

DTC	P0985	Shift Solenoid "E" Control Circuit Low (Shift Solenoid Valve SR)
DTC	P0986	Shift Solenoid "E" Control Circuit High (Shift Solenoid Valve SR)

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
P0985	ECM detects short in solenoid valve SR circuit 2 times when solenoid valve SR is operated (1 trip detection logic)	<ul style="list-style-type: none"> Short in shift solenoid valve SR circuit Shift solenoid valve SR ECM
P0986	ECM detects open in solenoid valve SR circuit 2 times when solenoid valve SR is not operated (1 trip detection logic)	<ul style="list-style-type: none"> Open in shift solenoid valve SR circuit Shift solenoid valve SR ECM

MONITOR DESCRIPTION

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 and illuminates the MIL and stores the DTC. And 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	P0985: Shift solenoid valve SR/Range check (Low resistance) P0986: Shift solenoid valve SR/Range check (High resistance)
Required sensors/Components	Shift solenoid valve SR
Frequency of operation	Continuous
Duration	0.064 sec.
MIL operation	Immediate
Sequence of operation	None

TYPICAL ENABLING CONDITIONS

P0985: Range check (Low resistance):

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

P0986: Range check (High resistance):

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

TYPICAL MALFUNCTION THRESHOLDS

P0985: Range check (Low resistance):

Shift solenoid valve SR resistance	8 Ω or less
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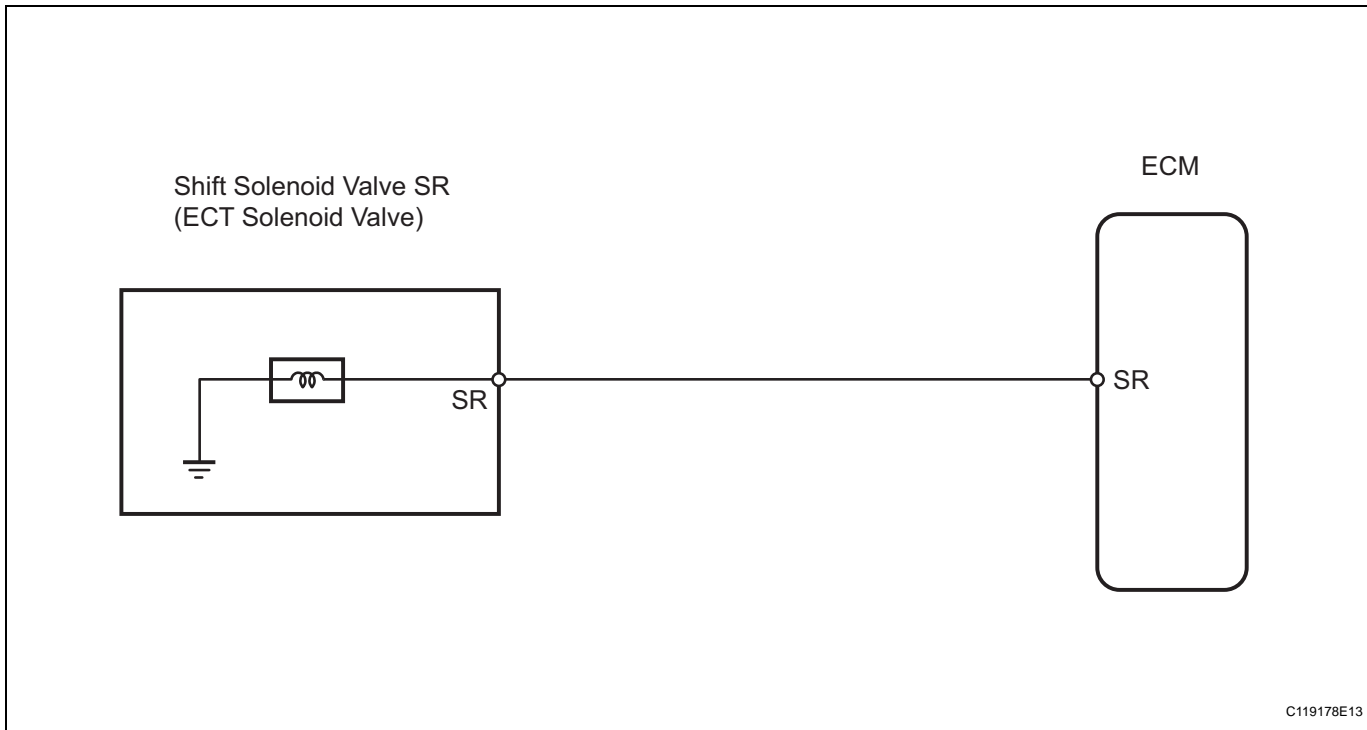
P0986: Range check (High resistance):

Shift solenoid valve SR resistance	100 kΩ or more
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COMPONENT OPERATING RANGE

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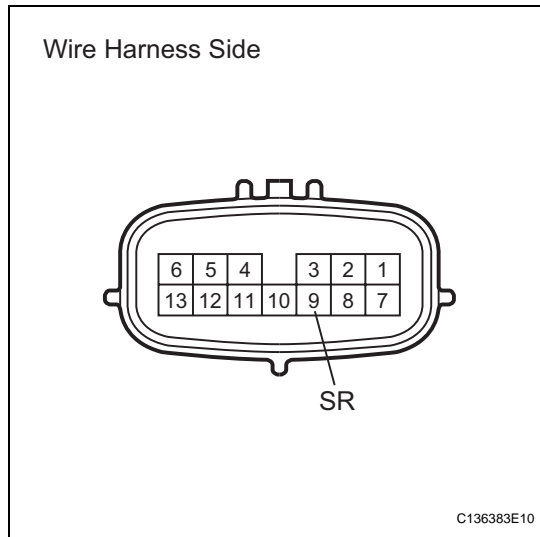
WIRING DIAGRAM



C119178E13

INSPECTION PROCEDURE

1 INSPECT TRANSMISSION WIRE (SHIFT SOLENOID VALVE SR)



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

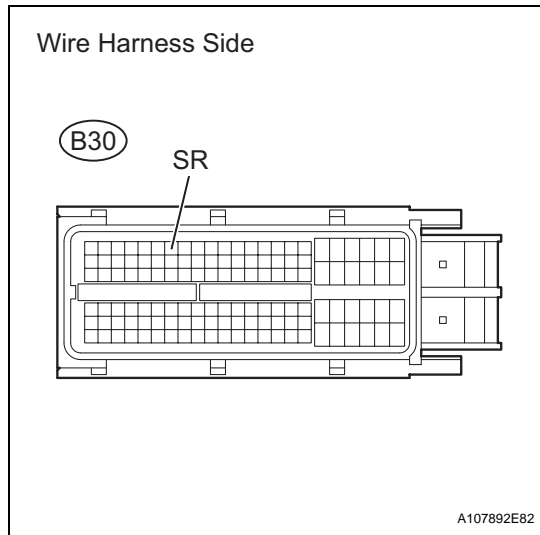
Standard resistance

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

NG → **Go to step 3**

OK

2 CHECK WIRE HARNESS (TRANSMISSION - ECM)



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

Standard resistance

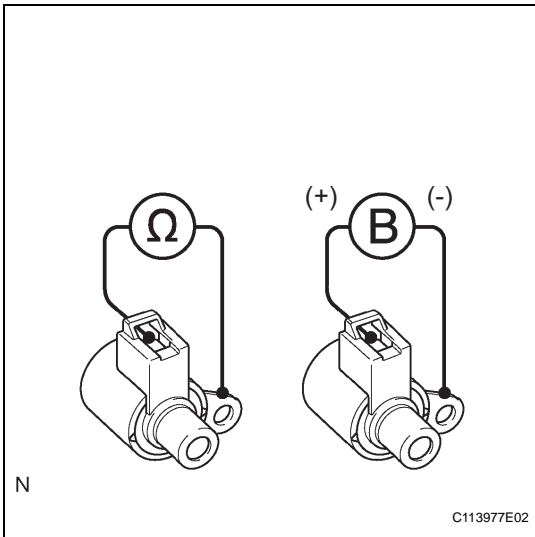
Tester Connection	Condition	Specified Condition
B30-8 (SR) - Body ground	20°C (68°F)	11 to 15 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE ECM

3 INSPECT SHIFT SOLENOID VALVE SR



- (a) Remove the shift solenoid valve SR.
- (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 SR

OK

REPAIR OR REPLACE TRANSMISSION WIRE