



PLUS Indirect Water Heaters

Ultra PLUS 40/60/80 - GOLD Plus 30/40/60/80

Thermostat Replacement Instructions

⚠ DANGER

Indicates presence of hazards that will cause severe personal injury, death or substantial property damage if ignored.

⚠ WARNING

Indicates presence of hazards that can cause severe personal injury, death or substantial property damage if ignored.

Thermostat Kit Contents: P/N 633-900-130
- 160° Thermostat - Screw Phillips #6-32 X 1/4 (2)
- Thermostat Knob - Label Consumer Protection
- Thermostat Label - Instructions
- Plastic Push Pins (3) - Thermostat Harness

Thermostat with Cover Kit Contents: P/N 633-900-102
- 160° Thermostat - Plastic Push Pins (3)
- Thermostat Knob - Screw Phillips #6-32 X 1/4 (2)
- Thermostat Label - Snap-Set Connector
- Thermostat Cover - Label Consumer Protection
- Instructions - Thermostat Harness

⚠ DANGER

When replacing thermostat always apply the supplied temperature setting label in the proper orientation according to the instructions. The labels are for reference purposes only; the water temperature should be tested to insure safe operation. Failure to comply could result in unintentionally high hot water setting that will greatly increase chances of severe burns or death by scalding.

Thermostat Replacement

1. Disconnect electricity to water heater.
 2. Remove the thermostat knob by pulling straight up.
 3. Remove plastic thermostat cover by pulling up firmly to disengage push pins.
 4. Remove thermostat bulb from drywell by pulling the capillary tube out of the drywell.
 5. Trace the thermostat wires back to the snap-set terminal strip mounted on the plastic cover. Remove the two (2) Phillips screws securing the cover on the snap-set connector to expose the wire connections.
 6. Note the position of the wires on the terminals and then remove the wires.
 7. Remove the two (2) screws connecting the old thermostat to the plastic cover.
 8. Remove the old thermostat.
 9. Apply the new temperature setting label over the existing one as seen in **Figure 1**.
 10. Attach the new thermostat to the cover with the two (2) Phillips screws. It must be oriented with the capillary tube under the "Scald Hazard" text.
 11. Place new knob on thermostat.
 12. Push thermostat wires through hole in plastic cover and reconnect to the appropriate terminals on the snap-set connector.
- NOTE** - If replacing a two (2) wire thermostat use the terminals marked "1" and "C" on the new thermostat.
13. Replace connection cover with two (2) Phillips headed screws.
 14. Push the thermostat bulb into the drywell tube until it reaches the bottom.

⚠ WARNING

Make sure capillary tube is not kinked or damaged. A defective capillary tube can cause the thermostat to fail, resulting in a situation that can result in severe personal injury or death.

15. Reinstall the plastic cover by aligning three plastic push pins and pushing down cover until engaged.
16. Restore electricity to water heater. Proceed to section titled "Setting Thermostat".

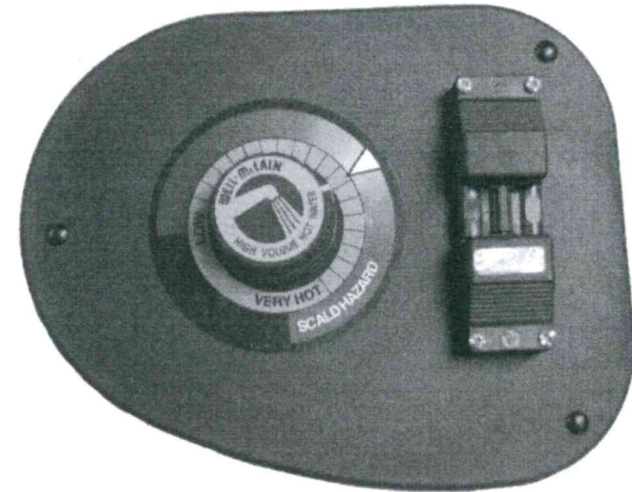


FIGURE 1


Thermostat with cover replacement


1. Disconnect electricity to water heater.
 2. Disconnect thermostat by unplugging snap-set connector.
 3. Remove plastic thermostat cover by pulling up firmly on cover to disengage push pins.
 4. Remove thermostat bulb from drywell by pulling the capillary tube out of the drywell.
 5. Install new pre-wired thermostat/cover plate assembly by uncoiling capillary tube and inserting bulb into drywell. Push bulb to the bottom of the drywell by feeding the capillary tube into the drywell.
- ⚠ WARNING** Make sure capillary tube is not kinked or damaged. A defective capillary tube can cause the thermostat to fail, resulting in a situation that can result in severe personal injury or death.
6. Attach cover by aligning three plastic push pins and pushing down cover until engaged.
 7. Reconnect thermostat by plugging in snap-set connector.
 8. Restore electricity to water heater. Proceed to section titled "Setting Thermostat".

Setting Thermostat

WARNING Studies have indicated that dangerous bacteria, including legionella pneumophila, can form in the potable water distribution system if certain minimum water temperatures are not maintained. Contact your local health department for more information.

Water heater thermostat is factory set to its lowest temperature. The Factory Setting mark on label is the preferred starting point for setting temperature. This may or may not be suitable for your needs.

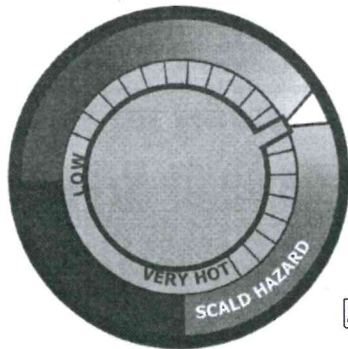
Turn thermostat knob **clockwise**  to **increase** water temperature.

Turn thermostat knob **counter-clockwise**  to **reduce** water temperature.

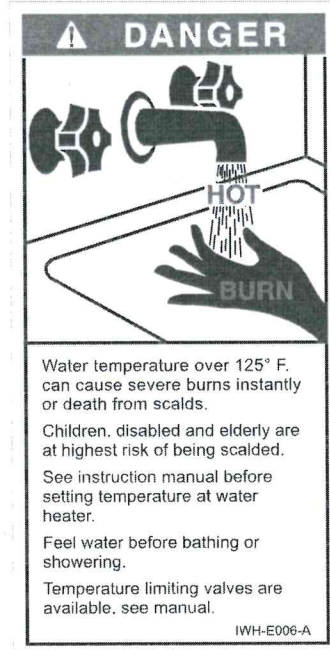
When decreasing temperature setting, the stored hot water must be used before checking temperature at faucet.

Check water temperature at a hot water faucet immediately after first heating cycle. Further temperature adjustment may be necessary as hot water heating system is used. Recheck water temperature at faucet after adjustment.

When adjusting thermostat, be sure boiler limit control is set a minimum 20°F higher.



WARNING At no time should boiler limit control be set above 210°F. This can cause severe personal injury, death or substantial property damage if ignored.



WARNING HOT WATER CAN SCALD!

- Water temperature over 125°F can cause severe burns instantly, or death from scalds.
- Feel water before bathing or showering.
- Consumer Protection Safety Commission and some states recommend temperature settings of 130°F or less. Setting thermostat higher than 130°F setting will increase risk of scald injury and can cause severe personal injury or death.
- Water heated to a temperature suitable for clothes washing, dish washing and other sanitizing needs will scald and cause permanent injury.
- Children and elderly, infirm or physically handicapped persons are likely to be injured by hot water. Never leave them unattended in or near bathtub, shower, or sink. Never allow small children to use a hot water faucet or draw their own bath. If anyone using hot water in the building fits this description, or if state laws or local codes require certain water temperatures at hot water faucets, take special precautions:
 - Install an automatic mixing valve at water heater or at each hot water faucet, bath and shower outlet. Selection and installation must comply with valve manufacturer's recommendations and instructions.
 - Use the lowest practical temperature setting.
 - Check water temperature after any adjustment. You must follow "Setting the Thermostat" below.

GENERAL NOTES

- Household water usage patterns will affect water temperature at any faucet or shower. Occasionally check temperature at each point of use, then adjust thermostat accordingly. Always recheck temperature after adjusting thermostat.
- When hot water is used in repeated small quantities, a "stacking" effect can develop in hot water tank. The upper layer of water in tank can be much hotter than lower layers.
- Lowering the thermostat setting or installing automatic mixing valves as indicated in these instructions will reduce water temperature levels. Consult your installer or service technician.