burners ignite and stay lit?

NO

Is there spark present at both the upper igniters?

NO

Faulty igniter or insufficient spark gap. Ensure upper igniters have sufficient spark gaps and spark is not arcing elsewhere.

Faulty Controller. Ensure Controller signals for heat to the upper ignition module.

Faulty ignition cable. Ensure continuity through affected ignition cable.

YES

Is there spark present at both the upper igniters, but no ignition?

NO

No Gas. Ensure incoming gas supply is available.

Faulty ignition module. Ensure upper ignition module signals to open lower gas valve.

Faulty gas valve. Ensure gas valve solenoid energizes and gas is present at the upper burners.

Dirty orifice. Ensure upper burner orifices are free of debris.

YES

Is there spark and ignition on both upper burners, but burner(s) do not stay lit?

NO

Dirty Flame Sensor. Clean the affected upper flame sensor.

Grounding Flame Sensor. Ensure Sensor rod is not coming in contact with any metal surface or ceramic tile of burner.

Determine flame sensor failure. Check microamp reading from upper ignition module from each sensor while burners are on. If flame sense failure occurring, the affected sensor should fall below 0.7 microcamps.

Wire connection. Ensure flame sense wire connections are tight.

Faulty Controller. Ensure Controller signals blower motor relay to close.

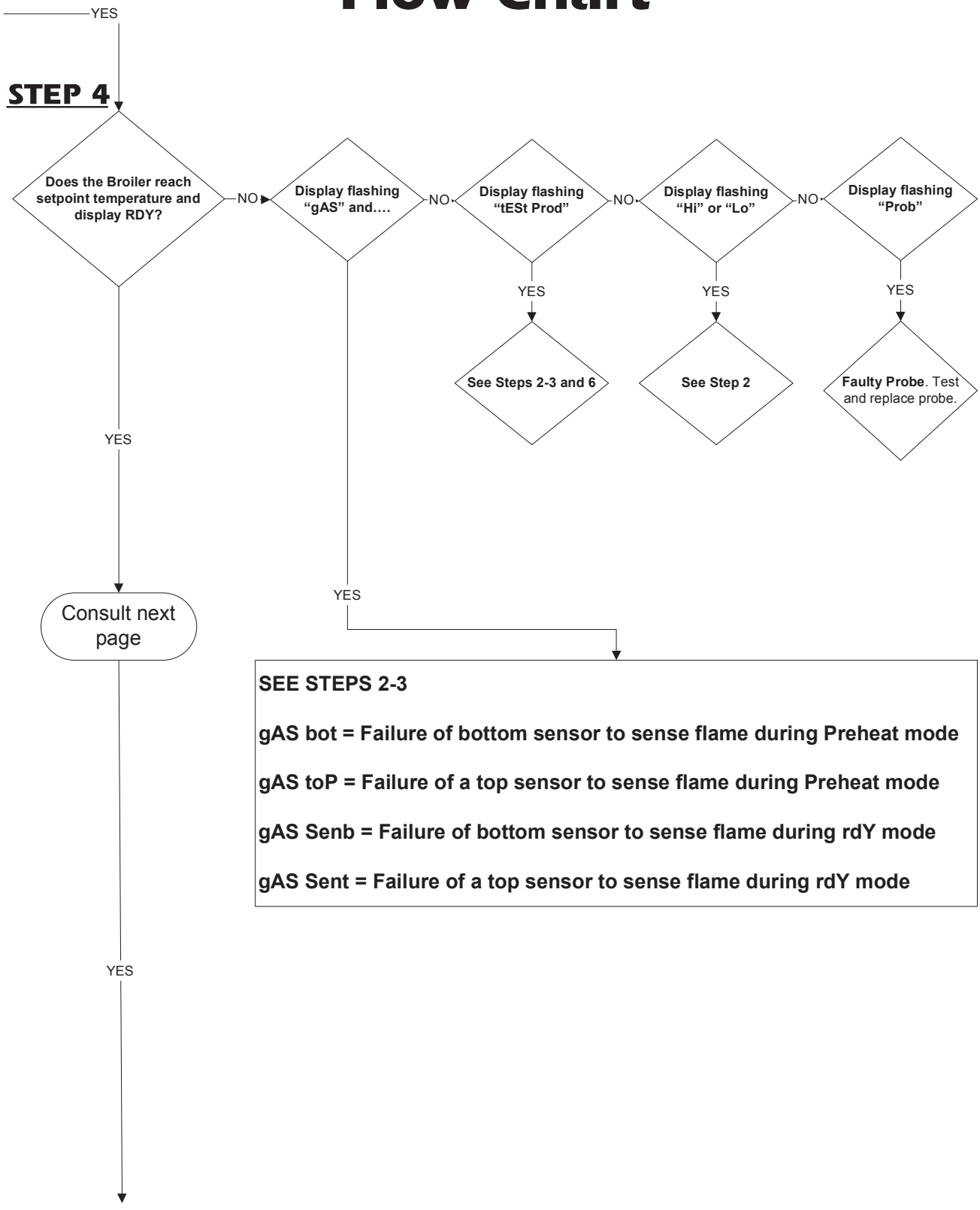
Faulty blower motor or relay. Ensure blower motor energizes and there is sufficient air traveling to the upper burners. Heavy accumulation of grease on the blower wheel can have adverse effects.

YES

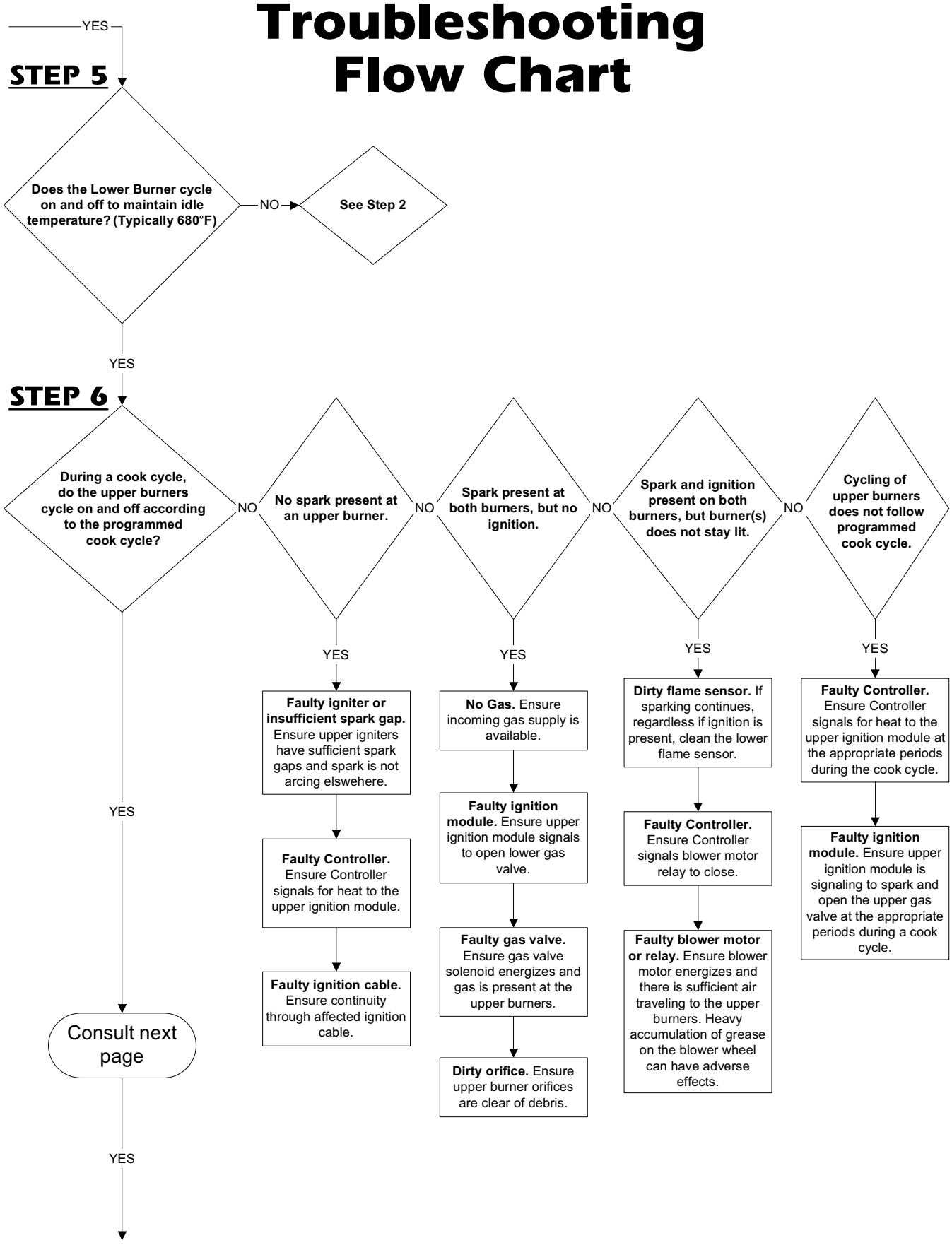
Consult next page

YES

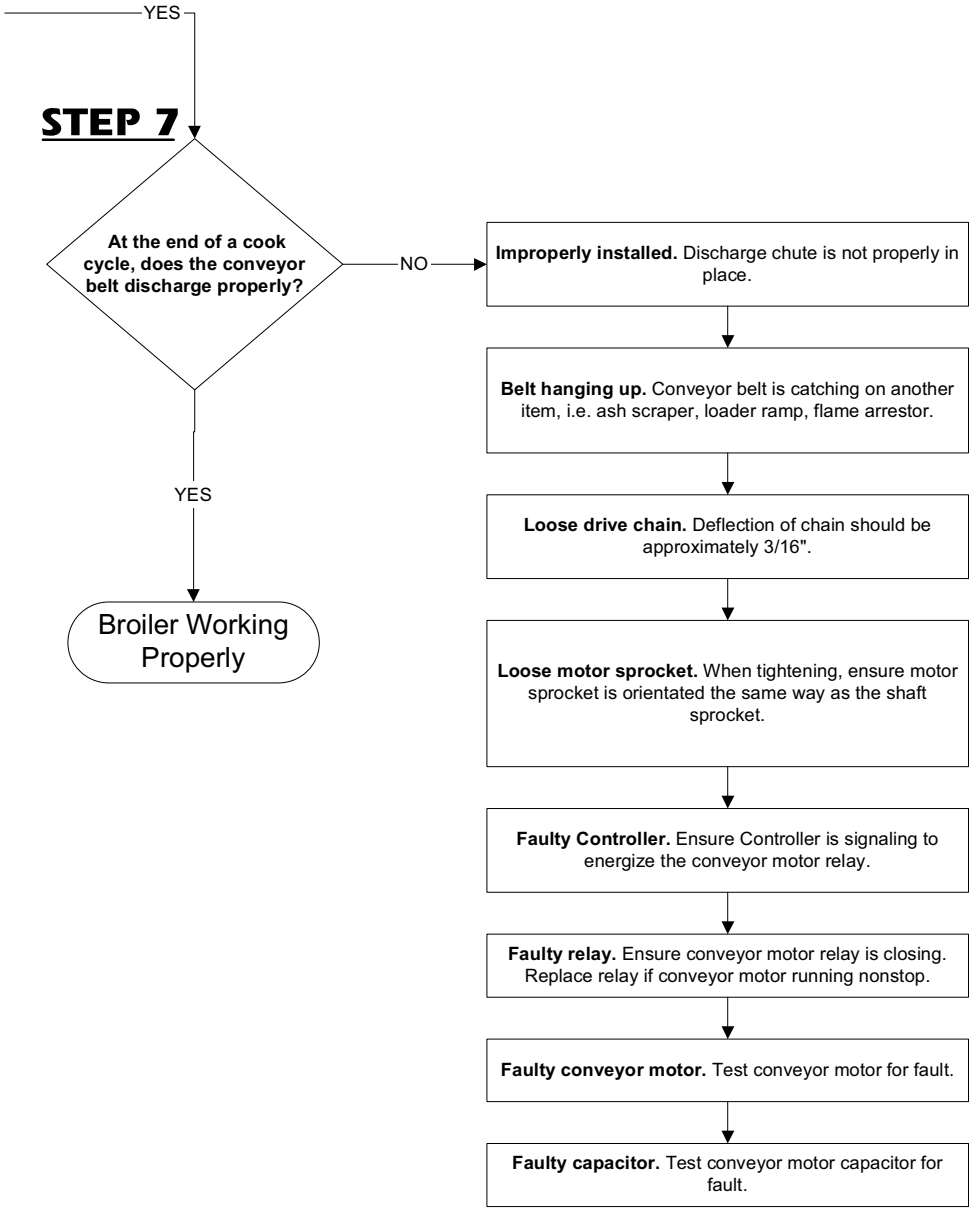
Troubleshooting Flow Chart



Troubleshooting Flow Chart

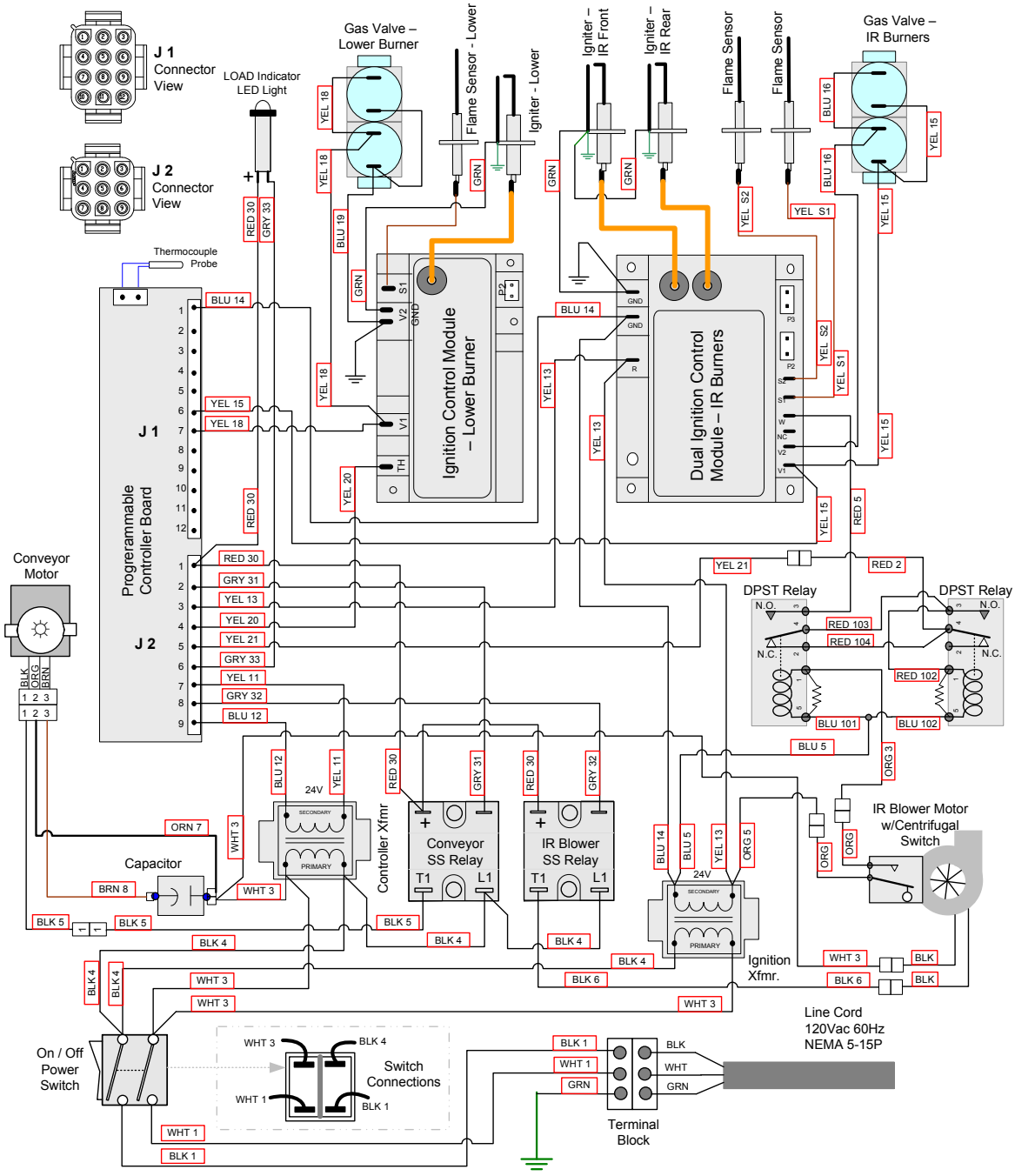


Troubleshooting Flow Chart



ELECTRICAL SCHEMATIC – FLEXIBLE BATCH BROILER

DUKE MFG. PN 175611 Rev. E



REPLACEMENT PARTS LIST

DESCRIPTION	PART NUMBER	QTY
Switch, Main Power	175503	1
Burner, Infrared	175780	2
Burner, Tube, J Style (Natural Gas Only)	175934	1
Burner, Tube, J Style (LP Gas Only)	175934	1
Motor, Conveyor	175867	1
Sprocket, B21X3/8 Bore (Motor)	175517	1
Shaft, Discharge Side	175037	1
Shaft, Right Side	175038	1
Capacitor, Motor-Conveyor	175507	1
Ignition Module, Lower Burner	175868	1
Ignition Module, Upper Burners	175869	1
Transformer, 40VA, 120VAC-24VAC	175516	2
Probe, Temperature C-Chamber	175977	1
Light, Cook	175550	1
Relay, Solid State	175870	2
Chain, Drive	175551	1
Controller	175873	1
Gasket, Control Bezel	175510	1
Gasket, Blower Inlet	175511	1
Blower, Dayton 60HZ, 115VAC	175871	1
Hose, Blower	175189	1
Orifice, Holder IR	175542	2
Valve, Nat-Gas Combo 120VAC (Natural Gas Only)	175531	2
Valve, LP-Gas Combo 120VAC (LP Gas Only)	175766	2
Orifice, Lower Burner, #31 (Natural Gas Only)	175823	1
Orifice, Lower Burner, #49 (LP Gas Only)	175737	1
Orifice, IR, Front, #40 (Natural Gas Only)	175735	1
Orifice, IR, Front, #52 (LP Gas Only)	175767	1
Orifice, IR, Rear, #36 (Natural Gas Only)	175736	1
Orifice, IR, Rear, #51 (LP Gas Only)	175768	1
Orifice Holder 3/8 Comp. Straight X Bulkhead	175545	1
Tubing-Tee to IR, Kit	175476	2
Tubing-Tee to Valve, Kit	175477	1
Tubing, Lower Burner to Valve, Kit	175178	1

REPLACEMENT PARTS LIST, CONTINUED

DESCRIPTION	PART NUMBER	QTY
Sensor, Lower Burner	175534	1
Sensor, IR Burner	175535	2
Igniter	175536	3
Ignition Suppression Cable, IR	175537	2
Ignition Suppression Cable, Lower Burner	175538	1
Cook, Chain	175674	1
Bushing Block, Conveyor	175525	4
Loader Tray	175430	1
Loader Mounting Bracket	175878	1
Loader	175444	1
Loader Ramp	175741	1
Door	175429	1
Flame Arrestor	175293	1
Burner Shield	175200	1
Discharge Chute	175340	1
Discharge Hood	175778	1
PHU Pan Shelf	175353	1
Discharge Pan	175358	1
Main Grease Pan	175329	1
“V” Grease Pan	175325	1
Side, Grease Pan	175357	1
Pivot Pivot Ash Scraper	175150	1
Rear Panel	175305	1
Front Panel	175300	1
Front, Upper, Lift Off	175392	1
Panel, Access Electrical LWB	175383	1
Panel, Access Discharge	175866	1
Impedance Pan (No Optional Catalyst)	175226	1
Catalyst (Optional)	175480	1
Catalyst Guard	175482	1
Tube Burner Cleaning Tool	175485	1
Flame Rod Tube Cleaner	175701	1
Brush, Flame Rod Tube Cleaner	175705	1
Kit, LP Gas Conversion Kit	175612	1
Sanitation Pail, Red	175842	1

NOTES:

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____ SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER _____ TELEPHONE _____

SERVICER _____ TELEPHONE _____

NORTH AMERICA & LATIN AMERICA

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Asia Office
Duke Food Service Equipment
(shanghai) Company Limited
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Shanghai, China 200335
Tel: +86 21 6876 9272
Fax: +86 21 33600628

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

Your Solutions Partner

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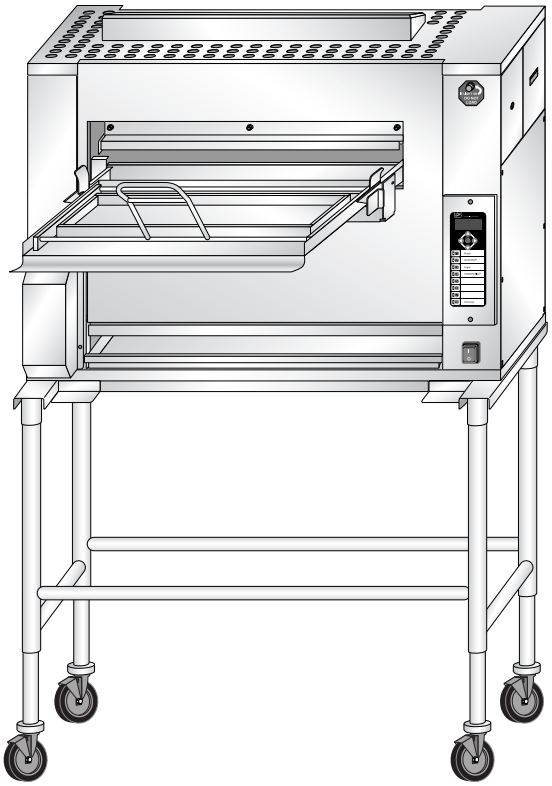
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Tel: +86 21 6876 9272
Fax: +86 21 33600628

Your Solutions Partner

Service Manual

FLEXIBLE BATCH BROILER



MODELS

FBB-EO-208
FBB-EC-208
FBB-EO-230
FBB-EC-230
FBB-EO-240
FBB-EC-240

Please read this manual completely before attempting to install, operate or service this equipment

This document is prepared for trained Duke service technicians. It is not to be used by anyone not properly qualified to perform these procedures.

This Service Manual is not all encompassing. If you have not been trained on servicing this product, be sure to read the manual completely before attempting servicing. Be sure all necessary tools, test equipment, and skills are available. Those procedures for which you do not have the proper skills and test equipment must be performed only by a qualified Duke trained service technician.

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www.dukemfg.com

P/N 177769A

IMPORTANT WARNING AND SAFETY INFORMATION

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL ELECTRICAL EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

READ THIS MANUAL THOROUGHLY BEFORE OPERATING, INSTALLING OR PERFORMING MAINTENANCE ON THE EQUIPMENT.

⚠ WARNING **Failure to follow all the instructions in this manual can cause property damage, injury or death.**

⚠ WARNING **Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death.**

⚠ WARNING **Electrical connections should be performed only by a certified professional.**

⚠ WARNING **Electrical and grounding connections must comply with the applicable portions of the National Electric Code and/or all local electric codes. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **Before connecting the unit to the electrical supply, verify that the electrical and grounding connections comply with the applicable portions of the National Electric Code and/or other local electrical codes. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **Before connecting the unit to the electrical supply, verify that the electrical connection agrees with the specifications on the data plate. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **UL73 grounding instructions: This appliance must be connected to a grounded, metal, permanent wiring system. Or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the appliance. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **Appliances equipped with a flexible electric supply cord, are provided with a grounding plug. It is imperative that this plug be connected into a properly grounded receptacle. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **If the receptacle is not the proper grounding type, contact an electrician. Do not remove the grounding prong from the plug. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **Before performing any service that involves electrical connection or disconnection and/or exposure to electrical components, always perform the Electrical LOCKOUT/TAGOUT Procedure. Disconnect all circuits. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **Before removing any sheet metal panels or servicing this equipment, always perform the Electrical LOCKOUT/TAGOUT Procedure. Be sure all circuits are disconnected. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **Do not operate this equipment without properly placing and securing all covers and access panels. Failure to comply with this procedure can cause property damage, injury or death.**

⚠ WARNING **Do not use or store gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. Failure to comply can cause property damage, injury or death.**

⚠ WARNING **In the event of a power failure, do not attempt to operate this appliance. Failure to comply can cause property damage, injury or death.**

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INTRODUCTION

INSTALLATION

For detailed installation instructions, refer to the Installation and Operation Manual.

OPERATION

For specific operating instructions, refer to the Installation and Operation Manual.

CLEANING

For specific cleaning instructions, refer to the Installation and Operation Manual.

SPECIFICATIONS

ELECTRICAL						
MODEL NUMBER	**VOLTAGE**	**AMPS**	**CYCLE**	**PHASE**	**POWER**	**CATALYST**
FBB-EO-208	208	68	60	3	23.5 kW	NO
FBB-EC-208	208	68	60	3	23.5 kW	YES
FBB-EO-230	230	62	60	3	23.5 kW	NO
FBB-EC-230	230	62	60	3	23.5 kW	YES
FBB-EO-240	240	60	50	3	23.5 kW	NO
FBB-EC-240	240	60	50	3	23.5 kW	YES

SHIPPING WEIGHT	**lbs**	**Kg**
BATCH BROILER (STANDARD)	530	240
SHIPPING DIMENSIONS	**Standard**	**Metric (cm)**
L X W X H	47" X 34" X 68"	119.4 X 86.4 X 172.7

MODEL NUMBER KEY

FBB–E**X-Y-ZZ**

X = O (No Catalyst) or C (Catalyst)

Y = 208 VAC, 230 VAC or 240 VAC

ZZ = 2 Digit Country Identifier

TOOLS

STANDARD

- Standard set of hand tools.
- Volt-Ohm Meter (VOM) with AC current clamp
  (Any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Conveyor Link Removal Pliers

REMOVAL AND REPLACEMENT OF COMPONENTS

COVERS AND PANELS

WARNING

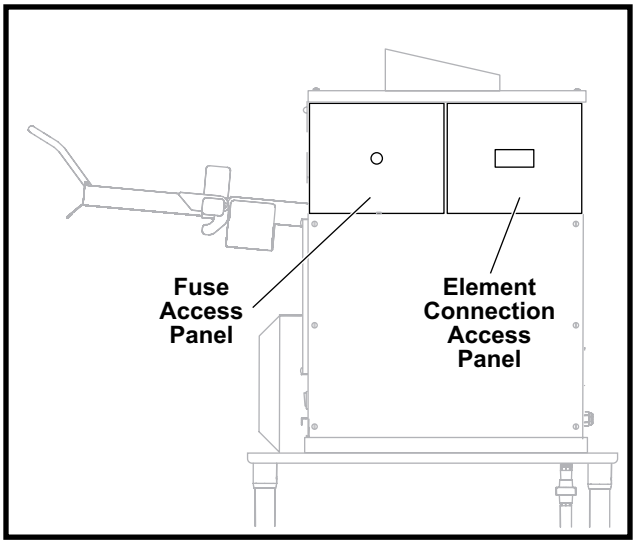
DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

Caution: If the broiler has been operating, broiler panels and components may be hot. Use PROPER PROTECTION.

Fuse Access Panel

The Fuse Access Panel provides access to the Upper Flame Sensors, Igniters and Blower Hose.

1. Remove Fuse Access Panel by lifting up and removing from broiler.
2. Install Fuse Access Panel by lowering into the side grooves.



Upper Access Panels

Element Connection Access Panel

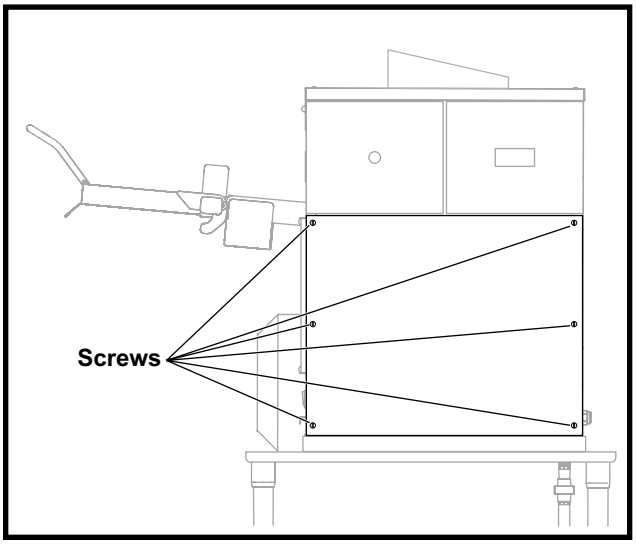
The Element Connection Access Panel provides access to the electrical connection for the Heating Elements.

1. First remove Fuse Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Element Connection Access Panel by lifting up and removing from broiler
3. Install Electrical Connection Access Panel by lowering into the side grooves.

Electrical Access Panel

The Electrical Access Panel provides access to the Transformers, Blower Motor, Conveyor Motor Capacitor, and electrical connections to the Control Board.

1. Remove the six screws securing the Electrical Access Panel.
2. Remove the panel from the broiler.
3. Reverse procedure to install the Electrical Access Panel.



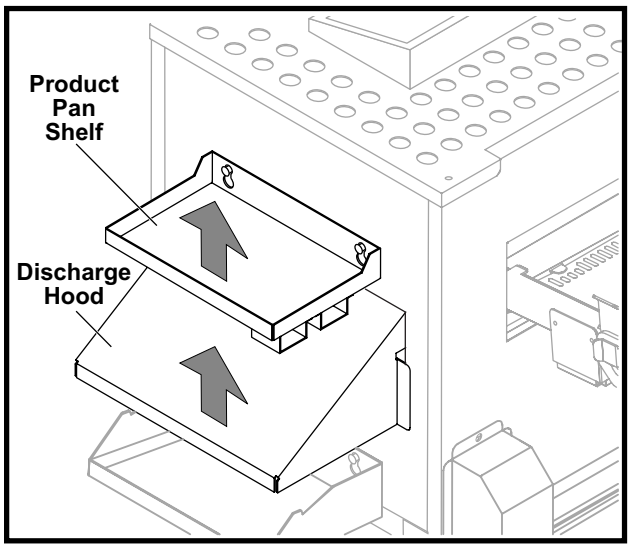
Electrical Access Panel

Product Pan Shelf

The Product Pan Shelf is located on the discharge side of the broiler and holds the unused holding pans.

1. Lift the pan shelf up and remove.

2. To install the pan shelf, slide the keyholes over the two screws and slide pan shelf down.



Product Pan Shelf and Discharge Hood

Discharge Hood

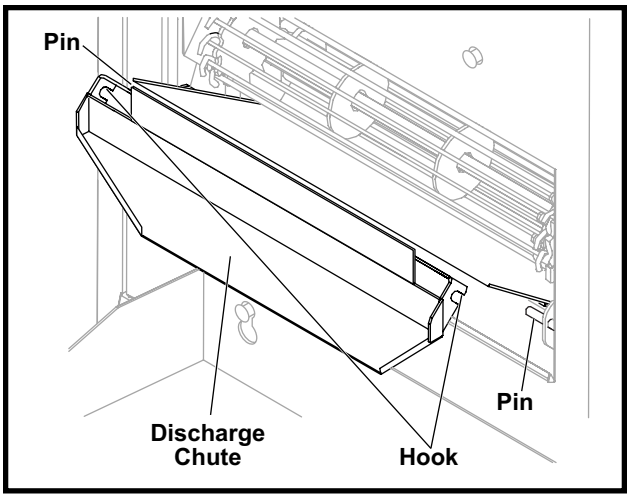
The Discharge Hood is located on the discharge side of the broiler under the Product Pan Shelf.

1. Remove the Product Pan Shelf.
2. Remove the Discharge Hood by lifting out.
3. Install Discharge Hood by lowering into the side grooves.
4. Reinstall the Product Pan Shelf.

Discharge Chute

The Discharge Chute is located under the Discharge Hood and guides the patties from the conveyor into the Discharge Pan.

1. Remove Product Pan Shelf.
2. Remove the Discharge Hood.
3. Remove Discharge Chute by lifting off of the two side pins.
4. Reverse procedure to install Discharge Chute, being sure to rest the hooks onto the pins on both sides.

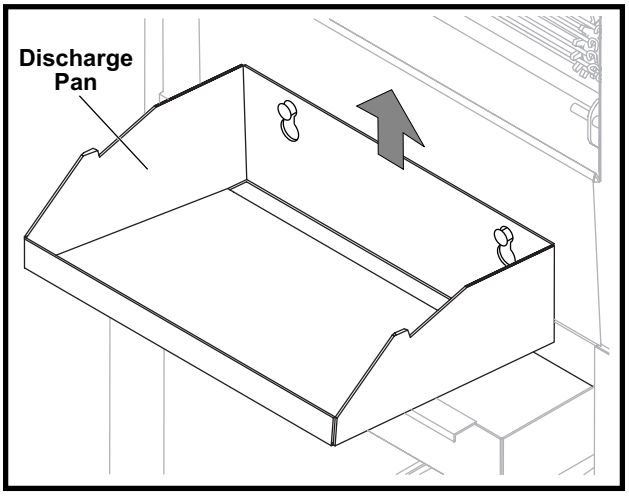


Discharge Chute

Discharge Pan

The Discharge Pan is located on the discharge side of the broiler below the Discharge Hood and is used to support the Product Pan (not supplied).

1. Remove the Product Pan if present.
2. Slide Discharge Pan up and out of keyhole slots.
3. Install Discharge Pan by lowering it into the thumbscrews.



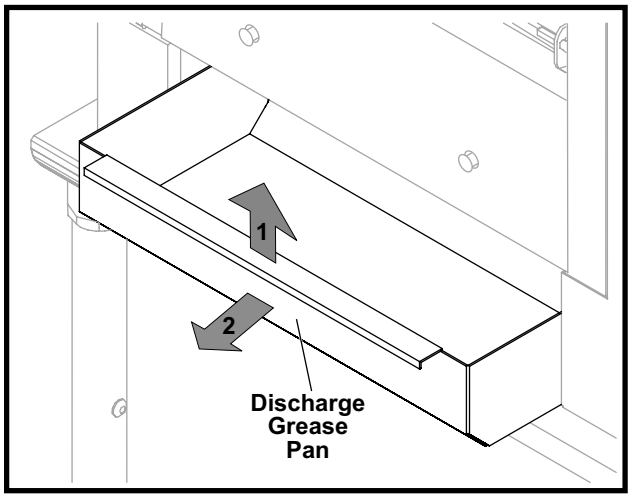
Discharge Pan

Discharge Grease Pan

The Discharge Grease Pan is located below the Discharge Pan and catches any grease drippings.

1. Tilt Discharge Grease Pan up to unhook and pull forward to remove.
2. When installing the Discharge Grease Pan, be sure to tilt up and push all the way back.

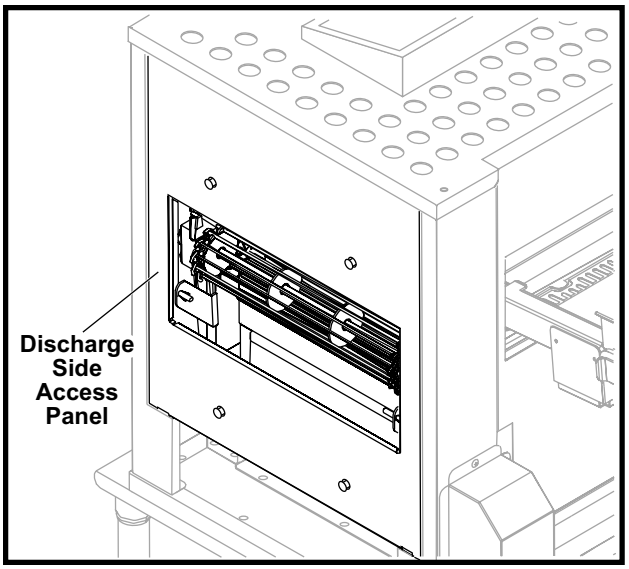
NOTE: Correct positioning will not allow pan removal without upward tilt.



Discharge Grease Pan

Discharge Access Panel

1. Remove the PHU Pan Shelf.
2. Remove Discharge Hood.
3. Remove Discharge Chute.
4. Remove Discharge Pan.
5. Remove Discharge Grease Pan.
6. Remove Discharge Access Panel by lifting it up and out.
7. Reverse procedure to install Discharge Access Panel.



Discharge Access Panel

Main Grease Pan

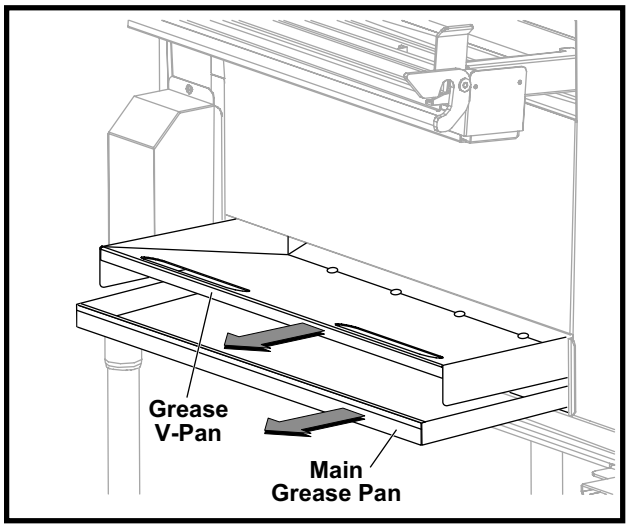
The Main Grease Pan is located on the front of the broiler under the Grease V-Pan.

Remove the Main Grease Pan by sliding straight out of broiler.

Grease V-Pan

The Grease V-Pan is located on the front of the broiler under the Loader Tray.

Remove pan by sliding straight out from broiler.

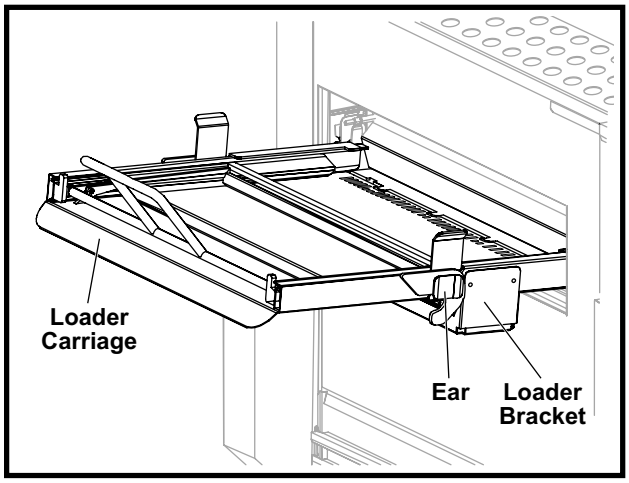


Grease V-Pan and Main Grease Pan

Loader Tray

The Loader Tray is located on the front of the broiler and slides into the channels on the Loader Brackets.

1. Remove Loader by sliding it out of the Loader Tray.
2. Remove Loader Tray from the Loader Brackets by pulling forward and disengaging ears on Loader Tray from keepers on the Loader Brackets.
3. Install Loader Tray by sliding it into bracket and engaging ears with keepers.



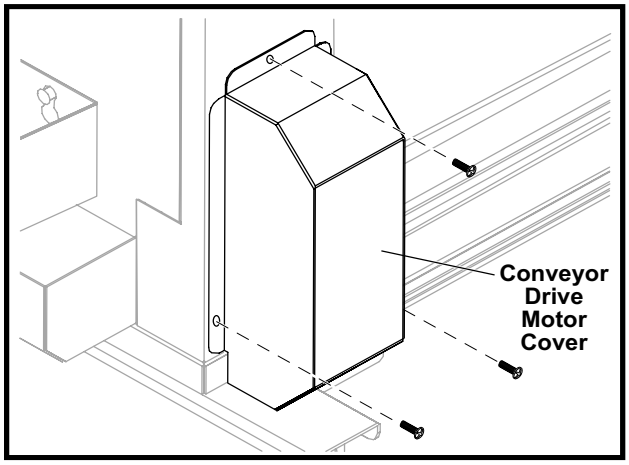
Loader Tray

Conveyor Drive Motor Cover

The Conveyor Drive Motor Cover, located on the lower front of the broiler on the discharge side, covers the Drive Chain Motor.

1. Remove the Main Grease Pan and the Grease V-Pan.

2. Remove the three screws securing the cover to the broiler.
3. Lift Conveyor Drive Motor Cover off the broiler.

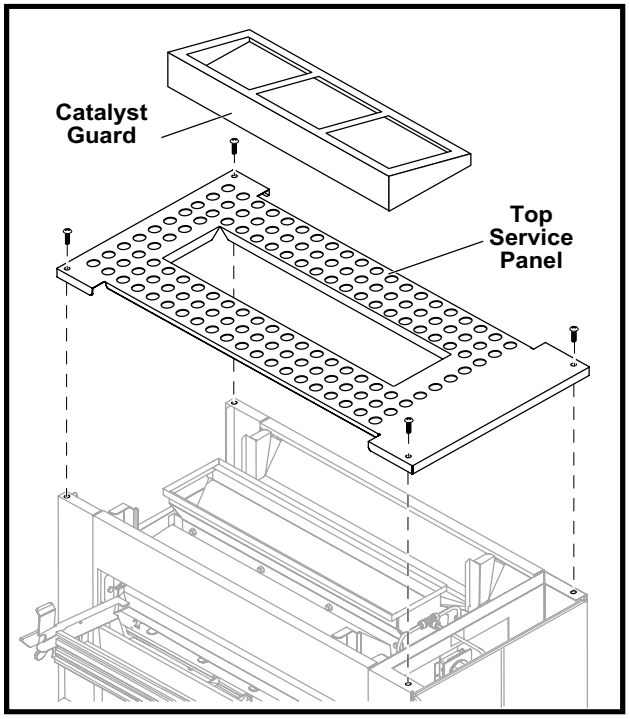


Conveyor Drive Motor Cover

Top Service Panel

The perforated Top Service Panel provides access to the two Infrared Burners

1. Remove the four screws securing the perforated Top Service Panel.
2. Remove the perforated Top Service Panel from the broiler.
3. Reverse procedure to install the perforated Top Service Panel.

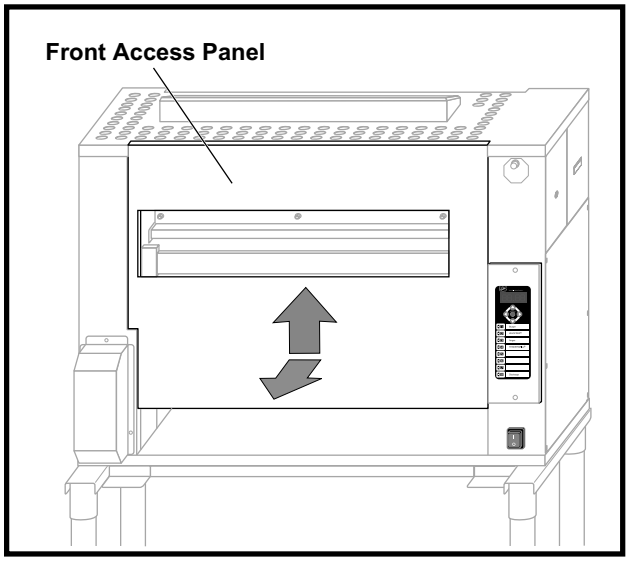


Top Service Panel

Removing the Front Panel

1. Slide the Loader out of the Loader Tray.
2. Unlatch the Loader Tray and slide it out of the Loader Tray Mounting Brackets.
3. Pull the Main Grease Pan out of the front of the broiler.

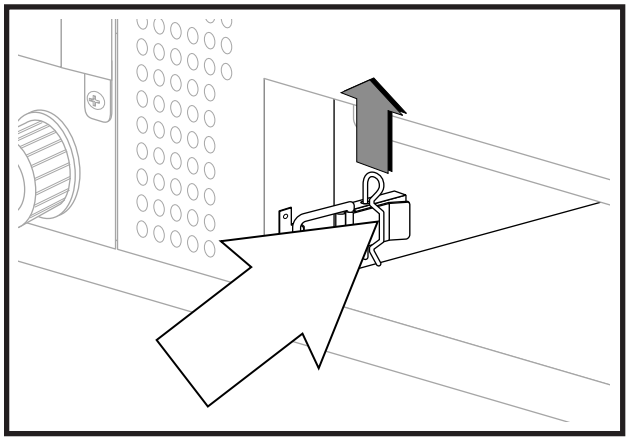
4. Pull the Grease V-Pan out of the front of the broiler.
5. Lift Front Panel up and away from broiler.
6. Reverse these steps to reinstall these parts.



Front Panel

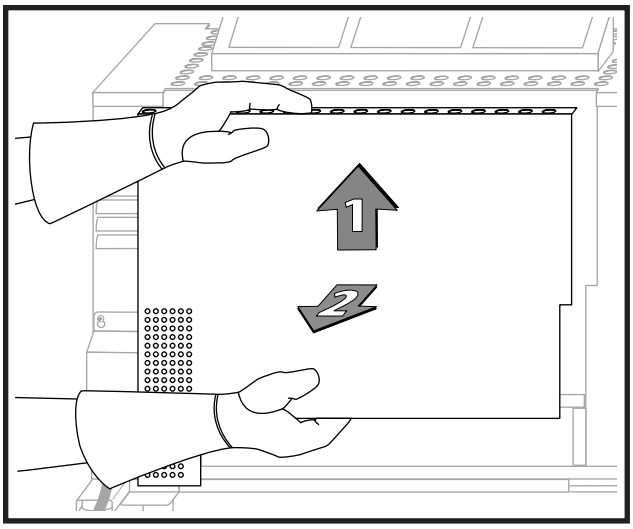
Removing the Rear Panel

1. Remove Cotter pin and unfasten latch.



Rear Panel Cotter Pin & Latch

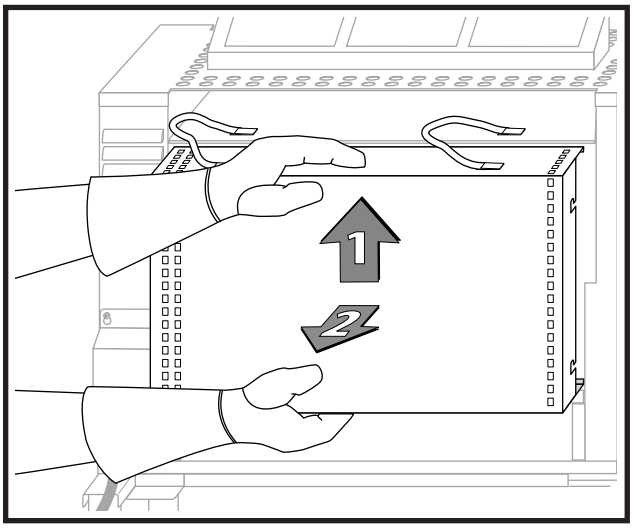
2. Lift Rear Panel up and away from broiler.
3. Reverse to reinstall the Rear Panel.



Rear Access Panel

Removing the Element Cover Panel

1. Remove the Rear Panel
2. Lift the Element Cover Panel up and away and remove from the broiler.



Element Cover Panel

3. The Panel is connected to the broiler with safety cables. Swing the panel up and place it on top of the broiler.
4. Reverse to reinstall the Element Cover Panel.

COMPONENT REMOVAL

CONVEYOR DRIVE MOTOR ASSEMBLY

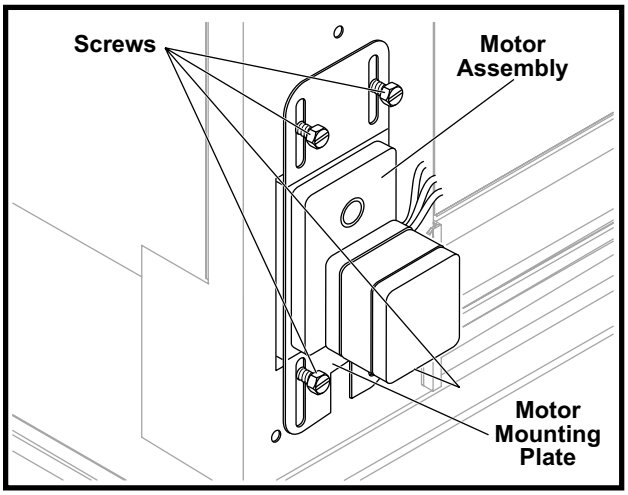
The Conveyor Drive Motor Assembly is located in the lower front of the broiler at the discharge end. The motor drives the Conveyor by use of a drive chain.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires to motor.
3. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
4. Remove four screws securing motor to mounting plate and remove motor.
5. Raise motor mounting plate to disengage drive chain from motor pulley.
6. Remove sprocket from motor shaft. Sprocket is secured to motor shaft by two set screws.
7. Reverse procedure to install a new motor. Ensure that one of the sprocket set screws is tightened to the flat side of the motor shaft.

NOTE: When installing the new motor, be sure to engage the chain on the motor sprocket. Adjust the tension on the chain to allow 3/16" chain deflection, as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.



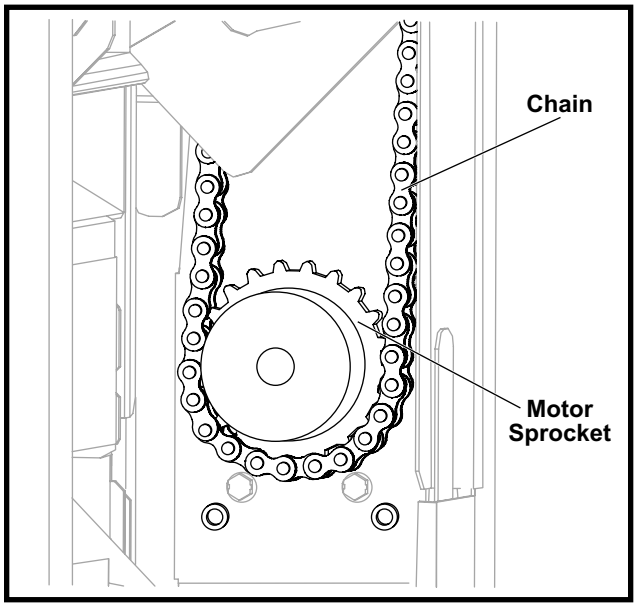
Conveyor Drive Motor Assembly

CONVEYOR DRIVE CHAIN

The Conveyor Drive Chain connects the drive motor to the Conveyor.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.



Drive Chain and Sprockets

1. Remove Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect motor wires.
4. Remove four screws securing motor mounting plate.
5. Raise motor mounting plate to disengage drive chain from motor sprocket.
6. Disengage chain from conveyor sprocket.
7. Remove chain from broiler by removing the master link.
8. Reverse procedure to install a new chain.

NOTE: When installing the new chain, be sure to engage the chain on the motor sprocket and conveyor sprocket. Then adjust the tension on the chain to allow 3/16" chain deflection, as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.

CONVEYOR DRIVE MOTOR SPROCKET

The Conveyor Drive Motor Sprocket is attached to the motor shaft.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect the motor wires.
4. Remove the four screws securing motor mounting plate.
5. Raise motor mounting plate to disengage drive chain from motor sprocket.
6. Disengage drive chain from motor sprocket.
7. Loosen the two setscrews on motor sprocket and remove sprocket from motor shaft.
8. Reverse procedure to install a new Conveyor Drive Motor Sprocket, ensuring that one set screw is tightened to the flat side of the motor shaft.

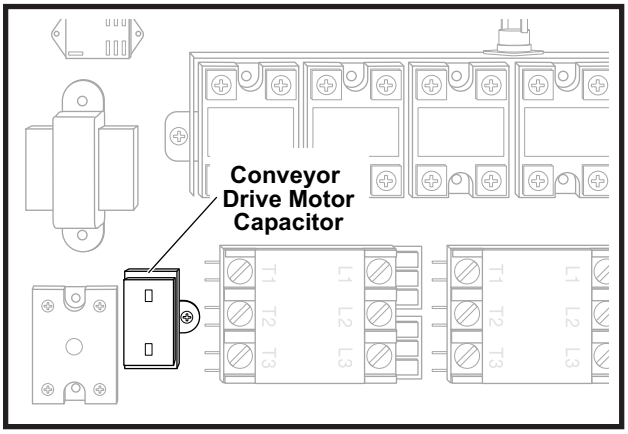
NOTE: When installing the new Conveyor Drive Motor Sprocket, be sure to engage the chain on the motor sprocket and conveyor sprocket, then adjust the tension on the chain to allow 3/16" chain deflection as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.

CONVEYOR DRIVE MOTOR CAPACITOR

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires to Conveyor Drive Motor Capacitor.
3. Discharge the capacitor Apply a short across the two capacitor terminals.
4. Remove screw securing capacitor to frame and remove Conveyor Drive Motor Capacitor.
5. Reverse procedure to install a new Conveyor Drive Motor Capacitor.



Conveyor Drive Motor Capacitor

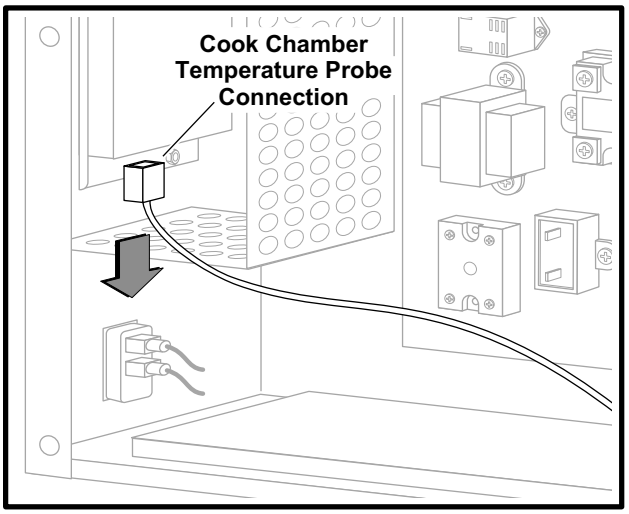
COOK CHAMBER TEMPERATURE PROBE

The Cook Chamber Temperature Probe connects to the bottom of the Control Board and is located on the back of the broiler.

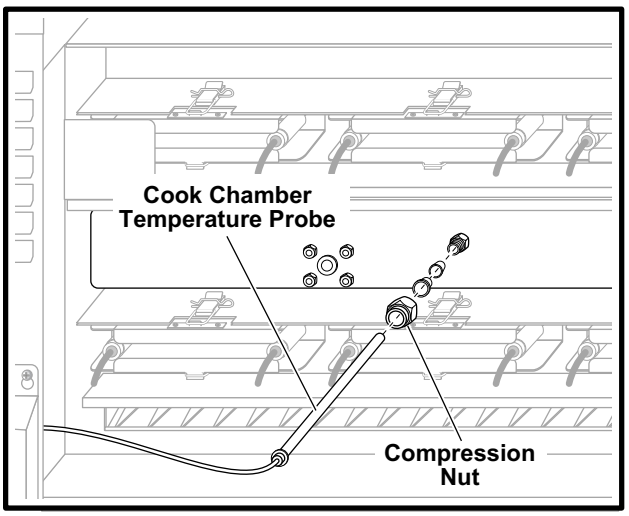
WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove the Rear Panel. Refer to the COVERS and PANELS section of the manual.
3. Remove the two screws that secure the Control Board Bezel.
4. Disconnect the Cook Chamber Temperature Probe connector at the bottom of the Control Board.
5. Remove the Cook Chamber Temperature Probe from the broiler by loosening the compression nut.
6. Slide the Cook Chamber Temperature Probe out of the broiler.
7. Route new Temperature Probe through Control Shroud and through panel.
8. Make connection at the Control Board and replace Control Board Bezel.
9. Slide new compression nut, fitting and sleeve onto Temperature Probe sheath.
10. Insert Temperature Probe into tube fully and tighten compression nut.



Cook Chamber Temperature Probe Connection



Cook Chamber Temperature Probe Mounting

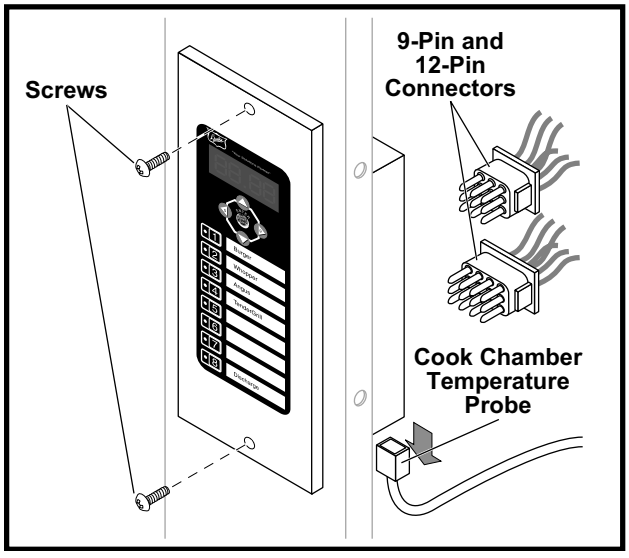
Control Board

The Control Board is located on the front of the broiler. Control Board programming is preset at the factory with standard BURGER KING® recipes. Any fine adjustments made at the restaurant level are the responsibility of the restaurant manager.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove the two screws on the front of the Control Board.
3. Disconnect the Cook Chamber Temperature Probe connector at the bottom of the Control Board.
4. Disconnect the 9-pin and 12-pin connectors from the back of the Control Board Bezel..
5. Remove Control Board from broiler.
6. Reverse procedure to install new Control Board.
7. Alert the restaurant manager the Control Board has been replaced and fine adjustments may be required.



Control Board

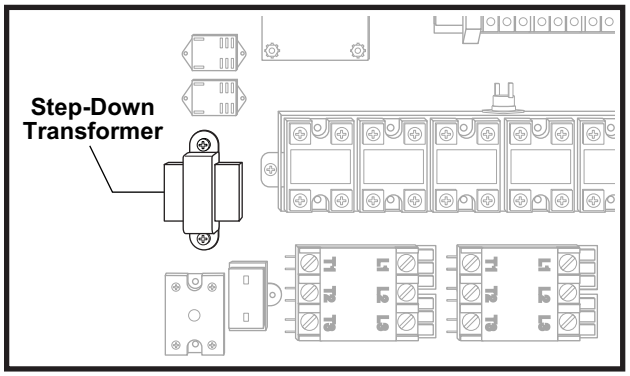
Step-Down Transformer

The Step-down Transformer is accessible by removing the Electrical Access Panel. The Transformer reduces the incoming voltage to 24 VAC.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires from the Transformer to be removed.
3. Remove screws securing Transformer to frame.
4. Remove Transformer.
5. Reverse procedure to install a Transformer.



Step-Down Transformers

SOLID-STATE RELAYS

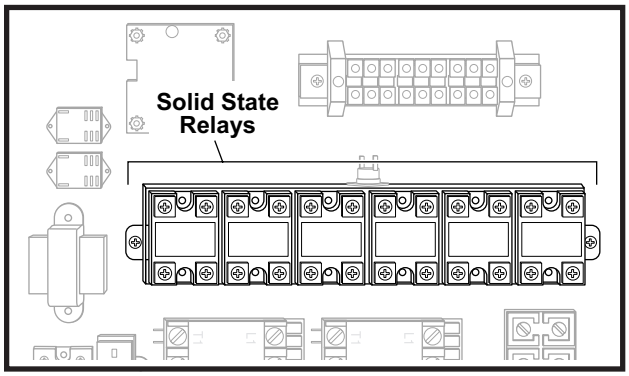
The Solid-State Relays are accessible by removing the Electrical Access Panel. There are a total of Seven SSR's. Six control the heating elements and one controls the conveyor motor.

Please note that there are three types of Solid State Relays used within the broiler. Each has separate input and output operating voltages, as well as different maximum output current ratings.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires from the Solid-State Relay to be removed.
3. Remove screws securing Solid-State Relay to frame.
4. Remove Solid-State Relay.
5. Peel protective film which covers the thermal compound pad on the back of the new Solid State Relay before replacing.
6. Reverse procedure to install a Solid-State Relay.



Solid State Relays

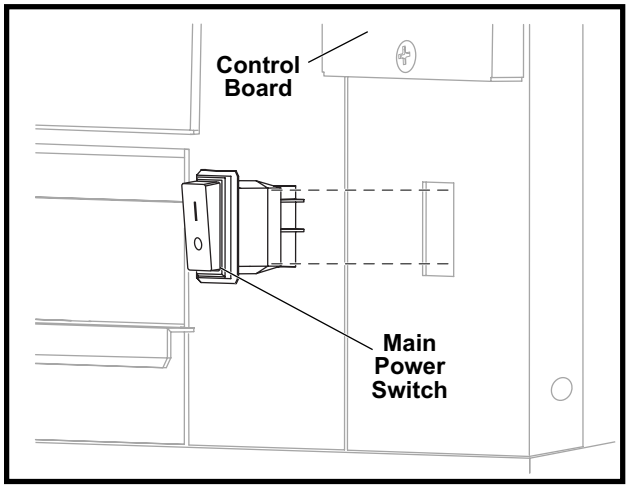
MAIN POWER SWITCH

The Main Power Switch is located on the front of the broiler below the Control Board.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect switch wires.
3. Pinch the spring tabs on the top and bottom of the switch and slide out through front of panel.
4. Reverse procedure to install a new Main Power Switch.



Main Power Switch

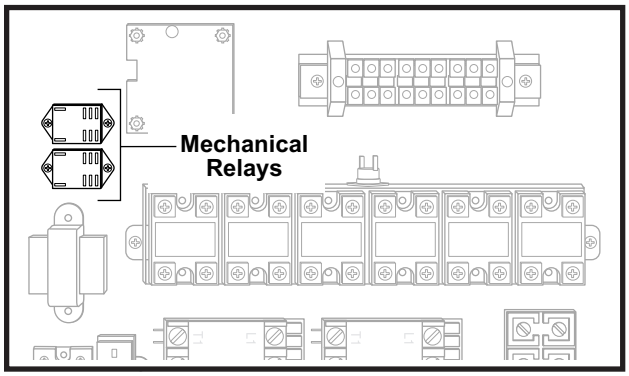
MECHANICAL RELAYS

The Mechanical Relays are accessible by removing the Electrical Access Panel. There are Two Mechanical Relays that are used in the Safety Panel Interlock system.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires from the Mechanical Relay to be removed.
3. Remove screws securing Mechanical Relay to frame.
4. Remove Mechanical Relay.
5. Reverse procedure to install an Mechanical Relay.



Mechanical Relays

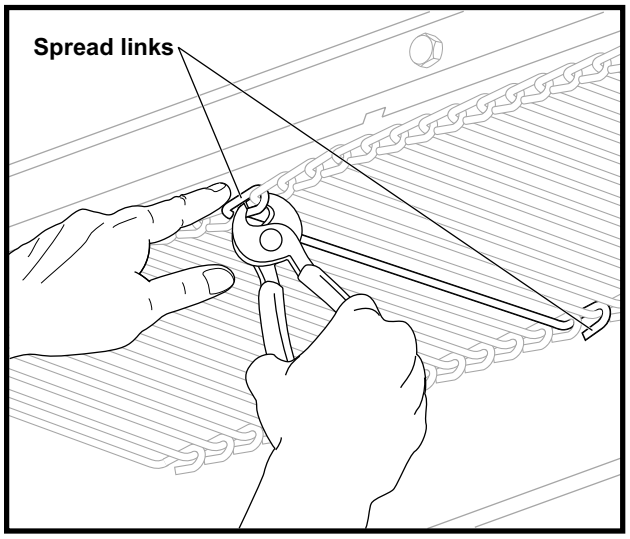
REPLACING CONVEYOR LINKS

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn off and unplug the broiler.
2. Remove the front operator parts and panels. Refer to the COVERS and PANELS section of the manual.
3. Spread the damaged link with Link Tool at both ends.
4. Remove the damaged link.
5. Install the new link.
6. Use pliers to close both ends of the link.
7. Check for proper operation. It may be necessary to add or remove shims behind or under the bushing blocks to ensure proper tension.

NOTE: Never remove a link without replacing a link.



Conveyor Links

HEATING ELEMENTS

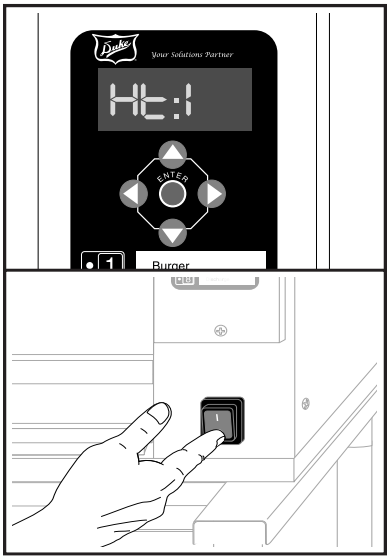
WARNING

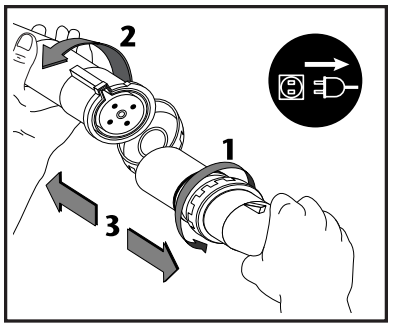
DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

NOTE: In the event of an element failure, the Controller will display an error message and indicate which element has failed. Refer to the Troubleshooting Label on the right side of the Broiler to identify the appropriate element location. The controller will display:

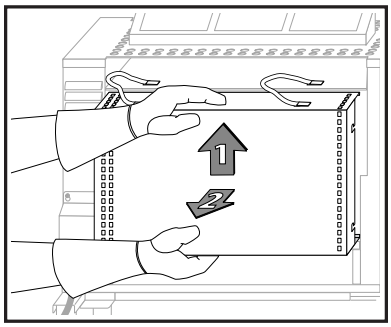
- Ht:1
- Ht:2
- Ht:3
- Ht:4
- Ht:5
- Ht:6

1. Turn off power and unplug the Broiler.

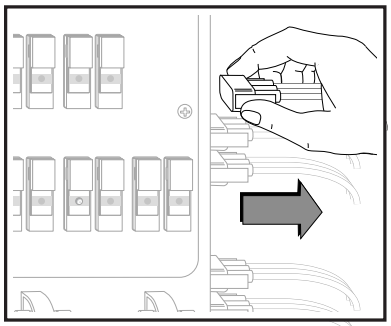




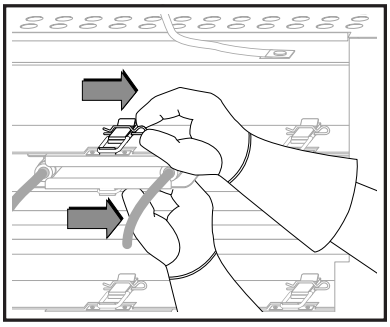
2. Lift and remove rear access panel.
3. Remove the element cover panel. Refer to the COVERS and PANELS section of the manual.



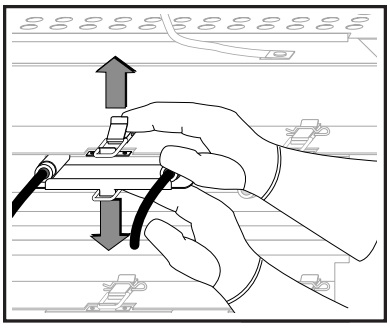
4. Remove the Fuse Access Panel and the Element Connection Access Panels. Refer to the COVERS and PANELS section of the manual.
5. Disconnect the appropriate element plug from the interior panel by squeezing in the connector's tabs.



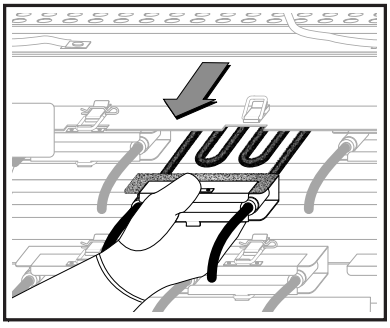
6. Disengage the clip by first removing the retaining pin on both top and bottom of element module.



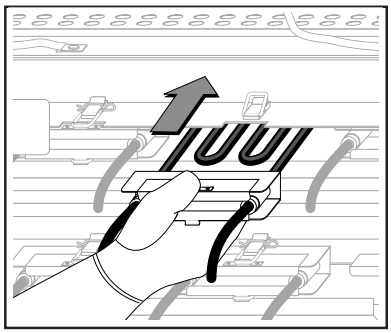
7. Pull clip forward to disengage.



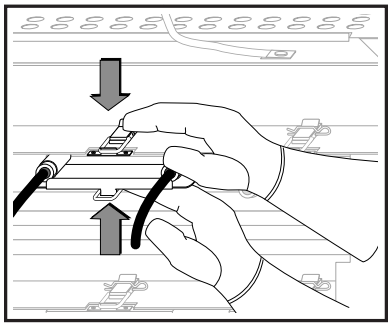
8. Slowly remove element module and replace with identical configuration. Replacement element must also be slid into support bracket at the front of the Broiler (Clips and Hooks will not align properly if the wrong element module is re-inserted.)

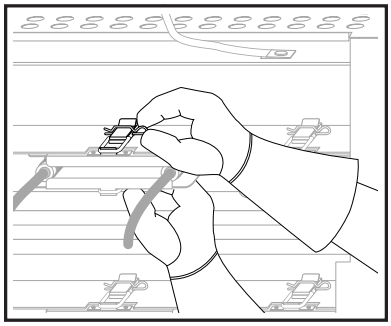


9. Slide element module in place and reengage clips and re-insert retaining pins.



10. Reengage clips and re-insert retaining pins.

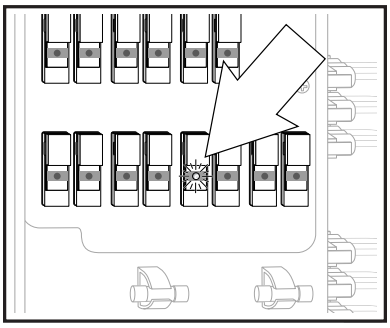




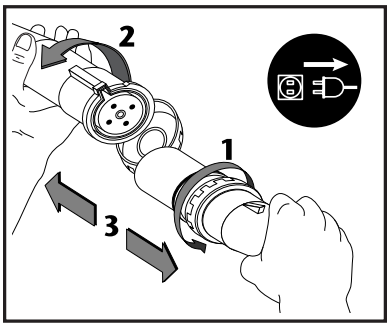
11. Reconnect element connector to interior panel connector.
12. Reinstall the Element Cover Panel.
13. Reinstall the Rear Panel and fasten the retaining latch.
14. Reinstall the Element Access Panel.
15. Plug in the Broiler.
16. Turn on the Main Power Switch.

FUSE REPLACEMENT

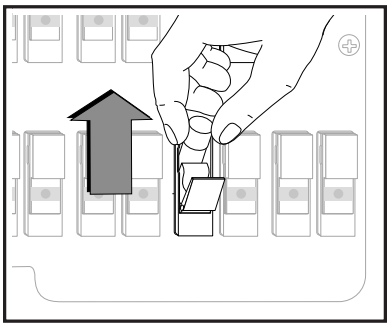
1. Check the fuses on the Fuse Panel. A lit Indicator lamp means a blown fuse.



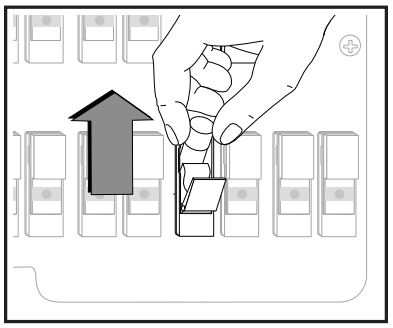
2. Unplug the broiler.



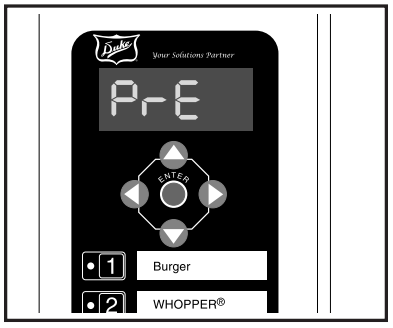
3. Open the fuse holder(s) to remove any blown fuse(s).



4. Replace any blown fuse(s) with correctly rated replacement fuse(s).



5. Close the fuse holder. Plug in the broiler and check the indicator lamps. They should not be lit with a good fuse in place.
6. Reinstall the Fuse Access Panel
7. Broiler will go into preheat mode indicating proper operation.



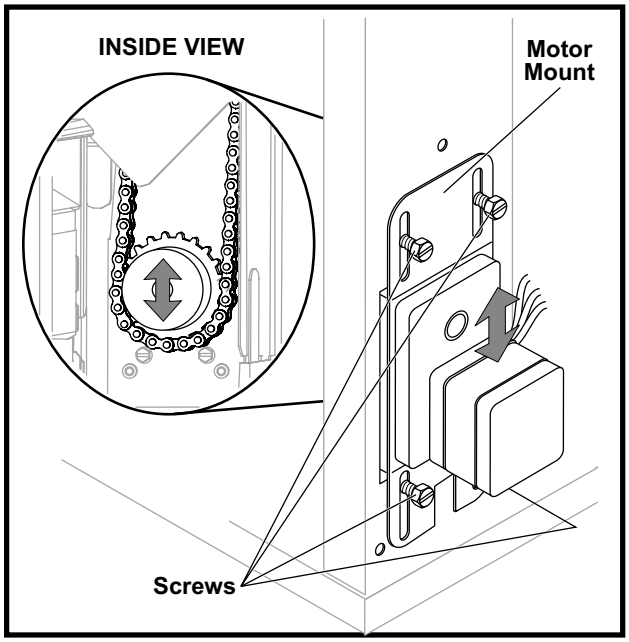
NOTE: This unit also comes equipped with a safety interlock system located on the rear access panel for additional user safety. The rear access panel must be mounted correctly or power will not be supplied to heating elements.

ADJUSTMENTS

DRIVE CHAIN DEFLECTION ADJUSTMENT

The Drive Chain connects the drive motor to the Conveyor.

1. Check that the deflection in the Drive Chain does not exceed 3/16" inch maximum. If the chain requires adjustment, proceed to step 2.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Remove Conveyor Drive Motor Cover.
4. Loosen the four screws securing the motor mount to the frame.
5. Move the motor mount up or down as necessary to provide 3/16" deflection at center of chain.
6. Secure the motor mount in place by tightening the four motor mount screws.
7. Install Conveyor Drive Motor Cover.
8. Install Discharge Access Panel.



Drive Chain Deflection Adjustment

CONVEYOR POSITION ADJUSTMENT

The Conveyor position is adjusted by adding shims between the Conveyor Shaft Bearing and the frame.

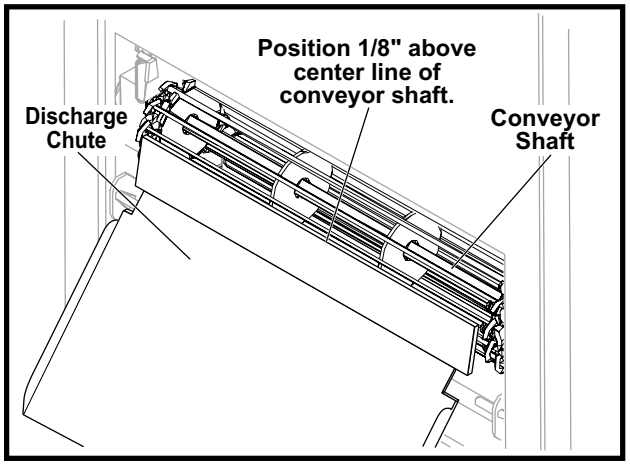
1. Remove Discharge Hood to provide visual access to the Conveyor.
2. Adjust Conveyor height as described in the following illustration.
3. Remove the two screws securing the bearing to the frame.
4. Insert shims as necessary between the bearing assembly and the frame.
5. Check Conveyor position.

NOTE: Leading edge of Discharge Chute should be about an 1/8" above the center line of the Conveyor shaft. When correctly adjusted, the Conveyor link should just graze the backside of the chute. If adjusted too high, the link will roll over the top of the leading edge of the Discharge Chute causing a Conveyor jam.

6. If additional shims are required, repeat step 4.

NOTE: Additional shims are located inside the Drive Motor Cover.

7. Use the Diagnostic Mode on the Control to run the Conveyor for several full revolutions to confirm that no jamming occurs.

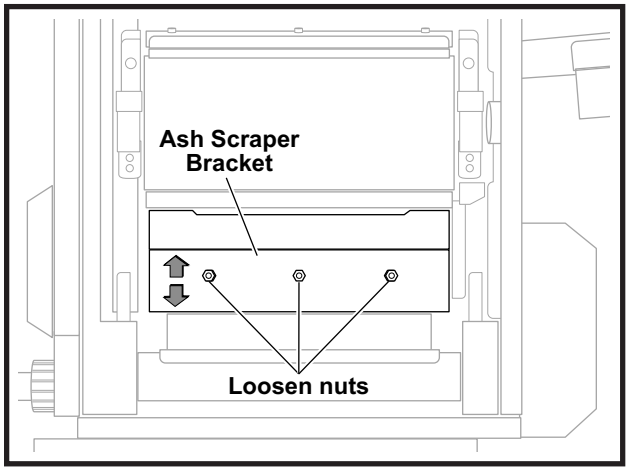


Conveyor Discharge Shaft Adjustment

ASH SCRAPER BRACKET ADJUSTMENT

The Ash Scraper Bracket support the Ash Scraper on the Discharge end of the Broiler.

1. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Loosen three nuts which secure the Ash Scraper Bracket and adjust bracket up or down as needed.

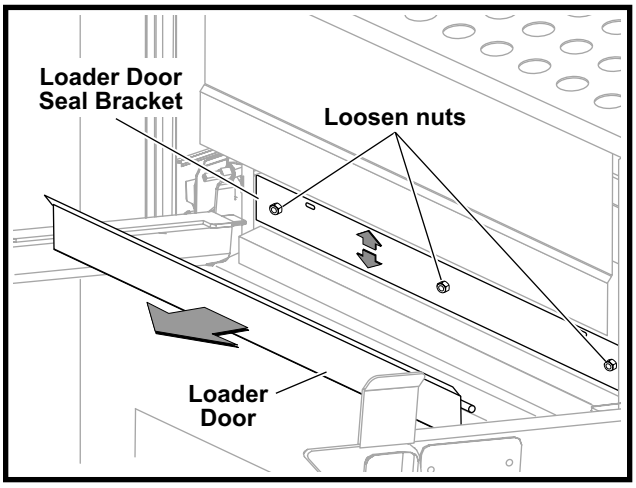


Ash Scraper Bracket Adjustment

LOADER DOOR SEAL BRACKET

The Loader Door Seal Bracket supports the Loader Door and assists to seal any gap between the Loader Door and the Loader Ramp.

1. Remove the Loader Door.
2. Loosen three nuts which secure the Loader Seal Door Bracket and adjust bracket up or down as needed.

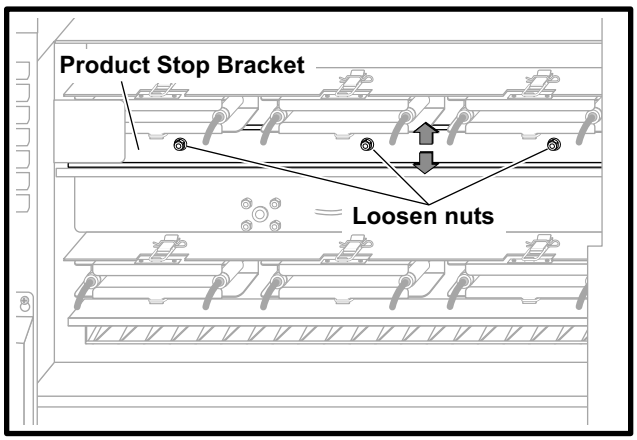


Loader Door Seal Bracket

Product Stop Bracket Adjustment

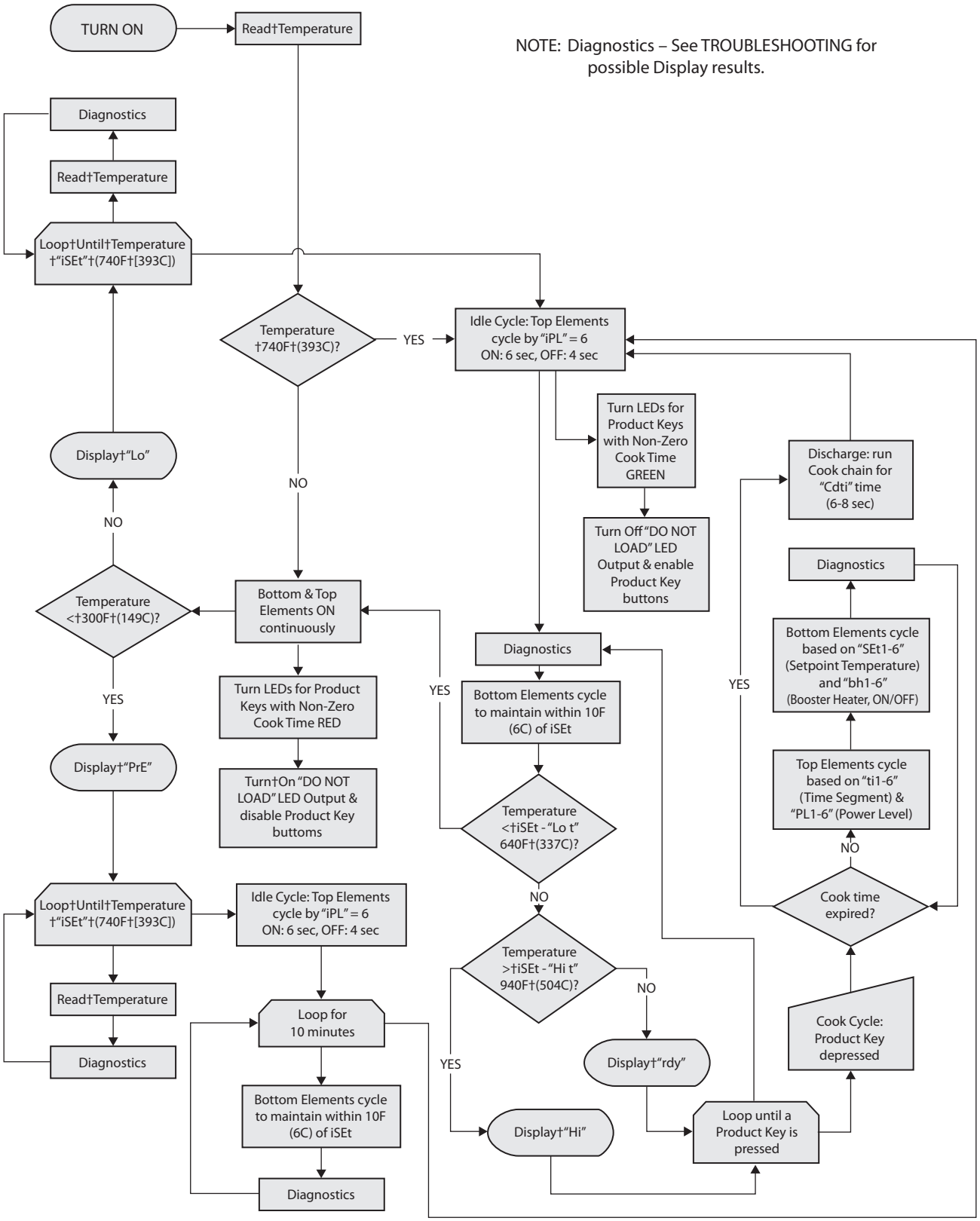
The Product Stop Bracket sits above the cook chain on the back wall of the cook cavity. It prevents product from being loaded and pushed up on top of the cook chain links.

1. Remove the Rear Panel and Element Cover Panel. Refer to the COVERS and PANELS section of the manual.
2. Loosen three nuts which secure the Product Stop Bracket and adjust bracket up or down as needed.



Product Stop Bracket Adjustment

SEQUENCE OF OPERATION



TROUBLESHOOTING

The following troubleshooting information includes checking procedures for various electrical components in order to help identify faulty components. The troubleshooting guide below is designed to identify various symptoms and provide the suggested remedy.

COMPONENT CHECK PROCEDURES

Checking the Power Switch

The Power Switch has a built-in LED that lights red when the switch is in the on position. Check the following before replacing the switch.

- Make sure the power cord is plugged into the correct receptacle. The broiler operates on 208/240 VAC 60 Hz line current.
- Check the circuit breaker assigned to the broiler.
- Try a different receptacle before replacing the switch.
- It's possible for the LED in the switch to fail. Turn the switch on and check the Control Board display. If the display is active, the LED is burned out, replace the switch.

Checking the Control Board

Under normal conditions, the Control Board displays the current status of the broiler. It can be used as a diagnostic tool, when it is working properly.

Try the following before replacing the Control Board.

- Cycle the broiler off and on; observe the Control Board.
- Try running the Control Board through a couple of different cook cycles.

NOTE: If the Control Board is still not performing properly, try these procedures:

1. Turn the broiler off.
2. Remove the Control Board.
3. Check each connection on the back of the Control Board. Make sure they are all connected correctly.
4. Loosely attach the Control Board, turn the broiler on. Observe the display and product key LEDs.
5. Turn the power off and reattach the Control Board if the problem is solved.

Testing the Temperature Probe

1. Turn the broiler OFF.
2. Remove two screws which secure the Control Board Bezel, and remove the Control Board.
3. Disconnect the Temperature Probe connector at the bottom of the Control Board.
4. Use an Ohmmeter to check resistance on the Temperature Probe. An open or shorted measurement would indicate a fault.

Checking the Conveyor Drive Motor

The Conveyor Drive Motor is located on the front of the broiler on the lower discharge side. Before replacing it, check the Conveyor for jammed meat product. Next, try turning the Conveyor discharge shaft with the Multipurpose Broiler Tool. If the Conveyor does not turn, check the following items:

- Check the Discharge Chute.
- Check the Loader Ramp.
- Check the Ash Scraper.
- Check the Cook Chain (Conveyor).
- Check the Flame Arrestor.

Testing the Conveyor Drive Motor

The Conveyor Drive Motor may be tested without removing it from the broiler.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn off and disconnect the broiler.
2. Remove the Conveyor Drive Motor Cover.
3. Tag and disconnect the wires.
4. Use an Ohmmeter to measure resistance.
5. Attempt to run the Drive Motor when it's disengaged from the Drive Chain.

NORMAL MOTOR RESISTANCE (230 VAC, 60 HZ)

Wires to Test	Resistance
Black and Brown	98.1 Ω
Black and Orange	98.1 Ω
Brown and Orange	196.2 Ω

Checking Conveyor Drive Motor Capacitor

If the motor tests OK, check the Capacitor. The Capacitor is located in the service area on the control side of the broiler.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect the wires connected to the Capacitor.
3. Discharge the Capacitor by shorting both terminals to ground at the same time.
4. Use an Ohmmeter to test the Capacitor.

NOTE: If both the Drive Motor and Capacitor test OK, the problem is probably with the Drive Motor Relay.

Testing the Relays

There are seven Solid-State Relays in the broiler. Six control the Heating Elements, while the other controls the Conveyor Drive Motor.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Turn ON the Main Power Switch.
3. The Heating Elements are energized when the Controller calls for heat. To test the relay, check for voltage on the input of the relay. See the chart below. At the same time, monitor AC current to Heating Elements. When no relay input voltage is present, there will be no amperage draw on the output of the relay.

NOTE: (SSR4) is unique and operates with a DC voltage input

Relay #	Input Voltage Range	Typical Voltage Reading	Max. Output Amps
SSR1	18-36 VAC	24 VAC	50 A
SSR2	18-36 VAC	24 VAC	50 A
SSR3	18-36 VAC	24 VAC	50 A
SSR4	4-32 VDC	6 VDC	50 A
SSR5	18-36 VAC	24 VAC	50 A
SSR6	18-36 VAC	24 VAC	50 A

The Conveyor Drive Motor runs when the Drive Motor Relay is energized by the Control.

The Solid State Relay that controls the Conveyor Drive Motor, utilizes a 4.5 - 32 VDC (typically 6 VDC) input signal to switch up to 10A on the output.

TESTING THE TRANSFORMERS

The 24-volt Step-Down Transformer in the broiler supplies power to the Control Board. Either a voltage or a resistance check can be used to test the Transformer.

Voltage Test

1. Make sure the broiler is turned OFF.
2. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect the secondary winding.
4. Turn the broiler on.
5. Using a VOM, test the voltage output across the secondary winding. Voltage should be 24 VAC.

Resistance Check

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn the broiler OFF.
2. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Tag and disconnect the wires of the Transformer to be tested.
4. Measure the resistance across the primary. Primary Resistance = 71.5 Ω ±10%.
5. Measure resistance across secondary.
6. Secondary Resistance = 1.3 Ω ±10%.

TESTING THE MECHANICAL RELAYS

The two Mechanical Relays work in conjunction with the safety interlocks to allow safe access to the various areas of the Broiler.

When working properly, they allow AC input voltage to the two Contactors, which allow the elements to heat.

Continuity Test

1. Make sure broiler is turned OFF.
2. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect a single contact terminal on the Mechanical Relay and tape off for safety.
4. Turn the broiler on.
5. Test continuity across the two contact terminals. With Safety Interlock panels installed, continuity should be present.

TESTING THE CONTACTORS

The two Contactors in the broiler lie in series with each other and supply power to the Elements.

Voltage Test

1. Make sure the broiler is turned OFF.
2. Remove the Electrical Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Turn the broiler on.
4. Visually validate that the Contactor is energizing and “pulling in”.
5. If Contactor does not energize, ensure 208/240 VAC is present at the input coil.

CONTROL DIAGNOSTICS

The Broiler Control consists of two programming modes and two diagnostic modes. To enter any of these 4 modes, it is required to first hold down the ENTER button for a few seconds until CODE is displayed. Then enter the 4 digit passcode provided below and press ENTER.

Programming

1. Recipe related programming (Refer to Owner's Manual)

   Passcode: 1 8 2 7

2. Broiler functionality programming (Refer to Owner's Manual)

   Passcode: 3 6 4 5

Diagnostics

1. Diagnostic Test

   Passcode: 3 4 2 4

   After entering the code and pressing ENTER, DIAG will be displayed and then the display will show 8888.

   The following options are available:

   a) Pressing the ▼ key will run the Conveyor Drive Motor.

   NOTE: Do not run the Conveyor Drive Motor for more than 6 seconds at a time. It will overheat.

   Pressing the ▼ key a second time will energize the Cook Light.

   b) Pressing the ▲ key once will initiate an Element Diagnostic test with the TOP ELEMENTS ON only.

      a. S1 = H1 Current

      b. S2 = H2 Current

      c. S3 = H3 Current

   c) Pressing the ▲ key a second time will initiate an Element Diagnostic test with the BOTTOM ELEMENTS ON only.

      a. S1 = H4 Current

      b. S2 = H5 Current

      c. S3 = H6 Current

   d) Pressing the ▲ key a third time will initiate an Element Diagnostic test with ALL ELEMENTS OFF.

      a. S1 = H1 & H4 Current

      b. S2 = H2 & H5 Current

      c. S3 = H3 & H6 Current

   e) Pressing the ▲ key a fourth time will go back to the home screen, 8888.

   f) Pressing the ENTER button from here will exit Diagnostic mode.

2. Failure Counts

   The Control Board keeps track of how many times product buttons are depressed. It also tracks Element failures and other various failures as shown below.

   Passcode: 1 2 3 4

   Prd1 = Prd1 depressions

   Prd2 = Prd2 depressions

   Prd3 = Prd3 depressions

   Prd4 = Prd4 depressions

   Prd5 = Prd5 depressions

   Prd6 = Prd6 depressions

   Prd7 = Prd7 depressions

   Prd8 = Prd8 depressions

   tP1 = HT1 Element failures

   tP2 = HT2 Element failures

   tP3 = HT3 Element failures

   tP4 = HT4 Element failures

   tP5 = HT5 Element failures

   tP6 = HT6 Element failures

   SrEr = Failures of ALL ELEMENTS OFF Element Diagnostic Test

   dBEr = Communication failures between Diagnostic Board and Control Board

   rtot = Total Run Time (Hours)

TROUBLESHOOTING CHART

Symptom	Cause	Remedy
Control display does not light up	No Power	Verify 208/240 VAC, 3 phase, present at receptacle. Confirm 208 VAC or 240 VAC on Serial Number Label. Ensure 208/240 VAC, line-to-line, at incoming terminal block.
	On / Off Switch	Ensure 208/240 VAC across input / output of switch.
	Transformer	Ensure 24 VAC across Transformer secondary winding.
	Wiring	Check for broken or improper wire connection.
Display flashes **"PnL"** & **"oFF"** – (Panel Off Error)	Back Panel Safety Interlock	Check that back panel is safely secured.
	Element Connection Access Panel Safety Interlock	Check that side panel is safely secured.
	Magnet Alignment	Check alignment of Safety Magnets on back and side panels.
	Safety Interlock	With panels installed, check for continuity on Safety Interlocks.
	Mechanical Relay	Ensure Mechanical Relays energize when panels are installed. With panels installed. measure 24 VAC at relay coils.
	Transformer	Check for 24 VAC on secondary of Transformer.
Display shows **"Ht:x"**, where x is 1,2,3,4,5,6 – (Heater Error)	Element	Identify correct Heater location and test continuity.
	Fuse	Test continuity of appropriate Fuse.
	Solid State Relay	Ensure Solid State Relay switches ON / OFF at appropriate intervals. Test for closed or open output condition.
	Control	Test Solid State Relay inputs for appropriate signal from control.
	Wiring	Check for broken or improper wire connection.

Symptom	Cause	Remedy
Display shows **"hT:Er"** – (Possible error during "PrE")	Element	Identify correct Heater location and test continuity.
	Fuse	Test continuity of appropriate Fuse.
	Solid State Relay	Ensure Solid State Relay switches ON / OFF at appropriate intervals. Test for closed or open output condition.
	Wiring	Check for broken or improper wire connection.
	Heat Loss	Check for missing or damaged panels.
Displays flashes **"tESt"** & **"Prod"** – (Test Product)	Refer to "Ht:x"	This error may occur at the end of a cook cycle and should be followed by a "Ht:x" error.
Display shows **"Hi"** – (High Temperature Error)	Solid State Relay	Ensure Solid State Relay switches ON / OFF at appropriate intervals. Test for closed or open output condition.
	Control	Test Solid State Relay inputs for appropriate signal from control.
	Wiring	Check for broken or improper wire connection.
Display shows **"Lo"** – (Low Temperature Error)	Refer to "Ht:x"	"Lo" may be followed by a "Ht:x" error.
	Refer to "Ht:x"	"Lo" may be followed by a "PnL" & "oFF" error.
	Refer to "hT:Er"	"Lo" may be followed by a "hT:Er" error.
	Heat Loss	Check for missing or damaged panels.
Display shows **"Sr:Er"** – (Failure of "ALL OFF" Diagnostic Test)	Element	Identify correct Heater location and test continuity.
	Fuse	Test continuity of appropriate Fuse.
	Solid State Relay	Ensure Solid State Relay switches ON / OFF at appropriate intervals. Test for closed or open output condition.
	Wiring	Check for broken or improper wire connection.
	Diagnostic Board	Ensure board powers on.
	Control	Test Solid State Relay inputs for appropriate signal from control.
	Current Sensor	Measure continuity on Current Sensors.
Display shows **"dB:Er"**	Wiring	Check harness connection between Diagnostic Board and Control Board.
	Diagnostic Board	Ensure board powers on.
	Control	Ensure board powers on.
	Current Sensor	Measure continuity on Current Sensors.

Symptom	Cause	Remedy
Display shows **“triP”**	High Limit Thermostat	Test continuity on Thermostat located on Relay Heat Sink.
	Cooling Fan	Ensure Cooling Fan runs when On / Off Switch is turned ON.
	Cooling obstruction	Clean Cooling Fan and any other item which may not be allowing Relay Heat Sink to dissipate heat effectively.
Display shows **“Prob”**	Temperature Probe	Test continuity for open or shorted Temperature Probe.
Cook Chain does not move / Runs all the time	Discharge Chute	Discharge Chute is not properly in place.
	Cook Chain obstruction	Cook Chain is catching on another item, i.e. ash scraper, loader ramp, flame arrestor. May require adjustment of Ash Scraper Bracket.
	Cook Chain not properly adjusted	It may be necessary to install shims behind or underneath shaft bearings to ensure proper position and tension of the cook chain.
	Loose Drive Chain	Deflection of Drive Chain should be approximately 3/16”.
	Loose Motor Sprocket	When tightening, ensure motor sprocket is orientated the same way as the shaft sprocket.
	Control	Ensure Control is signaling to energize the Conveyor Motor Relay.
	Solid State Relay	Ensure Conveyor Motor Relay is closing. Replace Solid State Relay if Conveyor Motor runs non-stop.
	Conveyor Motor	Test Conveyor Motor for fault.
	Capacitor	Test Conveyor Motor Capacitor for fault.

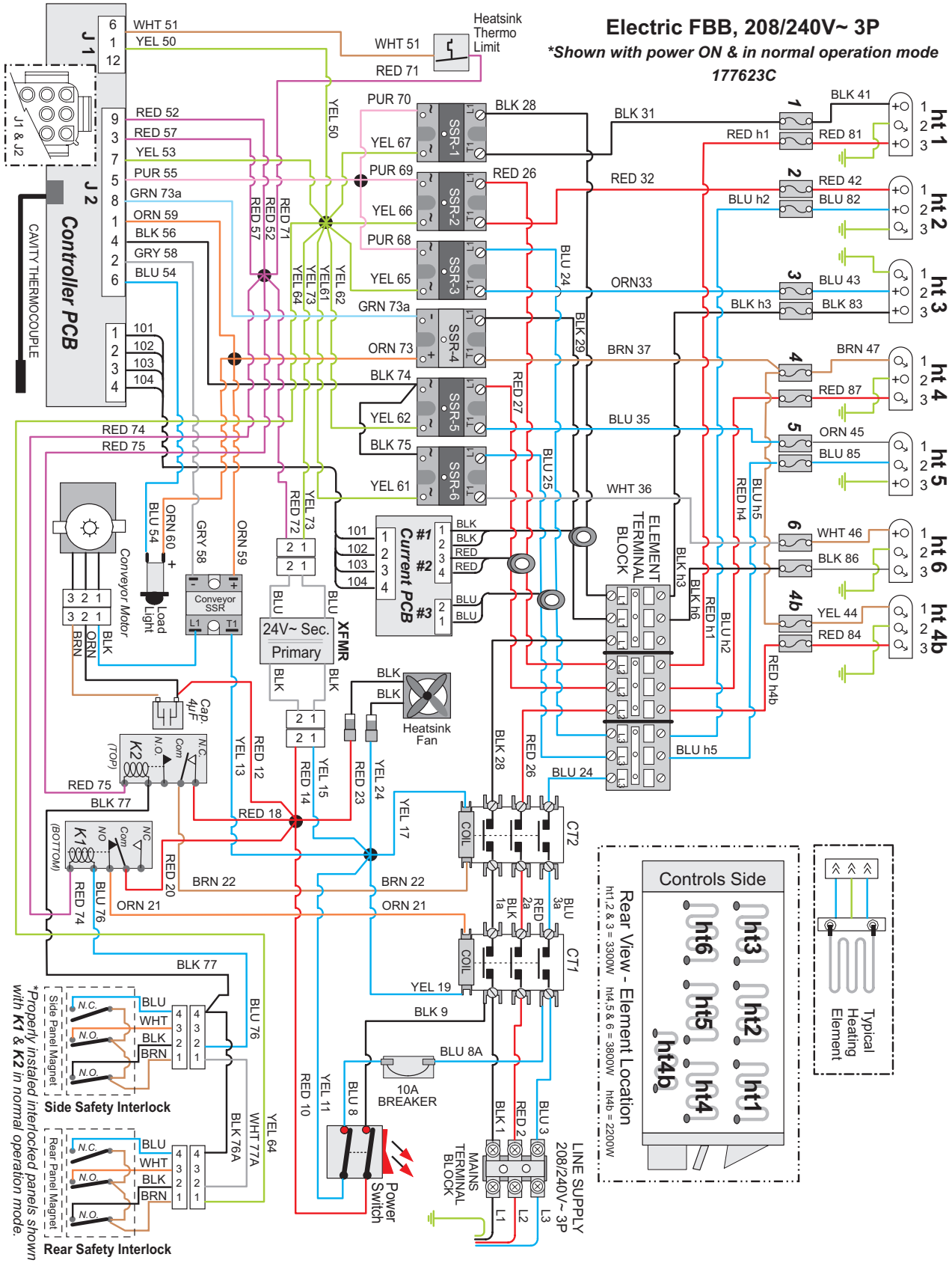
PREVENTIVE MAINTENANCE

SEMIANNUAL

It is recommended to perform preventative maintenance on the Broiler every 6 months. Over time, dust and debris will accumulate, electrical connections will loosen, and the following procedures and inspections should be made to extend the life of the components within the Broiler.

1. Vacuum dust and dirt from the cooling fan and heat sink fins.
2. Perform a visual inspection of the Broiler, noting and repairing any electrical connection which appears damaged.
3. Check tightness of all electrical connections throughout the Broiler. Pay particularly close attention to all Element, Solid State Relay, and Terminal Block connections as these will be more affected over time.
4. Check tightness of electrical connections within Plug and at receptacle

ELECTRICAL SCHEMATIC – FLEXIBLE BATCH BROILER



NOTES

NOTES

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____ **SERIAL NUMBER** _____

DATE OF PURCHASE _____

DEALER _____ **TELEPHONE** _____

SERVICER _____ **TELEPHONE** _____

NORTH AMERICA & LATIN AMERICA

Duke Manufacturing Company
2305 N. Broadway
St. Louis, MO 63102
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Toll Free: 1-800-735-3853
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658 Nong Jin Zhong Road
Shanghai, China 200335
Tel: +86 21 6876 9272
Fax: +86 21 33600628

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

Your Solutions Partner

Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102
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Fax: 314-231-5074
www.dukemfg.com

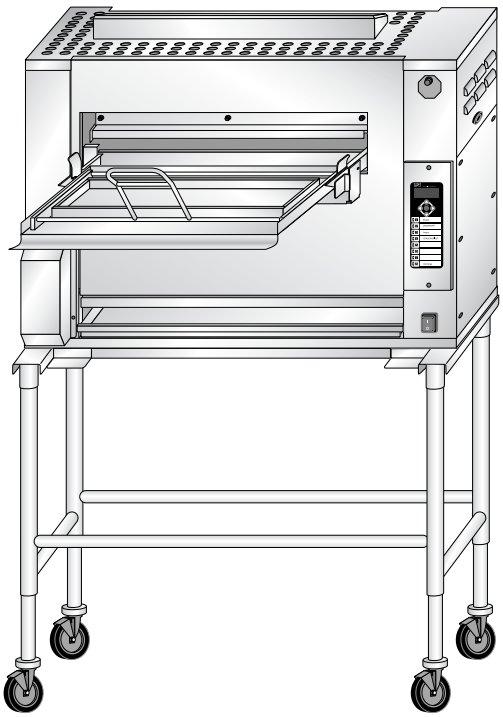
EU Headquarter Office
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Fax: +86 21 33600628

Your Solutions Partner

Service Manual



FLEXIBLE BATCH BROILER, CE VERSION

MODELS
FBB-XY-230-AAB

Please read this manual completely before attempting to install, operate or service this equipment

This document is prepared for trained Duke service technicians. It is not to be used by anyone not properly qualified to perform these procedures.

This Service Manual is not all encompassing. If you have not been trained on servicing this product, be sure to read the manual completely before attempting servicing. Be sure all necessary tools, test equipment, and skills are available. Those procedures for which you do not have the proper skills and test equipment must be performed only by a qualified Duke trained service technician.

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Duke Manufacturing Co.

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IMPORTANT WARNING AND SAFETY INFORMATION

IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT. THE QUALIFIED INSTALLER SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

IMPORTANT

THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED SHOULD BE POSTED IN A PROMINENT LOCATION. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN BROILER AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

IMPORTANT FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING

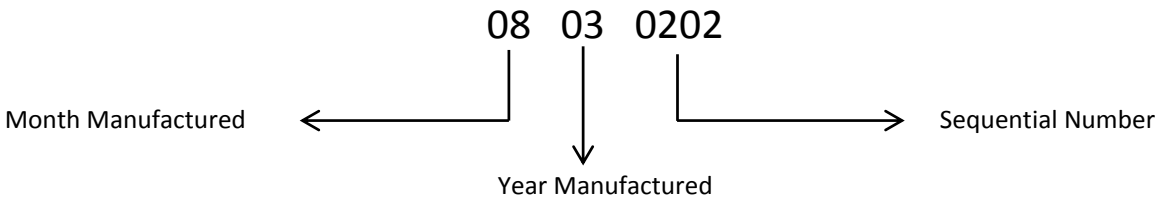
IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

WARNING

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

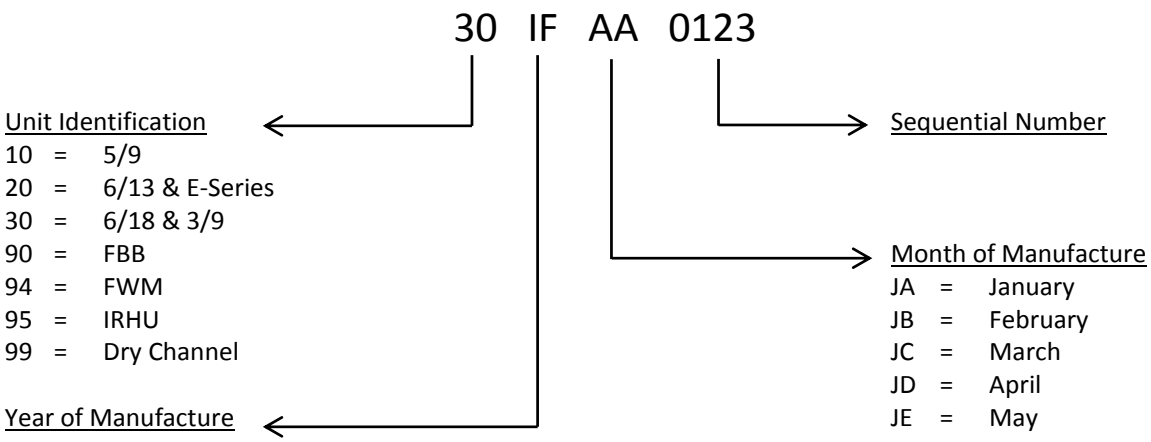
How to Determine Manufacture Date from Duke Equipment Serial Numbers

All units currently manufactured in St. Louis and Sedalia, Missouri (After 2/1/2013):



(Example: 08030202 = Indicates the unit was manufactured in August of 2003)

Units Manufactured in St. Louis, Missouri (Before 2/1/2013):



Unit Identification
- 10 = 5/9
- 20 = 6/13 & E-Series
- 30 = 6/18 & 3/9
- 90 = FBB
- 94 = FWM
- 95 = IRHU
- 99 = Dry Channel

Year of Manufacture
- A = 1
- B = 2
- C = 3
- D = 4
- E = 5
- F = 6
- G = 7
- H = 8
- I = 9
- J = 0

(Examples)
(JJ = 2000)
(JA = 2001)
(JB = 2002)

Sequential Number

Month of Manufacture
- JA = January
- JB = February
- JC = March
- JD = April
- JE = May
- JF = June
- JG = July
- JH = August
- JI = September
- AJ = October
- AA = November
- AB = December

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INTRODUCTION

INSTALLATION

For detailed installation instructions, refer to the Installation and Operation Manual.

OPERATION

For specific operating instructions, refer to the Installation and Operation Manual.

CLEANING

For specific cleaning instructions, refer to the Installation and Operation Manual.

CE SPECIFICATIONS

	G20	G25	G30	G31
ALTITUDE (MAXIMUM)	607 m	607 m	607 m	607 m
GROSS HEAT INPUT	26.4 KW	26.4 KW	26.4 KW	26.4KW
GAS PIP CONNECTION	12.7 mm BSPT	12.7 mm BSPT	12.7 mm BSPT	12.7 mm BSPT
Supply Pressure	20 mbar	25 mbar	28-30 mbar	37-50 mbar
IR burner Pressure	9.34 mbar	12.95 mbar	19.93 mbar	19.93 mbar
Lower Burner Pressure	9.34 mbar	12.95 mbar	19.93 mbar	19.93 mbar
ORIFICE – Front IR burner	2.35	2.35	1.40	1.55
ORIFICE – Rear IR Burner	2.50	2.50	1.51	1.61
ORIFICE – Lower Burner	3.05	3.05	2.00	2.00

SHIPPING WEIGHT	205 KG (450 lbs)
SHIPPING DIMENSIONS	121.9 cm x 99.1 cm x 172.7 cm (48" x 39" x68")
ELECTRICAL RATING	230 Volts 50 Hz 250 W

Model Number Information:

FBB-XY-230-AAB

X = 1 Reference Gas G31

X = 2 Reference Gas G20

X = 3 Reference Gas G30

X = 5 Reference Gas G25

Y = O No Catalyst

Y = C With Catalyst

AA = ISO 2 Digit Country Code

B = Future use

TOOLS

Standard

- Standard set of hand tools.
- VOM with AC current tester (Any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Manometer
- Pyrometer
- Gas Leakage Tester or method to test for gas leaks
- Conveyor Link Removal Pliers
- Duke Testing Harness

REMOVAL AND REPLACEMENT OF COMPONENTS

COVERS AND PANELS

WARNING

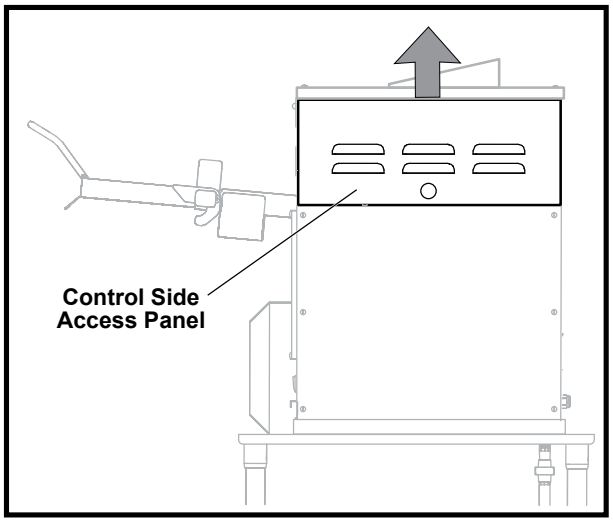
DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

Caution: If the broiler has been operating, broiler panels and components may be hot. Use PROPER PROTECTION.

Upper Lift Off Panel

The Upper Lift Off Panel provides access to the Upper Flame Sensors, Igniters and Blower Hose.

1. Remove Upper Lift Off Panel by lifting up and removing from broiler.
2. Install Upper Lift Off Panel by lowering into the side grooves.

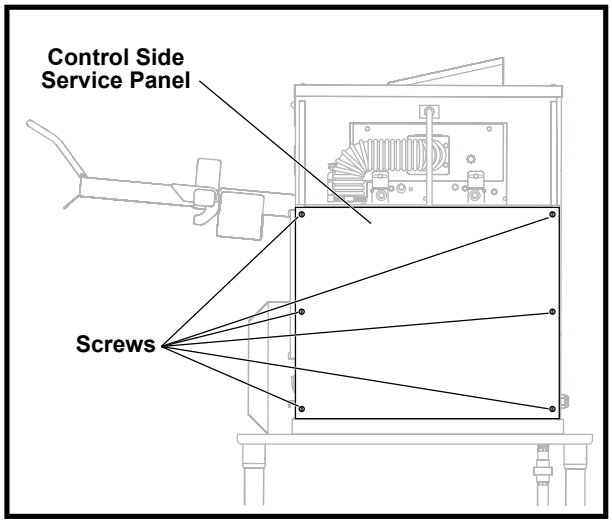


Upper Lift Off Panel

Lower Control Side Service Panel

The Lower Control Side Service Panel provides access to the Combo Gas Valves, Ignition Modules, Transformers, Blower Motor, Conveyor Motor Capacitor, and electrical connections to the Control Board.

1. Remove the six screws securing the Lower Control Side Service Panel.
2. Remove the panel from the broiler.
3. Reverse procedure to install the Lower Control Side Service Panel.

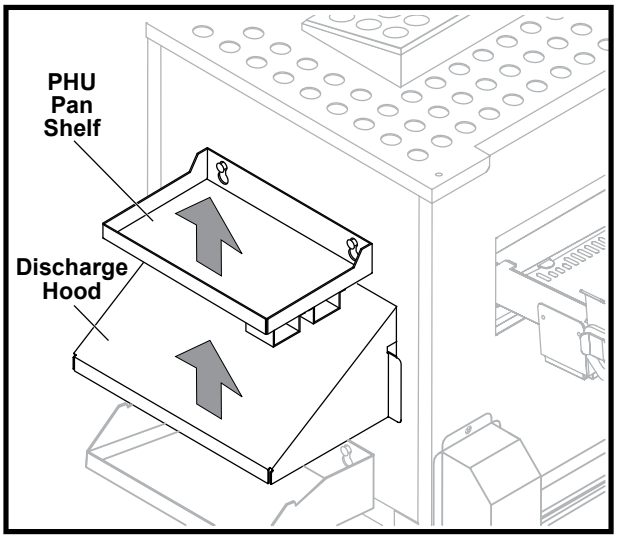


Lower Control Side Service Panel

PHU Pan Shelf

The PHU Pan Shelf is located on the discharge side of the broiler and holds the unused holding pans.

1. Lift the pan shelf up and remove.
2. To install the pan shelf, slide the keyholes over the two screws and slide pan shelf down.



PHU Pan Shelf and Discharge Hood

Discharge Hood

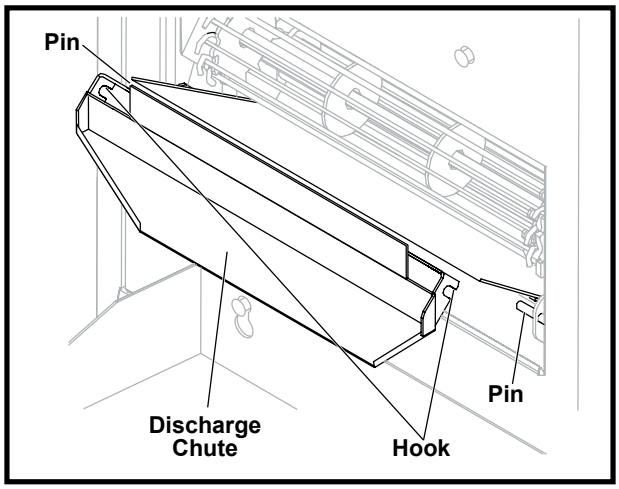
The Discharge Hood is located on the discharge side of the broiler under the PHU Pan Shelf.

1. Remove the PHU Pan Shelf.
2. Remove the Discharge Hood by lifting out.
3. Install Discharge Hood by lowering into the side grooves.
4. Reinstall the PHU Pan Shelf.

Discharge Chute

The Discharge Chute is located under the Discharge Hood and guides the patties from the conveyor into the Discharge Pan.

1. Remove PHU Pan Shelf.
2. Remove the Discharge Hood.
3. Remove Discharge Chute by lifting off of the two side pins.
4. Reverse procedure to install Discharge Chute, being sure to rest the hooks onto the pins on both sides.

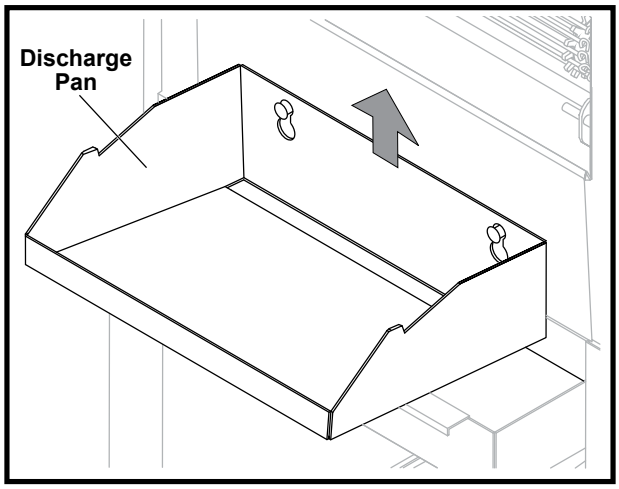


Discharge Chute

Discharge Pan

The Discharge Pan is located on the discharge side of the broiler below the Discharge Hood and is used to support the PHU Holding Pan (not supplied).

1. Remove the PHU Holding Pan if present.
2. Slide Discharge Pan up and out of keyhole slots.
3. Install Discharge Pan by lowering it into the thumbscrews.



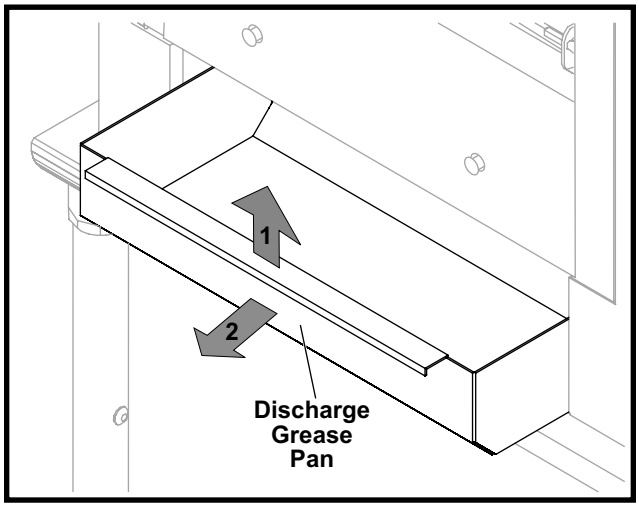
Discharge Pan

Discharge Grease Pan

The Discharge Grease Pan is located below the Discharge Pan and catches any grease drippings.

1. Tilt Discharge Grease Pan up to unhook and pull forward to remove.
2. When installing the Discharge Grease Pan, be sure to tilt up and push all the way back.

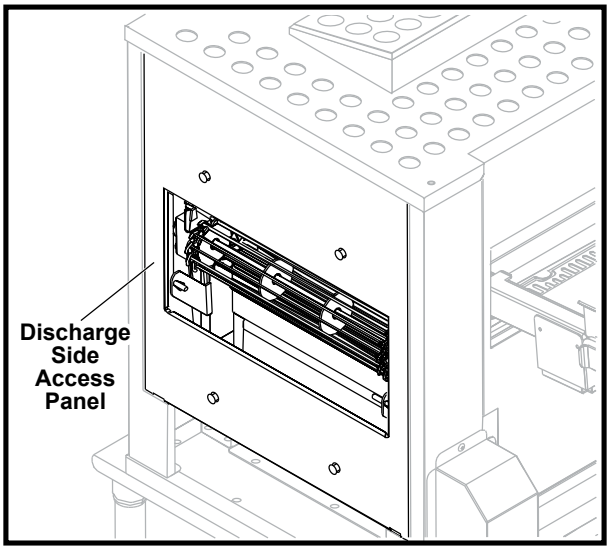
NOTE: Correct positioning will not allow pan removal without upward tilt.



Discharge Grease Pan

Discharge Access Panel

1. Remove the PHU Pan Shelf.
2. Remove Discharge Hood.
3. Remove Discharge Chute.
4. Remove Discharge Pan.
5. Remove Discharge Grease Pan.
6. Remove Discharge Access Panel by lifting it up and out.
7. Reverse procedure to install Discharge Access Panel.



Discharge Access Panel

Main Grease Pan

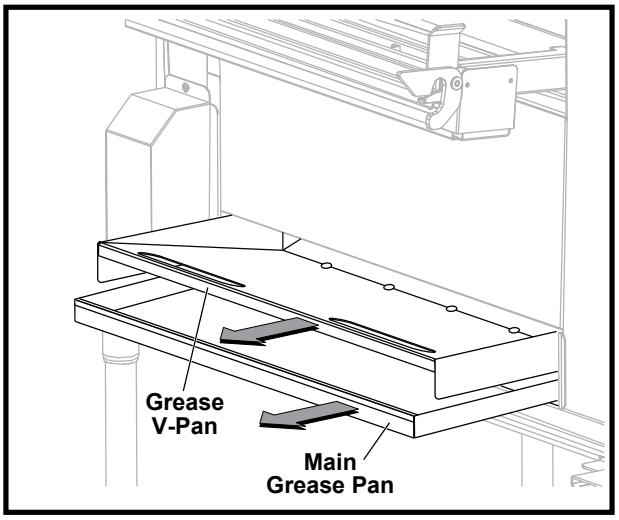
The Main Grease Pan is located on the front of the broiler under the V Grease Pan.

Remove the Main Grease Pan by sliding straight out of broiler.

V Grease Pan

The V Grease Pan is located on the front of the broiler under the Loader Tray.

Remove pan by sliding straight out from broiler.

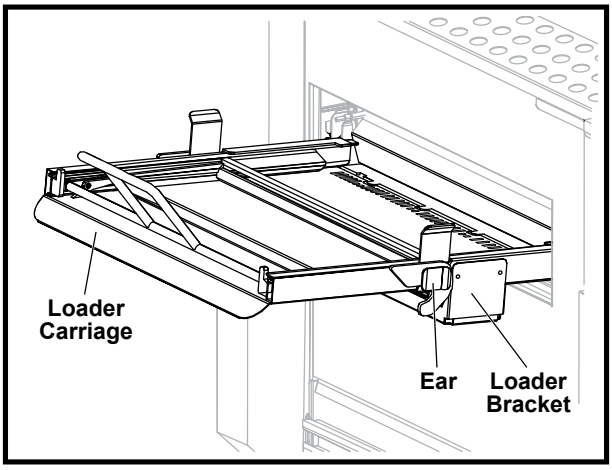


V Grease Pan and Main Grease Pan

Loader Tray

The Loader Tray is located on the front of the broiler and slides into the channels on the Loader Brackets.

1. Remove Loader by sliding it out of the Loader Tray.
2. Remove Loader Tray from the Loader Brackets by pulling forward and disengaging ears on Loader Tray from keepers on the Loader Brackets.
3. Install Loader Tray by sliding it into bracket and engaging ears with keepers.

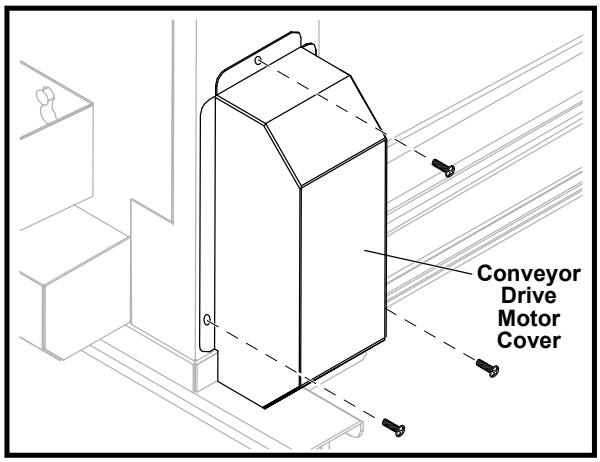


Loader Tray

Conveyor Drive Motor Cover

The Conveyor Drive Motor Cover, located on the lower front of the broiler on the discharge side, covers the Drive Chain Motor.

1. Remove the Main Grease Pan and the V Grease Pan.
2. Remove the three screws securing the cover to the broiler.
3. Lift Conveyor Drive Motor Cover off the broiler.

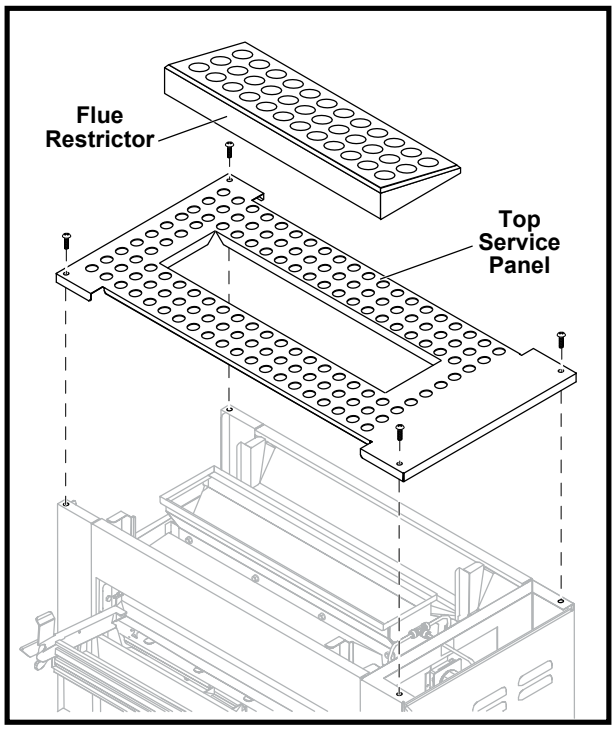


Conveyor Drive Motor Cover

Top Service Panel

The perforated Top Service Panel provides access to the two Infrared Burners

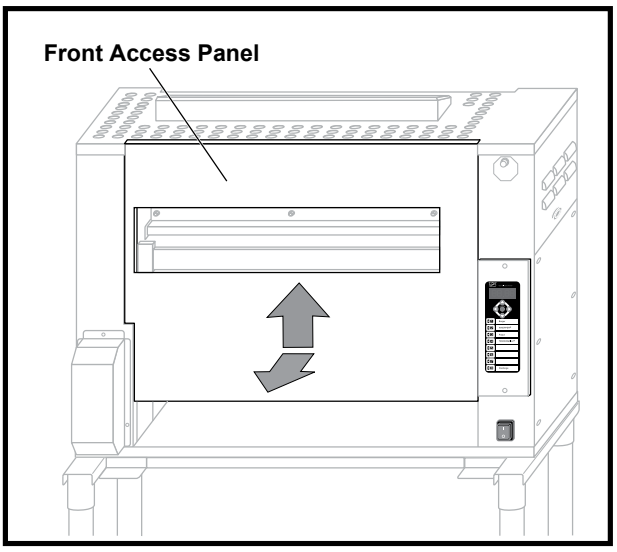
1. Remove the four screws securing the perforated Top Service Panel.
2. Remove the perforated Top Service Panel from the broiler.
3. Reverse procedure to install the perforated Top Service Panel.



Top Service Panel

Removing the Front Panel

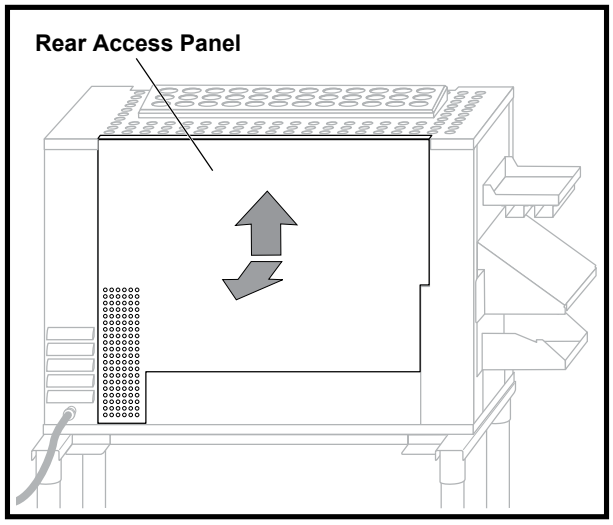
1. Slide the Loader out of the Loader Tray.
2. Unlatch the Loader Tray and slide it out of the Loader Tray Mounting Brackets.
3. Pull the Main Grease Pan out of the front of the broiler.
4. Pull the V Grease Pan out of the front of the broiler.
5. Lift the Front Panel up and away from the broiler.
6. Reverse these steps to reinstall these parts.



Front Panel

Removing the Rear Panel

1. Lift the Rear Panel up and away from the broiler.
2. Reverse to reinstall the Rear Panel.



Rear Panel

COMPONENT REMOVAL

CONVEYOR DRIVE MOTOR ASSEMBLY

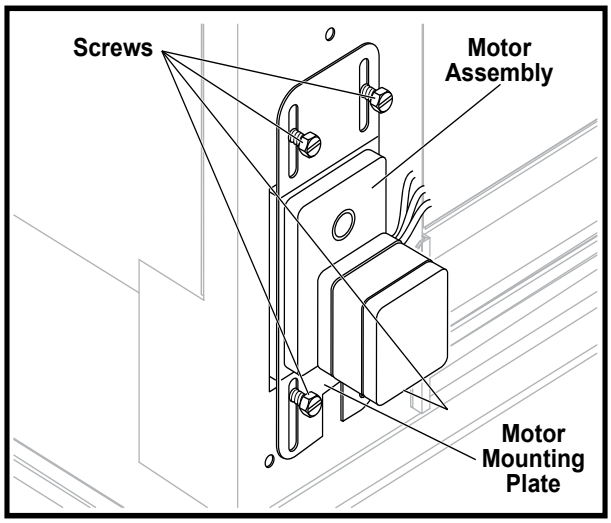
The Conveyor Drive Motor Assembly is located in the lower front of the broiler at the discharge end. The motor drives the Conveyor by use of a drive chain.

⚠ WARNING

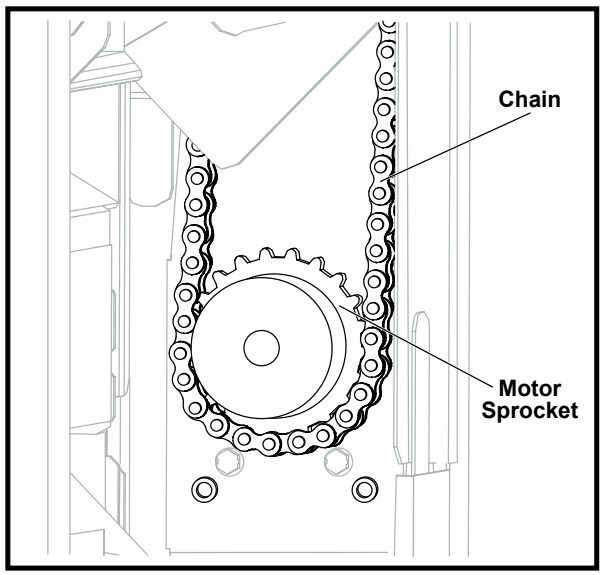
DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires to motor.
3. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
4. Remove four screws securing motor to mounting plate and remove motor.
5. Raise motor mounting plate to disengage drive chain from motor pulley.
6. Remove sprocket from motor shaft. Sprocket is secured to motor shaft by two set screws.
7. Reverse procedure to install a new motor. Ensure that one of the sprocket set screws is tightened to the flat side of the motor shaft.

NOTE: When installing the new motor, be sure to engage the chain on the motor sprocket. Adjust the tension on the chain to allow 4.763 mm chain deflection, as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.



Conveyor Drive Motor Assembly



Motor Sprocket and Drive Chain

Conveyor Drive Chain

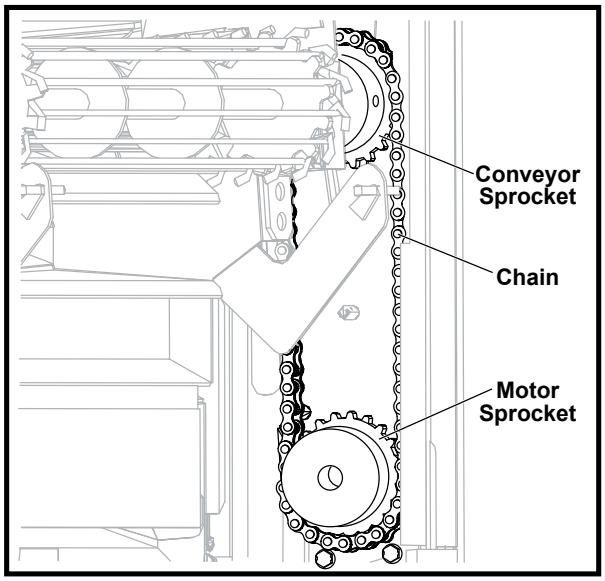
The Conveyor Drive Chain connects the drive motor to the Conveyor.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect motor wires.
4. Remove four screws securing motor mounting plate.
5. Raise motor mounting plate to disengage drive chain from motor sprocket.
6. Disengage chain from conveyor sprocket.
7. Remove chain from broiler by removing the master link.
8. Reverse procedure to install a new chain.

NOTE: When installing the new chain, be sure to engage the chain on the motor sprocket and conveyor sprocket. Then adjust the tension on the chain to allow 4.763 mm chain deflection, as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.



Drive Chain and Sprockets

Conveyor Drive Motor Sprocket

The Conveyor Drive Motor Sprocket is attached to the motor shaft.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Conveyor Drive Motor Cover. Refer to the COVERS and PANELS section of the manual.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect the motor wires.
4. Remove the four screws securing motor mounting plate.
5. Raise motor mounting plate to disengage drive chain from motor sprocket.
6. Disengage drive chain from motor sprocket.

7. Loosen the two setscrews on motor sprocket and remove sprocket from motor shaft.
8. Reverse procedure to install a new Conveyor Drive Motor Sprocket, ensuring that one set screw is tightened to the flat side of the motor shaft.

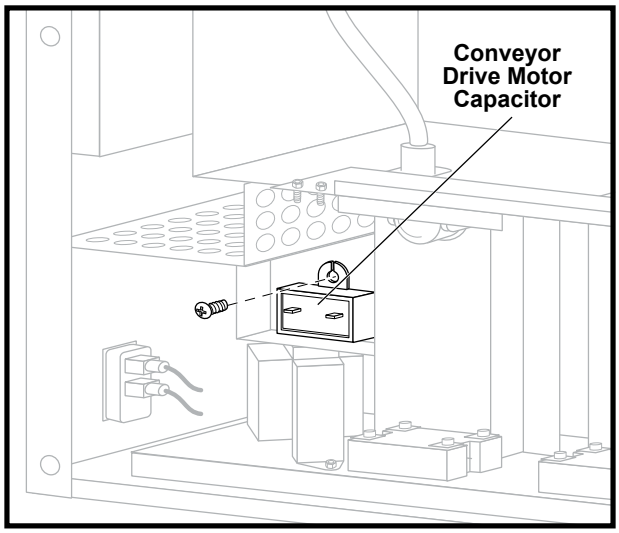
NOTE: When installing the new Conveyor Drive Motor Sprocket, be sure to engage the chain on the motor sprocket and conveyor sprocket, then adjust the tension on the chain to allow 4.763 mm chain deflection as described in the procedure DRIVE CHAIN DEFLECTION ADJUSTMENT in the ADJUSTMENT Section, before tightening the motor mounting plate screws.

Conveyor Drive Motor Capacitor

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect wires to Conveyor Drive Motor Capacitor.
4. Discharge the capacitor. Ground the two leads to the broiler frame.
5. Remove screw securing capacitor to frame and remove Conveyor Drive Motor Capacitor.
6. Reverse procedure to install a new Conveyor Drive Motor Capacitor.



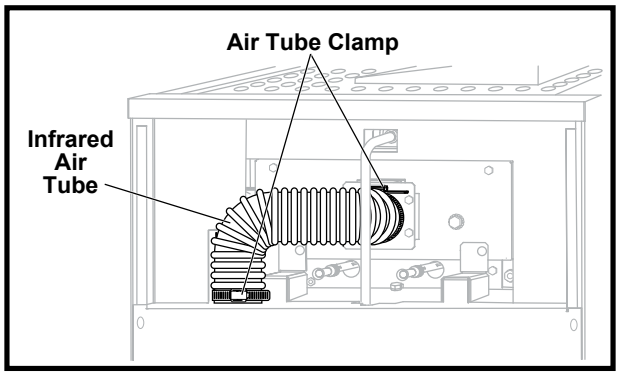
Conveyor Drive Motor Capacitor

Blower Hose

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Loosen Blower Hose clamp at output of Blower Motor.
3. Loosen hose clamp at center of air supply to upper burners.
4. Remove Blower Hose.
5. Reverse procedure to install Blower Hose.



Blower Hose

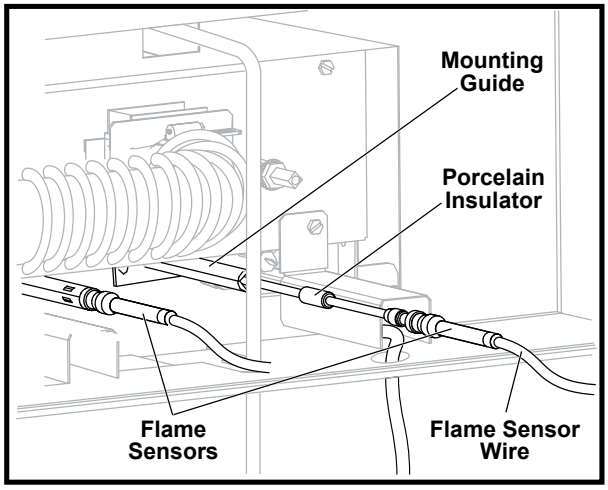
Upper Flame Sensor Assemblies

The Upper Flame Sensor Assemblies are accessible by removing the Upper Lift Off Panel. Each upper burner has a corresponding Flame Sensor Assembly.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Control Side Access Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disengage Upper Flame Sensor from guide and bracket, and pull out of guide and bracket.



Upper Flame Sensor

4. Disconnect Upper Flame Sensor wire from Ignition Module and remove Upper Flame Sensor Assembly.
5. Pinch the tabs on the wire grommets to remove them.
6. Feed wire through shelf to completely remove the Flame Sensor Assembly.
7. Reverse procedure to install a new Upper Flame Sensor Assembly.

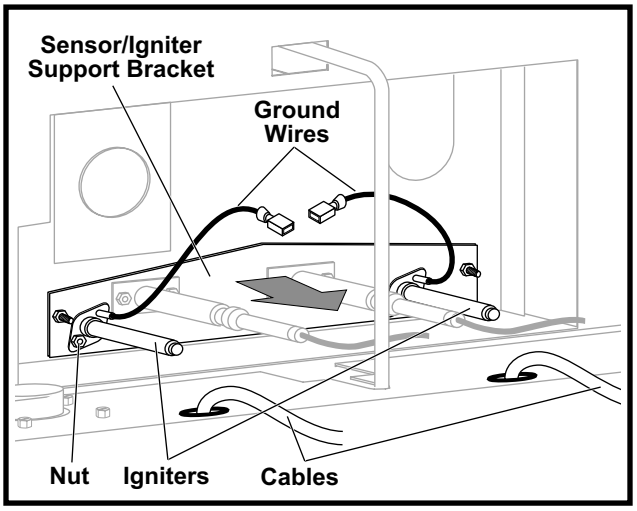
Upper Igniter Assemblies

The Upper Igniter Assemblies are accessible by removing the Upper Lift Off Panel. Each upper burner has a corresponding Igniter Assembly

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Remove two screws securing igniter cover.



Upper Igniters

4. Disconnect the cable and ground wire from the Igniter.
5. Remove Blower Hose.
6. Remove the two remaining screws that secure the Air Box Cover and remove the Air Box Cover.
7. Remove the Sensor/Igniter Support Bracket.
8. Remove the nut securing the Igniter.
9. Reverse procedure to install a new Upper Igniter, ensuring the replacement Igniter has the proper 3.175 mm spark gap. For proper ignition, the spark should be approximately 4.763 mm away from the surface of the IR burner tile.

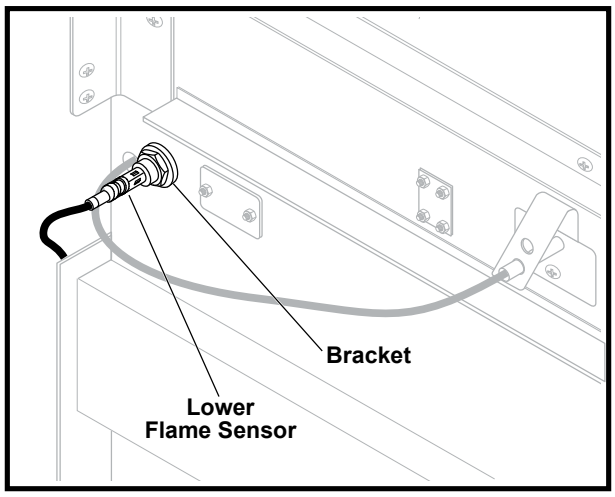
Lower Flame Sensor Assembly

The Lower Flame Sensor Assembly is accessible from the back of the broiler.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove Rear Panel. Refer to the COVERS and PANELS section of the manual.
3. Disengage Lower Flame Sensor from guide and bracket and pull out of guide and bracket.



Lower Flame Sensor

4. Disconnect Lower Flame Sensor wire from Lower Ignition Module, and remove Lower Flame Sensor Assembly.

5. Pinch tabs on the wire grommet to remove it.
6. Feed the wire through the hole to fully remove the Flame Sensor Assembly.
7. Reverse procedure to install a new Lower Flame Sensor Assembly.

Lower Igniter Assembly

The Lower Igniter Assembly is accessible by removing the Upper Lift Off Panel.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect Lower Igniter cable and ground wire from the Igniter.
3. Remove the nut securing the Igniter.
4. Reverse procedure to install a new Lower Igniter Assembly, ensuring the replacement Igniter has the proper 3.175 mm spark gap. For proper ignition, the spark should be approximately 19.05 mm above the lower burner.

Upper Infrared Burner Assembly

There are two Infrared Burners located on the top of the broiler. These Infrared Burners can be accessed by removing the Top Service Panel and Impedance Pan.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING

SHUT OFF THE GAS SUPPLY BEFORE SERVICING THE UNIT.

WARNING

CHECK ALL GAS JOINTS DISTURBED DURING SERVICING FOR LEAKS. CHECK USING A SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

Caution: If the broiler has been operating, broiler panels and components may be hot. Use proper protection.

1. Remove Impedance Pan. Refer to the COVERS and PANELS section of the manual.
2. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect gas line at input to top Infrared Burner Assembly to be removed.
4. Remove nuts which run along the length of the burner.
5. Remove both Igniter Guards.
6. Remove Blower Hose.
7. Remove Air Box Cover.
8. Remove the four screws that secure the Burner Venturi to the Air Box.
9. Use a putty knife to gently pry the Burner Venturi from the Air Box.
10. Lift Infrared Burner Assembly out of top of broiler, by sliding the burner forward, up and out of the broiler.
11. Reverse procedure to install a new Infrared Burner Assembly.

NOTE: Use Anti-Seize Technologies TFE1400 on all pipe threads when reassembling the Infrared Burner gas fittings.

NOTE: Clean excess silicone sealer from Air Box and Burner Venturi if reinstalling burner. Reapply high temp silicone sealer before installing burner.

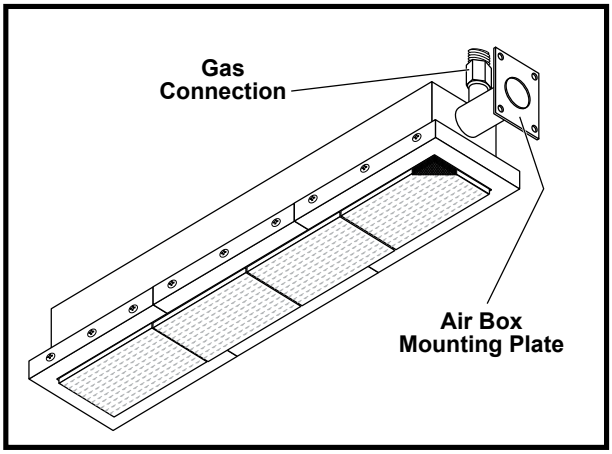
Lower J Burner Assembly

The Lower J Burner Assembly is located under the Conveyor and can be accessed at the discharge end of the broiler and from the front of the broiler.

⚠ WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

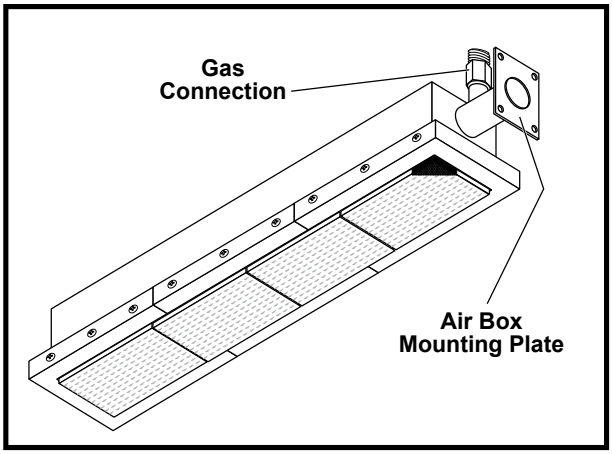
1. Remove PHU Pan Shelf.
2. Remove Discharge Hood.
3. Remove Discharge Chute.
4. Remove Discharge Pan.
5. Remove the Discharge Grease Pan
6. Remove the Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
7. Remove the Ash Scraper, by pulling thetop of the Ash Scrapper out, away from the broiler and lifting it up and out.
8. Remove the Main Grease Pan and V Grease Pan.
9. Remove Front Panel. Refer to the COVERS and PANELS section of the manual.
10. Disengage J Burner bracket from stud at discharge end, and move J Burner toward discharge end to disengage from its orifice.
11. Carefully slide J Burner Assembly out of front of broiler, taking care not to damage the Igniter Assembly.



Infrared Burner Assembly

12. Reverse procedure to install a new J Burner Assembly.

NOTE: Be sure J Burner input end engages the gas orifice and that the discharge end of the J Burner sits securely in the burner bracket.



Lower J Burner Assembly

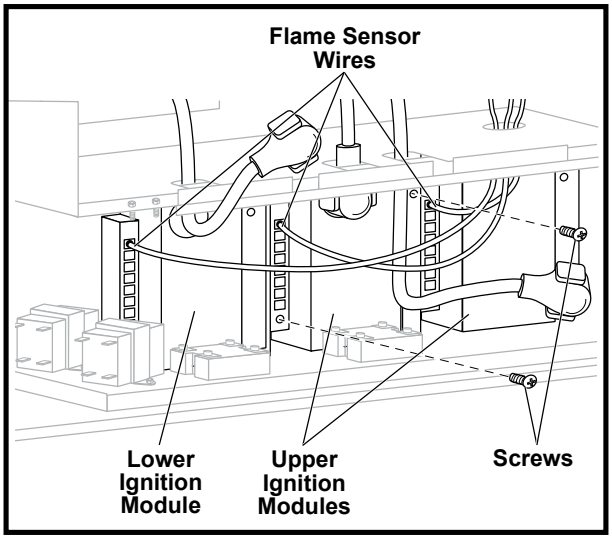
Ignition Modules

The Ignition Modules are accessible by removing the Lower Control Side Service Panel. The Ignition Modules are at the bottom of the compartment behind the Relays.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Tag and disconnect the wires to the Ignition Module to be removed.
3. Disconnect the Flame Sensor wire/s.
4. Remove the two screws attaching Ignition Module to frame and remove the module.
5. Reverse this procedure to replace an Ignition Module.



Ignition Modules

Combo Gas Valves

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING

SHUT OFF THE GAS SUPPLY BEFORE SERVICING THE UNIT.

WARNING

CHECK ALL GAS JOINTS DISTURBED DURING SERVICING FOR LEAKS. CHECK USING A SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

WARNING

ALL JOINTS PRIOR TO THE COMBO GAS VALVE MUST BE CHECKED BEFORE LIGHTING THE UNIT.

WARNING

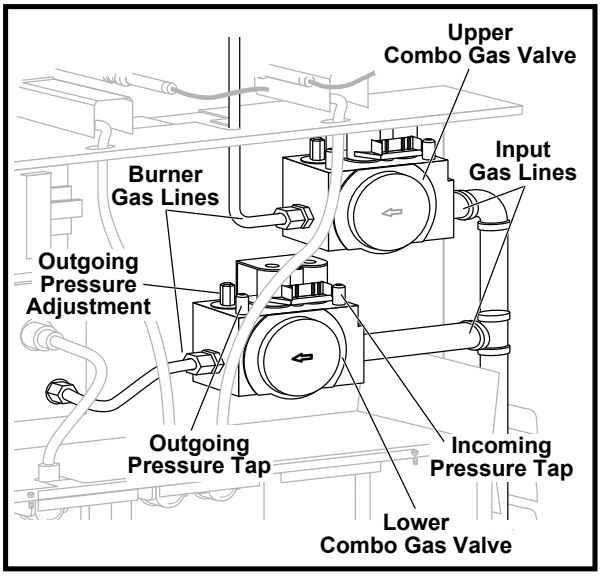
ALL JOINTS BEYOND THE COMBO GAS VALVE MUST BE CHECKED AFTER UNIT IS LIT.

NOTE: Combo Gas Valves are not serviceable and must not be disassembled.

1. Shut off gas to broiler.
2. Remove the Upper Lift Off Panel and Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect gas line going to the burner assembly at the Combo Gas Valve.
4. Tag and disconnect wires to the Combo Gas Valve.
5. Using a pipe wrench unscrew the Combo Gas Valve from the input gas line.
6. Reverse procedure to install a Combo Gas Valve. Make sure the new Combo Gas Valve is installed in the right direction.

NOTE: Use Anti-Seize Technologies TFE1400 on all pipe threads when replacing a Combo Gas Valve.

7. Check all gas connections for leaks.
8. Ensure proper gas valve pressure.



Combo Gas Valves

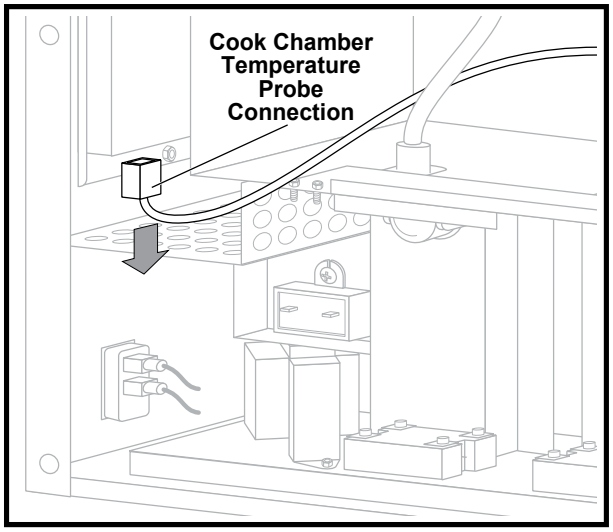
Cook Chamber Temperature Probe

The Cook Chamber Temperature Probe connects to the bottom of the Control Board and is located on the back of the broiler.

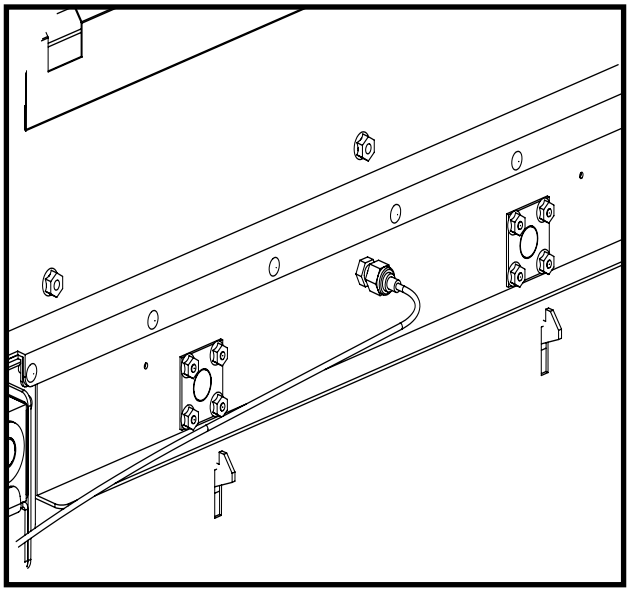
WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove the Rear Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect the Cook Chamber Temperature Probe connector at the bottom of the Control Board.
4. Remove the Cook Chamber Temperature Probe from the bracket by pushing down gently on the bracket.
5. Pinch the two grommets in the electrical compartment to remove them.
6. Slide the Cook Chamber Temperature Probe out of the broiler.
7. Reverse procedure to install a Cook Chamber Temperature Probe, ensuring the two grommets are reinstalled.
8. Ensure the Cook Chamber Temperature Probe is seated correctly on the its mounting bracket. The notch on the sheath must be locked on the bracket.



Cook Chamber Temperature Probe Connection



Cook Chamber Temperature Probe Mounting

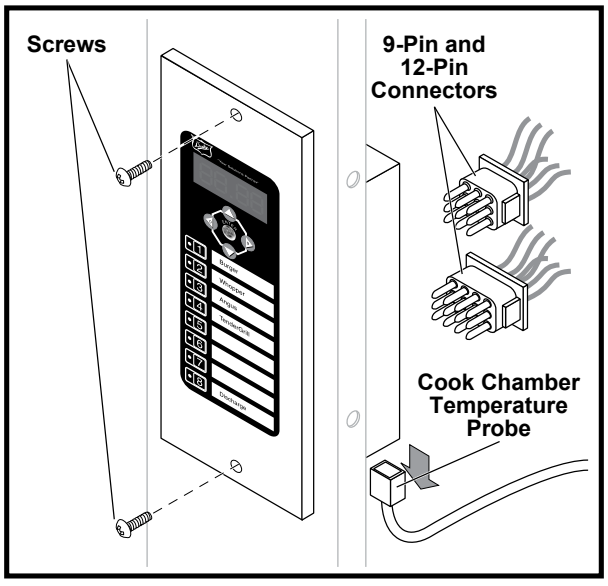
Control Board

The Control Board is located on the front of the broiler. Control Board programming is preset at the factory with standard BURGER KING® recipes. Any fine adjustments made at the restaurant level are the responsibility of the restaurant manager.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect the Cook Chamber Temperature Probe connector at the bottom of the Control Board.
3. Disconnect the 9-pin and 12-pin connectors from the back of the Control Board.
4. Remove the two screws on the front of the Control Board.
5. Remove Control Board from broiler.
6. Reverse procedure to install a new Control Board.
7. Alert the restaurant manager the Control Board has been replaced and fine adjustments may be required.



Control Board

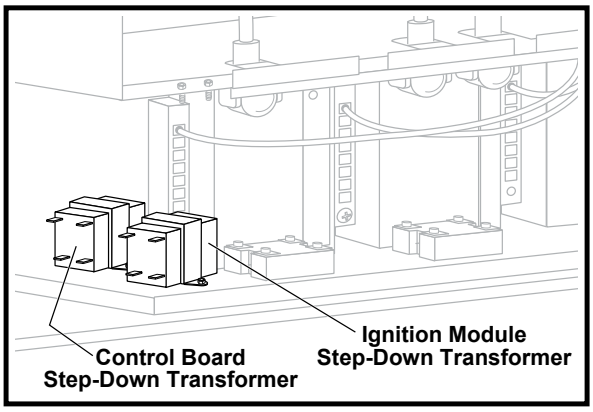
Step-Down Transformers

Two Step-down Transformers are accessible by removing the Lower Control Side Service Panel. Both Transformers reduce the incoming 230 VAC to 24 VAC. One Transformer provides 24VAC to the Control Board. The other Transformer provides 24VAC to operate the Ignition Modules.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires from the Transformer to be removed.
3. Remove screw securing Transformer to frame.
4. Remove Transformer.
5. Reverse procedure to install a Transformer.



Step-Down Transformers

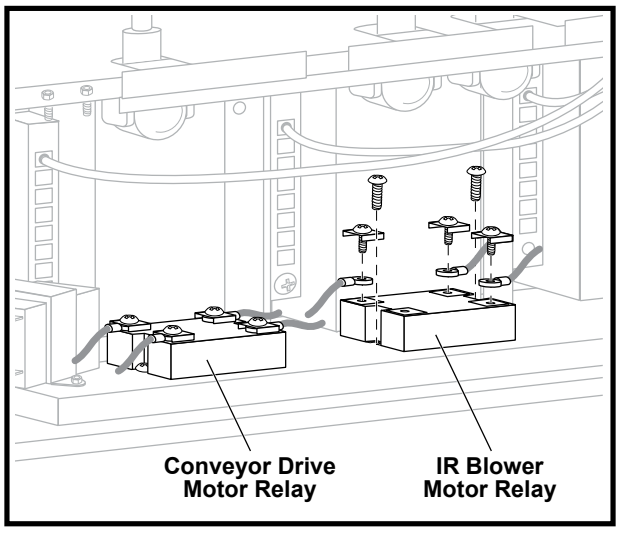
Solid-State Relays

Two Solid-State Relays are accessible by removing the Lower Control Side Service Panel. One Solid-State Relay controls the Conveyor Drive Motor. The other Solid-State Relay controls the Blower Motor.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect wires from the Solid-State Relay to be removed.
3. Remove screws securing Solid-State Relay to frame.
4. Remove Solid-State Relay.
5. Reverse procedure to install a Solid-State Relay.



Solid-State Relays

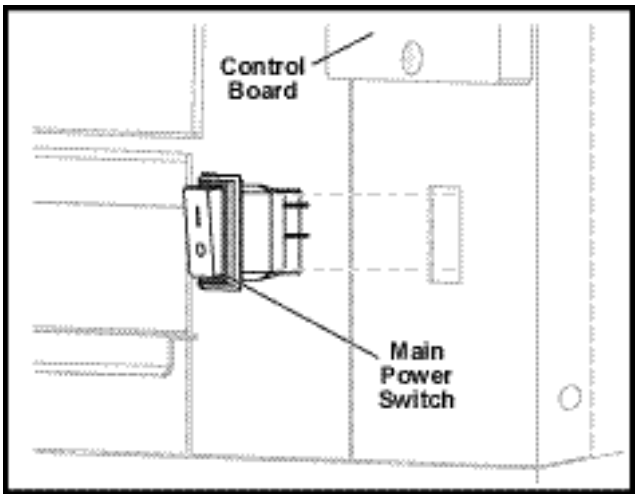
Main Power Switch

The Main Power Switch is located on the front of the broiler below the Control Board.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect switch wires.
3. Pinch the spring tabs on the top and bottom of the switch and slide out through front of panel.
4. Reverse procedure to install a new Main Power Switch.



Main Power Switch

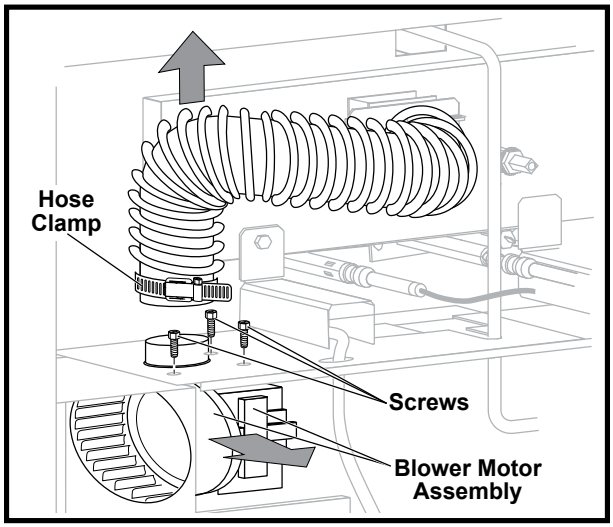
Blower Motor

The Blower Motor is located on the Control Board side of the broiler and is accessed by removal of the Upper Lift Off and Lower Control Side Service Panels.

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.
2. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect wires from the Blower Motor.
4. Loosen Blower Hose clamp and disconnect the hose from top of Blower Motor.
5. Remove three screws attaching Blower Motor to frame.
6. Reverse procedure to install a new Blower Motor. Replace gasket when installing new Blower Motor.



Blower Motor

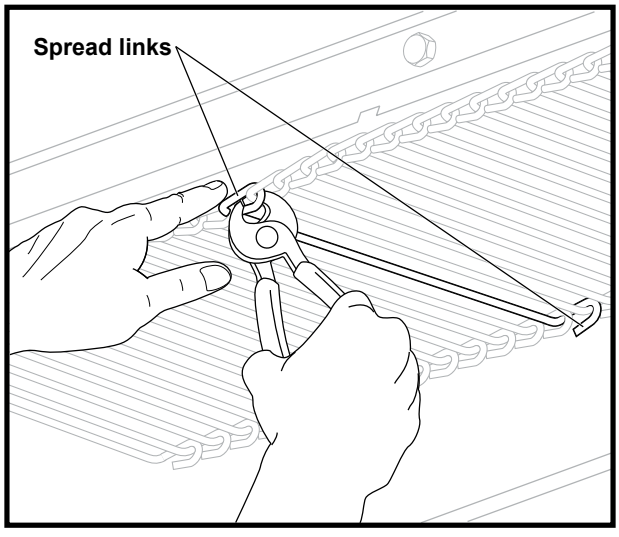
Replacing Conveyor Links

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn off and unplug the broiler.
2. Remove the front operator parts and panels. Refer to the COVERS and PANELS section of the manual.
3. Spread the damaged link with Link Tool at both ends.
4. Remove the damaged link.
5. Install the new link.
6. Use pliers to close both ends of the link.
7. Check for proper operation. It may be necessary to add or remove shims behind or under the bushing blocks to ensure proper tension.

NOTE: Never remove a link without replacing a link.

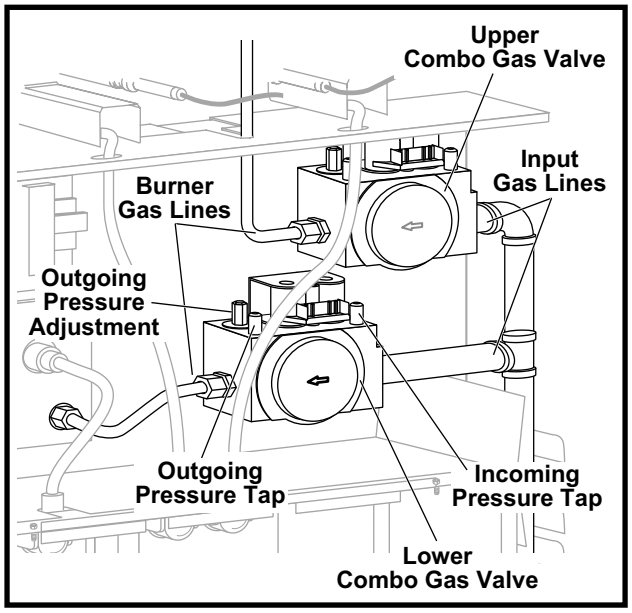


Conveyor Links

ADJUSTMENTS

COMBO GAS VALVE

The two Combo Gas Valves are located next to each other and are accessible by removing the Lower Control Side Service Panel. One gas valve is for the Lower J Burner and the other gas valve is for the Upper Infrared Burners. The gas pressure has been preset at the factory for the type of gas specified on the rating plate; however, it is sometimes necessary to adjust the gas pressure after the unit has been installed. Always check the incoming gas pressure at the tap provided on the gas valve before making any valve pressure adjustments. Valve adjustments must be made when both valves are fully open with all burners operating.



Combo Gas Valve

1. Turn the incoming gas supply to the broiler off.
2. Remove the Upper Lift Off Panel. Refer to the COVERS and PANELS section of the manual.

NOTE: Do not disconnect any wiring.

3. Loosen the outgoing pressure tap screw. Screw is not designed to come out.
4. Attach a gas pressure meter, slack tube, or manometer to the tap.
5. Turn gas supply on.

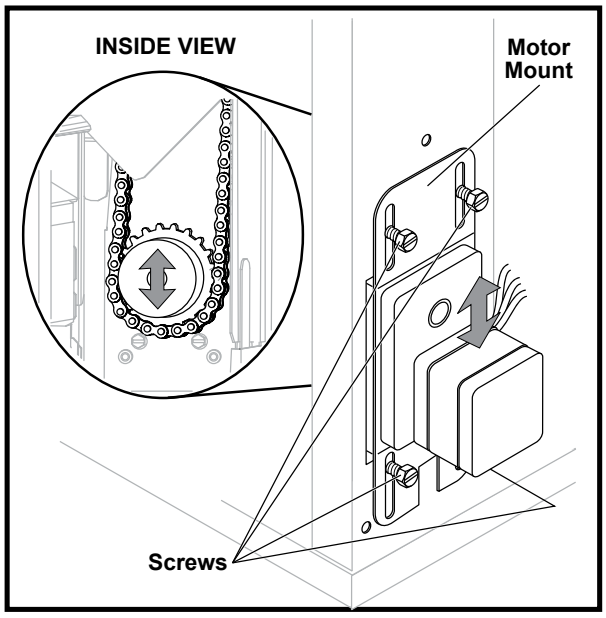
NOTE: The pressure regulator is an integral part of the Combo Gas Valve.

6. Locate the Outgoing Pressure Adjustment which lies just behind the Outgoing Pressure Tap. The adjustment will require a standard Allen wrench.
7. For the correct pressure measurement, refer to the Specification / Data Label on the Broiler.
8. Turn gas supply off.
9. Disconnect meter.
10. Re-tighten the screw into the Outgoing Pressure Tap.
11. Turn gas supply back on.
12. Check for any gas leaks.
13. Check broiler operation.

DRIVE CHAIN DEFLECTION ADJUSTMENT

The Drive Chain connects the drive motor to the Conveyor.

1. Check that the deflection in the Drive Chain does not exceed 4.763 mm maximum. If the chain requires adjustment, proceed to step 2.
2. Remove Discharge Access Panel. Refer to the COVERS and PANELS section of the manual.
3. Remove Conveyor Drive Motor Cover.
4. Loosen the four screws securing the motor mount to the frame.
5. Move the motor mount up or down as necessary to provide 4.763 mm deflection at center of chain.
6. Secure the motor mount in place by tightening the four motor mount screws.
7. Install Conveyor Drive Motor Cover.
8. Install Discharge Access Panel.



Drive Chain Deflection

CONVEYOR POSITION ADJUSTMENT

The Conveyor position is adjusted by adding shims between the Conveyor Shaft Bearing and the frame.

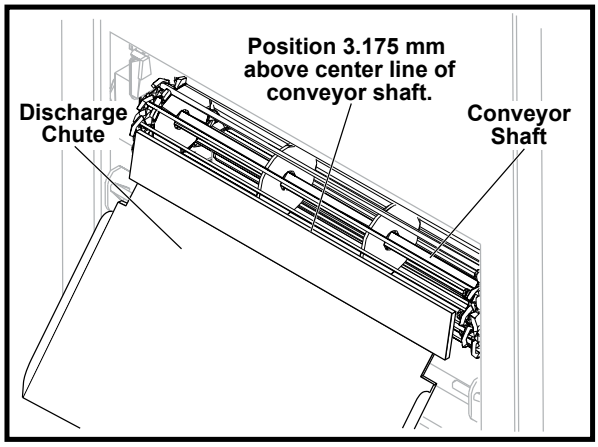
1. Remove Discharge Hood to provide visual access to the Conveyor.
2. Adjust Conveyor height as described in the following illustration.
3. Remove the two screws securing the bearing to the frame.
4. Insert shims as necessary between the bearing assembly and the frame.
5. Check Conveyor position.

NOTE: Leading edge of Discharge Chute should be about an 3.175 mm above the center line of the Conveyor shaft. When correctly adjusted, the Conveyor link should just graze the backside of the chute. If adjusted too high, the link will roll over the top of the leading edge of the Discharge Chute causing a Conveyor jam.

6. If additional shims are required, repeat step 4.

NOTE: Additional shims are located inside the Drive Motor Cover.

7. Run Conveyor for several full revolutions to confirm that no jamming occurs.



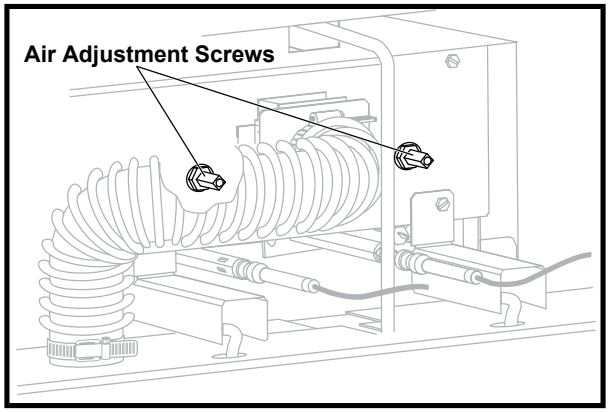
Conveyor Discharge Shaft Adjustment

UPPER IR BURNER AIR SUPPLY

The adjustments for the Upper IR Burner air supply are accessible by removing the Upper Lift Off Panel. There are two air adjustment screws located on each side of the blower hose.

NOTE: The air adjustment is factory set and must not be changed unless authorized to do so by Duke Manufacturing.

1. Remove the Upper Lift Off Panel.
2. If found loose, it may be necessary to re-adjust and re-tighten the locking nuts which secure the air adjustment screws.



IR Burner Air Adjustment Screws

LOWER BURNER AIR SUPPLY

The adjustment for the lower burner air supply is factory set and must not be changed. A properly adjusted natural gas burner has a blue flame around the burner bend with no yellow tips on the flame. A propane gas burner may have a small amount of yellow tips on the flames. The Air Shutter opening on factory J Burners is preset and welded. If replacing the J Burner, verify this opening before installing it.

TROUBLESHOOTING

The following troubleshooting information includes checking procedures for various electrical components in order to help identify faulty components. The troubleshooting guide below is designed to identify various symptoms and provide the suggested remedy.

COMPONENT CHECK PROCEDURES

Checking the Power Switch

The Power Switch has a built-in LED that lights red when the switch is in the on position. Check the following before replacing the switch.

- Make sure the power cord is plugged into the correct receptacle. The broiler operates on 230 VAC 50 Hz line current.
- Check the circuit breaker assigned to the broiler.
- Try a different receptacle before replacing the switch.
- It's possible for the LED in the switch to fail. Turn the switch on and check the Control Board display. If the display is active, the LED is burned out, replace the switch.

Checking the Control Board

Under normal conditions, the Control Board displays the current status of the broiler. It can be used as a diagnostic tool, when it is working properly.

Try the following before replacing the Control Board.

- Cycle the broiler off and on; observe the Control Board.
- Try running the Control Board through a couple of different cook cycles.

NOTE: If the Control Board is still not performing properly, try these procedures:

1. Turn the broiler off.
2. Remove the Control Board.
3. Check each connection on the back of the Control Board. Make sure they are all connected correctly.
4. Loosely attach the Control Board, turn the broiler on. Observe the display and product key LEDs.
5. Turn the power off and reattach the Control Board if the problem is solved.

Checking the Conveyor Drive Motor

The Conveyor Drive Motor is located on the front of the broiler on the lower discharge side. Before replacing it, check the Conveyor for jammed meat product. Next, try turning the Conveyor discharge shaft with the Multipurpose Broiler Tool. If the Conveyor does not turn, check the following items:

- Check the Discharge Chute.
- Check the Loader Ramp.
- Check the Ash Scraper.
- Check the Cook Chain (Conveyor).
- Check the Flame Arrestor.

Testing the Conveyor Drive Motor

The Conveyor Drive Motor may be tested without removing it from the broiler.

⚠ WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn off and disconnect the broiler.
2. Remove the Conveyor Drive Motor Cover.
3. Tag and disconnect the wires.
4. Use an Ohmmeter to measure resistance.
5. Attempt to run the Drive Motor when its disengaged from the Drive Chain.

NORMAL MOTOR RESISTANCE (230VAC 50HZ)	
Wires to Test	**Resistance**
Black and Brown	100Ω
Black and Orange	100Ω
Brown and Orange	200Ω

CHECKING CONVEYOR DRIVE MOTOR CAPACITOR

If the motor tests OK, check the Capacitor. The Capacitor is located in the service area on the control side of the broiler.

⚠ WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Disconnect the wires connected to the Capacitor.
3. Discharge the Capacitor by shorting both terminals to ground at the same time.
4. Use an Ohmmeter to test the Capacitor.

NOTE: If both the Drive Motor and Capacitor test OK, the problem is probably with the Drive Motor Relay.

CHECKING AND TESTING THE BLOWER MOTOR

The Blower Motor provides air to the Upper Infrared Burners. These burners will not function properly if the Blower Motor is not supplying a sufficient amount of air to them. The first thing to check is the Blower Wheel for grease and debris build up. Also, inspect for a loose or damaged Blower Hose.

⚠ WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Make sure the broiler is off and unplugged.
2. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Remove the Blower Motor Assembly.
4. Check and clean the Blower Wheel as needed.
5. Check that the wheel turns freely.
6. Measure the resistance of the Blower Motor winding. The normal resistance across the Blower Motor winding should be 114Ω.

NOTE: If the resistance is low, the winding may be shorted. If the resistance is high the winding is open.

If the Blower Motor tests OK, the problem is probably with the Blower Motor Relay.

TESTING THE RELAYS

There are two 24VAC Solid-State Relays in the broiler. One controls the Blower Motor, while the other controls the Conveyor Drive Motor.

1. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
2. Turn on the Main Power Switch.
3. The Blower Motor only runs when there is a call for ignition of the upper Infrared Burners. The Conveyor Drive Motor only runs for 8 seconds at the end of a cook cycle. To test the relay, check for 24VAC on the input of the relay. At the same time, monitor AC current to either the Blower Motor or the Conveyor Drive Motor. When no relay input voltage is present, there will be no amperage draw on the output of the relay.

Testing the Transformers

There are two 24-Volt Step-Down Transformers in the broiler. One supplies power to the Control Board, the other provides power to the Ignition Modules. Either a voltage or a resistance check can be used to test the Transformers.

Voltage Test

1. Make sure the broiler is turned off.
2. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Disconnect the secondary winding.
4. Turn the broiler on.
5. Using a VOM, test the voltage output across the secondary winding. Voltage should be 24VAC.

Resistance Check

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE BROILER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

1. Turn the broiler off.
2. Remove the Lower Control Side Service Panel. Refer to the COVERS and PANELS section of the manual.
3. Tag and disconnect the wires of the Transformer to be tested.
4. Measure the resistance across the primary. Primary Resistance = 70Ω.
5. Measure resistance across secondary.
6. Secondary Resistance = 1Ω.

Lower Ignition Module Testing

When the Cook Chamber Temperature Probe calls for heat, the Control Board will send 24VAC to terminals TH and GND on the Lower Ignition Module. The Lower Ignition Module first performs a diagnostic check. After the diagnostic, the Lower Ignition Module is activated.

- 24VAC is applied across terminal V1 opening the Lower Combo Gas Valve.
- High voltage spark is generated at terminal HV.
- When the Flame Sensor detects a current flow of not less than 0.7uA, the Igniter stops sparking.

The Lower Ignition Module performs a self-diagnostic check. It is equipped with an LED that has three states, indicating the type of diagnostic failure:

1. Steady On: Indicates internal failure of the module. The module must be replaced.
2. Two Flashes of the LED: Indicates the burner is lit but no call for heat exists.
3. Three Flashes of the LED: Indicates ignition lockout has occurred.

Upper Ignition Module

There are two upper ignition modules which operate the IR burners and they work in the same manner as the Lower Ignition Module. The Control Board will send 24VAC to terminals TH and GND on the FRONT Upper Ignition Module.

- 24VAC is applied to terminal TH and Ground. 24 VAC is presented between V1 and GND on the FRONT Upper Ignition Module which is connected to TH and GND on the REAR Upper Ignition Module. 24VAC is then presented across V1 and GND on the REAR Upper Ignition Module which allows the Upper Gas Valve to open.
- High voltage spark is generated at each Upper Igniter, with respect to the FRONT and REAR Upper Ignition Modules.
- When the Flame Sensors detect a current flow of not less than 0.7uA, the Igniters stop sparking.

The Upper Ignition Modules perform a self-diagnostic.

Upper Ignition Module Diagnostic Indicators:

1. Steady On: Indicates an internal control failure.
2. Two Flashes: Indicates the burner is lit but no call for heat exists.
3. Three Flashes: Indicates ignition lockout has occurred.

Checking the Flame Sensors

Typically, an Ignition Module Lockout is caused by dirty Flame Sensors.

Here are some Flame Sensor tips:

- If one Flame Sensor is dirty, clean them all. Allow the Flame Sensor to cool and clean it with an alcohol pad.
- Replace a Flame Sensor with damaged porcelain.
- Check for debris between the Flame Sensor tip and burner.
- Adjust the Flame Sensor if the tip is touching ground.
- Make sure all of the Flame Sensor connections are tight.

Checking the Igniters

Another item to check, if the broiler is not lighting properly, is the Igniters. It is possible for these to get bumped during routine cleaning, causing the gap between the electrodes to change.

- The spark gap should be 3.175 mm.
- Replace Igniter if the electrodes are damaged.
- Check all connections on the Ignition Module and Igniter.
- If gas and spark are present but burner does not light, verify proper location of the upper igniter with regard to burner. The igniters on the the top IR burners should be approximately 4.763 mm away from the surface of the IR burner tile. The lower igniter should be approximately 19.05 mm from the lower burner.

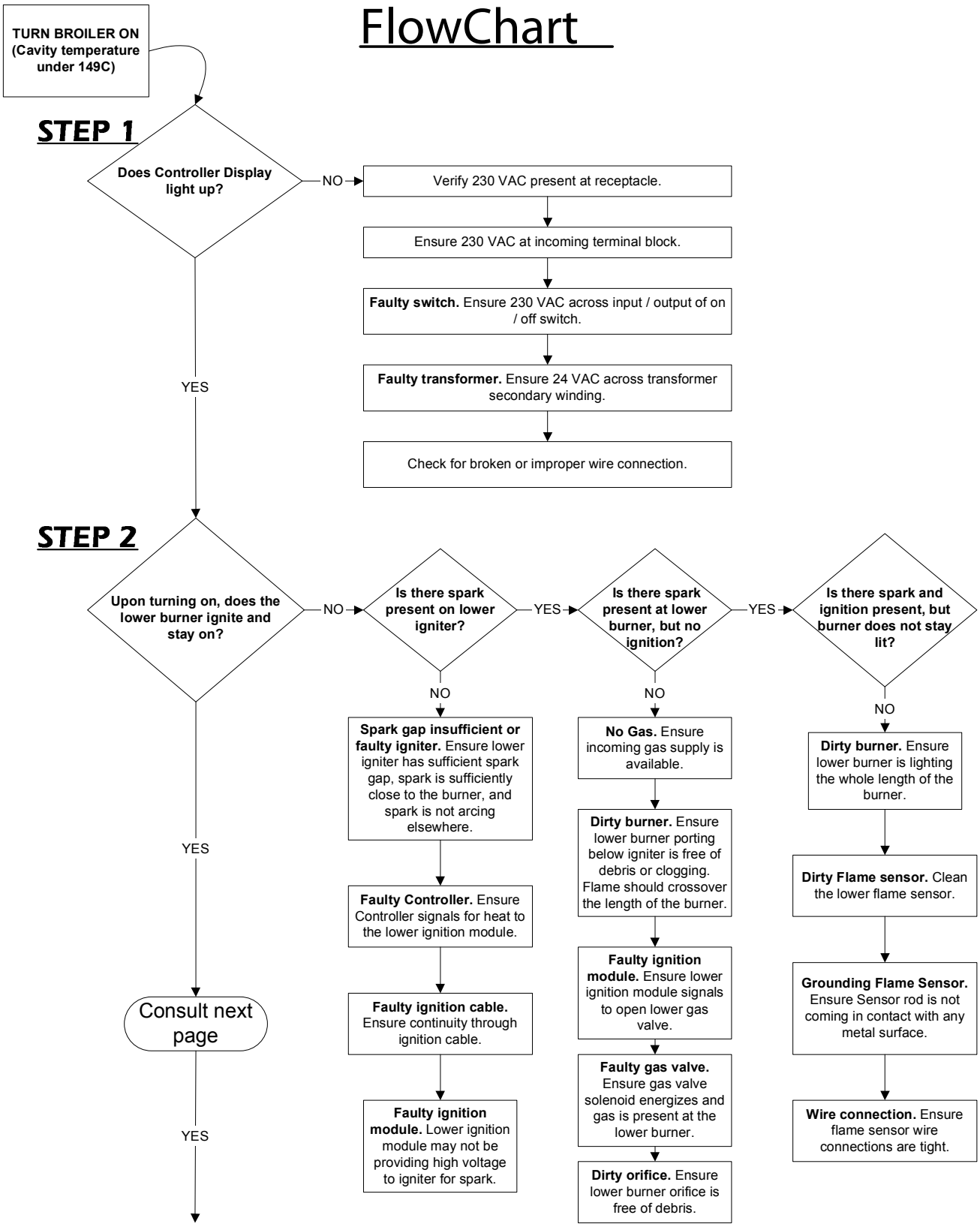
Troubleshooting FlowChart

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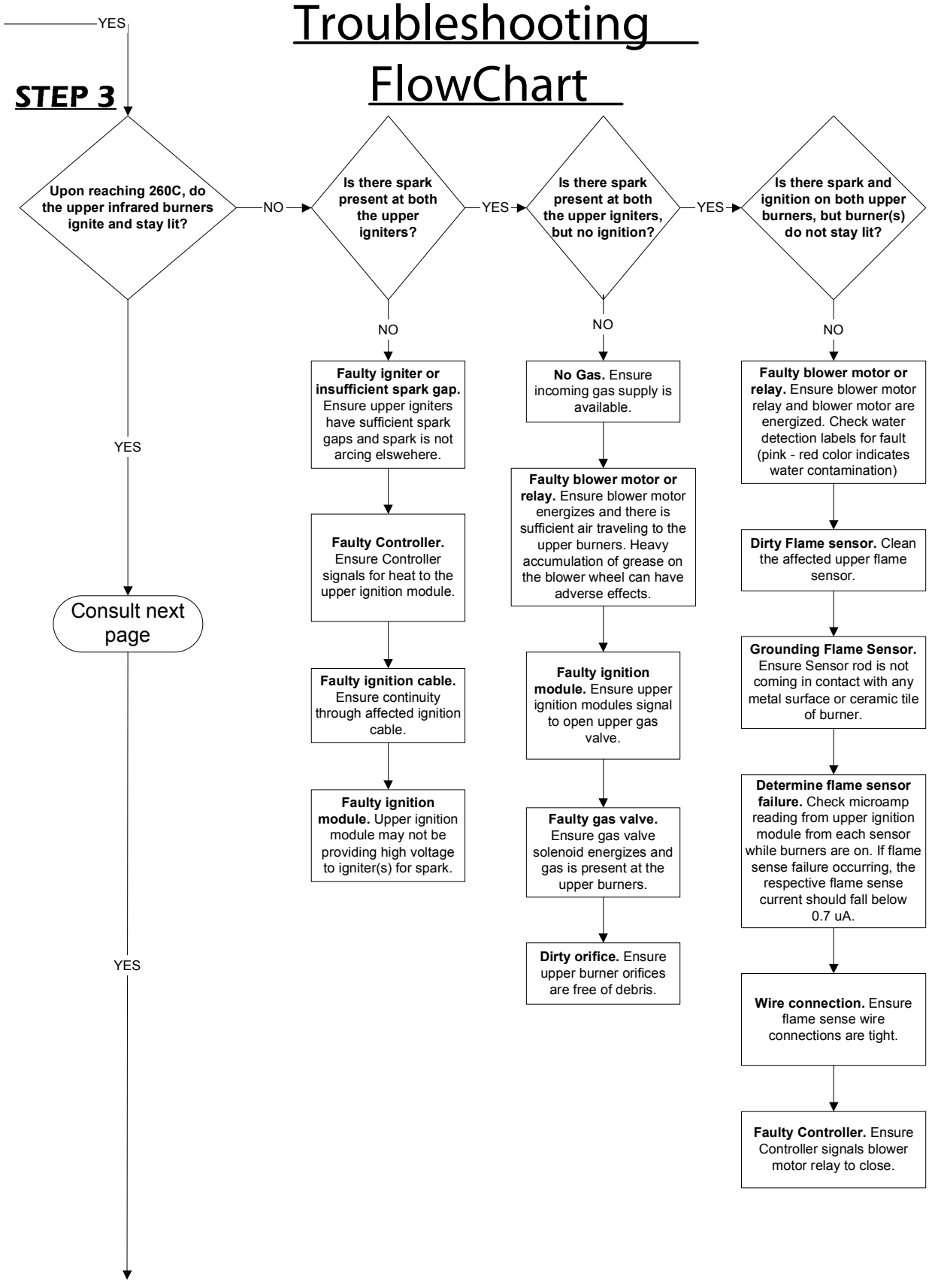
Define the Problem...

	Complaint...	Consult STEP...			
1	**Display flashing "gAS" and....**	**bot**	**toP**	**SEnb**	**SEnt**
		STEP 2	**STEP 3**	**STEP 2**	**STEP 3**
2	**Display flashing "tESt" and "Prod"**	**STEP 2-3 and 6**			
3	**Display showing "Hi"**	**STEP 2**			
4	**Display showing "Lo"**	**STEP 2**			
5	**Display showing "Prob"**	**Faulty Probe**. Test and replace probe.			
6	**Conveyor jammed / running all the time**	**STEP 7**			

Troubleshooting FlowChart



Troubleshooting FlowChart



Troubleshooting FlowChart

YES

STEP 4

Does the Broiler reach setpoint temperature and display "rdY"? (Lower burner may cycle on/off repeatedly before displaying "rdY")

NO

Display flashing "gAS" and….

NO

Display flashing "tESt Prod"

NO

Display flashing "Hi" or "Lo"

NO

Display flashing "Prob"

YES

See Step 2-3 and 6

YES

See Step 2

YES

Faulty Probe. Test and replace temperature probe.

YES

YES

Consult next page

YES

SEE STEP 2

gAS bot = Failure of bottom sensor to sense flame during "PrE" mode

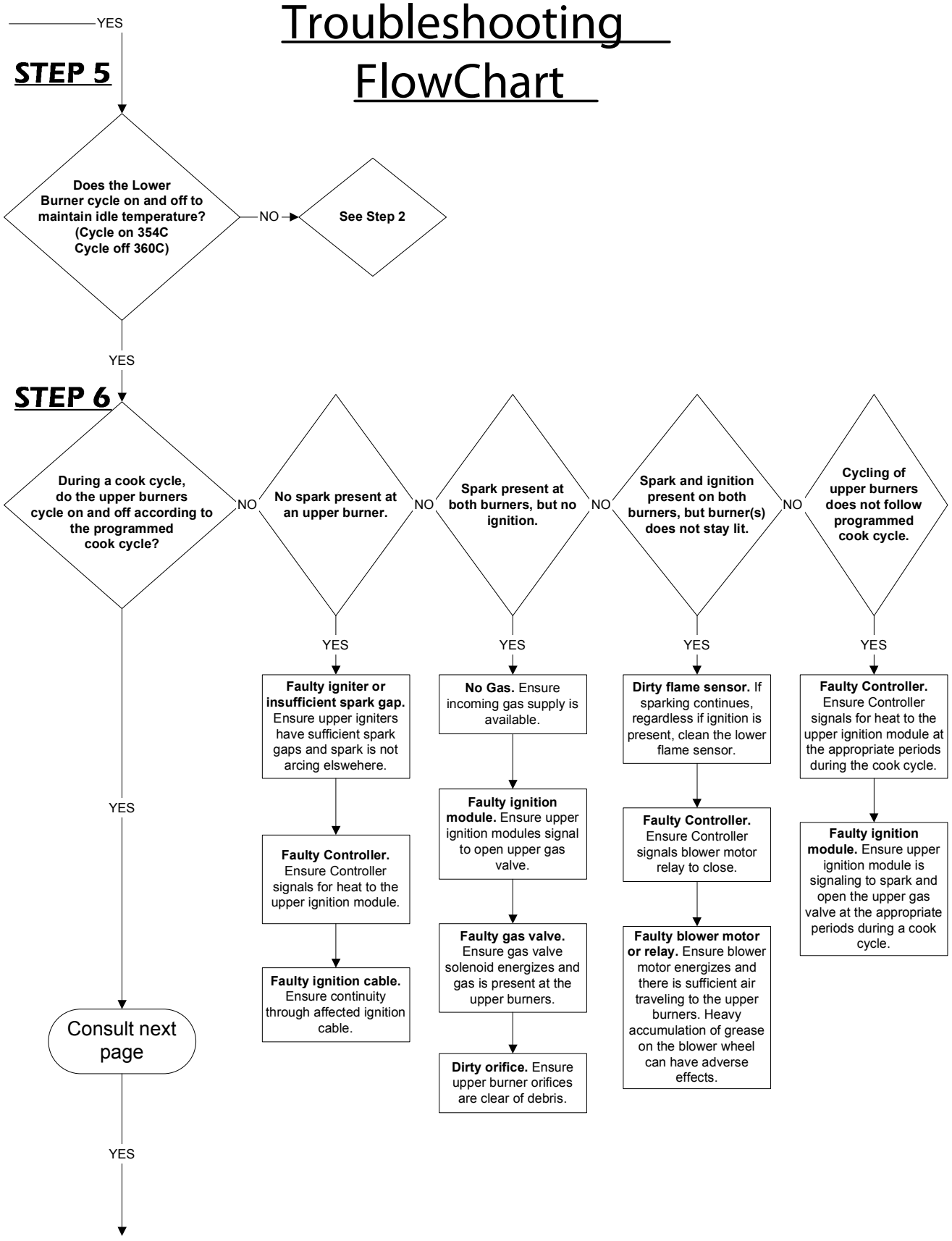
gAS Senb = Failure of bottom sensor to sense flame during "rdY" mode

SEE STEP 3

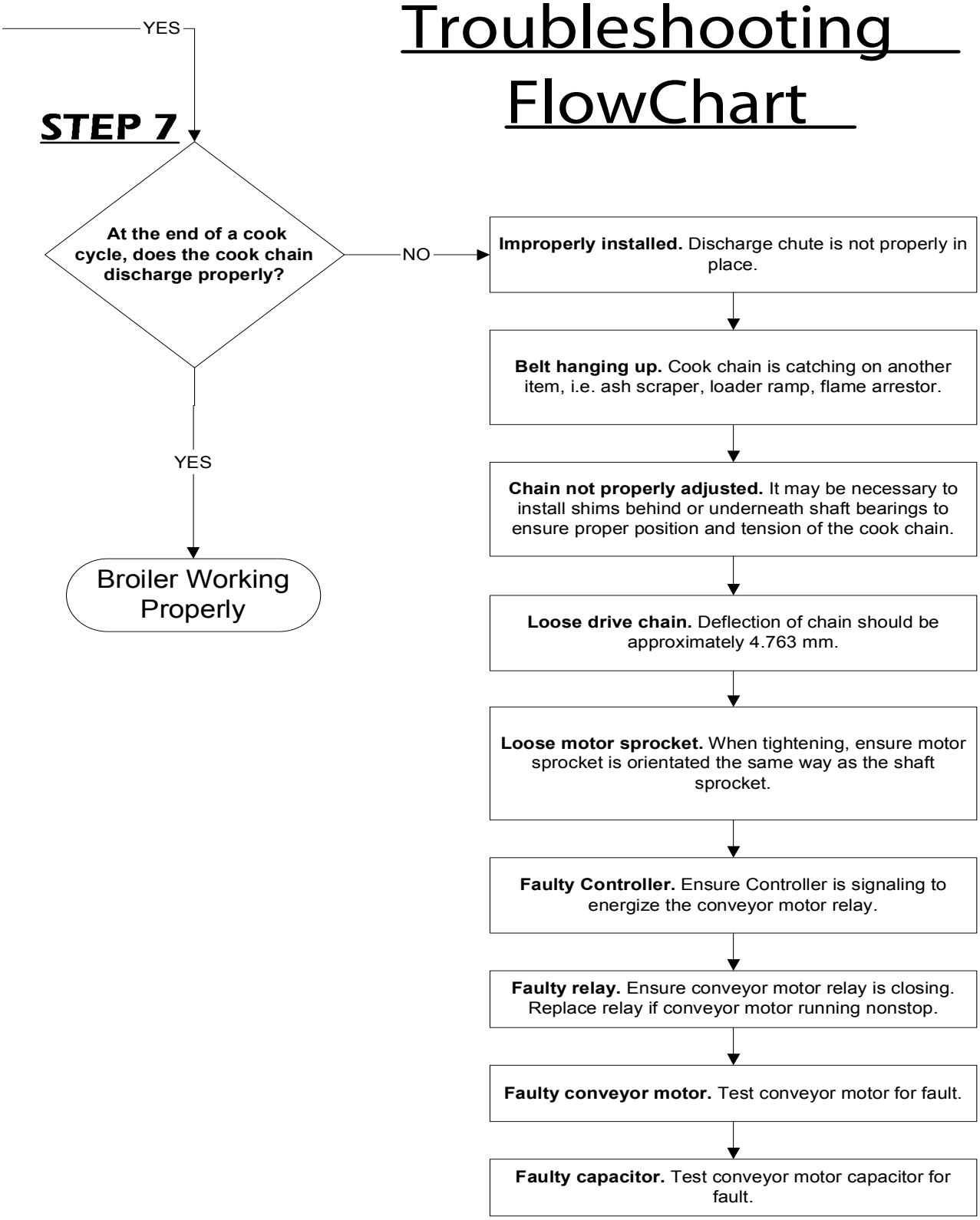
gAS toP = Failure of a top sensor to sense flame during "PrE mode

gAS Sent = Failure of a top sensor to sense flame during "rdY" mode

Troubleshooting FlowChart

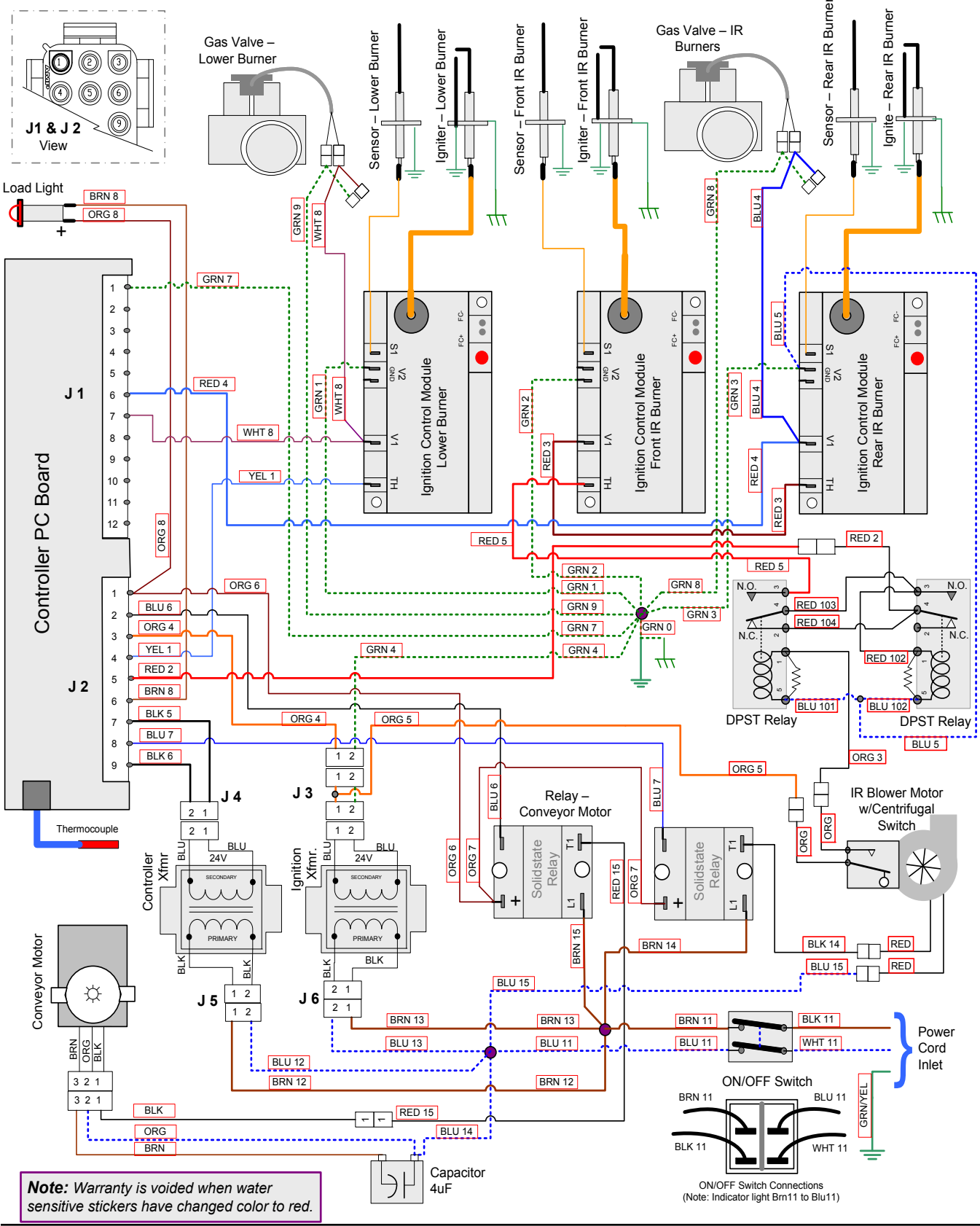


Troubleshooting FlowChart



ELECTRICAL SCHEMATIC – CE FLEXIBLE BATCH BROILER

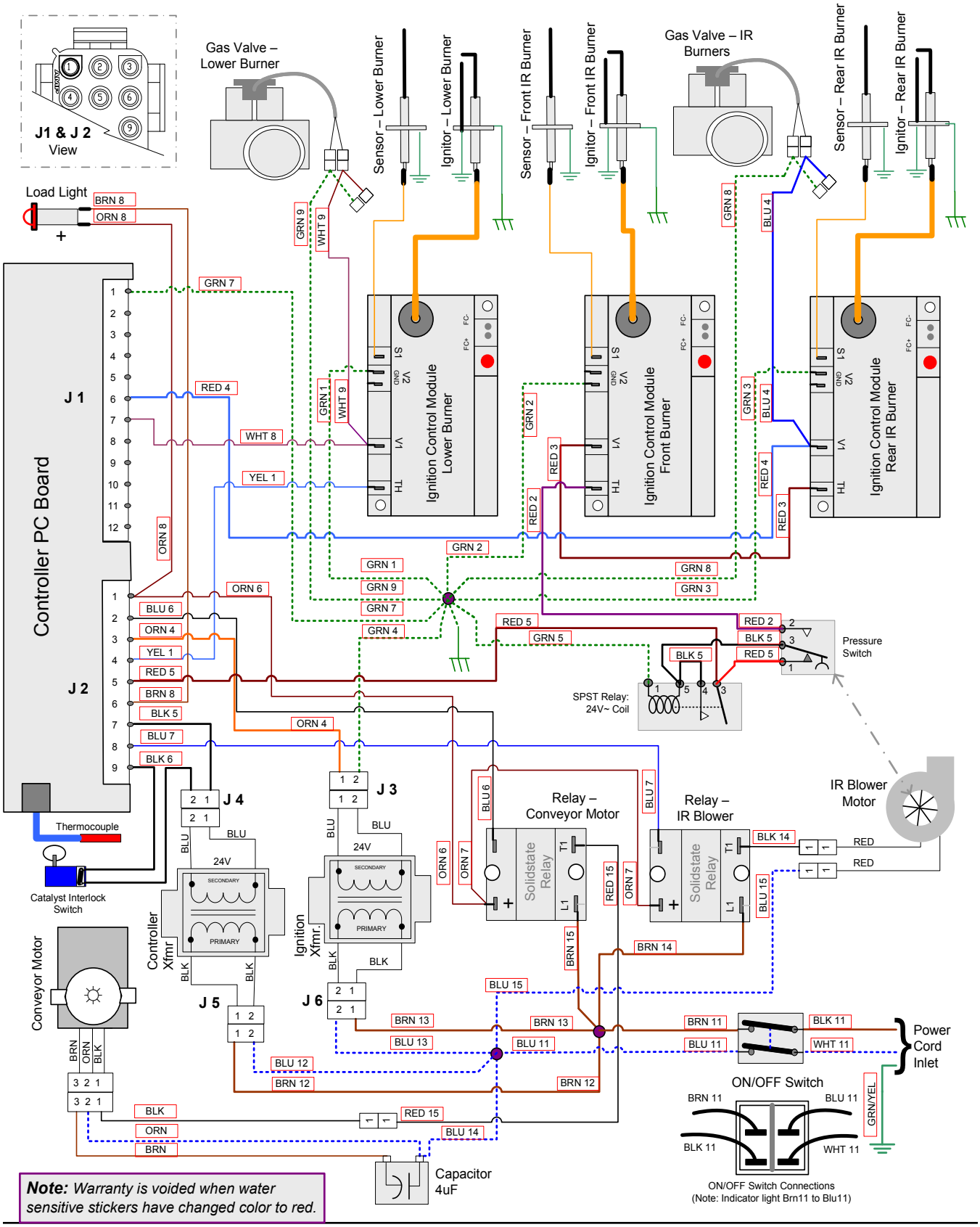
DUKE MFG. 175806 Rev.E



Note: *Warranty is voided when water sensitive stickers have changed color to red.*

ELECTRICAL SCHEMATIC – FLEXIBLE BATCH BROILER

DUKE MFG, AUS w/ IR Air Pressure Switch, P.N. 175186_D



Note: *Warranty is voided when water sensitive stickers have changed color to red.*

CUSTOMER ASSISTANCE

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER:	**SERIAL NUMBER:**
DATE OF PURCHASE:	
DEALER:	**TELEPHONE:**
SERVICER:	**TELEPHONE:**

FOR WARRANTY, PARTS & SERVICE:

DUKE CORPORATE,
CANADA, LATIN AMERICA

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 800-735-3853
Fax: 314-231-2460
service-dispatch@dukemfg.com

DUKE ASIA PACIFIC

Duke Manufacturing
No.3 Building
Lane 28, Yu Lv Road
Malu Town, Jiading District
Shanghai 201801, China
Phone: +86 21 59153525 / 59153526
Fax: +86 21 33600628
service.asiapac@dukemfg.com

DUKE EMEA - EUROPE,
MIDDLE EAST, AFRICA, RUSSIA

Duke Manufacturing CR, s.r.o.
Na Dlouhem 86
Jazlovice, Ricany
Building number DC 4 on the
ProLogis Park Prague D1 West
Prague 251 01
Czech Republic
Phone: +420 323 608 193
Fax: +420 323 608 144
service.emea@dukemfg.com

DUKE EMEA – UK, IRELAND

Phone: +44 (0) 1395 234140
Fax: +44 (0) 1395 234154
service.emea@dukemfg.com

TO ACCESS INTERNET: www.dukemfg.com

Please provide the following information when you write or call: model number, serial number, date of purchase, your complete mailing address (including zip code), and description of the problem.

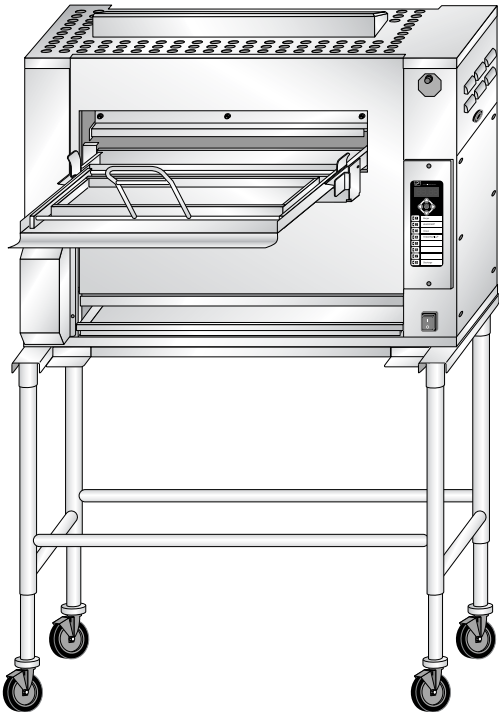


Your Solutions Partner

"Your Solutions Partner"

Manuale di manutenzione

FLEXIBLE BATCH BROILER – Versione CE



MODELLI

FBB-10-230
FBB-20-230
FBB-30-230
FBB-50-230

FBB-1C-230
FBB-2C-230
FBB-3C-230
FBB-5C-230

Leggere completamente questo manuale prima di procedere all'installazione, all'uso o alla manutenzione della macchina.

Questo documento si rivolge a tecnici di manutenzione Duke addestrati. Non deve essere utilizzato da nessuno che non abbia le qualifiche necessarie per l'esecuzione di queste procedure.

Questo manuale non include tutti gli aspetti. Se non si sono seguiti corsi per la manutenzione di questa macchina, leggere completamente il manuale prima di procedere alla manutenzione. Accertarsi di avere tutti gli attrezzi, gli strumenti di test e le capacità necessari. Le procedure per le quali non si hanno le capacità e gli strumenti di test appropriati devono essere svolte solo da un tecnico di manutenzione Duke addestrato e qualificato.

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www. dukemfg. com

AVVERTENZE IMPORTANTI E INFORMAZIONI SULLA SICUREZZA

IMPORTANTE PER LA TUTELA DELL'INCOLUMITÀ PERSONALE

QUESTO MANUALE SI RIVOLGE A PERSONALE QUALIFICATO PER L'INSTALLAZIONE DIORAMA APPARECCHI A GAS. L'INSTALLATORE QUALIFICATO DEVE ESEGUIRE L'AVVIO INIZIALE SUL CAMPO E LE REGOLAZIONI DELLA MACCHINA DESCRITTE IN QUESTO MANUALE.

IMPORTANTE

LE ISTRUZIONI DA SEGUIRE IN CASO CI SIA ODORE DIORAMA GAS DEVONO ESSERE AFFISSE IN UN PUNTO BEN VISIBILE. QUESTE INFORMAZIONI POSSONO ESSERE RICHIESTE ALLA SOCIETÀ DEL GAS.

IMPORTANTE

NEL CASO CI SIA ODORE DIORAMA GAS, SPEGNERE IL BRUCIATORE CHIUDENDO LA VALVOLA PRINCIPALE DEL GAS E RICHIEDERE L'INTERVENTO DELLA SOCIETÀ DEL GAS O DELL'AZIENDA EROGATRICE.

IMPORTANTE PER LA TUTELA DELL'INCOLUMITÀ PERSONALE

NON CONSERVARE NÉ USARE BENZINA O ALTRI LIQUIDI O VAPORI INFIAMMABILI PRESSO QUESTO O QUALSIASI ALTRO APPARECCHIO.

AVVERTENZA

OPERAZIONI IMPROPRIE DIORAMA INSTALLAZIONE, REGOLAZIONE, MODIFICA, MANUTENZIONE O RIPARAZIONE POSSONO CAUSARE DANNI ALLE COSE E LESIONI PERSONALI, ANCHE MORTALI. PRIMA DIORAMA INSTALLARE QUESTA MACCHINA O ESEGUIRE INTERVENTI SU DIORAMA ESSA LEGGERE ATTENTAMENTE LE ISTRUZIONI PER L'INSTALLAZIONE, L'USO E LA MANUTENZIONE.

AVVERTENZA

IN CASO DIORAMA INTERRUZIONE DELL'EROGAZIONE DELLA CORRENTE, NON CERCARE DIORAMA USARE QUESTA MACCHINA.

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INTRODUZIONE

INSTALLAZIONE

Per istruzioni dettagliate per l'installazione, consultare il manuale di installazione e uso.

ISTRUZIONI PER L'USO

Per istruzioni dettagliate per l'uso, consultare il manuale di installazione e uso.

PULIZIA

Per istruzioni dettagliate per la pulizia, consultare il manuale di installazione e uso.

DATI TECNICI CE

	G20	G25	G30	G31
ALTITUDINE (MAXIMUM)	607 m	607 m	607 m	607 m
POTENZA LORDA IN INGRESSO	26,4 KW	26,4 KW	26,4 KW	26,4KW
ATTACCO GAS	12,7 mm BSPT	12,7 mm BSPT	12,7 mm BSPT	12,7 mm BSPT
Pressione gas	20 mbar	25 mbar	28-30 mbar	37-50 mbar
Pressione bruciatore a infrarossi	9,34 mbar	12,95 mbar	19,93 mbar	19,93 mbar
Pressione bruciatore inferiore	9,34 mbar	12,95 mbar	19,93 mbar	19,93 mbar
ORIFIZIO – Bruciatore a infrarossi anteriore	2,35	2,35	1,40	1,55
ORIFIZIO – Bruciatore a infrarossi posteriore	2,50	2,50	1,51	1,61
ORIFIZIO – Bruciatore inferiore	3,05	3,05	2,00	2,00
SHIPPING WEIGHT	205 KG (450 lbs)			
SHIPPING DIMENSIONS	121,9 cm x 99,1 cm x 172,7 cm (483 x 393 x 683)			
DATI ELETTRICI DIORAMA TARGA	230 Volts 50 Hz 250 W			

Informazioni sul numero di modello:

FBB-XY-230

X = 1 Modello a gas G31

X = 2 Modello a gas G20

X = 3 Modello a gas G30

X = 5 Modello a gas G25

Y = O Senza catalizzatore

Y = C Con catalizzatore

ATTREZZI E STRUMENTI

Standard

- Set standard di attrezzi manuali
- Volt-ohmmetro con tester di corrente alternata s(i può adoperare un volt-ohmmetro di qualsiasi livello con sensibilità di almeno 20. 000 ohm a volt).
- Manometro
- Pirometro
- Cercafughe di gas o metodo per rilevare perdite di gas
- Pinza per la rimozione delle maglie della catena del nastro trasportatore
- Cavo di test Duke

RIMOZIONE E SOSTITUZIONE DEI COMPONENTI

COPERCHI E PANNELLI

AVVERTENZA

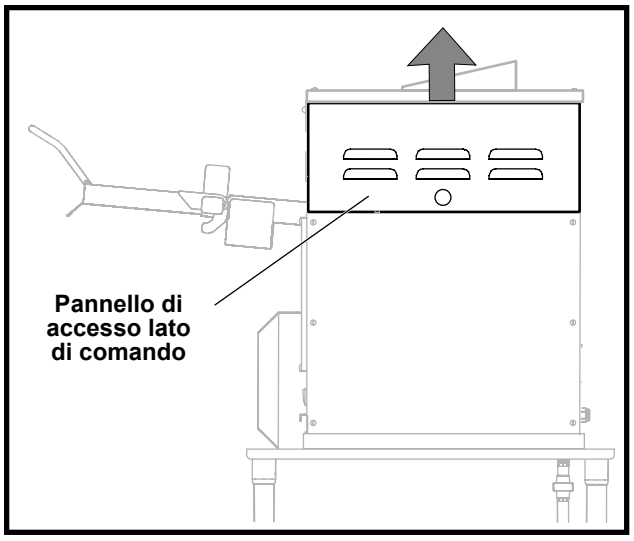
SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

Attenzione: se il grill ha cessato da poco di funzionare, i pannelli e i componenti possono essere roventi. USARE PROTEZIONI ADEGUATE.

Pannello di accesso superiore

Permette di accedere ai sensori superiori della fiamma, agli accenditori e al tubo flessibile del ventilatore.

1. Rimuovere il pannello di accesso superiore sollevandolo e togliendolo dal grill.
2. Reinstallare il pannello abbassandolo sulle scanalature laterali.

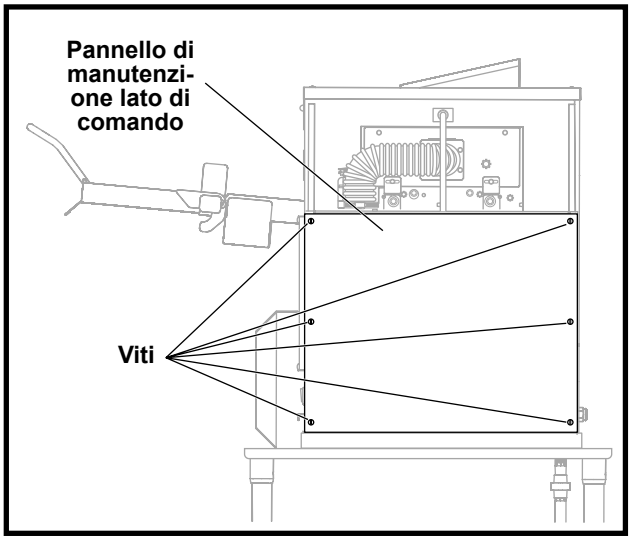


Pannello di accesso superiore

Pannello di manutenzione lato di comando inferiore

Permette di accedere alle valvole del gas, ai moduli di accensione, ai trasformatori, al motorino del ventilatore, al condensatore del motore del nastro e ai connettori sulla scheda di comando.

1. Togliere le sei viti di fissaggio del pannello del lato di comando inferiore.
2. Rimuovere il pannello dal grill.
3. Per reinstallare il pannello eseguire le operazioni precedenti in senso inverso.

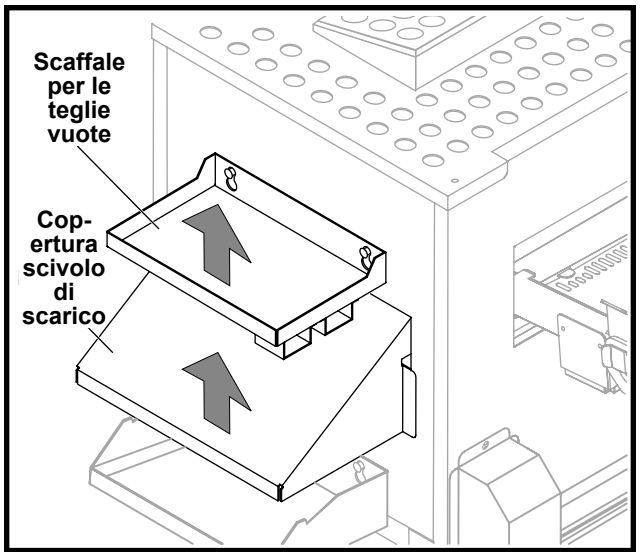


Pannello di manutenzione lato di comando inferiore

Scaffale per le teglie vuote

È situato sul lato di scarico del grill e serve per posarvi le teglie non adoperate.

1. Sollevare lo scaffale e rimuoverlo.
2. Per installare lo scaffale fare scorrere gli appositi fori lungo le due viti e spingere lo scaffale verso il basso.



Scaffale per le teglie vuote e copertura scivolo di scarico

Copertura scivolo di scarico

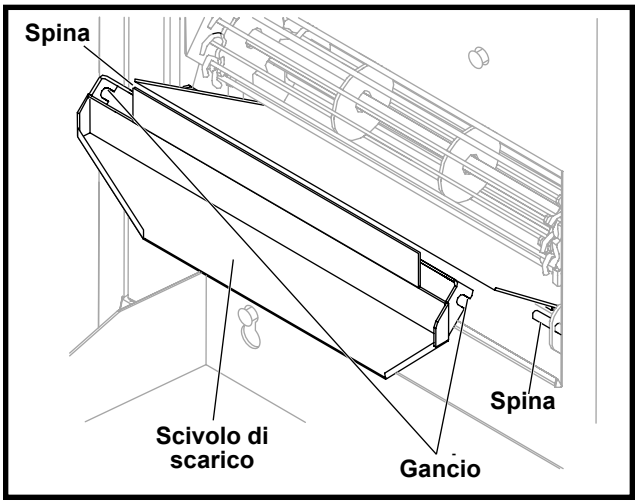
È situata sul lato di scarico del grill, sotto lo scaffale per le teglie vuote.

1. Togliere lo scaffale per le teglie vuote.
2. Rimuovere la copertura sollevandola.
3. Per installare la copertura abbassarla sulle scanalature laterali.
4. Reinstallare lo scaffale per le teglie vuote.

Scivolo di scarico

È situato sotto la copertura e serve a trasferire gli hamburger dal nastro alla teglia di raccolta.

1. Togliere lo scaffale per le teglie vuote.
2. Rimuovere la copertura.
3. Rimuovere lo scivolo sollevandolo dalle due spine laterali.
4. Per reinstallare lo scivolo eseguire le operazioni precedenti in senso inverso, accertandosi che i ganci poggino sulle spine a entrambi i lati.

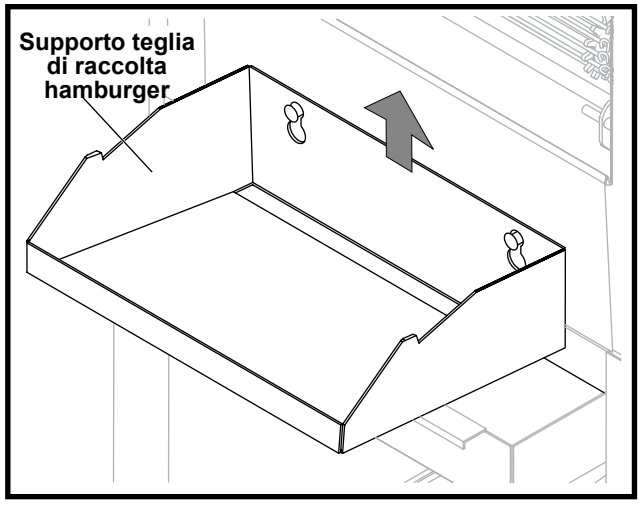


Scivolo di scarico

Supporto teglia di raccolta hamburger

È situato sul lato di scarico del grill, sotto la copertura dello scivolo, e serve a sostenere la teglia di raccolta hamburger (non acclusa).

1. Togliere la teglia di raccolta hamburger, se presente.
2. Fare scorrere il supporto verso l'alto e tirarlo in fuori staccandolo dalle viti.
3. Per installare il supporto farlo scorrere lungo le viti e abbassarlo.



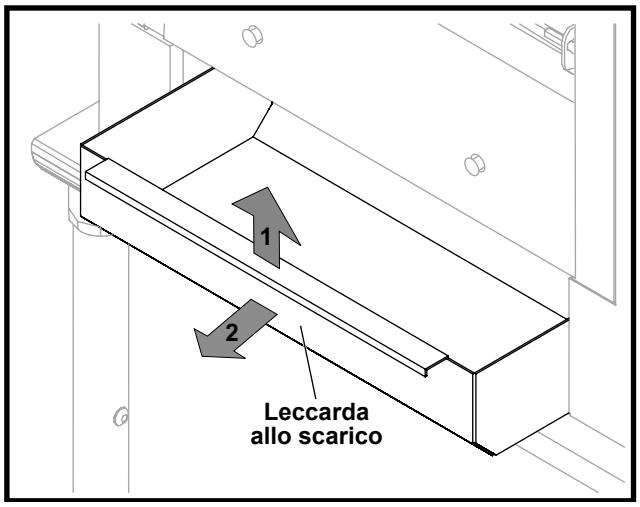
Supporto teglia di raccolta hamburger

Leccarda allo scarico

È situata sotto il supporto per la teglia di raccolta hamburger e raccoglie il grasso che cola dagli hamburger.

1. Inclinare la leccarda verso l'alto per sganciarla e tirarla in avanti per rimuoverla.
2. Quando si installa la leccarda, inclinarla verso l'alto e spingerla completamente indietro.

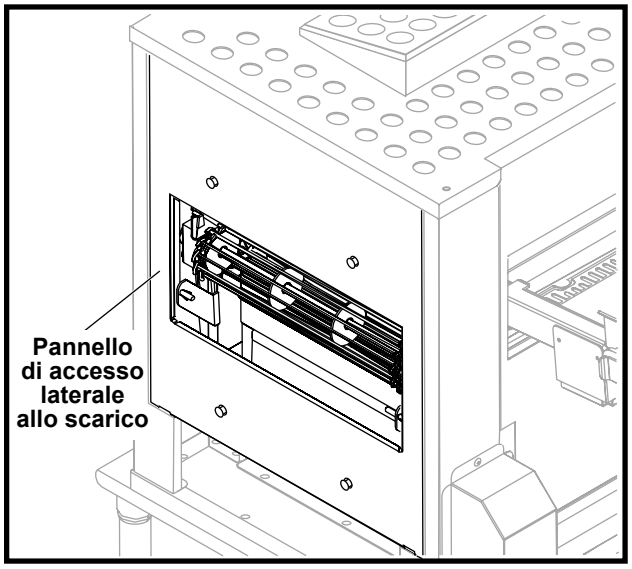
NOTA BENE: se la leccarda è posizionata correttamente, non è possibile rimuoverla senza inclinarla verso l'alto.



Leccarda allo scarico

Pannello di accesso allo scarico

1. Togliere lo scaffale per le teglie vuote.
2. Rimuovere la copertura dello scivolo di scarico.
3. Rimuovere lo scivolo.
4. Rimuovere il supporto della teglia di raccolta hamburger.
5. Rimuovere la leccarda.
6. Rimuovere il pannello di accesso allo scarico sollevandolo verso l'alto e in fuori.
7. Per installare il pannello eseguire le operazioni precedenti in senso inverso.



Pannello di accesso allo scarico

Leccarda principale

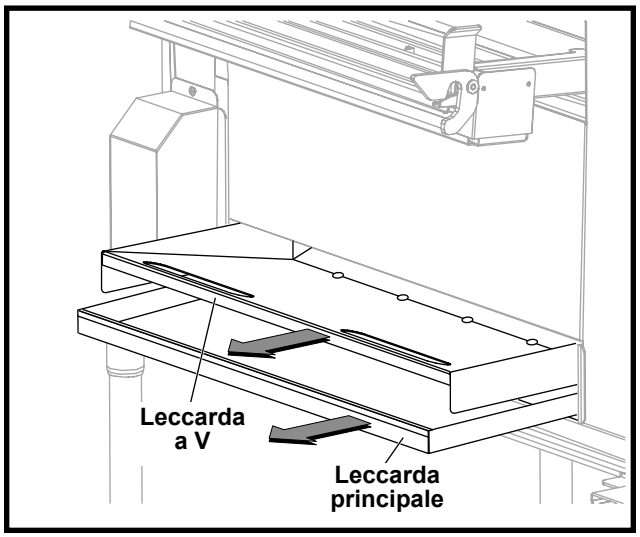
È situata sulla parte anteriore del grill, sotto la leccarda a V.

Rimuovere la leccarda principale facendola scorrere in senso rettilineo fuori del grill.

Leccarda a V

È situata sulla parte anteriore del grill, sotto il vassoio di caricamento.

Rimuovere la leccarda a V facendola scorrere in senso rettilineo.

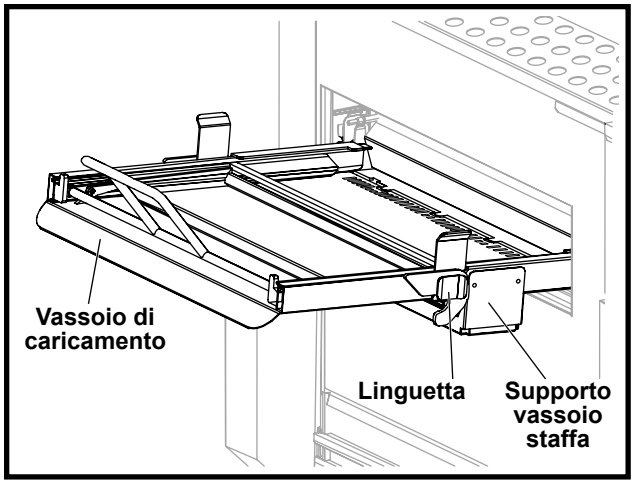


Leccarda a V e leccarda principale

Vassoio di caricamento

È situato sulla parte anteriore del grill ed è inserito nelle guide dell'apposita staffa.

1. Rimuovere il supporto facendolo scorrere fuori del vassoio.
2. Rimuovere il vassoio dalle staffe del supporto tirandolo in avanti e disinserendone le linguette dai fermalinguetta sulle staffe.
3. Per installare il vassoio farlo scorrere sulle staffe in modo che le linguette si inseriscano nei fermalinguetta.

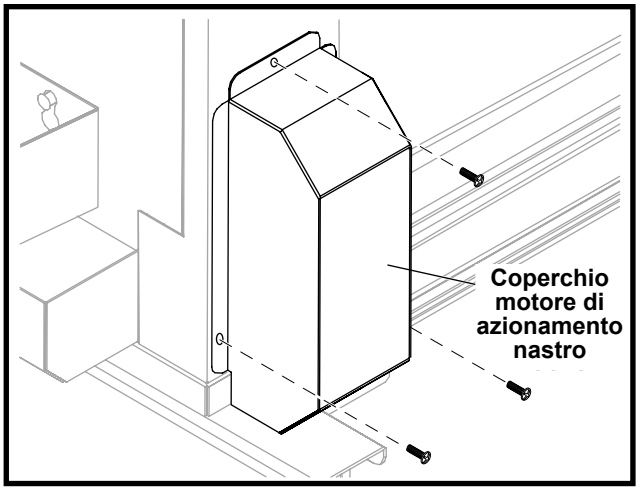


Vassoio di caricamento

Coperchio motore di azionamento nastro

È situato sulla parte anteriore del grill, in basso, sul lato di scarico.

1. Rimuovere la leccarda principale e la leccarda a V.
2. Togliere le tre viti di fissaggio del coperchio al grill.
3. Sollevare il coperchio per staccarlo dal grill.



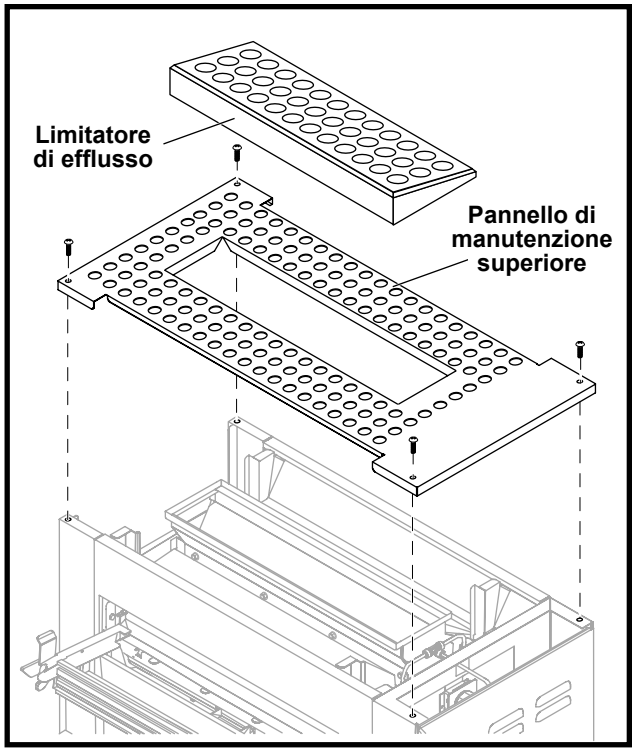
Coperchio motore di azionamento nastro

Pannello di manutenzione superiore

È perforato e permette di accedere ai due bruciatori a infrarossi.

1. Togliere le quattro viti di fissaggio del pannello.
2. Rimuovere il pannello dal grill.
3. Per installare il pannello eseguire le operazioni precedenti in senso inverso.

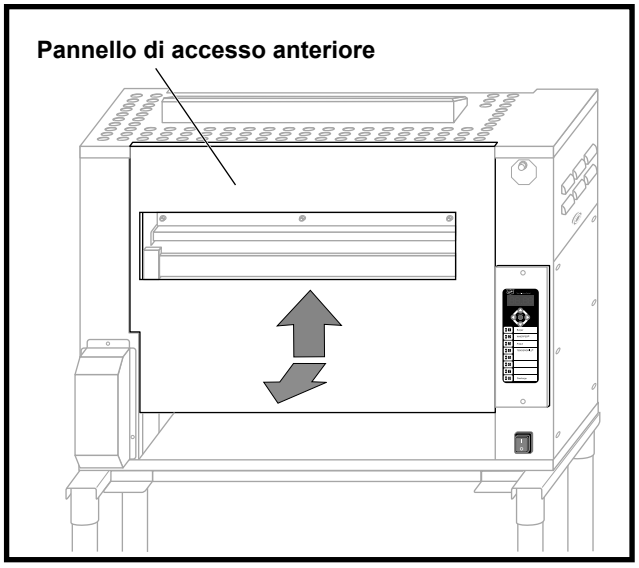
Pannello di manutenzione superiore



Rimozione del pannello anteriore

1. Fare scorre il supporto fuori del vassoio di caricamento.
2. Sbloccare il vassoio e farlo scorrere fuori delle staffe di fissaggio.
3. Tirare la leccarda principale fuori della parte anteriore del grill.
4. Tirare la leccarda a V fuori della parte anteriore del grill.
5. Sollevare il pannello anteriore e staccarlo dal grill.
6. Per reinstallare questi componenti eseguire le operazioni precedenti in senso inverso.

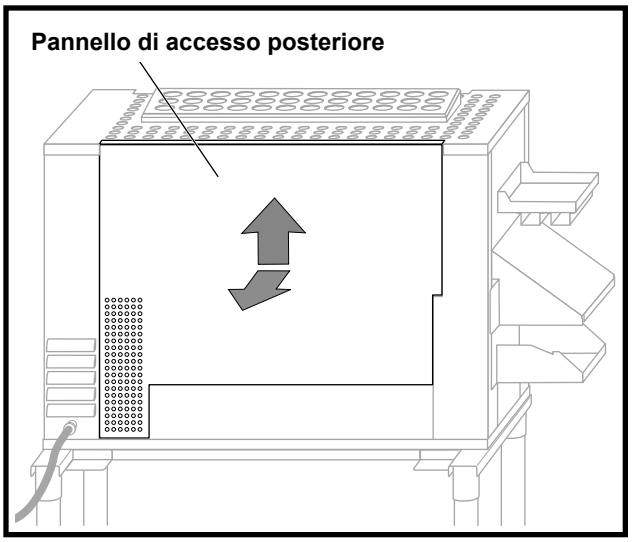
Panello anteriore



Rimozione del pannello posteriore

1. Sollevare il pannello posteriore e staccarlo dal grill.
2. Per reinstallare il pannello eseguire le operazioni precedenti in senso inverso.

Panello posteriore



RIMOZIONE DEI COMPONENTI

MOTORE DIORAMA AZIONAMENTO NASTRO

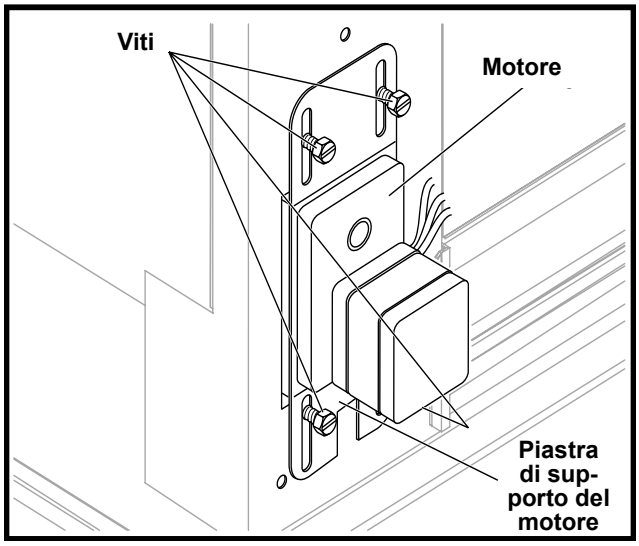
È situato nella parte anteriore del grill, in basso, all'estremità di scarico, e muove il nastro mediante una catena.

AVVERTENZA

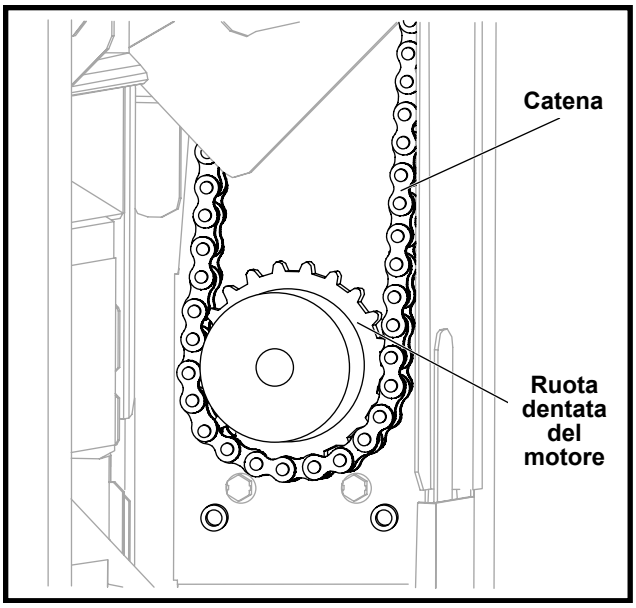
SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il coperchio del motore. Vedi sezione COPERCHI E PANNELLI.
2. Scollegare i cavi dal motore.
3. Rimuovere il pannello di accesso allo scarico. Vedi sezione COPERCHI E PANNELLI.
4. Togliere le quattro viti di fissaggio del motore alla piastra di supporto e rimuovere il motore.
5. Sollevare la piastra di supporto del motore per disinserire la catena dalla puleggia.
6. Rimuovere la ruota dentata dall'albero del motore; la ruota dentata è fissata all'albero mediante due viti.
7. Per installare un nuovo motore eseguire le operazioni precedenti in senso inverso. Accertarsi che una delle viti di fermo della ruota dentata sia serrata contro il lato piatto dell'albero del motore.

NOTA BENE: quando si installa il motore nuovo, accertarsi che la catena si inserisca sulla ruota dentata. Prima di serrare le viti della piastra di supporto del motore, regolare la tensione della catena in modo che la catena si defletta di 4,76 mm, come descritto nella procedura REGOLAZIONE DELLA DEFLESSIONE DELLA CATENA DIORAMA TRASMISSIONE della sezione REGOLAZIONI.



Motore di azionamento nastro



Ruota dentata motore e catena di trasmissione

Catena di trasmissione

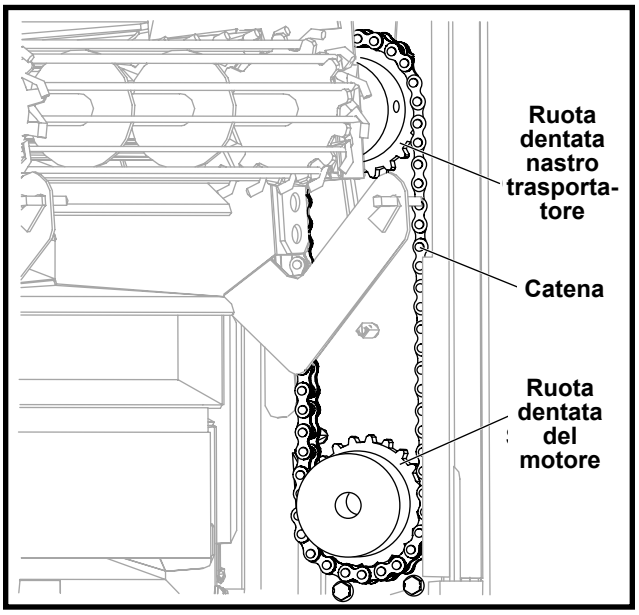
Muove il nastro trasmettendo la potenza sviluppata dal motore.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il coperchio del motore. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il pannello di accesso allo scarico. Vedi sezione COPERCHI E PANNELLI.
3. Scollegare i cavi dal motore.
4. Togliere le quattro viti di fissaggio del motore alla piastra di supporto.
5. Sollevare la piastra di supporto del motore per disinserire la catena dalla ruota dentata del motore.
6. Disinserire la catena dalla ruota dentata.
7. Rimuovere la catena dal grill rimuovendo la maglia principale.
8. Per installare una nuova catena eseguire le operazioni precedenti in senso inverso.

NOTA BENE: quando si installa la catena nuova, accertarsi che la catena si inserisca sulla ruota dentata del motore e su quella del nastro. Prima di serrare le viti della piastra di supporto del motore, regolare la tensione della catena in modo che la catena si defletta di 4,76 mm, come descritto nella procedura REGOLAZIONE DELLA DEFLESSIONE DELLA CATENA DIORAMA TRASMISSIONE della sezione REGOLAZIONI.



Catena di trasmissione e ruote dentate

Ruota dentata motore di azionamento nastro

È collegata all'albero del motore.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il coperchio del motore. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il pannello di accesso allo scarico. Vedi sezione COPERCHI E PANNELLI.
3. Scollegare i cavi dal motore.
4. Togliere le quattro viti di fissaggio del motore alla piastra di supporto.
5. Sollevare la piastra di supporto del motore per disinserire la catena dalla ruota dentata del motore.
6. Disinserire la catena dalla ruota dentata del motore.

7. Allentare le due viti di fermo sulla ruota dentata del motore e rimuovere la ruota dentata dall'albero del motore.
8. Eseguire le operazioni precedenti in senso inverso per installare una nuova ruota dentata del motore, accertandosi che una delle viti di fermo sia serrata contro il lato piatto dell'albero del motore.

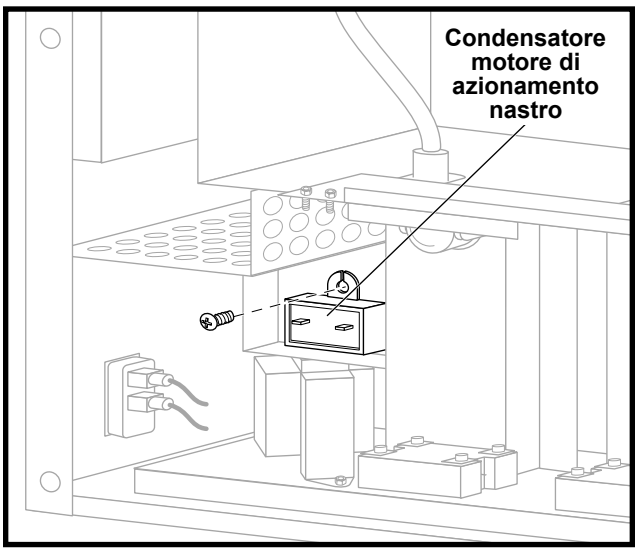
NOTA BENE: quando si installa la nuova ruota dentata del motore, accertarsi che la catena si inserisca sulla ruota dentata del motore e su quella del nastro, e poi prima di serrare le viti della piastra di supporto del motore, regolare la tensione della catena in modo che la catena si defletta di 4,76 mm, come descritto nella procedura REGOLAZIONE DELLA DEFLESSIONE DELLA CATENA DIORAMA TRASMISSIONE della sezione REGOLAZIONI.

Condensatore motore di azionamento nastro

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di accesso superiore. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Scollegare i cavi dal condensatore.
4. Scaricare il condensatore. Mettere a massa i due cavi, collegandoli al telaio del grill.
5. Togliere la vite di fissaggio del condensatore al telaio e rimuovere il condensatore.
6. Per installare un condensatore nuovo eseguire le operazioni precedenti in senso inverso.



Condensatore motore di azionamento nastro

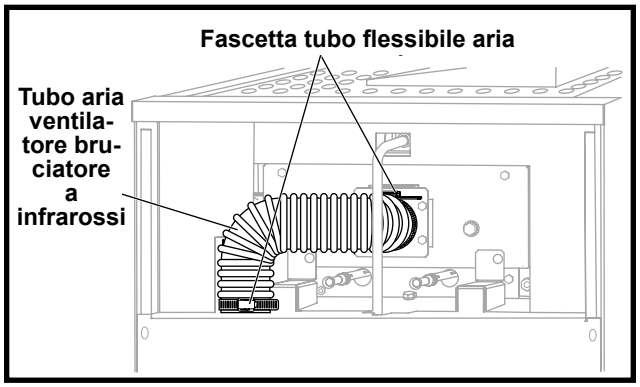
Tubo flessibile ventilatore

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di accesso superiore. Vedi sezione COPERCHI E PANNELLI.
2. Allentare la fascetta del tubo flessibile (di mandata dell'aria ai bruciatori superiori) all'uscita del motorino del ventilatore.
3. Allentare la fascetta al centro del tubo flessibile.
4. Rimuovere il tubo flessibile.
5. Per installare il tubo flessibile eseguire le operazioni precedenti in senso inverso.

Tubo flessibile ventilatore



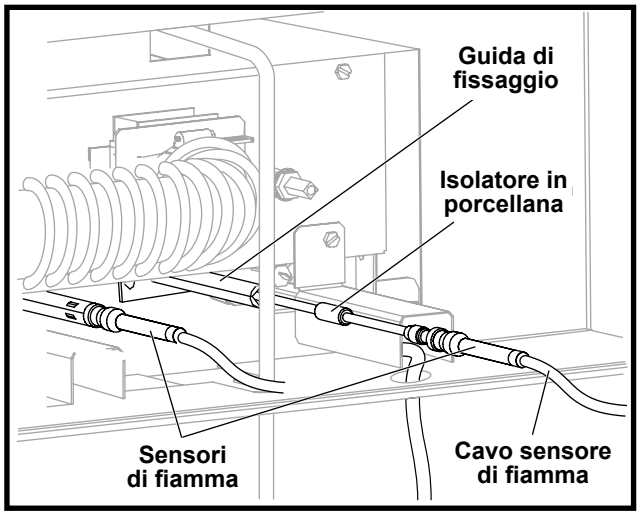
Sensori fiamma superiori

Sono accessibili rimuovendo il pannello di accesso superiore. Ciascun bruciatore superiore è dotato di un sensore di fiamma.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di accesso lato di comando. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Disinserire il sensore superiore di fiamma dalla guida e dalla staffa, ed estrarlo.



Sensore superiore di fiamma

4. Scollegare il cavo del sensore superiore di fiamma dal modulo di accensione e rimuovere il sensore.
5. Comprimere le linguette sui passacavo per rimuoverli.
6. Fare passare il cavo attraverso lo scaffale per rimuovere completamente il sensore.
7. Per installare un nuovo sensore superiore di fiamma eseguire le operazioni precedenti in senso inverso.

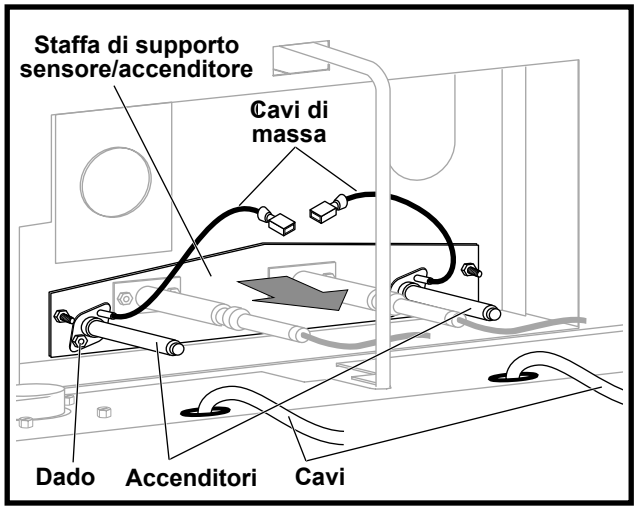
Moduli di accensione superiori

Sono accessibili rimuovendo il pannello di accesso superiore. Ciascun bruciatore superiore è dotato di un accenditore.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di accesso superiore. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Togliere le due viti di fissaggio del coperchio dell'accenditore.



Accenditori superiori

4. Scollegare il cavo di alimentazione e quello di massa dall'accenditore.
5. Rimuovere il tubo flessibile del ventilatore.
6. Togliere le due viti rimanenti che fissano il coperchio del modulo dell'aria e rimuovere il coperchio.
7. Rimuovere la staffa di supporto del sensore/accenditore.
8. Togliere il dado di fissaggio dell'accenditore.
9. Per installare un nuovo accenditore superiore eseguire le operazioni precedenti in senso inverso, accertandosi che la distanza tra gli elettrodi dell'accenditore di ricambio sia al giusto valore: 3,175 mm.

Affinché l'accensione avvenga correttamente, la scintilla deve scoccare a circa 4,76 mm dalla superficie del blocco refrattario del bruciatore a infrarossi.

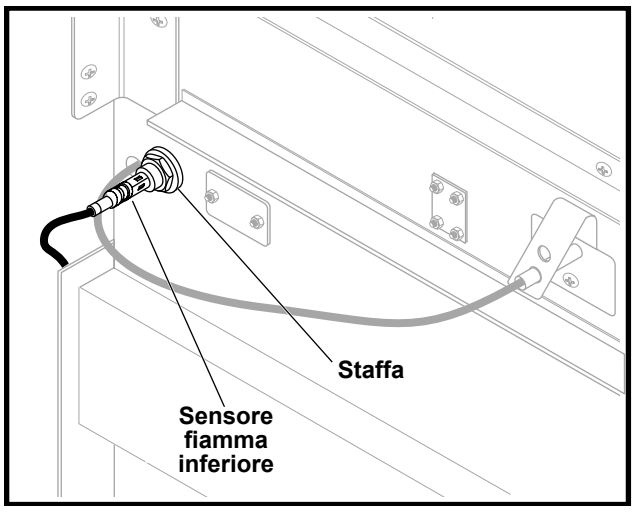
Sensore fiamma inferiore

È accessibile dalla parte posteriore del grill.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il panello posteriore. Vedi sezione COPERCHI E PANNELLI.
3. Disinserire il sensore superiore di fiamma dalla guida e dalla staffa, ed estrarlo.



Sensore fiamma inferiore

4. Scollegare il cavo del sensore inferiore di fiamma dal modulo di accensione e rimuovere il sensore.

5. Comprimere le linguette sul passacavo per rimuoverlo.
6. Fare passare il cavo attraverso il foro per rimuovere completamente il sensore.
7. Per installare un nuovo sensore inferiore di fiamma eseguire le operazioni precedenti in senso inverso.

Accenditore inferiore

È accessibile rimuovendo il pannello di accesso superiore.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di accesso superiore. Vedi sezione COPERCHI E PANNELLI.
2. Scollegare il cavo di alimentazione e quello di massa dall'accenditore inferiore.
3. Togliere il dado di fissaggio dell'accenditore.
4. Per installare un nuovo accenditore inferiore eseguire le operazioni precedenti in senso inverso, accertandosi che la distanza tra gli elettrodi dell'accenditore di ricambio sia al giusto valore: 3,175 mm. Affinché l'accensione avvenga correttamente, la scintilla deve scoccare a circa 19,05 mm sopra il bruciatore inferiore.

Bruciatore a infrarossi superiore

Sulla parte superiore del grill ci sono due bruciatori a infrarossi, accessibili rimuovendo il pannello di manutenzione superiore e il deflettore del fumo.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

AVVERTENZA

CHIUDERE LA VALVOLA DEL GAS PRIMA DIORAMA PROCEDERE ALLA MANUTENZIONE.

AVVERTENZA

CONTROLLARE TUTTI I RACCORDI DEI TUBI DEL GAS CHE POSSANO ESSERSI ALLENTATI DURANTE LA MANUTENZIONE, PER RILEVARE EVENTUALI FUGHE DIORAMA GAS. CONTROLLARE CON UNA SOLUZIONE DIORAMA ACQUA E SAPONE SE SI FORMANO BOLLE. NON UTILIZZARE UNA FIAMMA LIBERA.

Attenzione: se il grill ha cessato da poco di funzionare, i pannelli e i componenti possono essere roventi. Usare protezioni adeguate.

1. Rimuovere il deflettore del fumo. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Scollegare il tubo del gas all'ingresso del bruciatore a infrarossi superiore da rimuovere.
4. Rimuovere i dadi inseriti lungo il grill.
5. Rimuovere entrambi le protezioni dell'accenditore.
6. Rimuovere il tubo flessibile del ventilatore.
7. Rimuovere il coperchio del modulo dell'aria.
8. Togliere le quattro viti di fissaggio del Venturi del bruciatore al modulo dell'aria.
9. Adoperare una spatola per stucco per fare leva con cautela sul Venturi e staccarlo dal modulo dell'aria.

10. Estrarre il bruciatore a infrarossi dalla parte superiore del grill facendolo scorrere in avanti, verso l'alto e fuori.
11. Per installare un nuovo bruciatore a infrarossi eseguire le operazioni precedenti in senso inverso.

NOTA BENE: applicare il composto anti-inceppamento Technologies TFE1400 su tutti i filetti quando si montano i raccordi del tubo del gas del bruciatore.

NOTA BENE: se si reinstalla il bruciatore ripulire il modulo dell'aria e il Venturi dal sigillante al silicone. Riapplicare il sigillante al silicone per alte temperatura prima di installare il bruciatore.

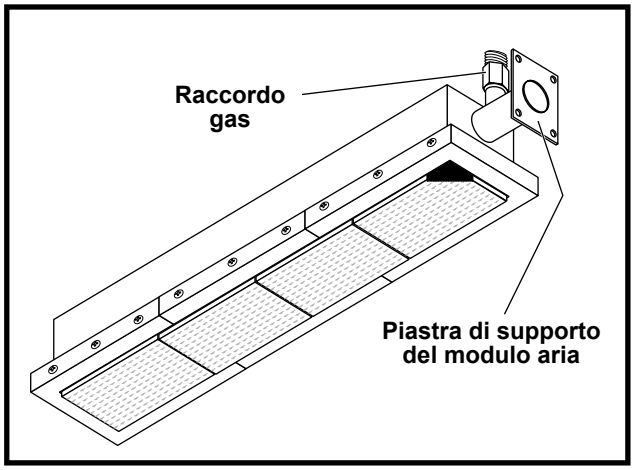
Bruciatore a J inferiore

È situato sotto il nastro trasportatore ed è accessibile dall'estremità di scarico e dalla parte anteriore del grill.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

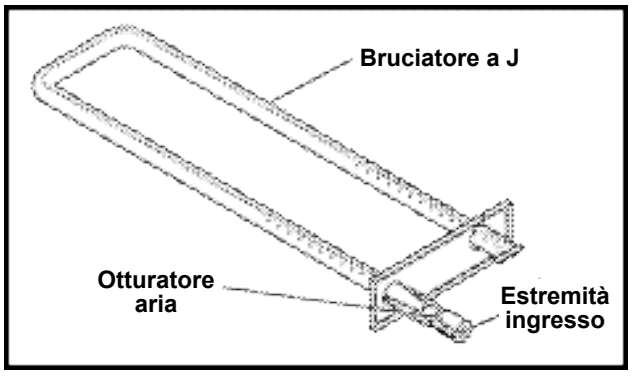
1. Togliere lo scaffale per le teglie vuote.
2. Rimuovere la copertura dello scivolo di scarico.
3. Rimuovere lo scivolo.
4. Rimuovere il supporto della teglia di raccolta hamburger.
5. Rimuovere la leccarda allo scarico.
6. Rimuovere il pannello di accesso allo scarico. Vedi sezione COPERCHI E PANNELLI.
7. Rimuovere il raschiatoio per le ceneri tirandone la parte superiore in fuori, via dal grill, e sollevandolo verso l'alto in fuori.
8. Rimuovere la leccarda principale e la leccarda a V.
9. Rimuovere il panello anteriore. Vedi sezione COPERCHI E PANNELLI.
10. Disinserire la staffa del bruciatore a J dal prigioniero all'estremità di scarico e spostare il bruciatore a J verso l'estremità di scarico per disinserirlo dall'orifizio.
11. Sfilare con cautela il bruciatore a J dalla parte anteriore del grill, facendo attenzione a non danneggiare l'accenditore.



Bruciatore a infrarossi

12. Per installare un nuovo bruciatore a J eseguire le operazioni precedenti in senso inverso.

NOTA BENE: accertarsi che l'estremità d'ingresso del bruciatore a J si inserisca nell'orifizio del gas e che l'estremità di scarico del bruciatore a J sia posizionata saldamente sulla staffa del bruciatore.



Bruciatore a J inferiore

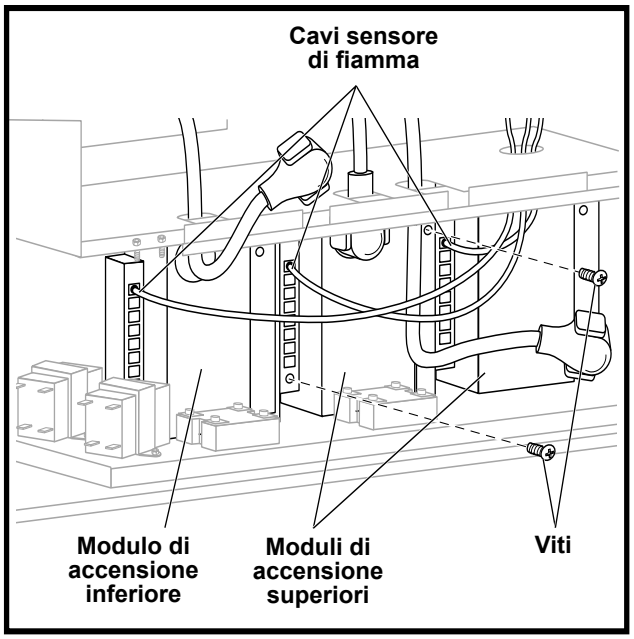
Moduli di accensione

Sono accessibili rimuovendo il pannello di manutenzione lato di comando inferiore; sono situati nella parte inferiore del vano, dietro i relè.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Apporre targhette di identificazione ai cavi del modulo di accensione da rimuovere, e rimuoverli.
3. Scollegare i cavi del sensore di fiamma.
4. Togliere le due viti di fissaggio del modulo di accensione al telaio e rimuovere il modulo.
5. Per reinstallare il modulo di accensione eseguire le operazioni precedenti in senso inverso.



Moduli di accensione

Valvole del gas

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

AVVERTENZA

CHIUDERE LA VALVOLA DEL GAS PRIMA DIORAMA PROCEDERE ALLA MANUTENZIONE DEL GRILL.

AVVERTENZA

CONTROLLARE TUTTI I RACCORDI DEI TUBI DEL GAS CHE POSSANO ESSERSI ALLENTATI DURANTE LA MANUTENZIONE, PER RILEVARE EVENTUALI FUGHE DIORAMA GAS. CONTROLLARE CON UNA SOLUZIONE DIORAMA ACQUA E SAPONE SE SI FORMANO BOLLE. NON UTILIZZARE UNA FIAMMA LIBERA.

AVVERTENZA

PRIMA DIORAMA ACCENDERE IL GRILL È NECESSARIO CONTROLLARE TUTTI I RACCORDI A MONTE DELLE VALVOLE DEL GAS.

AVVERTENZA

DOPO CHE SI ACCENDE IL GRILL È NECESSARIO CONTROLLARE TUTTI I RACCORDI A VALLE DELLE VALVOLE DEL GAS.

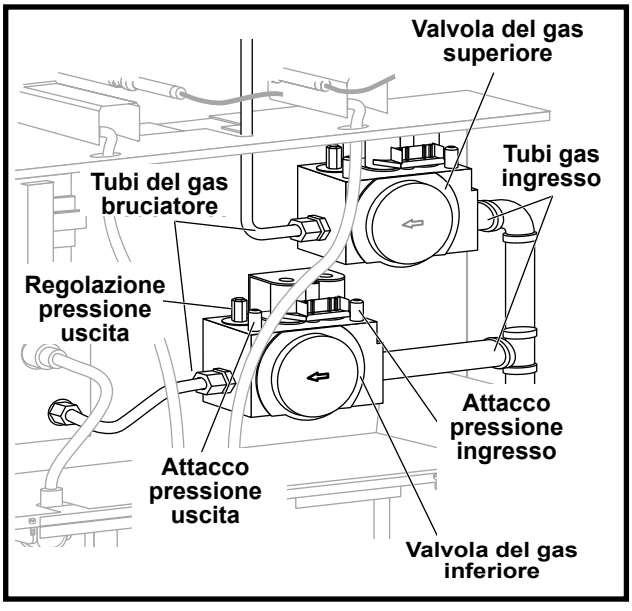
NOTA BENE: le valvole del gas non possono essere sottoposte a manutenzione e non devono essere smontate.

1. Chiudere la valvola principale del gas erogato al grill.
2. Rimuovere il pannello di accesso superiore e il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Scollegare il tubo del gas che raggiunge il grill, in corrispondenza delle valvole del gas.
4. Apporre targhette di identificazione ai cavi che raggiungono le valvole del gas, e scollegarli.
5. Per svitare una delle valvole del gas dal tubo adoperare una chiave fissa.
6. Per installare una delle valvole del gas eseguire le operazioni precedenti in senso inverso. Accertarsi che la nuova valvola del gas sia installata nella direzione giusta.

NOTA BENE: quando si sostituisce una delle valvole del gas, applicare il composto anti-inceppamento Technologies TFE1400 su tutti i filetti dei tubi.

7. Controllare tutti i raccordi per rilevare eventuali fughe di gas.

8. Verificare la pressione alla valvola del gas.



Valvole del gas

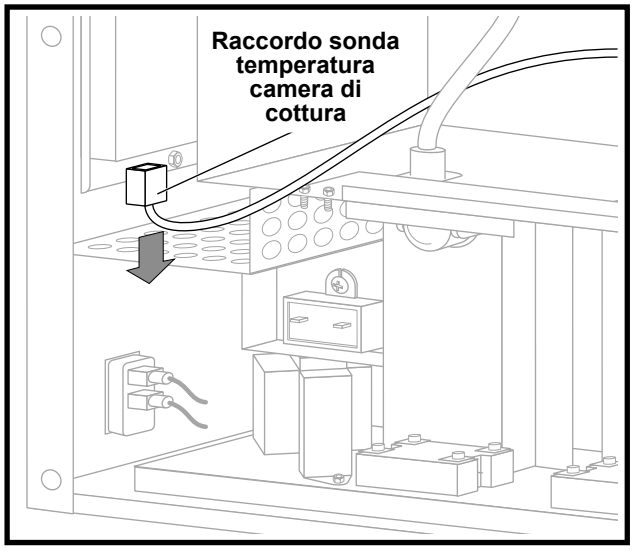
Sonda di temperatura camera di cottura

È collegata alla parte inferiore della scheda di comando ed è situata nella parte posteriore del grill.

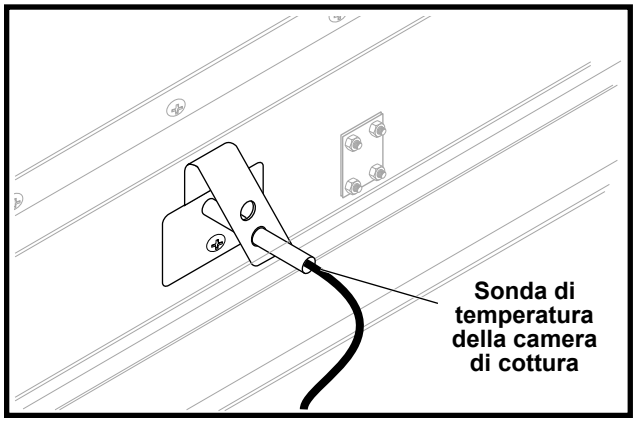
AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il pannello posteriore. Vedi sezione COPERCHI E PANNELLI.
3. Scollegare il connettore della sonda dalla parte inferiore della scheda di comando.
4. Rimuovere la sonda dalla staffa spingendo delicatamente verso il basso sulla staffa.
5. Comprimere i due passacavo nel vano dei circuiti elettrici per rimuoverli.
6. Sfilare la sonda dal grill.
7. Per installare una sonda eseguire le operazioni precedenti in senso inverso, accertandosi che i due passacavo siano reinstallati.
8. Accertarsi che la sonda sia posizionata correttamente sulla staffa; la tacca sul rivestimento deve essere bloccata sulla staffa.



Raccordo sonda temperatura camera di cottura



Fissaggio della sonda di temperatura della camera di cottura

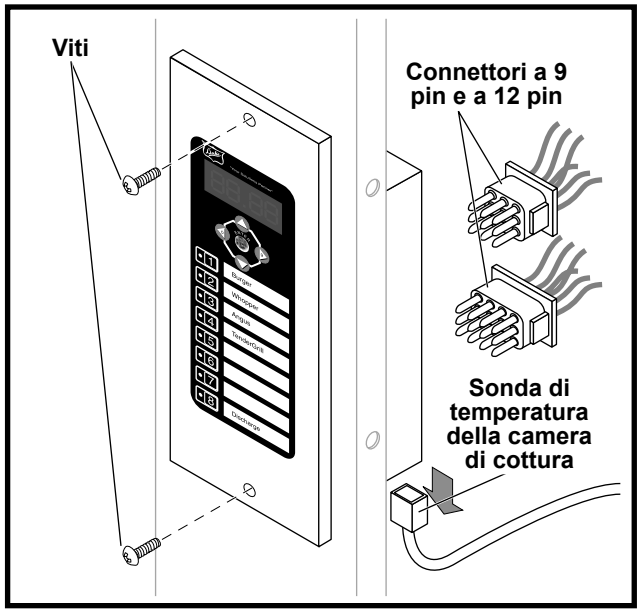
Scheda di comando

È situata nella parte anteriore del grill ed è stata preimpostata in fabbrica con le routine BURGER KING® standard. Eventuali regolazioni di precisione eseguite nel ristorante sono di responsabilità del direttore dell'esercizio.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Scollegare il connettore della sonda di temperatura della camera di cottura dalla parte inferiore della scheda di comando.
3. Scollegare i connettori a 9 pin e a 12 pin dalla parte posteriore della scheda di comando.
4. Togliere le due viti dalla parte anteriore della scheda di comando.
5. Rimuovere la scheda di comando dal grill.
6. Per installare una nuova scheda di comando eseguire le operazioni precedenti in senso inverso.
7. Comunicare al responsabile dell'esercizio che la scheda di comando è stata sostituita e che possono essere necessarie regolazioni di precisione.



Scheda di comando

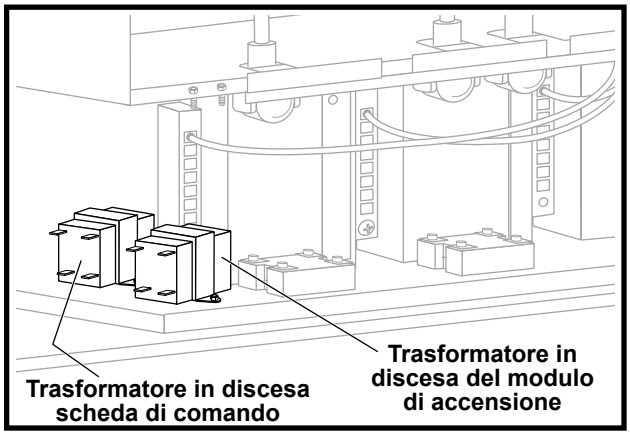
Trasformatori in discesa

Ce ne sono due, accessibili rimuovendo il pannello di manutenzione lato di comando inferiore. Entrambi abbassano la tensione in ingresso da 230 a 24 V c. a. ; un trasformatore genera 24 V c. a. per l'alimentazione della scheda di comando, mentre l'altro genera 24 V c. a. per il funzionamento dei moduli di accensione.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Scollegare i cavi dal trasformatore da rimuovere.
3. Togliere la vite di fissaggio del trasformatore al telaio.
4. Rimuovere il trasformatore.
5. Per installare un trasformatore eseguire le operazioni precedenti in senso inverso.



Trasformatori in discesa

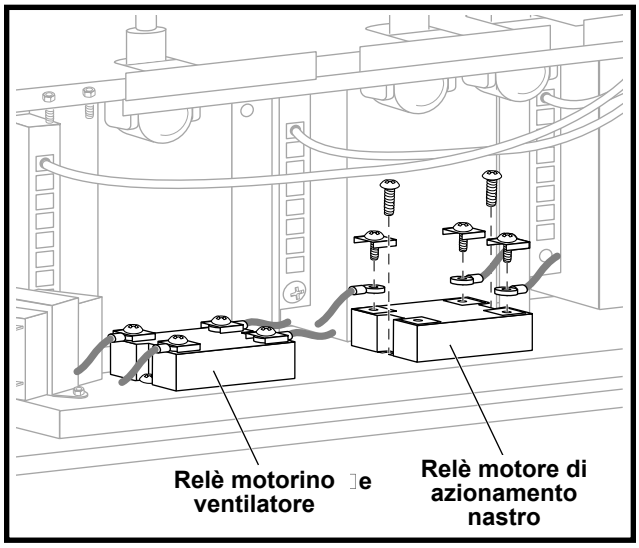
Relè a stato solido

Ce ne sono due, accessibili rimuovendo il pannello di manutenzione lato di comando inferiore. Uno dei relè comanda il motore del nastro, l'altro comando il motorino del ventilatore.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Scollegare i cavi dal relè da rimuovere.
3. Togliere le viti di fissaggio del relè al telaio.
4. Rimuovere il relè.
5. Per installare un relè eseguire le operazioni precedenti in senso inverso.



Relè a stato solido

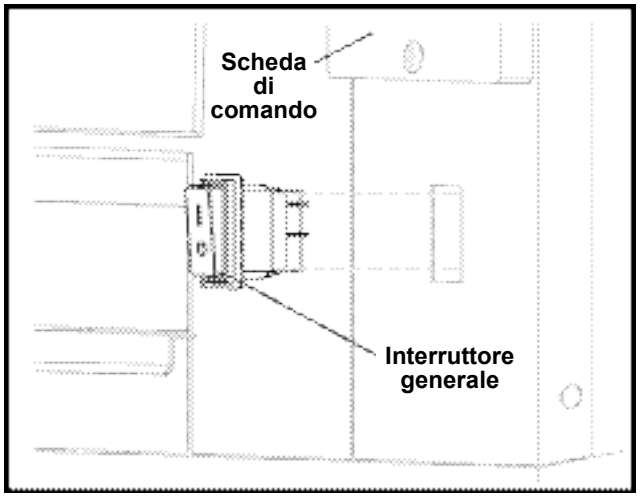
Interruttore generale

È situato nella parte anteriore del grill, sotto la scheda di comando.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Scollegare i cavi dell'interruttore.
3. Comprimere le linguette elastiche sulla parte superiore e inferiore dell'interruttore e sfilarlo attraverso la parte anteriore del pannello.
4. Per installare un nuovo interruttore generale eseguire le operazioni precedenti in senso inverso.



Interruttore generale

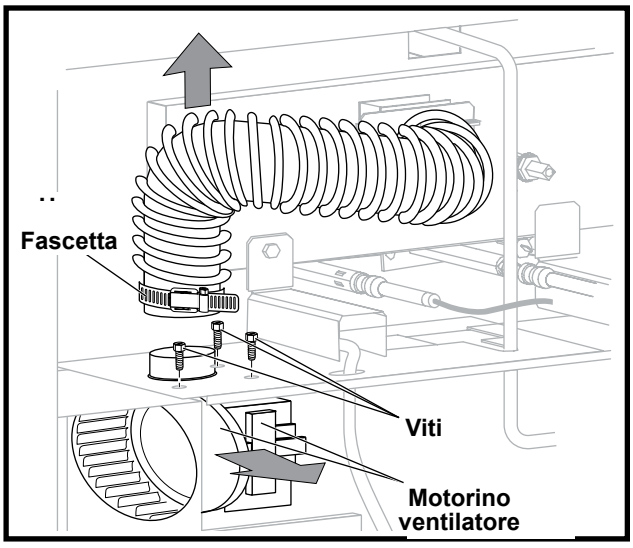
Motorino ventilatore

È situato sul lato scheda di comando del grill ed è accessibile rimuovendo il pannello di accesso superiore e il pannello di manutenzione lato di comando inferiore.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di accesso superiore. Vedi sezione COPERCHI E PANNELLI.
2. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Scollegare i cavi dal motorino del ventilatore.
4. Allentare la fascetta del tubo flessibile del ventilatore e scollegare il tubo flessibile dalla parte superiore del motorino.
5. Togliere le tre viti di fissaggio del motorino al telaio.
6. Per installare un nuovo motorino eseguire le operazioni precedenti in senso inverso. Quando si installa un nuovo motorino, sostituire la guarnizione.



Motorino ventilatore

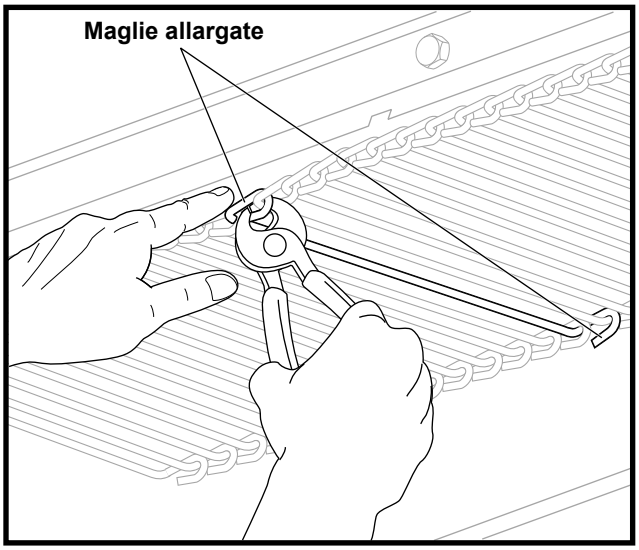
Sostituzione delle maglie del nastro trasportatore

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Spegnere il grill e scollegarlo dalla presa di corrente.
2. Rimuovere i pannelli e le parti anteriori accessibili all'operatore. Vedi sezione COPERCHI E PANNELLI.
3. Allargare la maglia danneggiata con l'apposita pinza a entrambe le estremità.
4. Rimuovere la maglia danneggiata.
5. Installare la nuova maglia.
6. Usare la pinza per chiudere entrambe le estremità della maglia.
7. Verificare il funzionamento. Può essere necessario aggiungere o rimuovere spessori dietro o sotto le boccole per assicurare la giusta tensione.

NOTA BENE: non rimuovere mai una maglia senza sostituirla.

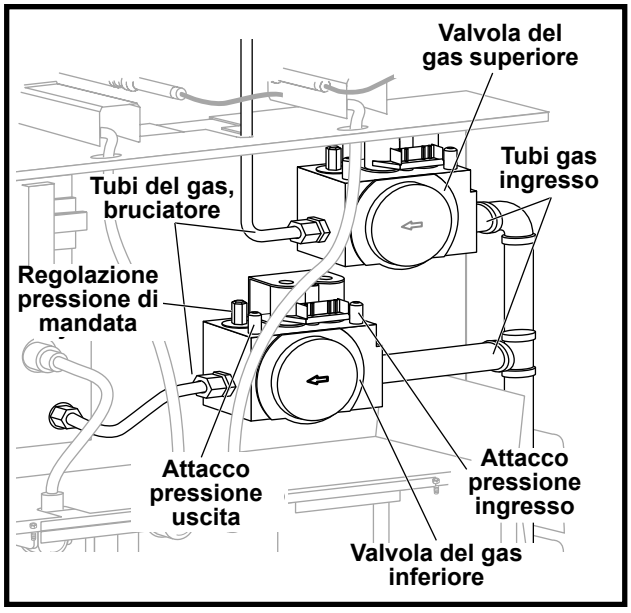


Maglie del nastro trasportatore

REGOLAZIONI

VALVOLE DEL GAS

Le due valvole del gas sono situate l'una accanto all'altra e sono accessibili rimuovendo il pannello di manutenzione lato di comando inferiore. Una valvola del gas alimenta il bruciatore a J inferiore, mentre l'altra alimenta i bruciatori a infrarossi superiori. In fabbrica le valvole sono state tarate per la pressione del gas specificata sulla targa dati; tuttavia a volte è necessario regolare la pressione dopo l'installazione della macchina. Controllare sempre la pressione del gas di mandata all'attacco presente sulla valvola del gas prima di regolare la pressione. Eventuali regolazioni devono essere eseguite con entrambe le valvole completamente aperte e tutti i bruciatori in funzione.



Valvole del gas

1. Chiudere la valvola principale del gas erogato al grill.
2. Rimuovere il pannello di accesso superiore. Vedi sezione COPERCHI E PANNELLI.

NOTA BENE: non scollegare nessun cavo.

3. Allentare la vite dell'attacco della pressione di mandata; la vite è prigioniera.
4. Collegare all'attacco un manometro.
5. Aprire la valvola principale del gas.

NOTA BENE: il regolatore di pressione è parte integrale delle valvole del gas.

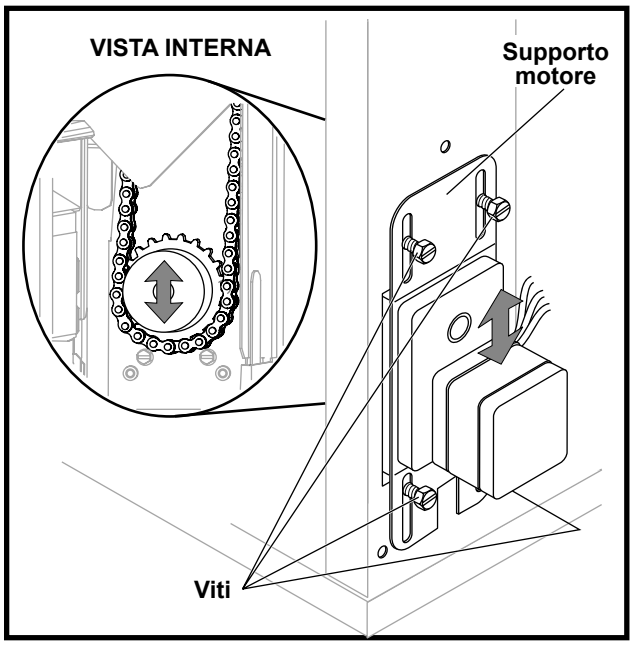
6. Individuare la vite di regolazione della pressione di mandata, situata dietro l'attacco della pressione di mandata. Per eseguire la regolazione occorre una chiave esagonale standard.
7. Per il giusto valore di pressione vedere la targa dati apposta al grill.
8. Chiudere la valvola principale del gas.
9. Scollegare il manometro.
10. Serrare la vite dell'attacco della pressione di mandata.
11. Aprire la valvola principale del gas.
12. Controllare se ci sono fughe di gas.
13. Verificare il funzionamento del grill.

REGOLAZIONE DELLA DEFLESSIONE DELLA CATENA DIORAMA TRASMISSIONE

La catena muove il nastro trasmettendo la potenza sviluppata dal motore.

1. Verificare che la deflessione della catena non sia maggiore di 4,76 mm. Se è necessario registrare la catena, andare al punto 2.
2. Rimuovere il pannello di accesso allo scarico. Vedi sezione COPERCHI E PANNELLI.
3. Rimuovere il coperchio del motore del nastro.
4. Allentare le quattro viti di fissaggio del supporto del motore al telaio.
5. Spostare il supporto del motore verso l'alto o verso il basso come necessario per ottenere una deflessione di 4,76 mm al centro della catena.
6. Fissare il supporto al telaio serrando le quattro viti.
7. Riposizionare il coperchio del motore.
8. Installare il pannello di accesso allo scarico.

Deflessione catena di trasmissione



REGOLAZIONE DELLA POSIZIONE DEL NASTRO TRASPORTATORE

Si regola la posizione del nastro aggiungendo spessori tra il telaio e il cuscinetto dell'albero del nastro.

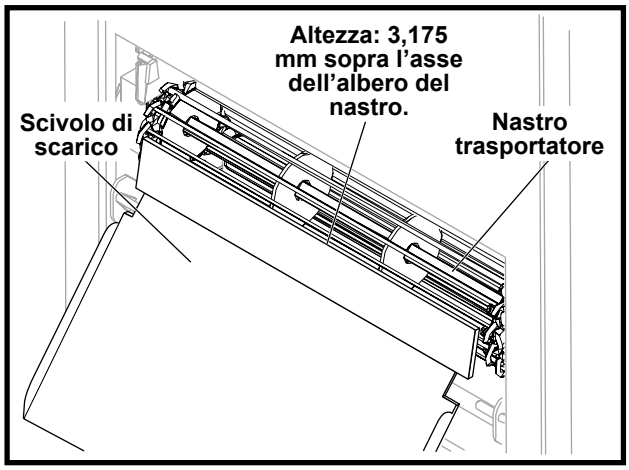
1. Rimuovere la copertura dello scivolo di scarico per poter osservare il nastro.
2. Regolare l'altezza del nastro come illustrato nella figura seguente.
3. Togliere le due viti di fissaggio del cuscinetto al telaio.
4. Inserire spessori come necessario tra il cuscinetto e il telaio.
5. Verificare la posizione del nastro.

NOTA BENE: il bordo di entrata dello scivolo di scarico deve trovarsi a circa 3,175 mm sopra l'asse dell'albero del nastro. Una volta eseguita la regolazione, la maglia del nastro deve sfiorare il lato posteriore dello scivolo. Se la posizione del nastro è regolata a un'altezza eccessiva, la maglia rotola sopra la parte superiore del bordo di entrata dello scivolo, facendo inceppare il nastro.

6. Se occorrono altri spessori ancora, ripetere l'operazione al punto 4.

NOTA BENE: all'interno del coperchio del motore ci sono alcuni spessori di riserva.

7. Fare compiere al nastro alcuni giri completi per verificare che non si inceppi.



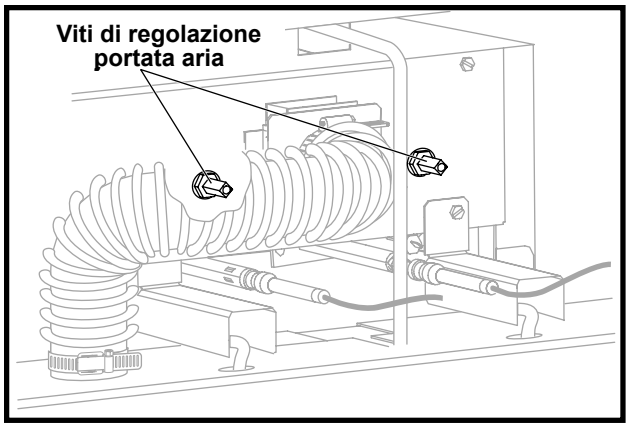
Registrazione dell'albero del nastro trasportatore

MANDATA DELL'ARIA AL BRUCIATORE A INFRAROSSI SUPERIORE

La regolazione della mandata di aria al bruciatore a infrarossi superiore si esegue mediante due viti, situate ai due lati del tubo flessibile del ventilatore e accessibili rimuovendo il pannello di accesso superiore.

NOTA BENE: la portata dell'aria è stata regolata in fabbrica e non deve essere modificata senza autorizzazione in tal senso da parte della Duke Manufacturing.

1. Rimuovere il pannello di accesso superiore.
2. Se sono allentati, può essere necessario serrare i dadi di fissaggio delle viti di regolazione.



Viti di regolazione portata aria bruciatore a infrarossi

MANDATA DELL'ARIA AL BRUCIATORE INFERIORE

La portata dell'aria che raggiunge il bruciatore inferiore è stata regolata in fabbrica e non deve essere modificata. Quando un bruciatore a gas naturale funziona alla giusta pressione ha una fiamma blu intorno al gomito e la fiamma non ha estremità gialle. La fiamma di un bruciatore a gas propano potrebbe avere estremità gialle in piccola quantità. L'apertura dell'otturatore per l'aria sui bruciatori a J è stata regolata in fabbrica in modo permanente mediante saldatura. Se si sostituisce il bruciatore a J, verificare questa apertura prima di installare il bruciatore di ricambio.

SOLUZIONE DEI PROBLEMI

Questa sezione contiene procedure relative a vari componenti elettrici volte a individuare componenti guasti in base ai sintomi riscontrati, e a indicare l'intervento appropriato.

PROCEDURE DIORAMA VERIFICA DEI COMPONENTI

Verifica dell'interruttore generale

L'interruttore generale è dotato di un LED che si accende in rosso quando l'interruttore è nella posizione On (macchina accesa). Prima di sostituire l'interruttore, compiere le seguenti verifiche:

- Accertarsi che il cordone di alimentazione sia collegato a una presa di corrente adatta; il grill funziona a una corrente di 230 V c. a. e 50 Hz.
- Controllare l'interruttore automatico del circuito a cui è collegato il grill.
- Provare a collegare il grill a un'altra presa di corrente.
- Controllare se il LED dell'interruttore è guasto: portare l'interruttore nella posizione On e controllare il display sul quadro di comando; se il display funziona, il LED è guasto e occorre sostituire l'interruttore.

Verifica della scheda di comando

In condizioni normali, la scheda di comando visualizza lo stato attuale del grill. È utilizzabile come strumento diagnostico quando funziona correttamente.

Prima di sostituire la scheda di comando, compiere le seguenti verifiche:

- Spegnere e riaccendere il grill, e osservare se la scheda di comando funziona.
- Fare eseguire alla scheda di comando un paio di cicli di cottura diversi.

NOTA BENE: se la scheda di comando ancora non funziona correttamente, procedere come segue:

1. Spegnere il grill.
2. Rimuovere la scheda di comando.
3. Controllare tutti i connettori sulla parte posteriore della scheda di comando e accertarsi che siano inseriti bene.
4. Collegare la scheda di comando ma senza fissarla, e accendere il grill. Osservare il display e i LED dei tasti delle routine.
5. Spegnere il grill e fissare la scheda di comando se si è risolto il problema.

Verifica del motore del nastro trasportatore

Il motore del nastro trasportatore è situato nella parte anteriore del grill, sul lato di scarico inferiore. Prima di sostituire il motore, controllare se il nastro trasportatore è inceppato. Poi provare a girare l'albero di scarico del nastro mediate l'attrezzo universale. Se il nastro non gira, controllare i seguenti componenti:

- Scivolo di scarico
- Rampa supporto vassoio
- Raschiatoio per le ceneri
- Catena di trasmissione
- Tagliafuoco

Verifica del motore del nastro trasportatore

Per verificare il funzionamento del motore non è necessario rimuoverlo dal grill.

⚠ AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Spegnere il grill e scollegarlo dalla presa di corrente.
2. Rimuovere il coperchio del motore del nastro
3. Apporre targhette di identificazione ai cavi e scollegarli.
4. Usare un ohmmetro per misurare la resistenza.
5. Cercare di avviare il motore mentre è disinserito dalla catena di trasmissione.

RESISTENZA NORMALE DEL MOTORE (230 V c. a. 50 Hz)	
Cavi su cui eseguire la misura	**Resistenza**
Nero e marrone	100Ω
Nero e arancione	100Ω
Marrone e arancione	200Ω

VERIFICA DEL CONDENSATORE DEL MOTORE DIORAMA AZIONAMENTO NASTRO

Se la verifica del motore non indica problemi, verificare il condensatore, situato nell'area di manutenzione sul lato di comando del grill.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Scollegare i cavi dal condensatore.
3. Scaricare il condensatore mettendone a massa entrambi i terminali simultaneamente.
4. Usare un ohmmetro per verificare il condensatore.

NOTA BENE: se sia il motore che il condensatore superano la verifica, il problema probabilmente risale al relè del motore.

VERIFICA DEL MOTORINO DEL VENTILATORE

Il motorino aziona il ventilatore che invia l'aria ai bruciatori a infrarossi superiori. Questi bruciatori non funzionano correttamente se non ricevono una quantità di aria sufficiente. Anzitutto controllare se sulla ventola ci sono accumuli di grasso e sporcizia. Controllare anche se il tubo flessibile del ventilatore è allentato o danneggiato.

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Accertarsi che il grill sia spento e scollegato dalla presa di corrente.
2. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Rimuovere il motorino.
4. Controllare la ventola e pulirla se necessario.
5. Accertarsi che la ventola ruoti liberamente.
6. Misurare la resistenza dell'avvolgimento del motorino; il valore normale deve essere di 114 Ω.

NOTA BENE: se la resistenza è bassa, l'avvolgimento potrebbe essere in cortocircuito, mentre se è alta, potrebbe essere a circuito aperto. Se il motorino supera la verifica, probabilmente il problema risale al relè del motorino.

VERIFICA DEI RELÈ

Il grill è dotato di due relè a stato solido da 24 V c. a.; uno per il circuito del motorino del ventilatore, l'altro per il circuito del motore del nastro.

1. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
2. Accendere il grill.
3. Il motorino del ventilatore si avvia solo quando i bruciatori a infrarossi superiori si devono accendere. Il motore del nastro funziona solo per 8 secondi al termine di un ciclo di cottura. Per verificare il relè, accertarsi che siano presenti 24 V c. a. al suo ingresso e al tempo stesso monitorare la corrente alternata applicata al motorino del ventilatore o al motore del nastro. Se la tensione applicata all'ingresso del relè è nulla, all'uscita del relè la corrente assorbita deve essere nulla.

Verifica dei trasformatori

Il grill è dotato di due trasformatori in discesa da 24 volt; uno alimenta la scheda di comando, l'altro alimenta i moduli di accensione. Per verificare i trasformatori si può eseguire una misura di tensione o di resistenza.

Verifica della tensione

1. Accertarsi che il grill sia spento.
2. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Scollegare l'avvolgimento secondario.
4. Accendere il grill.
5. Usando un volt-ohmmetro, misurare la tensione ai capi del secondario; deve essere pari a 24 V c. a.

Verifica della resistenza

AVVERTENZA

SPEGNERE IL GRILL, SCOLLEGARLO DALLA PRESA DIORAMA CORRENTE E SEGUIRE LE PROCEDURE DIORAMA BLOCCAGGIO DEGLI INTERRUTTORI E APPOSIZIONE DIORAMA CARTELLI MONITORI.

1. Spegnere il grill.
2. Rimuovere il pannello di manutenzione lato di comando inferiore. Vedi sezione COPERCHI E PANNELLI.
3. Apporre targhette di identificazione ai cavi del trasformatore da verificare, e scollegarli.
4. Misurare la resistenza del primario; deve essere pari a 70 Ω.
5. Misurare la resistenza del secondario.
6. La resistenza del secondario deve essere di 1 Ω.

Verifica del modulo di accensione inferiore

Quando la sonda di temperatura della camera di cottura rileva che la camera deve essere riscaldata, la scheda di comando applica 24 V c. a. ai terminali TH e GND del modulo di accensione inferiore, che si accende dopo l'esecuzione di un'autoverifica.

- Vengono applicati 24 V c. a. al terminale V1, per l'apertura della valvola del gas inferiore.
- Al terminale HV si genera una scintilla ad alta tensione.
- Quando il sensore di fiamma rileva una corrente di almeno 0,7 uA, l'accenditore non fa più scoccare la scintilla.

Il modulo di accensione inferiore esegue un'autoverifica; è dotato di un LED a tre modalità di segnalazione per indicare il tipo di guasto diagnosticato.

1. Spia sempre accesa:guasto interno al modulo, che deve essere sostituito.
2. Spia lampeggiante due volte: il bruciatore è in funzione ma la sonda non ha rilevato che occorre riscaldare la camera di cottura.
3. Spia lampeggiante tre volte:il modulo di accensione è bloccato.

Moduli di accensione superiori

Ce ne sono due, che azionano i bruciatori a infrarossi e funzionano in modo analogo al modulo di accensione inferiore. La scheda di comando applica 24 V c. a. ai terminali TH e GND del modulo di accensione superiore ANTERIORE.

- Vengono applicati 24 V c. a. ai terminali TH e GND (massa) del modulo di accensione superiore ANTERIORE, che sono collegati al terminali TH e GND del modulo di accensione superiore POSTERIORE; ai terminali V1 e GND di quest'ultimo viene quindi applicata la tensione di 24 V c. a. e ciò causa l'apertura della valvola del gas superiore.
- Su ciascun accenditore superiore si genera una scintilla ad alta tensione per l'accensione dei due moduli, quello ANTERIORE e quello POSTERIORE.
- Quando i sensori di fiamma rilevano una corrente di almeno 0,7 uA, gli accenditori non fanno più scoccare le scintille.

I moduli di accensione superiori eseguono un'autoverifica.

Segnalazioni della spia di ciascun modulo di accensione superiore:

1. Spia sempre accesa: guasto interno al modulo.
2. Spia lampeggiante due volte: il bruciatore è in funzione ma la sonda non ha rilevato che occorre riscaldare la camera di cottura.
3. Spia lampeggiante tre volte:il modulo di accensione è bloccato.

Verifica dei sensori di fiamma

In genere un modulo di accensione si blocca a causa di sporcizia in un sensore di fiamma.

Seguire queste indicazioni per quanto riguarda i sensori di fiamma:

- Se un sensore di fiamma è sporco, pulirli tutti. Lasciare raffreddare i sensori e pulirli con un tampone imbevuto di alcol.
- Sostituire un sensore di fiamma la cui parte ceramica sia danneggiata.
- Controllare se c'è sporcizia tra l'estremità del sensore di fiamma e il bruciatore.
- Regolare la posizione del sensore di fiamma se la sua estremità tocca un punto di massa.
- Accertarsi che tutte le connessioni dei sensori di fiamma siano salde.

Verifica degli accenditori

Se il grill non si accende correttamente verificare anche gli accenditori; è possibile che questi componenti vengano urtati durante la pulizia ordinaria e quindi cambi la distanza tra gli elettrodi.

- La distanza tra gli elettrodi deve essere di 3,175 mm.
- Sostituire un accenditore se gli elettrodi sono danneggiati.
- Controllare tutte le connessioni con il modulo di accensione e l'accenditore.
- Se il gas viene erogato e scocca la scintilla ma il bruciatore non si accende, verificare la posizione dell'accenditore superiore rispetto al bruciatore. Gli accenditori sui bruciatori a infrarossi superiori devono essere a una distanza di circa 4,76 mm dalla superficie del blocco refrattario del bruciatore. L'accenditore inferiore deve essere a una distanza di circa 19,05 mm dal bruciatore inferiore.

Diagramma di flusso per la soluzione dei problemi

Indice

Definire il problema…

	Sintomo…	Andare al punto…			
1	Sul display lampeggia “gAS” e…	bot	toP	SEnb	SEnt
		FASE 2	FASE 3	FASE 2	FASE 3
2	Sul display lampeggia “tESt” E “Prod”	FASE 2-3 e 6			
3	Sul display lampeggia “Hi”	FASE 2			
4	Sul display lampeggia “Lo”	FASE 2			
5	Sul display lampeggia “Prob”	**Sonda guasta** Verificare e sostituire la sonda.			
6	Nastro inceppato o continuamente in funzione	FASE 7			

Diagramma di flusso per la soluzione dei problemi

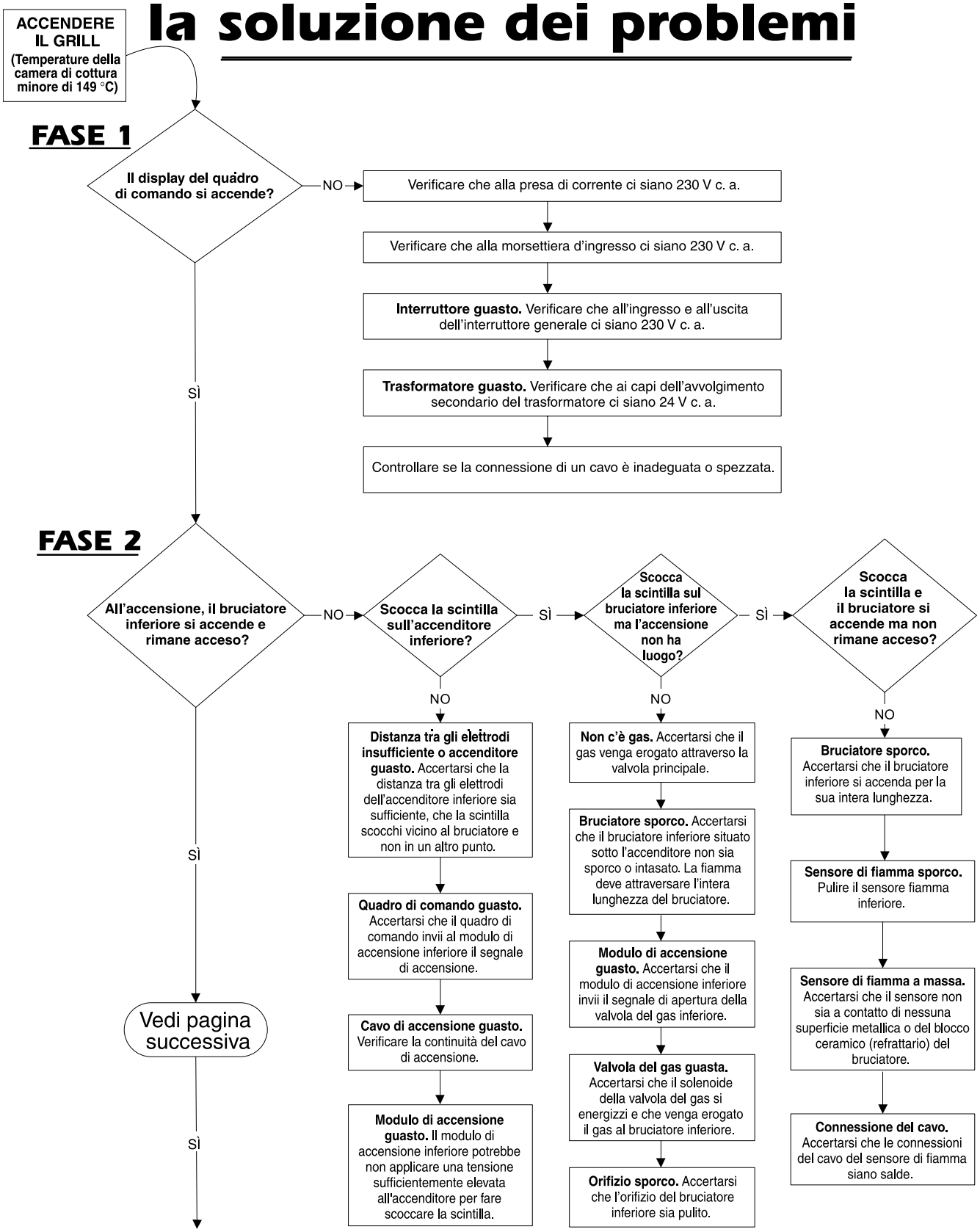


Diagramma di flusso per la soluzione dei problemi

SÌ

FASE 3

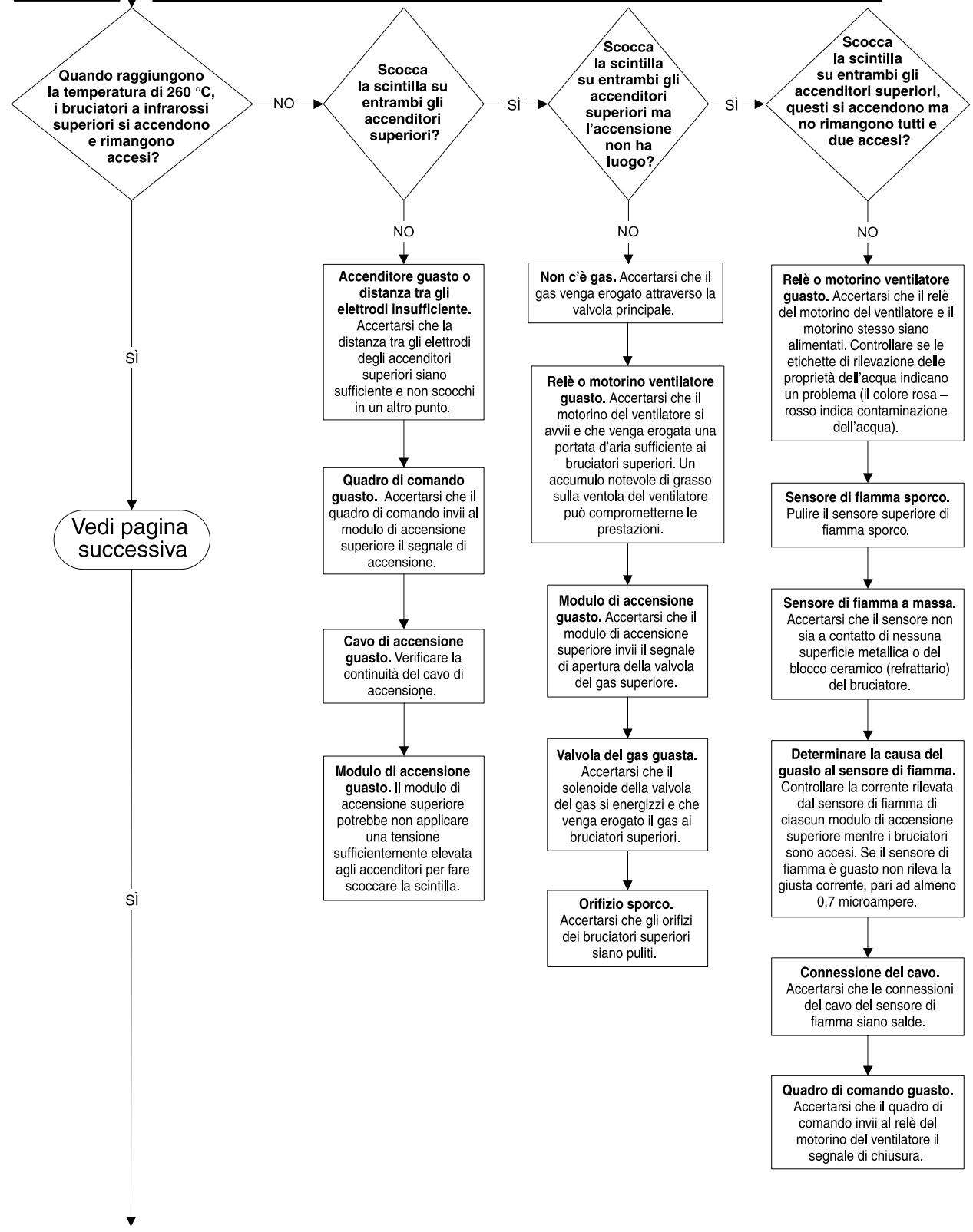


Diagramma di flusso per la soluzione dei problemi

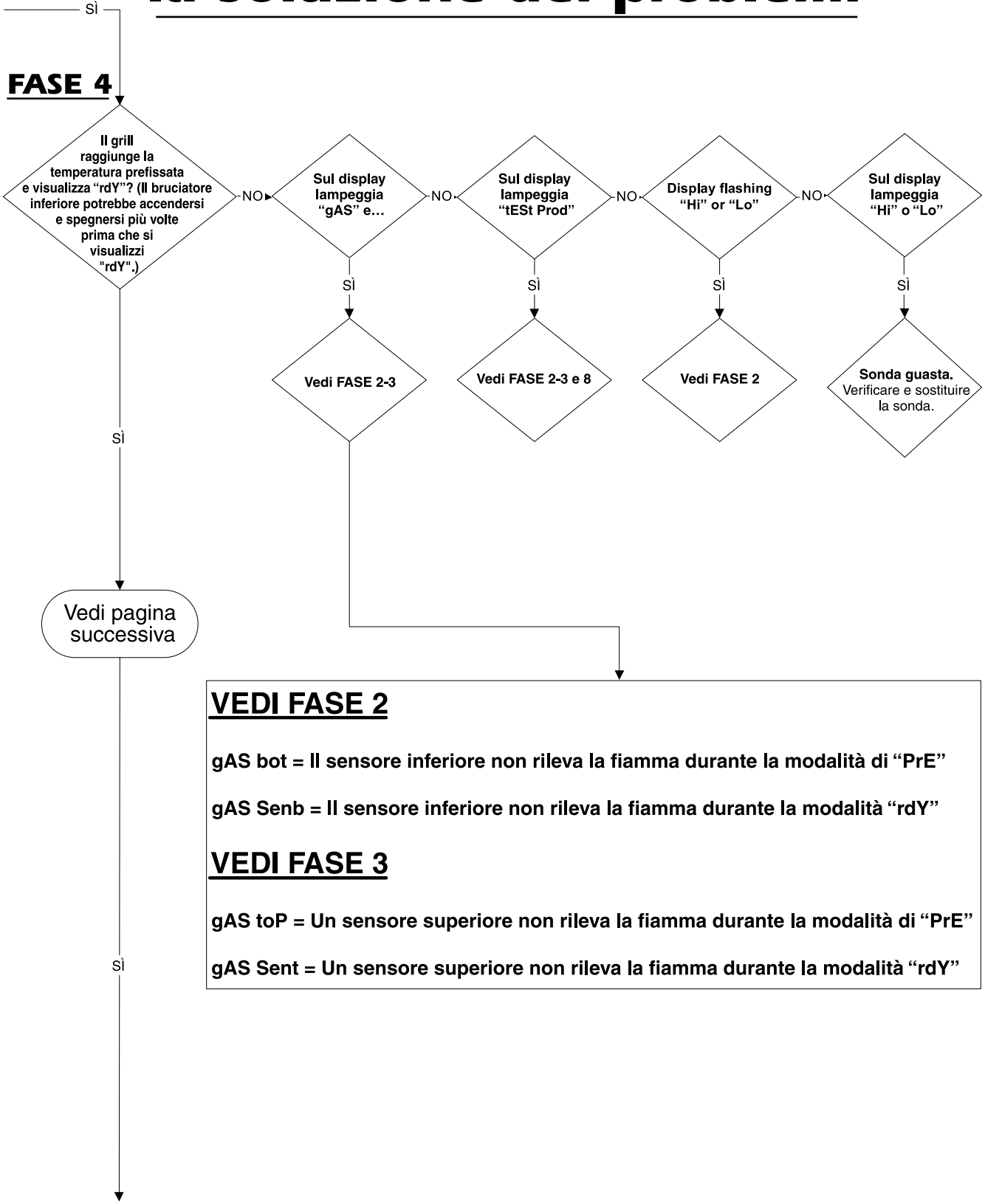


Diagramma di flusso per la soluzione dei problemi

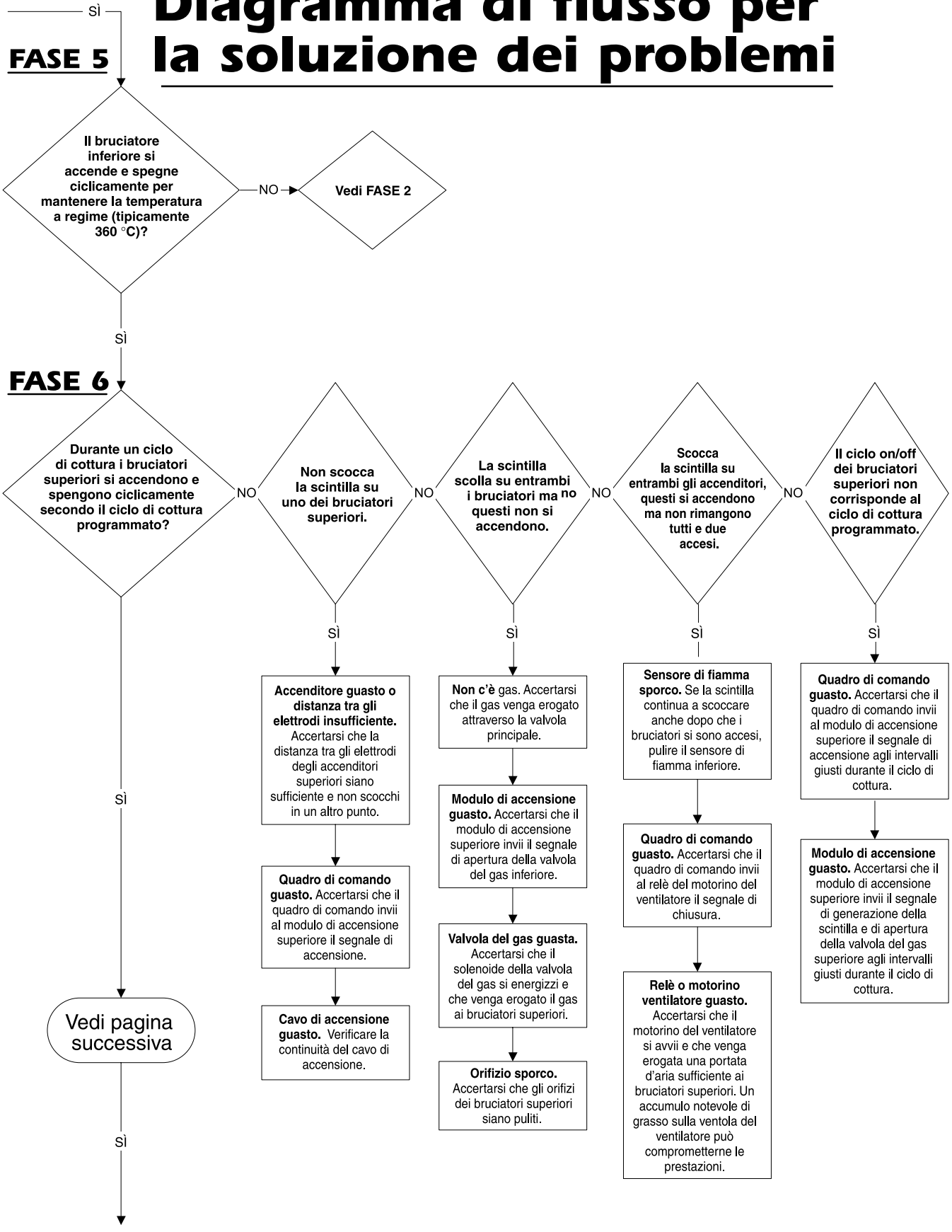
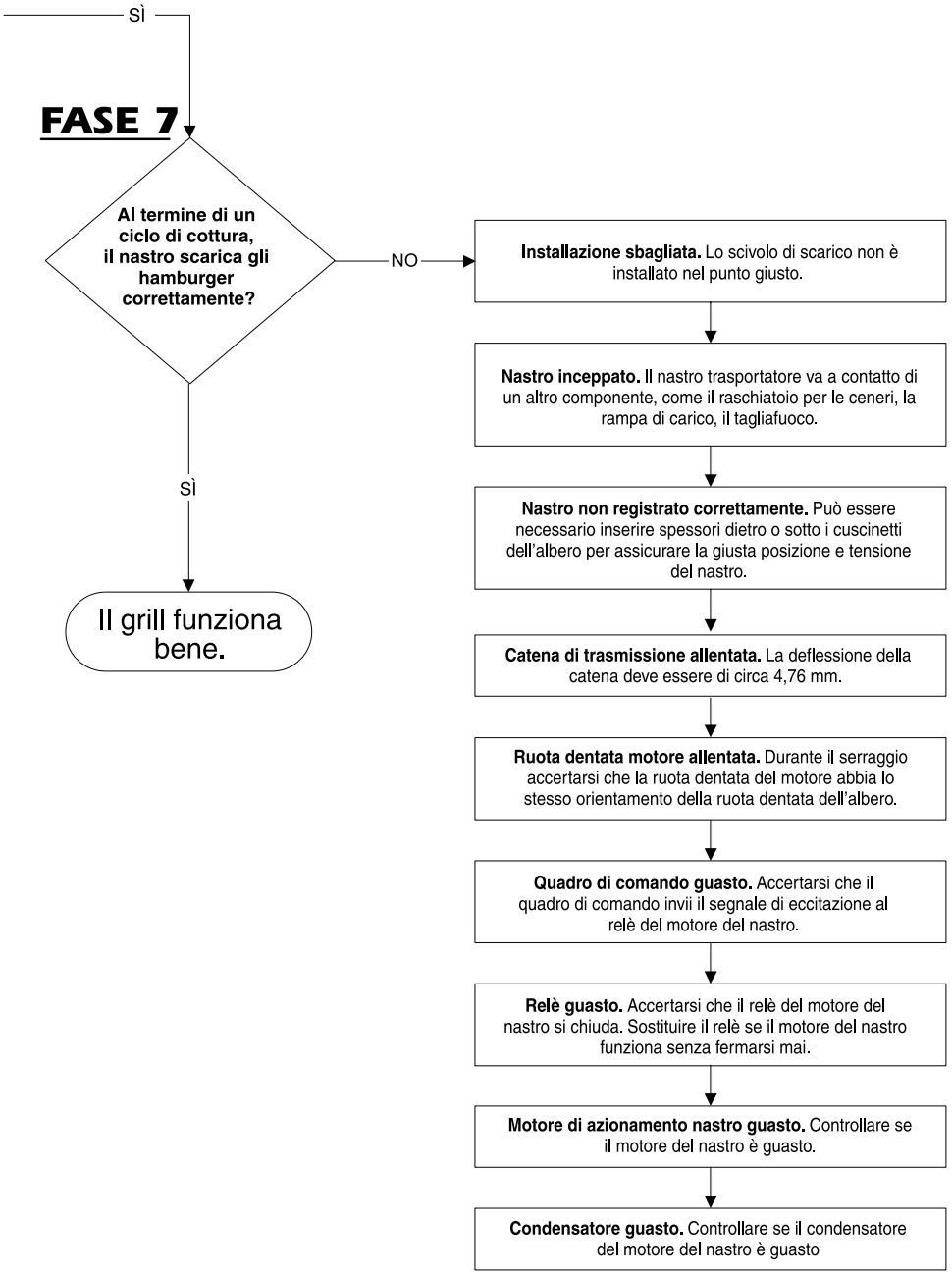
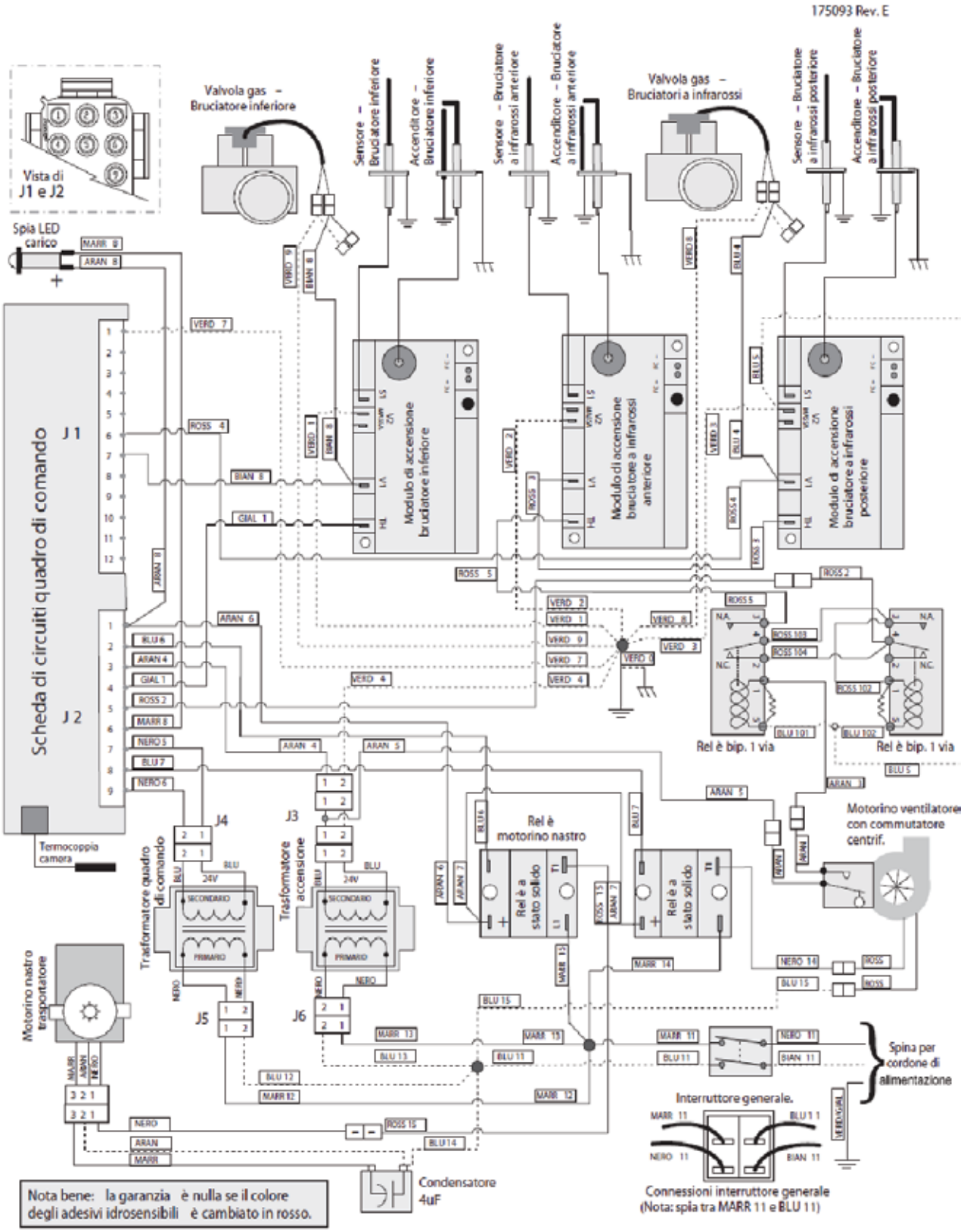


Diagramma di flusso per la soluzione dei problemi



SCHEMA ELETTRICO – FLEXIBLE BATCH BROILER



NOTAZIONE

NOTAZIONE

NOTAZIONE

SERVIZIO CLIENTI

Per facilitare la denuncia in caso di smarrimento o furto, annotare qui sotto il numero di modello e il numero di serie, apposti all'apparecchio. Suggeriamo anche di annotare tutte le informazioni elencate.

NUMERO DI MODELLO:	**NUMERO DI SERIE:**
DATA DI ACQUISTO:	
RIVENDITORE:	**TELEFONO:**
DITTA DI MANUTENZIONE:	**TELEFONO:**

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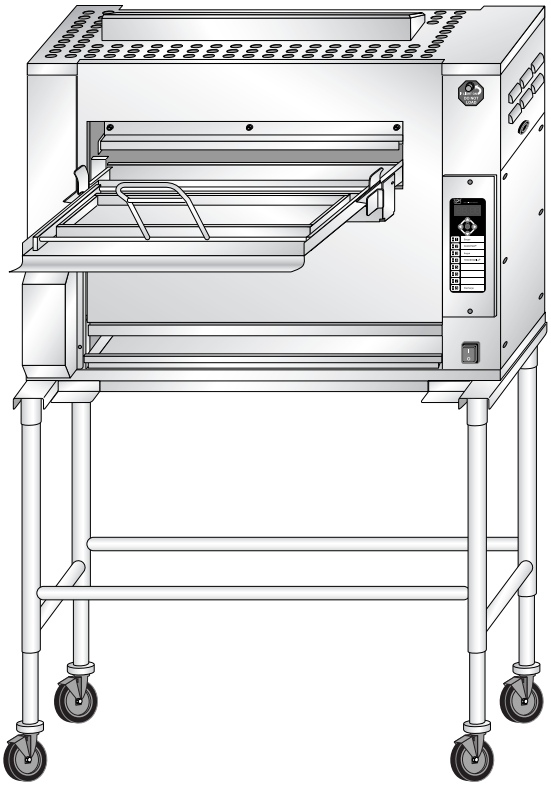
Si prega di fornire le seguenti informazioni quando si scrive o si chiama: numero del modello, numero di serie, data di acquisto, indirizzo (incluso il CAP) e una descrizione del problema.


Duke
"Your Solutions Partner"

Your Solutions Partner

Manual de servicio

ASADOR FLEXIBLE POR TANDAS



MODELOS

FBB-NO-120
FBB-NC-120
FBB-PO-120
FBB-PC-120

Lea este manual completamente antes de tratar de instalar, operar o efectuar el servicio de este equipo.

Este documento está preparado para técnicos de servicio capacitados de Duke. No debe ser usado por nadie que no esté debidamente capacitado para efectuar estos procedimientos.

Este manual de servicio no es completo. Si no ha sido capacitado en el servicio de este producto, asegúrese de leer el manual completamente antes de tratar de efectuar su servicio. Asegúrese de que se disponga de todas las herramientas, equipos de prueba y destrezas necesarios Los procedimientos para los que no se disponga de las destrezas y equipos de prueba apropiados deben ser efectuados solamente por un técnico de servicio capacitado de Duke.

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P/N 176344A

INFORMACIÓN DE ADVERTENCIA Y SEGURIDAD IMPORTANTE

IMPORTANTE PARA SU SEGURIDAD

ESTE MANUAL HA SIDO PREPARADO PARA PERSONAL CAPACITADO PARA INSTALAR EQUIPOS DE GAS. EL INSTALADOR CAPACITADO DEBE EFECTUAR LA PUESTA EN MARCHA INICIAL EN PLANTA Y LOS AJUSTES DE LOS EQUIPOS CUBIERTOS POR ESTE MANUAL.

IMPORTANTE

LAS INSTRUCCIONES QUE SE DEBEN SEGUIR EN EL CASO DE QUE SE DETECTE OLOR A GAS DEBEN ANUNCIARSE EN UN LUGAR DESTACADO. ESTA INFORMACIÓN PUEDE OBTENERSE DEL PROVEEDOR DE GAS LOCAL.

IMPORTANTE

EN EL CASO DE QUE SE DETECTE OLOR A GAS, APAGUE EL ASADOR CON LA VÁLVULA DE CORTE PRINCIPAL Y PÓNGASE EN CONTACTO CON LA COMPAÑÍA DE GAS O EL PROVEEDOR DE GAS LOCALES PARA EFECTUAR SU SERVICIO.

IMPORTANTE PARA SU SEGURIDAD

NO GUARDE NI USE GASOLINA NI OTROS VAPORES O LÍQUIDOS INFLAMABLES EN LAS PROXIMIDADES DE ÉSTE O DE CUALQUIER OTRO APARATO.

ADVERTENCIA

LA INSTALACIÓN, AJUSTE, ALTERACIÓN, SERVICIO O MANTENIMIENTO INDEBIDOS PUEDEN CAUSAR DAÑOS MATERIALES, LESIONES O LA MUERTE. LEA COMPLETAMENTE LAS INSTRUCCIONES DE INSTALACIÓN, OPERACIÓN Y MANTENIMIENTO ANTES DE INSTALAR O EFECTUAR EL SERVICIO DE ESTOS EQUIPOS.

ADVERTENCIA

EN EL CASO DE UN CORTE DE CORRIENTE, NO TRATE DE OPERAR ESTE DISPOSITIVO.

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INTRODUCCIÓN

INSTALACIÓN

Consulte las instrucciones de instalación detalladas en el manual de instalación y operación.

OPERACIÓN

Consulte las instrucciones de instalación específicas en el manual de instalación y operación.

LIMPIEZA

Consulte las instrucciones de limpieza específicas en el manual de instalación y operación.

ESPECIFICACIONES

	GAS NATURAL		PROPANO	
PRESIÓN DEL COLECTOR DE LOS QUEMADORES SUPERIORES	3.75" de col. de agua	0.93 kPa	8" de col. de agua	2.0 kPa
PRESIÓN DEL COLECTOR DEL QUEMADOR INFERIOR	3.75" de col. de agua	0.93 kPa	8" de col. de agua	2.0 kPa
ALTITUD (MÁXIMA)	2000 pies	607 m	2000 pies	607 m
CONEXIÓN DEL TUBO DE GAS	NPT hembra de 3/4”		NPT hembra de 3/4"	
INTERVALO DE PRESIONES DE ENTRADA	7"–12" de col. de agua		10”–12” de col. de agua	
CONSUMO DE ENERGÍA TOTAL	87,000 – 111,000 BTU/HR	25.5 –32.5 kW	79,000 –105,000 BTU/HR	23.2 –30.7 kW
TAMAÑO DEL ORIFICIO DEL QUEMADOR				
QUEMADOR INFRARROJO DELANTERO	N° 40	2.49 mm	N° 52	1.61 mm
QUEMADOR INFRARROJO TRASERO	N° 36	2.70 mm	N° 51	1.70 mm
QUEMADOR INFERIOR	N° 31	2.05 mm	N° 49	1.85 mm
ELÉCTRICAS				
NÚMERO DE MODELO	**VOLTAJE**	**AMPERIOS**	**CICLO**	**TAPÓN**
*FBB-NO-120	120	2	60	NEMA 5-15P
*FBB-NC-120	120	2	60	NEMA 5-15P
*FBB-PO-120	120	2	60	NEMA 5-15P
*FBB-PC-120	120	2	60	NEMA 5-15P
PESO DE ENVÍO				
ASADOR POR TANDAS (ESTÁNDAR)				
DIMENSIONES DE ENVÍO	**Estándar**		**Métrico (cm)**	
L X A X H	47" X 34" X 68"		119.4 X 86.4 X 172.7	

* Información del número de modelo:

- FBB-NO-120: Gas natural sin catalizador
- FBB-NC-120: Gas natural con catalizador
- FBB-PO-120: Gas propano sin catalizador
- FBB-PC-120: Gas propano con catalizador

HERRAMIENTAS

Estándar

- Juego estándar de herramientas manuales.
- Multímetro con probador de corriente alterna (se puede usar cualquier multímetro de buena calidad con una sensibilidad de al menos 20.000 ohmios por voltio).
- Manómetro
- Pirómetro
- Probador de fugas de gas o método para probar fugas de gas
- Alicates para quitar eslabones del transportador
- Mazo de cables de pruebas de Duke

ADVERTENCIA

ESTE ASADOR ESTÁ DISEÑADO PARA OPERAR CON GAS NATURAL A UNAS PRESIONES DE ENTRADA ENTRE 7" Y 12" DE COLUMNA DE AGUA. LAS PRESIONES DE SERVICIO DE MÁS DE 12" DE COLUMNA DE AGUA O MENOS DE 2 PSI, REQUERIRÁN EL JUEGO DE GAS NATURAL DE SUMINISTRO DE ALTA DE DUKE (N/P 175689). EL JUEGO INCLUYE COMPONENTES PARA AÑADIR UN REGULADOR EXTERNO AL ASADOR. EL REGULADOR DEBE AJUSTARSE DESPUÉS DE LA INSTALACIÓN A 7" DE COLUMNA DE AGUA SEGÚN LAS INSTRUCCIONES INCLUIDAS. PARA OBTENER UNA PRESIÓN DE ENTRADA MENOR QUE 7" DE COLUMNA DE AGUA, PÓNGASE EN CONTACTO CON EL PROVEEDOR DE GAS.

RETIRADA Y REEMPLAZO DE COMPONENTES

CUBIERTAS Y PANELES

⚠ ADVERTENCIA

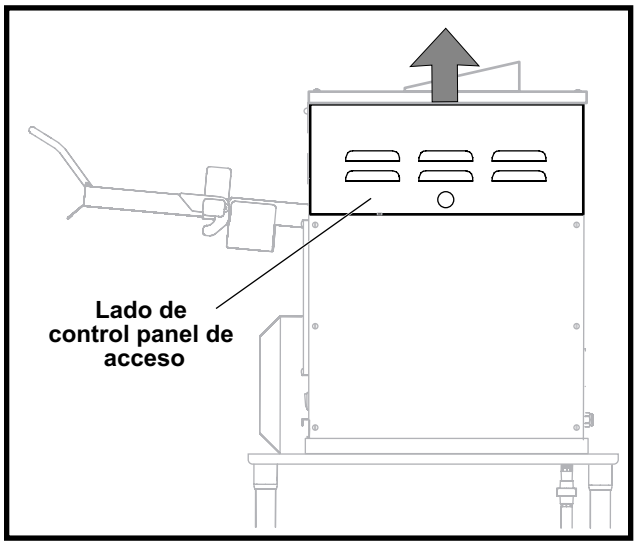
DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

Precaución: Si se ha estado operando el asador, los paneles y componentes del asador pueden estar calientes. Use la PROTECCIÓN APROPIADA.

Panel de levantamiento superior

El panel de levantamiento superior permite el acceso a los sensores de llamas superiores, encendedores y manguera del soplador.

1. Quite el panel de levantamiento superior levantándolo y sacándolo del asador.
2. Instale el panel de levantamiento superior bajándolo en las ranuras laterales.

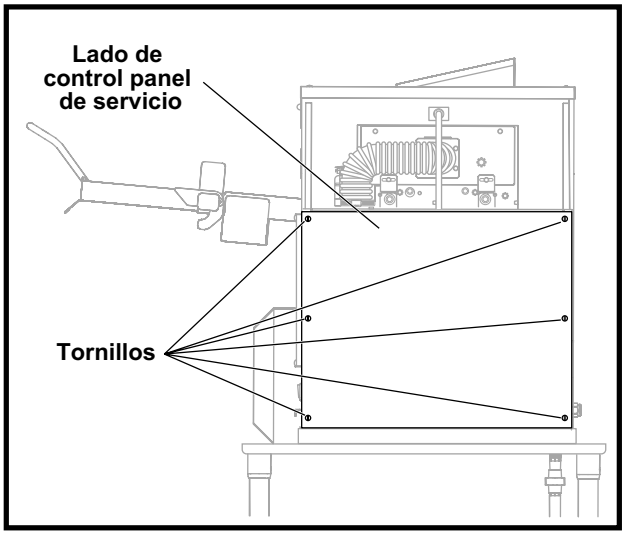


Panel de levantamiento superior

Panel de servicio del lado de control inferior

El panel de servicio del lado de control inferior permite el acceso a las válvulas de gas combinadas, módulos de encendido, transformadores, motor del soplador, condensador del motor del transportador y conexiones eléctricas al tablero de control.

1. Quite los seis tornillos que sujetan el panel de servicio del lado de control inferior.
2. Quite el panel del asador.
3. Invierta el procedimiento para instalar el panel de servicio del lado de control inferior.

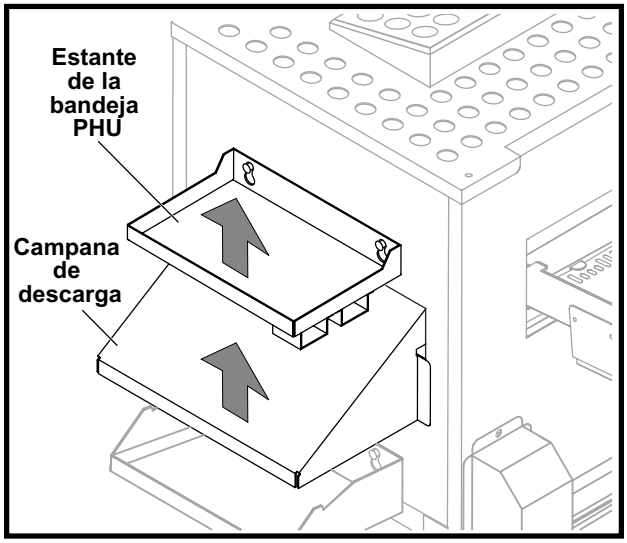


Panel de servicio del lado de control inferior

Estante de la bandeja PHU

El estante de la bandeja PHU está ubicado en el lado de descarga del asador y sujeta las bandejas sin usar.

1. Levante el estante de las bandejas y retírelo.
2. Para instalar el estante de las bandejas, deslice los agujeros en forma de ojo de cerradura sobre los dos tornillos y deslice el estante de las bandejas hacia abajo.



Estante de la bandeja PHU y campana de descarga

Campana de descarga

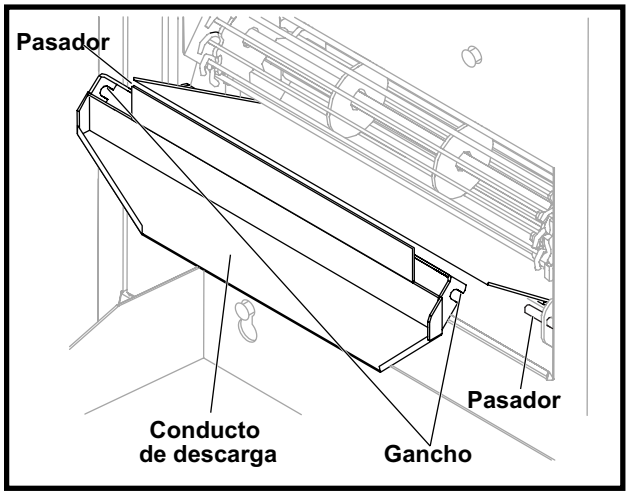
La campana de descarga está ubicada en el lado de descarga del asador, debajo del estante de la bandeja PHU.

1. Quite el estante de la bandeja PHU
2. Quite la campana de descarga levantándola y sacándola.
3. Instale la campana de descarga bajándola en las ranuras laterales.
4. Vuelva a instalar el estante de la bandeja PHU

Conducto de descarga

El conducto de descarga está ubicado debajo de la campana de descarga y guía las hamburguesas del transportador a la bandeja de descarga.

1. Quite el estante de la bandeja PHU.
2. Quite la campana de descarga.
3. Quite el conducto de descarga levantándolo y sacándolo de los pasadores laterales.
4. Invierta el procedimiento para instalar el conducto de descarga, asegurándose de apoyar los ganchos en los pasadores de ambos lados.

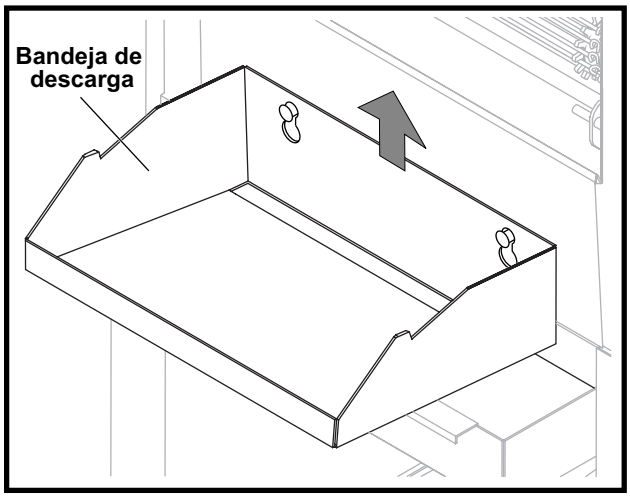


Conducto de descarga

Bandeja de descarga

La bandeja de descarga está ubicada en el lado de descarga del asador, debajo de la campana de descarga y se usa para sujetar la bandeja de retención PHU (no incluida).

1. Retire la bandeja de retención PHU si está presente.
2. Deslice la bandeja de descarga hacia arriba y hacia afuera de las ranuras en forma de ojo de cerradura.
3. Instale la bandeja de descarga bajándola en los tornillos de orejas.



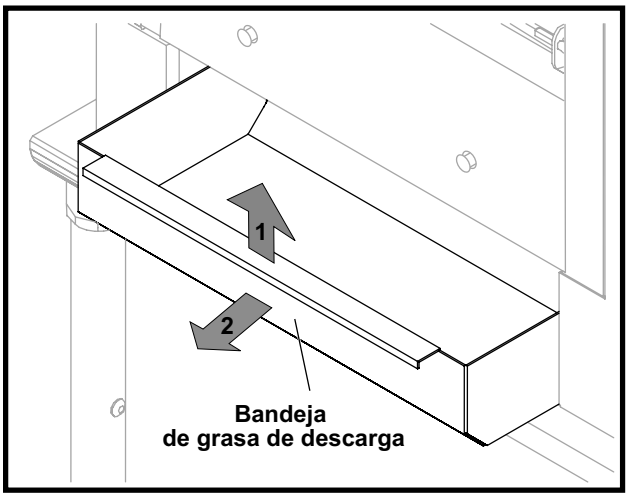
Bandeja de descarga

Bandeja de grasa de descarga

La bandeja de grasa de descarga está ubicada debajo de la bandeja de descarga y recoge todas las gotas de grasa.

1. Incline hacia arriba la bandeja de grasa de descarga para desengancharla y empújela hacia adelante para quitarla.
2. Al instalar la bandeja de grasa de descarga, asegúrese de inclinarla hacia arriba y empujarla completamente hacia atrás.

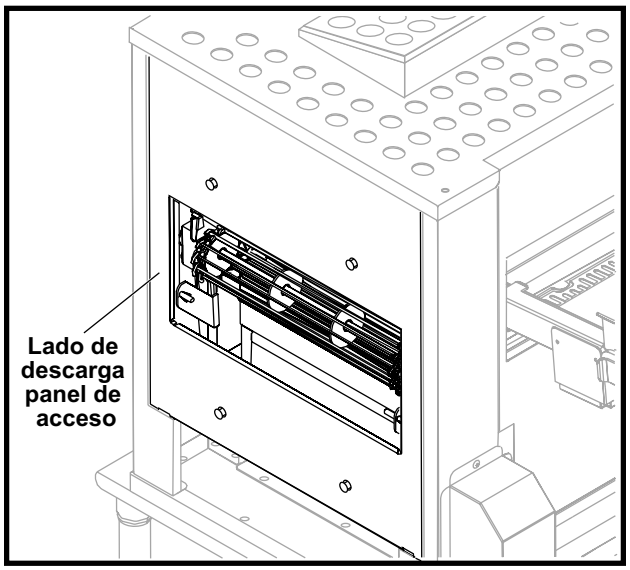
NOTA: La posición correcta no permitirá quitar la bandeja sin inclinarla hacia arriba.



Bandeja de grasa de descarga

Panel de acceso de descarga

1. Quite el estante de la bandeja PHU
2. Quite la campana de descarga.
3. Quite el conducto de descarga.
4. Quite la bandeja de descarga.
5. Quite la bandeja de grasa de descarga.
6. Quite el panel de acceso de descarga levantándolo hacia arriba y sacándolo.
7. Invierta el procedimiento para instalar el panel de acceso de descarga.



Panel de acceso de descarga

Bandeja de grasa principal

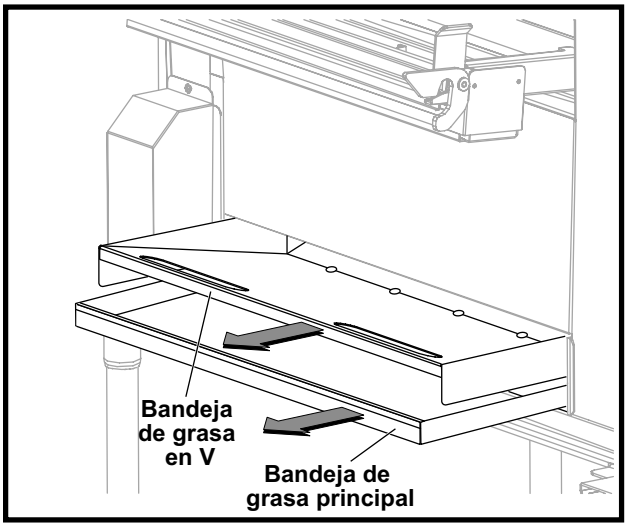
La bandeja de grasa principal está ubicada delante del asador, debajo de la bandeja de grasa en V.

Quite la bandeja de grasa principal deslizándola recto hacia afuera del asador.

Bandeja de grasa en V

La bandeja de grasa en V está ubicada delante del asador, debajo de la bandeja del cargador.

Quite la bandeja deslizándola recto hacia afuera del asador.

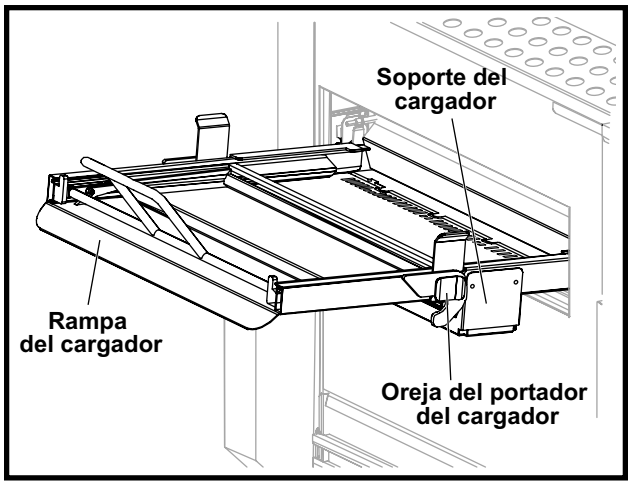


Bandeja de grasa en V y bandeja de grasa principal

Bandeja del cargador

La bandeja del cargador está ubicada delante del asador y se desliza por los canales de los soportes del cargador.

1. Quite el cargador deslizándolo hacia afuera de la bandeja del cargador
2. Quite la bandeja del cargador de los soportes del cargador empujando hacia delante y desenganchando las orejas de la bandeja del cargador de los retenedores de los soportes del cargador.
3. Instale la bandeja del cargador deslizándola dentro del soporte y enganchando las orejas con los retenedores.

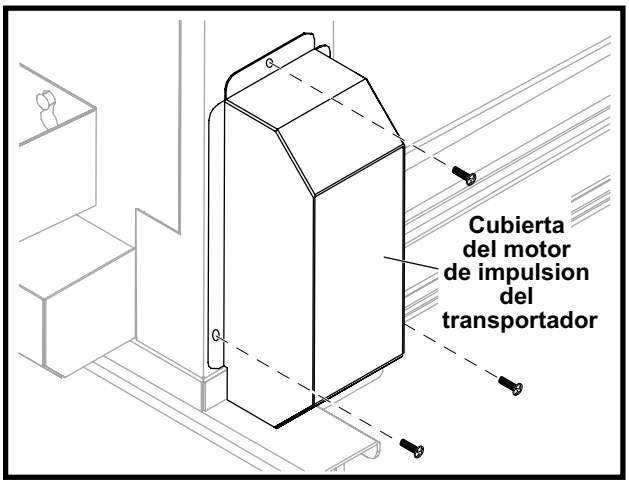


Bandeja del cargador

Cubierta del motor de impulsión del transportador

La cubierta del motor de impulsión del transportador, ubicada en la parte delantera inferior del asador del lado de descarga, cubre el motor de la cadena de impulsión.

1. Quite la bandeja de grasa principal y la bandeja de grasa en V.
2. Quite los tres tornillos que sujetan la cubierta al asador.
3. Levante y saque la cubierta del motor de impulsión del transportador del asador.

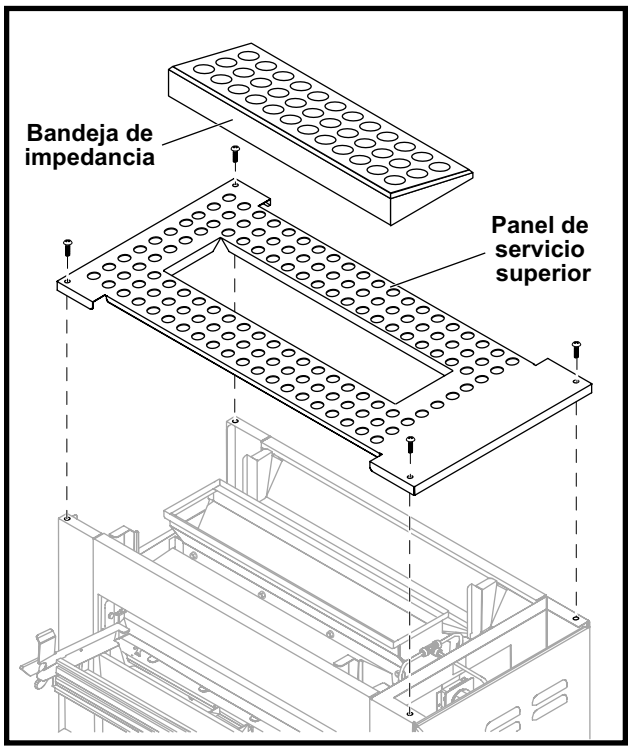


Cubierta del motor de impulsión del transportador

Panel de servicio superior

El panel de servicio superior perforado permite el acceso a los dos quemadores infrarrojos

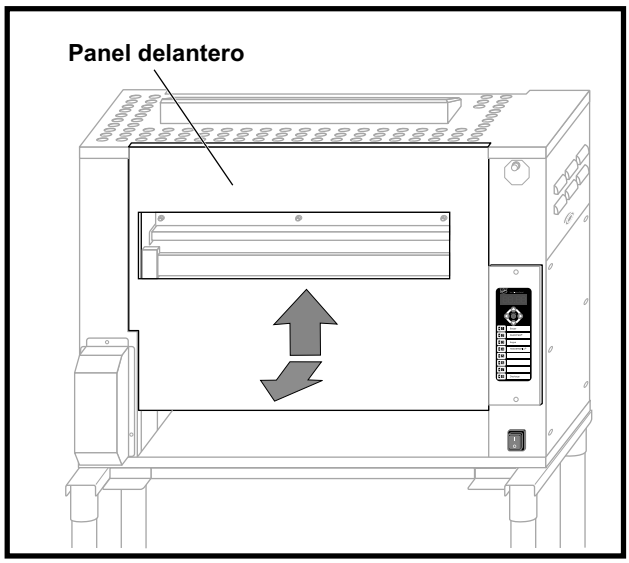
1. Quite los cuatro tornillos que sujetan el panel de servicio superior perforado.
2. Quite el panel de servicio superior perforado del asador.
3. Invierta el procedimiento para instalar el panel de servicio superior perforado.



Panel de servicio superior

Retirada del panel delantero

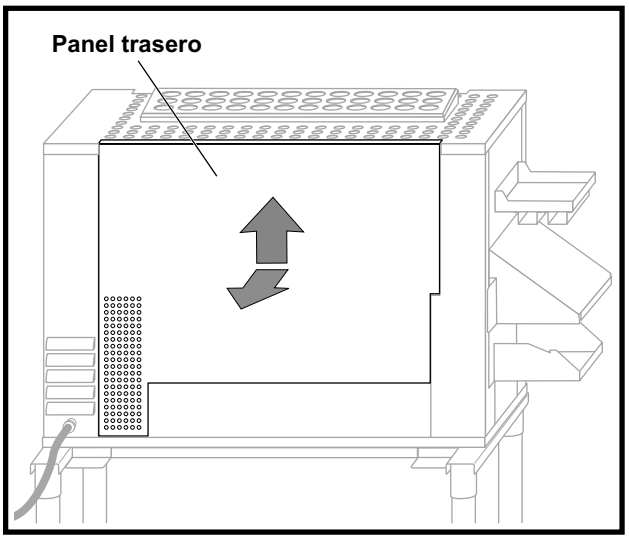
1. Deslice el cargador sacándolo de la bandeja del cargador.
2. Desenganche la bandeja del cargador y deslícela hacia afuera de los soportes de montaje de la bandeja del cargador.
3. Tire de la bandeja de grasa principal sacándola de la parte delantera del asador.
4. Tire de la bandeja de grasa en V sacándola de la parte delantera del asador.
5. Levante y quite el panel delantero del asador.
6. Invierta estos pasos para volver a instalar estas piezas.



Panel delantero

Retirada del panel trasero

1. Levante y quite el panel trasero del asador.
2. Invierta el procedimiento para volver a instalar el panel trasero.



Panel trasero

RETIRADA DE COMPONENTES

CONJUNTO DE MOTOR DE IMPULSIÓN DEL TRANSPORTADOR

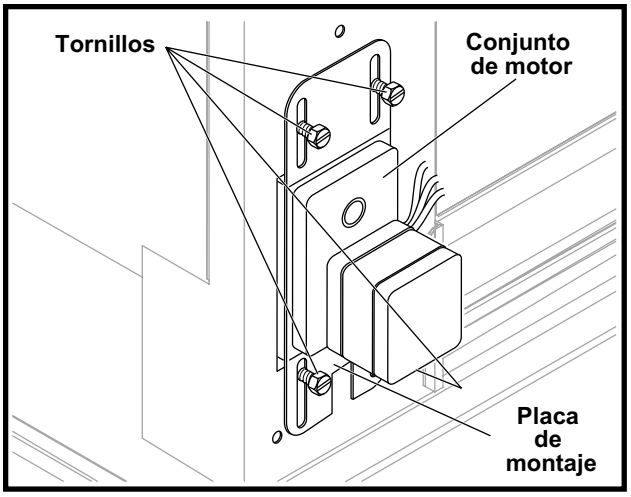
El conjunto de motor de impulsión del transportador está ubicado en la parte delantera inferior del asador, en el extremo de descarga. El motor impulsa el transportador usando una cadena de impulsión.

⚠ ADVERTENCIA

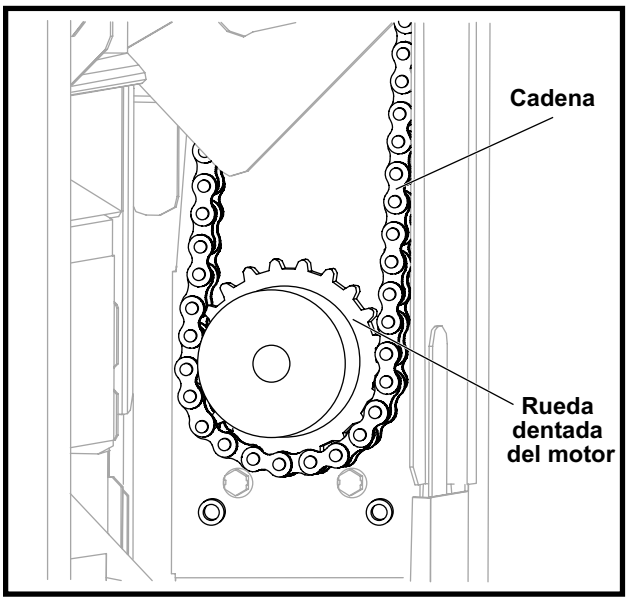
DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite la cubierta del motor de impulsión del transportador. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Desconecte los cables del motor.
3. Quite el panel de acceso de descarga Consulte la sección de CUBIERTAS y PANELES del manual.
4. Quite los cuatro tornillos que sujetan el motor a la placa de montaje y quite el motor.
5. Suba la placa de montaje del motor para desenganchar la cadena de impulsión de la polea del motor.
6. Quite la rueda dentada del eje del motor. La rueda dentada está sujeta al eje del motor por medio de dos tornillos de presión.
7. Invierta el procedimiento para instalar un motor nuevo. Asegúrese de que uno de los tornillos de presión de la rueda dentada esté apretado al lado plano del eje del motor.

NOTA: Al instalar el nuevo motor, asegúrese de enganchar la cadena a la rueda dentada del motor. Ajuste la tensión de la cadena para permitir una comba de 3/16", según se describe en el procedimiento de AJUSTE DE LA COMBA DE LA CADENA DE IMPULSIÓN en la sección de AJUSTE, antes de apretar los tornillos de la placa de montaje del motor.



Conjunto del motor de impulsión del transportador



Rueda dentada del motor y cadena de impulsión

Cadena de impulsión del transportador

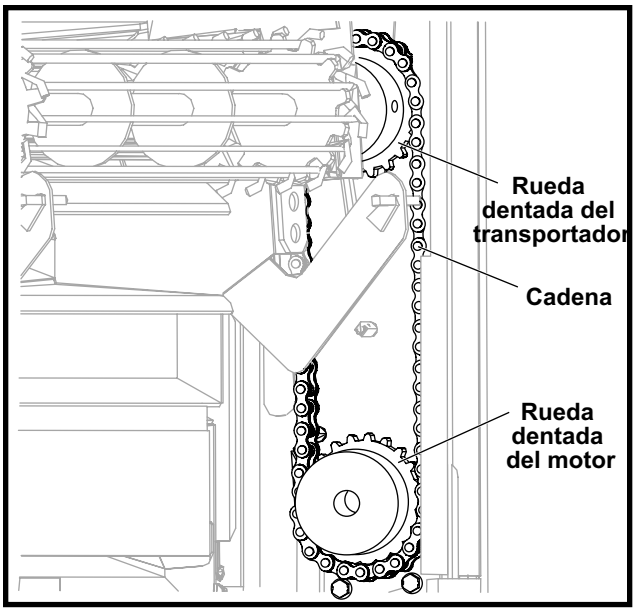
La cadena de impulsión del transportador conecta el motor de impulsión al transportador.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite la cubierta del motor de impulsión del transportador. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel de acceso de descarga Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desconecte los cables del motor.
4. Quite los cuatro tornillos que sujetan la placa de montaje del motor.
5. Suba la placa de montaje del motor para desenganchar la cadena de impulsión de la rueda dentada del motor.
6. Desenganche la cadena de la rueda dentada del transportador.
7. Quite la cadena del asador quitando el eslabón maestro.
8. Invierta el procedimiento para instalar una cadena nueva.

NOTA: Al instalar la nueva cadena, asegúrese de enganchar la cadena a la rueda dentada del motor y a la rueda dentada del transportador. Ajuste después la tensión de la cadena para permitir una comba de 3/16", según se describe en el procedimiento de AJUSTE DE LA COMBA DE LA CADENA DE IMPULSIÓN en la sección de AJUSTE, antes de apretar los tornillos de la placa de montaje del motor.



Cadena de impulsión y ruedas dentadas

Rueda dentada del motor de impulsión del transportador

La rueda dentada del motor de impulsión del transportador está conectada al eje del motor.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite la cubierta del motor de impulsión del transportador. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel de acceso de descarga Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desconecte los cables del motor.
4. Quite los cuatro tornillos que sujetan la placa de montaje del motor.
5. Suba la placa de montaje del motor para desenganchar la cadena de impulsión de la rueda dentada del motor.

6. Desenganche la cadena de impulsión de la rueda dentada del motor.
7. Afloje los dos tornillos de presión de la rueda dentada del motor y quite la rueda dentada del eje del motor.
8. Invierta el procedimiento para instalar una nueva rueda dentada del motor de impulsión del transportador, asegurándose de que un tornillo de presión esté apretado al lado plano del eje del motor.

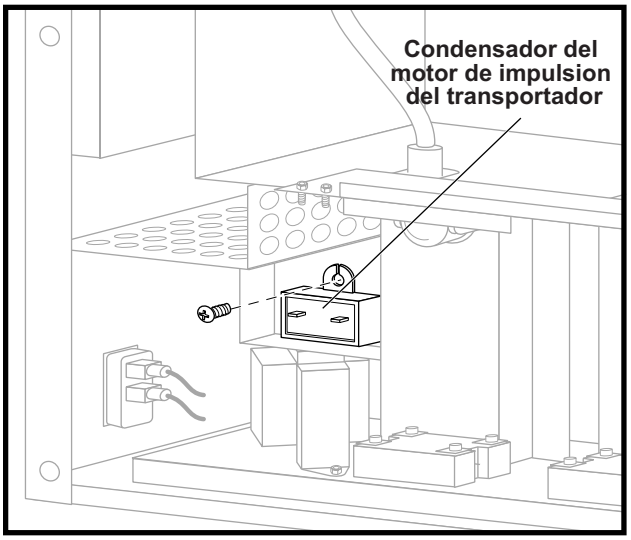
NOTA: Al instalar la nueva rueda dentada del motor de impulsión del transportador, asegúrese de enganchar la cadena en la rueda dentada del motor y en la rueda dentada del transportador, y después ajuste la tensión de la cadena para dejar una comba de 3/16" de la cadena según se describe en el procedimiento de AJUSTE DE LA COMBA DE LA CADENA DE IMPULSIÓN en la sección de AJUSTE, antes de apretar los tornillos de la placa de montaje del motor.

Condensador del motor de impulsión del transportador

⚠ ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de levantamiento superior. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desconecte los cables que van al condensador del motor de impulsión del transportador.
4. Descargue el condensador. Conecte a tierra los dos cables al bastidor del asador.
5. Quite el tornillo que sujeta el condensador al bastidor y quite el condensador del motor de impulsión del transportador.
6. Invierta el procedimiento para instalar un nuevo condensador del motor de impulsión del transportador.



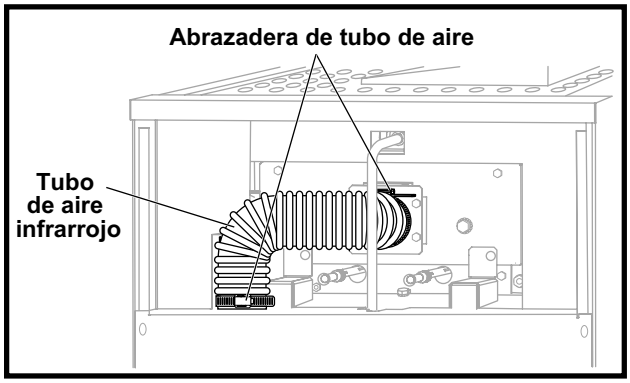
Condensador del motor de impulsión del transportador

Manguera del soplador

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de levantamiento superior. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Afloje la abrazadera de manguera del soplador en la salida del motor del soplador.
3. Afloje la abrazadera de manguera en el centro del suministro de aire a los quemadores superiores.
4. Quite la manguera del soplador.
5. Invierta el procedimiento para instalar la manguera del soplador.



Manguera del soplador

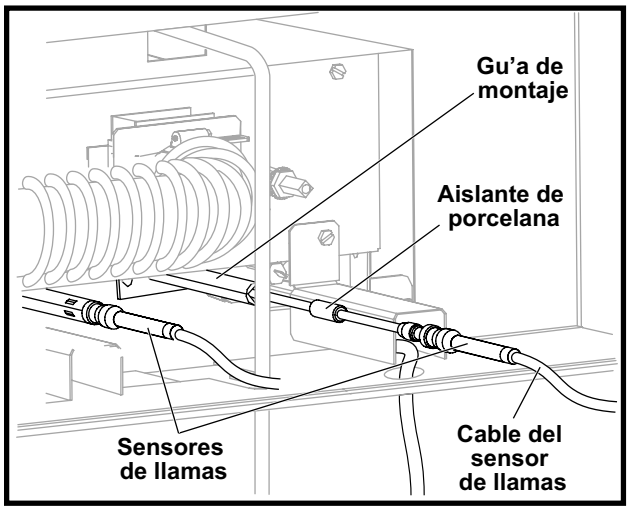
Conjuntos de sensores de llamas superiores

Los conjuntos de sensores de llamas superiores son accesibles quitando el panel de levantamiento superior. Cada quemador superior tiene un conjunto de sensor de llamas correspondiente.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de acceso del lado de control. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desenganche el sensor de llamas superior de la guía y del soporte, y saque la guía y el soporte tirando de los mismos.



Sensor de llamas superior

4. Desconecte el cable del sensor de llamas superior del módulo de encendido y quite el conjunto de sensor de llamas superior.
5. Pellizque las orejas de los ojales de los cables para quitarlos.
6. Pase el cable por el estante para quitar completamente el conjunto de sensor de llamas.
7. Invierta el procedimiento para instalar un nuevo conjunto de sensor de llamas superior.

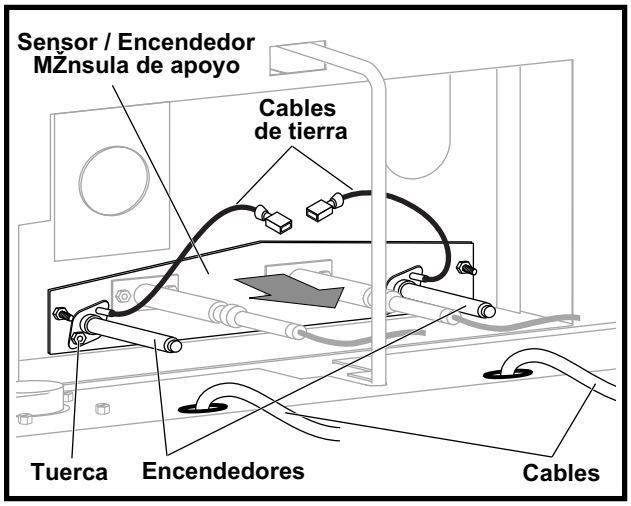
Conjuntos de encendedores superiores

Los conjuntos de encendedores superiores son accesibles quitando el panel de levantamiento superior. Cada quemador superior tiene un conjunto de encendedor correspondiente.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de levantamiento superior. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
3. Quite los dos tornillos que sujetan la cubierta del encendedor.



Encendedores superiores

4. Desconecte el cable y el cable de tierra del encendedor.
5. Quite la manguera del soplador.
6. Quite los dos tornillos restantes que sujetan la cubierta de la caja de aire y saque la cubierta de la caja de aire.
7. Quite la ménsula de apoyo del sensor/ encendedor.
8. Quite la tuerca que sujeta el encendedor.
9. Invierta el procedimiento para instalar un nuevo encendedor superior, asegurándose de que el encendedor de repuesto tenga la distancia de salto de la chispa apropiada de 1/8". Para un encendido apropiado, la chispa debe estar aproximadamente a 3/16" de la superficie de la baldosa del quemador infrarrojo.

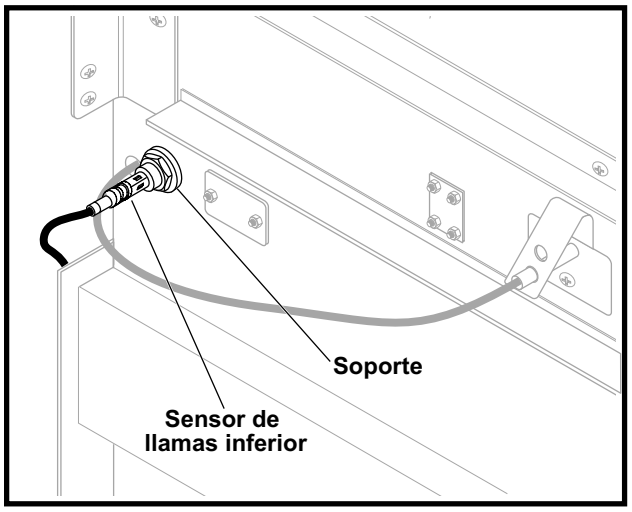
Conjunto del sensor de llamas inferior

El conjunto de sensor de llamas inferior es accesible desde la parte de atrás del asador.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel trasero. Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desenganche el sensor de llamas inferior de la guía y del soporte, y saque de la guía y del soporte tirando del mismo.



Sensor de llamas inferior

4. Desconecte el cable del sensor de llamas inferior del módulo de encendido inferior y quite el conjunto de sensor de llamas inferior.
5. Pellizque las orejas del ojal del cable para quitarlo.
6. Pase el cable por el agujero para quitar completamente el conjunto de sensor de llamas.
7. Invierta el procedimiento para instalar un nuevo conjunto de sensor de llamas inferior.

Conjunto del encendedor inferior

El conjunto de encendedor inferior es accesible quitando el panel de levantamiento superior.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de levantamiento superior. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Desconecte el cable del encendedor inferior y el cable de tierra del encendedor.
3. Quite la tuerca que sujeta el encendedor.
4. Invierta el procedimiento para instalar un nuevo conjunto de encendedor inferior, asegurándose de que el encendedor de repuesto tenga la distancia de salto de chispa apropiada de 1/8". Para un encendido apropiado, la chispa debe estar aproximadamente ¾" por encima del quemador inferior.

Conjunto de quemador infrarrojo superior

Hay dos quemadores infrarrojos ubicados en la parte superior del asador. Se puede tener acceso a estos quemadores infrarrojos quitando el panel de servicio superior y la bandeja de impedancia.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

ADVERTENCIA

CIERRE EL SUMINISTRO DE GAS ANTES DE EFECTUAR EL SERVICIO DE LA UNIDAD.

ADVERTENCIA

COMPRUEBE TODAS LAS JUNTAS DE GAS PERTURBADAS DURANTE EL SERVICIO PARA VER SI HAY FUGAS. COMPRUEBE CON UNA SOLUCIÓN DE AGUA JABONOSA (BURBUJAS). NO USE UNA LLAMA ABIERTA.

Precaución: Si se ha estado operando el asador, los paneles y componentes del asador pueden estar calientes. Use la protección apropiada.

1. Quite la bandeja de impedancia. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desconecte la tubería de gas en la entrada al conjunto de quemador infrarrojo superior que se vaya a quitar.
4. Quite las tuercas ubicadas a lo largo del quemador.
5. Quite los dos protectores del encendedor.
6. Quite la manguera del soplador.
7. Quite la cubierta de la caja de aire.
8. Quite los cuatros tornillos que sujetan el venturi del quemador a la caja de aire.

9. Use una espátula para apalancar con cuidado el venturi del quemador sacándolo de la caja de aire.
10. Levante el conjunto de quemador infrarrojo de la parte superior del asador, deslizando el quemador hacia adelante, hacia arriba y hacia afuera del asador.
11. Invierta el procedimiento para instalar un nuevo conjunto de quemador infrarrojo.

NOTA: Use compuesto de sellado de roscas de tuberías de Anti-Seize Technologies TFE1400 en todos los accesorios de tuberías de gas al volver a montar las tuberías de gas de los quemadores de rayos infrarrojos.

NOTA: Limpie el exceso de sellante de silicona de la caja de aire y del venturi del quemador si vuelve a instalar el quemador. Vuelva a aplicar sellante de silicona para altas temperaturas antes de instalar el quemador.

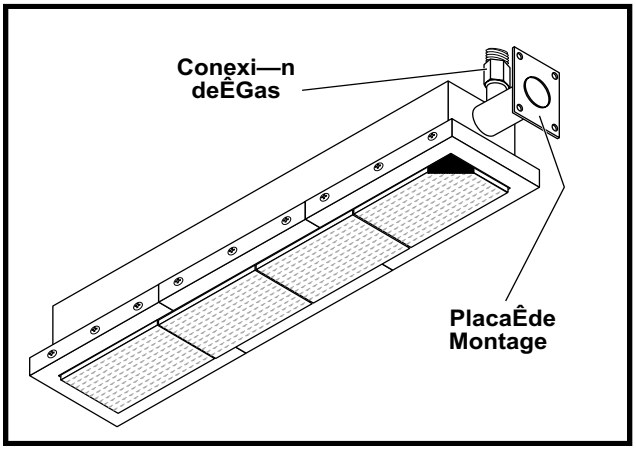
Conjunto de quemador J inferior

El conjunto de quemador J inferior está ubicado debajo del transportador y se puede tener acceso al mismo en el extremo de descarga del asador y desde la parte delantera del asador.

⚠ ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

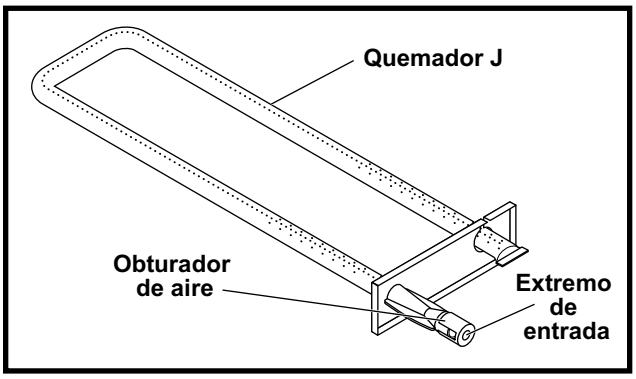
1. Quite el estante de la bandeja PHU.
2. Quite la campana de descarga.
3. Quite el conducto de descarga.
4. Quite la bandeja de descarga.
5. Quite la bandeja de grasa de descarga.
6. Quite el panel de acceso de descarga Consulte la sección de CUBIERTAS y PANELES del manual.
7. Quite el raspador de cenizas, tirando de la parte superior del mismo, en sentido opuesto al asador y levantándolo y sacándolo.
8. Quite la bandeja de grasa principal y la bandeja de grasa en V.
9. Quite el panel delantero. Consulte la sección de CUBIERTAS y PANELES del manual.
10. Desenganche el soporte del quemador J del espárrago del extremo de descarga, y mueva el quemador J hacia el extremo de descarga para desengancharlo de su orificio.
11. Deslice con cuidado el conjunto de quemador J sacándolo fuera de la parte delantera del asador, teniendo cuidado de no dañar el conjunto de encendedor.



Conjunto de quemador infrarrojo

12. Invierta el procedimiento para instalar un nuevo conjunto de quemador J.

NOTA: Asegúrese de que el extremo de entrada del quemador J se enganche en el orificio de gas y de que el extremo de descarga del quemador J se asiente de forma fija en el soporte del quemador.



Conjunto de quemador J inferior

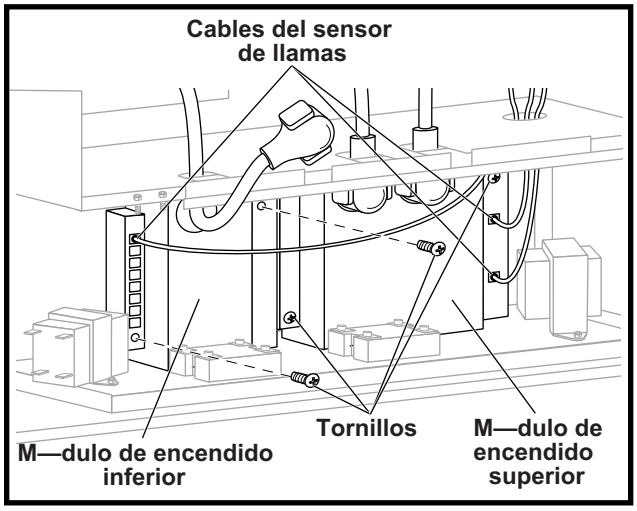
Módulos de encendido

Se puede tener acceso a los módulos de encendido quitando el panel de servicio del lado de control inferior. Los módulos de encendido están en la parte inferior del compartimiento, detrás de los relés.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Etiquete y desconecte los cables del módulo de encendido que se vaya a quitar.
3. Desconecte los cables del sensor de llamas.
4. Quite los dos tornillos que sujetan el módulo de encendido al bastidor y quite el módulo.
5. Invierta este procedimiento para reemplazar el módulo de encendido.



Módulos de encendido

Válvulas de gas combinadas

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

ADVERTENCIA

CIERRE EL SUMINISTRO DE GAS ANTES DE EFECTUAR EL SERVICIO DEL ASADOR.

ADVERTENCIA

COMPRUEBE TODAS LAS JUNTAS DE GAS PERTURBADAS DURANTE EL SERVICIO PARA VER SI HAY FUGAS. COMPRUEBE CON UNA SOLUCIÓN DE AGUA JABONOSA (BURBUJAS). NO USE UNA LLAMA ABIERTA.

ADVERTENCIA

SE DEBEN COMPROBAR TODAS LAS JUNTAS ANTES DE LA VÁLVULA DE GAS COMBINADA ANTES DE ENCENDER LA UNIDAD.

ADVERTENCIA

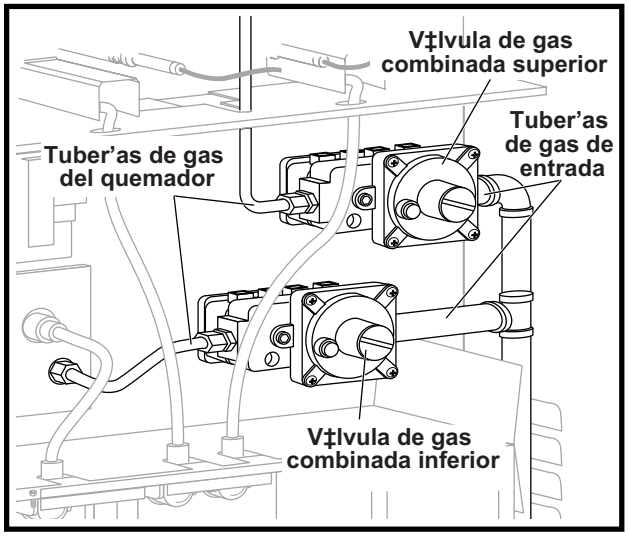
SE DEBEN COMPROBAR TODAS LAS JUNTAS DETRÁS DE LA VÁLVULA DE GAS COMBINADA DESPUÉS DE ENCENDER LA UNIDAD.

NOTA: Las válvulas de gas combinadas no se pueden reparar y por lo tanto no deben desarmarse.

1. Cierre el suministro de gas del asador.
2. Quite el panel de levantamiento superior y el panel de servicio del lado de control inferior. Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desconecte la tubería de gas que va al conjunto de quemador, en la válvula de gas combinada.
4. Etiquete y desconecte los cables que van a la válvula de gas combinada.
5. Use una llave para tubos a fin de desenroscar la válvula de gas combinada de la tubería de gas de entrada.
6. Invierta el procedimiento para instalar la válvula de gas combinada. Asegúrese de que la nueva válvula de gas combinada esté instalada en el sentido correcto.

NOTA: Use compuesto de sellado de roscas de tuberías de Anti-Seize Technologies TFE1400 en todos los accesorios de tuberías de gas al volver a montar las tuberías de gas de la válvula de gas combinada.

7. Compruebe todas las conexiones de gas para ver si tienen fugas.
8. Asegúrese de la presión apropiada de la válvula de gas.



Válvulas de gas combinadas

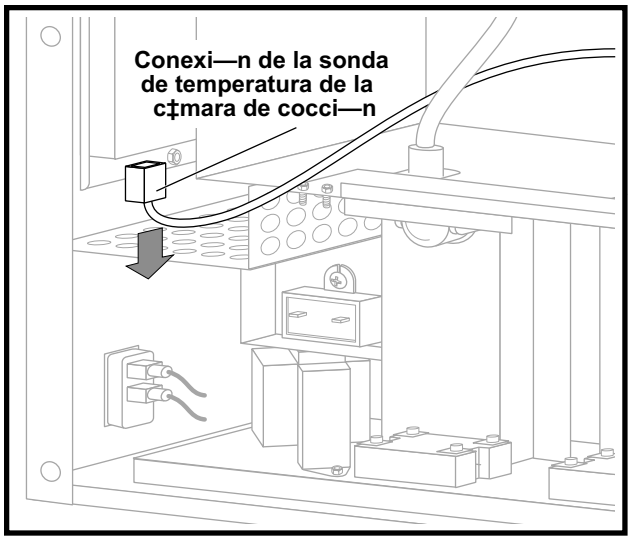
Sonda de temperatura de la cámara de cocción

La sonda de temperatura de la cámara de cocción se conecta a la parte inferior del tablero de control y está ubicada en la parte trasera del asador.

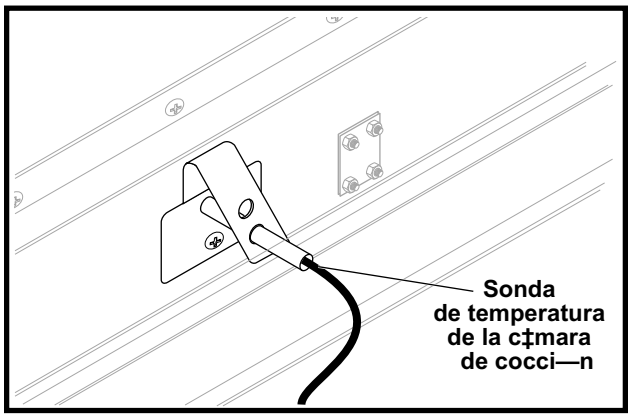
ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel trasero Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desconecte el conector de la sonda de temperatura de la cámara de cocción en la parte inferior del tablero de control.
4. Quite del soporte la sonda de temperatura de la cámara de cocción empujando el soporte suavemente hacia abajo.
5. Apriete las dos arandelas de goma del compartimiento eléctrico antes de quitarlas.
6. Deslice la sonda de temperatura de la cámara de cocción sacándola del asador.
7. Invierta el procedimiento para instalar la sonda de temperatura de la cámara de cocción, asegurándose de volver a instalar las dos arandelas de goma.
8. Asegúrese de que la sonda de temperatura de la cámara de cocción esté bien asentada en su soporte de montaje. La muesca de la funda debe estar trabada en el soporte.



Conexión de la Sonda de Temperatura



Montaje de la sonda de temperatura de la cámara de cocción

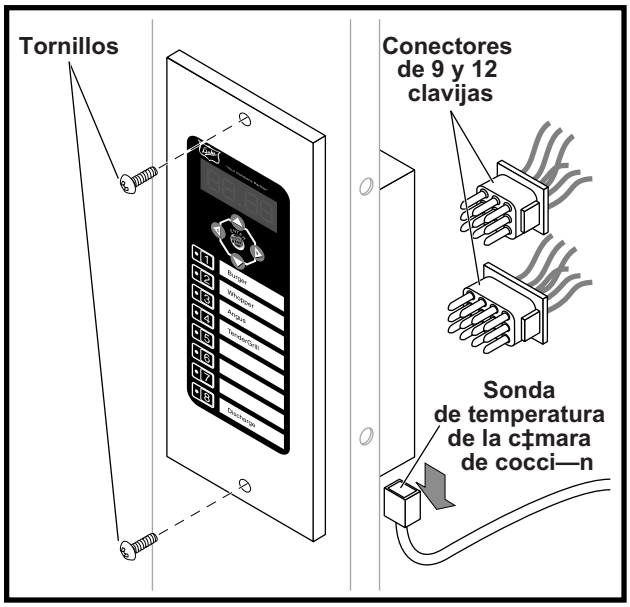
Tablero de control

El tablero de control está ubicado en la parte delantera del asador. La programación del tablero de control está prefijada en fábrica con recetas estándar de BURGER KING®. Cualquier ajuste fino efectuado a nivel e restaurante es responsabilidad del gerente del restaurante.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Desconecte el conector de la sonda de temperatura de la cámara de cocción en la parte inferior del tablero de control.
3. Desconecte los conectores de 9 y 12 clavijas de la parte trasera del tablero de control.
4. Quite los dos tornillos de la parte delantera del tablero de control.
5. Quite el tablero de control del asador.
6. Invierta el procedimiento para instalar un tablero de control nuevo.
7. Alerte al gerente del restaurante de que se ha reemplazado el tablero de control y que se requieren ajustes finos.



Tablero de control

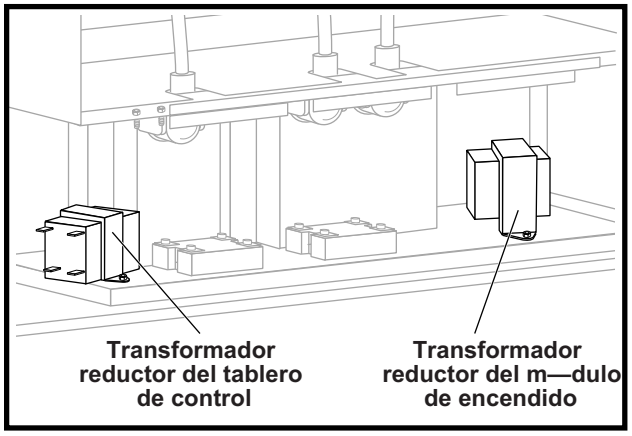
Transformadores reductores

Se puede tener acceso a los transformadores reductores quitando el panel de servicio del lado de control inferior. Ambos transformadores reducen el voltaje de los 120 a 240 VCA de entrada. El transformador izquierdo suministra 24 VCA al tablero de control. El transformador derecho suministra 24 VCA para hacer funcionar los relés de estado sólido.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Desconecte los cables del transformador que se vaya a quitar.
3. Quite los tornillos que sujetan el transformador al bastidor.
4. Quite el transformador.
5. Invierta el procedimiento para instalar un transformador.



Transformadores reductores

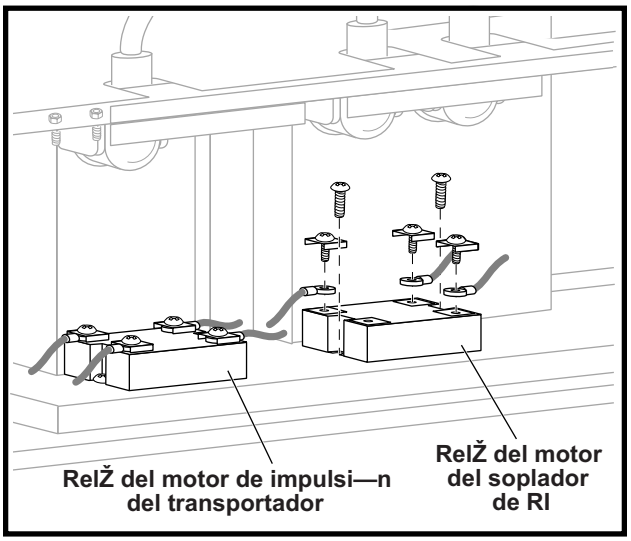
Relés de estado sólido

Se puede tener acceso a los relés de estado sólido quitando el panel de servicio del lado de control inferior. El relé de estado sólido izquierdo controla el motor de impulsión del transportador. El relé de estado sólido derecho controla el motor del soplador.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Desconecte los cables del relé de estado sólido que se vaya a quitar.
3. Quite los tornillos que sujetan el relé de estado sólido al bastidor.
4. Quite el relé de estado sólido.
5. Invierta el procedimiento para instalar el relé de estado sólido.



Relés de estado sólido

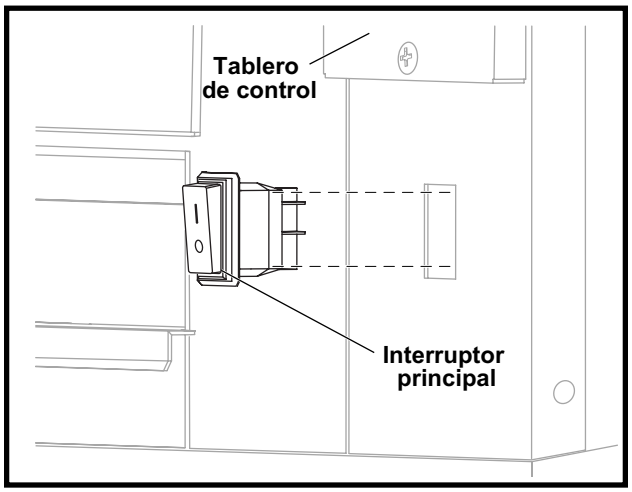
Interruptor principal

El interruptor principal está ubicado en la parte delantera del asador, debajo del tablero de control.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Desconecte los cables del interruptor.
3. Pellizque las orejas de resorte de la parte superior e inferior del interruptor y deslice hacia fuera de la parte delantera del panel.
4. Invierta el procedimiento para instalar un nuevo interruptor principal.



Interruptor principal

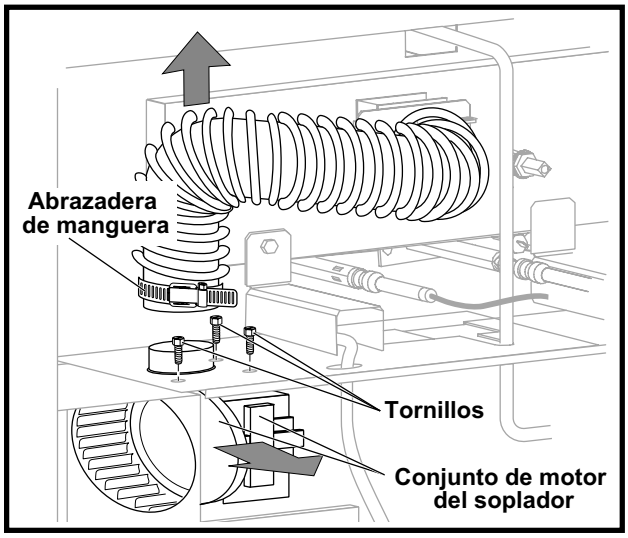
Motor del soplador

El motor del soplador está ubicado en el lado del tablero de control del asador y se puede tener acceso al mismo quitando los paneles de levantamiento superior y de servicio del lado de control inferior.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de levantamiento superior. Consulte la sección de CUBIERTAS y PANELES del manual.
2. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desconecte los cables del motor del soplador.
4. Afloje la abrazadera de manguera inferior y desconecte la manguera de la parte superior del motor del soplador.
5. Quite los tres tornillos que sujetan el motor del soplador al bastidor.
6. Invierta el procedimiento para instalar un motor de soplador nuevo. Reemplace la empaquetadura al instalar el nuevo motor del soplador.



Motor del soplador

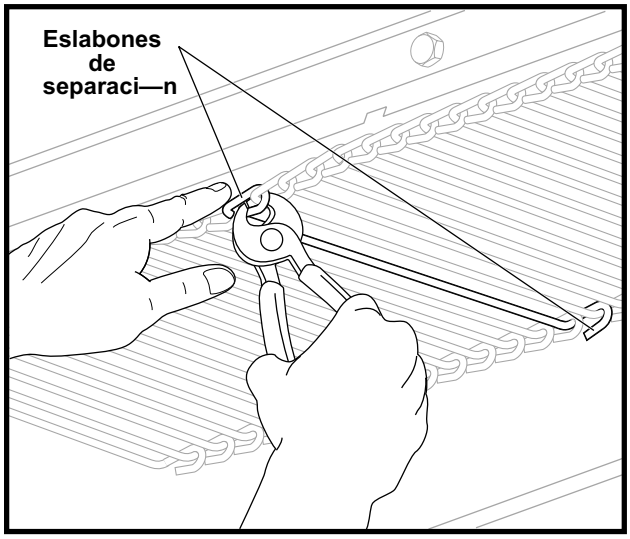
Reemplazo de eslabones del transportador

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Apague y desenchufe el asador.
2. Quite las piezas y paneles del operador delantero. Consulte la sección de CUBIERTAS y PANELES del manual.
3. Separe el eslabón dañado con la herramienta para eslabones en ambos extremos.
4. Quite el eslabón dañado.
5. Instale el nuevo eslabón.
6. Use alicates para cerrar ambos extremos del eslabón.
7. Compruebe la operación apropiada. Tal vez sea necesario añadir o quitar calces detrás o debajo de los bloques de bujes para asegurar una tensión apropiada.

NOTA: No quite nunca un eslabón sin reemplazarlo.



Eslabones de transportador

AJUSTES

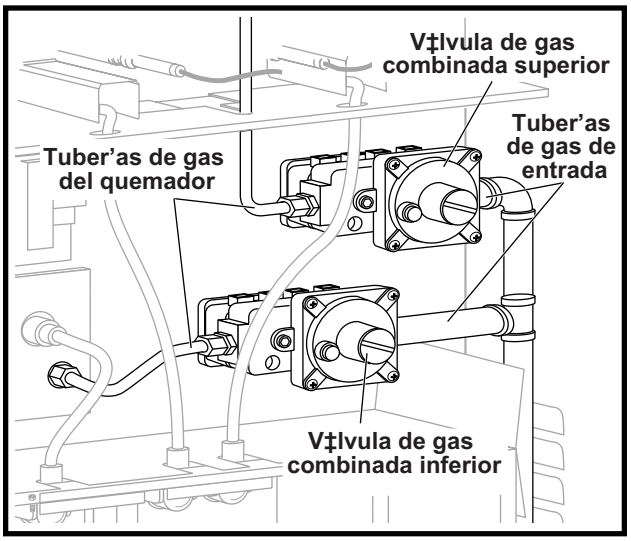
PRESIÓN DEL GAS DE ENTRADA

⚠ ADVERTENCIA

EL ASADOR ESTÁ DISEÑADO PARA OPERAR CON GAS NATURAL CON UNAS PRESIONES DE ENTRADA ENTRE 7" Y 12" DE COLUMNA DE AGUA. LAS PRESIONES DE SERVICIO DE MÁS DE 12" DE COLUMNA DE AGUA Y MENOS DE 2 PSI, REQUERIRÁN EL JUEGO DE GAS NATURAL DE SUMINISTRO DE ALTA DE DUKE (N/P 175689). EL JUEGO INCLUYE COMPONENTES PARA AÑADIR UN REGULADOR EXTERNO AL ASADOR. EL REGULADOR DEBE AJUSTARSE DESPUÉS DE LA INSTALACIÓN A 7" DE COLUMNA DE AGUA SEGÚN LAS INSTRUCCIONES INCLUIDAS.

VÁLVULA DE GAS COMBINADA

Las dos válvulas de gas combinadas están ubicadas una junto a otra y son accesibles quitando el panel de servicio del lado de control inferior. Una válvula de gas es para el quemador J inferior y la otra válvula de gas es para los quemadores infrarrojos superiores. La presión de gas se ha prefijado en fábrica para el tipo de gas especificado en la placa de identificación. No obstante, a veces es necesario ajustar la presión del gas después de haber instalado la unidad. Compruebe siempre la presión del gas de entrada en la toma proporcionada en el tubo de entrada antes de efectuar cualquier ajuste de presión de la válvula. Se deben efectuar los ajustes de la válvula cuando ambas válvulas estén completamente abiertas con todos los quemadores en operación.



Válvula de gas combinada

1. Cierre el paso de gas al asador.
2. Quite el panel de levantamiento superior. Consulte la sección de CUBIERTAS y PANELES del manual.

NOTA: No desconecte ningún cable.

3. Quite el tapón de la toma de presión y reemplácelo por el accesorio para el medidor de presión de gas, "Slack Tube" o manómetro.

4. Conecte el medidor
5. Abra el gas.

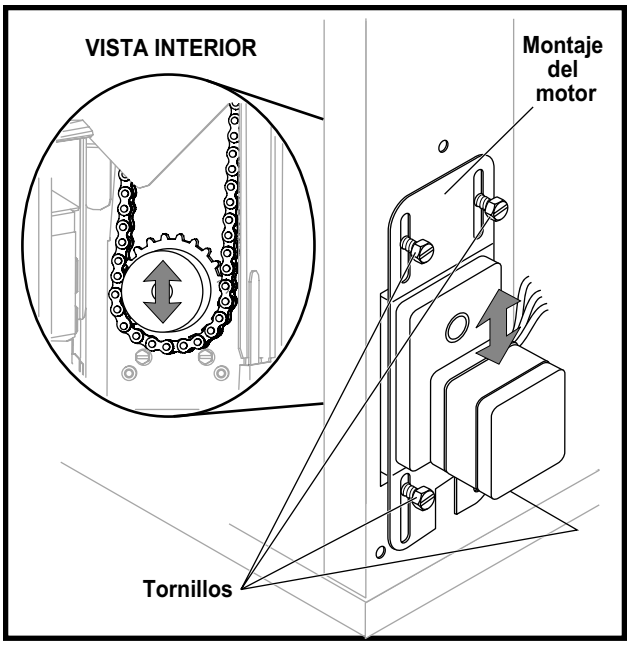
NOTA: El regulador de presión forma parte integral de la válvula de gas combinada.

6. Localice el tornillo de ajuste quitando la tapa de aluminio ranurada.
7. Ajuste la lectura de presión a 3.75" de columna de agua para gas natural u 8.0" para gas propano.
8. Cierre el gas.
9. Desconecte el medidor.
10. Quite la conexión y vuelva a instalar el tapón de la toma de presión.
11. Vuelva a abrir el gas.
12. Compruebe si hay fugas de gas.
13. Compruebe la operación del asador.

AJUSTE DE LA COMBA DE LA CADENA DE IMPULSIÓN

La cadena de impulsión conecta el motor de impulsión al transportador.

1. Compruebe que la comba de la cadena de impulsión no supere el máximo de 3/16". Si es necesario ajustar la cadena, vaya al paso 2.
2. Quite el panel de acceso de descarga Consulte la sección de CUBIERTAS y PANELES del manual.
3. Quite la cubierta del motor de impulsión del transportador.
4. Afloje los cuatro tornillos que sujetan el montaje del motor al bastidor.
5. Mueva el montaje del motor hacia arriba o hacia abajo según sea necesario para proporcionar una comba de 3/16" en el centro de la cadena
6. Fije el montaje del motor en posición apretando los cuatro tornillos de montaje del motor.
7. Instale la cubierta del motor de impulsión del transportador.
8. Instale el panel de acceso de descarga



Comba de la cadena de impulsión

AJUSTE DE LA POSICIÓN DEL TRANSPORTADOR

La posición del transportador se ajusta añadiendo calces entre el cojinete del eje del transportador y el bastidor.

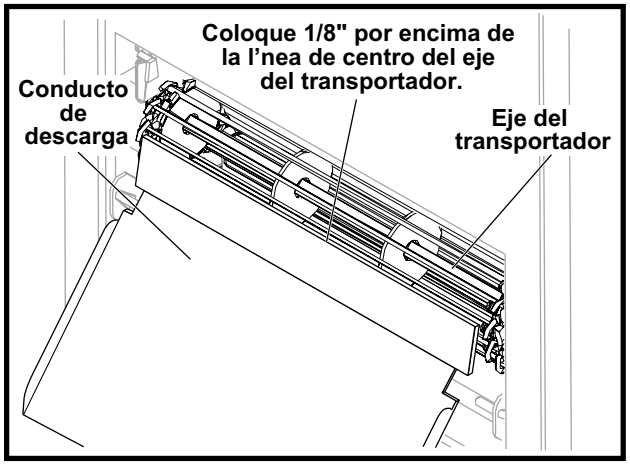
1. Quite la campana de descarga para proporcionar un acceso visual al transportador.
2. Ajuste la altura del transportador según se describe en la ilustración siguiente.
3. Quite los dos tornillos que sujetan el cojinete al bastidor.
4. Introduzca calces según sea necesario entre el conjunto de cojinete y el bastidor.
5. Compruebe la posición del transportador.

NOTA: El borde delantero del conducto de descarga debe estar aproximadamente a 1/8” por encima de la línea de centro del eje del transportador. Cuando se ajuste bien, el eslabón del transportador debe tocar justo el lado trasero del conducto. Si se ajusta demasiado alto, el eslabón rodará sobre la parte superior del borde superior del conducto de descarga atascando el transportador.

6. Si se necesitan calces adicionales, repita el paso 4.

NOTA: Hay calces adicionales ubicados en el interior de la cubierta del motor de impulsión.

7. Haga funcionar el transportador durante varias revoluciones para confirmar que no se produzcan atascos.



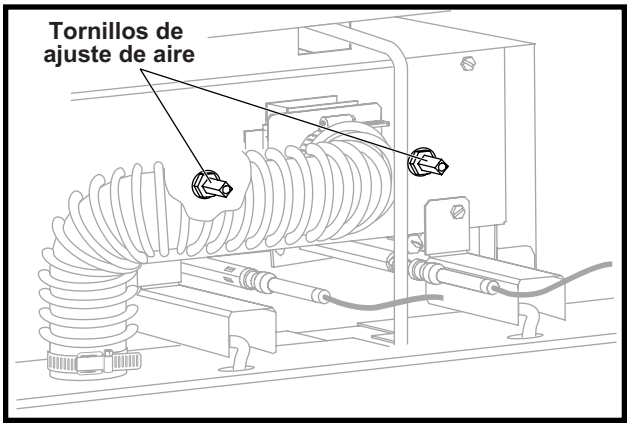
Ajuste del eje de descarga del transportador

SUMINISTRO DE AIRE DEL QUEMADOR INFRARROJO SUPERIOR

Los ajustes del suministro de aire del quemador infrarrojo superior son accesibles quitando el panel de levantamiento superior. Hay dos tornillos de ajuste de aire ubicados a cada lado de la manguera del soplador.

NOTA: El ajuste de aire está fijado en fábrica y no debe cambiarse a menos que sea autorizado por Duke Manufacturing.

1. Quite el panel de levantamiento superior.
2. Si está aflojado, reajuste la medición de la rosca expuesta al valor indicado en el asador.



Tornillos de ajuste de aire del quemador infrarrojo

SUMINISTRO DE AIRE DEL QUEMADOR INFERIOR

El ajuste del suministro de aire del quemador inferior está fijado en fábrica y no debe cambiarse. Un quemador de gas natural bien ajustado tiene una llama azul alrededor del codo del quemador sin puntas amarillas en la llama. Un quemador de gas propano puede tener una pequeña cantidad de puntas amarillas en la llamas. La abertura del obturador de aire en los quemadores J de fábrica está prefijada y soldada a 3/8" abierta. Si reemplaza el quemador J, verifique esta abertura antes de instalarlo.

LOCALIZACIÓN Y RESOLUCIÓN DE PROBLEMAS

La información siguiente sobre localización y resolución de problemas incluye procedimientos de comprobación para diversos componentes eléctricos a fin de identificar componentes defectuosos. La guía de localización y resolución de problemas está diseñada para identificar diversos síntomas y proporcionar la corrección sugerida.

PROCEDIMIENTOS DE COMPROBACIÓN DE COMPONENTES

Comprobación del interruptor de encendido

El interruptor de encendido tiene un LED integrado que se enciende de color rojo cuando el interruptor esté en la posición de encendido. Compruebe lo siguiente antes de reemplazar el interruptor.

- Asegúrese de que el cordón de alimentación esté enchufado en el receptáculo correcto. El asador funciona con una corriente de 120 VCA y 60 Hz.
- Compruebe el disyuntor asignado al asador.
- Pruebe un receptáculo diferente antes de reemplazar el interruptor.
- Es posible que falle el LED del interruptor. Ponga el interruptor en encendido y compruebe la pantalla del tablero de control. Si la pantalla está activa, el LED está quemado, reemplace el interruptor.

Comprobación del tablero de control

En condiciones normales, el tablero de control muestra el estado actual del asador. Se puede usar como herramienta de diagnóstico, cuando funciona bien.

Pruebe lo siguiente antes de reemplazar el tablero de control.

- Encienda y apague el asador; observe el tablero de control.
- Trate de operar el tablero de control mediante un par de ciclos de cocción diferentes.

NOTA: Si el tablero de control sigue sin funcionar debidamente, pruebe estos procedimientos.

1. Apague el asador.
2. Quite el tablero de control
3. Compruebe cada conexión en la parte trasera del tablero de control. Asegúrese de que todas estén bien conectadas.
4. Sujete ligeramente el tablero de control, encienda el asador. Observe la pantalla y los LED de las teclas de producto.
5. Apague y vuelva a conectar el tablero de control si se resuelve el problema.

Comprobación del motor de impulsión del transportador

El motor de impulsión del transportador está ubicado en la parte delantera del asador, en el lado de descarga inferior. Antes de reemplazarlo, compruebe el transportador para ver si hay carne atascada. A continuación, trate de girar el eje de descarga del transportador con la herramienta de uso general del asador. Si no gira el transportador, compruebe lo siguiente:

- Compruebe el conducto de descarga.
- Compruebe la rampa del cargador.
- Compruebe el raspador de cenizas.
- Compruebe la cadena de cocción (transportador).
- Compruebe el apagallamas.

Pruebas del motor de impulsión del transportador

Se puede probar el motor de impulsión del transportador sin quitarlo del asador.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Apague y desconecte el asador.
2. Quite la cubierta del motor de impulsión del transportador.
3. Etiquete y desconecte los cables.
4. Use un ohmiómetro para medir la resistencia.
5. Trate de hacer funcionar el motor de impulsión cuando esté desconectado de la cadena de impulsión.

RESISTENCIA NORMAL DEL MOTOR (120V, 60 HZ)	
Cables a probar	Resistencia
Negro y café	24.2 Ω
Negro y anaranjado	24.2 Ω
Café y anaranjado	49.2 Ω

COMPROBACIÓN DEL CONDENSADOR DEL MOTOR DE IMPULSIÓN DEL TRANSPORTADOR

Si las pruebas del motor son normales, compruebe el condensador. El condensador está ubicado en el área de servicio, en el lado de control del asador.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Desconecte los cables conectados al condensador.
3. Descargue el condensador cortocircuitando ambos terminales a tierra al mismo tiempo.
4. Use un ohmiómetro para probar el condensador.

NOTA: Si las pruebas del motor de impulsión y del condensador son normales, el problema se debe probablemente al relé del motor de impulsión.

COMPROBACIÓN Y PRUEBAS DEL MOTOR DEL SOPLADOR

El motor del soplador suministra aire a los quemadores infrarrojos superiores Estos quemadores no funcionarán debidamente si el motor del soplador no suministra una cantidad suficiente de aire a los mismos. Lo primero que hay que comprobar es la rueda del soplador para ver si hay grasa y residuos acumulados. Inspeccione también si hay una manguera de soplador aflojada o dañada.

ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Asegúrese de que el asador esté apagado y desenchufado.
2. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
3. Quite el conjunto de motor del soplador.
4. Compruebe y limpie la rueda del soplador según sea necesario.
5. Compruebe que la rueda gire libremente.
6. Mida la resistencia del devanado del motor del soplador. La resistencia normal entre el devanado del motor del soplador debe ser de 22.2 Ω ± 2.2 Ω.

NOTA: Si la resistencia es baja, se puede cortocircuitar el devanado. Si la resistencia es alta, el devanado está abierto.

Si las pruebas del motor del soplador son normales, el problema se debe probablemente al relé del motor del soplador.

PRUEBAS DE LOS RELÉS

Hay dos relés de estado sólido de 24 VDC en el asador. Uno controla el motor del soplador, mientras que el otro controla el motor de impulsión del transportador.

1. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
2. Ponga el interruptor principal en la posición de encendido.
3. El motor del soplador funciona solamente cuando se envía una señal de encendido de los quemadores infrarrojos superiores. El motor de impulsión del transportador funciona solamente durante 6 segundos al final de un ciclo de cocción. Para probar el relé, compruebe si hay 24 VDC en la entrada del relé. Al mismo tiempo, supervise la corriente alterna que llega al motor del soplador o al motor de impulsión del transportador. Cuando no haya presente un voltaje de entrada del relé, no habrá absorción de amperaje en la salida del relé.
4. Compruebe la continuidad entre terminales de salida usando un ohmiómetro. Si el ohmiómetro indica continuidad, el relé está bien. Si el ohmiómetro no indica continuidad, el relé es defectuoso.

PRUEBAS DE LOS TRANSFORMADORES

Hay dos transformadores reductores de 24 voltios en el asador. Uno suministra corriente al tablero de control y el otro a los módulos de encendido. Se puede usar una comprobación de voltaje o resistencia para probar los transformadores.

PRUEBA DE VOLTAJE

1. Asegúrese de que el asador esté apagado.
2. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
3. Desconecte el devanado secundario.
4. Encienda el asador.
5. Use un multímetro para probar la salida de voltaje en el devanado secundario. El voltaje debe ser de 24 VCA.

COMPROBACIÓN DE LA RESISTENCIA

⚠ ADVERTENCIA

DESCONECTE LA CORRIENTE ELÉCTRICA DEL ASADOR Y SIGA LOS PROCEDIMIENTOS DE BLOQUEO / ETIQUETADO.

1. Apague el asador.
2. Quite el panel de servicio del lado de control inferior Consulte la sección de CUBIERTAS y PANELES del manual.
3. Etiquete y desconecte los cables del transformador que se vaya a probar.
4. Mida la resistencia en el primario. Resistencia primaria = 21.8Ω ±10%.
5. Mida la resistencia en el secundario.
6. Resistencia secundaria = 0.8Ω ±10%.

PRUEBAS DEL MÓDULO DE ENCENDIDO INFERIOR

Cuando la sonda de temperatura de la cámara de cocción envíe una señal de calentamiento, el tablero de control enviará 24 VCA a los terminales TH y GND del módulo de encendido inferior. El módulo de encendido inferior efectúa primero una comprobación de diagnóstico. Después del diagnóstico, se activa el módulo de encendido inferior.

- Se aplican 24 VCA a través terminal del V1 abriendo la válvula de gas combinada inferior.
- Se genera una chispa de alto voltaje en el terminal HV.
- Cuando el sensor de llamas detecte una corriente de no menos de 0.7 µA, el encendedor deja de producir chispas.

El módulo de encendido inferior efectúa una comprobación de autodiagnóstico. Está equipado con un LED que tiene tres estados, indicando el tipo de falla de diagnóstico:

1. Constantemente encendido: Indica una falla interna del módulo. Se debe reemplazar el módulo.

2. Dos destellos del LED: Indica que el quemador está encendido pero no existe una señal de calentamiento.
3. Tres destellos del LED: Indica que se ha producido un bloqueo de encendido.

MÓDULO DE ENCENDIDO SUPERIOR

El módulo de encendido superior funciona de la misma manera que el módulo de encendido inferior, pero tiene dos encendedores y sensores de llamas. El tablero de control enviará 24 VCA a los terminales W y GND del módulo de encendido superior.

- Se aplican 24 VCA al terminal W y a tierra, lo que abre la válvula de gas combinada superior.
- Se genera una chispa de alto voltaje en los terminales HV1 y HV2.
- Cuando los sensores de llamas detectan una corriente de no menos de 0.7 µA, los encendedores dejan de producir chispas.

El módulo de encendido superior efectúa una comprobación de autodiagnóstico.

Indicadores de diagnóstico del módulo de encendido superior.

1. Constantemente encendido: Indica una falla del control interno.
2. Dos destellos: Indica que el quemador está encendido pero no existe una señal de calentamiento.
3. Tres destellos: Indica que se ha producido un bloqueo de encendido.

COMPROBACIÓN DE LOS SENSORES DE LLAMAS

Normalmente, el bloqueo del módulo de encendido es causado por sensores de llamas sucios.

A continuación indicamos algunos consejos para sensores de llamas:

- Si un sensor de llamas está sucio, límpielos todos. Deje que se enfríe el sensor de llamas y límpielo con un algodón empapado en alcohol.
- Reemplace un sensor de llamas por porcelana dañada.
- Compruebe si hay residuos entre la punta del sensor de llamas y el quemador.
- Ajuste el sensor de llamas si la punta toca tierra.
- Asegúrese de que todas las conexiones del sensor de llamas estén apretadas.

COMPROBACIÓN DE LOS ENCENDEDORES

Otro artículo que se debe comprobar, si el asador no se enciende bien, son los encendedores. Es posible que resulten golpeados durante la limpieza de rutina, haciendo que cambie la separación entre los electrodos.

- La distancia de salto de la chispa debe ser de 1/8".
- Reemplace el encendedor si los electrodos están dañados.
- Compruebe todas las conexiones en el modulo de encendido y en el encendedor.
- Si hay gas y chispas presentes pero el quemador no se enciende, verifique la ubicación apropiada del encendedor superior en lo que respecta al quemador. Los encendedores de los quemadores infrarrojos superiores deben estar aproximadamente a 3/16" de la superficie de la baldosa del quemador infrarrojo. El encendedor inferior debe estar aproximadamente a 3/4" del asador inferior.

Diagrama de flujo de localizaci—n y resoluci—n de problemas

êndice r‡pido

Defina el problema...

	Queja...	Consulte el paso			
1	La pantalla muestra ÒgASÓ yÉ	bot	toP	SEnb	SEnt
		PASO 2	PASO 3	PASO 2	PASO 3
2	En la pantalla destellan ÒtEStÓ y ÒProdÓ	PASO 2-3 y 6			
3	La pantalla muestra ÒHiÓ	PASO 2			
4	La pantalla muestra ÒLoÓ	PASO 2			
5	La pantalla muestra ÒProbÓ	**Sonda defectuosa** Pruebe y reemplace la sonda			
6	Transportador atascado / funcionando todo el tiempo	PASO 7			

Diagrama de flujo de localización y resolución de problemas

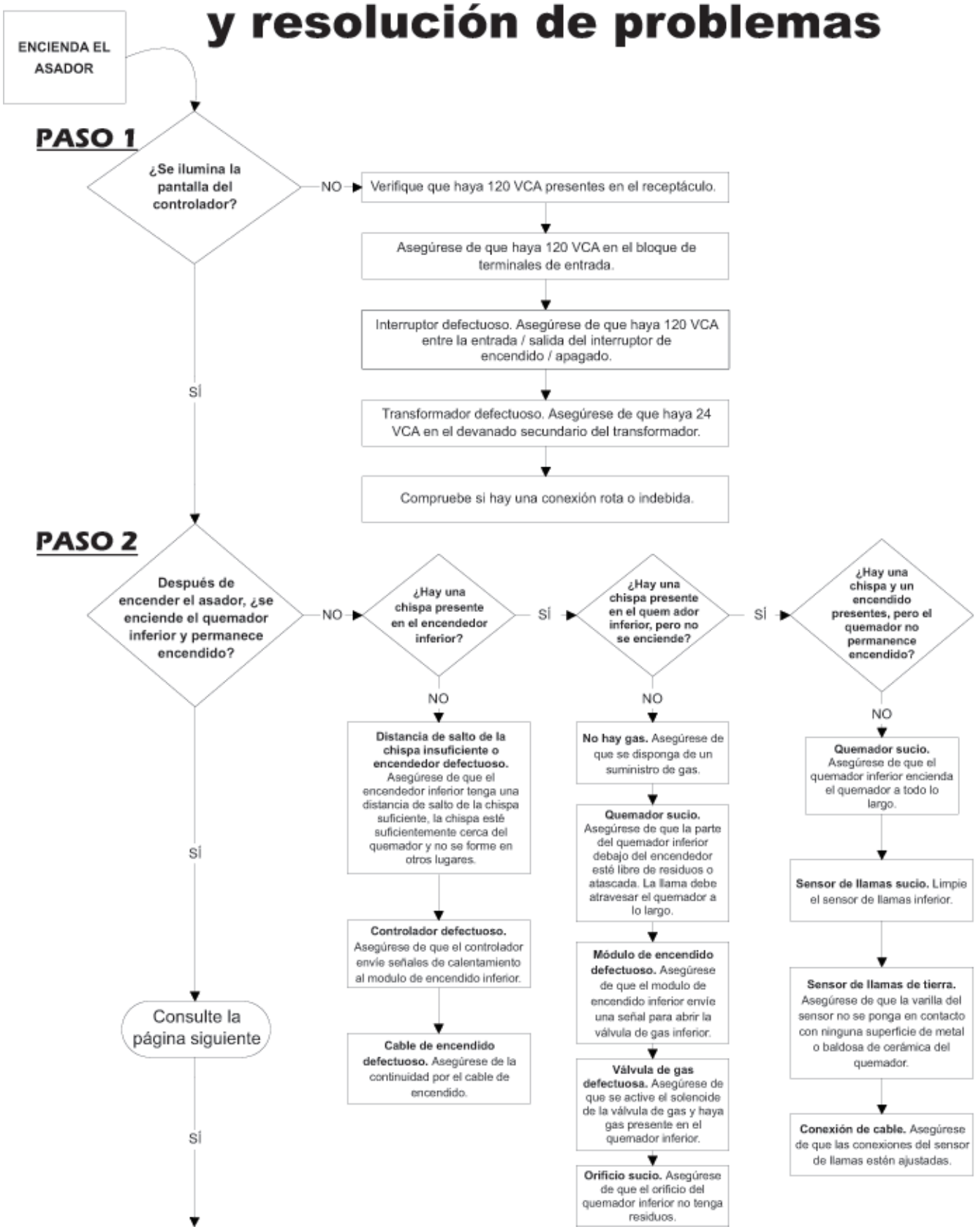


Diagrama de flujo de localización y resolución de problemas

SÍ

PASO 3

Después de alcanzar 500°F, ¿se encienden los quemadores infrarrojos superiores y permanecen encendidos?

NO → **¿Hay una chispa presente en ambos encendedores superiores?**

NO

Encendedor defectuoso o distancia de salto de la chispa insuficiente. Asegúrese de que los encendedores superiores tengan distancias de salto de la chispa suficientes y que la chispa no se forme en otro lugar.

Controlador defectuoso. Asegúrese de que el controlador envíe una señal de calentamiento al módulo de encendido superior.

Cable de encendido defectuoso. Asegúrese de la continuidad por el cable de encendido afectado.

SÍ → **¿Hay una chispa presente en ambos encendedores superiores, pero no encendido?**

NO

No hay gas. Asegúrese de que se disponga de un suministro de gas.

Módulo de encendido defectuoso. Asegúrese de que el módulo de encendido superior envíe una señal para abrir la válvula de gas inferior.

Válvula de gas defectuosa. Asegúrese de que se active el solenoide de la válvula de gas y de que haya gas presente en los quemadores superiores.

Orificio sucio. Asegúrese de que los orificios del quemador superior no tengan residuos.

SÍ → **¿Hay una chispa y encendido en ambos quemadores superiores, pero los quemadores no permanecen encendidos?**

NO

Sensor de llamas sucio. Limpie el sensor de llamas superior afectado.

Sensor de llamas de tierra. Asegúrese de que la varilla del sensor no se ponga en contacto con ninguna superficie de metal o baldosa de cerámica del quemador.

Determine la falla del sensor de llamas. Compruebe la lectura en microamperios del módulo de encendido superior de cada sensor mientras que los quemadores estén encendidos. Si se produce una falla de detección de la llama, el sensor afectado debe descender por debajo de 0.7 microcamperios.

Conexión de cable. Asegúrese de que las conexiones de los cables de detección de llamas estén ajustadas.

Controlador defectuoso. Asegúrese de que el controlador envíe una señal al relé del motor del soplador para que se cierre.

Motor o relé del soplador defectuosos. Asegúrese de que el motor del soplador se active y de que haya una cantidad de aire suficiente que se desplace a los quemadores superiores. Las grandes acumulaciones de grasa en la rueda del soplador pueden tener efectos adversos.

SÍ

Consulte la página siguiente

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Diagrama de flujo de localización y resolución de problemas

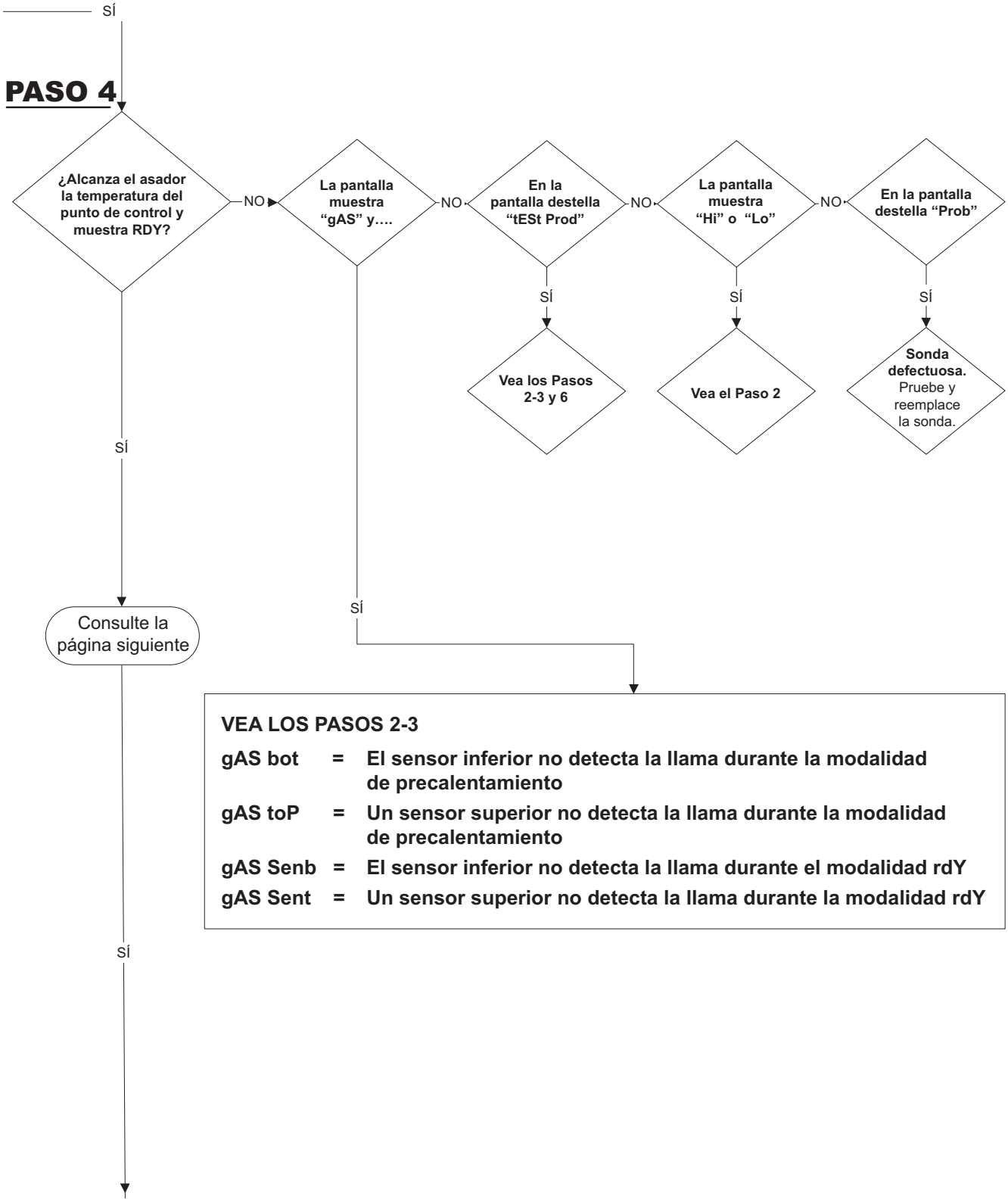


Diagrama de flujo de localización y resolución de problemas

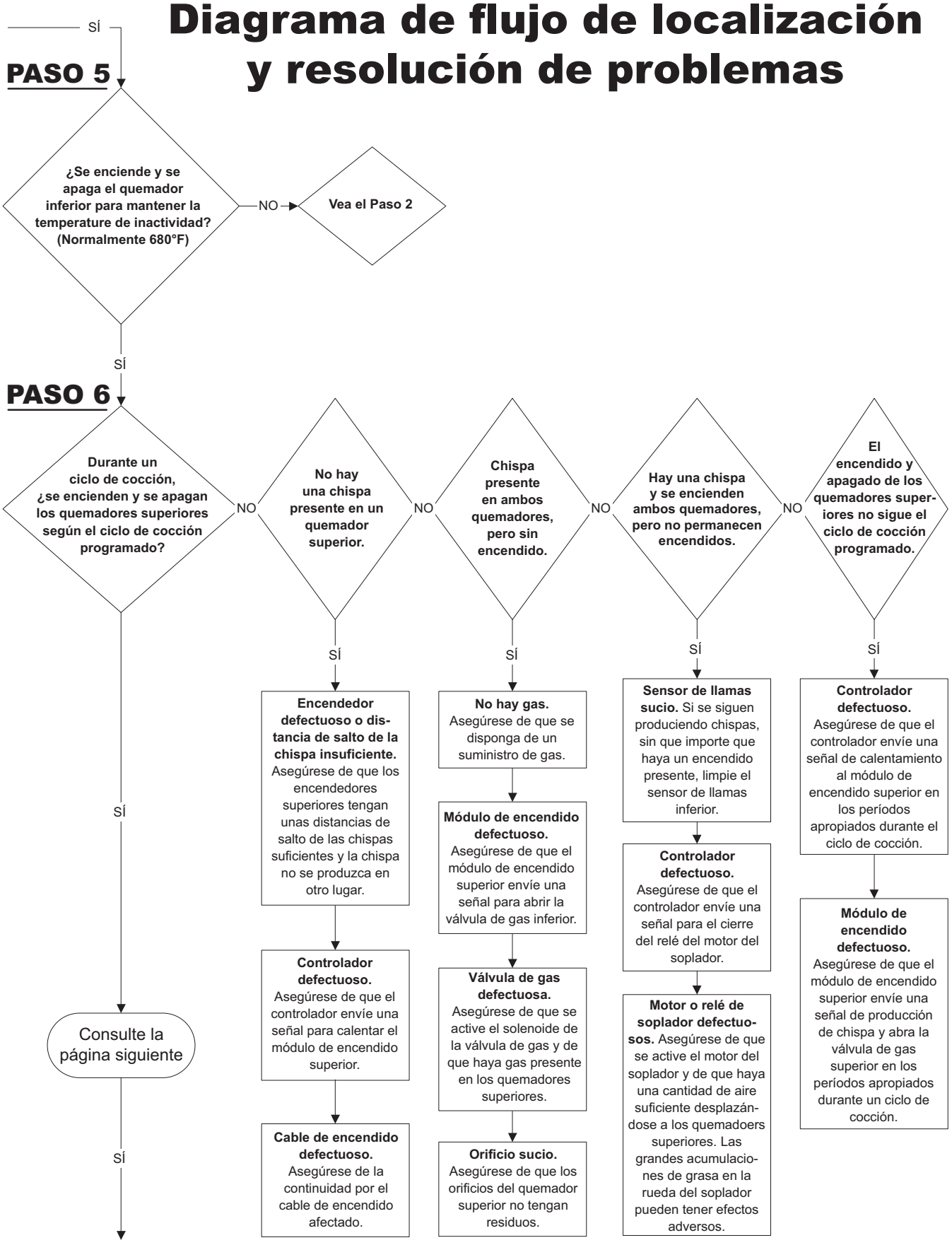


Diagrama de flujo de localización y resolución de problemas

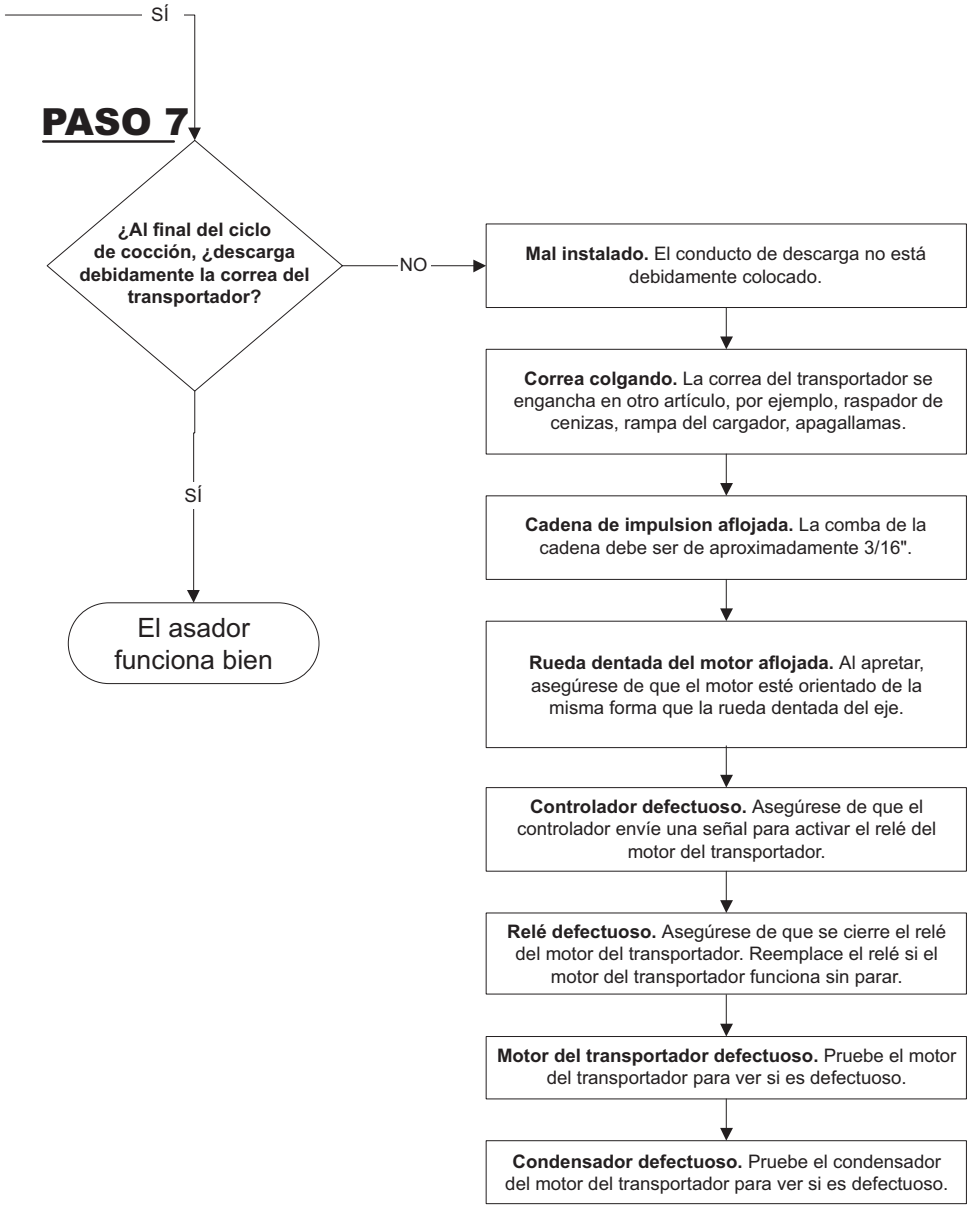
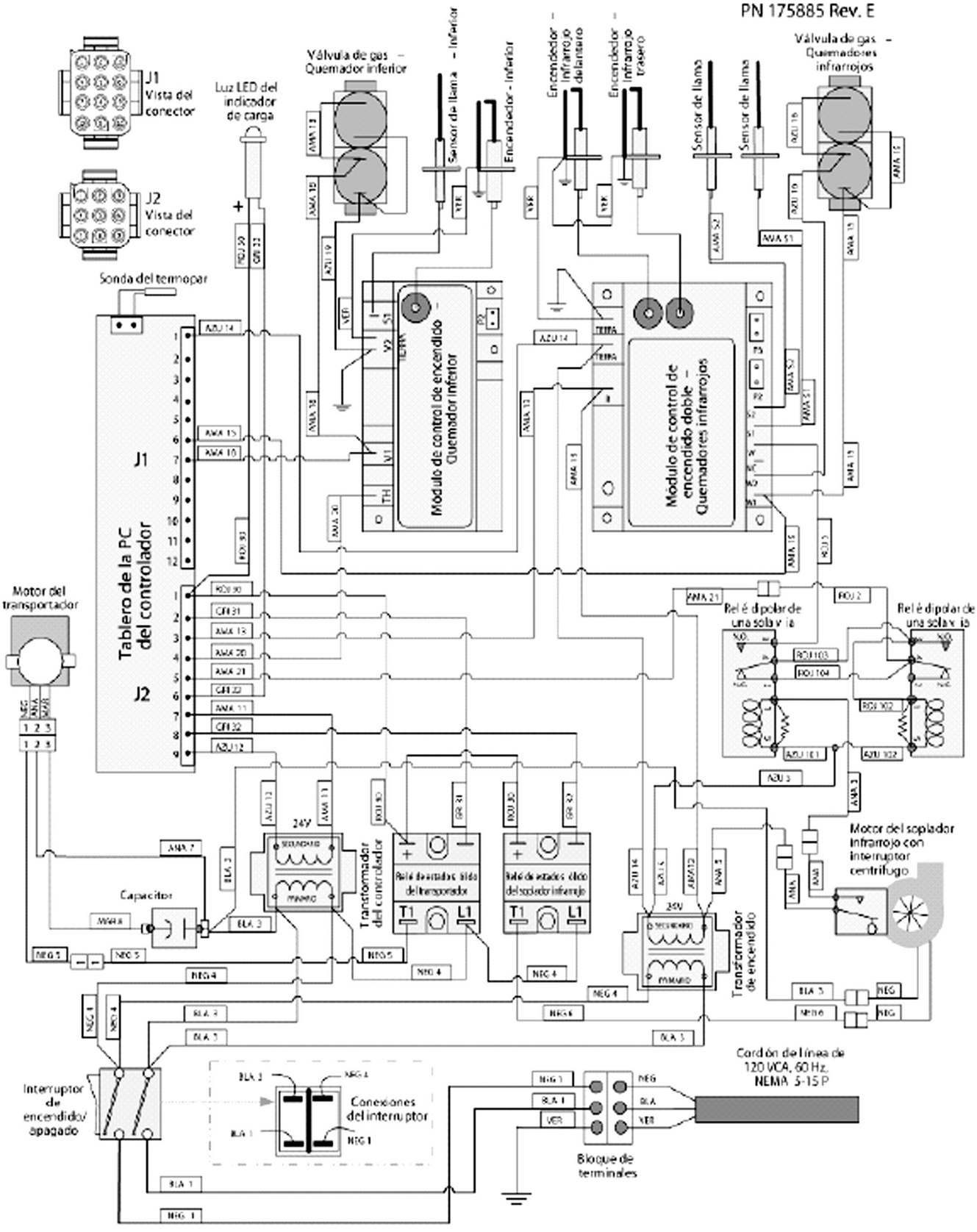


DIAGRAMA ELÉCTRICO – ASADOR FLEXIBLE POR TANDAS

PN 175885 Rev. E



LISTA DE PIEZAS DE REPUESTO

DESCRIPCIÓN	NÚMERO DE PIEZA	CANT.
Interruptor principal	175503	1
Quemador infrarrojo	175780	2
Quemador de tubo estilo J (gas natural solamente)	175505	1
Quemador de tubo estilo J (gas LP solamente)	175505	1
Motor del transportador	175506	1
Rueda dentada de calibre B21X3/8 (motor)	175517	1
Eje del lado de descarga	175037	1
Eje del lado derecho	175038	1
Condensador del motor del transportador	175507	1
Módulo de encendido del quemador inferior	175508	1
Módulo de encendido de los quemadores superiores	175509	1
Transformador de 40 VA, 120 VCA - 24VCA	175516	2
Sonda de temperatura de la cámara de cocción	175518	1
Luz de cocción	175550	1
Relé de estado sólido	175519	2
Cadena de impulsión	175551	1
Controlador	175575	1
Empaquetadura del marco de control	175510	1
Empaquetadura de entrada del soplador	175511	1
Soplador Dayton de 60 HZ, 115 VCA	175524	1
Manguera del soplador	175532	1
Orificio infrarrojo del retenedor	175542	2
Válvula combinada de gas natural de 120 VCA (gas natural solamente)	175531	2
Válvula combinada de LP de 120 VCA (gas LP solamente)	175766	2
Orificio del quemador inferior N° 31 (gas natural solamente)	175734	1
Orificio del quemador inferior N° 49 (gas LP solamente)	175737	1
Orificio infrarrojo delantero N° 40 (gas natural solamente)	175735	1
Orificio infrarrojo delantero N° 52 (gas LP solamente)	175767	1
Orificio infrarrojo trasero N° 36 (gas natural solamente)	175736	1
Orificio infrarrojo trasero N° 51 (gas LP solamente)	175768	1
Retenedor de orificio de 3/8 recto x mampara	175545	1
Juego de tubos de te a infrarrojo	175476	2
Juego de tubos de te a válvula	175477	1
Juego de tubos de quemador inferior a válvula	175478	1

LISTA DE PIEZAS DE REPUESTO, CONTINUACIÓN

DESCRIPCIÓN	NÚMERO DE PIEZA	CANT.
Sensor del quemador inferior	175534	1
Sensor del quemador infrarrojo	175535	2
Encendedor	175536	3
Cable de supresión de encendido infrarrojo	175537	2
Cable de supresión de encendido, quemador inferior	175538	1
Cadena de cocción	175674	1
Bloque de bujes del transportador	175525	4
Bandeja del cargador	175430	1
Soporte de montaje del cargador	175438	1
Cargador	175444	1
Rampa del cargador	175432	1
Puerta	175429	1
Apagallamas	175293	1
Protector del quemador	175200	1
Conducto de descarga	175340	1
Campana de descarga	175778	1
Estante de la bandeja PHU	175353	1
Bandeja de descarga	175358	1
Bandeja de grasa principal	175329	1
Bandeja de grasa en V	175325	1
Lado de la bandeja de grasa	175357	1
Raspador de cenizas de pivote	175150	1
Panel trasero	175305	1
Panel delantero	175300	1
Panel delantero superior de levantamiento	175392	1
Panel de acceso eléctrico LWB	175383	1
Panel de acceso de descarga	175250	1
Bandeja de impedancia (sin catalizador opcional)	175226	1
Catalizador (opcional)	175480	1
Protector de catalizador	175482	1
Herramienta de limpieza del quemador de tubos	175485	1
Limpiador de tubos de la varilla de llamas	175701	1
Cepillo para limpiar tubos de la varilla de llamas	175705	1
Juego de conversión de gas LP	175612	1

NOTAS:

ASISTENCIA AL CLIENTE

Para poder ayudarle a informar sobre esta unidad en caso de pérdida o robo, anote abajo el número de modelo y el número de serie ubicados en la unidad. También recomendamos que anote toda la información indicada y la conserve para futura referencia.

NÚMERO DE MODELO:	**NÚMERO DE SERIE:**
FECHA DE COMPRA:	
DISTRIBUIDOR:	**TELÉFONO:**
TÉCNICO DE SERVICIO:	**TELÉFONO:**

PARA GARANTÍA, PIEZAS Y SERVICIO:

NORTEAMÉRICA Y LATINOAMÉRICA

Duke Manufacturing Company
2305 N. Broadway
St. Louis, MO 63102
Teléfono: 314-231-1130
Teléfono gratuito: 1-800-735-3853
Fax: 314-231-5074

REINO UNIDO E IRLANDA

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Duke House
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ASIA

Asia Office
Duke Food Service Equipment
(shanghai) Company Limited
1F, Building #17-2,
658 Nong Jin Zhong Road
Shanghai, China 200335
Tel: +86 21 6876 9272
Fax: +86 21 33600628

PARA TENER ACCESO A INTERNET: www.dukemfg.com

Denos la siguiente información cuando nos escriba o nos llame: número de modelo, número de serie, fecha de compra, su dirección postal completa (incluido el código postal) y la descripción del problema.

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Duke Manufacturing Co.

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Duke Manufacturing
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Phone: +420 257 741 033
Fax: +420 257 741 039

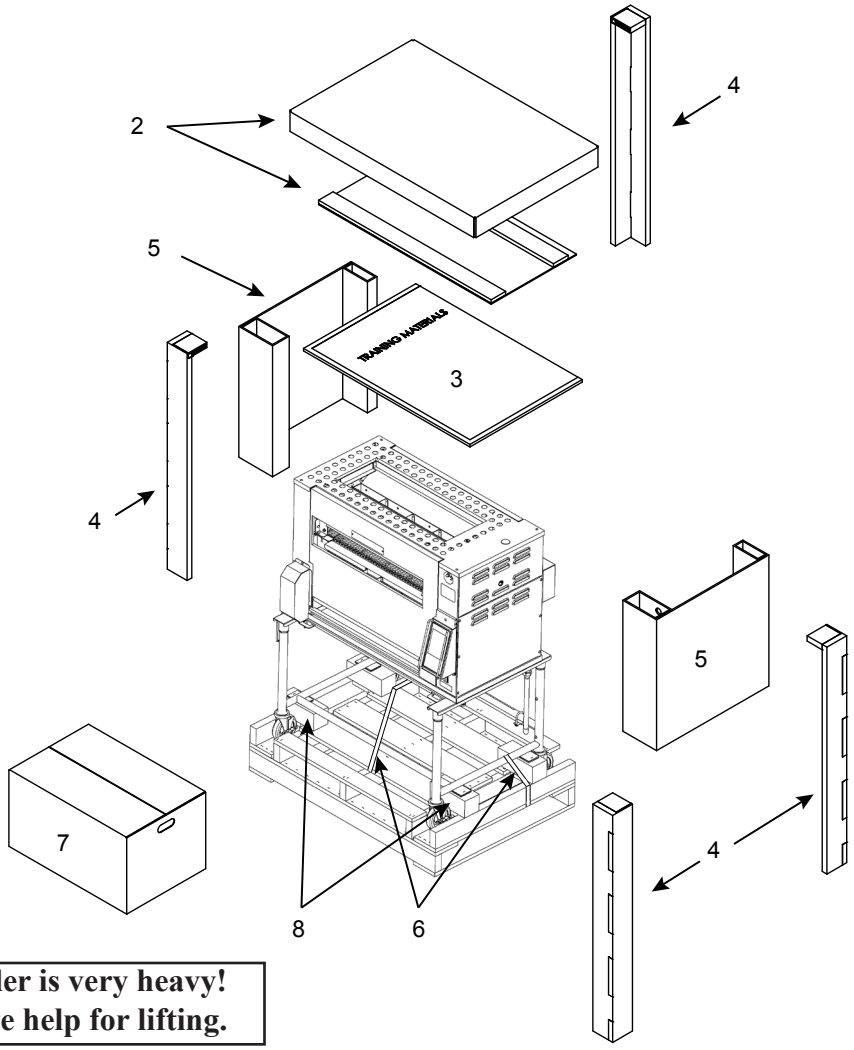
Duke Mfg UK

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Tel: +44 (0) 1395 234140
FAX: +44 (0) 1395 234154

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1F, Building #17-2, 658 Nong Jin Zhong Road
Shanghai, China 200335
Tel: +86 21 6876 9272
Fax: +86 21 33600628

Flexible Batch Broiler Unpacking Instructions

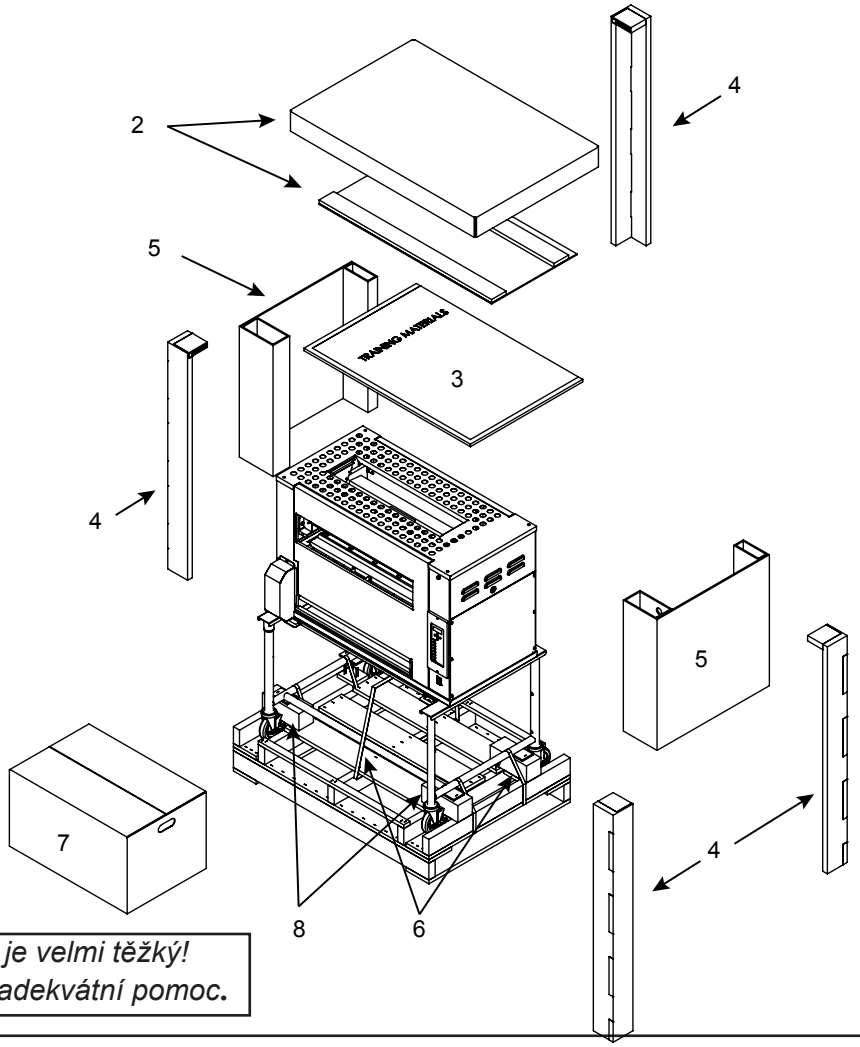


Caution: The Broiler is very heavy!
Use adequate help for lifting.

1. Using a utility knife, cut away plastic wrap (Not shown).
2. Remove the top cardboard and inner cap.
3. Remove Training Material Box
4. Remove cardboard from the corners (4 places).
5. Remove cardboard on the ends (2 places).
6. Remove banding straps (Cut with utility knife or scissors: 5 places).
7. Remove box of attachable parts & accessories from the front.
8. Safely lift one end of broiler and tap block towards center and then sideways to remove. Repeat for remaining blocks. This allows casters to touch the pallet.
9. Remove the broiler from the shipping pallet using 3 people to guide and distribute it's weight (approx 335 lbs) accordingly. While carefully supporting the broiler. Roll it forward until the front casters are clear of the pallet. Lift the broiler 6-8 inches above and away from the pallet, and gently place on floor to avoid damage to casters.
10. Remove protective blue tape from broiler panels, double checking that no tape remains.

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Otáčivý Dávkovací Gril Rozbalení Instrukce

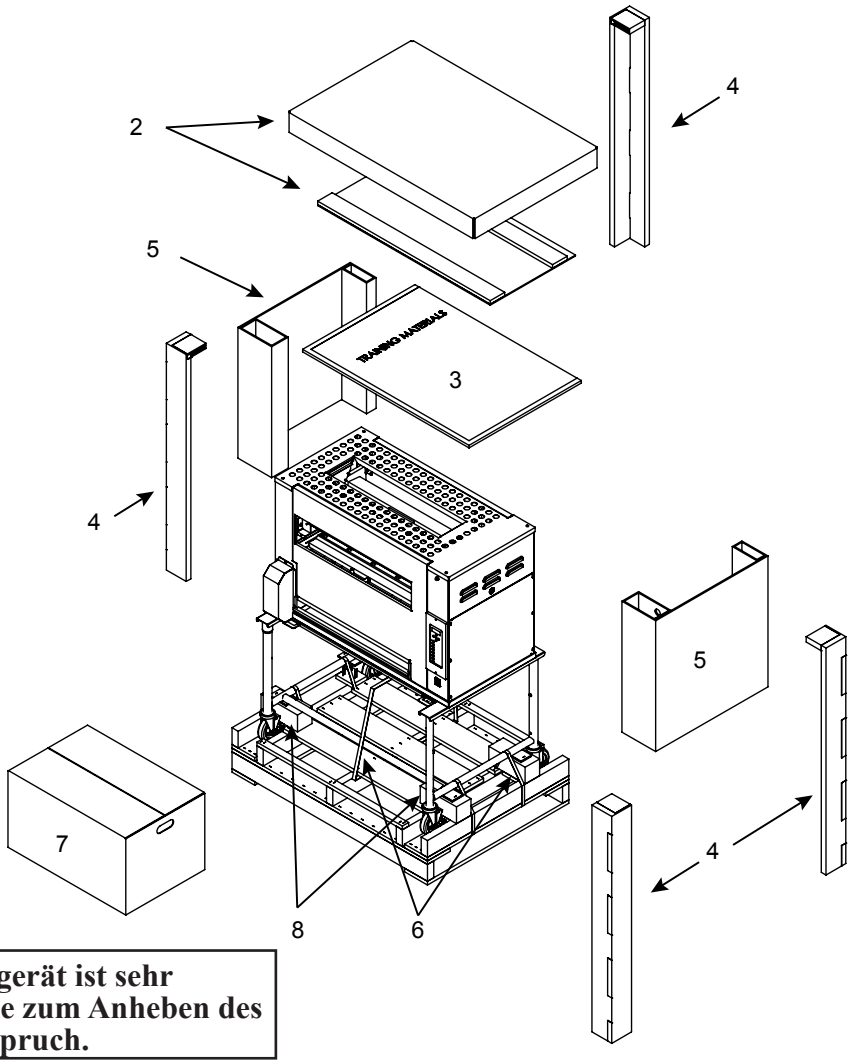


Upozornění: *Gril je velmi těžký!*
Při zvedání použijte adekvátní pomoc.

1. Pomocí pomocného nože odřízněte plastový obal (nezobrazeno).
2. Odstraňte horní lepenku a vnitřní poklop.
3. Odstraňte krabičku se školícím materiálem.
4. Odstraňte lepenku z rohů (4 míst).
5. Odstraňte lepenku na koncích (2 místa).
6. Odstraňte lepící pásky (přeřízněte pomocným nožem nebo nůžkami: 5 míst).
7. Odstraňte z přední části krabičku přípojných součástek a příslušenství.
8. Bezpečně zdvihněte jeden konec grilu a setřepte blok směrem ke středu a pak na strany, abyste ho vyjmuli.
   Opakujte pro zbývající bloky. To umožní kolečkům, aby se dotkla palety.
9. Vyjměte gril z přepravní palety za pomoci 3 lidí, aby usměrňovali a rozložili jeho hmotnost (přibl. 335 liber [152 Kg]). Za pečlivého podpírání grilu ho natáčejte směrem dopředu, dokud přední kolečka nejsou mimo paletu. Zdvihněte gril 6-8 palců nad paletu a pryč z ní a pomalu položte na podlahu, abyste zabránili poškození koleček.
10. Odstraňte ochranné modré pásky z panelů grilu, Zkontrolujte dvakrát, že žádný pásek nezůstal.

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Flexibler Batch-Grill Auspackenanweisungen

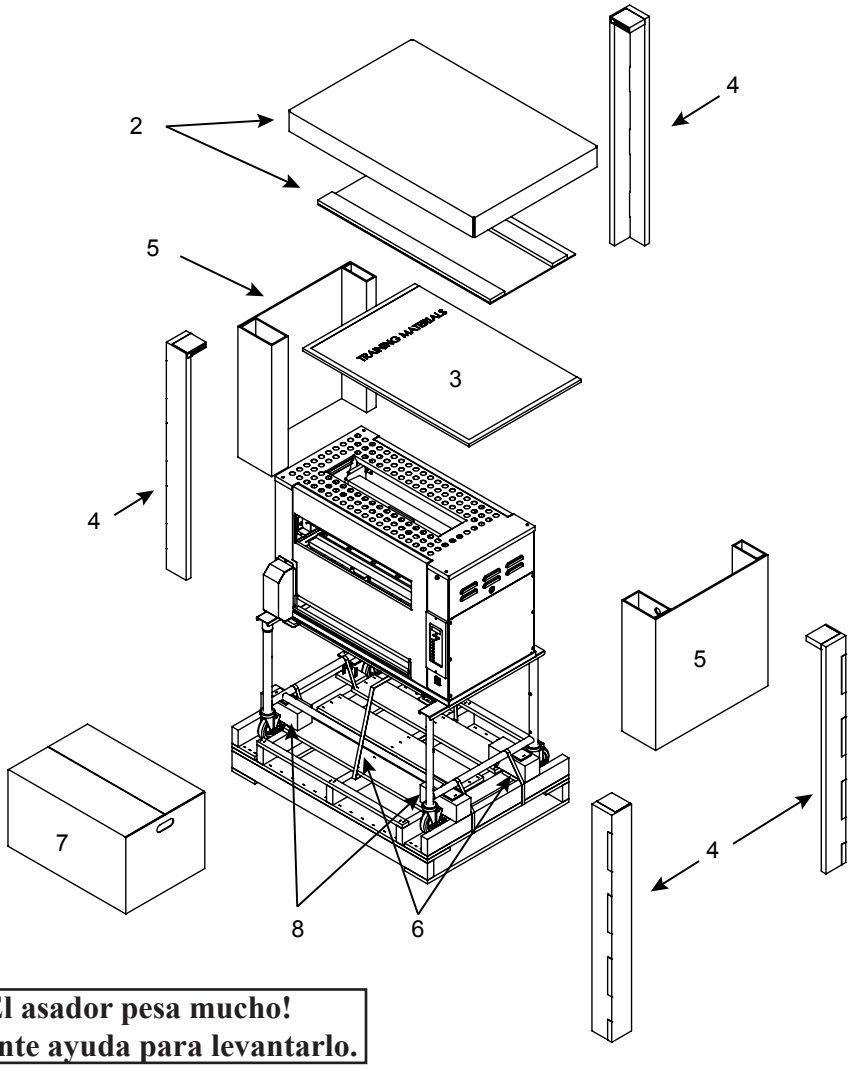


Vorsicht: Das Grillgerät ist sehr schwer! Nehmen Sie zum Anheben des Geräts Hilfe in Anspruch.

1. Schneiden Sie die Verpackungsfolie (nicht abgebildet) mit einem Universalmesser durch.
2. Entfernen Sie den oberen Karton und die innere Kappe.
3. Entnehmen Sie die Schachtel mit dem Schulungsmaterial.
4. Entfernen Sie den Karton von den Ecken (4 Stellen).
5. Entfernen Sie den Karton von den Enden (2 Stellen).
6. Entfernen Sie die Haltebänder (mit einem Universalmesser oder einer Schere: 5 Stellen).
7. Nehmen Sie die Einzelteil- und Zubehörkiste von der Vorderseite ab.
8. Heben Sie das Grillgerät an einem Ende vorsichtig an und klopfen Sie den Block zur Mitte und dann zur Seite heraus. Wiederholen Sie das Verfahren für die anderen Blöcke. Danach liegen die Laufrollen auf der Palette auf.
9. Heben Sie das Grillgerät von der Versandpalette; hierfür sind 3 Personen erforderlich, um das Gewicht des Geräts (ca. 152 kg) entsprechend zu verteilen. Stützen Sie das Grillgerät sorgfältig ab und rollen Sie das Gerät nach vorn, bis die vorderen Laufrollen über die Palette überstehen. Heben Sie das Grillgerät ca. 15 bis 20 cm von der Palette hoch und weg und setzen Sie das Gerät vorsichtig auf den Boden, um die Laufrollen nicht zu beschädigen.
10. Entfernen Sie das blaue Schutzband von den Platten des Grillgeräts und überprüfen Sie, dass keine Schutzbänder am Gerät verbleiben.

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Asador Por Tandas Flexible Desembalar Las Instrucciones

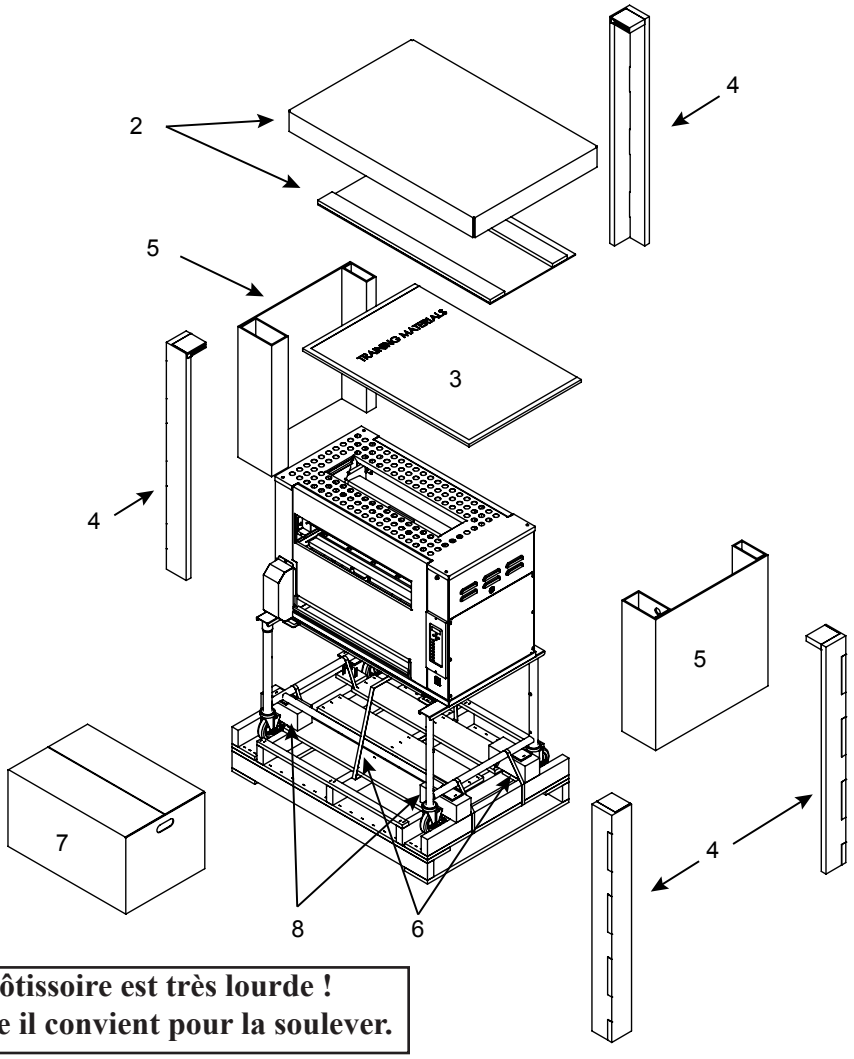


Precaución: ¡El asador pesa mucho!
Disponga de suficiente ayuda para levantarlo.

1. Quite la envoltura de plástico usando un cuchillo utilitario (no se muestra).
2. Quite el cartón superior y la tapa interior.
3. Quite la caja de materiales de capacitación.
4. Quite el cartón de todas las esquinas (4 lugares).
5. Quite el cartón de los extremos (2 lugares).
6. Quite los flejes (córtelos con un cuchillo utilitario o unas tijeras: 5 lugares).
7. Saque la caja de piezas y accesorios de conexión de la parte delantera.
8. Levante un extremo del asador de forma segura y golpee el bloque hacia el centro y hacia un lado para quitarlo. Repita esto para los bloques restantes. Esto permite que las ruedas hagan contacto con la plataforma.
9. Quite el asador de la plataforma de envío con ayuda de 3 personas para guiar y distribuir el peso (aproximadamente 335 lb) de la forma correspondiente. Mientras sostenga el asador con cuidado, hágalo rodar hacia adelante hasta que las ruedas se salgan de la plataforma. Levante el asador 6-8 pulgadas por encima y fuera de la plataforma y colóquelo con cuidado en el suelo para evitar daños en las ruedas.
10. Quite la cinta adhesiva protectora de color azul de los paneles del asador, comprobando que no quede cinta.

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RÔTISSOIRE À FOURNÉES FLEXIBLES
INSTRUCTIONS DE DÉBALLAGE

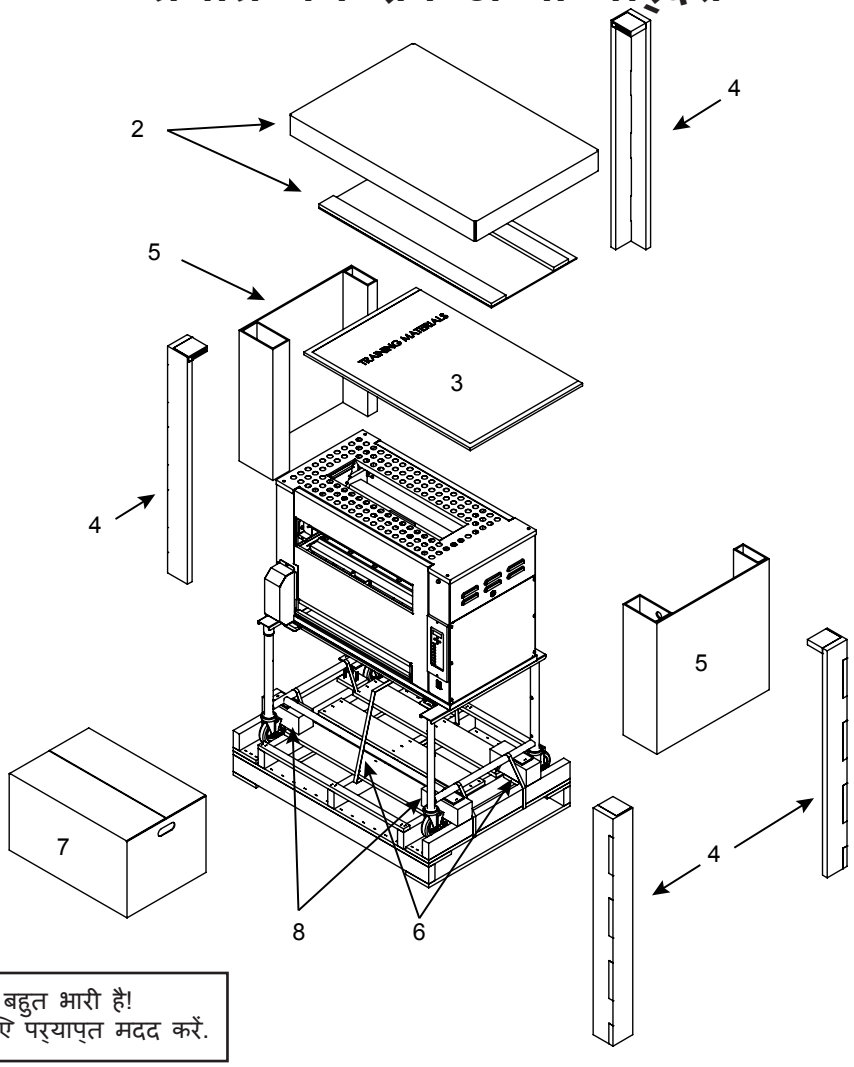


Attention : La rôtissoire est très lourde !
Se faire aider comme il convient pour la soulever.

1. Découper l'emballage plastique (non représenté) à l'aide d'un couteau universel.
2. Retirer le dessus en carton et l'opercule interne.
3. Enlever la boîte contenant la documentation de formation
4. Enlever le carton des coins (4 endroits).
5. Enlever le carton sur les côtés (2 endroits).
6. Enlever le cerclage (en le coupant avec un couteau universel ou des ciseaux : 5 endroits).
7. Enlever la boîte de pièces à fixer et d'accessoires du devant.
8. Soulever un des côtés de la rôtissoire avec prudence puis frapper sur la cale pour la déplacer vers le milieu et latéralement pour l'enlever. Répéter l'opération pour les autres cales. Cela permet aux roulettes de reposer sur la palette.
9. Déposer la rôtissoire de la palette en se faisant aider par 3 autres personnes pour la guider et répartir le poids (152 kg [335 lbs] environ) en conséquence. Tout en soutenant la rôtissoire avec précaution, la faire rouler vers l'avant jusqu'à ce que les roulettes avant ne reposent plus sur la palette. Soulever la rôtissoire de 15 à 20 cm (6 à 8 po) au-dessus et à l'écart de la palette puis la poser sur le sol pour éviter d'endommager les roulettes.
10. Décoller le ruban protecteur bleu des panneaux de la rôtissoire en revérifiant qu'il n'en reste plus.

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लचीले बैच सेब टी वी नरि्देश



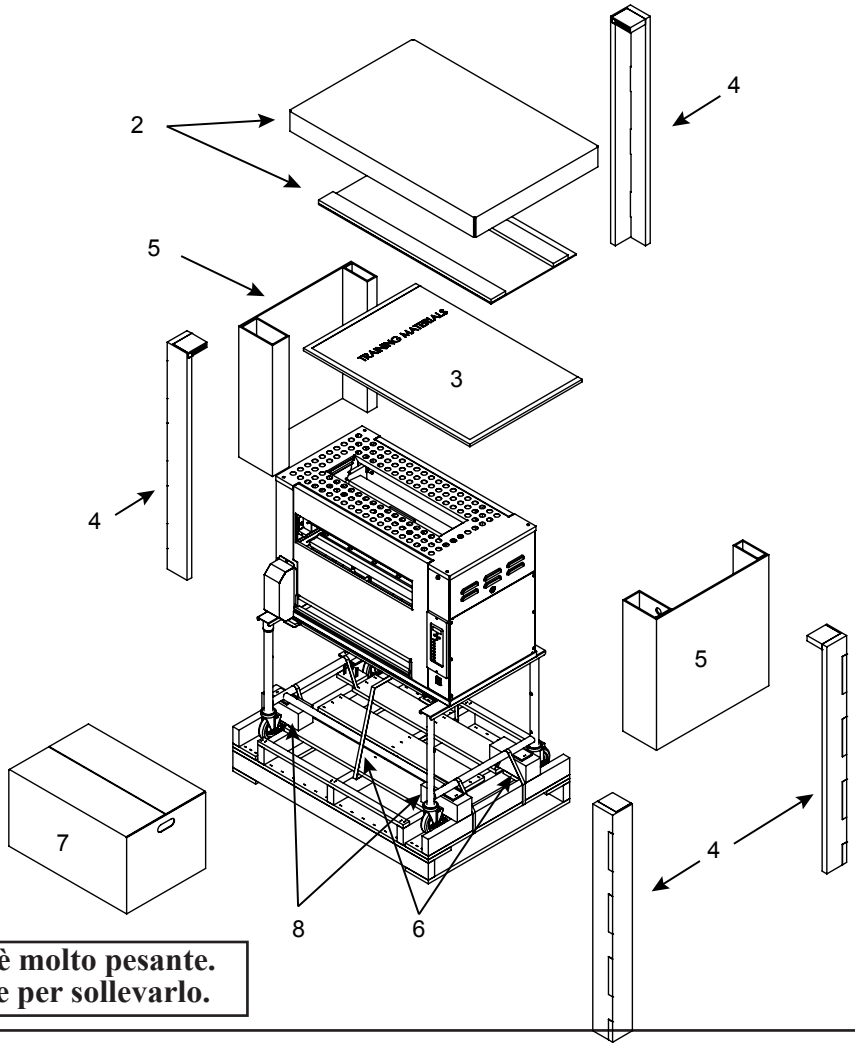
सावधानी: ब्रॉयलर बहुत भारी है!
उठाने के लिए पर्याप्त मदद करें.

1. सामान्य चाकू का इस्तेमाल करें, प्लास्टिक कवर को काटें (दिखाया नहीं गया है)।
2. ऊपरी कार्डबोर्ड और अंदरूनी कैप को निकालें।
3. प्रशिक्षण सामग्री बाक्स को निकालें।
4. किनारों से कार्डबोर्ड निकालें (चार स्थानों से)।
5. सिरों से कार्डबोर्ड निकालें (दो स्थानों से)।
6. बांधने वाली रस्सी हटायें (सामान्य चाकू या कैंची से काटें: 5 स्थानों से)।
7. अटैचेबल पार्ट्स और सहायक सामान (एक्सेसरीज़) के बॉक्स को आगे की और से निकालें।
8. ब्रॉइलर के एक सिरे को सुरक्षापूर्वक उठाएं और फिर निकालने के लिए बीच में और फिर किनारों की ओर हल्के हाथ से धक्का दें।
   बचे हुए ब्लॉक के लिए यही प्रक्रिया दोहराएं। इससे केस्टर पेलट को छूने लगता है।
9. मार्गदर्शन और इसका वजन बांटने के लिए 3 लोगों की मदद से ब्रॉइलर को प्रेषण पेलट से उतारें (लगभग 335 पौंड)। ब्रॉइलर को सावधानीपूर्वक सहारा देते हुए, इसे आगे की ओर तब तक सरकाएं जब तक कि फ्रंट केस्टर पेलट से दूर न हो जाए। ब्रॉइलर को पेलट से 6-8 इंच ऊपर उठाएं और दूर ले जाएं और केस्टर को नुकसान से बचाते हुए इसे धीरे से फर्श पर रख दें।
10. ब्रॉइलर पैनल से नीली रक्षात्मक टेप निकालें, यह दो बार जांच करते हुए कि कोई भी टेप बची न रहे।

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176600H

Istruzioni per il disimballaggio del grill

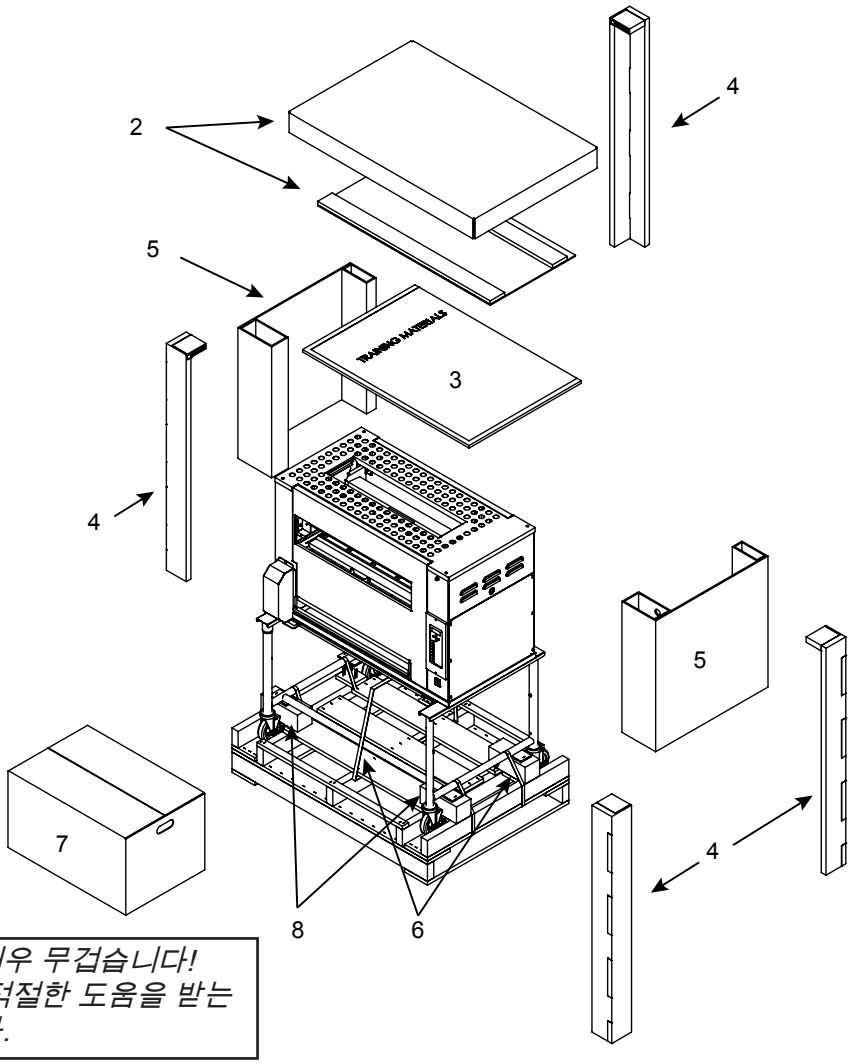


Attenzione: il grill è molto pesante. Farsi aiutare per sollevarlo.

1. Tagliare con un cutter i fogli di plastica (non illustrati) avvolti intorno al grill.
2. Rimuovere il cartone superiore e il coperchio interno.
3. Rimuovere la busta della documentazione.
4. Rimuovere il cartone dagli angoli (4).
5. Rimuovere il cartone dalle estremità (2).
6. Rimuovere le reggette (ce ne sono cinque; tagliarle con un cutter o con le forbici).
7. Rimuovere dalla parte anteriore la scatola delle parti da fissare e degli accessori.
8. Sollevare con cautela un'estremità del grill e spingere il blocco verso il centro e quindi lateralmente per rimuoverlo. Ripetere per i blocchi rimanenti. Ciò permette alle ruote piroettanti di toccare il bancale.
9. Rimuovere il grill dal bancale; occorrono tre persone per guidarne e distribuirne il peso (circa 152 kg) in modo opportuno. Sostenendo con cautela il grill, spostarlo in avanti finché le ruote anteriori non si staccano dal bancale. Sollevare il grill di 15 - 20 cm dal bancale allontanandolo dallo stesso e posarlo delicatamente sul pavimento per evitare di danneggiare le ruote piroettanti.
10. Rimuovere il nastro blu protettivo dai pannelli del grill, verificando che non rimangano pezzi di nastro.

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유연한 배치 굽는 포장 풀기 지침



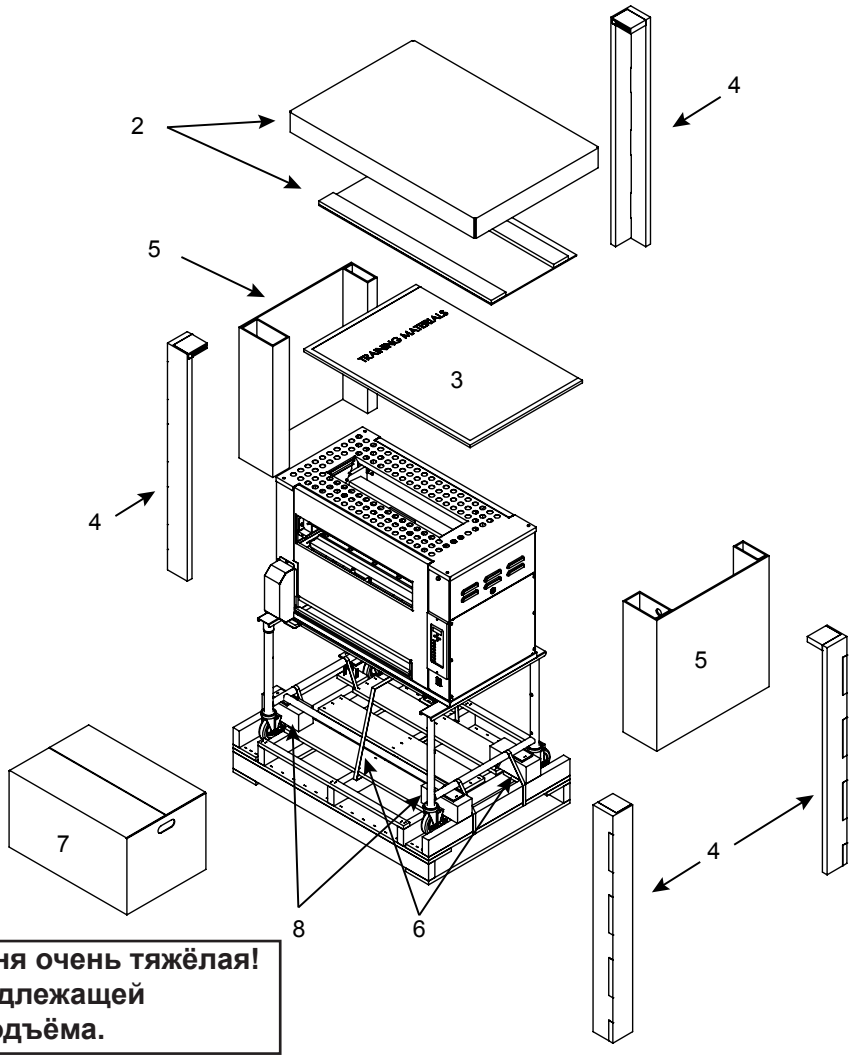
주의: 브로일러는 매우 무겁습니다! 운반할 경우 적절한 도움을 받는 것이 좋습니다.

1. 다용도 칼을 사용하여 플라스틱 포장재를 제거합니다(표시 없음).
2. 상단의 판지와 내부 덮개를 제거합니다.
3. 사용 설명서 상자를 제거합니다.
4. 모서리에서 판지를 제거합니다(4군데).
5. 양 끝에 있는 판지를 제거합니다(2군데).
6. 고정용 끈을 제거합니다(다용도 칼 또는 가위로 절단: 5군데).
7. 앞 쪽에서 분리형 부품 및 부속품 상자를 제거합니다.
8. 브로일러의 한쪽 끝을 조심스럽게 들어올리고 손으로 블록의 가운데 부분을 가볍게 두드린 다음 옆 쪽을 두드려서 빼냅니다.

   이 과정을 반복하여 나머지 블록도 제거합니다. 이렇게 하면 바퀴가 받침대에 닿게 됩니다.
9. 운반대에서 브로일러를 분리합니다. 무게(약 152kg)를 분산하기 위해 일반적으로 3명이 필요합니다. 브로일러를 조심스럽게 지지한 상태에서 앞 바퀴가 받침대 밖으로 나올 때까지 앞쪽으로 굴려서 옮깁니다. 브로일러를 15~20cm 가량 들어올려 받침대에서 분리한 다음 바퀴가 손상되지 않도록 바닥에 천천히 내려 놓습니다.
10. 브로일러 패널에서 파란색 보호 테이프를 제거한 다음 남아 있는 테이프가 없는지 한 번 더 확인합니다.

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Универсальная Жаровня Распаковывать инструкции

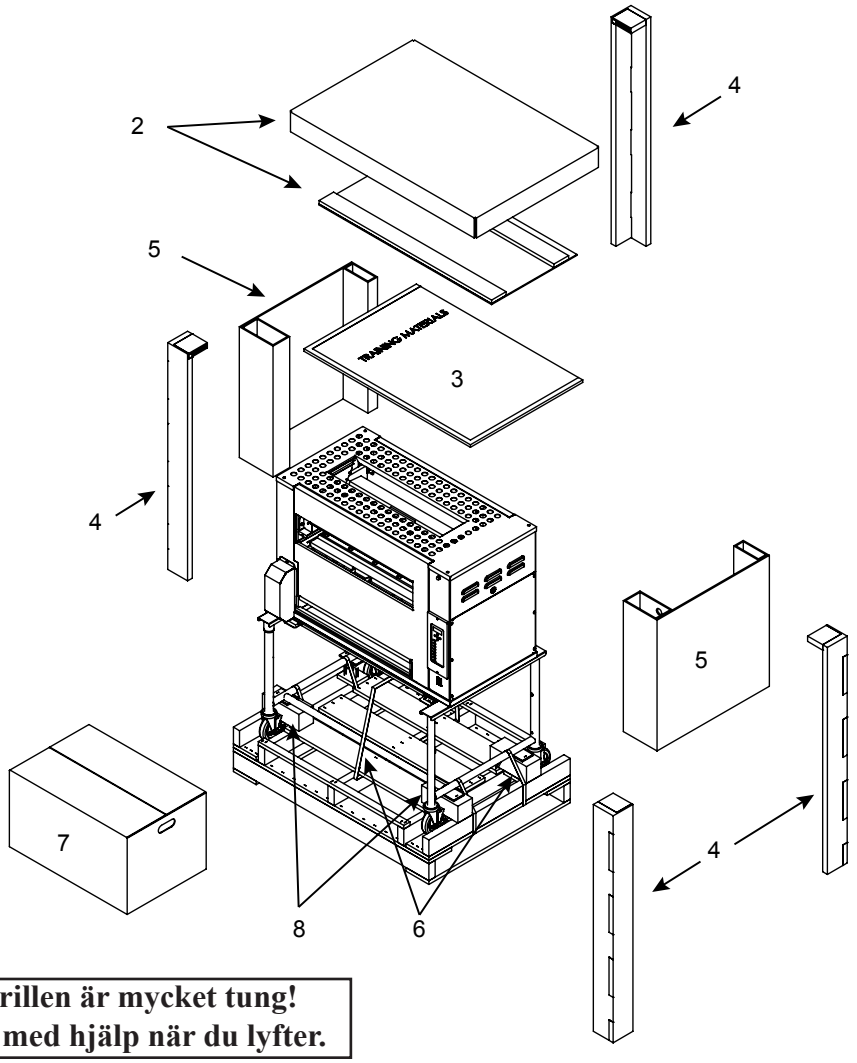


Осторожно: Жаровня очень тяжёлая! Воспользуйтесь надлежащей помощью для её подъёма.

1. Срежьте пластиковую упаковку (не показана на иллюстрации) с помощью обычного ножа.
2. Снимите верхний слой картона и внутреннюю крышку.
3. Снимите коробку с обучающими материалами.
4. Снимите картон с углов (4 точки).
5. Снимите картон с двух сторон (2 точки).
6. Снимите крепёжные полосы (разрежьте обычным ножом или ножницами: 5 точек).
7. Снимите с передней части устройства коробку с отдельно крепящимися деталями и аксессуарами.
8. Осторожно приподнимите один конец жаровни и простучите блок ближе к центру и затем с боков, чтобы вынуть его. Повторите эти действия с остальными блоками. Таким образом колёсики устройства встанут на паллету.
9. Снимите жаровню с транспортировочной паллеты силами 3-х человек, направляя и соответственно распределяя вес устройства (около 152 кг). Осторожно поддерживая жаровню, катите её вперёд, пока передние колёсики полностью не съедут с паллеты. Приподнимите жаровню на 15-20 см вверх и вбок от паллеты и аккуратно поставьте на пол, чтобы не повредить колёсики.
10. Снимите защитную синюю плёнку с панелей жаровни. Убедитесь, что вся плёнка снята.

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Flexibel Batchgrill Uppackning Instruktioner

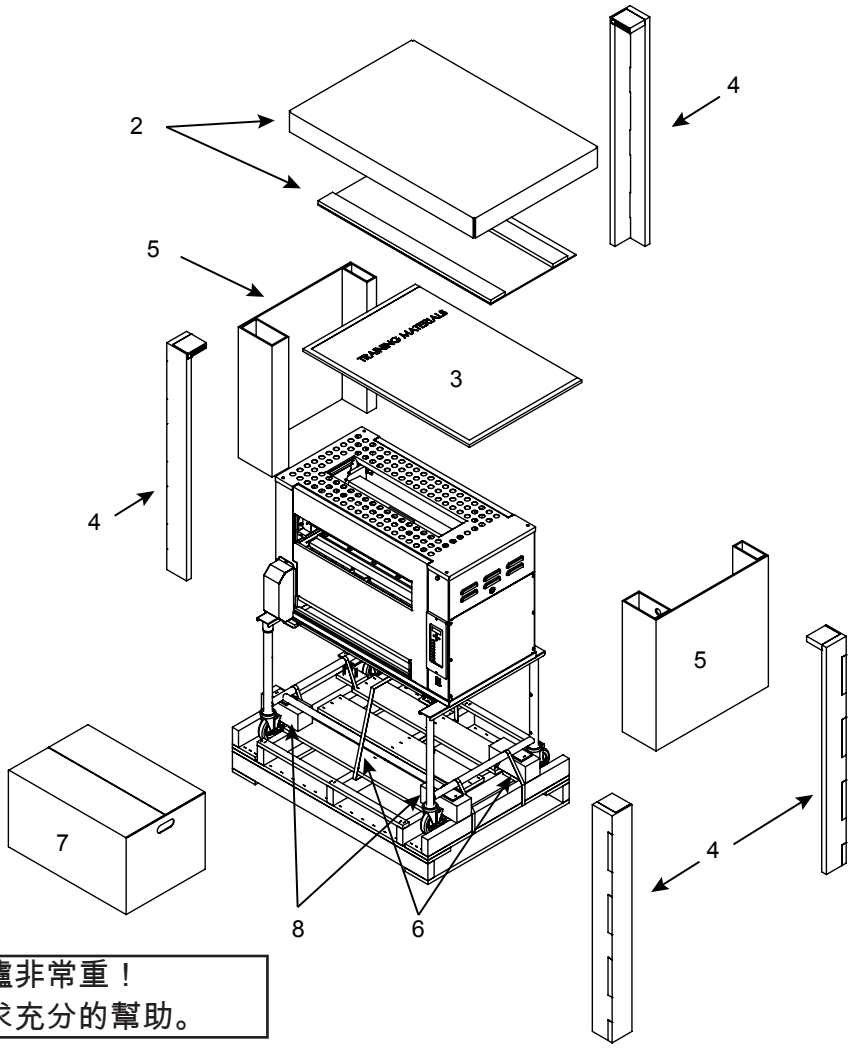


Försiktighet: Grillen är mycket tung!
Skaffa tillräckligt med hjälp när du lyfter.

1. Med hjälp av en vanlig kniv, skär bort omslaget av plast (visas ej).
2. Ta bort den över kartongen och det inre locket.
3. Ta bort boxen med Träningsmaterial.
4. Ta bort pappen från hörnen (4 platser).
5. Ta bort pappen från ändena (2 platser).
6. Ta bort bandremmarna (skär med en vanlig kniv eller sax: 5 platser).
7. Ta bort boxen med tillsättbara deler och tillsatser från framsidan.
8. Lyft säkert grillens ena ände och slå lätt på blocket mot mitten och sedan åt sidan för att ta bort. Upprepa med kvarstående block. Detta gör att styrhjulen nuddar lastpallen.
9. Ta bort grillen från transportpallen med hjälp av 3 personer för att rikta och fördela grillens vikt (ca 152 kg). Medan grillen stöds försiktigt, rulla den framåt tills de främre styrhjulen är utanför pallen. Lyft grillen 15-20 cm ovanför och bortom pallen, och placera varsamt på golvet för att undvika att styrhjulen skadas.
10. Ta bort den blå skyddstejpen från grillens paneler, och kontrollera att det inte sitter kvar någon tejp.

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Flexible Batch Broiler Unpacking Instructions

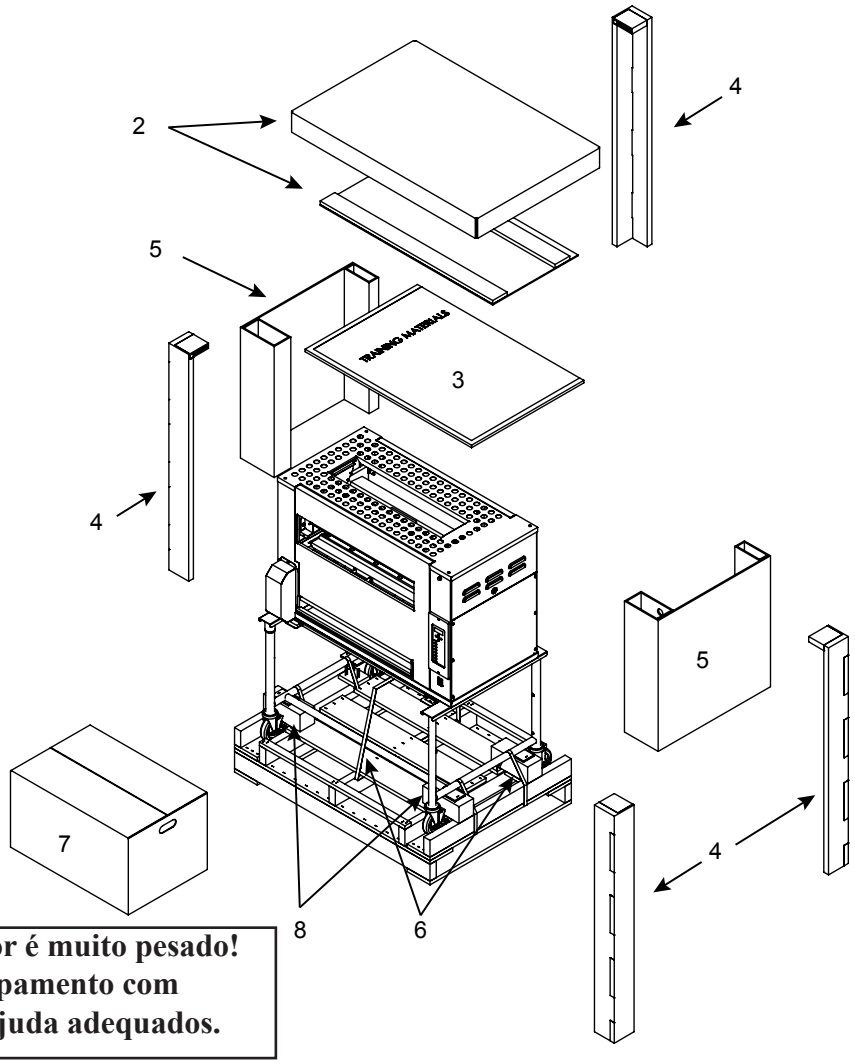


注意：烤爐非常重！
在搬運時請尋求充分的幫助。

1) 使用工具刀割開塑膠包裝（未顯示）。
2) 移除頂部的紙板和內部的填充物。
3) 取出培訓材料盒
4) 移除4個角上的紙板（4個位置）。
5) 移除兩端的紙板（2個位置）。
6) 移除捆綁帶（使用工具刀砍斷或使用剪刀剪斷：5個位置）。
7) 從前端取出零部件和附件盒。
8) 安全地抬起烤爐的一端，向中間輕拍底部木板，然後向側面輕拍，籍此移去木板。對其他部分的底部木板重複此操作。這樣可以使烤爐腳輪接觸到墊板。
9) 將烤爐從裝運墊板上搬下來，大概需要3人，這樣可以引導和分擔其重量（約335磅）。小心扶著烤爐。緩緩向前滾動，直到前端腳輪離開墊板。將烤爐抬高6-8英寸，抬離墊板，然後輕放在地板上，以避免損壞腳輪。
10) 從烤爐面板上移除藍色保護帶，仔細檢查，確保沒有遺留任何帶子。

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Grelha Multiproduto Descompactando Instruções

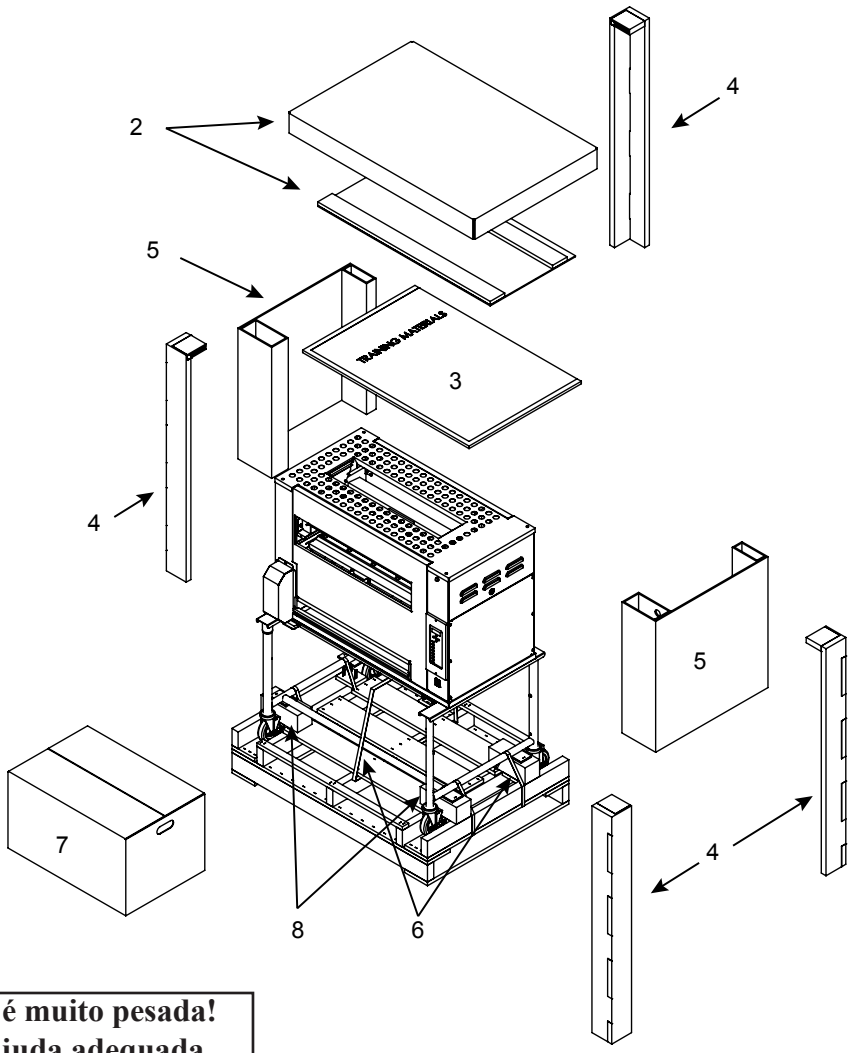


Aviso: O grelhador é muito pesado! Elevar o equipamento com equipamento e ajuda adequados.

1. Cortar o plástico da embalagem (não indicado na imagem) com uma faca industrial.
2. Remover o cartão superior e a tampa interior.
3. Remover a caixa de Literatura Técnica (Training Material).
4. Remover as peças de cartão dos cantos (4 posições).
5. Remover as peças de cartão das extremidades (2 posições).
6. Remover as bandas de fixação (cortar com faca industrial ou tesoura: 5 posições).
7. Remover a caixa de peças soltas e acessórios a partir da frente do equipamento.
8. Elevar uma das extremidades do grelhador (em condições de segurança) e bater no cepo para o centro e depois para os lados para o remover. Repetir esta operação para os outros cepos. Após a remoção dos cepos, os rodízios ficam em contacto com a palete.
9. Remover o grelhador da palete de transporte, com 3 pessoas a guiar e a distribuir o seu peso (cerca de 160 kg / 335 lbs) de modo uniforme. Suportar cuidadosamente o grelhador e rolá-lo para a frente até os rodízios dianteiros ficarem fora da palete. Elevar o grelhador cerca de 15 a 20 cm (6-8 polegadas) fora da palete e colocá-lo cuidadosamente no pavimento, para não danificar os rodízios.
10. Remover a fita de protecção azul das tampas do grelhador, tendo o cuidado de não deixar quaisquer resíduos de fita no grelhador.

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Broiler flexível do grupo que desembala instruções

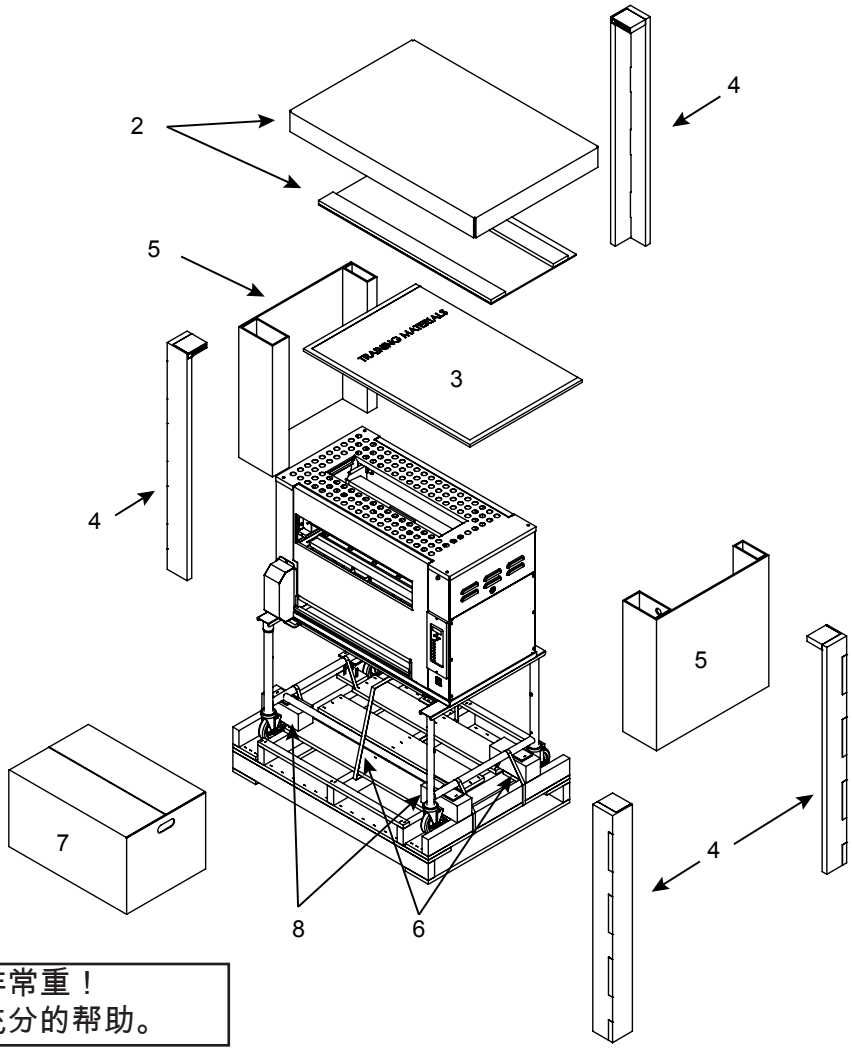


Atenção: A grelha é muito pesada!
Suspenda-a com ajuda adequada.

1. Usando um estilete, corte o envoltório de plástico (não mostrado).
2. Retire o papelão superior e a tampa interna.
3. Retire a caixa com o material de treinamento.
4. Retire os papelões dos cantos (4 lugares).
5. Retire o papelão das laterais (2 lugares).
6. Retire as fitas (corte-as com um estilete ou tesoura: 5 lugares).
7. Retire a caixa de peças e acessórios afixáveis da frente.
8. Levante com segurança uma ponta da grelha, dê uma pancadinha no bloco em direção ao centro e, em seguida, na lateral para removê-lo.
   Repita o procedimento nos outros blocos. Isso faz com que os rodízios encostem no palete.
9. Retire a grelha do palete de transporte (usando
   3 pessoas) para orientar e distribuir o peso (152 kg) igualmente. Levantando a grelha cuidadosamente, role-a para a frente até que os rodízios dianteiros estejam fora do palete. Levante a grelha de 15 a
   20 cm para cima, afastando-a do palete, e coloque-a no chão cuidadosamente para evitar danificar os rodízios.
10. Retire a fita de proteção azul dos paineis da grelha, cuidando para que não fique nada da fita.

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多用途批量烤炉 开箱说明



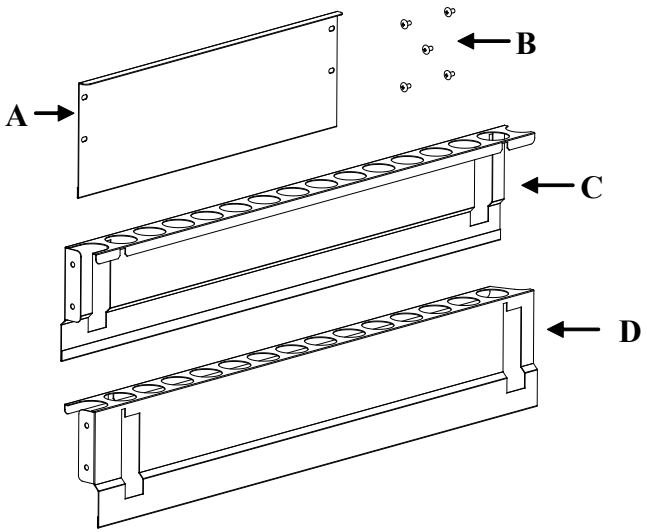
注意：烤炉非常重！
在搬运时请寻求充分的帮助。

1. 使用工具刀割掉塑料包装 (未显示) 。
2. 移除顶部的纸板和内部的填充物。
3. 取出培训材料盒。
4. 移除4个角上的纸板 (4个位置) 。
5. 移除两端的纸板 (2个位置) 。
6. 移除捆绑带 (使用工具刀砍断或使用剪刀剪断：5个位置) 。
7. 从前端取出零部件和附件盒。
8. 安全地抬起烤炉的一端，向中间轻拍底部木板，然后向侧面轻拍，籍此移去木板。对其他部分的底部木板重复此操作。这样可以使烤炉轮脚接触到垫板。
9. 将烤炉从装运垫板上搬下来，大概需要3人，这样可以引导和分担其重量 (约335磅[152千克]) 。小心扶着烤炉。缓缓向前滚动，直到前端轮脚离开垫板。将烤炉抬高6-8英寸，抬离垫板，然后轻放在地板上，以避免损坏轮脚。
10. 从烤炉面板上移除蓝色保护带，仔细检查，确保没有遗留任何带子。

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IR SPLASH SHIELDS KIT INSTRUCTIONS

Flexible Batch Broiler
KIT P/N 175048

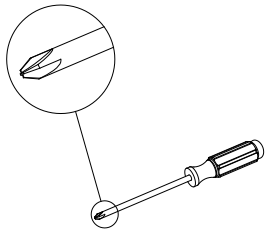


This kit contains:

A) (1) Panel, Splash, End	P/N 175996
B) (5) Screws, 10-24	P/N 0280400
C) (1) Panel, Splash, Rear	P/N 175993
D) (1) Panel, Splash, Front	P/N 175992

Item required for this installation:

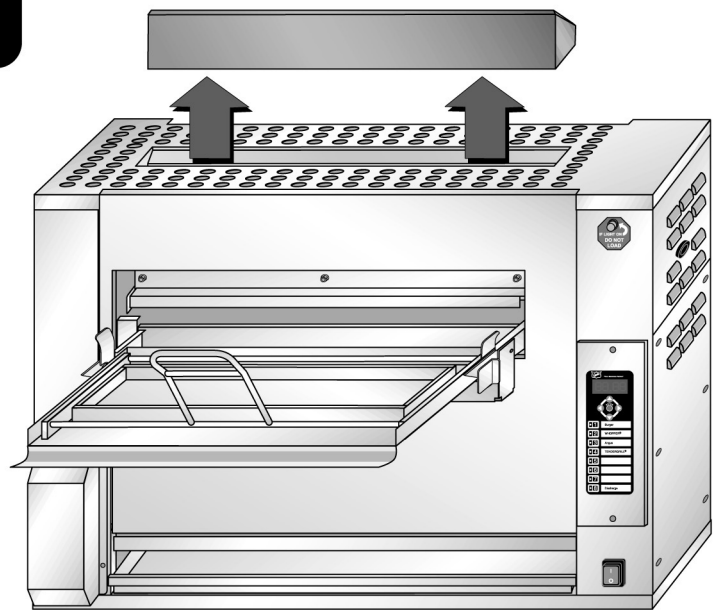
- Phillips screwdriver #2



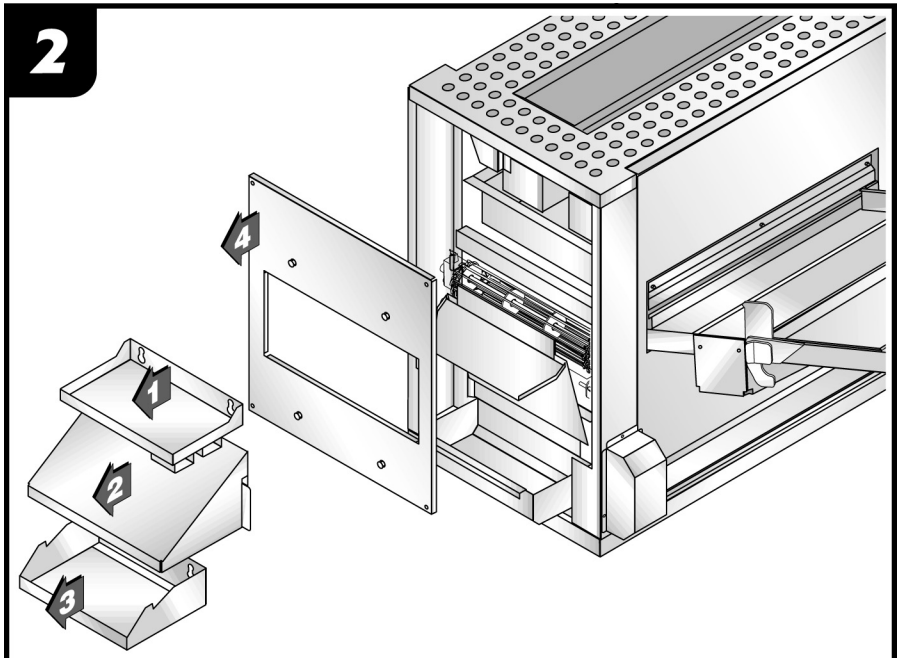
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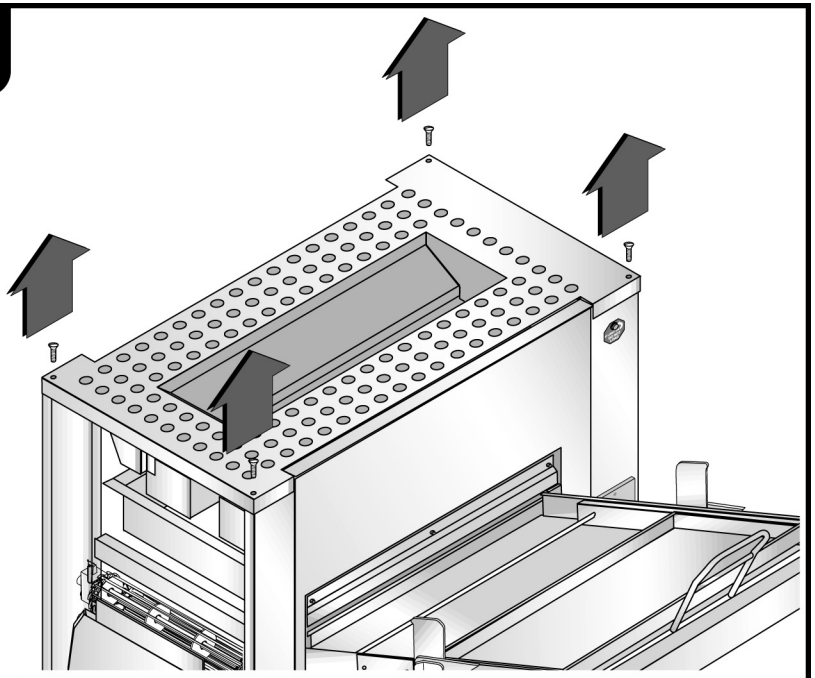
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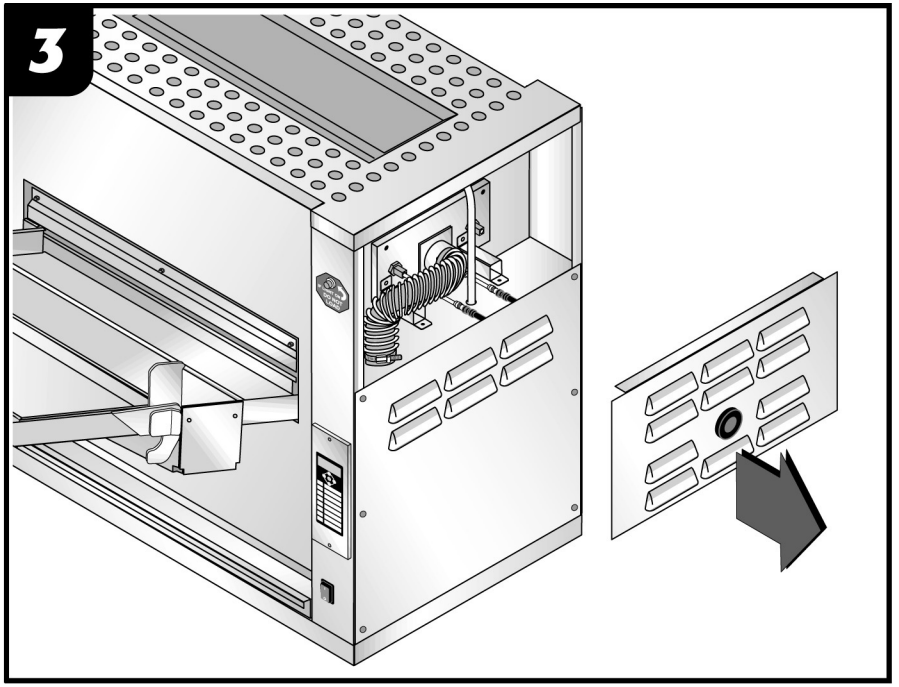
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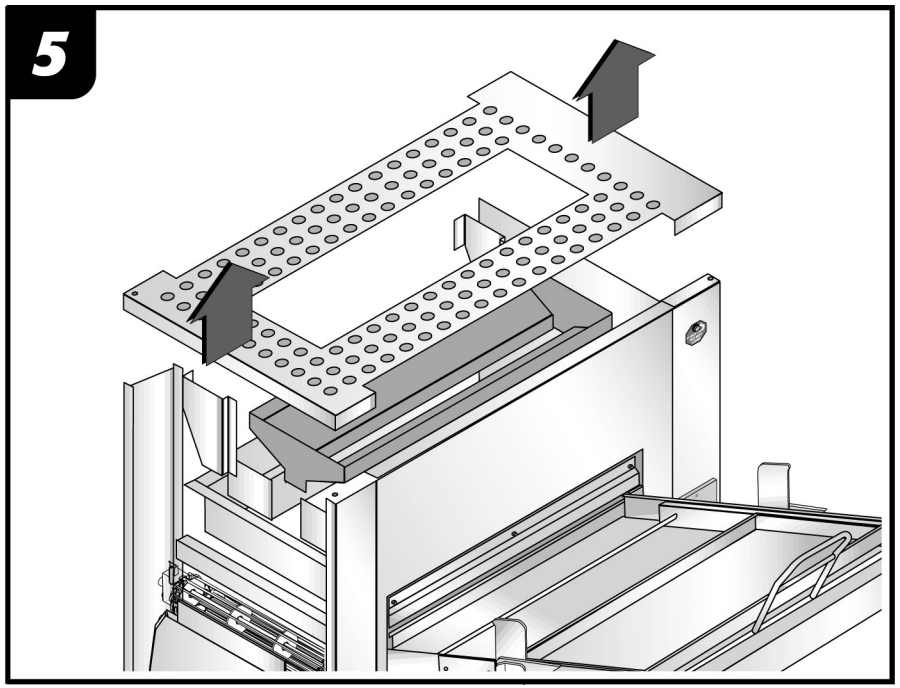
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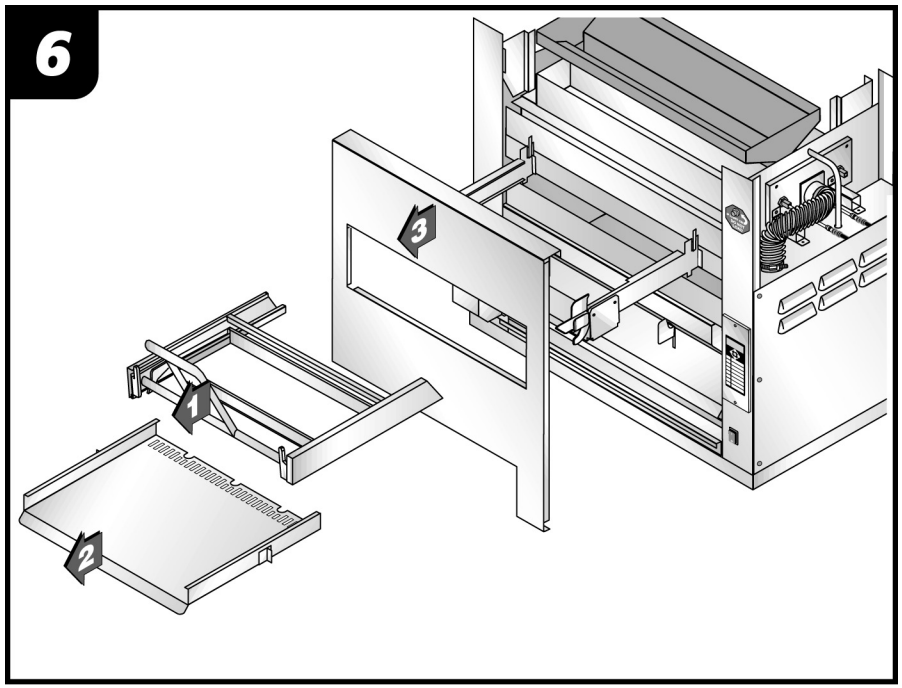
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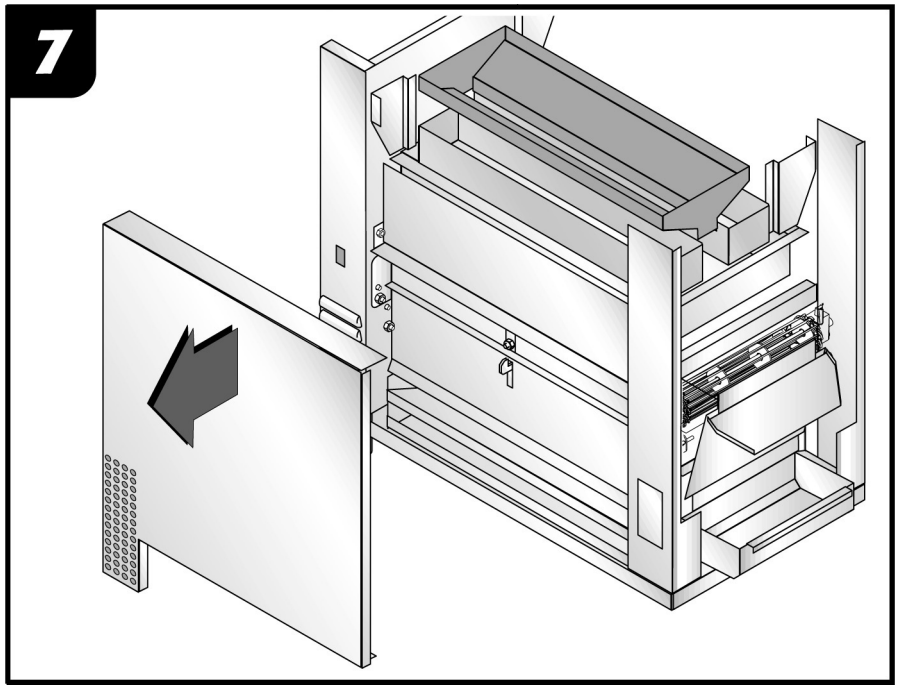
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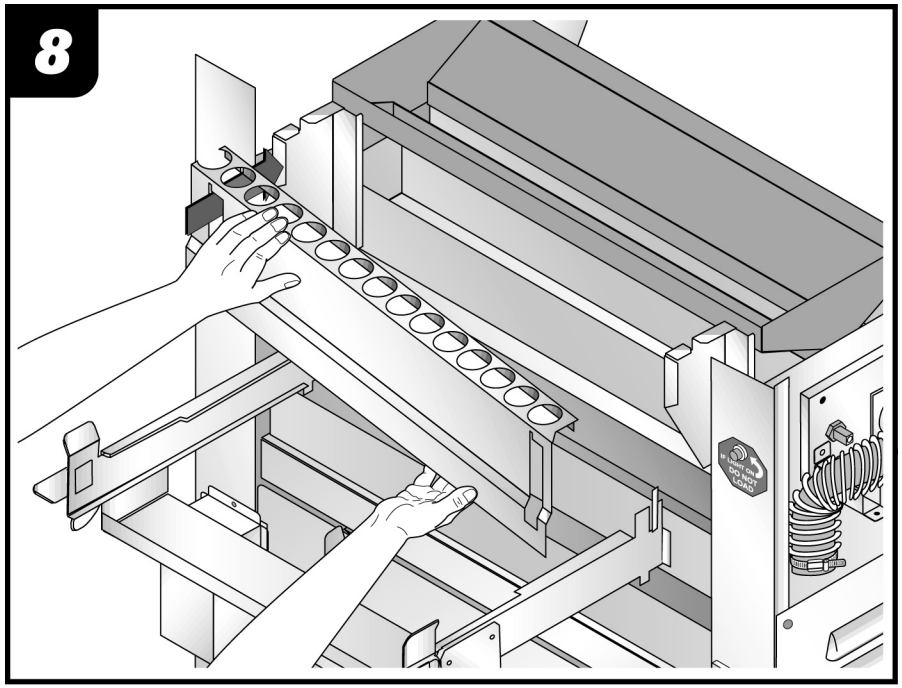
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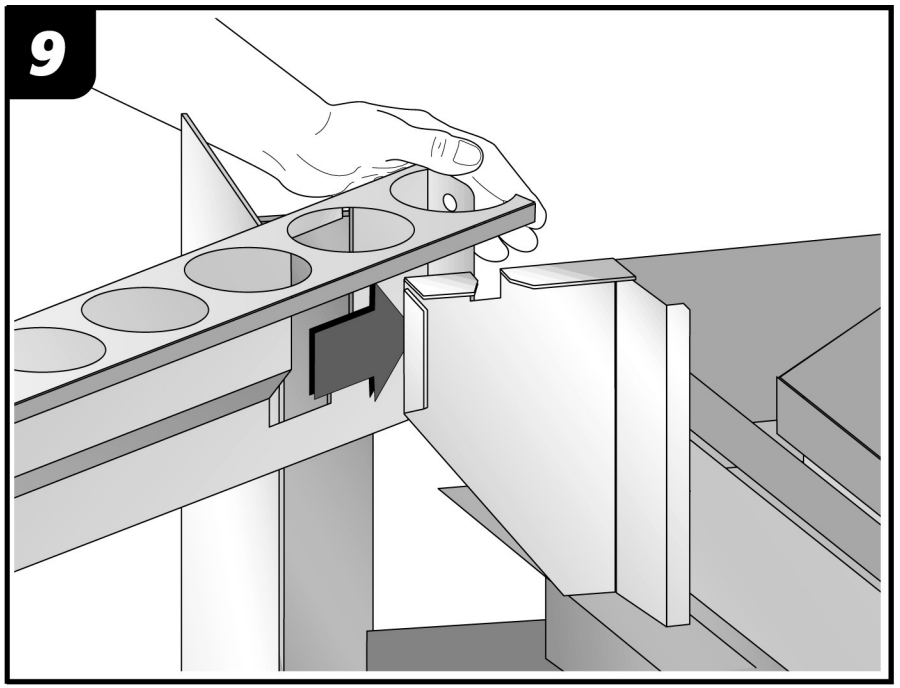
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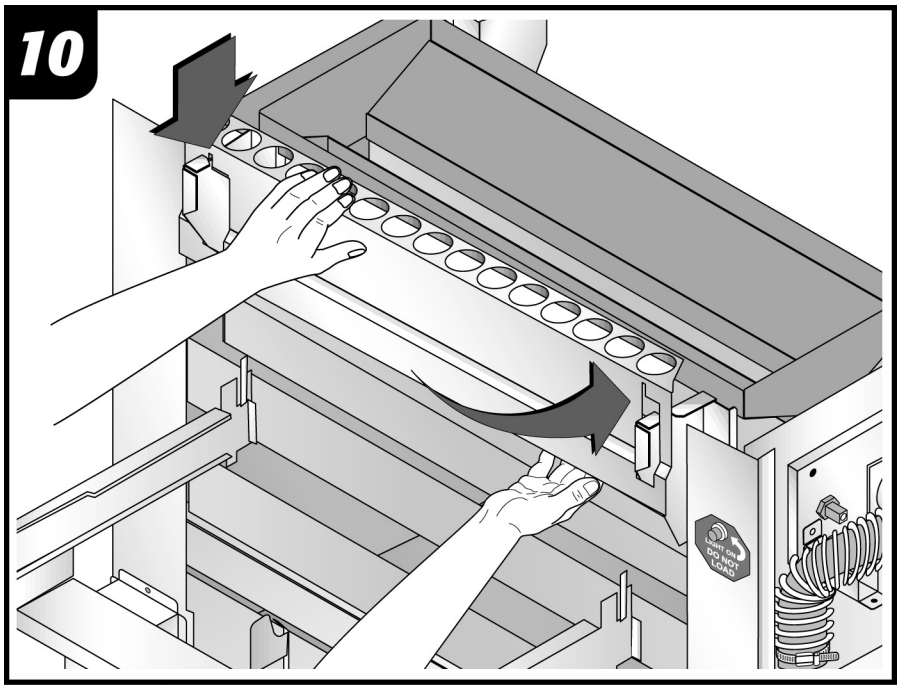
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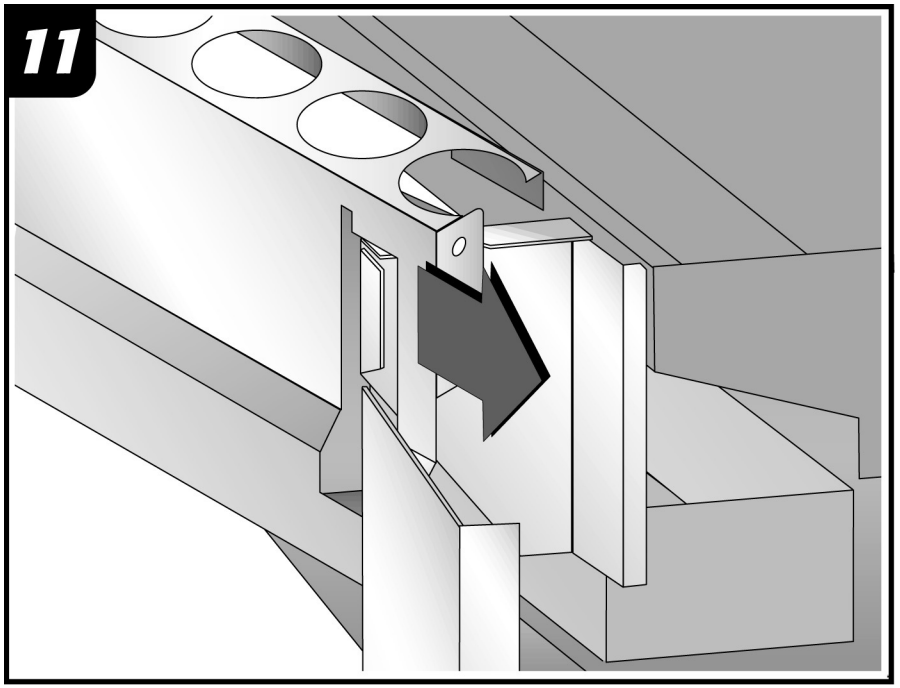
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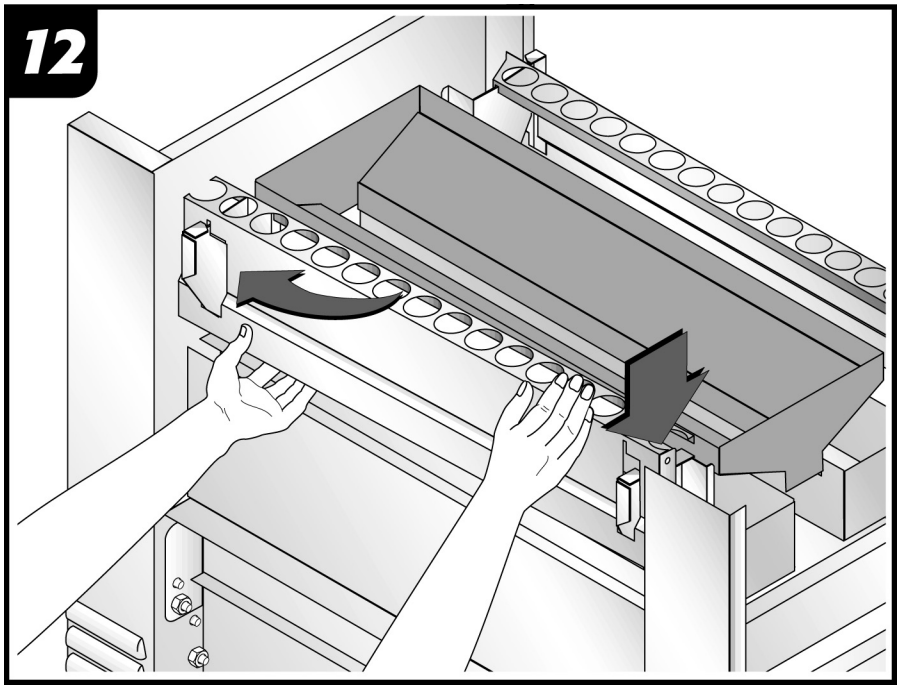
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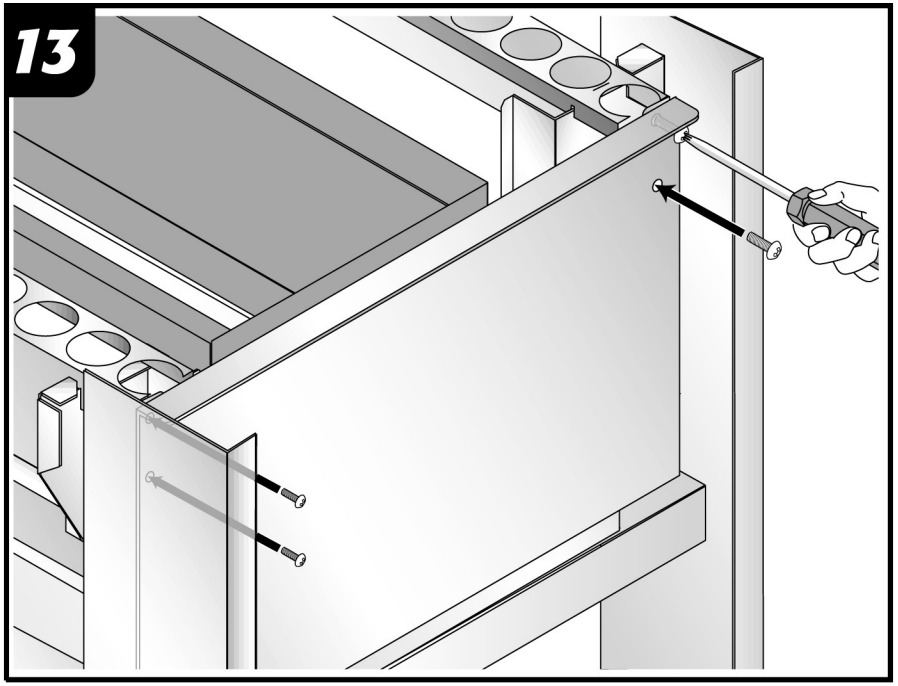
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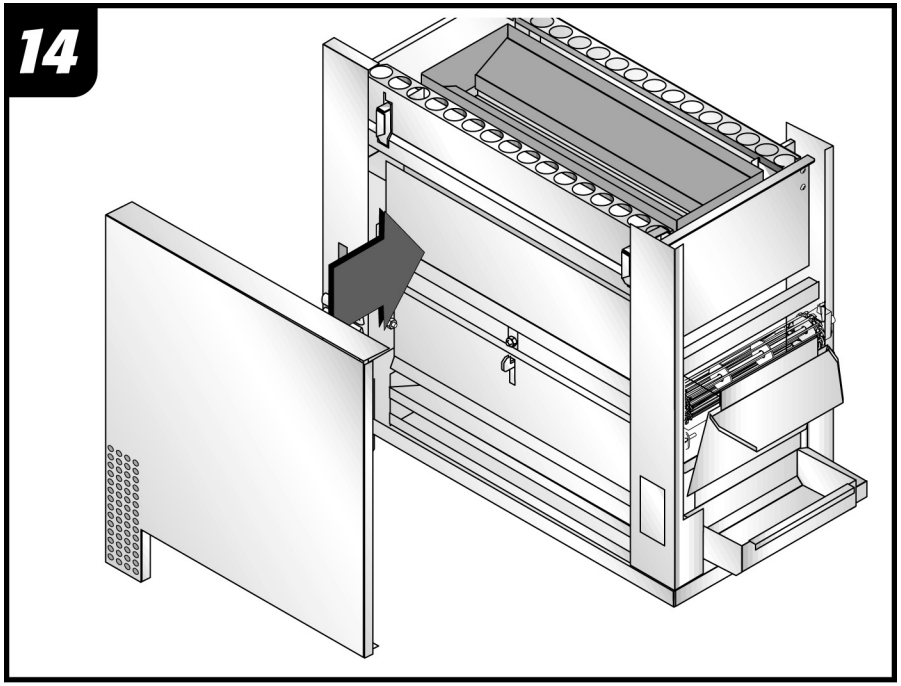
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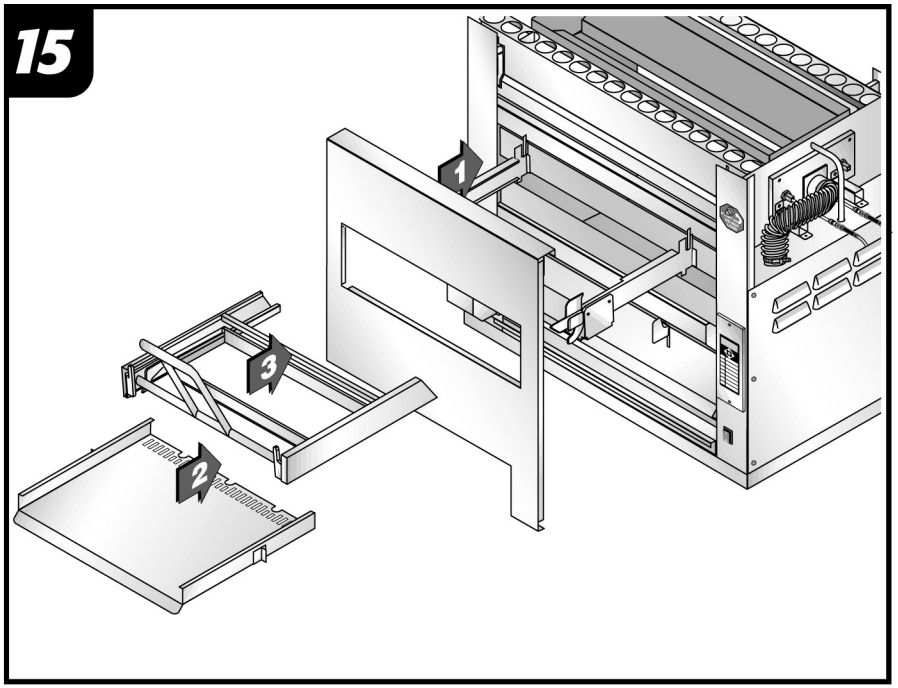
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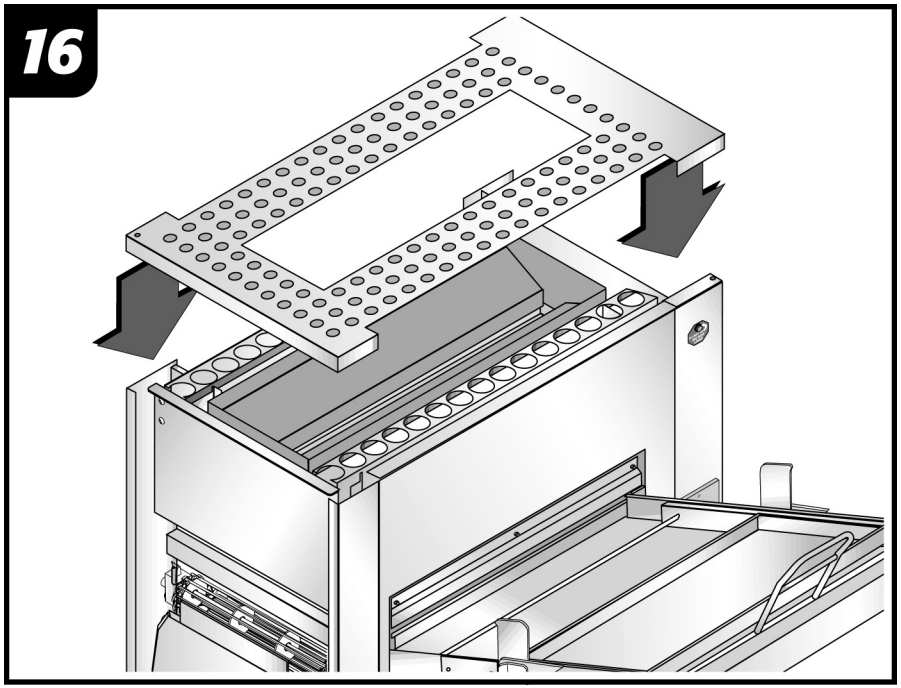
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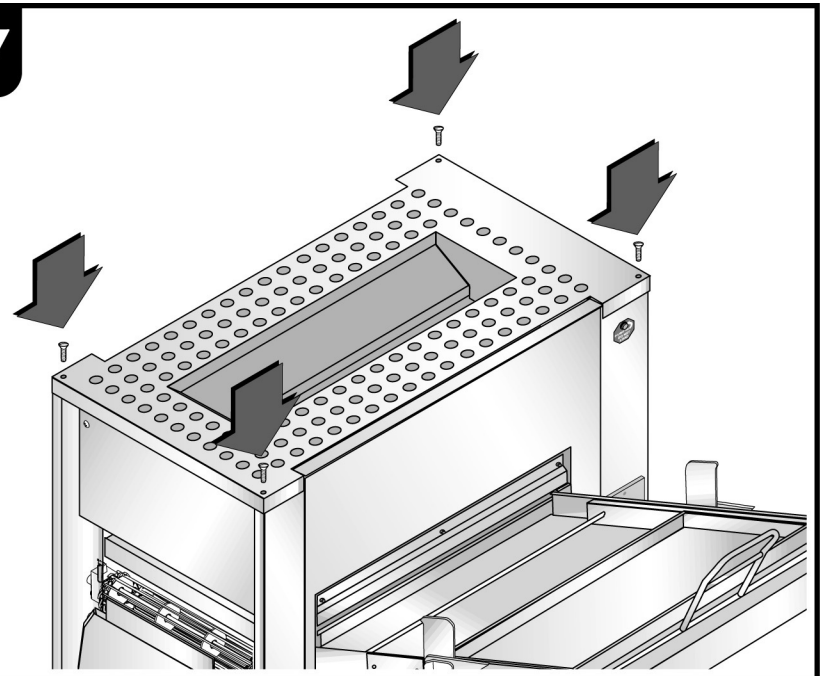
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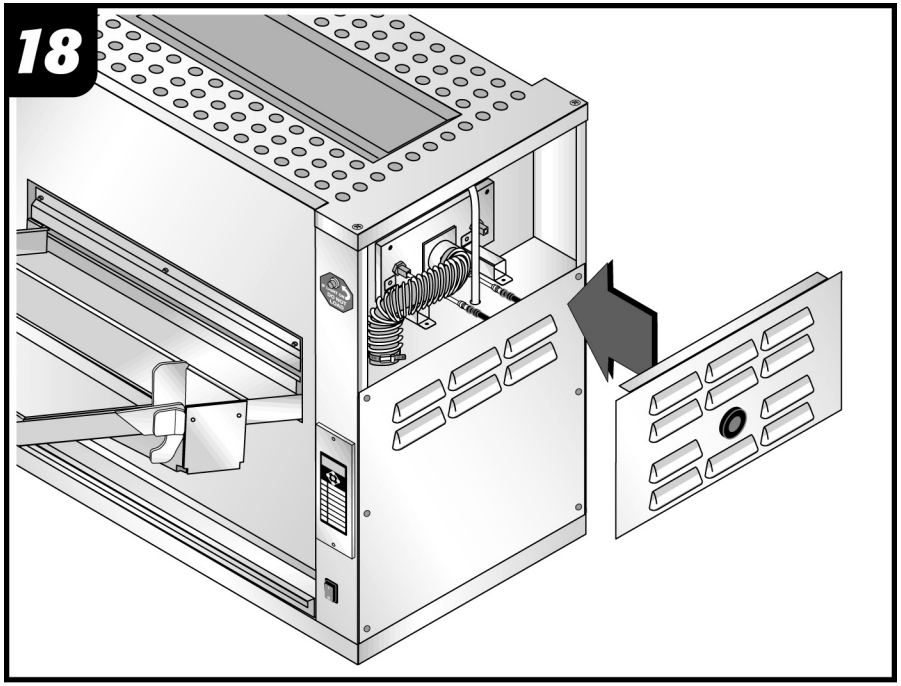
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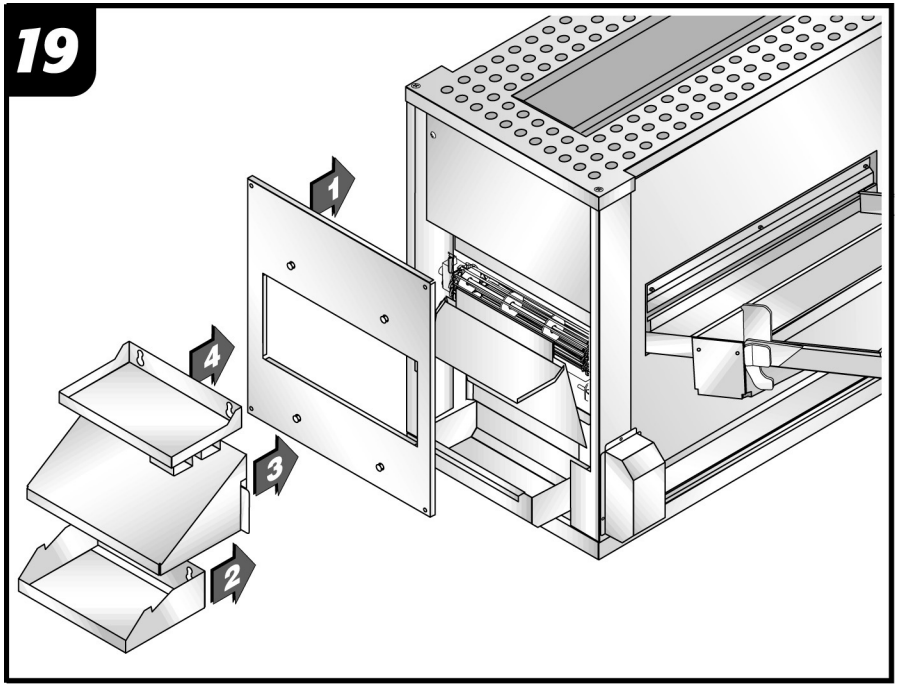
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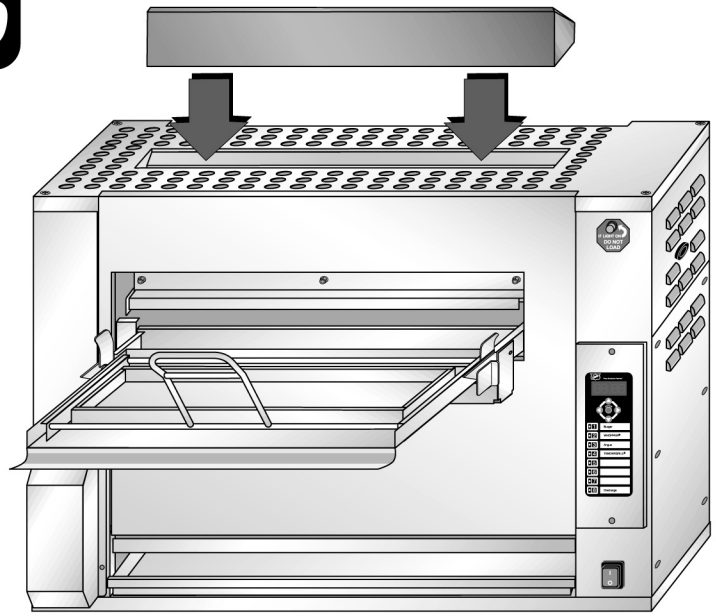
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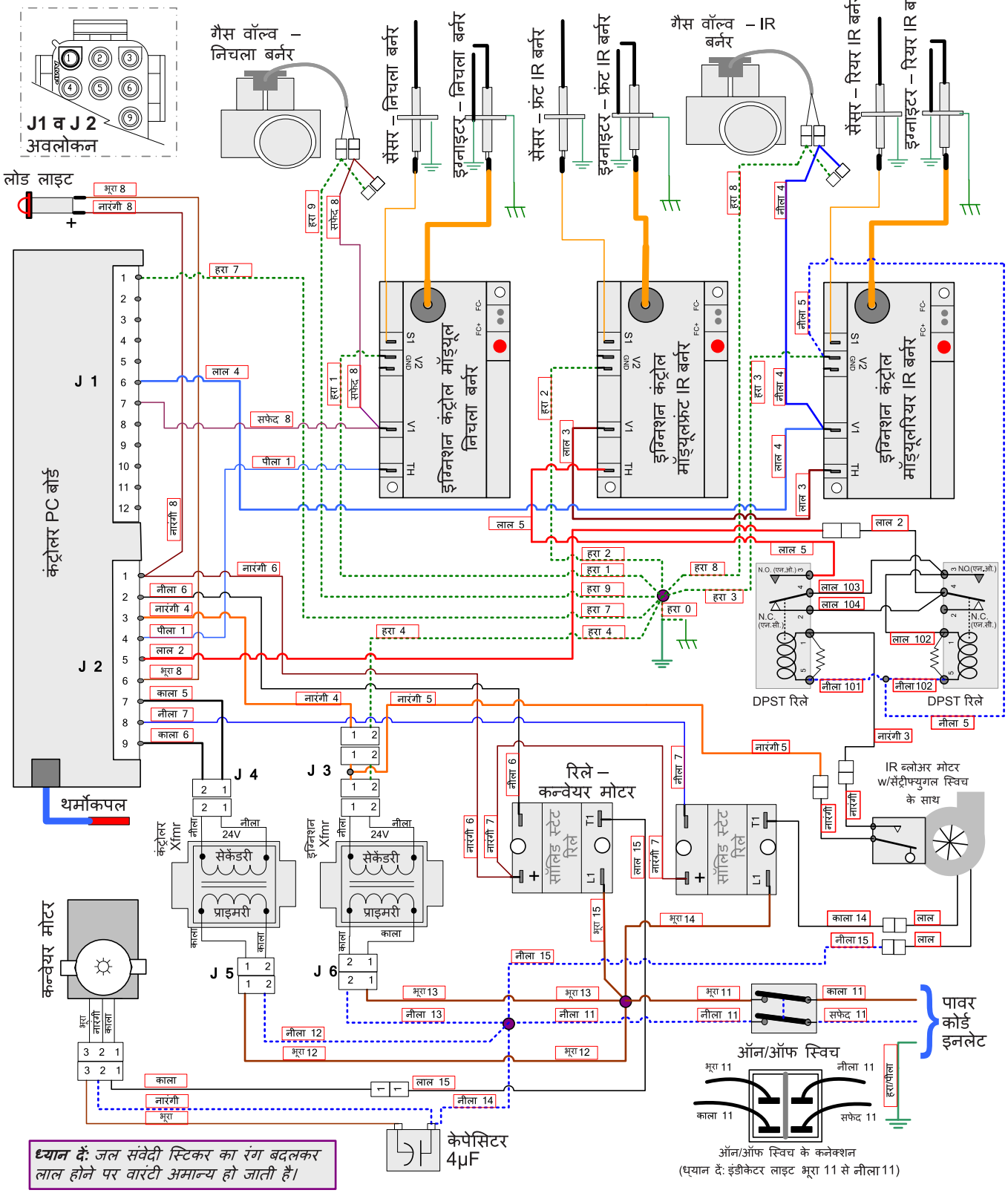
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VI. वायरिंग आरेख

इलेक्ट्रिकल आरेख – CE फ्लेक्सीबल बैच ब्रॉइलर

DUKE MFG. 176605 Rev.E



ध्यान दें: *जल संवेदी स्टिकर का रंग बदलकर लाल होने पर वारंटी अमान्य हो जाती है।*