DIAGNOSTIC TROUBLE CODE CHART

If a malfunction code is displayed during the DTC check, check the circuit listed for that code in the table below. (Proceed to the page given for that circuit.)

POWER BACK DOOR SYSTEM

DTC No.	Detection Item	Trouble Area	See page
B2222	PBD Pulse Sensor Malfunction	1. Wire harness 2. Power back door drive unit 3. Power back door ECU	ED-139

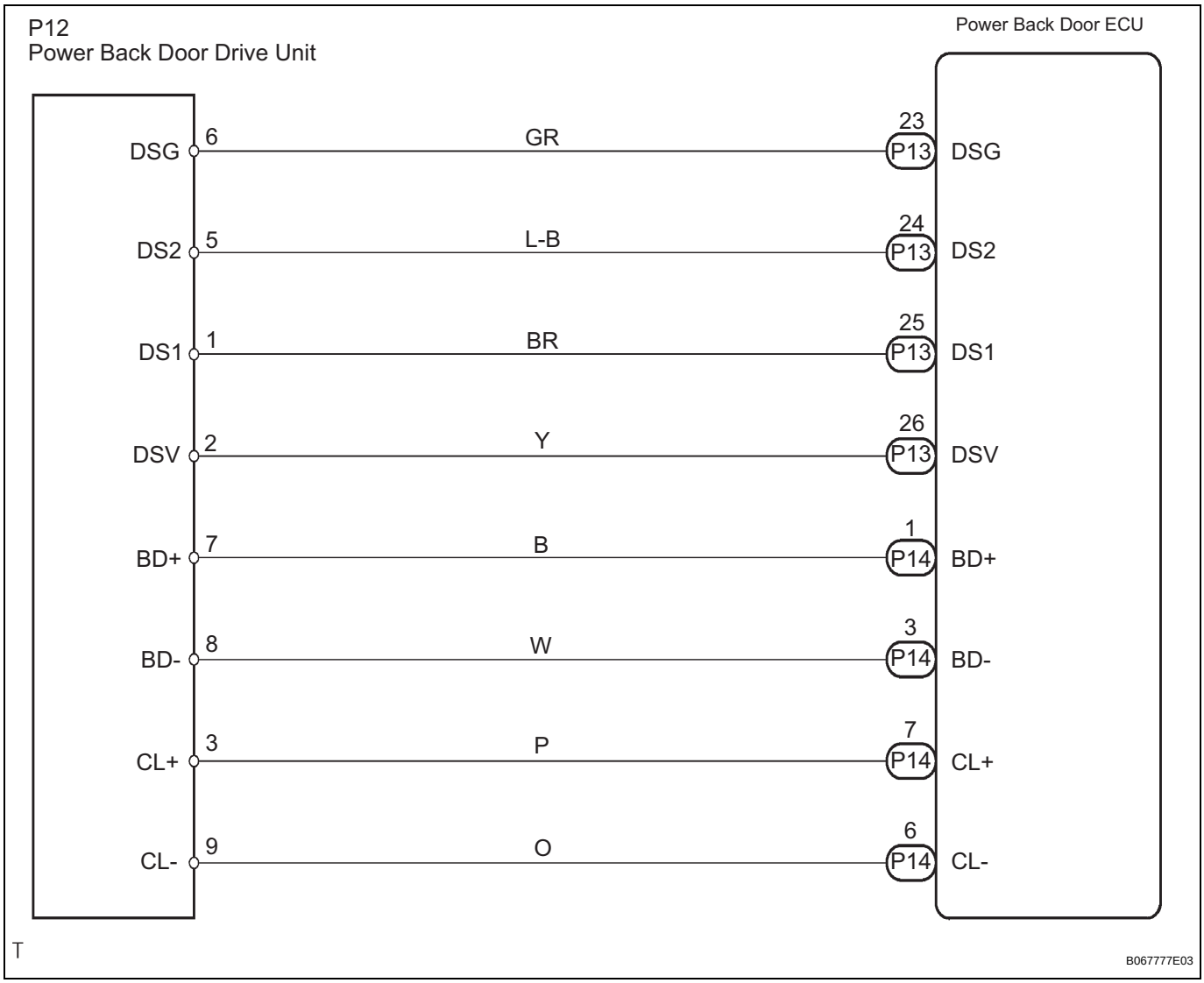
DTC	B2222	PBD Pulse Sensor Malfunction

DESCRIPTION

- A pulse sensor is built into the back door for a jam and foreign object detection and for back door position detection. The jam and foreign object detection feature of the pulse sensor monitors the operating speed of the back door while the power back door is in operation. The back door position detection feature of the pulse sensor monitors the back door location. If the back door position detection feature outputs a pulse signal that is out of the normal range, the power back door ECU will set DTC B2222.
- If DTC B2222 sets, the power back door system will be turned off. Thus, the back door can be moved freely and will be switched to manual operation mode (not electrically controlled).
- In order to restore the power back door system to normal operation mode, first solve the problem indicated by DTC B2222 and then manually close the back door fully (reset operation).

DTC No.	DTC Detection Condition	Trouble Area
B2222	Power back door does not operate	• Wire harness • Power back door drive unit • Power back door ECU

WIRING DIAGRAM



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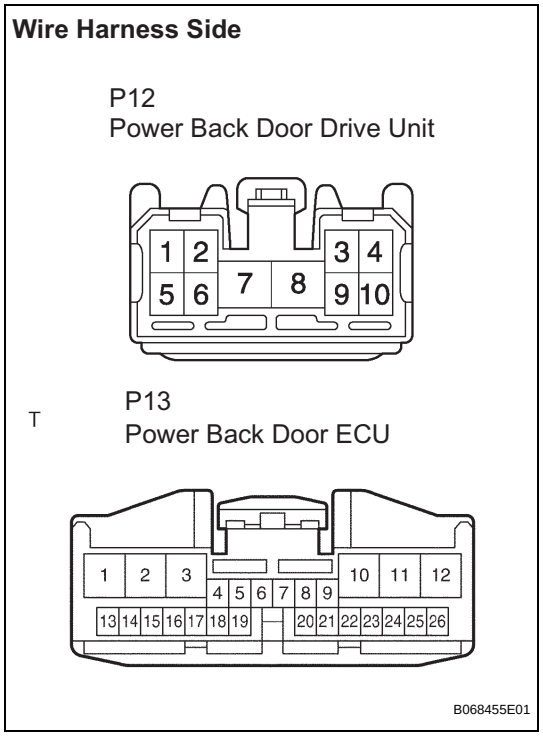
INSPECTION PROCEDURE

1 CHECK WIRE HARNESS (POWER BACK DOOR DRIVE UNIT - POWER BACK DOOR ECU)



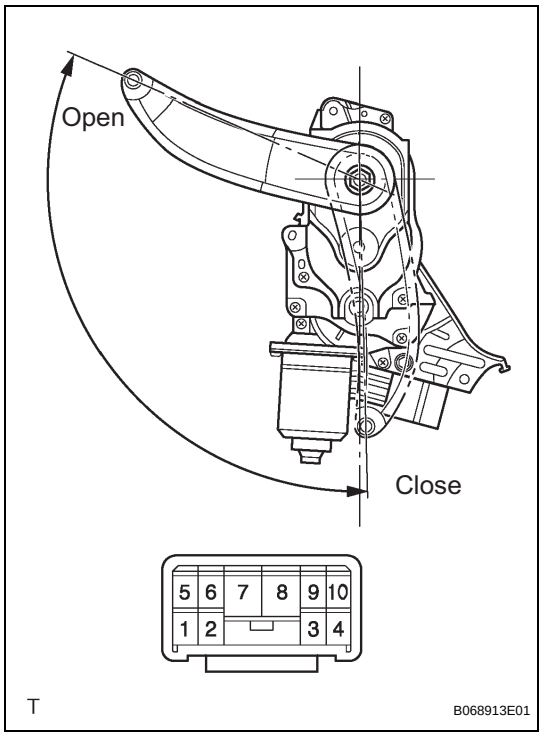
(a) Disconnect the P12 unit and P13 ECU connectors.
(b) Check the resistance between the wire harness side connectors.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
P12-6 (DSG) - P13-23 (DSG)	Below 1 Ω
P12-5 (DS2) - P13-24 (DS2)	
P12-1(DS1) - P13-25 (DS1)	
P12-2 (DSV) - P13-26 (DSV)	

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

OK

2 INSPECT POWER BACK DOOR DRIVE UNIT



(a) Remove the unit.
(b) Connect the battery positive (+) lead to terminal 3 and battery negative (-) terminal lead to terminal 9.
(c) Apply battery voltage to the terminals and check the motor operation.
OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 8 Battery negative (-) → Terminal 7	Open
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 8	Close

(d) Check the resistance of the clutch terminals.
Resistance

Terminal No.	Specified Condition
3 - 9	4.0 Ω

(e) Reinstall the unit with the connector connected.

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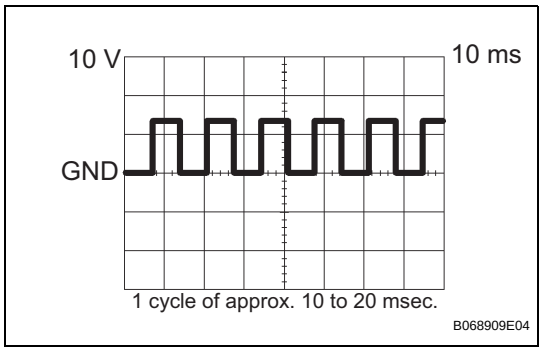

(f) Check the pulse of the pulse sensor.

(1) Using an oscilloscope, check the pulse generated when the door is manually opened and closed.

Reference

Terminal	Tool setting	Vehicle condition
1 - 6, 5 - 6	10 V/DIV., 10 ms/DIV.	Door moving

HINT:

A cycle of the pulse changes between approx. 10 to 20 msec. according to the speeds that the slide door is moving.

NOTICE:

When disconnecting the drive unit, initialize the power back door system (See page ED-132).

NG → **REPLACE POWER BACK DOOR DRIVE UNIT**

OK

REPLACE POWER BACK DOOR ECU