DTC	B1231	JAM PROTECTION LIMIT SWITCH CIRCUIT ON DRIVER SIDE DOOR

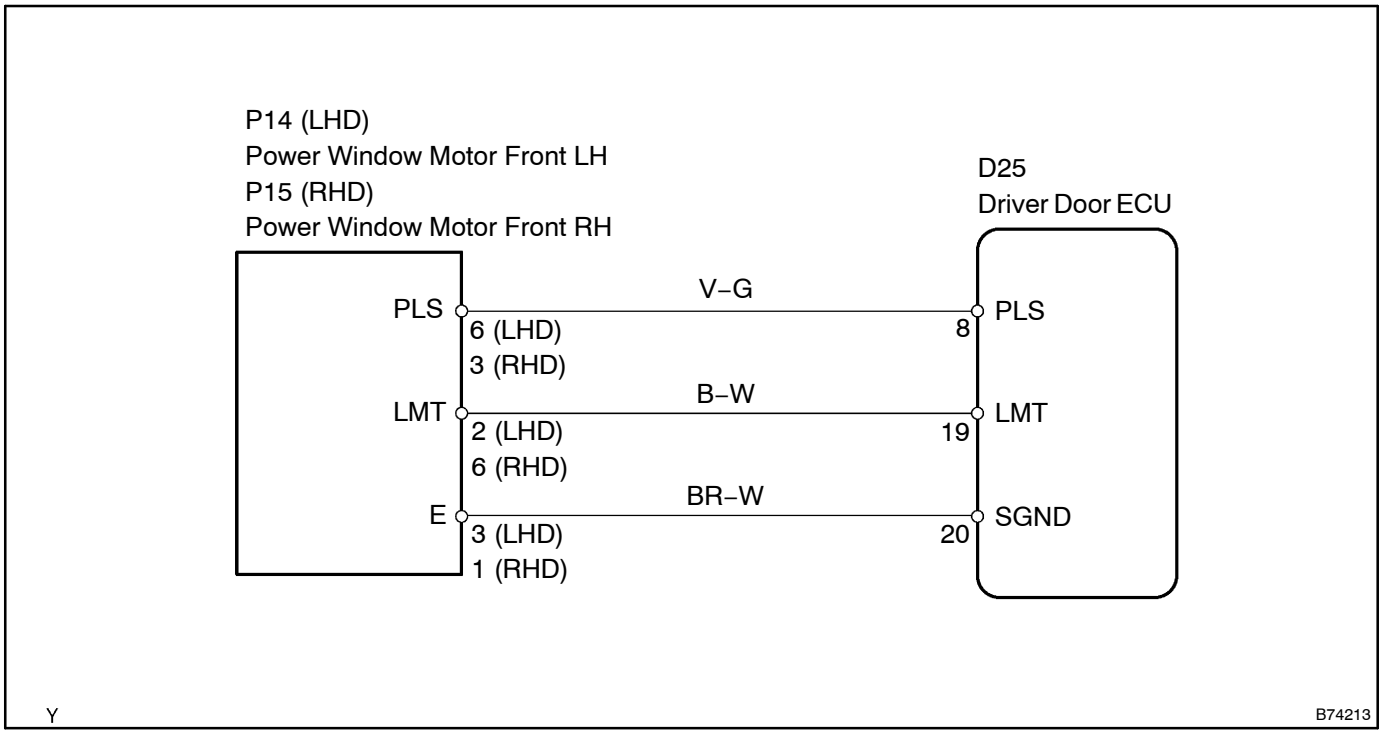
DTC	B1232	JAM PROTECTION PULSE SENSOR CIRCUIT ON DRIVER SIDE DOOR

CIRCUIT DESCRIPTION

These DTCs are output when the driver's door power window motor is malfunctioning.

DTC No.	DTC Detection Condition	Trouble Area
B1231	• Open in limit switch of power window regulator motor front LH • Open in limit switch of power window regulator motor front RH	• Power window regulator motor front LH • Power window regulator motor front RH • Wire harness
B1232	• Open in limit switch of power window regulator motor front LH • Open in limit switch of power window regulator motor front RH	• Power window regulator motor front LH • Power window regulator motor front RH • Wire harness

WIRING DIAGRAM



INSPECTION PROCEDURE

1	CHECK POWER WINDOW OPERATION

(a) Lower the driver door power window from the fully closed position to the fully open position. Check if the DTC is erased.

Result:

Result	Proceed to
DTC is erased	A
DTC is not erased	B

HINT:

If the DTC is erased, it is possible the driver door ECU incorrectly detected this DTC previously.

B → **Go to step 2**

A

END

2	READ VALUE OF INTELLIGENT TESTER II

(a) Connect the intelligent tester II to the DLC3.

(b) Turn the ignition switch ON and press the intelligent tester II main switch ON.

(c) Select the items below in the DATA LIST and read the displays on the intelligent tester II.

DRIVER DOOR ECU:

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
Limit SW	Jam Protection Limit SW	ON: Jam protection limit switch operates OFF: Jam protection limit switch do not operate	–

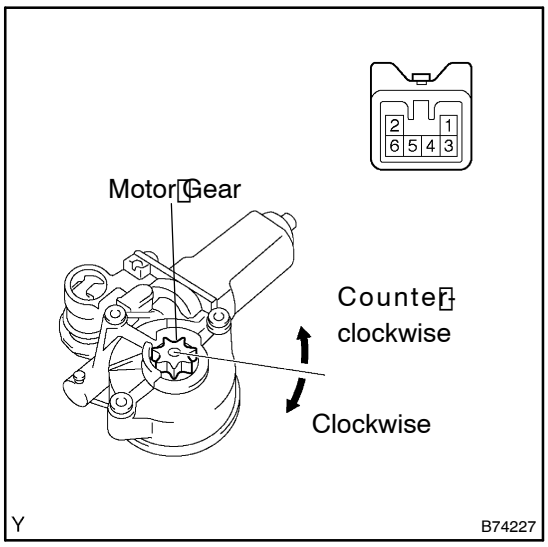
OK: ”ON” (Jam protection limit switch operates) appears on the screen.

NG → **Go to step 3**

OK

REPLACE DRIVER DOOR ECU

3	INSPECT POWER WINDOW REGULATOR MOTOR ASSY (DRIVER SIDE)



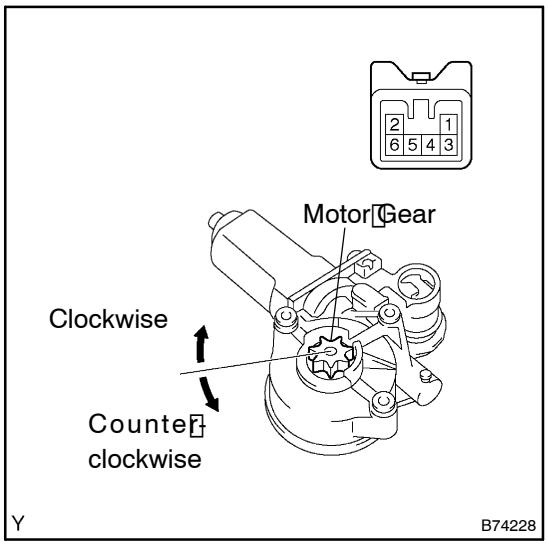
(a) Remove the motor (see page 75–17).
(b) Apply battery voltage to the motor connector according to the table below.
(c) Check that the motor rotates smoothly.

NOTICE:
Do not apply battery voltage to any terminals except terminals 4 and 5.

OK:

LHD models

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 5 Battery negative (–) → Terminal 4	Motor gear rotates clockwise
Battery positive (+) → Terminal 4 Battery negative (–) → Terminal 5	Motor gear rotates counterclockwise



RHD models

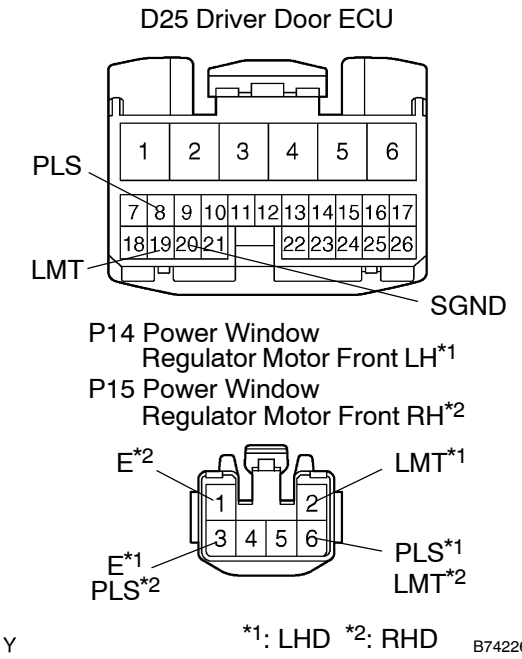
Measurement Condition	Specified Condition
Battery positive (+) → Terminal 4 Battery negative (–) → Terminal 5	Motor gear rotates clockwise
Battery positive (+) → Terminal 5 Battery negative (–) → Terminal 4	Motor gear rotates counterclockwise

NG → **REPAIR POWER WINDOW REGULATOR MOTOR ASSY**

OK

4	CHECK WIRE HARNESS (DRIVER DOOR ECU – POWER WINDOW REGULATOR MOTOR ASSY DRIVER SIDE)

Wire Harness Side



(a) Disconnect the D25 ECU connector.
(b) Disconnect the R14 (LHD) or P15 (RHD) motor connectors.
(c) Measure the resistance of the wire harness side connectors.

Standard:

LHD models

Tester Connection	Specified Condition
D25–19 (LMT) – P14–2 (LMT)	Below 1 Ω
D25–8 (PLS) – P14–6 (PLS)	Below 1 Ω
D25–20 (SGND) – P14–3 (E)	Below 1 Ω
P14–2 (LMT) – Body ground	10 kΩ or higher
P14–6 (PLS) – Body ground	10 kΩ or higher
P14–3 (E) – Body ground	10 kΩ or higher

RHD models

Tester Connection	Specified Condition
D25–19 (LMT) – P15–6 (LMT)	Below 1 Ω
D25–8 (PLS) – P15–3 (PLS)	Below 1 Ω
D25–20 (SGND) – P15–1 (E)	Below 1 Ω
P15–6 (LMT) – Body ground	10 kΩ or higher
P15–3 (PLS) – Body ground	10 kΩ or higher
P15–1 (E) – Body ground	10 kΩ or higher

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

OK

REPLACE DRIVER DOOR ECU