

SECTION **PG**

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000003935666

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.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:000000004448916

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.
5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT-III.

Precaution for Power Generation Variable Voltage Control System

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CAUTION:

For this model, the battery current sensor that is installed to the negative battery cable measures the charging/discharging current of the battery and performs various engine controls. If an electrical com-

PRECAUTIONS

< PRECAUTION >

ponent is connected directly to the negative battery terminal, the current flowing through that component will not be measured by the battery current sensor. This condition may cause a malfunction of the engine control system and battery discharge may occur. Do not connect an electrical component or ground wire directly to the battery terminal.

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PREPARATION

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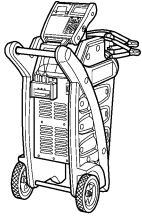
PREPARATION

PREPARATION

Special Service Tool

INFOID:000000004688008

Tool number (Kent-Moore No.) Tool name	Description
— (—) Model GR-8 Multitasking Battery Diagnostic Station	Tests batteries, starting and charging systems. For operating instructions, refer to diagnostic station instruction manual.

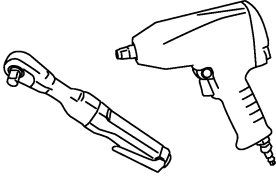


AWIIA1239ZZ

Commercial Service Tool

INFOID:000000003935669

Tool number Tool name	Description
Power tool	Loosening bolts and nuts



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BATTERY

< BASIC INSPECTION >

BASIC INSPECTION

BATTERY

How to Handle Battery

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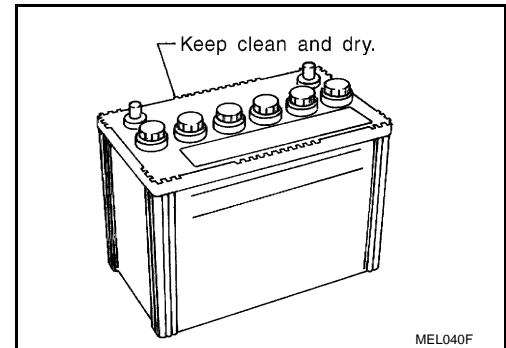
CAUTION:

- 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.

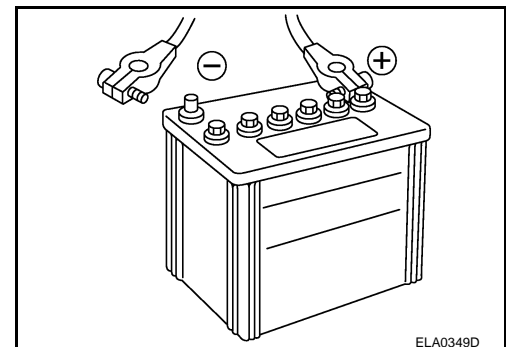
METHODS OF PREVENTING OVER-DISCHARGE

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

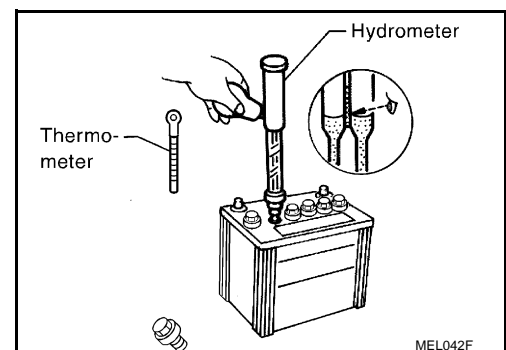
- The battery surface (particularly its top) should always be kept clean and dry.
- The terminal connections should be clean and tight.
- At every routine maintenance, check the electrolyte level. This also applies to batteries designated as "low maintenance" and "maintenance-free".



- 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.)



- 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.



CHECKING ELECTROLYTE LEVEL

WARNING:

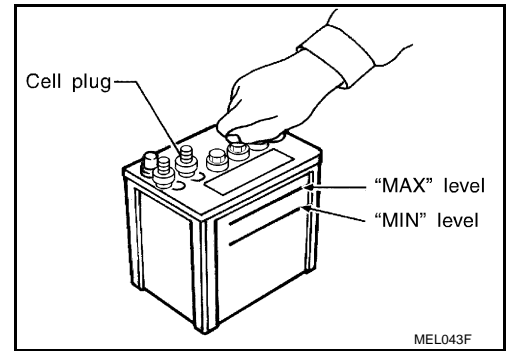
Never allow battery fluid to come in contact with skin, eyes, fabrics, or painted surfaces. After touching a battery, never touch or rub your eyes until you have thoroughly washed your hands. If acid contacts eyes, skin or clothing, immediately flush with water for 15 minutes and seek medical attention.

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BATTERY

< BASIC INSPECTION >

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

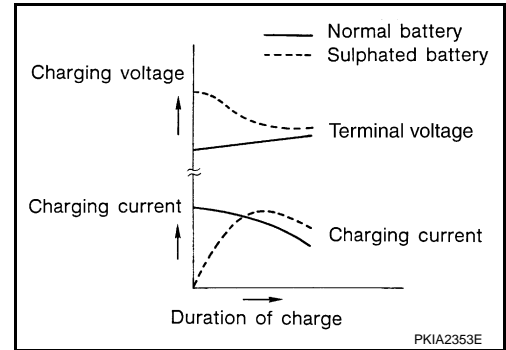


Sulphation

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 sulphation on the cell plates.

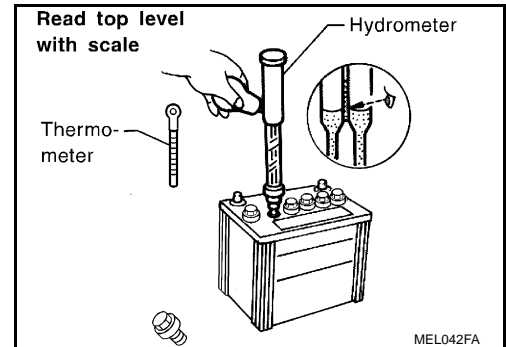
To determine if a battery has been "sulphated", note its voltage and current when charging it. As shown in the figure, less current and higher voltage are observed in the initial stage of charging sulphated batteries.

A sulphated 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

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
4 (40)	-0.016
-1 (30)	-0.020
-7 (20)	-0.024

BATTERY

< BASIC INSPECTION >

Battery electrolyte temperature [°C (°F)]	Add to specific gravity reading
-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

Amps	Time
50	1 hour
25	2 hours
10	5 hours
5	10 hours

Do not charge at more than 50 ampere rate.

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.

Work Flow

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TROUBLE DIAGNOSIS WITH MULTITASKING BATTERY DIAGNOSTIC STATION

Refer to diagnostic station instruction manual.

Special Repair Requirement

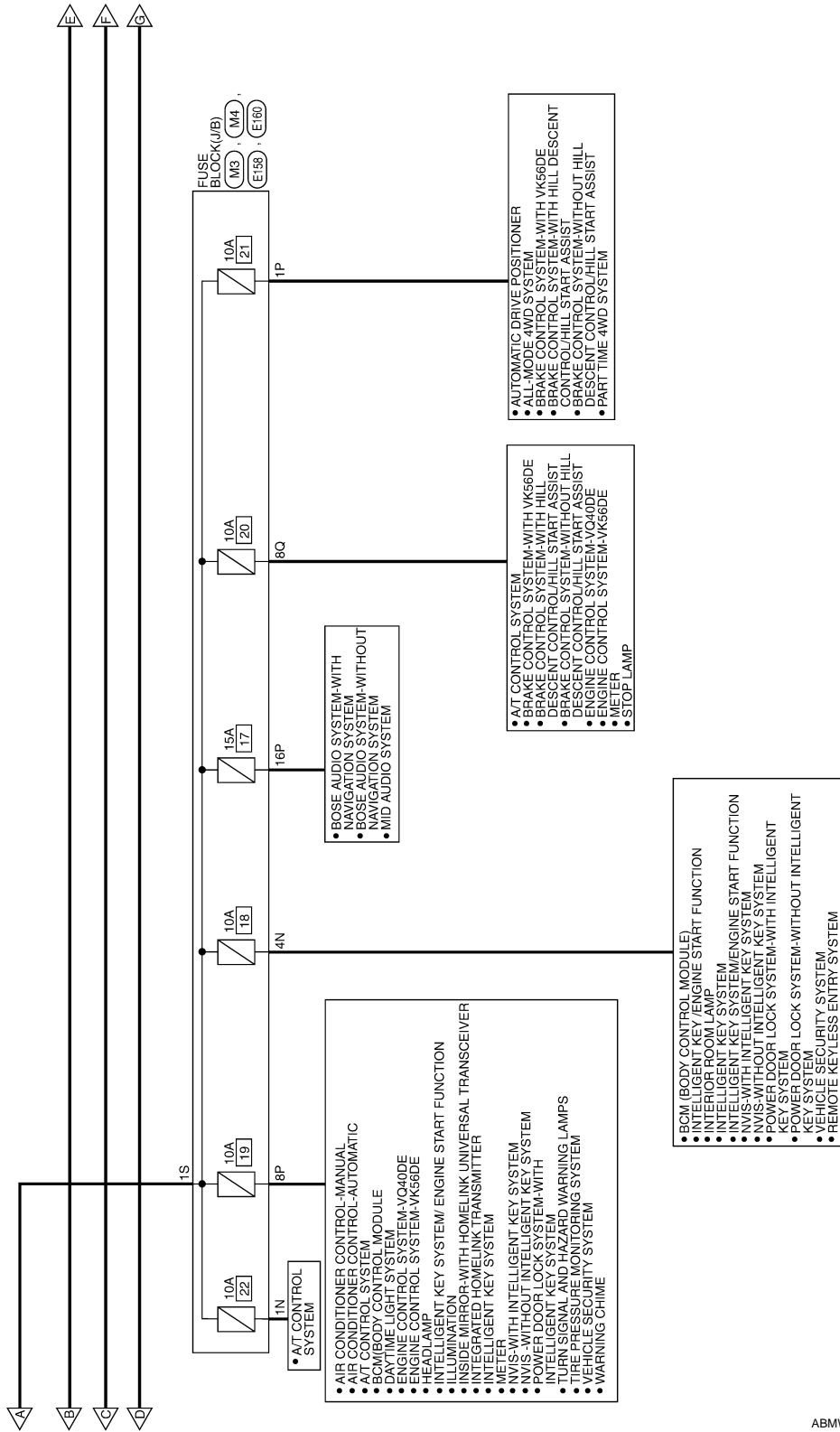
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Required Procedure After Battery Disconnection

System	Item	Reference
Brake Control	Type 1 - Steering Angle Sensor Neutral Position	Refer to BRC-12 .
	Type 2 - Steering Angle Sensor Neutral Position	Refer to BRC-141 .
Body, Lock & Security	With Intelligent Key - Automatic Back Door Initialization	Refer to DLK-10 .
	Without Intelligent Key - Automatic Back Door Initialization	Refer to DLK-208 .
Roof	Sunroof Memory Reset/Initialization	Refer to RF-5 .
Seats	Automatic Drive Positioner System Initialization	Refer to Owner's Manual.
Audio-Visual System	Audio (Radio Preset)	Refer to Owner's Manual.

POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

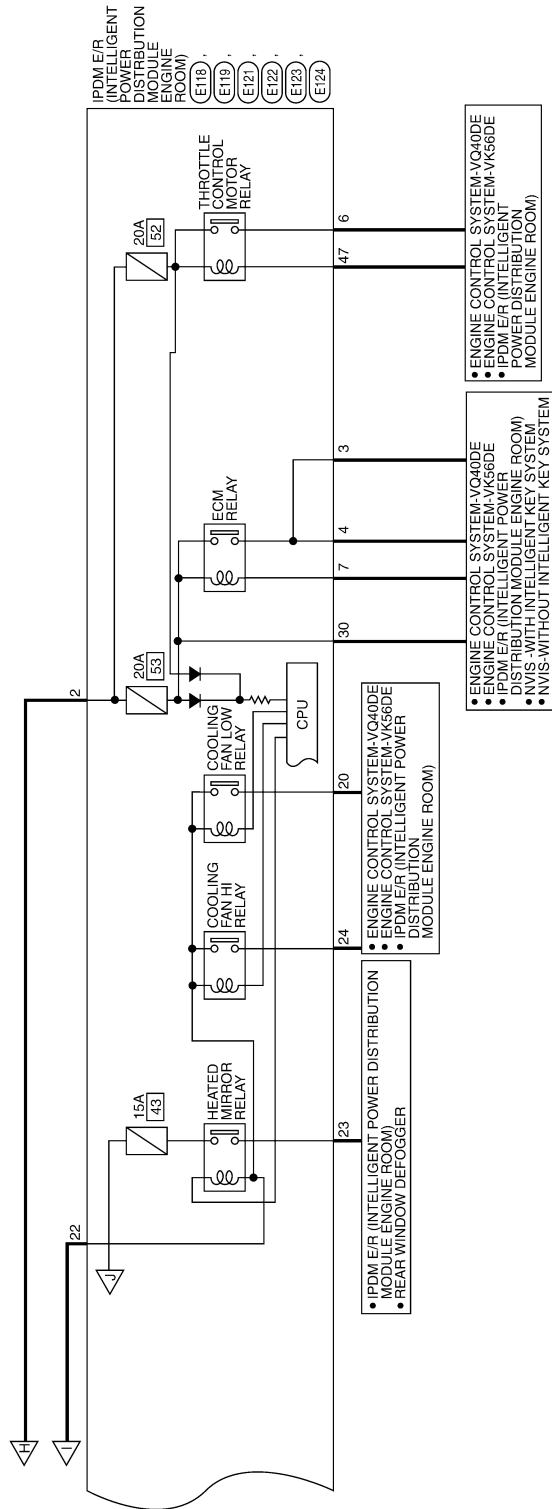


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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >



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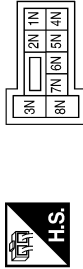
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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

BATTERY POWER SUPPLY CONNECTORS

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



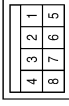
Terminal No.	Color of Wire	Signal Name
1N	R/B	-
4N	R/Y	-

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



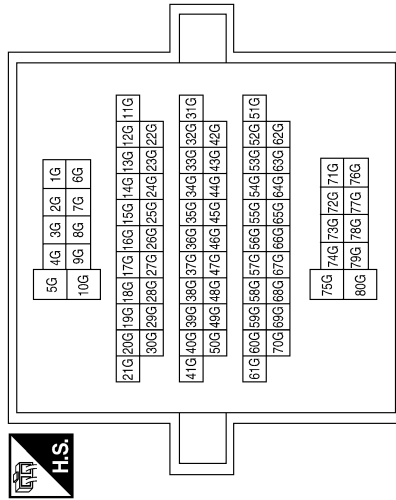
Terminal No.	Color of Wire	Signal Name
1P	R/B	-
8P	R/Y	-
16P	R/B	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



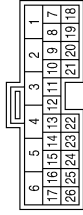
Terminal No.	Color of Wire	Signal Name
2	W/G	-

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



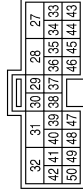
Terminal No.	Color of Wire	Signal Name
21G	V	-

Connector No.	M165
Connector Name	TRANSFER CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
25	W/G	IGN-SW

Connector No.	M166
Connector Name	TRANSFER CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
40	V	SSOF

POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

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	W	F/LUSM
2	R	F/LMAIN

Connector No.	E30
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	-



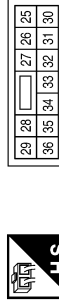
Terminal No.	Color of Wire	Signal Name
3	R	-

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	W/G	-

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



Terminal No.	Color of Wire	Signal Name
28	R	CLEARANCE FRONT LH
29	G	TRAILER RLY CONT
30	R/B	ECM BAT

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



Terminal No.	Color of Wire	Signal Name
20	BR	M/FAN 1
22	G	MOTOR FAN
23	LG	HEATED MIRROR
24	P	M/FAN 2

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



Terminal No.	Color of Wire	Signal Name
3	G	IGN COIL
4	P	ENG SUPPLY
6	V	ELEC THROTTLE
7	BR	ECM RLY CONT
10	R/B	DTRL RLY SUPPLY

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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >


Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



59	58	57
62	61	60

Terminal No.	Color of Wire	Signal Name
57	GR	TAIL LAMPS
59	B	GND (POWER)
61	R/B	TRAILER RLY SUPPLY


Connector No.	E123
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



51	50	49
56	55	54
53	52	51

Terminal No.	Color of Wire	Signal Name
49	GR	CLEARANCE FRONT RH
50	W	FR FOG LAMP LH
51	V	FR FOG LAMP RH
52	P	H/LAMP LO LH
54	R	H/LAMP LO RH
55	G	H/LAMP HI LH
56	L	H/LAMP HI RH

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



42	41	40	39	38	37
48	47	46	45	44	43

Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
47	O	ECM (ETC RLY CONT)

Connector No.	E129
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BLACK



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

Connector No.	E128
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	GRAY



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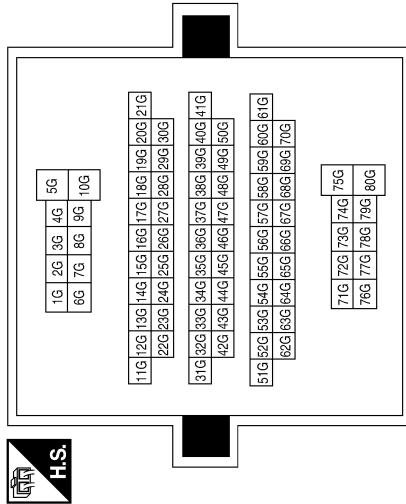
Terminal No.	Color of Wire	Signal Name
4	W	-
7	W	-

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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

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



Terminal No.	Color of Wire	Signal Name
21G	V	-

Connector No.	E156
Connector Name	TRANSFER SHUT OFF RELAY 1
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	W/G	-
2	B	-
3	B	-
5	W	-

Connector No.	E157
Connector Name	TRANSFER SHUT OFF RELAY 2
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	V	-
3	B	-
5	W	-

Connector No.	E158
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK



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

Connector No.	E160
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8Q	R/B	-

Connector No.	E202
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	-



Terminal No.	Color of Wire	Signal Name
5	B/R	-

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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Connector No.	E210
Connector Name	STARTER MOTOR
Connector Color	BLACK



Terminal No.	2	Color of Wire	B/R	Signal Name	-
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Connector No.	E206
Connector Name	GENERATOR
Connector Color	-



Terminal No.	1	Color of Wire	B/R	Signal Name	B
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Connector No.	E204
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	-



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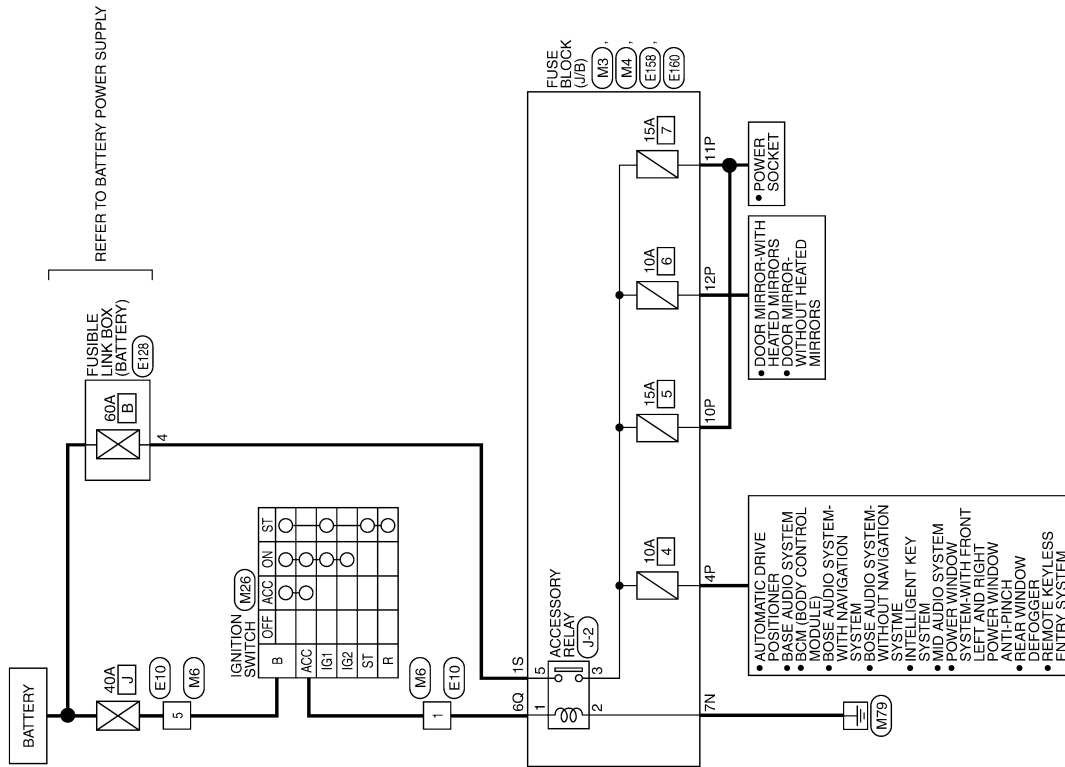
POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Wiring Diagram—Accessory Power Supply—

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ACCESSORY POWER SUPPLY



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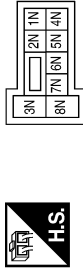
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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

ACCESSORY POWER SUPPLY CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
7N	B	-

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



Terminal No.	Color of Wire	Signal Name
4P	G/B	-
10P	G/Y	-
11P	G/B	-
12P	G/Y	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



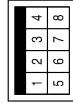
Terminal No.	Color of Wire	Signal Name
1	G/Y	-
5	G	-

Connector No.	M26
Connector Name	IGNITION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
B	G	-
ACC	G/Y	-

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G/Y	-
5	G	-

Connector No.	E128
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	GRAY

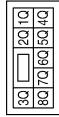


Terminal No.	Color of Wire	Signal Name
4	W	-

POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Connector No.	E160
Connector Name	FUSE BLOCK(J/B)
Connector Color	WHITE



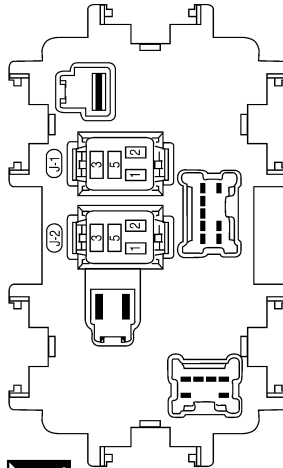
Terminal No.	Color of Wire	Signal Name
6Q	G/Y	-

Connector No.	E158
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK



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

Connector No.	J-2
Connector Name	ACCESSORY RELAY
Connector Color	-



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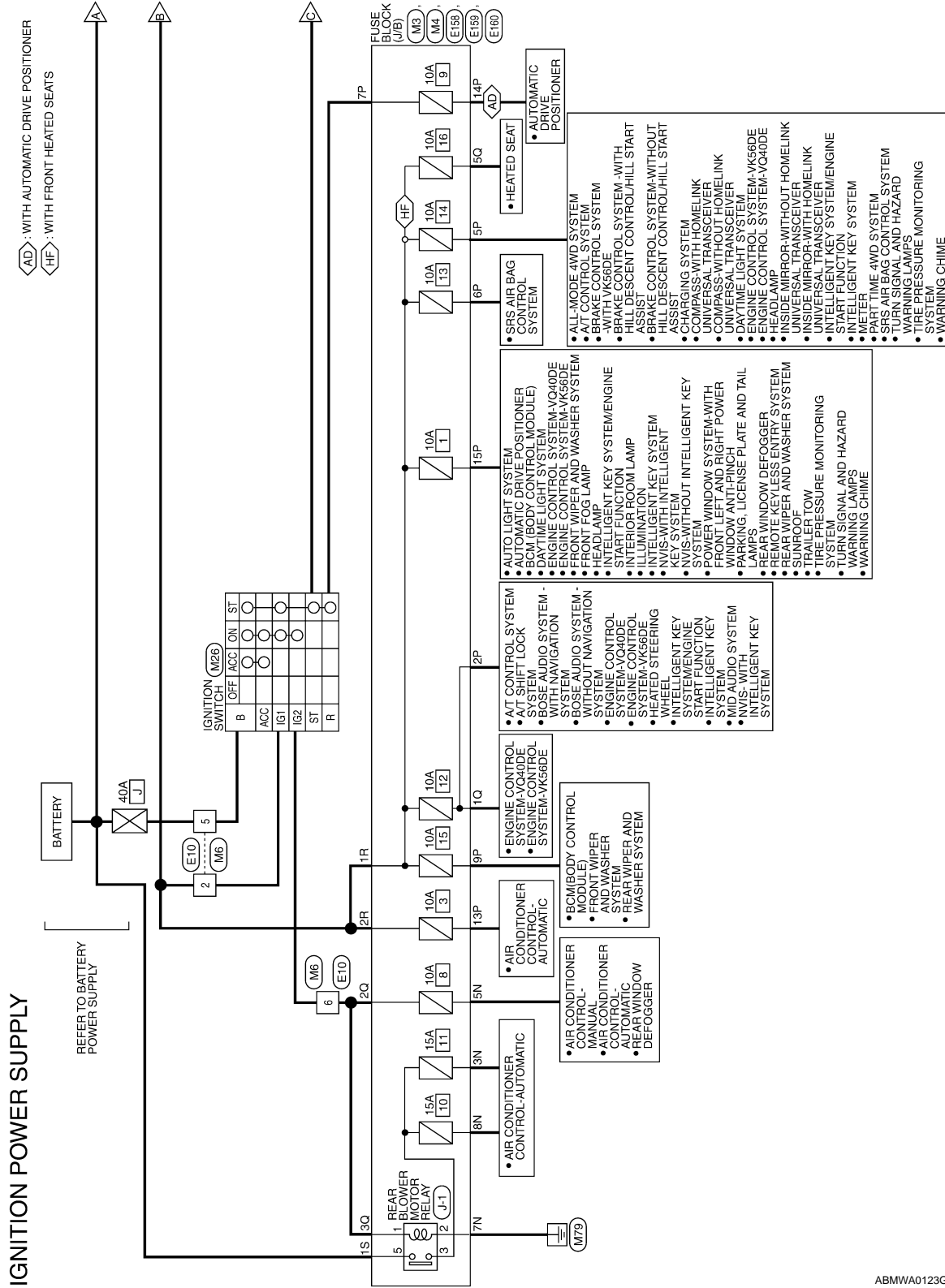
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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

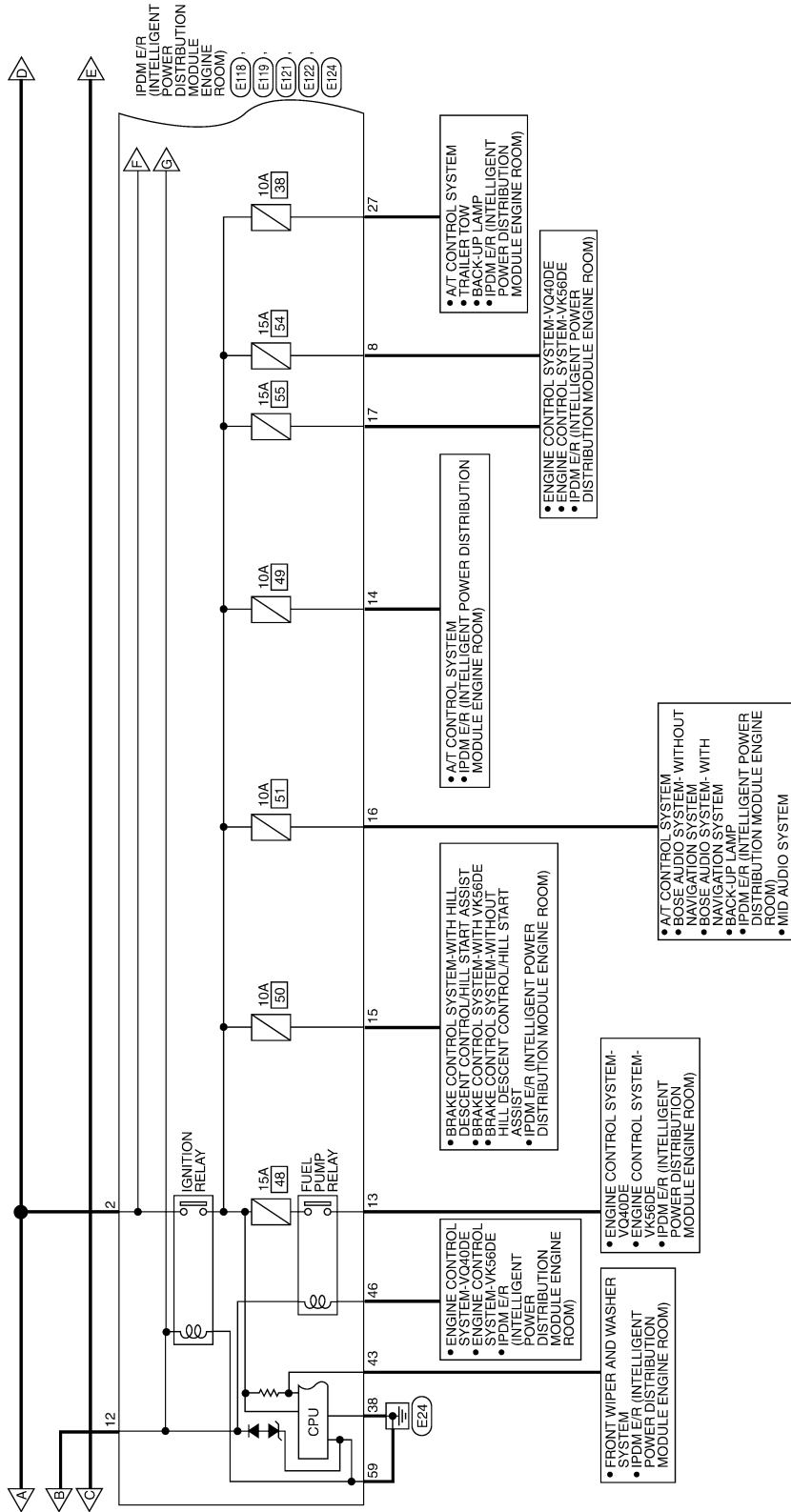
Wiring Diagram — Ignition Power Supply —

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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

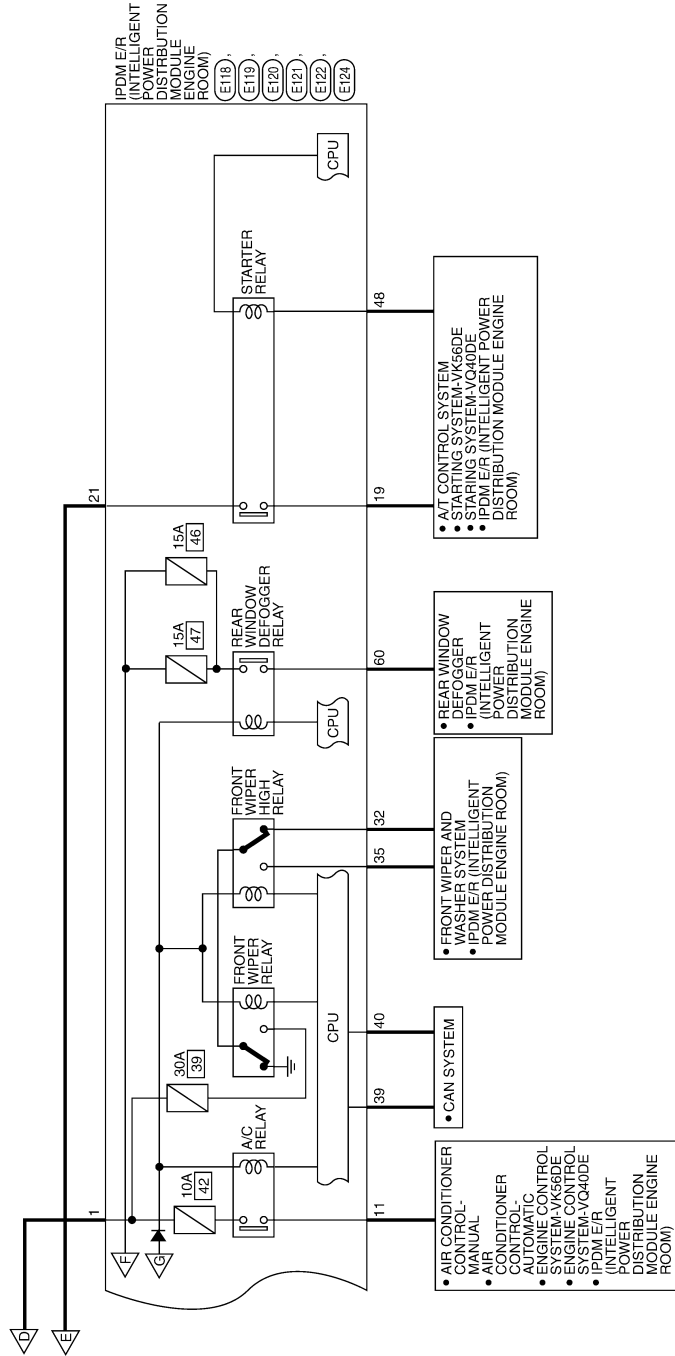


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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >



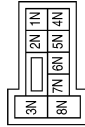
ABMWA0125GI

POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

IGNITION POWER SUPPLY CONNECTORS

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



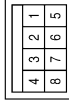
Terminal No.	Color of Wire	Signal Name
3N	L	-
5N	W/G	-
7N	B	-
8N	GR	-

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



Terminal No.	Color of Wire	Signal Name
2P	W/G	-
5P	W/G	-
6P	W/R	-
7P	LG	ST-R
9P	W/G	-
13P	W/G	-
14P	O	-
15P	W/R	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



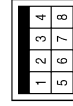
Terminal No.	Color of Wire	Signal Name
2	W/G	-
5	G	-
6	R	-

Connector No.	M26
Connector Name	IGNITION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
B	G	-
IG1	W/G	-
IG2	R	-

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	W/G	-
5	G	-
6	R	-

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	W	F/LUSM
2	R	F/LMAIN

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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

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

21	20	19
24	23	22



Terminal No.	Color of Wire	Signal Name
19	W	STARTER_MOTOR
21	GR	IGN_SW_(ST)

Terminal No.	Color of Wire	Signal Name
15	W/R	ABS_IGN_SUPPLY
16	W/G	REVERS_LAMP
17	W/G	INJECTION

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

9	8	7	6	5	4	3
18	17	16	15	14	13	12
11	10	9	8	7	6	5



Terminal No.	Color of Wire	Signal Name
8	W/R	O2_SENS
11	Y	A/C_COMPRESSOR
12	W/G	IGN_SW_(IG1)
13	R	FUEL_PUMP
14	W/G	A/T_ECU_IGN_SUPPLY

Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

59	58	57
62	61	60



Terminal No.	Color of Wire	Signal Name
59	B	GND (POWER)
60	GR	RR_DEF

Connector No.	E122
Connector Name	IPDM E/R(INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

42	41	40	39	38	37
48	47	46	45	44	43



Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
43	G	AUTO_STOP_SW
46	V	ECM (FUEL_PUMP_FLY_CONT)
48	R	INHIBIT

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

29	28	27	26	25
36	35	34	33	32
31	30	29	28	27



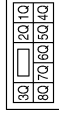
Terminal No.	Color of Wire	Signal Name
27	W	T_TOW_REV_LAMP
32	GR	FR_WIPER_LO
35	L	FR_WIPER_HI

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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Connector No.	E160
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1Q	W/G	-
2Q	R	-
3Q	W/G	-
5Q	W/R	-

Connector No.	E159
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK



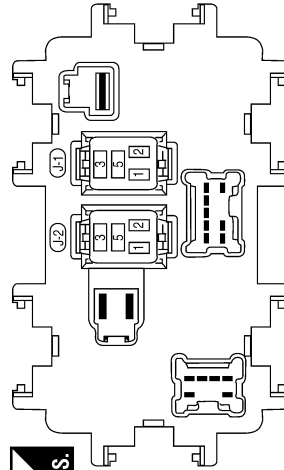
Terminal No.	Color of Wire	Signal Name
1R	W/G	-
2R	GR	-

Connector No.	E158
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK



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

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



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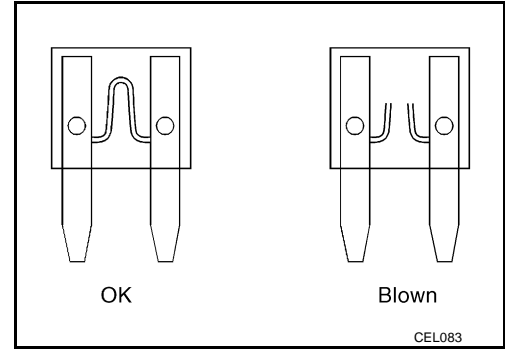
POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Fuse

INFOID:000000003935675

- If fuse is blown, be sure to eliminate cause of incident 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:000000003935677

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.

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 incident.
- Never wrap outside of fusible link with vinyl tape.
- Never let fusible link touch any other wiring harness, vinyl or rubber parts.

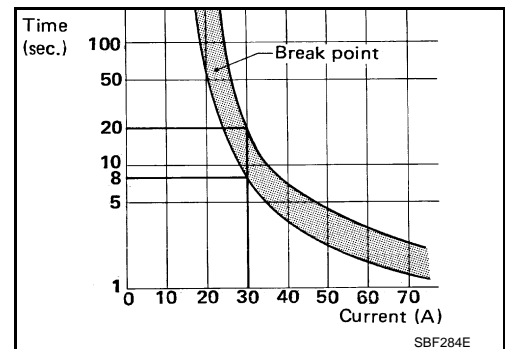
Circuit Breaker (Built Into BCM)

INFOID:000000003935677

For example, when current is 30A, the circuit is broken within 8 to 20 seconds.

A circuit breaker is used for the following systems:

- Power windows
- Power sunroof



GROUND CIRCUIT

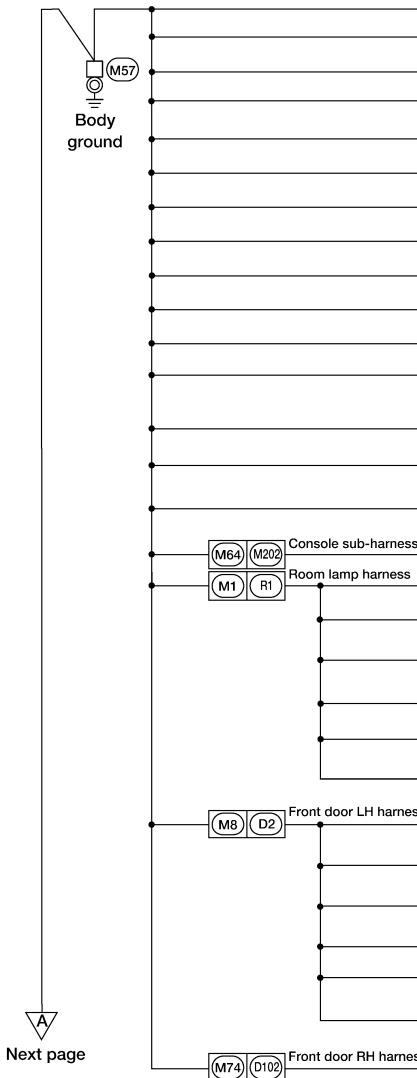
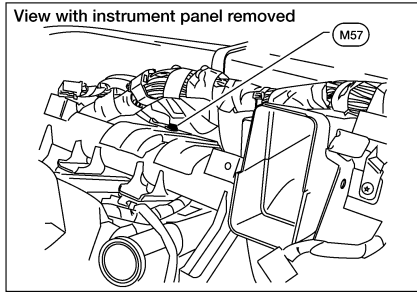
< COMPONENT DIAGNOSIS >

GROUND CIRCUIT

Ground Distribution

INFOID:000000003935678

Main Harness



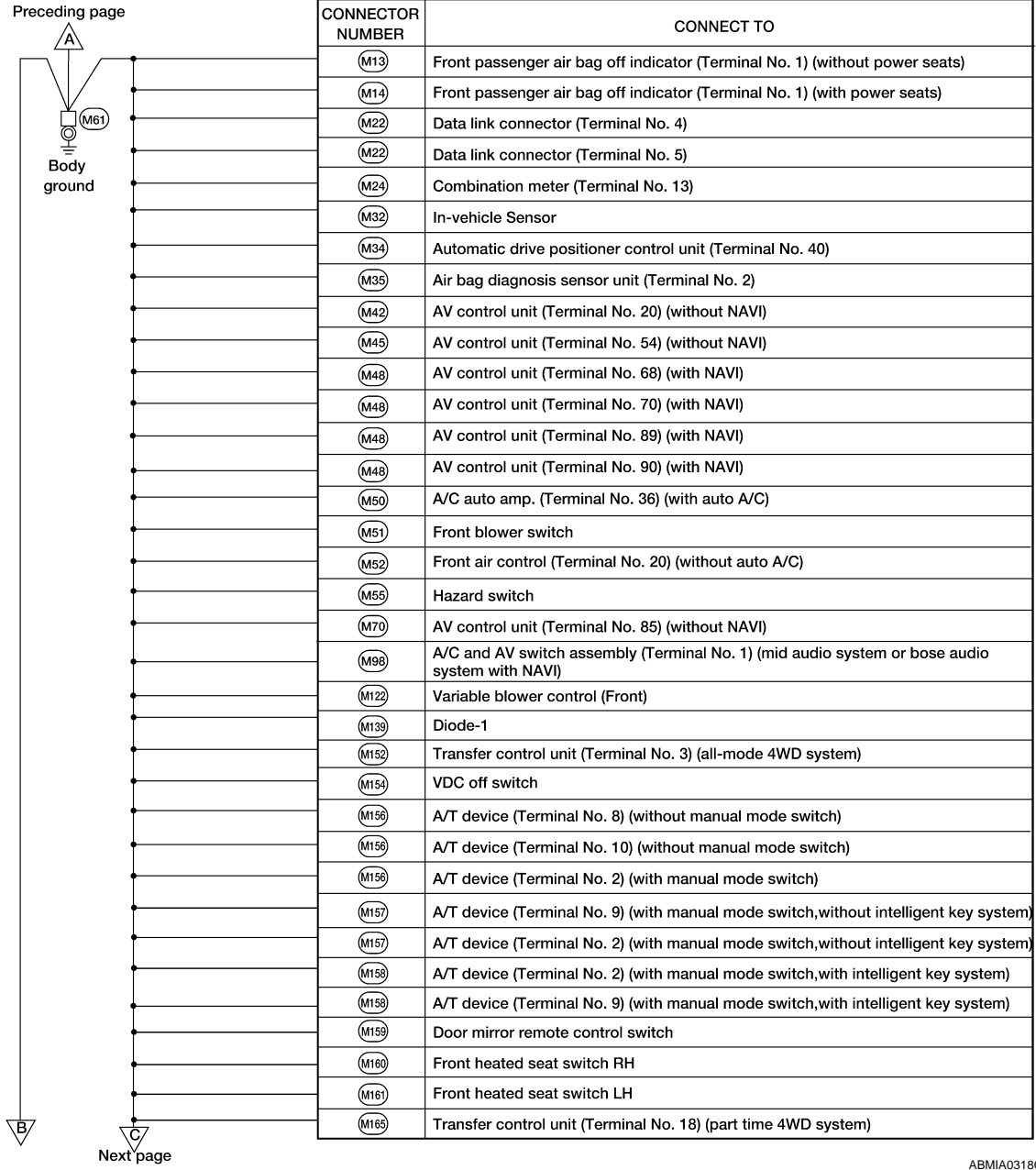
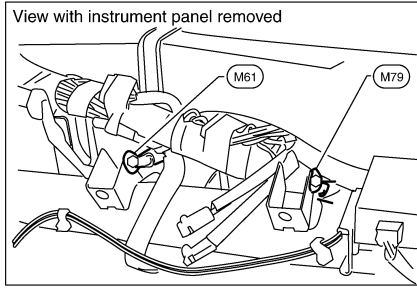
CONNECTOR NUMBER	CONNECT TO
(M5)	Combination switch (spiral cable) (Terminal No. 2)
(M7)	Heated steering wheel switch
(M20)	BCM (body control module) (Terminal No. 67)
(M21)	Nats antenna amp. (Terminal No. 3)
(M22)	Data link connector (Terminal No. 4)
(M22)	Data link connector (Terminal No. 5)
(M24)	Combination meter (Terminal No. 23)
(M26)	Combination switch (Terminal No. 12)
(M34)	Automatic drive positioner control unit (Terminal No. 48)
(M47)	Steering angle sensor
(M65)	Steering lock solenoid
(M84)	Pedal adjusting switch (Terminal No. 4) (without automatic drive positioner)
(M96)	Pedal adjusting switch (Terminal No. 1) (with automatic drive positioner)
(M155)	HDC (hill decent control) switch
(M163)	Door mirror remote control switch (Terminal No. 13) (with automatic drive positioner)
(M206)	Rear air control (rear) (Terminal No. 1) (with auto A/C)
(R2)	Rear air control (front) (Terminal No. 1) (with auto A/C)
(R4)	Sunroof switch
(R6)	Auto anti-dazzling inside mirror (Terminal No. 6) (without homelink universal transceiver)
(R7)	Auto anti-dazzling inside mirror (Terminal No. 3) (with homelink universal transceiver)
(R9)	Front room/map lamp assembly
(R10)	Personal lamp 2ND row
(D4)	Door mirror LH (door mirror defogger) (Terminal No. 6) (without automatic drive positioner)
(D5)	Seat memory switch
(D8)	Main power window and door lock/unlock switch (Terminal No. 17)
(D14)	Front door Lock assembly LH
(D16)	Front door request switch LH
(D18)	Door mirror LH (door mirror defogger) (Terminal No. 6) (with automatic drive positioner)
(D103)	Door lock sensor

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GROUND CIRCUIT

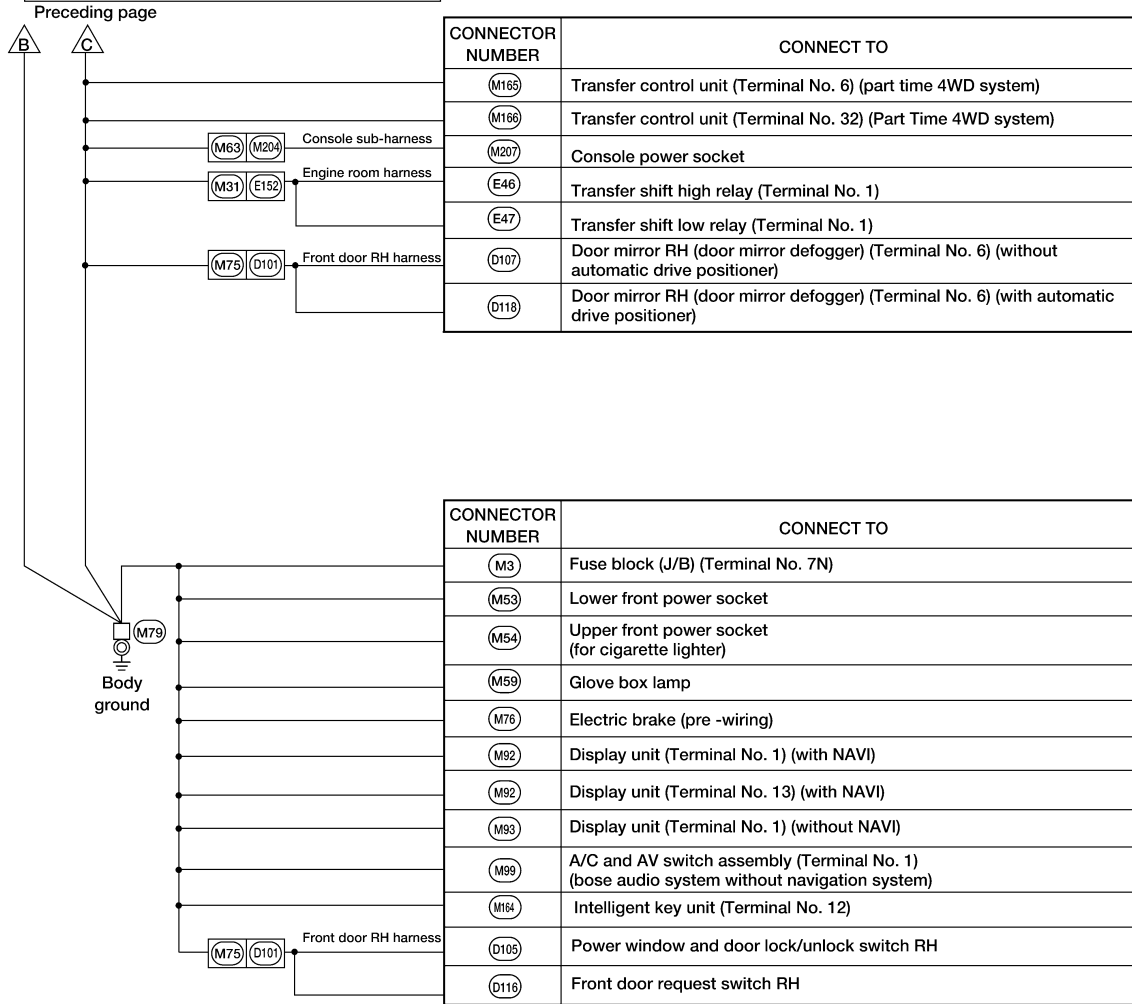
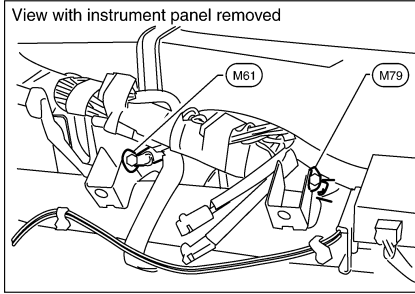
< COMPONENT DIAGNOSIS >



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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >



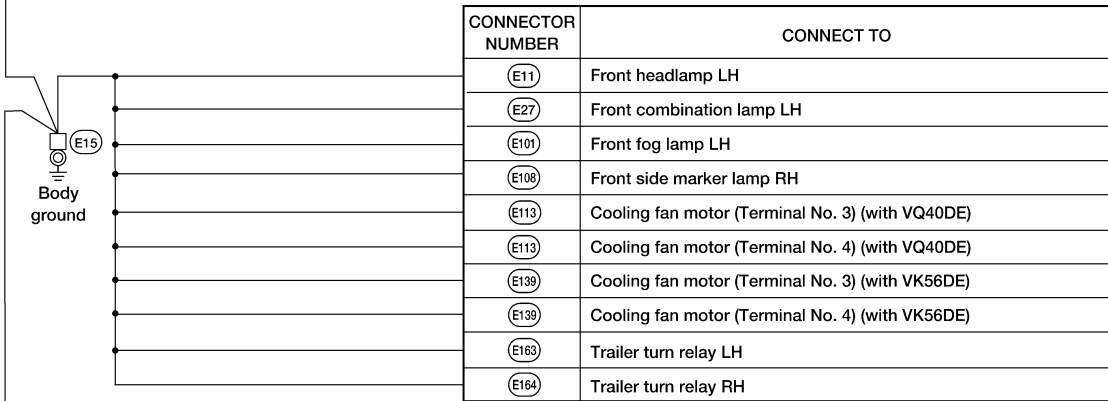
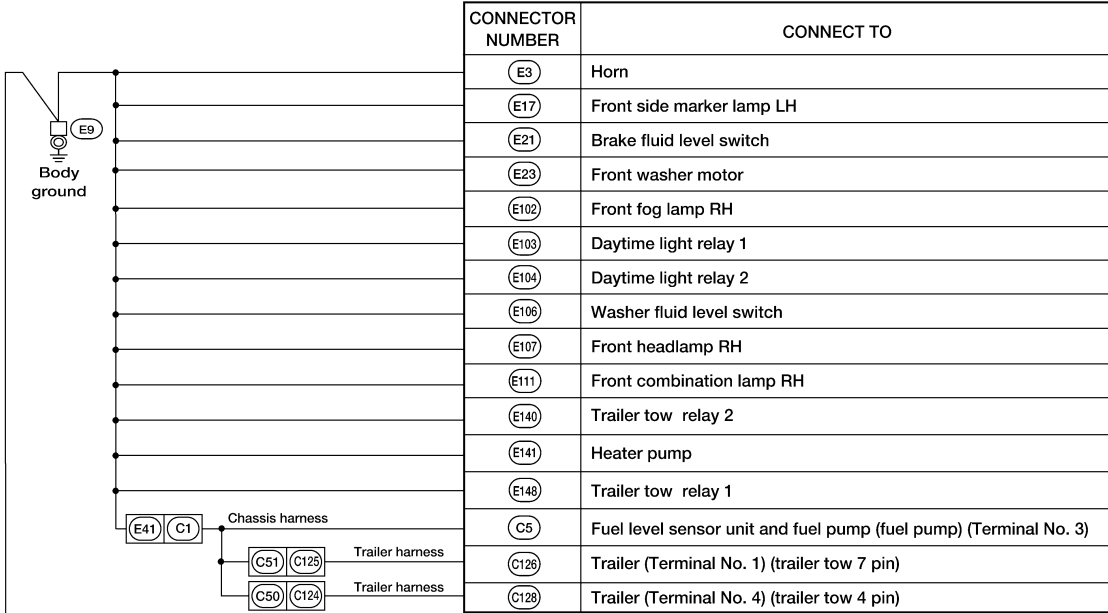
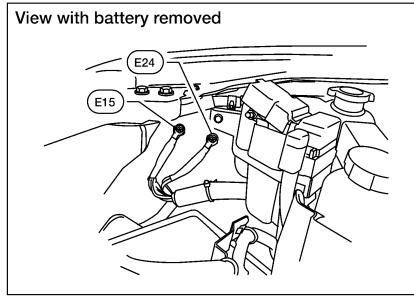
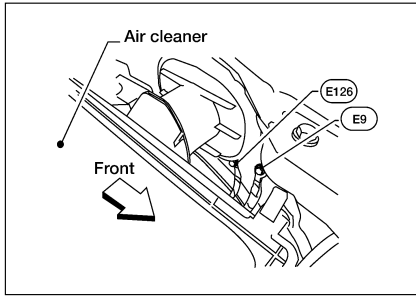
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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Engine Room Harness

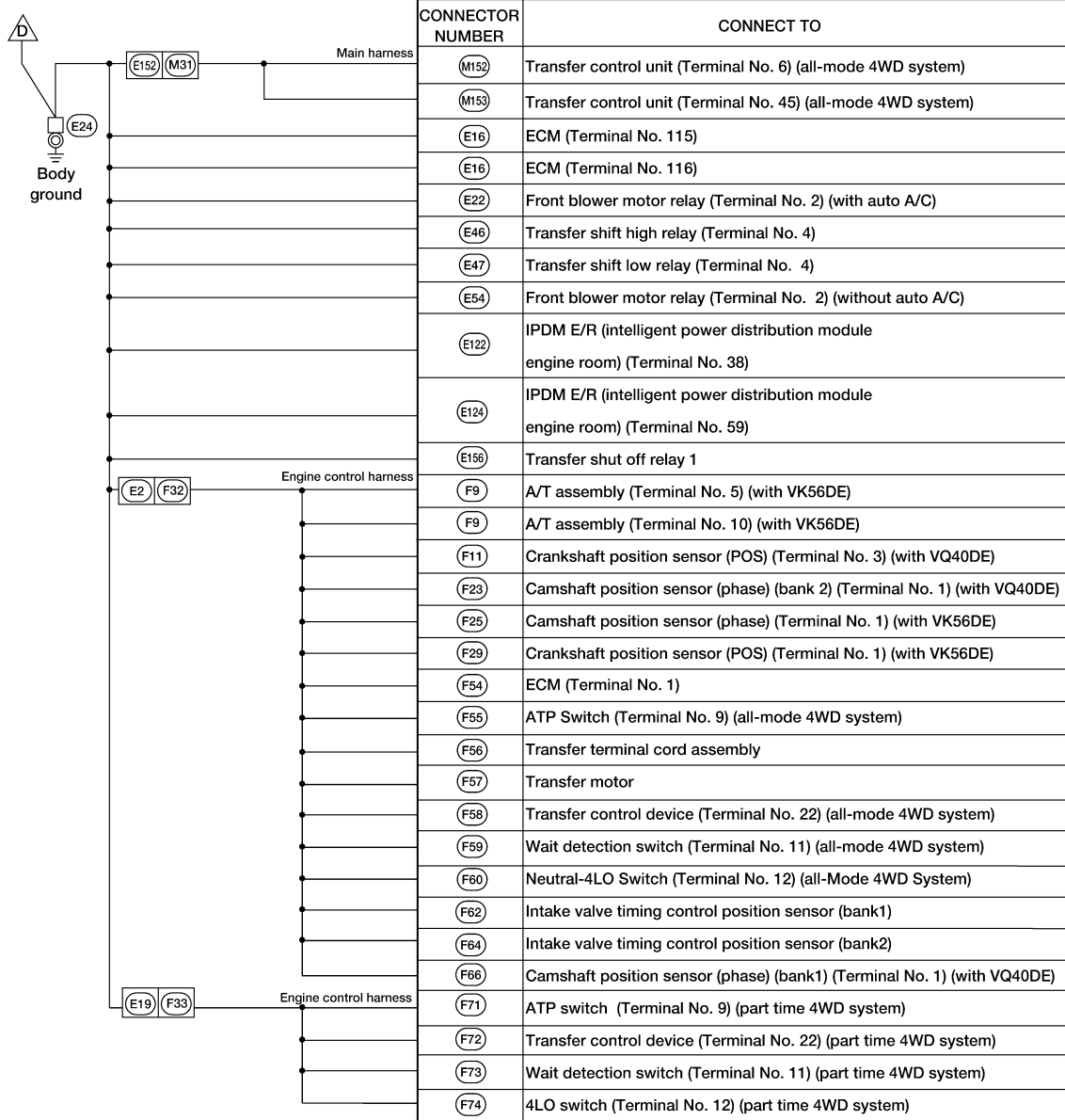
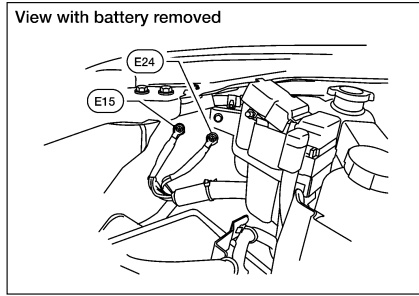


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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

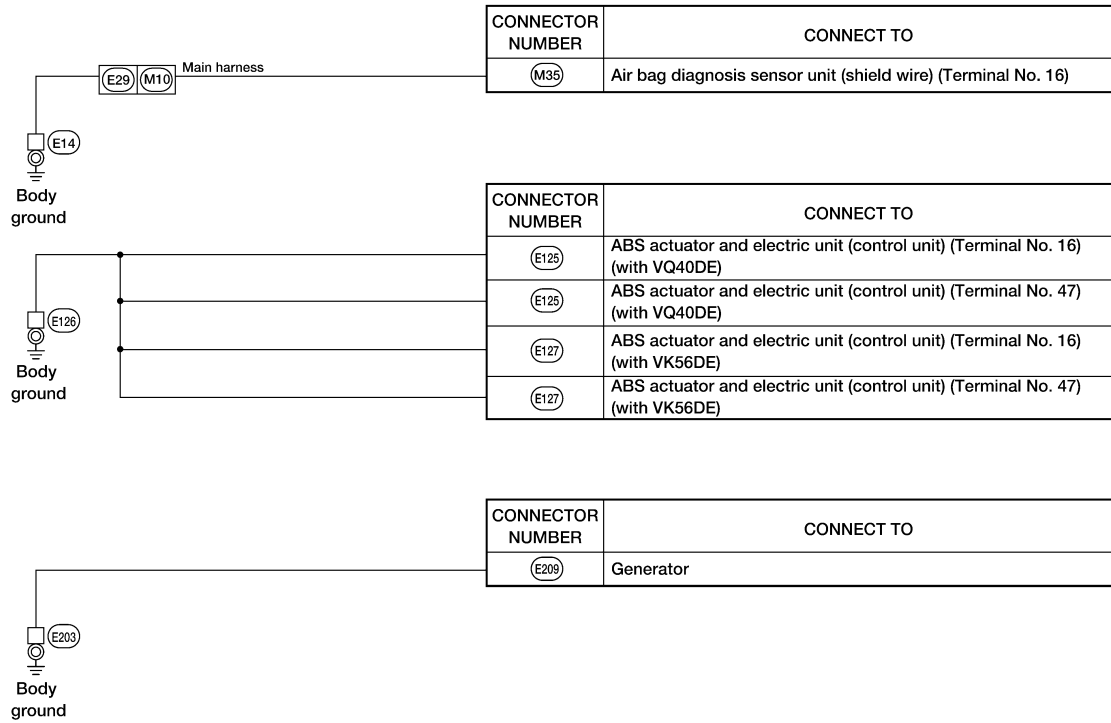
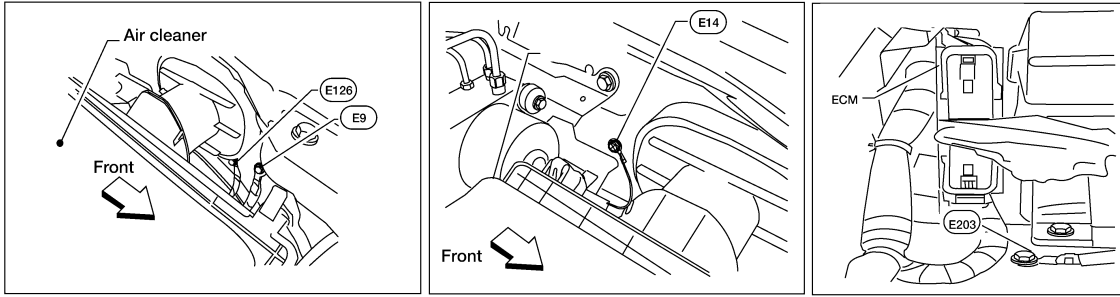


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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

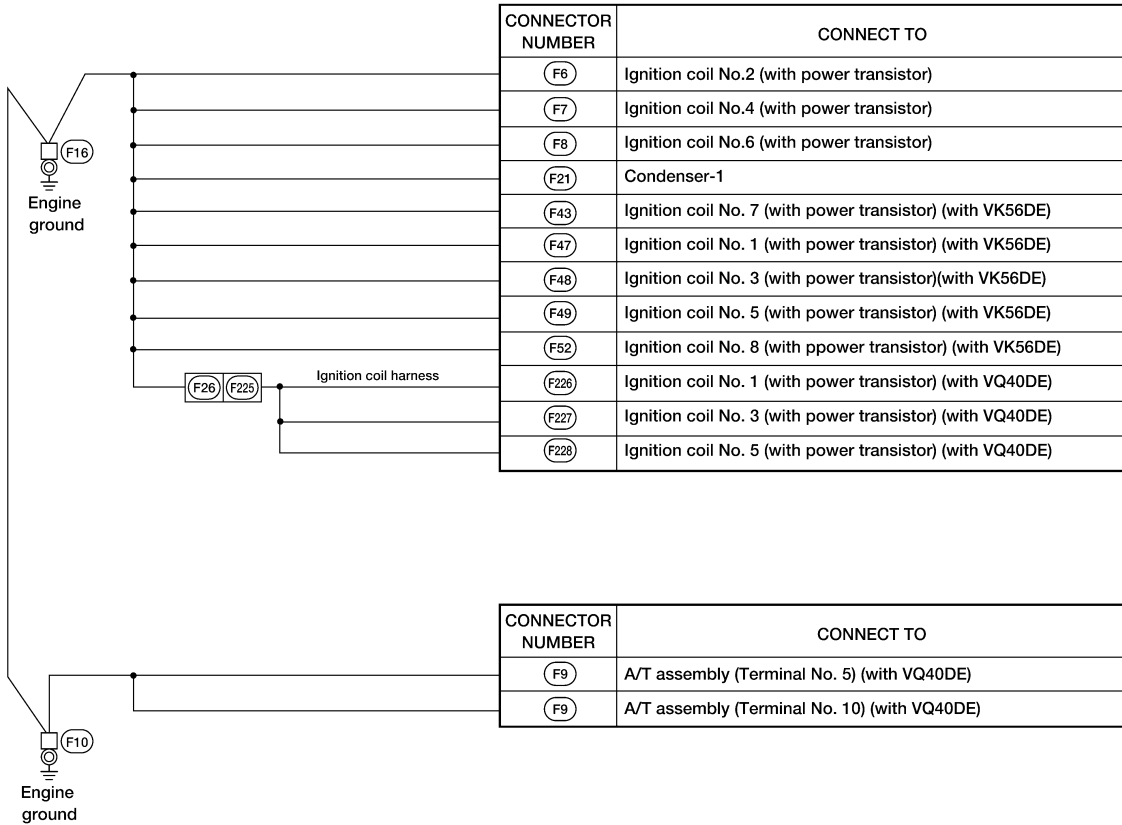
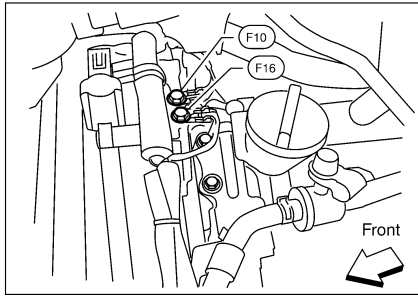


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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Engine Control Harness



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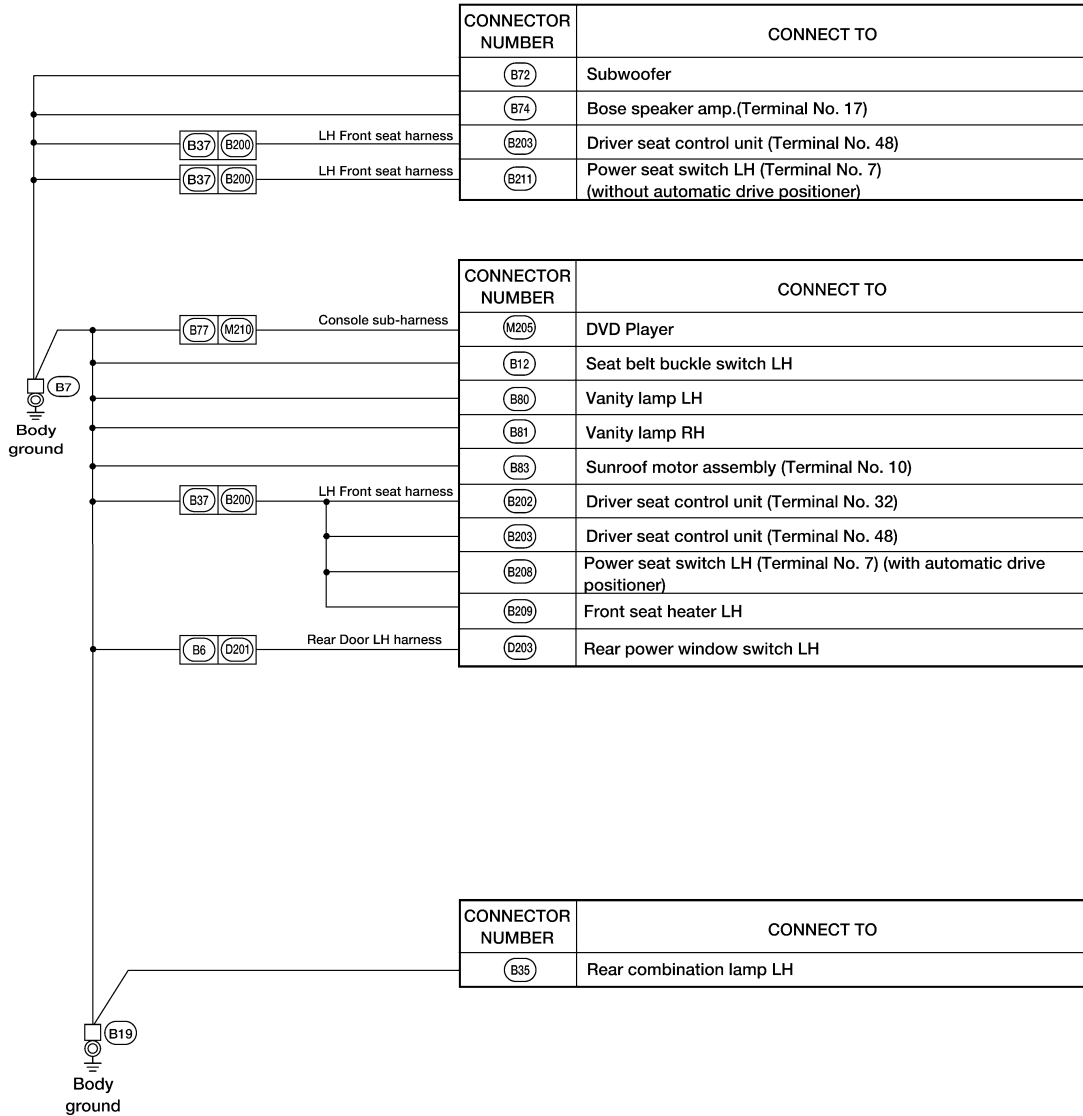
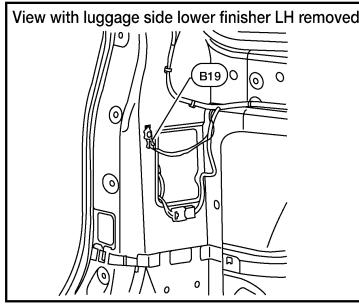
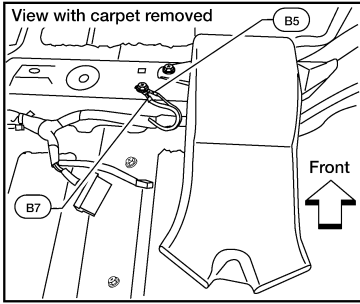
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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Body Harness

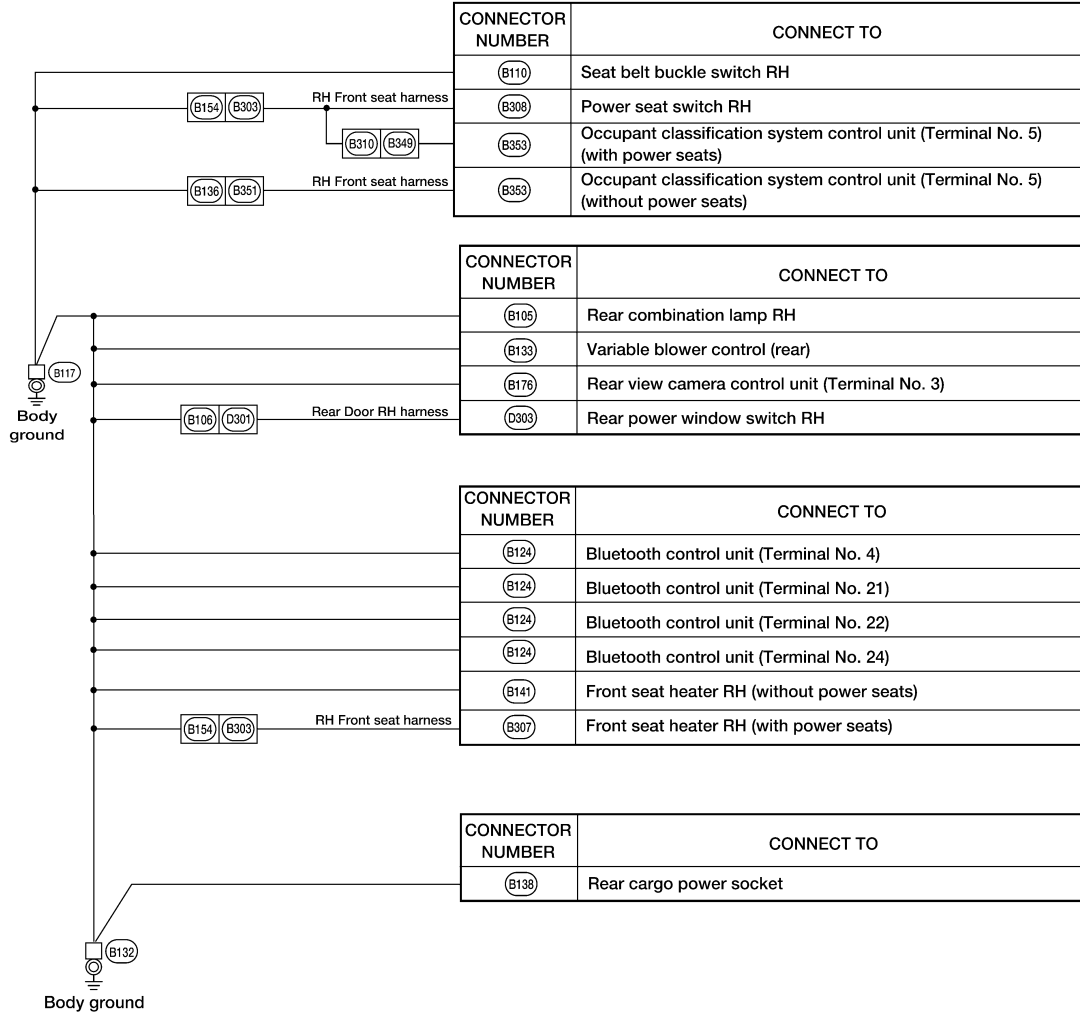
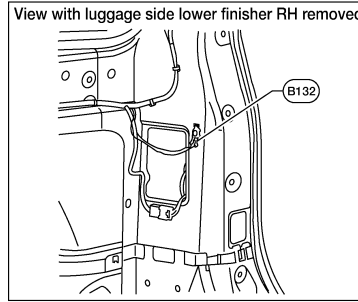
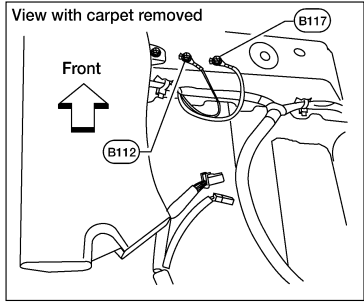


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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Body No. 2 Harness



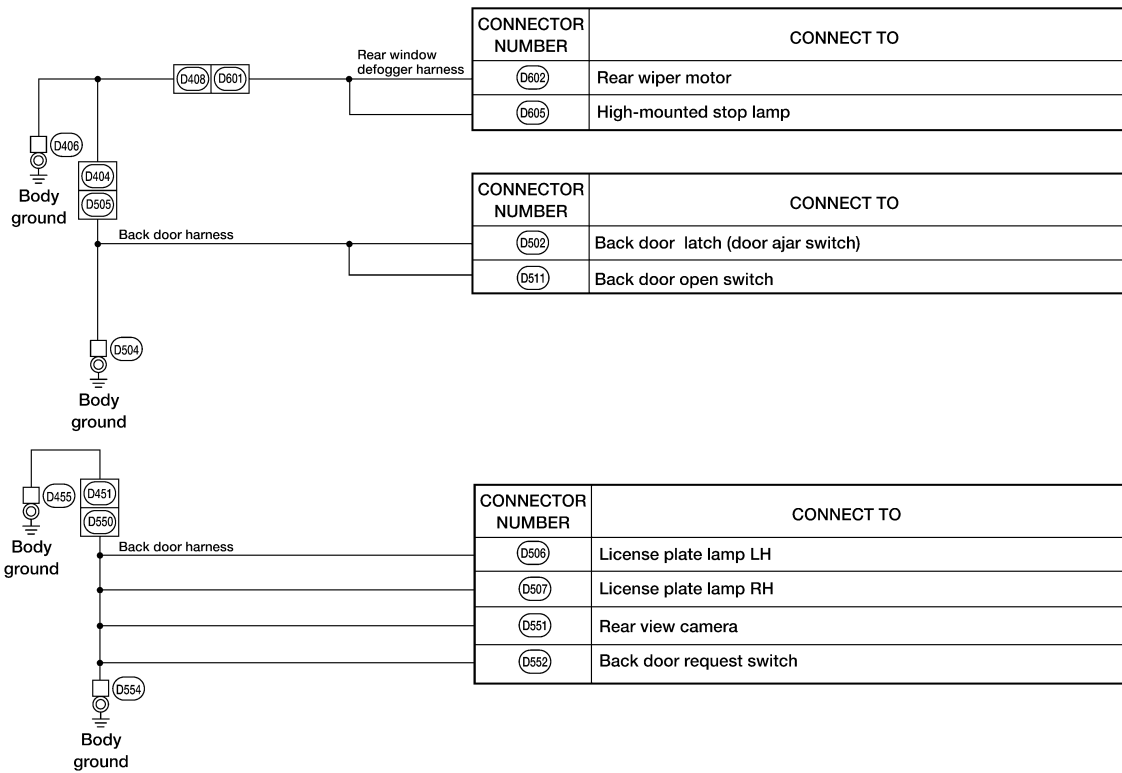
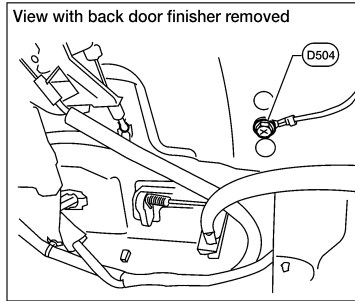
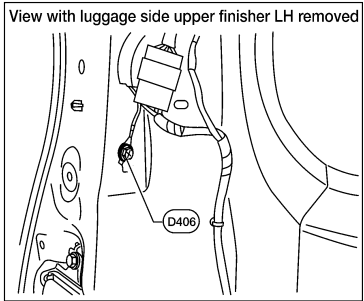
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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

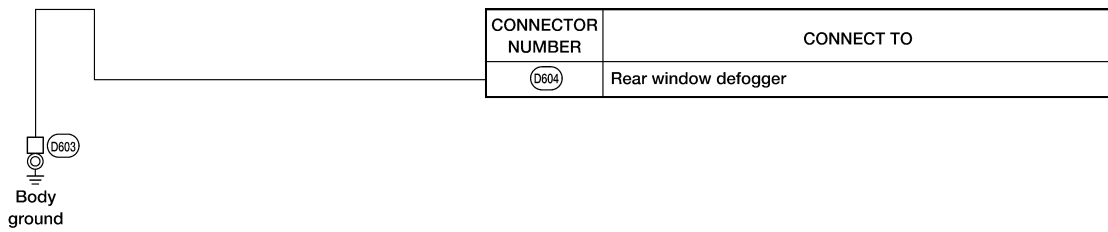
Back Door No. 2 and Back Door Harness



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GROUND CIRCUIT

< COMPONENT DIAGNOSIS >



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HARNESS

< COMPONENT DIAGNOSIS >

HARNESS

Harness Layout

INFOID:000000003935679

HOW TO READ HARNESS LAYOUT

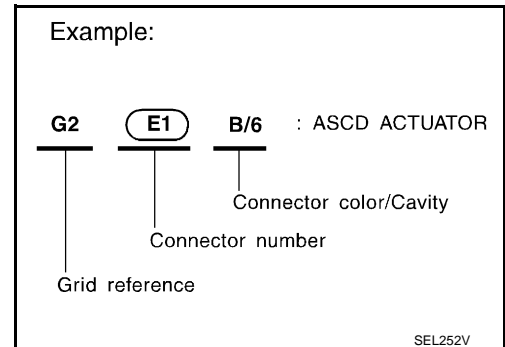
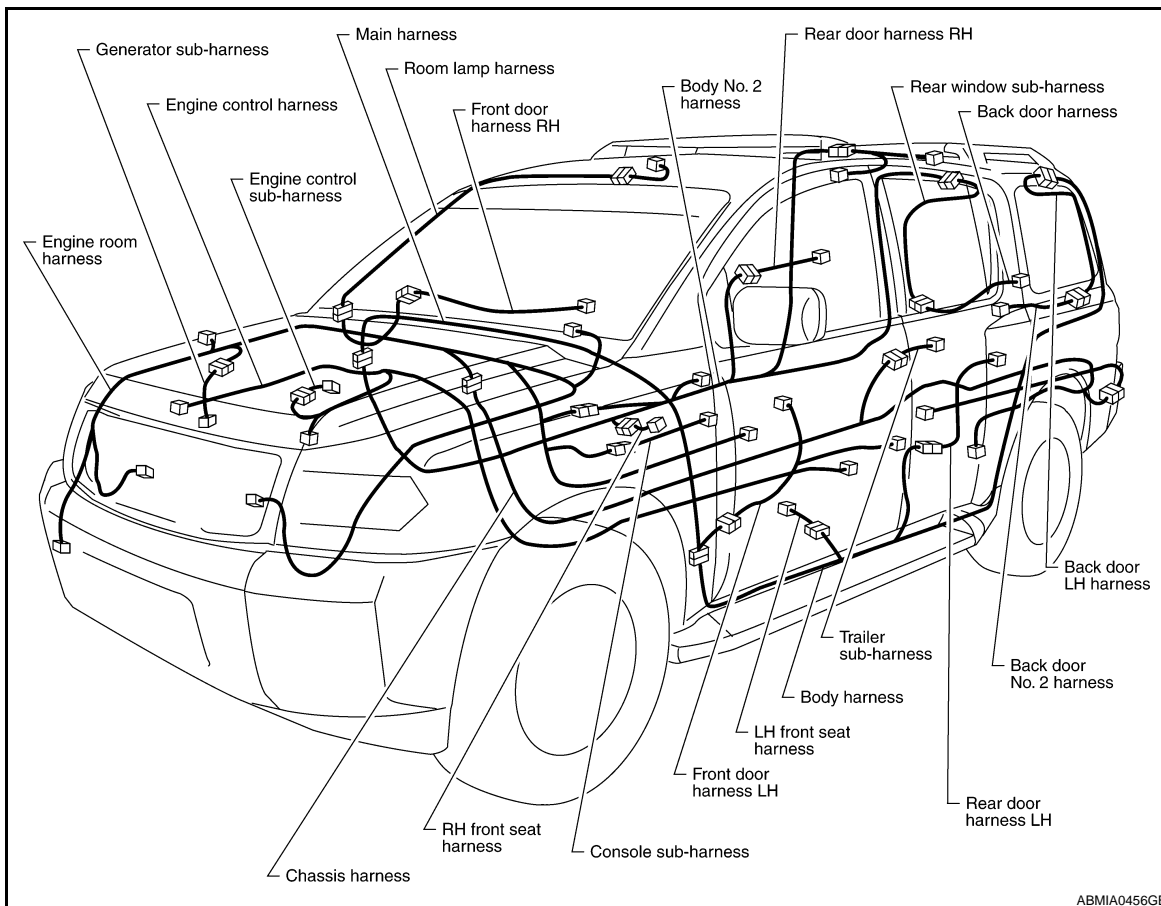
The following Harness Layouts use a map style grid to help locate connectors on the drawings:

- Main Harness and Console Sub-harness
- Engine Room Harness (RH View) and Generator Sub-harness
- Engine Room Harness (Passenger Compartment)
- Engine Room Harness (LH View)
- Engine Control Harness (VQ40DE), Injector Sub-harness, Ignition Coil Sub-harness and Knock Sensor Sub-harness
- Engine Control Harness (VK56DE) and Knock Sensor Sub-harness
- Chassis Harness and Trailer Sub-harness
- Body Harness and LH Front Seat Harness
- Body No. 2 Harness and RH Front Seat Harness
- Room Lamp Harness
- Back Door Harness, Rear Window Sub-harness and Back Door LH 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.

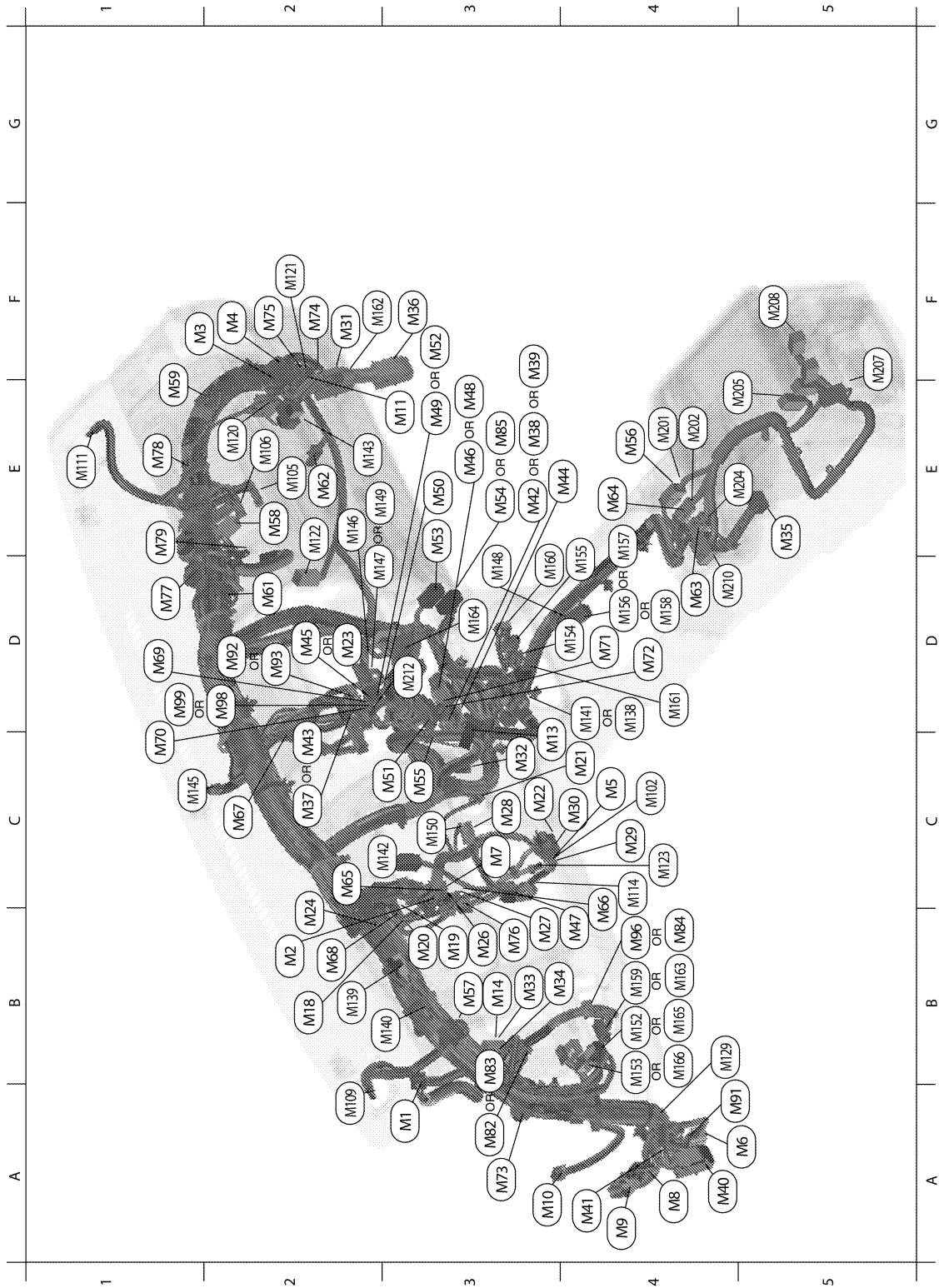
OUTLINE



HARNESS

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MAIN HARNESS



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A3	M1	W/24	: To R1	D3	M73	BR/1	: To M350
B2	M2	L/4	: Heated steering relay	F2	M74	W/16	: To D102
F1	M3	W/8	: Fuse block (J/B)	F2	M75	W/12	: To D101
F2	M4	W/16	: Fuse block (J/B)	B3	M76	W/6	: Electric brake (pre-wiring)

HARNESS

< COMPONENT DIAGNOSIS >

C4	M5	W/2	Combination switch	D1	M77	Y/4	: Front passenger air bag module (service replacement)
A5	M6	W/8	: To E10	E1	M78	GR/3	: To M501
C3	M7	W/6	: Heated steering wheel switch	E1	M79	—	: Body ground
A4	M8	BR/12	: To D2	A3	M82	W/2	: Circuit breaker-2 (with automatic drive positioner)
A4	M9	W/24	: To D1	B3	M83	W/2	: Circuit breaker-2 (without automatic drive positioner)
A3	M10	Y/4	: To E29	B4	M84	BR/6	: Pedal adjusting switch (without automatic drive positioner)
E3	M11	B/5	: Passenger select unlock relay	G4	M85	W/4	: Aux in jack
C3	M13	BR/3	: Front passenger air bag OFF indicator (without power seats)	B4	M91	W/16	: To E26
B3	M14	BR/2	: Front passenger air bag OFF indicator (with power seats)	D2	M92	W/24	: Display unit (with BOSE audio system-with NAVI)
B2	M18	W/40	: BCM (body control module)	D2	M93	W/24	: Display unit (with mid audio system or with BOSE audio system-without NAVI)
B3	M19	W/15	: BCM (body control module)	B4	M96	BR/6	: Pedal adjusting switch (with automatic drive positioner)
B3	M20	B/15	: BCM (body control module)	D2	M98	W/16	: A/C and AV switch assembly (with mid audio system or BOSE audio system-with NAVI)
C4	M21	W/4	: NATS antenna amp.	D2	M99	W/16	: A/C and AV switch assembly (with mid audio system or BOSE audio system-without NAVI)
C3	M22	W/16	: Data link connector	C4	M102	GR/8	Combination switch (spiral cable)
D2	M23	W/32	: AV control unit (with NAVI)	F2	M105	Y/2	: Front passenger air bag module
B2	M24	W/40	: Combination meter	F2	M106	O/2	: Front passenger air bag module
B3	M26	W/6	: Ignition switch	A2	M109	BR/2	: Front tweeter LH
B2	M27	W/2	: Key switch	E2	M111	BR/2	: Front tweeter RH
C3	M28	W/16	: Combination switch	C4	M114	W/2	: Heated steering wheel
C4	M29	Y/6	: Combination switch (spiral cable)	E2	M120	W/4	: Remote keyless entry receiver
C4	M30	GR/8	: Combination switch (spiral cable)	F2	M121	W/4	: Front blower motor resistor (without automatic A/C)
F2	M31	SMJ	: To E152	E2	M122	W/4	: Variable blower control (front)(with automatic A/C)
C3	M32	W/4	: In-vehicle sensor	C4	M123	W/2	: Tire pressure warning check connector
B3	M33	W/32	: Automatic drive positioner control unit	B4	M129	W/1	: Satellite radio tuner or pre-wiring for Satellite radio tuner
B4	M34	W/16	: Automatic drive positioner control unit	D4	M138	GR/8	: 4WD shift switch (part time 4WD system)
E5	M35	Y/28	: Air bag diagnosis sensor unit	B2	M139	B/2	: Diode-1
F3	M36	SMJ	: To B149	B3	M140	B/2	: Diode-2
C2	M37	W/12	: AV control unit (with NAVI)	D4	M141	GR/8	: 4WD shift switch (all-mode 4WD system)
E3	M38	W/20	: AV control unit	C2	M142	B/6	: Mode door motor (front)
F3	M39	W/20	: AV control unit (with NAVI)	E3	M143	B/6	: Air mix door motor (passenger)
A4	M40	SMJ	: To B69	C1	M145	B/4	: Optical sensor
A4	M41	W/16	: Satellite radio tuner or Pre-wiring for satellite radio tuner	E3	M146	GR/2	: Intake sensor
E3	M42	W/20	: AV control unit (without NAVI)	D2	M147	B/6	: Air mix door motor (driver) (with automatic A/C)
D2	M43	W/12	: AV control unit (without NAVI)	B3	M148	B/2	: Diode-3

HARNESS

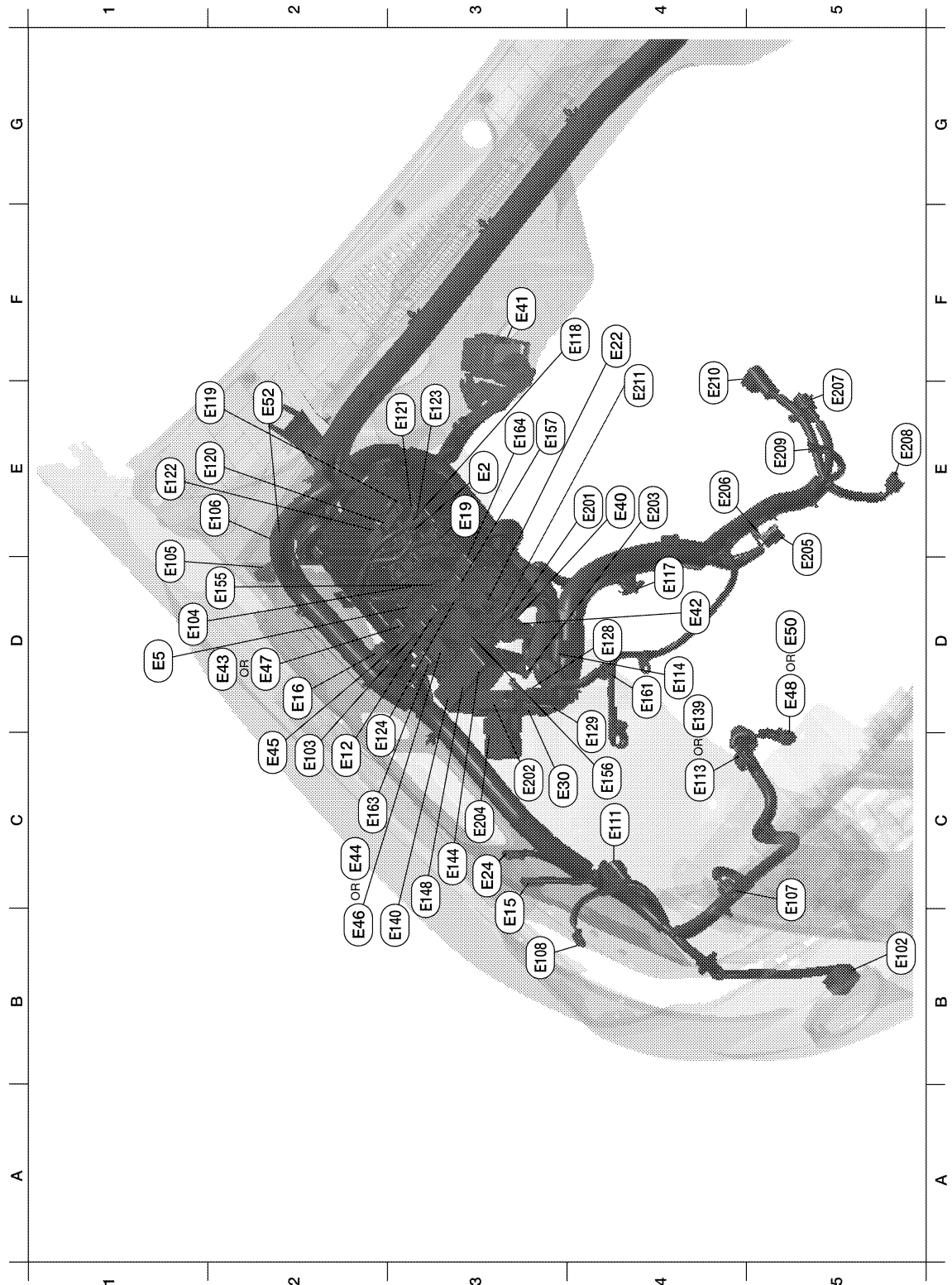
< COMPONENT DIAGNOSIS >

D2	M44	GR/3	: AV control unit	E3	M149	B/6	: Air mix door motor (front) (without automatic A/C)	A	
D2	M45	W/24	: AV control unit (without NAVI)	C3	M150	W/2	: Ignition keyhole illumination (with power door locks)	B	
D2	M46	W/16	: AV control unit (without NAVI)	B4	M152	W/24	: Transfer control unit (all-mode 4WD)	C	
B4	M47	W/8	: Steering angle sensor	B4	M153	GR/24	: Transfer control unit (all-mode 4WD)	D	
E3	M48	W/40	: AV control unit (with NAVI)	D4	M154	GR/6	: VDC off switch	E	
D3	M49	B/26	: A/C auto amp. (with automatic A/C)	D4	M155	W/8	: Hill descent control switch	F	
D2	M50	L/26	: A/C auto amp. (with automatic A/C)	D4	M156	W/10	: A/T device (without manual mode switch)	G	
C3	M51	W/8	: Front blower switch	E4	M157	W/10	: A/T device (with manual mode switch without intelligent key system)	H	
F3	M52	B/26	: Front air control (with manual A/C)	D4	M158	W/10	: A/T device (with manual mode switch and intelligent key system)	I	
D3	M53	B/3	: Lower front power socket	B4	M159	W/16	: Door mirror remote control switch (without automatic drive positioner)	J	
E3	M54	B/3	: Upper front power socket (for cigarette lighter)	D3	M160	BR/6	: Front heated seat switch RH	K	
C3	M55	W/4	: Hazard switch	D4	M161	W/6	: Front heated seat switch LH	L	
E4	M56	W/16	: To M201	F2	M162	W/2	: To B131	PG	
B3	M57	—	: Body ground	B4	M163	BR/16	: Door mirror remote control switch (with automatic drive positioner)	N	
E2	M58	B/6	: Intake door motor	D3	M164	W/40	: Intelligent key unit	O	
E1	M59	BR/2	: Glove box lamp	B4	M165	W/26	: Transfer case control unit (part time 4WD)	P	
D2	M61	—	: Body ground	B4	M166	W/24	: Transfer case control unit (part time 4WD)		
E2	M62	B/2	: Front blower motor	Console sub-harness					
D4	M63	W/6	: To M204	E4	M201	W/16	: To M56		
D4	M64	W/6	: To M202	E4	M202	W/6	: To M64		
C2	M65	W/4	: Steering lock solenoid	E4	M204	W/6	: To M63		
C4	M66	GR/6	: Key switch and ignition knob switch	E4	M205	W/32	: DVD player		
C2	M67	W/4	: Remote keyless entry receiver	F5	M207	B/3	: Console power socket		
B2	M68	GR/2	: Inside key antenna 1 (instrument panel)	F5	M208	B/10	: Rear air control		
D1	M69	W/12	AV control unit	F5	M209	B/10	: Rear air control (rear)		
C1	M70	W/32	: AV control unit (without NAVI)	D4	M210	W/18	: To B77		
D4	M71	V/1	: AV control unit	D3	M212	GR/2	: Inside key antenna 2 (center console)		
D4	M72	GR/2	: AV control unit						

HARNESS

< COMPONENT DIAGNOSIS >

ENGINE ROOM HARNESS (RH VIEW)



ABMIA0343GB

Refer to "ENGINE ROOM HARNESS (LH VIEW)" for continuation of engine room harness"

E3	E2	W/16	: To F32	F2	E119	W/16	: IPDM E/R (intelligent power distribution module engine room)
D1	E5	W/24	: To F14	E2	E120	W/6	: IPDM E/R (intelligent power distribution module engine room)

HARNESS

< COMPONENT DIAGNOSIS >

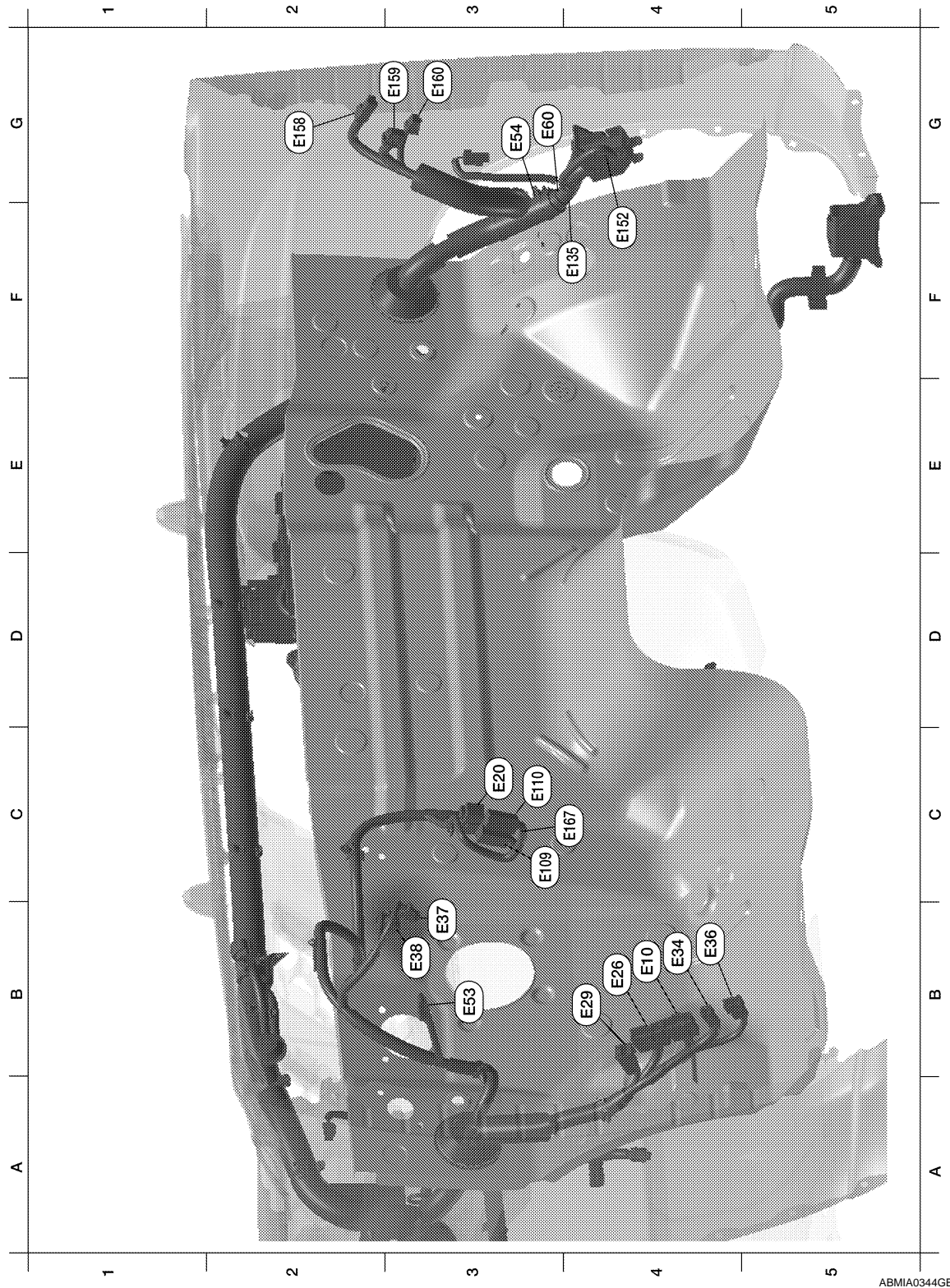
C2	E12	L/4	: Stop lamp relay	E3	E121	BR/12	: IPDM E/R (intelligent power distribution module engine room)
C3	E15	—	: Body ground	E1	E122	W/12	: IPDM E/R (intelligent power distribution module engine room)
D2	E16	B/40	: ECM	C1	E123	BR/8	: IPDM E/R (intelligent power distribution module engine room)
D1	E19	W/16	: To F33	D1	E124	B/6	: IPDM E/R (intelligent power distribution module engine room)
F4	E22	BR/6	: Front blower motor relay (with automatic A/C)	D4	E128	GR/2	: Fusible link box (battery)
C3	E24	—	: Body ground	D4	E129	B/2	: Fusible link box (battery)
C3	E30	—	: Fusible link box (battery)	D4	E139	B/4	: Cooling fan motor (with VK56DE)
E4	E40	GR/9	: To E201 (with VQ40DE)	B3	E140	BR/6	: Trailer tow relay 2
D3	E41	SMJ	: To C1	C3	E144	L/4	: Heater pump relay
D4	E42	B/4	: To E211 (with VK56DE)	C3	E148	L/4	: Trailer tow relay 1
D2	E43	B/5	: Transfer shift low relay (part time 4WD system)	D2	E155	L/4	: Transfer shut off relay
D2	E44	B/5	: Transfer shift high relay (part time 4WD system)	C4	E156	L/4	: Transfer shut off relay 1
C2	E45	BR/6	: Back-up lamp relay	E3	E157	L/4	: Transfer shut off relay 2
C2	E46	B/5	: Transfer shift high relay (all-mode 4WD system)	D4	E161	B/3	: Battery current sensor
D2	E47	B/5	: Transfer shift low relay (all-mode 4WD system)	C2	E163	L/4	: Trailer turn relay LH
D5	E48	B/3	: Refrigerant pressure sensor (with VQ40DE)	E3	E164	L/4	: Trailer turn relay RH
D5	E50	B/3	: Refrigerant pressure sensor (with VK56DE)	Generator sub-harness			
D1	E52	W/2	: To F35	E4	E201	GR/9	: To E40
B5	E102	B/2	: Front fog lamp RH				
C2	E103	B/5	: Daytime light relay 1	D5	E202	—	: Fusible link box (battery)
D1	E104	L/4	: Daytime light relay 2	E4	E203	—	: Body ground
D1	E105	B/2	: Front and rear washer motor	E4	E204	—	: Fusible link box (battery)
E2	E106	BR/2	: Washer fluid level switch	D5	E205	B/3	: Generator
C5	E107	B/3	: Front headlamp RH	E5	E206	—	: Generator
B3	E108	GR/2	: Front side marker lamp RH	F5	E207	GR/1	: Starter motor (with VQ40DE)
C4	E111	GR/3	: Front combination lamp RH	D5	E208	GR/1	: Oil pressure switch
C4	E113	GR/4	: Cooling fan motor (with VQ40DE)	E5	E209	—	: Generator
D4	E114	B/6	: Delta stroke sensor	F5	E210	B/1	: Starter motor
D4	E117	GR/2	: Front wheel sensor RH	E4	E211	B/4	: To E42
F4	E118	B/2	: IPDM E/R (intelligent power distribution module engine room)				

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< COMPONENT DIAGNOSIS >

ENGINE ROOM HARNESS (PASSENGER COMPARTMENT)



ABMIA0344GB

B4	E10	W/8	: To M6	G3	E60	GR/3	: Intelligent key warning buzzer
C3	E20	B/6	: Accelerator pedal position (APP) sensor	C3	E109	GR/2	: Pedal adjusting motor assembly (with automatic drive positioner)
B4	E26	W/16	: To M91	C3	E110	B/4	: Pedal adjusting motor assembly (with automatic drive positioner)

HARNESS

< COMPONENT DIAGNOSIS >

B4	E29	Y/4	: To M10	F4	E135	GR/2	: Transfer dropping resistor
B4	E34	W/8	: To B40	F4	E152	SMJ	: To M31
B4	E36	W/2	: To B42	G2	E158	B/1	: Fuse block (J/B)
B3	E37	BR/2	: ASCD brake switch	G3	E159	B/2	: Fuse block (J/B)
B3	E38	W/4	: Stop lamp switch	G3	E160	W/8	: Fuse block (J/B)
B3	E53	B/1	: Parking brake switch	C3	E167	GR/2	: Pedal adjusting motor
G3	E54	BR/6	: Front blower motor relay (with manual A/C)				

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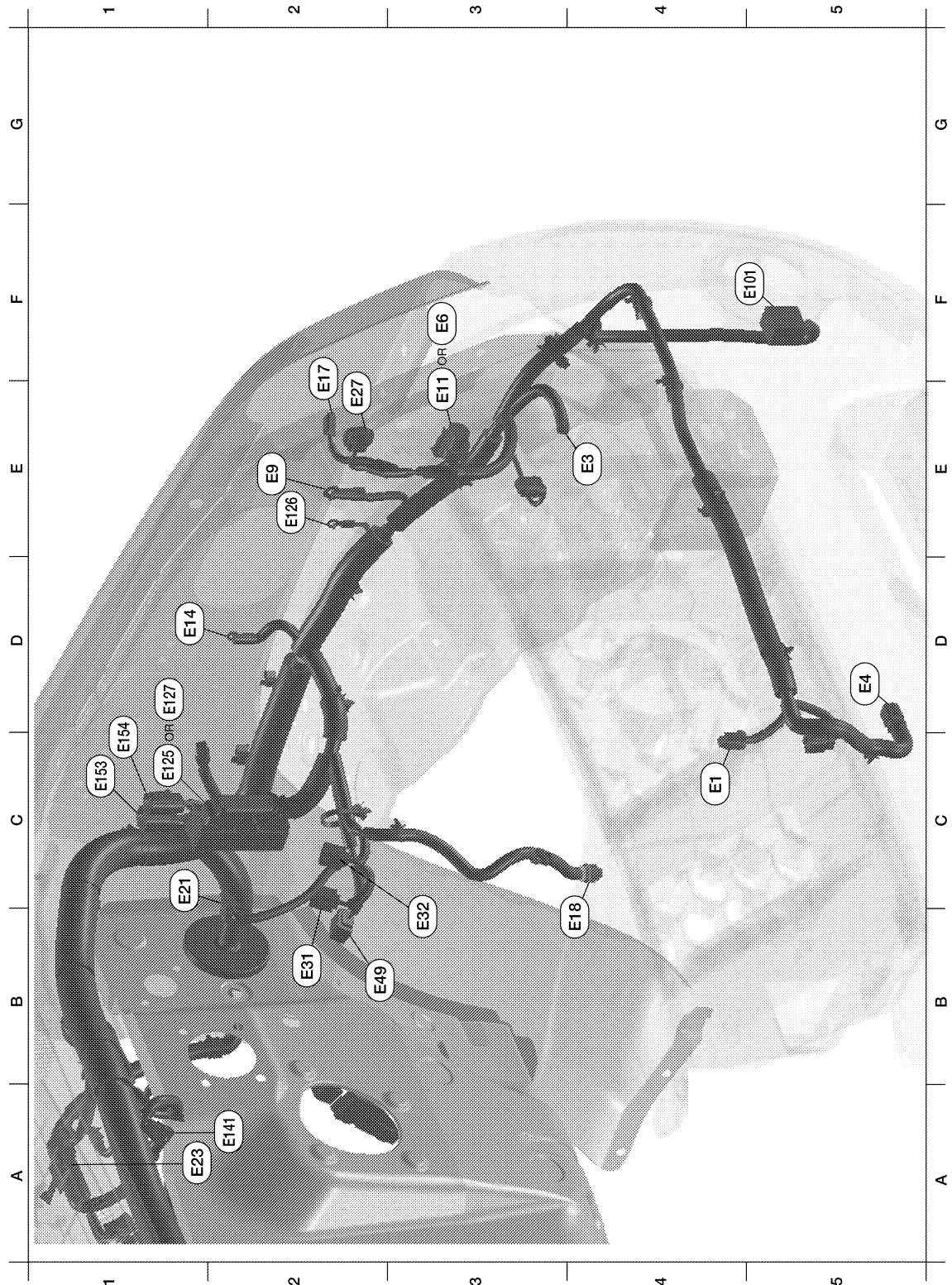
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< COMPONENT DIAGNOSIS >

ENGINE ROOM HARNESS (LH VIEW)



Refer to "ENGINE ROOM HARNESS (RH VIEW)" for continuation of engine room harness"

ABMIA0345GB

C4	E1	B/2	: Ambient sensor	E2	E27	GR/3	: Front combination lamp LH
E4	E3	B/2	: Horn	B2	E31	B/3	: Front pressure sensor
D5	E4	Y/2	: Crash zone sensor	C3	E32	B/3	: Rear pressure sensor
F3	E6	B/3	: Front headlamp LH (with daytime light system)	B3	E49	B/6	: Active booster

HARNESS

< COMPONENT DIAGNOSIS >

E2	E9	—	: Body ground	F5	E101	B/2	: Front fog lamp LH
E3	E11	B/3	: Front headlamp LH (without daytime light system)	C1	E125	B/47	: ABS actuator and electric unit (control unit)(with VQ40DE)
D1	E14	—	: Body ground	E2	E126	—	: Body ground
F2	E17	GR/2	: Front side marker lamp LH	C1	E127	B/47	: ABS actuator and electric unit (control unit)(with VK56DE)
B4	E18	GR/2	: Front wheel sensor LH	A2	E141	B/2	: Heater pump
C1	E21	GR/2	: Brake fluid level switch	C1	E153	W/2	: Transfer motor relay
A1	E23	GR/5	: Front wiper motor	C1	E154	W/2	: Transfer motor relay

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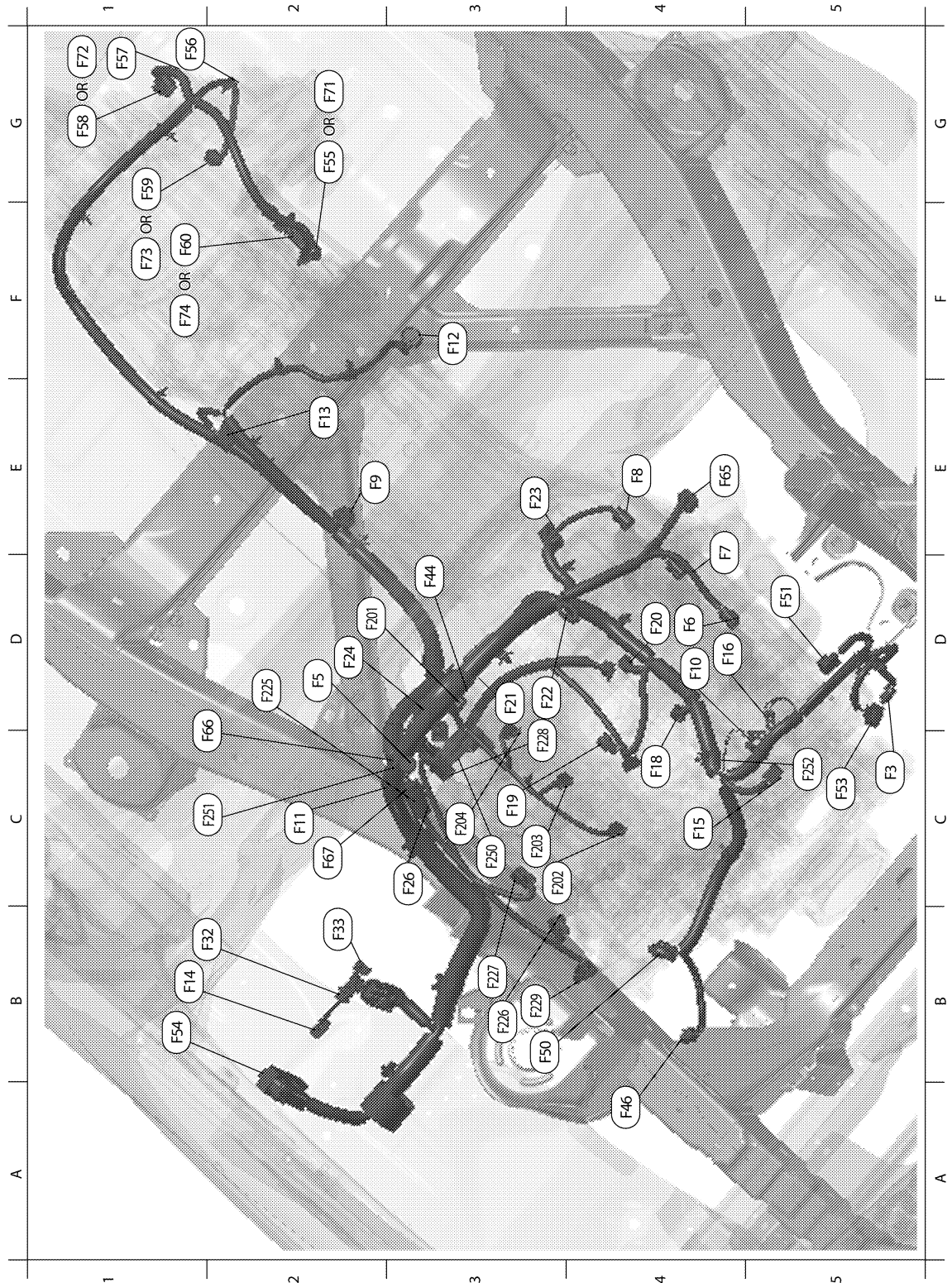
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HARNESS

< COMPONENT DIAGNOSIS >

ENGINE CONTROL HARNESS (VQ40DE)



ABMIA0346GB

C5	F3	B/1	: A/C Compressor	G2	F55	B/2	: ATP switch (all-mode 4WD system)
E4	F5	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 1)	G1	F56	B/8	: Transfer terminal cord assembly
D4	F6	GR/3	: Ignition coil No. 2 (with power transistor)	G1	F57	B/2	: Transfer motor
D4	F7	GR/3	: Ignition coil No. 4 (with power transistor)	G1	F58	GR/6	: Transfer control device (all-mode 4WD system)

HARNESSES

< COMPONENT DIAGNOSIS >

E4	F8	GR/3	: Ignition coil No. 6 (with power transistor)	F1	F59	B/2	: Wait detection switch (all-mode 4WD system)	A
E3	F9	G/10	: A/T assembly	F1	F74	GR/2	: 4LO switch (part time 4WD system)	B
D4	F10	—	: Engine ground	F1	F60	GR/2	: 4LO switch (all-mode 4WD system)	B
C2	F11	B/3	: Crankshaft position sensor (POS)	D2	F65	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 2)	C
F3	F12	G/4	: Heated oxygen sensor 2 (bank 2)	D2	F66	G/3	: Camshaft position sensor (PHASE)(bank 1)	C
F3	F13	L/4	: Heated oxygen sensor 2 (bank 1)	C2	F67	L/4	: To F250	C
B1	F14	W/24	: To E5	G2	F71	B/2	: ATP switch (part time 4WD system)	D
C4	F15	L/2	: EVAP canister purge volume control solenoid valve	G1	F72	B/8	: Transfer control device	D
D4	F16	—	: Engine ground	F1	F73	GR/2	: Wait detection switch (part time 4WD system)	E
C4	F18	GR/2	: Fuel injector No. 2	F1	F74	GR/2	: 4LO switch (part time 4WD system)	E
C3	F19	B/2	: VIAS control solenoid valve	Injector sub-harness				F
D4	F20	GR/2	: Fuel injector No. 4	D2	F201	G/4	: To F44	F
D3	F21	W/2	: Condenser-1	C3	F202	GR/2	: Fuel injector No. 1	F
D3	F22	GR/2	: Fuel injector No. 6	C3	F203	GR/2	: Fuel injector No. 3	G
B3	F23	B/3	: Camshaft position sensor (PHASE) (bank 2)	C3	F204	GR/2	: Fuel injector No. 5	G
D2	F24	GR/2	: Engine coolant temperature sensor	Ignition coil sub-harness				H
C3	F26	G/8	: To F225	D2	F225	G/8	: To F26	H
B2	F32	W/16	: To E2	B3	F226	GR/3	: Ignition coil No. 1 (with power transistor)	I
C2	F33	W/16	: To E19	B3	F227	GR/3	: Ignition coil No. 3 (with power transistor)	I
C2	F44	G/4	: To F201	C3	F228	GR/3	: Ignition coil No. 5 (with power transistor)	J
A4	F46	B/3	: Power steering pressure sensor	B3	F229	G/2	: Intake valve timing control solenoid valve (bank 1)	J
B3	F50	B/6	: Electric throttle control actuator	Knock sensor sub-harness				K
D5	F51	G/2	: Intake valve timing control solenoid valve (bank 2)	C3	F250	L/4	: To F67	K
C5	F53	B/6	: Mass air flow sensor	C2	F251	B/2	: Knock sensor (bank 1)	L
B1	F54	B/81	: ECM	C5	F252	B/2	: Knock sensor (bank 2)	L

PG

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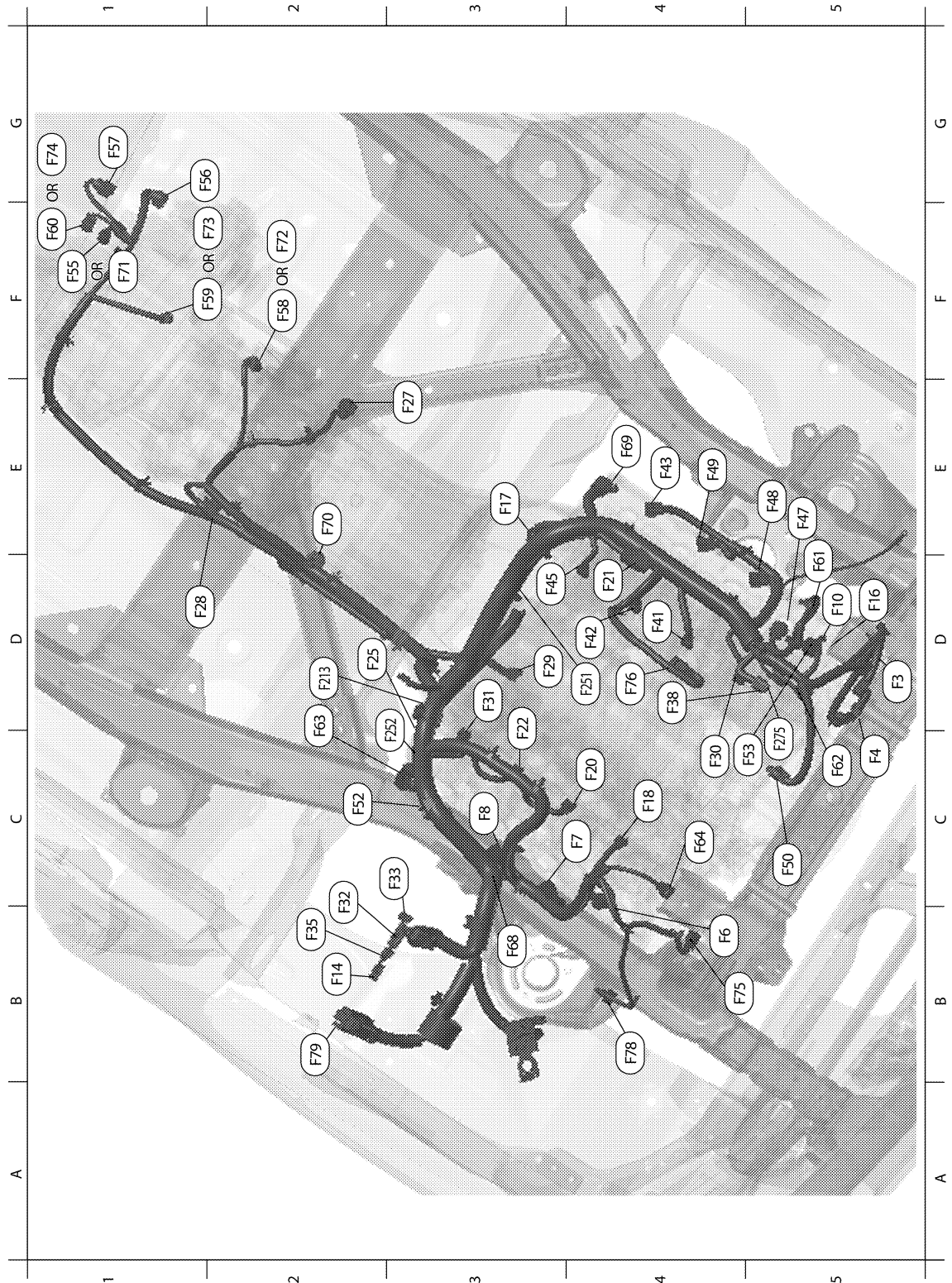
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HARNESS

< COMPONENT DIAGNOSIS >

ENGINE CONTROL HARNESS (VK56DE)



ABMIA0347GB

D5	F3	B/1	: A/C Compressor	E4	F49	GR/3	: Ignition coil No. 5 (with power transistor)
C5	F4	GR/1	: Oil pressure switch	C5	F50	B/6	: Electric throttle control actuator
C4	F6	GR/3	: Ignition coil No. 2 (with power transistor)	C2	F52	GR/3	: Ignition coil No. 8 (with power transistor)

HARNESS

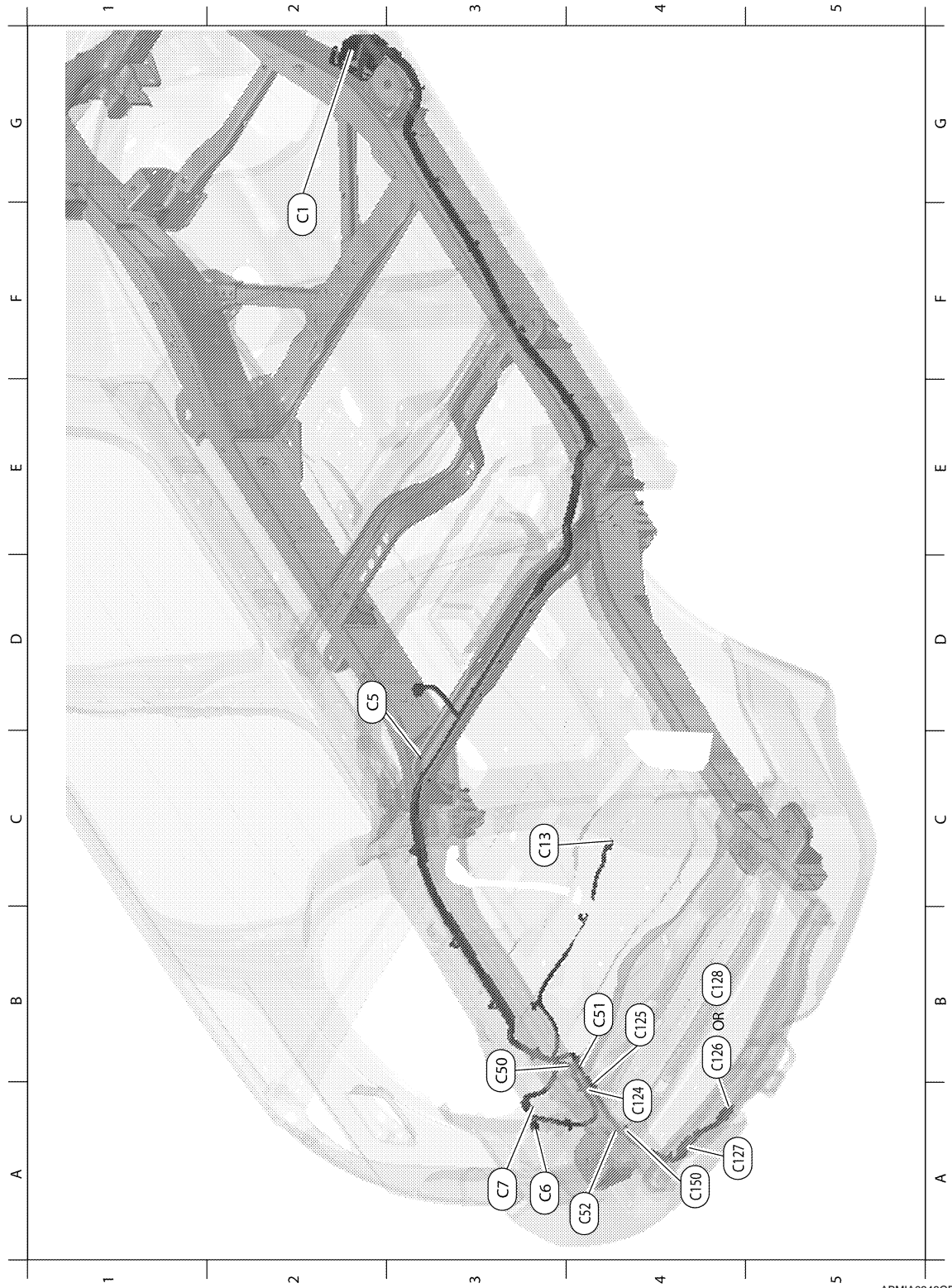
< COMPONENT DIAGNOSIS >

C4	F7	GR/3	: Ignition coil No. 4 (with power transistor)	C4	F53	B/6	: Mass air flow sensor	A	
C3	F8	GR/3	: Ignition coil No. 6 (with power transistor)	F1	F55	B/2	: ATP switch (all-mode 4WD system)	B	
D5	F10	—	: Engine ground	G2	F56	B/8	: Transfer terminal cord assembly (all-mode 4WD)	C	
B2	F14	W/24	: To E5	G1	F57	B/2	: Transfer motor (all-mode 4WD)	D	
D4	F21	W/2	: Condenser-1	F2	F58	GR/6	: Transfer control device (all-mode 4WD system)	E	
D3	F22	GR/2	: Fuel injector No. 6	F2	F59	B/2	: Wait detection switch (all-mode 4WD system)	F	
D5	F16	—	: Engine ground	F1	F60	GR/2	: Neutral-4LO switch (all-mode 4WD system)	G	
E3	F17	GR/1	: Starter motor	D5	F61	G/2	: Intake valve timing control solenoid valve (bank 1)	H	
C4	F18	GR/2	: Fuel injector No. 2	C5	F62	G/3	: Intake valve timing control position sensor (bank 1)	I	
C4	F20	GR/2	: Fuel injector No. 4	C2	F63	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 2)	J	
D4	F21	W/2	: Condenser-1	C5	F64	B/3	: Intake valve timing control position sensor (bank 2)	K	
D3	F22	GR/2	: Fuel injector No. 6	B3	F68	GR/2	: Water valve	L	
D2	F25	B/3	: Camshaft position sensor (PHASE)	E4	F69	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 1)		
E3	F27	G/4	: Heated oxygen sensor 2 (bank 1)	E2	F70	G/10	: A/T assembly		
D1	F28	G/4	: Heated oxygen sensor 2 (bank 2)	F1	F71	B/2	: ATP switch (part time 4WD system)		
D3	F29	B/3	: Crankshaft position sensor (POS)	F2	F72	B/8	: Transfer control device (part time 4WD system)		
C4	F30	GR/2	: Fuel injector No. 1	F2	F73	GR/2	: Wait detection switch (part time 4WD system)		
D3	F31	GR/2	: Fuel injector No. 8	G1	F74	GR/2	: 4LO switch (part time 4WD system)		
C2	F32	W/16	: To E2	B4	F75	G/2	: Intake valve timing control solenoid valve (bank 2)		
C3	F33	W/16	: To E19	D4	F76	L/2	: EVAP canister purge volume control solenoid valve		
B2	F35	W/2	: To E52	B4	F78	B/3	: Power steering pressure sensor		
D4	F38	B/6	: To F275	B2	F79	B/81	: ECM		
D4	F41	GR/2	: Fuel injector No. 3	Knock sensor sub-harness					
D4	F42	GR/2	: Fuel injector No. 5	D2	F213	GR/2	: Engine coolant temperature sensor		
E4	F43	GR/3	: Ignition coil No. 7 (with power transistor)	D3	F251	B/2	: Knock sensor (bank 1)	PG	
D3	F45	GR/2	: Fuel injector No. 7	C3	F252	B/2	: Knock sensor (bank 2)		
E4	F47	GR/3	: Ignition coil No. 1 (with power transistor)	D2	F275	B/6	: To F38		
E4	F48	GR/3	: Ignition coil No. 3 (with power transistor)						

HARNESS

< COMPONENT DIAGNOSIS >

CHASIS HARNESS



ABMIA0348GB

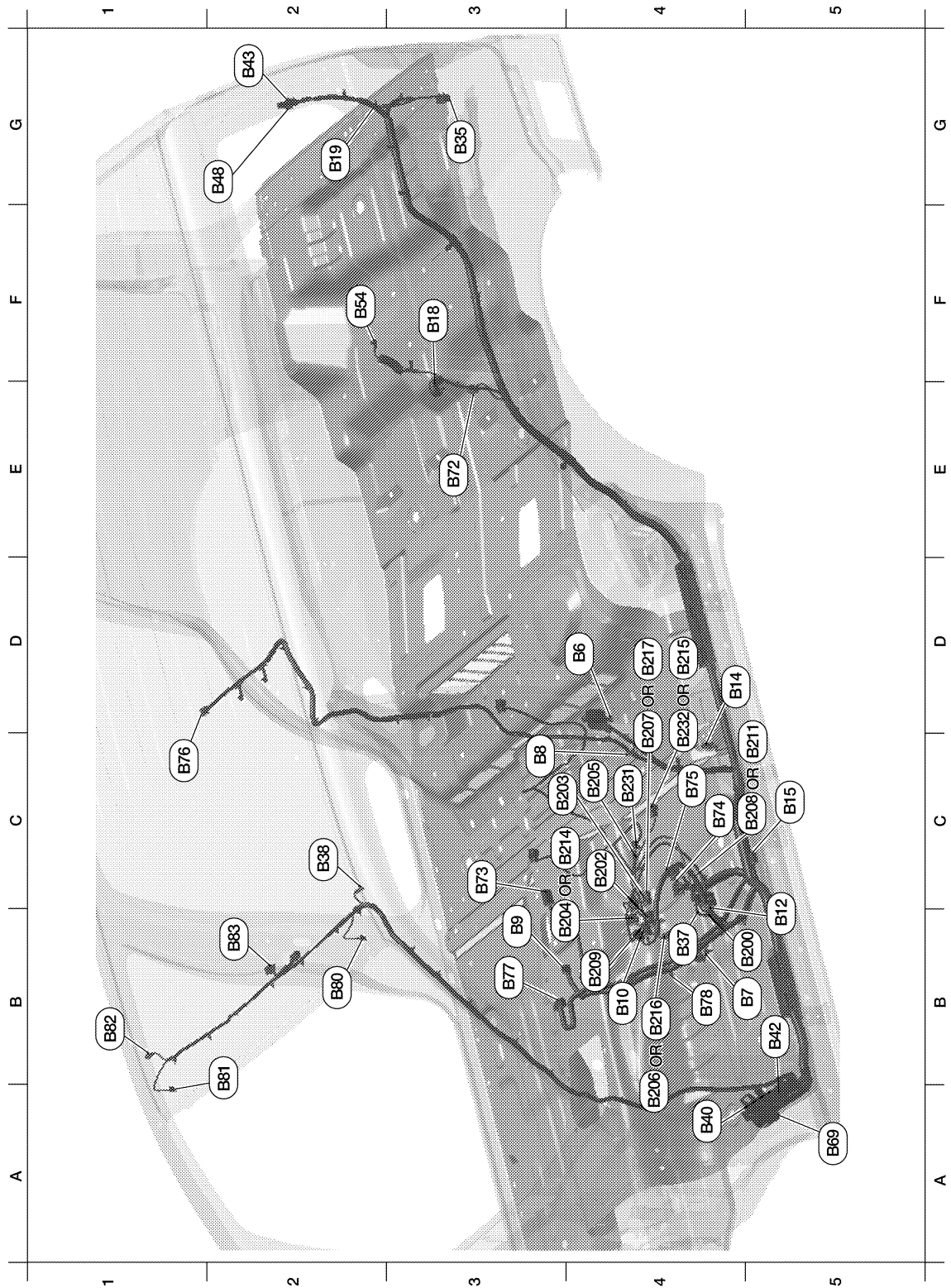
F2	C1	SMJ	: To E41	Trailer sub-harness			
D2	C5	GR/5	: Fuel level sensor unit and fuel pump	A4	C124	GR/8	: To C50 (trailer tow 4-pin)
A3	C6	B/2	: Evap canister vent control valve	B4	C125	GR/8	: To C51 (trailer tow 7-pin)
A3	C7	GR/3	: EVAP control system pressure sensor	B4	C126	B/7	: Trailer (trailer tow 7-pin)
C4	C13	GR/4	: Rear wheel sensor assembly	A4	C127	GR/2	: Rear bumper antenna

HARNESS

< COMPONENT DIAGNOSIS >

B3	C50	GR/8	: To C124 (trailer tow 4-pin)	B4	C128	B/4	: Trailer (trailer tow 4-pin)
B4	C51	GR/8	: To C125 (trailer tow 7-pin)	C3	C150	B/2	: C52
A4	C52	B/2	: To C150				

BODY HARNESS



ABMIA0349GB

D4	B6	W/12	: To D201	B3	B77	W/18	: To M210
B5	B7	—	: Body ground	B4	B78	Y/2	: To B157

HARNESSES

< COMPONENT DIAGNOSIS >

C3	B8	W/3	: Front door switch LH	B2	B80	W/2	: Vanity lamp LH
C3	B9	Y/12	: Air bag diagnosis sensor unit	B2	B81	W/2	: Vanity lamp RH
B4	B10	Y/2	: Front LH side air bag module	B1	B82	Y/2	: RH side front curtain air bag module
C5	B12	W/3	: Seat belt buckle switch LH	B2	B83	B/10	: Sunroof motor assembly
D4	B14	Y/2	: Front LH seat belt pre-tensioner	LH front seat harness			
C5	B15	Y/2	: LH side air bag (satellite) sensor	B5	B200	W/16	: To B37
F3	B18	W/3	: Rear door switch LH	C4	B202	W/32	: Driver seat control unit
G2	B19	—	: Body ground	C4	B203	W/16	: Driver seat control unit
G3	B35	W/6	: Rear combination lamp LH	C4	B204	GR/5	: Sliding motor LH (with automatic drive positioner)
B4	B37	W/16	: To B200	C4	B205	W/4	: To B231
C2	B38	Y/2	: LH side front curtain air bag module	B4	B206	GR/5	: Lifting motor (front)(with automatic drive positioner)
A4	B40	W/8	: To E34	C4	B207	GR/5	: Lifting motor (rear)(with automatic drive positioner)
B5	B42	W/2	: To E36	C5	B208	W/10	: Power seat switch LH (with automatic drive positioner)
G2	B43	W/8	: To D401	B4	B209	W/3	: Front seat heater LH
G2	B48	W/6	: To D402	D5	B211	W/10	: Power seat switch LH (without automatic drive positioner)
F2	B54	Y/2	: LH side rear curtain air bag module	C4	B214	GR/2	: Sliding motor LH (without automatic drive positioner)
A5	B69	SMJ	: To M40	D4	B215	W/2	: Reclining motor LH (without automatic drive positioner)
E3	B72	W/8	: Subwoofer	B4	B216	GR/2	: Lifting motor (front)(without automatic drive positioner)
C3	B73	B/6	: Yaw rate/side/decel G sensor	D4	B217	GR/2	: Lifting motor (rear)(without automatic drive positioner)
C4	B74	GR/8	: BOSE speaker amp.	C4	B231	W/4	: To B205
C4	B75	B/24	: BOSE speaker amp.	D4	B232	B/4	: Reclining motor LH (with automatic drive positioner)
C1	B76	W/16	: Video monitor				

HARNES

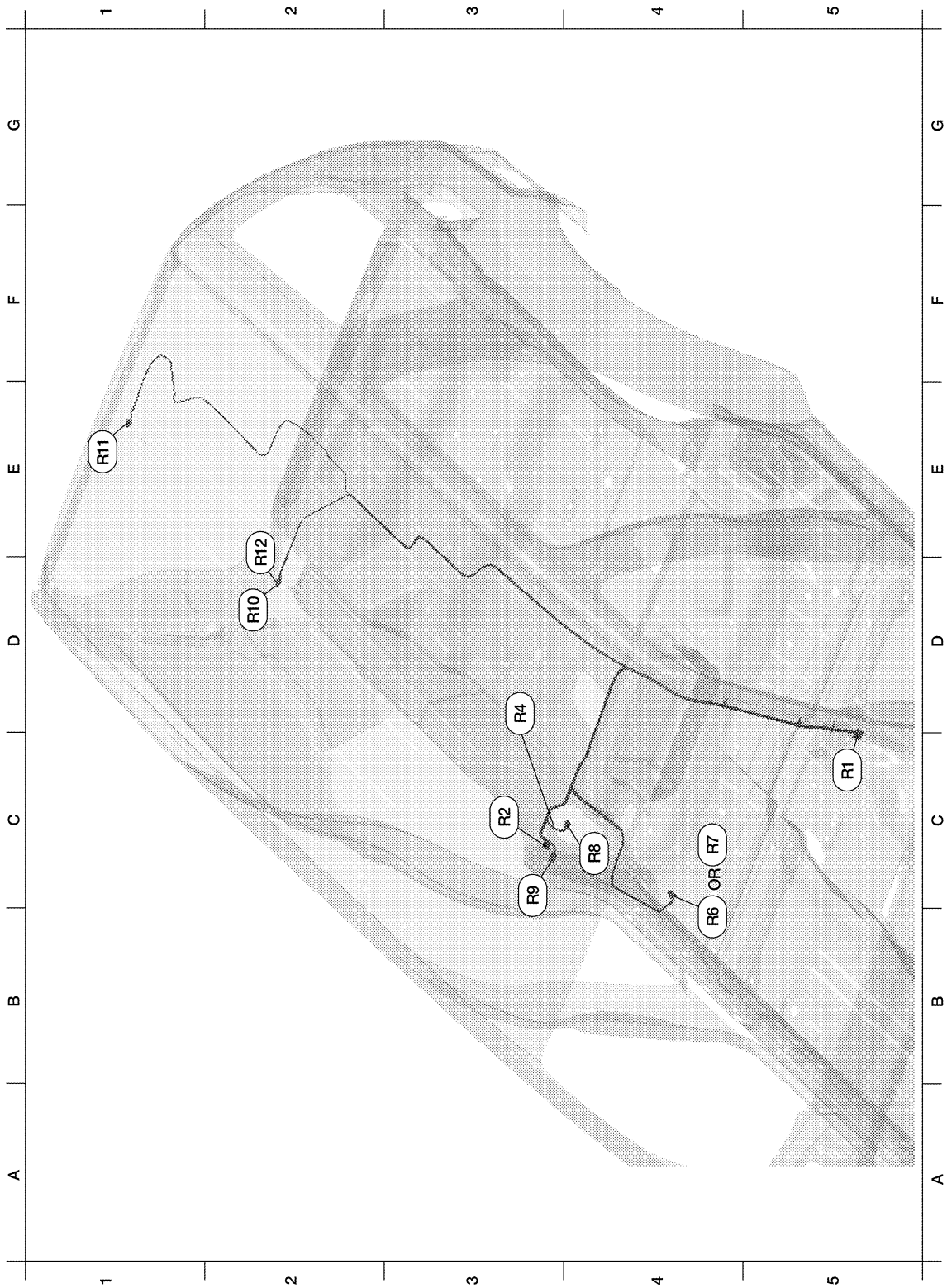
< COMPONENT DIAGNOSIS >

F3	B113	Y/12	: Air bag diagnosis sensor unit	G3	B157	Y/2	: B78
E5	B114	Y/2	: RH side air bag (satellite) sensor	B2	B175	W/2	: To B500
C2	B116	W/3	: Rear door switch RH	B3	B176	W/16	: Rear view camera control unit
F5	B117	—	: Body ground	RH front seat harness			
E4	B124	W/32	: Bluetooth control unit	F4	B303	W/16	: To B154 (with power seats)
F5	B125	W/8	: Bluetooth control unit	F3	B307	W/3	: Front seat heater RH (with power seats)
F5	B126	Y/2	: Front RH side air bag module	E4	B308	W/6	: Power seat switch RH
D4	B127	Y/2	: Front RH seat belt pre-tensioner	F3	B309	GR/2	: Sliding motor RH
B2	B128	Y/2	: RH side rear curtain air bag module	F4	B310	W/8	: To B349 (with power seats)
B2	B129	GR/2	: Inside key antenna 3 (3rd row seat)	E4	B311	W/2	: Reclining motor RH
G4	B131	W/2	: To M162	E4	B349	W/8	: To B310 (with power seats)
A1	B132	—	: Body ground	F4	B351	W/8	: To B136 (without power seats)
A2	B133	W/4	: Variable blower control (rear)	E4	B352	B/3	: Occupant classification system sensor
F4	B136	W/8	: To B351 (without power seats)	F4	B353	B/18	: Occupant classification system control unit
E4	B137	W/3	: Belt tension sensor				

HARNESS

< COMPONENT DIAGNOSIS >

ROOM LAMP HARNESS



ABMIA0351GB

C5	R1	W/24	: To M1	C4	R8	W/4	: Microphone
C3	R2	B/10	: Rear air control (front)	C3	R9	W/3	: Front room/map lamp assembly
D3	R4	W/3	: Sunroof switch	D2	R10	W/3	: Personal lamp 2nd row

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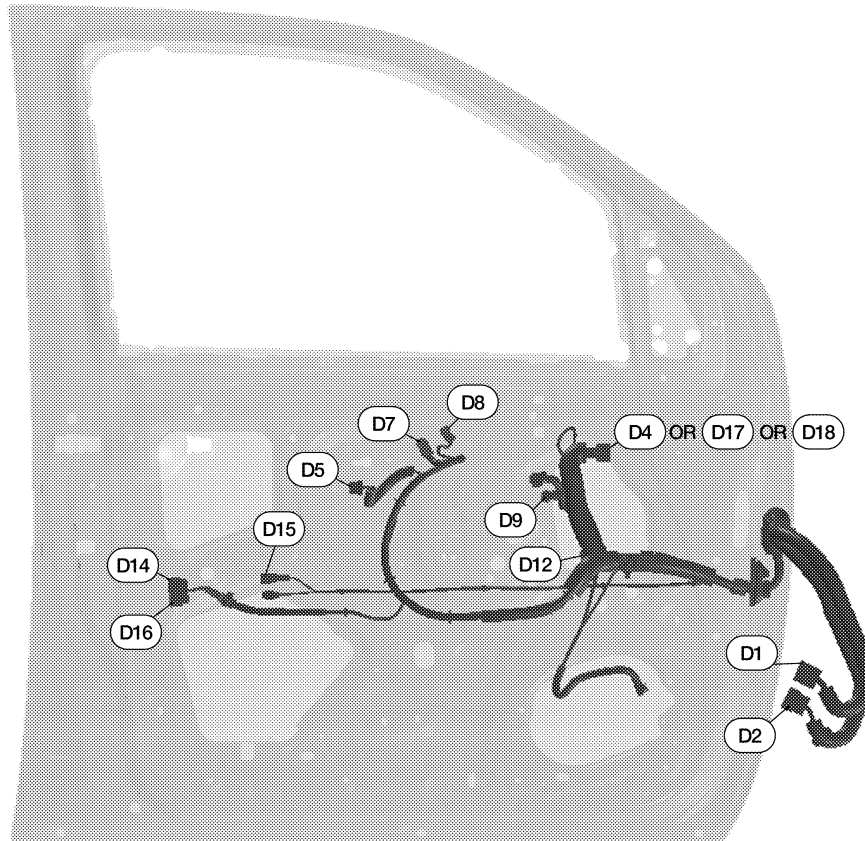
PG

HARNESS

< COMPONENT DIAGNOSIS >

B4	R6	B/7	: Auto anti-dazzling inside mirror (without HOMELINK® universal transceiver	E1	R11	W/2	: Cargo lamp
C4	R7	B/10	: Auto anti-dazzling inside mirror (without HOMELINK® universal transceiver	E2	R12	W/2	: Room lamp 2nd row

FRONT DOOR LH HARNESS

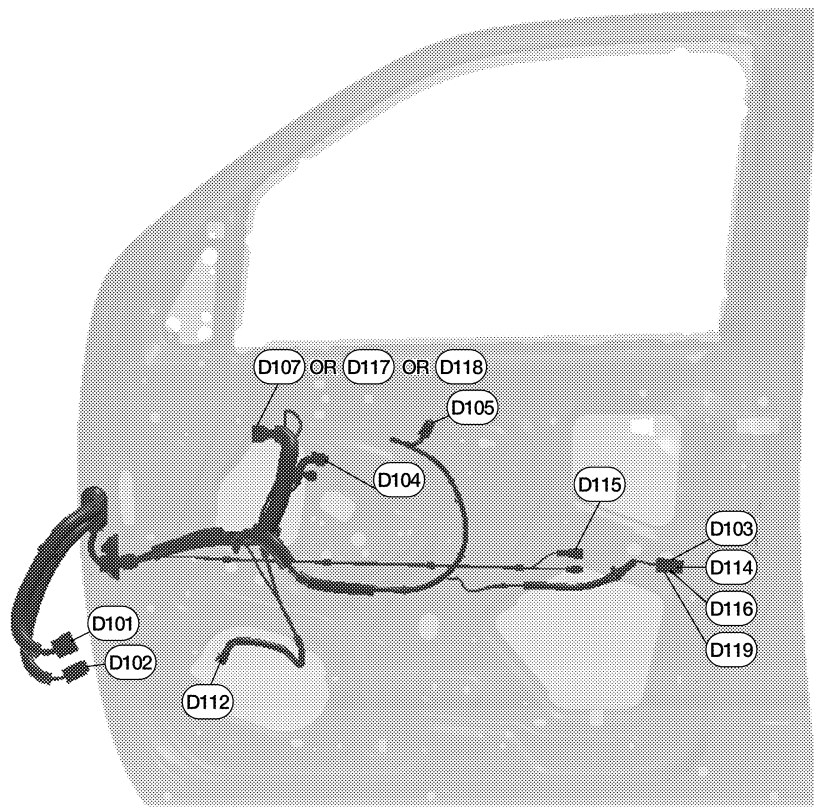


ABMIA0352GB

D1	W/24	: To M9	D12	W/2	: Front door speaker LH
D2	BR/12	: To M8	D14	GR/6	: Front door lock assembly LH
D4	B/10	: Door mirror LH (with heated mirrors)	D15	GR/2	: Front outside antenna LH
D5	W/8	: Seat memory switch	D16	GR/2	: Front door request switch LH
D7	W/16	: Main power window and door lock/unlock switch	D17	B/3	: Door mirror LH (without heated mirrors)
D8	W/3	: Main power window and door lock/unlock switch	D18	B/10	: Door mirror LH (with automatic drive positioner)
D9	B/6	: Front power window motor LH			

HARNESS

< COMPONENT DIAGNOSIS > FRONT DOOR RH HARNESS



ABMIA0353GB

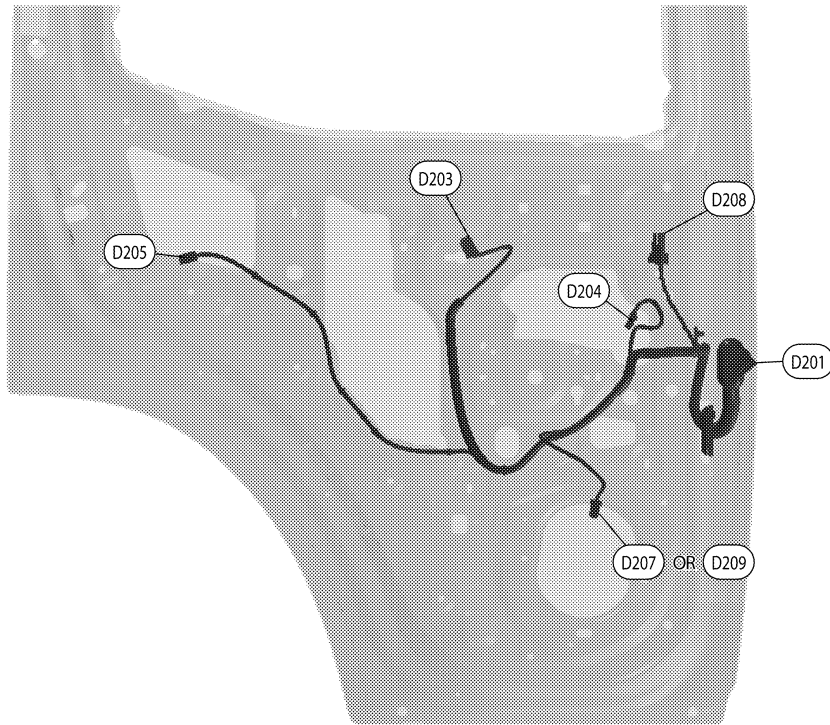
D101	W/12	: To M75	D114	W/2	: Front door lock actuator RH
D102	W/16	: To M74	D115	GR/2	: Front outside antenna RH
D103	B/3	: Front door lock assembly RH (door unlock sensor)	D116	GR/2	: Front door request switch RH
D104	B/6	: Front power window motor RH	D117	B/3	: Door mirror RH (without heated mirrors)
D105	W/16	: Power window and door lock/unlock switch RH	D118	B/10	: Door mirror RH (with automatic drive positioner)
D107	B/10	: Door mirror RH (with heated mirrors)	D119	W/2	: Front door lock assembly RH (door unlock actuator)
D112	W/2	: Front door speaker RH			

PG

HARNESS

< COMPONENT DIAGNOSIS >

REAR DOOR LH HARNESS



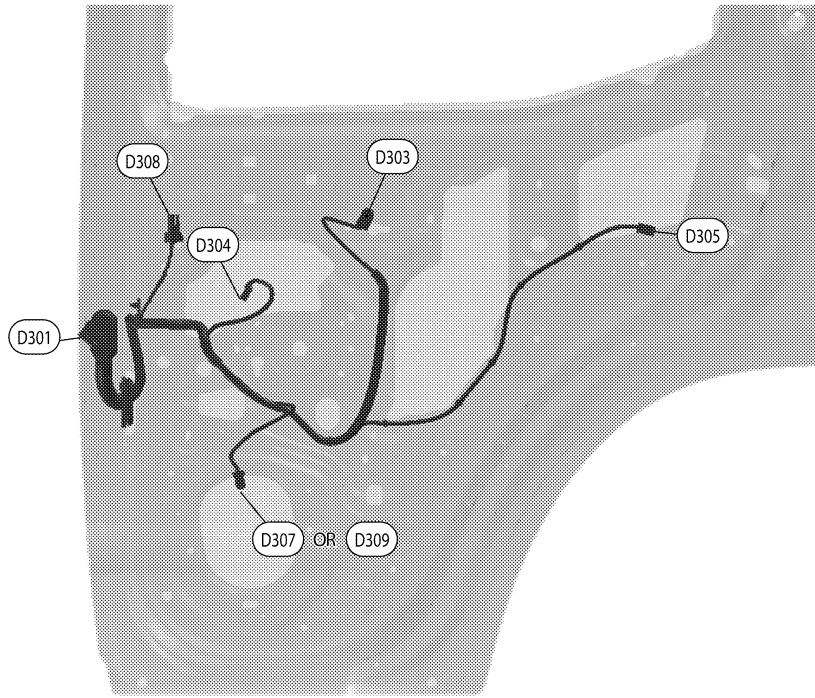
ABMIA0354GB

D201	W/12	: To B6	D207	BR/2	: Rear door speaker LH (with BOSE audio system)
D203	W/8	: Rear power window switch LH	D208	BR/2	: Rear door tweeter LH
D204	B/2	: Rear power window motor LH	D209	W/2	: Rear door speaker LH (with base and mid audio system)
D205	W/2	: Rear door lock actuator LH			

HARNESS

< COMPONENT DIAGNOSIS >

REAR DOOR RH HARNESS



ABMIA0355GB

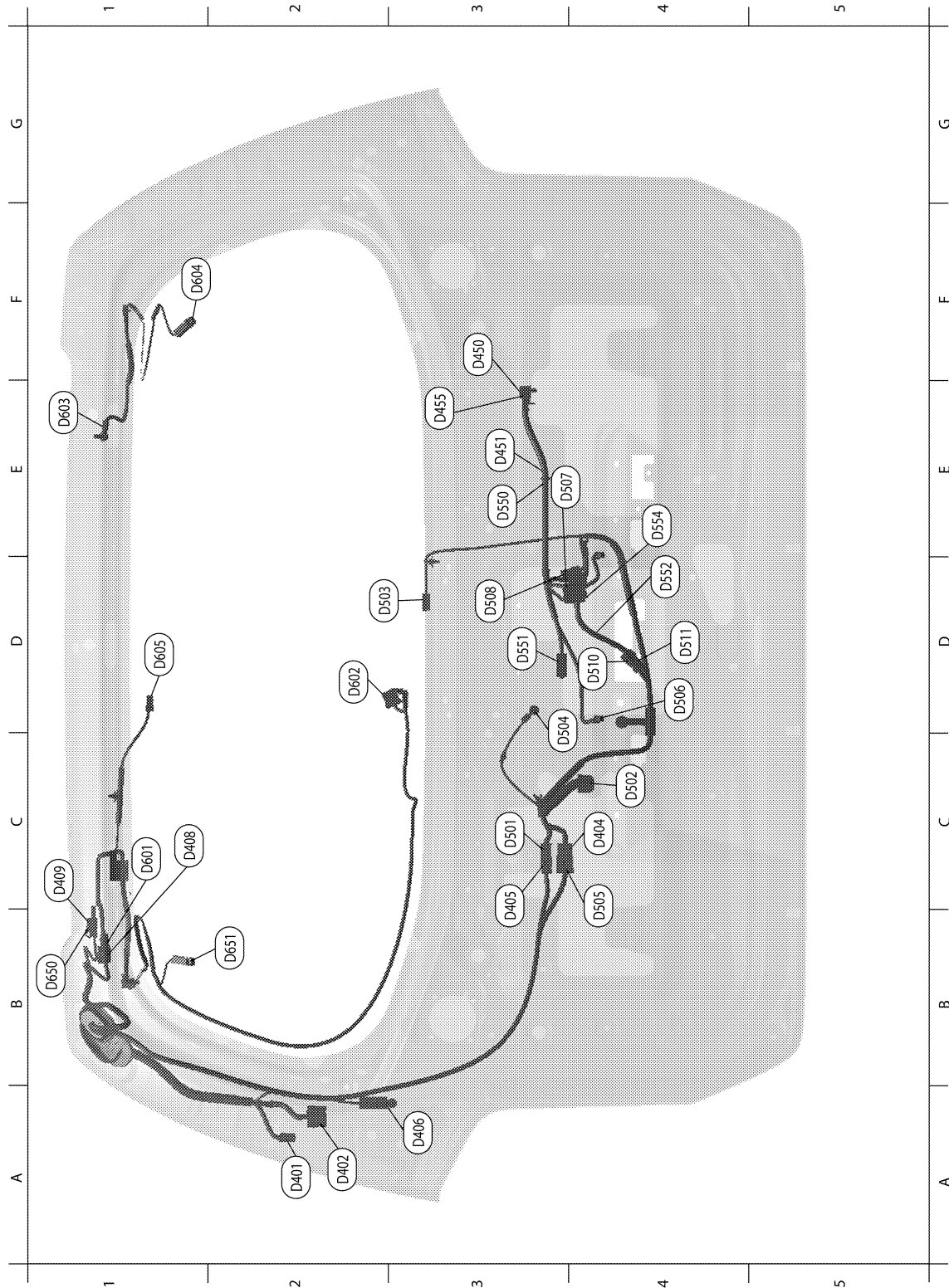
D301	W/12	: To B106	D307	BR/2	: Rear door speaker RH (with BOSE audio system)
D303	W/8	: Rear power window switch RH	D308	BR/2	: Rear door tweeter RH
D304	B/2	: Rear power window motor RH	D309	W/2	: Rear door speaker RH (with base and mid audio system)
D305	W/2	: Rear door lock actuator RH			

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HARNESS

< COMPONENT DIAGNOSIS >

BACK DOOR HARNESS



ABMIA0356GB

Back door No. 2 harness				E4	D507	BR/2	: License plate lamp RH
A2	D401	W/8	: To B43	D3	D508	W/4	: Glass hatch lock actuator
A2	D402	W/6	: To B48	D4	D510	BR/2	: Back door opener switch (without Intelligent key system)
C4	D404	W/4	: To D505	D4	D511	BR/2	: Back door opener switch (with Intelligent key system)

HARNESS

< COMPONENT DIAGNOSIS >

B3	D405	W/8	: To D501	D3	D550	W/8	: To D451	A
A3	D406	—	: Body ground	D3	D551	W/4	: Rear view camera	B
C1	D408	W/4	: To D601	E4	D552	GR/2	: Back door request switch	C
C1	D409	W/1	: To D650	E4	D554	—	: Body ground	D
F3	D450	W/8	: To B107	Rear window sub-harness				E
F3	D451	W/8	: To D550	C2	D601	W/4	: To D408	F
E3	D455	—	: Body ground	D2	D602	W/4	: Rear wiper motor	G
Back door harness				E1	D603	—	: Body ground	H
C3	D501	W/8	: To D405	E1	D603	—	: Body ground	I
C4	D502	W/4	: Back door latch	F2	D604	B/1	: Rear window defogger	J
D2	D503	B/1	: Glass hatch ajar switch	D1	D605	W/2	: High mounted stop lamp	K
D4	D504	—	: Body ground	Back door LH harness				L
C4	D505	W/4	: To D404	B1	D650	W/1	: To D409	M
D4	D506	BR/2	: License plate lamp LH	B2	D651	B/1	: Rear window defogger	N

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ELECTRICAL UNITS LOCATION

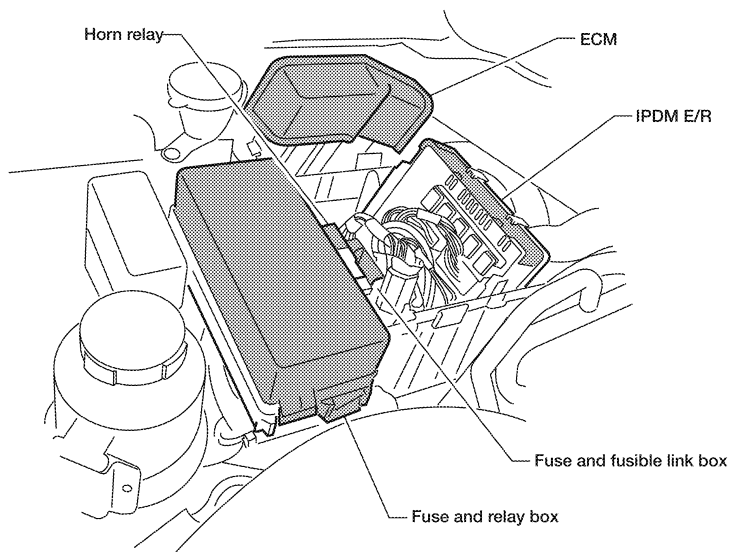
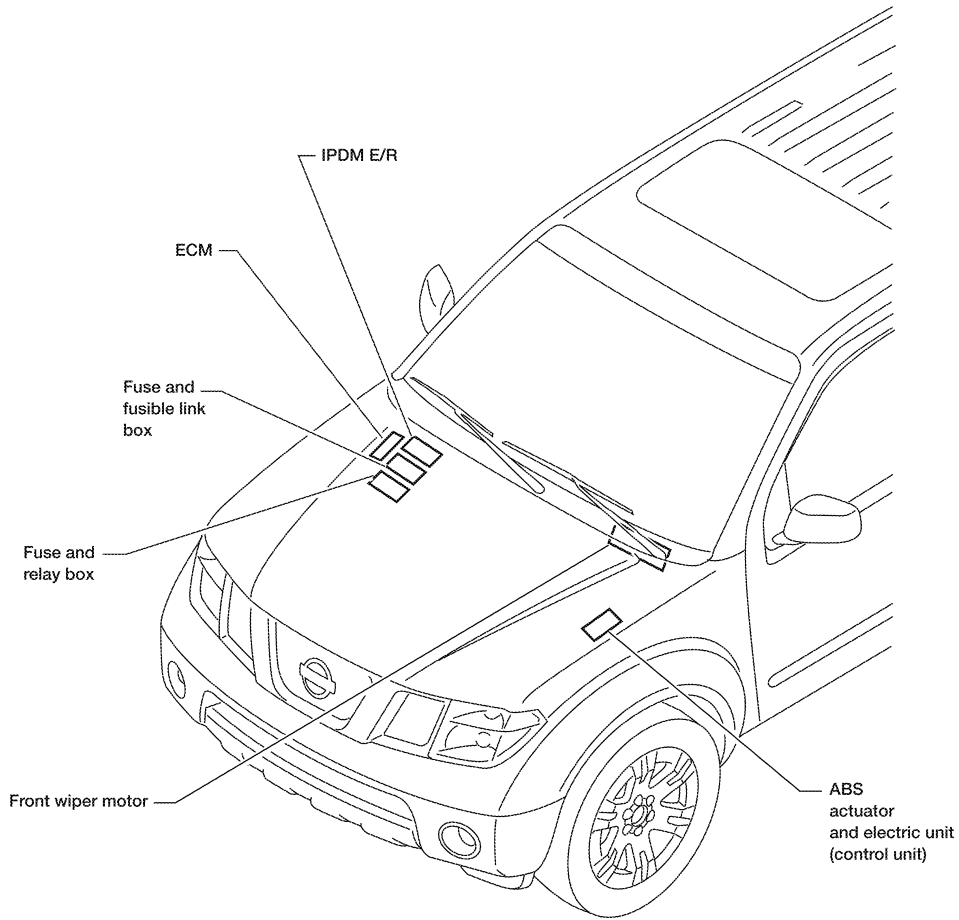
< COMPONENT DIAGNOSIS >

ELECTRICAL UNITS LOCATION

Electrical Units Location

INFOID:000000003935680

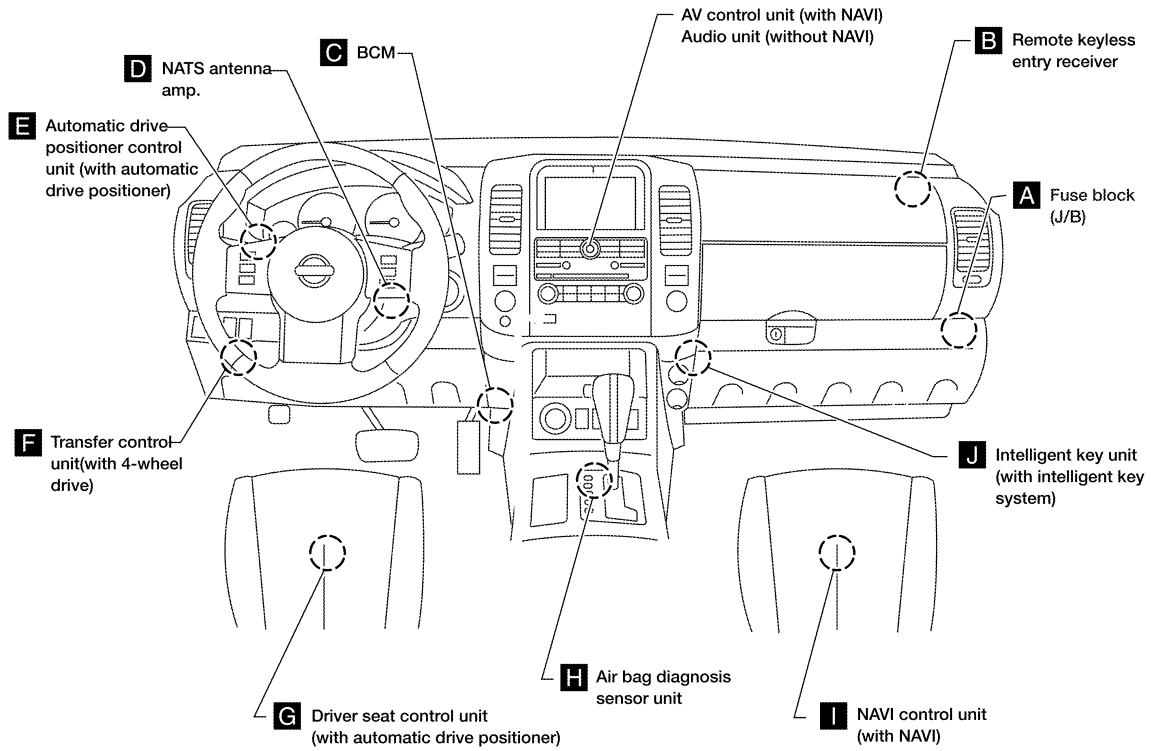
ENGINE COMPARTMENT



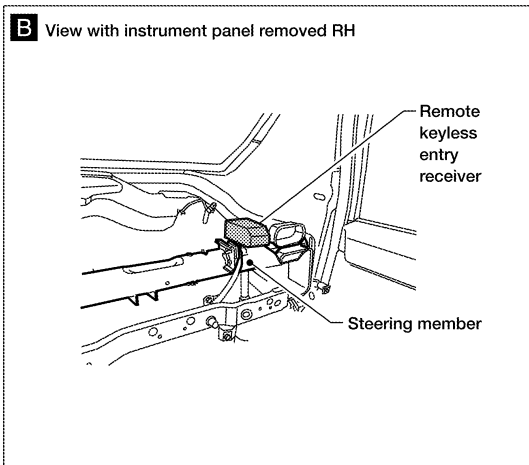
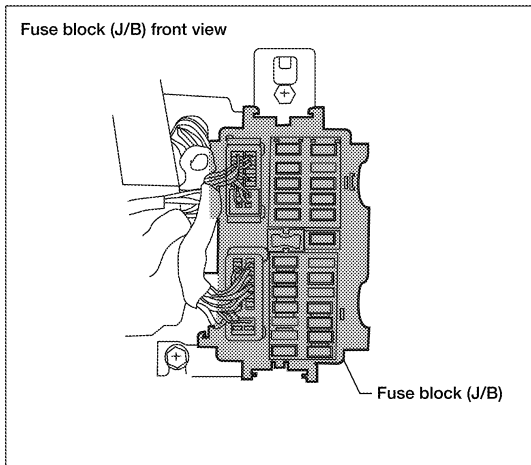
ABMIA0309GB

ELECTRICAL UNITS LOCATION

< COMPONENT DIAGNOSIS >
PASSENGER COMPARTMENT



A Instrument panel side RH

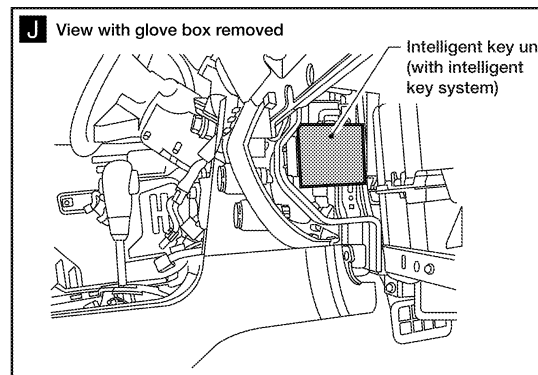
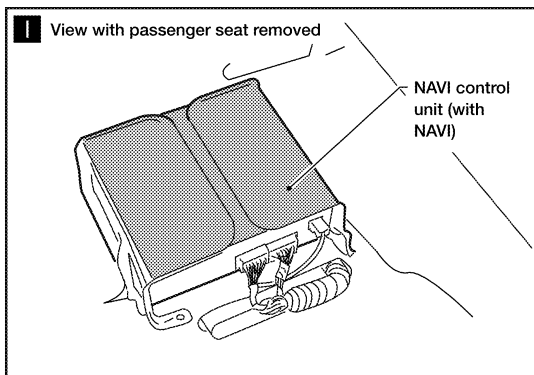
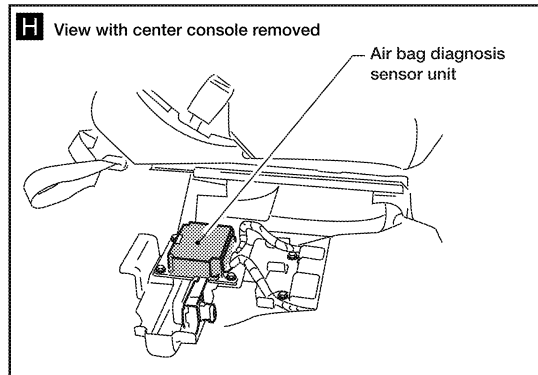
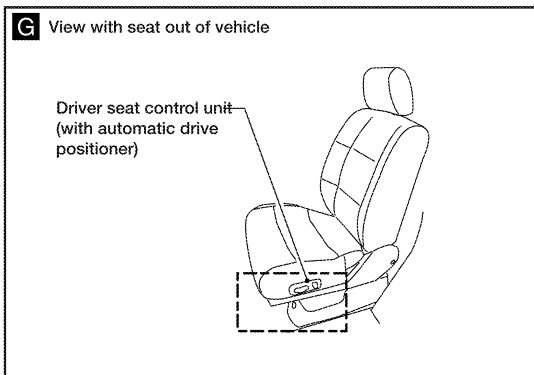
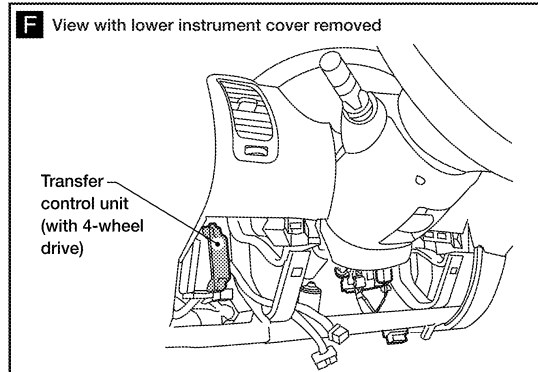
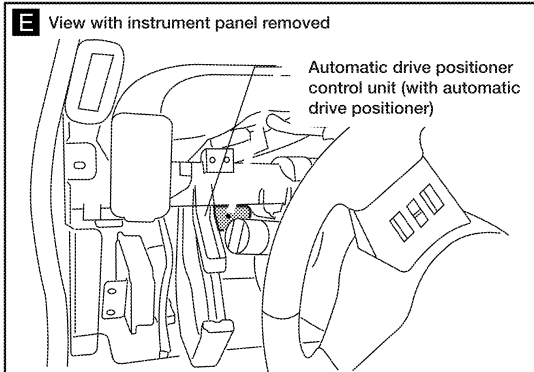
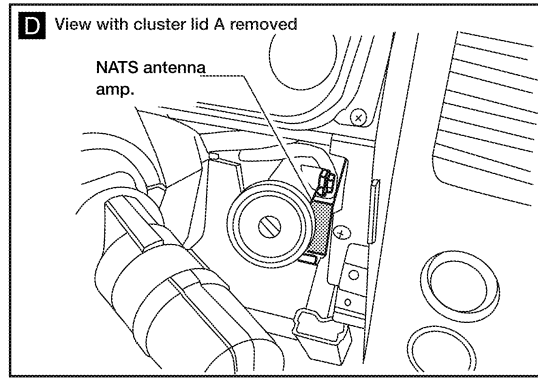
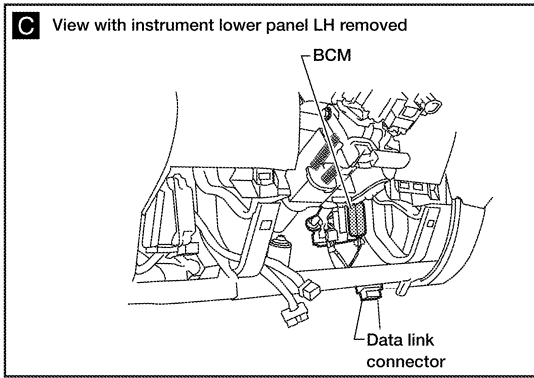


ABMIA0310GB

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ELECTRICAL UNITS LOCATION

< COMPONENT DIAGNOSIS >



ABMIA0311GB

HARNESS CONNECTOR

< COMPONENT DIAGNOSIS >

HARNESS CONNECTOR

Description

INFOID:000000003935681

HARNESS CONNECTOR (TAB-LOCKING TYPE)

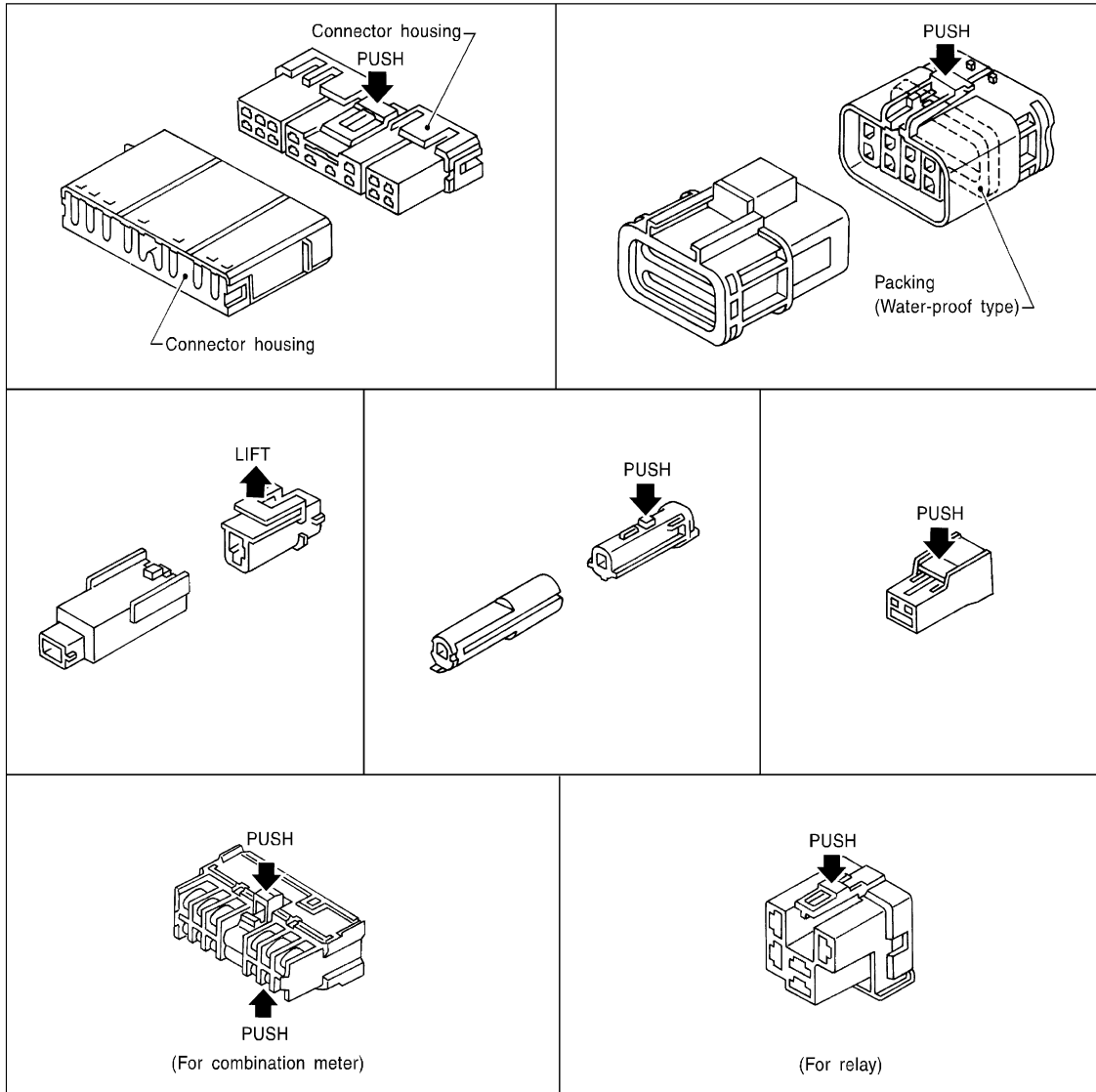
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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

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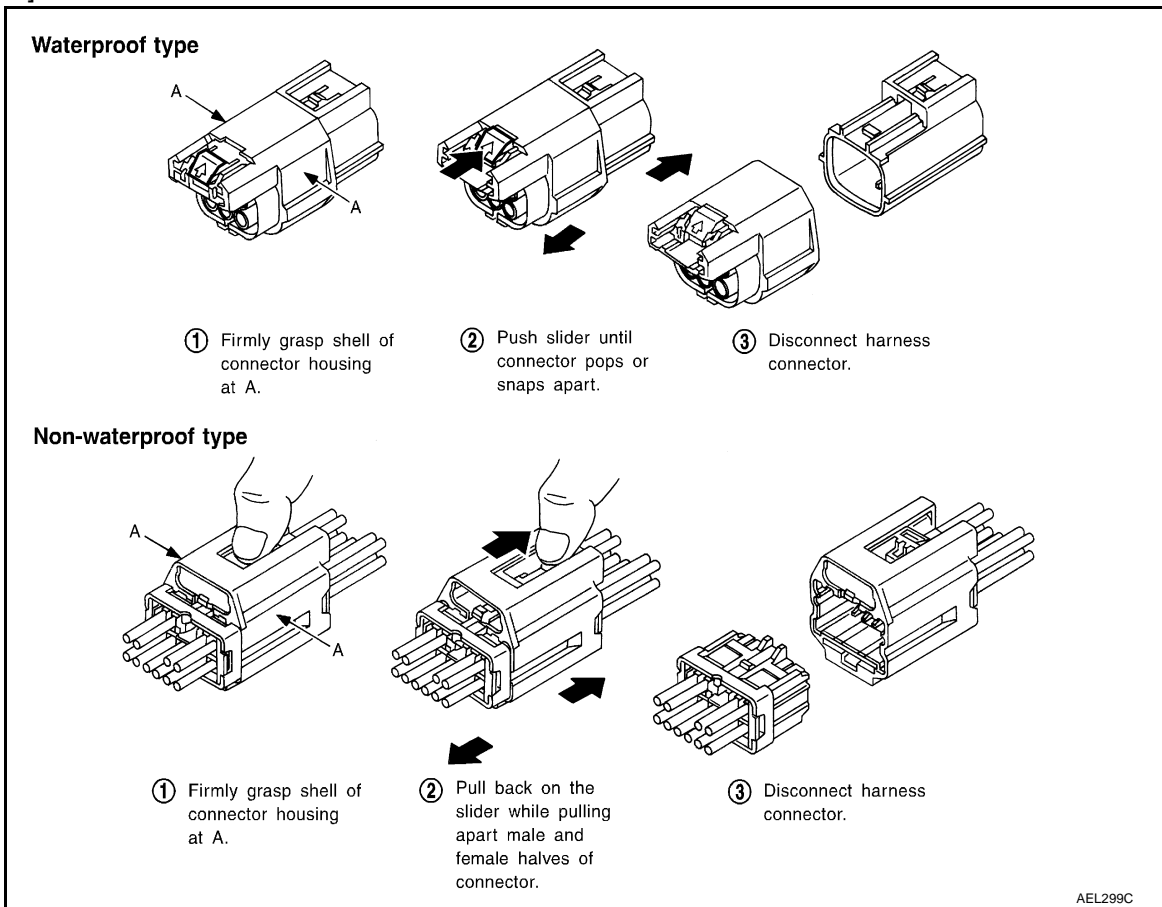
HARNESS CONNECTOR

< COMPONENT DIAGNOSIS >

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)

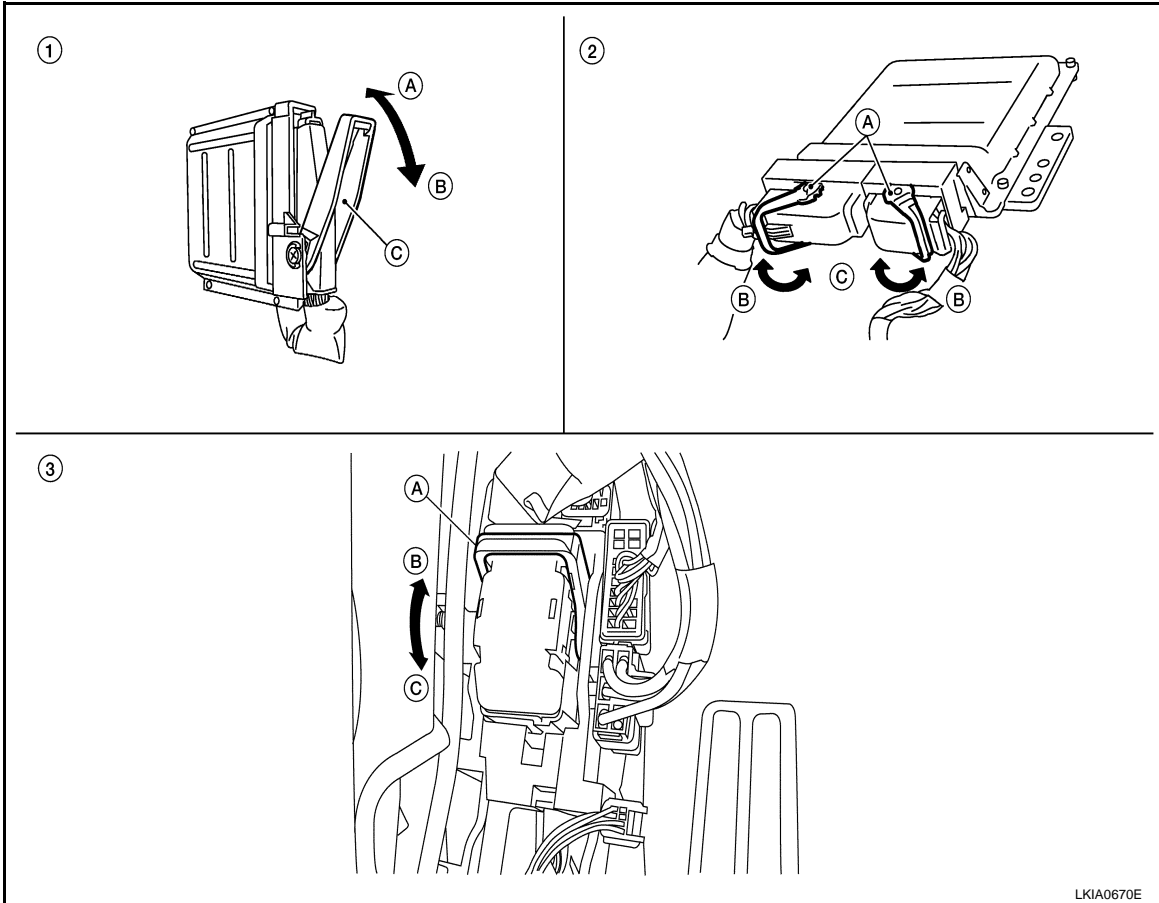
- Lever locking type harness connectors are used on certain control units and control modules such as ECM, ABS actuator and electric unit (control unit), etc.
- Lever locking type harness connectors are also used on super multiple junction (SMJ) connectors.
- Always confirm the lever is fully locked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

CAUTION:

HARNES CONNECTOR

< COMPONENT 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.



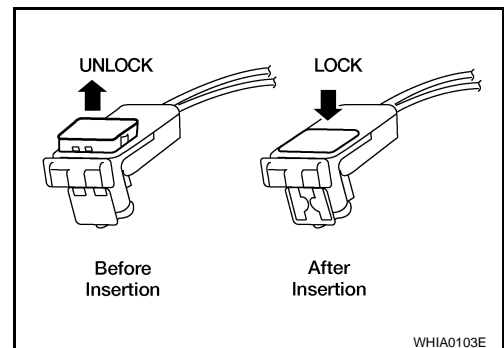
- | | | |
|--|--|---|
| <p>1. Control unit with single lever</p> <p>A. Fasten</p> <p>B. Loosen</p> <p>C. Lever</p> | <p>2. Control unit with dual levers</p> <p>A. Levers</p> <p>B. Fasten</p> <p>C. Loosen</p> | <p>3. SMJ connector</p> <p>A. Lever</p> <p>B. Fasten</p> <p>C. Loosen</p> |
|--|--|---|

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 component.
- Always push down to lock black locking tab after installing connector to SRS component. 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

< COMPONENT DIAGNOSIS >

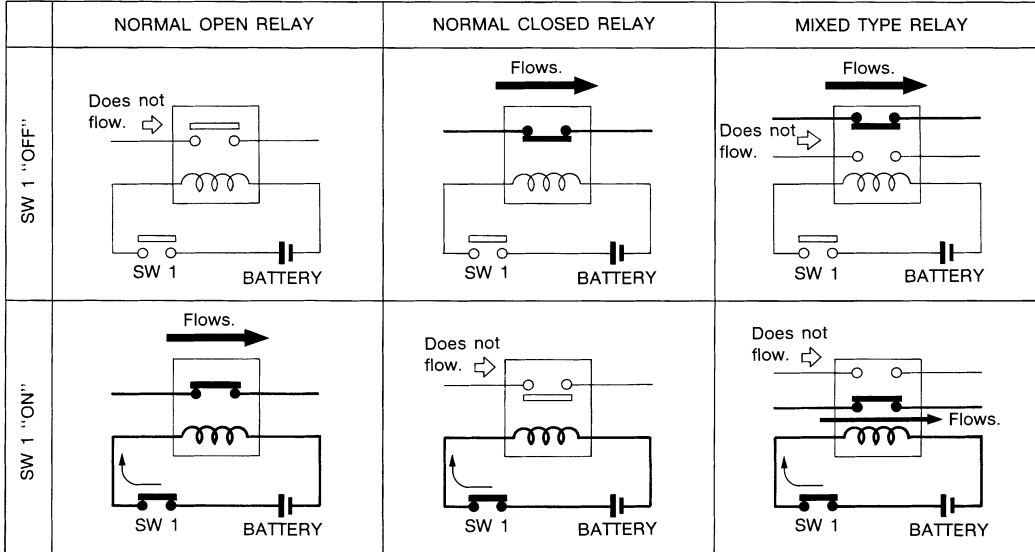
STANDARDIZED RELAY

Description

INFOID:000000003935683

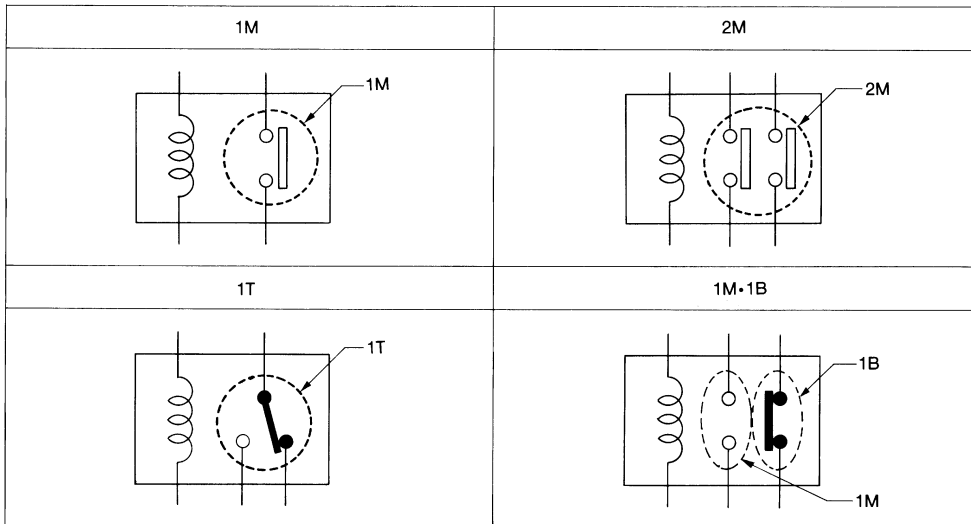
NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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



SEL881H

TYPE OF STANDARDIZED RELAYS

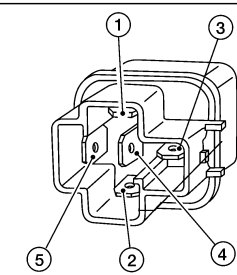
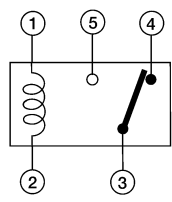
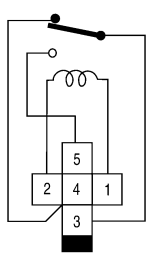
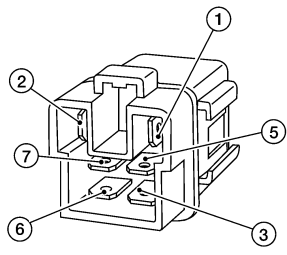
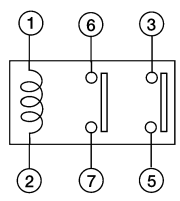
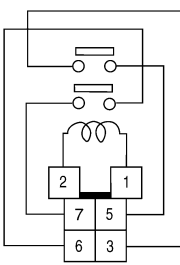
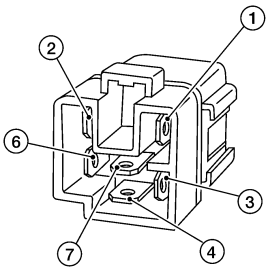
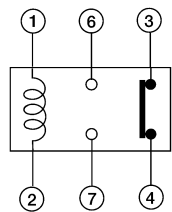
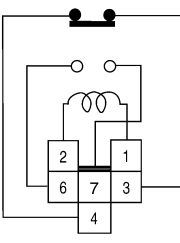
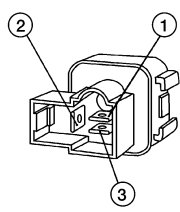
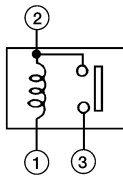
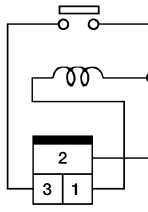
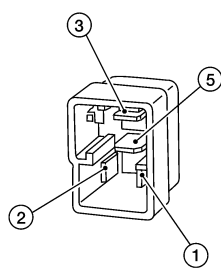
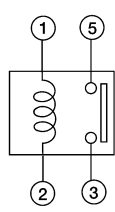
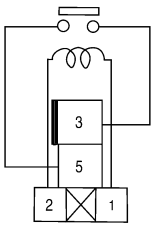


SEL882H

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

STANDARDIZED RELAY

< COMPONENT DIAGNOSIS >

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

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

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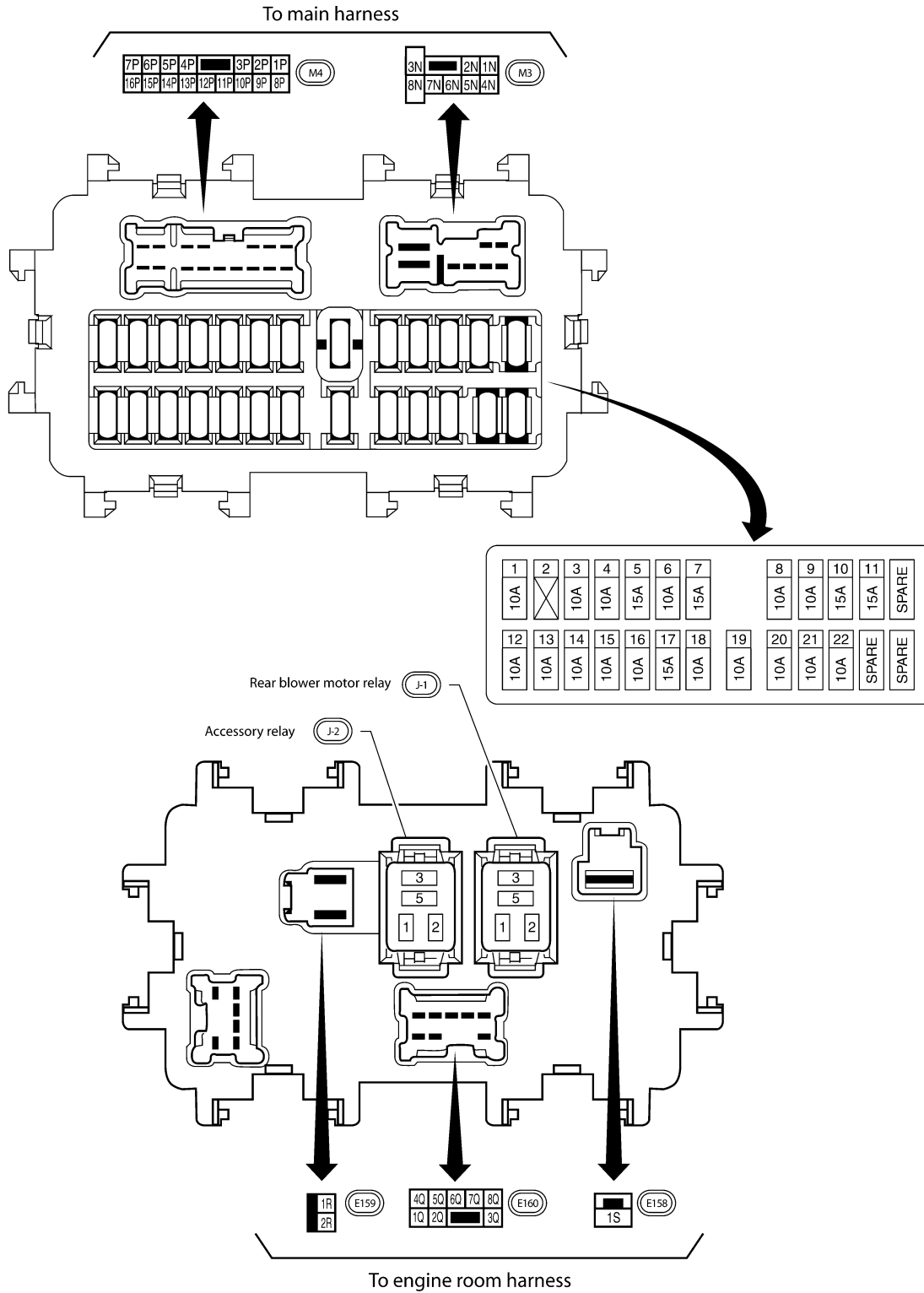
FUSE BLOCK-JUNCTION BOX (J/B)

< COMPONENT DIAGNOSIS >

FUSE BLOCK-JUNCTION BOX (J/B)

Terminal Arrangement

INFOID:000000003935685



ABMIA0312GB

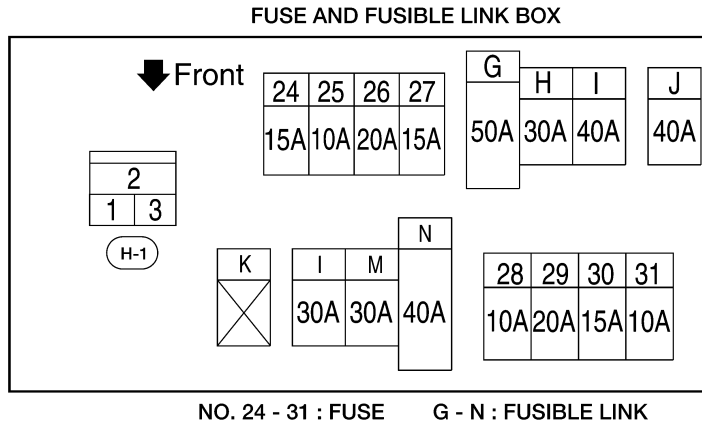
FUSE AND FUSIBLE LINK BOX

< COMPONENT DIAGNOSIS >

FUSE AND FUSIBLE LINK BOX

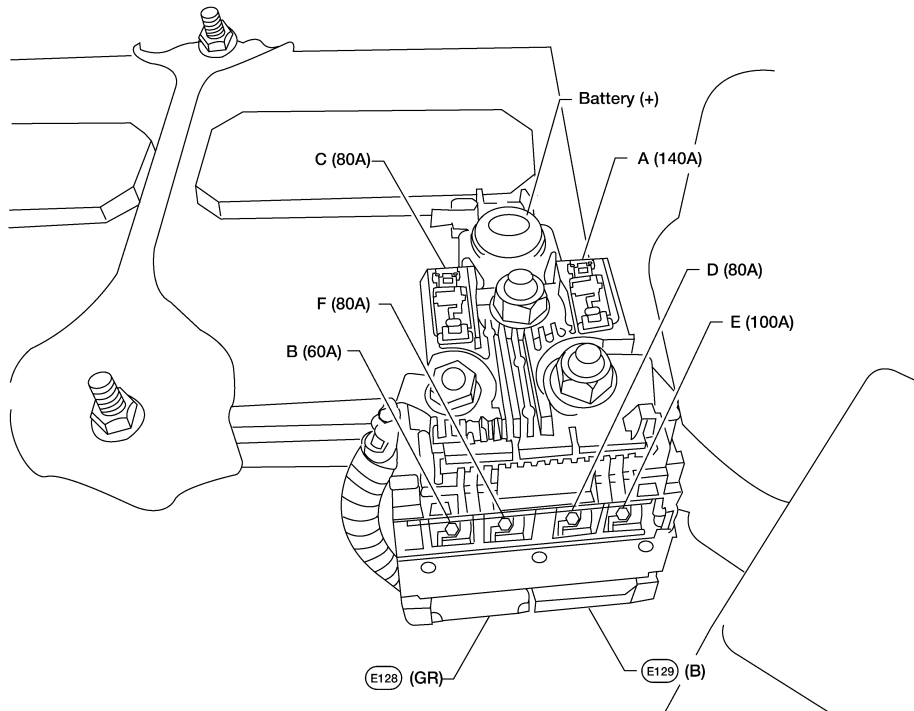
Terminal Arrangement

INFOID:000000003935686



NO. 24 - 31 : FUSE G - N : FUSIBLE LINK

E30, E128, E129, E202, E204
FUSIBLE LINK BOX (BATTERY)







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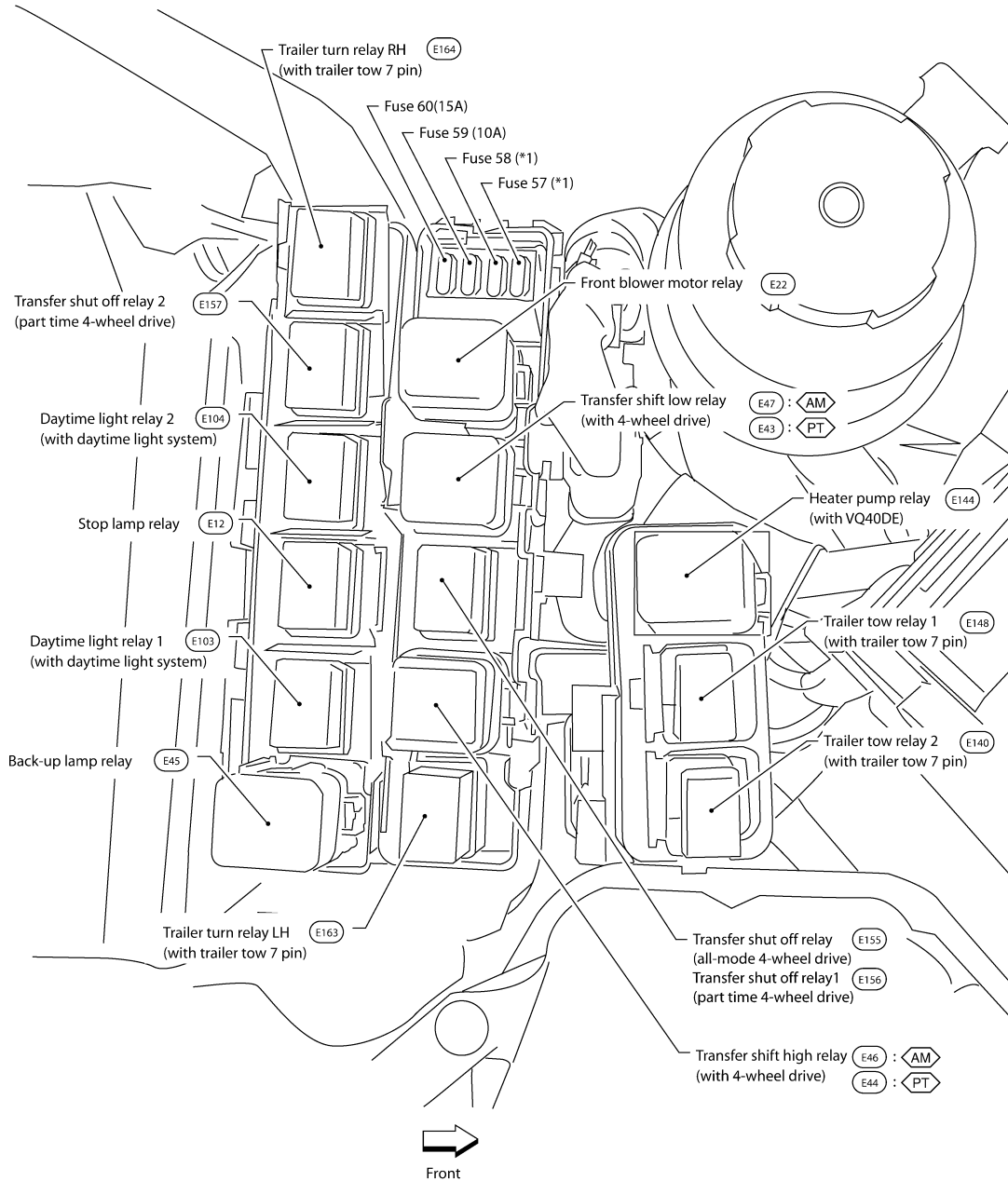
FUSE AND RELAY BOX

< COMPONENT DIAGNOSIS > FUSE AND RELAY BOX

Terminal Arrangement

INFOID:000000003935687

-  : ALL-MODE 4WD SYSTEM
-  : PART TIME 4WD SYSTEM
-  : 20A
- *1  : 10A



ABMIA0314GB

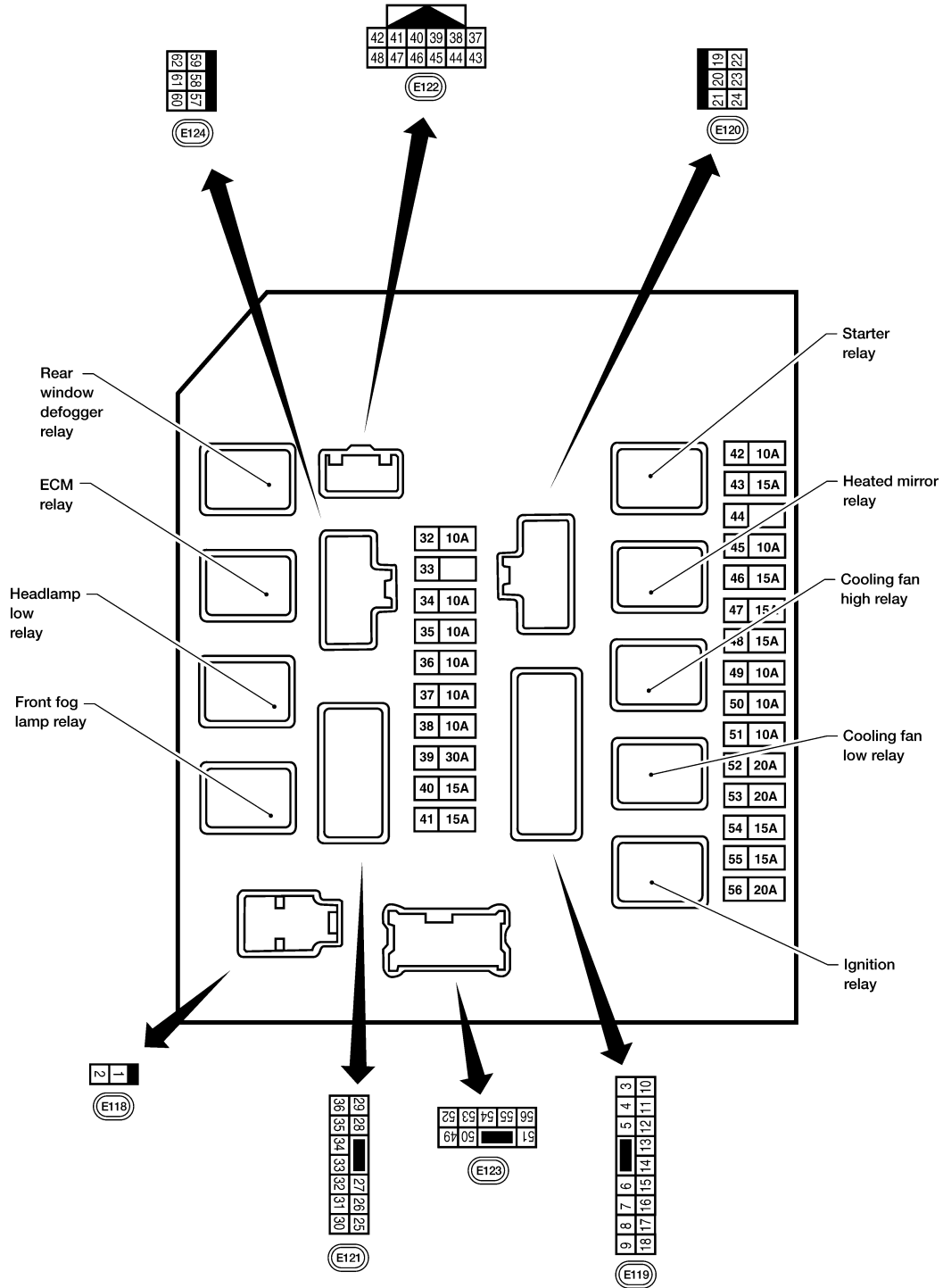
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< COMPONENT DIAGNOSIS >

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

Fuse, Connector and Terminal Arrangement

INFOID:000000004336254



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WKIA5856E

BATTERY

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

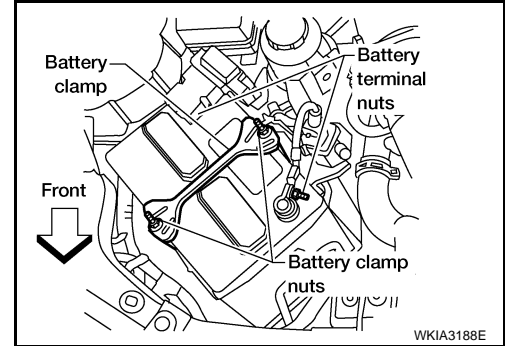
BATTERY

Removal and Installation

INFOID:000000003935688

REMOVAL

1. Disconnect both negative and positive battery terminals.
CAUTION:
Disconnect negative battery terminal first.
2. Remove battery clamp nuts and battery clamp.
3. Remove battery.



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

When connecting battery terminals, connect positive battery terminal first.

Battery clamp nuts : 3.92 N-m (0.40 kg-m, 35 in-lb)

Battery terminal nut : 3.4 N-m (0.35 kg-m, 30 in-lb)

Reset electronic systems as necessary. Refer to [PG-7. "Special Repair Requirement"](#).

BATTERY

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

BATTERY

Battery

INFOID:000000003935689

	Standard battery
Type	Gr. 24
Capacity (20 HR) minimum V-AH	63
Cold cranking current A (For reference value)	550

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