

# INSTALLATION INSTRUCTIONS (Pilot Assembly Replacement Kit)

Read these instructions thoroughly and understand all steps and procedures before proceeding with the installation.

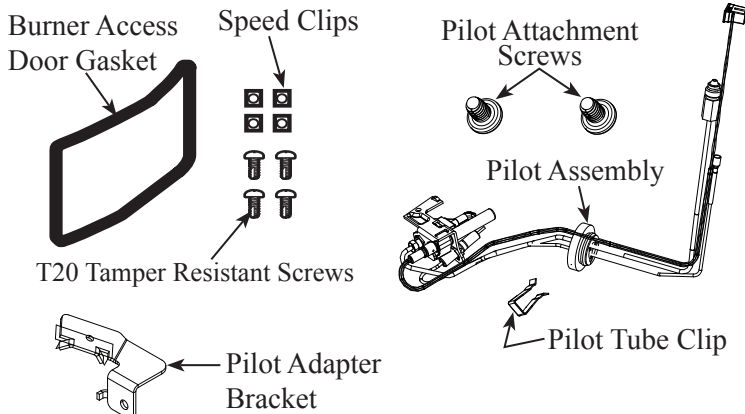
**CAUTION:** The burner chamber is a sealed area. If the burner access door is removed, the burner access door gasket must be replaced. This should only be done by a qualified service technician.

## INSPECT SHIPMENT:

Inspect contents for possible missing or damaged components.

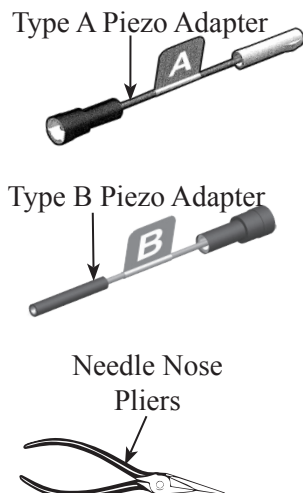
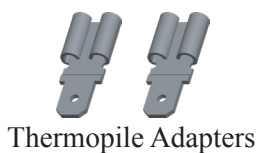
This kit includes:

- Qty. 4 (four) - T20 Tamper Resistant Screws
- Qty. 1 (one) - Pilot Assembly
- Qty. 2 (two) - Pilot Assembly Attachment Screw
- Qty. 4 (four) - Speed Clips
- Qty. 1 (one) - Burner Access Door Gasket
- Qty. 1 (one) - Installation Instructions
- Qty. 1 (one) - Pilot Tube Clip
- Qty. 1 (one) - Type A Piezo Adapter (Honeywell Pilot Assembly to White-Rodgers Control)
- Qty. 1 (one) - Type B Piezo Adapter (White-Rodgers Pilot Assembly to Honeywell Control)
- Qty. 2 (two) - Thermopile Adapters
- Qty. 1 (one) - Pilot Adapter Bracket



## TOOLS REQUIRED:

- 7/16" Open-end wrench
- 3/4" Open-end wrench
- #20 Torx head tool
- Phillip's head screwdriver
- Fine wire brush
- Soap and water solution
- Needle Nose Pliers



**NOTE:** This kit contains all the necessary parts to replace the pilot assembly on water heaters equipped with Honeywell or White Rodgers combination gas controls.

## ADDITIONAL INSTRUCTIONS:

Refer to the Use and Care Manual supplied with the water heater for complete information on the installation, lighting, operation and maintenance of the water heater.

1. **TURN OFF GAS TO THE APPLIANCE:** Rotate the combination gas control/thermostat knob counter-clockwise  $\curvearrowright$  to the "OFF" position.
2. **REMOVE JACKET DOOR:** See Figure 1 or 2.
3. **DISCONNECTION OF THERMOPILE, PILOT SUPPLY LINE, BURNER SUPPLY TUBE AND PIEZO WIRING FROM THE COMBINATION GAS CONTROL:** Locate the thermopile connector on the combination gas control. Carefully pull off the connector. Using a 7/16" open-end wrench, disconnect the pilot supply line from the combination gas control. Using a 3/4" open-end wrench, disconnect the burner supply tube from the combination gas control. Locate the piezo wire connector and disconnect it by pulling it apart. See Figures 1 or 2 for the type of control your water heater is equipped with.

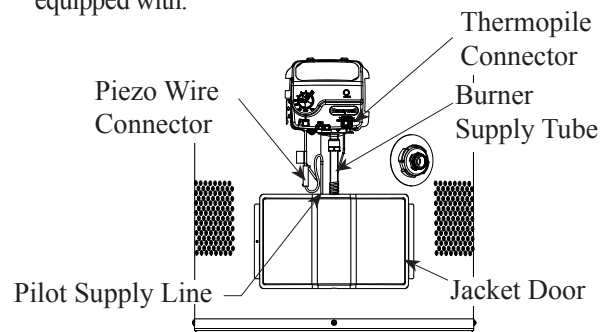


Figure 1  
Honeywell Combination Gas Control

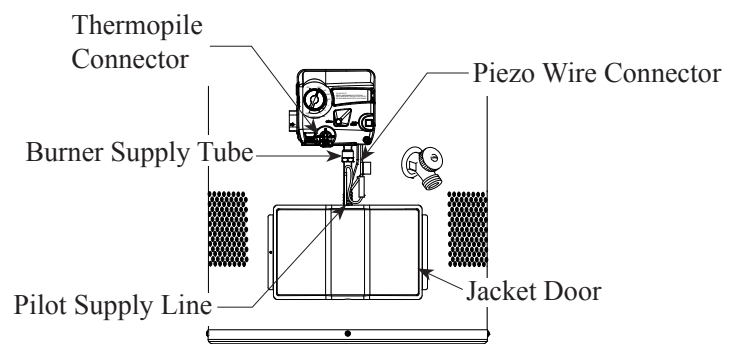


Figure 2  
White-Rodgers Combination Gas Control

**NOTICE:** The threads for connection of the burner supply tube nut on LP combination gas controls are left-handed.

**4. TAMPER RESISTANT SCREWS (USED TO SECURE BURNER ACCESS DOOR) REMOVAL:**

Using a #20 Torx head tool, remove the four tamper resistant screws at the corners of the burner access door assembly and discard them.

**5. BURNER ACCESS DOOR ASSEMBLY REMOVAL:**

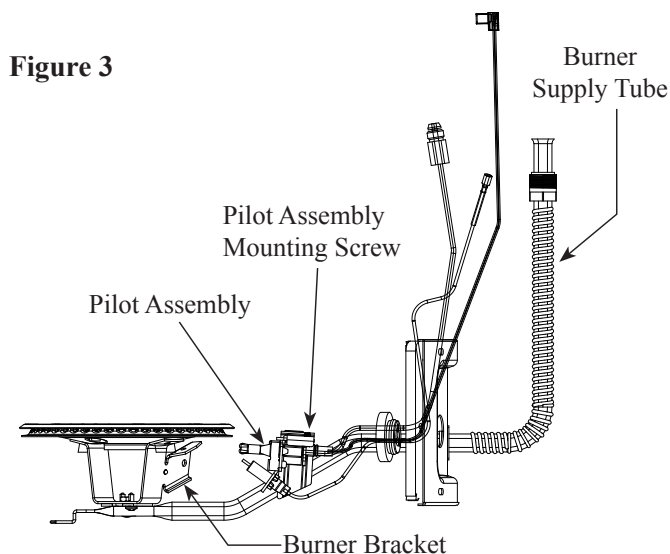
Grasp the burner supply tube and carefully remove the burner access door assembly with burner assembly from the water heater.

**6. PILOT ASSEMBLY REMOVAL:** Determine which burner assembly configuration your water heater has and use the appropriate, subsequent removal instructions:

**Configuration 1**

**Main burner with built in burner bracket. (Pilot assembly mounted to the burner supply tube)**

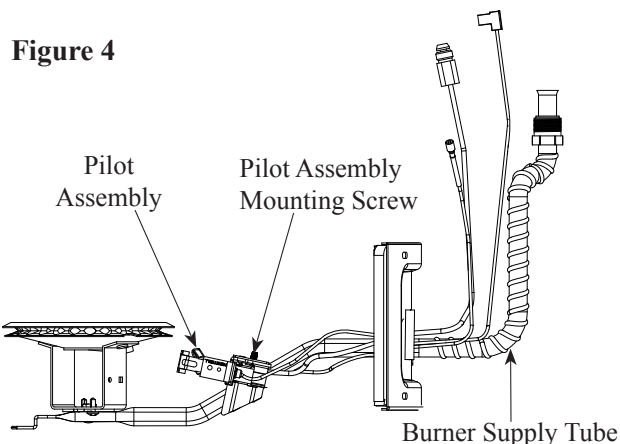
Using a Phillip's Head Screwdriver, remove the screw which attaches the pilot assembly to the burner supply tube and discard it. Pull the orange grommet with the pilot assembly out of the mounting hole, which is located on the burner access door. See Figure 3.



**Configuration #2**

**Main burner without pilot adapter bracket. (Pilot assembly mounted to the burner supply tube)**

Using a Phillip's Head Screwdriver, remove the screw which attaches the pilot assembly to the burner supply tube and discard it. Pull the orange grommet with the pilot assembly out of the mounting hole, which is located on the burner access door. See Figure 4.



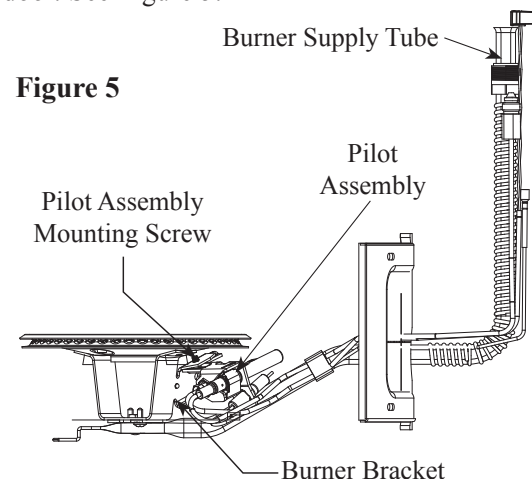
**Figure 4**

**Configuration #3**

**Main burner with built in burner bracket.**

**(Pilot assembly mounted to the burner bracket)**

Using a Phillip's Head Screwdriver, remove the screw which attaches the pilot assembly to the burner bracket and discard it. Pull the orange grommet with the pilot assembly out of the mounting hole, which is located on the burner access door. See Figure 5.



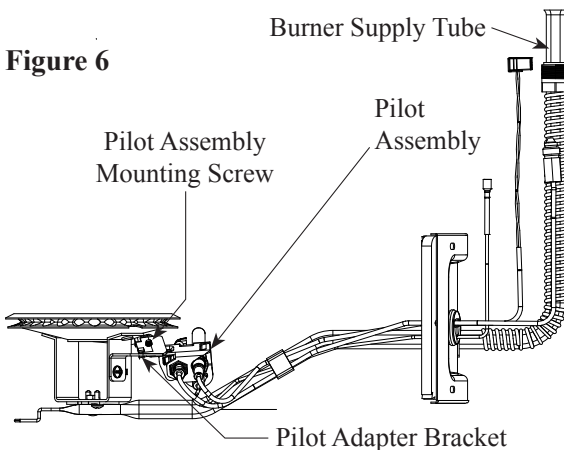
**Figure 5**

**Configuration 4**

**Main burner with pilot adapter bracket.**

**(Pilot assembly mounted to the pilot adapter bracket)**

Using a Phillip's Head Screwdriver, remove the screw which attaches the pilot assembly to the pilot adapter bracket and discard it. Pull the orange grommet with the pilot assembly out of the mounting hole, which is located on the burner access door. See Figure 6.



**Figure 6**

## NEW PILOT ASSEMBLY INSTALLATION:

Verify which burner configuration your water heater has, and then use the appropriate, subsequent installation instructions:

### Installation Configuration # 1 Burner without Bracket. See Figure 7.

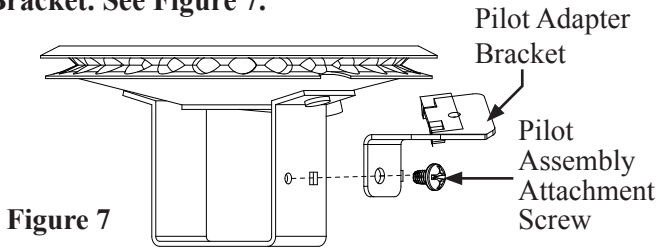


Figure 7

Attach the pilot adapter bracket to the main burner using one Pilot Assembly Attachment Screw, as shown in Figure 7.

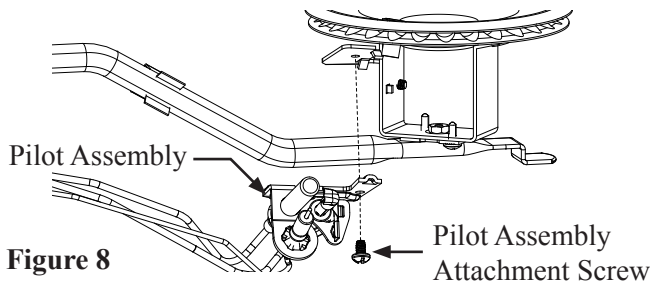


Figure 8

Attach the new pilot assembly to the pilot adapter bracket using another Pilot Assembly Attachment Screw as shown in Figure 8.

Insert the new pilot assembly by placing the connection ends through the hole (combustion chamber side) on the burner access door.

Push the orange grommet into the hole of the door until it is fully seated. See Figure 9.

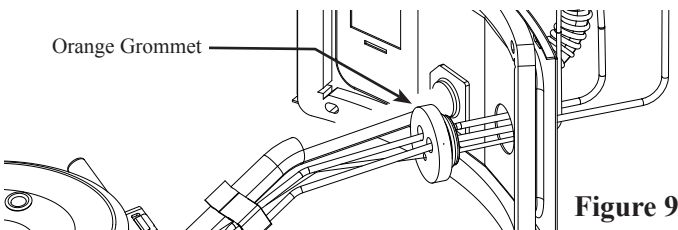


Figure 9

### Installation Configuration # 2 Burner with Bracket already installed. See Figure 10.

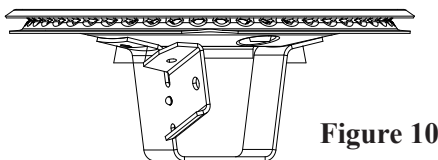


Figure 10

Attach the pilot to the bracket burner using one Pilot Assembly Attachment Screw, as shown in Figure 11.

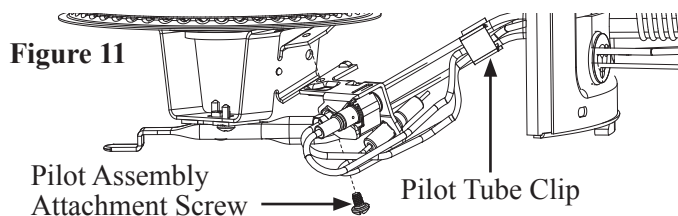


Figure 11

Insert the new pilot assembly by placing the connection ends through the hole (combustion chamber side) on the burner access door. See Figure 9.

Push the orange grommet into the hole of the door until it is fully seated.

**IMPORTANT:** Take care not to damage the orange grommet when you install it. Attach the new pilot assembly to the bracket on the burner and secure it with the new pilot assembly attachment screw (supplied). All replacement pilot assemblies attach directly to the burner.

Route the pilot supply line and wiring through the pilot tube clip then attach the clip to the burner supply tube. While holding the orange grommet in place, snug up the thermopile wiring, pilot supply line and piezo ignitor wiring so there is little to no slack between the main burner and the burner. Ensure that the fiberglass sleeving between the pilot and the grommet is covering the lengths of the piezo electrode and thermopile wiring. See Figure 11.

**DO NOT attach replacement pilot assembly to burner supply tube if applicable.**

## 7. BURNER ACCESS DOOR GASKET REMOVAL AND

**INSTALLATION:** Remove the old burner access door gasket from the combustion chamber and burner access door. Clean the surfaces to which the gasket was attached. If the old gasket was attached with an adhesive, a fine wire brush and soap and water solution may be used to remove the old gasket material and adhesive.

**⚠ WARNING! DO NOT use any flammable liquids such as gasoline, paint thinners, or solvents to remove the old gasket material and adhesive (if applicable). Place the new gasket on the clean and dry side (combustion chamber side) of the burner access door. If the gasket is equipped with peel and stick adhesive, peel off the pull away backing from the new burner access door gasket and install the gasket on the clean and dry side (combustion chamber side) of the burner access door. Ensure that the gasket used for the tamper resistant screws align with those in the burner access door.**

## 8. INSTALLING THE BURNER ACCESS DOOR

**ASSEMBLY:** Remove the Qty. 4 (four) Speed Clips that are located at the inner door opening attached to the combustion chamber and discard them. Install the new, Qty. 4 (four) Speed Clips that are provided from the kit. Re-install and secure the burner assembly to the water heater with the new, Qty. 4 (four), T20 Tamper Resistant Screws that are provided from the kit. Ensure that the door gasket is located correctly.

**9. CONNECTION OF BURNER SUPPLY TUBE AND PILOT SUPPLY LINE:** Install the inverted flared end of the burner supply tube into the combination gas control. Hand thread the hex nut fitting on the burner supply tube into the control. Ensure that the fitting is properly aligned with the control, otherwise cross threading of the connection will occur. Tighten the fitting using a 3/4" open-end wrench. See Figures 1 or 2 for the type of control your water heater is equipped with.

**NOTICE:** The threads for connection of the burner supply tube nut on LP combination gas controls are left-handed.

Install the end of the pilot supply line into the combination gas control. Hand thread the hex nut fitting on the pilot supply line into the control. Ensure that the fitting is properly aligned with the control, otherwise cross threading of the connection will occur. Tighten the fitting using a 7/16" open-end wrench. See Figures 1 or 2 for the type of control your water heater is equipped with.

**10. CONNECTION OF THERMOPILE AND PIEZO WIRING:**

**For water heaters equipped with Honeywell Combination Gas Control**

Locate the thermopile connector on the pilot assembly. Using needle nose pliers push the connector onto the Honeywell Combination Gas Control and ensure that the connector is fully engaged. Locate the piezo wire connector and connect it to the piezo lead coming from the gas control. See Figure 1.

**For water heaters equipped with White-Rodgers Combination Gas Control**

Locate the two thermopile adapters from the kit and using needle nose pliers insert the female ends into the thermopile connection of the White-Rodgers Combination Gas Control. **IMPORTANT:** For proper installation of the thermopile connector, the adapters must be oriented as show in Figure 12. Push the thermopile connector of the pilot assembly onto the thermopile adapters and ensure that the connections are correct and the connectors are fully engaged. Locate the Type A Piezo Adapter from the kit and connect it to the piezo lead coming from the gas control and the piezo wire coming from the pilot assembly.

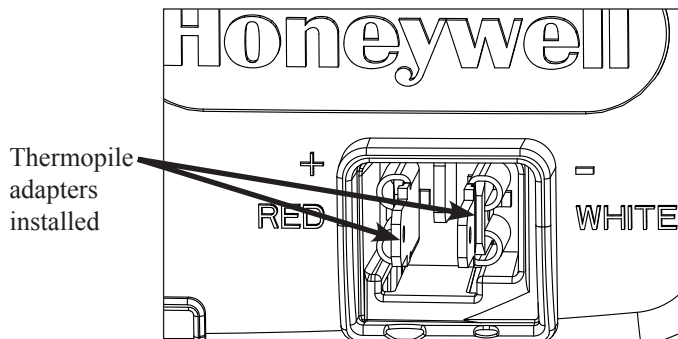


Figure 12

**⚠ WARNING:** Failure to properly install the burner access door assembly could result in a potentially hazardous situation resulting in death or serious injury and/or property damage.

**11. TURN ON GAS TO THE APPLIANCE:** Turn on the gas supply at the main gas supply line. Follow the "FOR YOUR SAFETY READ BEFORE OPERATING" and "LIGHTING INSTRUCTIONS" label located above the water heater's combination gas control.

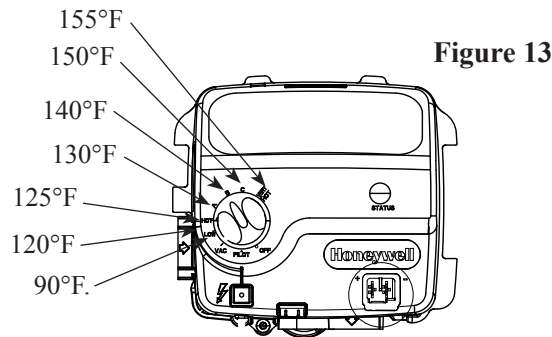
**12. CHECKING FOR GAS LEAKS:** With the pilot and main burner in operation, use a soap and water solution to check for gas leaks at the burner supply and pilot supply line connections.

**NOTICE:** If the soap and water solution bubbles up, there is a leak and the fittings must be tightened and checked again.

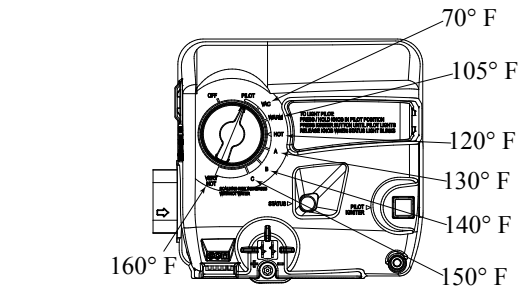
**IMPORTANT:** If the leak(s) cannot be eliminated, turn off the gas supply to the water heater and contact the water heater manufacturer at the phone number indicated in the water heater's Use & Care Manual.

**13. TEMPERATURE SETTING:** Rotate the combination gas control/thermostat knob clockwise to the desired setting. A temperature setting of 120°F (49°C) or less is recommended as a usable water temperature.

The illustrations in Figure 13 details the approximate water temperature for each mark on the combination gas control/thermostat.



Honeywell Combination Gas Control



White-Rodgers Combination Gas Control

**⚠ DANGER:** Hotter water increases the potential for Hot Water SCALDS.

**14. REPLACE JACKET DOOR:** Replace the jacket door by inserting one end of the door behind the jacket edge then insert the opposite end of the door behind the jacket edge and release the door.