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DIAGNOSIS AND REPAIR WORKFLOW

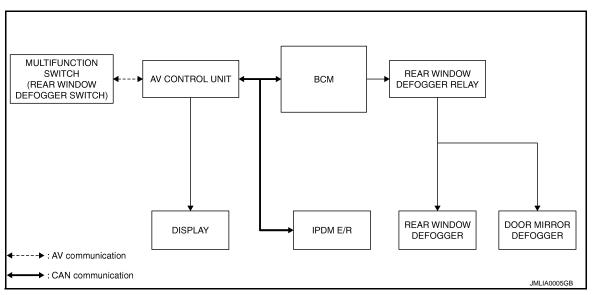
< BASIC INSPECTION > **BASIC INSPECTION** Α DIAGNOSIS AND REPAIR WORKFLOW Work Flow INFOID:0000000005249352 **DETAILED FLOW** 1. OBTAIN INFORMATION ABOUT SYMPTOM Interview the customer to obtain as much malfunction information (conditions and environment when the malfunction occurred) as possible when the customer brings the vehicle in. D >> GO TO 2. 2. CHECK DTC Е Perform self diagnosis using CONSULT-III Is any DTC detected? F YES >> Refer to BCS-78, "DTC Index" NO >> GO TO 3. $3.\mathsf{REPRODUCE}$ 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. Н >> GO TO 4. f 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. ${f 5}.$ IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS" Perform the diagnosis with "Component diagnosis" of the applicable system. >> GO TO 6. DEF 6.REPAIR OR REPLACE THE MALFUNCTIONING PARTS Repair or replace the specified malfunctioning parts. M >> GO TO 7. 7. FINAL CHECK Ν 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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SYSTEM DESCRIPTION

REAR WINDOW DEFOGGER SYSTEM

System Diagram



System Description

INFOID:0000000005249354

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

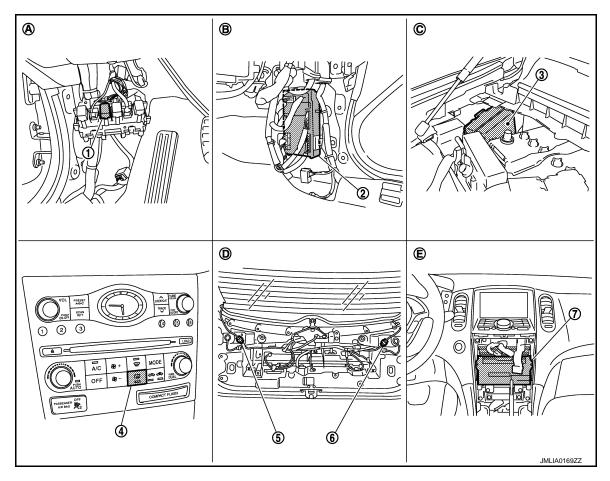
- BCM turns rear window defogger relay ON for approximately 15 minutes when rear window defogger switch turns ON. It makes rear window defogger and door mirror defogger (with mirror defogger) operate.
- Timer is canceled after pressing rear window defogger switch again during timer operation. Then BCM 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	Rear window defogger
Push button ignition switch	Ignition signal	mirror defogger control	Door mirror defogger

Component Parts Location

INFOID:0000000005249355



- Rear window defogger relay (built-in relay box)
- Rear window defogger switch (built-in 5. multifunction switch M72)
- AV control unit
 - With NAVI M87,M88
 - Without NAVI M83, M85
- Dash side lower (driver side)
- Behind back door finisher

- BCM M118, M119, M122, M123
- Rear window defogger connector D108
- IPDM E/R E6
- 6. Rear window defogger connector D120
- Dash side lower (passenger side)
- Behind cluster lid C
- Engine room dash panel (RH)

Component Description

INFOID:0000000005249356

Item	Function	
BCM	 Operates the rear window defogger relay with the operation of rear window defogger switch. Performs the timer control of rear window defogger. 	
Rear window defogger relay	Operates the rear window defogger and the door mirror defogger with the control signal from BCM.	
IPDM E/R	Transmits rear window defogger control signal to AV control unit via CAN communication.	
Multifunction switch (Rear window defogger switch)	The rear window defogger switch is installed. Turns the indicator lamp ON when detecting the operation of rear window defogger.	
AV control unit	Displays the rear window defogger ON to the display when detecting the operation of rear window defogger.	

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< SYSTEM DESCRIPTION >

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.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

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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 Diagnostic Result	Displays the diagnosis results judged by BCM.	
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.	
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.

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

x: Applicable item

System	Sustan Sustan selection item			
System	Sub system selection item	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 CONDITIONER*		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

^{*:} This item is displayed, but is not used.

FREEZE FRAME DATA (FFD) AND IGN COUNTER

Freeze Frame Data

The BCM records the following condition at the moment a particular DTC is detected.

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Vehicle Speed

Odo/Trip Meter

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

• Vehicle Condition (BCM detected condition)

CONSULT screen terms	Description	
SLEEP>LOCK	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 suppl 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 pow 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" (Ignition switch OFF with steering is locked.)	
OFF	Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)	
ACC	Power supply position is "ACC" (Ignition switch ACC)	
ON	Power supply position is "IGN" (Ignition switch ON with engine stopped)	
ENGINE RUN	Power supply position is "RUN" (Ignition switch ON with engine running)	
CRANKING	Power supply position is "CRANKING" (At engine cranking)	

IGN Counter

IGN counter indicates the number of times that ignition switch is turned ON after DTC is detected.

- The number is 0 when a malfunction is detected now.
- The number increases like 1 \rightarrow 2 \rightarrow 3...38 \rightarrow 39 after returning to the normal condition whenever ignition switch OFF \rightarrow ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

REAR WINDOW DEFOGGER

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

INFOID:0000000005249358

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

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.	

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

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1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Rattory power supply	L(40A)
11	Battery power supply	10 (10A)

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connectors.
- 3. Check voltage between BCM harness connector and ground.

	+) CM	(–)	Voltage (V) (Approx.)	
Connector	Terminal			
M118	1	Ground	Rattory voltage	
M119	11	Ground	Battery voltage	

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector Terminal		Ground	Continuity
M119	13		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair or replace harness.

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REAR WINDOW DEFOGGER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

REAR WINDOW DEFOGGER SWITCH

Description INFOID:000000005249360

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

Component Function Check

INFOID:0000000005249361

1. CHECK REAR WINDOW DEFOGGER SWITCH FUNCTION

Check that the indicator lamp of rear window defogger illuminates when rear window defogger switch ON. <u>Is the inspection result normal?</u>

YES >> Rear window defogger switch function is OK.

NO >> Refer to <u>DEF-10</u>, "<u>Diagnosis Procedure</u>"

Diagnosis Procedure

INFOID:0000000005249362

1. CHECK PRESET SWITCH

Does preset switch operate normally?

- Without navigation system. Refer to AV-21, "On Board Diagnosis Function".
- With navigation (single monitor) system. Refer to AV-175, "On Board Diagnosis Function".
- With navigation (twin monitor) system. Refer to AV-382, "On Board Diagnosis Function".

Is the inspection result normal?

YES >> INSPECTION END

NO

>> Replace preset switch. Refer to <u>AV-149</u>, "<u>Removal and Installation</u>" (without navigation system), <u>AV-345</u>, "<u>Removal and Installation</u>" [with navigation (single monitor) system] or <u>AV-576</u>, "<u>Removal and Installation</u>" [with navigation (twin monitor) system].

REAR WINDOW DEFOGGER RELAY

< DTC/CIRCUIT DIAGNOSIS >

REAR WINDOW DEFOGGER RELAY

Description INFOID:0000000005249363

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

Component Function Check

1. CHECK REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT

- 1. Perform Active Test ("REAR DEFOGGER") using CONSULT-III.
- 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 <u>DEF-11</u>, "<u>Diagnosis Procedure</u>"

Diagnosis Procedure

1. CHECK FUSE

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 RELAY CIRCUIT 1

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

(+) BCI	M	(–)	Condition	Voltage (V) (Approx.)	
Connector	Terminal				
M123	151	Ground	Rear window defogger switch: ON	0	
IVI 123	151	Giouna	Rear window defogger switch: OFF	Battery voltage	

Is the inspection result normal?

YES >> Rear window defogger power supply circuit is OK.

NO >> GO TO 3.

3.CHECK REAR WINDOW DEFOGGER RELAY CIRCUIT 2

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

BCM	1	Fuse block (J/B)		Continuity
Connector	Terminal	Connector Terminal		Continuity
M123	151	M2	4B	Existed

4. Check continuity between BCM harness connector and ground.

ВСМ		Continuity		
Connector Terminal		Ground	Continuity	
M123	151		Not existed	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

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REAR WINDOW DEFOGGER RELAY

< DTC/CIRCUIT DIAGNOSIS >

4. CHECK REAR WINDOW DEFOGGER RELAY

- 1. Disconnect rear window defogger relay,
- Check rear window defogger relay.
 Refer to <u>DEF-12</u>, "Component Inspection"

Is the inspection result normal?

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) connector (fuse block side) and ground.

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

Is the inspection result normal?

YES >> GO TO 6.

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

6. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-36, "Intermittent Incident"

>> INSPECTION END.

Component Inspection

INFOID:0000000005249366

1. CHECK REAR WINDOW DEFOGGER RELAY

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

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

3 3 3 3 3 5 2 1

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace rear window defogger relay.

REAR WINDOW DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

REAR WINDOW DEFOGGER

Description INFOID:0000000005249367

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:0000000005249368

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1. CHECK REAR WINDOW DEFOGGER

- 1. Perform Active Test ("REAR DEFOGGER") using CONSULT-III.
- 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 <u>DEF-13</u>, "<u>Diagnosis Procedure</u>"

Diagnosis Procedure

INFOID:0000000005249369

1. CHECK FUSE

- 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

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

(+) Rear window de	defogger		Condition	Voltage (V) (Approx.)
Connector	Terminal			(+
D108	1	Ground	Rear window defogger switch: ON	Battery voltage
D100	!	Ground	Rear window defogger switch: 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.
- Check continuity between rear window defogger harness connector and ground.

Rear window defo	gger		Continuity
Connector	Terminal	Ground	Continuity
D120	2		Existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

4. CHECK REAR WINDOW DEFOGGER CIRCUIT 1

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REAR WINDOW DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

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

Condenser	Condenser		Rear window defogger	
Connector	Terminal	Connector	Terminal	Continuity
D104	2	D108	1	Existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK REAR WINDOW DEFOGGER CIRCUIT 2

- Disconnect fuse block (J/B) connector.
- 2. Check continuity between fuse block (J/B) harness connector and condenser harness connector.

Fuse block (J/B)		Condenser		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B6	10G	D105	1	Existed
ВО	11G	D103	1	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK FUSE BLOCK (J/B)

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

(+) Fuse block (J/B)		(-)	Condition	Voltage (V) (Approx.)	
Connector	Terminal			(, (ppiox.)	
	10G		Rear window defogger switch: ON	Battery voltage	
В6	100	Ground	Rear window defogger switch: OFF	0	
ь	11G	Giodila	Rear window defogger switch: ON	Battery voltage	
			Rear window defogger switch: OFF	0	

Is the inspection result normal?

YES >> GO TO 7.

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

7. CHECK CONDENSER

Check condenser. Refer to DEF-15, "Component Inspection"

Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace condenser.

8. CHECK FILAMENT

Check the filament for damage or blown.

Refer to DEF-72, "Inspection and Repair"

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair filament.

9. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-36, "Intermittent Incident"

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REAR WINDOW DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

>> INSPECTION END

Component Inspection

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1. CHECK CONDENSER

1. Check continuity between condenser connector and ground part of condenser.

Cond	enser		Continuity
Connector	Terminal	Ground part of	Continuity
D105	1	condenser	Not existed
D104	2		Not existed

2. Check condenser terminals.

	Continuity			
Connector	onnector Terminal Connector Terminal			
D105	1	D104	2	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair condenser.

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DOOR MIRROR DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR DEFOGGER

Description INFOID:000000005249371

Power is supplied to the door mirror defogger using BCM control.

Component Function Check

INFOID:0000000005249372

1. CHECK DOOR MIRROR DEFOGGER

- 1. Perform Active Test ("REAR DEFOGGER") using CONSULT-III.
- Touch "ON".
- 3. Check that both side door mirror glasses are getting warmer.

Is the inspection result normal?

YES >> Door mirror defogger is OK.

NO >> Refer to <u>DEF-16</u>, "<u>Diagnosis Procedure</u>"

Diagnosis Procedure

INFOID:0000000005249373

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)

- Disconnect fuse block (J/B) connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between fuse block (J/B) connector (fuse block side) and ground.

(+) Fuse block (J/B)		(–)	Condition	Voltage (V) (Approx.)	
Connector	Terminal			(, (pprox.)	
	00		Rear window defogger switch: ON	Battery voltage	
M3	9C	0	Rear window defogger switch: OFF	0	
IVIS	Ground	Giouna	Rear window defogger switch: ON	Battery voltage	
	10C		Rear window defogger switch: OFF	0	

Is the inspection result normal?

YES >> GO TO 3.

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

3.check intermittent incident

Check intermittent incident.

Refer to GI-36, "Intermittent Incident".

>> INSPECTION END

DRIVER SIDE DOOR MIRROR DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

DRIVER SIDE DOOR MIRROR DEFOGGER

Description INFOID:0000000005249374

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

1. CHECK DRIVER SIDE DOOR MIRROR DEFOGGER

- 1. Perform Active Test ("REAR DEFOGGER") using CONSULT-III.
- 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 <u>DEF-17</u>, "<u>Diagnosis Procedure</u>"

Diagnosis Procedure

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.

,	+) (driver side)	(-)	Condition	Voltage (V) (Approx.)	
Connector	Terminal			(11 - 7	
D3	7	Ground	Rear window defogger switch: ON	Battery voltage	
D3	7	Ground	Rear window defogger switch: OFF	0	

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK DRIVER SIDE DOOR MIRROR DEFOGGER CIRCUIT

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

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between fuse block (J/B) and door mirror (driver side).

3.CHECK FUSE BLOCK (J/B) OUTPUT SIGNAL

- Turn ignition switch ON.
- Check voltage between fuse block (J/B) harness connector and ground.

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DRIVER SIDE DOOR MIRROR DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

(+	,	(–)	Condition	Voltage (V) (Approx.)	
Connector	Terminal				
M3	10C	Ground	Rear window defogger switch: ON	Battery voltage	
IVIS	100	Giouna	Rear window defogger switch: OFF	0	

Is the inspection result normal?

YES >> GO TO 5.

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

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)		Continuity
Connector	Terminal	Ground	Continuity
D3	19		Existed

Is the inspection result normal?

YES >> Replace door mirror glass (driver side). Refer to MIR-80, "GLASS MIRROR: Disassembly and Assembly".

NO >> Repair or replace harness between door mirror (driver side) and ground.

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-36, "Intermittent Incident"

>> INSPECTION END

PASSENGER SIDE DOOR MIRROR DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

PASSENGER SIDE DOOR MIRROR DEFOGGER

Description INFOID:000000005249377

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

1. CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER

- 1. Perform Active Test ("REAR DEFOGGER") using CONSULT-III.
- 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 <u>DEF-19</u>, "<u>Diagnosis Procedure</u>"

Diagnosis Procedure

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.

·	+) assenger side)	(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			, , ,
D33	7	Ground	Rear window defogger switch: ON	Battery voltage
DSS	,	Giouna	Rear window defogger switch: OFF	0

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER CIRCUIT

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

Fuse bl	ock (J/B)	Door mirror (p	assenger side)	Continuity	
Connector	Terminal	Connector Terminal		Outlinuity	
M3	9C	D33	7	Existed	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between fuse block (J/B) and door mirror (passenger side).

3.CHECK FUSE BLOCK (J/B) OUTPUT SIGNAL

- 1. Turn ignition switch ON.
- Check voltage between fuse block (J/B) harness connector and ground.

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PASSENGER SIDE DOOR MIRROR DEFOGGER

< DTC/CIRCUIT DIAGNOSIS >

	(+) lock (J/B)	(–)	Condition	Voltage (V) (Approx.)
Connector	Terminal			, , ,
M3	9C	Ground	Rear window defogger switch: ON	Battery voltage
IVIS	90	Giouna	Rear window defogger switch: OFF	0

Is the inspection result normal?

YES >> GO TO 5.

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

4. CHECK GROUND CIRCUIT

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

Door mirror (passenge		Continuity	
Connector	Terminal	Ground	Continuity
D33	19		Existed

Is the inspection result normal?

YES >> Replace door mirror glass (passenger side). Refer to MIR-80, "GLASS MIRROR: Disassembly and Assembly".

NO >> Repair or replace harness between door mirror (passenger side) and ground.

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-36, "Intermittent Incident"

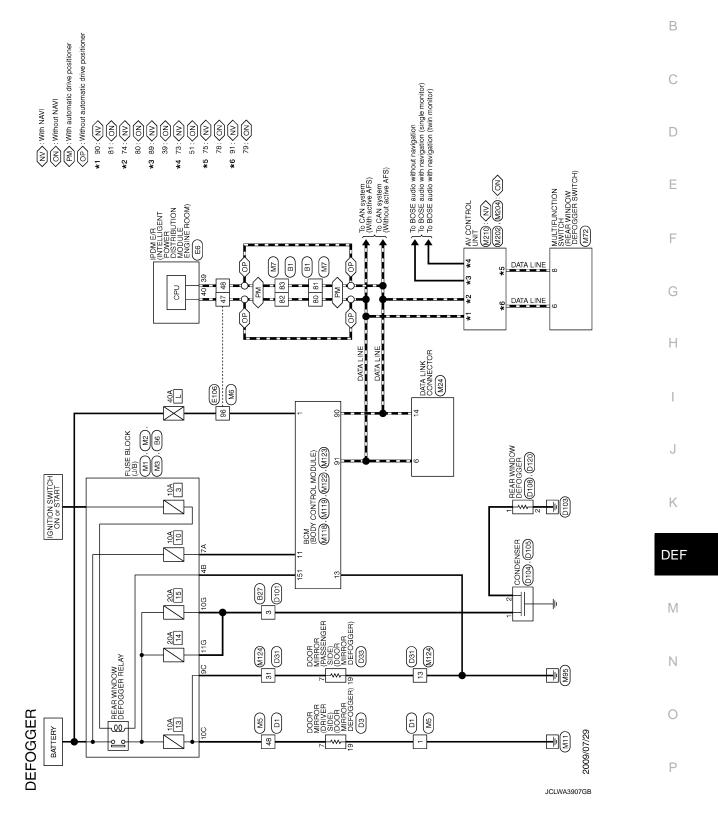
>> INSPECTION END

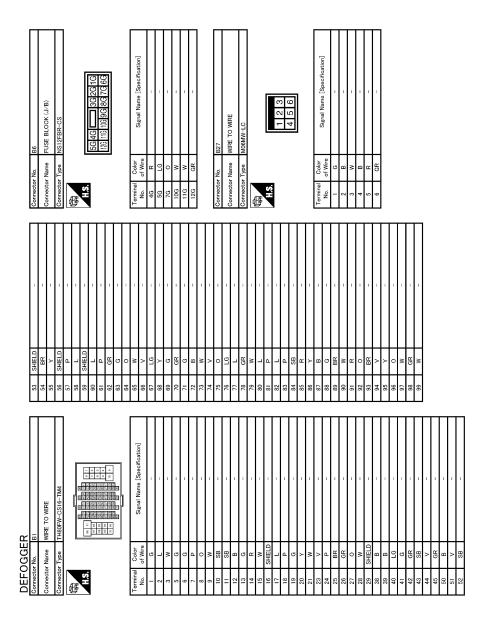
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REAR WINDOW DEFOGGER SYSTEM

Wiring Diagram - DEFOGGER SYSTEM -





JCLWA3908GB

< DTC/CIRCUIT DIAGNOSIS >

70	No. of Wire	a 38 88	1 04	o >	H	45 G	46 BR					Signal Name [Specification]		1	D120	REAR WINDOW DEFOGGER	M02MW-LC					· · · · · · · · · · · · · · · · · · ·	Signal Ivame [Specification]			PIDN E. R. GNYELLICENT POWER DISTRIBUTION MODILLE ENGINE ROOM!	TH08FW-NH			Ē
Terminal Color	T	2 ×		Connector No. D.	9	Connector Type M02MW-LC	E	H.S.				Terminal Color	No. of Wire	٦.	Connector No. D.	Connector Name RI	Connector Type M	€ C	H.S.			Terminal Color		2 B	Connector No. E6	Connector Name EN	Connector Type Ti	1	AME	
DEFOGGER Connector No. D101	Connector Name WIRE TO WIRE	Т	Connector Type Mubrw-LC			3 2 1	654	L	erminal Color Signal Name [Specification] No. of Wire	- 5	 	I B	SB -	GR -	Sonnector No. D104	Connector Name CONDENSER	Connector Type P01FB-A		[]-]	erminal Color		٦.	Connector No. D105	Connector Name CONDENSER	Sonnector Type P01FB-A			

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< DTC/CIRCUIT DIAGNOSIS >

CS (J.B) Signal Mame [Specification] Signal Name [Specification]	АВ
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Connector No.	D
icification]	Е
FUSE BLOCK (J/B)	F
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	DEFOGGER	T.		ŀ							
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< DTC/CIRCUIT DIAGNOSIS >

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< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status			
FR WIPER HI	Other than front wiper switch HI	Off			
FR WIFER HI	Front wiper switch HI	On			
ED WIDER LOW	Other than front wiper switch LO	Off			
FR WIPER LOW	Front wiper switch LO	On			
FR WASHER SW	Front washer switch OFF	Off			
FR WASHER SW	Front washer switch ON	On			
FR WIPER INT	Other than front wiper switch INT/AUTO	Off			
FR WIPER INT	Front wiper switch INT/AUTO	On			
FR WIPER STOP	Front wiper is not in STOP position	Off			
FR WIPER STOP	Front wiper is in STOP position	On			
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermitten dial position			
RR WIPER ON	Other than rear wiper switch ON	Off			
KK WIFEK ON	Rear wiper switch ON	On			
RR WIPER INT	Other than rear wiper switch INT	Off			
KK WIPEK INI	Rear wiper switch INT	On			
RR WASHER SW	Rear washer switch OFF	Off			
KK WASHER SW	Rear washer switch ON	On			
RR WIPER STOP	Rear wiper is in STOP position	Off			
KK WIPEK STOP	Rear wiper is not in STOP position	On			
TURN SIGNAL R	Off				
TURN SIGNAL R	Turn signal switch RH				
TURN SIGNAL L	Off				
TURN SIGNAL L	Turn signal switch LH	On			
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off			
TAIL LAWIP SVV	Lighting switch 1ST or 2ND	On			
HI BEAM SW	Other than lighting switch HI	Off			
HI BEAIN SW	Lighting switch HI	On			
HEAD LAMP SW 1	Other than lighting switch 2ND	Off			
HEAD LAIMP SW 1	Lighting switch 2ND	On			
HEAD LAMP SW 2	Other than lighting switch 2ND	Off			
HEAD LAWF SW 2	On				
DARRING CVA	Other than lighting switch PASS	Off			
PASSING SW	Lighting switch PASS	On			
ALITO LIGHT SW	Other than lighting switch AUTO	Off			
AUTO LIGHT SW	Lighting switch AUTO	On			
ED EOC SW	Front fog lamp switch OFF	Off			
FR FOG SW	Front fog lamp switch ON	On			

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status			
R FOG SW	NOTE: The item is indicated, but not monitored.	Off			
000D 0W DD	Driver door closed	Off			
OOR SW-DR	Driver door opened	On			
DOOR SW-AS	Passenger door closed	Off			
DOOK SVV-AS	Passenger door opened	On			
DOOR SW-RR	Rear RH door closed	Off			
DOOK SW-KK	Rear RH door opened	On			
DOOR SW-RL	Rear LH door closed	Off			
SOOK OW ILL	Rear LH door opened	On			
DOOR SW-BK	Back door closed	Off			
Jook off Bit	Back door opened	On			
CDL LOCK SW	Other than power door lock switch LOCK	Off			
	On				
CDL UNLOCK SW	Other than power door lock switch UNLOCK Power door lock switch UNLOCK	Off			
	On				
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off			
	Driver door key cylinder LOCK position Other than driver door key cylinder UNLOCK position	On			
KEY CYL UN-SW	Off				
	On				
EY CYL SW-TR	R NOTE: The item is indicated, but not monitored. Hazard switch is OFF				
HAZARD SW	Off				
	Hazard switch is ON	On			
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off			
ΓR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off			
ΓR/BD OPEN SW	Back door opener switch OFF	Off			
IVDD OF EN OW	While the back door opener switch is turned ON	On			
RNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off			
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off			
	LOCK button of the Intelligent Key is pressed	On			
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off			
OITEOOIT	UNLOCK button of the Intelligent Key is pressed	On			
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off			
RKE-PANIC	PANIC button of the Intelligent Key is not pressed	Off			
INL-FAINIU	PANIC button of the Intelligent Key is pressed	On			
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is not pressed	Off			
	UNLOCK button of the Intelligent Key is pressed and held	On			
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneously	Off			
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On			
	Bright outside of the vehicle	Close to 5 V			
OPTICAL SENSOR	Dark outside of the vehicle	Close to 0 V			

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status			
REQ SW -DR	Driver door request switch is not pressed	Off			
NEQ 3W -DIX	Driver door request switch is pressed	On			
REQ SW -AS	Passenger door request switch is not pressed	Off			
REQ 3W -A3	Passenger door request switch is pressed	On			
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off			
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off			
REQ SW -BD/TR	Back door request switch is not pressed	Off			
REQ 3W -BD/TR	Back door request switch is pressed	On			
DHEH EW	Push-button ignition switch (push switch) is not pressed	Off			
PUSH SW	Push-button ignition switch (push switch) is pressed	On			
ION DIVO E/D	Ignition switch in OFF or ACC position	Off			
IGN RLY2 -F/B	On				
CLUCH SW	The item is indicated, but not monitored.				
DDAKE OM 4	The brake pedal is depressed when No. 7 fuse is blown	Off			
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On			
DDAKE OW O	The brake pedal is not depressed	Off			
BRAKE SW 2	The brake pedal is depressed	On			
DETE (OANOL OW)	Selector lever in P position	Off			
DETE/CANCL SW	Selector lever in any position other than P				
OFT DAYAL OW	Selector lever in any position other than P and N	Off			
SFT PN/N SW	Selector lever in P or N position	On			
0.11.0.014	Steering is unlocked	Off			
S/L -LOCK	Steering is locked	On			
0.11.11.11.00.11	Steering is locked	Off			
S/L -UNLOCK	Steering is unlocked	On			
	Ignition switch in OFF or ACC position	Off			
S/L RELAY-F/B	Ignition switch in ON position	On			
	Driver door is unlocked	Off			
UNLK SEN -DR	Driver door is locked	On			
	Push-button ignition switch (push-switch) is not pressed	Off			
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	On			
	Ignition switch in OFF or ACC position	Off			
IGN RLY1 -F/B	Ignition switch in ON position	On			
	Selector lever in any position other than P	Off			
DETE SW -IPDM	Selector lever in P position	On			
	Selector lever in any position other than P and N	Off			
SFT PN -IPDM	Selector lever in P or N position	On			
	Selector lever in any position other than P	Off			
SFT P -MET	Selector lever in P position	On			
	Selector lever in any position other than N	Off			
SFT N -MET	Selector lever in N position	On			

< ECU DIAGNOSIS INFORMATION >

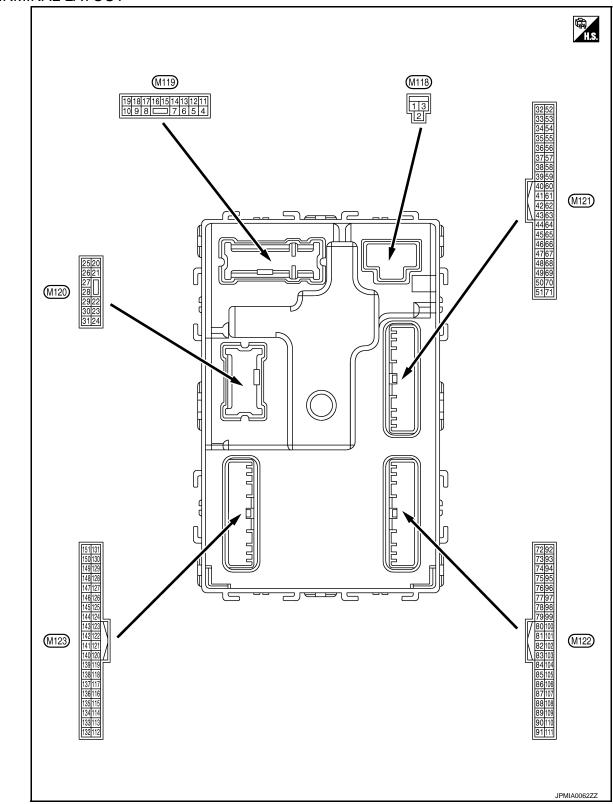
Monitor Item	Condition	Value/Status
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is unlocked	Off
S/L LOCK-IPDIVI	Steering is locked	On
C/L LINI K IDDM	Steering is locked	Off
S/L UNLK-IPDM	Steering is unlocked	On
S/L RELAY-REQ	Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK	Off
5/L RELAT-REQ	Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK	On
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Steering is locked	Reset
D OK FLAG	Steering is unlocked	Set
PRMT ENG STRT	The engine start is prohibited	Reset
TRWIT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The Intelligent Key is not inserted into key slot	Off
KE1 3W -3LOT	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
CONEIDM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
CONFIRM ID4	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
CONFININIDS	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done
CONFIDM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
CONFIRMIDI	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
1P 4	The ID of fourth Intelligent Key is registered to BCM	Done
TD 2	The ID of third Intelligent Key is not registered to BCM	Yet
TP 3	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
IP 2	The ID of second Intelligent Key is registered to BCM	Done
TD 4	The ID of first Intelligent Key is not registered to BCM	Yet
TP 1	The ID of first Intelligent Key is registered to BCM	Done

TERMINAL LAYOUT



PHYSICAL VALUES

DEF-35 2010 FX35/FX50

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< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				
		-	Input/		Condition	Value
+	_	Signal name	Output			(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	12 V
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		12 V
4		Interior room lamp			battery saver is activated. oom lamp power supply)	0 V
4 (P)	Ground	power supply (Battery saver signal)	Output	ed.	battery saver is not activat- or room lamp power supply)	12 V
5			•		UNLOCK (Actuator is activated)	12 V
(V)	Ground	LOCK	Output	Passenger door	Other than UNLOCK (Actuator is not activated)	0 V
7	0	Otan Inna	0	Otan Inno	ON	0 V
(Y)	Ground	Step lamp	Output	Step lamp	OFF	12 V
8	Ground	All doors, fuel lid	Output	All doors fuel lid	LOCK (Actuator is activated)	12 V
(V)	LOCK		Output	All doors, fuel lid	Other than LOCK (Actuator is not activated)	0 V
9	Cround	Ground Driver door, fuel lid		Driver door, fuel	UNLOCK (Actuator is activated)	12 V
(G)	Ground	UNLOCK	Output	lid	Other than UNLOCK (Actuator is not activated)	0 V
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	12 V
(BR)	Ground	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON		0 V
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(1)					ACC or ON	0 V
					Turn signal switch OFF	0 V
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s
						6.5 V

	inal No.	Description	I		• 11:1	Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
			-		Turn signal switch OFF	0 V
18 (O)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
				Other than under	condition	5.0 V
19 (SB)	Ground	Room lamp timer	Output	(Door is unlocke	mp timer is activated. ed. etc) unction is activated.	0 V
				_	Turn signal switch OFF	0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0
					Turn signal switch OFF	6.5 V 0 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
26	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
(P)	Ground	iteal wiper	Output	Real Wipel	ON (Operated)	12 V
34	Ground	Luggage room anten-	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
34 (SB) Gr	Siound	na (–)		OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
35	Ground	Luggage room anten-	Output	lgnition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(V)	Glound	na (+)	Output		When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
38	.8 Back o	Back door antenna (–	Output	When the back door opener re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(B)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
39	Ground Back door antenna (+) Output door opener request switch is operated with	When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB		
(W)		(+)	- 2.1941	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
47 (V)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V
(Y)		L/IX) COHIIO			ON	0 V

Terminal No. (Wire color)		Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)	
48		Back door opener	-	Back door opener	Not pressed	12 V	
(W)	Ground	switch operation	Output	switch	Pressed	0 V	
52	Ground	Starter relay control	Output	Ignition switch	When selector lever is in P or N position	12 V	
(LG)	Cround	Startor roley dontrol	Carpat	ON	When selector lever is not in P or N position	0 V	
					ON (Pressed)	0 V	
61 (W)	Ground	Back door opener request switch	Input	Back door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V	
64	_	Intelligent Key warn-	_	Intelligent Key	Sounding	0 V	
(L)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	12 V	
65 (O)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	(V) 15 10 5 10 ms JPMIA0016GB	
					Not in stop position	1.0 V 0 V	
66	Ground	Back door switch	Input	Back door switch	OFF (Door close)	12 V	
(LG)	Ground	Buok door owner	mput	Back acci cwitch	ON (Door open)	0 V	
					Pressed	0 V	
67 (P)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 JPMIA0594GB 8.5 - 9.0 V	
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1	
					ON (Door open)	0 V	

	ninal No. e color)	Description			O and distant	Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	(V) ₁₅ 10 5 0 ***10ms JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V
72	Ground	Room antenna 2 (-) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(R)	Ground				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
73	Ground	Room antenna 2 (+) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(G)					When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB

	inal No.	Description				Value	/
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
				When the pas-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	C
74 (SB)	Ground	Passenger door antenna (-)	Output	senger door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 11 1 s JMKIA0063GB	E
						(V)	(-
					When Intelligent Key is in the antenna detection area	10 5 0	-
75 (BR)	Ground	Passenger door antenna (+)	Output	When the pas- senger door re- quest switch is		JMKIA0062GB	
				operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0	k
						JMKIA0063GB	DE
					When Intelligent Key is in	(V) 15 10 5	N
70				When the driver	the antenna detection area	1 s JMKIA0062GB	Ν
76 (V)	Ground	Driver door antenna (-)	Output	door request switch is operat- ed with ignition		(V)	
				switch OFF	When Intelligent Key is not in the antenna detection area	15 10 5 0 1 s	F

	inal No. e color)	Description	T		Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
77		Driver door antenna		When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(LG)	Ground	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
78	Ground	Room antenna 1 (–)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(Y)		(Instrument panel)			When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
79	Ground	Room antenna 1 (+) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(BR)	Ground				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB

< ECU DIAGNOSIS INFORMATION >

Terminal No. Des (Wire color)		Description				Value	
(Wire	e color) –	Signal name	Input/ Output		Condition	(Approx.)	A
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	[
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	(
82	Ground	Ignition relay [Fuse	Output	Ignition switch	OFF or ACC	0 V	
(P)	Giodila	block (J/B)] control	Output	ignition switch	ON	12 V	
83	Ground	Remote keyless entry receiver communica-	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB	F
(GR)	Glound	tion	Output	When operating either button on the Intelligent Key		(V) 15 10 1 ms JMKIA0065GB	

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	inal No.	Description				Value
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
87	Ground	Combination switch	Input	Combination	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB
(BR)		INPUT 5		switch	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V

	inal No. e color)	Description			O a little	Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB	
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 2 ms JPMIA0040GB 1.3 V	
89	Ground	Push-button ignition	Input	Push-button ignition switch (Push	Pressed	0 V	
(SB)	Cround	switch (Push switch)		switch)	Not pressed	12 V	
90 (P)	Ground	CAN-L	Input/ Output		_	_	
91 (L)	Ground	CAN-H	Input/ Output		_	_	

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)
					OFF	12 V
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 JPMIA0015GB
					ON	6.5 V 0 V
93	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(V)		·	·		ON or ACC	0 V
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(O)	Ground	ACC relay control	Output	ignition switch	ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output		_	12 V
97	Ground	Steering lock condi-	Input	Steering lock	LOCK status	0 V
(L)	Ground	tion No. 1	IIIput	Steering lock	UNLOCK status	12 V
98	Ground	Steering lock condi-	Input	Steering lock	LOCK status	12 V
(P)		tion No. 2			UNLOCK status	0 V
99	Ground	Selector lever P posi-	Input	Selector lever	P position	0 V
(R)		tion switch			Any position other than P	12 V
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed) OFF (Not pressed)	0 V (V) 15 10 10 ms JPMIA0016GB 1.0 V
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
102	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0 V
(O)	Ground	lay control	Output	iginuon switch	ON	12 V
103 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF		12 V

	ninal No. e color)	Description			0 188	Value	
+	<u> </u>	Signal name	Input/ Output		Condition	(Approx.)	
106 (W)	Ground	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	12 V 0 V	
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V	
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	
					Front wiper switch LO	(V) 15 10 5	D
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
	Ground	Combination switch INPUT 4	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 2 ms JPMIA0038GB 1.3 V
108 (R)					Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB
					Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0040GB
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V

	inal No.	Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	В С
					Lighting switch PASS	(V) 15 10 5 0 2 ms 1.3 V	E F
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	G H
					Front wiper switch INT/ AUTO	(V) 15 10 5 0 2 ms JPMIA0038GB	J K
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V	M
					ON	0 V	0
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V	Ρ

	inal No.	Description				Value
(VVir	e color)	Signal name	Input/ Output		Condition	(Approx.)
					LOCK status	12 V
111 (GR)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 15 10 5 0 50 ms JMKIA0066GB
					For 15 seconds after UN- LOCK	12 V
					15 seconds or later after UNLOCK	0 V
112 (GR)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 → -10ms JPMIA0156GB 8.7 V
113	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(P)	0.00			ON When dark outside of the vehicle		Close to 0 V
116 (BR)	Ground	Stop lamp switch 1	Input		_	Battery voltage
		Stop lamp switch 2		OFF (Brake pedal is not depressed)		0 V
118	Crownd	(Without ICC)	lmmust	Stop lamp switch ON (Brake pedal is depressed)		Battery voltage
(P)	Ground	Stop lamp switch 2	- Input		OFF (Brake pedal is not de- brake hold relay OFF	0 V
		(With ICC)			ON (Brake pedal is de- rake hold relay ON	Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) ₁₅ 10 5 0 ++10ms JPMIA0594GB
					UNLOCK status	8.5 - 9.0 V 0 V
				When the Intellige	(Unlock switch sensor ON) nt Key is inserted into key slot	12 V
121 (BR)	Ground	Key slot switch	Input		nt Key is not inserted into key	0 V
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
(W)	2.00110	2.1.12300000		g	ON	Battery voltage

	inal No.	Description				Value	٨
(Wire	e color) –	Signal name	Input/ Output		Condition	(Approx.)	А
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 10 5 0 JPMIA0594GB 8.5 - 9.0 V	С
					ON (Door opene)	0 V	
132 (O)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB	E F
				Ignition switch OF	F or ACC	10.2 V 12 V	G
134			_	LOCK indicator	OFF	Battery voltage	Н
(GR)	Ground	LOCK indicator lamp	Output	lamp	ON	0 V	11
137 (B)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V	ı
138	Ground	Sensor power supply	Output	Ignition switch	OFF	0 V	
(Y)			-		ACC or ON P or N position	5.0 V 12 V	J
140 (R)	Ground	Selector lever P/N position	Input	Selector lever	Except P and N positions	0 V	
					ON	0 V	K
141 (G)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 11.3 V	DE
					OFF	12 V	Ν
					All switches OFF	0 V	
					Lighting switch 1ST Lighting switch HI	(V) 15	0
142	0	Combination switch	0	Combination switch	Lighting switch 2ND	15 10 5	
(O)	Ground	OUTPUT 5	Output	(Wiper intermittent dial 4)	Turn signal switch RH	2 ms JPMIA0031GB	Р

	inal No.	Description				Value
+ (VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	
143	Ground	Combination switch	Output	Combination	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10
(P)	Ground	OUTPUT 1	Output	switch	Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	5 0 JPMIA0032GB 10.7 V
					All switches OFF (Wiper intermittent dial 4)	0 V
		(Wiper in		Front washer switch ON (Wiper intermittent dial 4)		
144		Combination switch	Output	Combination switch	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10
(G)	Ground	OUTPUT 2			Rear washer switch ON (Wiper intermittent dial 4)	5
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	2 ms JPMIA0033GB
-				All switches OFF		0 V
					Front wiper switch INT/ AUTO	(V)
145	Onc	Combination switch	Output	Combination switch	Front wiper switch LO	15 10 5
(L)	Ground	OUTPUT 3	Output	(Wiper intermit- tent dial 4)	Lighting switch AUTO	0 2 ms JPMIA0034GB
					All 11 6==	10.7 V
					All switches OFF	0 V
					Front fog lamp switch ON Lighting switch 2ND	(V)
146		Combination switch		Combination	Lighting switch PASS	15
(SB)	Ground	Ground Combination switch Output switch		(Wiper intermit-	Turn signal switch LH	5 0 2 ms JPMIA0035GB

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	inal No.	Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) ₁₅ 10 5 0 → 10ms JPMIA0594GB 8.5 - 9.0 V	
					ON (Door open)	0 V	
151	Ground	Rear window defog-	Output	Rear window de-	Active	0 V	
(G)	Ground	ger relay control	Cutput	fogger	Not activated	Battery voltage	

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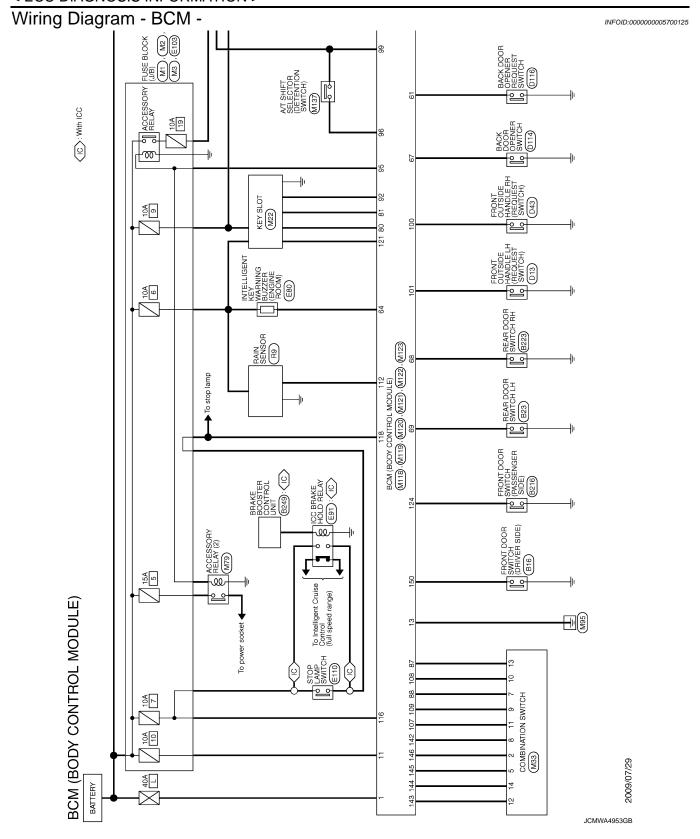
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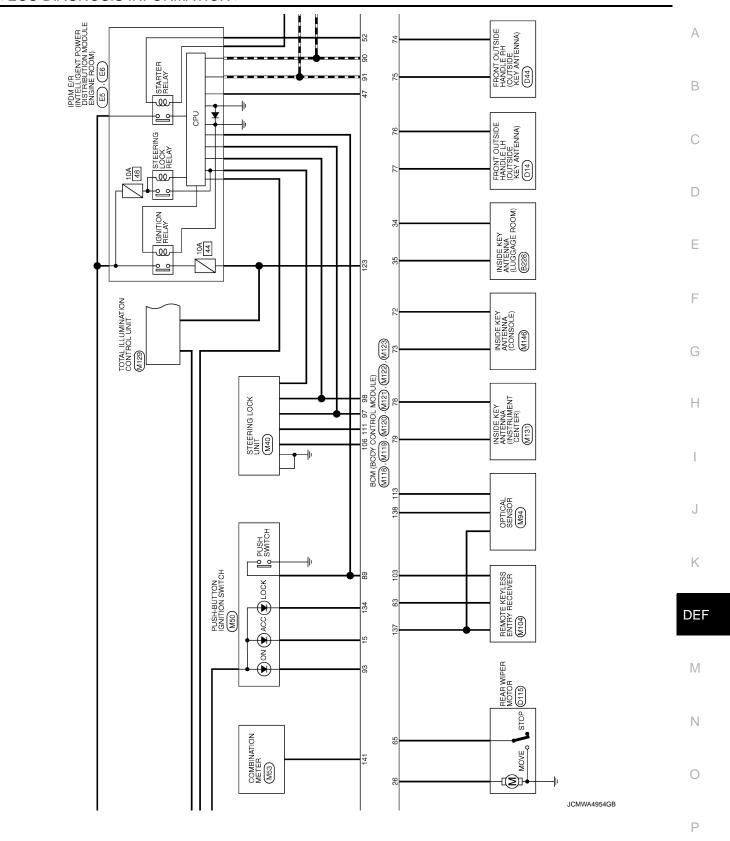
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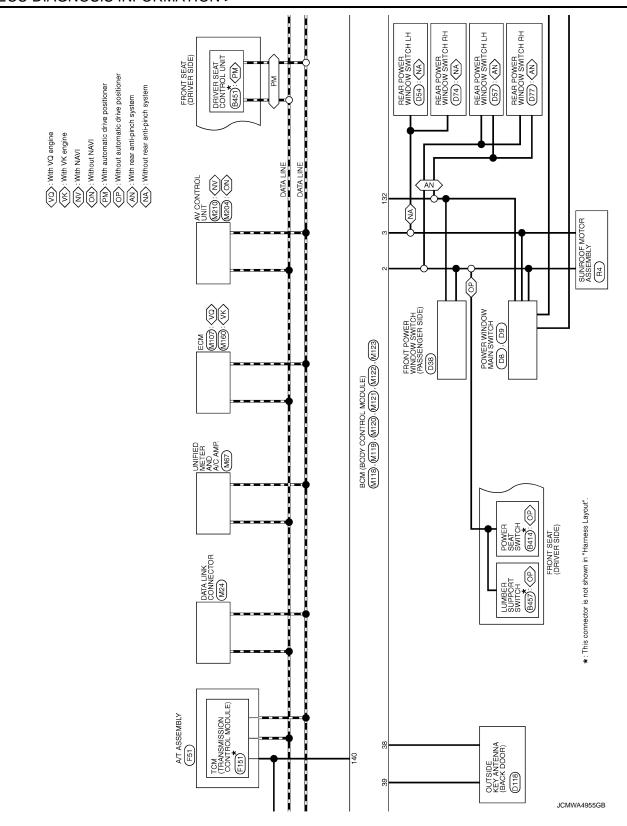
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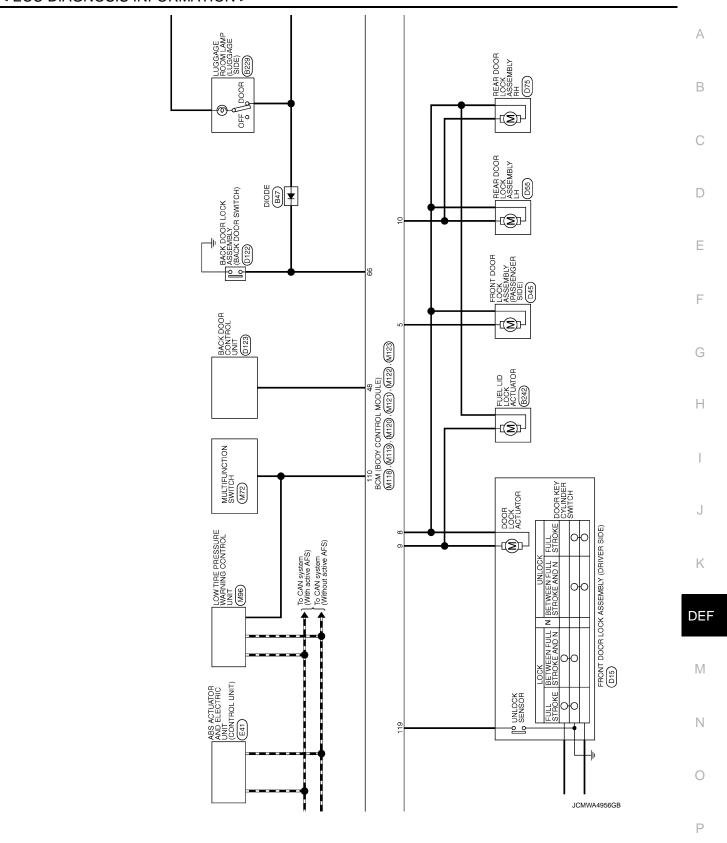
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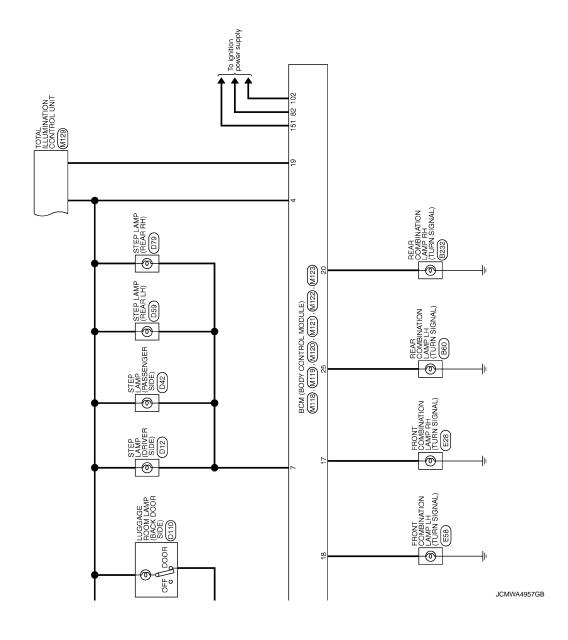
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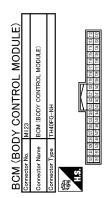




< ECU DIAGNOSIS INFORMATION >

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NATS ANT AMP NATS ANT AMP NATS ANT AMP IGN RELAY (F-B) CONT KEVLESS ENTRY RECEIVER SIGNAL COMBI SW INPUT 3 COMBI SW INPUT 3 COMBI SW INPUT 3 PUSH SW CAN-L COMBI SW INPUT 3 FACS RELAY CONT ACT SHIET SELECTOR POWER SUPPLY S.L. CONDITION 1 COMBI SW INPUT 1 COMBI SW INPUT 1 COMBI SW INPUT 2 COMBI SW INPUT 3 C	В
	С
1	D
Carlon	Е
H H H H H H H H H H H H H H H H H H H	F
	G
Connector Connec	Н
Signal Name (Specification)	I
10 10 10 10 10 10 10 10	J
Connector No. M	К
ULE)	DEF
NY CONTROL MODULE) M33 COMBINATION SWITCH THISPW-NIH Signal Name [Specification] FR WASHER (+) OUTPUT 4 FR WASHER (+) OUTPUT 3 OUTPUT 1 INPUT 3 OUTPUT 5 INPUT 3 OUTPUT 1 INPUT 1 INPUT 1 INPUT 1 INPUT 1 INPUT 3 OUTPUT 1 INPUT 1 IN	M
	N
Connector Name Conn	0
	JCMWA4958GB

Revision: 2009 August **DEF-59** 2010 FX35/FX50



Terminal No.	Color of Wire	Signal Name [Specification]
112	GR	RAIN SENSOR SERIAL LINK
113	Ь	OPLICAL SENSOR
116	ВR	STOP LAMP SW 1
118	d	STOP LAMP SW 2
119	SB	DR DOOR UNLOCK SENSOR
121	BR	KEY SLOT SW
123	M	IGN F/B
124	97	PASSENGER DOOR SW
132	0	POWER WINDOW SW COMM
134	GR	LOCK IND
137	8	RECEIVER/SENSOR GND
138	Υ	SENSOR POWER SUPPLY
140	ч	SHIFT N/P
141	5	SECURITY INDICATOR OUTPUT
142	0	COMBI SW OUTPUT 5
143	Ь	COMBI SW OUTPUT 1
144	5	COMBI SW OUTPUT 2
145	٦	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4
150	GR	DRIVER DOOR SW
151	g	REAR WINDOW DEFOGGER RELAY CONT

JCMWA4959GB

INFOID:0000000005700126

FAIL-SAFE CONTROL BY DTC

Fail-safe

BCM performs fail-safe control when any DTC are detected.

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals are received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent Starter control relay signal Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Power position: IGN Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (battery voltage) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When any of the following conditions are fulfilled Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E9: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled • Steering condition No. 1 signal: LOCK (0 V) • Steering condition No. 2 signal: LOCK (Battery voltage)

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

NOTE:

If rain sensor malfunction is detected when ignition switch is turned OFF \Rightarrow ON and front wiper switch is INT position, BCM operates a fail-safe control.

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.

When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

1. More than 1 minute is passed after the rear wiper stops.

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- Turn rear wiper switch OFF.
- Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

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If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC	
1	B2562: LOW VOLTAGE	
2	U1000: CAN COMM U1010: CONTROL UNIT(CAN)	
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING	
	B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY	
	 B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS B2604: PNP SW B2605: PNP SW B2606: S/L RELAY 	
4	 B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B260A: IGNITION RELAY B260B: STEERING LOCK UNIT B260C: STEERING LOCK UNIT 	
	 B260D: STEERING LOCK UNIT B260F: ENG STATE SIG LOST B2612: S/L STATUS B2614: ACC RELAY CIRC 	
	 B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2619: BCM 	•
	B261A: PUSH-BTN IGN SW B261E: VEHICLE TYPE B26E9: S/L STATUS B26EA: KEY REGISTRATION MOMENT OF THE PROPERTY OF THE PROPER	
5	U0415: VEHICLE SPEED SIG B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA	

DTC Index

INFOID:0000000005700128

NOTE:

The details of time display are as follows.

- · CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to BCS-17, "COM-MON ITEM: CONSULT-III Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warn- ing lamp ON	Reference page
No DTC is detected. Further testing may be required.	_	_	_	_
U1000: CAN COMM	_	_	_	BCS-35
U1010: CONTROL UNIT(CAN)	_	_	_	BCS-36
U0415: VEHICLE SPEED SIG	_	_	_	BCS-37
B2013: ID DISCORD BCM-S/L	×	×	_	SEC-50
B2014: CHAIN OF S/L-BCM	×	×	_	SEC-51
B2190: NATS ANTENNA AMP	×	_	_	SEC-42
B2191: DIFFERENCE OF KEY	×	_	_	SEC-45
B2192: ID DISCORD BCM-ECM	×	_	_	SEC-46
B2193: CHAIN OF BCM-ECM	×	_	_	SEC-48
B2195: ANTI SCANNING	×	_	_	SEC-49
B2553: IGNITION RELAY	_	×	_	PCS-50
B2555: STOP LAMP	_	×	_	SEC-54
B2556: PUSH-BTN IGN SW	_	×	×	SEC-56
B2557: VEHICLE SPEED	×	×	×	SEC-58
B2560: STARTER CONT RELAY	×	×	×	SEC-59
B2562: LOW VOLTAGE	_	×	_	BCS-38
B2601: SHIFT POSITION	×	×	×	SEC-60
B2602: SHIFT POSITION	×	×	×	SEC-63
B2603: SHIFT POSI STATUS	×	×	×	SEC-65
B2604: PNP SW	×	×	×	SEC-68
B2605: PNP SW	×	×	×	SEC-70
B2606: S/L RELAY	×	×	×	SEC-72
B2607: S/L RELAY	×	×	×	SEC-73
B2608: STARTER RELAY	×	×	×	SEC-75
B2609: S/L STATUS	×	×	×	SEC-77
B260A: IGNITION RELAY	×	×	×	PCS-52
B260B: STEERING LOCK UNIT	_	×	×	SEC-81
B260C: STEERING LOCK UNIT	_	×	×	SEC-82
B260D: STEERING LOCK UNIT	_	×	×	SEC-83
B260F: ENG STATE SIG LOST	×	×	×	SEC-84
B2612: S/L STATUS	×	×	×	SEC-88
B2614: ACC RELAY CIRC	_	×	×	PCS-54
B2615: BLOWER RELAY CIRC	_	×	×	PCS-56
B2616: IGN RELAY CIRC	_	×	×	PCS-58
B2617: STARTER RELAY CIRC	×	×	×	<u>SEC-92</u>
B2618: BCM	×	×	×	PCS-60
B2619: BCM	×	×	×	SEC-94
B261A: PUSH-BTN IGN SW	_	×	×	SEC-95
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	SEC-98

< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warn- ing lamp ON	Reference page
B2621: INSIDE ANTENNA	_	×	_	DLK-61
B2622: INSIDE ANTENNA	_	×	_	DLK-63
B2623: INSIDE ANTENNA	_	×	_	DLK-65
B26E7: TPMS CAN COMM	_	_	_	BCS-39
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	SEC-86
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	SEC-87

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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:0000000005249386

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to DEF-9, "BCM: Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.check rear window defogger switch

Check rear window defogger switch.

Refer to DEF-10, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.check rear window defogger relay

Check rear window defogger relay.

Refer to DEF-11, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-36, "Intermittent Incident".

NO >> GO TO 1.

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

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

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1. CHECK REAR WINDOW DEFOGGER

Check rear window defogger.

Refer to DEF-13, "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-36. "Intermittent Incident".

NO >> GO TO 1.

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DOOR MIRROR DEFOGGER DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

DOOR MIRROR DEFOGGER DOES NOT OPERATE BOTH SIDES

BOTH SIDES: Diagnosis Procedure

INFOID:0000000005249388

1. CHECK DOOR MIRROR DEFOGGER

Check door mirror defogger.

Refer to DEF-16, "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-36, "Intermittent Incident".

NO >> GO TO 1.

DRIVER SIDE

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000005249389

1. CHECK DRIVER SIDE DOOR MIRROR DEFOGGER

Check driver side 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-36, "Intermittent Incident".

NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005249390

${f 1}$.CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER.

Check passenger side door mirror defogger.

Refer to DEF-19, "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-36, "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

1. CHECK AV CONTROL UNIT FUNCTION

Check that the AV control unit is operating normally.

- Without navigation system. Refer to AV-77, "Work Flow".
- With navigation (single monitor) system. Refer to AV-239, "Work Flow (Multi AV)".
- With navigation (twin monitor) system. Refer to AV-456, "Work Flow (Multi AV)".

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-36, "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:0000000005249392

1. CHECK PRESET SWITCH

Check rear window defogger opration.

- YES >> Replace preset switch. Refer to <u>AV-149</u>, "<u>Removal and Installation</u>" (without navigation system), <u>AV-345</u>, "<u>Removal and Installation</u>" [navigation (single monitor) system] or <u>AV-576</u>, "<u>Removal and Installation</u>" [navigation (twin monitor) system].
- NO >> Check rear window defogger system. Refer to DEF-3, "Work Flow".

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

Precaution 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 AIR BAG" and "SEAT BELT" 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 AIR BAG".
- 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.

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

WARNING:

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT 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 battery, and wait at least 3 minutes before performing any service.

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REMOVAL AND INSTALLATION

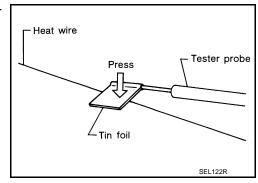
FILAMENT

Inspection and Repair

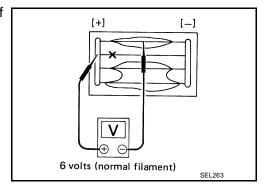
INFOID:0000000005249394

INSPECTION

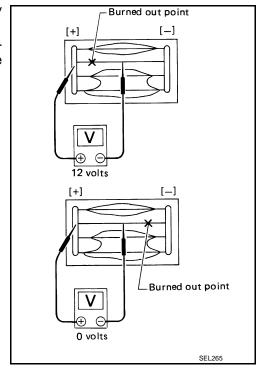
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with finger.



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.
- 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)

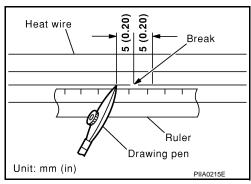
FILAMENT

< REMOVAL AND INSTALLATION >

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

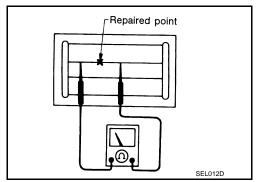
REPAIRING PROCEDURE

- 1. Wipe broken heat wire and its surrounding area clean with a stop cloth dampened in alcohol.
- Shake silver composition container before use.
 Apply a small amount of conductive silver composition to tip of drawing pen.
- 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.



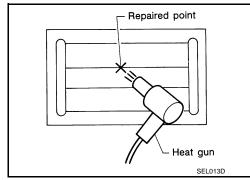
After repair is completed, check repaired wire for continuity. This
check must be conducted 10 minutes after silver composition is
deposited.

Do not touch repairing area while test is being conducted.



 Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. The minimum distance of 3 cm (1.2 in) must 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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