

VULCAN

*SERVICE AND PARTS MANUAL FOR
ECONOLINE SERIES
GAS RESTAURANT RANGES
MODELS: 36L77R, 36FL77R, 60L77R,
60FL77R, 160L77R, 260L77R*



VULCAN-HART COMPANY, P.O. BOX 696, LOUISVILLE, KY 40201-0696, TEL. (502) 778-2791

FORM 30753 (10-91)

IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

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.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE UNIT UNTIL POWER IS RESTORED.

SERVICE AND PARTS MANUAL

ECONOLINE SERIES GAS RESTAURANT RANGE - INDEX

PLEASE KEEP THIS MANUAL FOR FUTURE REFERENCE

Your Vulcan Econoline Range is produced with quality workmanship and material. Proper installation, usage and maintenance of your range will result in many years of satisfactory performance.

The manufacturer suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

DESCRIPTION	PAGE
SERVICE	4-9
CONTROLS	4
LIGHTING AND SHUTTING DOWN PILOTS	4, 5
PILOT ADJUSTMENTS	5, 6
THERMOSTAT - BY-PASS (MINIMUM BURNER) FLAME	7
OVEN CONTROL RECALIBRATION	8
ORIFICE DATA	9
TROUBLESHOOTING	10
REPLACEMENT PARTS LIST	11-18

SERVICE

WARNING: THE RANGE AND ITS PARTS ARE HOT. BE VERY CAREFUL WHEN OPERATING, CLEANING OR SERVICING THE RANGE.

CONTROLS (FIG. 1)

Thermostat Dial — allows operator to regulate oven temperature from low to 500°F.

Open Top Burner Valve Knob — regulates gas flow to top burners. Flame increases by turning knob counter-clockwise, and decreases by turning knob clockwise.

Griddle Burner Valve Knob — regulates gas flow to griddle burner. Heat increases by turning knob counter-clockwise, and decreases by turning knob clockwise.

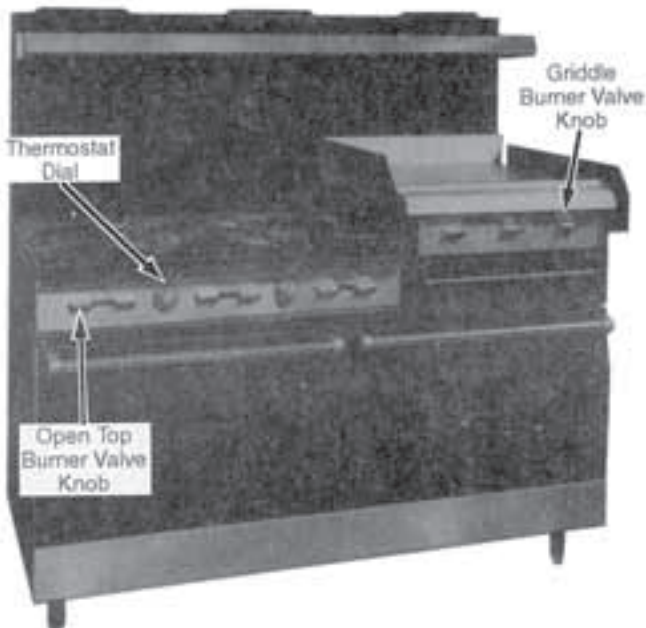


Fig. 1

LIGHTING AND SHUTTING DOWN PILOTS

NOTE: All adjustment procedures associated with pilot lighting must be performed **by a qualified Vulcan-Hart installation or service person.**

Oven Pilot

1. Turn main gas supply ON. Remove lower front panel and lift lighting hole cover.
2. Depress the reset button located behind the lower front panel and light with a lit taper (Fig. 2). Continue to hold reset button for 1 minute.
3. If pilot fails to light, turn main gas supply OFF and wait 5 minutes before repeating Steps 1 and 2.
4. After pilot is lit, turn the thermostat dial to the desired setting.

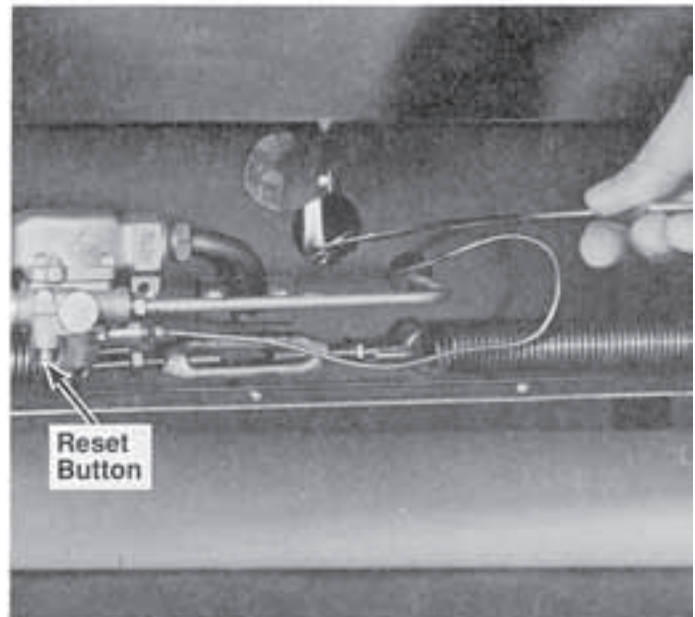


Fig. 2

Nightly Shutdown: Turn oven thermostat OFF.

Extended Shutdown:

1. Turn oven thermostat OFF.
2. Turn main gas supply OFF.

Open Top Pilots

1. Remove all top section cover plates and griddles.
2. Turn main gas supply ON (all burner valve knobs should be in OFF position).
3. Begin from the left range top side. Light each individual pilot from front to rear across the entire range top section.

NOTE: When lighting broiler/griddle section, the pilot is tubular in shape.

4. If any pilot fails to light or extinguishes, ensure that the burner knob is in the OFF position. Wait 5 minutes, then relight.
5. After all pilots are lit, ensure that all burners are operational. To ignite burners, turn the burner valve knobs fully ON, starting from left to right.
6. Turn burners OFF and reassemble top sections.

Nightly Shutdown: Turn burner valve knobs OFF.

Extended Shutdown:

1. Turn burner valve knobs OFF.
2. Turn main gas supply OFF.

Broiler/Griddle Pilot

The broiler/griddle sections are operated by the same burners.

1. Turn main gas supply ON.
2. Remove grid pan assembly, and using a taper, light the pilot from the underside of the griddle where the grid pan assembly was removed.
3. If pilot fails to light, turn main gas supply OFF. Wait 5 minutes and repeat steps 1 and 2.

Nightly Shutdown: Turn burner valve knobs OFF.

Extended Shutdown:

1. Turn burner valve knobs OFF.
2. Turn main gas supply OFF.

PILOT ADJUSTMENTS**Burner Adjustment**

The efficiency of the range depends on a rather delicate balance between the supply of air and volume of gas so that complete combustion is achieved. Whenever this balance is disturbed, poor operating characteristics and excessive gas consumption occurs.

Air Supply

Air supply is controlled by an air shutter on the front of the burner. Increase the air shutter openings until the flame on the burner begins to "lift". Then close air shutter slightly and lock in place. A yellow streaming flame is an indication of insufficient air. This condition can be corrected by increasing the air shutter opening.

Main Burner

Econoline Ranges are equipped with pressure regulators and fixed orifices which have been adjusted at the factory and no further adjustment should be required.

Top Burner

Turn one top burner on to remove air from the line. Turn burner off when gas begins to flow. Light top pilots and, if necessary, adjust by rotating adjusting screw clockwise to decrease flame; counterclockwise to increase flame.

Broiler-Griddle or Convectional Griddle

Adjust burner as sharp as possible without flash back.

Oven and Safety Pilot

To check or light oven pilot flame, remove lower panel and swing lighting hole cover to the side (Fig. 3).

1. If pilot is out, turn burner off; then wait 5 minutes before relighting.
2. Depress reset button and hold in for 1 minute after lighting pilot.
3. To shut down, turn main burner OFF and extinguish pilot.

If pilot fails to remain lit, insufficient gas is reaching the pilot. Remove adjusting cap above red button to expose adjusting screw for pilot gas (Fig. 4).

- Pilot Burner Adjustment (Grayson Safety Valve Shown)**
1. Remove pilot adjusting cap.
 2. Adjust pilot key to provide properly sized flame.
 3. Replace pilot adjusting cap.

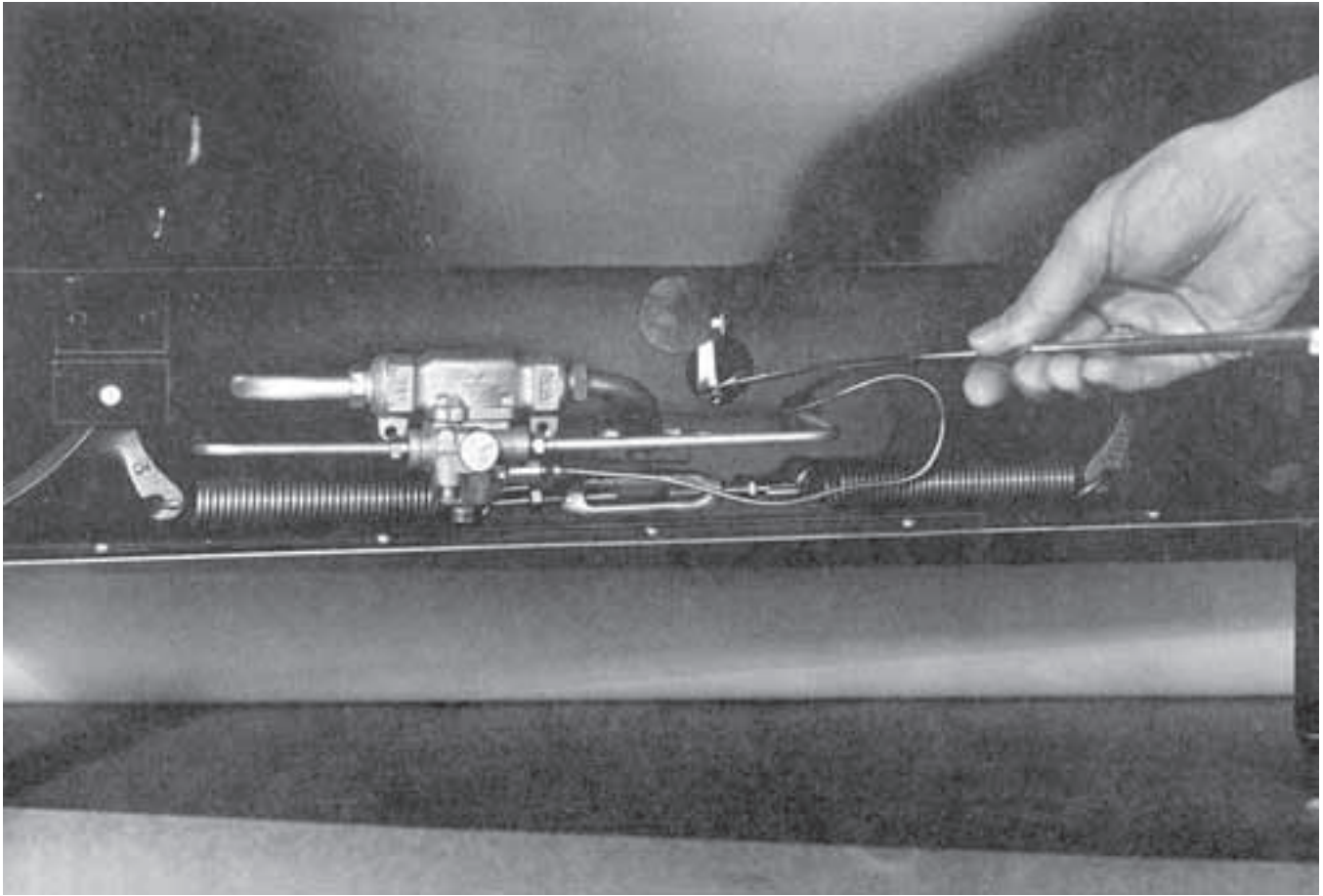
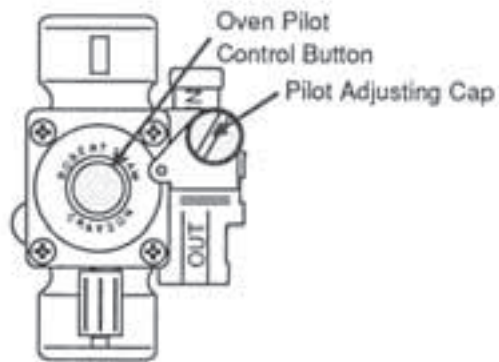


Fig. 3



PL-50117

Fig. 4

THERMOSTAT (BJWA)**To Adjust By-Pass Flame (Minimum Burner Flame):**

When oven reaches the temperature at which the dial is set, the oven control cuts down the flow of gas to the amount required to keep the oven at that temperature. The control must by-pass enough gas to keep the entire burner lit to maintain this minimum flame. The by-pass must be carefully and accurately set as follows (Fig. 5).

1. Light oven burner, then turn dial to highest set temperature.

2. After 5 minutes, turn dial clockwise to a point slightly beyond first mark on dial (shown by "X").
3. Remove dial and sleeve.
4. With a screwdriver, turn by-pass adjustor counter-clockwise to increase flame, clockwise to decrease flame, until there is a flame about $\frac{1}{8}$ " high over entire burner.
5. Replace sleeve and dial, turning dial clockwise until it locks in the OFF position.

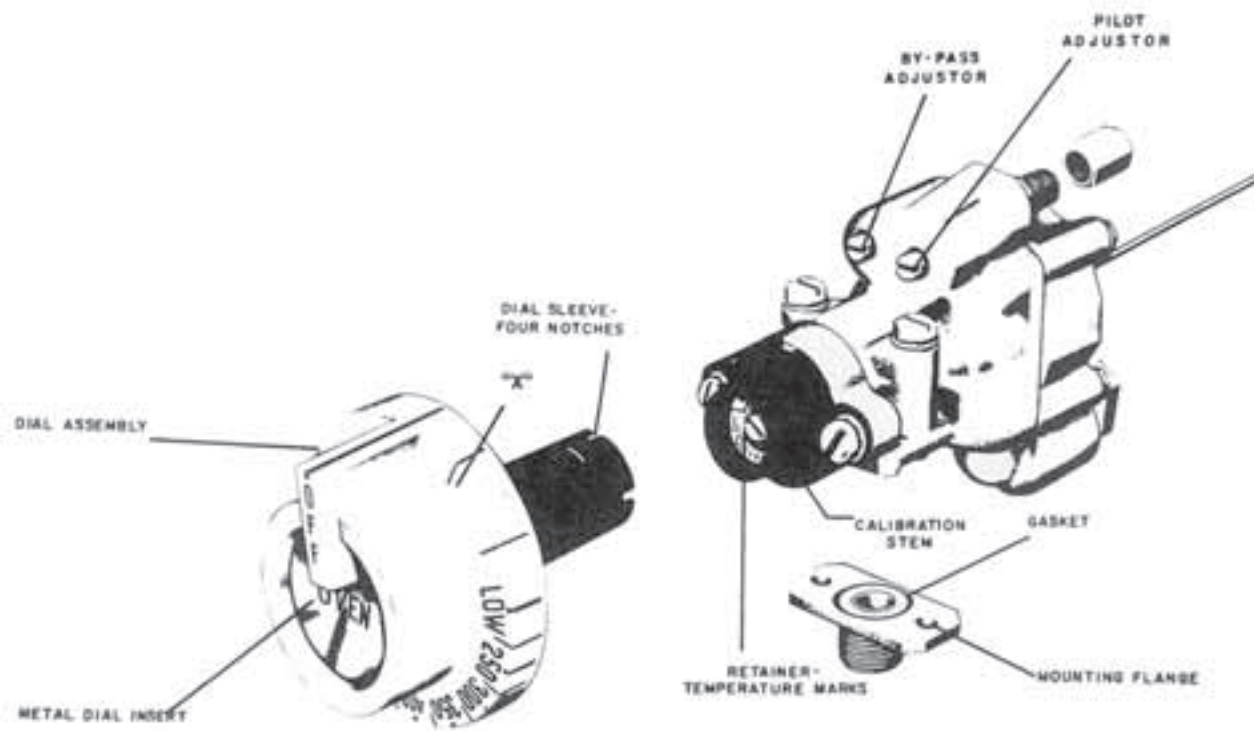


Fig. 5

OVEN CONTROL RECALIBRATION

NOTE: Do not recalibrate oven control until the by-pass flame has been adjusted.

The oven is a precision instrument. It is carefully calibrated at the factory so that the dial settings match the actual oven temperatures. Field recalibration is seldom necessary and should not be resorted to unless considerable experience with cooking results definitely proves the the control is not maintaining the temperatures to which the dial is set.

To check oven temperature when recalibrating, use an appropriate test instrument or thermometer.

BJWA Recalibration

1. Remove dial and push metal insert (Fig. 6).
2. Replace dial, turn to 400 mark, and light oven burner.
3. After burner has been on about 15 minutes, check oven temperature.

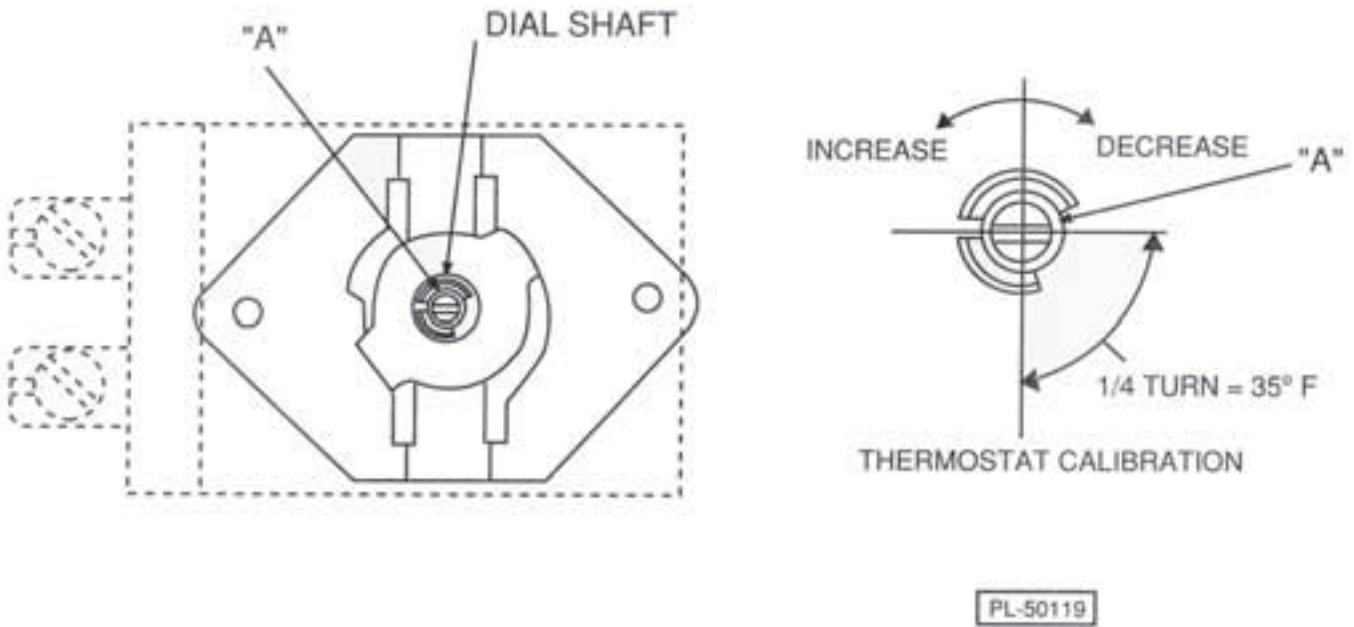


Fig. 6

ORIFICE DATA

	OPEN TOP	GRIDDLE	BROILER GRIDDLE	OVEN
INPUT AT SEA LEVEL PER BURNER (BTU'S)	15,000	15,000	10,000	35,000
GAS TYPE	NAT/PROP	NAT/PROP	NAT/PROP	NAT/PROP
SEA LEVEL TO 2000 FT.	48/57	48/57	54/62	34/51
2000 FT. TO 4000 FT.	49/57	49/58	56/65	38/52
4000 FT. TO 6000 FT.	50/58	50/60	56/66	39/53
6000 FT. TO 8000 FT.	51/59	51/63	57/67	39/54

TROUBLESHOOTING

OVEN

PROBLEM	PROBABLE CAUSES
Too much bottom heat.	<ol style="list-style-type: none"> 1. Insufficient heat input. 2. Overactive flue.
Uneven bake.	<ol style="list-style-type: none"> 1. Too low temperature. 2. Improper operation.
Side burning.	<ol style="list-style-type: none"> 1. Improper bypass setting. 2. Fluctuating gas pressure.
Too much top heat.	<ol style="list-style-type: none"> 1. Too high temperature. 2. Faulty ventilation. 3. Excessive heat input. 4. Thermostat calibration.
Uneven bake side-to-side.	<ol style="list-style-type: none"> 1. Appliance not level side to side. 2. Oven burner, bottom or baffles improperly installed.
Uneven bake front-to-rear.	<ol style="list-style-type: none"> 1. Overactive flue. 2. Range to level front to back. 3. Door not closing properly.
Dried out products.	<ol style="list-style-type: none"> 1. Too low temperature. 2. Cooking time too long. 3. Thermostat calibration.
Pilot outage.	<ol style="list-style-type: none"> 1. Pilot flame too low. 2. Restriction in pilot orifice. 3. Valve problem.

TOP BURNER

Improper burner combustion; excessive valve handle temperature; sticking top burner valves.	<ol style="list-style-type: none"> 1. Improper ventilation. 2. Poor door fit. 3. Oven door left open.
Poor Ignition.	<ol style="list-style-type: none"> 1. Insufficient gas input. 2. Poor air-gas adjustment. 3. Restriction in pilot orifice. 4. Restriction in main burner ignition port.

REPLACEMENT PARTS LIST

ECONOLINE GAS RESTAURANT RANGE REPLACEMENT PARTS LIST AND PHOTOS

REPLACEMENT PARTS ORDERING

The following information must accompany a replacements parts order or it cannot be filled.

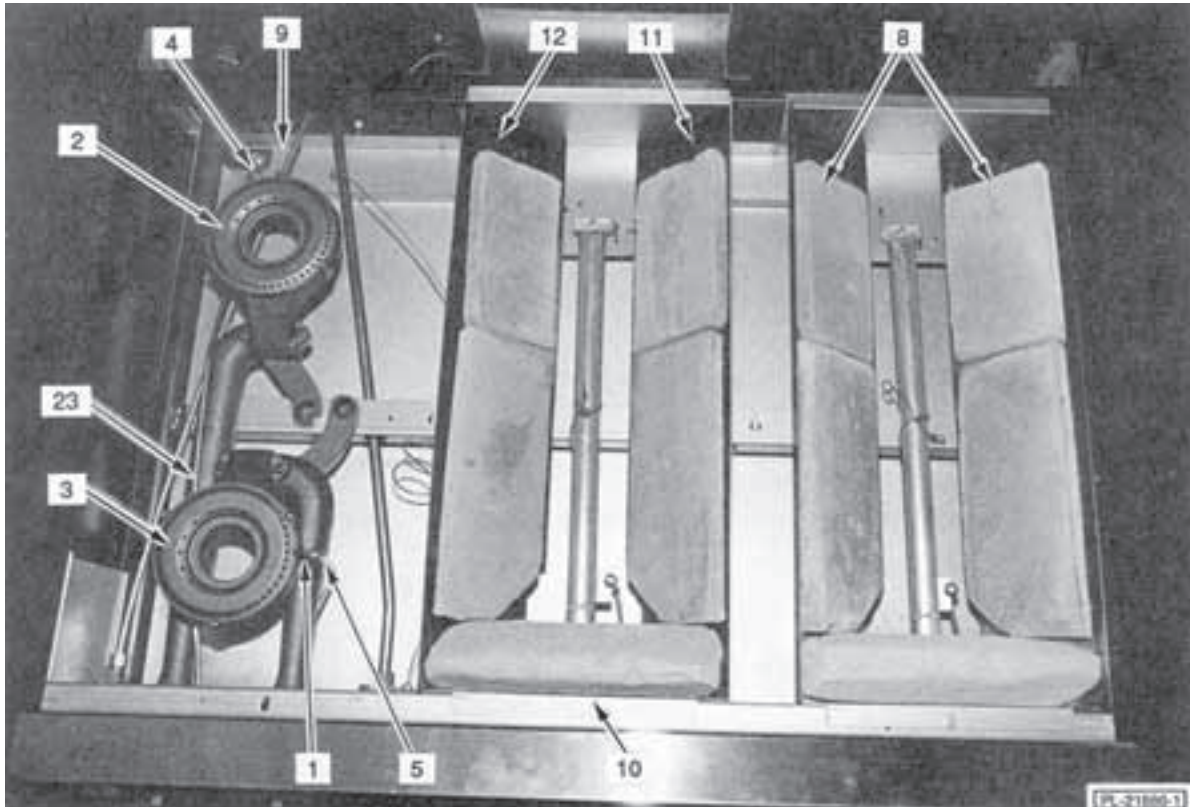
- A. Model and style or serial number.
- B. Type of gas (natural or propane).
- C. Voltage and phase.
- D. Appliance finish, permafinish, stainless steel, etc. (if applicable to part to be replaced).

This information can be found on the rating plate of the range.

Parts may be ordered from your authorized parts depot.

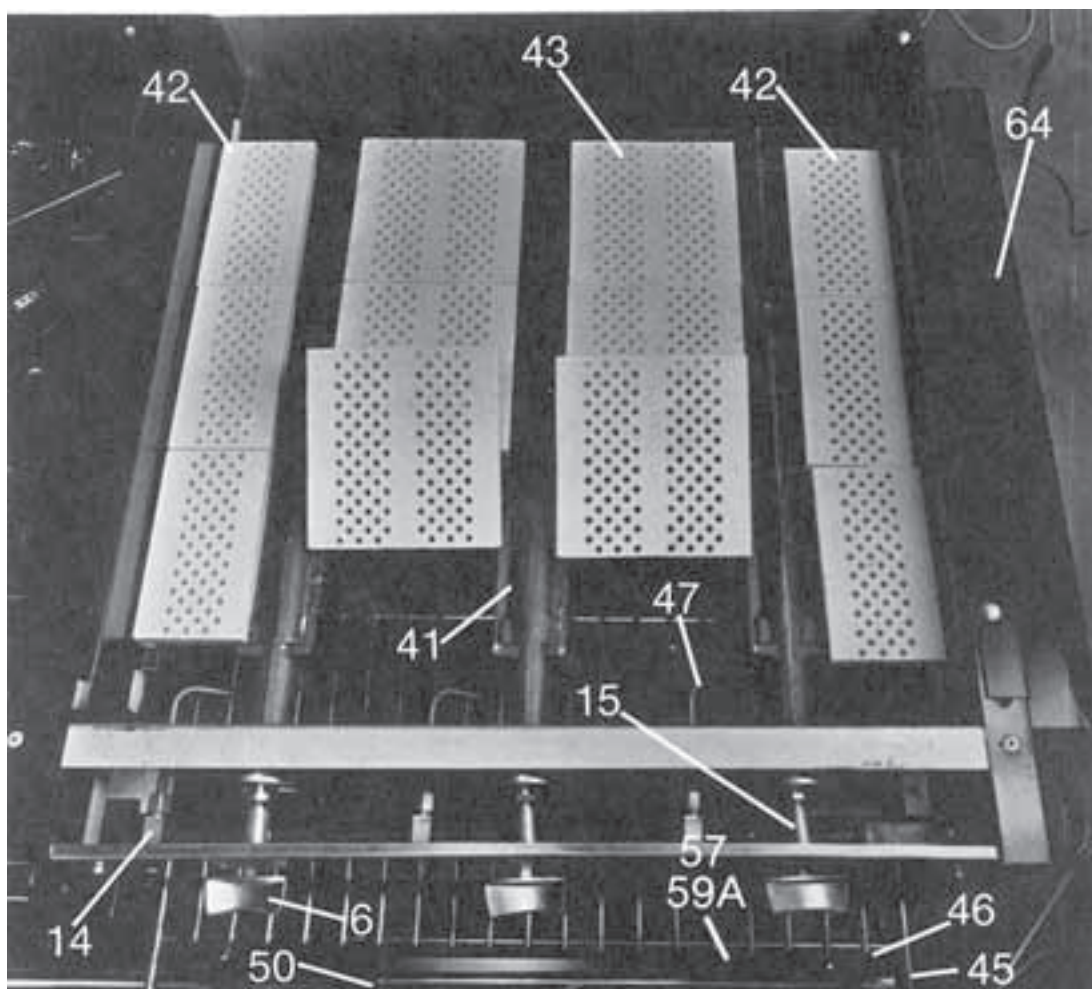
Use rating plate located inside lower front panel to help you obtain the information listed above. This plate will provide all the necessary information required by the service agency.

ALL SERVICE PERSONNEL
WHEN SERVICING THE EQUIPMENT, USE ONLY
CONTROLS ORIGINALLY SUPPLIED ON THIS EQUIPMENT BY
VULCAN-HART COMPANY.
DO NOT SUBSTITUTE.
SUBSTITUTION OF CONTROLS AS STATED ABOVE
WILL AUTOMATICALLY VOID THIS WARRANTY
AND THE CERTIFICATION ASSOCIATED WITH THIS EQUIPMENT.



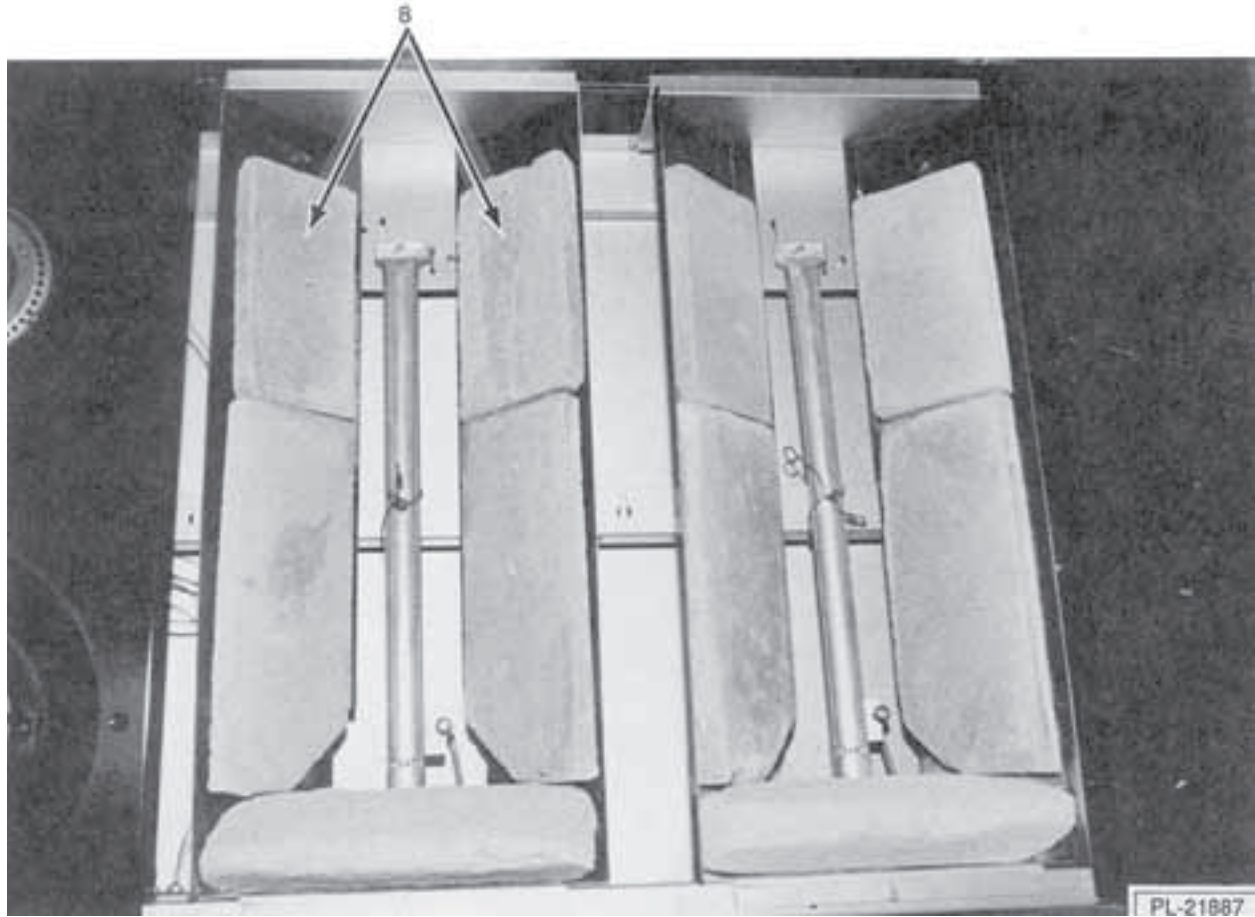
ITEM NO.	DESCRIPTION	PART NO.			
		36L77R	60L77R	160L77R	260L77R
1	PILOT BRACKET	413302-1	413302-1	413302-1	413302-1
+2	REAR BURNER ASSEMBLY (NAT)	409643-G7	409643-G7	409643-G7	409643-G7
	REAR BURNER ASSEMBLY (PROPANE)	409643-G8	409643-G8	409643-G8	409643-G8
+3	FRONT BURNER ASSEMBLY (NAT)	409644-G7	409644-G7	409644-G7	409644-G7
	FRONT BURNER ASSEMBLY (PROPANE)	409644-G8	409644-G8	409644-G8	409644-G8
4	REAR BURNER PILOT TUBE	412072-2	412072-2	412072-2	412072-2
5	FRONT BURNER PILOT TUBE	412070-2	412070-2	412070-2	412070-2
6	BURNER VALVE HANDLE (NS)	413157-1	413157-1	413157-1	413157-1
7	HOT TOP BURNER ASSMEBLY (NS)	412793-G1	412793-G1	412793-G1	412793-G1
8	BRICK SET	407065-G1	407065-G1	407065-G1	407065-G1
9	REAR BAFFLE	411594-1	411594-1	411594-1	411594-1
10	FRONT BAFFLE	413293-1	413293-1	413293-1	413293-1
11	RIGHT BAFFLE	412078-2	412078-2	412078-2	412078-2
12	LEFT BAFFLE	412078-1	412078-1	412078-1	412078-1
13	LIGHTER VALVE (NS)	409557-4	409557-4	409557-4	409557-4
14	PILOT VALVE (NS)	404193-1	404193-1	404193-1	404193-1
15	TOP BURNER VALVE (NAT) (NS)	404076-F50	404076-F50	404076-F50	404076-F50
	TOP BURNER VALVE (PROPANE) (NS)	404076-F57	404076-F57	404076-F57	404076-F57
16	THERMOSTAT (OVEN) (NS)	408823-6	408823-6	408823-6	408823-6
17	THERMODIAL (OVEN) FAHRENHEIT (NS)	411680-2	411680-2	411680-2	411680-2
	THERMODIAL (OVEN) CELCIUS(NS)	412655-2	412655-2	412655-2	412655-2
23	PILOT TUBE	413008-3	413008-3	413008-3	413008-3
40	HOT TOP PLATE (NS)	413271-1	413271-1	413271-1	413271-1
150	ADJUSTABLE PILOT (NS)	412063-2	412063-2	412063-2	412063-2
151	NUT (NS)	403213-3	403213-3	403213-3	403213-3
152	SLEEVE (NS)	403212-3	403212-3	403212-3	403212-3

+ SPECIFY GAS AND/OR TYPE OF SECTION (OPEN TOP, FRY TOP OR BROILER).
(NS) NOT SHOWN BY PHOTOGRAPH



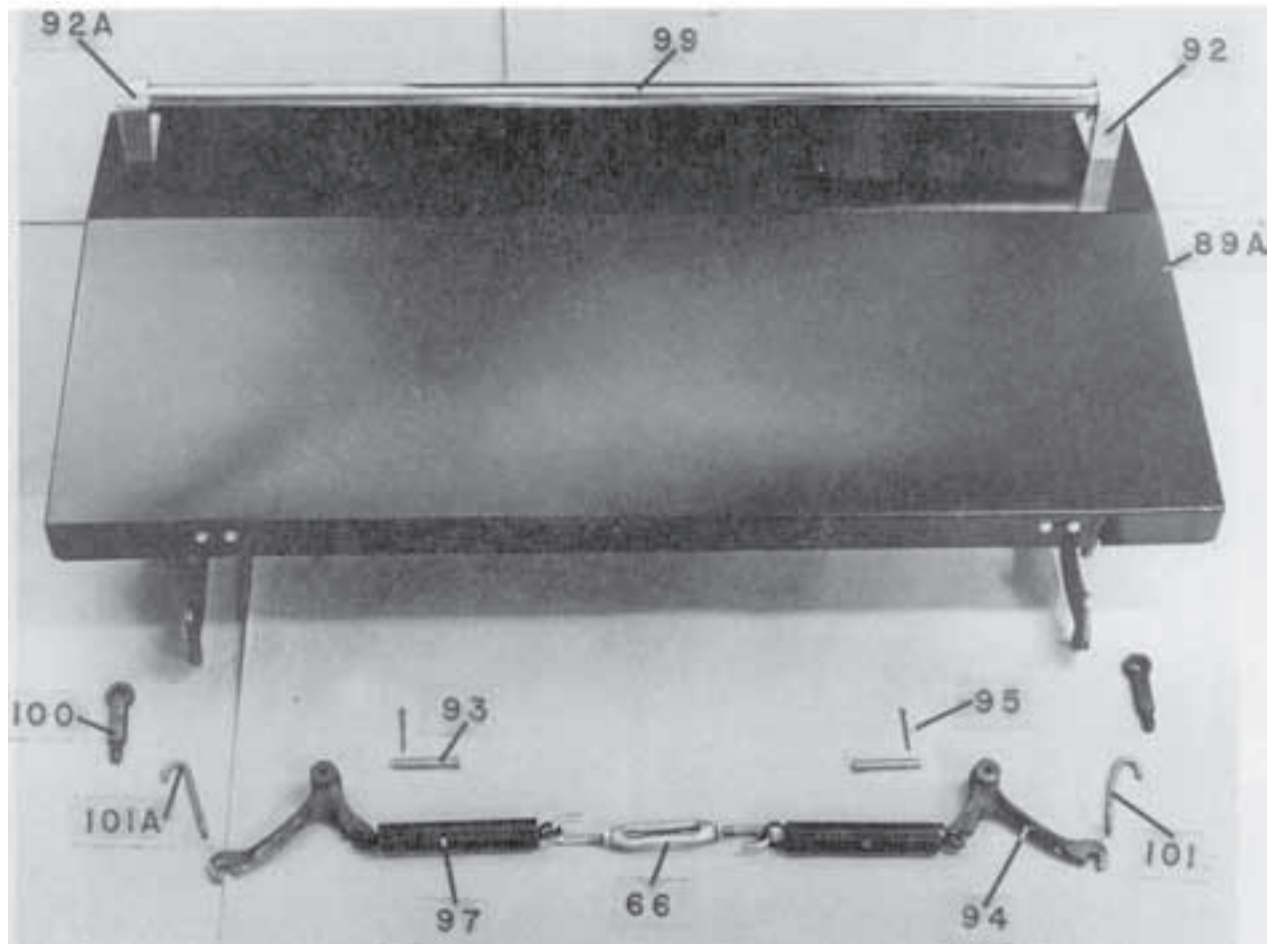
ITEM NO.	DESCRIPTION	PART NO.			
		36L77R	60L77R	160L77R	260L77R
6	BURNER VALVE HANDLE			413157-1	413157-1
14	LIGHTER VALVE			404193-2	404193-2
+15	BROILER BURNER VALVE (NAT) BROILER BURNER VALVE (PROPANE)			404076-F50 404076-F57	404076-F50 404076-F57
41	BURNER			411684-G1	411684-G1
42	SIDE CERAMICS			404146-1	404146-1
43	CENTER CERAMICS			404145-1	404145-1
44	GRID PAN ASSEMBLY			408766-G1	408766-G1
45	GRID			404149-2	404149-2
46	BURNER TRAY ASSEMBLY (NS)			411607-G1	411607-G1
47	PILOT TUBING			410662-G1	410662-G1
50	BURNER TRAY HANDLE			413343-1	413343-1
	BURNER TRAY HANDLE (SS)			413343-2	413343-2
64	GREASE COLLECTOR SUPPORT			413317-1	413317-1
	GREASE COLLECTOR SUPPORT (SS)			413317-2	413317-2

+ SPECIFY GAS AND/OR TYPE OF SECTION (OPEN TOP, FRY TOP OR BROILER).
 (NS) NOT SHOWN BY PHOTOGRAPH
 (SS) STAINLESS STEEL



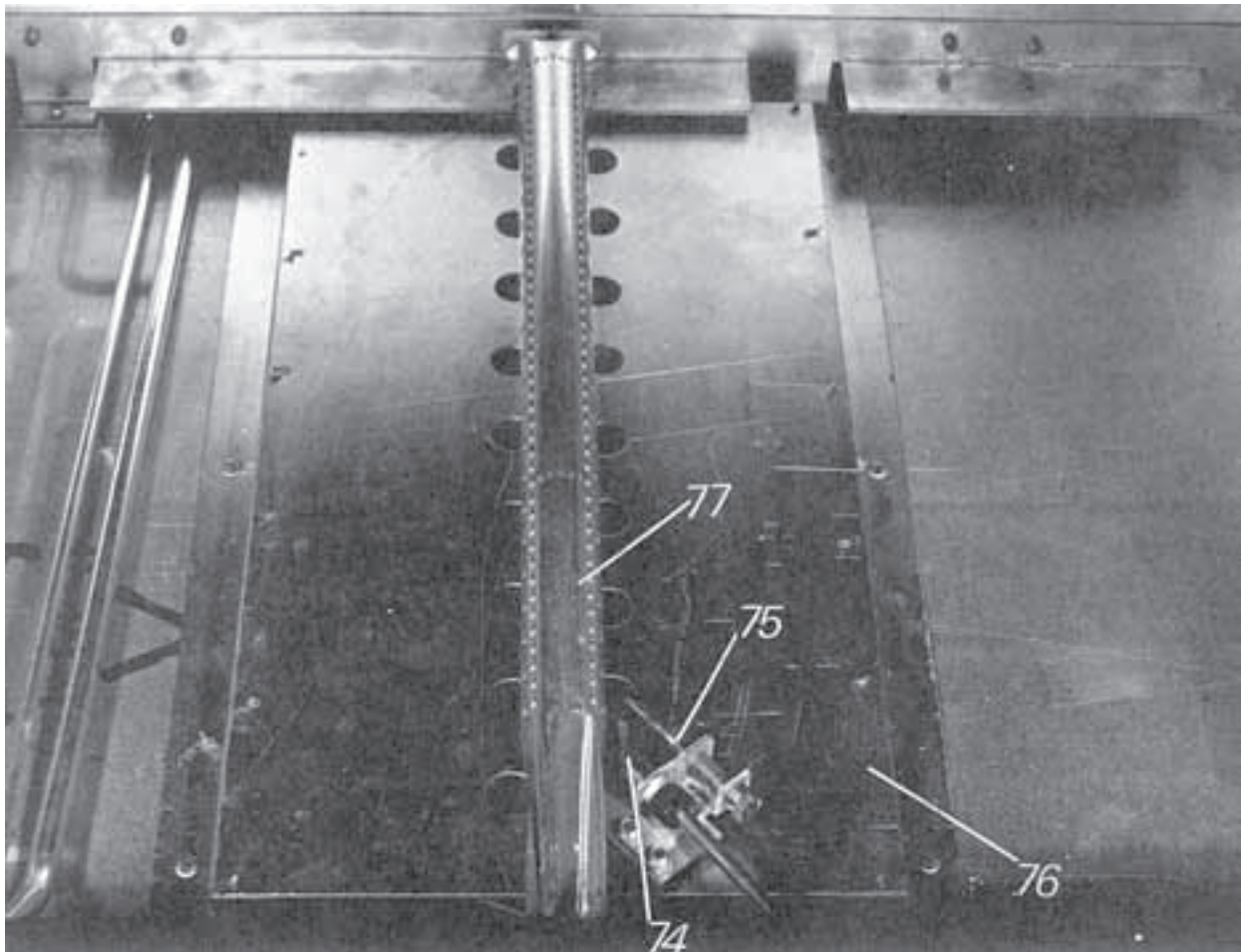
ITEM NO.	DESCRIPTION	PART NO.			
		36L77R	60L77R	160L77R	260L77R
8	BRICK SET	407065-G1	407065-G1	407065-G1	
14	PILOT VALVE (NS)	404193-2	404193-2	404193-2	
18	THERMO. BULB - SHIELD (NS)	411655-2	411655-2	411655-2	
19	THERMO. BULB - INSULATION (NS)	411656-1	411656-1	411656-1	
20	THERMO. BULB - SPRING (NS)	409312-1	409312-1	409312-1	
21	BURNER NOZZLE (NS)	411711-F	411711-F	411711-F	
22	THERMOSTAT (GRIDDLE) (NS)	408823-5	408823-5	408823-5	
23	PILOT TUBE (NS)	412059-5	412059-5	412059-5	
24	RIGHT BURNER TUBE(THERMO TO ELBOW) (NS)	411785-1	411785-1	711785-1	
25	LEFT BURNER TUBE(ELBOW TO THERMO)(NS)	411785-3	411785-3	411785-3	
26	BURNER TUBE (NS)	411786-1	411786-1	411786-1	
+39	ORIFICE SPUD (NAT)(NS)	10901-50	10901-50	10901-50	
	ORIFICE SPUD (PROPANE)(NS)	10901-57	10901-57	10901-57	
51	TEE STRAIGHT MALE (NS)	FP86-41	FP86-41	FP86-41	
52	STRAIGHT MALE (NS)	414700-9	414700-9	414700-9	
53	LEFT BURNER TUBE (NS)	411785-2	411785-2	411785-2	
54	RIGHT BURNER TUBE (NS)	411785-4	411785-4	411785-4	
55	THERMOSTAT DIAL (GRIDDLE) FAHR(NS)	411680-3	411680-3	411680-3	
	THERMOSTAT DIAL (GRIDDLE)CELS.(NS)	412655-3	412655-3	412655-3	
56	NOZZLE SUPPORT BRACKET (NS)	413047-2	413047-2	413047-2	
150	ADJUSTABLE PILOT (NS)	413063-2	412063-2	413063-2	
151	NUT (NS)	FP47-14	FP47-14	FP47-14	
152	SLEEVE (NS)	FP77-23	FP77-23	FP77-23	

+ SPECIFY GAS AND/OR TYPE OF SECTION (OPEN TOP, FRY TOP OR BROILER).
(NS) NOT SHOWN BY PHOTOGRAPH



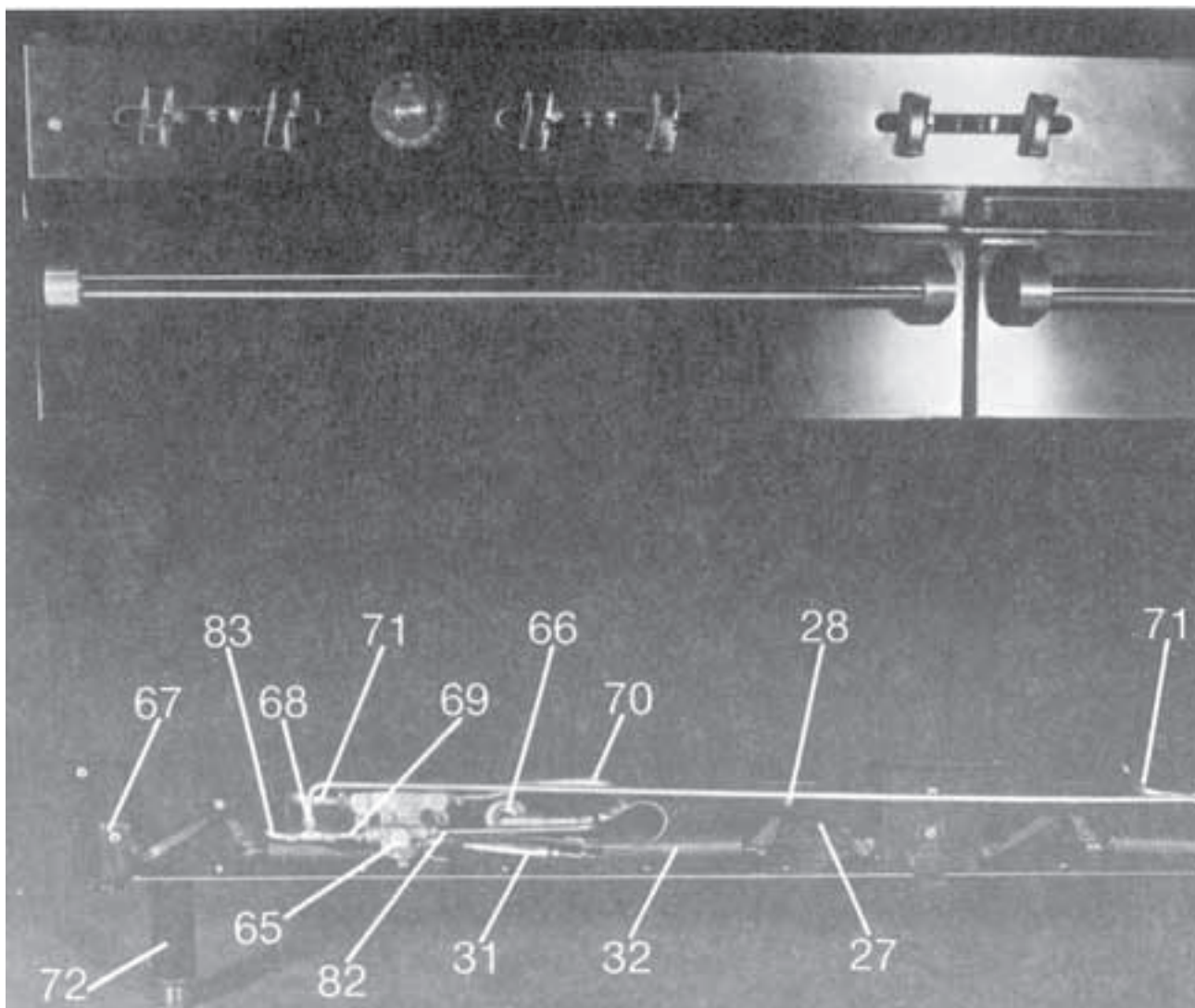
ITEM NO.	DESCRIPTION	PARTS NO.	36L77R	60L77R	160L77R	260L77R
92	RIGHT DOOR POST HANDLE	413416-1	1	2	1	2
92A	LEFT DOOR POST HANDLE	413416-2	1	2	1	2
93	BELL CRANK PIN	RS32-89	2	4	2	4
94	BELL CRANK	403956-1	2	4	2	4
95	COTTER PIN	413201-1	2	4	2	4
66	TURNBUCKLE & HOOKS	417865-1	2	4	2	4
97	OVEN DOOR SPRING	404053-1	2	-	2	-
98	OVEN DOOR SPRING (NS)	413342-1	-	2	-	2
99	DOOR POST	413257-1	1	-	1	-
99A	DOOR POST (NS)	413257-2	-	1	-	1
100	HINGE PIN	PC3-34-10597	2	4	2	4
101	RIGHT HAND HOOK	413381-1	1	2	1	2
101A	LEFT HAND HOOK	413381-2	1	2	1	2
89A	DOOR PANEL (STANDARD)	413915-2	-	1	-	1
155	HEX HEAD BOLTS 1/4-20-1"	SC37-87	4	8	4	8
156	CAPTIVE NUT (NS)	417853-2	2	4	2	4
157	TRUNNION BLOCK(NEW STYLE)	414976-1	2	4	2	4
158	STUD (NS)	413758-1	2	4	2	4

(NS) NOT SHOWN BY PHOTOGRAPH



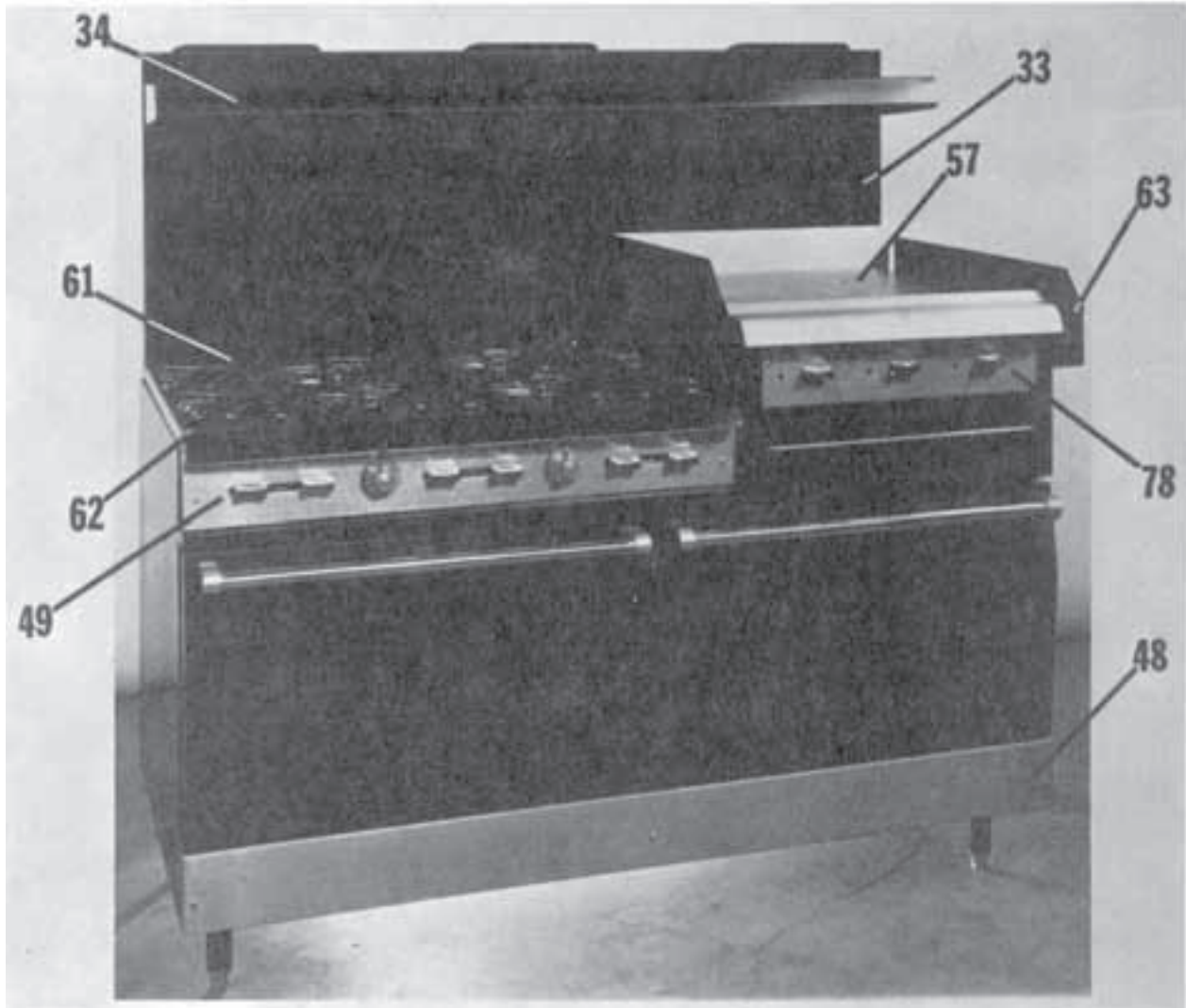
ITEM NO.	DESCRIPTION	PART NO.			
		36L77R	60L77R	160L77R	260L77R
+74	PILOT (NATURAL)	412787-1	412787-1	412787-1	412787-1
	PILOT (PROPANE)	412787-2	412787-2	412787-2	412787-2
75	THERMOCOUPLE T46	412788-1	412788-1	412788-1	412788-1
76	SECONDARY AIR PIN	413165-3	413165-3	413165-3	413165-3
77	OVEN BURNER ASSEMBLY	413225-G1	413225-G1	413225-G1	413225-G1
79	OVEN BOTTOM (NS)	413234-1	413234-1	413234-1	413234-1
80	OVEN BOTTOM BAFFLE (NS)	413228-1	413228-1	413228-1	413228-1

+ SPECIFY GAS AND/OR TYPE OF SECTION (OPEN TOP, FRY TOP OR BROILER).
(NS) NOT SHOWN BY PHOTOGRAPH



ITEM NO.	DESCRIPTION	PART NO.			
		36L77R	60L77R	160L77R	260L77R
27	BELL CRANK	403956-1	403956-1	403956-1	403956-1
31	TURNBUCKLE & HOOKS	417865-1	417865-1	417865-1	417865-1
32	OVEN DOOR SPRING	404053-1	404053-1	404053-1	404053-1
65	SAFETY VALVE	405569-2	405569-2	405569-2	405569-2
66	NOZZLE (OVEN BURNER)	404079-F	404079-F	404079-F	404079-F
67	SPRING CLIP	413371-1	413371-1	413371-1	413371-1
68	PILOT TUBE TEE TO RIGHT SAFETY		413332-1		413332-1
69	PILOT TUBE TEE TO LEFT SAFETY		413331-1		413331-1
70	BURNER TUBE SAFETY TO NOZZLE	413370-1	413370-1	413370-1	413370-1
71	BURNER TUBE ELBOW TO SAFETY(NS)	413242-1	413242-1	413242-1	413242-1
81	PILOT TUBE ELBOW TO SAFETY (NS)	413330-1		413330-1	
82	PILOT TUBE SAFETY TO PILOT	413328-1	413328-1	413328-1	413328-1
83	PILOT TUBE ELBOW TO TEE	413330-1	413330-2	413330-1	413330-2

(NS) NOT SHOWN BY PHOTOGRAPH



ITEM NO.	DESCRIPTION	PART NO.			
		36L77R	60L77R	160L77R	260L77R
33	SPLASHER BACK ASSEMBLY	413223-G1	413223-G3	413223-G3	413223-G5
	SPLASHER BACK ASSEMBLY (SS)	413223-G2	413223-G4	413223-G4	413223-G6
34	SHELF ASSEMBLY	411841-G3	411841-G1	411841-G1	411841-G1
	SHELF ASSEMBLY (SS)	411841-G4	411841-G2	411841-G2	411841-G2
48	LOWER PANEL ASSEMBLY (SS)	413172-G2	413249-G2	413172-G2	413249-G2
49	MANIFOLD COVER ASSEMBLY (SS)	413170-G8	413214-G2	413170-G10	413292-G2
57	GRIDDLE 24" RIGHT HAND	413299-G3	413299-G3	413299-G3	413299-G3
58	GRIDDLE 24" LEFT HAND (NS)	413299-G4	413299-G4	413299-G4	413299-G4
61	TOP GRATE	406820-1	406820-1	406820-1	406820-1
62	AERATION PLATE	413226-G1	413226-G1	413226-G1	413226-G1
63	GREASE COLLECTOR	413507-1	413507-1	413507-1	413507-1
	GREASE COLLECTOR (SS)	413507-2	413507-2	413507-2	413507-2
78	MANIFOLD COVER ASSEMBLY (BROILER)(SS)			413220-2	413220-2
149	OVEN RACK	413300-1	413300-1	413300-1	413300-1

*RIGHT HAND GRIDDLE PERMANENT, LEFT HAND GRIDDLE AVAILABLE IN PLACE OF OPEN TOP SECTION ON 160 & 260 ONLY.
(NS) NOT SHOWN BY PHOTOGRAPH

THIS
PAGE
INTENTIONALLY
LEFT
BLANK

THIS
PAGE
INTENTIONALLY
LEFT
BLANK