

SECTION **DEF**
DEFOGGER

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Repair Work Flow

INFOID:000000001712098

DETAILED FLOW

1. LISTEN TO CUSTOMER COMPLAINT

Listen to customer complaint. Get detailed information about the conditions and environment when the symptom occurs.

>> GO TO 2

2. VERIFY THE SYMPTOM WITH OPERATIONAL CHECK

Verify the symptom with operational check.

>> GO TO 3

3. GO TO APPROPRIATE TROUBLE DIAGNOSIS

Go to appropriate trouble diagnosis.

>> GO TO 4

4. REPAIR OR REPLACE

Repair or replace the specific parts.

>> GO TO 5

5. FINAL CHECK

Final check.

Is inspection result normal?

YES >> Inspection End

NO >> Refer to [GI-51, "Intermittent Incident"](#).

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REAR WINDOW DEFOGGER SYSTEM

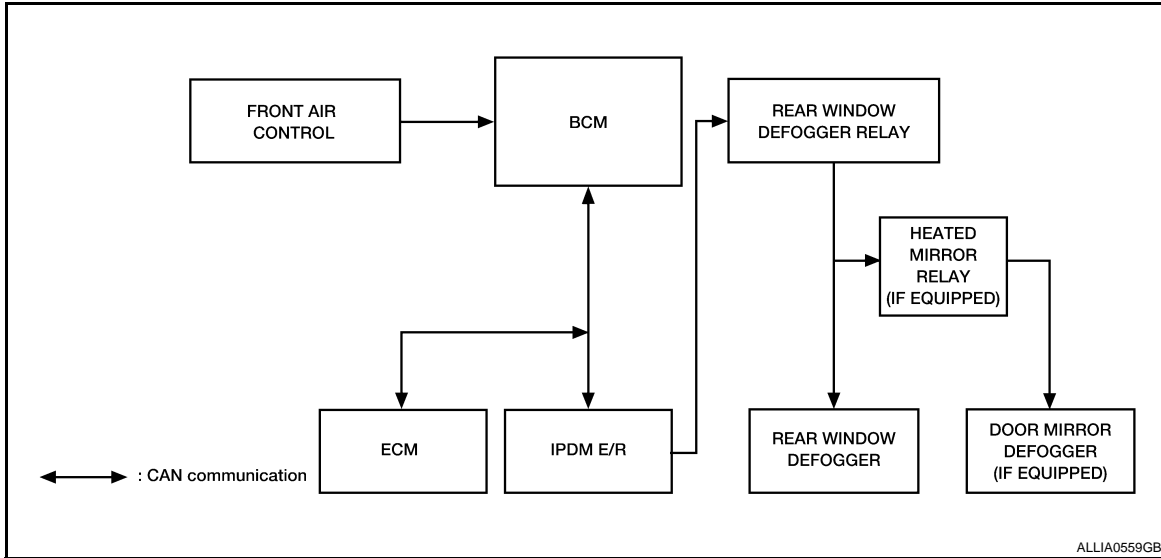
< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS

REAR WINDOW DEFOGGER SYSTEM

System Diagram

INFOID:000000001712099



System Description

INFOID:000000001712100

Operation Description

- Turn rear window defogger switch ON when the ignition switch is turned ON. Then rear window defogger switch transmits rear window defogger switch signal to BCM.
- BCM transmits rear window defogger control signal to IPDM E/R and display unit via CAN communication when rear window defogger operates.
- IPDM E/R turns rear window defogger relay and heated mirror relay (if equipped) ON when rear window defogger switch signal is received.
- Rear window defogger and door mirror defogger (if equipped) are supplied with power and operate when rear window defogger relay and heated mirror relay (if equipped) turn ON.
- Rear window defogger ON is displayed when signal is received.

Timer function

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

INPUT/OUTPUT SIGNAL CHART

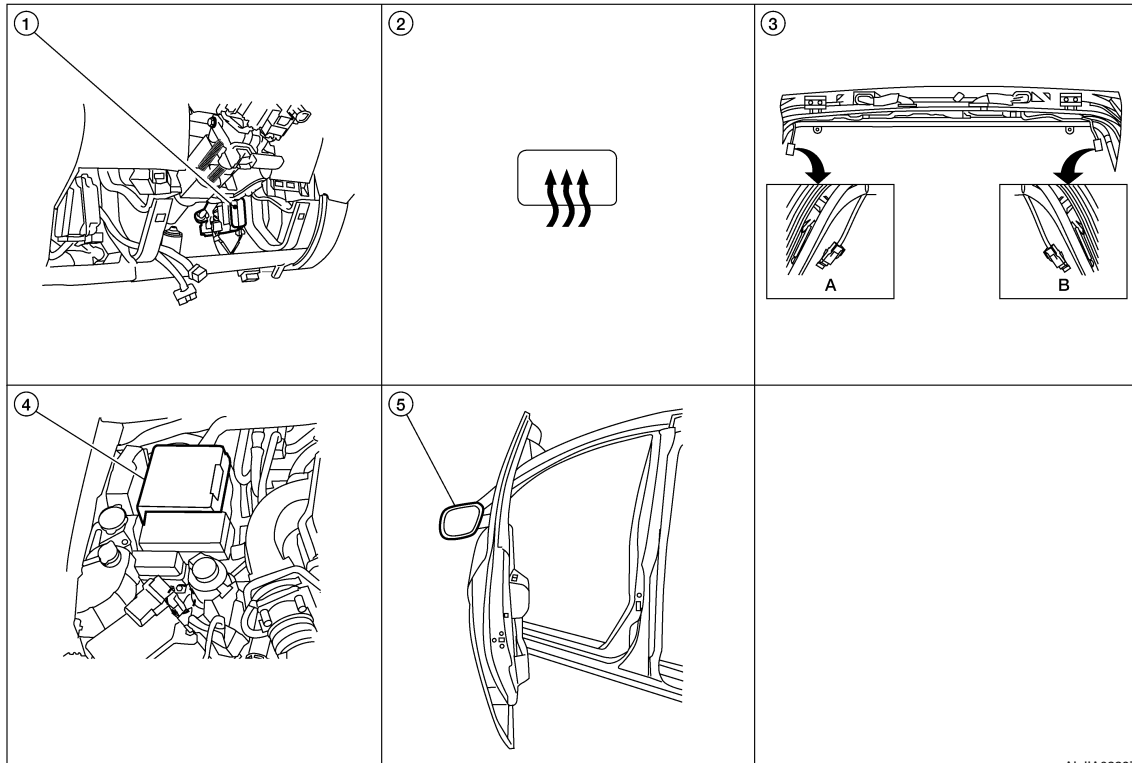
Switch	Input signal to BCM	BCM function	Acuator
Rear window defogger switch	Defogger switch signal	Rear window defogger & door mirror defogger (if equipped) control	Rear window defogger Door mirror defogger (if equipped)
Ignition switch	Ignition signal		

REAR WINDOW DEFOGGER SYSTEM

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000001712101



ALJIA0229ZZ

1. A. Steering column assembly
B. BCM M18, M20 (view with instrument lower panel LH removed)
2. Rear window defogger switch M98 (with auto A/C) or M49 (without auto A/C)
3. A. Rear window defogger ground connector D604
B. Rear window defogger connector D651
4. IPDM E/R E120, E122, E124
5. Door mirror (door mirror defogger) LH D4, RH D107 (if equipped)

Component Description

INFOID:000000001712102

BCM	<ul style="list-style-type: none"> Operates the rear window defogger with the operation of rear window defogger switch. Performs the timer control of rear window defogger.
Rear window defogger relay	<ul style="list-style-type: none"> Operates the rear window defogger and the door mirror defogger (if equipped) with the control signal from BCM.
Rear window defogger switch	<ul style="list-style-type: none"> The rear window defogger switch is turned ON. Turns the indicator lamp ON when detecting the operation of rear window defogger.
Rear window defogger	<ul style="list-style-type: none"> 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 (if equipped)	<ul style="list-style-type: none"> Heats the heating wire with the power supply from the heated mirror relay to prevent the door mirror from fogging up.

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:000000001712103

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-51, "DTC Index" .
CAN DIAG SUPPORT MNTR	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	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Rear window defogger	REAR DEFOGGER		×	×
BCM	BCM	×		

REAR WINDOW DEFOGGER

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

INFOID:000000001712104

Data monitor

Monitor Item	Description
REAR DEF SW	Indicates [ON/OFF] condition of rear defogger switch.
IGN SW	Indicates [ON/OFF] condition of ignition switch.

ACTIVE TEST

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

CAN COMMUNICATION

< FUNCTION DIAGNOSIS >

CAN COMMUNICATION

System Description

INFOID:000000001712105

Refer to [LAN-4. "System Description"](#).

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REAR WINDOW DEFOGGER SWITCH

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

REAR WINDOW DEFOGGER SWITCH

Description

INFOID:000000001712106

- The rear window defogger is operated by turning the rear window defogger switch ON.
- Turns the indicator lamp in the rear window defogger switch ON when operating the rear window defogger.

Component Function Check

INFOID:000000001712107

1. CHECK REAR WINDOW DEFOGGER SWITCH FUNCTION

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

Is the inspection result normal?

YES >> Rear window defogger switch function is OK.

NO >> Refer to [DEF-8, "Diagnosis Procedure A/C and AV Switch Assembly"](#) (with auto A/C) or [DEF-8, "Diagnosis Procedure Front Air Control"](#) (without aut A/C).

Diagnosis Procedure A/C and AV Switch Assembly

INFOID:000000001712108

1. CHECK A/C AND AV SWITCH ASSEMBLY (REAR WINDOW DEFOGGER SWITCH) CIRCUIT

Does rear window defogger switch operate normally?

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and A/C and AV switch assembly.
3. Check continuity between BCM connector (A) and A/C and AV switch assembly connector (B).

BCM connector	Terminal	A/C and AV switch assembly connector	Terminal	Continuity
M18 (A)	9	M98 (B)	16	Yes

4. Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	9		No

Is the inspection result normal?

YES >> Replace A/V and AC switch assembly. Refer to [AV-266, "Removal and Installation"](#).

NO >> Repair or replace harness.

Diagnosis Procedure Front Air Control

INFOID:000000001726732

1. CHECK FRONT AIR CONTROL (REAR WINDOW DEFOGGER SWITCH) CIRCUIT

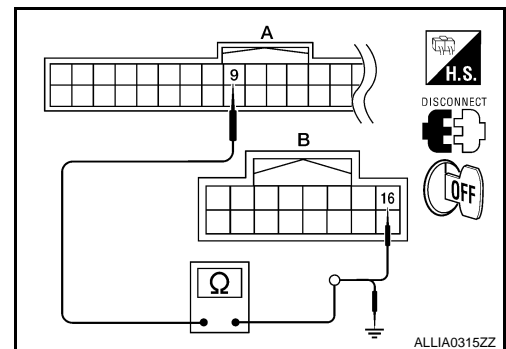
Does rear window defogger switch operate normally?

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY



REAR WINDOW DEFOGGER SWITCH

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect BCM and front air control.
3. Check continuity between BCM connector and front air control connector.

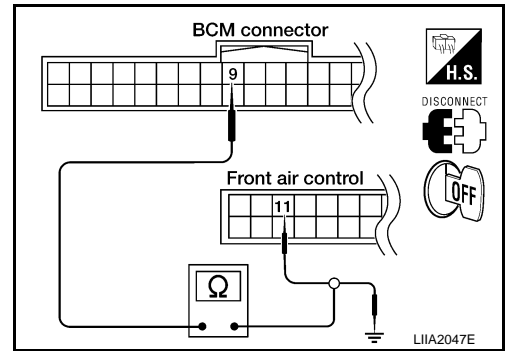
BCM connector	Terminal	A/C and AV switch assembly connector	Terminal	Continuity
M18	9	M49	11	Yes

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M18	9		No

Is the inspection result normal?

- YES >> [VTL-8. "Removal and Installation"](#)
 NO >> Repair or replace harness.



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REAR WINDOW DEFOGGER RELAY

< COMPONENT DIAGNOSIS >

REAR WINDOW DEFOGGER RELAY

Description

INFOID:000000001712109

Power is supplied to the rear window defogger with BCM control.

Component Function Check

INFOID:000000001712110

1. CHECK REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT

Check that an operation noise of rear window defogger relay (located in IPDM E/R) can be heard when turning the rear window defogger switch ON.

Is the inspection result normal?

- YES >> Rear window defogger relay power supply circuit is OK.
- NO >> Refer to [DEF-10, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000001712111

1. CHECK FUSES

Check if any of the following fuses in the IPDM E/R are blown.

COMPONENT PARTS	AMPERE	FUSE NO.
IPDM E/R	15A	46
IPDM E/R	15A	47

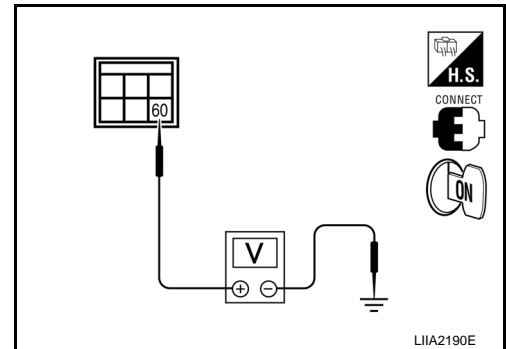
Is the inspection result normal?

- YES >> GO TO 2
- NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between IPDM E/R connector and ground.

Terminals		(-)	Condition of rear window defogger switch	Voltage (V) (Approx.)
(+)				
IPDM E/R connector	Terminal			
E124	60	Ground	ON	Battery voltage
			OFF	0



Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30, "Removal and Installation of IPDM E/R"](#).
- NO >> GO TO 3

3. CHECK INTERMITTENT INCIDENT

Check intermittent incident.
Refer to [GI-51, "Intermittent Incident"](#)

Is the inspection result normal?

- YES >> Check the following.
 - Battery power supply circuit.
 - IPDM E/R.
- NO >> Repair or replace the malfunctioning parts.

REAR WINDOW DEFOGGER POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

REAR WINDOW DEFOGGER POWER SUPPLY AND GROUND CIRCUIT

Description

INFOID:000000001712112

Heats the heating wire with the power supply from the rear window defogger relay to prevent the rear window from fogging up.

Component Function Check

INFOID:000000001712113

1. CHECK REAR WINDOW DEFOGGER

Check that the heating wire of rear window defogger is heated when turning the rear window defogger switch ON.

Is the inspection result normal?

- YES >> Rear window defogger is OK.
- NO >> Refer to [DEF-11. "Diagnosis Procedure"](#).

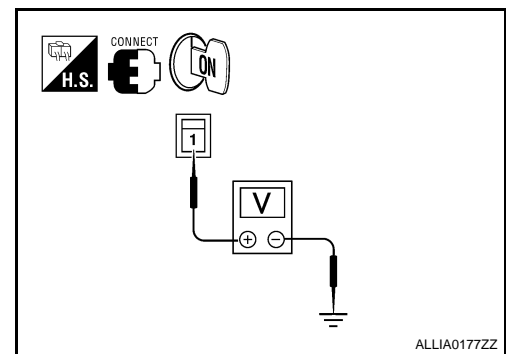
Diagnosis Procedure

INFOID:000000001712114

1. CHECK POWER SUPPLY CIRCUIT

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

Terminals		(-)	Condition of rear window defogger switch	Voltage (V) (Approx.)
(+)				
Rear window defogger connector	Terminal			
D651	1	Ground	ON	Battery voltage
			OFF	0



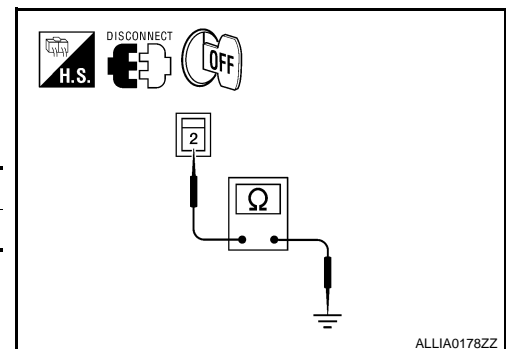
Is the inspection result normal?

- YES >> GO TO 2
- NO >> GO TO 3

2. CHECK GROUND CIRCUIT

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

Rear window defogger connector	Terminal	Ground	Continuity
D604	2		Yes



Is the inspection result normal?

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

3. CHECK HARNESS CONTINUITY

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REAR WINDOW DEFOGGER POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

1. Disconnect IPDM E/R.
2. Check continuity between rear window defogger connector (A) and IPDM E/R connector (B).

Rear window defogger connector	Terminal	IPDM E/R connector	Terminal	Continuity
D651 (A)	1	E124 (B)	60	Yes

3. Check continuity between rear window defogger connector (A) and ground.

Rear window defogger connector	Terminal	Ground	Continuity
D651 (A)	1		No

Is the inspection result normal?

- YES >> GO TO 5
 NO >> Replace or repair harness.

4. CHECK FILAMENT

Check filament.

Refer to [DEF-12, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Refer to [GI-51, "Intermittent Incident"](#).
 NO >> Repair filament. Refer to [DEF-34, "Filament Repair"](#).

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to [GI-51, "Intermittent Incident"](#).

Is the inspection result normal?

- YES >> Check the following.
- Battery power supply circuit.
 - IPDM E/R.
- NO >> Repair or replace the malfunctioning parts.

Component Inspection

INFOID:000000001712115

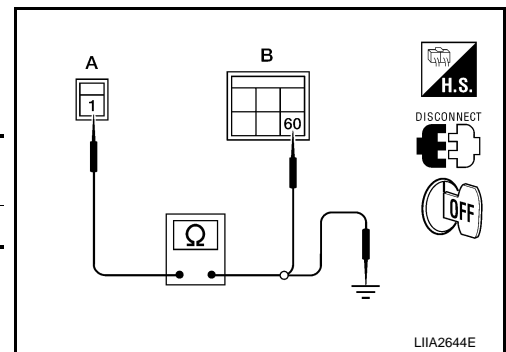
1. CHECK FILAMENT

Check the filament for damage or open circuits.

Refer to [DEF-34, "Filament Check"](#).

Is the inspection result normal?

- YES >> Inspection End.
 NO >> Repair filament. Refer to [DEF-34, "Filament Repair"](#).



DOOR MIRROR DEFOGGER LH

< COMPONENT DIAGNOSIS >

DOOR MIRROR DEFOGGER LH

Description

INFOID:000000001712116

Heats the heating wire with the power supply from the rear window defogger relay to prevent the door mirror from fogging up.

Component Function Check

INFOID:000000001712117

1. CHECK DOOR MIRROR DEFOGGER LH

Check that heating wire of door mirror defogger LH is heated when turning the rear window defogger switch ON.

Is the inspection result normal?

- YES >> Door mirror defogger is OK.
- NO >> Refer to [DEF-13. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000001712118

1. CHECK POWER SUPPLY

Check if the following fuse in the IPDM E/R is blown.

COMPONENT PARTS	AMPERE	FUSE NO.
IPDM E/R	15A	43

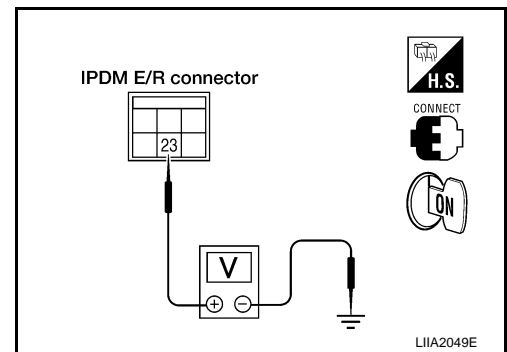
Is the inspection result normal?

- YES >> GO TO 2
- NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

Check voltage between IPDM E/R connector and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(-)		
E120	23	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0



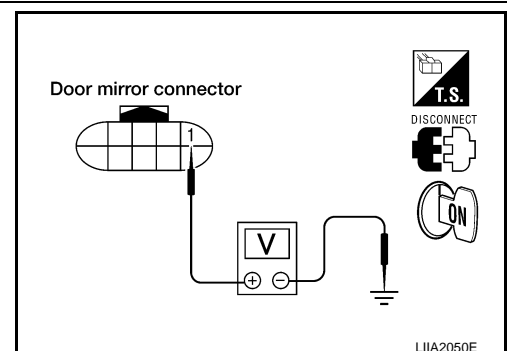
Is the inspection result normal?

- YES >> GO TO 3
- NO >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation of IPDM E/R"](#).

3. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror LH.
3. Turn ignition switch ON.
4. Check voltage between door mirror LH connector and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D4	1	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0



Is the inspection result normal?

- YES >> GO TO 4

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DOOR MIRROR DEFOGGER LH

< COMPONENT DIAGNOSIS >

NO >> Repair or replace harness.

4. CHECK DOOR MIRROR DEFOGGER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R.
3. Check continuity between IPDM E/R connector and door mirror LH or RH connector.

Connector	Terminal	Connector	Terminal	Continuity
A		B		
IPDM E/R: E120	23	Door mirror: D4	1	Yes

4. Check continuity between IPDM E/R and ground.

A		Ground	Continuity
Connector	Terminal		
IPDM E/R: E120	23		No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

5. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

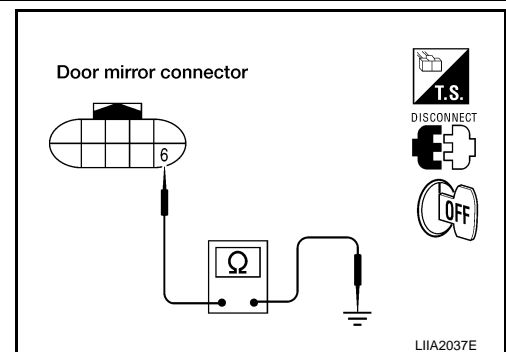
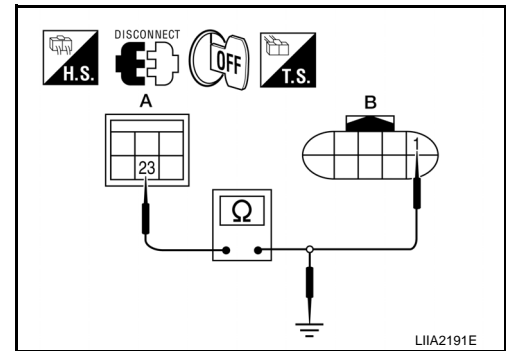
Check continuity between door mirror LH connector D4 terminal 6 and ground.

6 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair or replace harness.



6. CHECK DOOR MIRROR DEFOGGER LH

Check door mirror defogger LH.

Refer to [DEF-14, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 7

NO >> Replace door mirror. Refer to [MIR-13, "Door Mirror Assembly"](#).

7. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to [GI-51, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Check the following.

- Battery power supply circuit.
- IPDM E/R.

NO >> Repair or replace the malfunctioning parts.

Component Inspection

1. CHECK DOOR MIRROR DEFOGGER

INFOID:000000001712119

DOOR MIRROR DEFOGGER LH

< COMPONENT DIAGNOSIS >

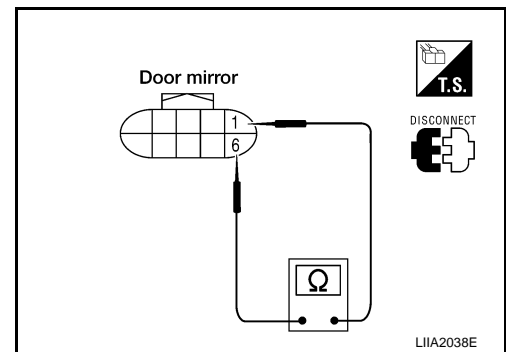
Check continuity between door mirror LH terminals 1 and 6.

1 - 6

: Continuity should exist.

Is the inspection result normal?

- YES >> Check the condition of the harness and the connector.
- NO >> Replace malfunctioning door mirror LH. Refer to [MIR-13. "Door Mirror Assembly"](#).



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DOOR MIRROR DEFOGGER RH

< COMPONENT DIAGNOSIS >

DOOR MIRROR DEFOGGER RH

Description

INFOID:000000001712124

Heats the heating wire with the power supply from the rear window defogger relay to prevent the door mirror from fogging up.

Component Function Check

INFOID:000000001712125

1. CHECK DOOR MIRROR DEFOGGER RH

Check that the heating wire of door mirror defogger RH is heated when turning the rear window defogger switch ON.

Is the inspection result normal?

- YES >> Door mirror defogger RH is OK.
- NO >> Refer to [DEF-16. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000001712126

1. CHECK POWER SUPPLY

Check if the following fuse in the IPDM E/R is blown.

COMPONENT PARTS	AMPERE	FUSE NO.
IPDM E/R	15A	43

Is the inspection result normal?

- YES >> GO TO 2
- NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

Check voltage between IPDM E/R connector and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(-)		
E120	23	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

Is the inspection result normal?

- YES >> GO TO 3
- NO >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation of IPDM E/R"](#).

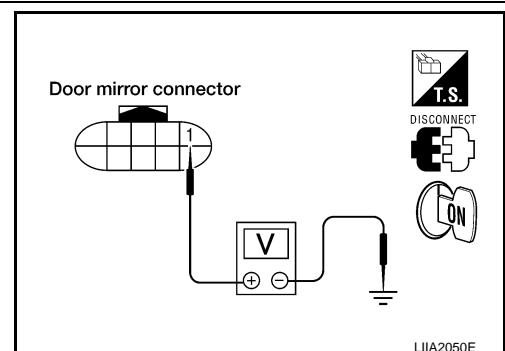
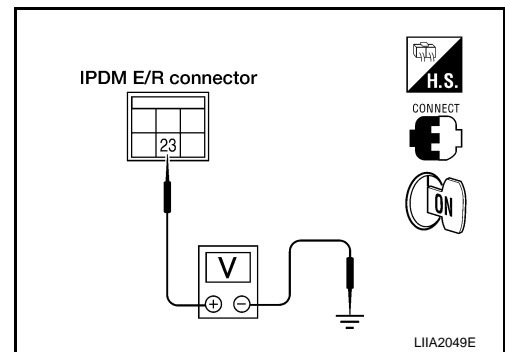
3. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror RH.
3. Turn ignition switch ON.
4. Check voltage between door mirror RH connector and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D107	1	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

Is the inspection result normal?

- YES >> GO TO 4



DOOR MIRROR DEFOGGER RH

< COMPONENT DIAGNOSIS >

NO >> Repair or replace harness.

4. CHECK DOOR MIRROR DEFOGGER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R.
3. Check continuity between IPDM E/R connector and door mirror LH or RH connector.

Connector	Terminal	Connector	Terminal	Continuity
A		B		
IPDM E/R: E120	23	Door mirror: D107	1	Yes

4. Check continuity between IPDM E/R and ground.

A		Ground	Continuity
Connector	Terminal		
IPDM E/R: E120	23		No

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.

5. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

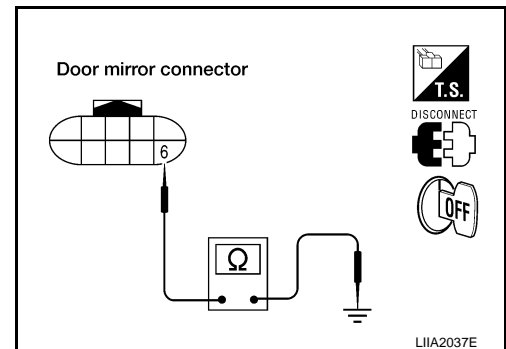
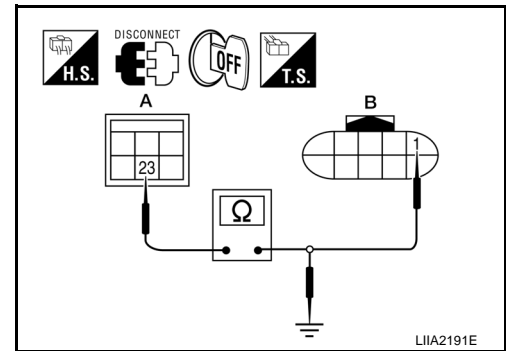
Check continuity between door mirror RH connector D107 terminal 6 and ground.

6 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair or replace harness.



6. CHECK DOOR MIRROR DEFOGGER RH

Check door mirror defogger RH.

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

Is the inspection result normal?

YES >> GO TO 7

NO >> Replace door mirror. Refer to [MIR-13, "Door Mirror Assembly"](#).

7. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to [GI-51, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Check the following.

- Battery power supply circuit.
- IPDM E/R.

NO >> Repair or replace the malfunctioning parts.

Component Inspection

1. CHECK DOOR MIRROR DEFOGGER

INFOID:000000001712127

DOOR MIRROR DEFOGGER RH

< COMPONENT DIAGNOSIS >

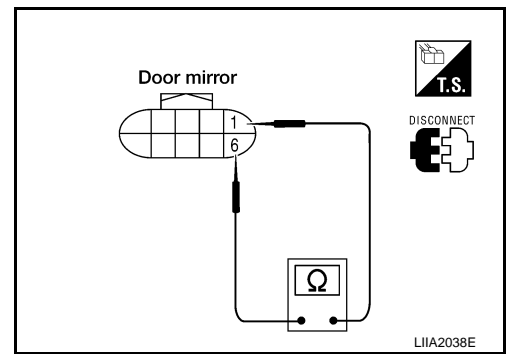
Check continuity between door mirror RH terminals 1 and 6.

1 - 6

: Continuity should exist.

Is the inspection result normal?

- YES >> Check the condition of the harness and the connector.
- NO >> Replace malfunctioning door mirror RH. Refer to [MIR-13. "Door Mirror Assembly"](#).



BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000001712132

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
REAR DEF SW	NOTE: The item is indicated, but not monitored.	OFF

TERMINAL LAYOUT

Refer to [BCS-41, "Terminal Layout"](#).

PHYSICAL VALUES

Refer to [BCS-41, "Physical Values"](#).

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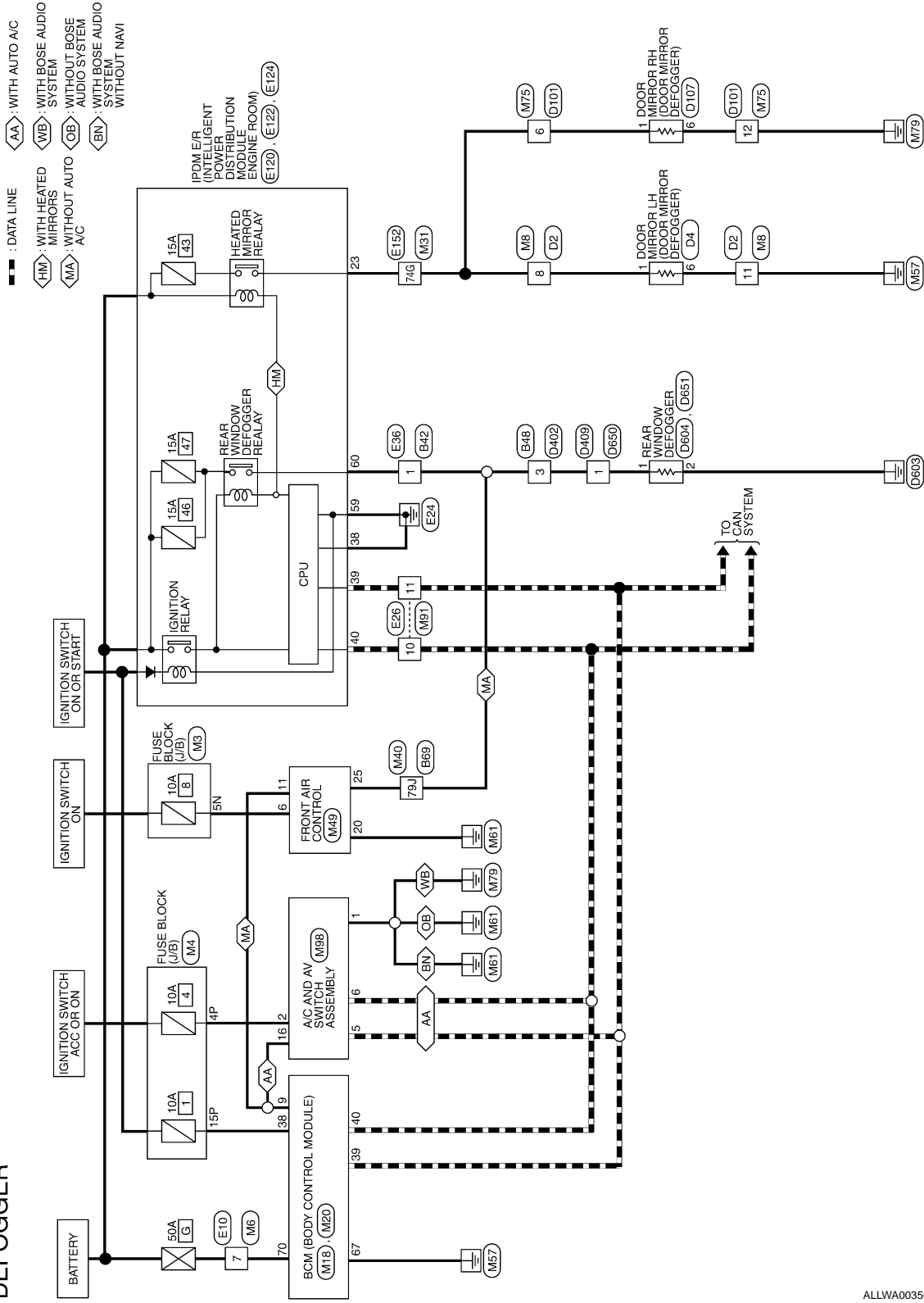
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Wiring Diagram

INFOID:000000001712133

DEFOGGER



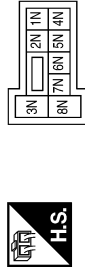
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

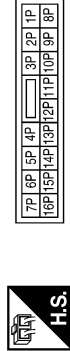
DEFOGGER CONNECTORS

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



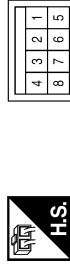
Terminal No.	Color of Wire	Signal Name
5N	W/G	-

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



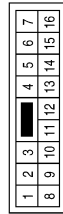
Terminal No.	Color of Wire	Signal Name
4P	G/B	-
15P	W/R	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	W	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	LG	-
11	B	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	Y	RR DEF SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
67	B	GND
70	W	BAT (F/L)

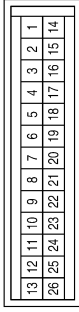
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BCM (BODY CONTROL MODULE)

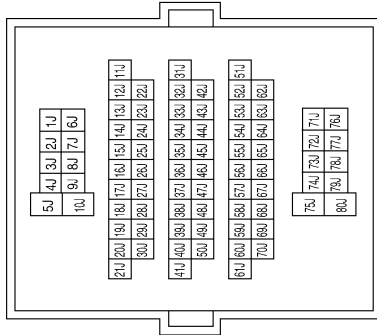
< ECU DIAGNOSIS >

Connector No.	M49
Connector Name	FRONT AIR CONTROL (WITH MANUAL A/C)
Connector Color	BLACK



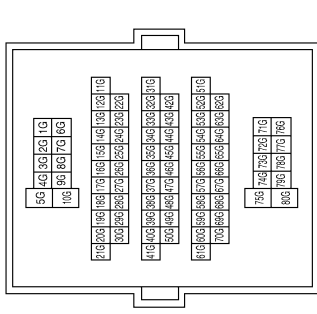
Terminal No.	Color of Wire	Signal Name
6	W/G	IGN
11	Y	REAR DEFROST REQUEST
20	B	GND
25	R	REAR DEFROST STATUS

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



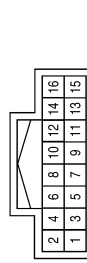
Terminal No.	Color of Wire	Signal Name
79J	R	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



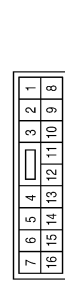
Terminal No.	Color of Wire	Signal Name
74G	LG	-

Connector No.	M98
Connector Name	A/C AND A/V SWITCH ASSEMBLY
Connector Color	WHITE



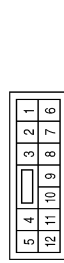
Terminal No.	Color of Wire	Signal Name
1	B	GND
2	G/Y	ACC
5	L	CAN-H
6	P	CAN-L
16	Y	RR-DEFOG

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	P	-
11	L	-

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	L	-
12	B	-

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BCM (BODY CONTROL MODULE)

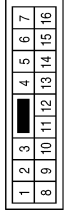
< ECU DIAGNOSIS >

Connector No.	E36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



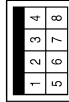
Terminal No.	Color of Wire	Signal Name
1	GR	-

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	P	-
11	L	-

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	W	-

Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



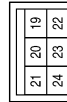
Terminal No.	Color of Wire	Signal Name
59	B	GND (POWER)
60	GR	RR_DEF

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
38	B	SIGNAL_GND
39	L	CAN-H
40	P	CAN-L

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
23	LG	HEATED MIRROR

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

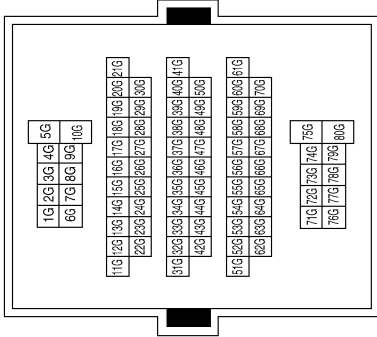
Connector No.	B42
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-

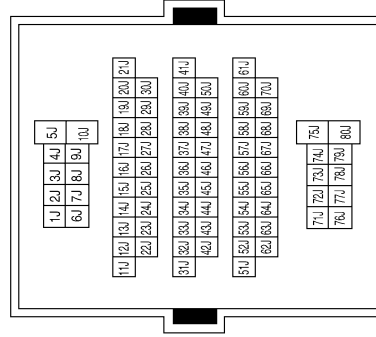
Terminal No.	74G	Color of Wire	LG	Signal Name	-
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Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	79J	Color of Wire	R	Signal Name	-
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Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	B48
Connector Name	WIRE TO WIRE
Connector Color	WHITE



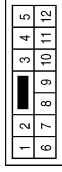
Terminal No.	3	Color of Wire	GR	Signal Name	-
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BCM (BODY CONTROL MODULE)

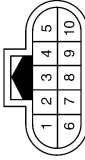
< ECU DIAGNOSIS >

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



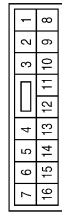
Terminal No.	Color of Wire	Signal Name
6	L	-
12	B	-

Connector No.	D4
Connector Name	DOOR MIRROR LH (DOOR MIRROR DEFOGGER)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	L/B	-
6	B	-

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	L/B	-
11	B	-

Connector No.	D409
Connector Name	WIRE TO WIRE
Connector Color	WHITE



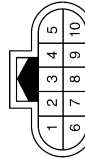
Terminal No.	Color of Wire	Signal Name
1	GR	-

Connector No.	D402
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	GR	-

Connector No.	D107
Connector Name	DOOR MIRROR RH (DOOR MIRROR DEFOGGER)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	L/B	-
6	B	-

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Connector No.	D651
Connector Name	REAR WINDOW DEFOGGER
Connector Color	BLACK



Terminal No.	1	Color of Wire	B	Signal Name	-
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Connector No.	D650
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	1	Color of Wire	B	Signal Name	-
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Connector No.	D604
Connector Name	REAR WINDOW DEFOGGER
Connector Color	BLACK



Terminal No.	2	Color of Wire	B	Signal Name	-
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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:000000001712134

1. CHECK REAR WINDOW DEFOGGER SWITCH

Check rear window defogger switch.

Refer to [DEF-11, "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-10, "Component Function Check"](#).

Is the inspection result normal?

YES >> Refer to [GI-51, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

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

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:000000001712135

1. CHECK REAR WINDOW DEFOGGER POWER SUPPLY AND GROUND CIRCUIT

Check rear window defogger power supply and ground circuit.

Refer to [DEF-11, "Component Function Check"](#).

Is the inspection result normal?

YES >> Refer to [GI-51, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

BOTH DOORS MIRROR DEFOGGER DON'T OPERATE BUT REAR WINDOW DEFOGGER OPERATES

< SYMPTOM DIAGNOSIS >

BOTH DOORS MIRROR DEFOGGER DON'T OPERATE BUT REAR WINDOW DEFOGGER OPERATES

Diagnosis Procedure

INFOID:000000001712136

1. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to [GI-51, "Intermittent Incident"](#).

Is the inspection result normal?

- YES >> Check the following.
- Battery power supply circuit.
 - IPDM E/R.
- NO >> Repair or replace the malfunctioning parts.

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DRIVER SIDE DOOR MIRROR DEFOGGER DOES NOT OPERATE.

< SYMPTOM DIAGNOSIS >

DRIVER SIDE DOOR MIRROR DEFOGGER DOES NOT OPERATE.

Diagnosis Procedure

INFOID:000000001712137

1. CHECK DOOR MIRROR DEFOGGER LH

Check door mirror defogger LH.

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

Is the inspection result normal?

YES >> Refer to [GI-51, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

PASSENGER SIDE DOOR MIRROR DEFOGGER DOES NOT OPERATE.

< SYMPTOM DIAGNOSIS >

PASSENGER SIDE DOOR MIRROR DEFOGGER DOES NOT OPERATE.

Diagnosis Procedure

INFOID:000000001712138

1. CHECK DOOR MIRROR DEFOGGER RH

Check door mirror defogger RH.

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

Is the inspection result normal?

YES >> Refer to [GI-51, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

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REAR WINDOW DEFOGGER SWITCH DOES NOT LIGHT, BUT REAR WINDOW DEFOGGER OPERATES

< SYMPTOM DIAGNOSIS >

REAR WINDOW DEFOGGER SWITCH DOES NOT LIGHT, BUT REAR WINDOW DEFOGGER OPERATES

Diagnosis Procedure

INFOID:000000001712139

1. CHECK REAR WINDOW DEFOGGER SWITCH

Check that the rear window defogger switch is operating normally.

Is the inspection result normal?

YES >> Refer to [GI-51, "Intermittent Incident"](#).

NO >> Refer to [DEF-8, "Diagnosis Procedure A/C and AV Switch Assembly"](#).

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000001697632

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 SR 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 SR, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR 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

INFOID:000000001697633

- 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.

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REAR WINDOW DEFOGGER

< ON-VEHICLE REPAIR >

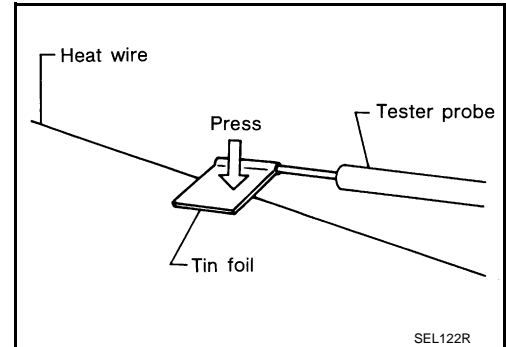
ON-VEHICLE REPAIR

REAR WINDOW DEFOGGER

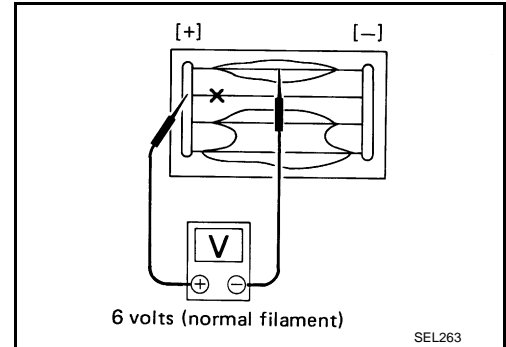
Filament Check

INFOID:000000001697630

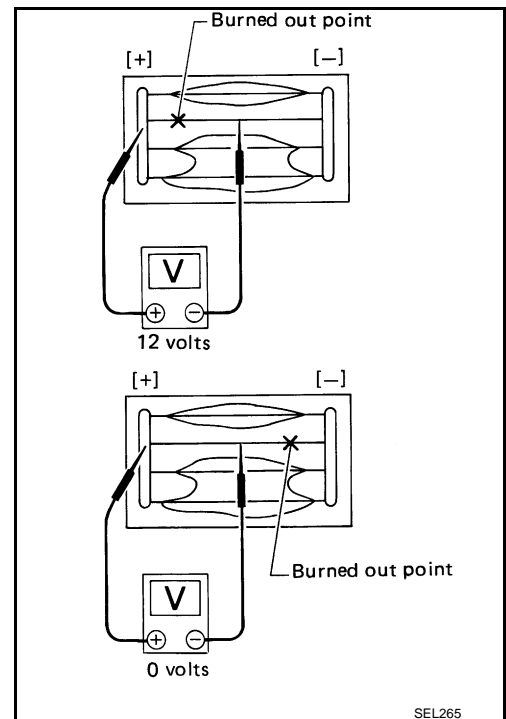
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.



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.



Filament Repair

INFOID:000000001697631

REPAIR EQUIPMENT

- Conductive silver composition (DuPont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long

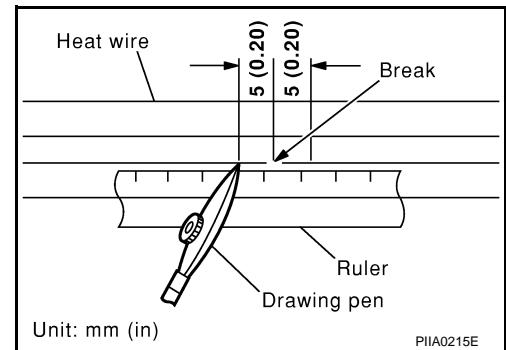
REAR WINDOW DEFOGGER

< ON-VEHICLE REPAIR >

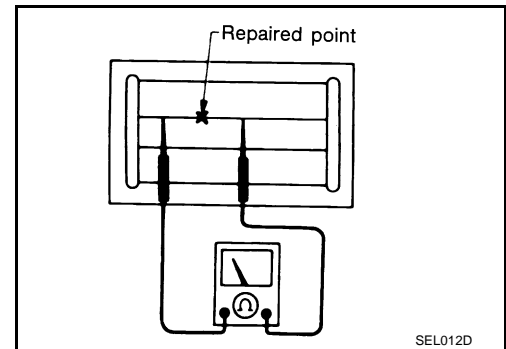
- Drawing pen
- Heat gun
- Alcohol
- Cloth

REPAIRING PROCEDURE

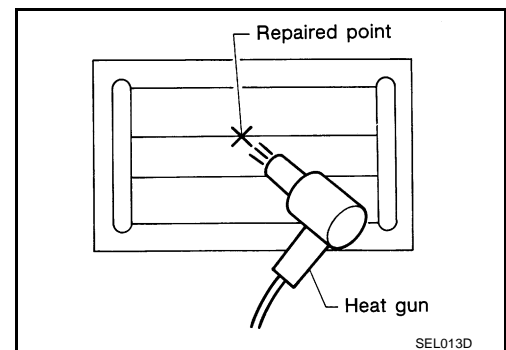
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on 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.



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