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| DTC | P0116 | ENGINE COOLANT TEMPERATURE CIRCUIT RANGE/PERFORMANCE PROBLEM |
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CIRCUIT DESCRIPTION

Refer to DTC P0115/22 on page 65-69.

| DTC No. | DTC Detection Condition | Trouble Area |
|---------|--|-------------------------------------|
| P0116 | If the engine coolant temperature was between 35°C (95°F) and 60°C (140°F) at engine start, and conditions (a) and (b) are met (2 trip detection logic): (a) Vehicle is driven at varying speeds (under acceleration and deceleration) (b) Engine coolant temperature remains within 3°C (5.4°F) of the engine starting temperature | • Engine coolant temperature sensor |
| P0116 | If the engine coolant temperature was more than 60°C (140°F) at engine start, and conditions (a) and (b) are met (6 trip detection logic): (a) Vehicle is driven at varying speeds (under acceleration and deceleration) (b) Engine coolant temperature remains within 1°C (1.8°F) of the engine starting temperature, and this is successively recorded 6 times | • Engine coolant temperature sensor |

INSPECTION PROCEDURE

HINT:

- If DTCs P0115/22, P0116, P0117/22 and P0118/22 are output simultaneously, the engine coolant temperature sensor circuit may be open or short. Perform troubleshooting on DTC P0115/22, P0117/22 or P0118/22 first.
- Read freeze frame data using the intelligent tester II. Freeze frame data record the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, if the air-fuel ratio was lean or rich, and other data from the time the malfunction occurred.

REPLACE ENGINE COOLANT TEMPERATURE SENSOR