



Heat Exchanger Replacement

Model Include: EZTR40 (NRC663)

This instructional manual is only intended for use by a qualified service professional or authorized Noritz Service Representative. Any unauthorized use of this manual may result in voiding the warranty.

Please contact Noritz Technical Support (866-766-7489) for additional support.

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Procedure	Diagram
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1. Drain the unit as shown in following procedure

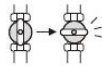
CAUTION



To avoid burns, wait until the unit cools down before draining the water. The appliance will remain hot after it is turned off.

Drain water into a bucket to prevent water damage.

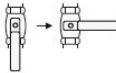
1. Close the gas valve.



2. Turn off the power supply.

Do not touch with wet hands.

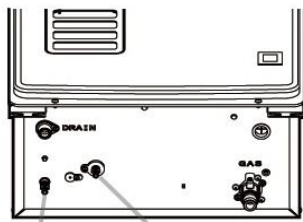
3. Close the water supply valve.



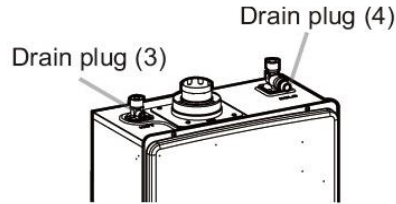
4. Fully open all hot water fixtures.



5. 1) Turn the drain plug (1), (2) to the left to open, and then remove.
- 2) Turn the drain plug (3) to the left to open (Not necessary to remove).
- 3) Wait approximately 30 seconds.
- 4) Turn the drain plug (4) to the left to open (Not necessary to remove).



Drain plug (1) Drain plug (2)

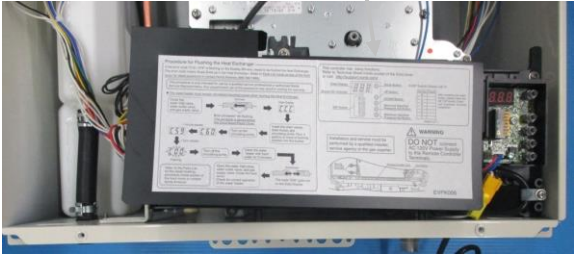

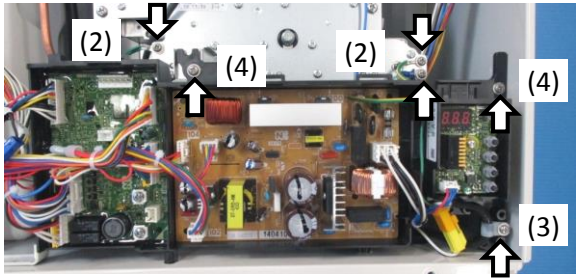
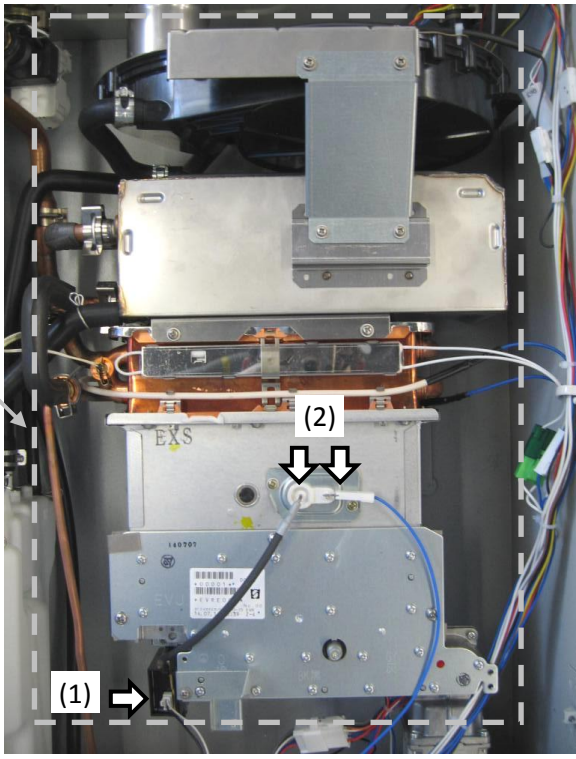
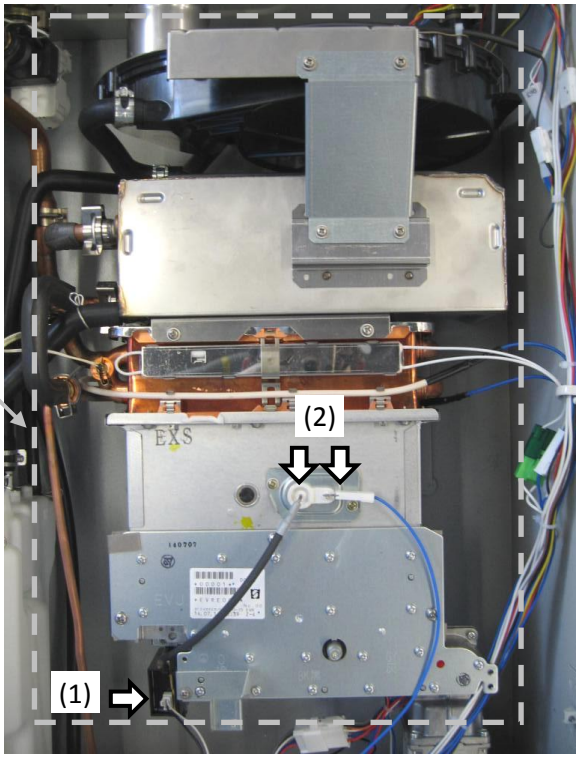


Drain Plugs

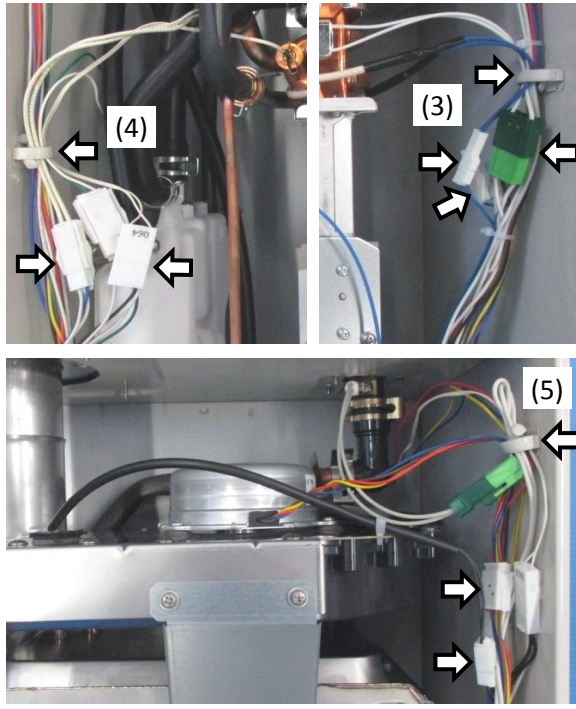
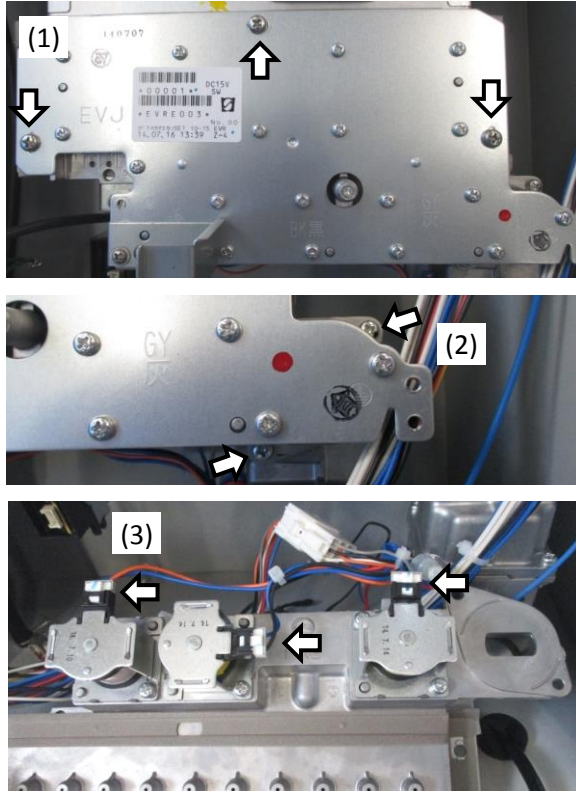
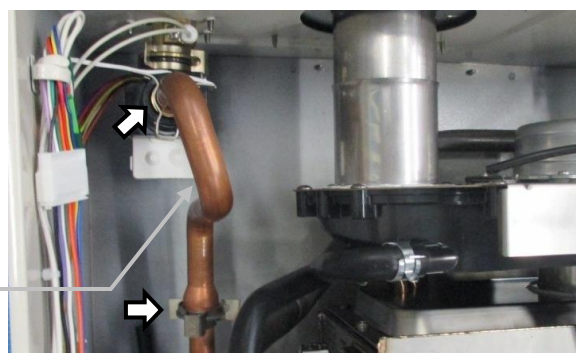
Each drain plug might not be visible if insulation is installed around the piping.

6. Check that the water is completely drained, close all the drain plugs and the hot water fixtures after 10 minutes or more pass from operation of 6.

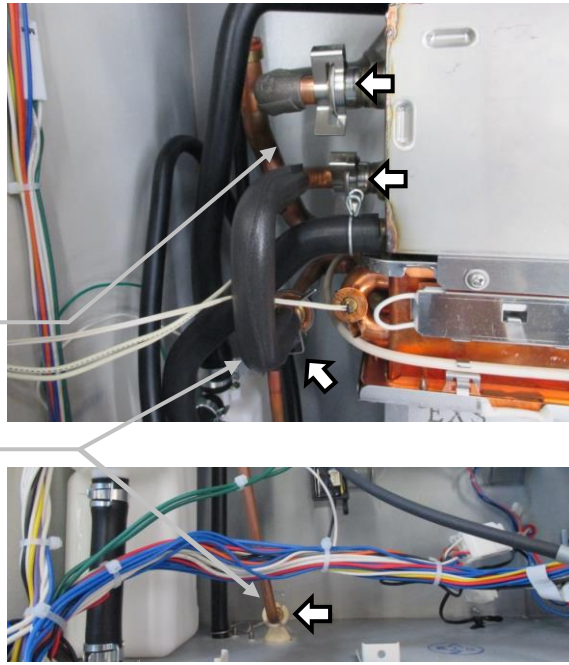
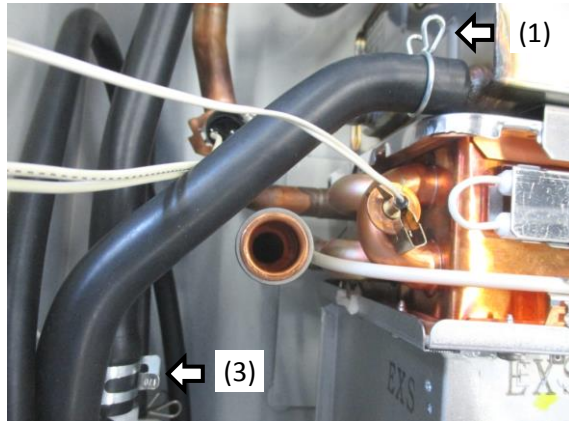
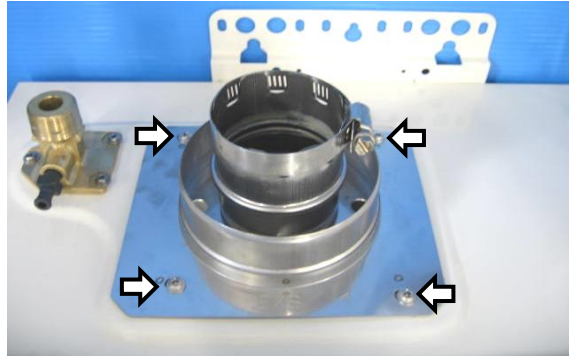
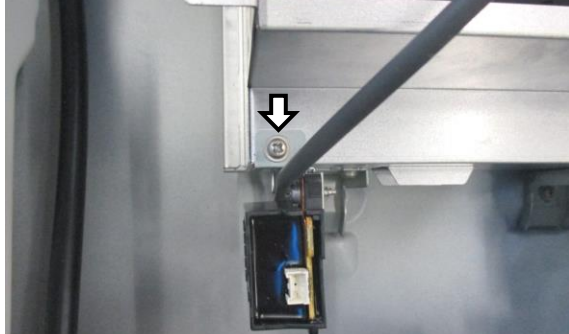
Heat Exchanger Replacement Procedure

Procedure	Diagram
<p>2. Remove the front cover</p> <ol style="list-style-type: none"> (1) Disconnect electrical power from the unit (2) Remove 4 screws (3) Remove the cover - circuit board <div style="text-align: center; margin-top: 20px;"> <p>Cover - Circuit Board</p>  </div>	
<p>3. Disconnect the connectors from the circuit board Remove the ground wire and the circuit board</p> <ol style="list-style-type: none"> (1) Disconnect the connectors from circuit board (2) Remove 3 ground wires (3) Remove the wire clamp of the power supply cord (4) Remove the circuit board; there are 2 screws, one on the right-side and middle-upper of the circuit board. 	
<p>4. Unplug all wires that attach to the wiring harness and the content parts of the water heater</p> <ol style="list-style-type: none"> (1) Disconnect the connector from the igniter (2) Disconnect the flame rod and the ignition plug <div style="text-align: center; margin-top: 20px;"> <p>Content parts of the water heater</p>  </div>	

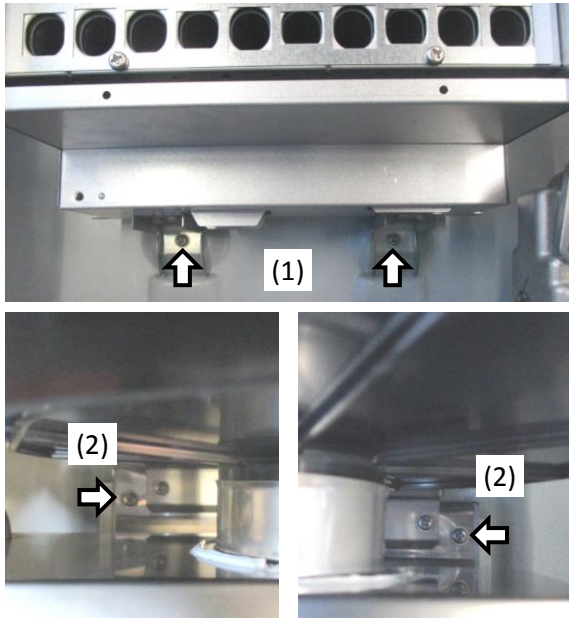
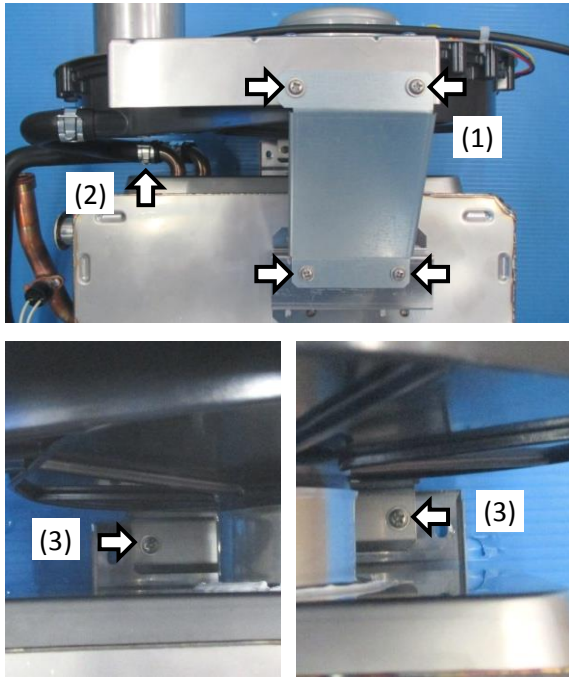
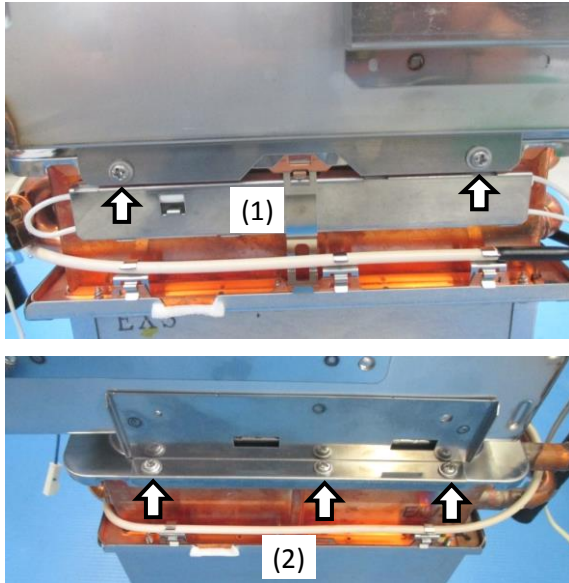
Heat Exchanger Replacement Procedure

Procedure	Diagram
<p>(3) Loosen the wire anchor on the right side of the case Unplug the freeze prevention heater and the thermal fuse wiring harness</p> <p>(4) Loosen the wire anchor on the left side of the case Unplug the high limit switch and the thermistor - heat exchanger wiring harness</p> <p>(5) Loosen the wire anchor on the upper right side of the case Unplug the fan motor and the thermistor - exhaust</p>	
<p>5. Remove the manifold plate</p> <p>(1) Remove 3 big silver screws on the manifold plate that attach the manifold to the burner</p> <p>(2) Remove 2 smaller silver screws on the manifold plate that attach the manifold to the gas valve</p> <p>(3) Remove the manifold plate Unplug the 3 connectors from 3 gas solenoid valves</p>	
<p>6. Disconnect water pipe from the water servo - main</p> <p>(1) Remove 2 "C" Clamps</p> <p>(2) Remove the pipe - heat exchanger to water servo - main</p> <p>Pipe - Heat Exchanger to Water Servo - Main</p>	


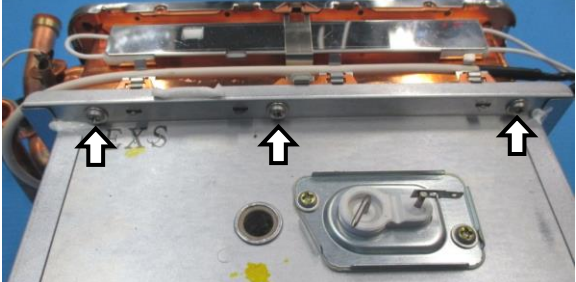
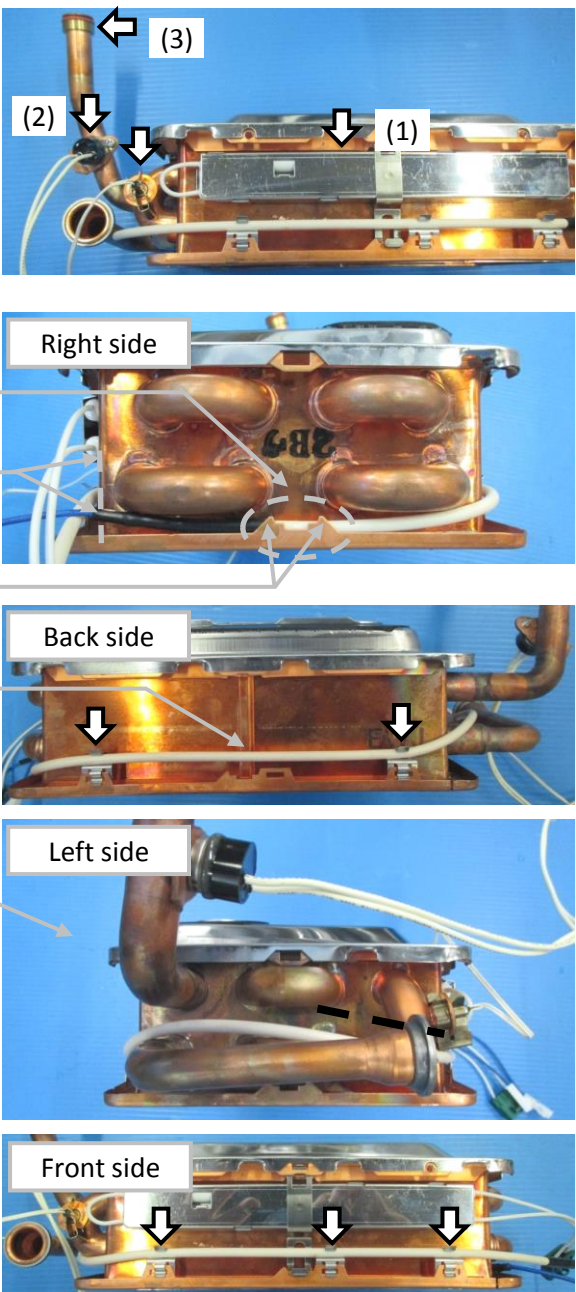
Heat Exchanger Replacement Procedure

Procedure	Diagram
<p>7. Disconnect water pipes from the content parts</p> <p>(1) Remove 4 "C" Clamps</p> <p>(2) Disconnect the pipe - flow sensor to Stainless Steel Heat Exchanger(SS HE)</p> <p>(3) Disconnect the pipe - heat exchanger SS to Copper(CU)</p> <div style="margin-top: 20px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-right: 20px;">Pipe - Flow Sensor to SS HE</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Pipe - Heat Exchanger SS to CU</div> </div>	
<p>8. Disconnect</p> <p>(1) Remove the spring clamp</p> <p>(2) Disconnect the drain hose from the SS HE</p> <p>(3) Remove the clamp - condensate hose</p> <p>(4) Disconnect the drain hose from the condensate container</p>	
<p>9. Remove the exhaust flue adapter from top of the unit</p> <p>(1) Disconnect the venting from the unit</p> <p>(2) Remove 4 screws and pull the exhaust flue adapter from the unit and set aside</p>	
<p>10. Remove the igniter from the body of the burner</p> <p>(1) Remove 1 screw from the mounting plate - igniter</p> <p>(2) Remove the igniter of the unit and set aside</p>	

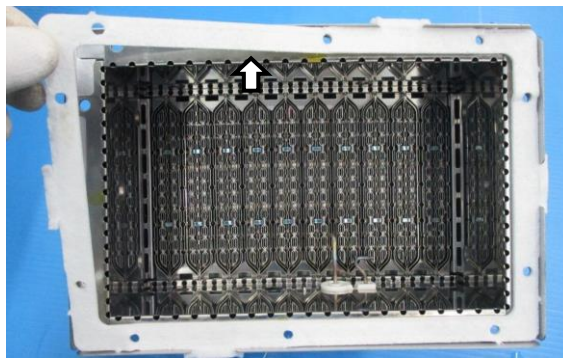
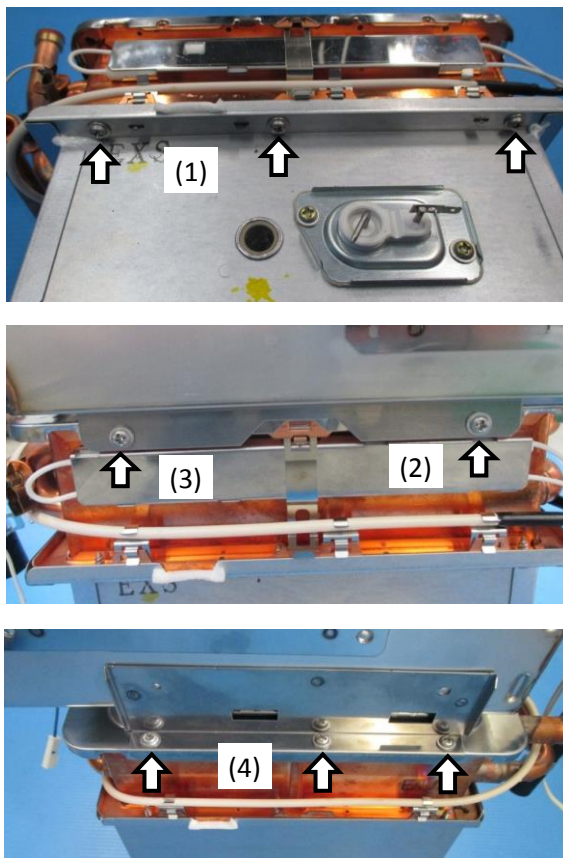
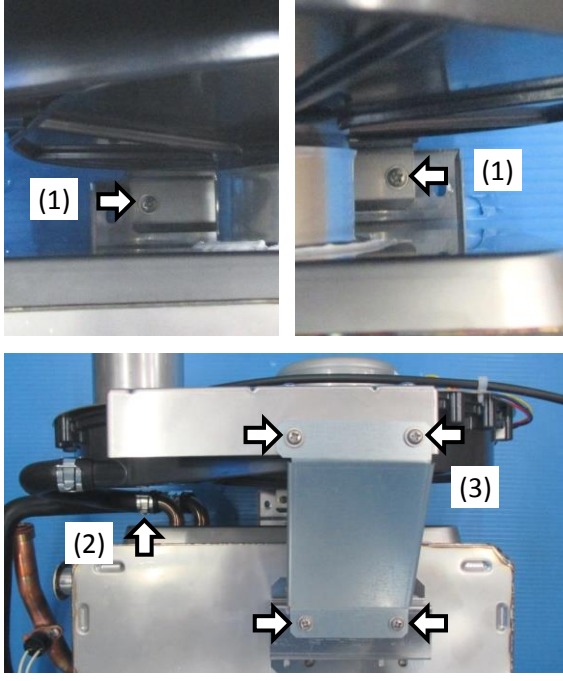
Heat Exchanger Replacement Procedure

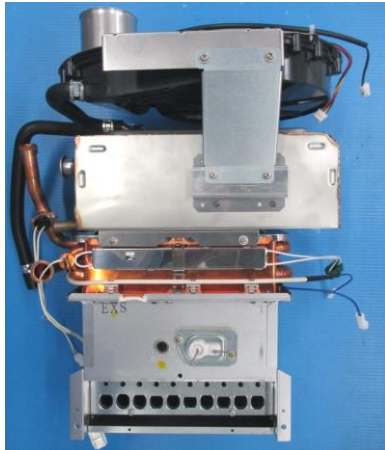
Procedure	Diagram
<p>11. Remove the heat exchanger from the case</p> <p>(1) Remove the 2 set screws on the bottom of the burner</p> <p>(2) Remove the upper left and right set screws between the fan and the SS HE (support bottom of assembly)</p> <p>(3) The fan, the SS HE, the CU HE, and the burner will come out in one section Remove it from the unit</p>	
<p>12. Separate the fan from the SS HE</p> <p>(1) Remove 4 screws on the mounting plate - fan between the fan and the SS HE</p> <p>(2) Remove the clamp - condensate hose</p> <p>(3) Remove the left and right set screws between the fan and the SS HE</p> <p>(4) Separate the fan from the SS HE</p>	
<p>13. Separate the SS HE from the CU HE</p> <p>(1) Remove 2 screws on the bracket between the SS HE and the CU HE</p> <p>(2) Remove the 3 screws that are located on the back side of the SS HE</p> <p>(3) Separate the SS HE from the CU HE</p>	

Heat Exchanger Replacement Procedure

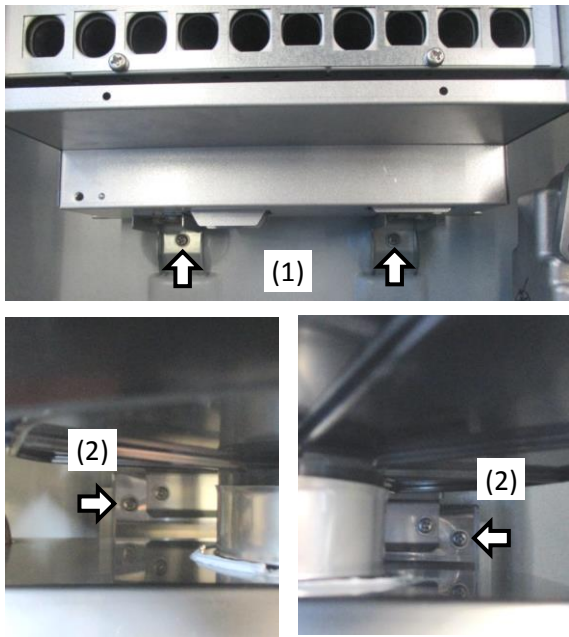
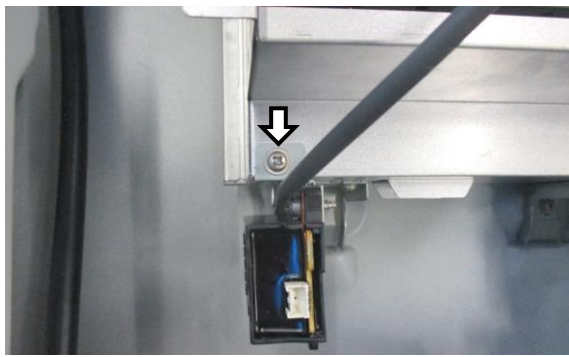
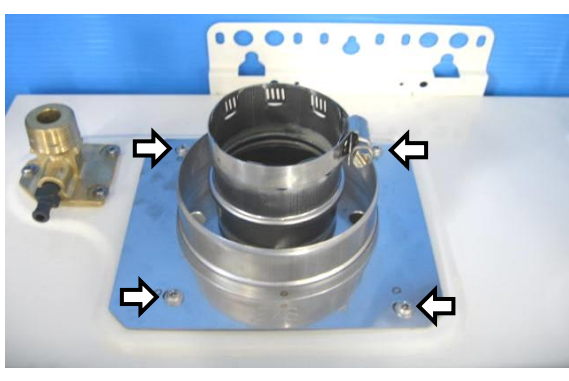

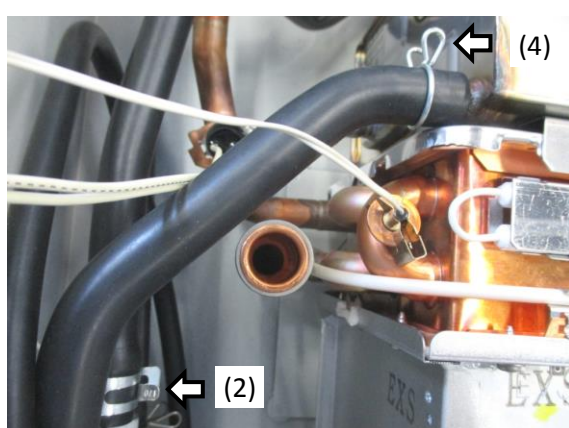
Procedure	Diagram
<p>14. Replacing the SS HE</p> <p>Note: If you are not replacing the SS HE, you can skip this step and set the SS HE aside.</p> <p>(1) Remove old gasket between the SS HE and the CU HE exhaust box and replace with new one</p>	
<p>15. Replacing the CU HE</p> <p>(1) Remove 10 screws holding the burner to the CU HE</p> <p>(2) Separate the burner from the CU HE</p>	
<p>16. Remove heat exchanger components from old heat exchanger Put on new heat exchanger</p> <p>(1) Front side: Freeze Prevention Heater</p> <p>(2) Left side: High Limit Switch and Thermistor - Heat Exchanger*</p> <p>*Replace new O Ring for the thermistor - heat exchanger</p> <p>(3) Place new O Ring on the outlet of new CU HE</p> <p>*The attached O Ring of inlet is the spare</p> <p>Install the thermal fuse(White) inside of the stopper</p> <p>The end of insulation tube(Black) and the front of the heat exchanger are lined up</p> <p>Stopper</p> <p>Keep the thermal fuse straight</p> <p>Make sure to route the thermal fuse as shown in the diagram to the right (Left side)</p> <p>(4) Attach the thermal fuse and 5 clamps from 4 sides of the heat exchanger, See 4 views of the heat exchanger to make sure the thermal fuse is routed correctly</p>	

Heat Exchanger Replacement Procedure

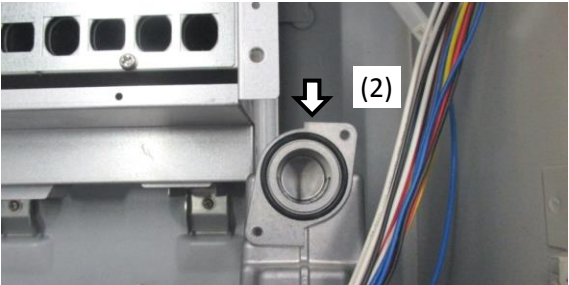
Procedure	Diagram
<p>17. Replace the gasket</p> <p>(1) Remove old burner gasket and replace with new one</p>	
<p>18. Reattach the burner, the CU HE and the SS HE</p> <p>(1) Secure 10 screws around perimeter of the burner and the CU HE</p> <p>(2) Secure the right screw on the bracket between the SS HE and the CU HE</p> <p>(3) Secure the left screw on the bracket between the SS HE and the CU HE</p> <p>(4) Secure 3 screws that located on the back side of the SS HE to hold the SS HE to the CU HE</p>	
<p>19. Reattach the fan</p> <p>(1) Secure the left and right set screws between the fan and the SS HE</p> <p>(2) Attach the clamp - condensate hose</p> <p>(3) Secure 4 screws on the mounting plate - fan between the fan and the SS HE</p>	



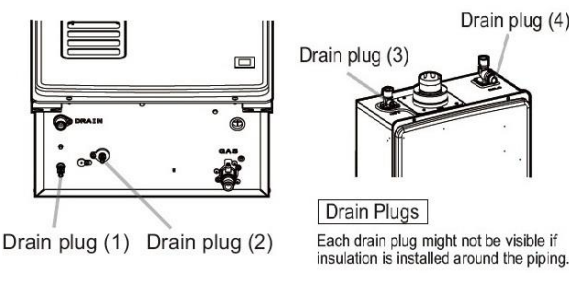
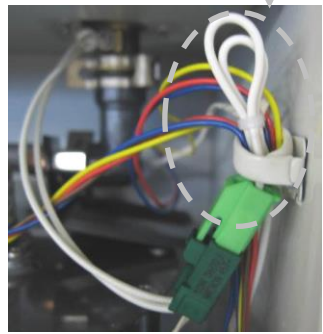
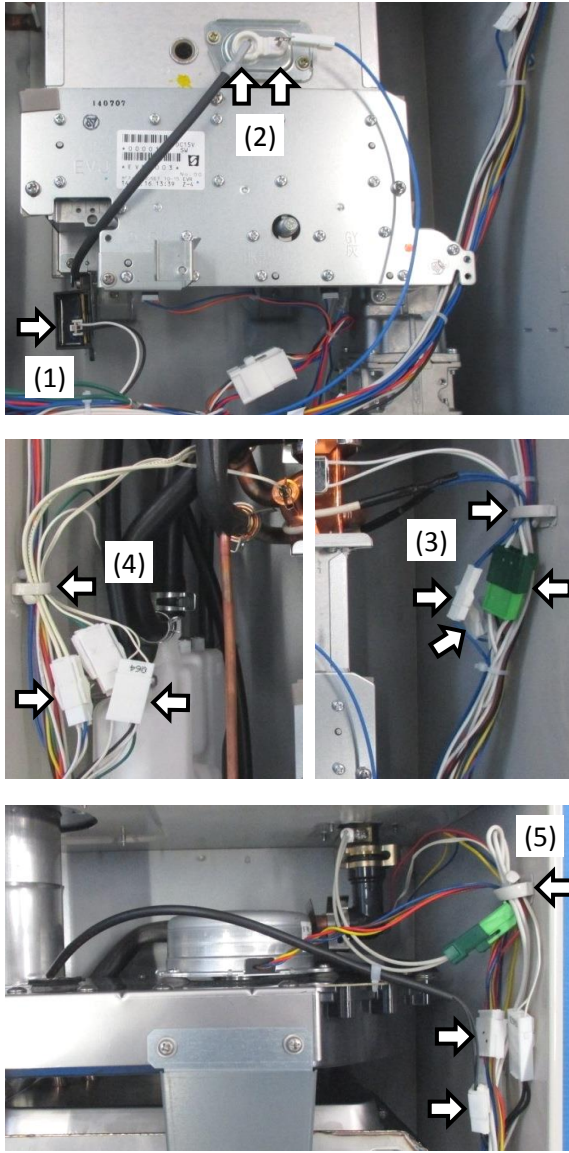
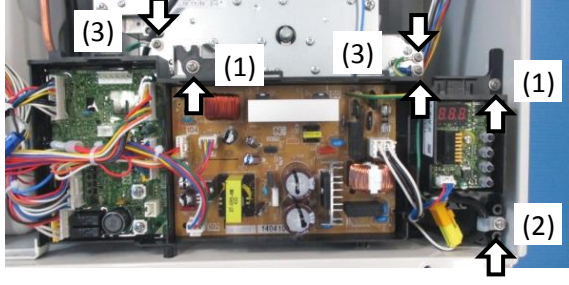
Heat Exchanger Replacement Procedure

Procedure	Diagram
<p>20. Reattach the assembly back inside the case</p> <p>(1) Secure the 2 set screws on the bottom of the burner</p> <p>(2) Secure the upper left and right set screws between the fan and the SS HE</p>	
<p>21. Reattach the igniter</p> <p>(1) Attach the igniter of the unit</p> <p>(2) Secure 1 screw on the mounting plate - igniter</p>	
<p>22. Reattach the exhaust flue adapter to top of the unit</p> <p>(1) Attach the flue adapter of the unit and secure 4 screws</p> <p>(2) Connect the venting to the unit</p>	
<p>23. Reattach the drain hoses to the condensate container and the SS HE</p> <p>(1) Connect the drain hose to the condensate container</p> <p>(2) Attach the clamp - condensate hose</p> <p>Confirm that the clamp is 170 as shown in the diagram</p> <p>(3) Connect the drain hose to the SS HE</p> <p>(4) Attach the spring clamp</p> 	



Heat Exchanger Replacement Procedure

Procedure	Diagram
<p>24. Reconnect water pipes to the content parts</p> <ol style="list-style-type: none"> (1) Connect the pipe - flow sensor to SS HE (2) Attach "C" Clamp to the pipe - flow sensor to SS HE (3) Connect the pipe - heat exchanger SS to CU and the drain connection - 1/4" tube (4) Attach 3 "C" Clamps to the pipe - heat exchanger SS to CU 	
<p>25. Reconnect water pipe to the water servo - main</p> <ol style="list-style-type: none"> (1) Connect the pipe - heat exchanger to water servo - main (2) Attach 2 "C" Clamps 	
<p>26. Reconnect the manifold plate</p> <ol style="list-style-type: none"> (1) Connect 3 connectors to gas solenoid valves as shown in the right diagram (2) Confirm that there is O-Ring before attach the manifold plate  <ol style="list-style-type: none"> (3) Secure 2 smaller silver screws on the manifold plate (4) Secure 3 big silver screws on the manifold plate (5) Hand tighten 5 screws equally 	

Heat Exchanger Replacement Procedure

Procedure	Diagram
<p>27. Check for water leaks</p> <ol style="list-style-type: none"> (1) Turn the drain plug (1)-(4) to the right to close (2) Turn on cold water shut off outlet valve slowly (check "C" clamps for leaks) (3) If you get leaks, shut off inlet water and re-secure "C" clamps 	 <p>Drain plug (1) Drain plug (2)</p> <p>Drain plug (3) Drain plug (4)</p> <p>Drain Plugs Each drain plug might not be visible if insulation is installed around the piping.</p>
<p>28. Reconnect all wires that attach to the wiring harness and the content parts of the water heater</p> <ol style="list-style-type: none"> (1) Connect the ignition wiring (2) Connect the flame rod and the ignition plug (3) Plug the freeze prevention heater and the thermal fuse wiring harness Tie the wire anchor to right side of the case as before (4) Plug the high limit switch and the thermistor - heat exchanger wiring harness Tie the wire anchor to left side of the case as before (5) Plug the fan motor and the thermistor - exhaust wiring harness Tie the wire anchor to upper right side of the case as before <div data-bbox="304 1344 822 1439" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>Fix the wiring harness by the wire anchor as shown in the diagram</p> </div> 	
<p>29. Reattach the circuit board</p> <p>Secure the ground wires</p> <p>Reconnect the connectors to the circuit board</p> <ol style="list-style-type: none"> (1) Attach the circuit board; there are 2 screws, one on the right-side and middle-upper of the circuit board (2) Attach the wire clamp of the power supply cord (3) Secure 3 ground wires (4) Connect the connectors to circuit board (5) Attach the cover - circuit board 	

Heat Exchanger Replacement Procedure

Procedure	Diagram
	 A photograph showing the internal components of a water heater. The heat exchanger is the central component, with various pipes and electrical wiring connected to it. The burner assembly is visible at the top, and the control panel is at the bottom.
<p>30. Check for gas leaks and correct operation of the water heater</p> <ul style="list-style-type: none">(1) Open gas supply valve and water outlet valve(2) Turn on the unit Check for gas leaks around manifold plate and correct operation of the water heater(3) If you get leaks, close the gas supply valve and water outlet valve Re-secure leaking points	
<p>31. Reattach the front cover</p> <ul style="list-style-type: none">(1) Secure the front cover with 4 screws	 A photograph of the front cover of a Noritz water heater. The cover is white and features the Noritz logo and the slogan "ALWAYS HOT". Four arrows point to the locations of the screws used to secure the cover: two at the top and two at the bottom.