

DTC	P0710	TRANSMISSION FLUID TEMPERATURE SENSOR "A" CIRCUIT
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DTC	P0712	TRANSMISSION FLUID TEMPERATURE SENSOR "A" CIRCUIT LOW INPUT
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DTC	P0713	TRANSMISSION FLUID TEMPERATURE SENSOR "A" CIRCUIT HIGH INPUT
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CIRCUIT DESCRIPTION

The ATF temperature sensor converts the fluid temperature into a resistance value which is input into the ECM.

DTC No.	DTC Detection Condition	Trouble Area
P0710	(a) and (b) is detected momentary within 0.5 sec. when neither P0712 or P0713 is not detected (1-trip detection logic) (a) ATF temperature sensor resistance is less than 79 Ω. (b) ATF temperature sensor resistance is more than 156 kΩ. HINT: Within 0.5 sec., the malfunction switches from (a) to (b) or from (b) to (a)	<ul style="list-style-type: none"> • Open or short in ATF temperature sensor circuit • Transmission wire (ATF temperature sensor) • ECM
P0712	ATF temperature sensor resistance is less than 79 Ω for 0.5 sec. or more (1-trip detection logic)	
P0713	DTC is detected for 0.5 sec. or more (1-trip detection logic) ATF temperature sensor resistance is more than 156 kΩ after started engine for 15 minutes or more	

MONITOR DESCRIPTION

The automatic transmission fluid (ATF) temperature sensor converts ATF temperature to an electrical resistance value. Based on the resistance, the ECM determines the ATF temperature, and the ECM detects an opens or shorts in the ATF temperature circuit. If the resistance value of the ATF temperature is less than 79Ω or more than 156kΩ, the ECM interprets this as a fault in the ATF sensor or wiring. The ECM will turn on the MIL.

MONITOR STRATEGY

Related DTCs	P0710	ATF temperature sensor "A"/Range check (Chattering)
	P0712	ATF temperature sensor "A"/Range check (Low resistance)
	P0713	ATF temperature sensor "A"/Range check (High resistance)
Required sensors/Components	ATF temperature sensor	
Frequency of operation	Continuous	
Duration	0.5 sec.	
MIL operation	Immediate	
Sequence of operation	None	

TYPICAL ENABLING CONDITIONS

Item	Specification	
	Minimum	Maximum
The monitor will run whenever the following DTCs are not present.	See page 05-389	
Range check (Chattering), (Low resistance)		
The typical enabling condition is not available.	-	
Range check (High resistance)		
Time after engine start	900 sec. or more	-

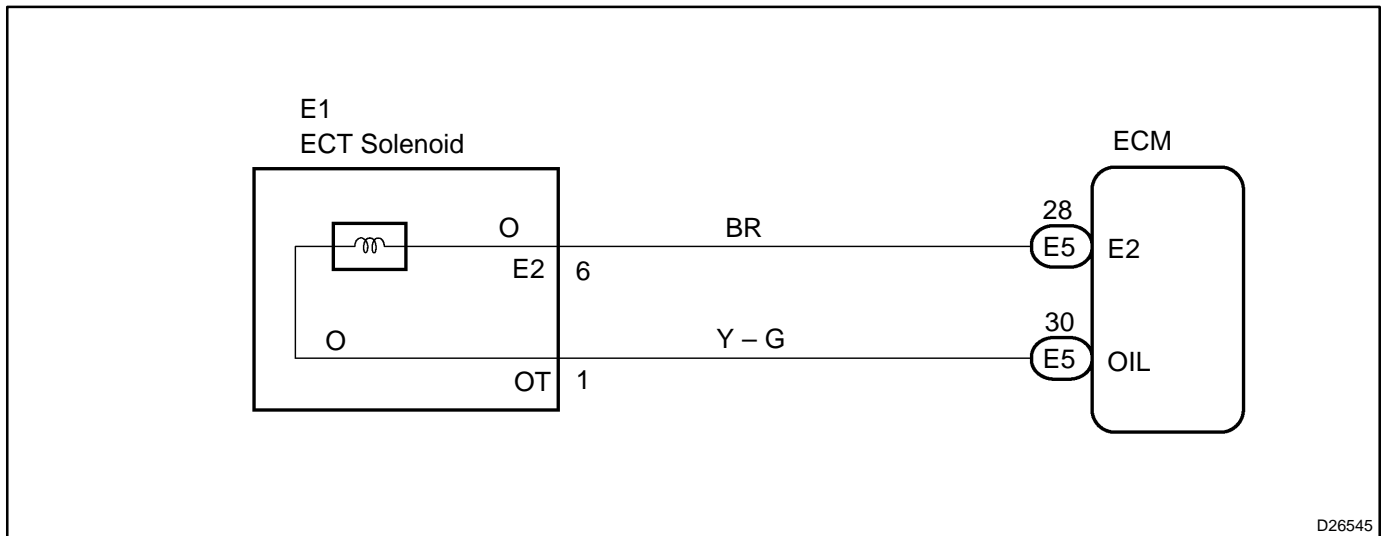
TYPICAL MALFUNCTION THRESHOLDS

Detection criteria	Threshold
Range check (Chattering)	
ATF temperature sensor resistance	Less than 79 Ω or more than 156 kΩ
Range check (Low resistance)	
ATF temperature sensor resistance	Less than 79 Ω
Range check (High resistance)	
ATF temperature sensor resistance	More than 156 kΩ

COMPONENT OPERATING RANGE

Parameter	Standard value
ATF temperature sensor resistance	79 Ω to 156 kΩ

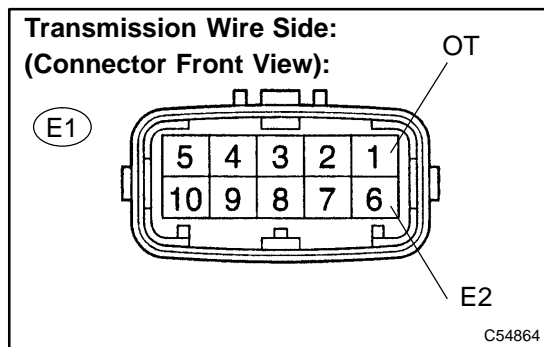
WIRING DIAGRAM



D26545

INSPECTION PROCEDURE

1 INSPECT TRANSMISSION WIRE(ATF TEMPERATURE SENSOR)



- (a) Disconnect the transmission wire connector from the transaxle.
- (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Specified Condition
1 (OT) – 6 (E2)	79 Ω to 156 kΩ

- (c) Measure the resistance according to the value(s) in the table below.

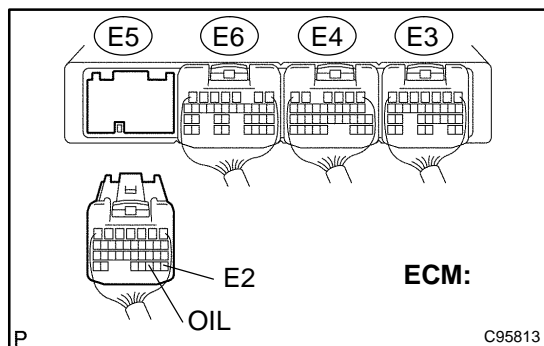
Standard (Check for short):

Tester Connection	Specified Condition
1 (OT) – Body ground	10 kΩ or higher
6 (E2) – Body ground	

NG → **REPAIR OR REPLACE TRANSMISSION WIRE (See page 40-29)**

OK

2 CHECK HARNESS AND CONNECTOR(TRANSMISSION WIRE – ECM)



- (a) Connect the transmission wire connector to the transaxle.
- (b) Disconnect the ECM connectors.
- (c) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Specified Condition
E5 – 30 (OIL) – E3 – 28 (E2)	79 Ω to 156 kΩ

- (d) Measure the resistance according to the value(s) in the table below.

Standard (Check for short):

Tester Connection	Specified Condition
E5 – 30 (OIL) – Body ground	10 kΩ or higher
E5 – 28 (E2) – Body ground	

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (See page 01-30)**

OK

REPLACE ECM (See page 10-17)