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## 83012-1 **OR** 82597 Replacement Instructions Heat Exchanger Assembly, ASME c/w Burner Door and Flue Box

### Applicable Boiler Models

- Ti100-150(C) (ASME Models)
- Ti200
- Lx150(ASME Models)
- Matrix M100(V) (ASME Models)

### Kit Contents 83012

- 83012 Heat Exchanger Assembly Ti100-150, Lx150, Matrix M100(V)
- 82054-2 (84299) Venturi Gasket, Cork
- 82766 Blower Gasket (C/W Pn#83012)
- 83291-1(100.3/150.3) Flue Adapter Kit (C/W Pn#83012)
- 83140 Flame Probe Wire

### Kit Contents 82597

- 82597 Heat Exchanger Assembly (Ti200)
- 82719 Blower Gasket (C/W Pn#82597)
- 83291-1(200.3) Flue Adapter Kit (C/W Pn#82597)
- Installation Instructions

### Tools Required

- Pliers
- Phillips #2 screwdriver
- Flat Screwdriver
- ¼” nut driver or wrench
- 5/16” nut driver or wrench
- 10mm wrench
- ½” Wrench
- 7/16” Wrench
- 9/16” Wrench
- Pipe wrench
- Torx T25 Torx T20 Screwdriver
- Saw to remove venting
- Adjustable wrench



### **▲WARNING**

This boiler must be service by a qualified heating technician. Failure to properly maintain or service this appliance may result in property damage, serious injury to occupants or, death.

### **▲WARNING**

The installation of this kit must be performed by a qualified boiler technician. Installing this kit without the proper background and training is hazardous and may result in

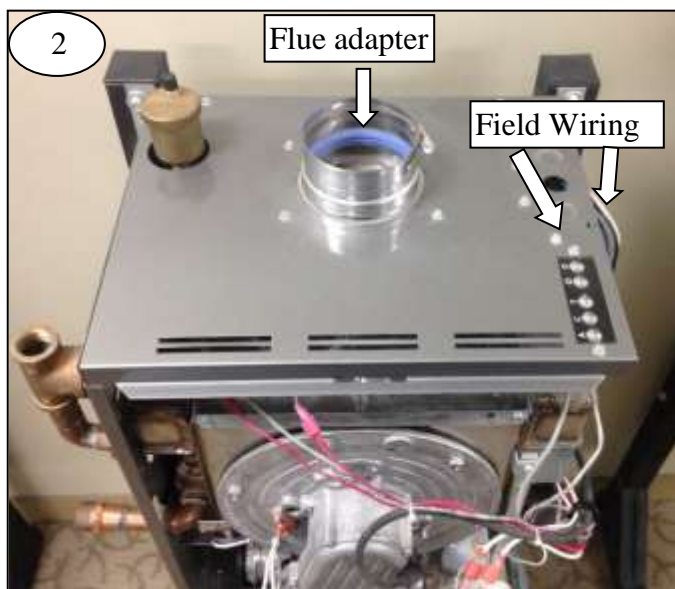
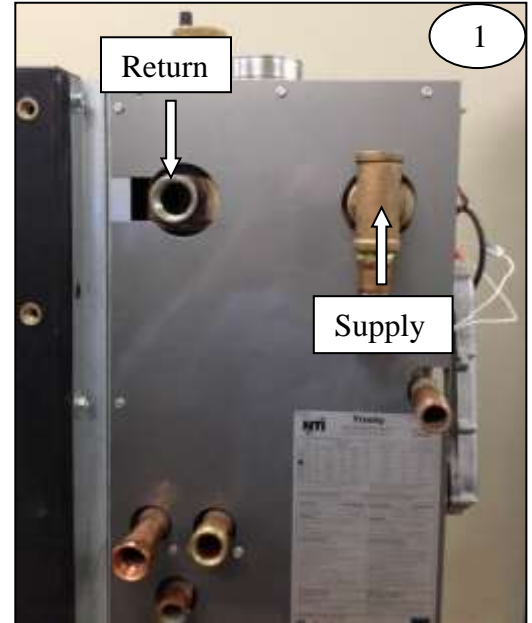
property damage serious injury or death.

**Disassembly Instructions Boilers:**

- 1) Turn off power and gas to the boiler.
- 2) Drain the boiler: use a wet/dry vacuum to help remove excess water.
- 3) Remove the exhaust venting.
- 4) Remove the gas line from the gas valve.
- 5) For **Lx boilers Refer to page 6**, **Matrix boilers refer to page 9**.

Ti150-200

Disconnect the supply and return piping from the heat exchanger.



Ti150-200

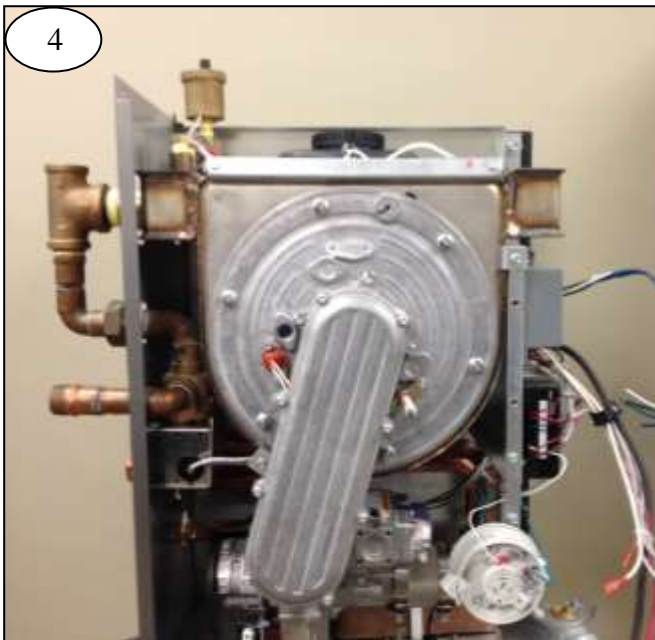
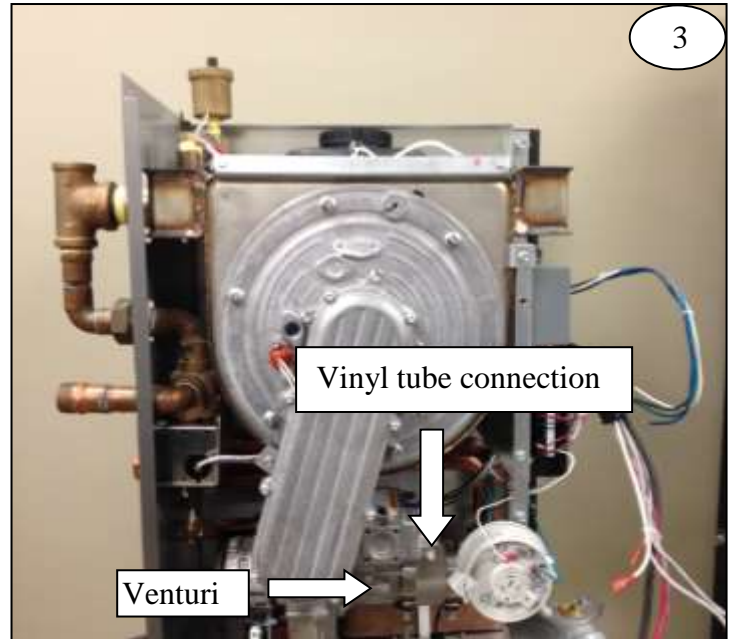
Remove field wiring.

Remove the jacket top and flue adaptor assembly.

Ti150-200

Disconnect the air inlet from the venturi.

Remove the vinyl tube from the gas valve.



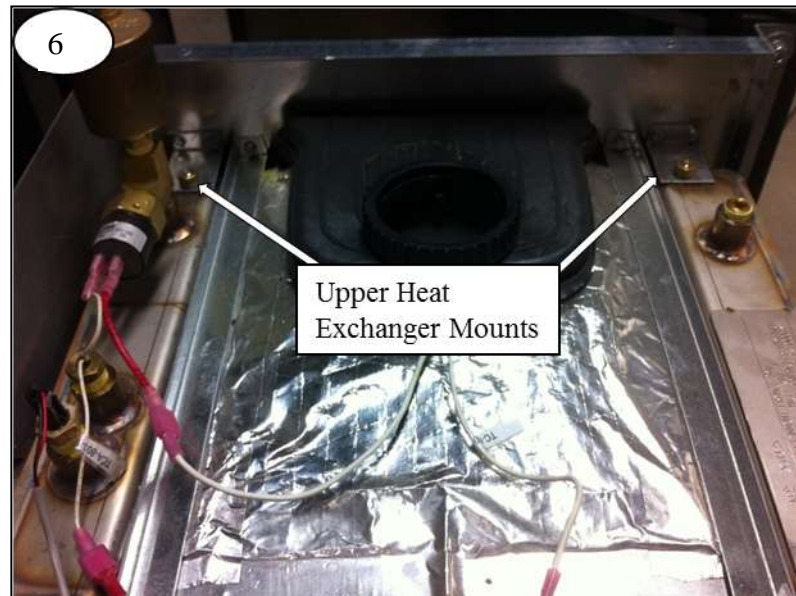
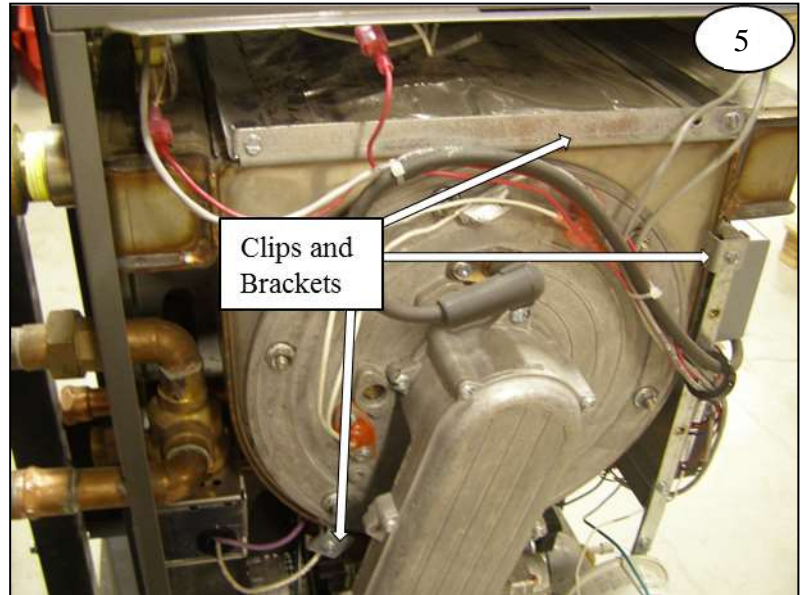
Ti150-200

Remove all the wiring attached to the burner door, blower, gas valve and safety limits.

Ti150-200

Remove the hold down clips and brackets.

Loosen the left side of the boiler jacket.



Ti150-200

Remove the upper heat exchanger mounts.

Remove the lower heat exchanger support over the condensate tubing.

Remove condensate tubes from the bottom of the heat exchanger.

Remove the heat exchanger.

**CAUTION** Do not over-tighten the nuts on the upper heat exchanger mounts during reassembly. Over tightening could cause a leak which could cause property damage.

Transfer the blower motor, gas valve, and sensors to the new heat exchanger

**WARNING**

Gas Leakage: Failure to properly reconnect the gas line and check for leaks may result in gas leakage causing serious injury or death.

**WARNING**

Failure to properly attach the venting or condensate drain and check for leaks, may cause flue gas leakage causing serious injury or death.

**CAUTION**

Failure to correctly attach and seal the boiler piping will result in water leakage causing property damage.

Transfer sensors and safety limits from the old heat exchanger to the new heat exchanger.

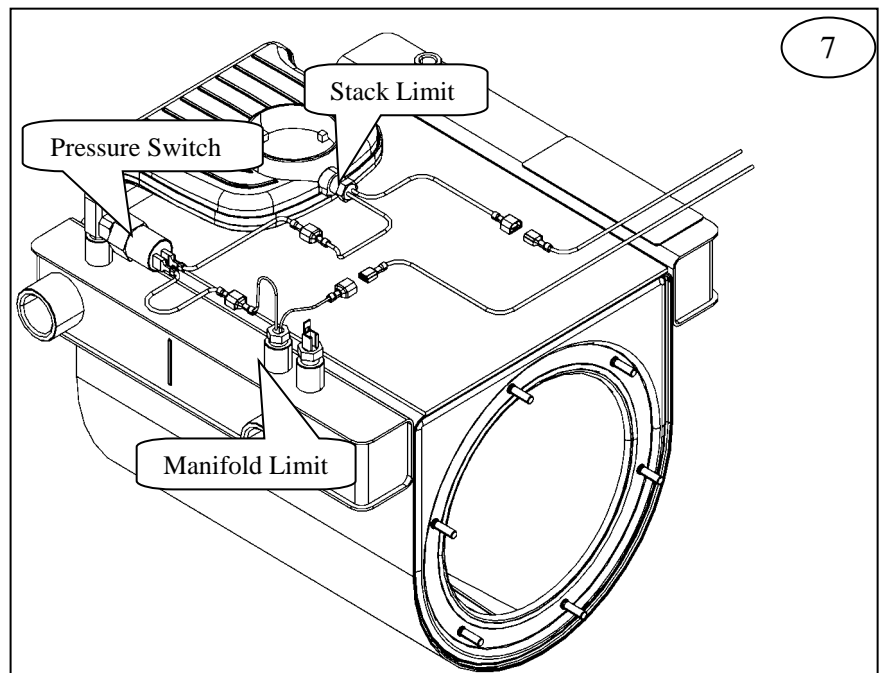
**NOTICE**

Safety limit wiring shown in figure 7.

**WARNING**

**Safety Limits-** Failure to correctly install and wire the safety limits on the replacement heat exchanger may result in a boiler malfunction causing injury or death.

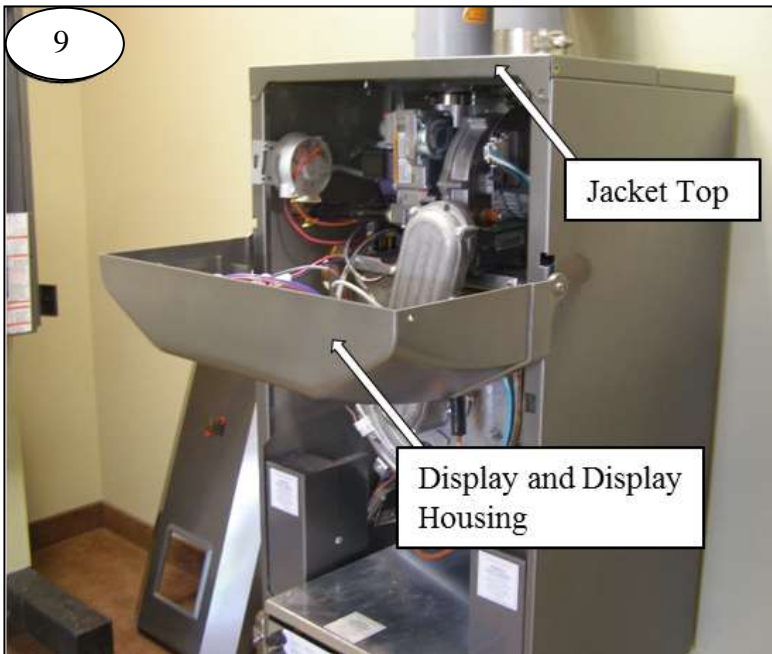
**Ti and Matrix Boiler Safety Limit Wiring.**



### Disassembly Instructions Lx:

Lx150

Disconnect the supply and return piping from the heat exchanger.



Lx150

Remove display and display housing as an assembly.

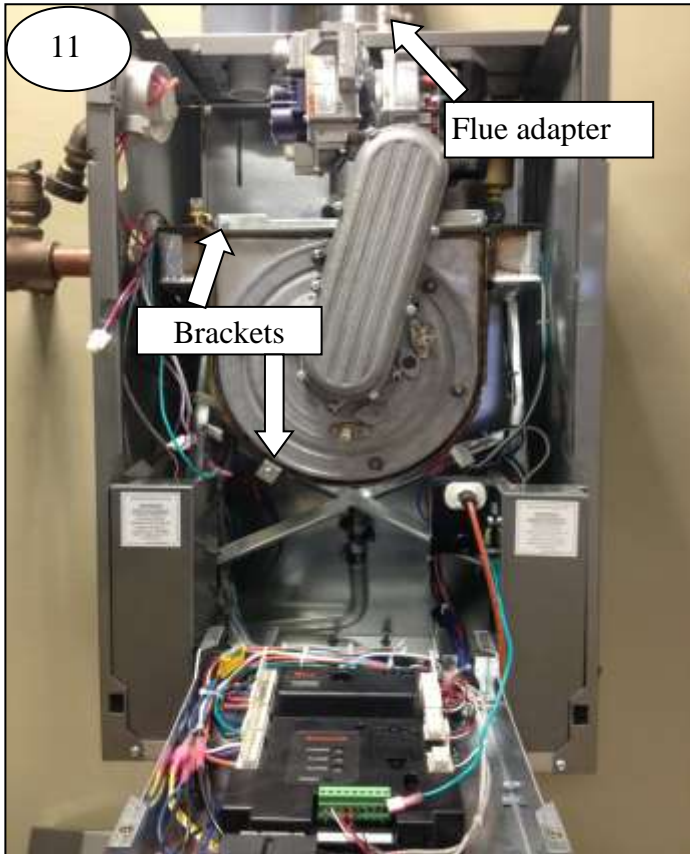
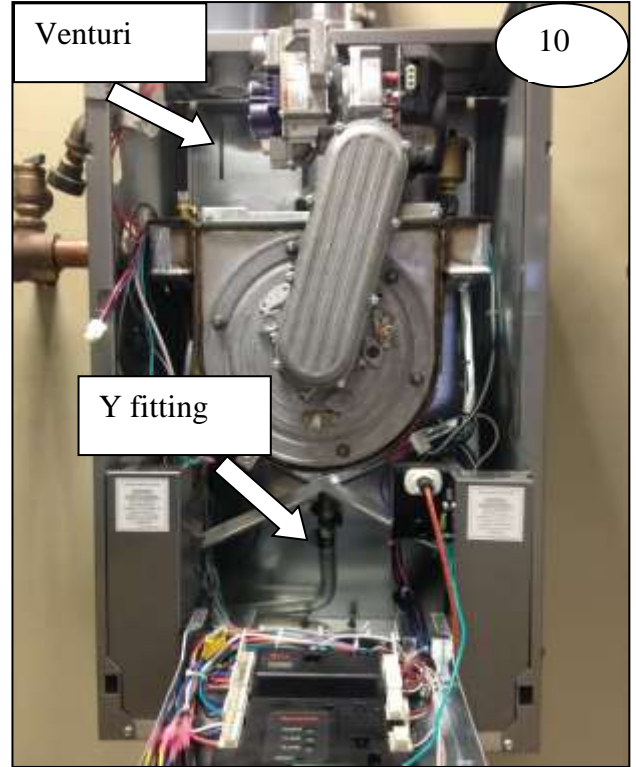
Remove front jacket top.

Lx150

Remove wiring attached to the burner door, blower motor, gas valve, and safety limits.

Remove the air inlet from the venturi.

Remove the condensate tubing from the Y fitting.

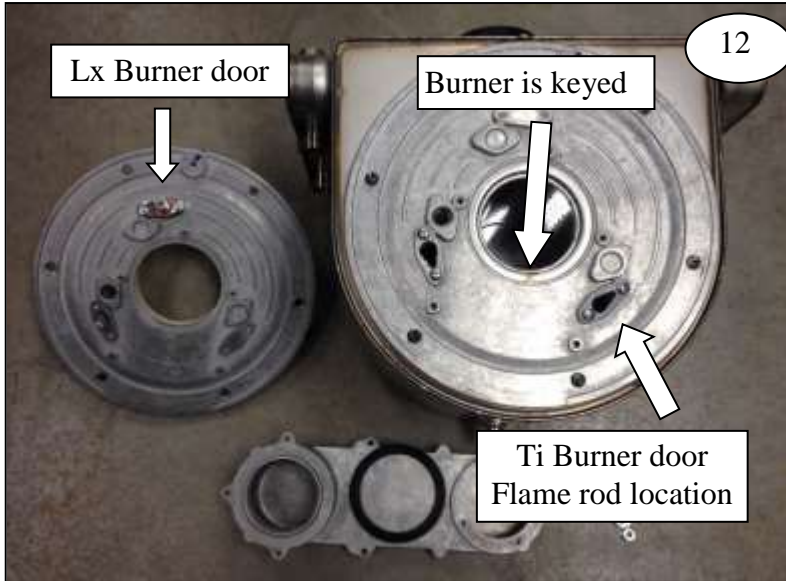


Lx150

Remove the flue adapter from the flue box.

Remove the brackets.

Remove the lower heat exchanger that covers the condensate tubing.



Lx 150 Only:

Remove the burner door assembly from the new heat exchanger and replace it with the original door. The new burner may be used with the old burner door.

Inspect the burner door gasket and refractory for damage and replace them as necessary.

**WARNING**

Failure to install the original Lx burner door, may result in a boiler malfunction leading to boiler malfunction causing serious injury or death.

**WARNING**

Failure to replace damaged or excessively worn gaskets or refractory may result in a boiler malfunction lead to, flue gas leakage or fire causing serious injury or death.

Lx150

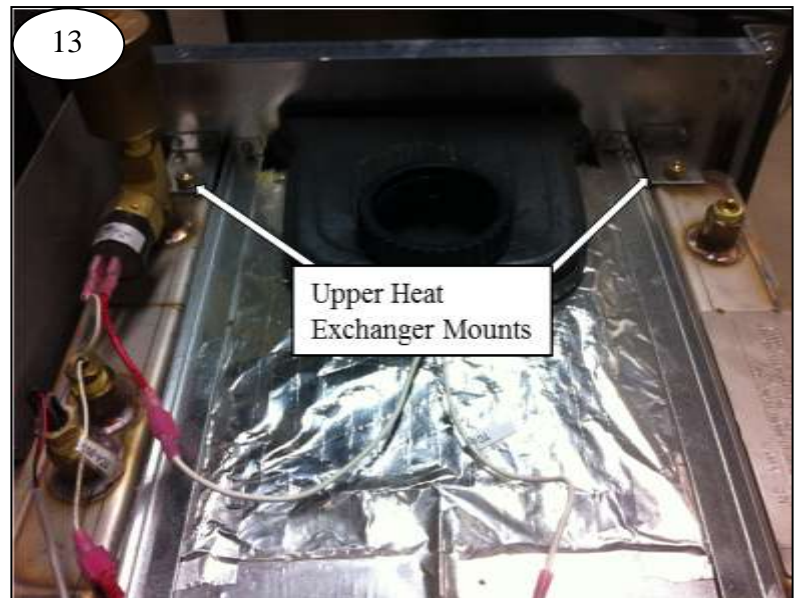
Remove the upper heat exchanger mounts.

Remove the heat exchanger.

**CAUTION** Do not over-tighten the nuts on the upper heat exchanger mounts during reassembly. Over tightening could cause a leak which could cause property damage.

Transfer the blower motor gas valve, and sensors to the new heat exchanger.

Install the new heat exchanger in the reverse order.



**WARNING**

Gas Leakage: Failure to properly reconnect the gas line and check for leaks may result in leakage causing serious injury or death.

**WARNING**

Failure to properly attach the venting or condensate drain and check for leaks, may cause flue gas leakage causing serious injury or death.

**CAUTION**

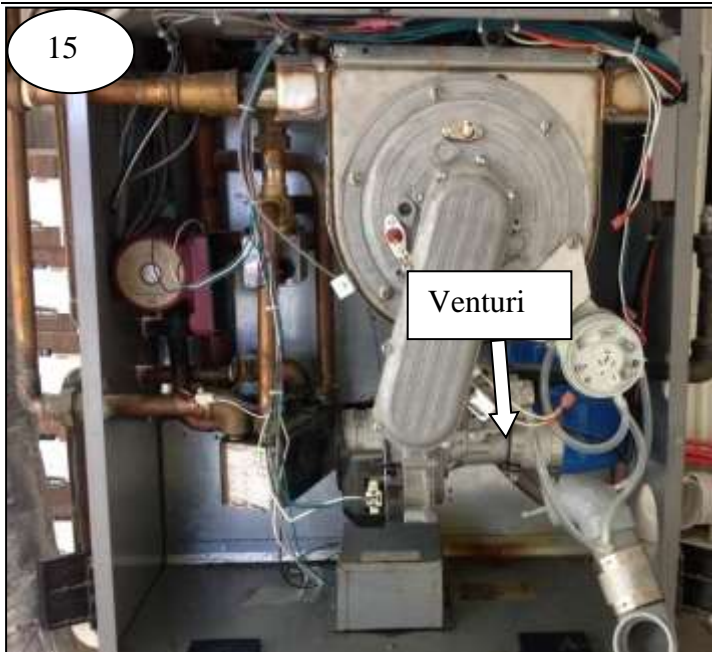
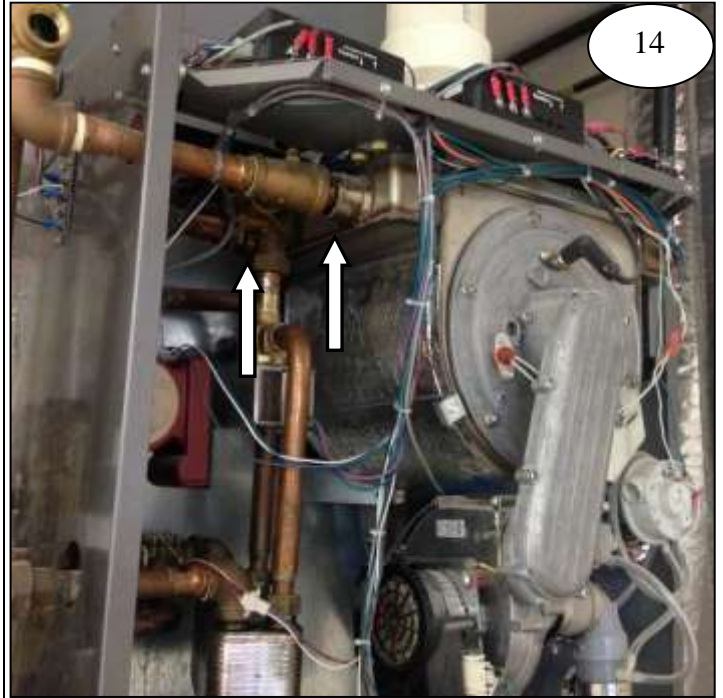
Failure to correctly reattach and seal the boiler piping will result in water leakage causing



property damage.

Matrix

Disconnect the supply and return piping from the heat exchanger.



Matrix

Remove wiring attached to the burner door, blower motor, and gas valve.

Remove the air inlet from the venturi.

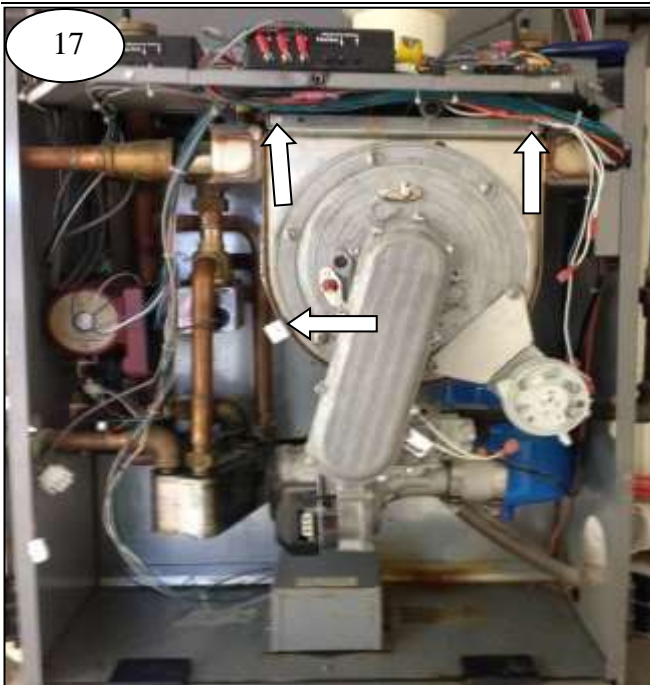
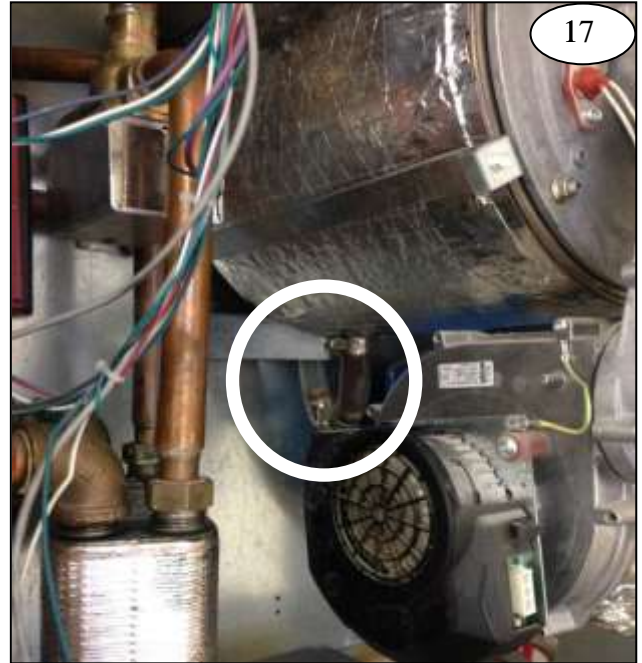
Remove the wiring attached to the safety limits.

Refer to Page 5 for safety limit wiring.

Matrix

Remove the condensate tubing from the Y fitting.

Remove the lower heat exchanger support.



Matrix

Remove the flue adapter from the flue box.

Remove the brackets.

Remove the heat exchanger.

Transfer the blower motor, gas valve, and safety limits to the new heat exchanger.

Install the new heat exchanger in the reverse order.



**WARNING** Gas Leakage: Failure to properly reconnect the gas line and check for leaks may result in leakage causing serious injury or death.



**WARNING** Failure to properly attach the venting or condensate drain and check for leaks, may cause flue gas leakage causing serious injury or death.



**CAUTION** Failure to correctly reattach and seal the boiler piping will result in water leakage causing property damage