

HD Cast Iron Burner Replacement Instructions (Four-tube Units)

Follow these instructions to replace screen-equipped HD burners with the new cast iron HD burners. A small gear wrench may be helpful due to tight spaces.

In This Kit (826-2564)		
Part No.	Description	Qty.
106-9622	T-bolt	2
220-5071	Burner Brace	1
809-0361	Screw, Drill #8 x 1/2 Hex Head	4
809-0412	Screw, #10-1/2 Hex Head Washer	2
809-0417	Nut, Flange 1/4-20 Serrated	4
809-0429	Bolt, 1/4-20x2 Hex Head Tap	4
809-0437	Screw, #10-3/8 Hex Head Washer	2
809-0459	Bolt, 5/16-18 x 3/4 Hex Head Washer	10
809-0931	Screw, #8 x 2-1/2 Hex Head Washer Slotted	6
810-3356	Cast Iron Burner, Universal	4
220-4626	Air Shutter	4

1. Remove components located in front of the frypot. This may include the gas valve, heat shield, and/or filter pan lid, as needed. Remove pilot assembly to enable removal of component box. Remove the burners along with the burner manifold, but **leave the silver brackets located at either end** (shown in Figure 1).



Figure 1: Leave these brackets attached to frypot.

NOTE: On Thermatron units, remove the control panel/cover. Drop the Thermatron switch box down (held with 2 machine screws), but **DO NOT** disconnect it.

2. Mount the pilot assembly to the frypot (Figure 2).

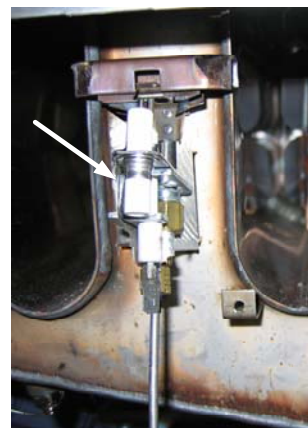


Figure 2: Secure pilot assembly to pot with screw.

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3. Installation of the burner brace involves inserting one end of the brace into the fryer interior and then rotating the brace in order to pass the other end through the inner hardware. Below are the steps to complete this process. Figure 3 shows the brace in its final position, as it will look inside of the fryer.



Figure 3: The brace in its final position, as it will look inside of the fryer.

- A. Angle the brace (as shown in Figure 4) and slide one end into the space in front of the frypot.

Ensure the side with keyholes is facing down.

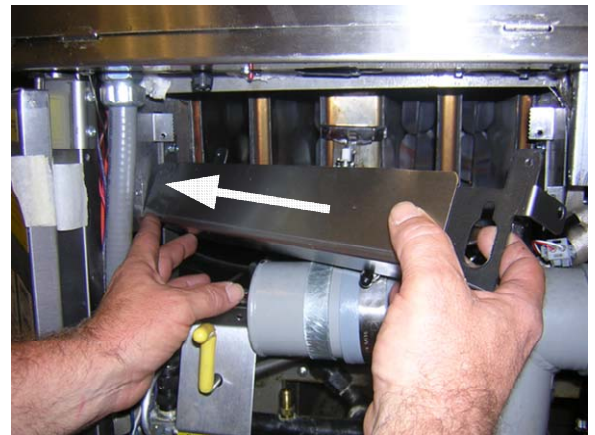


Figure 4: Start by inserting one end into the cabinet.

When inserting the brace, be sure to avoid obstructions, such as gas and drain lines, wires, and fittings. Ensure the end of the brace is behind all possible obstructions (Figure 5) before continuing.

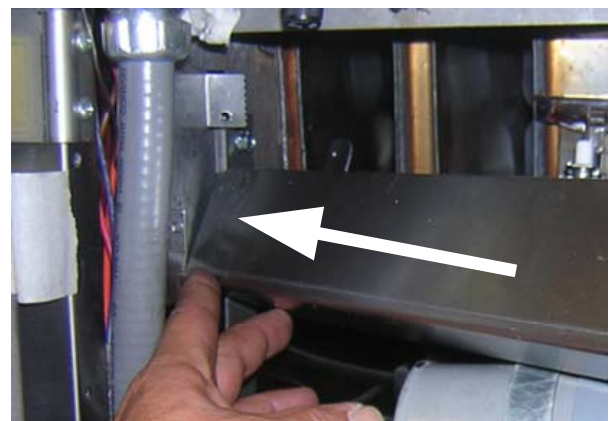


Figure 5: Brace must be behind all obstructions and clear of wires, drain lines, and fittings.

- B. Maneuver the other end over the drain manifold. Ensure the tab on the braces passes over the front lower tab on the fryer (Figure 6).

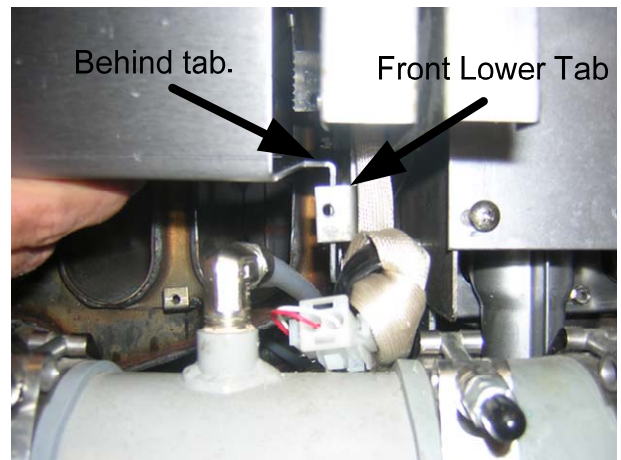


Figure 6: Pass the tab on the brace over the front lower tab on the fryer.

- C. The brace should be positioned similar to Figure 7.



Figure 7: The brace should be positioned similar to this.

- D. Rotate the brace away from the frypot (toward the front of the fryer). Move it up until the top edge is over the top/back tab (Figure 8). Rotate the brace back toward the frypot until the keyholes point away from the frypot (toward the front of the fryer) again, as shown in Figure 9 on the next page.

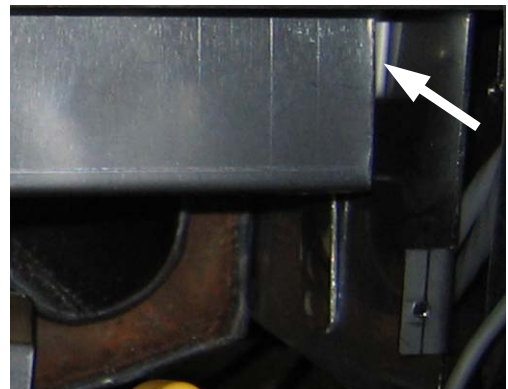


Figure 8: Rotate and lift the brace to clear the upper tab.

- E. Slide the brace up so that it is flush with the frypot (Figure 9). Ensure the holes on the tabs at each end of the brace are aligned with the matching holes on the fryer. Secure the brace to the fryer at both ends by using a 1/4-20 self-tapping screw on the upper hole and a #8 sheet metal screw on the lower hole.

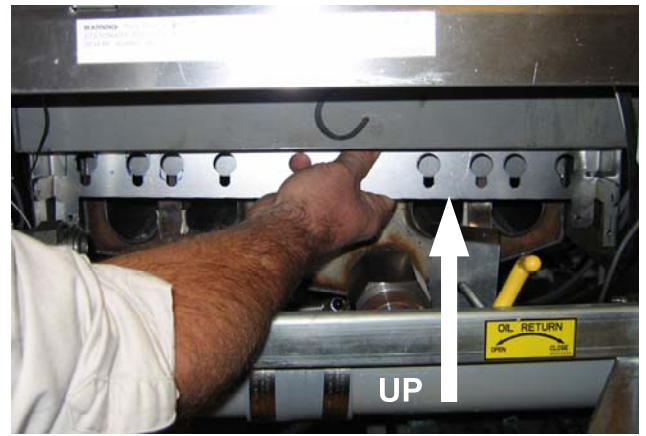


Figure 9: Slide the brace up, flush with the frypot.

- F. Match the frypot hole and the corresponding hole on the brace (shown in Figure 10). Using a vice grip to secure the brace, slide a box end wrench (gear wrench) and nut between the frypot mounting flange and the wall of the cabinet.

Insert a screw to secure. Repeat at the other end of the brace.

Remove the vice grip and secure the hole on the lower tab with a drill point screw. Repeat at the other end of the brace.

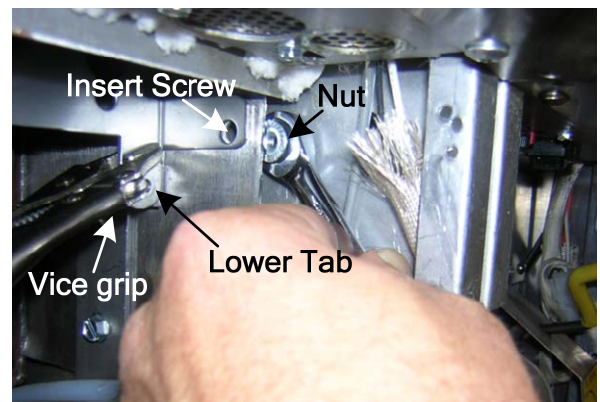


Figure 10: Rotate the brace into the frypot.

- G. When complete, the brace should be secured as pictured in Figure 11.



Figure 11: Slide the brace up, flush with the frypot.

4. Reinstall the burner manifold according to the bolt pattern in Figure 12. On each bracket, use the original bolts, but insert them into the holes above the original position. Secure the lower hole in each bracket with the t-bolts included in the kit. The manifold bracket in Figure 12 is shown outside of the cabinet for demonstration only.

NOTE: Special T-bolts provided in the kit are required to secure the burner manifold to the bottom half of each bracket. T-bolts are shown in Figure 13.

Figure 12 (right): Reinstall the burner manifold following the bolt pattern above.

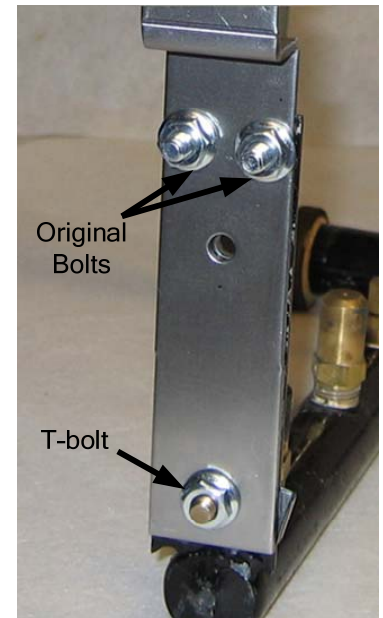


Figure 13 (below): T-bolts for lower hole on brackets.



5. Place two screws in each burner, as shown in Figure 14. Leave a gap between the head of the screw and the burner surface to ease their insertion into the key holes.

NOTE: It may be necessary to add the bolts to the center burners after the burners are installed.



Figure 14: Leave a gap between the screw and the burner surface.

6. On high altitude and LP units, air shutters should be installed. They are normally set approximately 1/4" (.65 cm) from the bottom of the burner, as shown in Figure 15.

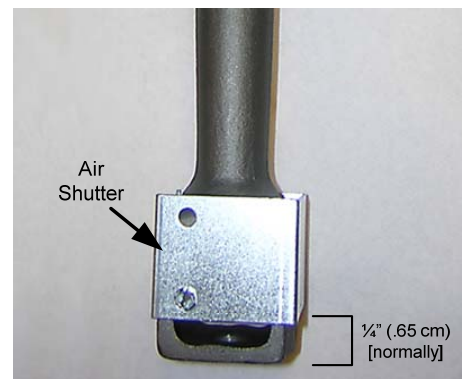


Figure 15: Install air shutters (high altitude and LP units).

7. Starting at the left, reinstall the burners in the following order (Figure 16):

1, 4, 2, 3.

NOTE: It may be necessary to start both center burners side by side, and then work them in one at a time.

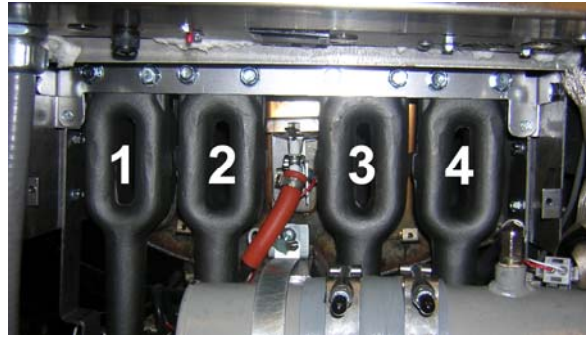


Figure 16: Reinstall the burners in the following order: **1, 4, 2, 3.**

8. Once all burners are installed, tighten the burner bolts at the top of each burner.

9. Reinstall any remaining components, except the heat shields and insulation removed from between frypot tubes in Step 1. Ensure all lines and wires are properly reconnected.

10. Bring the unit up to operating temperature. Ensure it is working properly and that the burners light off smoothly.

NOTE: If the fryer produces excess noise other than the normal sounds of operation after the installation of this kit, check the following:

- Manifold gas pressure is low when noise is heard.
- Burners are not square with pot.
 - a. Manifold brackets are installed incorrectly. Ensure that the notch on each of the burner manifold support brackets is facing outward, away from the fryer.
 - b. Burner mounting bolts are not tight.
- Orifices are burred or clogged. Check for external and internal burrs.
- Baffles are not secured properly.
- Pilot hood is not centered.
- Tube heat shields not removed.

If the unit makes a low frequency rumble when all of the vats are calling for heat with the doors closed, install shutters on all burners on the unit and adjust them to $\frac{3}{8}$ " open. (Figure 17)

If the rumble continues, slightly open or close the shutters, adjusting until the rumble is gone.

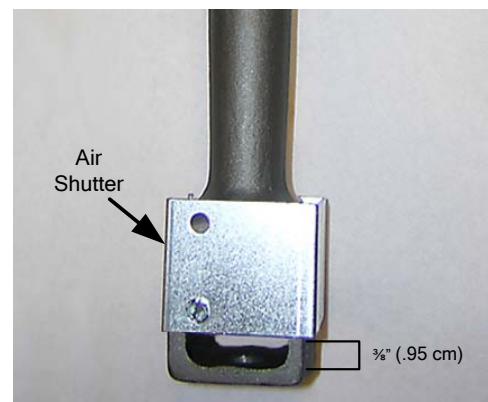


Figure 17: Adjust air shutters to $\frac{3}{8}$ " open if unit makes a low frequency rumble. 6 of 6