Model FSH-2-PH
Operation Manual - User Guide

ISO 9001-2015 Registered • Committed to Quality
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Printed in USA, Form 64408 (Rel. Date: Feb.2014, Rev. Date: Feb.2022. Rev. I)

APPROVALS FROM LOCAL AUTHORITIES MUST BE OBTAINED PRIOR TO INSTALLATION

- Provide the following information to the appropriate code officals, as required:
  - Ventless Recirculating Hood Product Information Sheet
  - Cooking appliance Product Information Sheet
  - Site Architectural Plans

- If code officials deny the plan due to Ventless Recirculating Hood concerns, please contact ***Giles Technical Service*** at ***800.554.4537*** or email ***services@gfse.com***. Please have pertinent information available relating to the denial, including the code official's contact information (name, phone number, email address).

Responsive. Reliable.

LIMITED WARRANTY

- Subject to the terms and conditions of this Limited Warranty as herein stated, all Giles Enterprises Inc. (hereafter referred to as *"Giles"*) food service equipment and parts purchased new from an authorized *Giles* dealer/distributor are warranted as to defects in material or workmanship for a period of twenty-four (24) months from the date of installation, provided, however, that with regard to labor costs in connection with this warranty, see below. Installations must be performed by a qualified kitchen equipment service company in accordance with all applicable codes and/or regulations in the jurisdiction where installed. Limited warranty coverage is extended only to the original owner and is void if the unit is resold.

- During the Limited Warranty period, *Giles* will replace or recondition, at its factory, any part(s) of this unit which *Giles* inspectors judge defective, provided the unit has been properly installed, subjected to normal usage, and operated and maintained in accordance with specified procedures. This Limited Warranty does not cover cosmetic damage, and damage due to acts of God, accident, misuse, alteration, negligence, abuse, or use of poor repair methods. All parts replaced under this Limited Warranty carry only the unexpired term of this Limited Warranty. Limited Warranty service may be furnished only by an authorized *Giles* equipment service company.

- If Limited Warranty service is requested, *Giles* will dispatch factory-authorized service representatives to inspect, repair, recondition, or replace units of its manufacture with such labor being rendered without cost to owner for twenty-four (24) months from the date of installation. Otherwise, service, including labor and transportation charges or other expenses, in connection with the removal or installation of any part or parts supplied under this Limited Warranty, are specified on the original sales contract between the purchaser and the authorized *Giles* service representative.

- **Failure to use Giles OEM replacement parts and Giles OEM filters may void this Limited Warranty.**

- *Giles* reserves the right to modify or redesign its equipment and/or parts in any way without obligation to provide such improvements or enhancements to such equipment or parts previously purchased.

- *Giles* makes no further warranties, express or implied, including any implied warranty of merchantability or fitness for a particular application, and has no other obligation or liability not specifically stated herein.

- Repair or replacement as provided under this Limited Warranty is the exclusive remedy. *Giles* shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on this product, except to the extent prohibited by applicable law. Any implied warranty of merchantability or fitness for a particular purpose on this product is limited in duration to the duration of this limited warranty.

- Used *Giles* food service equipment or parts, or *Giles* food service equipment or parts not purchased from an authorized *Giles* dealer/ditributor, carry no warranties, express or implied.

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Safety Overview:

The information contained in this manual has been prepared to describe the proper procedures for safely installing, operating and maintaining ***Giles Food Service Equipment***.

Throughout the manual, safety precautions are clearly identified and will immediately precede the procedures or processes to which they apply. Suggested, recommended, or other noteworthy information is identified as ***NOTES***, or will be noted as ***IMPORTANT!***. Additionally, certain words are used to indicate specific meaning, or to add emphasis as follows:

Shall: understood to be mandatory.
Should: understood to be advisory.
May: understood to be permissive.
Will: indicates occurrence of a future event or condition.

Hazard Alert Symbols are used in conjunction with the words ***DANGER***, ***WARNING***, or ***CAUTION***, to alert users to potential personal injury hazards and/or poor operating practices. These will immediately precede precautionary measures pertaining to avoiding such hazards or practices. Adhere to all information following these symbols to avoid possible personal injury, or even death, and damage to equipment or property. ***Failure to do so may void the factory warranty***.

This product can expose users to chemicals including lead, nickel, aluminum, brass, carbon, copper or BPA which are known in the state of California to cause cancer, birth defects and other reproductive harm. For more information go to: www.p65warnings.ca.gov.

DANGER

Indicates an imminently hazardous situation which, if not avoided, ***will*** result in serious personal injury, even death.

WARNING

Indicates a potentially hazardous situation which, if not avoided, ***could*** result in serious injury, even death.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, ***may*** result in minor to moderate injury. This notification is also used as an alert to unsafe practices.

CAUTION

When used without a safety alert symbol, indicates a potentially hazardous situation which, if not avoided, ***may*** result in equipment and/or property damage, and may void the factory warranty.

NOTE or IMPORTANT!
Identifies suggested, recommended, or other important information.

Specific Safety Precautions:

For your safety, please observe all the following precautions when operating or servicing this *GILES* food service equipment. Adhering to the following important safety information will help to prevent personal injury and/or damage to the equipment or property.

⚠ DANGER

- Before cleaning or performing maintenance, place power switch in the **[OFF]** position and remove all power from the appliance by unplugging power cord or turning **OFF** breaker in the electrical panel supplying the unit.
- When replacing filters, failing to place ***power switch*** in the **[OFF]** position, could result in electrical shock and/or serious personal injury.
- ***DO NOT*** wash down interior or exterior of hood with water from a spray hose.
- Failure to comply with **DANGER** notices will result in serious injury, even death, damage to equipment and/or property and may void the factory warranty.

⚠ WARNING

- **Ventless recirculating hoods are *NOT* suitable for every commercial food service application. Failure to fully comply with all of the site requirements and installation limitations as outlined in the *GFSE Hood Approval Letter and this Manual*, can result in poor or highly unsatisfactory performance.**
- ***DO NOT* use a ventless recirculating hood with any gas-fired cooking appliance due to high potential for inhalation hazard due to carbon monoxide build-up in the kitchen area. Hood is approved ONLY for use with electrically heated appliances.**
- Prior to installation, consult a qualified electrician to ensure that installation complies with all electrical requirements and codes.
- Check the rating label on the unit to determine the proper required power supply. Always consult with an electrician, or other qualified service technician, to ensure that circuit breakers and wiring are of sufficient rating and gauge to power the hood (wiring diagram is provided) and the associated cooking appliance. **All equipment must be installed and electrically grounded in accordance with local code, or in the absence of local code, in accordance with the National Electrical Code, NFPA 70.** Improper grounding may result in electrical shock to users.
- Improper installation, alterations to the unit, or improper service/maintenance could result in serious injury, even death; equipment and/or property damage; and will potentially void the factory warranty.
- ***DO NOT*** use or store flammable liquids, or materials that produce flammable vapors, in the vicinity of this or any other appliance!
- Failure to comply with **WARNING** notices could result in serious injury, even death; damage to equipment and/or property; and will potentially void the factory warranty.

Specific Safety Precautions:

⚠CAUTION

- Exercise care when uncrating and removing the unit from shipping pallet. The unit is top-heavy which presents a tipping hazard ... extreme care must be taken when moving it into position.
- Once located, be sure unit is properly leveled and anchored.
- **DO NOT** operate the appliance, unless you fully understand the function of all components and all operating procedures (refer to ***Section 3***). After reading and fully understanding information in ***Section 3***, closely follow the instructions presented in this Manual to avoid equipment damage or malfunction.
- The appliance is not intended to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given adequate instruction and/or supervision concerning use by a person responsible for their safety.
- When working in a kitchen environment, take necessary precautions to avoid injuries from **HOT** cooking appliances, utensils, tools, etc. As applicable, always wear personal thermal protection, such as oven mitts or gloves, when handling hot pans, utensils or foods.
- Failure to comply with **CAUTION** notices may result in minor to moderate personal injury, damage to equipment or property, and potentially void the warranty.

CAUTION

- Some components and controls on panels are impact-sensitive. To avoid damage and maintain proper operation, exercise care when moving items and working near the hood.
- Handle the Electronic Air Cleaner (E.A.C.) cell carefully. ***DO NOT*** bend the collection plates (fins) or break the ionizer wires, as this will significantly reduce the performance of the air cleaning system and can eventually cause deactivation of power supplying the fryer beneath hood.
- After cleaning it, ***DO NOT*** attempt to dry the E.A.C. cell by installing it in hood and running the blower. ***NEVER PLACE A WET E.A.C. CELL INTO THE HOOD,*** **doing so can potentially damage the system and cause improper operation. Such damage is *NOT* cover by the factory warranty**.
- When cleaning the appliance:
  - **DO NOT** steam clean hood.
  - **DO NOT** clean with products containing chlorine, or other corrosive chemicals.
  - **DO NOT** use abrasive products, steel wool or scouring pads.
  - **DO NOT** use oven cleaner products.
- ***DO NOT*** alter, add attachments, or otherwise modify this equipment! ***DO NOT*** attach any type of ductwork extensions to the hood exhaust in an attempt to redirect airflow.
- Failure to comply with **CAUTION** notices may result in damage to equipment or property. Such damages are ***NOT*** covered by the factory warranty.

Specific Safety Precautions:

NOTE:

- Comply with all appropriate state and/or local heath regulations regarding cleaning and sanitization of any food service equipment.
- To clean difficult surface areas, having excessive build-up of grease residue, *GILES* recommends using a mild, biodegradable, non-toxic degreasing cleaner such as ***Simple Green® Crystal Foaming Spray Degreaser/Cleaner***.
- *GILES* assumes no responsibility in regard to code compliance for installation and use of ventless recirculating ventilation equipment. The customer is responsible for obtaining all of the necessary approvals from ***Authorities Having Jurisdiction (AHJ)*** concerning use of this equipment.

1. Introduction

Thank you for selecting the *GILES* Free Standing Ventless Recirculating Hood, manufactured by Giles Enterprises, Inc., Montgomery, Alabama (USA), hereafter referred to as *"Giles"*. Giles' Ventless Hood technology is the result of extensive research, development and engineering. Every unit is thoroughly inspected and tested prior to shipment to ensure that it will operate flawlessly when installed. With proper care and maintenance the equipment should provide years of trouble-free service.

The hood is listed for use with fryers & pressure fryers, to remove of grease-laden cooking vapors from the air, as well as to help control unwanted odors which may be generated while cooking. It utilizes an electronic air cleaner (E.A.C.), which electrically charges grease particulate in the air stream, then electrostatically captures it on collection plates as the air passes through the cell. An activated charcoal filter provides a final filtration stage to help control odor.

To help protect your investment, we recommend taking a few moments to read this Manual and familiarize yourself with proper installation, cleaning, and maintenance procedures. Adhering to these recommended procedures can help minimize the potential future costly downtime and equipment repair expense.

Please retain this manual for future reference.

1.01 Construction

Primarily fabricated from high quality stainless steel sheet metal.

1.02 Standard Features

3-Stage Filtration: Three (3) different filters remove particulate and grease-laden vapor from the air stream. Stainless grease baffle filter, electrostatic air cleaner and activated charcoal filter.

Extinguishing System: Built-in fire suppression system protects against accidental fire in the fryer underneath the hood. ***Final field set up, charging and commissioning is the responsibility of the purchaser.***

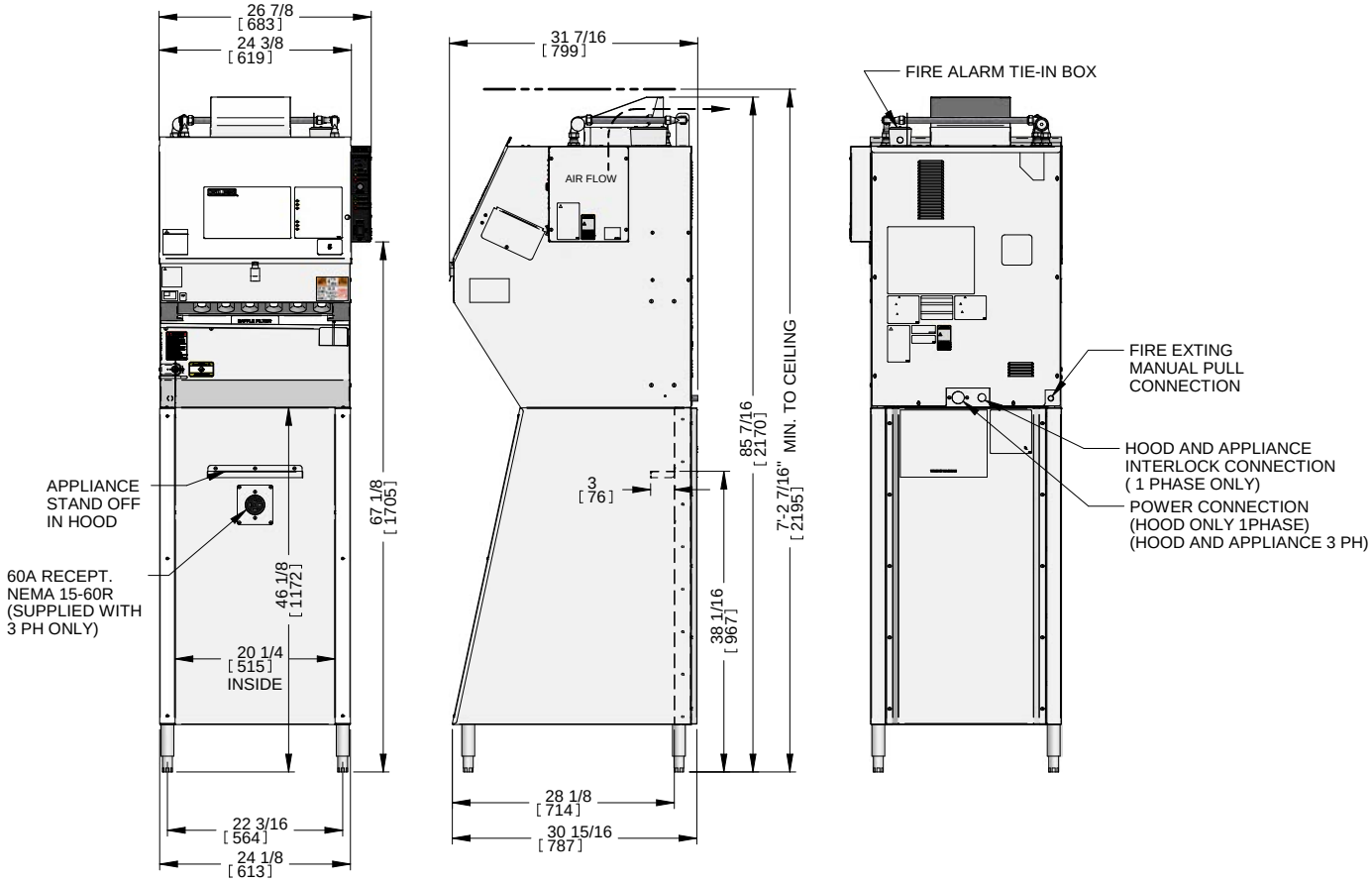
EAC Cleaning Timer: Cleaning reminder system to alert user when it is time to clean the Electronic Air Cleaner (E.A.C.) collector cell. ***DAILY*** cleaning is important to maintain peak air cleaning performance. If the cell is not cleaned in a timely manner, the timer can shutdown the hood which will disable power to the fryer and prevent further operation until cleaning is performed.

Push-To-Start Power: Hood & fryer combination will not automatically restart when power is restored after an interruption. Operator must restart hood in order to power fryer. Complies with code requirements in some jurisdictions.

Appliance Receptacle: Built-in, interlocked, NEMA 15-50R power receptacle for the cooking appliance. Plug appliance power cord directly into hood, can help minimize on-site installation work. ***Maximum appliance load = 50 amps***.

Single phase electrical configuration ***DOES NOT*** include receptacle

1.03 Specifications - Overall Dimensions



INCHES [mm]

1.04 Agency Certifications

1.06 Unit Weight

Model	Weights	
	Crated - lbs [kg]	Uncrated - lbs [kg]
FSH-2-PH	462 [146]	327 [148]

2. Installation

The following sections summarize procedures for proper installation. To help avoid personal injury and damage to the equipment, be sure to adhere to all installation instructions.

Equipment installation is the complete responsibility of the purchaser. It is advisable to engage the services of professional commercial kitchen equipment specialists, licensed electricians, and qualified HVAC contractors to assist with the details of installation. *Giles Technical Support* @ 800.554.4537 is available for assistance, if necessary.

2.01 Location

IMPORTANT!!

Before installing a *GILES* Recirculating Ventless Hood system ensure that ...

A. all necessary approvals have been obtained from local code authorities,

B. fryer to be used with the hood is within the hood's listing limitations stated in Section 2.04, and

C. the installation site complies with all specific requirements and limitations as outlined in the *GFSE Recirculating/Ventless Hood Approval Letter (HAL)* ... this document is available for review & download at *www.gfse.com* on the *HOME* page, under *SUPPORT* on the *VENTLESS SUPPORT DOCUMENTS* page.

To ensure satisfactory hood performance after installation, the site MUST comply with all minimum requirements for kitchen size (>300 sq ft), ceiling height, fresh outdoor air make-up, room air exchange rate, supplemental exhaust ventilation, clearances, and etc. as stipulated in the *Hood Approval Letter (HAL)*.

- **MAXIMUM of 1 hood per 300 sq ft of commercial kitchen space.**
- **Fresh outside air make-up must be equal to a MINIMUM of 15 complete room air exchanges per hour.**
- **Giles makes no representation as to a proper design or layout of any food service establishment in which ventless hoods will be used. Further, Giles does not perform site inspections prior to installation of its equipment.**
- **NOTE:** Hood produces a sound level of approximately **65 dB** when in operation.

⚠CAUTION

- ***DO NOT ALTER, ADD ATTACHMENTS OR OTHERWISE MODIFY THE EQUIPMENT.***
- ***Failure to comply with installation requirements as specified by the Giles Hood Approval Letter will void the factory warranty.***

1. Before unpacking, review dimensions and clearances shown in ***Section 1.03*** and determine whether the location selected for installation is suitable.
2. Keep the unit and the surrounding area free and clear of combustible materials.
3. Do not allow obstructions in the area around the exhaust outlet on top of hood. Minimum clearance required between the top of diverter and ceiling is **0.00" ...** it is advisable to provide some clearance for ease of movement should a future need arise.
4. Provide adequate space for future servicing and proper operation.
5. After final positioning, be sure to adjust the leveling legs so that the unit is level, side to side, front to back and corner to corner. *The legs must be installed on hood during the installation process.*
6. Before operation, make sure the unit is secured in position and cannot be unintentionally move.

2.02 Unpacking

IMPORTANT !!

When received, if the load exhibited any sign of damage, the equipment and all included accessories should have been immediately inspected, and the freight company promptly notified of any damages. ***Typically, it will be the purchaser's responsibility to report & negotiate freight damage claims.***

⚠CAUTION

- The hood is heavy and also top-heavy, which will present a tipping hazard! Exercise due caution when handling to avoid personal injury or damage to the equipment. After hood legs are attached, use due care to avoid bending or otherwise damaging them.
- Exercise care when removing the protective wooden framework from around the unit to avoid exposed nails or staples.
- Failure to comply with these **CAUTION** notices may result in minor to moderate injury, damage to equipment or property, and void the warranty.

Unit is shipped on a wooden pallet, secured with high-tensile plastic strapping and wrapped with plastic stretch film. A wooden framework is built around the unit for added protection. Unpack unit as follows:

1. Position pallet in an area that will provide adequate space for uncrating.
2. Remove stretch film wrap, strapping and any other packaging materials.
3. Carefully remove wooden crating framework, as necessary.
4. Locate the separate carton containing a ***1-1/2 gal. wet chemical fire suppressant tank*** and secure for safe keeping ... it will be needed by the ***Ansul Technician*** during field set-up of the fire suppression system.
5. To avoid damage, the unit was shipped without the leveling legs installed. They are packed in a separate carton. Be sure to retain for installation, see ***Adjustable Leg Installation*** below.
6. Carefully remove the unit from the shipping pallet. The hood is very heavy and also top-heavy, see ***Section 1.06, Unit Weight***. Great care should be taken when lifting or moving the unit to avoid personal injury or equipment damage.

Adjustable Leg Installation

1. Obtain carton containing the adjustable leveling legs.
2. With appliance resting on a stable surface, have two helpers tilt the unit forward slightly and hold. For safety, carefully brace the tilted unit with a suitable length wooden board while it is tilted.
3. Apply a suitable thread-lock, *(such as Red Loctite),* to the male threads on the leg.
4. Screw two (2) legs into threaded holes on bottom of the hood stand sides ... turning clockwise, hand tighten only. ***Take care not to cross-thread*** ... legs should turn fairly easy until tight.
5. Have helpers tilt unit, onto the installed legs, in the other direction, taking same precautions, to gain access to the other threaded holes and repeat the process with the other two (2) legs.

2.03 Electrical Specification (Hood Only)

⚠WARNING

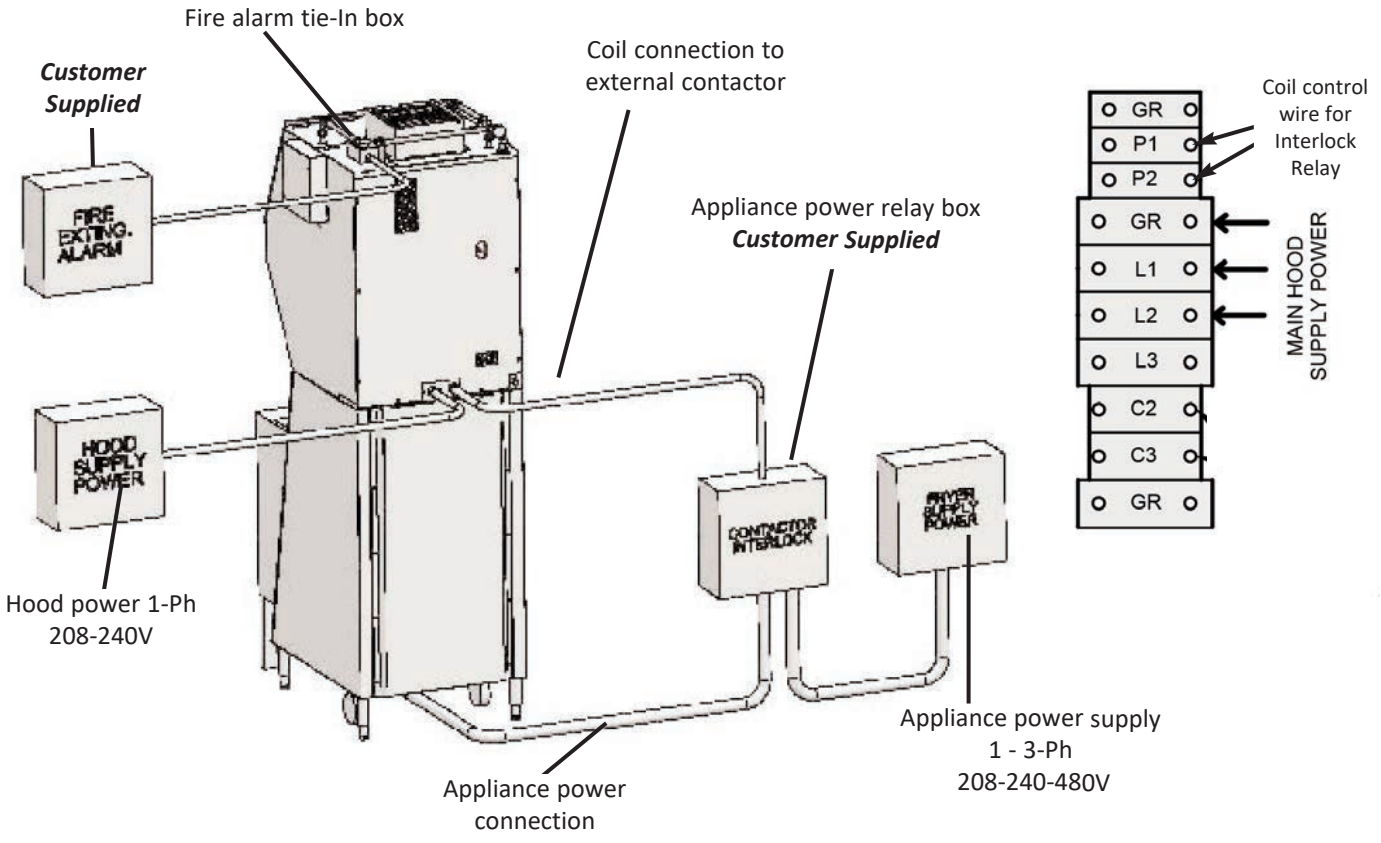
- Food service equipment must be properly grounded in **accordance with local code, or in the absence of local code, with the *National Electrical Code, ANSI/NFPA 70***. Improper grounding may result in electrical shock to users.
- Consult a certified electrician, or other qualified service technician, to ensure that the available electrical circuit is of sufficient rating to power the hood and cooking appliance load.
- **Improper installation, adjustment, alteration, service/maintenance could result in serious injury or possible death, equipment or property damage, and could void the factory warranty.**

Hood Electrical Requirements (Hood Only)				
Voltage	Hz	Phase	Amps	Breaker
208-240	60	1 - 3	1.8 - 1.6	5

Breaker size shown refers to applications when a separate power supply is used for the hood. When the cooking appliance is powered through the built-in appliance interlock contactor and power receptacle, actual breaker size is determined by the total electrical load of the hood + appliance.

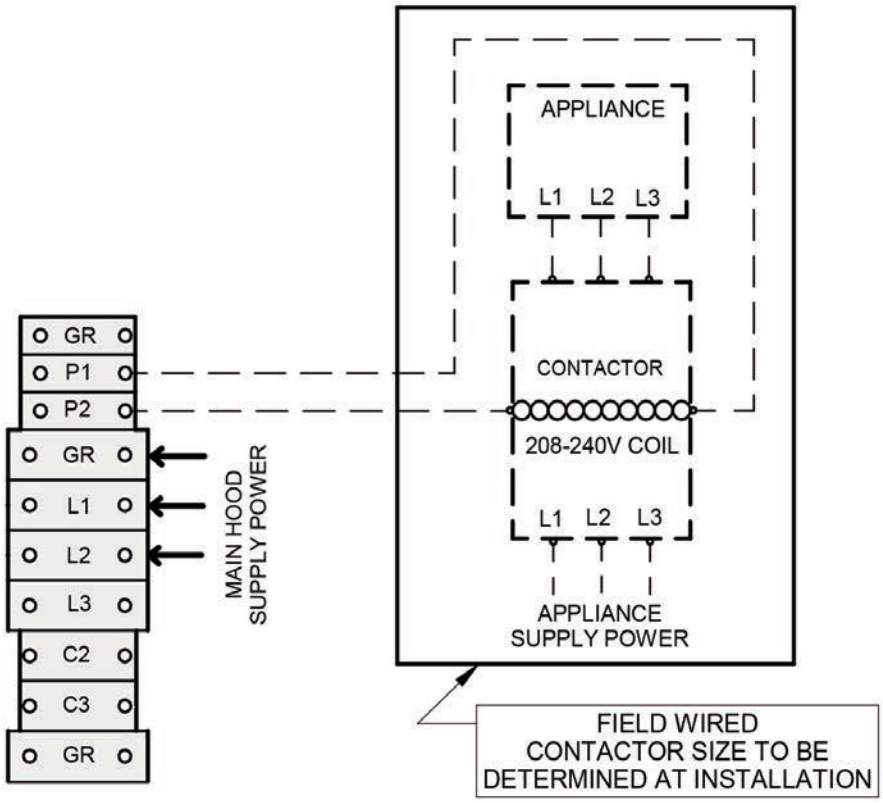
2.03.1 Electrical Connections

Figure 2.03.1-A: Hood & Appliance Powered Separately (208-240-480V/1 - 3-Ph) Through an External Appliance Interlock Contactor



2.03.1 Electrical Connections - continued

Figure 2.03.1-A: 1-Ph Hood ... Separate External Appliance Interlock Contactor - Details



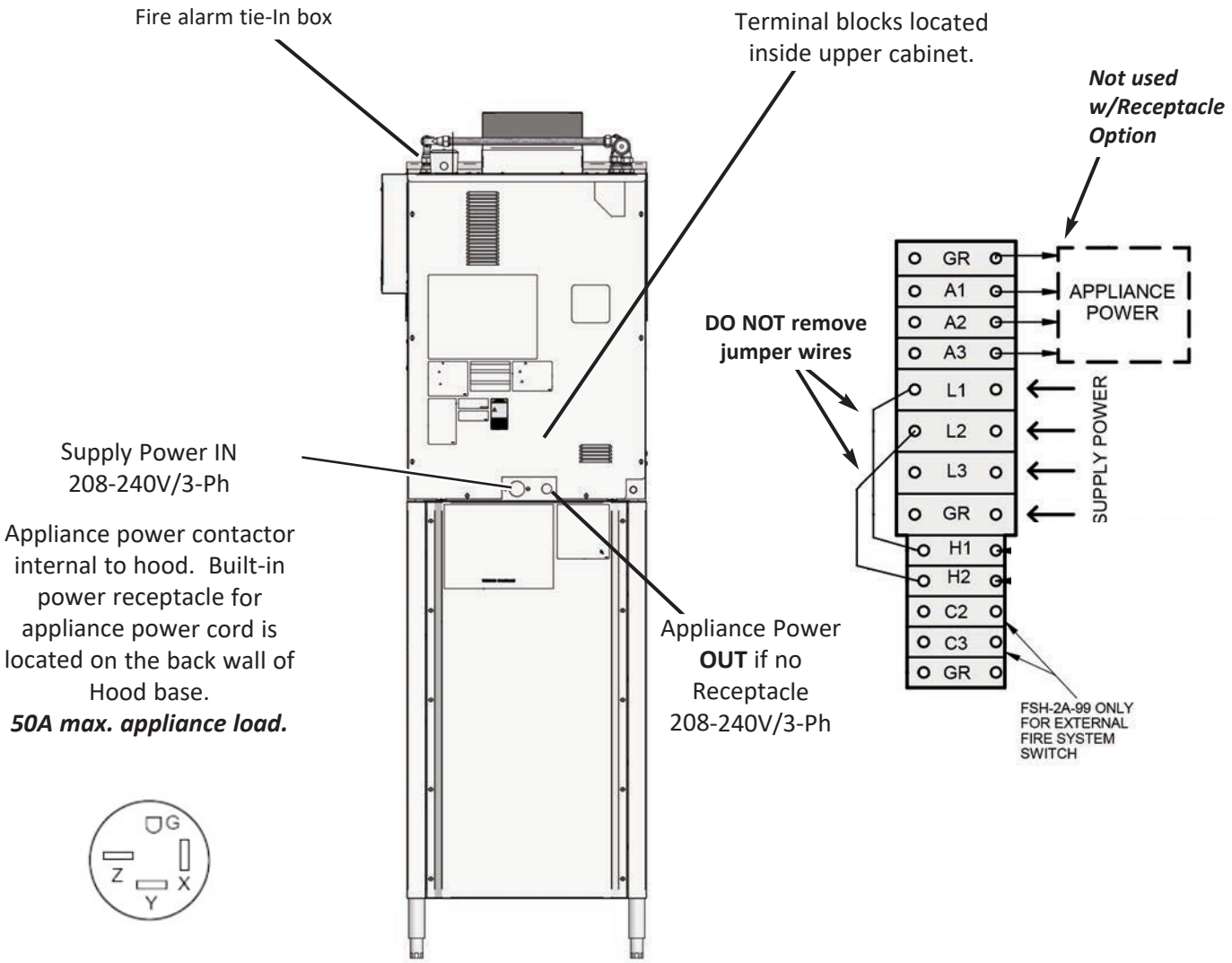
1. As shown on page 7, a 1-phase ***FSH-2-PH hood*** requires a separate, field installed, appliance interlock circuit with an appropriately sized contactor, connected as shown by this diagram ... ***customer supplied*****.**

2. Remove upper rear hood panel to gain access to terminal blocks for connecting coil control wiring **(P1, P2).** Attach appropriate conduit at cutout and route wiring to the ***customer supplied*** appliance interlock enclosure. Allow enough length (conduit & wire) so that the hood can be moved to access for cleaning and servicing.

3. Make appropriate connections for appliance power as indicated and reinstall hood back panel.

2.03.1 Electrical Connections - continued

Figure 2.03.1-B: 3-Ph Hood & Appliance on Same Power Supply, 208-240V ... Appliance Receptacle Installed in the Hood.



2.03.2 Hood Power Connection

IMPORTANT!
Electrical installation materials (breakers, conduit & fittings, wire, etc.) and labor shall be provided by the purchaser. Work should be performed by a qualified professional electrical contactor.

Installation must comply with all local code requirements. Giles assumes no responsibility with respect to code compliance regarding installation and use of this equipment.

See Figures 2.03.1-A ... 2.03.1-B

1. Install appropriate circuit breakers in electrical panel supplying power for the hood. Refer to ***Section 2.03***. Breaker size depends on actual hood configuration.
2. Remove upper back hood panel and electrical box cover inside. Route appropriate size conduit from panel and attach with proper connectors at conduit cutout opening. Pull proper size wire from electrical panel and attach to terminal blocks in hood service box. Allow sufficient length of wire and conduit to provide slack needed to properly access unit for cleaning and service.
3. ***Hood Appliance Receptacle installed:*** Simply plug the appliance power cord into the receptacle mounted inside the hood base. ***Maximum appliance load = 50A.*** It may be necessary to change, or install, the plug for the appliance power cord ***(not provided, customer supplied)***.
4. ***Hood without Receptacle:*** Attach wiring from appliance to terminal blocks **[A1,A2,A3,G]** and route through cutout using appropriate strain relief connector, or conduit. ***Maximum appliance load = 50A.***
5. Reinstall inside service cover and hood back panel.

2.03.3 Equipotential Bonding

An equipotential bonding lug is provided on this Hood so that it can be electrically bonded to the equipment being operated under it and/or other pieces of equipment being operated in the same workspace. The purpose is to minimize the possibility of a potential difference between two pieces of equipment that could result in electrical shock or electrocution of persons who might possibly touch two pieces of equipment at the same time.

2.03.4 Fire Alarm Connection

Allows for connecting the fire suppression switch to the building fire alarm control system so that any activation of the extinguishing system will activate the facility fire alarm.

1. Connection is made inside the tie-in junction box on top of hood.
2. Remove necessary cover or rear panel, make secure connection using wire nuts and replace covers.

2.04 Limitations & Clearances

The following describes various appliance limitations and required clearances for appliances to be placed underneath the hood. ***FSH-2 & FSH-2A-99*** ventless recirculating hoods are only listed for use with ***electric fryers*** that comply with the following limitations.

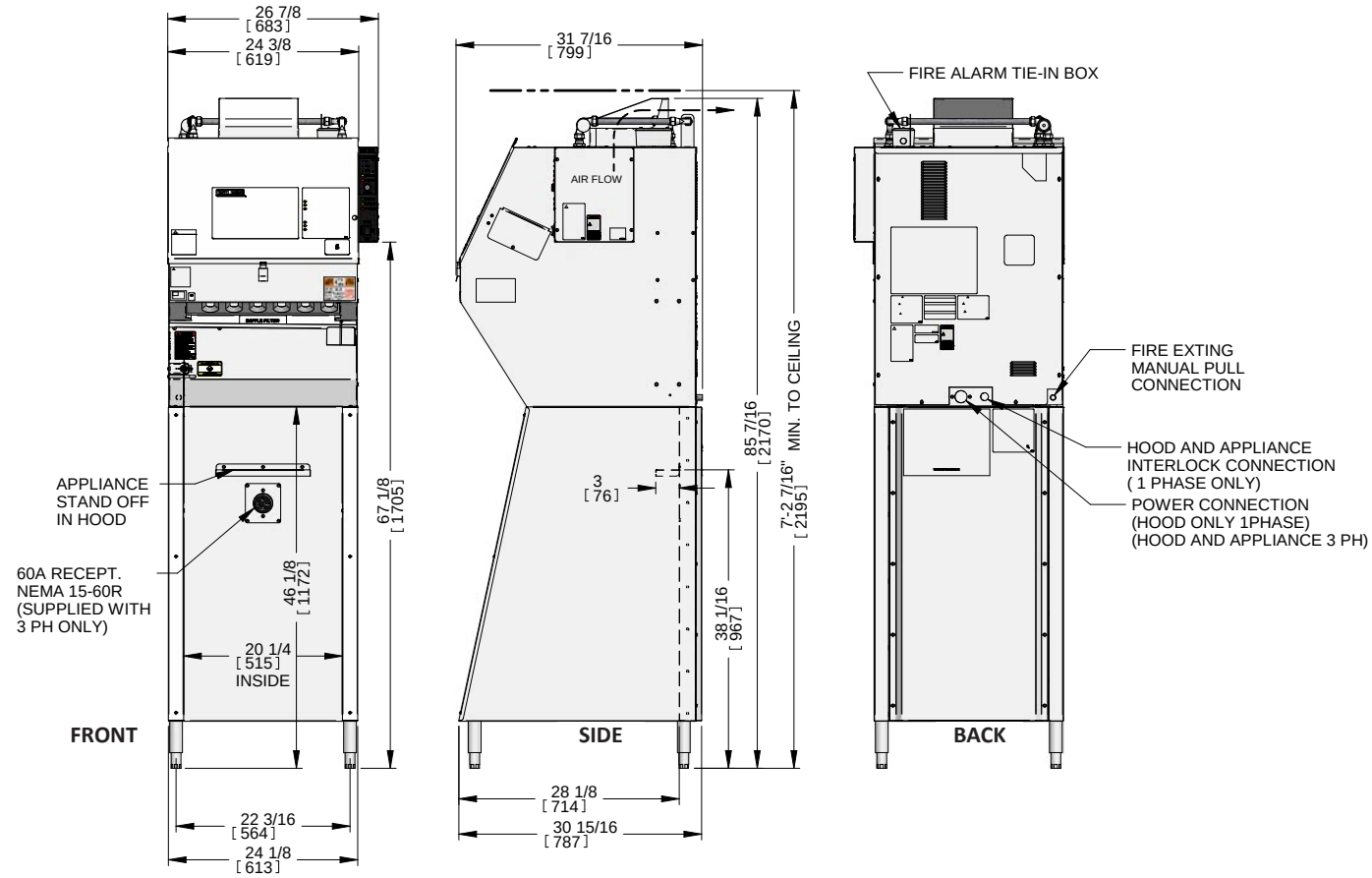
ONLY electrically heated fryers may be used ... Gas heated or equipment not meeting the specifications below are not approved.

⚠WARNING ***These hoods can be used with ELECTRIC FRYERS ONLY ... USE WITH GAS FRYERS IS NOT APPROVED!! and can create an inhalation hazard due to carbon monoxide build-up.***

2.04.1 Fryer Limitations

Model	Max. Fryer kW	Max. Shortening Capacity lbs [kg]	Max Cooking Surface sq in [sq m]
FSH-2-PH	20	110 [49.9]	380 [.25]

2.04.2 Hood Clearances



INCHES [mm]

2.05 Fire Suppression System

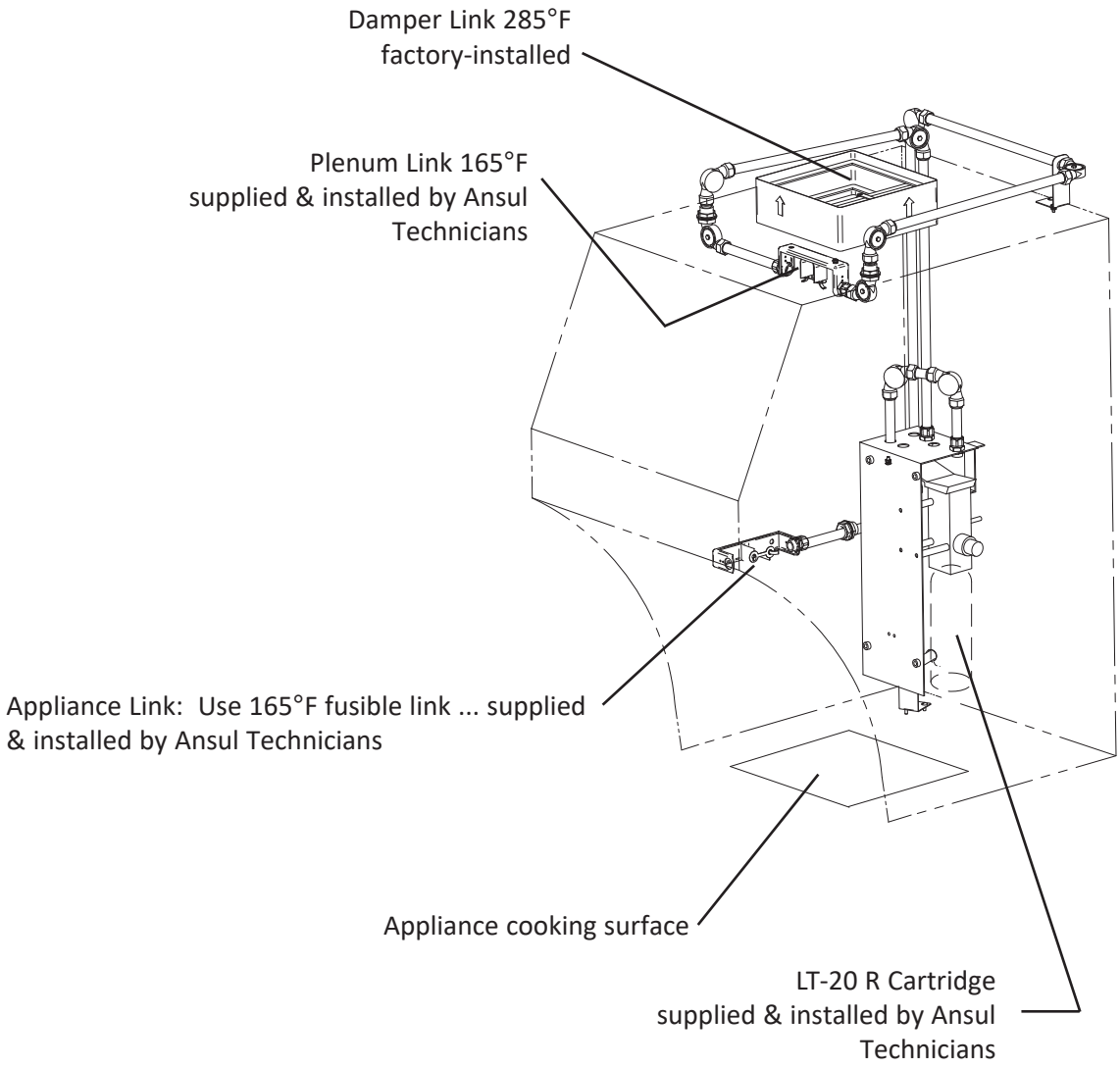
The fire suppression system installed in the *Giles* ventless hood is an ***ANSUL® R-102 Restaurant Fire Suppression System (UL-710B Listed)***. ***Final field set-up, charging, certification and arming of the system must be performed by an authorized Ansul distributor/dealer in accordance with the system listing.***

The fire suppression system is designed and UL-listed to provide fire protection for the fryer. It is a mechanically activated system that protects continuously. This factory-installed system is self-contained and includes all piping, nozzles (appliance & plenum), Automan release mechanism, detector link brackets, conduit for link cable, exhaust outlet fire damper and a 1-1/2 gal. stainless steel wet chemical suppressant storage tank.

.

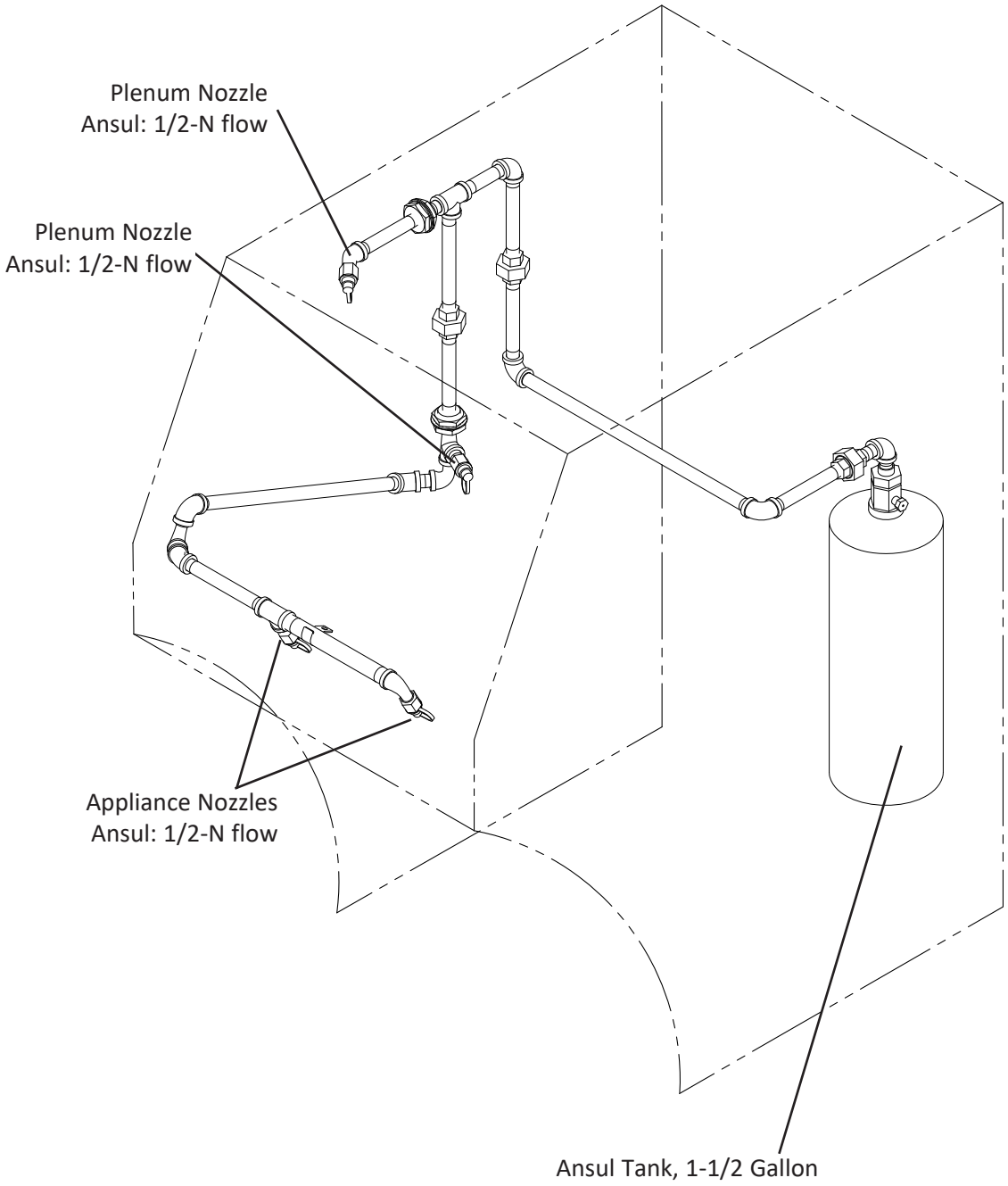
Field set-up by an Ansul agent shall include, but may not be limited to, installation of proper fusible detector links and cable, filling & installing the provided suppressant storage tank, installing a remote manual activation station, installing a compressed gas firing cartridge, testing, certifying and arming the system. ***Necessary parts and labor for system field set-up is the responsibility of the customer and is not included with hood purchase***.

2.05.1 Detector Links & Gas Cartridge Location



2.05.2 Fire Extinguisher Nozzles & Tank Location

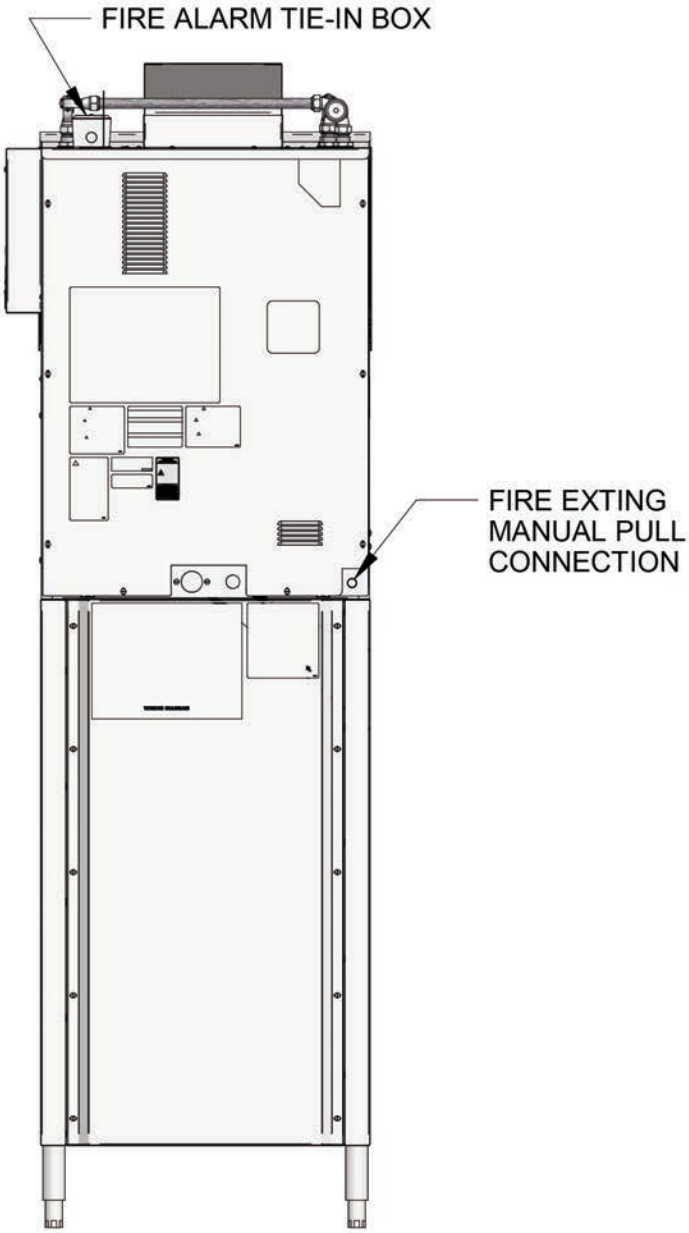
All nozzles are factory-installed and aligned in the proper operating position. ***DO NOT MOVE OR ADJUST.***



2.05.3 Remote Manual Activation Station (Customer Supplied)

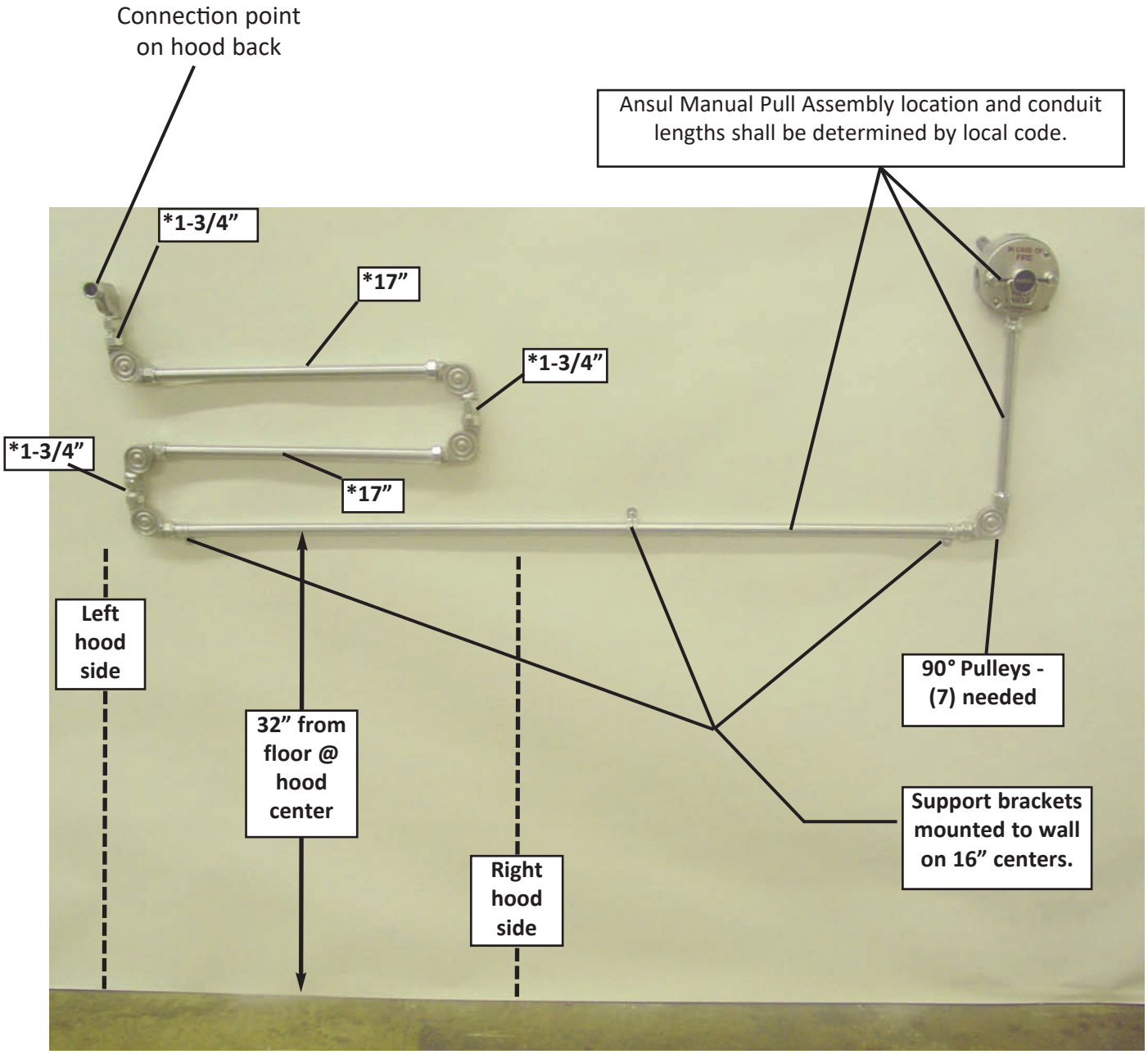
Hood requires use of the **ANSUL® R-102 Standard Manual Activation System**. The manual pull station must be conspicuously mounted near a path of egress and connected to the hood for activating the fire extinguishing system from the remote location. It shall be supplied and installed by an authorized Ansul agent ***(customer provided)***.

The following illustrations depict a typical installation configuration that will allow the hood to be moved away from the wall for cleaning and servicing without disconnecting the manual pull, or accidently discharging the system.



2.05.3 Remote Manual Activation Station - continued

Cut 1/2 EMT conduit to lengths, as indicated below, and mount the specified pieces to the wall, as shown.
Note: Conduit pieces marked with (*) will not to be affixed to the wall.



* Not mounted to wall

2.05.3 Remote Manual Activation Station - continued

The conduit hinge section of this configuration will allow the hood & fryer to be moved straight out from the wall for cleaning and service, without need to disconnect the manual pull system, risking an accidental system discharge, or need to disrupt other appliances in the cook line.

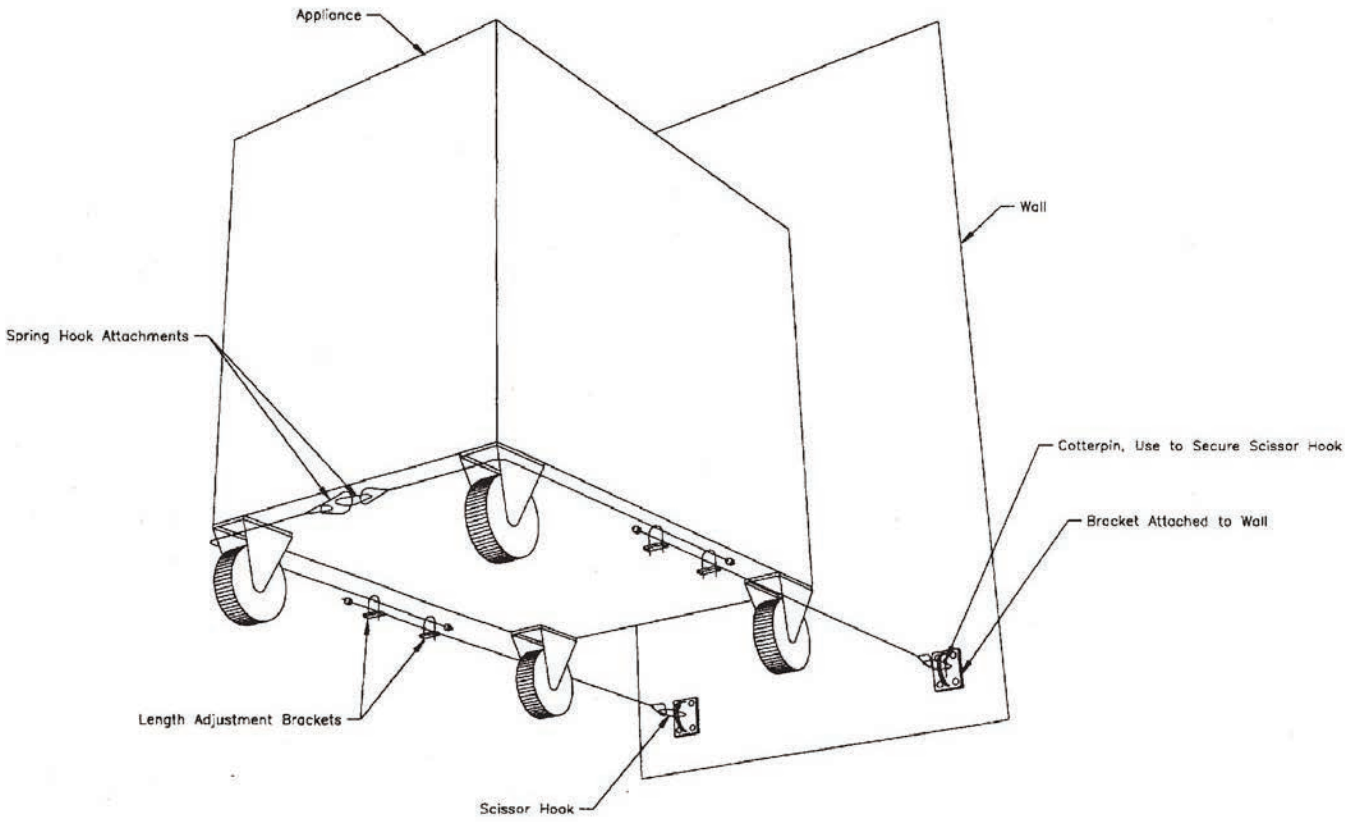
Extend the assembly conduit hinge, then route wire cable through the conduit and connect to hood's manual pull cable. Ensure all connections are tight.

Carefully slide hood into the proper positon in the cook line so that it is ready to have the fryer installed.

Be advised that this configuration is only one of several which can be utilized for Ansul Manual Pull Station installations. Ansul technicians are well experienced in determining the best configuration for specific situations.

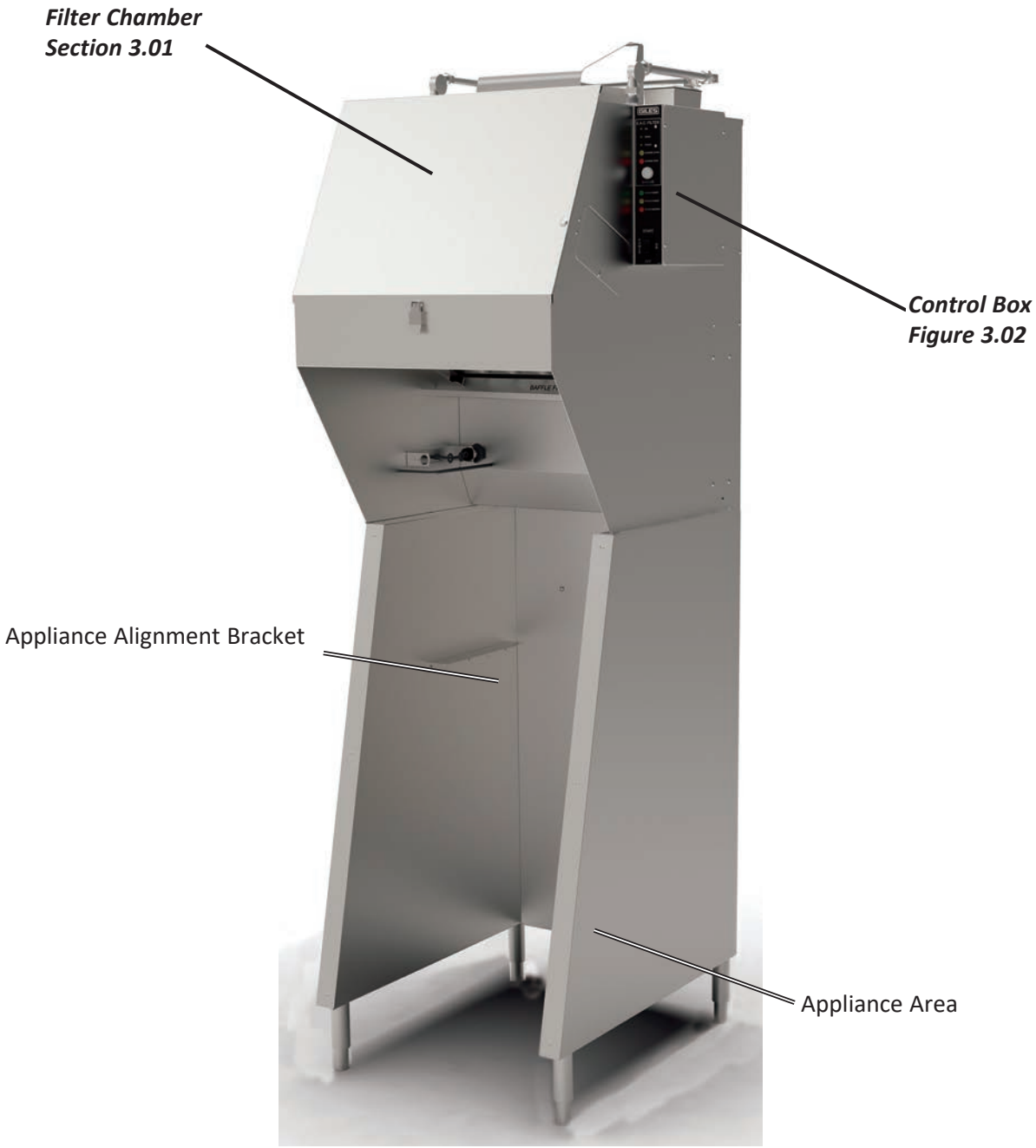
2.06 Restraining Device (customer provided)

Code officials in many jurisdictions may require that the fryer under this hood must be secured so that it can not move from beneath the hood. The following diagram depicts an example of a typical suitable restraining configuration. It must be appropriate and will vary depending on for the make & model of fryer being used.
Restraining device is <u>not</u> supplied with the hood.



3. Overview

The following provides a brief overview of the components, functions, and accessories of the ***Free Standing Ventless Hood, Model FSH-2-PH***. Please review this section carefully before proceeding further.



3.01 Filter Chamber & Hood Front

* Not Shown

** CE Listed Models must use HEPA Filter

3.01 Filter Chamber & Hood Front

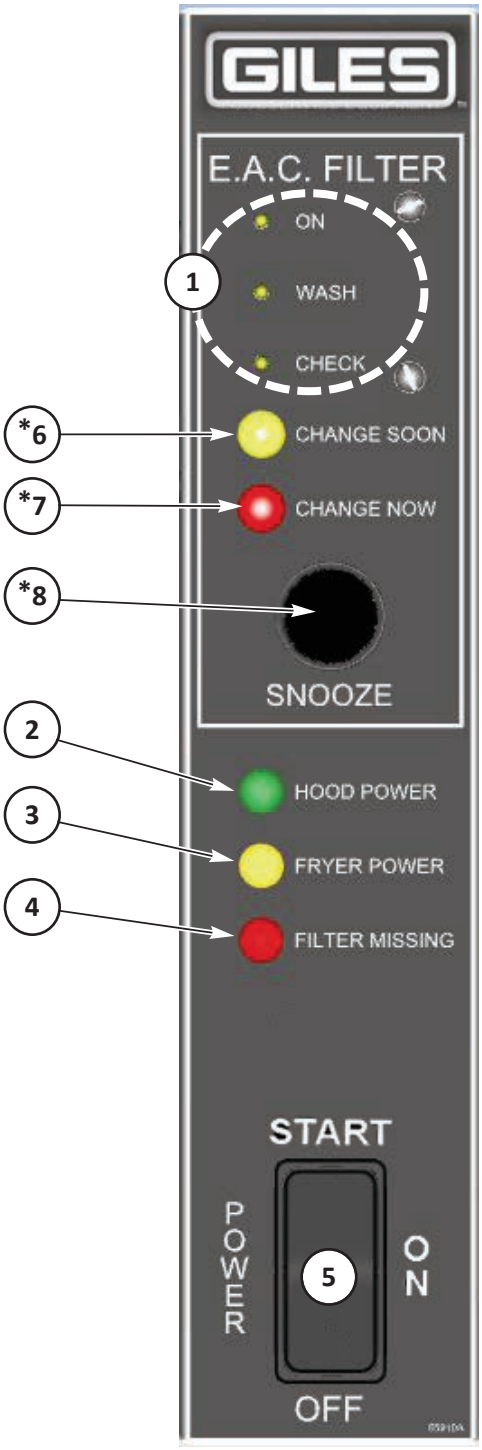
Item	Description	Function
*1	Filter Access Cover	Covers the filter chamber and plenum. Easily removed for access. Hood & fryer will not operate unless this cover is in place and properly latched.
2	Charcoal Filter	Helps to control undesirable cooking aromas. It should be replaced monthly (approx.). ***DO NOT* attempt to clean & re-use filter.** Have a standby filter *(Giles #30248)* for quick exchange to avoid lost time! ***NO FILTER WILL COMPLETELY ELIMINATE COOKING ODOR.***
3	Electronic Air Cleaner (E.A.C.) Collection Cell	The E.A.C. system is an electronic air cleaner that electrostatically captures grease vapor and smoke particulate generated when cooking. **Power must be turned OFF before removing the cell for cleaning. To maintain best hood performance, cell must be cleaned daily. Fryer under hood will be disabled if cell is not in place, becomes excessively dirty, or is experiencing other faults.**
**4	HEPA Filter **(Optional)** **ONLY this version is CE listed**	***Optional:*** High-efficiency *HEAP Filter* alternative. The filter ***CANNOT*** be cleaned and must be replaced periodically to maintain acceptable performance. **Fryer under hood will be disabled if the HEPA Filter is not in place or becomes clogged. HEPA Filter positioning is the reverse of what is shown ... charcoal filter is located below the HEPA filter.**
5	Baffle Filter	First stage of the air cleaning system. Easily removed for daily cleaning. **To prevent contact with electrical parts and avoid electrical shock, *DO NOT* remove the baffle filter while hood and fryer are powered.**
6	Grease Drip Cup	Collects and holds grease condensate generated by the baffle filter. It should be cleaned daily, or as needed.
7	Grease Drip Cup Safety Pin	Secures the grease drip cup in place to prevent it from unintentionally falling from the holding bracket.
8	Discharge Air Diverter	Diverts hood exhaust air to the sides and rear. Allows for operation of the unit in spaces with lower ceiling heights.
*9	Appliance Fusible Detector Link	A fire in fry vat melts the detector link and trips the fire extinguishing system. To avoid accidental system discharge, take care not to hit the link.

*** Not Shown**

**** CE Listed Models require HEPA Filter**

3.02 Control Box w/Timer

NOTE: Timer feature is NOT included on FSH-2 Models.



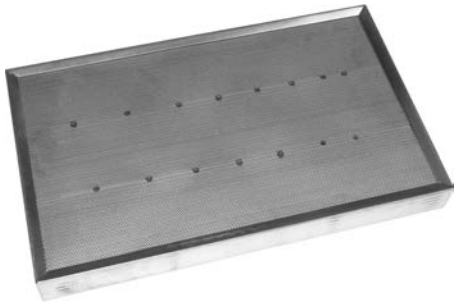
*Not present on HEPA Filter Models

3.02 Control Box w/Timer

Item	Description	Function
1	E.A.C. Filter Status Indicators **[ON]** **[WASH]** **[CHECK]**	LED light cluster indicates status of the Electronic Air Cleaner (E.A.C.) system. **[ON] -** Turns ON when hood is powered-up. Indicates that the E.A.C. system is powered and functioning normally to clean the air. This is the only light ON when system is operating normally. **[WASH] -** Indicates excessive grease film build-up on collector fins (dirty), collector cell is missing, poor connection, missing ionizer wires, etc. Approximately 2 minutes after this light turns ON, a beeping alarm tone sounds and power to fryer is shutdown. ***IMPORTANT! Do not rely on this indicator as a signal for routine cleaning; cell must be cleaned daily to maintain peak performance and extend useful life of charcoal filters.*** **[CHECK] -** Indicates that collector cell has stopped operating properly; it is damaged & shorted to ground, fins are shorted due to excessive moisture, etc. No alarm sounds & the fryer remains powered, but air is not being cleaned by the EAC. ***Discontinue operation & inspect.***
2	**HOOD POWER**	Indicates that hood is powered and running.
3	**FRYER POWER**	Indicates that power is being supplied to the fryer under the hood.
4	**FILTER MISSING**	Indicates that baffle and/or charcoal filter is missing or improperly installed.
5	Power Switch ***PUSH-TO-START***	Turns hood power ON and OFF. When hood fan reaches the proper speed, power is supplied to the fryer. To start hood, press & momentarily hold the top ***START*** portion of the switch; release when fan starts ... the switch springs back to remain ON. Hood must be restarted in this manner after any lost of power.
*6	**CHANGE SOON**	Illuminates when the EAC Cleaning Timer enters **[WARNING]** mode. Indicates that the cell needs to be cleaned (or exchanged with a clean standby) within the next ***24 hours***.
*7	**CHANGE NOW**	Illuminates when the EAC Cleaning Timer enters **[TIMEOUT]** mode. Allowed time between cleanings (or exchange) has expired. The cell must immediately be cleaned (or exchanged). An audible alarm sounds and both hood & fryer are locked out, preventing continued operation until the appropriate activities are performed.
*8	**SNOOZE**	Pressing this button delays **[TIMEOUT]** mode for ***2 hours***, allowing the hood & fryer to continue to operate for finishing a cook cycle or meeting customer demand. Two (2) snooze cycles are allowed before the shutdown process continues.

*** Not present on HEPA Filter Models**

3.03 Items Included w/Hood

Part	Description/Part Number	Function
	Baffle Filter **P/N 42300**	Removes large particle contaminant from the air stream.
	EAC Filter P/N 20520 ***Replaced by P/N 41254 HEPA Filter for models with HEPA Option***	Removes smoke and fine particle contaminant from the air stream.
	Charcoal Filter **P/N 30248**	Helps to control cooking odors in the recirculated air.

3.03 Items Included w/Hood

Part	Description/Part Number	Function
	***(1) Sample Can*** Foaming Crystal Cleaner/Degreaser **P/N 41510** ***12-count Case*** **NSF approved**	Foaming spray degreaser for cleaning EAC collector cell. Sample can of *GILES* recommended collector cell cleaner. It is readily available from Giles and on-line distributors, as well as many nationwide retail outlets.

3.04 Items Not Included w/Hood

Part	Description/Part Number	Function
	EAC Soak Tank w/Top **P/N 91123** ***Purchased separately***	For cleaning EAC collector cell using the soak process. ***GILES has revised its recommended best practice cleaning process ... use of Simple Green Foaming Cyrstal Spray Cleaner/Degreaser is the preferred practice***. Users wishing to continue with a soaking process must purchase the Soak Tank separately.

4. Operation

This section explains hood operation and filter maintenance procedures.

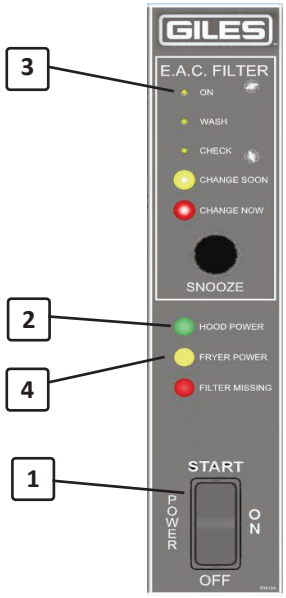
4.01 Hood Operation

This section describes starting the ventless hood. Be sure that all filters are in place and properly seated before attempting to start. ***Hood will not start unless the Filter Access Cover is in position and secured properly***.

Starting the Hood:

1. Press and momentarily hold the top **[START]** portion of the ***Power Switch*** ① until the hood blower starts running. Release and the switch will spring back and remain ON.
2. The green **HOOD POWER** light ② and the small **EAC [ON]** light ③ should both turn ON. A constant tone alarm may sound briefly and then silence as the fan reaches full speed.
3. At that time, the amber **FRYER POWERED** light ④ should turn ON, indicating that power is now being supplied to the fryer and it is ready for use.

Should this sequence not occur or should any other lights turn ON**, see the *Section 7, Troubleshooting*** for possible cause and corrective action.



Shutdown the Hood:

1. Press the bottom **[OFF]** portion of the ***Power Switch*** ①.
2. Blower stops and all indicator lights turn **OFF**.
3. Power to the fryer is shutdown.

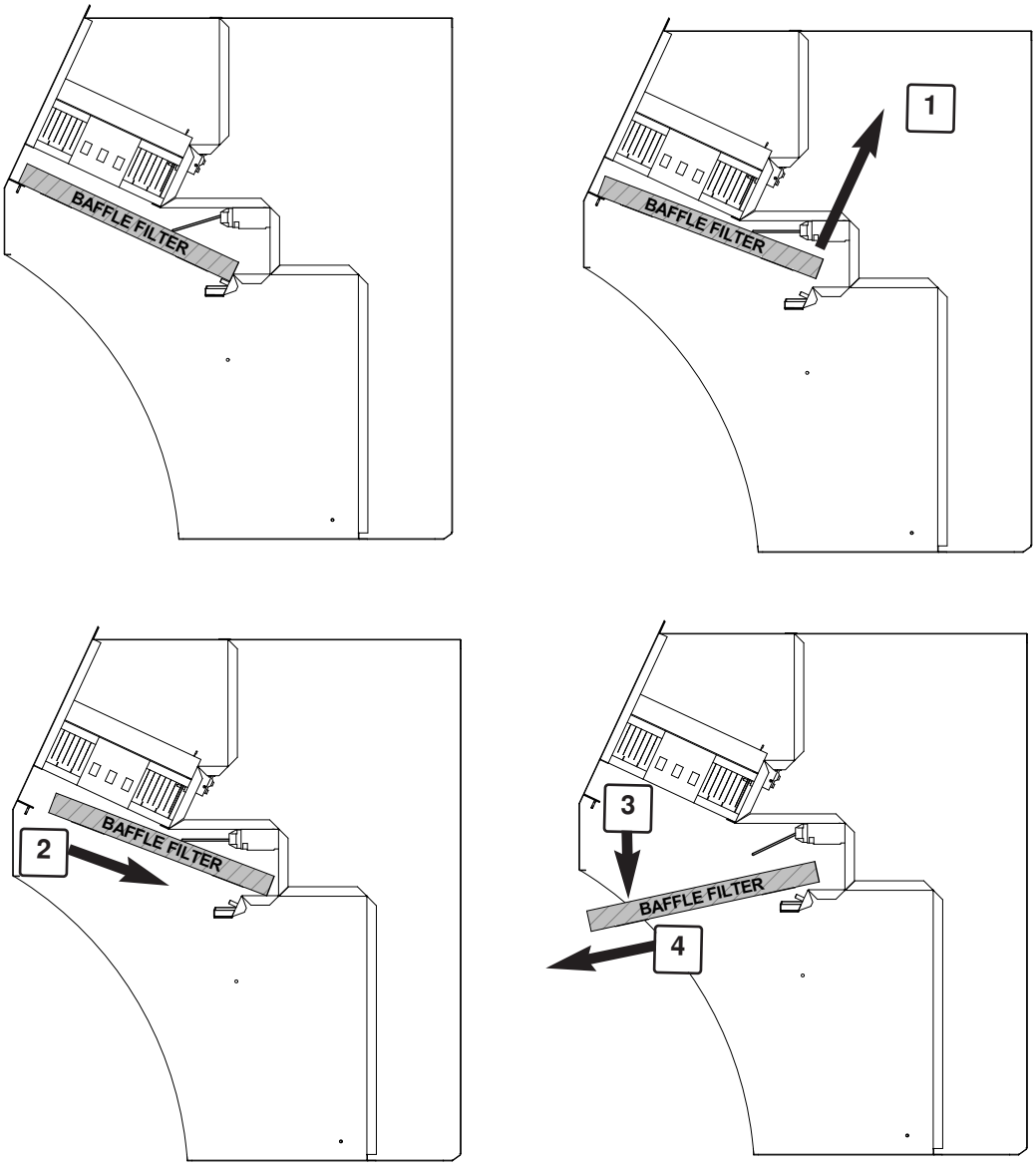
4.02 Filter System Overview

4.02.1 Ventless Hood Filter Table

Filter	When to Clean/Replace	How to Remove	How to Clean	How to Install
Baffle Filter	Clean daily	Section 4.02.2	Section 5.01.1	Section 4.02.3
E.A.C. Collector Cell	Clean daily	Section 4.02.4	Section 5.01.2	Section 4.02.5
HEPA Filter **(Optional)**	Change as needed ***DO NOT CLEAN***	Section 4.02.4	***DO NOT ATTEMPT TO CLEAN...REPLACE ONLY!*** Section 5.01.4	Section 4.02.5
Charcoal Filter	Replace every 30 to 40 days (approx.)	Section 4.02.6	***DO NOT ATTEMPT TO CLEAN...REPLACE ONLY!*** Section 5.01.3	Section 4.02.6

4.02.2 Baffle Filter Removal

The Baffle Filter has sharp exposed edges, which may cause cuts. Use due caution when handling and cleaning. Heavy duty rubber gloves are advised.



Turn OFF hood power ...

①Lift rear edge of filter enough to clear the edge of ***rear support channel***.

②Slide filter toward the back of the hood, allowing front edge to slide free of ***front support ledge***.

③Drop front edge down to clear ***Front Header Panel***.

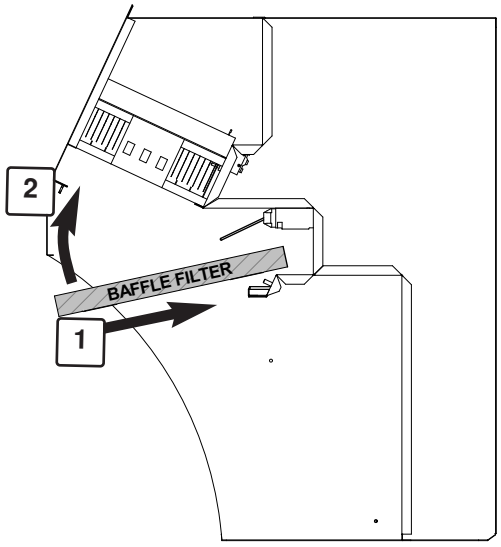
④Remove filter from hood.

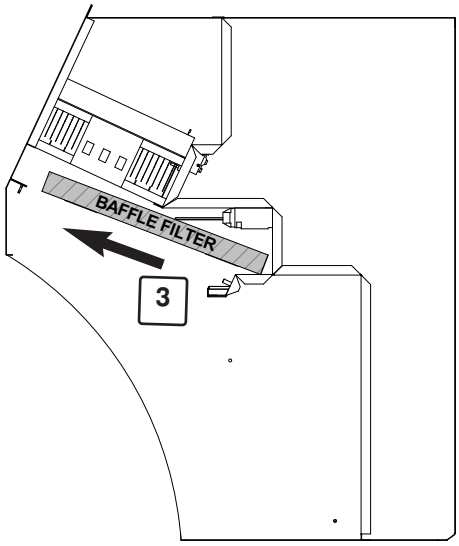
4.02.3 Baffle Filter Installation

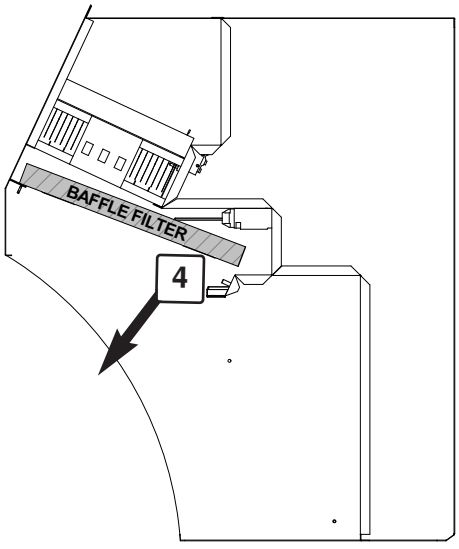
WARNING

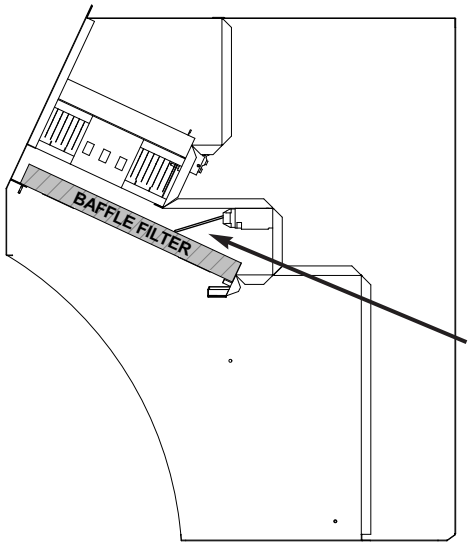
Sharp edges
Watch your fingers

The Baffle Filter has sharp exposed edges, which may cause cuts. Use due caution when handling and cleaning. Heavy duty rubber gloves are advised.









Switch arm must be actuated by the Baffle Filter when installed, as shown

① Insert back edge of filter into hood ***(to the back wall)***.

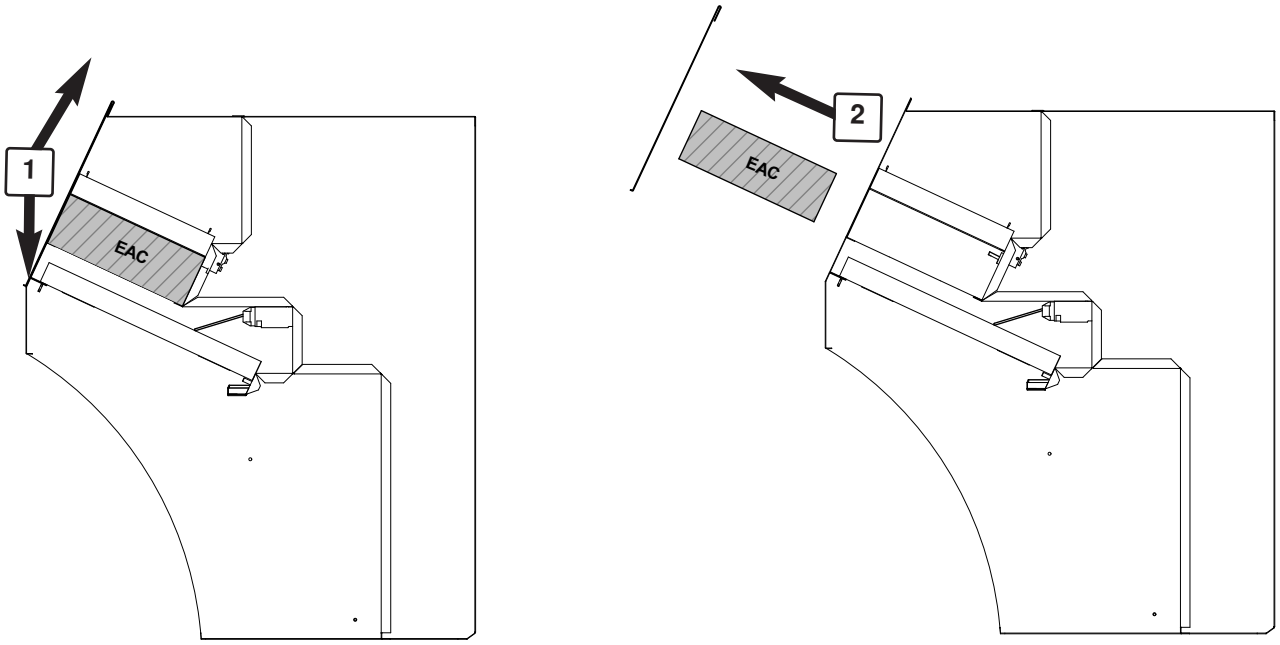
② Lift front edge up behind ***Front Header Panel***.

③ Pull filter forward until front edge rests on ***support ledge*** inside ***front panel***.

④ Allow back edge to drop down and rest on ***studs in the rear channel***.

IMPORTANT! ***As shown above, the filter body must engage and actuate the curved actuator lever located at the rear of hood, on the right side. Filter must be installed so that the slats/slots are vertical, NOT horizontal.***

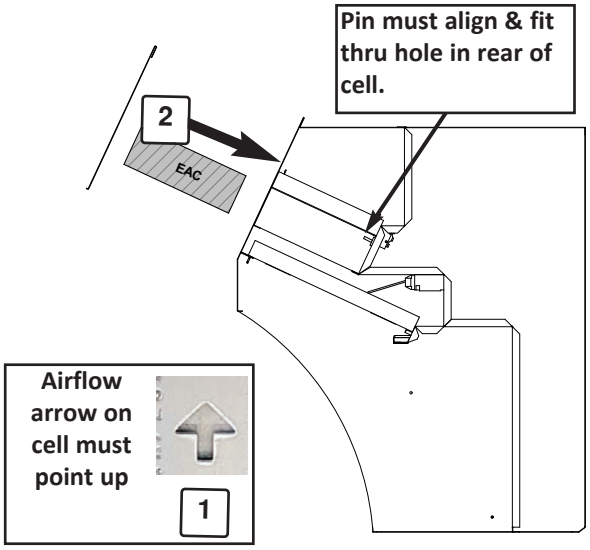
4.02.4 E.A.C. Collector Cell / HEPA Filter Removal



① Unlatch ***Access Cover*** and lift off.

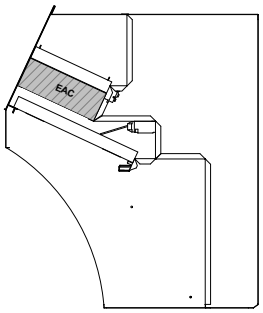
② Grasp ***E.A.C. Collector Cell / HEPA Filter*** and pull straight out, at a slightly upward angle.

4.02.5 E.A.C. Collector Cell / HEPA Filter Installation



① Ensure the airflow indicator arrow points **[UP]** & the cell's ***Contact Pad*** faces to the ***right side***.

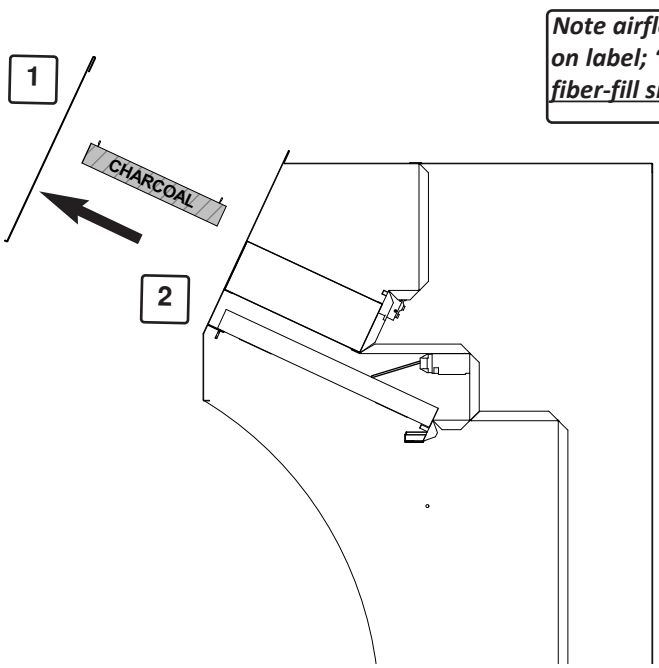
② Align cell (or filter) in ***guides*** and slide into hood. If installed properly, cell is flush with hood front. ***If not, cell is not installed incorrectly***.



③ Replace ***Access Cover*** and latch.

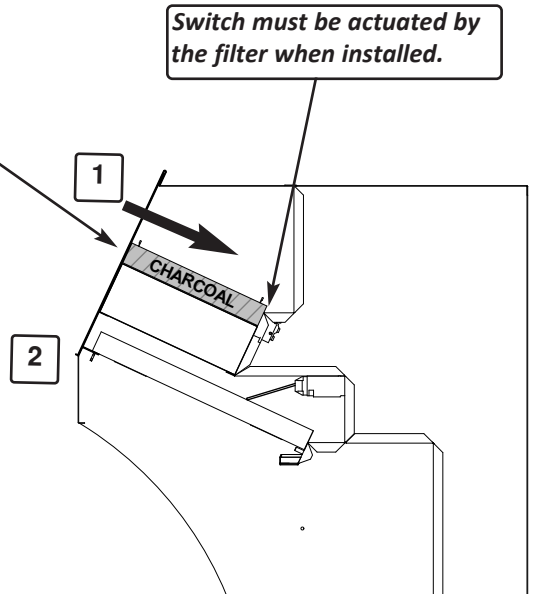
NOTE: HEPA Filter models ONLY - charcoal filter is located beneath the HEPA, such that air passes through it first before the HEPA filter. When installed, the filter must properly engage a proofing switch located on the back wall.

4.02.6 Charcoal Filter Removal & Installation



① Unlatch Access Cover and lift off.

② Grasp charcoal filter and pull straight out, at an slight upward angle.



① Align in guide channels, slide straight into hood. Filter must fit flush with front. ***Blue fiber-fill side must face upward.***

② Replace and latch cover.

NOTE: HEPA Filter models ONLY - charcoal filter is located beneath the HEPA, such that air passes through it first before the HEPA filter. When installed, the filter must properly engage a proofing switch located on the back wall.

4.03 Hood Alarm Conditions

4.03.1 Filter Missing - Baffle, Charcoal, or HEPA

If either the ***baffle, charcoal, or HEPA*** filters is not in place, or not positioned correctly, the red **[FILTER MISSING]** light will turn ON**.** Power to the fryer under the hood is **shutdown** until the condition is corrected; the amber **[FRYER POWER]** light turns OFF. No audible alarm will sound.

- Hood fan continues running.
- Check to confirm that all filters are in place. See ***Sections 4.02.3 - 4.02.5 - 4.02.6, Filter Installations.***
- Remove and reinstall filters, ensuring that they are seated properly in the guides and are inserted fully into the filter compartment so the cover fits properly. Each filter must also actuate a proofing switch. Charcoal and HEPA filter switches are in the rear wall. Baffle filter switch is a lever switch on the right side under the hood.

4.03.2 Filter Clogged - Baffle, Charcoal, or HEPA

If any filter becomes clogged or there are other conditions obstructing airflow that cause it to fall below the minimum required to provide effective capture of cooking vapor**,** power to the fryer under hood is shutdown, the amber **[FRYER POWER]** light turns OFF and a steady tone audible alarm sounds until corrective action is taken.

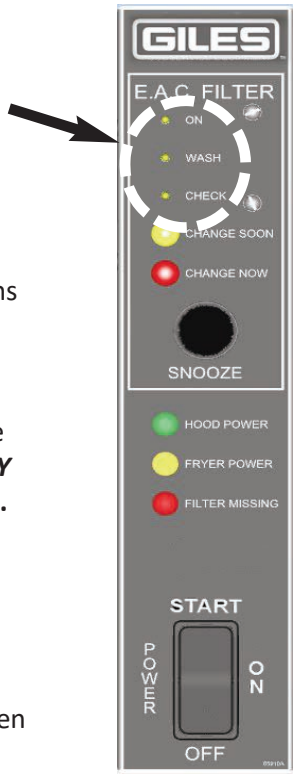
- Hood fan continues running.
- Clean the baffle filter, see **Section *4.04.1, Baffle Filter Cleaning*.**
- Replace charcoal or HEPA filter with fresh new, see **Section *4.03.5, Charcoal Filter Maintenance*.**
- Inspect Hood plenum to ensure that no other obstructions exist.
- Check the hood exhaust outlet and be sure that nothing is obstructing it or the surrounding area.

NOTE: There is no indicator light for clogged filter, only an audible alarm.

4.03.3 E.A.C. Filter Status & Alarm

Three LED lights on the control box panel indicate the operational status of the *Electronic Air Cleaner (E.A.C.)* system.

[ON] Indicates that the E.A.C. cell is installed, powered and operating. It will be the only light ON if the cleaning system is operating normally.



[WASH] This light turns ON to indicate the following:

- Filter cell is not installed or is mis-aligned.
- Collection fins contain excessive amount of captured grease residue.
- There is poor contact with contact plate inside hood.
- Too many Ionizer wires are missing.

When the **[WASH]** light is ON, an alarm condition exists and air cleaner is not functioning. After approximately two (2) minutes, a beeping alarm tone begins sounding and shortly thereafter, power to the fryer under the hood is shutdown; the **[FRYER POWER]** light turns OFF.

[WASH] light is ***NOT*** intented to be used as a signal for routine cleaning of the cell ... ***DO NOT use as such***. Typically, the collector cell must be cleaned ***DAILY*** to ensure optimum performance. See ***Section 5.01.2, EAC Filter Cell Cleaning*.**

[CHECK] This light turns ON to indicate the following:

- A broken ionizer wire is touching the cell frame.
- The cell is damaged & shorted to ground.
- Collection fins are shorted because of excessive moisture.

When **[CHECK]** light is ON**,** system is no longer functioning to clean the air, even though the hood continues to run and fryer remains powered. ***DO NOT CONTINUE TO USE FRYER WHEN THIS CONDITION EXIST ... CEASE COOKING & PREFORM AN INSPECTION!***

The following actions may clear alarm conditions:

1. Turn OFF hood ***Power Switch***.
2. Remove the E.A.C. cell and clean as described in ***Section 5.01.2***.
3. Inspect the cell for broken or missing ionizer wires, bent fins, or other damage. Ionizer wires are replaceable (when ordering replacements, note length ... ***20"***). Bent fins may be gently straightened by hand, so that no fin is touching an adjacent fin. A cell with excessive damage (broken or badly bent frame, broken insulators, etc) must be replaced.
4. Inspect the E.A.C. contact plate inside hood. Clean grease accumulation away with a mild degreasing cleaner and dry thoroughly.
5. Replace filter cell *(**Section 4.02.5**)* and restart Hood ***(Section 4.01)***. If the condition persist, contact a qualified service technician.

   If none of the LED lights turn ON when hood is started, the power supply may be faulty ... service is required.

4.04 E.A.C. Filter Cell Cleaning Timer Operation

The hood is equipped with a ***Filter Cell Cleaning Timer***. This feature is intended to help users maintain a proper cleaning routine for the sustainable *E.A.C. Collector Cell*. Timely cleaning is essential to ensure that the cleaning system continues to effectively remove grease-laden cooking vapor particulate from the recirculated air.

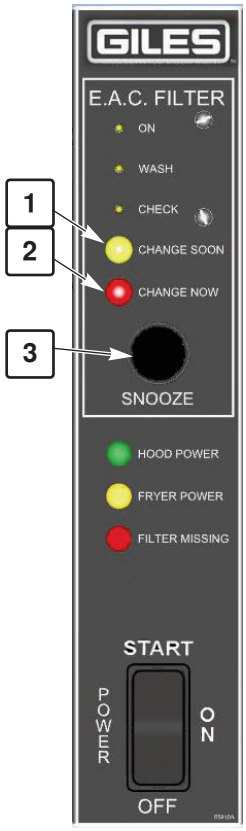
After a preset period of time expires, the timer signals that it is time to clean the collector cell *(or exchange it with a clean standby cell, if available)*. If action is not taken within the alloted time, a timeout error alarm occurs and power to the fryer is ***disabled*** and remains locked-out until filter maintenance is performed. After necessary maintenance is performed, the timer automatically resets, a fresh countdown begins and normal operation is restored.

Should error/alarm occur during a peak demand period or while cooking is in progress, a **SNOOZE** feature is provided to temporarily postpone shutdown and continue operation for a short period of time.

Timer indicators and **[SNOOZE]** control button are located on the hood control box panel.

Timer Operation:

NOTE: Does not apply to unit with HEPA Filter.



① **CHANGE SOON**

The amber indicator turns ON when timer enters **[WARNING]** mode. If the collector cell is cleaned *(or exchanged)* within the next ***24 hours***, timer automatically resets and begins a new countdown. Normal operation will continue without interruption.

② **CHANGE NOW**

The red indicator turns ON when timer enters **[TIMEOUT]** error mode, signaling that allowed time between cleanings has expired. An audible alarm sounds, and fryer power is ***disabled***. Power is ***locked out*** until cleaning *(or exchange)* is completed. The hood **[POWER]** and **[FRYER POWER]** lights will turn OFF.

Placing ***Power Switch*** in the **[OFF]** position silences the alarm. Hood cannot be restarted unless the timer is reset by cleaning the cell.

③ **SNOOZE Button**

In the event that **[TIMEOUT]** occurs during a period of high customer demand or while a cooking cycle is in progress, the **SNOOZE** feature may be used to exit **[TIMEOUT]** mode. Pressing the **[SNOOZE]** button temporarily returns timer to **[WARNING]** mode for a period of ***two (2) hours,*** allowing continued operation.

Only ***two (2)*** snooze periods are available. When a second is used, the **[CHANGE SOON]** light flashes to indicate this is the last snooze period. After second period expires, fryer is once again locked-out until the E.A.C. cell is cleaned *(or exchanged)*.

NOTE: [SNOOZE] Button is only active after the timer enters [TIMEOUT] mode and the red [CHANGE NOW] light is ON.

NOTES:

5. Cleaning & Maintenance

This section explains various cleaning and maintenance procedures needed to keep the Hood operating safely and at peak performance.

⚠CAUTION

- •• ***DO NOT*** steam clean hood or spray with water.
- •• ***DO NOT*** use products containing chlorine or caustic chemicals.
- •• ***DO NOT*** use abrasive products, steel wool or scouring pads.

Before performing cleaning activities, disconnect Hood and Appliance power at the main breaker.

5.01 Filter Cleaning & Maintenance

The following sections describe the procedures for cleaning and maintaining the hood filters. Conscientious adherence to these procedures is essential for maintaining optimum and satisfactory performance.

5.01.1 Baffle Filter Cleaning

⚠CAUTION

Stainless steel baffle filter is fabricated from thin guage metal that has potential to present sharp edges. Exercise due care when handling and cleaning the filter to avoid injury. ***It is recommended that heavy-duty rubber gloves be worn.***

Generally, the grease baffle filter should be cleaned daily. Remove filter and soak in a 3-compartment sink containing a mild degreaser, such as **YELLOW™ Dishsoap Concentrate** solution. Use a non-scratch pad to remove residue, as needed, rinse throughly with clean hot water. Stand upright so that water will drain and allow to air dry overnight.

Giles recommends Simple Green® Crystal Foaming Spray Cleaner and alternative cleaning product.

It may be possible to wash the baffle filter in the dishwasher.

Ensure that filter is completely dry before reinstalling in Hood. DO NOT PLACE WET FILTER INTO HOOD!

5.01.2 E.A.C. Filter Cell Cleaning

⚠CAUTION

Certain parts of the E.A.C. collector cell are fabricated from thin gauge sheet metal that can potentially have sharp edges that can cause cuts if not handled properly. To avoid injury, exercise due care when handling or cleaning the cell. ***It is recommended that heavy-duty rubber gloves be worn as a precaution.***

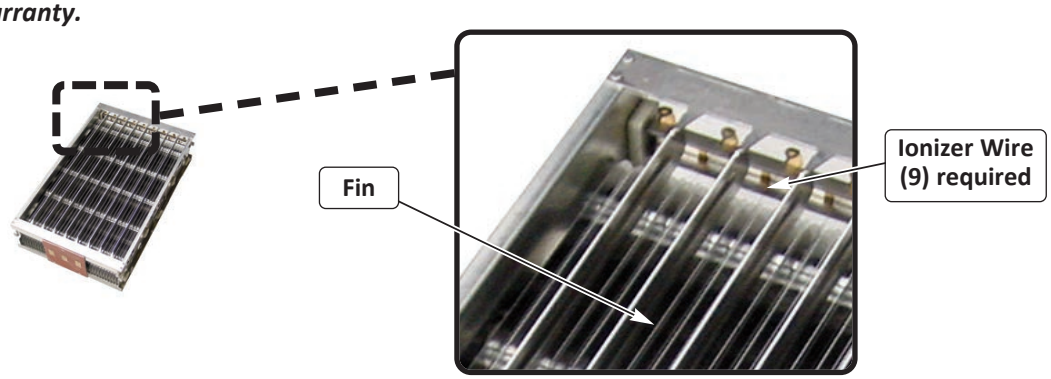
The E.A.C. collector cell is a sustainable and renewable filter component; it should last for years if cleaned and handled properly. To maintain peak performance, It ***MUST BE CLEANED DAILY***. Not doing so can cause hood & fryer operation to be interrupted, a premature failure of the cleaning system, or reduction of useful life for consumable charcoal filters. Follow the procedures detailed below for effective cleaning.

IMPORTANT: The cell CANNOT withstand washing in commercial dishwashing equipment, and some commercial cleaners/detergents will cause oxidation, or create a layer of contamination, on collection fins that can lead to system malfunction and result in interruption of power to the fryer beneath the hood.

Continued on Next Page

5.01.2 E.A.C. Filter Cell Cleaning - continued

CAUTION **While handling and cleaning the cell, take care not to bend the collection fins or break the fine ionizer wires that are stretched across the its face. Bent fins and broken/missing wires can prevent the electrostatic collection system from performing properly. System faults and alarms will occur that can potentially interrupt operations.** ***Damage from abusive handling and/or improper maintenance may not be covered by the factory warranty.***



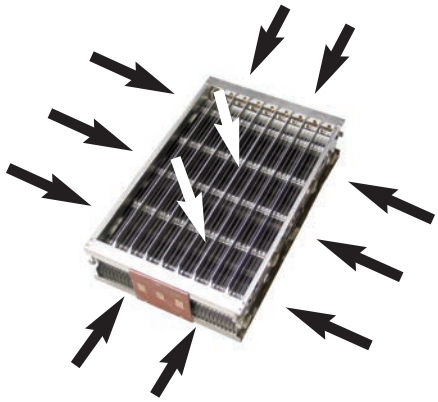
With proper care, cleaning, and handling, the E.A.C. collector cell is sustainable, designed to provide years of service.

Two (2) different cleaning methods are currently endorsed by *GILES Food Service,* as follows.

- ***Preferred spray method:*** Uses ***Simple Green® Crystal Foaming Spray Cleaner/Degreaser*** which is a readily available foaming aerosol that is an exceptionally effective cleaner, as well as being safe for use on aluminum (**NSF approved,** food-grade, non-toxic, and biodegradable). Cleaning the collector cell is quick and easy with this convenient ready-to-use cleaner. A complimentary sample is supplied with new equipment. It can be ordered from *Giles,* ***item #41510 (12-count case)*** and is also available from various on-line sources and retail outlets. When used as directed, a case of cleaner should be a 4 to 5 week supply, approximately, depending on equipment model.
- ***Alternative soak method:*** Uses a diluted solution of an approved degreaser product ***(LIQUID STORM™)*** and water***.*** Other cleaners may be used, such as ***Simple Green® Pro-HD.*** While not as convenient as the spray method, requiring more planning and time, the procedure has proven to be very satisfactory for cleaning collector cells for many years. Dilution factors for degreaser products will differ, refer to instructions in the following sections.

A. Preferred Cleaning Method - Spray Cleaner

1. Remove collector cell from hood (see ***Section 4.02.4***) and lay on a drain board, or other suitable surface.
2. Hold can at the appropriate distance and spray ***Simple Green® Crystal Foaming Degreaser*** onto the cell, completely covering all surfaces ... collection fins, contact plate, brass fittings and inside corners of frame. Turn cell over and apply to the other side in like manner, ensuring that both sides of all collector fins are completely covered with the foam.
3. Allow foam to soak for ***5 to 10 minutes***. In cases of extreme build-up, a second application may be required after rinsing.



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5.01.2 E.A.C. Filter Cell Cleaning - continued

4. Carefully move cell to sink and rinse thoroughly, using hot water spray. ***Rinse ONLY, DO NOT scrub with brushes.***

5. Stand cell upright on end on a drain board, w/contact plate up ... allow it to drain and air dry overnight. The cell must be completely dry before being replaced in hood unit. If desired, a small electric fan can be used to blow across the cell to help expedite drying.

6. Before replacing cell in the hood, inspect for broken/missing ionizer wires and bent fins. Broken or missing wires need to be replaced promptly. Bent fins may be straightened by hand so that no fins are touching adjacent fins.

IMPORTANT! ONLY Simple Green® Crystal Foaming Cleaner/Degreaser is recommended by GILES for cleaning the E.A.C. cell in this manner. Other spray cleaners have not been evaluated and may contain corrosive ingredients that may damage the metal, causing cell to fail or not perform properly. Such damages are not covered by the factory warranty.

B. Alternate Cleaning Method - Soaking

Corporate approved product for the soak method of cleaning the collector cell is ***EcoLab LIQUID STORM™*** which must be diluted in clean water at the rate of three (3) packets per 6 gals ***(1:2 ratio)***.

Giles factory-recommended product for the soaking method is ***Simple Green® Pro-HD,*** a readily available, biodegradable, non-toxic degreasing cleaner that is safe for use on aluminum. It performs well to clean the cell when diluted at a ***1:12 ratio*** *(e.g. 1/2 gal. cleaner to 6 gals water)*.

DO NOT use DISHWASHING DETERGENTS other than these approved cleaners as they may contain ingredients that can damage the metal components, causing failure or unsatisfactory performance. Such damages are not covered by the factory warranty.

1. Cleaning with this method requires a suitable, leakproof container, such as a trash bin, recycle bin, plastic tote, or a *Giles soaking tank*. The container must be large enough to hold the cell long with enough cleaning solution for it to be completely submerged, either standing on end, on edge, or lying flat.

   IMPORTANT! Giles has adopted the spray cleaner method for cleaning the collector cell as the "best practice" and has subsequently discontinued providing a Giles Soaking Tank with its ventless hood products, however the tank is still available for separate purchase ... Item No. 91123.

2A. Place cell into suitable container and fill with fresh water to a level that covers the cell. Measure water while filling and note the quantity.

- With ***LIQUID STORM™:*** add product in ***ratio of 1:2*** to water ... ***e.g. 8 gals of water requires (4) packets of product*** ... stir to mix.
- With ***Simple Green® Pro-HD:*** add product in ***ratio of 1:12*** to the water ... ***e.g. 8 gals of water requires .67 gals (2 qts+21 ozs) of degreaser*** ... stir to mix.

2B. Using a *Giles Soak Tank ...*

- With ***LIQUID STORM™:*** pour ***three (3) packets*** of product into the tank and fill with clean water to the full line indicated by "X" ... stir to mix.
- With ***Simple Green® Pro-HD:*** pour ***1/2 gal*** of product into the tank and fill with clean water to the full line indicated by "X" ... stir to mix.

Continued on Next Page

5.01.2 E.A.C. Filter Cell Cleaning - continued

3. After preparing the cleaning/degreaser solution, hold the cell by contact plate**,** frame or handle and carefully place it into the solution, being sure that it is fully submerged.
4. Allow cell to soak for approximately ***20 minutes (no more than 30 mins)***, then lift it slightly and briefly agitate in the solution to help dislodge grease residue.
5. Carefully remove cell from container and perform ***Steps 4 thru 6*** as explained in ***Method (A)***.

NOTE:
A degreaser soaking solution may be used multiple times ... cover container with a lid or other suitable cover when not in use to prevent contamination. Discard and remake the solution when a greasy film seems to remain floating on the liquid. When soaking, always ensure that solution completely covers the cell ... add some water if needed.

5.01.3 Charcoal Filter Maintenance

CAUTION ***Charcoal Filter is a single-use, disposable filter. NEVER attempt to clean and reuse; doing so can cause damage to the unit.***

Charcoal filter is a consumable item which must be replaced periodically (see ***Sections 4.02.6, Removal & 4.02.7, Installation***). It ***CANNOT*** be cleaned and reused. Typical replacement cycle is every **30 to 40 days**, depending on usage.

Use *GILES* replacement ***Item No. 30248***. Record replacement date on new filter.

IMPORTANT: Failure to use Giles OEM parts and OEM replacement filters may void the factory warranty.

5.01.4 HEPA Filter Maintenance [HEPA version only]

Hood is available equipped with a replaceable ***HEPA Filter*** as an alternative to the electronic air cleaning (E.A.C.) system with sustainable collector cell.

The ***HEPA Filter*** is a consumable item which must be replaced periodically (see ***Sections 4.02.5, Removal & 4.02.5, Installation***). ***It CANNOT be cleaned and reused.*** Typical replacement cycle can vary significantly depending on the cooking activities (quantity and type of foods cooked). A **HEPA** filter should potentially have a useful service life of approximately **3 to 4 months**, but this can only be determined by actual use.

If a **HEPA** filter has been in service for a period of time and a clogged filter alarm condition occurs ***(see Section 4.03.2)***, first replace the charcoal filter. If the alarm clears, that is an indication that the **HEPA** filter if still serviceable. Should the alarm ***NOT*** clear with the new charcoal filter, the filter probably needs to be replace. ***DO NOT attempt to clean and reuse the HEPA filter.***

Use *GILES* replacement ***Item No. 41254***. Record the replacement date on new filter.

IMPORTANT: Failure to use Giles OEM parts and OEM replacement filters may void the factory warranty.

5.02 General Hood Cleaning

CAUTION

DO NOT wash down hood with water from a spray hose.

DO NOT steam clean or use any type pressure washing equipment.

DO NOT use products containing chlorine or other caustic chemicals.

DO NOT use abrasive products, steel wool or scouring pads.

The factory-recommended product to use for general cleaning/degreasing of this equipment is ***Simple Green® Crystal Foaming Spray Cleaner/Degreaser***, a biodegradable, non-toxic effective degreasing cleaner**.**

5.02.1 Weekly Hood Cleaning

Exterior: Use a good quality stainless steel cleaner to clean all external stainless steel surfaces.

Inside Skirt Section: Use a mild, non-toxic, degreasing cleaner (see recommendation above) to clean the inside surfaces of the hood skirt section directly above the appliance.

Weekly cleaning should also include the baffle filter and E.A.C. collector cell as explained in ***Section 5.01*****.**

5.02.2 Quarterly Hood Cleaning

To maintain effectiveness and performance, the hood should be deep cleaned, at a minimum, every **3 months**.

1. Disconnect power to the unit, preferably at the circuit breaker.
2. Unplug and remove cooking appliance from under hood.
3. Remove all filters.
4. Use a soft cloth, or sponge, and a mild bio-degradable degreasing cleaner ***(Simple Green® Crystal Foaming Spray Cleaner)*** to clean inside the entire hood plenum, removing grease film accumulation from surfaces.
5. Inspect the hood fan and, if possible, clean any grease build-up from the blades using degreaser and a small brush (use cleaner sparingly). ***NOTE: When restarting hood after cleaning, hold a cardboard box, or other suitable item, over the exhaust outlet to catch residue & liquids which may be discharged from the blower.***

5. Thoroughly clean the under-hood area and all exterior surfaces with mild degreaser or a good quality stainless steel cleaner.
6. Allow hood to thoroughly dry or wipe dry with clean dry cloth.
7. Clean baffle filter and E.A.C. collector cell as explained in ***Section 5.01***. If necessary, obtain a fresh new charcoal filter ... reinstall all filters.
8. Restore power and reposition the cooking appliance.

5.03 Hood Maintenance

This section explains periodic maintenance procedures for the ventless hood system. Adhering of these procedures will help to maintain the unit's continuing performance.

5.03.1 Monthly Hood Interlock Inspection (typically performed by User)

Hood contains various interlocks which ensure that the hood & fryer unit will shutdown if certain conditions exist which are not consistent with safe and effective operation. The interlocks should be inspected and tested **MONTHLY** as described below. ***Code authorities may require that operators record these actives in a permanent Maintenance & Service Log.*** If problems are detected, contact *GILES Technical Services* or an authorized service provider.

1. **Door Interlock Test:** Start hood. With hood running, unlatch and slightly lift the bottom lip of the filter access cover. Confirm that hood powers OFF when cover is lifted and the fryer under the hood turns OFF, or cannot be turned ON.

2. **Baffle Filter Test:** Remove the baffle filter, replace filter cover, then turn ON hood power. Verify that the red **[FILTER MISSING]** light turns ON and the **[FRYER POWER]** light is OFF. Confirm that the fryer under hood will not turn ON. Reinstall the baffle filter. See ***Sections 4.02.2 & 4.02.3, Removal & Installation*.**

3. **Charcoal & HEPA Filter Test:** Same procedure as #2 except performed for the charcoal filter. Reinstall filter. See ***Sections 4.02.6, 4.02.7, Removal & Installation*.** Use same procedure to test HEPA filter, if equipped.

4. **E.A.C. Filter Test (N/A for HEPA Filter Version):** Same procedure as #2 & #3 except remove the E.A.C. collector cell, replace and latch filter cover. Turn ON hood power. Verify that the **[WASH]** light is ON, along with the amber **[FRYER POWER]** light. Wait approx. two (2) minutes, a beeping tone alarm should begin sounding. Shortly, the **[FRYER POWER]** light should turn OFF. Check to ensure that fryer under hood will not turn ON. Reinstall the E.A.C. cell. See ***Section 4.02.4. & 4.02.5, Removal & Installation*.**

5. **Filter Clogged Test:** ***Perform this test ONLY after installing new Charcoal Filter*.** Start hood normally and allow it to run. Use cardboard or other material and completely block hood exhaust outlet, holding it firmly in place so that no air is escaping. Within a few seconds, a continuous tone alarm should begin sounding and the **[FRYER POWER]** light should turn OFF. Check to ensure that fryer under hood will not turn ON. Remove the obstruction; the alarm should silence and the **[FRYER POWER]** light should turn ON again.

Should any of these tests fail to yield the described results, contact a factory-authorized service company and have the unit evaluated and repaired. Call ***GILES Services*** at ***800.554.4537*** for assistance in locating a service provider in your area.

5.04 Fire Suppression System Maintenance

The self-contained fire extinguishing system in the hood must be maintained in accordance with the ***Standard for Wet Chemical Extinguishing Systems, NFPA 17A*** and with the instructions of the system installer.

All inspection, maintenance, troubleshooting, repairs and general servicing of the fire extinguishing system must be performed by an authorized ***Ansul® Distributor/Dealer***. Required maintenance activities are described in the subsequent sections.

Continued on Next Page

5.04.1 Semi-Annual Fire Suppression System Inspection & Maintenance

Service and inspection of the fire suppression system must be performed by a qualified ***Ansul® Distributor/Dealer.*** As a minimum, field inspection of the system must be conducted semi-annually (6 months) and shall consist of the following:

- Verify that the fire hazard potential has not changed.
- Inspect the suppressant storage tank for chemical level and charge pressure.
- Inspect and test the Automan release mechanism.
- Inspect all nozzles to ensure they are free of grease build-up. Confirm that all nozzle blow-off caps are in place and in good condition ... replace as needed. See ***Section 2.05.2, Fire Extinguisher Nozzle Locations.***
- Inspect and test the remote manual activation station for function and wear.
- Install a test detector link and cut to test automatic actuation.
- Inspect and clean fusible detector links. Confirm that detector links are of the correct temperature rating. See ***Section 2.05.1, Fire Suppression Detector Links & Location.***
- Inspect detector link conduit ... inspect wire cable for wear at pulleys and detectors; replace if necessary.
- Record maintenance date and service performed in a permanent file and attach sign-off on tag to the hood system in a conspicuous location.

5.04.2 Annual Fire Suppression System Inspection & Maintenance

Same as *Semi-annual Inspection & Maintenance* except:

- All detector links must be replaced with new. See ***Section 2.05.1, Fire Suppression Detector Link Specification & Location.***

5.04.3 12-Year Fire Suppression System Inspection & Maintenance

Same as *Annual Inspection & Maintenance* except:

- Replace wet-chemical fire suppressant in storage tank.
- Hydrostatic test and certify suppressant tank and compressed gas charging cartridge. As alternative, replace these components with new.
- Flow test the regulator.

6. Troubleshooting

This section describes troubleshooting procedures for the ***FSH-2, FSH-2A-99 Ventless Hoods***. Refer to the wiring diagram provided with the unit as needed for more detailed analysis.

⚠ DANGER

- Electrical troubleshooting procedures should be performed **ONLY** by qualified service personnel. Death or serious injury will result from contact with energized electrical components.

6.01 Troubleshooting Procedures

Problem	Probable Cause	Corrective Action
Hood will not turn ON	a. Filter Access Cover not properly postioned & latched.	Confirm cover properly positioned.
	b. ***START*** portion of power switch not held until hood starts	Press & momenterily hold ***START*** portion of switch until blower starts.
	c. Power switch is faulty	Replace switch.
	c. Improper supply voltage	Connect to proper electrical supply.
	e. Not properly connected to power source.	Confirm connections & correct.
	f. Blown fuse or tripped circuit breaker.	Check fuse in hood or breaker at main electrical panel.
[FILTER MISSING] light ON at start-up	a. Baffle or charcoal filter not installed or not properly seated	Install filter and/or check filter positioning inside hood.
EAC [WASH] light ON & intermittent (beeping) alarm sounding	a. Excessive film build-up on fins	Clean the EAC cell, ***Section 4.04.2***
	b. EAC cell is not installed	Install EAC cell
	c. Poor connection at contact plate inside hood.	Check cell position, clean contacts.
	d. Faulty EAC contact plate	Have plate inspected, replace if needed.
	e. Missing ionizer wires	Replace wires, (9) required.
EAC [CHECK] light ON; no alarm sounding	a. EAC shorted to ground (damaged)	Replace or repair the EAC cell.
	b. High voltage wires shorted to ground.	Correct shorted condition.
	c. Collector fins shorted out due to excessive moisture.	Eliminiate condensation causes - cold air being drawn into hood, etc.

6.01 Troubleshooting Procedures - continued

Problem	Probable Cause	Corrective Action
Fryer will not power-up: • **[HOOD POWER]** light **ON** • **[FILTER MISSING]** light **ON** • **[FRYER POWER]** light **OFF**	a. Baffle filter is missing or not properly installed	Install filter / check positioning.
	b. Charcoal filter is missing or not properly installed	Install filter / check positioning.
	c. Faulty filter switches.	Test & replace as needed.
Fryer will not power-up: • **[HOOD POWER]** light **ON** • **[FILTER MISSING]** light **OFFN** • **[FRYER POWER]** light **OFF** • No alarm sounding	a. Fire Suppression system is not armed.	Contact Ansul service company.
	b. Ansul switch is faulty	Contact Ansul service company.
Fryer will not power-up: • **[HOOD POWER]** light **ON** • **Continuous (steady) tone** alarm sounding. • **[FRYER POWER]** light **OFF**	a. Baffle or charcoal filter clogged	Replace charcoal filter with new • Clean baffle filter.
	b. Hood exhaust outlet excessively block	Clear of any obstructions.
	c. Vacuum switch is out of adjustment	Test & adjust vacuum switch.
	d. Kinked or blocked vacuum line	Remove vacuum line kinks or blockage.
	e. Fan running slow or blades are loaded with grease build-up.	Check voltage and inspect blower; clean if needed
Fryer will not power-up: • **[HOOD POWERED]** light **ON** • **[WASH]** light **ON** • **Intermittent (beeping) tone** alarm sounding. • **[FRYER POWER]** light **OFF**	a. Excessive grease film built up on collector fins; too dirty	Clean the EAC cell, ***Section 4.04.2***.
	b. EAC cell is not installed	Install clean EAC cell.
	c. EAC driver board is faulty	Test & replace EAC power supply if needed.
	d. Poor connection at contact plate; dirty contacts, mis-alignment, faulty contacts.	Check cell position, clean contacts, inspect contact plate & replace if needed.
	e. Ionizer wire(s) missing	Replace missing wire(s)
Fryer is ON: • **[HOOD POWER]** light **ON** • **[CHECK]** light **ON** • ***No*** *alarm sounding, but cell is* ***NOT*** *cleaning air*.	a. Ionizer wire broken & touching chassis.	Replace ionizer wire.
	b. Collector fins shorted to ground by moisture.	Dry cell, determine cause of moisture, cool air being drawn into hood creating condensation.

7. Parts List

This section lists some of the various parts that are available for replacement on the unit. This is not an all inclusive listing; please contact an authorized *Giles* representative or service agent concerning other parts that may be replaced in the field.

7.01 Parts Ordering & Service Information

Giles is an equipment manufacturer and does not sell parts direct to end users. Parts for our equipment are available through authorized service agents, part distributors, and/or kitchen equipment dealers. If assistance with sourcing parts or equipment repair service is required, please contact a *GILES* representative to assist with locating a parts source or authorized service provider near you. For further assistance you may contact the ***GILES Technical/Customer Service Support*** as follows:

IN THE UNITED STATES & CANADA call: **800.554.4537**

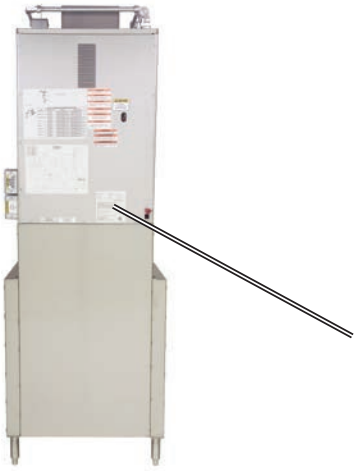
ALL OTHERS call: **334.272.1457**

Normal business hours are 8:00 AM to 5:00 PM Central Time ... calls are handled by an auto-attendant answering system. Please follow the recorded prompts to route your call appropriately. If calling after hours, leave a voicemail message and a representative should respond shortly, usually within 30 minutes.

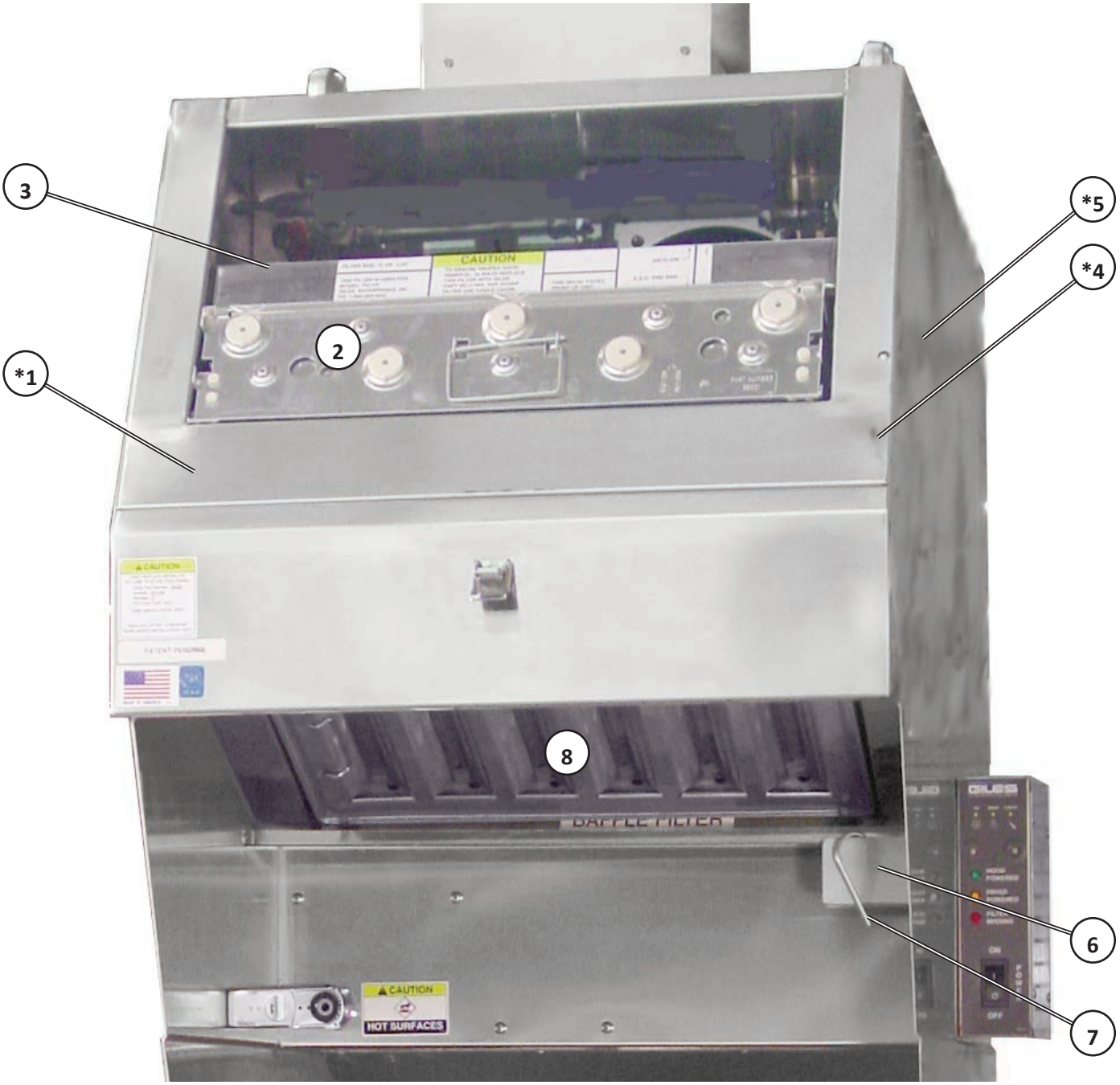
Website: **www.gfse.com** Email: **services@gfse.com**

Our goal at Giles is to provide the highest possible quality of service and assistance. To help us accomplish this, please have the following information readily available when calling, along with a brief description of the problem being experienced. Please record the unit information in the table below for quick reference.

Model:	
Serial Number:	
Voltage:	
Phase:	



7.02 Ventless Hood - Front



* Not shown

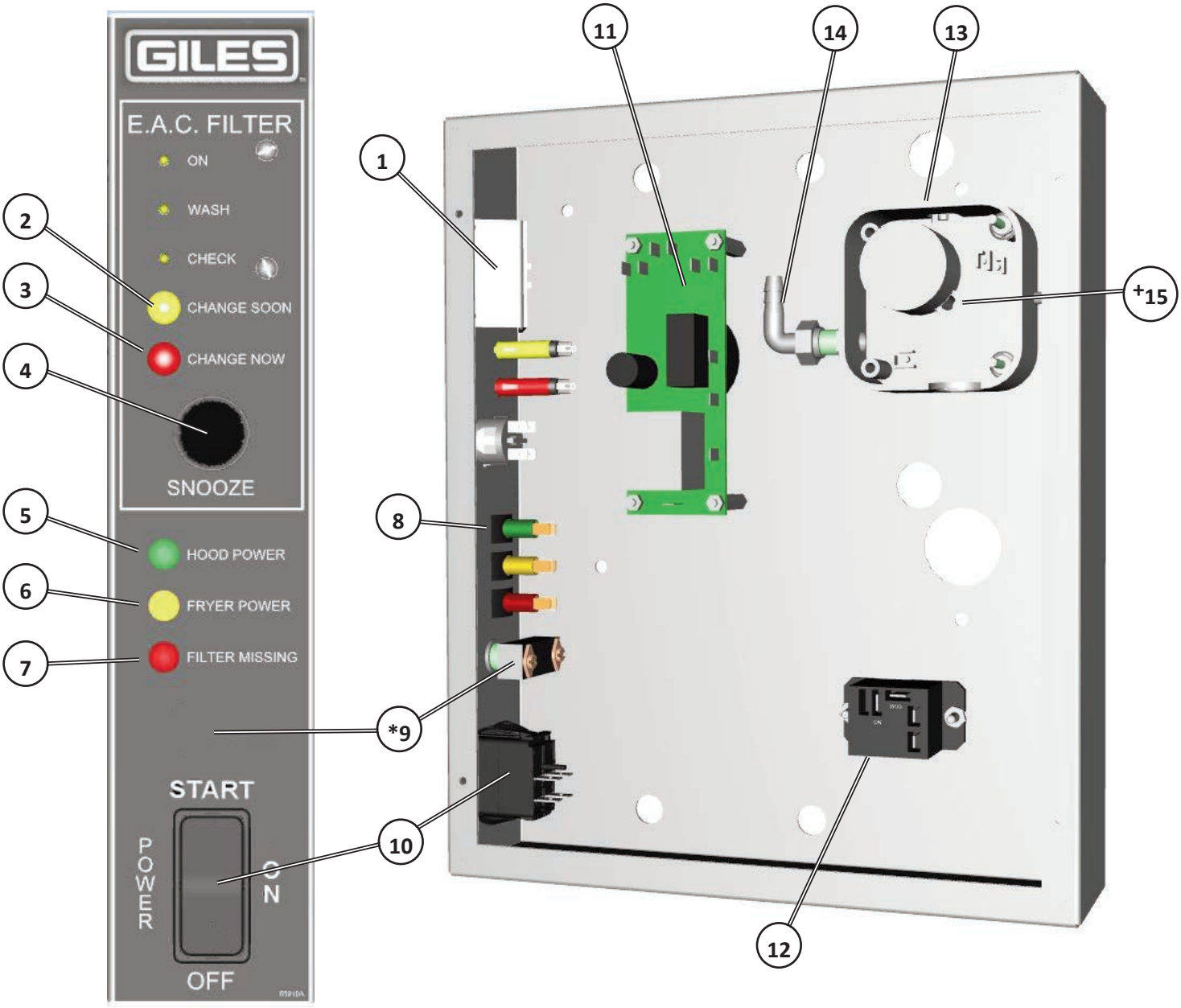
7.02 Parts List for Ventless Hood - Front

Item	Part No.	Qty.	Description
*1	90254	1	FILTER ACCESS PANEL Assembly
2	20520	1	EAC FILTER, 20”
	41254	1	HEPA FILTER, 20” **(FOR HEPA FILTER VERSION ONLY)**
3	30248	1	CHARCOAL FILTER, ASSY, 20” X 12-3/8”
*4	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
*5	21125	1	CONTACT BOARD, EAC
6	30206	1	DRIP CUP
7	34750	1	DRIP CUP SAFETY PIN
8	42300	1	BAFFLE FILTER, 20” X 20” X 2”, SS

NOTE:
Filter placement is opposite of this depiction in the HEPA Filter version of the hood ... Charcoal filter is located below the HEPA filter.

* **Not shown**

7.03 Control Box



** ILS Only*
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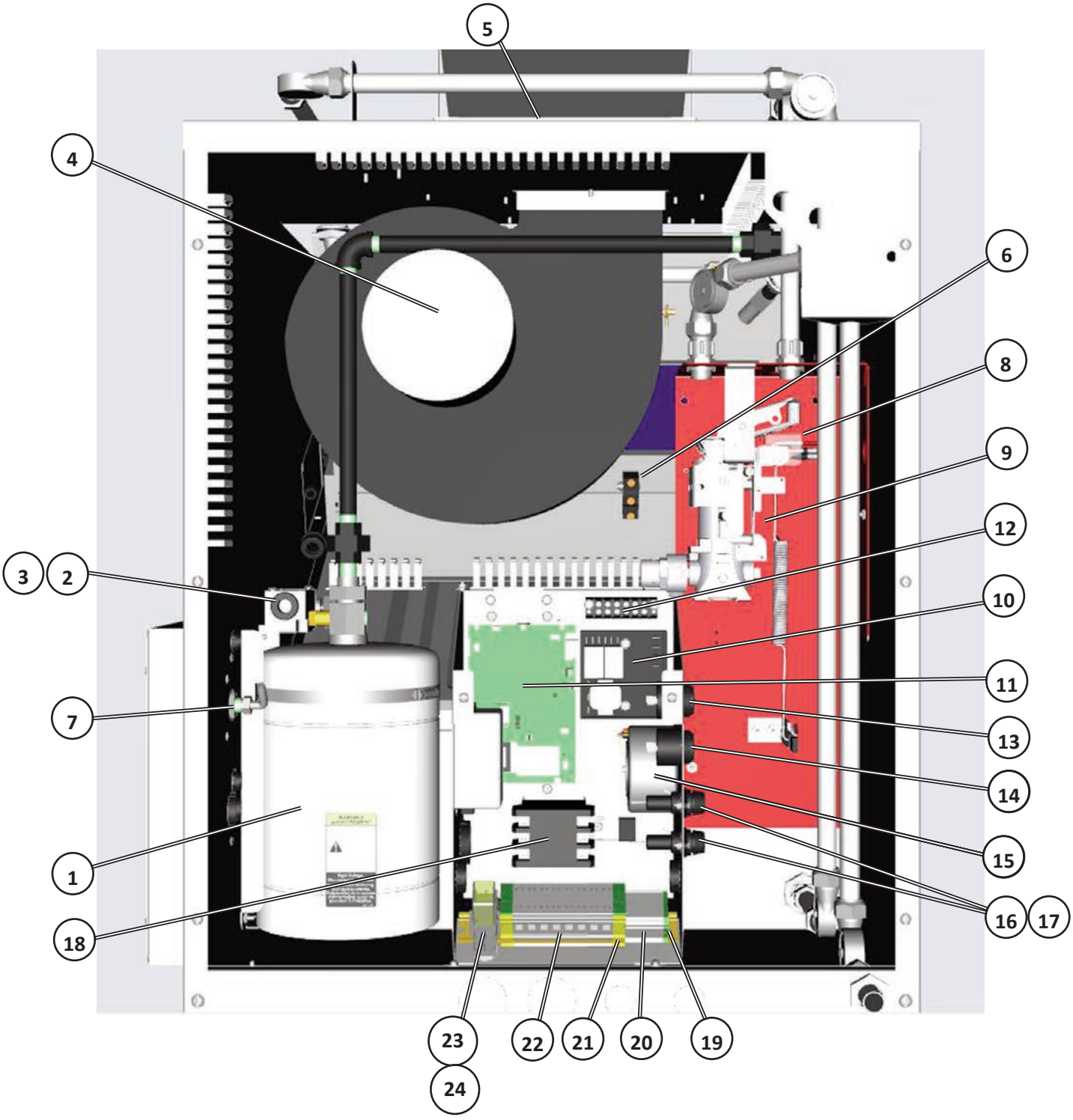
7.03 Parts List for Control Box

Item	Part No.	Qty.	Description
1	24209	1	**L.E.D. CLUSTER, AIR FILTER, E.A.C.**
2	20694	1	PILOT LIGHT, YELLOW, EAC TIMER
3	20693	1	PILOT LIGHT, RED, EAC TIMER
4	20692	1	SWITCH, MOMENTARY PUSH-BUTTON, EAC TIMER
5	20398	1	INDICATOR LIGHT, GREEN, 250V, 0.5W
6	20399	1	INDICATOR LIGHT, AMBER, 250V, 0.5W
7	20402	1	INDICATOR LIGHT, RED, 250V, 0.5W
8	20307	3	RETAINING CLIP, INDICATOR LIGHT
*9	23173	1	SWITCH, PUSH-BUTTON, MOMENTARY
10	21441	1	SWITCH, ROCKER, (ON)-0N-OFF, 250V, 20A
11	20572R	1	EAC TIMER BOARD, REPLACEMENT
12	21302	1	RELAY, SPST-NO, 240V
13	20390	1	SWITCH, VACUUM, 0.16 - 1.20 WC
14	40877	1	FITTING, 1/4 BARBED, 90-EL, NYL, 1/8 NPT
+15	40880	1	FITTING, 1/4 BARBED, 90-EL, NYL, 1/4 NPT

NOTE:
HEPA Filter version Control Box does no include Items 1, 2, 3, 4, 11 & 12.

** ILS Only*
+ Not Shown

7.04 Ventless Hood - Rear



7.04 Parts List for Ventless Hood - Rear

Item	Part No.	Qty.	Description
1	39272	1	**TANK, ANSUL, 1.5-GAL SS**
2	**23778**	1	**SWITCH, SIDE ROTARY, 240V, 30A, W/O ARM**
3	23779	1	ACTUATOR, ROTARY SWITCH
4	33589	1	BLOWER ASSEMBLY
5	41115	1	DAMPER, FIRE, 10 X 10, SHALLOW
6	24237	1 or 2	SWITCH, PLUNGER, 250V, 15A **(HEPA VERSION = 2)**
7	40880	1	FITTING, 1/4 BARBED, 90-EL, NYL, 1/4 NPT
8	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
9	40132	1	BRACKET/RELEASE, AUTOMAN, ANSUL
10	23776	1	MODULE, AIR FILTER, ALARM & SHUTDOWN
11	21296	1	POWER PACK ASSY, W/DRIVER BRD, 120V
12	23751	1	TERMINAL BLOCK, 6-PL, 250V, 15A
13	22950	1	SONALERT, 250V, INTERMITTENT
14	23782	1	SONALERT, CONTINUOUS TONE, 250V
15	21337	1	TRANSFORMER, 230VAC >115VAC @ 0.86A
16	21950	2	HOLDER, FUSE, 300V, 15A, SC 0 TO 15
17	21900	2	FUSE, 15-AMP, SC-15
18	21151	1	CONTACTOR, 63-AMP, 3PH, 208/240V
18	20624	1	CONTACTOR, 60A RES, 4-POLE, 240V COIL **(HEPA VERSION ONLY)**
19	20320	1	TERMINAL BLOCK, GROUND, AWG 8-24
20	20319	4	TERMINAL BLOCK, 50 AMP, AWG 8-24
21	20304	2	TERMINAL BLOCK, GROUND, 4-12 GA WIRE
22	20303	8	TERMINAL BLOCK, 4-12 GA WIRE
23	20318	1	RELAY, 240 VAC, 10A, ELECTRO-MECH
24	20312	1	BASE, RELAY, PLUG-IN, DIN MOUNT

NOTE:
HEPA Filter version does no include Items 10, 11, 13 & 15.

Notes:

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Form No. 64408 (Rel. Date: Oct.2008, Rev. Date: Feb.2022, Rev. I)