

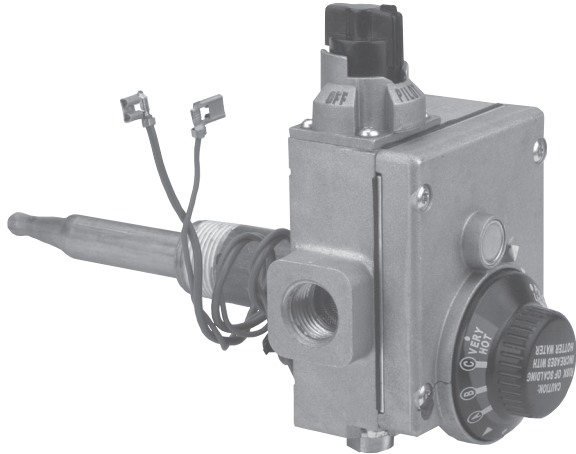
37C73U

Water Heater Thermostat Control

Installation Instructions

FOR NATURAL GAS ONLY

RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.



Fixed Adjustment Main and Pilot Regulators

The main and pilot gas regulators require no field service. They automatically control and maintain the outlet main and pilot burner gas pressure.

Model	Main Regulator	Pilot Regulator	Flange	Outlet	Flying Leads
37C73U168	3.5" W.C.	4.0" W.C.	1-1/4"	42 KBTU/hr	No Flying Leads
37C73U170	4.0" W.C.	4.9" W.C.	1"	38 KBTU/hr	No Flying Leads
37C73U171	4.0" W.C.	4.0" W.C.	2-1/2"	40 KBTU/hr	No Flying Leads
37C73U172	4.0" W.C.	4.0" W.C.	2-1/4"	40 KBTU/hr	No Flying Leads
37C73U173	4.0" W.C.	4.0" W.C.	1-1/4"	45 KBTU/hr	No Flying Leads
37C73U174	5.0" W.C.	5.0" W.C.	1-1/4"	37.5 KBTU/hr	11" Flying Leads

FOR YOUR SAFETY "WHAT TO DO IF YOU SMELL GAS"

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

⚠ WARNING

Do not use this Natural Gas control on a LP Gas water heater. Improper operation could occur, resulting in personal injury and/or death due to Carbon Monoxide poisoning, fire, or explosion. Check for proper gas type as listed on the rating plate affixed to the water heater.

FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS CONTROL COULD CAUSE PROPERTY DAMAGE, PERSONAL INJURY AND/OR DEATH.

1. This control must be installed or serviced only by a professional.
2. Do not use force when moving the gas control knob. If you cannot turn the knob with hand pressure only, the control must be replaced.
3. Do not use the control if the knob will not "pop up" after being depressed while the knob is in the PILOT position. The mechanism is damaged and the control must be replaced. Shut off gas to the water heater.
4. For your safety, this control is supplied with tamper resistant screws. Do not attempt to repair or adjust the control. If you experience problems, replace the control immediately. **Continuing to use a damaged control could result in fire and/or explosion.**
5. An odorant has been added to the gas to help you detect it. Before lighting, search for the odor of gas by sniffing at floor level around the water heater.
6. In some situations, the gas may lose its odor. To detect unodorized gas, you must have a gas detector which can be purchased from your gas company. If you do not have a detector and have the slightest suspicion that gas may be present, get out of the house and call the gas company. **DO NOT RELY TOTALLY ON YOUR NOSE.**

⚠ WARNING

Scald burns occur in under one second with 160° water, which this thermostat will deliver if the temperature dial is set at "VERY HOT". Lower settings of the temperature dial will reduce the risk of scald and will reduce your fuel bill.

INSTALLATION

REPLACEMENT INFORMATION

REMOVING OLD CONTROL

1. Turn off gas supply to the water heater at the manual gas shut-off valve. This valve is typically located beside the water heater.
2. Locate the gas control valve/thermostat. Before performing any maintenance, turn the temperature dial on the gas control valve/thermostat to the lowest setting. (See To light Appliance Figure 2)
3. On the top of the gas control valve turn the gas control knob to the "Off" position. (See To light Appliance Figure A)

NOTE: On the White-Rodgers gas control valve/thermostat the knob stop must first be slightly depressed before turning the gas control knob.

4. Close the cold water inlet valve to the water heater and open a nearby hot water faucet.
5. Connect a hose to the drain valve and terminate it to an adequate drain. Open water heater drain valve by turning handle counterclockwise to drain water heater tank.

IMPORTANT: DO NOT proceed to the following steps until the water heater is completely drained.

6. On some water heaters, the outer door may need to be removed.
7. If control doesn't have a piezo ignitor, skip to step (8) or disconnect the piezo ignitor wire from the piezo ignitor button.

NOTE: There are two types of ignitors. If you have the square ignitor, slide the ignitor bracket backward away from the gas valve to remove it. If you have a round ignitor, first remove the ignitor from the bracket by depressing front and rear holding tabs and lift. Next remove ignitor bracket from the gas valve. Keep ignitor and bracket.

8. Disconnect the thermocouple, pilot tube, and manifold (burner) tube. Some control may have two wires (flying leads) attached to the thermal switch that must be disconnected as well.
9. Disconnect the union joint in the gas piping. Disconnect the remaining pipe from the gas control valve/thermostat.
10. Remove the control by turning it counterclockwise. If needed, a short piece of 1/2" black iron pipe can be screwed into the control inlet to increase leverage.

INSTALLING NEW CONTROL

All piping must comply with local and state ordinances or with the National Fuel Gas Code (ANSI Z223.1-NFPA 54), whichever applies.

Dirt or contamination in the gas line can block the control from operating creating a risk of explosion, injury or death. To protect the control from dirt/contamination, a drip leg or sediment trap (see Figure 1) must be installed in the piping to the control.

1. To replace the gas control valve/thermostat, reassemble in reverse order. When replacing the gas valve, use a short piece of pipe to help turn control. (Clockwise) DO NOT OVER TIGHTEN or damage may result. Use an approved pipe compound on the threads that screw into the tank and to the gas pipe that screw into the gas control valve/thermostat. Do not use TEFLON tape. Do not apply compound to first two threads on gas pipe.
2. Reconnect the gas piping to the gas control valve/thermostat. Use new black iron pipe that has been properly reamed. If old pipe is used, be sure it is clean and free from rust and scale.

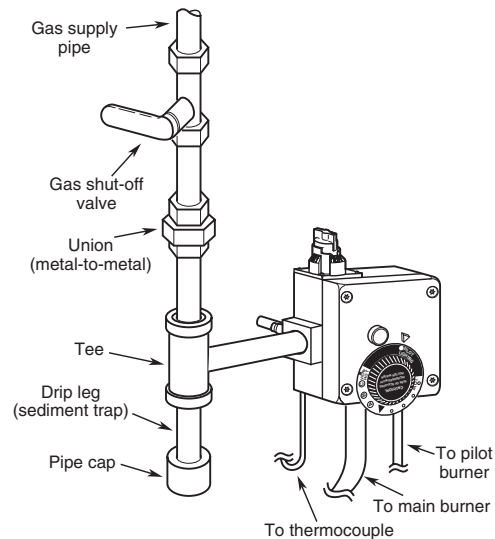


Figure 1. Typical gas connection

3. If control had an ignitor, transfer the ignitor and bracket removed from the old gas control valve to the new one.
4. Reconnect manifold tube (burner), pilot tube, ignitor wire (if present), flying leads (if present), Thermocouple nut (thermocouple nut should be hand tightened and then turned an additional 1/4 turn with small wrench. DO NOT OVERTIGHTEN. Do not use pipe joint compound or TEFLON tape on manifold, pilot, and thermocouple connections.
5. Reconnect union. DO NOT use joint compound or TEFLON tape on union connection.
6. Close the water heater drain valve by turning the handle to the right (clockwise). Open the cold water supply valve to the water heater to fill the water heater tank.

NOTE: The cold water supply valve must be left open when the water heater is in use.

Keep the nearby hot water faucet open for 3 minutes after a constant flow of water is obtained to purge the lines of any excess air. Check all new water piping for leaks. Repair as needed.

CAUTION

Never use this water heater unless it is completely filled with water. To prevent damage to the tank, the tank must be filled with water. Water must flow from the hot water faucet before turning ON gas to the water heater.

7. Turn on gas shutoff valve.

WARNING

DO NOT USE OPEN FLAME OR ANY KIND OF SPARK TO CHECK FOR LEAKS. Serious injury or death from fire or explosion could result.

8. **BEFORE LIGHTING THE PILOT, CHECK THE GAS LINES FOR LEAKS.** Use a soapy water solution. DO NOT test for gas leaks using a match or open flame. Brush the soapy water solution on all gas pipes, joints, and fittings. Check for bubbling soap indicating you have a leak. Turn OFF the gas and make the necessary repairs. Recheck for leaks. Rinse off soapy solution and wipe dry.
9. Affix the new Lighting instruction label on the water heater to cover the existing label.

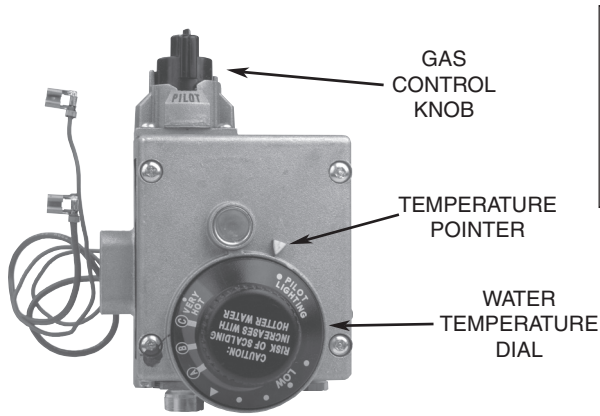


Figure 2. Gas Control Knob and Water Temperature Dial

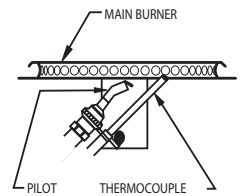
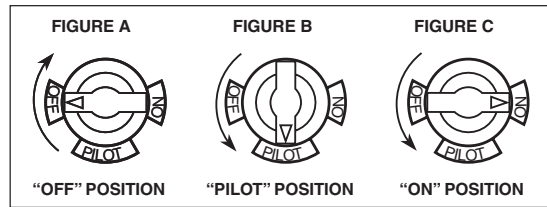


FIGURE D

A. Gas valve/thermostat without ignitor (If control has an ignitor, proceed to Section B).

1. Set control to lowest setting by turning the water temperature dial clockwise (↻) to the "PILOT LIGHTING" position. DO NOT FORCE.
2. Turn gas control knob clockwise to "OFF". See FIGURE A.
NOTE: Gas control knob must be depressed slightly to turn from "PILOT" to "OFF". Do not use tools or excessive force.
3. Wait at least five (5) minutes to clear out any gas, and then smell around the appliance area. If you smell gas, **STOP!** Follow instructions "What to do if you smell gas" on the first page of this instruction sheet. If you do not detect gas, continue with the next step.
4. Remove inner and outer burner doors located on the water heater under gas control unit.
5. Find pilot – follow small metal tubes from gas control. The pilot is located near the main burner. See FIGURE D.
6. Turn gas control knob counterclockwise to "PILOT". See FIGURE B.
7. Depress control knob all the way and hold down. Immediately light the pilot with a match. Continue to hold knob down for approximately one (1) minute after pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If pilot goes out, repeat steps 2, 3, 6 and 7.
 - If knob does not pop up when released, turn knob clockwise to "OFF". STOP and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn gas control knob to "OFF" and call your service technician or gas supplier.
8. Replace inner and outer burner doors.
9. At arm's length away, turn gas control knob counterclockwise to the full "ON" position, FIGURE C.
10. Align the water temperature dial mark (▲) with the temperature pointer on the cover. This mark, indicative of approximately 120°F, is the preferred starting point. If hotter water is desired, see TEMPERATURE REGULATION on page 4.
11. Check for leaks at the pilot and main burner fittings on the gas control with the main burner firing. Use a soapy water solution. If a leak is detected, turn the gas supply off and make repairs.

B. Gas Valve/Thermostat with ignitor.

1. **STOP!** Read the safety information on the label.
2. Set the thermostat to lowest setting (PILOT LIGHTING). Turn thermostat dial fully clockwise (↻) until it stops.
3. Push the gas control knob down slightly and turn clockwise (↻) to "OFF", see FIGURE A.
NOTE: Knob CANNOT be turned from "PILOT" to "OFF" unless it is pushed down slightly. Do not force.
4. Remove the outer burner door located below the gas control.
5. Wait five (5) minutes to clear out any gas. If you then smell gas, **STOP!** Follow instructions "What to do if you smell gas" on the first page of this instruction sheet. If you do not detect gas, continue with the next step.
6. This unit is equipped with a push button pilot ignitor, which is used to light the pilot. Locate the ignitor on the gas control.
7. Turn gas control knob counterclockwise (↶) to "PILOT", see FIGURE B.
8. The pilot is located on the right side of the burner. It can be located by looking through the glass view port while pressing the piezo ignitor button several times. Look for a spark at the pilot location, FIGURE D.
9. Once the pilot has been found, push the gas knob all the way down. Immediately press the pilot ignitor button rapidly 4 to 5 times. If the pilot will not light, repeat step 3 through 9.
10. Continue to hold the gas control knob down for about one (1) minute after the pilot is lit. Release the gas control knob and it will pop back up. Pilot should remain lit. If it goes out, repeat step 3 through 9. It may take several minutes for air to clear the lines before the pilot will light.
 - If the pilot does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob clockwise (↻) to "OFF" and call your service technician or gas supplier.
11. Once the pilot flame is established replace the outer burner door.
12. At arm's length away, turn gas control knob counterclockwise (↶) to "ON". See FIGURE C.
13. Set the thermostat to desired setting. See TEMPERATURE REGULATION on page 4.

TEMPERATURE REGULATION

After the gas connections are made, water is in the heater and the pilot light is ignited, the control must be set to the desired water temperature.

The recommended water temperature dial setting is at the arrow (▲). The water temperature out of the heater at this setting will be approximately 120°F.

If you use hot water frequently and in short spurts, water temperature can occasionally exceed the temperature setting by up to 30°F because of the dynamics of the appliance.

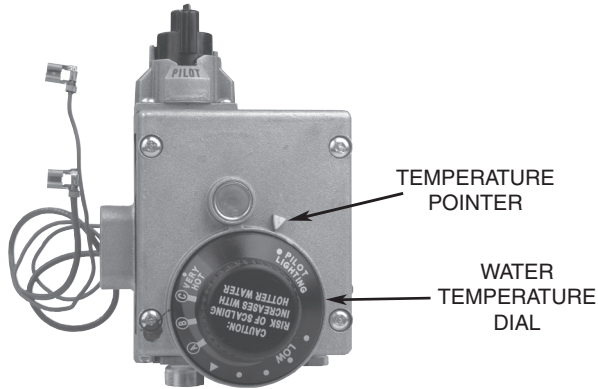


Figure 3. Water Temperature Dial

The arrow (▲) setting is the safest and most economical. If the want hotter water, rotate the water temperature dial counterclockwise (↺) to a higher setting. Approximate water temperature delivered at the different settings is shown in the following table.

To avoid scald injury, set the control at the lowest setting which will still deliver your needed hot water.

⚠ WARNING		
The hotter the water the greater the risk of scald injury and the shorter the time to cause injury.		
SETTING	APPROXIMATE TEMPERATURE (F)	APPROXIMATE TIME TO CAUSE INJURY
(▲)	120°	5 Minutes
A	130°	30 Seconds
B	140°	5 Seconds
C	150°	1.5 Second
VERY HOT	160°	Under 1 Second

Be sure to protect babies and the infirm or others with impaired mobility who cannot get out of the hot water quickly. They are the people most commonly hurt in scald injuries and in need of lower temperature and other protection like supervision, point-of-use temperature control equipment or a system mixing valve. A point-of-use valve or a system mixing valve can be obtained from your plumber.

⚠ WARNING
Never allow children to use a hot water tap, or to draw their own bath water. Never leave a child or impaired person unattended in a bathtub or shower. Scald burns can result.

TO TURN OFF GAS TO APPLIANCE

Set the control to lowest setting by turning water temperature dial clockwise (↻) to the "PILOT LIGHTING" position on dial (as shown in Figure 3). **DO NOT FORCE.**

Turn gas control knob clockwise to "PILOT".



Turn gas control knob clockwise to "OFF".



NOTE

Gas control knob must be depressed slightly to turn from "PILOT" to "OFF". **Do not use tools or excessive force.**