DIB1J–01

DTC	P0753	Shift Solenoid ”A” Electrical

DTC	P0758	Shift Solenoid ”B” Electrical

CIRCUIT DESCRIPTION

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

Position	NORMAL			SHIFT SOLENOID NO.1 MALFUNCTIONING			SHIFT SOLENOID NO.2 MALFUNCTIONING			BOTH SOLENOIDS 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	OFF	1st	X	ON	3rd	ON	X	1st	O/D
	ON	ON	2nd	X	ON	3rd	OFF	X	O/D	O/D
	OFF	ON	3rd	X	ON	3rd	OFF	X	O/D	O/D
	OFF	OFF	O/D	X	OFF	O/D	OFF	X	O/D	O/D
2	ON	OFF	1st	X	ON	3rd	ON	X	1st	3rd
	ON	ON	2nd	X	ON	3rd	OFF	X	3rd	3rd
	OFF	ON	3rd	X	ON	3rd	OFF	X	3rd	3rd
L	ON	OFF	1st	X	OFF	1st	ON	X	1st	1st
	ON	ON	2nd	X	ON	2nd	ON	X	1st	1st

X: Malfunctions

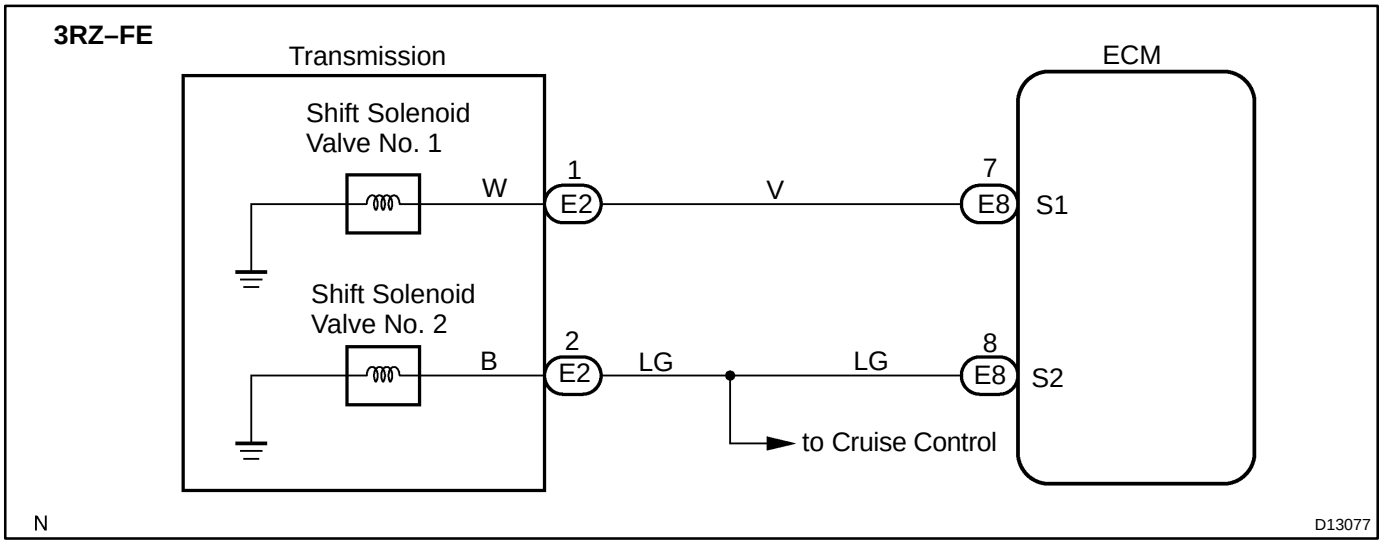
HINT:

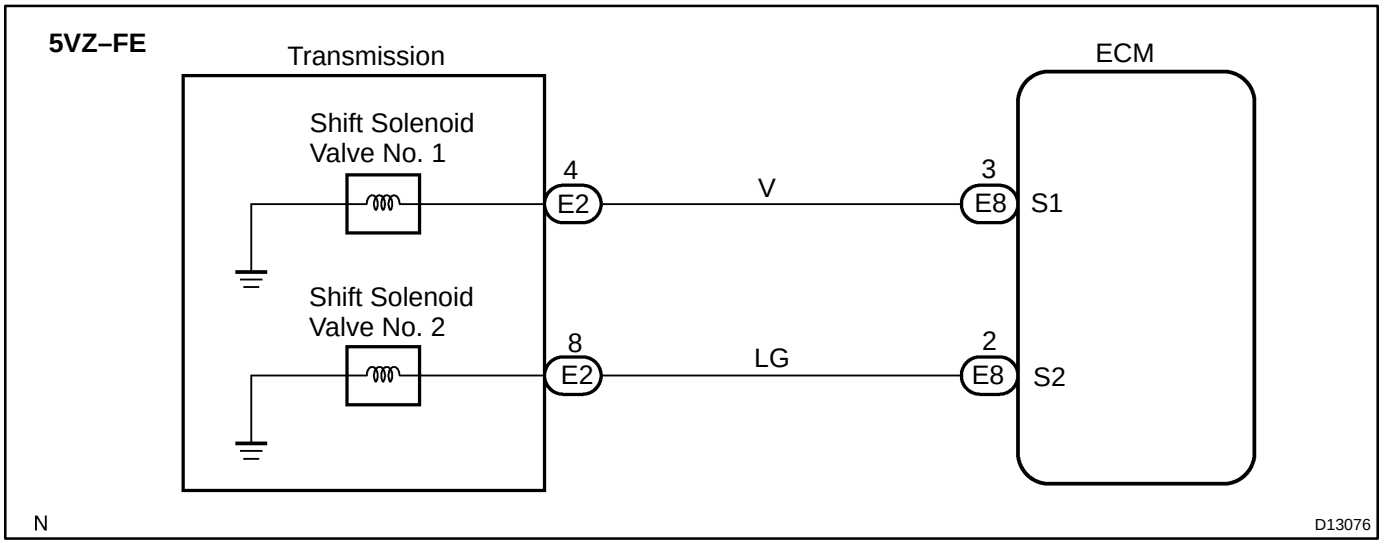
Check the shift solenoid valve No. 1 when DTC P0753 is output and check the shift solenoid valve No. 2 when DTC P0758 is output.

DTC No.	DTC Detection Condition	Trouble Area
P0753 P0758	The ECM checks for an open or short circuit in the shift solenoid valves No. 1 and No. 2 circuit when it changes gear position. The ECM records DTC P0753 or P0758 if condition (a) or (b) is detected once, but it does not light up MIL. After ECM detects condition (a) or (b) continuously 8 times or more in one–trip, it causes the MIL to light up until condition (a) or (b) disappears. After that, if the ECM detects condition (a) or (b) once, it starts lighting up MIL again. (a) Solenoid resistance is 8 Ω or less (short circuit) when the solenoid is energized. (b) Solenoid resistance is 100 kΩ or more (open circuit) when the solenoid is not energized.	• 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 shift solenoid valve circuits develops an open or short, the ECM turns the other shift solenoid ON and OFF to shift to the gear positions shown in the table above. The ECM also turns the shift solenoid valve SL OFF at the same time. If both solenoids are malfunctioning, hydraulic control cannot be done electronically so it must be done manually.
Manual shifting as shown in the following table must be done (In the case of a short circuit, the ECM stops sending current to the short circuited solenoid).

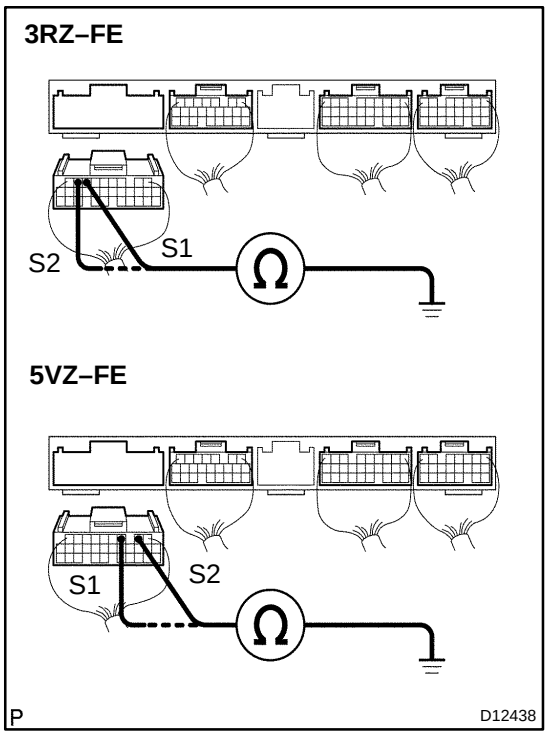
WIRING DIAGRAM





INSPECTION PROCEDURE

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



PREPARATION:

Disconnect the connector from ECM.

CHECK:

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

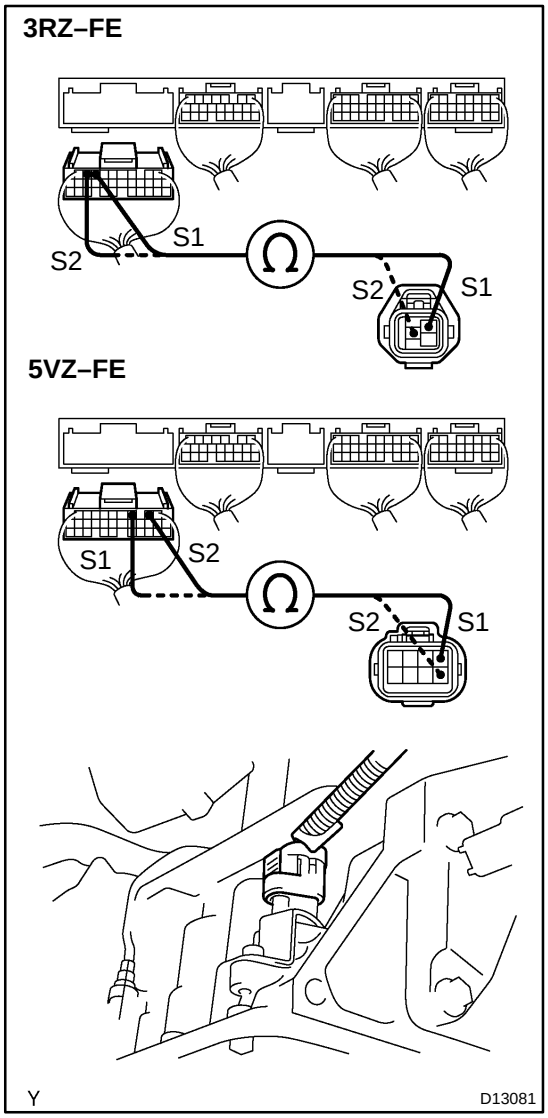
OK:

Resistance: 11 – 15 Ω

NG

OK → **Check and replace the ECM (See page IN–28).**

2	**Check harness and connector between ECM and automatic transmission solenoid connector.**



PREPARATION:

Disconnect the solenoid connector from the automatic transmission.

CHECK:

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

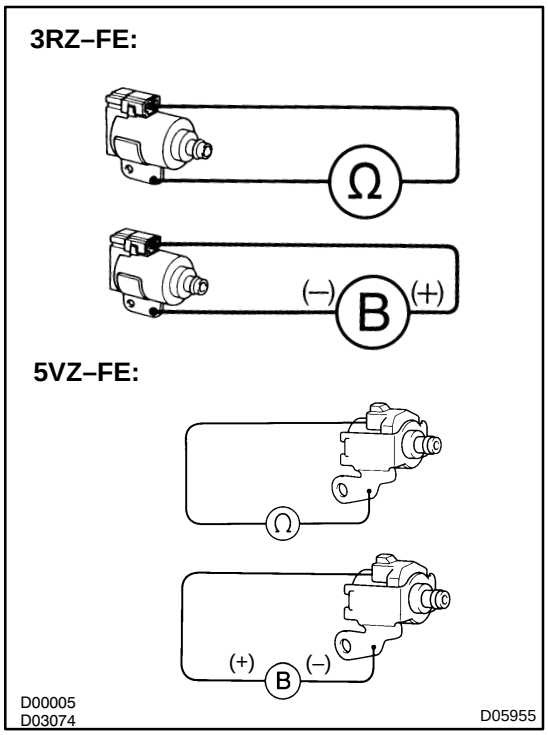
OK:

There is no open and no short circuit.

NG → **Repair or replace the harness or connector.**

OK

3	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:

(a) Measure resistance between solenoid connector and body ground.
(b) Connect positive (+) lead to terminal of solenoid connector, negative (–) lead to solenoid body.

OK:

(a) Resistance: 11 – 15 Ω
(b) The solenoid makes an operating noise.

NG → **Replace the solenoid valve.**

OK

Repair or replace the solenoid wire.