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| DTC | P0711 | Transmission Fluid Temperature Sensor "A" Performance |
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DESCRIPTION

Refer to DTC P0710 (See page [AT-49](#)).

| DTC No. | DTC Detection Conditions | Trouble Areas |
|---------|---|---|
| P0711 | Both (a) and (b) are detected (2-trip detection logic): (a) Intake air and engine coolant temperatures are more than -10°C (14°F) at engine start (b) After normal driving for over 22 minutes and 5.6 miles (9 km) or more, ATF temperature is less than 20°C (68°F) | <ul style="list-style-type: none"> • Transmission wire (No. 1 ATF temperature sensor) • ECM |

MONITOR DESCRIPTION

This DTC indicates that there is a problem with the output from the automatic transmission fluid (ATF) temperature sensor and that the sensor itself is defective. The ATF temperature sensor converts the ATF temperature to an electrical resistance value. Based on the resistance, the ECM determines the ATF temperature and detects any open or short malfunctions in the ATF temperature circuit or a fault of the ATF temperature sensor.

After running the vehicle for a certain period, the ATF temperature should increase. If the ATF temperature is below 20°C (68°F) after running the vehicle for a certain period, the ECM interprets this as a fault, and turns on the MIL.

MONITOR STRATEGY

| | |
|-----------------------------|---|
| Related DTCs | P0711: ATF temperature sensor/Rationality check |
| Required sensors/Components | ATF temperature sensor |
| Frequency of operation | Continuous |
| Duration | 3 seconds |
| MIL operation | 2 driving cycles |
| Sequence of operation | None |

TYPICAL ENABLING CONDITIONS

| | |
|---|-----------------------------------|
| The monitor will run whenever the following DTCs are not present. | None |
| ATF temperature sensor "A" circuit | Functioning normally |
| ECT (Engine coolant temperature) sensor circuit | Functioning normally |
| IAT (Intake air temperature) sensor circuit | Functioning normally |
| Time after engine start | 21 minutes and 40 seconds or more |
| Driving distance after engine start | 5.6 miles (9 km) or more |
| IAT (12 seconds after engine start) | -10°C (14°F) or more |
| ECT (12 seconds after engine start) | -10°C (14°F) or more |

TYPICAL MALFUNCTION THRESHOLDS

| | |
|-----------------|---|
| ATF temperature | Less than 20°C (68°F) (Conditions vary with ATF temperature at engine start) |
|-----------------|---|

WIRING DIAGRAM

Refer to DTC P0710 (See page [AT-51](#)).

HINT:

According to the DATA LIST displayed on the intelligent tester, you can read the values of components, such as the switches, sensors and actuators, without removing any parts. Reading the DATA LIST as a first step of troubleshooting is one method of shortening labor time.

NOTICE:

In the table below, the values listed under "Normal Condition" are for reference only. Do not depend solely on these reference values when judging whether a part is faulty or not.

1. Warm up the engine.
2. Turn the ignition switch off.
3. Connect the intelligent tester together with the CAN VIM (controller area network vehicle interface module) to the DLC3.
4. Turn the ignition switch to the ON position.
5. Push the "ON" button of the tester.
6. Select the items "DIAGNOSIS/ ENHANCED OBD II/ DATA LIST/ A/T".
7. According to the display on the tester, read the "DATA LIST".

| Item | Measurement Item/ Range (display) | Normal Condition |
|--------------|---|---|
| AT OIL TEMP1 | No. 1 ATF Temperature Sensor Value/ min.: -40°C (-40°F) max.: 215°C (419°F) | <ul style="list-style-type: none"> • After Stall Test: Approximately 80°C (176°F) • Equal to ambient temperature during cold soak |

HINT:

When DTC P0712 is output and intelligent tester reading is 150°C (302°F) or more, there is a short circuit.

When DTC P0713 is output and intelligent tester reading is -40°C (-40°F), there is an open circuit. Measure the resistance between terminal THO1 (OT) and the body ground.

| Temperature Displayed | Malfunction |
|-----------------------|---------------|
| -40°C (-40°F) | Open circuit |
| 150°C (302°F) or more | Short circuit |

HINT:

If a circuit related to the ATF temperature sensor becomes open, P0713 is immediately set (in 0.5 seconds). When P0713 is set, P0711 cannot be detected. It is not necessary to inspect the circuit when P0711 is set.

1 CHECK ANY OTHER DTCS OUTPUT (IN ADDITION TO DTC P0711)

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch to the ON position and push the intelligent tester main switch ON.
- (c) Select the items "DIAGNOSIS/ ENHANCED OBD II/ DTC INFO/ CURRENT CODES".
- (d) Read the DTCs using the intelligent tester.

Result:

| Display (DTC Output) | Proceed to |
|------------------------|------------|
| Only "P0711" is output | A |
| "P0711" and other DTCs | B |

HINT:

If any codes besides "P0711" are output, perform troubleshooting for those DTCs first.

B

GO TO DTC CHART

A

2 CHECK TRANSMISSION FLUID LEVEL

AT

OK:

Automatic transmission fluid level is correct.

NG

ADD FLUID

OK

REPLACE TRANSMISSION WIRE (ATF TEMPERATURE SENSOR)