

FAIL-SAFE CHART

1. CHECK POWER WINDOW FAIL-SAFE FUNCTION

HINT:

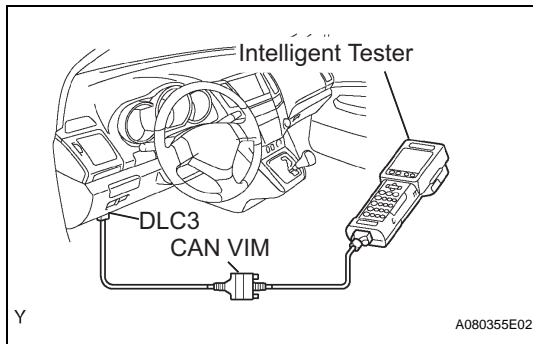
If there is a malfunction in the power window system, some of the power window functions will be disabled.

Driver side power window

Malfunctioning Part	Disabled Function	Operative Function
Pulse sensor circuit in power window motor	<ul style="list-style-type: none"> AUTO UP/DOWN function Power window operation function after ignition off 	<ul style="list-style-type: none"> Manual UP (fully pulled UP position) Manual DOWN Remote (AUTO and manual) Remote function after ignition OFF (AUTO and manual) MANUAL UP/DOWN function via driver side door lock key cylinder MANUAL DOWN function via transmitter
CPU in power window master switch	<ul style="list-style-type: none"> AUTO UP/DOWN function Remote function (AUTO and manual) MANUAL UP/DOWN function via driver side door lock key cylinder MANUAL DOWN function via transmitter 	<ul style="list-style-type: none"> Manual UP (fully pulled UP position) Manual DOWN

Power windows except driver side power window

Malfunctioning Part	Disabled Function	Operative Function
<ul style="list-style-type: none"> Pulse sensor circuit in power window motor CPU in power window master switch Communication between master switch and each power window switch 	<ul style="list-style-type: none"> AUTO UP/DOWN function Power window operation function after ignition OFF MANUAL UP/DOWN function via driver side door lock key cylinder MANUAL DOWN function via transmitter 	<ul style="list-style-type: none"> Manual UP (fully pulled UP position) Manual DOWN



DATA LIST / ACTIVE TEST

1. USING INTELLIGENT TESTER

- Connect the intelligent tester to the DLC3.
- 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 on the intelligent tester, you can read the value 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.

- Connect the intelligent tester to the DLC3.
- Turn the ignition switch ON.

(c) Read the DATA LIST according to the display on the tester.

MASTER SW:

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
P/W AUTO SW	Driver door power window auto switch signal/ON or OFF	ON: Driver door power window auto switch operates OFF: Driver door power window auto switch does not operate	-
P P/W AUTO SW	Front passenger door remote power window auto switch signal/ON or OFF	ON: Front passenger door remote power window auto switch operates OFF: Front passenger door remote power window auto switch does not operate	-
RR P/W AUTO SW	Rear RH door remote power window auto switch signal/ON or OFF	ON: Rear RH door remote power window auto switch operates OFF: Rear RH door remote power window auto switch does not operate	-
RL P/W AUTO SW	Rear LH door remote power window auto switch signal/ON or OFF	ON: Rear LH door remote power window auto switch operates OFF: Rear LH door remote power window auto switch does not operate	-
P/W UP SW	Driver door power window manual up switch signal/ON or OFF	ON: Driver door power window manual up switch operates OFF: Driver door power window manual up switch does not operate	-
P P/W UP SW	Front passenger door remote power window manual up switch signal/ON or OFF	ON: Front passenger door remote power window manual up switch operates OFF: Front passenger door remote power window manual up switch does not operate	-
RR P/W UP SW	Rear RH door remote power window manual up switch signal/ON or OFF	ON: Rear RH door remote power window manual up switch operates OFF: Rear RH door remote power window manual up switch does not operate	-
RL P/W UP SW	Rear LH door remote power window manual up switch signal/ON or OFF	ON: Rear LH door remote power window manual up switch operates OFF: Rear LH door remote power window manual up switch does not operate	-
P/W DOWN SW	Driver door power window manual down switch signal/ON or OFF	ON: Driver door power window manual down switch operates OFF: Driver door power window manual down switch does not operate	-
P P/W DOWN SW	Front passenger door remote power window manual down switch signal/ON or OFF	ON: Front passenger door remote power window manual down switch operates OFF: Front passenger door remote power window manual down switch does not operate	-
RR P/W DOWN SW	Rear RH door remote power window manual down switch signal/ON or OFF	ON: Rear RH door remote power window manual down switch operates OFF: Rear RH door remote power window manual down switch does not operate	-

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
RL P/W DOWN SW	Rear LH door remote power window manual down switch signal/ON or OFF	ON: Rear LH door remote power window manual down switch operates OFF: Rear LH door remote power window manual down switch does not operate	-
P/W LOCK SW	Power window lock switch signal/ ON or OFF	ON: Power window lock switch in LOCK position OFF: Power window lock switch in UNLOCK position	-
GLASS POS-1/4	Door glass position (Fully closed - 1/4 open) signal/OK or CAUTION	OK: Power window is going UP by manual operation CAUTION: CAUTION may be displayed even when no resistance is applied in each position. In this case, there must be a foreign object stuck in that position	-
GLASS POS-2/4	Door glass position (1/4 open - 2/4 open) signal/OK or CAUTION	OK: Power window is going UP by manual operation CAUTION: CAUTION may be displayed even when no resistance is applied in each position. In this case, there must be a foreign object stuck in that position	-
GLASS POS-3/4	Door glass position (2/4 open - 3/4 open) signal/OK or CAUTION	OK: Power window is going UP by manual operation CAUTION: CAUTION may be displayed even when no resistance is applied in each position. In this case, there must be a foreign object stuck in that position	-
GLASS POS-OPEN	Door glass position (3/4 open - Fully open) signal/OK or CAUTION	OK: Power window is going UP by manual operation CAUTION: CAUTION may be displayed even when no resistance is applied in each position. In this case, there must be a foreign object stuck in that position	-
DOOR KEY PW UP	Door key-linked power window UP signal/AVAIL or NOT AVL	AVAIL: Door key-linked power window UP is available NOT AVL: Door key-linked power window UP is unavailable	-
DOOR KEY PW DOWN	Door key-linked power window DOWN signal/AVAIL or NOT AVL	AVAIL: Door key-linked power window DOWN is available NOT AVL: Door key-linked power window DOWN is unavailable	-
UP/WIRELESS	Power window UP w/ transmitter signal/AVAIL or NOT AVL	AVAIL: Power window UP w/ transmitter is available NOT AVL: Power window UP w/ transmitter is unavailable	-

BODY:

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/ or OFF	ON: Driver side door is open OFF: Driver side door is closed	-

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
P DOR CYT SW	Front passenger side door courtesy switch signal/ ON or OFF	ON: Front passenger side door is open OFF: Front 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.

MASTER SW

Item	Test Detail	Diagnostic Note
P/W UP/DOWN	Operates power window UP/DOWN	-