DTC	P0982	Shift Solenoid "D" Control Circuit Low (Shift Solenoid Valve S4)

DTC	P0983	Shift Solenoid "D" Control Circuit High (Shift Solenoid Valve S4)

DESCRIPTION

Shifting from 1st to 5th is performed in combination with the ON and OFF operation of the shift solenoid valves SL1, SL2, SL3, S4 or SR, which are controlled by the ECM. If an open or short circuit occurs in any of the shift solenoid valves, the ECM controls the remaining normal shift solenoid valves to allow the vehicle to be operated safely (see page AX-35).

DTC No.	DTC Detection Condition	Trouble Area
P0982	ECM detects short in solenoid valve S4 circuit 2 times when solenoid valve S4 is operated (1 trip detection logic)	• Short in shift solenoid valve S4 circuit • Shift solenoid valve S4 • ECM
P0983	ECM detects open in solenoid valve S4 circuit 2 times when solenoid valve S4 is not operated (1 trip detection logic)	• Open in shift solenoid valve S4 circuit • Shift solenoid valve S4 • ECM

MONITOR DESCRIPTION

This DTC indicates an open or short in the shift solenoid valve S4 circuit. The ECM commands gear shifts by turning the shift solenoid valves ON/OFF. When there is an open or short circuit in any shift solenoid valve circuit, the ECM detects the problem, illuminates the MIL and stores the DTC. Also, the ECM performs the fail-safe function and turns the other normal shift solenoid valves ON/OFF. In case of an open or short circuit, the ECM stops sending current to the circuit (see page AX-35).

MONITOR STRATEGY

Related DTCs	P0982: Shift solenoid valve S4/Range check (Low resistance) P0983: Shift solenoid valve S4/Range check (High resistance)
Required sensors/Components	Shift solenoid valve S4
Frequency of operation	Continuous
Duration	0.064 sec.
MIL operation	Immediate
Sequence of operation	None

TYPICAL ENABLING CONDITIONS

P0982: Range check (Low resistance)

The monitor will run whenever this DTC is not present.	None
Shift solenoid valve S4	ON
Battery voltage	8 V or more
Ignition switch	ON
Starter	OFF

P0983: Range check (High resistance)

The monitor will run whenever this DTC is not present.	None
Shift solenoid valve S4	OFF
Battery voltage	8 V or more
Ignition switch	ON
Starter	OFF

AX

TYPICAL MALFUNCTION THRESHOLDS

P0982: Range check (Low resistance)

Shift solenoid valve S4 resistance	8 Ω or less

P0983: Range check (High resistance)

Shift solenoid valve S4 resistance	100 kΩ or more

COMPONENT OPERATING RANGE

Shift solenoid valve S4	Resistance: 11 to 15 Ω at 20°C (68°F)

WIRING DIAGRAM

Shift Solenoid Valve S4
(ECT Solenoid Valve)

ECM

S4

S4

C119178E12

AX
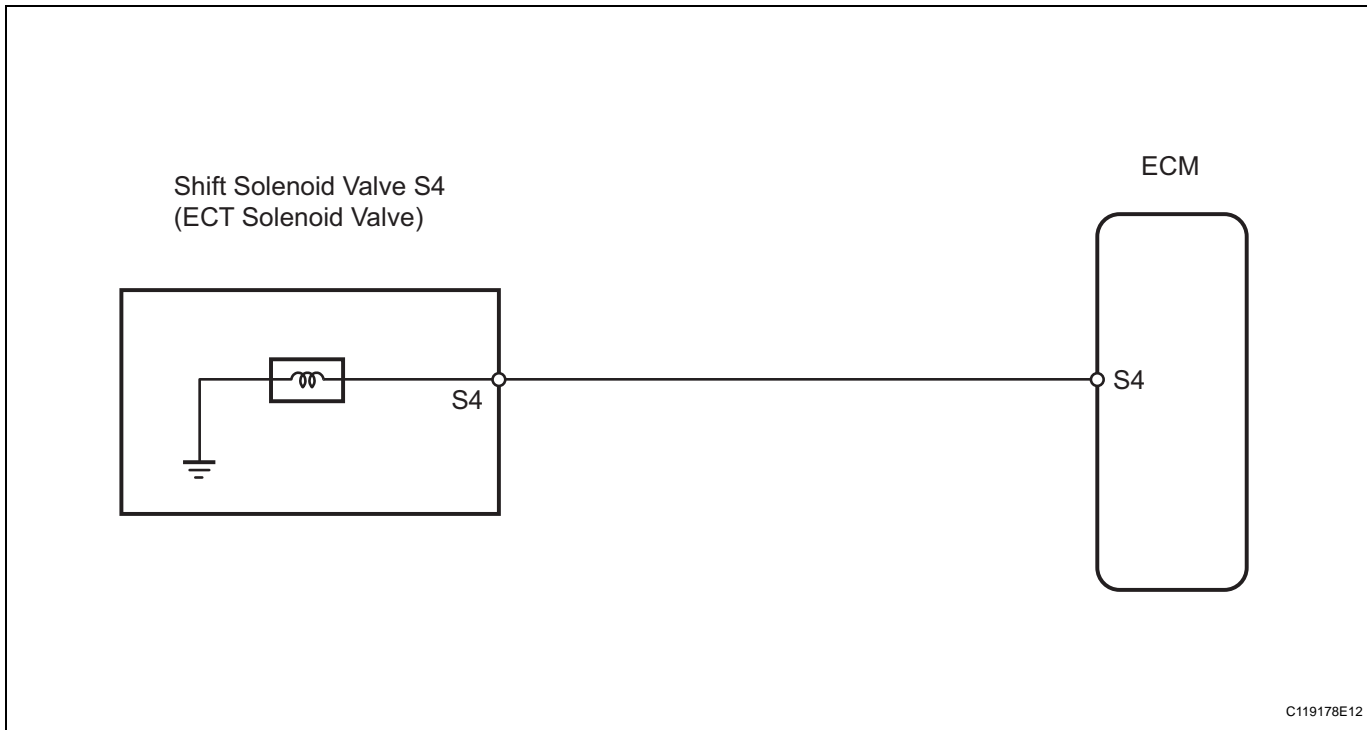
INSPECTION PROCEDURE

1	INSPECT TRANSMISSION WIRE (SHIFT SOLENOID VALVE S4)

Wire Harness Side

S4

6 5 4 | 3 2 1
13 12 11 10 | 9 8 7

C136383E06
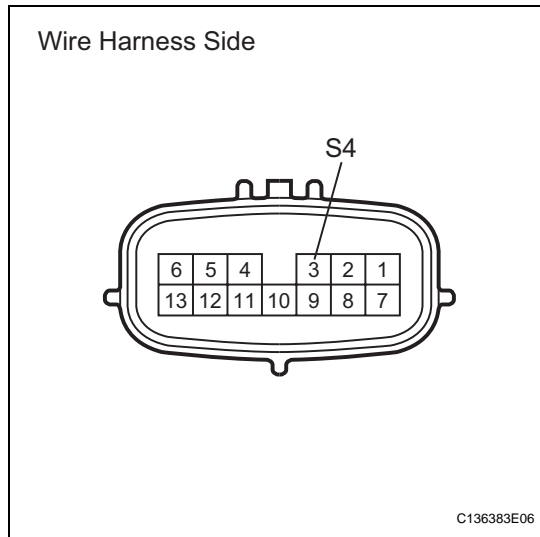
(a) Disconnect the B32 wire connector.
(b) Measure the resistance of the transmission wire.
Standard resistance

Tester Connection	Condition	Specified Condition
3 (S4) - Body ground	20°C (68°F)	11 to 15 Ω

NG	Go to step 3

OK

2	CHECK WIRE HARNESS (TRANSMISSION WIRE - ECM)

Wire Harness Side

(B30) S4

A107892E75
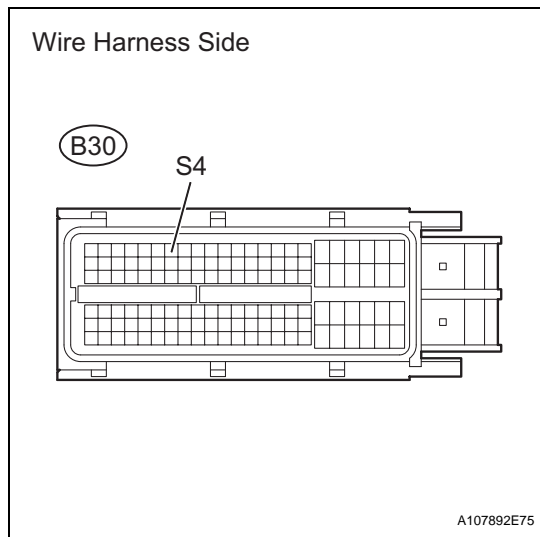
(a) Disconnect the B30 ECM connector.
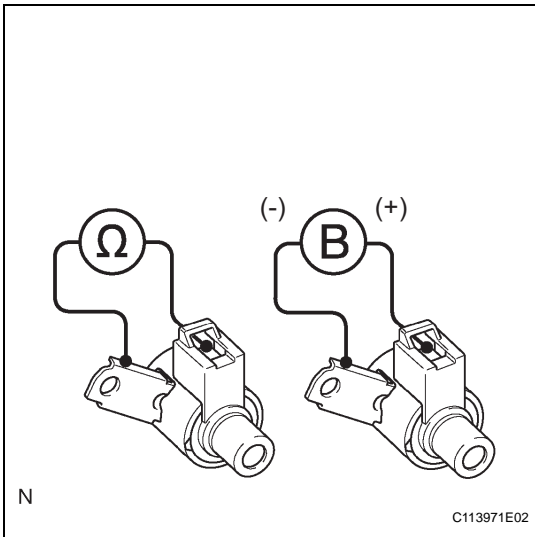(b) Measure the resistance of the wire harness side connector.
Standard resistance

Tester Connection	Condition	Specified Condition
B30-7 (S4) - Body ground	20°C (68°F)	11 to 15 Ω

NG	REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPLACE ECM

AX

3	INSPECT SHIFT SOLENOID VALVE S4

N

C113971E02

(a) Remove the shift solenoid valve S4.
(b) Measure the resistance of the solenoid valve.
   Standard resistance:
      11 to 15 Ω at 20°C (68°F)
(c) Connect the battery's positive (+) lead to the terminal of the solenoid valve connector, and the negative (-) lead to the solenoid body. Then check that the valve moves and makes an operating noise.
   OK:
      Valve moves and makes operating noise.

NG $>$	REPLACE SHIFT SOLENOID VALVE S4

OK

REPAIR OR REPLACE TRANSMISSION WIRE