

INSTALLATION INSTRUCTIONS



Tradesman 170/400 Orifice Change

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Kit Contents:

DESCRIPTION	QTY.
Burner Orifice	1
Copper washer	1
Orifice holder	1
Retention Nut	1
Formed copper tube	1
Compression sleeves	2
Compression nuts	2
Black plastic bushing	1

Tools required:

- Standard screwdriver
- ¼ in. nut driver
- Adjustable wrench
- Tradesman 400: Ratchet with extensions and 7/8 in socket
- Tradesman 170: Ratchet with extensions and 9/16 in. socket

Qualifications for Installation of the kit:

- You must be able to read and understand these instructions
- You must have sufficient experience and training to install the kit's components
- You must be able to test the heater for proper operation and place the heater in a continuing safe and normal operating condition.

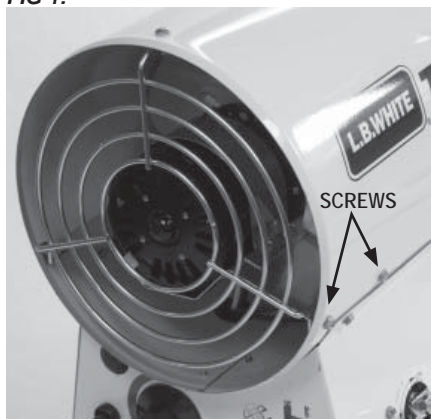
Discussion:

Use this kit to replace the original orifice (with c-clips) in the Tradesman 170 and 400 construction heaters.

Initial Preparation:

1. Disconnect the heater from its electrical supply.
2. Close all fuel supply valves to the heater.
3. Remove the heater's bottom base plate for access to the heater's control section.
4. Remove the screws that hold the motor mount to the heater's barrel. See Fig. 1

FIG 1:



5. Remove the fan guard.
6. Disconnect the following wires:
 - a. Motor wires from the circuit board
 - b. Capacitor wires from capacitor (Discharge the capacitor before wire removal)
 - c. Tradesman 170: Ignition cable from the ignitor.
7. Lift the motor and fan assembly from the heater and position as needed for access to the burner plate.
8. Loosen the compression nuts of the existing copper manifold tube at the solenoid valve outlet and burner orifice inlet. (Tradesman 170 shown, Fig. 2 and Fig. 3).

FIG 2:

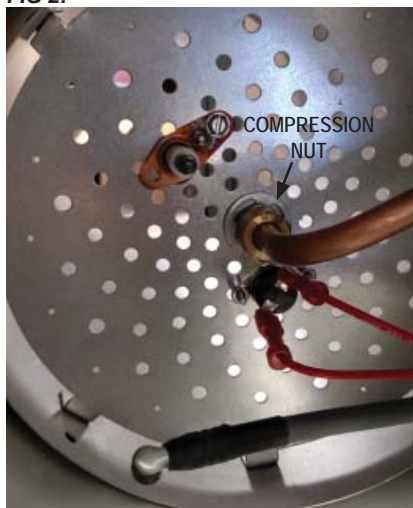


FIG 3:



9. Remove and discard the existing copper manifold tube with protective bushing. See Fig. 4.

FIG 4:



10. Remove the C clip from the orifice. Reach down the barrel of the heater and remove the orifice. See Fig. 5.

FIG 5:

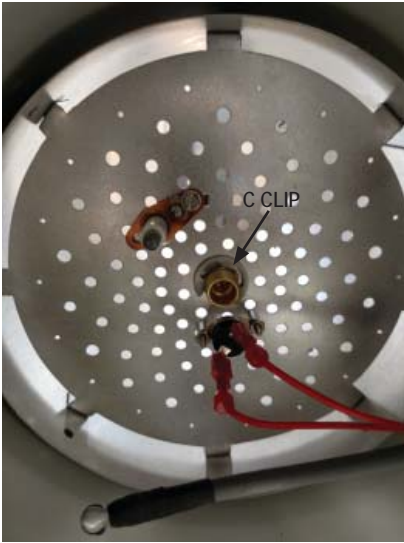


FIG 7:

**Tradesman 400**

FIG 8:

**Installing the Kit****Tradesman 170**

1. The hex of the orifice holder must be inserted into the hex hole of the burner plate to securely hold the orifice holder in place. See Figs. 6, 7, and 8. Center the attachment nut over the hex shaped burner plate hole. See Fig.9. Thread the orifice holder into the nut from the opposite side of the burner plate.

FIG 6:

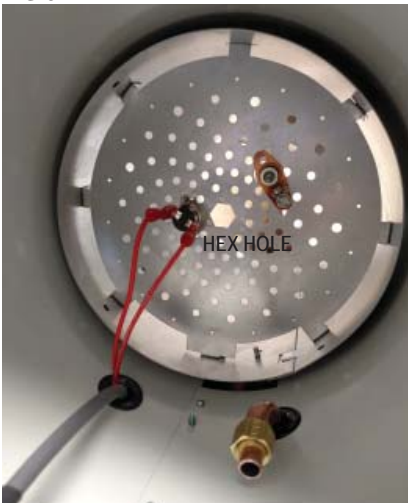
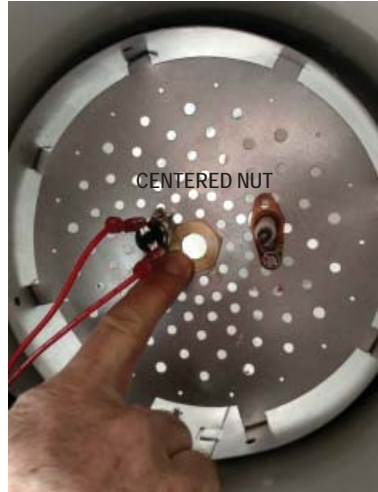


FIG 9:



2. Snug the nut in place at the burner plate. See Fig. 10.

Tradesman 170

FIG 10:



FIG 13:



3. Slide the copper washer onto the orifice.

Tradesman 170

FIG 11:



Tradesman 400

FIG 14:



Tradesman 400

FIG 12:



4. Thread the orifice with washer into the orifice holder. Snug in place. See Fig. 13 or Fig. 14.

5. Push the kit's plastic bushing into the hole at the barrel bottom. Route the replacement copper tube through the bushing. When routed about half way, slide a nut with sleeve onto the end of the tube to be connected to the inlet of the burner orifice. See Fig. 15.

FIG 15:

6. Push the tube with sleeve **firmly and completely** into the orifice. Hand tighten the compression nut onto the orifice threads. Complete this procedure for the opposite end of the tube to be installed at the solenoid valve outlet.
7. Using a wrench, **securely tighten** the compression nuts at both ends of the copper tube.

Completion

1. Reassemble the heater.
2. Connect the heater to its fuel and electrical supplies.
3. Start the heater and check for proper operation.

Service

Contact your local L.B. White dealer for replacement parts and service. You may also call the L.B. White Co., LLC at 1-800-345-7200, for assistance, or email us at customerservice@lbwhite.com.

Be sure that you have your heater model number and configuration number when calling.



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