

DTC	P1780	Park/Neutral Position Switch Malfunction
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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 (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. (2-trip detection logic)	• Short in park/neutral position switch circuit • Park/neutral position switch • ECM
	When driving under conditions (a) and (b) for 30 seconds or more, the park/neutral position switch is ON (N position). (2-trip detection logic) (a) Vehicle speed: 70 km/h (44 mph) or more (b) Engine speed: 1,500 – 2,500 rpm	

The diagram illustrates the electrical system of a vehicle, showing the following components and their connections:

- Battery:** Connected to the system via a main power line.
- ECM (Engine Control Module):** Connected to the system via a main power line.
- Combination Meter:** Includes L, 2, D, and R indicators, connected to the system via C14 and C13 terminals.
- Park/neutral Start Switch:** Controls the starter and ignition circuits.
- Ignition Switch:** Controls the ignition system.
- Engine Room J/B (Junction Box):** Distributes power to the starter, ignition, and other components.
- Cowl Side J/B LH (Junction Box):** Distributes power to the gauge and other components.
- Starter Relay:** Controls the starter motor.
- Starter:** The motor that starts the engine.
- IG1 No.1 Relay:** Controls the ignition system.
- ALT (Alternator):** Generates power for the system.
- Fusible Link:** Protects the system from overcurrent.
- Various Fuses and Connectors:** Labeled with numbers and wire colors (e.g., G-B, G, G-Y, R-B, B-W, W-R, B-R, L-B, R-L, B).

The diagram shows the flow of electricity from the battery and ECM through various relays, switches, and junction boxes to the meter, starter, and alternator. Wire colors and terminal numbers are used to identify specific connections.

INSPECTION PROCEDURE

1 Read PNP, REVERSE, 2ND and LOW signals.

When using TOYOTA hand-held tester:

PREPARATION:

- Connect a TOYOTA hand-held tester to the DLC3.
- 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

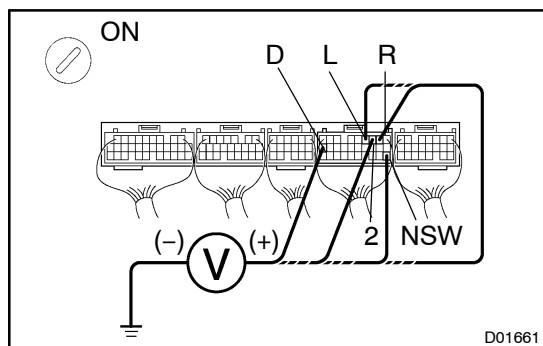
HINT:

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

OK

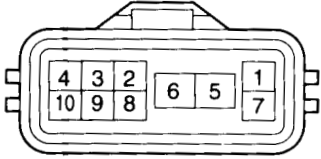
Check and replace the ECM (See page IN-34).

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Check park/neutral position switch.



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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	4 – 7	5 – 6
R	4 – 8	–
N	4 – 10	5 – 6
D	4 – 9	–
2	2 – 4	–
L	3 – 4	–

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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](#)).