SECTION PG

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000004095218

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

WARNING:

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

Precaution for Power Generation Variable Voltage Control System

INFOID:0000000004095219

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

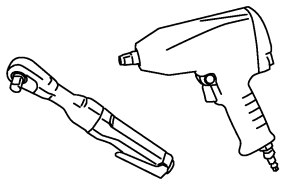
Special Service Tool

INFOID:0000000004687999

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:0000000004095221

Tool number Tool name	Description
Power tool 	Loosening bolts and nuts

BASIC INSPECTION

BATTERY

How to Handle Battery

INFOID:0000000004095222

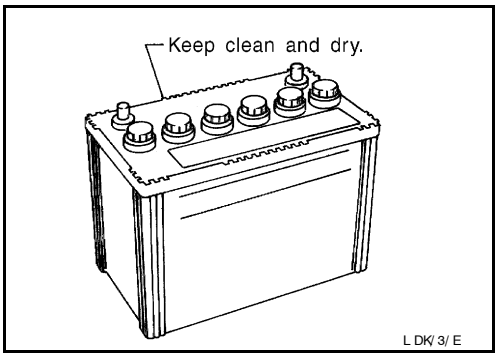
CAUTION:

- **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.**

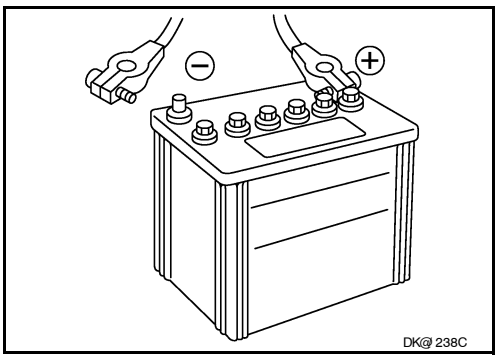
METHODS OF PREVENTING OVER-DISCHARGE

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

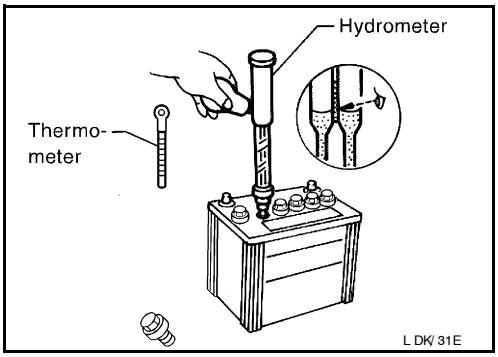
- The battery surface (particularly its top) should always be kept clean and dry.
- The terminal connections should be clean and tight.
- At every routine maintenance, check the electrolyte level.
  This also applies to batteries designated as “low maintenance” and “maintenance-free”.



- 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.

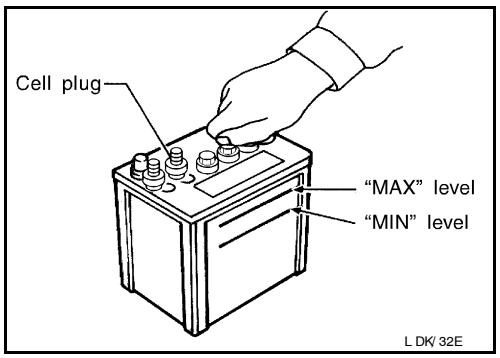


CHECKING ELECTROLYTE LEVEL

WARNING:

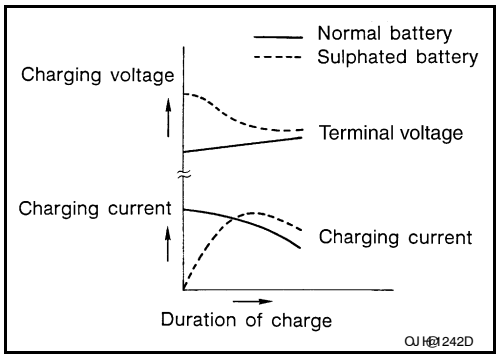
Never allow battery fluid to come in contact with skin, eyes, fabrics, or painted surfaces. After touching a battery, never touch or rub your eyes until you have thoroughly washed your hands. If acid contacts eyes, skin or clothing, immediately flush with water for 15 minutes and seek medical attention.

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



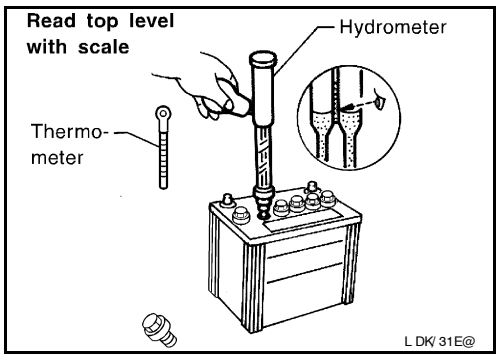
Sulphation

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



SPECIFIC GRAVITY CHECK

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



Hydrometer Temperature Correction

Battery electrolyte temperature [°C (°F)]	Add to specific gravity reading
71 (160)	0.032
66 (150)	0.028
60 (140)	0.024
54 (130)	0.020
49 (120)	0.016
43 (110)	0.012
38 (100)	0.008
32 (90)	0.004
27 (80)	0
21 (70)	–0.004
16 (60)	–0.008
10 (50)	–0.012
4 (40)	–0.016
–1 (30)	–0.020
–7 (20)	–0.024

Battery 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

INFOID:0000000004688000

TROUBLE DIAGNOSIS WITH MULTITASKING BATTERY DIAGNOSTIC STATION

Refer to diagnostic station instruction manual.

Special Repair Requirement

INFOID:0000000004095224

Required Procedure After Battery Disconnection

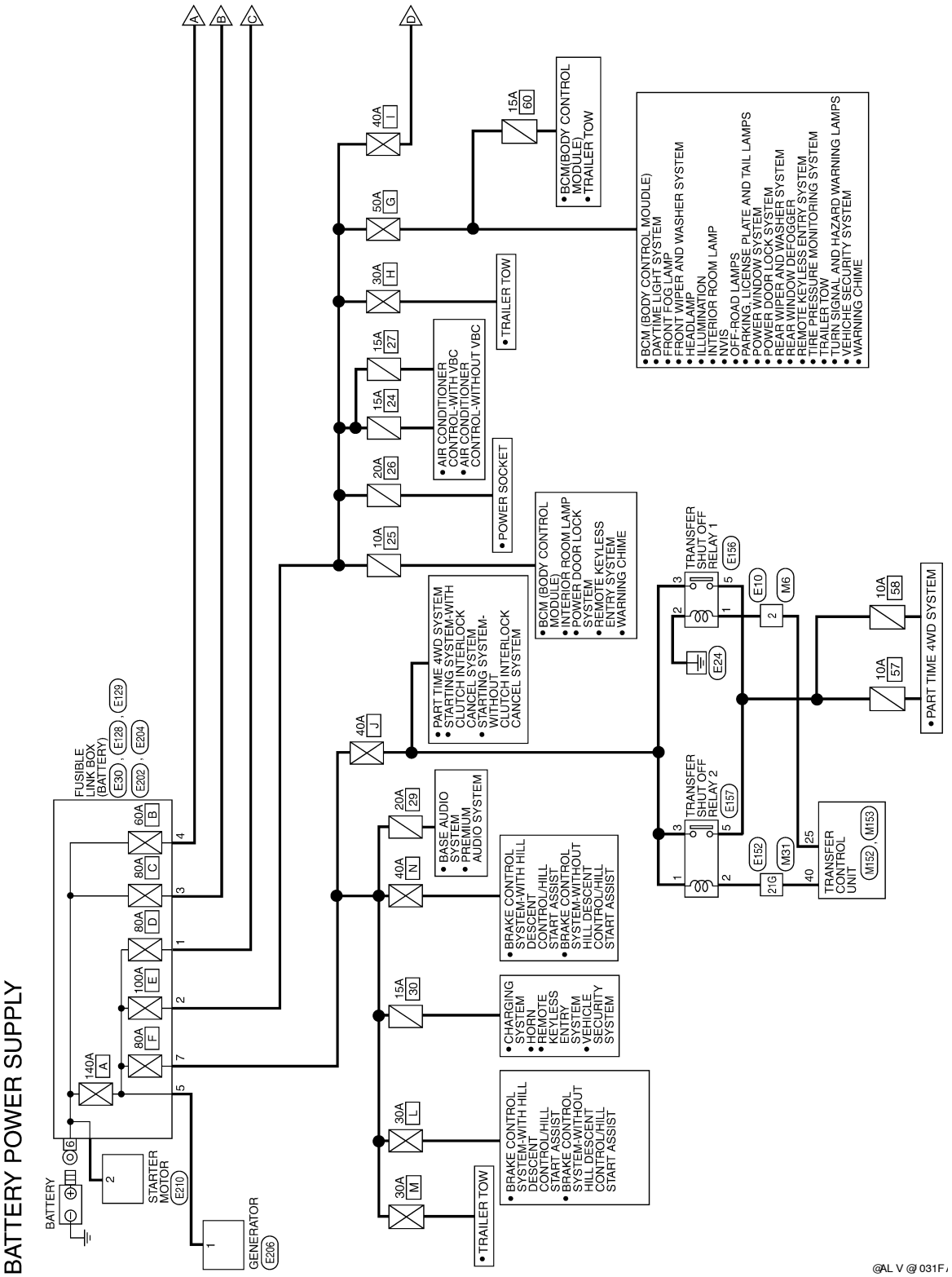
System	Item	Reference
Brake Control	Steering Angle Sensor Neutral Position	Type 1: Refer to BRC-12. Type 2: Refer to BRC-115.
Audio-Visual System	Audio (Radio Preset)	Refer to Owner’s Manual.

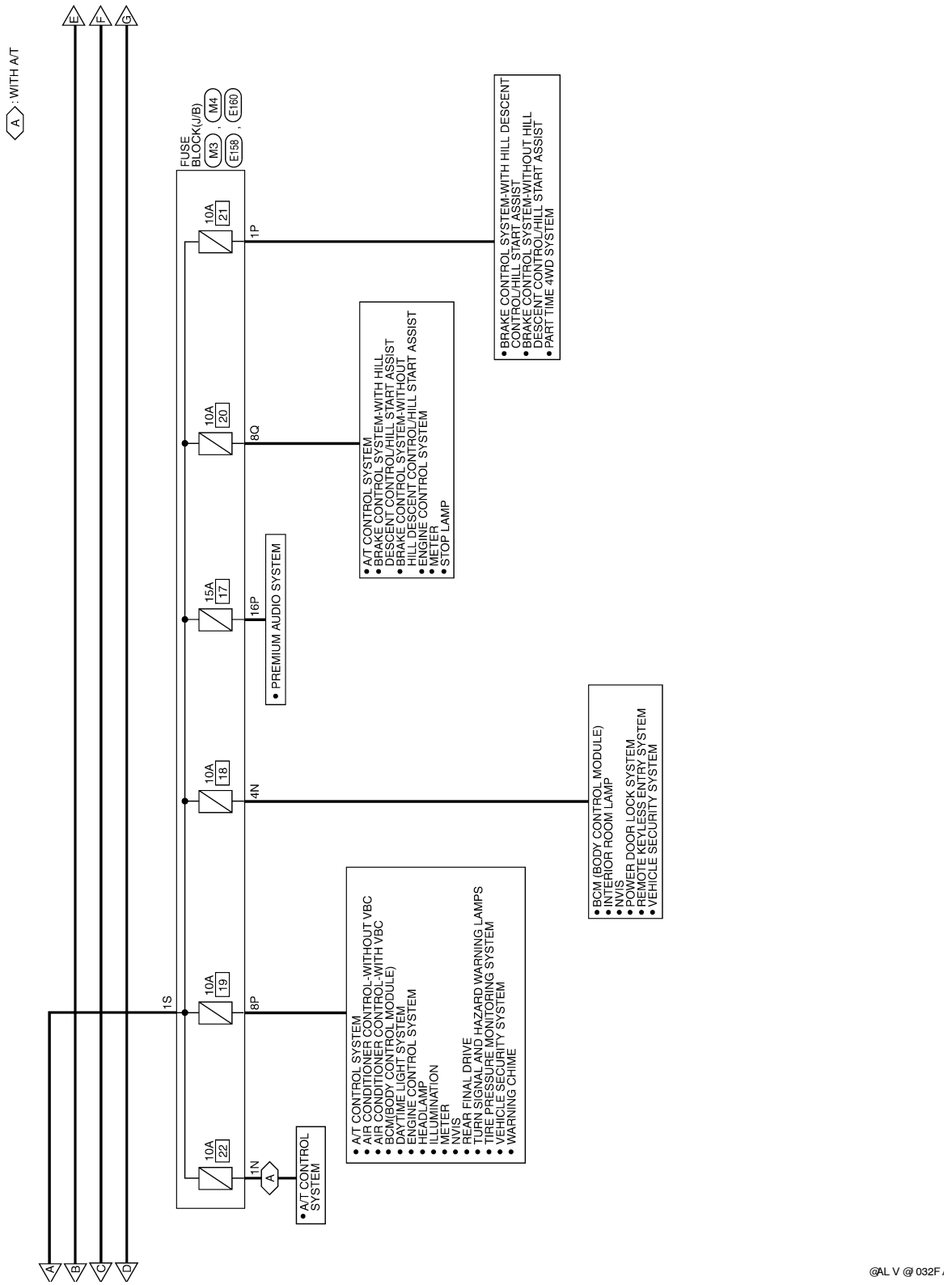
COMPONENT DIAGNOSIS

POWER SUPPLY ROUTING CIRCUIT

Wiring Diagram—Battery Power Supply

INFOID:0000000004095225




A : WITH A/T
FUSE BLOCK(J/B)
M3 , M4
E158 , E160
10A 21
1P
10A 20
8Q
15A 17
16P
10A 18
4N
10A 19
8P
1S
10A 22
1N
A
E
F
G
A
B
C
D
• BRAKE CONTROL SYSTEM-WITH HILL DESCENT CONTROL/HILL START ASSIST
• BRAKE CONTROL SYSTEM-WITHOUT HILL DESCENT CONTROL/HILL START ASSIST
• PART TIME 4WD SYSTEM
• A/T CONTROL SYSTEM
• BRAKE CONTROL SYSTEM-WITH HILL DESCENT CONTROL/HILL START ASSIST
• BRAKE CONTROL SYSTEM-WITHOUT HILL DESCENT CONTROL/HILL START ASSIST
• ENGINE CONTROL SYSTEM
• METER
• STOP LAMP
• PREMIUM AUDIO SYSTEM
• BCM (BODY CONTROL MODULE)
• INTERIOR ROOM LAMP
• NVIS
• POWER DOOR LOCK SYSTEM
• REMOTE KEYLESS ENTRY SYSTEM
• VEHICLE SECURITY SYSTEM
• A/T CONTROL SYSTEM
• A/T CONTROL SYSTEM
• AIR CONDITIONER CONTROL-WITHOUT VBC
• AIR CONDITIONER CONTROL-WITH VBC
• BCM(BODY CONTROL MODULE)
• DAYTIME LIGHT SYSTEM
• ENGINE CONTROL SYSTEM
• HEADLAMP
• ILLUMINATION
• METER
• NVIS
• REAR FINAL DRIVE
• TURN SIGNAL AND HAZARD WARNING LAMPS
• TIRE PRESSURE MONITORING SYSTEM
• VEHICLE SECURITY SYSTEM
• WARNING CHIME
• A/T CONTROL SYSTEM
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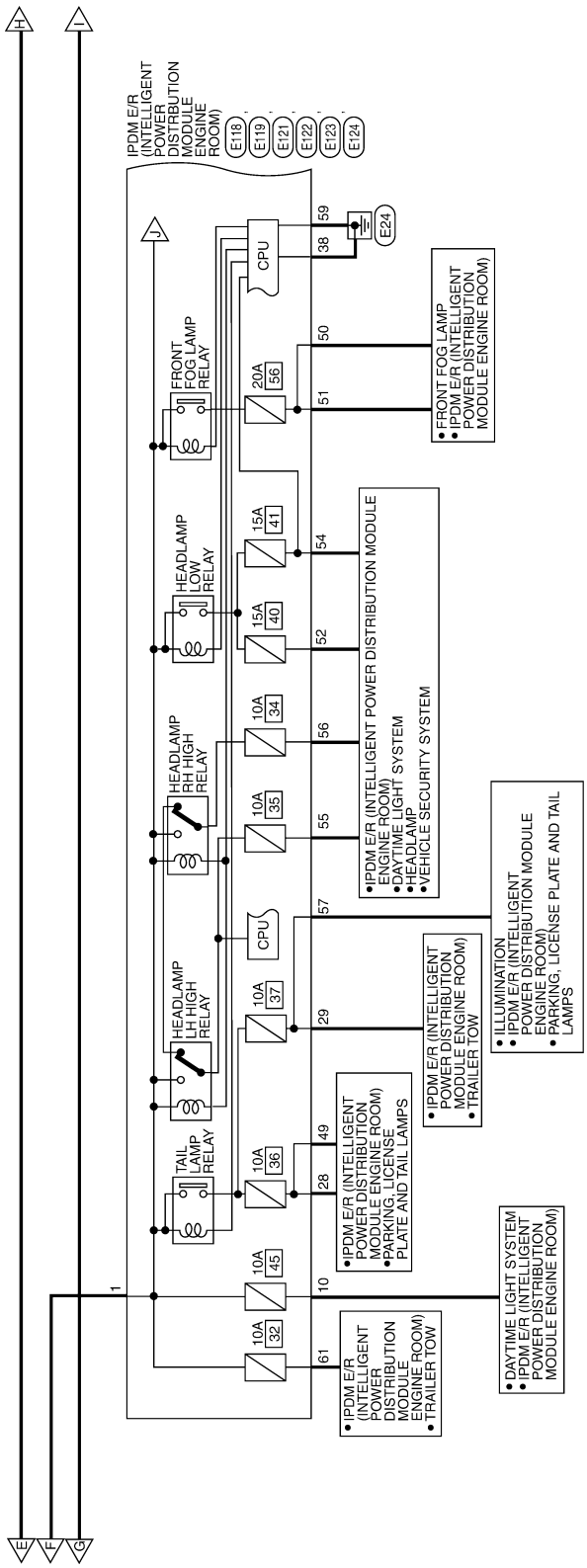
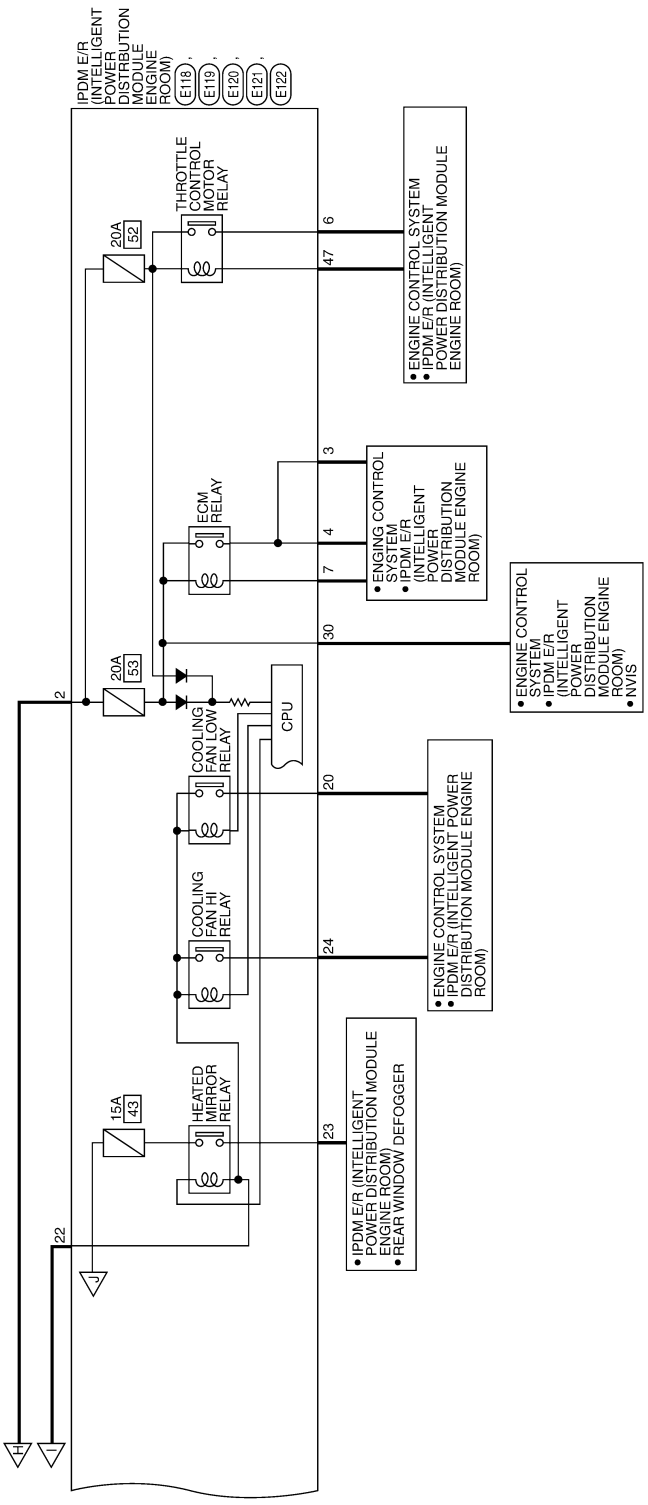

H
I
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E118
E119
E121
E122
E123
E124
J
CPU
59
38
E24
FRONT FOG LAMP RELAY
20A 56
50
51
• FRONT FOG LAMP
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
HEADLAMP LOW RELAY
15A 41
15A 40
54
52
HEADLAMP RH HIGH RELAY
10A 34
10A 35
56
55
•IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
•DAYTIME LIGHT SYSTEM
•HEADLAMP
•VEHICLE SECURITY SYSTEM
CPU
57
HEADLAMP LH HIGH RELAY
10A 37
29
• ILLUMINATION
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• PARKING, LICENSE PLATE AND TAIL LAMPS
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• TRAILER TOW
TAIL LAMP RELAY
10A 36
49
28
•IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
•PARKING, LICENSE PLATE AND TAIL LAMPS
10A 45
10
• DAYTIME LIGHT SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
10A 32
61
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• TRAILER TOW
1
E
F
G

@AL V @ 033F


IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E118
E119
E120
E121
E122
20A 52
20A 53
15A 43
THROTTLE CONTROL MOTOR RELAY
ECM RELAY
COOLING FAN LOW RELAY
COOLING FAN HI RELAY
HEATED MIRROR RELAY
CPU
2
22
6
47
3
4
7
30
20
24
23
• ENGINE CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• ENGING CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• ENGINE CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• NVIS
• ENGINE CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• REAR WINDOW DEFOGGER

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BATTERY POWER SUPPLY CONNECTORS

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

H.S.

3N		2N	1N
8N	7N	6N	5N	4N

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

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

H.S.

7P	6P	5P	4P		3P	2P	1P
16P	15P	14P	13P	12P	11P	10P	9P	8P

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

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

H.S.

3	2	1
6	5	4

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

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

H.S.

			5G	4G	3G	2G	1G				
				10G	9G	8G	7G	6G			
21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G	
		30G	29G	28G	27G	26G	25G	24G	23G	22G	
41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G	
		50G	49G	48G	47G	46G	45G	44G	43G	42G	
61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G	
		70G	69G	68G	67G	66G	65G	64G	63G	62G	
				75G	74G	73G	72G	71G			
					80G	79G	78G	77G	76G		

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

Connector No.	M152
Connector Name	TRANSFER CONTROL UNIT
Connector Color	WHITE

H.S.

6	5	4	3	2	1
17	16	15	14	13	12	11	10	9	8	7
26	25	24	23	22	21	20	19	18

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

Connector No.	M153
Connector Name	TRANSFER CONTROL UNIT
Connector Color	WHITE

H.S.

32	31	30	29	28	27
42	41	40	39	38	37	36	35	34	33
50	49	48	47	46	45	44	43

Terminal No.	Color of Wire	Signal Name
40	V	SSOF

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	R	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
20	BR	MOTOR FAN1
22	G	F/L M/FAN
23	LG	HEATED MIRROR
24	P	MOTOR FAN2

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

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

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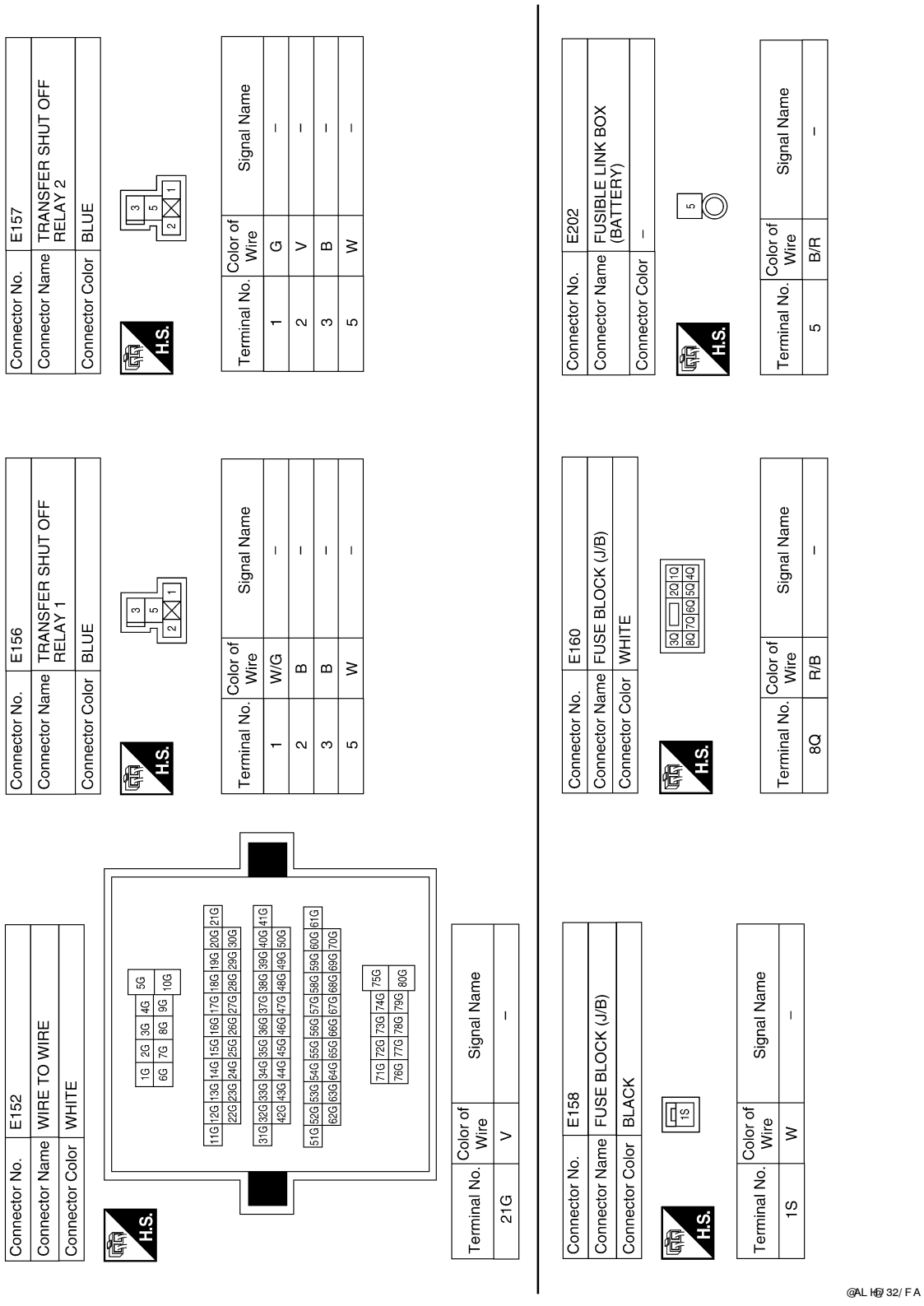
Connector No. E152
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1G 2G 3G 4G 5G
6G 7G 8G 9G 10G
11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G
22G 23G 24G 25G 26G 27G 28G 29G 30G
31G 32G 33G 34G 35G 36G 37G 38G 39G 40G 41G
42G 43G 44G 45G 46G 47G 48G 49G 50G
51G 52G 53G 54G 55G 56G 57G 58G 59G 60G 61G
62G 63G 64G 65G 66G 67G 68G 69G 70G
71G 72G 73G 74G 75G
76G 77G 78G 79G 80G
Terminal No. Color of Wire Signal Name
21G V –
Connector No. E156
Connector Name TRANSFER SHUT OFF RELAY 1
Connector Color BLUE
H.S.
3 5 1 2
Terminal No. Color of Wire Signal Name
1 W/G –
2 B –
3 B –
5 W –
Connector No. E157
Connector Name TRANSFER SHUT OFF RELAY 2
Connector Color BLUE
H.S.
3 5 1 2
Terminal No. Color of Wire Signal Name
1 G –
2 V –
3 B –
5 W –
Connector No. E158
Connector Name FUSE BLOCK (J/B)
Connector Color BLACK
H.S.
1S
Terminal No. Color of Wire Signal Name
1S W –
Connector No. E160
Connector Name FUSE BLOCK (J/B)
Connector Color WHITE
H.S.
3Q 2Q 1Q
8Q 7Q 6Q 5Q 4Q
Terminal No. Color of Wire Signal Name
8Q R/B –
Connector No. E202
Connector Name FUSIBLE LINK BOX (BATTERY)
Connector Color –
H.S.
5
Terminal No. Color of Wire Signal Name
5 B/R –
@AL H@ 32/ F A

Wiring Diagram—Ignition Power Supply

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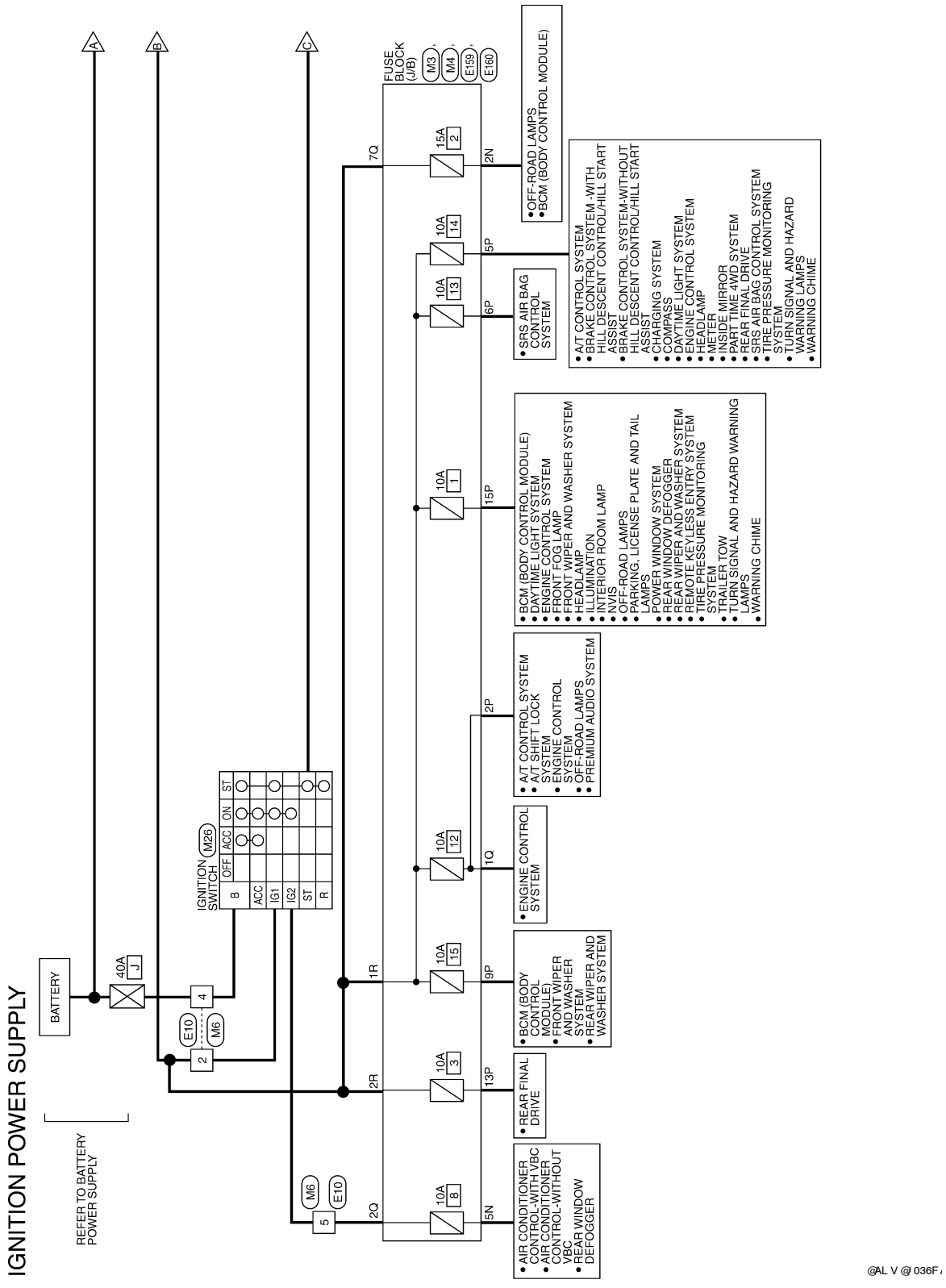
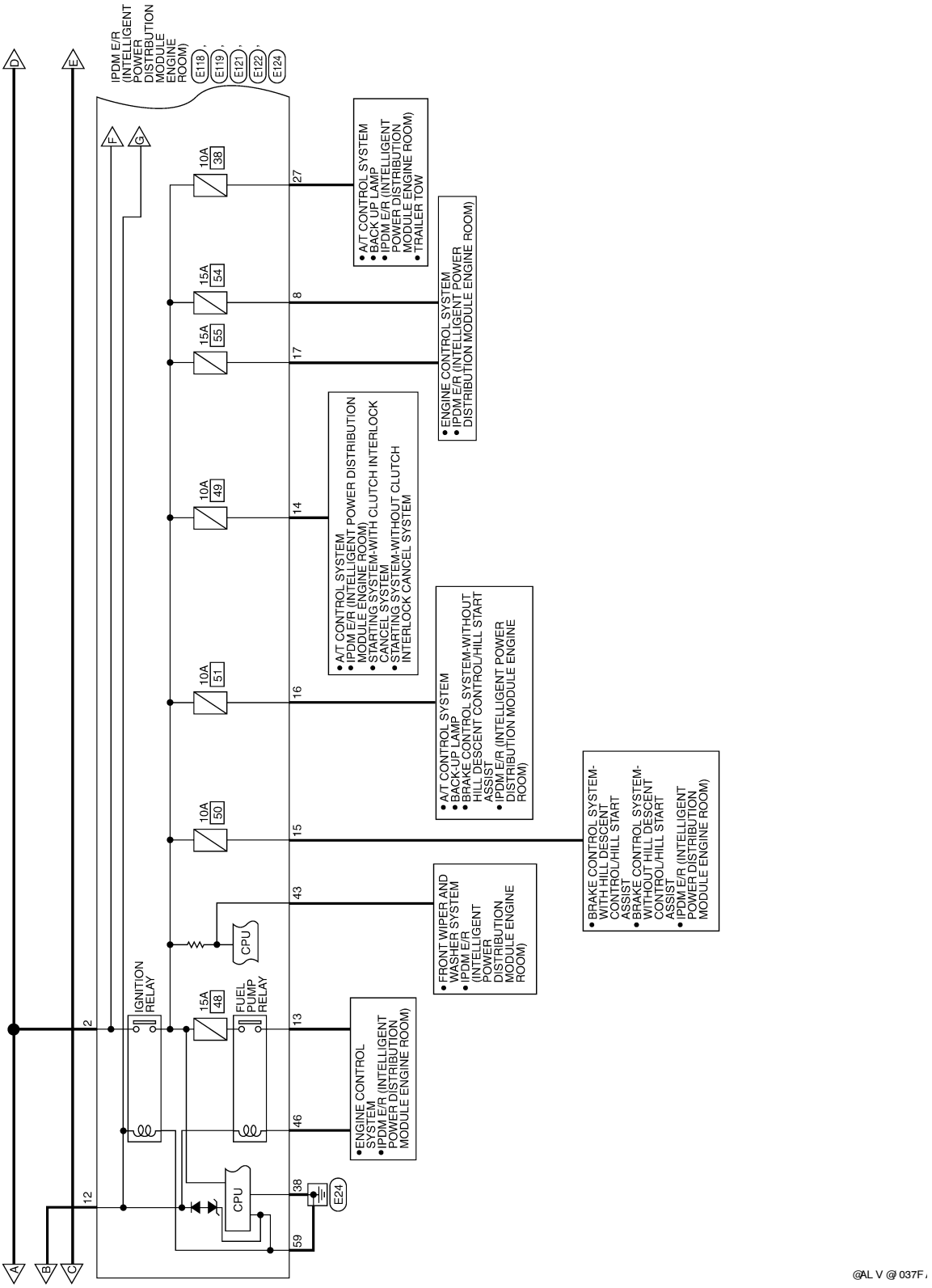
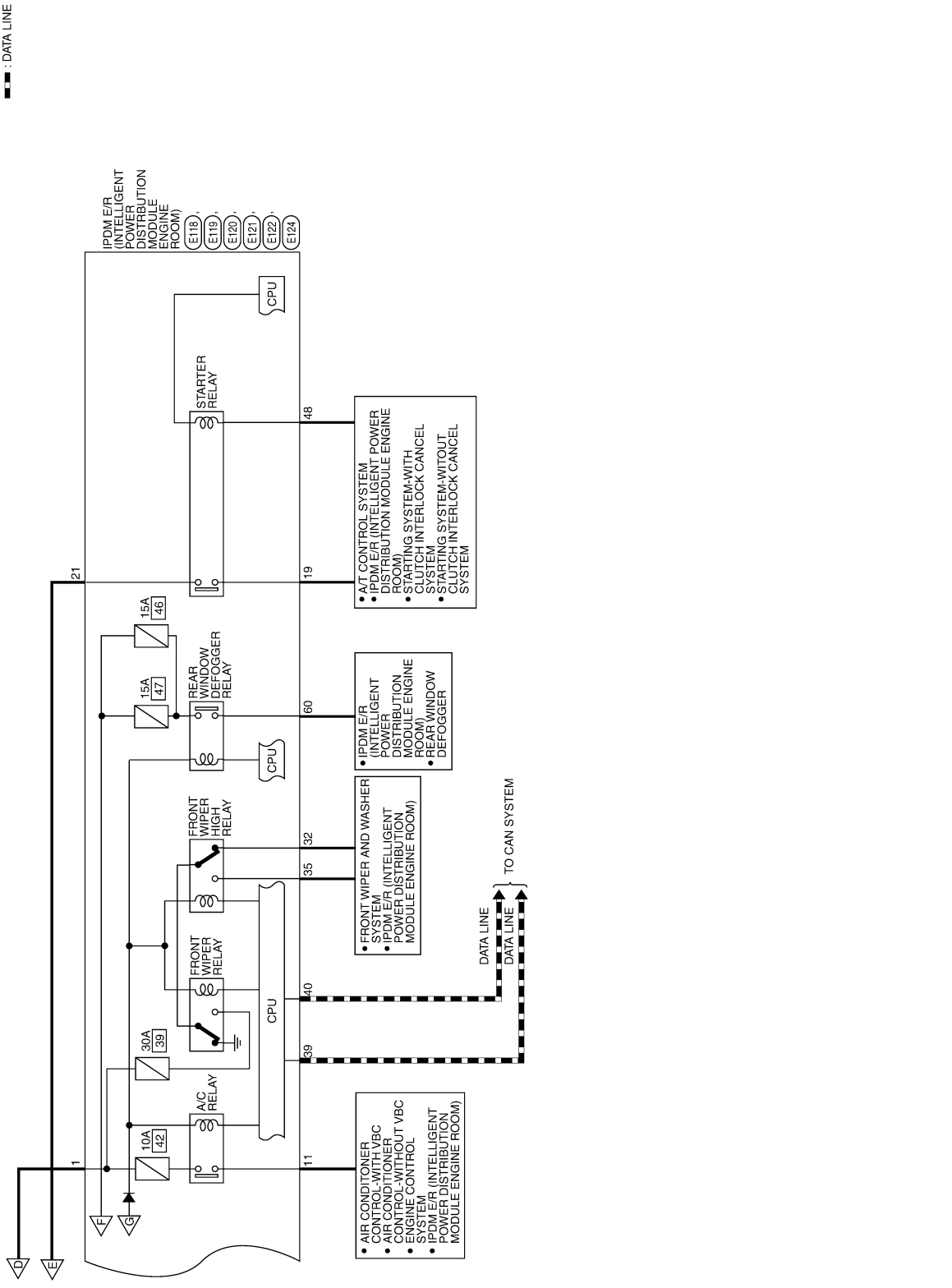



IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E118, E119, E121, E122, E124
A
B
C
D
E
F
G
IGNITION RELAY
FUEL PUMP RELAY
CPU
CPU
10A 38
15A 54
15A 55
10A 49
10A 51
10A 50
15A 48
E24
2
12
38
59
13
46
43
15
16
14
17
8
27
• A/T CONTROL SYSTEM
• BACK-UP LAMP
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• TRAILER TOW
• ENGINE CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• A/T CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• STARTING SYSTEM-WITH CLUTCH INTERLOCK
• CANCEL SYSTEM
• STARTING SYSTEM-WITHOUT CLUTCH INTERLOCK CANCEL SYSTEM
• A/T CONTROL SYSTEM
• BACK-UP LAMP
• BRAKE CONTROL SYSTEM-WITHOUT HILL DESCENT CONTROL/HILL START ASSIST
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• BRAKE CONTROL SYSTEM-WITH HILL DESCENT CONTROL/HILL START ASSIST
• BRAKE CONTROL SYSTEM-WITHOUT HILL DESCENT CONTROL/HILL START ASSIST
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• FRONT WIPER AND WASHER SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• ENGINE CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
@AL V @ 037F

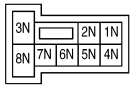

: DATA LINE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E118, E119, E120, E121, E122, E124
CPU
STARTER RELAY
REAR WINDOW DEFOGGER RELAY
FRONT WIPER HIGH RELAY
FRONT WIPER RELAY
A/C RELAY
15A 46
15A 47
30A 39
10A 42
21
1
48
19
60
32
35
40
39
11
D
E
F
G
• AT CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• STARTING SYSTEM-WITH CLUTCH INTERLOCK CANCEL SYSTEM
• STARTING SYSTEM-WITOUT CLUTCH INTERLOCK CANCEL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
• REAR WINDOW DEFOGGER
• FRONT WIPER AND WASHER SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
DATA LINE
DATA LINE
TO CAN SYSTEM
• AIR CONDITIONER CONTROL-WITH VBC
• AIR CONDITIONER CONTROL-WITHOUT VBC
• ENGINE CONTROL SYSTEM
• IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

@AL V @ 038F

IGNITION POWER SUPPLY CONNECTORS

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

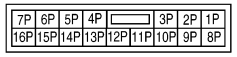
H.S.



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

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

H.S.



Terminal No.	Color of Wire	Signal Name
2P	W/G	–
5P	W/G	–
6P	W/R	–
9P	W/G	–
13P	W/G	–
15P	W/R	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	W/G	–
4	G	–
5	R	–

Connector No.	M26
Connector Name	IGNITION SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
B	G	–
ST	GR	–
IG1	W/G	–
IG2	R	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	W/G	–
4	G	–
5	R	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	W/R	O2 SENSOR
11	Y	A/C COMPRESSOR
12	W/G	IGN SW (IG1)
13	R	FUEL PUMP
14	W/G	A/T ECU IGN SUPPLY

Terminal No.	Color of Wire	Signal Name
15	W/R	ABS IGN SUPPLY
16	W/G	REVERSE LAMP
17	W/G	INJECTIOR

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

H.S.

21	20	19
24	23	22

Terminal No.	Color of Wire	Signal Name
19	W	STARTER MTR
21	GR	IGN SW (ST)

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

H.S.

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
43	G	AUTO STOP SW
46	V	FUEL PUMP RLY CONT
48	R	INHIBIT SW

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

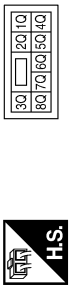
H.S.

59	58	57
62	61	60

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

@AL H@ 324F A

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



Terminal No.	Color of Wire	Signal Name
1Q	W/G	–
2Q	R	–
7Q	W/G	–

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

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

@AL H@ 325F A

Wiring Diagram—Accessory Power Supply

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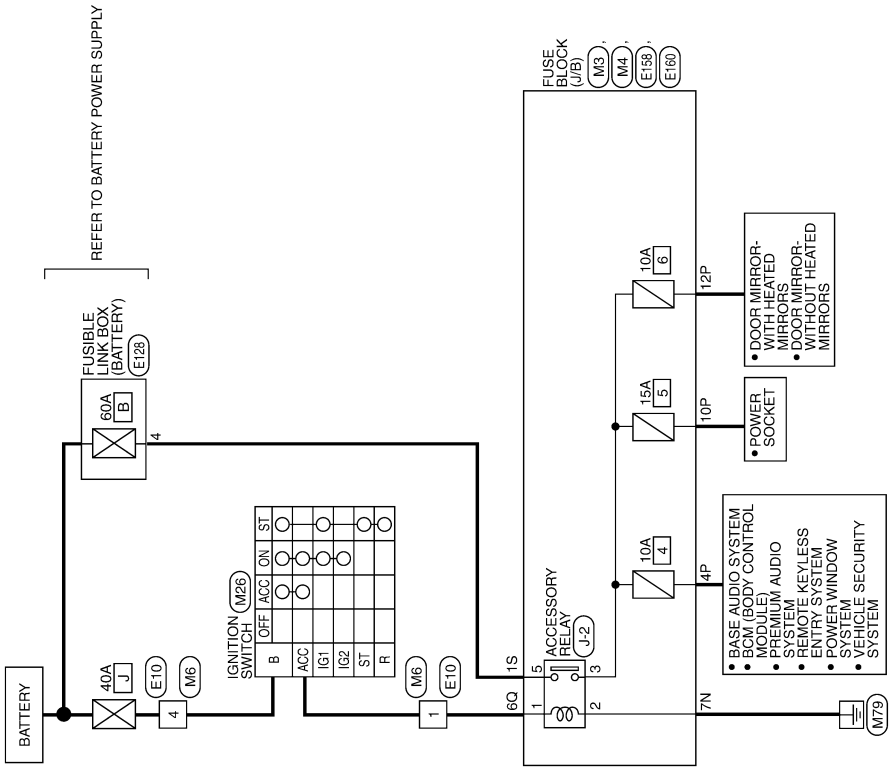
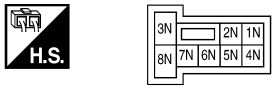
ACCESSORY POWER SUPPLY



@AL V @ 035F,

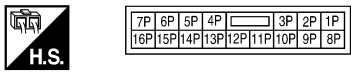
ACCESSORY POWER SUPPLY CONNECTORS

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



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

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



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

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

Terminal No.	Color of Wire	Signal Name
1	G/Y	–
4	G	–

Connector No.	M26
Connector Name	IGNITION SWITCH
Connector Color	WHITE

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

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

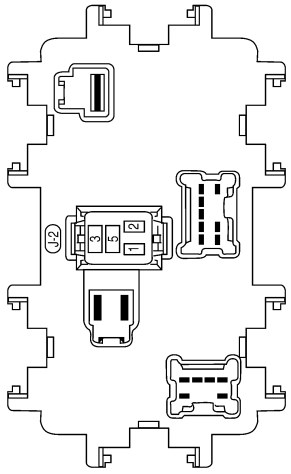
Terminal No.	Color of Wire	Signal Name
1	G/Y	–
4	G	–

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

Terminal No.	Color of Wire	Signal Name
4	W	–

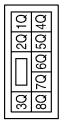
Connector No.	J-2
Connector Name	FUSE BLOCK(J/B)
Connector Color	–

T.S.



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

H.S.



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

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

H.S.

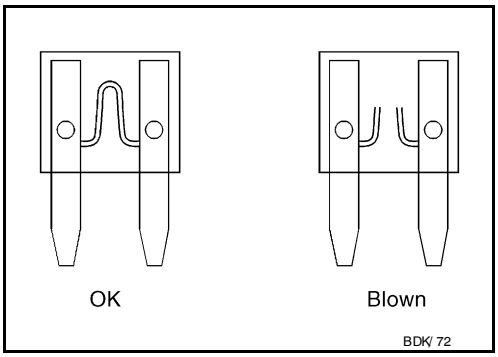
Terminal No.	Color of Wire	Signal Name
1S	W	–

@AL H@ 322F A

Fuse

INFOID:0000000004095228

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



Fusible Link

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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.

CAUTION:

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

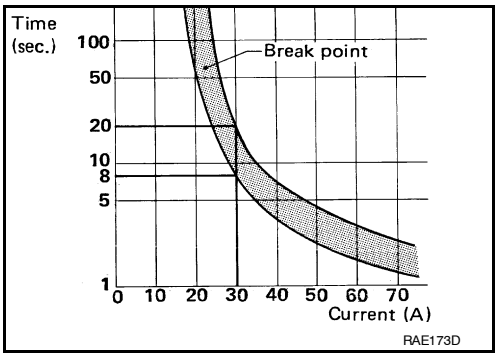
Circuit Breaker (Built Into BCM)

INFOID:0000000004095230

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

A circuit breaker is used for the following systems:

- Power windows
- Power sunroof



GROUND CIRCUIT

Ground Distribution

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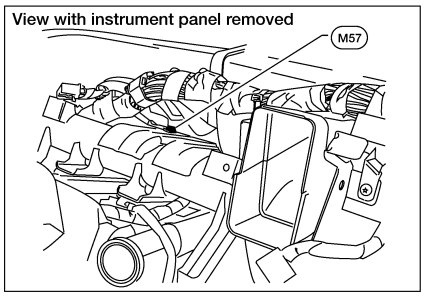
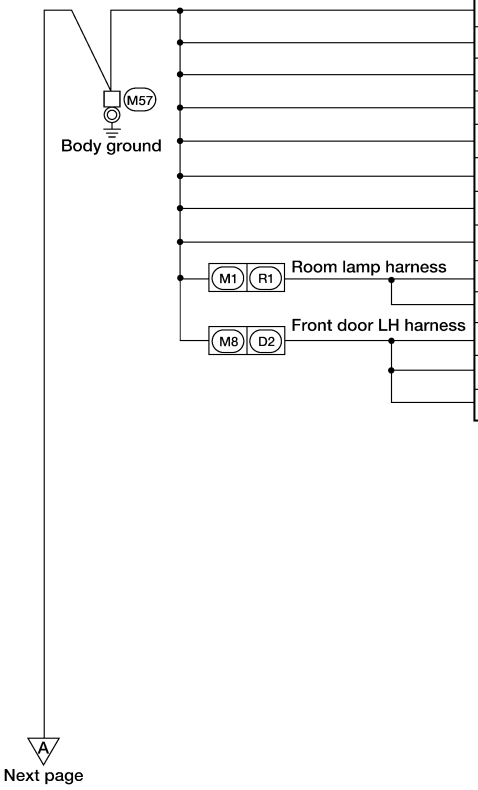
Main Harness





CONNECTOR NUMBER	CONNECT TO
M20	BCM (Body control module) (Terminal No. 67)
M21	Nats antena amp. (Terminal No. 3)
M22	Data link connector (Terminal No. 4)
M22	Data link connector (Terminal No. 5)
M24	Combination meter (Terminal No. 23)
M28	Combination switch
M80	Off-road lamps switch (Terminal No. 2)
M80	Off-road lamps switch (Terminal No. 6)
R7	Auto anti-dazzling inside mirror
R9	Front room/map lamp assembly
D4	Door mirror LH
D7	Main power window and door lock/unlock switch
D14	Front door lock assembly LH

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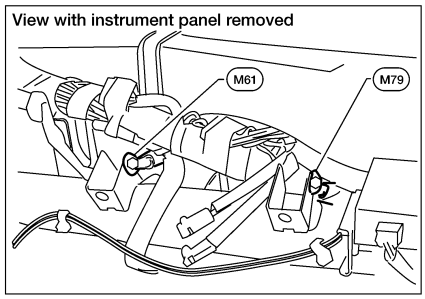
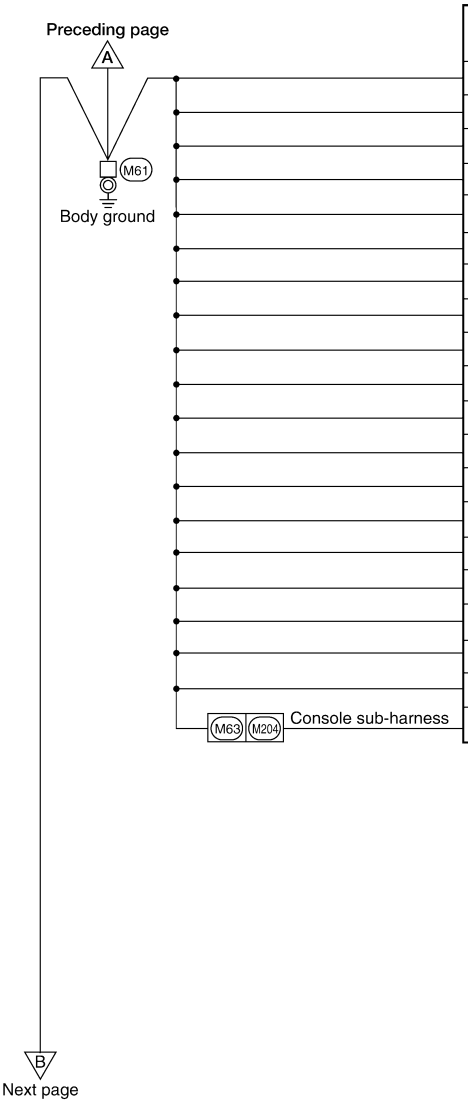
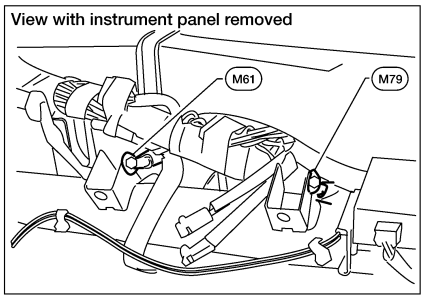
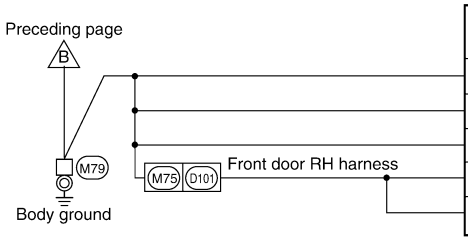




CONNECTOR NUMBER	CONNECT TO
M13	Front passenger air bag off indicator
M24	Combination meter (Terminal No. 13)
M35	Air bag diagnosis sensor unit (Terminal No. 2)
M47	Steering angle sensor
M49	Front air control (Terminal No. 20) (without VBC)
M50	Front air control (Terminal No. 13) (with VBC)
M51	Front blower switch
M55	Hazard switch
M121	Variable blower control (front)
M152	Transfer control unit (Terminal No. 6)
M152	Transfer control unit (Terminal No. 18)
M153	Transfer control unit (Terminal No. 32)
M154	VDC off switch
M155	Hill descent control switch
M156	A/T device (Terminal No. 2)
M156	A/T device (Terminal No. 8)
M156	A/T device (Terminal No. 10)
M159	Door mirror remote control switch
M163	Clutch interlock cancel switch
M207	Console power socket

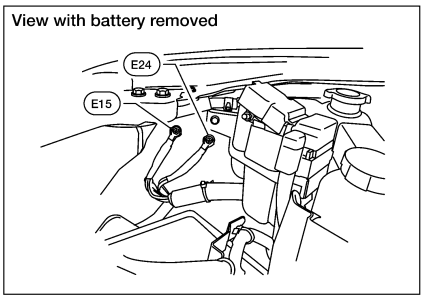
@AL H@ 308F A

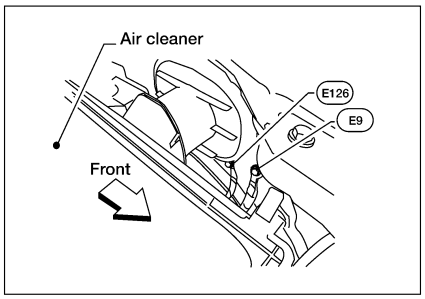


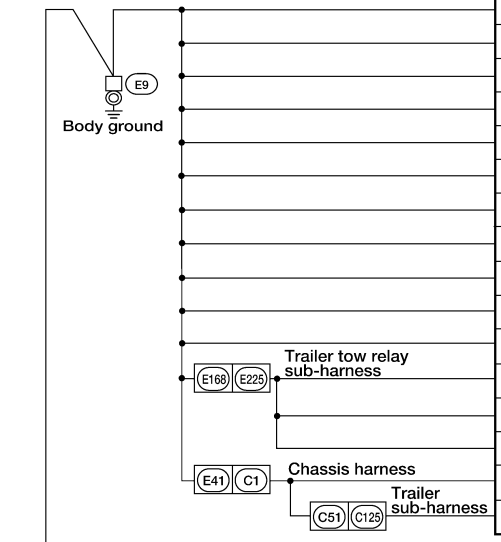


CONNECTOR NUMBER	CONNECT TO
M53	Front power socket
M59	Glove box lamp
M76	Electric brake (pre-wiring)
D105	Power window and door lock/unlock switch RH
D107	Door mirror RH

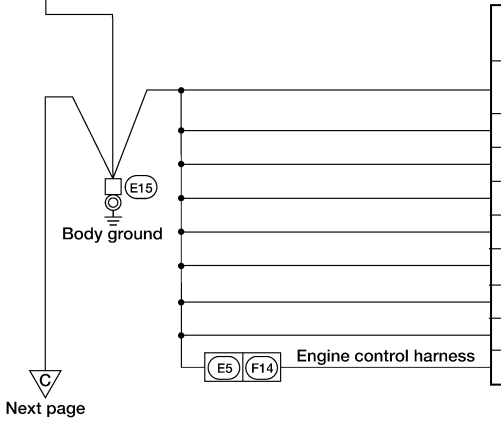
Engine Room Harness







CONNECTOR NUMBER	CONNECT TO
E6	Horn (Terminal No. 1) (with dual note horn)
E17	Front combination lamp LH (side marker)
E21	Brake fluid level switch
E23	Front wiper motor
E102	Front fog lamp RH
E103	Daytime light relay 1
E104	Daytime light relay 2
E106	Washer fluid level switch
E107	Front combination lamp RH (headlamp)
E111	Front combination lamp RH
E162	Horn (Terminal No. 2) (with single note horn)
E226	Back-up lamp relay
E227	Trailer tow relay 1
E228	Trailer tow relay 2
C5	Fuel level sensor unit and fuel pump
C126	Trailer



CONNECTOR NUMBER	CONNECT TO
E11	Front combination lamp LH (headlamp) (without daytime light system)
E27	Front combination lamp LH
E101	Front fog lamp LH
E108	Front combination lamp RH (side marker)
E113	Cooling fan motor (Terminal No. 3)
E113	Cooling fan motor (Terminal No. 4)
E169	Trailer turn relay LH
E170	Trailer turn relay RH
F66	Park/neutral position (PNP) switch (with M/T)

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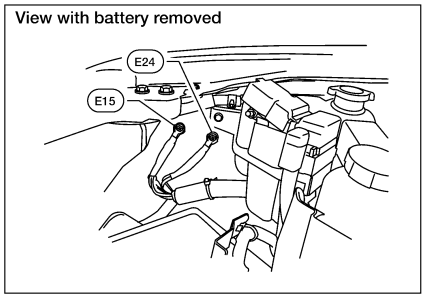

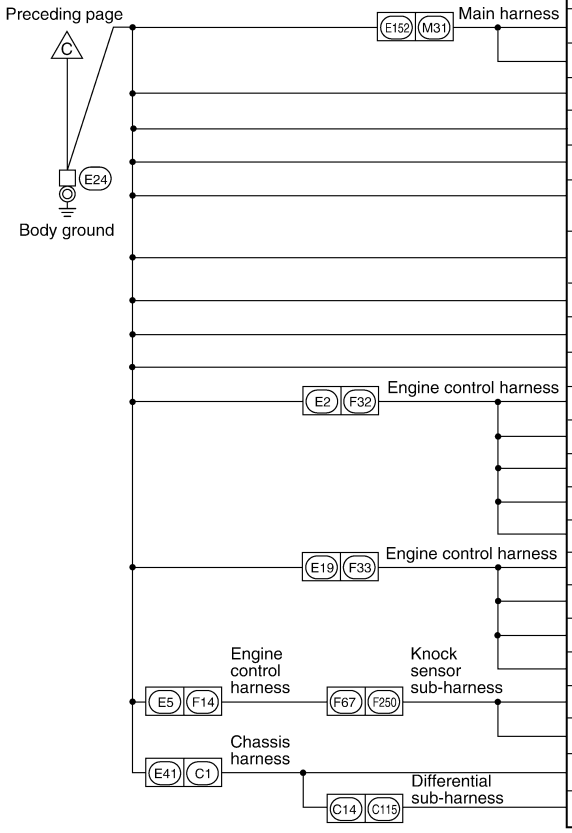

CONNECTOR NUMBER	CONNECT TO
M70	Differential lock control unit (Terminal No. 3)
M70	Differential lock control unit (Terminal No. 10)
E16	ECM (Terminal No. 115)
E16	ECM (Terminal No. 116)
E54	Front blower motor relay
E122	IPDM E/R (Intelligent power distribution module engine room) (Terminal No. 38)
E124	IPDM E/R (Intelligent power distribution module engine room) (Terminal No. 59)
E156	Transfer shut off relay 1
E166	Clutch interlock cancel relay 2
E171	Clutch interlock cancel relay 1
F11	Crankshaft position sensor (POS)
F23	Camshaft position sensor (PHASE) (bank 2)
F50	Electric throttle control actuator (shield wire)
F54	ECM (Terminal No. 1)
F70	Camshaft position sensor (PHASE) (bank 1)
F55	ATP switch (with A/T)
F58	Transfer control device (Terminal No. 22)
F59	Wait detection switch
F60	4LO switch
F251	Knock sensor (bank 1) (shield wire)
F252	Knock sensor (bank 2) (shield wire)
C12	License plate lamp
C116	Differential lock position switch

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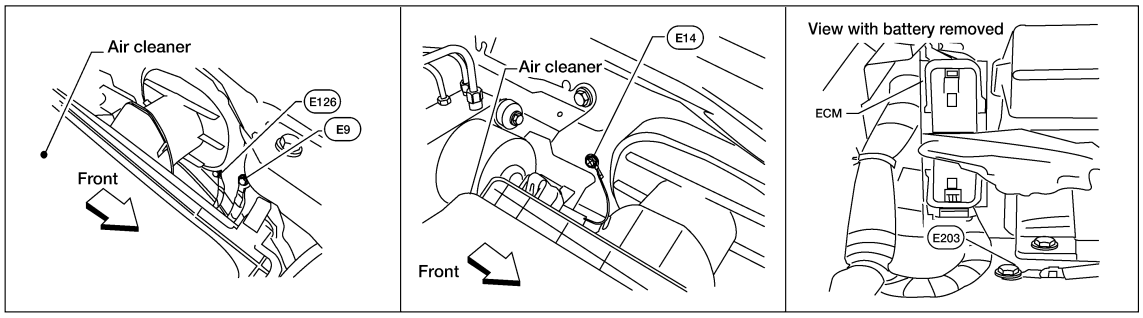
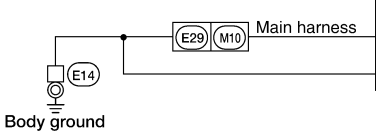
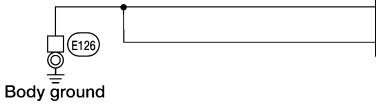




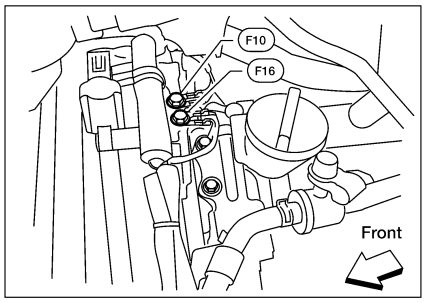
CONNECTOR NUMBER	CONNECT TO
M35	Air bag diagnosis sensor unit (Terminal No. 16)
E4	Crash zone sensor (shield wire)

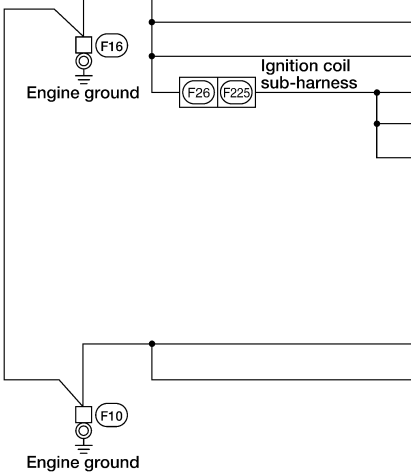


CONNECTOR NUMBER	CONNECT TO
E125	ABS actuator and electric unit (control unit) (Terminal No. 16)
E125	ABS actuator and electric unit (control unit) (Terminal No. 47)

CONNECTOR NUMBER	CONNECT TO
E209	Generator

@AL H@ 312F A



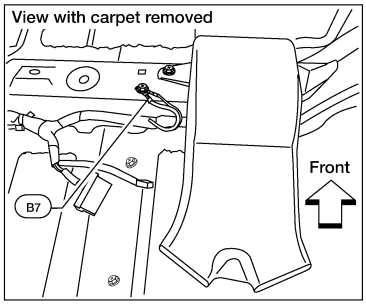


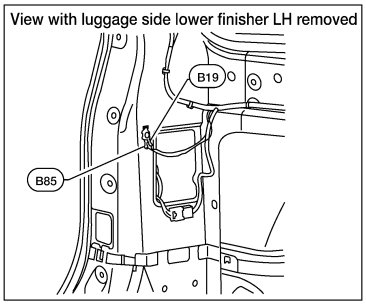
CONNECTOR NUMBER	CONNECT TO
F6	Ignition coil No. 2 (with power transistor)
F7	Ignition coil No. 4 (with power transistor)
F8	Ignition coil No. 6 (with power transistor)
F21	Condenser-1
F226	Ignition coil No. 1 (with power transistor)
F227	Ignition coil No. 3 (with power transistor)
F228	Ignition coil No. 5 (with power transistor)

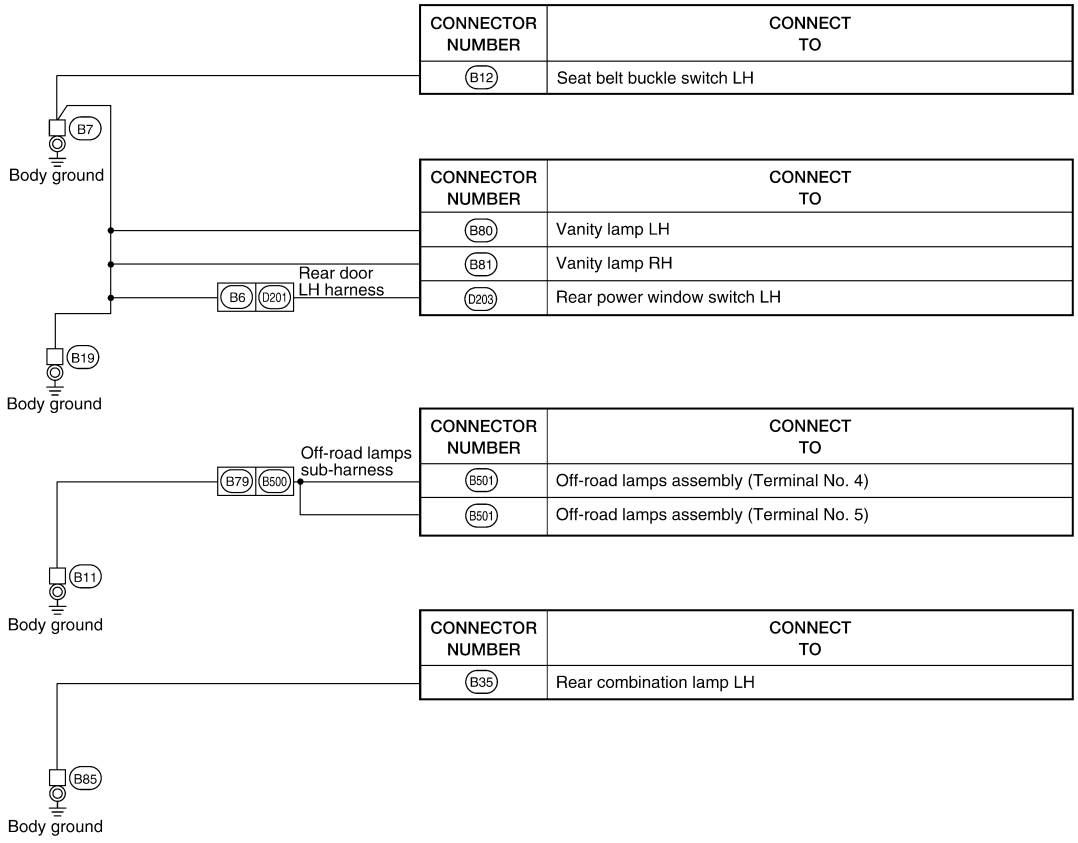
CONNECTOR NUMBER	CONNECT TO
F9	A/T Assembly (Terminal No. 5)
F9	A/T Assembly (Terminal No. 10)

@AL H@ 313F A

Body Harness







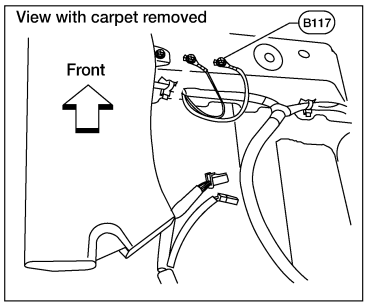
CONNECTOR NUMBER	CONNECT TO
B12	Seat belt buckle switch LH

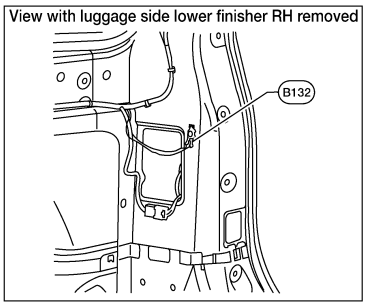
CONNECTOR NUMBER	CONNECT TO
B80	Vanity lamp LH
B81	Vanity lamp RH
D203	Rear power window switch LH

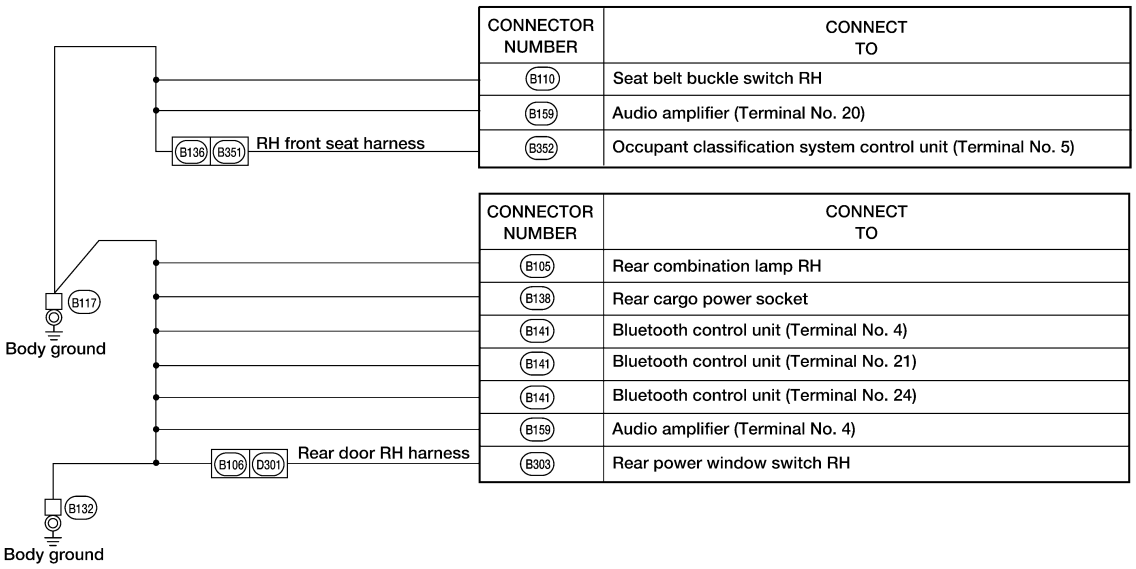
CONNECTOR NUMBER	CONNECT TO
B501	Off-road lamps assembly (Terminal No. 4)
B501	Off-road lamps assembly (Terminal No. 5)

CONNECTOR NUMBER	CONNECT TO
B35	Rear combination lamp LH

@AL H@ 314F A





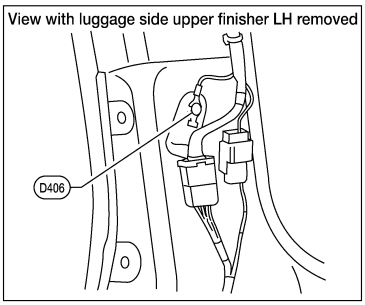


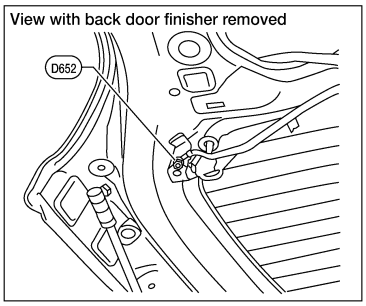
CONNECTOR NUMBER	CONNECT TO
B110	Seat belt buckle switch RH
B159	Audio amplifier (Terminal No. 20)
B352	Occupant classification system control unit (Terminal No. 5)

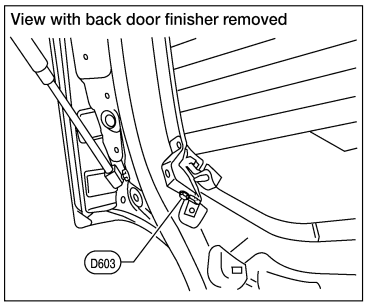
CONNECTOR NUMBER	CONNECT TO
B105	Rear combination lamp RH
B138	Rear cargo power socket
B141	Bluetooth control unit (Terminal No. 4)
B141	Bluetooth control unit (Terminal No. 21)
B141	Bluetooth control unit (Terminal No. 24)
B159	Audio amplifier (Terminal No. 4)
B303	Rear power window switch RH

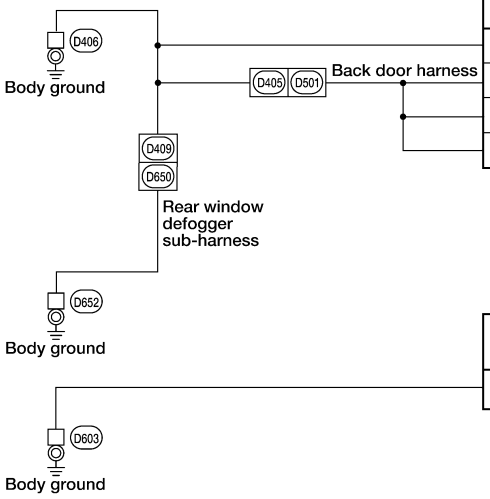
@AL H@ 315F A

Back Door No. 2 and Back Door Harness









CONNECTOR NUMBER	CONNECT TO
D403	High-mounted stop lamp
D502	Back door switch
D505	Back door key cylinder switch
D509	Rear wiper motor

CONNECTOR NUMBER	CONNECT TO
D604	Rear window defogger

@AL H@ 355F A

HARNESS

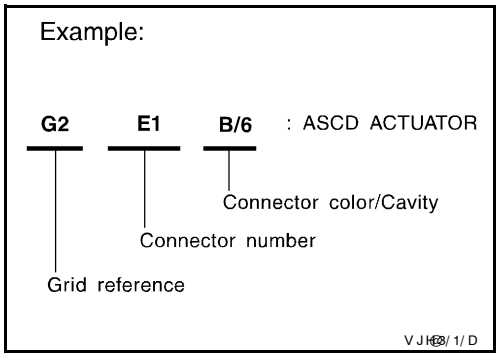
Harness Layout

INFOID:0000000004095232

HOW TO READ HARNESS LAYOUT

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

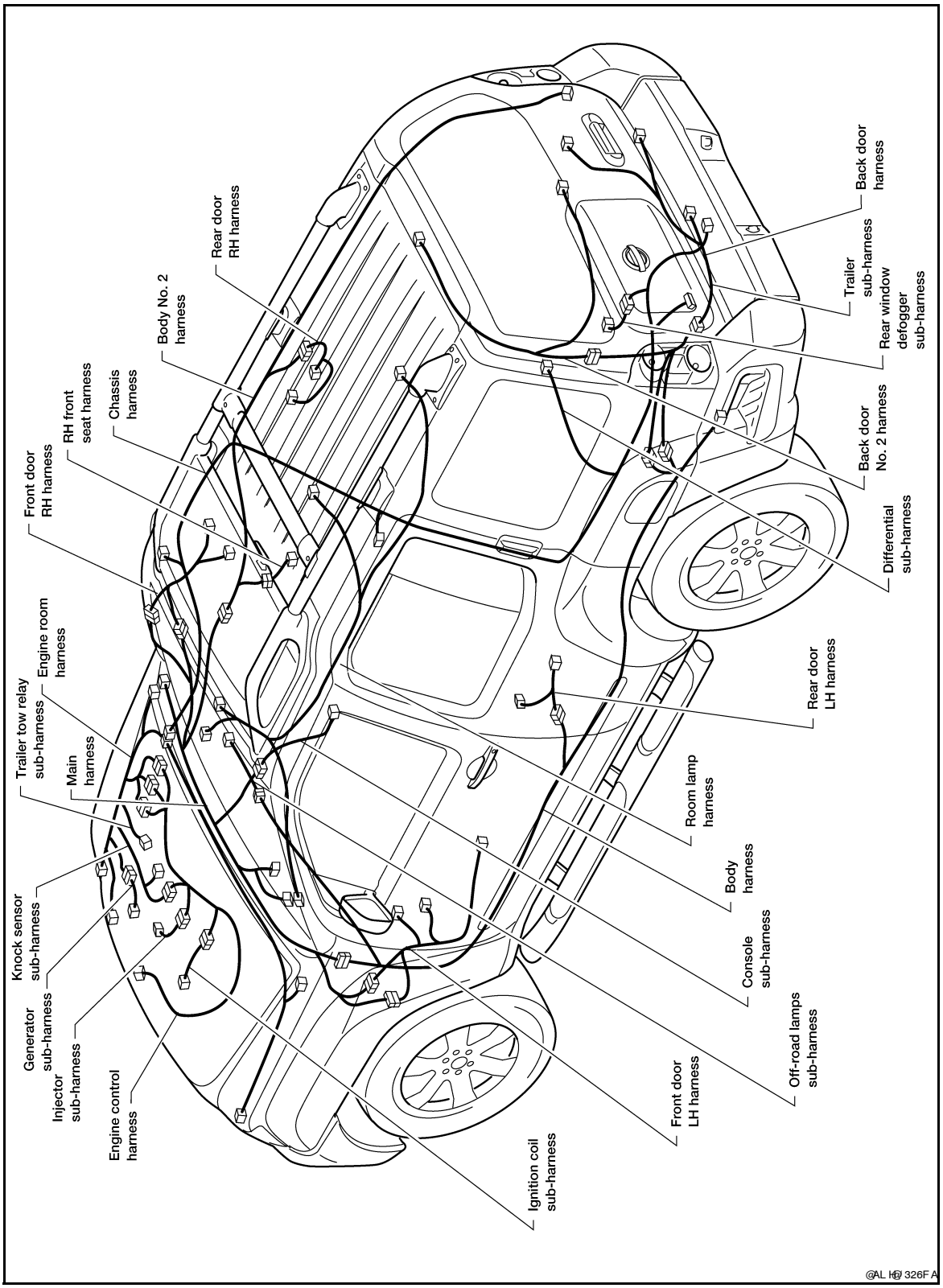
- Main Harness and Console Sub-harness
- Engine Room Harness (RH View) Engine Compartment, Generator Sub-harness, and Trailer Tow Relay Sub-harness
- Engine Room Harness (Passenger Compartment)
- Engine Room Harness (LH View) Engine Compartment
- Engine Control Harness, Injector Sub-harness, Ignition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

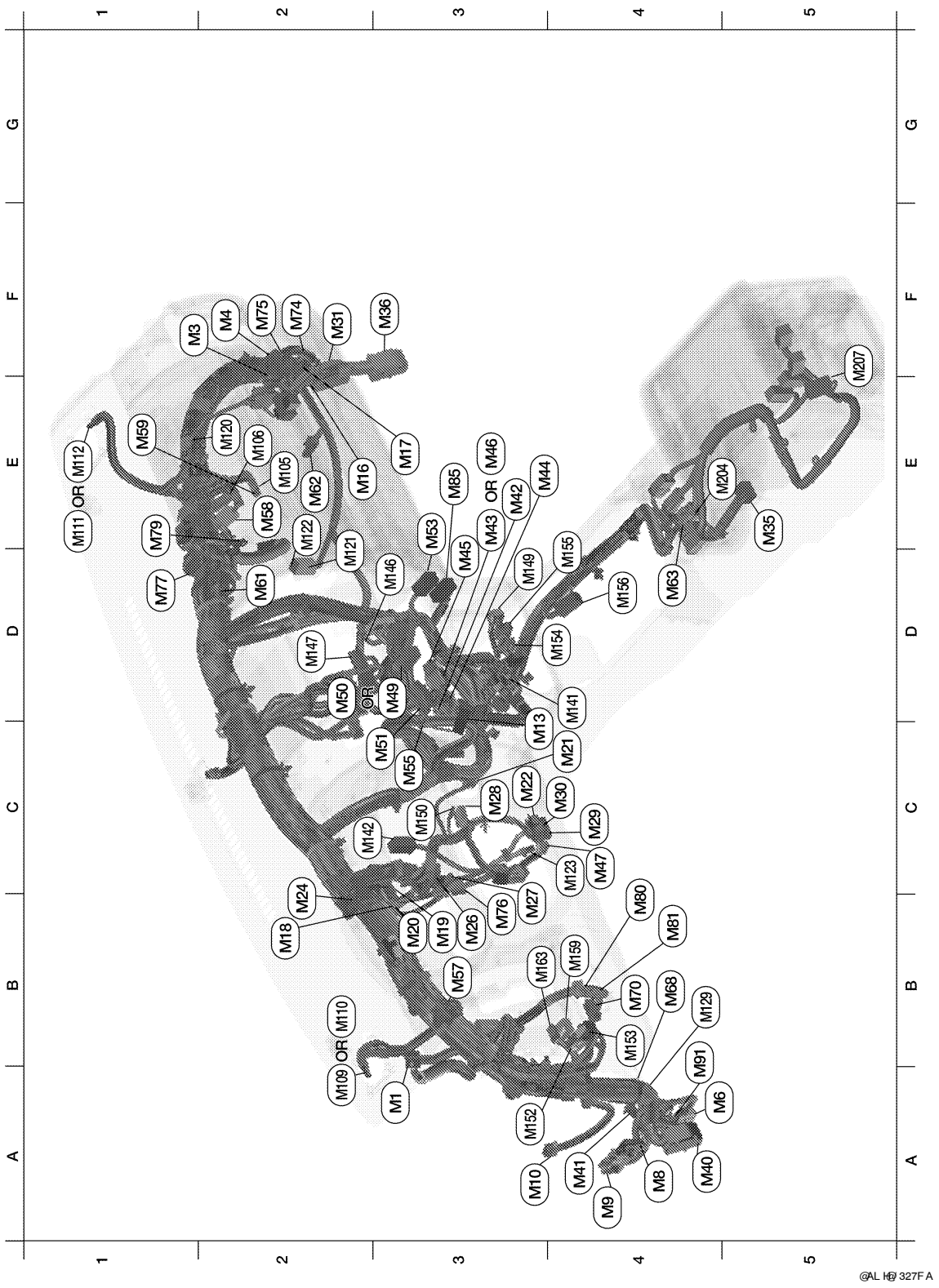


To use the grid reference

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

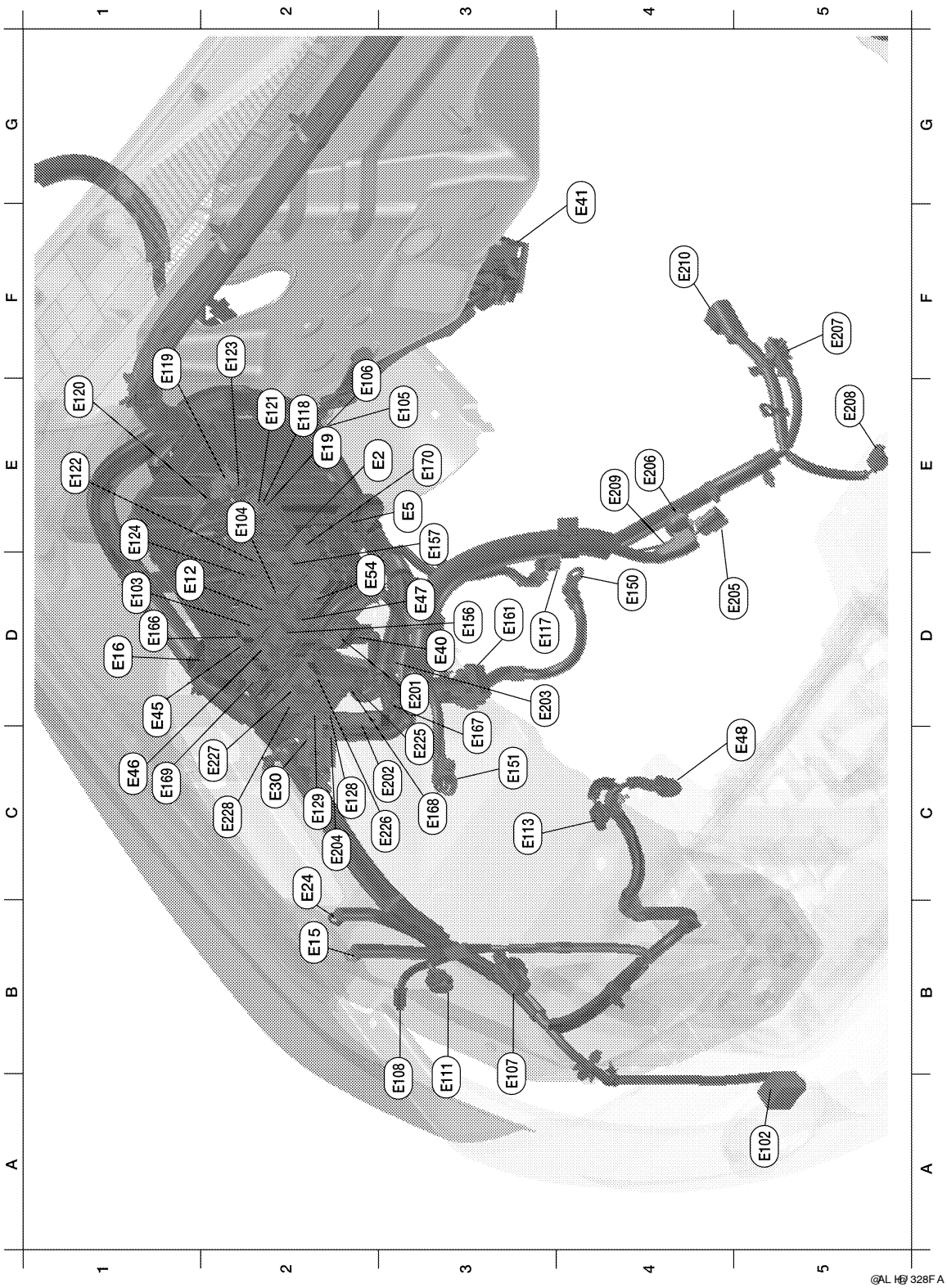
OUTLINE


Back door harness
Rear door RH harness
Trailer sub-harness
Rear window defogger sub-harness
Body No. 2 harness
Chassis harness
RH front seat harness
Front door RH harness
Back door No. 2 harness
Differential sub-harness
Engine room harness
Trailer tow relay sub-harness
Main harness
Rear door LH harness
Room lamp harness
Body harness
Knock sensor sub-harness
Console sub-harness
Generator sub-harness
Injector sub-harness
Off-road lamps sub-harness
Engine control harness
Front door LH harness
Ignition coil sub-harness
@AL H@ 326F A



A3	M1	W/24	: To R1	E2	M62	B/2	: Front blower motor
F1	M3	W/8	: Fuse block (J/B)	D4	M63	W/6	: To M204
F2	M4	W/16	: Fuse block (J/B)	B4	M68	V/1	: To M250
A4	M6	W/6	: To E10	B4	M70	W/26	:Differential lock control unit
A4	M8	BR/12	: To D2	F2	M74	W/16	: To D102

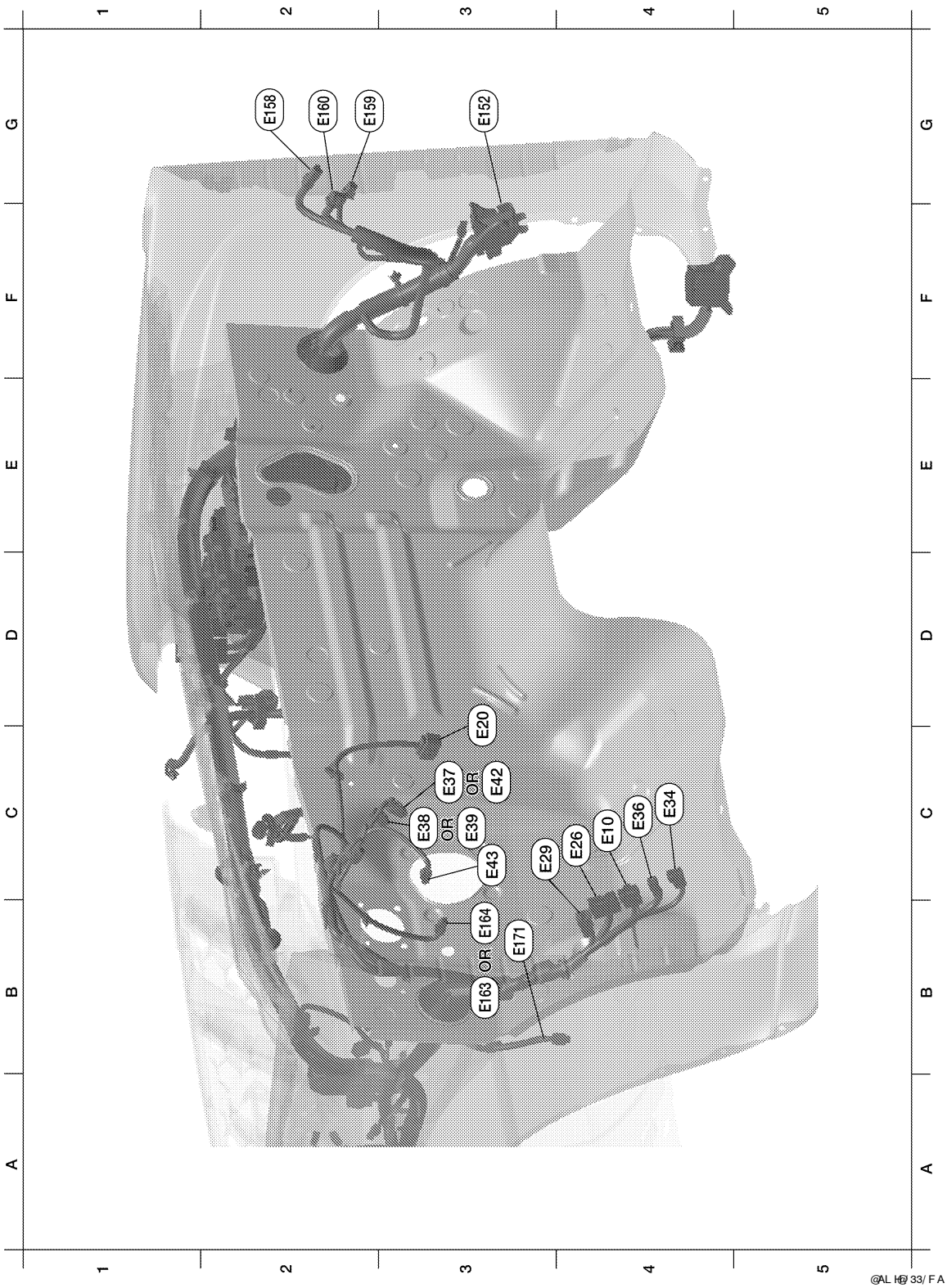
A4	M9	W/16	: To D1	F2	M75	W/12	: To D101
A3	M10	Y/4	: To E29	B3	M76	W/6	: Electric brake (pre-wiring)
C3	M13	BR/3	: Front passenger air bag OFF indicator	D1	M77	Y/4	: Front passenger air bag module (service replacement)
E3	M16	W/12	: To B162	E1	M79	—	: Body ground
E3	M17	W/16	: To B163	B4	M80	GR/8	: Off-road lamps switch
B2	M18	W/40	: BCM (body control module)	B4	M81	L/4	: Off-road lamps relay
B3	M19	W/15	: BCM (body control module)	E3	M85	W/4	: Aux in jack
B3	M20	B/15	: BCM (body control module)	B4	M91	W/16	: To E26
C4	M21	W/4	: NATS antenna amp.	E2	M105	Y/2	: Front passenger air bag module
C3	M22	W/16	: Data link connector	E2	M106	O/2	: Front passenger air bag module
B2	M24	W/40	: Combination meter	A2	M109	BR/2	: Front tweeter LH (with base audio system)
B3	M26	W/6	: Ignition switch	B2	M110	W/2	: Front tweeter LH (with premium audio system)
B3	M27	W/2	: Key switch	E1	M111	BR/2	: Front tweeter RH (with base audio system)
C2	M28	W/16	: Combination switch	E1	M112	W/2	: Front tweeter RH (with premium audio system)
C4	M29	Y/6	: Combination switch	E2	M120	W/4	: Remote keyless entry receiver
C4	M30	GR/8	: Combination switch	E2	M121	W/4	: Variable blower control (front)
F2	M31	SMJ	: To E152	E2	M122	W/4	: Front blower motor resistor
E5	M35	Y/28	: Air bag diagnosis sensor unit	C4	M123	W/2	: Tire pressure warning check connector
F3	M36	SMJ	: To B149	B4	M129	V/1	: Satellite radio tuner or pre-wiring for satellite radio turner
A3	M40	SMJ	: To B69	D4	M141	GR/8	: 4WD shift switch
A4	M41	W/16	: Satellite radio tuner or pre-wiring for satellite radio tuner	C2	M142	B/6	: Mode door motor
E3	M42	W/12	: Audio unit (with premium audio system)	D3	M146	GR/2	: Intake sensor
E3	M43	W/20	: Audio unit (with base audio system)	D2	M147	B/6	: Air mix door motor
E2	M44	W/6	: Audio unit (with premium audio system)	D3	M149	W/6	: Differential lock mode switch
D3	M45	W/16	: Audio unit (with premium audio system)	C3	M150	W/2	: Ignition keyhole illumination
E3	M46	W/10	: Audio unit (with premium audio system)	A3	M152	W/26	: Transfer control unit
C4	M47	W/8	: Steering angle sensor	B4	M153	W/24	: Transfer control unit
D3	M49	B/26	: Front air control (without VBC)	D4	M154	GR/6	: VDC off switch
D2	M50	B/26	: Front air control (with VBC)	D4	M155	W/8	: Hill descent control switch
C3	M51	W/8	: Front blower switch	D4	M156	W/10	: A/T device
E3	M53	B/3	: Front power socket	B4	M159	W/16	: Door mirror remote control switch
C3	M55	W/4	: Hazard switch	B3	M163	W/8	: Clutch interlock cancel switch
B3	M57	—	: Body ground	Console sub-harness			
E2	M58	B/6	: Intake door motor	E4	M204	W/6	: To M63
E1	M59	BR/2	: Glove box lamp	F5	M207	B/3	: Console power socket
D2	M61	—	: Body ground				



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

E3	E2	W/16	: To F32	F2	E123	BR/8	: IPDM E/R (intelligent power distribtion module engine room)
E3	E5	W/24	: To F14	E1	E124	B/6	: IPDM E/R (intelligent power distribution module engine room)
D1	E12	L/4	: Stop lamp relay	C2	E128	GR/2	: Fuseible link box (battery)

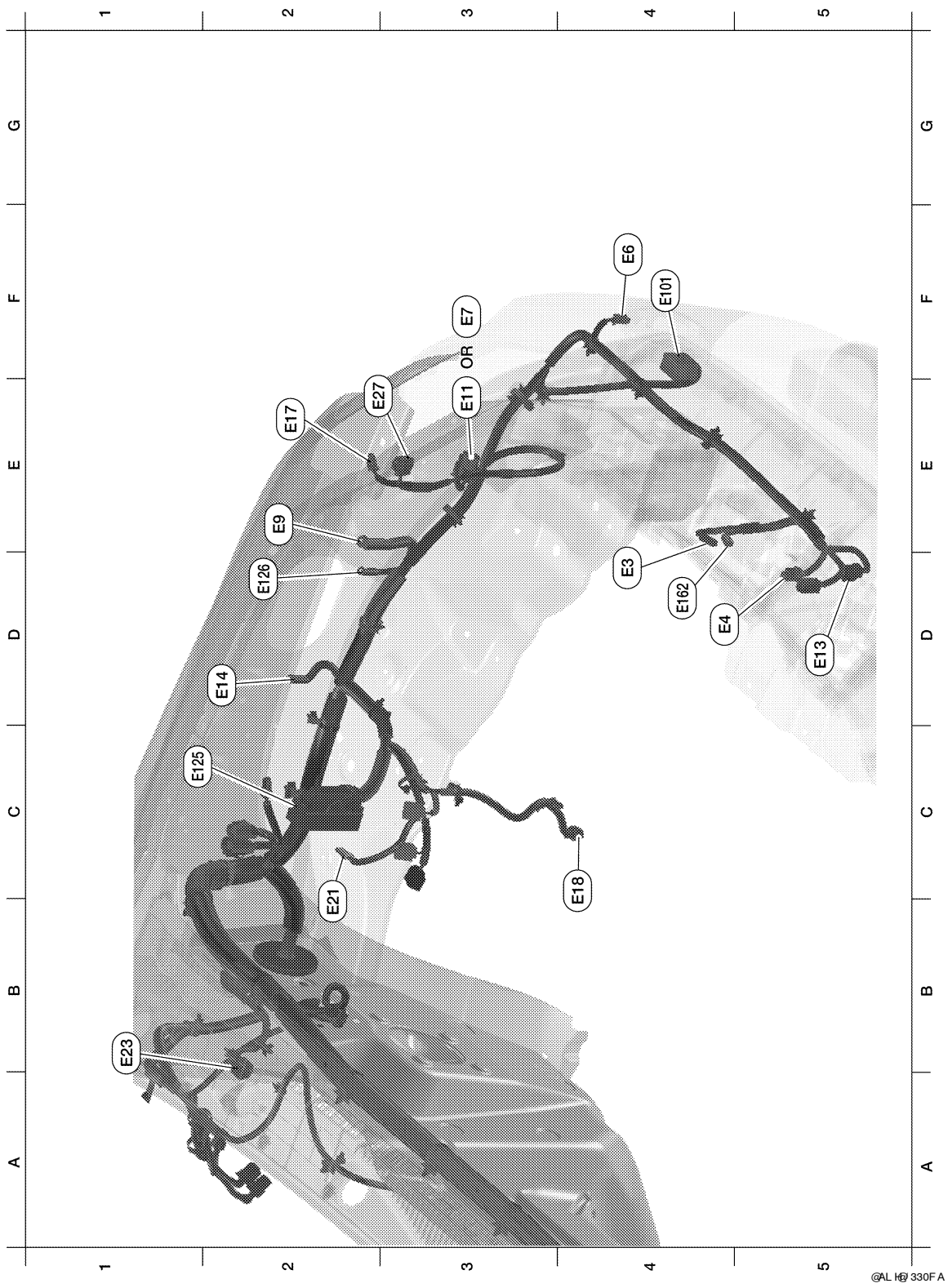
C2	E15	—	: Body ground	C2	E129	BR/2	: Fuseible link box (battery)
D1	E16	B/40	: ECM	D5	E150	—	: Battery ground
E2	E19	W/16	: To F33	C3	E151	—	: Negative battery cable
D4	E24	—	: Body ground	D3	E156	L/4	: Trailer shut off relay1
C2	E30	—	: Fusible link box (battery)	D3	E157	L/4	: Trailer shut off realy 2
D3	E40	GR/9	: To E201	D3	E161	B/3	: Battery current sensor
G4	E41	SMJ	: To C1	D1	E166	BR/6	: Clutch interlock cancel relay 2
D1	E45	BR/6	: Back-up lamp relay (with A/T)	C3	E167	B/2	: Diode-3
C1	E46	B/5	: Transfer shift high relay	C3	E168	W/12	: To E225
D3	E47	B/5	: Transfer shift low relay	C1	E169	L/4	: Trailer turn relay LH
C5	E48	B/3	: Refrigerant pressure sensor	E3	E170	L/4	: Trailer turn relay RH
D2	E54	BR/6	: Front blower motor relay	Generator sub-harness			
A5	E102	B/2	: Front fog lamp RH	D3	E201	GR/9	: To E40
D1	E103	B/5	: Daytime light relay 1	C3	E202	—	: Fusible link box (battery)
E1	E104	L/5	: Daytime light relay 2	C3	E203	—	: Body ground
F3	E105	B/2	: Front and rear washer motor	C2	E204	—	: Fusible link box (battery)
F2	E106	BR/2	: Washer fluid level switch	D5	E205	B/3	: Generator
A3	E107	B/3	: Front combination lamp RH (head lamp)	C3	E206	—	: Generator
A3	E108	GR/2	: Front combination lamp RH (side marker)	F5	E207	GR/1	: Stater motor
A3	E111	GR/3	: Front combination lamp RH	E5	E208	GR/1	: Oil pressure switch
C3	E113	GR/4	: Cooling fan motor	E4	E209	—	: Generator
D3	E117	GR/2	: Front wheel sensor RH	F4	E210	B/1	: Starter motor
E2	E118	B/2	: IPDM E/R (intelligent power distribtion module engine room)	Trailer tow relay sub-harness			
F1	E119	W/16	: IPDM E/R (intelligent power distribtion module engine room)	C3	E225	W/12	: To E168
E1	E120	W/6	: IPDM E/R (intelligent power distribtion module engine room)	C3	E226	L/4	: Back-up lamp relay (with M/T)
E1	E121	BR/12	: IPDM E/R (intelligent power distribtion module engine room)	C2	E227	L/4	: Trailer tow relay 1
E1	E122	W/12	: IPDM E/R (intelligent power distribtion module engine room)	C2	E228	BR/6	: Trailer tow relay 2



C4	E10	W/6	: To M6	C3	E42	BR/2	: ASCD brake switch (with A/T)
D3	E20	B/6	: Accelerator pedal position (APP) sensor	C3	E43	L/2	: ASCD clutch switch
C4	E26	W/16	: To M91	G3	E152	SMJ	: To M31
C3	E29	Y/4	: To M10	G2	E158	B/1	: Fuse block (J/B)
C4	E34	W/8	: To B40	G2	E159	B/2	: Fuse block (J/B)

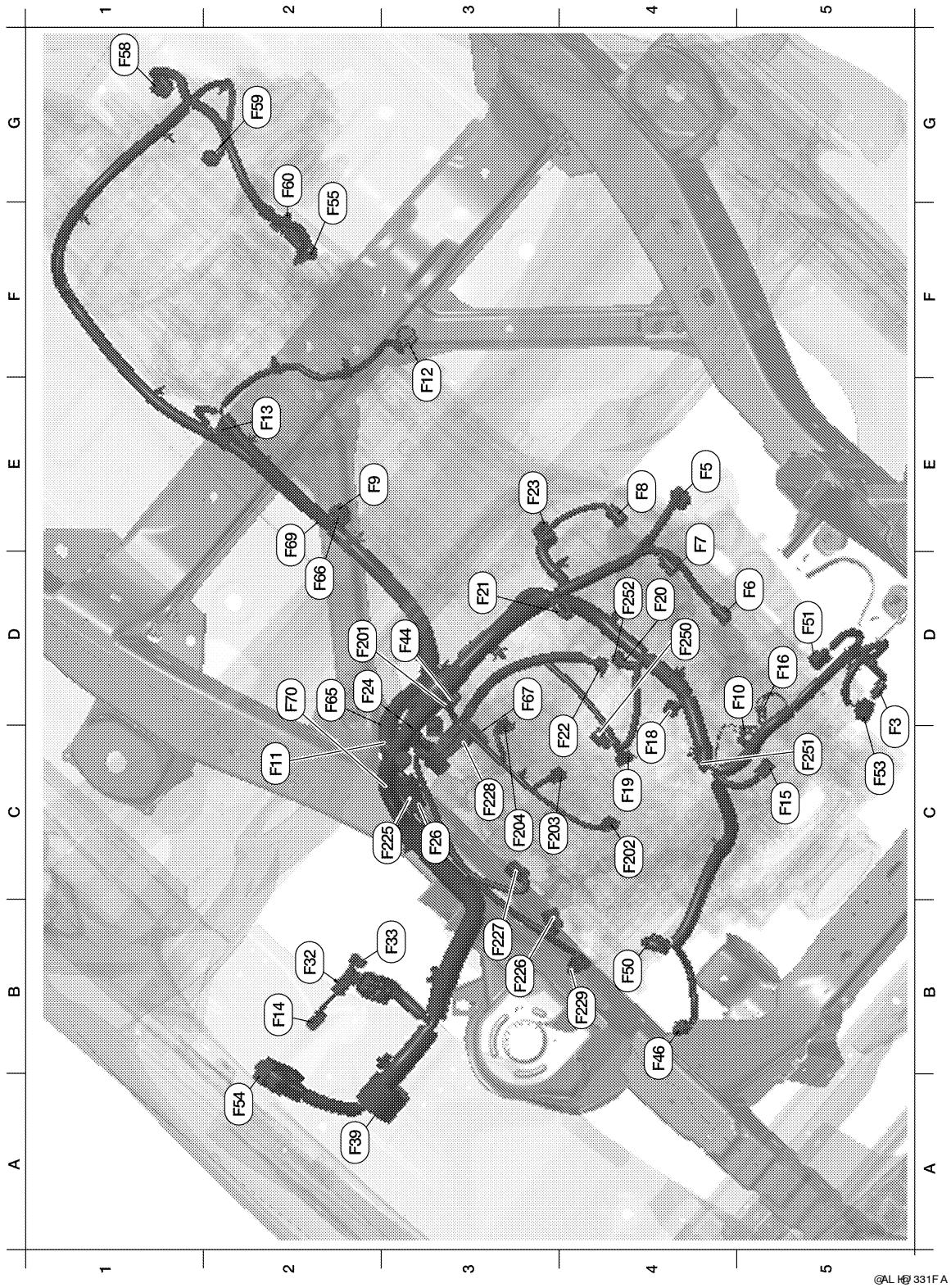
C4	E36	W/2	: To B42	G2	E160	W/8	: Fuse block (J/B)
C3	E37	BR/2	: ASCD brake switch	B3	E163	L/2	: Clutch interlock switch (with clutch interlock cancel switch)
C3	E38	B/2	: Stop lamp switch (with M/T)	B3	E164	L/2	: Clutch interlock switch (without clutch interlock cancel switch)
C3	E39	W/4	: Stop lamp switch (with A/T)	B3	E171	B/5	: Clutch interlock cancel relay 1

ENGINE ROOM HARNESS (LH VIEW)



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

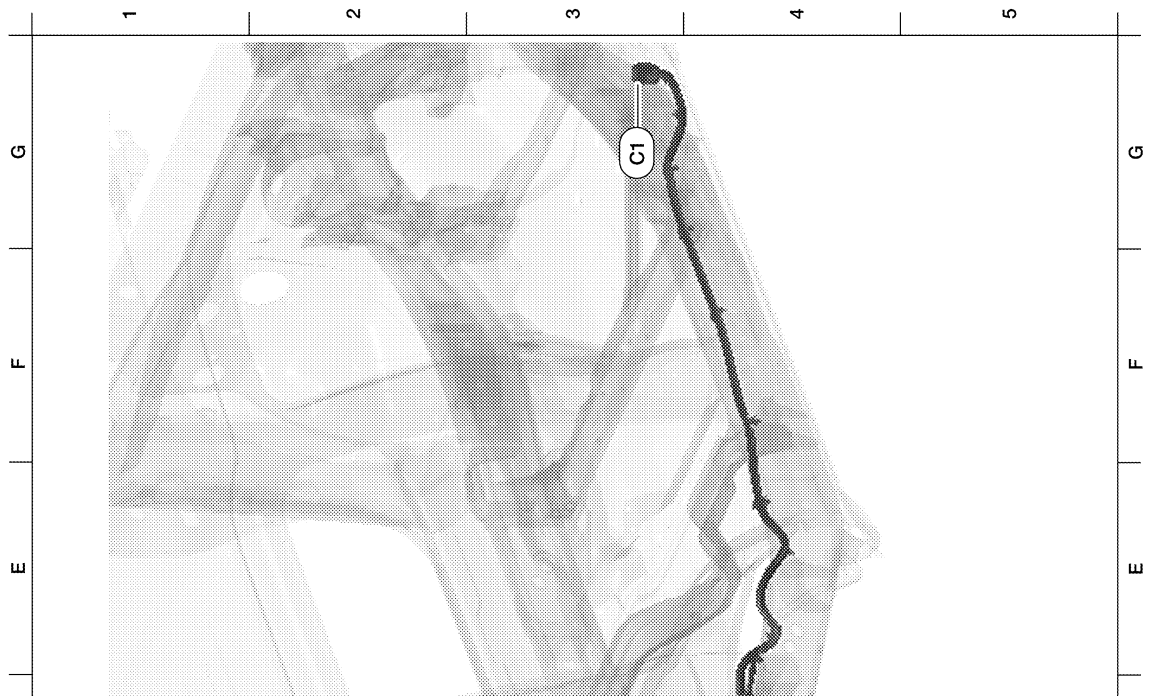
D4	E3	B/1	: Horn (with singal note horn)	C4	E18	GR/2	: Front wheel sensor LH
D4	E4	Y/2	: Crash zone sensor	B2	E21	GR/2	: Brake fluid level switch
F4	E6	B/2	: Horn (with dual note born)	B1	E23	GR/5	: Front wiper motor
F3	E7	B/3	: Front combination lamp LH (head lamp)(with daytime light system)	E2	E27	GR/3	: Front combination lamp LH
E2	E9	—	: Body ground	D5	E101	B/2	: Front fog lamp LH
E3	E11	B/3	: Front combination lamp LH (head lamp)(without daytime light system)	C1	E125	B/47	: ABS actuator and electric unit (control unit)
C1	E13	GR/2	: Ambient sensor 2	D2	E126	—	: Body ground
D2	E14	—	: Body ground	D4	E162	B/1	: Horn (with signal note horn)
E2	E17	GR/2	: Front combination lamp LH (side marker)				



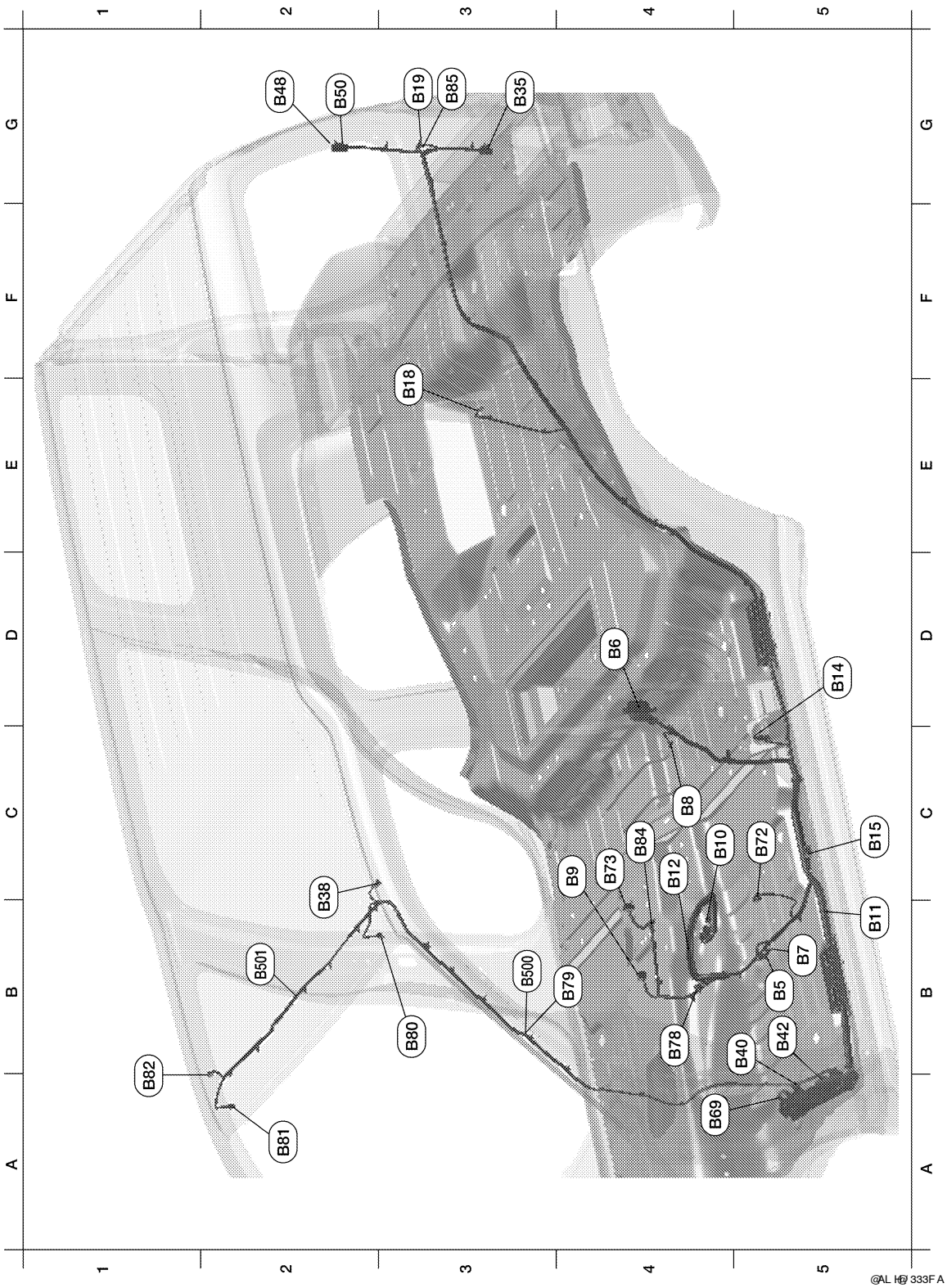
C5	F3	B/1	: A/C Compressor	D5	F51	G/2	: Intake valve timing control solenoid valve (bank 2)
E4	F5	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 2)	C5	F53	B/6	: Mass air flow sensor
D5	F6	GR/3	: Ignition coil No. 2 (with power transistor)	A2	F54	B/81	: ECM

E4	F7	GR/3	: Ignition coil No. 4 (with power transistor)	F2	F55	B/2	: ATP switch
E4	F8	GR/3	: Ignition coil No. 6 (with power transistor)	G1	F58	B/8	: Transfer control device
E3	F9	G/10	: A/T assembly	G2	F59	GR/2	: Wait detection switch
D5	F10	—	: Engine ground	G2	F60	GR/2	: 4LO switch
C2	F11	B/3	: Crankshaft position sensor (POS)	D2	F65	B/4	: Air fuel ratio (A/F) sensor 1 (bank 1)
F3	F12	G/4	: Heated oxygen sensor 2 (bank 2)	D2	F66	B/2	: Park/neutral position (PNP) switch
E2	F13	L/4	: Heated oxygen sensor 2 (bank 1)	D3	F67	L/4	: To F250
B2	F14	W/24	: To E5	E2	F69	W/2	: Back up lamp switch
C5	F15	L/2	: EVAP canister purge volume control solenoid valve	D2	F70	G/3	: Camshaft position sensor (PHASE) (bank 1)
D5	F16	—	: Engine ground	Injector sub-harness			
C4	F18	GR/2	: Fuel injector No. 2	D2	F201	G/4	: To F44
C4	F19	B/2	: VIAS control solenoid valve	C4	F202	GR/2	: Fuel injector No.1
D4	F20	GR/2	: Fuel injector No. 4	C4	F303	GR/2	: Fuel injector No.3
D3	F21	W/2	: Condenser-1	C3	F204	GR/2	: Fuel injector No.5
D4	F22	GR/2	: Fuel injector No. 6	Ignition coil sub-harness			
E4	F23	B/3	: Camshaft position sensor (PHASE) (bank 2)	C3	F225	G/8	: To F26
D2	F24	GR/2	: Engine coolant temperature sensor	B3	F226	GR/3	: Fuel injector No.1 (with power transistor)
C3	F26	G/8	: To F225	B3	F227	GR/3	: Fuel injector No.3 (with power transistor)
B2	F32	W/16	: To E2	C3	F228	GR/3	: Fuel injector No.5 (with power transistor)
B2	F33	W/16	: To E19	B4	F229	G/2	: Intake valve timing control solenoid valve (bank 1)
A2	F39	—	: Fusible link box (battery)	Knock sensor sub-harness			
D3	F44	G/4	: To F201	D4	F250	L/4	: To F67
B4	F46	B/3	: Power steering pressure sensor	C5	F251	B/2	: Knock sensor (bank 1)
B4	F50	B/6	: Electric throttle control actuator	D4	F252	B/2	: Knock sensor (bank 2)

CHASSIS HARNESS



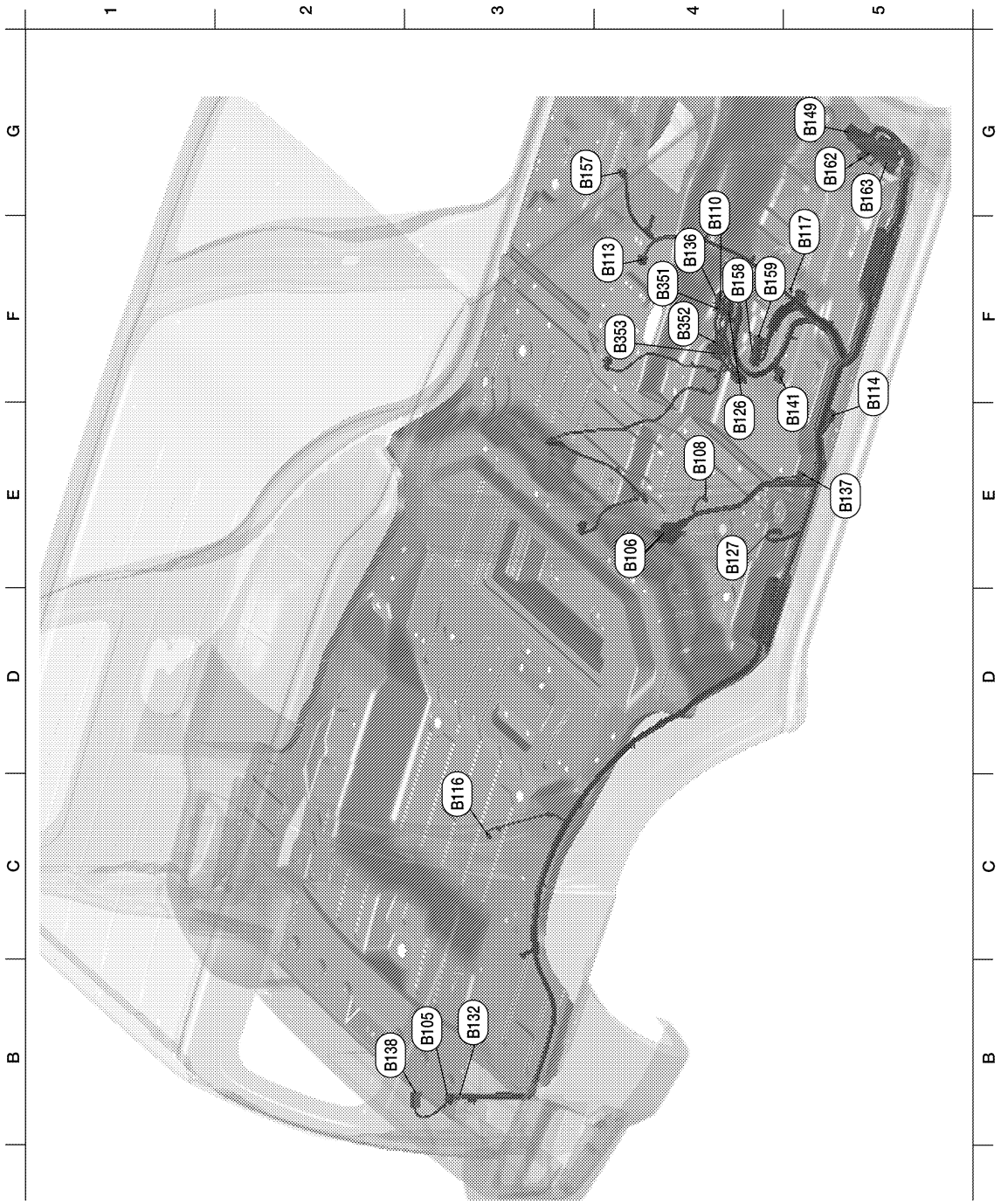
G3	C1	SMJ	: To E41	A4	C52	B/2	: To C150
D3	C5	GR/5	: Fuel level sensor unit and fuel pump	Differential Sub-harness			
A3	C6	B/2	: EVAP canister vent control valve	B4	C115	GR/4	: To C14
A3	C7	GR/3	: EVAP control system pressure sensor	C4	C116	GR/2	: Differential lock position switch
D4	C10	GR/2	: Rear wheel sensor RH	C4	C117	B/2	: Differential lock solenoid
C3	C11	GR/2	: Rear wheel sensor LH	Trailer Sub-harness			
A4	C12	W/2	: License plate lamp	B4	C125	GR/6	: To C51
B4	C14	GR/4	: To C115	A5	C126	B/7	: Trailer
B4	C51	GR/6	: To C125	A4	C150	B/2	: To C52



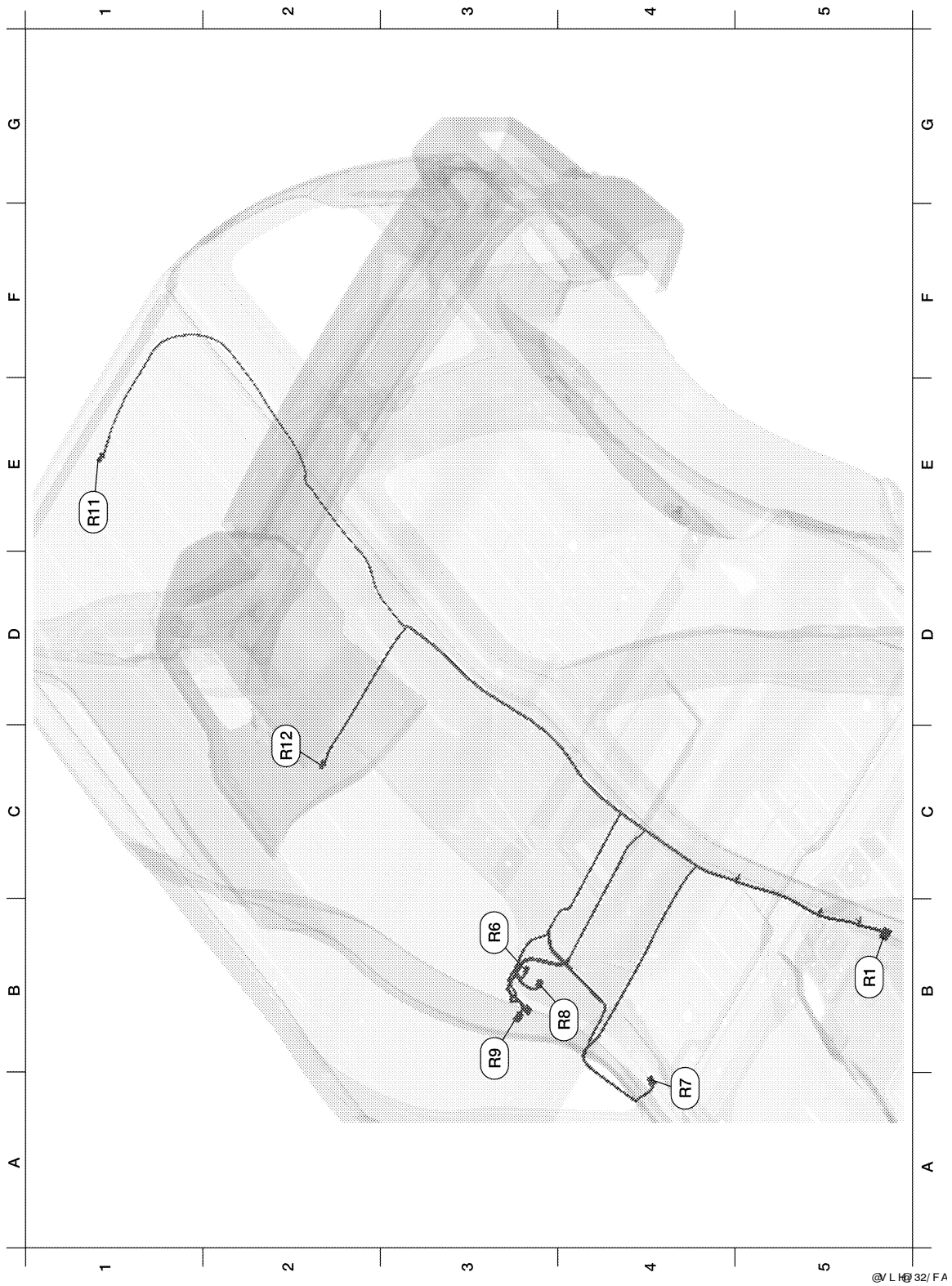
B5	B5	—	: Body ground	G2	B48	W/8	: To D402
D4	B6	W/12	: To D201	G2	B50	W/2	: To D410
B5	B7	—	: Body ground	A4	B69	SMJ	: To M40
C4	B8	W/3	: Front door switch LH	C5	B72	W/4	: Subwoofer
C4	B9	Y/12	: Air bag diagnosis sensor unit	C4	B73	B/6	: Yaw rate/side/decel G sensor

C4	B10	Y/2	: Front LH side air bag module	B4	B78	Y/2	: To B157
B5	B11	—	: Body ground	B4	B79	W/6	: To B500
C4	B12	W/3	: Seat belt buckle switch LH	B3	B80	W/2	: Vanity lamp LH
D5	B14	Y/2	: Front LH seat belt pre-tensioner	A2	B81	W/2	: Vanity lamp RH
C5	B15	Y/2	: LH side air bag (satellite) sensor	A1	B82	Y/2	: RH side curtain air bag module
E3	B18	W/3	: Rear door switch LH	C4	B84	B/1	: Parking brake switch
G3	B19	—	: Body ground	G3	B85	—	: Body ground
G3	B35	W/6	: Rear combination lamp LH	Off-road Lamps Sub-harness			
C2	B38	Y/2	: LH side curtain air bag module	B3	B500	W/6	: To B79
B5	B40	W/8	: To E34	B2	B501	GR/6	: To B526
B5	B42	W/2	: To E36				

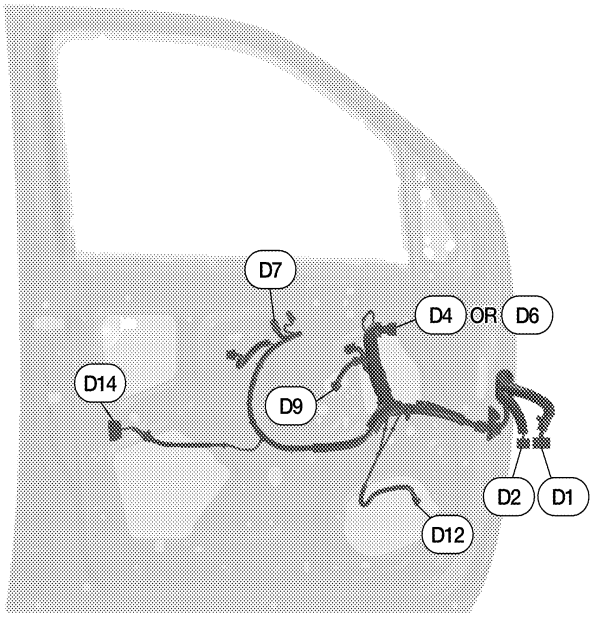
BODY NO. 2 HARNESS



B3	B105	W/6	: Rear combination lamp RH	B2	B138	B/3	: Rear cargo power socket
E4	B106	W/12	: To D301	E5	B141	W/32	: Bluetooth control unit
E4	B108	W/3	: Front door switch RH	G5	B149	SMJ	: To M36
F4	B110	W/3	: Seat belt buckle switch RH	G4	B157	Y/2	: To B78
F4	B113	Y/12	: Air bag diagnosis sensor unit	F4	B158	W/8	: Audio amplifier
E5	B114	Y/2	: RH side air bag (satellite) sensor	F4	B159	W/24	: Audio amplifier
C3	B116	W/3	: Rear door switch RH	G5	B162	W/12	: To M16
F5	B117	—	: Body ground	G5	B163	W/16	: To M17
E4	B126	Y/2	: Front RH side air bag module	RH Front Seat Sub-harness			
E4	B127	Y/2	: Front RH seat belt pre-tensioner	F4	B351	W/8	: To B136
B3	B132	—	: Body ground	F4	B352	B/18	: Occupant classification system control unit
F4	B136	W/8	: To B351	F4	B352	B/3	: Occupant classification system sensor
E5	B137	W/3	: Belt tension sensor				

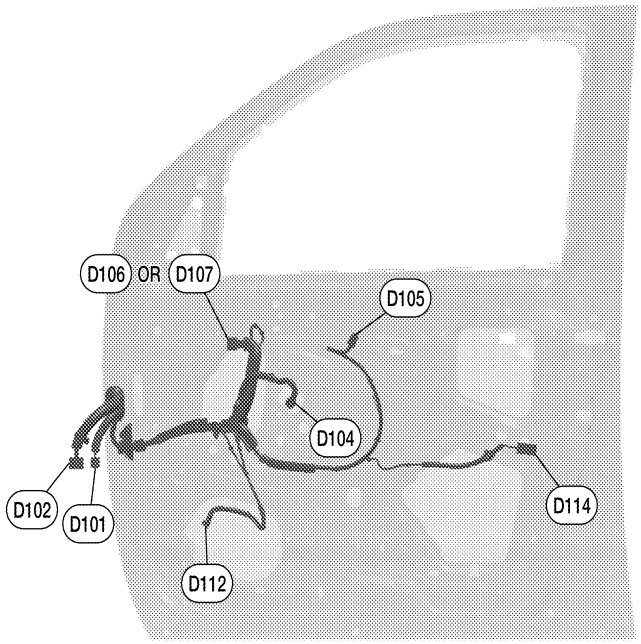


B5	R1	W/24	: To M1	D3	R9	W/3	: Front room/map lamp assembly
B3	R6	W/4	: Bluetooth on indicator	E1	R11	W/2	: Cargo lamp
A4	R7	B/7	: Auto anti-dazzling inside mirror	D2	R12	W/2	: Room lamp 2nd row
B4	R8	W/4	: Microphone				



@AL H@ 336F A

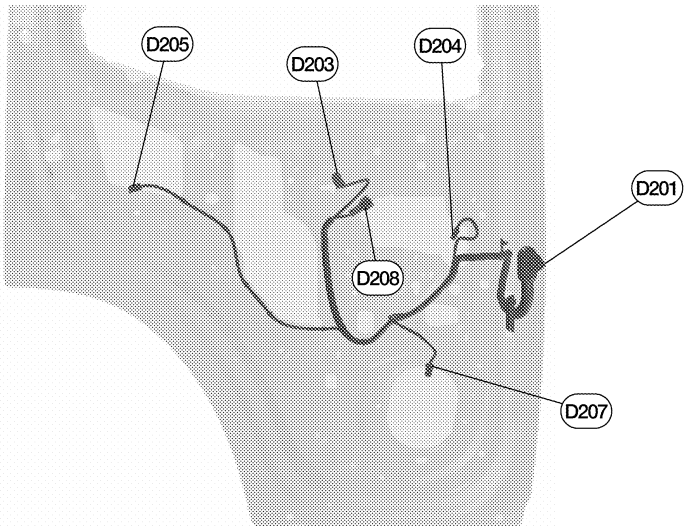
D1	W/16	: To M9	D7	W/16	: Main power window and door lock/unlock switch
D2	BR/12	: To M8	D9	BR/2	: Front power window motor LH
D4	B/10	: Door mirror LH (with heated mirrors)	D12	W/2	: Front door speaker LH
D6	B/3	: Door mirror LH (without heated mirrors)	D14	GR/6	: Front door lock assembly LH



@AL H@ 337F A

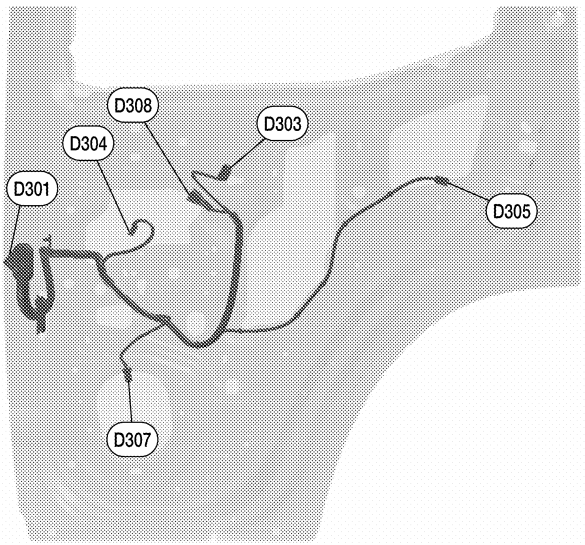
D101	W/12	: To M75	D106	B/3	: Door mirror RH (without heated mirrors)
D102	W/16	: To M74	D107	B/10	: Door mirror RH (with heated mirrors)
D104	BR/2	: Front power window motor RH	D112	W/2	: Front door speaker RH
D105	W/12	: Power window and door lock/unlock switch RH	D114	W/2	: Front door lock actuator RH

REAR DOOR LH HARNESS



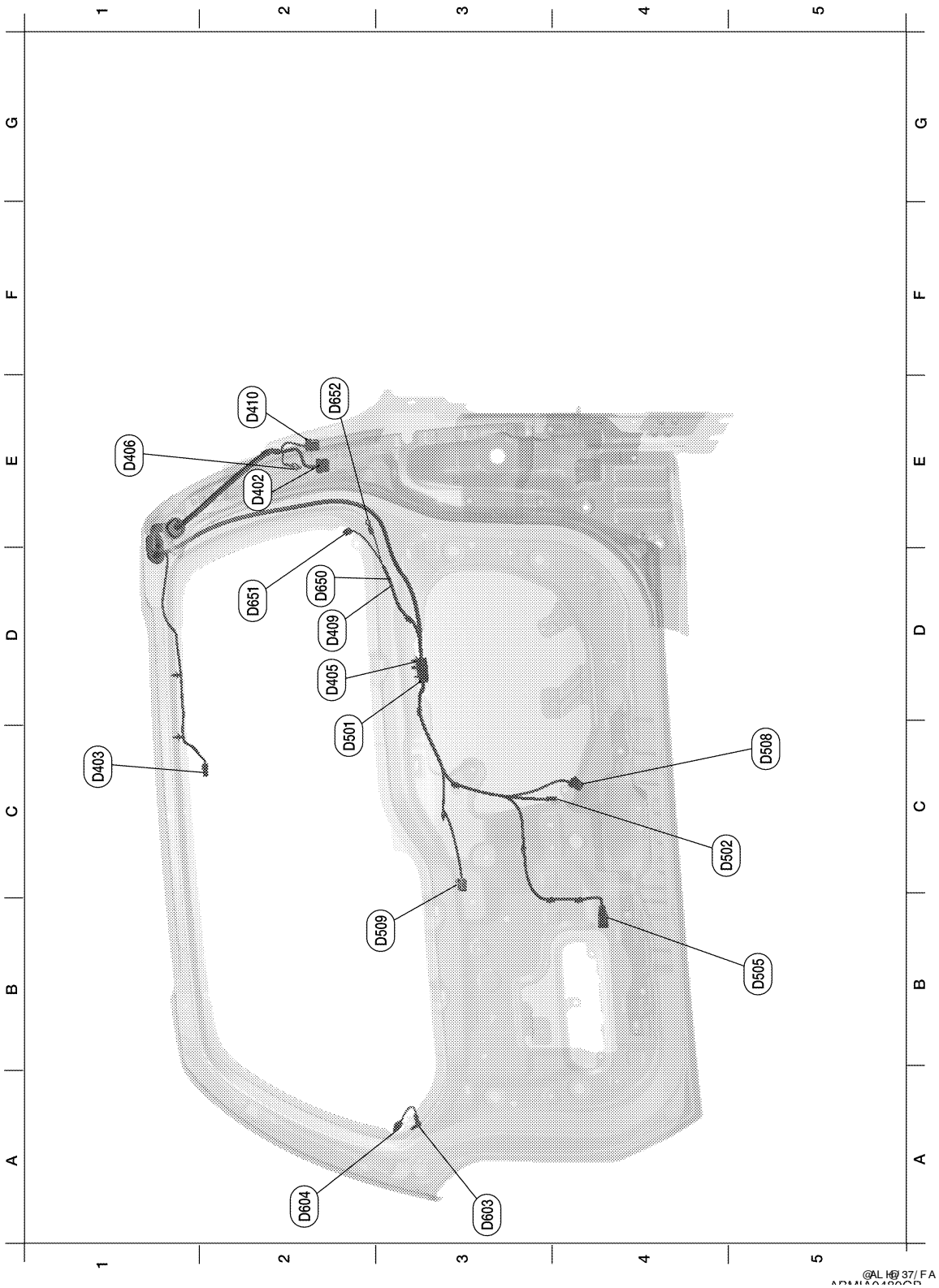
D201	W/12	: To B6	D205	W/2	: Rear door lock actuator LH
D203	W/8	: Rear power window switch LH	D207	W/2	: Rear door speaker LH
D204	B/2	: Rear power window motor LH	D208	BR/2	: Rear tweeter LH

REAR DOOR RH HARNESS



D301	W/12	: To B106	D305	W/2	: Rear door lock actuator RH
D303	W/8	: Rear power window switch RH	D307	W/2	: Rear door speaker RH
D304	B/2	: Rear power window motor RH	D308	BR/2	: Rear tweeter RH

BACK DOOR HARNESS



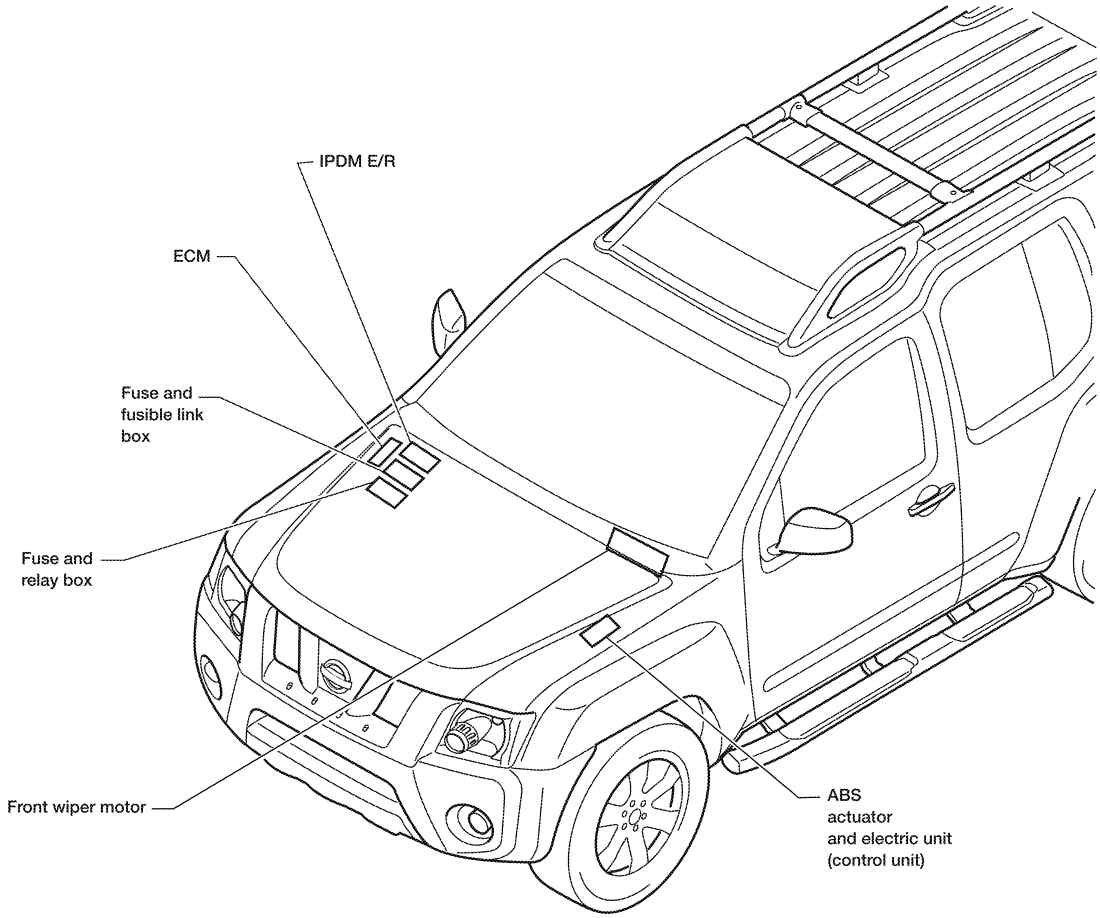
Back door No. 2 harness			
E2	D402	W/8	: To B48
C1	D403	W/2	: High mounted stop lamp
D2	D405	W/8	: To D501
E1	D406	—	: Body ground
D2	D409	W/2	: To D650
E2	D410	W/2	: To B50
Back door harness			
C2	D501	W/8	: To D405
C5	D502	W/3	: Back door switch
B5	D505	BR/3	: Back door key cylinder switch
C5	D508	W/4	: Back door lock actuator
B3	D509	W/4	: Rear wiper motor
Rear window defogger sub-harness			
A3	D603	—	: Body ground
A2	D604	B/1	: Rear window defogger
D2	D650	W/2	: To D409
D2	D651	B/1	: Rear window defogger
E2	D652	—	: Body ground

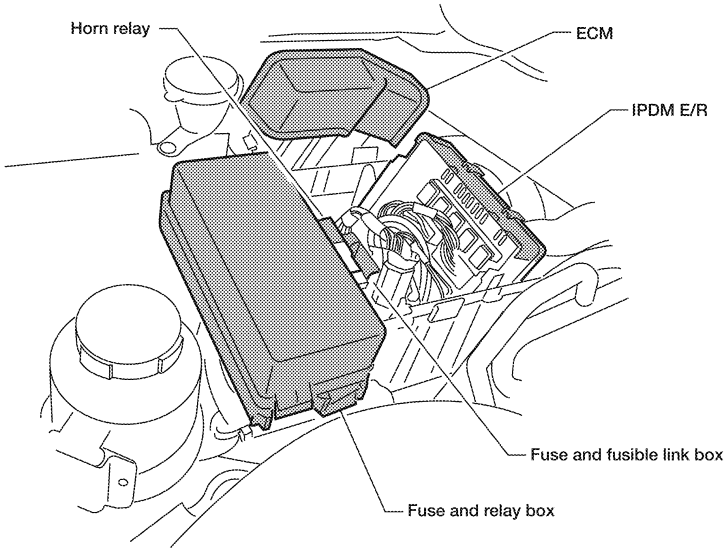
ELECTRICAL UNITS LOCATION

Electrical Units Location

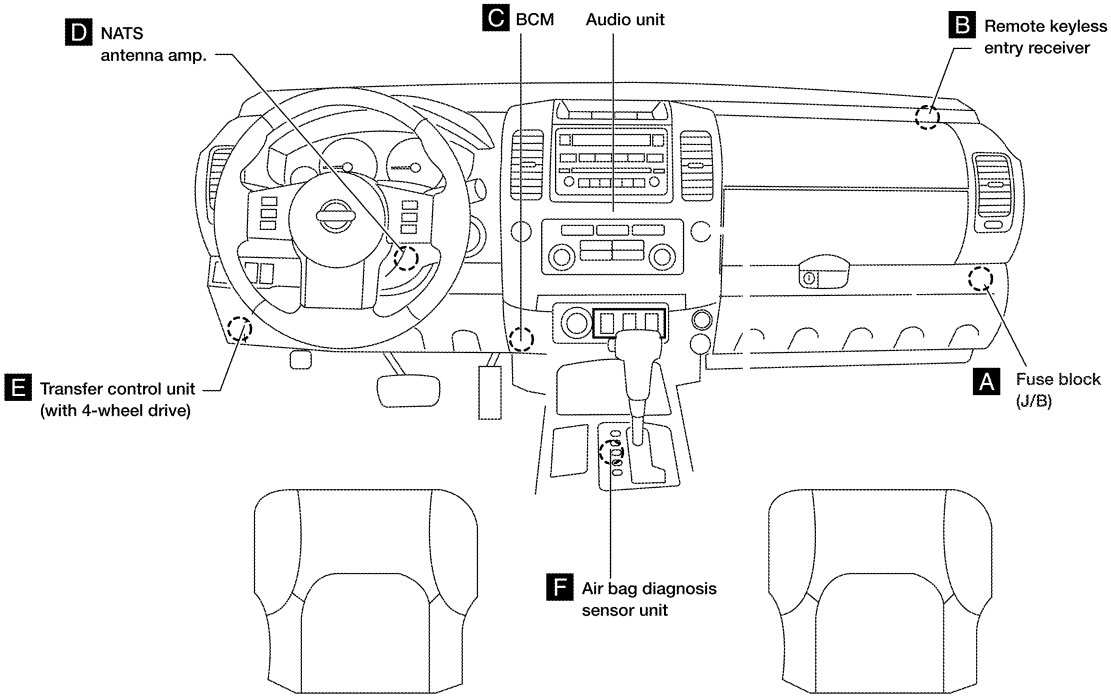
INFOID:0000000004095233

ENGINE COMPARTMENT

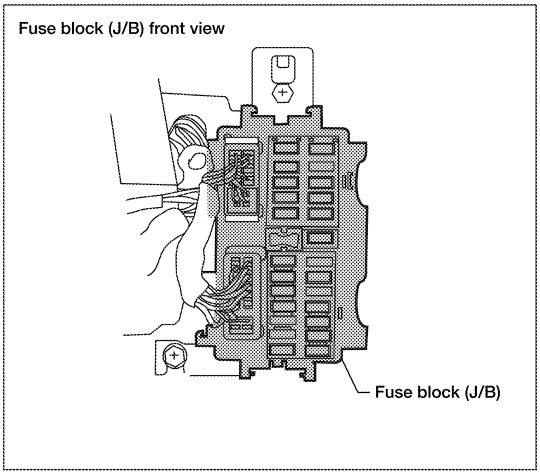




@AL H@ 301F A

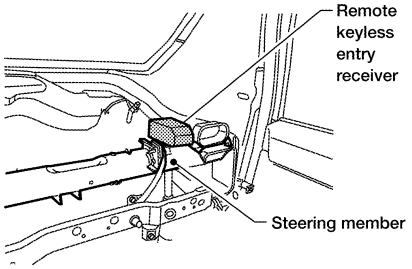


A Instrument panel side RH

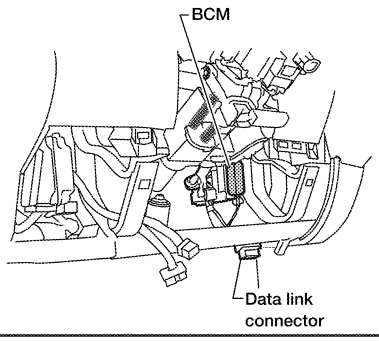


@AL H@ 302F A

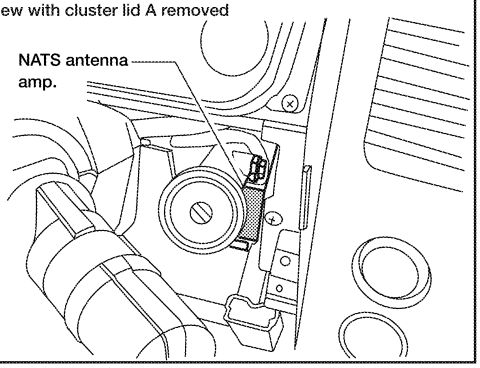
B View with instrument panel removed RH



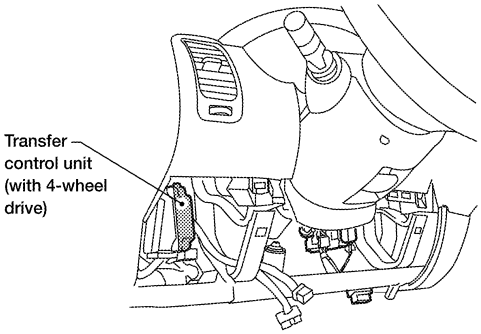
C View with instrument lower panel LH removed



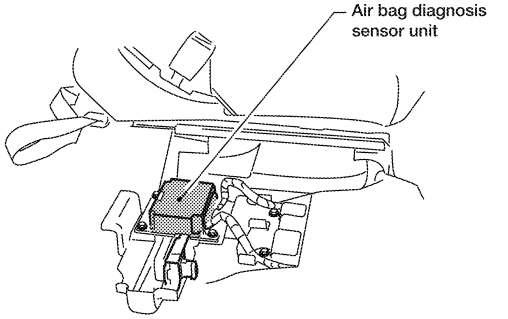
D View with cluster lid A removed



E View with lower instrument cover removed



F View with center console removed



@AL H@ 303F A

HARNESS CONNECTOR

Description

INFOID:0000000004095234

HARNESS CONNECTOR (TAB-LOCKING TYPE)

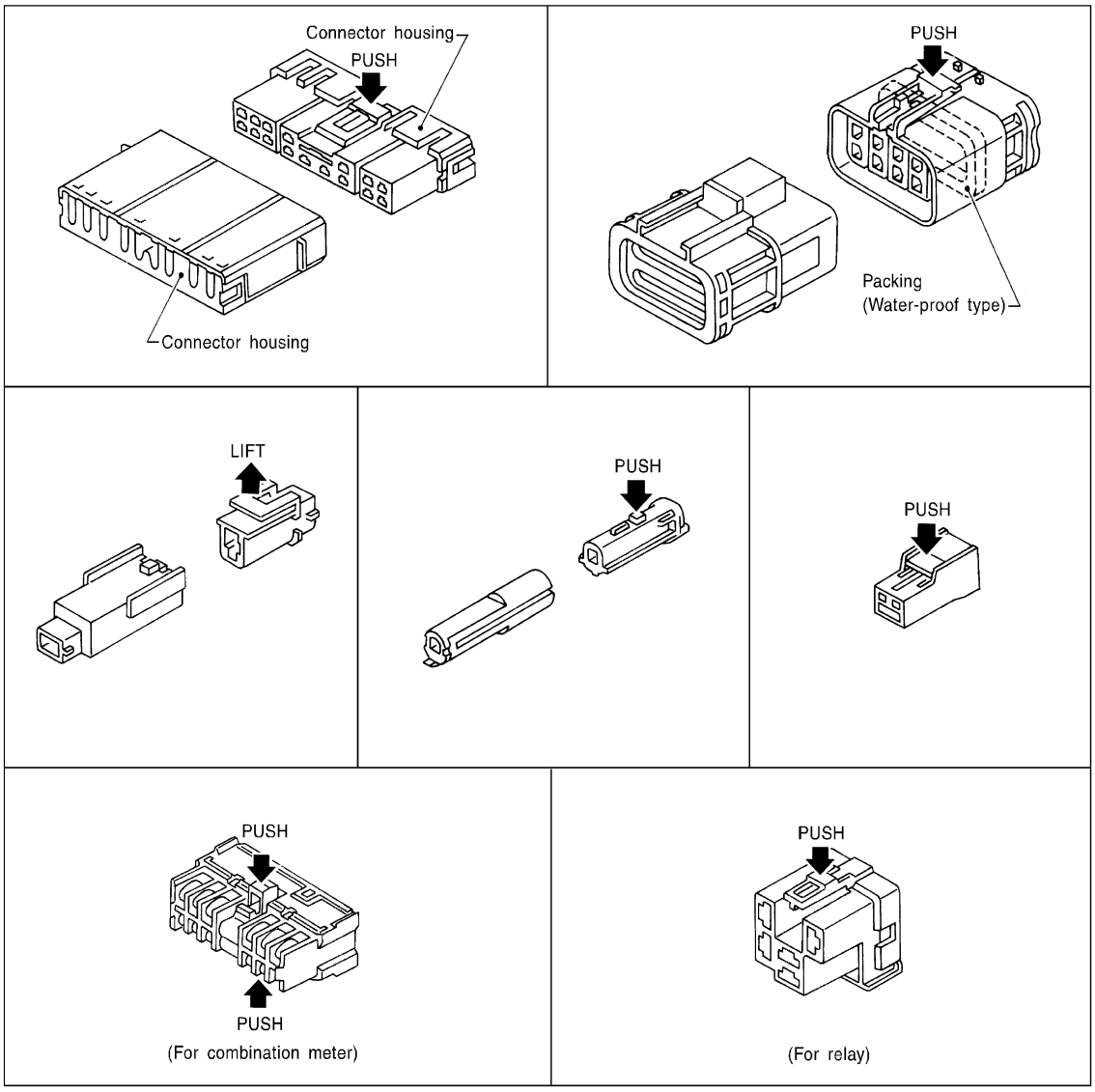
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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

CAUTION:

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

[Example]



RDK658C@

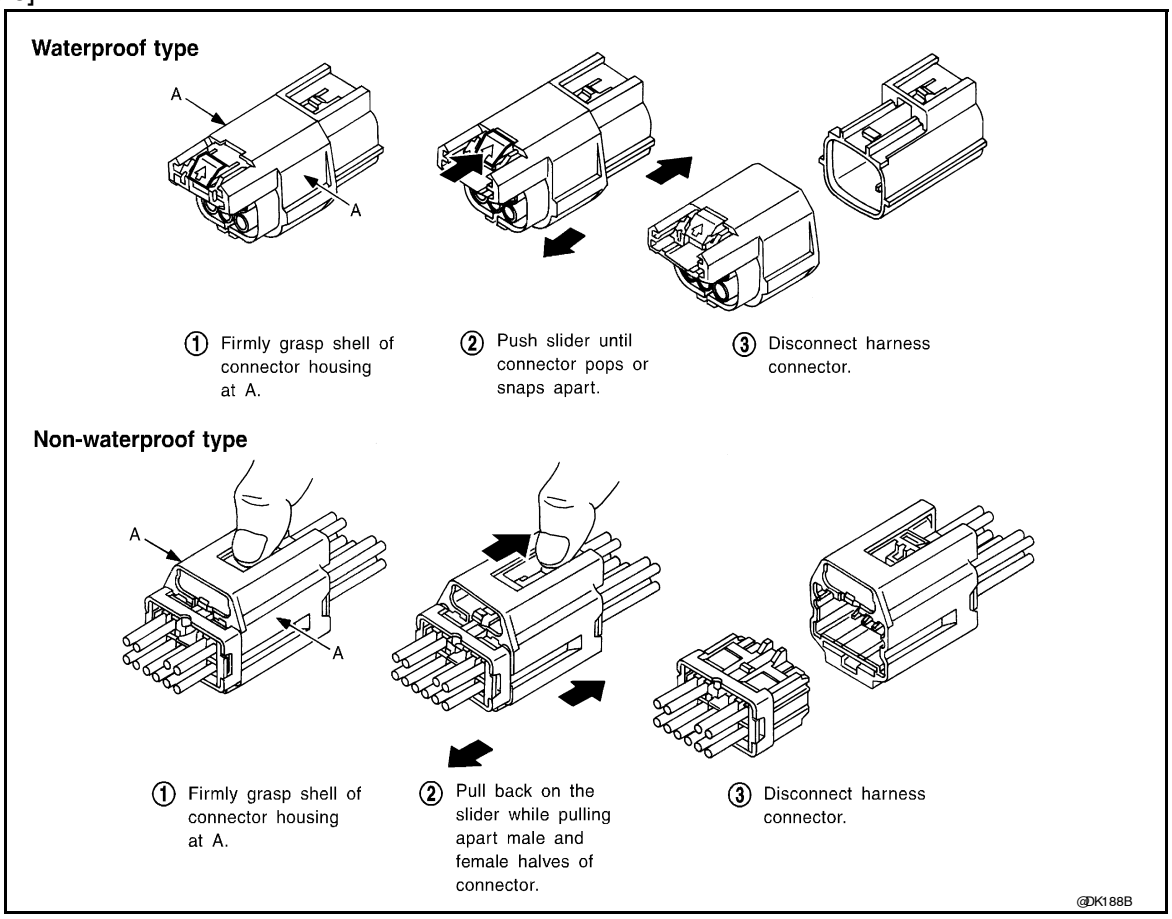
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

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

CAUTION:

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

[Example]

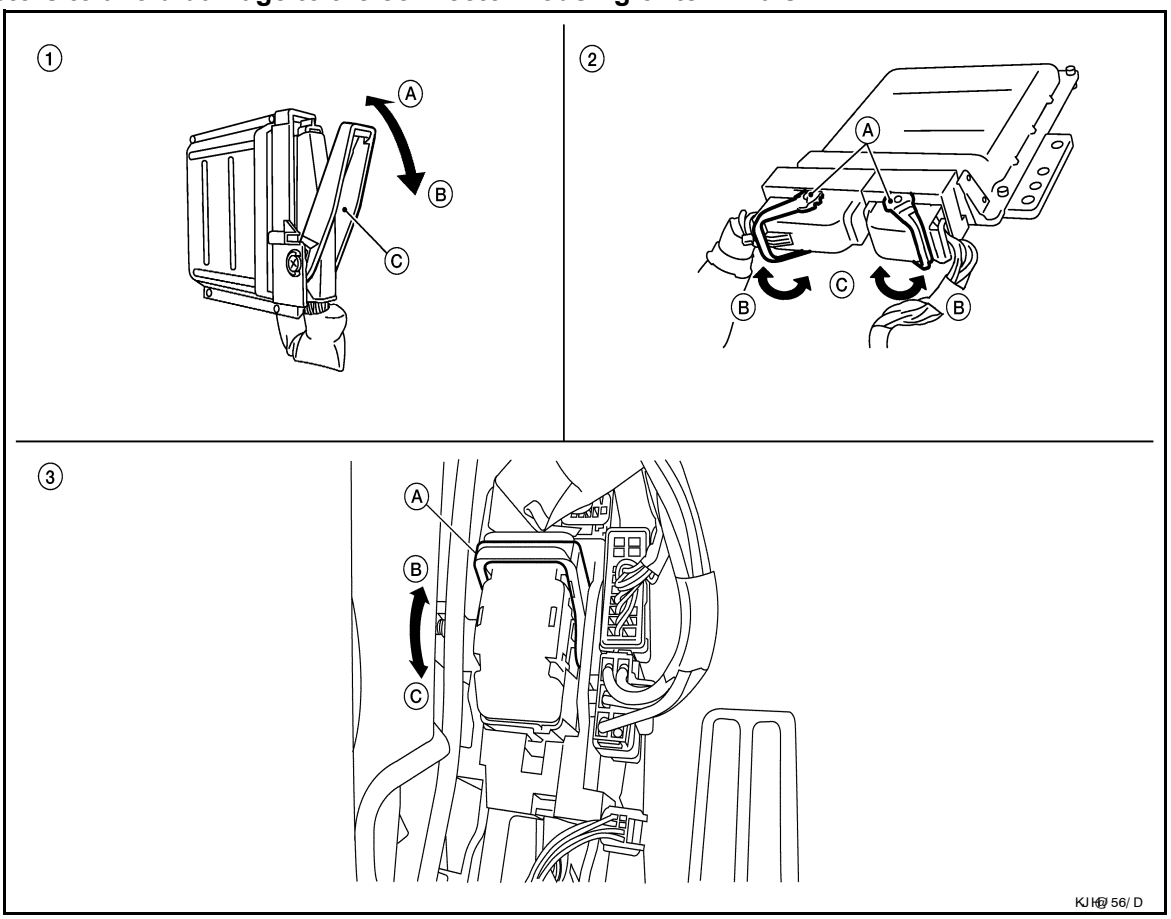


HARNESS CONNECTOR (LEVER LOCKING TYPE)

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

CAUTION:

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



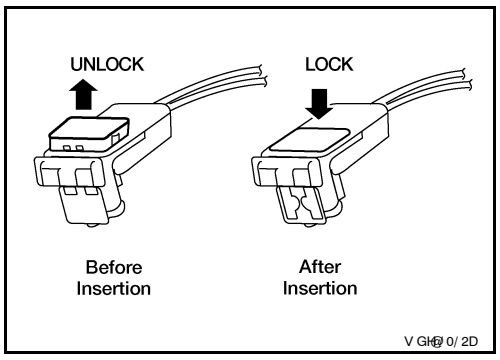
1. Control unit with single lever
   A. Fasten
   B. Loosen
   C. Lever
2. Control unit with dual levers
   A. Levers
   B. Fasten
   C. Loosen
3. SMJ connector
   A. Lever
   B. Fasten
   C. Loosen

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 component.
- Always push down to lock black locking tab after installing connector to SRS component. When locked, the black locking tab is level with the connector housing.

CAUTION:

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



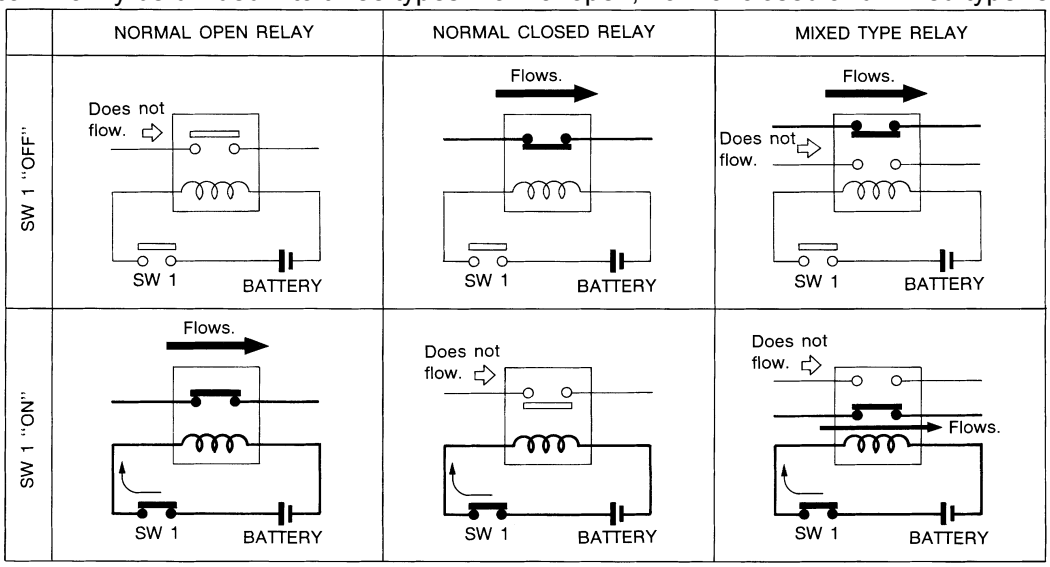
STANDARDIZED RELAY

Description

INFOID:0000000004095236

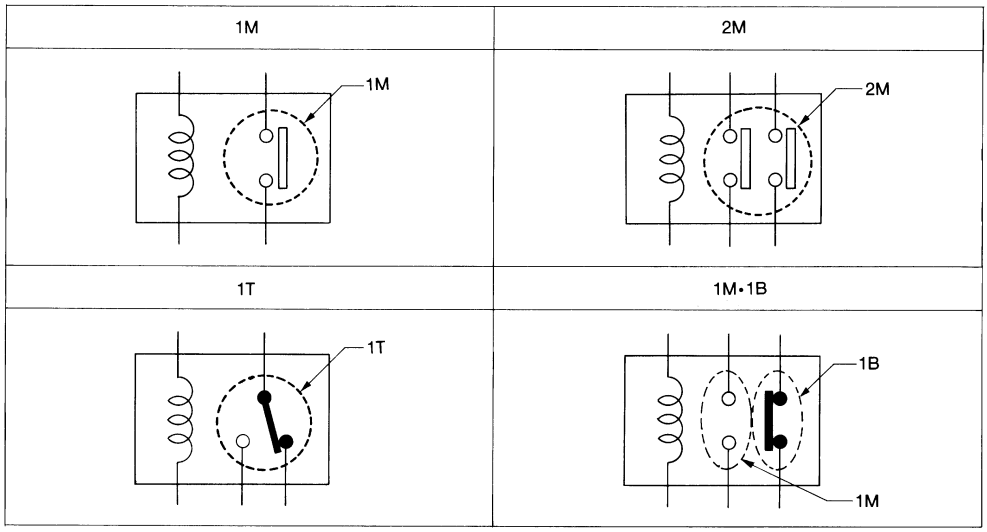
NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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



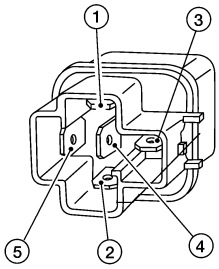
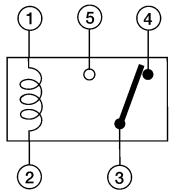
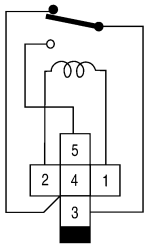
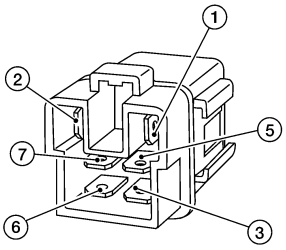
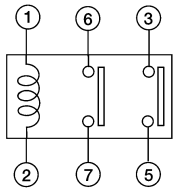
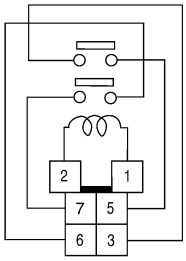
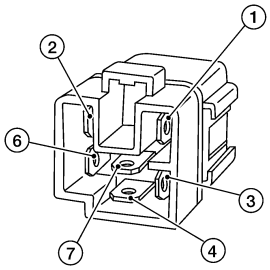
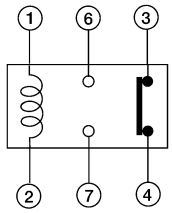
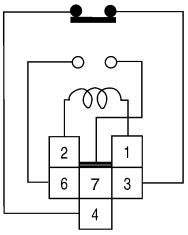
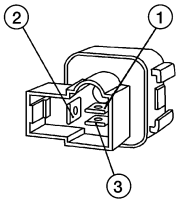
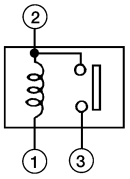
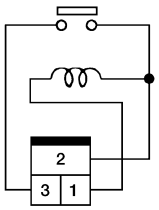
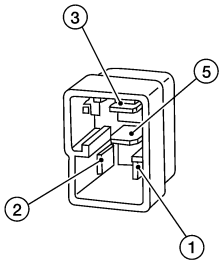
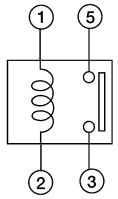
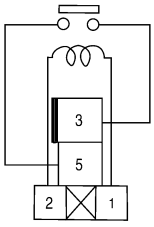
RDK770G

TYPE OF STANDARDIZED RELAYS



RDK771G

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

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

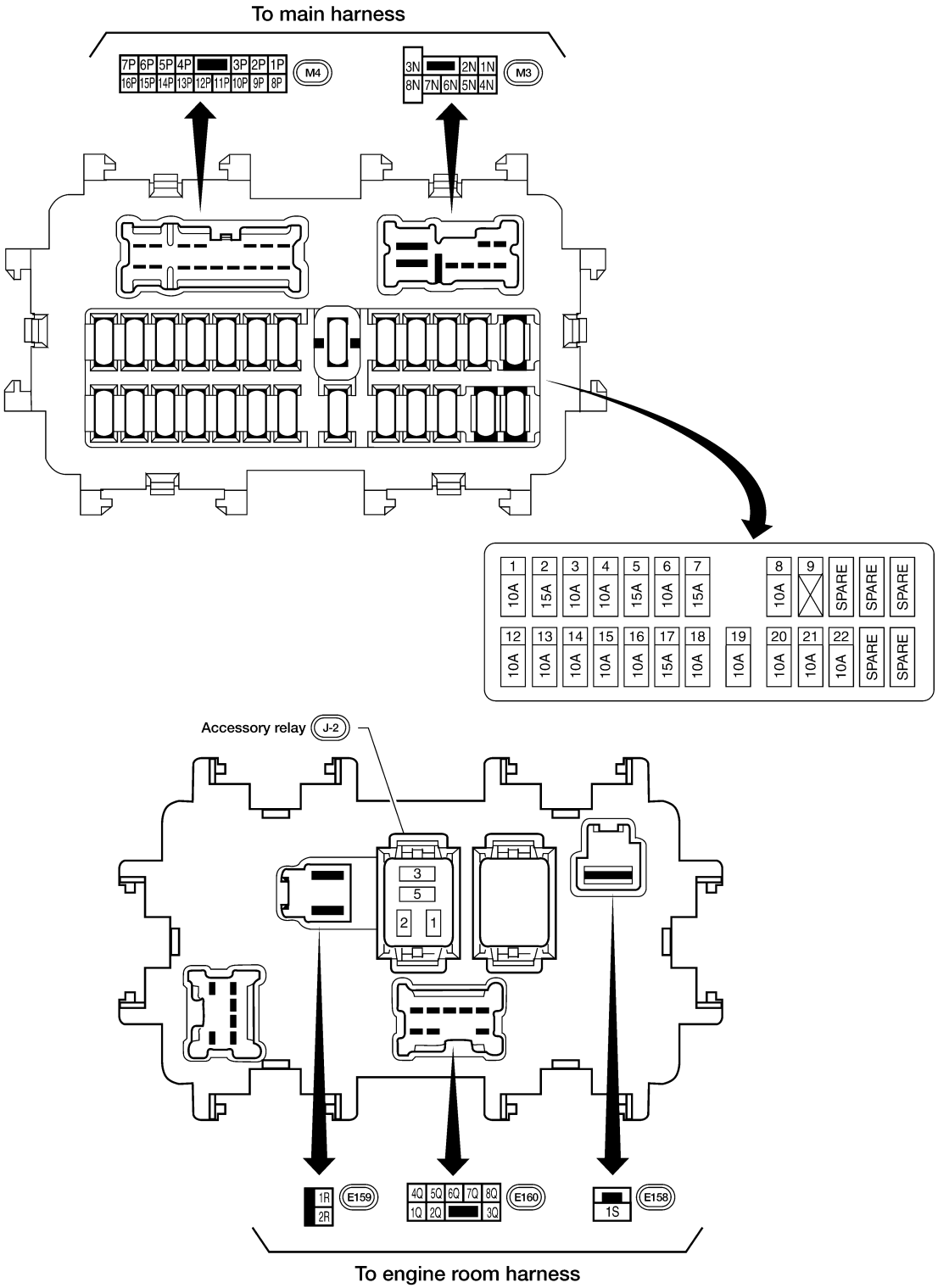
The arrangement of terminal numbers on the actual relays may differ from those shown above.

V J H 142D

FUSE BLOCK-JUNCTION BOX (J/B)

Terminal Arrangement

INFOID:0000000004095238



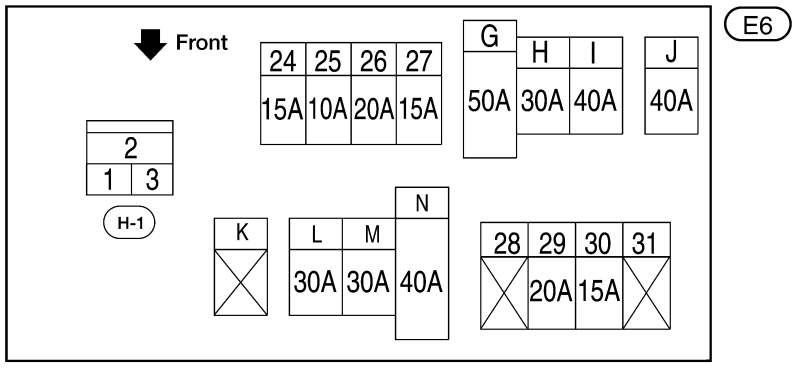
@AL H@ 304F A

FUSE AND FUSIBLE LINK BOX

Terminal Arrangement

INFOID:0000000004095239

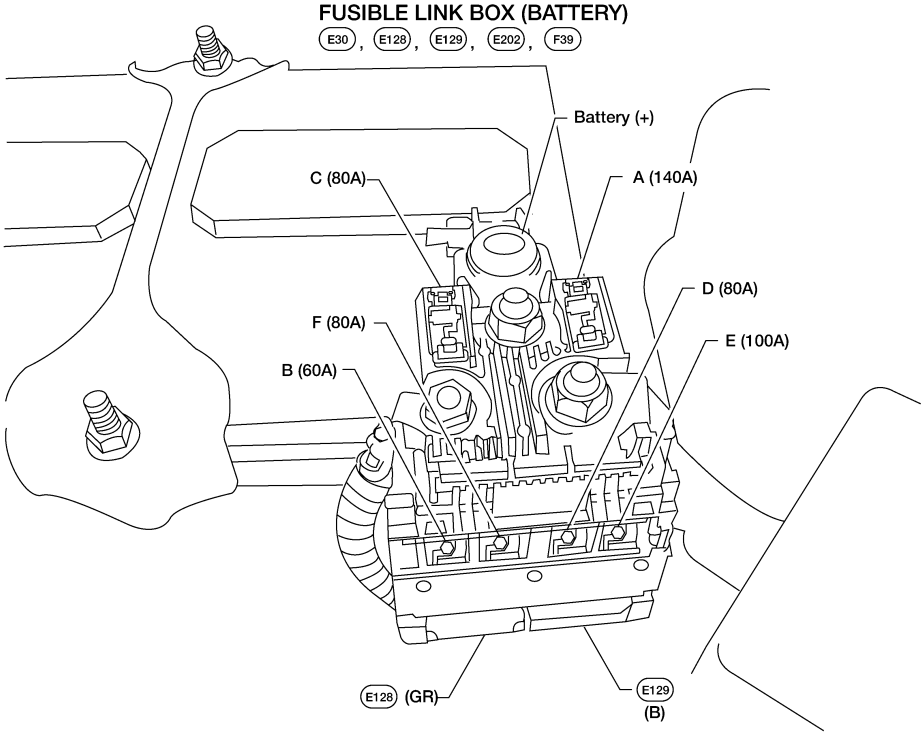
FUSE AND FUSIBLE LINK BOX



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

FUSIBLE LINK BOX (BATTERY)

E30, E128, E129, E202, F39

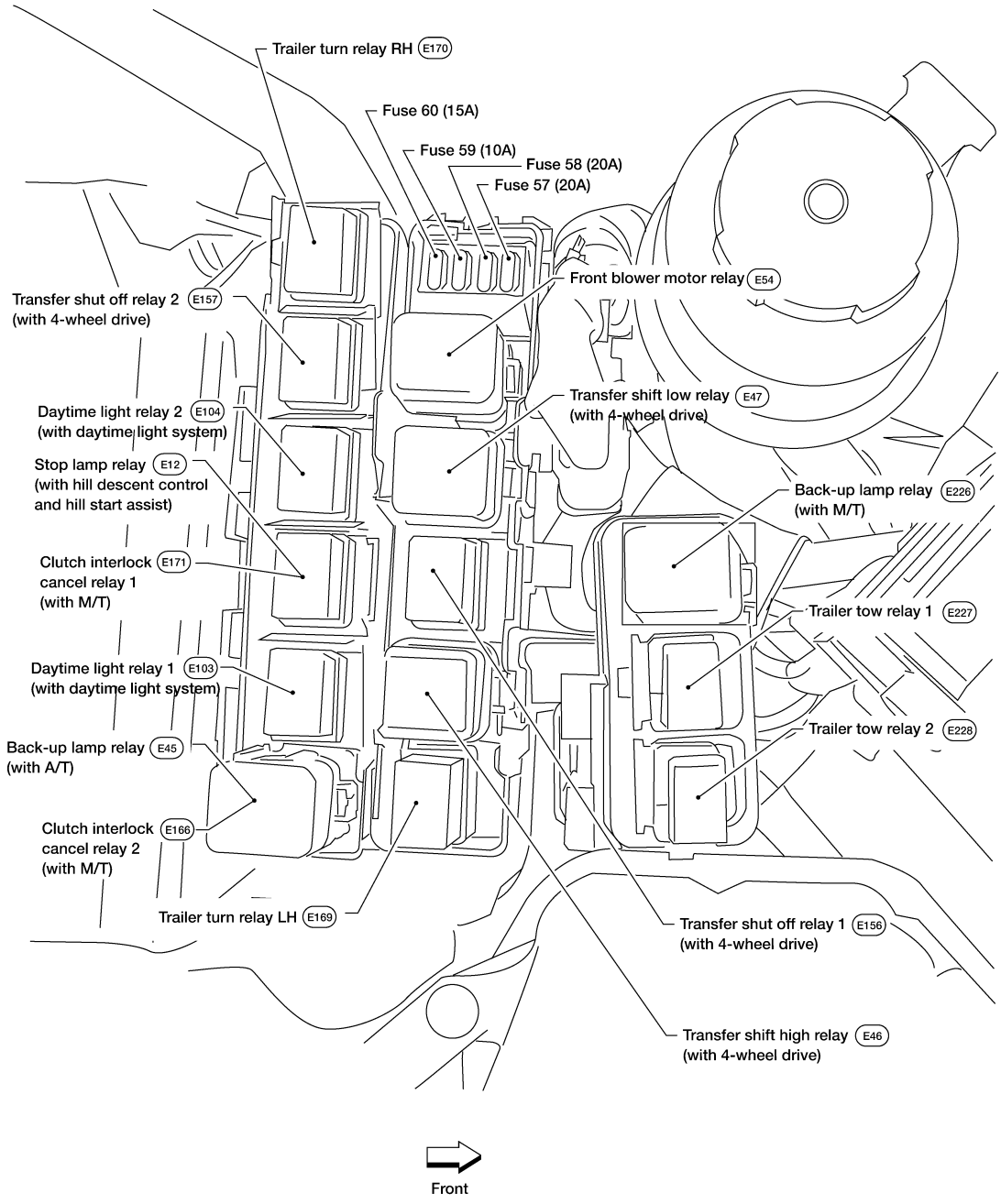


@AL H@ 305F A

FUSE AND RELAY BOX

Terminal Arrangement

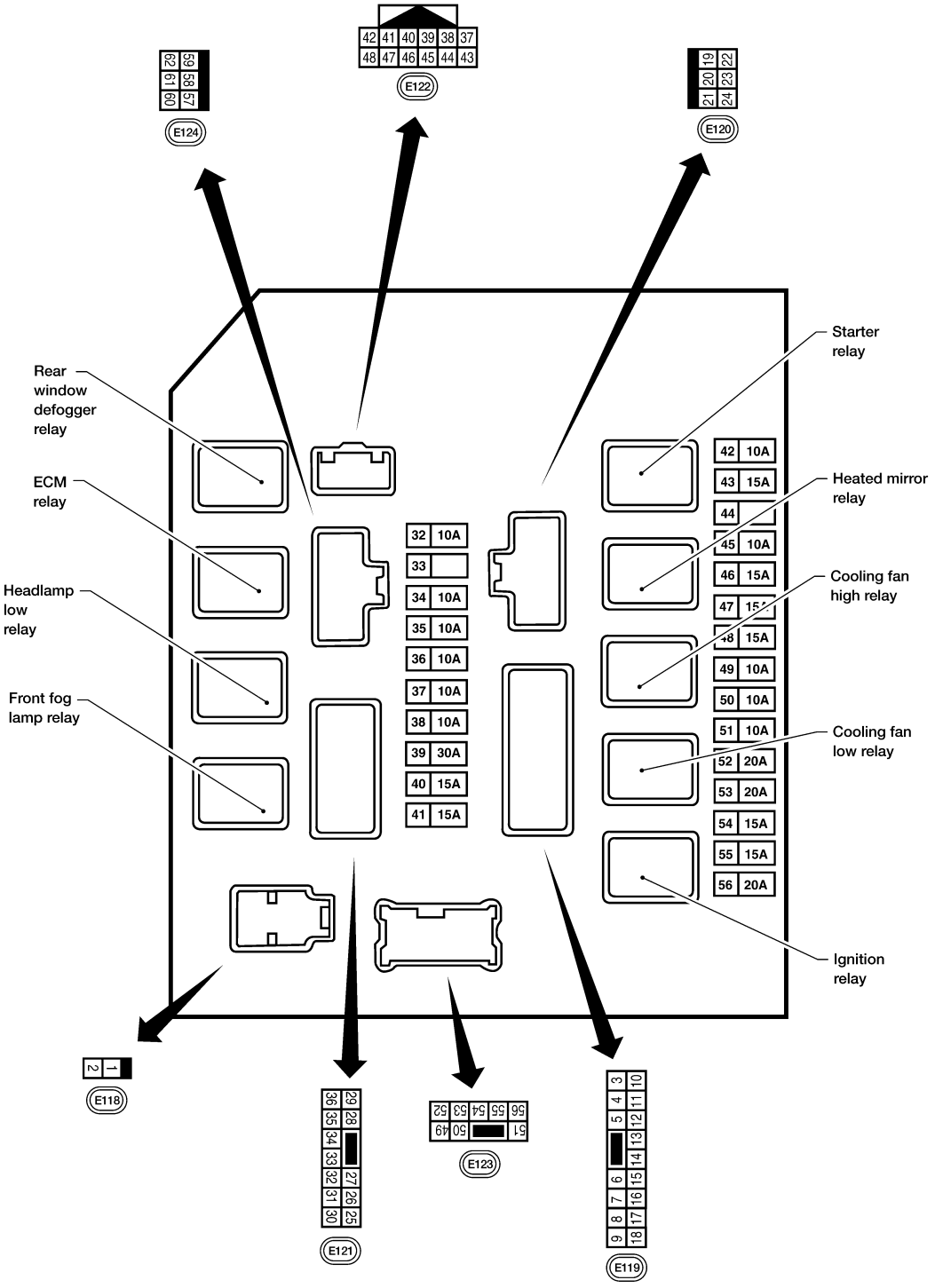
INFOID:0000000004095240



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

Fuse, Connector and Terminal Arrangement

INFOID:0000000004363652



V J H 4745D

ON-VEHICLE REPAIR

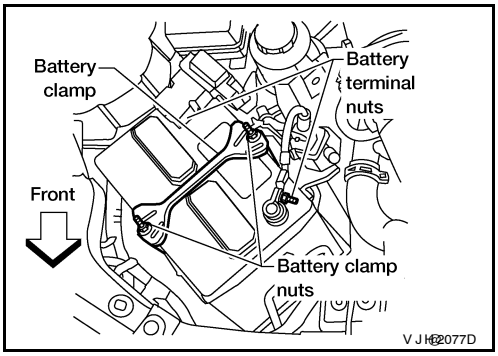
BATTERY

Removal and Installation

INFOID:0000000004095241

REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:
Install positive battery terminal first.

Battery clamp nuts	**: 3.92 N·m (0.40 kg-m, 35 in-lb)**
Battery terminal nut	**: 3.4 N·m (0.35 kg-m, 30 in-lb)**

Reset electronic systems as necessary. Refer to PG-6, "Special Repair Requirement".

SERVICE DATA AND SPECIFICATIONS (SDS)

BATTERY

Battery

INFOID:0000000004095242

	Standard battery
Type	GR24F
Capacity (20 HR) minimum V-AH	63
Cold cranking current A (For reference value)	550