



N-0841MC, N-0842MC, NRC111 and NCC199 Series Heat Exchanger Replacement

Models Include: N-0841MC, N-0841MC-DV
N-0842MC, N-0842MC-DV
NRC111-SV, NRC111-DV
NCC199-SV, NCC199-DV

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.


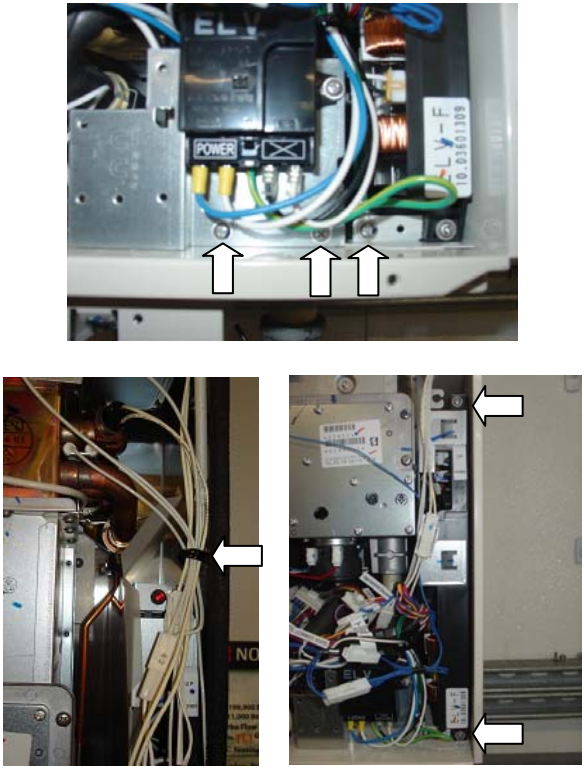
Please contact Noritz Technical Support (866-766-7489) for additional support.

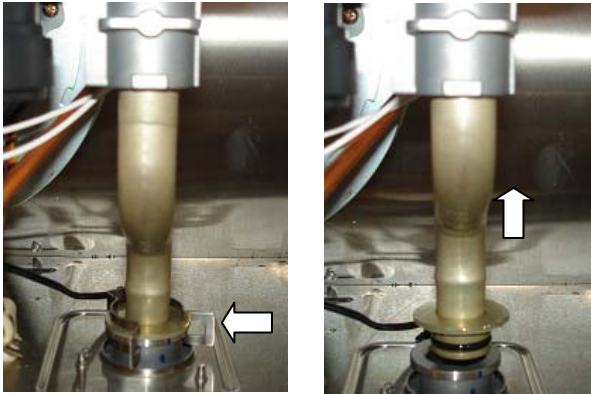
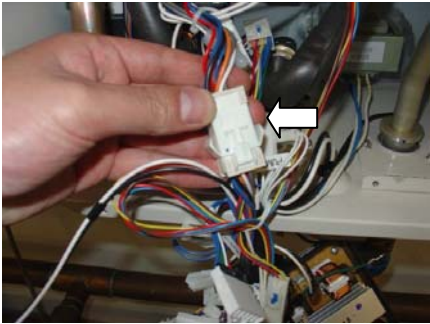
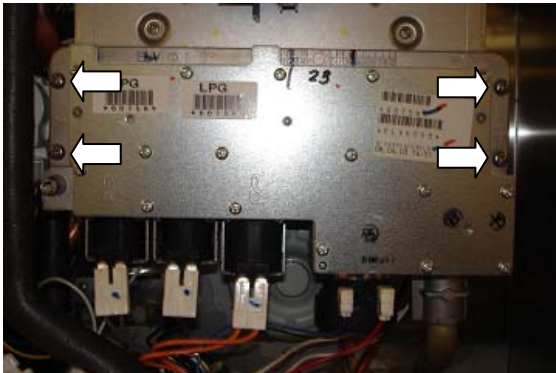
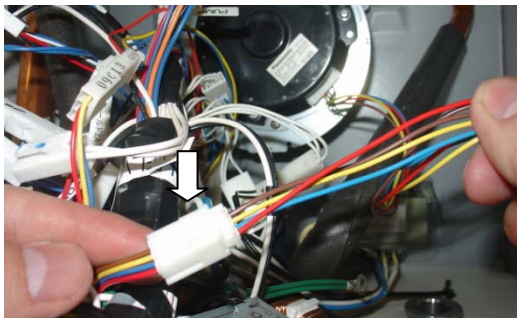
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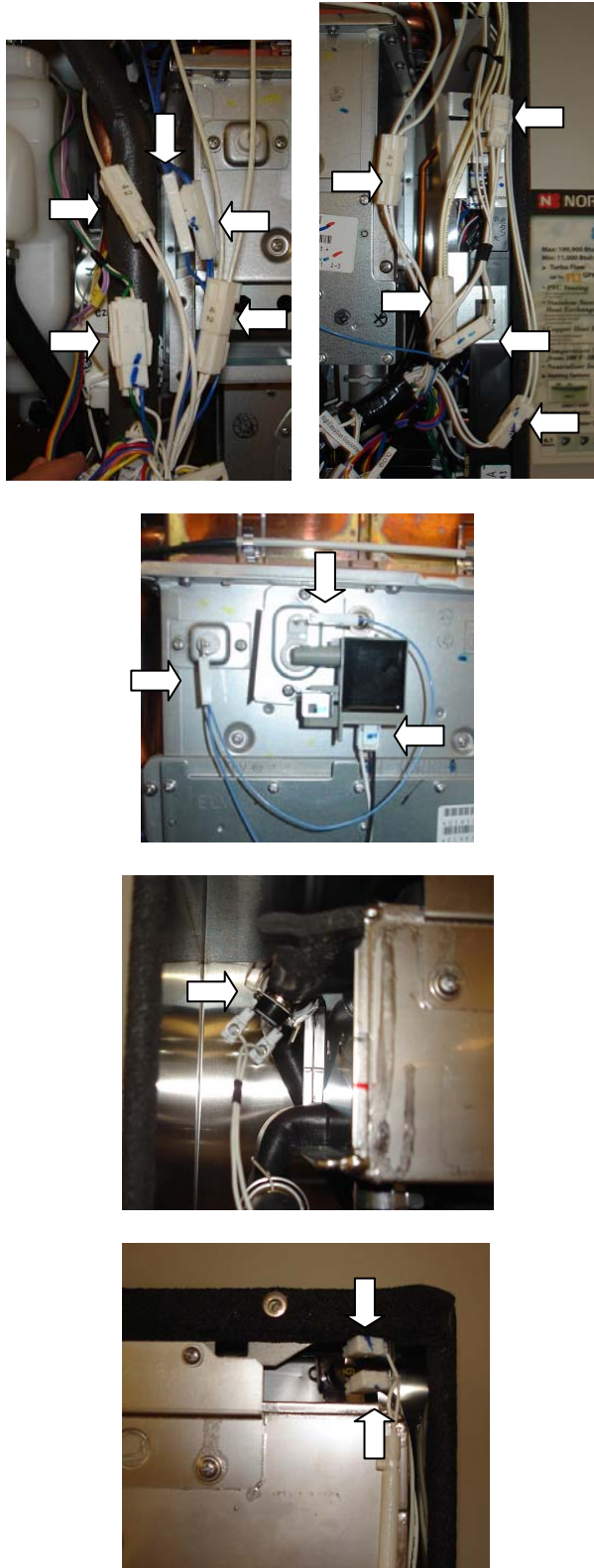
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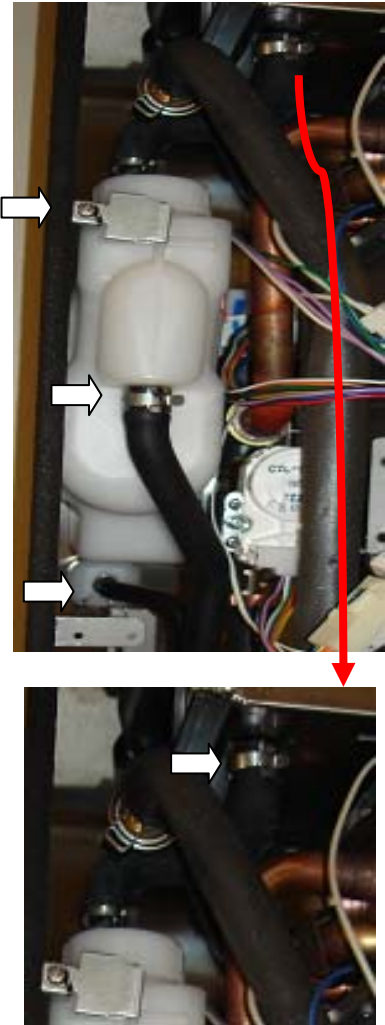

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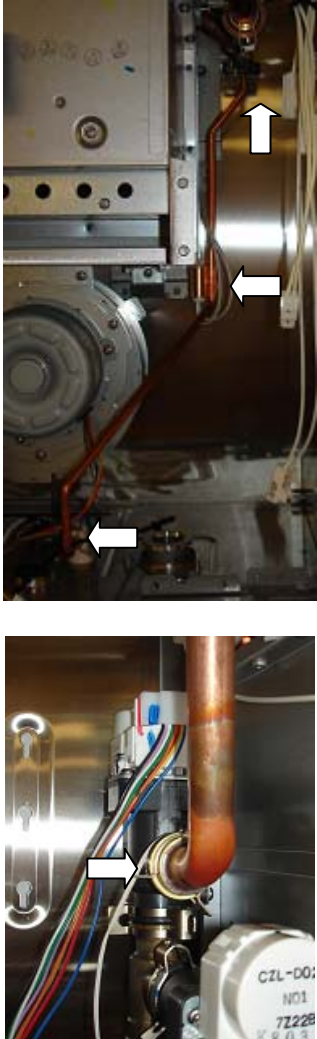
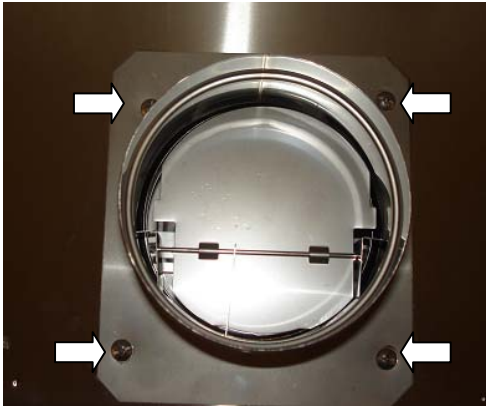
NRC111 and NCC199 (N-0841MC, N0842MC Series) Heat Exchanger Replacement Procedure

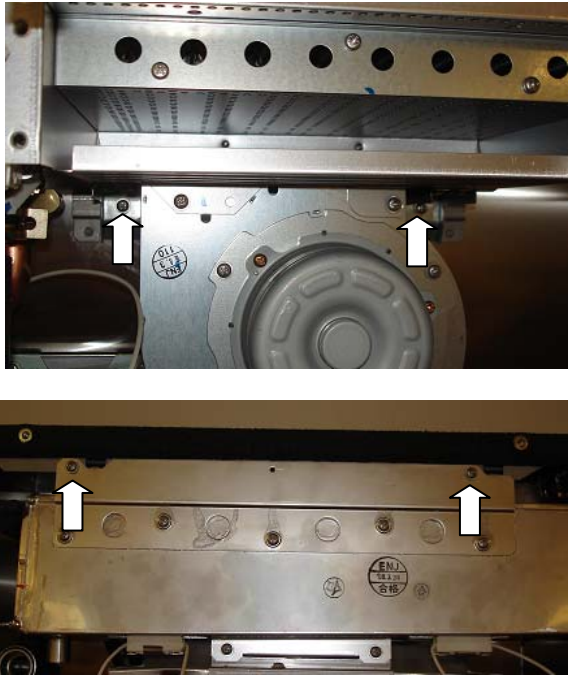
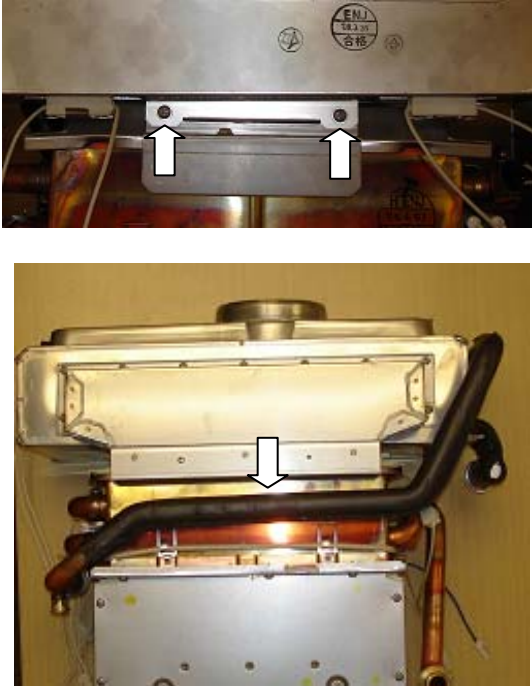
Procedure	Diagram
<p>1. Remove front cover</p> <ol style="list-style-type: none"> (1) Disconnect electrical power to unit (2) Remove 4 screws (3) Turn off gas and water (4) Remove filter and drain unit completely (5) Open drain ports on the bottom of the unit 	
<p>2. Remove GFCI and circuit board</p> <ol style="list-style-type: none"> (1) Remove two screws that hold the GFCI Plate, one screw will have a ground wire attached), Let GFCI hang outside of the unit (2) Remove the ground wire that is to the left of the circuit board (3) Loosen wire anchor from right side of case (4) Remove the circuit board; there are two screws, one on top and bottom of the circuit board. Let the circuit board hang outside of the unit 	

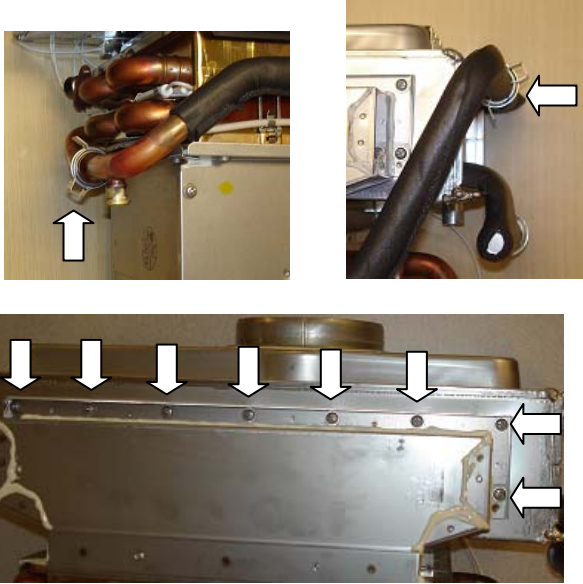
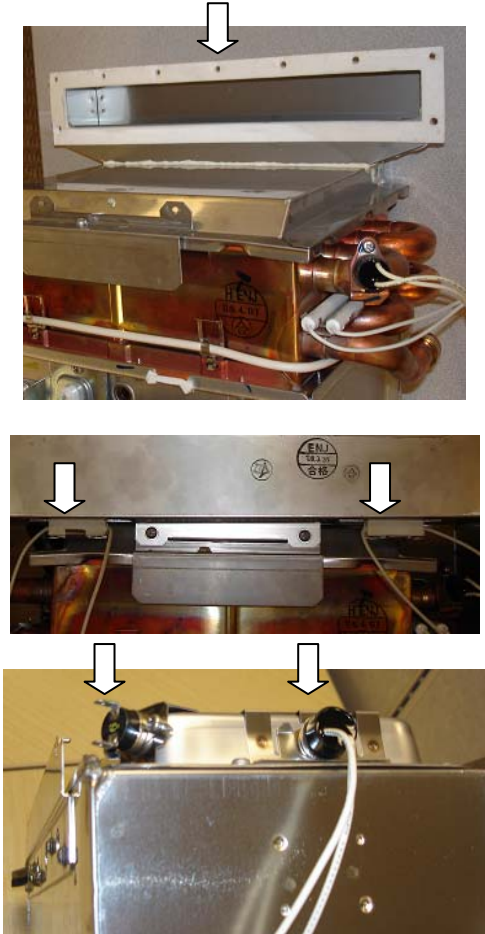
Procedure	Diagram
<p>3. Remove gas valve assembly</p> <ol style="list-style-type: none"> (1) Locate "C" clamp on the bottom right hand corner of the unit that attaches the gas connection to the manifold plate and remove. (2) Locate inlet gas pipe to manifold and push up. (3) Locate the large wiring connection, that attaches the wires from the manifold plate to the wiring harness, and disconnect the plug. (4) Next locate the four big silver screws holding the manifold plate to the burner, there will be two on the right and left side of the manifold plate. Remove those four screws and the manifold plate and pipe can be removed and set aside. 	  
<p>4. Unplug all wires that attach to the wiring harness and the body of the water heater</p> <ol style="list-style-type: none"> (1) Wiring for the fan 	

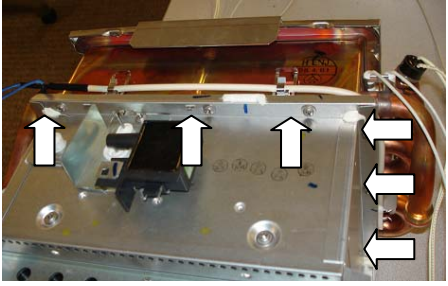
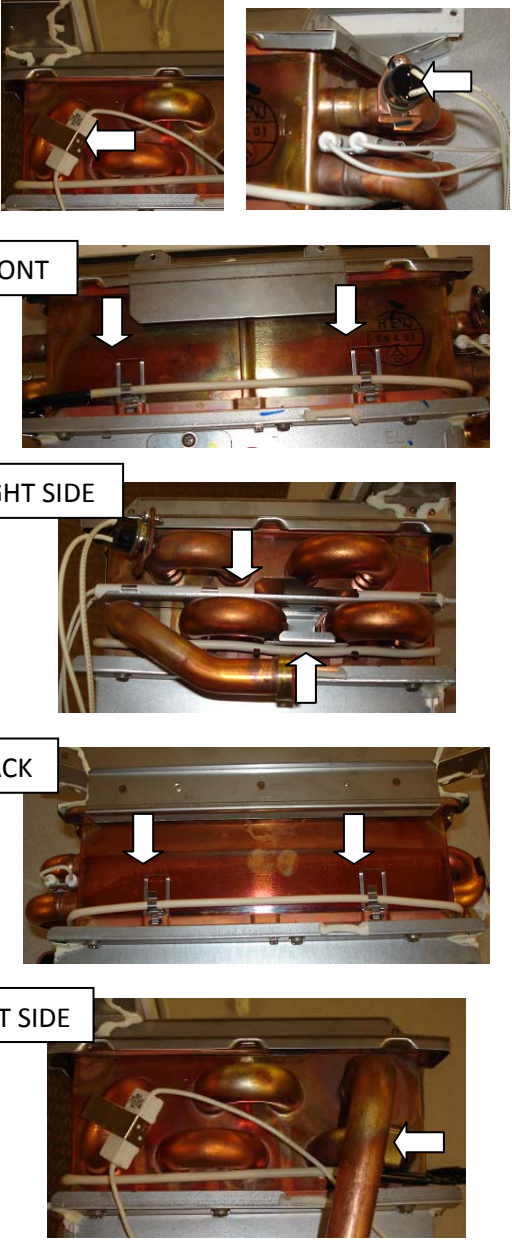
Procedure	Diagram
<p>(2) Left Side Wiring Harness: Thermal fuse (2), Freeze prevention heaters (2), Neutralizer sensor plug</p> <p>(3) Right Side Wiring Harness: High limit switch (2), Freeze prevention heater(2), Freeze prevention sensor</p> <p>(4) Flame rods (2), ignition box</p> <p>(5) Left Side On Stainless Steel Heat Exchanger(aka SS HE): Freeze prevention sensor (take off whole clip)</p> <p>(6) Right Side On SS HE: Freeze prevention sensor plugs (2)</p>	 <p>The 'Diagram' column contains six photographs illustrating the components mentioned in the procedure. The top-left photo shows the left side wiring harness with arrows pointing to thermal fuses, heaters, and a sensor plug. The top-right photo shows the right side wiring harness with arrows pointing to high limit switches, heaters, and a sensor. The middle photo shows a close-up of the ignition box and high limit switches. The bottom-left photo shows a freeze prevention sensor on the stainless steel heat exchanger. The bottom-right photo shows two freeze prevention sensor plugs on the right side of the stainless steel heat exchanger.</p>


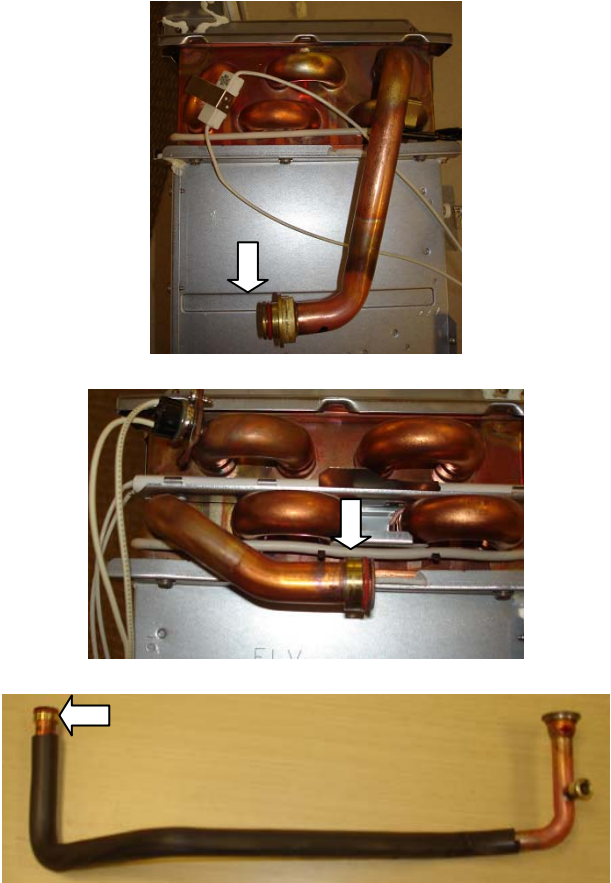
Procedure	Diagram
<p>5. Removing the Neutralizer</p> <ol style="list-style-type: none"> (1) Remove the screw holding the metal clamp on the top of neutralizer (2) Remove the 3 spring clamps on the hoses of the neutralizer. 1 will be right below the SS HE and 2 will be on the neutralizer (you will need a needle nose pliers to open spring clamps) (3) Pull hoses off where clamps were removed (4) Lift up on neutralizer and pull out and set aside 	
<p>6. Remove Water Pipes Inside Unit</p> <ol style="list-style-type: none"> (1) Remove "C" Clamp on top of foam covered pipe going into SS HE (2) Remove "C" Clamp on bottom of foam covered pipe going into Flow Sensor (3) Remove Pipe and set aside 	


Procedure	Diagram
<p>(4) Locate ¼” drain pipe on right hand side of unit and disconnect both small “C” Clamps on top and bottom of pipe</p> <p>(5) Disconnect Freeze prevention heater on ¼” drain pipe</p> <p>(6) Remove ¼” Drain Pipe and set aside</p> <p>(7) Left Side: Disconnect “C” Clamp from Copper Heat Exchanger (aka CU HE) and Main Water Control Valve</p> <p>(8) Pull out pipe</p>	
<p>7. Remove Flue from Top of Unit</p> <p>(1) Disconnect the venting from the unit</p> <p>(2) Remove the 4 screws and pull the Flue off of the unit and set aside</p>	

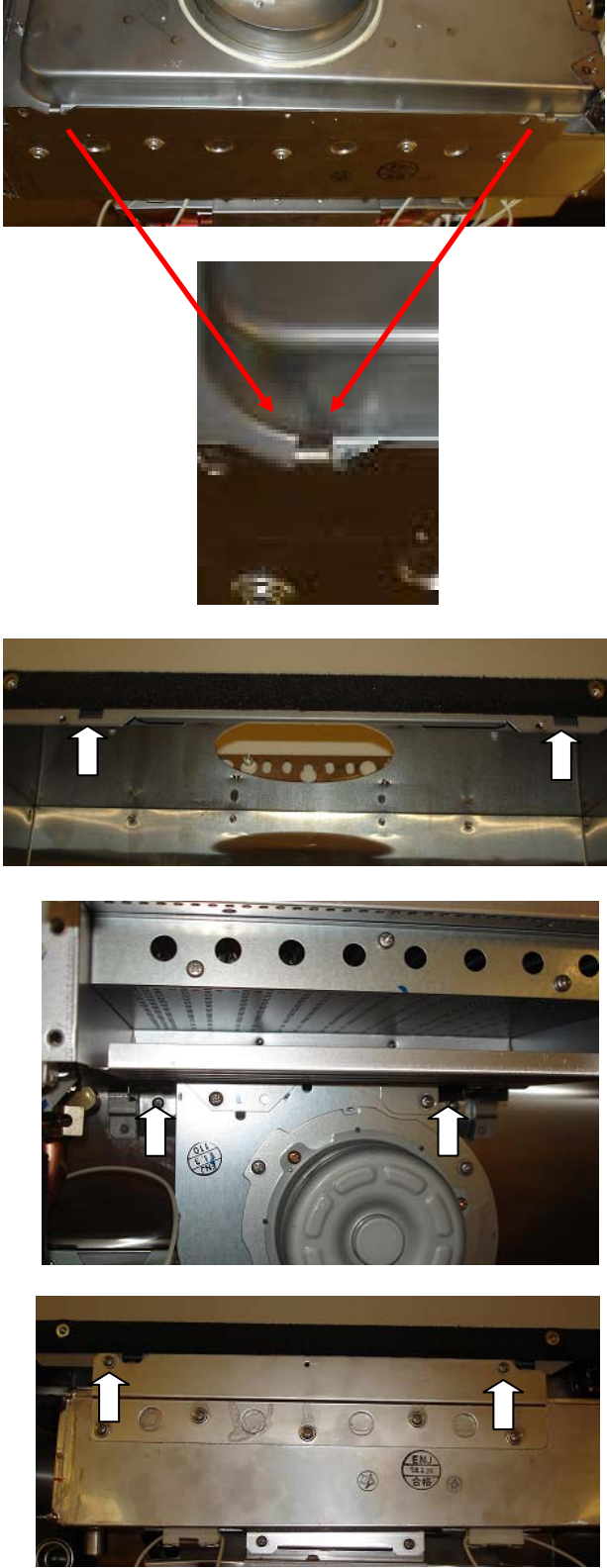
Procedure	Diagram
<p>8. Remove heat exchanger from case</p> <ol style="list-style-type: none"> (1) Remove the 2 set screws on the bottom of the burner (2) Remove the upper left and right set screws near the top center of the case (support bottom of assembly) (3) SS HE, CU HE, Burner, and Fan will come out in one section. Remove from unit. 	
<p>9. Separate the SS HE from CU HE</p> <ol style="list-style-type: none"> (1) Remove the 2 screw on the bracket between the SS HE and CU HE (2) Flip the Assembly over and locate the foam covered pipe connecting the two heat exchangers 	


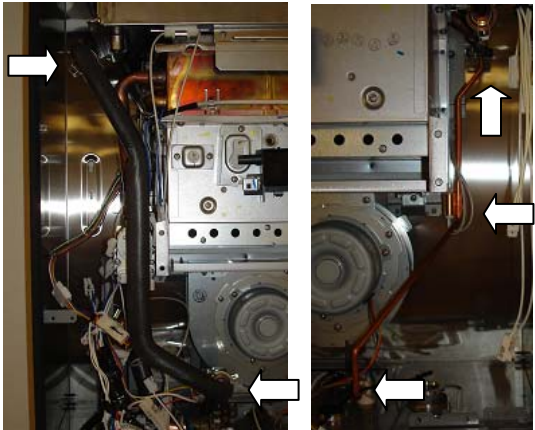

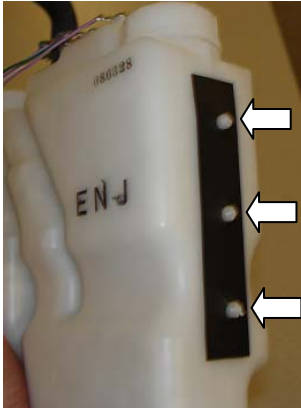
Procedure	Diagram
<p>(3) Remove the 2 "C" Clamps on the end of each pipe and remove pipe and set aside</p> <p>(4) Remove the 9 screws that located on the back side of the SS HE</p> <p>(5) Separate the SS HE from the CU HE</p>	
<p>10. Replacing Stainless Steel Heat Exchanger</p> <p>Note: If you are not replacing the SS HE then you can skip this step and set SS HE aside.</p> <p>(1) Check the gasket on the CU HE, if it is damaged replace it with one that was shipped in the heat exchanger kit</p> <p>(2) Remove the 2 Freeze Prevention Heater on the front of the SS HE and place on new SS HE</p> <p>(3) On Right Side of SS HE, remove Freeze Prevention Sensor and High Limit Switch and place on new SS HE</p>	

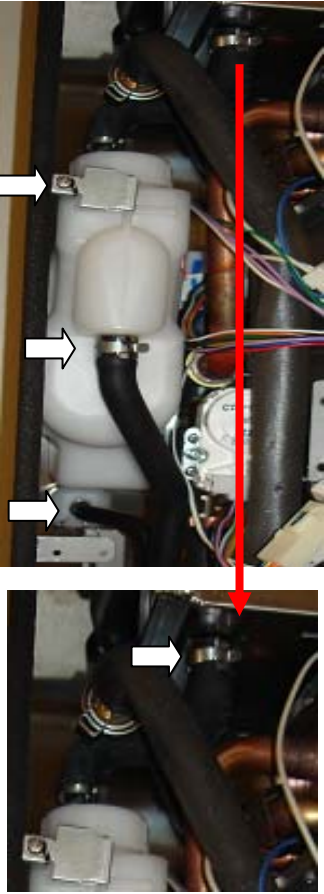
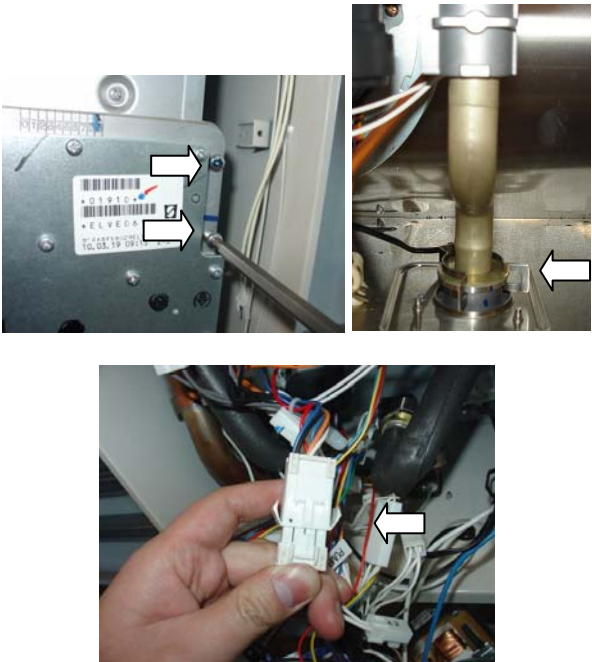
Procedure	Diagram
<p>11. Replacing the Copper Heat Exchanger</p> <p>(1) Remove 12 screws holding burner to heat exchanger</p> <p>(2) Separate burner from CU HE</p>	
<p>12. Remove heat exchanger components and put on new heat exchanger</p> <p>(1) Left Side: Freeze Prevention Heater</p> <p>(2) Right Side: High Limit Switch</p> <p>(3) Thermal fuse and fasteners from four sides of heat exchanger</p>	 <p>FRONT</p> <p>RIGHT SIDE</p> <p>BACK</p> <p>LEFT SIDE</p>

Procedure	Diagram
<p>13. Replace gaskets</p> <ol style="list-style-type: none"> (1) Remove old burner gasket and replace with new one (2) Inspect gasket between SS HE and CU HE Exhaust Box, if the gasket is damaged, replace it. 	
<p>14. Place new O-Rings on new CU HE and Pipe between CU HE and SS HE</p> <ol style="list-style-type: none"> (1) Inlet to CU HE (2) Exit to CU HE (3) Foam Pipe that connects SS HE and CU HE 	

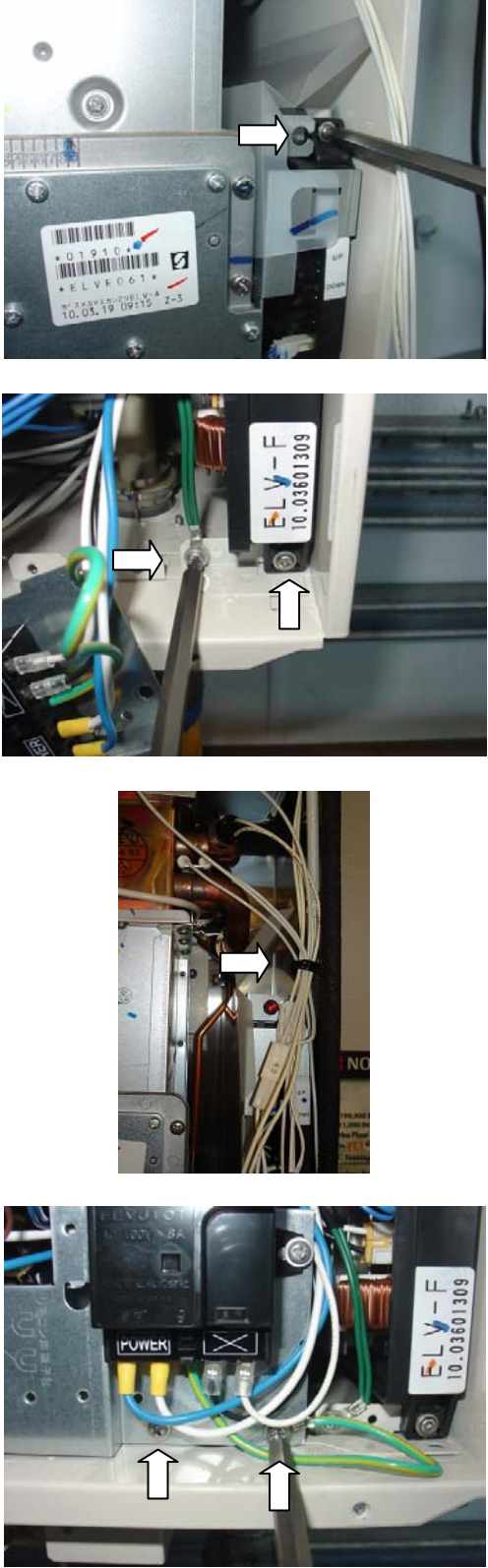
Procedure	Diagram
<p>15. Reattach burner, CU HE, and SS HE</p> <ol style="list-style-type: none"> (1) 12 screws around perimeter of burner and heat exchanger (2) Turn Assembly around exposing back side of the assembly (3) Attach 9 screws to hold the SS HE to the CU HE (4) Attach the Foam Covered Pipe with the 2 "C" Clamp. Make sure to insert pipe in all the way before attaching "C" Clamp. (5) Flip Assembly around exposing Front side of assembly (6) Attach 2 screws to hold SS HE to bracket on CU HE 	

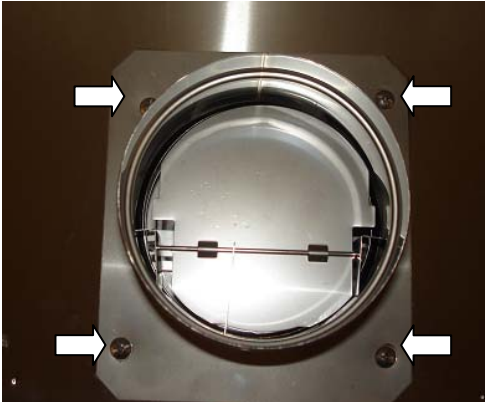
Procedure	Diagram
<p data-bbox="240 233 699 264">16. Replace assembly back inside case</p> <ol data-bbox="285 306 756 621" style="list-style-type: none"><li data-bbox="285 306 756 369">(1) Locate hooks on top of SS HE (See Blown Up View)<li data-bbox="285 375 756 438">(2) Locate notches on top of water heater case.<li data-bbox="285 445 756 550">(3) The hooks from the heat exchanger will help align and hold assembly in place<li data-bbox="285 556 756 588">(4) Secure bottom burner screws<li data-bbox="285 594 756 625">(5) Secure top left and right screws	 <p>The diagram consists of four photographs illustrating the installation process. The top photograph shows the heat exchanger being lowered into the case, with red arrows pointing to the hooks on the heat exchanger and the notches on the case. The second photograph is a close-up of the hooks and notches, with red arrows pointing to the alignment points. The third photograph shows the heat exchanger being secured with screws, with white arrows pointing to the top left and right screws. The bottom photograph shows the heat exchanger fully installed and secured, with white arrows pointing to the top left and right screws.</p>

Procedure	Diagram
<p>17. Reconnect water connections</p> <ol style="list-style-type: none"> (1) Insert Pipe from CU HE in to Main Water Control Valve and attach "C" Clamp (2) Insert Foam Covered Pipe into the flow sensor and SS HE and attach with "C" Clamps (3) Insert ¼" Drain Pipe into CU HE and Drain Port and attach with small "C" Clamps (4) Reconnect Freeze Prevention Heater on ¼" Drain Pipe into the wiring harness 	 
<p>18. Reinstall neutralizer</p> <ol style="list-style-type: none"> (1) Locate the 3 key holes inside case (2) Locate the 3 knobs on the neutralizer (3) Line up the knobs with the key holes and pull down to secure neutralizer 	 

Procedure	Diagram
<p>(4) Attach with a screw the mounting plate to secure the neutralizer to bracket on case</p> <p>(5) Reattach 3 hoses with clamps, you will need a needle nose peelers for these clamps</p>	
<p>19. Replace gas valve assembly</p> <p>(1) Secure gas valve assembly to burner with 4 silver screws</p> <p>(2) Secure manifold pipe to gas inlet fitting with "C" clamp.</p> <p>(3) Reconnect large wiring connection, that attaches the wires from the manifold plate to the wiring harness</p>	

Procedure	Diagram
<p>20. Reconnect all wires that attach to the wiring harness and the body of the water heater</p> <ol style="list-style-type: none"> (1) Wiring for the fan (2) Left Side Wiring Harness: Thermal fuse (2), Freeze prevention heaters (2), Neutralizer sensor plug (3) Right Side Wiring Harness: High limit switch (2), Freeze prevention heater(2), Freeze prevention sensor (4) Flame rods (2), ignition box (5) Left Side On SS HE: Freeze prevention sensor (replace clip with wires attached) (6) Right Side On SS HE: Freeze prevention sensor plugs (2) 	

Procedure	Diagram
<p>21. Replace circuit board and GFCI</p> <ol style="list-style-type: none"> (1) Slide circuit board back into original position (2) Secure top of circuit board screw (3) Secure bottom of circuit board screw and ground wire to the left (4) Secure Wire Anchor above circuit board (5) Secure GFCI plate to case with 2 screws (ground wire on right side) 	 <p>The diagram consists of four photographs illustrating the assembly steps:</p> <ul style="list-style-type: none"> Top Photo: Shows a screwdriver being used to tighten a screw at the top of the circuit board. A white arrow points to the screw head. Second Photo: Shows a screwdriver being used to secure a screw at the bottom of the circuit board. A white arrow points to the screw head. A label with 'ELV-F 10-03601309' is visible. Third Photo: Shows a wire anchor being secured above the circuit board. A white arrow points to the anchor. Bottom Photo: Shows two screws being used to secure the GFCI plate to the case. Two white arrows point to the screws.

Procedure	Diagram
<p>22. Replace Flue from Top of Unit</p> <ol style="list-style-type: none"> (1) Inset flue in top of unit and secure the 4 screws (2) Reconnect the venting to the unit 	
<p>23. Replace Front Cover</p> <ol style="list-style-type: none"> (1) Replace water inlet filter (2) Close Drain Ports (3) Turn on cold water shut off valve slowly (check for leaks around "C" clamps) (4) If you get leaks shut off water and re-secure "C" Clamps. (5) Turn on gas (check "C" clamps for leaks) (6) Secure front cover with 4 screws (7) Return electrical power to the unit 	