

DTC	P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)
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DESCRIPTION

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

DTC No.	DTC Detection Condition	Trouble Area
P0705	2 or more switches are ON simultaneously for P (NSW), R, N (NSW), D, 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

MONITOR DESCRIPTION

These DTCs indicate a problem with the park/neutral position switch and the wire harness in the park/neutral position switch circuit.

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

For security, the park/neutral position switch detects the shift lever position so that the engine can be started only when the shift lever is on P or N.

The park/neutral position switch sends a signal to the ECM according to the shift lever position (R, D, 2 or L).

The ECM determines that there is a problem with the switch or related parts if it receives more than 1 position signal simultaneously. The ECM will illuminate the MIL and store the DTC.

MONITOR STRATEGY

Related DTCs	P0705: Park/Neutral position switch/Verify switch input
Required sensors/Components	Park/Neutral position switch
Frequency of operation	Continuous
Duration	2 sec.
MIL operation	2 driving cycles
Sequence of operation	None

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TYPICAL ENABLING CONDITIONS

The monitor will run whenever this DTC is not present.	None
The typical enabling condition is not available	-

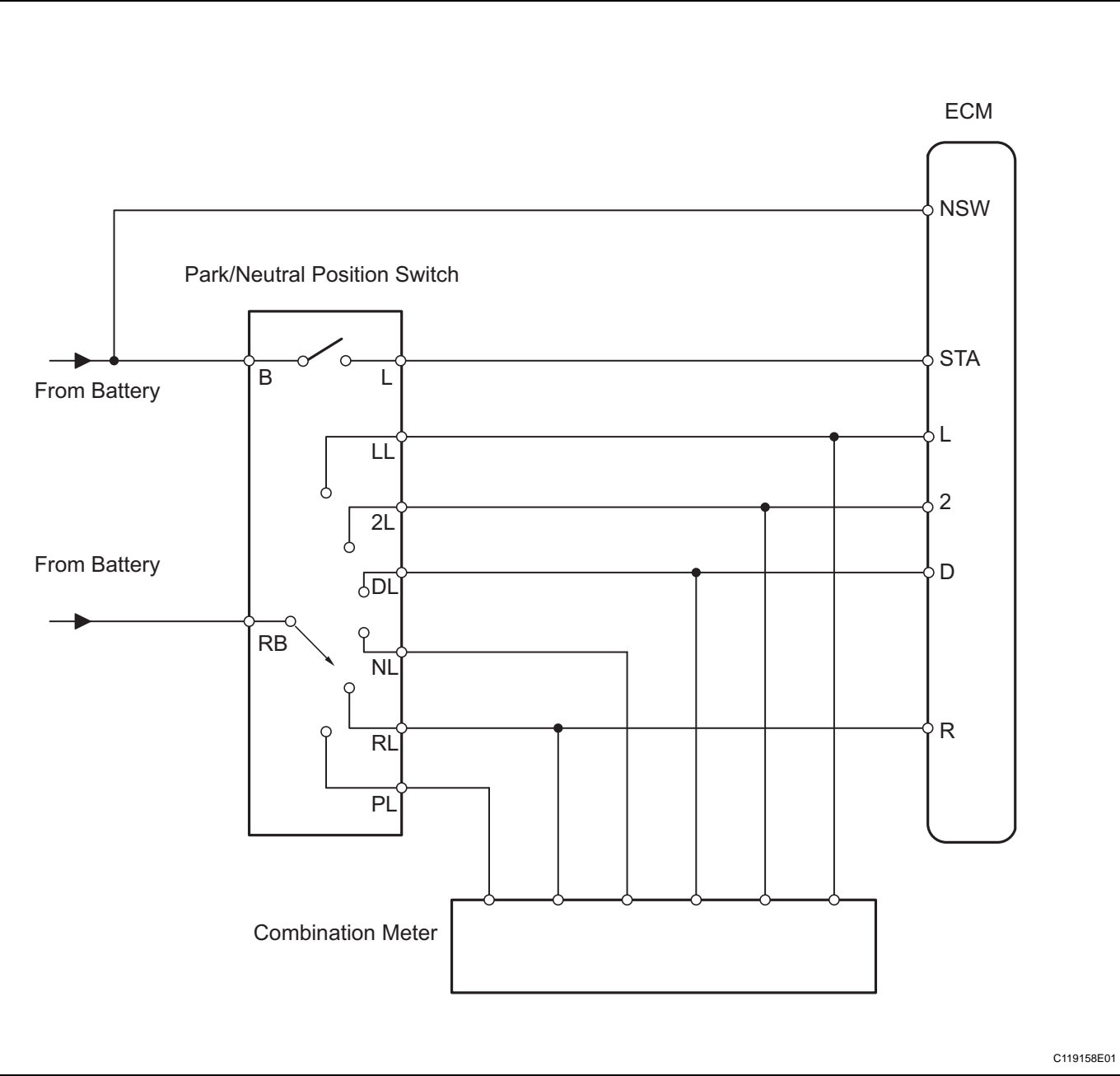
TYPICAL MALFUNCTION THRESHOLDS

When either condition below is met:	A or B
A. Number of the following signal inputs at the same time	2 or more
Park/Neutral position switch	ON
R switch	ON
D switch	ON
2 switch	ON
L switch	ON
B. All of the following conditions are met:	-
Park/Neutral position switch	OFF
R switch	OFF
D switch	OFF
2 switch	OFF
L switch	OFF

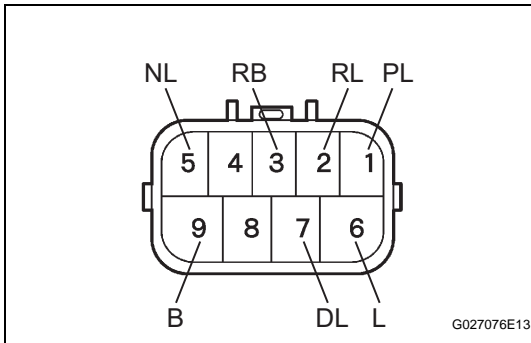
COMPONENT OPERATING RANGE

Park/Neutral position switch	Park/Neutral position switch sends only one signal to the ECM.
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WIRING DIAGRAM



1 INSPECT PARK/NEUTRAL POSITION SWITCH



- Disconnect the P1 park/neutral position switch connector.
- Measure the resistance of the park/neutral position switch when the shift lever is moved to each position.

Standard resistance

Tester Connection	Shift Lever Position	Specified Condition
3 (RB) - 1 (PL) and 9 (B) - 6 (L)	P	Below 1 Ω
3 (RB) - 1 (PL) and 9 (B) - 6 (L)	Not on P	10 k Ω or higher
2 (RL) - 3 (RB)	R	Below 1 Ω
2 (RL) - 3 (RB)	Not on R	10 k Ω or higher
3 (RB) - 5 (NL) and 9 (B) - 6 (L)	N	Below 1 Ω
3 (RB) - 5 (NL) and 9 (B) - 6 (L)	Not on N	10 k Ω or higher
3 (RB) - 7 (DL)	D	Below 1 Ω
3 (RB) - 7 (DL)	Not on D	10 k Ω or higher
3 (RB) - 4 (2L)	2	Below 1 Ω
3 (RB) - 4 (2L)	Not on 2	10 k Ω or higher
3 (RB) - 8 (LL)	L	Below 1 Ω
3 (RB) - 8 (LL)	Not on L	10 k Ω or higher

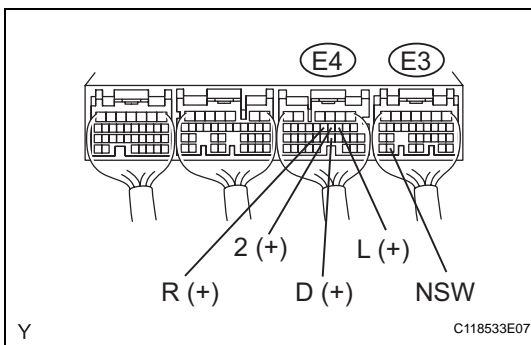
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REPLACE PARK/NEUTRAL POSITION SWITCH

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2 CHECK WIRE HARNESS (PARK/NEUTRAL POSITION SWITCH - BATTERY)



- Turn the ignition switch ON.
- Measure the voltage of the wire harness side connectors.

Standard voltage

Tester Connection	Shift Lever Position	Specified Condition
E3-30 (NSW) - Body ground	P or N	Below 1 V
E3-30 (NSW) - Body ground	Not on P or N	10 to 14 V
E4-11 (R) - Body ground	R	10 to 14 V*
E4-11 (R) - Body ground	Not on R	Below 1 V
E4-21 (D) - Body ground	D or 3	10 to 14 V
E4-21 (D) - Body ground	Not on D or 3	Below 1 V
E4-10 (2) - Body ground	2	10 to 14 V
E4-10 (2) - Body ground	Not on 2	Below 1 V
E4-9 (L) - Body ground	L	10 to 14 V
E4-9 (L) - Body ground	Not on L	Below 1 V

HINT:

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

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**REPAIR OR REPLACE HARNESS AND
CONNECTOR**

OK

REPLACE ECM