

Heat Exchangers

Replacement Instructions

Kit Name	Heat Exchangers Replacement Kit
Kit Part Number and Compatible Rinnai Products	<ul style="list-style-type: none"> 107000640 - For use with SENSEI RX/CX Condensing Tankless Water Heater Models: RX/RXP199i, RX180i, CX/CXP199i 107000641 - For use with SENSEI RX/CX Condensing Tankless Water Heater Models: RX/RXP160i, RX130i, CX/CXP160i

WARNING

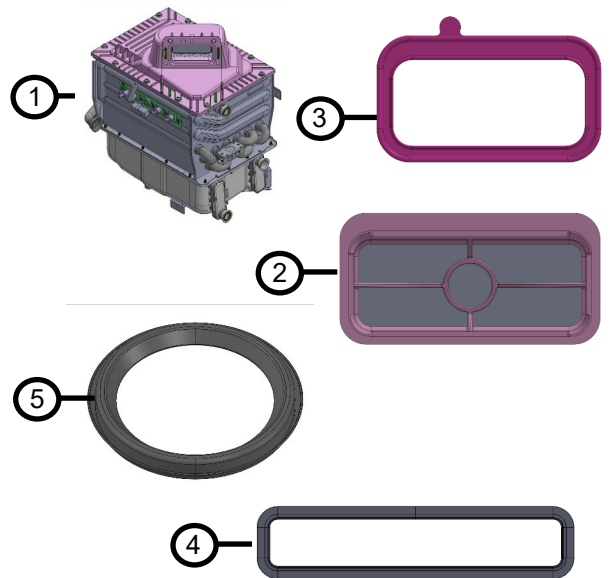
Failure to correctly assemble the components according to these instructions may result in electric shock, injury, or death.

Items Inside Product Box

Before installation, please make sure all parts are located inside the product box.

Table 1

Item #	Item	Qty
1	Heat Exchangers Assembly	1
2	Check Valve	1
3	Check Valve Gasket	1
4	Exhaust Duct Gasket	1
5	Exhaust Gasket	1



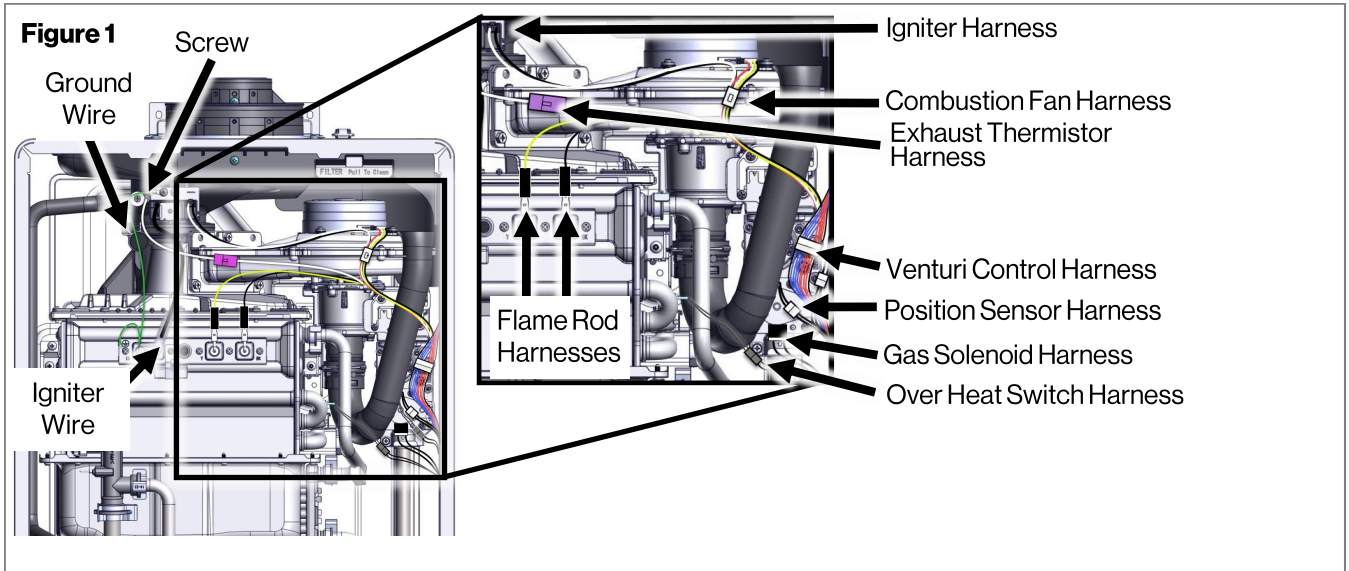
TOOLS/MATERIALS REQUIRED

- Phillips head screwdriver

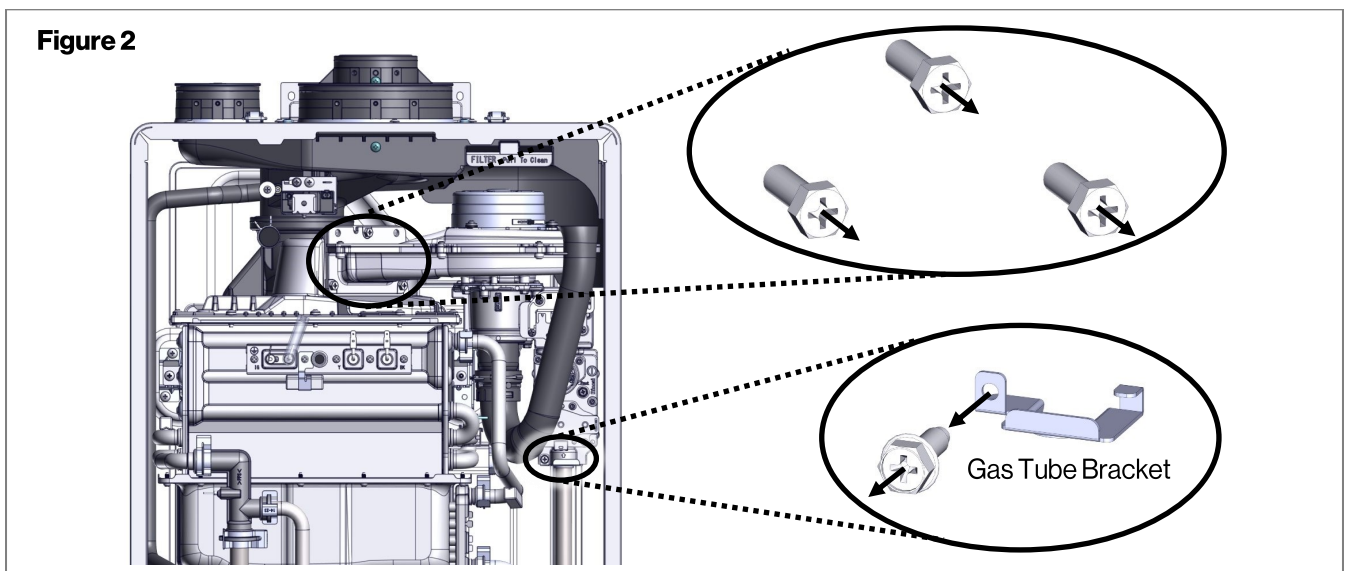
Instructions:

1. Turn off and disconnect 120 V power supply.
2. Turn off water supply, and drain water from isolation valves or a pressure relief valve.
3. Turn off gas supply.
4. Remove front panel by removing the two screws and releasing the two latches.

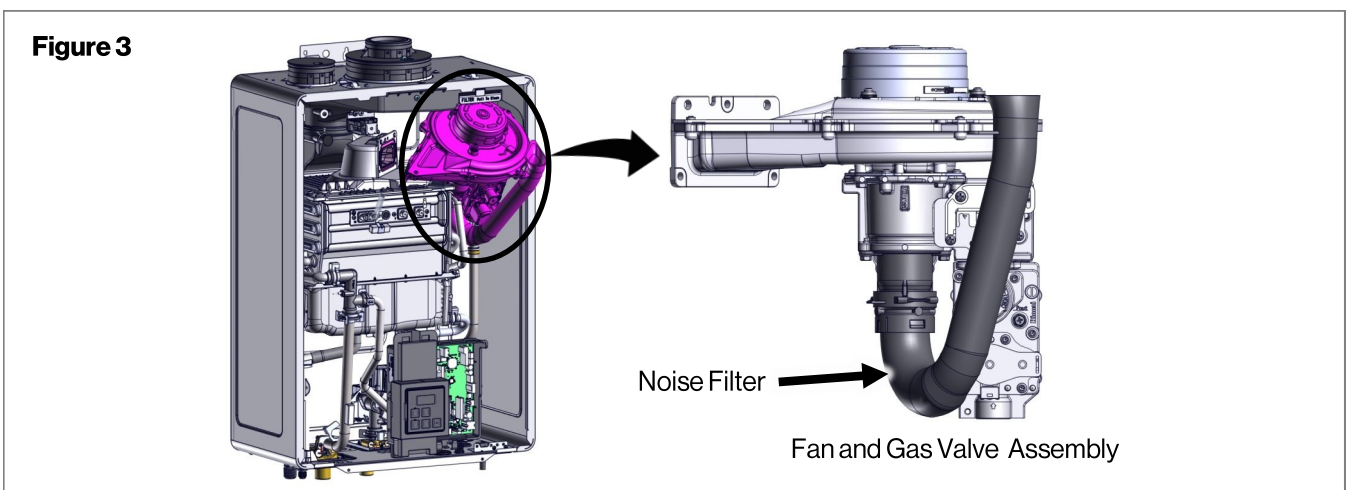
5. Disconnect combustion fan harness, venturi control harness, position sensor harness, gas solenoid harness, exhaust thermistor harness, igniter harness, flame rod harnesses, over heat switch harness, and igniter wire. Remove screw to disconnect ground wire (Figure 1).



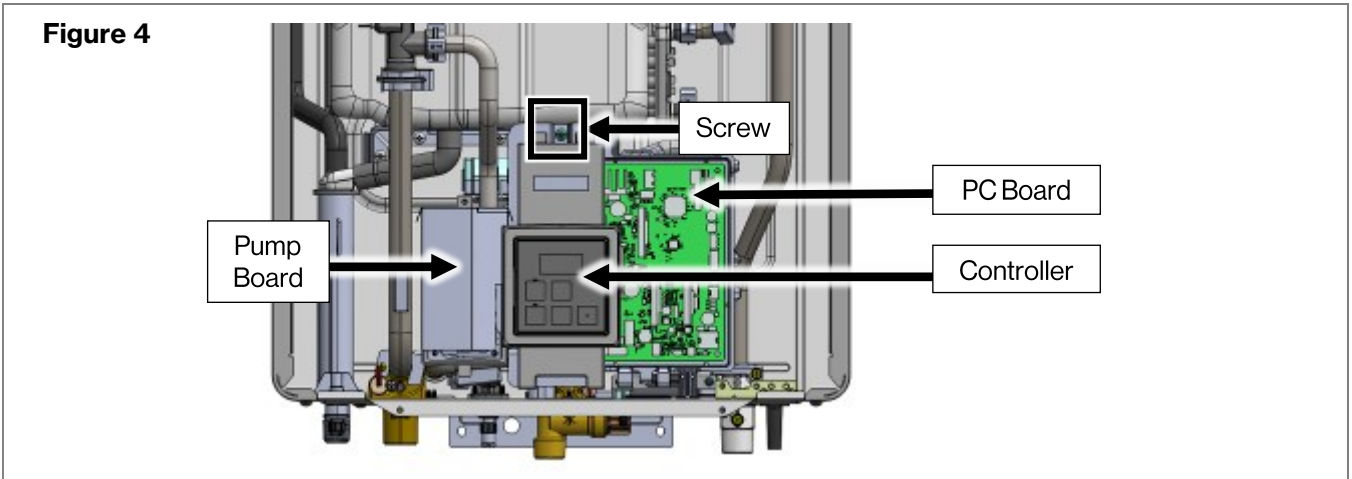
6. Remove screw from gas tube bracket. Rotate and remove gas tube bracket from gas valve. Hold the gas pipe and the gas valve assembly, and pull down the gas pipe so that the gas valve assembly is disconnected from the gas pipe. Remove screws around perimeter of fan mounting flange. Remove two bottom screws first and top screw last (Figure 2).



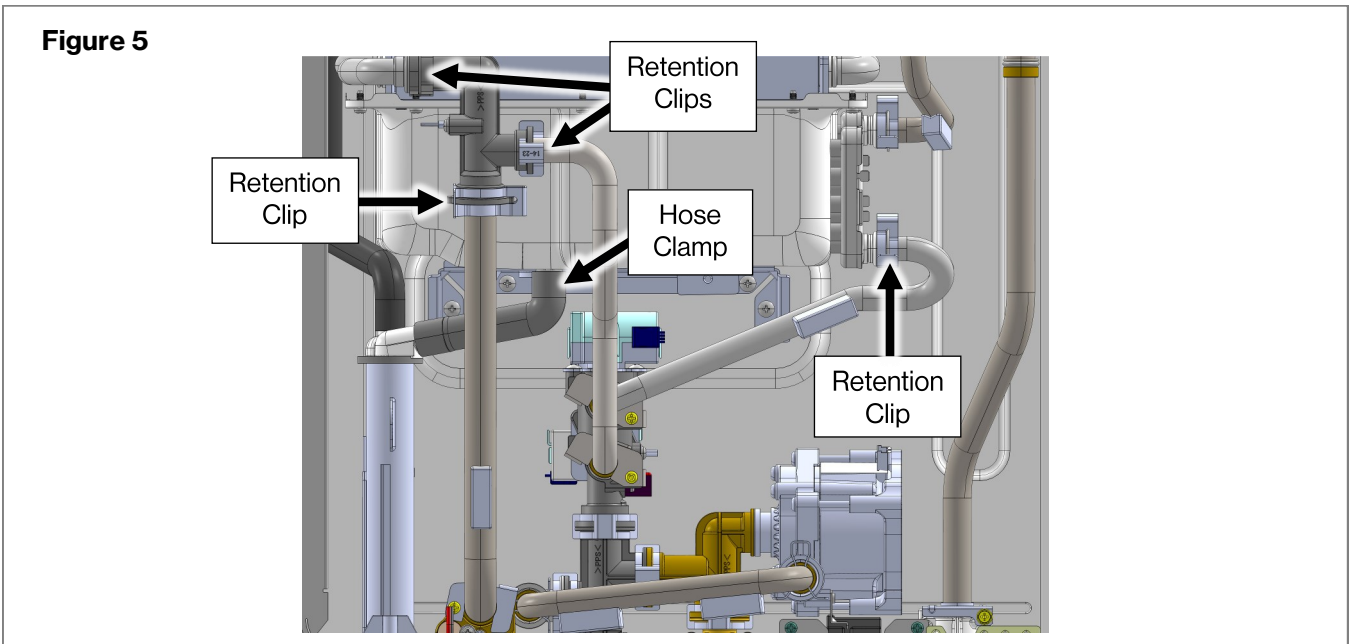
7. Lift fan and gas valve assembly upward, then rotate forward to remove fan and gas valve assembly. (Figure 3). **Note: Noise filter is fragile. Do not hold the noise filter or apply strong force to the noise filter.**



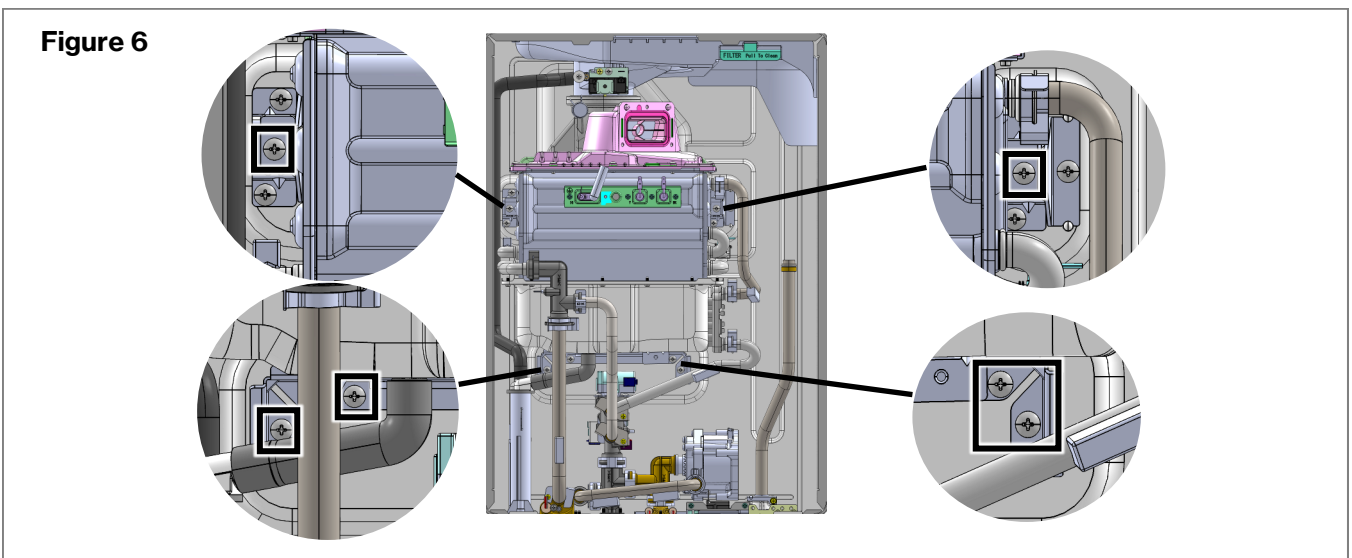
- Remove screw securing the PC board to the unit. Remove controller and PC board, and pump board (pump model only) from their location and let them rest next to the water heater (Figure 4).



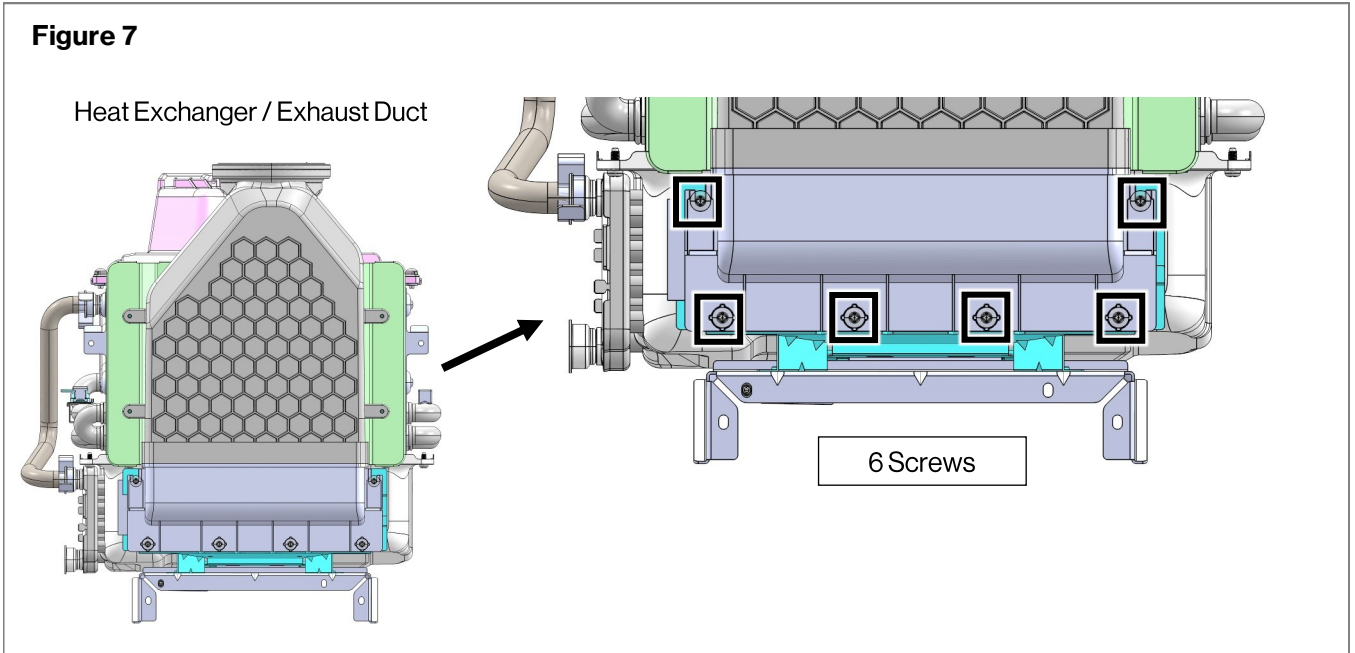
- Disconnect five white wire connections and one blue wire connection below the secondary heat exchanger.
- Remove 4 retention clips from the pipes connecting to the heat exchanger and the hose clamp from the condensate hose (Figure 5).



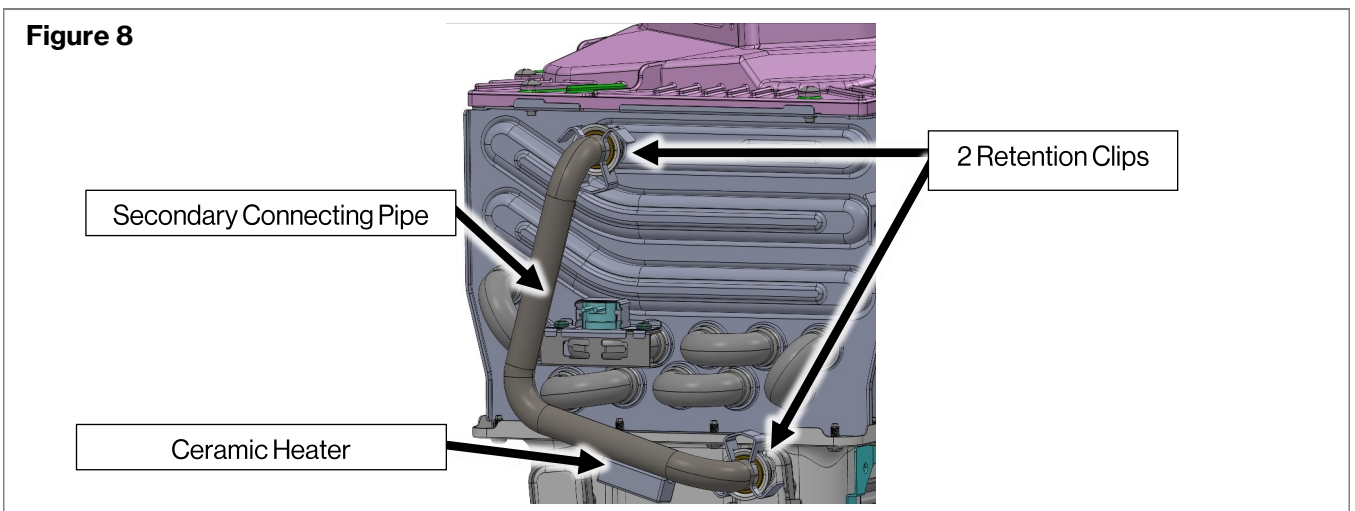
- Remove 6 heat exchanger screws from the top and bottom of the heat exchanger (Figure 6).



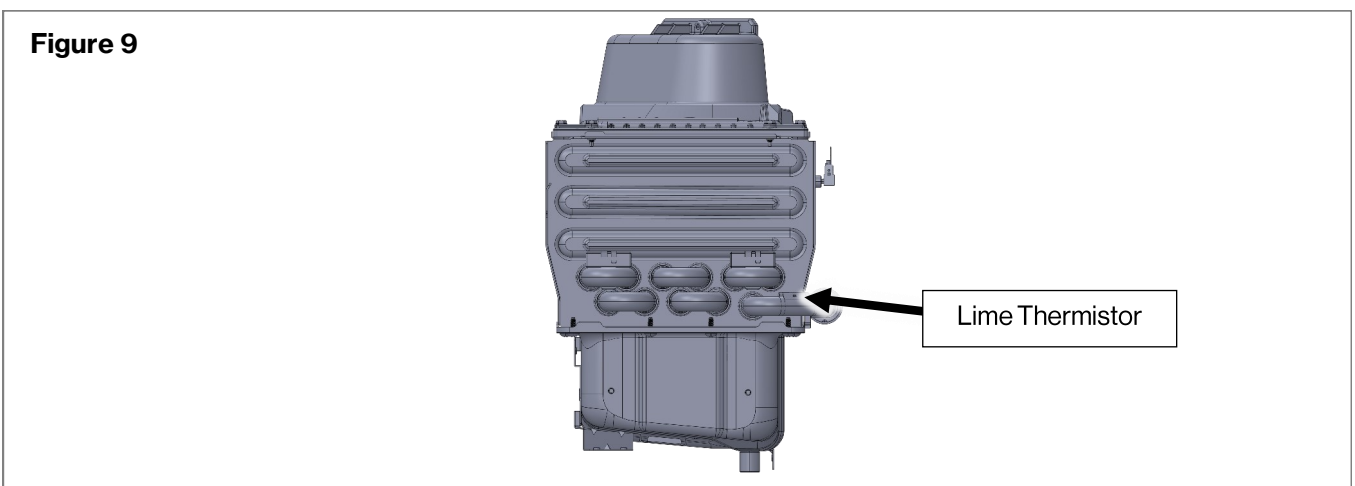
12. Remove the heat exchangers/exhaust duct assembly from the body of the water heater. On the back of the heat exchangers/exhaust duct assembly, locate and remove 6 screws securing the exhaust duct to the heat exchangers (Figure 7).



13. Remove 2 retention clips securing secondary connecting pipe and remove the pipe. Do not discard the retention clips and the pipe as they will be installed onto the new heat exchangers during reassembly (Figure 8).



14. Remove lime thermistor on the left of the heat exchangers (Figure 9).

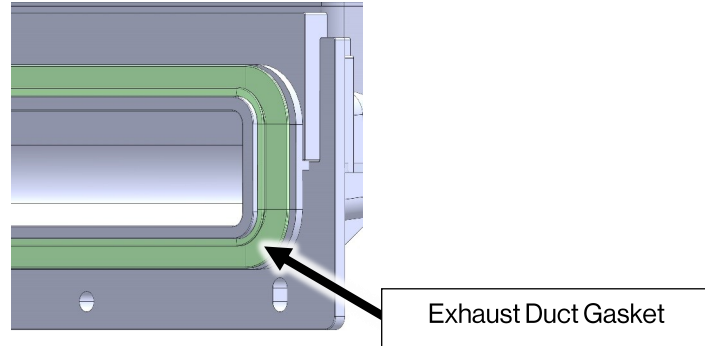


Reassembly

Throughout reassembly process, inspect if gaskets and O-rings have any damages. Replace damaged gaskets or O-rings. Also, install ceramic heaters, thermistor and sensor properly, and connect connectors properly.

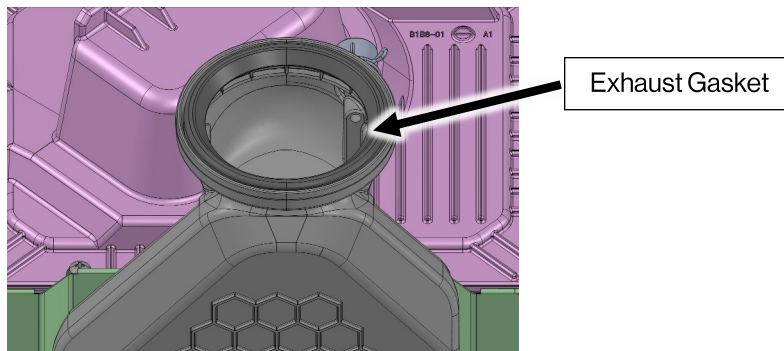
1. Install the lime thermistor into a new provided heat exchanger (Figure 9).
2. Install the secondary connecting pipe using 2 retention clips to secure it (Figure 8).
3. Install 1 ceramic heater on the secondary connecting pipe (Figure 8).
4. Install the new exhaust duct gasket onto the exhaust duct assembly (Figure 10). You see flat surface of the exhaust duct gasket if the gasket is installed properly.

Figure 10



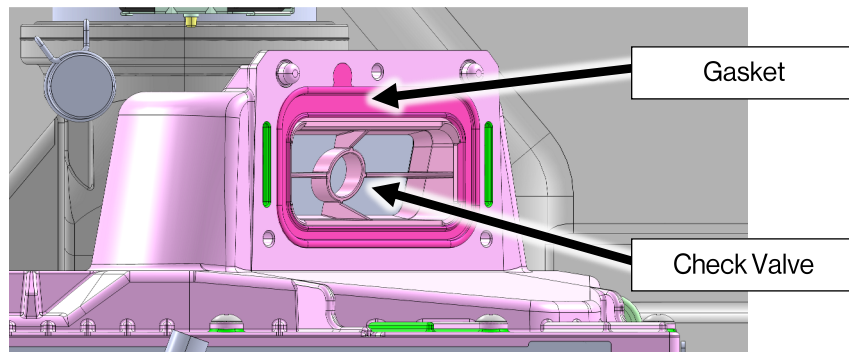
5. Install the exhaust duct assembly using 6 screws to secure it (Figure 7).
6. Replace existing exhaust gasket with the new exhaust gasket (Figure 11)

Figure 11



7. Install the heat exchanger assembly using 6 screws to secure the heat exchanger into place (Figure 6).
8. Install the retention clips onto the connecting pipes. Install the hose clamp onto the condensate hose. Reconnect the white wire connections and the blue wire connection below the secondary heat exchanger (Figure 5).
9. Install the controller, the PC board and the pump board (pump model only) to the unit using 1 screw to secure it (Figure 4).
10. Install the new check valve and its gasket into an opening of burner plate (Figure 12).

Figure 12



11. Install the fan/gas valve assembly back into the unit, connecting the bottom of the gas valve to the gas inlet pipe (Figure 3).
12. Secure the fan/gas valve assembly to the opening of the burner plate using 3 screws (Figure 2).

13. Install the gas tube bracket by placing it onto the pipe by pushing up to the connection of the gas valve and the pipe. Then rotate the bracket left to align the screw holes (Figure 2).
14. Secure the gas tube bracket using 1 screw (Figure 2).
15. Reconnect the igniter and flame rod harnesses to the electrode and flame rods, and attach the igniter wire. Attach a screw to connect the ground wire. (Figure 1).
16. Reconnect the combustion fan harness, the venturi control harness, the position sensor harness, the gas solenoid harness, the exhaust thermistor harness and over heat switch harness (Figure 1).
17. Reconnect and turn on 120 V power supply, water supply and gas supply.
18. Perform leak detection test for gas and water.
19. After all checks have been successfully completed, reinstall the front panel using the two screws and two latches to secure it.

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