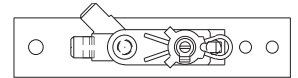




SERVER

### Thermostat Replacement Kit Stock No. 81040

This kit includes thermostat 81034

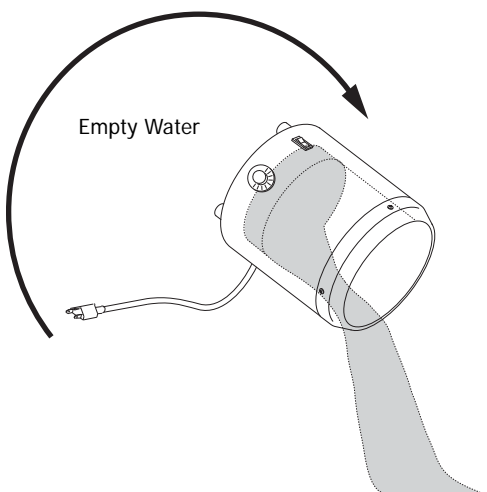
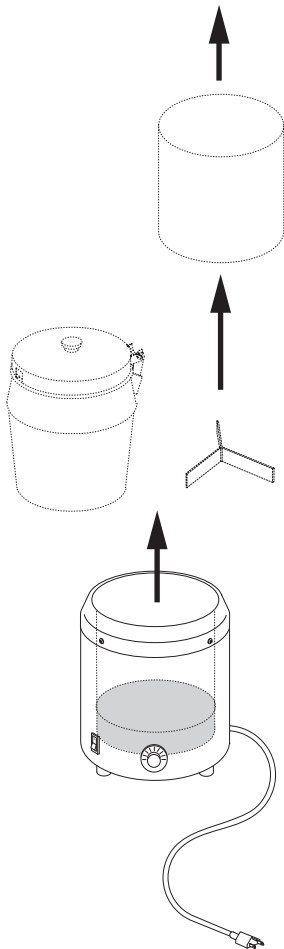
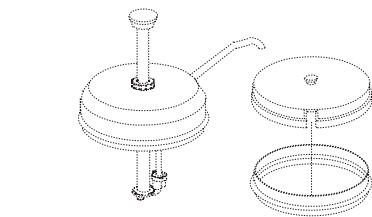


For Unit Prior to Series 81:

- FS
- FSP
- FS-4

## OLD THERMOSTAT REMOVAL

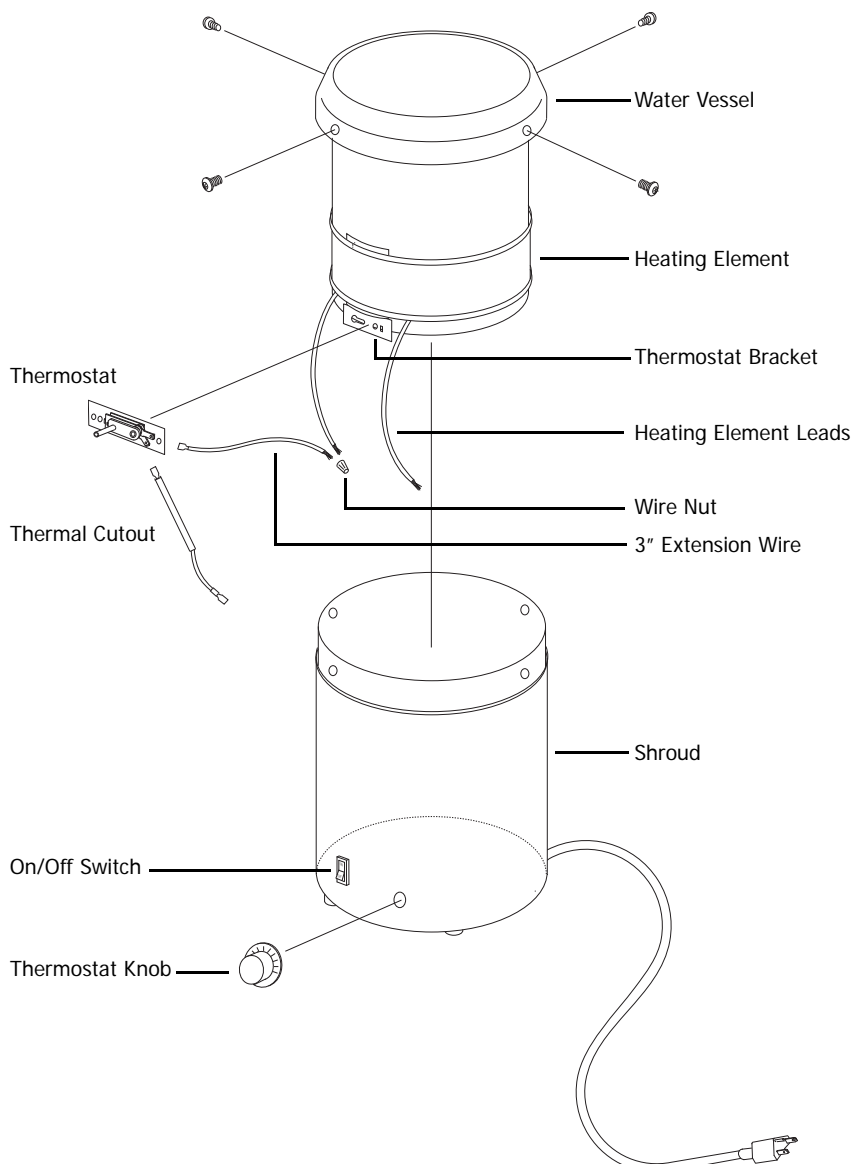
- 1 TURN UNIT OFF AND UNPLUG CORD.  
Allow unit to fully cool if unit has been in operation.
- 2 EMPTY ANY CONTENTS AND/OR WATER FROM VESSEL(S). Remove all accessories from unit.
- 3 REMOVE AND DISCARD OLD THERMOSTAT KNOB.  
Pointer type knobs have a setscrew that will need to be unscrewed.
- 4 DISASSEMBLE SHROUD FROM WATER VESSEL ENOUGH TO ACCESS WIRING.
  - Remove four screws, located around top rim of water vessel, securing water vessel to shroud. Save these four screws for re-assembly.
  - Slowly pull vessel away from shroud by tilting shroud until thermostat shaft clears hole provided in shroud.
  - If unit has a small rubber grommet in thermostat shaft hole in shroud, remove and discard grommet.
- 5 CUT WIRE TIES OR DISCONNECT GREEN GROUND LEAD, IF NECESSARY TO FURTHER ACCESS INTERNAL WIRING.
- 6 DISCONNECT LEADS TO THERMOSTAT.  
Thermostat can be best accessed when vessel is set upside down on a work surface.
- 7 REMOVE SCREW(S), NUT(S), AND WASHER(S) SECURING THERMOSTAT TO THERMOSTAT BRACKET.
- 8 REMOVE OLD THERMOSTAT AND DISCARD.



## NEW THERMOSTAT INSTALLATION

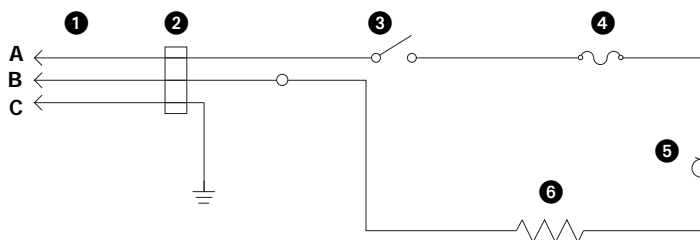
- 1 SET WATER VESSEL UPSIDE DOWN ON WORK SURFACE.
- 2 POSITION NEW THERMOSTAT, WITH ANGLED TERMINAL POINTING UPWARD, ONTO THERMOSTAT BRACKET.
- 3 SECURE THERMOSTAT TO THERMOSTAT BRACKET.
  - Use two Tinnerman clips provided in kit to secure thermostat to bracket.
- 4 CUT RING TERMINAL OFF OF HEATING ELEMENT LEAD. STRIP END OF LEAD APPROXIMATELY 1/2".
- 5 CONNECT STRIPPED HEATING ELEMENT LEAD TO 3" EXTENSION WIRE, PROVIDED IN KIT USING WIRE NUT ALSO PROVIDED IN KIT.
- 6 CONNECT LEADS TO THERMOSTAT.  
See **WIRING DIAGRAM** on opposite page.
  - Use new thermal cutout.
- 7 CONNECT GREEN GROUND LEAD, IF DISCONNECTED PREVIOUSLY.
- 8 INSTALL VESSEL BACK INTO SHROUD.  
Align thermostat shaft into hole provided in shroud.
- 9 GATHER ALL WIRES WITH WIRE TIES TO PREVENT WIRES FROM TOUCHING VESSEL OR HEATING ELEMENT AFTER COMPLETE ASSEMBLY.
- 10 SECURE VESSEL TO SHROUD BY RE-INSTALLING THE FOUR SCREWS AROUND THE TOP RIM OF THE WATER VESSEL.
- 11 INSTALL NEW THERMOSTAT KNOB ONTO THERMOSTAT SHAFT BY ALIGNING KNOB ONTO SPLINE ON SHAFT AND PUSHING KNOB ONTO SHAFT.
- 12 SET UNIT UPRIGHT ONTO ITS FEET AND PLUG UNIT INTO POWER SOURCE.
- 13 CALIBRATE THERMOSTAT PER CALIBRATION INSTRUCTIONS.

Kit Includes:		
Part No.	Qty.	Description
04387	2	Tinnerman Clip
10001	1	Wrench, Hexagonal, 1.5mm
11170	1	Wire Nut
81034	1	Thermostat
81037	1	Thermal Cutout
81054	1	3" Extension Wire
81055	1	Thermostat Knob



## WIRING DIAGRAM

- ① Cord Assembly
  - A Black
  - B White
  - C Green (Ground Wire)
- ② Bushing and/or Strain Relief
- ③ Snap-In Rocker Switch
- ④ Thermal Cut-Out
- ⑤ Thermostat



Factory-installed thermostats are sealed after calibration with Loctite or similar bonding material.

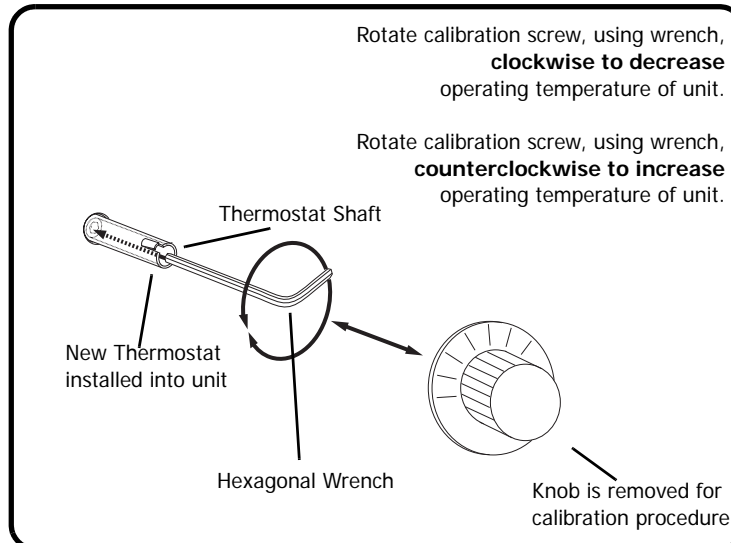
Do not attempt to calibrate a factory-installed thermostat.

## TOOLS NEEDED FOR CALIBRATION PROCEDURE

- **Hexagonal Wrench or Allen Wrench (1.5 mm)**  
-included in thermostat replacement kit
- **Stem type Dial Thermometer**  
-to measure water temperature of 90°-170°F (32.2°-76.7°C)  
-not included in thermostat replacement kit
- **Cover to contain heat within unit**  
-needs to have small hole in it to hold dial thermometer  
-not included in thermostat replacement kit

## CALIBRATION PROCEDURE

- ① FILL VESSEL AT LEAST 1/2 FULL OF WATER
- ② PLACE A COVER OVER VESSEL AND INSERT DIAL THERMOMETER THROUGH HOLE IN COVER SO THAT IT CAN READ THE WATER TEMPERATURE.
- ③ TURN KNOB TO SETTING OF:  
**150°F (65.6°C)** or  
**160°F (71.1°C)** for FS-4 units.
- ④ CAREFULLY REMOVE KNOB WITH A STRAIGHT PULL TO AVOID TURNING THERMOSTAT SHAFT.
- ⑤ TURN UNIT ON AND ALLOW TO HEAT UP TO A MINIMUM OF:  
**160°F (71.1°C)** or  
**170°F (76.7°C)** for FS-4 units.
  - These are minimum temperatures because exceeding these temperatures will not affect the final calibration. These are the lowest temperatures that the thermostat needs to "open" at, which is equal to turning heating element "off".
  - It might take as long as 45 minutes to reach the minimum temperature needed.
  - If temperature does not reach the minimum needed- hold thermostat shaft with one hand and rotate calibration screw, inside shaft, 1/4 turn counterclockwise, using hexagonal wrench. This will "close" thermostat and increase temperature of heating element.
  - If temperature still does not reach the minimum needed- repeat 1/4 turn of calibration screw, until temperature reaches the minimum needed.



- ⑥ WHEN UNIT REACHES THE MINIMUM TEMPERATURE NEEDED, ROTATE CALIBRATION SCREW TWO FULL TURNS CLOCKWISE TO COOL UNIT TO:  
**150°F (65.6°C)** or  
**160°F (71.1°C)** for FS-4 units.
  - This will "open" thermostat completely, which is equal to turning heating element "off" to decrease temperature of heating element.
  - If unit does not cool to the needed temperature- rotate calibration screw two additional full turns clockwise.
- ⑦ WHEN TEMPERATURE COOLS TO THE NEED TEMPERATURE, ROTATE CALIBRATION SCREW COUNTERCLOCKWISE UNTIL A SOFT AUDIBLE CLICK IS HEARD.
  - Or rotate calibration screw two full turns counterclockwise to "close" thermostat completely, which is equal to turning heating element "on".
  - Unit will now start and continue to heat up until another audible click is heard. This second click indicates that heating has stopped and unit is now working properly.
- ⑧ CHECK CALIBRATION SETTING:  
Turn unit off and then turn unit back on again.  
  
Return unit to service when unit can hold a stable temperature around:  
**150°F (65.6°C)** or  
**160°F (71.1°C)** for FS-4 units.  
after unit has been on for about 45 minutes.  
Otherwise, repeat entire calibration procedure.
- ⑨ SECURE CALIBRATION SCREW BY PLACING SUITABLE THREAD-LOCKING MATERIAL, SUCH AS LOCTITE, IN SHAFT CENTER.
- ⑩ INSTALL THERMOSTAT KNOB ONTO THERMOSTAT SHAFT BY ALIGNING KNOB ONTO SPLINE ON SHAFT AND PUSHING KNOB ONTO SHAFT.
  - If unit includes knob guard, install knob guard also.



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