DI6TR–09

CIRCUIT INSPECTION

DTC	P0116/22	Engine Coolant Temp. Circuit Range/ Performance Problem

CIRCUIT DESCRIPTION

A thermistor built in the water temperature sensor changes the resistance value according to the water temperature. The structure of the sensor and connection to the engine ECU is the same as the ones of the air temperature sensor.

DTC No.	DTC Detecting Condition	Trouble Area
P0116/22	When THW ≧ 35 °C (95 °F) and < 60 °C (140 °F), and THA- ≧ −6.7 °C (20 °F), and when starting engine, conditions (a) and (b) continue: (2 trip detection logic) (a) Vehicle speed is changing (Not stable) (b) THW change is lower than 3 °C (5.4 °F) from THW since when starting engine	• Engine coolant temp. sensor • Cooling system

INSPECTION PROCEDURE

HINT:

- If DTC "P0115/22" (Engine Coolant Temp. Circuit Malfunction) and "P0116/22" (Engine Coolant Temp. Circuit Range/Performance Problem) are output simultaneously, engine coolant temp. sensor circuit may be open. Perform troubleshooting of DTC P0115/22 first.
- Read freeze frame data using a hand–held tester. Because freeze frame records the engine conditions when the malfunction is detected, when troubleshooting it is useful for determining whether the vehicle was running or stopped, the engine warmed up or not, the air–fuel ratio lean or rich, etc. at the time of the malfunction.

1	Are there any other codes (besides DTC P0116/22) being output?

YES → Go to relevant DTC chart.

NO

2	Check thermostat (See Pub. No. RM630E on page CO–11).

NG → Replace thermostat.

OK

Replace engine coolant temp. sensor.