

JULY-1964

TO: ALL ROOTES GROUP DEALERS
MODEL: ALL MODELS
SUBJECT: THERMOSTATS

Dealers have been returning thermostats under guarantee which, when tested, have proved to be perfectly satisfactory.

Before replacing a thermostat, the suspect unit should be checked in the following manner:-

- (1) Examine the thermostat visually to ensure that the rivetted or soldered joints are secure.
- (2) Ensure that the jiggle pin is in position and free to float.
- (3) Check that the rubber seal on top of the wax type element is not cracked or perished and that no wax is exuding from beneath it.
- (4) Fully immerse the thermostat in cold water, taking care not to let it touch the bottom or sides of the container. Suspend it from a fixed part of its structure in order not to interfere with its action when opening.

Raise the temperature of the water gradually to 4° or 5° F (2.2° or 2.8° C) above the specified opening temperature of the thermostat and hold it steady at this temperature for two or three minutes.

Continue to raise the temperature gradually to boiling point and again soak for the recommended period.

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- (5) Check that the behavior of the thermostat, as the temperature rises, follows the specified pattern:-
- (a) Bellows Type
After starting to open within $4^{\circ} - 5^{\circ}\text{F}$ ($2.2^{\circ} - 2.8^{\circ}\text{C}$) of its nominal temperature, the thermostat should be fully open within a further $10^{\circ} - 12^{\circ}\text{F}$ ($5.6^{\circ} - 6.7^{\circ}\text{C}$).
- (b) Wax Type
This thermostat should also start to open within $4^{\circ} - 5^{\circ}\text{F}$ ($2.2^{\circ} - 2.8^{\circ}\text{C}$) of its specified temperature. At 210° to 212°F ($98.9^{\circ} - 100^{\circ}\text{C}$) it will be approximately $\frac{1}{4}$ " open but will not reach its fully open position until several degrees above normal atmospheric boiling point.
- (6) When the valve has opened, ensure that its seating is clear of foreign matter. (NB. It is not recommended that the valve be operated manually).
- (7) Remove the thermostat from the hot water and submerge it in cold water (room temperature) to check that the valve re-seats securely within 15 - 20 seconds.

ALTERNATIVE METHOD

The above procedure is essential for testing the bellows type and is preferred for the wax type. The characteristics of the wax type, however, are such that if the valve opens to the correct extent at boiling point, its starting temperature will almost certainly be correct too. In most instances, therefore, where the wax type only is concerned, it will be sufficient, in place of Item 5 above, to plunge the thermostat into boiling water and observe its opening dimension after two or three minutes at that temperature.

ROOTES MOTORS INCORPORATED

K. Langridge
Kenneth Langridge
General Service Manager *RLT*

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