

2005 Corvette: GM TechLink: Low Coolant System Operation

The 2005 Chevrolet Corvette utilizes an algorithm-based low coolant level system which eliminates the need for the coolant level sensor previously positioned inside the surge tank.

The algorithm (a mathematical calculation) measures the difference in engine coolant temperature readings over time as a function of engine speed, to determine if the cooling system has a low coolant condition. After vehicle start-up, the ECM sends an engine RPM and engine coolant message through the BCM to the HVAC control head. The HVAC control head uses engine coolant temperature and engine RPM to determine if an increase in coolant temperature is due to a low coolant level condition.

This system is capable of losing 2 full liters of coolant before triggering the Low Coolant warning message. Because the surge tank holds approximately 0.8 liters when filled to the proper level, it's possible that a Low Coolant warning message is not triggered, even though the surge tank is completely dry.

TIP: After filling a system that has triggered the Low Coolant indicator message, the ignition must be cycled to turn the Low Coolant indicator off.

Diagnostic Tips

In the event that the Low Coolant message is present and the coolant is not low, verify that the RPM and Coolant Data (GMLAN) sent to the BCM matches the RPM and Coolant Data (Class 2) sent to the HVAC control module. If the RPM and Coolant GMLAN and Class 2 Data **do match**, the HVAC Module software needs updated. If the RPM and Coolant GMLAN and Class 2 Data **do not match**, the ECM and BCM software need updated.

TIP: This assumes that there are no RPM or Coolant codes set and no other messages or symptoms are present.

Always refer to SI for the latest service information before conducting any repairs.

- Thanks to Chris Semanisin, GM TechLink, November 2004

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