

SERVICE BULLETIN

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SUBSIDIARY OF
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Subject: COOLING SYSTEM

Description: ENGINE TEMPERATURE

The cooling system in the Checker is of the pressure type. This means that the water is under pressure when operating with a pressure cap on the radiator. The pressure cap is designed with a spring pressure of approximately four pounds to hold the sealing portion of the cap tight against the top of the filler neck. Under this pressure, created by the cap, water is prevented from boiling at its normal boiling point.

As we know, water boils at 212° Fahrenheit at normal atmospheric pressure and also that under low atmospheric pressures, as found in high altitudes, water will boil at less than 212°. On the other hand, if more pressure is applied, water will boil at higher than 212° temperature. This is the principle used in a pressure cooling system. The cooling system is sealed by the pressure cap, causing pressure to be developed, raising the boiling point of the water.

The boiling point of the water in the system is increased 3° for every pound increase of pressure. The Checker cooling system has a four pound pressure; thus the boiling point of the water is 224°.

We have learned from records of innumerable tests, that an engine operates more efficiently at high temperatures. Gasoline economy is better and sludge formation is minimized.

The thermostat is set to start opening at 160°. Depending on outside temperature, the normal water temperature will be from 170° to 200°, and with a pressure cap, temperatures can go over 212° without affecting the efficiency of the engine, or without any danger of overheating.

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Real overheating will be indicated by the continued loss of water boiling out of the radiator, and unless this happens, the system is in a normal and satisfactory condition. However, if the radiator is overfilled, some water will be lost through the overflow pipe when the engine is warmed up the first time. This loss, however, will not continue and additional water should not be added.

The radiator cap should not be removed when the engine is hot, as the removal will release the pressure in the cooling system and cause the hot water to overflow the filler neck.

Be guided, therefore, by the heat indicator. As long as it stays within the operating range, marked on the dial, the cooling system is functioning properly and you should instruct filling station attendants to leave the radiator cap alone. The cooling system then will retain its maximum temperature control and the engine will continue to operate at its greatest efficiency.

By: NEW YORK SERVICE DEPARTMENT