

CIRCUIT INSPECTION

DTC	P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)
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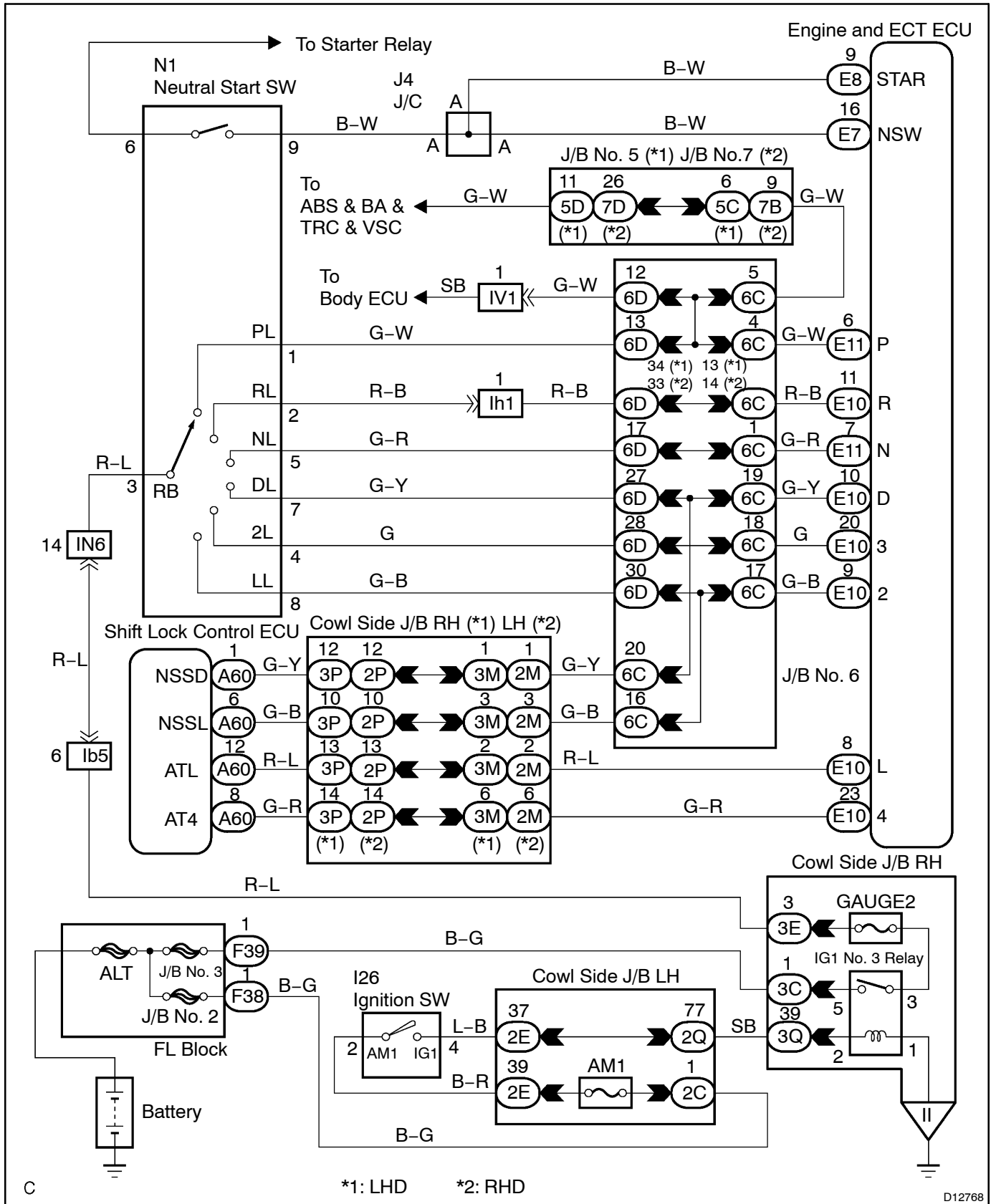
DTC	P0850	Park/Neutral Switch Input Circuit
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CIRCUIT DESCRIPTION

The neutral start switch detects the shift lever range and sends signals to the Engine and ECT ECU.

DTC No.	DTC Detection Condition	Trouble Area
P0705	(2-trip detection logic) • All switches are OFF simultaneously for P, R, N, D, 3 and 2 ranges. • 2 or more switches are ON simultaneously for P, R, N, (D 4), 3 and (2 L) ranges.	• Short in neutral start switch circuit • Neutral start switch • Engine and ECT ECU
P0850	Neutral start switch remains ON (P, N range) during driving under conditions (a) and (b) for 30 sec. (2-trip detection logic) (a) Vehicle speed: 70 km/h (44 mph) or more (b) Engine speed: 1,500 – 2,500 rpm	

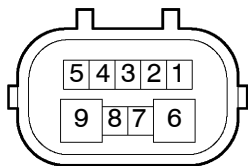
WIRING DIAGRAM



D12768

INSPECTION PROCEDURE

1 Check neutral start switch.



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D06561

PREPARATION:

- (a) Jack up the vehicle.
- (b) Disconnect the neutral start switch connector.

CHECK:

Check continuity between each terminal shown below when the shift lever is moved to each range.

OK:

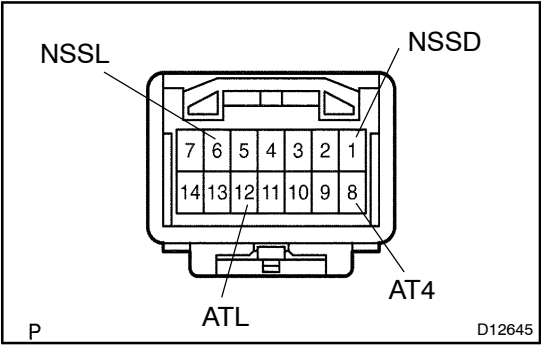
Shift range	Terminal No. to continuity	Terminal No. to continuity
P	1 – 3	6 – 9
R	2 – 3	–
N	3 – 5	6 – 9
D, 4	3 – 7	–
3	3 – 4	–
2, L	3 – 8	–

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Replace neutral start switch
(See page AT-7).

OK

2 Check transmission control switch.



PREPARATION:

- (a) Connect the neutral start switch connector.
- (b) Disconnect the shift lock control computer connector (transmission control switch).

CHECK:

Check continuity between each terminal of shift lock control computer (transmission control switch).

OK:

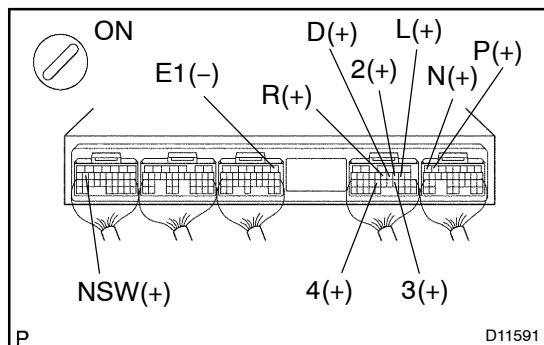
Shift range	Tester connection	Specified valve
D	1 – 8 (NSSD – AT4)	No continuity
4		Continuity
2	6 – 12 (NSSL – ATL)	No continuity
L		Continuity

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Replace the transmission control switch
(See page AT-21).

OK

3 Measure voltage between each terminals of NSW, P, R, N, D, 4, 3, 2, L and E1 of Engine and ECT ECU.



PREPARATION:

- Connect the shift lock control computer connector (transmission control switch).
- Turn the ignition switch ON.

CHECK:

Measure voltage between each terminals NSW, P, R, N, D, 4, 3, 2, L and E1 of Engine and ECT ECU when the shift lever is shifted to the following ranges.

OK:

Tester connection	Condition	Specified condition
NSW – Body ground	Shift lever range: P and N	Below 1 V
	Shift lever range: Except P and N	Battery voltage
P – Body ground	Shift lever range: P	Battery voltage
R – Body ground	Shift lever range: R	Battery voltage*
N – Body ground	Shift lever range: N	Battery voltage
D – Body ground	Shift lever range: D and 4	Battery voltage
4 – Body ground	Shift lever range: 4	Battery voltage
3 – Body ground	Shift lever range: 3	Battery voltage
2 – Body ground	Shift lever range: 2 and L	Battery voltage
L – Body ground	Shift lever range: L	Battery voltage

HINT:

*: The voltage will drop slightly due to lighting up of the back up light.

OK

Check and replace the Engine and ECT ECU (See page IN-38).

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Repair or replace the harness or connector (See page IN-38).