

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"

INFOID:000000005713776

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Power Generation Variable Voltage Control System

INFOID:000000005387830

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 component 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.

PREPARATION

< PREPARATION >

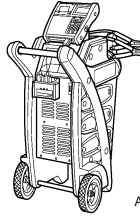
PREPARATION

PREPARATION

Special Service Tool

INFOID:000000005387831

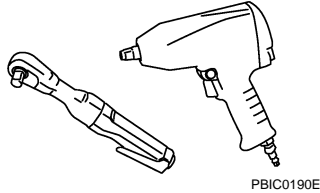
Tool number (Kent-Moore No.) Tool name	Description
— (—) Model GR-8 Multitasking Battery Diagnostic Station	Tests batteries, starting and charging systems. For operating instructions, refer to diagnostic station instruction manual.



Commercial Service Tool

INFOID:000000005387832

Tool name	Description
Power tool	Loosening bolts and nuts



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BATTERY

< BASIC INSPECTION >

BASIC INSPECTION

BATTERY

How to Handle Battery

INFOID:000000005387833

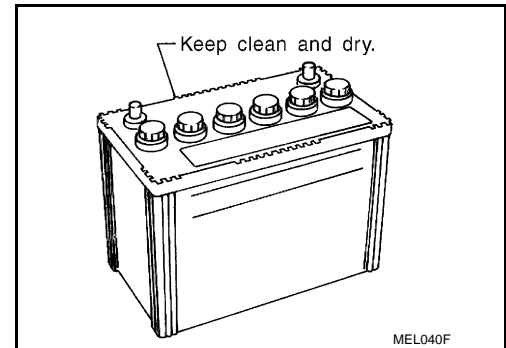
CAUTION:

- 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.

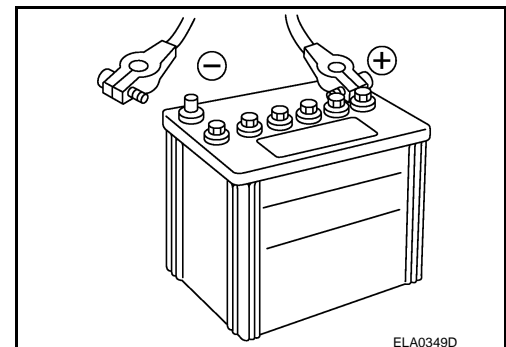
METHODS OF PREVENTING OVER-DISCHARGE

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

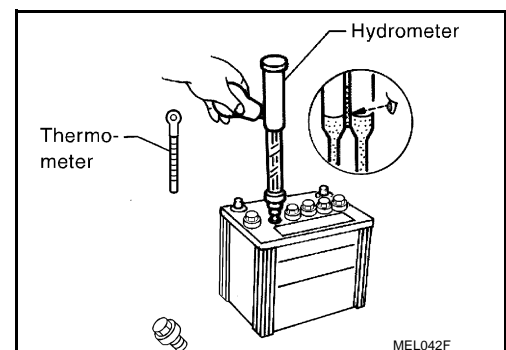
- The battery surface (particularly its top) should always be kept clean and dry.
- The terminal connections should be clean and tight.
- At every routine maintenance, check the electrolyte level. This also applies to batteries designated as "low maintenance" and "maintenance-free".



- 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

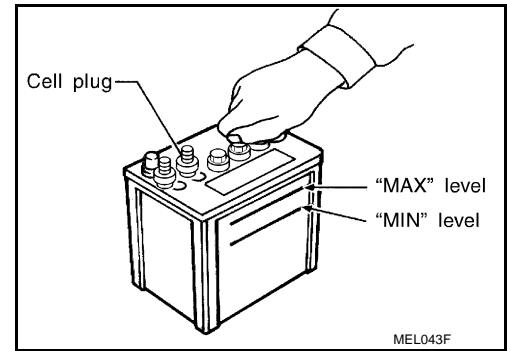
WARNING:

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.

BATTERY

< BASIC INSPECTION >

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

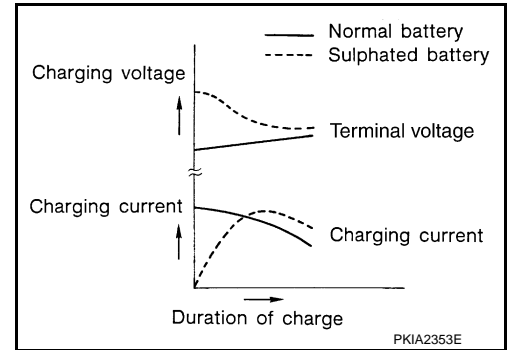


Sulphation

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.

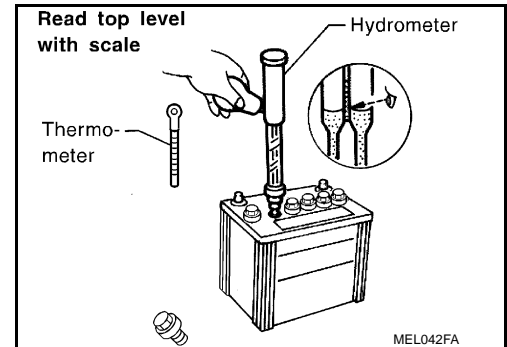
To determine if a battery has been “sulphated”, note its voltage and current when charging it. As shown in the figure, less current and higher voltage are observed in the initial stage of charging sulphated batteries.

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

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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.

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:000000005661276

Required Procedure After Battery Disconnection

System	Item	Reference
Engine Control	Idle Air Volume Learning	Refer to EC-23, "Idle Air Volume Learning" .
Brake Control	Steering Angle Sensor Neutral Position	Refer to BRC-8, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement" .
Roof	Sunroof Memory Reset/Initialization	Refer to RF-5, "BASIC INSPECTION : Special Repair Requirement" .
Seats	Automatic Drive Positioner System Initialization	Refer to Owner's Manual.
Audio-Visual System	Audio (Radio Preset)	Refer to Owner's Manual.
	Navigation System	Refer to Owner's Manual.

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POWER SUPPLY ROUTING CIRCUIT

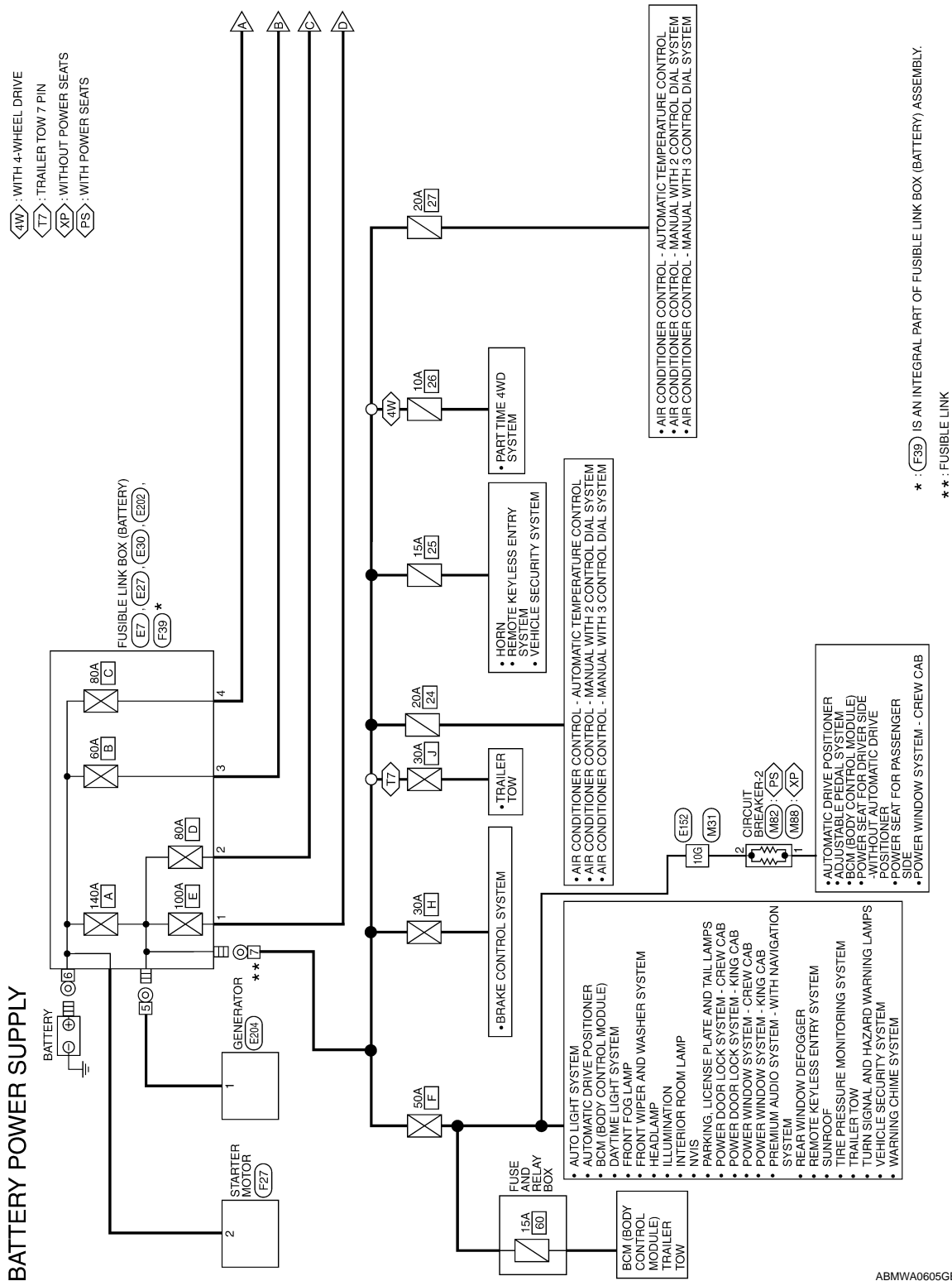
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COMPONENT DIAGNOSIS

POWER SUPPLY ROUTING CIRCUIT

Wiring Diagram —Battery Power Supply—

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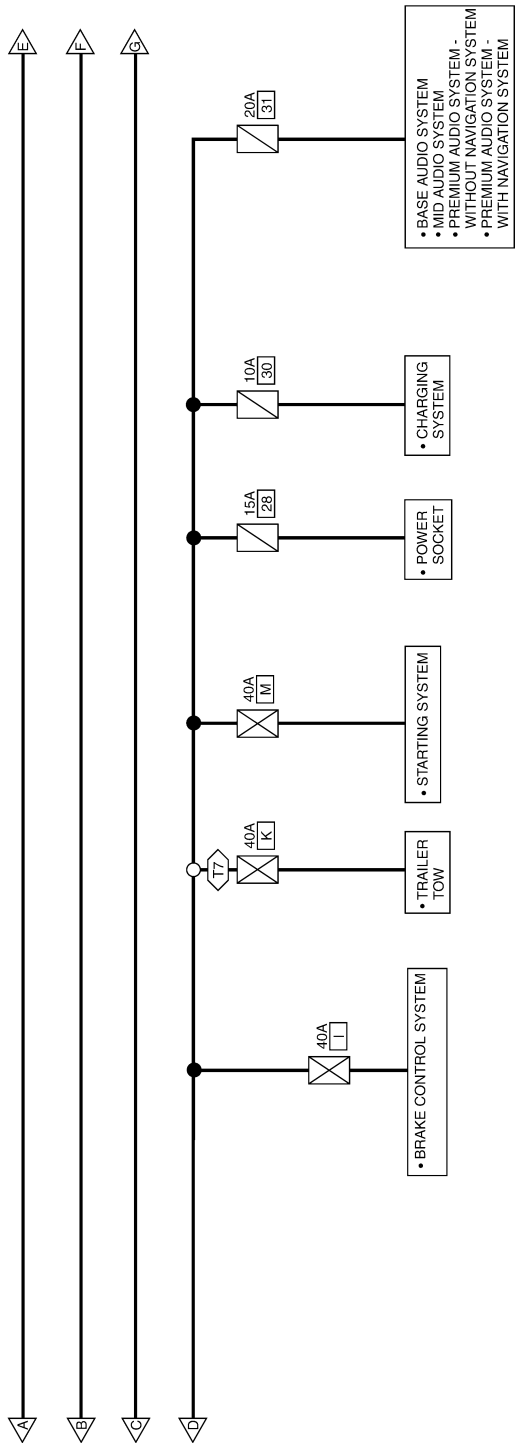


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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

T7 : TRAILER TOW 7PIN

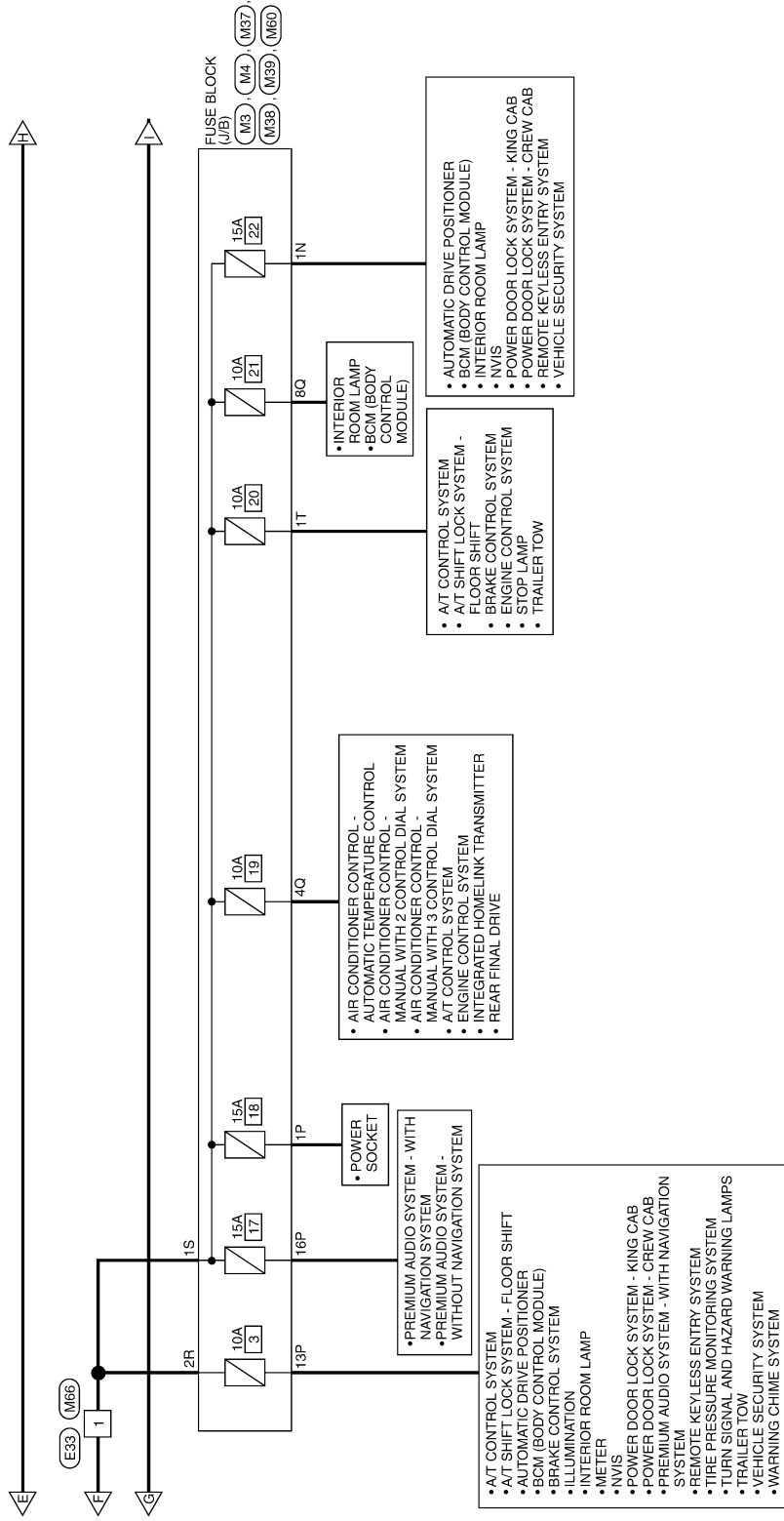


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POWER SUPPLY ROUTING CIRCUIT

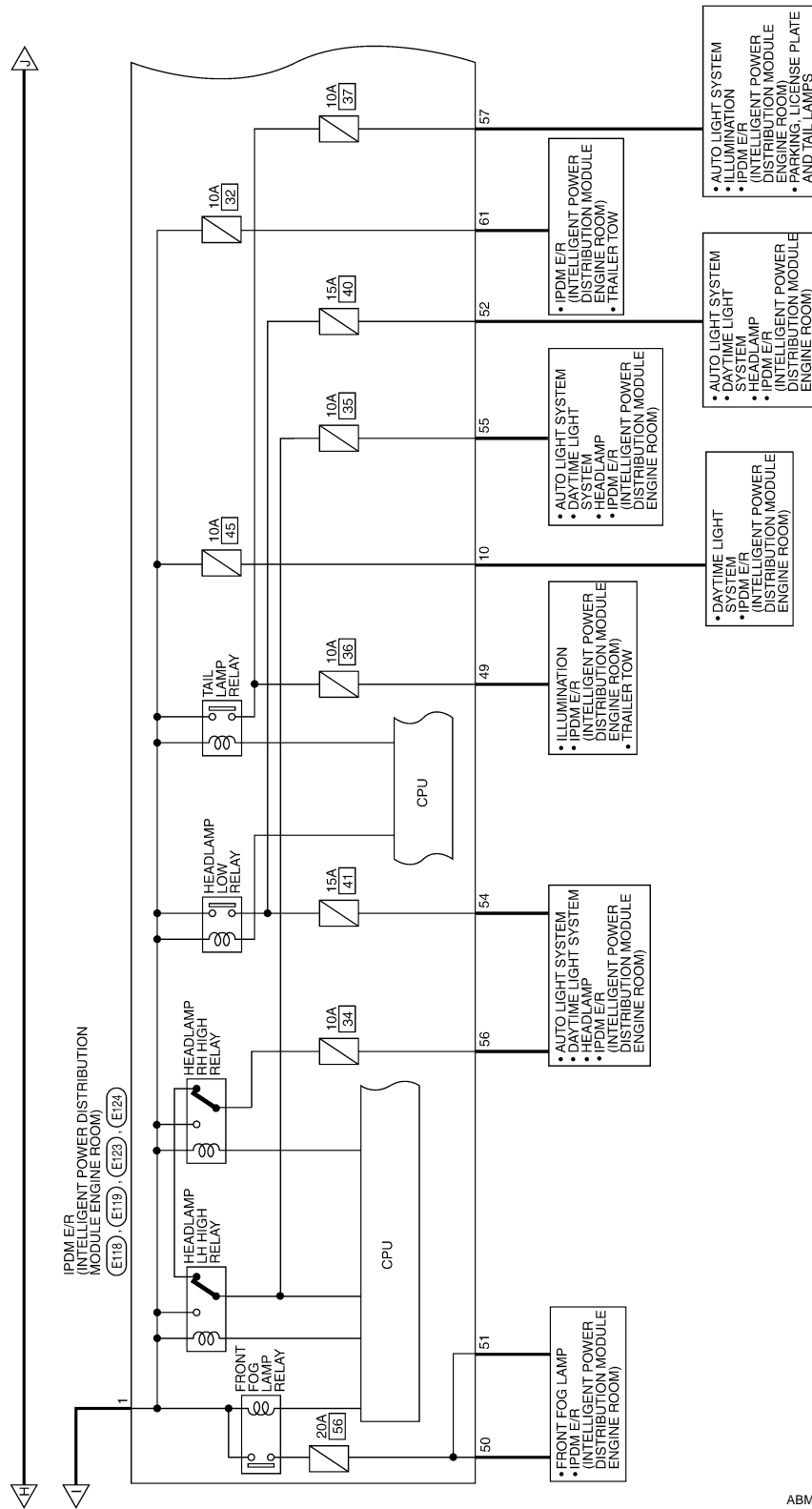
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POWER SUPPLY ROUTING CIRCUIT

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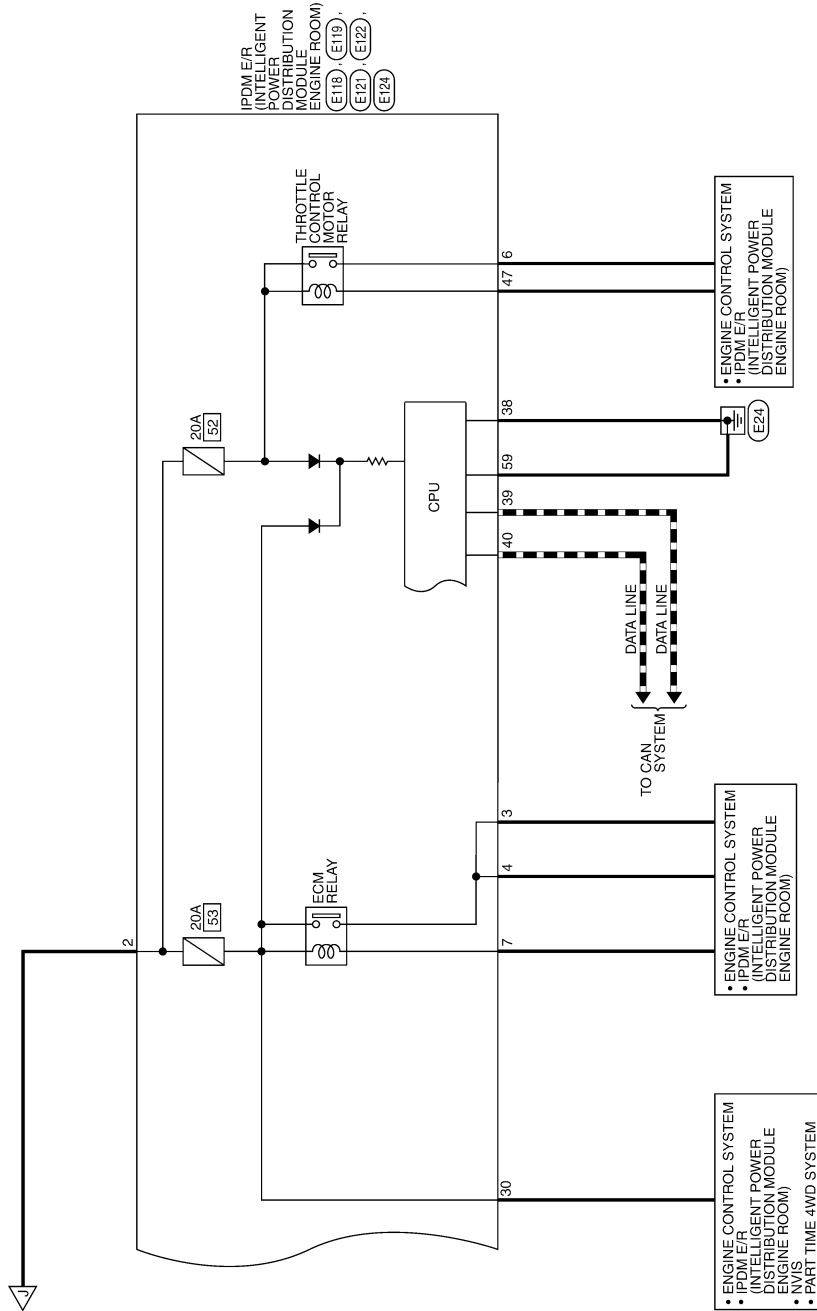


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POWER SUPPLY ROUTING CIRCUIT

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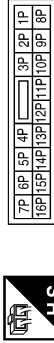
BATTERY POWER SUPPLY CONNECTORS

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



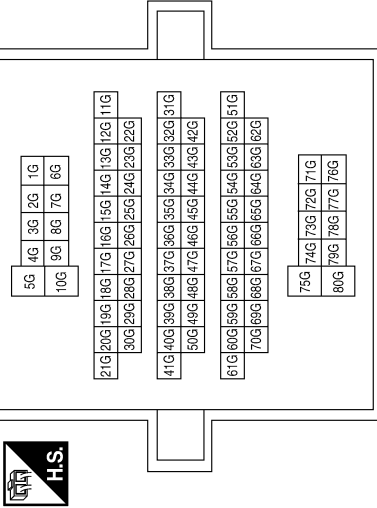
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



Terminal No.	Color of Wire	Signal Name
1P	G	-
13P	P	-
16P	R	-

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



Terminal No.	Color of Wire	Signal Name
10G	W/B	-

Connector No.	M37
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK



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

Connector No.	M38
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK



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

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-
8Q	W/L	-

POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Connector No.	M82
Connector Name	CIRCUIT BREAKER-2 (WITH POWER SEATS)
Connector Color	WHITE



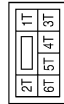
Terminal No.	Color of Wire	Signal Name
1	L/B	-
2	W/B	-

Connector No.	M66
Connector Name	WIRE TO WIRE
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	W	-

Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1T	R/Y	-

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



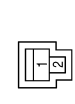
Terminal No.	Color of Wire	Signal Name
1	B/R	-
2	B/Y	-

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



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

Connector No.	M88
Connector Name	CIRCUIT BREAKER-2 (WITHOUT POWER SEATS)
Connector Color	WHITE



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

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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	B/Y	F/L USM
2	R	F/L MAIN

Connector No.	E33
Connector Name	WIRE TO WIRE
Connector Color	BLACK



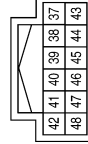
Terminal No.	Color of Wire	Signal Name
1	W	-

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



Terminal No.	Color of Wire	Signal Name
7	W	-

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



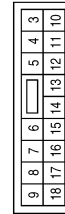
Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
47	O	ETC RLY CONT

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



Terminal No.	Color of Wire	Signal Name
30	W	ECM BAT

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	BR	IGN COIL
4	W/L	ECM
6	L	ETC
7	W/B	ECM RLY CONT
10	G	DTRL RLY SUPPLY


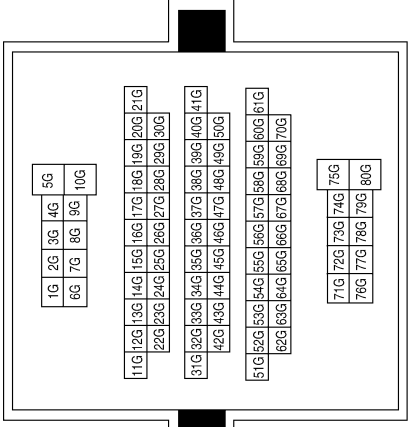
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POWER SUPPLY ROUTING CIRCUIT



< COMPONENT DIAGNOSIS >

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


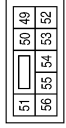
Terminal No.	Color of Wire	Signal Name
10G	W/B	-

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



Terminal No.	Color of Wire	Signal Name
57	R/L	TAIL LAMP
59	B	GND(POWER)
61	BR	TRAIL RLY SUPPLY

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



Terminal No.	Color of Wire	Signal Name
49	R/L	ILLUMINATION
50	W/R	FR FOG LAMP LH
51	W/R	FR FOG LAMP RH
52	L	H/LAMP LO LH
54	R/Y	H/LAMP LO RH
55	G	H/LAMP HI LH
56	L/W	H/LAMP HI RH (WITHOUT DAYTIME LIGHT)
56	Y	H/LAMP HI RH (WITH DAYTIME LIGHT)

Connector No.	F27
Connector Name	STARTER MOTOR
Connector Color	-



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

Connector No.	E204
Connector Name	GENERATOR
Connector Color	-

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

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

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

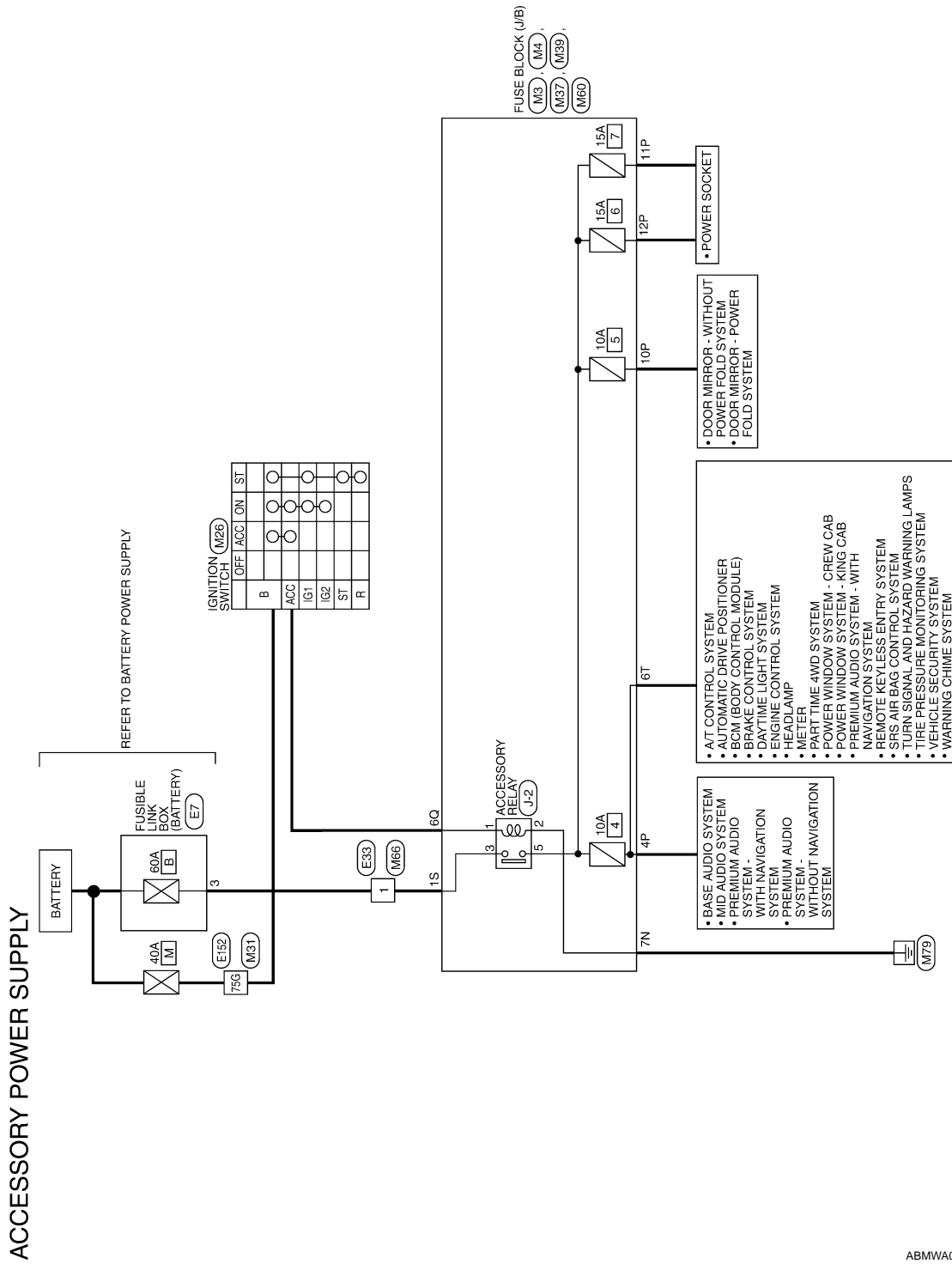
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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Wiring Diagram —Accessory Power Supply—

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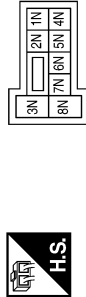
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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

ACCESSORY POWER SUPPLY CONNECTORS

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



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



Connector No.	M26
Connector Name	IGNITION SWITCH
Connector Color	WHITE

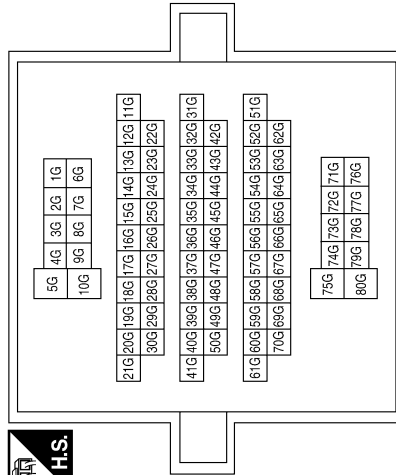


Terminal No.	Color of Wire	Signal Name
7N	B	-

Terminal No.	Color of Wire	Signal Name
4P	V	-
10P	O	-(WITH POWER FOLD SYSTEM)
10P	GR	-(WITHOUT POWER FOLD SYSTEM)
11P	G/W	-
12P	L/W	-

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

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



Terminal No.	Color of Wire	Signal Name
75G	G	-

Connector No.	M37
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK



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

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POWER SUPPLY ROUTING CIRCUIT

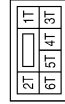
< COMPONENT DIAGNOSIS >

Connector No.	M66
Connector Name	WIRE TO WIRE
Connector Color	BLACK



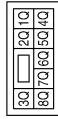
Terminal No.	1	Color of Wire	W	Signal Name	-
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Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	6T	Color of Wire	O	Signal Name	-
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Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	6Q	Color of Wire	V	Signal Name	-
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Connector No.	E33
Connector Name	WIRE TO WIRE
Connector Color	BLACK



Terminal No.	1	Color of Wire	W	Signal Name	-
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Connector No.	E7
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	GRAY



Terminal No.	3	Color of Wire	W	Signal Name	-
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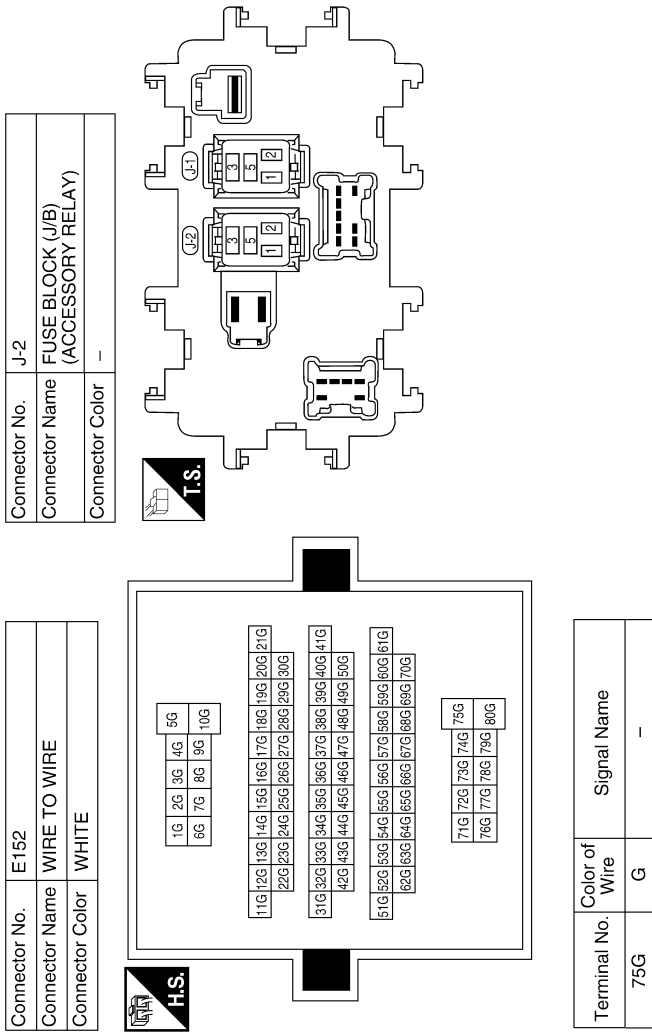
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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >



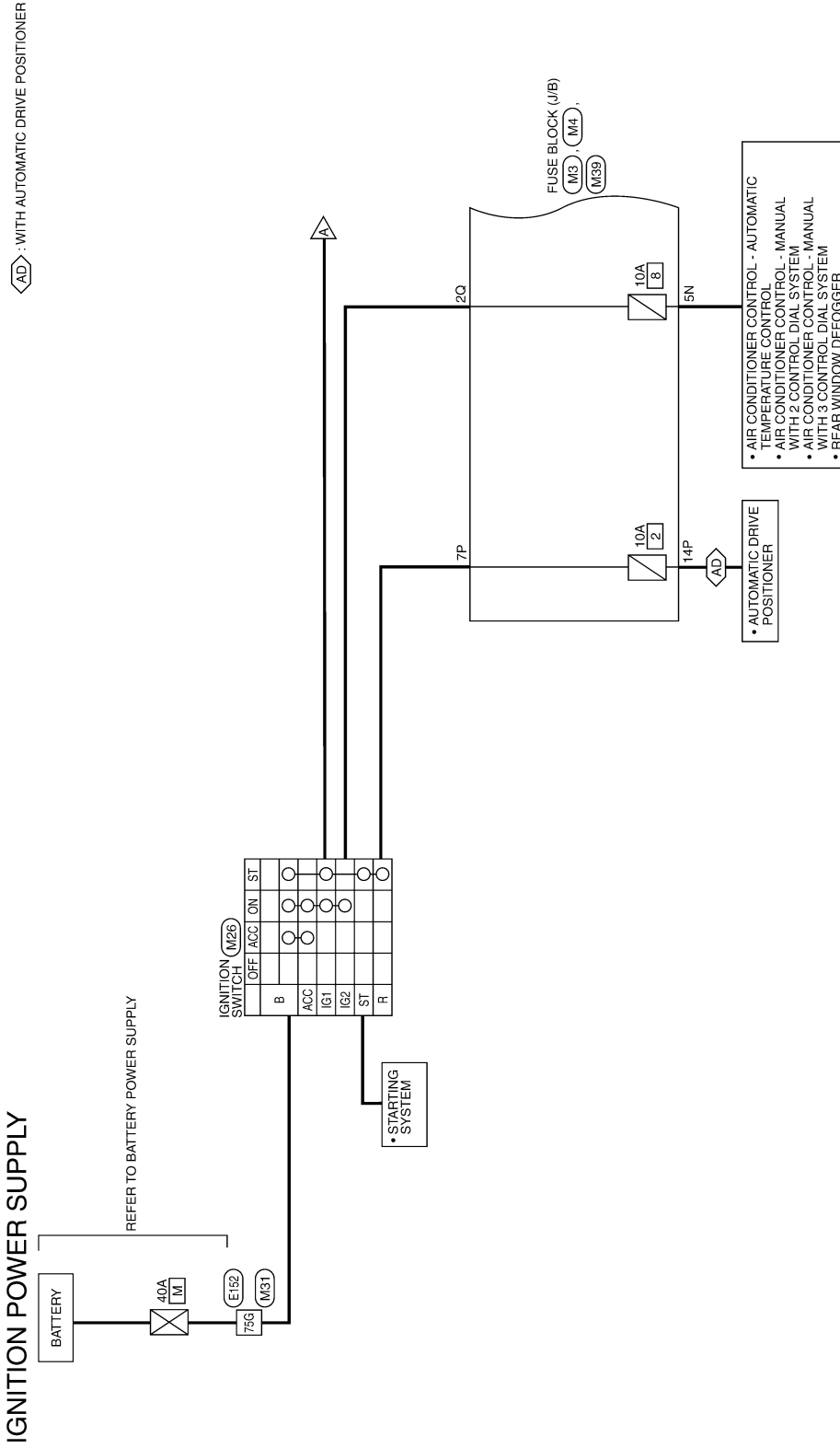
ABMIA1610GB

POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Wiring Diagram —Ignition Power Supply —

INFOID:000000005387838



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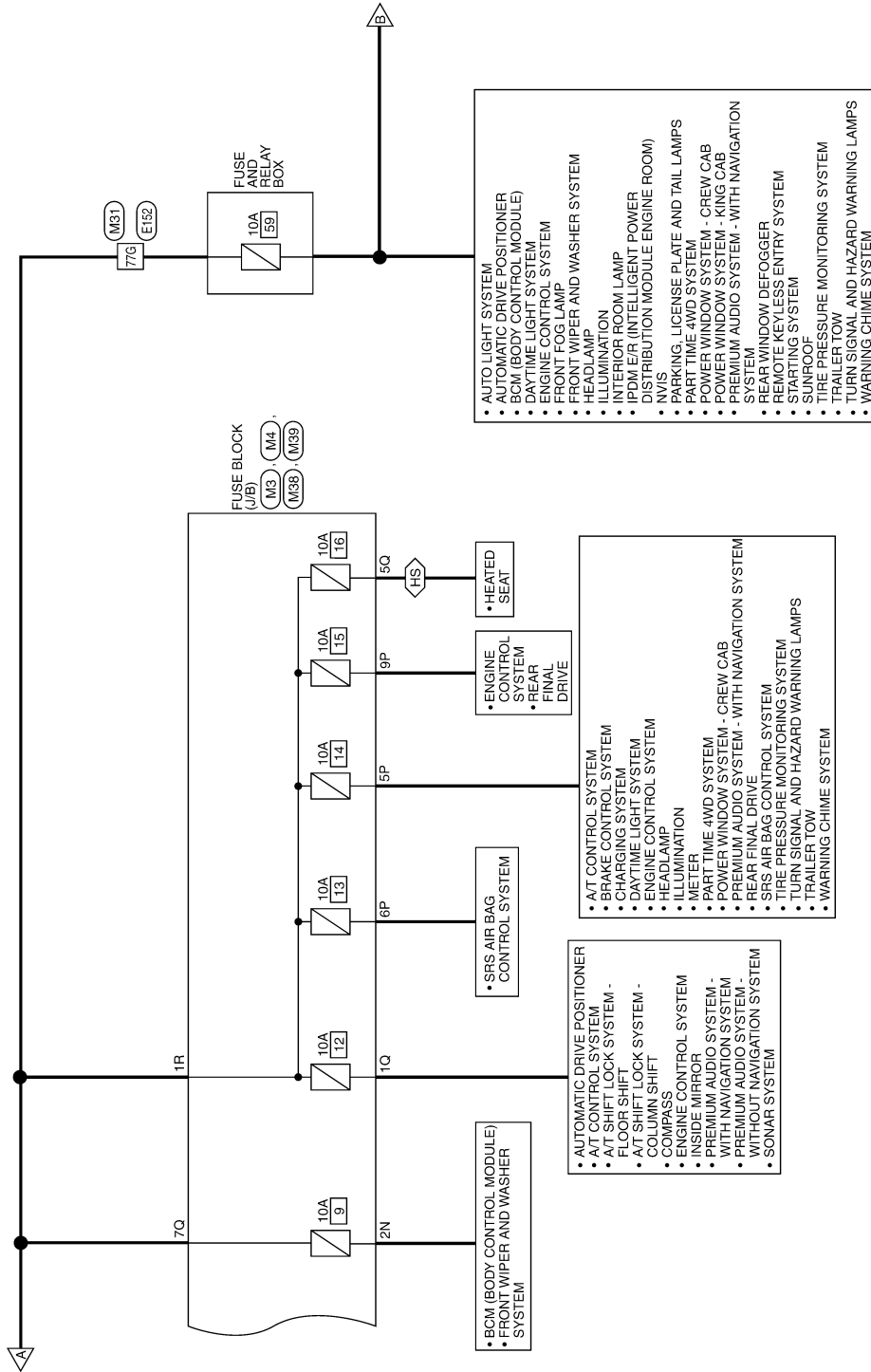
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ABMWA0611GB

POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

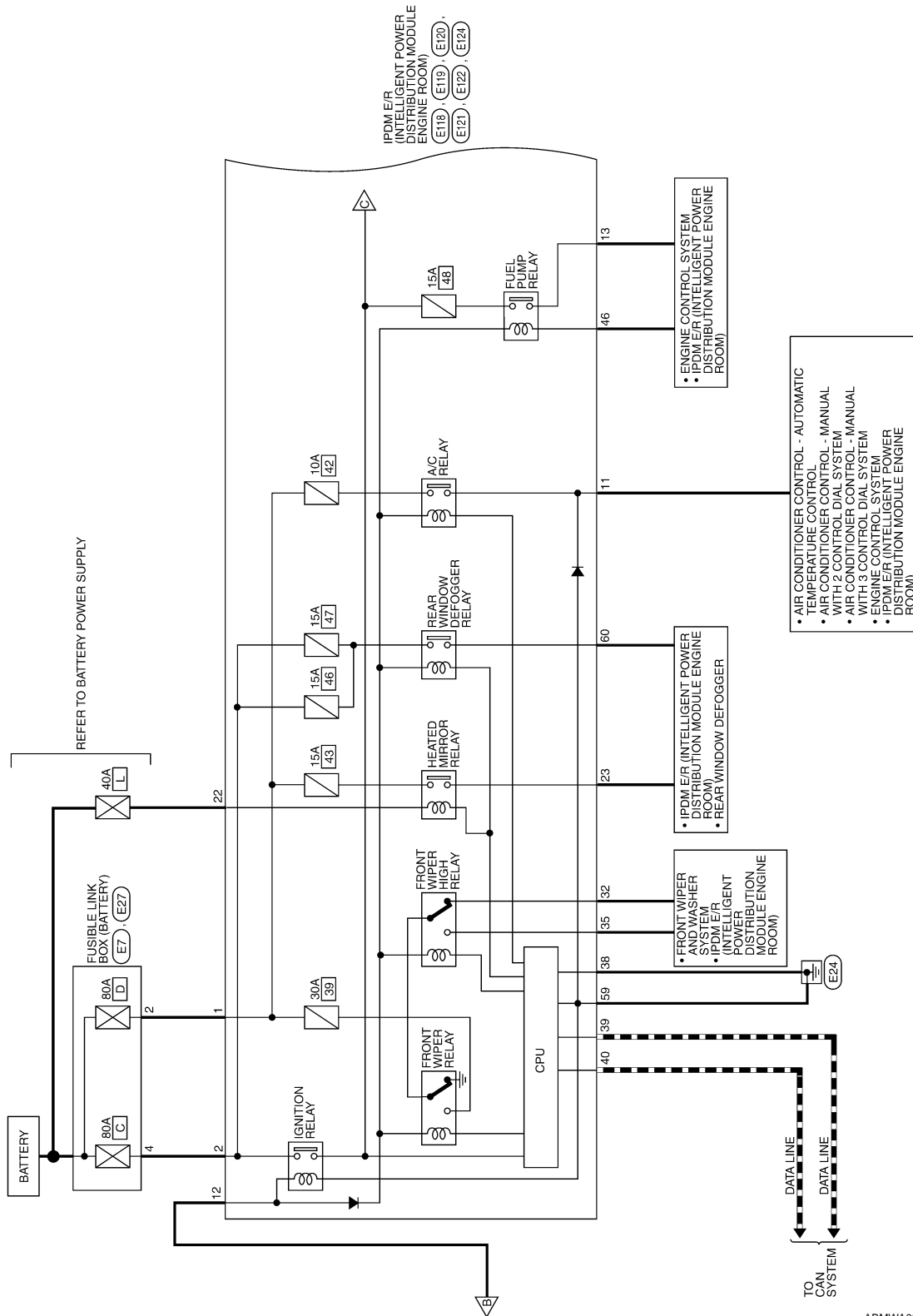
HS : WITH HEATED SEATS



ABMWA0612GB

POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

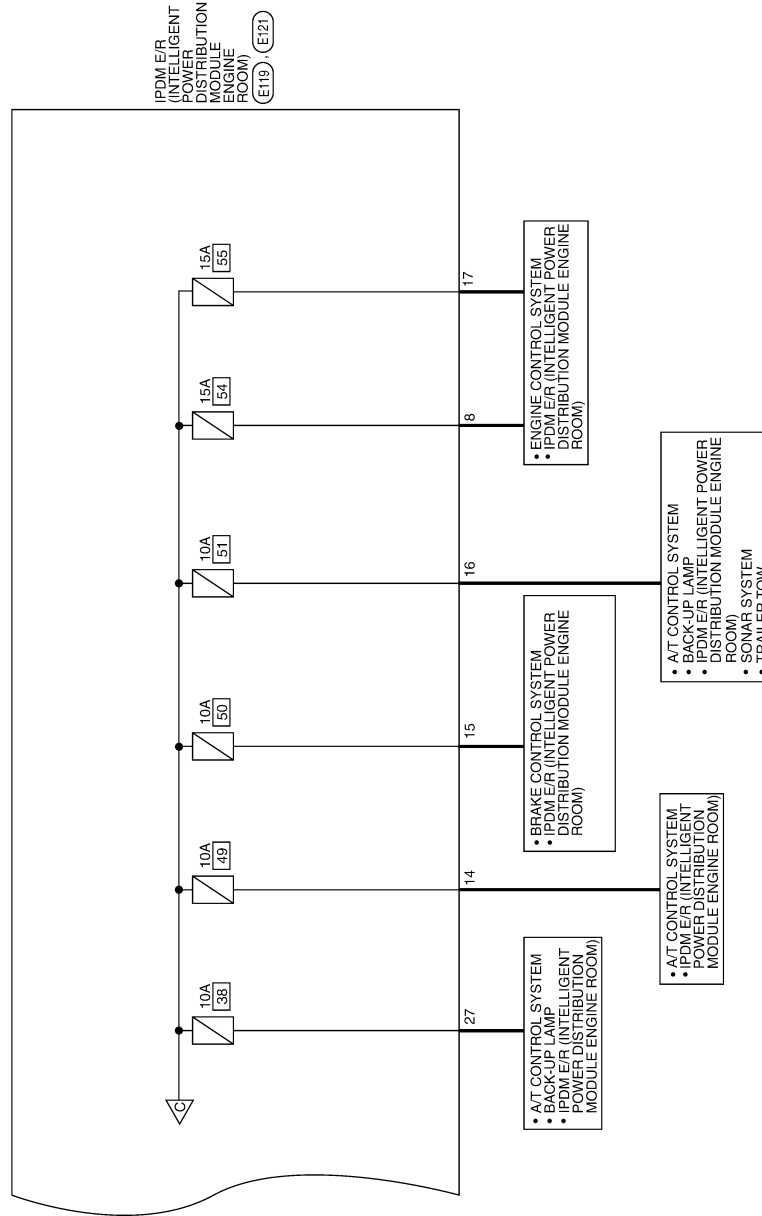


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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >



ABMWA0614GB

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
2N	R/L	-
5N	Y/G	-

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



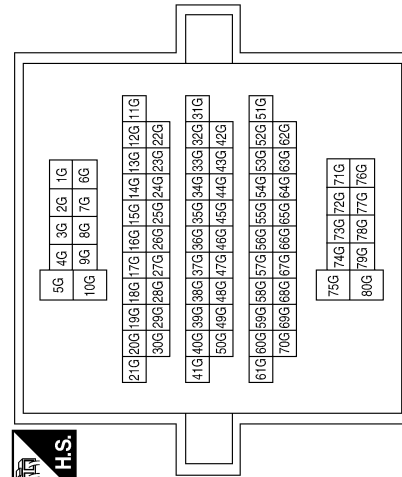
Terminal No.	Color of Wire	Signal Name
5P	O/L	-
6P	W/L	-
7P	LG	-
9P	R/B	-
14P	O	-

Connector No.	M26
Connector Name	IGNITION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
B	G	-
ST	BR	-
IG1	B/R	-
R	LG	-
IG2	R	-

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



Terminal No.	Color of Wire	Signal Name
75G	G	-
77G	B/R	-

Connector No.	M38
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK



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

ABMIA1611GB

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POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

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



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

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



Terminal No.	Color of Wire	Signal Name
4	R	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



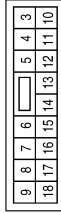
Terminal No.	Color of Wire	Signal Name
1Q	G/R	-
2Q	R	-
5Q	G	-
7Q	B/R	-

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



Terminal No.	Color of Wire	Signal Name
22	G	F/L MOTOR FAN
23	GR/W	HEATED MIRROR

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



Terminal No.	Color of Wire	Signal Name
8	R/B	O2 SENSOR
11	Y/B	A/C COMPRESSOR
12	L/W	IGN SW (IG)
13	B/Y	FUEL PUMP
14	Y/R	A/T CU IGN SUPPLY
15	LG/B	ABS IGN SUPPLY
16	G	REVERSE LAMP
17	W	INJECTOR

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	B/Y	F/L USM
2	R	F/L MAIN

ABMIA1612GB

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
59	B	GND (POWER)
60	B/W	RR DEF

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



42	41	40	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
46	GR	FUEL PUMP RLY CONT

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

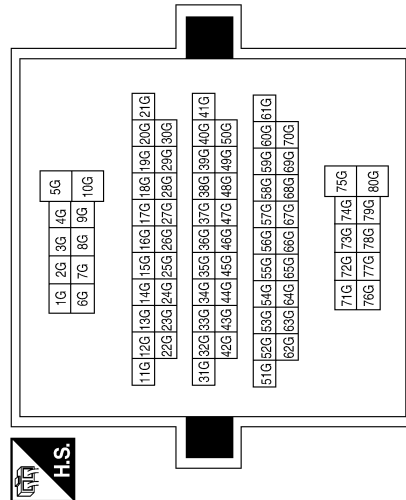


29	28	27	26	25		
36	35	34	33	32	31	30

Terminal No.	Color of Wire	Signal Name
27	W/B	TTOW REV LAMP
32	L	FR WIPER LO
35	L/B	FR WIPER HI

Terminal No.	Color of Wire	Signal Name
75G	G	-
77G	B/R	-

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



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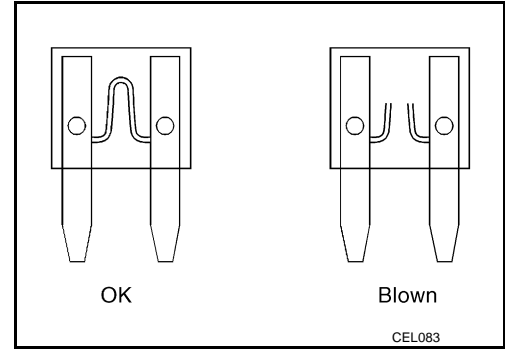
POWER SUPPLY ROUTING CIRCUIT

< COMPONENT DIAGNOSIS >

Fuse

INFOID:000000005387839

- 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

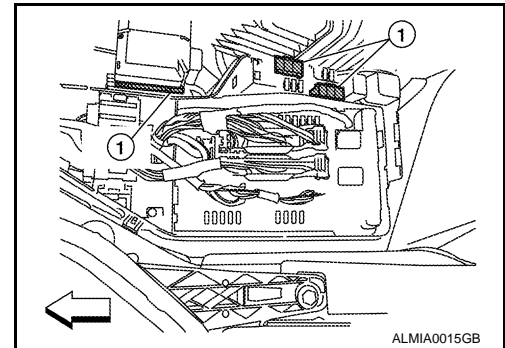
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A melted fusible link can be detected either by visual inspection or by feeling with finger tip. If its condition is questionable, use circuit tester or test lamp.

1 : Fusible link

CAUTION:

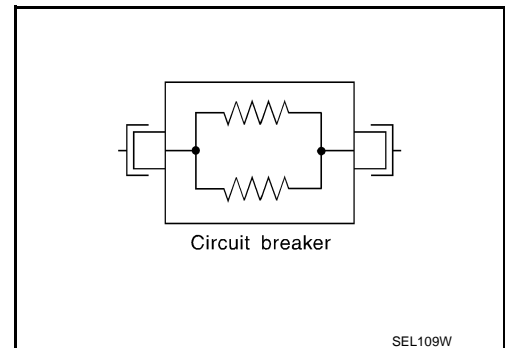
- If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of malfunction.
- Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other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



Circuit Breaker (PTC)

INFOID:000000005387841

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



GROUND

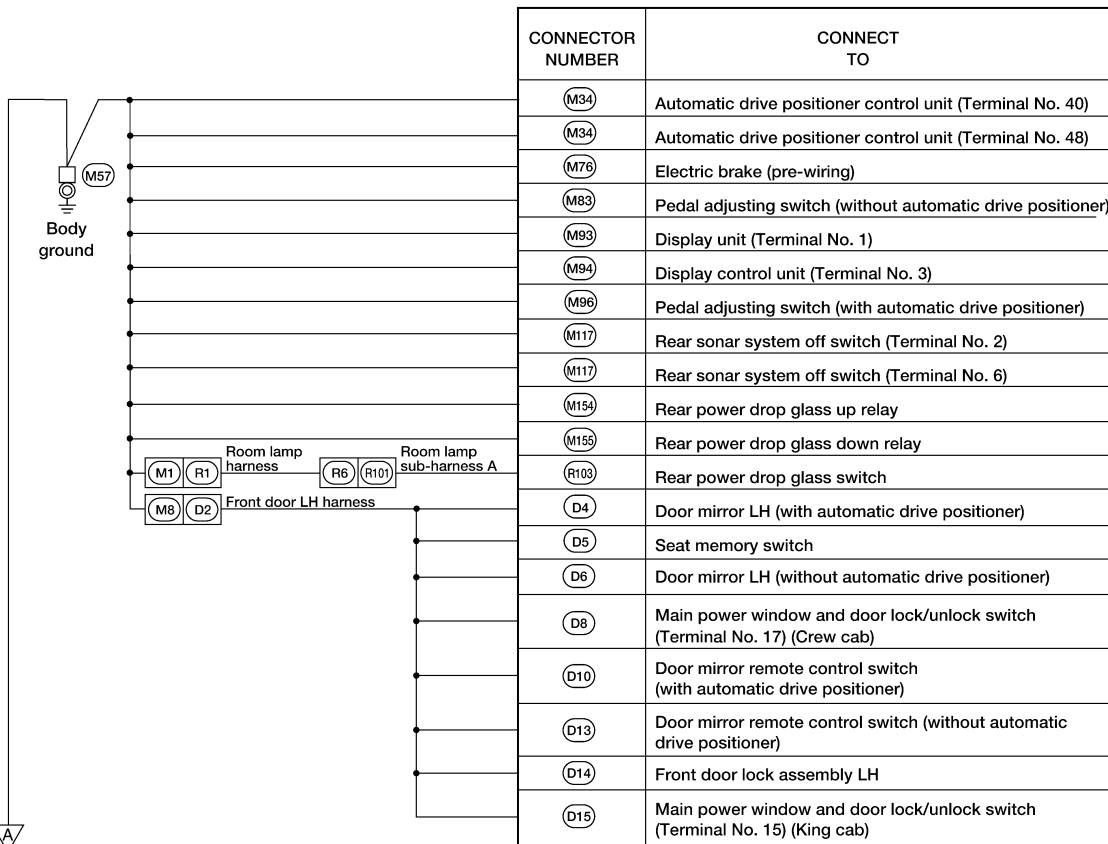
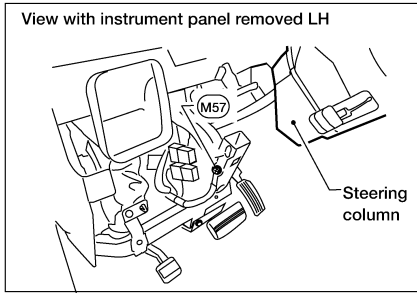
< COMPONENT DIAGNOSIS >

GROUND

Ground Distribution

INFOID:000000005387842

MAIN HARNESS



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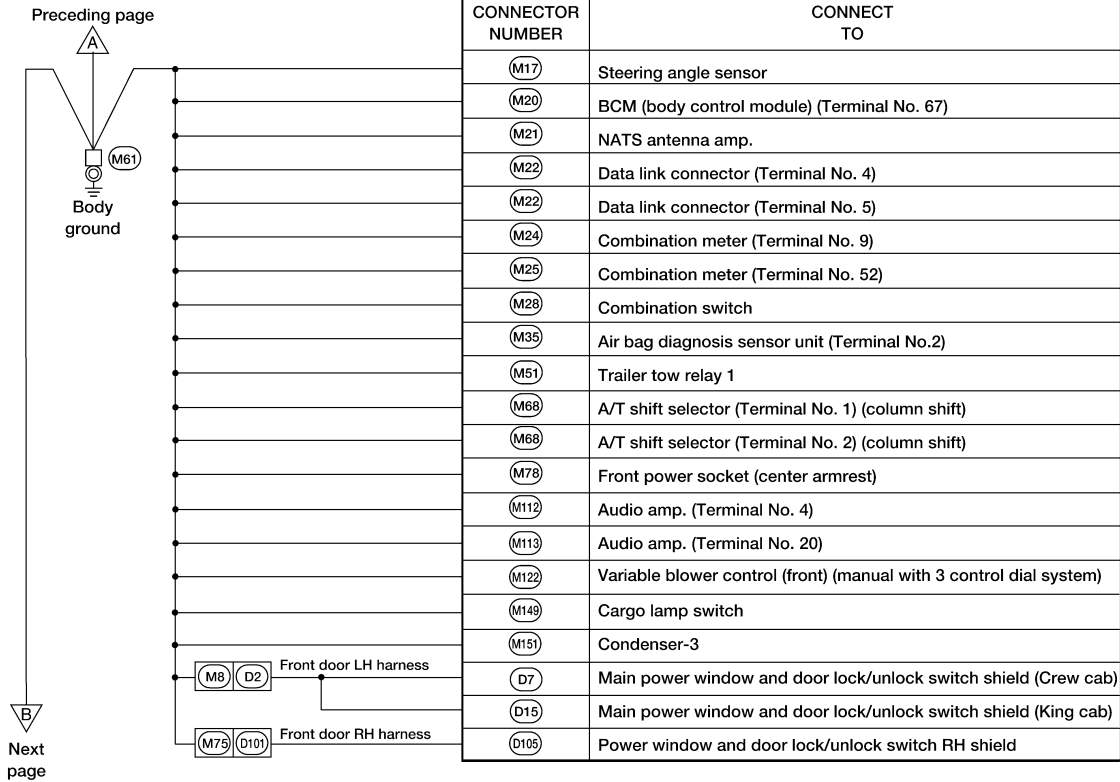
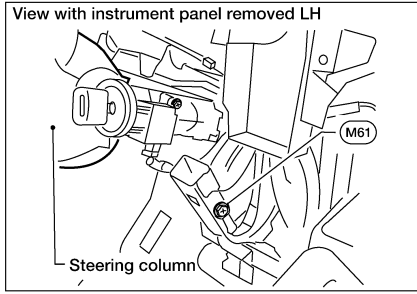
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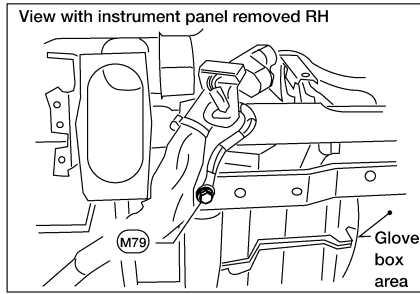
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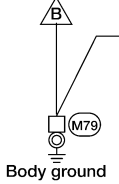
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GROUND

< COMPONENT DIAGNOSIS >



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CONNECTOR NUMBER	CONNECT TO
(M3)	Fuse block (J/B) (Terminal No. 7N)
(M13)	Front passenger air bag off indicator
(M32)	In-vehicle sensor
(M47)	Hazard switch (manual with 2 control dial system or auto A/C)
(M50)	Front air control (Terminal No. 35) (manual with 2 control dial system or auto A/C)
(M53)	Front power socket LH
(M54)	Front power socket RH
(M55)	Hazard switch (manual with 3 control dial system)
(M67)	Tow mode switch (Terminal No. 2)
(M67)	Tow mode switch (Terminal No. 6)
(M81)	Shift lock control unit (Terminal No. 8)
(M98)	AV switch
(M107)	Front blower relay
(M122)	Variable blower control (manual with 2 control dial system or auto A/C)
(M148)	VDC OFF switch
(M158)	Front heated seat switch LH
(M160)	Front heated seat switch RH
(M176)	Front air control (Terminal No. 1) (manual with 3 control dial system)
(M59) (M201)	Console sub-harness
(M203)	A/T shift selector (floor shift) (Terminal No. 2) (king cab)
(M203)	A/T shift selector (floor shift) (Terminal No. 8) (king cab)
(M204)	A/T shift selector (floor shift) (Terminal No. 2) (crew cab)
(M204)	A/T shift selector (floor shift) (Terminal No. 8) (crew cab)
(M206)	DVD player (Terminal No. 22)
(M207)	Console power socket
(M1) (R1)	Room lamp harness
(R3)	Vanity lamp LH
(R7)	Auto anti-dazzling inside mirror
(R8)	Vanity lamp RH
(R6) (R101)	Room lamp sub-harness A
(R102)	Front room/map lamp assembly
(M2) (R2)	Room lamp harness
(R4)	Sunroof motor assembly
(M79) (D101)	Front door RH harness
(D105)	Power window and door lock/unlock switch RH
(D106)	Door mirror RH (without automatic drive positioner)
(D107)	Door mirror RH (with automatic drive positioner)

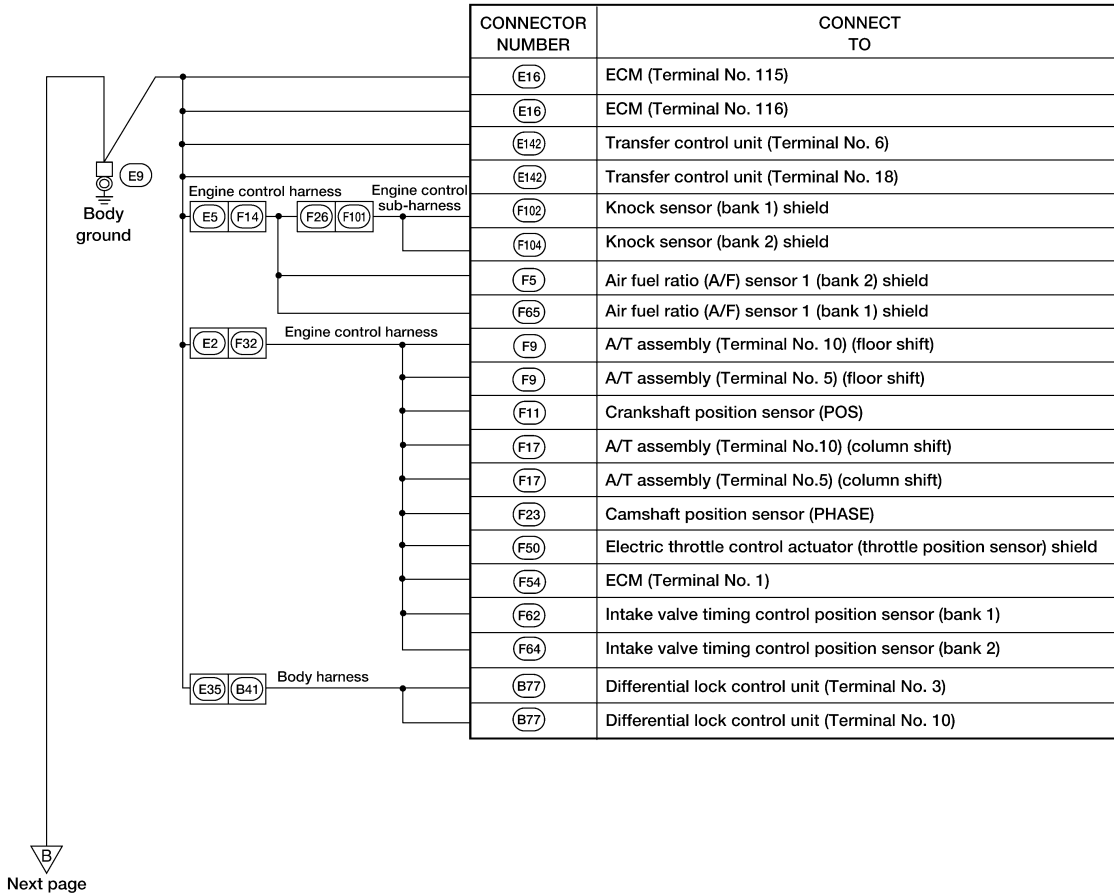
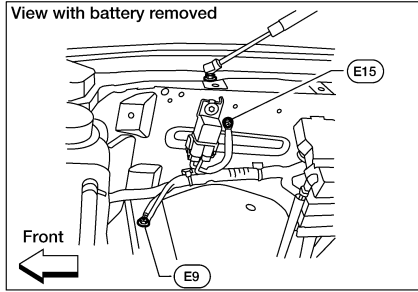
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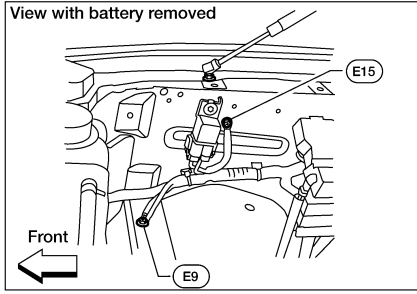
ENGINE ROOM HARNESS



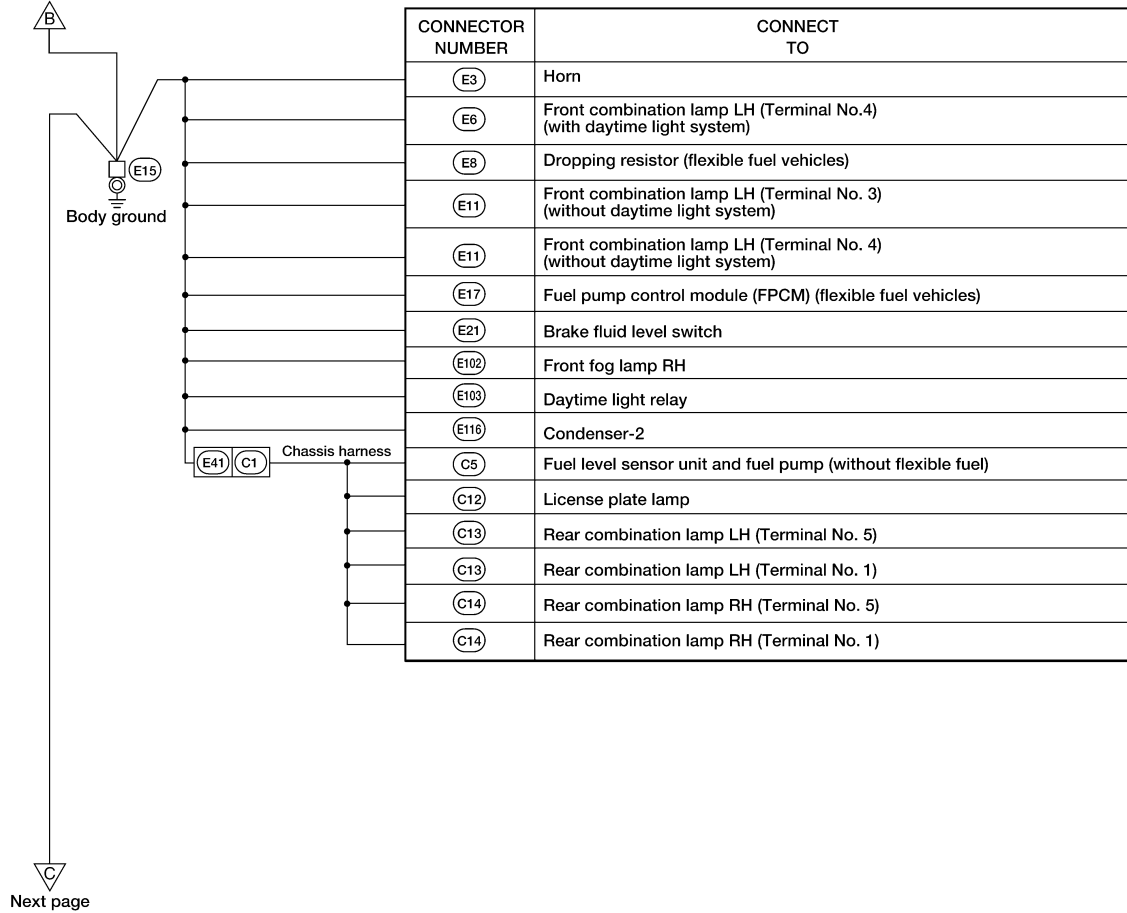
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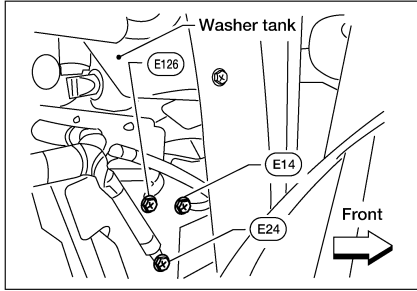


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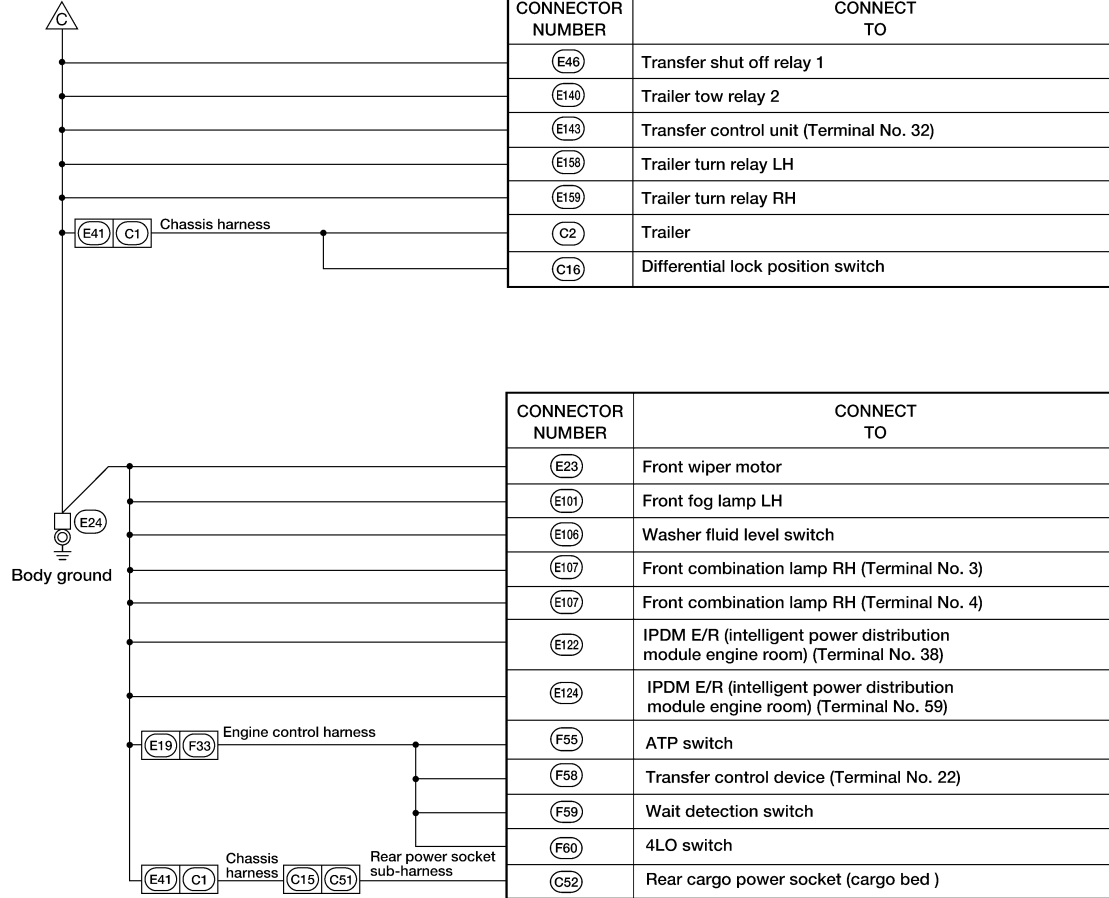
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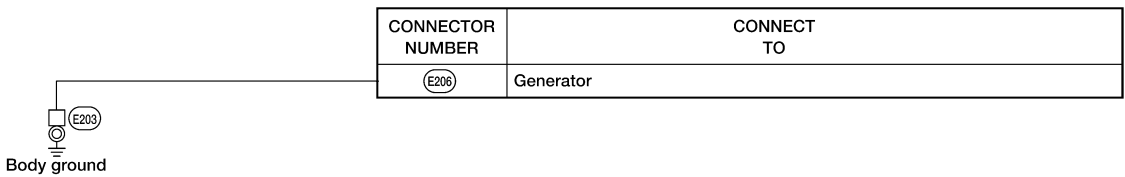
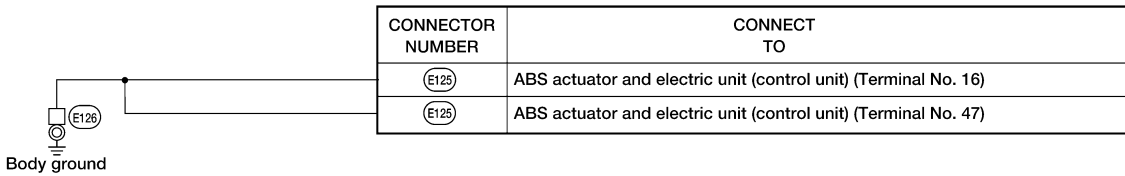
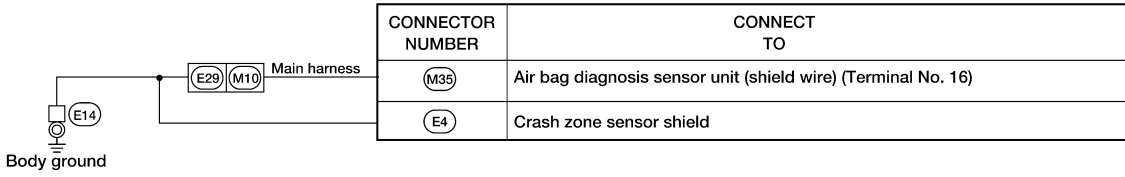
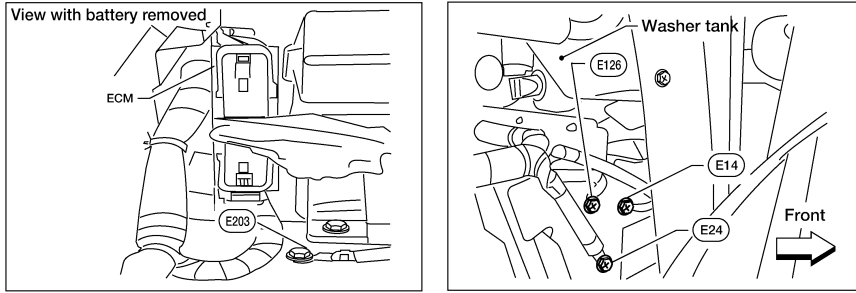
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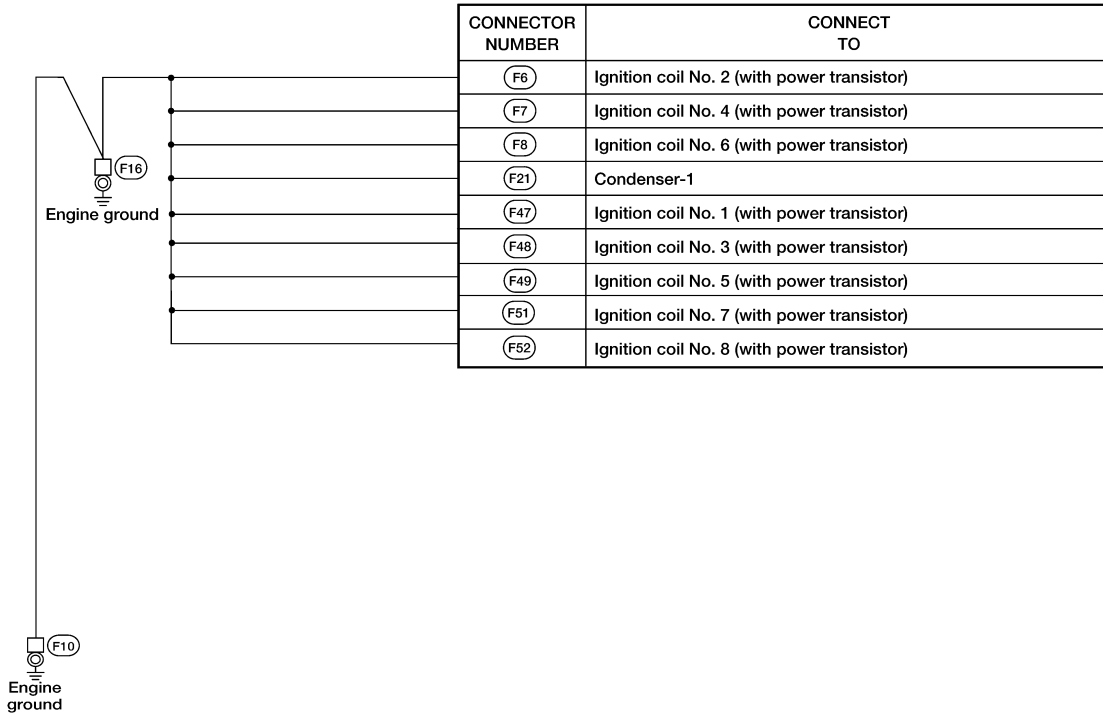
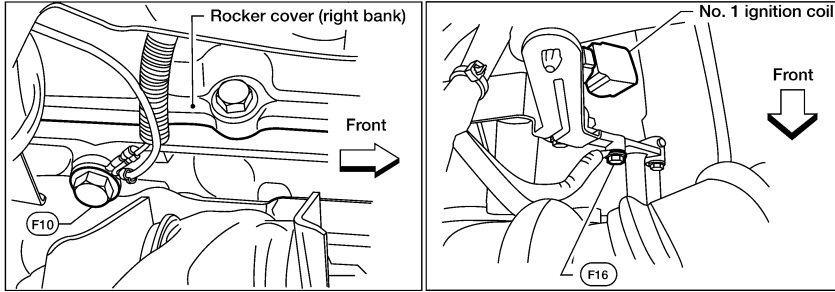
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GROUND

< COMPONENT DIAGNOSIS >

ENGINE CONTROL HARNESS

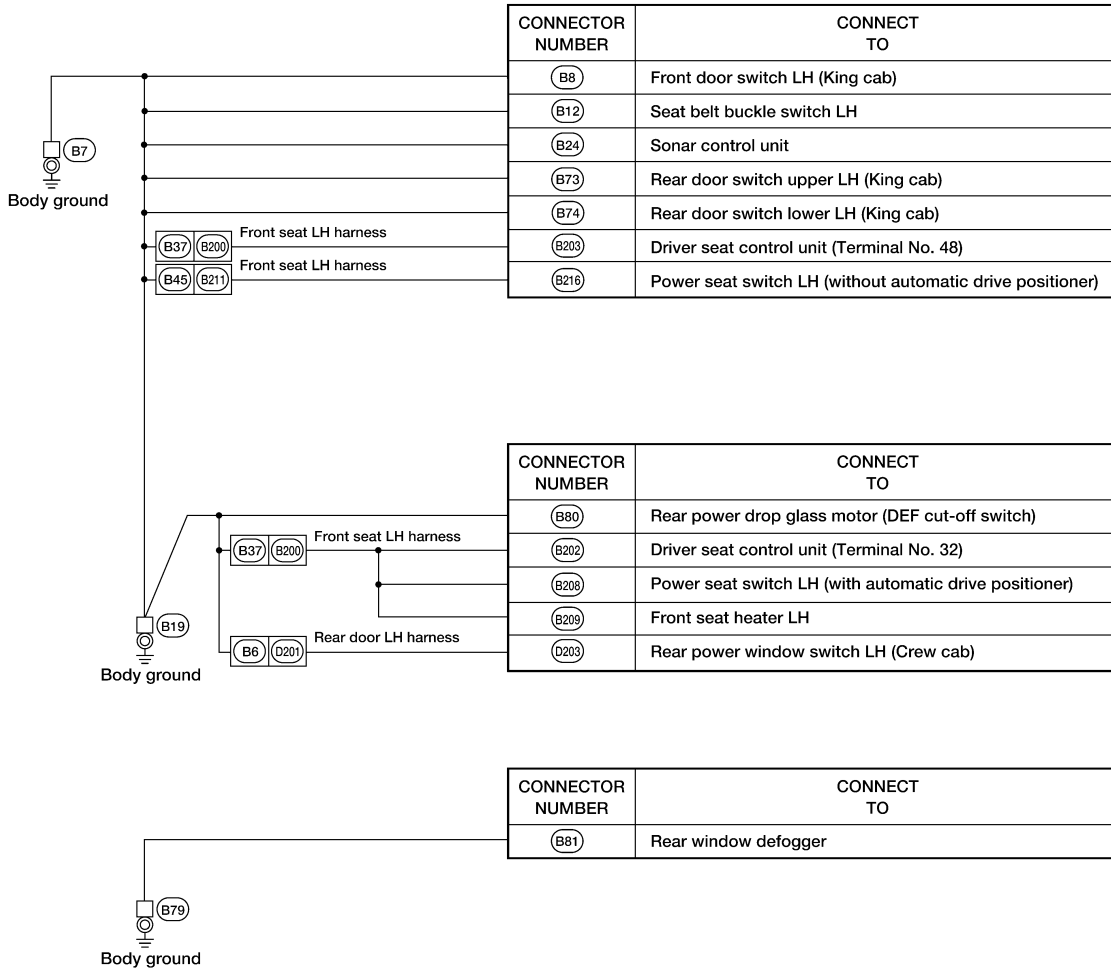
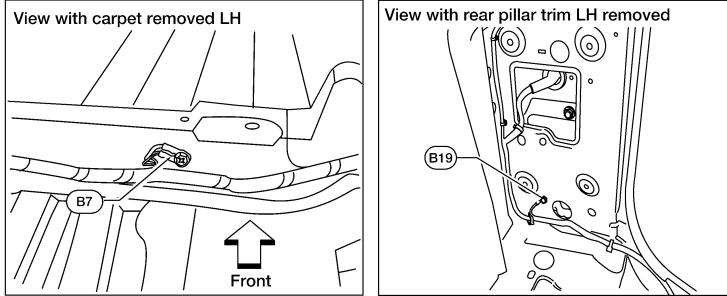


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GROUND

< COMPONENT DIAGNOSIS >

BODY HARNESS

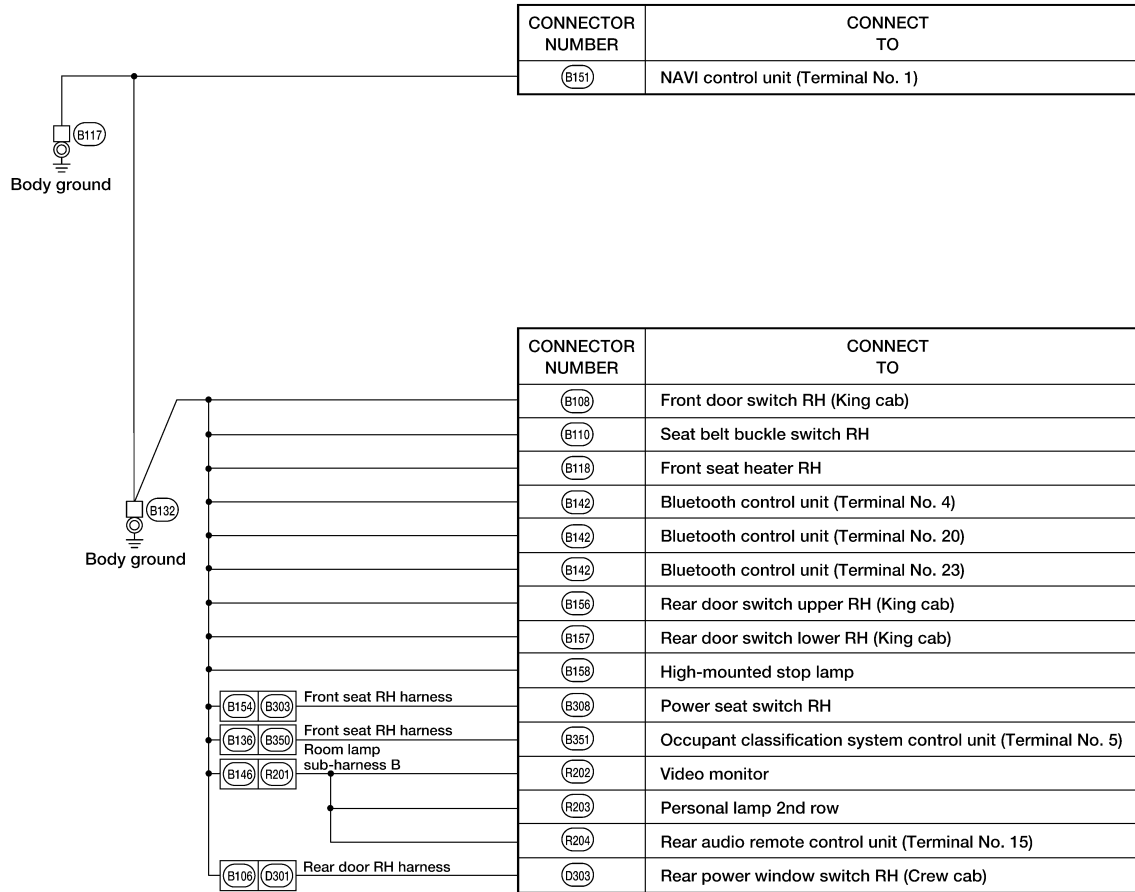
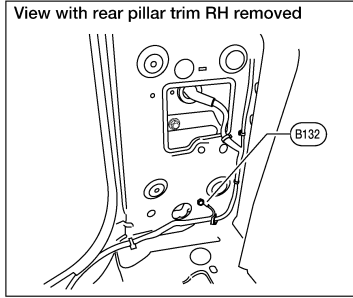
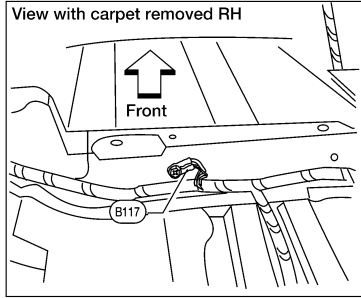


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< COMPONENT DIAGNOSIS >

BODY NO. 2 HARNESS



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HARNESS

< COMPONENT DIAGNOSIS >

HARNESS

Harness Layout

INFOID:000000005387843

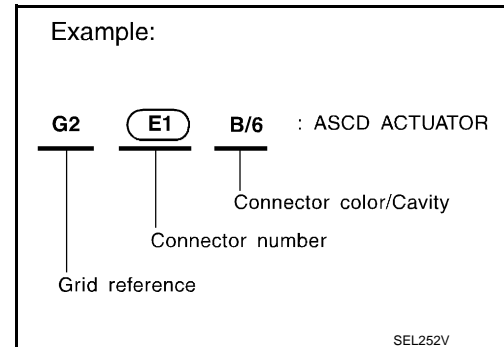
HOW TO READ HARNESS LAYOUT

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

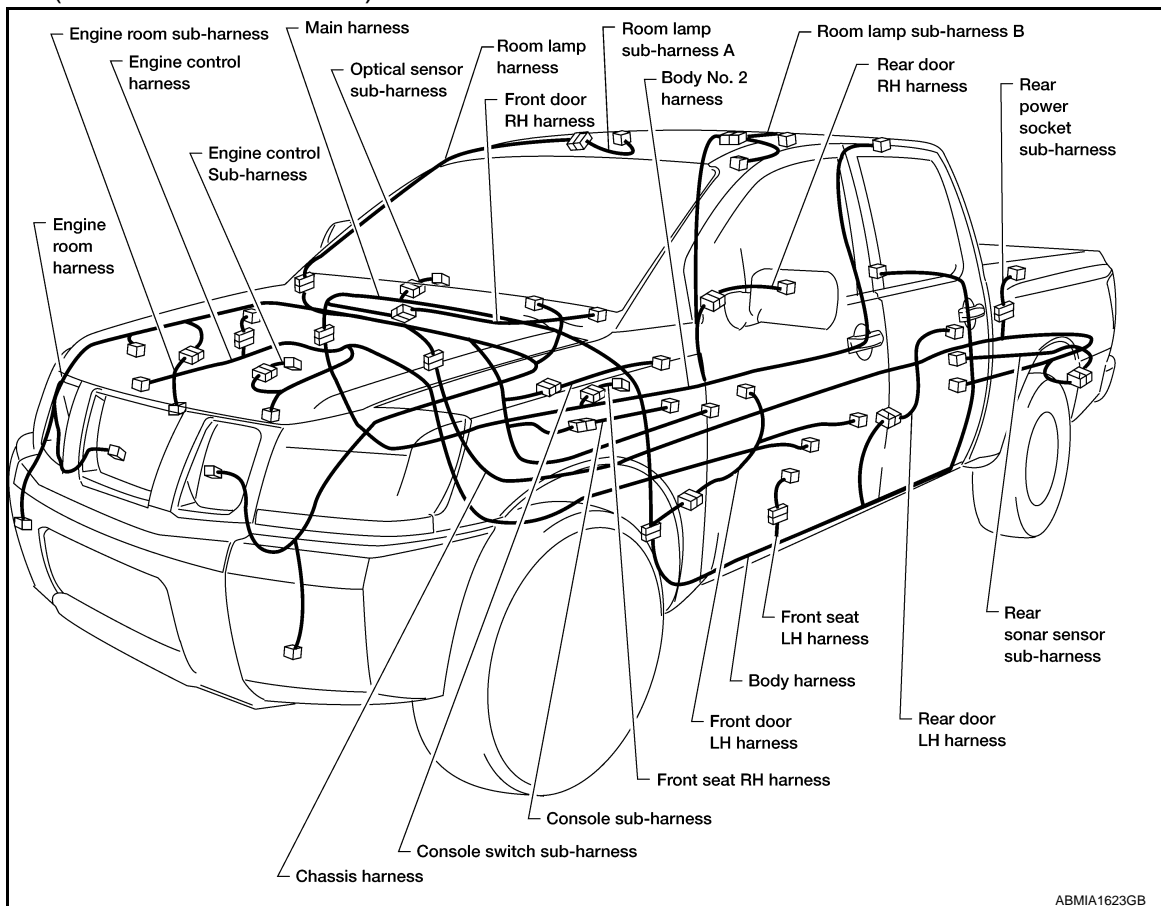
- Main Harness, Console Sub-harness, Console Switch Sub-harness and Optical Sensor Sub-harness
- Engine Room Harness and Engine Room Sub-harness
- Engine Room Harness (Passenger Compartment)
- Engine Control Harness and Knock Sensor Sub-harness
- Chassis Harness, Rear Sonar Sensor Sub-harness and Rear Power Socket Sub-harness
- Body Harness (King Cab Models) and Front Seat LH Harness
- Body Harness (Crew Cab Models) and Front Seat LH Harness
- Body No. 2 Harness (King Cab Models) and Front Seat RH Harness
- Body No. 2 Harness (Crew Cab Models) and Front Seat RH Harness
- Room Lamp Harness, Room Lamp Sub-harness A and Room Lamp Sub-harness B

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.



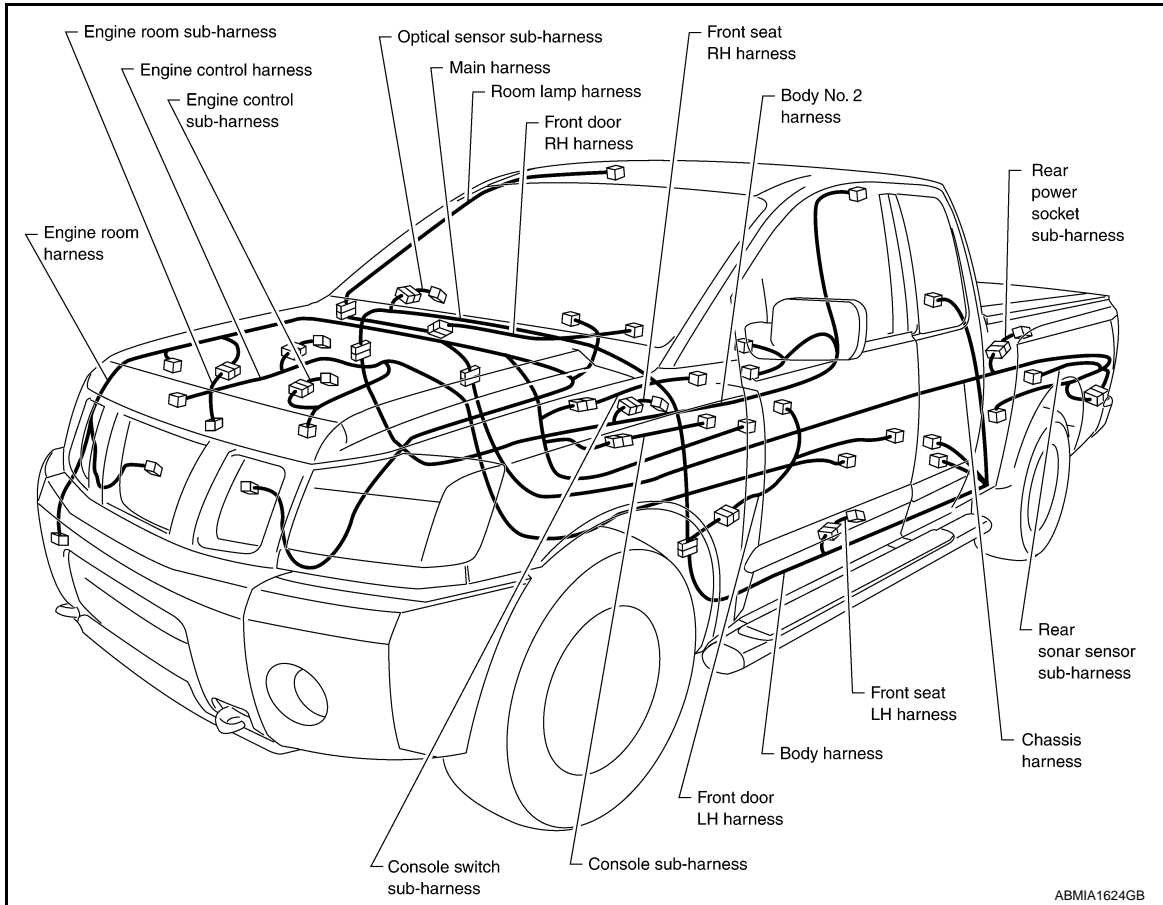
OUTLINE (CREW CAB MODELS)



HARNESS

< COMPONENT DIAGNOSIS >

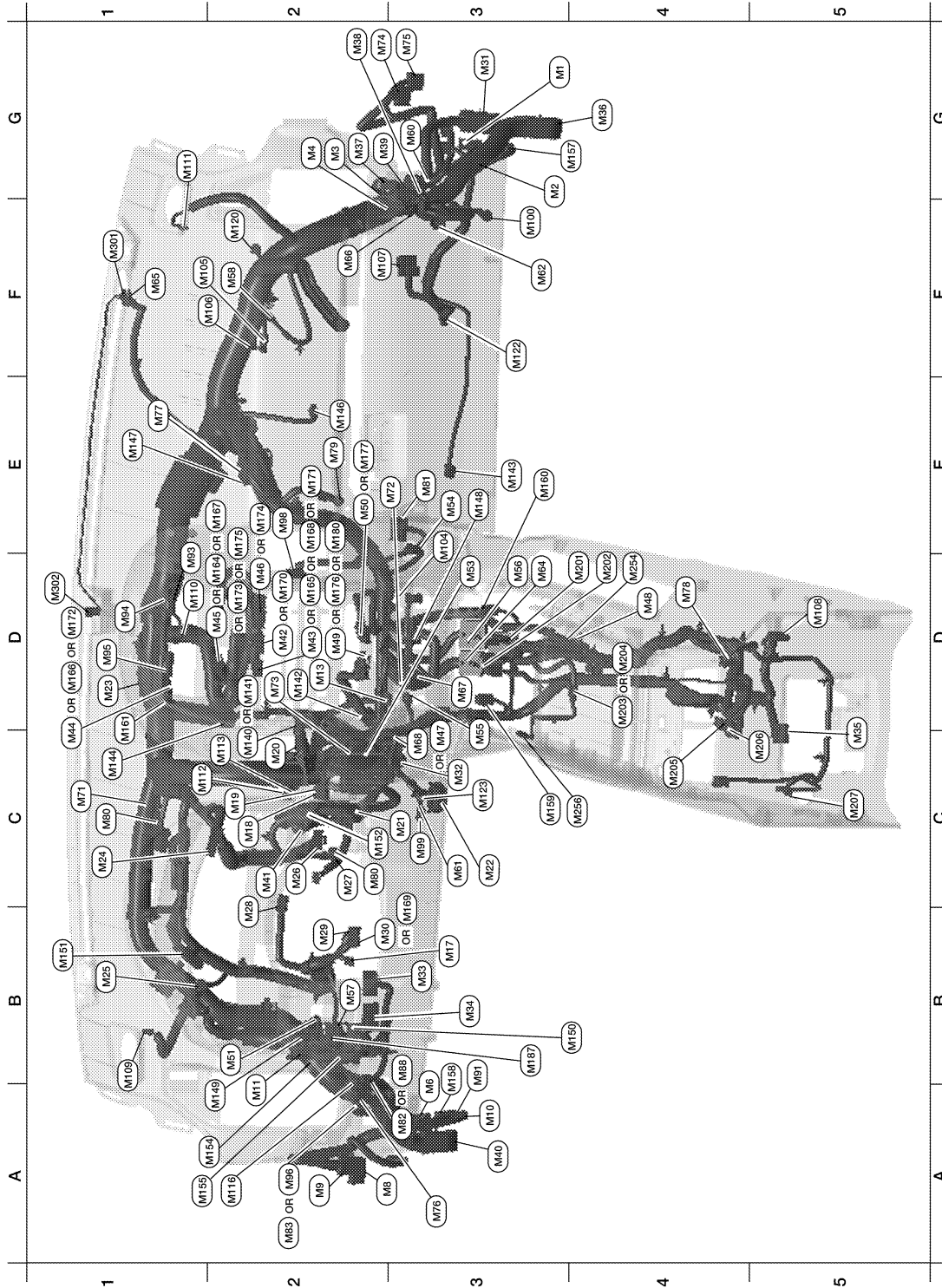
OUTLINE (KING CAB MODELS)



HARNESS

< COMPONENT DIAGNOSIS >

MAIN HARNESS



ABMIA1625GB

G3	M1	W/16	: To R1	A2	M96	BR/6	: Pedal adjusting switch (with automatic drive positioner)
G3	M2	W/12	: To R2	D2	M98	W/24	: AV switch
G2	M3	W/8	: Fuse block (J/B)	C3	M99	BR/2	: Foot lamp LH
G2	M4	W/16	: Fuse block (J/B)	F3	M100	BR/2	: Foot lamp RH

HARNESS

< COMPONENT DIAGNOSIS >

A3	M6	W/10	: To E10	B3	M91	W/16	: To E26
A3	M8	W/16	: To D2	D1	M93	W/24	: Display unit
A2	M9	BR/24	: To D1	D1	M94	W/24	: Display control unit
A3	M10	Y/4	: To E29	D1	M95	W/32	: Display control unit
A2	M11	B/1	: Parking brake switch	E3	M104	W/4	: Aux jack
D2	M13	BR/2	: Front passenger air bag OFF indicator	F1	M105	Y/2	: Front passenger air bag module
B3	M17	W/8	: Steering angle sensor	F1	M106	O/2	: Front passenger air bag module
C2	M18	W/40	: BCM (body control module)	F3	M107	B/5	: Front blower relay
C2	M19	W/15	: BCM (body control module)	D5	M108	B/6	: Yaw rate/ side/ decel G sensor
C2	M20	B/15	: BCM (body control module)	B1	M109	BR/2	: Front tweeter LH
C3	M21	W/4	: NATS antenna amp.	D1	M110	BR/2	: Center speaker
C3	M22	W/16	: Data link connector	G1	M111	BR/2	: Front tweeter RH
D1	M23	W/2	: Diode-1	C1	M112	W/8	: Audio amp.
C1	M24	W/40	: Combination meter	C2	M113	W/24	: Audio amp.
B1	M25	W/12	: Combination meter	A2	M116	B/2	: Rear sonar buzzer
C2	M26	W/6	: Ignition switch	B1	M117	GR/8	: Rear sonar system OFF switch
C2	M27	W/4	: Key switch and key lock solenoid	F2	M120	W/4	: Remote keyless entry receiver
B2	M28	W/16	: Combination switch	F3	M122	W/4	: Variable blower control
B2	M29	Y/6	: Combination switch	C3	M123	W/2	: Tire pressure warning check connector
B3	M30	GR/8	: Combination switch (with BLUETOOTH)	C2	M140	GR/8	: 4WD shift switch (2 control dial system or auto A/C)
G3	M31	SMJ	: To E152	C2	M141	W/8	: 4WD shift switch (3 control dial system without auto A/C)
C3	M32	W/4	: In-vehicle sensor	D2	M142	B/6	: Mode door motor
B3	M33	W/32	: Automatic drive positioner control unit	E3	M143	B/6	: Air mix door motor (passenger)
B3	M34	W/16	: Automatic drive positioner control unit	C1	M144	B/6	: Defroster door motor
C5	M35	Y/28	: Air bag diagnosis sensor unit	E2	M146	GR/2	: Intake sensor
G4	M36	SMJ	: To B149	E1	M147	B/6	: Air mix door motor (driver)
G2	M37	B/1	: Fuse block (J/B)	E3	M148	GR/6	: VDC OFF switch
G2	M38	B/2	: Fuse block (J/B)	A1	M149	W/6	: Cargo lamp switch
G2	M39	W/8	: Fuse block (J/B)	B3	M150	L/4	: Cargo lamp relay
A3	M40	SMJ	: To B69	B1	M151	W/2	: Condenser-3
C2	M41	W/16	: Satellite radio tuner or pre-wiring for satellite radio tuner	C2	M152	W/2	: Ignition keyhole illumination
D2	M42	W/12	: Audio unit (with premium audio system with NAVI)	A1	M154	B/5	: Rear power drop glass up relay
D2	M43	W/10	: Audio unit (with premium audio system with NAVI)	A1	M155	B/5	: Rear power drop glass down relay
D1	M44	W/6	: Audio unit (with premium audio system with NAVI)	G3	M157	W/20	: To B161
D1	M45	W/16	: Audio unit (with premium audio system- with NAVI) (crew cab)	B3	M158	W/10	: To D3
D2	M46	W/20	: Audio unit (with premium audio system with NAVI)	C3	M159	W/6	: Front heated seat switch LH
D3	M47	W/4	: Hazard switch (2 control dial system or auto A/C)	E3	M160	BR/6	: Front heated seat switch RH
D4	M48	BR/2	: To M254	C1	M161	W/2	: Diode-3
D2	M49	B/26	: Front air control (with automatic temperature control)	D2	M164	W/16	: Audio unit (with premium audio system with NAVI) (king cab)

HARNESS

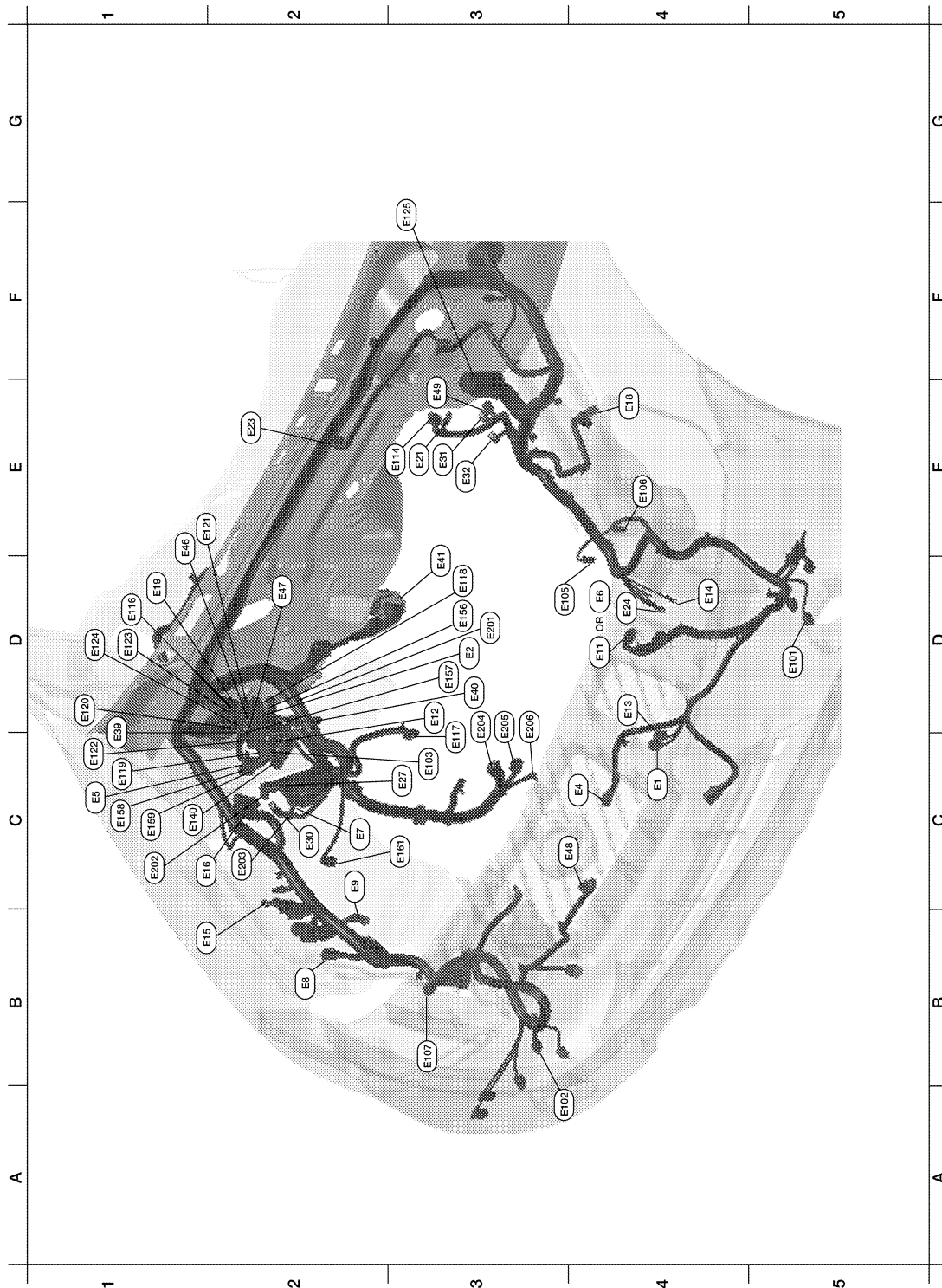
< COMPONENT DIAGNOSIS >

D2	M50	L/18	: Front air control (2 control dial system or auto A/C)	D2	M165	W/10	: Audio unit (with mid audio system)	A	
B2	M51	L/4	: Trailer tow relay 1	D1	M166	W/6	: Audio unit (with mid audio system)	B	
D3	M53	B/3	: Front power socket LH	D2	M167	W/16	: Audio unit (with mid audio system)	B	
E3	M54	B/3	: Front power socket RH	D2	M168	W/20	: Audio unit (with base audio system)	C	
C3	M55	W/8	: Hazard switch (3 control dial system without auto A/C)	B3	M169	GR/8	: Audio unit (with premium audio system without NAVI)	C	
D3	M56	W/16	: To M201	D2	M170	W/12	: Audio unit (with premium audio system without NAVI)	D	
B2	M57	—	: Body ground	E2	M171	W/10	: Audio unit (with premium audio system without NAVI)	D	
F2	M58	B/6	: Intake door motor	D1	M172	W/6	: Audio unit (with premium audio system without NAVI)	E	
G3	M60	W/6	: Fuse block (J/B)	D2	M173	W/16	: Audio unit (with premium audio system without NAVI) (crew cab)	E	
C3	M61	—	: Body ground	E2	M174	W/20	: Audio unit (with premium audio system without NAVI)	F	
F3	M62	B/2	: Front blower motor	E2	M175	W/16	: Audio unit (with premium audio system without NAVI) (king cab)	F	
D3	M64	BR/24	: To M202	D2	M176	B/26	: Front air control (manual 3 control dial system)	G	
F1	M65	W/4	: To M301	D2	M177	L/18	: Front air control (manual 3 control dial system)	H	
F2	M66	B/1	: To E33	E2	M180	B/26	: Front air control (manual 2 control dial system)	H	
C3	M67	GR/8	: Tow mode switch	B3	M187	L/4	: Rear window defogger cut-off relay	I	
C3	M68	W/8	: A/T shift selector (column shift)	Console sub-harness					
	M71	B/2	: Resistor	D4	M201	W/16	: To M56	J	
E2	M72	W/6	: Differential lock mode switch	D4	M202	BR/24	: To M64	J	
D2	M73	BR/6	: Back-up lamp relay	D4	M203	W/12	: A/T selector (floor shift) (king cab)	K	
G2	M74	BR/20	: To D102		M204	W/12	: Shift selector (floor shift) (crew cab)	K	
G3	M75	W/10	: To D101	G4	M205	GR/16	: DVD player	L	
A3	M76	W/6	: Electric brake (pre-wiring)	C5	M206	L/16	: DVD player	L	
E1	M77	Y/4	: Front passenger air bag module (service replacement)	C5	M207	B/3	: Console power socket		
D4	M78	W/2	: Front power socket (center arm rest)	Console switch sub-harness					PG
E2	M79	—	: Body ground	D4	M254	BR/2	: To M48		
C2	M80	W/2	: Key switch	C4	M256	B/2	: A/T shift selector (floor shift)		
E3	M81	GR/10	: Shift lock control unit	Optical sensor sub-harness					N
A3	M82	W/2	: Circuit breaker-2 (with power seats)	F1	M301	W/4	: To M65		
A2	M83	BR/6	: Pedal adjusting switch (without automatic drive positioner)	D1	M302	B/4	: Optical sensor	O	
B3	M88	W/2	: Circuit breaker-2 (without power seats)					P	

HARNESS

< COMPONENT DIAGNOSIS >

ENGINE ROOM HARNESS



ABMIA1626GB

C4	E1	GR/2	: Ambient sensor	D5	E101	B/2	: Front fog lamp LH
D3	E2	W/16	: To F32	A3	E102	B/2	: Front fog lamp RH
C3	E3	B/2	: Horn	C3	E103	B/5	: Daytime light relay
C4	E4	Y/2	: Crash zone sensor	D4	E105	BR/2	: Front washer motor
C1	E5	W/24	: To F14	E4	E106	BR/2	: Washer fluid level switch

HARNES

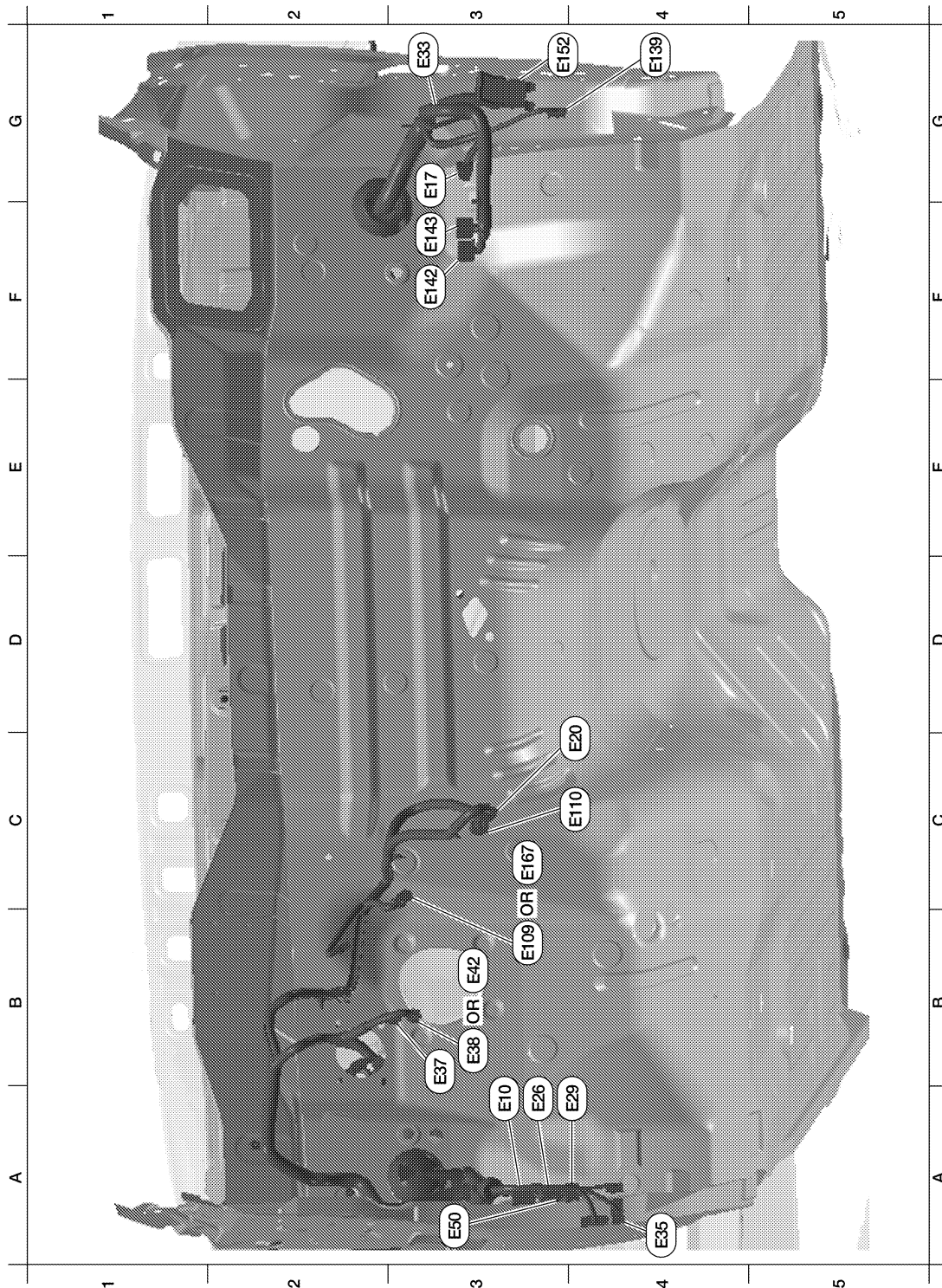
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D4	E6	B/6	: Front combination lamp LH (with daytime light system)	B3	E107	B/6	: Front combination lamp RH	A
C2	E7	GR/2	: Fusible link box (battery)	E3	E114	B/6	: Delta stroke motor	
B2	E8	GR/2	: Dropping resistor	D1	E116	W/2	: Condenser-2	B
C2	E9	—	: Body ground	D3	E117	GR/2	: Front wheel sensor RH	
D4	E11	B/6	: Front combination lamp LH (without daytime light system)	D3	E118	B/2	: IPDM E/R (intelligent power distribution module engine room)	C
D3	E12	B/5	: Stop lamp relay	C1	E119	W/16	: IPDM E/R (intelligent power distribution module engine room)	
D4	E14	—	: Body ground	D1	E120	W/6	: IPDM E/R (intelligent power distribution module engine room)	D
B1	E15	—	: Body ground	E1	E121	BR/12	: IPDM E/R (intelligent power distribution module engine room)	E
C1	E16	B/40	: ECM	C1	E122	W/12	: IPDM E/R (intelligent power distribution module engine room)	
E4	E18	GR/2	: Front wheel sensor LH	D1	E123	BR/8	: IPDM E/R (intelligent power distribution module engine room)	F
D1	E19	W/16	: To F33	D1	E124	B/6	: IPDM E/R (intelligent power distribution module engine room)	G
E3	E21	GR/2	: Brake fluid level switch	F3	E125	B/47	: ABS actuator and electric unit (control unit)	H
E2	E23	GR/6	: Front wiper motor	C1	E140	BR/6	: Trailer tow relay-2	
D4	E24	—	: Body ground	D3	E156	B/5	: Transfer shift high relay	I
C3	E27	BR/2	: Fusible link box (battery)	D3	E157	B/5	: Transfer shift low relay	
C2	E30	/1	: Fusible link box (battery)	C1	E158	L/4	: Trailer tow relay LH	J
E3	E31	GR/3	: Front pressure sensor	C1	E159	L/4	: Trailer tow relay RH	
E3	E32	GR/3	: Rear pressure sensor	C3	E161	B/3	: Battery current sensor	K
D1	E39	W/2	: To F34	Engine room sub-harness				
D3	E40	B/3	: To E201	D3	E201	B/3	: To E40	L
D3	E41	SMJ	: To C1	C1	E202	/1	: Fusible link box (battery)	
E1	E46	L/4	: Transfer SHUT OFF relay 1	C2	E203	—	: Body ground	M
D2	E47	L/4	: Transfer SHUT OFF relay 2	D3	E204	/1	: Generator	
C4	E48	B/3	: Refrigerant pressure sensor	D3	E205	B/3	: Generator	N
E3	E49	B/6	: Active booster	D3	E206	/1	: Generator	O
								PG

HARNESS

< COMPONENT DIAGNOSIS >

ENGINE ROOM HARNESS (PASSENGER COMPARTMENT)



ABMIA1627GB

A3	E10	W/10	: To M6			
G3	E17	W/4	: Fuel pump control module (FPCM)			
C4	E20	B/8	: Accelerator pedal position (APP) sensor			
A3	E26	W/16	: To M91			
A3	E29	Y/4	: To M10			

HARNES

< COMPONENT DIAGNOSIS >

G3	E33	B/1	: To M66				
A4	E35	W/12	: To B41				
B3	E37	BR/2	: ASCD brake switch				
B3	E38	W/4	: Stop lamp switch (column shift)				
B3	E42	B/2	: Stop lamp switch (floor shift)				
A3	E50	BR/2	: To B75				
B3	E109	GR/2	: Pedal adjusting motor assembly				
C4	E110	GR/3	: Pedal adjusting motor assembly				
G4	E139	W/8	: To B107				
F3	E142	W/26	: Transfer control unit				
F3	E143	W/24	: Transfer control unit				
G3	E152	SMJ	: To M31				
C3	E167	GR/2	: Pedal adjusting motor				

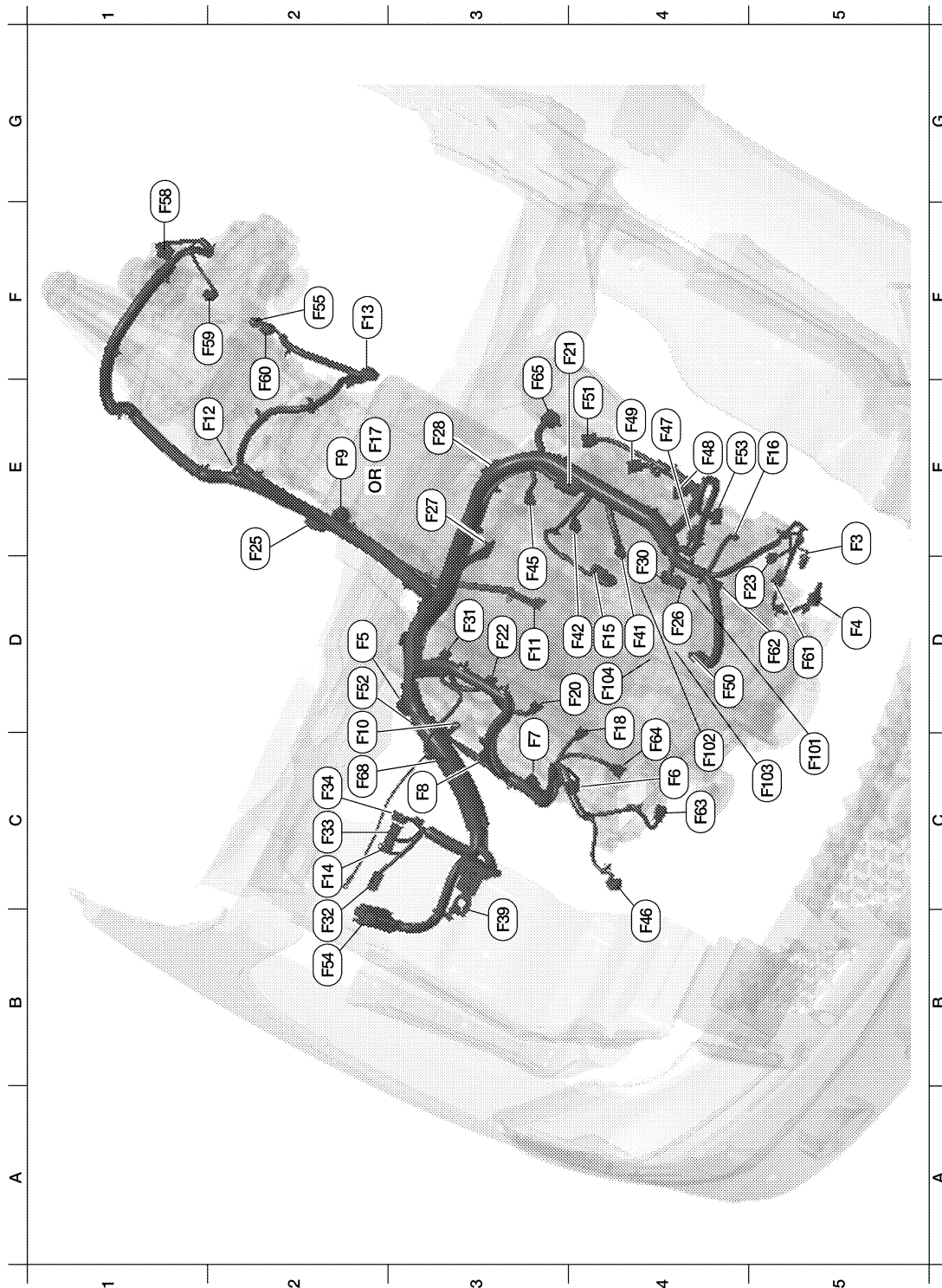
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< COMPONENT DIAGNOSIS > ENGINE CONTROL HARNESS



ABMIA0120GB

E5	F3	B/1	: A/C Compressor	F1	F58	B/8	: Transfer control device
D5	F4	GR/1	: Oil pressure switch	F2	F59	GR/2	: Wait detection switch
D2	F5	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 2)	F2	F60	GR/2	: 4LO switch
C4	F6	GR/3	: Ignition coil No. 2 (with power transistor)	D5	F61	G/2	: Intake valve timing control solenoid valve (bank 1)

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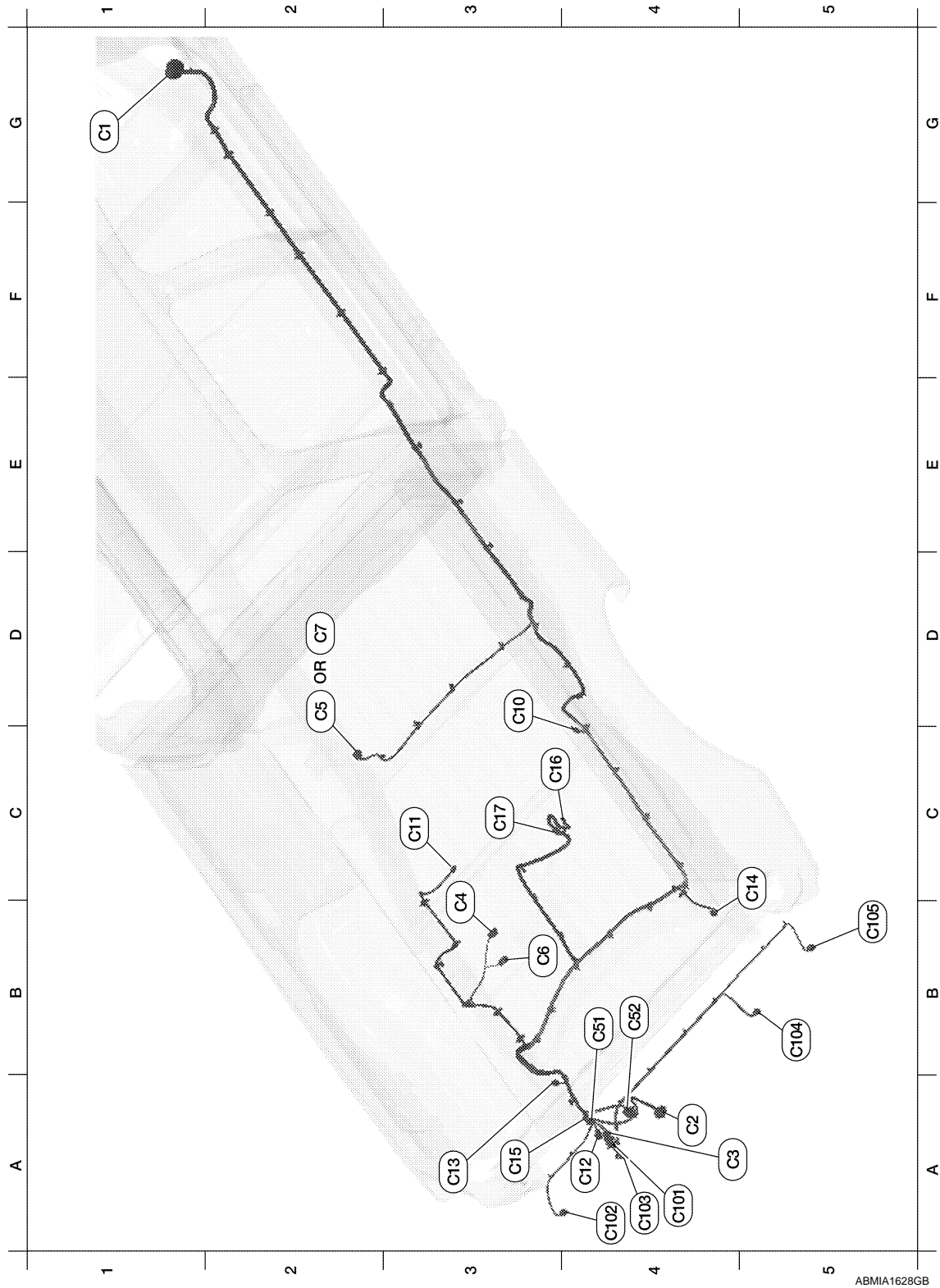
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C3	F7	GR/3	: Ignition coil No. 4 (with power transistor)	D4	F62	B/2	: Intake valve timing control position sensor (bank 1)	A
C3	F8	GR/3	: Ignition coil No. 6 (with power transistor)	C4	F63	G/2	: Intake valve timing control solenoid valve (bank 2)	B
E2	F9	G/10	: A/T assembly (floor shift)	C4	F64	B/3	: Intake valve timing control position sensor (bank 2)	B
C2	F10	—	: Engine ground	F3	F65	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 1)	C
D3	F11	B/3	: Crankshaft position sensor (POS)	C2	F68	GR/2	: Water valve	C
E1	F12	G/4	: Heated oxygen sensor 2 (bank 2)	Engine control sub-harness				
F2	F13	G/4	: Heated oxygen sensor 2 (bank 1)	C5	F101	B/6	: To F26	D
C2	F14	W/24	: To E5	C4	F102	B/2	: Knock sensor (bank 1)	D
D4	F15	GR/2	: EVAP canister purge volume control solenoid valve	C5	F103	GR/2	: Engine coolant temperature sensor	E
E5	F16	—	: Engine ground	D4	F104	B/2	: Knock sensor (bank 2)	E
E2	F17	G/10	: A/T assembly (column shift)					F
C4	F18	GR/2	: Fuel injector No. 2					F
D4	F20	GR/2	: Fuel injector No. 4					G
F4	F21	GR/2	: Condenser-1					G
D3	F22	GR/2	: Fuel injector No. 6					H
D4	F23	B/3	: Camshaft position sensor (phase)					H
D2	F25	W/2	: Diode-2					I
D4	F26	B/6	: To F101					I
E3	F27	B/1	: Starter motor					J
E3	F28	GR/1	: Starter motor					J
D4	F30	GR/2	: Fuel injector No. 1					K
D3	F31	GR/2	: Fuel injector No. 8					K
B2	F32	W/16	: To E2					L
C2	F33	W/16	: To E19					L
C2	F34	W/2	: To E39					M
B3	F39	—	: Fusible link (battery)					N
D4	F41	GR/2	: Fuel injector No. 3					N
D4	F42	GR/2	: Fuel injector No. 5					O
D3	F45	GR/2	: Fuel injector No. 7					O
B4	F46	B/3	: Power steering pressure sensor					P
E4	F47	GR/3	: Ignition coil No. 1 (with power transistor)					P
E4	F48	GR/3	: Ignition coil No. 3 (with power transistor)					Q
E4	F49	GR/3	: Ignition coil No. 5 (with power transistor)					Q
D4	F50	B/6	: Electric throttle control actuator					R
E4	F51	GR/3	: Ignition coil No. 7 (with power transistor)					R
D2	F52	GR/3	: Ignition coil No. 8 (with power transistor)					S
E5	F53	B/6	: Mass air flow sensor					S
B2	F54	B/81	: ECM					T
F2	F55	B/2	: ATP switch					T

HARNESS

< COMPONENT DIAGNOSIS >

CHASIS HARNESS



G1	C1	SMJ	: To E41				
A4	C2	B/7	: Trailer				
A4	C3	GR/6	: To C101				
C3	C4	GR/3	: Evap control system pressure sensor				

HARNESS

< COMPONENT DIAGNOSIS >

D2	C5	GR/5	: Fuel level sensor unit and fuel pump (without flexible fuel)					A
B3	C6	B/2	: Evap canister vent control valve					
D2	C7	GR/5	: Fuel level sensor unit and fuel pump (with flexible fuel)					B
D3	C10	GR/2	: Rear wheel sensor RH					
C3	C11	BR/2	: Rear wheel sensor LH					C
A4	C12	W/2	: License plate lamps					
A3	C13	GR/8	: Rear combination lamp LH					
C5	C14	GR/8	: Rear combination lamp RH					D
A3	C15	GR/2	: To C51					
C3	C16	GR/2	: Differential lock position switch					E
C3	C17	B/2	: Differential lock solenoid					
Rear power socket sub-harness								
B4	C51	GR/2	: To C15					F
B4	C52	BR/7	: Rear cargo power socket (cargo bed)					
Rear sonar sensor sub-harness								G
A4	C101	GR/6	: To C3					
A4	C102	B/3	: Rear sonar sensor LH outer					H
A4	C103	B/3	: Rear sonar sensor LH inner					
B5	C104	B/3	: Rear sonar sensor RH inner					
B5	C105	B/3	: Rear sonar sensor RH outer					I

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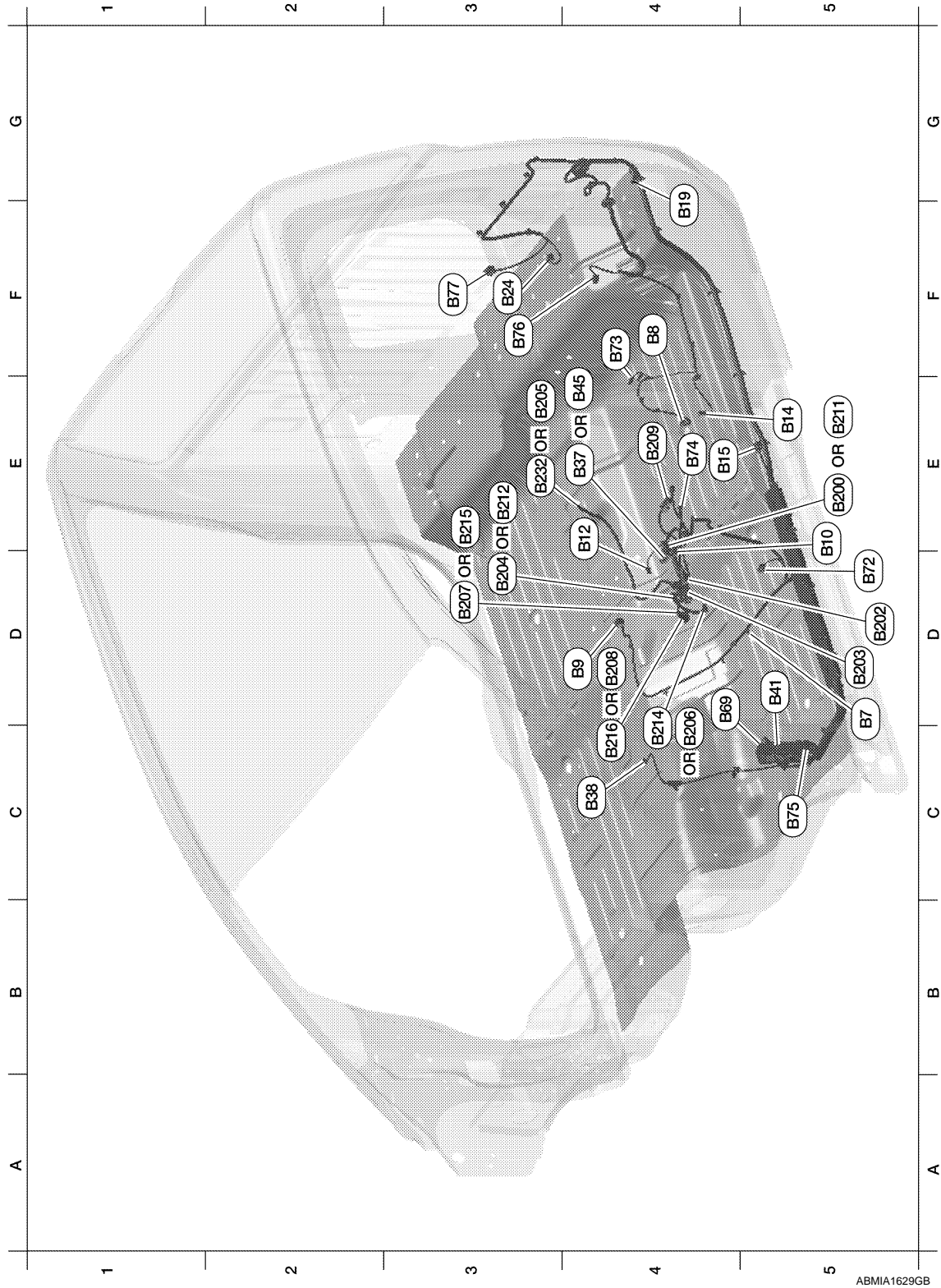
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HARNESS

< COMPONENT DIAGNOSIS >

BODY HARNESS (KING CAB MODELS)



D5	B7	—	: Body ground	F3	B77	W/26	: Differential lock control unit
F4	B8	W/3	: Front door switch LH	Front seat LH harness			
D4	B9	Y/12	: Air bag diagnosis sensor unit	E5	B200	W/16	: To B37 (with automatic drive positioner)
E5	B10	Y/2	: Front LH side air bag module	D5	B202	W/32	: Driver seat control unit
E4	B12	W/3	: Seat belt buckle switch LH	D4	B203	W/16	: Driver seat control unit

HARNES

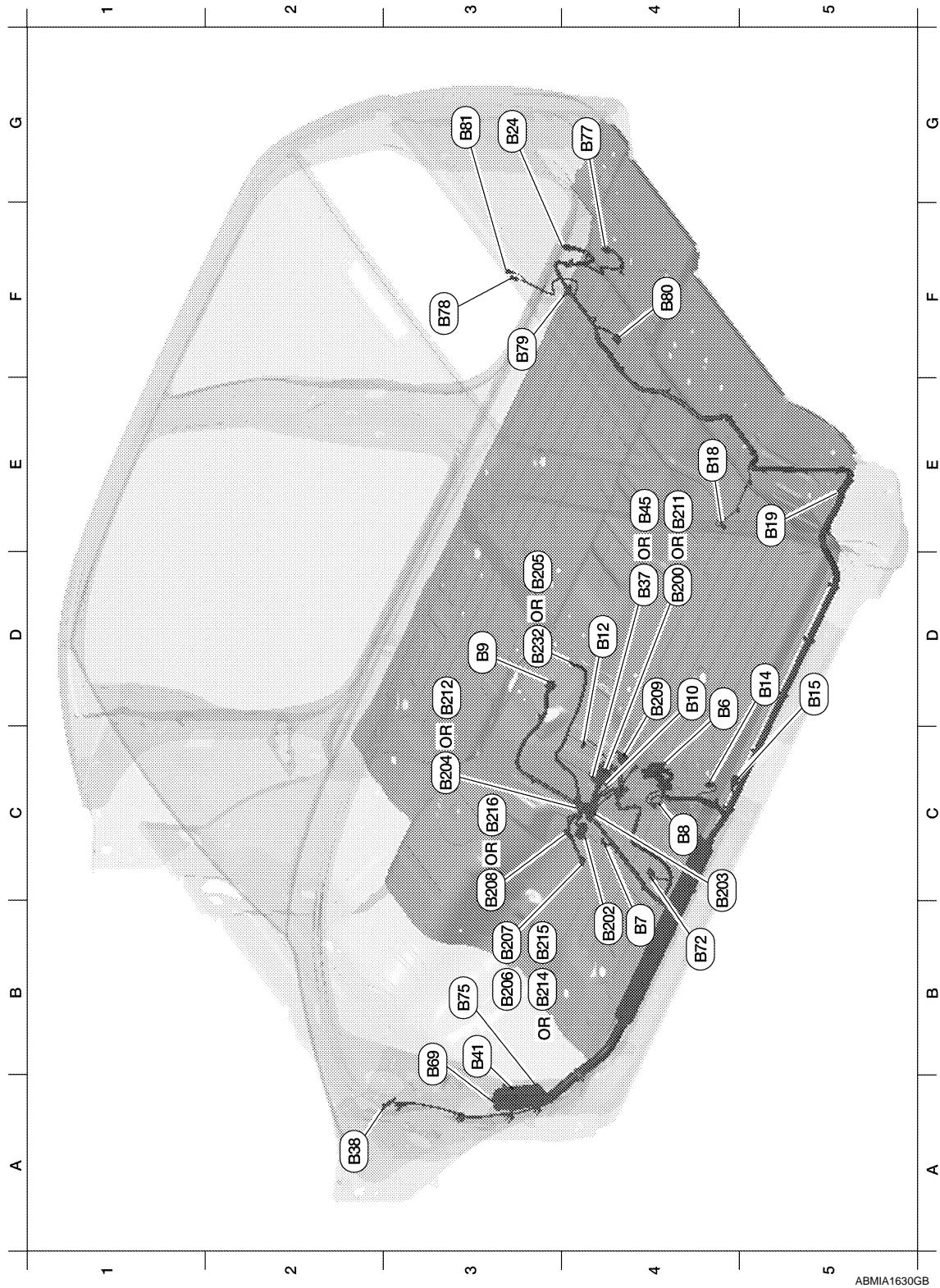
< COMPONENT DIAGNOSIS >

E5	B14	Y/2	: Front LH seat belt pre-tensioner	D3	B204	GR/5	: Sliding motor LH (with automatic drive positioner)	A
E4	B15	Y/2	: LH side air bag (satellite) sensor	E3	B205	W/4	: Reclining motor LH (with automatic drive positioner)	B
F4	B19	—	: Body ground	D4	B206	W/5	: Lifting motor (front) (with automatic drive positioner)	B
F3	B24	W/16	: Sonar control unit	D3	B207	GR/5	: Lifting motor (rear) (with automatic drive positioner)	C
E4	B37	W/16	: To B200 (with automatic drive positioner)	D4	B208	W/10	: Power seat switch LH (with automatic drive positioner)	C
C4	B38	Y/2	: LH side curtain air bag module	E4	B209	W/3	: Front seat heater LH	D
D5	B41	W/12	: To E35	F5	B211	W/2	: To B45	D
E4	B45	W/2	: To B211	E3	B212	B/2	: Sliding motor LH (without automatic drive positioner)	E
B3	B69	SMJ	: To M40	D4	B214	GR/2	: Lifting motor (front) (without automatic drive positioner)	F
D5	B72	W/4	: Subwoofer	E3	B215	GR/2	: Lifting motor (rear) (without automatic drive positioner)	F
F4	B73	B/2	: Rear door switch upper LH	D4	B216	W/10	: Power seat switch LH (without automatic drive positioner)	G
E4	B74	B/2	: Rear door switch lower LH	E3	B232	W/2	: Reclining motor LH (without automatic drive positioner)	G
C5	B75	BR/2	: To E50	F5	B211	W/2	: To B45	H
F3	B76	W/2	: Rear door speaker LH					H
								I
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HARNESS

< COMPONENT DIAGNOSIS >

BODY HARNESS (CREW CAB MODELS)



D4	B6	W/18	: To D201	Front seat LH harness		
B4	B7	—	: Body ground	D4	B200	W/16 : To B37
C4	B8	W/3	: Front door switch LH	B4	B202	W/32 : Driver seat control unit
D3	B9	Y/12	: Air bag diagnosis sensor unit	C4	B203	W/16 : Driver seat control unit
D4	B10	Y/2	: Front LH side air bag module	C3	B204	GR/5 : Sliding motor LH (with automatic drive positioner)

HARNESS

< COMPONENT DIAGNOSIS >

D4	B12	W/3	: Seat belt buckle switch LH	D3	B205	W/4	: Reclining motor LH (with automatic drive positioner)	A
D5	B14	Y/2	: Front LH seat belt pre-tensioner	B3	B206	W/5	: Lifting motor (front) (with automatic drive positioner)	B
D5	B15	Y/2	: LH side air bag (satellite) sensor	B3	B207	GR/5	: Lifting motor (rear) (with automatic drive positioner)	B
E4	B18	W/3	: Rear door switch LH	C3	B208	W/10	: Power seat switch LH (with automatic drive positioner)	C
E5	B19	—	: Body ground	D4	B209	W/3	: Front seat heater LH	
G3	B24	W/16	: Sonar control unit	E4	B211	W/2	: To B45	D
D4	B37	W/16	: To B200	D3	B212	B/2	: Sliding motor LH (without automatic drive positioner)	D
A2	B38	Y/2	: LH side curtain air bag module	B3	B214	GR/2	: Lifting motor (front) (without automatic drive positioner)	E
B3	B41	W/12	: To E35	B3	B215	GR/2	: Lifting motor (rear) (without automatic drive positioner)	F
E4	B45	W/2	: To B211	C3	B216	W/10	: Power seat switch LH (without automatic drive positioner)	F
B3	B69	SMJ	: To M40	D3	B232	W/2	: Reclining motor LH (without automatic drive positioner)	G
B4	B72	W/4	: Subwoofer					
B3	B75	BR/2	: To E50					
G4	B77	W/26	: Differential lock control unit					H
F3	B78	B/1	: Rear window defogger					
F3	B79	—	: Body ground					I
F4	B80	GR/4	: Rear power drop glass motor					
G3	B81	B/1	: Rear window defogger					J

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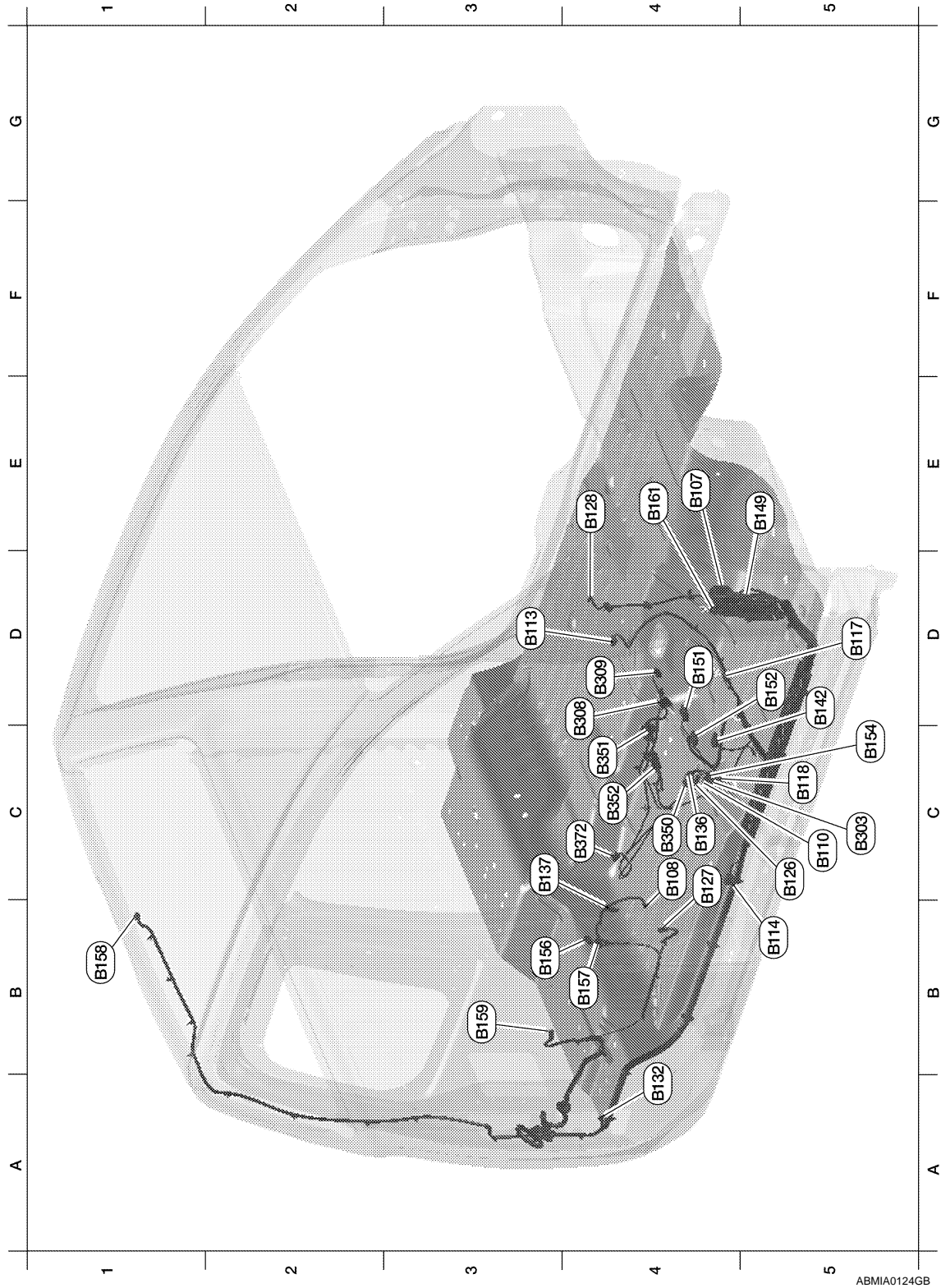
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< COMPONENT DIAGNOSIS >

BODY NO. 2 HARNESS (KING CAB MODELS)



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E4	B107	W/8	: To E139	Front seat RH harness		
C4	B108	W/3	: Front door switch RH	C5	B303	W/2 : To B154
C5	B110	W/3	: Seat belt buckle switch RH	D4	B308	W/6 : Power seat switch RH
D3	B113	Y/12	: Air bag diagnosis sensor unit	D4	B309	GR/2 : Sliding motor RH
B5	B114	Y/2	: RH side air bag (satellite) sensor	C4	B350	Y/8 : To B136

HARNESS

< COMPONENT DIAGNOSIS >

D5	B117	—	: Body ground	C4	B351	B/18	: Occupant classification control unit
C5	B118	W/3	: Front seat heater RH	C4	B352	B/3	: Occupant classification system sensor
C5	B126	Y/2	: Front RH side air bag module	C2	B372	W/2	: Reclining motor RH
C4	B127	Y/2	: Front RH seat belt pre-tensioner				
E4	B128	Y/2	: RH side curtain air bag module				
B4	B132	—	: Body ground				
C4	B136	W/8	: To B350				
C3	B137	W/3	: Belt tension sensor				
D5	B142	W/32	: Bluetooth control unit				
E5	B149	SMJ	: To M36				
D4	B151	W/40	: NAVI control unit				
D5	B152	W/32	: NAVI control unit				
C5	B154	W/2	: To B303				
B3	B156	B/2	: Rear door switch upper RH				
B4	B157	B/2	: Rear door switch lower RH				
B1	B158	W/3	: High-mounted stop lamp				
B3	B159	W/2	: Rear door speaker RH				
E4	B161	W/20	: To M157				

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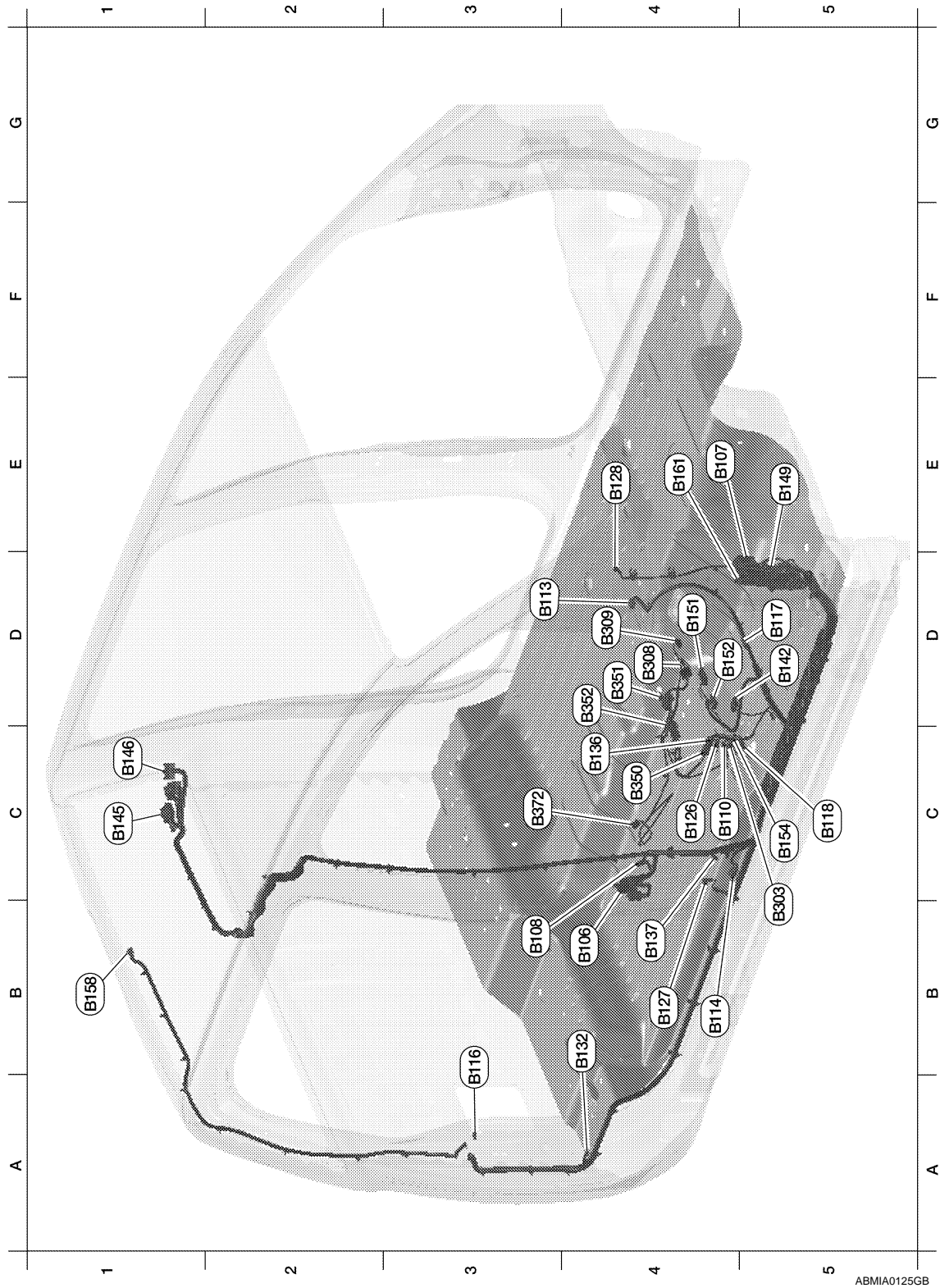
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< COMPONENT DIAGNOSIS >

BODY NO. 2 HARNESS (CREW CAB MODELS)



B4	B106	W/18	: To D301	Front seat RH harness			
E4	B107	W/8	: To E139	B5	B303	W/2	: To B154
B3	B108	W/3	: Front door switch RH	D4	B308	W/6	: Power seat switch RH
C4	B110	W/3	: Seat belt buckle switch RH	D4	B309	GR/2	: Sliding motor RH
D3	B113	Y/12	: Air bag diagnosis sensor unit	C4	B350	Y/8	: To B136

HARNESS

< COMPONENT DIAGNOSIS >

B4	B114	Y/2	: RH side air bag (satellite) sensor	D4	B351	B/18	: Occupant classification control unit
B3	B116	W/3	: Rear door switch RH	D4	B352	B/3	: Occupant classification system sensor
D5	B117	—	: Body ground	C3	B372	W/2	: Reclining motor RH
C5	B118	W/3	: Front seat heater RH				
C4	B126	Y/2	: Front RH side air bag module				
B4	B127	Y/2	: Front RH seat belt pre-tensioner				
E4	B128	Y/2	: RH side curtain air bag module				
B4	B132	—	: Body ground				
C4	B136	W/8	: To B350				
B4	B137	W/3	: Belt tension sensor				
D5	B142	W/32	: Bluetooth control unit				
C1	B145	W/16	: To R200				
C1	B146	BR/24	: To R201				
E5	B149	SMJ	: To M36				
D4	B151	W/40	: NAVI control unit				
D4	B152	W/32	: NAVI control unit				
C5	B154	W/2	: To B303				
B1	B158	W/3	: High-mounted stop lamp				
E4	B161	W/20	: To M157				

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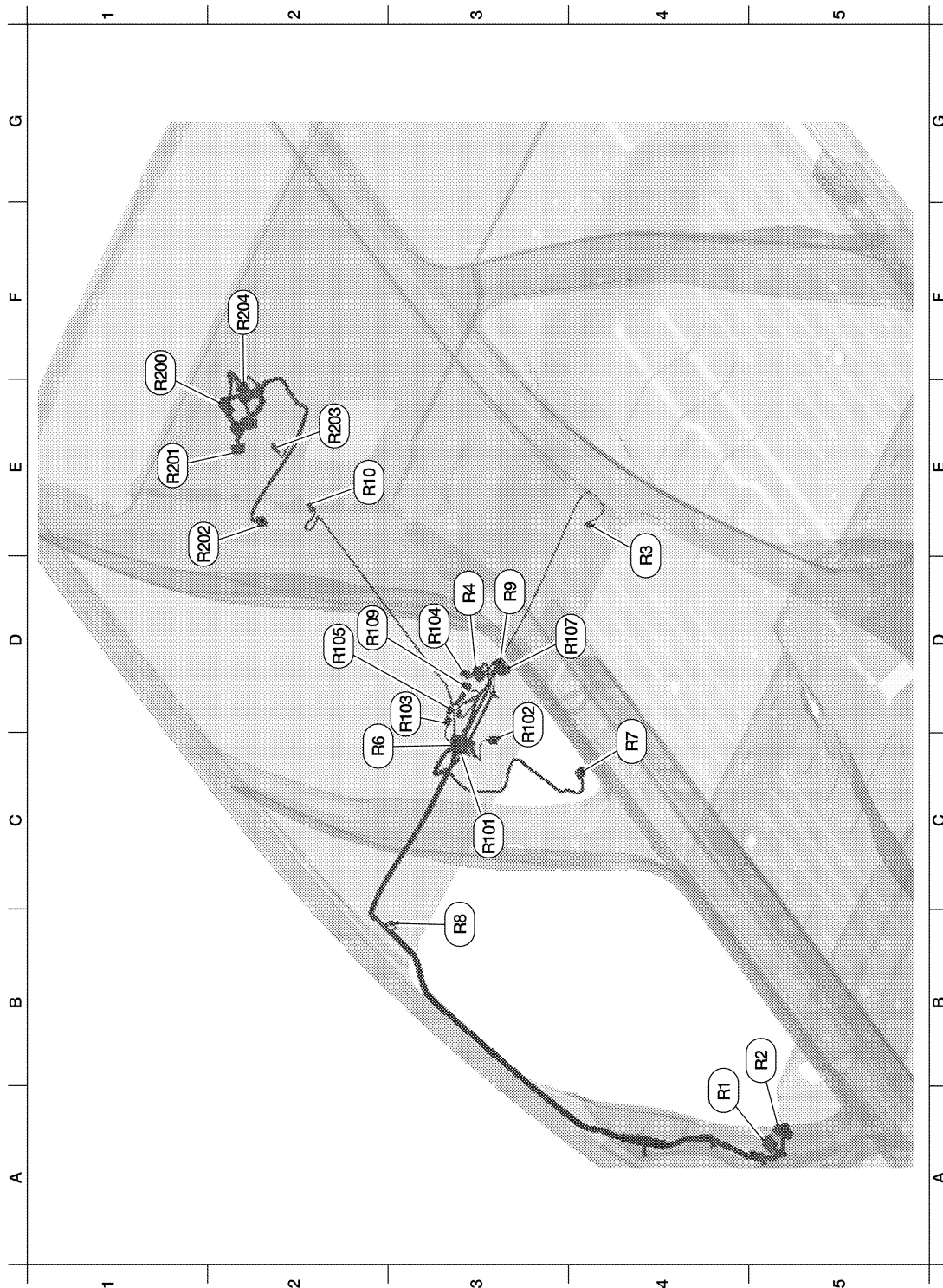
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HARNESS

< COMPONENT DIAGNOSIS >

ROOM LAMP HARNESS



ABMIA0126GB

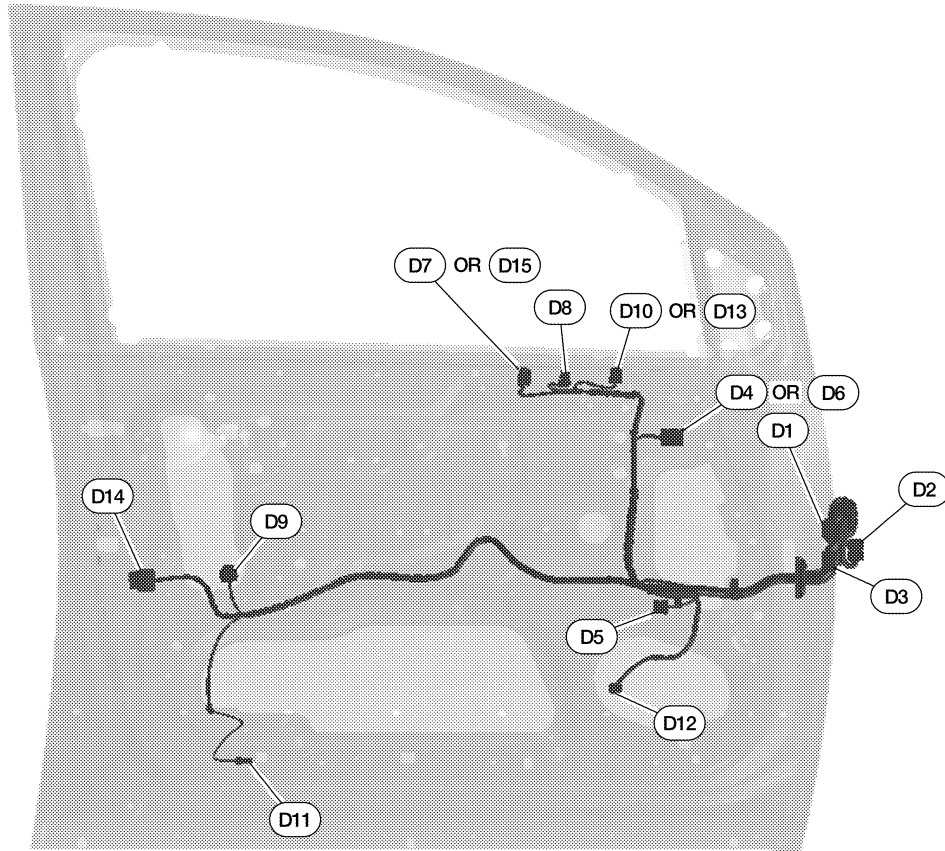
A4	R1	W/16	: To M1	D3	R103	W/6	: Rear power drop glass switch
B5	R2	W/12	: To M2	D3	R104	GR/6	: Sunroof switch
E4	R3	W/2	: Vanity lamp LH	D2	R105	W/4	: Bluetooth ON indicator
D3	R4	W/10	: Sunroof motor assembly	D3	R107	W/8	: To R9
C2	R6	W/16	: To R101	D2	R109	W/4	: Microphone

HARNESS

< COMPONENT DIAGNOSIS >

C4	R7	GR/10	: Auto anti-dazzling inside mirror	Room lamp sub-harness B			
B3	R8	W/2	: Vanity lamp RH	F1	R200	W/16	: To B145
D3	R9	W/8	: To R107	E1	R201	BR/24	: To B146
E2	R10	W/2	: Room lamp	E1	R202	W/12	: Video monitor
Room lamp sub-harness A				E2	R203	W/3	: Personal lamp 2ND row
C3	R101	W/16	: To R6	F2	R204	W/16	: Rear audio remote control unit
D3	R102	GR/8	: Front room/map lamp assembly				

FRONT DOOR LH HARNESS



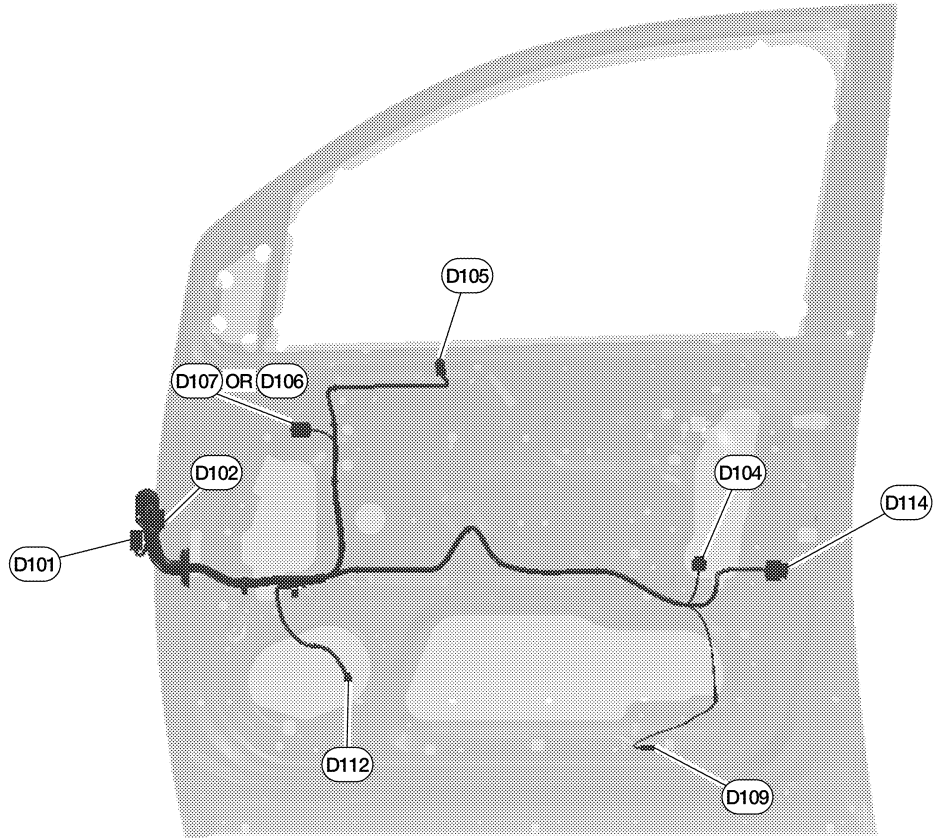
ABMIA0127GB

D1	BR/24	: To M9	D9	GR/6	: Front power window motor LH
D2	W/16	: To M8	D10	BR/16	: Door mirror remote control switch (with automatic drive positioner)
D3	W/10	: To M158	D11	W/2	: Front step lamp LH
D4	W/16	: Door mirror LH (with automatic drive positioner)	D12	W/2	: Front door speaker LH
D5	W/8	: Seat memory switch	D13	W/16	: Door mirror remote control switch (without automatic drive positioner)
D6	W/6	: Door mirror LH (without automatic drive positioner)	D14	B/6	: Front door lock assembly LH
D7	W/16	: Main power window and door lock/unlock switch (crew cab)	D15	W/16	: Main power window and door lock/unlock switch (king cab)
D8	W/3	: Main power window and door lock/unlock switch (crew cab)			

HARNESS

< COMPONENT DIAGNOSIS >

FRONT DOOR RH HARNESS



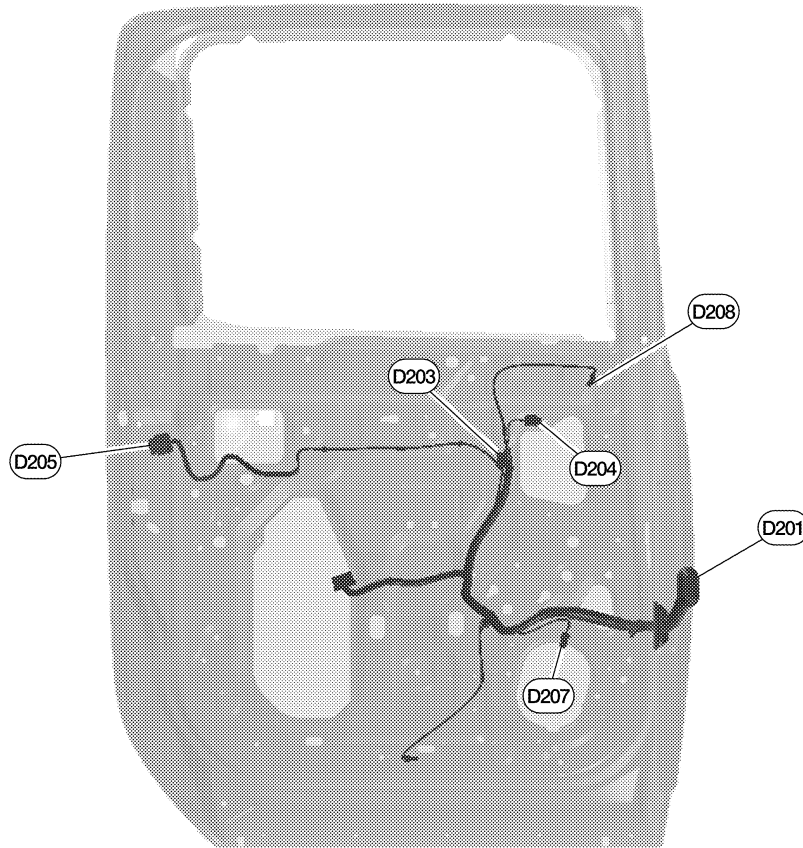
ABMIA0128GB

D101	W/10	: To M75	D107	W/16	: Door mirror RH (with automatic drive positioner)
D102	BR/20	: To M74	D109	W/2	: Front step lamp RH
D104	GR/6	: Front power window motor RH	D112	W/2	: Front door speaker RH
D105	W/16	: Power window and door lock/unlock switch RH	D114	B/6	: Front door lock actuator RH
D106	W/6	: Door mirror RH (without automatic drive positioner)			

HARNESS

< COMPONENT DIAGNOSIS >

REAR DOOR LH HARNESS (CREW CAB MODELS)



ABMIA0129GB

D201	W/18	: To B6			
D203	W/8	: Rear power window switch LH			
D204	GR/2	: Rear power window motor LH			
D205	B/6	: Rear door lock actuator LH			
D207	W/2	: Rear door speaker LH			
D208	BR/2	: Rear door tweeter LH			

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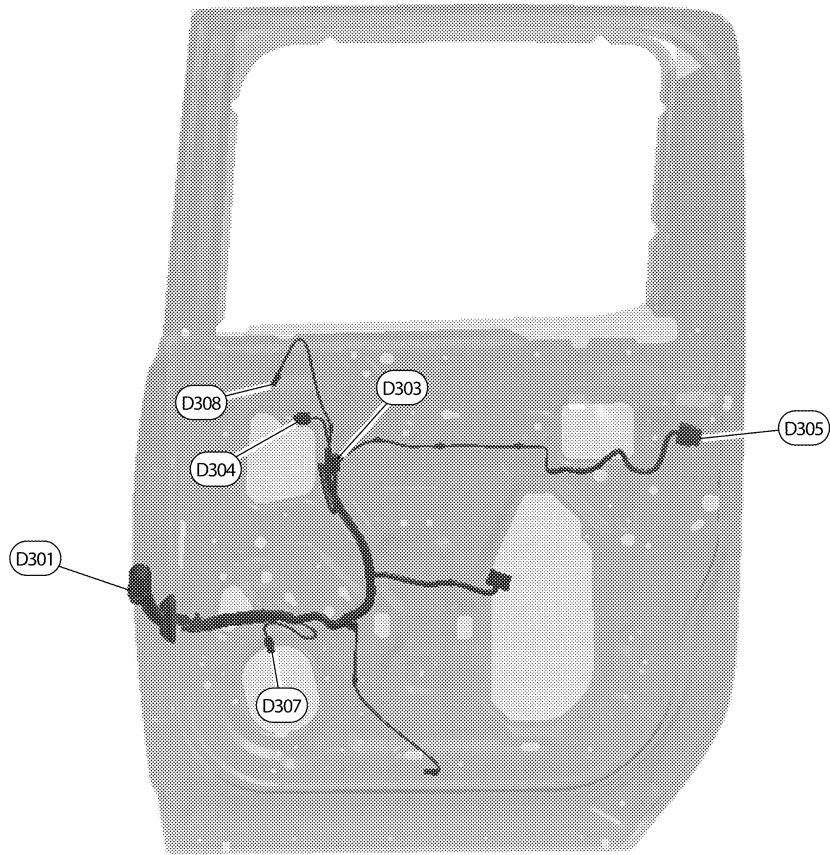
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HARNESS

< COMPONENT DIAGNOSIS >

REAR DOOR RH HARNESS (CREW CAB MODELS)



ABMIA0130GB

D301	W/18	: To B106			
D303	W/8	: Rear power window switch RH			
D304	GR/2	: Rear power window motor RH			
D305	B/6	: Rear door lock actuator RH			
D307	W/2	: Rear door speaker RH			
D308	BR/2	: Rear door tweeter RH			

ELECTRICAL UNITS LOCATION

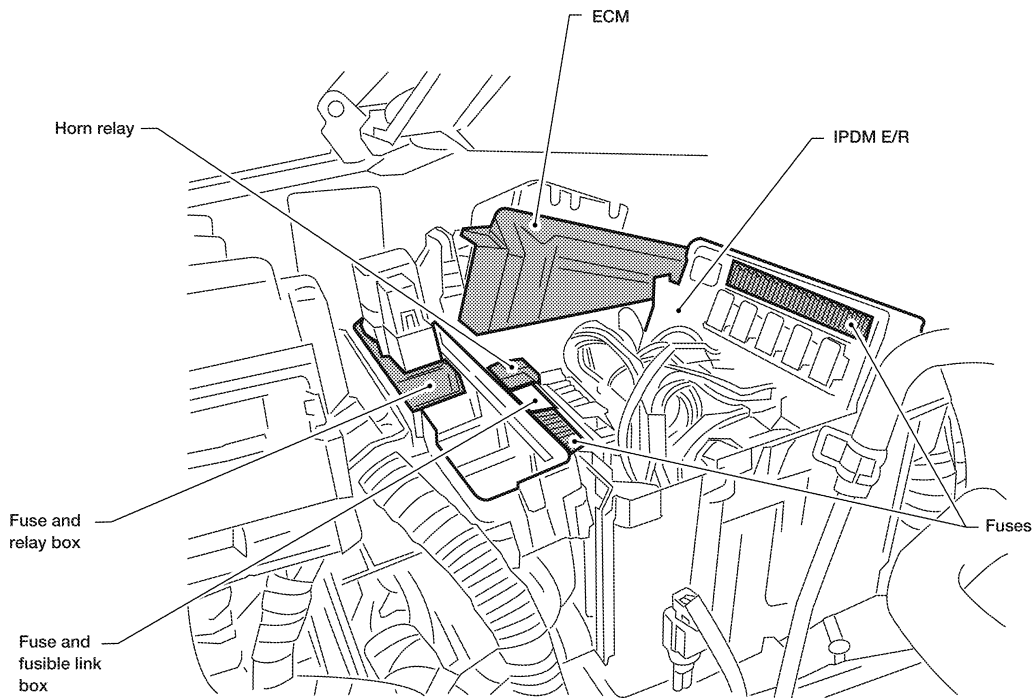
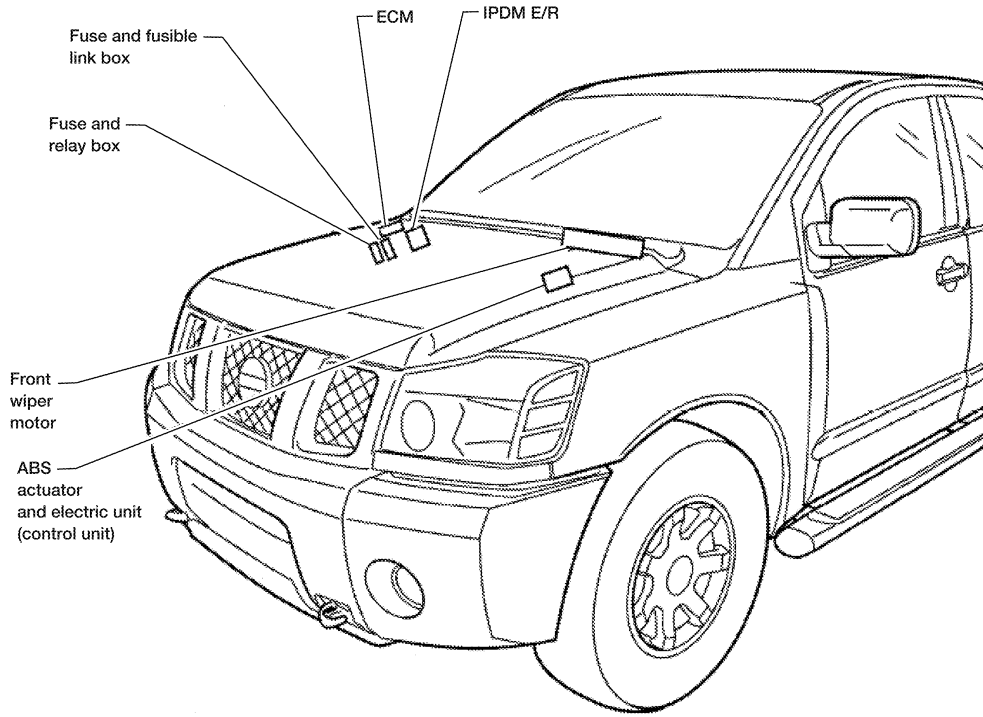
< COMPONENT DIAGNOSIS >

ELECTRICAL UNITS LOCATION

Electrical Units Location

INFOID:000000005387844

ENGINE COMPARTMENT

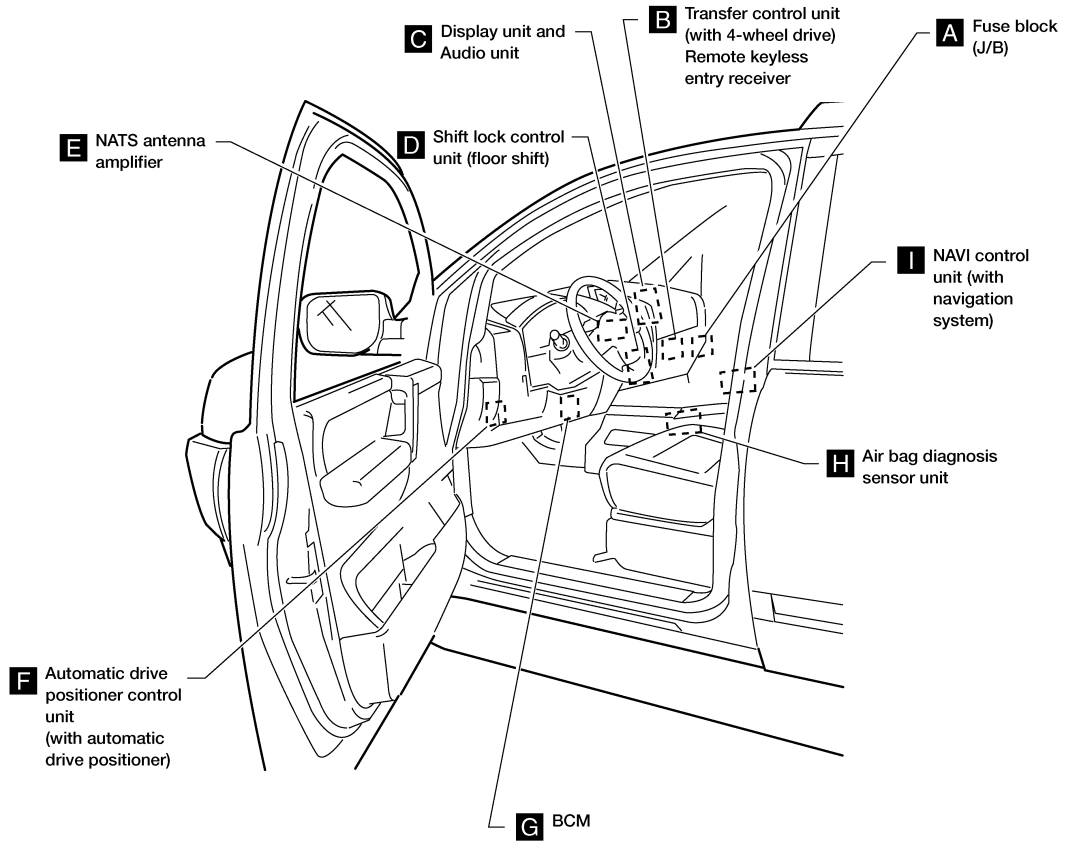


ALMIA0303GB

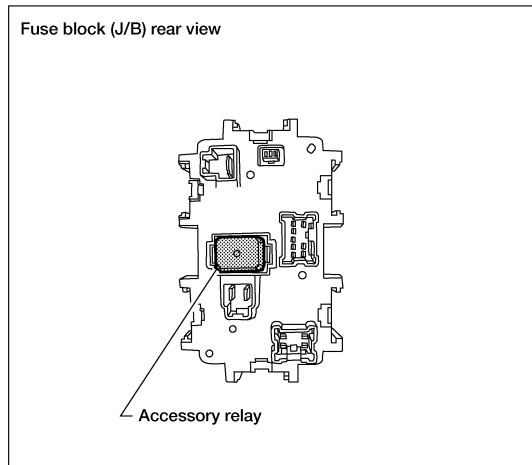
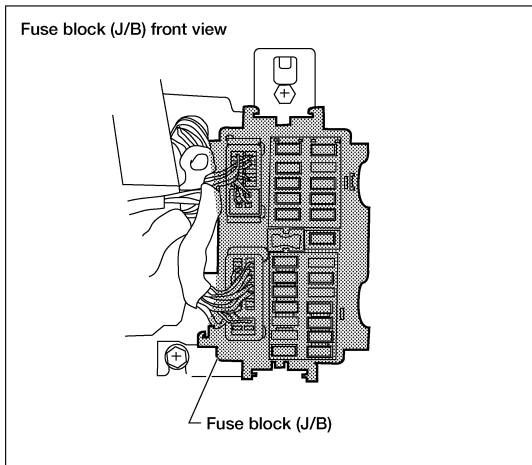
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ELECTRICAL UNITS LOCATION

< COMPONENT DIAGNOSIS > PASSENGER COMPARTMENT



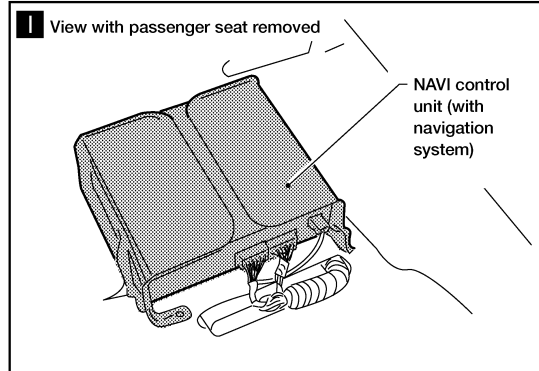
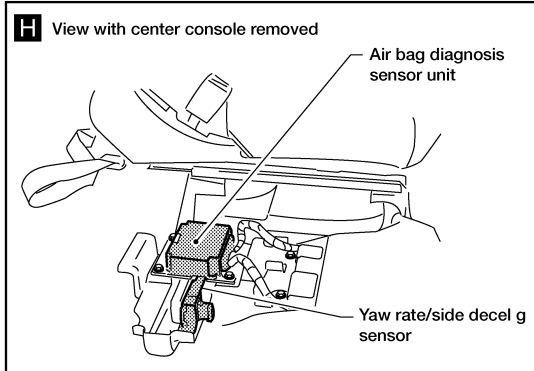
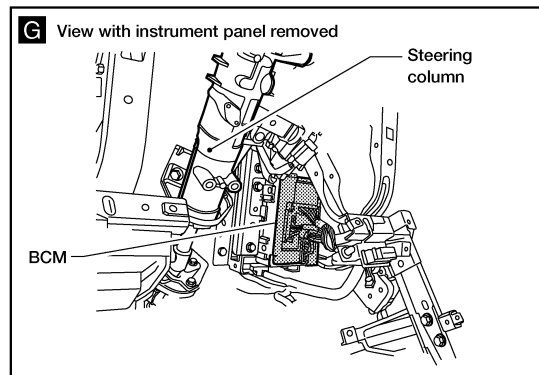
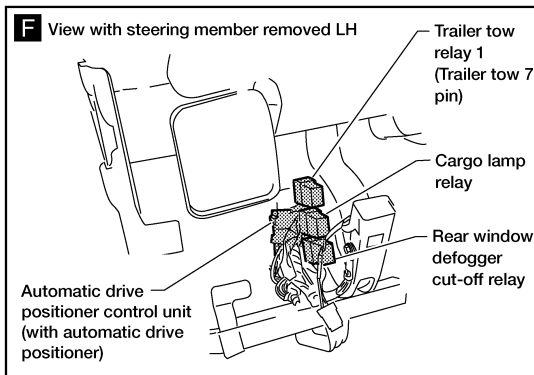
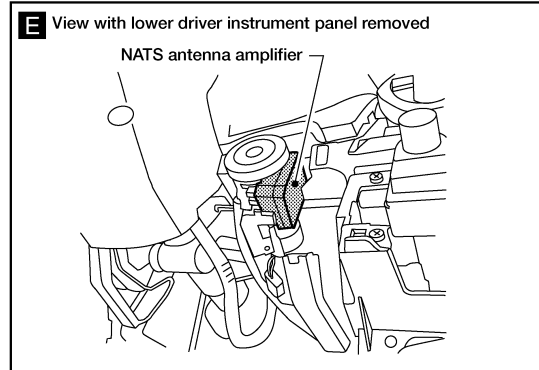
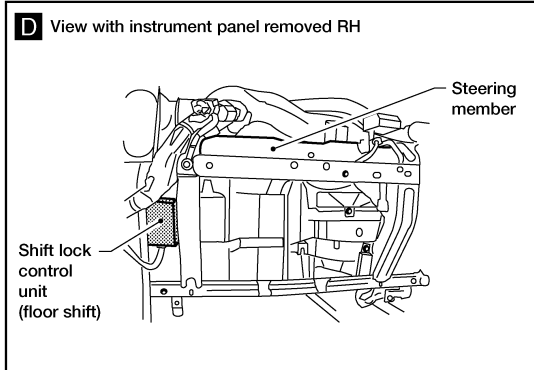
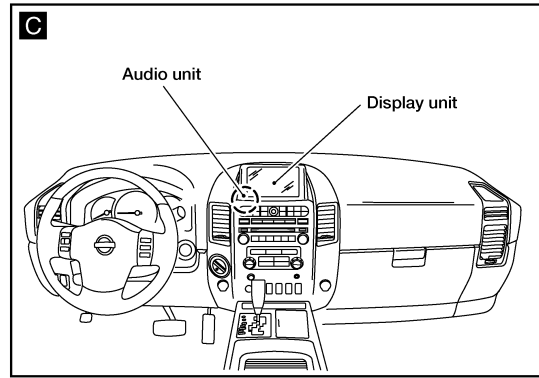
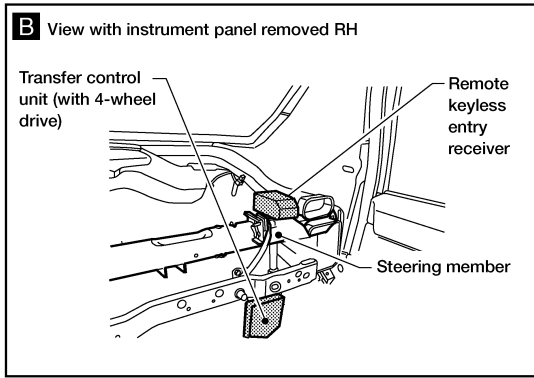
A Instrument panel side RH



ABMIA1631GB

ELECTRICAL UNITS LOCATION

< COMPONENT DIAGNOSIS >



ABMIA1632GB

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HARNESS CONNECTOR

< COMPONENT DIAGNOSIS >

HARNESS CONNECTOR

Description

INFOID:000000005387845

HARNESS CONNECTOR (TAB-LOCKING TYPE)

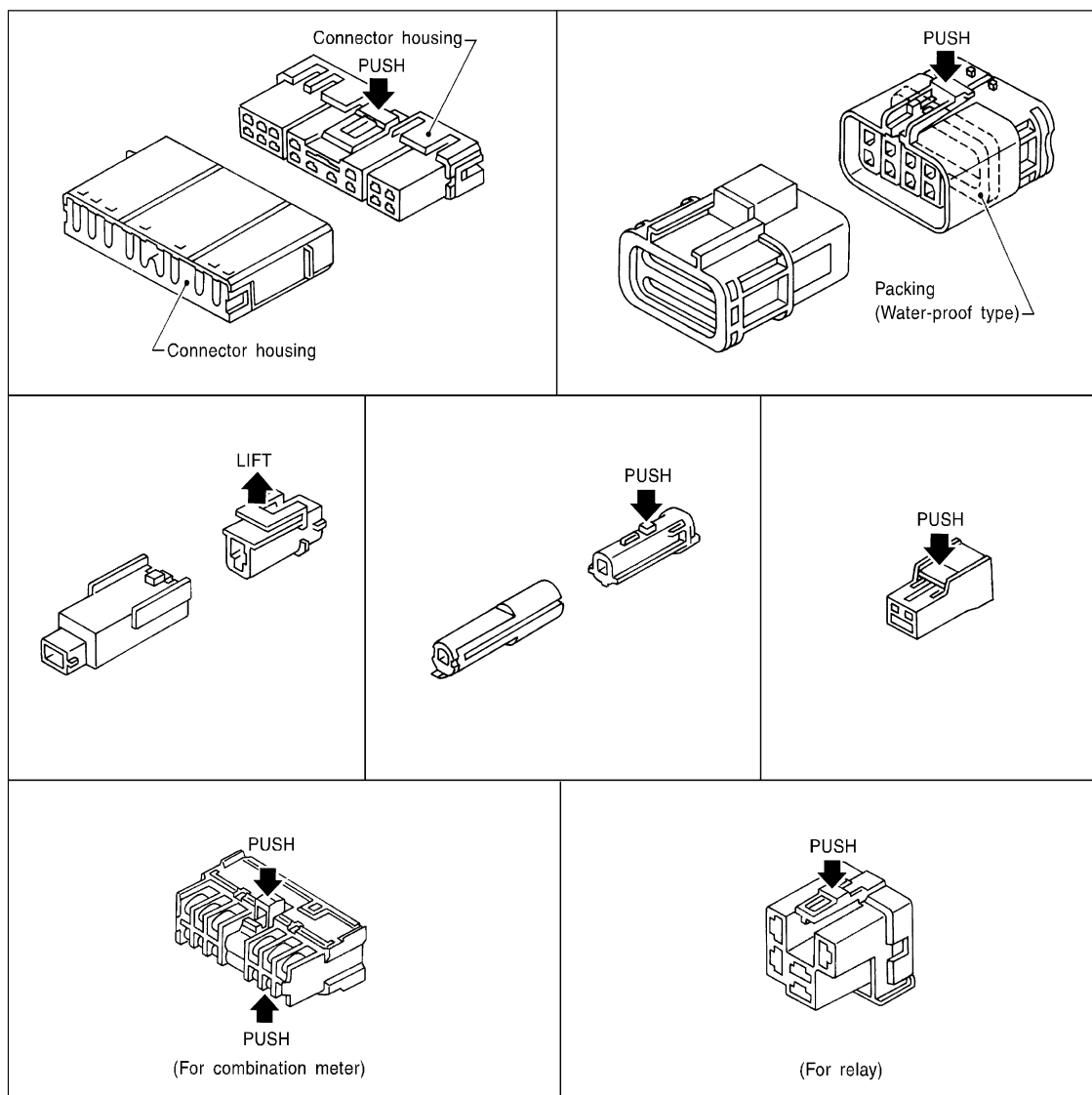
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the figure below.

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.

HARNESS CONNECTOR

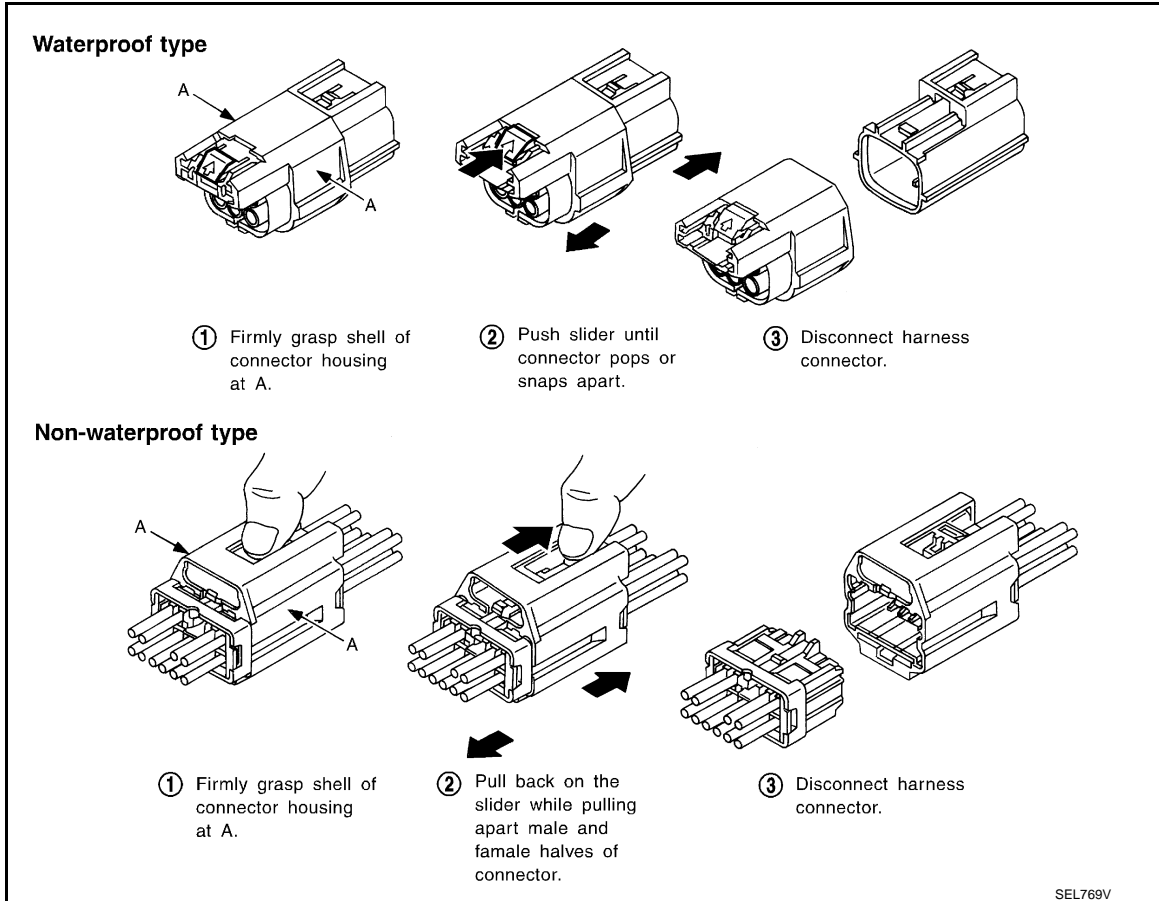
< COMPONENT DIAGNOSIS >

- 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.

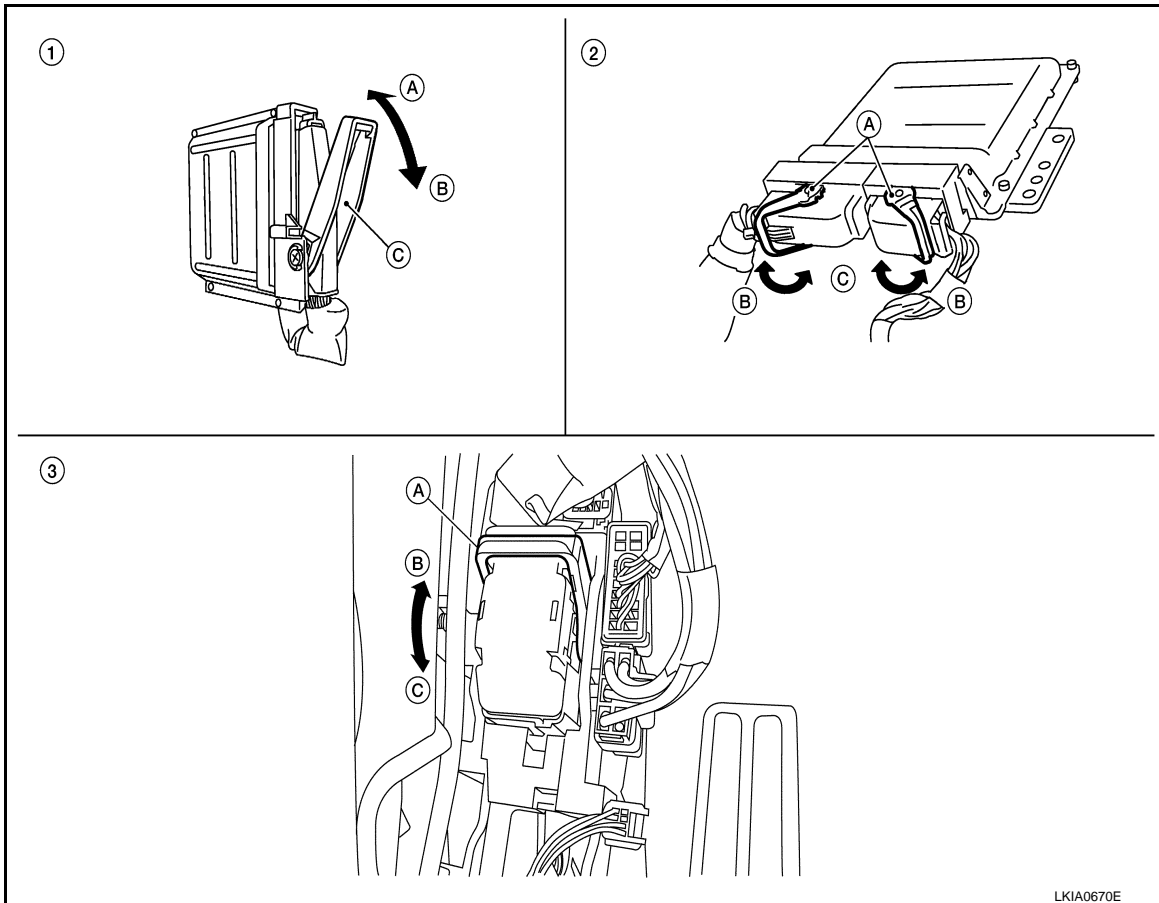
CAUTION:

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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.



LKIA0670E

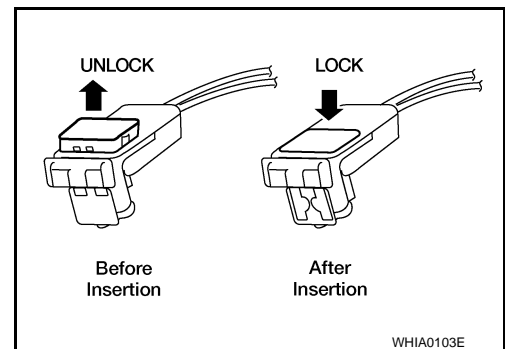
- | | | |
|-----------------------------------|---------------------------------|------------------|
| 1. Control unit with single lever | 2. Control unit with dual lever | 3. SMJ connector |
| A. Fasten | A. Fasten | A. Fasten |
| B. Loosen | B. Loosen | B. Loosen |
| C. Lever | C. Lever | C. Lever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

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.



WHIA0103E

STANDARDIZED RELAY

< COMPONENT DIAGNOSIS >

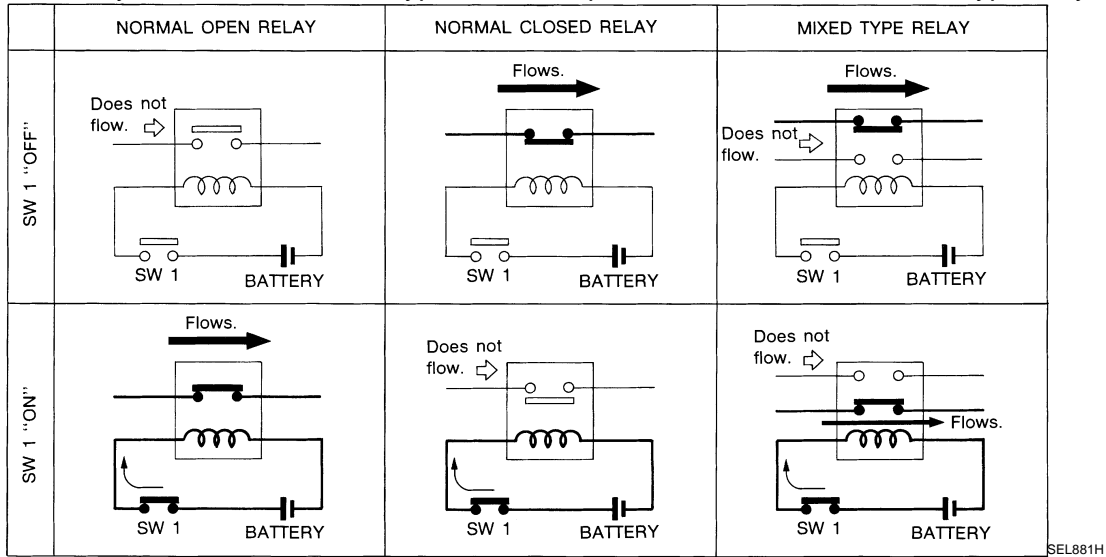
STANDARDIZED RELAY

Description

INFOID:000000005387846

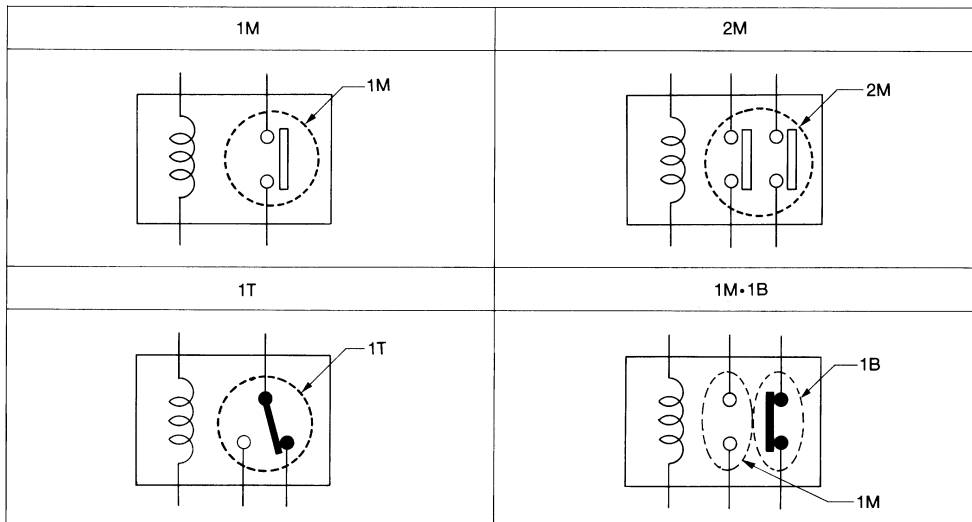
NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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



TYPE OF STANDARDIZED RELAYS

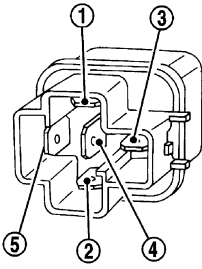
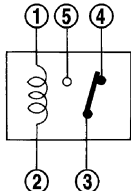
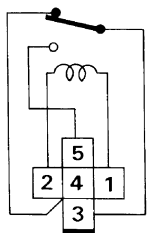
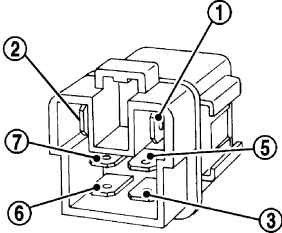
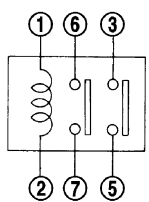
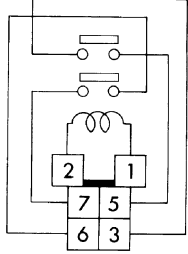
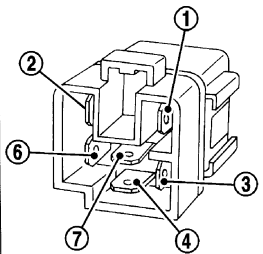
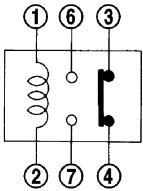
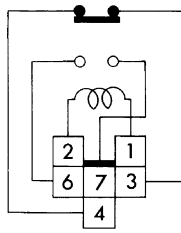
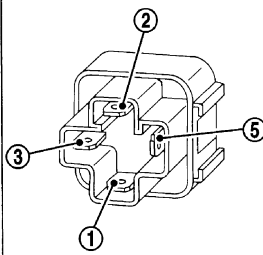
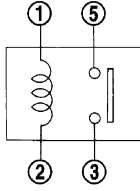
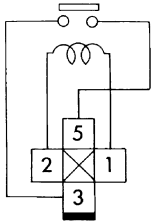
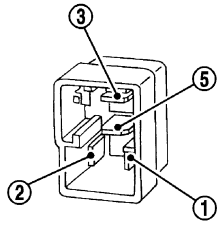
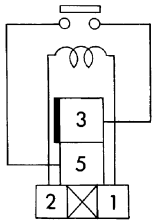
- 1M 1 Make
- 1T 1 Transfer
- 2M 2 Make
- 1M-1B 1 Make 1 Break



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STANDARDIZED RELAY

< COMPONENT 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

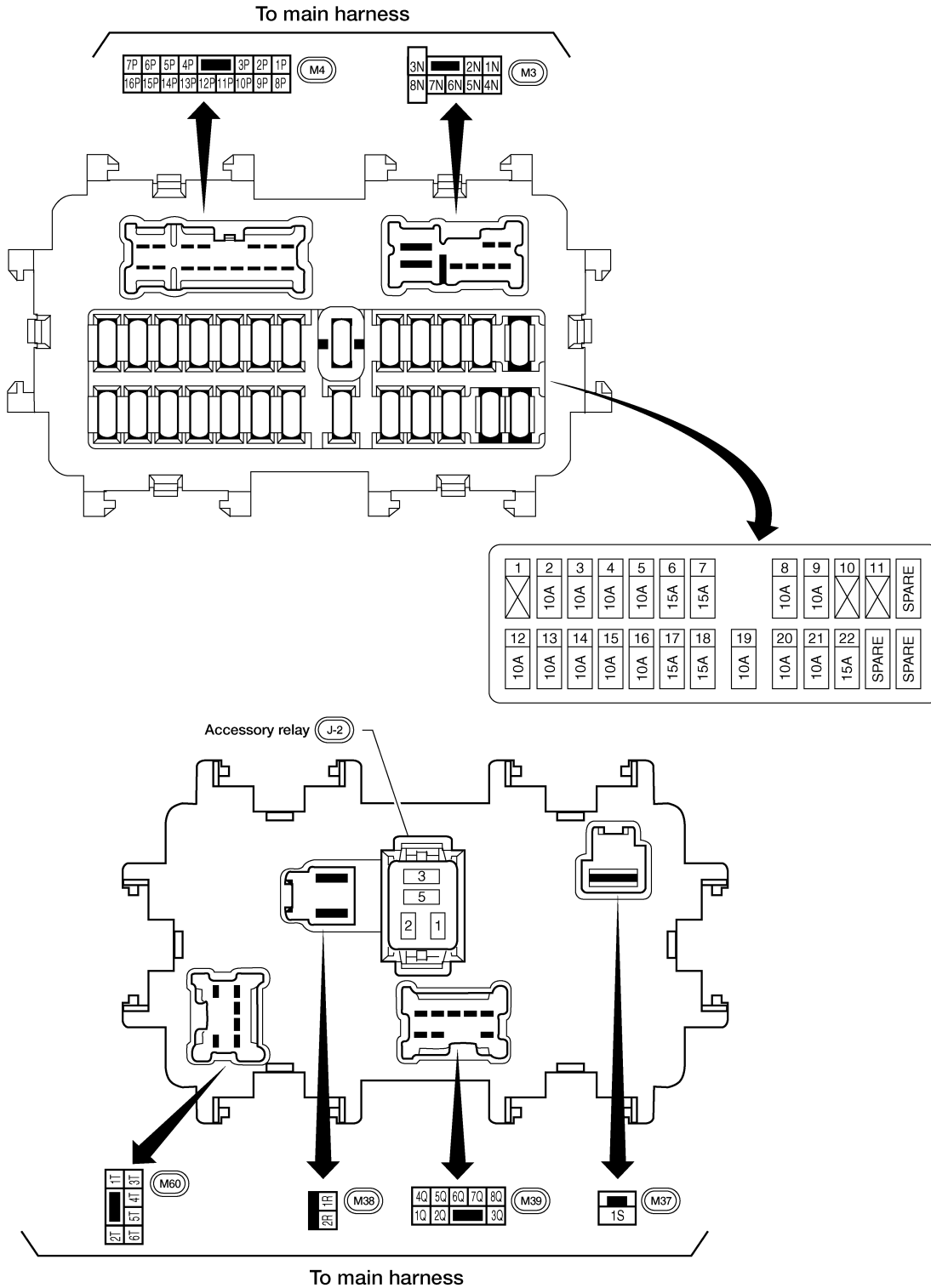
FUSE BLOCK - JUNCTION BOX (J/B)

< COMPONENT DIAGNOSIS >

FUSE BLOCK - JUNCTION BOX (J/B)

Terminal Arrangement

INFOID:000000005387847



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FUSE, FUSIBLE LINK AND RELAY BOX

< COMPONENT DIAGNOSIS >

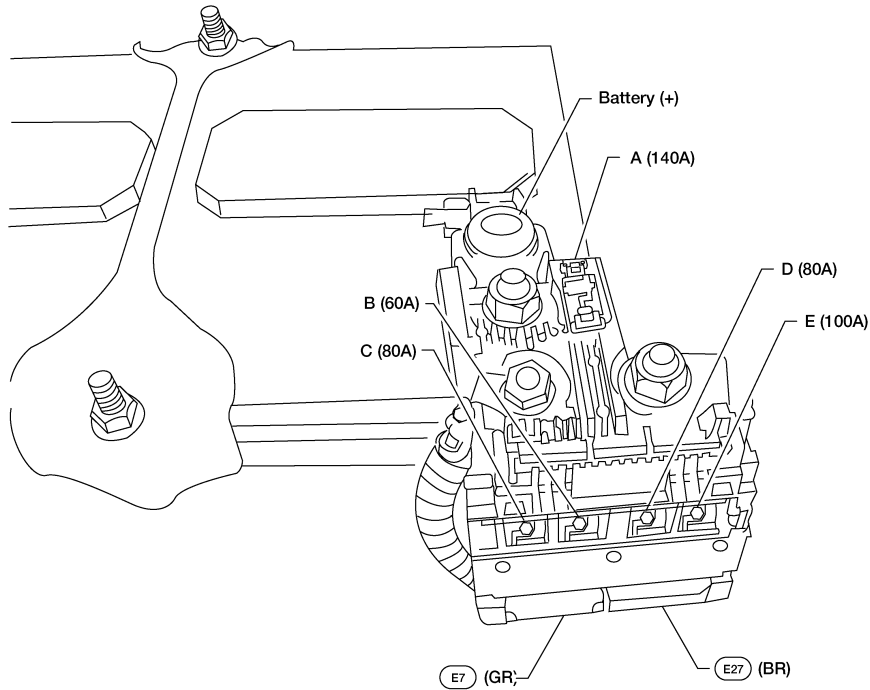
FUSE, FUSIBLE LINK AND RELAY BOX

Terminal Arrangement

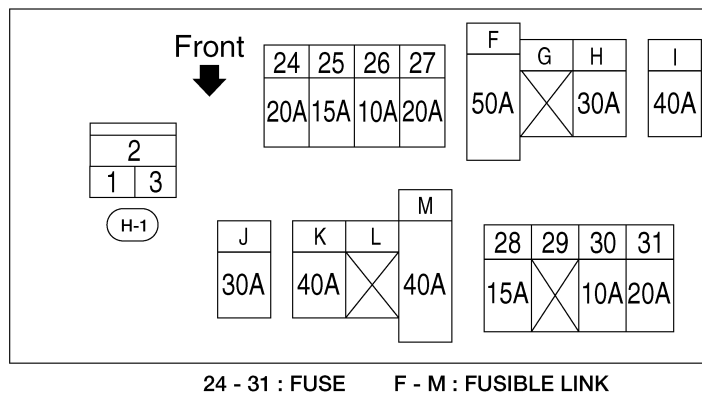
INFOID:000000005387848

FUSE AND FUSIBLE LINK BOX

FUSIBLE LINK BOX (BATTERY)



FUSE AND FUSIBLE LINK BOX

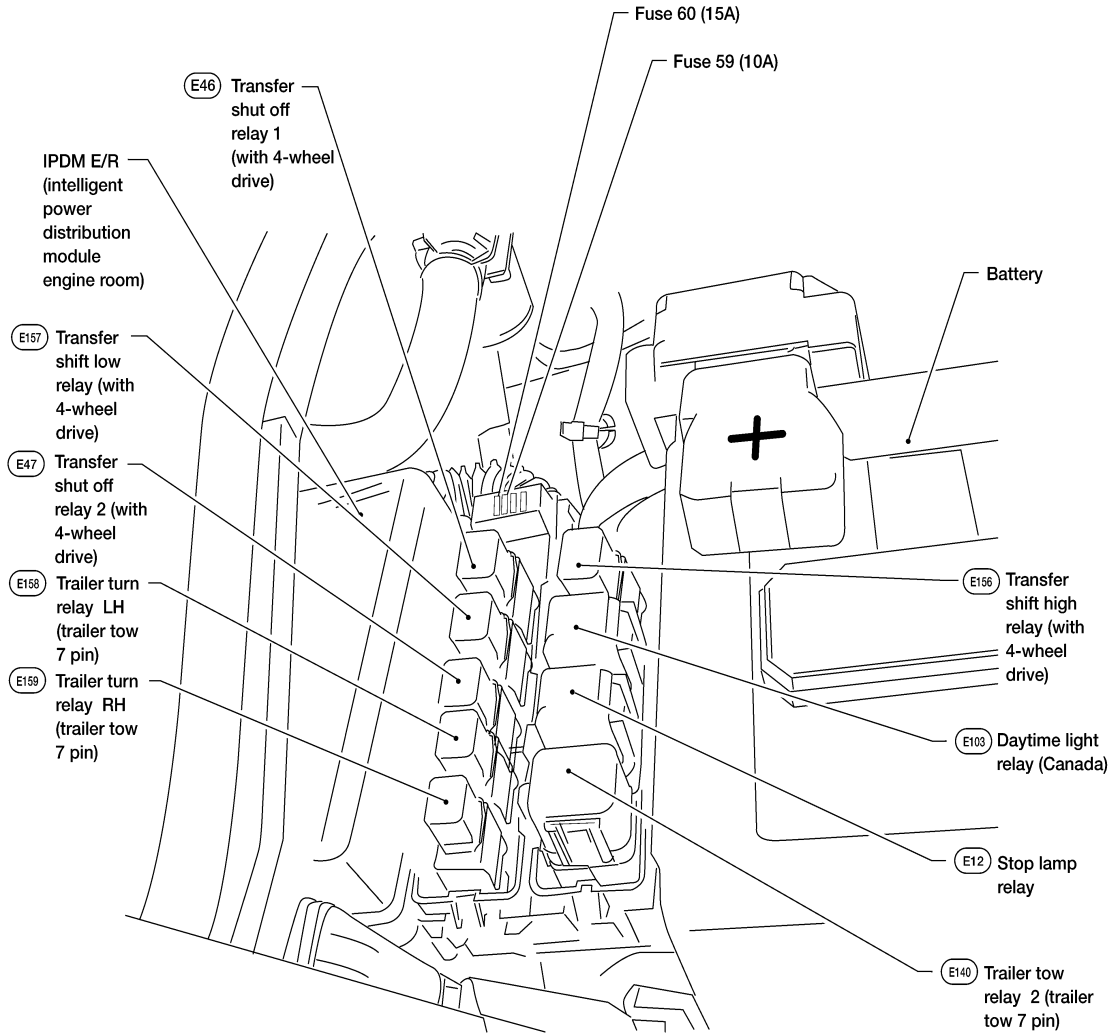


ABMIA1634GB

FUSE, FUSIBLE LINK AND RELAY BOX

< COMPONENT DIAGNOSIS >

FUSE AND RELAY BOX



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ABMIA1635GB

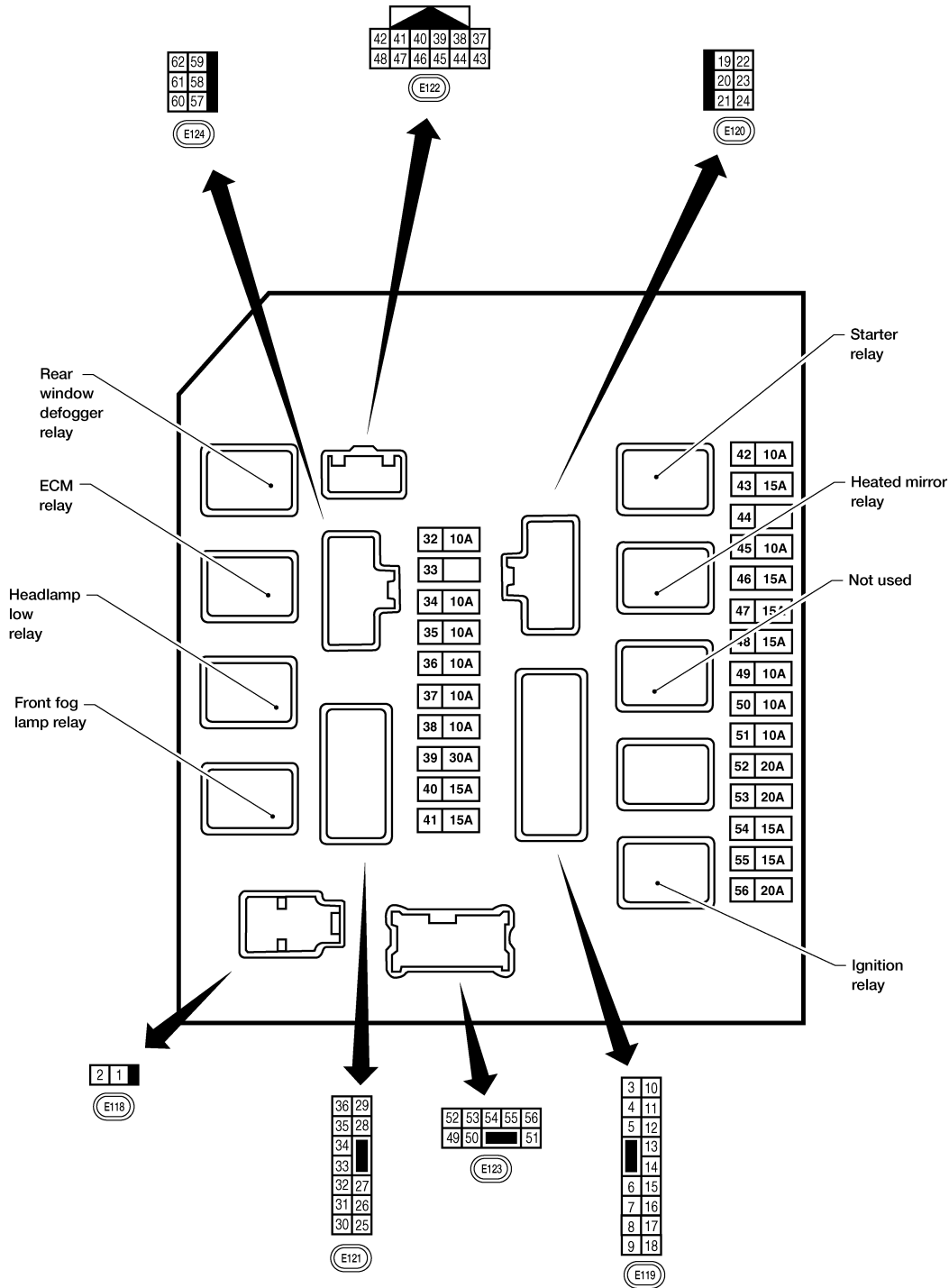
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< COMPONENT DIAGNOSIS >

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

IPDM E/R Terminal Arrangement - Type A

INFOID:000000005711367



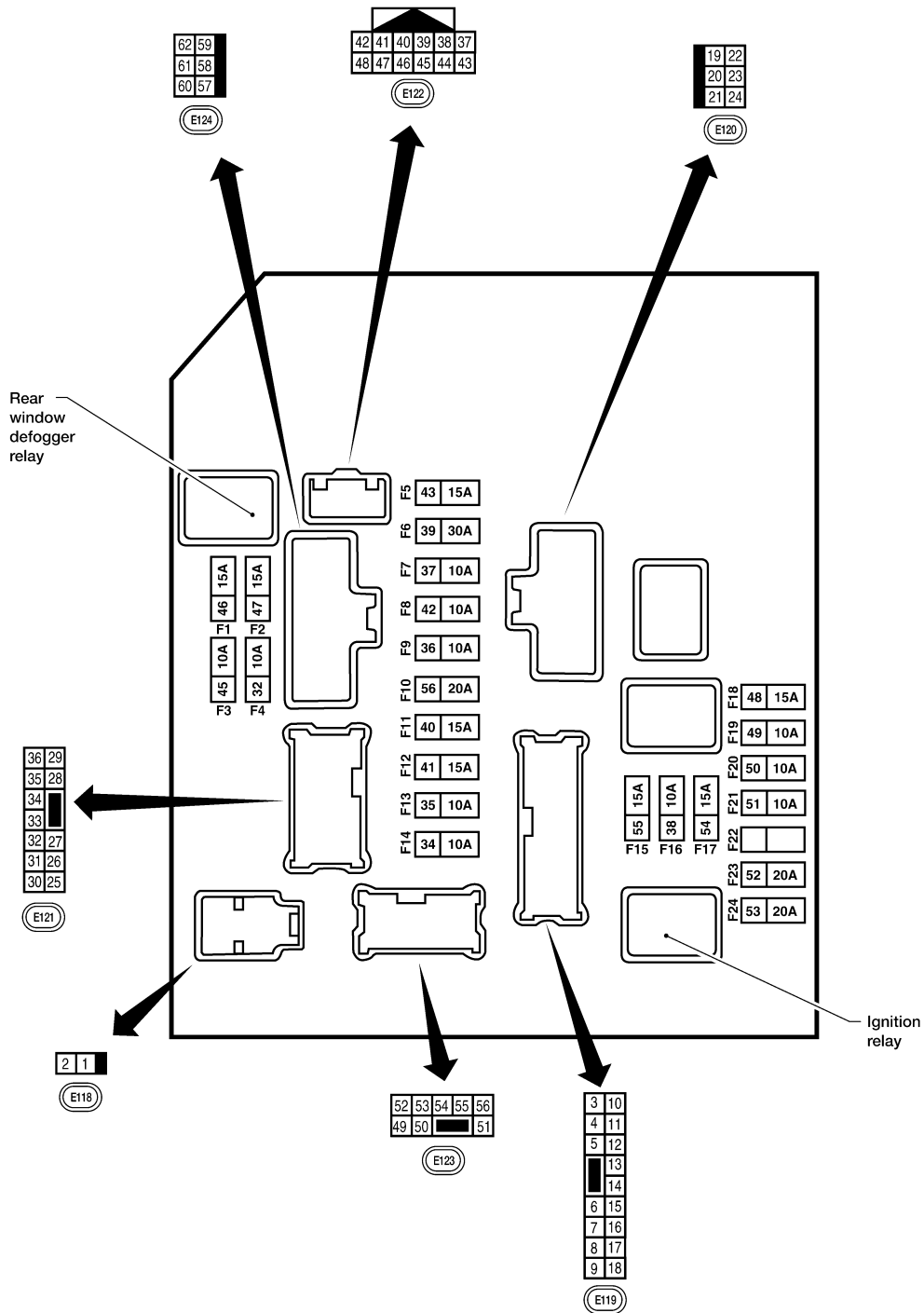
ABMIA1636GB

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

< COMPONENT DIAGNOSIS >

IPDM E/R Terminal Arrangement - Type B

INFOID:000000005711368



NOTE:

Numbers preceded by an "F" represent the fuse numbers imprinted on the IPDM E/R. The other numbers represent the fuse numbers as they appear in the wiring diagrams.

ABMIA1637GB

BATTERY

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

BATTERY

Removal and Installation

INFOID:000000005387849

REMOVAL

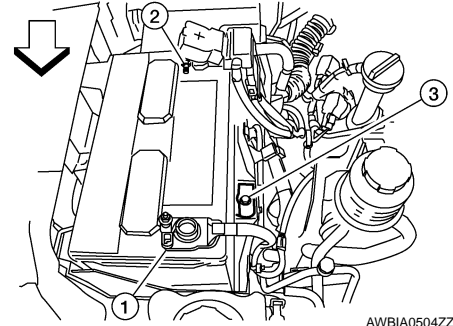
1. Disconnect the negative battery terminal (1) and positive battery terminal (2).

CAUTION:

Remove negative battery terminal first.

⇐ : **Front**

2. Remove the battery cover.
3. Remove the battery clamp bolt (3) and battery clamp.
4. Remove the battery.



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

When installing, install the positive battery terminal first.

Battery clamp bolt : 14.7 N·m (1.5 kg-m, 11 ft-lb)

Battery terminal nut : 3.5 N·m (0.36 kg-m, 31 in-lb)

Reset electronic systems as necessary. Refer to [PG-7. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Battery

INFOID:000000005387850

	Standard battery	Heavy duty battery (with towing package and FFV equipped vehicles)
Type	Gr. 24	Gr. 27
Capacity (20 HR) minimum V-AH	72	80
Cold cranking current A (For reference value)	650	710

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