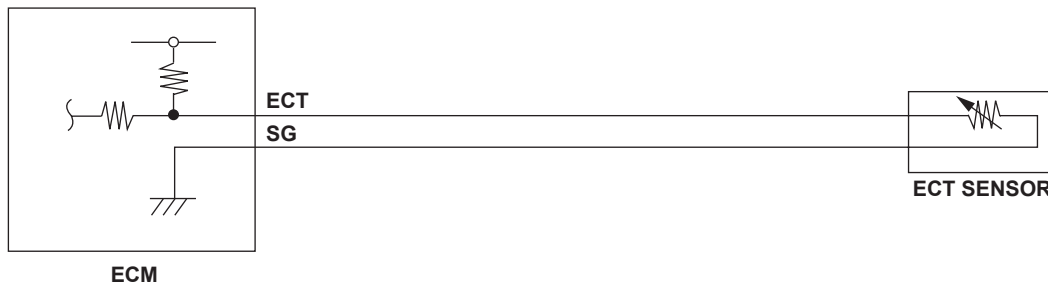


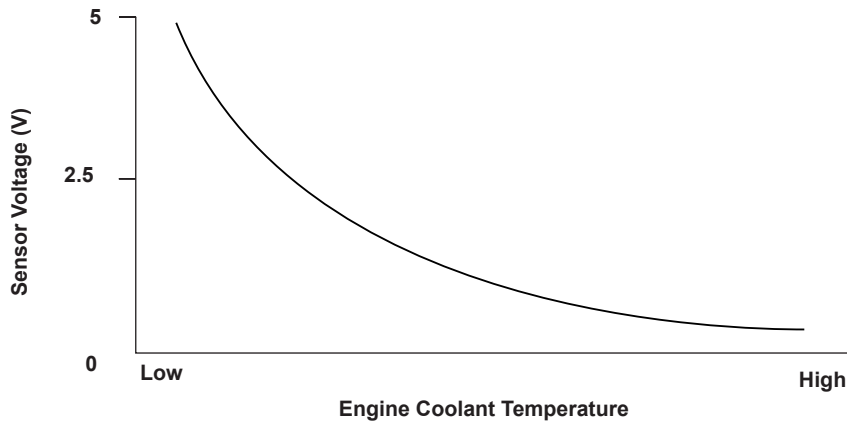
Advanced Diagnostics

DTC P0117: Engine Coolant Temperature (ECT) Sensor Circuit Low Voltage



P0116-9602

Engine Coolant Temperature (ECT) Sensor Output Voltage



P0116-9672

General Description

The engine coolant temperature (ECT) sensor is used for the air/fuel ratio feedback control, the ignition timing control, the idle speed control, and other functions. The ECT sensor resistance varies depending on the engine coolant temperature. As the engine coolant cools, the ECT sensor resistance increases, and the engine control module (ECM) detects a high signal voltage. As the engine coolant warms, the ECT sensor resistance decreases, and the ECM detects a low signal voltage. If the ECT sensor output voltage is less than a set value when the engine coolant temperature is high, the ECM detects a malfunction and a DTC is stored.

Monitor Execution, Sequence, Duration, DTC Type

| | |
|-----------|-------------------------|
| Execution | Continuous |
| Sequence | None |
| Duration | 2 seconds or more |
| DTC Type | One drive cycle, MIL ON |

Enable Conditions

| Condition | |
|-----------------|-----|
| Ignition switch | ON |
| No active DTCs | ECT |

Malfunction Threshold

The output voltage from the ECT sensor is 0.08 V or less for at least 2 seconds.

Diagnosis Details

Conditions for illuminating the MIL

When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored in the ECM memory.

Conditions for clearing the MIL

The MIL will be cleared if the malfunction does not recur during three consecutive trips in which the diagnostic runs.

The MIL, the DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.