

**NOTICE**  
Series  
Identification

Read the boiler rating label to determine the series number. The rating label is located on the top of the boiler (inside).

## Combustion Air Pressure Switch Kit Instructions

Kit part number 383-600-513

**NOTICE**

You must read and have the **SlimFit® Series 2 Boiler Manual** with you to proceed with these instructions.

The Boiler Manual is available online at [Weil-McLain.com](http://Weil-McLain.com)

### STOP!

#### Read before proceeding

#### Hazard definitions

The following defined terms are used throughout this manual to bring attention to the presence of hazards of various risk levels or to important information concerning the life of the product.

**⚠ DANGER**

Indicates presence of hazards that will cause severe personal injury, death or substantial property damage.

**⚠ WARNING**

Indicates presence of hazards that can cause severe personal injury, death or substantial property damage.

**⚠ CAUTION**

Indicates presence of hazards that will or can cause minor personal injury or property damage.

**NOTICE**

Indicates special instructions on installation, operation or maintenance that are important but not related to personal injury or property damage.

**⚠ WARNING**

**These instructions must only be used by a qualified installer/service technician.** Read all instructions completely before beginning the installation. Failure to follow all instructions can cause severe personal injury, death or substantial property damage.

This kit is intended to be installed on SlimFit 1000-2000 Series 2 boilers with vertical direct exhaust venting or direct vent with sidewall air intake and vertical vent. See SlimFit Series 2 Boiler Manual for specifics and other requirements for this venting configuration.

### SlimFit model numbers:

#### Left-hand boilers

(cleanout access on left side when facing burner end)

**SF1000L** — 1000 MBH input

**SF1500L** — 1500 MBH input

**SF2000L** — 2000 MBH input

#### Right-hand boilers

(cleanout access on right side when facing burner end)

**SF1000R** — 1000 MBH input

**SF1500R** — 1500 MBH input

**SF2000R** — 2000 MBH input

### P/N 383-600-513 Kit contents

Item	Description	Part Number	Qty
1	Combustion Air Pressure Switch	571-624-648	1
2	Screw Hex Washer Head Slotted 10/32 X 3/8 BP	562-135-710	2
3	Clip Plastic .25D Hole Snap-In	562-650-114	1
4	Combustion Air Pressure Switch Kit Instructions	550-100-149	1
5	1/8 inch Hose Barb Fitting	562-302-525	1
6	Harness - Air Pressure Switch	591-392-052	1

### Recommended tools:

- 5/16" Nut driver
- Drill with 5/32" drill bit
- 13mm Wrench
- 7/16" Wrench
- Thread Sealant (pipe dope)

## STOP! Read before proceeding

**⚠ WARNING** The boiler contains ceramic fiber and fiberglass materials. Use care when handling these materials per instructions in the Boiler Manual, available on-line at Weil-McLain.com. Failure to comply could result in severe personal injury.

**⚠ WARNING** **Shut off power to the boiler and close main gas valve. Close all isolation valves.** Failure to do so can result in severe personal injury, death or substantial property damage.

**⚠ WARNING** **Wait for the heat exchanger to cool down before proceeding.** Failure to do so can result in severe personal injury.

**⚠ WARNING** Removing and reinstalling components can change boiler behavior. After any maintenance procedure, you must prove the boiler is operating correctly. To do so, **follow the complete procedure for boiler and system start-up as instructed in the Boiler Manual.** Failure to comply could result in severe personal injury, death or substantial property damage.

**⚠ WARNING** For component location reference, see previous pages. This is duplicated from the SlimFit Boiler manual, but included here for convenience. All instructions in the Boiler manual must be followed, including fuel requirements, water requirements and start-up/operation.

## Clearance requirements

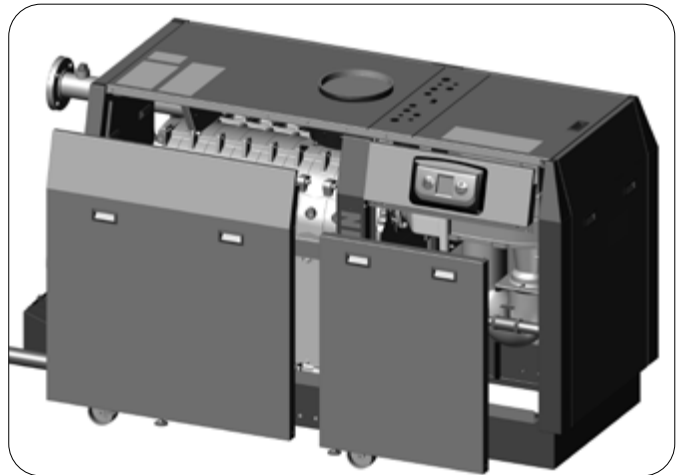
This procedure requires adequate clearance to remove the side panels and center Weil-McLain post from the cleanout plate side of the boiler.

It is assumed that the boiler will NOT need to be moved in order to meet these clearance requirements.

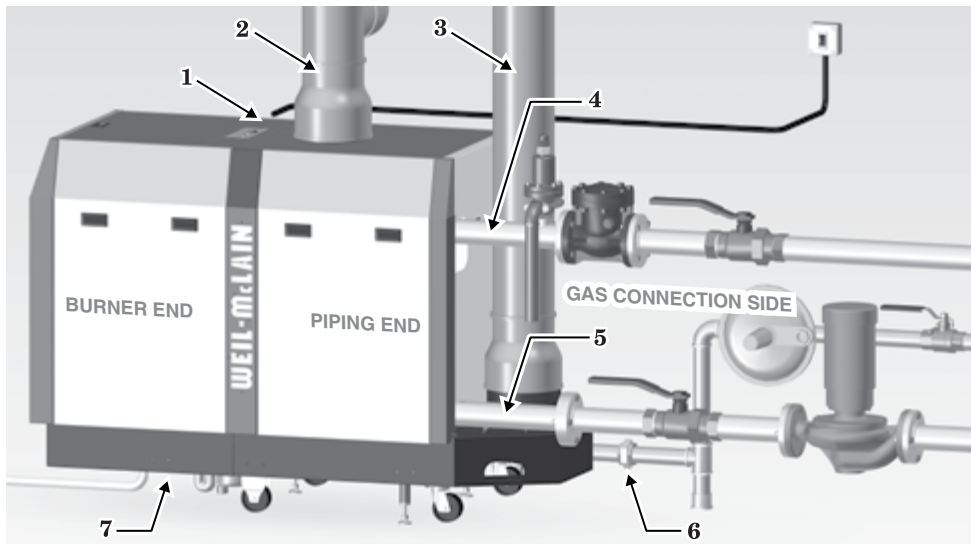
## Isolate the boiler

1. Disconnect power to boiler by Service Switch or On/Off switch located on the top of the boiler, see Figure 1.
2. On the cleanout plate side of the boiler remove the two side access panels, two (2) screws in bottom of Display panel, Weil-McLain center post, and piping end door for access to internal components, see Figures 2 and 3.

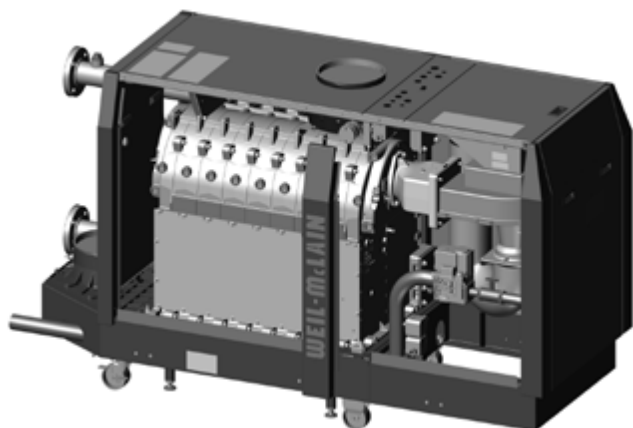
**Figure 2** Remove side access panels and display panel.



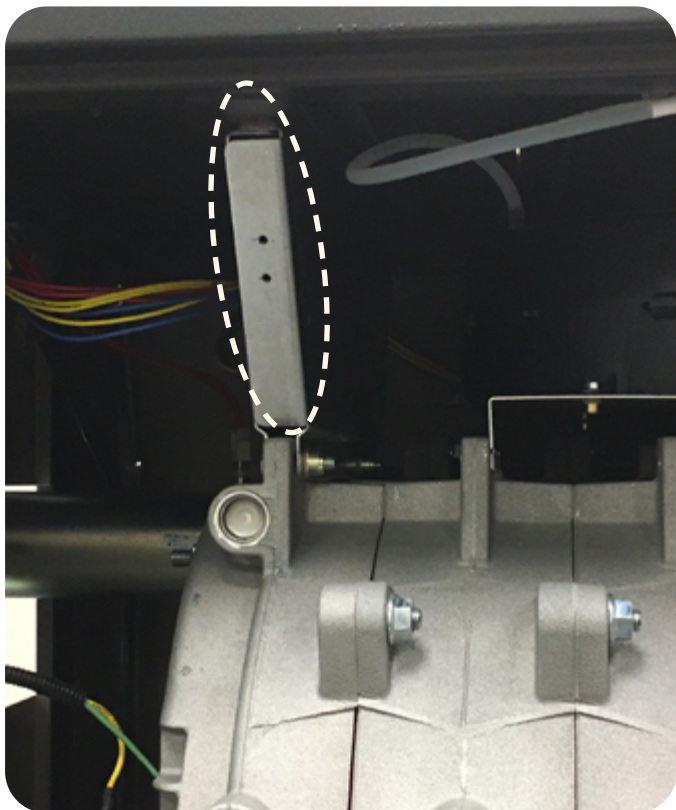
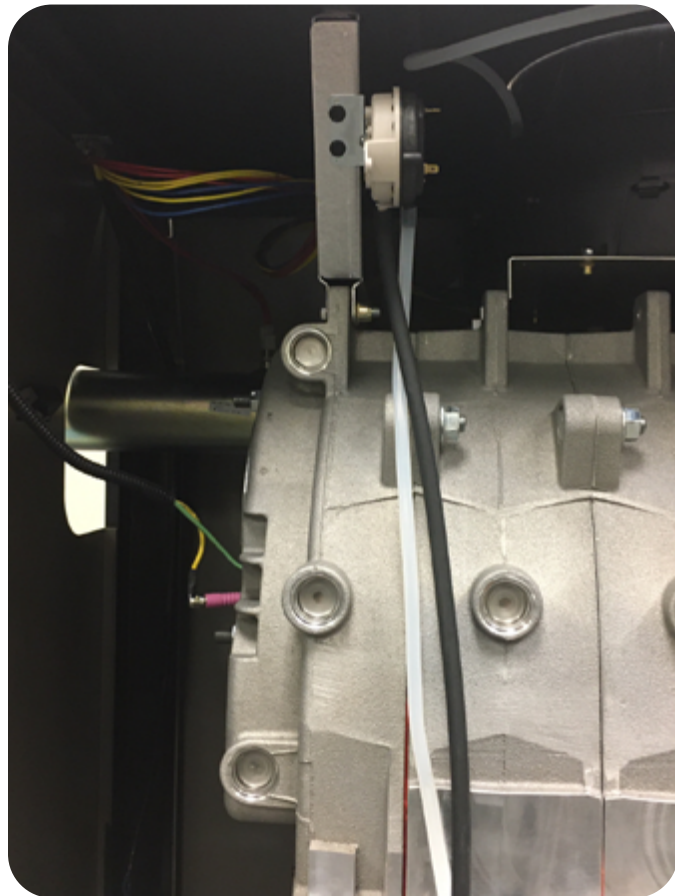
**Figure 1** Typical boiler connections (all external components, wiring and piping shown for reference only)



- 1 Electric entrance
- 2 Air pipe (air intake)
- 3 Vent pipe (vent connection)
- 4 Water outlet pipe (system supply)
- 5 Water return pipe (system return)
- 6 Gas connection
- 7 Condensate trap assembly

**Figure 3** Remove center post.


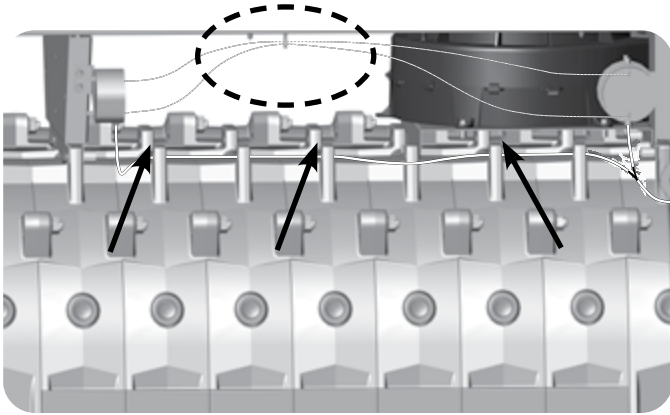
3. Carefully remove the display panel that is still attached by the communication harness. Place on top of boiler.
4. Locate the support frame bracket at the back of the boiler (Water connection end). See Figure 4.
5. On the angled down face of the bracket locate two (2), 5/32" holes, approximately 2" from the top of the bracket. If they are not present, then the two (2) holes will have to be drilled with a 5/32" drill bit approximately 2" from the top of the bracket. The spacing of the two (2) holes should be 0.80". It

**Figure 4** Support frame bracket, shown with holes drilled

**Figure 5** Pressure switch mounted to frame support bracket


is recommended to use the actual bracket on the pressure switch to mark the hole centers, then drill the marked holes.

6. With the two (2) screws provided, install the Combustion Air Pressure Switch as shown in the image, see Figure 5, (above). The pressure tap should be directed downward when installed. Figure 5 shows installation on a "Left hand" boiler. For "Right hand" boilers the pressure switch will have the spade terminals facing the rear or water pipe end of the boiler.
7. Disconnect the white silicone pressure sense line from the new Combustion Air Pressure Switch and route it through the casting holes as shown in Figure 6.
8. Disconnect the white silicone sense line from the bottom of the factory installed Minimum Air Flow Switch and connect it to the Y-fitting on the new Combustion Air Pressure Switch sense line. (Figure 73 in boiler manual shows the Minimum Air Flow Switch.)
9. Connect the short hose off of the Y-fitting back to the Minimum Air Flow Switch.
10. Connect the long hose off of the Y-fitting on to the Combustion Air Pressure Switch.
11. Disconnect the lower white with orange stripe wire from the factory installed Minimum Air Flow Switch.
12. Using the P/N 591392052 wire harness provided in the kit, connect the female terminal removed from the Minimum Air Flow Switch to the male terminal end of the new harness. The opposite end of that wire (female terminal) will be connected



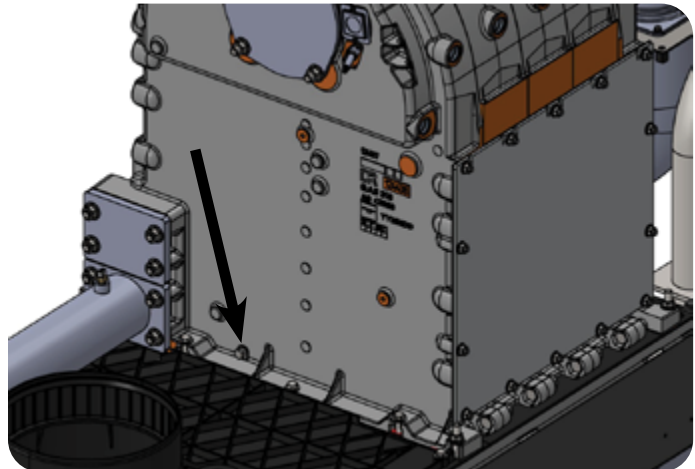
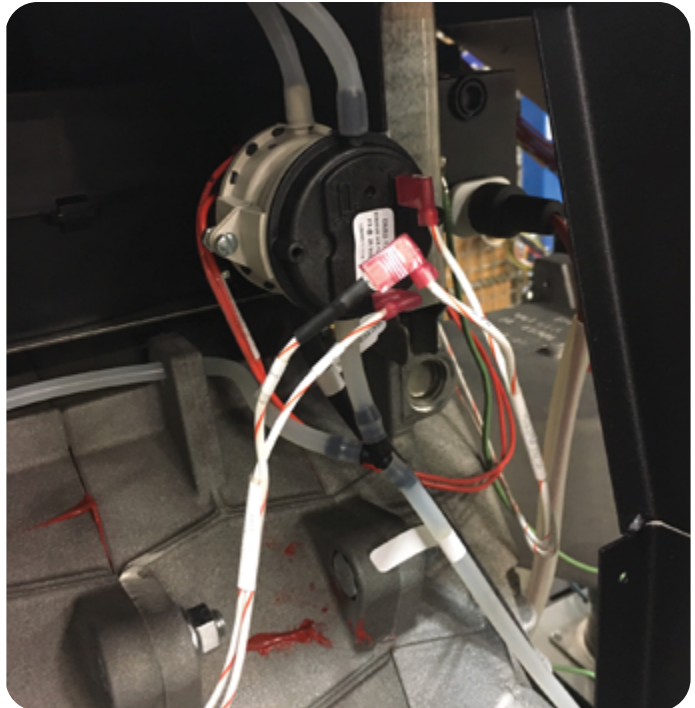
**Figure 6** Pressure switch sense lines routing

to the upper male terminal on the new Combustion Air Pressure Switch.

13. The remaining wire from the P/N 591392052 harness with two female terminals will connect to the lower male terminals on the Combustion Air Pressure Switch and the factory installed Minimum Air Flow Switch. When the installation is complete, the Combustion Air Pressure Switch will be in series with the original factory installed Minimum Air Pressure Switch. (Figure 8)
14. Insert the plastic wire clip into the top frame as shown in Figure 6.
15. Ensure wires going to the Combustion Air Pressure Switch are routed through the plastic clip.
16. Using 13mm wrench, remove the 1/8 inch plug from the base of the end casting at the water connection end of the boiler. (Figure 7) Clean the internal threads to remove any debris.
17. Apply thread sealant (pipe dope) to the threaded end of the 1/8 inch hose barb supplied in the kit.
18. Using a 7/16" wrench, install the 1/8 inch hose barb fitting to the open port in the end casting.
19. Connect the black-colored sense line from the Combustion Air Pressure Switch to the hose barb fitting that was installed to the end casting.
20. Restore the power to the boiler and proceed through the Annual Start up / Safety checks identified in the SlimFit Series 2 Boiler Manual.

### Reinstall the center post, display panels and end and side access panels.

Reinstall the center post, end panel, side access panels and display panel, by aligning top tabs with slots in the top jacket frame, then sliding into slots in bottom frame until secure. (See Figure 2, page 2)

**Figure 7** Hose Barb Location**Figure 8** Electrical Connections to Minimum Air Flow Switch

### Start up, test and adjust boiler

1. **Refer to Boiler Manual for proper startup procedure.**
2. Follow all instructions in the Boiler Manual to start up, test and adjust the boiler.