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|------------|--------------|---|
| DTC | P1780 | Park/Neutral Position Switch Circuit |
|------------|--------------|---|

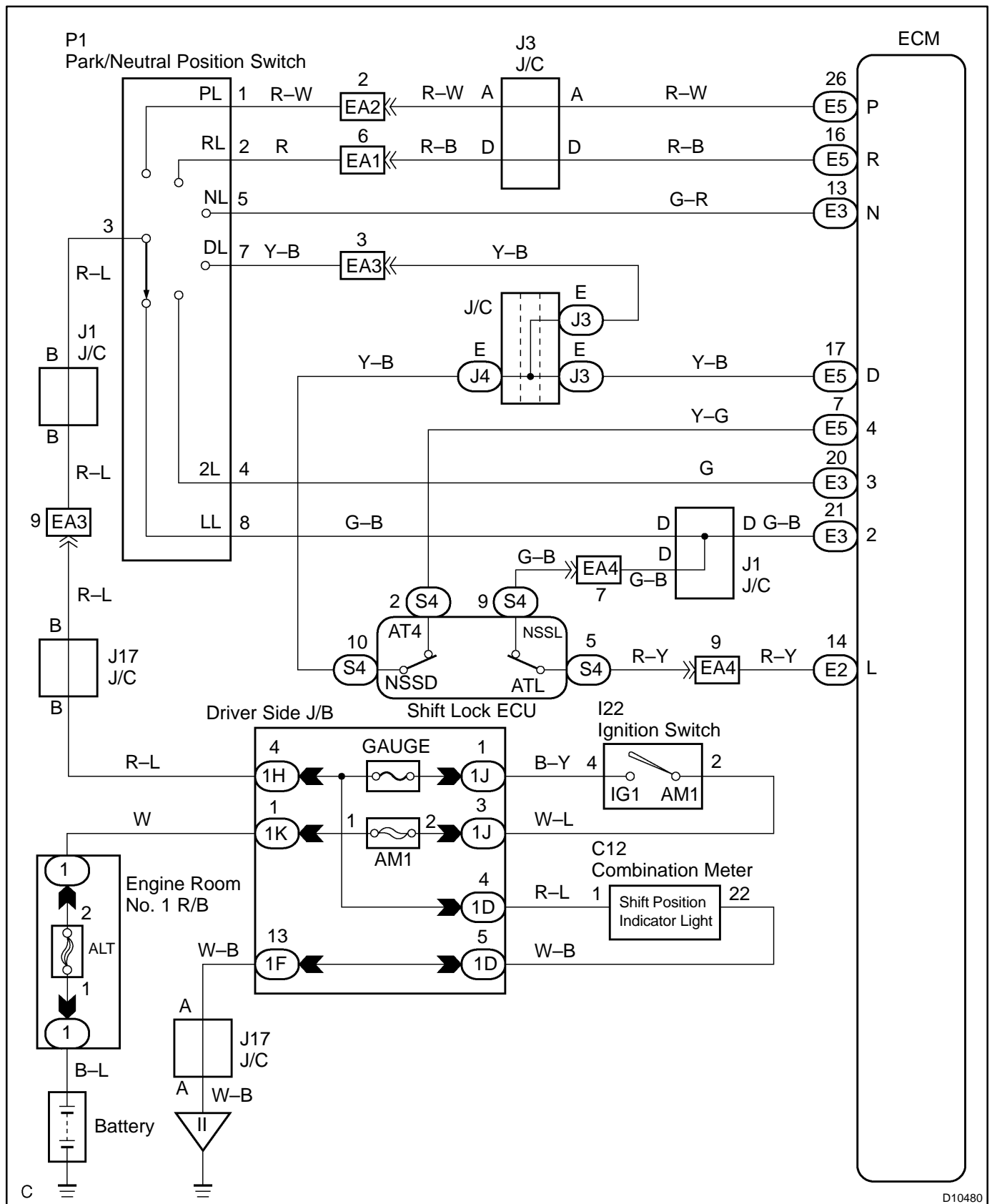
CIRCUIT DESCRIPTION

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



D10480

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. |
|----------|---|

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, M, 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 |
| M | 4TH: OFF → ON |
| 3 | 3RD: OFF → ON |
| 2 | 2ND: OFF → ON |
| L | LOW: OFF → ON |

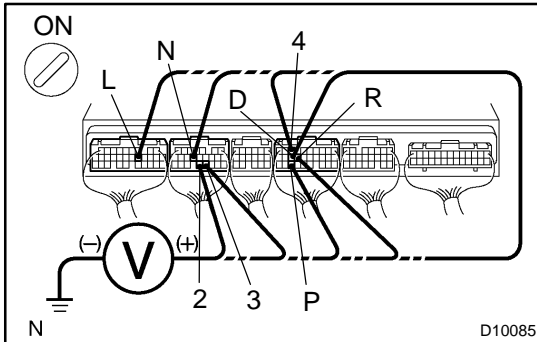
OK

**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: M 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.

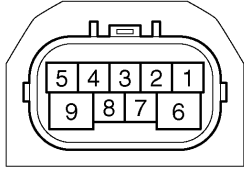
OK

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, M | 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](#)).