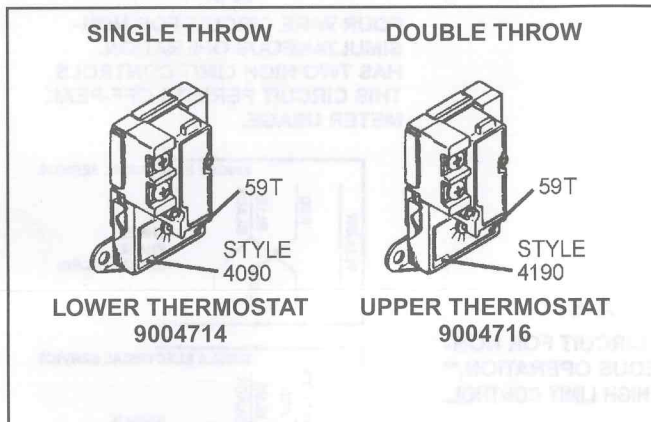


ELECTRIC THERMOSTAT/HIGH LIMIT CONTROL REPLACEMENT TYPE 59T & 66T

IMPORTANT

New type 59T single and double throw thermostats and type 66T high limit are now being used on residential electric water heaters, except those heaters using the A-7 wiring circuit.* These new thermostats are designed to handle heavier electrical loads, offer longer contact life and maintain better calibration. In all other wiring circuits the new 59T and 66T controls can be used interchangeably with the old type AW thermostats and HLC high limits. Both new and old style controls are available for field replacements with wiring data included from your nearest Product Service branch.

- For immersion or wrap-around elements
- Can be screw or clamp mounted to tank surface
- Tested and listed by Underwriters' Laboratories



A.O. Smith Part No.	Switch Action	Circuit Opens	Rating	Adjustment Range
9004714	Single Throw Type 59T	On Temp. Rise	3000W @ 120V 6240W @ 208V	
9004716	Double Throw Type 59T	Ct 1 On Rise* Ct 2 on Fall+	6925W @ 277V 7200W @ 240V 6000W @ 480V	90° F to 150° F

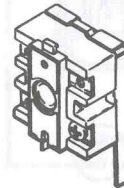
* Terminals 1 and 2 + Terminals 1 and 4

Wiring changes will have to be made only when the upper thermostat replacement is not of the same type. Wiring diagrams are on the reverse side of this sheet.

The new 66T and old HLC high limits can be used interchangeably but installation is simpler if used with the companion thermostat.

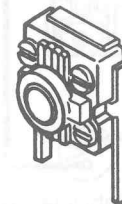
- Furnished with slip-on type mounting bracket.
- Manual reset draws attention to high temperature condition.
- Contacts cannot be held closed by blocking reset lever.
- Can be screw or clamp mounted to tank surface.
- Tested and listed by Underwriters' Laboratories.

CONTACTS OPEN AT 170° ± 5°F, RATED 40 AMPS AT 120-277 VOLTS 25 AMPS @ 480 VOLTS



TYPE 66T-4490 HIGH LIMIT,
AOS # 9004718
IDENTIFICATION ON BACK PLATE

CONTACTS OPEN AT 190° ± 5°F, RATED 40 AMPS @ 120-277 VOLTS



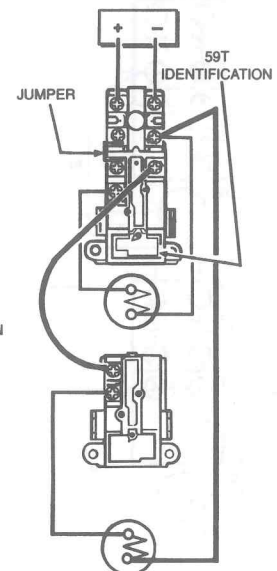
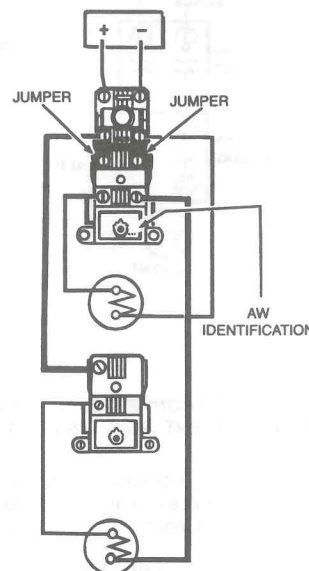
TYPE HLC-1610
AOS # 9004778
IDENTIFICATION ON BACK PLATE

* This four wire circuit for non-simultaneous operation has two high limit controls to permit off-peak meter arrangement. The old AW control must be used for replacements on this circuit.

ELECTRIC CONTROLS

OLD A-6 CIRCUIT
Two wire circuit for non-simultaneous operation. Has single high limit control and double throw type AW upper thermostat.

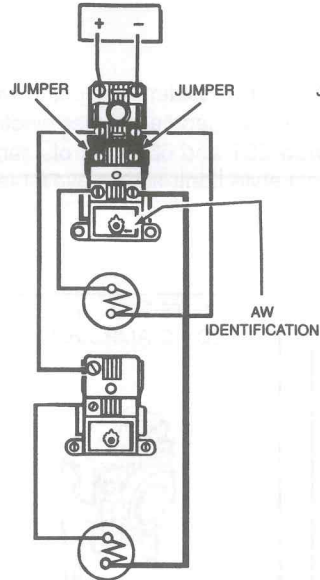
NEW A-6 CIRCUIT
Two wire circuit for non-simultaneous operation. Has single high limit control and double throw type 59T upper thermostat.



ELECTRIC CONTROLS

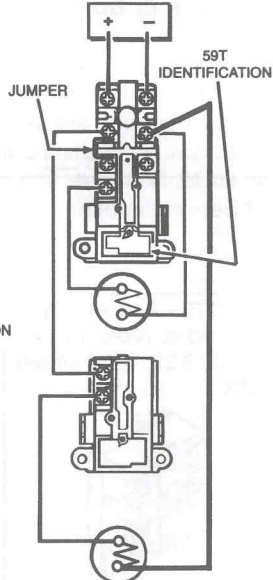
OLD B-6 CIRCUIT

Two wire circuit for non-simultaneous operation. Has single high limit control and double throw type AW upper thermostat.



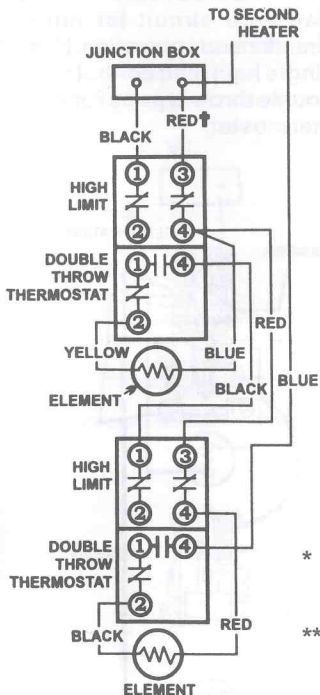
NEW B-6 CIRCUIT

Two wire circuit for non-simultaneous operation. Has single high limit control and double throw type 59T upper thermostat.

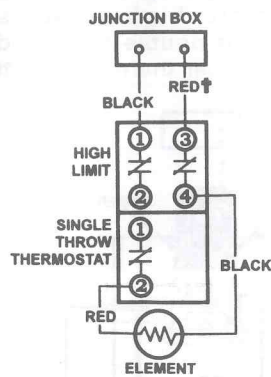


NOTE: Light lines represent wiring which is unchanged when making a thermostat replacement. Heavy lines indicate wiring which is attached to different terminals. Old style high limit controls may be reused on new style thermostats and vice versa.

S-1 THREE WIRE CIRCUIT FOR ELECTRIC CO. CO-OP. PROGRAMS.



C-2 TWO WIRE CIRCUIT FOR SINGLE ELEMENT HEATERS EQUIPPED WITH HIGH LIMIT CONTROL.



* MUST NOT BE CONVERTED TO SIMULTANEOUS OPERATION IF TOTAL CURRENT DRAW EXCEEDS: 40 AMPS.

** MUST NOT BE CONVERTED TO SIMULTANEOUS OPERATION IF TOTAL WATTS/HR. INPUT EXCEEDS: 6240W @ 208 VOLTS, 7200 W @ 240 VOLTS, 8300 W @ 277 VOLTS.

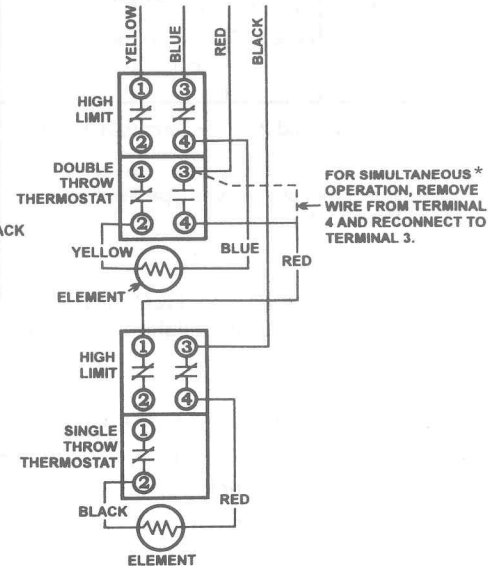
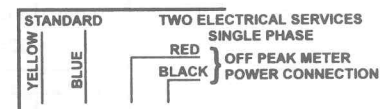
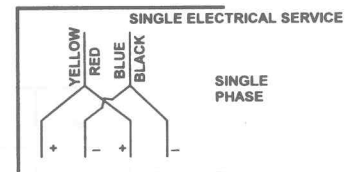
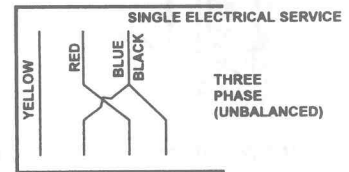
† WHITE FOR 120V AND 277V.

⚠ WARNING! TURN OFF THE HEATER ELECTRICAL SUPPLY.

1. Remove front panel(s) and fold aside insulation.
NOTE: The internal wiring of the water heater conforms to one of the designated diagrams shown. The heater data plate identifies this wiring as designated in the space marked CIRCUIT. Also shown on the plate are the voltage and wattage ratings.
2. Carefully mark and note the exact position and color of each wire. Disconnect the wiring.
3. Remove the old control(s). Be certain you have the correct style to replace each removed part.
4. Install the new part(s), connect wiring, and reinstall insulation.
5. Check the water heater to see if it is full, by turning on the hot water faucet to see if water flows freely.
6. Attach the front panel(s) and turn on heater electrical supply.

A-7

FOUR WIRE CIRCUIT FOR NON-SIMULTANEOUS OPERATION. HAS TWO HIGH LIMIT CONTROLS. THIS CIRCUIT PERMITS OFF-PEAK METER USAGE.



A-6

TWO WIRE CIRCUIT FOR NON-SIMULTANEOUS OPERATION, HAS SINGLE HIGH LIMIT CONTROL.**

