DI3C3–03

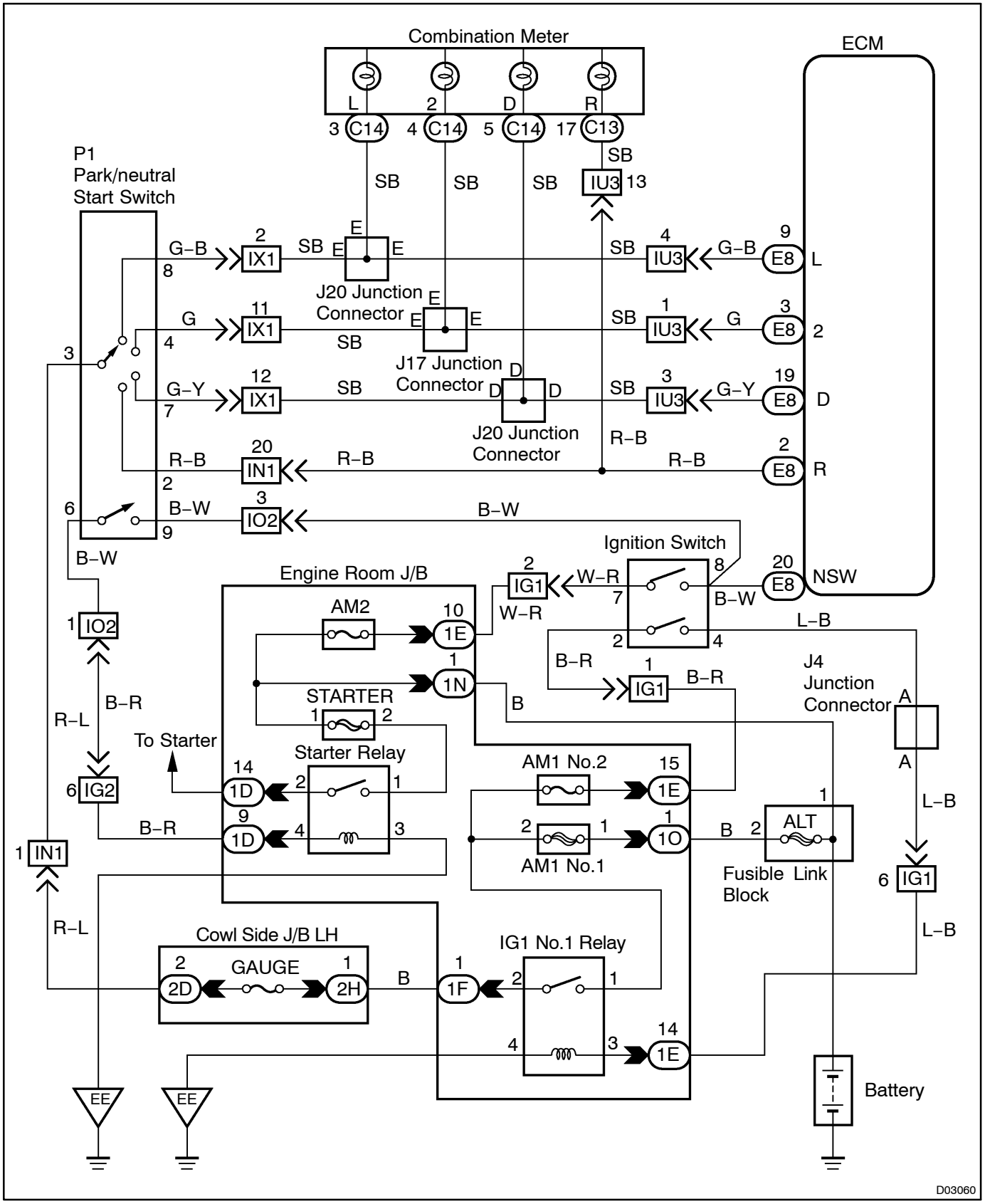
| DTC | P1780 | Park/Neutral Position Switch Malfunction |
|---|---|---|

## CIRCUIT DESCRIPTION

The park/neutral position switch detects the shift lever position and sends signals to the ECM.
The ECM receives signals (NSW, R, D, 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 N, 2 and L positions.<br>(2–trip detection logic) | • Short in park/neutral position switch circuit<br>• Park/neutral position switch<br>• ECM |
| | When driving under conditions (a) and (b) for 30 seconds or more, the park/neutral position switch is ON (N position).<br>(2–trip detection logic)<br>(a) Vehicle speed: 70 km/h (44 mph) or more<br>(b) Engine speed: 1,500 – 2,500 rpm | |

# WIRING DIAGRAM



# INSPECTION PROCEDURE

| | |
|---|---|
| 1 | **Read PNP, REVERSE, 2ND and LOW signals.** |

**When using TOYOTA hand–held tester:**

**PREPARATION:**

(a) Connect a TOYOTA hand–held tester to the DLC3.

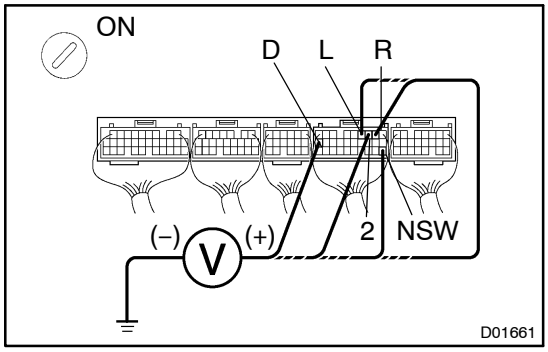
(b) Turn the ignition switch ON and TOYOTA hand–held tester main switch ON.

**CHECK:**

Shift lever into the P, R, D, N, 2 and L positions, and read the PNP, REVERSE, 2ND and LOW signals on the TOYOTA hand–held tester.

**OK:**

| Shift position | Signal |
|---|---|
| 2 | 2ND OFF → ON |
| L | LOW OFF → ON |
| R | REVERSE OFF → ON |
| P,N | PNP SW OFF → ON |




**When not using TOYOTA hand–held tester:**

**PREPARATION:**

Turn the ignition switch ON.

**CHECK:**

Measure voltage between terminals NSW, R, D, 2 and L of ECM and body ground when the shift lever is shifted to the following positions.

**OK:**

| Position | NSW–Body ground | R–Body ground | D–Body ground | 2–Body ground | L–Body ground |
|---|---|---|---|---|---|
| P,N | 0 V | 0 V | 0 V | 0 V | 0 V |
| R | 9 – 14 V* | 7.5 – 14 V* | 0 V | 0 V | 0 V |
| D | 9 – 14 V | 0 V | 7.5 – 14 V | 0 V | 0 V |
| 2 | 9 – 14 V | 0 V | 0 V | 7.5 – 14 V | 0 V |
| L | 9 – 14 V | 0 V | 0 V | 0 V | 7.5 – 14 V |

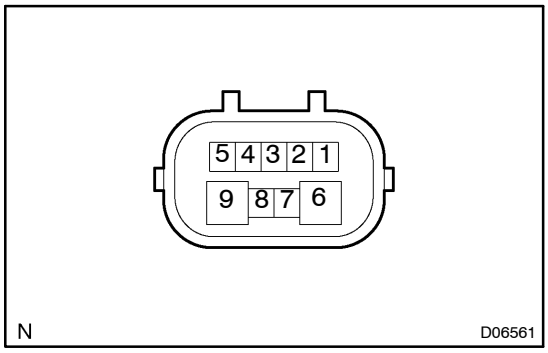
HINT:

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

**OK** → **Check and replace the ECM (See page IN–34).**

**NG**

| 2 | Check park/neutral position switch. |
|---|---|




**PREPARATION:**

Remove 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 | |
|---|---|---|
| P | 6 – 9 | 1 – 3 |
| R | 2 – 3 | – |
| N | 6 – 9 | 3 – 5 |
| D | 3 – 7 | – |
| 2 | 3 – 4 | – |
| 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–34).**