

DTC	P2772	Transfer L4 SW Circuit
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CIRCUIT DESCRIPTION

The ECM detects the signal from the transfer L4 position switch.

This DTC indicates that the transfer L4 position switch remains ON.

DTC No.	DTC Detecting Condition	Trouble Area
P2772	Transfer L4 position switch remains ON while vehicle running under conditions for 1.8 seconds or more (1-trip detection logic) (a) Output shaft speed 3000 rpm or less (b) Transfer shift position is H	<ul style="list-style-type: none"> • Short in transfer L4 position switch circuit • Transfer L4 position switch • ECM

MONITOR DESCRIPTION

The ECM monitors the transfer-case L4 position switch to determine when the transfer-case L4 gear is engaged. If the transfer-case L4 gears remain engaged under the following conditions, the ECM will conclude that there is a malfunction of the L4 position switch:

- L4 switch indicated that the L4 transfer-case gears are engaged.
- Transfer-case shifter is in the "H" position.
- Transfer-case output shaft rpm is between 750 and 3,000 rpm.
- The specified time period has elapsed.

If all of the above conditions are detected, the ECM will conclude that there is a malfunction of the L4 switch, and illuminate the MIL and store the DTC.

MONITOR STRATEGY

Related DTCs	P2772	Transfer L4 position switch/ON malfunction
Required sensors/Components	Transfer L4 position switch	
Frequency of operation	Continuous	
Duration	ON malfunction (A)	1.8 sec.
	ON malfunction (B)	0.5 sec.
MIL operation	1 driving cycle	
Sequence of operation	None	

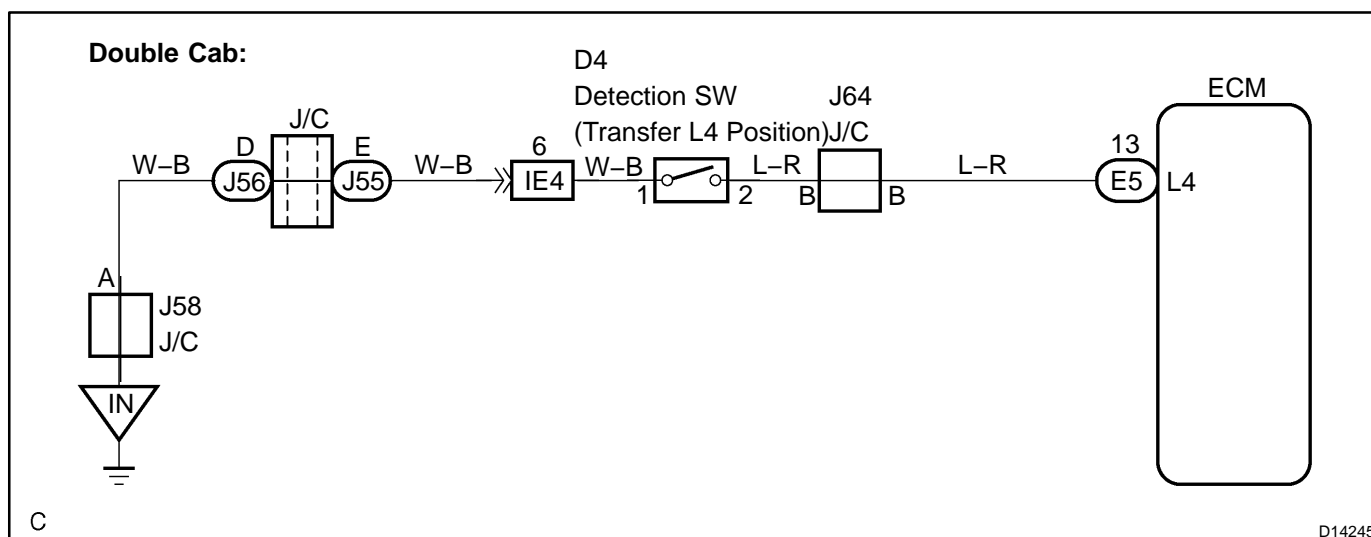
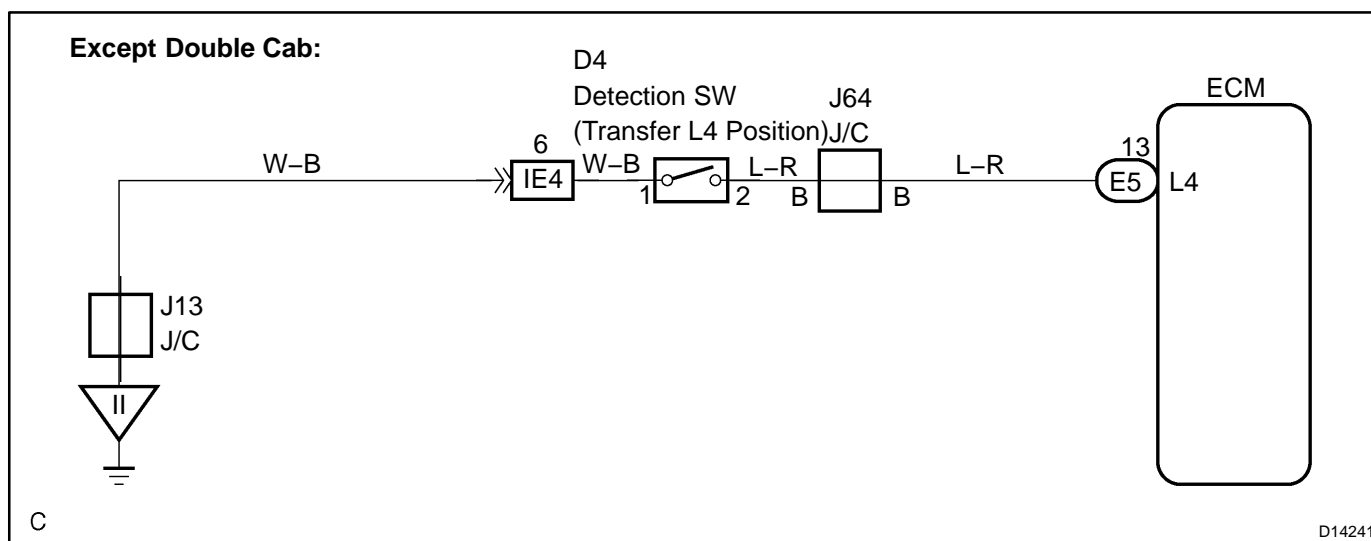
TYPICAL ENABLING CONDITIONS

Item	Specification	
	Minimum	Maximum
All:		
Output speed sensor circuit	Not circuit malfunction	
Vehicle speed sensor circuit	Not circuit malfunction	
Transfer neutral position switch	OFF	
ON malfunction (A)		
Output speed (Transfer output speed)	1,000 to 3,000 rpm	
ON malfunction (B)		
Output speed (Transfer output speed)	143 rpm or more	—

TYPICAL MALFUNCTION THRESHOLDS

Detection criteria	Threshold
Both of the following conditions is met: ON malfunctions (A) and (B)	
ON malfunction (A)	
L4 switch	ON
ON malfunction (B)	
Actual Transfer gear ratio Transfer input speed/Transfer output speed	0.9 to 1.1

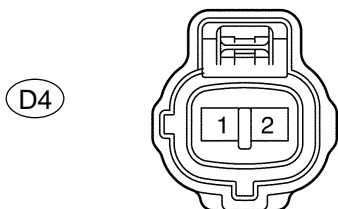
WIRING DIAGRAM



INSPECTION PROCEDURE

1 Check harness and connector (transfer L4 position switch – body ground).

Wire Harness Side:
(Connector Front View):



D14209

PREPARATION:

Disconnect the transfer position L4 switch connector.

CHECK:

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

OK:

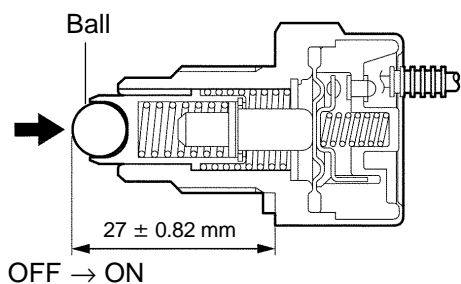
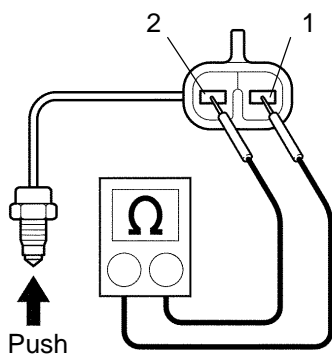
Tester Connection	Specified Condition
1 – Body ground	Below 1 Ω

NG

Repair or replace the harness or connector
(See page [IN-30](#)).

OK

2 Inspect transfer L4 position switch.



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D14208

PREPARATION:

Remove the transfer position L4 switch.

CHECK:

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

OK:

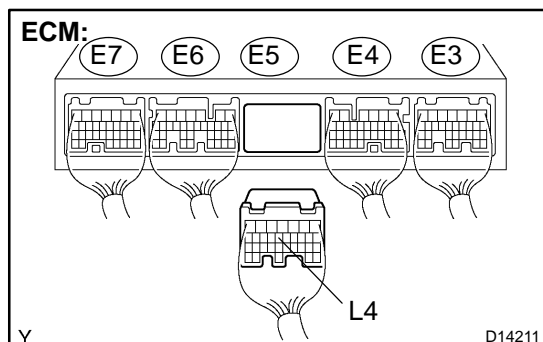
Switch position	Tester Connection	Specified Condition
Free	1 – 2	10 k Ω or higher
Pushed in	↑	Below 1 Ω

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Replace the transfer L4 position switch.

OK

3 Check harness and connector (transfer L4 position switch – ECM).



PREPARATION:

Disconnect the connector from the ECM.

CHECK:

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

OK:

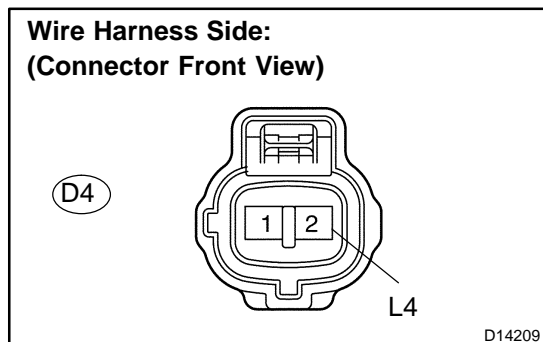
Tester Connection	Specified Condition
E5 – 13 (L4) – D4 – 2 (L4)	Below 1 Ω

CHECK:

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

OK:

Tester Connection	Specified Condition
E5 – 13 (L4) – Body ground	10 k Ω or higher



NG

Repair or replace the harness or connector
(See page [IN-30](#)).

OK

Replace the ECM (See page [SF-82](#)).