



## Technical Bulletin

### **Air Shutter Adjustment**

Models Affected: Flame Guard™ 30-gallon tall product (L.P. Only)

The purpose of this Technical Aid is to advise customers of the factory installed air shutter on the 30-gallon propane Flame Guard™ product. The Product Service & Support Department has received complaints pertaining to the inability to adjust this product in the field. This product DOES have a factory installed adjustable air shutter.

At the point of installation, a visual inspection should be made to ensure that the main burner and pilot are burning properly. In some installations the air shutter, which is factory installed on the 30-gallon tall Flame Guard™ propane product, may have to be adjusted to obtain an ideal burn pattern. The adjustment for this unit can be made using the steps outlined in the attached sheet.

If you have any questions or concerns related to adjusting the air shutter on this product, contact our Product Service & Support Department immediately at:

**1-800-999-9515**

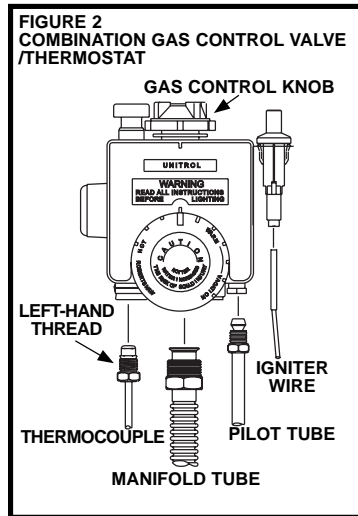
# AIR SHUTTER ADJUSTMENT FOR FLAME GUARD (L.P. - 30T ONLY)

## L.P. Gas Model 30T

**Important:** For correct water heater operation, it is essential that the air shutter be properly adjusted. If you lack the necessary skills to properly perform the adjustment, you should not proceed, but get help from a qualified service technician.

### Removing the Manifold Assembly

1. Turn off the gas to the water heater at the manual gas shut-off valve (figure 1).
2. Turn the gas control knob on the combination gas control valve/thermostat clockwise to the "OFF" position.
3. Remove the outer door.
4. Loosen the (2) screws securing the manifold door assembly to the combustion chamber. **NOTE:** Do not totally remove the screws from the manifold door.
5. Disconnect the thermocouple (left-hand thread), pilot tube (right-hand thread), and manifold tube (left-hand thread) at the thermostat. Disconnect the igniter wire from the igniter button (figure 2).
6. Grasp the manifold tube and push down slightly to free the manifold, pilot tube, and the thermocouple.
7. Carefully remove the manifold assembly from the burner compartment. **BE SURE NOT TO DAMAGE INTERNAL PARTS.**
8. Loosen the set screw securing the air shutter, and rotate shutter 1/4 turn (clockwise). Then tighten screw.
9. Inspect the door gasket for damage/debris and replace if needed.
10. Inspect the viewport (see figure 1) for damage and replace if needed.
11. Carefully insert the burner/manifold assembly into the heater, making sure the burner is level with the manifold door. **NOTE:** Be sure the metal tip on the burner is inserted into the bracket on the combustion chamber floor (see figure 3).
12. Check door gasket seal for any fiberglass insulation that might prevent a proper seal between the manifold door and the combustion chamber.
13. Tighten the two screws that secure the manifold door to the combustion chamber. **NOTE:** Applying pressure to the manifold door at the base of the manifold tube will ensure a tighter seal. Use care not to over tighten the screws. There should be no gaps between the gasket part of the manifold door and combustion chamber. **Important: DO NOT operate the water heater if the door gasket is not sealed.**
14. Reconnect the manifold tubing, pilot tubing, and thermocouple to the thermostat. **NOTE:** Do not cross thread or apply any type of sealant to these fittings. The manifold



## ! WARNING



### Explosion Hazard

- Tighten both manifold door screws securely.
- Remove any fiberglass between gasket and combustion chamber.
- Replace viewport if glass is missing or damaged.
- Replace two piece connector if missing or removed.
- Replace door gasket if damaged.
- Failure to do so can result in death, explosion, or fire.

FIGURE 1  
BURNER ASSEMBLY  
REMOVAL

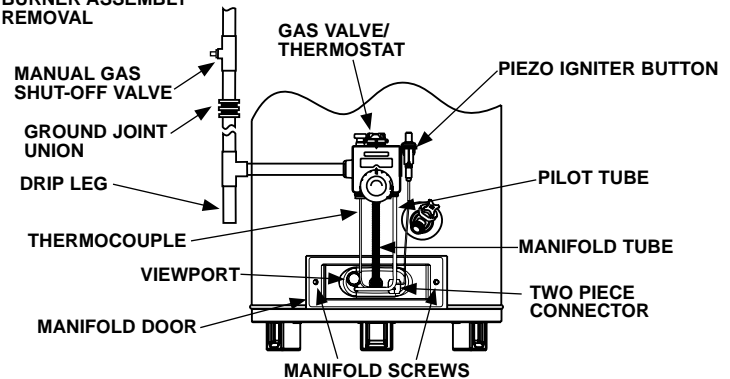
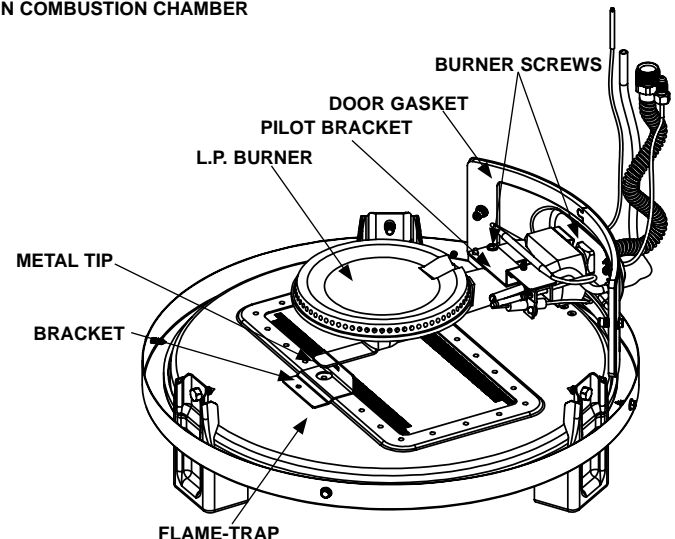


FIGURE 3  
MANIFOLD/BURNER ASSEMBLY  
IN COMBUSTION CHAMBER



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tube uses a left-hand thread and should be turned all the way in by hand. An open-end wrench should be used to finish tightening the manifold tubing. The thermocouple also uses a left-hand thread and should be started and turned all the way in by hand. An additional quarter turn with an open-end wrench should sufficiently tighten it. Seat the pilot tube (right-hand thread) and tighten the nut by hand, use an open-end wrench to finish tightening the nut. Be careful not to over tighten.

15. Reconnect the igniter wire to the igniter.
16. Turn on the gas supply at the manual gas shut-off valve and refer to the lighting instructions on the outside of the water heater. Check for leaks using a chloride-free soap and water solution (bubbles forming indicate a leak) or other approved method. **Important: DO NOT USE AN OPEN FLAME TO CHECK FOR LEAKS. ALL LEAKS MUST BE FIXED IMMEDIATELY.**
17. Replace the outer door.
18. Verify proper operation of the water heater. If further adjustments are needed repeat process beginning with step one.

FIGURE 4  
AIR SHUTTER ADJUSTMENT

