



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.

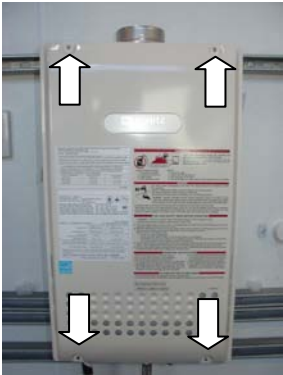

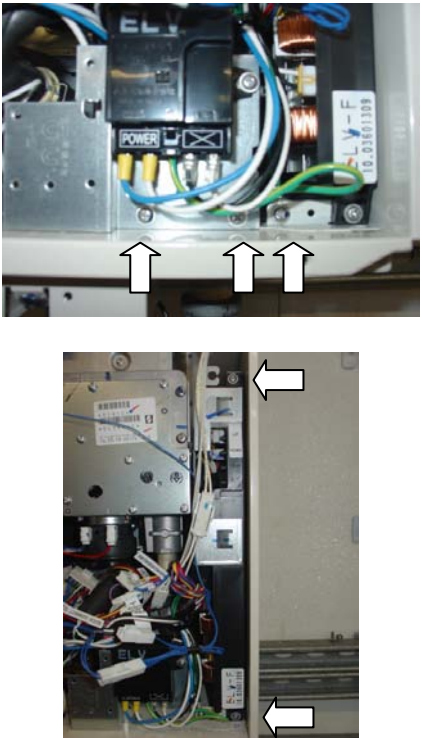
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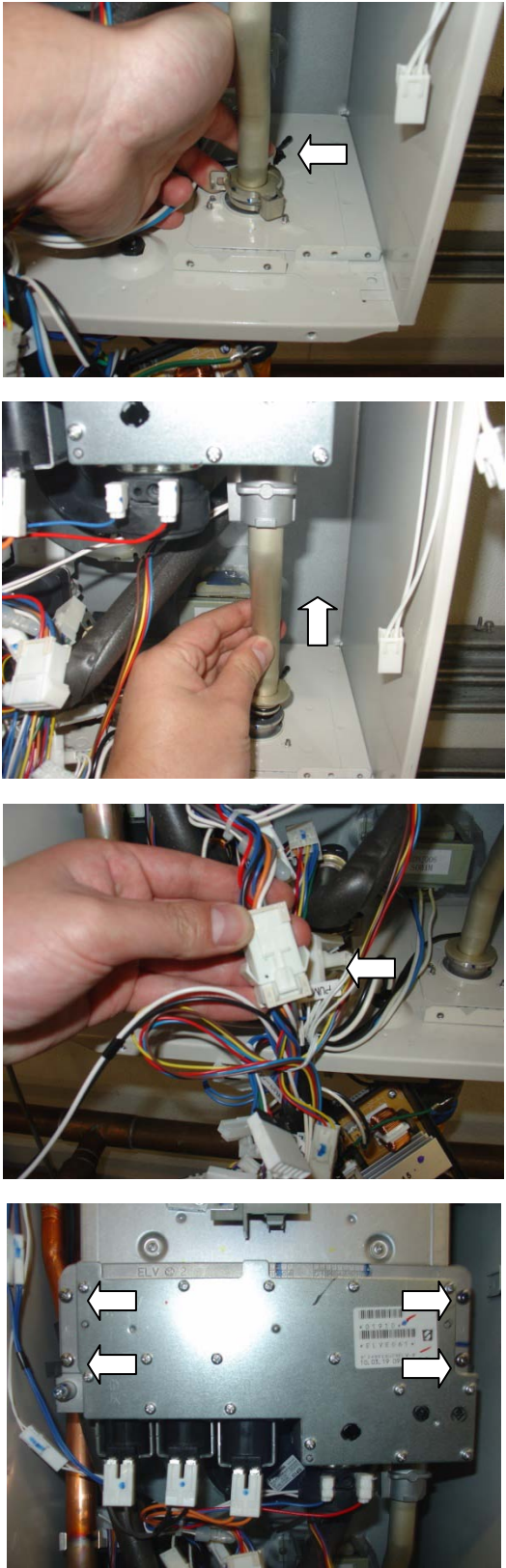
Noritz America Corporation

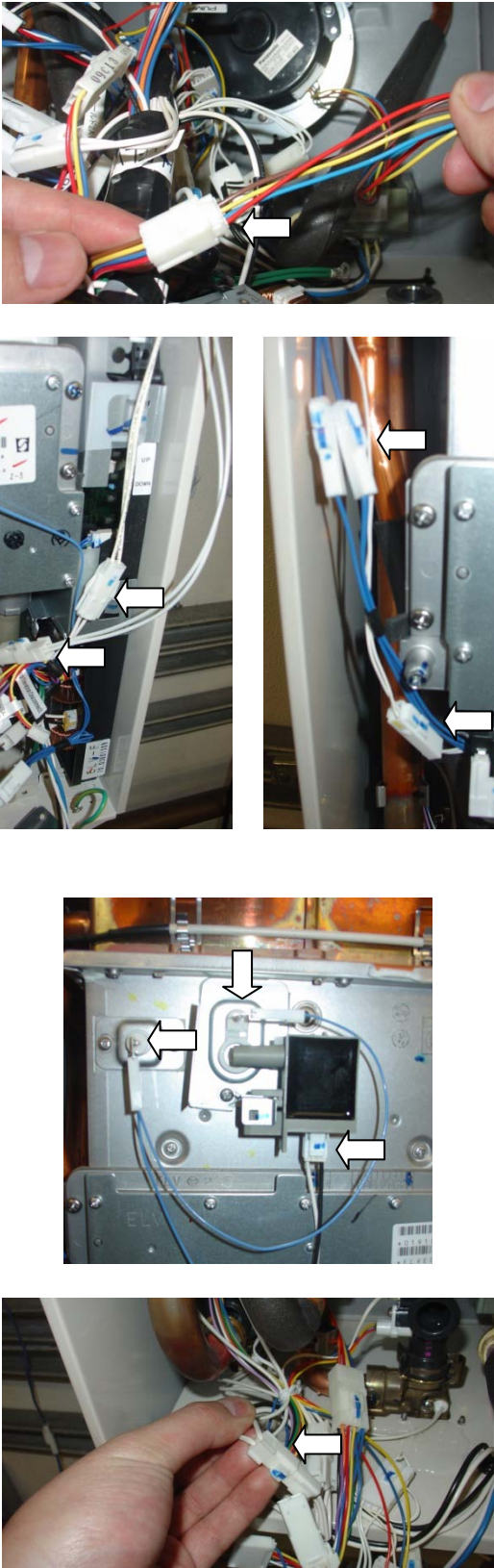
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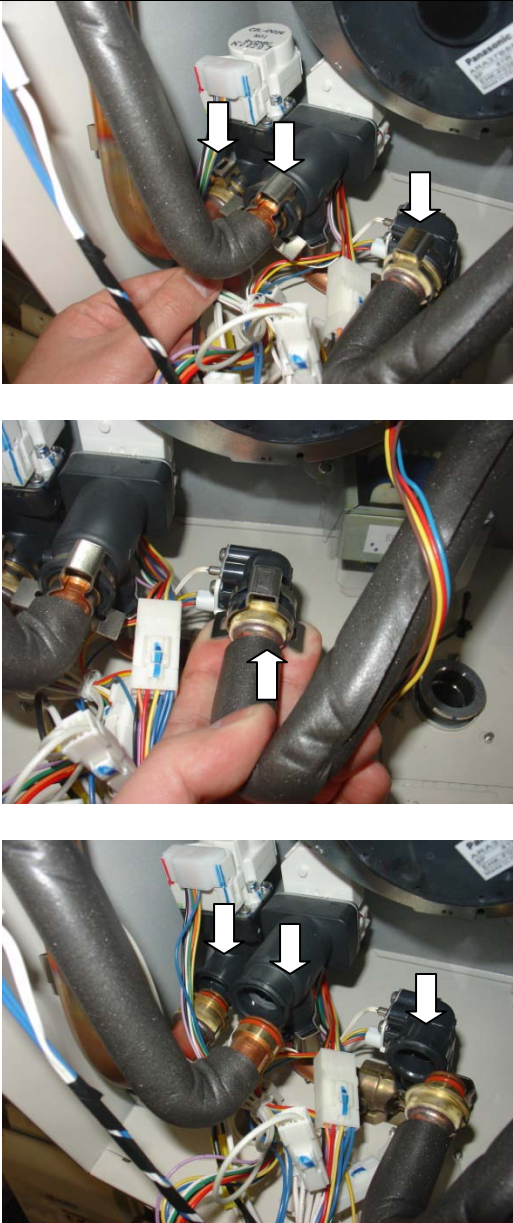
Phone 866-766-7489 Fax 714-241-1196

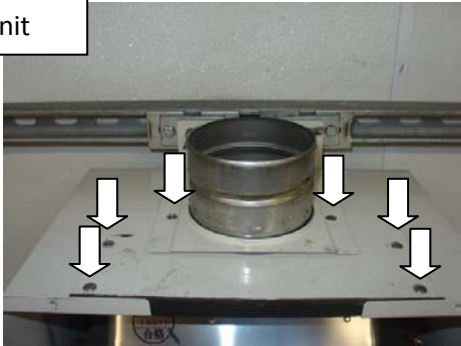
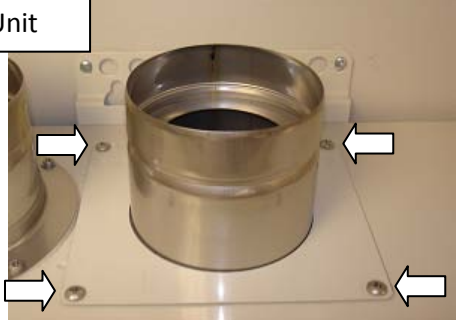
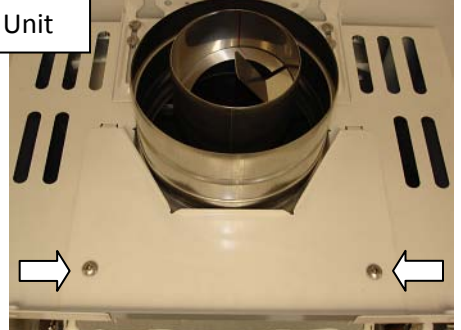
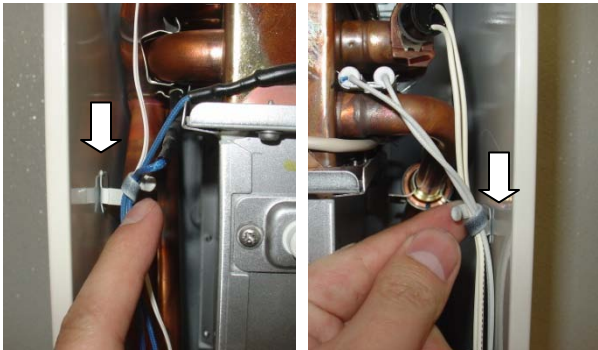
NR98 Series, NC199 Series & N-0751M Series Heat Exchanger Replacement Procedure

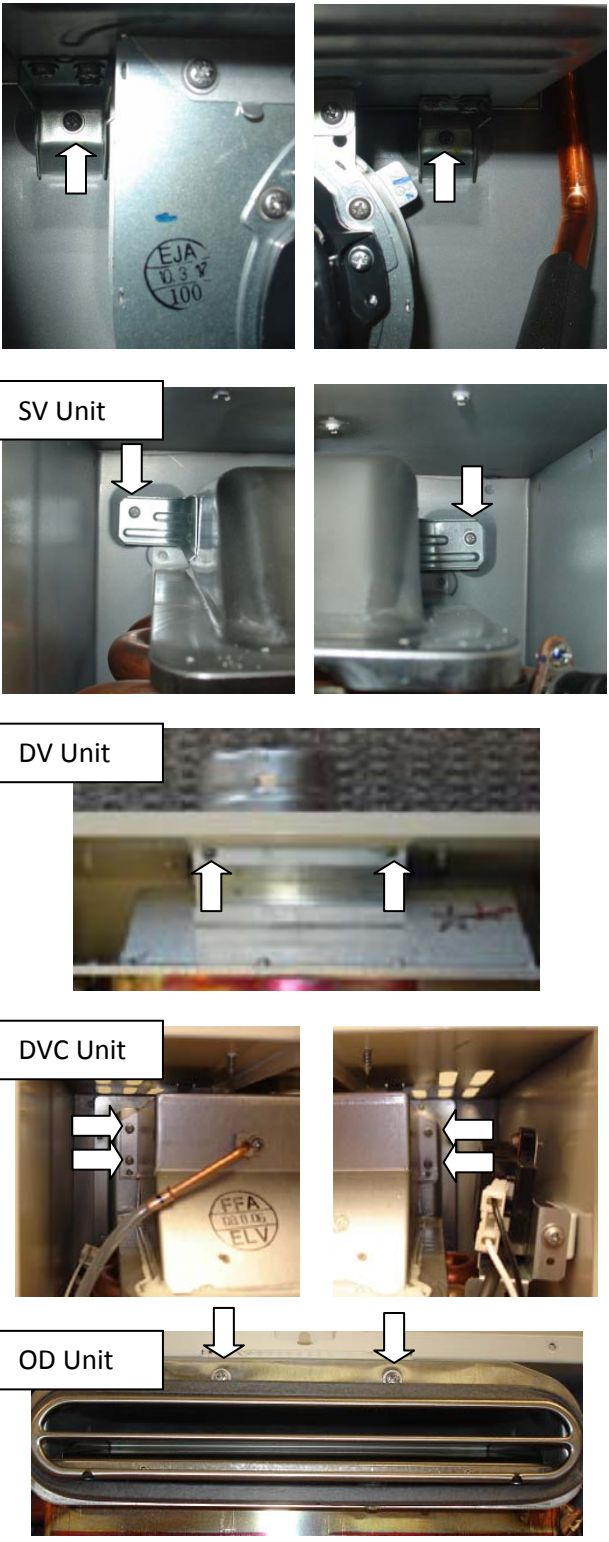
Procedure	Diagram
<p>1. Remove front cover</p> <ul style="list-style-type: none"> (1) Remove 4 screws (2) Disconnect electrical power to unit (3) Turn off gas and water (4) Remove filter and drain unit completely 	
<p>2. Remove the Remote Control (ONLY DVC UNIT)</p> <ul style="list-style-type: none">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

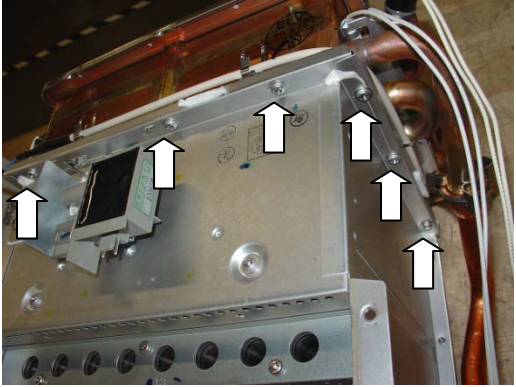


Procedure	Diagram
<p>4. Remove gas valve assembly</p> <ol style="list-style-type: none"> (1) Locate "C" Clamp on the bottom right hand corner of the unit that attaches the gas connection to the manifold plate and remove. (2) Locate inlet gas pipe to manifold and push up. Then locate the large wiring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

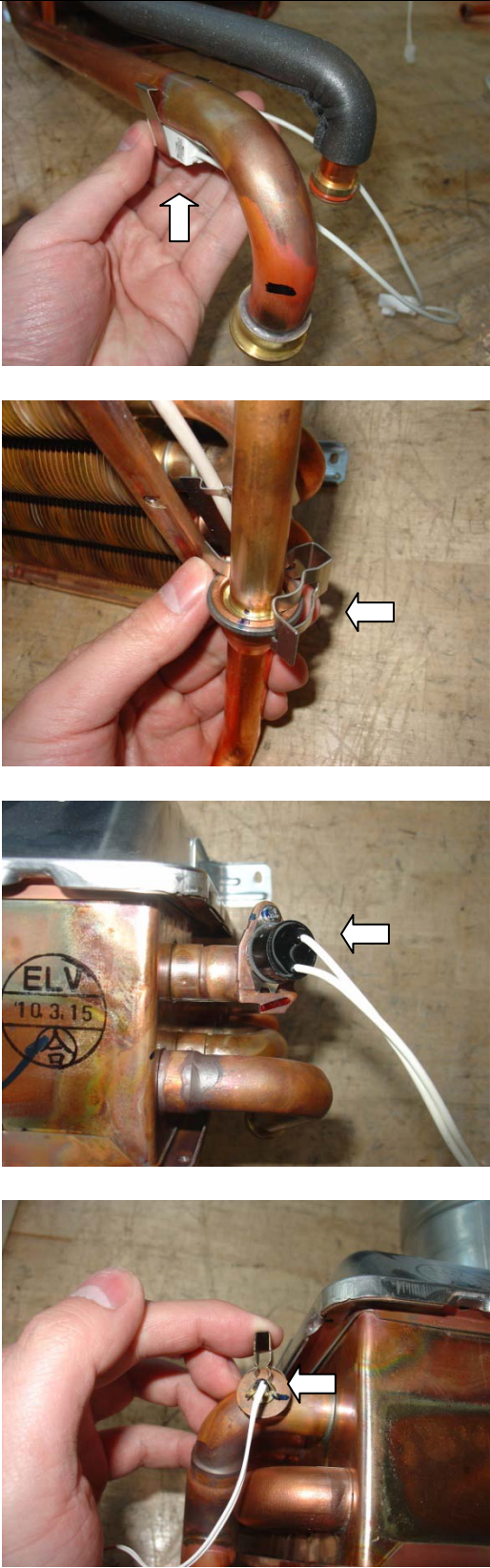
Procedure	Diagram
<p>5. Unplug all wires that attach to the wiring harness and the body of the water heater</p> <ul style="list-style-type: none"> (1) Wiring for the fan (2) High limit switch, freeze prevention heater (3) Thermal fuse (2), heat exchanger thermistor (4) Flame rods (2), ignition box (DVC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

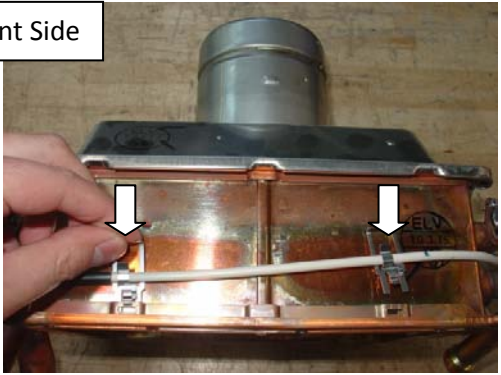
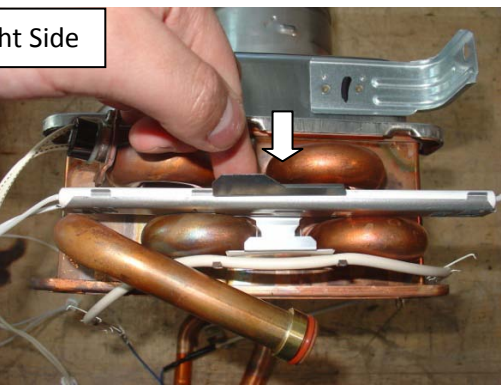
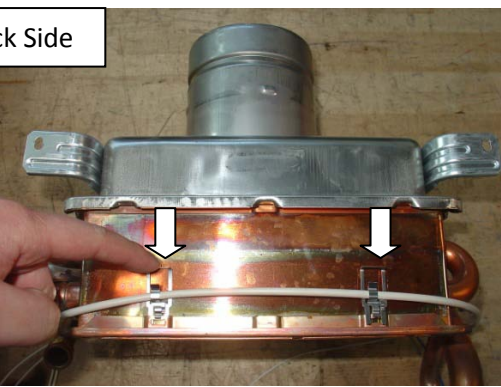
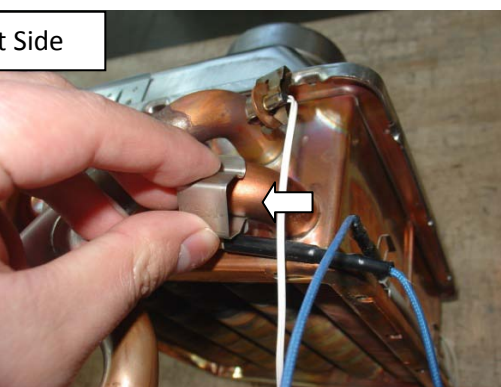
Procedure	Diagram
<p>6. Disconnect water pipes coming from the heat exchanger.</p> <p>(1) Push out "C" Clamps from flow sensor, bypass water valve, and main water valve</p> <p>(2) Disconnect water pipes from each water connection</p> <p>NOTE: DVC Units the center valve (bypass water valve will be facing the opposite direction)</p>	 <p>The diagram consists of three photographs showing the disconnection of water pipes from a heat exchanger. The top photo shows three 'C' clamps being pushed out from the flow sensor, bypass water valve, and main water valve. The middle photo shows a hand pulling a water pipe away from the main water valve. The bottom photo shows the three 'C' clamps being pushed out from the flow sensor, bypass water valve, and main water valve.</p>

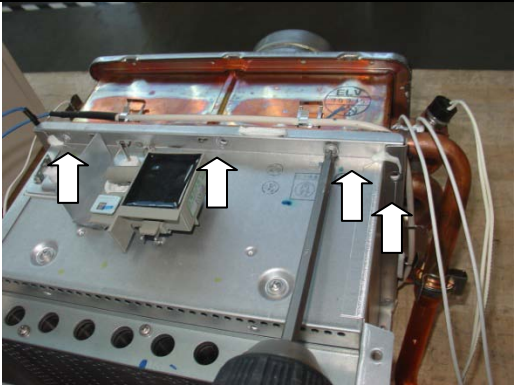

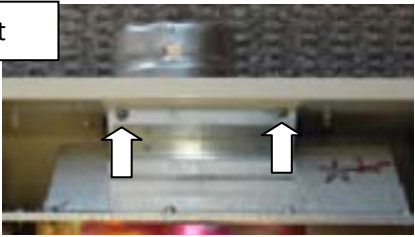

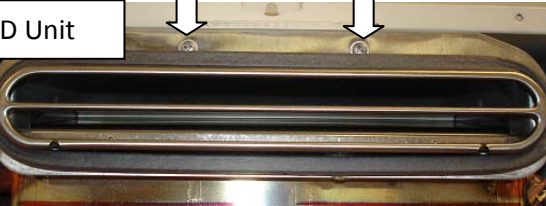
Procedure	Diagram
<p>7. Remove heat exchanger from case</p> <p>(1) Remove the 6, 4 or 2 case cover screws depending on unit (OD Units this step will be skipped)</p> <p>(2) Loosen wire anchors from each side of case</p>	<div data-bbox="823 325 1356 674"> <p>SV Unit</p>  </div> <div data-bbox="823 709 1356 1033"> <p>DV Unit</p>  </div> <div data-bbox="823 1068 1356 1402"> <p>DVC Unit</p>  </div> <div data-bbox="823 1438 1417 1785">  </div>

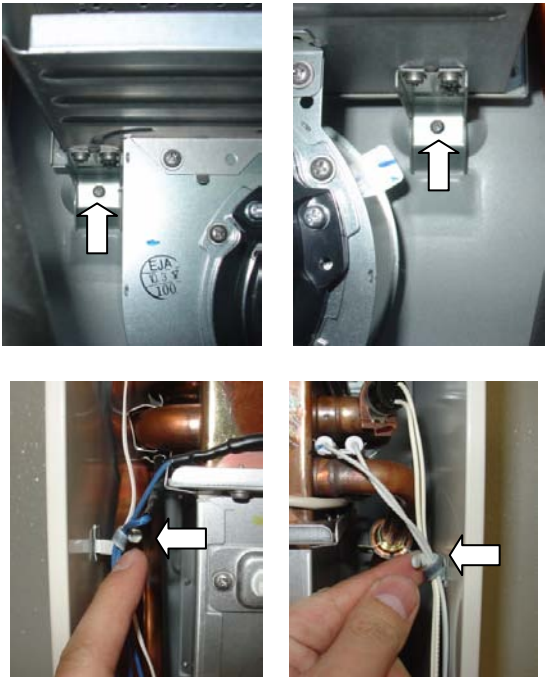
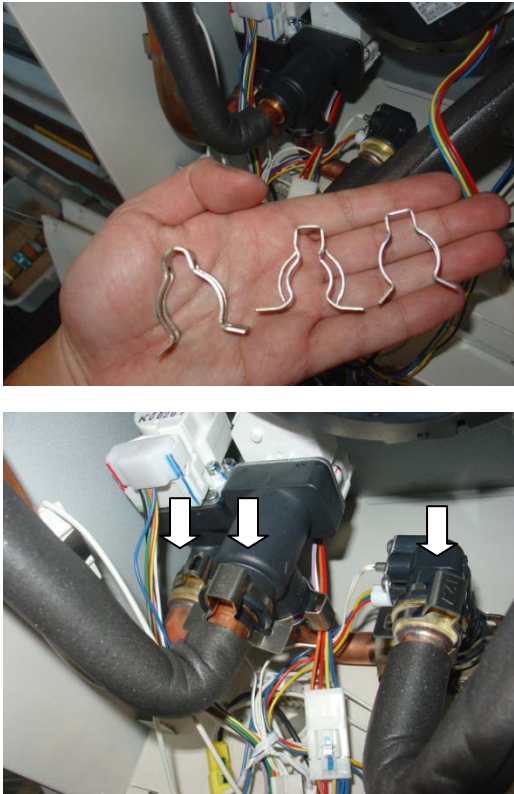
Procedure	Diagram
<p>(3) Remove the 2 set screws on the bottom of the burner</p> <p>(4) Remove the upper left and right set screws near the top of the case (support bottom of assembly)</p> <p>(5) The exhaust box, heat exchanger, burner and fan will come out of the case in one section</p>	 <p>The diagram illustrates the removal of the burner assembly in five steps:</p> <ol style="list-style-type: none"> SV Unit: Two photographs showing the removal of set screws from the bottom of the burner and the upper left and right set screws near the top of the case. Arrows point to the screws being removed. DV Unit: A photograph showing the DV Unit being lifted out of the case. Arrows point to the unit. DVC Unit: Two photographs showing the DVC Unit being lifted out of the case. Arrows point to the unit. OD Unit: A photograph showing the OD Unit being lifted out of the case. Arrows point to the unit.

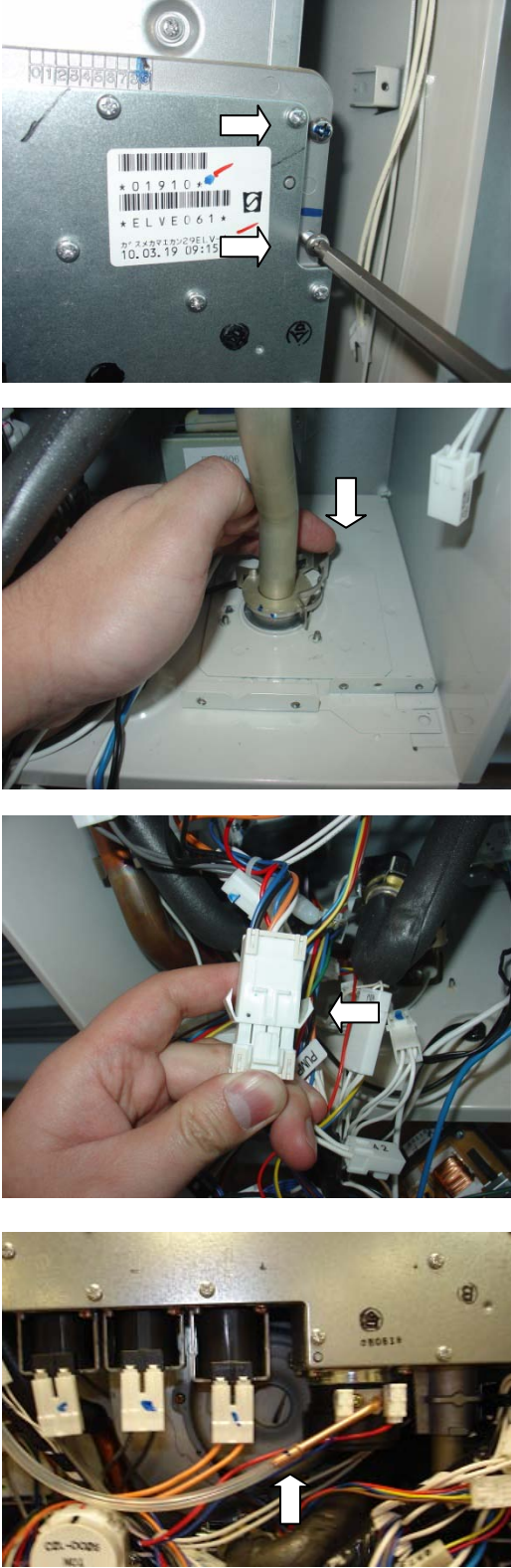
Procedure	Diagram
<p>8. Separate burner from heat exchanger</p> <p>(1) Remove 12 screws holding burner to heat exchanger</p>	
<p>9. Replace burner gasket</p> <p>(1) Remove old gasket</p> <p>(2) Replace with new gasket</p>	
<p>10. Place new O-Rings on new heat exchanger</p> <p>(1) Inlet to heat exchanger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

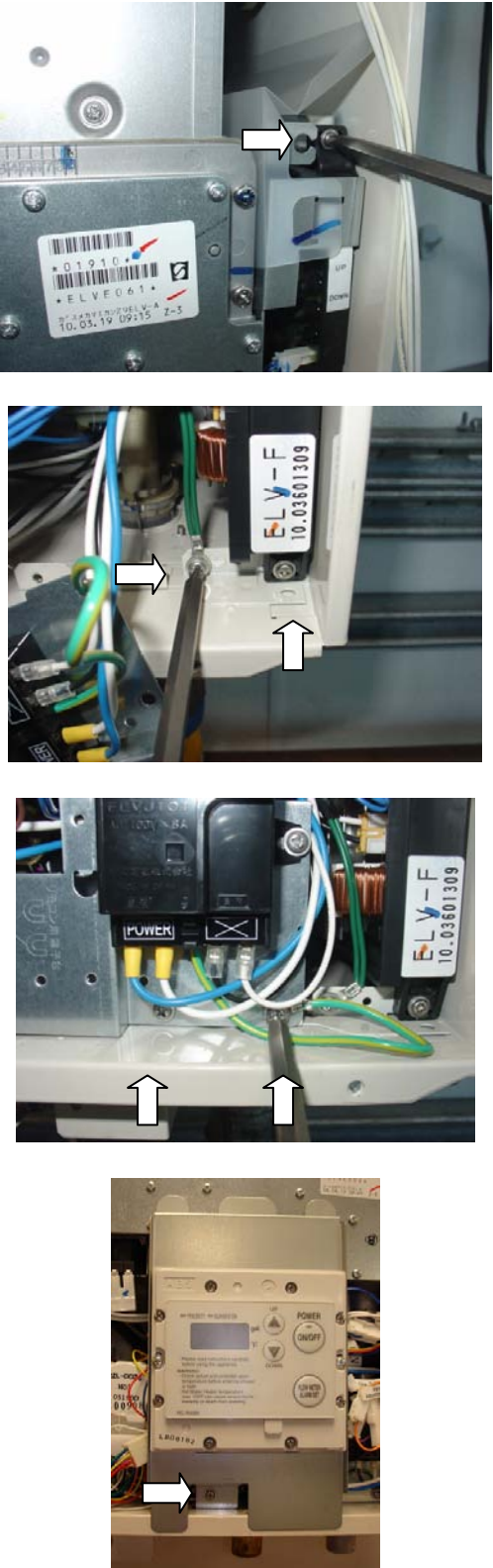
Procedure	Diagram
<p>11. Remove heat exchanger components from old heat exchanger and put on new heat exchanger</p> <ul style="list-style-type: none"> (1) Outlet freeze prevention heater (2) Inlet heat exchanger pipe (3) High limit switch (4) Heat exchanger thermistor 	 <p>The diagram consists of four photographs showing the removal of components from an old heat exchanger. The first photo shows a hand holding a curved copper pipe with a white arrow pointing to a small metal fitting. The second photo shows a hand holding a copper pipe with a white arrow pointing to a small metal fitting. The third photo shows a hand holding a copper pipe with a white arrow pointing to a small metal fitting. The fourth photo shows a hand holding a copper pipe with a white arrow pointing to a small metal fitting.</p>

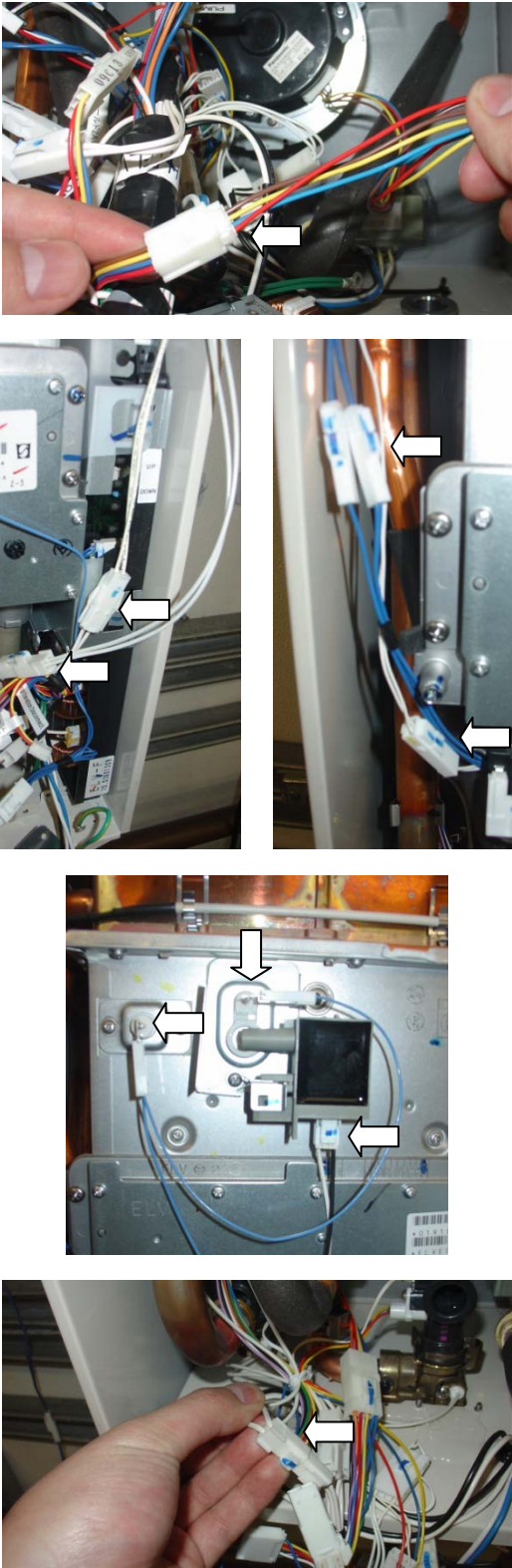
Procedure	Diagram
<p>(5) Thermal fuse and fasteners (4 sides)</p> <p>(6) Replace the freeze prevention heater with the clip holding the thermal fuse</p>	<div data-bbox="820 262 982 325">Front Side</div>  <div data-bbox="820 661 982 724">Right Side</div>  <div data-bbox="820 1071 982 1134">Back Side</div>  <div data-bbox="820 1480 982 1543">Left Side</div> 



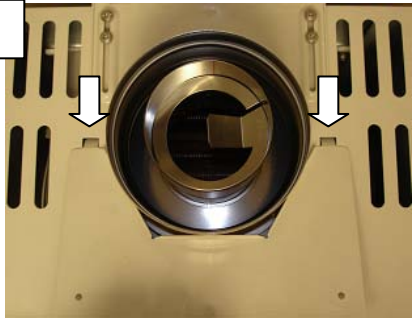
Procedure	Diagram
<p>12. Reattach burner and heat exchanger assembly</p> <p>(1) 12 screws around perimeter of burner</p>	
<p>13. Replace assembly back inside case</p> <p>(1) Secure top left and right screws</p>	<div data-bbox="815 751 1383 1081"> <p>SV Unit</p>  </div> <div data-bbox="815 1113 1334 1348"> <p>DV Unit</p>  </div> <div data-bbox="815 1379 1399 1633"> <p>DVC Unit</p>  </div> <div data-bbox="815 1665 1399 1869"> <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>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</p>	

Procedure	Diagram
<p>15. Replace gas valve assembly</p> <ol style="list-style-type: none"> (1) Secure gas valve assembly to burner with 4 silver screws (2) Secure manifold pipe to gas inlet fitting with "C" Clamp. (3) Reconnect large wiring connection, that attaches the wires from the manifold plate to the wiring harness (4) DVC UNIT ONLY: Reconnect the rubber tube to the manifold plate 	 <p>The diagram consists of four photographs illustrating the steps for replacing a gas valve assembly. The top photo shows a gas valve assembly being secured to a burner with four silver screws, with a white arrow pointing to the screws. The middle-left photo shows a hand securing a manifold pipe to a gas inlet fitting with a "C" clamp, with a white arrow pointing to the clamp. The middle-right photo shows a hand reconnecting a large wiring connection between the manifold plate and the wiring harness, with a white arrow pointing to the connection. The bottom photo shows a hand reconnecting a rubber tube to the manifold plate, with a white arrow pointing to the tube.</p>

Procedure	Diagram
<p>16. Replace circuit board and GFCI</p> <ol style="list-style-type: none"> (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 	 <p>The diagram consists of four photographs illustrating the steps of replacing the circuit board and GFCI. The first photo shows a screw being inserted into the top of the circuit board. The second photo shows a screw being inserted into the bottom of the circuit board. The third photo shows the GFCI plate being secured to the case with two screws. The fourth photo shows the remote controller being secured back into the unit.</p>

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

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