

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

See page [DI-999](#).

DTC No.	DTC Detection Condition	Trouble Area
P0711	Both (a) and (b) are detected: (2-trip detection logic) (a) Intake air and engine coolant temps. are more than -20°C (5°F) at engine start (b) After normal driving for over 22 min. and 9 km (6 mile) or more, ATF temp. is less than 10°C (68°F)	• Transmission wire (ATF temperature sensor No.1)

MONITOR DESCRIPTION

This DTC indicates that there is a problem with 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 an open or short in the ATF temperature circuit or a fault in 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 (TFT sensor)	
Frequency of operation	Continuous	
Duration	3 sec.	
MIL operation	2 driving cycles	
Sequence of operation	None	

TYPICAL ENABLING CONDITIONS

Item	Specification	
	Minimum	Maximum
The monitor will run whenever this DTC is not present.	See page DI-963	
TFT (transmission fluid temperature) sensor circuit	Not circuit malfunction	
ECT (Engine coolant temperature) sensor circuit	Not circuit malfunction	
IAT (Intake air temperature) sensor circuit	Not circuit malfunction	
Time after engine start	21 min. and 40 sec.	
Driving distance after engine start	9 km (5.6 mile) or more	–
IAT (12 sec. after engine start)	-10°C (14°F) or more	–
ECT (12 sec. after engine start)	-10°C (14°F) or more	–

TYPICAL MALFUNCTION THRESHOLDS

Detection criteria	Threshold
TFT (transmission fluid temperature)	Less than 20°C (68°F) (varies with TFT (transmission fluid temperature) at engine start)

WIRING DIAGRAM

See page [DI-999](#).

INSPECTION PROCEDURE

HINT:

According to the DATA LIST displayed by the OBD II scan tool or hand-held tester, you can read the value of the switch, sensor, actuator and so on without parts removal. Reading the DATA LIST as the first step of troubleshooting is one method to shorten labor time.

- Warm up the engine.
- Turn the ignition switch off.
- Connect the OBD II scan tool or hand-held tester to the DLC3.
- Turn the ignition switch to the ON position.
- Push the "ON" button of the OBD II scan tool or the hand-held tester.
- When you use the hand-held tester:
Select the item "DIAGNOSIS / ENHANCED OBD II / DATA LIST".
- According to the display on the tester, read the "DATA LIST".

Item	Measurement Item/ Range (display)	Normal Condition
AT FLUID TEMP 1	ATF Temp. Sensor Value/ min.: -40°C (-40°F) max.: 215°C (419°F)	<ul style="list-style-type: none"> After Stall Test; Approx. 80°C (176°F) Equal to ambient temperature when cold soak

HINT:

When DTC P0712 is output and hand-held tester output is 150°C (302°F) or more, there is a short circuit.
When DTC P0713 is output and hand-held tester output is -40°C (-40°F), there is an open circuit.
Measure the resistance between terminal THO1 (OT) and 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 second).
When P0713 is set, P0711 cannot be detected.
It is not necessary to inspect the circuit when P0711 is set.

1	Check other DTCs output (in addition to DTC P0711).
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PREPARATION:

- (a) Turn the ignition switch off.
- (b) Connect the OBD II scan tool or hand-held tester to the DLC3.
- (c) Turn the ignition switch to the ON position.
- (d) Turn on the tester.
- (e) Select the item "DIAGNOSIS / ENHANCED OBD II / DTC INFO / CURRENT CODES".

CHECK:

Read the DTCs using the OBD II scan tool or the hand-held tester.

RESULT:

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

HINT:

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

B

Go to DTC chart (See page [DI-991](#)).

A

2	Check transmission fluid level (See page DI-952).
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OK:

Automatic transmission fluid level is correct.

NG

Add fluid (See page [DI-952](#)).

OK

**Replace the transmission wire
(ATF temperature sensor)
(See page [AT-9](#)).**