

## SERVICE MANUAL

### HEAVY DUTY GAS BROILER

#### MODELS

<i>GHCB40</i>	<i>ML-052211</i>
<i>GHCB44</i>	<i>ML-052213</i>
<i>GHMCB44</i>	<i>ML-052214</i>
<i>HCB1</i>	<i>ML-052202</i>
<i>HCB2(B)</i>	<i>ML-052208</i>
<i>IR1</i>	<i>ML-052200</i>
<i>IR2(B)</i>	<i>ML-052201</i>
<i>GHIR44</i>	<i>ML-052210</i>



#### – NOTICE –

This Manual is prepared for the use of trained Vulcan Service Technicians and should not be used by those not properly qualified. If you have attended a Vulcan Service School for this product, you may be qualified to perform all the procedures described in this manual.

This manual is not intended to be all encompassing. If you have not attended a Vulcan Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Vulcan Service Technician.

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# GENERAL

## INTRODUCTION

This service manual was specially written for the Heavy Duty Gas Broilers.

## INSTALLATION AND OPERATION

Detailed installation and operation instructions are included in the Installation and Operation Manual which is sent with each Broiler.

## CLEANING

Detailed cleaning instructions are included in the Installation and Operation Manual for the appropriate model.

## LIGHTING PILOT

Detailed lighting pilot instruction are included in the Installation and Operation Manual for the appropriate model.

## DATA PLATE LOCATION

### GHCB40

Behind the oven kick panel riveted to left corner of the oven burner box. (Removal of the kick panel is necessary to access plate.)

### HCB1/2(B)

Riveted to front right-hand corner of the lower shelf.

### GHIR44

Riveted to the door liner behind the left hand door panel.

### IR1/2(B)

Riveted to lower cabinet bottom shelf.

## SPECIFICATIONS

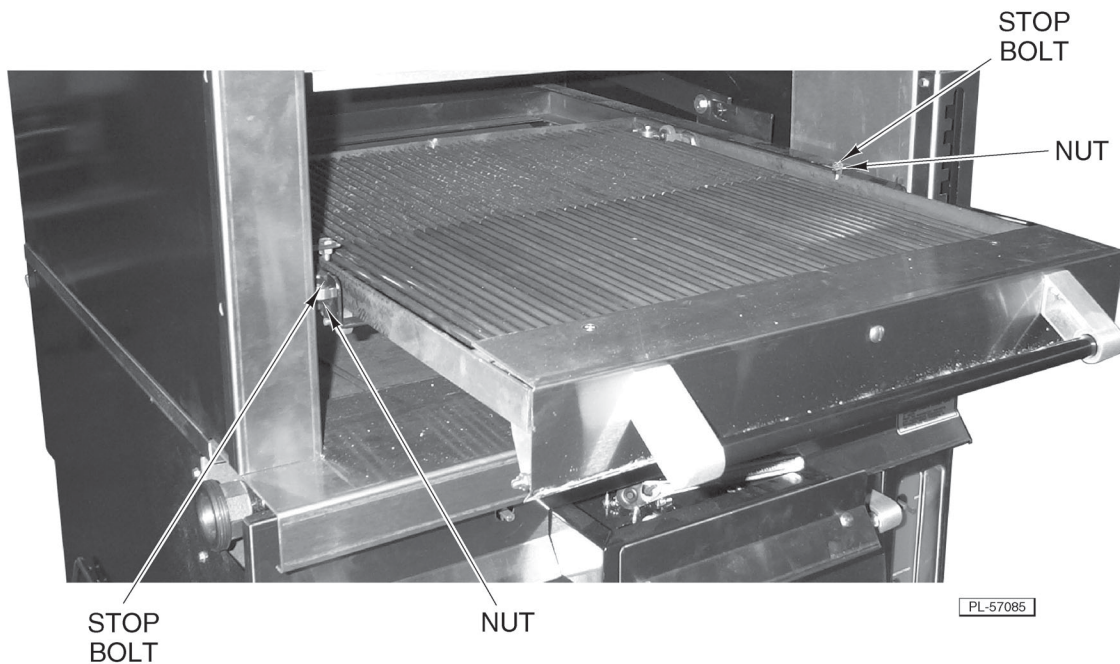
### Gas Data

Model	Dimensions			No. of Burners per Section	Total BTU /hr
	Width	Depth	Height		
GHCB40	34"	39 <sup>1</sup> / <sub>8</sub> "	79"	4	100,000
GHCB44	34"	39 <sup>1</sup> / <sub>8</sub> "	79"	4	100,000
GHMCB44	34"	39 <sup>1</sup> / <sub>8</sub> "	57"	4	100,000
HCB1	36"	38 <sup>3</sup> / <sub>8</sub> "	68"	4	50,000
HCB2(B)	36"	38 <sup>3</sup> / <sub>8</sub> "	80 <sup>1</sup> / <sub>2</sub> "	4	100,000
IR1	36"	38 <sup>3</sup> / <sub>8</sub> "	69"	4	80,000
IR2(B)	36"	38 <sup>3</sup> / <sub>8</sub> "	80 <sup>1</sup> / <sub>2</sub> "	4	160,000
GHIR44	34"	38 <sup>1</sup> / <sub>4</sub> "	82"	4	80,000

## TOOLS

### Standard

- Hand tools (standard set)
- Volt-Ohmmeter (VOM) with AC current tester (any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Gas test kit
- Temperature tester (thermocouple or digital pyrometer)
- Temperature tester (thermocouple type).
- Manometer



## IMPORTANT

**STOP BOLTS MUST BE IN POSITION FOR SAFE OPERATION OF GRID. IF DAMAGED OR MISSING, REPLACE AT ONCE. DO NOT OPERATE GRID WITHOUT BOLTS.**

Two (2) broiler grid 1/4-20 stop bolts and nuts are supplied with each broiler grid to ensure that the grid is not accidentally pulled completely from the broil section while hot. One (1) stop bolt and nut are mounted to the grid carriage RT. and LT. HD. side member through a 0.281 diameter hole directly in front of the grid stop tab. The stop nuts and bolts are screwed tightly against the side members and are properly adjusted extending approximately 1/2" below the stop tab as shown in the above photo.

# REMOVAL AND REPLACEMENT OF PARTS

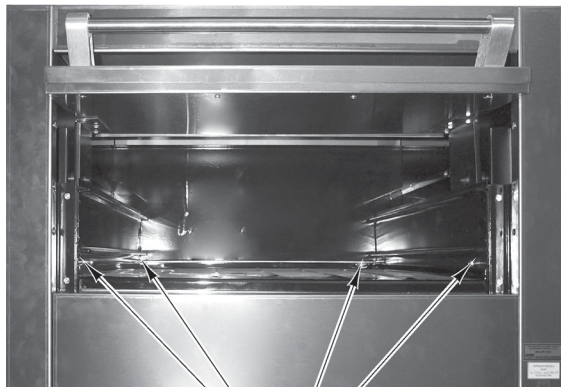
## COVERS, PANELS AND HANDLES

### Burner Box Cover (GHCB40, GHCB44, GHIR44)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.



1. Open the augratin oven door.
2. Remove the oven rack.



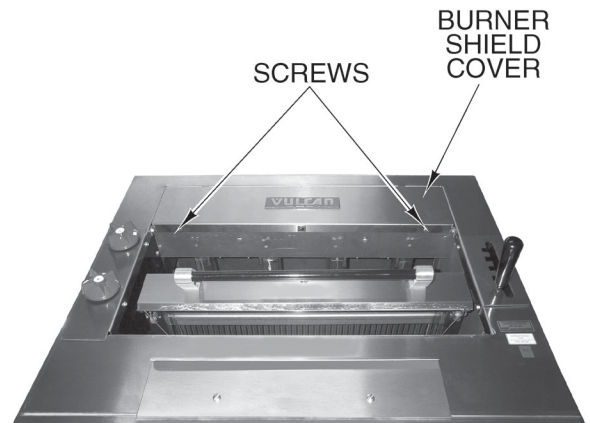
3. Remove the four screws and bushings from the oven.
4. Remove the augratin oven bottom assembly as outlined in Augratin Oven Bottom Assembly.

5. Lift and remove the burner box cover from the broiler.
6. Reverse the procedure to install.

### Burner Shield Cover [HCB2(B), IR1, IR2(B)]

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

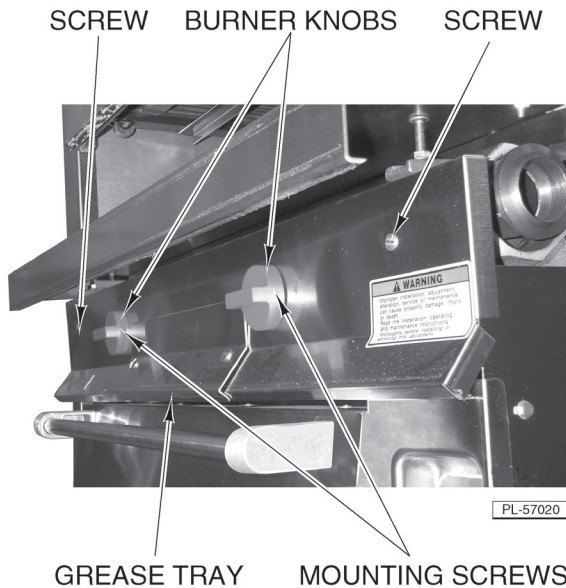
**NOTE:** The models HCB2(B) and IR2(B) have two burner shield covers.



1. Remove the two screws from the burner shield cover and the broiler.
2. Lift and remove the burner shield cover from the broiler.
3. Reverse the procedure to install.

## Manifold Cover Assembly (GHCB40 & GHIR44)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.



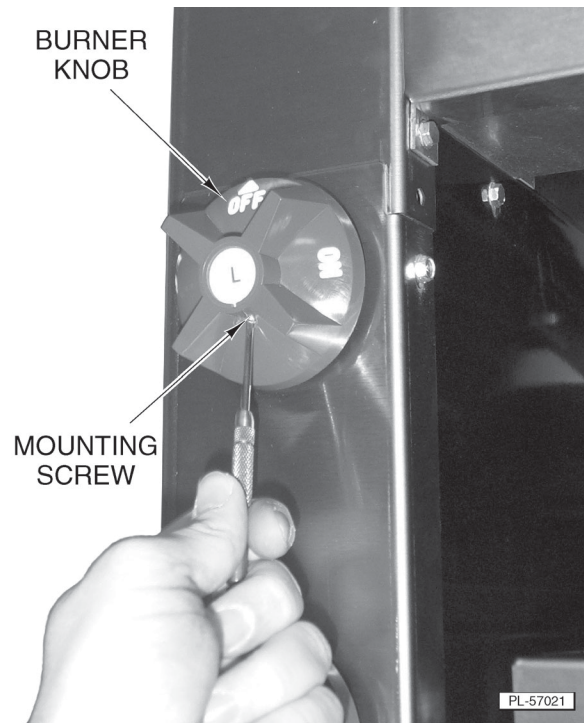
1. Remove the grease tray from the broiler (GHCB40 only).

**NOTE:** The GHIR44 manifold cover assembly has a chain to protect switch wiring.

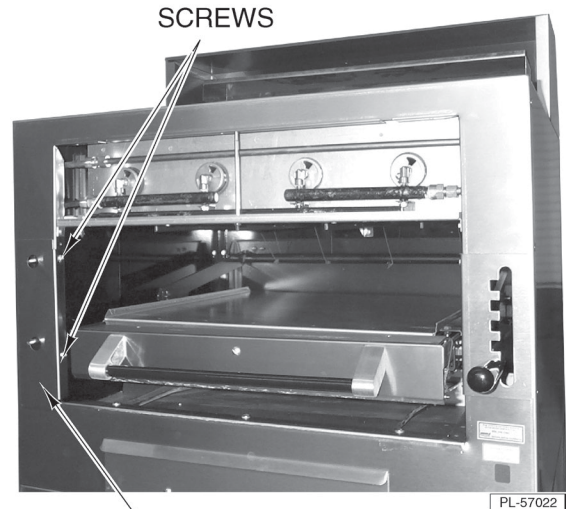
2. Loosen the mounting screw in each burner knob.
3. Remove the two burner knobs from the broiler.
4. Remove the two screws from the manifold cover assembly.
5. Remove the manifold cover assembly from the broiler.
6. Reverse the procedure to install.

## Burner Knob Cover Plate [HCB2(B), IR1 and IR2(B)]

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.



1. Loosen the mounting screw in each burner knob.
2. Remove the burner knob.



BURNER KNOB COVER PLATE

3. Remove two screws from the burner knob cover plate and the broiler.
4. Slide the burner knob cover plate out and remove it from the broiler.
5. Reverse the procedure to install.

## Control Panel Cover (GHCB40)

1. Remove the manifold cover assembly as outlined in Manifold Cover Assembly.



2. Loosen the retaining screw and remove the burner knob from the broiler.
3. Pull the thermostat knob to remove it from the broiler.



4. Remove the bolt and the control panel cover from the broiler.
5. Reverse the procedure to install.

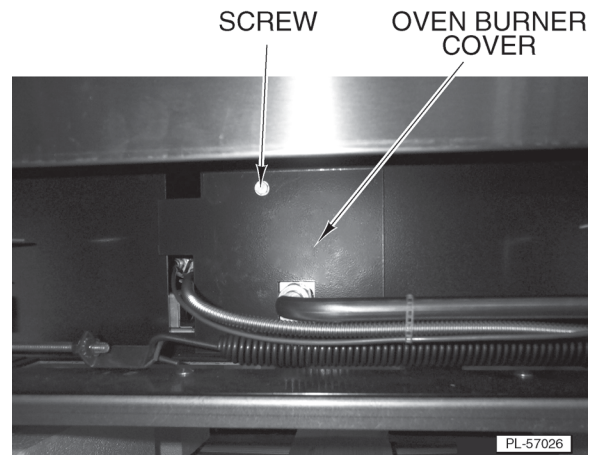
## Lower Front Panel (GHCB40)



1. Grasp the bottom of the lower front panel.
2. Pull the lower front panel out to remove it from the broiler.
3. Reverse the procedure to install.

## Oven Burner Cover (GHCB40)

1. Remove the lower front panel as outlined in Covers, Panels and Handles.



2. Remove the screw from the oven burner cover.
3. Remove the oven burner cover from the broiler.
4. Reverse the procedure to install.

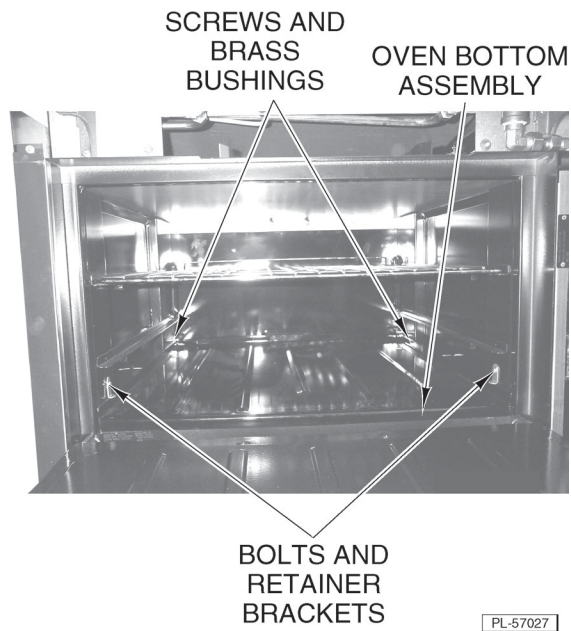


## Oven Bottom Assembly (GHCB40)

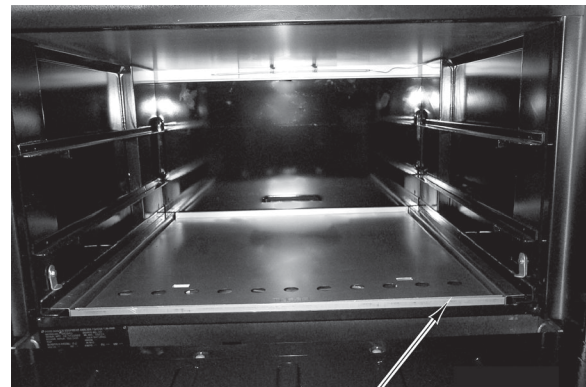
**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the lower front panel as outlined in Covers, Panels and Handles.
2. Open oven door.
3. Remove rack if necessary.



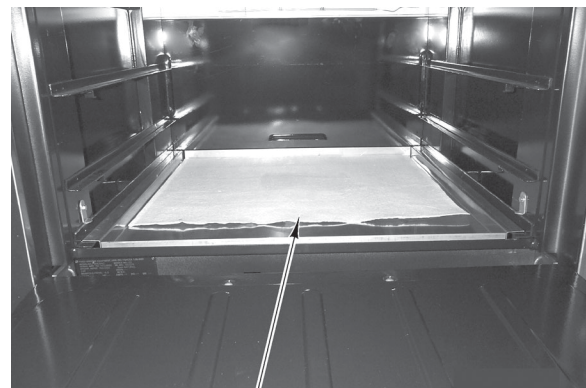
4. Remove the two screws and brass bushings from the broiler.
5. Loosen the two bolts on the retainer brackets.
6. Remove the oven bottom assembly from the broiler.



OVEN BOTTOM BAFFLE

PL-57028

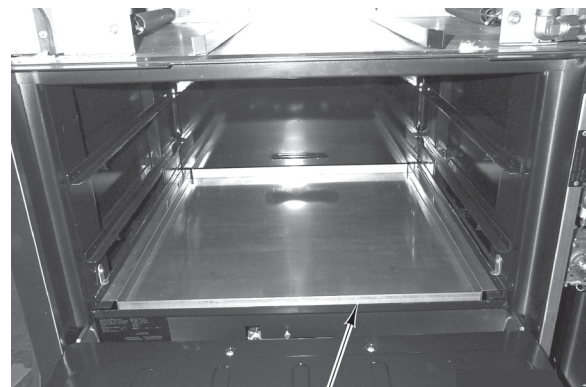
7. Remove the oven bottom baffle from the broiler.



OVEN INSULATION SHEET

PL-57029

8. Remove the oven insulation sheet.



OVEN BOTTOM TRAY

PL-57030

9. Remove the oven bottom tray.
10. Reverse the procedure to install.

## Augratin Oven Bottom Assembly (GHCB40)

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SCREWS AND BRASS BUSHINGS

PL-57031

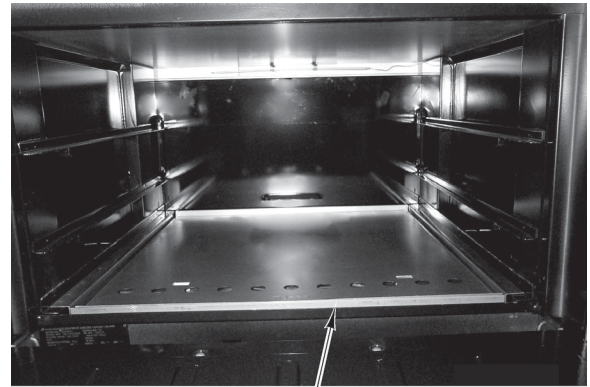
1. Remove the four screws and brass bushings from the broiler.



AUGRATIN OVEN BOTTOM

PL-57032

2. Slide the augratin oven bottom assembly from the broiler.



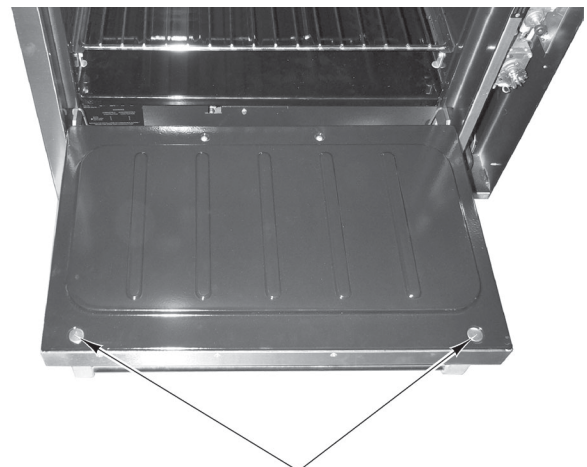
AUGRATIN OVEN BOTTOM Baffle

PL-57033

3. Remove the augratin oven bottom baffle from the broiler.
4. Reverse the procedure to install.

**NOTE:** When installing bottom assembly, angle metal should be at the rear of the oven.

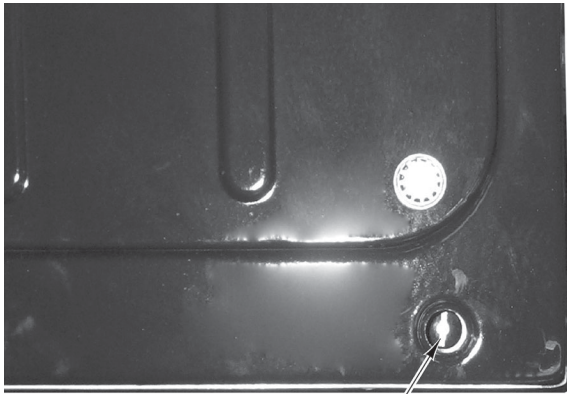
## Oven Door Handle (GHCB40)



CAPS

PL-57034

1. Remove the caps from the oven door.



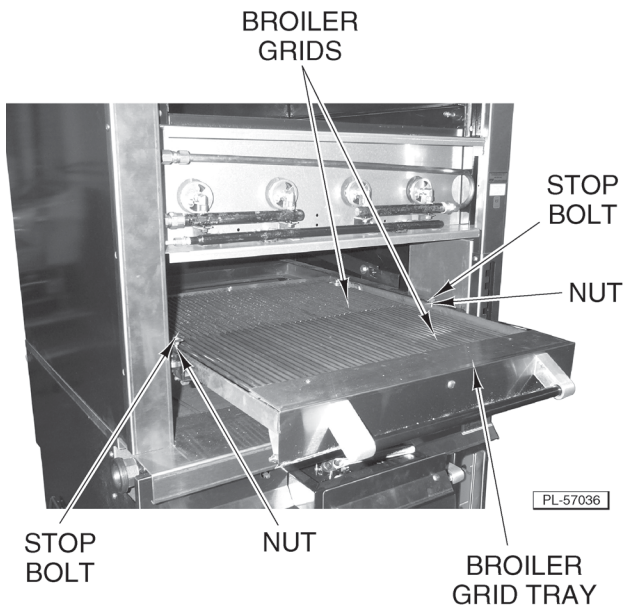
SCREW PL-57035

2. Remove two screws and the oven door handle from the oven door.
3. Reverse the procedure to install.

### BROILER GRID TRAY (ALL MODELS)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

1. Allow the broiler grids to cool.



STOP BOLT NUT STOP BOLT NUT BROILER GRID TRAY PL-57036

2. Remove the two broiler grids from the broiler grid tray.
3. Remove two stop bolts and nuts from the broiler.
4. Carefully pull out the broiler grid tray to remove it from the grid carriage.
5. Reverse the procedure to install.

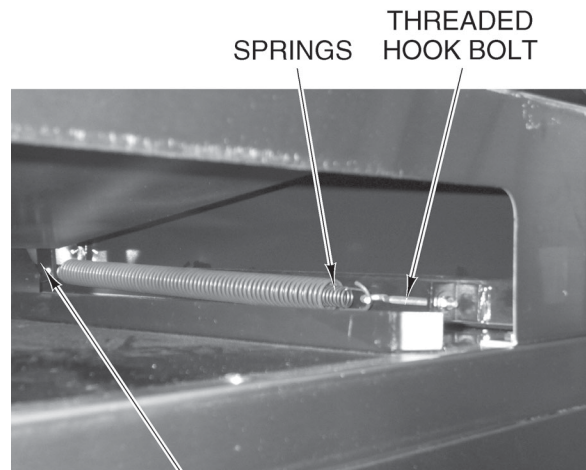
### GRID CARRIAGE ASSEMBLY (ALL MODELS)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

**WARNING:** SPRING AND HOOK BOLT ARE UNDER TENSION.

1. Remove the broiler grid tray as outlined in Broiler Grid Tray.
2. Remove cover manifold cover assembly as outlined in Covers, Panels and Handles.



LOWER LEVER ARM ASSEMBLY PL-57068

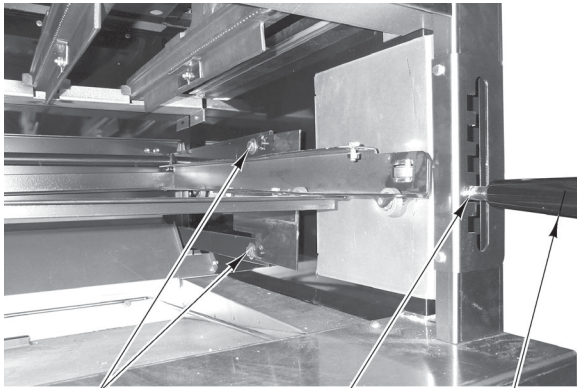
3. Carefully remove the two springs from the threaded hook bolts and the lower lever arm assembly.

## BURNER CERAMICS (GHCB40)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

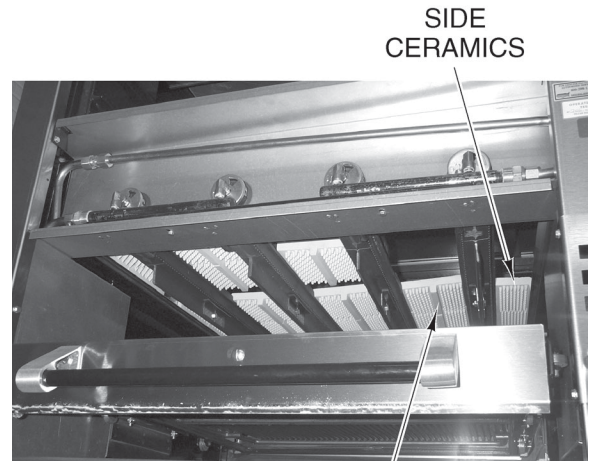
**NOTE:** Lower broiler pan for easier access.

1. Allow the burner ceramics to cool.



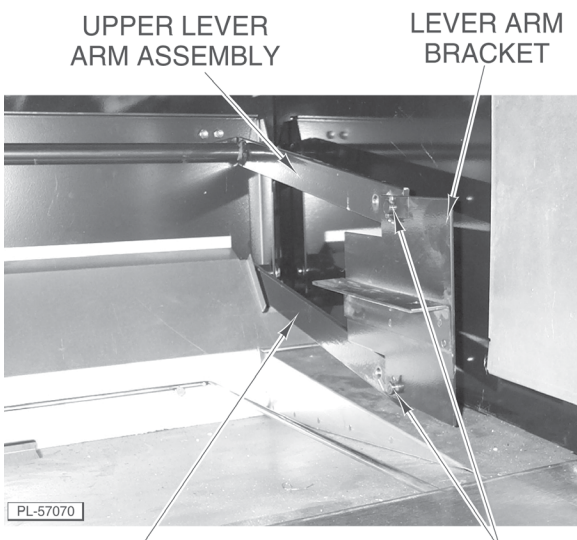
BOLTS AND WASHERS  
 GRID ARM LIFTING ASSEMBLY  
 GRID HANDLE

4. Remove the grid handle from the grid arm lifting assembly.
5. Remove two bolts, six washers and two nuts from the grid arm lifting assembly and the grid carriage assembly.
6. Remove the grid arm lifting assembly from the grid carriage assembly and the broiler.



SIDE CERAMICS  
 CENTER CERAMICS

2. Carefully push up on the side and center ceramics to remove from the broiler.
3. Reverse the procedure to install.



UPPER LEVER ARM ASSEMBLY  
 LEVER ARM BRACKET  
 LOWER LEVER ARM ASSEMBLY  
 COTTER PIN, BOLT AND NUT

7. Remove the four cotter pins and bolts (two each side) from the lever arm bracket and upper and lower lever arm assemblies.

**NOTE:** When installing grid arm lifting assembly, install washers between grid arm lifting assembly and grid carriage assembly.

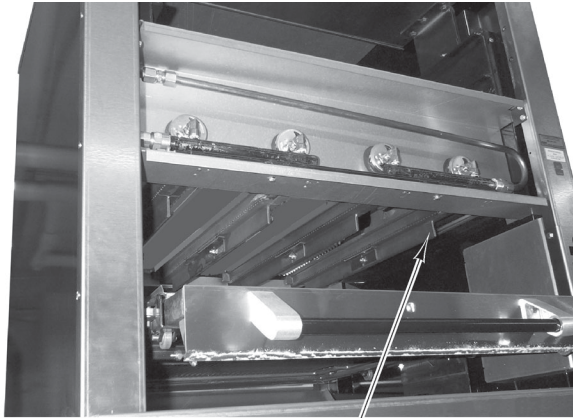
8. Reverse the procedure to install.

## BURNER ASSEMBLY

### GHCB40 & HCB2(B)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

1. Remove the burner ceramics as outlined under Burner Ceramics.
2. Remove burner box cover as outlined in Controls, Panels and Handles.



BURNER  
ASSEMBLY

3. Allow the burner assembly to cool.
4. Lift the rear of the burner assembly and remove it from the broiler.

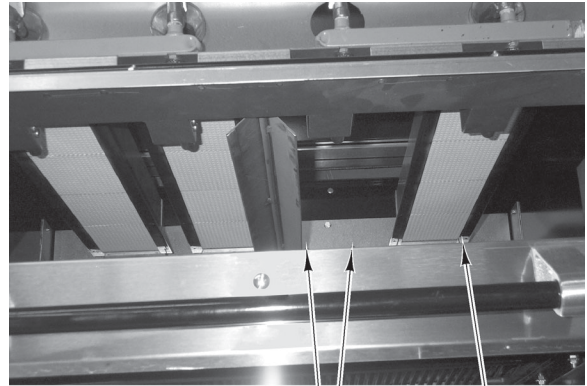
**CAUTION:** Make sure that you do not damage the pilot nozzle when you remove the burner assembly.

5. Reverse the procedure to install.

### GHIR44

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

1. Allow the burner assembly to cool.



ALIGNMENT  
PINS

BURNER  
ASSEMBLY

2. Lift the rear of the burner assembly off the alignment pins.
3. Carefully move the burner assembly to the rear of the broiler and then remove burner from the broiler.

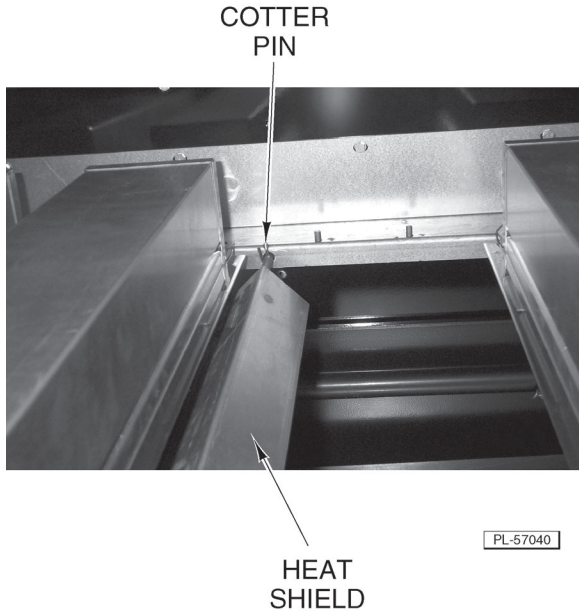
**CAUTION:** Make sure that you do not damage the pilot burner nozzle when you remove the burner assembly.

4. Reverse the procedure to install.

## HEAT SHIELD (GHIR44)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

1. Remove burner assemblies as outlined in Burner Assembly.



2. Remove the cotter pin from the shaft of the heat shield.
3. Remove the heat shield from the broiler.
4. Reverse the procedure to install.

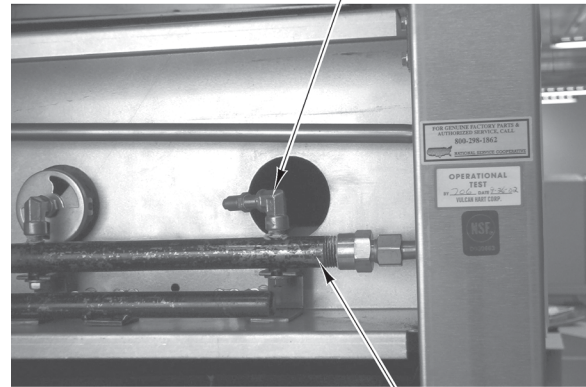
## PILOT ELBOW NOZZLE

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the burner box cover as outlined in Covers, Panels and Handles.
2. Remove the burner assemblies as outlined in Burner Assemblies.
3. Allow the pilot elbow nozzles to cool.

## PILOT ELBOW NOZZLE



4. Remove the pilot elbow nozzle from sub-manifold assembly.
5. Reverse the procedure to install.

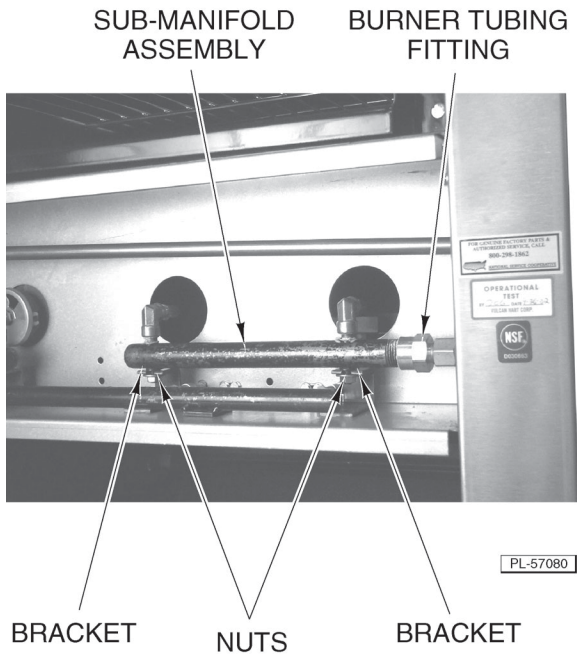
## SUB-MANIFOLD ASSEMBLY

### GHCB40

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**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

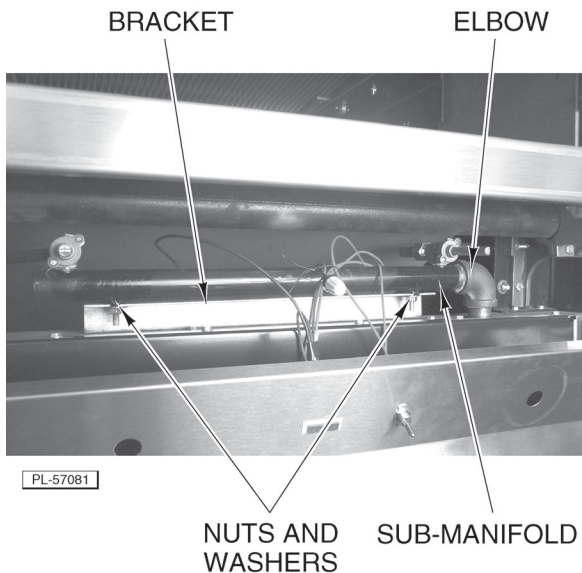
1. Remove the burner box cover as outlined in Covers, Panels and Handles.
2. Remove the burner assemblies as outlined in Burner Assemblies.
3. Remove the pilot elbow nozzles as outlined in Pilot Elbow Nozzle.



4. Disconnect the burner tubing fitting from the sub-manifold assembly.
5. Loosen the two nuts on the sub-manifold assembly and the brackets.
6. Remove the sub-manifold assembly from the broiler.
7. Reverse the procedure to install.

#### GHIR44

1. Remove the manifold cover assembly as outlined in Covers, Panels and Handles.
2. Disconnect the burner valves from the sub-manifold as outlined in Burner Valves (GHIR44).



3. Remove the two nuts and washers from the sub-manifold and the bracket.
4. Disconnect the sub-manifold from the elbow.
5. Remove the sub-manifold from the broiler.
6. Reverse the procedures to install.

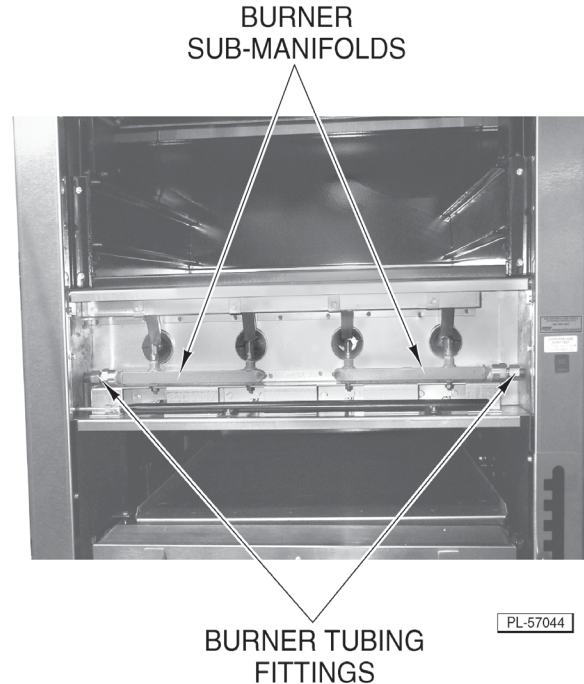
#### BURNER SUB-MANIFOLD (GHIR44)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

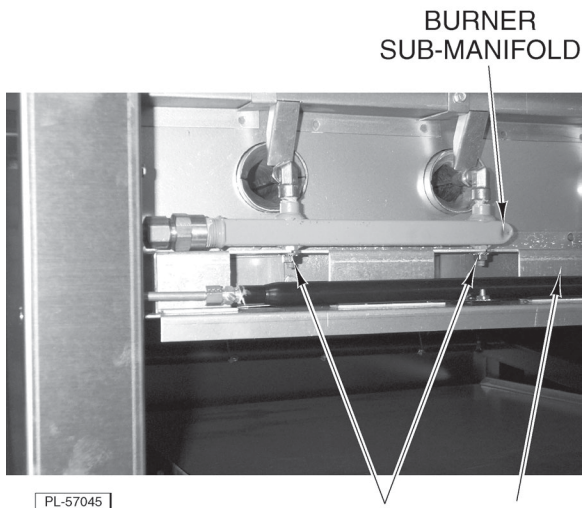
**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

**NOTE:** These procedures apply to the left and right side burner subassemblies.

1. Remove the burner box cover as outlined in Covers, Panels and Handles.
2. Remove the burner assemblies as outlined in Burner Assemblies.
3. Remove the elbow pilot nozzles as outlined in Pilot & Elbow Nozzle.



4. Disconnect the burner tubing fitting from the burner sub-manifold.



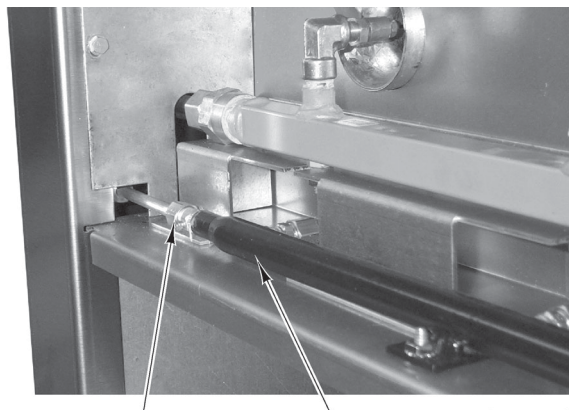
5. Loosen the two nuts on the burner sub-manifold.
6. Remove the burner sub-manifold from the broiler.
7. Reverse the procedure to install.

### PILOT MANIFOLD (GHIR44)

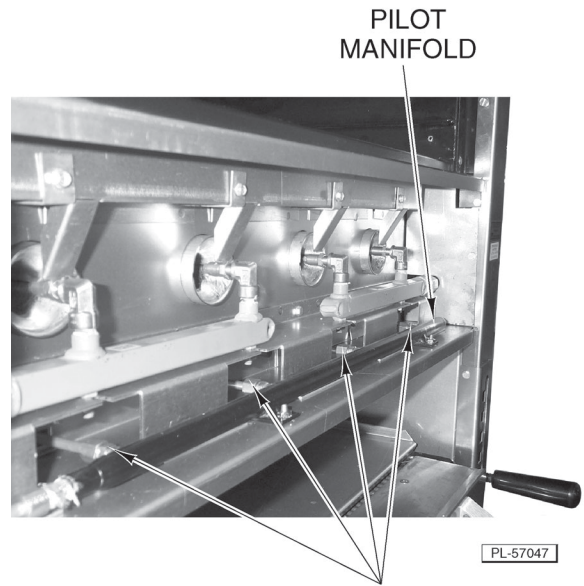
**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

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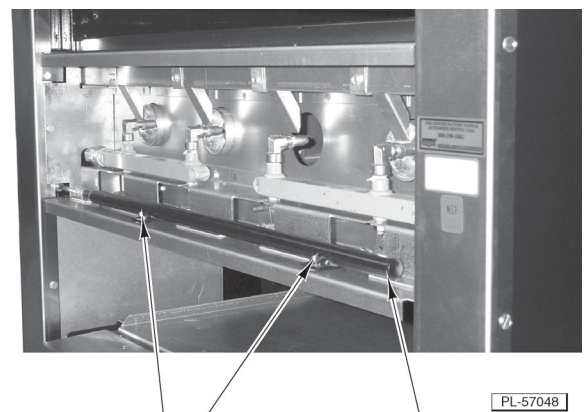
1. Remove the burner box cover as outlined in Covers, Panels and Handles.



2. Disconnect the pilot tube from the pilot manifold.



3. Disconnect the four pilot burner nozzles from the pilot manifold.



4. Remove the two washers and nuts from the pilot manifold.
5. Remove the pilot manifold from the broiler.
6. Reverse the procedure to install.

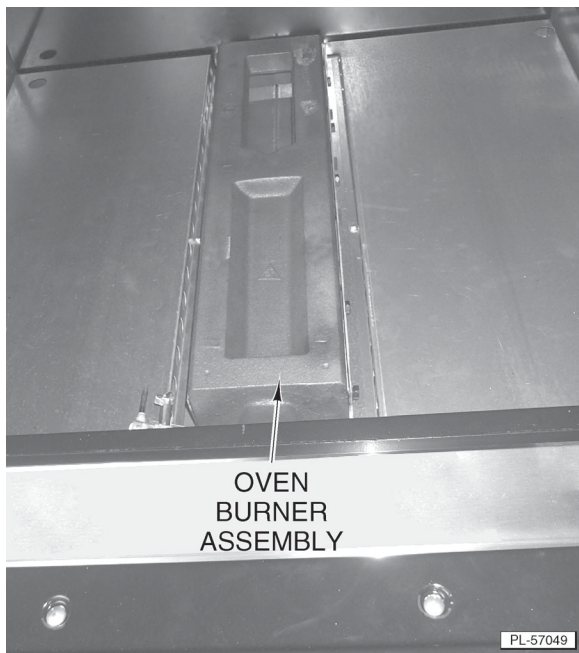


## OVEN BURNER ASSEMBLY (GHCB40)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the oven bottom assembly as outlined in Covers, Panels and Handles.



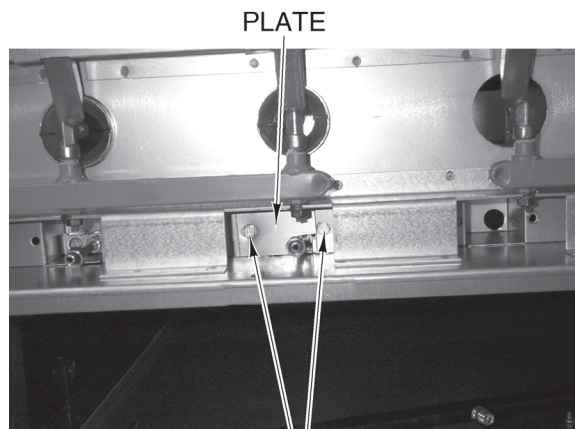
2. Lift and remove the oven burner assembly from the broiler.
3. Reverse the procedure to install.

## PILOT BURNER NOZZLES (GHIR44)

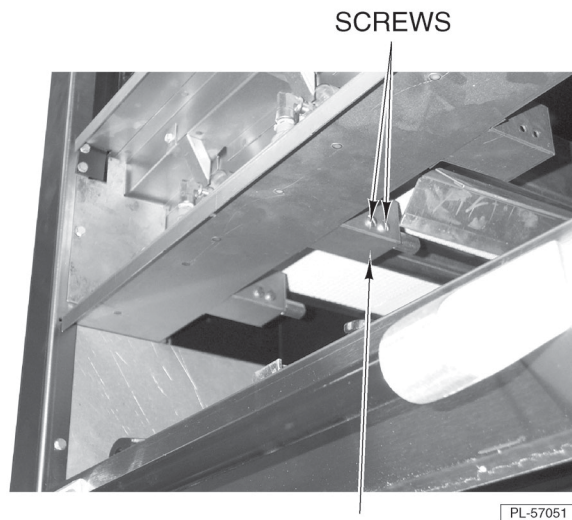
**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the burner box cover as outlined in Covers, Panels and Handles.
2. Remove the pilot manifold as outlined in Pilot Manifold.



3. Remove the two screws and plate from the broiler.



4. Remove the two screws and the pilot burner nozzle from the pilot support housing.
5. Remove the pilot burner nozzle from the broiler.
6. Reverse the procedure to install.

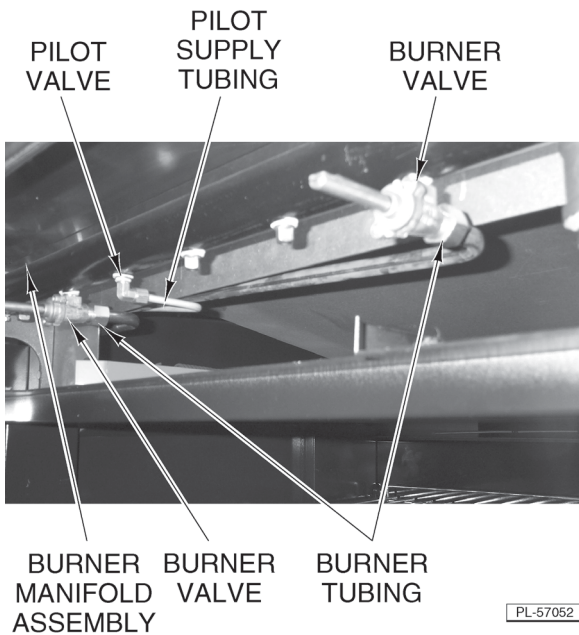
## GAS VALVES, TUBING, THERMOSTATS, REGULATORS AND SOLENOIDS

### Burner Manifold Assembly (GHCB40)

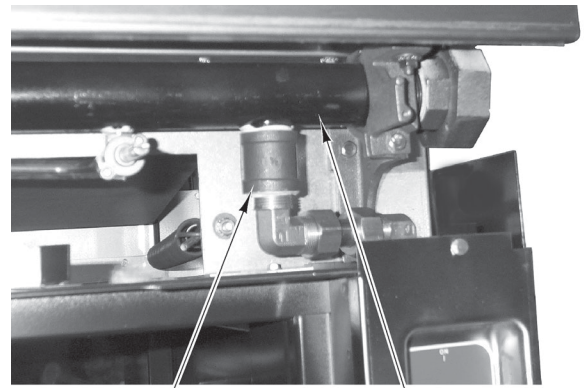
**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the manifold cover assembly as outlined in Covers, Panels and Handles.



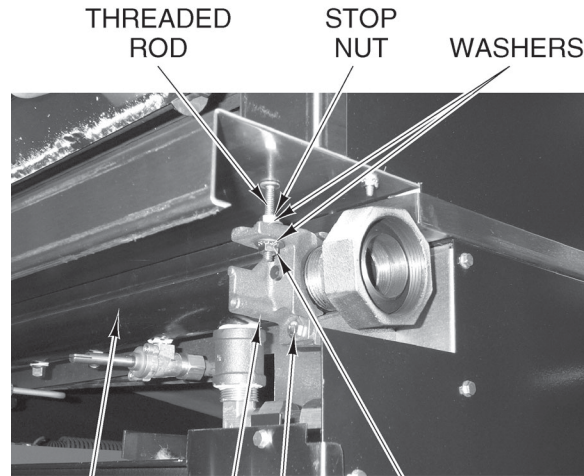
2. Disconnect the burner tubing from the burner valves.
3. Disconnect the pilot supply tubing from the pilot valve.
4. Remove the two burner valves from the burner manifold assembly.
5. Remove the pilot valve from the burner manifold assembly.



OVEN GAS SUPPLY TUBE  
BURNER MANIFOLD ASSEMBLY

6. Disconnect the oven gas supply tube from the burner manifold assembly.

**NOTE:** For proper alignment of the gas tubing, make sure you do not change the position of the stop nuts.



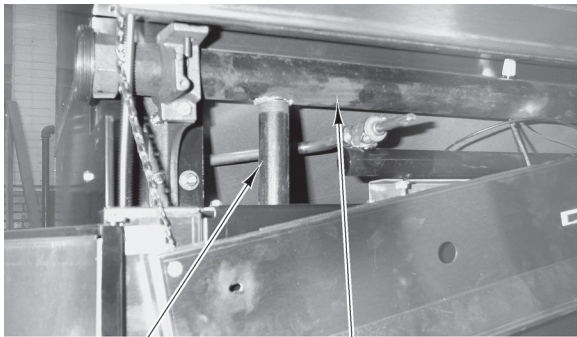
7. Remove the two nuts and two washers from the threaded rod.
8. Hold the burner manifold assembly and remove the two bolts, manifold holding bracket and two washers from the broiler.
9. Reverse the procedure to install.

## Burner Manifold Assembly (GHIR44)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the manifold cover assembly as outlined in Covers, Panels and Handles.



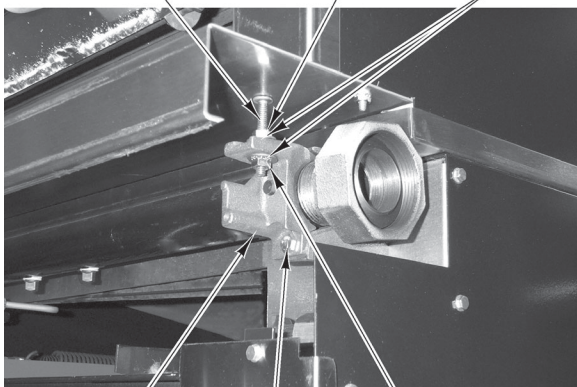
DROP PIPE

MANIFOLD ASSEMBLY

2. Disconnect the drop pipe from the burner manifold assembly

**NOTE:** For proper alignment of the gas tubing, make sure you do not change the position of the stop nuts.

THREADED ROD      STOP NUT      WASHERS



MANIFOLD HOLDING BRACKET

BOLT

NUT

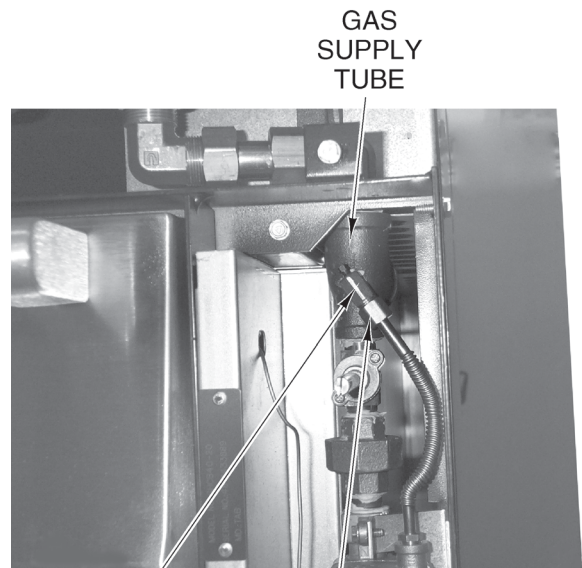
3. Remove the two nuts and two washers from the threaded rod.
4. Hold the burner manifold assembly and remove the two bolts, manifold holding bracket and two washers from the broiler.
5. Reverse the procedure to install.

## Oven Pilot Valve (GHCB40)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the control panel cover as outlined in Covers, Panels and Handles.



OVEN PILOT VALVE

PILOT TUBING

2. Disconnect the pilot tubing from the oven pilot valve.
3. Remove the oven pilot valve from the gas supply tube.
4. Reverse the procedure to install.

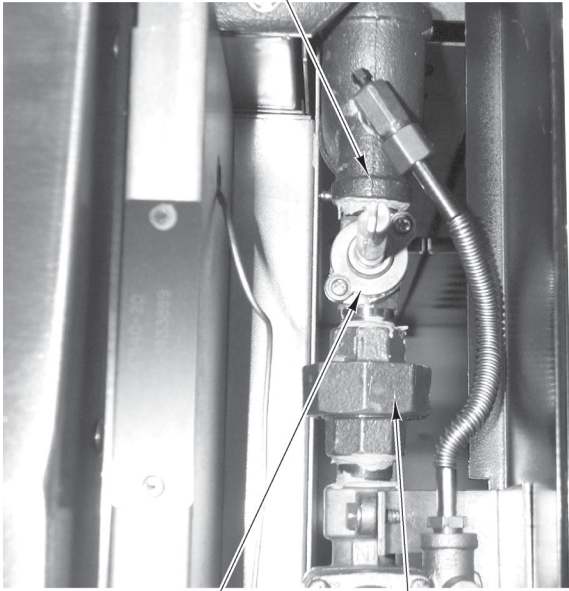
## Oven Burner Valve (GHCB40)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the control panel cover as outlined in Covers, Panels and Handles.

OVEN GAS  
SUPPLY TUBE



OVEN BURNER  
VALVE

UNION

2. Disconnect the oven burner valve from the oven gas supply tube and the union.
3. Reverse the procedure to install.

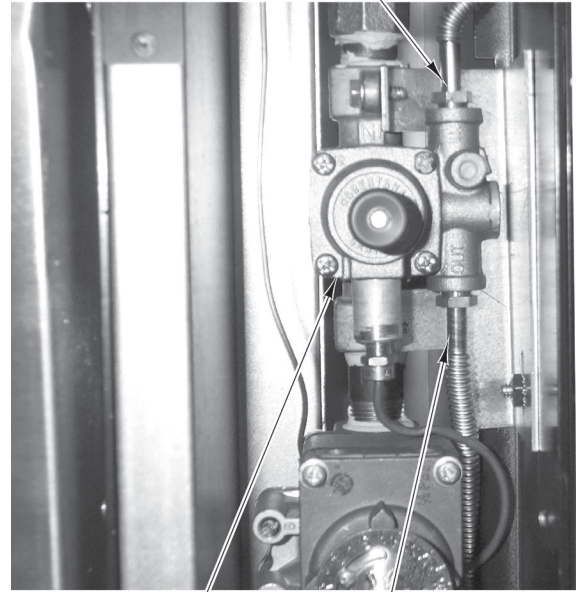
#### Pilot Outage Protection Valve (GHCB40)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the control panel cover as outlined in Covers, Panels and Handles.
2. Remove the lower front panel as outlined in Covers, Panels and Handles.

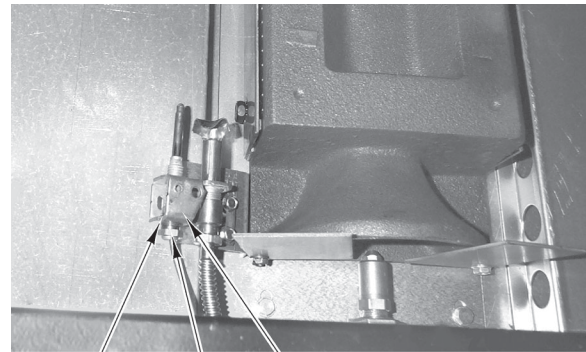
PILOT VALVE  
TUBING



PILOT OUTAGE  
PROTECTION  
VALVE

PILOT VALVE  
TUBING

3. Disconnect the pilot valve tubing from the pilot outage protection valve.
4. Remove the oven bottom assembly as outlined in Covers, Panels and Handles.

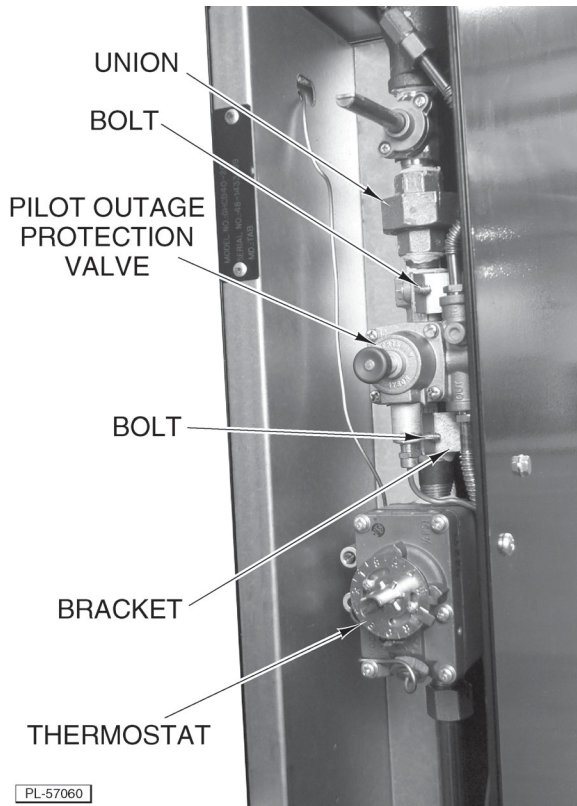


IGNITOR  
WIRE

B-NUT

BRACKET

5. Loosen the b-nut and remove the ignitor wire from the bracket.



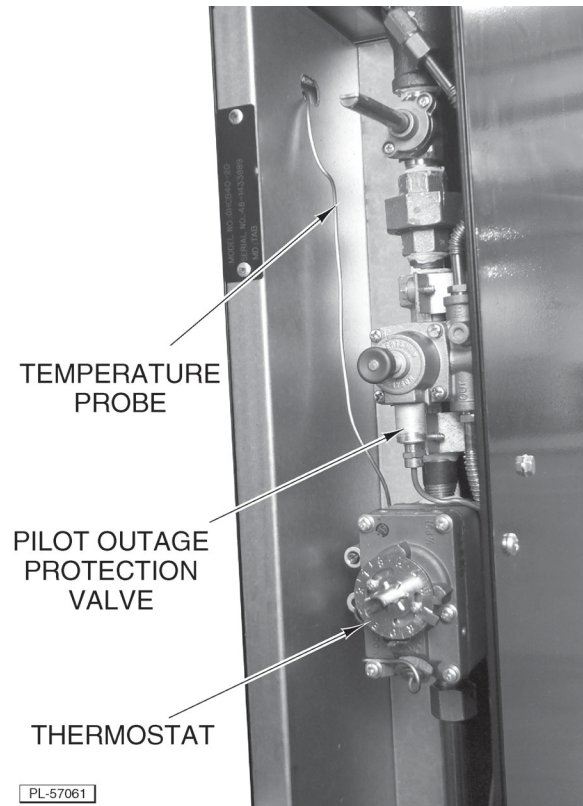
6. Remove the two bolts from the pilot outage protection valve and the bracket.
7. Disconnect the pilot outage protection valve from the union and the thermostat.
8. Remove the pilot outage protection valve and the ignitor wire from the broiler.
9. Reverse the procedure to install.

### Thermostat (GHCB40)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the control panel cover as outlined in Covers, Panels and Handles.
2. Note the location and position of the temperature probe in the oven.



3. Disconnect the thermostat from the pilot outage protection valve and from the oven burner tubing.



TEMPERATURE PROBE

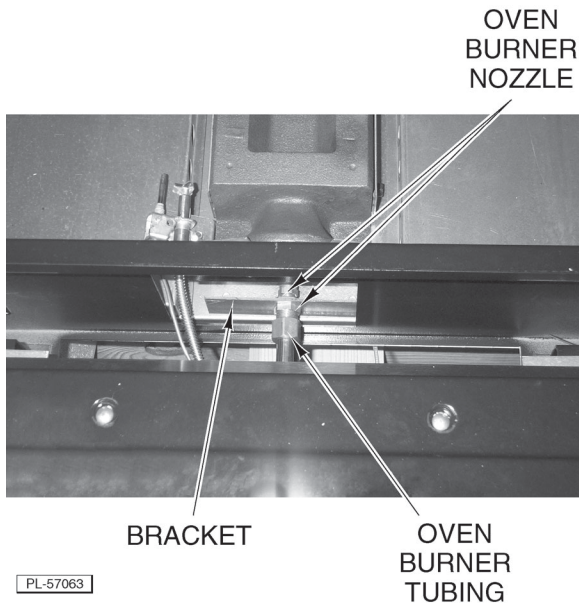
4. Remove the temperature probe from the oven.
5. Remove the thermostat with the temperature probe from the broiler.
6. Reverse the procedure to install.

## Oven Burner Nozzle (GHCB40)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the oven burner cover as outlined in Covers, Panels and Handles.



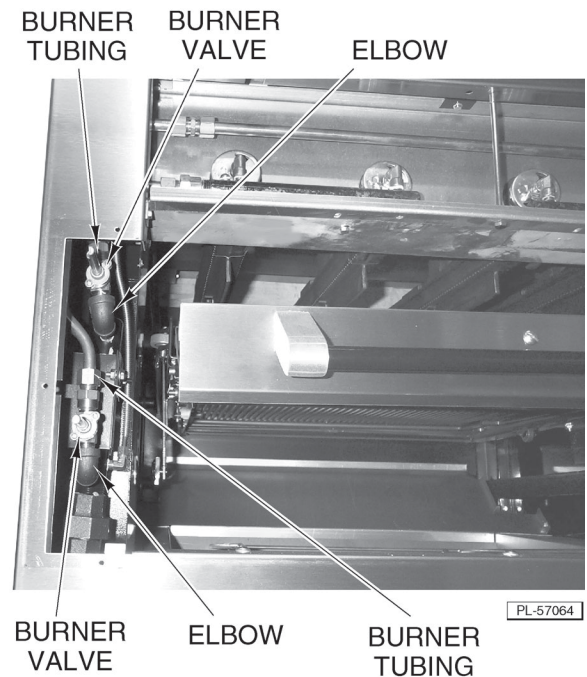
2. Disconnect the oven burner tubing from the oven burner nozzle.
3. Remove the oven burner nozzle from the bracket.
4. Remove the oven burner nozzle from the broiler.
5. Reverse procedure to install.

## Burner Valve [(IR2(B) and HCB2(B)]

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the burner knob cover plate as outlined in Covers, Panels and Handles.



2. Disconnect the burner valve from the elbow and the burner tubing.
3. Reverse the procedure to install.

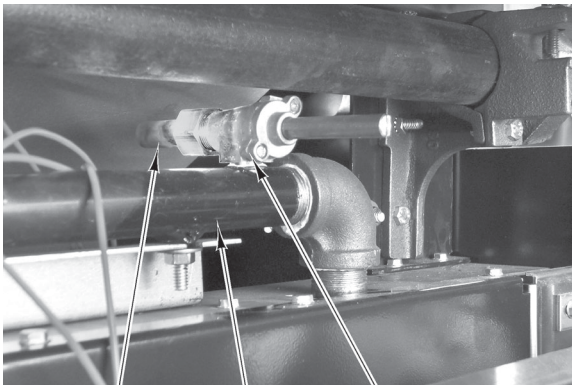
## Burner Valve (GHIR44)

**WARNING:** DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the manifold cover assembly as outlined in Covers, Panels and Handles.



BURNER TUBING    SUB-MANIFOLD    BURNER VALVE

2. Disconnect the burner tubing from the burner valve.
3. Disconnect the burner valve from the sub-manifold.
4. Remove the burner valve from the broiler.
5. Reverse the procedure to install.

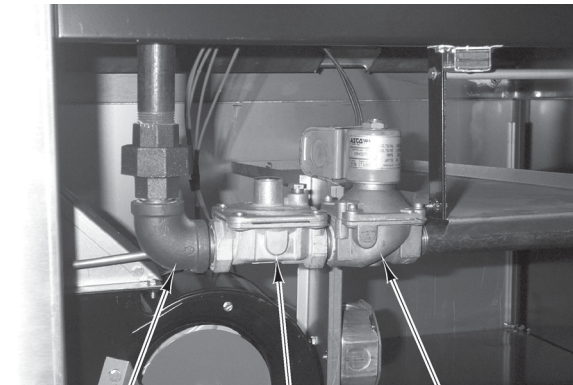
## Regulator (GHIR44)

**WARNING:** DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Open the lower doors to gain access to the regulator.



PIPE ELBOW    REGULATOR    SOLENOID

2. Disconnect the regulator from the pipe elbow and the solenoid.
3. Remove the regulator from the broiler.
4. Reverse the procedure to install.

## Regulator [HCB2(B)]

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.



REGULATOR      BURNER  
TUBE

1. Disconnect the gas supply tube and the burner tube.
2. Remove the regulator from the broiler.
3. Reverse the procedure to install.

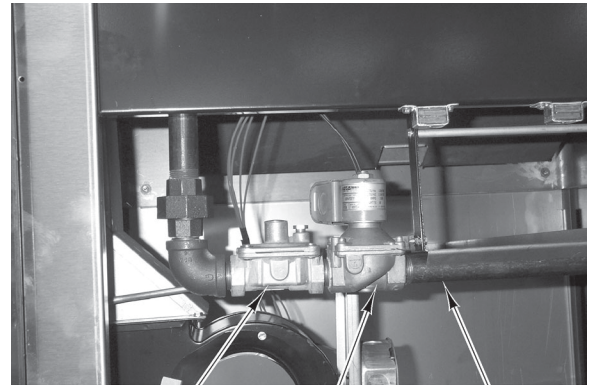
## Solenoid (GHIR44)

**WARNING:** DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT/TAGOUT PROCEDURES.

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Open the lower doors to get access to the solenoid.



REGULATOR      SOLENOID      BURNER  
PIPE

2. Note the location and connection of the electrical wires.
3. Disconnect the electrical wires.
4. Disconnect the solenoid from the burner pipe and the regulator.
5. Remove the solenoid from the broiler.
6. Reverse the procedure to install.



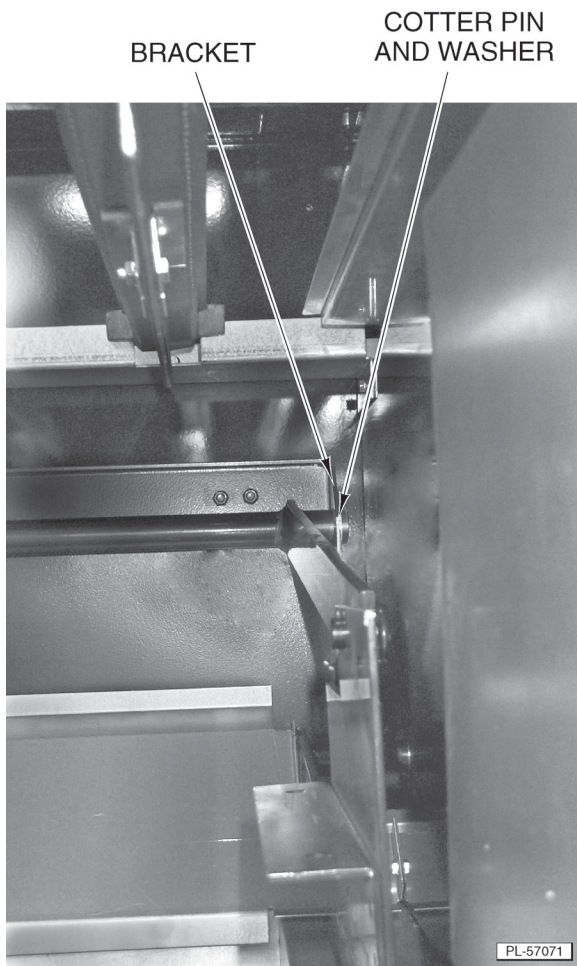
## LEVER ARM ASSEMBLY (ALL MODELS)

### Upper

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the grid carriage assembly as outlined in Grid Carriage Assembly.



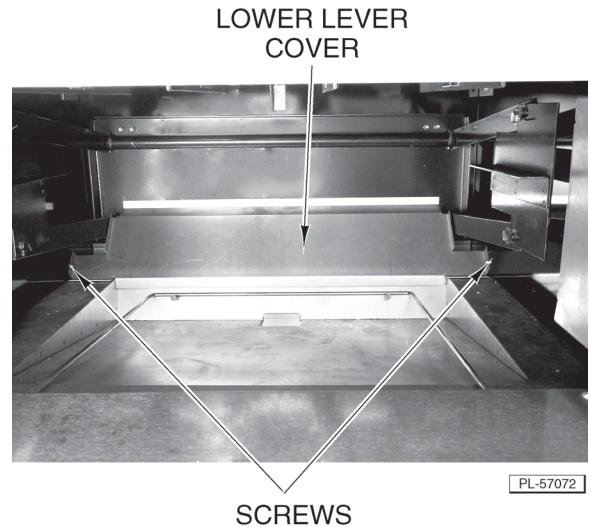
2. Remove the two cotter pins and washers from the upper lever arm assembly.
3. Remove the upper lever arm assembly from the two brackets.
4. Reverse the procedure to install.

### Lower

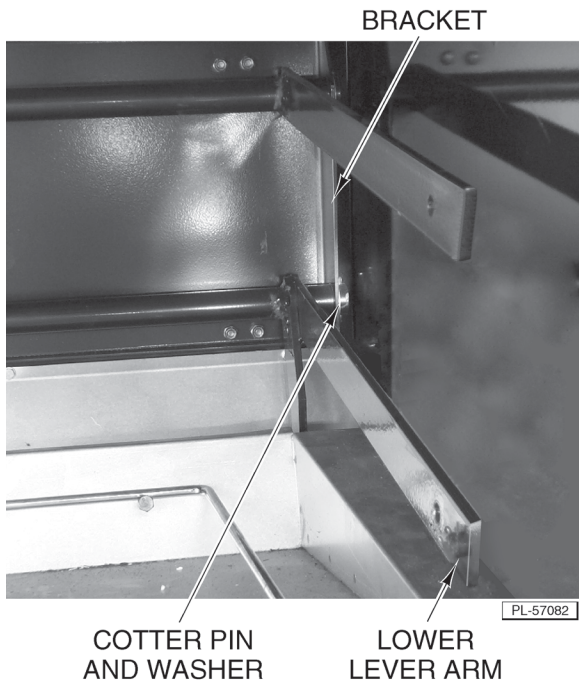
**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Remove the grid carriage assembly as outlined in Grid Carriage Assembly.



2. Remove two screws and the lower lever cover from the broiler.



3. Remove the two cotter pins and washers from the lower lever arm assembly.
4. Remove the lower lever arm assembly from the two brackets.
5. Reverse the procedure to install.

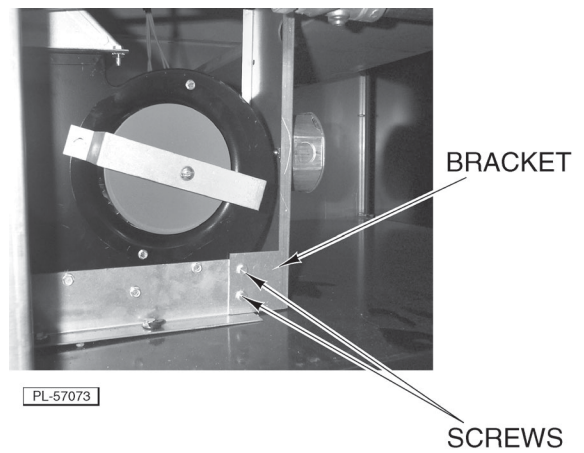
## BLOWER AND MOTOR

### GHIR44

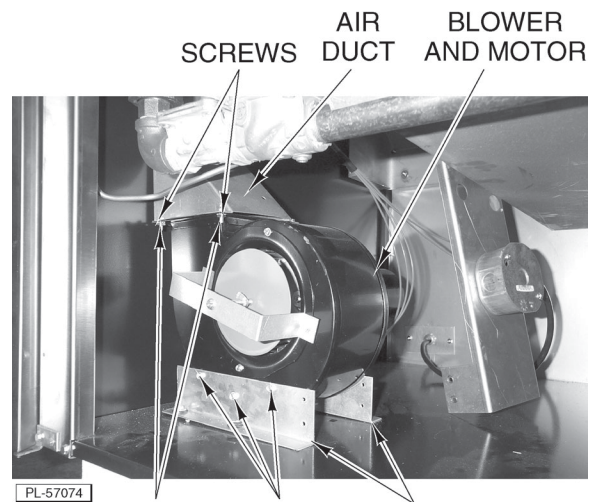
**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

**WARNING:** DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

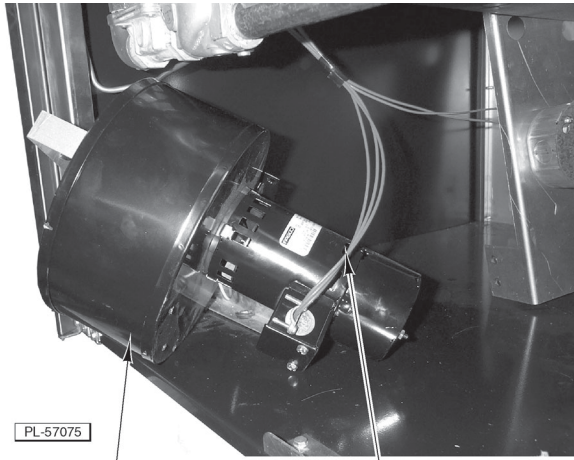
1. Open the lower doors to get access to the blower and motor.



2. Remove the four screws from the bracket and blower and motor.
3. Move the bracket away from the blower and motor.



4. Remove the four screws and nuts from the air duct and the blower and motor.
5. Carefully remove the six screws from the blower and motor and the brackets.
6. Remove the air duct from the broiler.
7. Note the location and connection of the electrical wires.



BLOWER AND MOTOR

ELECTRICAL WIRES

8. Disconnect the electrical wires.
9. Remove the blower and motor from the broiler.
10. Reverse the procedure to install.

### IR1 and IR2(B)

**WARNING:** DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

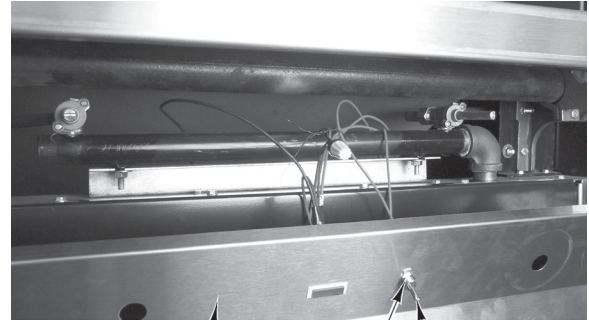
1. Remove the screws and the bracket and the blower and motor.
2. Remove the screws and nuts from the air duct and the blower and motor.
3. Carefully remove the screws from the blower and motor and the brackets.
4. Carefully remove the air duct from the blower and motor.
5. Note the location and connection of the electrical wires.
6. Disconnect the electrical wires from the blower and motor.
7. Remove the blower and motor from the broiler.
8. Reverse the procedure to install.

### Blower Switch (GHIR44)

**WARNING:** DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

1. Remove the manifold cover assembly as outlined in Covers, Panels and Handles.

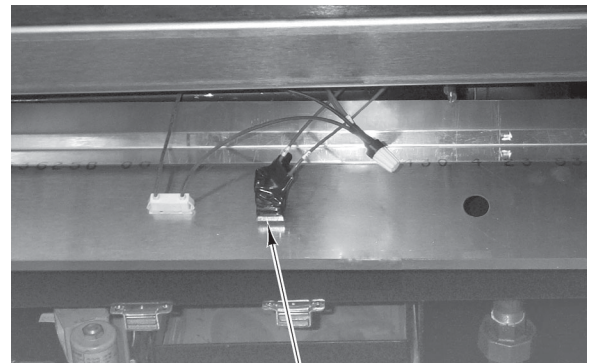


PL-57076

MANIFOLD COVER ASSEMBLY

NUT SWITCH

2. Remove the nut from the manifold cover assembly and the switch.
3. Note the location and connection of the electrical wires.



PL-57078

SWITCH WIRES

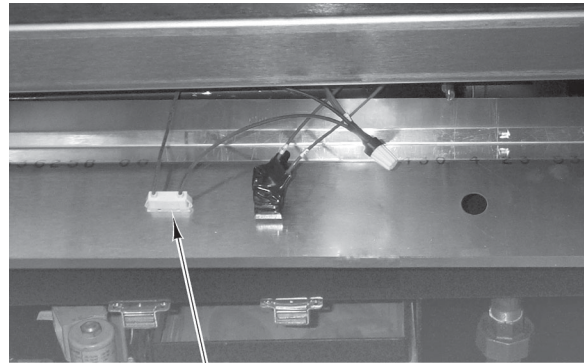
4. Disconnect the electrical wires.
5. Reverse the procedures to install.

## Light (GHIR44)

**WARNING:** DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

1. Remove the manifold cover assembly as outlined in Covers, Panels and Handles.
2. Note the location and connection of the electrical wires.
3. Disconnect the electrical wires from the light.
4. Reverse the procedure to install.



PL-57077

LIGHT WIRES

# SERVICE PROCEDURES AND ADJUSTMENTS

## GAS SUPPLY CHECKS

If the gas supply piping is to be tested at a test pressure in excess of 1/2 psi (3.45 kPa), the appliance and its individual shutoff valve must be disconnected from the supply line. If the gas supply piping is to be tested at a pressure equal to or less than 1/2 psi (3.45 kPa), the individual shutoff valve must be closed during testing.

### REGULATOR ADJUSTMENT (ALL MODELS)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

Accurate gas pressure adjustment can only be made with the gas on and the burner lit. In addition the supply line pressure to the broiler must be at least 1.0" W.C. greater than what is stated on the broiler unit rating plate.

Regulators are preadjusted for natural or propane gas as specified on the broiler rating plate.

1. Connect the manometer to the main gas manifold pipe of the broiler. Turn on gas.
2. Light one burner and take a reading.

3. Light all burners and take a reading.
4. Light all the gas appliances on the same supply line and take a reading.
  - A. At no time should the pressure drop more than 1/2" W.C. A large pressure drop could be an indication that the gas supply line is too small or a blockage. Check supply line pressure to ensure that it is at least 1.0" greater than the specified operating pressure of the broiler. Check with the gas provider for the proper size gas line.

## PILOT ADJUSTMENT (ALL MODELS)

1. Light the pilot as outlined under Lighting Pilot in the Installation and Operation manual for the appropriate model.
2. Locate the pilot adjustment screw on the supply end of pilot manifold pipe.
3. With a flat blade screwdriver, turn the pilot adjustment screw counterclockwise to increase or clockwise to decrease gas flow. The flame should only be high enough to ignite the burner in less than 4 seconds.

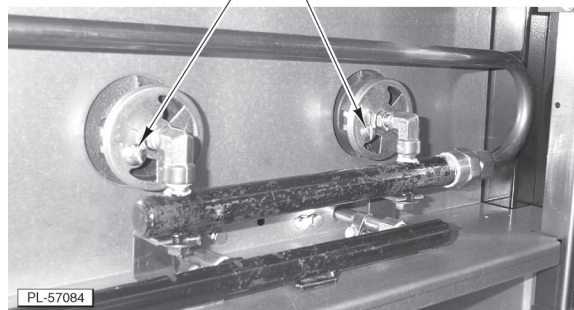
## BURNER VENTURI AIR SHUTTER ADJUSTMENT [GHCB40 AND HCB2(B)]

The gas burners have a disk type air shutter. The disk type is used on cast iron burners. All burners are tested and the air shutters are set at the factory prior to shipment. However, fine tuning adjustments may be necessary.

When using natural gas, the air shutter will be approximately 50% open. On propane (LP), the air shutter will be approximately 90% open.

1. For GHCB40 remove the burner box cover as outlined under Covers, Panels and Handles in Removal and Replacement of Parts Section of this manual.
2. For HCB2(B) remove the burner box cover as outlined under Covers, Panels and Handles in Removal and Replacement of Parts Section of this manual.
3. Loosen the air shutter adjustment screw.

ADJUSTMENT SCREW



4. Turn the burner on . If the flame is soft, lazy or yellow, there is not enough primary air and the air shutter needs to be opened up. If the flame is lifting off the burner, there is too much primary air and the air shutter needs to be closed down.
5. Rotate the air shutter so that a blue flame without any yellow tipping is seen across the burner.
6. Once the proper adjustment is made, carefully tighten the adjustment screw without moving the air adjuster.
7. Install front covers when complete.

## BURNER SERVICE (ALL MODELS)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING THE OVEN.

If the burner ports become obstructed or the burner cracks, the burner will not operate properly.

1. Remove burner(s) as outlined under Burner Assemblies Section of this manual.
2. Check burner(s) for:
  - A. Obstruction in port holes.
    - 1) Soak the burner(s) in warm, soapy water. If this does not solve the problem, the obstruction may be removed by carefully inserting, by hand, the proper size drill bit. If severe clogging or damage is evident, replace the burner(s).
  - B. Cracks in burner body.
    - 1) Burner must be replaced.

## BURNER ORIFICE SERVICE (ALL MODELS)

**WARNING:** SHUT OFF THE GAS BEFORE SERVICING.

1. Remove the burner associated with the orifice to be serviced as outlined under Burner Assemblies.
2. Remove the orifice tip and check for obstructions or damage.
3. Soak the orifice(s) in warm, soapy water. If this does not solve the problem, the obstructions may be removed by carefully inserting, by hand, the proper size drill bit. If severe clogging or damage is evident, replace the orifice(s).
4. Reverse the procedure to install.

## TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES
Uneven heating, sides burning.	<ul style="list-style-type: none"> <li>A) Temperature too low.</li> <li>B) Improper operation of broiler.</li> <li>C) Fluctuating gas pressure.</li> </ul>
Too much top heat.	<ul style="list-style-type: none"> <li>A) Temperature too high.</li> <li>B) Faulty ventilation.</li> <li>C) Excessive heat input.</li> <li>D) Gas pressure too high or orifice too large.</li> </ul>
Uneven heat front to back.	<ul style="list-style-type: none"> <li>A) Appliance not level front to back.</li> </ul>
Dried out products.	<ul style="list-style-type: none"> <li>A) Broiling time too long or product too close to the burner.</li> <li>B) Gas pressure too high or orifice too large.</li> </ul>
Pilot outage.	<ul style="list-style-type: none"> <li>A) Pilot flame too low.</li> <li>B) Restriction in pilot orifice.</li> </ul>
Pilot will not light.	<ul style="list-style-type: none"> <li>A) Insufficient gas input.</li> <li>B) Poor air to gas adjustment.</li> <li>C) Restriction in pilot orifice.</li> <li>D) Restriction in main burner port.</li> <li>E) Pilot adjustment incorrect.</li> </ul>

