

<b>DTC</b>	<b>P1780</b>	<b>Park/Neutral Position Switch Malfunction</b>
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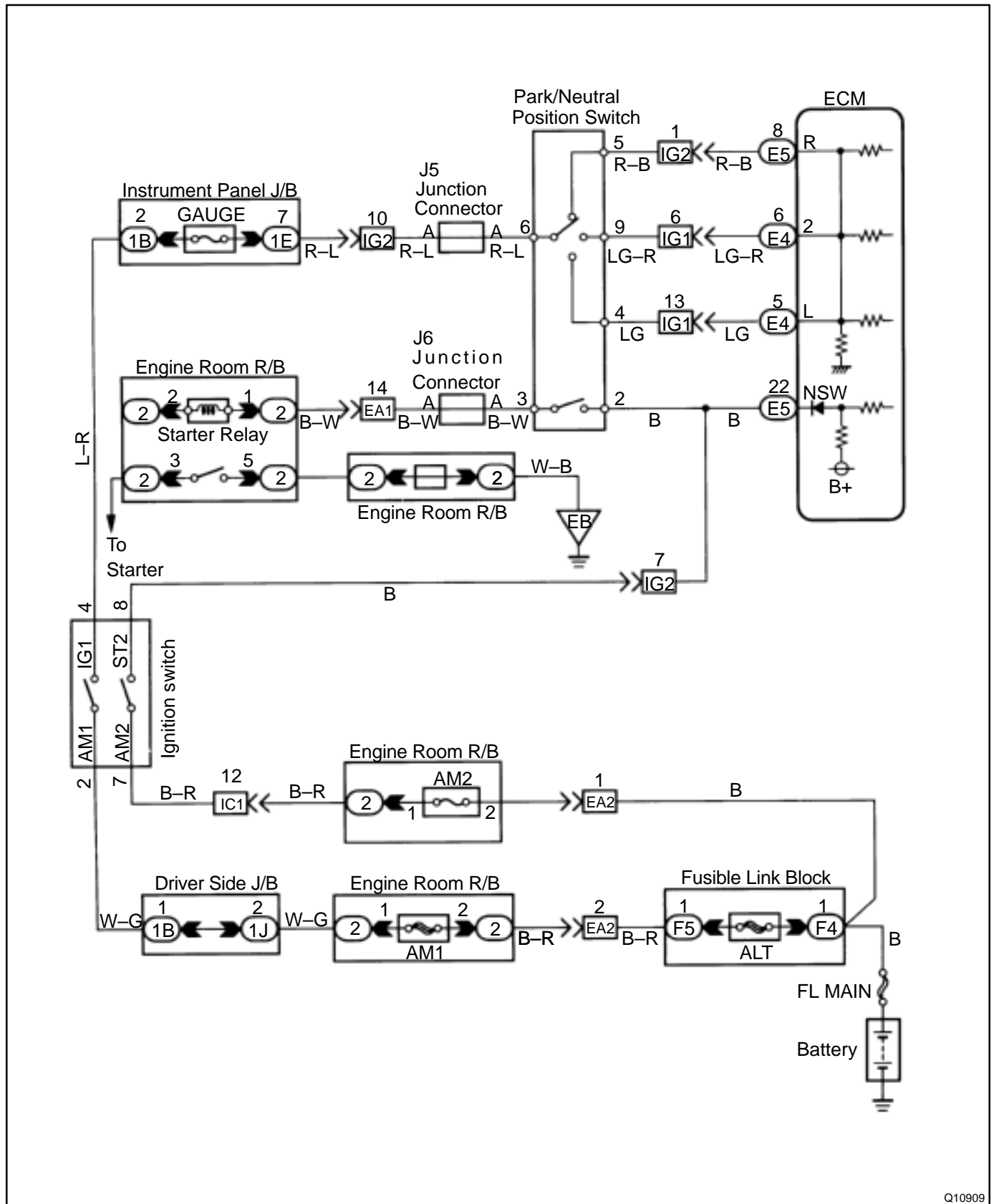
## CIRCUIT DESCRIPTION

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

The ECM receives signals (NSW, R, 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 the D position.

DTC No.	DTC Detection Condition	Trouble Area
P1780	2 or more switches are ON simultaneously for N, R, 2 or L position (2 trip detection logic)	<ul style="list-style-type: none"> <li>• Short in park/neutral position switch circuit</li> <li>• Park/neutral position switch</li> <li>• ECM</li> </ul>
	When driving under conditions (a), (b) and (c) for 30 seconds or more, the park/neutral position switch is ON (N position). (2 trip detection logic) (a) Vehicle speed: 80 km/h (50 mph) or more (b) Engine speed: 2,000 – 3,000 rpm (c) Manifold absolute pressure: 450 mmHg or more	

## WIRING DIAGRAM



Q10909

## INSPECTION PROCEDURE

## 1 Check PNP SW, REVERSE, 2ND and LOW signal.

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

**PREPARATION:**

- (a) Connect the TOYOTA hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and TOYOTA hand-held tester main switch ON.

**CHECK:**

Shift the shift lever to the P, R, N, 2 or L position, and read the NSW, R2 or L signal on the TOYOTA hand-held tester.

**OK:**

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

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

**PREPARATION:**

Turn the ignition switch ON.

**CHECK:**

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

**OK:**

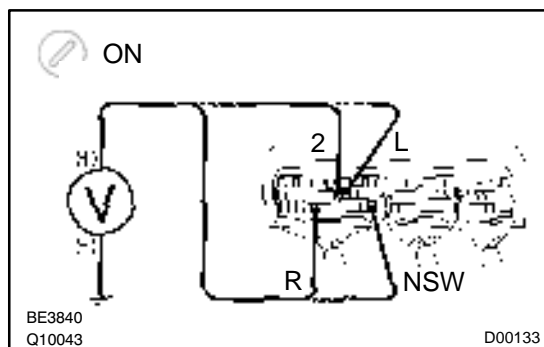
Position	NSW–Body ground	R–Body ground	2–Body ground	L–Body ground
P,N	0 V	0 V	0 V	0 V
R	7.5 – 14 V*	7.5 – 14 V*	0 V	0 V
D	7.5 – 14 V	0 V	0 V	0 V
2	7.5 – 14 V	0 V	7.5 – 14 V	0 V
L	7.5 – 14 V	0 V	0 V	7.5 – 14 V

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

**OK**

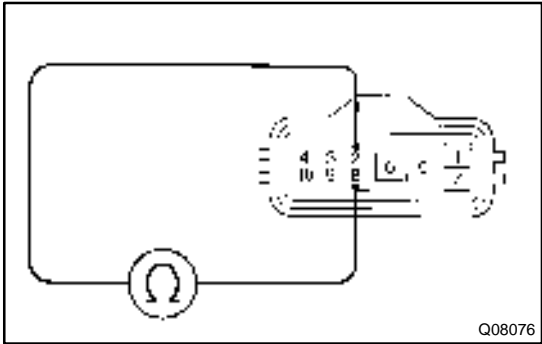
**Check and replace the ECM.**

**NG**



2

**Check park/neutral position switch.**



**PREPARATION:**

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

**CHECK:**

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

Shift Position	Terminal No. to continuity	
P	2 – 7	5 – 6
R	2 – 8	–
N	2 – 9	5 – 6
D	2 – 10	–
2	2 – 3	–
L	2 – 4	–

**NG**

**Replace park/neutral position switch.**

**OK**

**Repair or replace harness and connector.**