## INSTALLATION INSTRUCTIONS FOR REPLACING THE GAS CONTROL VALVE/THERMOSTAT

Kit Contents: 1 Gas Control Valve/Thermostat, 1 Ferrule Nut

IMPORTANT: For correct water heater operation, it is essential that the gas control valve/thermostat be properly installed. If you lack the necessary skills to properly perform the installation, you should not proceed, but get help from a qualified technician.

## **Removing the Gas Control Valve/Thermostat**

- 1. Turn off the gas supply to the water heater at the manual gas shut-off valve. This valve is typically located beside the water heater. Note the position of the shut-off valve in the open/on position then proceed to turn it off (Figure 1).
- On the lower front of the water heater locate the gas control valve/thermostat (see Figure 1). Before performing any maintenance, it is important to turn the temperature dial on the gas control valve/thermostat to its lowest setting.
- On top of the gas control valve/thermostat turn the gas control knob to the "OFF" position. NOTE: On the White Rodgers gas control valve/thermostat the knob stop must first be depressed before turning the gas control knob. See Lighting Instructions on the water heater.
- 4. Remove the outer door.
- 5. Close the cold water inlet valve to the water heater.
- 6. Open a nearby hot water faucet.
- 7. Connect a hose to the drain valve and terminate it to an adequate drain. NOTE: The drain hose should be rated for at least 200°F. If the drain hose does not have this rating, open the cold water inlet valve and a nearby hot faucet until the water is no longer hot. IMPORTANT: DO NOT proceed to the following steps until the water heater is completely drained.
- 8. Disconnect the piezo igniter wire from the piezo igniter button. NOTE: There are two types of igniters. If you have the square igniter, slide the igniter bracket backwards away from the gas valve to remove it. If you have the round igniter, first remove the igniter from the bracket by depressing front and rear holding tabs and lift. Next remove igniter bracket from the gas valve. Disconnect the thermocouple, pilot tube, the two connectors attached to the thermal switch, and manifold tube at the gas control valve/thermostat (Figure 2). NOTE: L.P. gas systems use reverse (left-hand) threads on the manifold tube.
- Disconnect the ground joint union in the gas piping. Disconnect the remaining pipe from the gas control valve/ thermostat (Figure 1).
- 10. To remove the gas control valve/thermostat, thread a correctly sized pipe into the inlet and use it to turn the gas control valve/ thermostat (counterclockwise.) Do not use pipe wrench or equivalent to grip body. Damage may result, causing leaks. Do not insert any sharp objects into the inlet or outlet connections. Damage to the gas control valve/thermostat may result.

## **Replacing the Gas Control Valve/Thermostat**

- To replace the gas control valve/thermostat, reassemble in reverse order. When replacing the gas valve, thread a correctly sized pipe into the inlet and use it to turn the gas valve (clockwise.) DO NOT OVER TIGHTEN or damage may result. NOTE: Use an approved Teflon<sup>®</sup> tape or pipe compound only on the threaded section of the gas control valve/thermostat that screws into the tank.
- Reconnect the gas piping to the gas control valve/thermostat. NOTE: Use an approved Teflon tape or pipe compound on the gas piping connections.
- 3. Transfer the igniter and bracket removed from the old gas control valve to the new one.
- 4. Do not use the (pilot) ferrule nut supplied with the new gas

## A WARNING **Explosion Hazard** Use a new CSA approved gas supply line. Install a shut-off valve. Do not connect a natural gas water heater to an L.P. gas supply. Do not connect an L.P. gas water heater to a natural gas supply. Failure to follow these instructions can result in death, explosion, or carbon monoxide poisoning. FIGURE 1 GAS CONTROL VALVE/THERMOSTAT REMOVAL PIEZO GAS CONTROL VALVE/ THERMOSTAT IGNITER BUTTON MANUAL GAS PIEZO IGNITER BUTTON SHUT-OFF VALVE (ALT. CONFIGURATION) GROUND JOINT UNION TUBE DRIP LEG MANIFOLD TUBE THERMAL THERMOCOUPLE SWITCH VIEW PORT MANIFOLD DOOR MANIFOLD TWO PIECE SCREWS (2) WIRE CONNECTOR FIGURE 2 GAS CONTROL VALVE/THERMOSTAT WHITE RODGERS GAS VALVE ROBERTSHAW GAS VALVE 0 **PILOT** ■ PILOT TUBE (WITH FERRULE (WITH FERRULE NUT) THERMOCOUPL THERMOCOUPIE NUT) MANIFOLD TUBE N MANIFOLD TUBE

valve, unless the existing nut is not usable. Reconnect the manifold tube, pilot tube, igniter wire, and thermal switch wires. NOTE: L.P. gas systems use reverse (left-hand) threads on the manifold tube.

- 4. Fill the tank completely with water. NOTE: To purge the lines of any excess air, keep the hot water faucet open for 3 minutes after a constant flow of water is obtained.
- 5. Turn on the gas supply and test the gas supply connections by brushing on an approved noncorrosive leak detection solution. Bubbles forming indicate a leak. Correct any leak found.
- 6. Check the operation of the burner by following the lighting instructions on the front of the water heater. With the burner lit, check the gas control valve/thermostat supply line, manifold tube and pilot tube connections for leaks. Verify proper operation and then replace the outer door.

 $\mathsf{TEFLON}^{\circledast}$  is a registered trademark of E.I. Du Pont De Nemours and Company