

SECTION **PG**

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

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The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, 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.

PREPARATION

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Special Service Tool

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

Tool number (TechMate No.) Tool name	Description
<p>— (165-GR8-1200KIT-NI) Multitasking battery and electrical diagnostic station</p>  <p style="text-align: right;">AWIIA1239ZZ</p>	<p>Testing batteries, starting and charging systems and charges batteries. For operating instructions, refer to diagnostic station instruction manual.</p>
<p>— (165-EXP-800 NI) Battery and electrical diagnostic analyzer</p>  <p style="text-align: right;">JSMIA0806ZZ</p>	<p>Testing batteries and charging systems. For operating instructions, refer to diagnostic analyzer instruction manual.</p>

Commercial Service Tool

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Tool name	Description
<p>Power tool</p>  <p style="text-align: right;">PIIB1407E</p>	<p>Loosening nuts, screws and bolts</p>

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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

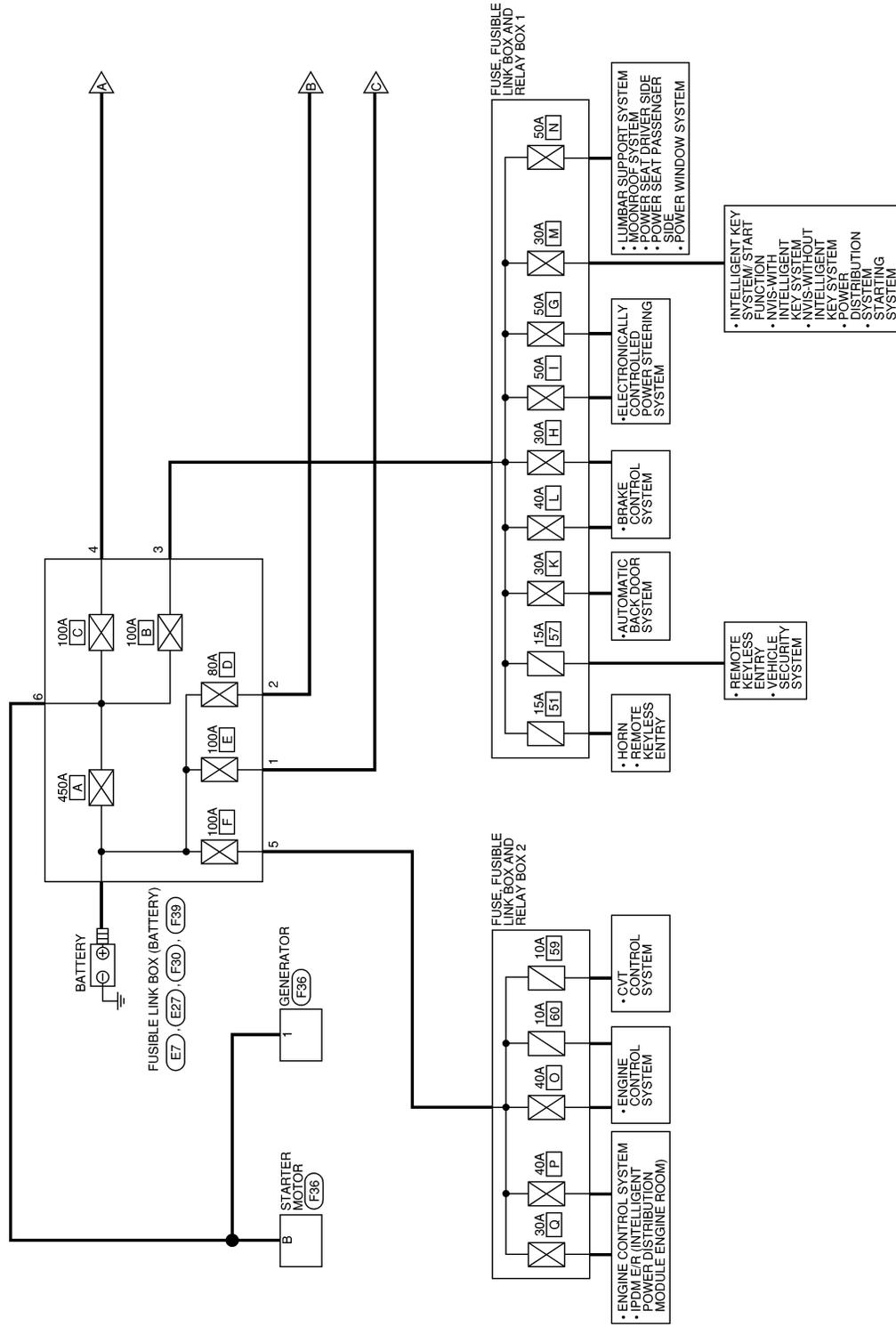
DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY ROUTING CIRCUIT

Wiring Diagram —Battery Power Supply —

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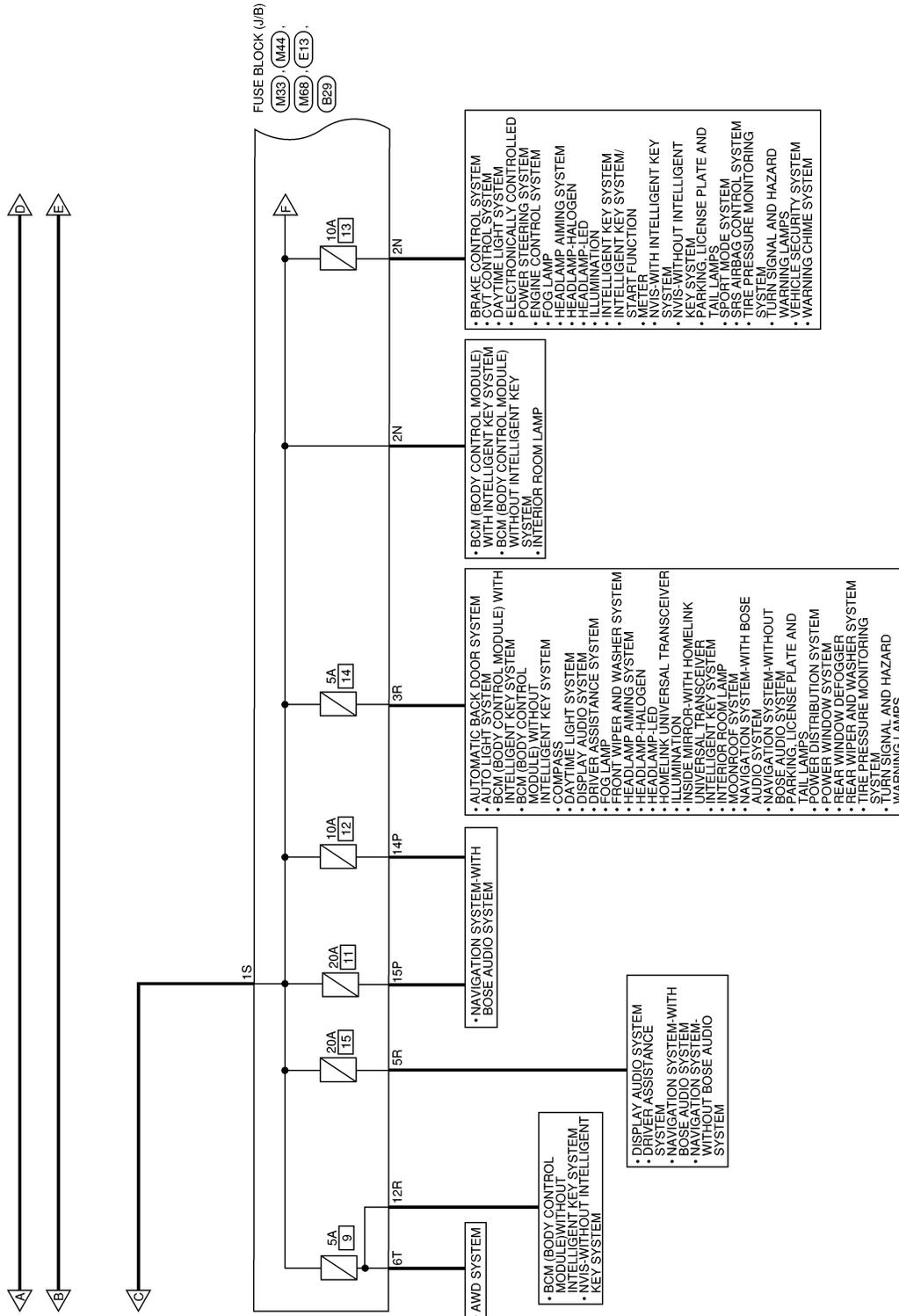
BATTERY POWER SUPPLY



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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

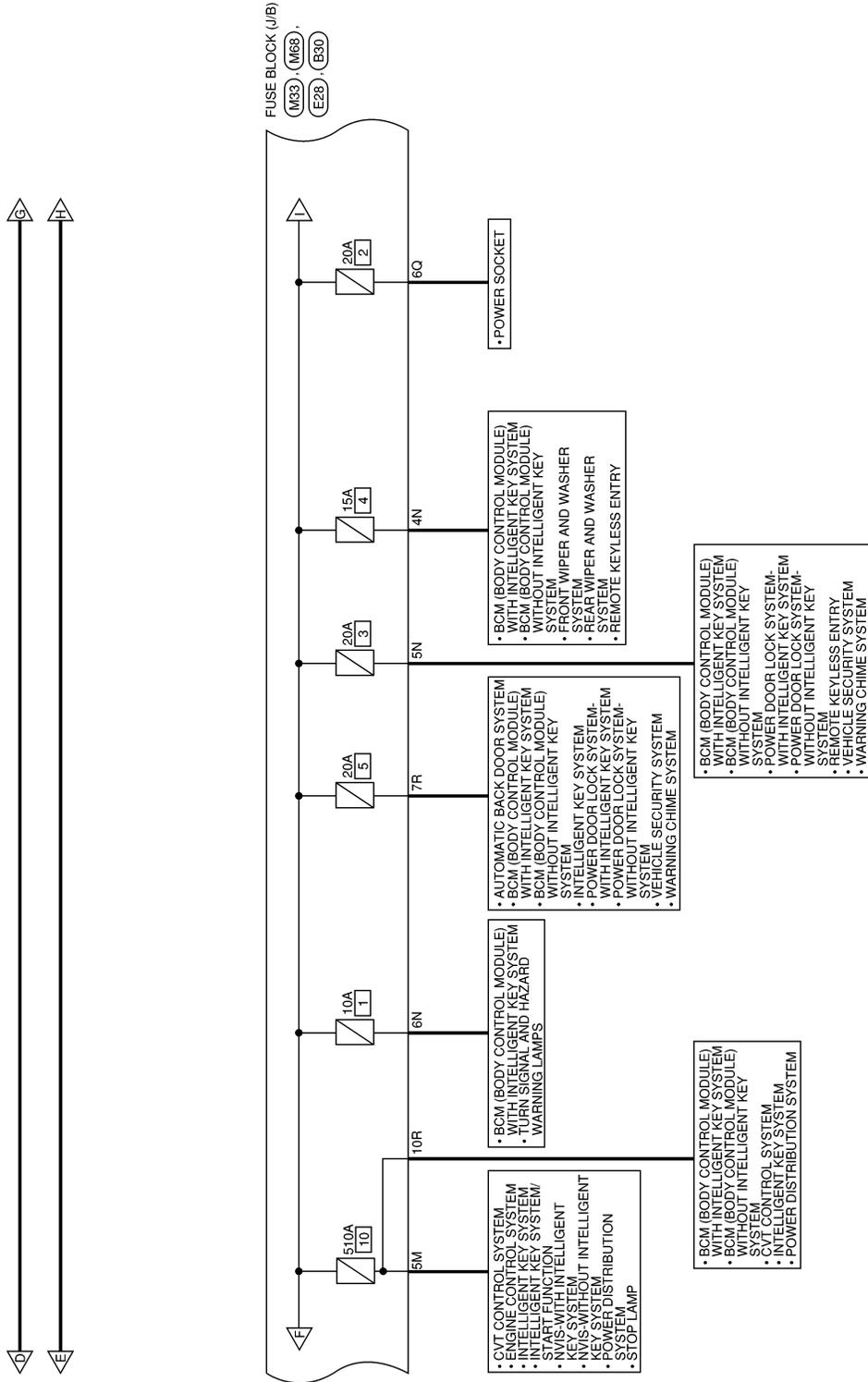


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POWER SUPPLY ROUTING CIRCUIT

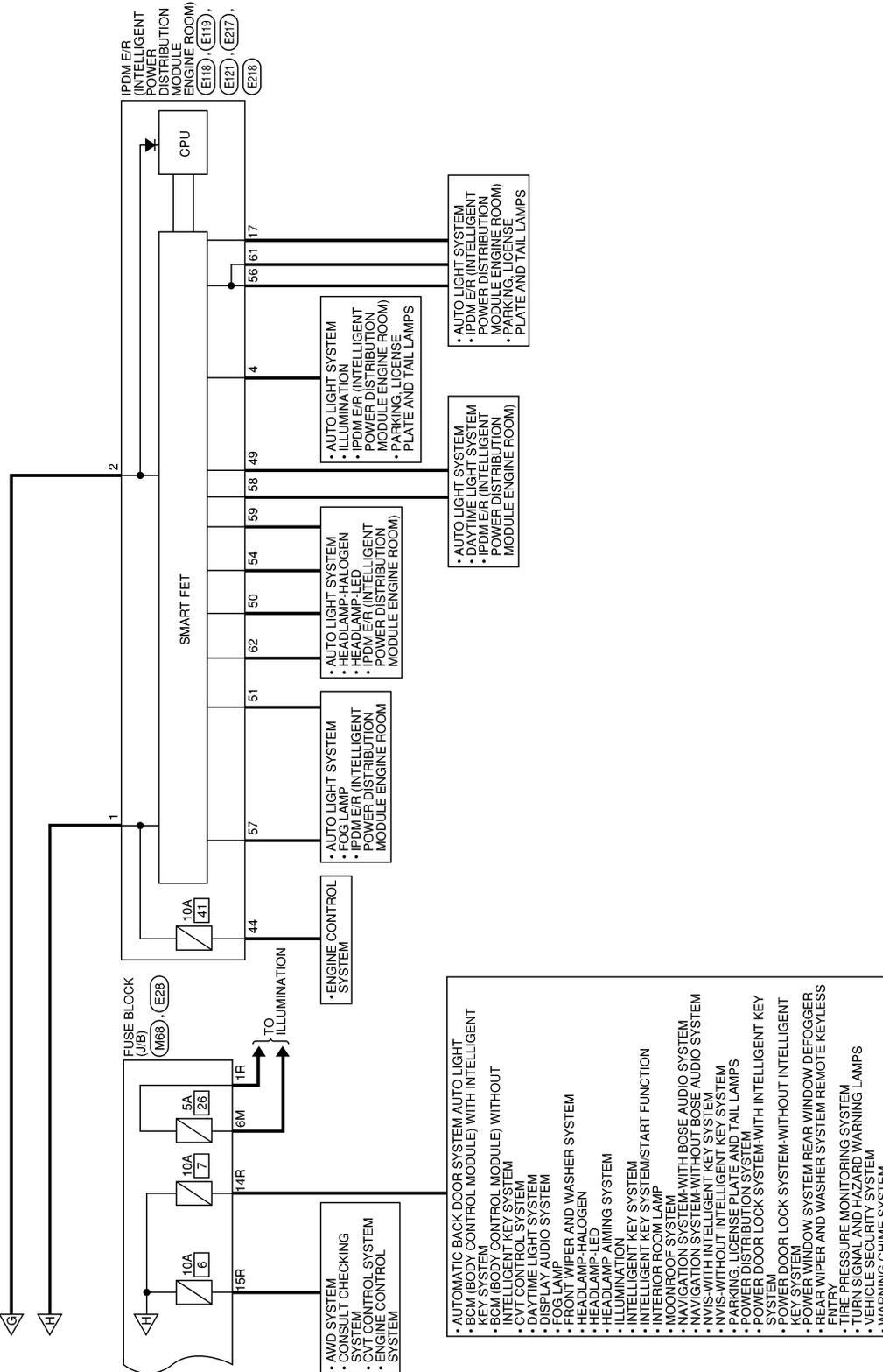
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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >



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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

BATTERY POWER SUPPLY - CONNECTORS

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



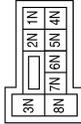
Terminal No.	Color of Wire	Signal Name
1R	V	-
3R	V	-
5R	L	-
7R	LA/V	-
10R	GR	-
12R	BR	-
14R	W	-
15R	W	-

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13P	LA/G	-
14P	SB	-
15P	L	-

Connector No.	M33
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2N	LG	-
4N	LG	-
5N	R	-
6N	BG	-

Connector No.	E42
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-

Connector No.	E13
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1S	G	-

Connector No.	E7
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	GRAY



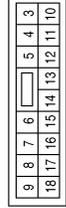
Terminal No.	Color of Wire	Signal Name
3	W	-
4	L	-

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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



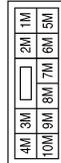
Terminal No.	Color of Wire	Signal Name
4	Y	O LIGHT POSITION REAR LH
17	W	O LIGHT POSITION REAR RH

Connector No.	E118
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



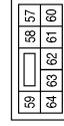
Terminal No.	Color of Wire	Signal Name
1	R	FL BAT 2
2	L	FL BAT 1

Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



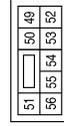
Terminal No.	Color of Wire	Signal Name
5M	V	-
6M	Y	-

Connector No.	E218
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
57	W	O LIGHT FR FOG LAMPS RH
58	R	O LIGHT DTRL RH
59	G	O LIGHT HBEAM LH
61	GR	O LIGHT CLEARANCE FR RH
62	SB	O LIGHT LBEAM RH

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
49	R	O LIGHT DTRL LH
50	L	O LIGHT LBEAM LH
51	V	O LIGHT FR FOG LAMPS LH
54	LG	O HBEAM RH
56	BG	O LIGHT CLEARANCE FR LH

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



Terminal No.	Color of Wire	Signal Name
44	R	O BAT ABS VALVE

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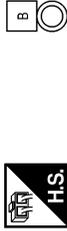
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POWER SUPPLY ROUTING CIRCUIT

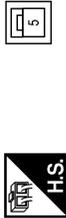
< DTC/CIRCUIT DIAGNOSIS >

Connector No.	F36
Connector Name	STARTER MOTOR
Connector Color	-



Terminal No.	B	Color of Wire	B/R	Signal Name	-
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Connector No.	F29
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BLACK



Terminal No.	5	Color of Wire	W	Signal Name	-
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Connector No.	F29
Connector Name	GENERATOR
Connector Color	-



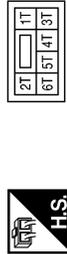
Terminal No.	1	Color of Wire	B/R	Signal Name	-
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Connector No.	B30
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	6Q	Color of Wire	R	Signal Name	-
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Connector No.	B29
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	6T	Color of Wire	L/L	Signal Name	-
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Connector No.	F39
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	-



Terminal No.	6	Color of Wire	B/R	Signal Name	-
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POWER SUPPLY ROUTING CIRCUIT

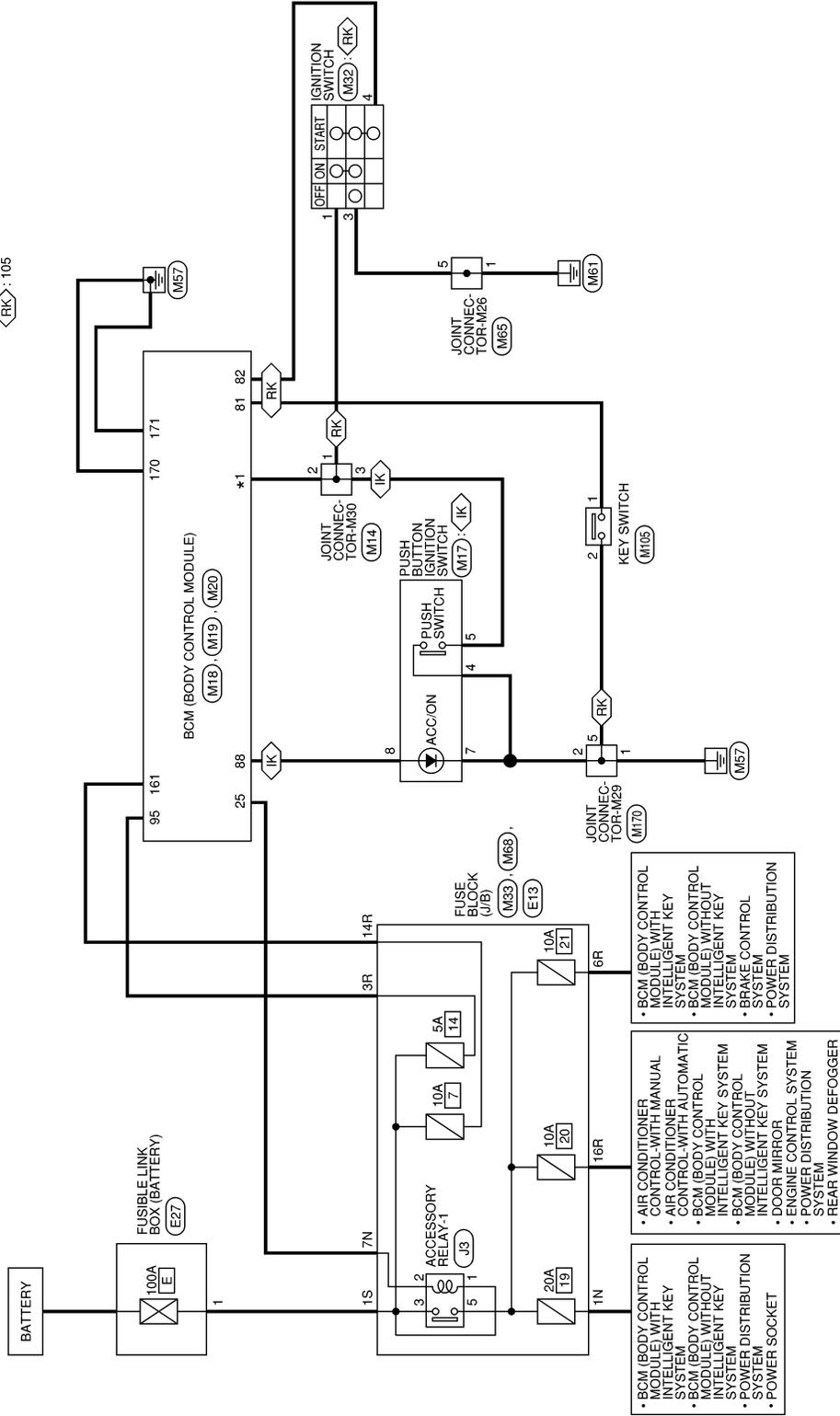
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Wiring Diagram —Accessory Power Supply—

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ACCESSORY POWER SUPPLY

- ◊IK◊ : WITH INTELLIGENT KEY SYSTEM
- ◊RK◊ : WITH REMOTE KEYLESS ENTRY SYSTEM
- *1 ◊IK◊ : 101
- *1 ◊RK◊ : 105



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POWER SUPPLY ROUTING CIRCUIT

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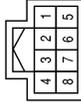
ACCESSORY POWER SUPPLY CONNECTORS

Connector No.	M14
Connector Name	JOINT CONNECTOR-M30
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	Y	-
3	Y	-

Connector No.	M17
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Color	WHITE



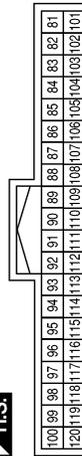
Terminal No.	Color of Wire	Signal Name
4	B	-
5	Y	-
7	B	-
8	W	-

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



Terminal No.	Color of Wire	Signal Name
25	BR	O BAT TEMP1 RL

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



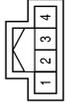
Terminal No.	Color of Wire	Signal Name
81	L	I KEY SW
82	LA/R	I STARTER SW (WITHOUT INTELLIGENT KEY SYSTEM)
88	W	O START SW BACKLIGHT LED
95	V	I SHORTING PIN
101	Y	I START SW
105	Y	I GN SW

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



Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	GND 1
171	B	GND 2

Connector No.	M32
Connector Name	IGNITION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	-
3	B	-
4	LA/R	-

POWER SUPPLY ROUTING CIRCUIT

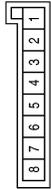
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Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



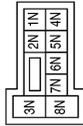
Terminal No.	Color of Wire	Signal Name
3R	V	-
6R	LA/L	-
14R	W	-
16R	GR	-

Connector No.	M65
Connector Name	JOINT CONNECTOR-M26
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-
5	B	-

Connector No.	M33
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



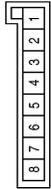
Terminal No.	Color of Wire	Signal Name
1N	L	-
7N	BR	-

Connector No.	E13
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1S	G	-

Connector No.	M170
Connector Name	JOINT CONNECTOR-M29
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-

Connector No.	M105
Connector Name	KEY SWITCH
Connector Color	WHITE



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

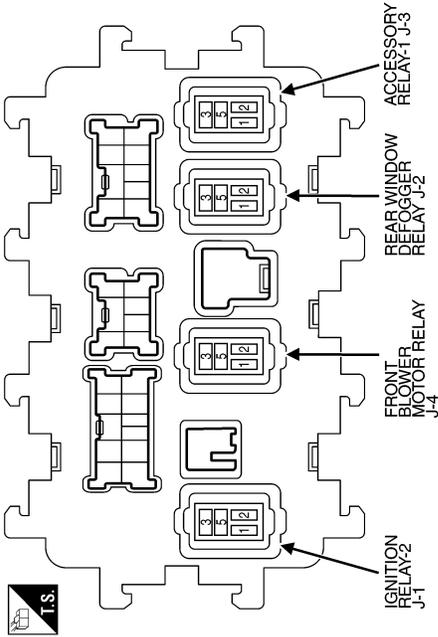
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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Connector No.	J-3
Connector Name	FUSE BLOCK (J/B) (ACCESSORY RELAY-1)
Connector Color	-



Connector No.	E27
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-

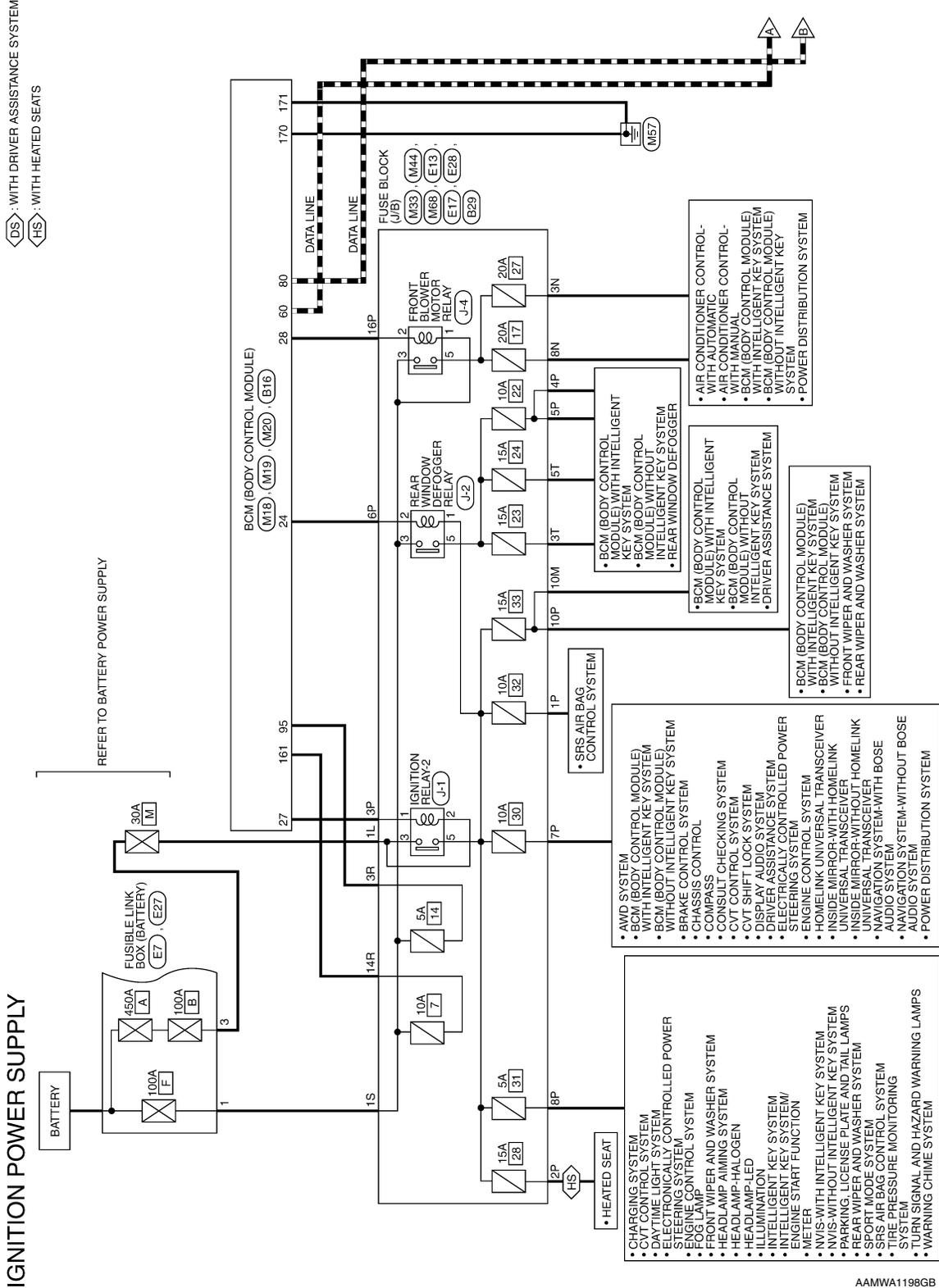
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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Wiring Diagram — Ignition Power Supply —

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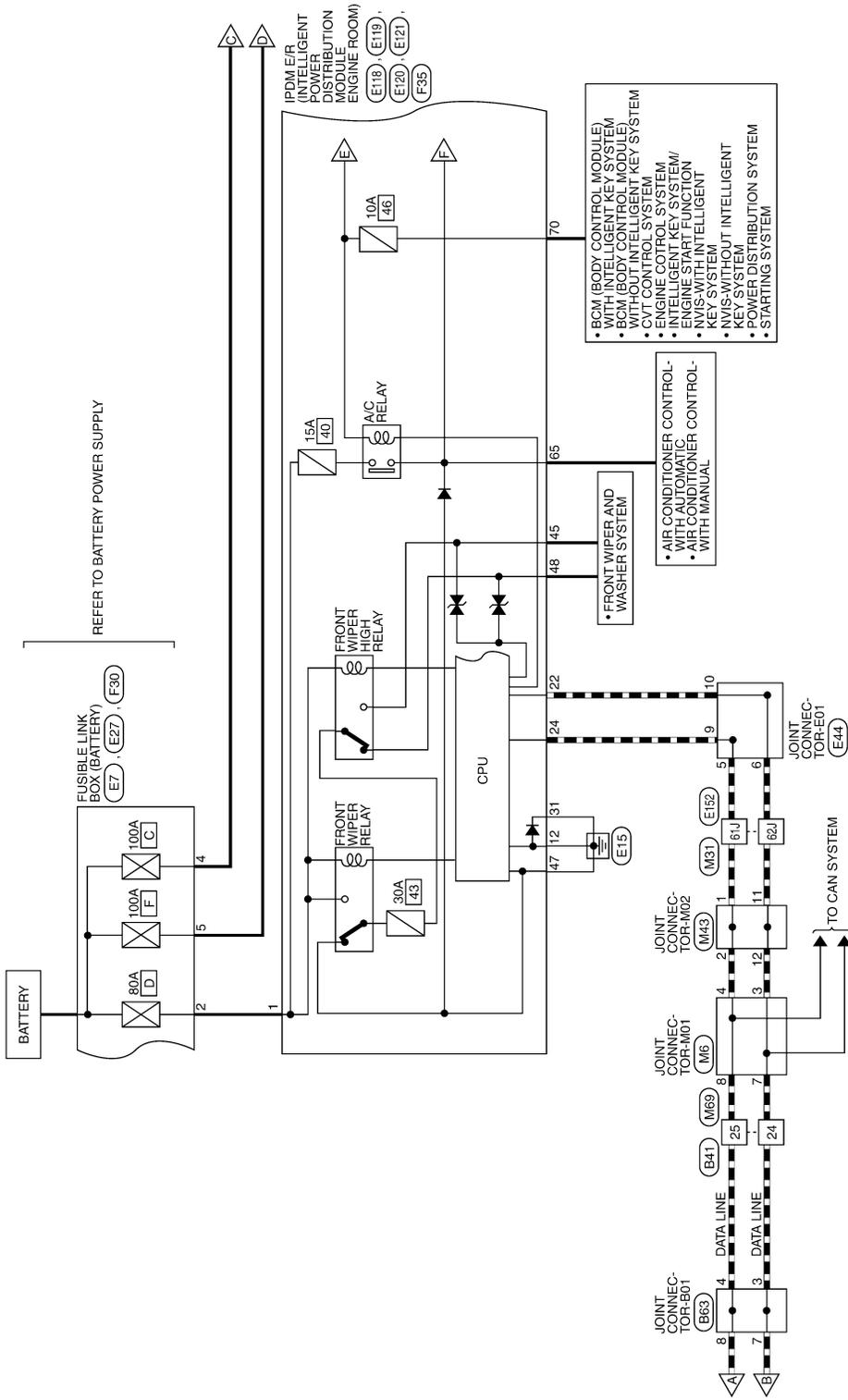


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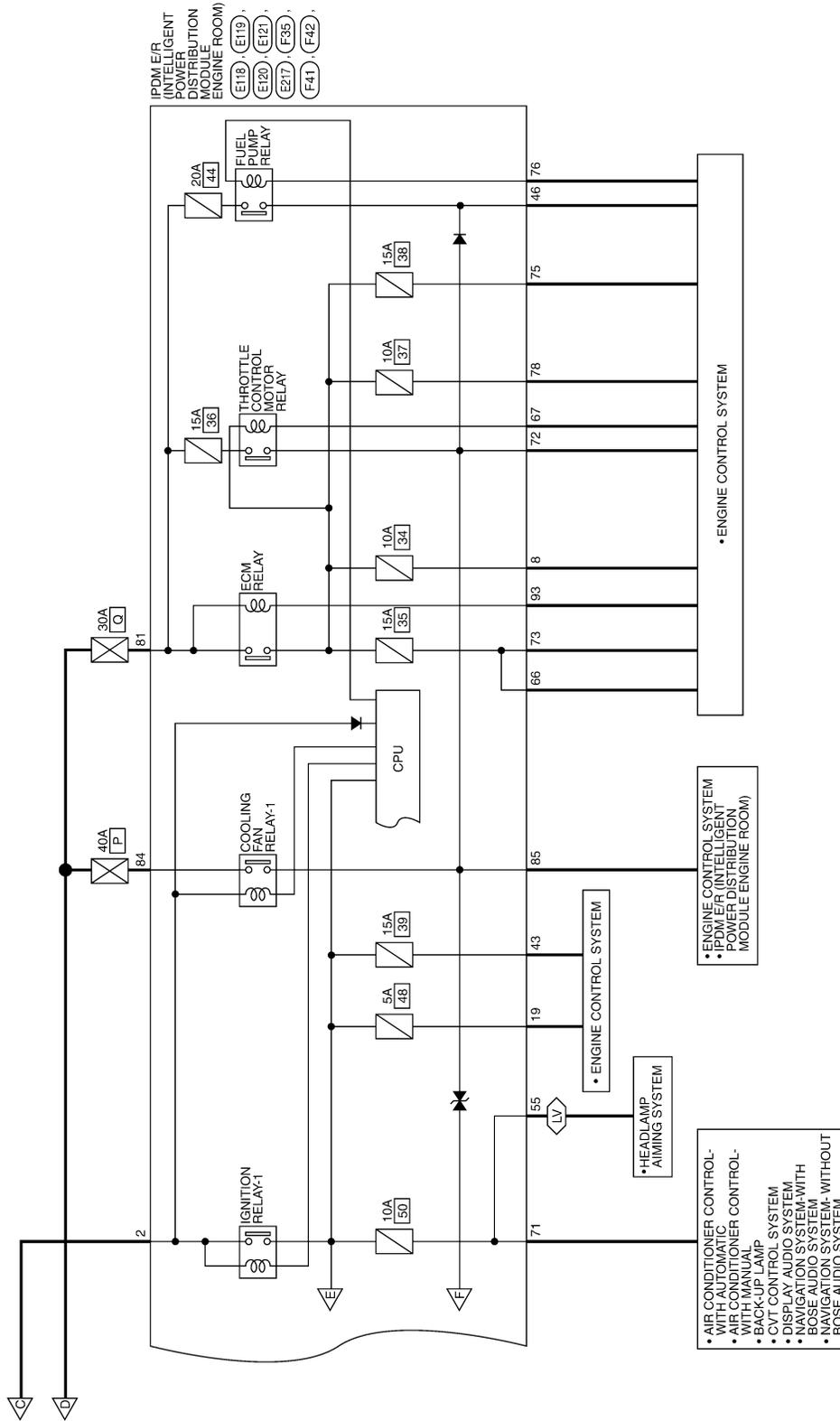


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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

◊ (LV) WITH LED HEADLAMPS



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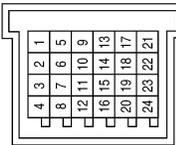
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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

IGNITION POWER SUPPLY - CONNECTORS

Connector No.	M6
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



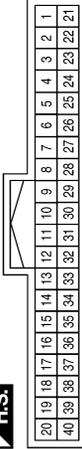
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-



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

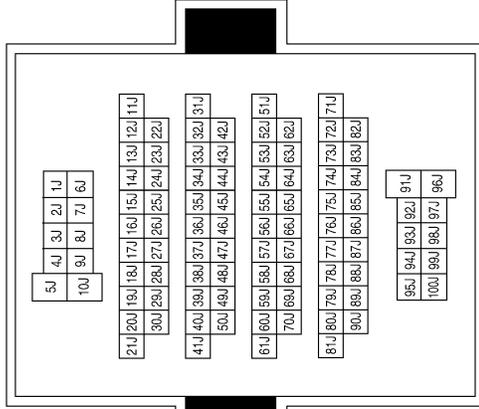
Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND 1
171	B	I GND 2

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

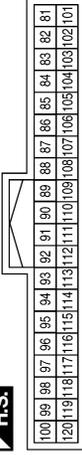


Terminal No.	Color of Wire	Signal Name
24	LA/R	O DEFROSTER RL D
27	Y	O IGN1 RL
28	LA/W	O IGN2 RL

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



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



Terminal No.	Color of Wire	Signal Name
95	V	I SHORTING PIN

Terminal No.	Color of Wire	Signal Name
61J	L	-
62J	P	-

POWER SUPPLY ROUTING CIRCUIT

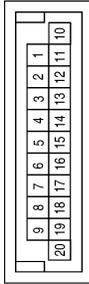
< DTC/CIRCUIT DIAGNOSIS >

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



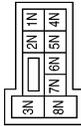
Terminal No.	Color of Wire	Signal Name
1P	R	-
2P	G	-
3P	Y	-
4P	LG	-
5P	GR	-
6P	LA/R	-
7P	Y	-
8P	LA/BR	-
10P	LG	-
16P	LA/W	-

Connector No.	M43
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
11	P	-
12	P	-

Connector No.	M33
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



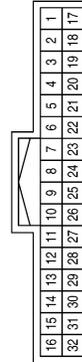
Terminal No.	Color of Wire	Signal Name
3N	Y	-
8N	SB	-

Connector No.	E7
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
3	W	-
4	L	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

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



Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

AAMIA2343GB

POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Connector No.	E27
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-

Connector No.	E17
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1L	L	-

Connector No.	E13
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

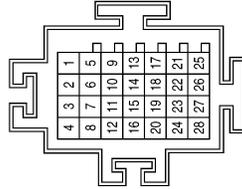


Terminal No.	Color of Wire	Signal Name
1S	G	-

Connector No.	E118
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



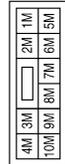
Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	FL BAT 2
2	L	FL BAT 1

Terminal No.	Color of Wire	Signal Name
5	L	-
6	P	-
9	L	-
10	P	-

Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10M	L	-

AAMIA2344GB

POWER SUPPLY ROUTING CIRCUIT

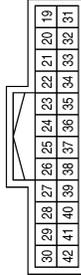
< DTC/CIRCUIT DIAGNOSIS >

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	RED



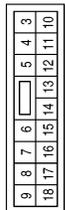
Terminal No.	Color of Wire	Signal Name
43	LG	O IGN LCS CABIN
45	V	O FR WIPER HI
46	W	O FUEL PUMP
47	B	POWER GROUND
48	Y	O FR WIPER LO

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



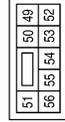
Terminal No.	Color of Wire	Signal Name
19	LG	O IGN ECM
22	P	CAN-L
24	L	CAN-H
31	B	2ND SIGNAL GROUND

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
8	BG	O ACTUATOR 4 CABIN
12	B	SIGNAL GROUND

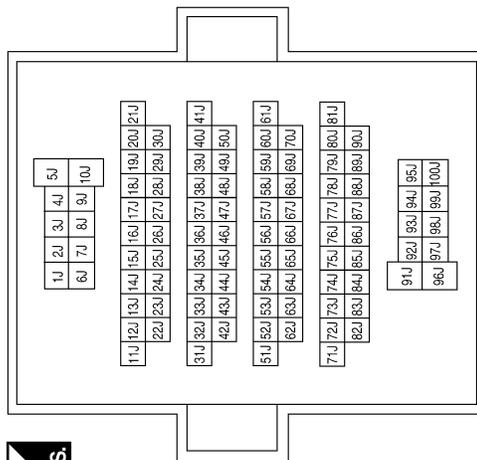
Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
55	SB	O IGN REVERSE SW AC VALVE 1

Terminal No.	Color of Wire	Signal Name
61J	L	-
62J	P	-

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



AAMIA2345GB

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POWER SUPPLY ROUTING CIRCUIT

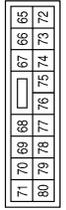
< DTC/CIRCUIT DIAGNOSIS >

Connector No.	F41
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
81	L	FLECM USM SUPPLY
84	LG	I BATT MOTOR FAN LO
85	P	O MOTOR FAN LO

Connector No.	F35
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
65	P	O AC CLUTCH
66	R	O ACTUATOR1 1
67	V	LI ECM ACT5 DRIVER
70	BG	O IGN AT LPG
71	SB	O IGN REVERSE SW AC VALVE
72	GR	O ACTUATOR5 (3FBA)
73	Y	O ACTUATOR1 2 (3FB)
75	BR	O ACTUATOR3 (3FB3)
76	P	LI FUEL PUMP DRIVER
78	L	O ACTUATOR2 (3FB2)

Connector No.	F30
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BLACK



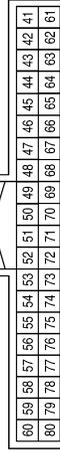
Terminal No.	Color of Wire	Signal Name
5	W	-

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



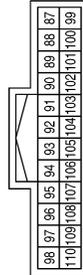
Terminal No.	Color of Wire	Signal Name
3T	G	-
5T	G	-

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
60	L	CAN-H
80	P	CAN-L

Connector No.	F42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



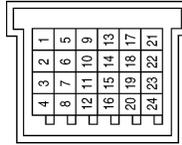
Terminal No.	Color of Wire	Signal Name
93	P	LI ECM DRIVER

AAMIA2346GB

POWER SUPPLY ROUTING CIRCUIT

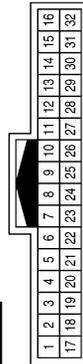
< DTC/CIRCUIT DIAGNOSIS >

Connector No.	B63
Connector Name	JOINT CONNECTOR-B01
Connector Color	GRAY



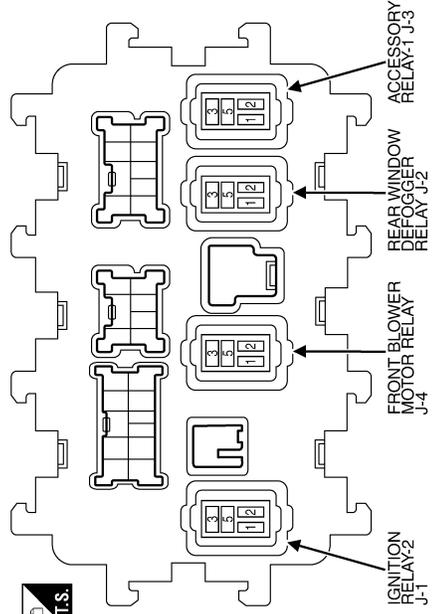
Terminal No.	Color of Wire	Signal Name
3	P	-
4	L	-
7	P	-
8	L	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE

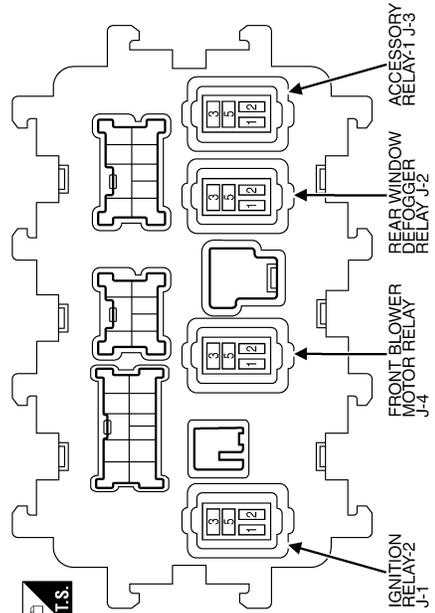


Terminal No.	Color of Wire	Signal Name
24	P	-
25	L	-

Connector No.	J-2
Connector Name	FUSE BLOCK (J/B) (REAR WINDOW DEFOGGER)
Connector Color	-



Connector No.	J-1
Connector Name	FUSE BLOCK (J/B) (IGNITION RELAY-2)
Connector Color	-

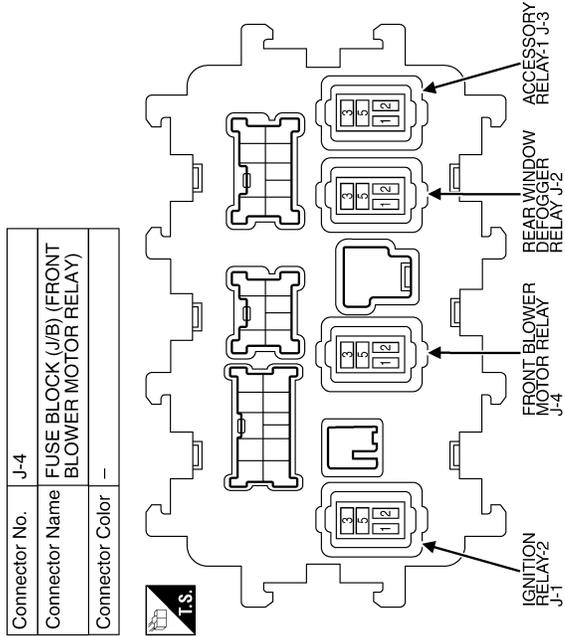


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POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >



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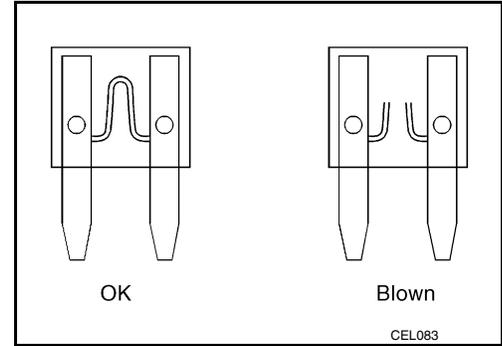
POWER SUPPLY ROUTING CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Fuse

INFOID:000000010290321

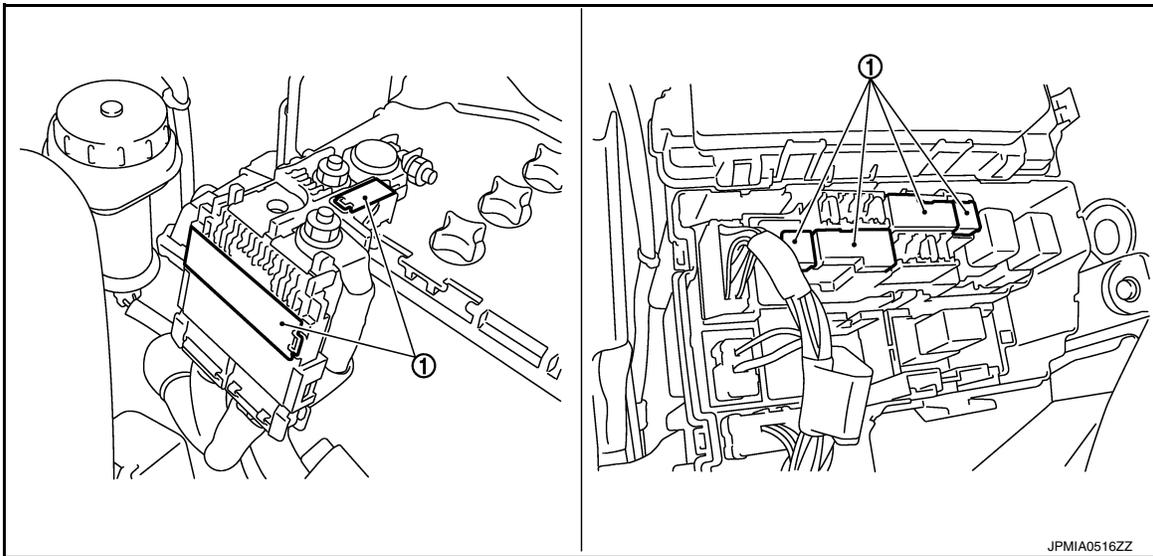
- If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.
- Use fuse of specified rating. Never use fuse of more than specified rating.
- Do not partially install fuse; always insert it into fuse holder properly.
- Remove fuse for "ELECTRICAL PARTS (BAT)" if vehicle is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



Fusible Link

INFOID:000000010290322

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.

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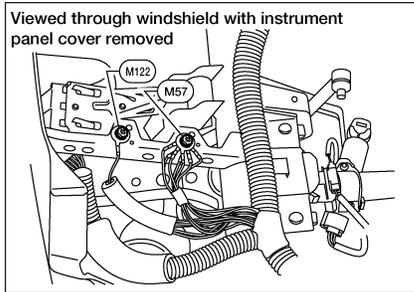
< DTC/CIRCUIT DIAGNOSIS >

GROUND

Ground Distribution

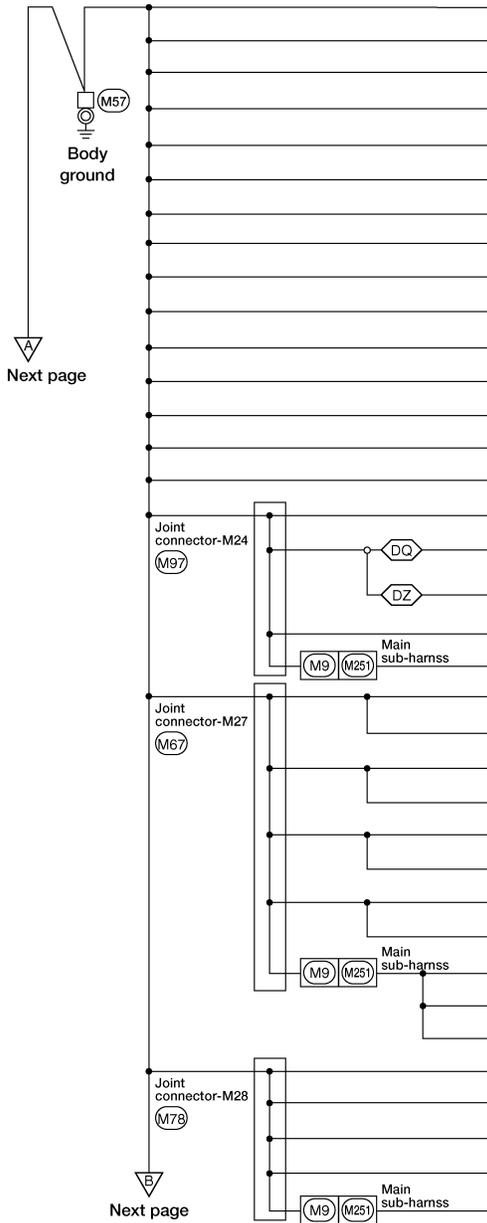
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MAIN HARNESS



◇DQ◇ : WITH DRIVER ASSISTANCE SYSTEM

◇DZ◇ : WITHOUT DRIVER ASSISTANCE SYSTEM

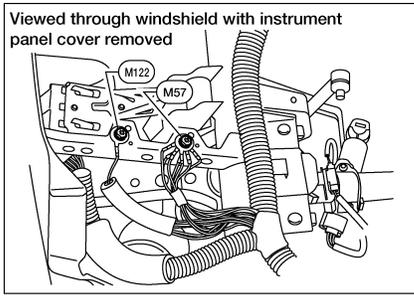


CONNECTOR NUMBER	CONNECT TO
Ⓜ4	NATS antenna amp. (without Intelligent Key System)
Ⓜ5	Dongle unit
Ⓜ20	BCM (body control module) (Terminal No. 170)
Ⓜ20	BCM (body control module) (Terminal No. 171)
Ⓜ28	Combination switch
Ⓜ50	Front air control (Terminal No. 19)
Ⓜ51	A/C switch
Ⓜ56	Steering angle sensor
Ⓜ62	Front power socket
Ⓜ63	Console power socket
Ⓜ83	Audio unit (Terminal No. 20)
Ⓜ101	AV control unit (Terminal No. 20) (without BOSE audio system)
Ⓜ108	AV control unit (Terminal No. 20) (with BOSE audio system)
Ⓜ196	Front heated seat switch RH (Terminal No. 3)
Ⓜ197	Front heated seat switch LH (Terminal No. 3)
Ⓜ87	Audio unit (Terminal No. 52)
Ⓜ103	Around view monitor control unit (Terminal No. 1) (without driver assistance system)
Ⓜ113	Around view monitor control unit (Terminal No. 1) (with driver assistance system)
Ⓜ120	Warning system buzzer
Ⓜ253	Warning system switch
Ⓜ24	Automatic back door switch (Terminal No. 3)
Ⓜ24	Automatic back door switch (Terminal No. 4)
Ⓜ79	VDC OFF switch (Terminal No. 4)
Ⓜ79	VDC OFF switch (Terminal No. 8)
Ⓜ178	Automatic back door main switch (Terminal No. 2)
Ⓜ178	Automatic back door main switch (Terminal No. 3)
Ⓜ196	Front heated seat switch RH (Terminal No. 2)
Ⓜ197	Front heated seat switch LH (Terminal No. 2)
Ⓜ252	AWD lock switch
Ⓜ254	Hill descent switch (Terminal No. 4)
Ⓜ254	Hill descent switch (Terminal No. 6)
Ⓜ2	Sport mode switch (Terminal No. 4)
Ⓜ2	Sport mode switch (Terminal No. 8)
Ⓜ26	Hazard switch (Terminal No. 3)
Ⓜ26	Hazard switch (Terminal No. 4)
Ⓜ253	Warning systems switch (Terminal No. 4)

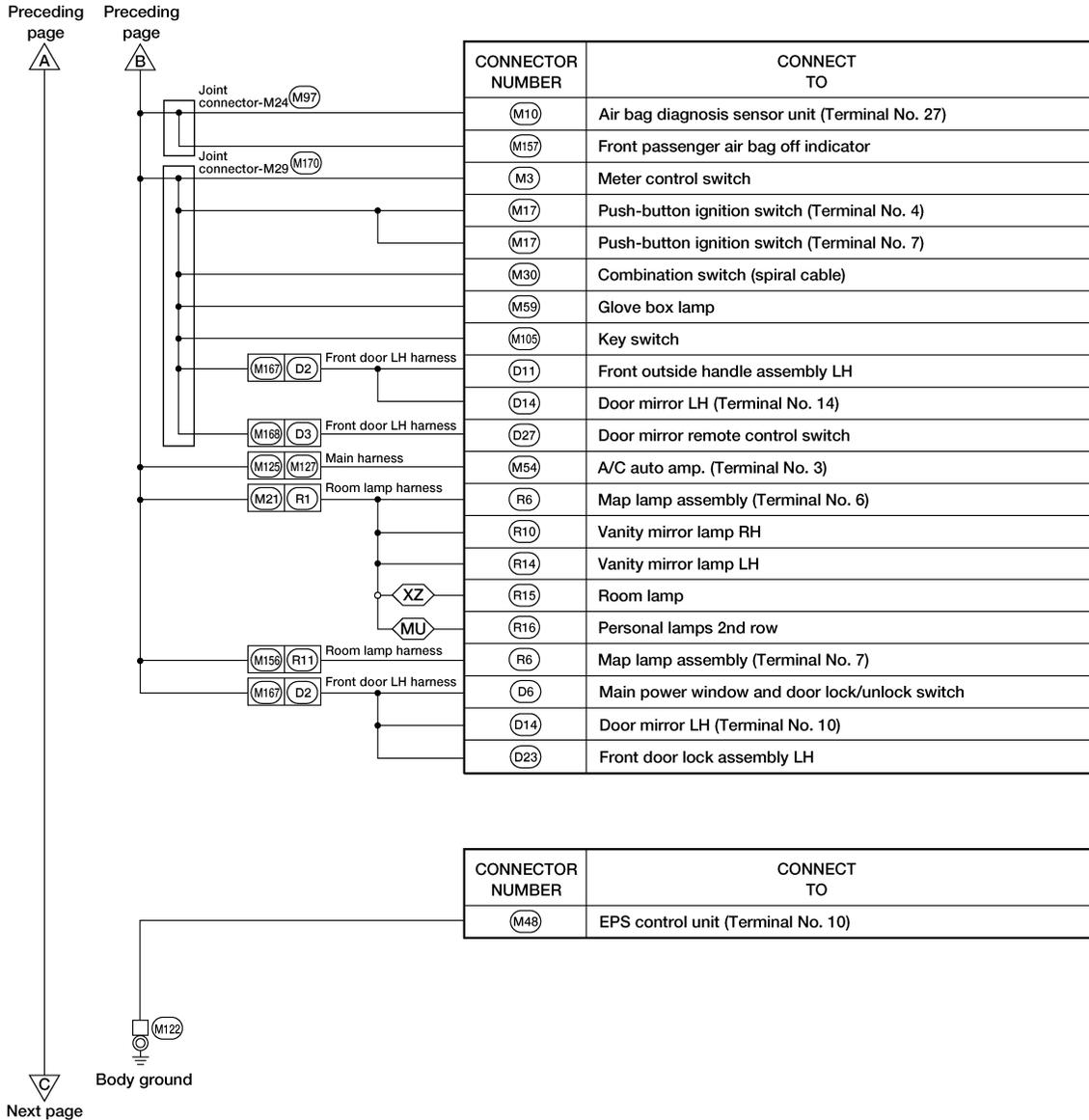
AAMIA2312GB

GROUND

< DTC/CIRCUIT DIAGNOSIS >



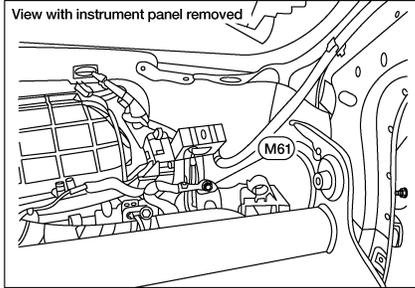
MU : WITH MOONROOF
XZ : WITHOUT MOONROOF



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< DTC/CIRCUIT DIAGNOSIS >

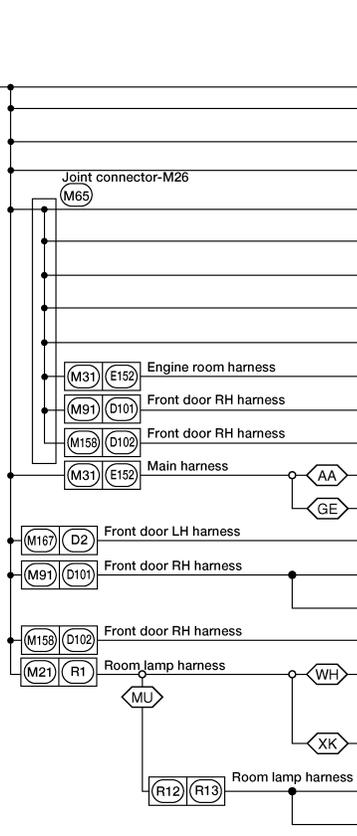


- AA : WITH AUTO A/C
- GE : WITH MANUAL A/C
- MU : WITH MOONROOF
- WH : WITH HOMELINK UNIVERSAL TRANSCEIVER
- XK : WITHOUT HOMELINK UNIVERSAL TRANSCEIVER

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Body ground



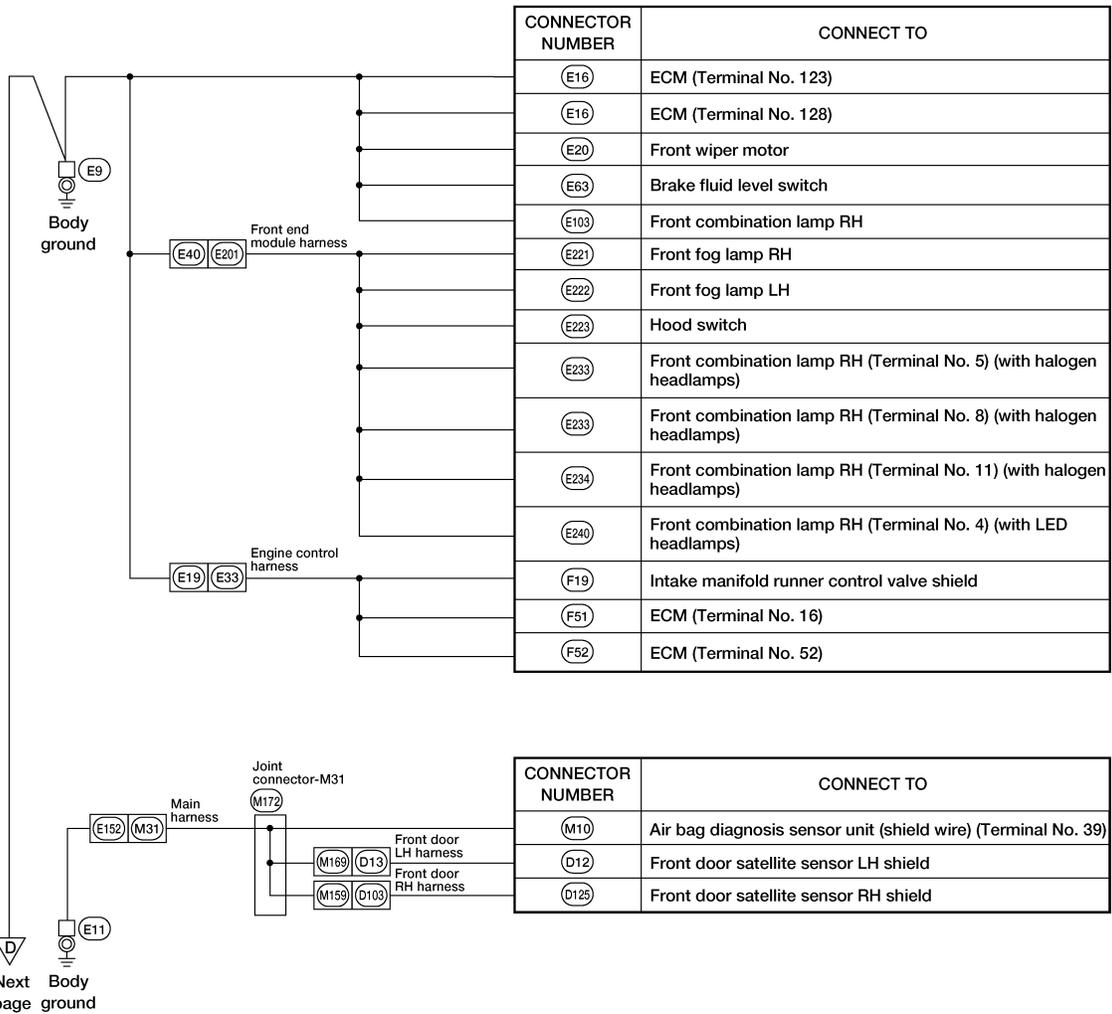
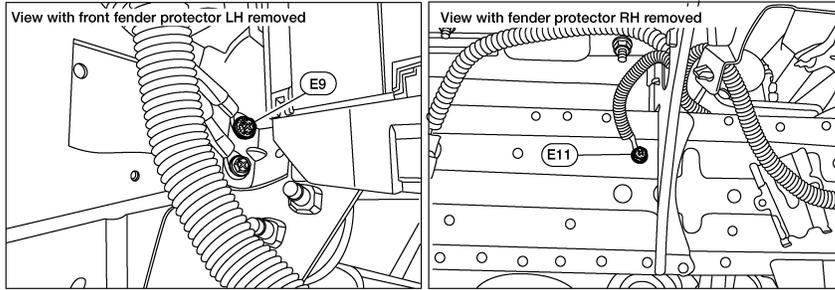
CONNECTOR NUMBER	CONNECT TO
M22	Data link connector (Terminal No. 4)
M22	Data link connector (Terminal No. 5)
M76	Combination meter (Terminal No. 1)
M77	Combination meter (Terminal No. 52)
M32	Ignition switch
M96	Chassis control module (Terminal No. 12)
M107	CVT shift selector (Terminal No. 2)
M107	CVT shift selector (Terminal No. 4)
M188	CVT shift selector
E21	Distance sensor
D128	Front outside handle assembly RH
D107	Door mirror RH (Terminal No. 14)
M133	Variable blower control (with auto A/C)
M146	Variable blower control (with manual A/C)
D5	Blind spot warning/blind spot intervention indicator LH
D108	Blind spot warning/blind spot intervention indicator RH
D112	Power window and door lock/unlock switch RH
D107	Door mirror RH (Terminal No. 10)
R7	Auto anti-dazzling inside mirror (with Homelink universal transceiver)
R9	Auto anti-dazzling inside mirror (without Homelink universal transceiver)
R4	Moonroof motor assembly
R5	Sunshade motor assembly

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GROUND

< DTC/CIRCUIT DIAGNOSIS >

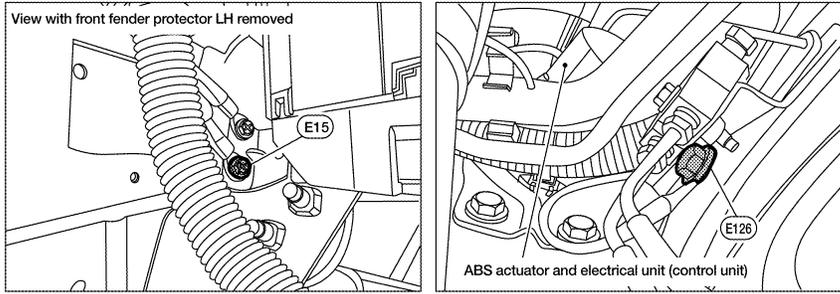
ENGINE ROOM HARNESS



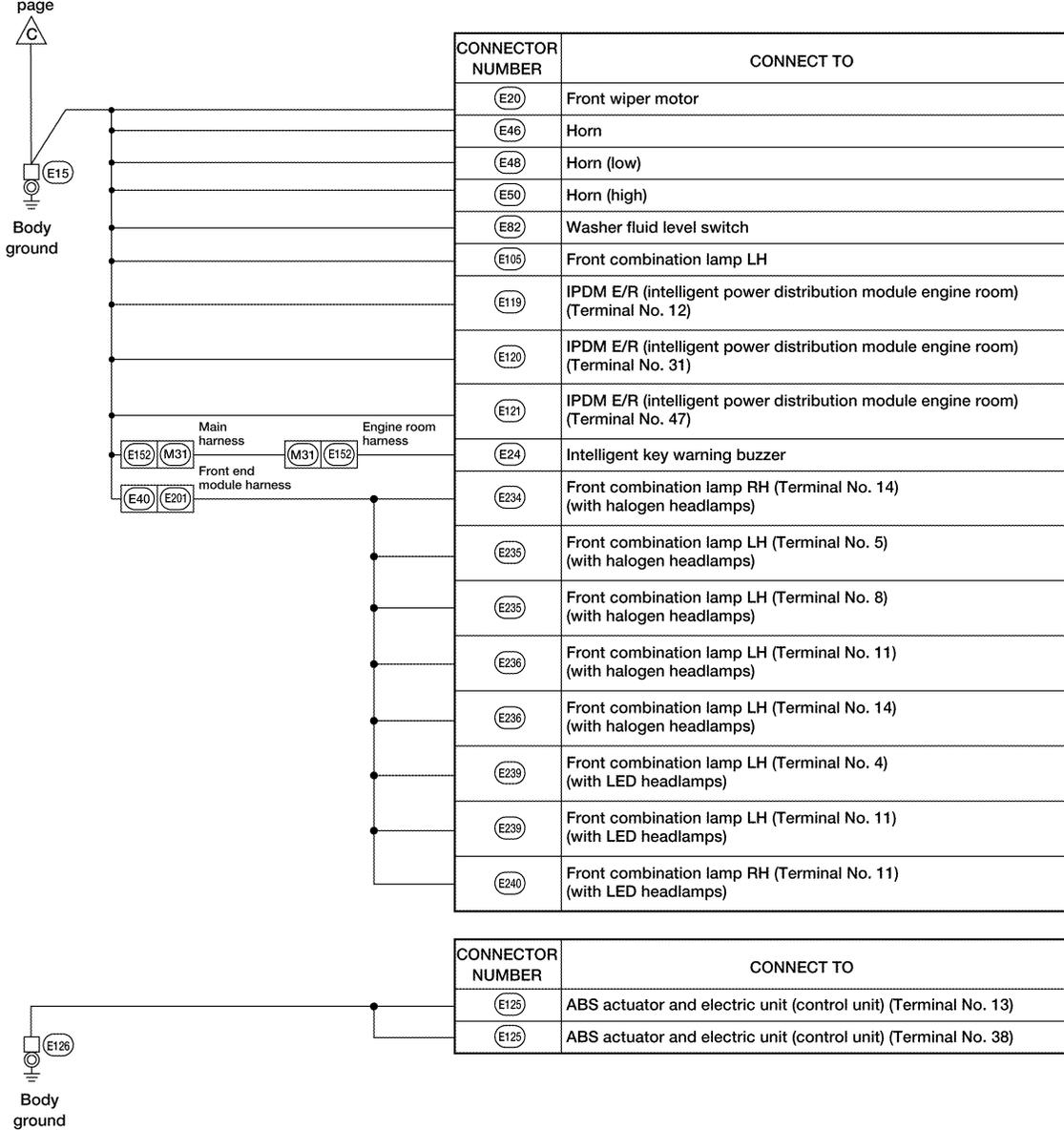
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< DTC/CIRCUIT DIAGNOSIS >



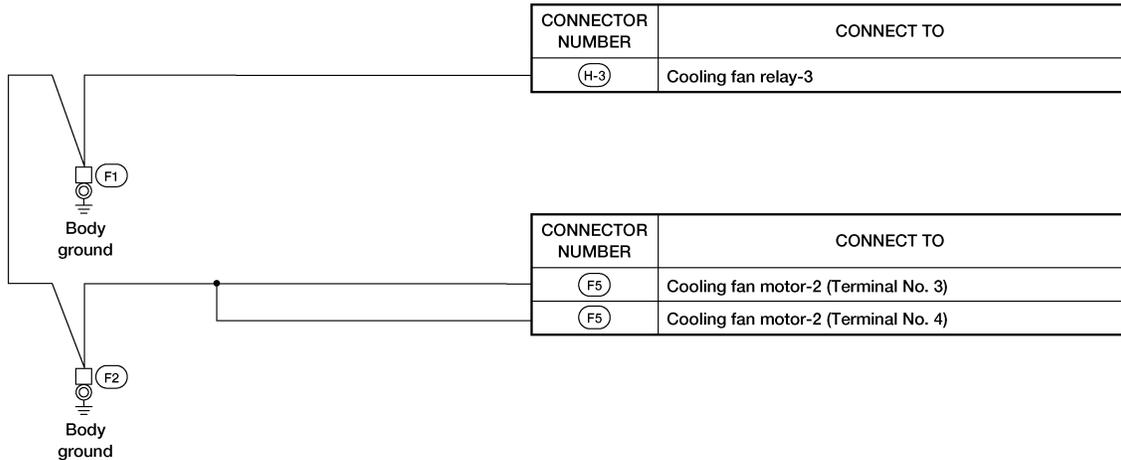
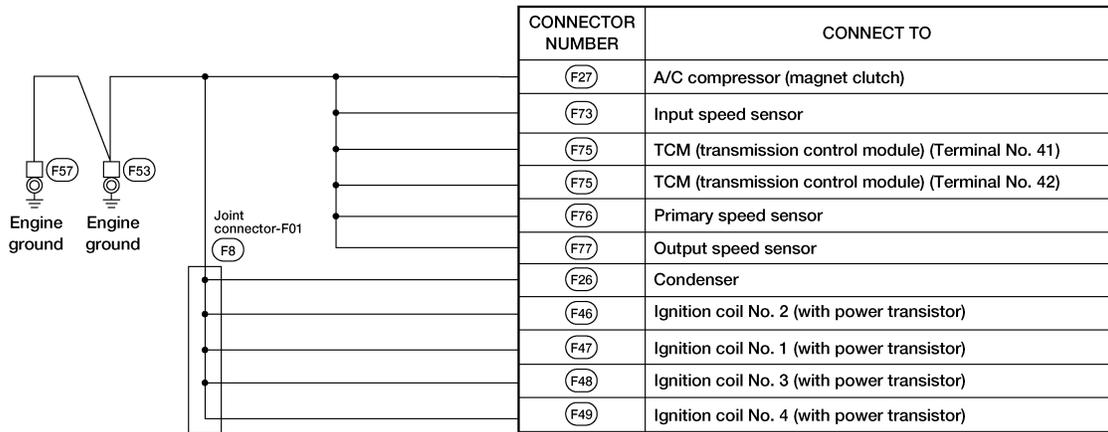
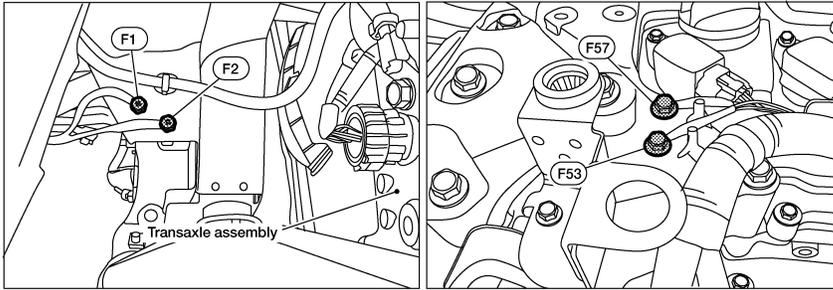
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GROUND

< DTC/CIRCUIT DIAGNOSIS > ENGINE CONTROL HARNESS



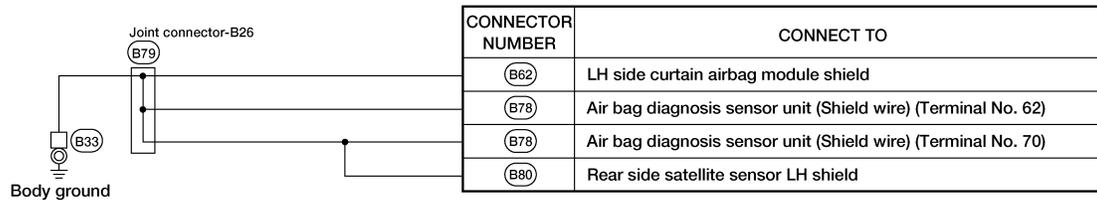
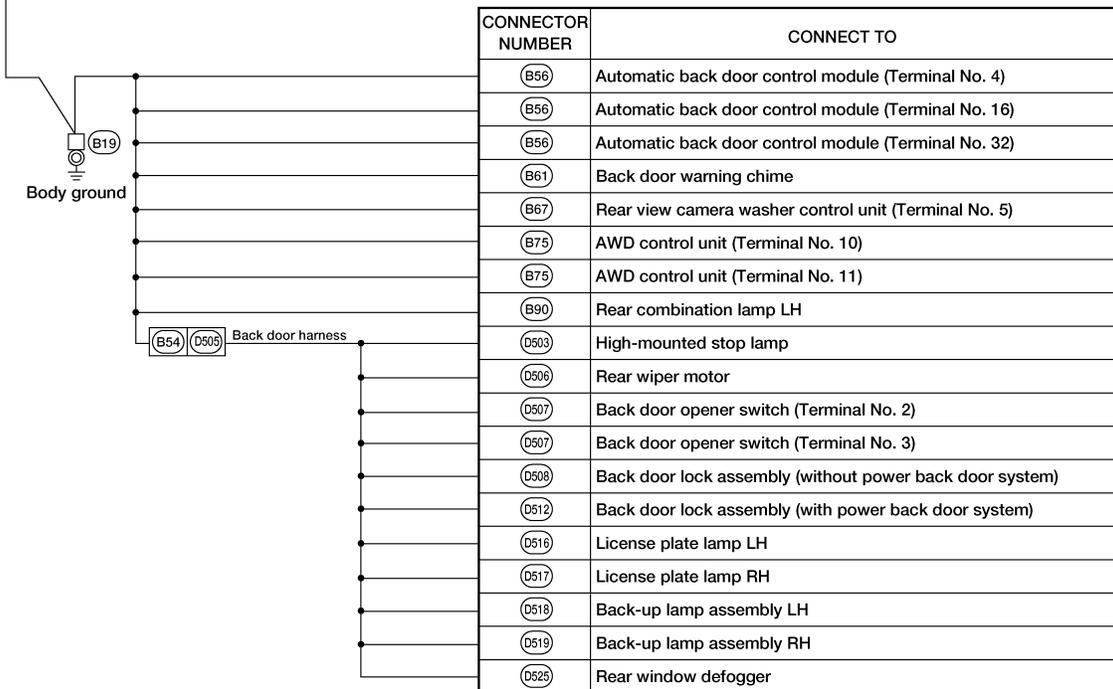
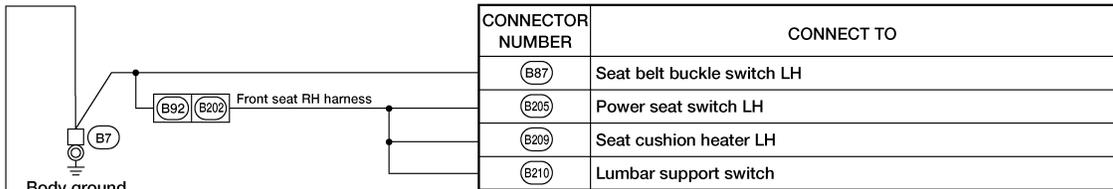
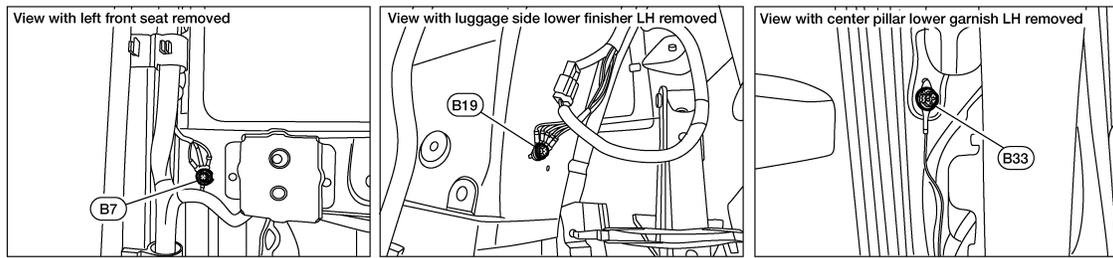
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< DTC/CIRCUIT DIAGNOSIS >

BODY HARNESS

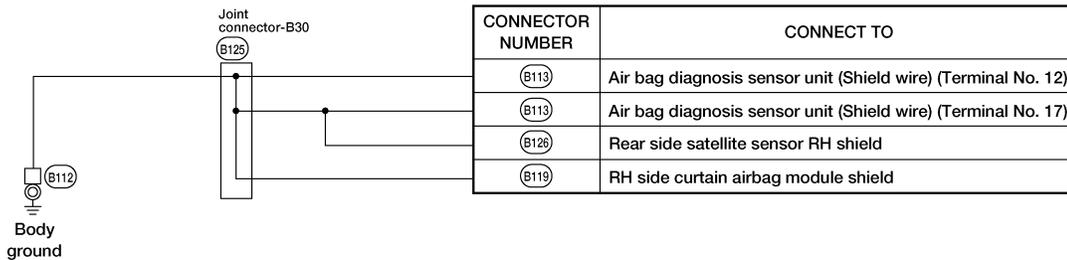
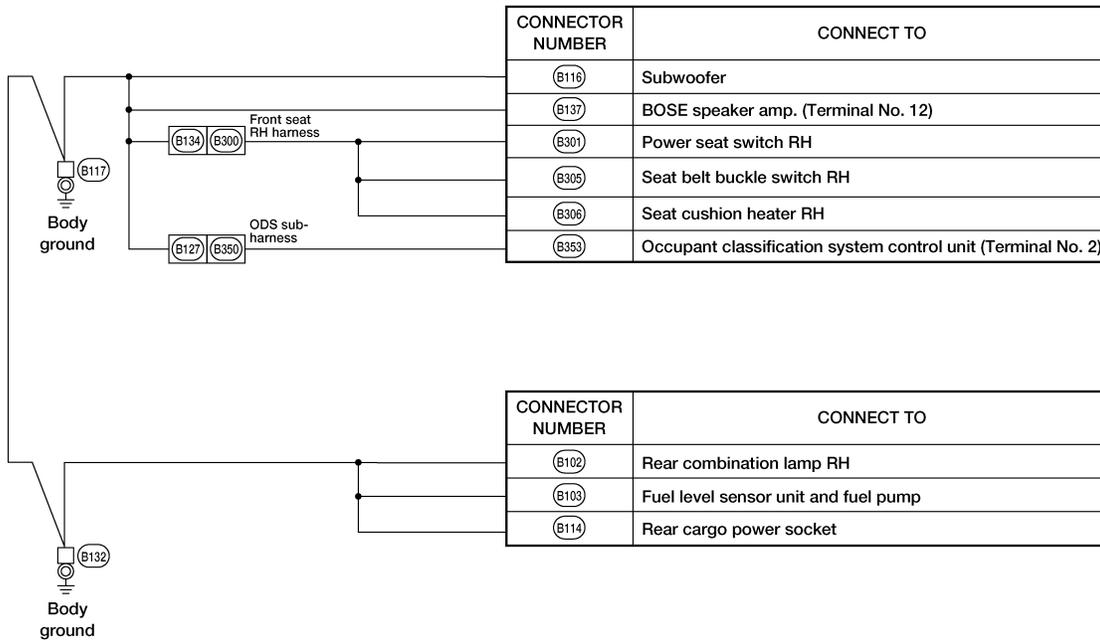
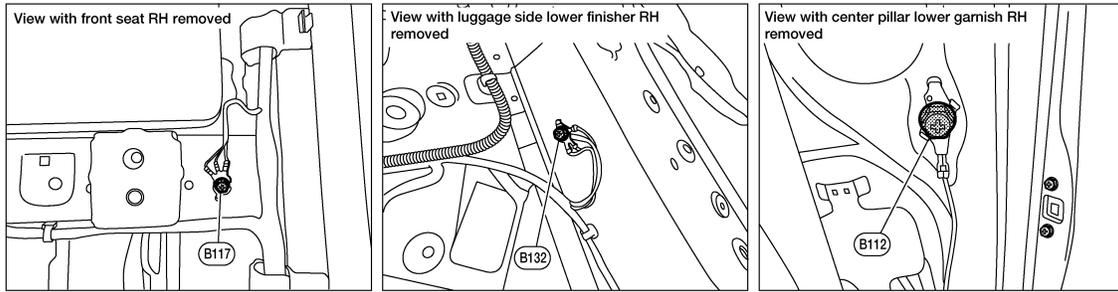


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GROUND

< DTC/CIRCUIT DIAGNOSIS >

BODY NO. 2 HARNESS



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HARNESS

< DTC/CIRCUIT DIAGNOSIS >

HARNESS

Harness Layout

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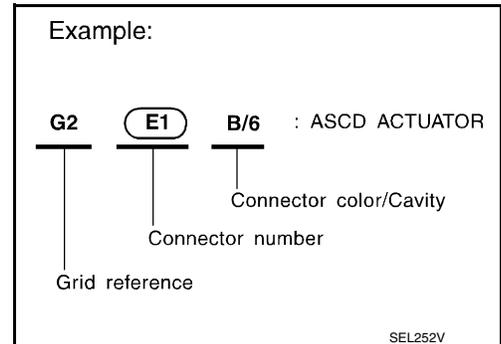
HOW TO READ HARNESS LAYOUT

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

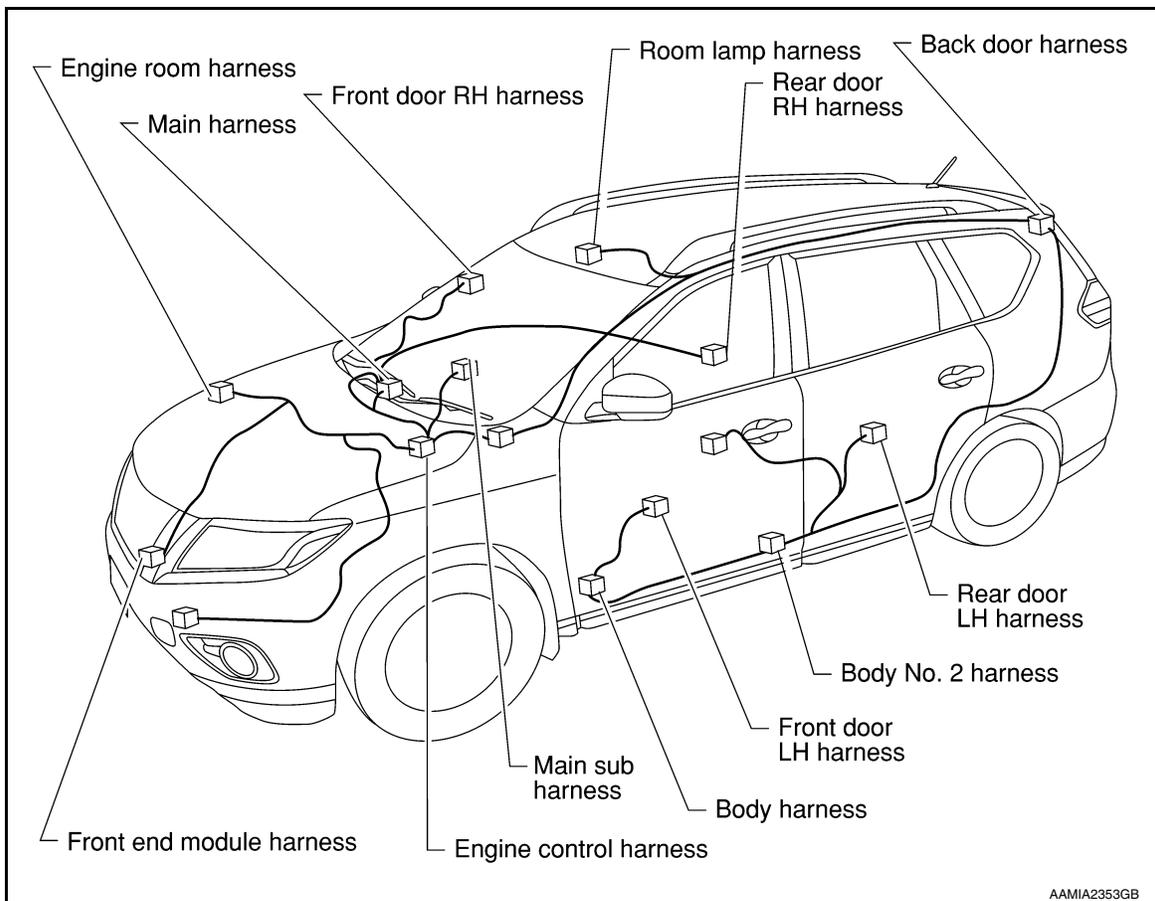
- Main Harness and Main Sub Harness
- Engine Room Harness
- Engine Room Harness (Passenger Compartment)
- Front End Module Harness
- Engine Control Harness
- Body Harness
- Body No. 2 Harness
- Room Lamp Harness

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.



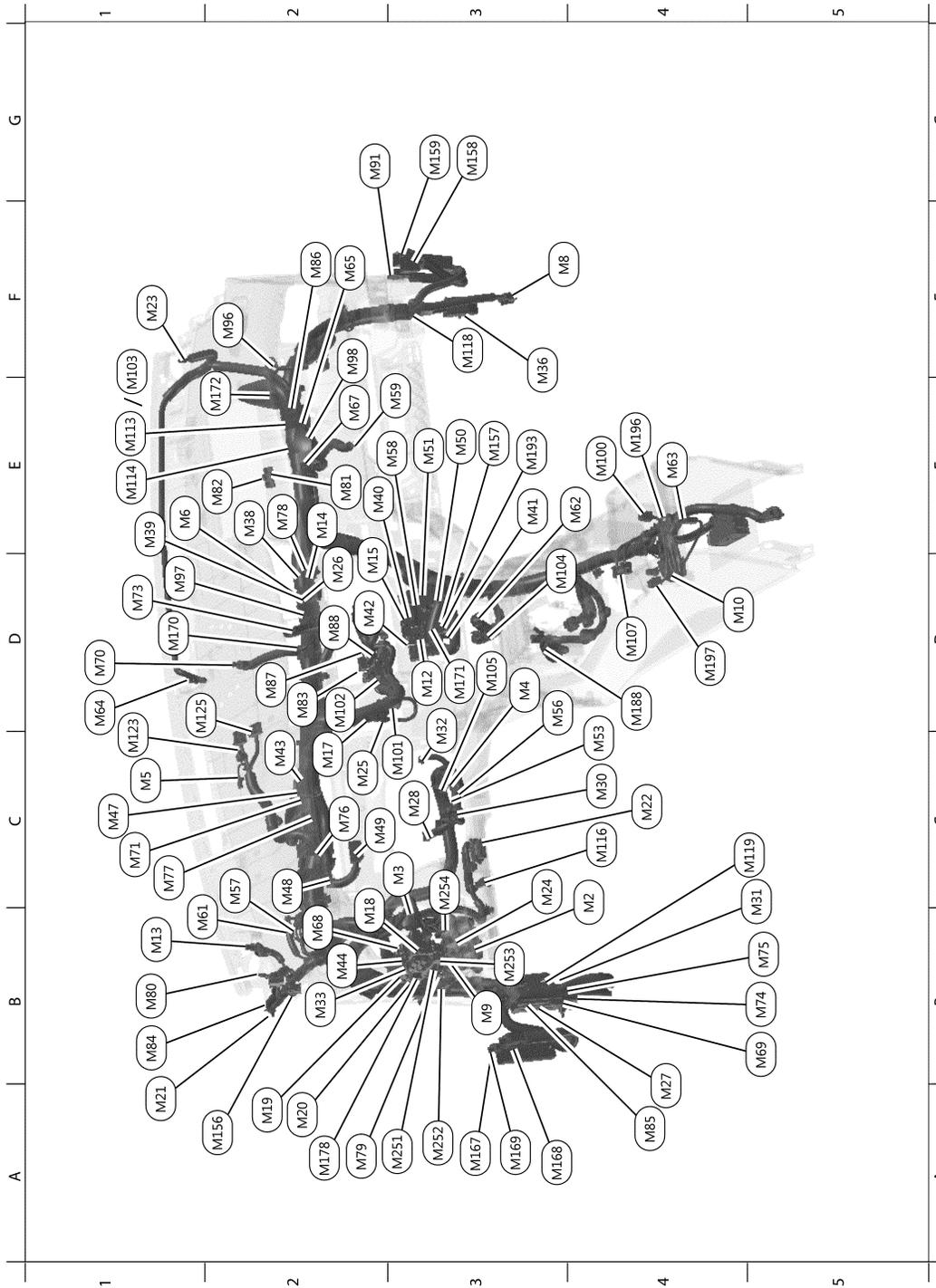
OUTLINE



HARNESS

< DTC/CIRCUIT DIAGNOSIS >

MAIN HARNESS



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C4	M2	B/8	: Sport mode switch	C1	M71	B/20	: Joint connector-M03
C3	M3	W/8	: Meter control switch	D1	M73	W/8	: Joint connector-M23
D3	M4	W/4	: NATS antenna amp. (With Intelligent Key system)	B5	M74	W/16	: To B52
C1	M5	W/4	: Dongle unit	B5	M75	B/2	: TO E36
E1	M6	GR/24	: Joint connector-M01	C2	M76	W/40	: Combination meter

HARNESS

< DTC/CIRCUIT DIAGNOSIS >

F3	M8	W/6	: To B106	C1	M77	W/12	: Combination meter
B3	M9	W/16	: To M251	E2	M78	W/8	: Joint connector-M28
D4	M10	Y/28	: Air bag diagnosis sensor unit	A2	M79	B/8	: VDC off switch
D3	M12	B/4	: Room lamp relay	B1	M80	W/2	: Front tweeter LH
B1	M13	W/3	: Optical sensor	E2	M81	O/2	: Front passenger air bag module
E2	M14	W/4	: Joint connector-M30	E2	M82	B/2	: Front passenger air bag module
D2	M15	W/3	: Optical sensor	D2	M83	W/20	: Audio unit
C2	M17	W/8	: Push-button ignition switch	B1	M84	W/4	: Joint connector-M32
B2	M18	GR/40	: BCM (Body control module)	A4	M85	W/8	: Joint connector-M33
A2	M19	B/40	: BCM (Body control module)	F2	M86	W/8	: Joint connector-M34
A2	M20	BR/16	: BCM (Body control module)	D2	M87	W/32	: Audio unit
A1	M21	W/8	: To R1	D2	M88	W/8	: Audio unit
C4	M22	W/16	: Data link connector	G2	M91	W/24	: To D101
F1	M23	W/2	: Front tweeter RH	F2	M96	W/24	: Chassis control module
C3	M24	G/8	: Automatic back door switch	D1	M97	W/8	: Joint connector-M24
C2	M25	W/3	: NATS antenna amp. (With Intelligent Key system)	F2	M98	W/8	: Joint connector-M22
D2	M26	W/4	: Hazard switch	E4	M100	W/8	: AWD shift switch
A4	M27	W/8	: Joint connector-M13	C3	M101	W/20	: AV control unit (Without BOSE audio system)
C3	M28	W/16	: Combination switch	D2	M102	W/24	: AV control unit (Without BOSE audio system)
C4	M30	W/12	: Combination switch (Spiral cable)	F1	M103	W/40	: Around view monitor control unit (Without driver assistance system)
C5	M31	SMJ	: To E152	D3	M104	W/4	: Aux in jack
D3	M32	W/4	: Ignition switch	D3	M105	W/2	: Key switch
B2	M33	W/8	: Fuse block (J/B)	D4	M107	W/16	: CVT shift selector
F3	M36	SMJ	: To B136	E1	M113	W/40	: Around view monitor control unit (With driver assistance system)
E2	M38	W/6	: Joint connector-M05	E1	M114	W/32	: Around view monitor control unit (With driver assistance system)
E1	M39	W/6	: Joint connector-M06	C4	M116	W/8	: Calibration control
E2	M40	W/2	: Circuit breaker-1	F3	M118	W/12	: Option connector 11
E3	M41	W/2	: In-vehicle sensor	C5	M119	W/12	: Option connector 10
D2	M42	W/2	: Circuit breaker-2	C1	M123	W/6	: To M132
C2	M43	B/20	: Joint connector-M02	D1	M125	W/32	: To M127
B2	M44	W/16	: Fuse block (J/B)	A2	M156	W/24	: To R11
C1	M47	B/20	: Joint connector-M04	E3	M157	B/4	: Front passenger air bag off indicator
C2	M48	B/2	: EPS control unit	G3	M158	W/16	: To D102
C2	M49	W/8	: EPS control unit	G3	M159	Y/4	: To D103
E3	M50	W/32	: Front air control	A3	M167	W/16	: To D2
E3	M51	B/8	: A/C switch	A3	M168	W/24	: To D3
C4	M53	Y/4	: Combination switch (Spiral cable)	A3	M169	Y/4	: To D13
D3	M56	GR/8	: Steering angle sensor	D1	M170	W/8	: Joint connector-M29
C2	M57	—	: Ground	D3	M171	W/4	: Joint connector-M25
E3	M58	B/4	: Power window relay	E2	M172	W/4	: Joint connector-M31
E3	M59	W/2	: Glove box lamp	A2	M178	B/8	: Automatic back door main switch

HARNESS

< DTC/CIRCUIT DIAGNOSIS >

B1	M61	—	: Ground	D4	M188	BR/2	: CVT shift selector
E4	M62	B/3	: Front power socket	E3	M193	W/8	: Joint connector-M18
E4	M63	B/3	: Console power socket	E4	M196	BR/6	: Front heated seat switch RH
D1	M64	B/2	: Sunload sensor	D4	M197	W/6	: Front heated seat switch LH
F2	M65	W/8	: Joint connector-M26	Main sub harness			
E2	M67	W/8	: Joint connector-M27	A3	M251	W/16	: To M9
B2	M68	BR/16	: Fuse block (J/B)	A3	M252	W/10	: AWD lock switch
B5	M69	W/32	: To B41	B3	M253	W/8	: Warning system switch
D1	M70	BR/2	: Center speaker	C3	M254	GR/10	: Hill descent control switch

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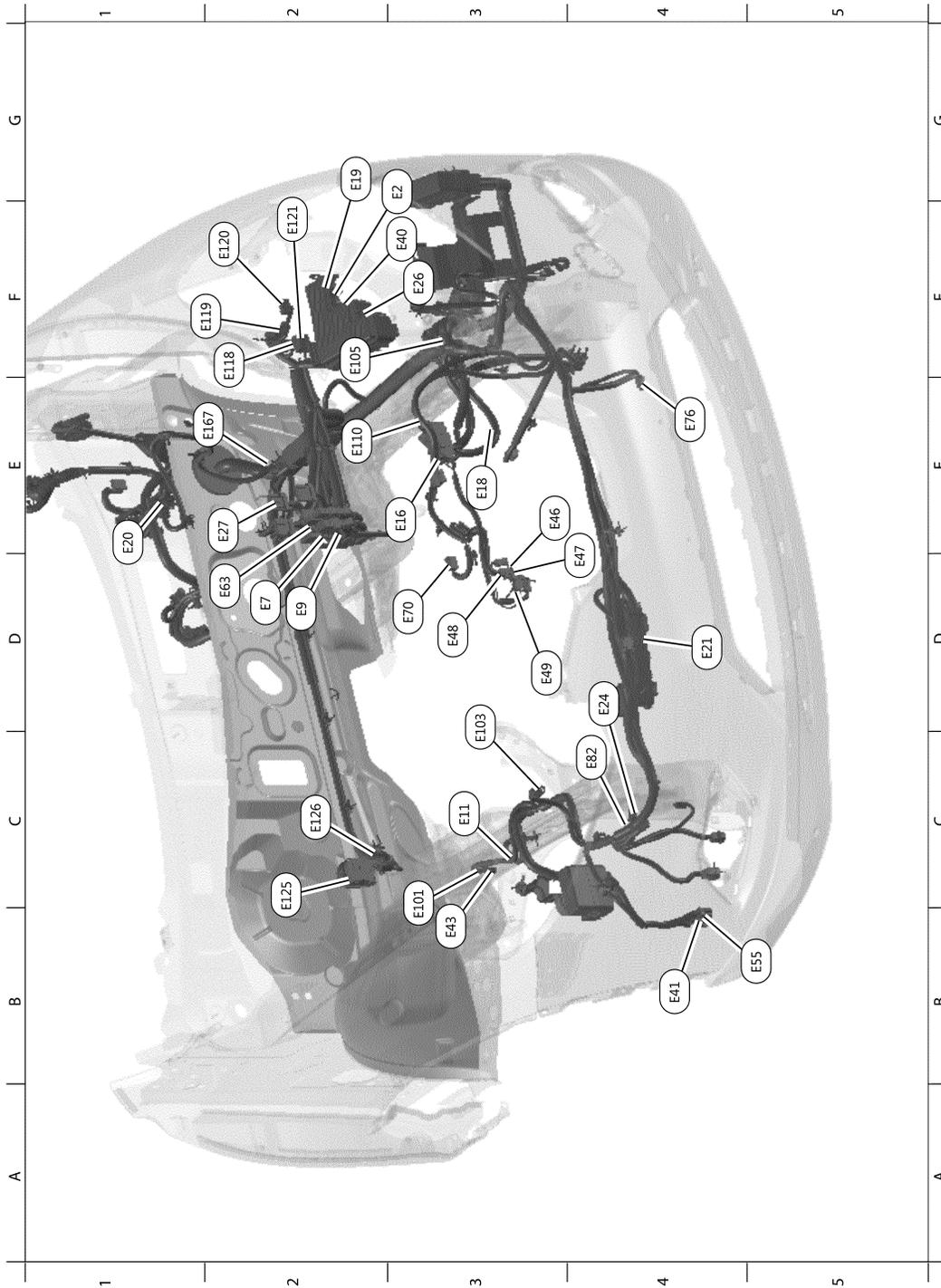
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< DTC/CIRCUIT DIAGNOSIS >

ENGINE ROOM HARNESS



AAMIA0255ZZ

G3	E2	W/2	: To F32	D3	E49	BR/1	: Horn (Low)
D2	E7	GR/2	: Fusible link box (Battery)	B5	E55	B/2	: Rear view camera washer motor
D2	E9	—	: Ground	D2	E63	B/2	: Brake fluid level switch
C3	E11	—	: Ground	D3	E70	Y/2	: Crash zone sensor
E3	E16	B/32	: ECM	E4	E76	B/2	: Ambient sensor

HARNESSES

< DTC/CIRCUIT DIAGNOSIS >

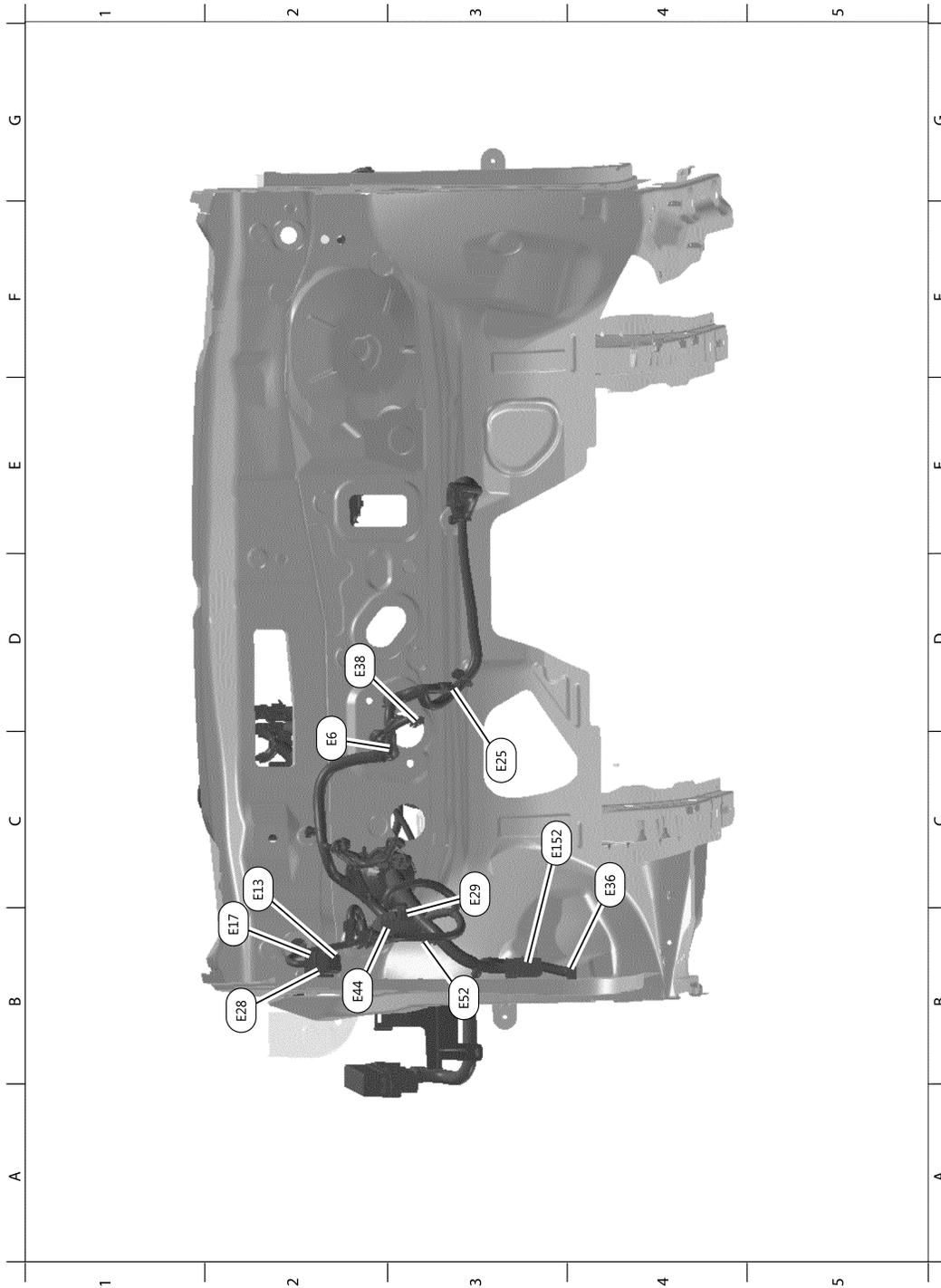
E3	E18	GR/2	: Front wheel sensor LH	C4	E82	W/2	: Washer fluid level switch
G2	E19	BR/16	: To F33	C3	E101	W/3	: Anti-theft horn relay
E1	E20	GR/5	: Front wiper motor	D3	E103	GR/3	: Front combination lamp RH
D4	E21	B/8	: Distance sensor	F2	E105	GR/3	: Front combination lamp LH
D4	E24	BR/3	: Intelligent Key warning buzzer	E2	E110	B/3	: Front height sensor
F3	E26	W/24	: To E209	F2	E118	B/2	: IPDM E/R (Intelligent power distribution module engine room)
E2	E27	BR/2	: Fusible link box (Battery)	F2	E119	GR/16	: IPDM E/R (Intelligent power distribution module engine room)
F3	E40	W/4	: To E40	F2	E120	GR/24	: IPDM E/R (Intelligent power distribution module engine room)
B4	E41	B/2	: Front and rear washer motor	F2	E121	R/6	: IPDM E/R (Intelligent power distribution module engine room)
B3	E43	GR/2	: Front wheel sensor RH	C2	E125	B/37	: ABS actuator and electric unit (Control unit)
E3	E46	B/1	: Horn	C2	E126	—	: Ground
E4	E47	B/1	: Horn	E2	E167	B/3	: Vacuum sensor
D3	E48	B/1	: Horn (Low)				

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< DTC/CIRCUIT DIAGNOSIS >

ENGINE ROOM HARNESS (PASSENGER COMPARTMENT)



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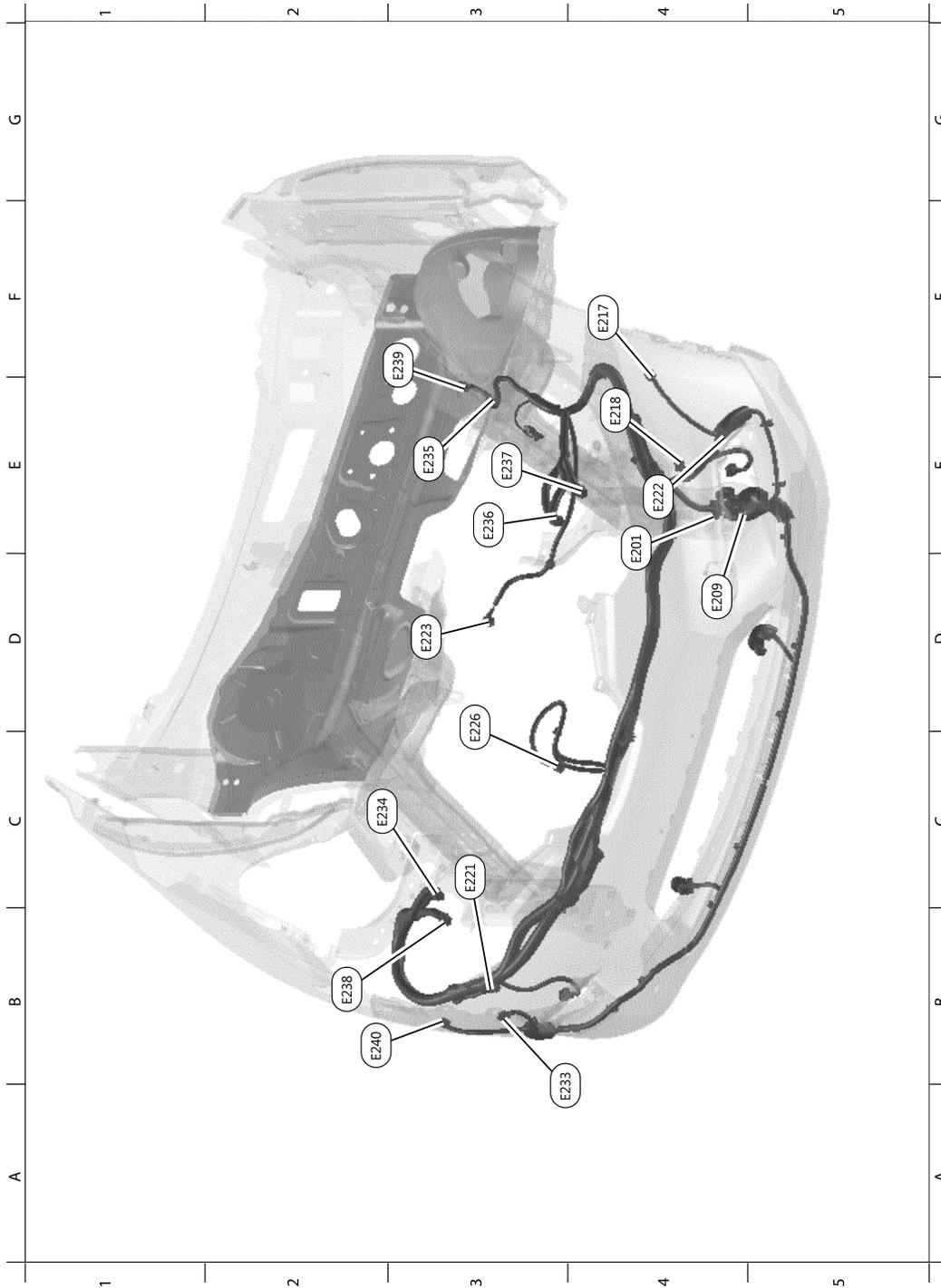
C2	E6	BR/2	: Brake pedal position switch	C4	E36	B/2	: To M75
C2	E13	W/1	: Fuse block (J/B)	D2	E38	W/4	: Stop lamp switch
B2	E17	W/1	: Fuse block (J/B)	B2	E44	W/28	: Joint connector-E01
C3	E25	B/6	: Accelerator pedal position (APP) sensor	B3	E52	B/1	: Parking brake switch

HARNESS

< DTC/CIRCUIT DIAGNOSIS >

B2	E28	W/10	: Fuse block (J/B)	C3	E152	SMJ	: To M31
C3	E29	B/24	: BCM (Body control module)				

FRONT END MODULE HARNESS



AAMIA0265ZZ

E4	E201	W/4	: To E40	A3	E233	B/6	: Front combination lamp RH (With halogen headlamps)
D4	E209	W/24	: To E26	C2	E234	GR/6	: Front combination lamp RH (With halogen headlamps)

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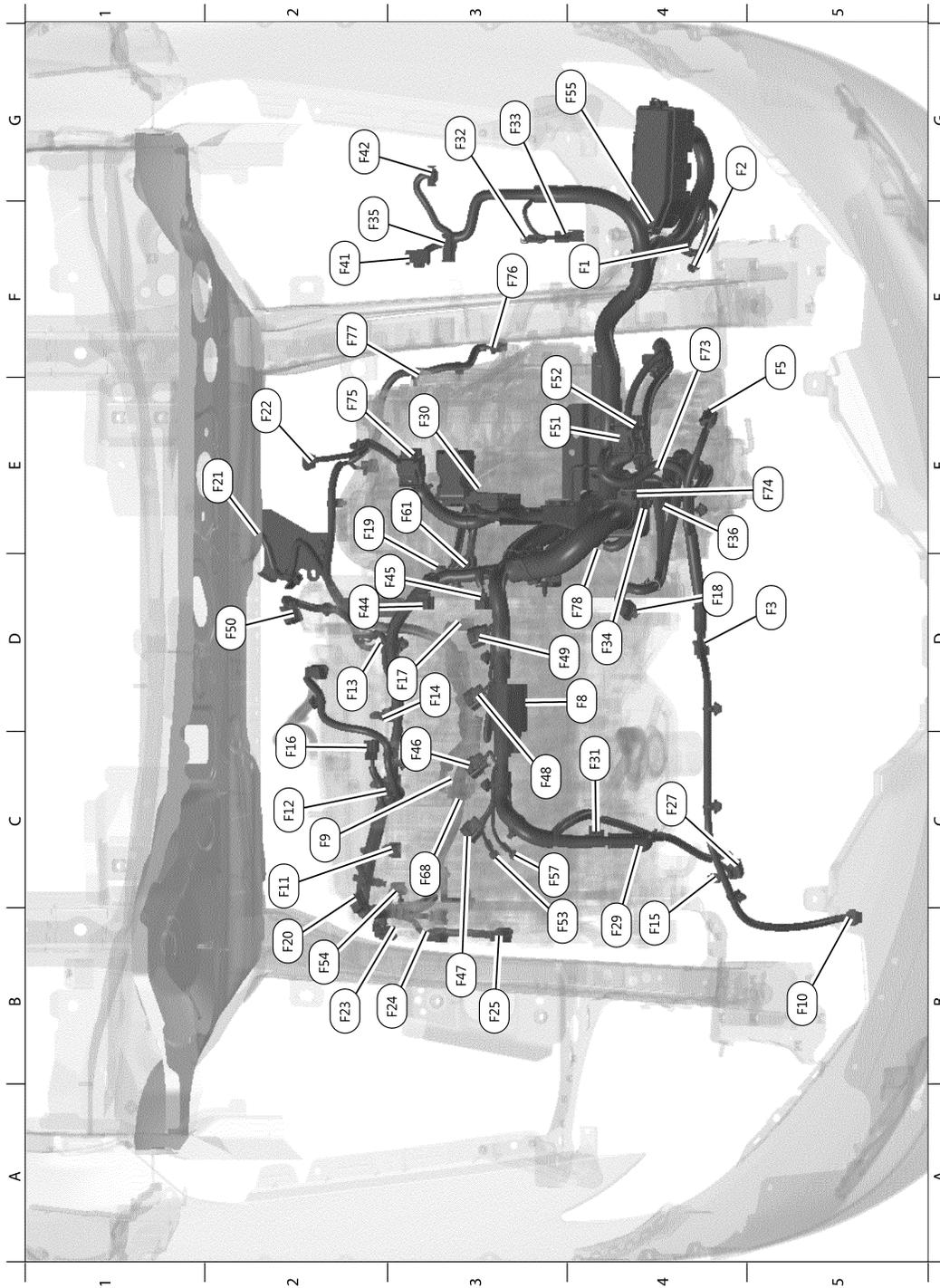
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< DTC/CIRCUIT DIAGNOSIS >

F4	E217	BR/8	: IPDM E/R (Intelligent power distribution module engine room)	E3	E235	B/6	: Front combination lamp LH (With halogen headlamps)
E4	E218	W/8	: IPDM E/R (Intelligent power distribution module engine room)	E3	E236	GR/6	: Front combination lamp LH (With halogen headlamps)
C3	E221	B/2	: Front fog lamp RH	E3	E237	B/3	: Front combination lamp LH(Head lamp aiming motor)
E4	E222	B/2	: Front fog lamp LH	B2	E238	B/3	: Front combination lamp RH(Head lamp aiming motor)
D3	E223	GR/2	: Hood switch	F3	E239	B/8	: Front combination lamp LH (With LED headlamps)
D3	E226	B/6	: Front camera	B2	E240	B/8	: Front combination lamp RH (With LED headlamps)

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< DTC/CIRCUIT DIAGNOSIS > ENGINE CONTROL HARNESS



AAMIA0257ZZ

F4	F1	—	: Engine ground	G3	F33	BR/16	: To E19
G4	F2	—	: Engine ground	D4	F34	—	: Starter motor
D5	F3	GR/4	: Cooling fan motor-1	F2	F35	W/16	: IPDM E/R (Intelligent power distribution module engine room)
F5	F5	GR/4	: Cooling fan motor-2	E4	F36	—	: Starter motor

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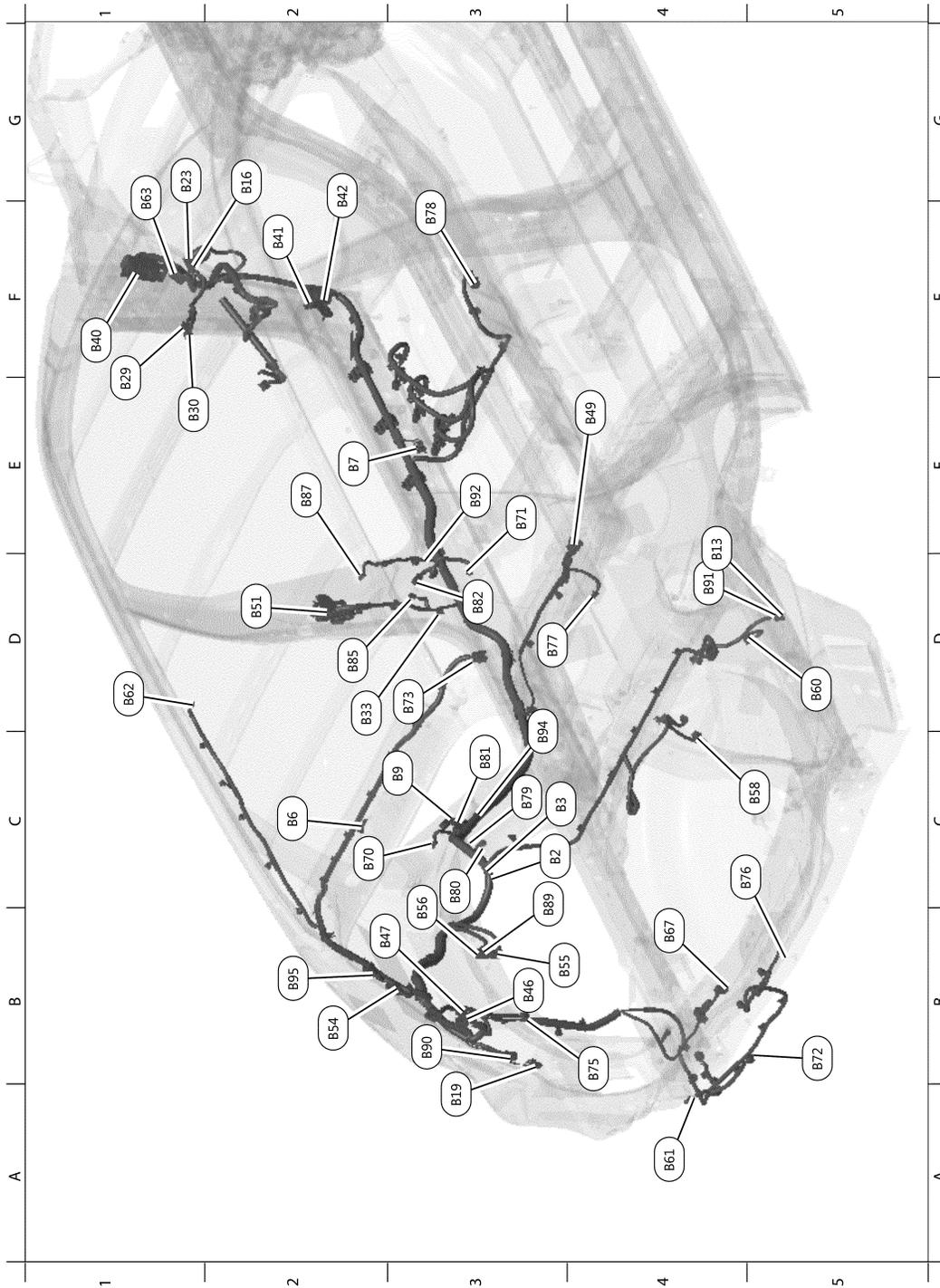
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D4	F8	B/10	: Joint connector-F01	F2	F41	GR/6	: IPDM E/R (Intelligent power distribution module engine room)
C2	F9	GR/2	: Knock sensor	G2	F42	B/24	: IPDM E/R (Intelligent power distribution module engine room)
B5	F10	B/3	: Refrigerant pressure sensor	D2	F44	B/3	: Camshaft position sensor
C2	F11	GR/2	: Fuel injector no.1	D3	F45	B/3	: Exhaust position sensor
C2	F12	GR/2	: Fuel injector no.2	C3	F46	GR/3	: Ignition coil no.2
D2	F13	GR/2	: Fuel injector no.4	B3	F47	GR/3	: Ignition coil no.1
D3	F14	GR/2	: Fuel injector no.3	C3	F48	GR/3	: Ignition coil no.3
B4	F15	GR/2	: A/C compressor (Electrical control valve)	D3	F49	GR/3	: Ignition coil no.4
C2	F16	B/2	: EVAP canister purge volume control solenoid valve	D2	F50	B/6	: Electric throttle control actuator
D3	F17	B/3	: Crankshaft position sensor	E3	F51	B/48	: ECM
D4	F18	GR/4	: Air fuel ratio (A/F) sensor 1	F3	F52	BR/48	: ECM
E2	F19	B/2	: Intake manifold runner control valve	B3	F53	—	: Engine ground
B2	F20	B/3	: Intake manifold runner control valve position sensor	B2	F54	B/3	: Engine oil pressure sensor
E2	F21	B/4	: Heated oxygen sensor 2	G4	F55	B/4	: Starter cut relay
E2	F22	B/4	: Mass air flow sensor	C3	F57	—	: Engine ground
B2	F23	GR/2	: Intermediate lock timing control solenoid valve	E3	F61	GR/2	: Engine coolant temperature sensor
B3	F24	GR/2	: Exhaust valve timing control solenoid valve	C3	F68	GR/2	: Engine oil temperature sensor
B3	F25	GR/2	: Intake valve timing control solenoid valve	F4	F73	B/3	: Input speed sensor
C4	F27	B/2	: A/C compressor (Magnet clutch)	E5	F74	GR/22	: CVT unit
B4	F29	—	: Generator	E2	F75	B/48	: TCM (Transmission control module)
E3	F30	B/1	: Fusible link box (Battery)	F3	F76	B/3	: Primary speed sensor
C4	F31	B/2	: Generator	F2	F77	B/3	: Output speed sensor
G3	F32	W/2	: To E2	D4	F78	B/10	: Transmission range switch

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< DTC/CIRCUIT DIAGNOSIS >

BODY HARNESS



AAMIA0258ZZ

C3	B2	W/4	: Joint connector-B27	D1	B62	Y/2	: LH side curtain air bag module
C3	B3	W/4	: Joint connector-B03	G1	B63	GR/24	: Joint connector-B01
C2	B6	B/1	: Rear window defogger condenser	B4	B67	W/12	: Rear view camera washer control unit
E2	B7	—	: Ground	C2	B70	W/4	: Rear door switch LH
C3	B9	O/2	: Front LH seat belt pre-tensioner (Lap belt)	E3	B71	W/4	: Front door switch LH

HARNES

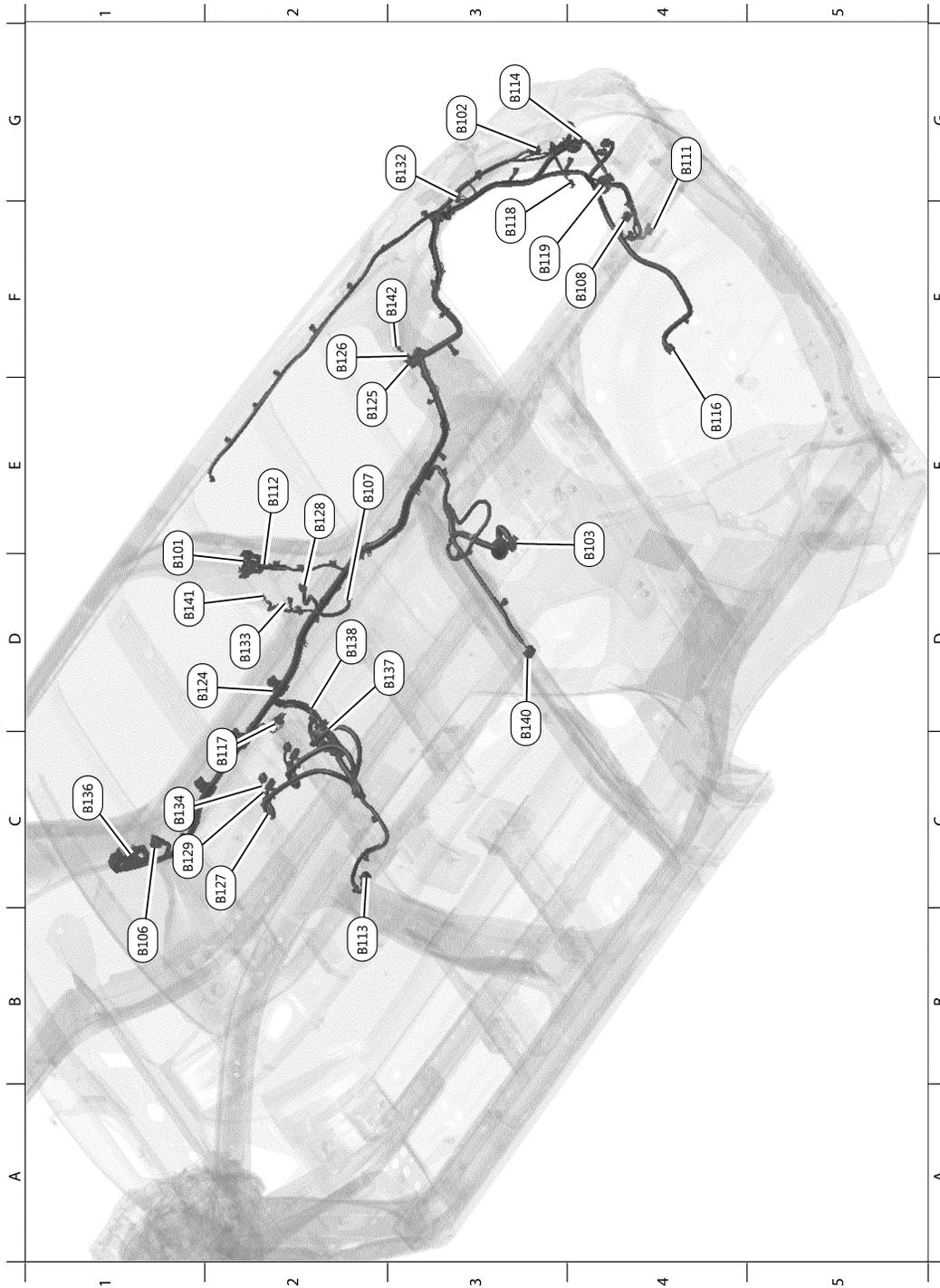
< DTC/CIRCUIT DIAGNOSIS >

E4	B13	B/2	: To C13	B5	B72	B/2	: Rear view camera air pump motor
G2	B16	G/40	: BCM (Body control module)	D3	B73	W/8	: Power back door spindle unit RH
A3	B19	—	: Ground	B4	B75	W/16	: AWD control module
E1	B29	W/6	: Fuse block (J/B)	C5	B76	GR/2	: Outside key antenna (Rear bumper)
E1	B30	W/8	: Fuse block (J/B)	D3	B77	GR/2	: Inside key antenna (Console)
D2	B33	—	: Body ground	F3	B78	Y/22	: Air bag diagnosis sensor unit
F1	B40	GR/100	: To E34	C3	B79	W/4	: Joint connector-B26
F2	B41	W/32	: To M69	C3	B80	Y/2	: Rear side satellite sensor LH
G2	B42	W/16	: To M74	C3	B81	Y/2	: Front side air bag satellite sensor LH
B3	B46	W/32	: To D501	D3	B82	Y/2	: Front LH side air bag module
B2	B47	W/16	: To D501	D2	B85	Y/2	: Front LH seat belt pre-tensioner (Shoulder belt)
E4	B49	W/12	: To B140	E2	B87	W/4	: Seat belt buckle switch (Driver seat)
D2	B51	W/12	: To D201	C3	B89	W/4	: Joint connector-B25
B2	B54	W/2	: To D505	B3	B90	W/4	: Rear combination lamp LH
B3	B55	B/24	: Automatic back door control module	D4	B91	B/3	: Rear height sensor
C3	B56	GR/14	: Automatic back door control module	E3	B92	W/6	: To B202
C5	B58	B/2	: Rear wheel sensor LH	D3	B94	W/4	: Joint connector-B24
D5	B60	B/2	: Rear wheel sensor RH	B2	B95	W/8	: Spindle unit LH
A4	B61	BR/2	: Automatic back door warning chime	G1	B23	GR/16	: BCM (Body control module)

HARNESS

< DTC/CIRCUIT DIAGNOSIS >

BODY NO. 2 HARNESS



AAMIA0266ZZ

E1	B101	W/12	: To D301	E2	B125	W/4	: Joint connector-B30
G3	B102	W/4	: Rear combination lamp RH	F2	B126	Y/2	: Rear side satellite sensor RH
E4	B103	GR/6	: Fuel level sensor unit and fuel pump (Main)	C2	B127	W/4	: To B350
B1	B106	W/6	: To M8	E2	B128	Y/2	: Front side air bag satellite sensor RH

HARNES

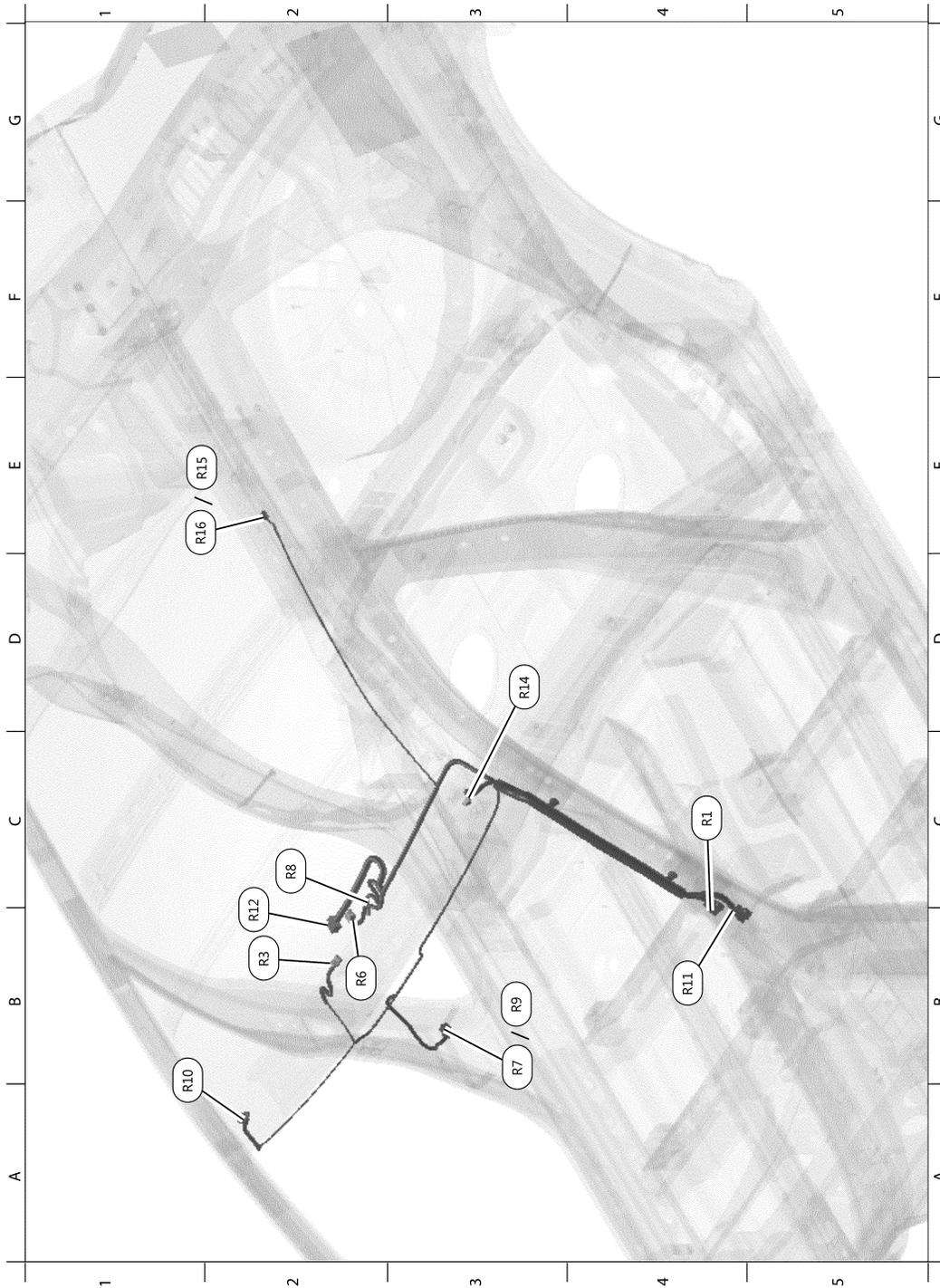
< DTC/CIRCUIT DIAGNOSIS >

E2	B107	O/2	: Front RH seat belt pre-tensioner (Lap belt)	C1	B129	Y/2	: Front RH side air bag module
F4	B108	B/2	: EVAP canister vent control valve	G3	B132	—	: Ground
G4	B111	GR/3	: EVAP control system pressure sensor	D2	B133	Y/2	: Front RH seat belt pre-tensioner (Shoulder belt)
E2	B112	—	: Body ground	C1	B134	W/6	: To B300
B2	B113	Y/22	: Air bag diagnosis sensor unit	C1	B136	SMJ	: To M36
G3	B114	B/3	: Rear cargo power socket	D3	B137	BR/14	: BOSE speaker amp.
E4	B116	GR/6	: Subwoofer	D2	B138	BR/23	: BOSE speaker amp.
C2	B117	—	: Ground	D3	B140	W/12	: To B49
F3	B118	W/2	: Luggage room lamp	D1	B141	W/4	: Front door switch RH
F3	B119	Y/2	: RH side curtain air bag module	F3	B142	W/4	: Rear door switch RH
D1	B124	W/4	: Joint connector-B29				

HARNESS

< DTC/CIRCUIT DIAGNOSIS >

ROOM LAMP HARNESS



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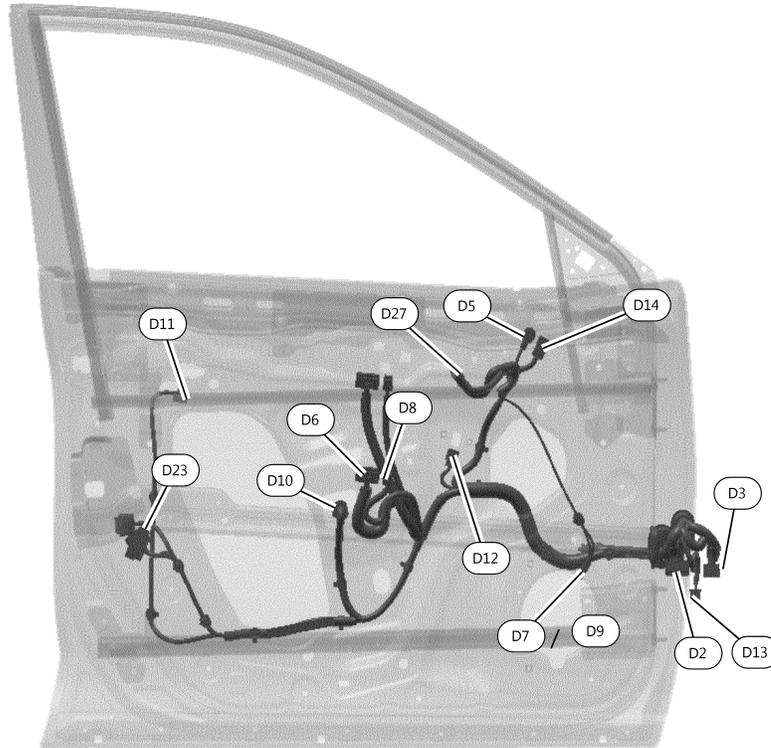
C4	R1	W/8	: To M21	B1	R10	W/2	: Vanity lamp RH
B2	R3	W/12	: Moonroof switch	B4	R11	W/24	: To M156
B2	R6	W/8	: Map lamp assembly	C2	R12	W/12	: To R13
B3	R7	B/10	: Auto anti-dazzling inside mirror (With homelink universal transceiver)	D3	R14	W/2	: Vanity lamp LH

HARNESS

< DTC/CIRCUIT DIAGNOSIS >

C2	R8	W/6	: Microphone	E1	R15	W/3	: Room lamp
B3	R9	B/7	: Auto anti-dazzling inside mirror (Without universal transceiver)	E1	R16	W/4	: Personal lamp 2nd row

FRONT DOOR LH HARNESS

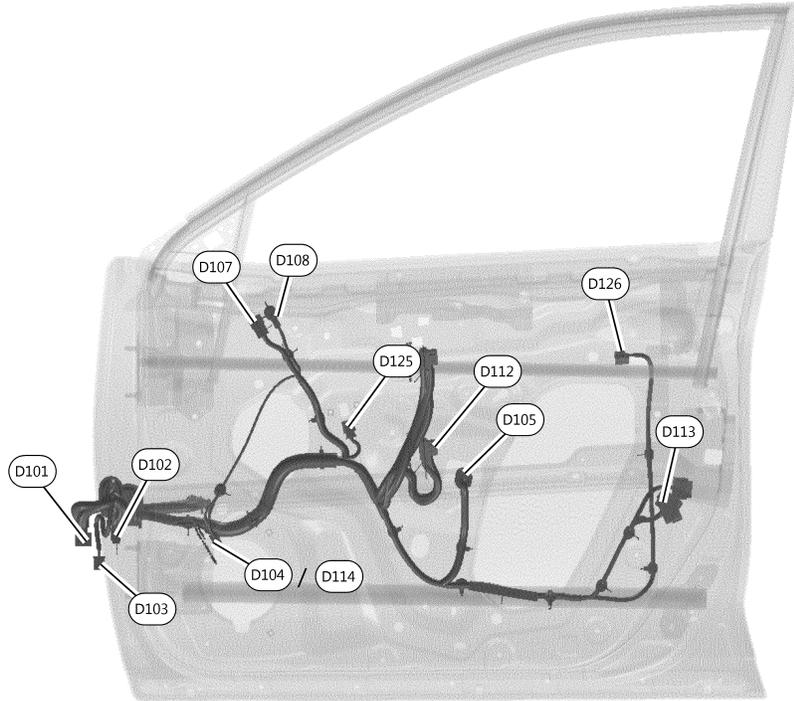


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D2	W/16	: To M167	D10	G/6	: Front power window motor LH
D3	W/24	: To M168	D11	W/2	: Front step lamp (Driver side)
D5	W/4	: Blind spot warning/blind spot intervention indicator LH	D12	Y/2	: Front door satellite sensor LH
D6	W/16	: Main power window and door lock/unlock switch	D13	Y/4	: To M169
D7	W/2	: Front door speaker LH (Without BOSE audio system)	D14	W/16	: Door mirror LH
D8	W/3	: Main power window and door lock/unlock switch	D23	GR/6	: Front door lock assembly LH
D9	BR/2	: Front door speaker LH (With BOSE audio system)	D27	B/16	: Door mirror remote control switch

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< DTC/CIRCUIT DIAGNOSIS > FRONT DOOR RH HARNESS



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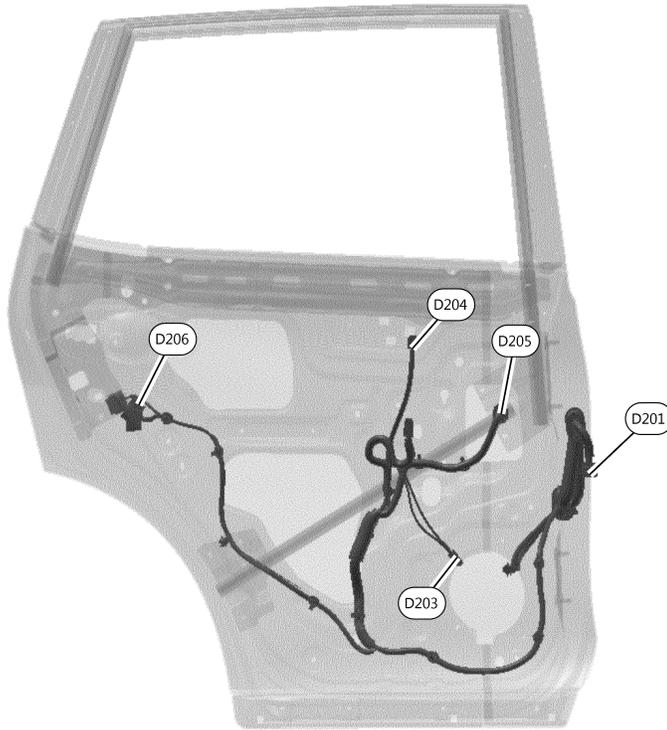
D101	W/24	: To M91	D108	W/4	: Blind spot warning/blind spot intervention indicator RH
D102	W/16	: To M158	D112	W/12	: Power window and door lock/unlock switch RH
D103	Y/4	: To M159	D113	GR/6	: Front door lock actuator RH
D104	W/2	: Front door speaker RH (Without BOSE audio system)	D114	BR/2	: Front door speaker RH (With BOSE audio system)
D105	G/6	: Front power window motor RH	D125	Y/2	: Front door satellite sensor RH
D107	W/16	: Door mirror RH	D126	B/4	: Front outside handle assembly RH

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< DTC/CIRCUIT DIAGNOSIS >

REAR DOOR LH HARNESS



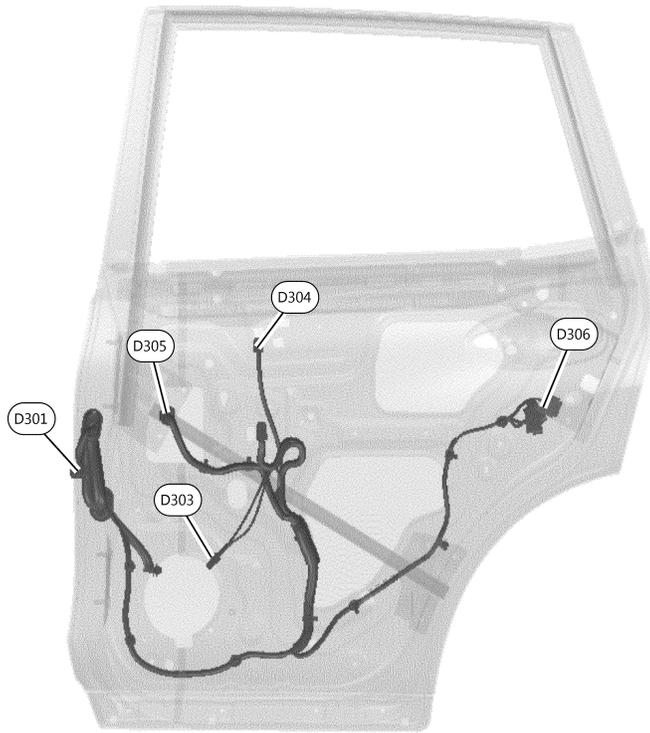
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D201	W/12	: To B51	D205	G/5	: Rear power window motor LH
D203	W/2	: Rear door speaker LH	D206	GR/6	: Rear door lock actuator LH
D204	W/8	: Rear power window switch LH			

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< DTC/CIRCUIT DIAGNOSIS >

REAR DOOR RH HARNESS



AAMIA0263ZZ

D301	W/12	: To B101	D305	G/6	: Rear power window motor RH
D303	W/2	: Rear door speaker RH	D306	GR/6	: Rear door lock actuator RH
D304	W/8	: Rear power window switch RH			

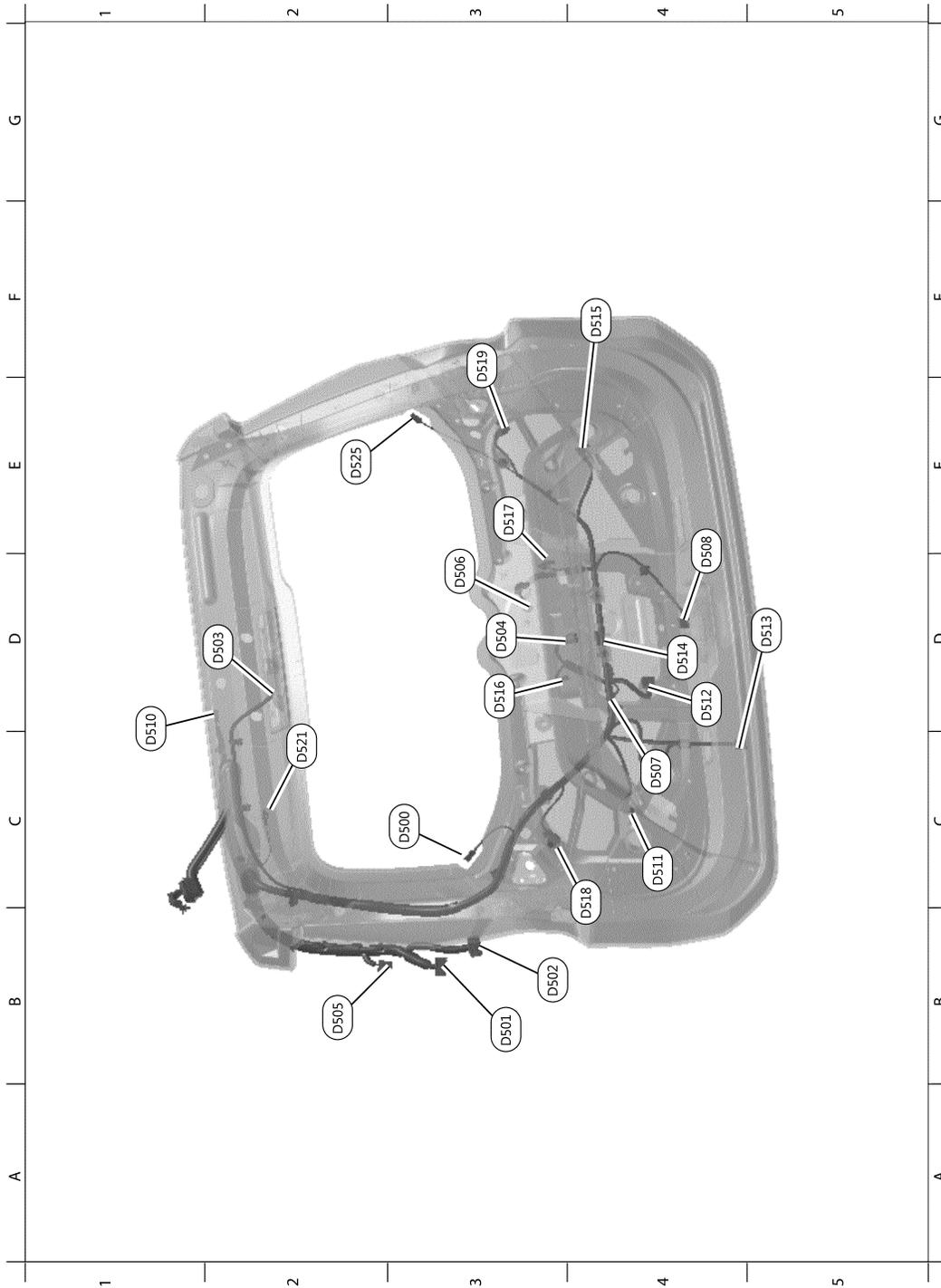
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< DTC/CIRCUIT DIAGNOSIS >

BACK DOOR HARNESS



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C3	D500	B/1	: Rear window defogger condenser	D4	D512	W/8	: Back door lock assembly (With power back door system)
B3	D501	W/32	: To B46	D5	D513	GR/6	: Automatic back door close switch
B3	D502	W/16	: To B47	D4	D514	W/8	: Rear view camera (With driver assistance system)
D2	D503	W/2	: High-Mounted stop lamp	F4	D515	W/2	: Touch sensor RH

HARNESSES

< DTC/CIRCUIT DIAGNOSIS >

D3	D504	B/6	: Rear view camera (Without driver assistance system)	D3	D516	W/2	: License plate lamp LH	A
B2	D505	W/2	: To B54	E3	D517	BR/2	: License plate lamp RH	
D3	D506	W/3	: Rear wiper motor	C4	D518	W/3	: Back-up lamp assembly LH	B
C4	D507	W/4	: Back door opener switch	F3	D519	W/3	: Back-up lamp assembly RH	
E4	D508	W/4	: Back door lock assembly (Without power back door system)	C2	D521	—	: Ground	C
D1	D510	B/1	: Rear window defogger	E2	D525	B/1	: Rear window defogger	
C4	D511	W/2	: Touch sensor LH					D

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ELECTRICAL UNITS LOCATION

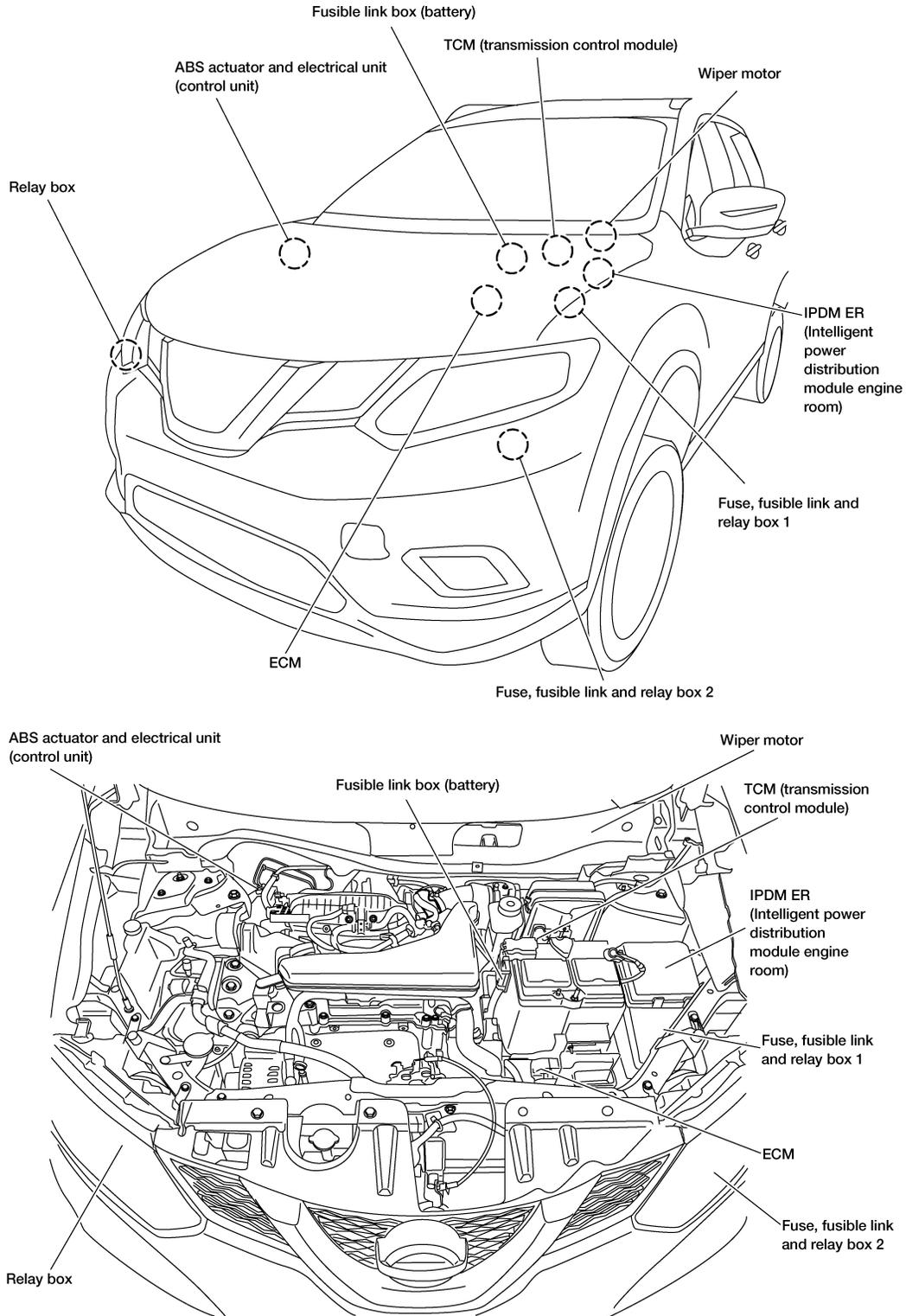
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ELECTRICAL UNITS LOCATION

Electrical Units Location

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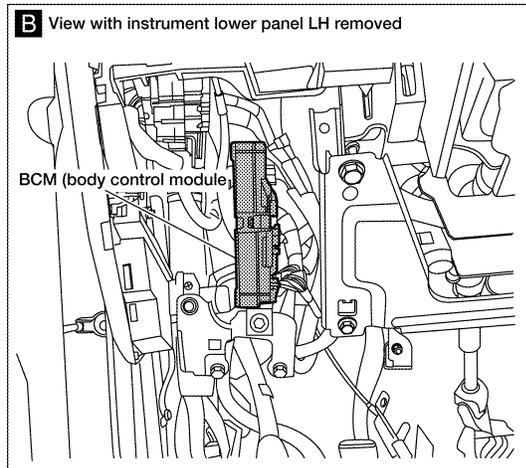
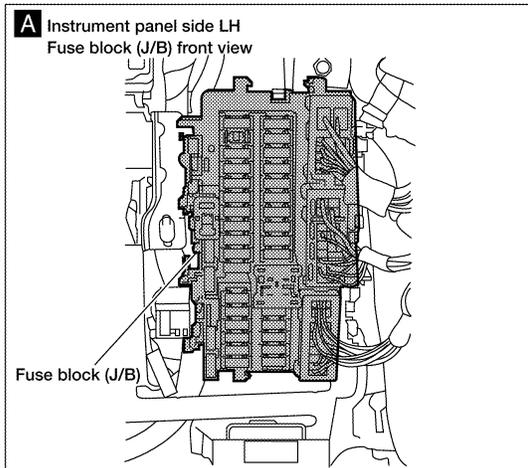
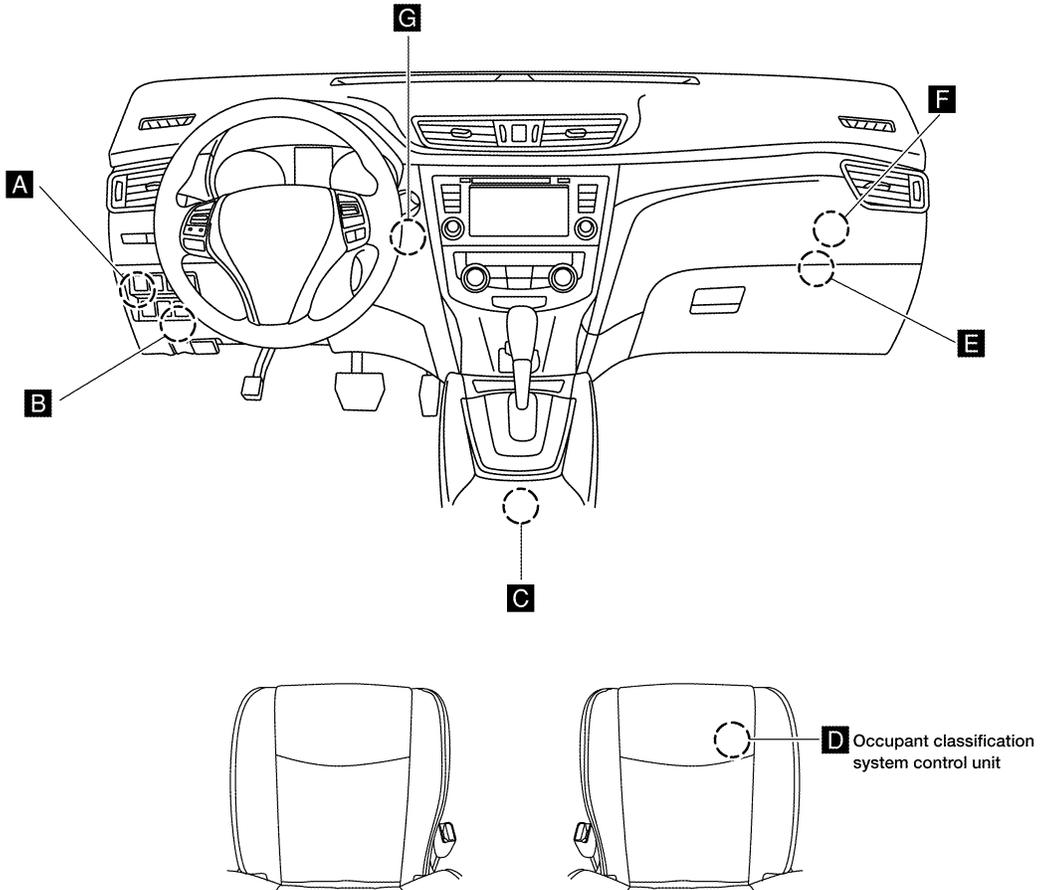
ENGINE COMPARTMENT



AAMIA2339GB

ELECTRICAL UNITS LOCATION

< DTC/CIRCUIT DIAGNOSIS >
 PASSENGER COMPARTMENT

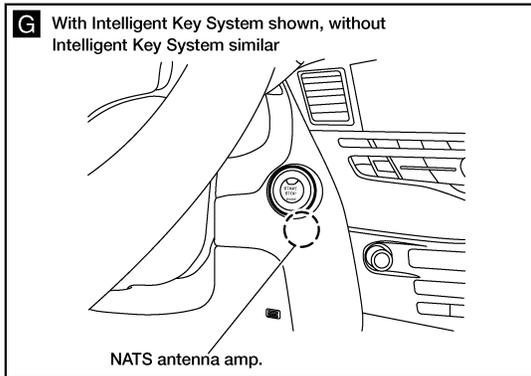
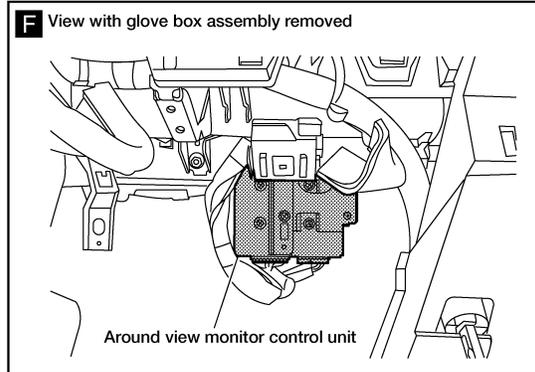
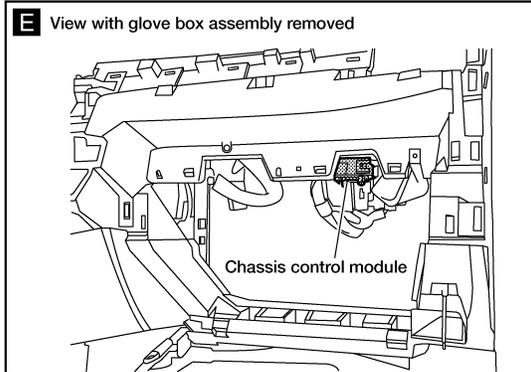
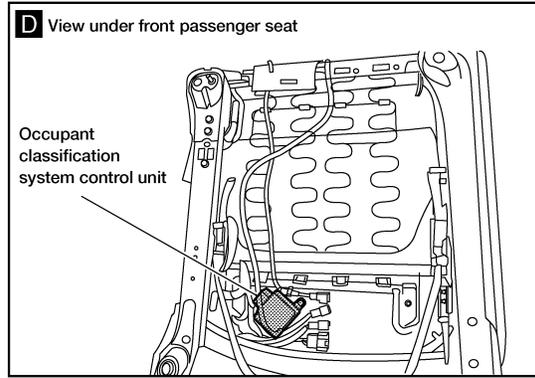
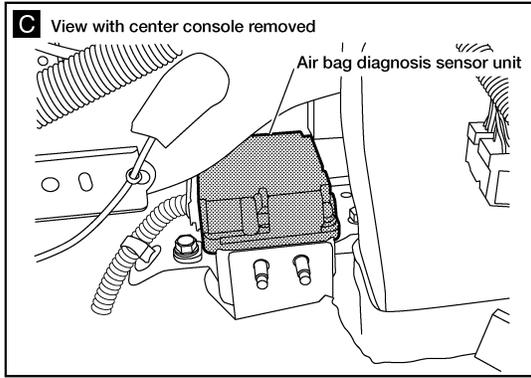


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ELECTRICAL UNITS LOCATION

< DTC/CIRCUIT DIAGNOSIS >



AAMIA2341GB

HARNESS CONNECTOR

< DTC/CIRCUIT DIAGNOSIS >

HARNESS CONNECTOR

Description

INFOID:000000010290326

HARNESS CONNECTOR (TAB-LOCKING TYPE)

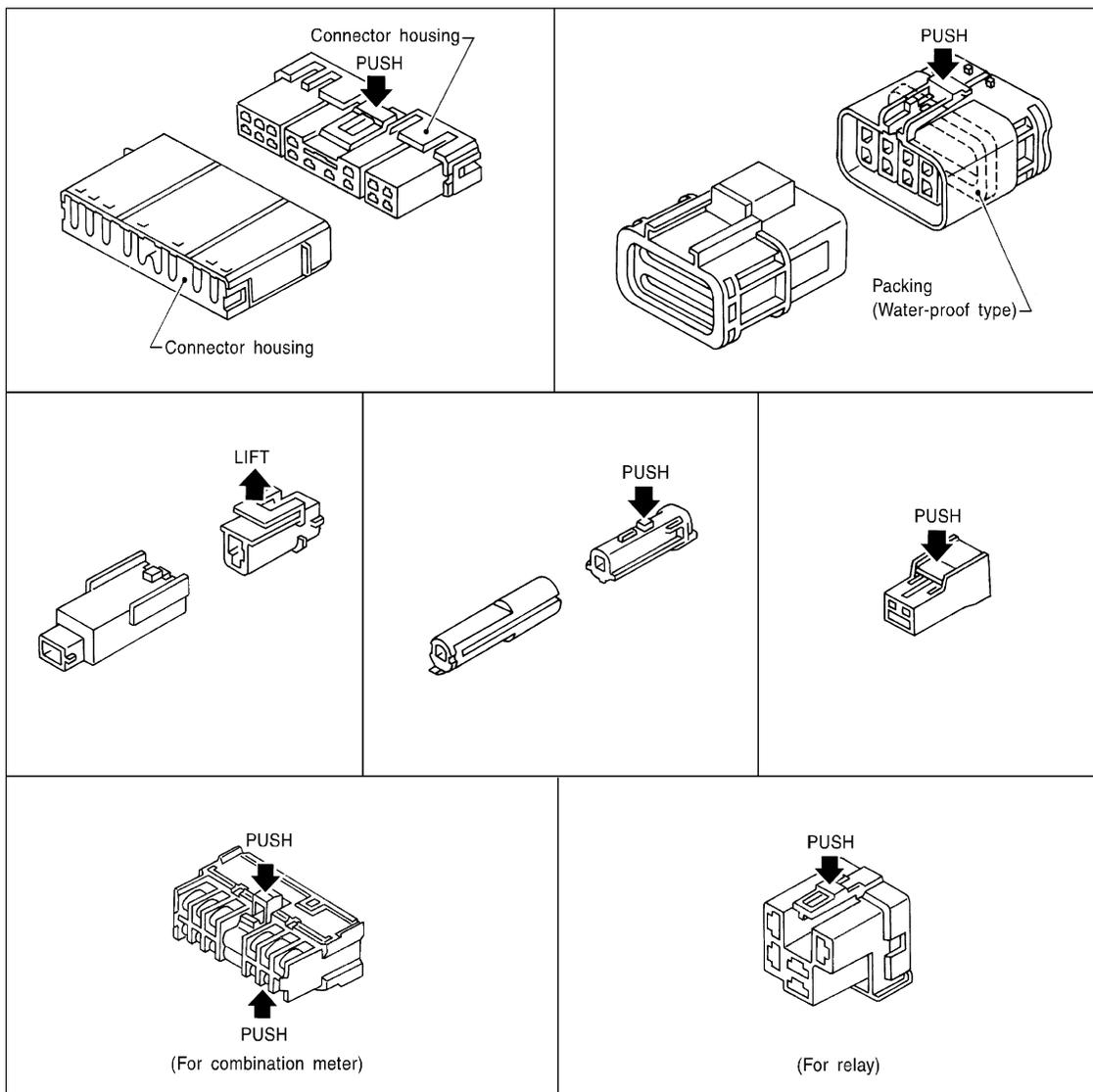
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the figure below.

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]



SEL769DA

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.

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HARNESS CONNECTOR

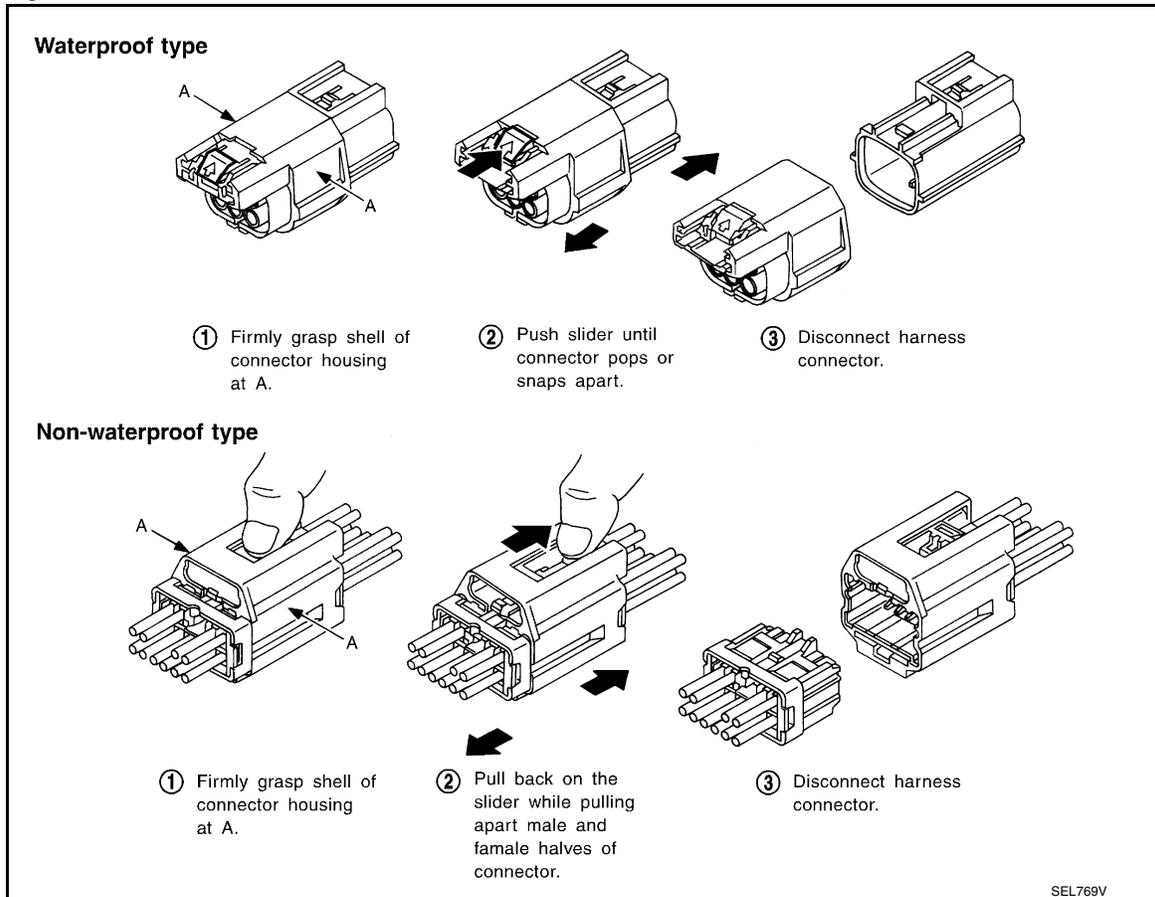
< DTC/CIRCUIT DIAGNOSIS >

- 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)

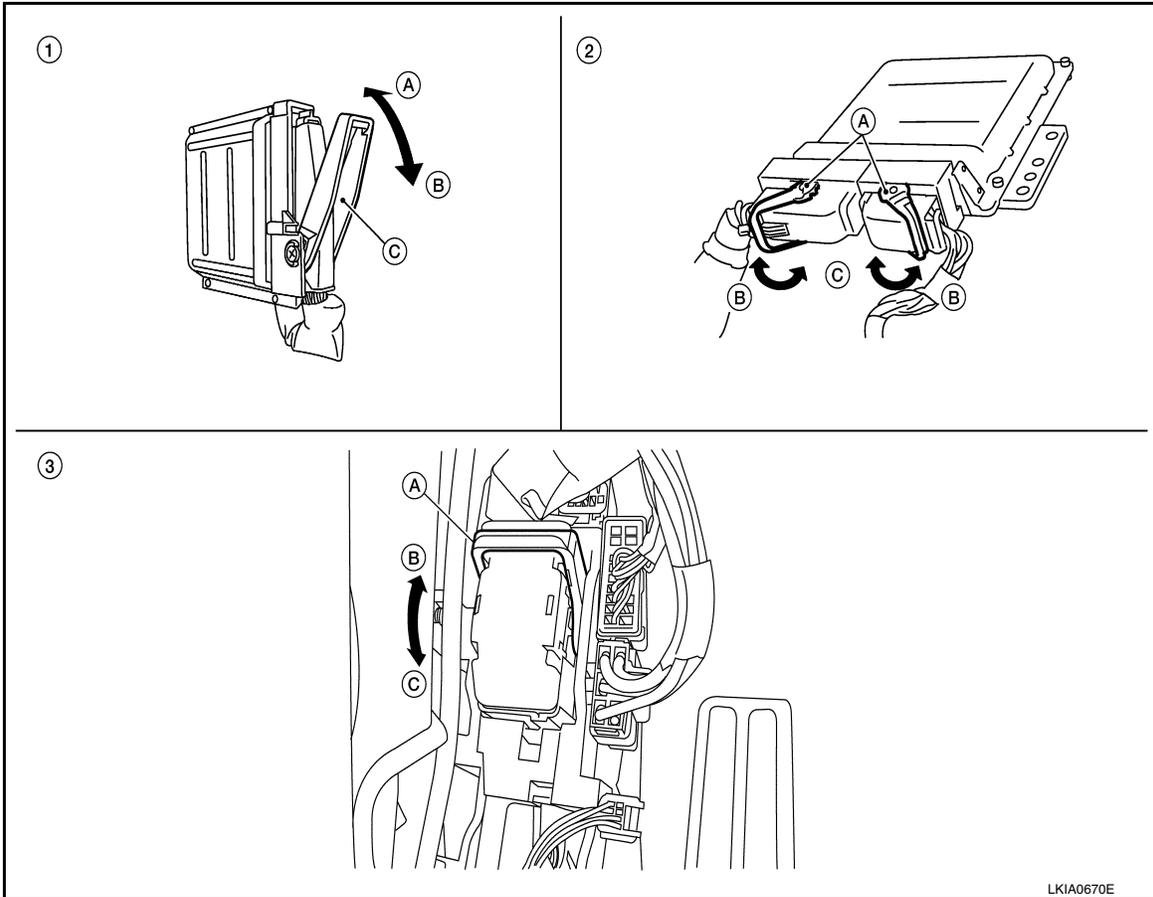
- Lever locking type harness connectors are used on certain control units and control modules such as ECM, ABS actuator and electric unit (control unit), etc.
- Lever locking type harness connectors are also used on super multiple junction (SMJ) connectors.
- Always confirm the lever is fully locked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

CAUTION:

HARNES CONNECTOR

< DTC/CIRCUIT DIAGNOSIS >

- 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.



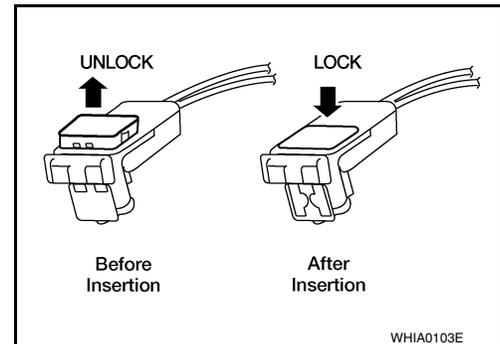
- | | | |
|-----------------------------------|---------------------------------|------------------|
| 1. Control unit with single lever | 2. Control unit with dual lever | 3. SMJ connector |
| A. Fasten | A. Lever | A. Lever |
| B. Loosen | B. Fasten | B. Fasten |
| C. Lever | C. Loosen | C. Loosen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

HARNES 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

< DTC/CIRCUIT DIAGNOSIS >

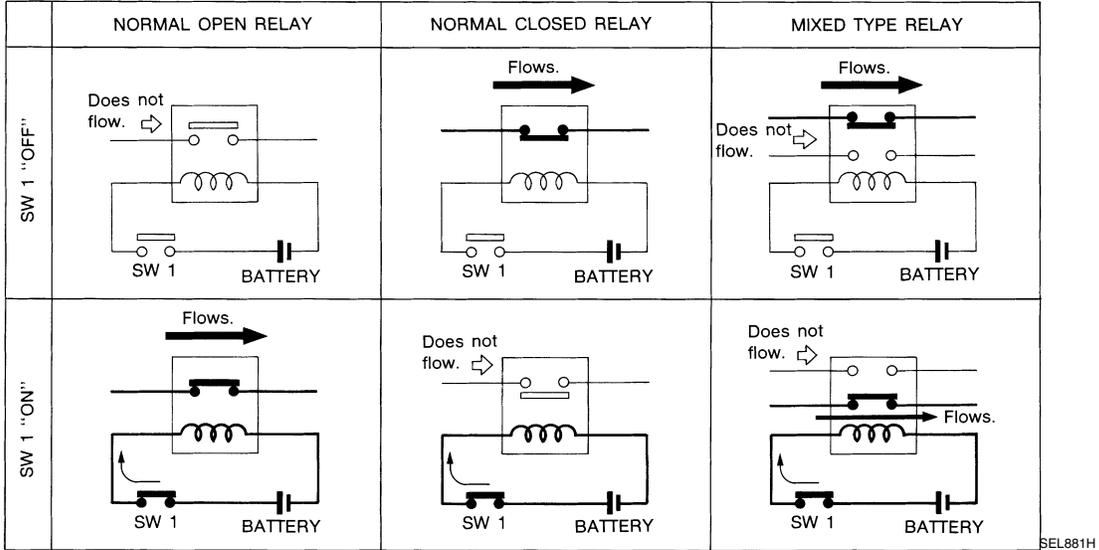
STANDARDIZED RELAY

Description

INFOID:000000010290327

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

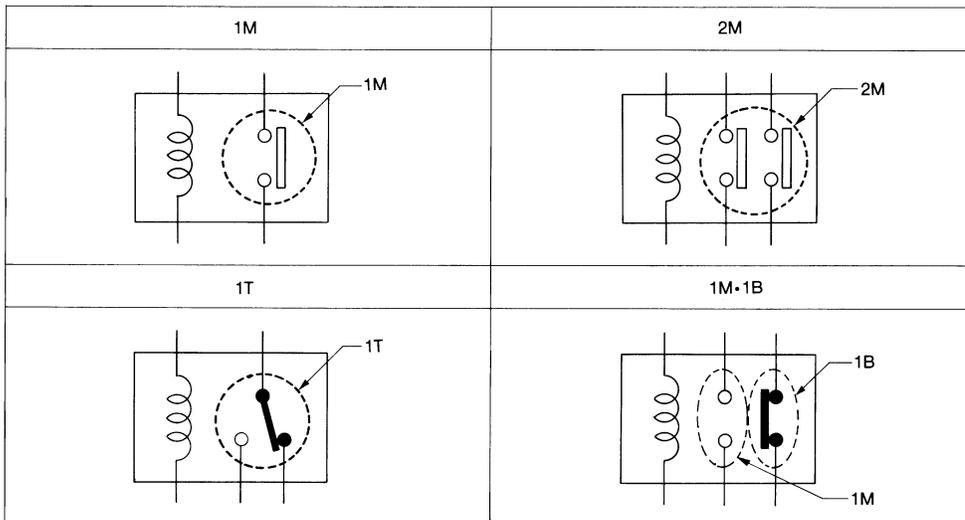
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



SEL881H

TYPE OF STANDARDIZED RELAYS

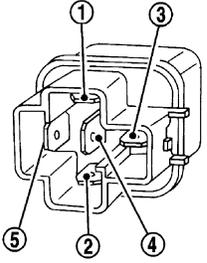
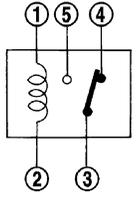
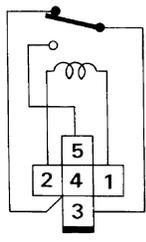
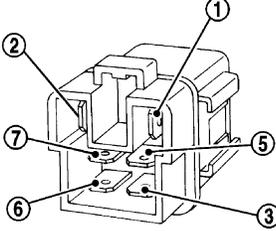
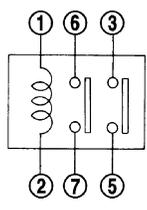
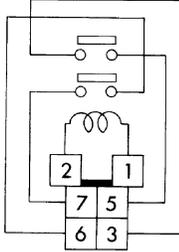
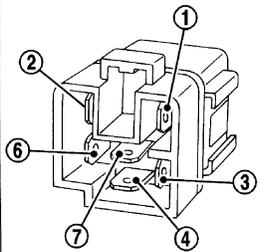
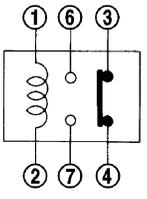
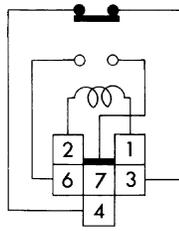
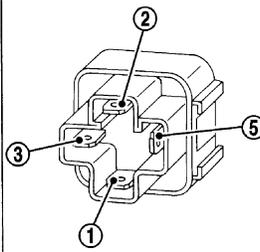
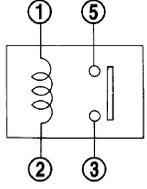
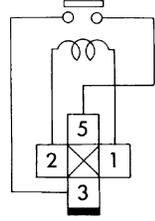
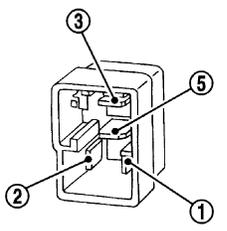
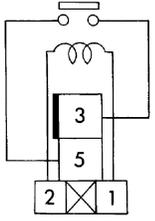
- 1M 1 Make
- 2M 2 Make
- 1T 1 Transfer
- 1M·1B 1 Make 1 Break



SEL882H

STANDARDIZED RELAY

< DTC/CIRCUIT DIAGNOSIS >

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

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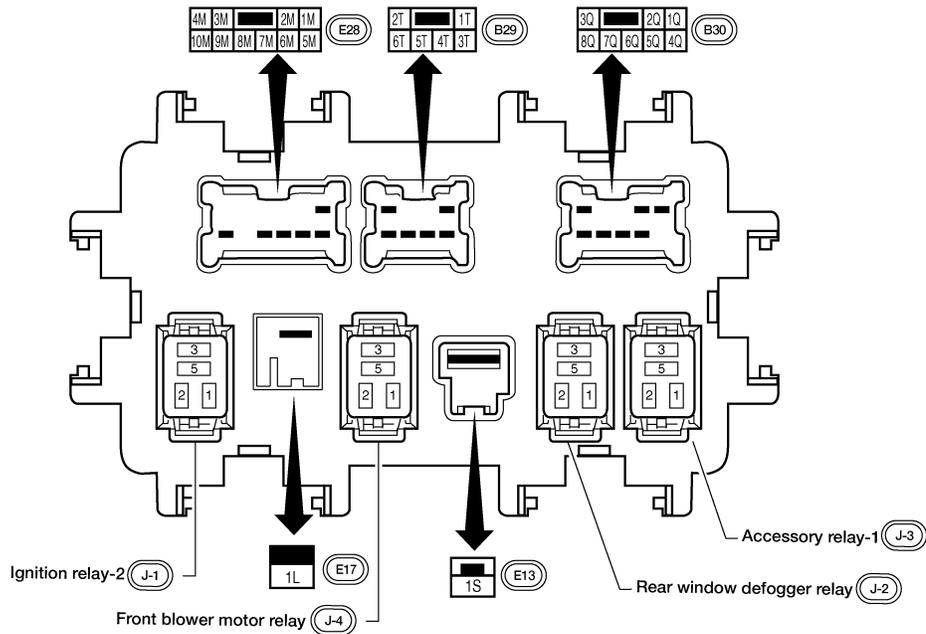
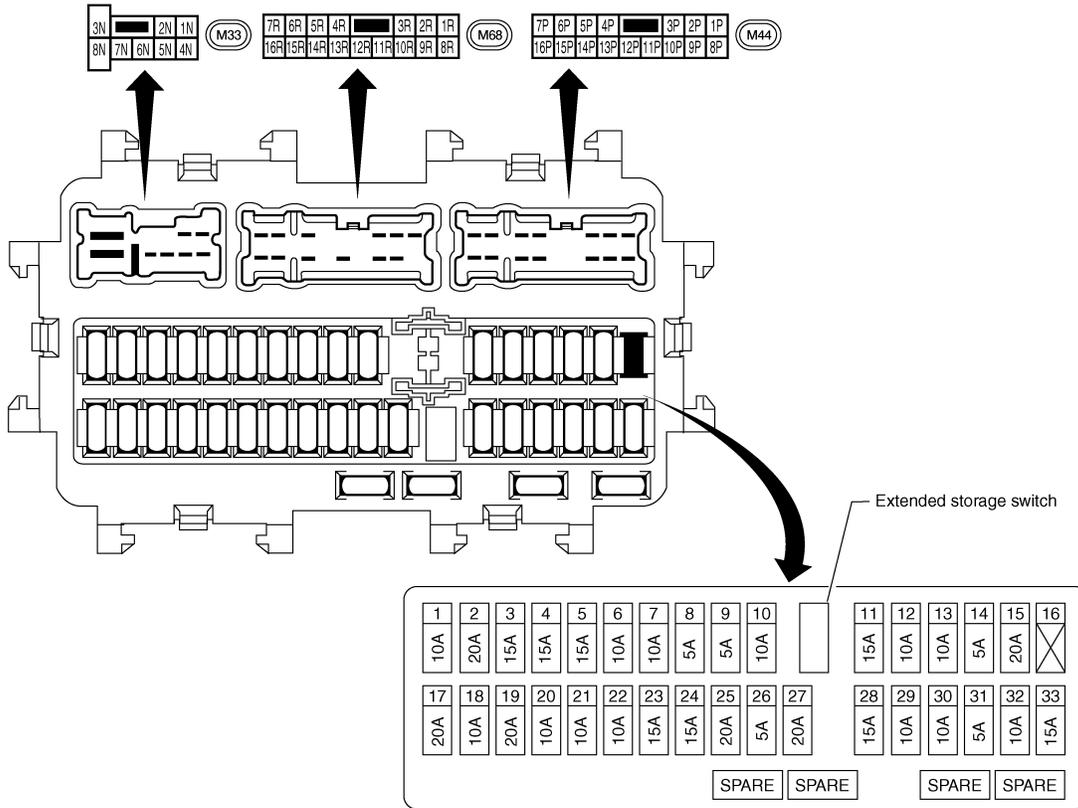
FUSE BLOCK - JUNCTION BOX (J/B)

< DTC/CIRCUIT DIAGNOSIS >

FUSE BLOCK - JUNCTION BOX (J/B)

Terminal Arrangement

INFOID:000000010290328



AAMIA2349GB

FUSE, FUSIBLE LINK AND RELAY BOX

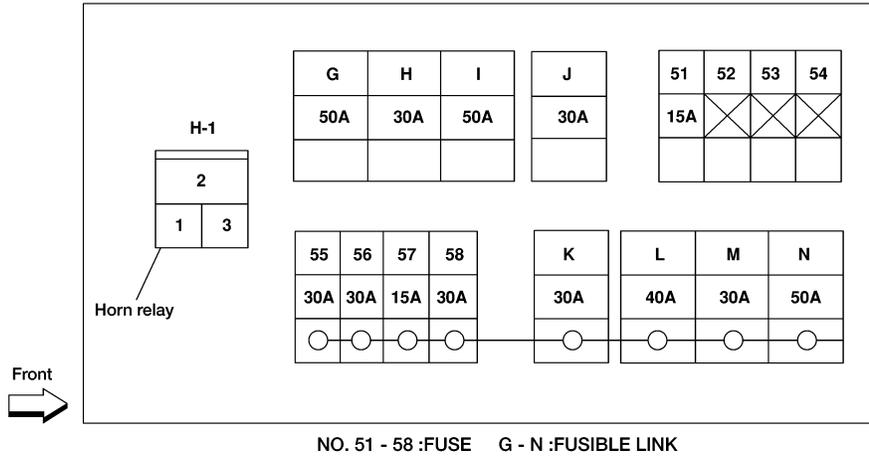
< DTC/CIRCUIT DIAGNOSIS >

FUSE, FUSIBLE LINK AND RELAY BOX

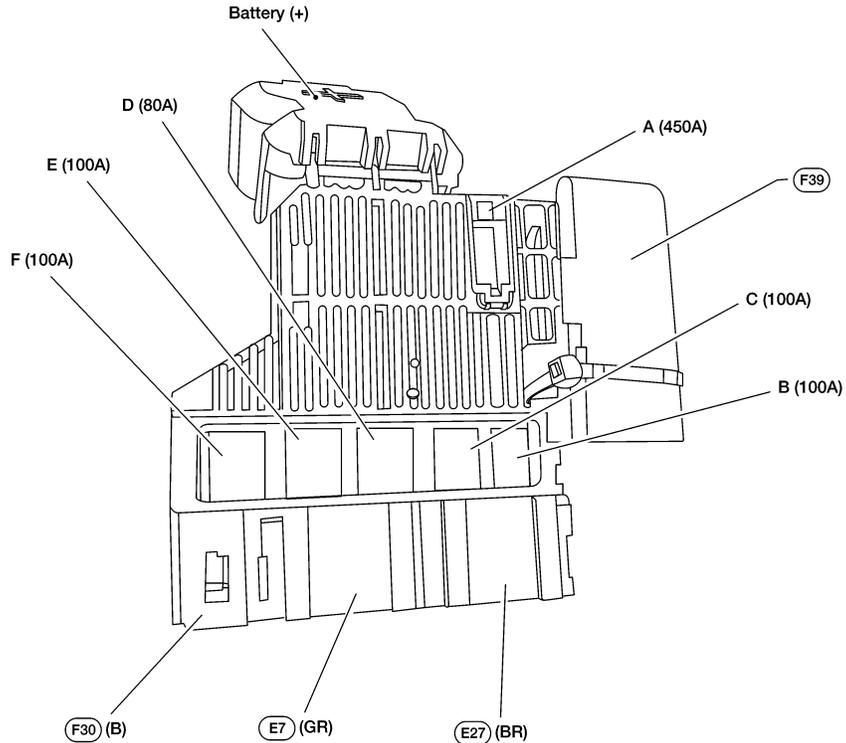
Terminal Arrangement

INFOID:000000010290329

FUSE, FUSIBLE LINK AND RELAY BOX 1



FUSIBLE LINK BOX (BATTERY)

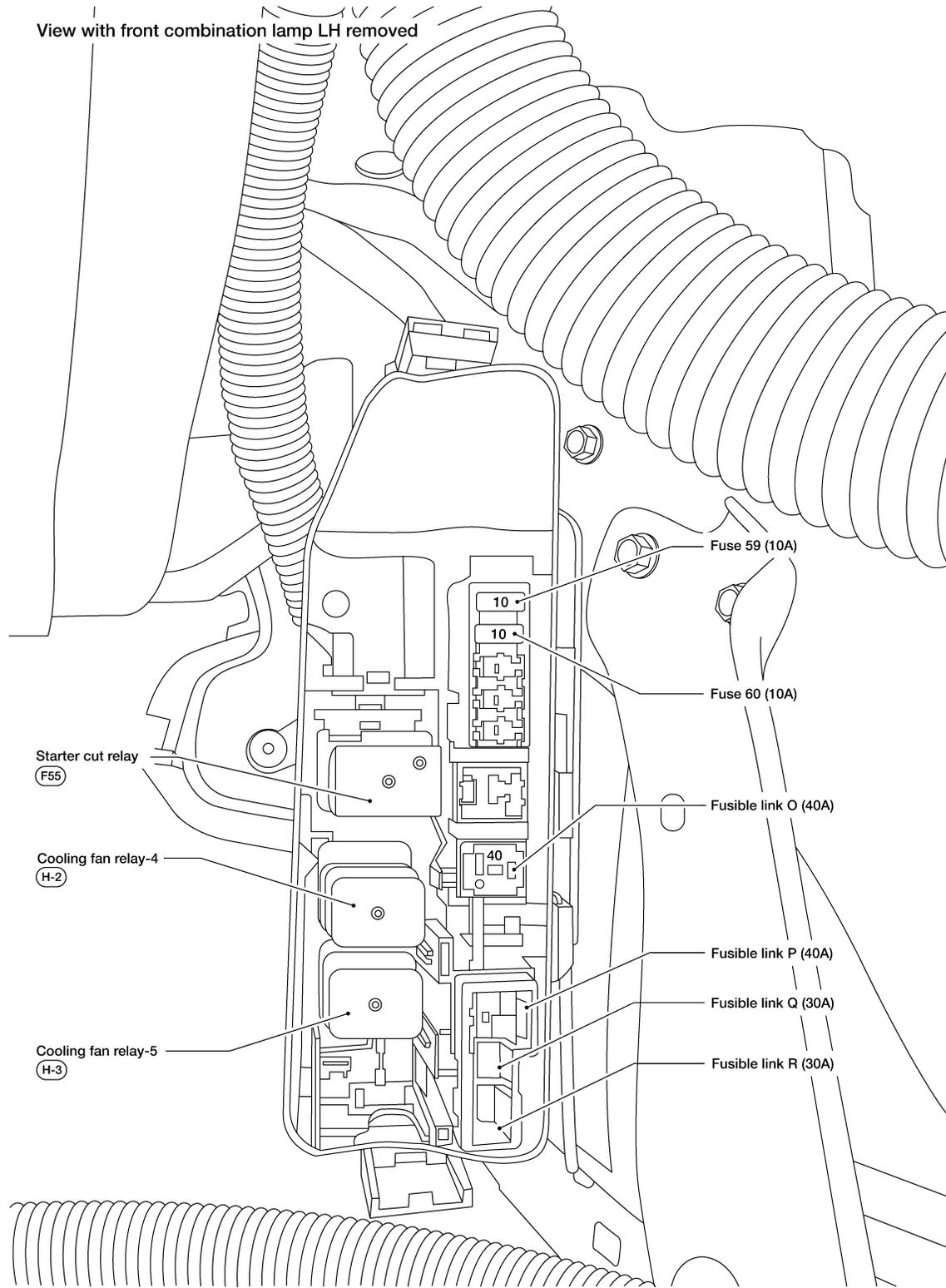


AAMIA2350GB

FUSE, FUSIBLE LINK AND RELAY BOX

< DTC/CIRCUIT DIAGNOSIS >

FUSE, FUSIBLE LINK AND RELAY BOX 2

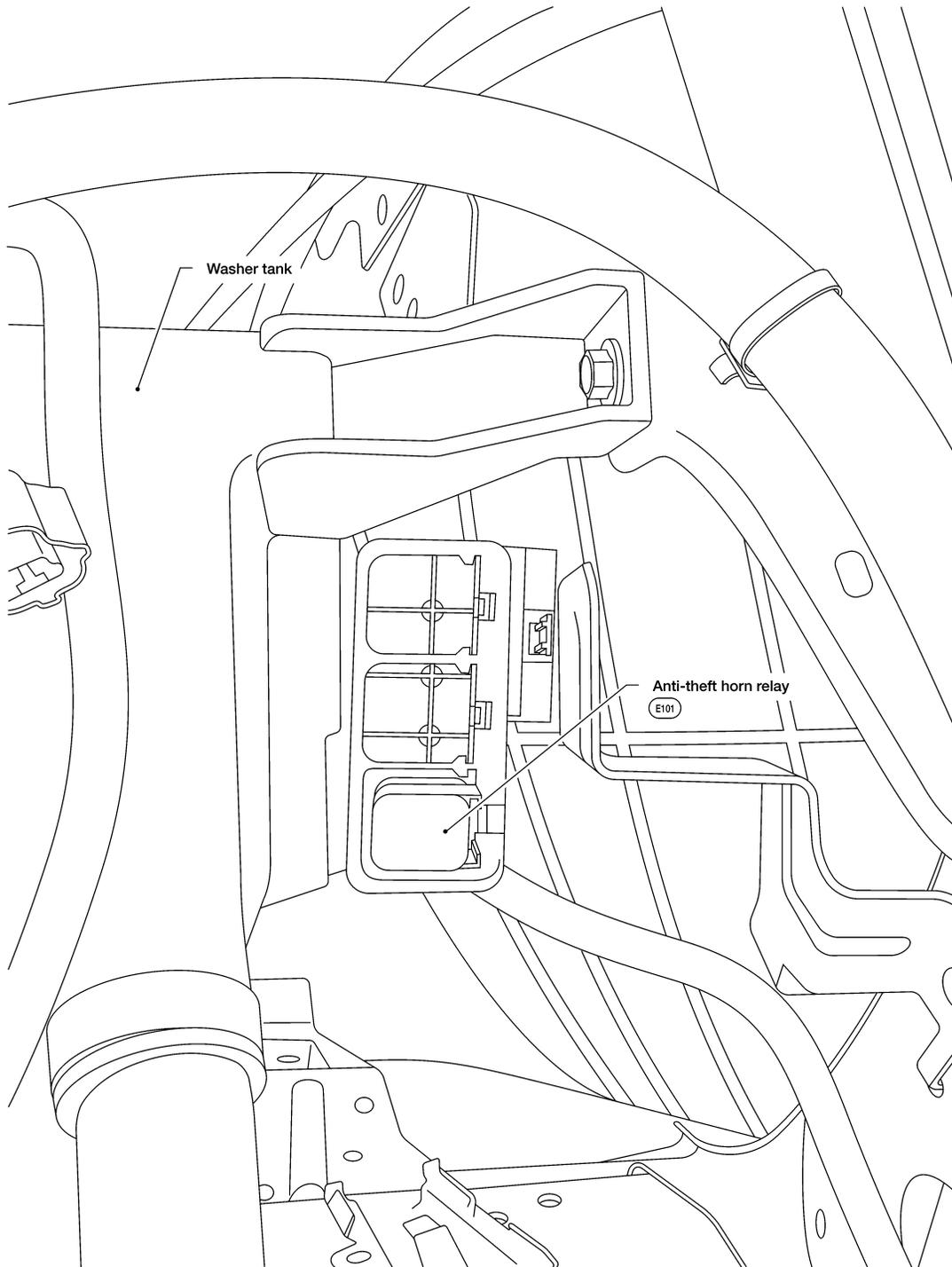


FUSE, FUSIBLE LINK AND RELAY BOX

< DTC/CIRCUIT DIAGNOSIS >

RELAY BOX

View with front combination lamp RH removed



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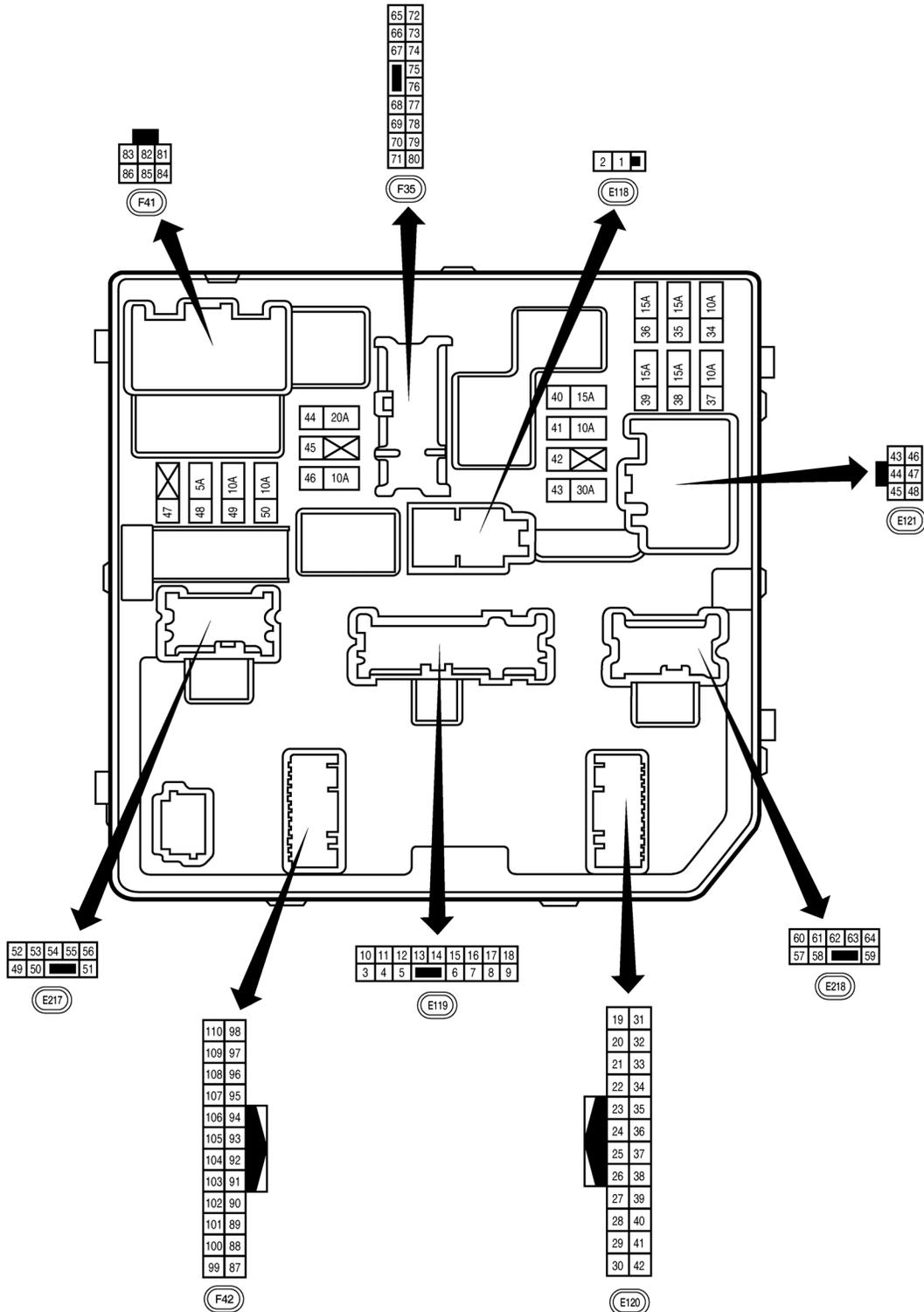
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< DTC/CIRCUIT DIAGNOSIS >

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

IPDM E/R Terminal Arrangement

INFOID:000000010290330



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BATTERY

< BASIC INSPECTION >

BASIC INSPECTION

BATTERY

How to Handle Battery

INFOID:000000010290331

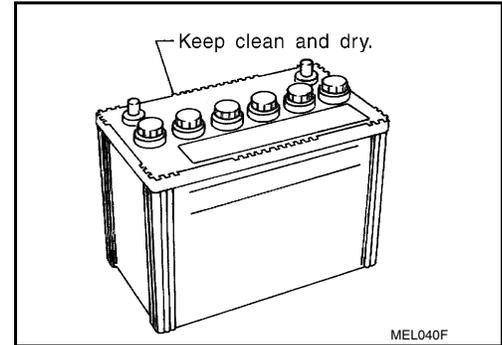
CAUTION:

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

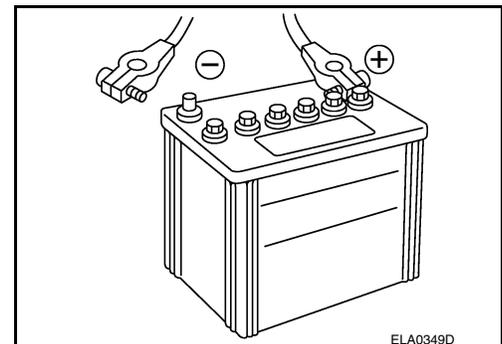
METHODS OF PREVENTING OVER-DISCHARGE

The following precautions must be taken to prevent over-discharging a battery.

- The 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 battery cable from the negative terminal. (If the vehicle has an extended storage switch, turn it off.)



Work Flow

INFOID:000000010290332

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

To diagnose and confirm the condition of the 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.

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

Checking Electrolyte Level

WARNING:

Never allow battery fluid to come in contact with skin, eyes, fabrics, or painted surfaces. After touching a 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.

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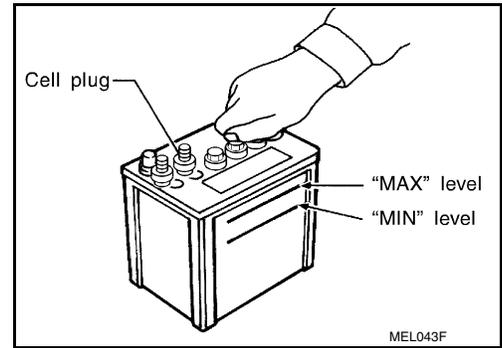
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BATTERY

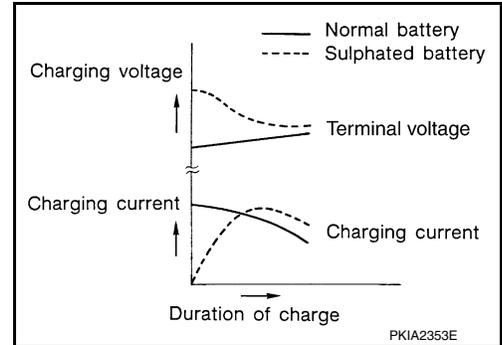
< BASIC INSPECTION >

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



SULFATION

- **A 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 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 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.**



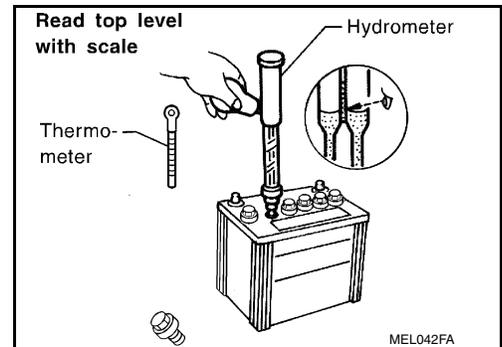
Specific Gravity Check

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

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

BATTERY

< BASIC INSPECTION >

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 Battery

CAUTION:

- **Never “quick charge” a fully discharged battery.**
- **Keep the 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 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 battery charger will automatically decrease as the battery charges. This indicates that the voltage of the 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 battery should be replaced.

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:000000010290333

Required Procedure After Battery Disconnection

System	Item	Reference
Engine Control System	Idle Air Volume Learning	EC-141
Door & Lock	Calibration Of Automatic Back Door Position Information	DLK-103
Power Window Control System	Power Window System Initialization	PWC-27
Roof	Moonroof Memory Reset/Initialization Sunshade Memory Reset/Initialization	RF-24
Heater & Air Conditioning Control System	Temperature Setting Trimmer	HAC-50 (Automatic air conditioning)
	Foot Position Setting Trimmer	HAC-50 (Automatic air conditioning)
	Inlet Port Memory Function (FRE)	HAC-50 (Automatic air conditioning)
	Inlet Port Memory Function (REC)	HAC-51 (Automatic air conditioning)
	Target Evaporator Temp Upper Limit	HAC-51 (Automatic air conditioning) HAC-150 (Manual air conditioning)
Audio, Visual and Navigation System	Audio (Radio Preset)	Refer to Owner's Manual.
	Navigation System	Refer to Owner's Manual.

FUSE INSPECTION

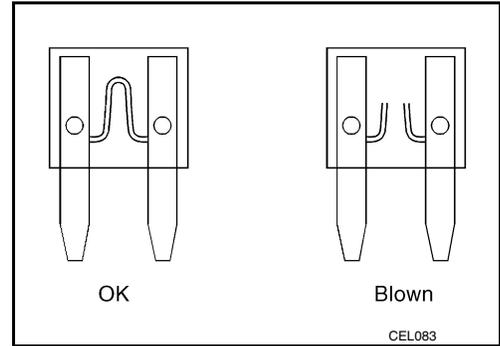
< BASIC INSPECTION >

FUSE INSPECTION

How To Check

- 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.

INFOID:000000010290334



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FUSIBLE LINK INSPECTION

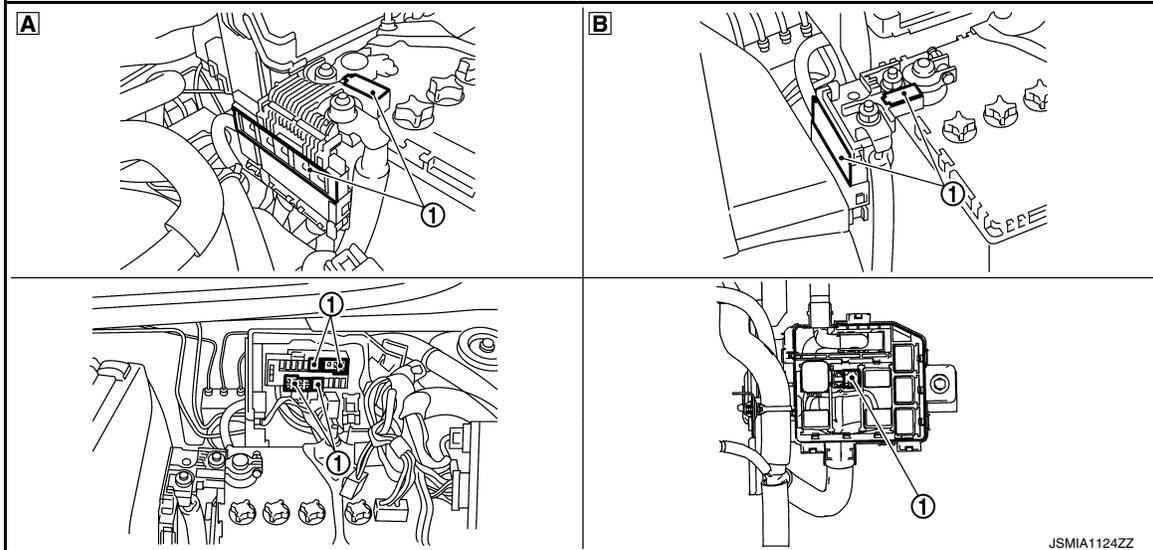
< BASIC INSPECTION >

FUSIBLE LINK INSPECTION

How To Check

INFOID:000000010290335

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

A With stop/start system

B Without stop/start system*

*: Not applicable

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.

BATTERY

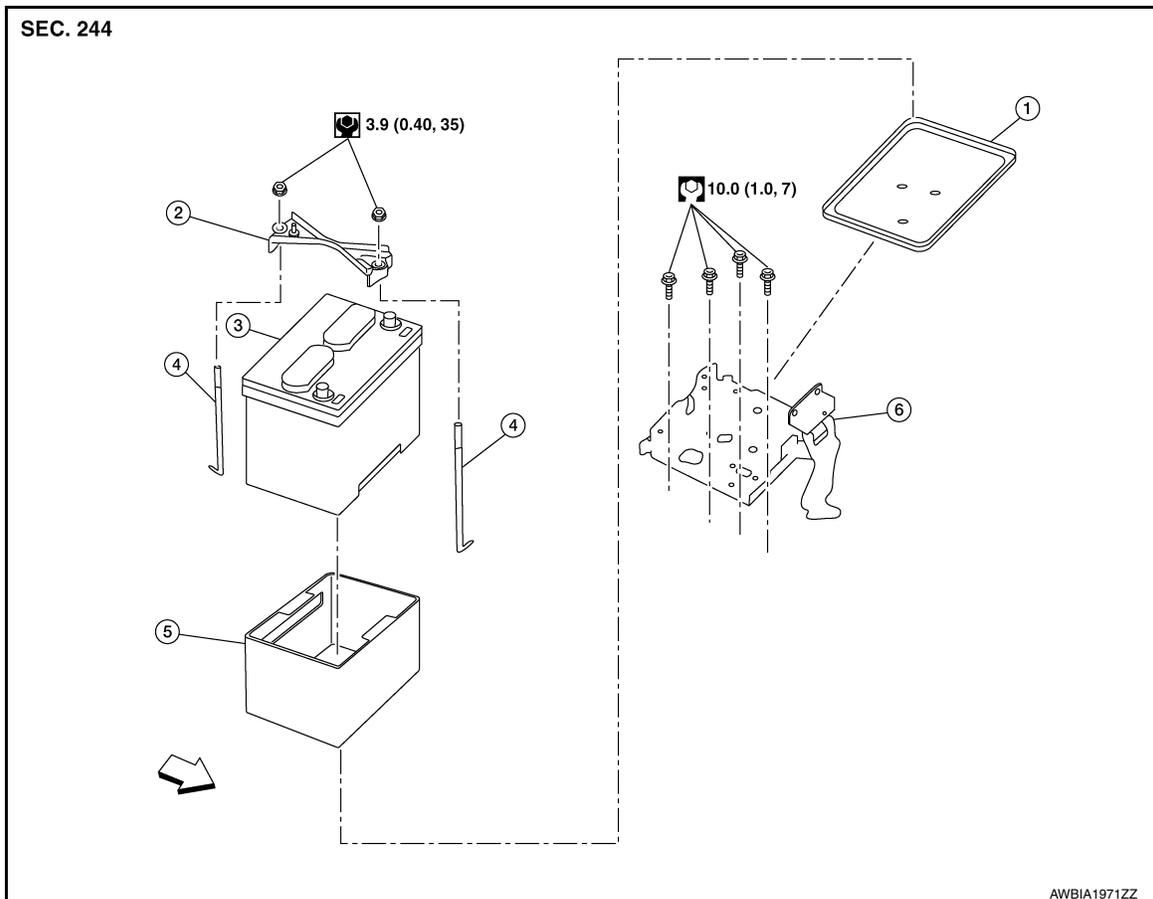
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

BATTERY

Exploded View

INFOID:0000000010256016



- | | | |
|-----------------------|------------------|-----------------|
| 1. Battery tray liner | 2. Battery frame | 3. Battery |
| 4. Battery rod | 5. Battery cover | 6. Battery tray |
- ⇐ Front

Removal and Installation (Battery)

INFOID:0000000010256017

REMOVAL

1. Pull back cover of battery positive terminal.
2. Loosen the battery terminal nuts and disconnect the battery negative and positive terminals.
CAUTION:
To prevent damage to the parts, disconnect the battery negative terminal first.
3. Remove battery frame nuts, battery frame and battery rods.
4. Remove battery cover and battery.

INSTALLATION

Installation is in the reverse order of removal.

- CAUTION:**
- Make sure battery tray liner is clean prior to installing new battery.
 - To prevent damage to the parts, connect the battery positive terminal first.
 - Make sure battery cables are tightly clamped to battery terminals for good contact.
 - Check battery terminal for poor connection caused by corrosion.

BATTERY

< REMOVAL AND INSTALLATION >

WARNING:

Do not allow battery fluid to come into contact with skin, eyes, fabrics, or painted surfaces. After touching a 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.

Battery terminal nut : 5.0 N·m (0.51 kg-m, 44 in-lb)

Reset electronic systems as necessary. Refer to [.PG-72, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#)

Removal and Installation (Battery Tray)

INFOID:000000010256018

REMOVAL

1. Remove battery. Refer to [PG-75, "Removal and Installation \(Battery\)"](#).
2. Remove air cleaner and air duct. Refer to [EM-24, "Removal and Installation"](#).
3. Disconnect harness connector from TCM.
4. Remove wiring harness retainers.
5. Disconnect harness connectors from ECM.
6. Remove battery tray. Refer to [PG-75, "Exploded View"](#)
7. Remove TCM bracket from battery tray (if necessary).
8. Remove ECM bracket from battery tray (if necessary).

INSTALLATION

Installation is in the reverse order of removal.

Reset electronic systems as necessary. Refer to [PG-72, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

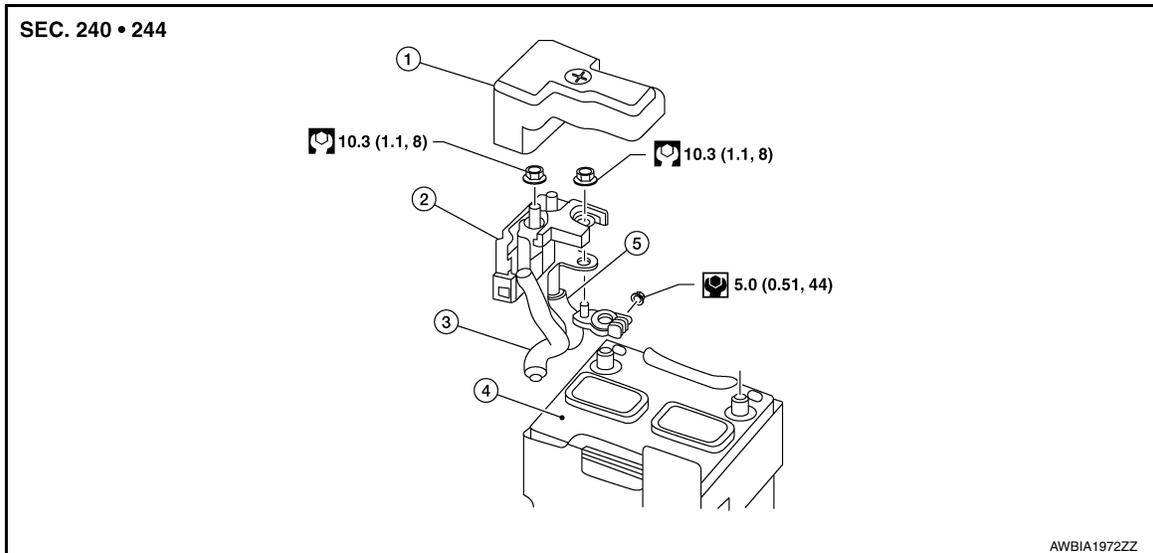
BATTERY TERMINAL WITH FUSIBLE LINK

< REMOVAL AND INSTALLATION >

BATTERY TERMINAL WITH FUSIBLE LINK

Exploded View

INFOID:000000010256019



- | | | |
|------------|-------------------------------|-------------------|
| 1. Cover | 2. Fusible link box (battery) | 3. Positive cable |
| 4. Battery | 5. Harness connector | ← Front |

Removal and Installation

INFOID:000000010256020

REMOVAL

- Loosen battery terminal nuts and disconnect both negative and positive terminals from the battery.
CAUTION:
To prevent damage to the parts, disconnect the battery negative terminal first.
- Disconnect positive cable from fusible link box (battery).
- Disconnect harness connectors from fusible link box (battery) and remove fusible link box (battery).

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Replace the fusible link box battery if it has been dropped or sustained and impact.

To install the battery, carefully read the following instructions:

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

Reset electronic systems as necessary. Refer to [PG-72. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

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SERVICE DATA AND SPECIFICATIONS (SDS)

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Battery

INFOID:000000009794795

Type*	GR35
Capacity (20HR) minimum V-AH	12-60
Cold cranking current A @ -18°C (0°F)	550

*: Always check with the Parts Department for the latest parts information.