SECTION PG

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

PRECAUTION

PRECAUTIONS

Precaution for Technicians Using Medical Electric

INFOID:0000000010119351

OPERATION PROHIBITION

WARNING:

- **Parts with strong magnet is used in this vehicle.**
- **Technicians using a medical electric device such as pacemaker must never perform operation on the vehicle, as magnetic field can affect the device function by approaching to such parts.**

NORMAL CHARGE PRECAUTION

WARNING:

- **If a technician uses a medical electric device such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator, the possible effects on the devices must be checked with the device manufacturer before starting the charge operation.**
- **As radiated electromagnetic wave generated by PDM (Power Delivery Module) at normal charge operation may affect medical electric devices, a technician using a medical electric device such as implantable cardiac pacemaker or an implantable cardioverter defibrillator must not approach motor room [PDM (Power Delivery Module)] at the hood-opened condition during normal charge operation.**

PRECAUTION AT TELEMATICS SYSTEM OPERATION

WARNING:

- **If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.**
- **The electromagnetic wave of TCU might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), when using the service, etc.**
- **If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of TCU might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before TCU use.**

PRECAUTION AT INTELLIGENT KEY SYSTEM OPERATION

WARNING:

- **If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.**
- **The electromagnetic wave of Intelligent Key might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), at door operation, at each request switch operation, or at engine starting.**
- **If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of Intelligent Key might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before Intelligent Key use.**

Point to Be Checked Before Starting Maintenance Work

INFOID:0000000010119352

The high voltage system may starts automatically. It is required to check that the timer air conditioner and timer charge (during EVSE connection) are not set before starting maintenance work.
NOTE:
If the timer air conditioner or timer charge (during EVSE connection) is set, the high voltage system starts automatically even when the power switch is in OFF state.

High Voltage Precautions

INFOID:0000000010119353

WARNING:

- **Because hybrid vehicles and electric vehicles contain a high voltage battery, there is the risk of electric shock, electric leakage, or similar accidents if the high voltage component and vehicle are han-**

dled incorrectly. Be sure to follow the correct work procedures when performing inspection and maintenance.
- **Be sure to remove the service plug in order to disconnect the high voltage circuits before performing inspection or maintenance of high voltage system harnesses and parts.**
- **To prevent the removed service plug from being connected by mistake during the procedure, always carry it in your pocket or put it in the tool box.**
- **Be sure to wear insulating protective equipment before beginning work on the high voltage system.**
- **Clearly identify the persons responsible for high voltage work and ensure that other persons do not touch the vehicle. When not working, cover high voltage parts with an insulating cover sheet or similar item to prevent other persons from contacting them.**

CAUTION:

There is the possibility of a malfunction occurring if the vehicle is changed to READY status while the service plug is removed. Therefore do not change the vehicle to READY status unless instructed to do so in the Service Manual.

HIGH VOLTAGE HARNESS AND EQUIPMENT IDENTIFICATION

The colors of the high voltage harnesses and connectors are all orange. Orange "High Voltage" labels are applied to the Li-ion battery and other high voltage devices. Do not carelessly touch these harnesses and parts.

HANDLING OF HIGH VOLTAGE HARNESS AND TERMINALS

Immediately insulate disconnected high voltage connectors and terminals with insulating tape.

REGULATIONS ON WORKERS WITH MEDICAL ELECTRONICS

WARNING:

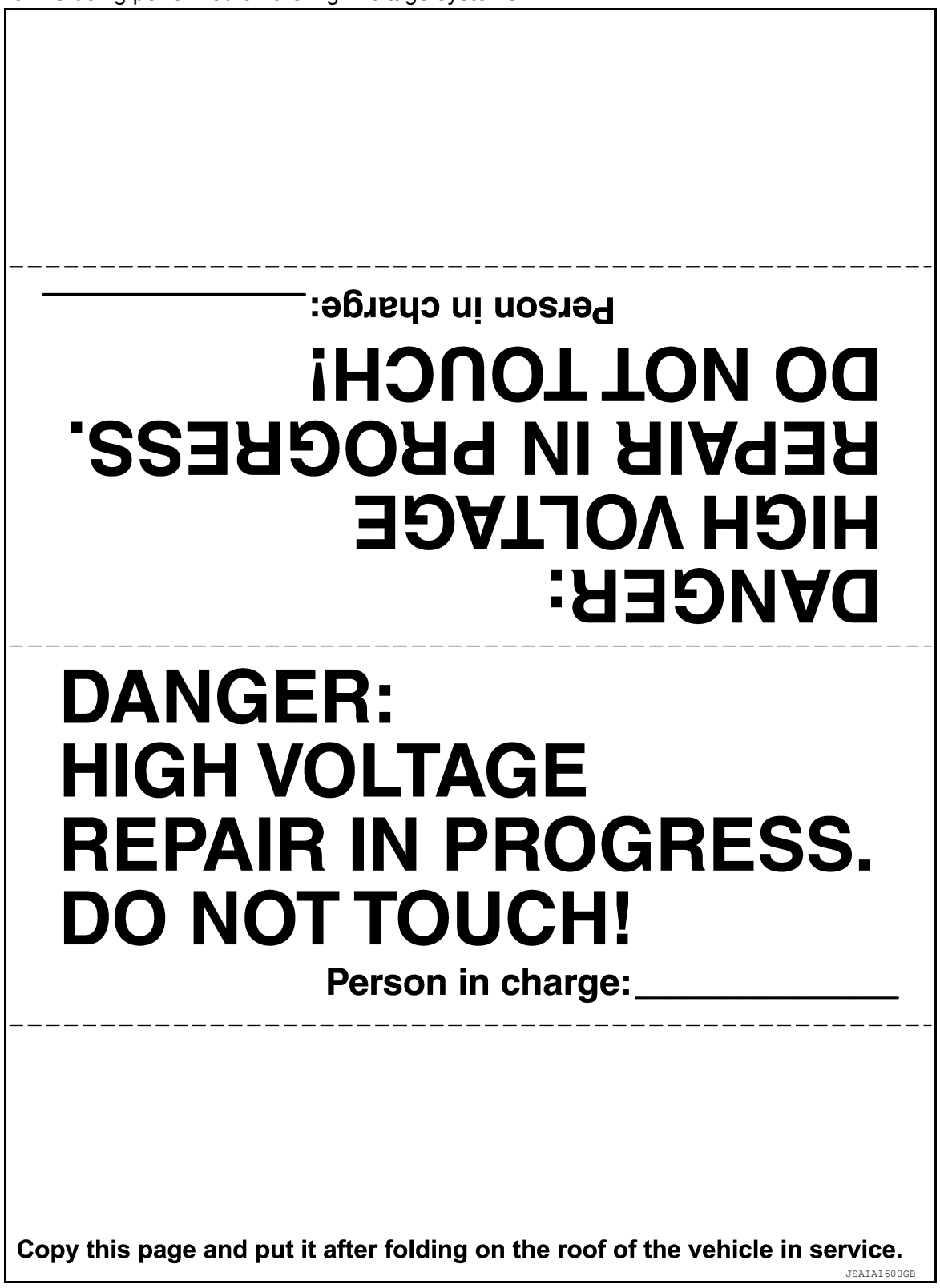
The vehicle contains parts that contain powerful magnets. If a person who is wearing a heart pacemaker or other medical device is close to these parts, the medical device may be affected by the magnets. Such persons must not perform work on the vehicle.

PROHIBITED ITEMS TO CARRY DURING THE WORK

Because this vehicle uses components that contain high voltage and powerful magnetism, due not carry any metal products which may cause short circuits, or any magnetic media (cash cards, prepaid cards, etc.) which may be damaged on your person when working.

POSTING A SIGN OF “DANGER! HIGH VOLTAGE AREA. KEEP OUT”

To call the attention of other workers, indicate "High voltage work in progress. Do not touch!" on vehicles where work is being performed on the high voltage systems.



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

INFOID:0000000010119354

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS

system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the 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 Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.**

Precaution for Removing 12V Battery

INFOID:0000000010119355

1. Check that EVSE is not connected.
   NOTE:
   If EVSE is connected, the air conditioning system may be automatically activated by the timer A/C function.
2. Turn the power switch OFF → ON → OFF. Get out of the vehicle. Close all doors (including back door).
3. Check that the charge status indicator lamp does not blink and wait for 5 minutes or more.
   NOTE:
   If the battery is removed within 5 minutes after the power switch is turned OFF, plural DTCs may be detected.
4. Remove 12V battery within 1 hour after turning the power switch OFF → ON → OFF.
   NOTE:
   - The 12V battery automatic charge control may start automatically even when the power switch is in OFF state.
   - Once the power switch is turned ON → OFF, the 12V battery automatic charge control does not start for approximately 1 hour.

   CAUTION:

   - **After all doors (including back door) are closed, if a door (including back door) is opened before battery terminals are disconnected, start over from Step 1.**
   - **After turning the power switch OFF, if "Remote A/C" is activated by user operation, stop the air conditioner and start over from Step 1.**

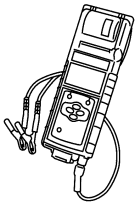
PREPARATION

PREPARATION

Special Service Tools

INFOID:0000000010119356

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name		Description
— (—) Model GR8-1200 NI Multitasking battery and electrical diagnostic station	 AWIIA1239ZZ	Tests batteries, starting and charging systems and charges batteries. For operating instructions, refer to diagnostic station instruction manual.
— (—) Model EXP-800 NI Battery and electrical diagnostic analyzer	 JSMIA0806ZZ	Tests batteries and charging systems. For operating instructions, refer to diagnostic analyzer instruction manual.

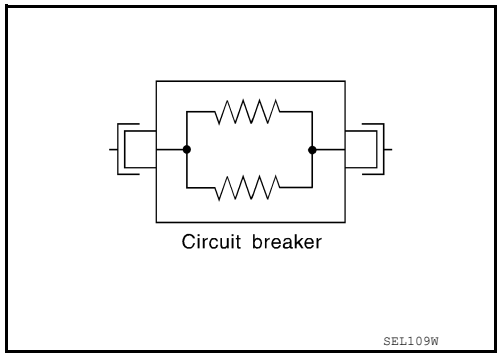
SYSTEM DESCRIPTION

COMPONENT PARTS

Circuit Breaker

INFOID:0000000010593505

The PTC thermistor generates heat in response to current flow. The temperature (and resistance) of the thermistor element varies with current flow. Excessive current flow will cause the element's temperature to rise. When the temperature reaches a specified level, the electrical resistance will rise sharply to control the circuit current.
Reduced current flow will cause the element to cool. Resistance falls accordingly and normal circuit current flow is allowed to resume.



12V Battery

INFOID:0000000010593506

Type		51R
20 hour rate capacity	[V – Ah]	12 – 43
Cold cranking current (For reference value)	[A]	410

NOTE:
VCM charges the 12V battery for 5 minutes when the vehicle power is not turned ON for a set period of time (120 h). Refer to EVC-59, "AUTOMATIC 12V BATTERY CHARGE CONTROL : System Description".

Harness Connector

INFOID:0000000010593507

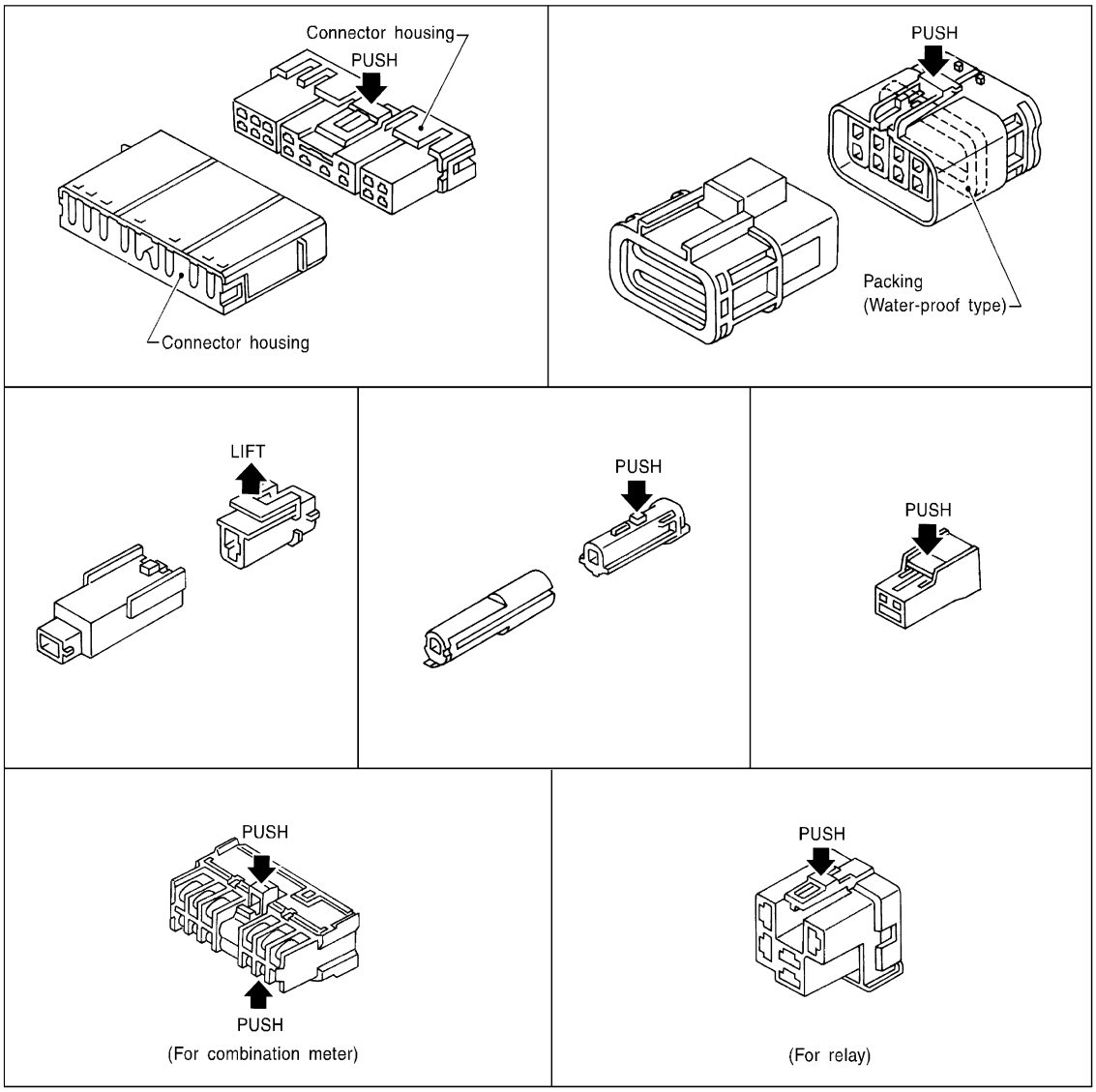
NOTE:
The color of the high voltage harnesses and connectors is orange. Do not carelessly touch these harnesses and connector.

HARNESS CONNECTOR (TAB-LOCKING TYPE)

- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the figure below.

CAUTION:
To prevent damage to the parts, never pull the harness or wires when disconnecting the connector.

[Example]



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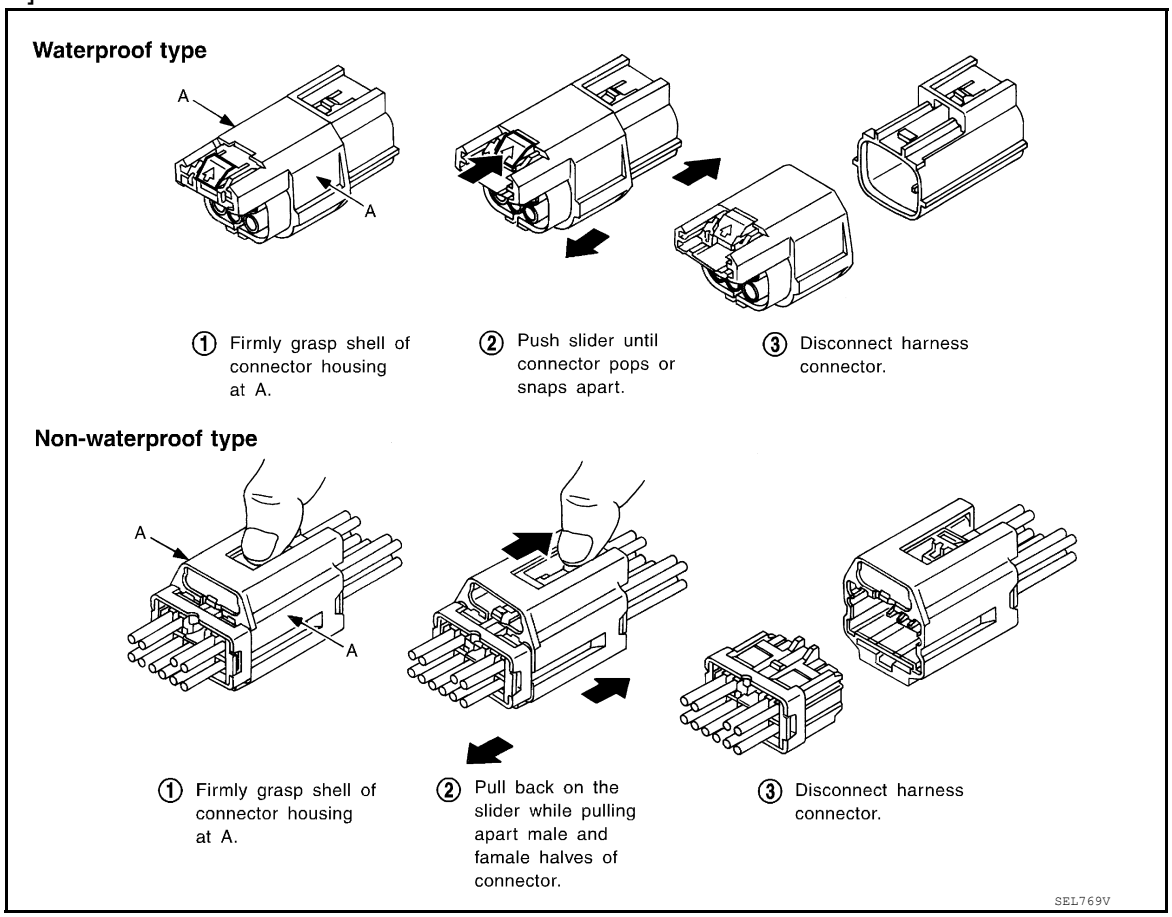
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

- A new style slide-locking type connector is used on certain systems and components, especially those related to OBD.
- The slide-locking type connectors help prevent incomplete locking and accidental looseness or disconnection.
- The slide-locking type connectors are disconnected by pushing or pulling the slider. Refer to the figure below.
- After connecting the connector, check that the slider is located in the correct position.

CAUTION:

- **To prevent damage to the parts, never pull the harness or wires when disconnecting the connector.**
- **To prevent damage to the parts, be careful not to damage the connector support bracket when disconnecting the connector.**

[Example]

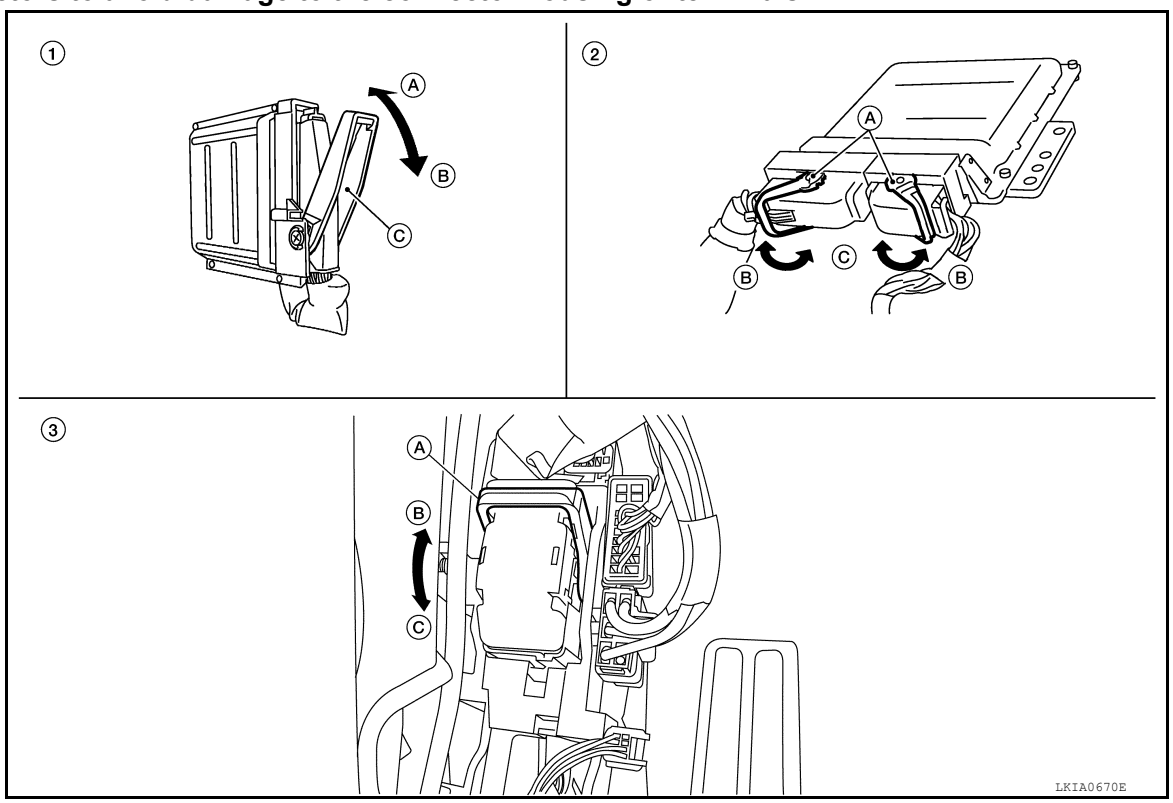


HARNESS CONNECTOR (LEVER LOCKING TYPE)

- Lever locking type harness connectors are used on certain control units and control modules such as ECM, ABS actuator and electric unit (control unit), etc.
- Lever locking type harness connectors are also used on super multiple junction (SMJ) connectors.
- Always confirm the lever is fully locked in place by moving the lever as far as it will go to ensure full connection.

CAUTION:

Always confirm the lever is fully released (loosened) before attempting to disconnect or connect these connectors to avoid damage to the connector housing or terminals.



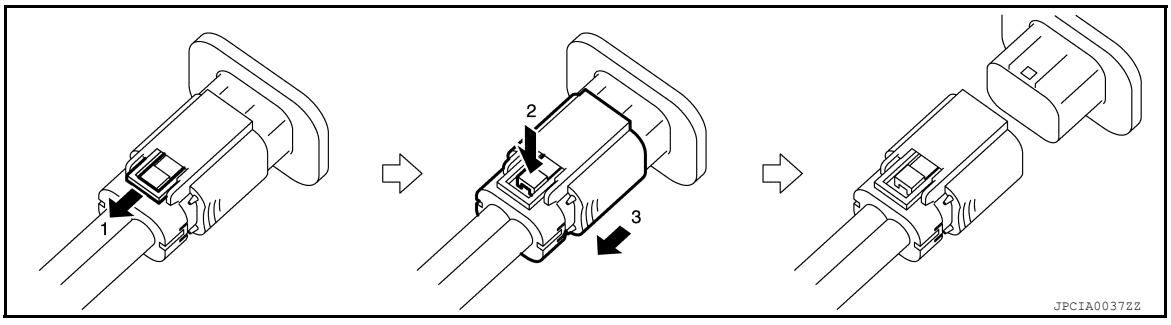
1. Control unit with single lever
   A. Fasten
   B. Loosen
   C. Lever
2. Control unit with dual levers
   A. Levers
   B. Fasten
   C. Loosen
3. SMJ connector
   A. Lever
   B. Fasten
   C. Loosen

HIGH VOLTAGE HARNESS CONNECTOR (2-STEP TYPE, 3-STEP TYPE)

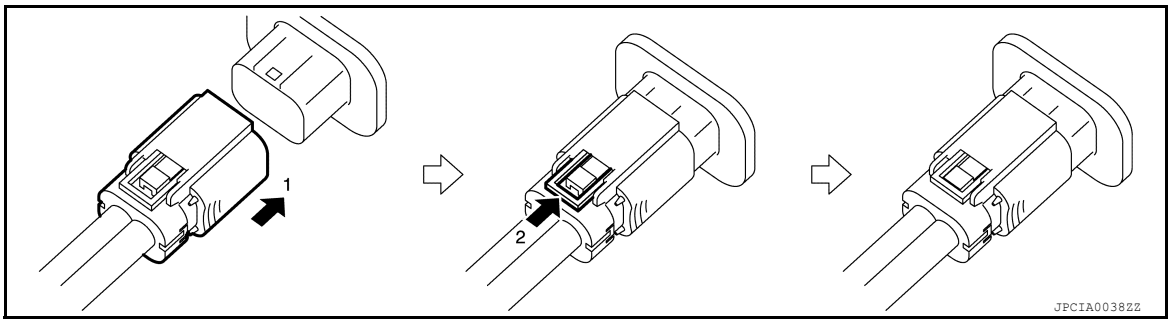
- 2-step type and 3-step type connectors are used for specific high voltage parts.
- For secure connection, check that the slider is pressed all the way when connecting the high voltage connector.

2-Step Type

DISCONNECT

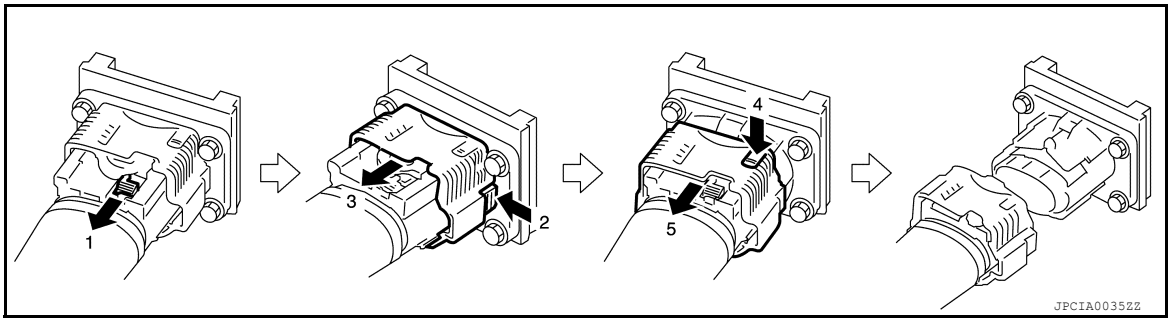


CONNECT

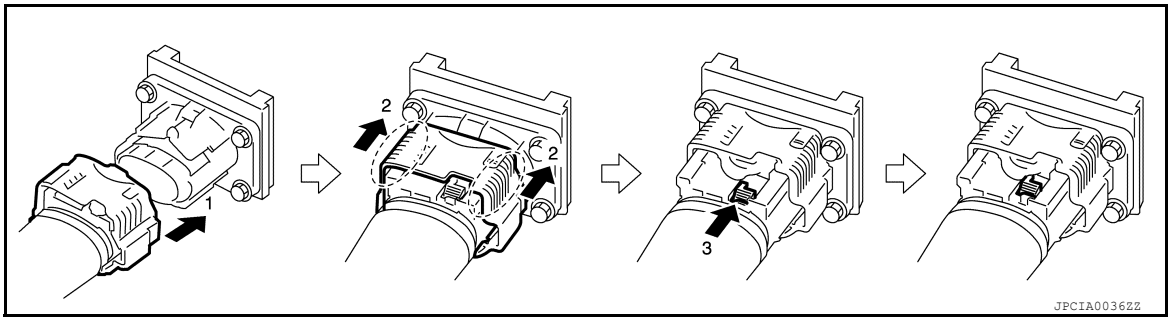


3-Step Type

DISCONNECT



CONNECT

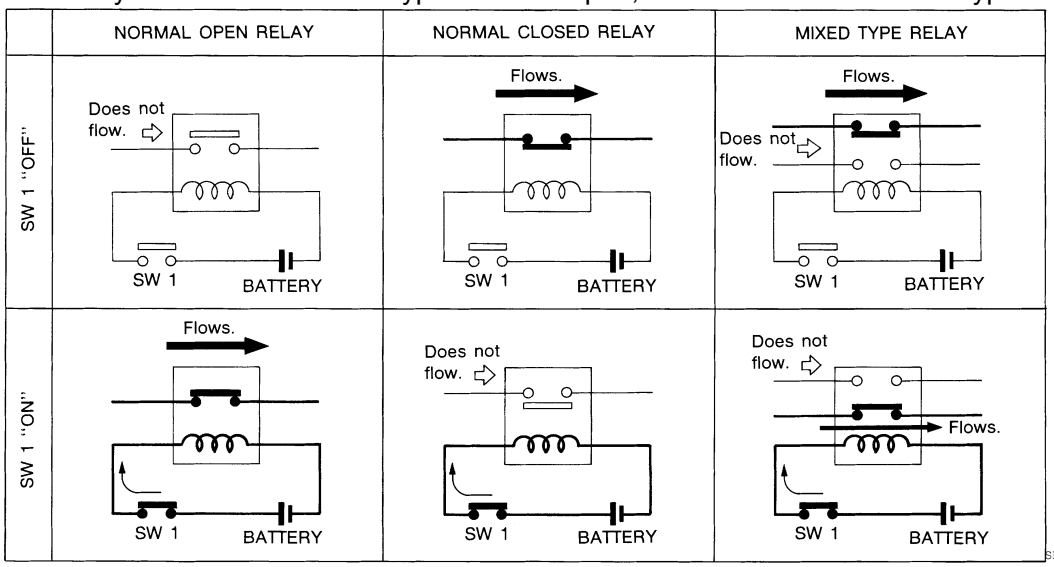


Standardized Relay

INFOID:0000000010593508

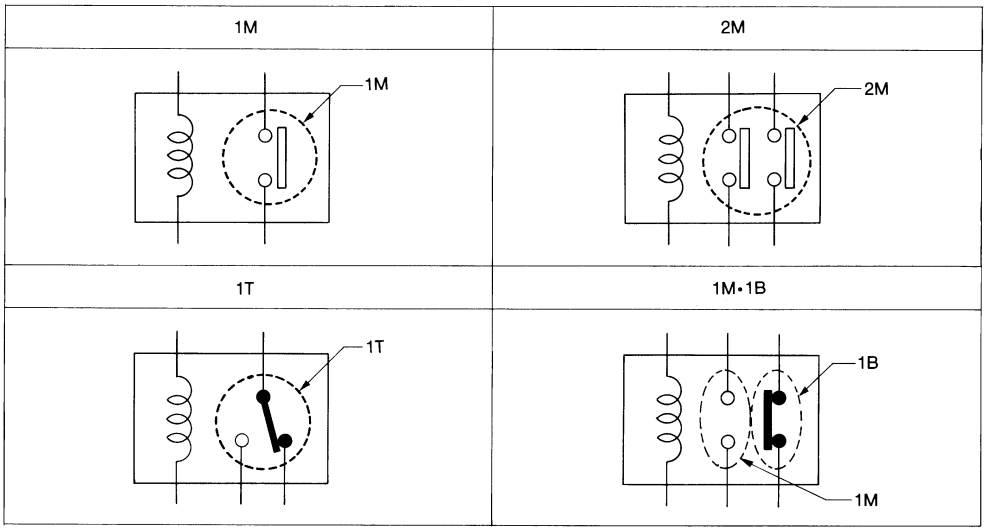
NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



TYPE OF STANDARDIZED RELAYS

1M ····· 1 Make
1T ····· 1 Transfer
2M ····· 2 Make
1M·1B ····· 1 Make 1 Break



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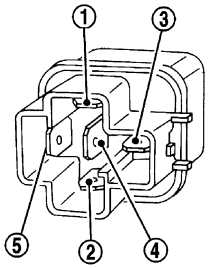
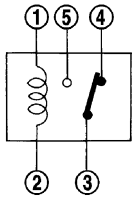
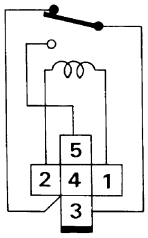
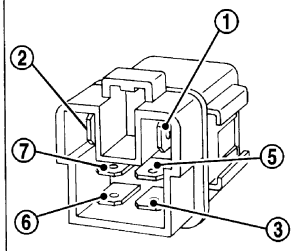
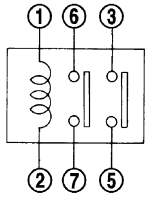
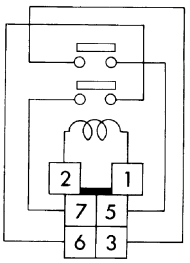
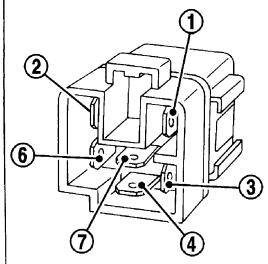
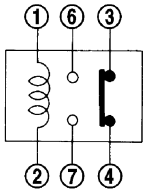
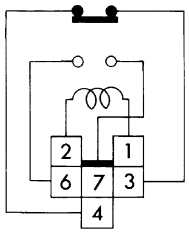
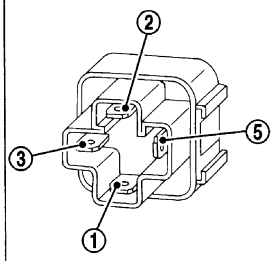
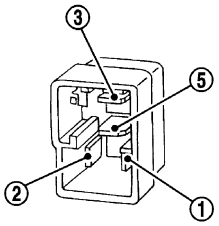
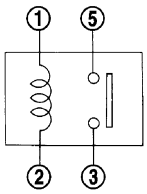
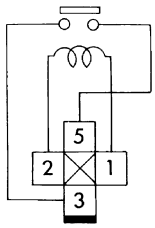
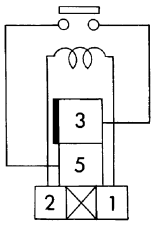
Type	Outer view	Circuit	Connector symbol and connection	Case color
1T				BLACK
2M				BROWN
1M•1B				GRAY
1M	 		 	BLUE

The arrangement of terminal numbers on the actual relays may differ from those shown above.

SEL188W

WIRING DIAGRAM

POWER SUPPLY ROUTING CIRCUIT

Wiring Diagram —Battery Power Supply —

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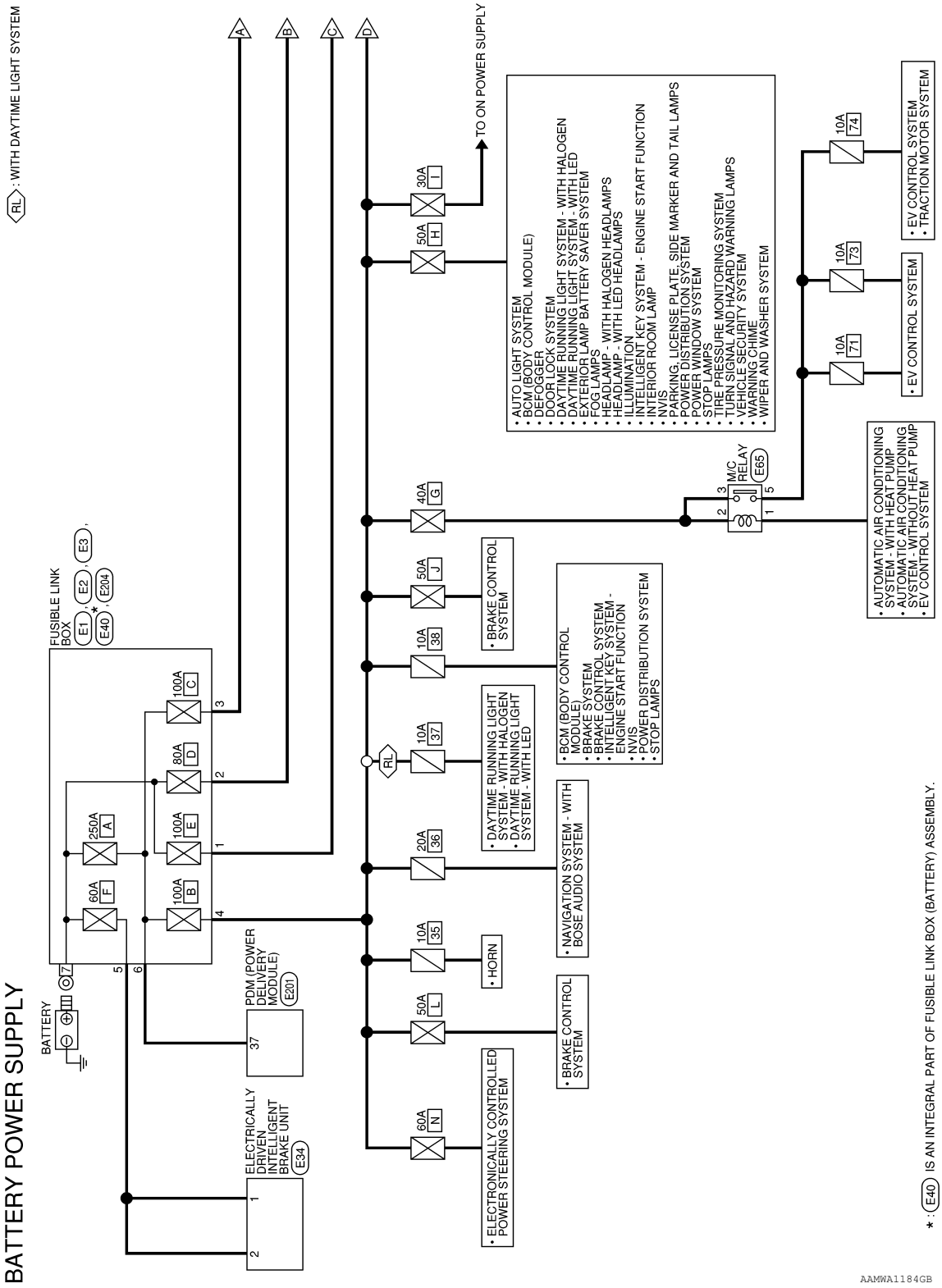

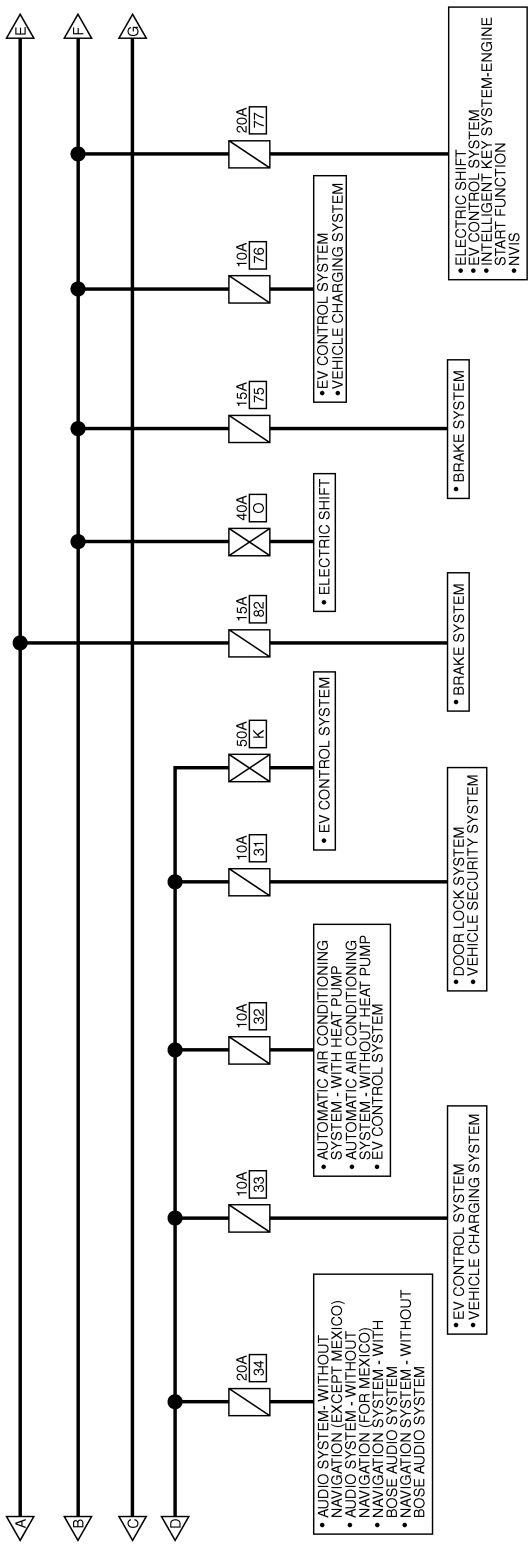

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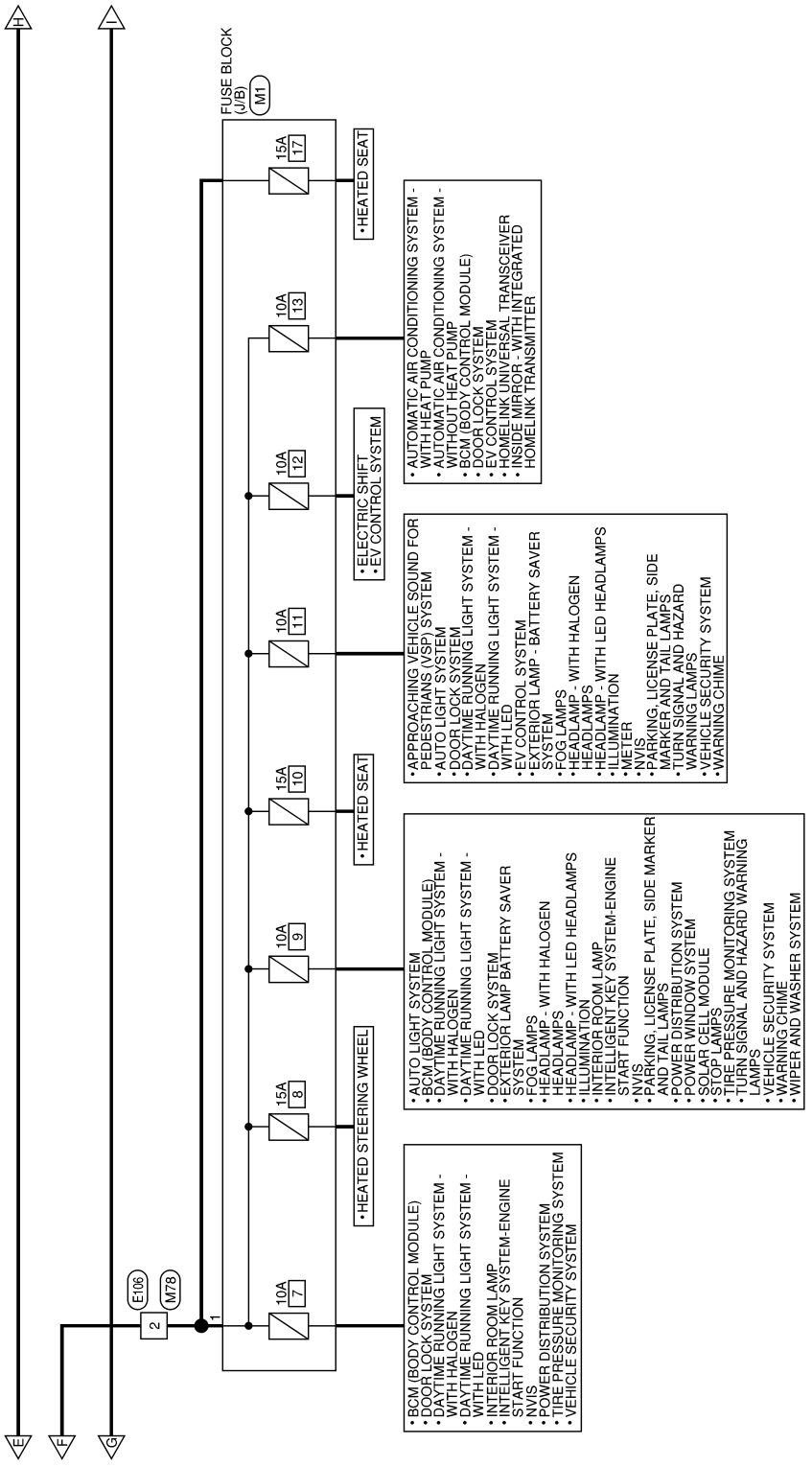

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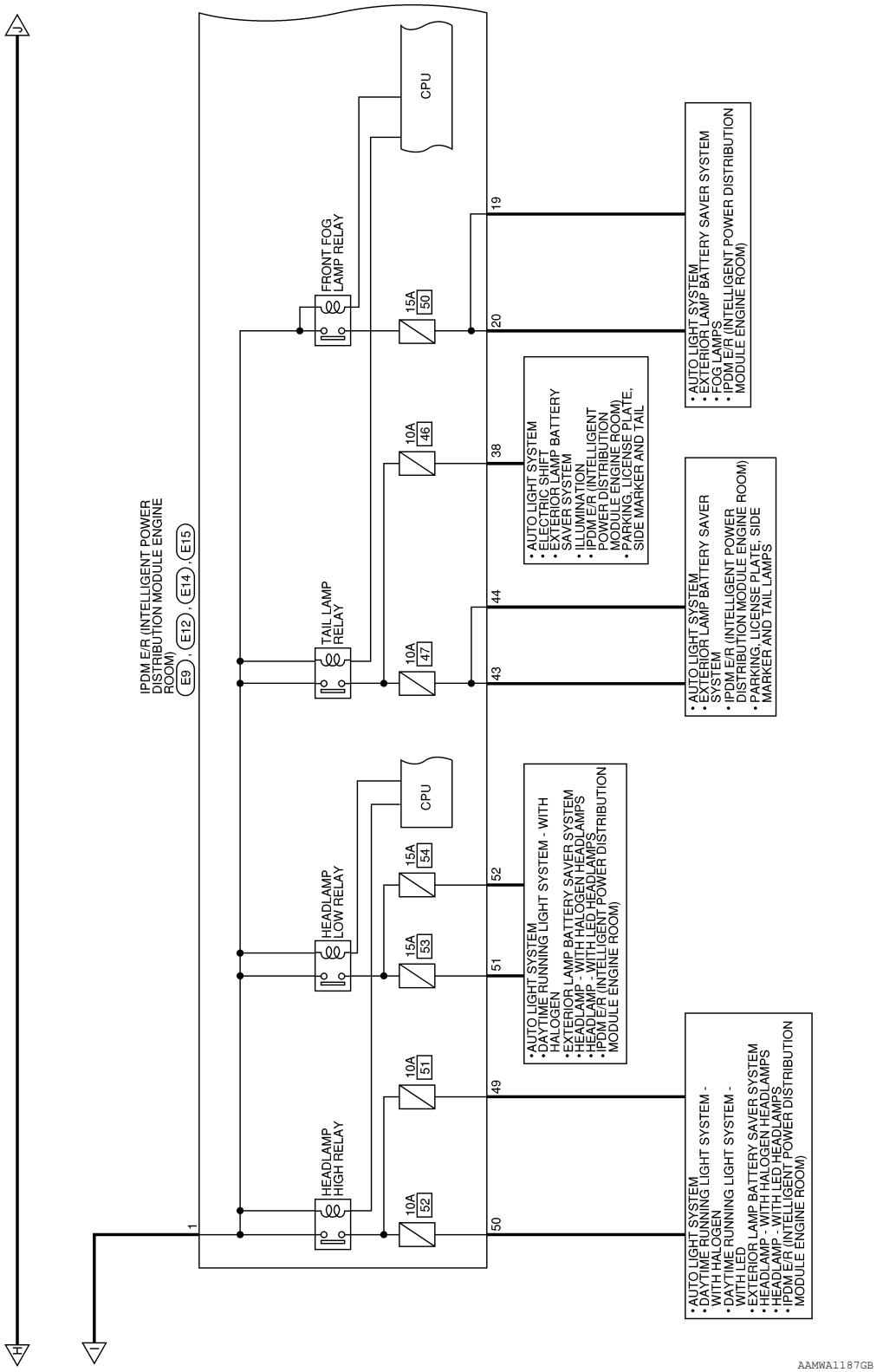
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E9, E12, E14, E15
1
CPU
FRONT FOG LAMP RELAY
TAIL LAMP RELAY
HEADLAMP LOW RELAY
HEADLAMP HIGH RELAY
15A 50
10A 46
10A 47
15A 54
15A 53
10A 51
10A 52
19
20
38
44
43
52
51
49
50
• AUTO LIGHT SYSTEM
• EXTERIOR LAMP BATTERY SAVER SYSTEM
• FOG LAMPS
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• AUTO LIGHT SYSTEM
• ELECTRIC SHIFT EXTERIOR LAMP BATTERY SAVER SYSTEM
• ILLUMINATION
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• PARKING, LICENSE PLATE, SIDE MARKER AND TAIL
• AUTO LIGHT SYSTEM
• EXTERIOR LAMP BATTERY SAVER SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS
• AUTO LIGHT SYSTEM
• DAYTIME RUNNING LIGHT SYSTEM - WITH HALOGEN
• EXTERIOR LAMP BATTERY SAVER SYSTEM
• HEADLAMP - WITH HALOGEN HEADLAMPS
• HEADLAMP - WITH LED HEADLAMPS
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• AUTO LIGHT SYSTEM
• DAYTIME RUNNING LIGHT SYSTEM - WITH HALOGEN
• DAYTIME RUNNING LIGHT SYSTEM - WITH LED
• EXTERIOR LAMP BATTERY SAVER SYSTEM
• HEADLAMP - WITH HALOGEN HEADLAMPS
• HEADLAMP - WITH LED HEADLAMPS
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
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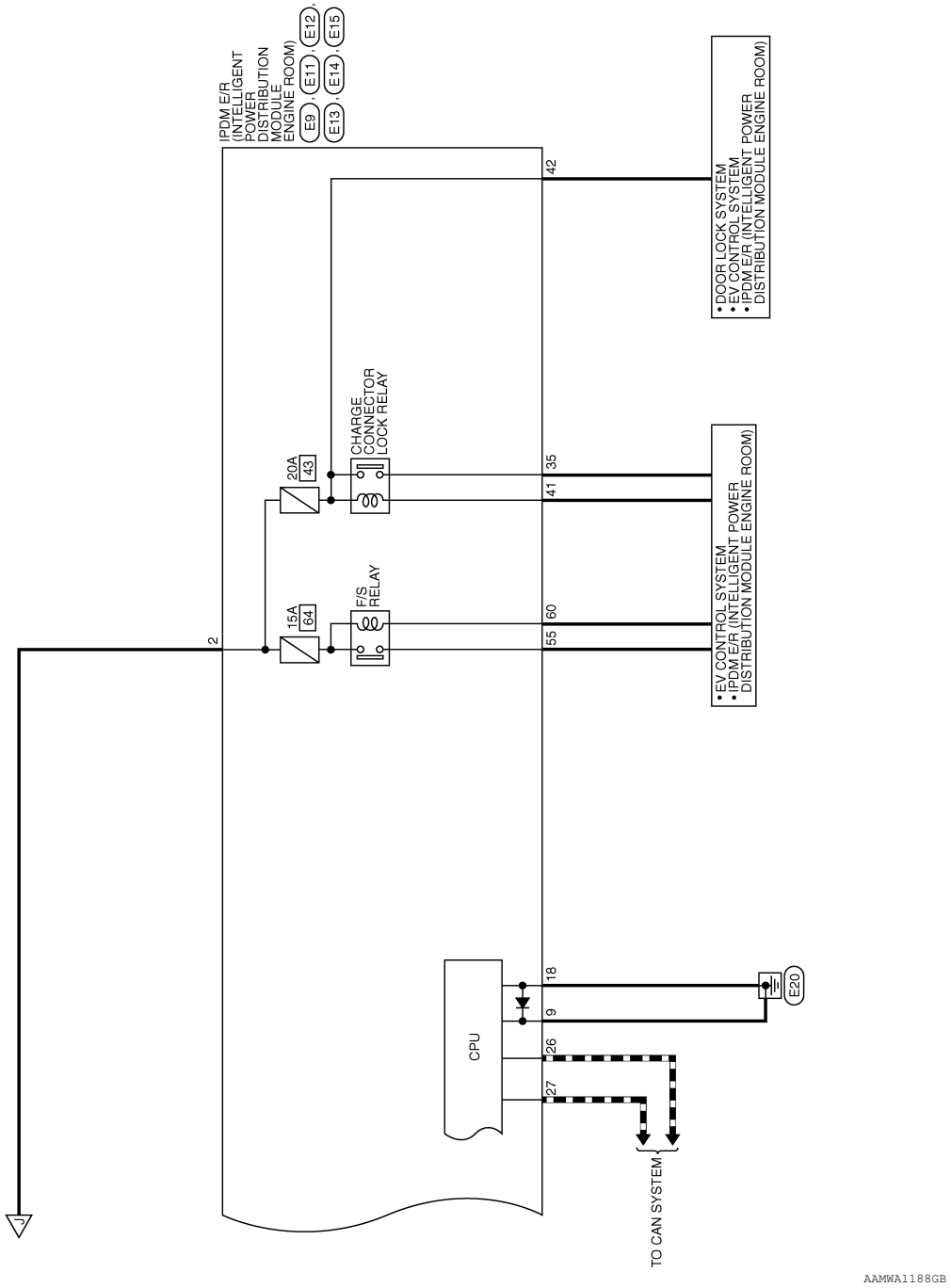

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BATTERY POWER SUPPLY CONNECTORS

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	W	–

Connector No.	M78
Connector Name	WIRE TO WIRE
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
2	W	–

Connector No.	E1
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	GRAY

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

Connector No.	E2
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BROWN

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

Connector No.	E3
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
5	R	–

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	R	F/L USM
2	G	F/L MAIN

AAMIA2320GB

Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
9	B	POWER GROUND

Connector No.	E12
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
18	B/W	SGND
19	W	FR FOG/L RH
20	V	FR FOG/L LH

Connector No.	E13
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
26	P	CAN-L
27	L	CAN-H

Connector No.	E14
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
35	R	VCM VB
38	LG	TAIL 1 (WITHOUT SOLAR CELL)
38	R	TAIL 1 (WITH SOLAR CELL)
41	SB	VCM RLY CONT
42	BR	VCM BAT
43	O	CLEARANCE/L LH
44	B	TAIL 2

Connector No.	E15
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
49	Y	H/LAMP HI RH
50	G	H/LAMP HI LH
51	L	H/LAMP LO LH
52	P	H/LAMP LO RH
55	LG	FAST CHARGE
60	GR	F/S RLY CONT

Connector No.	E34
Connector Name	ELECTRICALLY-DRIVEN INTELLIGENT BRAKE UNIT
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	MOTOR POWER
2	Y	MOTOR POWER

AAMIA2321GB

Connector No.	E40
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	–

H.S.

Terminal No.	Color of Wire	Signal Name
7	–	–

Connector No.	E65
Connector Name	M/C RELAY
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	R	–
3	R	–
5	W	–

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
2	W	–

Connector No.	E201
Connector Name	PDM (POWER DELIVERY MODULE) ON BOARD CHARGER
Connector Color	–

H.S.

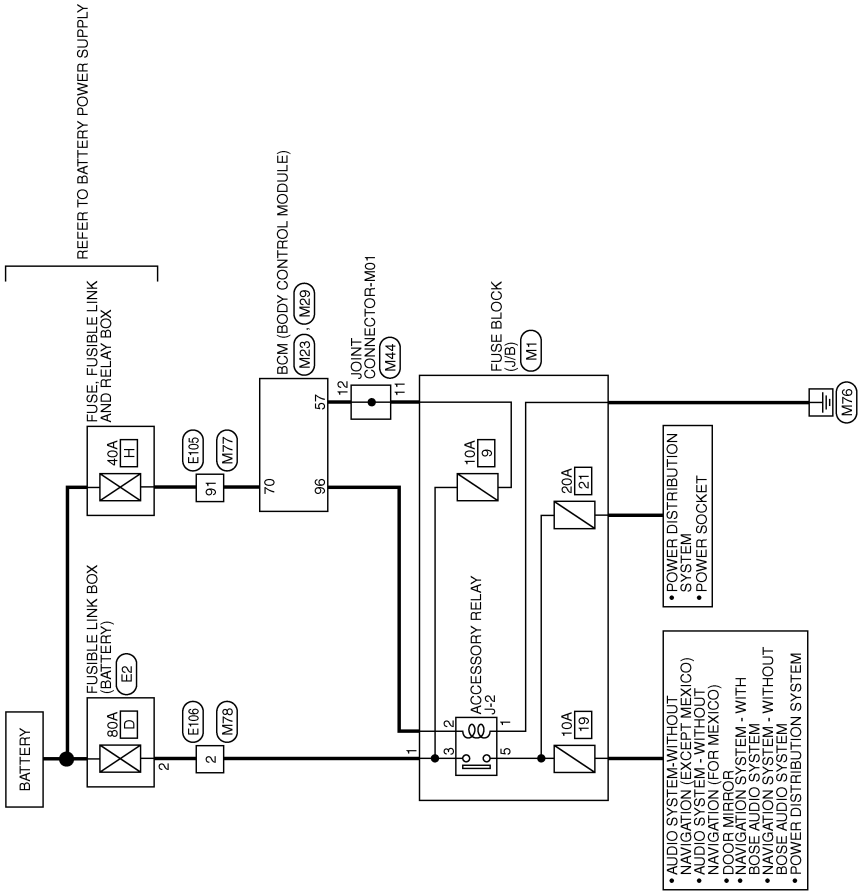
Terminal No.	Color of Wire	Signal Name
37	B/R	–

AAMIA2322GB

Wiring Diagram —Accessory Power Supply —

INFOID:0000000010586657

ACCESSORY POWER SUPPLY



AAMWA1189GB

ACCESSORY POWER SUPPLY CONNECTORS

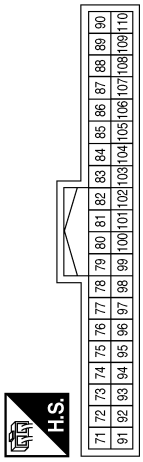
Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–

Connector No.	M23
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

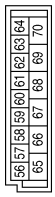
H.S.



Terminal No.	Color of Wire	Signal Name
96	BR	ACC RELAY OUTPUT

Connector No.	M25
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
57	P	BATTERY (FUSE)
70	Y	BATTERY (F/L)

Connector No.	M44
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
11	P	–
12	P	–

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

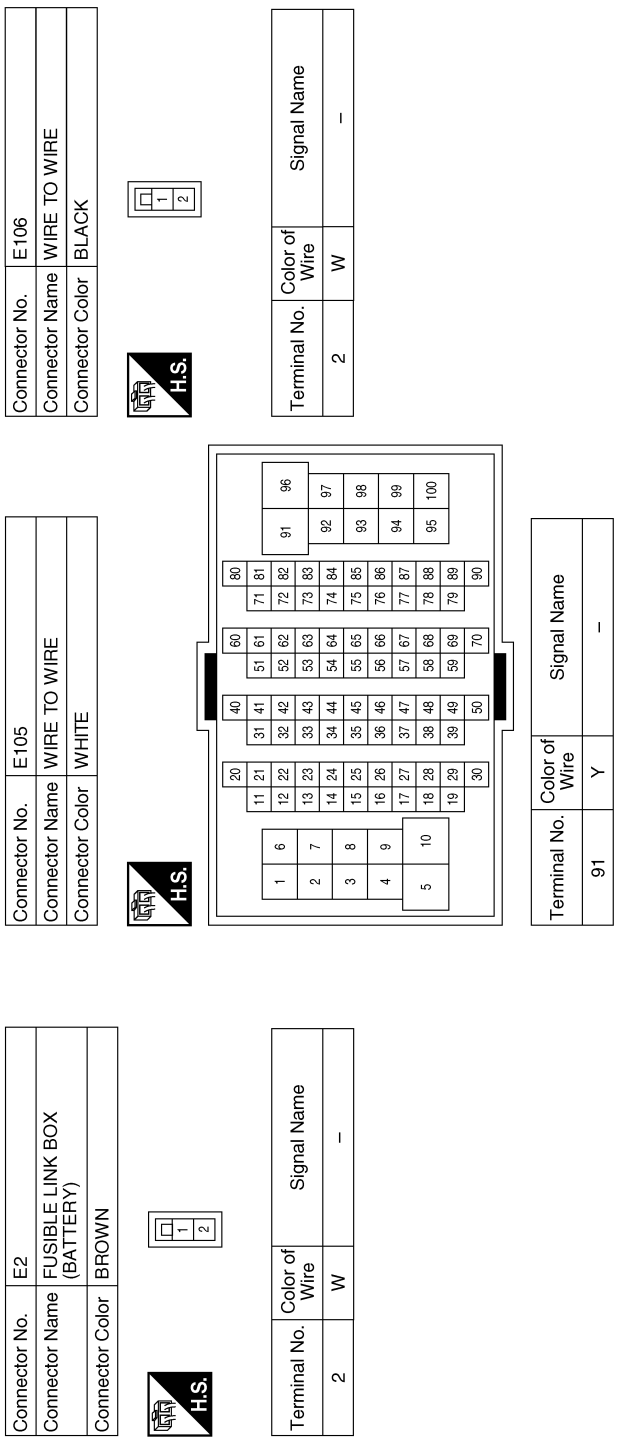
Terminal No.	Color of Wire	Signal Name
91	Y	–

Connector No.	M78
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
2	W	–

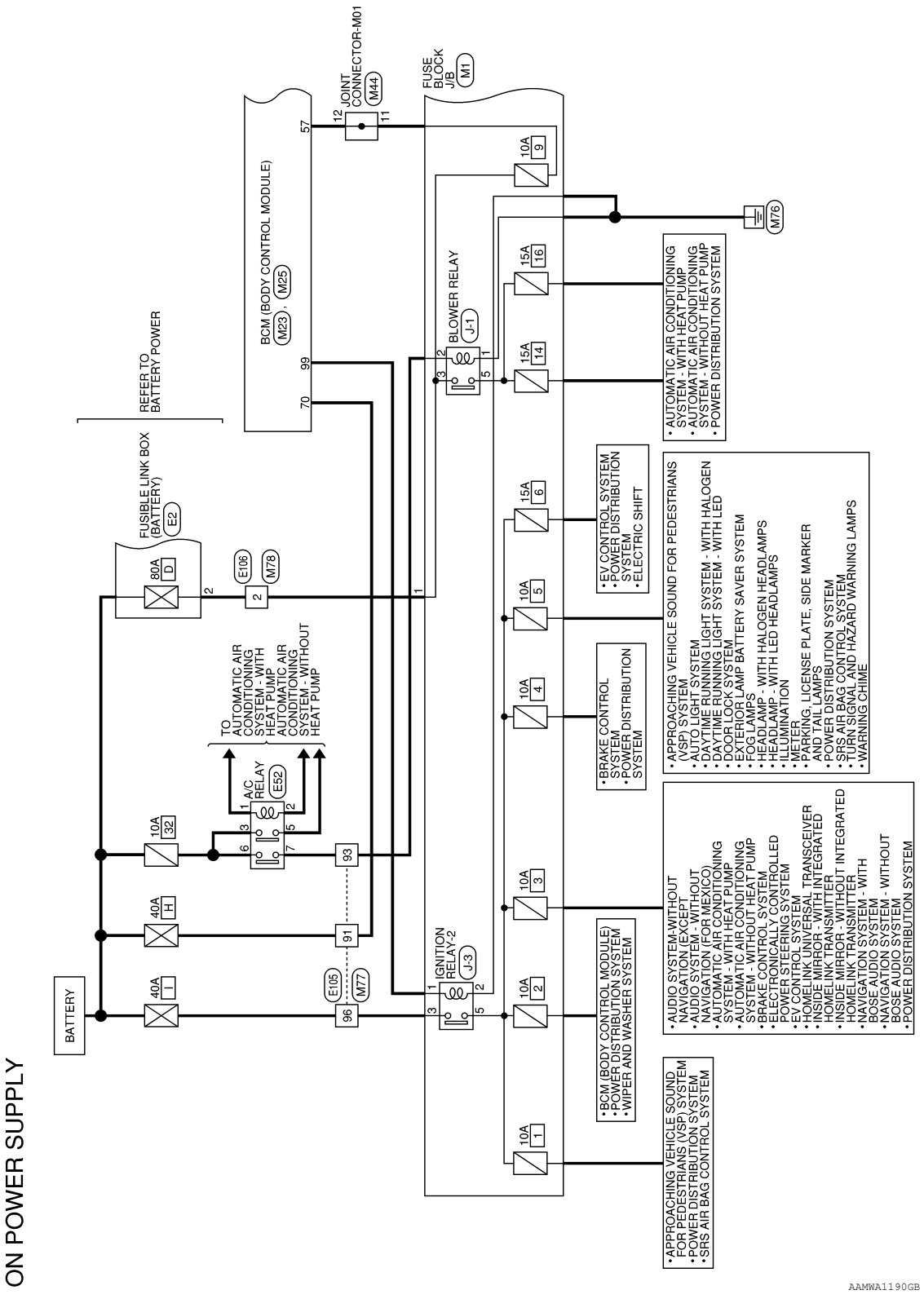
AAMIA2323GB

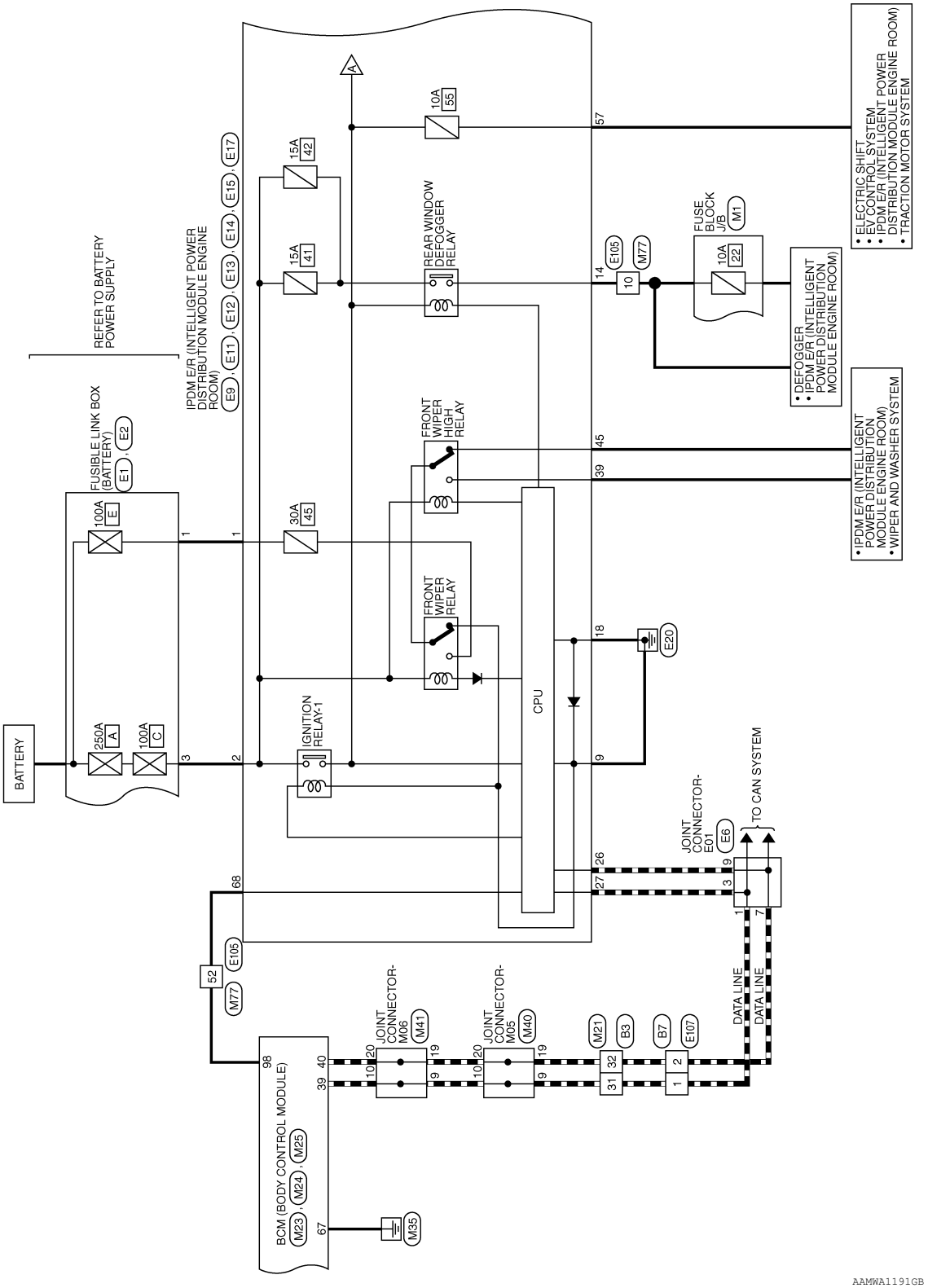


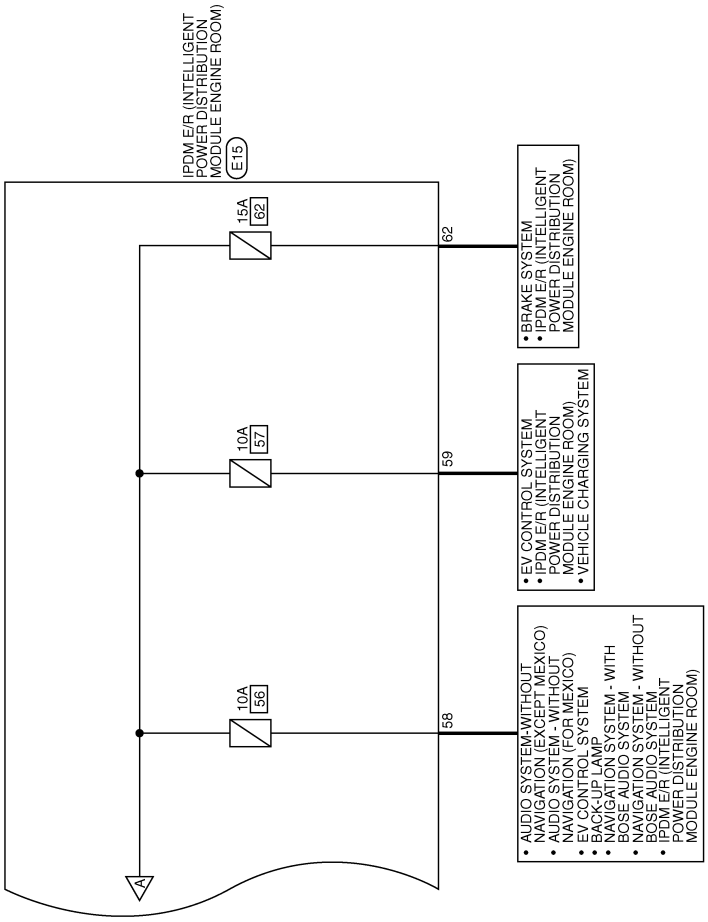
AAMIA2324GB

Wiring Diagram—On Power Supply—

INFOID:0000000010586658




REFER TO BATTERY POWER SUPPLY
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E9, E11, E12, E13, E14, E15, E17
FUSIBLE LINK BOX (BATTERY)
E1, E2
BATTERY
100A E
250A A
100A C
30A 45
15A 42
15A 41
10A 55
REAR WINDOW DEFOGGER RELAY
FRONT WIPER HIGH RELAY
FRONT WIPER RELAY
IGNITION RELAY-1
CPU
FUSE BLOCK J/B M1
10A 22
E105 M77
10
E20
• ELECTRIC SHIFT
• EV CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• TRACTION MOTOR SYSTEM
• DEFOGGER
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• WIPER AND WASHER SYSTEM
JOINT CONNECTOR-E01 E6
TO CAN SYSTEM
DATA LINE
DATA LINE
JOINT CONNECTOR-M06 M41
JOINT CONNECTOR-M05 M40
M21 B3 B7 E107
BCM (BODY CONTROL MODULE)
M23, M24, M25
M35
AAMWA1191GB



AAMWA1192GB

ON POWER SUPPLY CONNECTORS

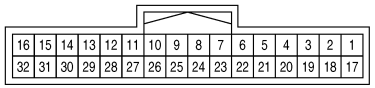
Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–

Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Color	WHITE

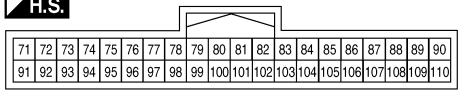
H.S.



Terminal No.	Color of Wire	Signal Name
31	L	–
32	P	–

Connector No.	M23
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

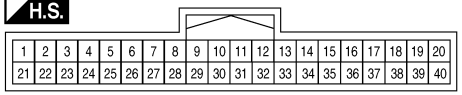
H.S.



Terminal No.	Color of Wire	Signal Name
98	L	IGN RELAY OUTPUT1 (USM)
99	GR	IGN RELAY OUTPUT2 (ELEC)

Connector No.	M24
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

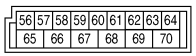
H.S.



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

Connector No.	M25
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

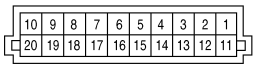
H.S.



Terminal No.	Color of Wire	Signal Name
57	P	BATTERY (FUSE)
67	B	GND
70	Y	BATTERY (F/L)

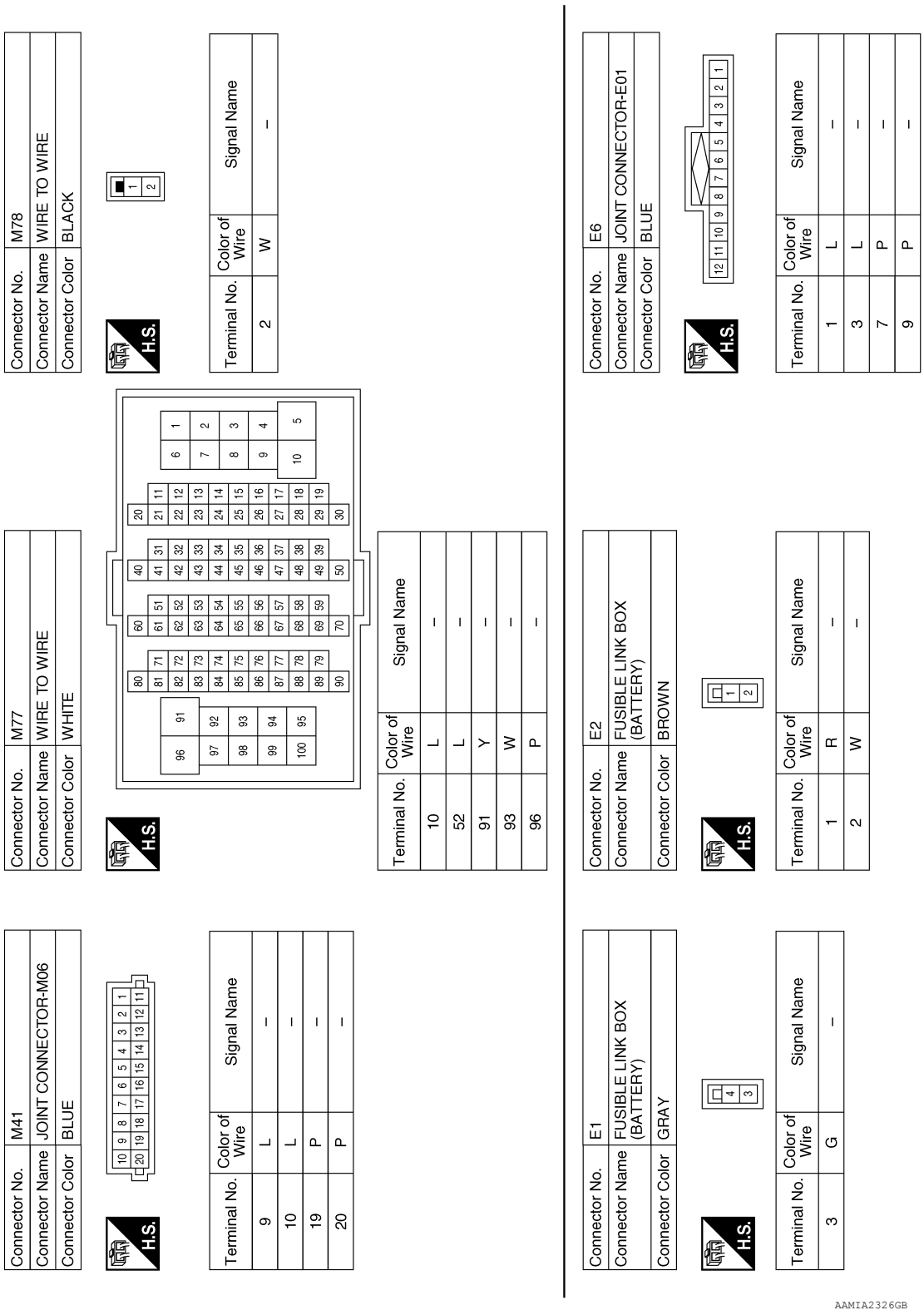
Connector No.	M40
Connector Name	JOINT CONNECTOR-M05
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
9	L	–
10	L	–
19	P	–
20	P	–

AAMIA2325GB


Connector No. M78
Connector Name WIRE TO WIRE
Connector Color BLACK
H.S.
Terminal No. Color of Wire Signal Name
2 W –
Connector No. M77
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
10 L –
52 L –
91 Y –
93 W –
96 P –
Connector No. E6
Connector Name JOINT CONNECTOR-E01
Connector Color BLUE
H.S.
Terminal No. Color of Wire Signal Name
1 L –
3 L –
7 P –
9 P –
Connector No. E2
Connector Name FUSIBLE LINK BOX (BATTERY)
Connector Color BROWN
H.S.
Terminal No. Color of Wire Signal Name
1 R –
2 W –
Connector No. M41
Connector Name JOINT CONNECTOR-M06
Connector Color BLUE
H.S.
Terminal No. Color of Wire Signal Name
9 L –
10 L –
19 P –
20 P –
Connector No. E1
Connector Name FUSIBLE LINK BOX (BATTERY)
Connector Color GRAY
H.S.
Terminal No. Color of Wire Signal Name
3 G –
AAMIA2326GB

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

1	2

Terminal No.	Color of Wire	Signal Name
1	R	F/L USM
2	G	F/L MAIN

Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

11	10	9
14	13	12

Terminal No.	Color of Wire	Signal Name
9	B	POWER GROUND
14	R	RR DEF

Connector No.	E12
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

17		16	15
22	21	20	19	18

Terminal No.	Color of Wire	Signal Name
18	B/W	SGND

Connector No.	E13
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

28	27	26	25	24	23
34	33	32	31	30	29

Terminal No.	Color of Wire	Signal Name
26	P	CAN-L
27	L	CAN-H

Connector No.	E14
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

39	38		37	36	35
46	45	44	43	42	41	40

Terminal No.	Color of Wire	Signal Name
39	R	FR WIPER HI
45	Y	FR WIPER LO

Connector No.	E15
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

53	52	51	50		49	48	47
62	61	60	59	58	57	56	55	54

Terminal No.	Color of Wire	Signal Name
57	R	VCM IGN
58	O	REVERSE LAMP IGN
59	BR	ABS ECU IGN
62	V	E-ACT/HAS IGN

AAMIA2327GB

Terminal No.	Color of Wire	Signal Name
1	W	–
2	BR	–
3	R	–
5	W	–
6	R	–
7	O	–

Connector No.	E52
Connector Name	A/C RELAY
Connector Color	BROWN

H.S.

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

Terminal No.	Color of Wire	Signal Name
10	R	–
52	O	–
91	Y	–
93	O	–
96	P	–

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
2	W	–

AAMIA2328GB

Connector No.	B7
Connector Name	WIRE TO WIRE
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
1	L	–
2	P	–

Connector No.	B3
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
31	L	–
32	P	–

Connector No.	E107
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

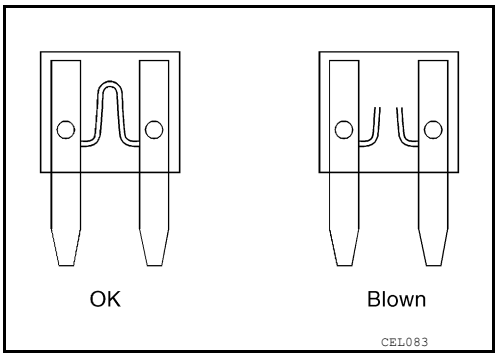
Terminal No.	Color of Wire	Signal Name
1	L	–
2	P	–

AAMIA2329GB

Fuse

INFOID:0000000010586659

- If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.
- Use fuse of specified rating. Never use fuse of more than specified rating.
- Do not partially install fuse; always insert it into fuse holder properly.
- Remove fuse for “ELECTRICAL PARTS (BAT)” if vehicle is not used for a long period of time.

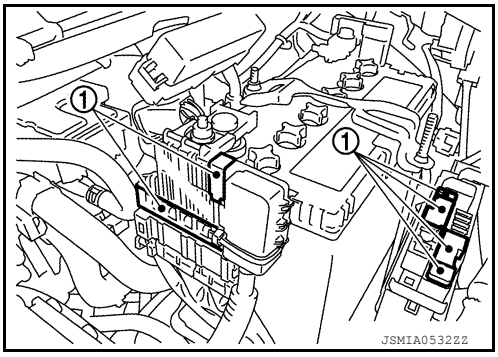


Fusible Link

INFOID:0000000010586660

A melted fusible link can be detected either by visual inspection or by feeling with finger tip. If its condition is questionable, use circuit tester or test lamp.

1 : Fusible link



CAUTION:

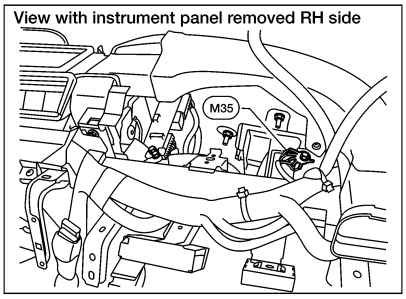
- **If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of malfunction.**
- **Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other wiring harness, vinyl or rubber parts.**

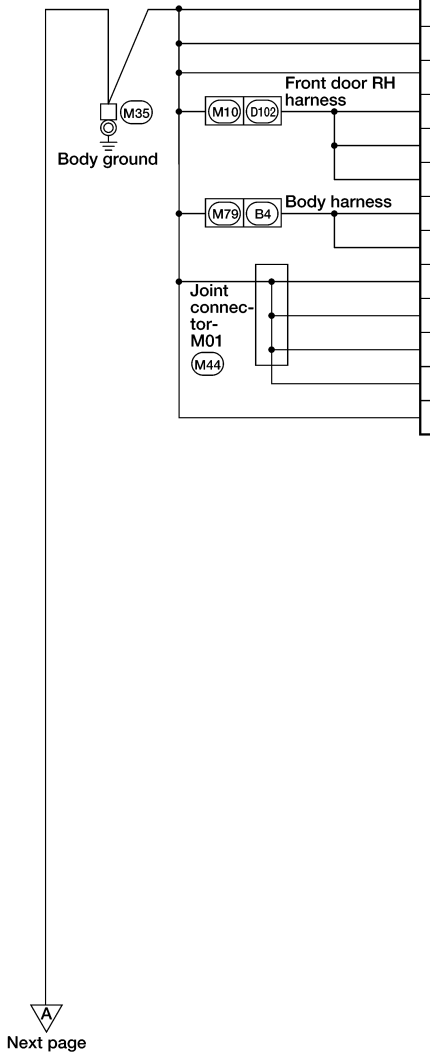
GROUND

Ground Distribution

INFOID:0000000010586661

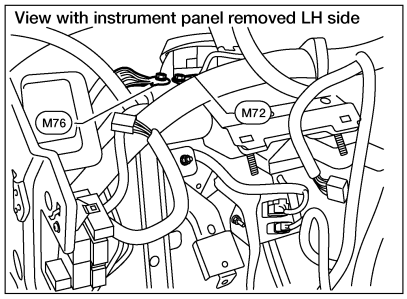
MAIN HARNESS

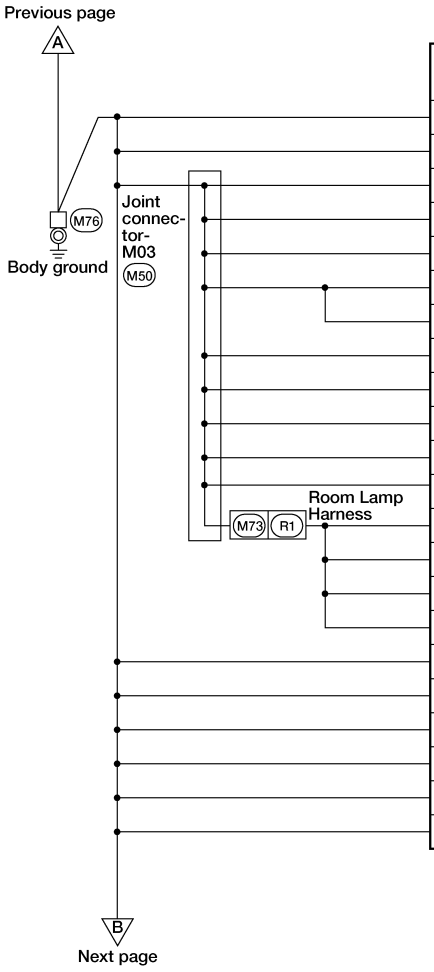




CONNECTOR NUMBER	CONNECT TO
M32	Around view monitor control unit (Terminal No. 1)
M60	Power socket
M114	Power transistor
D104	Power window and lock/unlock switch RH
D105	Door mirror RH
D115	Front outside handle RH (request switch)
M23	BCM (Body control module) shield
B82	Inside key antenna (luggage room) shield
M51	Multifunction switch
M55	A/C Auto amp. (Terminal No. 10)
M67	TCU (Terminal No. 2)
M102	Heat pump Control unit (Terminal No. 16)
M25	BCM (Body control module) (Terminal No. 67)

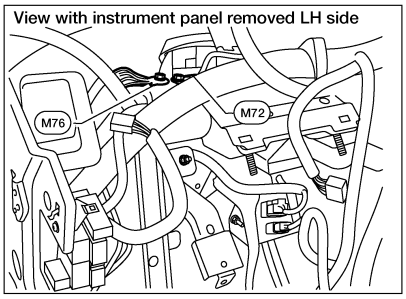
AAMIA2461GB

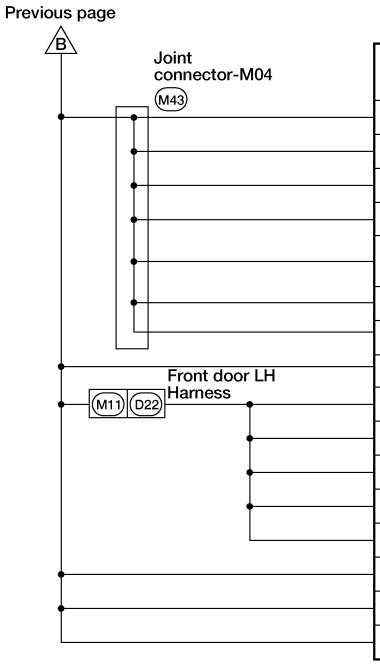




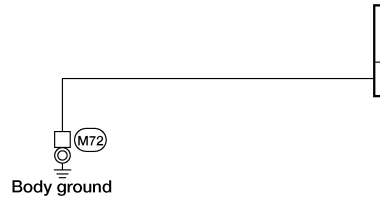
CONNECTOR NUMBER	CONNECT TO
M4	Data link (Terminal No. 4)
M4	Data link (Terminal No. 5)
M27	Combination switch
M30	Steering angle sensor
M33	Power switch
M34	Combination meter (Terminal No. 5)
M34	Combination meter (Terminal No. 6)
M45	Hazard switch
M49	NATS Antenna amp.
M90	Rear heated seat relay
M91	Dongle unit
M80	Combination switch (Spiral cable)
R4	Map lamp
R5	Room lamp
R6	Auto anti-dazzling inside mirror (without universal homelink transceiver)
R7	Auto anti-dazzling inside mirror (with universal homelink transceiver)
M63	Front passenger air bag off indicator
M65	Immediate charging switch
M83	Audio unit (Terminal No. 20)
M84	Audio unit (Terminal No. 45)
M84	BCM Audio unit (Terminal No. 48)
M93	Charge port lid opener switch

AAMIA2462GB



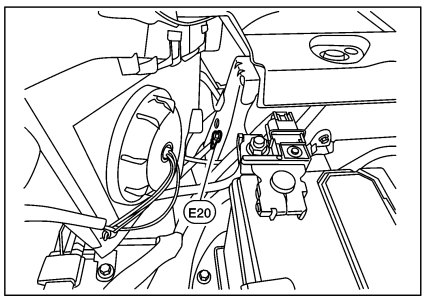


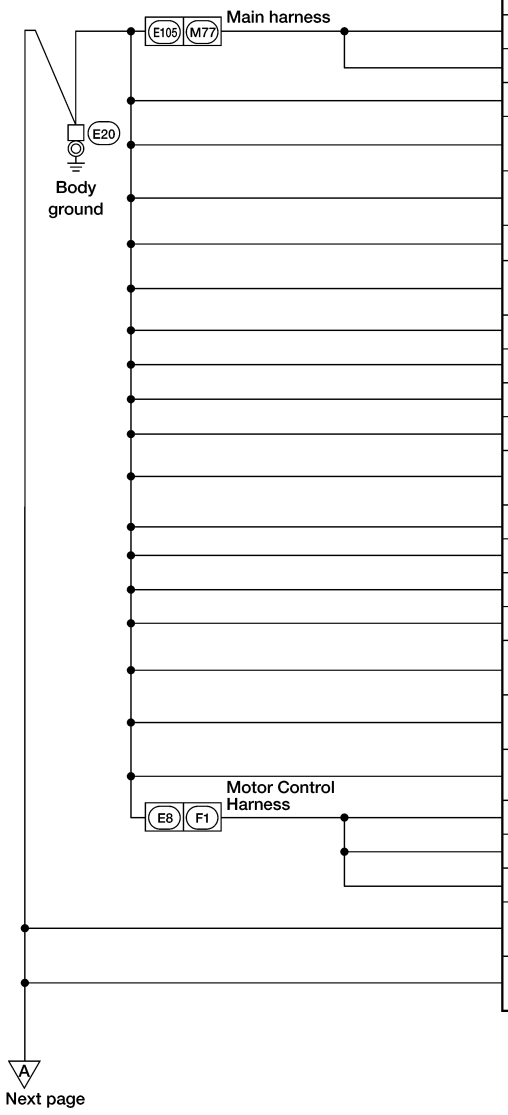
CONNECTOR NUMBER	CONNECT TO
M6	Heated steering wheel shield (Terminal No. 2)
M6	Heated steering wheel shield (Terminal No. 6)
M28	VDC off switch
M31	Approaching vehicle sound for pedestrians (VSP) off switch
M47	Approaching vehicle sound for pedestrians (VSP) Control unit (Terminal No. 1)
M57	Electric shift sensor shield
M67	TCU shield
M94	Charge connector lock switch
D4	Door mirror LH
D5	Door mirror remote switch
D15	Front outside handle LH (request switch)
D35	Main power window and door lock/unlock switch
D38	Front door lock assembly LH
J-1	Blower relay
J-2	Accessory relay
J-3	Ignition relay 2



CONNECTOR NUMBER	CONNECT TO
M38	EPS control unit (Terminal No. 10)

AAMIA2463GB





CONNECTOR NUMBER	CONNECT TO
M34	Combination meter (Terminal No. 38)
M34	Combination meter (Terminal No. 39)
E10	Side marker lamp LH
E11	IPDM E/R (Intelligent power distribution module engine room) (Terminal No. 9)
E11	IPDM E/R (Intelligent power distribution module engine room) (Terminal No. 18)
E19	Cooling fan control module (Terminal No.1)
E26	Front Combination lamp LH (Terminal No. 3) (with halogen headlamps)
E29	Washer fluid level switch
E30	Front fog lamp LH
E37	Brake fluid level switch
E43	Power socket relay
E45	Front combination lamp RH (Terminal No. 4) (with halogen headlamps)
E46	Horn low
E61	VCM (Terminal No. 65)
E62	VCM (Terminal No. 118)
E74	Hood switch
E85	Front combination lamp LH (Terminal No. 6) (with LED headlamps)
E85	Front combination lamp LH (Terminal No. 7) (with LED headlamps)
E85	Front combination lamp LH (Terminal No. 9) (with LED headlamps)(without daytime running lights)
F13	Traction motor inverter (Terminal No. 47)
F13	Traction motor inverter (Terminal No. 49)
F14	Traction motor shield
E85	Front combination lamp LH (Terminal No. 9) (with daytime running lights) (with LED headlamps)
E86	Front combination lamp LH (Terminal No. 9) (with daytime running lights) (with LED headlamps)

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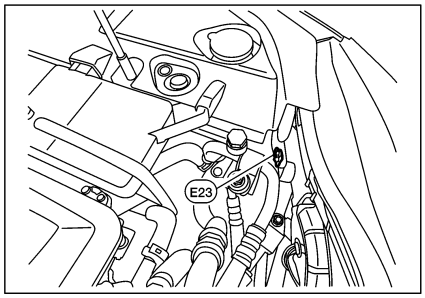

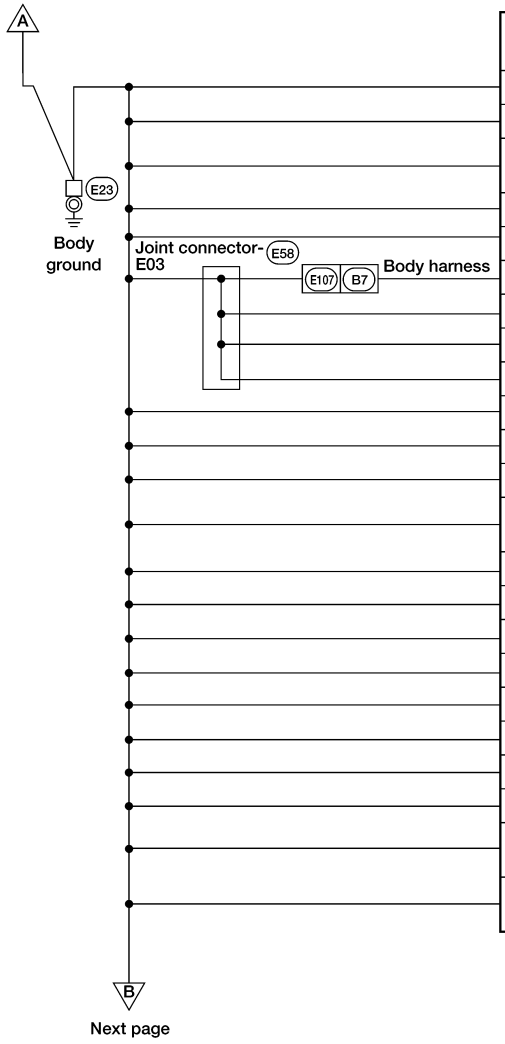

CONNECTOR NUMBER	CONNECT TO
E16	Front side marker lamp RH
E18	Cooling fan relay
E26	Front combination lamp LH (Terminal No. 4) (with halogen headlamps)
E29	Washer fluid level switch
E32	Front wiper motor
B15	Brake power supply back up unit shield
E31	Master cylinder pressure sensor shield
E36	Stroke sensor shield
E62	VCM shield
E34	Electronically driven intelligent brake unit shield
E35	ABS Actuator and electronic unit (Control unit) shield
E38	Charge port lid opener actuator
E45	Front combination lamp RH (Terminal No. 3) (with halogen headlamps)
E48	Fog lamp RH
E59	Vehicle security horn
E61	VCM (Terminal No. 58)
E62	VCM (Terminal No. 126)
E67	Electric water pump
E76	Daytime relay 2
E77	Daytime relay 1
E84	Daytime running light relay
E86	Front combination lamp RH (Terminal No. 6) (with LED headlamps)(without daytime running lights)
E86	Front combination lamp RH (Terminal No. 9) (with LED headlamps)

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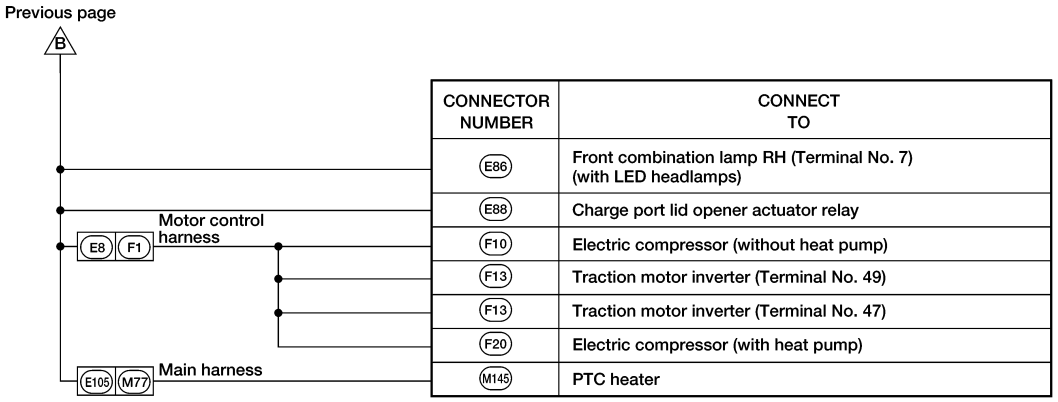
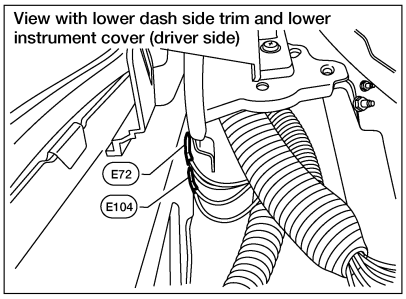


CONNECTOR NUMBER	CONNECT TO
E86	Front combination lamp RH (Terminal No. 7) (with LED headlamps)
E88	Charge port lid opener actuator relay
F10	Electric compressor (without heat pump)
F13	Traction motor inverter (Terminal No. 49)
F13	Traction motor inverter (Terminal No. 47)
F20	Electric compressor (with heat pump)
M145	PTC heater

AAMIA2466GB



CONNECTOR NUMBER	CONNECT TO
M35	ABS Actuator and electronic unit (control unit) (Terminal No. 3)
M35	ABS Actuator and electronic unit (control unit) (Terminal No. 4)

E72
Body ground

CONNECTOR NUMBER	CONNECT TO
M34	Electrically-driven intelligent brake unit (Terminal No. 32)

E104
Body ground

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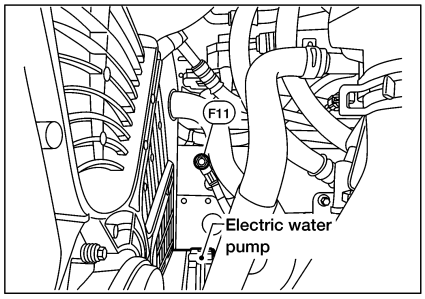
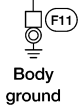
MOTOR CONTROL HARNESS



CONNECTOR NUMBER	CONNECT TO
F32	PDM (power delivery module) (Terminal No. 51)



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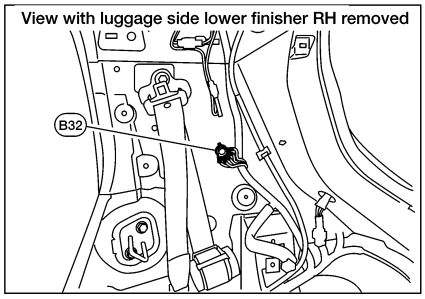

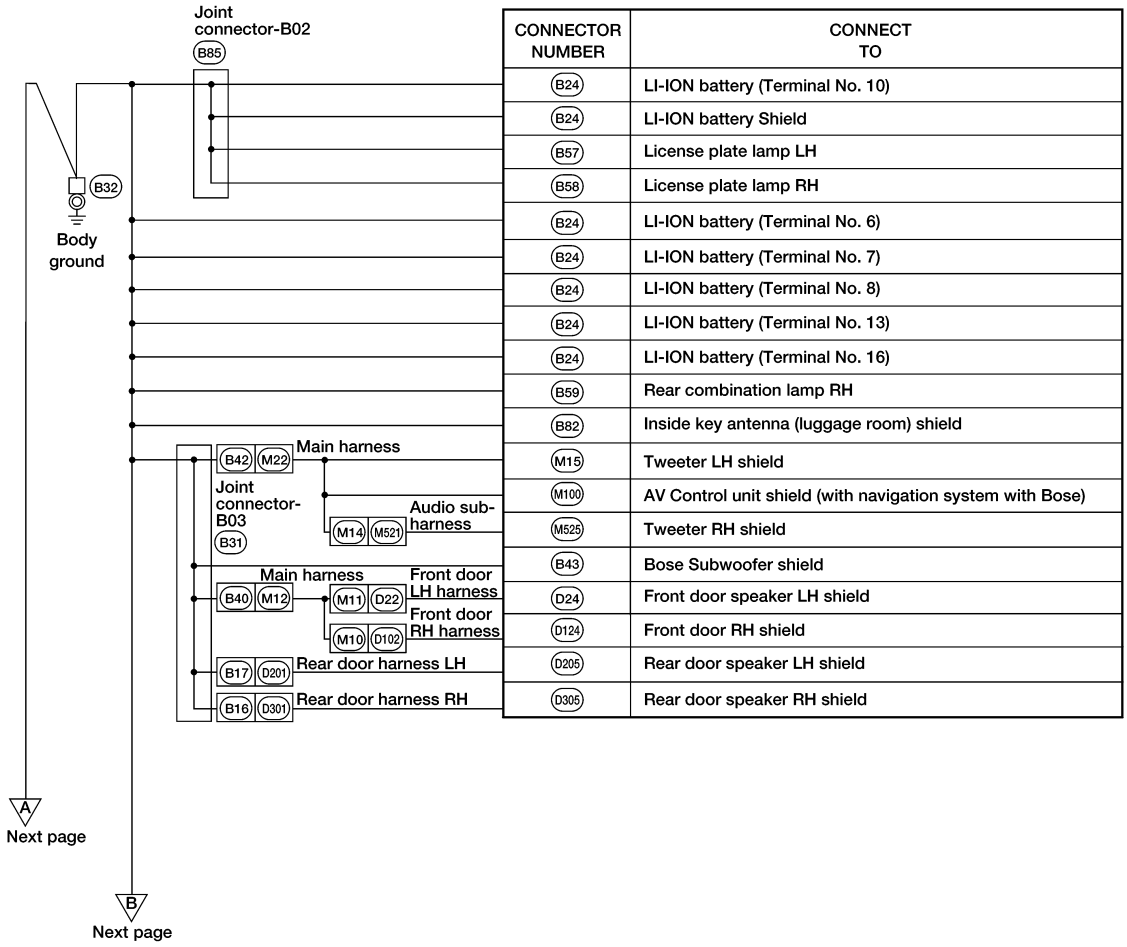

CONNECTOR NUMBER	CONNECT TO
B24	LI-ION battery (Terminal No. 10)
B24	LI-ION battery Shield
B57	License plate lamp LH
B58	License plate lamp RH
B24	LI-ION battery (Terminal No. 6)
B24	LI-ION battery (Terminal No. 7)
B24	LI-ION battery (Terminal No. 8)
B24	LI-ION battery (Terminal No. 13)
B24	LI-ION battery (Terminal No. 16)
B59	Rear combination lamp RH
B82	Inside key antenna (luggage room) shield
M15	Tweeter LH shield
M100	AV Control unit shield (with navigation system with Bose)
M525	Tweeter RH shield
B43	Bose Subwoofer shield
D24	Front door speaker LH shield
D124	Front door RH shield
D205	Rear door speaker LH shield
D305	Rear door speaker RH shield

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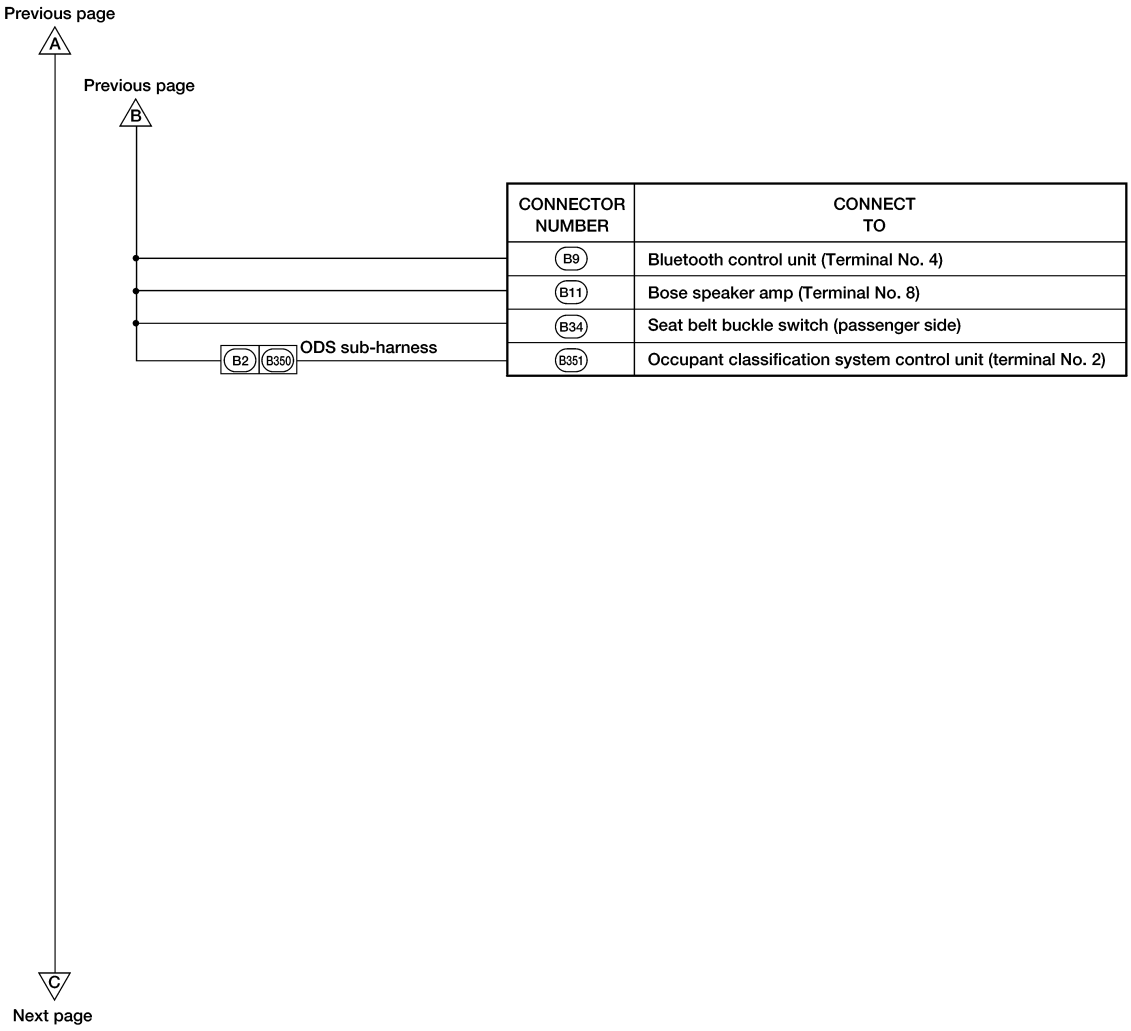

CONNECTOR NUMBER	CONNECT TO
B9	Bluetooth control unit (Terminal No. 4)
B11	Bose speaker amp (Terminal No. 8)
B34	Seat belt buckle switch (passenger side)
B351	Occupant classification system control unit (terminal No. 2)

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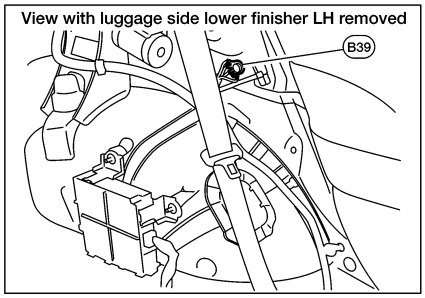

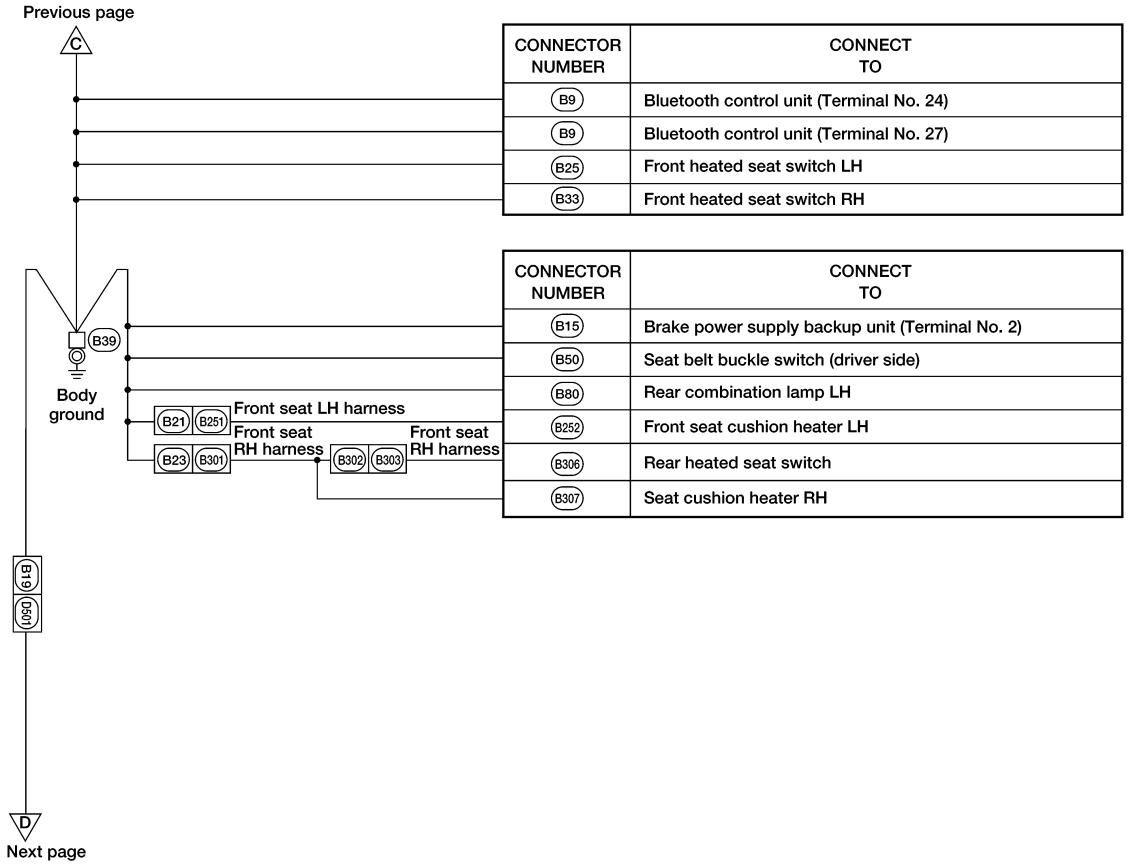

CONNECTOR NUMBER	CONNECT TO
B9	Bluetooth control unit (Terminal No. 24)
B9	Bluetooth control unit (Terminal No. 27)
B25	Front heated seat switch LH
B33	Front heated seat switch RH

CONNECTOR NUMBER	CONNECT TO
B15	Brake power supply backup unit (Terminal No. 2)
B50	Seat belt buckle switch (driver side)
B80	Rear combination lamp LH
B252	Front seat cushion heater LH
B306	Rear heated seat switch
B307	Seat cushion heater RH

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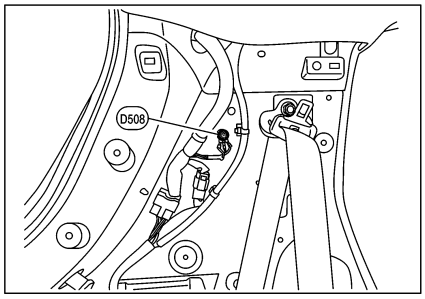

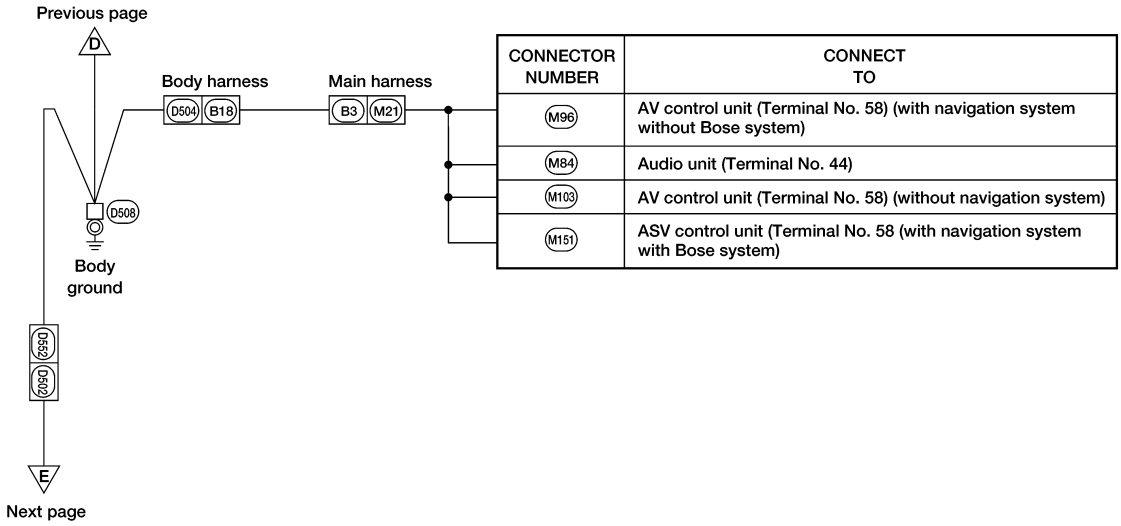

CONNECTOR NUMBER	CONNECT TO
M96	AV control unit (Terminal No. 58) (with navigation system without Bose system)
M84	Audio unit (Terminal No. 44)
M103	AV control unit (Terminal No. 58) (without navigation system)
M151	ASV control unit (Terminal No. 58 (with navigation system with Bose system)

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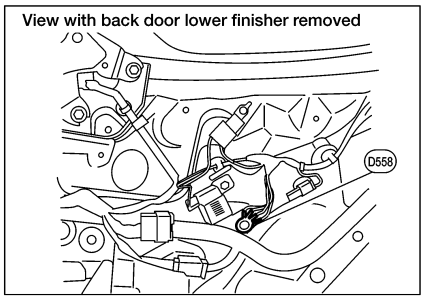

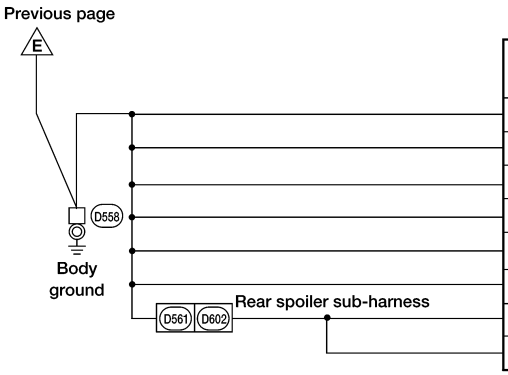

CONNECTOR NUMBER	CONNECT TO
D554	Rear wiper motor
D562	Back door lock assembly (Terminal No. 2)
D562	Back door lock assembly (Terminal No. 4)
D563	Back door opener switch (Terminal No. 2)
D563	Back door opener switch (Terminal No. 3)
D565	Rear window defogger
D601	Solar cell module (Terminal No. 2)
D603	High-mounted stop lamp

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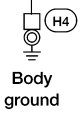

CONNECTOR NUMBER	CONNECT TO
H11	Normal charge port (Terminal No. 5)

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HARNESS

Harness Layout

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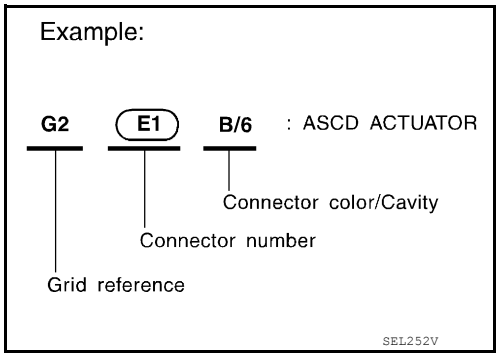
HOW TO READ HARNESS LAYOUT

The following Harness Layouts use a map style grid to help locate connectors on the drawings:

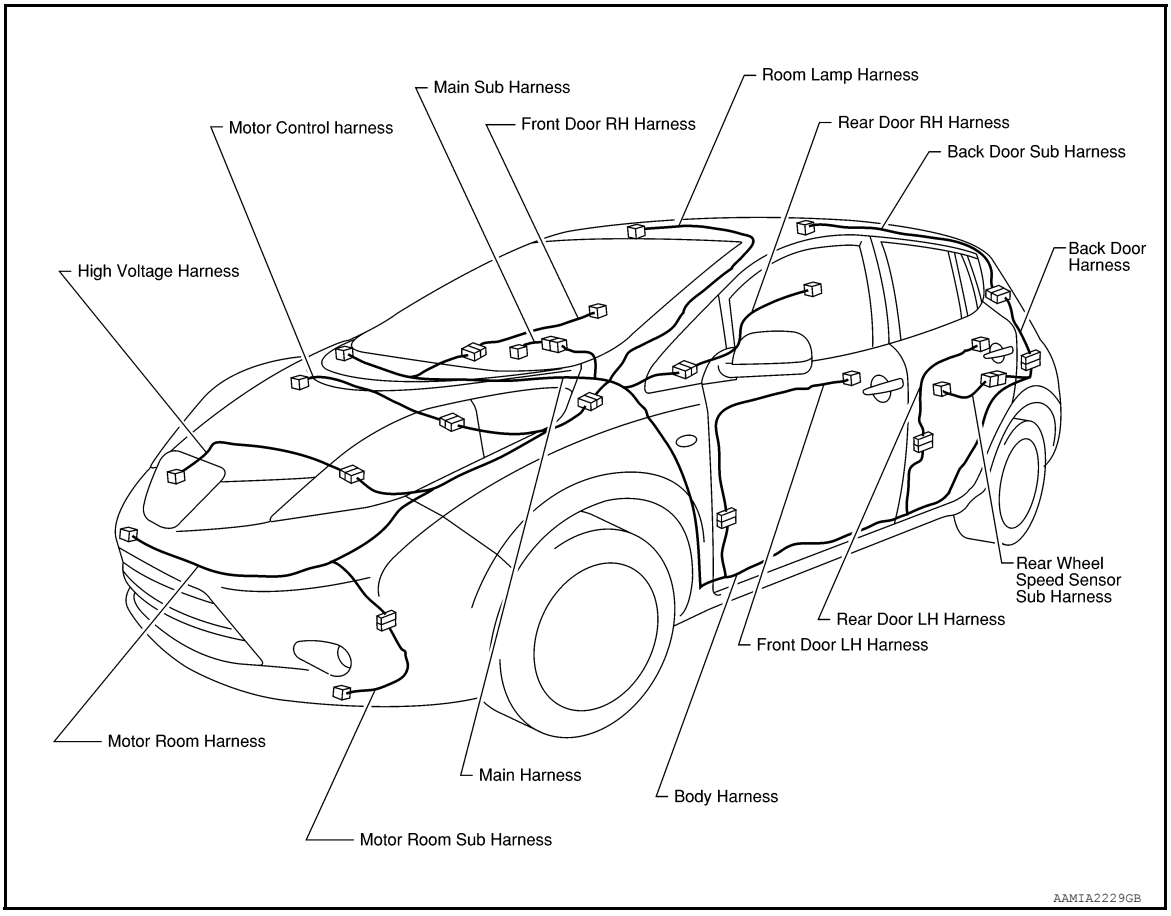
- Main Harness and Main Sub Harness
- Motor Room Harness and Motor Room Sub Harness
- Motor Room Harness (Passenger Compartment)
- Motor Control Harness
- Body Harness and Rear Wheel Speed Sensor Sub Harness
- Room Lamp Harness
- High Voltage Harness

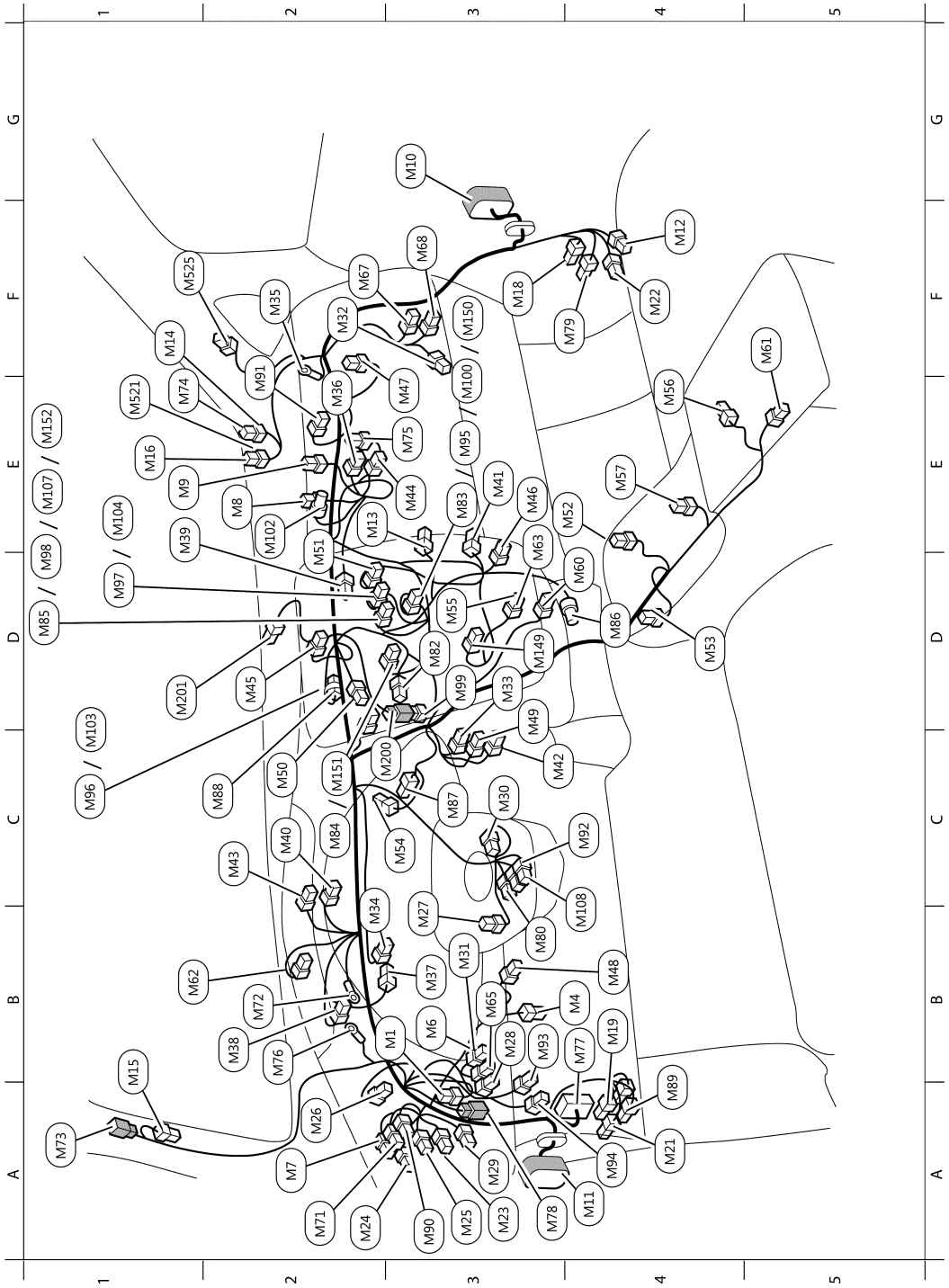


To use the grid reference

1. Find the desired connector number on the connector list.
2. Find the grid reference.
3. On the drawing, find the crossing of the grid reference letter column and number row.
4. Find the connector number in the crossing zone.
5. Follow the line (if used) to the connector.

OUTLINE





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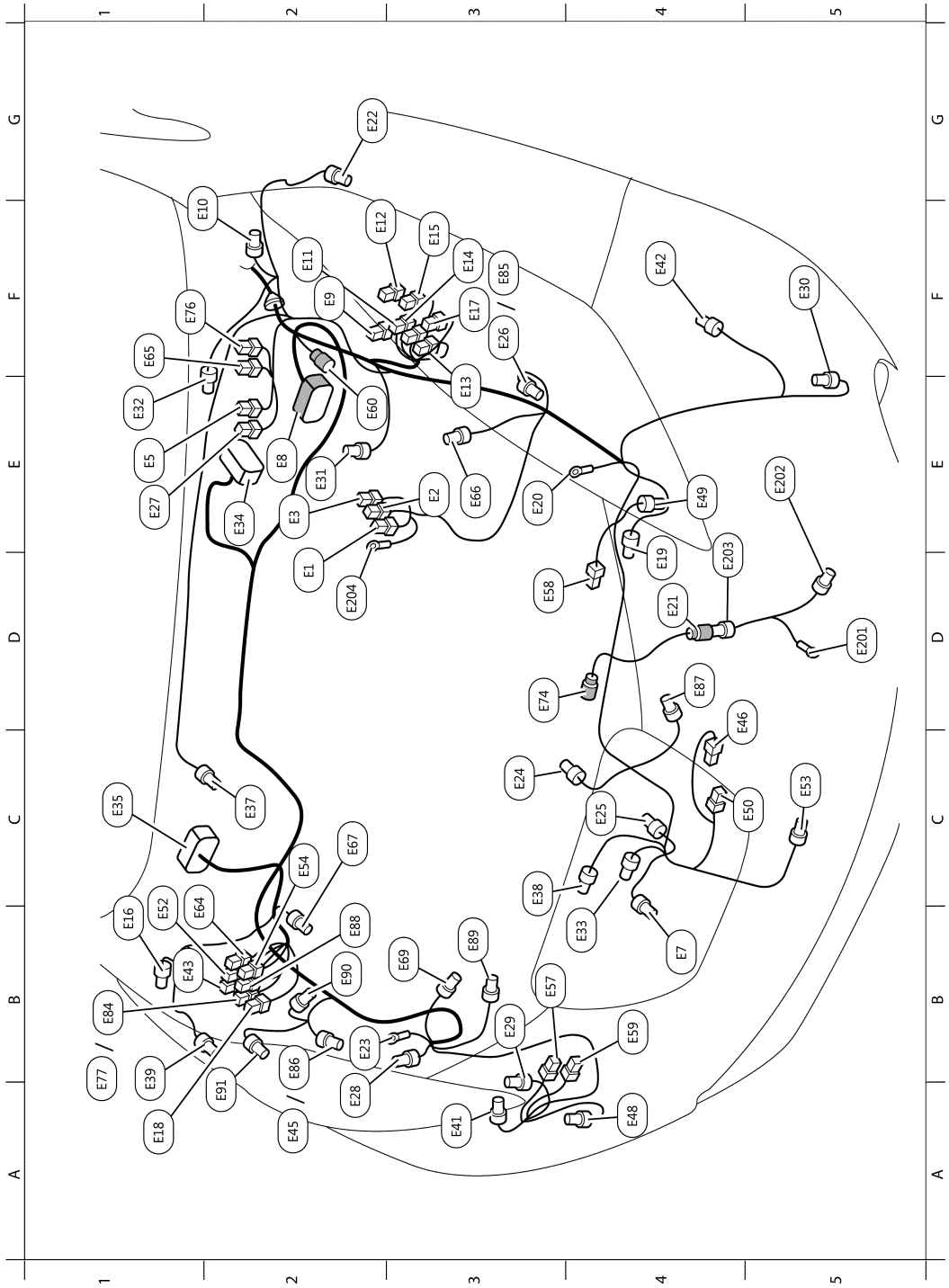
B3	M1	W/1	: Fuse block (J/B)	E4	M57	W/12	: Electric shift sensor
B4	M4	W/16	: Data link connector	D4	M60	B/3	: Power socket
B3	M6	L/8	: Heated steering wheel switch	F5	M61	Y/28	: Air bag diagnosis sensor unit
A2	M7	L/4	: Heated steering wheel relay	B2	M62	W/8	: Upper meter

E2	M8	B/2	: Front passenger air bag module	E3	M63	B/5	: Front passenger air bag off indicator
E1	M9	O/2	: Front passenger air bag module	B3	M65	GR/8	: Immediate charging switch
A4	M11	W/55	: To D22	F2	M67	W/40	: TCU
F4	M12	W/8	: To B40	F3	M68	GR/17	: TCU
E2	M13	BR/2	: Warning buzzer	A2	M71	L/4	: Heated seat relay
F2	M14	BR/2	: To M505	B2	M72	—	: Body ground
A1	M15	BR/2	: Tweeter LH	A1	M73	W/16	: To R1
E1	M16	W/3	: Optical sensor	F1	M74	W/2	: Sunload sensor
F3	M18	W/16	: To B1	E3	M75	W/4	: Remote keyless entry receiver
B4	M19	W/16	: To B2	B2	M76	—	: Body ground
A4	M21	W/32	: To B3	B4	M77	SMJ	: To E105
F4	M22	W/24	: To B42	A3	M78	B/2	: To E106
A3	M23	W/40	: BCM (Body control module)	F4	M79	W/32	: To B4
A2	M24	B/40	: BCM (Body control module)	B3	M80	W/2	: Combination switch
A3	M25	W/15	: BCM (Body control module)	D3	M82	W/4	: To M143
A2	M26	W/12	: Meter control switch	E3	M83	W/20	: Audio unit
B3	M27	W/16	: Combination switch	C1	M84	W/32	: Audio unit
B3	M28	B/8	: VDC off switch	D1	M85	L/5	: Audio unit
A3	M29	B/15	: BCM (Body control module)	D4	M86	L/2	: Inside key antenna (Instrument center)
C3	M30	W/8	: Steering angle sensor	C3	M87	W/24	: To M140
B3	M31	W/8	: Approaching vehicle sound for pedestrians (VSP) off switch	C2	M88	W/2	: Diode-3
E3	M32	W/40	: Around view monitor control unit	A4	M89	W/2	: To B6
D3	M33	W/8	: Power switch	A3	M90	L/4	: Rear heated seat relay
B2	M34	W/40	: Combination meter	E2	M91	W/4	: Dongle unit
F2	M35	—	: Body ground	C4	M92	GR/8	: Combination switch (Spiral cable)
E2	M36	GR/20	: Joint connector-M02	B3	M93	G/8	: Charge port lid opener switch
B3	M37	W/8	: EPS control unit	A4	M94	GR/10	: Charge connector lock switch
B2	M38	B/2	: EPS control unit	E3	M95	W/20	: AV control unit (With navigation system without BOSE)
E1	M39	GR/2	: Blower motor	D1	M96	W/40	: AV control unit (With navigation system without BOSE)
C2	M40	L/20	: Joint connector-M05	D1	M97	GR/17	: AV control unit (With navigation system without BOSE)
E3	M41	L/20	: Joint connector-M06	D1	M98	L/5	: AV control unit (With navigation system without BOSE)
C3	M42	W/2	: In-vehicle sensor	D3	M99	W/4	: To M200
C2	M43	GR/20	: Joint connector-M04	E3	M100	W/20	: AV control unit (With navigation system with BOSE)
E3	M44	GR/20	: Joint connector-M01	E2	M102	W/16	: Heater pump control unit
D2	M45	W/4	: Hazard switch	D1	M103	W/40	: AV control unit (With navigation system with BOSE)
E3	M46	O/20	: Joint connector-M07	E1	M104	GR/17	: AV control unit (With navigation system with BOSE)
E3	M47	W/16	: Approaching vehicle sound for pedestrians (VSP) control unit	E1	M107	B/5	: AV control unit (With navigation system with BOSE)
B4	M48	B/2	: Start up sound speaker	F3	M150	W/20	: AV control unit (Without navigation system)

D3	M49	W/4	: NATS antenna amp.	C2	M151	W/40	: AV control unit (Without navigation system)
C2	M50	P/20	: Joint connector-M03	E1	M152	L/5	: AV control unit (Without navigation system)
E2	M51	W/8	: Multifunction switch	B4	M108	Y/6	: Combination switch (Spiral cable)
E4	M52	W/4	: Auxiliary input jack	Main sub harness			
D4	M53	G/5	: USB connector	C2	M200	W/4	: To M99
C2	M54	B/16	: Intake door motor	D1	M201	W/4	: Charging status indicator
D3	M55	W/40	: A/C auto amp.	E1	M521	BR/1	: To M14
E4	M56	W/8	: Selector indicator	F1	M525	BR/2	: Tweeter RH



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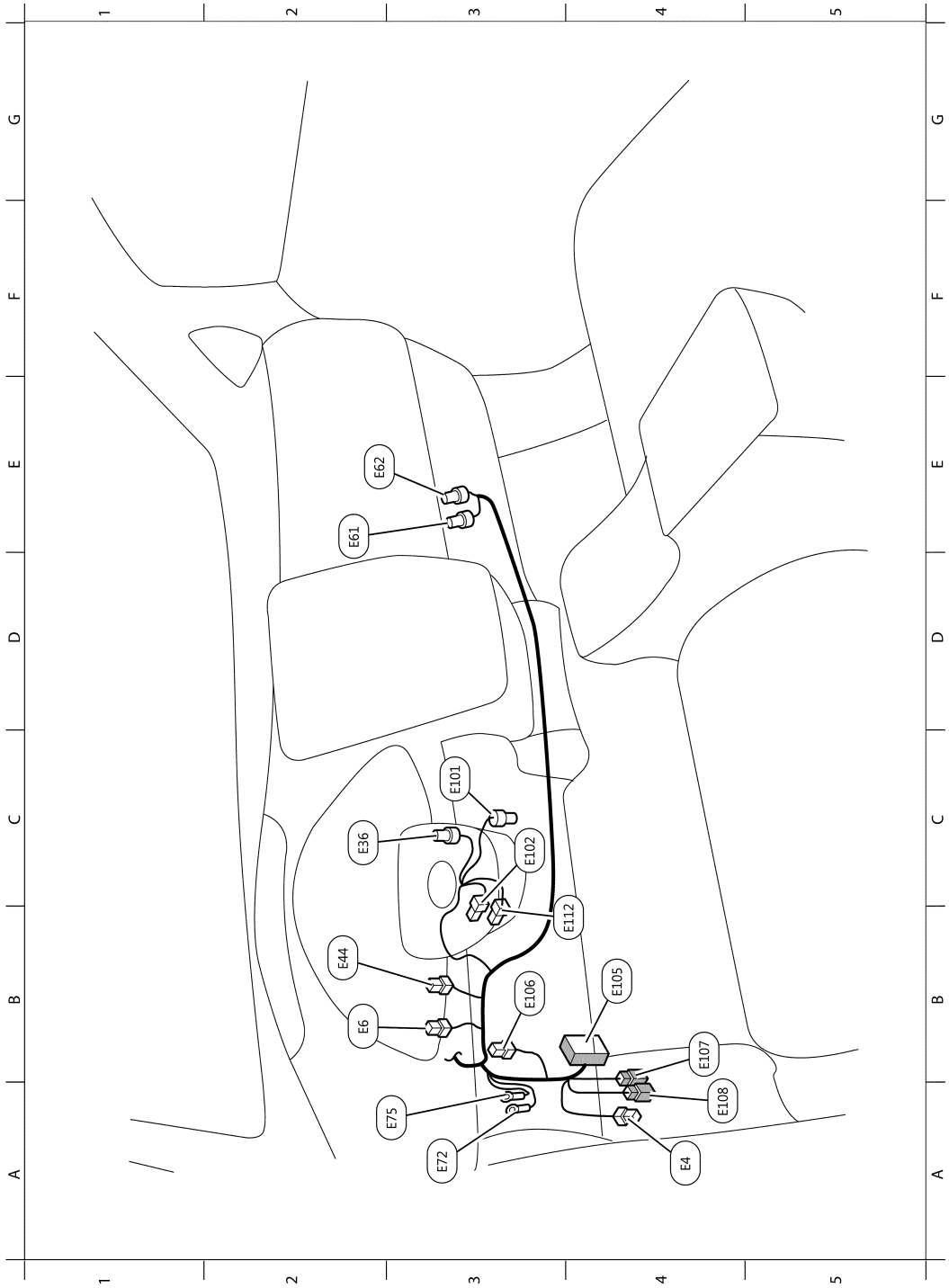
D2	E1	GR/2	: Fusible link box (Battery)	A3	E41	GR/2	: Washer pump
E3	E2	BR/2	: Fusible link box (Battery)	F4	E42	B/2	: Approaching vehicle sound for pedestrians (VSP) speaker
E2	E3	B/1	: Battery terminal with fusible link	B1	E43	L/4	: Power socket relay
E1	E5	W/3	: Anti theft horn relay	A2	E45	GR/6	: Front combination lamp RH (With halogen headlamps)

B4	E7	B/10	: Quick charge port	D4	E46	B/1	: Horn (Low)
E2	E8	B/52	: To F1	A4	E48	B/2	: Front fog lamp RH
F2	E9	B/2	: IPDM E/R (Intelligent power distribution module engine room)	E4	E49	B/3	: Refrigerant pressure sensor (With heat pump)
F1	E10	GR/2	: Front side marker lamp LH	C5	E50	B/1	: Horn (Low)
F2	E11	B/6	: IPDM E/R (Intelligent power distribution module engine room)	C1	E52	BR/6	: A/C relay
F2	E12	BR/8	: IPDM E/R (Intelligent power distribution module engine room)	C5	E53	B/2	: Ambient sensor
E3	E13	W/12	: IPDM E/R (Intelligent power distribution module engine room)	C2	E54	L/4	: Parking actuator relay
F3	E14	BR/12	: IPDM E/R (Intelligent power distribution module engine room)	B3	E57	BR/1	: Vehicle security horn
F3	E15	W/16	: IPDM E/R (Intelligent power distribution module engine room)	D3	E58	B/24	: Joint connector-E03
B1	E16	GR/2	: Front side marker lamp RH	B4	E59	B/1	: Vehicle security horn
F3	E17	B/10	: IPDM E/R (Intelligent power distribution module engine room)	E2	E60	B/12	: To F2
A1	E18	B/4	: Cooling fan relay	C1	E64	L/4	: F/S chg relay
D4	E19	GR/3	: Cooling fan control module	F1	E65	L/4	: M/C relay
E3	E20	—	: Body ground	E3	E66	B/4	: Battery current sensor
D4	E21	B/4	: To E203	C2	E67	G/4	: Electric water pump
G2	E22	B/2	: Front wheel sensor LH	B3	E69	GR/2	: Coolant temperature sensor
B2	E23	—	: Body ground	D3	E74	GR/2	: Hood switch
C3	E24	GR/2	: Charge port light	F1	E76	B/5	: Daytime light relay 2
C4	E25	B/2	: Normal charge port	B1	E77	L/4	: Daytime light relay 1
F3	E26	GR/6	: Front combination lamp LH (With halogen headlamps)	B1	E84	B/5	: Daytime running light relay
E1	E27	L/4	: Reverse lamp relay	F3	E85	B/10	: Front combination lamp LH (With LED headlamps)
A2	E28	BR/3	: Intelligent Key warning buzzer	B2	E86	B/10	: Front combination lamp RH (With LED headlamps)
B3	E29	BR/2	: Washer level switch	D4	E87	GR/4	: Charging connector lock actuator
F5	E30	B/2	: Front fog lamp LH	B2	E88	L/4	: Charging port opener actuator relay
E2	E31	B/3	: Master cylinder pressure sensor	B3	E89	BR/2	: Compressor suction refrigerant temperature sensor
E1	E32	GR/5	: Front wiper motor	B2	E90	GR/2	: Refrigerant channel switching 2 way type valve
B4	E33	Y/2	: Crash zone sensor	A2	E91	B/2	: Refrigerant channel switching 3 way type valve
E2	E34	B/46	: Electrically-driven intelligent brake unit	Motor room sub harness			
C1	E35	B/32	: ABS actuator and electric unit (Control unit)	D5	E201	—	: PDM (Power delivery module)
C2	E37	GR/2	: Brake fluid level switch	E5	E202	B/4	: Front camera
C3	E38	B/4	: Charge port lid opener actuator	D4	E203	B/4	: To E21
B1	E39	B/2	: Front wheel sensor RH	D3	E204	—	: Fusible link box (Battery)



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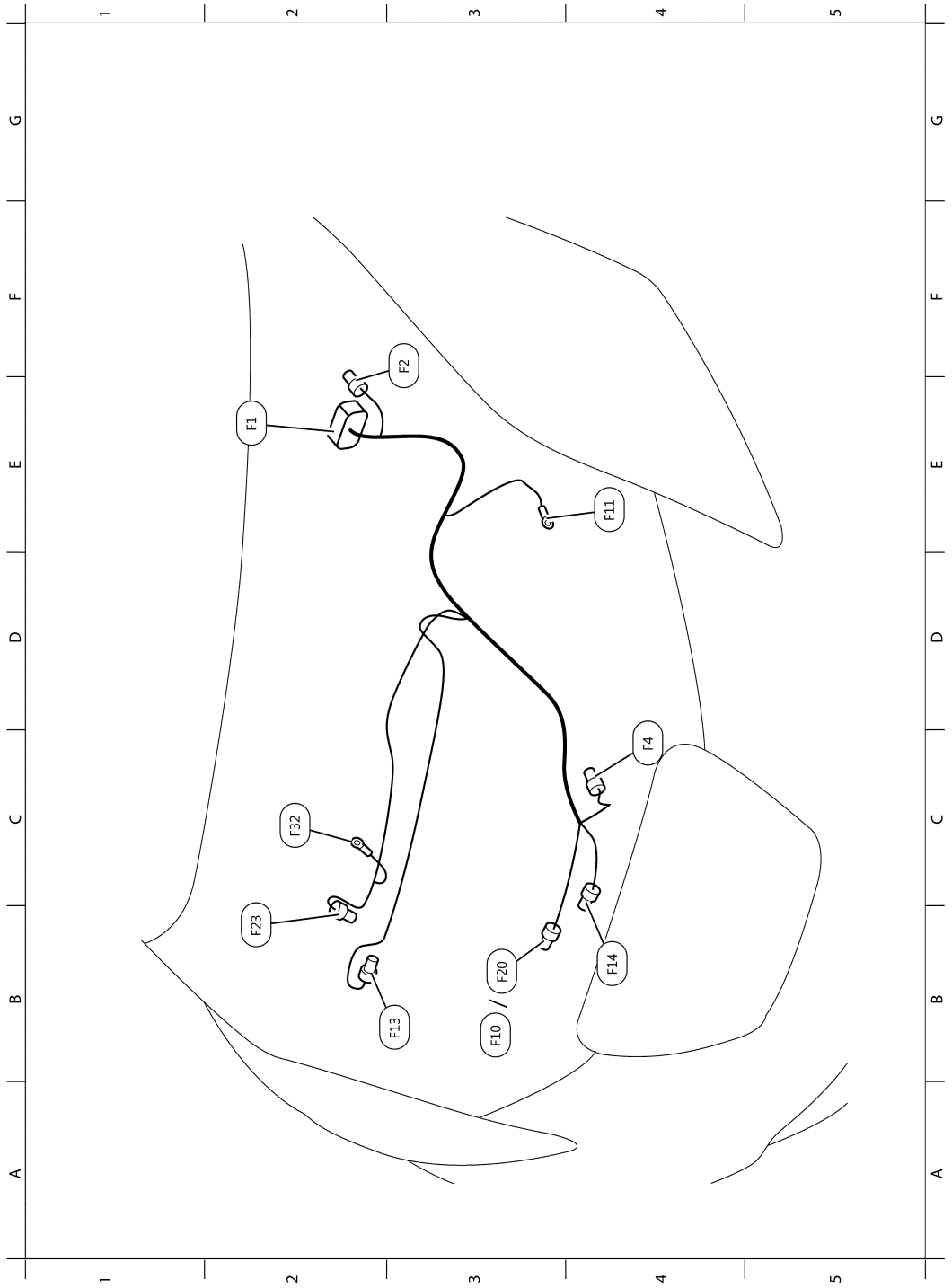
A4	E4	B/1	: Parking brake switch	C3	E101	B/6	: Accelerator pedal position sensor
B2	E6	L/12	: Joint connector-E01	C3	E102	W/4	: Stop lamp switch
C2	E36	B/4	: Stroke sensor	B4	E105	SMJ	: To M77
B2	E44	L/12	: Joint connector-E02	B3	E106	B/2	: To M78
E2	E61	B/65	: VCM	B4	E107	W/24	: To B7

E2	E62	BR/65	: VCM	A4	E108	W/4	: To B8
A3	E72	—	: Body ground	B4	E112	BR/2	: Brake pedal position switch
A3	E75	—	: Body ground				

MOTOR CONTROL HARNESS



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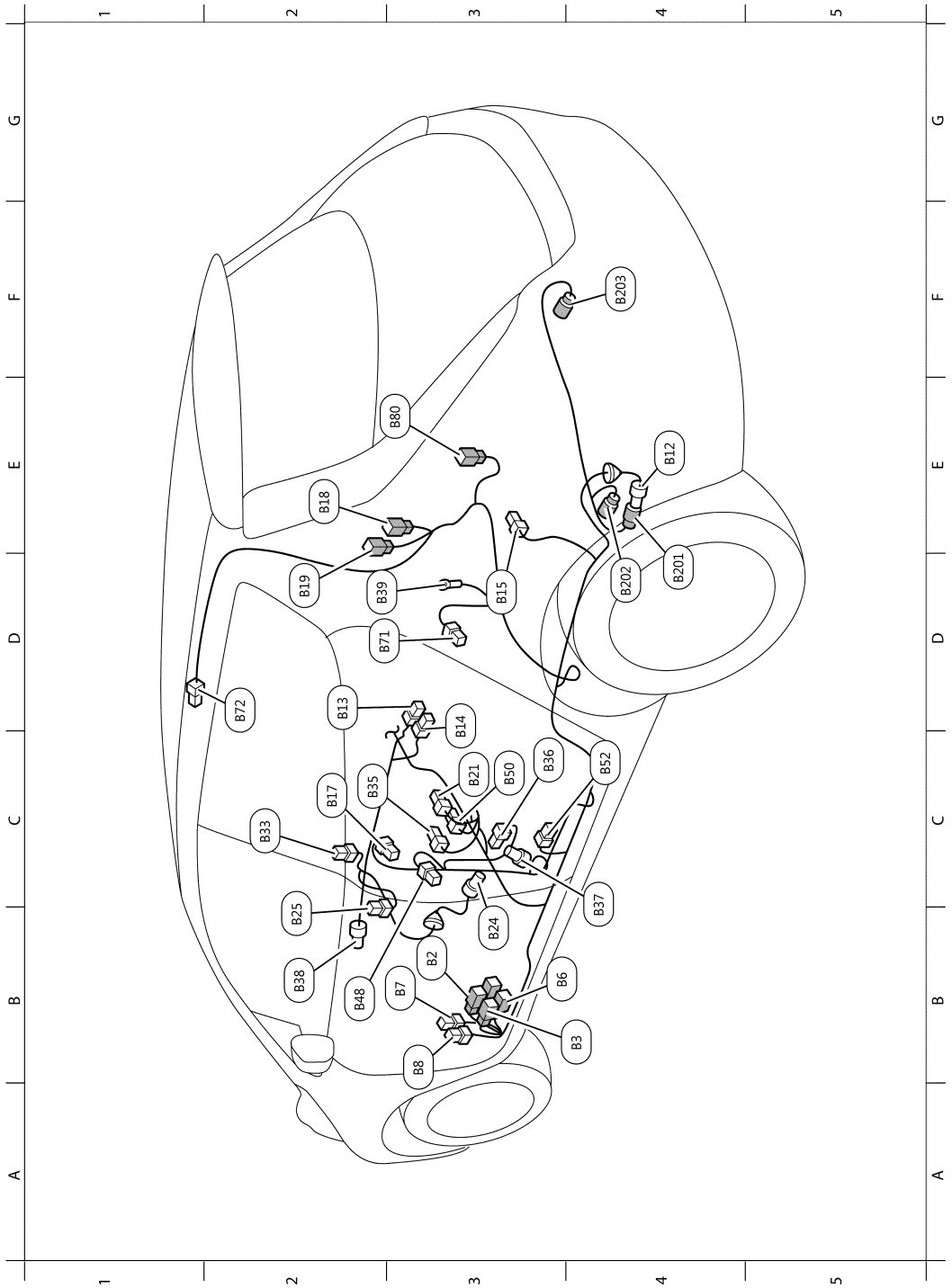
E2	F1	B/52	: To E8	B3	F13	B/49	: Traction motor inverter
F3	F2	B/12	: To E60	B4	F14	B/8	: Traction motor

C4	F4	B/10	: Parking actuator	B3	F20	B/6	: Electric compressor (With heat pump)
B3	F10	W/6	: Electric compressor (Without heat pump)	B2	F23	G/36	: PDM (Power delivery module)
E4	F11	—	: Body ground	C2	F32	—	: PDM (Power delivery module)

BODY HARNESS (LH SIDE)



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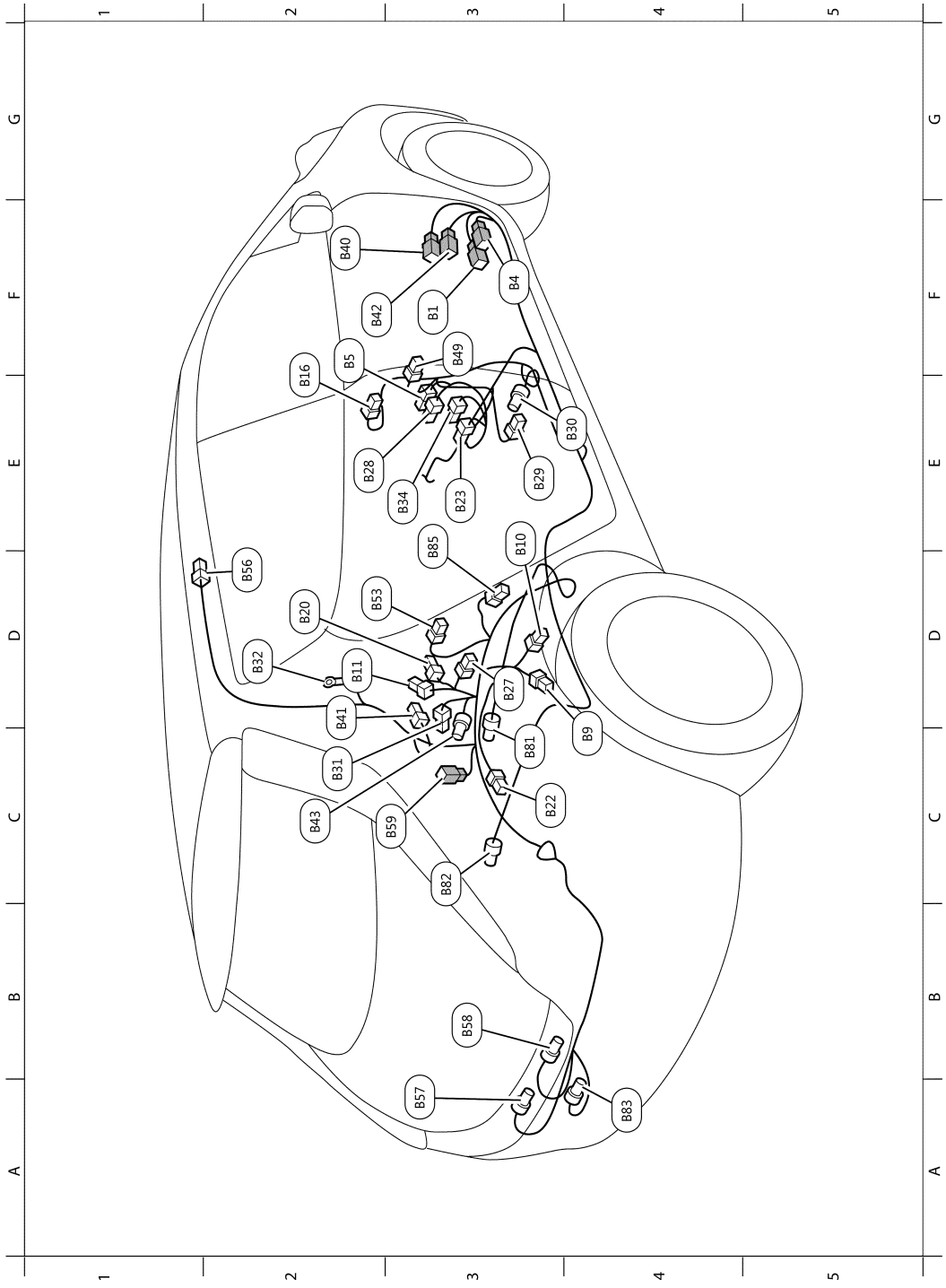
B3	B2	W/16	: To M19	C2	B35	Y/2	: Front LH side air bag module
B4	B3	W/32	: To M21	C3	B36	Y/2	: Front LH seat belt pre-tensioner

B3	B6	W/2	: To M89	C4	B37	Y/2	: LH side air bag (Satellite) sensor
B3	B7	W/24	: To E107	B2	B38	B/6	: Yaw rate/side/decel G sensor
B3	B8	W/4	: To E108	D2	B39	—	: Body ground
E4	B12	B/10	: To B201	B2	B48	W/4	: Front door switch (Driver side)
D2	B13	Y/22	: Air bag diagnosis sensor unit	C3	B50	W/3	: Seat belt buckle switch (Driver side)
D3	B14	Y/22	: Air bag diagnosis sensor unit	C4	B52	O/2	: Lap seat belt pre-tensioner (Driver side)
D3	B15	W/6	: Brake power supply backup unit	D2	B71	W/4	: Rear door switch LH
C2	B17	W/12	: To D201	D2	B72	Y/2	: LH side front curtain air bag module
E2	B18	W/20	: To D504	E3	B80	W/6	: Rear combination lamp LH
D2	B19	W/4	: To D501	Rear wheel sensor sub harness			
C3	B21	W/4	: To B251	D4	B201	B/10	: To B12
B3	B24	G/36	: Li-ion battery	D4	B202	GR/2	: Rear wheel sensor LH
B2	B25	W/6	: Front heated seat switch LH	F4	B203	GR/2	: Rear wheel sensor RH
C2	B33	BR/6	: Front heated seat switch RH				



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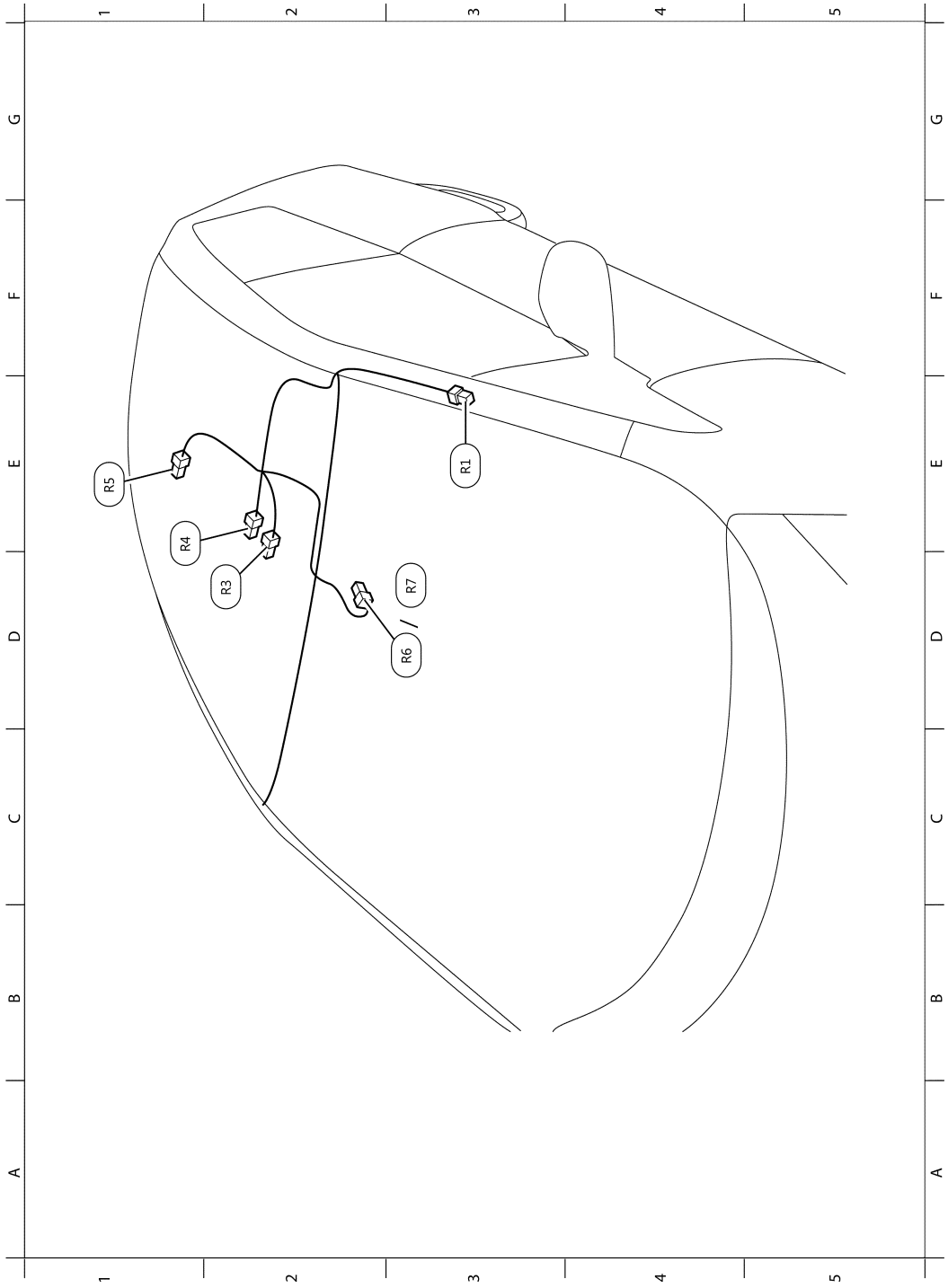
F3	B1	W/16	: To M18	E3	B34	W/2	: Seat belt buckle switch (Passenger side)
F3	B4	W/32	: To M79	F2	B40	W/8	: To M12
F2	B5	W/4	: To B350	D2	B41	W/2	: Luggage room lamp
C4	B9	W/32	: Bluetooth® control unit	F2	B42	W/24	: To M22
E3	B10	W/8	: Bluetooth® control unit	C2	B43	GR/2	: BOSE subwoofer

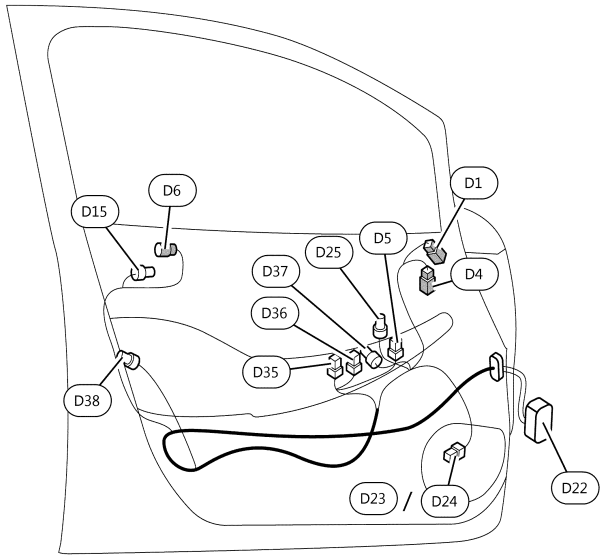
D2	B11	B/8	: BOSE speaker amp.	F3	B49	W/4	: Front door switch (Passenger side)
F2	B16	W/12	: To D301	D2	B53	W/4	: Rear door switch RH
D2	B20	B/16	: BOSE speaker amp.	D2	B56	Y/2	: RH side front curtain air bag module
C3	B22	W/3	: To B401	A3	B57	BR/2	: License plate lamp LH
E3	B23	W/8	: To B301	B3	B58	BR/2	: License plate lamp RH
D3	B27	B/16	: BOSE speaker amp.	C3	B59	W/6	: Rear combination lamp RH
E2	B28	Y/2	: Front RH side air bag module	C3	B81	L/2	: Inside key antenna (Rear seat)
E3	B29	Y/2	: Front RH seat belt pre-tensioner	C3	B82	L/2	: Inside key antenna (Luggage room)
E4	B30	Y/2	: RH side air bag (Satellite) sensor	A4	B83	L/2	: Outside key antenna (Rear bumper)
C2	B31	B/20	: Joint connector-B03	E3	B85	B/20	: Joint connector-B02
D2	B32	—	: Body ground				



AAMIA0296ZZ

E3	R1	W/16	: To M73	E1	R5	W/3	: Room lamp
D2	R3	W/6	: Microphone	D3	R6	B/7	: Auto anti-dazzling inside mirror (Without universal homelink transceiver)
E1	R4	W/8	: Map lamp	D3	R7	B/10	: Auto anit-dazzling inside mirror (Intergrated homelink transmitted)

FRONT DOOR LH HARNESS



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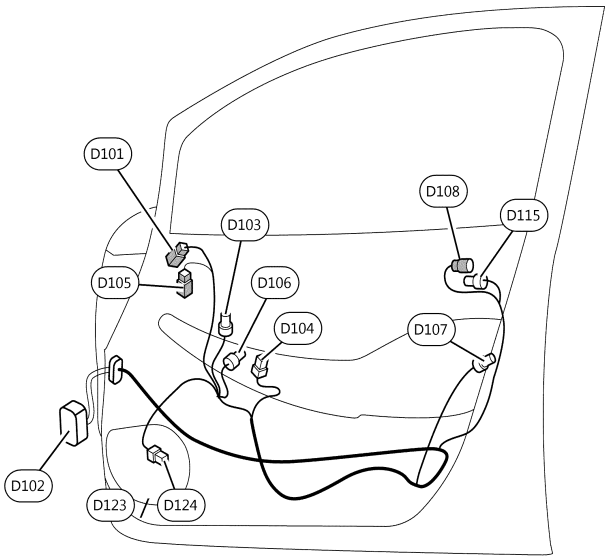
D1	W/4	: Side camera LH	D24	BR/2	: Front door speaker LH (With BOSE audio system)
D4	W/8	: Door mirror LH	D25	Y/2	: Front door satellite sensor LH
D5	W/16	: Door mirror remote control switch	D35	W/16	: Power window main switch
D6	L/2	: Outside key antenna (Driver side)	D36	W/3	: Power window main switch
D15	B/2	: Front door request switch (Driver side)	D37	G/6	: Front power window motor LH (Driver side)
D22	W/55	: To M11	D38	GR/6	: Front door lock assembly (Driver side)
D23	W/2	: Front door speaker LH (Without BOSE audio system)			



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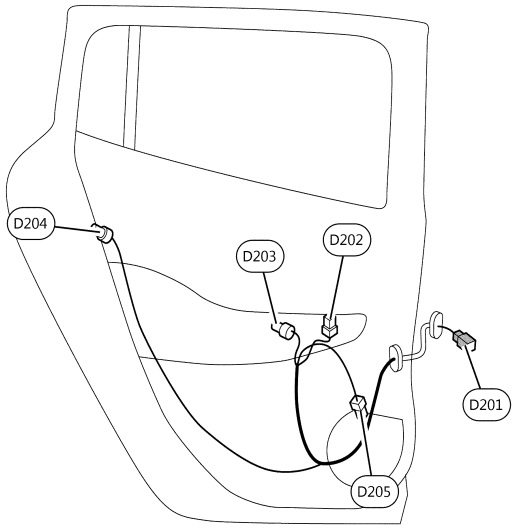
D101	W/4	: Side camera RH	D107	GR/6	: Front door lock assembly (Passenger side)
D102	W/55	: To M10	D108	L/2	: Outside key antenna (Passenger side)
D103	Y/2	: Front door satellite sensor RH	D115	B/2	: Front door request switch (Passenger side)
D104	W/12	: Front power window switch (Passenger side)	D123	W/2	: Front door speaker RH (Without BOSE audio system)
D105	W/8	: Door mirror RH	D124	BR/2	: Front door speaker RH (With BOSE audio system)
D106	G/6	: Front power window motor (Passenger side)			

REAR DOOR LH HARNESS



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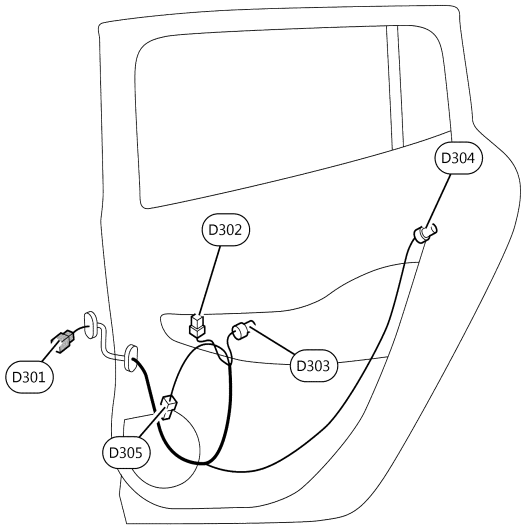
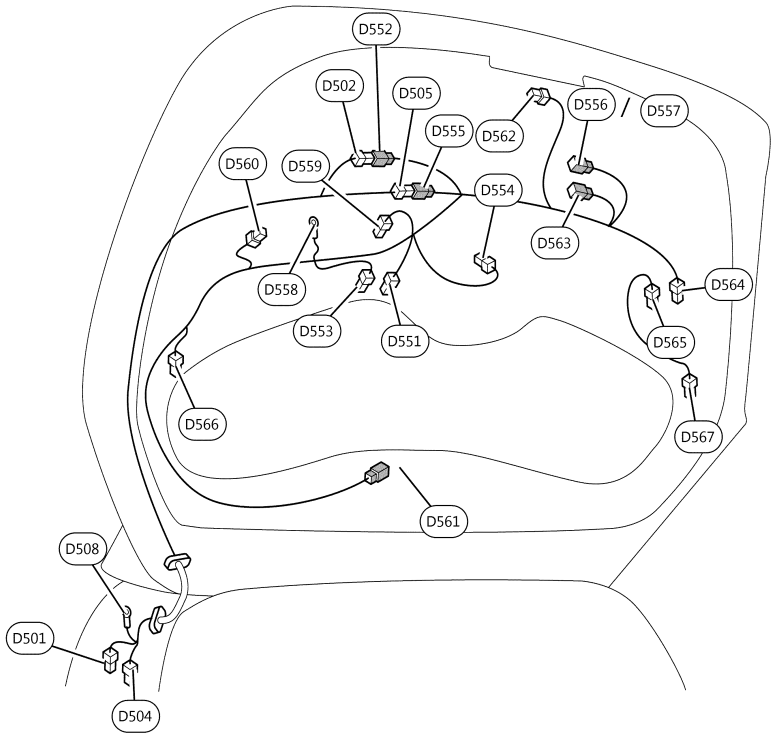
D201	W/12	: To B17	D204	GR/6	: Rear door lock assembly LH
D202	W/8	: Rear power window switch LH	D205	W/2	: Rear door speaker LH
D203	G/6	: Rear power window motor LH			



AAMIA0300ZZ

D301	W/12	: To B16	D304	GR/6	: Rear door lock assembly RH
D302	W/8	: Rear power window switch RH	D305	W/2	: Rear door speaker RH
D303	G/6	: Rear power window motor RH			



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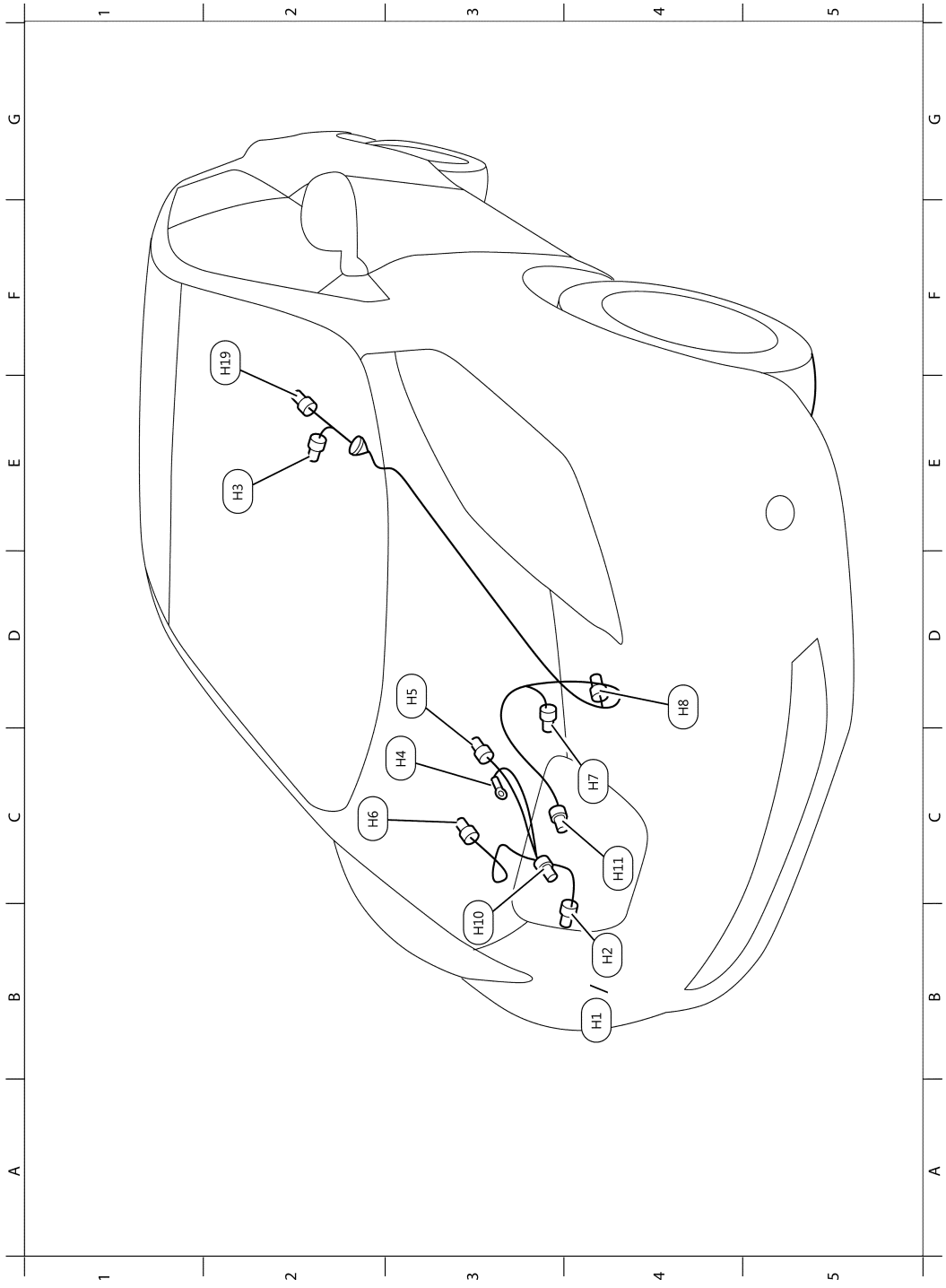
D501	W/4	: To B19	D557	W/8	: Rear view camera (With around view monitor)
D502	W/2	: To D552	D558	—	: Body ground
D504	W/20	: To B18	D559	W/1	: Coil
D505	W/12	: To D555	D560	W/4	: Coil
D508	—	: Body ground	D561	W/4	: To D602
Back door sub harness			D562	W/4	: Back door lock assembly
D551	B/1	: Condenser	D563	GR/4	: Back door opener switch assembly
D552	W/2	: To D502	D564	B/1	: Condenser-1
D553	B/1	: Condenser	D565	B/1	: Rear window defogger
D554	W/4	: Rear wiper motor	D566	B/1	: Condenser-1
D555	W/12	: To D505	D567	B/1	: Rear window defogger
D556	W/4	: Rear view camera (Without around view monitor)			



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B4	H1	O/4	: Electric compressor (Without heat pump)	C4	H7	O/4	: PDM (Power delivery module)
B4	H2	O/3	: Electric compressor (With heat pump)	D4	H8	O/2	: PDM (Power delivery module)
E2	H3	O/3	: Li-ion battery	B3	H10	O/2	: Quick charge port
C3	H4	—	: Body ground	C4	H11	O/3	: Normal charge port

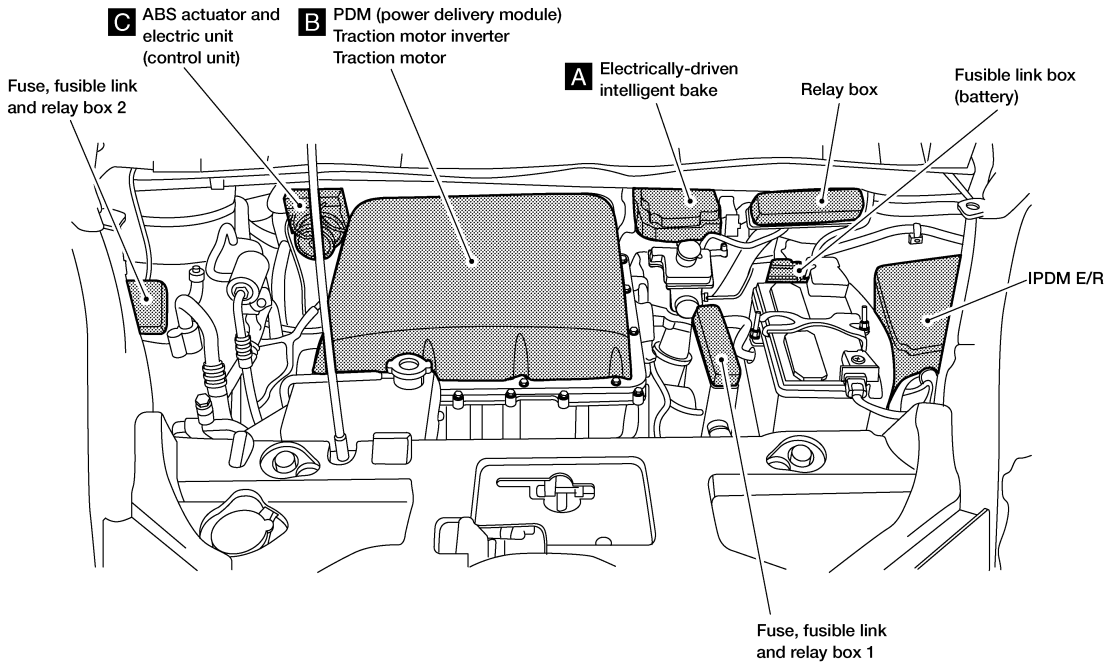
D3	H5	O/3	: PDM (Power delivery module)	F2	H19	O/6	: Li-ion battery
C2	H6	O/3	: PDM (Power delivery module)				

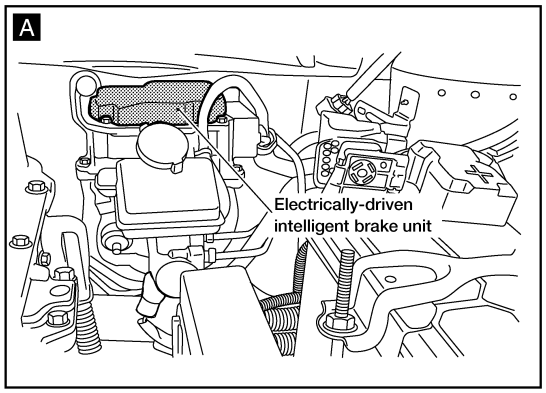
ELECTRICAL UNITS LOCATION

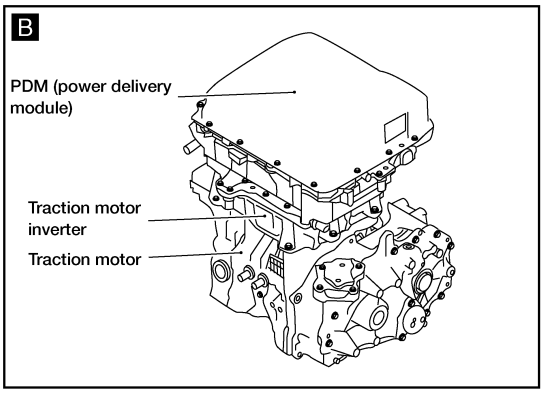
Electrical Units Location

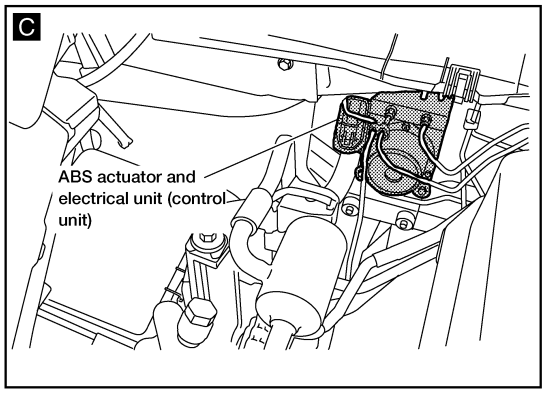
INFOID:0000000010586662

ENGINE COMPARTMENT









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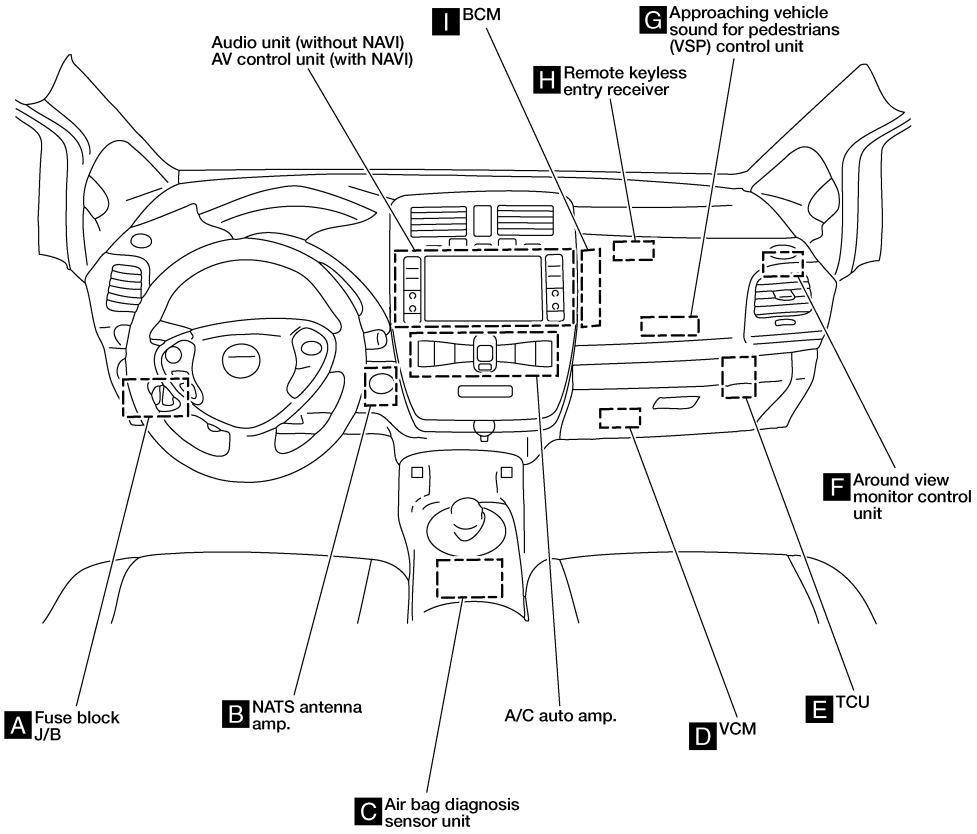

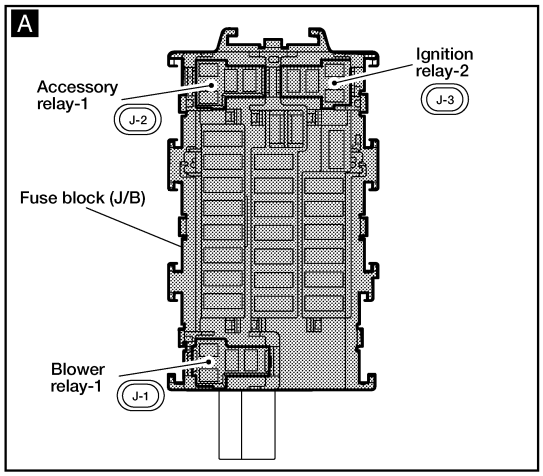

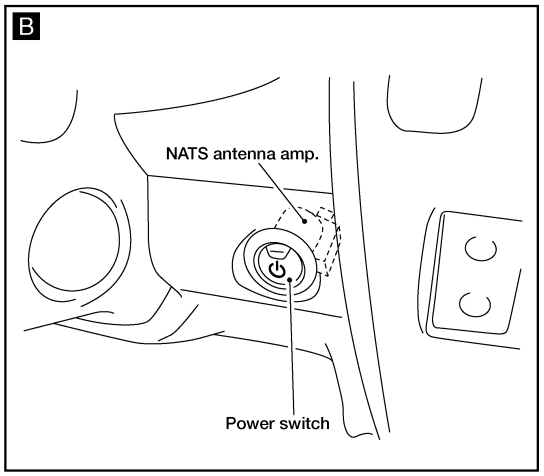

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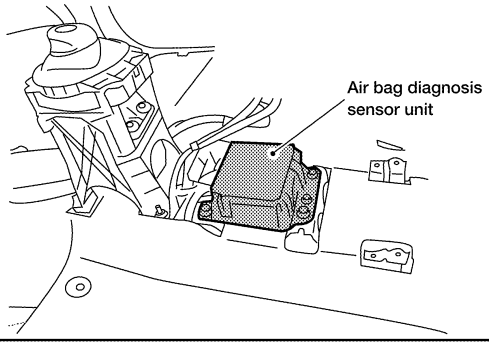
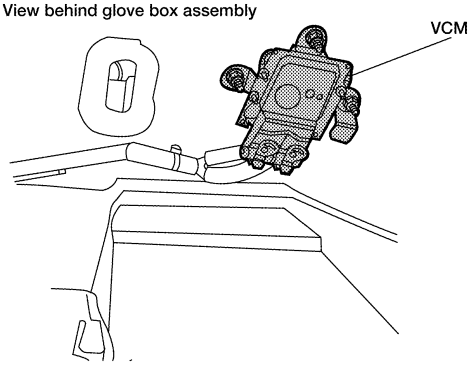
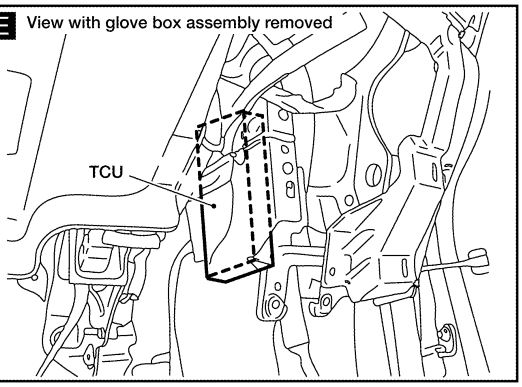
C View with center console assembly removed



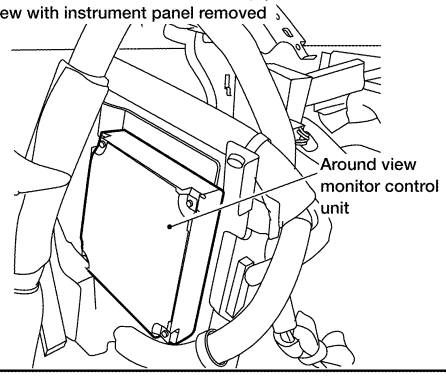
D View behind glove box assembly



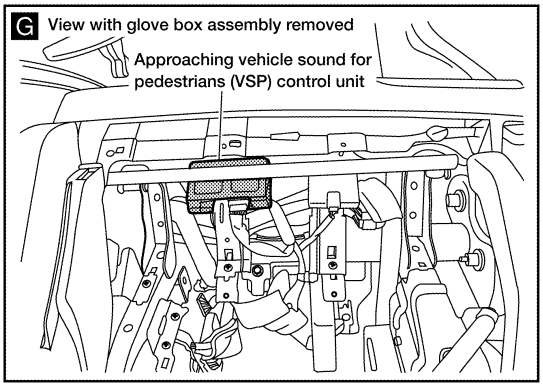
E View with glove box assembly removed



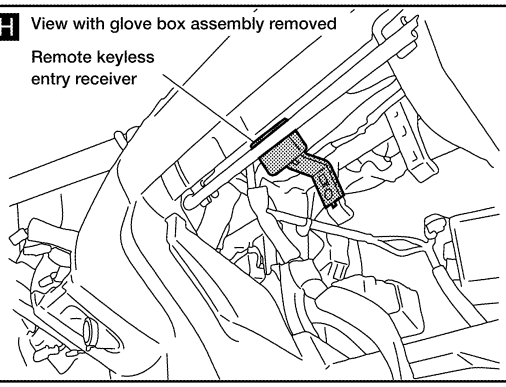
F View with instrument panel removed



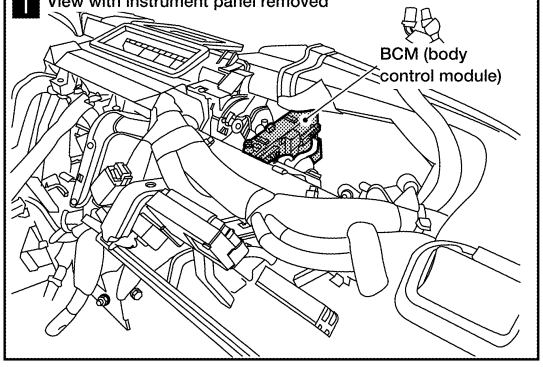
G View with glove box assembly removed



H View with glove box assembly removed



I View with instrument panel removed



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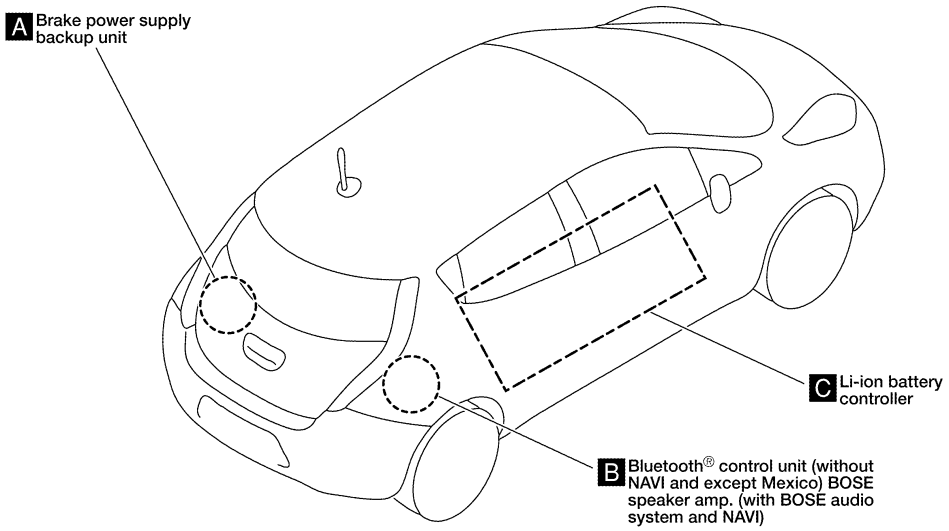

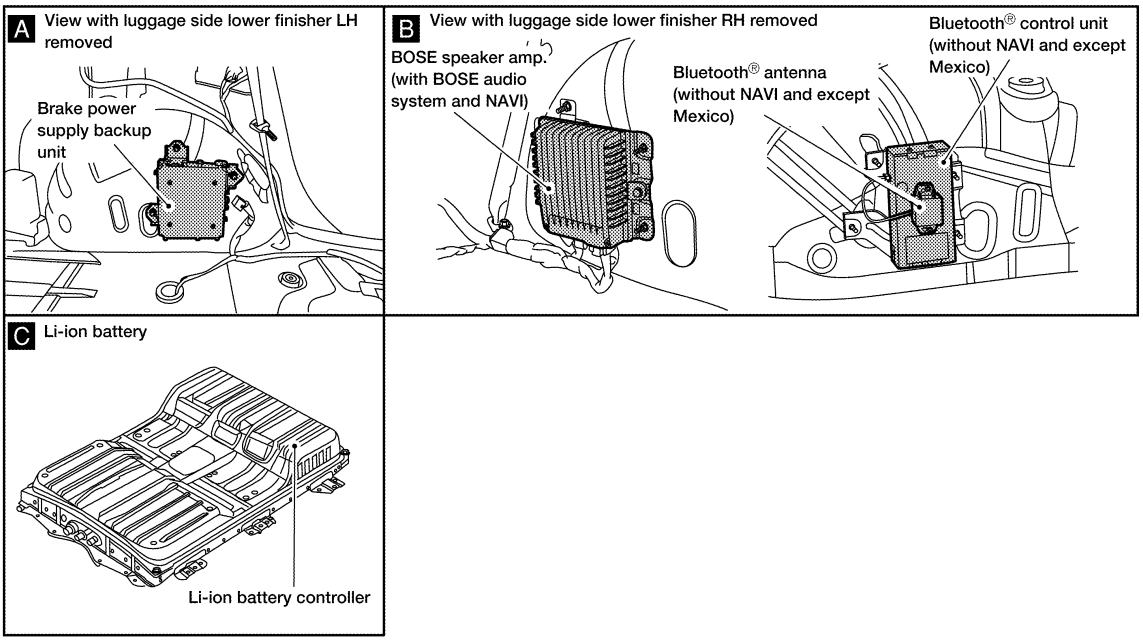

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HARNESS CONNECTOR

Description

INFOID:0000000010586663

HARNESS CONNECTOR (TAB-LOCKING TYPE)

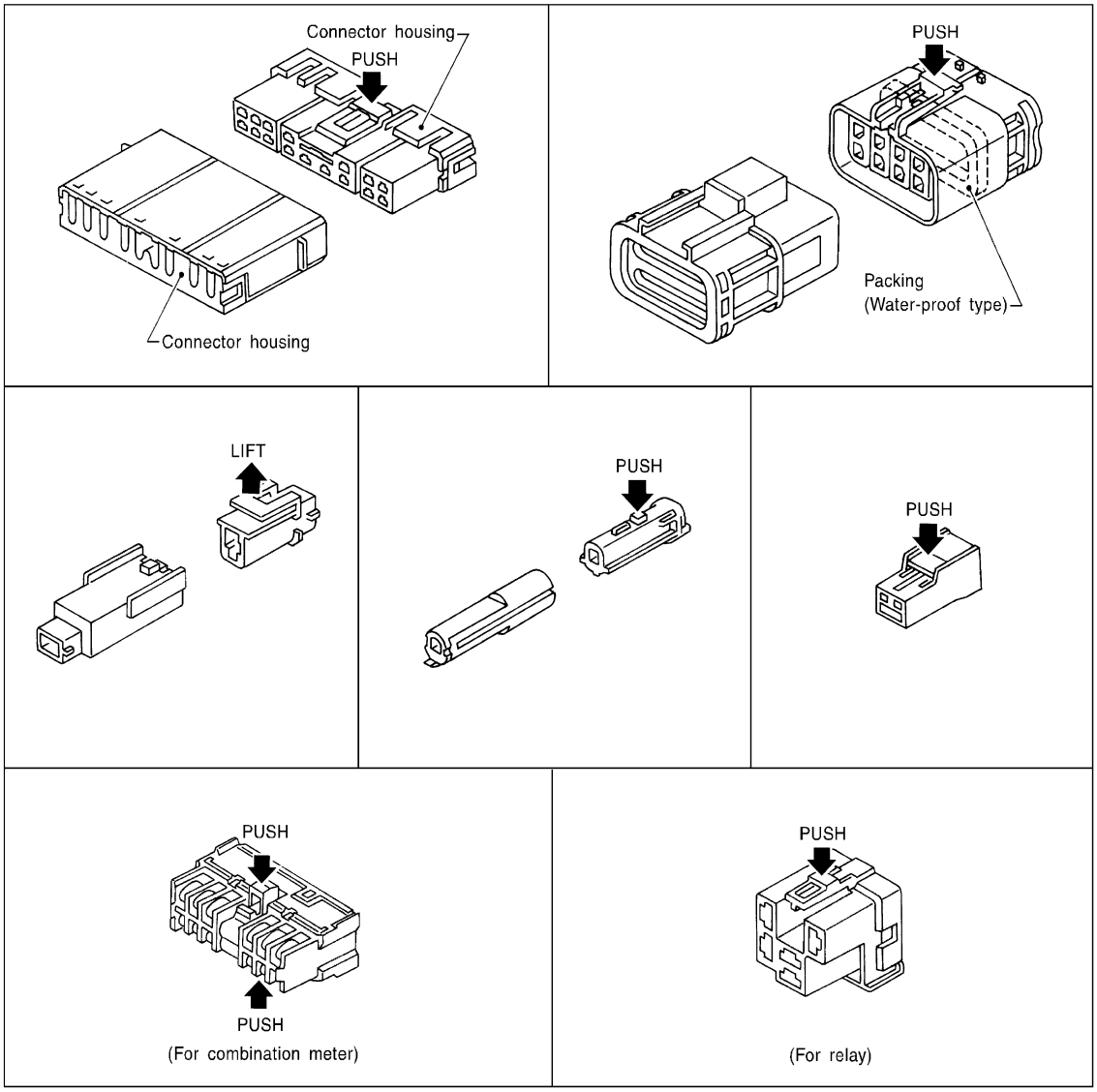
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the figure below.

Refer to the next page for description of the slide-locking type connector.

CAUTION:

Do not pull the harness or wires when disconnecting the connector.

[Example]



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HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

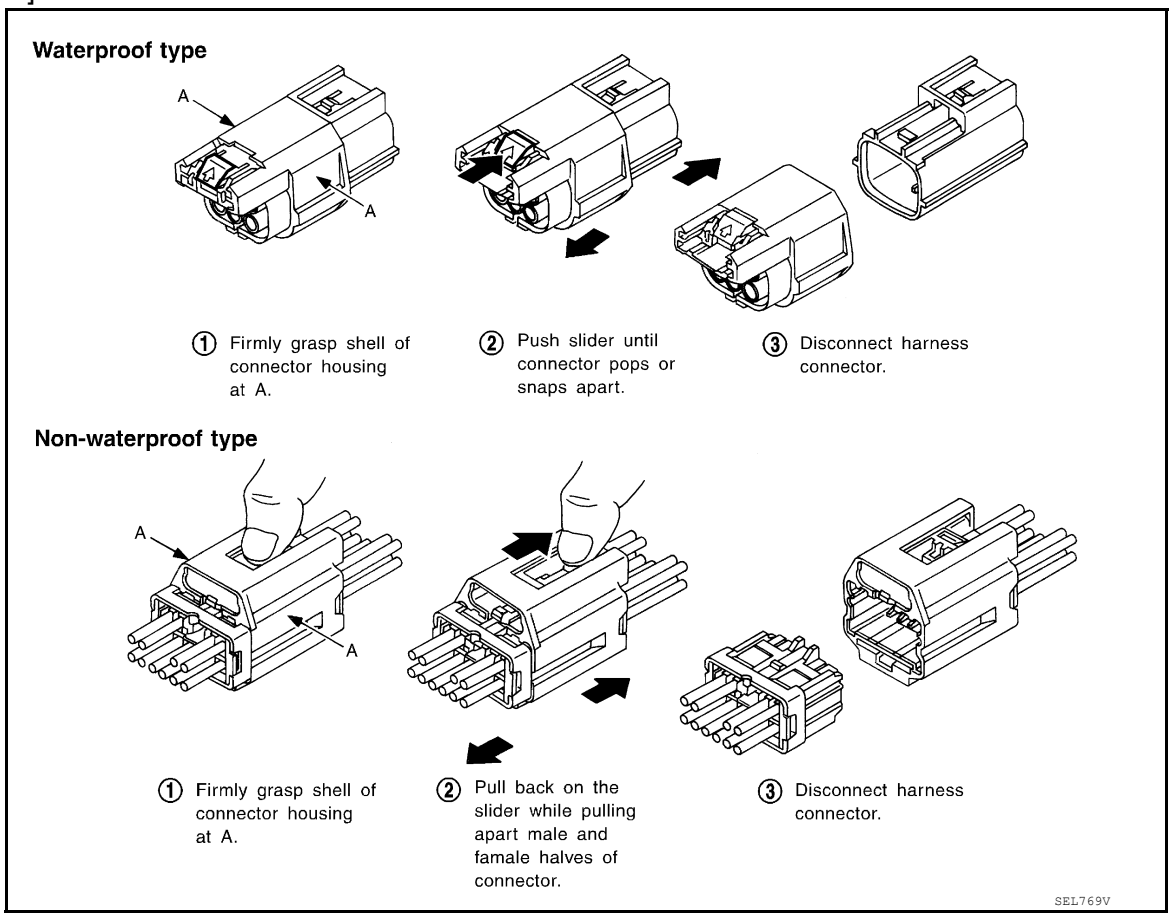
- A new style slide-locking type connector is used on certain systems and components, especially those related to OBD.
- The slide-locking type connectors help prevent incomplete locking and accidental looseness or disconnection.

- The slide-locking type connectors are disconnected by pushing or pulling the slider. Refer to the figure below.

CAUTION:

- **Do not pull the harness or wires when disconnecting the connector.**
- **Be careful not to damage the connector support bracket when disconnecting the connector.**

[Example]

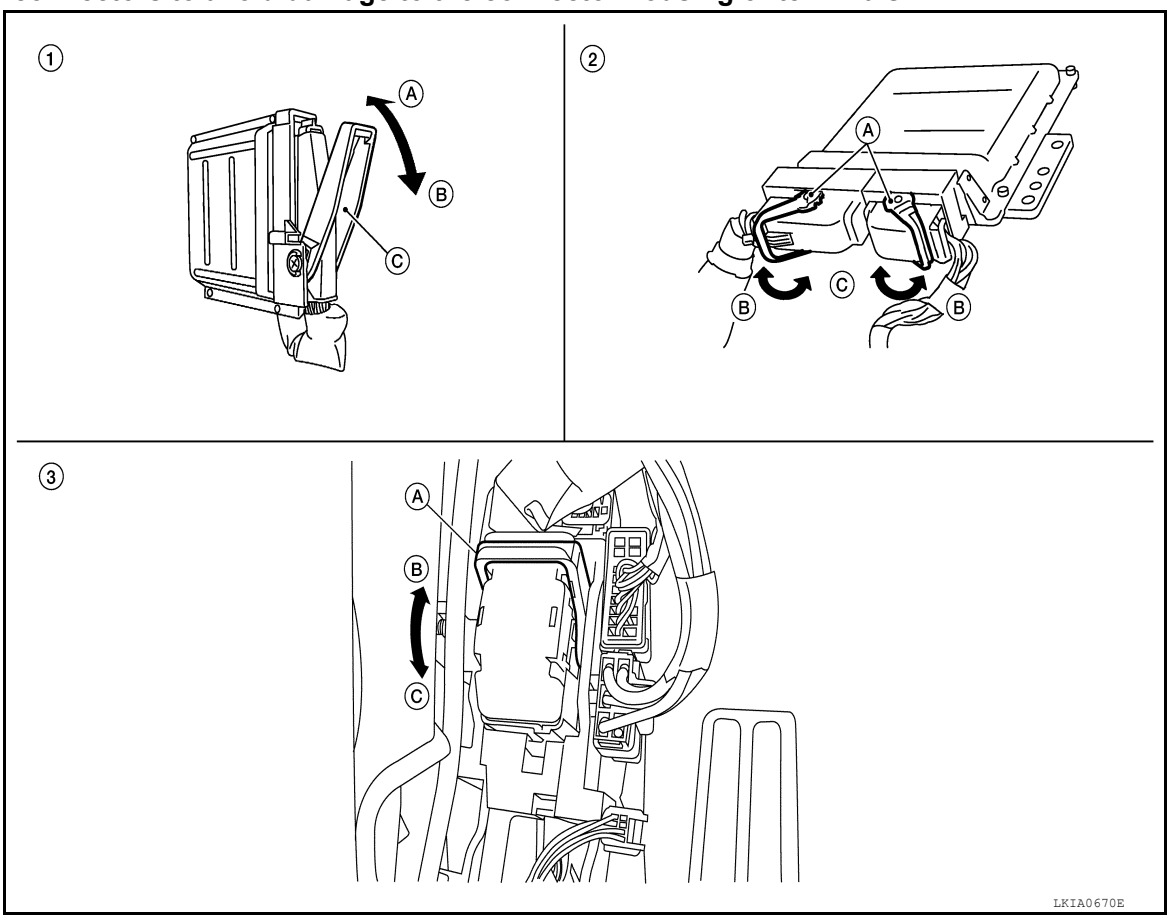


HARNESS CONNECTOR (LEVER LOCKING TYPE)

- Lever locking type harness connectors are used on certain control units and control modules such as ECM, ABS actuator and electric unit (control unit), etc.
- Lever locking type harness connectors are also used on super multiple junction (SMJ) connectors.
- Always confirm the lever is fully locked in place by moving the lever as far as it will go to ensure full connection.

CAUTION:

- **Always confirm the lever is fully released (loosened) before attempting to disconnect or connect these connectors to avoid damage to the connector housing or terminals.**



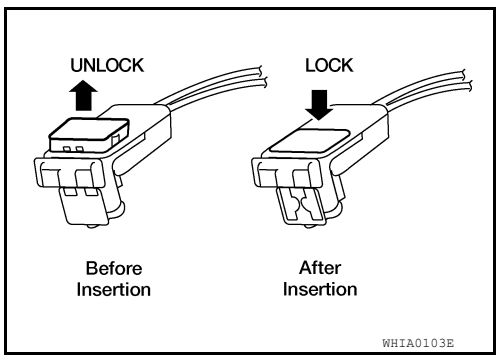
1. Control unit with single lever
   A. Fasten
   B. Loosen
   C. Lever
2. Control unit with dual lever
   A. Lever
   B. Fasten
   C. Loosen
3. SMJ connector
   A. Lever
   B. Fasten
   C. Loosen

HARNESS CONNECTOR (DIRECT-CONNECT SRS COMPONENT TYPE)

- SRS direct-connect type harness connectors are used on certain SRS components such as air bag modules and seat belt pre-tensioners.
- Always pull up to release black locking tab prior to removing connector from SRS components.
- Always push down to lock black locking tab after installing connector to SRS components. When locked, the black locking tab is level with the connector housing.

CAUTION:

- **Do not pull the harness or wires when removing connectors from SRS components.**



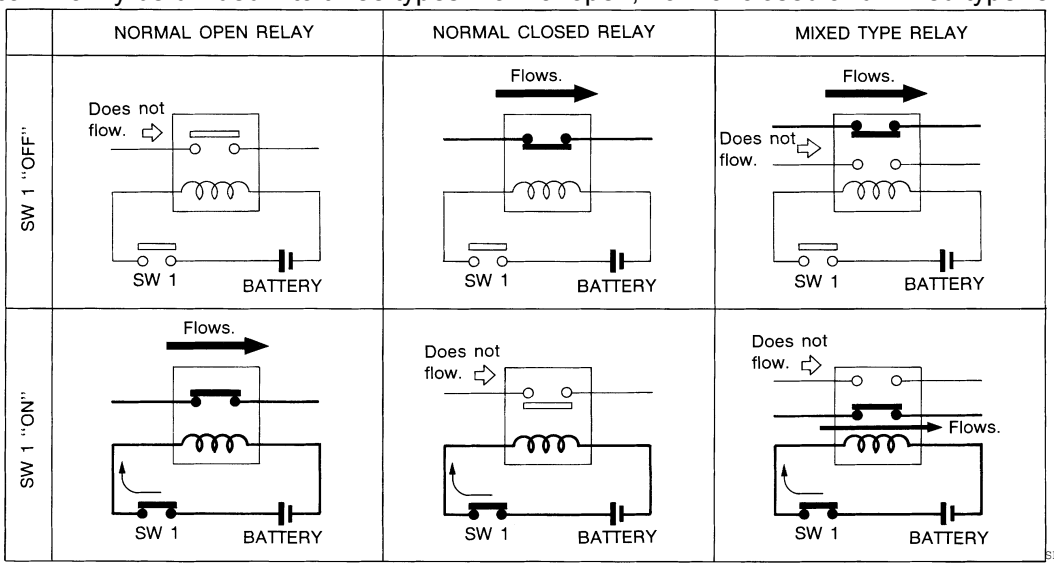
STANDARDIZED RELAY

Description

INFOID:0000000010586664

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



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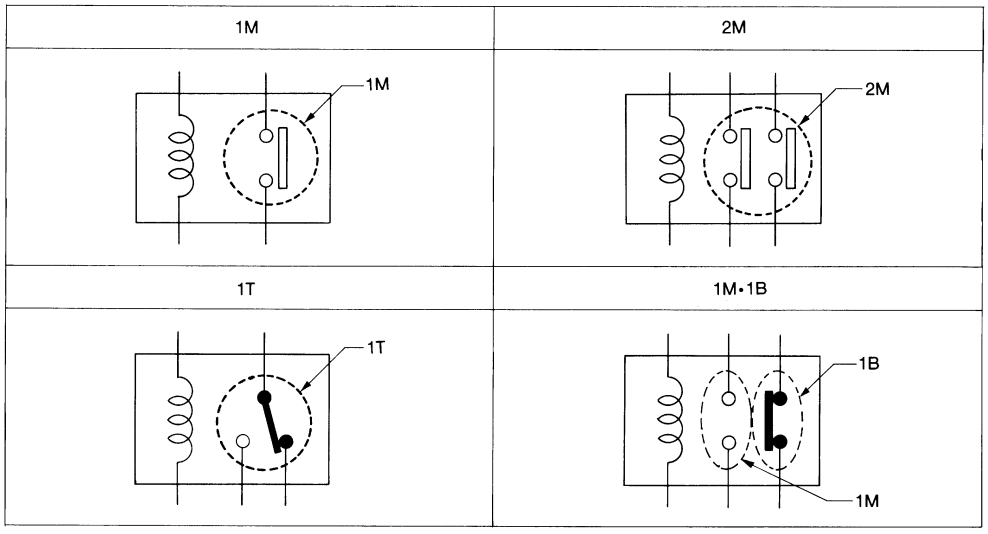
TYPE OF STANDARDIZED RELAYS

1M	1 Make	2M	2 Make
1T	1 Transfer	1M·1B	1 Make 1 Break



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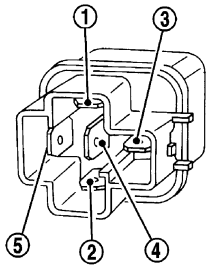
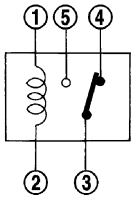
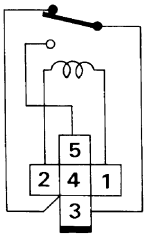
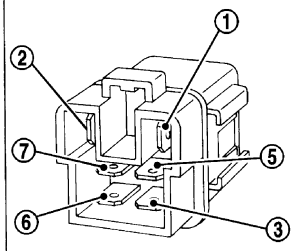
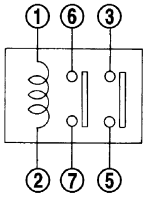
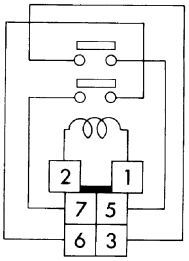
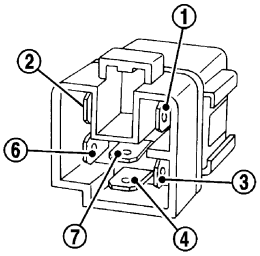
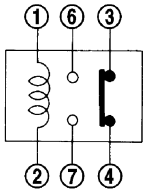
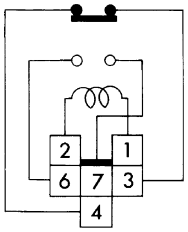
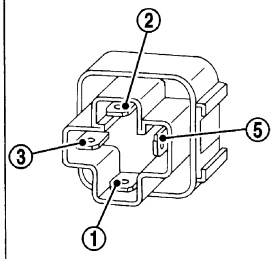
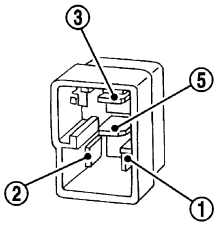
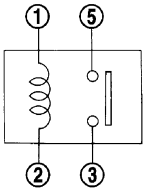
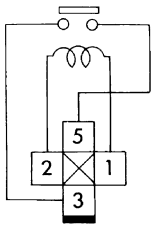
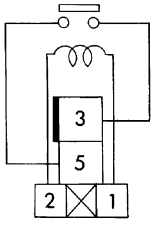
Type	Outer view	Circuit	Connector symbol and connection	Case color
1T				BLACK
2M				BROWN
1M•1B				GRAY
1M	 		 	BLUE

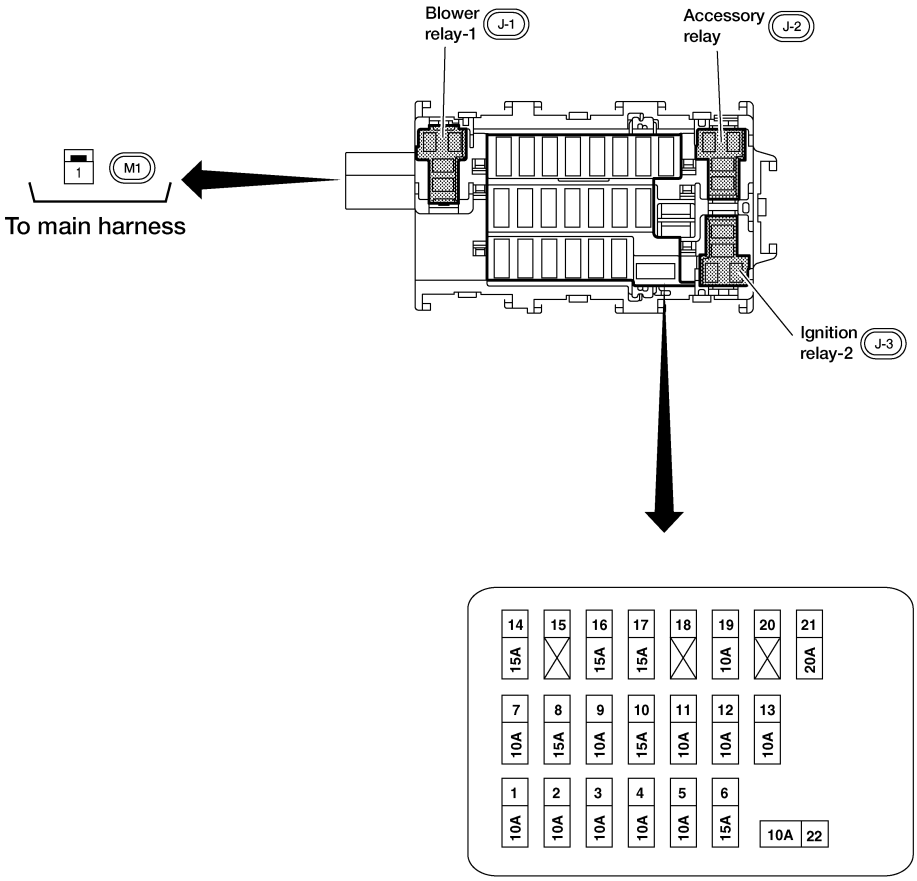
The arrangement of terminal numbers on the actual relays may differ from those shown above.

SEL188W

FUSE BLOCK - JUNCTION BOX (J/B)

Terminal Arrangement

INFOID:0000000010586665



AAMIA2457GB

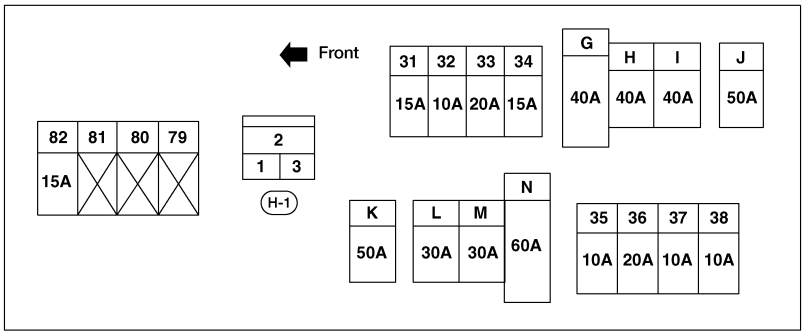
FUSE, FUSIBLE LINK AND RELAY BOX

Terminal Arrangement

INFOID:0000000010586666

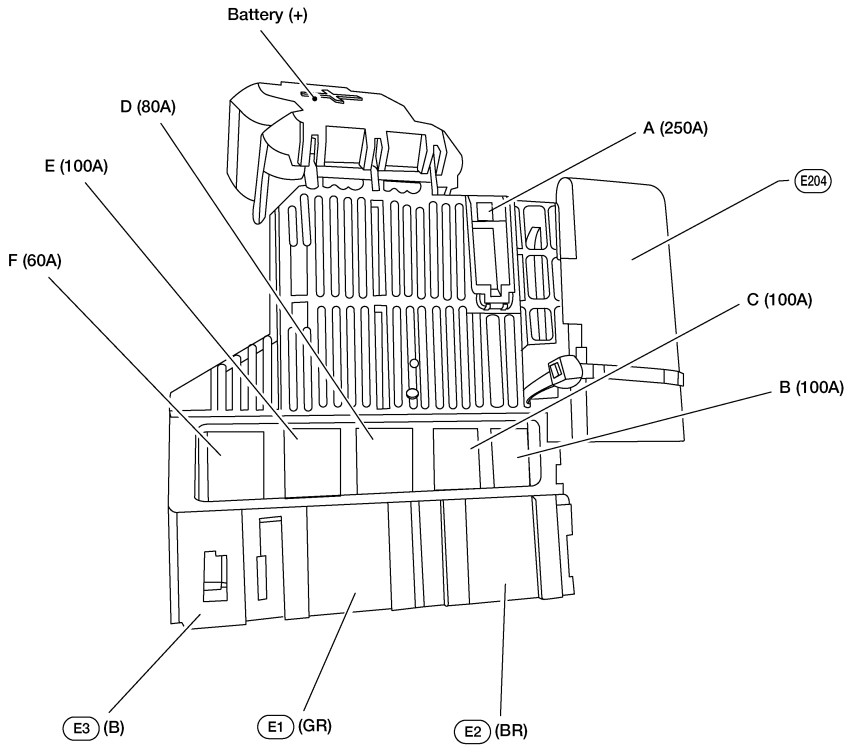
FUSE, FUSIBLE LINK AND RELAY BOX 1 AND FUSIBLE LINK BOX (BATTERY)

FUSE, FUSIBLE LINK BOX AND RELAY BOX 1



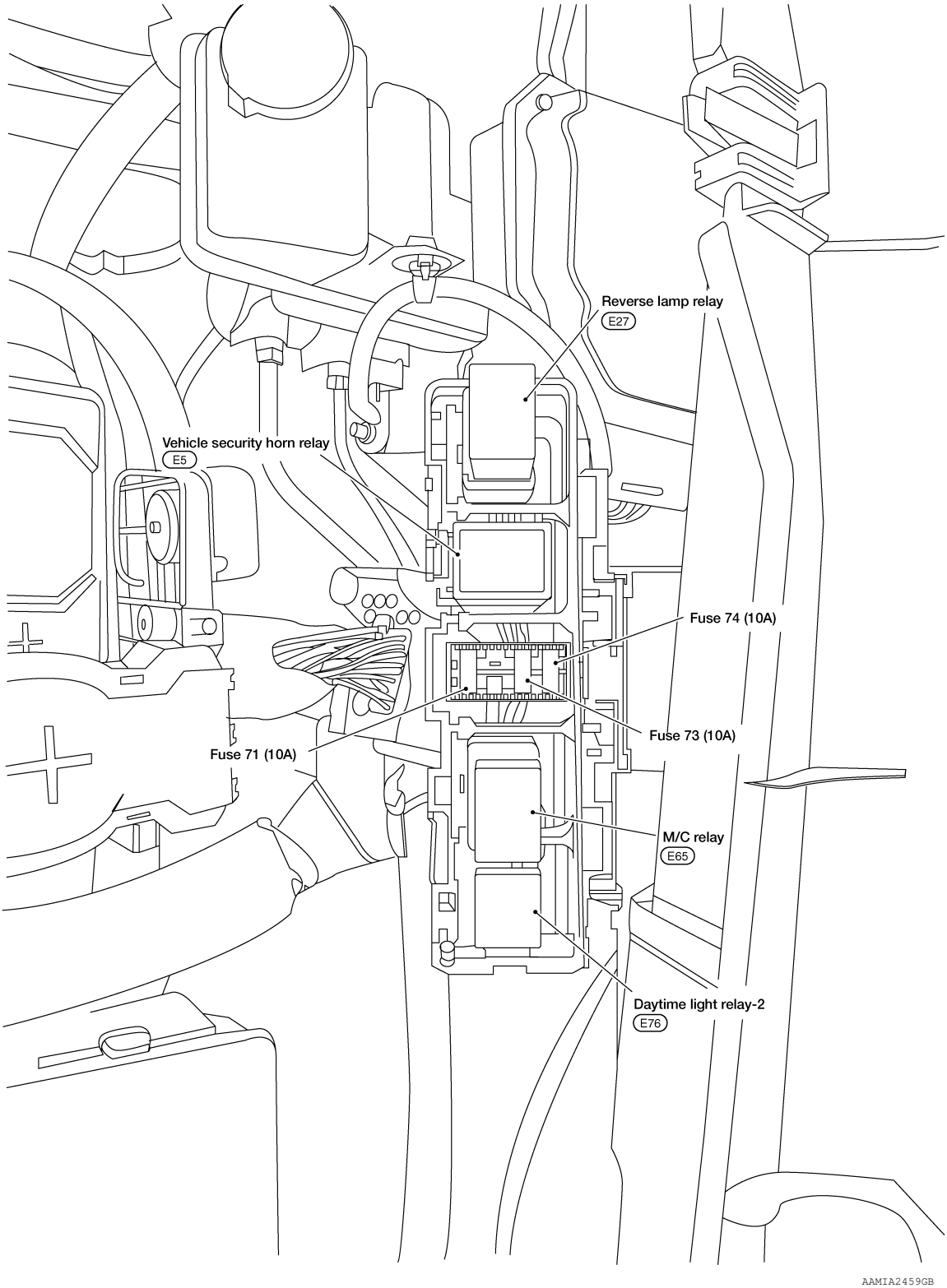
NO. 51 - 38, 79 - 82 :FUSE G - N :FUSIBLE LINK

FUSIBLE LINK BOX (BATTERY)

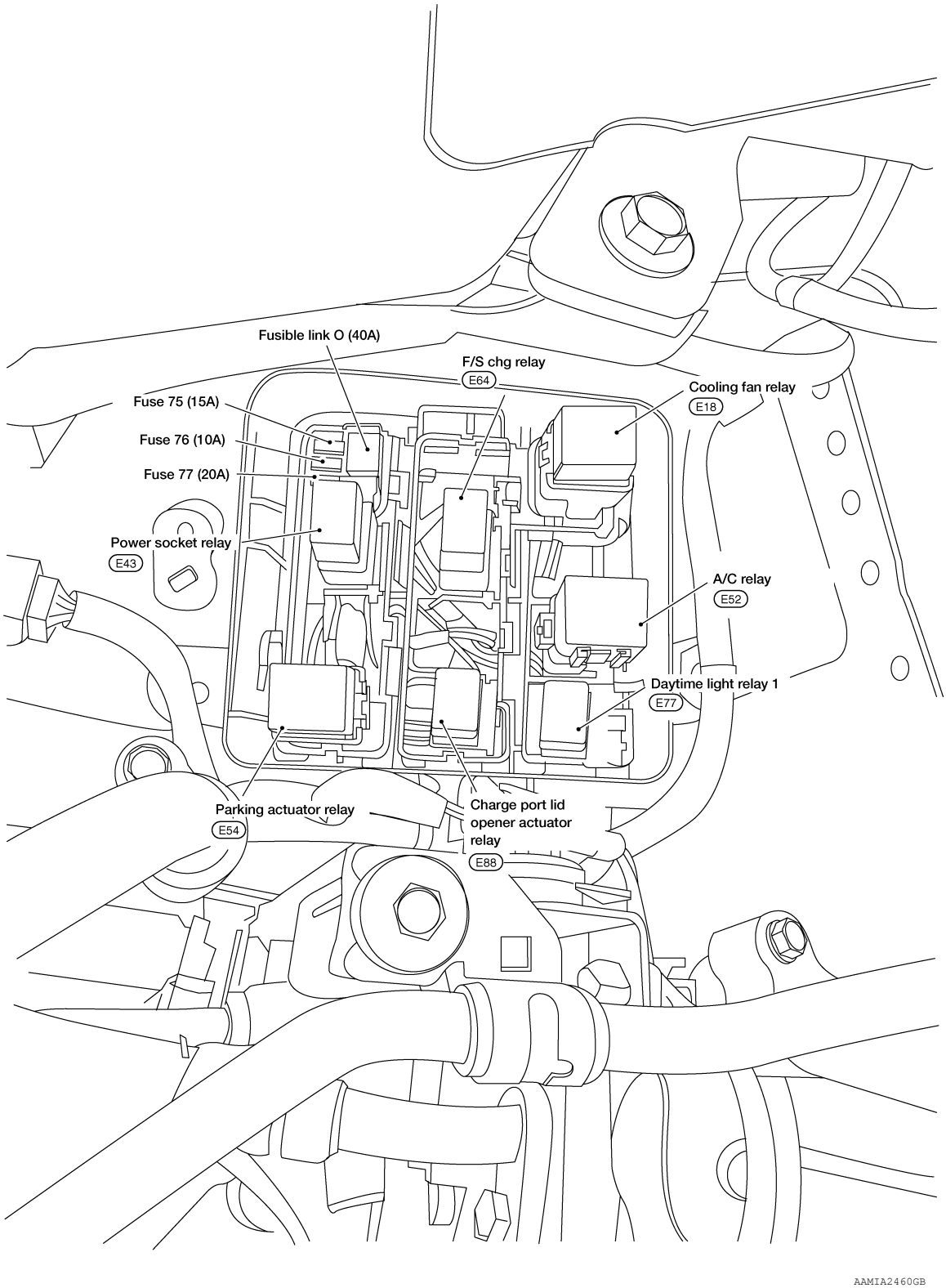


AAMIA2458GB

FUSE AND RELAY BOX



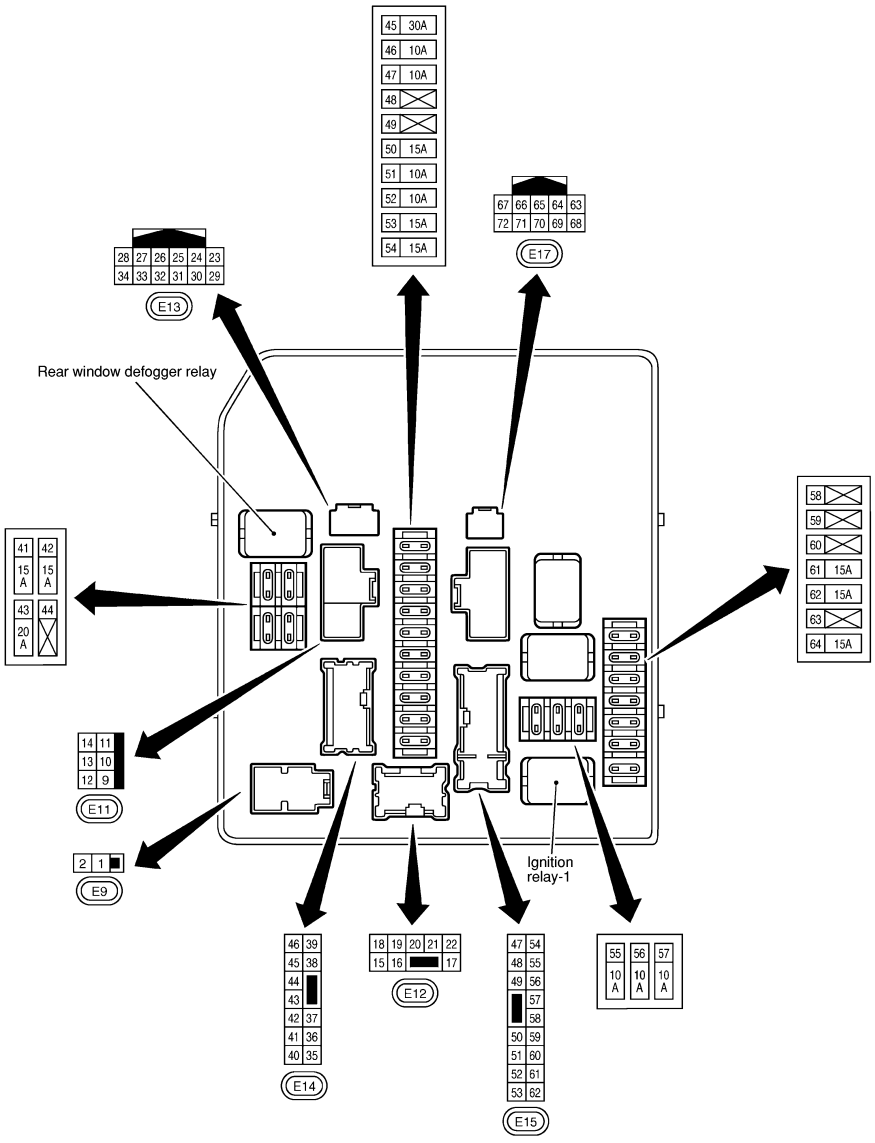
FUSE, FUSIBLE LINK AND RELAY BOX 2



IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R Terminal Arrangement

INFOID:0000000010586667



AAMIA2475GB

BASIC INSPECTION

12V BATTERY INSPECTION

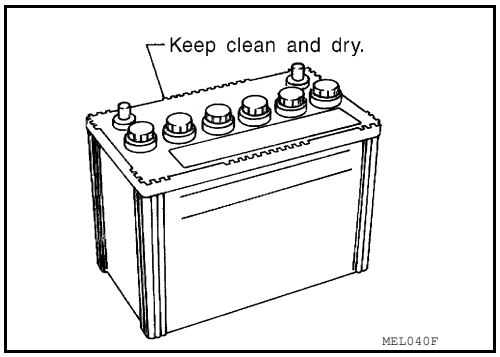
How to Handle 12V Battery

INFOID:0000000010119396

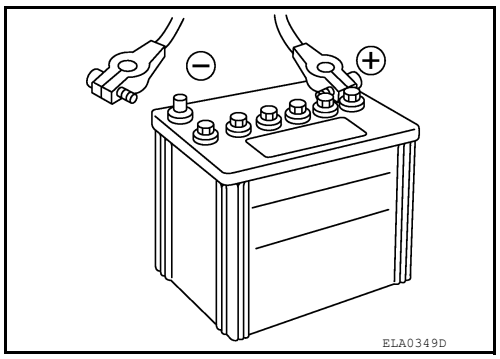
CAUTION:
- **If it becomes necessary to start the EV system with a booster battery and jumper cables, use a 12-volt booster battery.**
- **After connecting 12V battery cables, ensure that they are tightly clamped to 12V battery terminals for good contact.**
- **Never add distilled water through the hole used to check specific gravity.**

METHODS OF PREVENTING OVER-DISCHARGE

The following precautions must be taken to prevent over-discharging a battery.
- The 12V battery surface (particularly its top) should always be kept clean and dry.
- The terminal connections should be clean and tight.
- At every routine maintenance, check the electrolyte level. This also applies to batteries designated as “low maintenance” and “maintenance-free”.



- When the vehicle is not going to be used over a long period of time, disconnect the 12V battery cable from the negative terminal. (If the vehicle has an extended storage switch, turn it off.) Refer to PG-6, "Precaution for Removing 12V Battery".



Work Flow

INFOID:0000000010119397

12V BATTERY DIAGNOSIS WITH EXP-800 NI OR GR8-1200 NI

To diagnose and confirm the condition of the 12V battery, use the following special service tools:
- EXP-800 NI Battery and electrical diagnostic analyzer
- GR8-1200 NI Multitasking battery and electrical diagnostic station

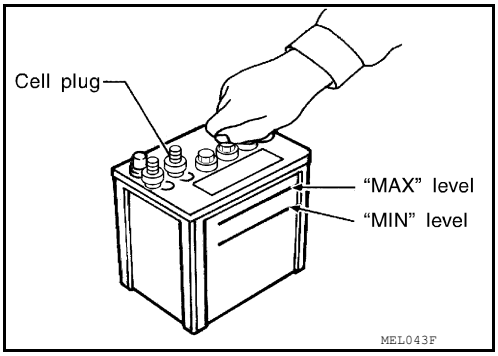
NOTE:
Refer to the applicable instruction manual for proper battery diagnosis procedures.

12V BATTERY DIAGNOSIS WITHOUT EXP-800 NI OR GR8-1200 NI

Check Electrolyte Level

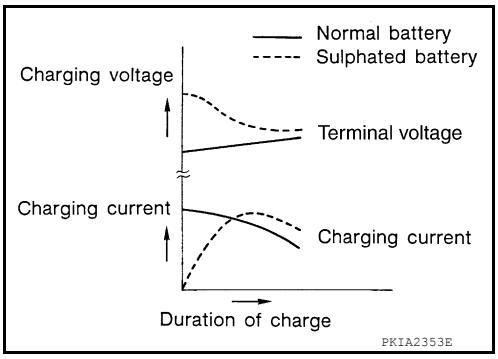
WARNING:
Never allow battery fluid to come in contact with skin, eyes, fabrics, or painted surfaces. After touching a 12V battery, never touch or rub your eyes until you have thoroughly washed your hands. If acid contacts eyes, skin or clothing, immediately flush with water for 15 minutes and seek medical attention.
Failure to do this may cause personal injury or damage to clothing or the painted surfaces.

- Remove the cell plug using a suitable tool.
- Add distilled water up to the MAX level.



SULFATION

- **A 12V battery will be completely discharged if it is left unattended for a long time and the specific gravity will become less than 1.100. This may result in sulfation on the cell plates.**
- **To determine if a 12V battery has been "sulfated", note its voltage and current when charging it. As shown in the figure, less current and higher voltage are observed in the initial stage of charging sulfated batteries.**
- **A sulfated 12V battery may sometimes be brought back into service by means of a long, slow charge, 12 hours or more, followed by a battery capacity test.**



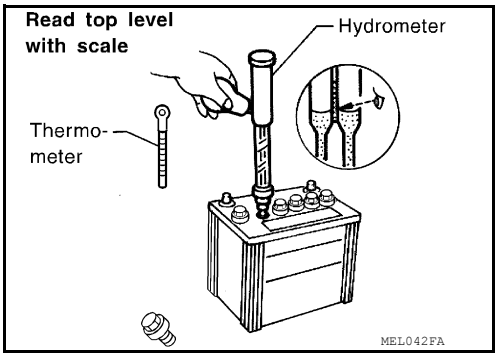
Specific Gravity Check

NOTE:

Check the charge condition of the battery.

Periodically check the specific gravity of the electrolyte. Keep a close check on charge condition to prevent over-discharge.

1. Read hydrometer and thermometer indications at eye level.
2. Use the chart below to correct your hydrometer reading according to electrolyte temperature.



Hydrometer Temperature Correction

12V Battery electrolyte temperature [°C (°F)]	Add to specific gravity reading
71 (160)	0.032
66 (150)	0.028
60 (140)	0.024
54 (130)	0.020
49 (120)	0.016
43 (110)	0.012
38 (100)	0.008
32 (90)	0.004
27 (80)	0
21 (70)	–0.004
16 (60)	–0.008
10 (50)	–0.012

12V Battery electrolyte temperature [°C (°F)]	Add to specific gravity reading
4 (40)	−0.016
−1 (30)	−0.020
−7 (20)	−0.024
−12 (10)	−0.028
−18 (0)	−0.032

Corrected specific gravity	Approximate charge condition
1.260 - 1.280	Fully charged
1.230 - 1.250	3/4 charged
1.200 - 1.220	1/2 charged
1.170 - 1.190	1/4 charged
1.140 - 1.160	Almost discharged
1.110 - 1.130	Completely discharged

Charging The 12V Battery

CAUTION:

- **Never "quick charge" a fully discharged 12V battery.**
- **Keep the 12V battery away from open flame while it is being charged.**
- **When connecting the charger, connect the leads first, then turn on the charger. Never turn on the charger first, as this may cause a spark.**
- **If 12V battery electrolyte temperature rises above 55 °C (131 °F), stop charging. Always charge battery at a temperature below 55 °C (131 °F).**

Charging Rates (Standard Charge)

Approximate charge condition	Charge current (A)	Charge time (h)
Fully charged	7	2
3/4 charged		2.5
1/2 charged		5
1/4 charged		7.5
Almost discharged		9
Completely discharged		10

Charging Rates (Quick Charge)

Approximate charge condition	Charge current (A)	Charge time (h)
Fully charged	—	—
3/4 charged	16	0.5
1/2 charged	33	
1/4 charged		
Almost discharged		
Completely discharged	—	—

NOTE:

The ammeter reading on your 12V battery charger will automatically decrease as the 12V battery charges. This indicates that the voltage of the 12V battery is increasing normally as the state of charge improves. The charging amps indicated above refer to initial charge rate.

- If, after charging, the specific gravity of any two cells varies more than 0.050, the 12V battery should be replaced.

ADDITIONAL SERVICE WHEN REMOVING 12V BATTERY NEGATIVE TERMINAL

Special Repair Requirement

INFOID:0000000010119398

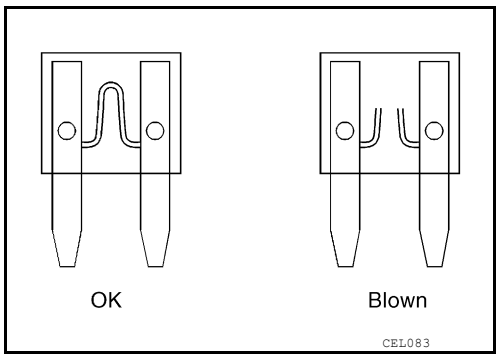
System	Item	Reference
EV Control System	VCM Timer Adjustment	EVC-130, "Description"
Power Window Control System	Power Window System Initialization	PWC-28, "Description"
Heater & Air Conditioning Control System	Temperature Setting Trimmer	HAC-83, "Temperature Setting Trimmer" (with heat pump)
	Inlet Port Memory Function (REC)	HAC-83, "Inlet Port Memory Function (REC)" (with heat pump)
	Inlet Port Memory Function (FRE)	HAC-84, "Inlet Port Memory Function (FRE)" (with heat pump)
	Foot Position Setting Trimmer	HAC-84, "Foot Position Setting Trimmer" (with heat pump)
	Compressor Operation Setting at Defroster Mode (Timer/Remote Climate Control)	HAC-84, "Compressor Operation Setting at Defroster Mode (Timer/Remote Climate Control)" (with heat pump)
	Setting of Compressor Maximum Rotation Speed During Pre Air Conditioning	HAC-85, "Setting of Compressor Maximum Rotation Speed During Pre Air Conditioning" (with heat pump)
	Setting of Compressor Maximum Rotation Speed During Idling	HAC-85, "Setting of Compressor Maximum Rotation Speed During Idling" (with heat pump)
	Temperature Setting Trimmer	HAC-274, "Temperature Setting Trimmer" (without heat pump)
	Inlet Port Memory Function (REC)	HAC-274, "Inlet Port Memory Function (REC)" (without heat pump)
	Inlet Port Memory Function (FRE)	HAC-275, "Inlet Port Memory Function (FRE)" (without heat pump)
	Foot Position Setting Trimmer	HAC-275, "Foot Position Setting Trimmer" (without heat pump)
	Compressor Operation Setting at Defroster Mode (Timer/Remote Climate Control)	HAC-275, "Compressor Operation Setting at Defroster Mode (Timer/Remote Climate Control)" (without heat pump)
	Setting of Compressor Maximum Rotation Speed During Pre Air Conditioning	HAC-276, "Setting of Compressor Maximum Rotation Speed During Pre Air Conditioning" (without heat pump)
	Setting of Compressor Maximum Rotation Speed During Idling	HAC-276, "Setting of Compressor Maximum Rotation Speed During Idling" (without heat pump)
Audio, Visual & Navigation System	Audio (Radio Preset)	Refer to Owner's Manual
	Navigation System	Refer to Owner's Manual

FUSE INSPECTION

How To Check

INFOID:0000000010119399

- If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.
- Use fuse of specified rating. Never use fuse of more than specified rating.
- Do not partially install fuse; always insert it into fuse holder properly.
- Remove fuse for “ELECTRICAL PARTS (BAT)” if vehicle is not used for a long period of time.

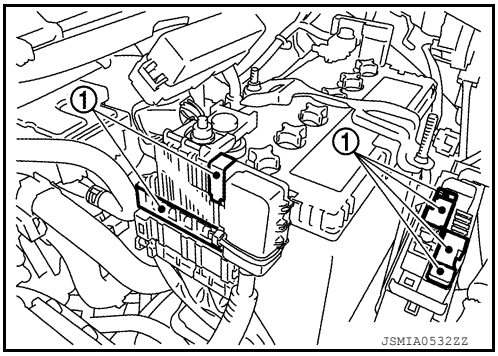


FUSIBLE LINK INSPECTION

How To Check

INFOID:0000000010119400

A melted fusible link can be detected either by visual inspection or by feeling with finger tip. If its condition is questionable, use circuit tester or test lamp.



1 :Fusible link

CAUTION:

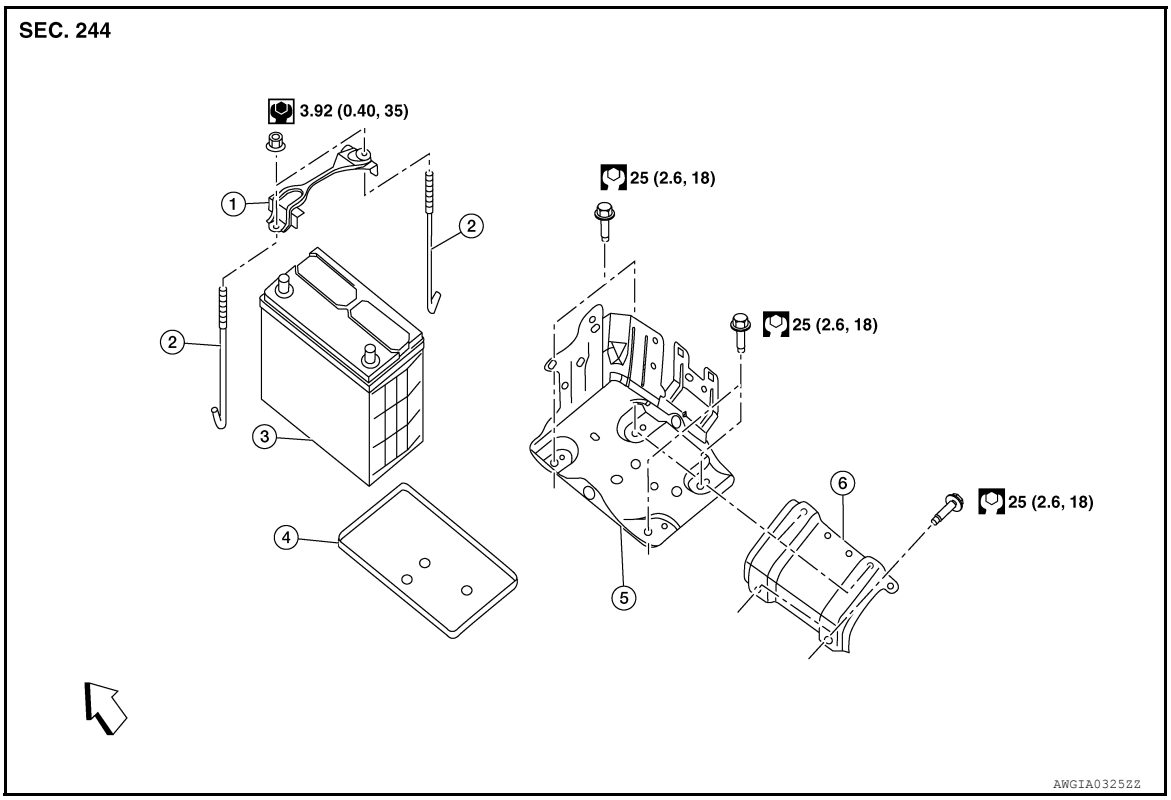
- **If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of malfunction.**
- **Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other wiring harness, vinyl or rubber parts.**

REMOVAL AND INSTALLATION

12V BATTERY

Exploded View

INFOID:0000000010119401



1. Battery frame
2. Battery rods
3. Battery
4. Battery tray liner
5. Battery tray
6. Battery tray bracket

⇦ Front

Removal and Installation

INFOID:0000000010119402

REMOVAL

1. Disconnect the 12V battery cable from the negative terminal. Refer to PG-6, "Precaution for Removing 12V Battery".
   CAUTION:
   To prevent damage to the parts, disconnect the 12V battery cable from the negative terminal first.
2. Remove cover of 12V battery positive terminal.
3. Disconnect the 12V battery cable from the positive terminal.
4. Remove battery frame nuts and battery frame.
5. Remove 12V battery.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

To install the 12V battery, carefully read the following instructions.

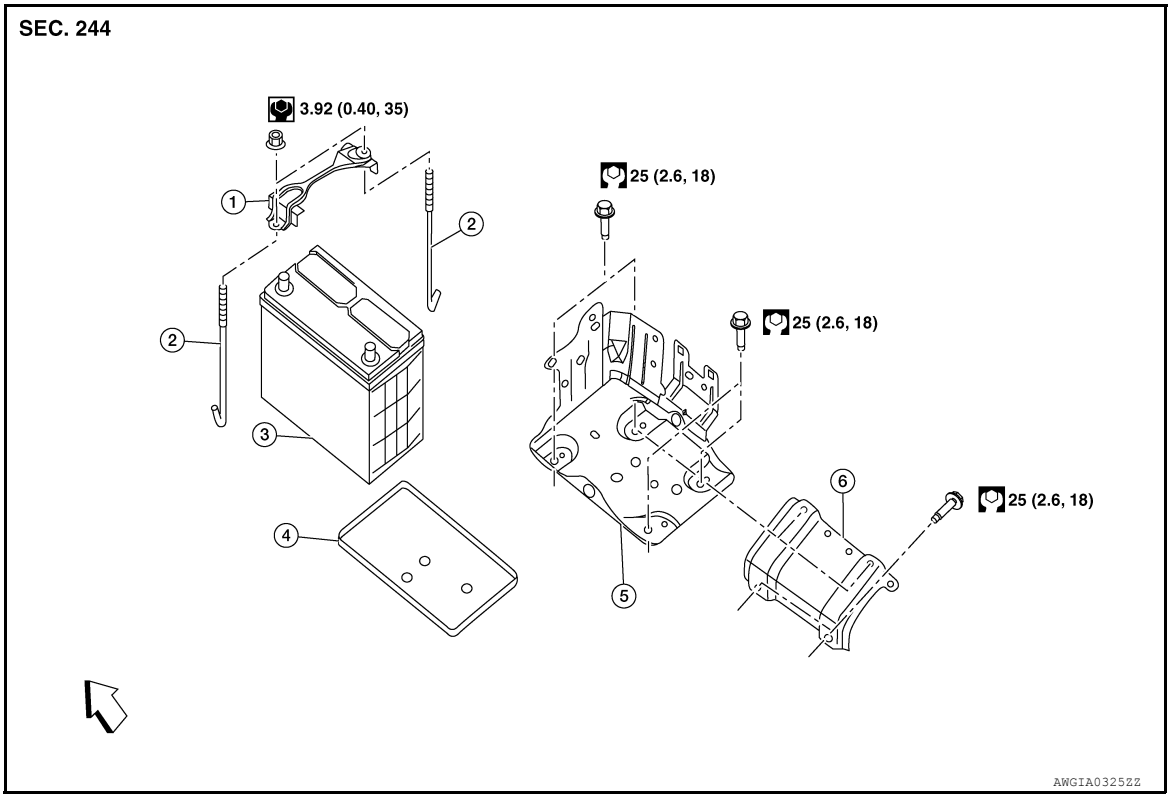
- **To prevent damage to the parts, connect the 12V battery cable to the positive terminal first.**
- **After connecting 12V battery cables, to securely supply 12V battery voltage, ensure that they are tightly clamped to 12V battery terminals for good contact.**
- **To securely supply 12V battery voltage, check 12V battery terminal for poor connection caused by corrosion.**

Reset electronic systems as necessary. Refer to PG-86, "Special Repair Requirement".

BATTERY TRAY

Exploded View

INFOID:0000000010119403



1. Battery frame
2. Battery rods
3. Battery
4. Battery tray liner
5. Battery tray
6. Battery tray bracket

⇦ Front

Removal and Installation

INFOID:0000000010119404

REMOVAL

1. Remove the 12 volt battery. Refer to PG-89, "Removal and Installation".
2. Remove the battery tray liner.
3. Remove the ground strap retainers from the battery tray and set the ground strap aside.
4. Remove the fuse, fusible link and relay box-1 from the battery tray and set the fuse, fusible link and relay box-1 aside.
5. Remove battery tray bolts and battery tray.

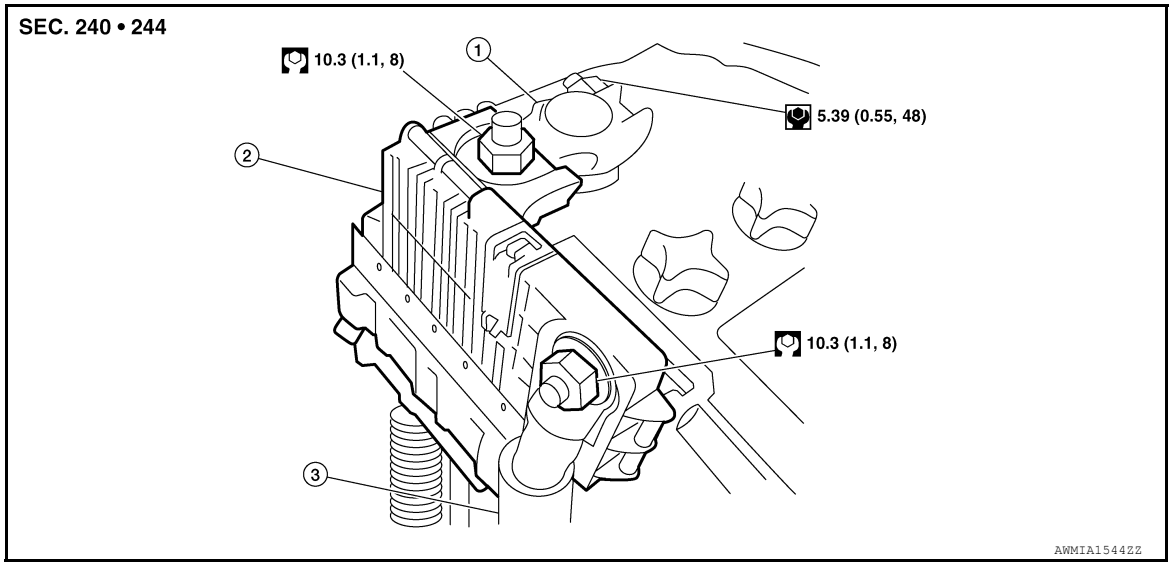
INSTALLATION

Installation is in the reverse order of removal.

BATTERY TERMINAL WITH FUSIBLE LINK

Exploded View

INFOID:0000000010119405



1. Positive terminal
2. Fusible link box (battery)
3. Positive cable

Removal and Installation

INFOID:0000000010119406

REMOVAL

1. Disconnect the 12V battery cable from the negative terminal. Refer to PG-6, "Precaution for Removing 12V Battery".
   CAUTION:
   To prevent damage to the parts, disconnect the 12V battery cable from the negative terminal first.
2. Remove cover of 12V battery positive terminal.
3. Disconnect the 12V battery cable from the positive terminal.
4. Open cover of harness mounting nut.
5. Remove harness mounting nut and battery terminal with fusible link mounting nut.
6. Disconnect harness connector and remove battery terminal with fusible link.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

To install the 12V battery, carefully read the following instructions.

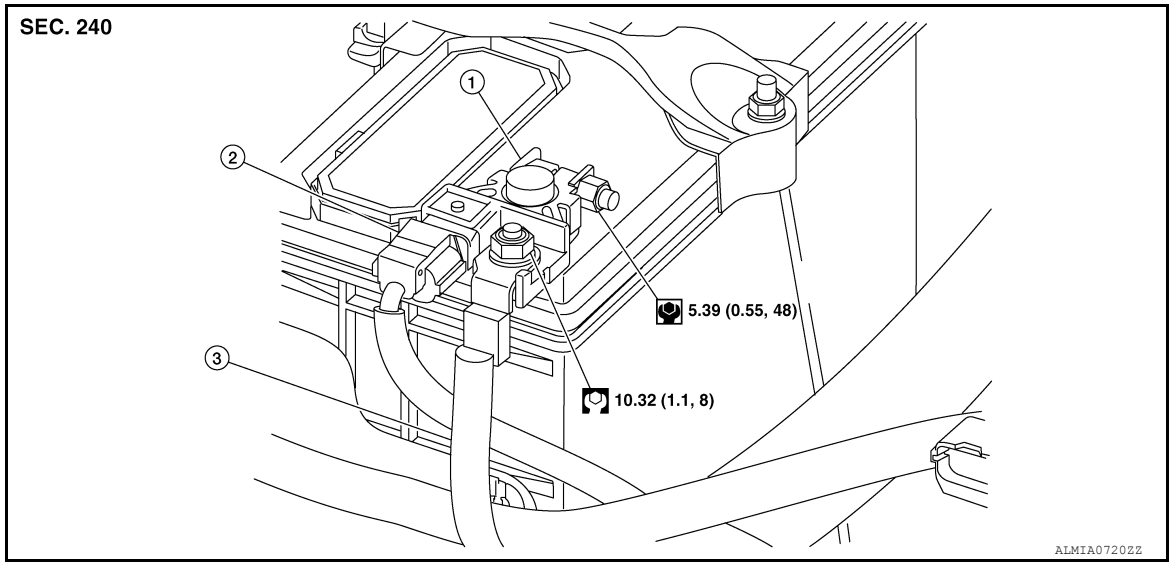
- **To prevent damage to the parts, connect the 12V battery cable to the positive terminal first.**
- **After connecting 12V battery cables, to securely supply 12V battery voltage, ensure that they are tightly clamped to 12V battery terminals for good contact.**
- **To securely supply 12V battery voltage, check 12V battery terminal for poor connection caused by corrosion.**

Reset electronic systems as necessary. Refer to PG-86, "Special Repair Requirement"

BATTERY CURRENT SENSOR

Exploded View

INFOID:0000000010119407



1. Negative terminal
2. Current sensor
3. Negative cable

Removal and Installation

INFOID:0000000010119408

REMOVAL

1. Disconnect the 12V battery cable from the negative terminal. Refer to PG-6, "Precaution for Removing 12V Battery".
2. Disconnect the battery current sensor connector.
3. Remove the battery current sensor mounting nut.
4. Remove the battery current sensor from 12V battery cable.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

To install the 12V battery, carefully read the following instructions.

- **To prevent damage to the parts, connect the 12V battery cable to the positive terminal first.**
- **After connecting 12V battery cables, to securely supply 12V battery voltage, ensure that they are tightly clamped to 12V battery terminals for good contact.**
- **To securely supply 12V battery voltage, check 12V battery terminal for poor connection caused by corrosion.**

Reset electronic systems as necessary. Refer to PG-86, "Special Repair Requirement".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

12V Battery

INFOID:0000000010119409

Type		51R
20 hour rate capacity	[V – Ah]	12 – 43
Cold cranking current (For reference value)	[A]	410