

# NO. 1 DOOR GLASS DOES NOT MOVE UP AND DOWN IN AUTOMATIC MODE

B3E090358000W06

## Note

- Perform the following inspection for the power window system component parts of windows where the door glass cannot be operated automatically.

1	Door glass does not move up and down in automatic mode
POSSIBLE CAUSE	<ul style="list-style-type: none"> <li>• Open circuit or short to power supply in sensor 1 signal, ground signal from wiring harness (between power window switch and power window motor), inner power window switch, or inner motor: Steps 3-6</li> <li>• Open circuit or short to power supply/ground in sensor 2 signal from wiring harness (between power window switch and power window motor), inner power window switch, or inner motor: Steps 7-11</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• The automatic function and the IG OFF timer function do not operate while the power window switch is in fail-safe mode. The fail-safe operates when sensor 1, and/or sensor 2, and/or the sensor power supply malfunctions.</li> <li>• Sensor 1 and/or 2 malfunction</li> </ul> <ul style="list-style-type: none"> <li>- When the door glass is moving up and down, the power window switch cannot sense a pulse signal from sensor 1 during the time it senses 5 pulses (2.5 cycles) from sensor 2.</li> <li>- When the door glass is moving up and down, the switch cannot sense a pulse signal from sensor 2 during the time it senses 5 pulses (2.5 cycles) from sensor 1.</li> <li>- There are three abnormal pulses in a pulse signal while the door glass is moving up or down.</li> <li>- There are 20 cycle pulses from a closed position while the door glass is moving up.</li> <li>- There is no pulse signal for 1 s after the door glass is moved down.</li> </ul>

## Diagnostic procedure

STEP	INSPECTION	ACTION
1	<b>INSPECT WHETHER POWER WINDOW SWITCH ENTERS FAIL-SAFE MODE OR NOT</b> • Did the door glass move up or down in automatic mode?	Yes Reinspect malfunction symptoms.
		No Go to the next step. (Power window switch may enter fail-safe mode.)
2	<b>VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR ELSEWHERE</b> • Turn the ignition switch to the ON position. • Inspect the voltage at the following power window switch terminals (sensor 1 signal):  - Driver's side: G - Except driver's side: A	Yes Go to Step 7.
		No Go to the next step.

	<ul style="list-style-type: none"> <li>Does the voltage alternate between <b>0 V</b> and <b>approx.12 V</b> when the door glass is moving up and down?</li> </ul>		
3	<b>VERIFY SENSOR 1 OUTPUT SIGNAL</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Inspect the voltage at the following power window motor terminals (sensor 1 signal): <ul style="list-style-type: none"> <li>Front: A</li> <li>Rear: B</li> </ul> </li> <li>Is the voltage alternate between <b>0 V</b> and <b>approx.12 V</b> when the door glass is moving up and down in manual mode?</li> </ul>	Yes	Go to the next step.
		No	Replace the power window motor, then go to Step 12.
4	<b>INSPECT WIRING HARNESS BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR FOR CONTINUITY</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the LOCK position.</li> <li>Disconnect the power window switch connector.</li> <li>Is there continuity between the following power window switch terminals and power window motor terminals? <ul style="list-style-type: none"> <li>Driver's side: <ul style="list-style-type: none"> <li>G-A (sensor 1 signal)</li> <li>C-D (sensor power supply)</li> <li>I-C (ground signal)</li> </ul> </li> <li>Passenger's side: <ul style="list-style-type: none"> <li>A-A (sensor 1 signal)</li> <li>I-D (sensor power supply)</li> <li>G-C (ground signal)</li> </ul> </li> <li>Rear side: <ul style="list-style-type: none"> <li>A-B (sensor 1 signal)</li> <li>I-D (sensor power supply)</li> <li>G-C (ground signal)</li> </ul> </li> </ul> </li> </ul>	Yes	Go to the next step.
		No	Repair the wiring harness between the power window switch and power window motor, then go to Step 12.
5	<b>VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR POWER WINDOW SWITCH</b> <ul style="list-style-type: none"> <li>Turn the ignition switch to the ON position.</li> <li>Inspect the voltage at the following power window switch terminals: <ul style="list-style-type: none"> <li>Driver's side <ul style="list-style-type: none"> <li>G (sensor 1 signal)</li> <li>I (ground signal)</li> </ul> </li> <li>Except driver's side <ul style="list-style-type: none"> <li>A (sensor 1 signal)</li> <li>G (ground signal)</li> </ul> </li> </ul> </li> <li>Is the voltage <b>approx. 12 V</b>?</li> </ul>	Yes	Repair the wiring harness between the power window switch and power window motor, then go to Step 12.
		No	Replace the power window switch (open circuit or short to power supply in power window switch).
6	<b>VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR ELSEWHERE</b> <ul style="list-style-type: none"> <li>Is there continuity between the following power window switch terminals (wiring harness-side) and ground? <ul style="list-style-type: none"> <li>Driver's side <ul style="list-style-type: none"> <li>G (sensor 1 signal)</li> <li>C (sensor power supply)</li> </ul> </li> </ul> </li> </ul>	Yes	Replace the wiring harness between the power window switch and power window motor, then go to Step 12.

	<ul style="list-style-type: none"> <li>- Except driver's side</li> <li>• A (sensor 1 signal)</li> <li>• I (sensor power supply)</li> </ul>	No	Go to the next step.
7	<b>VERIFY WHETHER MALFUNCTION IS IN POWER WINDOW SWITCH OR ELSEWHERE</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the ON position.</li> <li>• Inspect the voltage at power window switch terminal E (sensor 2 signal).</li> <li>• Does the voltage alternate between <b>0 V</b> and <b>approx.12 V</b> when the door glass is moving up and down?</li> </ul>	Yes	Replace the power window switch (malfunction in power window switch automatic mode control), then go to Step 11.
		No	Go to the next step.
8	<b>VERIFY SENSOR 2 OUTPUT SIGNAL</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the ON position.</li> <li>• Inspect the voltage at power window motor terminal B (sensor 2 signal).</li> <li>• Does the voltage alternate between <b>0 V</b> and <b>approx.12 V</b> when door glass is moving up and down?</li> </ul>	Yes	Go to the next step.
		No	Replace the power window motor, then go to Step 12.
9	<b>VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR ELSEWHERE</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the LOCK position.</li> <li>• Disconnect the power window switch connector and power window motor connector.</li> <li>• Is there continuity between the power window switch terminal E (sensor 2 signal) and power window motor terminal B (sensor 2 signal)?</li> </ul>	Yes	Go to the next step.
		No	Repair the wiring harness between the power window switch and power window motor, then go to Step 12.
10	<b>VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR ELSEWHERE</b> <ul style="list-style-type: none"> <li>• Is there continuity between power window switch terminal E (sensor 2 signal) and ground?</li> </ul>	Yes	Repair the wiring harness between the power window switch and power window motor, then go to Step 12.
		No	Go to the next step.
11	<b>VERIFY WHETHER MALFUNCTION IS IN WIRING HARNESS (BETWEEN POWER WINDOW SWITCH AND POWER WINDOW MOTOR) OR POWER WINDOW SWITCH</b> <ul style="list-style-type: none"> <li>• Turn the ignition switch to the ON position.</li> <li>• Measure the voltage at power window switch terminal E (sensor 2 signal).</li> <li>• Is the voltage <b>approx. 12 V</b>?</li> </ul>	Yes	Repair the wiring harness between the power window switch and front driver-side power window motor, then go to the next step.
		No	Replace the power window switch (open circuit or short to power supply/ground in power window switch), then go to the next step.
12	<b>REINSPECT MALFUNCTION SYMPTOM AFTER REPAIR</b> <ul style="list-style-type: none"> <li>• Is malfunction no longer present?</li> </ul>	Yes	<ul style="list-style-type: none"> <li>• Troubleshooting completed.</li> <li>• Explain repairs to the customer.</li> </ul>
		No	Reinspect malfunction symptoms, then repeat from Step 1 if malfunction recurs.