N-0931M, NR111 and NC250 Series Heat Exchanger Replacement

Models Include: N-0931M, N-0931M-OD, N-0931M-DV

                             N-0931M-ASME, N-0931M-DV-ASME

                             NR111-SV, NR111-OD, NR111-DV

                             NC250-SV-ASME, NC250-DV-ASME

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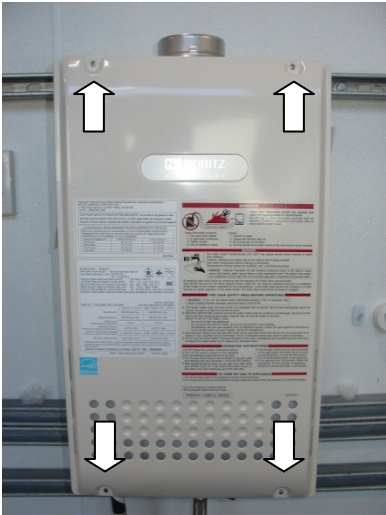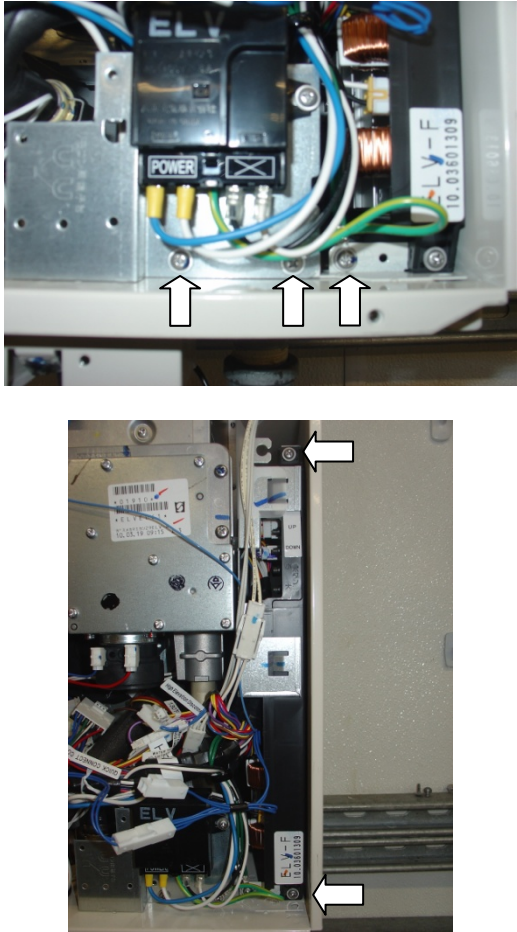
Please contact Noritz Technical Support (866-766-7489) for additional support.

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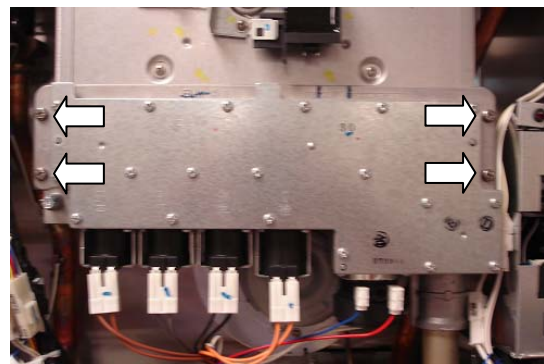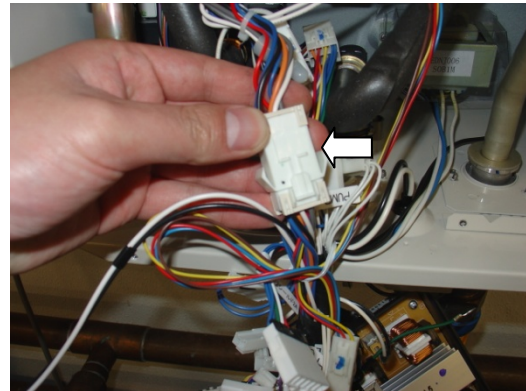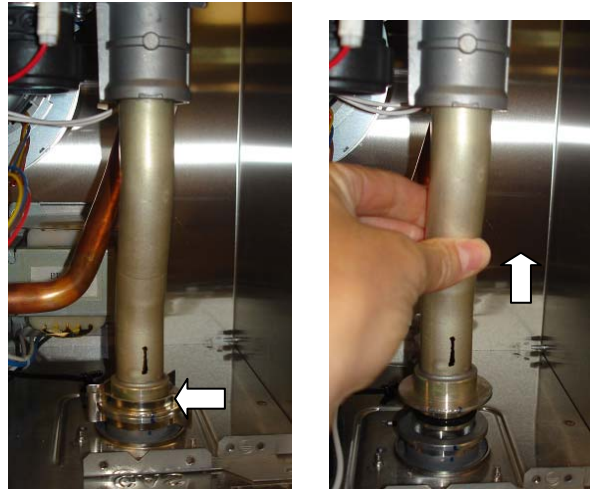**NR111 and NC250 (N-0931M Series) Heat Exchanger Replacement Procedure**

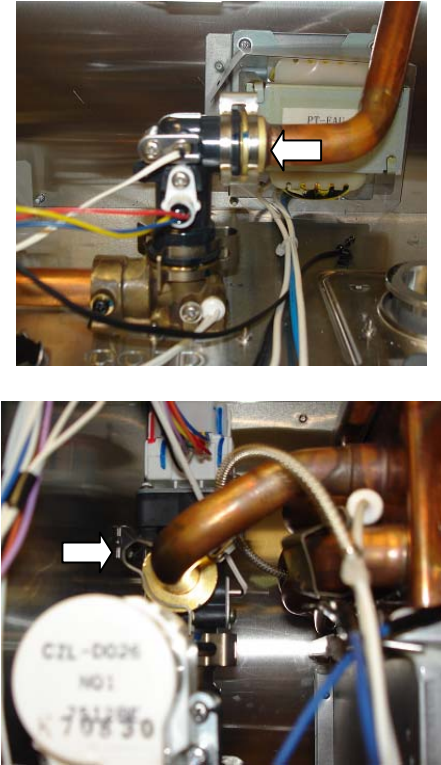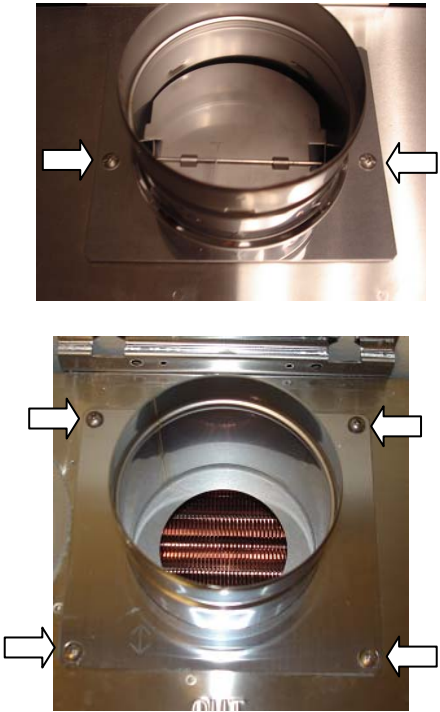| Procedure	Diagram

1. Remove front cover
 	
   (1) Disconnect electrical power to unit
   (2) Remove 4 screws
   (3) Turn off gas and water
   (4) Remove filter and drain unit completely	

2. Remove GFCI and circuit board
 	
   (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. Let the circuit board hang outside of the unit

Procedure	Diagram
3. Remove gas valve assembly (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 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.	

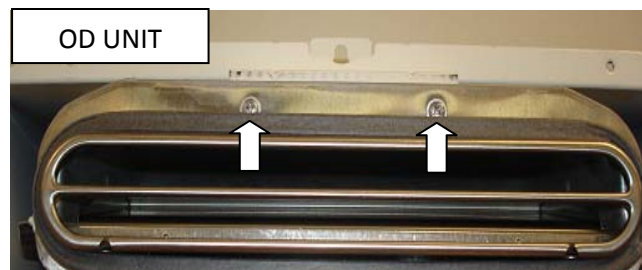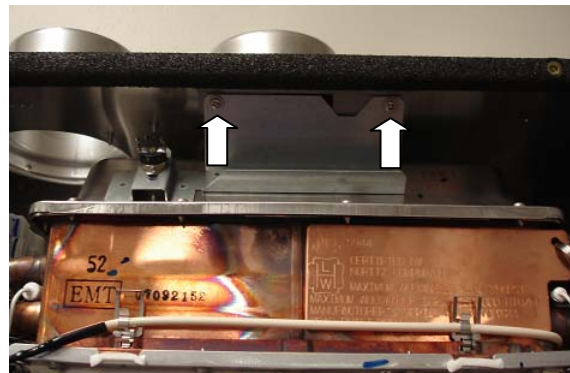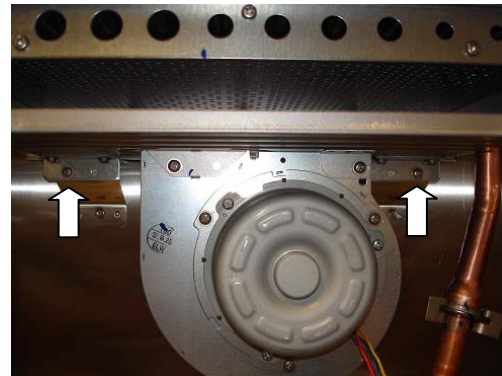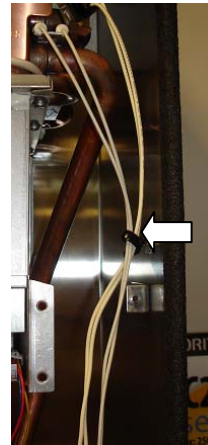| Procedure	Diagram
4. Unplug all wires that attach to the wiring harness and the body of the water heater (1) Wiring for the fan (2) High limit switch, freeze prevention heater (3) Thermal fuse (2), heat exchanger Freeze prevention heater (4) Flame rods (2), ignition box (5) Freeze prevention sensor (2) on exhaust box	

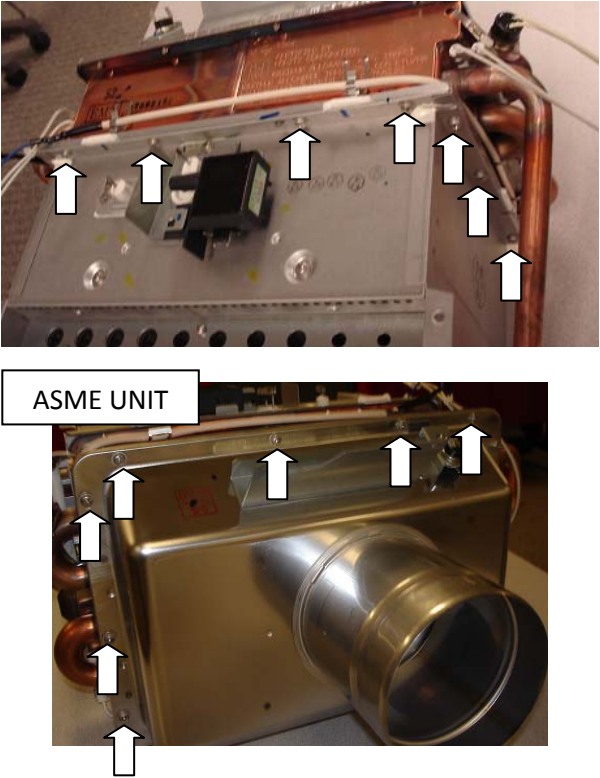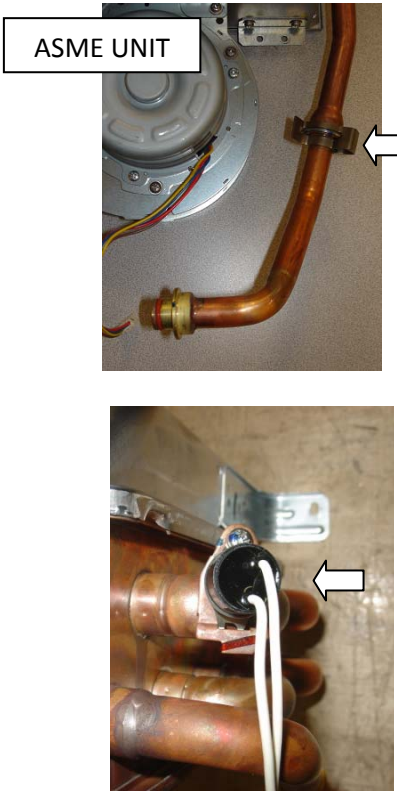| Procedure	Diagram
5. Disconnect water pipes coming from the heat exchanger. (1) Push out "C" clamps from flow sensor and main water valve (2) Disconnect water pipes from each water connection	
6. Remove Case Top Cover from Flue NOTE: OD units this step is skipped (1) Some units will have 2 screws and some will have 4 screws (2) Remove the 2 or 4 screws and pull of top cover plate and gasket	

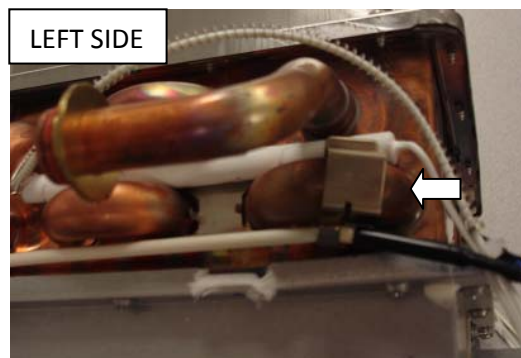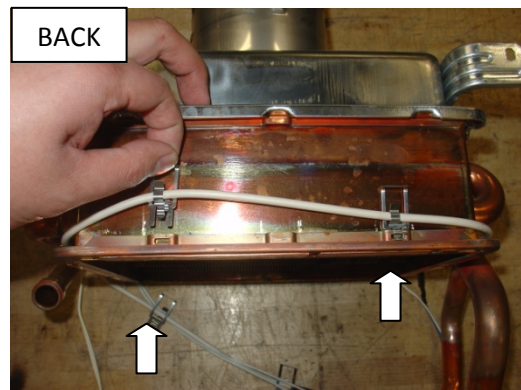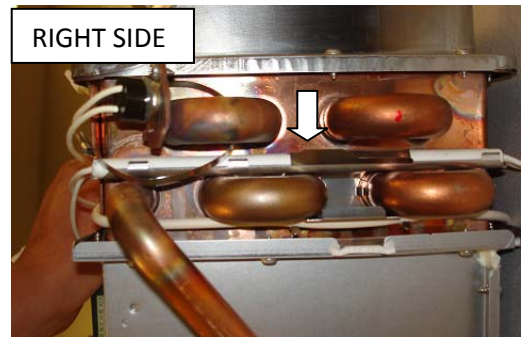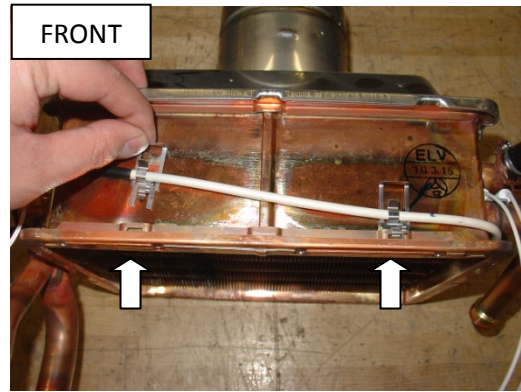| Procedure	Diagram

7. Remove heat exchanger from case
 	
   (1) Loosen wire anchors from right side of case
   (2) Remove the 2 set screws on the bottom of the burner
   (3) Remove the upper left and right set screws near the top center of the case (support bottom of assembly) OD Units the screw will be located above flue
	
	OD UNIT

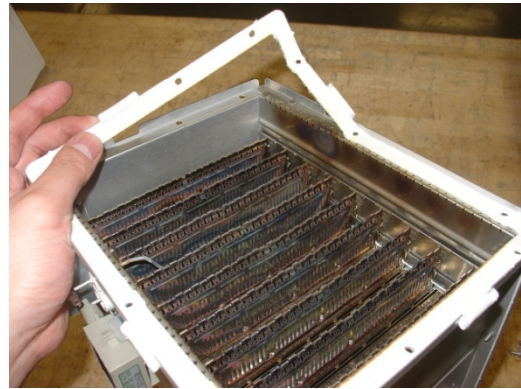| Procedure	Diagram
8. Separate burner from heat exchanger (1) Remove 14 screws holding burner to heat exchanger (non ASME units the Exhaust Box is already attached to the heat exchanger (2) ASME UNITS ONLY: The exhaust box will have to be removed there are 14 screws. A gasket is supplied with the heat exchanger for between the heat exchanger and exhaust box	ASME UNIT
9. Remove heat exchanger components and put on new heat exchanger (1) Water inlet pipe by removing the "C" Clamp (ONLY ON ASME UNITS) (2) High limit switch	ASME UNIT

(3) Thermal fuse and fasteners from four sides of heat exchanger

FRONT

RIGHT SIDE
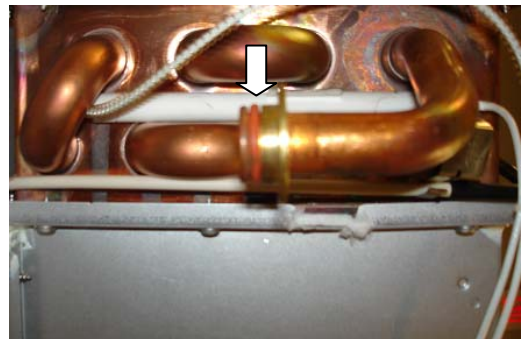
BACK

LEFT SIDE

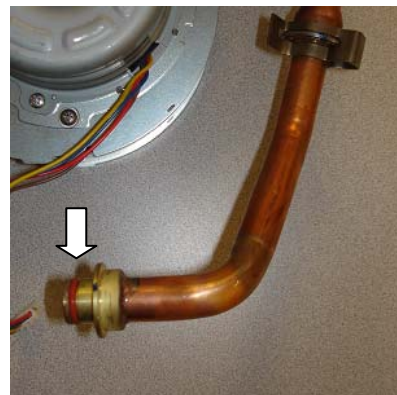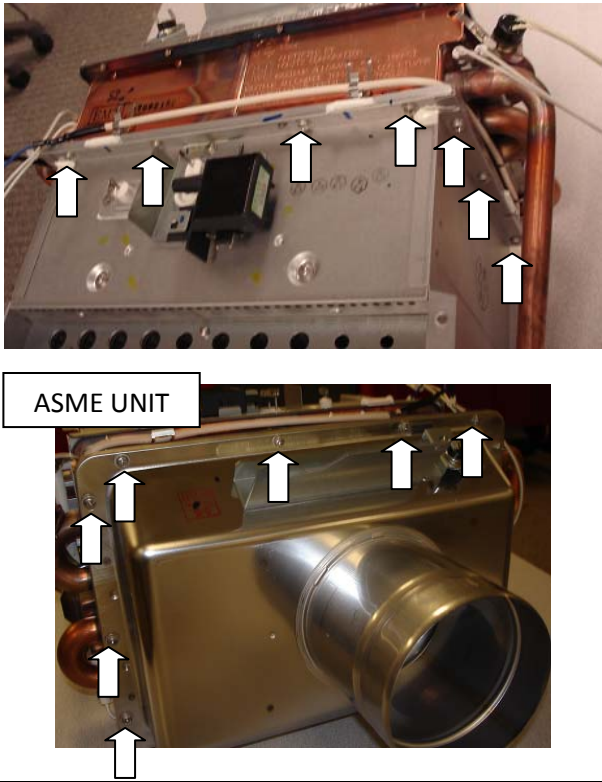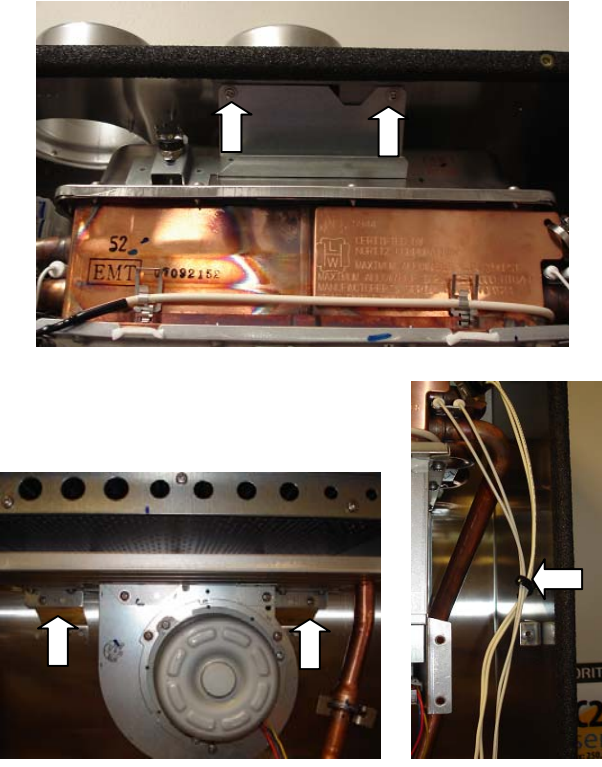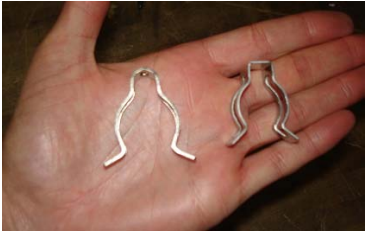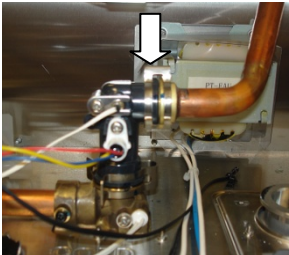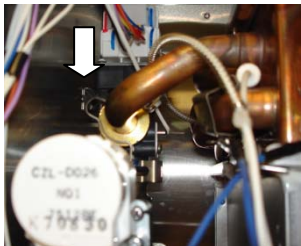| Procedure	Diagram

10. Replace burner gasket
 	
    (1) Remove old gasket
    (2) Replace with new gasket	
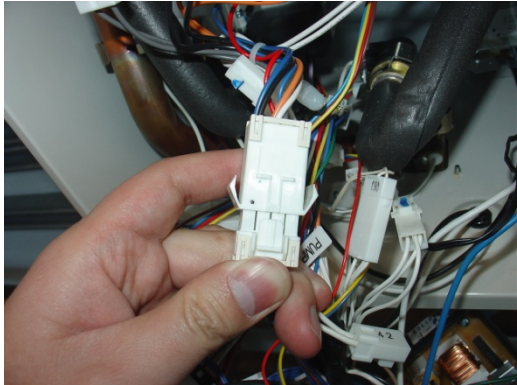
11. Place new O-Rings on new heat exchanger
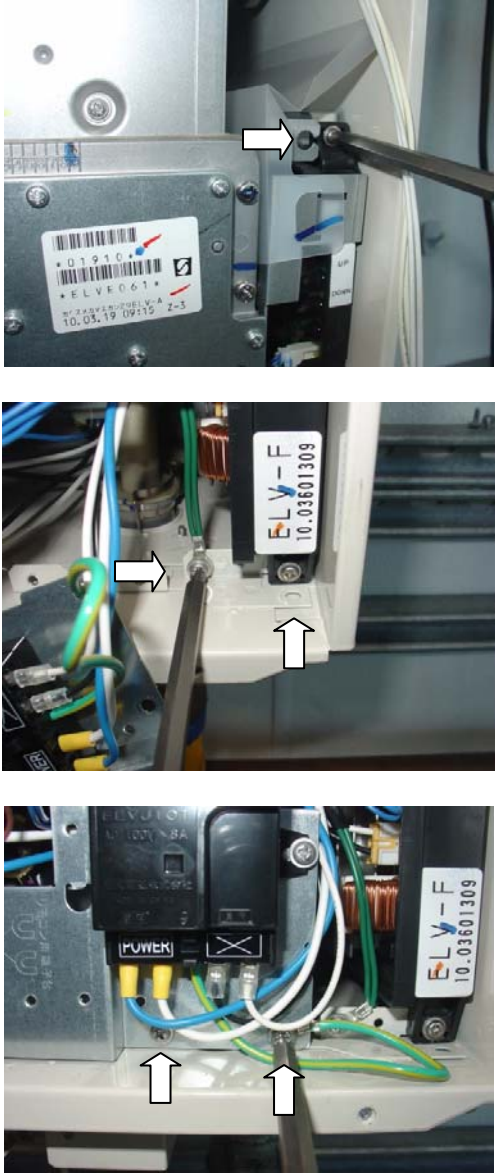 	
    (1) Inlet to heat exchanger
    (2) Main water pipe	

Procedure	Diagram

12. Reattach burner, heat exchanger, and exhaust box assembly
 	
   (1) 14 screws around perimeter of burner and heat exchanger
   (2) ASME UNIT ONLY : 14 screws around perimeter of exhaust box and heat exchanger
	
	ASME UNIT

13. Replace assembly back inside case
 	
   (1) Secure top left and right screws
   (2) Secure bottom burner screws
   (3) Tighten wire anchor

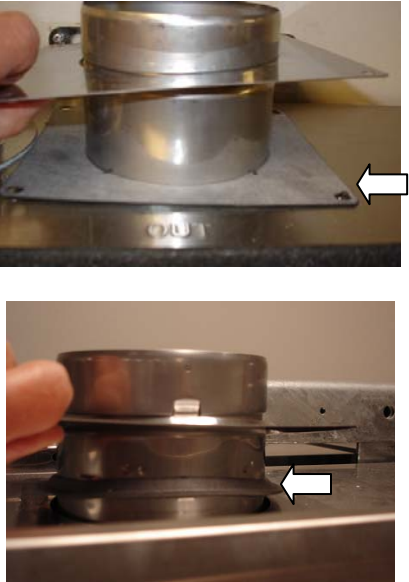| Procedure	Diagram
14. Reconnect water connections (1) Locate 2 "C" clamps and connect to main water valve (larger) and flow sensor (smaller)	

15. Replace gas valve assembly
 	
  (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	

Procedure	Diagram

16. Reconnect all wires that attach to the wiring harness and the body of the water heater
 	
   (1) Wiring for the fan
   (2) High limit switch, freeze prevention heater
   (3) Thermal fuse (2), heat exchanger Freeze prevention
   (4) Flame rods (2), ignition box
   (5) Freeze prevention sensor (2) on exhaust box	

Procedure	Diagram
17. 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)	

Procedure	Diagram
18. Replace case top covers NOTE: OD units this step is skipped (1) Depending on the unit the gasket may be different some are square and flat others are sponge like and round (2) Secure top covers with 2 or 4 screws depending on top cover style	
19. Replace Front Cover (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" clamps for leaks) (5) Secure front cover with 4 screws (6) Return electrical power to the unit	