

<b>DTC</b>	<b>P1780</b>	<b>PARK/NEUTRAL POSITION SWITCH MALFUNCTION</b>
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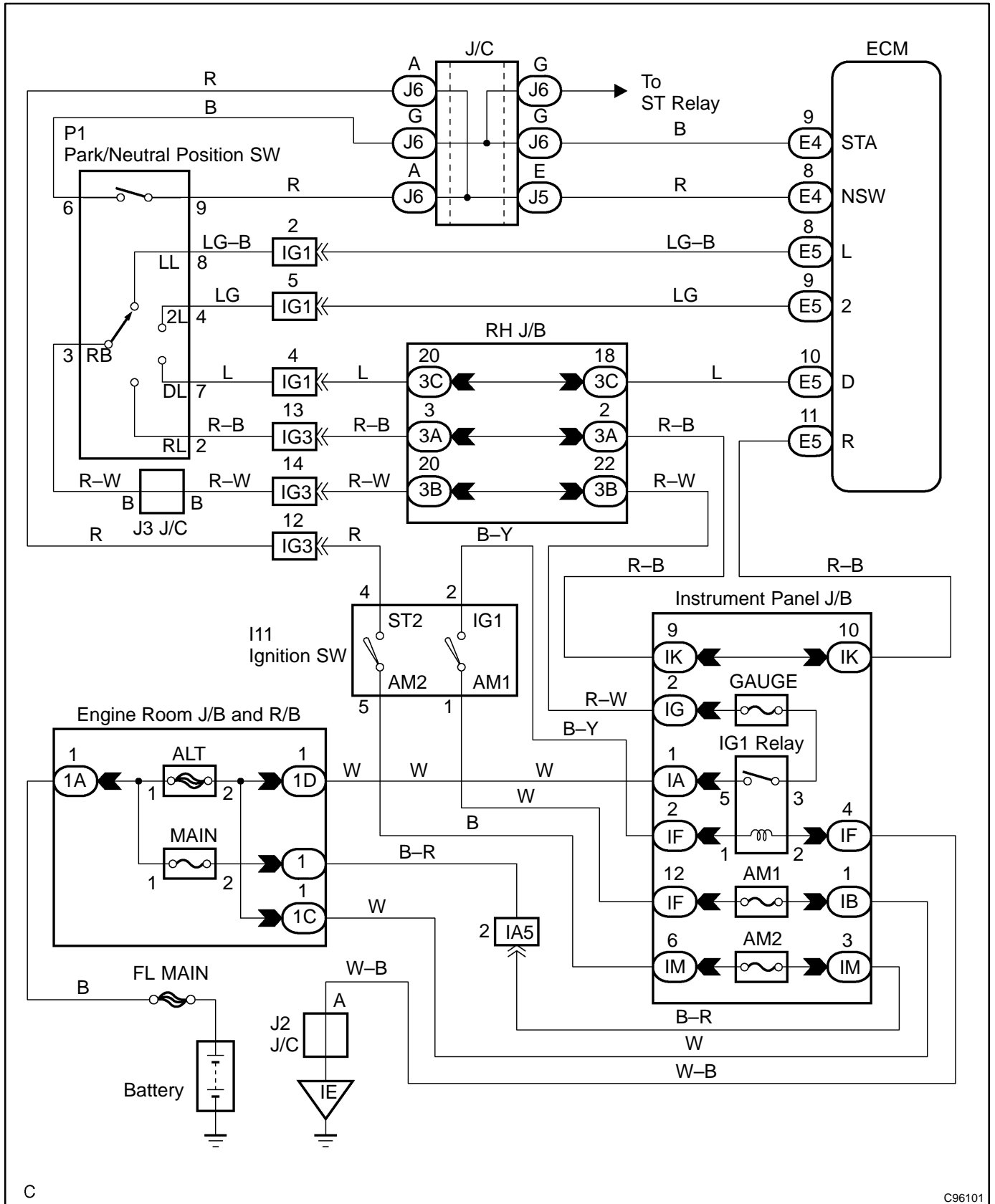
## PARK/NEUTRAL POSITION SWITCH CIRCUIT

### CIRCUIT DESCRIPTION

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

DTC No.	DTC Detecting Condition	Trouble Area
P1780	2 or more switches are ON simultaneously for "N", "R", "2" or "L" position. (2-trip detection logic)  When driving under the 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: 1,500 – 5,000 rpm (c) Manifold absolute pressure: 300 mmHg or more	<ul style="list-style-type: none"> <li>• Wire harness</li> <li>• Park/neutral position switch</li> <li>• ECM</li> </ul>

# WIRING DIAGRAM



C

C96101

## INSPECTION PROCEDURE

### 1 READ VALUE OF OBD II SCAN TOOL OR HAND-HELD TESTER

- (a) Warm up the engine.
- (b) Turn the ignition switch OFF.
- (c) Connect the OBD II scan tool or Hand-held tester to the DLC3.
- (d) Turn the ignition switch ON and push the OBD II scan tool or Hand-held tester main SW ON.
- (e) Shift the shift lever to the P, R, N, D, 2 and L positions, select the item "PNP SW (NSW)", "REVERSE", "4TH/DRIVE", "2ND" and "LOW" in the DATALIST and read its value displayed on the OBD II scan tool or Hand-held tester.

**NOTICE:**

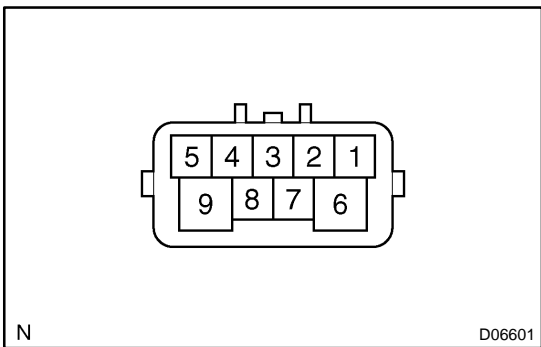
The values given below for "Normal Condition" are representative values, so a vehicle may still be normal even if its value differs from those listed here. Do not depend solely on the "Normal Condition" here when deciding whether or not the part is faulty.

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
PNP SW [NSW]	PNP SW Status/ ON or OFF	Shift lever position is; P or N: ON Except P or N: OFF	The shift lever position and these values are different, there are failures of the PNP switch or shift cable adjustment.
LOW	PNP SW Status/ ON or OFF	Shift lever position is; L: ON Except L: OFF	
2ND	PNP SW Status/ ON or OFF	Shift lever position is; 2: ON Except 2: OFF	
REVERSE	PNP SW Status/ ON or OFF	Shift lever position is; R: ON Except R: OFF	
4TH/DRIVE	PNP SW Status/ ON or OFF	Shift lever position is; D: ON Except D: OFF	

**OK** → **CHECK AND REPLACE ECM(See page 01-34)**

**NG**

**2 INSPECT PARK/NEUTRAL POSITION SWITCH ASSY**



- (a) Disconnect the park/neutral position switch connector.
- (b) Check continuity between each terminal shown below when the shift lever is moved to each position.

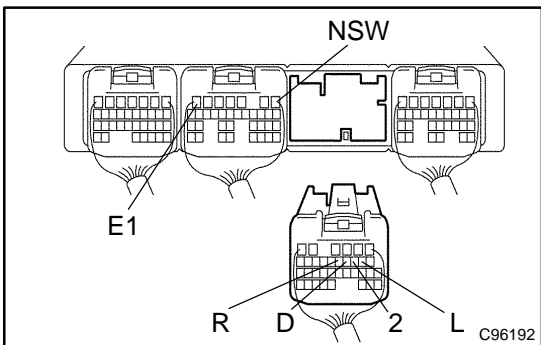
Shift Position	Terminal No. to continuity	
	Terminal No.	Terminal No.
P	1 – 3	6 – 9
R	2 – 3	–
N	3 – 5	6 – 9
D	3 – 7	–
2	3 – 4	–
L	3 – 8	–

**OK:**  
There is continuity.

**NG** → **REPLACE PARK/NEUTRAL POSITION SWITCH ASSY(See page 40-3)**

**OK**

**3 CHECK HARNESS AND CONNECTOR(PARK/NEUTRAL POSITION SWITCH – ECM)**



- (a) Connect the park/neutral position switch connector.
- (b) Disconnect the ECM connector.
- (c) Turn the IG switch ON and measure the voltage between terminals R, D, 2 and L of ECM and the E1 when the shift lever is shifted to the following position.

**OK:**

Shift Position	Terminal	Voltage (V)
R	R – E1	10 – 14
D	D – E1	10 – 14
2	2 – E1	10 – 14
L	L – E1	10 – 14

- (d) Turn the IG switch OFF and connect the ECM connector.
- (e) Turn the IG switch ON and measure the voltage between terminals NSW of ECM and the E1 when the shift lever is shifted to the following position.

**OK:**

Shift Position	Terminal	Voltage (V)
P	NSW – E1	Below 1
N	NSW – E1	Below 1
Except P and N	NSW – E1	10 – 14

**NG** → **REPAIR OR REPLACE HARNESS OR CONNECTOR(See page 01-34)**

**OK**

**CHECK AND REPLACE ECM(See page 01-34)**