



## NR98, NC199 and N-0751M Series Heat Exchanger Replacement

Models Include: N-0751M, N-0751M-OD, N-0751M-DV, N-0751M-DVC  
NR98-SV, NR98-OD, NR98-DVC  
NC199-OD, NC199-DVC

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.

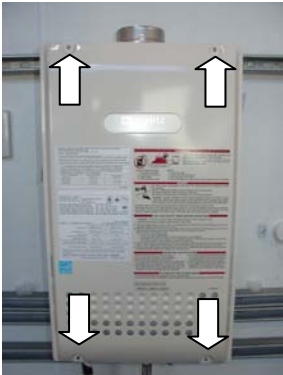

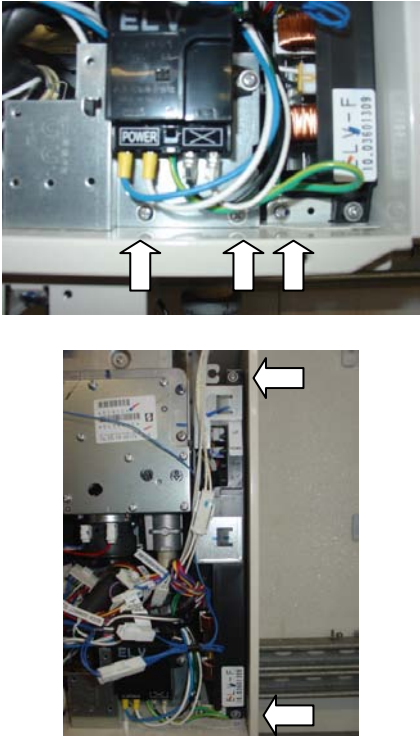
Please contact Noritz Technical Support (866-766-7489) for additional support.

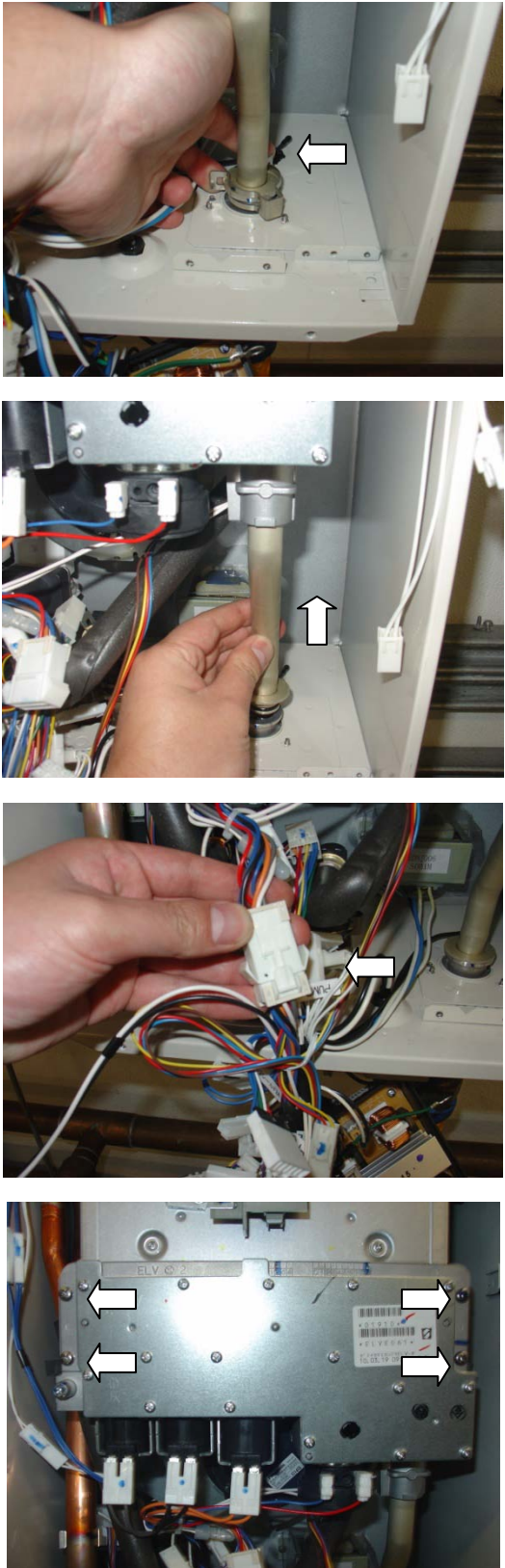
Noritz America Corporation

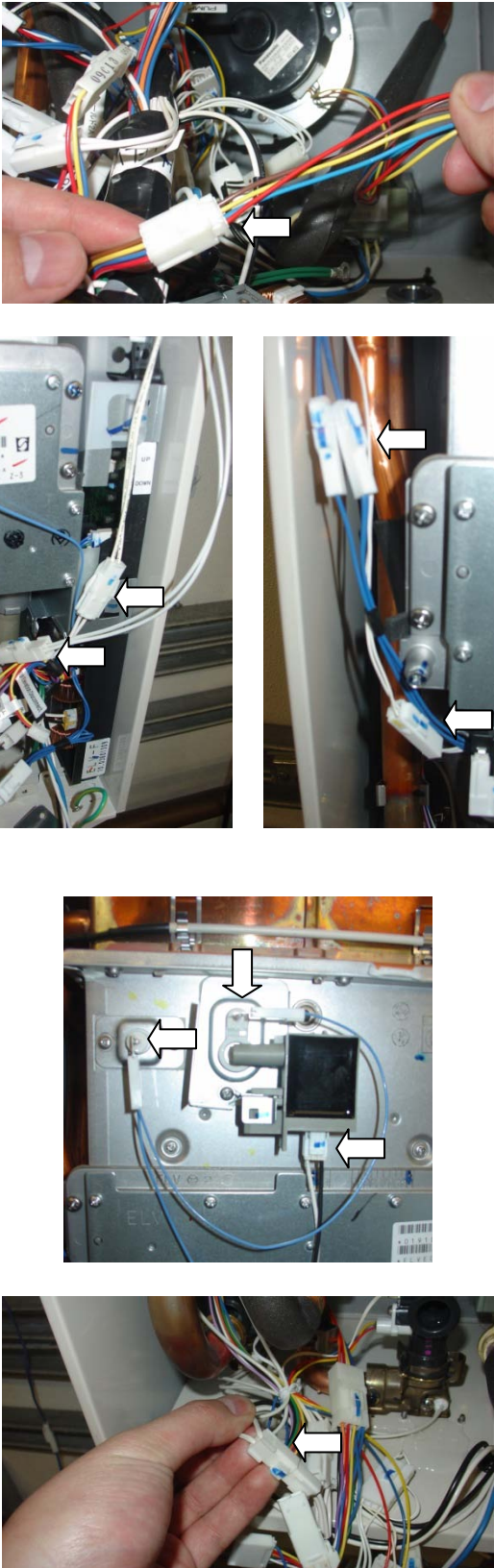
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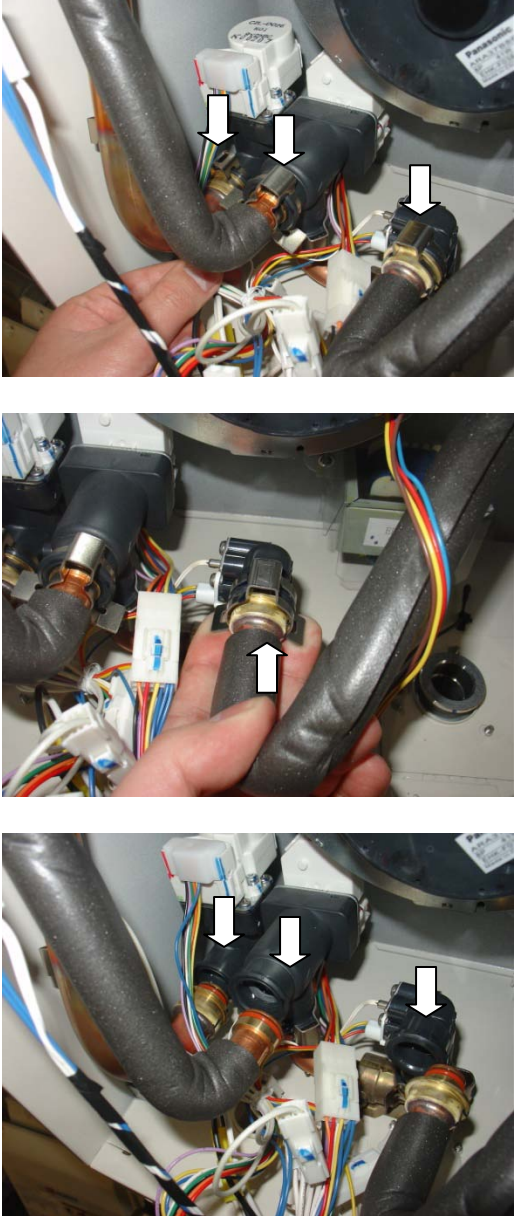
Phone 866-766-7489 Fax 714-241-1196

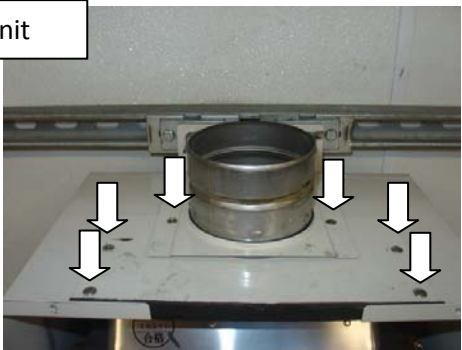
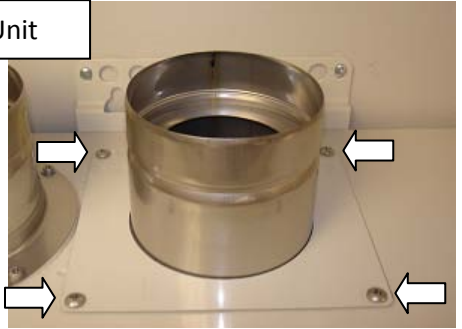
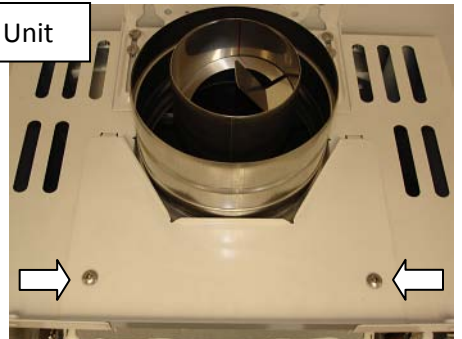
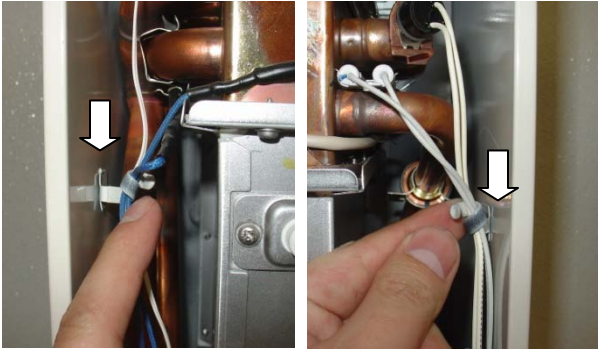
## NR98 Series, NC199 Series & N-0751M Series Heat Exchanger Replacement Procedure

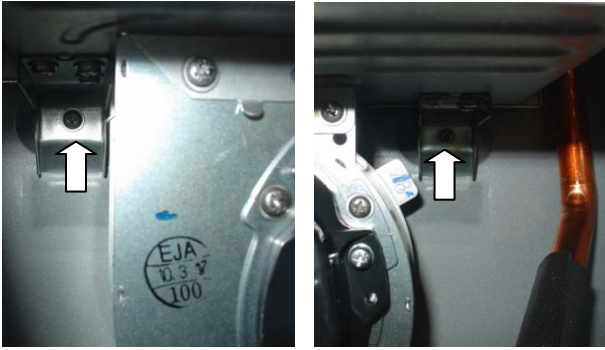

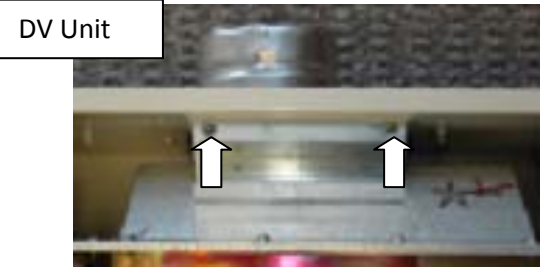

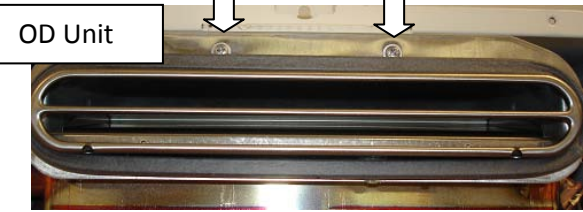
Procedure	Diagram
<p>1. Remove front cover</p> <ol style="list-style-type: none"> <li>(1) Remove 4 screws</li> <li>(2) Disconnect electrical power to unit</li> <li>(3) Turn off gas and water</li> <li>(4) Remove filter and drain unit completely</li> </ol>	
<p>2. Remove the Remote Control (<b>ONLY DVC UNIT</b>)</p> <ol style="list-style-type: none"> <li>(1) Remove screw from the bottom of the metal plate that the controller is mounted to</li> <li>(2) Let the remote control hang outside the unit or disconnect the wire and set aside</li> </ol>	
<p>3. Remove GFCI and circuit board</p> <ol style="list-style-type: none"> <li>(1) Remove two screws that hold the GFCI Plate, one screw will have a ground wire attached), Let GFCI hang outside of the unit</li> <li>(2) Remove the ground wire that is to the left of the circuit board</li> <li>(3) Remove the circuit board; there are two screws, one on top and bottom of the circuit board</li> <li>(4) Pull out circuit board and let hang outside of the unit</li> </ol>	

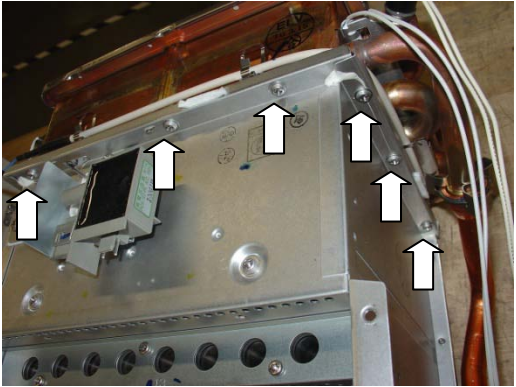


Procedure	Diagram
<p>4. Remove gas valve assembly</p> <ol style="list-style-type: none"> <li>(1) Locate "C" Clamp on the bottom right hand corner of the unit that attaches the gas connection to the manifold plate and remove.</li> <li>(2) Locate inlet gas pipe to manifold and push up. Then locate the large wiring connection, that attaches the wires from the manifold plate to the wiring harness, and disconnect the plug.</li> <li>(3) Next locate the 4 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 4 screws and the manifold plate and pipe can be removed and set aside.</li> </ol> <p><b>NOTE: DVC Units</b> will also have a rubber hose attached to the manifold plate. Disconnect that rubber hose.</p>	

Procedure	Diagram
<p>5. Unplug all wires that attach to the wiring harness and the body of the water heater</p> <ol style="list-style-type: none"> <li>(1) Wiring for the fan</li> <li>(2) High limit switch, freeze prevention heater</li> <li>(3) Thermal fuse (2), heat exchanger thermistor</li> <li>(4) Flame rods (2), ignition box (<b>DVC Units</b> the ignition box is not located on the ignition plug, there will only be a black wire with a gray tip, disconnect that wire)</li> <li>(5) Freeze prevention on outlet pipe</li> </ol>	 <p>The 'Diagram' column contains five photographs illustrating the disconnection process:</p> <ul style="list-style-type: none"> <li><b>Top Photo:</b> A close-up of a multi-colored wire bundle being held by a hand. A white connector is being unplugged from the bundle.</li> <li><b>Second Row (Left):</b> A view of the metal body of the water heater with several wires plugged into it. White arrows point to the connectors being targeted for removal.</li> <li><b>Second Row (Right):</b> A similar view from a different angle, showing wires being unplugged from the metal panel.</li> <li><b>Third Photo:</b> A view of the control panel area, showing a black control board with various wires connected to it. White arrows point to the wires being disconnected.</li> <li><b>Bottom Photo:</b> A hand holding a white connector that has been disconnected from the wire bundle.</li> </ul>

Procedure	Diagram
<p data-bbox="237 235 769 298">6. Disconnect water pipes coming from the heat exchanger.</p> <ul data-bbox="285 340 776 508" style="list-style-type: none"><li data-bbox="285 340 776 436">(1) Push out "C" Clamps from flow sensor, bypass water valve, and main water valve</li><li data-bbox="285 445 776 508">(2) Disconnect water pipes from each water connection</li></ul> <p data-bbox="188 550 769 613"><b>NOTE: DVC Units</b> the center valve (bypass water valve will be facing the opposite direction)</p>	 <p>The diagram consists of three sequential photographs showing the process of disconnecting water pipes from a heat exchanger. The top photograph shows a hand using a tool to push out three 'C' clamps from the flow sensor, bypass water valve, and main water valve. The middle photograph shows a hand pulling a pipe away from a connection. The bottom photograph shows the three connections after the pipes have been disconnected.</p>

Procedure	Diagram
<p>7. Remove heat exchanger from case</p> <p>(1) Remove the 6, 4 or 2 case cover screws depending on unit (<b>OD Units</b> this step will be skipped)</p> <p>(2) Loosen wire anchors from each side of case</p>	<div data-bbox="824 327 1357 674"> <p>SV Unit</p>  </div> <div data-bbox="824 709 1357 1035"> <p>DV Unit</p>  </div> <div data-bbox="824 1066 1357 1402"> <p>DVC Unit</p>  </div> <div data-bbox="824 1440 1419 1787">  </div>

Procedure	Diagram
<p>(3) Remove the 2 set screws on the bottom of the burner</p> <p>(4) Remove the upper left and right set screws near the top of the case (support bottom of assembly)</p> <p>(5) The exhaust box, heat exchanger, burner and fan will come out of the case in one section</p>	    

Procedure	Diagram
<p>8. Separate burner from heat exchanger</p> <p>(1) Remove 12 screws holding burner to heat exchanger</p>	
<p>9. Replace burner gasket</p> <p>(1) Remove old gasket</p> <p>(2) Replace with new gasket</p>	
<p>10. Place new O-Rings on new heat exchanger</p> <p>(1) Inlet to heat exchanger</p> <p>(2) Bypass and main water pipes</p>	

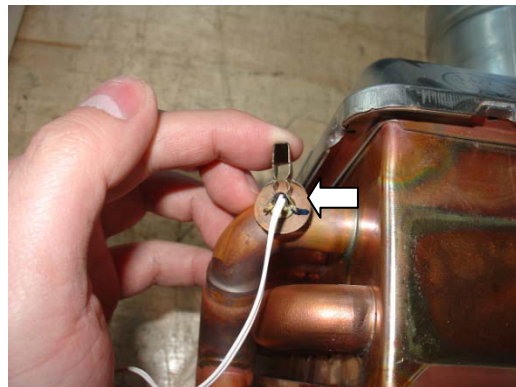
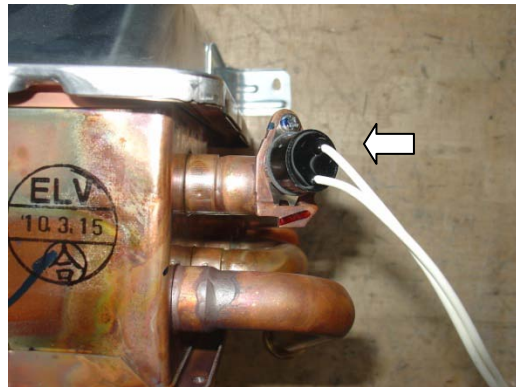
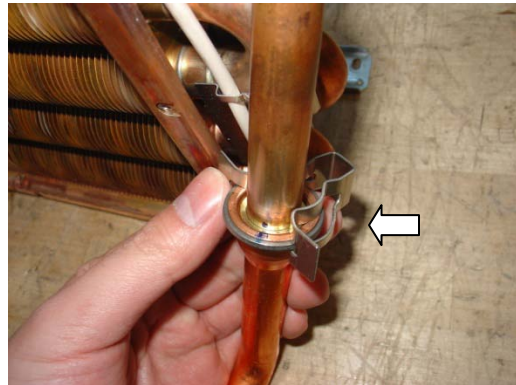
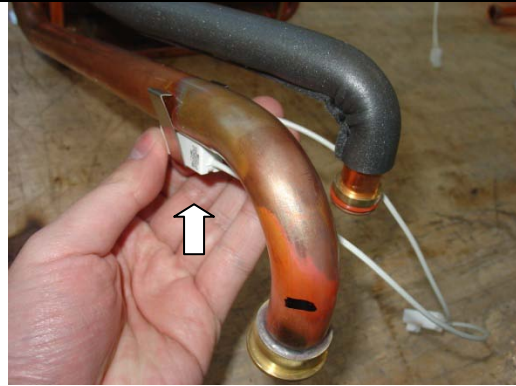


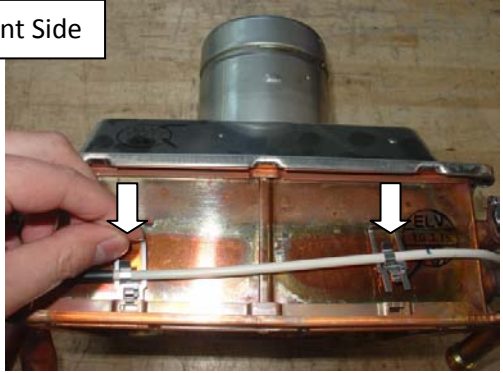
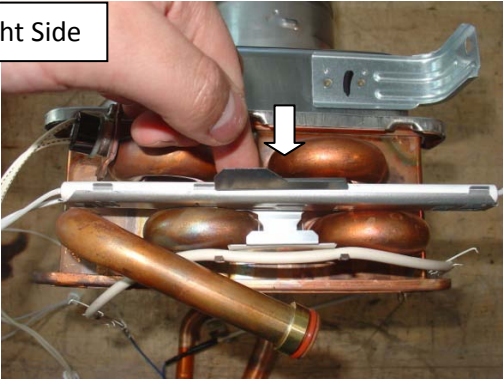
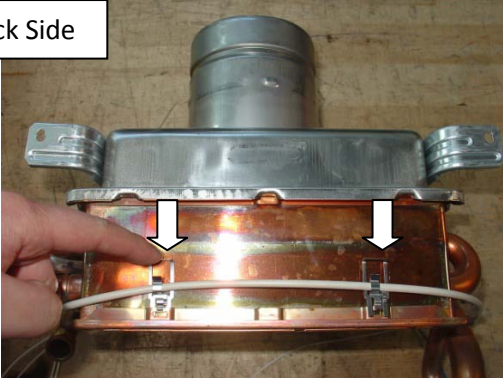
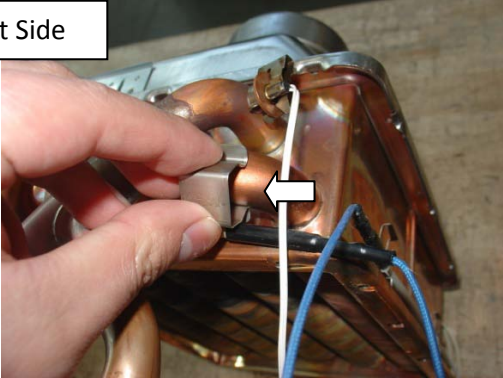
Procedure

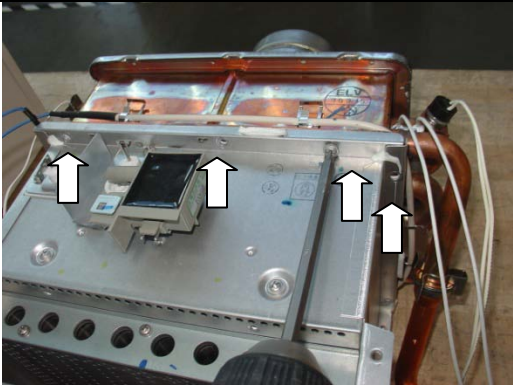
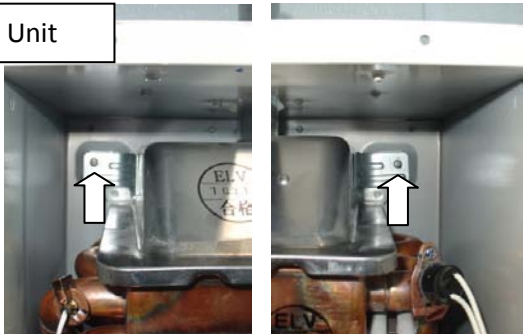
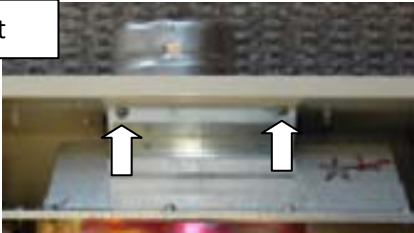

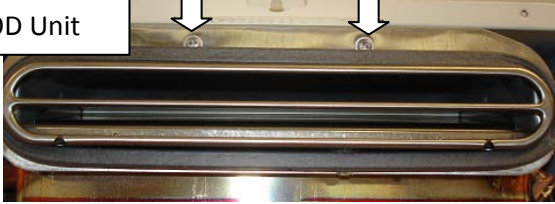
11. Remove heat exchanger components from old heat exchanger and put on new heat exchanger

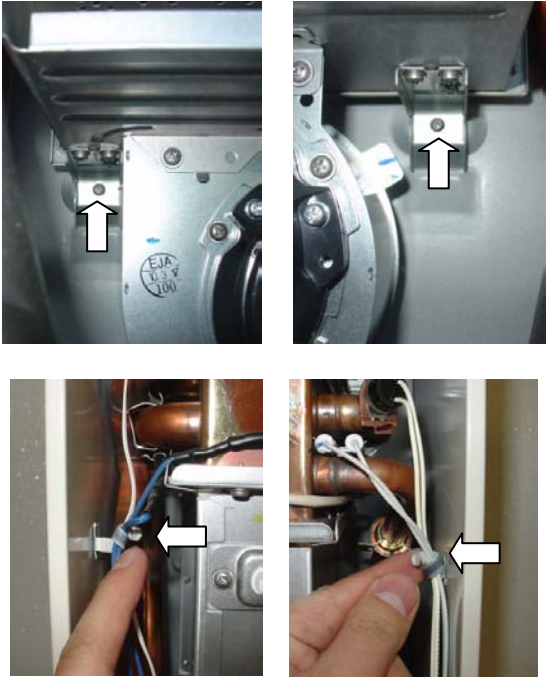
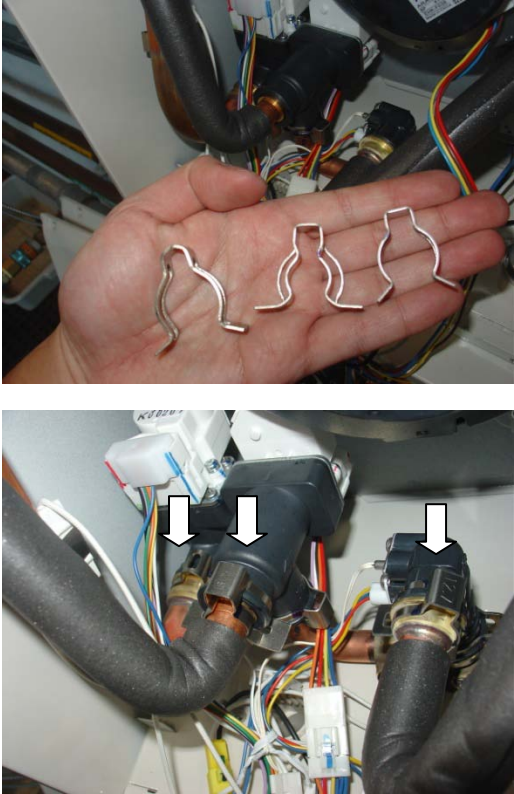
- (1) Outlet freeze prevention heater
- (2) Inlet heat exchanger pipe
- (3) High limit switch
- (4) Heat exchanger thermistor

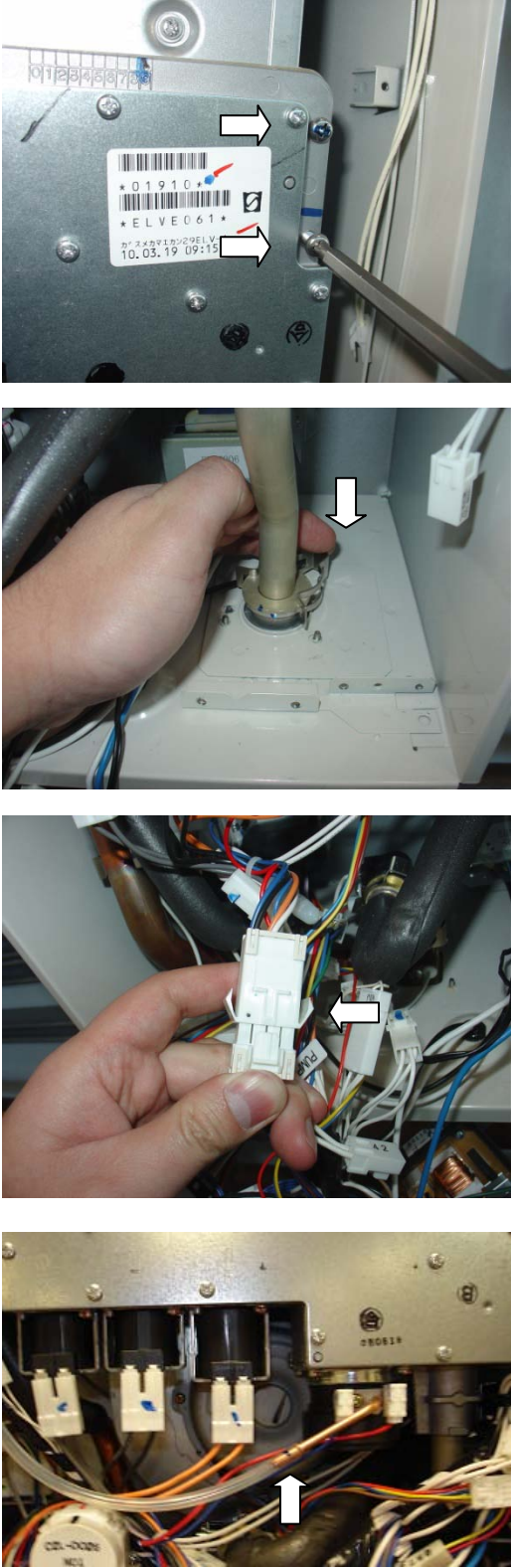
Diagram



Procedure	Diagram
<p>(5) Thermal fuse and fasteners (4 sides) (6) Replace the freeze prevention heater with the clip holding the thermal fuse</p>	<p data-bbox="818 268 980 321">Front Side</p>  <p data-bbox="818 674 980 726">Right Side</p>  <p data-bbox="818 1083 980 1136">Back Side</p>  <p data-bbox="818 1495 980 1547">Left Side</p> 

Procedure	Diagram
<p>12. Reattach burner and heat exchanger assembly</p> <p>(1) 12 screws around perimeter of burner</p>	
<p>13. Replace assembly back inside case</p> <p>(1) Secure top left and right screws</p>	<div data-bbox="813 747 1386 1079"> <p>SV Unit</p>  </div> <div data-bbox="813 1115 1333 1346"> <p>DV Unit</p>  </div> <div data-bbox="813 1381 1398 1633"> <p>DVC Unit</p>  </div> <div data-bbox="813 1669 1403 1871"> <p>OD Unit</p>  </div>

Procedure	Diagram
<p>(2) Secure bottom burner screws  (3) Tighten wire anchors</p>	
<p>14. Reconnect water connections</p> <p>(1) Locate 3 "C" Clamps and connect to main water valve, bypass water valve, and flow sensor.</p> <p><b>Note: Clips are different sizes, in the picture the clip on the left is for the main water valve, center for the bypass water valve, on right for the flow sensor</b></p>	

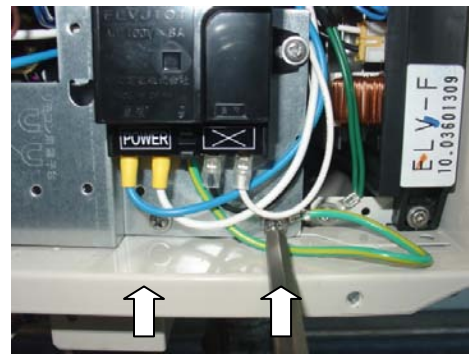
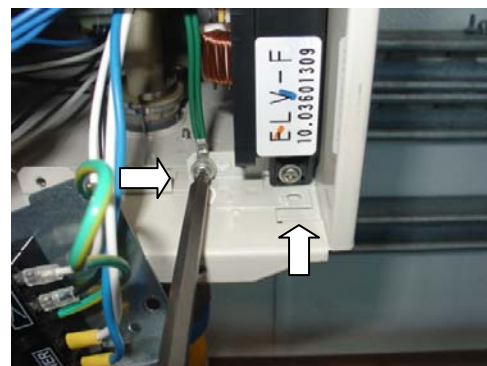
Procedure	Diagram
<p>15. Replace gas valve assembly</p> <ol style="list-style-type: none"> <li>(1) Secure gas valve assembly to burner with 4 silver screws</li> <li>(2) Secure manifold pipe to gas inlet fitting with "C" Clamp.</li> <li>(3) Reconnect large wiring connection, that attaches the wires from the manifold plate to the wiring harness</li> <li>(4) DVC UNIT ONLY: Reconnect the rubber tube to the manifold plate</li> </ol>	 <p>The diagram consists of four photographs illustrating the installation process:</p> <ul style="list-style-type: none"> <li><b>Top Photo:</b> Shows the gas valve assembly being secured to the burner plate with four silver screws. A white arrow points to the screws, and another white arrow points to a label on the assembly that reads "0128458738", "01910", "ELVE061", and "10.03.19 09:15".</li> <li><b>Second Photo:</b> Shows a hand securing a manifold pipe to a gas inlet fitting using a "C" clamp. A white arrow points to the clamp.</li> <li><b>Third Photo:</b> Shows a hand reconnecting a large white wiring connector to the manifold plate. A white arrow points to the connector.</li> <li><b>Bottom Photo:</b> Shows a hand reconnecting a rubber tube to the manifold plate. A white arrow points to the tube.</li> </ul>

Procedure



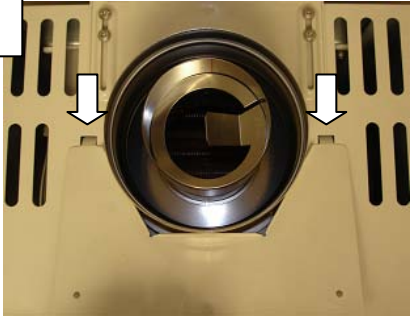
16. Replace circuit board and GFCI

- (1) Slide circuit 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 GFCI plate to case with 2 screws (ground wire on right side)
- (5) DVC UNITS ONLY: Secure the remote controller back into the unit and reconnect the wire if you removed it

Diagram



Procedure	Diagram
<p>17. Reconnect all wires that attach to the wiring harness and the body of the water heater</p> <ol style="list-style-type: none"> <li>(1) Wiring for the fan</li> <li>(2) High limit switch, freeze prevention heater</li> <li>(3) Thermal fuse (2), heat exchanger thermistor</li> <li>(4) Flame rods (2), ignition box (<b>DVC Units</b> the ignition box is not located on the ignition plug, there will only be a black wire with a gray tip, reconnect that wire)</li> <li>(5) Freeze prevention on outlet pipe</li> </ol>	

Procedure	Diagram
<p>18. Replace case top covers</p> <p><b>OD Units</b> this step is skipped</p> <p><b>SV Units</b></p> <ol style="list-style-type: none"> <li>(1) Place larger top cover first, then gasket, then smaller cover over flue</li> <li>(2) Secure top covers with 6 screws</li> </ol> <p><b>DV Units</b></p> <ol style="list-style-type: none"> <li>(1) Place the gasket on first, then the case cover</li> <li>(2) Secure top cover with 4 screws</li> </ol> <p><b>DVC Units</b></p> <ol style="list-style-type: none"> <li>(1) Place the 2 tabs in case cover into openings in the top of the case</li> <li>(2) Secure top cover with 2 screws</li> </ol>	<p>SV Unit</p>  <p>DV Unit</p>  <p>DVC Unit</p> 
<p>19. Replace Front Cover</p> <ol style="list-style-type: none"> <li>(1) Replace water inlet filter</li> <li>(2) Turn on cold water shut off valve slowly (check for leaks around "C" Clamps)</li> <li>(3) If you get leaks shut off water and re-secure "C" Clamps</li> <li>(4) Turn on gas (check "C" Clamp for leaks)</li> <li>(5) Secure front cover with 4 screws</li> <li>(6) Replace water inlet filter</li> <li>(7) Return electrical power to the unit</li> </ol>	