

# **Packard** **SERVICE** **TECHNICAL** **Bulletin**

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Dealer 9  
June 4, 1953

TO: ZONES AND DEALERS

SUBJECT: NEW COOLING SYSTEM THERMOSTATS (CAPSULE TYPE)  
26th Series

Starting with engine numbers L-216891, L-312370, L-409334 and L-604405, capsule type cooling system thermostats are used in production instead of the bellows type thermostats.

A characteristic of the bellows type thermostat has been that the cooling system pressure exerted against the bellows tends to close the thermostat valve which may cause overheating up to a certain point. Above this point the extreme heat causes the bellows to expand, opening the valve, thus overcoming any coolant pressure that can be maintained within the limits of the pressure cap.

In other words, a 160° bellows type thermostat will open at 160° temperature without coolant pressure, but under pressure it may not open until 170° or 180° temperature is reached, depending on the pressure in the cooling system.

To obtain the utmost in performance and economy it is necessary to maintain regulated engine and under-bonnet temperatures at a normal level. The temperature should be controlled so as not to cause vapor lock, boiling, or the loss of coolant from the cooling system due to expansion.

The desired controlled temperature can only be accomplished by a pressurized cooling system and an effective cooling system thermostat. For every pound of coolant pressure maintained, the boiling point of the coolant rises 3 degrees; therefore, the radiator cap has three functions - it controls the pressure in the cooling system, raises the boiling point of the coolant, and prevents the loss of coolant from the overflow pipe within the limits of the radiator cap predetermined pressure setting.

The capsule type thermostat is not affected by cooling system pressure; therefore, it will open at its predetermined temperature calibration regardless of cooling system pressure.

When overheating of the cooling system is encountered with the 24th, 25th or 26th Series cars and the trouble is not caused by - poor circulation in the core, faulty water pump, loose or broken fan belt, defective radiator cap or hoses - the outlined procedure should be followed.

(over)



Note: With the normal 20° temperature rise after stopping an engine in hot weather, it may be necessary to install a 12 lb. radiator cap to prevent the coolant from spilling out of the overflow pipe.

1. If coolant is being lost through the overflow pipe and the temperature gauge reading is normal, install a new capsule type thermostat, Part No. 440066. In some cases it may be necessary to install the 12 lb. radiator cap.
2. If coolant is being lost through the overflow pipe and the temperature gauge reading is high, install a new capsule type thermostat, Part No. 440066, and the new temperature gauge sending unit, Part Number 439368. In some cases it may be necessary to install the 12 lb. radiator cap.

Caution: Under no circumstances should the new sending unit, Part No. 439368, be installed on the early 26th Series cars having the gauge regulator as described in Service Counselor Vol. 27, No. 4, April, 1953, unless the gauge regulator is removed.

The capsule type thermostats and the 12 lb. radiator caps are available at the Parts Warehouse and may be ordered as follows:

Part No. 440066	Thermostat	170 Deg. (Alcohol Anti-freeze)
Part No. 436846	Thermostat	180 Deg. (Permanent Anti-freeze)
Part No. 446546	Radiator Cap	12 lb.

Very truly yours,

*J. A. Carr*  
J. A. Carr  
General Service Manager

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