DATA LIST / ACTIVE TEST

1. USING INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Monitor the ECU data by following the prompts on the tester screen.
HINT:
The intelligent tester has a "Snapshot" function which records the monitored data.
Refer to the intelligent tester operator's manual for further details.

2. DATA LIST

HINT:
Using the DATA LIST displayed by the intelligent tester, you can read the values of the switch, sensor, actuator, etc. without parts removal. Reading the DATA LIST as the first step of troubleshooting is one way to shorten the labor time.
(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch ON.
(c) Read the DATA LIST according to the display on the tester.

Standard (Multiplex network body ECU):

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
IG SW	Ignition switch signal/ ON or OFF	ON: Key is in ON or START position OFF: Key is in OFF or ACC position	-
D DOR CTY SW	Driver side door courtesy switch signal/ ON or OFF	ON: Driver side door is open OFF: Driver side door is closed	-
P DOR CYT SW	Passenger side door courtesy switch signal/ ON or OFF	ON: Passenger side door is open OFF: Passenger side door is closed	-

3. ACTIVE TEST

HINT:
Performing the ACTIVE TEST using the intelligent tester allows you to operate the relay, VSV, actuator, etc. without parts removal. Performing the ACTIVE TEST as the first step of troubleshooting is one way to shorten the labor time.
It is possible to display the DATA LIST during the ACTIVE TEST.
(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch ON.
(c) Perform the ACTIVE TEST according to the display on the tester.

Standard (Multiplex network body ECU):

Item	Test Detail	Diagnostic Note
IG OFF P/W	Ignition switch OFF power window control permission output ON/OFF	-

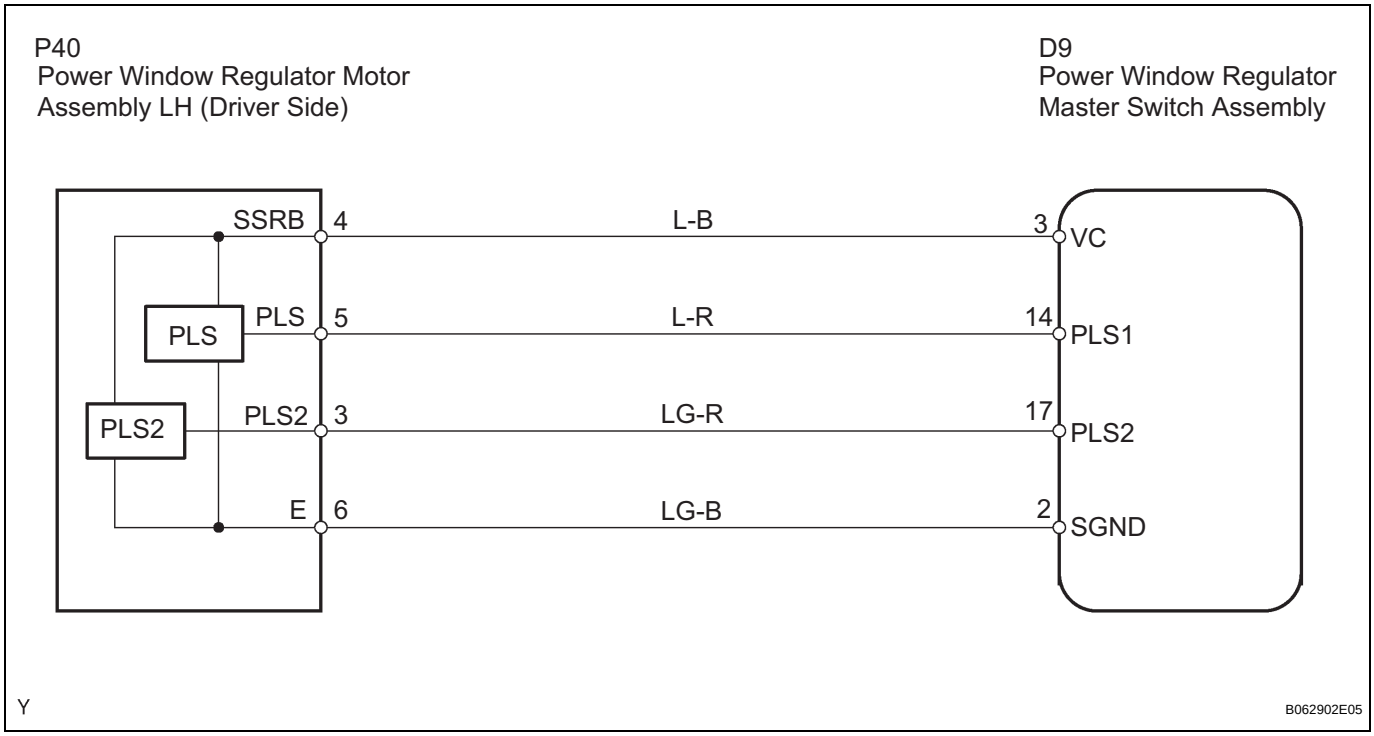
Auto Up / Down Function does not Operate

DESCRIPTION

If the AUTO UP/DOWN function does not operate, any of the following troubles may be the cause:

- When the PWR fuse or the power window relay (Marking: PWR) is replaced with new ones, or when the battery terminal and the connector of the power window master switch are disconnected, the power window memory of the fully closed position which is recorded in the power window master switch is erased.
- The pulse sensors in the driver side power window motor have a malfunction.
- There is an open or short circuit in the wiring between the power window master switch and the driver side power window motor.
- The power window master switch has a malfunction.

WIRING DIAGRAM



WS

INSPECTION PROCEDURE

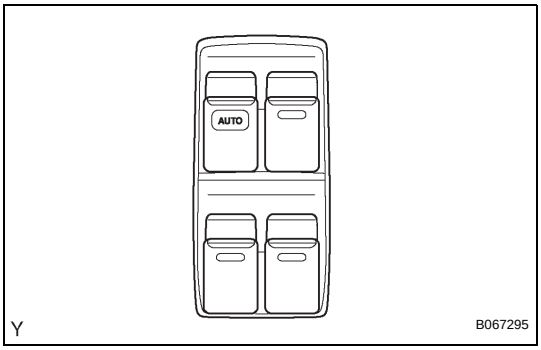
1	CHECK MANUAL UP/DOWN FUNCTION (DRIVER SIDE)

(a) Check that the door glass can be operated manually.

NG → **OTHER PROBLEM**

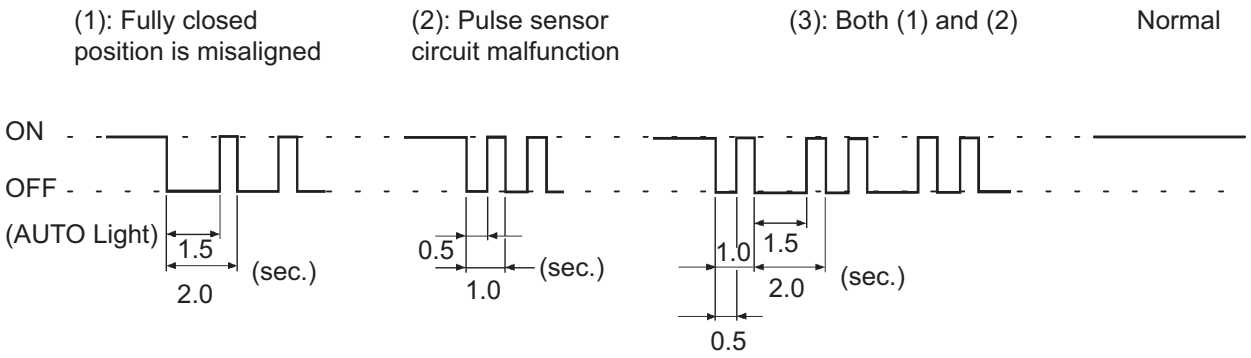
OK

2	CHECK ILLUMINATION OF POWER WINDOW MASTER SWITCH



(a) Turn the ignition switch ON.
(b) Operate the AUTO (drive side) switch of the master switch.
(c) Check the blinking pattern of the AUTO light as shown in the illustration.
  (1) If pattern (1) is displayed, proceed to A.
  (2) If pattern (2) or (3) is displayed, proceed to B.
  (3) If the normal pattern is displayed, proceed to C.

Blinking Pattern of AUTO Light:



B → **Go to step 4**

C → **REPLACE POWER WINDOW MASTER SWITCH**

A

WS

3	RESET POWER WINDOW REGULATOR MOTOR

See page WS-5.

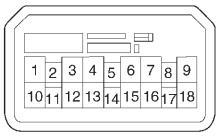
OK → **END**

NG

4	**CHECK WIRE HARNESS (MASTER SWITCH - MOTOR) (MASTER SWITCH - BODY GROUND)**

Wire Harness Side:

D9
Power Window Regulator
Master Switch Assembly



P40
Power Window Regulator Motor
Assembly LH (Driver Side)



B062894E01

(a) Disconnect the D9 master switch connector.
(b) Disconnect the P40 motor connector (driver side).
(c) Check the resistance between the wire harness side connectors.
Standard resistance

Terminal No.	Specified Condition
D9-3 (VC) - P40-4 (SSRB)	Below 1 Ω
D9-14 (PLS1) - P40-5 (PLS)	
D9-17 (PLS2) - P40-3 (PLS2)	
D9-2 (SGND) - P40-6 (E)	

(d) Check the resistance between the D9 master switch connector and body ground.
Standard resistance

Terminal No.	Specified Condition
D9-3 (VC) - Body ground	10 kΩ or higher
D9-14 (PLS1) - Body ground	
D9-17 (PLS2) - Body ground	
D9-2 (SGND) - Body ground	

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

OK

REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY (DRIVER SIDE)