# GW SECTION **GLASSES, WINDOW SYSTEM & MIRRORS**

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## PRECAUTIONS

## PRECAUTIONS

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# Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

#### WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

## Handling for Adhesive and Primer

- Do not use an adhesive which is past its usable date. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.
- Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.
- Open the seal of the primer and adhesive just before application. Discard the remainder.
- Before application, be sure to shake the primer container to stir the contents. If any floating material is found, do not use it.
- If any primer or adhesive contacts the skin, wipe it off with gasoline or equivalent and wash the skin with soap.
- When using primer and adhesive, always observe the precautions in the instruction manual.

## **Trouble Diagnosis Precaution**

When you read wiring diagrams, refer to the following:

- GI-14, "How to Read Wiring Diagrams"
- PG-4, "POWER SUPPLY ROUTING CIRCUIT"

When you perform trouble diagnosis, refer to the following:

- <u>GI-11, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"</u>
- <u>GI-27, "How to Perform Efficient Diagnosis for an Electrical Incident"</u>

Check for any service bulletins before servicing the vehicle.

Revision: January 2005

## PREPARATION

# PREPARATION

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## **Special Service Tool**

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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

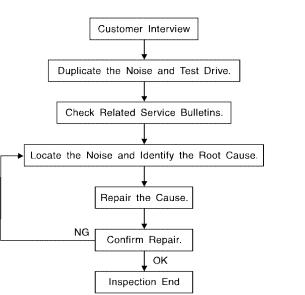
Tool number (Kent-Moore No.) Tool name		Description
 (J-39570) Chassis ear	SIIA0993E	Locating the noise
 (J-43980) NISSAN Squeak and Rat- tle Kit	SilA0994E	Repairing the cause of noise

## **Commercial Service Tool**

EI\$002K5

(Kent-Moore No.) Tool name		Description
(J-39565) Engine ear	SIIA0995E	Locating the noise
( — ) Suction Lifter	LIIA1991E	Holding door glass

## SQUEAK AND RATTLE TROUBLE DIAGNOSES Work Flow



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#### **CUSTOMER INTERVIEW**

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to GW-9, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs. GW

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by test driving the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak —(Like tennis shoes on a clean floor) Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces = higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping.
- Creak—(Like walking on an old wooden floor) Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle—(Like shaking a baby rattle) Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock —(Like a knock on a door) Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick—(Like a clock second hand) Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump—(Heavy, muffled knock noise) Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz—(Like a bumble bee) Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that you may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

## DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when you confirm the repair.

If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

- 1) Close a door.
- 2) Tap or push/pull around the area where the noise appears to be coming from.
- 3) Rev the engine.
- 4) Use a floor jack to recreate vehicle "twist".
- 5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on A/T model).
- 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
- If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

#### CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.

If a TSB relates to the symptom, follow the procedure to repair the noise.

#### LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

- 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's stethoscope).
- 2. Narrow down the noise to a more specific area and identify the cause of the noise by:
- removing the components in the area that you suspect the noise is coming from.
   Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise. Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks.
   Refer to <u>GW-7</u>, "Generic Squeak and Rattle Troubleshooting".

#### **REPAIR THE CAUSE**

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
- separate components by repositioning or loosening and retightening the component, if possible.
- insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A NISSAN Squeak and Rattle Kit (J-43980) is available through your authorized NISSAN Parts Department.

#### **CAUTION:**

Do not use excessive force as many components are constructed of plastic and may be damaged. Always check with the Parts Department for the latest parts information.

The following materials are contained in the NISSAN Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005: 100×135 mm (3.94×5.31 in)/76884-71L01: 60×85 mm (2.36×3.35 in)/76884-71L02: 15×25 mm (0.59×0.98 in)

**INSULATOR (Foam blocks)** 

Insulates components from contact. Can be used to fill space behind a panel.

73982-9E000: 45 mm (1.77 in) thick, 50×50 mm (1.97×1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97×1.97 in)

INSULATOR (Light foam block)

	845-71L00:  30 mm (1.18  in) thick, 30×50 mm (1.18×1.97 in) LT CLOTH TAPE	А
Us	ed to insulate where movement does not occur. Ideal for instrument panel applications. 370-4B000: 15×25 mm (0.59×0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll. The following	~
ma	Interials not found in the kit can also be used to repair squeaks and rattles.	В
Ins	sulates where slight movement is present. Ideal for instrument panel applications. LICONE GREASE	
No SIL	ed instead of UHMW tape that will be visible or not fit. te: Will only last a few months. JCONE SPRAY e when grease cannot be applied.	С
DU		D
	e to eliminate movement.	
	ONFIRM THE REPAIR	Е
	nfirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same nditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.	
Ge	eneric Squeak and Rattle Troubleshooting	F
Re	fer to Table of Contents for specific component removal and installation information.	
INS	STRUMENT PANEL	G
Мо	st incidents are caused by contact and movement between:	
1.	The cluster lid A and instrument panel	
2.	Acrylic lens and combination meter housing	Н
3.	Instrument panel to front pillar garnish	
4.	Instrument panel to windshield	
5.	Instrument panel mounting pins	GW
6.	Wiring harnesses behind the combination meter	
7.	A/C defroster duct and duct joint	J
pre	ese incidents can usually be located by tapping or moving the components to duplicate the noise or by essing on the components while driving to stop the noise. Most of these incidents can be repaired by apply-	0
nes	felt cloth tape or silicone spray (in hard to reach areas). Urethane pads can be used to insulate wiring har-	Κ
-	UTION:	
Do	not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will t be able to recheck the repair.	L
CE	INTER CONSOLE	
Со	mponents to pay attention to include:	М
1.	Shifter assembly cover to finisher	1 V I
2.	A/C control unit and cluster lid C	
3.	Wiring harnesses behind audio and A/C control unit	

The instrument panel repair and isolation procedures also apply to the center console.

#### DOORS

Pay attention to the:

- 1. Finisher and inner panel making a slapping noise
- 2. Inside handle escutcheon to door finisher
- 3. Wiring harnesses tapping
- 4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the NISSAN Squeak and Rattle Kit (J-43980) to repair the noise.

#### TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner. In addition look for:

- 1. Trunk lid bumpers out of adjustment
- 2. Trunk lid striker out of adjustment
- 3. The trunk lid torsion bars knocking together
- 4. A loose license plate or bracket

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

#### SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

- 1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
- 2. Sun visor shaft shaking in the holder
- 3. Front or rear windshield touching headliner and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

#### **OVERHEAD CONSOLE (FRONT AND REAR)**

Overhead console noises are often caused by the console panel clips not being engaged correctly. Most of these incidents are repaired by pushing up on the console at the clip locations until the clips engage. In addition look for:

- 1. Loose harness or harness connectors.
- 2. Front console map/reading lamp lense loose.
- 3. Loose screws at console attachment points.

#### SEATS

When isolating seat noise it's important to note the position the seat is in and the load placed on the seat when the noise is present. These conditions should be duplicated when verifying and isolating the cause of the noise.

Cause of seat noise include:

- 1. Headrest rods and holder
- 2. A squeak between the seat pad cushion and frame
- 3. The rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

#### UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.

Causes of transmitted underhood noise include:

- 1. Any component mounted to the engine wall
- 2. Components that pass through the engine wall
- 3. Engine wall mounts and connectors
- 4. Loose radiator mounting pins
- 5. Hood bumpers out of adjustment
- 6. Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

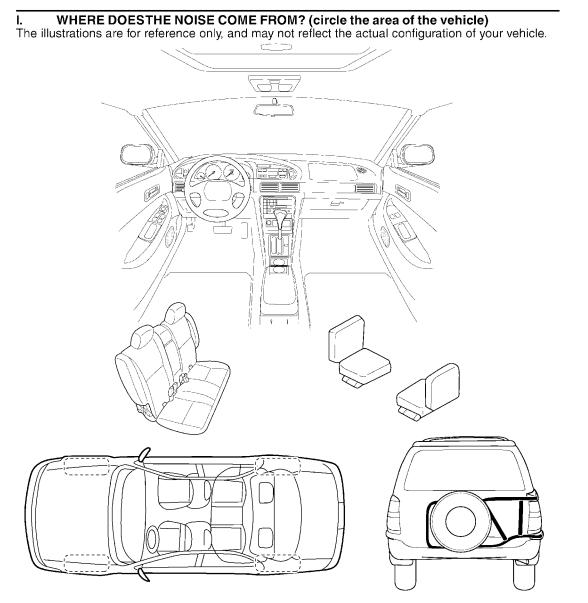
### **Diagnostic Worksheet**



#### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Nissan Customer:

We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service advisor or technician to ensure we confirm the noise you are hearing.



Continue to the back of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

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#### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:					
II. WHEN DOES IT OCCUR? (che	eck the boxes that apply)				
<ul> <li>anytime</li> <li>1<sup>st</sup> time in the morning</li> <li>only when it is cold outside</li> <li>only when it is hot outside</li> </ul>	<ul> <li>after sitting out in the sun</li> <li>when it is raining or wet</li> <li>dry or dusty conditions</li> <li>other:</li></ul>				
III. WHEN DRIVING:	IV. WHAT TYPE OF NOISE?				
<ul> <li>through driveways</li> <li>over rough roads</li> <li>over speed bumps</li> <li>only at about mph</li> <li>on acceleration</li> <li>coming to a stop</li> <li>on turns : left, right or either (circle)</li> <li>with passengers or cargo</li> <li>other:</li> </ul>	<ul> <li>squeak (like tennis shoes on a clean floor)</li> <li>creak (like walking on an old wooden floor)</li> <li>rattle (like shaking a baby rattle)</li> <li>knock (like a knock on a door)</li> <li>tick (like a clock second hand)</li> <li>thump (heavy, muffled knock noise)</li> <li>buzz (like a bumble bee)</li> </ul>				

#### TO BE COMPLETED BY DEALERSHIP PERSONNEL Test Drive Notes:

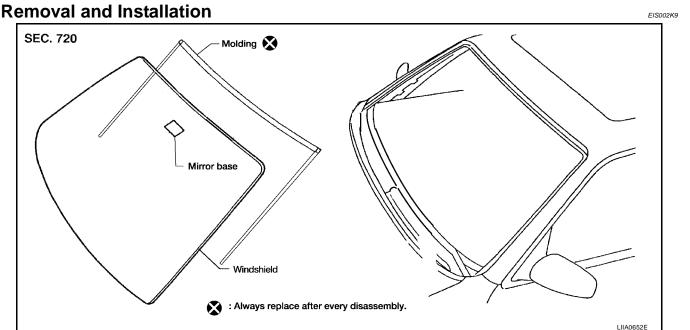
□ after driving \_\_\_\_ miles or \_\_\_\_ minutes

		YES	NO	Initials of person performing	
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confirm repair					
VIN:	Customer Name: _				
W.O. #:	Date:	_			SBT844

#### This form must be attached to Work Order

## WINDSHIELD GLASS

# WINDSHIELD GLASS



#### REMOVAL

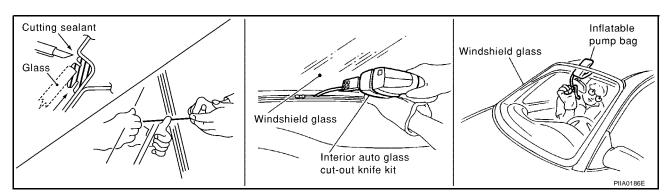
- 1. Remove the front pillar garnish. Refer to EI-36, "BODY SIDE TRIM" .
- 2. Remove inside mirror. Refer to <u>GW-86, "Removal and Installation"</u>.
- 3. Partially remove the headlining (front edge). Refer to EI-43, "HEADLINING" .
- 4. Remove cowl top cover. Refer to EI-21, "Removal and Installation" .
- 5. Apply a protective tape around the windshield glass to protect the painted surface from damage.
- Remove glass using piano wire or power cutting tool and an inflatable pump bag.
- If the windshield glass is to be reused, mark the body and the glass with mating marks.

#### WARNING:

When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

#### **CAUTION:**

- When the windshield glass is to be reused, do not use a cutting knife or power cutting tool.
- Be careful not to scratch the glass when removing.
- Do not set or stand glass on its edge. Small chips may develop into cracks.



#### INSTALLATION

- Use a genuine NISSAN Urethane Adhesive Kit (if available) or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger compartment air pressure when a door is closed.

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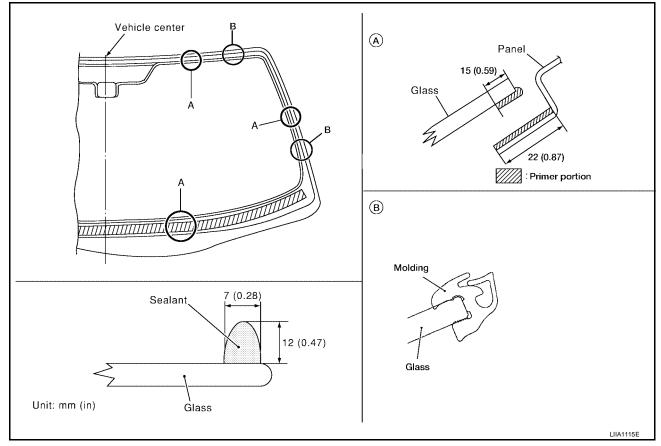
- The molding must be installed securely so that it is in position and leaves no gap.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.
- Install parts removed.

#### WARNING:

- Keep heat and open flames away as primers and adhesive are flammable.
- The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Avoid contact with the skin and eyes.
- Use in an open, well ventilated location. Avoid breathing the vapors. They can be harmful if inhaled. If affected by vapor inhalation, immediately move to an area with fresh air.
- Driving the vehicle before the urethane adhesive has completely cured may affect the performance of the windshield in case of an accident.

#### **CAUTION:**

- Do not use an adhesive which is past its usable term. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.
- Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.
- Do not leave primers or adhesive cartridge unattended with their caps open or off.
- The vehicle should not be driven for at least 24 hours or until the urethane adhesive has completely cured. Curing time varies depending on temperature and humidities. The curing time will increase under lower temperatures and lower humidities.



#### **Repairing Water Leaks for Windshield**

Leaks can be repaired without removing and reinstalling glass.

If water is leaking between the urethane adhesive material and body or glass, determine the extent of leakage. This can be done by applying water to the windshield area while pushing glass outward.

To stop the leak, apply primer (if necessary) and then urethane adhesive to the leak point.

## **REAR WINDOW GLASS AND MOLDING**

### **REAR WINDOW GLASS AND MOLDING** PFP:79712 А **Removal and Installation** EIS00201 SEC. 797 В С D Е Sliding glass Latch F Latch Urethane adhesive Urethane adhesive bond Н Body panel Sliding glass Glass Back window GW **Fixed glass** Apply urethane adhesive evenly. Κ Urethane adhesive Urethane adhesive Glass 12 (0.47) Body panel L Glass 7 (0.28) Μ Unit: mm (in)

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### REMOVAL

Remove the rear pillar finishers. Refer to EI-36, "BODY SIDE TRIM" .

- Remove glass using piano wire or power cutting tool and an inflatable pump bag.
- If the rear window glass is to be reused, mark the body and the glass with mating marks.

#### WARNING:

When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

#### CAUTION:

- When the rear window glass is to be reused, do not use a cutting knife or power cutting tool.
- Be careful not to scratch the glass when removing.
- Do not set or stand the glass on its edge. Small chips may develop into cracks.

#### INSTALLATION

- Use a genuine NISSAN Urethane Adhesive Kit (if available) or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger compartment air pressure when a door is closed.
- The molding must be installed securely so that it is in position and leaves no gap.
- Check gap along bottom to confirm that glass does not contact sheet metal.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.
- Install parts removed.

#### WARNING:

- Keep heat and open flames away as primers and adhesive are flammable.
- The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Avoid contact with the skin and eyes.
- Use in an open, well ventilated location. Avoid breathing the vapors. They can be harmful if inhaled. If affected by vapor inhalation, immediately move to an area with fresh air.
- Driving the vehicle before the urethane adhesive has completely cured may affect the performance of the rear window in case of an accident.

#### **CAUTION:**

- Do not use an adhesive which is past its usable term. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.
- Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.
- Do not leave primers or adhesive cartridge unattended with their caps open or off.
- The vehicle should not be driven for at least 24 hours or until the urethane adhesive has completely cured. Curing time varies depending on temperature and humidity. The curing time will increase under lower temperatures and lower humidities.

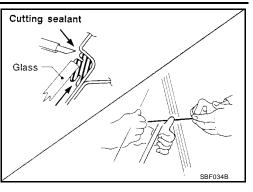
#### **Repairing Water Leaks for Rear Window Glass**

Leaks can be repaired without removing or reinstalling glass.

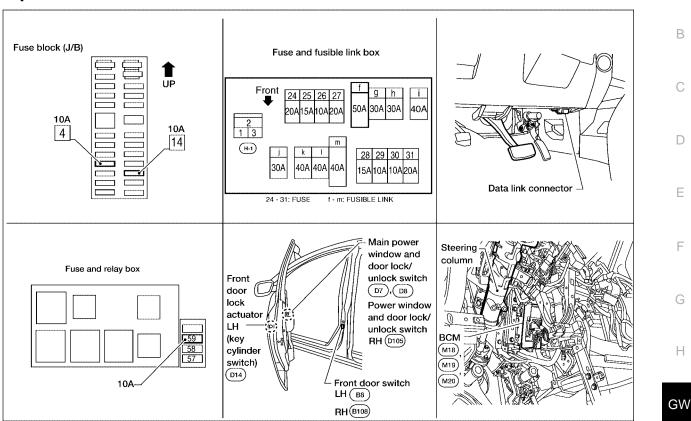
If water is leaking between urethane adhesive material and body or glass, determine the extent of leakage.

This can be done by applying water to the rear window area while pushing glass outward.

To stop leak, apply primer (if necessary) and then urethane adhesive to the leak point.



## **POWER WINDOW SYSTEM Component Parts and Harness Connector Location**



### System Description KING CAB

Power is supplied at all time

- from 50A fusible link (letter f, located in the fuse and fusible link box)
- to BCM terminal 70
- through BCM terminal 69
- to main power window and door lock/unlock switch terminal 1
- to power window and door lock/unlock switch RH terminal 10.

#### **CREW CAB**

Power is supplied at all time

- from 50A fusible link (letter f, located in the fuse and fusible link box)
- to BCM terminal 70
- through BCM terminal 69
- to main power window and door lock/unlock switch terminal 19
- to power window and door lock/unlock switch RH terminal 10.

With ignition switch in ON or START position, Power is supplied

- through 10A fuse (No. 59, located in the fuse and relay box)
- to BCM terminal 38
- through BCM terminal 68
- to main power window and door lock/unlock switch terminal 10.

#### **KING CAB**

With ignition switch in ON or START position,

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Ground is supplied

- to BCM terminal 67
- to main power window and door lock/unlock switch terminal 15
- to power window and door lock/unlock switch RH terminal 11
- through body grounds M57, M61 and M79.

#### **CREW CAB**

With ignition switch in ON or START position, Ground is supplied

- to BCM terminal 67
- to main power window and door lock/unlock switch terminal 17
- to power window and door lock/unlock switch RH terminal 11
- through body grounds M57, M61 and M79.

#### MANUAL OPERATION

#### Front Driver Side Door

#### WINDOW UP

When the front LH switch in the main power window and door lock/unlock switch is pressed in the up position, Power is supplied

- through main power window and door lock/unlock switch terminal 8
- to front power window motor LH terminal 2.

Ground is supplied

- through main power window and door lock/unlock switch terminal 11
- to front power window motor LH terminal 1.

Then, the motor raises the window until the switch is released.

#### WINDOW DOWN

When the front LH switch in the main power window and door lock/unlock switch is pressed in the down position

Power is supplied

- through main power window and door lock/unlock switch terminal 11
- to front power window motor LH terminal 1.

Ground is supplied

- through main power window and door lock/unlock switch terminal 8
- to front power window motor LH terminal 2.

Then, the motor lowers the window until the switch is released.

#### Front Passenger Side Door POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH OPERATION WINDOW UP

When the power window and door lock/unlock switch RH is pressed in the up position Power is supplied

- through power window and door lock/unlock switch RH terminal 8
- to front power window motor RH terminal 2.

Ground is supplied

- through power window and door lock/unlock switch RH terminal 9
- to front power window motor RH terminal 1.

Then, the motor raises the window until the switch is released.

#### WINDOW DOWN

When the power window and door lock/unlock switch RH is pressed in the down position Power is supplied

- through power window and door lock/unlock switch RH terminal 9
- to front power window motor RH terminal 1.

#### Ground is supplied

• through power window and door lock/unlock switch RH terminal 8

Revision: January 2005

#### **GW-16**

te feast e conservée deux martes DUL terminal 0	
• to front power window motor RH terminal 2.	А
Then, the motor lowers the window until the switch is released. King Cab	А
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OPERATION	
Signal is sent	В
<ul> <li>through main power window and door lock/unlock switch terminal 12</li> </ul>	
<ul> <li>to power window and door lock/unlock switch RH terminal 16.</li> </ul>	
The operation of power window after receiving the signal is the same as operating the power window with power window and door lock/unlock switch RH.	С
Crew Cab MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OPERATION	
Signal is sent	D
<ul> <li>through main power window and door lock/unlock switch terminal 14</li> </ul>	
<ul> <li>to power window and door lock/unlock switch RH terminal 16.</li> </ul>	Е
The operation of power window after receiving the signal is the same as operating the power window with power window and door lock/unlock switch RH.	
Rear Door (Crew Cab LH or RH)	F
REAR POWER WINDOW SWITCH LH OR RH OPERATION	I
WINDOW UP	
When the rear power window switch LH or RH is pressed in the up position Power is supplied	G
<ul> <li>through rear power window switch LH or RH terminal 4</li> </ul>	
• to rear power window motor LH or RH terminal 2.	Н
Ground is supplied	
<ul> <li>through rear power window switch LH or RH terminal 5</li> </ul>	
• to rear power window motor LH or RH terminal 1.	GW
Then, the motor raises the window until the switch is released.	
WINDOW DOWN	
When the rear power window switch LH or RH is pressed in the down position Power is supplied	J
<ul> <li>through rear power window switch LH or RH terminal 5</li> </ul>	
<ul> <li>to rear power window motor LH or RH terminal 1.</li> </ul>	Κ
Ground is supplied	
<ul> <li>through rear power window switch LH or RH terminal 4</li> </ul>	
<ul> <li>to rear power window motor LH or RH terminal 2.</li> </ul>	L
Then, the motor lowers the window until the switch is released. MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OPERATION WINDOW UP	Μ
When the main power window and door lock/unlock switch (rear LH) is pressed in the up position	
Power is supplied	
<ul> <li>through main power window and door lock/unlock switch terminal 3</li> </ul>	
• to rear power window switch LH terminal 3	
<ul> <li>through rear power window switch LH terminal 4</li> </ul>	
• to rear power window motor LH terminal 2.	
Ground is supplied	
<ul> <li>through main power window and door lock/unlock switch terminal 1</li> </ul>	
• to rear power window switch LH terminal 2	
<ul> <li>through rear power window switch LH terminal 5</li> </ul>	
• to rear power window motor LH terminal 1.	
Then, the motor raises the window until the switch is released. When the main power window and door lock/unlock switch (rear RH) is pressed in the up position Power is supplied	
<ul> <li>through main power window and door lock/unlock switch terminal 5</li> </ul>	

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### **GW-17**

- to rear power window switch RH terminal 3
- through rear power window switch RH terminal 4
- to rear power window motor RH terminal 2.

Ground is supplied

- through main power window and door lock/unlock switch terminal 7
- to rear power window motor RH terminal 2
- through rear power window switch RH terminal 5
- to rear power window switch RH terminal 1.

Then, the motor raises the window until the switch is released.

#### WINDOW DOWN

When the main power window and door lock/unlock switch (rear LH) is pressed in the down position Power is supplied

- through main power window and door lock/unlock switch terminal 1
- to rear power window switch LH terminal 2
- through rear power window switch LH terminal 5
- to rear power window motor LH terminal 1.

Ground is supplied

- to main power window and door lock/unlock switch terminal 3
- through rear power window switch LH terminal 3
- through rear power window switch LH terminal 4
- to rear power window motor LH terminal 2.

Then, the motor raises the window until the switch is released.

When the main power window and door lock/unlock switch (rear RH) is pressed in the down position Power is supplied

- through main power window and door lock/unlock switch terminal 7
- to rear power window switch RH terminal 2
- through rear power window switch RH terminal 5
- to rear power window motor RH terminal 1.

Ground is supplied

- through main power window and door lock/unlock switch terminal 5
- to rear power window switch RH terminal 3
- through rear power window switch RH terminal 4
- to rear power window motor RH terminal 2.

Then, the motor raises the window until the switch is released.

#### AUTO OPERATION

The power window AUTO feature enables the driver to open or close the window without holding the window switch in the down or up position.

#### POWER WINDOW SERIAL LINK

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH, and BCM transmit and receive the signal by power window serial link.

The signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

• Keyless power window down signal.

The signal is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

- Front door window RH operation signal.
- Power window control by key cylinder switch signal.
- Power window lock signal.
- Retained power operation signal.

#### POWER WINDOW LOCK

The power window lock is designed to lock operation of all windows except for front door window LH. A When in the lock position, the power window lock signal is transmitted to power window and door lock/unlock switch RH by power window serial link. This prevents the power window motor from operating.

#### **RETAINED POWER OPERATION**

When the ignition switch is turned to the OFF position from ON or START position.

Power is supplied for 45 seconds

- to main power window and door lock/unlock switch terminal 10
- from BCM terminal 68.

When power and ground are supplied, the BCM continues to be energized, and the power window can be operated.

The retained power operation is canceled when the front LH or front RH door is opened.

RAP signal period can be changed by CONSULT-II. Refer to GW-40, "CONSULT-II Function (BCM)" .

#### ANTI-PINCH SYSTEM

Main power window and door lock/unlock switch and power window and door lock/unlock switch RH monitor the power window motor operation and the power window position (full closed or other) for front LH and front RH power window by the signals from encoder and limit switch in front power window motor LH and RH. When main power window and door lock/unlock switch or power window and door lock/unlock switch RH detects interruption during the following close operation,

- automatic close operation when ignition switch is in the ON position
- automatic close operation during retained power operation

Main power window and door lock/unlock switch or power window and door lock/unlock switch RH controls each front power window motor for open and the power window will be lowered about 150 mm (5.91 in).

# POWER WINDOW CONTROL BY THE FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

When ignition key switch is OFF, front power window LH and RH can be opened or closed by turning the front door key cylinder LH to the UNLOCK/LOCK position for more than 3 seconds.

- Front power windows can be opened as the door key cylinder is kept fully turned to the UNLOCK position.
- Front power windows can be closed as the door key cylinder is kept fully turned to the LOCK position.
- While performing open/close operation for the windows, power window is stopped when the door key cylinder is placed in the NEUTRAL position.
- When the ignition switch is turned ON while the power window opening operation is performed, the power window opening stops.

## **CAN Communication System Description**

Refer to LAN-8, "CAN COMMUNICATION" .

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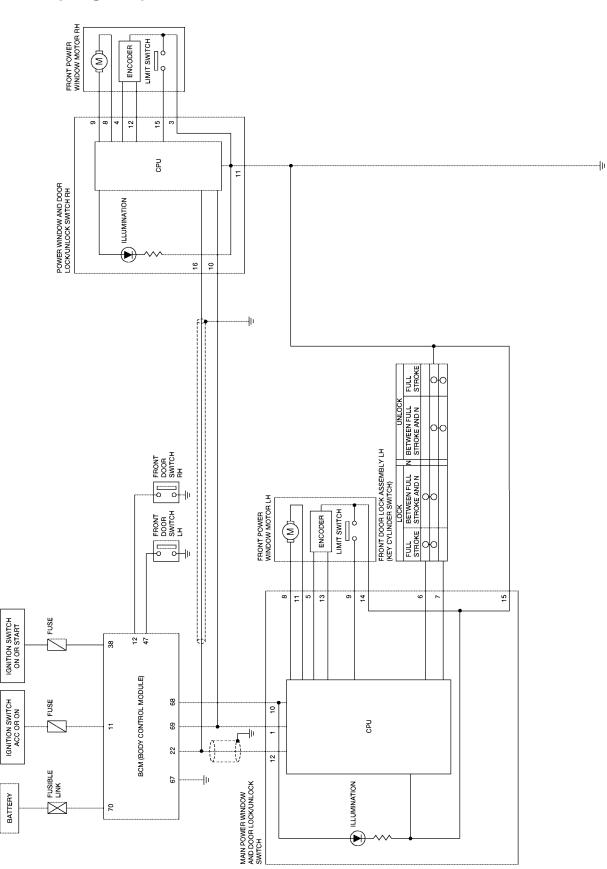
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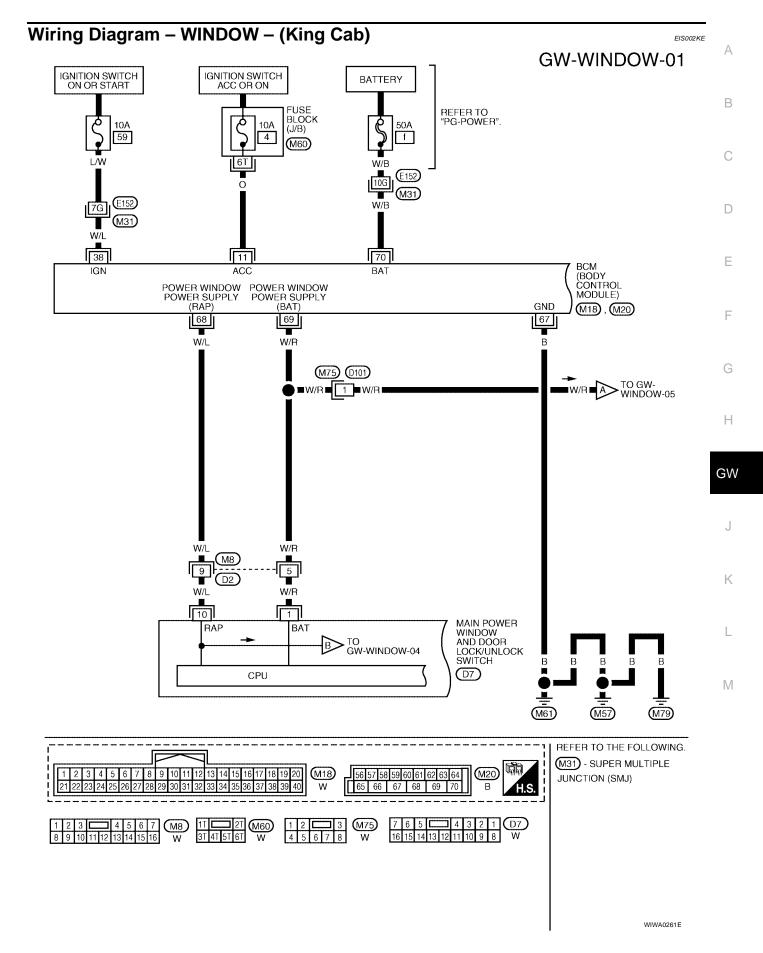
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## Schematic (King Cab)

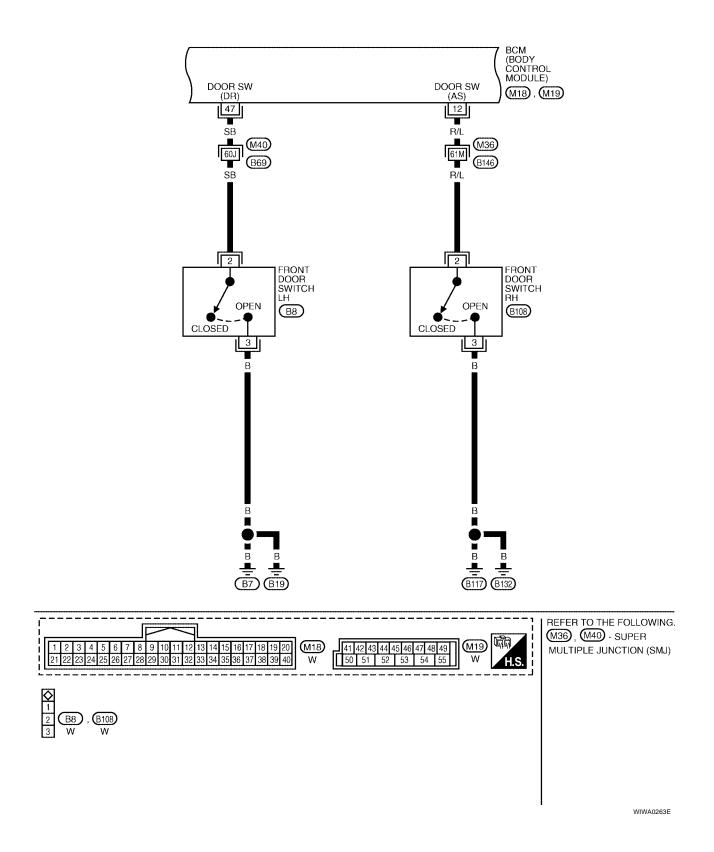


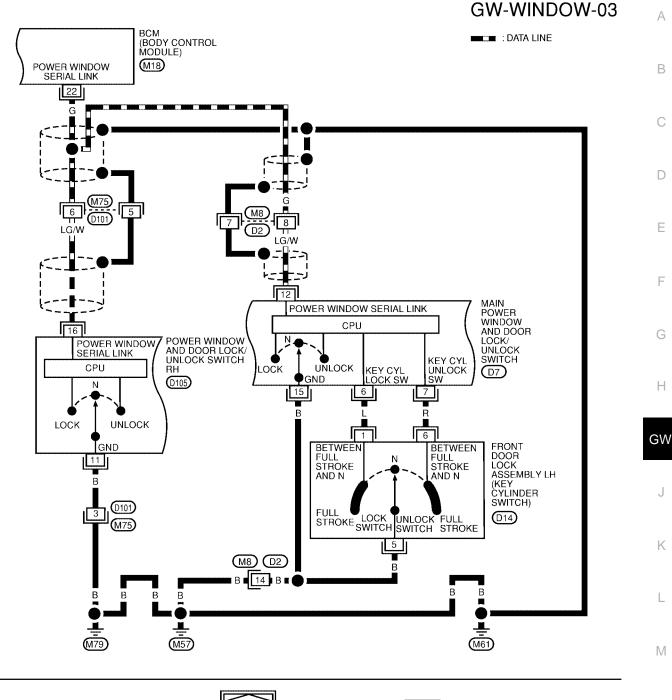
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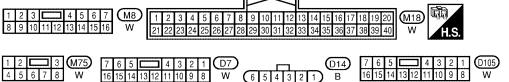
EIS002KD



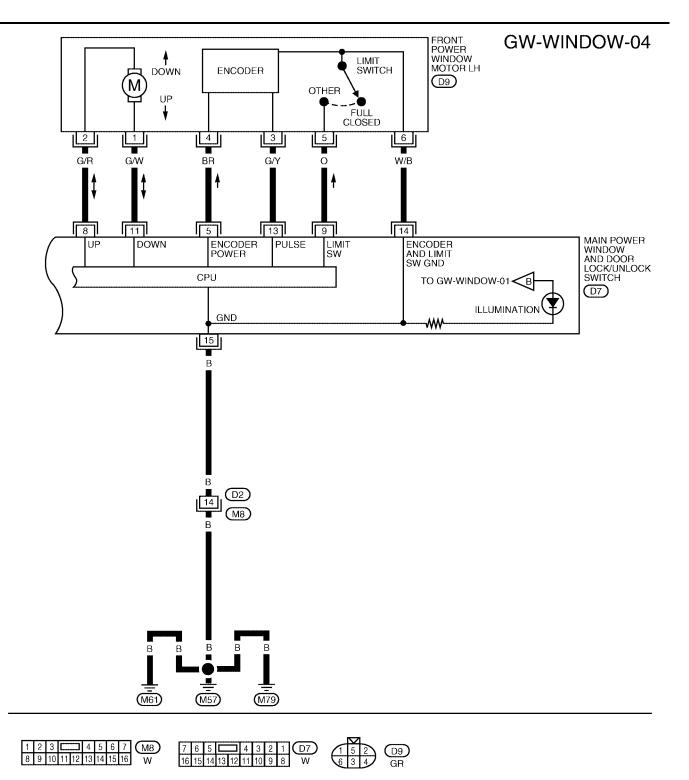
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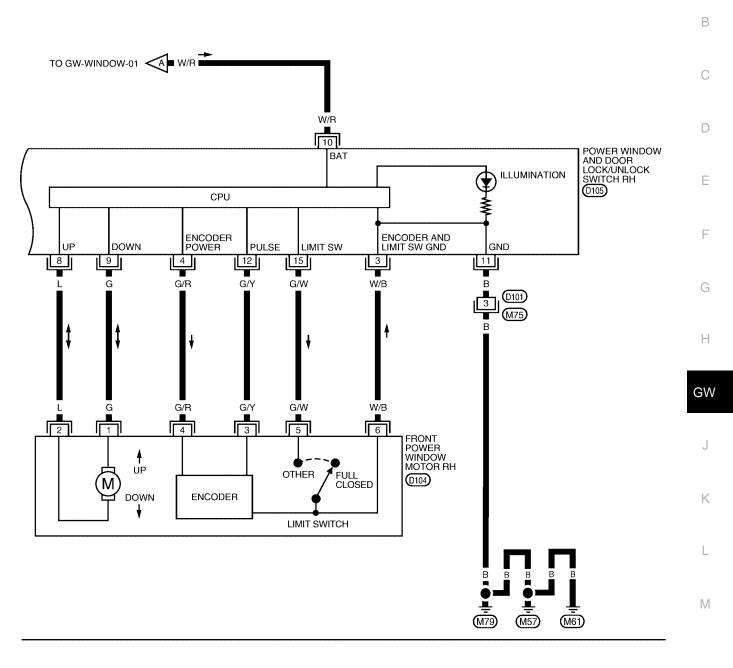
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**GW-WINDOW-05** 

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## Terminal and Reference Value for Main Power Window and Door Lock/Unlock Switch (King Cab)

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)	
1	W/R	Battery power supply	_	Battery voltage	
5	BR	Encoder power supply	When ignition switch ON or power window timer operates	10	
6	L	Front door lock assembly LH (key cylinder switch) lock signal	Key position (Neutral $\rightarrow$ Locked)	$5 \rightarrow 0$	
7	R	Front door lock assembly LH (key cylinder switch) unlock signal	Key position (Neutral $\rightarrow$ Unlocked)	$5 \rightarrow 0$	
8	G/R	Front power window motor LH UP signal	When power window motor is operated UP	Battery voltage	
			Driver side door window is between fully-open and just before fully-closed position (ON)	0	
9	0	Limit switch signal	Driver side door window is between just before fully-closed position and fully-closed position (OFF)	5	
			When ignition switch ON	Battery voltage	
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage	
10	W/L	W/L	RAP signal	More than 45 seconds after igni- tion switch is turned to OFF	0
			When front door LH or RH open or power window timer operates	0	
11	G/W	Front power window motor LH DOWN signal	When power window motor is operated DOWN	Battery voltage	
12	LG/W	Power window serial link	When ignition switch ON or power window timer operates	(V) 15 10 5 0 200 ms PIIA2344J	
13	G/Y	Encoder pulse signal	When power window motor oper- ates	(V) 6 4 2 0 	
14	W/B	Limit switch and encoder ground	_	0	
15	В	Ground	<u> </u>	0	

# Terminal and Reference Value for Power Window and Door Lock/Unlock Switch RH (King Cab)

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
3	W/B	Limit switch and encoder ground	—	0
4	G/R	Encoder power supply	When ignition switch ON or power window timer operates	10

**Revision: January 2005** 

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
8	L	Front power window motor RH UP signal	When power window motor is operated UP	Battery voltage
9	G	Front power window motor RH DOWN signal	When power window motor is operated DOWN	Battery voltage
10	W/R	Battery power supply	—	Battery voltage
11	В	Ground	—	0
12	G/Y	Encoder pulse signal	When power window motor oper- ates	(V) 6 4 2 0 
				OCC3383D
15	G/W	Limit switch signal	Passenger side door window is between fully-open and just before fully-closed position (ON)	0
			Passenger side door window is between just before fully-closed position and fully-closed position (OFF)	5
16	LG/W	Power window serial link	When ignition switch is ON or power window timer operating	(V) 15 10 5 0 200 ms PIIA2344J

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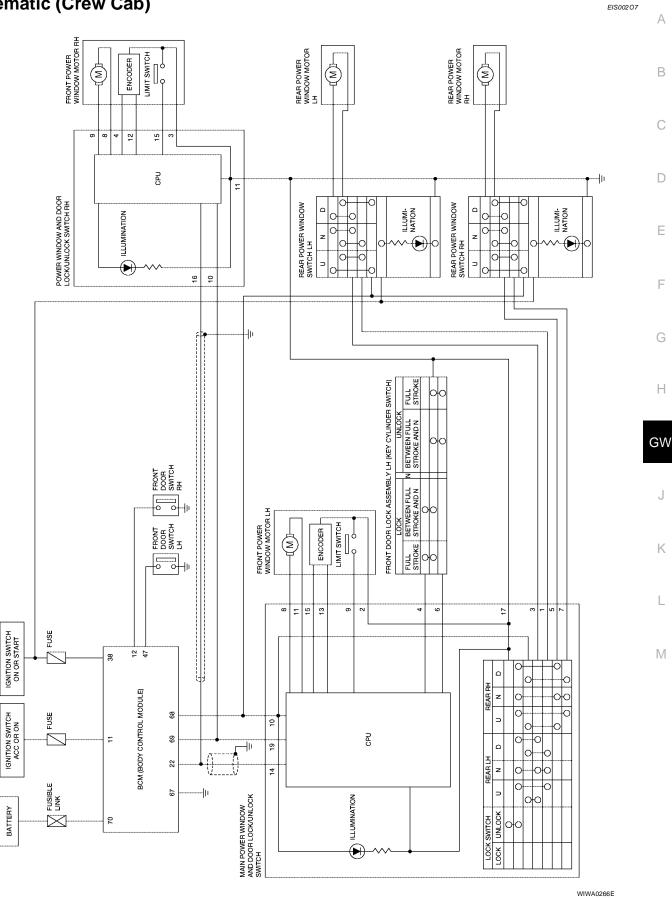
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# Terminal and Reference Value for BCM (King Cab)

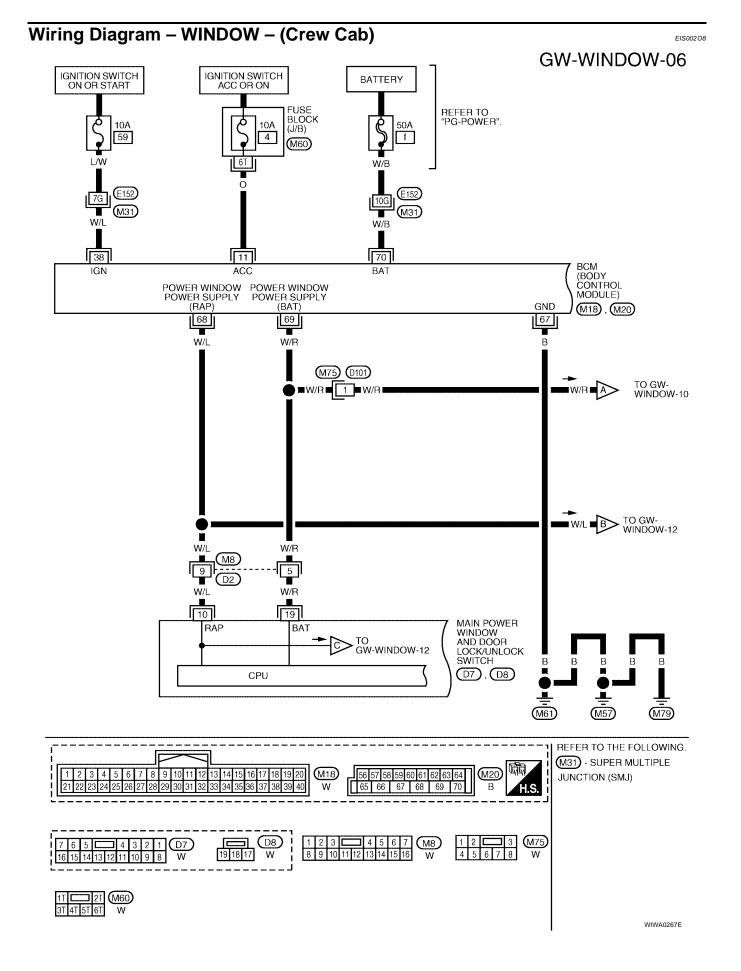
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Terminal	Wire Color	ltem	Condition	Voltage (V) (Approx.)
11	0	Ignition switch (ACC or ON)	Ignition switch (ACC or ON position)	Battery voltage
12	R/L	Front door switch RH signal	ON (Open)	Battery voltage
			OFF (Close)	0
22	G	Power window serial link	When ignition switch ON or power window timer operates	(V) 15 10 5 0 200 ms PIIA2344J
38	W/L	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
47	SB	Front door switch LH signal	ON (Open)	Battery voltage
47			OFF (Close)	0
67	В	Ground	—	0
	W/L	RAP signal	When ignition switch ON	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
68			More than 45 seconds after igni- tion switch is turned to OFF	0
			When front door LH or RH is open or power window timer operates	0
69	W/R	Power window power supply	—	Battery voltage
70	W/B	Battery power supply	_	Battery voltage

## Schematic (Crew Cab)

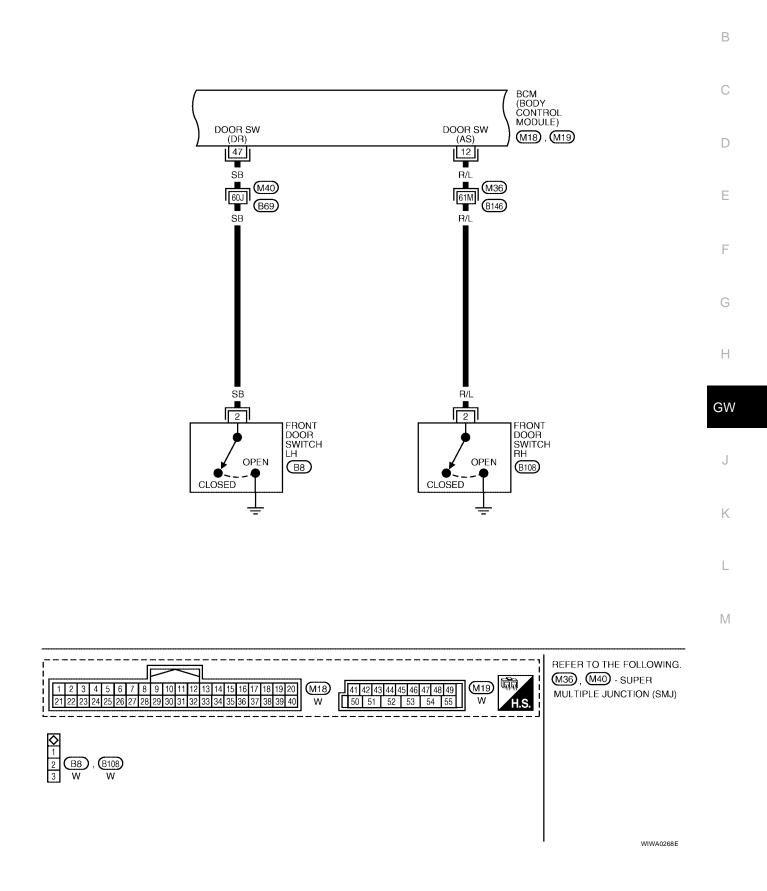


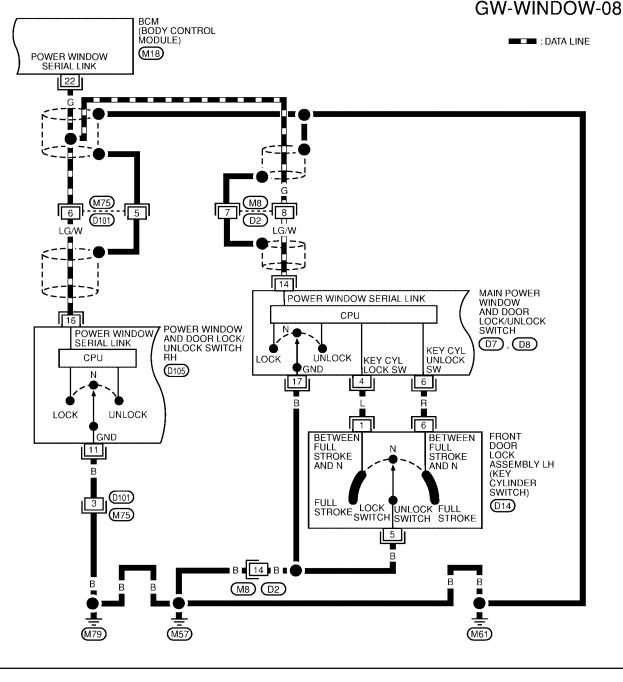
GW-29

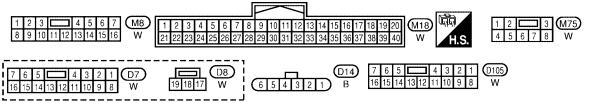


GW-WINDOW-07

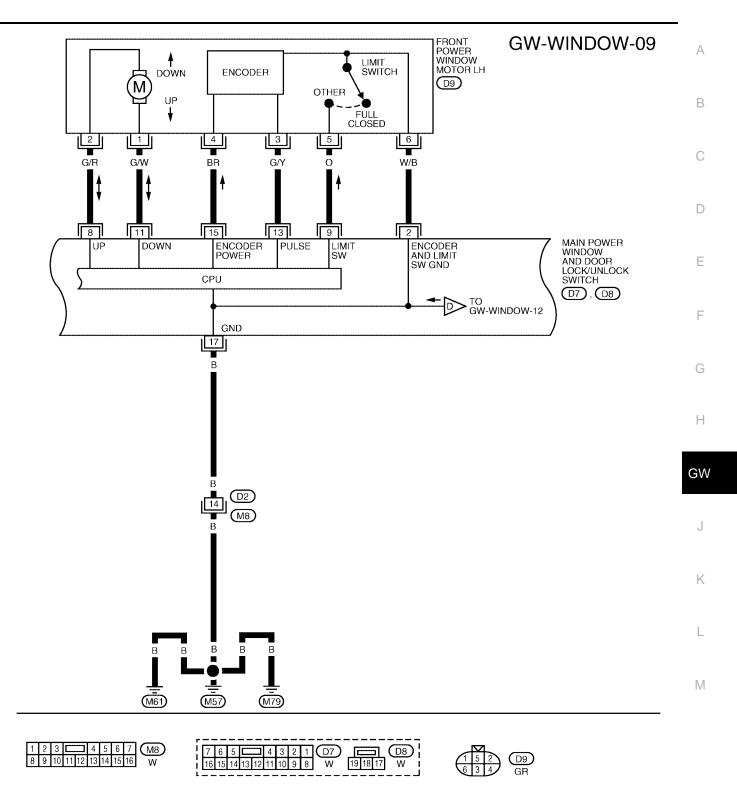
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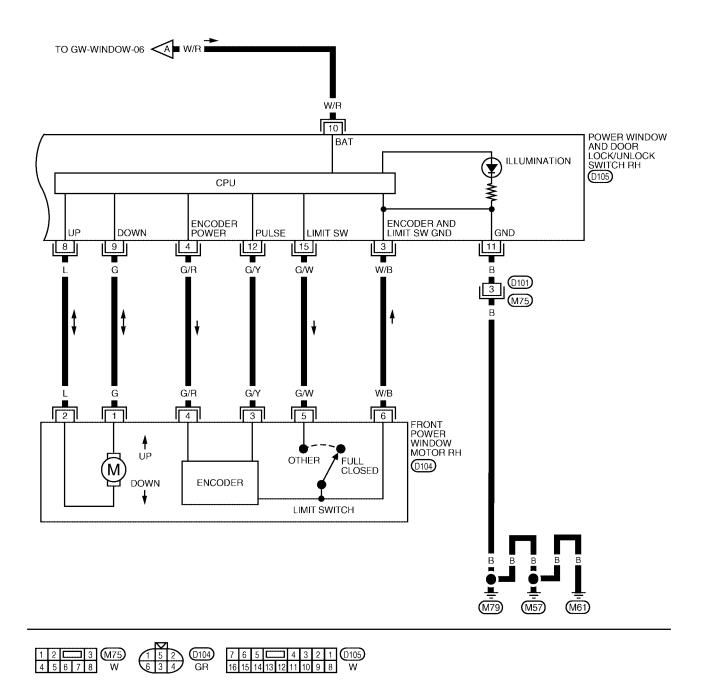


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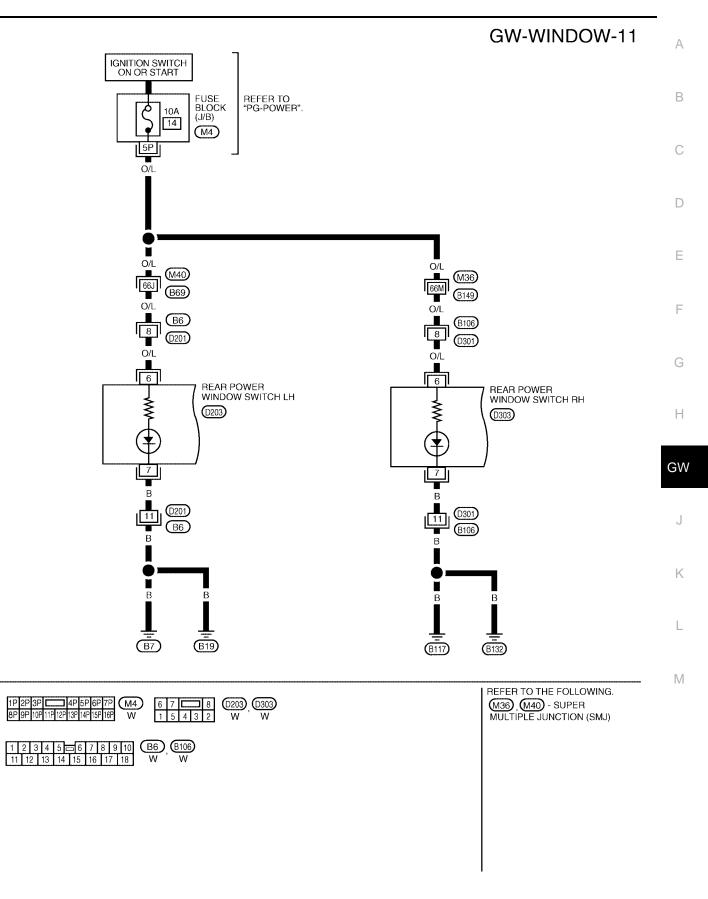


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## **GW-WINDOW-10**

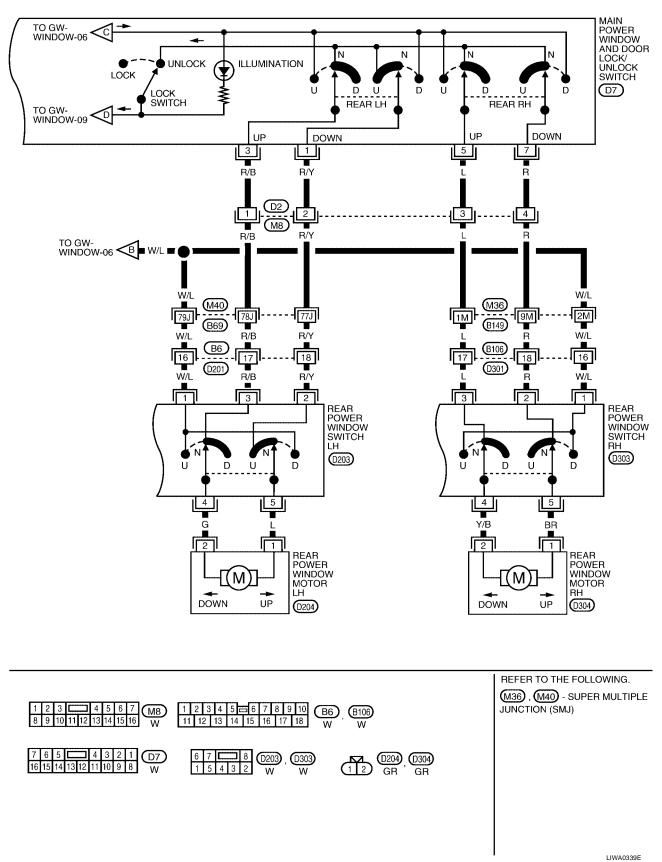


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## **GW-WINDOW-12**



### Terminal and Reference Value for Main Power Window and Door Lock/Unlock Switch (Crew Cab)

erminal	Wire Color	Item	Condition	Voltage (V) (Approx.)	
1	R/Y	Rear power window LH DOWN signal	When rear LH switch in main power window and door lock/unlock switch is operated DOWN	Battery voltage	
2	W/B	Limit switch and encoder ground	_	0	
3	R/B	Rear power window LH UP signal	When rear LH switch in main power window and door lock/unlock switch is operated UP	Battery voltage	
4	L	Front door lock assembly LH (key cylinder switch) lock signal	Key position (Neutral $\rightarrow$ Locked)	$5 \rightarrow 0$	
5	L	Rear power window RH UP signal	When rear RH switch in main power window and door lock/unlock switch is operated UP	Battery voltage	
6	R	Front door lock assembly LH (key cylinder switch) unlock signal	Key position (Neutral $\rightarrow$ Unocked)	$5 \rightarrow 0$	
7	R	Rear power window RH DOWN signal	When rear RH switch in main power window and door lock/unlock switch is operated DOWN	Battery voltage	
8	G/R	Front power window motor LH UP signal	When power window motor is operated UP	Battery voltage	
			Driver side door window is between fully-open and just before fully-closed position (ON)	0	
9	0	0	O Limit switch signal	Driver side door window is between just before fully-closed position and fully-closed position (OFF)	5
			When ignition switch ON	Battery voltage	
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage	
10	W/L	RAP signal	More than 45 seconds after igni- tion switch is turned to OFF	0	
			When front door LH or RH open or power window timer operates	0	
11	G/W	Front power window motor LH DOWN signal	When power window motor is operated DOWN	Battery voltage	
13	G/Y	Encoder pulse signal	When power window motor oper- ates	(V) 6 4 2 0 	

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Terminal	Wire Color	ltem	Condition	Voltage (V) (Approx.)
14	LG/W	Power window serial link	When ignition switch ON or power window timer operates	(V) 15 10 5 0 200 ms PIIA2344J
15	BR	Encoder power supply	When ignition switch ON or power window timer operates	10
17	В	Ground	—	0
19	W/R	Battery power supply	—	Battery voltage

## Terminal and Reference Value for Power Window and Door Lock/Unlock Switch RH (Crew Cab)

	i			
Terminal	Wire Color	ltem	Condition	Voltage (V) (Approx.)
3	W/B	Limit switch and encoder ground	—	0
4	G/R	Encoder power supply	When ignition switch ON or power window timer operates	10
8	L	Front power window motor RH UP signal	When power window motor is operated UP	Battery voltage
9	G	Front power window motor RH DOWN signal	When power window motor is operated DOWN	Battery voltage
10	W/R	Battery power supply	—	Battery voltage
11	В	Ground	—	0
12	G/Y	Encoder pulse signal	When power window motor oper- ates	(V) 6 4 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	G/W		Passenger side door window is between fully-open and just before fully-closed position (ON)	0
15		5 G/W	G/W Limit switch signal	Passenger side door window is between just before fully-closed position and fully-closed position (OFF)
16	LG/W	Power window serial link	When ignition switch is ON or power window timer operating	(V) 15 10 5 0 200 ms PIIA2344J

## Terminal and Reference Value for BCM (Crew Cab)

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Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)		
11	0	Ignition switch (ACC or ON)	Ignition switch (ACC or ON position)	Battery voltage		
10	R/L	Front door quitch DLL signal	ON (Open)	Battery voltage		
12	R/L	Front door switch RH signal	OFF (Close)	0		
22	G	Power window serial link	When ignition switch ON or power window timer operates	(V) 15 10 5 10 10 10 10 10 10 10 10 10 10		
38	W/L	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage		
47 SB		Front door owitch I H oignal	ON (Open)	Battery voltage		
47	30	Front door switch LH signal	OFF (Close)	0		
67	В	Ground	—	0		
	W/L RAP signal		When ignition switch ON	Battery voltage		
		68 W/L RAP signal	W/L       RAP signal         W/L       RAP signal			Battery voltage
68				More than 45 seconds after igni- tion switch is turned to OFF	0	
			When front door LH or RH is open or power window timer operates	0		
69	W/R	Power window power supply		Battery voltage		
70	W/B	Battery power supply	_	Battery voltage		

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## Work Flow

- 1. Check the symptom and customer's requests.
- 2. Understand the outline of system. Refer to <u>GW-15, "System Description"</u>.
- 3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to <u>GW-43</u>, "Trouble Diagnoses Symptom Chart (King Cab)".
- 4. Does power window system operate normally? Yes, GO TO 5, If No, GO TO 3.
- 5. Inspection End.

## **CONSULT-II Function (BCM)**

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CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

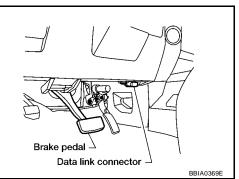
BCM diagnostic test item	Diagnostic mode	Content
	WORK SUPPORT	Changes setting of each function.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
Inspection by part	SELF-DIAG RESULTS	Displays BCM self-diagnosis results.
	CAN DIAG SUPPORT MNTR	The results of transmit/receive diagnosis of CAN communication can be read.
	ECU PART NUMBER	BCM part number can be read.
	CONFIGURATION	Performs BCM configuration read/write functions.

#### **CONSULT-II INSPECTION PROCEDURE**

#### **CAUTION:**

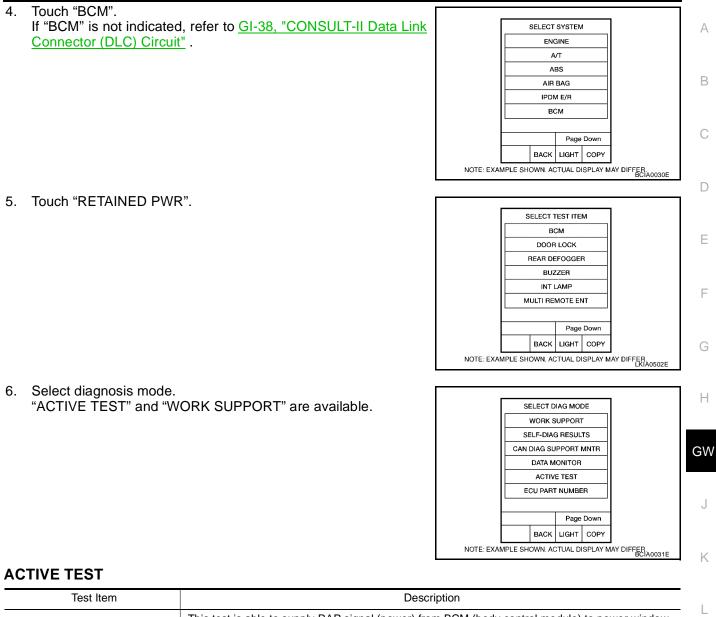
If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

1. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



- 2. Turn ignition switch ON.
- 3. Touch "START (NISSAN BASED VHCL)".

	CONSULT-II				
	ENGINE				
	START (NISSAN BASED VHCL)				
	START (X-BADGE VHCL)				
	SUB MODE				
	LIGHT COPY				
NOTE: EXA	NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER. BCIA0029E				



	·
	This test is able to supply RAP signal (power) from BCM (body control module) to power window system and power sunroof system (if equipped). Those systems can be operated when turning on "RETAINED PWR" on CONSULT-II screen even if the ignition switch is turned OFF.
RETAINED PWR	<b>NOTE:</b> During this test, CONSULT-II can be operated with ignition switch in OFF position. "RETAINED PWR" should be turned "ON" or "OFF" on CONSULT-II screen when ignition switch is ON. Then turn ignition switch OFF to check retained power operation. CONSULT-II might be stuck if "RETAINED PWR" is turned "ON" or "OFF" on CONSULT-II screen when ignition switch is OFF.

#### WORK SUPPORT

Work item	Description
RETAINED PWR	<ul> <li>RAP signal's power supply period can be changed by mode setting. Selects RAP signal's power supply period between three steps</li> <li>MODE1 (45 sec.) / MODE2 (OFF) / MODE 3 (2 min.).</li> </ul>

#### DATA MONITOR

Work item	Description
IGN ON SW	Indicates (ON / OFF) condition of ignition switch

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DOOR SW-DR	Indicates (ON / OFF) condition of front door switch driver side
DOOR SW-AS	Indicates (ON / OFF) condition of front door switch passenger side

## Trouble Diagnoses Symptom Chart (King Cab)

• Check that other systems using the signal of the following systems operate normally.

Symptom	Repair order	Refer to page	
	1. BCM power supply and ground circuit check	<u>GW-45</u>	
None of the power windows can be operated using any switch	2. Main power window and door lock/unlock power supply and ground circuit check	<u>GW-46</u>	
	3. Power window serial link check	<u>GW-68</u>	
	4. Replace BCM	BCS-25	
	1. Front power window motor LH circuit check	<u>GW-50</u>	
Front power window LH alone does not operate	2. Replace main power window and door lock/ unlock switch	<u>EI-32</u>	
	1. Power window and door lock/unlock switch RH power supply and ground circuit check	<u>GW-48</u>	
Front power window RH alone does not operate	2. Power window serial link check	<u>GW-68</u>	
	3. Front power window motor RH circuit check	<u>GW-50</u>	
	4. Replace BCM	BCS-25	
	1. Door window sliding part malfunction		
	<ul> <li>A foreign material adheres to window glass or glass run rubber.</li> </ul>	_	
	<ul> <li>Glass run rubber wear or deformation.</li> </ul>		
Anti-pinch system does not operate normally (Front LH)	• Sash is tilted too much, or not enough.		
	2. Limit switch adjusting	<u>GW-78</u>	
	3. Limit switch circuit check LH	<u>GW-51</u>	
	4. Encoder circuit check LH	<u>GW-56</u>	
	1. Door window sliding part malfunction		
	<ul> <li>A foreign material adheres to window glass or glass run rubber.</li> </ul>	_	
	<ul> <li>Glass run rubber wear or deformation.</li> </ul>		
Anti-pinch system does not operate normally (Front RH)	• Sash is tilted too much, or not enough.		
	2. Limit switch adjusting	<u>GW-78</u>	
	3. Limit switch circuit check RH	<u>GW-54</u>	
	4. Encoder circuit check RH	<u>GW-60</u>	
	1. Check the retained power operation mode setting.	<u>GW-41</u>	
Power window retained power operation does not operate properly	2. Door switch check	<u>GW-62</u>	
	3. Replace BCM.	BCS-25	
Does not operate by front door lock assembly LH (key cylinder	1. Front door lock assembly LH (key cylinder switch) check	<u>GW-64</u>	
switch)	2. Replace main power window and door lock/ unlock switch	<u>EI-32</u>	
Power window lock switch does not function	1. Power window lock switch circuit check	<u>GW-68</u>	

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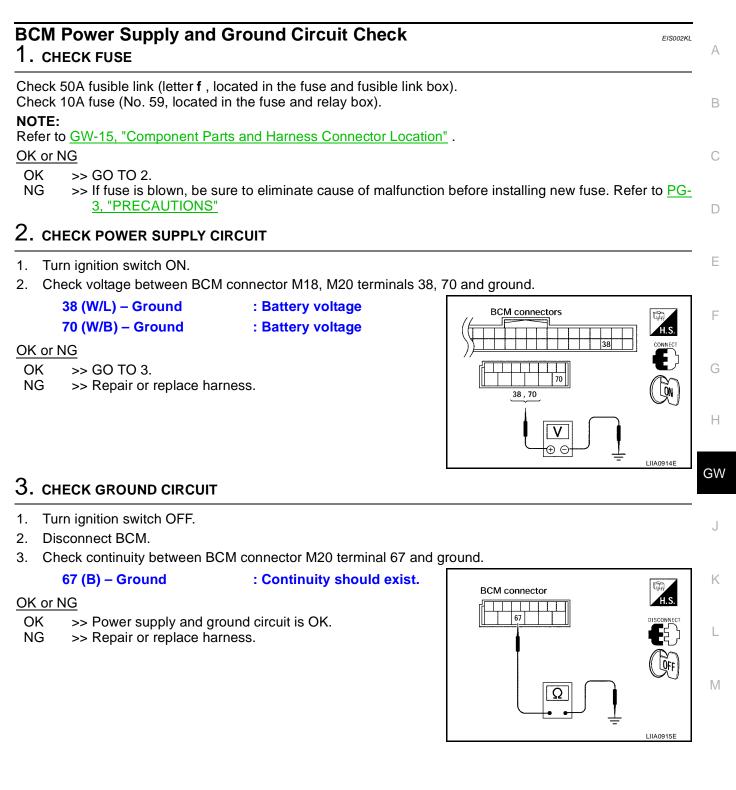
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## Trouble Diagnoses Symptom Chart (Crew Cab)

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#### • Check that other systems using the signal of the following systems operate normally.

Symptom	Repair order	Refer to page	
	1. BCM power supply and ground circuit check	<u>GW-45</u>	
None of the power windows can be operated using any switch	2. Main power window and door lock/unlock power supply and ground circuit check	<u>GW-46</u>	
	3. Power window serial link check	<u>GW-71</u>	
	4. Replace BCM	BCS-25	
	1. Front power window motor LH circuit check	<u>GW-50</u>	
Front power window LH alone does not operate	2. Replace main power window and door lock/ unlock switch	<u>EI-32</u>	
	1. Power window and door lock/unlock switch RH power supply and ground circuit check	<u>GW-48</u>	
Front power window RH alone does not operate	2. Power window serial link check	<u>GW-71</u>	
	3. Front power window motor RH circuit check	<u>GW-50</u>	
	4. Replace BCM	BCS-25	
Rear power window LH alone does not operate	1. Rear power window motor LH circuit check	<u>GW-73</u>	
Rear power window RH alone does not operate	1. Rear power window motor RH circuit check	<u>GW-75</u>	
	1. Door window sliding part malfunction		
	<ul> <li>A foreign material adheres to window glass or glass run rubber.</li> </ul>	_	
	<ul> <li>Glass run rubber wear or deformation.</li> </ul>		
Anti-pinch system does not operate normally (Front LH)	• Sash is tilted too much, or not enough.		
	2. Limit switch adjusting	<u>GW-78</u>	
	3. Limit switch circuit check LH	<u>GW-53</u>	
	4. Encoder circuit check LH	<u>GW-58</u>	
Anti-pinch system does not operate normally (Front RH)	<ol> <li>Door window sliding part malfunction</li> <li>A foreign material adheres to window glass or glass run rubber.</li> <li>Glass run rubber wear or deformation.</li> <li>Sash is tilted too much, or not enough.</li> </ol>	_	
	<ol> <li>Limit switch adjusting</li> </ol>	<u>GW-78</u>	
	3. Limit switch circuit check RH	<u>GW-70</u> <u>GW-54</u>	
	4. Encoder circuit check RH	<u>GW-54</u> GW-60	
	Encoder circuit check KH     1. Check the retained power operation mode     setting.	<u>GW-60</u> <u>GW-41</u>	
Power window retained power operation does not operate properly	2. Door switch check	<u>GW-62</u>	
	3. Replace BCM.	BCS-25	
Does not operate by front door lock assembly LH (key cylinder	1. Front door lock assembly LH (key cylinder switch) check	<u>GW-66</u>	
switch)	2. Replace main power window and door lock/ unlock switch	<u>EI-32</u>	
Power window lock switch does not function	1. Power window lock switch circuit check	<u>GW-71</u>	



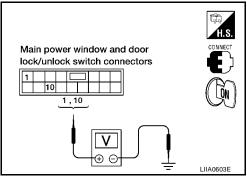
# Main Power Window and Door Lock/Unlock Switch Power Supply and Ground Circuit Check (King Cab)

## 1. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between main power window and door lock/unlock switch connector D7 terminals 1, 10 and ground.



OK >> GO TO 2. NG >> GO TO 3.



## 2. CHECK GROUND CIRCUIT

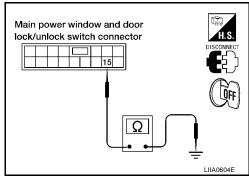
- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch.
- 3. Check continuity between main power window and door lock/unlock switch connector D7 terminal 15 and ground.

#### 15 (B) - Ground

: Continuity should exist.

#### OK or NG

- OK >> Power supply and ground circuit are OK.
- NG >> Repair or replace harness.



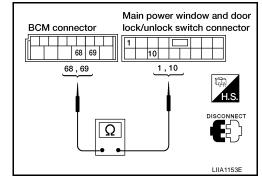
### $3.\,$ check main power window and door lock/unlock switch power supply circuit

#### 1. Disconnect BCM.

- 2. Check continuity between BCM connector M20 terminals 68, 69 and main power window and door lock/ unlock switch connector D7 terminals 1, 10.
  - 68 (W/L) 10 (W/L)
- : Continuity should exist.

69 (W/R) – 1 (W/R) : Continuity should exist.

- OK >> GO TO 4.
- NG >> Repair or replace harness.



### 4. CHECK BCM OUTPUT SIGNAL

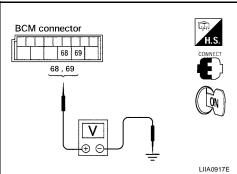
- 1. Connect BCM.
- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M20 terminals 68, 69 and ground.
  - 68 (W/L) Ground
- : Battery voltage
- 69 (W/R) Ground

- : Battery voltage

: Battery voltage

#### OK or NG

- OK >> Check the condition of the harness and the connector.
- NG >> Replace BCM. Refer to BCS-25, "Removal and Installation of BCM" .



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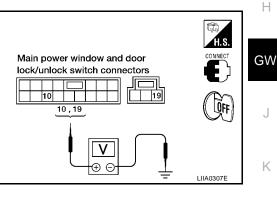
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#### Main Power Window and Door Lock/Unlock Switch Power Supply and Ground Circuit Check (Crew Cab) EIS0020D

- 1. CHECK POWER SUPPLY CIRCUIT
- Turn ignition switch ON. 1.
- Check voltage between main power window and door lock/unlock switch connector D7 terminal 10, D8 2. terminal 19 and ground.
  - 10 (W/L) Ground
  - 19 (W/R) Ground : Battery voltage

#### OK or NG

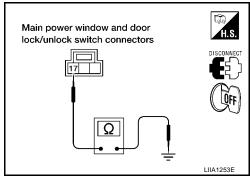
OK >> GO TO 2. NG >> GO TO 3.



## 2. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and 3. М ground.
  - 17 (B) Ground
- : Continuity should exist.

- OK >> Power supply and ground circuit are OK.
- NG >> Repair or replace harness.



## 3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY CIRCUIT

#### 1. Disconnect BCM.

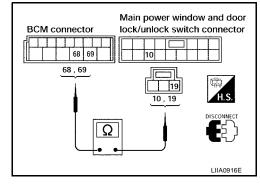
2. Check continuity between BCM connector M20 terminals 68, 69 and main power window and door lock/ unlock switch connector D7 terminal 10 and D8 terminal 19.

68 (W/L) – 10 (W/L) : Continuity should exist.

69 (W/R) – 19 (W/R) : Continuity should exist.

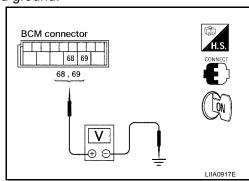
#### OK or NG

- OK >> GO TO 4.
- NG >> Repair or replace harness.



## 4. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM.
- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M20 terminals 68, 69 and ground.
  - 68 (W/L) Ground
    - : Battery voltage
  - 69 (W/R) Ground
- : Battery voltage
- OK or NG
- OK >> Check the condition of the harness and the connector.
- NG >> Replace BCM, Refer to BCS-25, "Removal and Installation of BCM" .



#### Power Window and Door Lock/Unlock Switch RH Power Supply and Ground **Circuit Check** FIS002KN

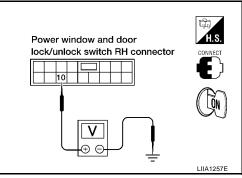
- 1. CHECK POWER SUPPLY CIRCUIT
- 1. Turn ignition switch ON.
- Check voltage between power window and door lock/unlock switch RH connector D105 terminal 10 and 2. ground.

#### 10 (W/R) – Ground

: Battery voltage

#### OK or NG

>> GO TO 2. OK NG >> GO TO 3.



## 2. CHECK GROUND CIRCUIT

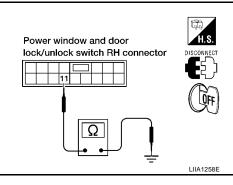
- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- 3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground.

#### 11 (B) – Ground

: Continuity should exist.

#### OK or NG

- OK >> Power supply and ground circuit are OK.
- NG >> Repair or replace harness.



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## 3. CHECK POWER WINDOW SWITCH RH POWER SUPPLY CIRCUIT

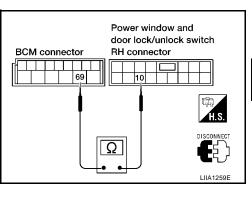
- 1. Disconnect BCM.
- 2. Check continuity between BCM connector M20 terminal 69 and power window and door lock/unlock switch RH connector D105 terminal 10.

#### 69 (W/R) - 10 (W/R)

: Continuity should exist.

#### OK or NG

- OK >> GO TO 4.
- NG >> Repair or replace harness.



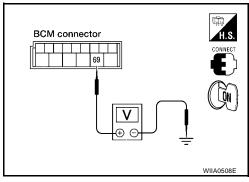
## 4. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM.
- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M20 terminal 69 and ground.

#### 69 (W/R) – Ground : I

#### : Battery voltage

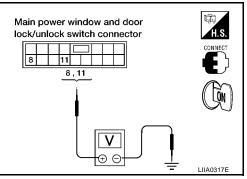
- OK >> Check the condition of the harness and the connector
- NG >> Replace BCM. Refer to <u>BCS-25</u>, "Removal and Installation of <u>BCM"</u>.



## Front Power Window Motor LH Circuit Check 1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between main power window and door lock/unlock switch connector D7 terminals 8, 11 and ground.

Connector	Terminals	(Wire color)	Condition	Voltage (V)
Connector	(+)	(-)	Condition	(Approx.)
	8 (G/R)		UP	Battery voltage
D7		Ground	DOWN	0
01	11 (G/W)	Oround	UP	0
	TT (G/W)		DOWN	Battery voltage



#### OK or NG

OK >> GO TO 2.

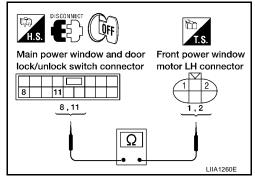
NG >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door" .

## 2. CHECK POWER WINDOW MOTOR CIRCUIT

- Turn ignition switch OFF. 1.
- 2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
- Check continuity between main power window and door lock/unlock switch connector D7 terminals 8, 11 3. and front power window motor LH connector D9 terminals 1, 2.
  - 8 (G/R) 2 (G/R)
  - 11 (G/W) 1 (G/W)
- : Continuity should exist. : Continuity should exist.

#### OK or NG

- OK >> Replace front power window motor LH. Refer to GW-77, "FRONT DOOR GLASS AND REGULATOR" .
- NG >> Repair or replace harness.



### Front Power Window Motor RH Circuit Check

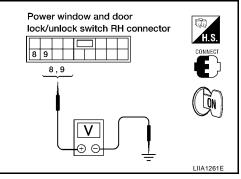
#### 1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH OUTPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between power window and door lock/unlock switch RH connector D105 terminals 8, 9 and ground.

Connector	Terminals	(Wire color)	Condition	Voltage (V)
Connector	(+)	(-)	Condition	(Approx.)
	9 (G)		UP	0
D105	9 (G)	Ground	DOWN	Battery voltage
D105	9 (1 )	Ground	UP	Battery voltage
	8 (L)		DOWN	0

OK or NG

- OK >> GO TO 2.
- >> Replace power window and door lock/unlock switch RH. NG Refer to EI-32, "Front Door" .

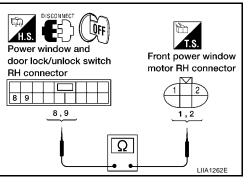


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## 2. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH and power window and door lock/unlock switch RH.
- 3. Check continuity between power window and door lock/unlock switch RH connector D105 terminals 8, 9 and front power window motor RH connector D104 terminals 1, 2.
  - 8 (L) 2 (L) 9 (G) – 1 (G)
- : Continuity should exist. : Continuity should exist.

- OK or NG
- OK >> Replace front power window motor RH. Refer to <u>GW-77</u>, "FRONT DOOR GLASS AND REGULATOR" .
- NG >> Repair or replace harness.



## Limit Switch Circuit Check Front LH (King Cab)

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH LIMIT SIGNAL

- Turn ignition switch ON. 1.
- 2. Check voltage between main power window and door lock/unlock switch connector D7 termimal 9 and around.

Connector	Terminal (	(Wire color)	Condition	Voltage (V)	Main power window and	(h)
Connector	(+)	(-)	Condition	(Approx.)	door lock/unlock switch connector	H.S.
D7	0.(0)	Ground	Driver side door window is between fully-open and just before fully-closed position (ON)	0		
יט	9 (O)	Ground	Driver side door window is between just before fully- closed position and fully- closed position (OFF)	5		LIIA0339E

OK or NG

OK >> Limit switch circuit is OK.

NG >> GO TO 2.

## 2. CHECK FRONT POWER WINDOW MOTOR LH LIMIT SIGNAL

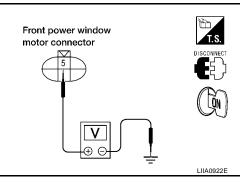
- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Check voltage between front power window motor LH connector D9 terminal 5 and ground.

#### 5 (O) – Ground

: Approx. 5V

#### OK or NG

OK	>> GO TO 3.
NG	>> GO TO 5.



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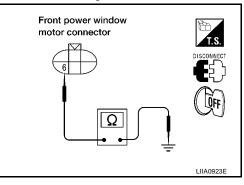
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## 3. CHECK LIMIT SWITCH GROUND CIRCUIT

Check continuity between front power window motor LH connector D9 terminal 6 and ground.

- 6 (W/B) Ground: Continuity should exist.OK or NGOK>> Replace front power window motor LH. Refer to GW-77,
  - <u>"FRONT DOOR GLASS AND REGULATOR"</u>.
- NG >> GO TO 4.



## 4. CHECK HARNESS CONTINUITY

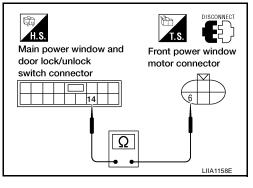
- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between front power window motor LH connector D9 terminal 6 and main power window and door lock/unlock switch connector D7 terminal 14.

#### 6 (W/B) - 14 (W/B)

: Continuity should exist.

#### OK or NG

- OK >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".
- NG >> Repair or replace harness.



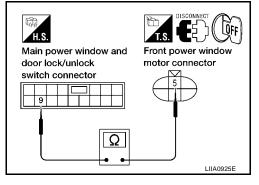
## 5. CHECK HARNESS CONTINUITY

- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between front power window motor LH connector D9 terminal 5 and main power window and door lock/unlock switch connector D7 terminal 9.

### 5 (O) – 9 (O)

: Continuity should exist.

- OK >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".
- NG >> Repair or replace harness.



## Limit Switch Circuit Check Front LH (Crew Cab) 1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH LIMIT SIGNAL

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#### 1. Turn ignition switch ON.

2. Check voltage between main power window and door lock/unlock switch connector D7 termimal 9 and ground.

Connector	Terminal (	Wire color)	Condition	Voltage (V)	Main power window and
Connector	(+)	(-)	Condition	(Approx.)	door lock/unlock
D7		Ground	Driver side door window is between fully-open and just before fully-closed position (ON)	0	
יט	9 (O)	Ground	Driver side door window is between just before fully- closed position and fully- closed position (OFF)	5	

#### OK or NG

OK >> Limit switch circuit is OK.

NG >> GO TO 2.

## 2. CHECK FRONT POWER WINDOW MOTOR LH LIMIT SIGNAL

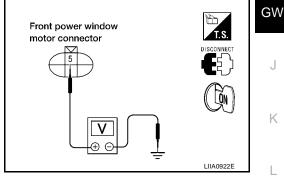
- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Check voltage between front power window motor LH connector D9 terminal 5 and ground.

5 (O) – Ground

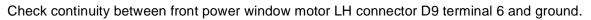
#### : Approx. 5V

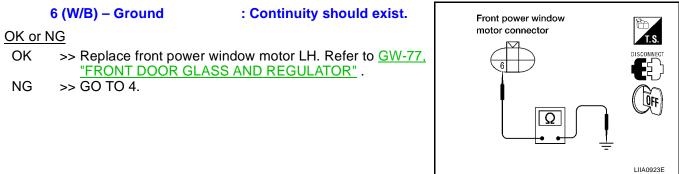
#### OK or NG

OK >> GO TO 3. NG >> GO TO 5.



## 3. CHECK LIMIT SWITCH GROUND CIRCUIT





### 4. CHECK HARNESS CONTINUITY

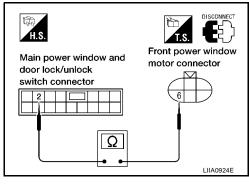
- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between front power window motor LH connector D9 terminal 6 and main power window and door lock/unlock switch connector D7 terminal 2.

#### 6 (W/B) – 2 (W/B)

: Continuity should exist.

#### OK or NG

- OK >> Replace main power window and door lock/unlock switch. Refer to <u>EI-32</u>, "Front Door".
- NG >> Repair or replace harness.



## 5. CHECK HARNESS CONTINUITY

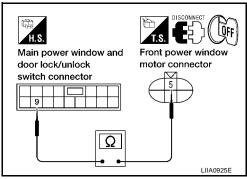
- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between front power window motor LH connector D9 terminal 5 and main power window and door lock/unlock switch connector D7 terminal 9.

#### 5 (O) – 9 (O)

: Continuity should exist.

#### OK or NG

- OK >> Replace main power window and door lock/unlock switch. Refer to <u>EI-32</u>, "Front Door".
- NG >> Repair or replace harness.



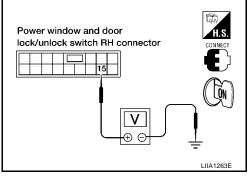
## Limit Switch Circuit Check Front RH

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## 1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH LIMIT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between power window and door lock/unlock switch RH connector D105 terminal 15 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V)
Connector	(+)	(-)	Condition	(Approx.)
D105	15 (CAN)	Ground	Passenger side door window is between fully-open and just before fully-closed posi- tion (ON)	0
D105	15 (G/W)	Ground	Passenger side door window is between just before fully- closed position and fully- closed position (OFF)	5



OK or NG

OK >> Limit switch circuit is OK.

NG >> GO TO 2.

## 2. CHECK LIMIT SWITCH GROUND CIRCUIT

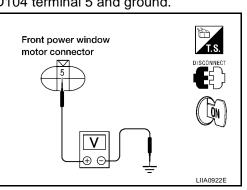
- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH.
- 3. Check voltage between front power window motor RH connector D104 terminal 5 and ground.

: Approx. 5V

#### 5 (G/W) – Ground

#### OK or NG

OK >> GO TO 3. NG >> GO TO 5.



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## 3. CHECK LIMIT SWITCH GROUND CIRCUIT

Check continuity between front power window motor RH connector D104 terminal 6 and ground.

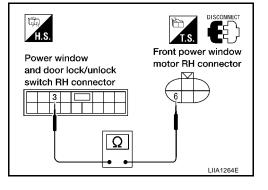


## 4. CHECK HARNESS CONTINUITY

- 1. Disconnect power window and door lock/unlock switch RH.
- 2. Check continuity between front power window motor RH connector D104 terminal 6 and power window and door lock/unlock switch RH connector D105 terminal 3.

6 (W/B) – 3 (W/B) : Continuity should exist.

- OK >> Replace power window and door lock/unlock switch RH. Refer to <u>EI-32, "Front Door"</u>.
- NG >> Repair or replace harness.



## 5. CHECK HARNESS CONTINUITY

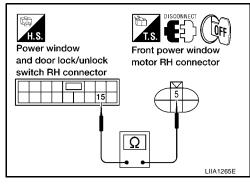
- 1. Disconnect power window and door lock/unlock switch RH.
- 2. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 15 and front power window motor RH connector D104 terminal 5.

#### 15 (G/W) – 5 (G/W)

: Continuity should exist.

#### OK or NG

- OK >> Replace power window and door lock/unlock switch RH. Refer to <u>EI-32, "Front Door"</u>.
- NG >> Repair or replace harness.



## Encoder Circuit Check Front LH (King Cab)

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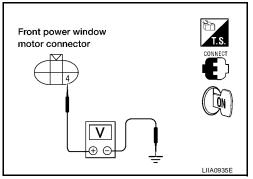
## 1. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Turn ignition switch ON.
- 4. Check voltage between front power window motor LH connector D9 terminal 4 and ground.

4 (BR) – Ground : Approx. 10V

#### OK or NG

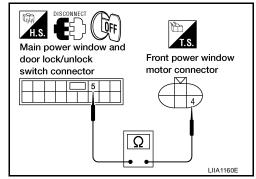
OK >> GO TO 3. NG >> GO TO 2.



## 2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch.
- 3. Check continuity between front power window motor LH connector D9 terminal 4 and main power window and door lock/unlock switch connector D7 terminal 5.

4 (BR) – 5 (BR) : Continuity should exist.



#### OK or NG

OK >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".

NG >> Repair or replace harness.

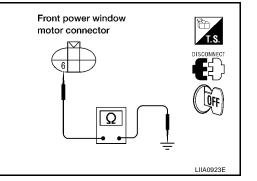
## 3. CHECK ENCODER GROUND

- 1. Turn ignition switch OFF.
- 2. Check continuity between front power window motor LH connector D9 terminal 6 and ground.

```
6 (W/B) – Ground : Continuity should exist.
```

#### OK or NG

OK >> GO TO 5. NG >> GO TO 4.



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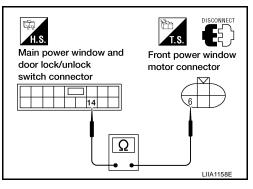
## 4. CHECK ENCODER GROUND CIRCUIT

- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between front power window motor LH connector D9 terminal 6 and main power window and door lock/unlock switch connector D7 terminal 14.

6 (W/B) – 14 (W/B) : Continuity should exist.

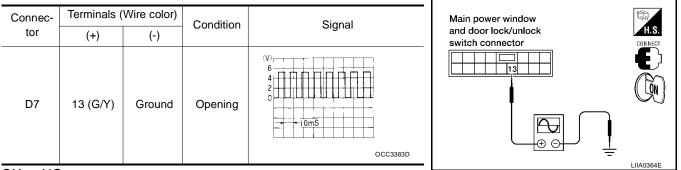
#### OK or NG

- OK >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".
- NG >> Repair or replace harness.



## 5. CHECK ENCODER SIGNAL

- 1. Connect front power window motor LH.
- 2. Turn ignition switch ON.
- 3. Check the signal between main power window and door lock/unlock switch connector and ground with oscilloscope. □



#### OK or NG

OK >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".

NG >> GO TO 6.

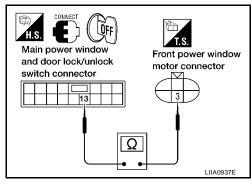
## 6. CHECK ENCODER CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH and main power window and door lock/unlock switch.
- 3. Check continuity between front power window motor LH connector D9 terminal 3 and main power window and door lock/unlock switch connector D7 terminal 13.

#### 3 (G/Y) – 13 (G/Y) : Continuity should exist.

#### OK or NG

- OK >> Replace front power window motor LH. Refer to <u>GW-77,</u> <u>"FRONT DOOR GLASS AND REGULATOR"</u>.
- NG >> Repair or replace harness.



## Encoder Circuit Check Front LH (Crew Cab)

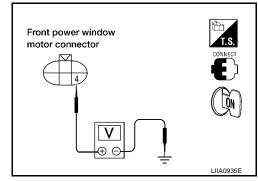
EIS002OH

- 1. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY
- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Turn ignition switch ON.
- 4. Check voltage between front power window motor LH connector D9 terminal 4 and ground.

#### 4 (BR) – Ground : Approx. 10V

#### OK or NG

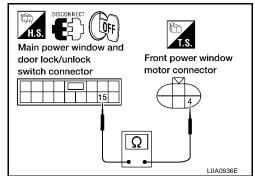
- OK >> GO TO 3.
- NG >> GO TO 2.



## 2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch.
- 3. Check continuity between front power window motor LH connector D9 terminal 4 and main power window and door lock/unlock switch connector D7 terminal 15.

4 (BR) – 15 (BR) : Continuity should exist.



- OK >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".
- NG >> Repair or replace harness.

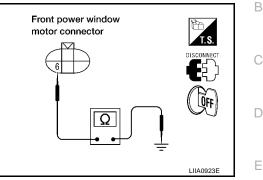
## 3. CHECK ENCODER GROUND

- 1. Disconnect front power window motor LH.
- 2. Check continuity between front power window motor LH connector D9 terminal 6 and ground.

#### 6 (W/B) – Ground : Continuity should exist.

#### OK or NG

OK >> GO TO 5. NG >> GO TO 4.



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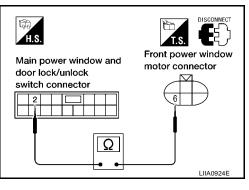
## 4. CHECK ENCODER GROUND CIRCUIT

- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between front power window motor LH connector D9 terminal 6 and main power window and door lock/unlock switch connector D7 terminal 2.

6 (W/B) – 2 (W/B) : Continuity should exist.

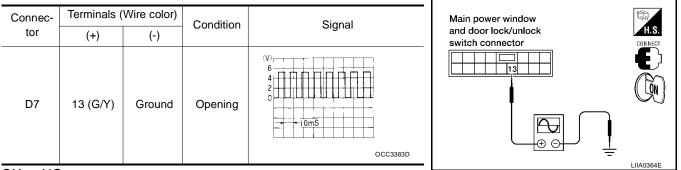
#### OK or NG

- OK >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".
- NG >> Repair or replace harness.



## 5. CHECK ENCODER SIGNAL

- 1. Connect front power window motor LH.
- 2. Turn ignition switch ON.
- 3. Check the signal between main power window and door lock/unlock switch connector and ground with oscilloscope. □



#### OK or NG

OK >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".

NG >> GO TO 6.

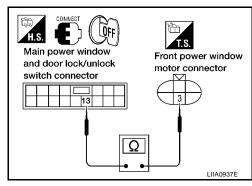
## 6. CHECK ENCODER CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH and main power window and door lock/unlock switch.
- 3. Check continuity between front power window motor LH connector D9 terminal 3 and main power window and door lock/unlock switch connector D7 terminal 13.

#### 3 (G/Y) – 13 (G/Y) : Continuity should exist.

#### OK or NG

- OK >> Replace front power window motor LH. Refer to <u>GW-77,</u> <u>"FRONT DOOR GLASS AND REGULATOR"</u>.
- NG >> Repair or replace harness.



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## Encoder Circuit Check Front RH

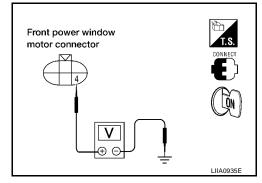
## 1. CHECK FRONT POWER WINDOW MOTOR RH POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH.
- 3. Turn ignition switch ON.
- 4. Check voltage between front power window motor RH connector D104 terminal 4 and ground.

#### 4 (G/R) – Ground : Approx. 10V

#### OK or NG

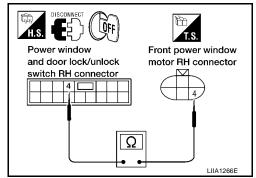
- OK >> GO TO 3.
- NG >> GO TO 2.



## 2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH and power window and door lock/unlock switch RH.
- 3. Check continuity between front power window motor RH connector D104 terminal 4 and power window and door lock/unlock switch RH connector D105 terminal 4.

4 (G/R) – 4 (G/R) : Continuity should exist.



- OK >> Replace power window and door lock/unlock switch RH. Refer to EI-32, "Front Door".
- NG >> Repair or replace harness.

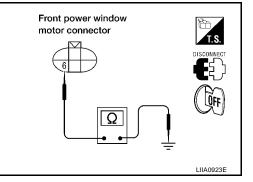
## 3. CHECK ENCODER GROUND

- 1. Turn ignition switch OFF.
- 2. Check continuity between front power window motor RH connector D104 terminal 6 and ground.

```
6 (W/B) – Ground : Continuity should exist.
```

#### OK or NG

OK >> GO TO 5. NG >> GO TO 4.



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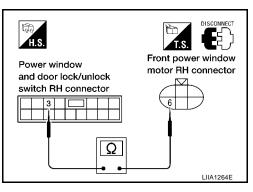
## 4. CHECK ENCODER GROUND CIRCUIT

- 1. Disconnect power window and door lock/unlock switch RH.
- 2. Check continuity between front power window motor RH connector D104 terminal 6 and power window and door lock/unlock switch RH connector D105 terminal 3.

6 (W/B) – 3 (W/B) : Continuity should exist.

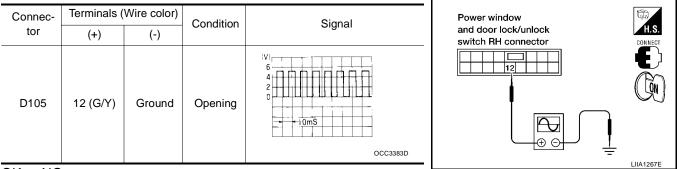
#### OK or NG

- OK >> Replace power window and door lock/unlock switch RH. Refer to <u>EI-32, "Front Door"</u>.
- NG >> Repair or replace harness.



## 5. CHECK ENCODER SIGNAL

- 1. Connect front power window motor RH.
- 2. Turn ignition switch ON.
- 3. Check the signal between power window and door lock/unlock switch RH connector and ground with ∟ oscilloscope.



#### OK or NG

OK >> Replace power window and door lock/unlock switch RH. Refer to EI-32, "Front Door".

NG >> GO TO 6.

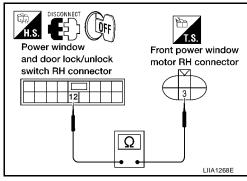
## 6. CHECK ENCODER CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH and power window and door lock/unlock switch RH.
- 3. Check continuity between front power window motor RH connector D104 terminal 3 and power window and door lock/unlock switch RH connector D105 terminal 12.

#### 3 (G/Y) – 12 (G/Y) : Continuity should exist.

OK or NG

- OK >> Replace front power window motor RH. Refer to <u>GW-77</u>, <u>"FRONT DOOR GLASS AND REGULATOR"</u>.
- NG >> Repair or replace harness.



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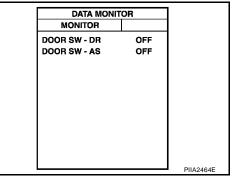
## **Door Switch Check**

## 1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

#### With CONSULT-II

Check front door switches ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CON-SULT-II.

Monitor item	Cor	dition	
DOOR SW-DR	OPEN	: ON	
DOOK SW-DI	CLOSE	: OFF	
DOOR SW-AS	OPEN	: ON	
DOON SW-AS	CLOSE	: OFF	



### B Without CONSULT-II

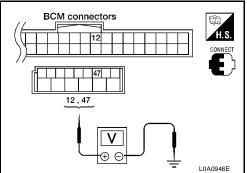
Check voltage between BCM connector and ground.

ltem	Item Connector	Terminals (Wire color)		Condition	Voltage (V)	
nom		(+)	(-)	Condition	(Approx.)	
Front RH	M19	12 (R/L)		OPEN	0	
	10119	12 (IV/L)	Ground	CLOSE	Battery voltage	
Front LH	M20	47 (SB)	Ground	OPEN	0	
	IVIZU	47 (30)		CLOSE	Battery voltage	

OK or NG

OK >> Front door switch is OK.

NG >> GO TO 2.



## 2. CHECK FRONT DOOR SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front door switch LH or RH and BCM.
- 3. Check continuity between front door switch connector B8 (LH) or B108 (RH) terminal 2 and BCM connector M19 terminal 47 (LH) or connector M18 terminal 12 (LH).

```
Front LH
2 (SB) – 47 (SB)
Front RH
```

: Continuity should exist.

2(R/L) - 12(R/L)

: Continuity should exist.

4. Check continuity between front door switch connector B8 (LH) or B108 (RH) terminal 2 and ground.

#### 2 (SB or R/L) – Ground

# : Continuity should not exist.

#### OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

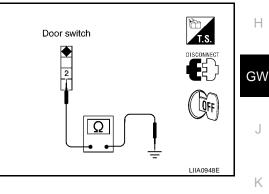
## 3. CHECK DOOR SWITCH

Check continuity between each front door switch terminal 2 and body ground part of front door switch.

Terr	minal	Door switch	Continuity
	Body ground part	Pushed	No
2	of front door switch	Released	Yes

#### OK or NG

- OK >> Replace BCM. Refer to BCS-25, "Removal and Installation of BCM".
- NG >> Replace malfunctioning front door switch.



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## Front Door Lock Assembly LH (Key Cylinder Switch) Check (King Cab) 1. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) INPUT SIGNAL

#### (P)With CONSULT-II

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK SW") in "DATA MONITOR" mode for "POWER DOOR ROCK SYSTEM" with CONSULT-II. Refer to GW-41, "DATA MONITOR".

#### "KEY CYL LK-SW" should be "ON" when key inserted in door key cylinder is turned to lock.

Check front door lock assembly LH (key cylinder switch) ("KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-II. Refer to GW-41, "DATA

"KEY CYL UN-SW" should be "ON" when key inserted

in door key cylinder was turned to unlock.

DATA MONI	TOR	7
MONITOR		
KEY CYL LK - SW	OFF	
	L	_IIA0047E
DATA MONIT	OR	]

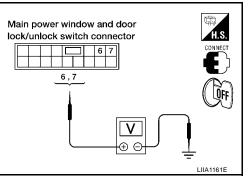
MONITOR KEY CYL UN - SW OFF LIIA0050E

#### Without CONSULT-II

MONITOR" .

Check voltage between main power window and door lock/unlock switch connector and ground.

Connector	Terminals (Wire color)		Key position	Voltage (V)
Connector	(+)	()	Rey pooliton	(Approx.)
	6 (L)		Neutral / Lock	5
D7	0(L)	Ground	Lock	0
D1	7 (R)	Oround	Neutral / Unlock	5
	7 (13)		Unlock	0



#### OK or NG

OK >> Front door lock assembly LH (key cylinder switch) is OK. NG >> GO TO 2.

## 2. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) CIRCUIT

- Turn ignition switch OFF. 1.
- 2. Disconnect main power window and door lock/unlock switch and front door lock assembly LH (key cylinder switch).
- 3. Check continuity between main power window and door lock/ unlock switch connector D7 terminals 6, 7 and front door lock assembly LH (key cylinder switch) connector D14 terminals 1, 6.
  - 7(R) 6(R)

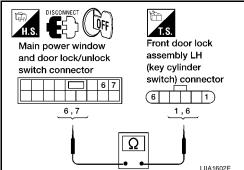
: Continuity should exist.

6 (L) – 1 (L)

: Continuity should exist.

OK or NG

- >> GO TO 3. OK
- NG >> Repair or replace harness.



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## 3. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) GROUND

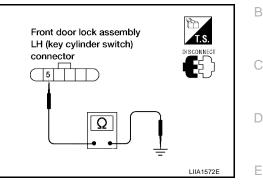
Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminal 5 and ground.

#### 5 (B) – Ground

: Continuity should exist.

#### OK or NG

- OK >> GO TO 4.
- NG >> Repair or replace harness.



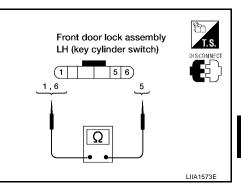
## 4. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminals 1, 6 and 5.

Tern	ninals	Key position	Continuity
6		Neutral / Lock	No
0	F	Unlock	Yes
4	5	Neutral / Unlock	No
1		Lock	Yes

OK or NG

- OK >> Replace main power window and door lock/unlock switch. Refer to <u>EI-32, "Front Door"</u>.
- NG >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>BL-128, "FRONT DOOR LOCK"</u>.



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## Front Door Lock Assembly LH (Key Cylinder Switch) Check (Crew Cab) 1. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) INPUT SIGNAL

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### (P)With CONSULT-II Check front door lock assembly LH (key cylinder switch) ("KEY DATA MONITOR CYL LK SW") in "DATA MONITOR" mode for "POWER DOOR ROCK SYSTEM" with CONSULT-II. Refer to GW-41, "DATA MONITOR MONITOR". KEY CYL LK - SW OFF "KEY CYL LK-SW" should be "ON" when key inserted in door key cylinder is turned to lock. Check front door lock assembly LH (key cylinder switch) ("KEY

CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-II. Refer to GW-41, "DATA MONITOR" .

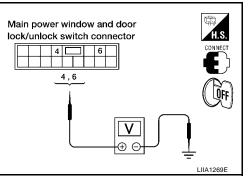
"KEY CYL UN-SW" should be "ON" when key inserted in door key cylinder was turned to unlock.

	L	IIA0047E
DATA MONITO	R	
MONITOR		
KEY CYL UN - SW	OFF	
	L	IIA0050E

#### Without CONSULT-II

Check voltage between main power window and door lock/unlock switch connector and ground.

Connector	Terminals (Wire color)		Key position	Voltage (V)
Connector	(+)	()	rtey poolaon	(Approx.)
	6 (R)		Neutral / Lock	5
D7		Ground	Lock	0
D1	<b>A</b> (I )	Glound	Neutral / Unlock	5
	4 (L)		Unlock	0



#### OK or NG

OK >> Front door lock assembly LH (key cylinder switch) is OK. NG >> GO TO 2.

## 2. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) CIRCUIT

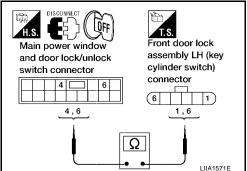
- Turn ignition switch OFF. 1.
- 2. Disconnect main power window and door lock/unlock switch and front door lock assembly LH (key cylinder switch).
- 3. Check continuity between main power window and door lock/ unlock switch connector D7 terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector D14 terminals 1, 6.
  - 6(R) 6(R)

- 4 (L) 1 (L)

: Continuity should exist.

: Continuity should exist.

- >> GO TO 3. OK
- NG >> Repair or replace harness.



## 3. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) GROUND

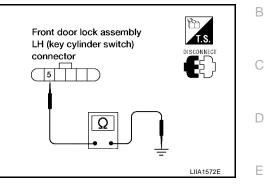
Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminal 5 and ground.

#### 5 (B) – Ground

: Continuity should exist.

#### OK or NG

- OK >> GO TO 4.
- NG >> Repair or replace harness.



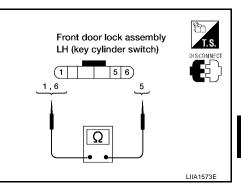
## 4. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminals 1, 6 and 5.

Terminals		Key position	Continuity
0	- 5	Neutral / Lock	No
6		Unlock	Yes
4		Neutral / Unlock	No
1		Lock	Yes

OK or NG

- OK >> Replace main power window and door lock/unlock switch. Refer to <u>EI-32, "Front Door"</u>.
- NG >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>BL-128, "FRONT DOOR LOCK"</u>.



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## Power Window Serial Link Check Front LH and RH (King Cab)

: **ON** 

### 1. CHECK SERIAL LINK OUTPUT SIGNAL

#### (P)With CONSULT-II

Check door lock and unlock switch ("LOCK SW DR/AS", "UNLK SW DR/AS") in DATA MONITOR mode for "REMOTE KEYLESS ENTRY SYSTEM" with CONSULT-II. Refer to GW-41, "DATA MONITOR".

When door lock and unlock switch is turned to LOCK

LOCK SW DR/AS

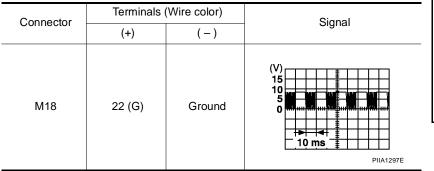
When door lock and unlock switch is turned to UNLOCK : **ON** 

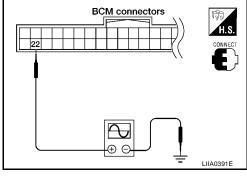
**UNLK SW DR/AS** 

DATA MONITOR MONITOR LOCK SW DR/AS OFF UNLK SW DR/AS OFF LIIA0172E

#### Without CONSULT-II

- 1. Remove key from ignition switch, and make sure the driver side and passenger side doors are closed.
- Check the signal between BCM connector and ground with oscilloscope when door lock and unlock 2. switch (front LH and front RH) is turned "LOCK" or "UNLOCK".
- Make sure signals which are shown in the figure below can be 3. detected during 10 second just after door lock and unlock switch (front LH and front RH) is turned "LOCK" or "UNLOCK".





#### OK or NG

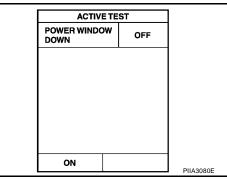
OK >> GO TO 2. NG >> GO TO 3.

## 2. CHECK BCM OUTPUT SIGNAL

Check power window serial link ("POWER WINDOW DOWN") in "ACTIVE TEST" mode with CONSULT-II. Refer to GW-41, "ACTIVE TEST" .

When "ACTIVE TEST" is executed, are the driver side and passenger side windows lowered?

- OK >> Further inspection is necessary. Refer to symptom chart.
- NG >> Replace BCM.

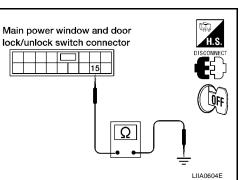


## 3. CHECK POWER WINDOW SWITCH GROUND

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- 3. Check continuity between main power window and door lock/unlock switch connector D7 terminal 15 and ground.

15 (B) – Ground

: Continuity should exist.



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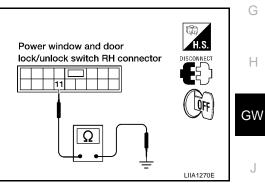
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- 4. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground.
  - 11 (B) Ground

: Continuity should exist.

- OK >> GO TO 4.
- NG >> Repair or replace harness.

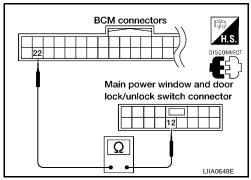


### 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Disconnect BCM.
- 2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 12.

22 (G) – 12 (LG/W)

: Continuity should exist.

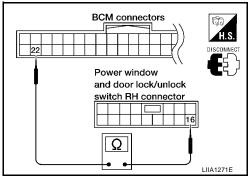


3. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

22 (G) – 16 (LG/W)

: Continuity should exist.

- OK >> Replace main power window and door lock/unlock switch or power window and door lock/unlock switch RH. Refer to EI-32, "Front Door".
- NG >> Repair or replace harness.



## Power Window Serial Link Check Front LH and RH (Crew Cab)

: **ON** 

## 1. CHECK SERIAL LINK OUTPUT SIGNAL

#### With CONSULT-II

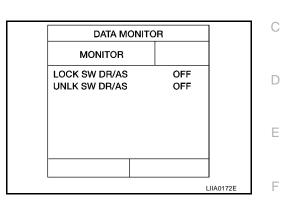
Check door lock and unlock switch ("LOCK SW DR/AS", "UNLK SW DR/AS") in DATA MONITOR mode for "REMOTE KEYLESS ENTRY SYSTEM" with CONSULT-II. Refer to <u>GW-41, "DATA MONITOR"</u>.

• When door lock and unlock switch is turned to LOCK

LOCK SW DR/AS

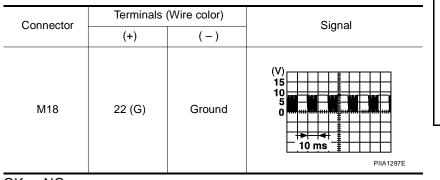
• When door lock and unlock switch is turned to UNLOCK

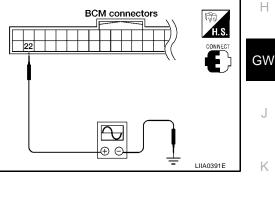
UNLK SW DR/AS : ON



#### Without CONSULT-II

- 1. Remove key from ignition switch, and make sure the driver side and passenger side doors are closed.
- 2. Check the signal between BCM connector and ground with oscilloscope when door lock and unlock switch (front LH and front RH) is turned "LOCK" or "UNLOCK".
- 3. Make sure signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (front LH and front RH) is turned "LOCK" or "UNLOCK".





#### OK or NG

OK >> GO TO 2. NG >> GO TO 3.

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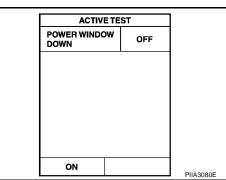
## 2. CHECK BCM OUTPUT SIGNAL

Check power window serial link ("POWER WINDOW DOWN") in "ACTIVE TEST" mode with CONSULT-II. Refer to  $\underline{GW-41}$ , "ACTIVE TEST".

When "ACTIVE TEST" is executed, are the driver side and passenger side windows lowered?

#### OK or NG

- OK >> Further inspection is necessary. Refer to symptom chart.
- NG >> Replace BCM. Refer to <u>BCS-25, "Removal and Installa-</u> tion of <u>BCM"</u>.



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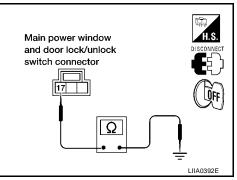
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## 3. CHECK POWER WINDOW SWITCH GROUND

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- 3. Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and ground.

17 (B) – Ground

: Continuity should exist.

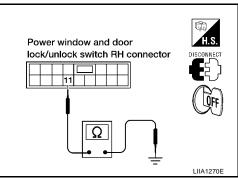


4. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground.

11 (B) – Ground

: Continuity should exist.

- OK >> GO TO 4.
- NG >> Repair or replace harness.

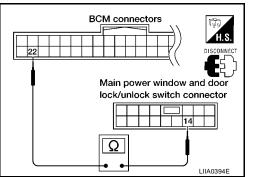


### 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Disconnect BCM.
- 2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 14.

22 (G) – 14 (LG/W)

: Continuity should exist.



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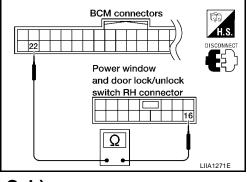
3. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

22 (G) – 16 (LG/W)

: Continuity should exist.

#### OK or NG

- OK >> Replace main power window and door lock/unlock switch or power window and door lock/unlock switch RH. Refer to EI-32, "Front Door"
- NG >> Repair or replace harness.



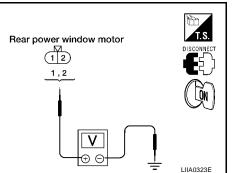
# Rear Power Window Motor LH Circuit Check (Crew Cab) 1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window motor LH.
- 3. Turn ignition switch ON.
- 4. Check voltage between rear power window motor LH connector D204 terminals 1, 2 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
D204	2 (G)	Ground	UP	Battery voltage
			DOWN	0
	1 (L)		UP	0
			DOWN	Battery voltage
OK or NG				

#### OK OF ING

- OK >> Replace rear power window motor LH. Refer to GW-80, "REAR DOOR GLASS AND REGULATOR" .
- NG >> GO TO 2



**Revision: January 2005** 

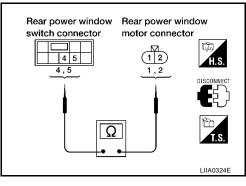
# 2. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH.
- 3. Check continuity between rear power window switch LH connector D203 terminals 4, 5 and rear power window motor LH connector D204 terminal 1, 2.
  - 4 (G) 2 (G) 5 (L) – 1 (L)
- : Continuity should exist.

: Continuity should exist.

#### OK or NG

- OK >> GO TO 3
- NG >> Repair or replace harness.



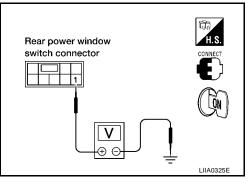
# 3. CHECK POWER SUPPLY

- 1. Connect rear power window switch LH.
- 2. Turn ignition switch ON.
- Check voltage between rear power window switch LH connector D203 terminal 1 and ground. 3.

#### 1 (W/L) – Ground : Battery voltage

#### OK or NG

OK >> GO TO 4. >> Repair or replace harness. NG



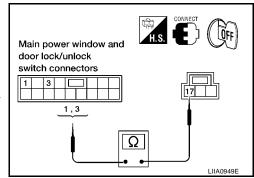
## 4. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

- Turn ignition switch OFF. 1.
- 2. Confirm that power window lock switch is in unlocked position.
- Check continuity between main power window and door lock/unlock switch connector D7 terminals 1, 3 3. and connector D8 terminal 17.
  - 1 (R/Y) 17 (B)
- : Continuity should exist.
- 3 (R/B) 17 (B)

- : Continuity should exist.

#### OK or NG

- OK >> Repair or replace harness.
- >> Replace main power window and door lock/unlock NG switch. Refer to EI-32, "Front Door" .



# POWER WINDOW SYSTEM

# Rear Power Window Motor RH Circuit Check (Crew Cab) 1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window motor RH.
- 3. Turn ignition switch ON.
- 4. Check voltage between rear power window motor RH connector D304 terminals 1, 2 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
D304	2 (Y/B)	Ground	UP	Battery voltage
			DOWN	0
	1 (BR)		UP	0
			DOWN	Battery voltage

# 

Rear power window motor (1 2)

OK or NG

- OK >> Replace rear power window motor RH. Refer to <u>GW-80</u>, <u>"REAR DOOR GLASS AND REGULATOR"</u>.
- NG >> GO TO 2.

# 2. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH.
- 3. Check continuity between rear power window switch RH connector D303 terminals 4, 5 and rear power window motor RH connector D304 terminal 1, 2.
  - 4 (Y/B) 2 (Y/B)

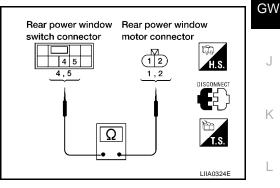
5 (BR) – 1 (BR)

: Continuity should exist.

: Continuity should exist.

#### OK or NG

- OK >> GO TO 3.
- NG >> Repair or replace harness.



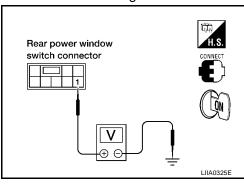
# 3. CHECK POWER SUPPLY

- 1. Connect rear power window switch RH.
- 2. Turn ignition switch ON.
- 3. Check voltage between rear power window switch RH connector D303 terminal 1 and ground.

#### 1 (W/L) – Ground : Battery voltage

#### OK or NG

OK	>> GO TO 4.
NG	>> Repair or replace harness.



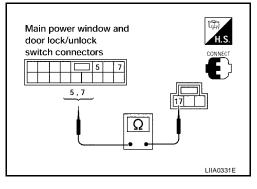
# 4. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Confirm that power window lock switch is in unlocked position.
- 3. Check continuity between main power window and door lock/unlock switch connector D7 terminals 5, 7 and connector D8 terminal 17.
  - 5 (O/L) 17 (B)
- : Continuity should exist.
- 7 (R) 17 (B)

: Continuity should exist.

#### OK or NG

- OK >> Repair or replace harness.
- NG >> Replace main power window and door lock/unlock switch. Refer to EI-32, "Front Door".



# FRONT DOOR GLASS AND REGULATOR

# FRONT DOOR GLASS AND REGULATOR



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**Removal and Installation** 

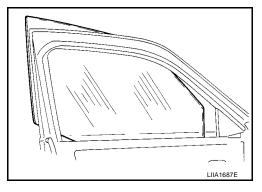


Door glass run Door glass 7.5 (0.77, 66) 6 **(0.77, 66)** Regulator assembly : N·m (kg-m, in-lb)

# FRONT DOOR GLASS

#### Removal

- 1. Remove the front door speaker. Refer to AV-66, "Removal and Installation of Front Door Speaker".
- 2. Remove the hole cover over rear glass bolt.
- 3. Operate the power window main switch to raise/lower the door window until the glass bolts can be seen.
- 4. Remove the inside seal.
- 5. Remove the glass bolts.
- 6. While holding the front door glass, raise it at the rear end and pull the glass out of the sash toward the outside of the door.



#### Installation

Installation is in the reverse order of removal.

**Glass bolts** 

: 6.1 N·m (0.62 kg-m, 54 in-lb)

#### **Fitting Inspection**

- Check that the glass is securely fit into the glass run groove.
- Lower the glass slightly [approximately 10 to 20 mm (0.39 to 0.79 in)] and check that the clearance to the sash is parallel. If the clearance between the glass and sash is not parallel, loosen the regulator bolts, guide rail bolts, and glass and guide rail bolts to correct the glass position.

# FRONT DOOR GLASS REGULATOR

#### Removal

- 1. Remove the front door speaker. Refer to AV-66, "Removal and Installation of Front Door Speaker" .
- 2. Remove the hole cover over rear glass bolt.
- 3. Operate the power window main switch to raise/lower the door window until the glass bolts can be seen.
- 4. Remove the inside seal.
- 5. Remove the glass bolts.
- 6. Raise the front door glass and hold it in place with suitable tool.
- 7. Disconnect the harness connector from the regulator assembly.
- 8. Remove the bolts and the regulator assembly.

#### **Disassembly And Assembly**

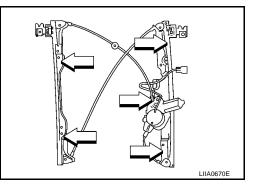
Remove the regulator motor from the regulator assembly.

#### **Inspection After Removal**

Check the regulator assembly for the following items. If a malfunction is detected, replace or grease it.

- Wire wear
- Regulator deformation
- Grease condition for each sliding part

The arrows in the figure show the application points of the body grease.



#### Installation

- 1. Install the regulator assembly. Refer to <u>GW-78, "FRONT DOOR GLASS REGULATOR"</u>.
- 2. Connect the harness connector to the regulator assembly.
- 3. Align the glass and install the glass bolts.

#### Glass bolts : 6.1 N·m (0.62 kg-m, 54 in-lb)

- 4. Reset the limit switch. Refer to <u>GW-78, "Setting of Limit Switch"</u>.
- 5. Install front door speaker. Refer to AV-66, "Removal and Installation of Front Door Speaker" .

# SETTING AFTER INSTALLATION Setting of Limit Switch

If any of the following work has been done, set the limit switch (integrated in the motor).

- Removal and installation of the regulator.
- Removal and installation of the motor from the regulator.
- Removal and installation of the glass.
- Removal and installation of the glass run.

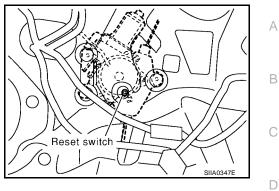
#### Resetting

After installing each component, perform the following procedure to reset the limit switch.

- 1. Raise the glass to the top position.
- 2. While pressing and holding the reset switch, lower the glass to the bottom position.
- 3. Release the reset switch. Verify that the reset switch returns to the original position, if not, pull the switch using suitable tool.
- 4. Raise the glass to the top position.

#### **CAUTION:**

Do not operate the glass automatically to raise the glass to the top position.



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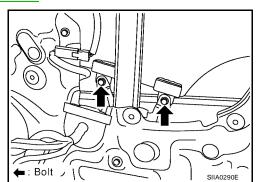
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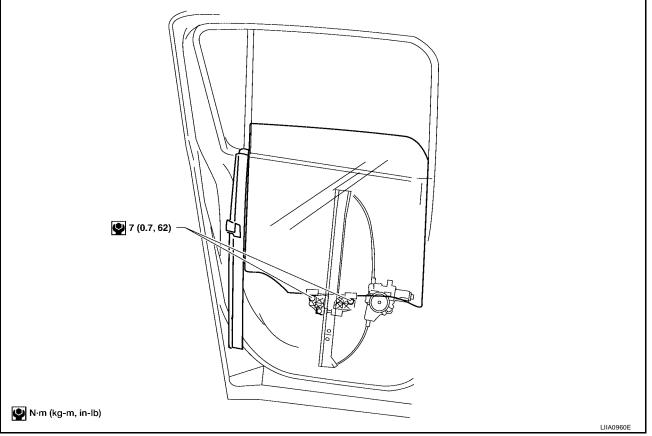
# REAR DOOR GLASS AND REGULATOR

#### Rear Door Glass REMOVAL

- 1. Remove the rear door finisher. Refer to EI-33, "Rear Door Crew Cab" .
- 2. Operate the power window switch to raise/lower the door window until the glass bolts can be seen.
- 3. Remove the inside seal.
- 4. Remove the glass run from the partition glass.
- 5. Remove the partition sash bolt (lower) and screw (upper) to remove the sash.
- 6. Remove the glass bolts and the glass.
- 7. Remove the partition glass from the panel.



#### INSTALLATION



- 1. Install the partition glass in the panel.
- 2. Install the partition sash.
- 3. Install the glass from outside to ensure that it is in both the front and rear glass channels. Tighten glass the bolts to the specified torque.

#### **Glass bolts**

: 6.1 N·m (0.62 kg-m, 54 in-lb)

- 4. Install the inside seal.
- 5. Install the rear door finisher. Refer to EI-33, "Rear Door Crew Cab" .

#### FITTING INSPECTION

• Check that the glass is securely fit into the glass run groove.

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# **REAR DOOR GLASS AND REGULATOR**

• Lower the glass slightly [approximately 10 to 20 mm (0.39 to 0.79 in)], and check that the clearance to the sash is parallel. If the clearance between the glass and sash is not parallel, loosen the regulator bolt, guide rail bolts, and glass and carrier plate bolts to correct the glass position.

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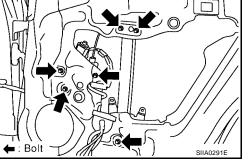
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#### Rear Door Glass Regulator REMOVAL

- 1. Remove the rear door finisher. Refer to EI-33, "Rear Door Crew Cab" .
- 2. Operate the power window switch to raise/lower the door window until the glass bolts can be seen.
- 3. Remove the inside seal.
- 4. Remove the glass bolts, raise the glass and hold in place with suitable tool.
- 5. Remove the bolts and the regulator and guide channel from the panel.
- 6. Disconnect the connector for the regulator assembly.



#### **INSPECTION AFTER REMOVAL**

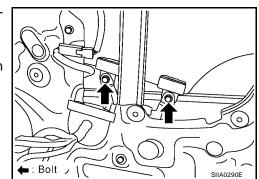
Check the regulator assembly for the following items. If a malfunction is detected, replace or grease it.

- Gear wear
- Regulator deformation
- Spring damage
- Grease condition for each sliding part

#### INSTALLATION

Installation is in the reverse order of removal.

**GW-82** 



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### SIDE WINDOW GLASS

# SIDE WINDOW GLASS



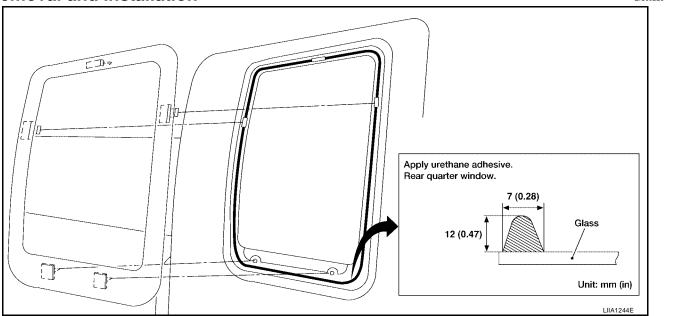
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# Removal and Installation



#### REMOVAL

- 1. Remove the rear door finisher. Refer to EI-34, "Rear Door King Cab" .
  - Remove glass using piano wire or power cutting tool and an inflatable pump bag.
  - If the window glass is to be reused, mark the body and the glass with mating marks.

#### WARNING:

When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

#### **CAUTION:**

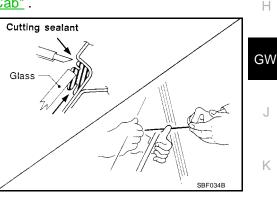
- When the side window glass is to be reused, do not use a cutting knife or power cutting tool.
- Be careful not to scratch the glass when removing.
- Do not set or stand the glass on its edge. Small chips may develop into cracks.

#### INSTALLATION

- Use a genuine NISSAN Urethane Adhesive Kit (if available) or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger compartment air pressure when a door is closed.
- Check gap along bottom to confirm that glass does not contact sheet metal.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.
- Install removed parts.

#### WARNING:

- Keep heat and open flames away as primers and adhesive are flammable.
- The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Avoid contact with the skin and eyes.
- Use in an open, well ventilated location. Avoid breathing the vapors. They can be harmful if inhaled. If affected by vapor inhalation, immediately move to an area with fresh air.
- Driving the vehicle before the urethane adhesive has completely cured may affect the performance of the glass in case of an accident.



#### CAUTION:

- Do not use an adhesive which is past its usable term. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.
- Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.
- Do not leave primers or adhesive cartridge unattended with their caps open or off.
- The vehicle should not be driven for at least 24 hours or until the urethane adhesive has completely cured. Curing time varies depending on temperature and humidity. The curing time will increase under lower temperatures and lower humidities.

#### **Repairing Water Leaks for Side Window Glass**

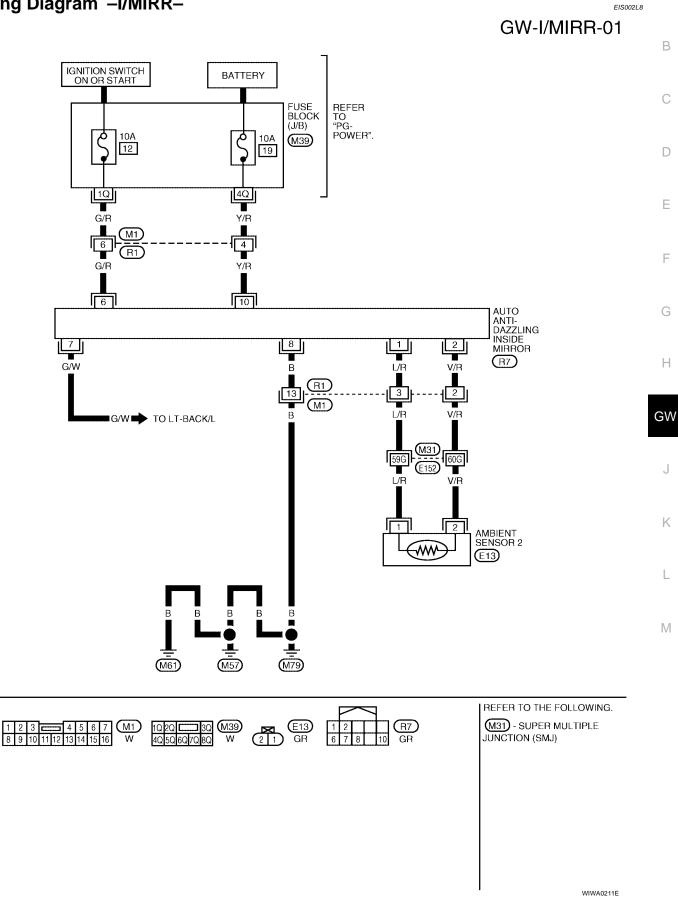
Leaks can be repaired without removing or reinstalling glass.

If water is leaking between urethane adhesive material and body or glass, determine the extent of leakage.

This can be done by applying water to the side window area while pushing glass outward.

To stop leak, apply primer (if necessary) and then urethane adhesive to the leak point.

# INSIDE MIRROR Wiring Diagram –I/MIRR–

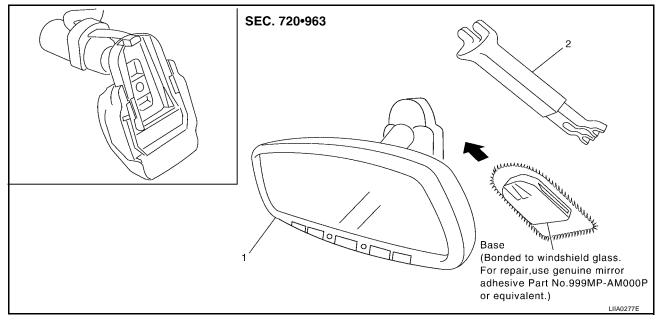


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# **Removal and Installation**

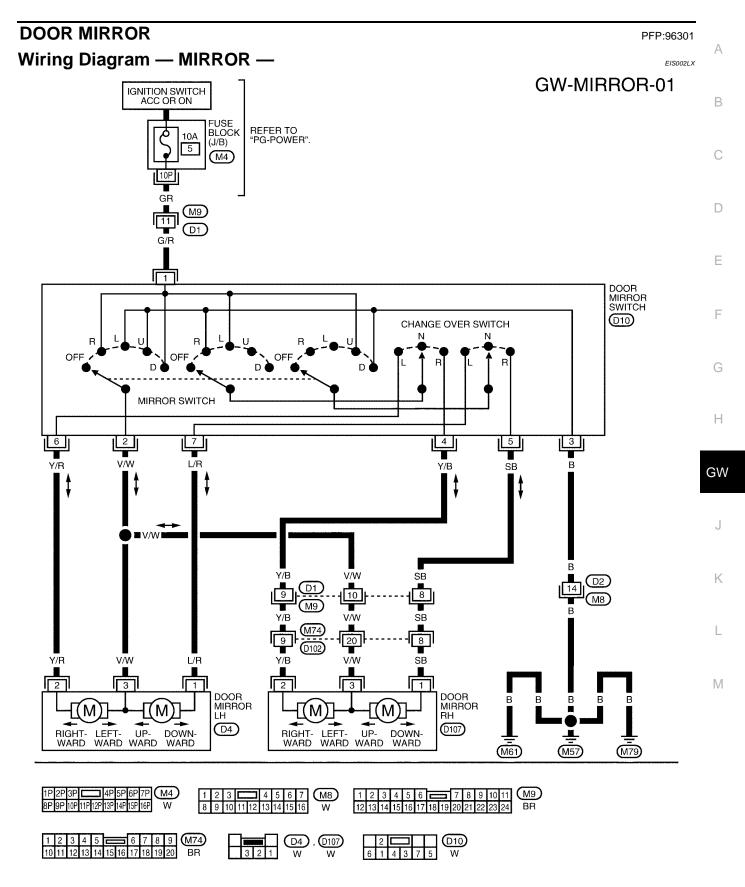
- 1. Remove the inside mirror finisher.
- 2. Slide the mirror upward to remove.
- 3. Disconnect the connector.

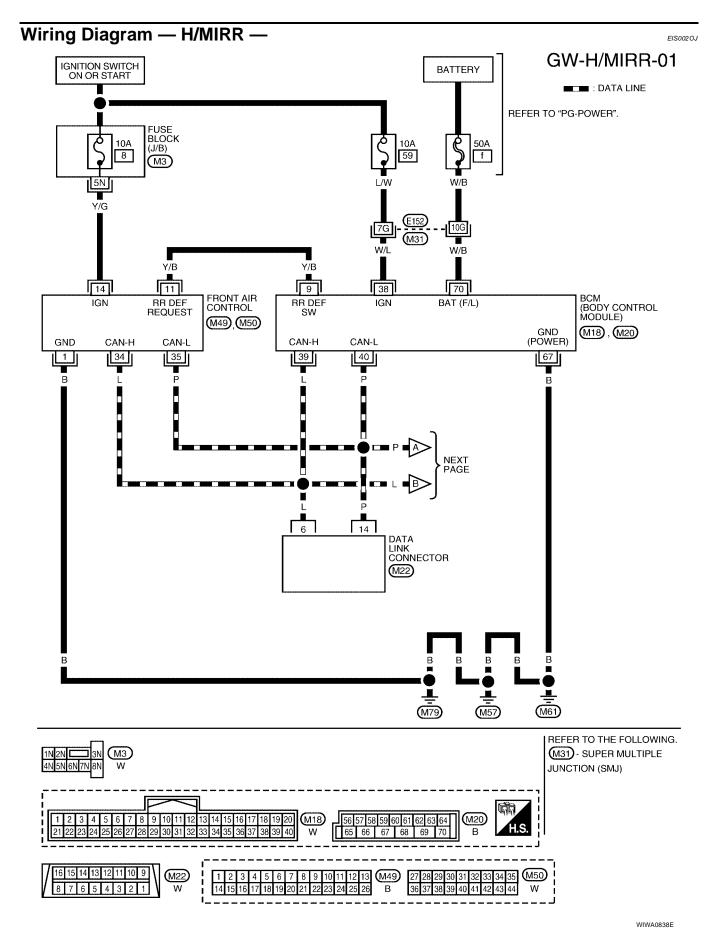


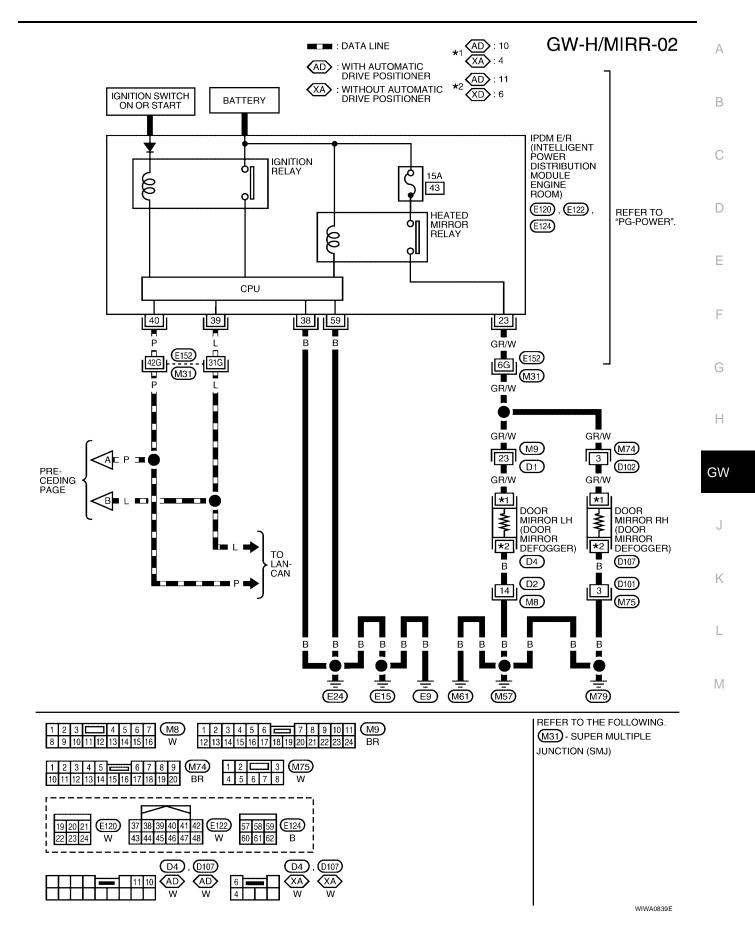
1. Inside mirror

2. Inside mirror finisher

Install in the reverse order of removal.

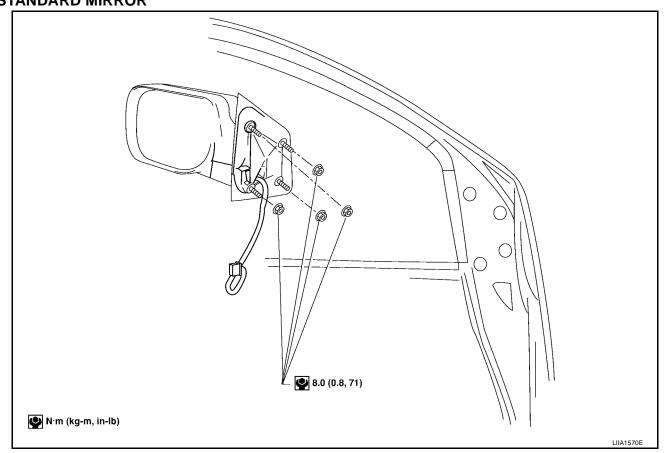






### Door Mirror Assembly STANDARD MIRROR





### **Removal and Installation**

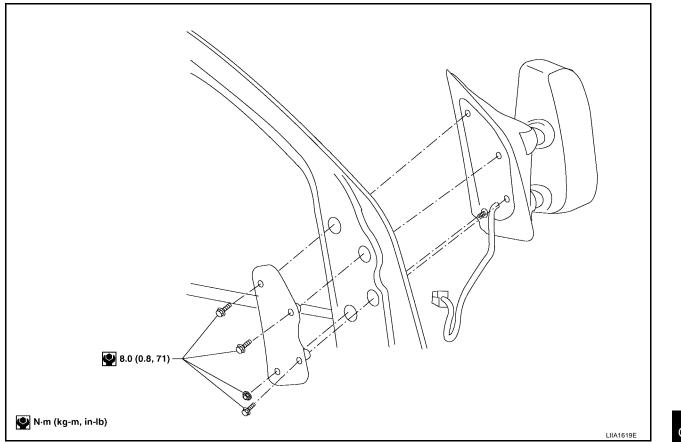
#### NOTE:

Be careful not to damage the mirror bodies.

- 1. Remove the front door finisher. Refer to EI-32, "Front Door" .
- 2. Remove the adhesive front door sash cover.
- 3. Disconnect the mirror electrical connector.
- 4. Remove the door mirror nuts, and remove the door mirror assembly.

Installation is in the reverse order of removal.

#### TRAILER TOW MIRROR



# Removal and Installation NOTE:

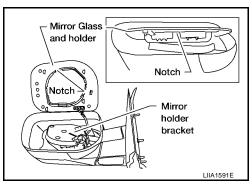
Be careful not to damage the mirror bodies.

- 1. Remove the front door finisher. Refer to EI-32, "Front Door" .
- 2. Disconnect the mirror electrical connector.
- 3. Remove the door reinforcement plate.
- 4. Remove the door mirror assembly.

Install in the reverse order of removal.

#### DOOR MIRROR GLASS REMOVAL

- 1. Remove door mirror assembly. Refer to <u>GW-90, "Door Mirror Assembly"</u>.
- 2. Set mirror assembly mirror glass upward.
- 3. Apply protective tape to mirror housing.
- 4. Insert a screwdriver into notch and remove mirror glass by pushing up two hooks.
- 5. Disconnect two electrical connectors from mirror holder.





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#### INSTALLATION

- 1. Set mirror holder bracket and mirror assembly in the horizontal position.
- 2. Connect two electrical connectors to the back of the mirror holder.
- 3. Heat lower hooks with a hair dryer to prevent breaking the hooks.
- 4. Align upper hooks to bracket.
- 5. Align lower hooks to bracket and push lower part of mirror glass down into bracket until you hear a click. Ensure that mirror glass is secure in door mirror.
- 6. Install door mirror assembly. Refer to <u>GW-90</u>, "Door <u>Mirror</u> <u>Assembly"</u>

