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| DTC | P0753, P0758 | Shift Solenoid A/B Electrical Malfunction (Shift Solenoid Valve No.1/No.2) |
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CIRCUIT DESCRIPTION

Shifting from 1st to O/D is performed in combination with ON and OFF of the shift solenoid valve No. 1 and No. 2 controlled by ECM. If an open or short circuit occurs in either of the solenoid valves, the ECM controls the remaining normal solenoid valve to allow the vehicle to be operated smoothly (Fail safe function).

| Range | NORMAL | | | SHIFT SOLENOID VALVE NO. 1 MALFUNCTIONING | | | SHIFT SOLENOID VALVE NO. 2 MALFUNCTIONING | | | BOTH SHIFT SOLENOID VALVES MALFUNCTIONING |
|-------|----------------|-------|------|---|-------|------|---|-------|------|---|
| | Solenoid valve | | Gear | Solenoid valve | | Gear | Solenoid valve | | Gear | Gear when shift selector is manually operated |
| | No. 1 | No. 2 | | No. 1 | No. 2 | | No. 1 | No. 2 | | |
| D | ON | ON | 1st | X | OFF | 3rd | ON | X | 2nd | 3rd |
| | ON | OFF | 2nd | X | OFF | 3rd | ON | X | 2nd | 3rd |
| | OFF | OFF | 3rd | X | OFF | 3rd | OFF | X | 3rd | 3rd |
| | OFF | ON | O/D | X | ON | O/D | OFF | X | 3rd | 3rd |
| 2 | ON | ON | 1st | X | OFF | 3rd | ON | X | 2nd | 3rd |
| | ON | OFF | 2nd | X | OFF | 3rd | ON | X | 2nd | 3rd |
| | OFF | OFF | 3rd | X | OFF | 3rd | OFF | X | 3rd | 3rd |
| L | ON | ON | 1st | X | OFF | 3rd | ON | X | 2nd | 3rd |
| | ON | OFF | 2nd | X | OFF | 3rd | ON | X | 2nd | 3rd |

X: Malfunctions

HINT:

Check the shift solenoid valve No. 1 when DTC P0753 is output and check the shift solenoid valve No. 2 when DTC P0758 is output.

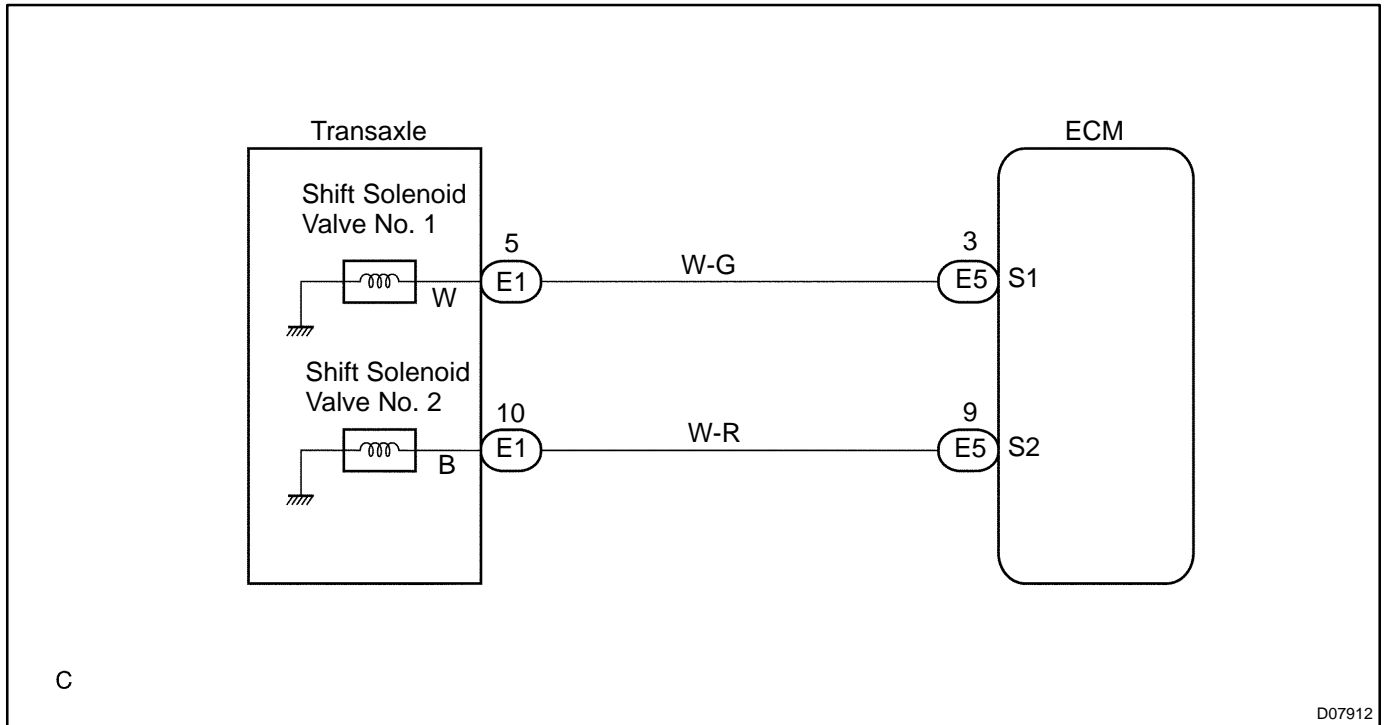
| DTC No. | DTC Detecting Condition | Trouble Area |
|----------------|--|--|
| P0753 P0758 | <p>The ECM checks for an open or short circuit in the shift solenoid valve No. 1/No. 2 circuit when it changes.</p> <p>The ECM records DTC P0753 or P0758 if condition (a) or (b) is detected once, but it does not blink the MIL</p> <p>After ECM detects condition (a) or (b) continuously 2 times or more in 1-trip, it causes the MIL to light up until condition (a) or (b) disappears.</p> <p>After that, if the ECM detects condition (a) or (b) once, it starts lighting up MIL again.</p> <p>(a) Solenoid resistance is 8 Ω or less (short circuit) when the solenoid is energized.</p> <p>(b) Solenoid resistance is 100 kΩ or more (open circuit) when the solenoid is not energized.</p> | <ul style="list-style-type: none"> • Open or short in shift solenoid valve No. 1/No. 2 circuit • Shift solenoid valve No. 1/No. 2 • ECM |

Fail safe function:

If either of the solenoid valve circuits develops an open or short, the ECM turns the other solenoid valve ON and OFF to shift to the gear positions shown in the table above. The ECM also turns the shift solenoid valve ST OFF at the same time. If both solenoids malfunction, hydraulic control cannot be performed electronically and must be done manually.

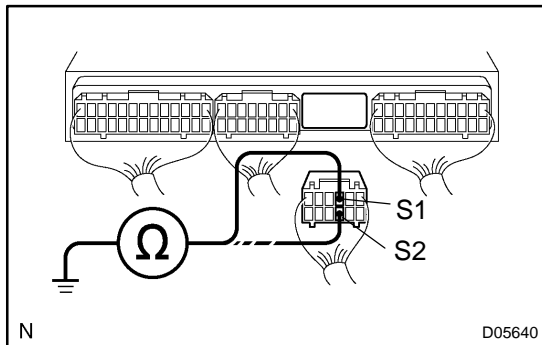
Manual shifting as shown in the above table must be done (In the case of a short circuit, the ECM stops sending current to the short circuited solenoid).

WIRING DIAGRAM



INSPECTION PROCEDURE

- | | |
|---|---|
| 1 | Measure resistance between terminal S1 or S2 of ECM and body ground. |
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PREPARATION:

Disconnect the connector from ECM.

CHECK:

Measure resistance between terminal S1 or S2 of ECM and body ground.

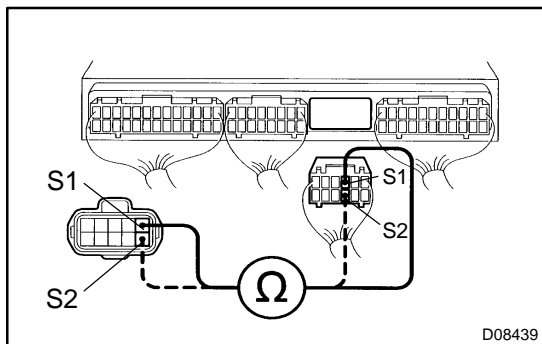
OK:

Resistance: 11 - 15 Ω at 20 °C (68 °F)

| | |
|-----------|---|
| OK | Check and replace the ECM (See page IN-29). |
|-----------|---|

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|-----------|
| NG |
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2 Measure harness and connector between ECM and automatic transmission solenoid connector.



PREPARATION:

Disconnect the solenoid connector from the automatic trans-axle.

CHECK:

Measure the harness and connector between terminal S1 or S2 of ECM and terminal S1 or S2 of solenoid connector.

OK:

Resistance: 0 Ω

NG

Repair or replace the harness or connector (See page [IN-29](#)).

OK

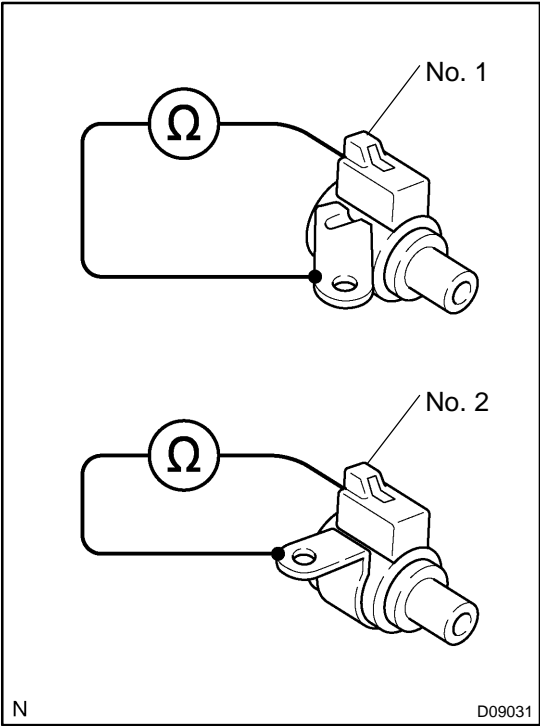
3 Check connection of the connectors.

NG

Connect the connectors correctly.

OK

4 Check shift solenoid valve No. 1 or No. 2.



PREPARATION:

- (a) Jack up the vehicle.
- (b) Remove the oil pan.
- (c) Disconnect the solenoid connector.
- (d) Remove the shift solenoid valve No. 1 or No. 2.

CHECK:

Measure resistance between solenoid connector and body ground.

OK:

Resistance: 11 - 15 Ω at 20 °C (68 °F)

NG → **Replace the solenoid valve.**

OK

Repair or replace the solenoid wire.