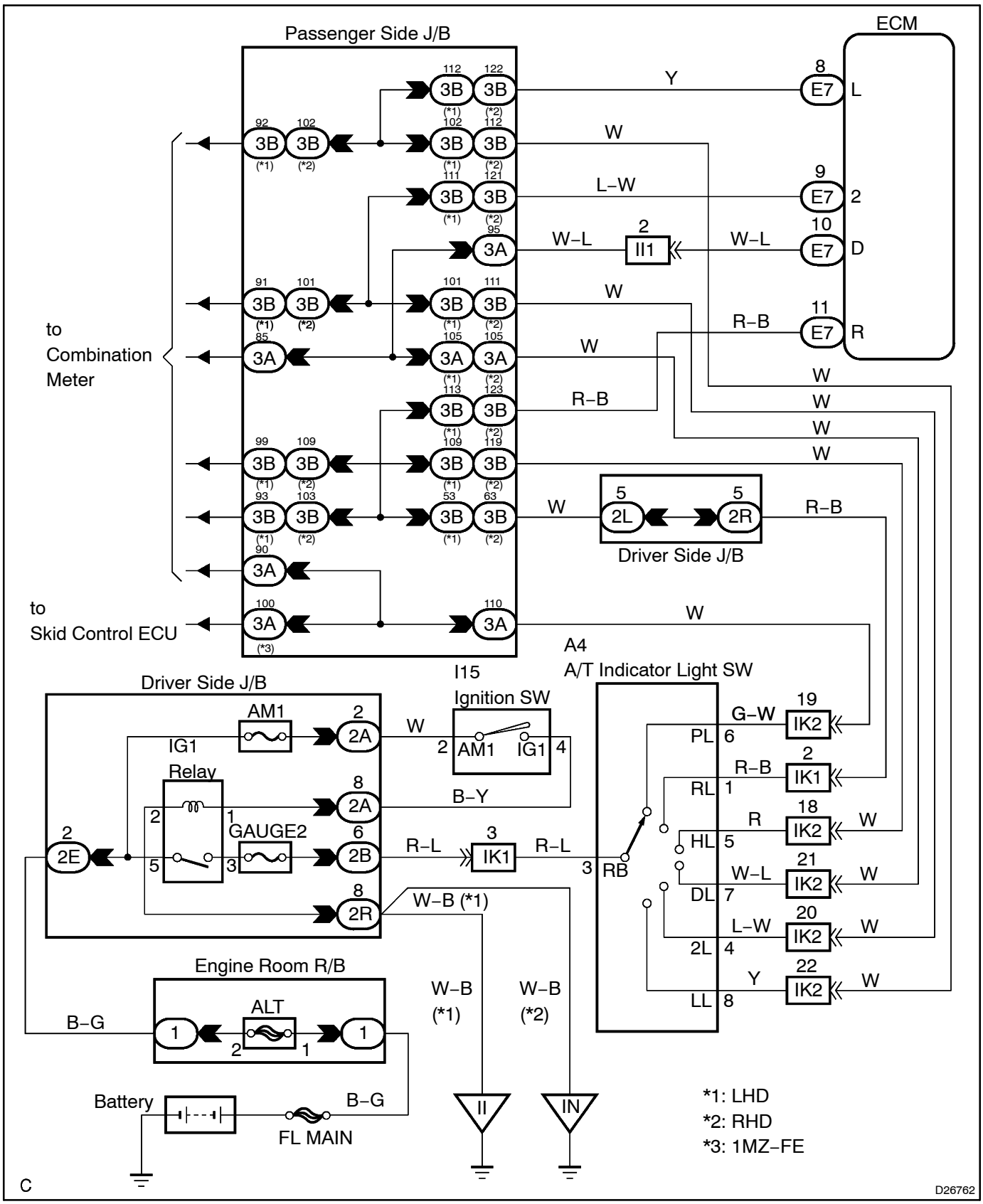
DTC	P1780/97	PARK/NEUTRAL POSITION SWITCH MALFUNCTION

CIRCUIT DESCRIPTION

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

DTC No.	DTC Detection Condition	Trouble Area
P1780/97	When driving under conditions (a) and (b) for 30 sec. or more, the park/neutral position switch is ON (P and N range) : (2 trip detection logic) (a) Vehicle speed: 70 km/h (44 mph) or more (b) Engine speed: 1,500 – 2,500 rpm	• Park/neutral position switch circuit • Park/neutral position switch assy • ECM

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

When using hand–held tester:

According to the DATA LIST displayed by hand–held tester, you can read the value of the switch, sensor, and so or without parts removal. Reading the DATA LIST as the first step of troubleshooting is one method to shorter labor time.

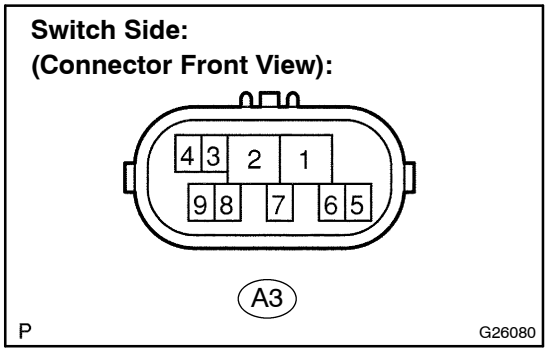
(a) Turn the ignition switch OFF.
(b) Connect the Hand–held tester to the DLC3.
(c) Turn the ignition switch ON and push the Hand–held tester main SW ON.
(d) Shift the shift lever to the P and N ranges, select the item "PNP SW (NSW)" in the DATA LIST and read its value displayed on the Hand–held tester.

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 range 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.

1 INSPECT PARK/NEUTRAL POSITION SWITCH ASSY



(a) Disconnect the park/neutral position switch connector.
(b) Measure resistance according to the value(s) in the table below when the shift lever is moved to each position.

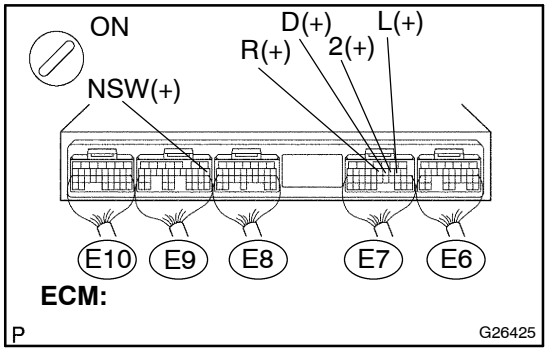
Standard:

Shift Position	Tester Connection	Specified Condition
P	2 – 6 and 4 – 5	Below 1 Ω
Except P	↑	10 kΩ or higher
R	2 – 1	Below 1 Ω
Except R	↑	10 kΩ or higher
N	2 – 9 and 4 – 5	Below 1 Ω
Except N	↑	10 kΩ or higher
D	2 – 7	Below 1 Ω
Except D	↑	10 kΩ or higher
2	2 – 3	Below 1 Ω
Except 2	↑	10 kΩ or higher
L	2 – 8	Below 1 Ω
Except L	↑	10 kΩ or higher

NG → **REPLACE PARK/NEUTRAL POSITION SWITCH ASSY**

OK

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



(a) Connect the transmission control switch connector of shift lock control unit assy.

(b) Turn the ignition switch to the ON position, and measure the voltage according to the value(s) in the table below when the shift lever is moved to each position.

Standard:

Shift Position	Tester Connection	Specified condition
P and N	E9 – 8 (NSW) – Body ground	Below 1 V
Except P and N	↑	10 to 14 V
R	E7 – 11 (R) – Body ground	10 to 14 V*
Except R	↑	Below 1 V
D	E7 – 10 (D) – Body ground	10 to 14 V
Except D	↑	Below 1 V
2	E7 – 9 (2) – Body ground	10 to 14 V
Except 2	↑	Below 1 V
L	E7 – 8 (L) – Body ground	10 to 14 V
Except L	↑	Below 1 V

HINT:

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

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE ECM