

# BURNER INSPECTION KIT INSTRUCTIONS

050/075/100/150/200

Kit #550002280

Kit installation shall be completed by qualified agency.

## **⚠ WARNING**

Fire, explosion, asphyxiation and electrical shock hazard. Improper installation could result in death or serious injury. Read this instruction and understand all requirements, including requirements of authority having jurisdiction, before beginning installation. Installation not complete until appliance operation verified per Installation, Operation & Maintenance Manual provided with boiler.

Tools required:

- (2) Crescent wrenches
- Phillips screwdriver
- 11/32" Nut Driver, Wrench or Socket
- Gasket Scraper
- 7/16" Deep Well Socket

1. Follow instructions TO TURN OFF GAS TO APPLIANCE found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual. Verify all electrical power to boiler is turned off.

## **⚠ WARNING**

Electrical shock hazard. Turn OFF electrical power supply at service panel.

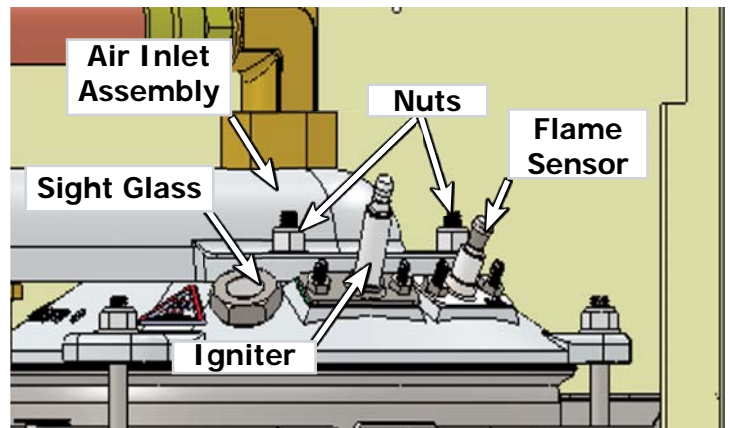
2. Remove front jacket panel(s).

## **⚠ WARNING**

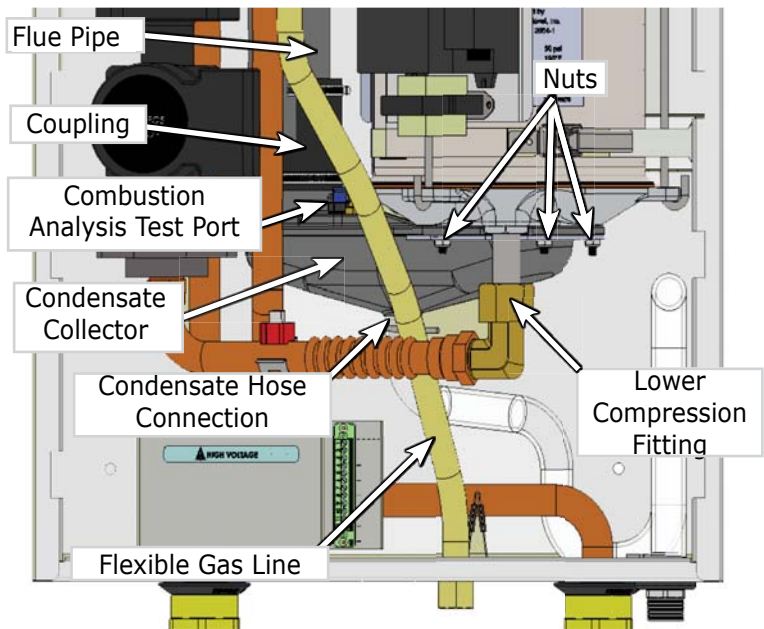
Burn hazard. Verify heat exchanger, igniter, and flame sensor have cooled or use appropriate personal protection equipment before removing.

3. Inspect combustion chamber through sight glass. Verify flame is not present. See figure 1.
4. Remove Igniter:
  - Disconnect igniter cable from igniter.
  - Remove two (2) 8-32 hex nuts using 11/32" nut driver, wrench or socket. See figure 1.
  - Pull igniter up and out of heat exchanger.
  - Remove old igniter gasket. Clean heat exchanger surface.
5. Remove Flame Sensor:
  - Disconnect flame sensor cable from flame sensor.
  - Remove two (2) 8-32 hex nuts using 11/32" nut driver, wrench or socket. See figure 1.
  - Disconnect ground wire from stud.
  - Pull flame sensor out of heat exchanger.

**Figure - 1 Sight Glass, Igniter & Flame Sensor**



**Figure - 2 Flexible Gas Line**



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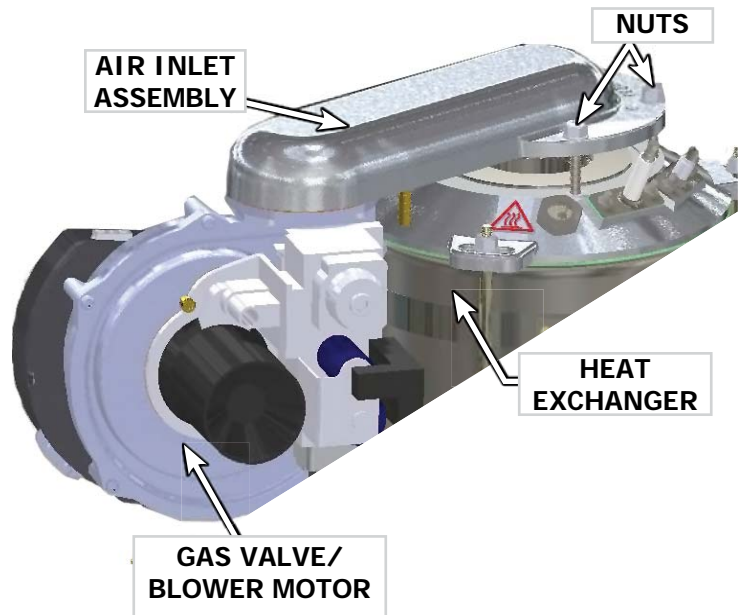
6. Remove Gas Valve Harness. Loosen retaining screw and disconnect harness from gas valve.
7. Disconnect Flexible Gas Line:
  - Turn off gas at manual main shutoff valve.
  - Disconnect flexible gas line from gas shutoff valve. See figure 2.

### NOTICE

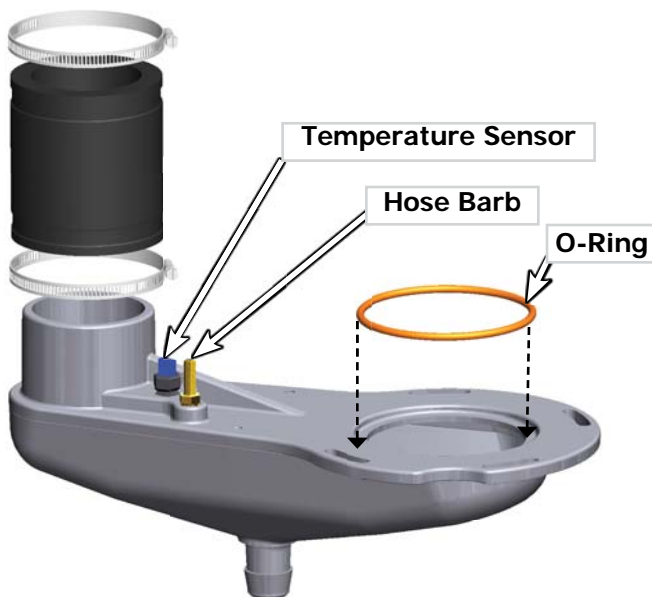
Use two wrenches when loosening and tightening gas lines. Boiler components can be damaged if subjected to excessive torque.

8. Remove Air Inlet Assembly: See figure 3.
  - Disconnect two (2) harnesses from blower.
  - Support air inlet assembly. Remove four (4) 1/4-20 hex flange nuts securing air inlet assembly to heat exchanger using 7/16" deep well socket.
9. Burner Inspection. Follow Annual Inspection and Cleaning of Boiler Components in Installation, Operation & Maintenance Manual.

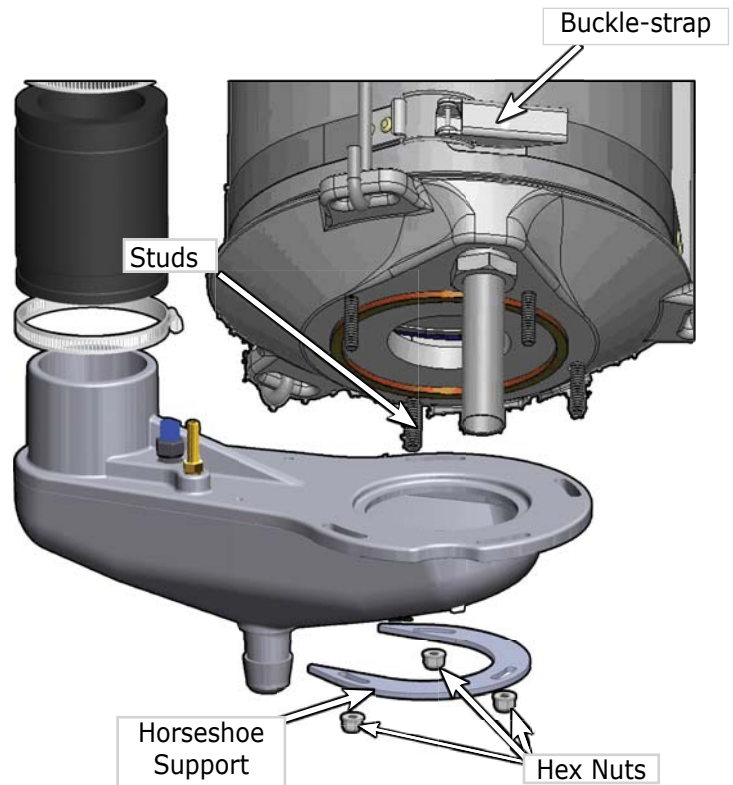
**Figure - 3 Air Inlet Assembly**



**Figure 4 - O-Ring Placement**

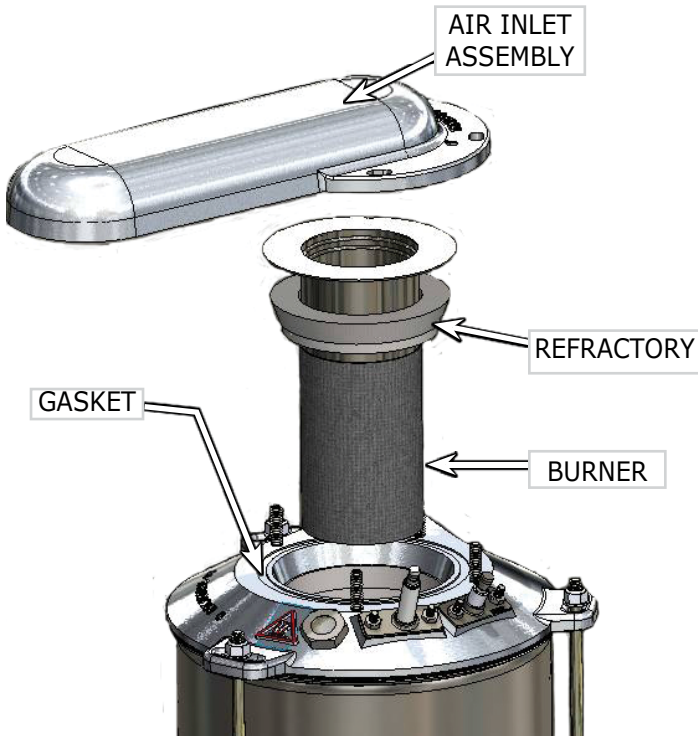


**Figure - 5 Push Upward onto Studs**

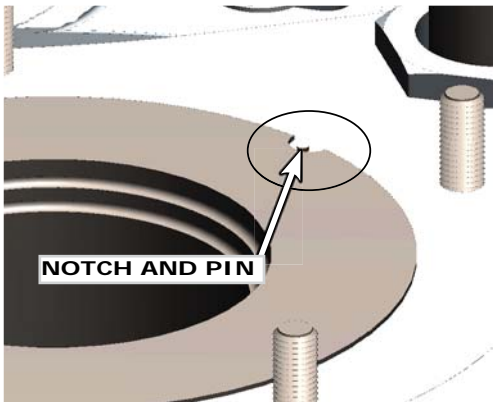


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**Figure - 6 Burner with Refractory**



**Figure - 7 Notch and Pin**



### Replacement Instructions:

1. Install Condensate Collector (if removed during inspection and cleaning).
  - Apply thin film of silicone sealant to condensate collector recess. Place new O-ring into recess. See figure 4. Use silicone sealant sparingly - helps hold o-ring in-place and is not necessary for sealing.
  - Place flexible coupling and hose clamps onto condensate collector assembly. Tighten lower hose clamp. See figure 4.
  - Position condensate collector assembly under heat exchanger. Push assembly over heat exchanger studs while engaging flexible coupling onto flue pipe. Secure with 1/4-20 hex flange nuts. Do not overtighten. See figure 5.
  - Verify flue pipe is fully seated into flexible coupling. Tighten upper hose clamps.
  - Attach wire harness to vent temperature sensor.
2. Install Burner
  - Slide new refractory burner sleeve onto new burner. See figure 6 for orientation.
  - Insert new burner into heat exchanger. Align U-shaped notch on burner flange with pin on heat exchanger. See figure 7.
3. Install Air Inlet Assembly
  - Replace existing burner gasket with new gasket provided with kit. Align gasket with studs in heat exchanger.
  - Place air inlet assembly onto heat exchanger. Secure hand tight with four (4) 1/4-20 hex flange nuts. See figure 2.
  - Verify minimum 1/8" clearance between blower and piping. Complete tightening nuts.
4. Connect Flexible Gas Line:
  - Connect flexible gas line to gas shutoff valve.

### NOTICE

Flexible gas line uses flare connection. No thread (joint) compound (pipe dope) necessary.

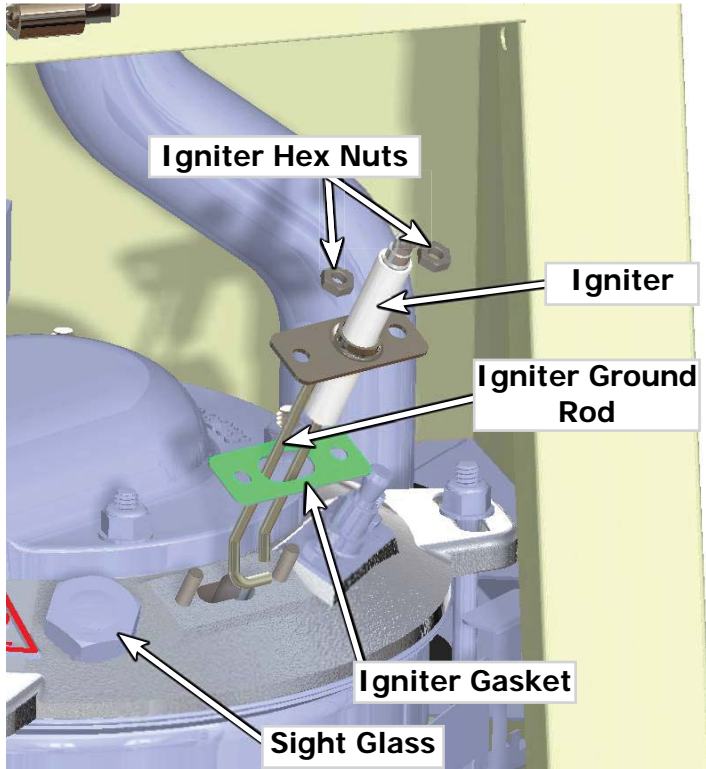
5. Install Gas Valve Harness. Attach gas valve harness to gas valve. Secure with integral screw.
6. Install Flame Sensor:
  - Insert flame sensor into heat exchanger. Flame sensor bracket is off set and will only allow insertion in proper orientation.

### NOTICE

Flame sensor does not require gasket. Flame sensor o-ring seals flame sensor to heat exchanger.

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**Figure - 8 Igniter, Gasket and Hex Nuts**



- Place flame sensor ground wire onto right-side stud.
  - Secure flame sensor and flame sensor cable with two (2) 8-32 hex nuts. Do not overtighten (maximum 5 lb-ft.). See figure 1.
  - Attach flame sensor cable to flame sensor.
7. Install Igniter. See figure 8
    - Position igniter gasket over igniter.
    - Orient igniter with ground rod to left side.
    - Insert igniter into heat exchanger. Secure with two (2) 8-32 hex nuts. Do not overtighten (maximum 5 lb-ft).
    - Attach igniter cable to igniter.
  8. Gas Line Leak Test
    - Turn on gas at manual main gas shutoff valve.
    - Check for gas line leaks using gas detector, noncorrosive detection fluid, or other leak detection method acceptable to authority having jurisdiction. Correct leaks immediately and retest.

**⚠ DANGER**

Fire hazard. Do not use matches, candles, open flames, or other methods providing ignition source. Failure to comply will result in death or serious injury.

9. General Finish Instructions
  - Resume operation using OPERATING INSTRUCTIONS found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual.
  - Verify proper operation by following START UP PROCEDURE in Installation, Operation & Maintenance Manual.
  - Install front jacket panel(s).

50/075/100/150/200 Burner Inspection Kit # 550002280		
DESCRIPTION	PART #	QTY
1/4-20 Hex Flange Nut	-	8
Burner Gasket	-	1
8-32 Hex Nut	-	4
Refractory Sleeve	-	1
Igniter Gasket	-	1
O-Ring	50/75/100	240008261
	150/200	240008699
Gasket, Air/Fuel Inlet	-	1
Instructions	240008931	1

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