SECTION PG

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

PRECAUTIONS

PFP:00011

Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

EKS00FSH

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 SRS 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 SRS 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.**

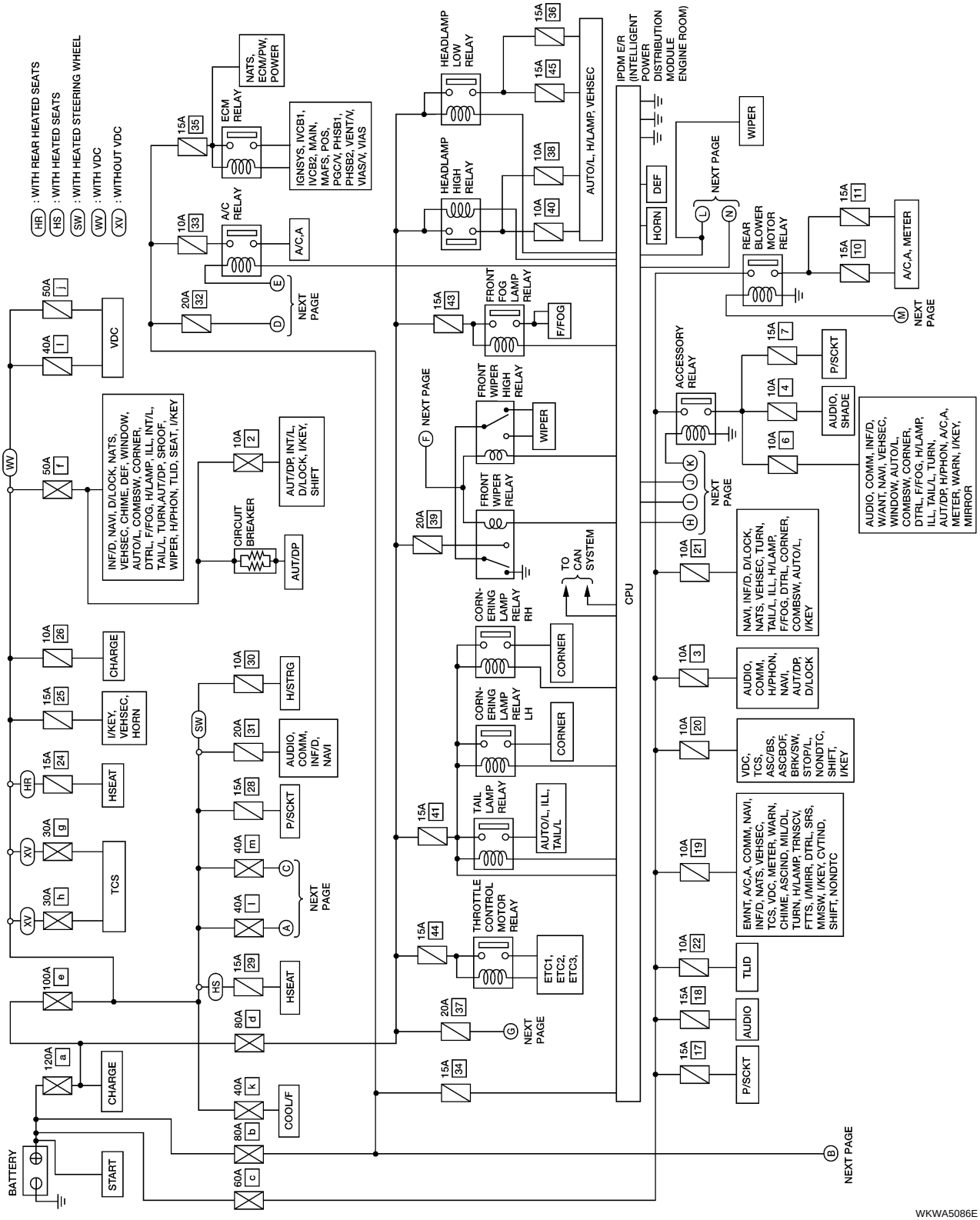
POWER SUPPLY ROUTING CIRCUIT

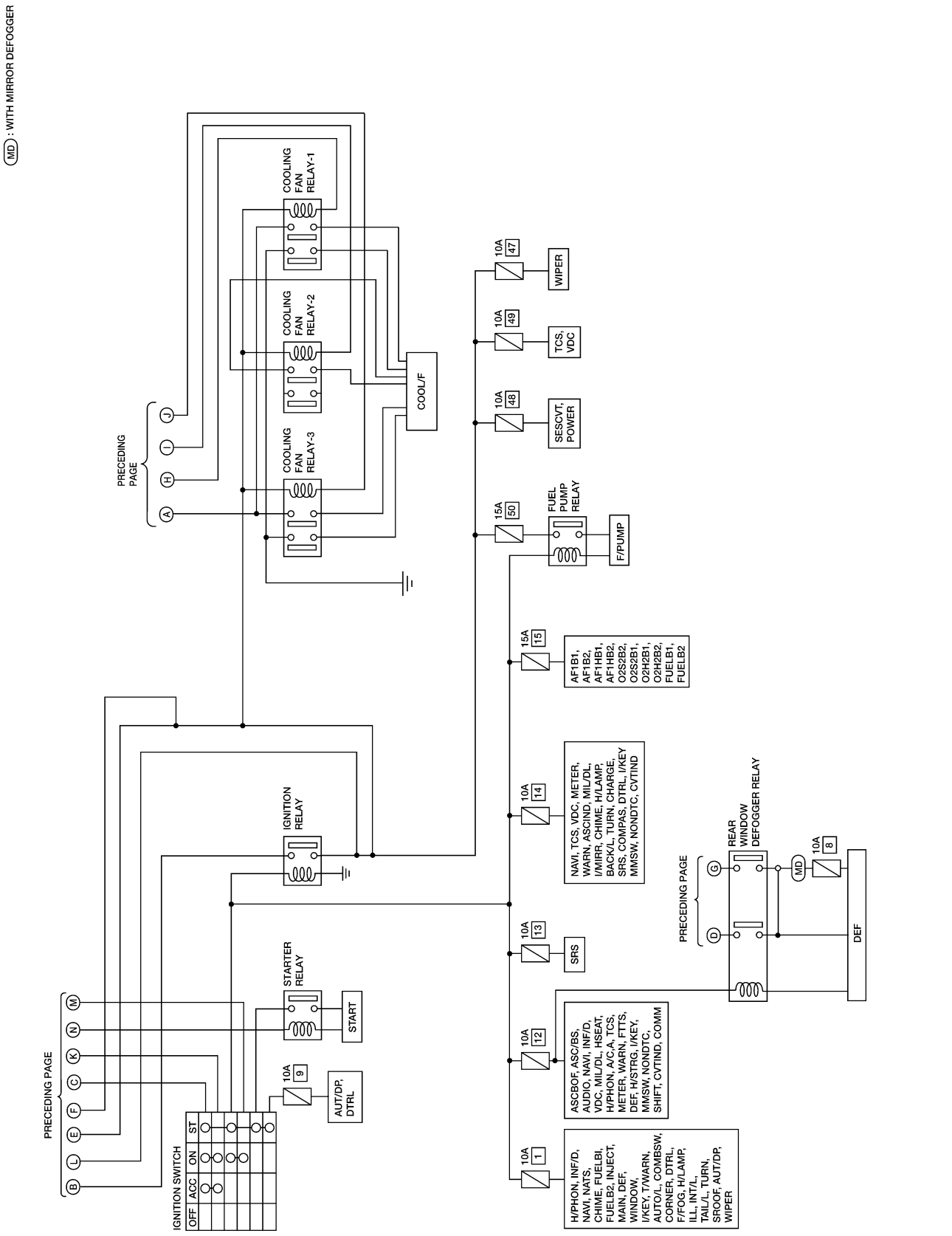
PFP:24110

Schematic

EKS009HX

For detailed ground distribution, refer to PG-32, "Ground Distribution" .



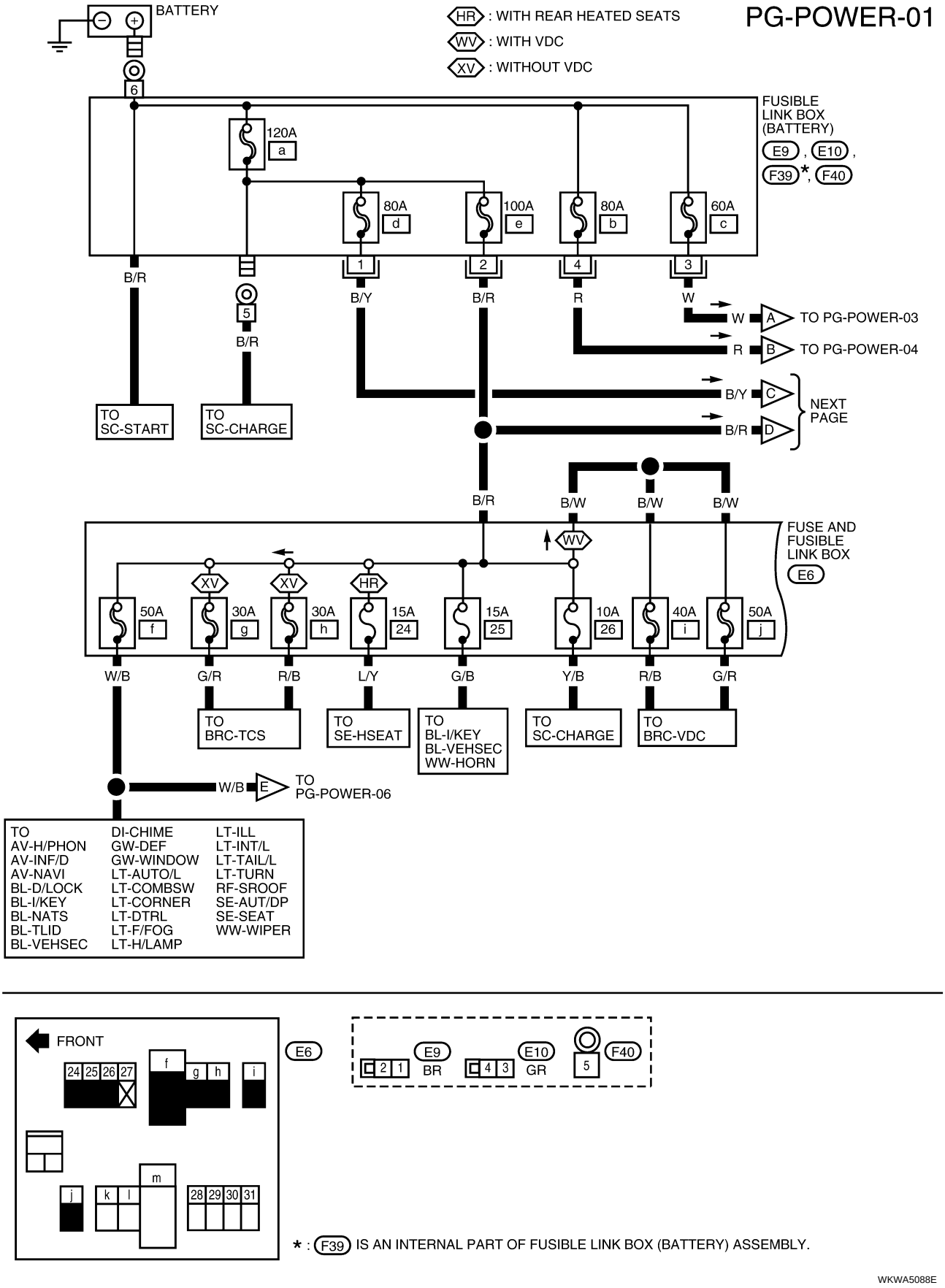

(MD) : WITH MIRROR DEFOGGER
PRECEDING PAGE
COOLING FAN RELAY-1
COOLING FAN RELAY-2
COOLING FAN RELAY-3
COOL/F
10A 47
WIPER
10A 49
TCS, VDC
10A 48
SESCVT, POWER
15A 50
FUEL PUMP RELAY
F/PUMP
15A 15
AF1B1, AF1B2, AF1HB1, AF1HB2, O2S2B2, O2S2B1, O2H2B1, O2H2B2, FUELB1, FUELB2
10A 14
NAVI, TCS, VDC, METER, WARN, ASCIND, MIL/DL, I/MIRR, CHIME, H/LAMP, BACK/L, TURN, CHARGE, SRS, COMPAS, DTRL, I/KEY MMSW, NONDTC, CVTIND
IGNITION RELAY
10A 13
SRS
STARTER RELAY
START
10A 12
ASCBOF, ASC/BS, AUDIO, NAVI, INF/D, VDC, MIL/DL, HSEAT, H/PHON, A/C,A, TCS, METER, WARN, FTTS, DEF, H/STRG, I/KEY, MMSW, NONDTC, SHIFT, CVTIND, COMM
10A 9
AUT/DP, DTRL
10A 1
H/PHON, INF/D, NAVI, NATS, CHIME, FUELBI, FUELB2, INJECT, MAIN, DEF, WINDOW, I/KEY, T/WARN, AUTO/L, COMBSW, CORNER, DTRL, F/FOG, H/LAMP, ILL, INT/L, TAIL/L, TURN, SROOF, AUT/DP, WIPER
PRECEDING PAGE
IGNITION SWITCH
OFF
ACC
ON
ST
REAR WINDOW DEFOGGER RELAY
10A 8
DEF
PRECEDING PAGE

WKWA5087E

Wiring Diagram — POWER —

EKS009HY

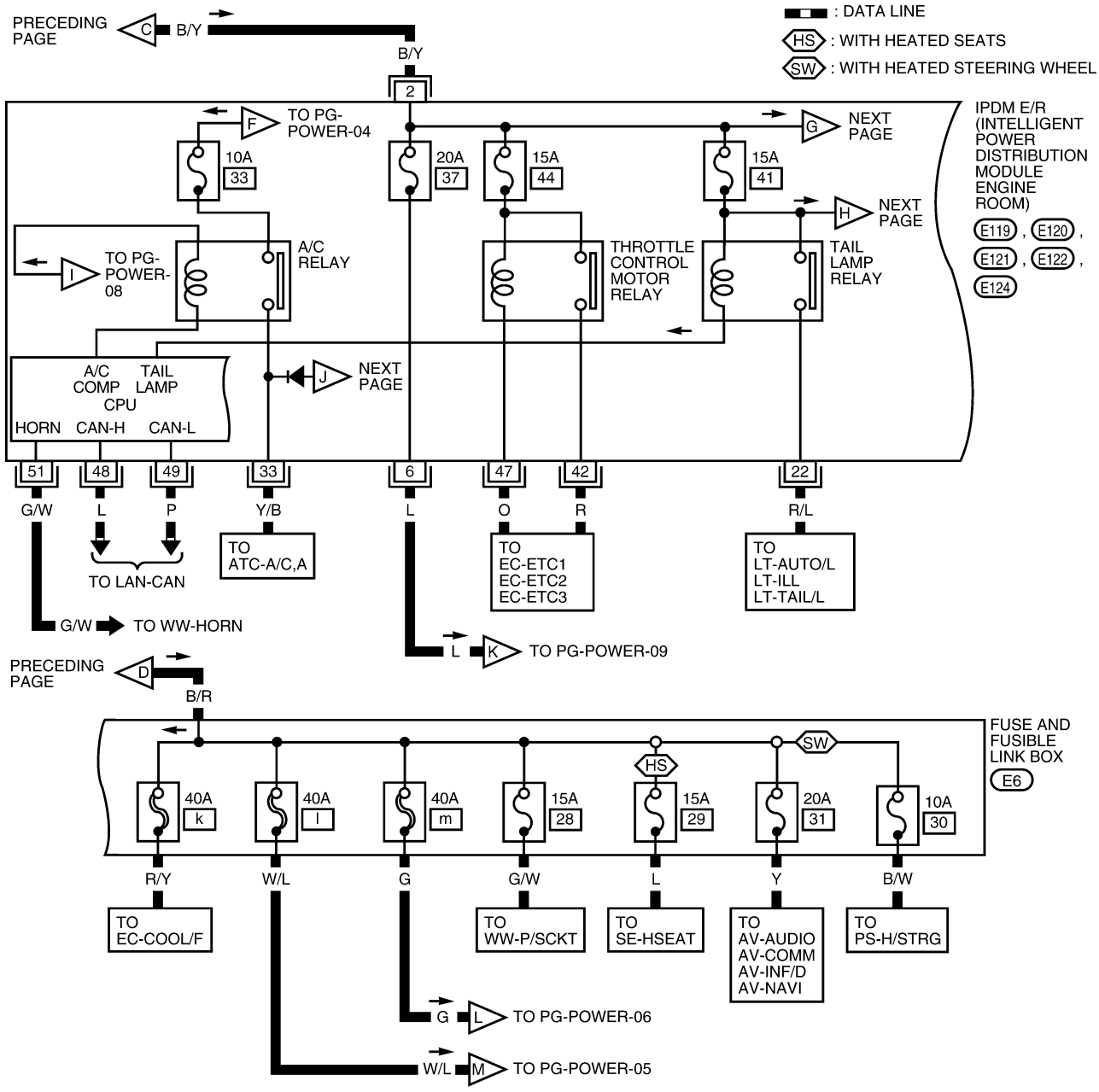
BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

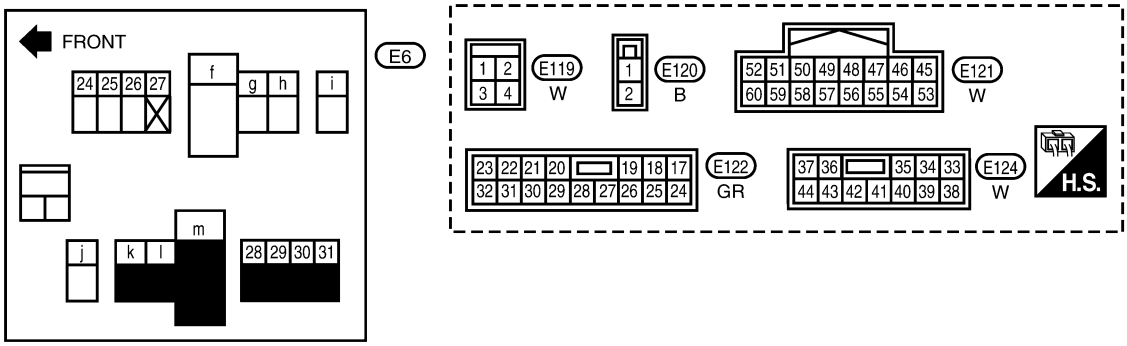


* : F39 IS AN INTERNAL PART OF FUSIBLE LINK BOX (BATTERY) ASSEMBLY.

WKWA5088E

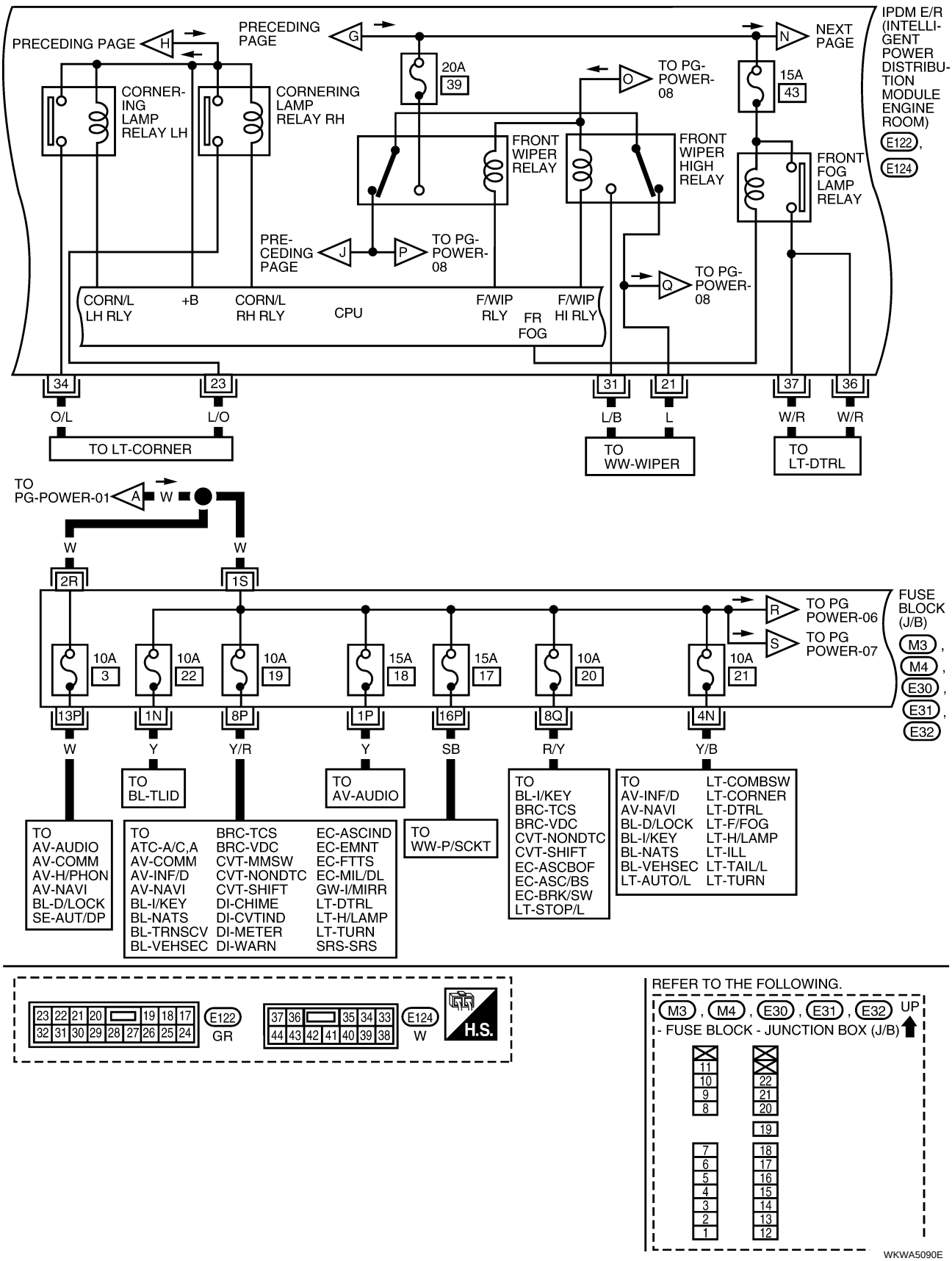
PG-POWER-02



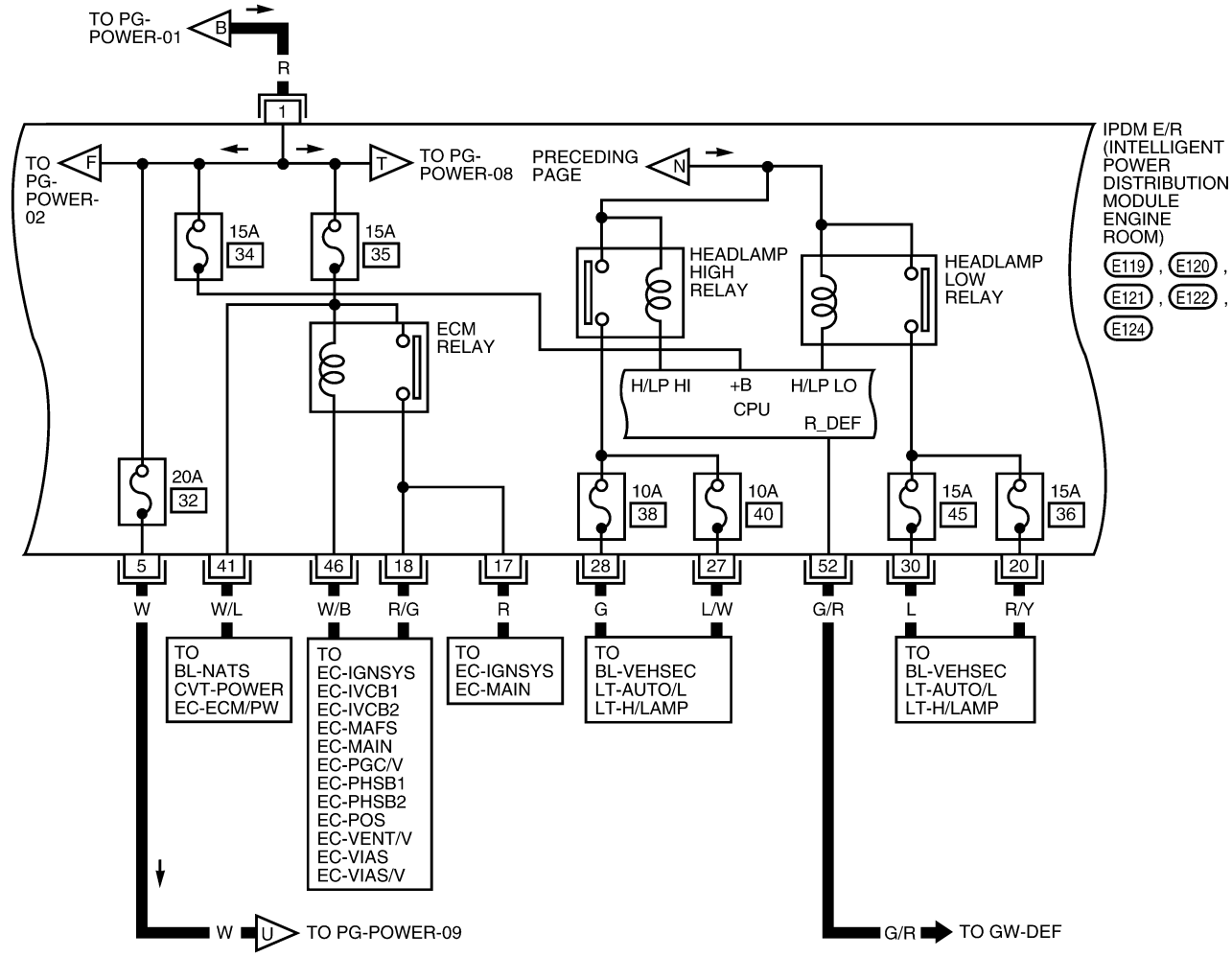


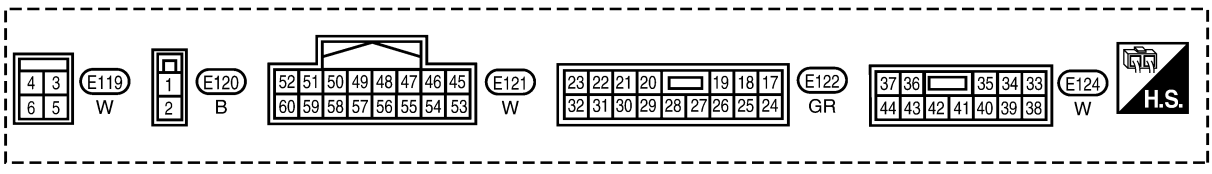
WKWA5089E

PG-POWER-03

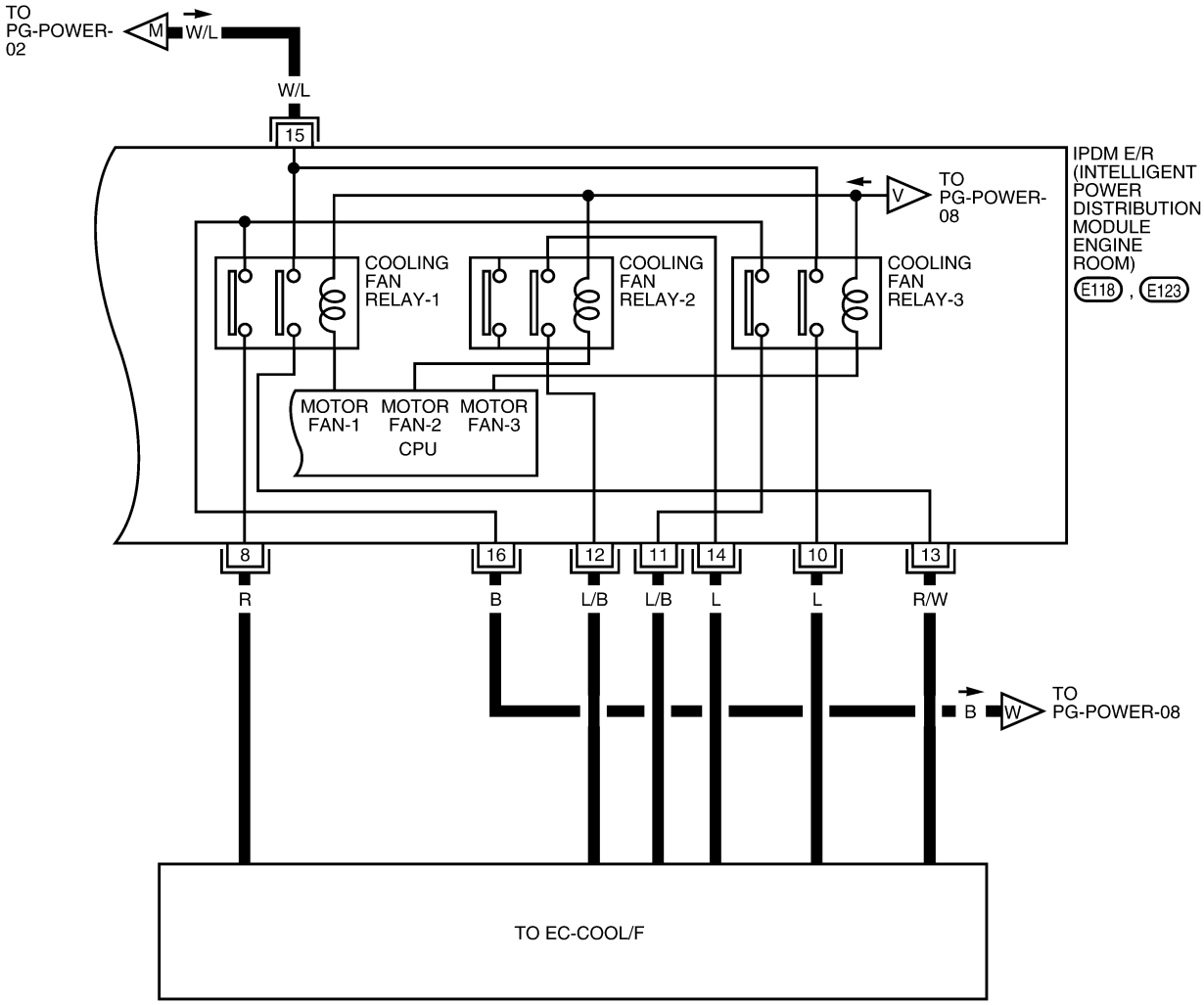

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E122, E124
PRECEDING PAGE
H
PRECEDING PAGE
G
NEXT PAGE
N
20A 39
15A 43
TO PG-POWER-08
O
CORNERING LAMP RELAY LH
CORNERING LAMP RELAY RH
FRONT WIPER RELAY
FRONT WIPER HIGH RELAY
FRONT FOG LAMP RELAY
PRECEDING PAGE
J
P
TO PG-POWER-08
Q
TO PG-POWER-08
CORN/L LH RLY
+B
CORN/L RH RLY
CPU
F/WIP RLY
FR FOG
F/WIP HI RLY
34
23
31
21
37
36
O/L
L/O
L/B
L
W/R
W/R
TO LT-CORNER
TO WW-WIPER
TO LT-DTRL
TO PG-POWER-01
A
W
W
W
2R
1S
FUSE BLOCK (J/B)
M3, M4, E30, E31, E32
R
TO PG POWER-06
S
TO PG POWER-07
10A 3
10A 22
10A 19
15A 18
15A 17
10A 20
10A 21
13P
1N
8P
1P
16P
8Q
4N
W
Y
Y/R
Y
SB
R/Y
Y/B
TO AV-AUDIO AV-COMM AV-H/PHON AV-NAVI BL-D/LOCK SE-AUT/DP
TO BL-TLID
TO ATC-A/C,A AV-COMM AV-INF/D AV-NAVI BL-I/KEY BL-NATS BL-TRNSCV BL-VEHSEC
BRC-TCS BRC-VDC CVT-MMSW CVT-NONDTC CVT-SHIFT DI-CHIME DI-CVTIND DI-METER DI-WARN
EC-ASCIND EC-EMNT EC-FTTS EC-MIL/DL GW-I/MIRR LT-DTRL LT-H/LAMP LT-TURN SRS-SRS
TO AV-AUDIO
TO WW-P/SCKT
TO BL-I/KEY BRC-TCS BRC-VDC CVT-NONDTC CVT-SHIFT EC-ASCBOF EC-ASC/BS EC-BRK/SW LT-STOP/L
TO AV-INF/D AV-NAVI BL-D/LOCK BL-I/KEY BL-NATS BL-VEHSEC LT-AUTO/L
LT-COMBSW LT-CORNER LT-DTRL LT-F/FOG LT-H/LAMP LT-ILL LT-TAIL/L LT-TURN
23 22 21 20 19 18 17
32 31 30 29 28 27 26 25 24
E122
GR
37 36 35 34 33
44 43 42 41 40 39 38
E124
W
H.S.
REFER TO THE FOLLOWING.
M3, M4, E30, E31, E32
UP
- FUSE BLOCK - JUNCTION BOX (J/B)
11 10 9 8
22 21 20 19
7 6 5 4 3 2 1
18 17 16 15 14 13 12
WKWA5090E

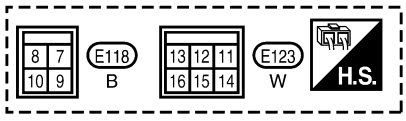
PG-POWER-04





WKWA5091E

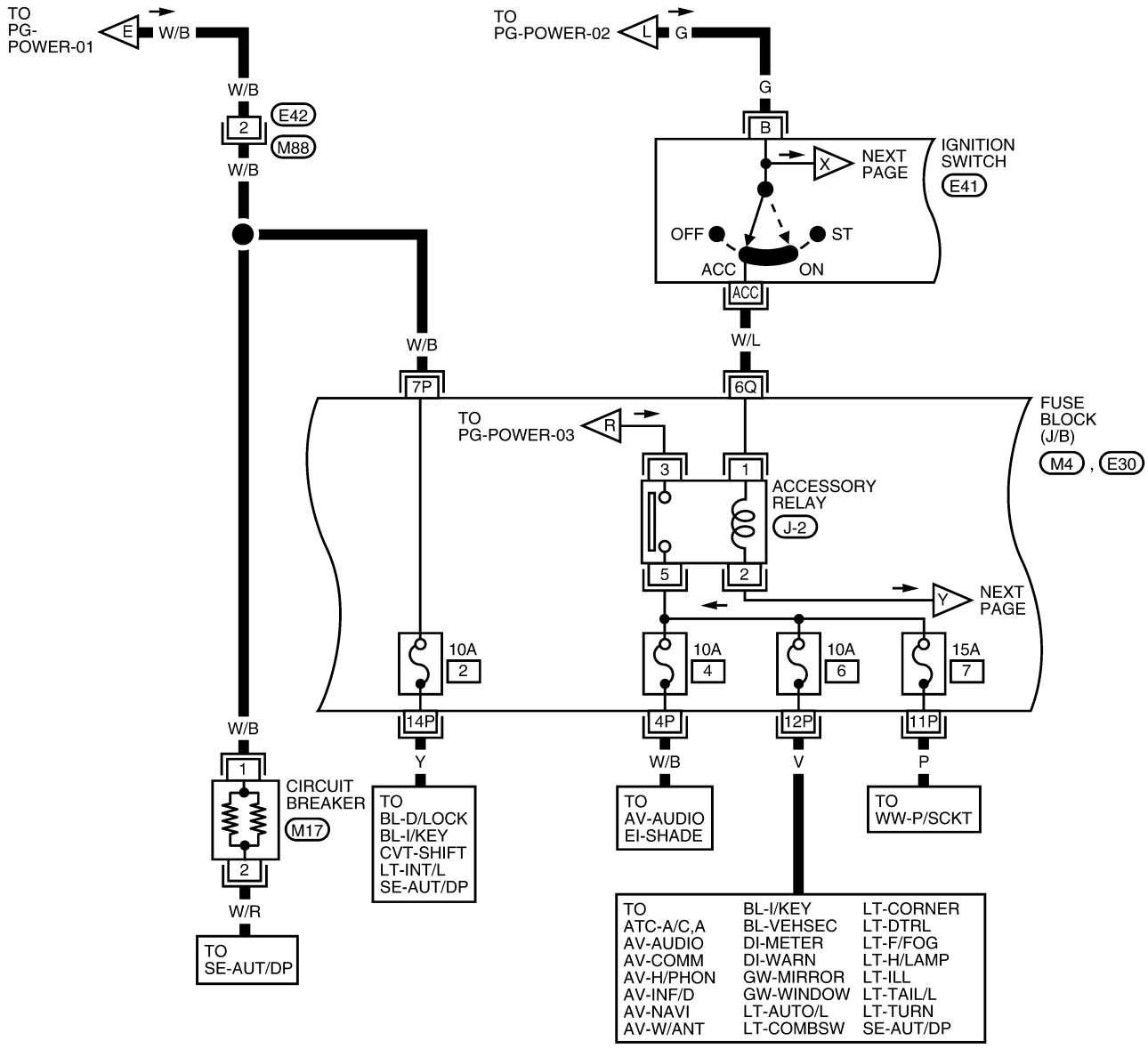

TO
PG-POWER-
02
M
W/L
W/L
15
IPDM E/R
(INTELLIGENT
POWER
DISTRIBUTION
MODULE
ENGINE
ROOM)
E118
E123
V
TO
PG-POWER-
08
COOLING
FAN
RELAY-1
COOLING
FAN
RELAY-2
COOLING
FAN
RELAY-3
MOTOR
FAN-1
MOTOR
FAN-2
MOTOR
FAN-3
CPU
8
16
12
11
14
10
13
R
B
L/B
L/B
L
L
R/W
B
W
TO
PG-POWER-08
TO EC-COOL/F

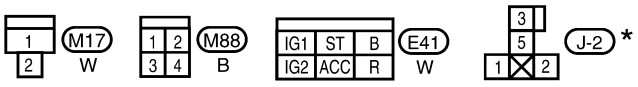

8 7
10 9
E118
B
13 12 11
16 15 14
E123
W
H.S.

WKWA5092E

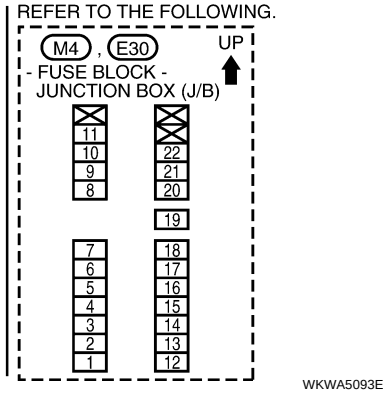
ACCESSORY POWER SUPPLY — IGNITION SW. IN ACC OR ON

PG-POWER-06





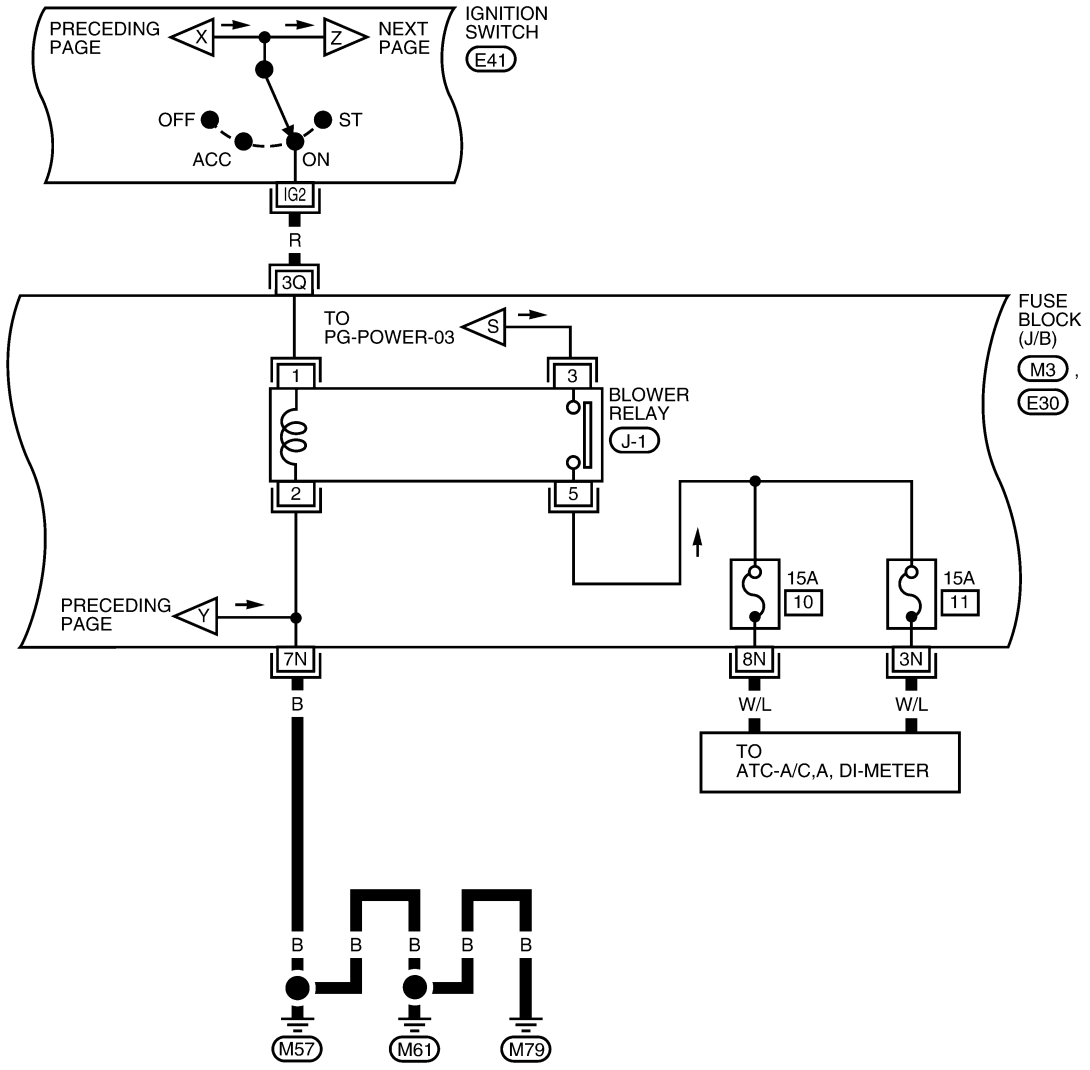
*: THIS CONNECTOR IS NOT SHOWN IN “HARNESS LAYOUT”.

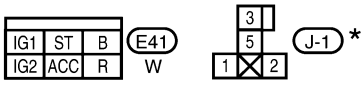


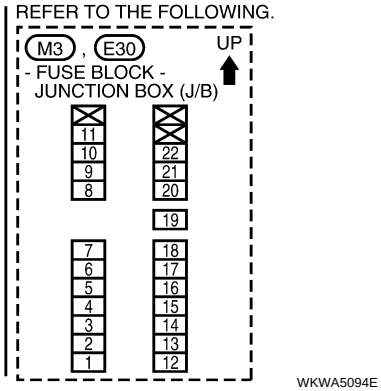
WKWA5093E

IGNITION POWER SUPPLY — IGNITION SW. IN ON

PG-POWER-07





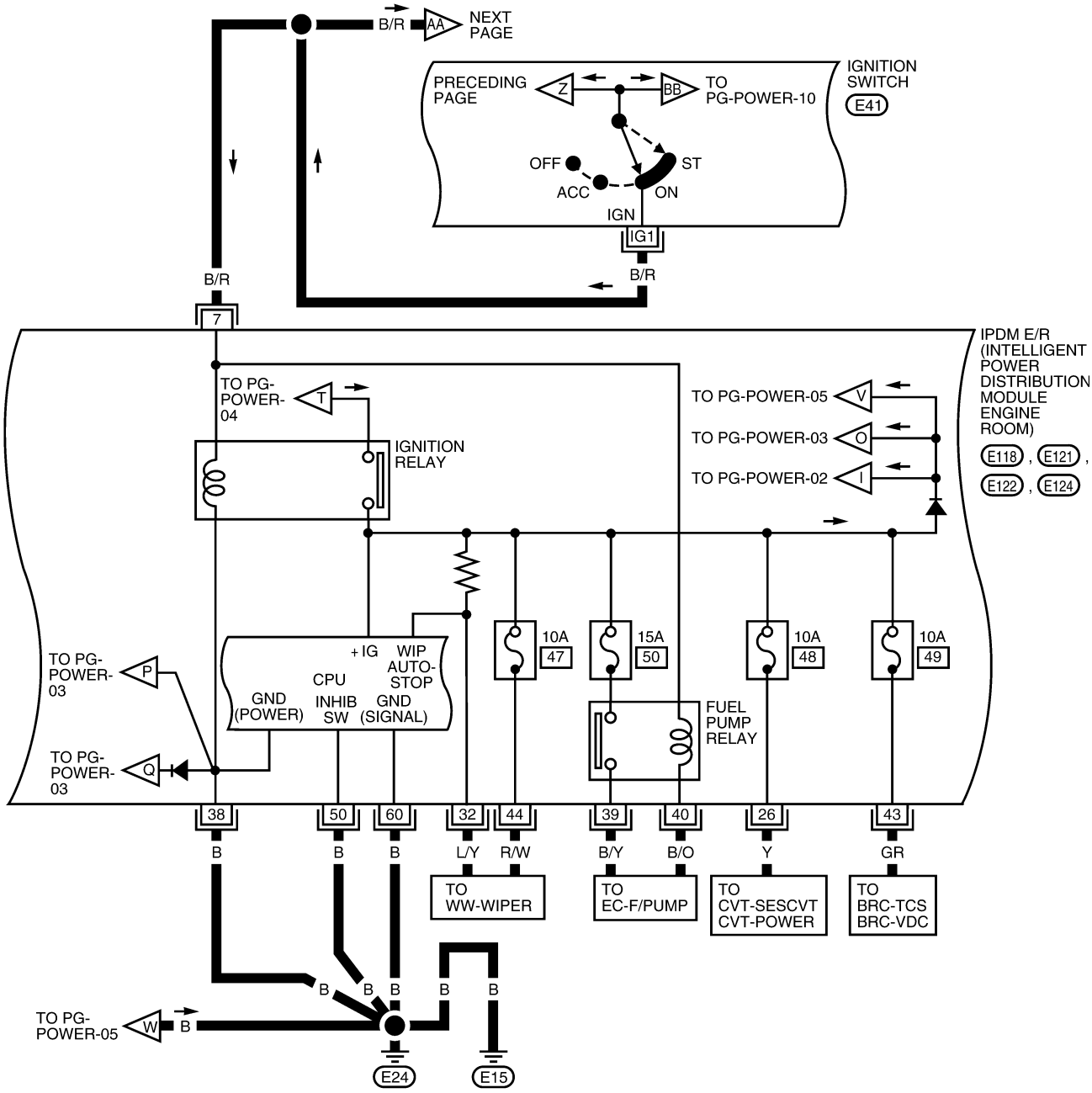


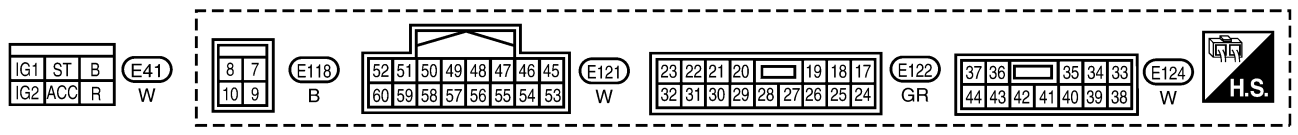
WKWA5094E

*: THIS CONNECTOR IS NOT SHOWN IN “HARNESS LAYOUT”.

IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START

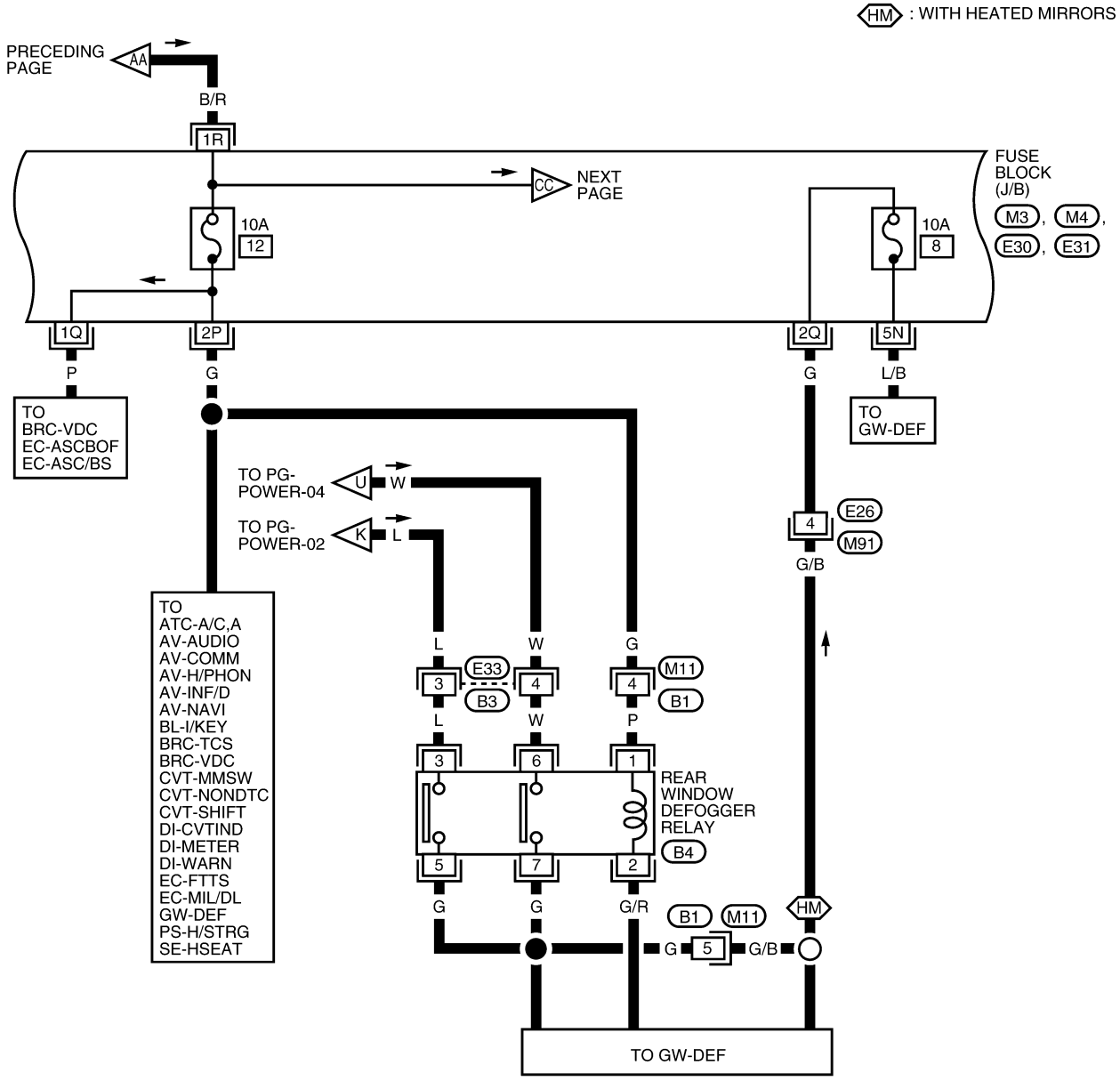
PG-POWER-08

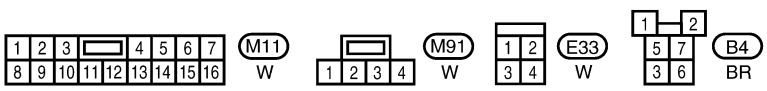


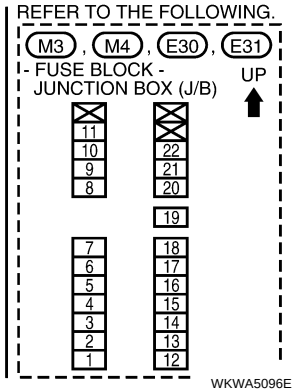


WKWA5095E

PG-POWER-09

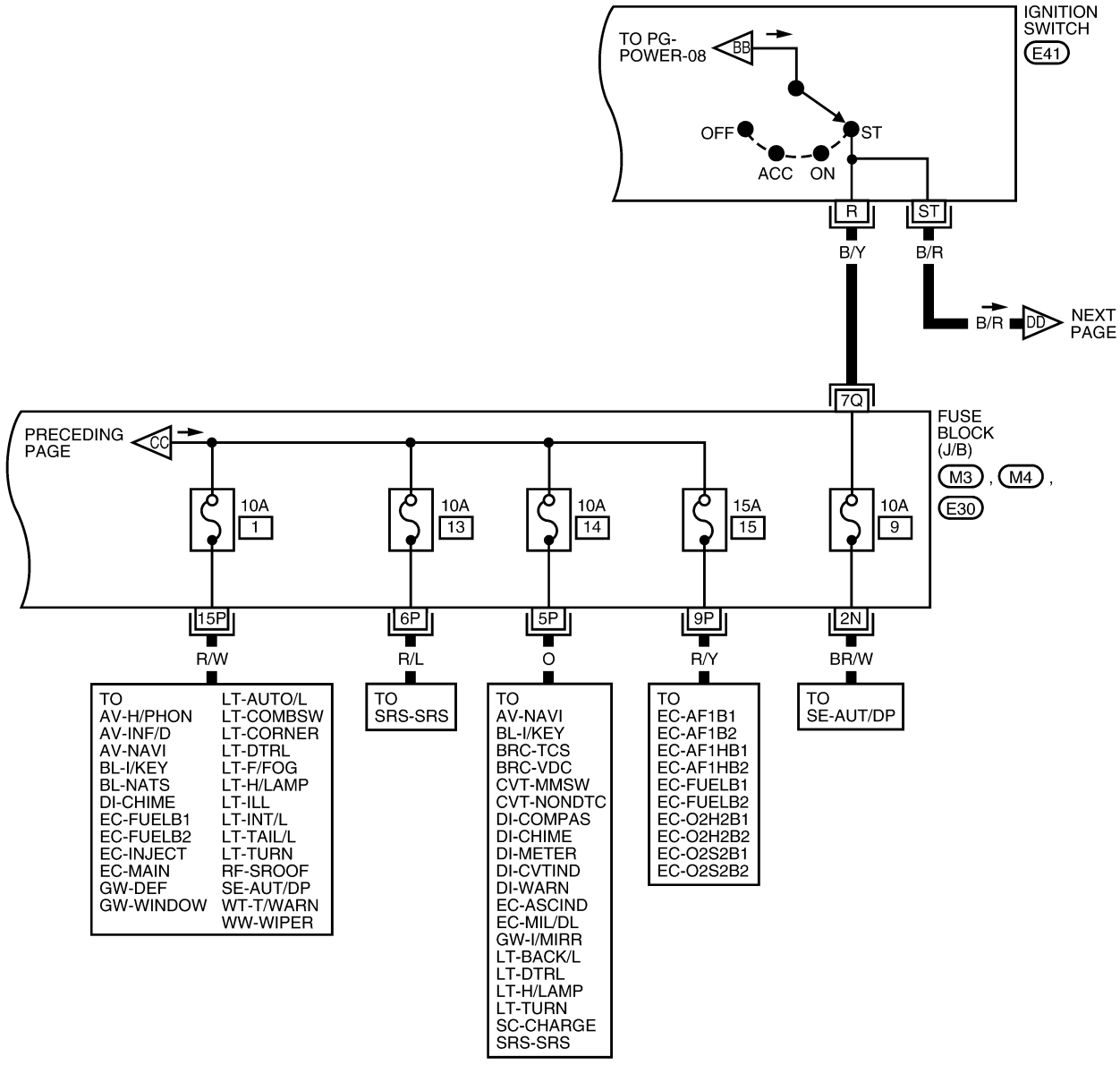

HM : WITH HEATED MIRRORS
PRECEDING PAGE
AA
B/R
1R
CC
NEXT PAGE
10A 12
10A 8
FUSE BLOCK (J/B)
M3, M4, E30, E31
1Q
2P
2Q
5N
P
G
G
L/B
TO BRC-VDC EC-ASCBOF EC-ASC/BS
TO GW-DEF
TO PG-POWER-04
U
W
TO PG-POWER-02
K
L
4
E26
M91
G/B
TO ATC-A/C,A AV-AUDIO AV-COMM AV-H/PHON AV-INF/D AV-NAVI BL-I/KEY BRC-TCS BRC-VDC CVT-MMSW CVT-NONDTC CVT-SHIFT DI-CVTIND DI-METER DI-WARN EC-FTTS EC-MIL/DL GW-DEF PS-H/STRG SE-HSEAT
L
W
G
3
E33
B3
4
4
M11
B1
L
W
P
3
6
1
REAR WINDOW DEFOGGER RELAY
B4
5
7
2
G
G
G/R
B1
M11
HM
G
5
G/B
TO GW-DEF

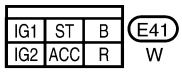

M11
W
M91
W
E33
W
B4
BR

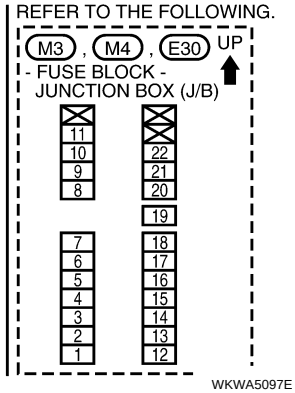

REFER TO THE FOLLOWING.
M3, M4, E30, E31
- FUSE BLOCK - JUNCTION BOX (J/B)
UP
WKWA5096E

IGNITION POWER SUPPLY — IGNITION SW. IN START

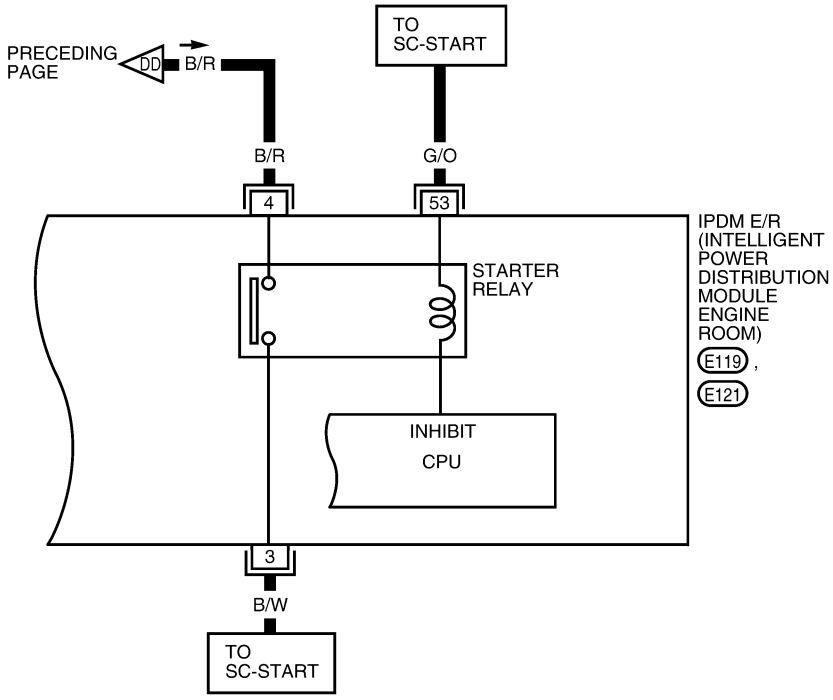
PG-POWER-10

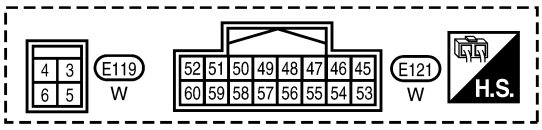






WKWA5097E


PRECEDING PAGE
DD
B/R
TO SC-START
B/R
G/O
4
53
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E119 ,
E121
STARTER RELAY
INHIBIT
CPU
3
B/W
TO SC-START

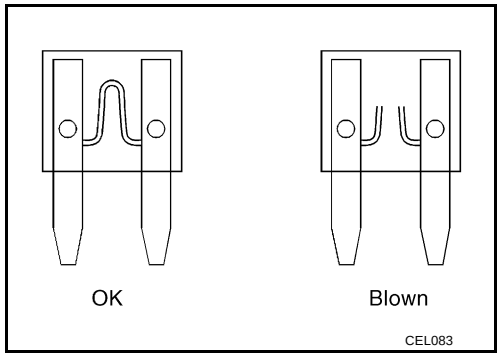

4 3
6 5
E119
W
52 51 50 49 48 47 46 45
60 59 58 57 56 55 54 53
E121
W
H.S.

LKWA0369E

Fuse

EKS00GGO

- 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

EKS00GGP

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:

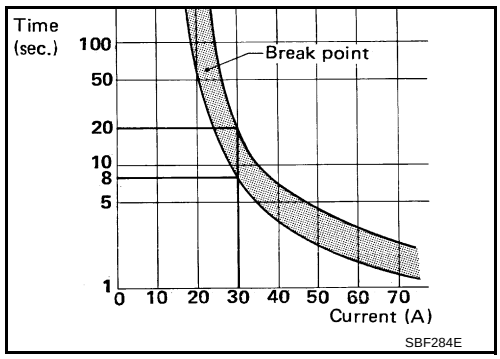
- **If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of incident.**
- **Never wrap outside of fusible link with vinyl tape.**
- **Never let fusible link touch any other wiring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

Circuit Breaker (Built Into BCM)

EKS00GGQ

For example, when current is 30A, the circuit is broken within 8 to 20 seconds.
A circuit breaker is used for the following systems:

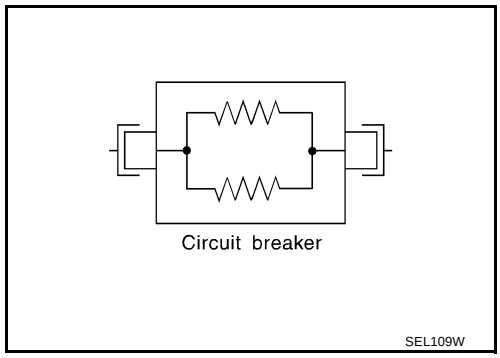
- Power seat
- Power windows
- Power sunroof



Circuit Breaker (PTC)

EKS00IML

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.



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

PFP:284B7

System Description

EKS009HZ

- IPDM E/R (Intelligent Power Distribution Module Engine Room) integrates the relay box and fuse block which were originally placed in engine compartment. It controls integrated relays via IPDM E/R control circuit.
- IPDM E/R-integrated control circuit performs ON-OFF operation of relays, CAN communication control, oil pressure switch signal reception, etc.
- It controls operation of each electrical component via BCM and CAN communication lines.

CAUTION:

None of the IPDM E/R-integrated relays can be removed.

SYSTEMS CONTROLLED BY IPDM E/R

1. Lamp control
   Using CAN communication lines, it receives signal from BCM and controls the following lamps:
   - Head lamps (High, Low)
   - Parking lamps
   - Tail lamps
   - License plate lamps
   - Cornering lamps
   - Front fog lamps
   - Daytime light system (Canada only)
2. Wiper control
   Using CAN communication lines, it receives signals from the BCM and controls the front wipers.
3. Rear window defogger relay control
   Using CAN communication lines, it receives signals from the BCM and controls the rear window defogger relay.
4. A/C compressor control
   Using CAN communication lines, it receives signals from the ECM and controls the A/C compressor (magnet clutch).
5. Starter control
   Using CAN communication lines, it receives signals from the BCM and controls the starter relay.
6. Cooling fan control
   Using CAN communication lines, it receives signals from the ECM and controls the cooling fan relays.
7. Horn control
   Using CAN communication lines, it receives signals from the BCM and controls the horn relay.

CAN COMMUNICATION LINE CONTROL

With CAN communication, by connecting each control unit using two communication lines (CAN-L line, CAN-H line), it is possible to transmit a maximum amount of information with minimum wiring. Each control unit can transmit and receive data, and reads necessary information only.

1. Fail-safe control
   - When CAN communication with other control units is impossible, IPDM E/R performs fail-safe control. After CAN communication returns to normal operation, it also returns to normal control.
   - Operation of control parts by IPDM E/R during fail-safe mode is as follows:

Controlled system	Fail-safe mode
Headlamp	● With the ignition switch ON, the headlamp low relay is ON. ● With the ignition switch OFF, the headlamp low relay is OFF. ● With the ignition switch ON or OFF, the headlamp high relay is OFF.
Tail and parking lamps	● With the ignition switch ON, the tail lamp relay is ON. ● With the ignition switch OFF, the tail lamp relay is OFF.

Controlled system	Fail-safe mode
Cooling fan	● With the ignition switch ON, cooling fan relay 1 and 3 are ON and cooling fan operates at high speed. ● With the ignition switch OFF, all cooling relays are OFF.
Front wiper	Until the ignition switch is turned off, the front relays remain in the same status they were in just before fail–safe control was initiated.
Rear window defogger	Rear window defogger relay is OFF.
A/C compressor	A/C relay is OFF (magnet clutch is OFF).
Front fog lamps	Front fog lamp relay is OFF.
Horn	Horn relay is OFF.
Cornering lamps	Cornering lamp relays are OFF.
Daytime lights (Canada only)	● With the ignition switch ON, daytime light output is activated (front fog lamp relay is ON). ● With the ignition switch OFF, daytime light output is OFF (front fog lamp relay is OFF).

IPDM E/R STATUS CONTROL

In order to save power, IPDM E/R switches status by itself based on each operating condition.

1. CAN communication status
   - CAN communication is normally performed with other control units.
   - Individual unit control by IPDM E/R is normally performed.
   - When sleep request signal is received from BCM, mode is switched to sleep waiting status.
2. Sleep waiting status
   - Process to stop CAN communication is activated.
   - All systems controlled by IPDM E/R are stopped. When 1 second has elapsed after CAN communication with other control units is stopped, mode switches to sleep status.
3. Sleep status
   - IPDM E/R operates in low current-consumption mode.
   - CAN communication is stopped.
   - When a change in CAN communication signal is detected, mode switches to CAN communication status.
   - When a change in ignition switch signal is detected, mode switches to CAN communication status.

CAN Communication System Description

EKS00IMN

Refer to LAN-4, "SYSTEM DESCRIPTION" .

Function of Detecting Ignition Relay Malfunction

EKS009I0

- When the integrated ignition relay is stuck in a "closed contact" position and cannot be turned OFF, IPDM E/R turns ON tail lamps, parking lamps, and daytime lights (Canada only) for 10 minutes to indicate IPDM E/R malfunction.
- When the state of the integrated ignition relay does not agree with the state of the ignition switch signal received via CAN communication, the IPDM E/R activates the tail lamp relay and front fog lamp relay (Canada only).

Ignition switch signal	Ignition relay status	Tail lamp relay	Front fog lamp relay (Canada only)
ON	ON	—	—
OFF	OFF	—	—
ON	OFF	—	—
OFF	ON	ON (10 minutes)	ON (10 minutes)

NOTE:
When the ignition switch is turned ON, the relays are turned OFF.

CONSULT-II Function (IPDM E/R)

EKS009I1

CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

IPDM E/R diagnostic Mode	Description
SELF-DIAG RESULTS	Displays IPDM E/R self-diagnosis results.
DATA MONITOR	Displays IPDM E/R input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.

CONSULT-II START PROCEDURE

Refer to GI-37, "CONSULT-II Start Procedure" .

SELF-DIAGNOSTIC RESULTS

Operation Procedure

1. Touch “SELF-DIAG RESULTS” on “SELECT DIAG MODE” screen.
2. Self-diagnosis results are displayed.

Display Item List

Display items	CONSULT-II display code	Error return condition	TIME		Possible causes
			CRNT	PAST	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	—	—	—	—	—
CAN COMM CIRC	U1000	● If CAN communication reception/transmission data has an error, or if any of the control units fail, data reception/transmission cannot be confirmed. ● When the data in CAN communication is not received before the specified time.	X	X	Any of items listed below have errors: ● TRANSMIT DIAG ● ECM ● BCM/SEC

NOTE:

The details for display of the period are as follows:

- CRNT: Error currently detected with IPDM E/R.
- PAST: Error detected in the past and placed in IPDM E/R memory.

DATA MONITOR

Operation Procedure

1. Touch “DATA MONITOR” on “SELECT DIAG MODE” screen.
2. Touch "ALL SIGNALS”, “MAIN SIGNALS” or “SELECTION FROM MENU” on the “DATA MONITOR” screen.

ALL SIGNALS	All signals will be monitored.
MAIN SIGNALS	Monitors the predetermined item(s).
SELECTION FROM MENU	Selects and monitors individual signal(s).

3. Touch “START”.
4. When "SELECTION FROM MENU" is selected, touch items to be monitored. When "ALL SIGNALS" is selected, all the items will be monitored. When "MAIN SIGNALS" is selected, predetermined items are monitored.
5. Touch “RECORD” while monitoring to record the status of the item being monitored. To stop recording, touch “STOP”.

All Signals, Main Signals, Selection From Menu

Item name	CONSULT-II screen display	Display or unit	Monitor item selection			Description
			ALL SIGNALS	MAIN SIGNALS	SELECTION FROM MENU	
Motor fan request	MOTOR FAN REQ	1/2/3/4	X	X	X	Signal status input from ECM
Compressor request	AC COMP REQ	ON/OFF	X	X	X	Signal status input from ECM
Parking, license, and tail lamp request	TAIL&CLR REQ	ON/OFF	X	X	X	Signal status input from BCM
Headlamp low request	HL LO REQ	ON/OFF	X	X	X	Signal status input from BCM
Headlamp high request	HL HI REQ	ON/OFF	X	X	X	Signal status input from BCM
Front fog lights request	FR FOG REQ	ON/OFF	X	X	X	Signal status input from BCM
FR wiper request	FR WIP REQ	STOP/1LOW/LOW/HI	X	X	X	Signal status input from BCM
Wiper auto stop	WIP AUTO STOP	ACT P/STOP P	X	X	X	Output status of IPDM E/R
Wiper protection	WIP PROT	OFF/LS/HS/Block	X		X	Control status of IPDM E/R
Starter request	ST RLY REQ	ON/OFF	X		X	Status of input signal *1
Ignition relay status	IGN RLY	ON/OFF	X	X	X	Ignition relay status monitored with IPDM E/R
Rear defogger request	RR DEF REQ	ON/OFF	X	X	X	Signal status input from BCM
Oil pressure switch	OIL P SW	OPEN/CLOSE	X		X	Signal status input from IPDM E/R
Hood switch	HOOD SW *2	OFF	X		X	Signal status input from IPDM E/R
Theft warning horn request	THFT HRN REQ	ON/OFF	X		X	Signal status input from BCM
Horn chirp	HORN CHIRP	ON/OFF	X		X	Output status of IPDM E/R
Cornering lamp request	CRNRNG LMP REQ	OFF/LEFT/RIGHT	X		X	Signal status input from BCM

*1 Perform monitoring of IPDM E/R data with the ignition switch ON. When the ignition switch is in ACC position, display may not be correct.
*2 This item is displayed, but does not function.

CAN DIAG SUPPORT MNTR

Refer to LAN-4, "SYSTEM DESCRIPTION" .

ACTIVE TEST

Operation Procedure

1. Touch “ACTIVE TEST” on “SELECT DIAG-MODE” screen.
2. Touch item to be tested, and check operation.
3. Touch “START”.
4. Touch "STOP" while testing to stop the operation.

Test name	CONSULT-II screen display	Description
Tail lamp output	TAIL LAMP	With a certain ON-OFF operation, the tail lamp relay can be operated.
Rear defogger output	REAR DEFOGGER	With a certain ON-OFF operation, the rear defogger relay can be operated.

Test name	CONSULT-II screen display	Description
Front wiper (HI, LO) output	FRONT WIPER	With a certain operation (OFF, HI ON, LO ON), the front wiper relay (Lo, Hi) can be operated.
Cooling fan output	MOTOR FAN	With a certain operation (1, 2, 3, 4), the cooling fan can be operated.
Lamp (HI, LO, FOG) output	LAMPS	With a certain operation (OFF, HI ON, LO ON, FOG ON), the lamp relay (Lo, Hi, Fog) can be operated.
Cornering lamp output	CORNERING LAMP	With a certain operation (OFF, ON), the cornering lamp relay (RH, LH) can be operated.
Horn output	HORN	With a certain ON-OFF operation, the horn relay can be operated.

Auto Active Test

EKS009I2

DESCRIPTION

- In auto active test mode, operation inspection can be performed when IPDM E/R sends a drive signal to the following systems:
  - Rear window defogger
  - Front wipers
  - Tail, license plate, and parking lamps
  - Cornering lamps
  - Front fog lamps
  - Headlamps (High, Low)
  - A/C compressor (magnet clutch)
  - Cooling fan

OPERATION PROCEDURE

1. Close hood and front door RH, and lift wiper arms away from windshield (to prevent glass damage by wiper operation).

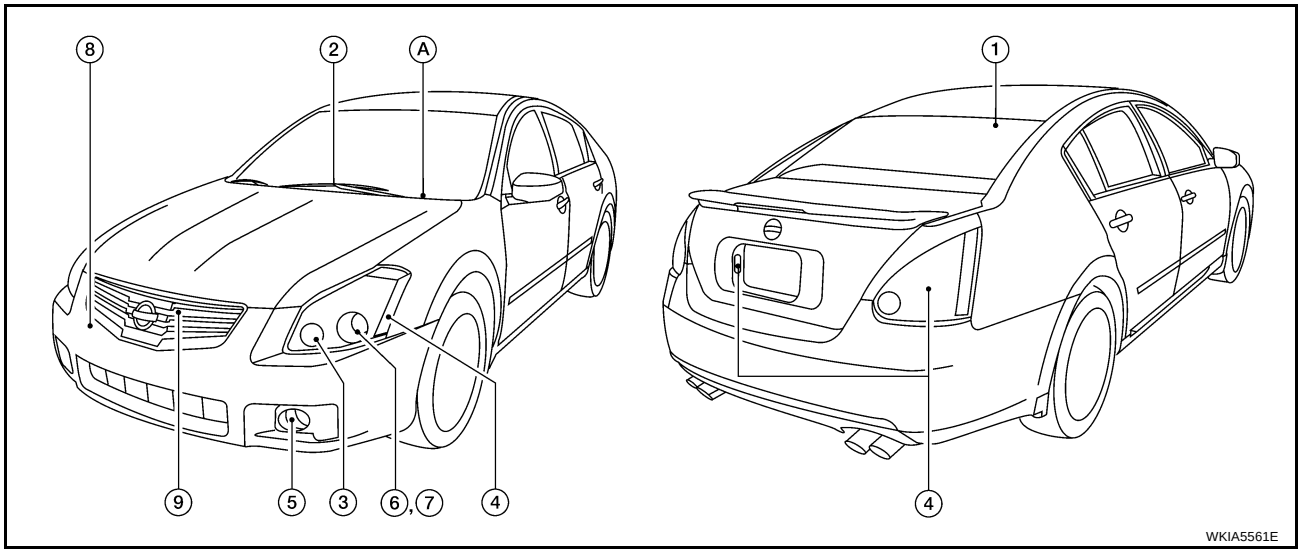
   NOTE:
   When auto active test is performed with hood opened, sprinkle water on windshield beforehand.
2. Turn ignition switch OFF.
3. Turn ignition switch ON and, within 20 seconds, press front door switch LH 10 times. Then turn ignition switch OFF.
4. Turn ignition switch ON within 10 seconds after ignition switch OFF.
5. When auto active test mode is actuated, horn chirps once.
6. After a series of operations is repeated three times, auto active test is completed.

   NOTE:
   When auto active test mode has to be cancelled halfway, turn ignition switch OFF.

   CAUTION:
   Be sure to perform BL-29, "Door Switch Check" when the auto active test cannot be performed.

INSPECTION IN AUTO ACTIVE TEST MODE

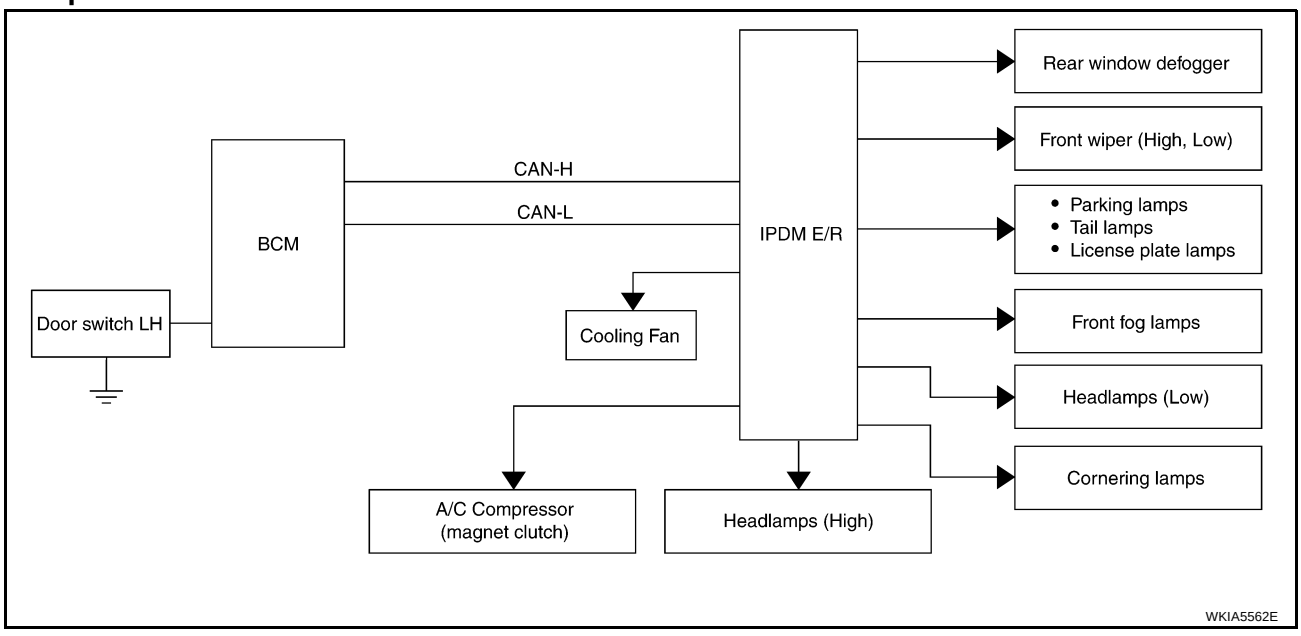
When auto active test mode is actuated, the following nine steps are repeated three times.



(A): Oil pressure warning lamp is blinking when the auto active test is operating.

Item Number	Test Item	Operation Time/Frequency
1	Rear window defogger	10 seconds
2	Front wipers	LOW 5 seconds then HIGH 5 seconds
3	Cornering lamps	10 seconds
4	Tail, license plate, and parking lamps	10 seconds
5	Front fog lamps	10 seconds
6	Headlamps (low)	10 seconds
7	Headlamps (high)	ON-OFF 5 times (Turns ON-OFF the solenoid to switch High/Low. In this case, the bulb does not illuminate.)
8	A/C compressor (magnet clutch)	ON-OFF 5 times
9	Cooling fan	LOW 2 seconds → MID 2 seconds → HIGH 2 seconds → MID 2 seconds → LOW 2 seconds

Concept of Auto Active Test



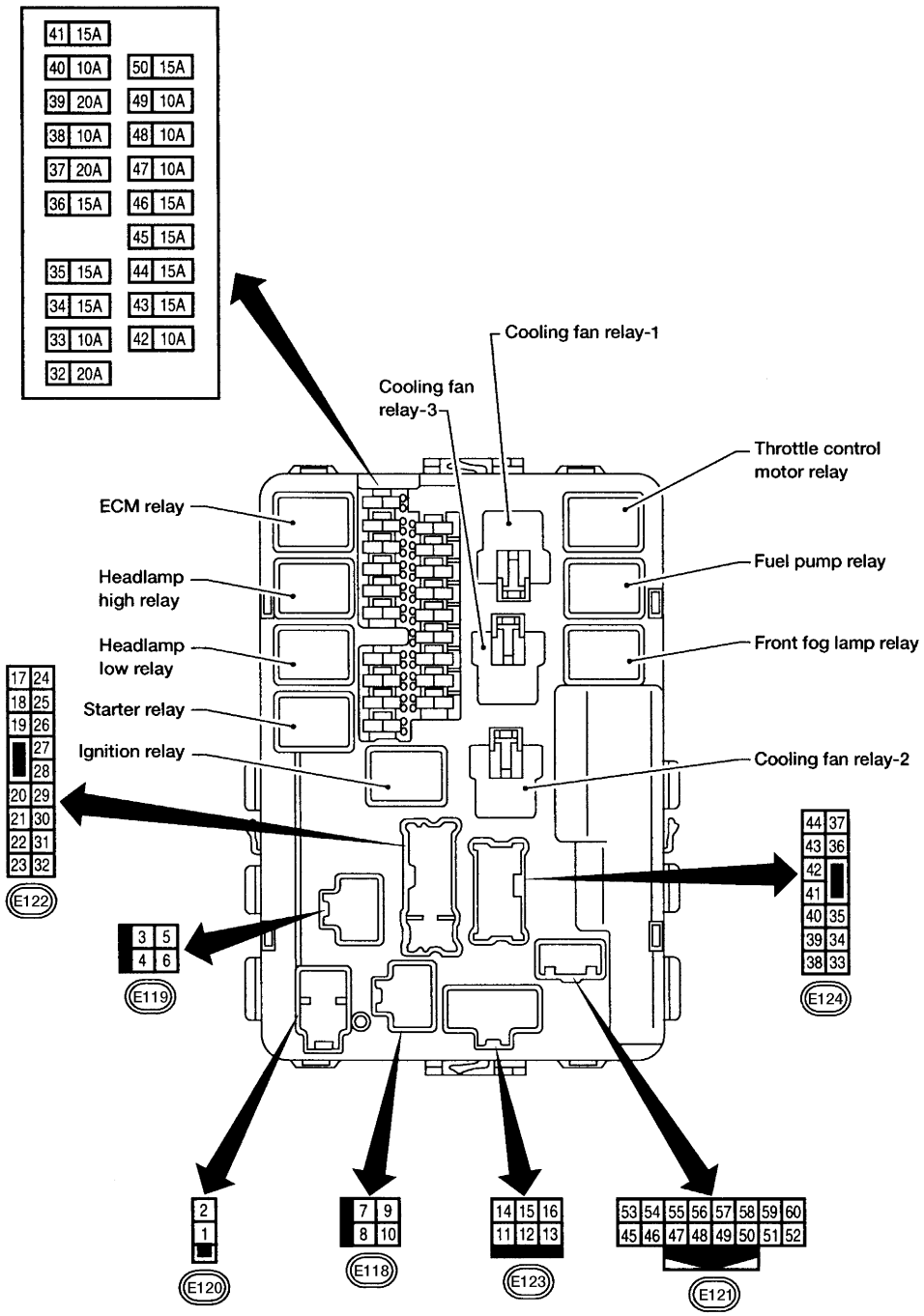
- IPDM E/R actuates auto active test mode when it receives door switch signal from BCM via CAN communication line. Therefore, when auto active test mode is activated successfully, CAN communication between IPDM E/R and BCM is normal.
- If any of the systems controlled by IPDM E/R cannot be operated, possible cause can be easily diagnosed using auto active test.

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
Any of front wipers, tail and parking lamps, front fog lamps, cornering lamps, and head lamps (Hi, Lo) do not operate.	Perform auto active test. Does system in question operate?	YES	● BCM signal input system
		NO	● Lamp/wiper motor malfunction ● Lamp/wiper motor ground circuit malfunction ● Harness/connector malfunction between IPDM E/R and system in question ● IPDM E/R (integrated relay) malfunction
Rear window defogger does not operate.	Perform auto active test. Does rear window defogger operate?	YES	● BCM signal input circuit
		NO	● Rear window defogger relay circuit ● Open circuit of rear window defogger ● Harness/connector malfunction between IPDM E/R and system in question ● IPDM E/R malfunction
A/C compressor does not operate.	Perform auto active test. Does magnetic clutch operate?	YES	● BCM signal input circuit ● CAN communication signal between BCM and ECM ● CAN communication signal between ECM and IPDM E/R
		NO	● Magnet clutch malfunction ● Harness/connector malfunction between IPDM E/R and magnet clutch ● IPDM E/R (integrated relay) malfunction
Cooling fan does not operate.	Perform auto active test. Does cooling fan operate?	YES	● ECM signal input circuit ● CAN communication signal between ECM and IPDM E/R
		NO	● Cooling fan motor malfunction ● Harness/connector malfunction between IPDM E/R and cooling fan motor ● IPDM E/R (integrated relay) malfunction
Oil pressure warning lamp does not operate.	Perform auto active test. Does oil pressure warning lamp blink?	YES	● Harness/connector malfunction between IPDM E/R and oil pressure switch ● Oil pressure switch malfunction
		NO	● CAN communication signal between BCM and Unified Meter and A/C Amp. ● Combination meter

IPDM E/R Terminal Arrangement

EKS009I4



WKIA5563E

Terminals and Reference Values for IPDM E/R

EKS00I8G

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition			Reference value (Approx.)
				Ignition switch	Operation or condition		
1	R	Battery power supply	Input	OFF	—		Battery voltage
2	B/Y	Battery power supply	Input	OFF	—		Battery voltage
3	B/W	Starter motor	Output	START	—		Battery voltage
4	B/R	Ignition switch	Input	—	OFF or ACC or ON		0V
					START		Battery voltage
5	W	Rear window defogger relay	Output	—	—		Battery voltage
6	L	Rear window defogger relay	Output	—	—		Battery voltage
7	B/R	Ignition switch supplied power	Input	—	OFF or ACC		0V
					ON or START		Battery voltage
8	R	Cooling fan motor low 1	Input		Conditions met for cooling fan operation in HIGH		0V
					Cooling fan operation OFF-LOW-MID		Battery voltage
10	L	Cooling fan motor high 2	Output	—	Conditions met for cooling fan operation in MID-HIGH		Battery voltage
					Cooling fan operation OFF-LOW		0V
11	L/B	Cooling fan motor high 1	Input	—	Conditions met for cooling fan operation in MID-HIGH		0V
					Cooling fan operation OFF-LOW		Less than battery voltage
12	L/B	Cooling fan motor ground 2	Input	—	Conditions met for cooling fan operation in LOW		Battery voltage
					Cooling fan operation OFF-MID-HIGH		0V
13	R/W	Cooling fan motor low 2	Output		Conditions met for cooling fan operation in HIGH		Battery voltage
					Cooling fan operation OFF-LOW-MID		0V
14	L	Cooling fan motor ground	Output	—	Conditions met for cooling fan operation in LOW		Less than battery voltage
					Conditions met for cooling fan operation in OFF-MID-HIGH		0V
15	W/L	Battery power supply	Input	—	—		Battery voltage
16	B	Ground	Input	—	—		0V
17	R	ECM Relay	Output	—	Ignition switch ON or START		Battery voltage
					Ignition switch OFF or ACC		0V
18	R/G	ECM relay	Output	—	Ignition switch ON or START		Battery voltage
					Ignition switch OFF or ACC		0V
20	R/Y	RH Low beam headlamp	Output	—	Lighting switch in 2nd position or auto light system active		Battery voltage
21	L	Wiper low speed signal	Output	ON or START	Wiper switch	OFF-HIGH	0V
						LOW-INT operation	Battery voltage

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition			Reference value (Approx.)
				Ignition switch	Operation or condition		
22	R/L	Rear parking, license plate, and tail lamp	Output	—	Lighting switch in 2nd position or auto light system active		0V
						ON	Battery voltage
23	L/O	RH Cornering lamp	Output	ON or START	Lighting switch ON or auto light system active and turn signal switch in the RIGHT position		Battery voltage
26	Y	TCM ignition supply	Output		Ignition switch ON or START		Battery voltage
					Ignition switch OFF or ACC		0V
27	L/W	RH High beam headlamp	Output	—	Lighting switch in 2nd position or auto light system active and also in HIGH or PASS position		Battery voltage
28	G	LH High beam headlamp	Output	—	Lighting switch in 2nd position or auto light system active and placed in HIGH or PASS position		Battery voltage
30	L	LH Low beam headlamp	Output	—	Lighting switch in 2nd position or auto light system active		Battery voltage
31	L/B	Wiper high speed signal	Output	ON or START	Wiper switch	OFF-LOW-INT	0V
						HIGH	Battery voltage
32	L/Y	Wiper auto stop signal	Input	ON or START	Wipers not in park position		Battery voltage
					Wipers in park position		0V
33	Y/B	A/C compressor	Output	ON or START	A/C switch or auto A/C request ON		Battery voltage
					A/C switch or auto A/C request OFF		0V
34	O/L	LH Cornering lamp	Output	ON or START	Lighting switch ON or auto light system active and turn signal switch in the LEFT position		Battery voltage
36	W/R	Front fog lamp (RH)	Output	ON or START	Lighting switch in 2ND position or auto light system active and combination switch in LOW position and the front fog lamp switch	OFF	0V
						ON	Battery voltage
37	W/R	Front fog lamp (LH)	Output	ON or START	Lighting switch in 2ND position or auto light system active and combination switch in LOW position and the front fog lamp switch	OFF	0V
						ON	Battery voltage

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value (Approx.)
				Ignition switch	Operation or condition	
38	B	Ground	Input	—	—	0V
39	B/Y	Fuel pump	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
40	B/O	Fuel pump relay control	Input	—	Ignition switch ON or START and ECM control conditions met	0V
					Ignition switch OFF or ACC	Battery voltage
41	W/L	Battery power supply	Output	—	—	Battery voltage
42	R	Throttle control motor relay	Output	—	Ignition switch ON or START and ECM control conditions met	Battery voltage
					Ignition switch OFF or ACC	0V
43	GR	ABS unit ignition supply	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
44	R/W	Washer motor ignition supply	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
46	W/B	ECM relay control	Input	—	Ignition switch ON or START and ECM control conditions met	0V
					Ignition switch OFF or ACC	Battery voltage
47	O	Throttle control motor relay control	Input	—	Ignition switch ON or START and ECM control conditions met	0V
					Ignition switch OFF or ACC	Battery voltage
48	L	CAN-H	—	—	—	—
49	P	CAN-L	—	—	—	—
50	B	Ground	Input	—	—	0V
51	G/W	Horn relay control	Output	—	Horn or horn chirp request received over CAN	0V
					No request message or network not functioning	Battery voltage
52	G/R	Rear window defogger relay control	Input	ON or START	Rear window defogger switch: ON	0V
					Rear window defogger switch: OFF	Battery voltage
53	G	Starter relay (inhibit switch)	Input	ON or START	Selector lever in "P" or "N"	Battery voltage
					Selector lever any other position	0V
57	P/L	Oil pressure switch	Input	ON or START	—	Battery voltage
60	B	Ground	Input	—	—	0V

IPDM E/R Power/Ground Circuit Inspection

EKS009I5

1. FUSE AND FUSIBLE LINK INSPECTION

Check that the following fusible links or IPDM E/R fuses are not blown.

Terminal No.	Signal name	Fuse, fusible link No.
1, 2	Battery power	a, b, d

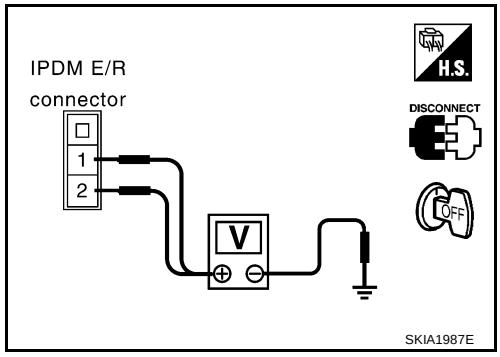
OK or NG

OK >> GO TO 2.
NG >> Replace fuse or fusible link.

2. POWER CIRCUIT INSPECTION

1. Disconnect IPDM E/R harness connector E120.
2. Check voltage between IPDM E/R harness connector E120 terminals 1, 2 and ground.

Battery voltage should exist



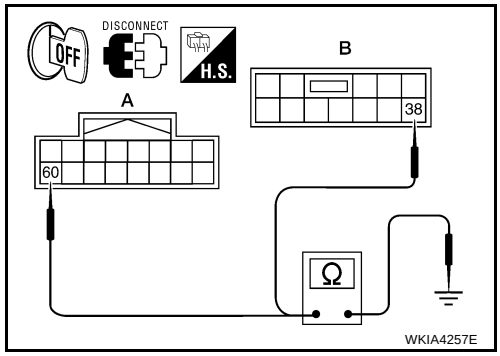
OK or NG

OK >> GO TO 3.
NG >> Repair or replace IPDM E/R power circuit harness.

3. GROUND CIRCUIT INSPECTION

1. Disconnect IPDM E/R harness connectors E121 and E124.
2. Check continuity between IPDM E/R harness connector E121 (A) terminal 60, E124 (B) terminal 38 and ground.

Continuity should exist



OK or NG

OK >> Inspection End.
NG >> Repair or replace IPDM E/R ground circuit harness.

Inspection with CONSULT-II (Self-Diagnosis)

EKS009I6

CAUTION:

If a CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on which control unit(s) carry out CAN communication.

1. SELF-DIAGNOSIS RESULT CHECK

1. Connect CONSULT-II and select "IPDM E/R" on the "Select System" screen.
2. Select "SELF-DIAG RESULTS" on the "SELECT DIAG MODE" screen.
3. Check display content in self-diagnosis results.

CONSULT-II Display	CONSULT-II display code	TIME		Details of diagnosis result
		CRNT	PAST	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	—	—	—	No malfunction
CAN COMM CIRC	U1000	X	X	Any of items listed below have errors: ● TRANSMIT DIAG ● ECM ● BCM/SEC

NOTE:

The Details for Display for the Period are as follows:

- CRNT: Error currently detected by IPDM E/R.
- PAST: Error detected in the past and stored in IPDM E/R memory.

Contents displayed

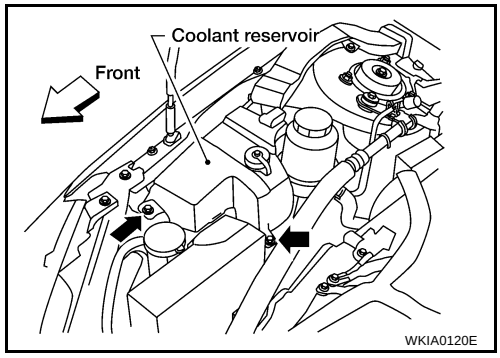
NO DTC DETECTED. FURTHER TESTING MAY BE REQUIRED.>>Inspection End.
CAN COMM CIRC>>Print out the self diagnosis results and refer to LAN-7, "TROUBLE DIAGNOSIS" .

Removal and Installation of IPDM E/R

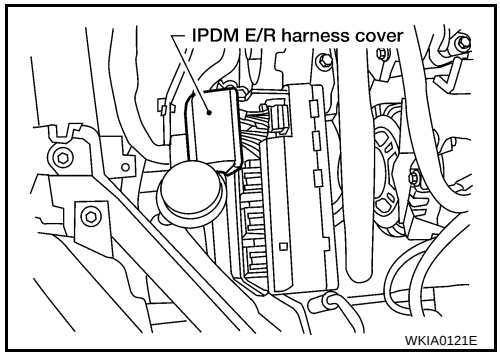
EKS009I7

REMOVAL

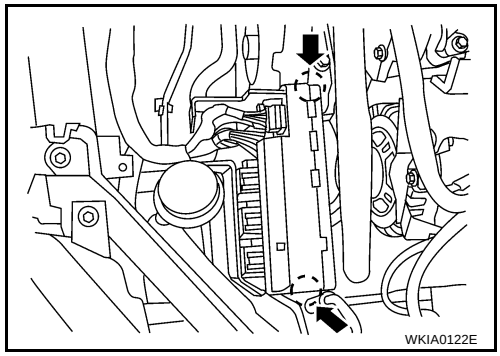
1. Disconnect negative battery cable.
2. Remove engine side cover RH.
3. Remove 2 bolts and position coolant reservoir aside.
4. Remove IPDM E/R upper cover.



5. Remove IPDM E/R harness cover.



6. Release 2 clips and pull IPDM E/R up from case.
7. Disconnect IPDM E/R connectors and remove the IPDM E/R.



INSTALLATION

Installation is in the reverse order of removal.

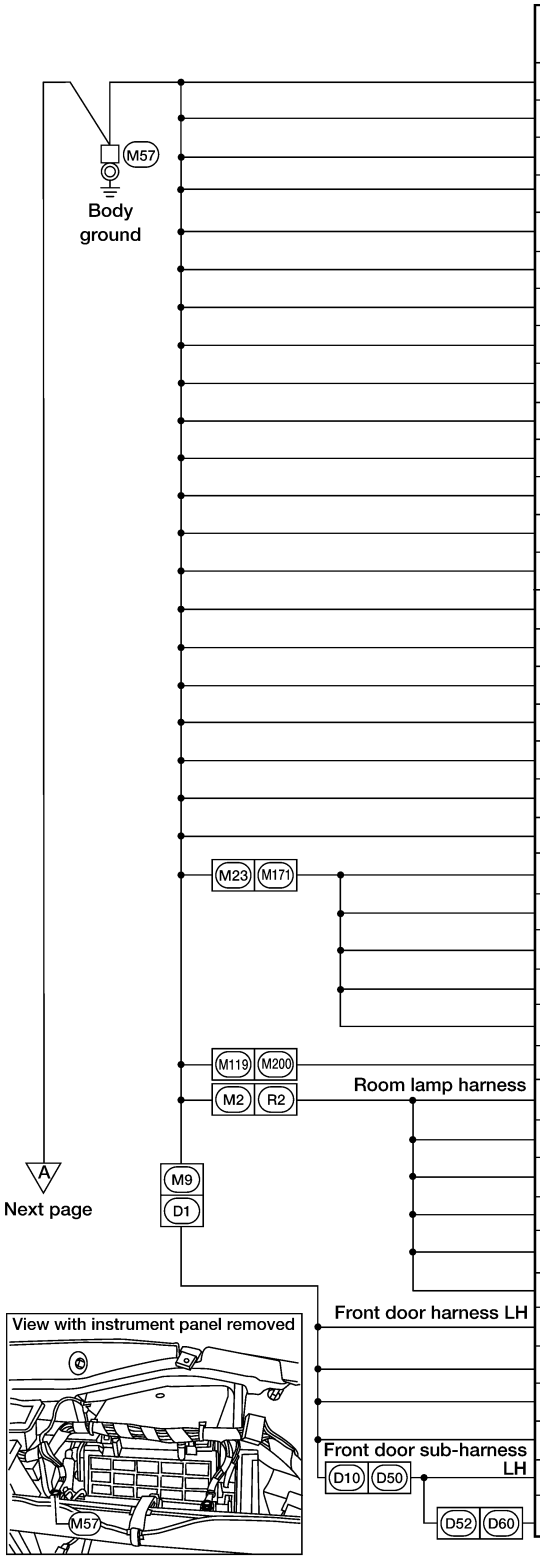
GROUND CIRCUIT

PFP:24080

Ground Distribution

EKS009I8

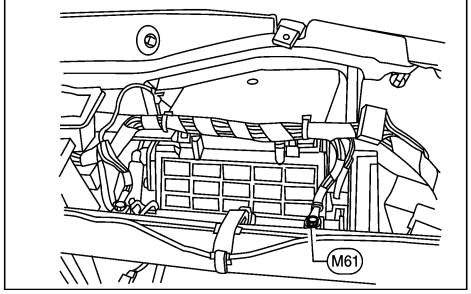
MAIN HARNESS

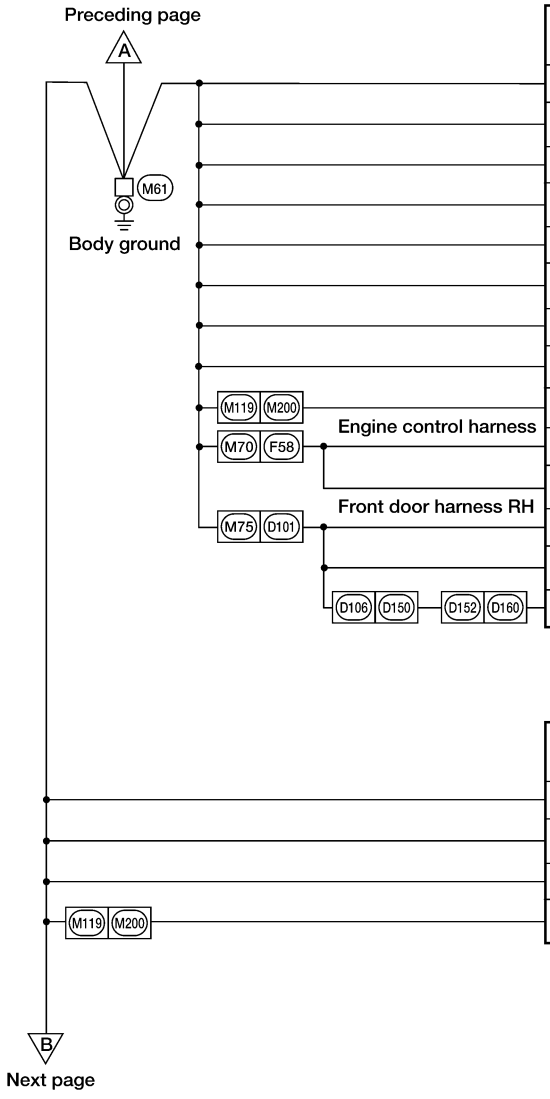


CONNECTOR NUMBER	CONNECT TO
M3	Fuse box (J/B) (Terminal No. 5N)
M5	Illumination control switch
M6	VDC OFF switch (with VDC)
M6	TCS OFF switch (with TCS)
M7	Door mirror remote control switch
M16	ADP steering switch
M20	BCM (body control module) (Terminal No. 67)
M21	NATS antenna amp.
M22	Data link connector (Terminal No. 4 and 5)
M24	Combination meter (Terminal No. 10, 11 and 12)
M28	Combination switch
M31	Shift lock control unit
M35	Air bag diagnosis sensor unit
M38	Combination switch (heated steering)
M42	Automatic drive positioner control unit (Terminal No. 40 and 48)
M47	Steering angle sensor
M50	Unified meter and A/C amp. (Terminal No. 29 and 30)
M59	Glove box lamp
M102	Front passenger air bag OFF indicator
M116	Rear sonar system OFF switch (Terminal No. 2 and 6)
M118	A/C display (Terminal No. 7)
M172	Front power socket (front center console)
M173	Heated steering wheel switch
M181	Front heated seat switch LH
M182	Front heated seat switch RH
M183	Rear sunshade front switch
M201	Front air control (Terminal No. 2)
R3	Vanity mirror lamp LH
R4	Sunroof motor
R7	Auto anti-dazzling inside mirror
R8	Vanity mirror lamp RH
R13	Personal lamp
R14	Interior room lamp (room/map lamps)
D4	Door mirror LH
D5	Seat memory switch
D6	Trunk and fuel lid opener switch
D8	Main power window and door lock/unlock switch (Terminal No. 17)
D51	Front door lock assembly LH (key cylinder switch)
D62	Front door request switch LH

WKIA5538E

View with instrument panel removed

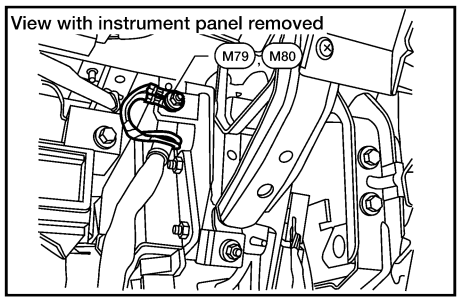


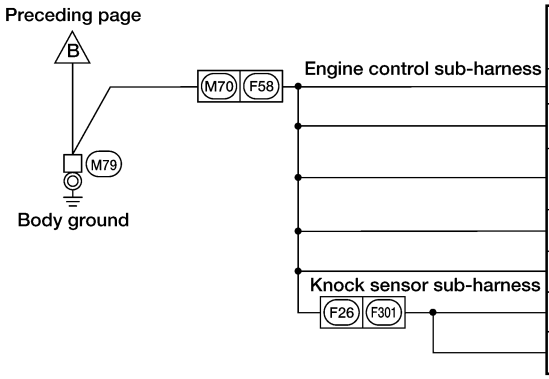


CONNECTOR NUMBER	CONNECT TO
M6	TCS OFF switch (with TCS)
M6	VDC OFF switch (with VDC)
M34	CVT device (Terminal No. 11)
M64	Fan control amp.
M93	Display unit (Terminal No. 1) (with NAVI)
M94	Display control unit (Terminal No. 3)
M96	NAVI control unit (Terminal No. 1)
M98	AV switch
M204	Front power socket
F56	TCM (Terminal No. 25)
F57	TCM (Terminal No. 48)
D105	Power window and door lock/unlock switch RH (Terminal No. 11)
D107	Door mirror RH
D162	Front door request switch RH

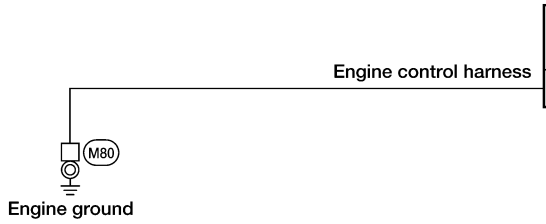
CONNECTOR NUMBER	CONNECT TO
M52	Intelligent key unit
M54	Trunk lid opener cancel switch
M72	Steering lock solenoid
M202	Hazard switch

WKIA5539E





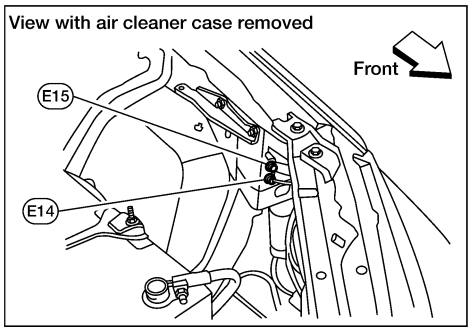
CONNECTOR NUMBER	CONNECT TO
F11	Crankshaft position sensor (POS)
F23	Camshaft position sensor (PHASE) (Bank 2)
F50	Electric throttle control actuator (throttle position sensor) (shield wire)
F54	ECM (Terminal No.1)
F54	ECM (shield wire)
F302	Knock sensor (shield wire)
F303	Camshaft position sensor (PHASE) (Bank 1)

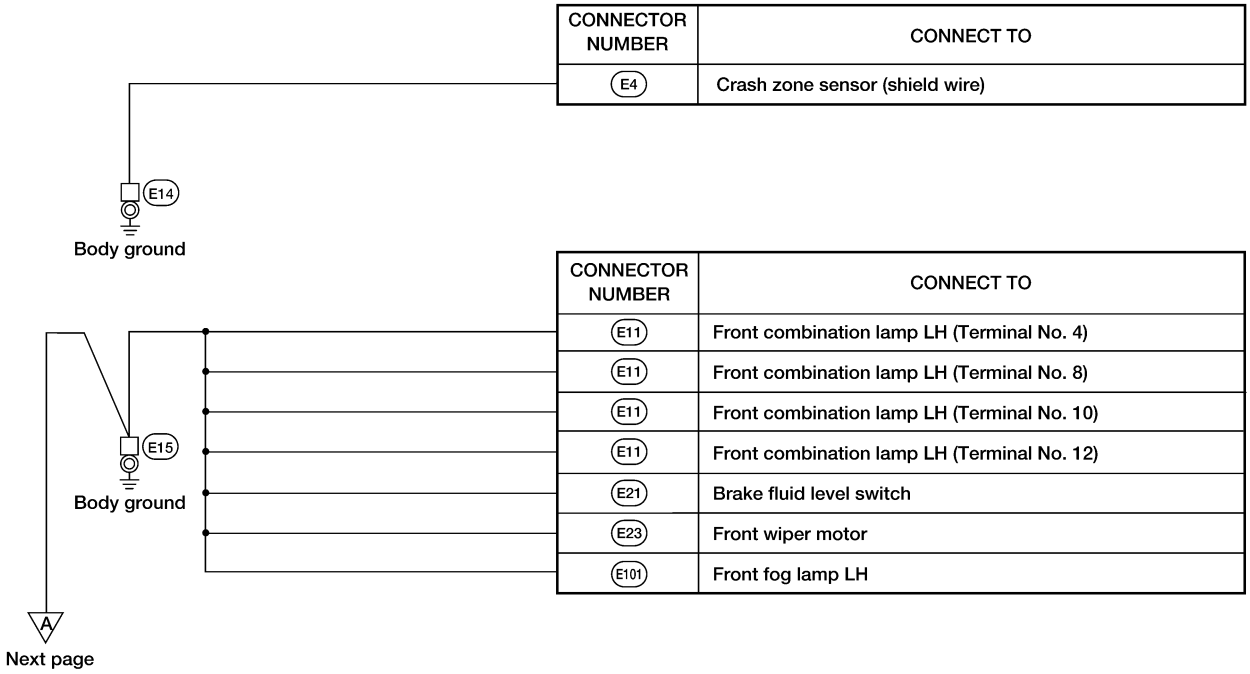


CONNECTOR NUMBER	CONNECT TO
M82	ECM (Terminal No. 115 and 116)

WKIA5540E

ENGINE ROOM HARNESS

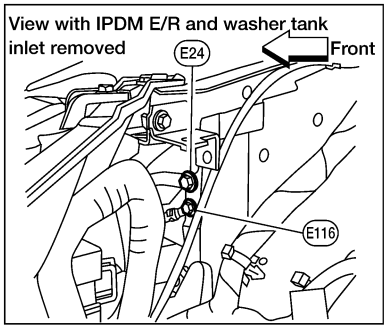


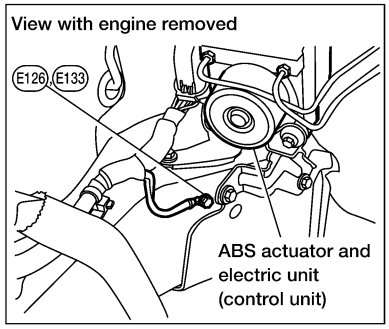


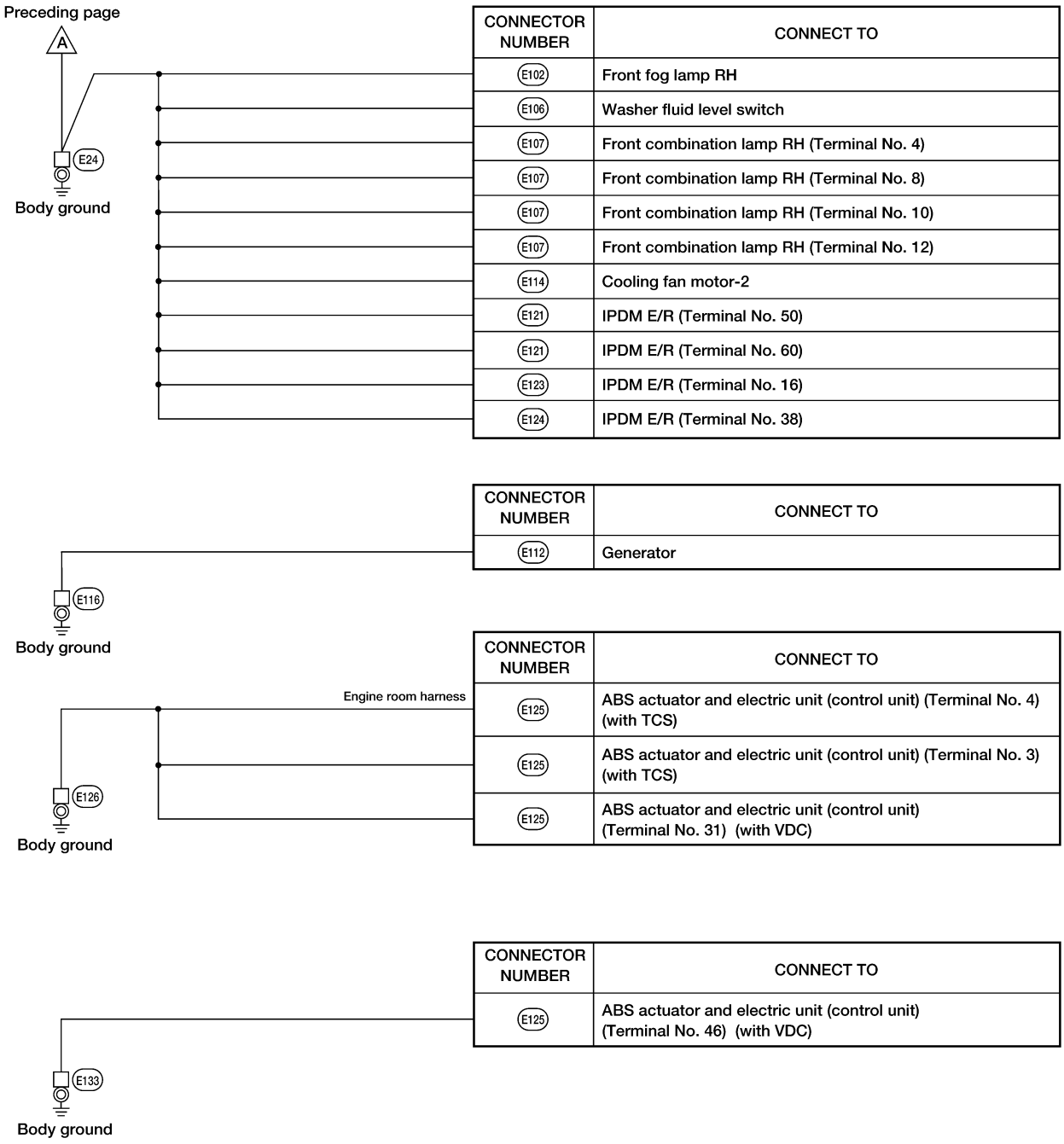
CONNECTOR NUMBER	CONNECT TO
E4	Crash zone sensor (shield wire)

CONNECTOR NUMBER	CONNECT TO
E11	Front combination lamp LH (Terminal No. 4)
E11	Front combination lamp LH (Terminal No. 8)
E11	Front combination lamp LH (Terminal No. 10)
E11	Front combination lamp LH (Terminal No. 12)
E21	Brake fluid level switch
E23	Front wiper motor
E101	Front fog lamp LH

WKIA5541E







CONNECTOR NUMBER	CONNECT TO
E102	Front fog lamp RH
E106	Washer fluid level switch
E107	Front combination lamp RH (Terminal No. 4)
E107	Front combination lamp RH (Terminal No. 8)
E107	Front combination lamp RH (Terminal No. 10)
E107	Front combination lamp RH (Terminal No. 12)
E114	Cooling fan motor-2
E121	IPDM E/R (Terminal No. 50)
E121	IPDM E/R (Terminal No. 60)
E123	IPDM E/R (Terminal No. 16)
E124	IPDM E/R (Terminal No. 38)

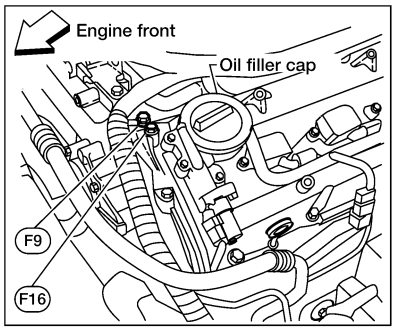
CONNECTOR NUMBER	CONNECT TO
E112	Generator

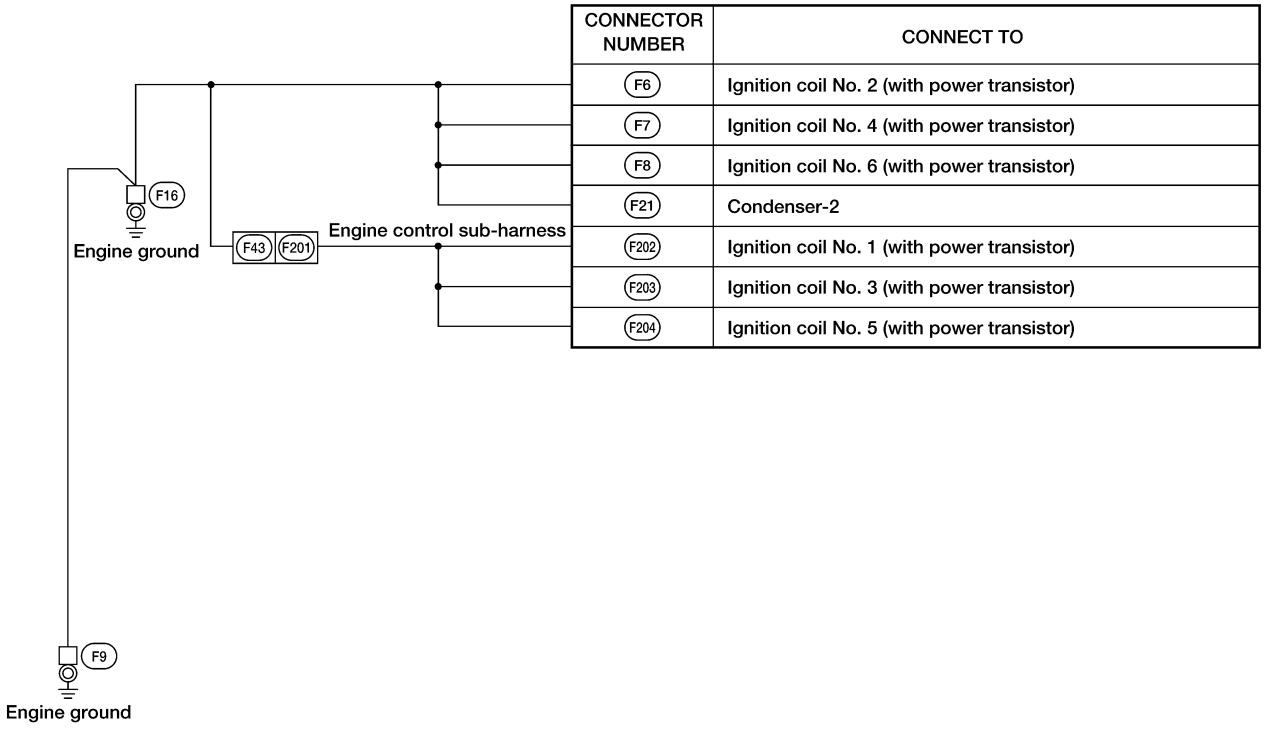
CONNECTOR NUMBER	CONNECT TO
E125	ABS actuator and electric unit (control unit) (Terminal No. 4) (with TCS)
E125	ABS actuator and electric unit (control unit) (Terminal No. 3) (with TCS)
E125	ABS actuator and electric unit (control unit) (Terminal No. 31) (with VDC)

CONNECTOR NUMBER	CONNECT TO
E125	ABS actuator and electric unit (control unit) (Terminal No. 46) (with VDC)

WKIA5542E

ENGINE CONTROL HARNESS

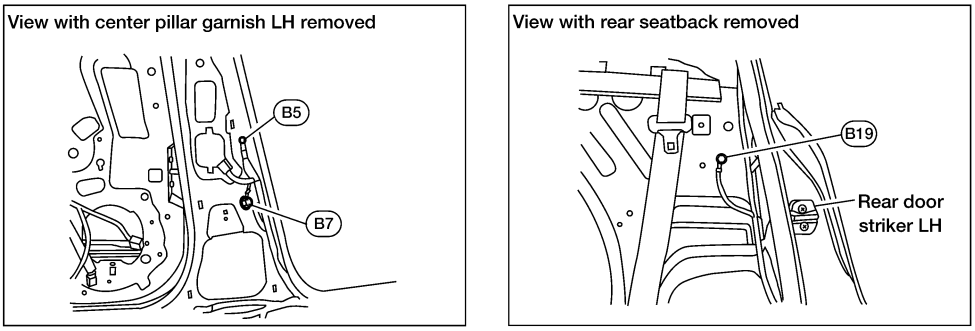


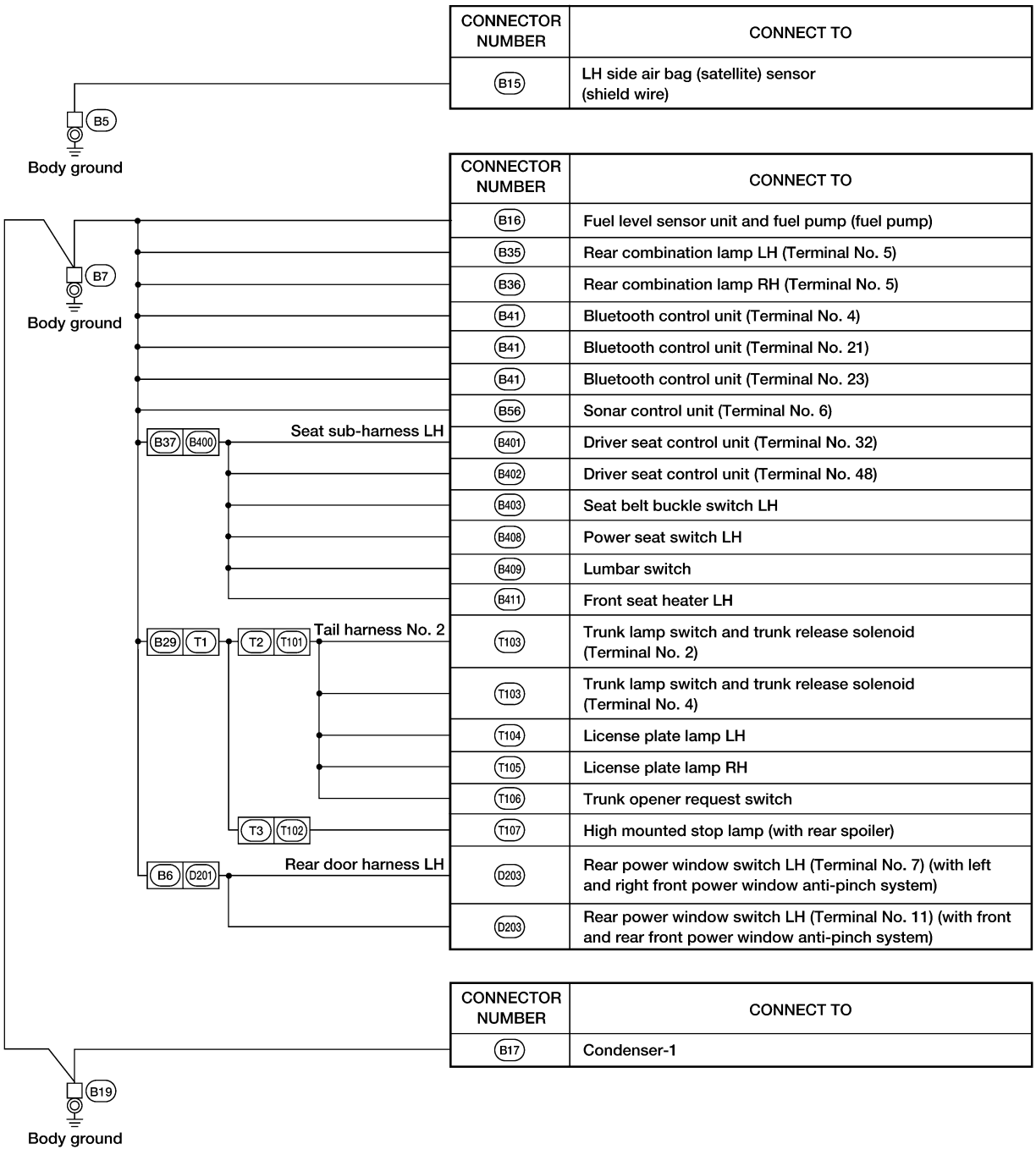


CONNECTOR NUMBER	CONNECT TO
F6	Ignition coil No. 2 (with power transistor)
F7	Ignition coil No. 4 (with power transistor)
F8	Ignition coil No. 6 (with power transistor)
F21	Condenser-2
F202	Ignition coil No. 1 (with power transistor)
F203	Ignition coil No. 3 (with power transistor)
F204	Ignition coil No. 5 (with power transistor)

WKIA5576E

BODY HARNESS





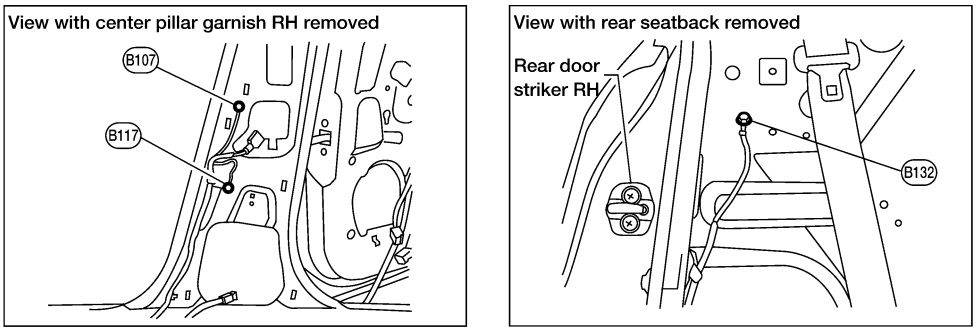
CONNECTOR NUMBER	CONNECT TO
B15	LH side air bag (satellite) sensor (shield wire)

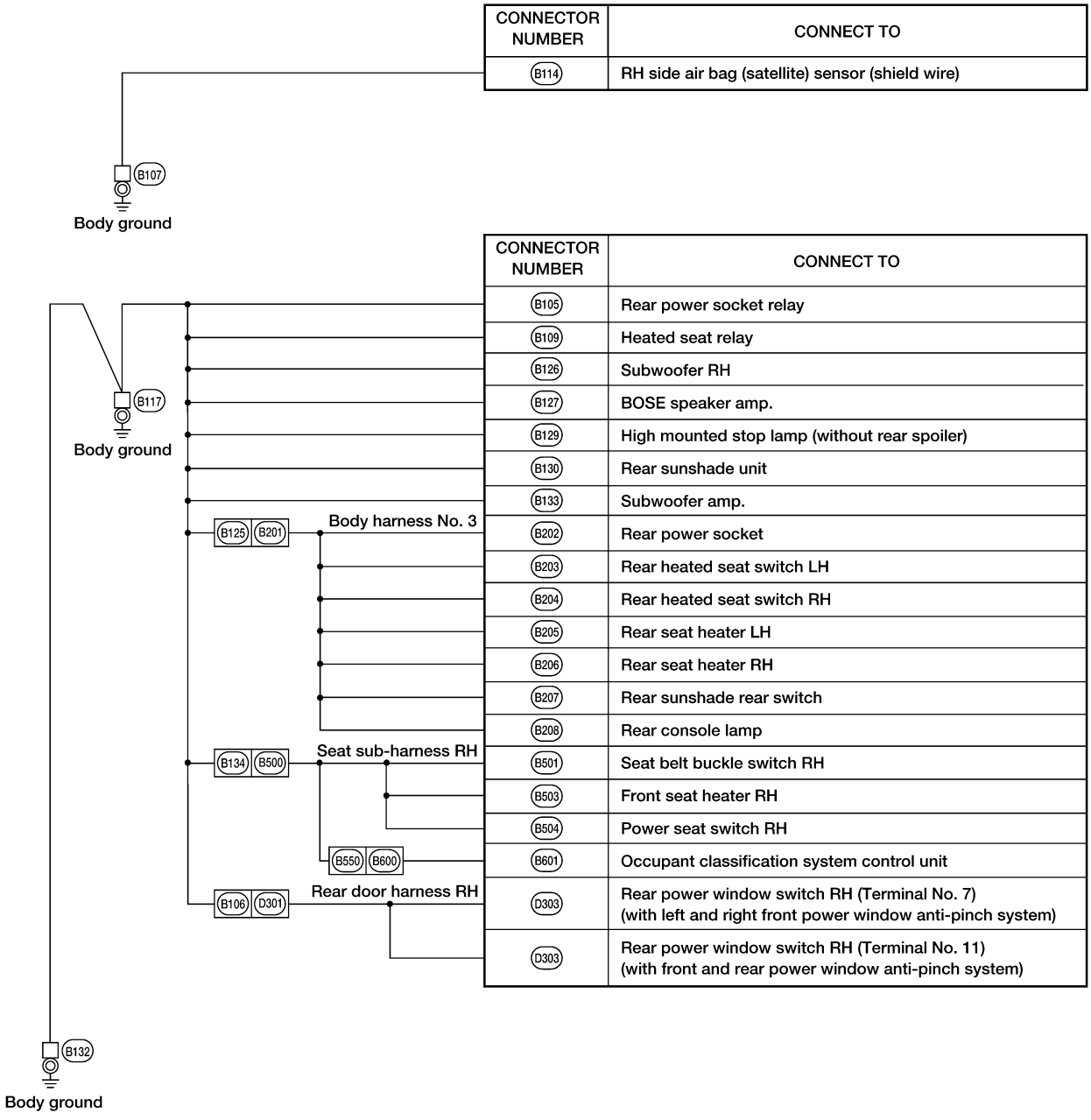
CONNECTOR NUMBER	CONNECT TO
B16	Fuel level sensor unit and fuel pump (fuel pump)
B35	Rear combination lamp LH (Terminal No. 5)
B36	Rear combination lamp RH (Terminal No. 5)
B41	Bluetooth control unit (Terminal No. 4)
B41	Bluetooth control unit (Terminal No. 21)
B41	Bluetooth control unit (Terminal No. 23)
B56	Sonar control unit (Terminal No. 6)
B401	Driver seat control unit (Terminal No. 32)
B402	Driver seat control unit (Terminal No. 48)
B403	Seat belt buckle switch LH
B408	Power seat switch LH
B409	Lumbar switch
B411	Front seat heater LH
T103	Trunk lamp switch and trunk release solenoid (Terminal No. 2)
T103	Trunk lamp switch and trunk release solenoid (Terminal No. 4)
T104	License plate lamp LH
T105	License plate lamp RH
T106	Trunk opener request switch
T107	High mounted stop lamp (with rear spoiler)
D203	Rear power window switch LH (Terminal No. 7) (with left and right front power window anti-pinch system)
D203	Rear power window switch LH (Terminal No. 11) (with front and rear front power window anti-pinch system)

CONNECTOR NUMBER	CONNECT TO
B17	Condenser-1

WKIA5543E

BODY NO. 2 HARNESS

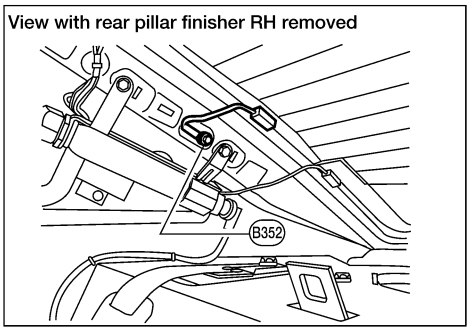




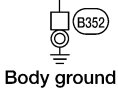
CONNECTOR NUMBER	CONNECT TO
B114	RH side air bag (satellite) sensor (shield wire)

CONNECTOR NUMBER	CONNECT TO
B105	Rear power socket relay
B109	Heated seat relay
B126	Subwoofer RH
B127	BOSE speaker amp.
B129	High mounted stop lamp (without rear spoiler)
B130	Rear sunshade unit
B133	Subwoofer amp.
B202	Rear power socket
B203	Rear heated seat switch LH
B204	Rear heated seat switch RH
B205	Rear seat heater LH
B206	Rear seat heater RH
B207	Rear sunshade rear switch
B208	Rear console lamp
B501	Seat belt buckle switch RH
B503	Front seat heater RH
B504	Power seat switch RH
B601	Occupant classification system control unit
D303	Rear power window switch RH (Terminal No. 7) (with left and right front power window anti-pinch system)
D303	Rear power window switch RH (Terminal No. 11) (with front and rear power window anti-pinch system)

WKIA5544E



CONNECTOR NUMBER	CONNECT TO
B351	Rear window defogger



WKIA3224E

HARNESS

PFP:24010

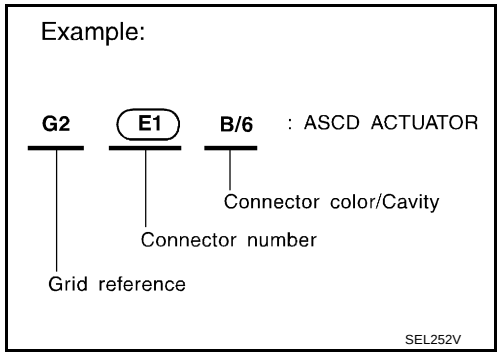
Harness Layout

EKS009I9

HOW TO READ HARNESS LAYOUT

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

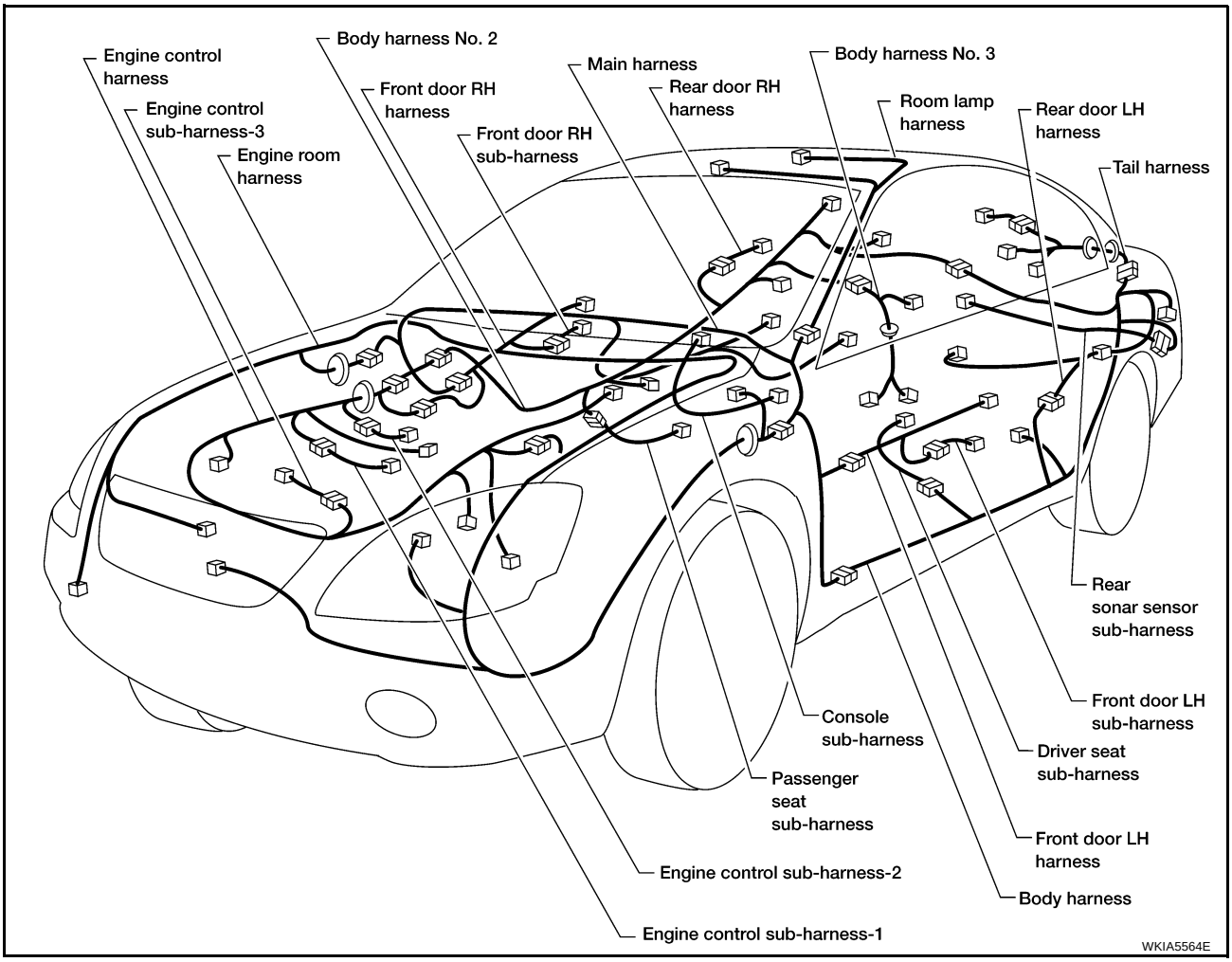
- Main Harness and Console Sub-harness
- Engine Room Harness (LH View) Engine Compartment
- Engine Room Harness (RH View) Engine Compartment
- Engine Control Harness, Engine Control Sub-harness-1, Engine Control Sub-harness-2, Engine Control Sub-harness-3.
- Body Harness and Tail Harness
- Body No. 2 Harness and Body No. 3 Harness
- Room Lamp Harness



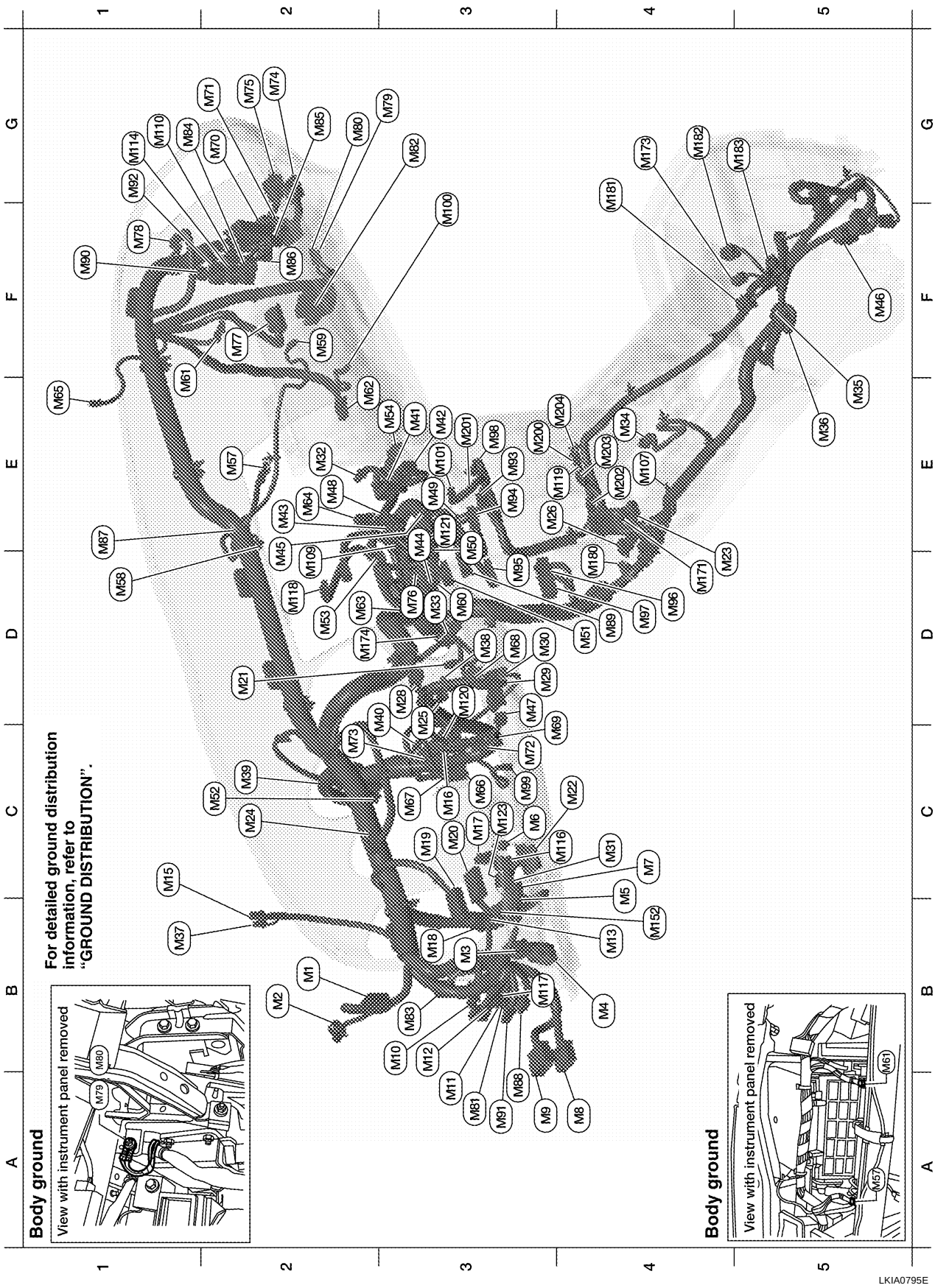
To use the grid reference

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

OUTLINE


Engine control harness
Body harness No. 2
Main harness
Body harness No. 3
Front door RH harness
Rear door RH harness
Room lamp harness
Rear door LH harness
Engine control sub-harness-3
Front door RH sub-harness
Engine room harness
Tail harness
Rear sonar sensor sub-harness
Front door LH sub-harness
Console sub-harness
Driver seat sub-harness
Passenger seat sub-harness
Front door LH harness
Engine control sub-harness-2
Body harness
Engine control sub-harness-1
WKIA5564E

MAIN HARNESS

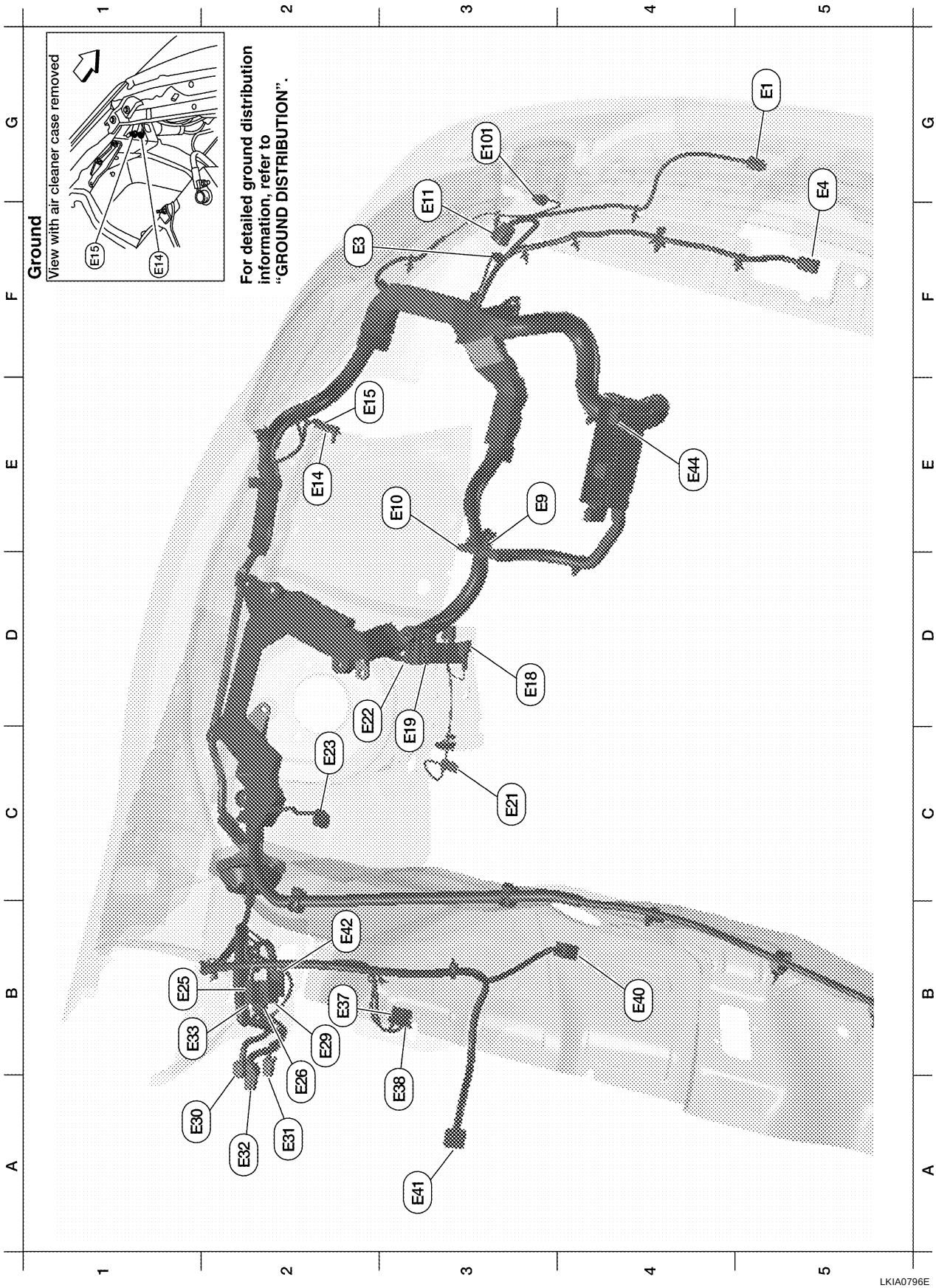


B2	M1	W/16	: To R1	E3	M44	W/6	: Audio unit (with NAVI)
B2	M2	W/3	: To R2	E2	M45	W/16	: Audio unit (with NAVI)
B3	M3	W/8	: Fuse block (J/B)	F5	M46	B/6	: Yaw rate/side/decel G sensor
B4	M4	W/16	: Fuse block (J/B)	D3	M47	W/8	: Steering angle sensor
B4	M5	W/3	: Illumination control switch	E2	M48	W/2	: To M501
C3	M6	GR/6	: TCS OFF switch (without VDC)	E3	M49	GR/20	: Unified meter and A/C amp.
C3	M6	GR/6	: VDC OFF switch (with VDC)	E3	M50	GR/16	: Unified meter and A/C amp.
C4	M7	BR/16	: Door mirror remote control switch (with automatic drive positioner)	D4	M51	W/20	: Audio unit (without NAVI)
C4	M7	W/16	: Door mirror remote control switch (without automatic drive positioner)	C2	M52	W/40	: Intelligent key unit
A4	M8	W/32	: To D2	D2	M53	W/12	: Audio unit (without BOSE)
A3	M9	W/16	: To D1	D2	M53	W/16	: Audio unit (with BOSE)
B3	M10	Y/4	: To E29	E3	M54	W/2	: Trunk lid opener cancel switch
A3	M11	W/16	: To B1	E2	M57	—	: Body ground
B3	M12	W/8	: To B2	D1	M58	W/3	: Intake door motor
D4	M13	L/4	: Heated steering relay	F2	M59	BR/2	: Glove box lamp
C1	M15	W/3	: Optical sensor	D3	M60	W/12	: Audio unit (without NAVI)
C3	M16	GR/6	: ADP steering switch	E1	M61	—	: Body ground
C3	M17	W/2	: Circuit breaker	E2	M62	W/2	: Blower motor
B3	M18	W/40	: BCM (body control module)	D2	M63	W/3	: Audio unit
C3	M19	W/15	: BCM (body control module)	E2	M64	W/4	: Fan control amp.
C3	M20	B/15	: BCM (body control module)	E1	M65	B/2	: Sunload sensor
D2	M21	W/4	: NATS antenna amp.	C3	M66	W/2	: Telescopic motor
C3	M22	W/16	: Data link connector	C3	M67	W/3	: Telescopic motor
D5	M23	W/18	: To M171	D3	M68	W/2	: Tilt motor
C2	M24	W/24	: Combination meter	C3	M69	W/3	: Tilt motor
C3	M25	W/2	: Ignition keyhole illumination	G2	M70	W/16	: To F58
E3	M26	W/16	: To M180	G2	M71	W/16	: To F59
D3	M28	W/16	: Combination switch	C3	M72	W/4	: Steering lock solenoid
D3	M29	Y/6	: Spiral cable	C2	M73	GR/6	: Key switch and ignition knob switch
D3	M30	GR/8	: Spiral cable	G2	M74	W/24	: To D102
C4	M31	GR/10	: Shift lock control unit	F2	M75	W/8	: To D101
E2	M32	W/2	: In-vehicle sensor	D3	M76	GR/2	: Instrument panel antenna
D3	M33	W/2	: Intake sensor	F2	M77	Y/4	: Front passenger air bag module
E4	M34	W/16	: CVT device	F1	M78	B/4	: Remote keyless entry receiver (for intelligent key)
E5	M35	Y/28	: Air bag diagnosis sensor unit	G3	M79	—	: Body ground
E5	M36	B/1	: Parking brake switch	G2	M80	—	: Body ground
B1	M37	BR/2	: Security indicator lamp	A3	M81	W/32	: To B20
D3	M38	W/2	: Combination switch (heated steering)	G3	M82	B/40	: ECM
C2	M39	W/3	: Air mix door motor (driver)	B3	M83	W/16	: To E34
D3	M40	W/4	: Mode door motor	G1	M84	GR/16	: To B101
E3	M41	W/32	: Automatic drive positioner control unit	G2	M85	W/24	: To B102
E3	M42	W/16	: Automatic drive positioner control unit	F2	M86	W/16	: To B103
E2	M43	W/10	: Audio unit (with NAVI)	E1	M87	W/3	: Air mix door motor (passenger)

B3	M88	B/4	: To E42	D2	M118	W/12	: A/C display
D4	M89	W/24	: Unified meter and A/C amp.	E3	M119	W/16	: To M200
F1	M90	W/16	: To E25	D3	M120	W/4	: Remote keyless entry receiver (for tire pressure warning)
A3	M91	W/4	: To E26	E3	M121	GR/2	: NAVI control unit
G1	M92	W/12	: To E131	C3	M123	W/2	: Tire pressure warning check connector
E3	M93	W/24	: Display unit (with NAVI)	B4	M152	B/2	: Resistor-1
E3	M94	W/24	: Display control unit (with NAVI)	D4	M171	W/18	: To M23
D3	M95	W/32	: Display control unit (with NAVI)	G4	M173	B/2	: Heated steering wheel switch
D4	M96	W/40	: NAVI control unit (with NAVI)	D2	M174	GR/2	: Front console antenna
D4	M97	W/32	: NAVI control unit (with NAVI)	D4	M180	W/16	: To M26
E3	M98	W/16	: AV switch	F4	M181	W/6	: Front heated seat switch LH
C3	M99	W/2	: Foot lamp LH	G4	M182	BR/6	: Front heated seat switch RH
F3	M100	W/2	: Foot lamp RH	G5	M183	W/6	: Rear sunshade switch front (with rear sunshade)
E3	M101	W/3	: Front passenger air bag off indicator	Console sub-harness			
E4	M107	BR/2	: CVT device	E3	M200	W/16	: To M119
D2	M109	W/12	: Audio unit	E3	M201	W/12	: Front air control
G1	M110	BR/12	: To B136	E4	M202	W/4	: Hazard switch
G1	M114	W/24	: To B40	E4	M203	W/4	: Aux-jack
G3	M116	GR/8	: Rear sonar system off switch	E3	M204	B/3	: Front power socket
B3	M117	B/2	: Sonar buzzer				

ENGINE ROOM HARNESS (LH VIEW)

Engine Compartment

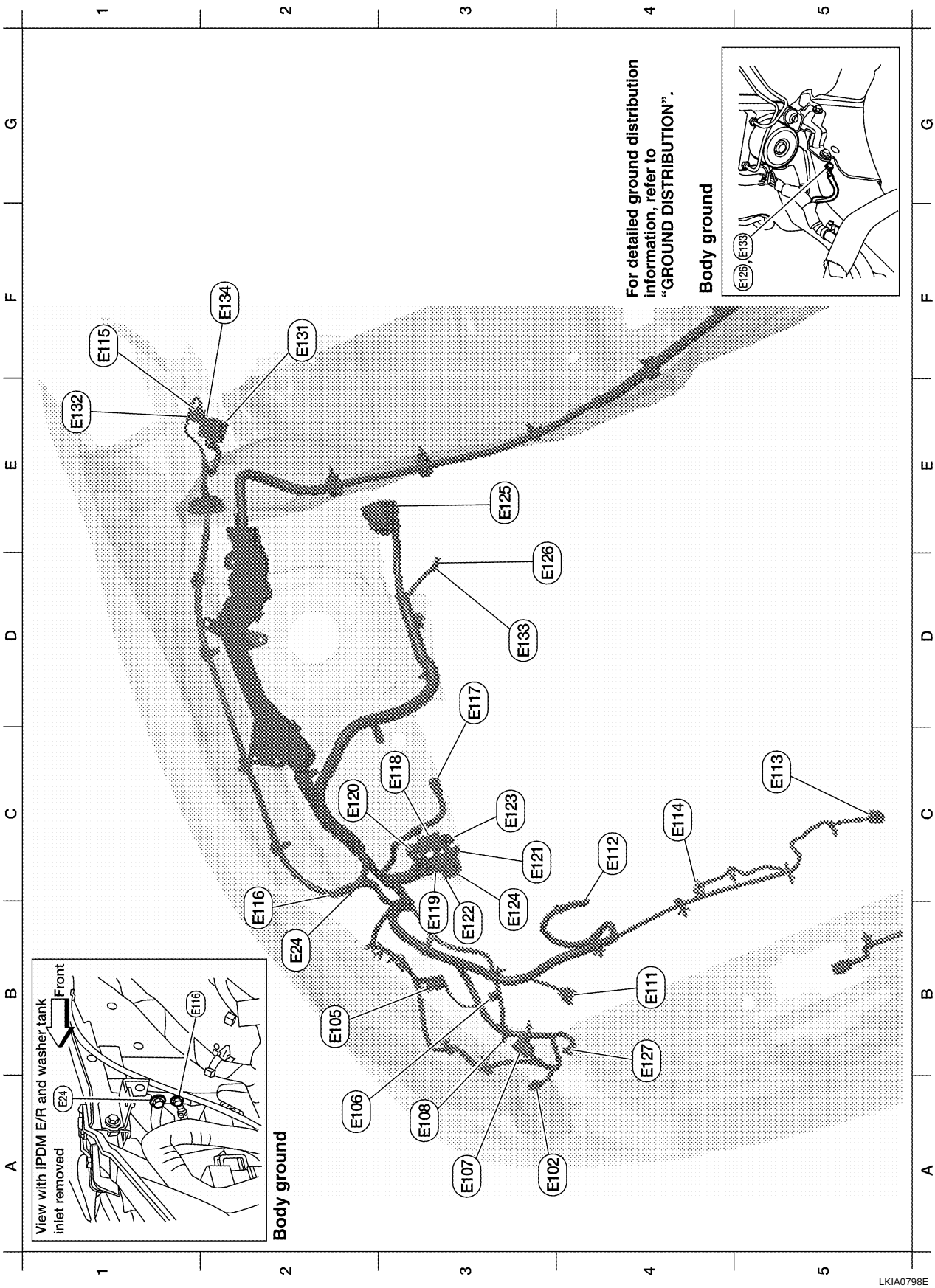


Refer to PG-48, "ENGINE ROOM HARNESS (RH VIEW)" for continuation of engine room harness.

G5	E1	B/2	: Ambient sensor			
F2	E3	B/1	: Horn (low)			
G5	E4	Y/2	: Crash zone sensor			
E3	E9	BR/2	: Fusible link box (battery)			
E2	E10	GR/2	: Fusible link box (battery)			
G3	E11	GR/12	: Front combination lamp LH			
E2	E14	—	: Body ground			
E2	E15	—	: Body ground			
D3	E18	B/2	: Front wheel sensor LH			
C3	E19	GR/9	: To F33			
C3	E21	GR/2	: Brake fluid level switch			
D2	E22	GR/2	: To F35			
C2	E23	GR/6	: Front wiper motor			
B1	E25	W/16	: To M90			
B2	E26	W/4	: To M91			
B2	E29	Y/4	: To M10			
A1	E30	W/8	: Fuse block J/B			
A2	E31	B/2	: Fuse block J/B			
A2	E32	B/1	: Fuse block J/B			
B1	E33	W/4	: To B3			
B2	E37	BR/2	: ASCD brake switch			
A3	E38	B/2	: Stop lamp switch			
B4	E40	B/6	: Accelerator pedal position sensor			
A3	E41	W/6	: Ignition switch			
B2	E42	B/4	: To M88			
E4	E44	L/4	: Back-up lamp relay			
G3	E101	B/2	: Front fog lamp LH			

ENGINE ROOM HARNESS (RH VIEW)

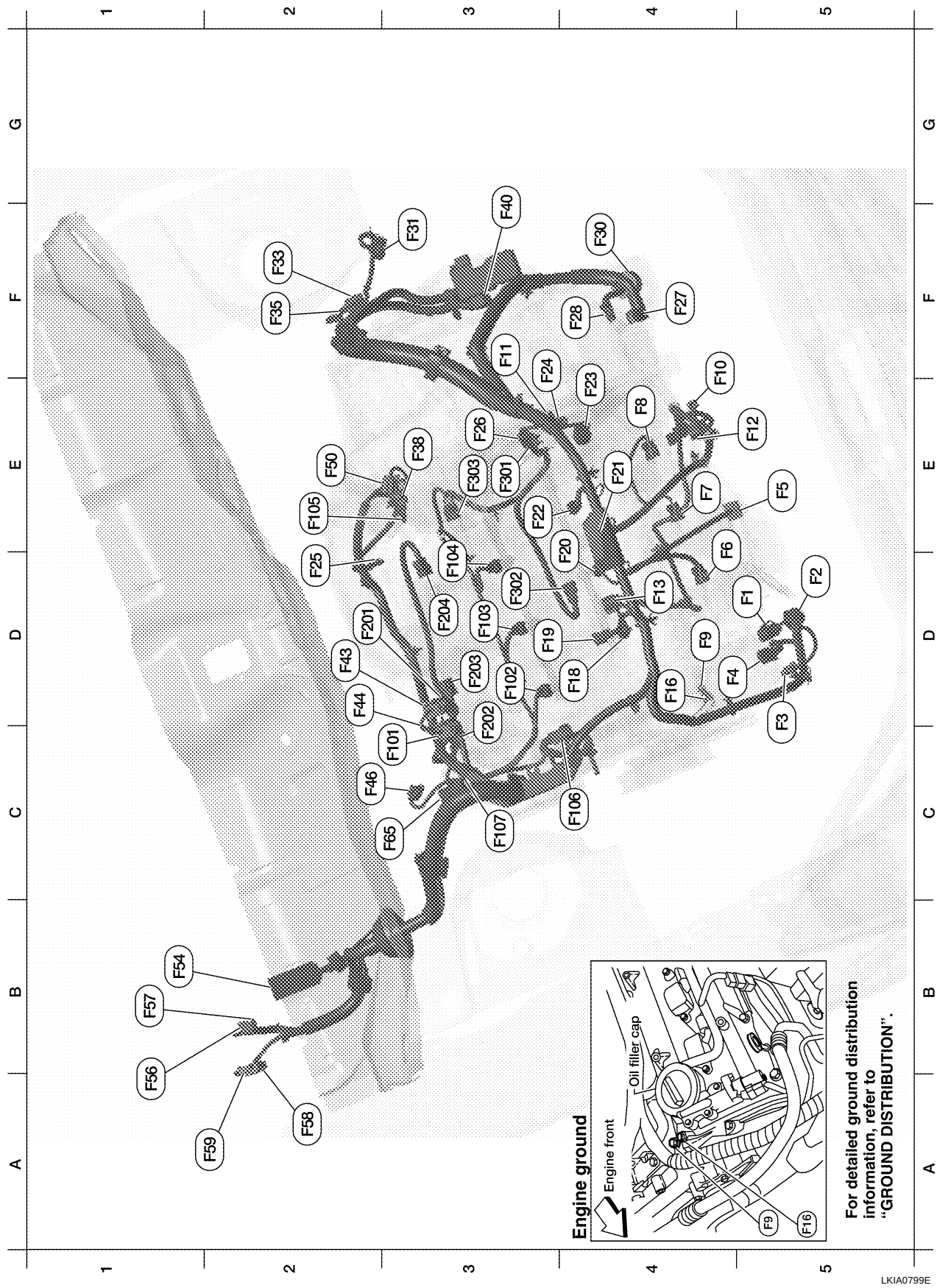
Engine Compartment



Refer to PG-46, "ENGINE ROOM HARNESS (LH VIEW)" for continuation of engine room harness.

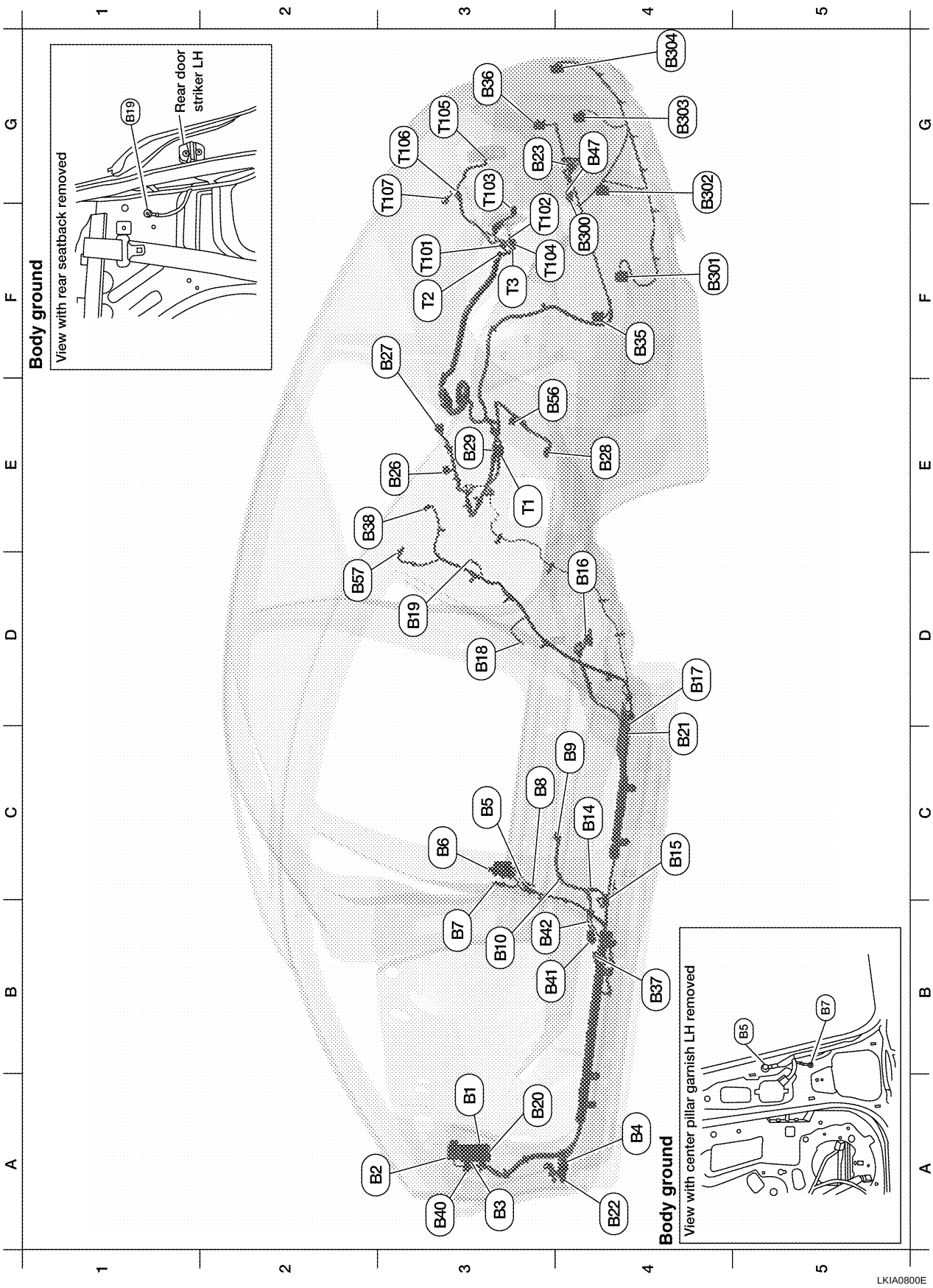
B2	E24	—	: Body ground				
A3	E102	B/2	: Front fog lamp RH				
B2	E105	GR/2	: Front washer motor				
A2	E106	BR/2	: Washer fluid level switch				
A3	E107	GR/12	: Front combination lamp RH				
A3	E108	B/1	: Horn (high)				
B4	E111	B/3	: Refrigerant pressure sensor				
C4	E112	—	: Generator (ground)				
C5	E113	GR/4	: Cooling fan motor-1				
C4	E114	GR/4	: Cooling fan motor-2				
F1	E115	W/2	: To B111				
B2	E116	—	: Body ground				
D3	E117	GR/2	: Front wheel sensor RH				
C3	E118	B/4	: IPDM E/R (intelligent power distribution module engine room)				
B3	E119	W/4	: IPDM E/R (intelligent power distribution module engine room)				
C2	E120	B/2	: IPDM E/R (intelligent power distribution module engine room)				
C3	E121	W/16	: IPDM E/R (intelligent power distribution module engine room)				
B3	E122	GR/16	: IPDM E/R (intelligent power distribution module engine room)				
C3	E123	W/6	: IPDM E/R (intelligent power distribution module engine room)				
C3	E124	W/12	: IPDM E/R (intelligent power distribution module engine room)				
E3	E125	B/32	: ABS actuator and electric unit (control unit) (with TCS)				
E3	E125	B/46	: ABS actuator and electric unit (control unit) (with VDC)				
D3	E126	—	: Body ground				
B4	E127	BR/3	: Intelligent key warning buzzer				
F2	E131	W/12	: To M92				
E1	E132	W/4	: To B104				
D3	E133	—	: Body ground				
F2	E134	W/16	: To M83				

ENGINE CONTROL HARNESS



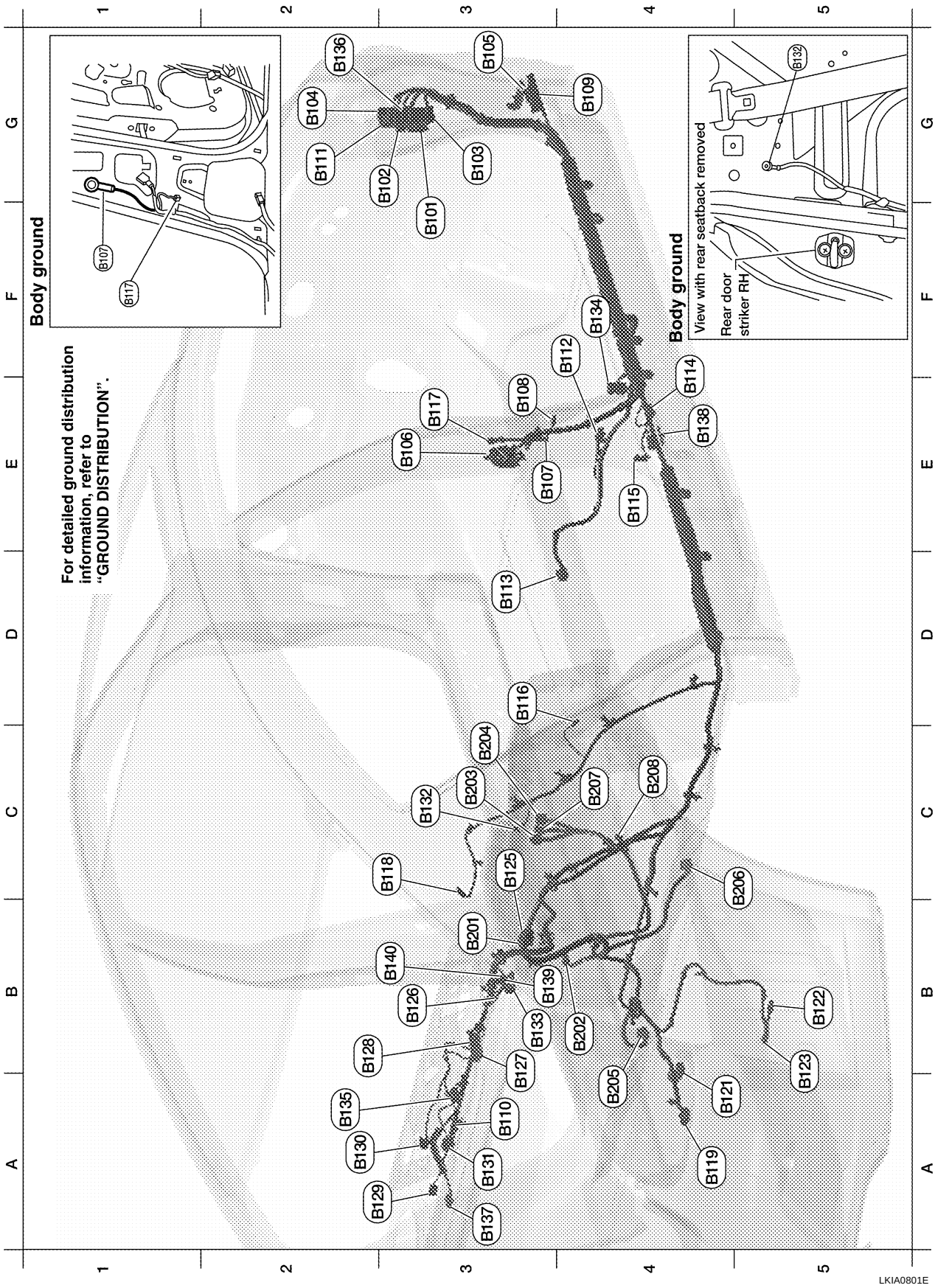
D5	F1	W/2	: Generator	A2	F58	W/16	: To M70
D5	F2	—	: Generator	A2	F59	W/12	: To M71
D5	F3	B/1	: A/C Compressor	C3	F65	B/6	: Air fuel ratio (A/F) sensor 1 (bank 1)
D4	F4	GR/2	: Intake valve timing control solenoid valve (bank 2)	Engine control sub-harness-1			
E5	F5	B/6	: Air fuel ratio (A/F) sensor 1 (bank 2)	C3	F101	G/8	: To F44
D4	F6	GR/3	: Ignition coil No. 2 (with power transistor)	D3	F102	GR/2	: Fuel injector No. 1
E4	F7	GR/3	: Ignition coil No. 4 (with power transistor)	D3	F103	GR/2	: Fuel injector No. 3
E4	F8	GR/3	: Ignition coil No. 6 (with power transistor)	D3	F104	GR/2	: Fuel injector No. 5
D4	F9	—	: Engine ground	E2	F105	L/2	: EVAP canister purge volume control solenoid valve
F4	F10	BR/3	: Front electronic controlled engine mount	C4	F106	B/1	: Oil pressure switch
F3	F11	B/3	: Crankshaft position sensor (POS)	C3	F107	GR/2	: Intake valve timing control solenoid valve (bank 1)
E5	F12	G/4	: Heated oxygen sensor 2 (bank 2)	Engine control sub-harness-2			
D4	F13	G/4	: Heated oxygen sensor 2 (bank 1)	D2	F201	G/6	: To F43
D4	F16	—	: Engine ground	D3	F202	GR/3	: Ignition coil No. 1 (with power transistor)
D4	F18	GR/2	: Fuel injector No. 2	D3	F203	GR/3	: Ignition coil No. 3 (with power transistor)
D3	F19	B/2	: VIAS control solenoid valve	D3	F204	GR/3	: Ignition coil No. 5 (with power transistor)
E4	F20	GR/2	: Fuel injector No. 4	Engine control sub-harness-3			
E4	F21	GR/2	: Condenser-2	E3	F301	GR/6	: To F26
E3	F22	GR/2	: Fuel injector No. 6	D3	F302	B/2	: Knock sensor
E4	F23	B/3	: Camshaft position sensor (PHASE) (bank 2)	E3	F303	G/3	: Camshaft position sensor (phase) (bank 1)
F3	F24	GR/2	: Engine coolant temperature sensor				
D2	F25	BR/3	: Rear electronic controlled engine mount				
E3	F26	GR/6	: To F301				
F4	F27	—	: Starter motor				
F4	F28	GR/1	: Starter motor				
F4	F30	GR/22	: CVT unit				
G3	F31	B/6	: Mass air flow sensor				
F2	F33	GR/9	: To E19				
F2	F35	GR/2	: To E22				
E3	F38	B/3	: Secondary speed sensor				
F3	F40	—	: Fusible link box (battery)				
D2	F43	G/6	: To F201				
D2	F44	G/8	: To F101				
C2	F46	B/3	: Power steering pressure sensor				
E2	F50	GR/6	: Electronic throttle control actuator				
B1	F54	B/81	: ECM				
A1	F56	W/24	: TCM (transmission control module)				
B1	F57	GR/24	: TCM (transmission control module)				

BODY HARNESS AND TAIL HARNESS



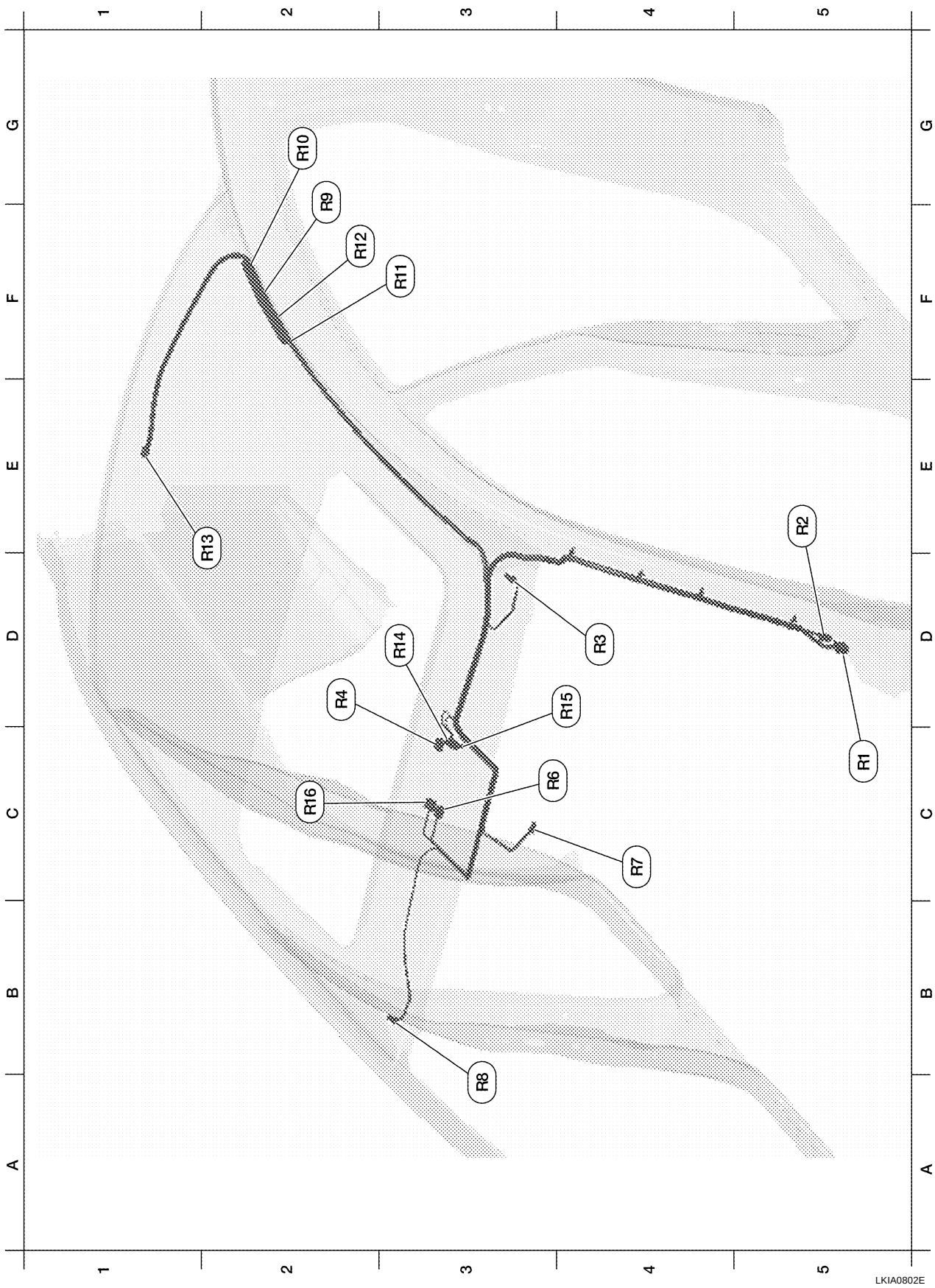
A3	B1	W/16	: To M11	Tail harness			
A2	B2	W/8	: To M12	E3	T1	W/8	: To B29
A3	B3	W/4	: To E33	F3	T2	W/3	: To T101
A4	B4	BR/6	: Rear window defogger relay	F3	T3	W/4	: To T102
C3	B5	—	: Body ground	F3	T101	W/3	: To T2
C3	B6	W/12	: To D201	F3	T102	W/4	: To T3
B3	B7	—	: Body ground	G3	T103	W/4	: Trunk lamp switch and trunk release solenoid
C3	B8	W/3	: Front door switch LH	F3	T104	B/2	: License plate lamp LH
D3	B9	Y/12	: Air bag diagnosis sensor unit	G3	T105	B/2	: License plate lamp RH
B3	B10	Y/2	: Front LH side air bag module	G3	T106	BR/2	: Trunk opener request switch
C4	B14	Y/2	: Front LH seat belt pre-tensioner	G3	T107	BR/2	: High mounted stop lamp (with rear spoiler)
C4	B15	Y/2	: LH side air bag (satellite) sensor				
D4	B16	GR/5	: Fuel level sensor unit and fuel pump				
D4	B17	W/2	: Condenser-1				
D3	B18	W/1	: Rear door switch LH				
D3	B19	—	: Body ground				
A3	B20	W/32	: To M81				
C4	B21	W/1	: Condenser-3				
A4	B22	B/5	: Passenger select unlock relay				
E3	B23	GR/2	: Rear bumper antenna				
E3	B26	W/2	: Subwoofer LH (without BOSE audio system)				
E3	B26	W/6	: Subwoofer LH (with BOSE audio system)				
F3	B27	W/8	: To B131				
E4	B28	W/4	: Fuel lid opener actuator				
E3	B29	W/8	: To T1				
F4	B35	W/6	: Rear combination lamp LH				
G3	B36	W/6	: Rear combination lamp RH				
B4	B37	W/18	: To B400				
E2	B38	Y/2	: LH side front curtain air bag module				
A3	B40	W/24	: To M114				
B3	B41	W/32	: Bluetooth control unit				
B3	B42	GR/1	: Bluetooth control unit				
G4	B47	GR/6	: To B300				
E4	B56	W/16	: Sonar control unit				
D2	B57	B/1	: Rear window defogger				
Rear sonar sensor sub-harness							
F4	B300	GR/6	: To B47				
F4	B301	B/3	: Rear sonar sensor LH outer				
G4	B302	B/3	: Rear sonar sensor LH inner				
G4	B303	B/3	: Rear sonar sensor RH inner				
G4	B304	B/3	: Rear sonar sensor RH outer				

BODY NO. 2 HARNESS AND BODY NO. 3 HARNESS



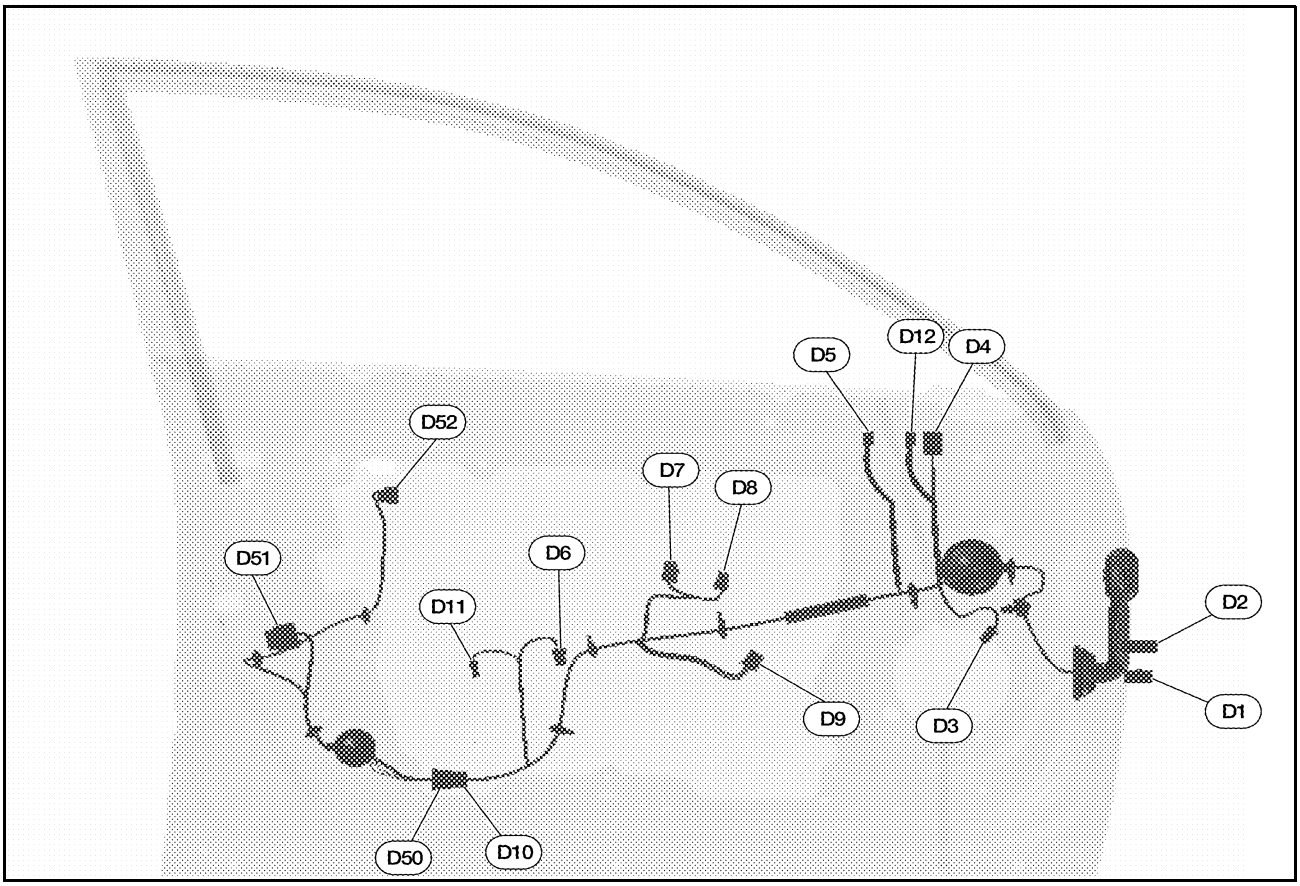
Body harness No.2				G2	B136	BR/12	: To M110
F3	B101	GR/16	: To M84	A3	B137	W/16	: Satellite radio tuner or pre-wiring for satellite radio tuner
G3	B102	W/24	: To M85	E4	B138	B/3	: Belt tension sensor
G3	B103	W/16	: To M86	B4	B139	BR/1	: Satellite radio tuner (with SIRIUS satellite radio)
G2	B104	W/4	: To E132	B4	B139	V/1	: Satellite radio tuner (with XM satellite radio)
G3	B105	L/4	: Rear power socket relay (with rear console)	B3	B140	GR/1	: Satellite radio tuner (with SIRIUS satellite radio)
E3	B106	W/12	: To D301	B3	B140	BR/1	: Satellite radio tuner (with XM satellite radio)
E3	B107	—	: Body ground	Body harness No.3			
E3	B108	W/3	: Front door switch RH	B3	B201	W/10	: To B125
G4	B109	BR/6	: Heated seat relay	B4	B202	B/2	: Rear power socket
A3	B110	GR/2	: Rear parcel shelf antenna	C3	B203	W/6	: Rear heated seat switch LH (with rear sunshade)
G2	B111	W/2	: To E115	C3	B204	BR/6	: Rear heated seat switch RH (with rear sunshade)
F4	B112	Y/2	: Front RH side air bag module	A4	B205	W/3	: Rear seat heater LH
D3	B113	Y/12	: Air bag diagnosis sensor unit	B4	B206	W/3	: Rear seat heater RH
E4	B114	Y/2	: RH side air bag (satellite) sensor	C4	B207	W/6	: Rear sunshade rear switch (with rear sunshade)
E4	B115	Y/2	: Front RH seat belt pre-tensioner	C4	B208	W/4	: Rear console lamp
D3	B116	W/1	: Rear door switch RH				
E3	B117	—	: Body ground				
C3	B118	Y/2	: RH side rear curtain air bag module				
A4	B119	GR/3	: EVAP control system pressure sensor				
A4	B121	B/2	: EVAP canister vent control valve				
B5	B122	GR/2	: Rear wheel sensor RH				
A5	B123	L/2	: Rear wheel sensor LH				
C3	B125	W/10	: To B201				
B3	B126	W/2	: Subwoofer RH (without BOSE audio system)				
B3	B126	BR/6	: Subwoofer RH (with BOSE audio system)				
B3	B127	GR/8	: BOSE speaker amp.				
B2	B128	B/24	: BOSE speaker amp.				
A2	B129	W/2	: High mounted stop lamp (without rear spoiler)				
A2	B130	W/6	: Rear sunshade unit				
A3	B131	W/8	: To B27				
C3	B132	—	: Body ground				
B3	B133	W/10	: Subwoofer amp. (without BOSE audio system)				
F4	B134	W/16	: To B500				
A2	B135	W/2	: Trunk room lamp				

ROOM LAMP HARNESS



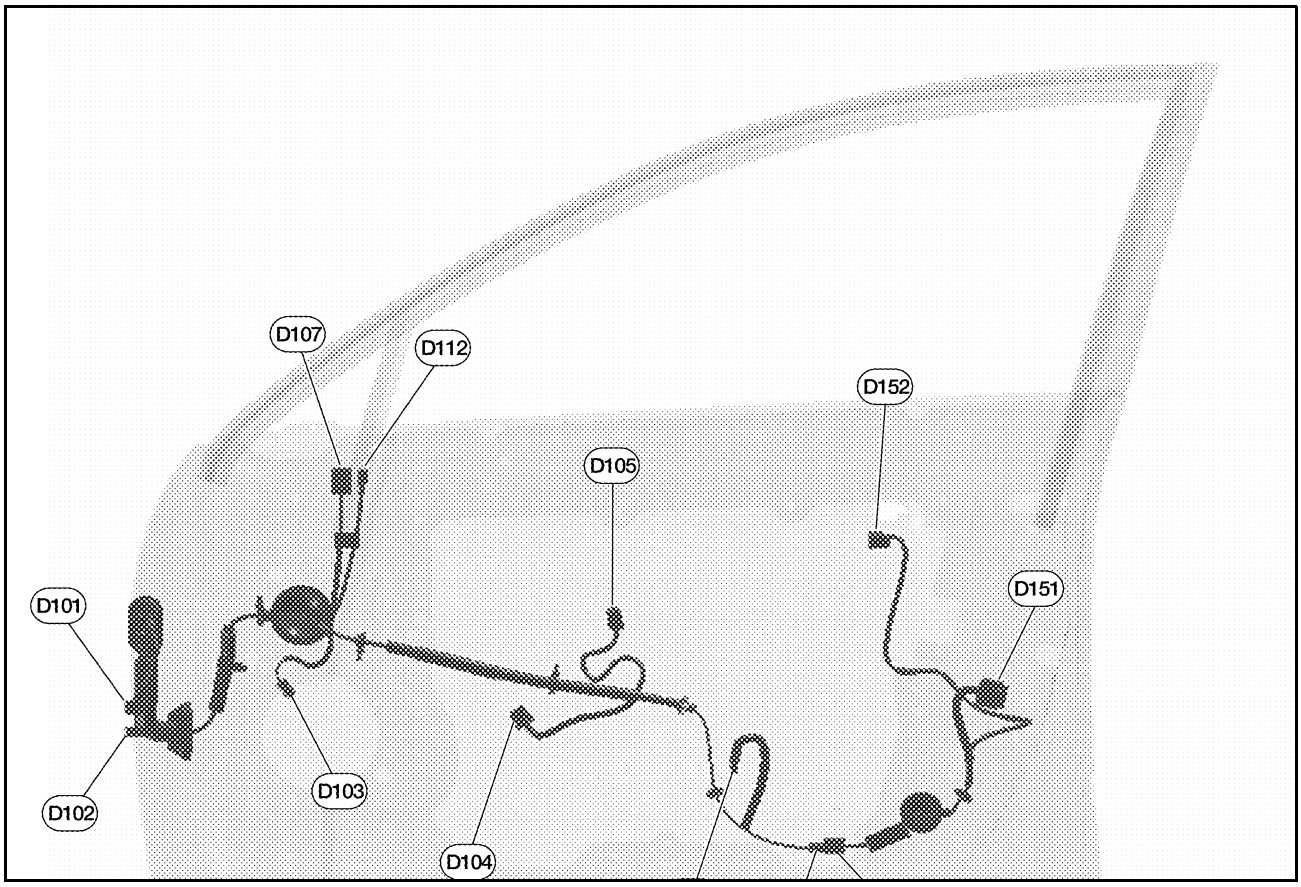
C5	R1	W/16	: To M1				
E5	R2	W/3	: To M2				
D4	R3	W/2	: Vanity mirror lamp LH				
D2	R4	W/10	: Sunroof motor				
C3	R6	GR/6	: Sunroof switch				
C4	R7	B/10	: Auto anti-dazzling inside mirror				
A3	R8	W/2	: Vanity mirror lamp RH				
F2	R9	W/2	: Diode-1				
G2	R10	W/2	: Diode-2				
F3	R11	W/2	: Diode-3				
F2	R12	W/2	: Diode-4				
D1	R13	W/6	: Personal lamp				
D3	R14	W/8	: Interior room lamp				
D3	R15	W/4	: Microphone				
C2	R16	W/4	: Bluetooth on indicator				

FRONT DOOR LH HARNESS



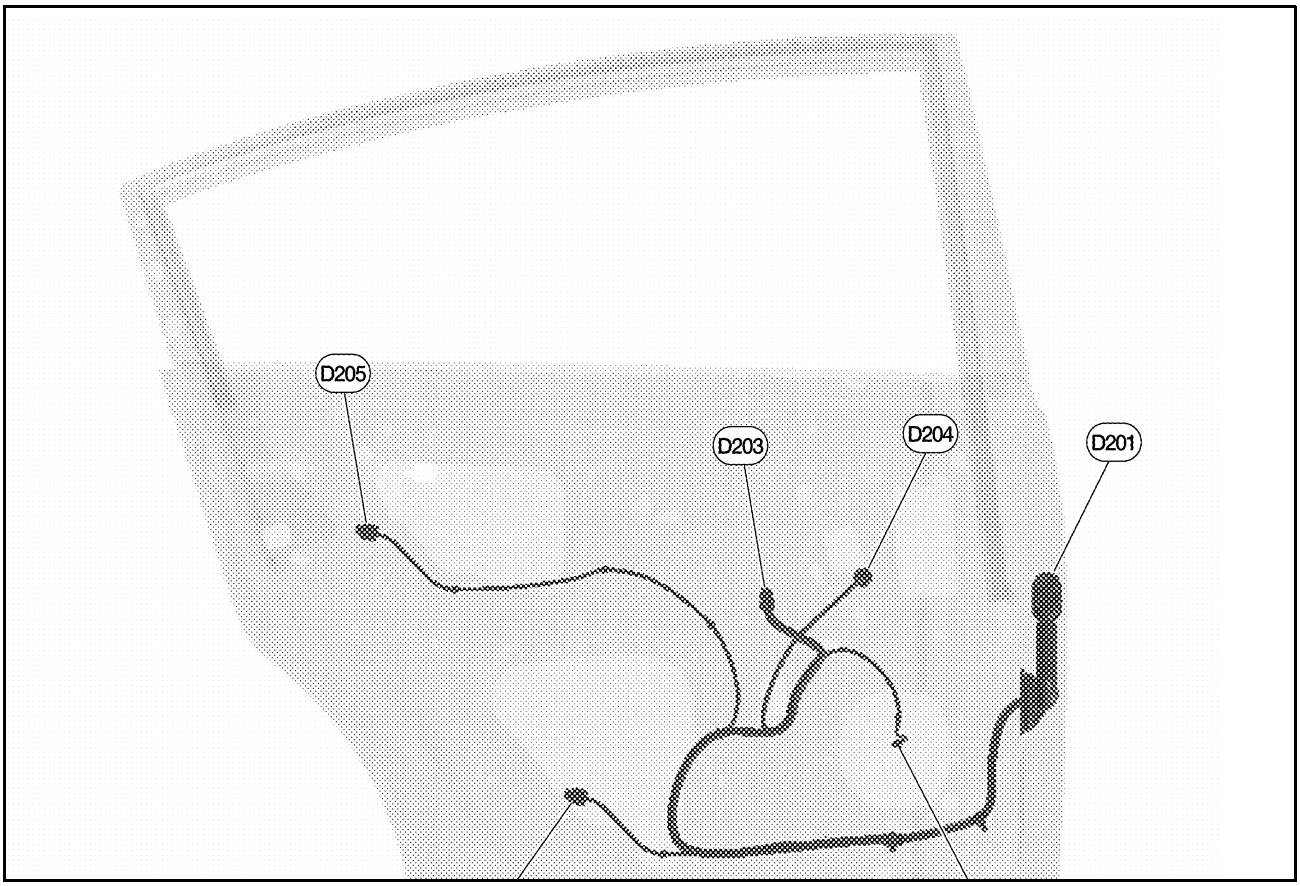
D1	W/16	: To M9	D9	W/6	: Front power window motor LH
D2	W/32	: To M8	D10	W/10	: To D50
D3	W/2	: Front door speaker LH	D11	W/2	: Front step lamp LH
D4	W/16	: Door mirror LH (with auto dimming outside mirrors)	D12	BR/2	: Tweeter LH
D4	W/12	: Door mirror LH (without auto dimming outside mirrors)	Front door LH sub-harness		
D5	W/8	: Seat memory switch	D50	W/10	: To D10
D6	W/4	: Trunk and fuel lid opener switch	D51	BR/6	: Front door lock assembly LH
D7	W/16	: Main power window and door lock/unlock switch	D52	B/4	: To D60
D8	W/3	: Main power window and door lock/unlock switch			

FRONT DOOR RH HARNESS



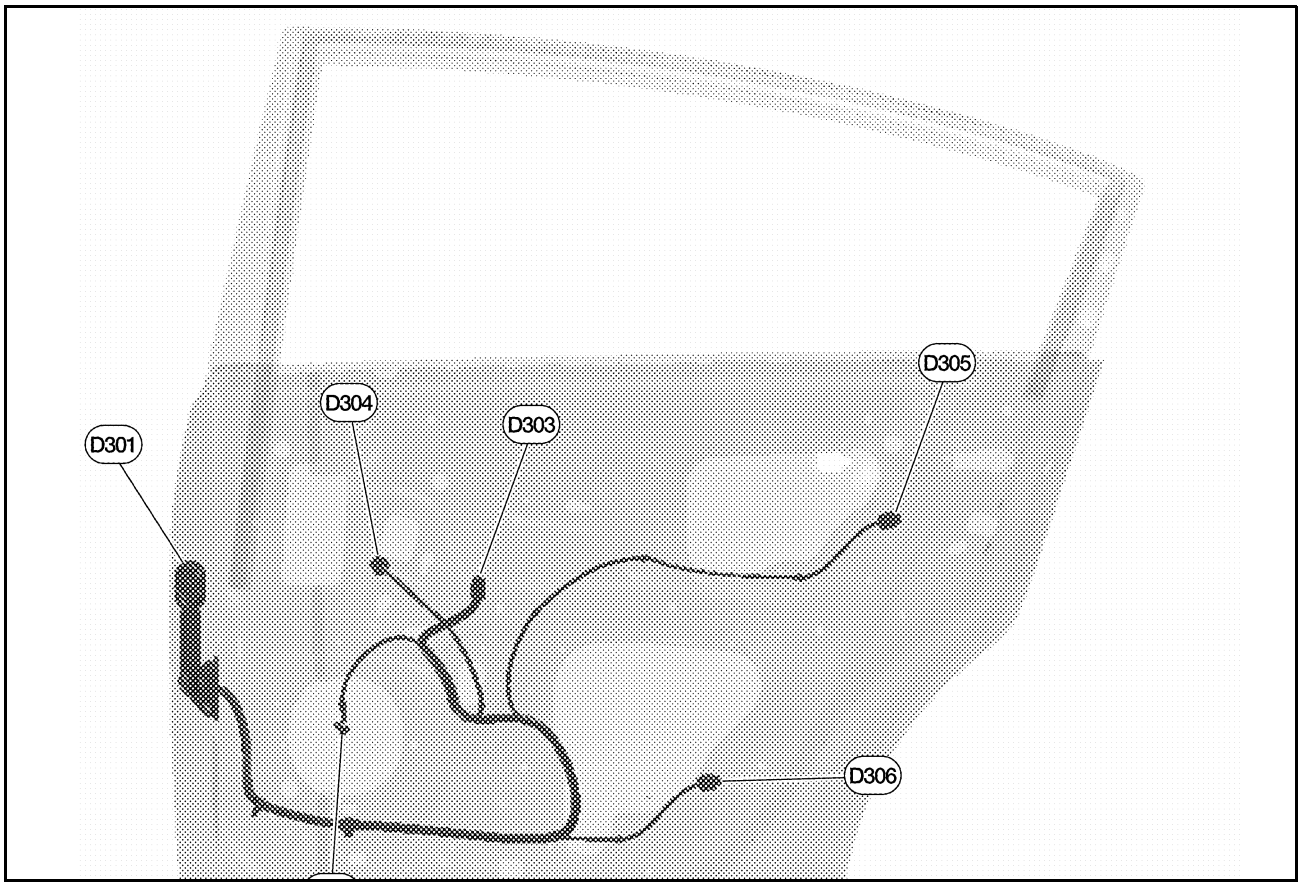
D101	W/8	: To M75	D107	W/12	: Door mirror RH (without auto dimming outside mirrors)
D102	W/24	: To M74	D108	W/2	: Front step lamp RH
D103	W/2	: Front door speaker RH (without BOSE audio system)	D112	BR/2	: Tweeter RH
D103	BR/2	: Front door speaker RH (with BOSE audio system)	Front door RH sub-harness		
D104	W/6	: Front power window motor RH	D150	W/6	: To D106
D105	W/16	: Power window and door lock/unlock switch RH	D151	B/6	: Front door lock actuator RH
D106	W/6	: To D150	D152	B/4	: To D160
D107	W/16	: Door mirror RH (with auto dimming outside mirrors)			

REAR DOOR LH HARNESS



D201	W/12	: To B6	D204	GR/2	: Rear power window motor LH (with left and right front power window anti-pinch system)
D202	BR/2	: Rear door speaker LH (with BOSE audio system)	D204	GR/6	: Rear power window motor LH (with left and right front power window anti-pinch system)
D202	W/2	: Rear door speaker LH (without BOSE audio system)	D205	B/6	: Rear door lock actuator LH
D203	W/8	: Rear power window switch LH (with left and right front power window anti-pinch system)	D206	W/8	: Rear step lamp LH
D203	W/16	: Rear power window switch LH (with left and right front power window anti-pinch system)			

REAR DOOR RH HARNESS



D301	W/12	: To B106	D304	GR/2	: Rear power window motor RH (with left and right front power window anti-pinch system)
D302	W/2	: Rear door speaker RH (without BOSE audio system)	D304	GR/6	: Rear power window motor RH (with left and right front power window anti-pinch system)
D302	BR/2	: Rear door speaker RH (with BOSE audio system)	D305	B/6	: Rear door lock actuator RH
D303	W/8	: Rear power window switch RH (with left and right front power window anti-pinch system)	D306	W/8	: Rear step lamp RH
D303	W/16	: Rear power window switch RH (with left and right front power window anti-pinch system)			

Wiring Diagram Codes (Cell Codes)

EKS009IA

Use the chart below to find out what each wiring diagram code stands for.
Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
A/C,A	ATC	Auto Air Conditioner
AF1B1	EC	Air Fuel Ratio Sensor 1 Bank 1
AF1B2	EC	Air Fuel Ratio Sensor 1 Bank 2
AF1HB1	EC	Air Fuel Ratio Sensor 1 Heater Bank 1
AF1HB2	EC	Air Fuel Ratio Sensor 1 Heater Bank 2
AUTO/L	LT	Auto Light Control
APPS1	EC	Accelerator Pedal Position Sensor
APPS2	EC	Accelerator Pedal Position Sensor
APPS3	EC	Accelerator Pedal Position Sensor
ASCBOF	EC	ASCD Brake Switch
ASC/BS	EC	ASCD Brake Switch
ASCIND	EC	ASCD Indicator
ASC/SW	EC	ASCD Steering Switch
AUDIO	AV	Audio
AUT/DP	SE	Automatic Drive Positioner
BACK/L	LT	Back-up Lamp
BRK/SW	EC	Brake Switch
CAN	CVT	CAN Communication Line
CAN	EC	CAN Communication Line
CAN	LAN	CAN System
CHARGE	SC	Charging System
CHIME	DI	Warning Chime
COOL/F	EC	Cooling Fan Control
COMBSW	LT	Combination Switch
COMM	AV	Audio Visual Communication System
COMPAS	DI	Compass
CORNER	LT	Cornering Lamps
CVTIND	DI	CVT Indicator Lamp
D/LOCK	BL	Power Door Lock
DEF	GW	Rear Window Defogger
DTRL	LT	Headlamp - With Daytime Light System
ECM/PW	EC	ECM Power Supply for Back-Up
ECTS	EC	Engine Coolant Temperature Sensor
EMNT	EC	Engine Mount
ETC1	EC	Electric Throttle Control Function
ETC2	EC	Throttle Control Motor Relay
ETC3	EC	Throttle Control Motor
F/FOG	LT	Front Fog Lamp
F/PUMP	EC	Fuel Pump
FTS	CVT	CVT Fluid Temperature Sensor Circuit
FTTS	EC	Fuel Tank Temperature Sensor
FUELB1	EC	Fuel Injection System Bank 1
FUELB2	EC	Fuel Injection System Bank 2
H/LAMP	LT	Headlamp
HORN	WW	Horn
H/PHON	AV	Hands Free Telephone
HSEAT	SE	Heated Seat

H/STRG	PS	Heated Steering Wheel
I/MIRR	GW	Inside Mirror (Auto Anti-Dazzling Mirror)
IATS	EC	Intake Air Temperature Sensor
IGNSYS	EC	Ignition System
I/KEY	BL	Intelligent Key System
ILL	LT	Illumination
INF/D	AV	Vehicle Information and Integrated Switch System
INJECT	EC	Injector
IVCB1	EC	Intake Valve Timing Control Solenoid Valve Bank 1
IVCB2	EC	Intake Valve Timing Control Solenoid Valve Bank 2
KS	EC	Knock Sensor
LPSV	CVT	Line Pressure Solenoid Valve
L/USSV	CVT	Lock-up Select Solenoid Valve
MAFS	EC	Mass Air Flow Sensor
MAIN	EC	Main Power Supply and Ground Circuit
METER	DI	Speedometer, Tachometer, Temp., Oil and Fuel Gauges
MIL/DL	EC	Malfunction Indicator Lamp
MIRROR	GW	Door Mirror
MMSW	CVT	Manual Mode Switch
NATS	BL	Nissan Anti-Theft System
NAVI	AV	Navigation System
NONDTC	CVT	Non-Detective Items
O2H2B1	EC	Rear Heated Oxygen Sensor 2 (Rear) Heater Bank 1
O2H2B2	EC	Rear Heated Oxygen Sensor 2 (Rear) Heater Bank 2
O2S2B1	EC	Heated Oxygen Sensor 2 (Rear) Bank 1
O2S2B2	EC	Heated Oxygen Sensor 2 (Rear) Bank 2
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHSB1	EC	Camshaft Position Sensor (PHASE) (Bank 1)
PHSB2	EC	Camshaft Position Sensor (PHASE) (Bank 2)
PNP/SW	CVT	Park/Neutral Position Switch
PNP/SW	EC	Park/Neutral Position Switch
POS	EC	Crankshaft Position Sensor (CKPS) (POS)
POWER	CVT	Transmission Control Module (Power Supply)
POWER	PG	Power Supply Routing
PRE/SE	EC	EVAP Control System Pressure Sensor
PRSCVT	CVT	Primary Speed Sensor CVT (Revolution Sensor)
PRIPS	CVT	Primary Pressure Sensor
P/SCKT	WW	Power Socket
PS/SEN	EC	Power Steering Oil Pressure Sensor
ROOM/L	LT	Interior Room Lamp
RP/SEN	EC	Refrigerant Pressure Sensor
SEAT	SE	Power Seat
SECPS	CVT	Secondary Pressure Sensor
SECPSV	CVT	Secondary Pressure Solenoid Valve
SEN/PW	EC	Sensor Power Supply
SHADE	EI	Rear Sunshade
SHIFT	CVT	CVT Shift Lock System
SESCVT	CVT	Secondary Speed Sensor CVT (Revolution Sensor)
SONAR	DI	Rear Sonar System
SROOF	RF	Sunroof
SRS	SRS	Supplemental Restraint System
START	SC	Starting System

STM	CVT	Step Motor
STOP/L	LT	Stop Lamp
STSIG	CVT	Start Signal Circuit
T/WARN	WT	Low Tire Pressure Warning System
TCV	CVT	Torque Converter Clutch Solenoid Valve
TLID	BL	Trunk Lid Opener
TAIL/L	LT	Parking, License and Tail Lamps
TCS	BRC	Traction Control System
TPS1	EC	Throttle Position Sensor
TPS2	EC	Throttle Position Sensor
TPS3	EC	Throttle Position Sensor
TRNSCV	BL	HOMELINK® Universal Transceiver
TRSC	AT	Turbine Revolution Sensor
TURN	LT	Turn Signal and Hazard Warning Lamps
VDC	BRC	Vehicle Dynamic Control System
VEHSEC	BL	Vehicle Security System
VENT/V	EC	EVAP Canister Vent Control Valve
VIAS	EC	Variable Air Induction Control System
VIAS/V	EC	Variable Air Induction Control System Valve
W/ANT	AV	Audio Antenna
WARN	DI	Warning Lamps
WINDOW	GW	Power Window
WIPER	WW	Front Wiper and Washer

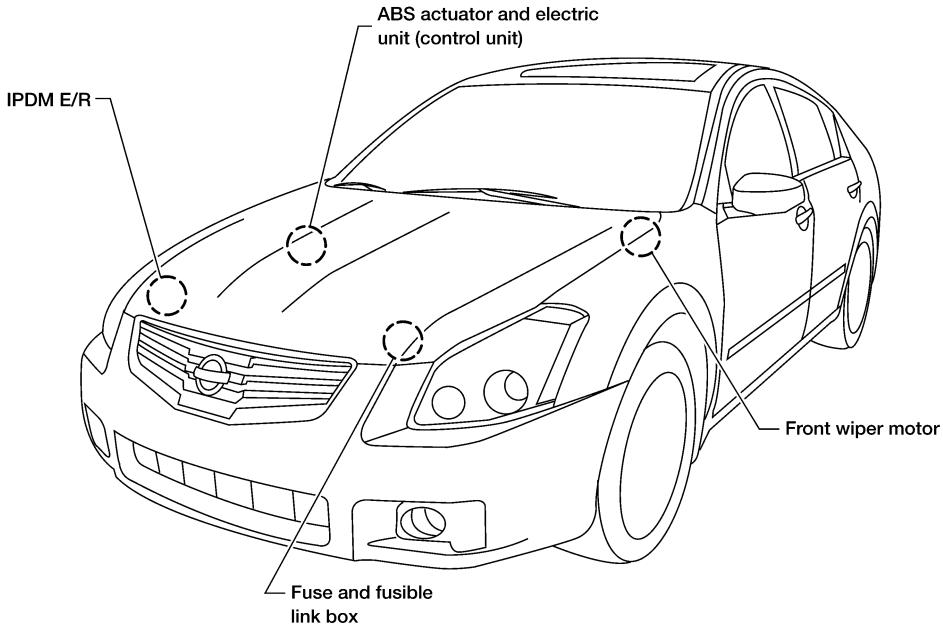
ELECTRICAL UNITS LOCATION

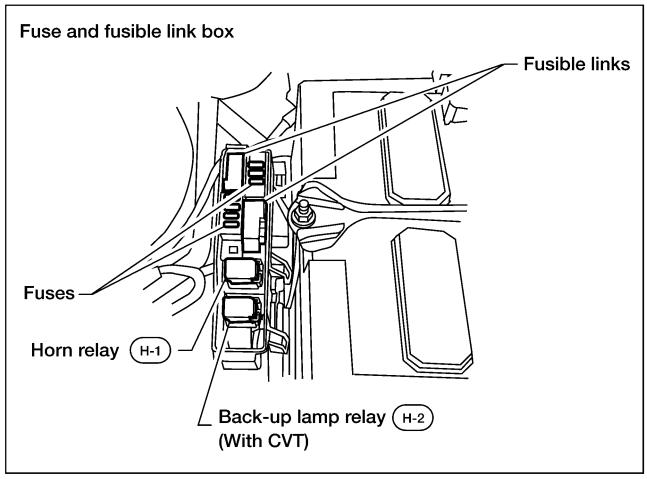
PFP:25230

Electrical Units Location

EKS009IB

ENGINE COMPARTMENT





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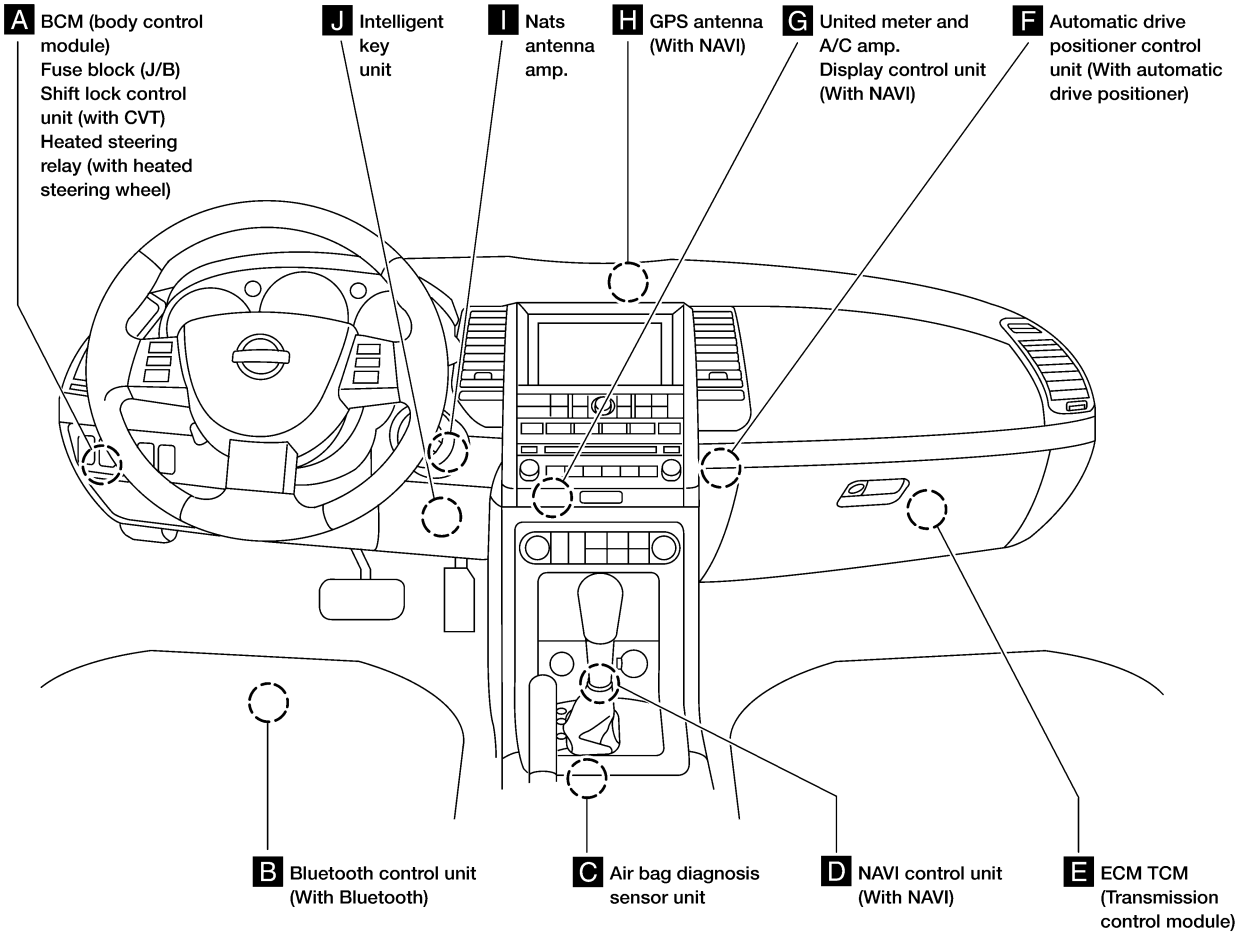
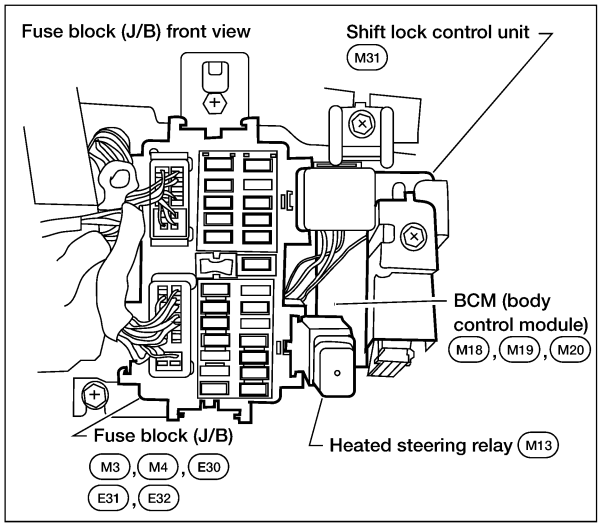
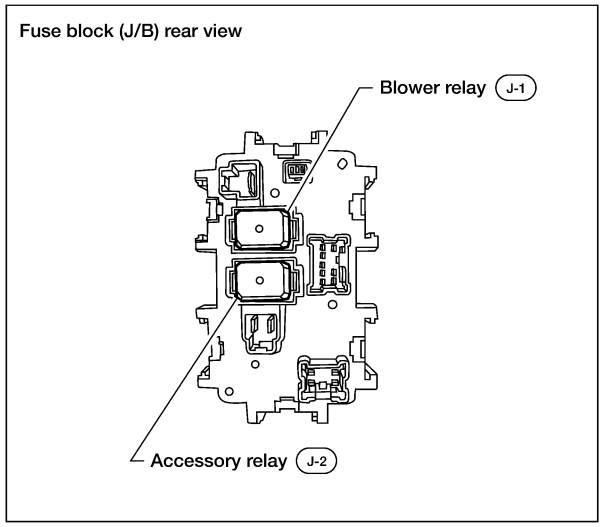
PASSENGER COMPARTMENT



A Instrument panel side LH





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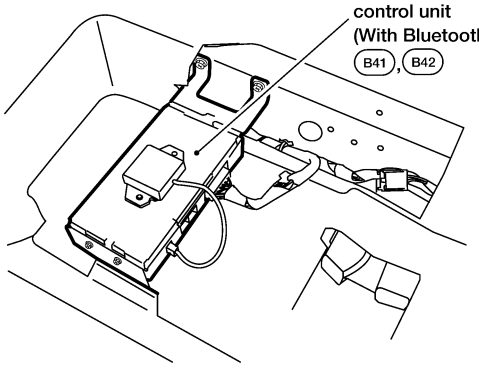
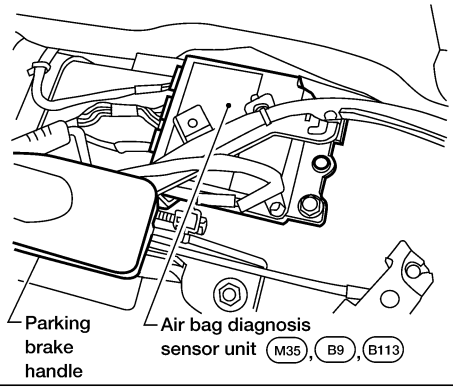
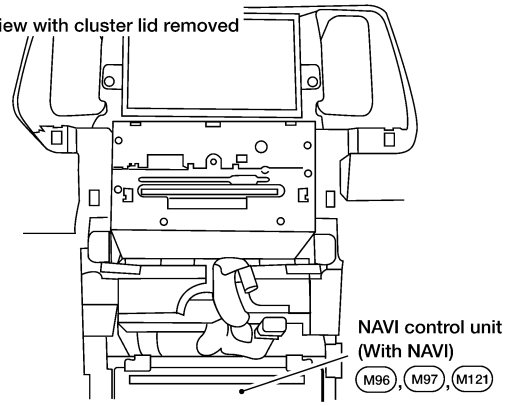
B View with front driver seat removed



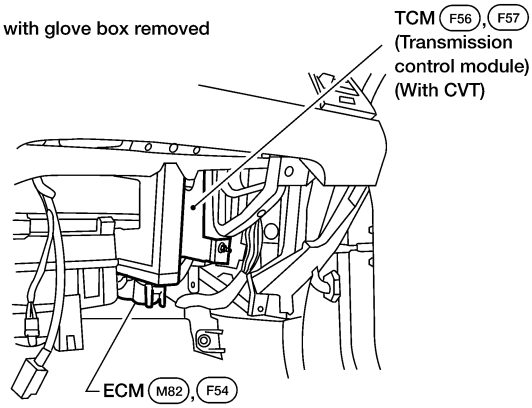
C View with center console removed



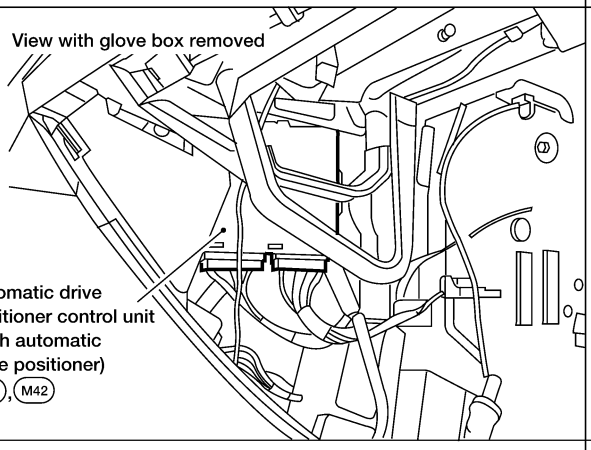
D View with cluster lid removed



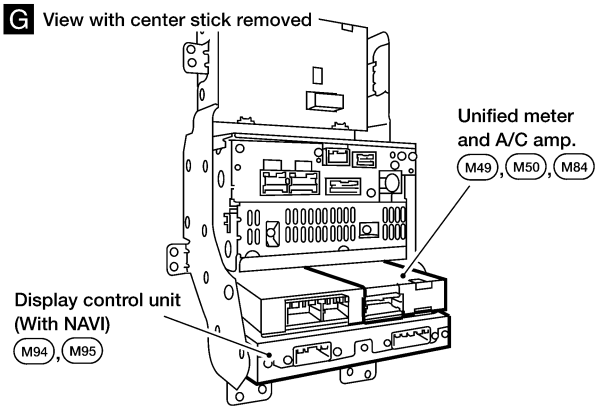
E View with glove box removed



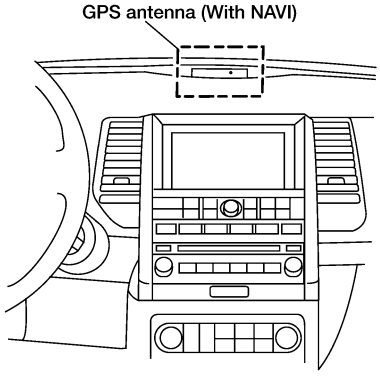
F View with glove box removed



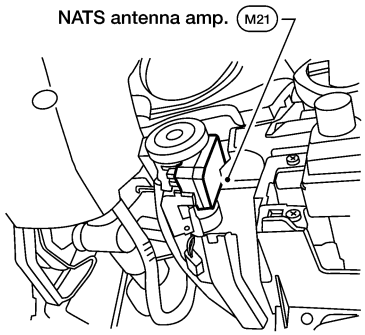
G View with center stick removed



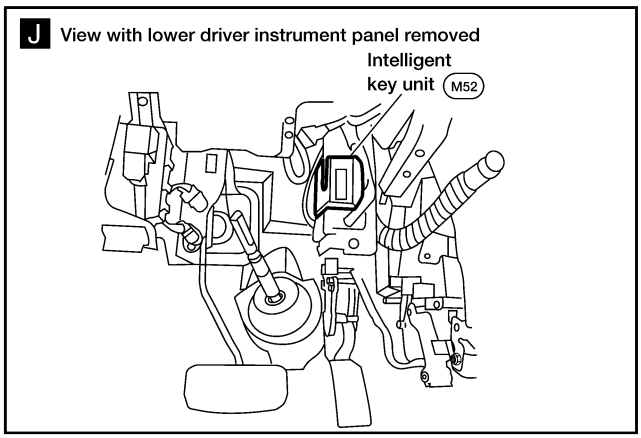
H Behind instrument panel finisher



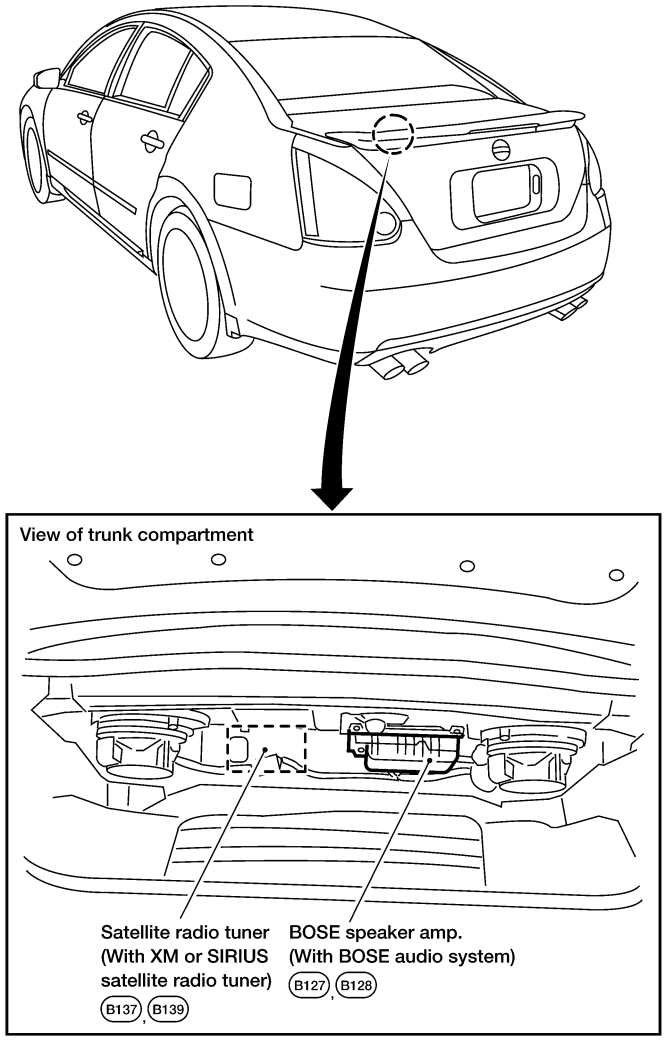
I View with lower driver instrument panel removed



WKIA5567E


J View with lower driver instrument panel removed
Intelligent key unit M52

WKIA5568E


View of trunk compartment
Satellite radio tuner
(With XM or SIRIUS
satellite radio tuner)
B137, B139
BOSE speaker amp.
(With BOSE audio system)
B127, B128

WKIA5572E

HARNESS CONNECTOR

PFP:B4341

Description

EKS009IF

HARNESS CONNECTOR (TAB-LOCKING TYPE)

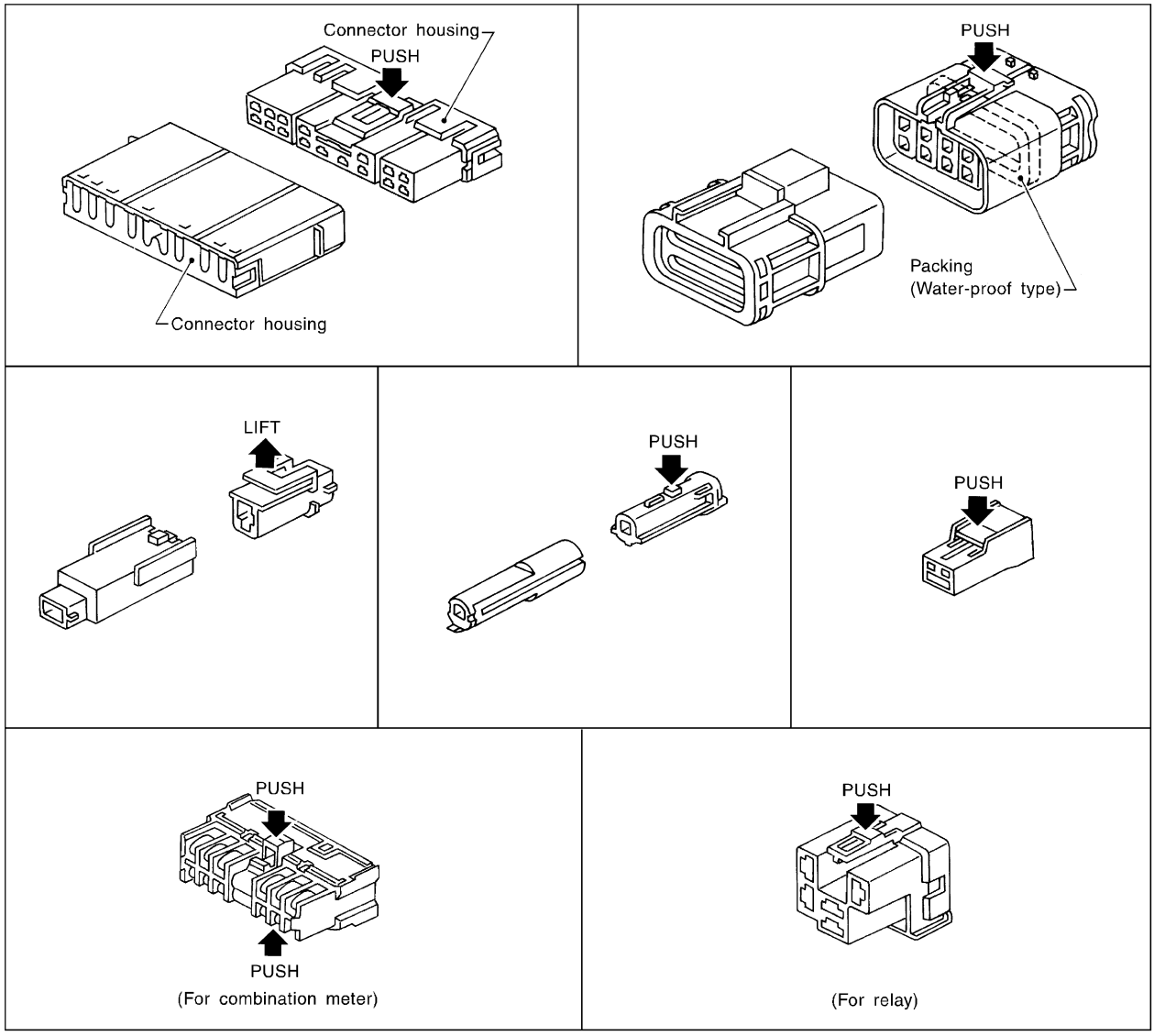
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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

CAUTION:

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

[Example]



SEL769DA

HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

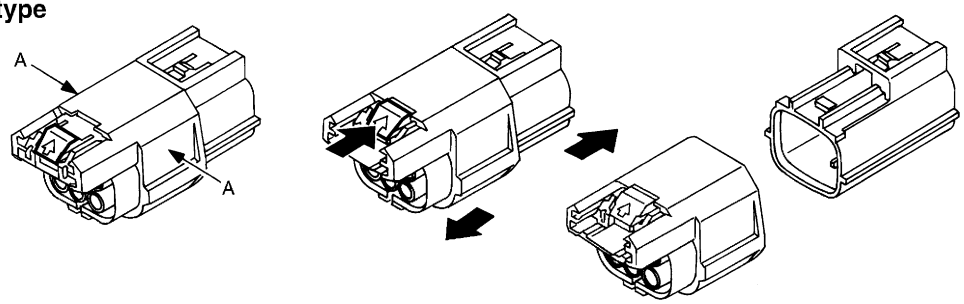
- A new style slide-locking type connector is used on certain systems and components, especially those related to OBD.
- The slide-locking type connectors help prevent incomplete locking and accidental looseness or disconnection.
- The slide-locking type connectors are disconnected by pushing or pulling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

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]

Waterproof type

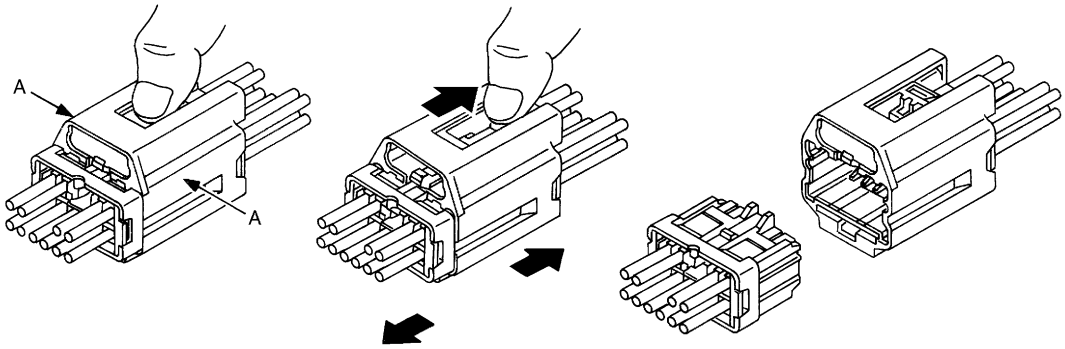


① Firmly grasp shell of connector housing at A.

② Push slider until connector pops or snaps apart.

③ Disconnect harness connector.

Non-waterproof type



① Firmly grasp shell of connector housing at A.

② Pull back on the slider while pulling apart male and female halves of connector.

③ Disconnect harness connector.

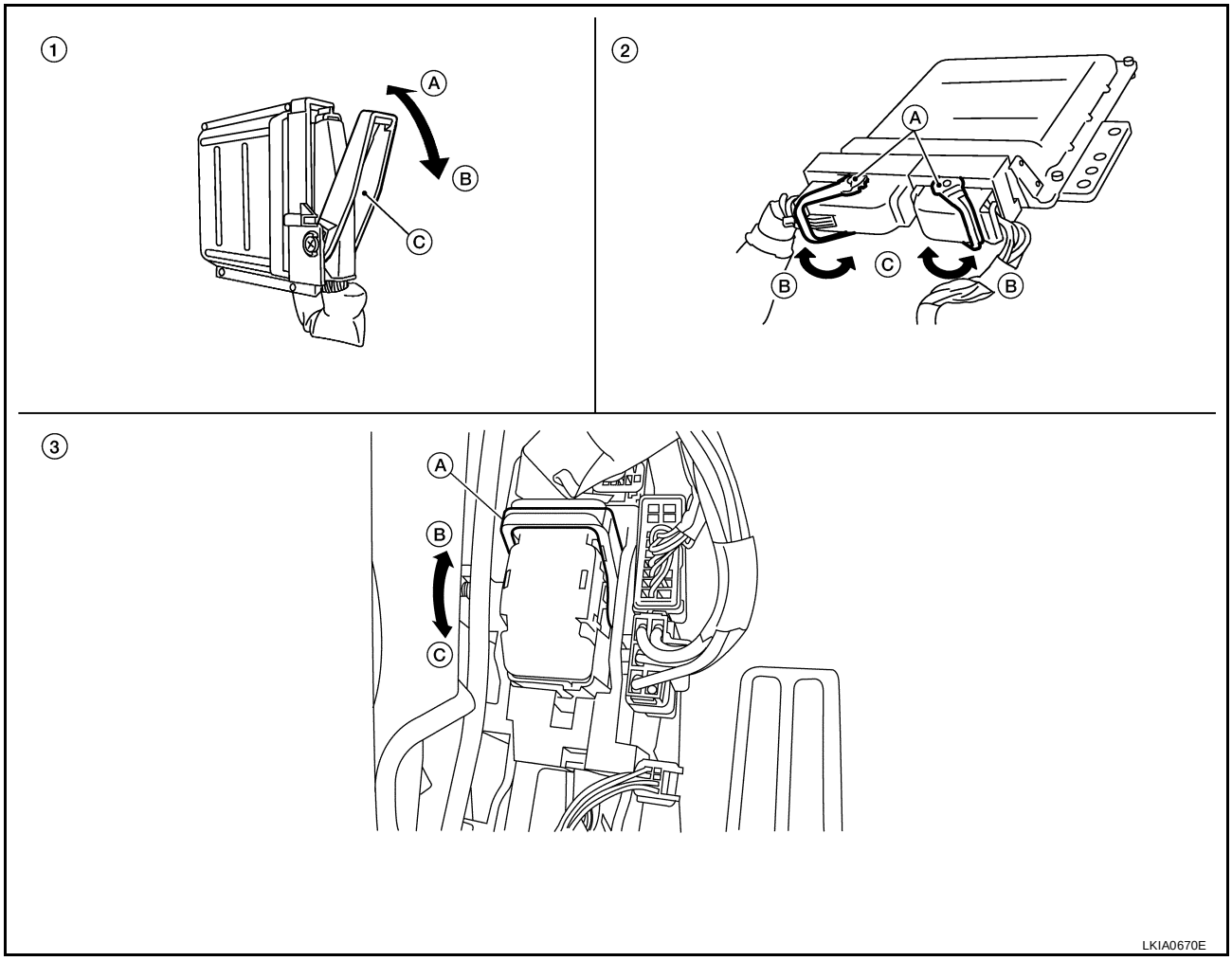
AEL299C

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.



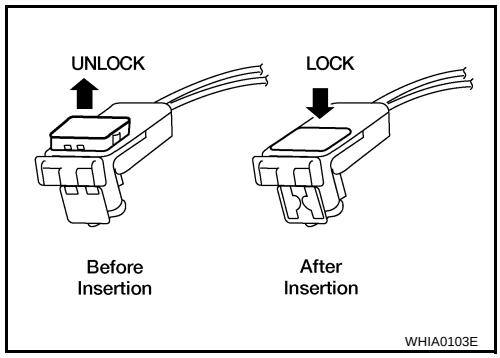
1. Control unit with single lever
   A. Fasten
   B. Loosen
   C. Lever
2. Control unit with dual levers
   A. Levers
   B. Fasten
   C. Loosen
3. SMJ connector
   A. Lever
   B. Fasten
   C. Loosen

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.**



ELECTRICAL UNITS

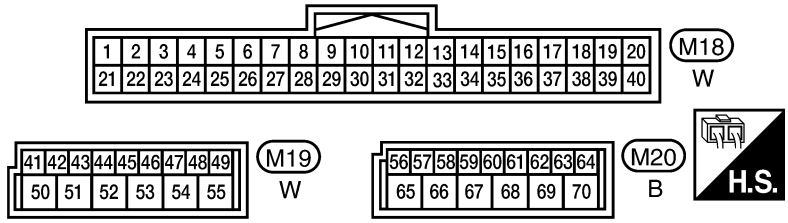
PFP:23710

Terminal Arrangement

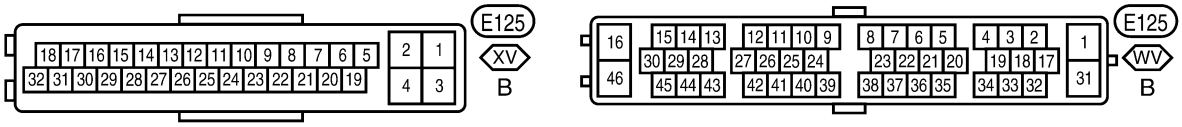
EKS009IG

WV : WITH VDC
XV : WITHOUT VDC

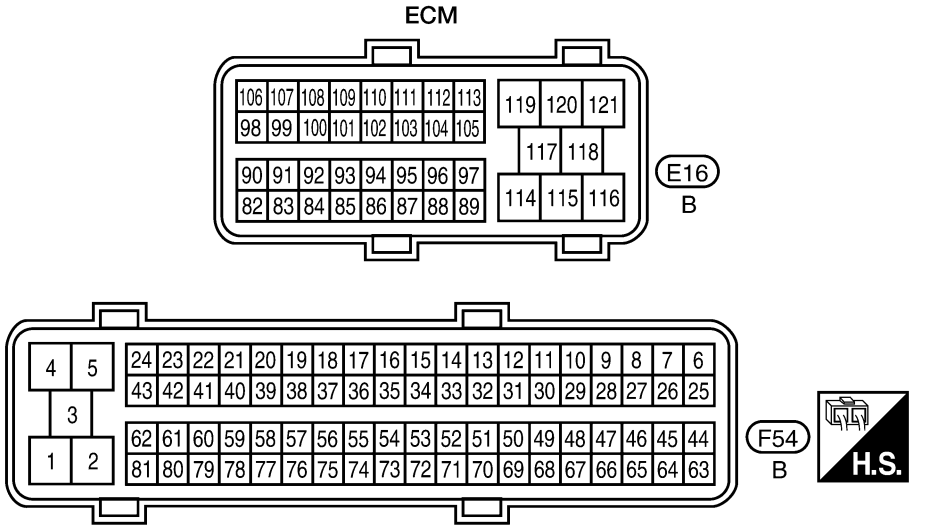
BCM (BODY CONTROL MODULE)



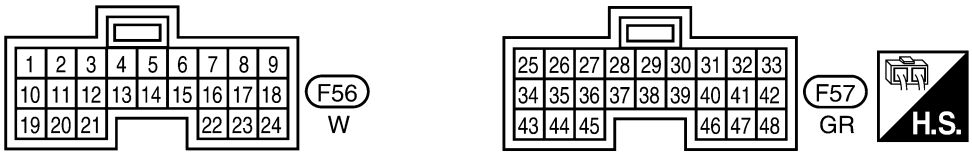
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



ECM



TCM (TRANSMISSION CONTROL MODULE)



WKIA5569E

STANDARDIZED RELAY

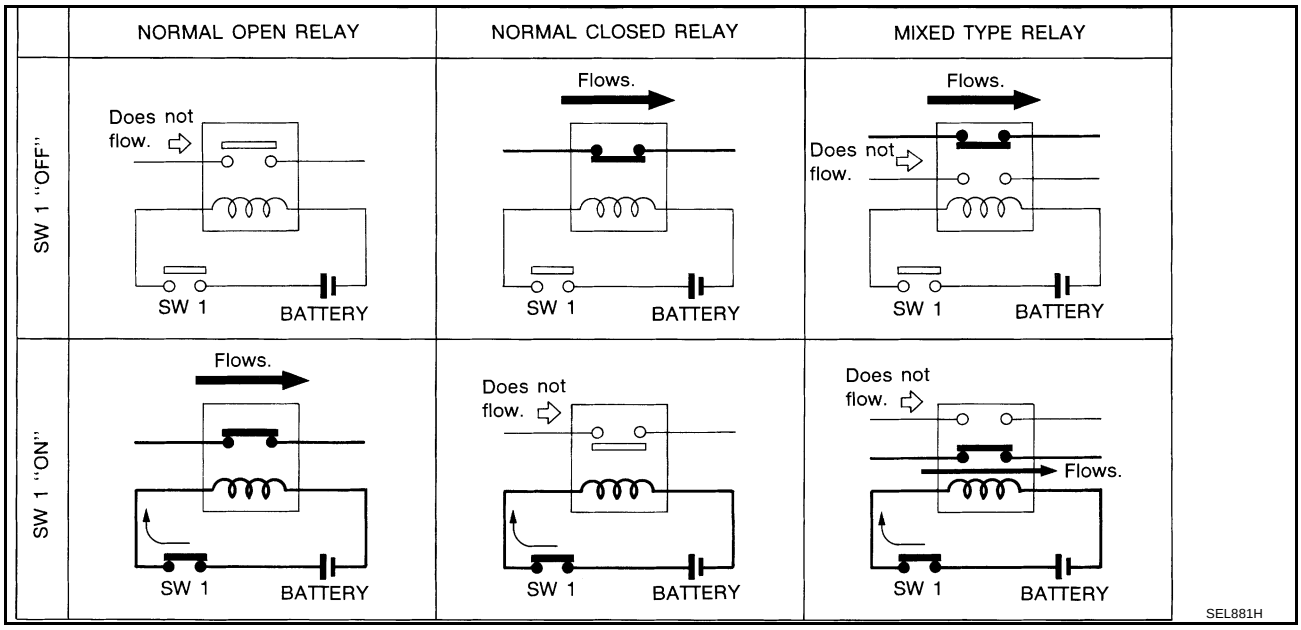
PFP:25230

Description

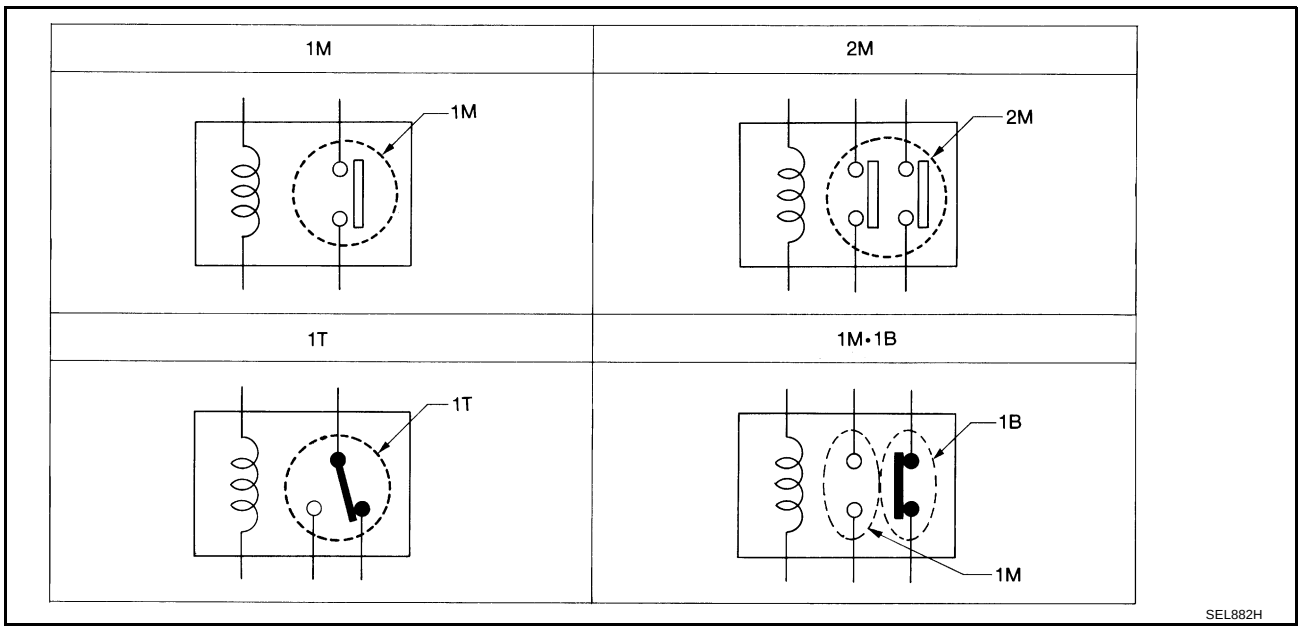
EKS009IH

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

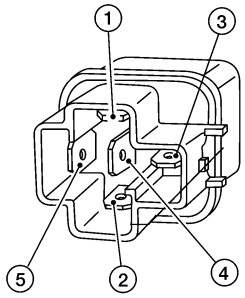
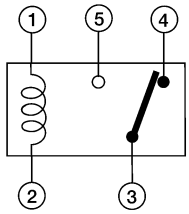
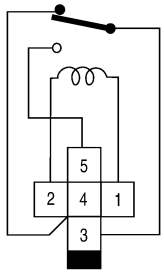
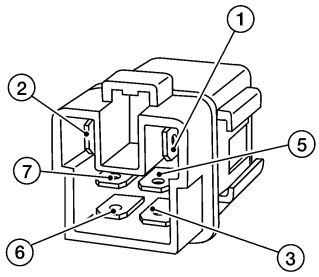
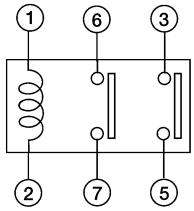
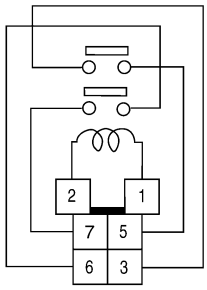
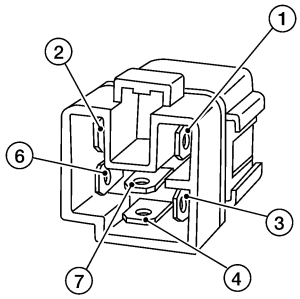
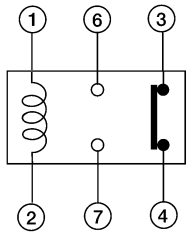
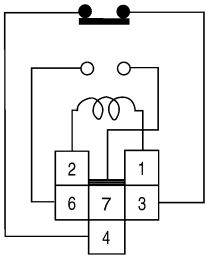
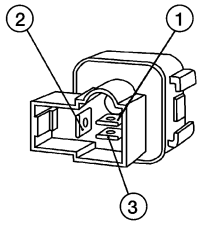
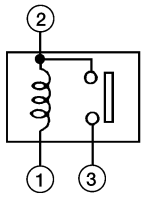
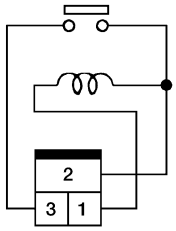
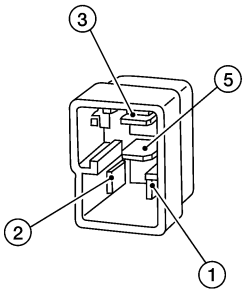
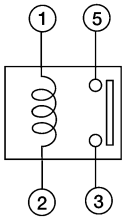
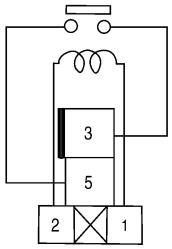
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



TYPE OF STANDARDIZED RELAYS



1M	1 Make		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.

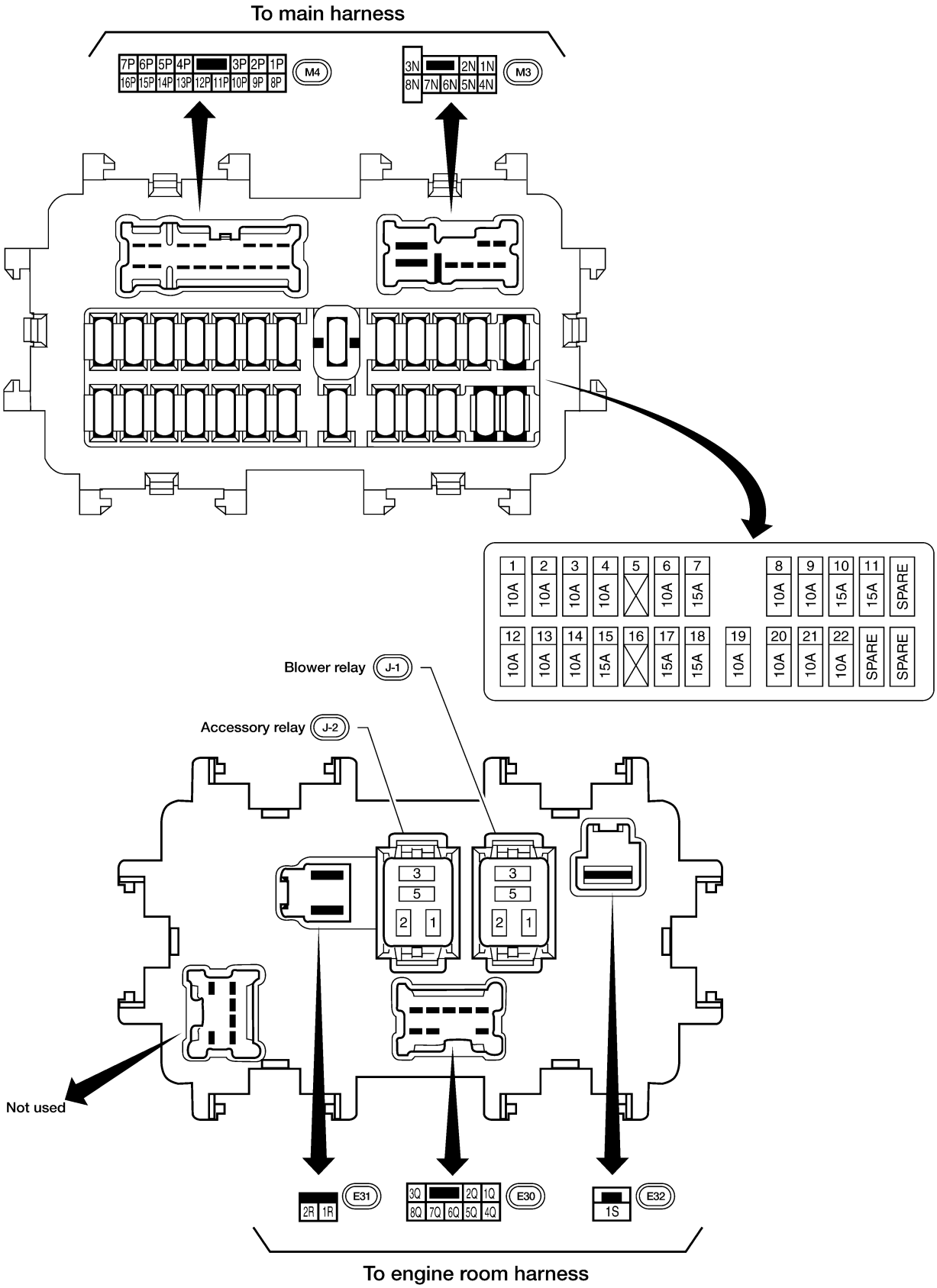
WKIA0253E

FUSE BLOCK-JUNCTION BOX (J/B)

PFP:24350

Terminal Arrangement

EKS009II



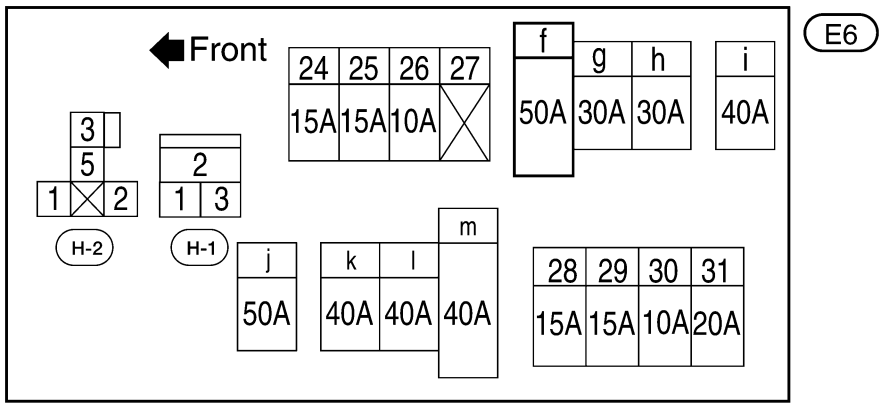
WKIA5570E

FUSE AND FUSIBLE LINK BOX

PFP:24381

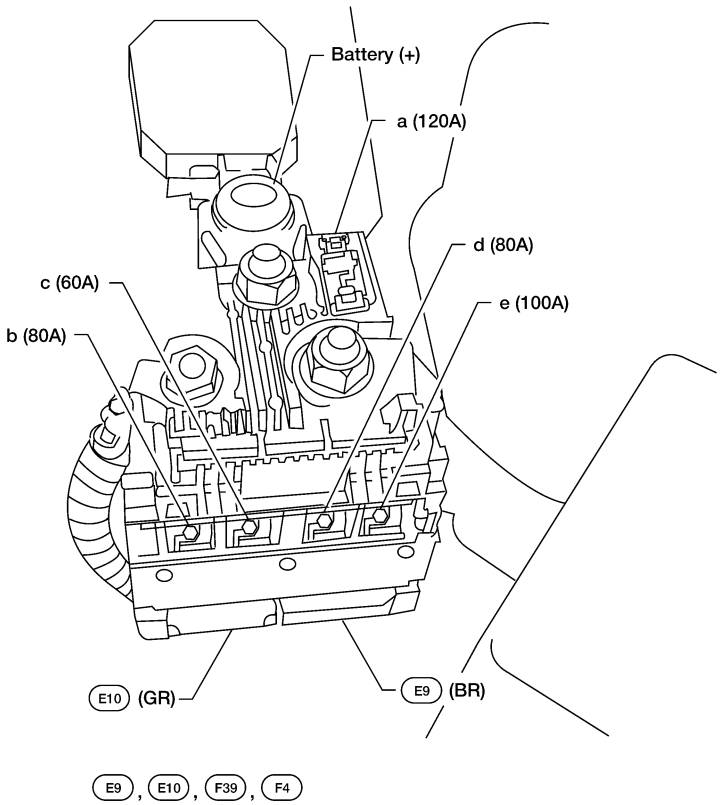
Terminal Arrangement

EKS009IJ



24 - 31: FUSE f - m : FUSIBLE LINK

FUSIBLE LINK BOX (BATTERY)



WKIA5571E