

**EXHAUST FLUE ASSEMBLY REPLACEMENT  
ELITE AND ELITE VWH 80, 110, 150, and 220 MODELS  
(Part # 7450P-901)**

**STOP! Read these instructions or warranty will be void!**

**INCLUDED IN KIT**

- (1) Clamp All Replacement
- (1) Flue Temperature Sensor
- (1) Silicone O Ring
- (1) Flue Outlet Gasket
- (1) Stainless Steel Barb Fitting with O Ring
- (1) ECO Flue Switch
- (1) Flue Bracket
- (1) 3" Exhaust Assembly
- (1) Instruction Sheet
- (1) Stainless Steel Screw

**⚠ DANGER**

This installation shall be done by a qualified service agency in accordance with these instructions, all applicable codes, and requirements of the authority having jurisdiction. Failure to follow these instructions will result in substantial property damage, severe personal injury, or death.

**TOOLS REQUIRED (NOT INCLUDED)**

- Phillips Head Screwdriver, Flat Head Screwdriver, or Drill with Phillips and Flat Head Bits
- Adjustable wrenches of assorted sizes
- Nut driver with assorted attachments
- Materials and tools for removing and installing various kinds of exhaust pipe (PVC / CPVC Saw, Sockets of varying sizes, Flat Head Screwdriver, PVC / CPVC pipe, cement, etc. See boiler installation manual for important venting information.)

**⚠ DANGER**

**IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT, CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE. DO NOT STORE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

**WHAT TO DO IF YOU SMELL GAS**

- Do not try to light any appliance.
- Do not touch any electrical switch.
- Do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department. Installation and service must be provided by a qualified installer, service agency, or the gas supplier.

**STEP 1: PREPARATION**

1. Turn off all electrical power to the boiler – both at the boiler, and at the circuit breaker.

**⚠ DANGER**

**DO NOT** proceed with installation if the boiler remains powered. Failure to follow this warning will result in property damage, serious personal injury, or death.

2. Close water inlet and outlet valves to the boiler.
3. Drain all water from the boiler.

**⚠ WARNING**

**Do not** proceed with installation if boiler remains filled with water. Failure to follow this warning could result in property damage, serious personal injury, or death.

## ⚠ WARNING

Water drained from the boiler may be scalding hot. Take precautions to avoid scalding when draining boiler. Failure to follow this warning could result in property damage, serious personal injury, or death.

4. Remove boiler front cover.

## ⚠ WARNING

Wait until boiler has had sufficient time to cool before proceeding with installation. Failure to follow this warning could result in property damage, serious personal injury, or death.

### **STEP 2: REMOVE EXISTING EXHAUST VENT ASSEMBLY**

1. Remove exhaust pipe from existing exhaust assembly. This procedure will differ depending on the exhaust piping material used in the installation.

## CAUTION

If it is necessary to cut the exhaust pipe, it is recommended to cut the pipe a minimum of one foot away from the vent outlet assembly in order to ease reinstallation. Failure to follow these instructions could result in property damage.

2. Use an adjustable wrench to remove the air vent from the top of the boiler. See Figure 1. Remove the rubber air vent gasket from the boiler cabinet. Place both the air vent and rubber gasket in a safe location for eventual reinstallation.

**NOTE:** A replacement air vent and gasket ARE NOT included in this kit.

## ⚠ CAUTION

There may be residual pressure in the boiler. Take precautions when removing the air vent. Failure to follow these instructions could result in property damage or personal injury.

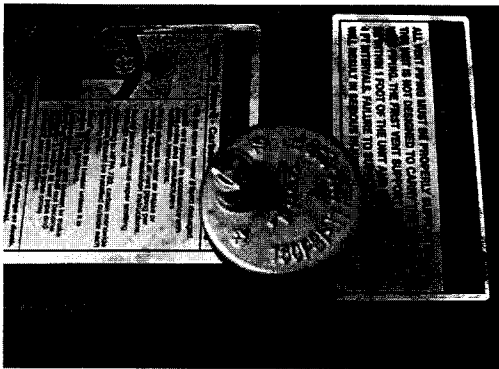


Figure 1 – Air Vent

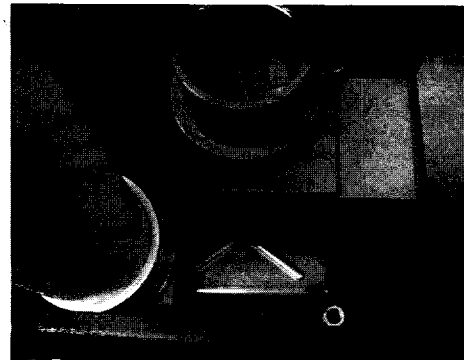


Figure 2 – Air Vent and Access Cover Removed

3. Use a Phillips Head screwdriver or drill with Phillips Head bit to remove screws attaching the top access cover to the boiler cabinet. Remove the top access cover. Place the screws and top access cover in a safe location for eventual reinstallation. See Figure 2.

**NOTE:** Replacement screws ARE NOT included in this kit.

4. Remove control board access cover from the top of boiler to expose the field connection board and exhaust vent assembly connections. See Figure 3.

5. Examine the installed exhaust vent adapter. Some models have a stainless steel barb fitting and hose installed on the adapter (Figure 3). Other models have a stainless steel screw installed in this location. See Figure 4. The finished exhaust vent adapter replacement installation MUST match that of the original.

**NOTE:** Depending on the model of your boiler, there will be either a stainless steel screw, or stainless steel barb fitting and O-ring left over in the parts included with this kit.

## CAUTION

Failure to install the replacement exhaust vent adapter to meet the original installed specifications will result in improper boiler operation, could result in property damage, and WILL VOID warranty.

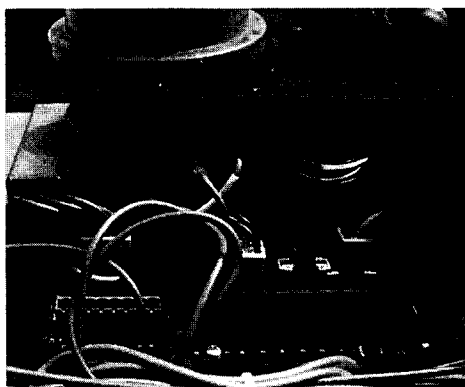


Figure 3 – Access Cover Removed

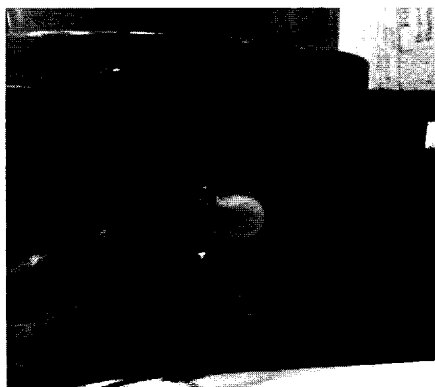


Figure 4 – Adapter with Installed Screw

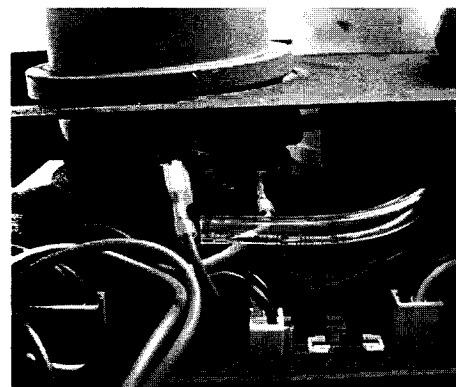


Figure 5 – ECO Wires and Hose Removed

6. Remove spade connectors from ECO flue switch. See Figure 5.

7. Remove hose from stainless steel barb fitting. (This step is not applicable to models with stainless steel screw installed in this location.) See Figure 5.

8. Remove ECO flue switch by turning counterclockwise by hand. See Figure 6.



Figure 6 – ECO Flue Switch Removed



Figure 7 – Removed Two Pin Connector

9. Remove the two pin wire connector from the flue temperature sensor. See Figure 7.

10. Carefully remove the exhaust vent assembly by lifting and turning the assembly counterclockwise.

11. Remove the flue outlet gasket from the exhaust vent. A Flat Head screwdriver may aid in this process. See Figure 8.

12. Use a Phillips Head screwdriver to remove the screws connecting the flue bracket to the assembly. Removing the ten pin connector from the field connection board may ease this process. See Figure 9.

**NOTE:** DO NOT lose these screws. Additional screws are not included with this kit.

13. Remove flue bracket.



Figure 8 – Exposed Flue Outlet Gasket

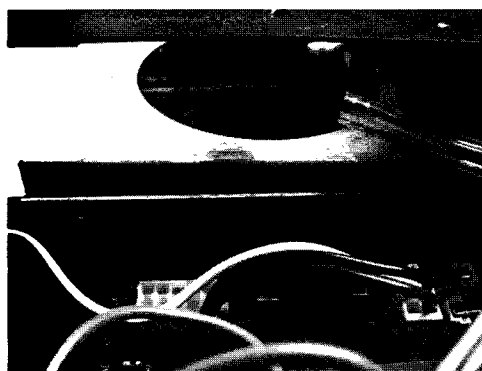
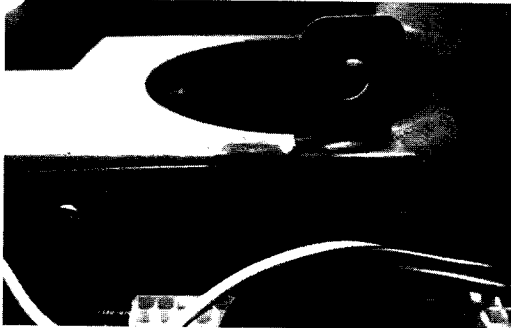


Figure 9 – Flue Bracket Installation Location

### **STEP 3: INSTALL THE NEW VENT OUTLET ASSEMBLY**

1. Install the flue outlet gasket into the exhaust vent. A flat head screwdriver may aid in this process. See Figure 8.
2. Install the flue bracket using the two screws removed in Step 2, 9. See Figures 9 and 10. If necessary, reattach ten pin connector to the field connection board.
3. Use a small adjustable wrench to install the flue temperature sensor into the exhaust assembly. See Figure 11.



**Figure 10 – Installed Flue Bracket**



**Figure 11 – Installing the Flue Temperature Sensor**

4. Install O ring on the ECO flue switch. See Figure 12.

5. Install O ring on the stainless steel barb fitting. (This step is not applicable to models with installed stainless steel screw in this location.) See Figure 13.



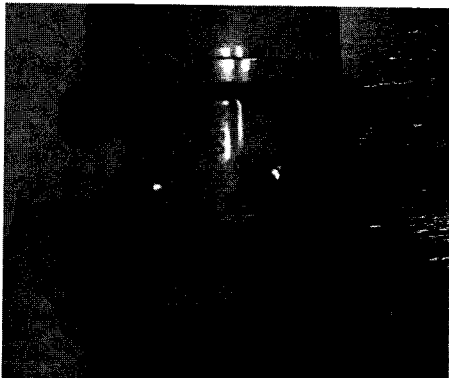
**Figure 12 – O Ring Installed on ECO Flue Switch**



**Figure 13 – O Ring Installed on Stainless Steel Barb Fitting**

- 6.a. For models with an installed stainless steel barb fitting, use a small adjustable wrench to install stainless steel barb fitting into the exhaust assembly. See Figure 14.

- 6.b. For models with an installed stainless steel screw, use a flat head screwdriver to install the stainless steel screw in the exhaust assembly. See Figure 4.



**Figure 14 – Exhaust Assembly with ECO and Barb**



**Figure 15 – Exhaust Assembly in Initial Position**

7. Lubricate flue outlet gasket with a soapy water solution or water-based lubricant. See Figure 8.

8. Carefully slide the exhaust assembly into the flue outlet as shown in Figure 15. Do not push the exhaust assembly fully into place.
9. Carefully turn the exhaust assembly clockwise until the ECO fitting appears in the eye of the flue outlet gasket. See Figure 16.
10. Install the ECO Flue Switch with attached O Ring through the eye of the flue outlet gasket and into the exposed fitting. Attach the red spade connectors to the ECO Flue Switch. See Figure 17.
11. Attach the rubber hose to the stainless steel barb fitting. (This step is not applicable to models with installed stainless steel screw in this location.) See Figure 17.
12. Attach the two pin connector to the flue temperature sensor. See Figure 18.

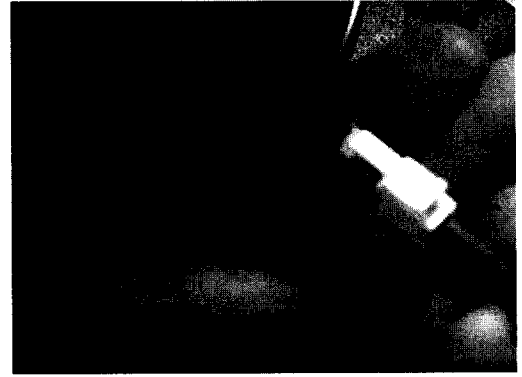
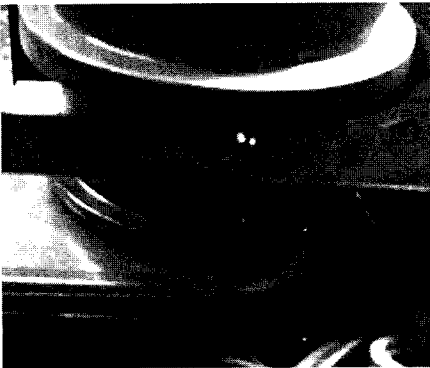


Figure 16 – Exhaust Assembly in Position    Figure 17 – ECO, Hose Attached to Barb    Figure 18 – Two Pin Connector Attached to Sensor

13. Reinstall control board access cover on top of boiler to cover the field connection board and exhaust vent assembly connections.
14. Slide the rubber clamp-all gasket over the exhaust assembly. See Figure 19.
15. Slide the clamp-all over the installed gasket. See Figure 20.



Figure 19 – Gasket Installed on Exhaust Assembly

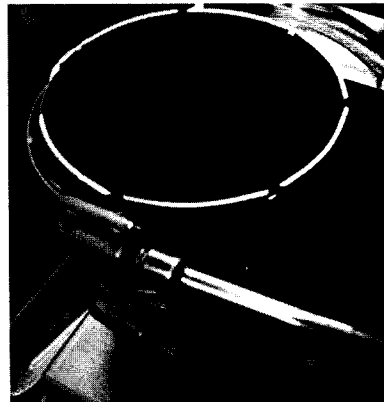


Figure 20 – Tightening the Clamp-All

16. Tighten clamp-all using a 3/8" nut driver. See Figure 20.
17. Use a Phillips Head screwdriver or drill with Phillips Head bit, and the screws removed earlier to reinstall the top access cover to the boiler cabinet.
18. Replace the rubber air vent gasket. Use a small amount of pipe dope on the threads of the air vent. Use a wrench to reinstall the air vent on the top of the boiler.
19. Slide exhaust pipe into top of the clamp-all gasket.
20. Finish tightening the clamp-all onto the exhaust pipe using a 3/8" nut driver.
21. Reinstall the exhaust vent piping following information provided in the boiler installation manual.

**STEP 4: POWER THE BOILER****⚠ WARNING****IF YOU SMELL GAS:**

- Do not try to light any appliance.
- Do not touch any electrical switch.
- Do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone.
- Follow gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

1. Restore electrical power to the boiler.
2. Initiate a call for heat.
3. Observe boiler operation. If an error or fault code should appear on the display, refer to boiler installation manual for troubleshooting information.

**⚠ DANGER**

Failure to follow the venting information provided in the boiler installation manual when reinstalling exhaust vent pipe will result in property damage, serious personal injury, or death.

4. Check exhaust vent piping and exhaust assembly to ensure there are no leaks, especially at the sensor / barb connections. Repair leaks as necessary.

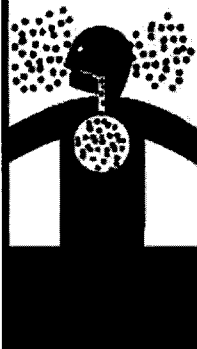
**⚠ DANGER**

Failure to check for and repair exhaust leaks will result in property damage, serious personal injury, or death.

5. If there are no leaks and the boiler operates properly for at least 15 minutes, installation is complete.

**⚠ WARNING**

**Breathing Hazard - Carbon Monoxide Gas**



- Do not operate heater if flood damaged.
- Install vent system in accordance with local codes and manufacturers installation instructions.
- Do not obstruct heater air intake or exhaust. Support all vent piping per manufacturers installation instructions.
- Do not place chemical vapor emitting products near unit.
- According to NFPA 720, carbon monoxide detectors should be installed outside each sleeping area.
- Never operate the heater unless it is vented to the outdoors.
- Analyze the entire vent system to make sure that condensate will not become trapped in a section of vent pipe and therefore reduce the open cross sectional area of the vent.

**Breathing carbon monoxide can cause brain damage or death. Always read and understand instruction manual.**

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