

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. (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 (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 architecture, starting from the Battery at the bottom. Power flows through a Fusible Link and an ALT (Alternator) to a J6 Junction Connector. From there, it branches into several paths: one to the ECM (Engine Control Module) via a NSW (Neutral Switching) terminal, another to the Ignition Switch, and others to various relays and fuses. The Ignition Switch controls the IG1 No.1 Relay, which in turn powers the IG1 (Ignition) circuit. The Starter Relay is connected to the Starter motor and the Starter J/B. The Cowl Side J/B LH contains a GAUGE and is connected to the Starter J/B. The Engine Room J/B is a central hub connecting to the Starter, Ignition, and various other components. The Park/neutral Start Switch is connected to the Starter J/B and the Ignition Switch. The Combination Meter is connected to the Ignition Switch and the Starter J/B. The ECM is connected to the Ignition Switch and the Starter J/B. The diagram also shows the connection to the Battery and the use of ground symbols (EE).

INSPECTION PROCEDURE

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

When using LEXUS hand-held tester.

PREPARATION:

- Connect a LEXUS hand-held tester to the DLC3.
- Turn the ignition switch ON and LEXUS 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 LEXUS 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 LEXUS 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

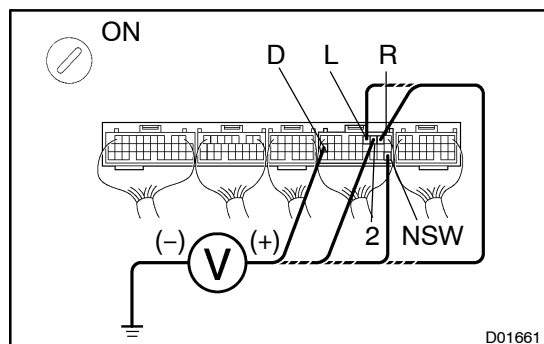
HINT:

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

OK

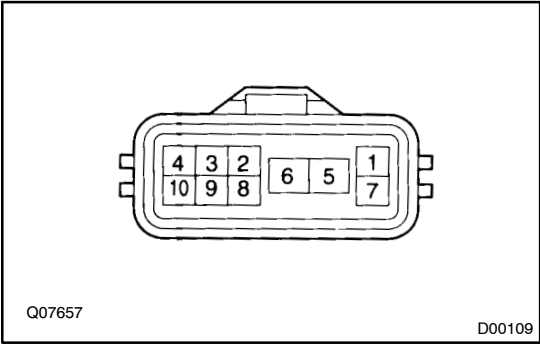
Check and replace the ECM (See page IN-33).

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

OK

NG

Replace the park/neutral position switch.

Repair or replace harness and connector between battery and park/neutral position switch, park/neutral position switch and ECM (See page [IN-33](#)).