

DTC	P1780	Park/Neutral Position Switch Circuit
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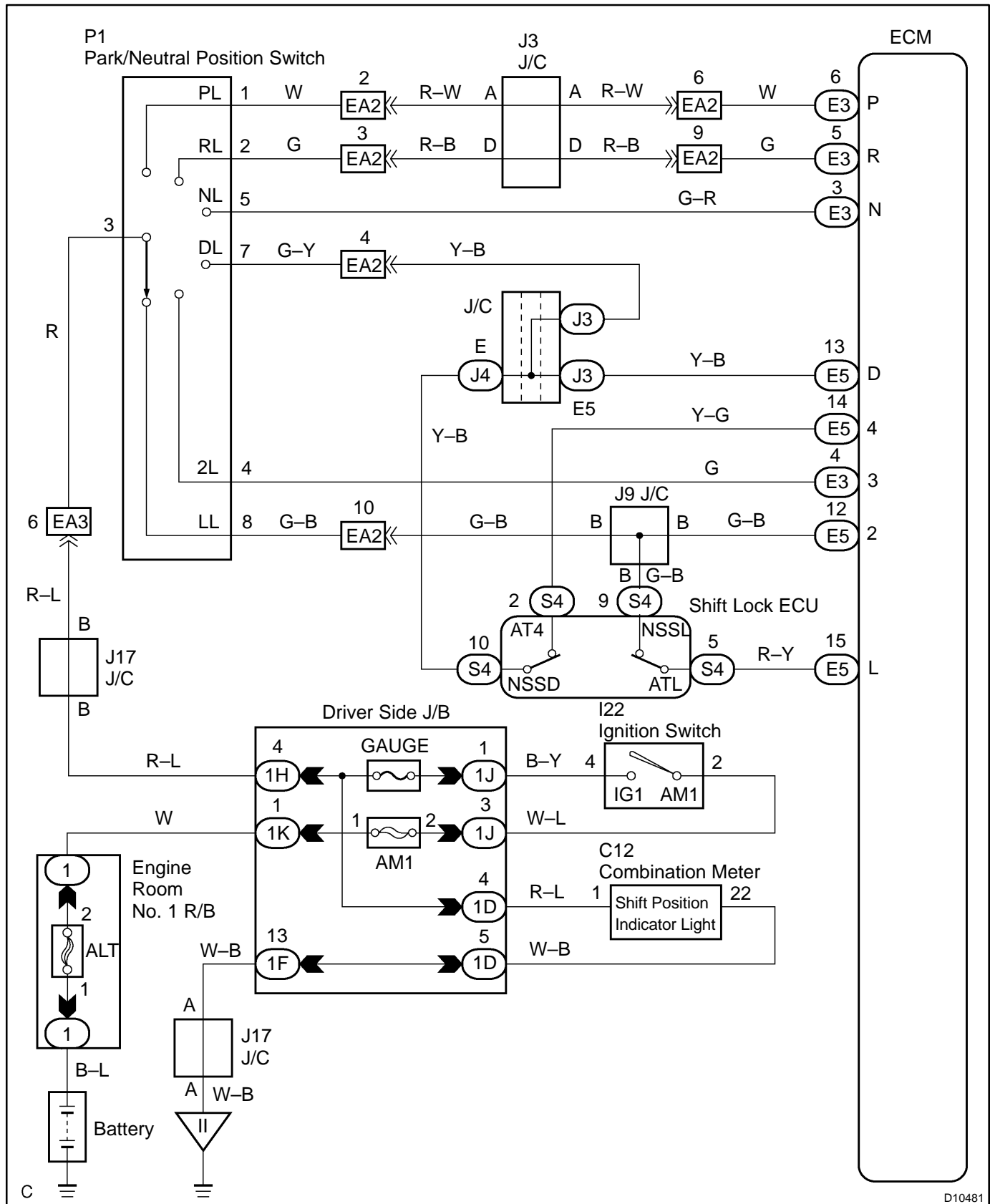
CIRCUIT DESCRIPTION

The park/neutral position switch detects the shift lever position and sends signals to the ECM.

The ECM receives signals (P, R, N, D, 4, 3, 2 and L) from the park/neutral position switch. When the signal is not sent to the ECM from the park/neutral position switch, the ECM judges that the shift lever is in D position.

DTC No.	DTC Detection Condition	Trouble Area
P1780	2 or more switches are ON simultaneously for P, R, N, D, 4, 3, 2 and L positions (2-trip detection logic).	<ul style="list-style-type: none"> • Short in park/neutral position switch circuit • Park/neutral position switch • ECM
	When driving under conditions 1. and 2. for 30 seconds or more, the park/neutral position switch is ON (N position) (2-trip detection logic). 1. Vehicle speed: 70 km/h (44 mph) or more 2. Engine speed: 1,500 – 2,500 rpm	

WIRING DIAGRAM



D10481

INSPECTION PROCEDURE

HINT:

In case of using the LEXUS hand-held tester, start the inspection from step 1 and in case of not using the LEXUS hand-held tester, start from step 2.

1	Read PNP, REVERSE, DRIVE, 4TH, 3RD, 2ND and LOW signals.
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PREPARATION:

- (a) Remove the DLC3 cover.
- (b) Connect a LEXUS hand-held tester to the DLC3.
- (c) Turn the ignition switch ON and LEXUS hand-held tester main switch ON.

CHECK:

Shift the shift lever into the P, R, N, 4, 3, 2 and L positions, and read the PNP, REVERSE, DRIVE, 4TH, 3RD, 2ND and LOW signals on the LEXUS hand-held tester.

OK:

Shift position	Signal
P, N	PNP: OFF → ON
R	REVERSE: OFF → ON
D	DRIVE: OFF → ON
4	4TH: OFF → ON
3	3RD: OFF → ON
2	2ND: OFF → ON
L	LOW: OFF → ON

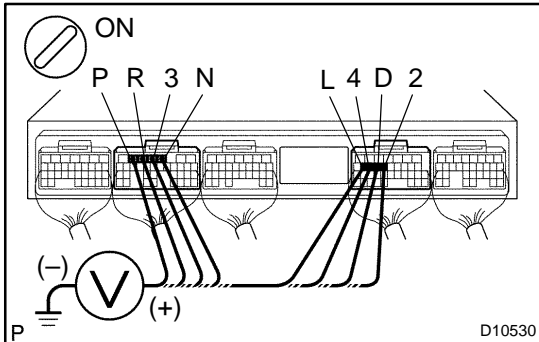
OK

**Check and replace the ECM
(See page [IN-32](#)).**

NG

Go to step 3.

2 Measure voltage between each terminals of P, N, D, 4, 3, 2, L and R of ECM and body ground.



PREPARATION:

Turn the ignition switch ON.

CHECK:

Measure voltage between each terminals P, N, D, 4, 3, 2, L and R of ECM and body ground when the shift lever is shifted in the following positions.

OK:

Tester connection	Condition	Specified condition
P – Body ground	Shift lever position: P	Battery positive voltage
R – Body ground	Shift lever position: R	Battery positive voltage*
N – Body ground	Shift lever position: N	Battery positive voltage
D – Body ground	Shift lever position: D Transmission control SW (for D and 4): OFF	Battery positive voltage
4 – Body ground	Shift lever position: 4 Transmission control SW (for D and 4): ON	Battery positive voltage
3 – Body ground	Shift lever position: 3	Battery positive voltage
2 – Body ground	Shift lever position: 2 Transmission control SW (for 2 and L): OFF	Battery positive voltage
L – Body ground	Shift lever position: L Transmission control SW (for 2 and L): ON	Battery positive voltage

HINT:

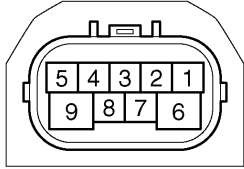
*: The voltage will drop slightly due to lighting up the back up light.

OK

Check and replace the ECM
(See page [IN-32](#)).

NG

3 Check park/neutral position switch.



N

F13412

PREPARATION:

- (a) Jack up the vehicle.
- (b) Disconnect the park/neutral position switch connector.

CHECK:

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

OK:

Shift Position	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	–

NG

Replace the park/neutral position switch.

OK

Repair or replace harness and connector between battery and park/neutral position switch, park/neutral position switch and ECM (See page [IN-32](#)).