SECTION DEF
DEFOGGER

CONTENTS

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000007512125

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.

>> GO TO 2.

2.CHECK DTC

Perform self diagnosis using CONSULT.

Is any DTC detected?

YES >> Refer to BCS-74, "DTC Index".
NO >> GO TO 3.

3.REPRODUCE THE MALFUNCTION INFORMATION

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

>> GO TO 4.

4.IDENTIFY THE MALFUNCTIONING SYSTEM WITH “SYMPTOM DIAGNOSIS”

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

>> GO TO 5.

5.IDENTIFY MALFUNCTIONING PARTS WITH “COMPONENT DIAGNOSIS”

Perform the diagnosis with “Component diagnosis” of the applicable system.

>> GO TO 6.

6.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 7.

7.FINAL CHECK

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

Are all malfunctions corrected?

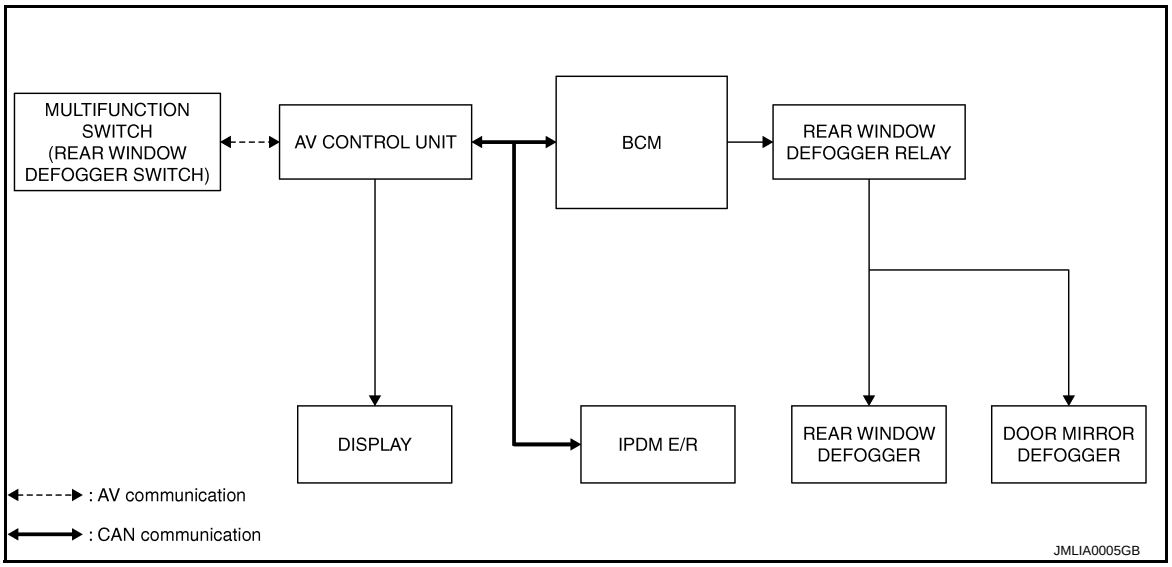
YES >> INSPECTION END
NO >> GO TO 4.

SYSTEM DESCRIPTION

REAR WINDOW DEFOGGER SYSTEM

System Diagram

INFOID:0000000007512126



System Description

INFOID:0000000007512127

Operation Description

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

Timer function

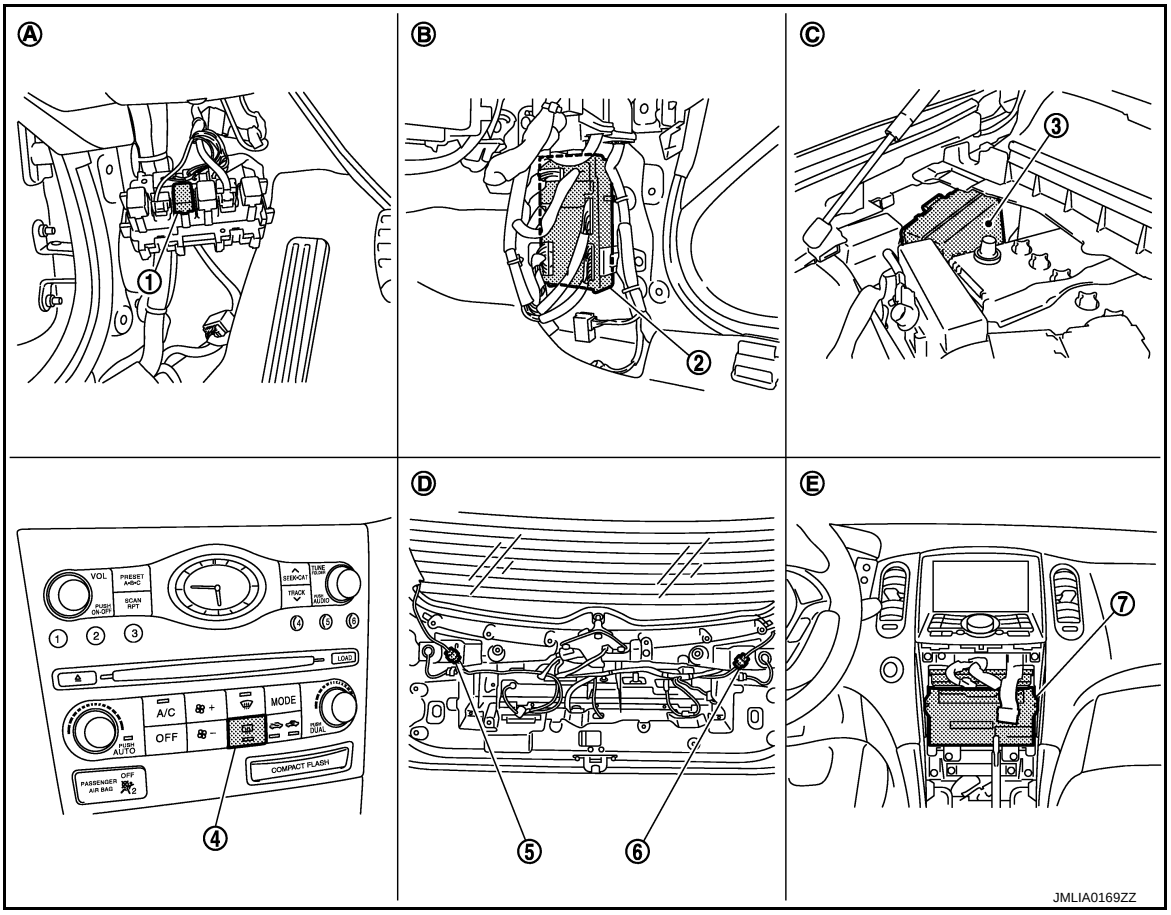
- BCM turns rear window defogger relay ON for approximately 15 minutes when rear window defogger switch turns ON. It makes rear window defogger and door mirror defogger (with mirror defogger) operate.
- Timer is canceled after pressing rear window defogger switch again during timer operation. Then BCM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

INPUT/OUTPUT SIGNAL CHART

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

Component Parts Location

INFOID:0000000007512128



1. Rear window defogger relay
2. BCM
3. IPDM E/R
4. Rear window defogger switch (built-in multifunction switch)
5. Rear window defogger connector
6. Rear window defogger connector
7. AV control unit
- A. Dash side lower (driver side)
- B. Dash side lower (passenger side)
- C. Engine room dash panel (RH)
- D. Behind back door finisher
- E. Behind cluster lid C

Component Description

INFOID:0000000007512129

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

INFOID:0000000007799404

APPLICATION ITEM
CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION
BCM can perform the following functions for each system.

NOTE:

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*			
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×

NOTE:

*: This item is displayed, but is not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected*	While turning BCM status from low power consumption mode to normal mode (Power supply position is “LOCK”*)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
	LOCK>ACC		While turning power supply position from “LOCK”* to “ACC”
	ACC>ON		While turning power supply position from “ACC” to “IGN”
	RUN>ACC		While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power supply position from “ACC” to “OFF”
	OFF>LOCK		While turning power supply position from “OFF” to “LOCK”*
	OFF>ACC		While turning power supply position from “OFF” to “ACC”
	ON>CRANK		While turning power supply position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is “LOCK”*.) to low power consumption mode
	LOCK		Power supply position is “LOCK”*
	OFF		Power supply position is “OFF” (Ignition switch OFF)
	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	0 - 39	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 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

NOTE:
*: Power supply position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power supply position shifts to “ACC” when the push-button ignition switch (push switch) is pushed at “LOCK”.

REAR WINDOW DEFOGGER

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

INFOID:0000000007512131

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	Rear window defogger operates when “ON” on CONSULT screen is touched.

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000007512132

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	Battery power supply	L(40A)
11		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.

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

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		Ground	Continuity
Connector	Terminal		
M119	13		Existed

Does continuity exist?

YES >> INSPECTION END
NO >> Repair or replace harness.

REAR WINDOW DEFOGGER SWITCH

Description

INFOID:0000000007512133

- 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:0000000007512134

1.CHECK REAR WINDOW DEFOGGER SWITCH FUNCTION

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

Is the inspection result normal?

YES >> Rear window defogger switch function is OK.
NO >> Refer to DEF-10, "Diagnosis Procedure"

Diagnosis Procedure

INFOID:0000000007512135

1.CHECK PRESET SWITCH

Does preset switch operate normally?
- Without navigation system. Refer to AV-17, "On Board Diagnosis Function".
- With navigation system. Refer to AV-151, "On Board Diagnosis Function".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace preset switch. Refer toAV-126, "Removal and Installation" (without navigation system) or AV-301, "Removal and Installation" (with navigation system).

REAR WINDOW DEFOGGER RELAY

Description

INFOID:0000000007512136

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

Component Function Check

INFOID:0000000007512137

1.CHECK REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT

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

Is the inspection result normal?

YES >> Rear window defogger relay power supply circuit is OK.
NO >> Refer to DEF-11, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007512138

1.CHECK FUSE

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

Is the inspection result normal?

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

2.CHECK REAR WINDOW DEFOGGER RELAY CIRCUIT 1

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

(+)		(–)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal			
M123	151	Ground	Rear window defogger switch: ON	0
			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

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

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

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	151		Not existed

Is the inspection result normal?

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

4.CHECK REAR WINDOW DEFOGGER RELAY

1. Disconnect rear window defogger relay,
2. Check rear window defogger relay.
   Refer to DEF-12, "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.

(+)		(–)	Voltage (V) (Approx.)
Fuse block (J/B)			
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-45, "Intermittent Incident"

>> INSPECTION END.

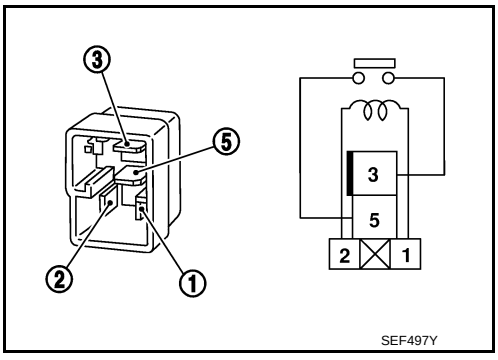
Component Inspection

INFOID:0000000007512139

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



Is the inspection result normal?

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

REAR WINDOW DEFOGGER

Description

INFOID:0000000007512140

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:0000000007512141

1.CHECK REAR WINDOW DEFOGGER

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

Is the inspection result normal?

YES >> Rear window defogger is OK.
NO >> Refer to DEF-13, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007512142

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check the following items.

- 20A fuse [No.14, located in fuse block (J/B)]
- 20A fuse [No.15, located in fuse block (J/B)]

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

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

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

Rear window defogger		Ground	Continuity
Connector	Terminal		
D120	2		Existed

Is the inspection result normal?

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

4.CHECK REAR WINDOW DEFOGGER POWER SUPPLY CIRCUIT

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

Fuse block (J/B)		Rear window defogger		Continuity
Connector	Terminal	Connector	Terminal	
B6	10G	D108	1	Existed
	11G			

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

Fuse block (J/B)		Ground	Continuity
Connector	Terminal		
B6	10G		Not existed
	11G		

Is the inspection result normal?

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

5.CHECK FUSE BLOCK (J/B)

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

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

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 6.

6.CHECK REAR WINDOW DEFOGGER RELAY

Check rear window defogger relay. Refer to DEF-12, "Component Inspection"

Is the inspection result normal?

YES >> GO TO 8.
NO >> Replace rear window defogger relay.

7.CHECK FILAMENT

Check the filament for damage or blown.
Refer to DEF-57, "Inspection and Repair"

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair filament.

8.CHECK INTERMITTENT INCIDENT

Check intermittent incident.
Refer to GI-45, "Intermittent Incident"

>> INSPECTION END

DOOR MIRROR DEFOGGER

Description

INFOID:0000000007512144

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

Component Function Check

INFOID:0000000007512145

1.CHECK DOOR MIRROR DEFOGGER

1. Perform Active Test (“REAR DEFOGGER”) using CONSULT.
2. 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 DEF-15, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007512146

1.CHECK FUSE

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

Is the inspection result normal?

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

2.CHECK FUSE BLOCK (J/B)

1. 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.

(+)		(–)	Condition	Voltage (V) (Approx.)
Fuse block (J/B)				
Connector	Terminal			
M3	9C	Ground	Rear window defogger switch: ON	Battery voltage
			Rear window defogger switch: OFF	0
	10C		Rear window defogger switch: ON	Battery voltage
			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-45, "Intermittent Incident".

>> INSPECTION END

DRIVER SIDE DOOR MIRROR DEFOGGER

Description

INFOID:0000000007512147

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:0000000007512148

1.CHECK DRIVER SIDE DOOR MIRROR DEFOGGER

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

Is the inspection result normal?

YES >> Driver side door mirror defogger is OK.
NO >> Refer to DEF-16, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007512149

1.CHECK POWER SUPPLY CIRCUIT

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

(+)		(–)	Condition	Voltage (V) (Approx.)
Door mirror (driver side)				
Connector	Terminal			
D3	7	Ground	Rear window defogger switch: ON	Battery voltage
			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.
3. Check continuity between fuse block (J/B) harness connector and door mirror (driver side) harness connector.

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

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

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

(+)		(–)	Condition	Voltage (V) (Approx.)
Fuse block (J/B)				
Connector	Terminal			
M3	10C	Ground	Rear window defogger switch: ON	Battery voltage
			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)		Ground	Continuity
Connector	Terminal		
D3	19		Existed

Is the inspection result normal?

YES >> Replace door mirror glass (driver side). Refer to MIR-48, "GLASS MIRROR : Removal and Installation".
NO >> Repair or replace harness between door mirror (driver side) and ground.

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.
Refer to GI-45, "Intermittent Incident"

>> INSPECTION END

PASSENGER SIDE DOOR MIRROR DEFOGGER

Description

INFOID:0000000007512150

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:0000000007512151

1.CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER

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

Is the inspection result normal?

YES >> Passenger side door mirror defogger is OK.
NO >> Refer to DEF-18, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007512152

1.CHECK POWER SUPPLY CIRCUIT

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

(+)		(–)	Condition	Voltage (V) (Approx.)
Door mirror (Passenger side)				
Connector	Terminal			
D33	7	Ground	Rear window defogger switch: ON	Battery voltage
			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.
3. Check continuity between fuse block (J/B) harness connector and door mirror (passenger side) harness connector.

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

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.
2. Check voltage between fuse block (J/B) harness connector and ground.

(+)		(–)	Condition	Voltage (V) (Approx.)
Fuse block (J/B)				
Connector	Terminal			
M3	9C	Ground	Rear window defogger switch: ON	Battery voltage
			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 (passenger side)		Ground	Continuity
Connector	Terminal		
D33	19		Existed

Is the inspection result normal?

YES >> Replace door mirror glass (passenger side). Refer to MIR-48, "GLASS MIRROR : Removal and Installation".
NO >> Repair or replace harness between door mirror (passenger side) and ground.

5. CHECK INTERMITTENT INCIDENT

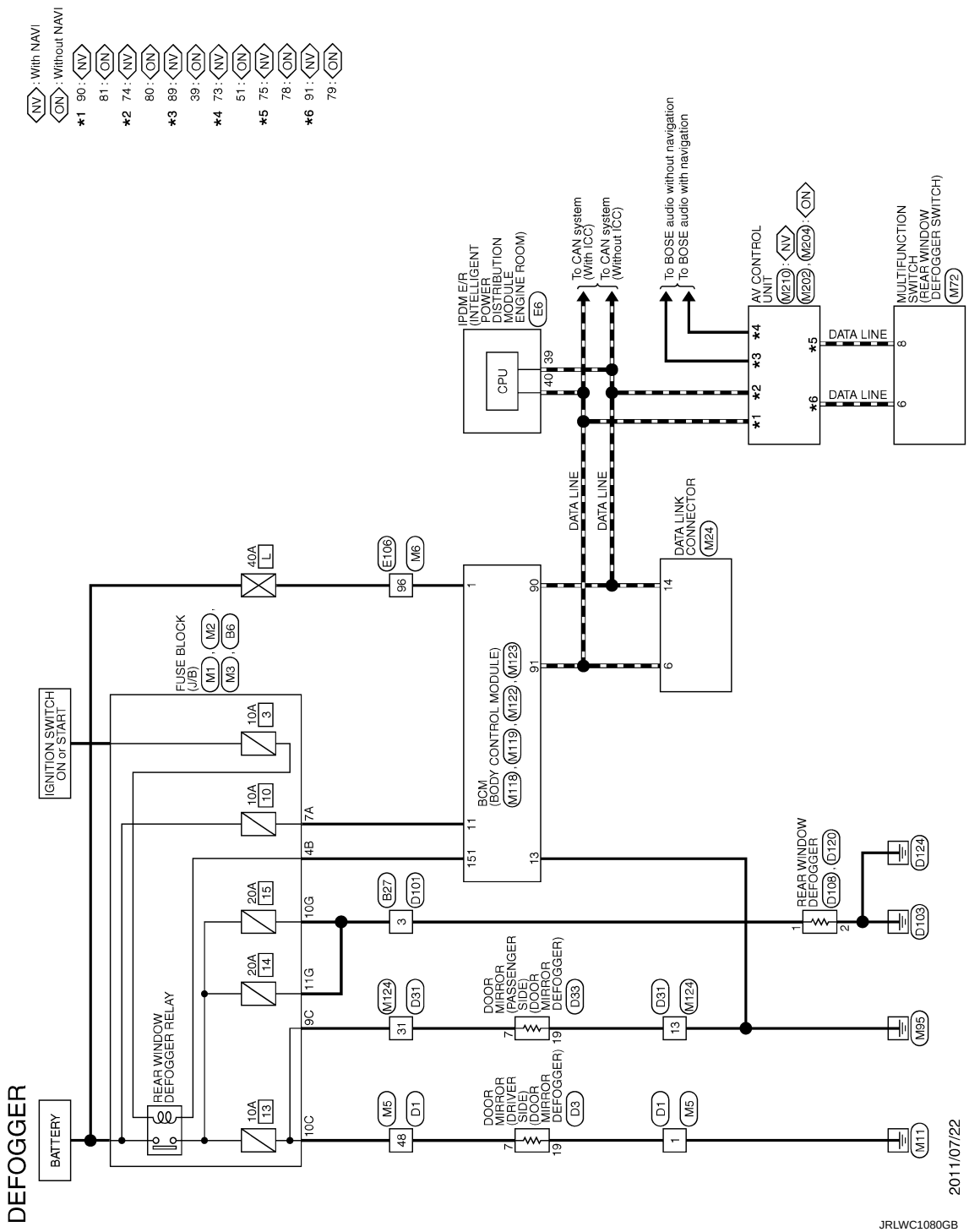
Check intermittent incident.
Refer to GI-45, "Intermittent Incident"

>> INSPECTION END

REAR WINDOW DEFOGGER SYSTEM

Wiring Diagram - DEFOGGER SYSTEM -

INFOID:0000000007512153



ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000007799407

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT/AUTO	Off
	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper volume dial is in a dial position 1 - 7	Wiper volume dial position
RR WIPER ON	Other than rear wiper switch ON	Off
	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
	Rear wiper is not in STOP position	On
TURN SIGNAL R	Other than turn signal switch RH	Off
	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On

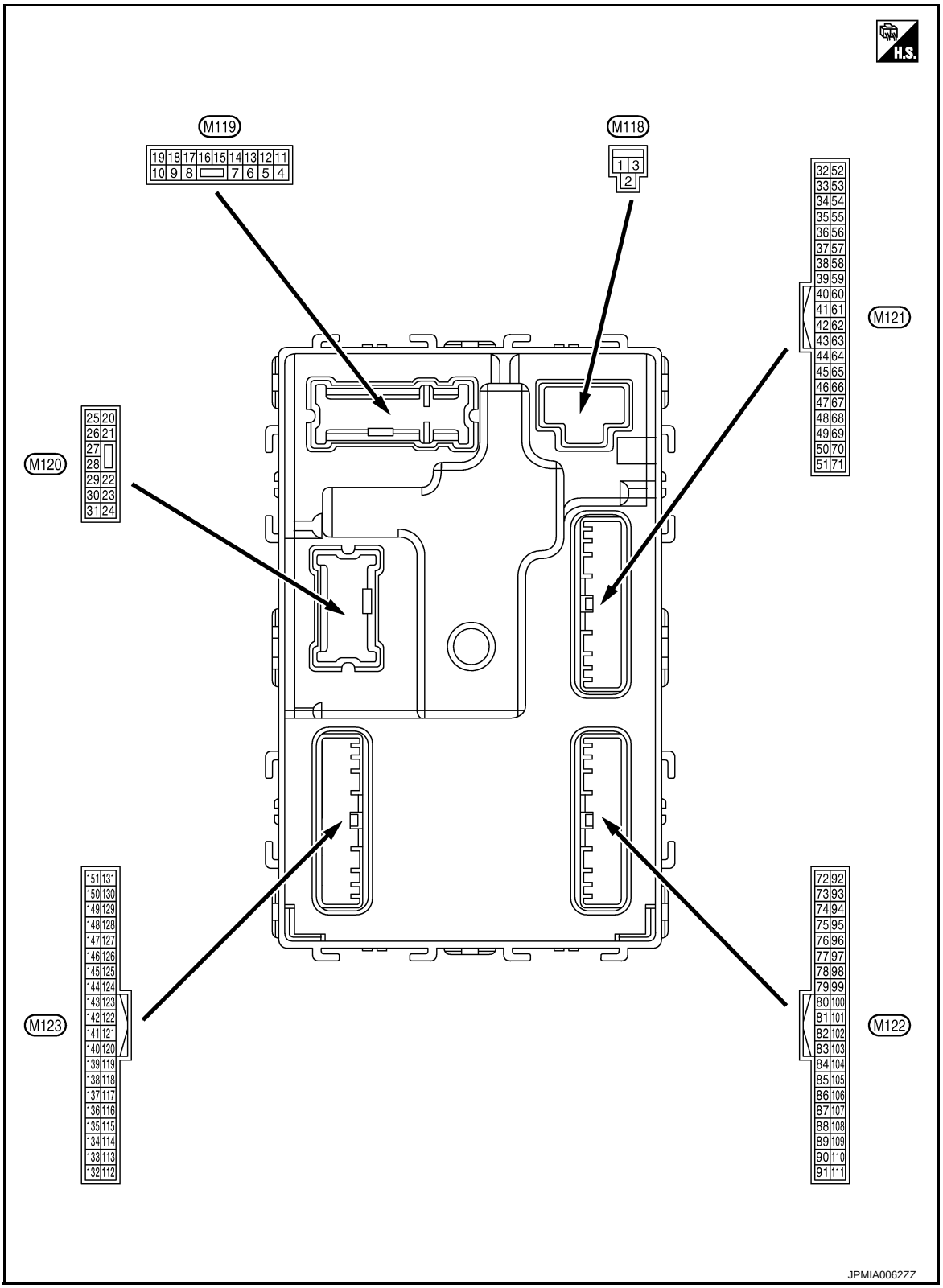
Monitor Item	Condition	Value/Status
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	**NOTE:** The item is indicated, but not monitored.	Off
TR CANCEL SW	**NOTE:** The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	**NOTE:** The item is indicated, but not monitored.	Off
REVERSE SW	**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
	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
	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

Monitor Item	Condition	Value/Status
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	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
	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	**NOTE:** The item is indicated, but not monitored.	Off
ACC RLY -F/B	**NOTE:** The item is indicated, but not monitored.	Off
CLUCH SW	**NOTE:** The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is depressed when No. 7 fuse is blown	Off
	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
	The brake pedal is depressed	On
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	**NOTE:** The item is indicated but not monitored.	Off
S/L -UNLOCK	**NOTE:** The item is indicated but not monitored.	Off
S/L RELAY-F/B	**NOTE:** The item is indicated but not monitored.	Off
UNLK SEN -DR	Driver door is unlocked	Off
	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On

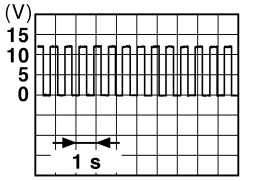
Monitor Item	Condition	Value/Status
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	**NOTE:** The item is indicated but not monitored.	Off
S/L UNLK-IPDM	**NOTE:** The item is indicated but not monitored.	Off
S/L RELAY-REQ	**NOTE:** The item is indicated but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed-ometer reading
VEH SPEED 2	While driving	Equivalent to speed-ometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Driver side door is open after ignition switch is turned OFF (Selector lever is in the P position)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	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
	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
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
	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
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done

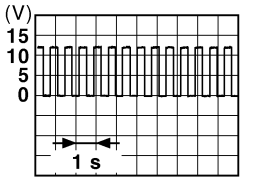
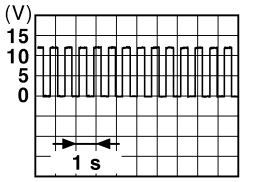
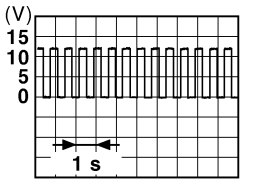
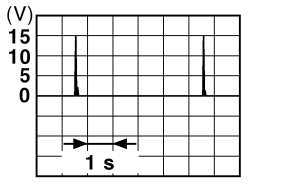
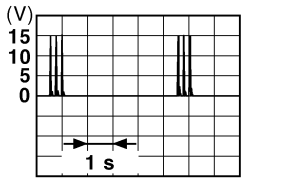
Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
	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
	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
	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
	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done

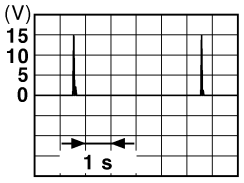
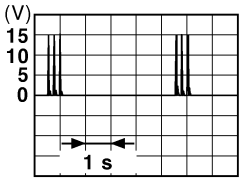
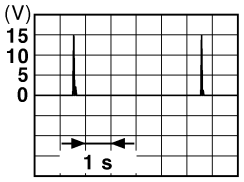
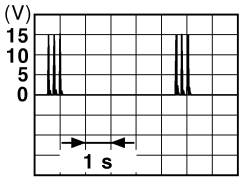
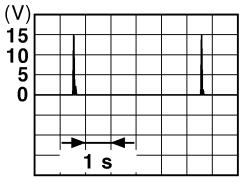
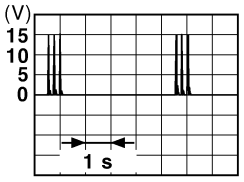
TERMINAL LAYOUT

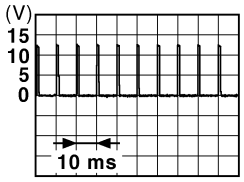
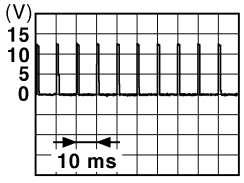
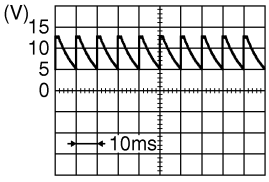
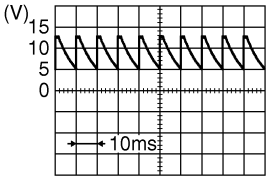


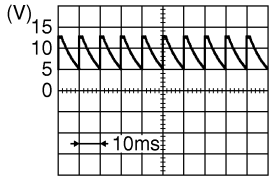
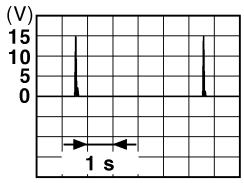
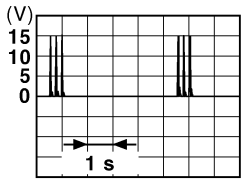
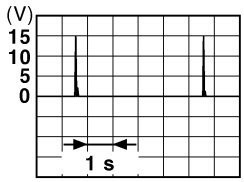
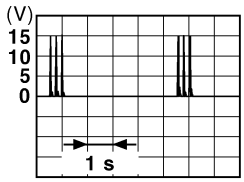
PHYSICAL VALUES

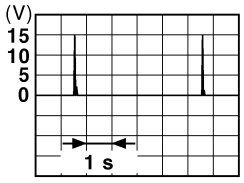
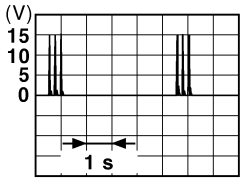
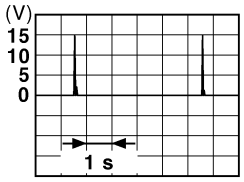
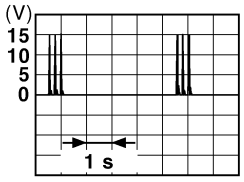
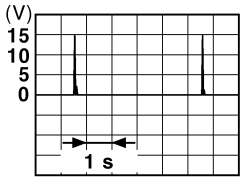
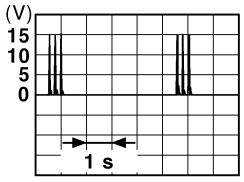
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
3 (BG)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
4 (P)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V
5 (V)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
7 (Y)	Ground	Step lamp control	Output	Step lamp	ON	0 V
					OFF	12 V
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	12 V
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
10 (BR)	Ground	Rear RH door and rear LH door UNLOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OFF		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
					ACC or ON	0 V
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V

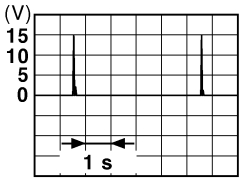
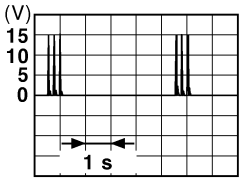
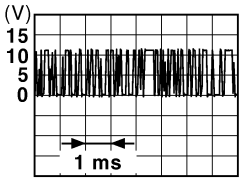
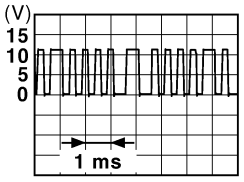
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (SB)	Ground	Interior room lamp control	Output	Other than under condition		5.0 V
				• Interior room lamp timer is activated. (Door is unlocked. etc...) • Welcome light function is activated.		0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
26 (P)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Operated)	12 V
34 (SB)	Ground	Luggage room antenna (–)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

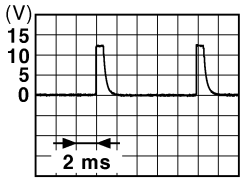
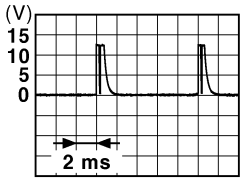
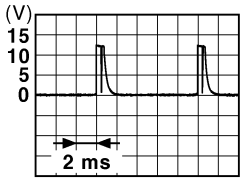
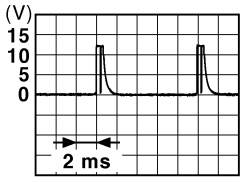
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
35 (V)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
38 (B)	Ground	Back door antenna (–)	Output	When the back door opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
39 (W)	Ground	Back door antenna (+)	Output	When the back door opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V

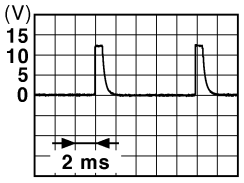
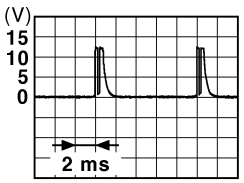
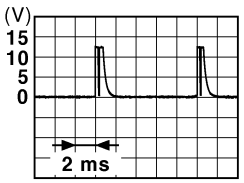
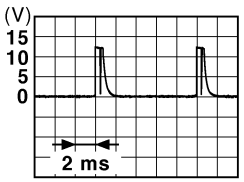
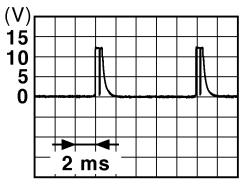
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
52 (LG)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	12 V
					When selector lever is not in P or N position	0 V
60 (SB)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ignition switch (Push switch)	Pressed	0 V
					Not pressed	12 V
61 (W)	Ground	Back door opener request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (L)	Ground	Intelligent Key warning buzzer (Engine room)	Output	Intelligent Key warning buzzer (Engine room)	Sounding	0 V
					Not sounding	12 V
65 (BG)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	 JPMIA0016GB 1.0 V
					Not in stop position	0 V
66 (LG)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	12 V
					ON (Door open)	0 V
67 (P)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	 JPMIA0594GB 8.5 - 9.0 V
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V

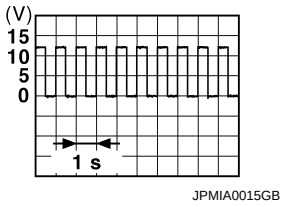
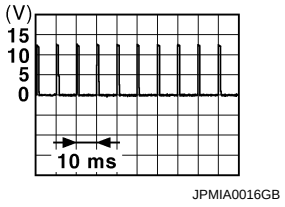
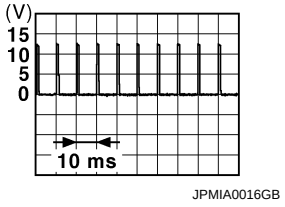
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V
74 (SB)	Ground	Passenger door antenna (–)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
75 (BR)	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

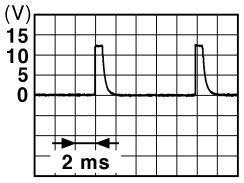
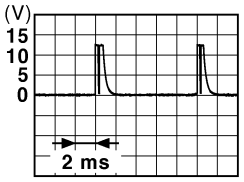
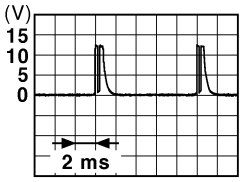
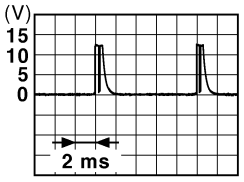
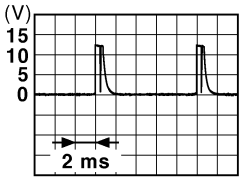
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
76 (V)	Ground	Driver door antenna (–)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
77 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
78 (Y)	Ground	Room antenna (–) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

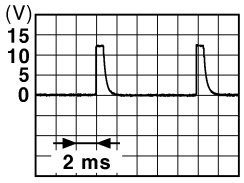
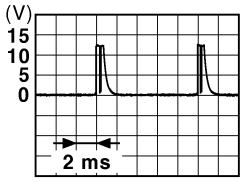
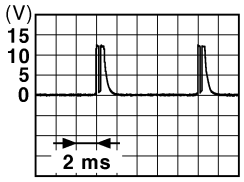
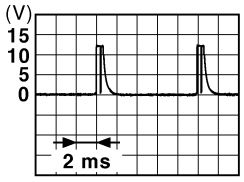
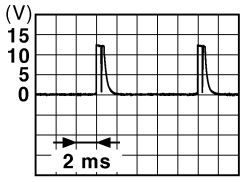
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
79 (BR)	Ground	Room antenna (+) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
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 (P)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
83 (GR)	Ground	Remote keyless entry receiver communication	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on the Intelligent Key		 JMKIA0065GB

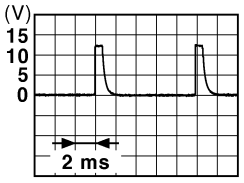
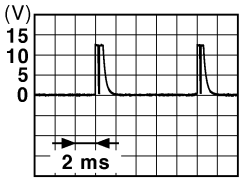
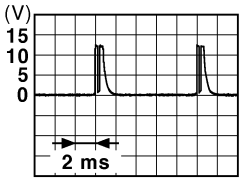
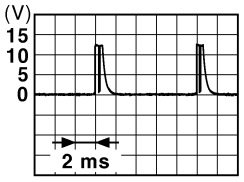
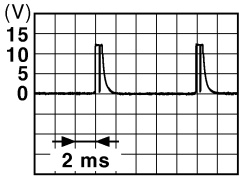
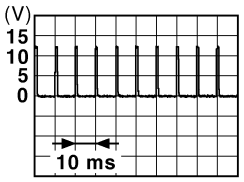
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switches OFF (Wiper volume dial 4)	 JPMIA0041GB 1.4 V
					Front fog lamp switch ON (Wiper volume dial 4)	 JPMIA0037GB 1.3 V
				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

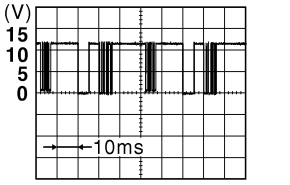
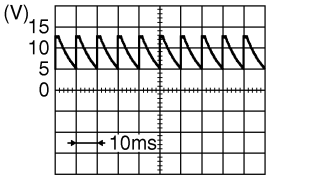
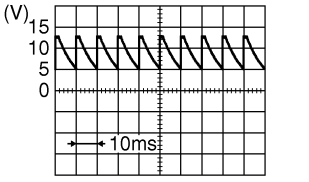
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper volume dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper volume dial 4)	 JPMIA0036GB 1.3 V
					Lighting switch 2ND (Wiper volume dial 4)	 JPMIA0037GB 1.3 V
					Rear washer switch ON (Wiper volume dial 4)	 JPMIA0039GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3	 JPMIA0040GB 1.3 V
90 (P)	Ground	CAN-L	Input/ Output	—		—
91 (L)	Ground	CAN-H	Input/ Output	—		—

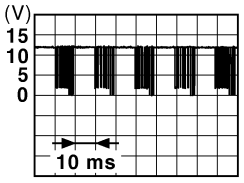
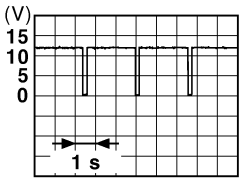
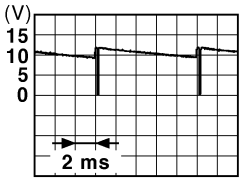
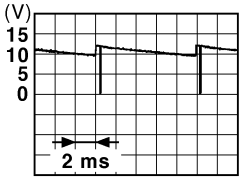
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF	12 V
					Blinking	 JPMIA0015GB 6.5 V
					ON	0 V
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ON or ACC	0 V
95 (BG)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	—		12 V
99 (R)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	12 V
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
102 (BG)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
103 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		12 V

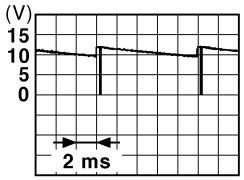
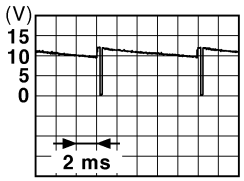
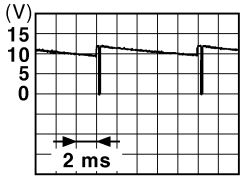
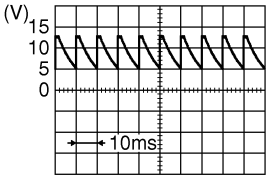
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper volume dial 4)	All switches OFF	 JPMIA0041GB 1.4 V
					Turn signal switch LH	 JPMIA0037GB 1.3 V
					Turn signal switch RH	 JPMIA0036GB 1.3 V
					Front wiper switch LO	 JPMIA0038GB 1.3 V
					Front washer switch ON	 JPMIA0039GB 1.3 V

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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper volume dial 4)	All switches OFF	 JPMIA0041GB 1.4 V
					Lighting switch PASS	 JPMIA0037GB 1.3 V
					Lighting switch 2ND	 JPMIA0036GB 1.3 V
					Front wiper switch INT/ AUTO	 JPMIA0038GB 1.3 V
					Front wiper switch HI	 JPMIA0040GB 1.3 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	ON	0 V
					OFF	 JPMIA0012GB 1.1 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
112 (GR)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		 JPMIA0156GB 8.7 V
113 (P)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
116 (BR)	Ground	Stop lamp switch 1	Input	—		Battery voltage
118 (P)	Ground	Stop lamp switch 2 (Without ICC)	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
		Stop lamp switch 2 (With ICC)		Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF		0 V
				Stop lamp switch ON (Brake pedal is depressed) or ICC brake 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)	 JPMIA0594GB 8.5 - 9.0 V
					UNLOCK status (Unlock switch sensor ON)	0 V
121 (BR)	Ground	Key slot switch	Input	When the Intelligent Key is inserted into key slot		12 V
				When the Intelligent Key is not inserted into key slot		0 V
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V

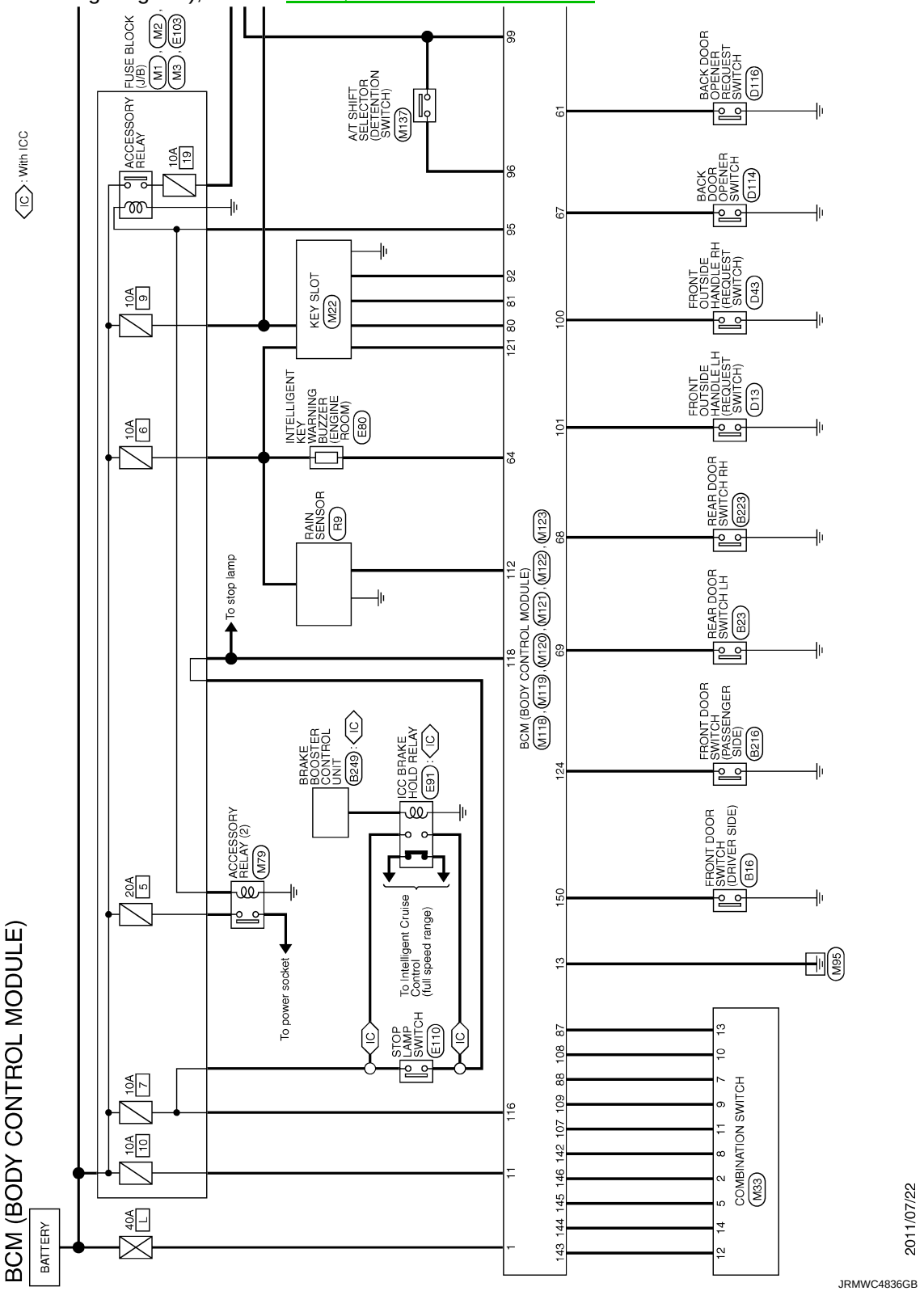
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
132 (BG)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2 V
				Ignition switch OFF or ACC		12 V
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (B)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (Y)	Ground	Sensor power supply	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V
140 (R)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	12 V
					Except P and N positions	0 V
141 (G)	Ground	Security indicator lamp	Output	Security indicator lamp	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	12 V
142 (BG)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper volume dial 4)	0 V
					Front wiper switch HI (Wiper volume dial 4)	 JPMIA0032GB 10.7 V
					Rear wiper switch INT (Wiper volume dial 4)	
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 • Wiper volume dial 6 • Wiper volume dial 7	

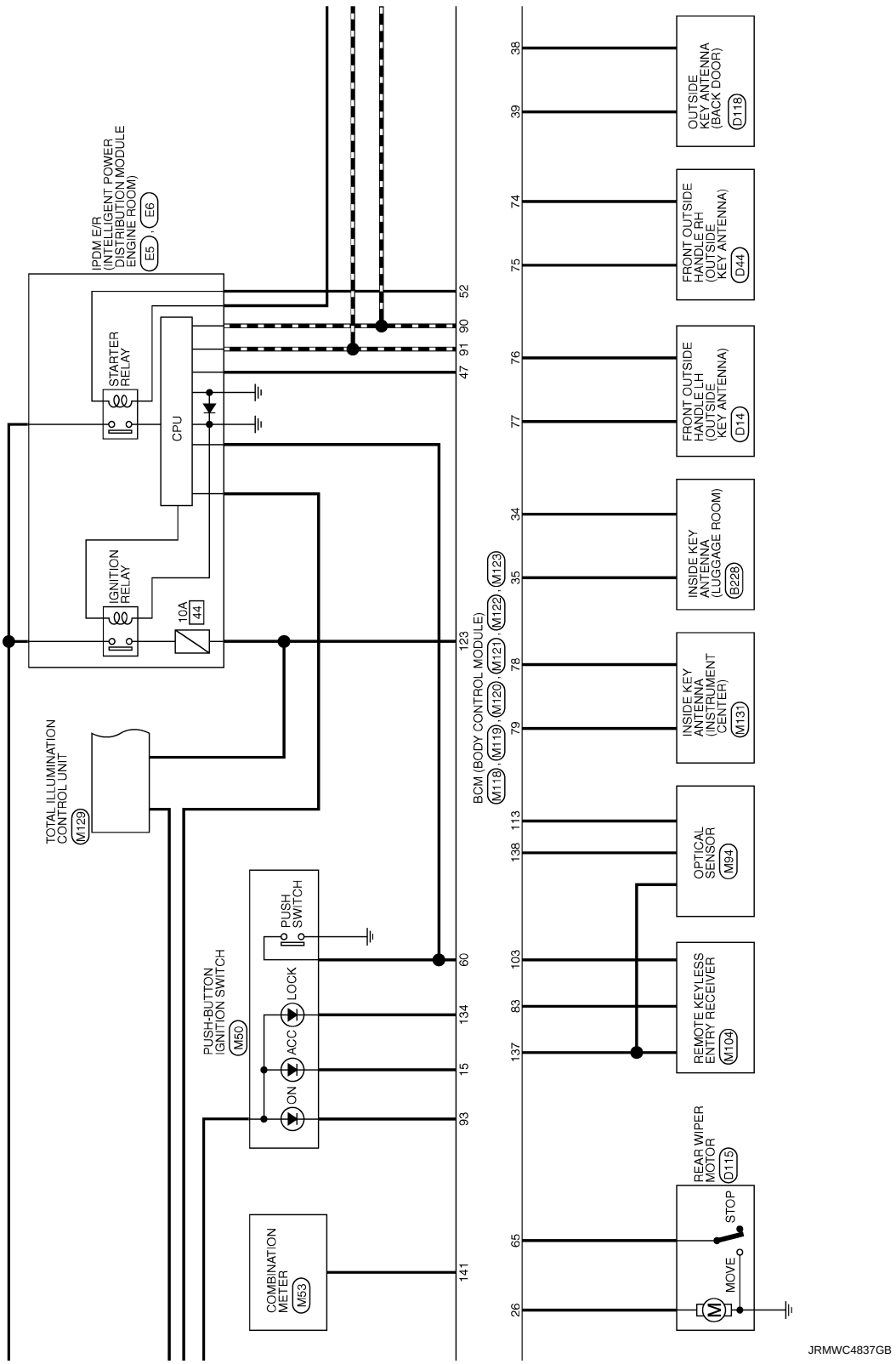
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper volume dial 4)	0 V
					Front washer switch ON (Wiper volume dial 4)	 JPMIA0033GB 10.7 V
					Rear wiper switch ON (Wiper volume dial 4)	
					Rear washer switch ON (Wiper volume dial 4)	
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Front wiper switch INT/ AUTO	 JPMIA0034GB 10.7 V
					Front wiper switch LO	
					Lighting switch AUTO	
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Front fog lamp switch ON	 JPMIA0035GB 10.7 V
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V
151 (G)	Ground	Rear window defogger relay control	Output	Rear window defogger	Active	0 V
					Not activated	Battery voltage

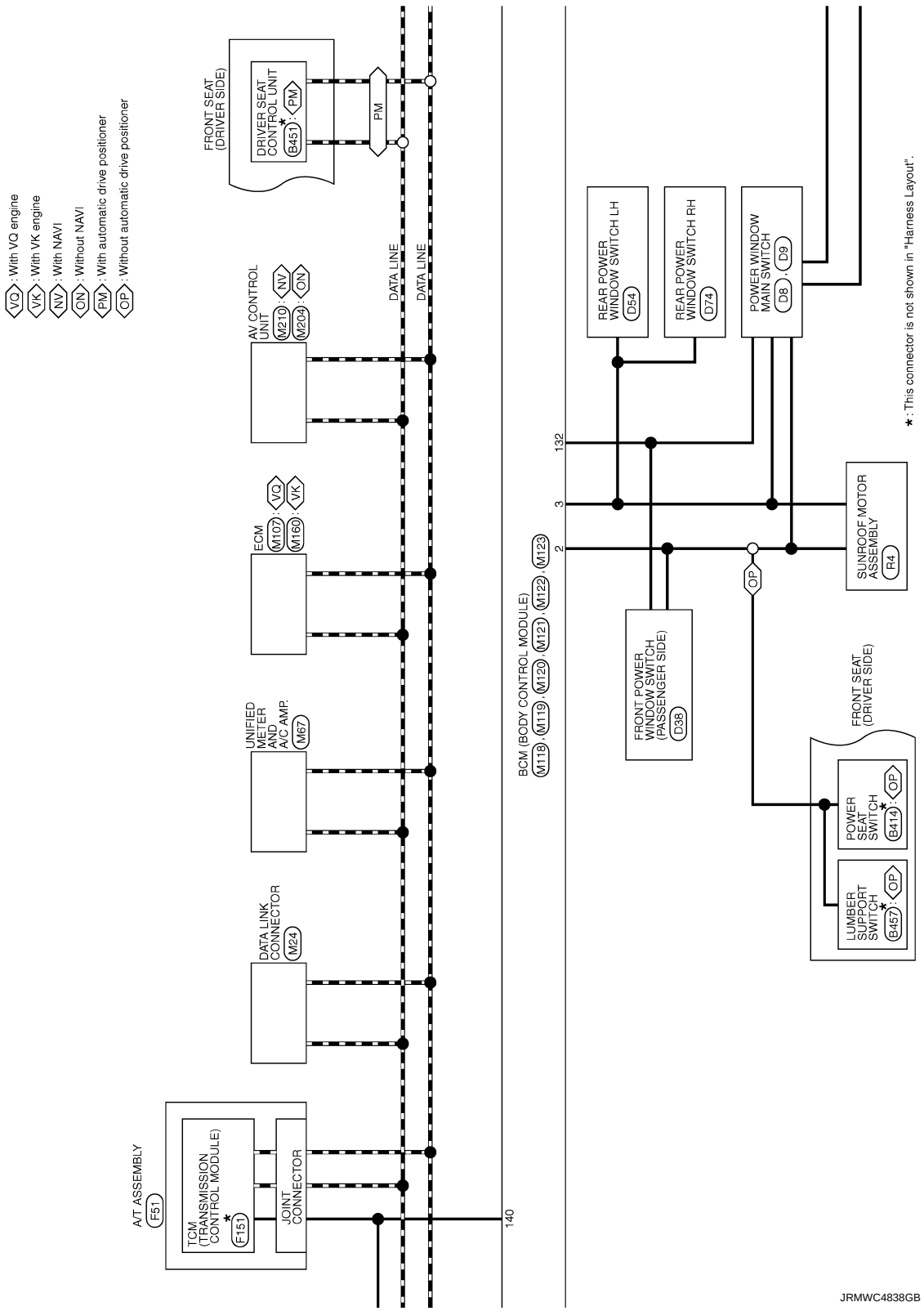
Wiring Diagram - BCM -

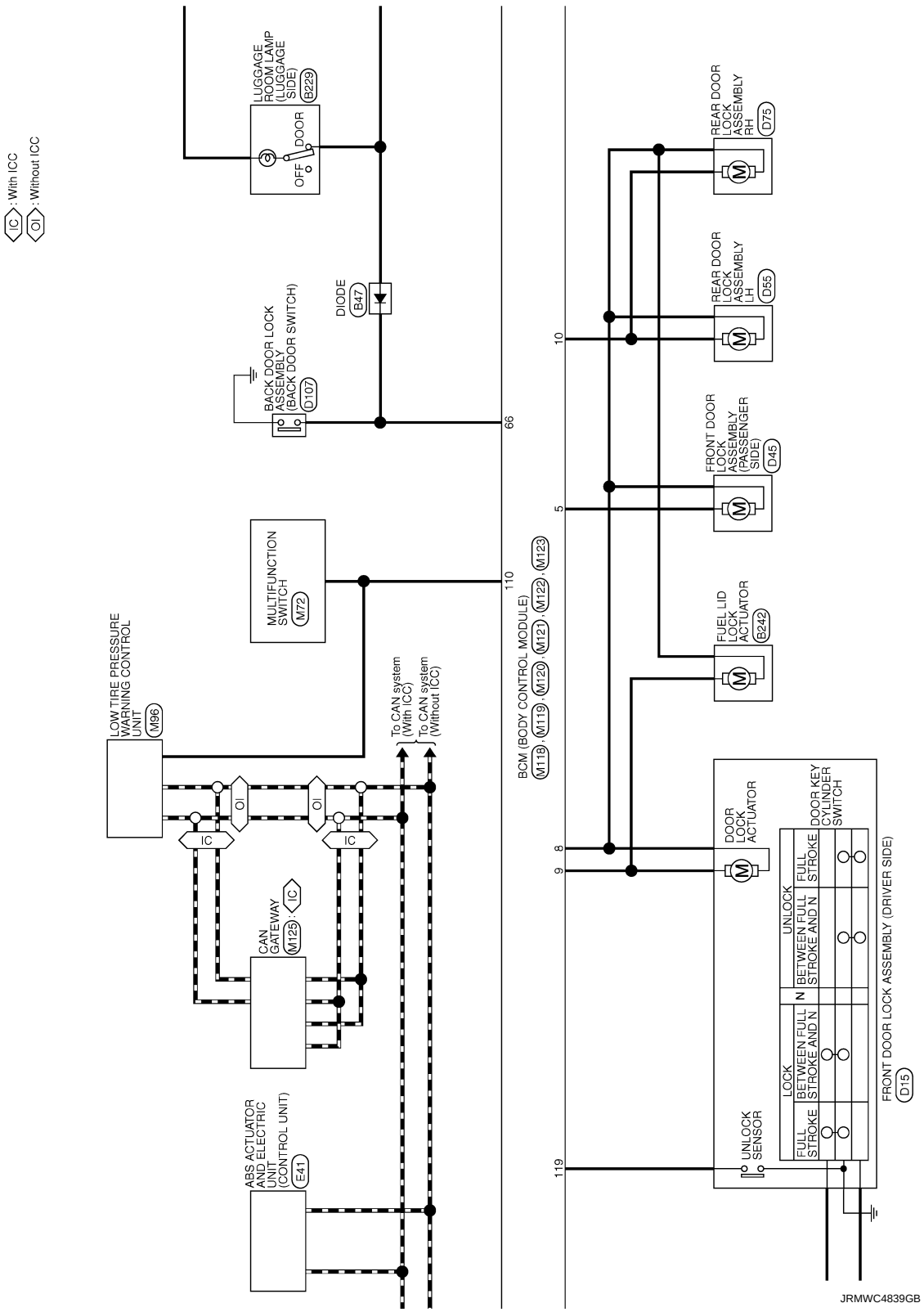
INFOID:0000000007799408

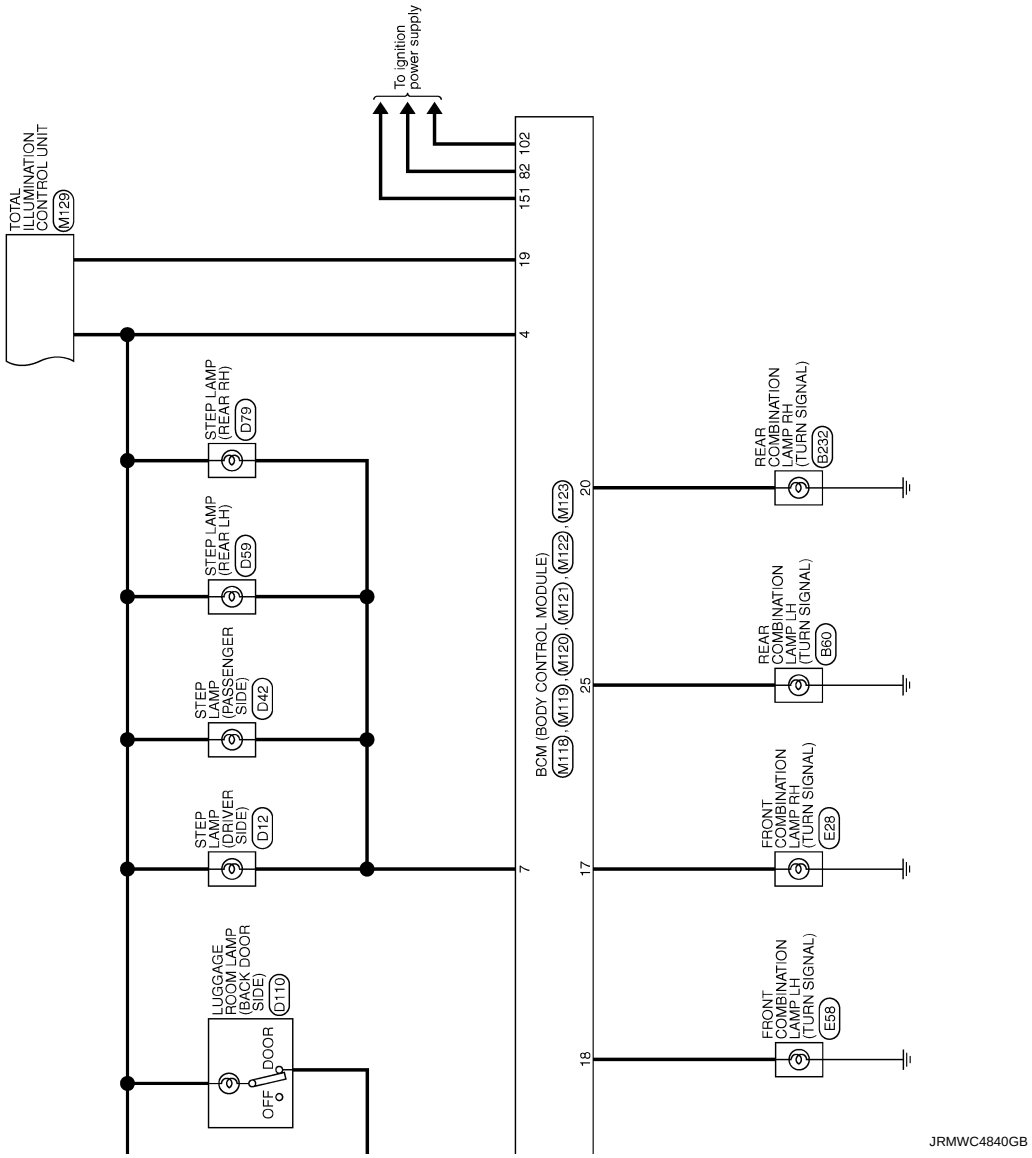
For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-13, "Connector Information".




IPDM E/R
(INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E5, E6
STARTER RELAY
CPU
IGNITION RELAY
10A 44
TOTAL ILLUMINATION CONTROL UNIT
M129
PUSH-BUTTON IGNITION SWITCH
M50
PUSH SWITCH
LOCK
ACC
ON
COMBINATION METER
M53
BCM (BODY CONTROL MODULE)
M118, M119, M120, M121, M122, M123
52
90
91
47
123
60
134
15
93
141
OUTSIDE KEY ANTENNA (BACK DOOR)
D118
FRONT OUTSIDE HANDLE RH (OUTSIDE KEY ANTENNA)
D44
FRONT OUTSIDE HANDLE LH (OUTSIDE KEY ANTENNA)
D14
INSIDE KEY ANTENNA (LUGGAGE ROOM)
B228
INSIDE KEY ANTENNA (INSTRUMENT CENTER)
M133
OPTICAL SENSOR
M94
REMOTE KEYLESS ENTRY RECEIVER
M104
REAR WIPER MOTOR
D115
STOP
MOVE
38
39
74
75
76
77
34
35
78
79
113
138
103
83
137
65
26
JRMWC4837GB


VQ : With VQ engine
VK : With VK engine
NV : With NAVI
ON : Without NAVI
PM : With automatic drive positioner
OP : Without automatic drive positioner
FRONT SEAT (DRIVER SIDE)
DRIVER SEAT CONTROL UNIT
B451
PM
PM
DATA LINE
DATA LINE
AV CONTROL UNIT
M210
M204
NV
ON
ECM
M107 : VQ
M160 : VK
UNIFIED METER AND A/C AMP.
M67
DATA LINK CONNECTOR
M24
A/T ASSEMBLY
F51
TCM (TRANSMISSION CONTROL MODULE)
F151
JOINT CONNECTOR
140
BCM (BODY CONTROL MODULE)
M118, M119, M120, M121, M122, M123
132
3
2
REAR POWER WINDOW SWITCH LH
D54
REAR POWER WINDOW SWITCH RH
D74
POWER WINDOW MAIN SWITCH
D8, D9
FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
D38
OP
SUNROOF MOTOR ASSEMBLY
R4
FRONT SEAT (DRIVER SIDE)
POWER SEAT SWITCH
B414 : OP
LUMBER SUPPORT SWITCH
B457 : OP
★ : This connector is not shown in "Harness Layout".
JRMWC4838GB


IC : With ICC
OI : Without ICC
LUGGAGE ROOM LAMP (LUGGAGE SIDE) B229
DOOR
OFF
DIODE B47
BACK DOOR LOCK ASSEMBLY (BACK DOOR SWITCH) D107
MULTIFUNCTION SWITCH M72
LOW TIRE PRESSURE WARNING CONTROL UNIT M96
OI
IC
CAN GATEWAY M125
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E41
To CAN system (With ICC)
To CAN system (Without ICC)
66
110
BCM (BODY CONTROL MODULE) M118, M119, M120, M121, M122, M123
10
5
9
8
119
REAR DOOR LOCK ASSEMBLY RH D75
REAR DOOR LOCK ASSEMBLY LH D55
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) D45
FUEL LID LOCK ACTUATOR E242
DOOR LOCK ACTUATOR
UNLOCK SENSOR
DOOR KEY CYLINDER SWITCH
LOCK
UNLOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D15
JRMWC4839GB



Fail-safe

INFOID:0000000007799409

FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
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
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
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter relay control signal • Starter relay status signal (CAN)
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)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter 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
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

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 ⇒ 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.
2. Turn rear wiper switch OFF.
3. Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

INFOID:0000000007799410

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)

Priority	DTC
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING
4	• 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/CLUTCH SW • B2605: PNP/CLUTCH SW • B2608: STARTER RELAY • B260A: IGNITION RELAY • B260F: ENG STATE SIG LOST • B2614: BCM • B2615: BCM • B2616: BCM • B2617: BCM • B2618: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26EA: KEY REGISTRATION • U0415: VEHICLE SPEED SIG
5	• B2621: INSIDE ANTENNA • B2623: INSIDE ANTENNA
6	B26E7: TPMS CAN COMM

DTC Index

INFOID:0000000007799411

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-18, "COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Reference
No DTC is detected. Further testing may be required.	—	—	—	—
U1000: CAN COMM	—	—	—	BCS-36
U1010: CONTROL UNIT(CAN)	—	—	—	BCS-37
U0415: VEHICLE SPEED SIG	—	—	—	BCS-38
B2190: NATS ANTENNA AMP	×	—	—	SEC-47
B2191: DIFFERENCE OF KEY	×	—	—	SEC-50
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-51
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-53
B2195: ANTI SCANNING	×	—	—	SEC-54
B2553: IGNITION RELAY	—	×	—	PCS-49
B2555: STOP LAMP	—	×	—	SEC-55

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Reference
B2556: PUSH-BTN IGN SW	—	×	×	SEC-57
B2557: VEHICLE SPEED	×	×	×	SEC-59
B2560: STARTER CONT RELAY	×	×	×	SEC-60
B2562: LOW VOLTAGE	—	×	—	BCS-39
B2601: SHIFT POSITION	×	×	×	SEC-61
B2602: SHIFT POSITION	×	×	×	SEC-64
B2603: SHIFT POSI STATUS	×	×	×	SEC-66
B2604: PNP/CLUTCH SW	×	×	×	SEC-69
B2605: PNP/CLUTCH SW	×	×	×	SEC-71
B2608: STARTER RELAY	×	×	×	SEC-73
B260A: IGNITION RELAY	×	×	×	PCS-51
B260F: ENG STATE SIG LOST	×	×	×	SEC-75
B2614: BCM	—	×	×	PCS-53
B2615: BCM	—	×	×	PCS-55
B2616: BCM	—	×	×	PCS-57
B2617: BCM	×	×	×	SEC-77
B2618: BCM	×	×	×	PCS-59
B261A: PUSH-BTN IGN SW	—	×	×	SEC-79
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	SEC-82
B2621: INSIDE ANTENNA	—	×	—	DLK-100
B2623: INSIDE ANTENNA	—	×	—	DLK-102
B26E7: TPMS CAN COMM	—	—	—	BCS-40
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	SEC-76

SYMPTOM DIAGNOSIS

REAR WINDOW DEFOGGER AND DOOR MIRROR DEFOGGERS DO NOT OPERATE

Diagnosis Procedure

INFOID:0000000007512159

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-45, "Intermittent Incident".
NO >> GO TO 1.

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

Diagnosis Procedure

INFOID:0000000007512160

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-45, "Intermittent Incident".
NO >> GO TO 1.

DOOR MIRROR DEFOGGER DOES NOT OPERATE

BOTH SIDES

BOTH SIDES : Diagnosis Procedure

INFOID:0000000007512161

1. CHECK DOOR MIRROR DEFOGGER

Check door mirror defogger.
Refer to DEF-15, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".
NO >> GO TO 1.

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000007512162

1. CHECK DRIVER SIDE DOOR MIRROR DEFOGGER

Check driver side 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-45, "Intermittent Incident".
NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007512163

1. CHECK PASSENGER SIDE DOOR MIRROR DEFOGGER.

Check passenger side door mirror defogger.
Refer to DEF-18, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".
NO >> GO TO 1.

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

Diagnosis Procedure

INFOID:0000000007512164

1.CHECK AV CONTROL UNIT FUNCTION

Check that the AV control unit is operating normally.
- Without navigation system. Refer to AV-56, "Work Flow".
- With navigation system. Refer to AV-196, "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-45, "Intermittent Incident".
NO >> GO TO 1.

REAR WINDOW DEFOGGER INDICATOR DOES NOT ILLUMINATE

Diagnosis Procedure

INFOID:0000000007512165

1.CHECK PRESET SWITCH

Check rear window defogger operation.

YES >> Replace preset switch. Refer to AV-126, "Removal and Installation" (without navigation system) or AV-301, "Removal and Installation" (with navigation system).
NO >> Check rear window defogger system. Refer to DEF-3, "Work Flow".

PRECAUTION

PRECAUTIONS

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

INFOID:0000000007512166

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

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:

Always observe the following items for preventing accidental activation.

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

REMOVAL AND INSTALLATION

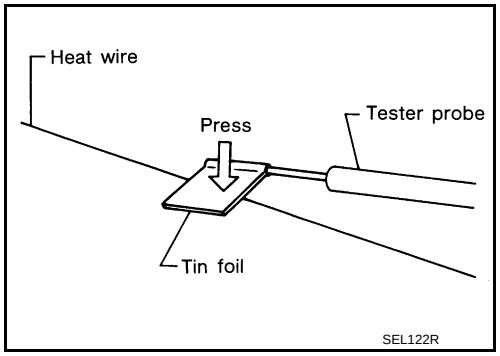
FILAMENT

Inspection and Repair

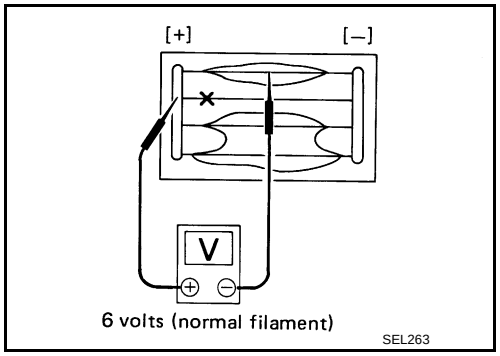
INFOID:0000000007512167

INSPECTION

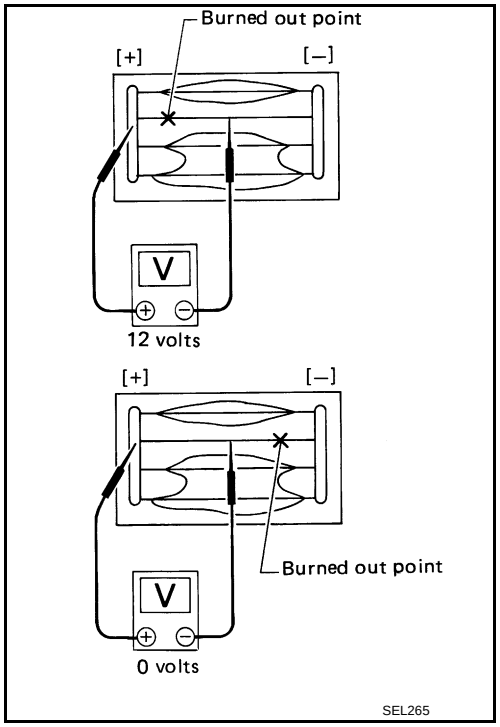
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with finger.



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.
4. To locate burned out point, move probe to left and right along filament. Test needle will swing abruptly when probe passes the point.



REPAIR

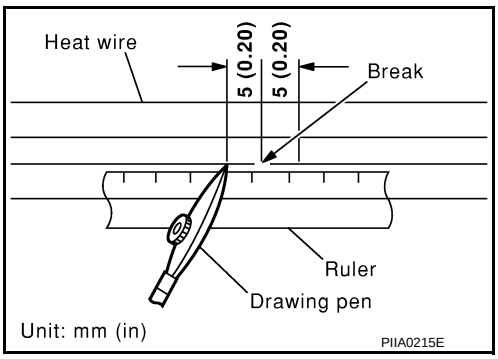
REPAIR EQUIPMENT

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

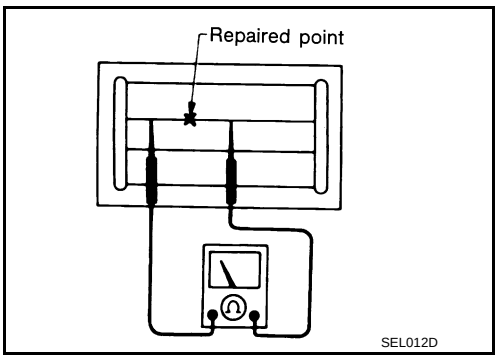
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

REPAIRING PROCEDURE

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



5. 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.