SECTION DEF
DEFOGGER

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012549104

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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, 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 SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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 or batteries, and wait at least three minutes before performing any service.**

Handling for Adhesive and Primer

INFOID:0000000012549105

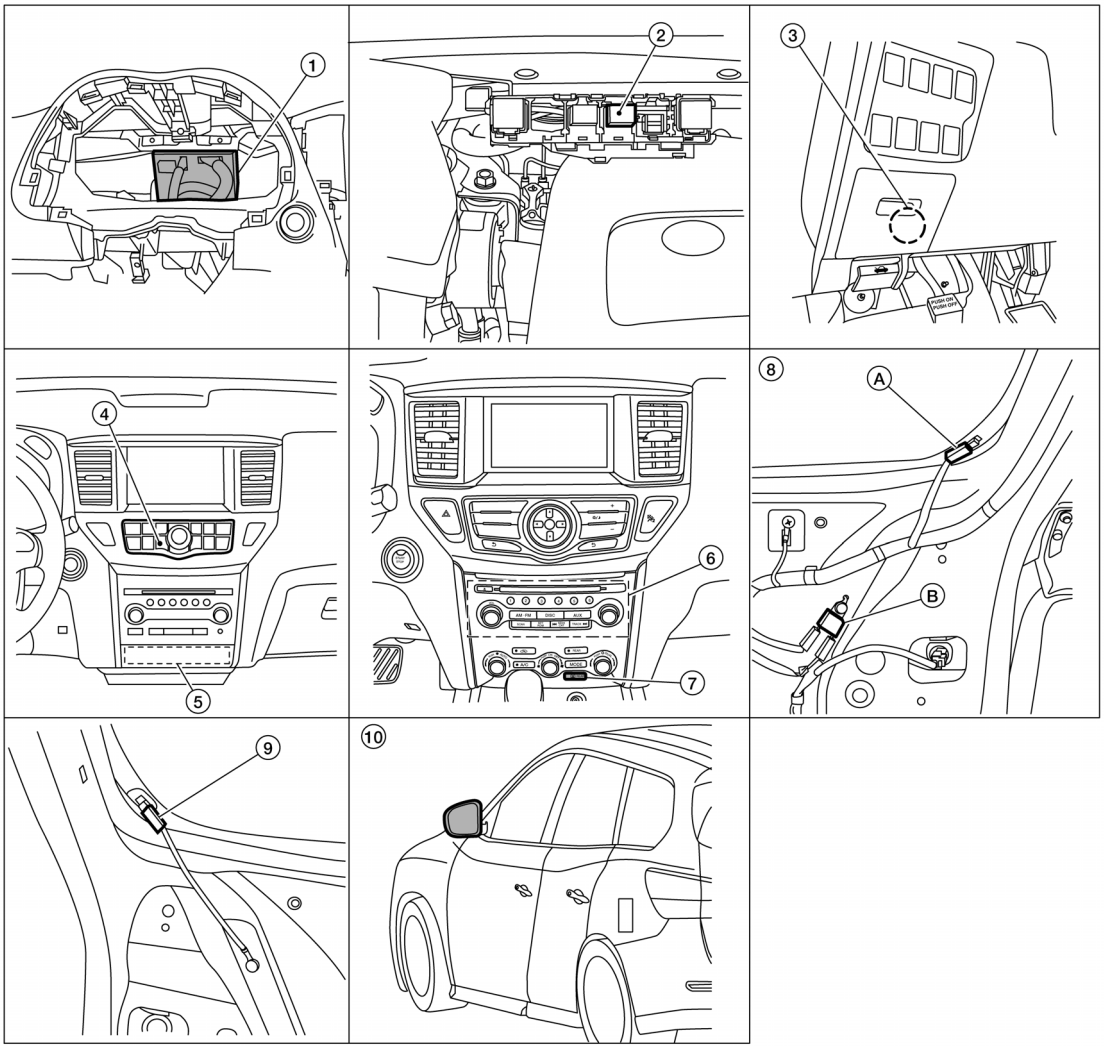
- Do not use an adhesive which is past its usable date. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.
- Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.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

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012549106



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1. BCM (view with instrument panel removed)
2. Accessory relay-2
3. Fuse block (J/B) (Rear window defogger relay)
4. A/C switch assembly (rear window defogger switch) (with base audio system)
5. A/C auto amp.
6. AV control unit
7. A/C and AV switch assembly (rear window defogger switch) (except base audio system)
8. A. Rear window defogger power connector
   B. Rear window defogger condenser (view with back door lower finisher removed)
9. Rear window defogger ground connector (view with back door lower finisher removed)
10. Door mirror LH (door mirror defogger) (RH similar)

Component Description

INFOID:0000000012549107

Component	Description
AV control unit[2]	• AV control unit transmits A/C switch operation signal to the BCM via CAN communication line.
BCM	• Operates the rear window defogger relay with the operation of rear window defogger switch. • Performs the timer control of rear window defogger.
A/C auto amp[1]	• Transmits rear window defogger switch ON signal to the BCM. • Turns the indicator lamp ON when detecting the operation of rear window defogger.
Rear window defogger relay	• Operates the rear window defogger and the door mirror defogger with the control signal from BCM.
A/C switch assembly[1] (rear window defogger switch)	• Transmits rear window defogger switch ON signal. • Turns the indicator lamp ON when detecting the operation of rear window defogger.
A/C and AV switch assembly[2] (rear window defogger switch)	• Transmits rear window defogger switch ON signal. • Turns the indicator lamp ON 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[3]	• Heats the heating wire with the power supply from the rear window defogger relay to prevent the door mirror from fogging up.

1: With base audio system

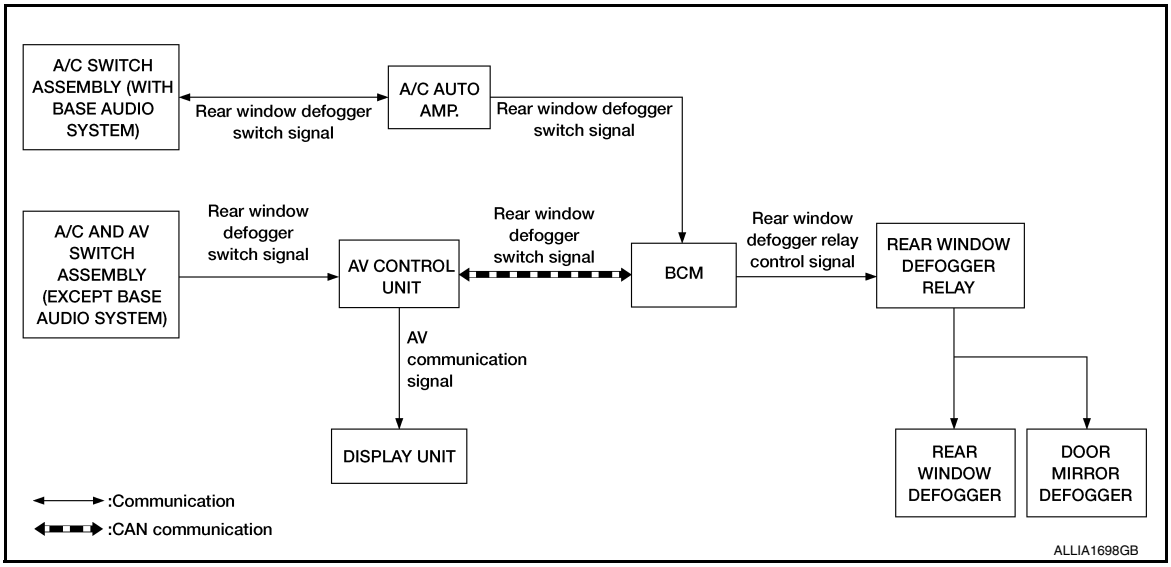
2: Except base audio system

3: With heated mirrors

SYSTEM

System Diagram

INFOID:0000000012549108



System Description

INFOID:0000000012549109

Operation Description

- When rear window defogger switch is turned ON while ignition switch is ON, the rear window defogger switch signal is transmitted to the BCM.
- BCM turns rear window defogger relay ON when rear window defogger switch signal is received.
- Rear window defogger and door mirror defogger are supplied with power and operate when rear window defogger relay turns ON.
- Rear window defogger ON is displayed when signal is received.
- For vehicles with base audio system, A/C auto amp. transmits rear window defogger control signal to A/C switch assembly when rear window defogger operates.
- For vehicles without base audio system, BCM transmits rear window defogger control signal to AV control unit and A/C and AV switch assembly via CAN communication when rear window defogger operates.

Timer function

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

INPUT/OUTPUT SIGNAL CHART

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

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012947319

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

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

Direct Diagnostic Mode	Description
ECU Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION
BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×	×		
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×	×		
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×			

REAR WINDOW DEFOGGER

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

INFOID:0000000012947320

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
REAR DEF SW [On/Off]	Indicates condition of rear window defogger switch.

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation [Off/On].

WORK SUPPORT

Support Item	Setting	Description
SET R-DEF TIMER	MODE3	Rear defogger turns OFF after 1 minute.
	MODE2	Rear defogger remains ON until turned OFF.
	MODE1*	Rear defogger turns OFF after 15 minutes.

* : Initial setting

ECU DIAGNOSIS INFORMATION

BCM

List of ECU Reference

INFOID:0000000012549112

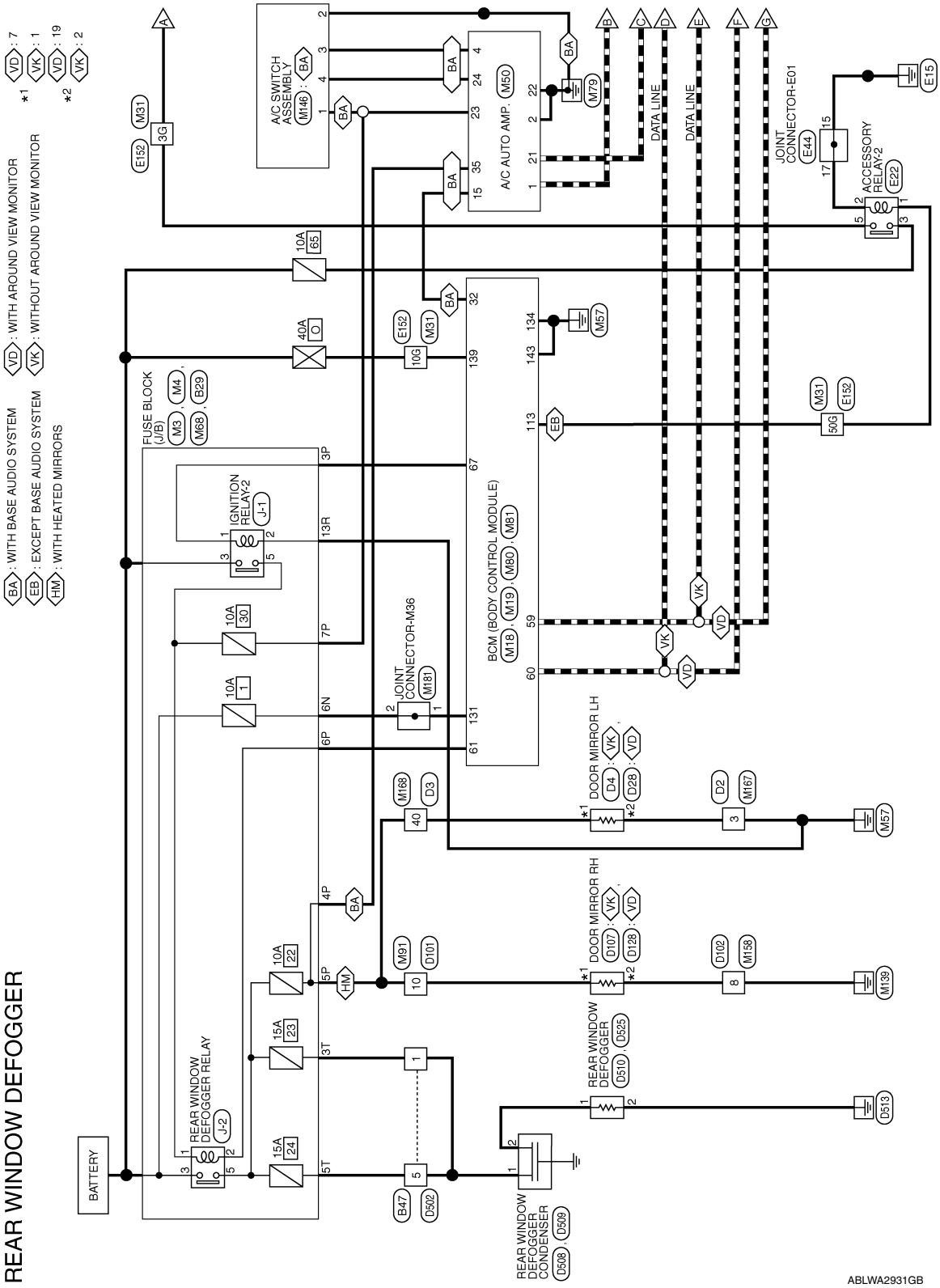
ECU	Reference
BCM	BCS-31, "Reference Value"
	BCS-50, "Fail Safe"
	BCS-51, "DTC Inspection Priority Chart"
	BCS-52, "DTC Index"

WIRING DIAGRAM

REAR WINDOW DEFOGGER SYSTEM

Wiring Diagram

INFOID:0000000012549113



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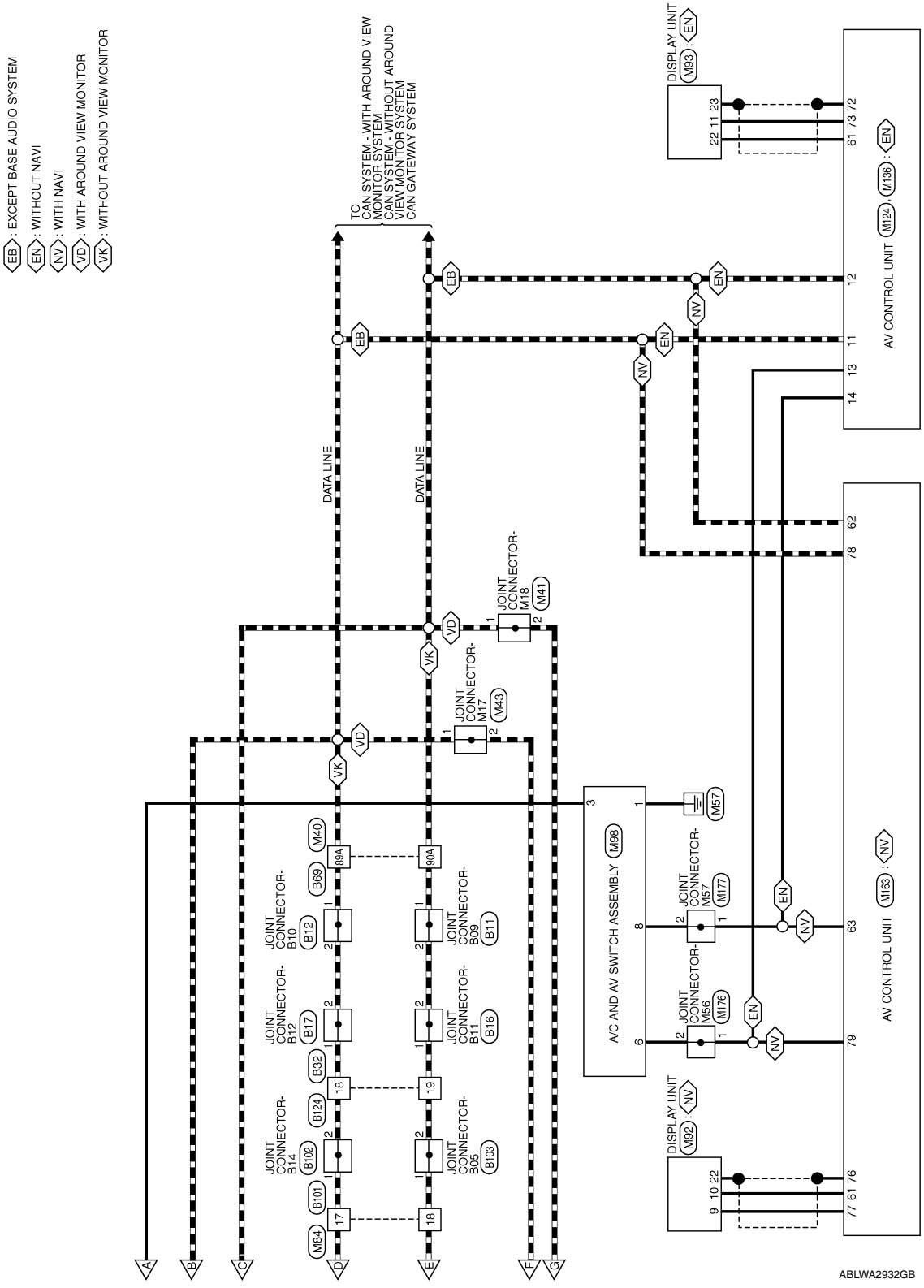
EB : EXCEPT BASE AUDIO SYSTEM
EN : WITHOUT NAVI
NV : WITH NAVI
VD : WITH AROUND VIEW MONITOR
VK : WITHOUT AROUND VIEW MONITOR
TO CAN SYSTEM - WITH AROUND VIEW MONITOR SYSTEM CAN SYSTEM - WITHOUT AROUND VIEW MONITOR SYSTEM CAN GATEWAY SYSTEM
DISPLAY UNIT (M93) : EN
DISPLAY UNIT (M92) : NV
AV CONTROL UNIT (M124), (M136) : EN
AV CONTROL UNIT (M163) : NV
A/C AND AV SWITCH ASSEMBLY (M98)
DATA LINE
DATA LINE
JOINT CONNECTOR-M18 (M41)
JOINT CONNECTOR-M17 (M43)
JOINT CONNECTOR-B10 (B69), (B12)
JOINT CONNECTOR-B12 (B17), (B32)
JOINT CONNECTOR-B14 (B124), (B102), (B101)
JOINT CONNECTOR-B09 (B11)
JOINT CONNECTOR-B11 (B16)
JOINT CONNECTOR-B05 (B103)
JOINT CONNECTOR-M57 (M177)
JOINT CONNECTOR-M56 (M176)
(M40), 89A, 90A, (M84), 17, 18, 19
(M57)
A, B, C, D, E, F, G
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REAR WINDOW DEFOGGER CONNECTORS

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

H.S.

3N		2N	1N
8N	7N	6N	5N	4N

Terminal No.	Color of Wire	Signal Name
6N	W	–

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

H.S.

7P	6P	5P	4P		3P	2P	1P
16P	15P	14P	13P	12P	11P	10P	9P	8P

Terminal No.	Color of Wire	Signal Name
3P	G	–
4P	LG	–
5P	BR	–
6P	BG	–
7P	LG	–

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

H.S.

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
32	R	RR DEF SW

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
59	P	CAN-L
60	L	CAN-H
61	BG	REAR DEFOGGER RELAY OUT
67	G	IGN ELEC RELAY OUT 2

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

H.S.

1G	2G	3G	4G	5G
6G	7G	8G	9G	10G

11G	12G	13G	14G	15G	16G	17G	18G	19G	20G	21G	31G	32G	33G	34G	35G	36G	37G	38G	39G	40G	41G
22G	23G	24G	25G	26G	27G	28G	29G	30G			42G	43G	44G	45G	46G	47G	48G	49G	50G		
51G	52G	53G	54G	55G	56G	57G	58G	59G	60G	61G	71G	72G	73G	74G	75G	76G	77G	78G	79G	80G	81G
62G	63G	64G	65G	66G	67G	68G	69G	70G			82G	83G	84G	85G	86G	87G	88G	89G	90G		

91G	92G	93G	94G	95G
96G	97G	98G	99G	100G

Terminal No.	Color of Wire	Signal Name
3G	P	–
10G	W	–
50G	L	–

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

H.S.

1A	2A	3A	4A	5A
6A	7A	8A	9A	10A

11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A
	22A	23A	24A	25A	26A	27A	28A	29A	30A	

31A	32A	33A	34A	35A	36A	37A	38A	39A	40A	41A
	42A	43A	44A	45A	46A	47A	48A	49A	50A	

51A	52A	53A	54A	55A	56A	57A	58A	59A	60A	61A
	62A	63A	64A	65A	66A	67A	68A	69A	70A	

71A	72A	73A	74A	75A	76A	77A	78A	79A	80A	81A
	82A	83A	84A	85A	86A	87A	88A	89A	90A	

91A	92A	93A	94A	95A
96A	97A	98A	99A	100A

Terminal No.	Color of Wire	Signal Name
89A	L	–
90A	P	–

Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

Connector No.	M50
Connector Name	A/C AUTO AMP.
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	GR	GND
4	W	FR/TX
15	R	RR DEF SW
21	P	CAN-L
22	GR	GND (POWER)
23	LG	IGN
24	G	FR/RX
35	LG	RR DEF F/B

Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

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Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

H.S.

7R	6R	5R	4R		3R	2R	1R
16R	15R	14R	13R	12R	11R	10R	9R	8R

Terminal No.	Color of Wire	Signal Name
13R	GR	–

Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
113	L	ACC RELAY OUT

Connector No.	M81
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

137	136	135	134	133	132	131	130	129
143	142	141	140	139	138			

Terminal No.	Color of Wire	Signal Name
131	W	BAT BCM FUSE
134	B	GND 2
139	W	BAT POWER F/L
143	B	GND 1

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
17	L	–
18	P	–

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
10	BR	–

Connector No.	M92
Connector Name	DISPLAY UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
9	B	FRONT DISP IT
10	W	IT FRONT DISP
22	SHIELD	SHIELD

ABLIA7116GB

Connector No.	M124
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
11	L	CAN-H
12	P	CAN-L
13	SB	M CAN-H
14	LG	M CAN-L

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

H.S.

2	4	6	8	10	12	14	16
1	3	5	7	9	11	13	15

Terminal No.	Color of Wire	Signal Name
1	B	–
3	P	–
6	SB	–
8	LG	–

Connector No.	M93
Connector Name	DISPLAY UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
11	W	UART IN
22	B	UART OUT
23	SHIELD	UART GND

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8	9	10
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Terminal No.	Color of Wire	Signal Name
8	B	–

Connector No.	M146
Connector Name	A/C SWITCH ASSEMBLY
Connector Color	WHITE

H.S.

1	2	3	4	5	6
7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	B	–
3	W	–
4	G	–

Connector No.	M136
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE

H.S.

64	63	62	61	60	59	58	57	56	55	54	53
76	75	74	73	72	71	70	69	68	67	66	65

Terminal No.	Color of Wire	Signal Name
61	B	DISP IT
72	SHIELD	DISP SHIELD
73	W	IT DISP

ABLIA7117GB

Connector No.	M163
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

H.S.

49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

Terminal No.	Color of Wire	Signal Name
61	W	IT DISP
62	P	CAN-L
63	LG	M CAN-L
76	SHIELD	DISP SHIELD
77	B	DISP IT
78	L	CAN-H
79	SB	M CAN-H

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
3	B	–

Connector No.	M168
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
40	BR	–

Connector No.	M176
Connector Name	JOINT CONNECTOR-M56
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	SB	–

Connector No.	M177
Connector Name	JOINT CONNECTOR-M57
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	LG	–

Connector No.	M181
Connector Name	JOINT CONNECTOR-M36
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	W	–
2	W	–

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Connector No.	E22
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	B	–
3	R	–
5	P	–

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
15	GR	–
17	B	–

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3G	P	–
10G	P	–
50G	G	–

Connector No.	B11
Connector Name	JOINT CONNECTOR-B09
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

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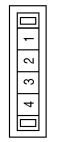
Connector No.	B17
Connector Name	JOINT CONNECTOR-B12
Connector Color	WHITE

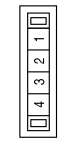
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

Connector No.	B16
Connector Name	JOINT CONNECTOR-B11
Connector Color	WHITE

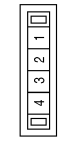
H.S.



Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

Connector No.	B12
Connector Name	JOINT CONNECTOR-B10
Connector Color	WHITE

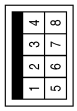
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

Connector No.	B47
Connector Name	WIRE TO WIRE
Connector Color	GRAY

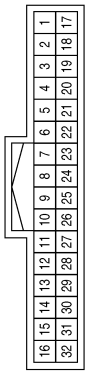
H.S.



Terminal No.	Color of Wire	Signal Name
1	W	–
5	G	–

Connector No.	B32
Connector Name	WIRE TO WIRE
Connector Color	WHITE

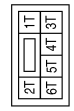
H.S.



Terminal No.	Color of Wire	Signal Name
18	L	–
19	P	–

Connector No.	B29
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
3T	W	–
5T	G	–

ABLIA7120GB

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

5A	4A	3A	2A	1A
	9A	8A	7A	6A
	10A			

21A	20A	19A	18A	17A	16A	15A	14A	13A	12A	11A
	30A	29A	28A	27A	26A	25A	24A	23A	22A	

41A	40A	39A	38A	37A	36A	35A	34A	33A	32A	31A
	50A	49A	48A	47A	46A	45A	44A	43A	42A	

61A	60A	59A	58A	57A	56A	55A	54A	53A	52A	51A
	70A	69A	68A	67A	66A	65A	64A	63A	62A	

81A	80A	79A	78A	77A	76A	75A	74A	73A	72A	71A
	90A	89A	88A	87A	86A	85A	84A	83A	82A	

95A	94A	93A	92A	91A
100A	99A	98A	97A	96A

Terminal No.	Color of Wire	Signal Name
89A	L	–
90A	P	–

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
17	L	–
18	P	–

Connector No.	B102
Connector Name	JOINT CONNECTOR-B14
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

Connector No.	B103
Connector Name	JOINT CONNECTOR-B05
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

Connector No.	B124
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
18	L	–
19	P	–

ABLIA7110GB

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

H.S.

7	6	5	4		3	2	1
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name
3	B	–

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
40	Y	–

Connector No.	D4
Connector Name	DOOR MIRROR LH (WITHOUT AROUND VIEW MONITOR SYSTEM)
Connector Color	WHITE

H.S.

6	5	4	3	2	1
12	11	10	9	8	7

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	B	–

Connector No.	D28
Connector Name	DOOR MIRROR LH (WITH AROUND VIEW MONITOR SYSTEM)
Connector Color	WHITE

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
7	Y	–
19	B	–

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

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
10	BR	–

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
8	B	–

ABLIA7111GB

Connector No.	D502
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	R	–
5	R	–

Connector No.	D128
Connector Name	DOOR MIRROR RH (WITH AROUND VIEW MONITOR SYSTEM)
Connector Color	WHITE

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
7	BR	–
19	B	–

Connector No.	D107
Connector Name	DOOR MIRROR RH (WITHOUT AROUND VIEW MONITOR SYSTEM)
Connector Color	WHITE

H.S.

6	5	4	3	2	1
12	11	10	9	8	7

Terminal No.	Color of Wire	Signal Name
1	BR	–
2	B	–

Connector No.	D510
Connector Name	REAR WINDOW DEFOGGER
Connector Color	BLACK

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	D509
Connector Name	REAR WINDOW DEFOGGER CONDENSER
Connector Color	BLACK

H.S.

2

Terminal No.	Color of Wire	Signal Name
2	G	–

Connector No.	D508
Connector Name	REAR WINDOW DEFOGGER CONDENSER
Connector Color	BLACK

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	R	–

ABLIA7112GB

Connector No.	D525
Connector Name	REAR WINDOW DEFOGGER
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
2	B	–

ABLIA8335GB

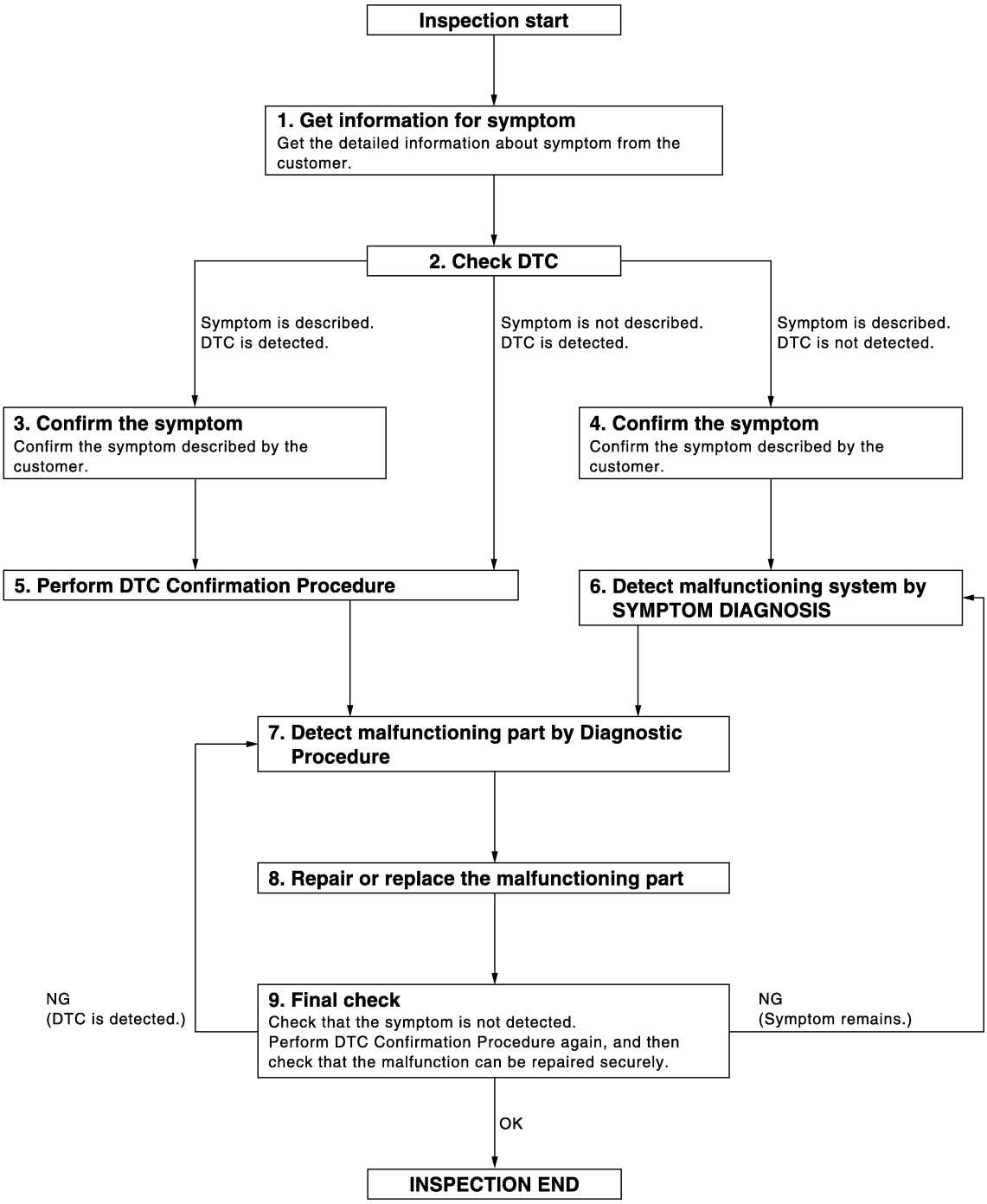
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000012549114

OVERALL SEQUENCE



JMKIA2270GB

DETAILED FLOW

1. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2.

2. CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is displayed.
- Record DTC and freeze frame data (Print them out with CONSULT.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3.
Symptom is described, DTC is not displayed>>GO TO 4.
Symptom is not described, DTC is displayed>>GO TO 5.

3. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT to the vehicle in “DATA MONITOR” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT to the vehicle in “DATA MONITOR ” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.
At this time, always connect CONSULT to the vehicle, and check diagnostic results in real time.
If two or more DTCs are detected, refer to BCS-51, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.
  If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

YES >> GO TO 7.
NO >> Refer to GI-47, "Intermittent Incident".

6. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to DEF-6, "System Description" based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 7.

7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described is based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check voltage of related BCM terminals using CONSULT.

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair and replacement.
3. Check DTC. If DTC is displayed, erase it.

>> GO TO 9.

9. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction has been repaired securely.
When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Does the symptom reappear?

YES (DTC is detected)>>GO TO 7.
YES (Symptom remains)>>GO TO 6.
NO >> Inspection End.

DTC/CIRCUIT DIAGNOSIS

REAR WINDOW DEFOGGER SWITCH

Description

INFOID:0000000012549115

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

Component Function Check

INFOID:0000000012549116

1. CHECK REAR WINDOW DEFOGGER SWITCH FUNCTION

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

Is the inspection result normal?

YES >> Rear window defogger switch function is OK.
NO >> Refer to DEF-26, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012549117

Regarding Wiring Diagram information, refer to DEF-10, "Wiring Diagram".

BASE AUDIO SYSTEM

1. CHECK REAR WINDOW DEFOGGER RELAY OPERATION

1. Push the ignition switch to ON.
2. Check that an operation noise of rear window defogger relay [located in fuse block (J/B)] can be heard when pressing the rear window defogger switch ON and OFF.

Is the inspection result normal?

YES >> GO TO 2.
NO >> GO TO 5.

2. CHECK FUSE

Check if Fuse 22 from the rear window defogger relay output is blown.

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 3.

3. CHECK FOR VOLTAGE FROM THE REAR WINDOW DEFOGGER RELAY

1. Press rear window defogger switch.
2. Check for voltage between fuse block (J/B) connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Fuse block (J/B)					
Connector	Terminal				
M4	4P	Ground	Rear window defogger switch	ON	Battery voltage
				OFF	0

Is the inspection result normal?

YES >> GO TO 4.
NO >> Perform rear window defogger relay diagnosis. Refer to DEF-31, "Diagnosis Procedure".

4. CHECK REAR WINDOW DEFOGGER SWITCH INDICATOR CIRCUIT

1. Press rear window defogger switch.
2. Check for voltage between A/C auto amp. connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
A/C auto amp.					
Connector	Terminal				
M50	35	Ground	Rear window defogger switch	ON	Battery voltage
				OFF	0

Is the inspection result normal?

YES >> Replace A/C auto amp. Refer to HAC-156, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK A/C AUTO AMP. (REAR WINDOW DEFOGGER SWITCH) FUNCTION

1. Check (“REAR DEF SW”) in BCM - REAR DEFOGGER “DATA MONITOR” mode by using CONSULT.
2. Operate rear window defogger switch and check the status on CONSULT screen.

Monitor Item	Condition		status
REAR DEF SW	Rear window defogger switch	Pressed	On
		Released	Off

Is the inspection result normal?

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

6. CHECK REAR WINDOW DEFOGGER ON SIGNAL CIRCUIT

Check voltage between BCM connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M18	32	Ground	Rear window defogger switch	ON	0
				OFF	5

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> GO TO 7.

7. CHECK HARNESS CONTINUITY

1. Push ignition switch to OFF.
2. Disconnect BCM and A/C auto amp.
3. Check continuity between BCM connector and A/C auto amp.

BCM		A/C auto amp.		Continuity
Connector	Terminal	Connector	Terminal	
M18	32	M50	15	Yes

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M18	32		No

Is the inspection result normal?

YES >> Replace A/C auto amp. Refer to HAC-156, "Removal and Installation".
NO >> Repair or replace harness.

8. CHECK REAR WINDOW DEFOGGER RELAY GROUND CIRCUIT

CONSULT
1. Select BCM (REAR DEFOGGER) ACTIVE TEST.
2. Turn REAR DEFOGGER active test ON and OFF.
3. Check voltage between fuse block (J/B) connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Fuse block (J/B)					
Connector	Terminal				
M4	6P	Ground	Rear window defogger active test	ON	0
				OFF	Battery voltage

Is the inspection result normal?

YES >> GO TO 11.
NO >> GO TO 9.

9. CHECK REAR WINDOW DEFOGGER RELAY CIRCUIT

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Fuse block (J/B)					
Connector	Terminal				
M4	6P	Ground	Rear window defogger switch	ON	0
				OFF	Battery voltage

Is the inspection result normal?

YES >> Replace rear window defogger relay.
NO >> GO TO 10.

10. CHECK HARNESS CONTINUITY

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

BCM		Fuse block (J/B)		Continuity
Connector	Terminal	Connector	Terminal	
M19	61	M4	6P	Yes

4. Check continuity between fuse block (J/B) connector M4 terminal 6P and ground.

Fuse block (J/B)		Ground	Continuity
Connector	Terminal		
M4	6P		No

Is the inspection result normal?

YES >> Perform rear window defogger relay component inspection. Refer to DEF-32, "Component Inspection". If OK, replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> Repair or replace harness.

11. CHECK REAR WINDOW DEFOGGER RELAY

Check rear window defogger relay.
Refer to DEF-32, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 12.
NO >> Replace rear window defogger relay.

12. CHECK INTERMITTENT INCIDENT

Check intermittent incident.
Refer to GI-47, "Intermittent Incident".

Is the inspection result normal?

YES >> Check the following.
- Battery power supply circuit.
- Fuse block (J/B).

NO >> Repair or replace the malfunctioning parts.

EXCEPT BASE AUDIO SYSTEM

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

Operate the rear window defogger switch.

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2.

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

1. Turn ignition switch ACC.
2. Check voltage between A/C and AV switch assembly harness connector M98 terminal 3 and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
A/C and AV switch assembly					
Connector	Terminal				
M98	3	Ground	Ignition switch	ACC	Battery voltage
				OFF	0

Is the inspection result normal?

YES >> Replace A/C and AV switch assembly. Refer to HAC-154, "Removal and Installation - With Navigation".
NO >> GO TO 3.

3. CHECK A/C AND AV SWITCH ASSEMBLY (REAR WINDOW DEFOGGER SWITCH) CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect accessory relay-2 connector E22.
3. Disconnect A/C and AV switch assembly connector M98.
4. Check continuity between A/C and AV switch assembly connector M98 terminal 3 and accessory relay-2 connector E22 terminal 5.

A/C and AV switch assembly		Accessory relay-2		Continuity
Connector	Terminal	Connector	Terminal	
M98	3	E22	5	Yes

Is the inspection result normal?

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

4. CHECK A/C AND AV SWITCH ASSEMBLY (REAR WINDOW DEFOGGER SWITCH) CIRCUIT FOR SHORT

1. Turn ignition switch OFF.
2. Disconnect accessory relay-2 connector E22.
3. Disconnect A/C and AV switch assembly connector M98.
4. Check continuity between A/C and AV switch assembly connector M98 terminal 3 and ground.

A/C and AV switch assembly		Ground	Continuity
Connector	Terminal		
M98	3		No

Is the inspection result normal?

YES >> Check the following:
- Accessory relay-2.
- Battery power supply circuit.

NO >> Repair or replace harness.

REAR WINDOW DEFOGGER RELAY

Description

INFOID:0000000012549118

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

Component Function Check

INFOID:0000000012549119

1. CHECK REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT

Check that an operation noise of rear window defogger relay [located in fuse block (J/B)] can be heard when turning the rear window defogger switch ON.

Is the inspection result normal?

YES >> Rear window defogger relay power supply circuit is OK.
NO >> Refer to DEF-31, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012549120

Regarding Wiring Diagram information, refer to DEF-10, "Wiring Diagram".

1. CHECK REAR WINDOW DEFOGGER RELAY GROUND CIRCUIT

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M19	61	Ground	Rear window defogger switch	ON	0
				OFF	Battery voltage

Is the inspection result normal?

YES >> Rear window defogger power supply circuit is OK.
NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

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

BCM		Fuse block (J/B)		Continuity
Connector	Terminal	Connector	Terminal	
M19	61	M4	6P	Yes

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness.

3. CHECK REAR WINDOW DEFOGGER RELAY

Check rear window defogger relay.
Refer to DEF-32, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident"
NO >> Replace rear window defogger relay.

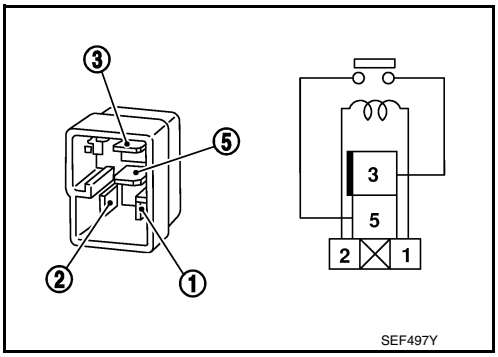
Component Inspection

INFOID:0000000012549121

1. CHECK REAR WINDOW DEFOGGER RELAY

Check rear window defogger relay.

Terminal		Condition	Continuity
Rear window defogger relay			
3	5	12V direct current supply between terminals 1 and 2.	Yes
		No current supply	No



Is the inspection result normal?

YES >> Inspection End.
NO >> Replace rear window defogger relay.

REAR WINDOW DEFOGGER POWER SUPPLY AND GROUND CIRCUIT

Description

INFOID:0000000012549122

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:0000000012549123

1. CHECK REAR WINDOW DEFOGGER

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

Is the inspection result normal?

YES >> Rear window defogger is OK.
NO >> Refer to DEF-33, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012549124

Regarding Wiring Diagram information, refer to DEF-10, "Wiring Diagram".

1. CHECK FUSES

Check if any of the following fuses in fuse block (J/B) are blown.

COMPONENT PARTS	AMPERE	FUSE NO.
Fuse block (J/B)	15A	23
	15A	24

Is the inspection result normal?

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

2. CHECK POWER SUPPLY CIRCUIT

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Rear window defogger					
Connector	Terminal				
D510	1	Ground	Rear window defogger switch	ON	Battery voltage
				OFF	0

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

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

Rear window defogger		Ground	Continuity
Connector	Terminal		
D525	2		Yes

Is the inspection result normal?

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

4. CHECK HARNESS CONTINUITY 1

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

Rear window defogger condenser		Rear window defogger		Continuity
Connector	Terminal	Connector	Terminal	
D509	2	D510	1	Yes

Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

1. Disconnect fuse block (J/B).
2. Check continuity between fuse block (J/B) connector and rear window defogger condenser connector.

Fuse block (J/B)		Rear window defogger condenser		Continuity
Connector	Terminal	Connector	Terminal	
B29	3T	D508	1	Yes
	5T			

Is the inspection result normal?

YES >> Replace rear window defogger condenser.
NO >> Replace or repair harness.

6. CHECK FILAMENT

Check filament. Refer to DEF-34, "Component Inspection".

Is the inspection result normal?

YES >> Refer to GI-47, "Intermittent Incident".
NO >> Repair filament. Refer to DEF-51, "Inspection and Repair".

Component Inspection

INFOID:0000000012549125

1. CHECK FILAMENT

Check the filament for damage or open circuits.
Refer to DEF-51, "Inspection and Repair".

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair filament. Refer to DEF-51, "Inspection and Repair".

DOOR MIRROR DEFOGGER LH (WITHOUT AROUND VIEW MONITOR)

Description

INFOID:0000000012549126

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:0000000012549127

1. CHECK DOOR MIRROR DEFOGGER LH

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

Is the inspection result normal?

YES >> Door mirror defogger is OK.
NO >> Refer to DEF-35, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012549128

Regarding Wiring Diagram information, refer to DEF-10, "Wiring Diagram".

1. CHECK POWER SUPPLY

Check if the following fuse in the fuse block (J/B) is blown.

COMPONENT PARTS	AMPERE	FUSE NO.
Fuse block (J/B)	10A	22

Is the inspection result normal?

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

2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror LH.
3. Turn ignition switch ON.
4. Check voltage between door mirror LH connector D4 terminal 1 and ground.

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness.

3. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror LH connector and ground.

Door mirror LH		Ground	Continuity
Connector	Terminal		
D4	2		Yes

Is the inspection result normal?

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

4. CHECK DOOR MIRROR DEFOGGER LH

Check door mirror defogger LH.
Refer to DEF-36, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace door mirror. Refer to MIR-18, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.
Refer to GI-47, "Intermittent Incident".

Is the inspection result normal?

YES >> Check the following:
- Battery power supply circuit
- Fuse block (J/B)

NO >> Repair or replace the malfunctioning parts.

Component Inspection

INFOID:0000000012549129

1. CHECK DOOR MIRROR DEFOGGER

1. Turn ignition switch OFF.
2. Disconnect door mirror LH.
3. Check continuity between door mirror terminals.

Terminal		Continuity
1	2	Yes

Is the inspection result normal?

YES >> Check the condition of the harness and the connector.
NO >> Replace malfunctioning door mirror LH. Refer to MIR-18, "Removal and Installation".

DOOR MIRROR DEFOGGER LH (WITH AROUND VIEW MONITOR)

Description

INFOID:0000000012549130

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:0000000012549131

1. CHECK DOOR MIRROR DEFOGGER LH

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

Is the inspection result normal?

YES >> Door mirror defogger is OK.
NO >> Refer to DEF-37, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012549132

Regarding Wiring Diagram information, refer to DEF-10, "Wiring Diagram".

1. CHECK POWER SUPPLY

Check if the following fuse in the fuse block (J/B) is blown.

COMPONENT PARTS	AMPERE	FUSE NO.
Fuse block (J/B)	10A	22

Is the inspection result normal?

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

2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror LH.
3. Turn ignition switch ON.
4. Check voltage between door mirror LH connector D28 terminal 7 and ground.

(+)		(-)	Condition		Voltage (V) (Approx.)
Door mirror LH					
Connector	Terminal				
D28	7	Ground	Rear window defogger switch	ON	Battery voltage
				OFF	0

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness.

3. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror LH connector and ground.

Door mirror LH		Ground	Continuity
Connector	Terminal		
D28	19		Yes

Is the inspection result normal?

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

4. CHECK DOOR MIRROR DEFOGGER LH

Check door mirror defogger LH.
Refer to DEF-38, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace door mirror. Refer to MIR-18, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.
Refer to GI-47, "Intermittent Incident".

Is the inspection result normal?

YES >> Check the following:
- Battery power supply circuit
- Fuse block (J/B)

NO >> Repair or replace the malfunctioning parts.

Component Inspection

INFOID:0000000012549133

1. CHECK DOOR MIRROR DEFOGGER

1. Turn ignition switch OFF.
2. Disconnect door mirror LH.
3. Check continuity between door mirror terminals.

Terminal		Continuity
7	19	Yes

Is the inspection result normal?

YES >> Check the condition of the harness and the connector.
NO >> Replace malfunctioning door mirror LH. Refer to MIR-18, "Removal and Installation".

DOOR MIRROR DEFOGGER RH (WITHOUT AROUND VIEW MONITOR)

Description

INFOID:0000000012549134

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:0000000012549135

1. CHECK DOOR MIRROR DEFOGGER RH

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

Is the inspection result normal?

YES >> Door mirror defogger RH is OK.
NO >> Refer to DEF-39, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012549136

Regarding Wiring Diagram information, refer to DEF-10, "Wiring Diagram".

1. CHECK POWER SUPPLY

Check if the following fuse in the fuse block (J/B) is blown.

COMPONENT PARTS	AMPERE	FUSE NO.
Fuse block (J/B)	10A	22

Is the inspection result normal?

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

2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror RH.
3. Turn ignition switch ON.
4. Check voltage between door mirror RH connector D107 terminal 1 and ground.

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness.

3. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror RH connector and ground.

Door mirror RH		Ground	Continuity
Connector	Terminal		
D107	2		Yes

Is the inspection result normal?

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

4. CHECK DOOR MIRROR DEFOGGER RH

Check door mirror defogger RH.
Refer to DEF-40, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace door mirror. Refer to MIR-18, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.
Refer to GI-47, "Intermittent Incident".

Is the inspection result normal?

YES >> Check the following:
- Battery power supply circuit
- Fuse block (J/B)

NO >> Repair or replace the malfunctioning parts.

Component Inspection

INFOID:0000000012549137

1. CHECK DOOR MIRROR DEFOGGER

1. Turn ignition switch OFF.
2. Disconnect door mirror RH.
3. Check continuity between door mirror terminals.

Terminal		Continuity
1	2	Yes

Is the inspection result normal?

YES >> Check the condition of the harness and the connector.
NO >> Replace malfunctioning door mirror RH. Refer to MIR-18, "Removal and Installation".

DOOR MIRROR DEFOGGER RH (WITH AROUND VIEW MONITOR)

Description

INFOID:0000000012549138

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:0000000012549139

1.CHECK DOOR MIRROR DEFOGGER RH

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

Is the inspection result normal?

YES >> Door mirror defogger RH is OK.
NO >> Refer to DEF-41, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012549140

Regarding Wiring Diagram information, refer to DEF-10, "Wiring Diagram".

1. CHECK POWER SUPPLY

Check if the following fuse in the fuse block (J/B) is blown.

COMPONENT PARTS	AMPERE	FUSE NO.
Fuse block (J/B)	10A	22

Is the inspection result normal?

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

2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror RH.
3. Turn ignition switch ON.
4. Check voltage between door mirror RH connector D128 terminal 7 and ground.

(+)		(-)	Condition		Voltage (V) (Approx.)
Door mirror RH					
Connector	Terminal				
D128	7	Ground	Rear window defogger switch	ON	Battery voltage
				OFF	0

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness.

3. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror RH connector and ground.

Door mirror RH		Ground	Continuity
Connector	Terminal		
D128	19		Yes

Is the inspection result normal?

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

4. CHECK DOOR MIRROR DEFOGGER RH

Check door mirror defogger RH. Refer to DEF-42, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace door mirror. Refer to MIR-18, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.
Refer to GI-47, "Intermittent Incident".

Is the inspection result normal?

YES >> Check the following:
- Battery power supply circuit
- Fuse block (J/B)

NO >> Repair or replace the malfunctioning parts.

Component Inspection

INFOID:0000000012549141

1. CHECK DOOR MIRROR DEFOGGER

1. Turn ignition switch OFF.
2. Disconnect door mirror RH.
3. Check continuity between door mirror terminals.

Terminal		Continuity
7	19	Yes

Is the inspection result normal?

YES >> Check the condition of the harness and the connector.
NO >> Replace malfunctioning door mirror RH. Refer to MIR-18, "Removal and Installation".

SYMPTOM DIAGNOSIS

DEFOGGER SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000012549142

Symptom	Reference page
Rear window defoggers and door mirror defoggers do not operate.	Refer to DEF-44, "Diagnosis Procedure".
Rear window defoggers do not operate but both of the door mirror defoggers operate.	Refer to DEF-45, "Diagnosis Procedure".
Both door mirror defoggers don’t operate but rear window defoggers operate.	Refer to DEF-46, "Diagnosis Procedure".
Driver side door mirror defogger does not operate.	Refer to DEF-48, "Diagnosis Procedure".
Passenger side door mirror defogger does not operate.	Refer to DEF-49, "Diagnosis Procedure".
Rear window defogger switch does not light, but rear window defogger operates.	Refer to DEF-50, "Diagnosis Procedure".

REAR WINDOW DEFOGGER AND DOOR MIRROR DEFOGGER DO NOT OPERATE.

Diagnosis Procedure

INFOID:0000000012549143

1. CHECK REAR WINDOW DEFOGGER SWITCH

Check rear window defogger switch.
Refer to DEF-26, "Component Function Check".

Is the inspection result normal?

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

2. CHECK REAR WINDOW DEFOGGER RELAY

Check rear window defogger relay.
Refer to DEF-31, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3. CHECK REAR WINDOW DEFOGGER POWER SUPPLY AND GROUND CIRCUIT

Check rear window defogger power supply and ground circuit.
Refer to DEF-33, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.

4. CHECK DOOR MIRROR DEFOGGER

Check door mirror defogger.
Refer to DEF-35, "Diagnosis Procedure" (LH without around view monitor), DEF-37, "Diagnosis Procedure" (LH with around view monitor), DEF-39, "Diagnosis Procedure" (RH without around view monitor), DEF-41, "Diagnosis Procedure" (RH with around view monitor).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000012549144

1. CHECK REAR WINDOW DEFOGGER POWER SUPPLY AND GROUND CIRCUIT

Check rear window defogger power supply and ground circuit.
Refer to DEF-33, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000012549145

Regarding Wiring Diagram information, refer to DEF-10, "Wiring Diagram".

1. CHECK DOOR MIRROR DEFOGGER FUSE

Check if the following fuse in fuse block (J/B) is blown.

COMPONENT PARTS	AMPERE	FUSE NO.
Fuse block (J/B)	10A	22

Is the inspection result normal?

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

2. CHECK DOOR MIRROR DEFOGGER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the following harness connectors.
- Fuse block (J/B) connector M4
- Door mirror LH D4 (without around view monitor), D28 (with around view monitor)
- Door mirror RH D107 (without around view monitor), D128 (with around view monitor)
3. Check continuity between fuse block (J/B) harness connector and door mirror defogger harness connectors.

Fuse block (J/B) Connector	Terminal	Door mirror Connectors	Terminal	Continuity
M4	5P	D4 (LH without around view monitor)	1	Yes
		D107 (RH without around view monitor)		
		D28 (LH with around view monitor)	7	
		D128 (RH with around view monitor)		

4. Check continuity between fuse block (J/B) harness connector M4 terminal 5P and ground.

Fuse block (J/B) connector	Terminal	Ground	Continuity
M4	5P		No

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness.

3. CHECK DOOR MIRROR DEFOGGER

Check door mirror LH.
Refer to DEF-35, "Component Function Check" (without around view monitor) or DEF-37, "Component Function Check" (with around view monitor).
Check door mirror RH.
Refer to DEF-39, "Component Function Check" (without around view monitor) or DEF-41, "Component Function Check" (with around view monitor).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

DRIVER SIDE DOOR MIRROR DEFOGGER DOES NOT OPERATE.

Diagnosis Procedure

INFOID:0000000012549146

1. CHECK DOOR MIRROR DEFOGGER LH

Check door mirror defogger LH.
Refer to DEF-35, "Component Function Check" (without around view monitor) or DEF-37, "Component Function Check" (with around view monitor).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

PASSENGER SIDE DOOR MIRROR DEFOGGER DOES NOT OPERATE.

Diagnosis Procedure

INFOID:0000000012549147

1. CHECK DOOR MIRROR DEFOGGER RH

Check door mirror defogger RH.
Refer to DEF-39, "Component Function Check" (without around view monitor) or DEF-41, "Component Function Check" (with around view monitor).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000012549148

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

Check that A/C and AV switch assembly (rear window defogger switch) is operating normally.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
NO >> Check rear window defogger switch. Refer to DEF-26, "Diagnosis Procedure".

REMOVAL AND INSTALLATION

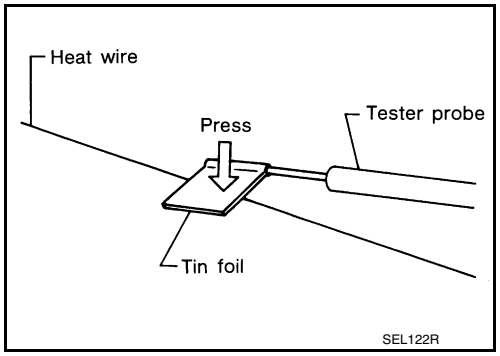
FILAMENT

Inspection and Repair

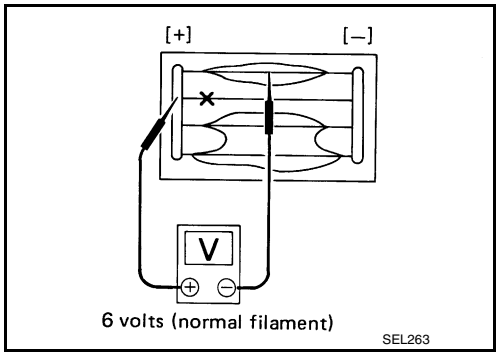
INFOID:0000000012549149

INSPECTION

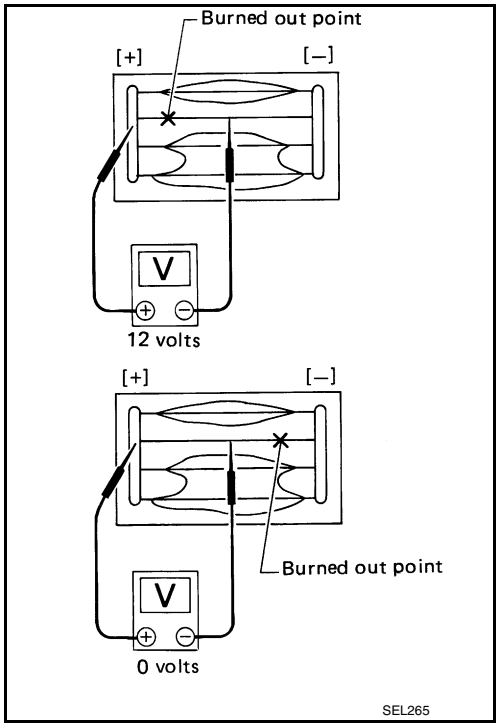
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.



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



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



REPAIR

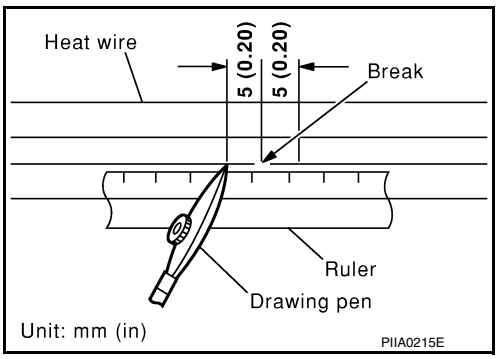
REPAIR EQUIPMENT

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

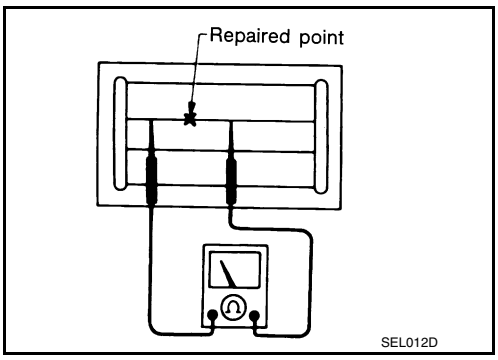
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

REPAIRING PROCEDURE

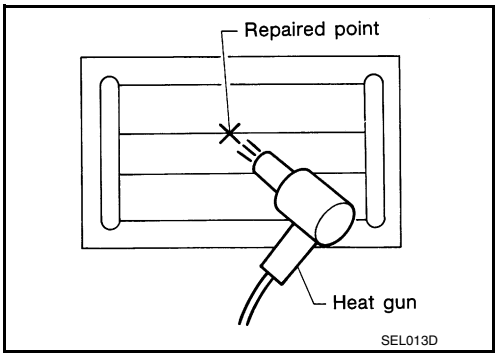
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.
   NOTE:
   Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition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



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



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



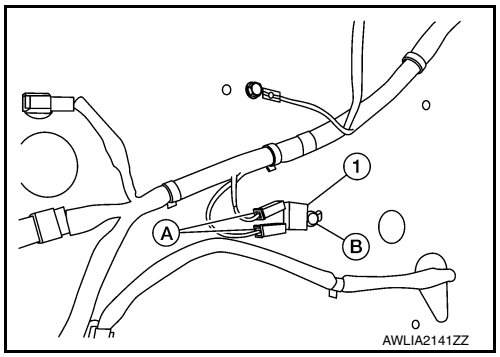
CONDENSER

Removal and Installation

INFOID:0000000012549150

REMOVAL

1. Remove the back door lower finisher. Refer to INT-35, "BACK DOOR LOWER FINISHER : Removal and Installation".
2. Disconnect the harness connectors (A) from the condenser (1).
3. Remove the bolt (B) and the condenser (1).



INSTALLATION

Installation is in the reverse order of removal.