

DTC P1780 Park Neutral Position Switch Malfunction

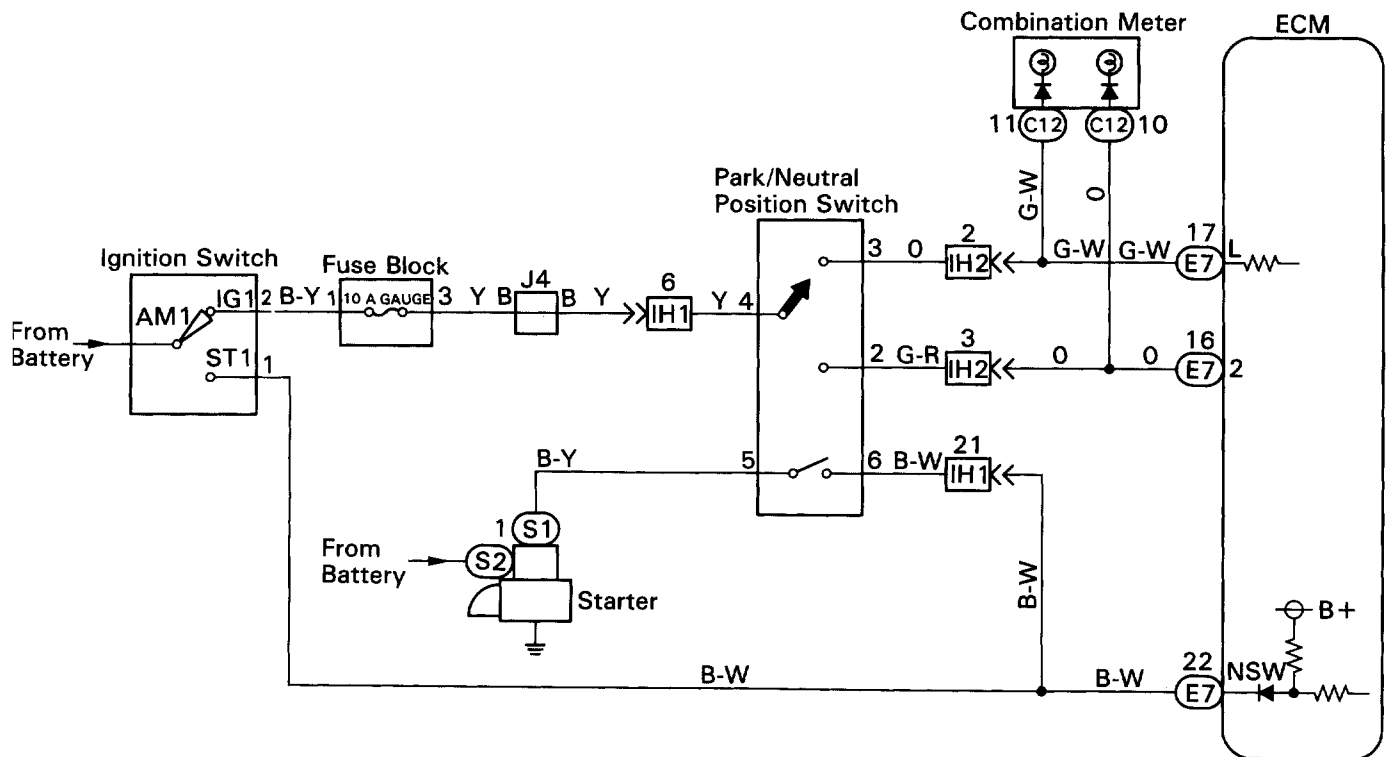
CIRCUIT DESCRIPTION

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

The ECM receives signals (R, NSW, 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 Detecting 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 with the park/neutral position switch is ON (N position). (2 trip detection logic) a) Vehicle speed: 70km/h (44 mph) or more b) Engine speed: 1,500–2,500 rpm	

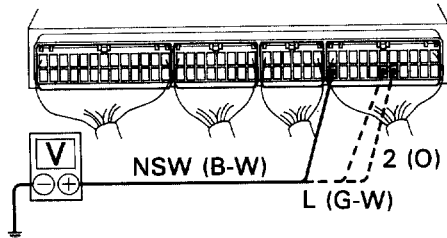
WIRING DIAGRAM



INSPECTION PROCEDURE

1

Check voltage between terminal NSW, 2, L of ECM and body ground.

BE3840
Q07353
NG

P Turn ignition switch ON.

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

OK

Position	NSW-body ground	2-body ground	L-body ground
P, N	0 V	0 V	0 V
R	7.5 ~ 14 V*	0 V	0 V
D	7.5 ~ 14 V	0 V	0 V
2	7.5 ~ 14 V	7.5 ~ 14 V	0 V
L	7.5 ~ 14 V	0 V	7.5 ~ 14 V

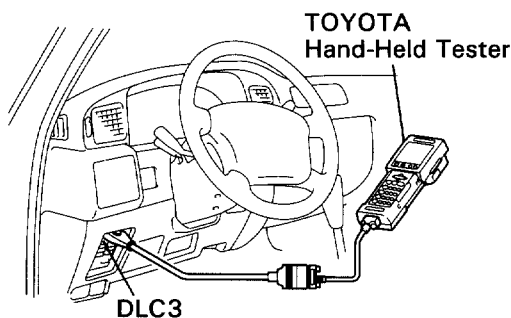
*: The voltage will drop slightly due to lighting up of the back up light.

OK

Proceed to the next circuit inspection shown on matrix chart (See page [AT-62](#)).

2

Connect the TOYOTA hand-held tester and read NSW, 2, L signals

BE3840
Q07307
NG

- P**
1. Remove the DLC 3 cover.
 2. Connect the TOYOTA hand-held tester to the DLC3 (OBD II connector).
 3. Turn ignition switch ON and TOYOTA hand-held tester main switch ON.

C Shift the shift lever to the 2 and L positions, and read the NSW, 2 and L signal on the TOYOTA hand-held tester.

OK

Shift position	Signal
2	2 OFF → ON
L	L OFF → ON
P, N	NSW OFF → ON

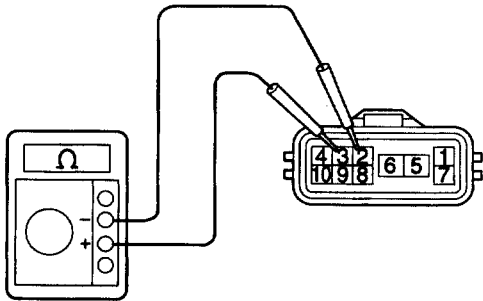
OK

Proceed to the next circuit inspection shown on matrix chart (See page [AT-62](#)).

Go to step 3.

3

Check park/neutral position switch.



Q05204

OK

- P
1. Jack up the vehicle.

2. Remove the park/neutral position switch,

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

○—○ Continuity

Terminal Position	6	5	4	7	8	10	9	2	3
P	○—○		○—○						
R			○—○	○—○					
N	○—○	○—○	○—○	○—○	○—○				
D			○—○	○—○	○—○	○—○			
2			○—○	○—○	○—○	○—○	○—○		
L			○—○	○—○	○—○	○—○	○—○	○—○	○—○

NG

Replace park/neutral position switch.

4

Check harness and connector between battery and park/neutral position switch, ECM and park/neutral position switch (See page IN-26).

OK

NG

Repair or replace harness and connector.

Check and replace ECM