



YMMS: 2020 Jeep Wrangler Unlimited Rubicon
 Engine: 3.6L Eng
 VIN:

Feb 22, 2021
 License:
 Odometer:

SET CONDITION [P0118-00-ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH]

- The Powertrain Control Module (PCM) detects that the Engine Coolant Temperature (ECT) Sensor input voltage is above 4.95 volts depending on calibration for 2.24 seconds.

SET CONDITION [P0118-ENGINE COOLANT TEMPERATURE SENSOR 1 CIRCUIT HIGH]

- The Engine Coolant Temperature (ECT) Sensor input voltage is above 4.95 volts depending on calibration for 2.24 seconds.

SET CONDITION [P0118-ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH]

- The Powertrain Control Module (PCM) detects that the Engine Coolant Temperature (ECT) Sensor input voltage is above the maximum acceptable threshold.

WHEN MONITORED [P0118-00-ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH]

This diagnostic runs continuously when the following conditions are met:

- With the ignition on.
- Battery voltage greater than 10.4 volts.

WHEN MONITORED [P0118-ENGINE COOLANT TEMPERATURE SENSOR 1 CIRCUIT HIGH]

This diagnostic runs continuously when the following conditions are met:

- With the ignition on
- Battery voltage greater than 10.4 volts

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This diagnostic runs continuously when the following conditions are met:

- With the ignition on.
- Battery voltage greater than 10.4 volts.

POSSIBLE CAUSES [P0118-00-ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH]

Possible Causes
ECT SENSOR SIGNAL CIRCUIT SHORTED TO VOLTAGE

ECT SENSOR SIGNAL CIRCUIT OPEN/HIGH RESISTANCE
SENSOR GROUND CIRCUIT OPEN/HIGH RESISTANCE
ENGINE COOLANT TEMPERATURE (ECT) SENSOR
POWERTRAIN CONTROL MODULE (PCM)

Always perform the PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE before proceeding. Refer to PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE .

POSSIBLE CAUSES [P0118-ENGINE COOLANT TEMPERATURE SENSOR 1 CIRCUIT HIGH]

Possible Causes
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THEORY OF OPERATION [P0118-00-ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH]

The cooling system of the modern internal combustion engine has two main functions. The first function is to keep the engine from overheating once the engine is at operating temperatures. This is achieved by keeping the cylinder head cool to eliminate pre-ignition and the cylinder block warmer for decreased friction. The secondary function is to increase the engine temperature rapidly to eliminate high friction at cold temperatures and increase cabin heat, more rapidly, for the vehicle occupant comfort. The temperature of the coolant fluid is monitored by the Powertrain Control Module(PCM) using the engine

coolant temperature sensor. The PCM checks rationality of this data by comparing the received data to other temperature sensors on the engine, such as the Engine Oil Temperature (EOT) sensor. The Engine Coolant Temperature (ECT) Sensor operates as a typical two wire sensor. It receives a 5-Volt signal on the ECT Sensor Signal circuit and is grounded through the Coolant Temperature Sensor Return circuit. It acts as a variable resistor, and changes resistance as temperature changes.

THEORY OF OPERATION [P0118-ENGINE COOLANT TEMPERATURE SENSOR 1 CIRCUIT HIGH]

The Engine Coolant Temperature (ECT) Sensor is a variable resistor that functions as a normal two wire, 5-Volt sensor. The Powertrain Control Module (PCM) supplies the ECT Sensor with a 5-Volt reference and a filtered ground (return) circuit. For the ECT Sensor diagnostic, the PCM internally monitors the voltage on the signal circuit, which is converted into a temperature reading. If the voltage reads above the high calibrated threshold, or below the low calibrated threshold, a circuit high or low fault is set.

THEORY OF OPERATION [P0118-ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH]

The Engine Coolant Temperature (ECT) Sensor is a variable resistor that functions as a normal two wire, 5-Volt sensor. The Powertrain Control Module (PCM) supplies the ECT Sensor with a 5-Volt reference and a filtered ground (return) circuit. For the ECT Sensor diagnostic, the PCM internally monitors the voltage on the signal circuit, which is converted into a temperature reading. If the voltage reads above the high calibrated threshold, or below the low calibrated threshold, a circuit high or low fault is set.