

SECTION **DEF**  
**DEFOGGER**

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# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000008142610

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 AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the 12V battery, and wait at least 3 minutes before performing any service.

#### Precaution Necessary for Steering Wheel Rotation after 12V Battery Disconnect

INFOID:000000008142611

For vehicle with steering lock unit, if the 12V battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the 12V battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

#### OPERATION PROCEDURE

1. Connect both 12V battery cables.  
**NOTE:**  
Supply power using jumper cables if 12V battery is discharged.
2. Turn the ignition switch to ACC position.  
(At this time, the steering lock will be released.)
3. Disconnect both 12V battery cables. The steering lock will remain released with both 12V battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both 12V battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform All DTC Reading using CONSULT and delete DTC.  
**NOTE:**  
Multiple DTCs are detected when 12V battery cable is disconnected while ignition switch is in ACC position.

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# COMPONENT PARTS

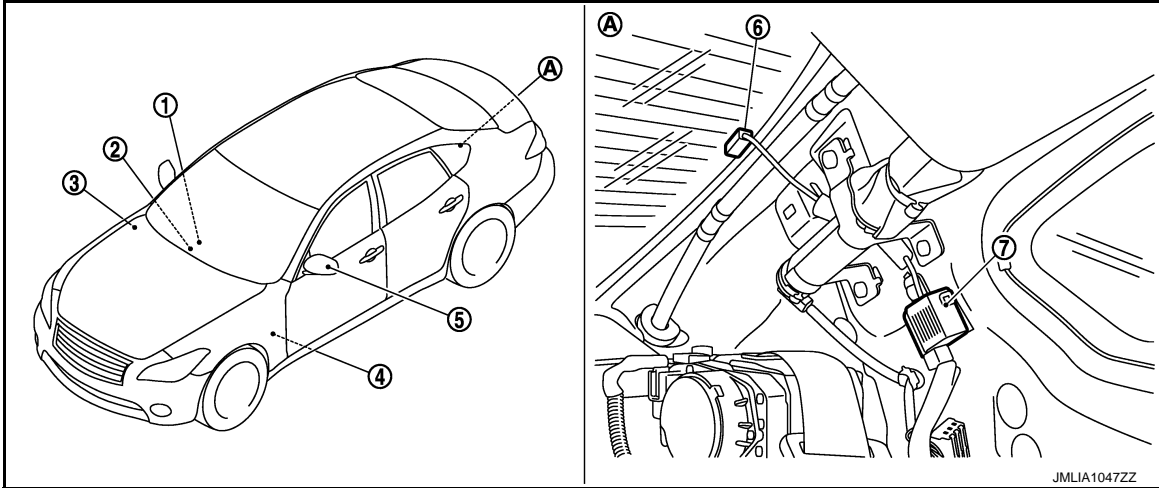
< SYSTEM DESCRIPTION >

## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:000000008142612



AV control unit

Refer to [AV-11, "Component Parts Location"](#) (Base audio without navigation) or [AV-128, "Component Parts Location"](#) (BOSE audio with navigation).

1.

2. Multifunction switch

IPDM E/R

Refer to [PCS-5, "IPDM E/R : Component Parts Location"](#)

3.

BCM

Refer to [BCS-4, "BODY CONTROL SYSTEM : Component Parts Location"](#)

4.

5. Door mirror (door mirror defogger)

6. Rear window defogger connector

7. Condenser

#### Component Description

INFOID:000000008142613

BCM	<ul style="list-style-type: none"> <li>Operates the rear window defogger with the operation of rear window defogger switch</li> <li>Performs the timer control of rear window defogger</li> </ul>
Rear window defogger relay	Operates the rear window defogger and the door mirror defogger with the control signal from BCM
IPDM E/R	Transmit rear window defogger ON signal to AV control unit via CAN communication
Multifunction switch (Rear window defogger switch)	<ul style="list-style-type: none"> <li>The rear window defogger switch is installed</li> <li>Turns the indicator lamp ON when detecting the operation of rear window defogger</li> </ul>
AV control unit	Displays the rear window defogger ON to the display when detecting the operation of rear window defogger
Rear window defogger	Heats the heating wire with the power supply from the rear window defogger relay to prevent the rear window from fogging up
Door mirror defogger	Heats the heating wire with the power supply from the rear window defogger relay to prevent the door mirror from fogging up

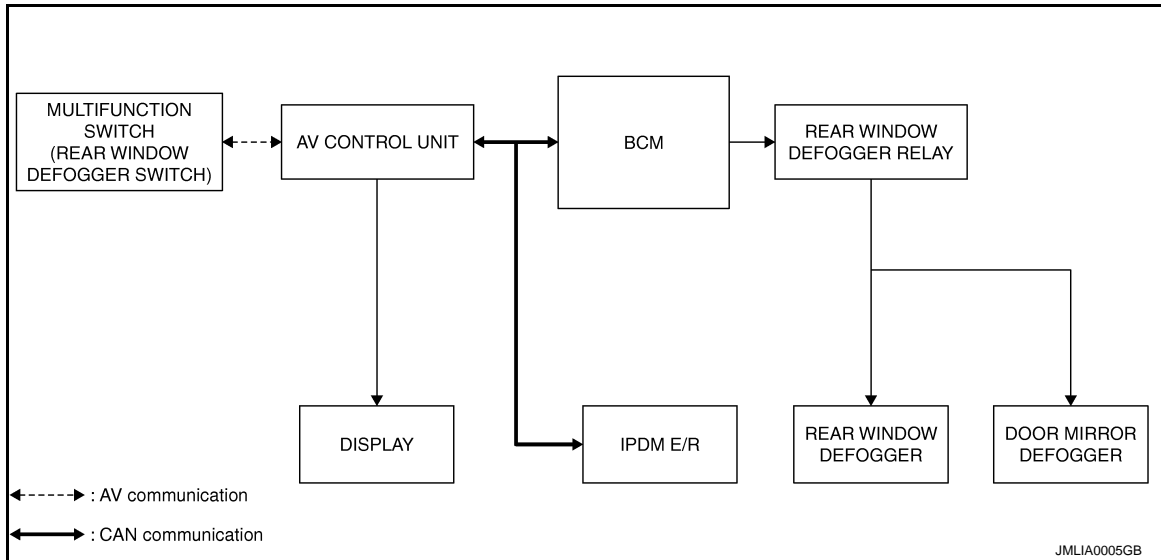
# SYSTEM

< SYSTEM DESCRIPTION >

## SYSTEM

### System Diagram

INFOID:000000008142614



### System Description

INFOID:000000008142615

#### Operation Description

- Turn rear window defogger switch ON when the ignition switch turns ON. Then multifunction switch (rear window defogger switch) transmits rear window defogger switch signal to AV control unit via AV communication. AV control unit transmits rear window defogger switch signal to BCM via CAN communication.
- BCM turns rear window defogger relay ON and transmits rear window defogger control signal to IPDM E/R via CAN communication when rear window defogger switch signal is received.
- Rear window defogger and door mirror defogger (with mirror defogger) are supplied with power and operate when rear window defogger relay turns ON.
- IPDM E/R transmits rear window defogger control signal to AV control unit via CAN communication.
- AV control unit transmit rear defogger indicator signal to multifunction switch (rear window defogger switch) via AV communication, then rear window defogger indicator is illuminated.

#### Timer function

- BCM turns rear window defogger relay ON for approximately 15 minutes when rear window defogger switch turns ON. It makes rear window defogger and door mirror defogger (with mirror defogger) operate.
- Timer is canceled after pressing rear window defogger switch again during timer operation. Then BCM turns rear window defogger relay OFF. The same reaction also occurs during timer operation, if the ignition switch is turned OFF.

#### INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Rear window defogger switch	Defogger switch signal	Rear window defogger and Door mirror defogger control	Rear window defogger Door mirror defogger
Push button ignition switch	Ignition signal		

# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

#### COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000008491750

#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul style="list-style-type: none"> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul>

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*		×	×
<ul style="list-style-type: none"> <li>Intelligent Key system</li> <li>Engine start system</li> </ul>	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
—	AIR PRESSURE MONITOR*	×	×	×

\*: This item is not used.

#### FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

# DIAGNOSIS SYSTEM (BCM)

## < SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected*	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"
	ACC>ON		While turning power supply position from "ACC" to "IGN"
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
	ACC>OFF		While turning power supply position from "ACC" to "OFF"
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"
	OFF>ACC		While turning power supply position from "OFF" to "ACC"
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode
	LOCK		Power supply position is "LOCK"
	OFF		Power supply position is "OFF"
	ACC		Power supply position is "ACC"
	ON		Power supply position is "IGN"
ENGINE RUN	Power supply position is "RUN"		
CRANKING	Power supply position is "CRANKING"		
IGN Counter	0 - 39	<p>The number of times that ignition switch is turned ON after DTC is detected</p> <ul style="list-style-type: none"> <li>• The number is 0 when a malfunction is detected now.</li> <li>• The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>• The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul>	

### NOTE:

\*: Refer to [PCS-34, "POWER DISTRIBUTION SYSTEM : System Description"](#) for details of the power supply position.

## REAR WINDOW DEFOGGER

### REAR WINDOW DEFOGGER : CONSULT Function (BCM - REAR DEFOGGER)

INFOID:000000008142617

#### Data monitor

Monitor Item	Description
REAR DEF SW	This is displayed even when it is not equipped.
PUSH SW	Indicates [ON/OFF] condition of push switch.

#### ACTIVE TEST

## DIAGNOSIS SYSTEM (BCM)

### < SYSTEM DESCRIPTION >

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Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation. Rear window defogger operates when "ON" on CONSULT screen is touched.



# BCM

< ECU DIAGNOSIS INFORMATION >

## ECU DIAGNOSIS INFORMATION

BCM

List of ECU Reference

INFOID:000000008142618

ECU	Reference
BCM	<a href="#">BCS-34. "Reference Value"</a>
	<a href="#">BCS-54. "Fail-safe"</a>
	<a href="#">BCS-54. "DTC Inspection Priority Chart"</a>
	<a href="#">BCS-55. "DTC Index"</a>

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# REAR WINDOW DEFOGGER SYSTEM

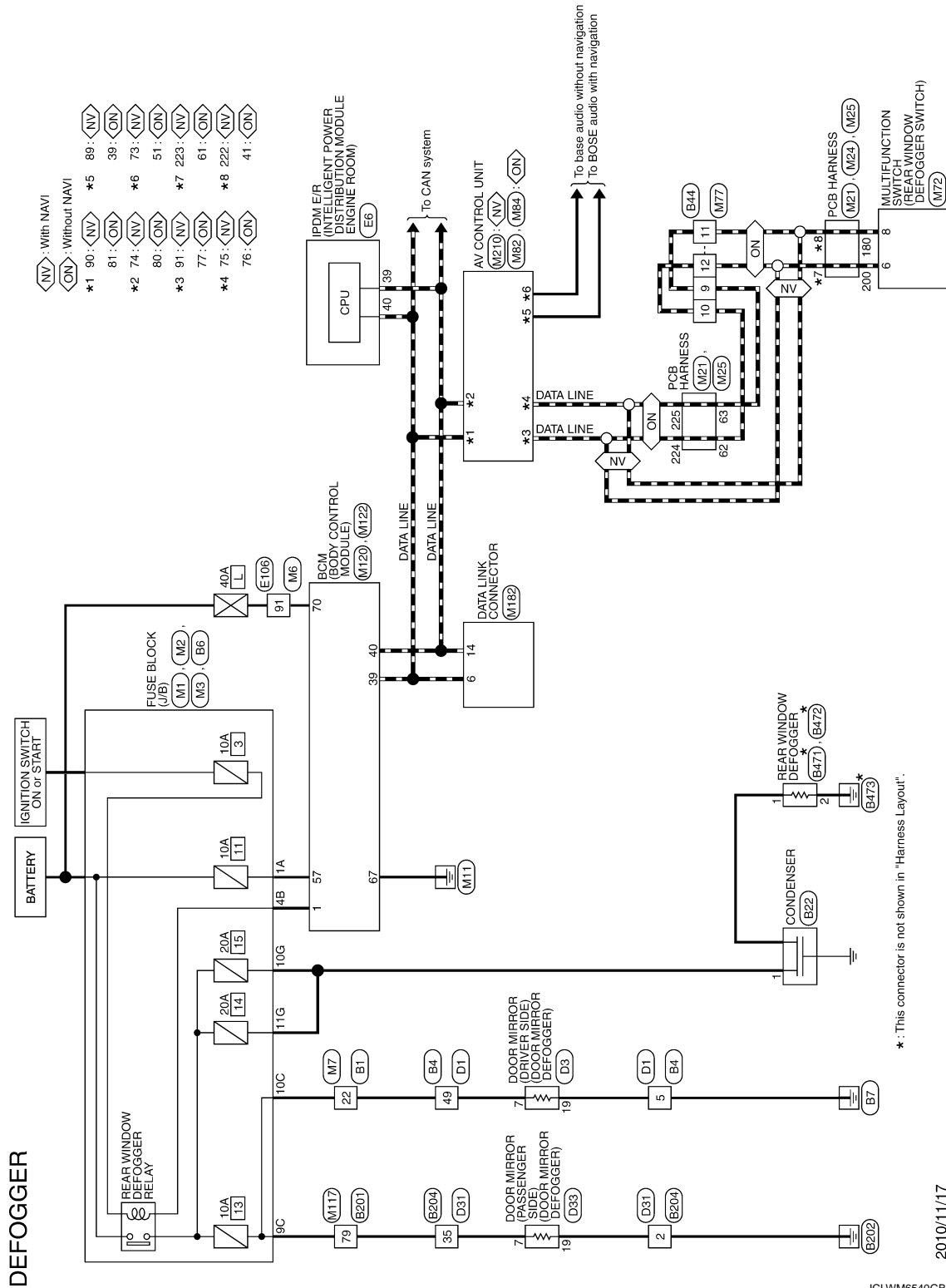
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## WIRING DIAGRAM

### REAR WINDOW DEFOGGER SYSTEM

#### Wiring Diagram

INFOID:000000008142619



2010/11/17

JCLWM6540GB

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000008142620

DETAILED FLOW

#### 1.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much as possible when the customer brings the vehicle in.

>> GO TO 2.

#### 2.CHECK DTC

Perform self diagnosis with CONSULT

Is any DTC detected?

YES >> Refer to [BCS-55. "DTC Index"](#).

NO >> GO TO 3.

#### 3.REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.  
Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 4.

#### 4.IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

Use "Symptom diagnosis" from the symptom inspection result in step 3. Then identify where to start performing the diagnosis based on possible causes and symptoms.

>> GO TO 5.

#### 5.IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

Perform the diagnosis with "Component diagnosis" of the applicable system.

>> GO TO 6.

#### 6.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 7.

#### 7.FINAL CHECK

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 3.

Are all malfunctions corrected?

YES >> INSPECTION END

NO >> GO TO 4.

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# REAR WINDOW DEFOGGER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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## DTC/CIRCUIT DIAGNOSIS

### REAR WINDOW DEFOGGER SWITCH

#### Component Function Check

INFOID:000000008142621

#### 1. CHECK REAR WINDOW DEFOGGER SWITCH FUNCTION

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Check that the indicator lamp of rear window defogger illuminates when rear window defogger switch ON.

Is the inspection result normal?

- YES >> Rear window defogger switch function is OK.
- NO >> Refer to [DEF-12, "Diagnosis Procedure"](#)

#### Diagnosis Procedure

INFOID:000000008142622

#### 1. CHECK MULTIFUNCTION SWITCH (REAR WINDOW DEFOGGER SWITCH)

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Does multifunction switch operate normally?

Base audio without navigation. Refer to [AV-97, "Symptom Table"](#).

BOSE audio with navigation. Refer to [AV-253, "Symptom Table"](#).

Is the inspection result normal?

- YES >> INSPECTION END.
- NO >> Replace multifunction switch (rear window defogger switch).

# REAR WINDOW DEFOGGER RELAY

< DTC/CIRCUIT DIAGNOSIS >

## REAR WINDOW DEFOGGER RELAY

### Component Function Check

INFOID:000000008142623

#### 1.CHECK REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT

1. Perform Active Test ("REAR DEFOGGER") with CONSULT.
2. Touch "ON".
3. Check that the rear window heating wire is getting warmer.

Is the inspection result normal?

- YES >> Rear window defogger relay power supply circuit is OK.  
 NO >> Refer to [DEF-13. "Diagnosis Procedure"](#)

### Diagnosis Procedure

INFOID:000000008142624

#### 1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check 10A fuse [No.3, located in fuse block (J/B)].

Is the inspection result normal?

- YES >> GO TO 2.  
 NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

#### 2.CHECK REAR WINDOW DEFOGGER CIRCUIT 1

1. Turn ignition switch ON.
2. Check voltage between BCM harness connector and ground.

BCM		Ground	Condition	Voltage (V) (Approx.)
Connector	Terminal			
M120	1	Ground	Rear window defogger switch	ON
			OFF	Battery voltage

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> GO TO 3.

#### 3.CHECK REAR WINDOW DEFOGGER CIRCUIT 2

1. Turn ignition switch OFF.
2. Disconnect BCM connector and rear window defogger relay.
3. Check continuity between BCM harness connector and fuse block (J/B) harness connector.

BCM		Fuse block (J/B)		Continuity
Connector	Terminal	Connector	Terminal	
M120	1	M2	4B	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M120	1		Not existed

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> Repair or replace harness.

#### 4.CHECK REAR WINDOW DEFOGGER RELAY

Check rear window defogger relay.  
 Refer to [DEF-14. "Component Inspection"](#)

Is the inspection result normal?

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# REAR WINDOW DEFOGGER RELAY

## < DTC/CIRCUIT DIAGNOSIS >

- YES >> GO TO 5.  
 NO >> Replace rear window defogger relay.

### 5.CHECK FUSE BLOCK (J/B)

1. Install the rear window defogger relay.
2. Turn ignition switch ON.
3. Check voltage between fuse block (J/B) (fuse block side) and ground.

Fuse block (J/B)		Ground	Voltage (V) (Approx.)
Connector	Terminal		
M2	4B	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 6.  
 NO >> Repair or replace fuse block (J/B).

### 6.CHECK INTERMITTENT INCIDENT

Check intermittent incident.  
 Refer to [GI-49. "Intermittent Incident"](#).

>> INSPECTION END.

## Component Inspection

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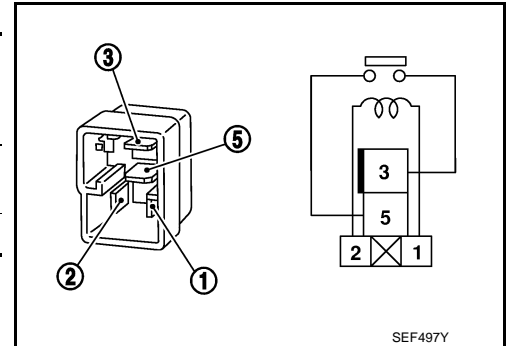
### 1.CHECK REAR WINDOW DEFOGGER RELAY

1. Turn ignition switch OFF.
2. Disconnect rear window defogger relay.
3. Check rear window defogger relay.

Terminal		Condition	Continuity
Rear window defogger relay			
3	5	12 V direct current supply between terminals 1 and 2.	Existed
		No current supply	Not existed

Is the inspection result normal?

- YES >> INSPECTION END.  
 NO >> Replace rear window defogger relay.



# REAR WINDOW DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

## REAR WINDOW DEFOGGER

### Component Function Check

INFOID:000000008142626

#### 1.CHECK REAR WINDOW DEFOGGER

1. Perform Active Test ("REAR DEFOGGER") with CONSULT.
2. Touch "ON".
3. Check that the rear window heating wire is getting warmer.

Is the inspection result normal?

- YES >> Rear window defogger is OK.  
NO >> Refer to [DEF-15. "Diagnosis Procedure"](#)

#### Diagnosis Procedure

INFOID:000000008142627

#### 1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check the following items.
  - 20A fuse [No.14, located in fuse block (J/B)]
  - 20A fuse [No.15, located in fuse block (J/B)]

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

#### 2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between rear window defogger harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Connector	Terminal				
B471	1	Ground	Rear window defogger switch	ON	Battery voltage
			OFF	0	

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> GO TO 4.

#### 3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear window defogger connector.
3. Check continuity between rear window defogger harness connector and ground.

Rear window defogger		Ground	Continuity
Connector	Terminal		
B472	2		Existed

Is the inspection result normal?

- YES >> GO TO 7.  
NO >> Repair or replace harness .

#### 4.CHECK REAR WINDOW DEFOGGER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect condenser connector and fuse block (J/B) connector.
3. Check continuity between fuse block (J/B) harness connector and condenser harness connector.

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# REAR WINDOW DEFOGGER

## < DTC/CIRCUIT DIAGNOSIS >

Fuse block (J/B)		Condenser		Continuity
Connector	Terminal	Connector	Terminal	
B6	10G	B22	1	Existed
	11G			

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5.CHECK FUSE BLOCK (J/B)

1. Turn ignition switch ON.
2. Check voltage between fuse block (J/B) (fuse block side) and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)
Fuse block (J/B)				
Connector	Terminal	Ground		
B6	10G		Rear window defogger switch: ON	Battery voltage
			Rear window defogger switch: OFF	0
	11G		Rear window defogger switch: ON	Battery voltage
		Rear window defogger switch: OFF	0	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace fuse block (J/B).

### 6.CHECK CONDENSER

Check condenser. Refer to [DEF-16, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace condenser.

### 7.CHECK FILAMENT

Check the filament for damage or blown.  
Refer to [DEF-27, "Inspection and Repair"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair filament.

### 8.CHECK INTERMITTENT INCIDENT

Check intermittent incident.  
Refer to [GI-49, "Intermittent Incident"](#).

>> INSPECTION END

## Component Inspection

INFOID:000000008142628

### 1.CHECK FILAMENT

Check the filament for damage or blown.  
Refer to [DEF-27, "Inspection and Repair"](#).

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Repair filament.



# DOOR MIRROR DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

## DOOR MIRROR DEFOGGER

### Component Function Check

INFOID:000000008142629

#### 1.CHECK DOOR MIRROR DEFOGGER

1. Perform Active Test ("REAR DEFOGGER") with CONSULT.
2. Touch "ON".
3. Check that both side door mirror glass is getting warmer.

Is the inspection result normal?

- YES >> Door mirror defogger is OK.  
NO >> Refer to [DEF-17. "Diagnosis Procedure"](#)

### Diagnosis Procedure

INFOID:000000008142630

#### 1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check 10A fuse [No.13, located in fuse block (J/B)].

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

#### 2.CHECK FUSE BLOCK (J/B)

1. Turn ignition switch ON.
2. Check voltage between fuse block (J/B) (fuse block side) and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Fuse block (J/B)					
Connector	Terminal				
M3	9C	Ground	Rear window de-fogger switch	ON	Battery voltage
			OFF	0	
	10C		Rear window de-fogger switch	ON	Battery voltage
			OFF	0	

Is the inspection result normal?

- YES >> INSPECTION END.  
NO >> Replace fuse block (J/B).

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# DRIVER SIDE DOOR MIRROR DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

## DRIVER SIDE DOOR MIRROR DEFOGGER

### Component Function Check

INFOID:000000008142631

#### 1.CHECK DRIVER SIDE DOOR MIRROR DEFOGGER

1. Perform Active Test ("REAR DEFOGGER") with CONSULT.
2. Touch "ON".
3. Check that the driver side door mirror glass is getting warmer.

Is the inspection result normal?

- YES >> Driver side door mirror defogger is OK.  
NO >> Refer to [DEF-18. "Diagnosis Procedure"](#)

### Diagnosis Procedure

INFOID:000000008142632

#### 1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror (driver side) connector.
3. Turn ignition switch ON.
4. Check voltage between door mirror (driver side) harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Door mirror (driver side)					
Connector	Terminal				
D3	7	Ground	Rear window de-fogger switch	ON	Battery voltage
				OFF	0

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> GO TO 2.

#### 2.CHECK FUSE BLOCK (J/B) OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect fuse block (J/B) connector.
3. Turn ignition switch ON.
4. Check voltage between fuse block (J/B) harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Fuse block (J/B)					
Connector	Terminal				
M3	10C	Ground	Rear window de-fogger switch	ON	Battery voltage
				OFF	0

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Replace fuse block (J/B).

#### 3.CHECK DRIVER SIDE DOOR MIRROR DEFOGGER CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between fuse block (J/B) harness connector and door mirror (driver side) harness connector.

Fuse block (J/B)		Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
M3	10C	D3	7	Existed

3. Check continuity between fuse block (J/B) harness connector and ground.

# DRIVER SIDE DOOR MIRROR DEFOGGER

## < DTC/CIRCUIT DIAGNOSIS >

Fuse block (J/B)		Ground	Continuity
Connector	Terminal		
M3	10C	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

### 4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror (driver side) harness connector and ground.

Door mirror (driver side)		Ground	Continuity
Connector	Terminal		
D3	19	Ground	Existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5.CHECK DRIVER SIDE DOOR MIRROR DEFOGGER

Check driver side door mirror defogger.  
Refer to [DEF-19. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace door mirror (driver side). Refer to [MIR-24. "DOOR MIRROR ASSEMBLY : Removal and Installation"](#).

### 6.CHECK INTERMITTENT INCIDENT

Check intermittent incident.  
Refer to [GI-49. "Intermittent Incident"](#).

Is the inspection result normal?

>> INSPECTION END.

## Component Inspection

INFOID:000000008142633

### 1.CHECK DRIVER SIDE DOOR MIRROR DEFOGGER

1. Turn ignition switch OFF.
2. Disconnect door mirror (driver side) connector.
3. Check continuity between door mirror terminals.

Door mirror (driver side)			Continuity
Connector	Terminal		
D3	7	19	Existed

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace door mirror (driver side). Refer to [MIR-24. "DOOR MIRROR ASSEMBLY : Removal and Installation"](#).

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# PASSENGER SIDE DOOR MIRROR DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

## PASSENGER SIDE DOOR MIRROR DEFOGGER

### Component Function Check

INFOID:000000008142634

#### 1.CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER

1. Perform Active Test ("REAR DEFOGGER") with CONSULT.
2. Touch "ON".
3. Check that the passenger side door mirror glass is getting warmer.

Is the inspection result normal?

- YES >> Passenger side door mirror defogger is OK.  
NO >> Refer to [DEF-20. "Diagnosis Procedure"](#)

### Diagnosis Procedure

INFOID:000000008142635

#### 1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror (passenger side) connector.
3. Turn ignition switch ON.
4. Check voltage between door mirror (passenger side) harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Door mirror (Passenger side)	Terminal				
Connector	Terminal	Ground	Rear window de-fogger switch	ON	Battery voltage
D33	7			OFF	0

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> GO TO 2.

#### 2.CHECK FUSE BLOCK (J/B) OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect fuse block (J/B) connector.
3. Turn ignition switch ON.
4. Check voltage between fuse block (J/B) harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)	
Fuse block (J/B)	Terminal				
Connector	Terminal	Ground	Rear window de-fogger switch	ON	Battery voltage
M3	9C			OFF	0

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Replace fuse block (J/B).

#### 3.CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER

1. Turn ignition switch OFF.
2. Check continuity between fuse block (J/B) harness connector and door mirror (passenger side) harness connector.

Fuse block (J/B)		Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M3	9C	D33	7	Existed

3. Check continuity between fuse block (J/B) harness connector and ground.

# PASSENGER SIDE DOOR MIRROR DEFOGGER

## < DTC/CIRCUIT DIAGNOSIS >

Fuse block (J/B)		Ground	Continuity
Connector	Terminal		
M3	9C	Ground	Not existed

Is the inspection result normal?

- YES >> GO TO 6.  
NO >> Repair or replace harness.

### 4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror (passenger side) harness connector and ground.

Door mirror (passenger side)		Ground	Continuity
Connector	Terminal		
D33	19	Ground	Existed

Is the inspection result normal?

- YES >> GO TO 5.  
NO >> Repair or replace harness.

### 5.CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER

Check passenger side door mirror defogger.  
Refer to [DEF-21, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 6.  
NO >> Replace door mirror (passenger side). Refer to [MIR-24, "DOOR MIRROR ASSEMBLY : Removal and Installation"](#).

### 6.CHECK INTERMITTENT INCIDENT

Check intermittent incident.  
Refer to [GI-49, "Intermittent Incident"](#).

>> INSPECTION END.

## Component Inspection

INFOID:000000008142636

DEF

### 1.CHECK PASSENGER DOOR MIRROR DEFOGGER

1. Turn ignition switch OFF.
2. Disconnect door mirror (passenger side) connector.
3. Check continuity between door mirror terminals.

Door mirror (passenger side)			Continuity
Connector	Terminal		
D33	7	19	Existed

Is the inspection result normal?

- YES >> INSPECTION END.  
NO >> Replace door mirror (passenger side). Refer to [MIR-24, "DOOR MIRROR ASSEMBLY : Removal and Installation"](#).

# REAR WINDOW DEFOGGER AND DOOR MIRROR DEFOGGER DO NOT OPERATE.

< SYMPTOM DIAGNOSIS >

---

## SYMPTOM DIAGNOSIS

REAR WINDOW DEFOGGER AND DOOR MIRROR DEFOGGER DO NOT OPERATE.

### Diagnosis Procedure

INFOID:000000008142637

#### 1. CHECK REAR WINDOW DEFOGGER SWITCH

---

Check rear window defogger switch.

Refer to [DEF-12. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2. CHECK REAR WINDOW DEFOGGER RELAY

---

Check rear window defogger relay.

Refer to [DEF-13. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

#### 3. CONFIRM THE OPERATION

---

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-49. "Intermittent Incident"](#).

NO >> GO TO 1.

# REAR WINDOW DEFOGGER DOES NOT OPERATE BUT BOTH DOOR MIRROR DEFOGGER OPERATE.

< SYMPTOM DIAGNOSIS >

REAR WINDOW DEFOGGER DOES NOT OPERATE BUT BOTH DOOR MIRROR DEFOGGER OPERATE.

## Diagnosis Procedure

INFOID:000000008142638

### 1. CHECK REAR WINDOW DEFOGGER

Check rear window defogger.

Refer to [DEF-15, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2. CONFIRM THE OPERATION

Confirm the operation again

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-49, "Intermittent Incident"](#).

NO >> GO TO 1.

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# DOOR MIRROR DEFOGGER DOES NOT OPERATE BUT REAR WINDOW DEFOGGER OPERATE

< SYMPTOM DIAGNOSIS >

## DOOR MIRROR DEFOGGER DOES NOT OPERATE BUT REAR WINDOW DEFOGGER OPERATE

BOTH SIDES

BOTH SIDES : Diagnosis Procedure

INFOID:000000008142639

### 1.CHECK DOOR MIRROR DEFOGGER

---

Check door mirror defogger.

Refer to [DEF-17, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

---

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-49, "Intermittent Incident"](#).

NO >> GO TO 1.

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:000000008142640

### 1.CHECK DRIVER SIDE DOOR MIRROR DEFOGGER

---

Check driver side door mirror defogger.

Refer to [DEF-18, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

---

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-49, "Intermittent Incident"](#).

NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008142641

### 1.CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER.

---

Check passenger side door mirror defogger.

Refer to [DEF-20, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

---

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-49, "Intermittent Incident"](#).

NO >> GO TO 1.



# ON IS NOT DISPLAYED WHEN PRESSING REAR WINDOW DEFOGGER SWITCH BUT IT IS OPERATED

< SYMPTOM DIAGNOSIS >

## ON IS NOT DISPLAYED WHEN PRESSING REAR WINDOW DEFOGGER SWITCH BUT IT IS OPERATED

### Diagnosis Procedure

INFOID:000000008142642

#### 1. CHECK AV CONTROL UNIT FUNCTION

Check that the AV control unit is operating normally.

Base audio without navigation. Refer to [AV-57, "Work Flow"](#).

BOSE audio with navigation. Refer to [AV-190, "Work Flow"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-49, "Intermittent Incident"](#).

NO >> GO TO 1.

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## REAR WINDOW DEFOGGER INDICATOR DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >

---

### REAR WINDOW DEFOGGER INDICATOR DOES NOT ILLUMINATE

#### Diagnosis Procedure

INFOID:000000008142643

#### 1. CHECK MULTIFUNCTION SWITCH (REAR WINDOW DEFOGGER SWITCH)

---

Check rear window defogger operate.

- YES >> Replace multifunction switch (rear window defogger switch).
- NO >> Check rear window defogger system. Refer to [DEF-11, "Work Flow"](#)

# FILAMENT

< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

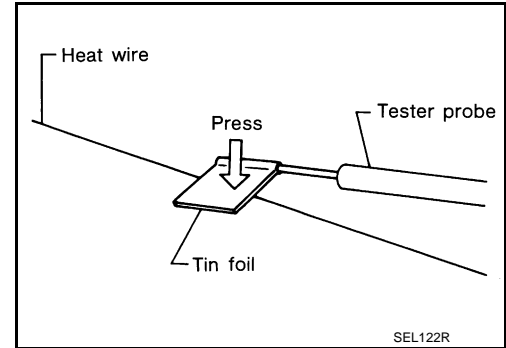
### FILAMENT

#### Inspection and Repair

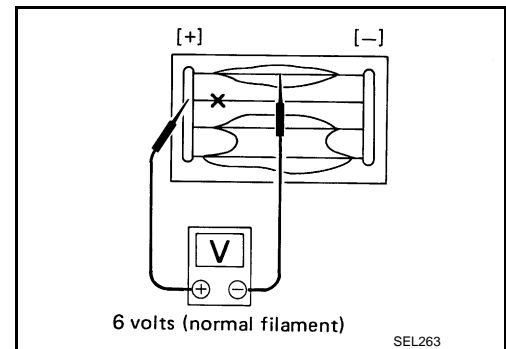
INFOID:000000008142644

#### INSPECTION

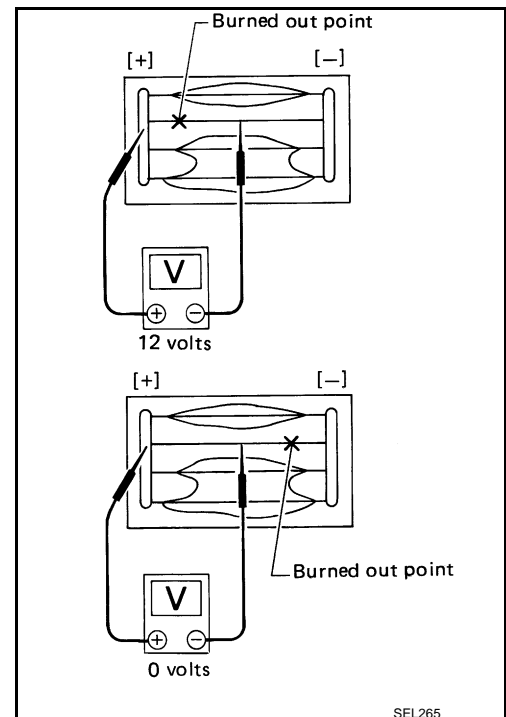
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.



2. Attach probe circuit tester (in Volt range) to middle portion of each filament.



3. If a filament is burned out, circuit tester registers 0 or battery voltage.
4. To locate burned out point, move probe to left and right along filament. Test needle will swing abruptly when probe passes the point.



#### REPAIR

##### REPAIR EQUIPMENT

- Conductive silver composition (Dupont No. 4817 or equivalent)

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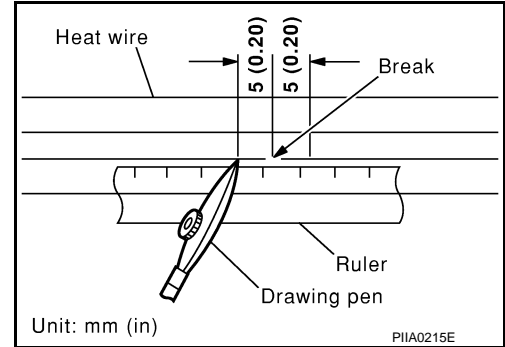
# FILAMENT

## < REMOVAL AND INSTALLATION >

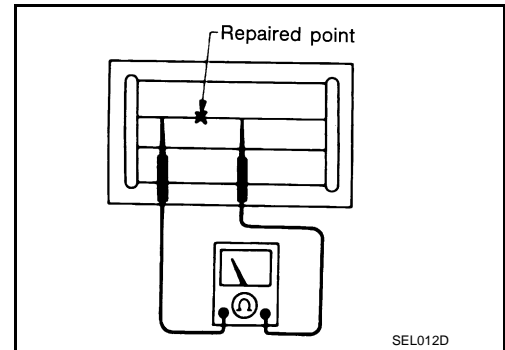
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

### REPAIRING PROCEDURE

1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.

