

PG

SECTION

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

PRECAUTION	3	Terminal Arrangement	73
PRECAUTIONS	3	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	75
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	3	IPDM E/R Terminal Arrangement	75
Precaution for Power Generation Variable Voltage Control System	3	BASIC INSPECTION	76
PREPARATION	4	BATTERY	76
PREPARATION	4	How to Handle Battery	76
Special Service Tool	4	Work Flow	76
Commercial Service Tool	4	INSPECTION AND ADJUSTMENT	79
SYSTEM DESCRIPTION	5	ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL	79
ELECTRICAL UNITS LOCATION	5	ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement	79
Electrical Units Location	5	FUSE INSPECTION	80
COMPONENT PARTS	8	How To Check	80
Circuit Breaker (Built Into BCM)	8	FUSIBLE LINK INSPECTION	84
Circuit Breaker (External to BCM)	8	Fusible Link	84
Harness Connector	8	REMOVAL AND INSTALLATION	85
Standardized Relay	11	BATTERY	85
WIRING DIAGRAM	14	Removal and Installation	85
POWER SUPPLY ROUTING CIRCUIT	14	BATTERY TRAY	86
Wiring Diagram — Battery Power Supply —	14	Removal and Installation	86
Wiring Diagram — Accessory Power Supply —	23	BATTERY TERMINAL WITH FUSIBLE LINK ...	87
Wiring Diagram — Ignition Power Supply —	27	Exploded View	87
GROUND	34	Removal and Installation	87
Ground Distribution	34	SERVICE DATA AND SPECIFICATIONS (SDS)	88
HARNESS	47	SERVICE DATA AND SPECIFICATIONS (SDS)	88
Harness Layout	47		
FUSE BLOCK - JUNCTION BOX (J/B)	72		
Terminal Arrangement	72		
FUSE, FUSIBLE LINK AND RELAY BOX	73		

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:0000000011676142

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

WARNING:

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

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

WARNING:

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

Precaution for Power Generation Variable Voltage Control System

INFOID:0000000011676143

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 >

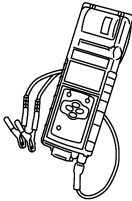
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000011676144

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

Tool number (TechMate No.) Tool name	Description
— (—) Model GR8-1200 NI Multitasking battery and electrical diagnostic station  AWI1A1239ZZ	Tests batteries, starting and charging systems and charges batteries. For operating instructions, refer to diagnostic station instruction manual.
— (—) Model EXP-800 NI Battery and electrical diagnostic analyzer  JSMIA0806ZZ	Tests batteries and charging systems. For operating instructions, refer to diagnostic analyzer instruction manual.

Commercial Service Tool

INFOID:0000000011676145

Tool name	Description
Power tool  PIIB1407E	Loosening nuts, screws and bolts

ELECTRICAL UNITS LOCATION

< SYSTEM DESCRIPTION >

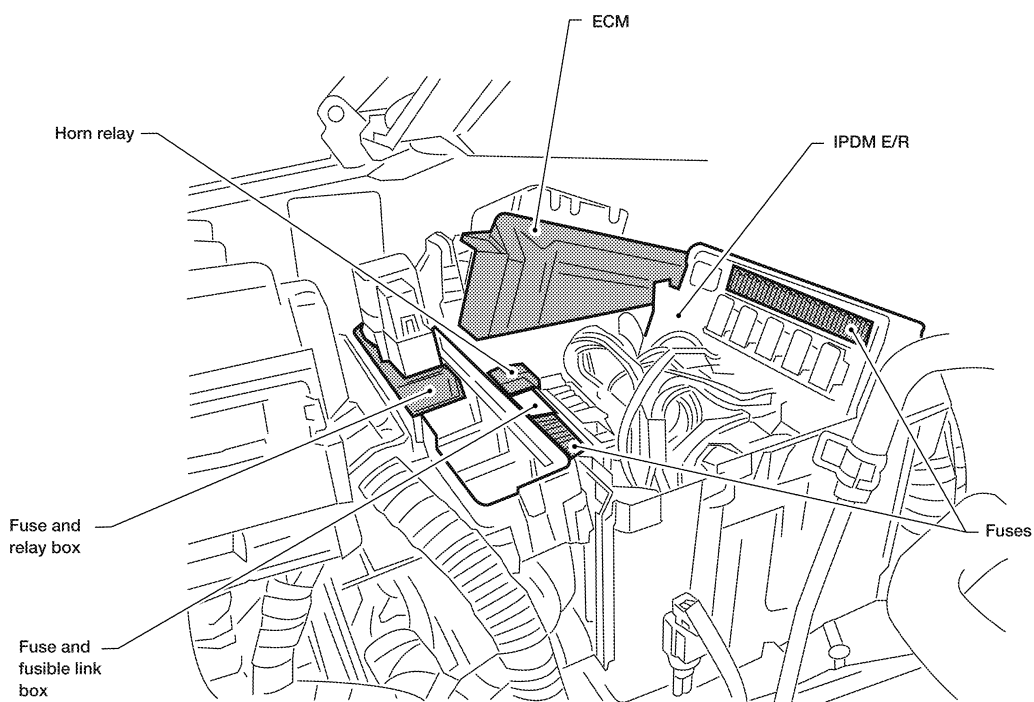
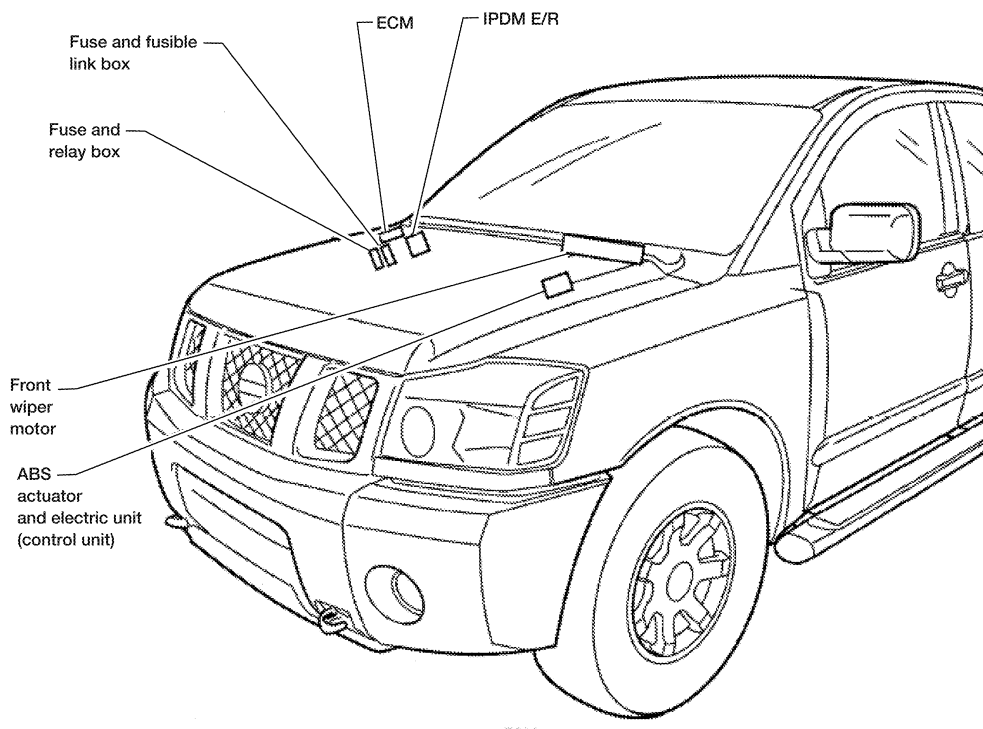
SYSTEM DESCRIPTION

ELECTRICAL UNITS LOCATION

Electrical Units Location

INFOID:0000000011676146

ENGINE COMPARTMENT

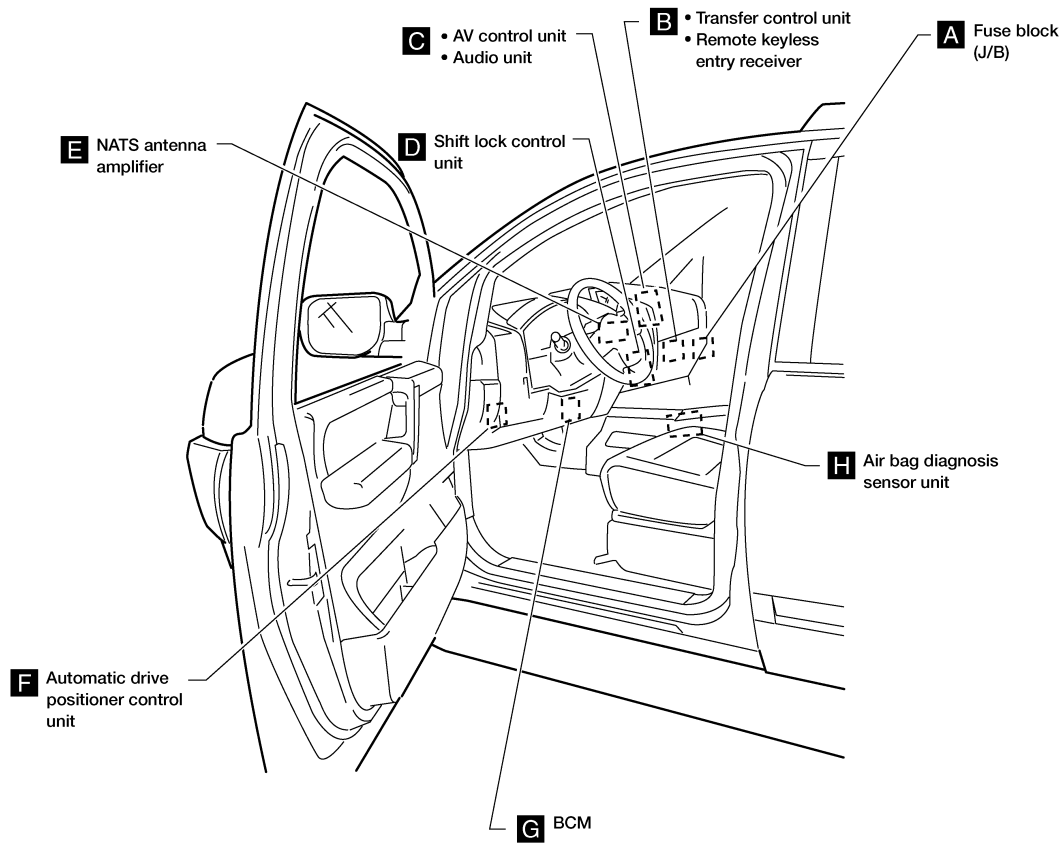


ALMIA0303GB

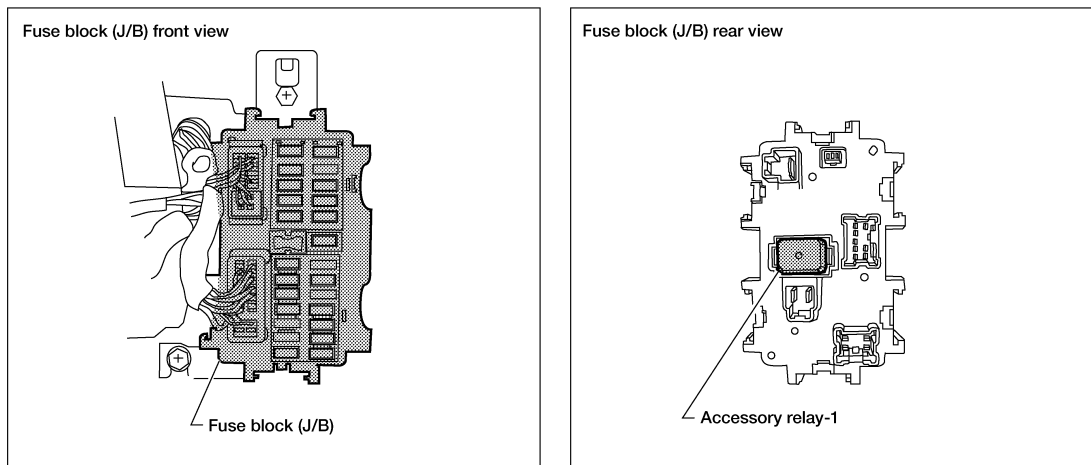
ELECTRICAL UNITS LOCATION

< SYSTEM DESCRIPTION >

PASSENGER COMPARTMENT



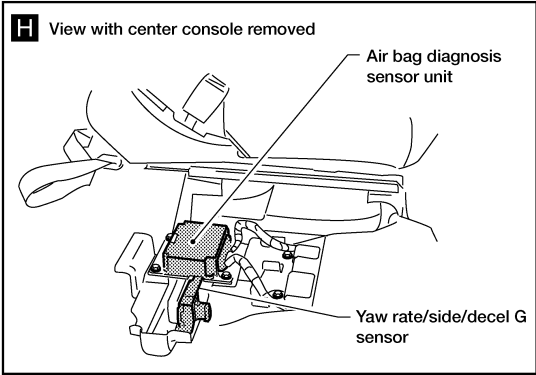
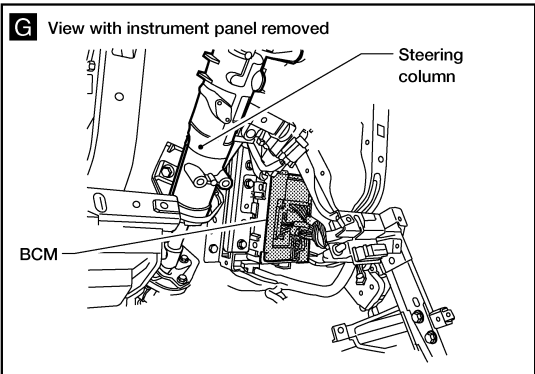
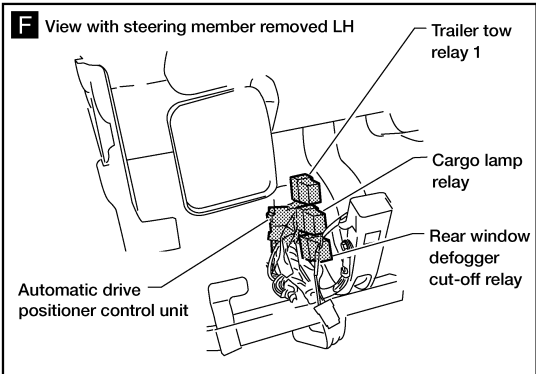
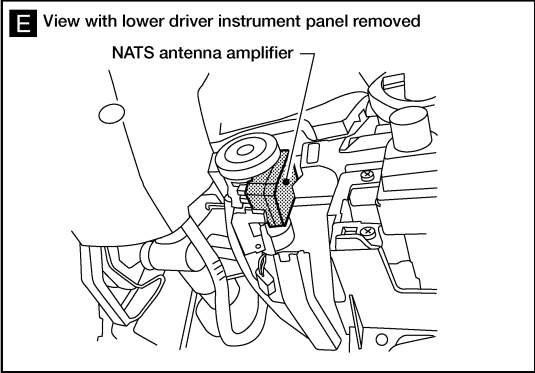
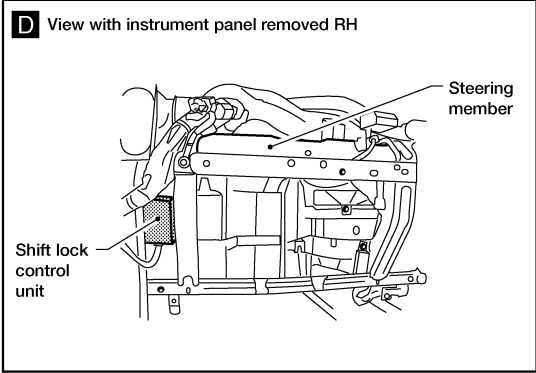
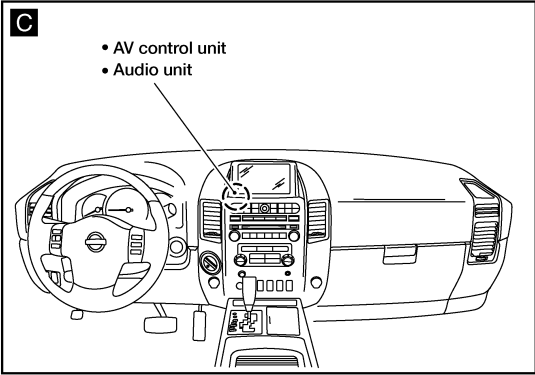
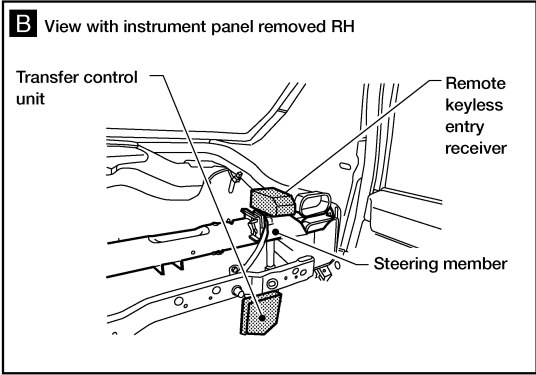
A Instrument panel side RH



ABMIA6105GB

ELECTRICAL UNITS LOCATION

< SYSTEM DESCRIPTION >



ABMIA6106GB

A
B
C
D
E
F
G
H
I
J
K
L
PG
N
O
P

PG

COMPONENT PARTS

< SYSTEM DESCRIPTION >

COMPONENT PARTS

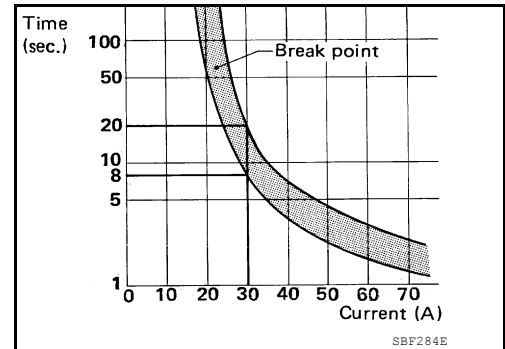
Circuit Breaker (Built Into BCM)

INFOID:0000000011676147

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

This circuit breaker is used for the following systems:

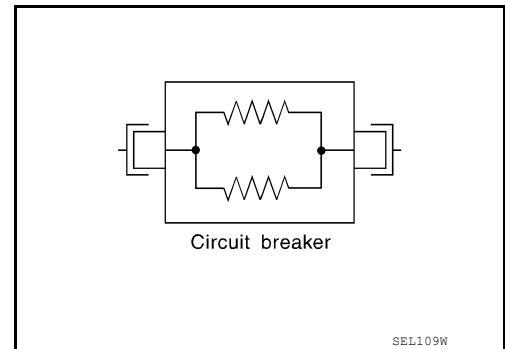
- Power windows
- Power moonroof



Circuit Breaker (External to BCM)

INFOID:0000000011676148

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.



Harness Connector

INFOID:0000000011676149

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.

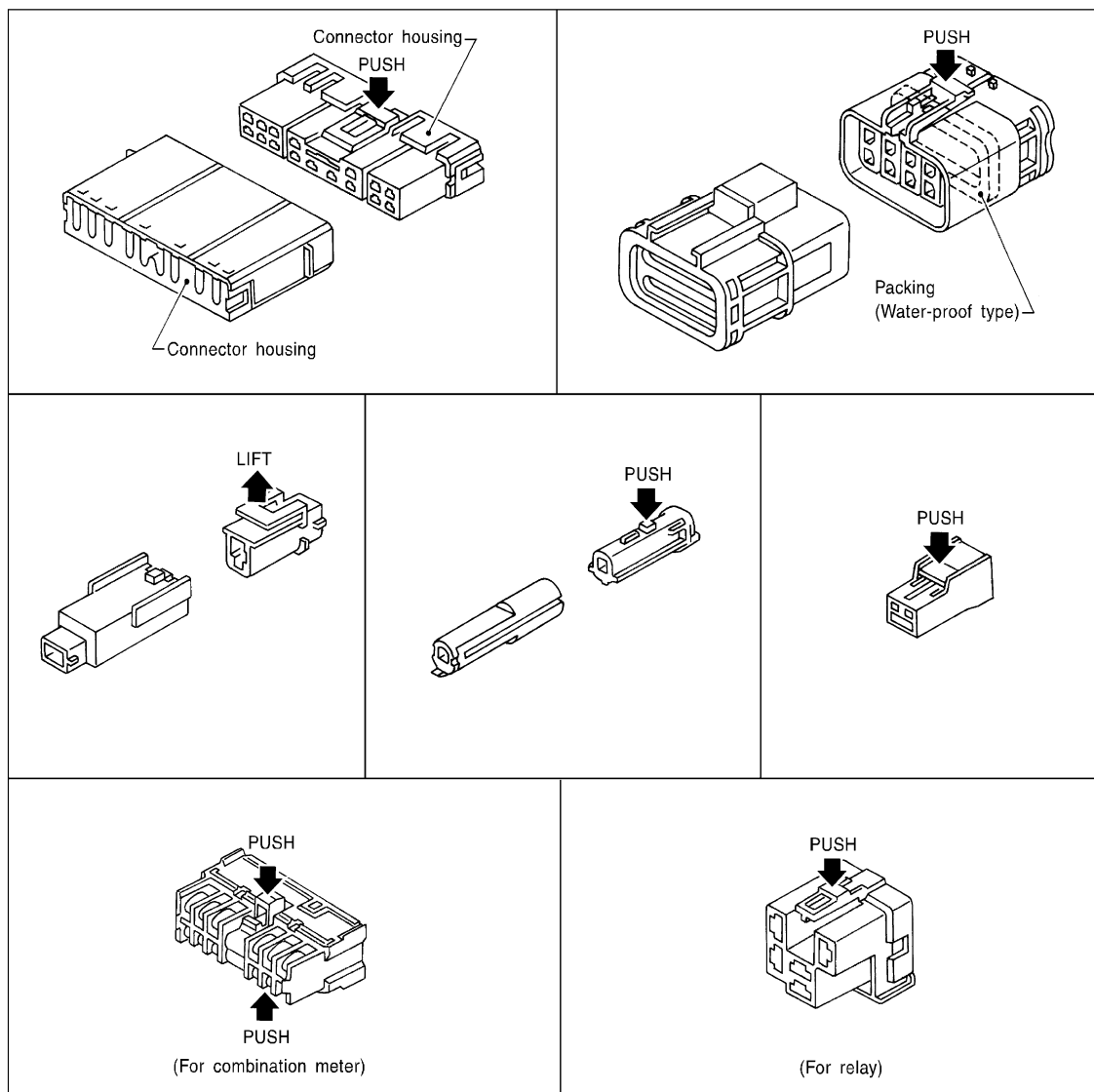
CAUTION:

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

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[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 figure below.

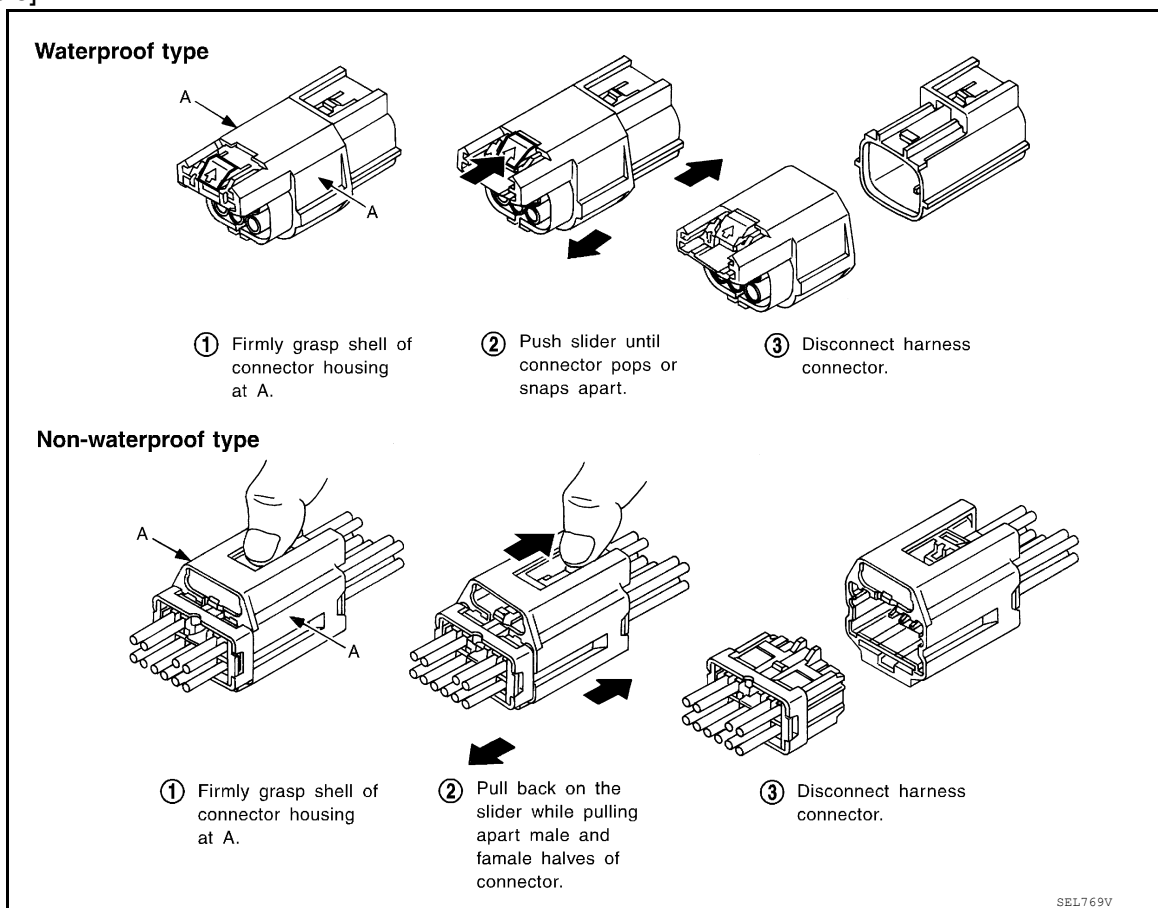
CAUTION:

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

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[Example]



HARNESS CONNECTOR (LEVER LOCKING TYPE)

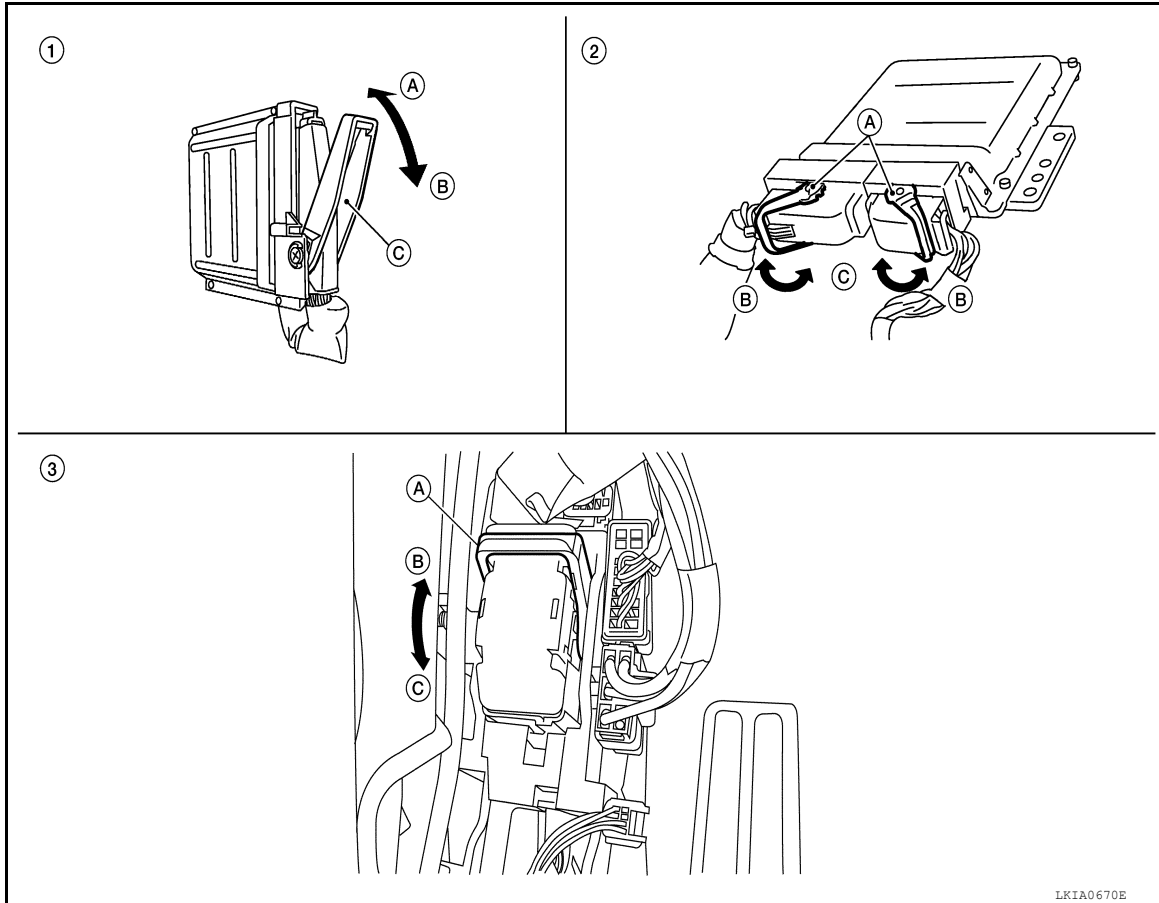
- Lever locking type harness connectors are used on certain control units and control modules such as ECM, ABS actuator and electric unit (control unit), etc.
- Lever locking type harness connectors are also used on super multiple junction (SMJ) connectors.
- Always confirm the lever is fully locked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

CAUTION:

COMPONENT PARTS

< SYSTEM DESCRIPTION >

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



1. Control unit with single lever

- A. Fasten
- B. Loosen
- C. Lever

2. Control unit with dual lever

- A. Lever
- B. Fasten
- C. Loosen

3. SMJ connector

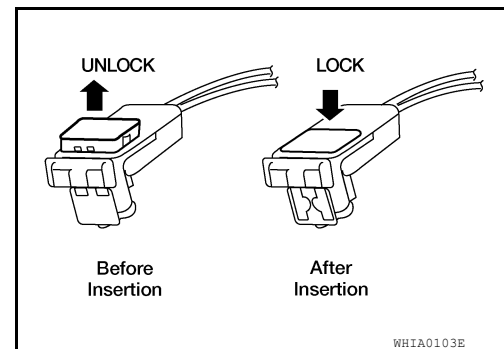
- A. Lever
- B. Fasten
- C. Loosen

HARNESS CONNECTOR (DIRECT-CONNECT SRS COMPONENT TYPE)

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

CAUTION:

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



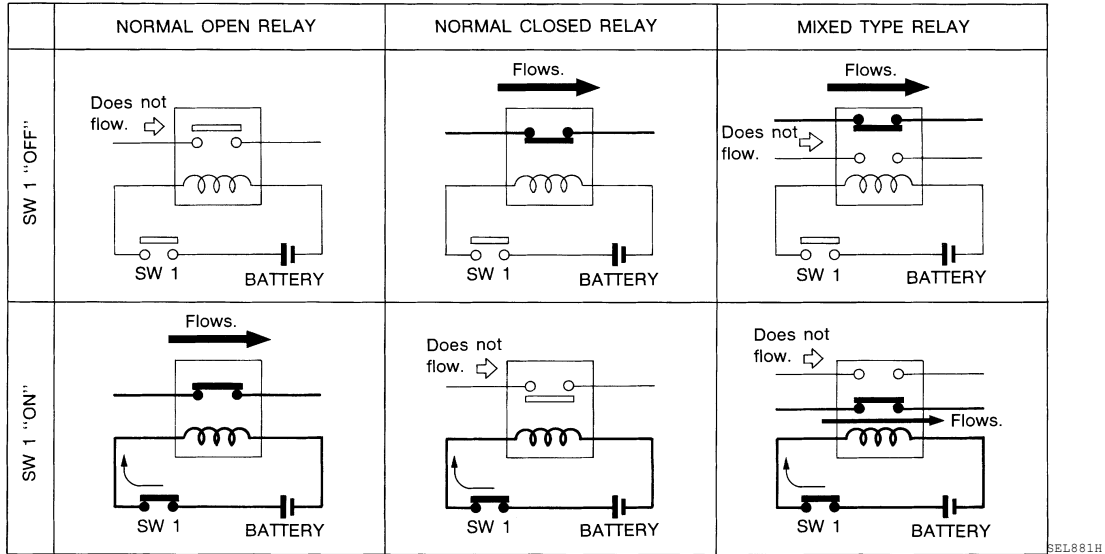
Standardized Relay

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

COMPONENT PARTS

< SYSTEM DESCRIPTION >

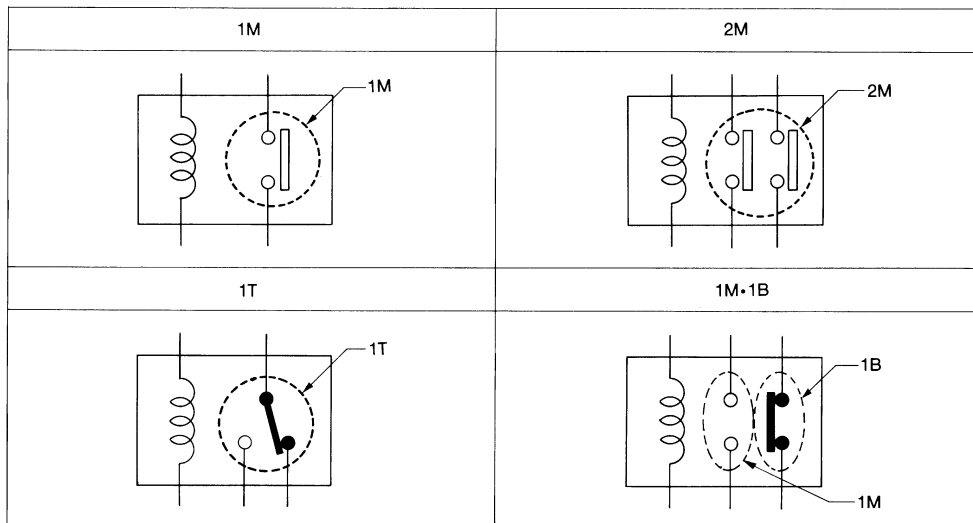
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



SEL881H

TYPE OF STANDARDIZED RELAYS

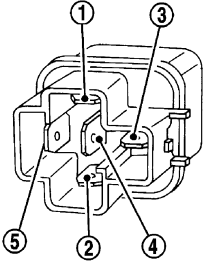
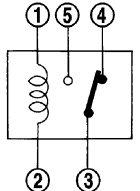
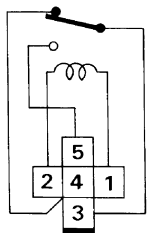
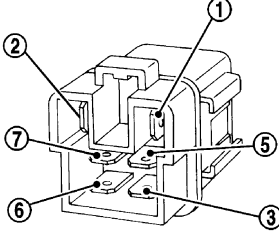
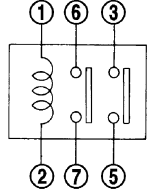
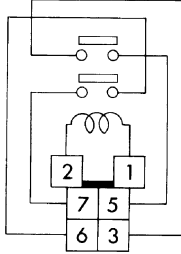
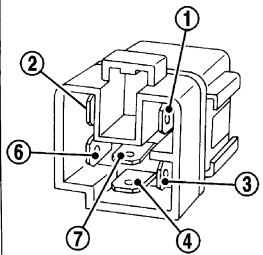
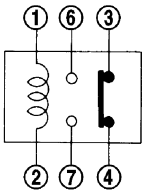
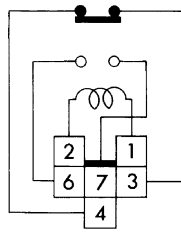
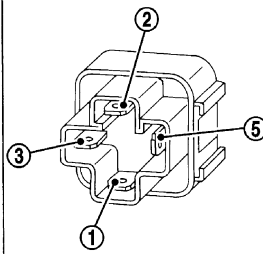
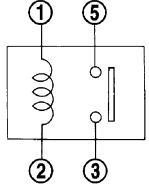
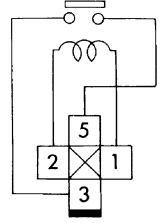
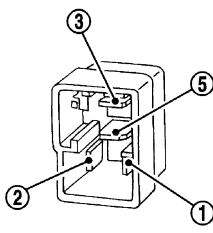
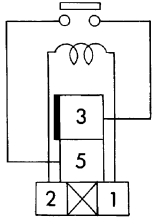
1M 1 Make 2M 2 Make
 1T 1 Transfer 1M·1B 1 Make 1 Break



SEL882H

COMPONENT PARTS

< SYSTEM DESCRIPTION >

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

POWER SUPPLY ROUTING CIRCUIT

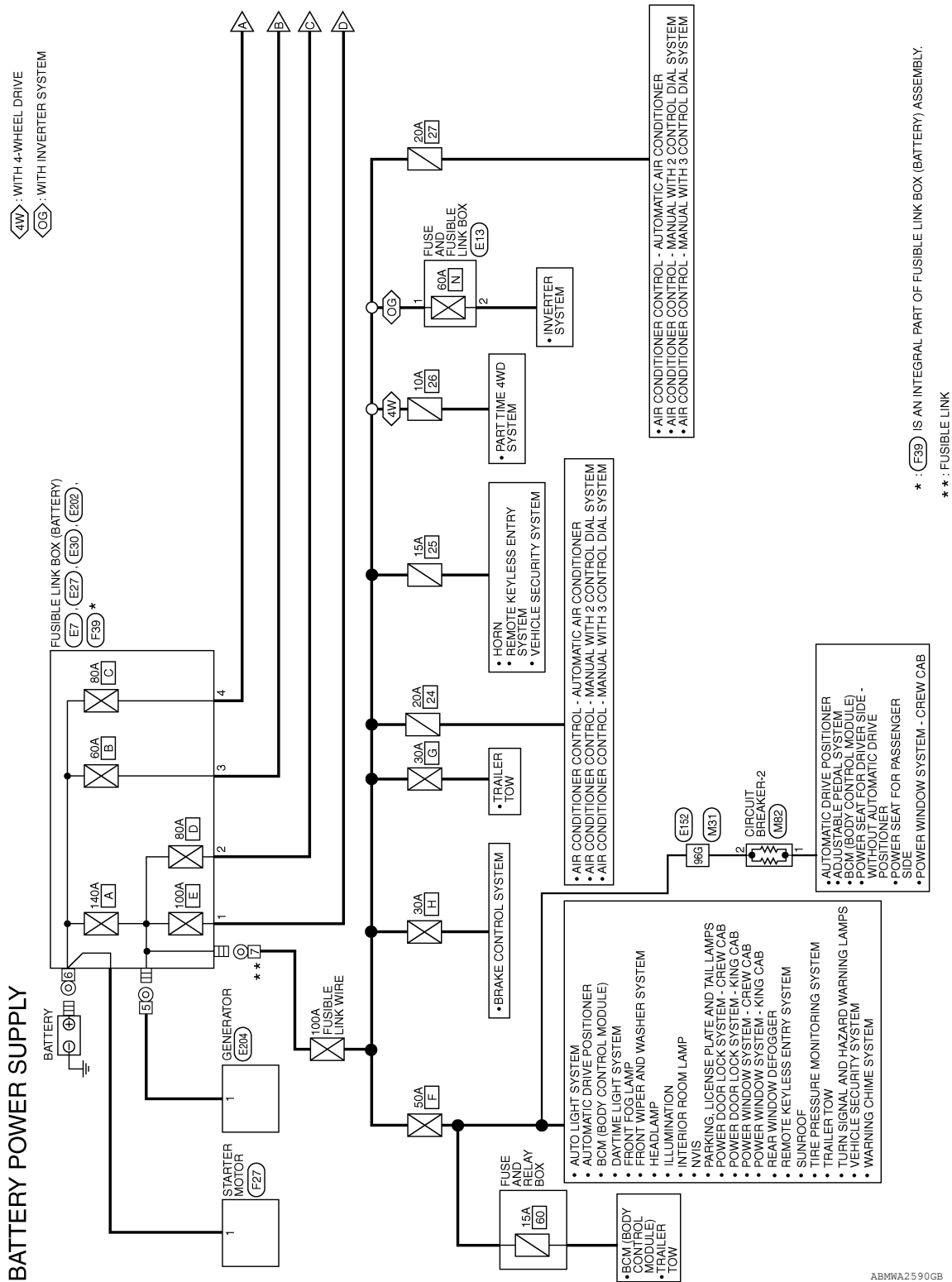
< WIRING DIAGRAM >

WIRING DIAGRAM

POWER SUPPLY ROUTING CIRCUIT

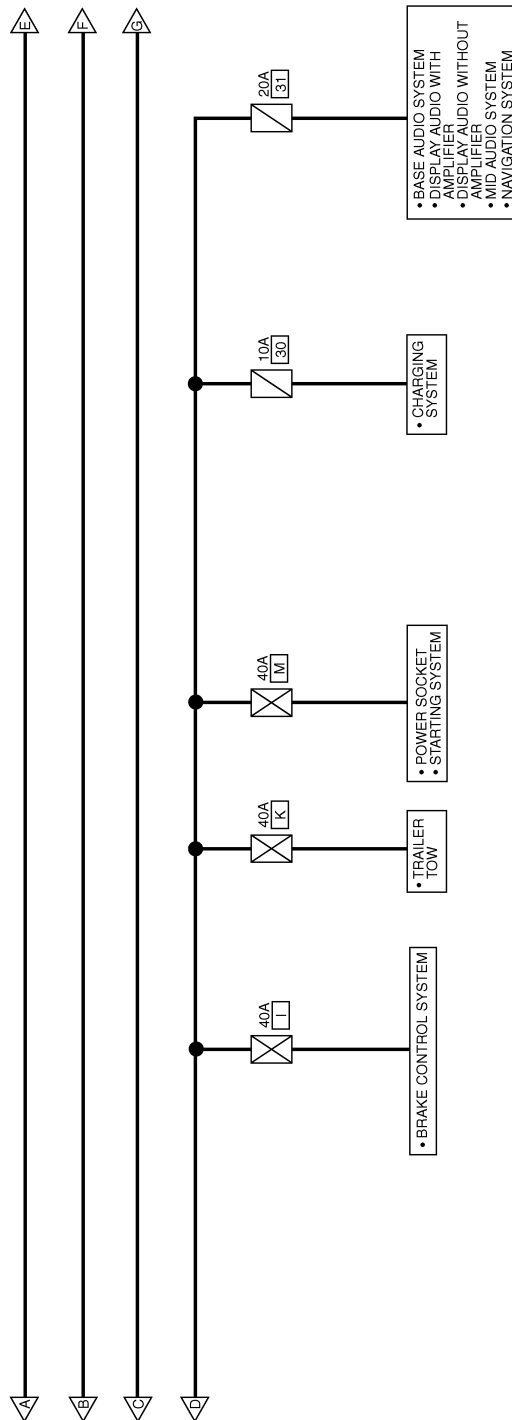
Wiring Diagram —Battery Power Supply —

INFOID:0000000011676151



POWER SUPPLY ROUTING CIRCUIT

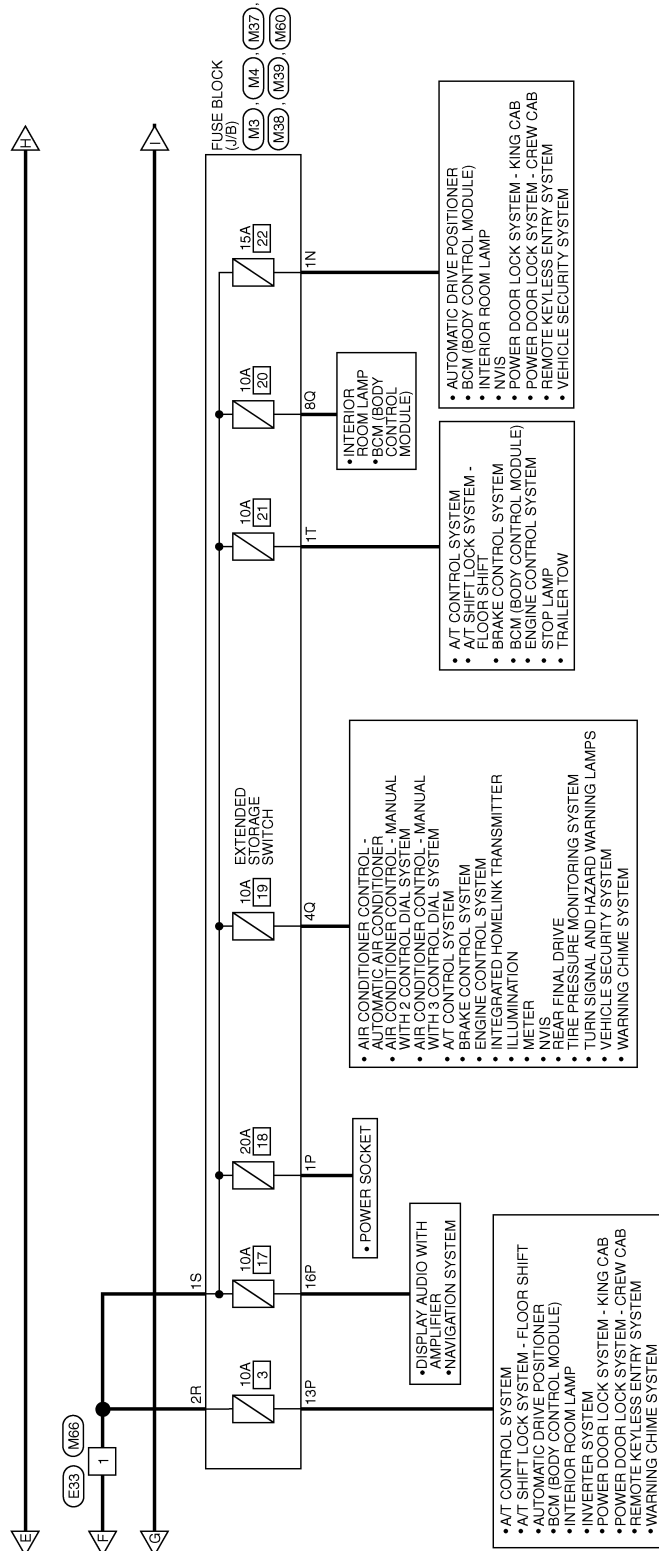
< WIRING DIAGRAM >



ABMWA2591GB

POWER SUPPLY ROUTING CIRCUIT

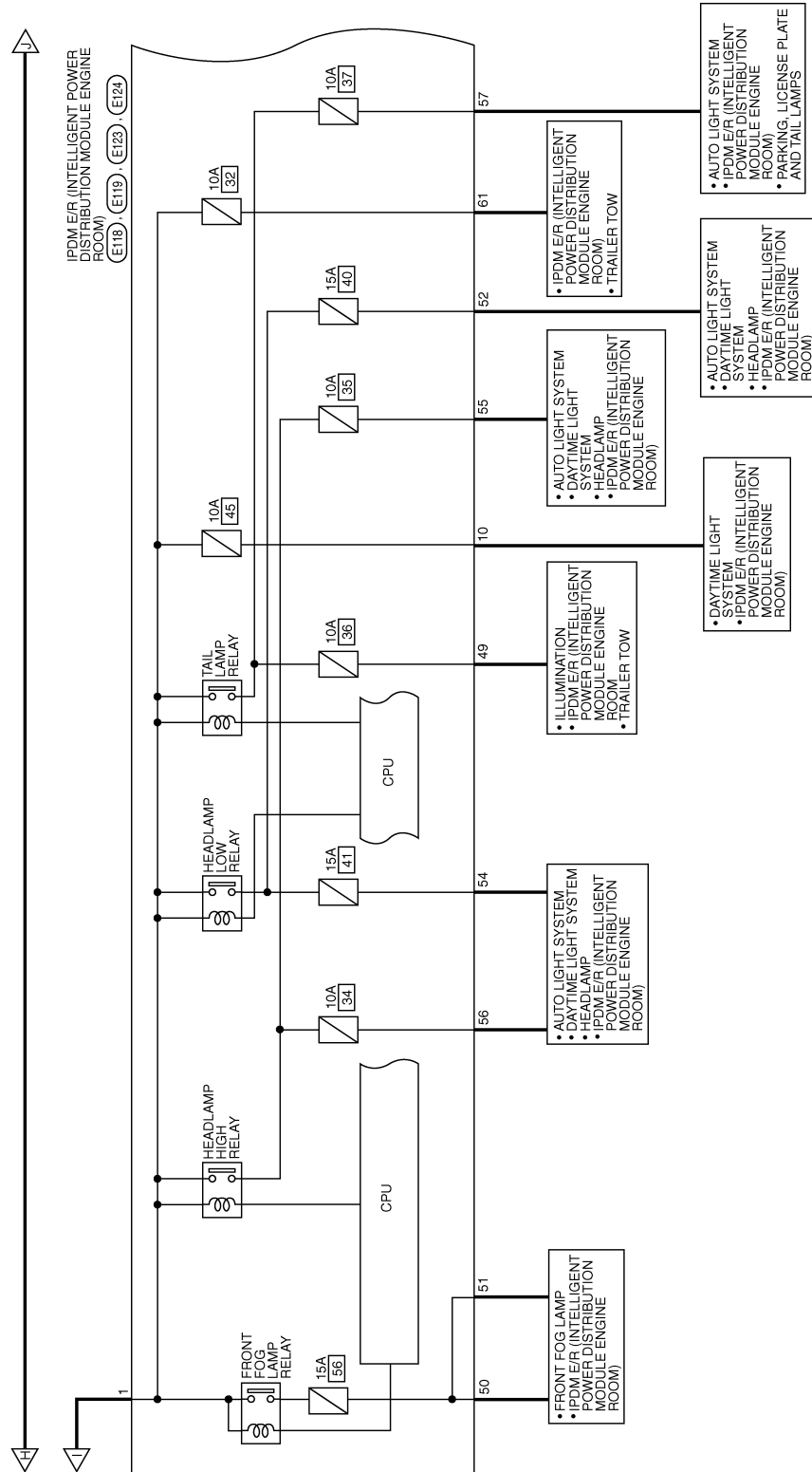
< WIRING DIAGRAM >



ABMWA2592GB

POWER SUPPLY ROUTING CIRCUIT

< WIRING DIAGRAM >

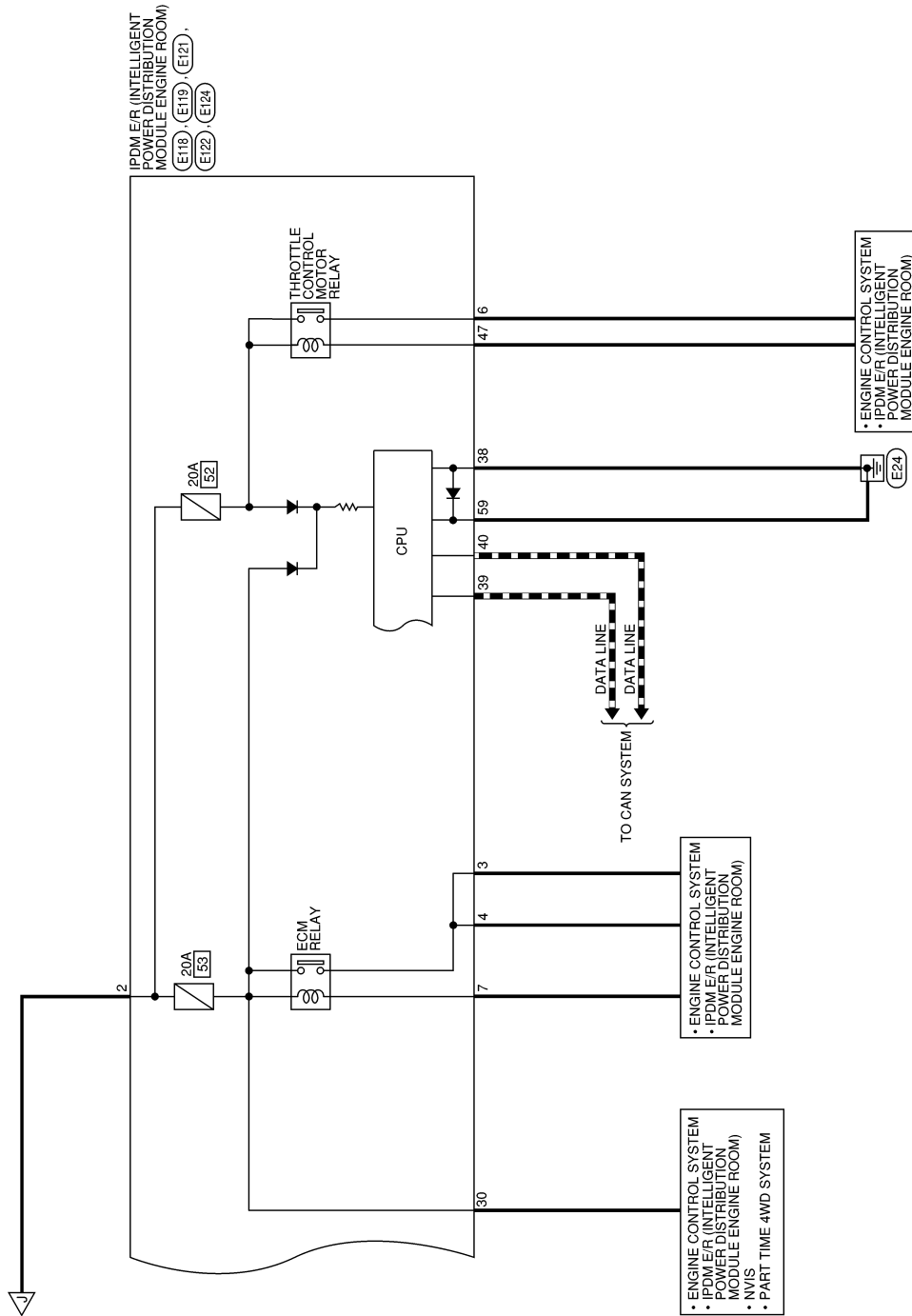


ABMWA2593GB

A
B
C
D
E
F
G
H
I
J
K
L
PG
N
O
P

POWER SUPPLY ROUTING CIRCUIT

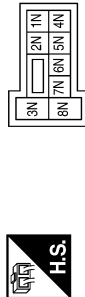
< WIRING DIAGRAM >



AAMWA1613GB

BATTERY POWER SUPPLY CONNECTORS

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



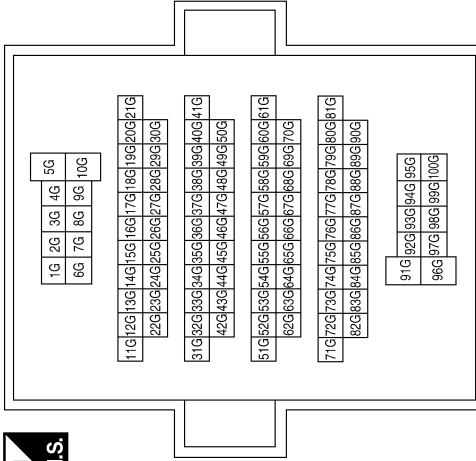
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



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

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



Terminal No.	Color of Wire	Signal Name
96G	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	G	-

ABMIA4108GB

POWER SUPPLY ROUTING CIRCUIT

< WIRING DIAGRAM >

Connector No.	M82
Connector Name	CIRCUIT BREAKER-2
Connector Color	WHITE



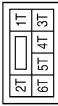
Terminal No.	Color of Wire	Signal Name
1	L/B	-
2	W/B	-

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.	E13
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BLACK



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

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



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

ABMIA4125GB

POWER SUPPLY ROUTING CIRCUIT

< WIRING DIAGRAM >

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



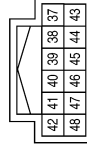
Terminal No.	Color of Wire	Signal Name
1	W	-

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



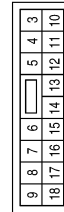
Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
47	O	ETC RLY CONT

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



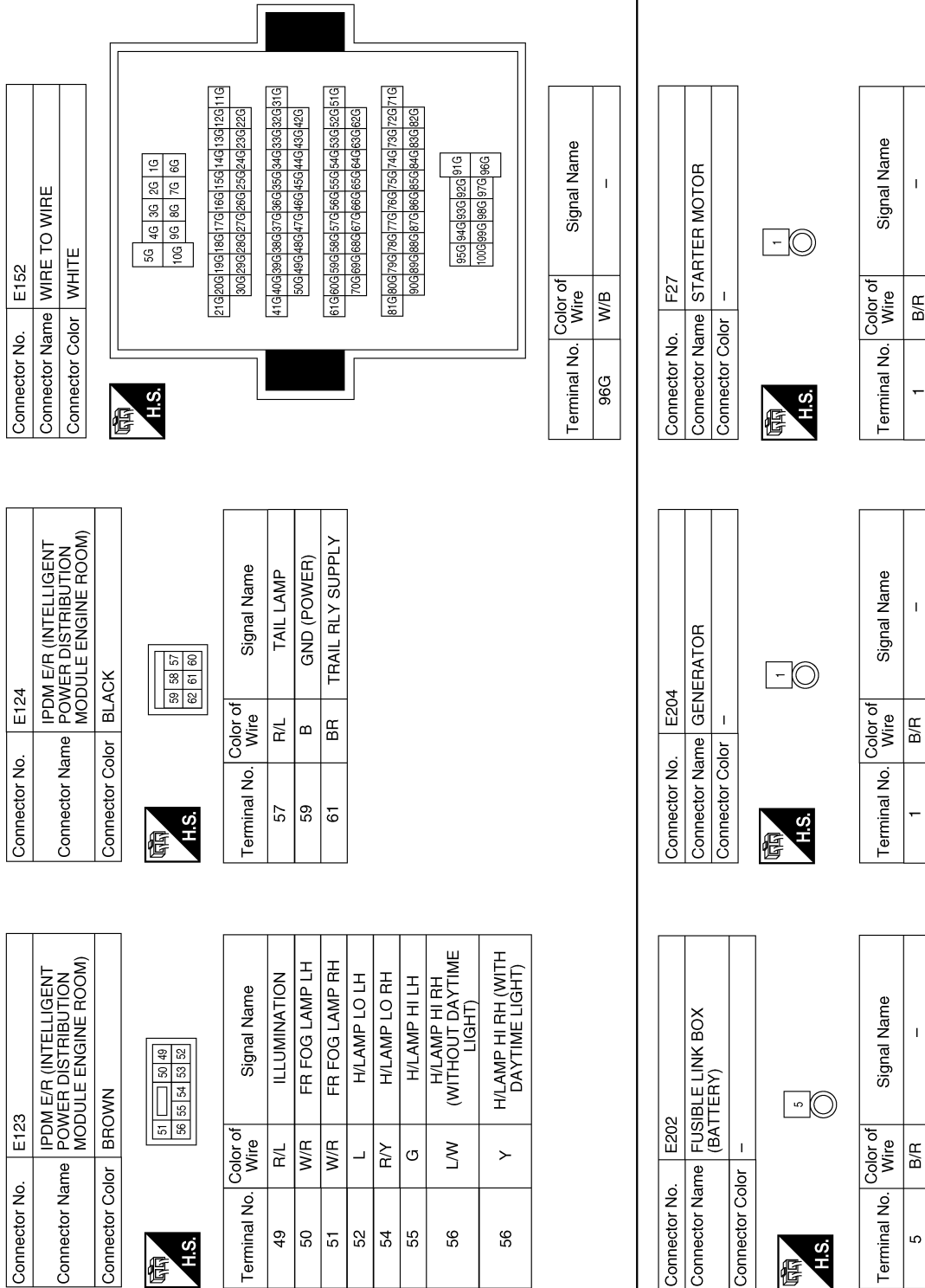
Terminal No.	Color of Wire	Signal Name
3	BR	IGN COIL
4	W/L	ECM
6	L	ETC
7	W/B	ECM RLY CONT
10	G	DTRL RLY SUPPLY

ABMIA4126GB

A
B
C
D
E
F
G
H
I
J
K
L
PG
N
O
P

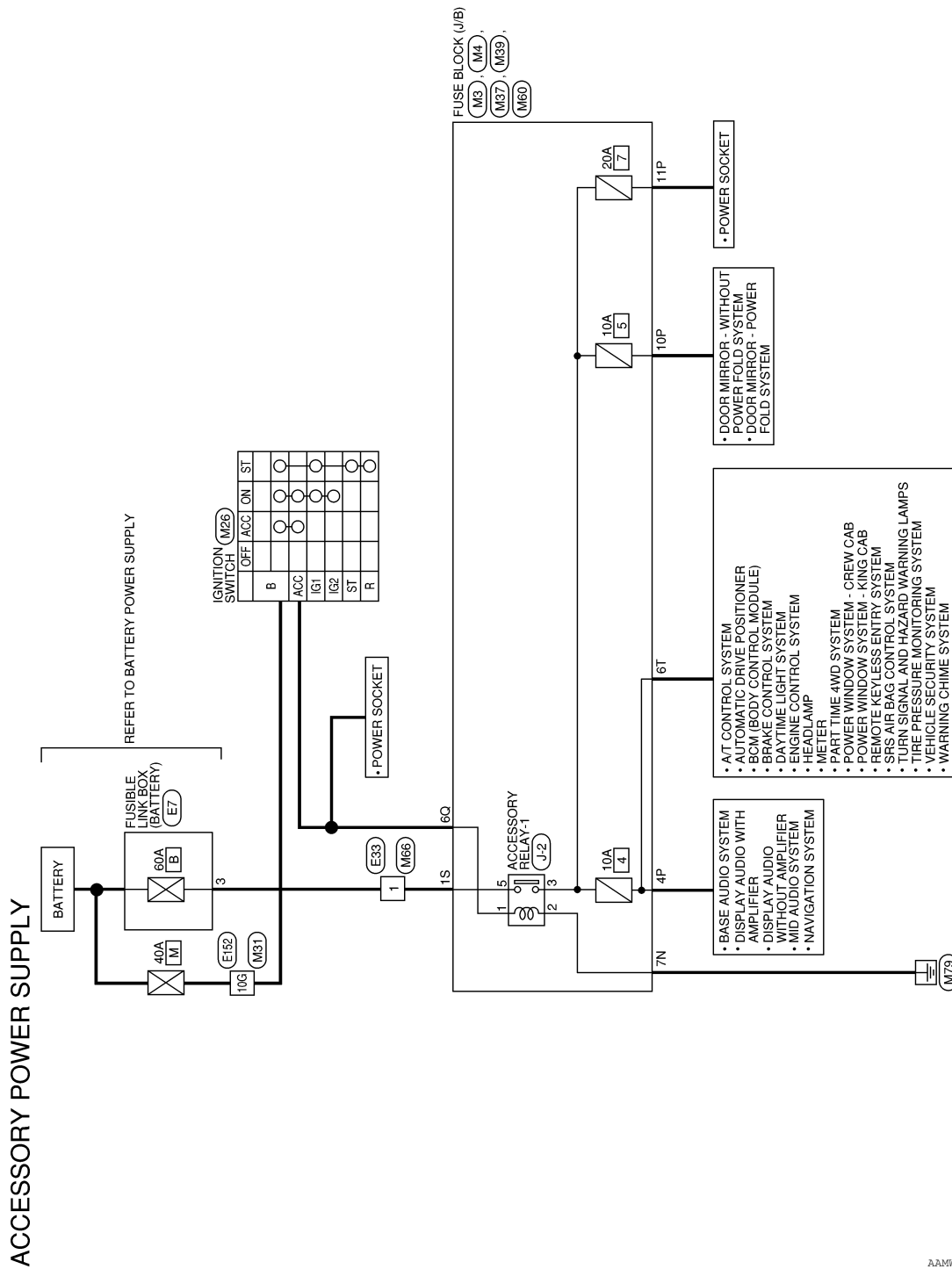
POWER SUPPLY ROUTING CIRCUIT

< WIRING DIAGRAM >



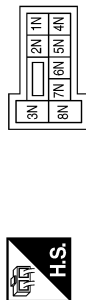
ABMIA6110GB

INFOID:0000000011676152



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



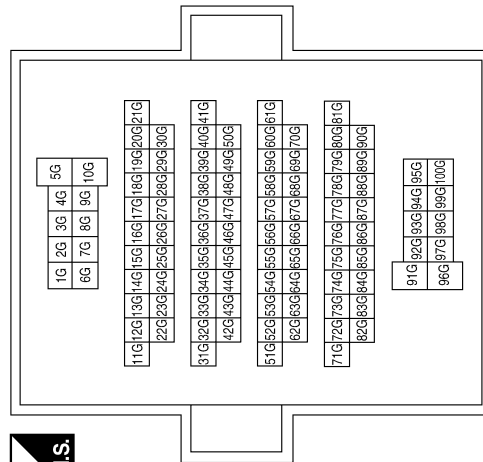
Terminal No.	Color of Wire	Signal Name
4P	V	-
10P	O	-
11P	G/W	-

Connector No.	M26
Connector Name	IGNITION SWITCH
Connector Color	WHITE



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
10G	G	-

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



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

POWER SUPPLY ROUTING CIRCUIT

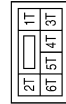
< WIRING DIAGRAM >

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



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

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



Terminal No.	6T	Color of Wire	O	Signal Name	-
--------------	----	---------------	---	-------------	---

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



Terminal No.	6Q	Color of Wire	V	Signal Name	-
--------------	----	---------------	---	-------------	---

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



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

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

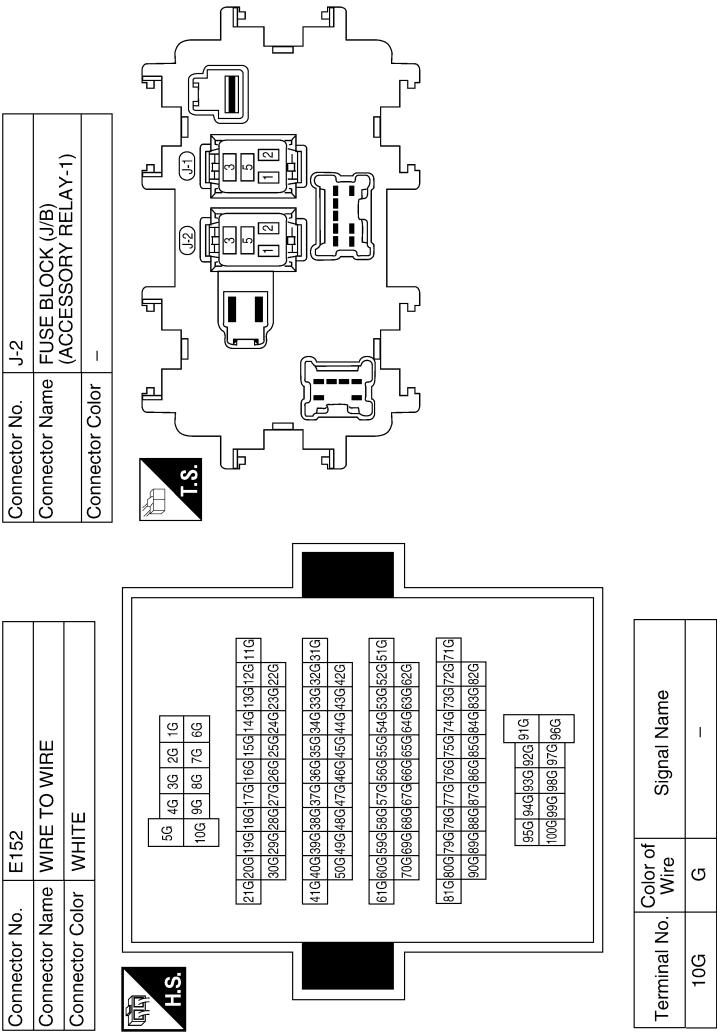


Terminal No.	3	Color of Wire	W	Signal Name	-
--------------	---	---------------	---	-------------	---

ABMIA1609GB

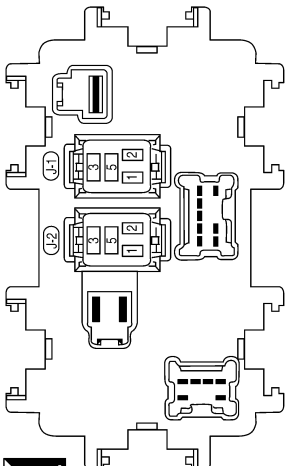
POWER SUPPLY ROUTING CIRCUIT

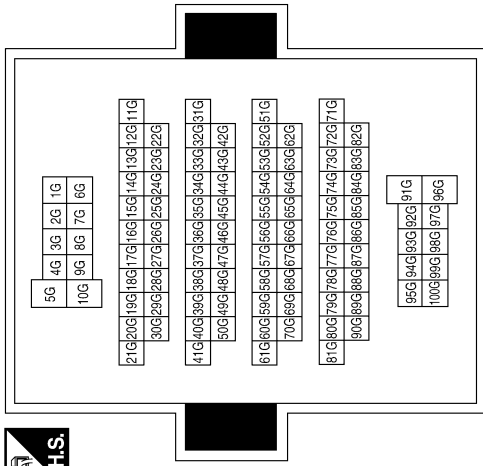
< WIRING DIAGRAM >



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





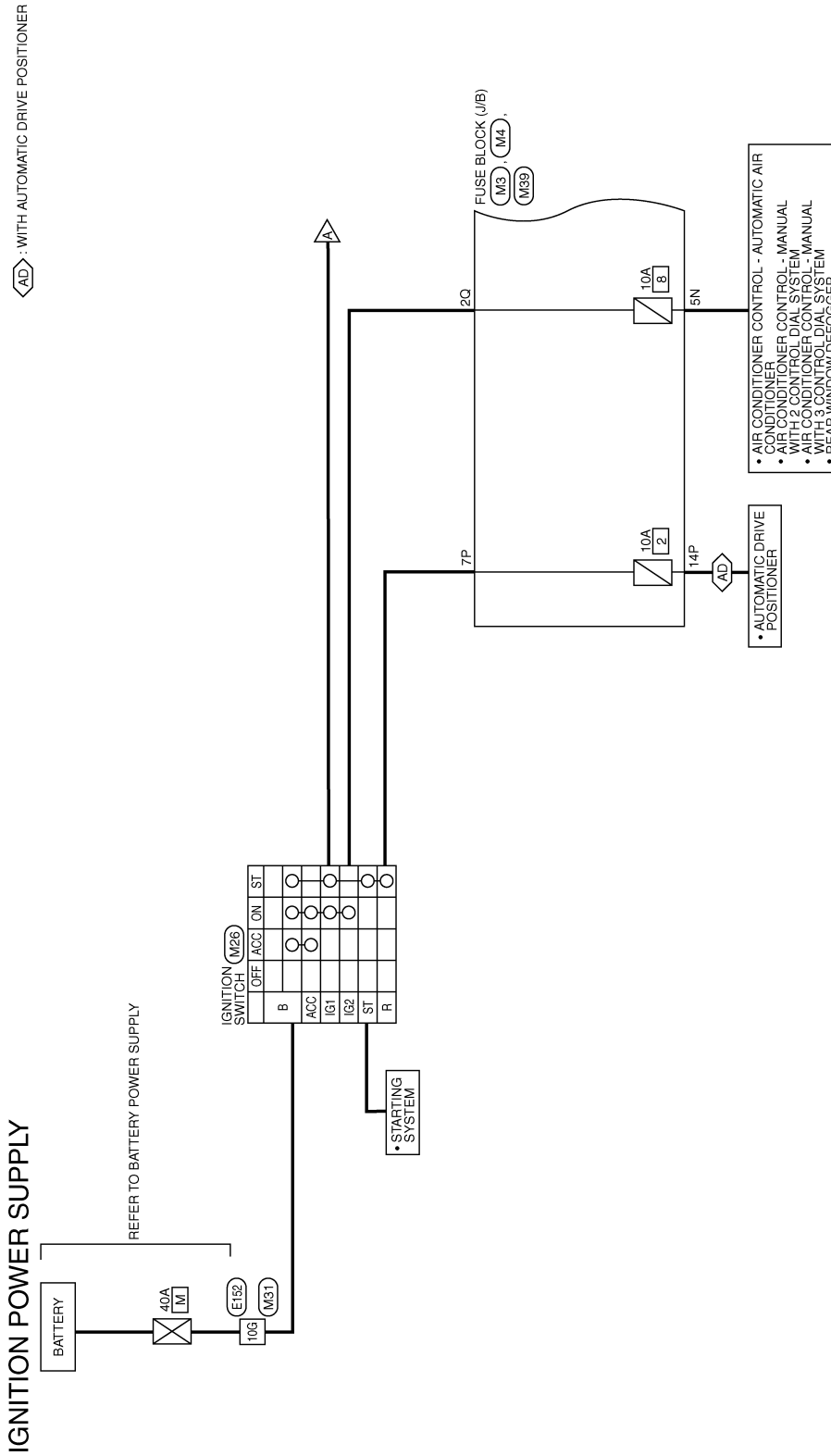


POWER SUPPLY ROUTING CIRCUIT

< WIRING DIAGRAM >

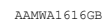
Wiring Diagram —Ignition Power Supply —

INFOID:0000000011676153



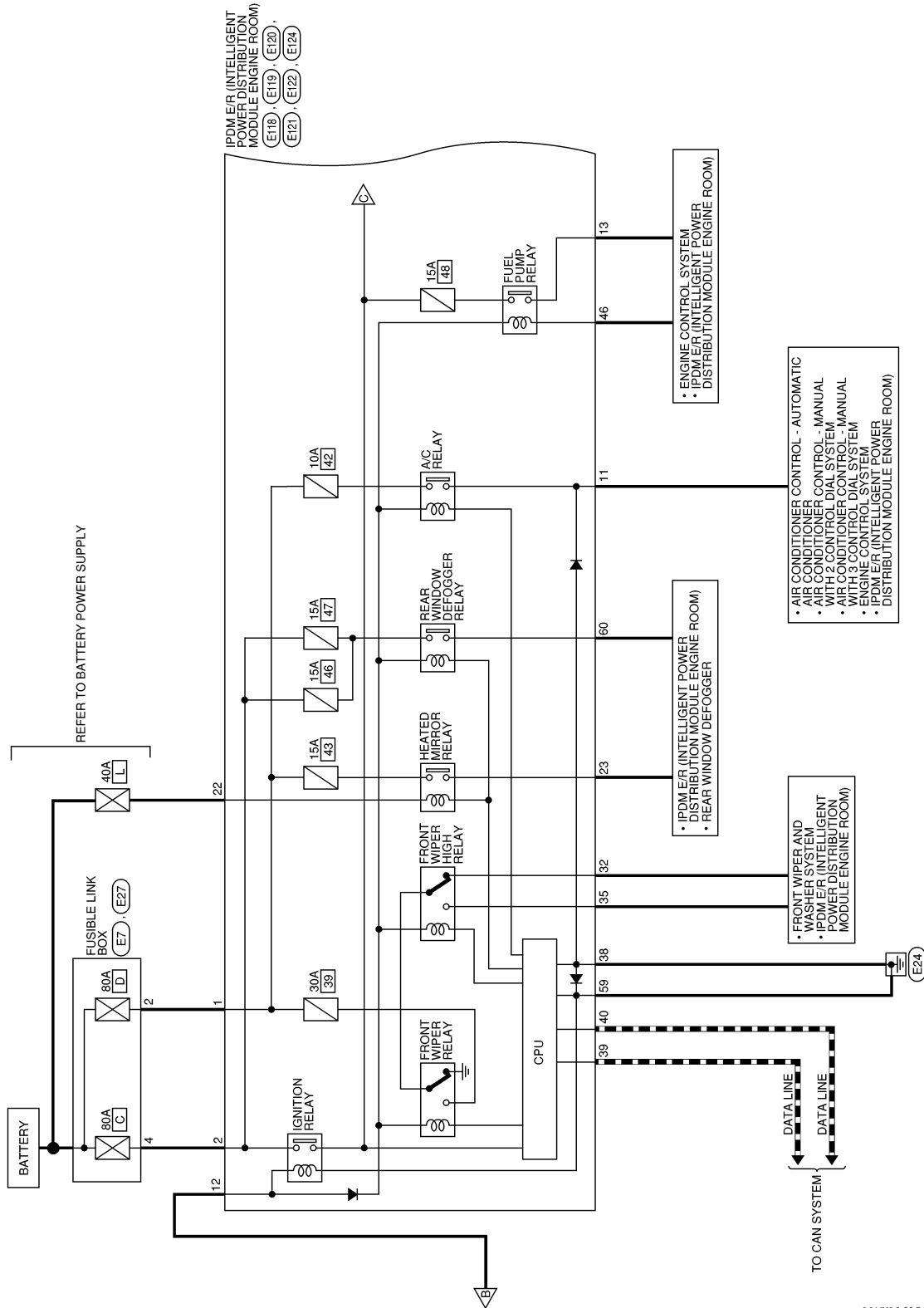
ABMWA2596GB

< WIRING DIAGRAM >



POWER SUPPLY ROUTING CIRCUIT

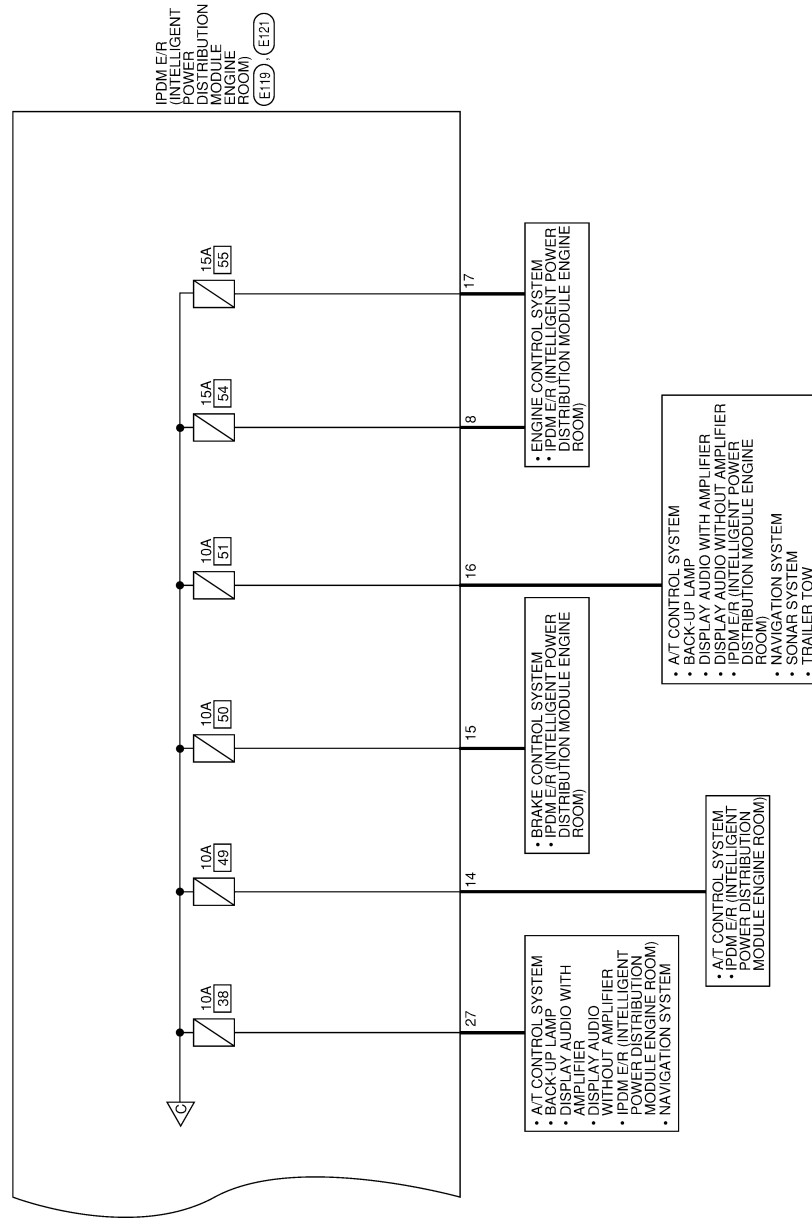
< WIRING DIAGRAM >



AAMWA1615GB

POWER SUPPLY ROUTING CIRCUIT

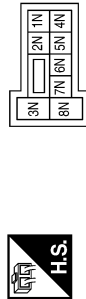
< WIRING DIAGRAM >



ABMWA1777GB

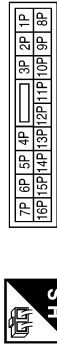
IGNITION POWER SUPPLY CONNECTORS

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



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

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



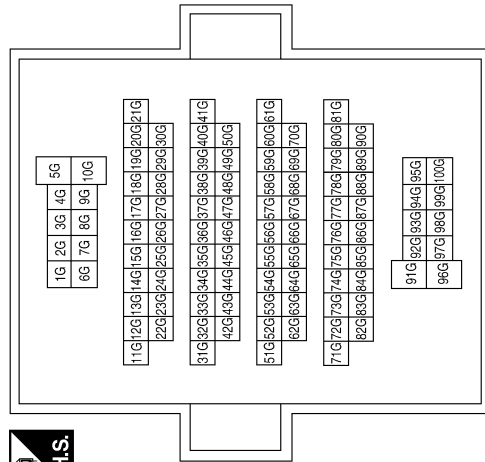
Terminal No.	Color of Wire	Signal Name
5P	O/L	-
6P	W/L	-
7P	LG	-
9P	R/B	-
14P	O	-

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
2G	B/R	-
10G	G	-

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



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

ABMIA4112GB

POWER SUPPLY ROUTING CIRCUIT

< WIRING DIAGRAM >

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

30	20	10
80	70	60
50	40	



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

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

4	3
---	---



Terminal No.	Color of Wire	Signal Name
4	R	-

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

1	2
---	---



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

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

1	2
---	---



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

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					



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.	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
22	G	F/L MOTOR
23	GR/W	HEATED MIRROR

POWER SUPPLY ROUTING CIRCUIT

< WIRING DIAGRAM >

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	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
46	GR	FUEL PUMP RLY CONT

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

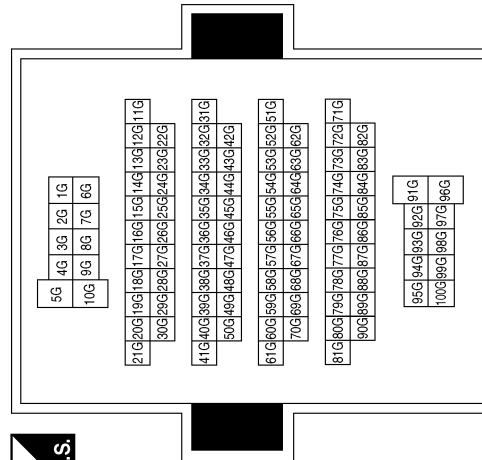


29	28	27	26	25
36	35	34	33	32
31	30			

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

Terminal No.	Color of Wire	Signal Name
2G	B/R	-
10G	G	-

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



ABMIA6111GB

A
B
C
D
E
F
G
H
I
J
K
L
PG
N
O
P

GROUND

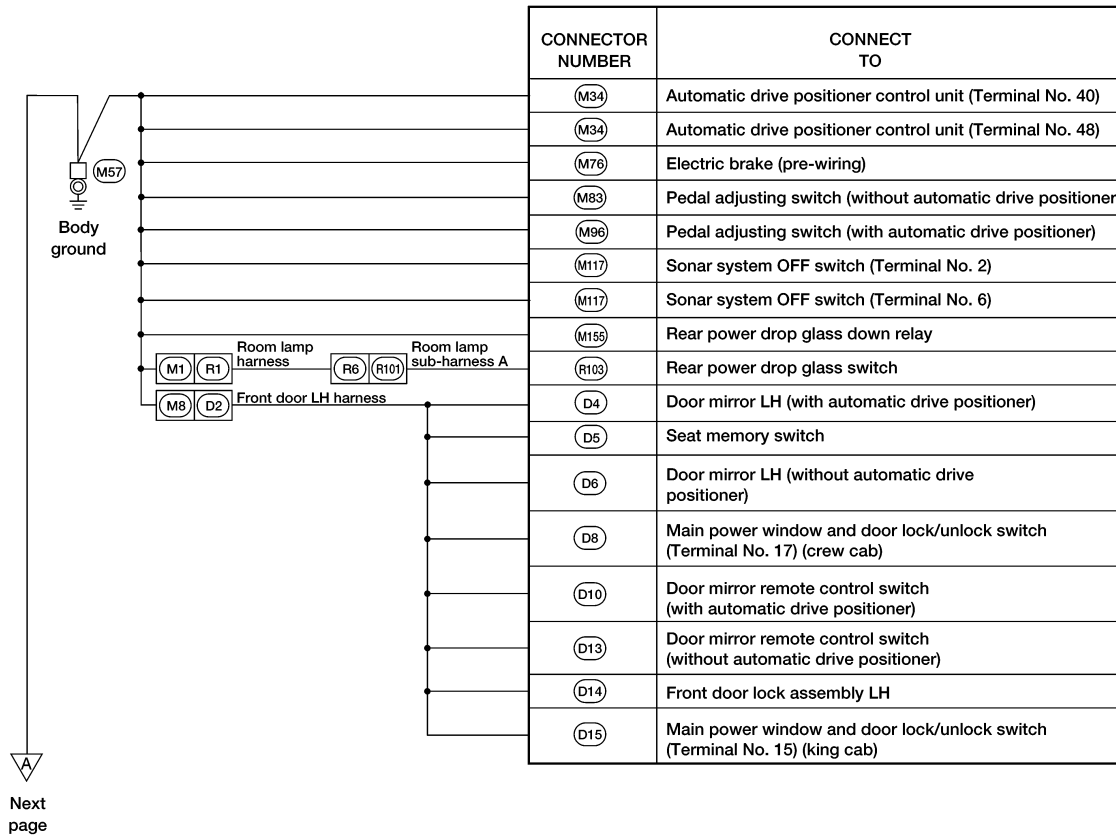
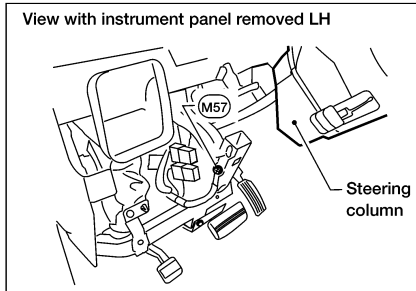
< WIRING DIAGRAM >

GROUND

Ground Distribution

INFOID:000000011676154

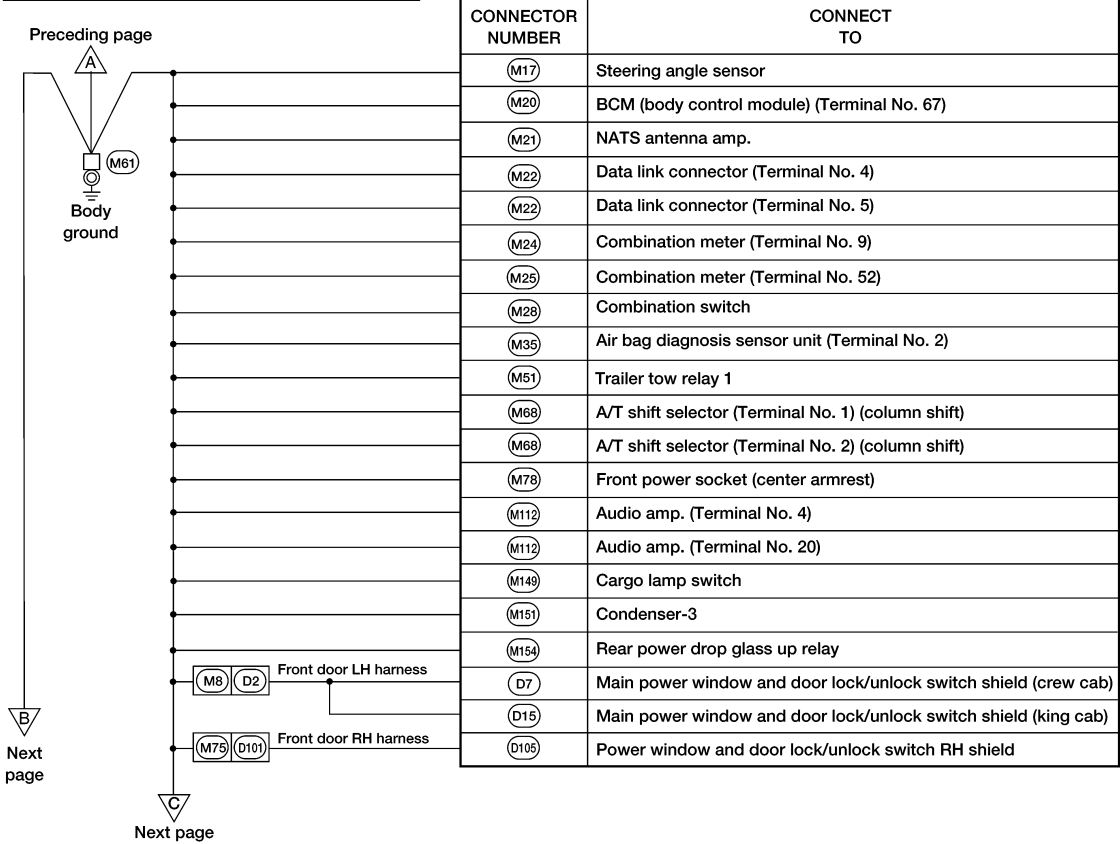
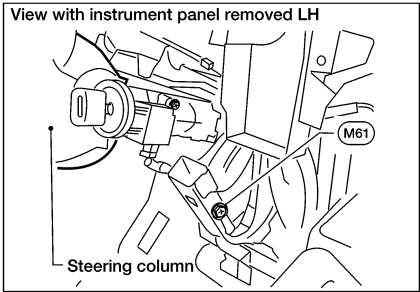
MAIN HARNESS



ABMIA6121GB

GROUND

< WIRING DIAGRAM >



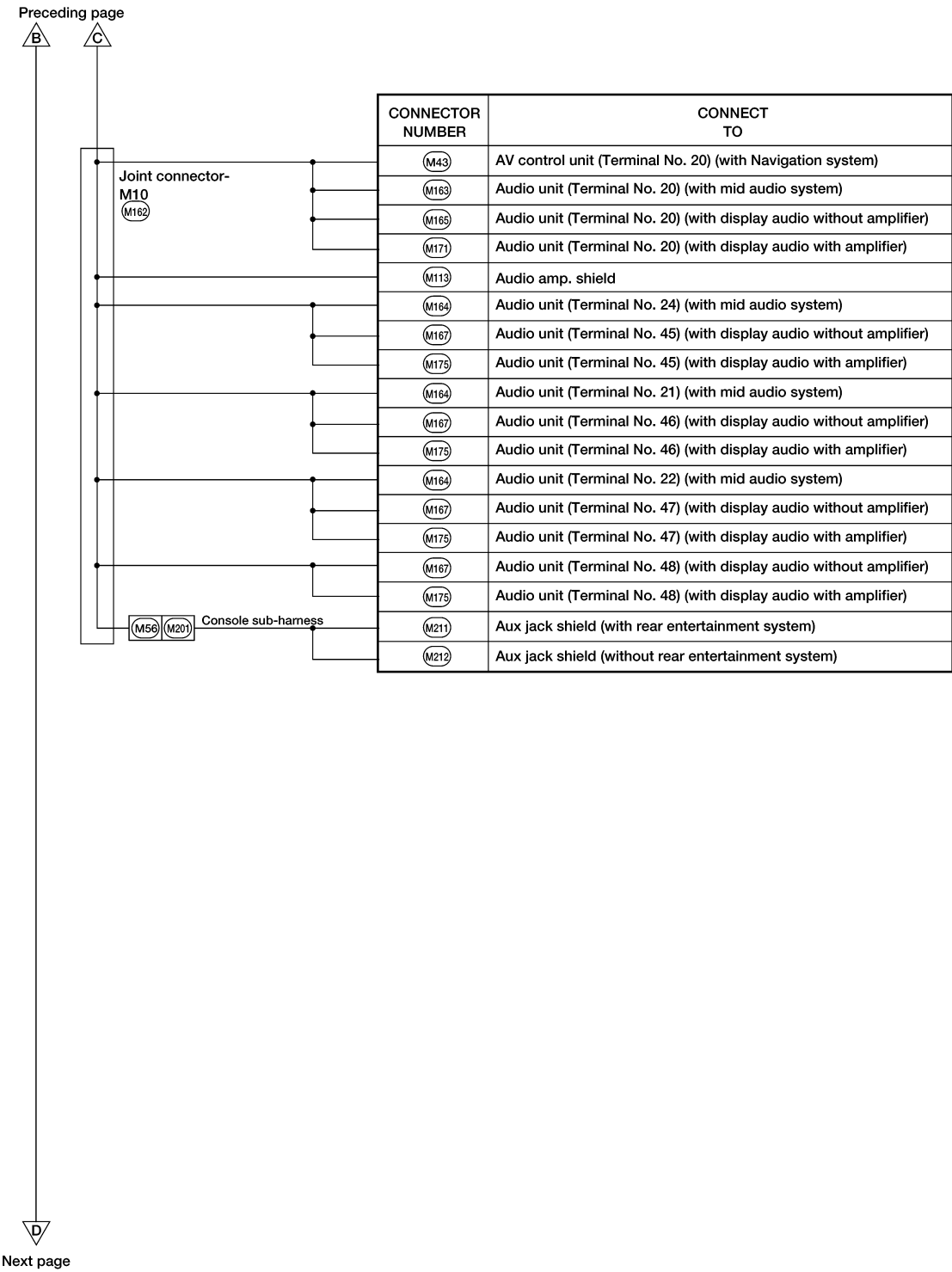
ABMIA4116GB

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

PG

GROUND

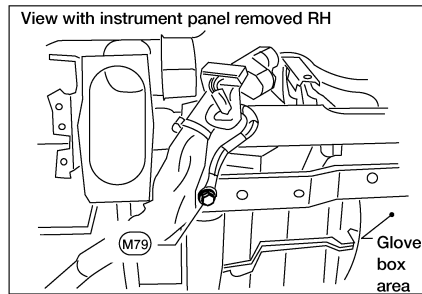
< WIRING DIAGRAM >



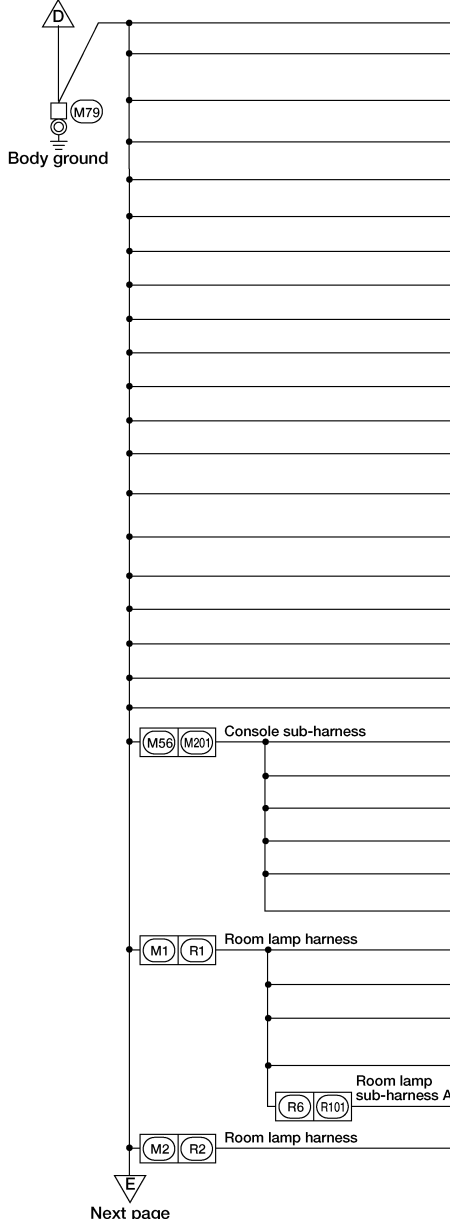
ABMIA6122GB

GROUND

< WIRING DIAGRAM >



Preceding page

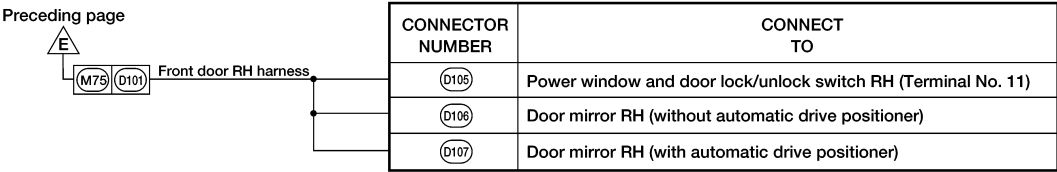


CONNECTOR NUMBER	CONNECT TO
(M3)	Fuse block (J/B)
(M12)	Front passenger air bag OFF indicator (with vehicle security system)
(M13)	Front passenger air bag OFF indicator (without vehicle security system)
(M32)	In-vehicle sensor
(M47)	Hazard switch (with 2 control dial system or auto A/C)
(M50)	Front air control (Terminal No. 35) (with auto A/C)
(M53)	Front power socket LH
(M54)	Front power socket RH
(M55)	Hazard switch (with 3 control dial system without auto A/C)
(M67)	Tow mode switch (Terminal No. 2)
(M67)	Tow mode switch (Terminal No. 6)
(M81)	Shift lock control unit (Terminal No. 8)
(M107)	Front blower relay
(M121)	Variable blower control (Terminal No. 4) (with 3 control dial system without auto A/C)
(M122)	Variable blower control (Terminal No. 1) (with 2 control dial system or auto A/C)
(M148)	VDC OFF switch
(M159)	Front heated seat switch LH
(M160)	Front heated seat switch RH
(M176)	Front air control (Terminal No. 1) (with manual 3 control dial system)
(M181)	Front air control (Terminal No. 35) (with manual 2 control dial system)
(M203)	A/T shift selector (Terminal No. 2) (floor shift)
(M203)	A/T shift selector (Terminal No. 8) (floor shift)
(M206)	DVD player (Terminal No. 22)
(M207)	Console power socket
(M208)	A/C 120V outlet front (shield wire)
(M211)	Aux jack shield
(R3)	Vanity lamp LH
(R7)	Auto anti-dazzling inside mirror (with homelink universal transceiver)
(R8)	Vanity lamp RH
(R12)	Auto anti-dazzling inside mirror (without homelink universal transceiver)
(R102)	Front room/map lamp assembly
(R4)	Sunroof motor assembly

ABMIA6123GB

GROUND

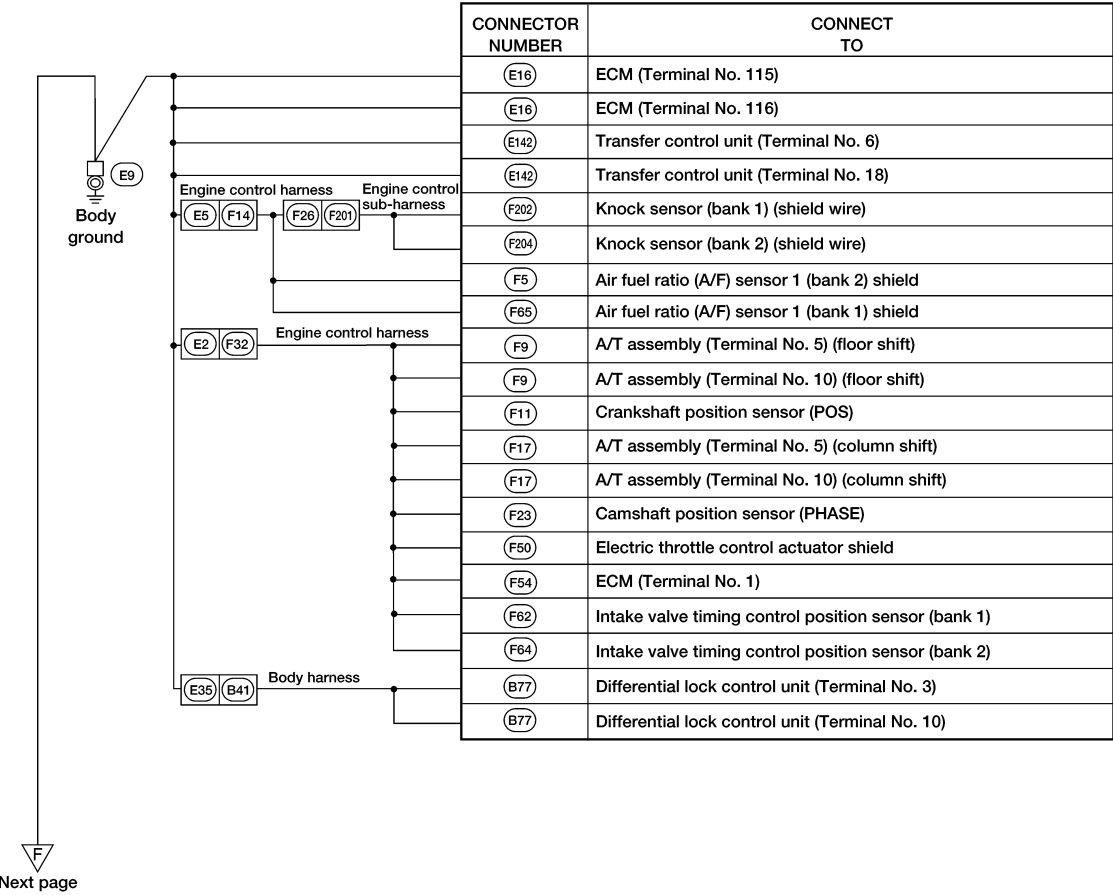
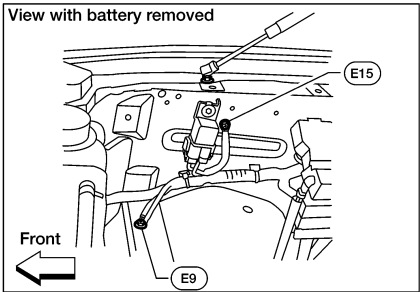
< WIRING DIAGRAM >



ABMIA6124GB

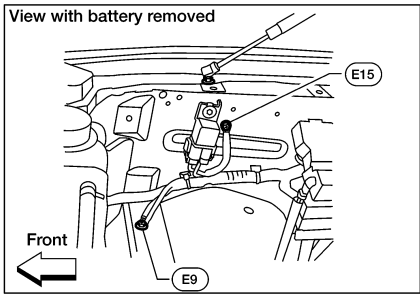
GROUND

< WIRING DIAGRAM >
ENGINE ROOM HARNESS

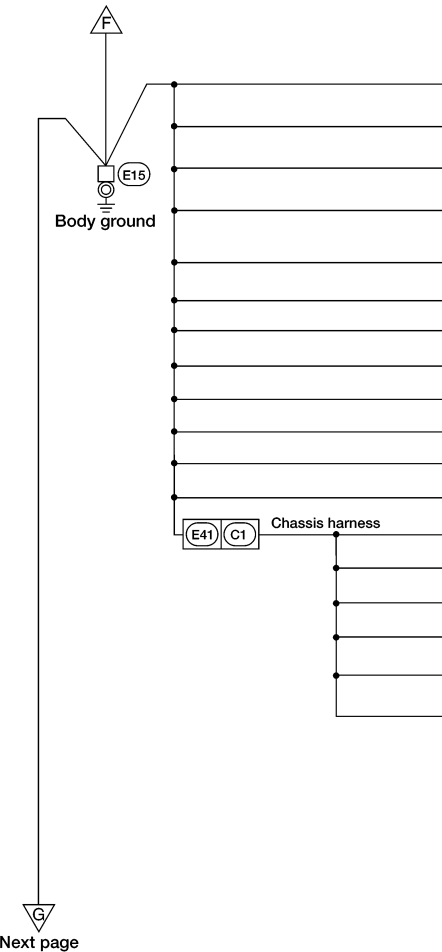


GROUND

< WIRING DIAGRAM >



Preceding page

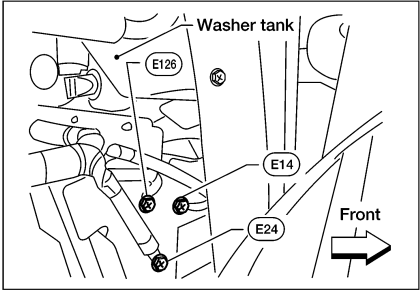


CONNECTOR NUMBER	CONNECT TO
E3	Horn
E6	Front combination lamp LH (Terminal No. 4) (with daytime light system)
E8	Dropping resistor
E11	Front combination lamp LH (Terminal No. 3) (without daytime light system)
E11	Front combination lamp LH (Terminal No. 4)
E17	Fuel pump control module (FPCM)
E21	Brake fluid level switch
E25	TCM (transmission control module) relay
E65	Accessory relay-2
E102	Front fog lamp RH
E103	Daytime light relay
E116	Condenser-2
C5	Fuel level sensor unit and fuel pump
C12	License plate lamps
C13	Rear combination lamp LH (Terminal No. 5)
C13	Rear combination lamp LH (Terminal No. 1)
C14	Rear combination lamp RH (Terminal No. 5)
C14	Rear combination lamp RH (Terminal No. 1)

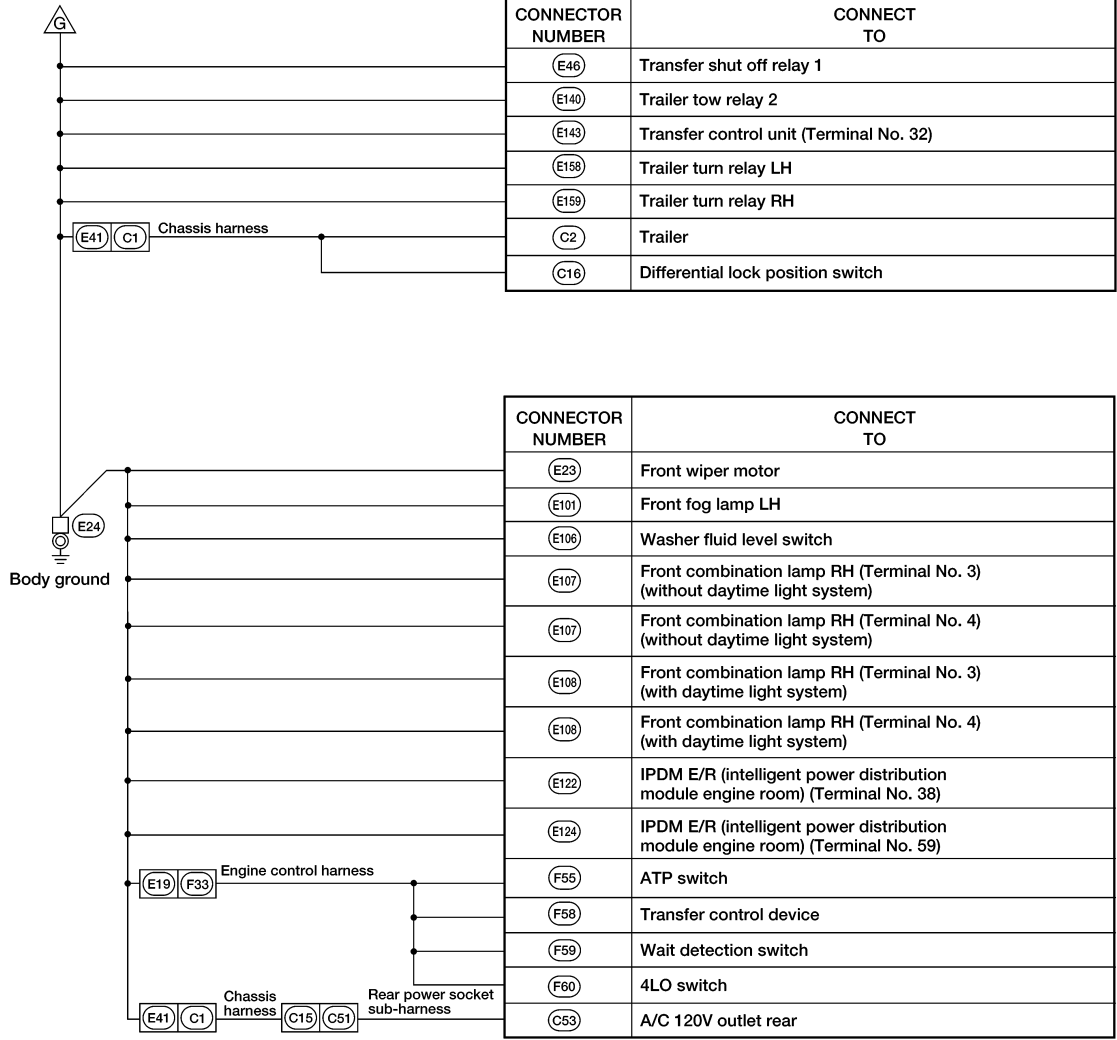
ABMIA6126GB

GROUND

< WIRING DIAGRAM >



Preceding page

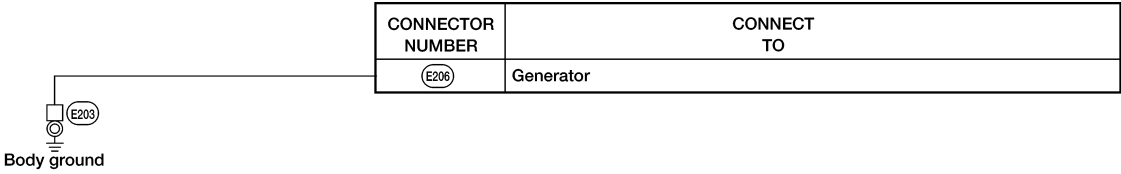
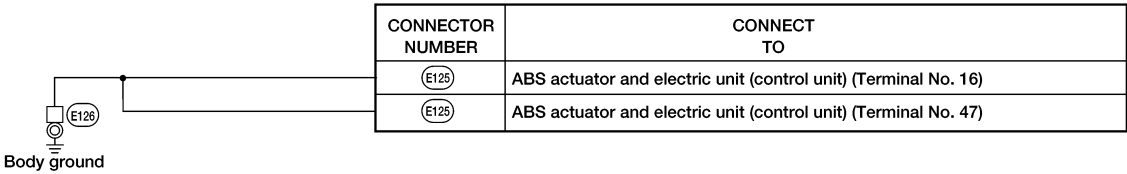
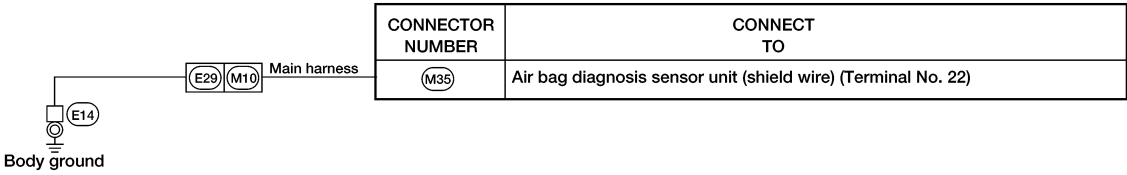
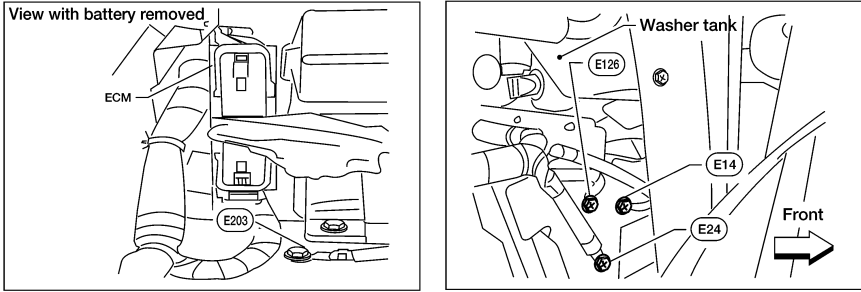


ABMIA6127GB

A
B
C
D
E
F
G
H
I
J
K
L
PG
N
O
P

GROUND

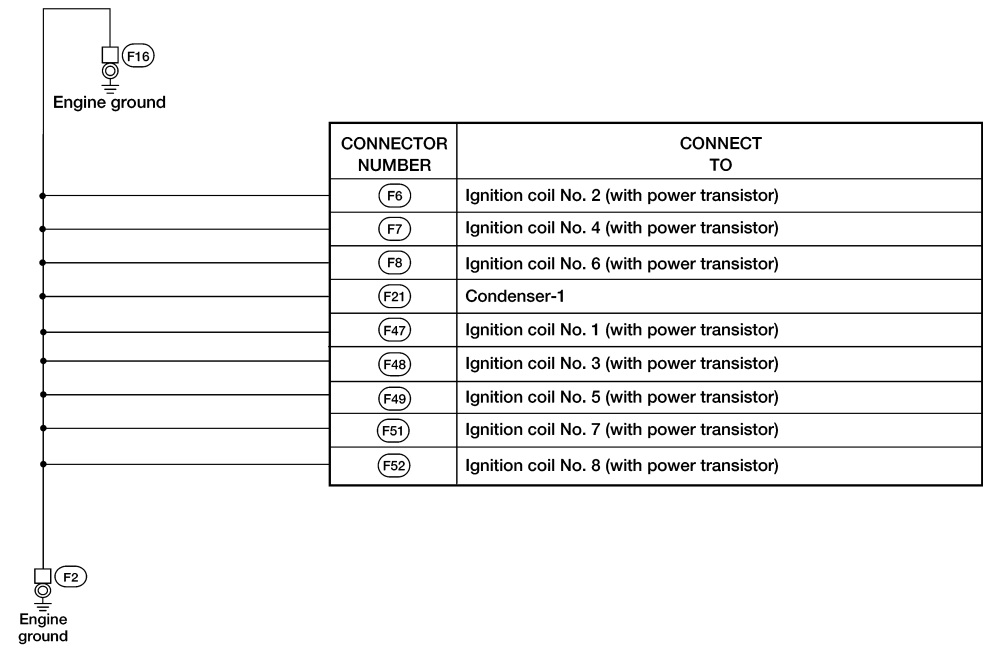
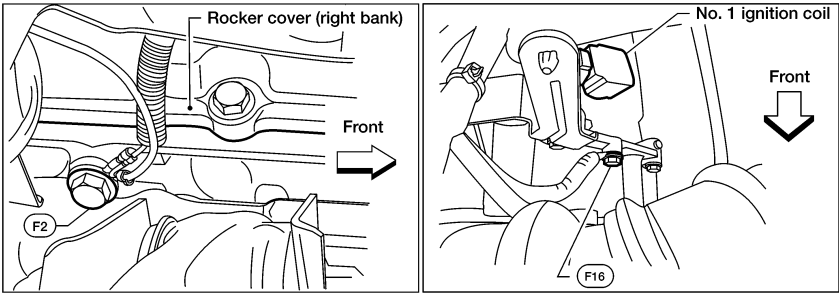
< WIRING DIAGRAM >



ABMIA6128GB

GROUND

< WIRING DIAGRAM >
ENGINE CONTROL HARNESS



ABMIA6129GB

PG

N

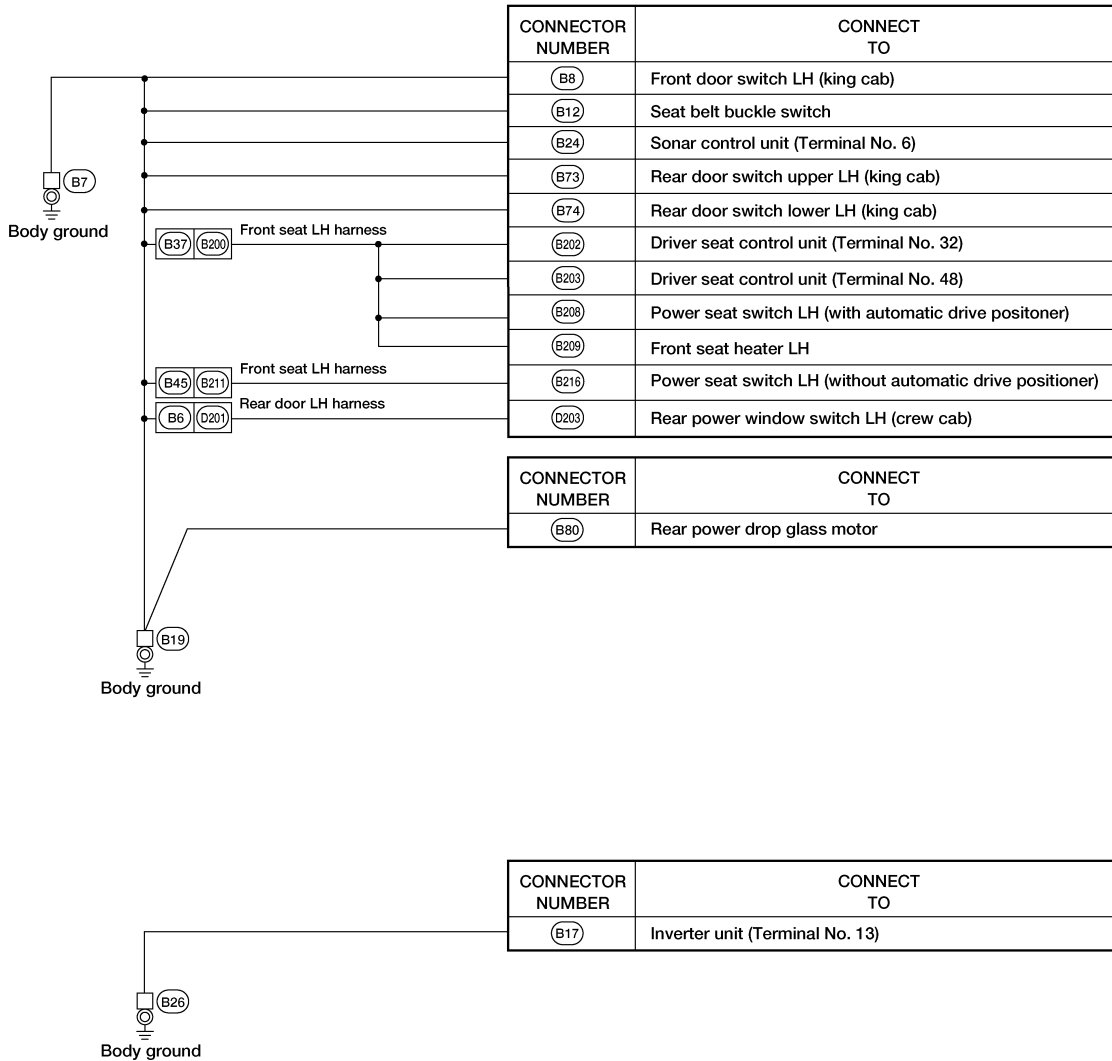
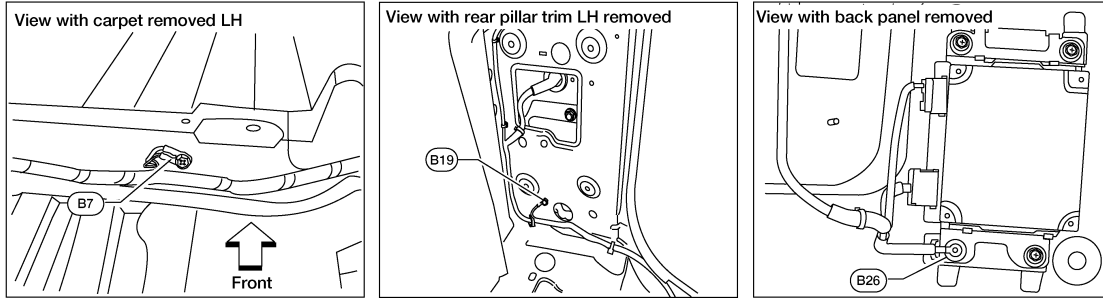
O

P

GROUND

< WIRING DIAGRAM >

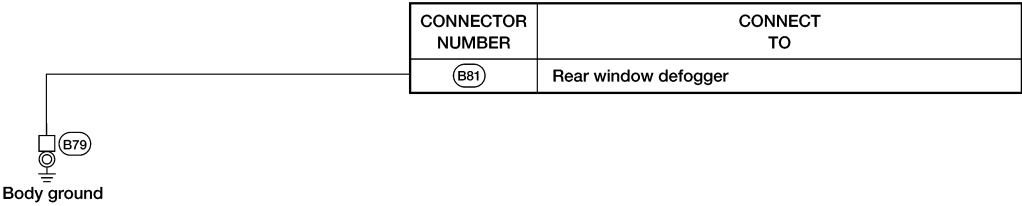
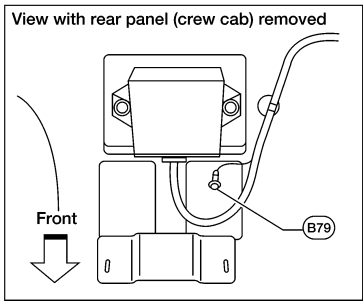
BODY HARNESS



ABMIA6130GB

GROUND

< WIRING DIAGRAM >

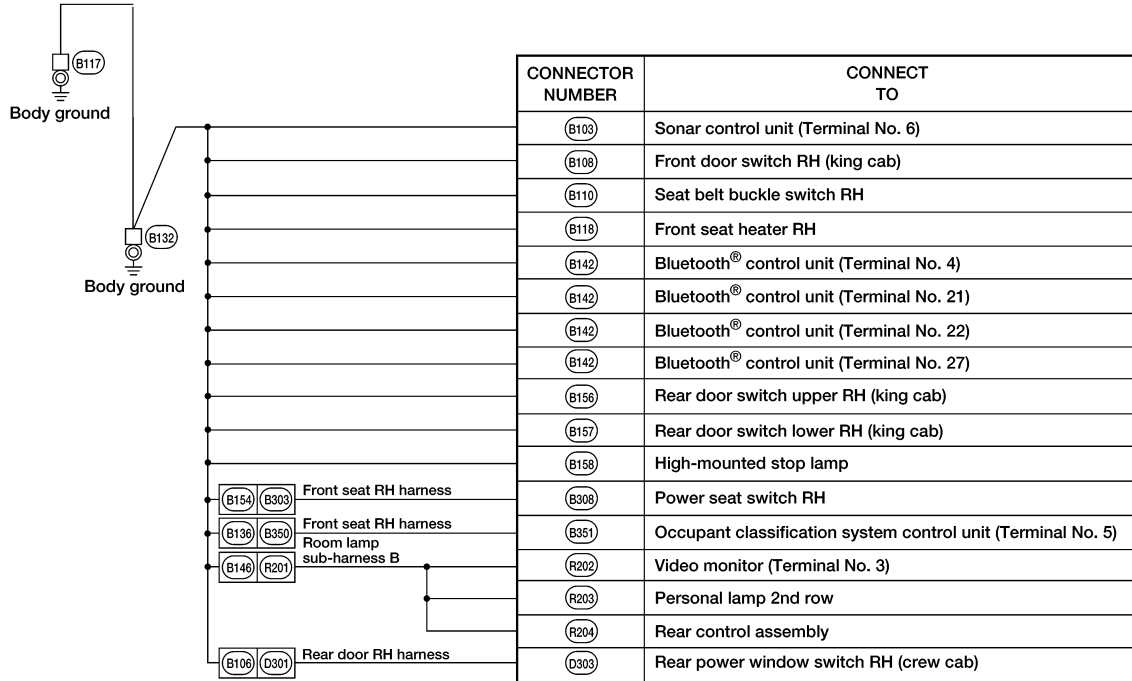
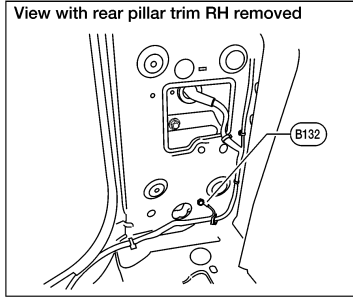
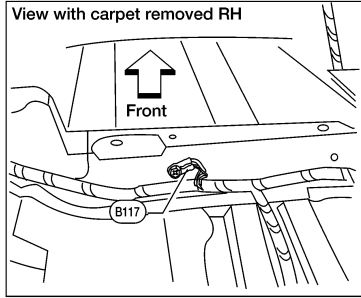


PG

GROUND

< WIRING DIAGRAM >

BODY NO. 2 HARNESS



ABMIA6131GB

HARNESS

< WIRING DIAGRAM >

HARNESS

Harness Layout

INFOID:0000000011676155

HOW TO READ HARNESS LAYOUT

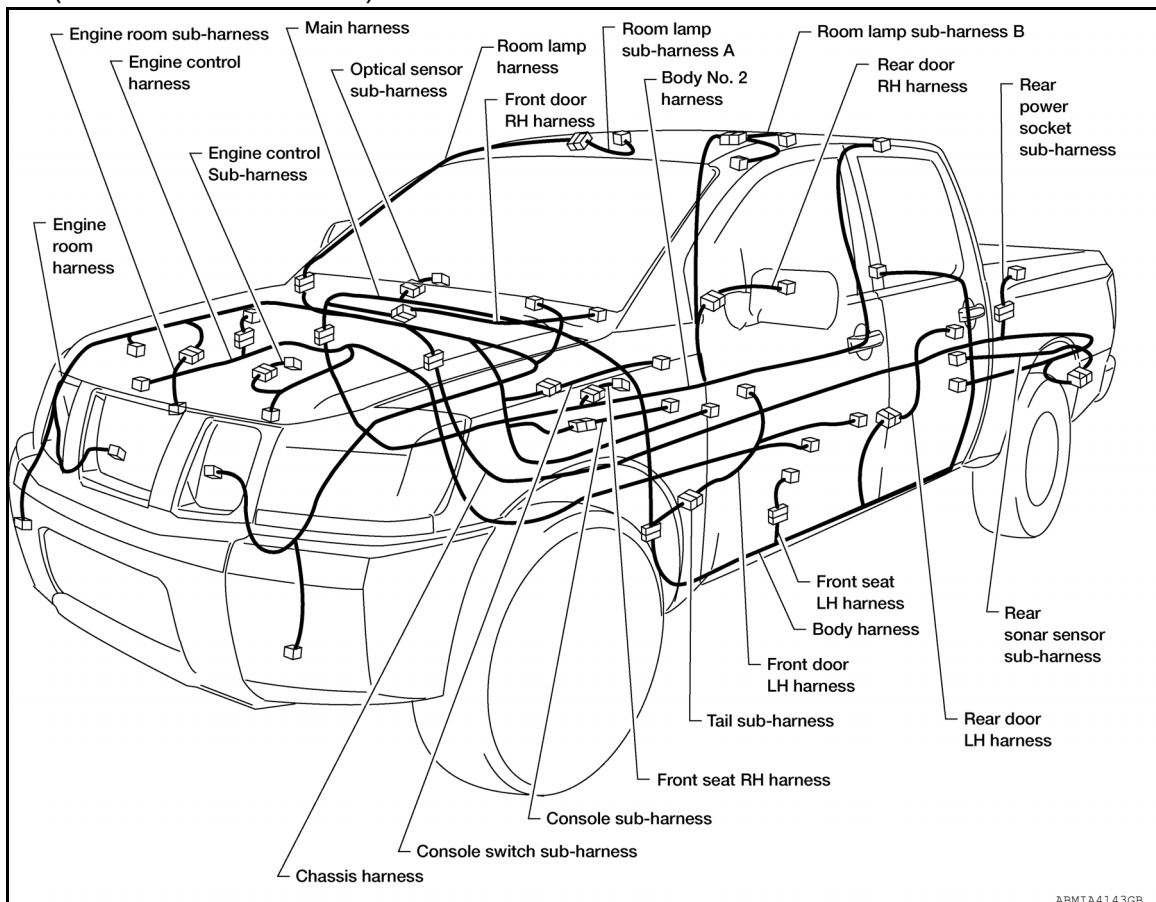
The following Harness Layouts use a map style grid to help locate connectors on the drawings:

- 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 Engine control Sub-harness
- Chassis Harness, Rear Sonar Sensor Sub-harness and Rear Power Socket Sub-harness
- Body Harness (King Cab Models), Front Seat LH Harness and Tail sub-harness
- Body Harness (Crew Cab Models), Front Seat LH Harness and Tail sub-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)

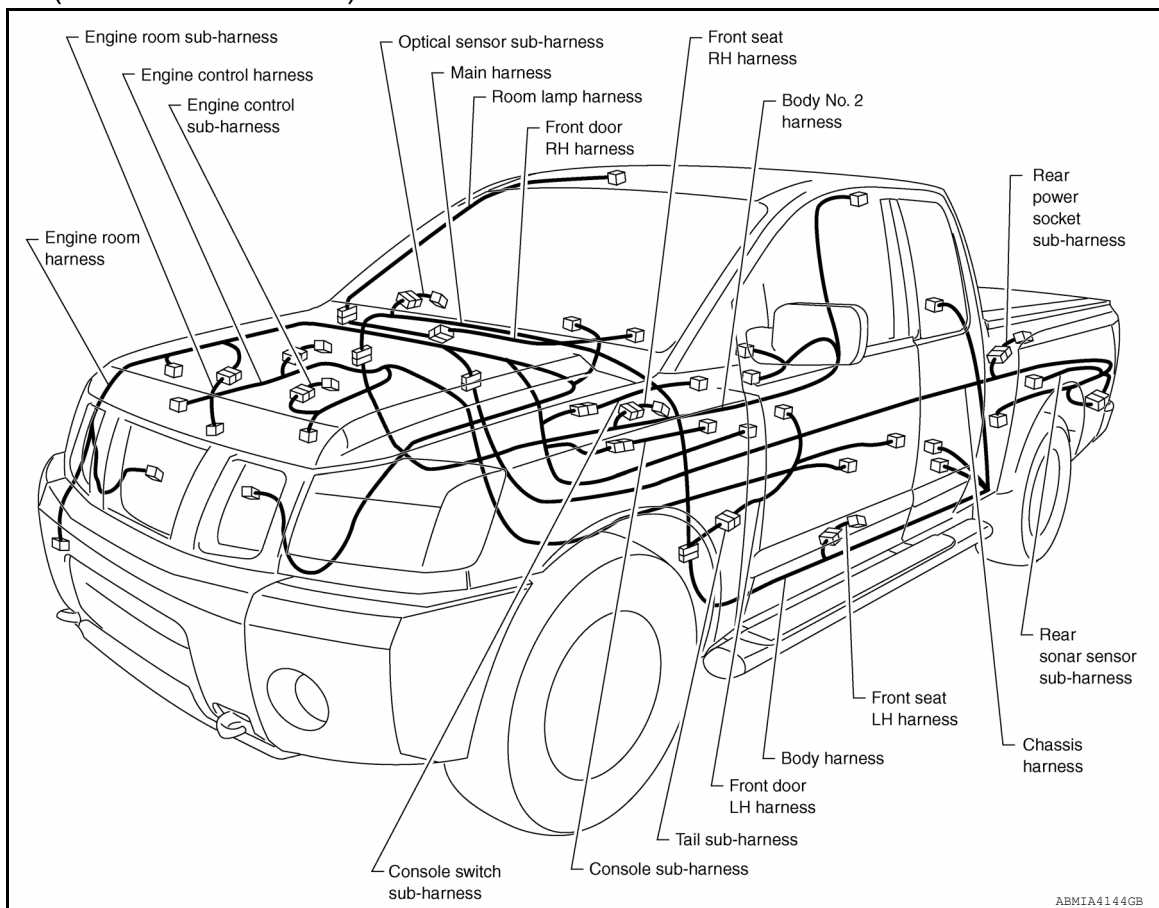


ABMIA4143GB

HARNESS

< WIRING DIAGRAM >

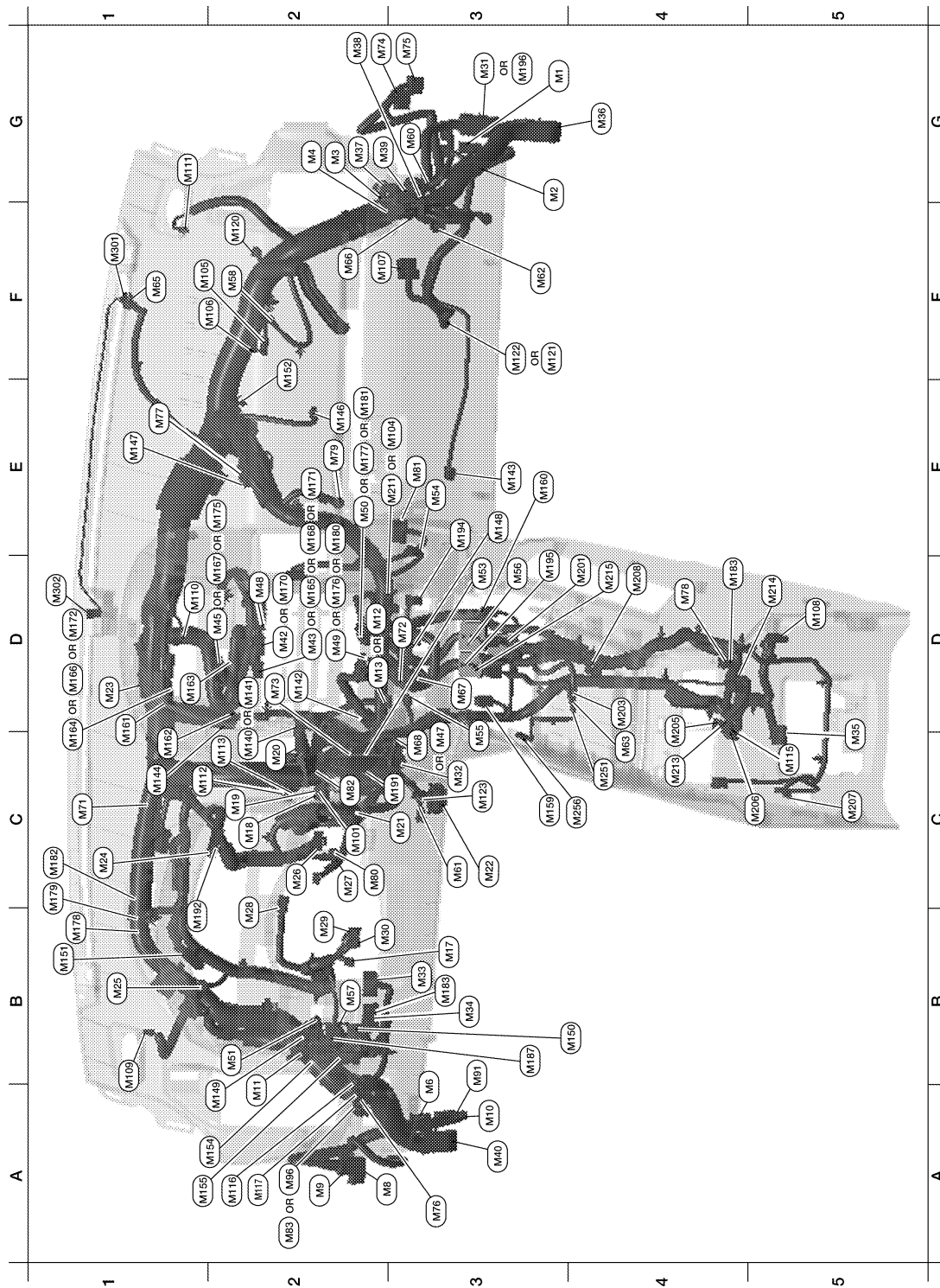
OUTLINE (KING CAB MODELS)



HARNESS

< WIRING DIAGRAM >

MAIN HARNESS



AAMIA3186GB

G3	M1	W/16	: To R1	F1	M105	Y/2	: Front passenger air bag module
G3	M2	W/12	: To R2	F1	M106	O/2	: Front passenger air bag module
G2	M3	W/8	: Fuse block (J/B)	F3	M107	B/5	: Front blower relay
G2	M4	W/16	: Fuse block (J/B)	D5	M108	B/4	: Yaw rate/ side/ decel G sensor

HARNESS

< WIRING DIAGRAM >

A3	M6	W/10	: To E10	B1	M109	BR/2	: Front tweeter LH
A3	M8	W/16	: To D2	D1	M110	BR/2	: Center speaker
A2	M9	BR/24	: To D1	G1	M111	BR/2	: Front tweeter RH
A3	M10	Y/4	: To E29	C1	M112	W/8	: Audio amp.
A2	M11	B/1	: Parking brake switch	C2	M113	W/24	: Audio amp.
D2	M12	BR/2	: Front passenger air bag OFF indicator (with vehicle security system)	D5	M115	GR/7	: To M213
D2	M13	BR/3	: Front passenger air bag OFF indicator (without vehicle security system)	A2	M116	B/2	: Rear sonar buzzer
B3	M17	W/8	: Steering angle sensor	A2	M117	GR/8	: Sonar system OFF switch
C2	M18	W/40	: BCM (body control module)	F2	M120	W/4	: Remote keyless entry receiver
C2	M19	W/15	: BCM (body control module)	F3	M121	W/4	: Variable blower control (3 control dial system or auto A/C)
C2	M20	B/15	: BCM (body control module)	F3	M122	W/4	: Variable blower control (2 control dial without A/C)
C3	M21	W/4	: NATS antenna amp.	C3	M123	W/2	: Tire pressure warning check connector
C3	M22	W/16	: Data link connector	C2	M140	GR/8	: 4WD shift switch (2 control dial system or auto A/C)
D1	M23	W/2	: Diode-1	C2	M141	W/8	: 4WD shift switch (3 control dial system without auto A/C)
C1	M24	W/40	: Combination meter	D2	M142	B/6	: Mode door motor
B1	M25	W/12	: Combination meter	E3	M143	B/6	: Air mix door motor (passenger)
C2	M26	W/6	: Ignition switch	C1	M144	B/6	: Defroster door motor
C2	M27	W/4	: Key switch and key lock solenoid	E2	M146	GR/2	: Intake sensor
B2	M28	W/16	: Combination switch	E1	M147	B/6	: Air mix door motor (driver)
B2	M29	Y/6	: Combination switch (spiral cable)	E3	M148	GR/6	: VDC OFF switch
B3	M30	GR/8	: Combination switch (spiral cable)	A1	M149	W/6	: Cargo lamp switch
G3	M31	SMJ	: To E152	B3	M150	L/4	: Cargo lamp relay
C3	M32	W/4	: In-vehicle sensor	B1	M151	W/2	: Condenser-3
B3	M33	W/32	: Automatic drive positioner control unit	F2	M152	W/2	: Ignition keyhole illumination
B3	M34	W/16	: Automatic drive positioner control unit	A1	M154	B/5	: Rear power drop glass up relay
C5	M35	Y/28	: Air bag diagnosis sensor unit	A1	M155	B/5	: Rear power drop glass down relay
G4	M36	SMJ	: To B149	C3	M159	W/6	: Front heated seat switch LH
G2	M37	B/1	: Fuse block (J/B)	E3	M160	BR/6	: Front heated seat switch RH
G2	M38	B/2	: Fuse block (J/B)	C1	M161	W/2	: Diode-3
G2	M39	W/8	: Fuse block (J/B)	C1	M162	L/20	: Joint connector-M10
A3	M40	SMJ	: To B69	C1	M163	W/16	: Audio unit (with mid audio system)
D2	M42	G/5	: AV control unit (with navigation system)	C1	M164	W/20	: Audio unit (with mid audio system)
D2	M43	W/20	: AV control unit (with navigation system)	D2	M165	W/20	: Audio unit (with display audio without ampli- fier)
D1	M45	W/24	: AV control unit (with navigation system)	D1	M166	W/5	: Audio unit (with display audio without ampli- fier)
D3	M47	W/4	: Hazard switch (2 control dial system or auto A/C)	D2	M167	W/16	: Audio unit (with display audio without ampli- fier)
D2	M48	W/12	: A/C 120V outlet main switch	D2	M168	W/20	: Audio unit (with base audio system)
D2	M49	B/26	: Front air control (with automatic temperature control)	E2	M171	W/20	: Audio unit (with display audio witht ampli- fier)
D2	M50	W/18	: Front air control (with auto A/C)	D1	M172	W/5	: Audio unit (with display audio witht ampli- fier)

HARNESS

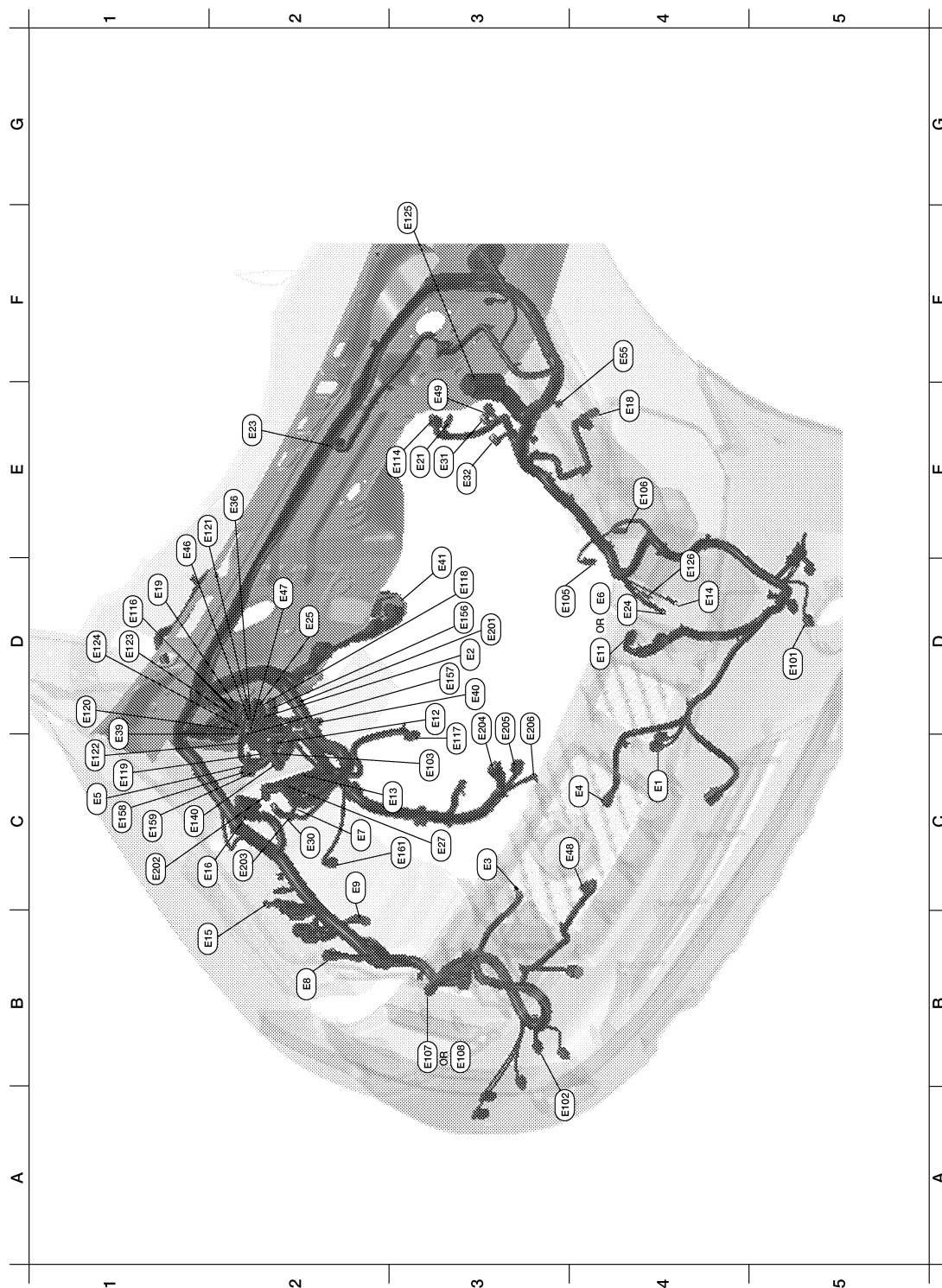
< WIRING DIAGRAM >

B2	M51	L/4	: Trailer tow relay 1	E2	M175	W/32	: Audio unit (with display audio witht amplifier)
D3	M53	B/3	: Front power socket LH	D2	M176	B/26	: Front air control (manual 3 control dial system)
E3	M54	B/3	: Front power socket RH	D2	M177	G/18	: Front air control (manual 3 control dial system)
C3	M55	W/8	: Hazard switch (3 control dial system without auto A/C)	B1	M178	W/20	: Joint connector-M08
D3	M56	W/16	: To M201	B1	M179	W/20	: Joint connector-M07
B2	M57	—	: Body ground	E2	M180	B/26	: Front air control (manual 2 control dial system)
F2	M58	B/6	: Intake door motor	E2	M181	W/18	: Front air control (manual 2 control dial system)
G3	M60	W/6	: Fuse block (J/B)	B1	M182	G/20	: Joint connector-M09
C3	M61	—	: Body ground	D4	M183	L/20	: Joint connector-M06
F3	M62	B/2	: Front blower motor	B3	M187	L/4	: Rear window defogger cut-off relay
C4	M63	BR/20	: To M251	C3	M191	L/20	: Joint connector-M01
F1	M65	W/4	: To M301	B1	M192	G/20	: Joint connector-M02
F2	M66	B/1	: To E33	E3	M194	L/20	: Joint connector-M04
C3	M67	GR/8	: Tow mode switch	D3	M195	BR/24	: To M215
C3	M68	W/8	: A/T shift selector (column shift)	G3	M196	SMJ	: To E168
C1	M71	B/2	: Resistor	Console sub-harness			
E2	M72	W/6	: Differential lock mode switch	D4	M201	W/16	: To M56
D2	M73	BR/6	: Back-up lamp relay	D4	M203	W/12	: A/T shift selector (floor shift)
G2	M74	BR/20	: To D102	D4	M205	GR/16	: DVD player
G3	M75	W/10	: To D101	C4	M206	L/16	: DVD player
A3	M76	W/6	: Electric brake (pre-wiring)	C5	M207	B/3	: Console power socket
E1	M77	Y/4	: Front passenger air bag module (service replacement)	D4	M208	W/4	: A/C 120V out front
D4	M78	W/2	: Front power socket (center armrest)	E3	M211	W/6	: Aux jack (with rear entertainment system)
E2	M79	—	: Body ground	C4	M213	GR/7	: To M115
C2	M80	W/2	: Key switch	D5	M214	GR/5	: USB interface
E3	M81	GR/10	: Shift lock control unit	D4	M215	BR/24	: To M195
C2	M82	W/2	: Circuit breaker-2	Console switch sub-harness			
A2	M83	BR/6	: Pedal adjusting switch (without automatic drive positioner)	C4	M251	BR/20	: To M63
B3	M91	W/16	: To E26	C4	M256	B/2	: A/T shift selector (floor shift)
A2	M96	BR/6	: Pedal adjusting switch (with automatic drive positioner)	Optical sensor sub-harness			
C2	M101	L/20	: Joint connector-M03	F1	M301	W/4	: To M65
E3	M104	W/4	: Aux jack (without rear entertainment system)	D1	M302	W/4	: Optical sensor

HARNESS

< WIRING DIAGRAM >

ENGINE ROOM HARNESS



ABMIA6113GB

C4	E1	GR/2	: Ambient sensor	F4	E55	L/4	: Accessory relay-2
D3	E2	W/16	: To F32	D5	E101	B/2	: Front fog lamp LH
C3	E3	B/2	: Horn	A3	E102	B/2	: Front fog lamp RH
C4	E4	Y/2	: Crash zone sensor	C3	E103	B/5	: Daytime light relay
C1	E5	W/24	: To F14	D4	E105	BR/2	: Front washer motor

HARNESS

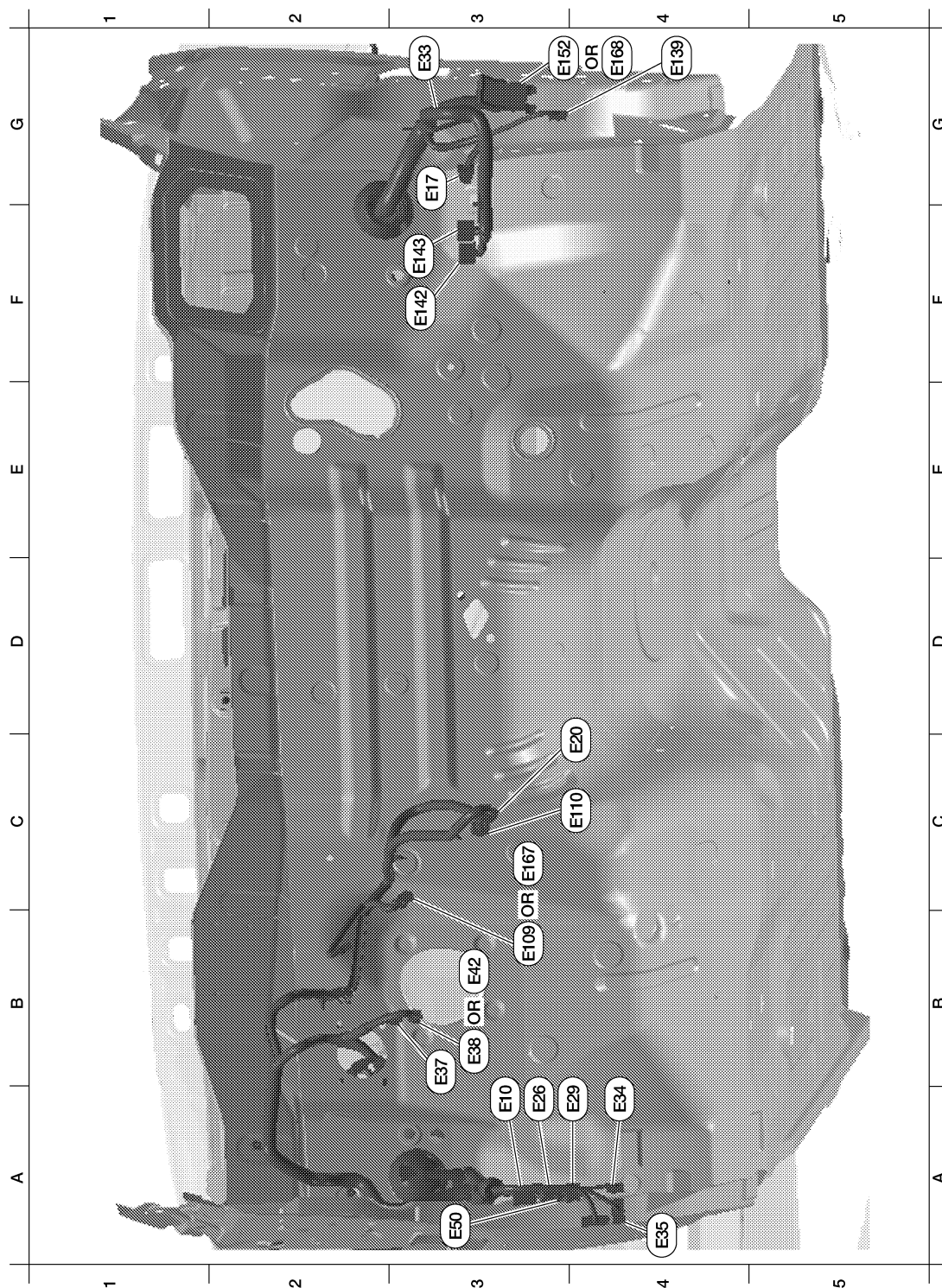
< WIRING DIAGRAM >

D4	E6	B/6	: Front combination lamp LH (with daytime light system)	E4	E106	BR/2	: Washer fluid level switch	A
C2	E7	GR/2	: Fusible link box (battery)	B3	E107	B/6	: Front combination lamp RH (without daytime light system)	B
B2	E8	GR/2	: Dropping resistor	B3	E108	B/6	: Front combination lamp RH (with daytime light system)	C
C2	E9	—	: Body ground	E3	E114	B/6	: Delta stroke sensor	D
D4	E11	B/6	: Front combination lamp LH (without daytime light system)	D1	E116	W/2	: Condenser-2	E
D3	E12	B/5	: Stop lamp relay	D3	E117	GR/2	: Front wheel sensor RH	F
C3	E13	B/2	: Fuse and fusible link box	D3	E118	B/2	: IPDM E/R (intelligent power distribution module engine room)	G
D4	E14	—	: Body ground	C1	E119	W/16	: IPDM E/R (intelligent power distribution module engine room)	H
B1	E15	—	: Body ground	D1	E120	W/6	: IPDM E/R (intelligent power distribution module engine room)	I
C1	E16	B/40	: ECM	E1	E121	BR/12	: IPDM E/R (intelligent power distribution module engine room)	J
E4	E18	GR/2	: Front wheel sensor LH	C1	E122	W/12	: IPDM E/R (intelligent power distribution module engine room)	K
D1	E19	W/16	: To F33	D1	E123	BR/8	: IPDM E/R (intelligent power distribution module engine room)	L
E3	E21	GR/2	: Brake fluid level switch	D1	E124	B/6	: IPDM E/R (intelligent power distribution module engine room)	
E2	E23	GR/6	: Front wiper motor	F3	E125	B/47	: ABS actuator and electric unit (control unit)	
D4	E24	—	: Body ground	D4	E126	—	: Body ground	
D2	E25	L/4	: TCM (transmission control module) relay	C1	E140	BR/6	: Trailer tow relay-2	
C3	E27	BR/2	: Fusible link box (battery)	D3	E156	B/5	: Transfer shift high relay	
C2	E30	/1	: Fusible link box (battery)	D3	E157	B/5	: Transfer shift low relay	
E3	E31	GR/3	: Front pressure sensor	C1	E158	L/4	: Trailer turn relay LH	
E3	E32	GR/3	: Rear pressure sensor	C1	E159	L/4	: Trailer turn relay RH	
E2	E36	L/5	: Inverter relay	C3	E161	B/3	: Battery current sensor	
D1	E39	W/2	: To F34	Engine room sub-harness				
D3	E40	B/3	: To E201	D3	E201	B/3	: To E40	PG
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	
D2	E47	L/4	: Transfer SHUT OFF relay 2	D3	E204	/1	: Generator	N
C4	E48	B/3	: Refrigerant pressure sensor	D3	E205	B/3	: Generator	
E3	E49	B/6	: Active booster	D3	E206	/1	: Generator	O
								P

HARNESS

< WIRING DIAGRAM >

ENGINE ROOM HARNESS (PASSENGER COMPARTMENT)



ABMIA6114GB

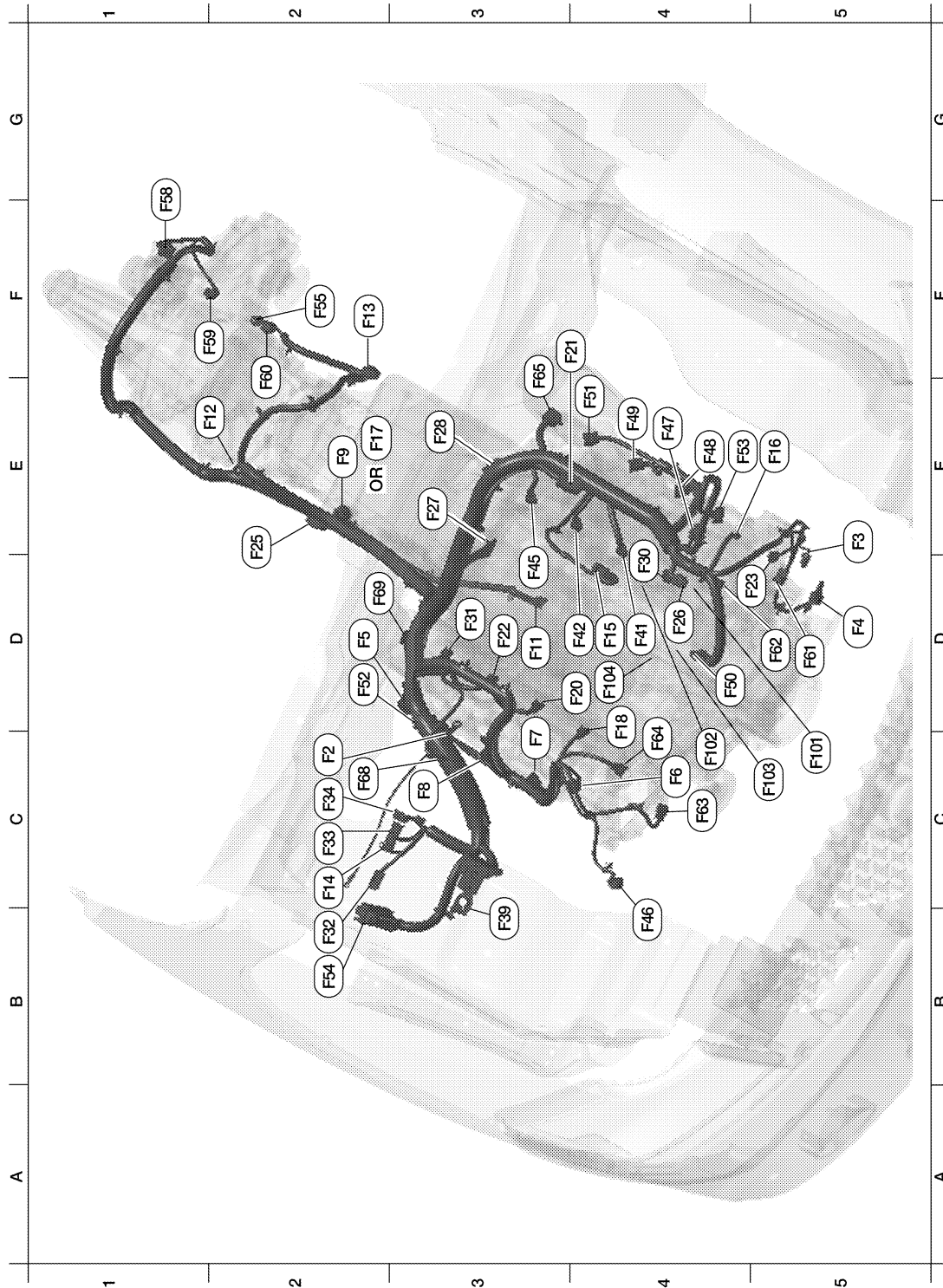
A3	E10	W/10	: To M6	B3	E42	B/2	: Stop lamp switch (floor shift)
G3	E17	W/4	: Fuel pump control module (FPCM)	A3	E50	BR/2	: To B75
C4	E20	B/8	: Accelerator pedal position (APP) sensor	B3	E109	GR/2	: Pedal adjusting motor assembly
A3	E26	W/16	: To M91	C4	E110	GR/3	: Pedal adjusting motor assembly
A3	E29	Y/4	: To M10	G4	E139	BR/12	: To B107

HARNESS

< WIRING DIAGRAM >

G3	E33	B/1	: To M66	F3	E142	W/26	: Transfer control unit
A4	E34	B/1	: To B25	F3	E143	W/24	: Transfer control unit
A4	E35	W/12	: To B41	G3	E152	SMJ	: To M31
B3	E37	BR/2	: Brake pedal position switch	C3	E167	GR/2	: Pedal adjusting motor
B3	E38	W/4	: Stop lamp switch (column shift)	G4	E168	SMJ	: To M196

ENGINE CONTROL HARNESS



ABMIA4155GB

HARNESS

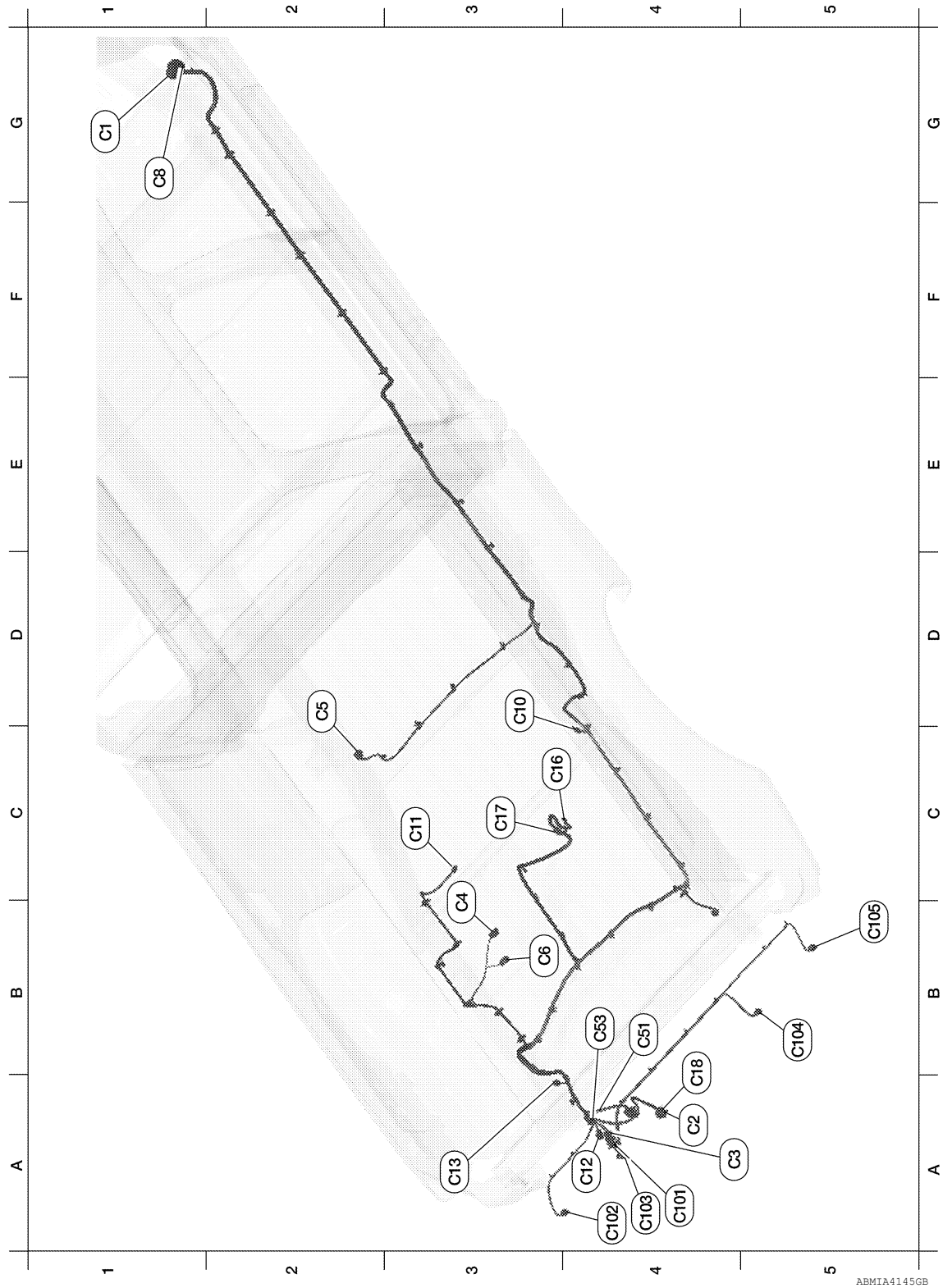
< WIRING DIAGRAM >

C2	F2	—	: Engine ground	B3	F39	—	: Fusible link (battery)
E5	F3	B/1	: A/C Compressor	D4	F41	GR/2	: Fuel injector No. 3
D5	F4	GR/1	: Oil pressure switch	D4	F42	GR/2	: Fuel injector No. 5
D2	F5	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 2)	D3	F45	GR/2	: Fuel injector No. 7
C4	F6	GR/3	: Ignition coil No. 2 (with power transistor)	B4	F46	B/3	: Power steering pressure sensor
C3	F7	GR/3	: Ignition coil No. 4 (with power transistor)	E4	F47	GR/3	: Ignition coil No. 1 (with power transistor)
C3	F8	GR/3	: Ignition coil No. 6 (with power transistor)	E4	F48	GR/3	: Ignition coil No. 3 (with power transistor)
E2	F9	G/10	: A/T assembly (floor shift)	E4	F49	GR/3	: Ignition coil No. 5 (with power transistor)
D3	F11	B/3	: Crankshaft position sensor (POS)	D4	F50	B/6	: Electric throttle control actuator
E1	F12	G/4	: Heated oxygen sensor 2 (bank 2)	E4	F51	GR/3	: Ignition coil No. 7 (with power transistor)
F2	F13	G/4	: Heated oxygen sensor 2 (bank 1)	D2	F52	GR/3	: Ignition coil No. 8 (with power transistor)
C2	F14	W/24	: To E5	E5	F53	B/6	: Mass air flow sensor
D4	F15	GR/2	: EVAP canister purge volume control solenoid valve	B2	F54	B/81	: ECM
E5	F16	—	: Engine ground	F2	F55	B/2	: ATP switch
E2	F17	G/10	: A/T assembly (column shift)	F1	F58	B/8	: Transfer control device
C4	F18	GR/2	: Fuel injector No. 2	F2	F59	GR/2	: Wait detection switch
D4	F20	GR/2	: Fuel injector No. 4	F2	F60	GR/2	: 4LO switch
F4	F21	GR/2	: Condenser-1	D5	F61	G/2	: Intake valve timing control solenoid valve (bank 1)
D3	F22	GR/2	: Fuel injector No. 6	D4	F62	B/3	: Intake valve timing control position sensor (bank 1)
D4	F23	B/3	: Camshaft position sensor (PHASE)	C4	F63	G/2	: Intake valve timing control solenoid valve (bank 2)
D2	F25	W/2	: Diode-2	C4	F64	B/3	: Intake valve timing control position sensor (bank 2)
D4	F26	B/6	: To F101	F3	F65	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 1)
E3	F27	—	: Starter motor	C2	F68	GR/2	: Water valve
E3	F28	GR/1	: Starter motor	D2	F69	GR/6	: Joint connector-F01
D4	F30	GR/2	: Fuel injector No. 1	Engine control sub-harness			
D3	F31	GR/2	: Fuel injector No. 8	C5	F101	B/6	: To F26
B2	F32	W/16	: To E2	C4	F102	B/2	: Knock sensor (bank 1)
C2	F33	W/16	: To E19	C5	F103	GR/2	: Engine coolant temperature sensor
C2	F34	W/2	: To E39	D4	F104	B/2	: Knock sensor (bank 2)

HARNESS

< WIRING DIAGRAM >

CHASSIS HARNESS



ABMIA4145GB

G1	C1	SMJ	: To E41	C3	C16	GR/2	: Differential lock position switch
A4	C2	B/7	: Trailer	C3	C17	B/2	: Differential lock solenoid
A4	C3	GR/6	: To C101	A4	C18	B/7	: Trailer receptacle
C3	C4	GR/3	: Evap control system pressure sensor	Rear power socket sub-harness			
D2	C5	GR/5	: Fuel level sensor unit and fuel pump	B4	C51	W/2	: To C15

HARNESS

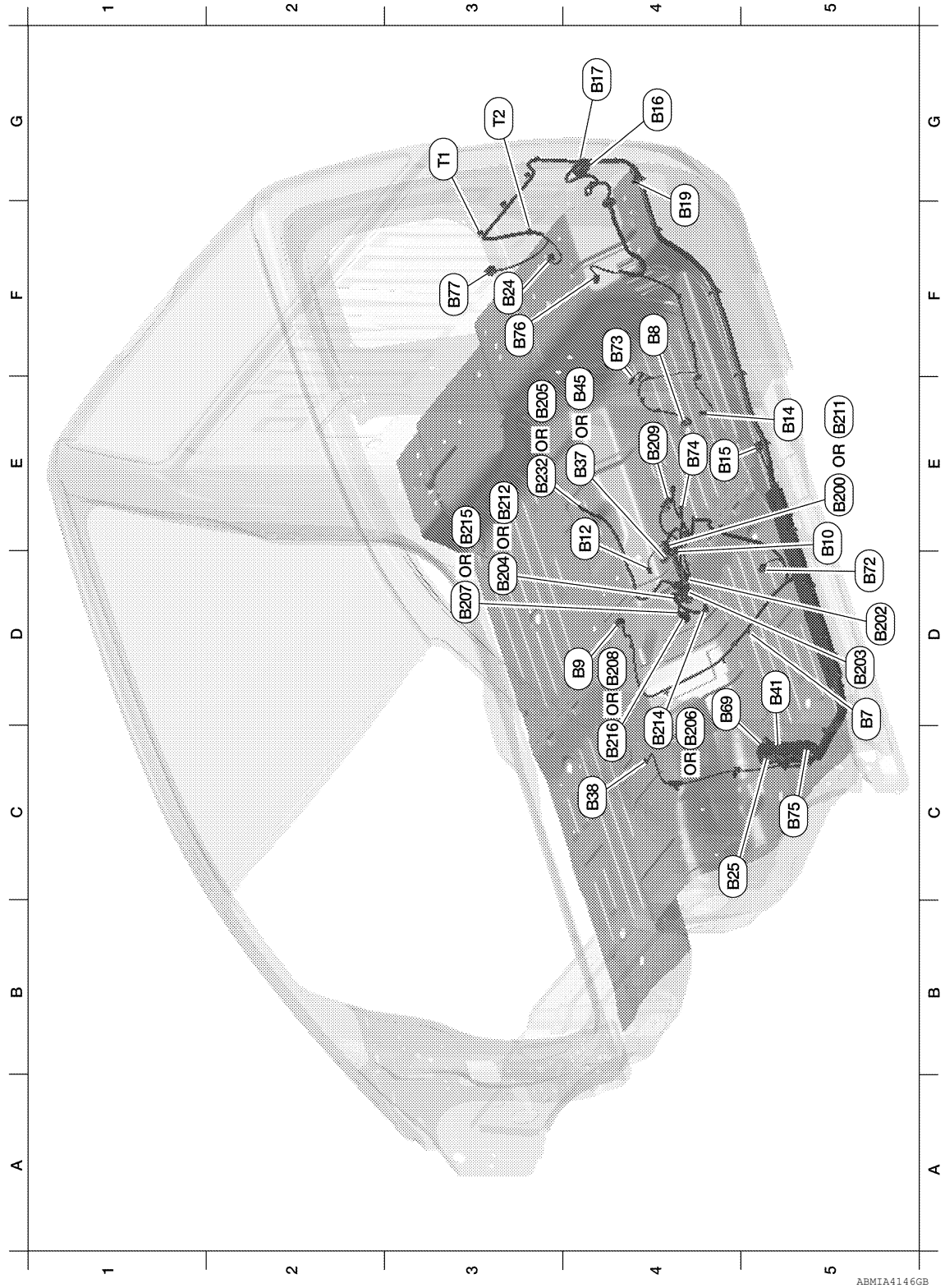
< WIRING DIAGRAM >

B3	C6	B/2	: Evap canister vent control valve	B4	C53	GR/4	: A/C 120V outlet rear
G1	C8	B/6	: To T1	Rear sonar sensor sub-harness			
D3	C10	GR/2	: Rear wheel sensor RH	A4	C101	GR/6	: To C3
C3	C11	B/2	: Rear wheel sensor LH	A4	C102	B/3	: Rear sonar sensor LH outer
A4	C12	W/2	: License plate lamps	A4	C103	B/3	: Rear sonar sensor LH inner
A3	C13	GR/8	: Rear combination lamp LH	B5	C104	B/3	: Rear sonar sensor RH inner
C5	C14	GR/8	: Rear combination lamp RH	B5	C105	B/3	: Rear sonar sensor RH outer
A3	C15	W/2	: To C51				

HARNESS

< WIRING DIAGRAM >

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/22	: Air bag diagnosis sensor unit	E5	B200	W/16	: To B37
E5	B10	Y/2	: Front LH side air bag module	D5	B202	W/32	: Driver seat control unit
E4	B12	W/4	: Seat belt buckle switch LH	D4	B203	W/16	: Driver seat control unit

HARNESS

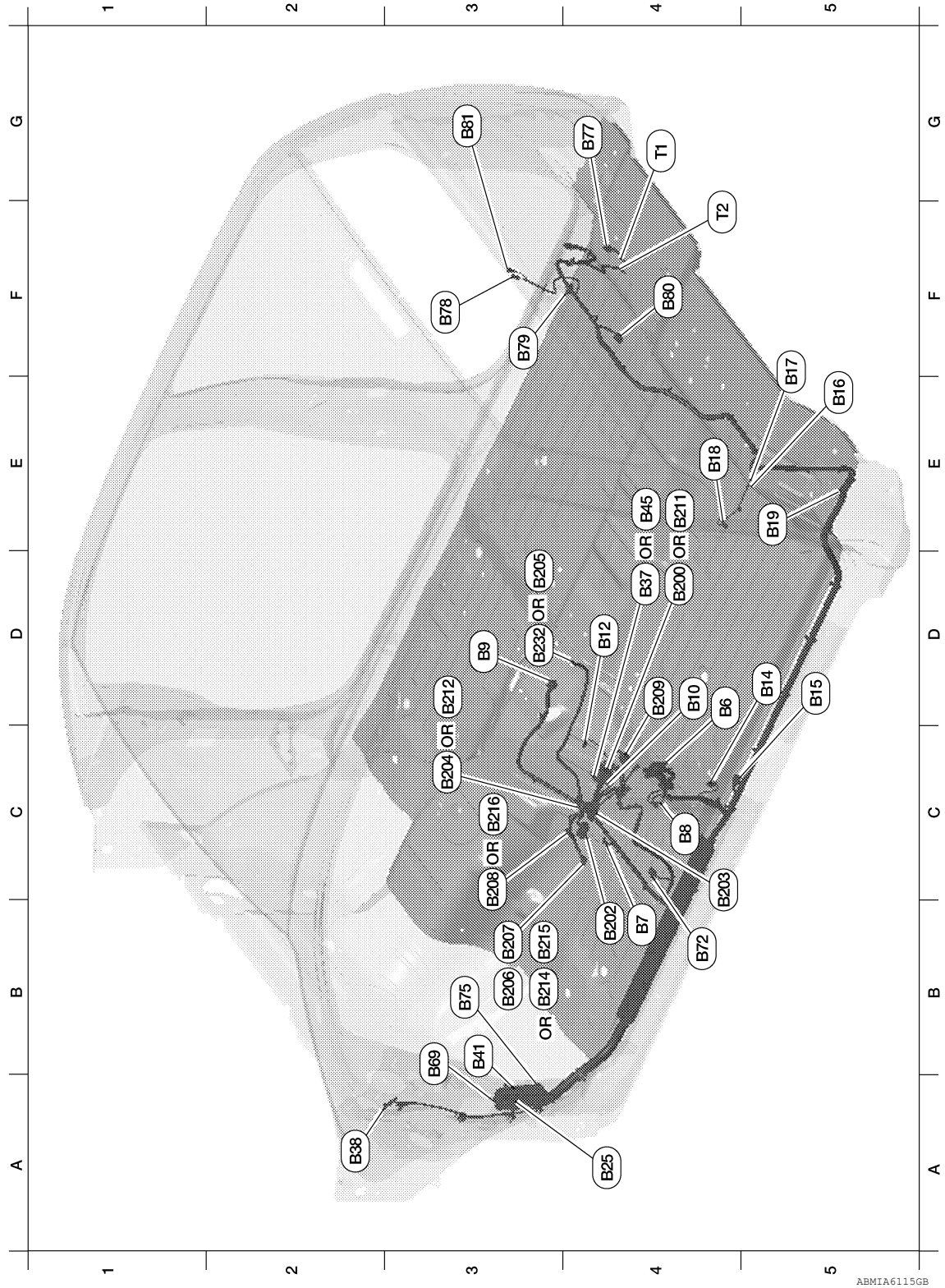
< WIRING DIAGRAM >

E5	B14	Y/2	: Front LH seat belt pre-tensioner	D3	B204	GR/5	: Sliding motor LH (with automatic drive positioner)
E4	B15	Y/2	: LH side air bag (satellite) sensor	E3	B205	W/4	: Reclining motor LH (with automatic drive positioner)
G4	B16	W/12	: Inverter unit	D4	B206	W/5	: Lifting motor (front) (with automatic drive positioner)
G4	B17	W/2	: Inverter unit	D3	B207	GR/5	: Lifting motor (rear) (with automatic drive positioner)
F4	B19	—	: Body ground	D4	B208	W/10	: Power seat switch LH (with automatic drive positioner)
F3	B24	W/16	: Sonar control unit	E4	B209	W/3	: Front seat heater LH
C4	B25	B/1	: To E34	F5	B211	W/2	: To B45
E4	B37	W/16	: To B200	E3	B212	B/2	: Sliding motor LH (without automatic drive positioner)
C4	B38	Y/2	: LH side curtain air bag module	D4	B214	GR/2	: Lifting motor (front) (without automatic drive positioner)
D5	B41	W/12	: To E35	E3	B215	GR/2	: Lifting motor (rear) (without automatic drive positioner)
E4	B45	W/2	: To B211	D4	B216	W/10	: Power seat switch LH (without automatic drive positioner)
B3	B69	SMJ	: To M40	E3	B232	W/2	: Reclining motor LH (without automatic drive positioner)
D5	B72	W/4	: Subwoofer	Tail sub-harness			
F4	B73	B/2	: Rear door switch upper LH	G3	T1	B/6	: To C8
E4	B74	B/2	: Rear door switch lower LH	G3	T2	GR/6	: Rear view camera
C5	B75	BR/2	: To E50				
F3	B76	W/2	: Rear door speaker LH				

HARNESS

< WIRING DIAGRAM >

BODY HARNESS (CREW CAB MODELS)



D4	B6	W/18	: To D201	F3	B79	—	: Body ground
B4	B7	—	: Body ground	F4	B80	GR/4	: Rear power drop glass motor
C4	B8	W/3	: Front door switch LH	G3	B81	B/1	: Rear window defogger
D3	B9	Y/22	: Air bag diagnosis sensor unit	Front seat LH harness			
D4	B10	Y/2	: Front LH side air bag module	D4	B200	W/16	: To B37

HARNESS

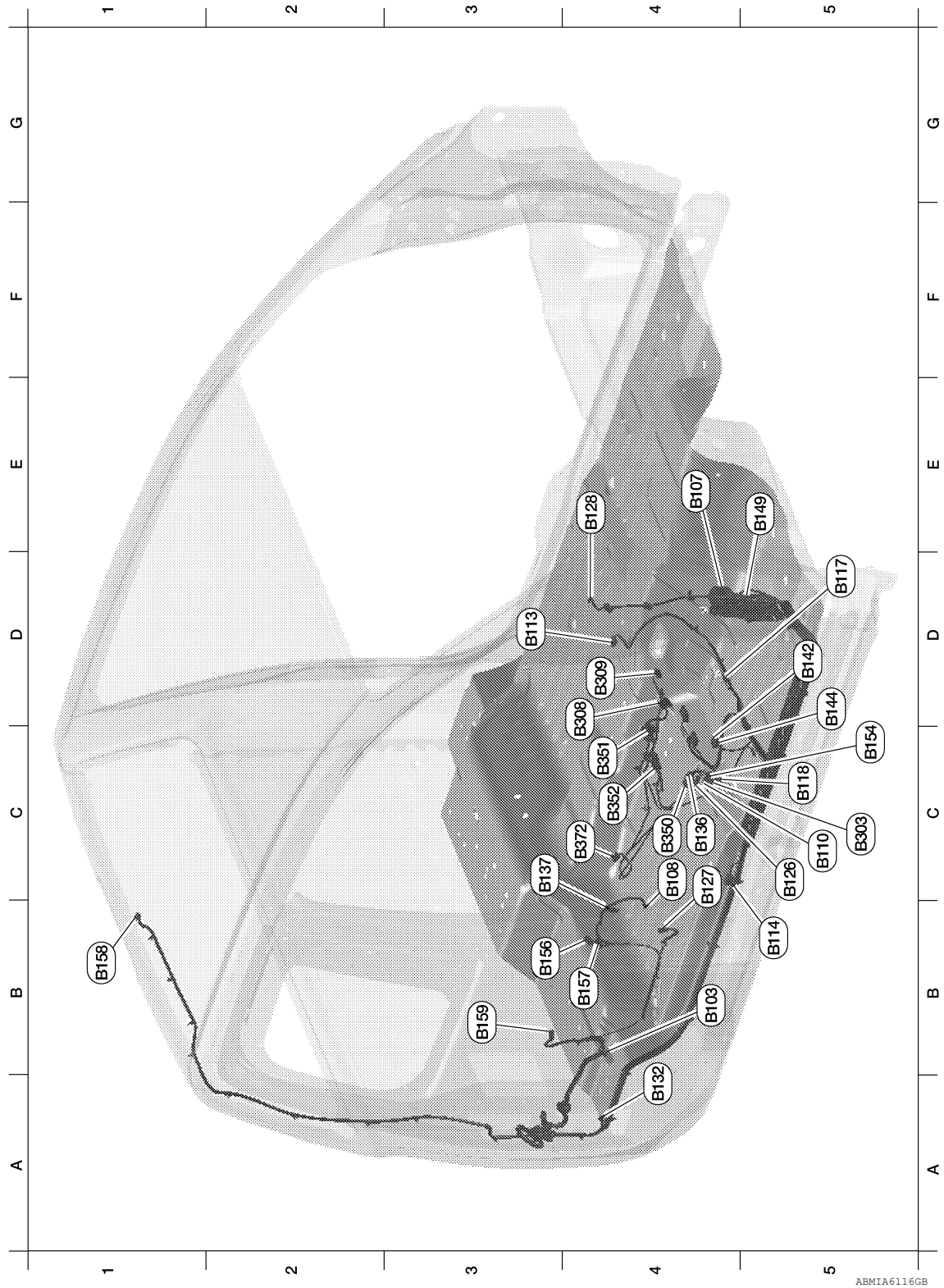
< WIRING DIAGRAM >

D4	B12	W/4	: Seat belt buckle switch LH	B4	B202	W/32	: Driver seat control unit
D5	B14	Y/2	: Front LH seat belt pre-tensioner	C4	B203	W/16	: Driver seat control unit
D5	B15	Y/2	: LH side air bag (satellite) sensor	C3	B204	GR/5	: Sliding motor LH (with automatic drive positioner)
E5	B16	W/12	: Inverter unit	D3	B205	W/4	: Reclining motor LH (with automatic drive positioner)
F5	B17	W/2	: Inverter unit	B3	B206	W/5	: Lifting motor (front) (with automatic drive positioner)
E4	B18	W/3	: Rear door switch LH	B3	B207	GR/5	: Lifting motor (rear) (with automatic drive positioner)
E5	B19	—	: Body ground	C3	B208	W/10	: Power seat switch LH (with automatic drive positioner)
A4	B25	B/1	: To E34	D4	B209	W/3	: Front seat heater LH
D4	B37	W/16	: To B200	E4	B211	W/2	: To B45
A2	B38	Y/2	: LH side curtain air bag module	D3	B212	B/2	: Sliding motor LH (without automatic drive positioner)
B3	B41	W/12	: To E35	B3	B214	GR/2	: Lifting motor (front) (without automatic drive positioner)
E4	B45	W/2	: To B211	B3	B215	GR/2	: Lifting motor (rear) (without automatic drive positioner)
B3	B69	SMJ	: To M40	C3	B216	W/10	: Power seat switch LH (without automatic drive positioner)
B4	B72	W/4	: Subwoofer	D3	B232	W/2	: Reclining motor LH (without automatic drive positioner)
B3	B75	BR/2	: To E50	Tail sub-harness			
G4	B77	W/26	: Differential lock control unit	G4	T1	B/6	: To C8
F3	B78	B/1	: Rear window defogger	F4	T2	GR/6	: Rear view camera

HARNESS

< WIRING DIAGRAM >

BODY NO. 2 HARNESS (KING CAB MODELS)



B4	B103	W/16	: Sonar control unit	D5	B144	W/8	: Bluetooth® control unit
E4	B107	BR/12	: To E139	E5	B149	SMJ	: To M36
C4	B108	W/3	: Front door switch RH	C5	B154	W/2	: To B303
C5	B110	W/4	: Seat belt buckle switch RH	B3	B156	B/2	: Rear door switch upper RH
D3	B113	Y/22	: Air bag diagnosis sensor unit	B4	B157	B/2	: Rear door switch lower RH

HARNESS

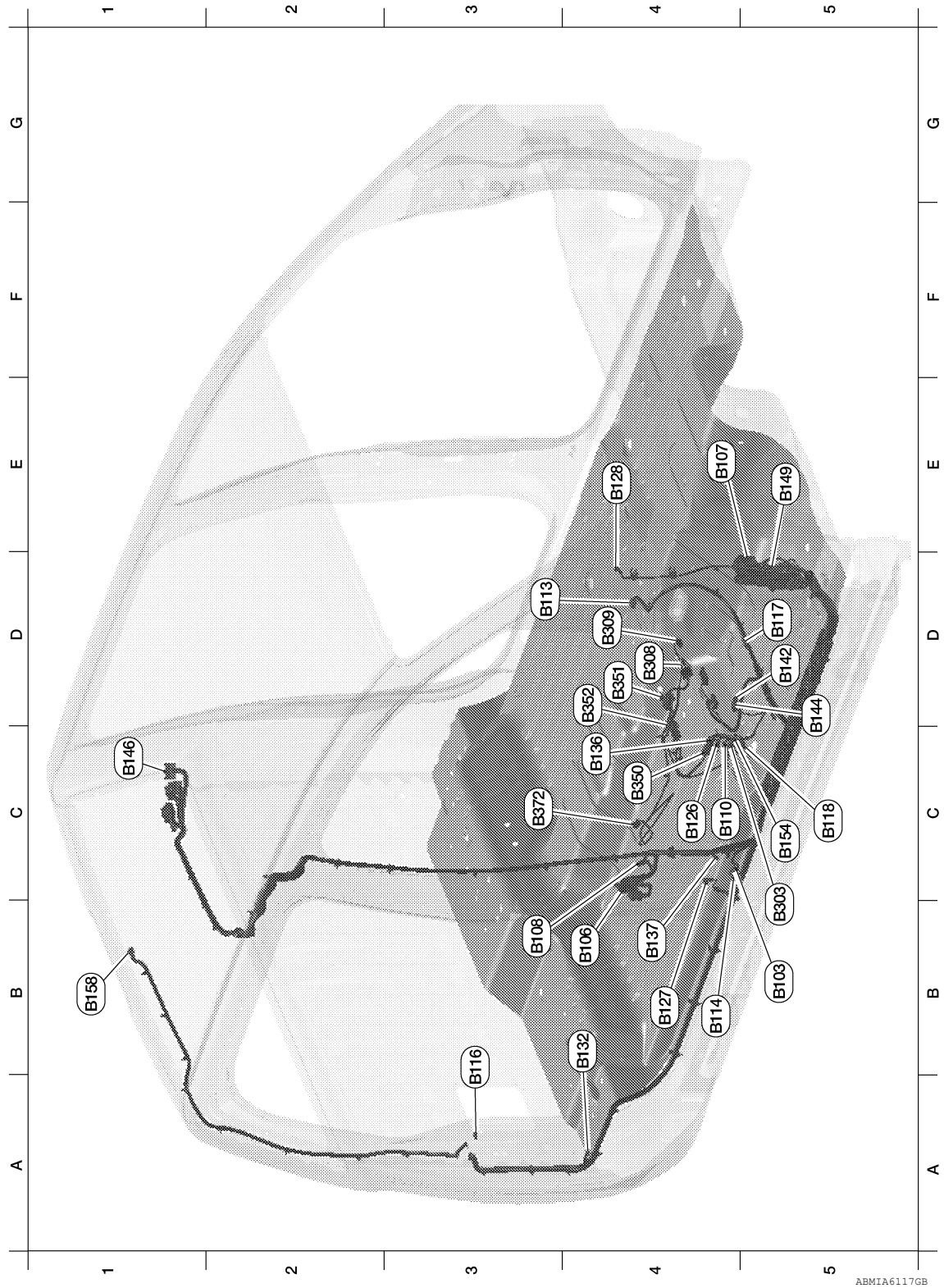
< WIRING DIAGRAM >

B5	B114	Y/2	: RH side air bag (satellite) sensor	B1	B158	W/3	: High-mounted stop lamp
D5	B117	—	: Body ground	B3	B159	W/2	: Rear door speaker RH
C5	B118	W/3	: Front seat heater RH	Front seat RH harness			
C5	B126	Y/2	: Front RH side air bag module	C5	B303	W/2	: To B154
C4	B127	Y/2	: Front RH seat belt pre-tensioner	D4	B308	W/6	: Power seat switch RH
E4	B128	Y/2	: RH side curtain air bag module	D4	B309	GR/2	: Sliding motor RH
B4	B132	—	: Body ground	C4	B350	Y/8	: To B136
C4	B136	W/8	: To B350	C4	B351	B/18	: Occupant classification control unit
C3	B137	W/3	: Belt tension sensor	C4	B352	B/3	: Occupant classification system sensor
D5	B142	W/32	: Bluetooth® control unit	C2	B372	W/2	: Reclining motor RH

HARNESS

< WIRING DIAGRAM >

BODY NO. 2 HARNESS (CREW CAB MODELS)



B5	B103	W/16	: Sonar control unit	B4	B137	W/3	: Belt tension sensor
B4	B106	W/18	: To D301	D5	B142	W/32	: Bluetooth® control unit
E4	B107	BR/12	: To E139	D5	B144	W/8	: Bluetooth® control unit
B3	B108	W/3	: Front door switch RH	C1	B146	BR/24	: To R201
C4	B110	W/4	: Seat belt buckle switch RH	E5	B149	SMJ	: To M36

HARNESS

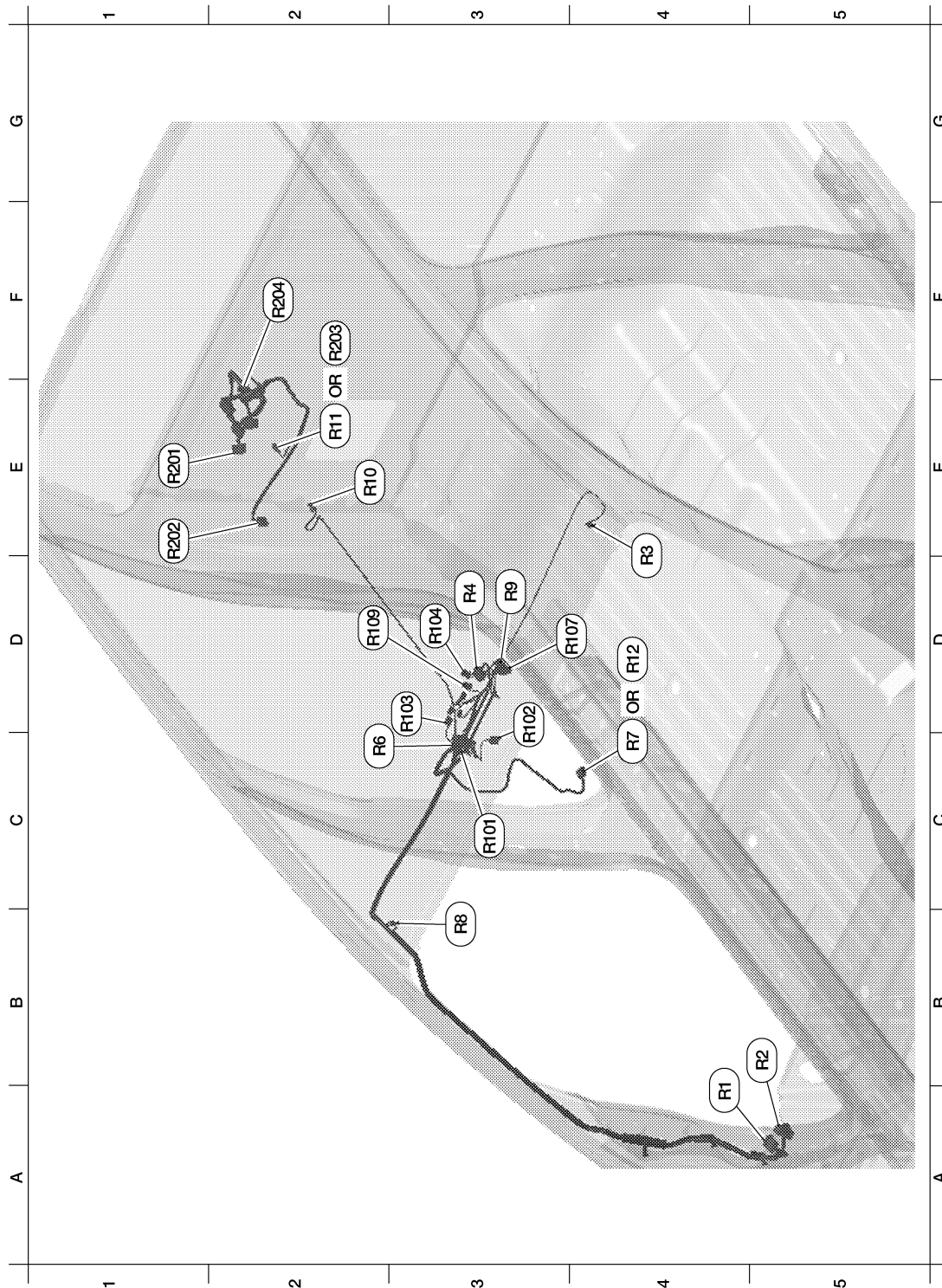
< WIRING DIAGRAM >

D3	B113	Y/22	: Air bag diagnosis sensor unit	C5	B154	W/2	: To B303
B4	B114	Y/2	: RH side air bag (satellite) sensor	B1	B158	W/3	: High-mounted stop lamp
B3	B116	W/3	: Rear door switch RH	Front seat RH harness			
D5	B117	—	: Body ground	B5	B303	W/2	: To B154
C5	B118	W/3	: Front seat heater RH	D4	B308	W/6	: Power seat switch RH
C4	B126	Y/2	: Front RH side air bag module	D4	B309	GR/2	: Sliding motor RH
B4	B127	Y/2	: Front RH seat belt pre-tensioner	C4	B350	Y/8	: To B136
E4	B128	Y/2	: RH side curtain air bag module	D4	B351	B/18	: Occupant classification control unit
B4	B132	—	: Body ground	D4	B352	B/3	: Occupant classification system sensor
C4	B136	W/8	: To B350	C3	B372	W/2	: Reclining motor RH

HARNESS

< WIRING DIAGRAM >

ROOM LAMP HARNESS



ABMIA6118GB

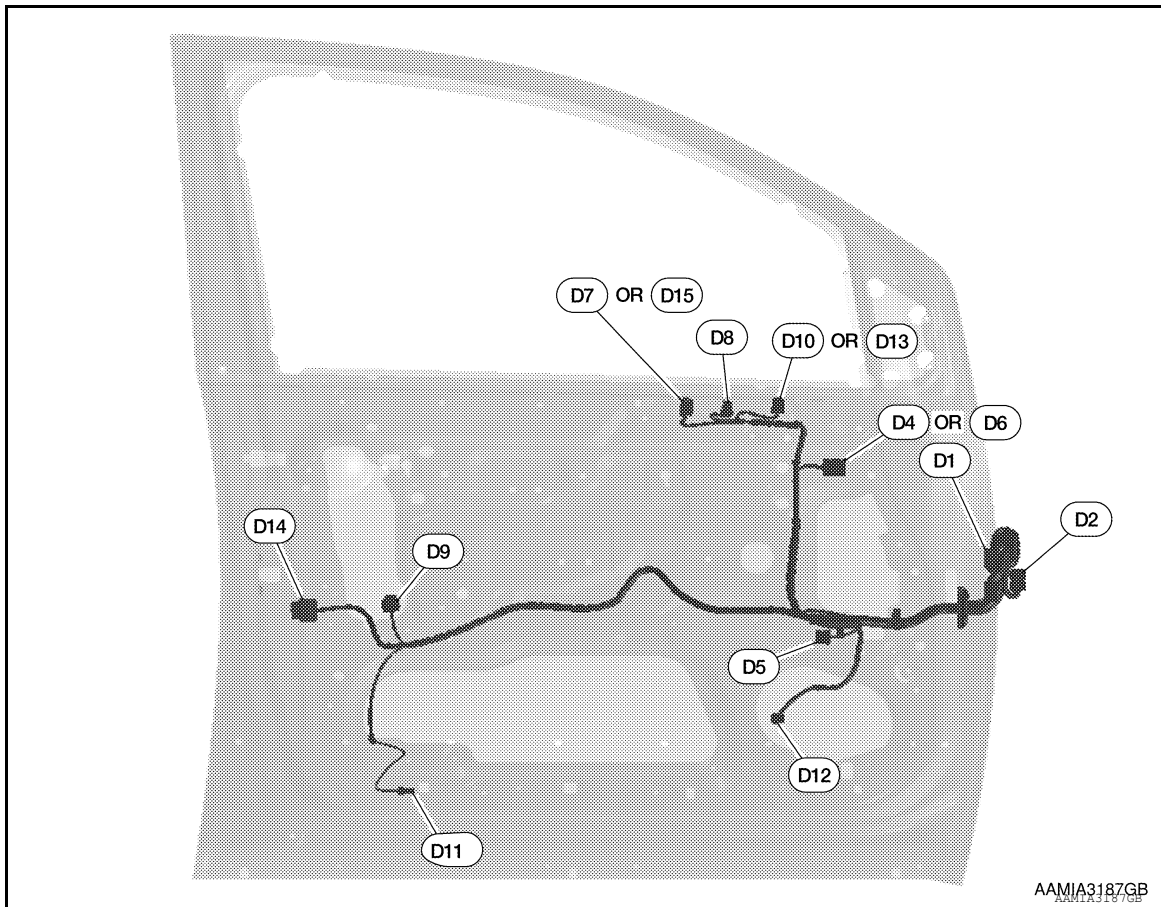
A4	R1	W/16	: To M1	C3	R101	W/16	: To R6
B5	R2	W/12	: To M2	D3	R102	GR/8	: Front room/map lamp assembly
E4	R3	W/2	: Vanity lamp LH	D3	R103	W/6	: Rear power drop glass switch
D3	R4	W/10	: Sunroof motor assembly	D3	R104	GR/6	: Sunroof switch
C2	R6	W/16	: To R101	D3	R107	W/8	: To R9

HARNESS

< WIRING DIAGRAM >

C4	R7	GR/10	: Auto anti-dazzling inside mirror (with homelink universal transceiver)	D2	R109	W/4	: Microphone
B3	R8	W/2	: Vanity lamp RH	Room lamp sub-harness B			
D3	R9	W/8	: To R107	E1	R201	BR/24	: To B146
E2	R10	W/2	: Room lamp	E1	R202	W/12	: Video monitor
E2	R11	W/3	: Personal lamp 2ND row (crew cab with NAVI)	E2	R203	W/3	: Personal lamp 2ND row (crew cab without NAVI)
D4	R12	B/7	: Auto anti-dazzling inside mirror (without homelink universal transceiver)	F2	R204	W/16	: Rear control assembly
Room lamp sub-harness A							

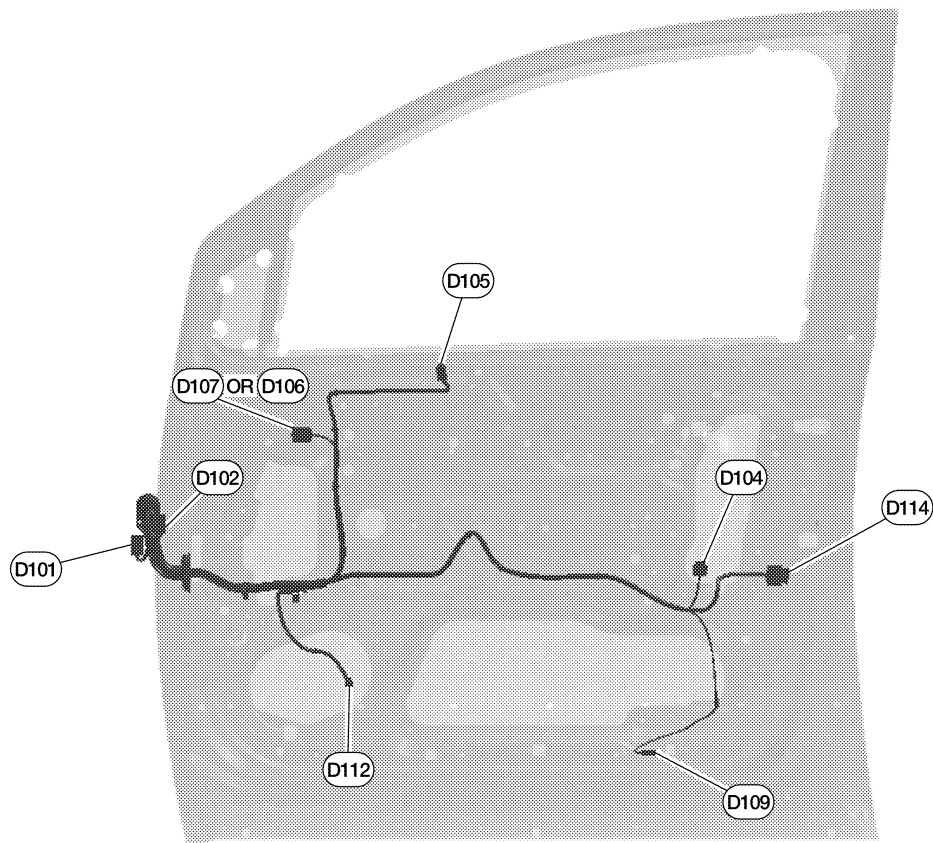
FRONT DOOR LH HARNESS



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)
D4	W/16	: Door mirror LH (with automatic drive positioner)	D11	W/2	: Front step lamp LH
D5	W/8	: Seat memory switch	D12	W/2	: Front door speaker LH
D6	W/6	: Door mirror LH (without automatic drive positioner)	D13	W/16	: Door mirror remote control switch (without automatic drive positioner)
D7	W/16	: Main power window and door lock/unlock switch (crew cab)	D14	B/6	: Front door lock assembly LH
D8	W/3	: Main power window and door lock/unlock switch (crew cab)	D15	W/16	: Main power window and door lock/unlock switch (king cab)

HARNESS

< WIRING DIAGRAM >
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)			

PG

N

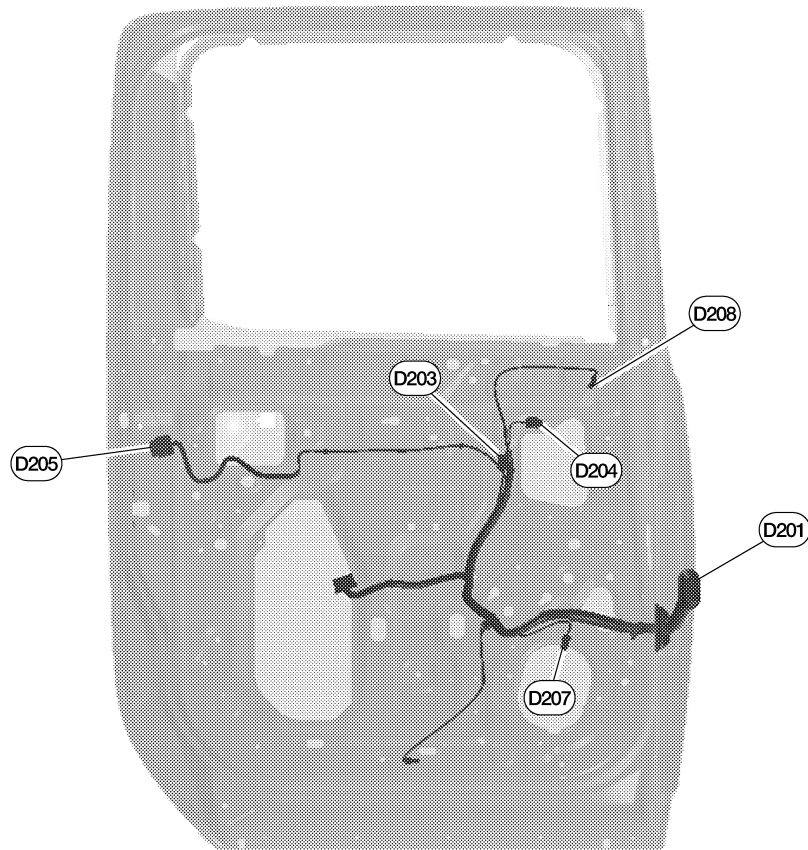
O

P

HARNESS

< WIRING DIAGRAM >

REAR DOOR LH HARNESS (CREW CAB MODELS)



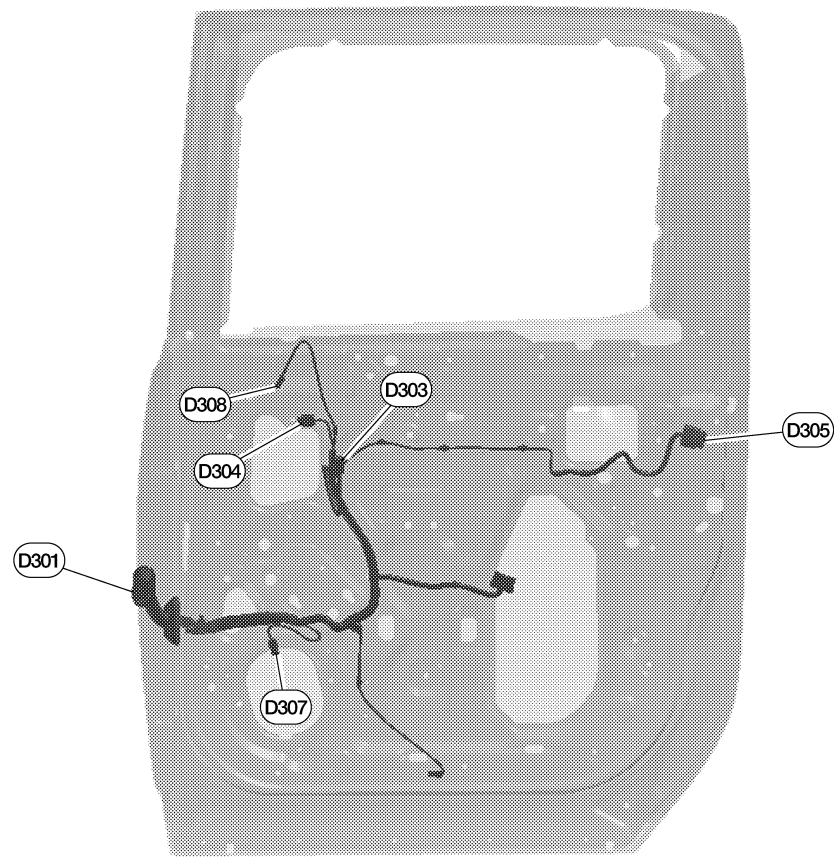
ABMIA6119GB

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

HARNESS

< WIRING DIAGRAM >

REAR DOOR RH HARNESS (CREW CAB MODELS)



ABMIA6120GB

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

PG

N

O

P

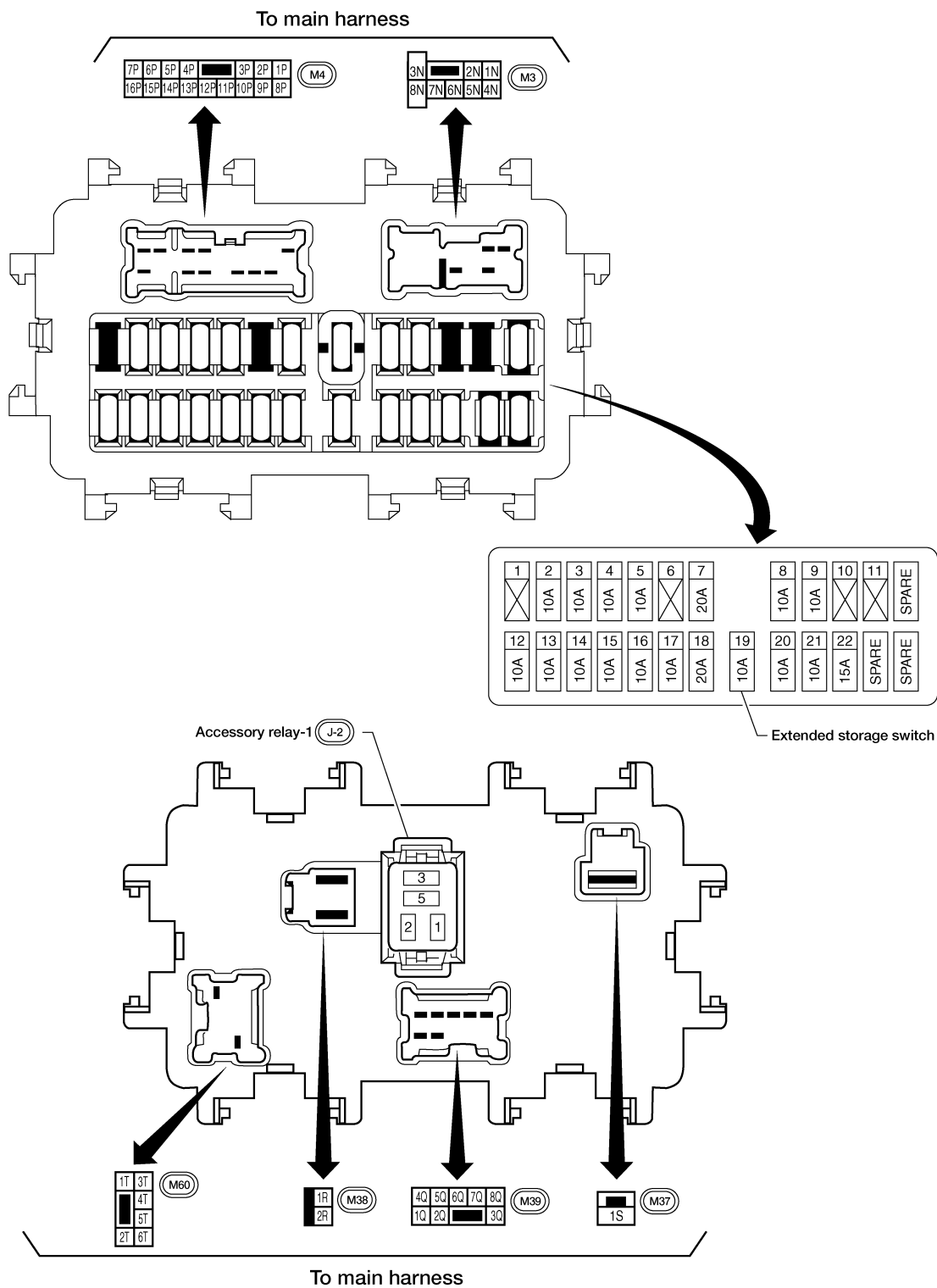
FUSE BLOCK - JUNCTION BOX (J/B)

< WIRING DIAGRAM >

FUSE BLOCK - JUNCTION BOX (J/B)

Terminal Arrangement

INFOID:000000011676156



ABMIA6107GB

FUSE, FUSIBLE LINK AND RELAY BOX

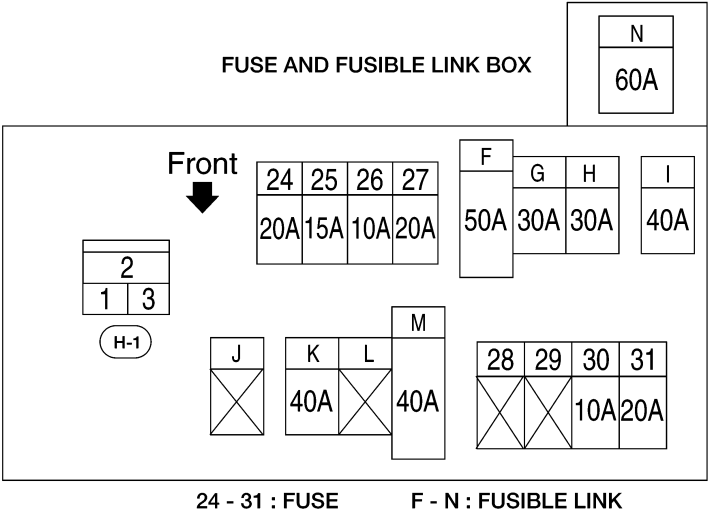
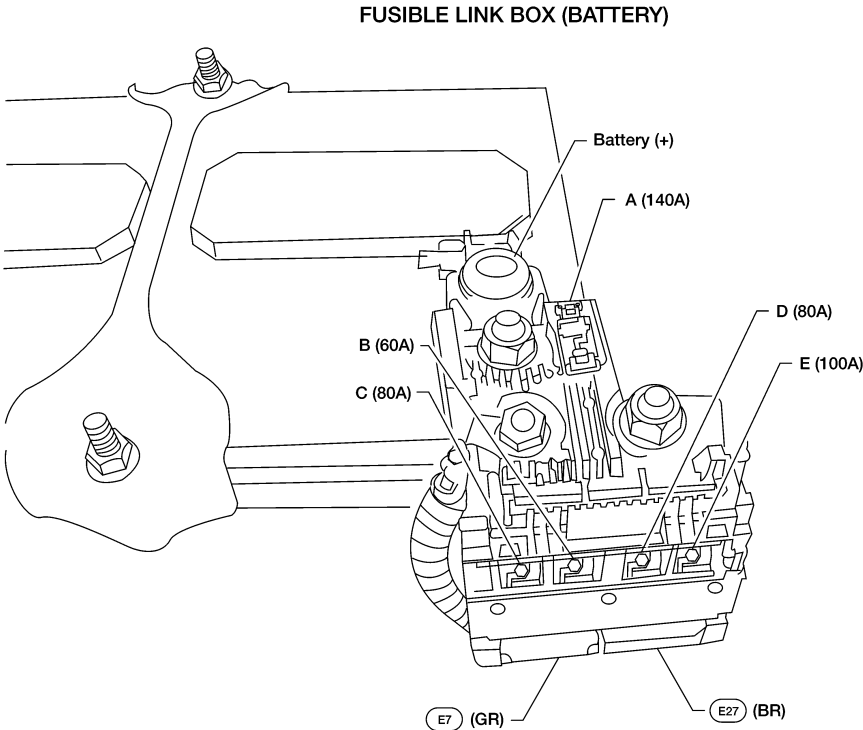
< WIRING DIAGRAM >

FUSE, FUSIBLE LINK AND RELAY BOX

Terminal Arrangement

INFOID:0000000011676157

FUSE AND FUSIBLE LINK BOX



ABMIA6108GB

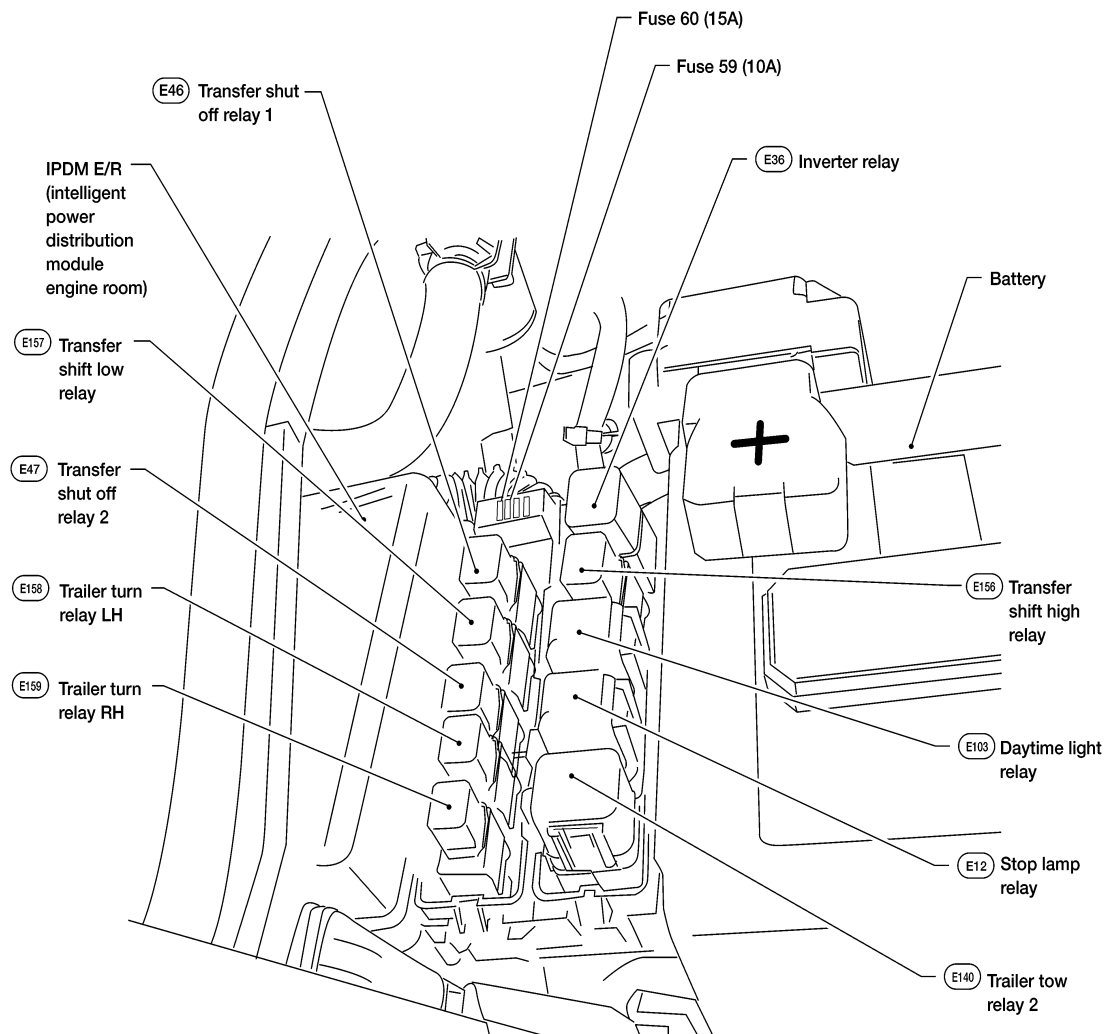
A
B
C
D
E
F
G
H
I
J
K
L
PG
N
O
P

PG

FUSE, FUSIBLE LINK AND RELAY BOX

< WIRING DIAGRAM >

FUSE AND RELAY BOX



ABMIA6109GB

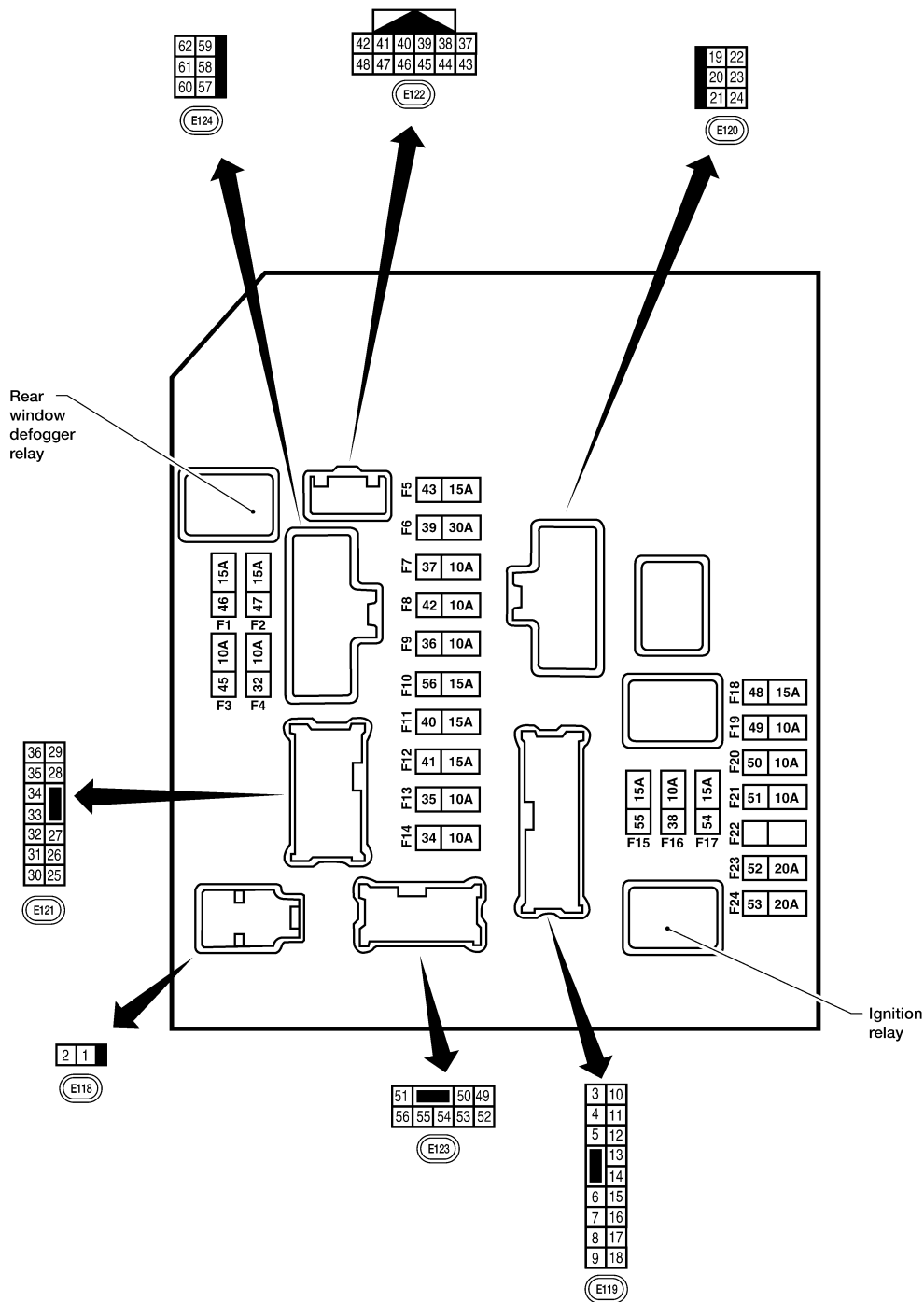
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< WIRING DIAGRAM >

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

IPDM E/R Terminal Arrangement

INFOID:0000000011676158



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.

ABMIA2539GB

BATTERY

< BASIC INSPECTION >

BASIC INSPECTION

BATTERY

How to Handle Battery

INFOID:0000000011676159

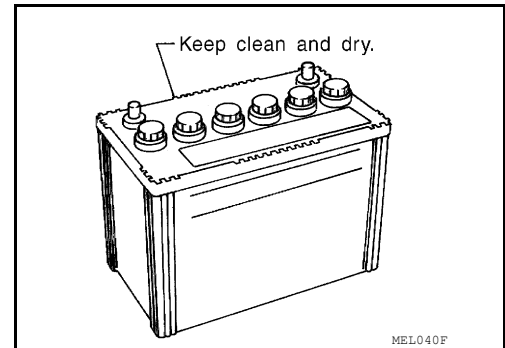
CAUTION:

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

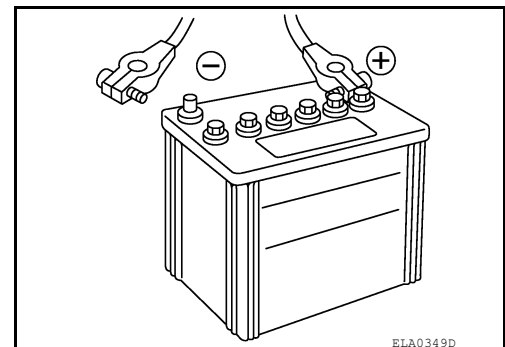
METHODS OF PREVENTING OVER-DISCHARGE

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

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



- When the vehicle is not going to be used over a long period of time, disconnect the battery cable from the negative terminal. (If the vehicle has an extended storage switch, turn it off.)



Work Flow

INFOID:0000000011676160

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

To diagnose and confirm the condition of the battery, use the following special service tools:

- EXP-800 NI Battery and electrical diagnostic analyzer
- GR8-1200 NI Multitasking battery and electrical diagnostic station

NOTE:

Refer to the applicable Instruction Manual for proper battery diagnosis procedures.

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

Checking Electrolyte Level

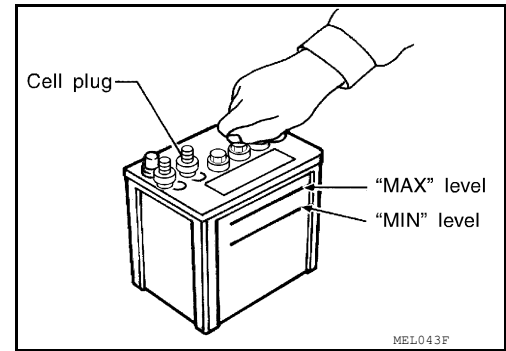
WARNING:

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

BATTERY

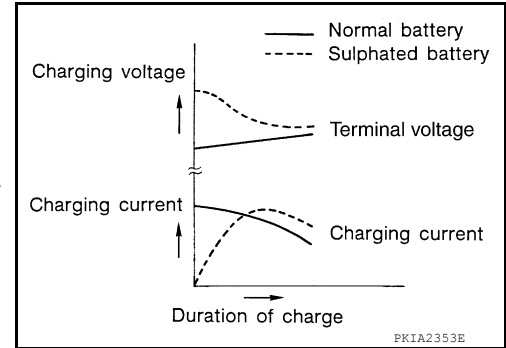
< BASIC INSPECTION >

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



SULFATION

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



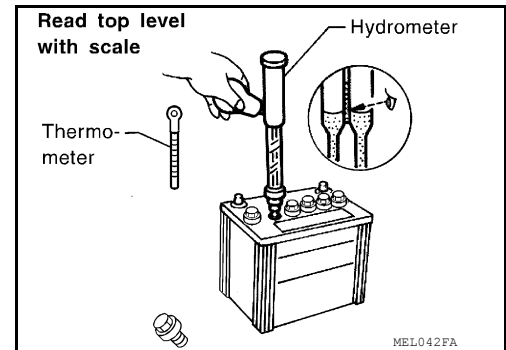
Specific Gravity Check

NOTE:

Check the charge condition of the battery.

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

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



Hydrometer Temperature Correction

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

BATTERY

< BASIC INSPECTION >

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

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

Charging The Battery

CAUTION:

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

Charging Rates (Standard Charge)

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

Charging Rates (Quick Charge)

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

NOTE:

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

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

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:0000000011676161

Required Procedure After Battery Disconnection

System	Item	Reference
Engine Control System	Idle Air Volume Learning	EC-130
Roof	Sunroof Memory Reset/Initialization	RF-5
Automatic Drive Positioner	Automatic Drive Positioner System Initialization	Refer to Owner's Manual.
Audio, Visual & Navigation System	Audio (Radio Preset)	Refer to Owner's Manual.
	Navigation System	Refer to Owner's Manual.

FUSE INSPECTION

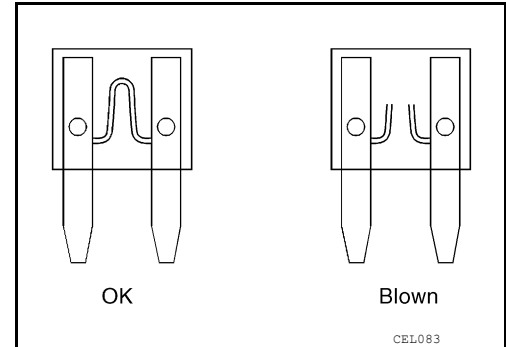
< BASIC INSPECTION >

FUSE INSPECTION

How To Check

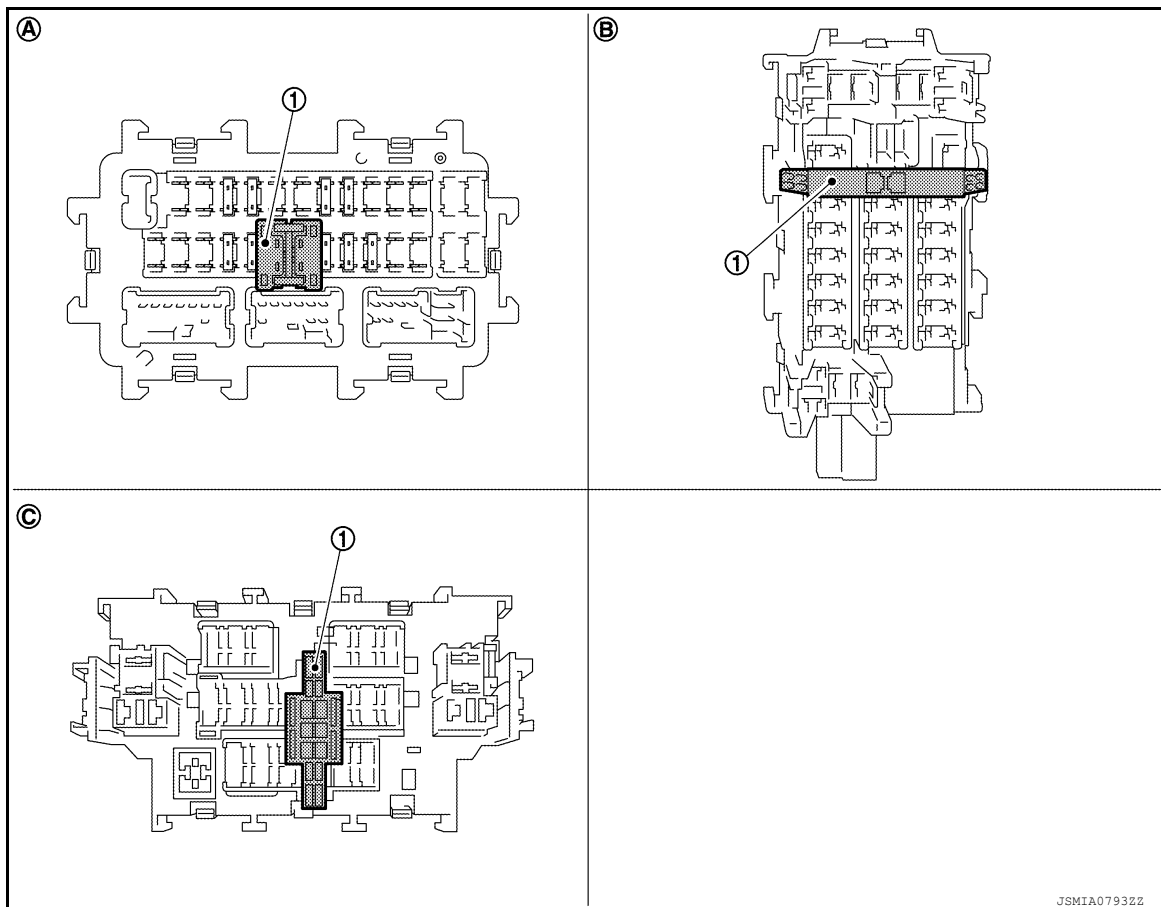
INFOID:0000000011676162

- 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.



EXTENDED STORAGE SWITCH (IF EQUIPPED)

The following switch may be mounted on the fuse block (Junction Box) for transportation and storage.



① Extended storage switch

Ⓐ Type A

Ⓑ Type B

Ⓒ Type C

Remove the extended storage switch if it causes the interference when checking fuses.

How To Extended Storage Switch ON/OFF

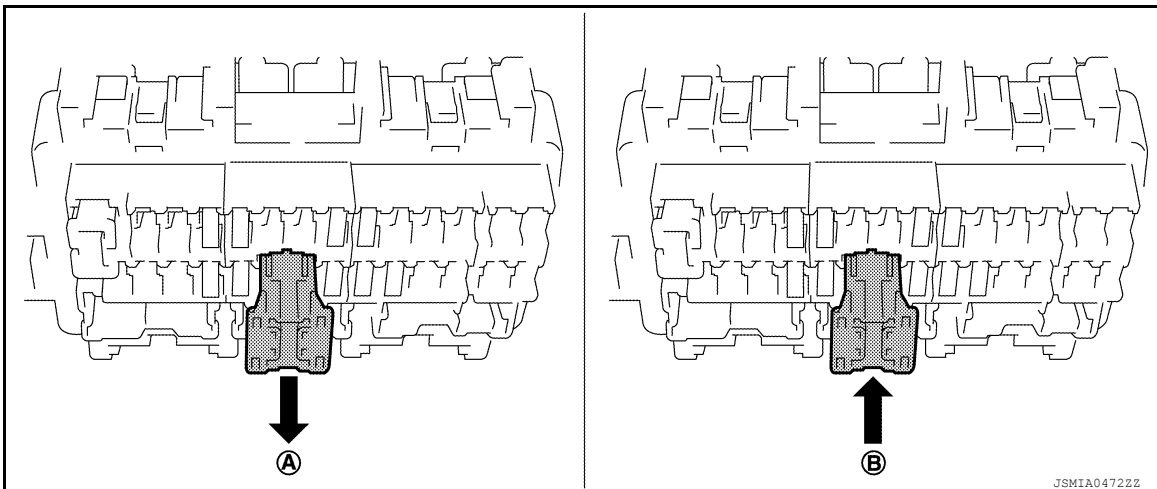
CAUTION:

- Turn the ignition switch OFF when operating the extended storage switch.
- Under normal conditions, keep the extended storage switch in ON state. Never operate the extended storage switch except when necessary.

FUSE INSPECTION

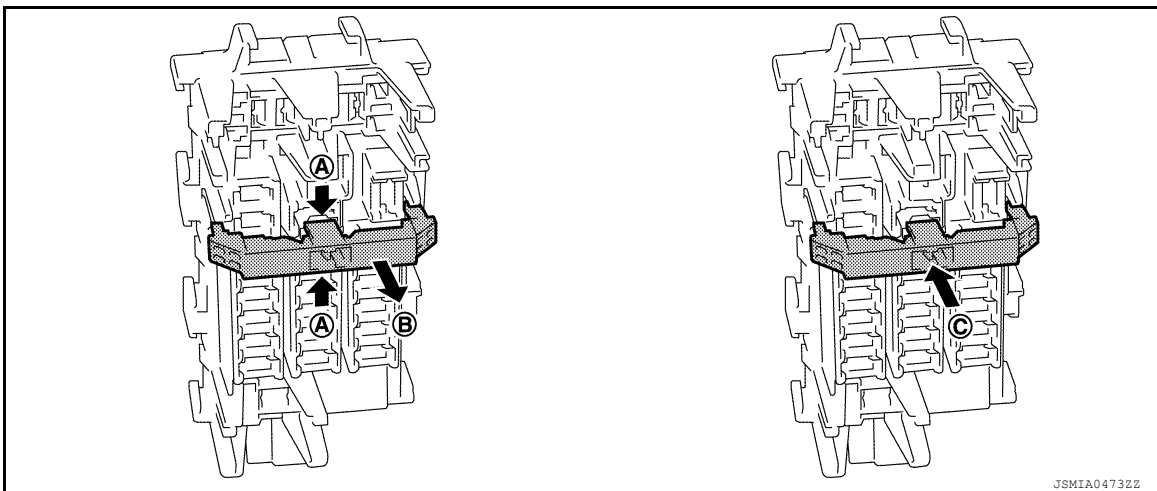
< BASIC INSPECTION >

• Type A



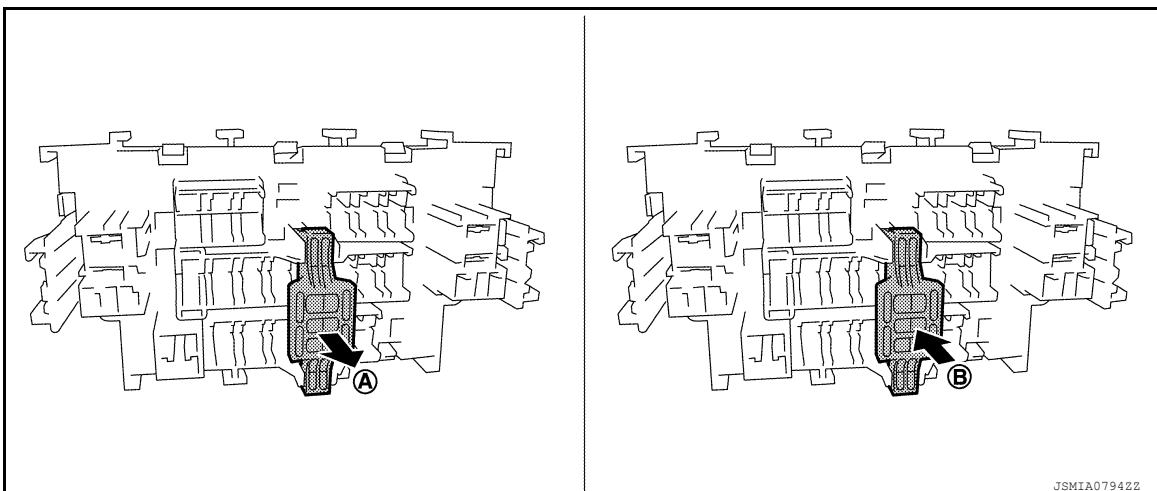
- To turn the extended storage switch OFF, pull it up in ① direction as shown in the figure.
- To turn the extended storage switch ON, press it in ② direction as shown in the figure.

• Type B



- To turn the extended storage switch OFF, hold ① of the switch and pull up in ② direction as shown in the figure.
- To turn the extended storage switch ON, press it in ③ direction as shown in the figure.

• Type C



- To turn the extended storage switch OFF, pull it up in ① direction as shown in the figure.
- To turn the extended storage switch ON, press it in ② direction as shown in the figure.

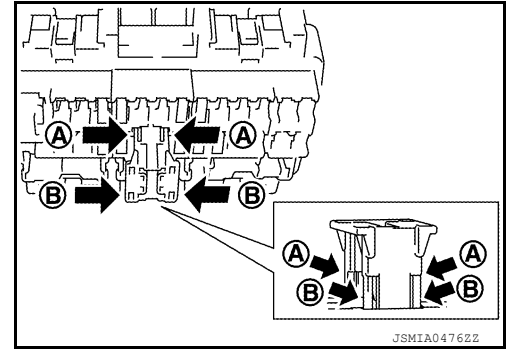
How To Remove Extended Storage Switch

Type A

FUSE INSPECTION

< BASIC INSPECTION >

1. Turn the ignition switch OFF.
2. Turn the extended storage switch OFF.
3. Press pawl (A) and tilt to disengage the extended storage switch. Press pawl (B) and tilt to remove the extended storage switch.



CAUTION:

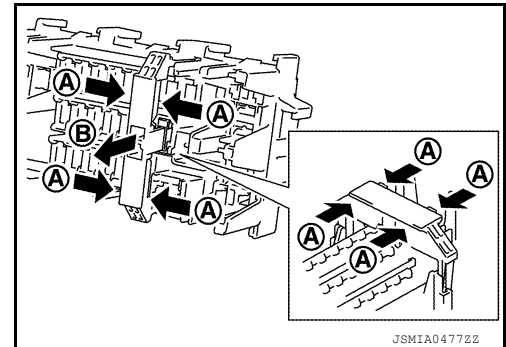
Never use fuse for bus bar.

NOTE:

- Extended storage switch and bus bar are removed together. Remove bus bar from extended storage switch, if necessary.
- Install removed bus bar to fuse block.
- Extended storage switch is for transportation and storage. Reinstallation is not required after the removal.

Type B

1. Turn the ignition switch OFF.
2. Turn the extended storage switch OFF.
3. Hold (A) and pull up the extended storage switch hard in (B) direction.



CAUTION:

Never use fuse for bus bar.

NOTE:

- Extended storage switch and bus bar may be removed together. Remove bus bar from extended storage switch, if necessary.
- Install removed bus bar to fuse block.
- Extended storage switch is for transportation and storage. Reinstallation is not required after the removal.

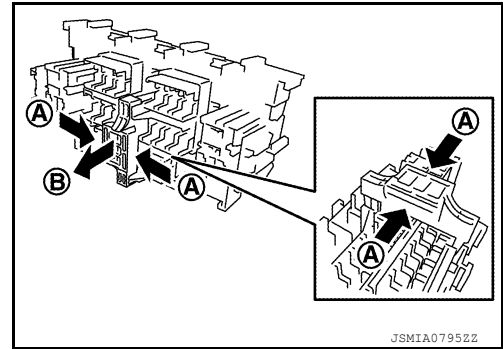
Type C

1. Turn the ignition switch OFF.
2. Turn the extended storage switch OFF.

FUSE INSPECTION

< BASIC INSPECTION >

3. Hold (A) and pull up the extended storage switch hard in (B) direction.



CAUTION:

Never use fuse for bus bar.

NOTE:

- Extended storage switch and bus bar are removed together. Remove bus bar from extended storage switch, if necessary.
- Install removed bus bar to fuse block.
- Extended storage switch is for transportation and storage. Reinstallation is not required after the removal.

A
B
C
D
E
F
G
H
I
J
K
L
N
O
P

PG

FUSIBLE LINK INSPECTION

< BASIC INSPECTION >

FUSIBLE LINK INSPECTION

Fusible Link

INFOID:0000000011676163

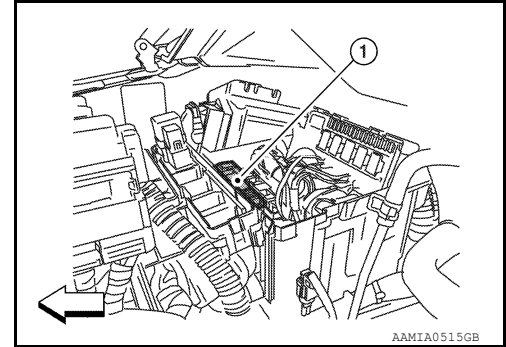
A melted fusible link can be detected either by visual inspection or by feeling with finger tip. If its condition is questionable, use circuit tester or test lamp.

1 : Fusible link

↔: Vehicle front

CAUTION:

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



BATTERY

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

BATTERY

Removal and Installation

INFOID:0000000011676164

REMOVAL

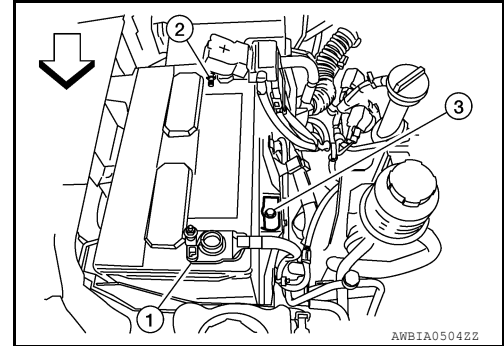
1. Disconnect the negative battery terminal (1) and positive battery terminal (2).

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-79. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

A
B
C
D
E
F
G
H
I
J
K
L
PG
N
O
P

BATTERY TRAY

< REMOVAL AND INSTALLATION >

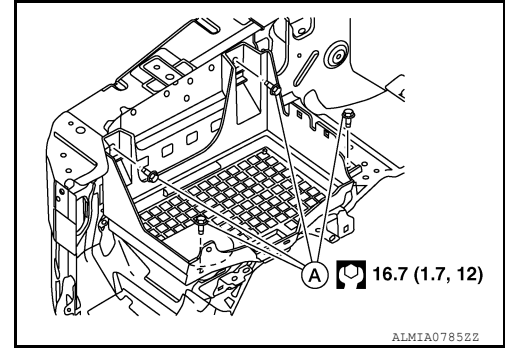
BATTERY TRAY

Removal and Installation

INFOID:000000011867283

REMOVAL

1. Remove the battery. Refer to [PG-85, "Removal and Installation"](#).
2. Remove the battery tray bolts (A) and battery tray.



INSTALLATION

Installation is in the reverse order of removal.

Reset electronic systems as necessary. Refer to [PG-79, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

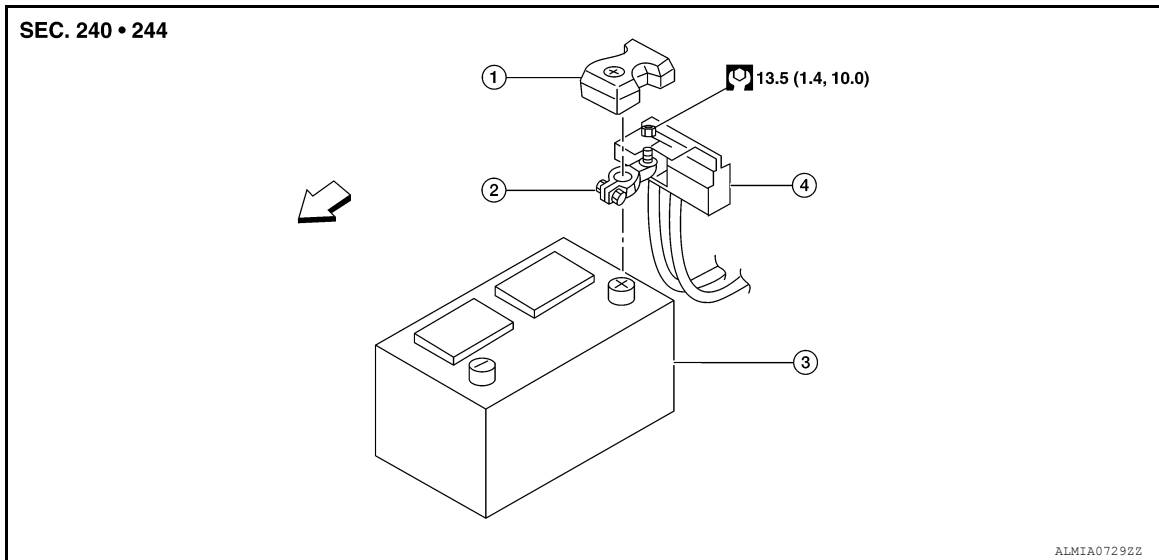
BATTERY TERMINAL WITH FUSIBLE LINK

< REMOVAL AND INSTALLATION >

BATTERY TERMINAL WITH FUSIBLE LINK

Exploded View

INFOID:0000000011867280



1. Cover
4. Fusible link box

2. Terminal
↔ Front

3. Battery

Removal and Installation

INFOID:0000000011867281

REMOVAL

1. Disconnect both battery negative and positive terminals. Refer to [PG-85, "Removal and Installation"](#).
CAUTION:
To prevent damage to the parts, disconnect the battery negative terminal first.
2. Disconnect positive cable from fusible link box (battery).
3. Disconnect harness connectors and separate positive terminal from fusible link box (battery).

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

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

To install the battery, carefully read the following instructions:

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

Reset electronic systems as necessary. Refer to [PG-79, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

PG

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Battery

INFOID:0000000011676165

	Standard battery	Heavy duty battery (with towing package and FFV equipped vehicles)
Type*	Gr. 24F	Gr. 27F
Capacity (20 HR) minimum V-AH	12 - 70	12 - 80
Cold cranking current A (For reference value)	650	710

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