SECTION PG

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

PRECAUTIONS

PFP:00011

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

EKS006RO

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.**

Wiring Diagrams and Trouble Diagnosis

EKS006RP

When you read wiring diagrams, refer to the following:

- Refer to GI-15, "How to Read Wiring Diagrams" in GI section.
- Refer to PG-4, "POWER SUPPLY ROUTING CIRCUIT" for power distribution.

When you perform trouble diagnosis, refer to the following:

- Refer to GI-11, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES" in GI section.
- Refer to GI-27, "How to Perform Efficient Diagnosis for an Electrical Incident" in GI section.

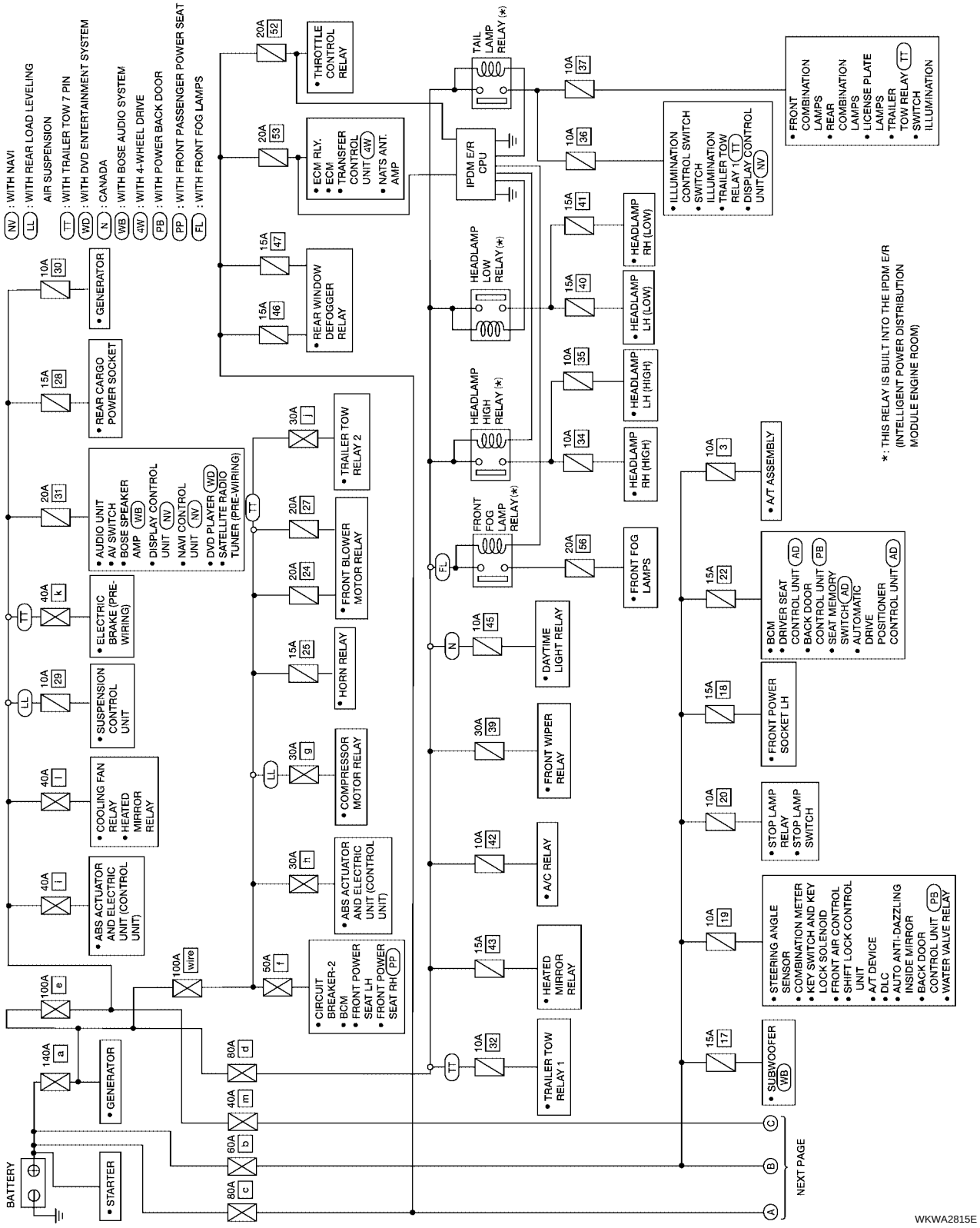
POWER SUPPLY ROUTING CIRCUIT

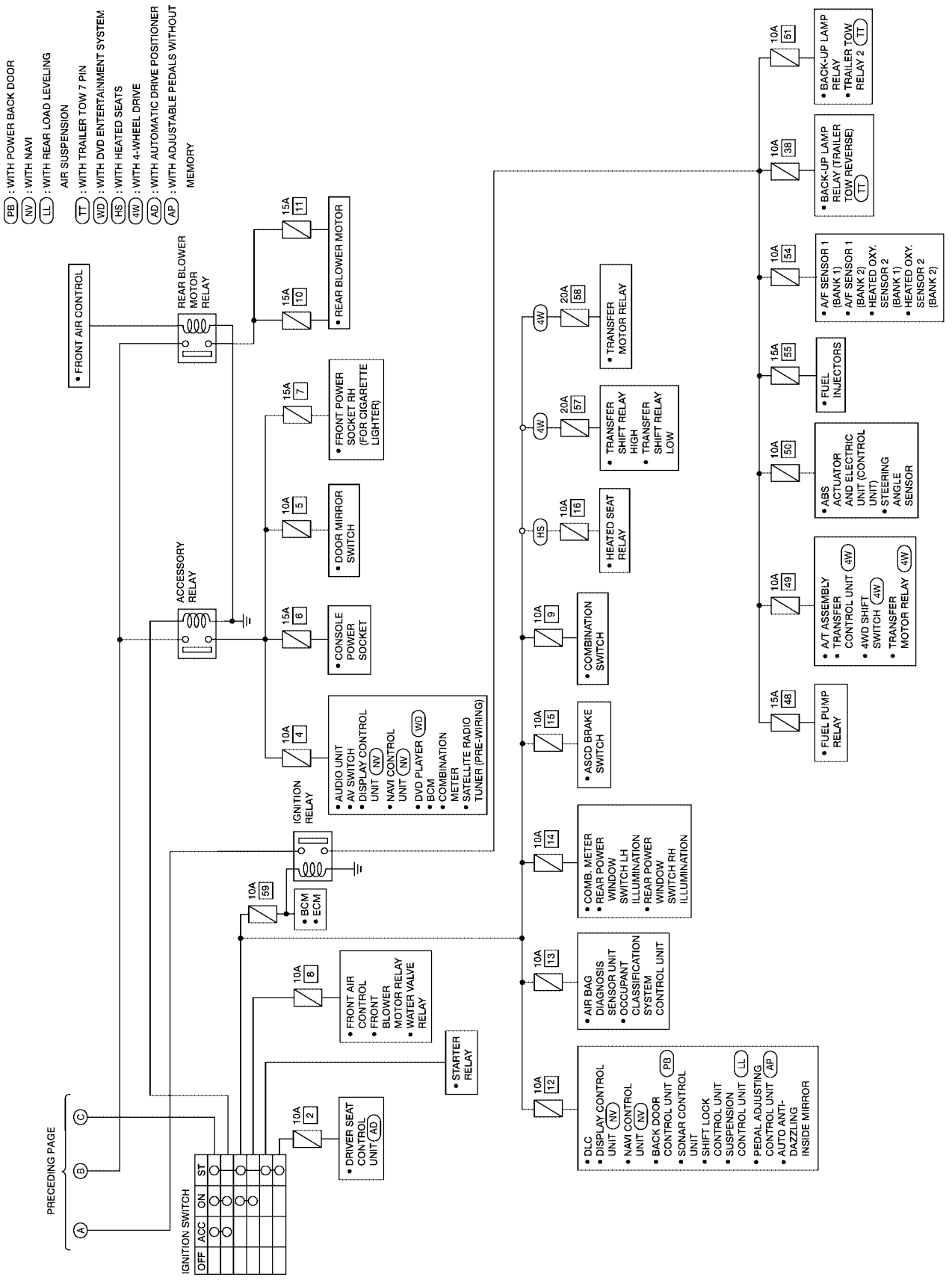
PFP:24110

Schematic

EKS006RQ

For detailed ground distribution, refer to PG-29, "Ground Distribution" .



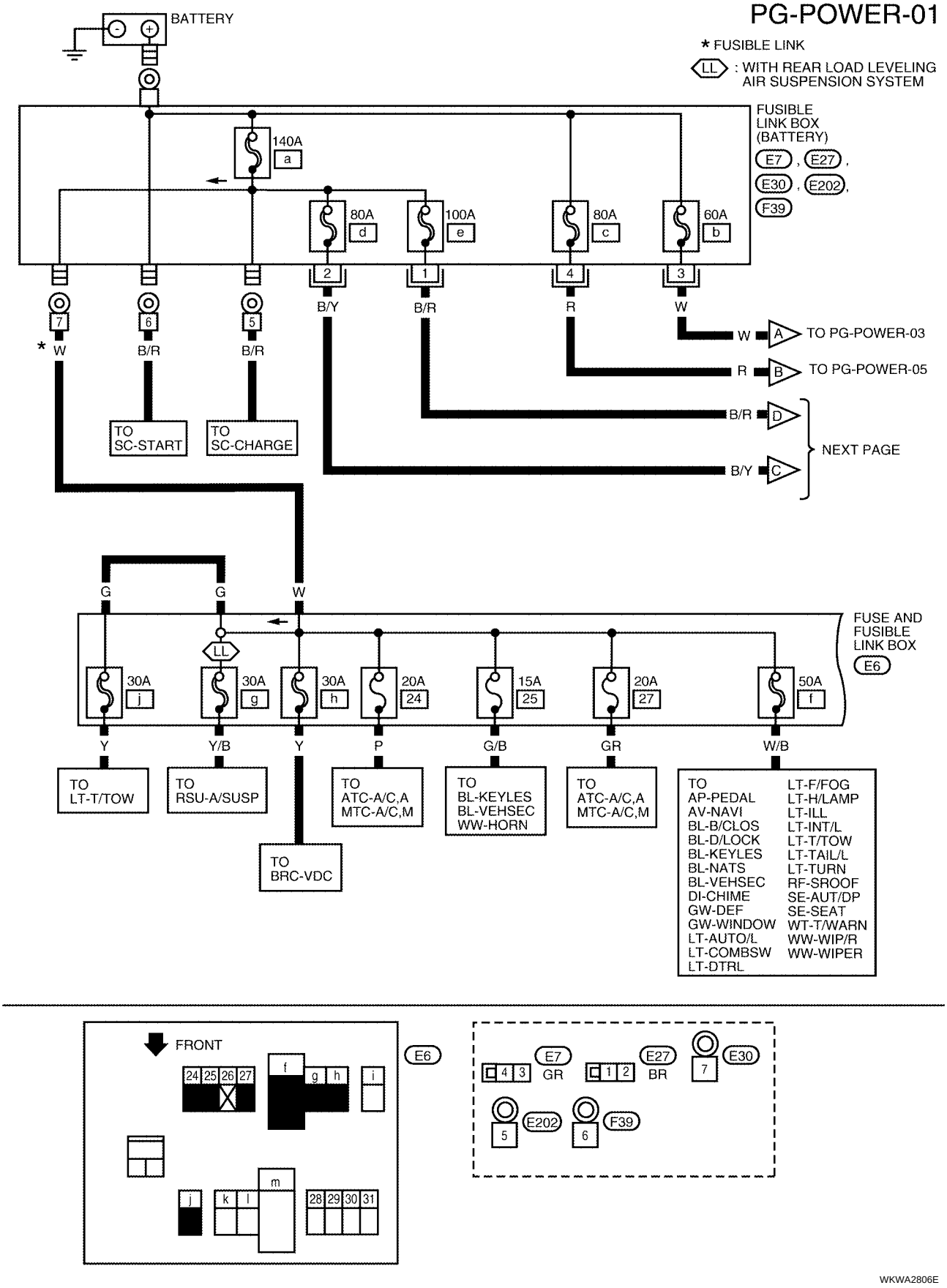

(PB) : WITH POWER BACK DOOR
(NV) : WITH NAVI
(LL) : WITH REAR LOAD LEVELING AIR SUSPENSION
(TT) : WITH TRAILER TOW 7 PIN
(WD) : WITH DVD ENTERTAINMENT SYSTEM
(HS) : WITH HEATED SEATS
(4W) : WITH 4-WHEEL DRIVE
(AD) : WITH AUTOMATIC DRIVE POSITIONER
(AP) : WITH ADJUSTABLE PEDALS WITHOUT MEMORY
PRECEDING PAGE
IGNITION SWITCH
OFF ACC ON ST
REAR BLOWER MOTOR RELAY
ACCESSORY RELAY
IGNITION RELAY
• FRONT AIR CONTROL
• REAR BLOWER MOTOR
• FRONT POWER SOCKET RH (FOR CIGARETTE LIGHTER)
• DOOR MIRROR SWITCH
• CONSOLE POWER SOCKET
• AUDIO UNIT
• AV SWITCH
• DISPLAY CONTROL UNIT (NV)
• NAVI CONTROL UNIT (NV)
• DVD PLAYER (WD)
• BCM
• COMBINATION METER
• SATELLITE RADIO TUNER (PRE-WIRING)
• BCM
• ECM
• FRONT AIR CONTROL
• FRONT BLOWER MOTOR RELAY
• WATER VALVE RELAY
• STARTER RELAY
• DRIVER SEAT CONTROL UNIT (AD)
• DLC
• DISPLAY CONTROL UNIT (NV)
• NAVI CONTROL UNIT (NV)
• BACK DOOR CONTROL UNIT (PB)
• SONAR CONTROL UNIT
• SHIFT LOCK CONTROL UNIT
• SUSPENSION CONTROL UNIT (LL)
• PEDAL ADJUSTING CONTROL UNIT (AP)
• AUTO ANTI-DAZZLING INSIDE MIRROR
• AIR BAG DIAGNOSIS SENSOR UNIT
• OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT
• COMB. METER
• REAR POWER WINDOW SWITCH LH ILLUMINATION
• REAR POWER WINDOW SWITCH RH ILLUMINATION
• ASCD BRAKE SWITCH
• COMBINATION SWITCH
• HEATED SEAT RELAY
• TRANSFER SHIFT RELAY HIGH
• TRANSFER SHIFT RELAY LOW
• TRANSFER MOTOR RELAY
• FUEL PUMP RELAY
• A/T ASSEMBLY
• TRANSFER CONTROL UNIT (4W)
• 4WD SHIFT SWITCH (4W)
• TRANSFER MOTOR RELAY (4W)
• ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
• STEERING ANGLE SENSOR
• FUEL INJECTORS
• A/F SENSOR 1 (BANK 1)
• A/F SENSOR 1 (BANK 2)
• HEATED OXY. SENSOR 2 (BANK 1)
• HEATED OXY. SENSOR 2 (BANK 2)
• BACK-UP LAMP RELAY (TRAILER TOW REVERSE) (TT)
• BACK-UP LAMP RELAY
• TRAILER TOW RELAY 2 (TT)

WKWA1577E

Wiring Diagram — POWER —

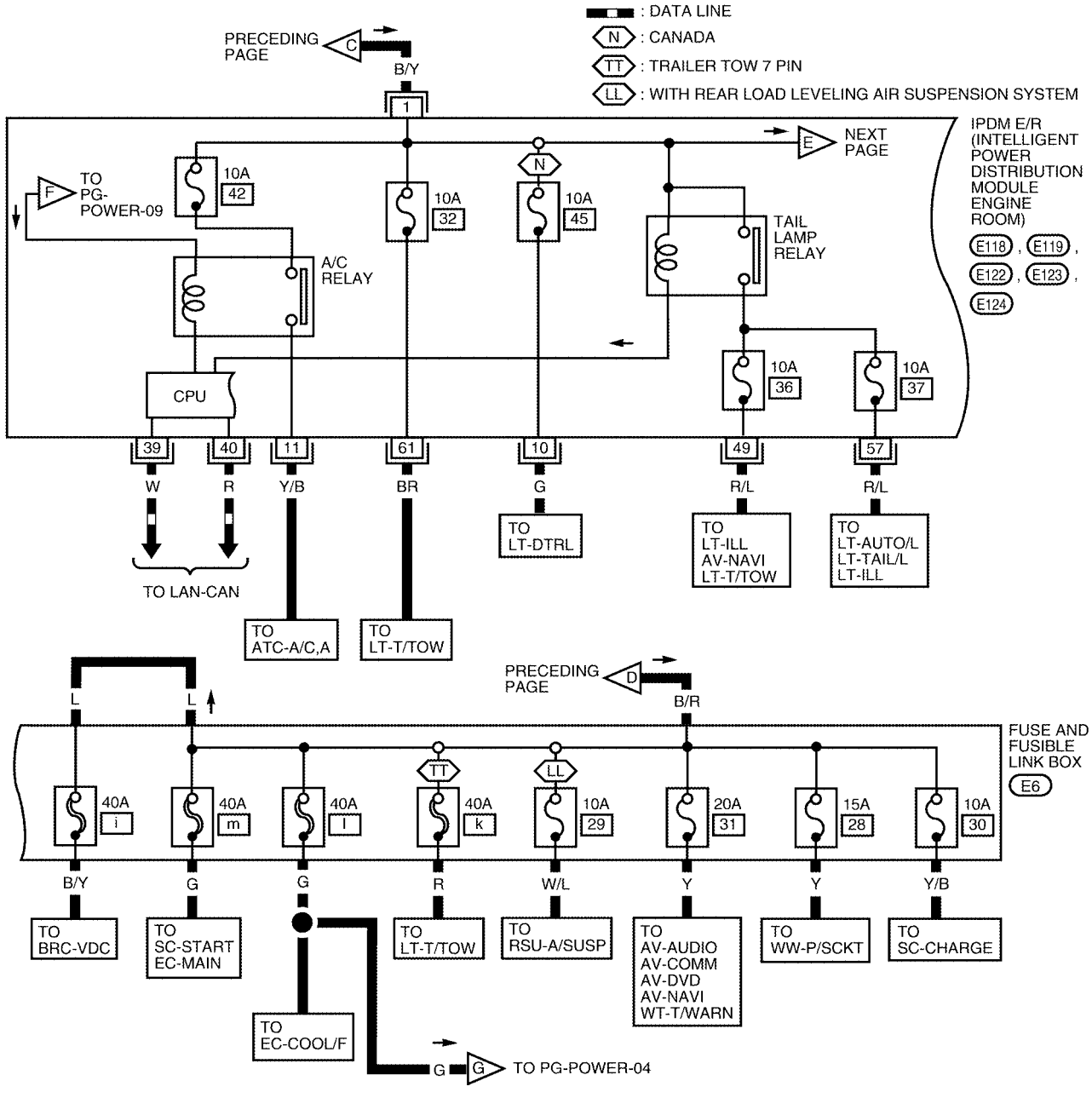
EKS006RR

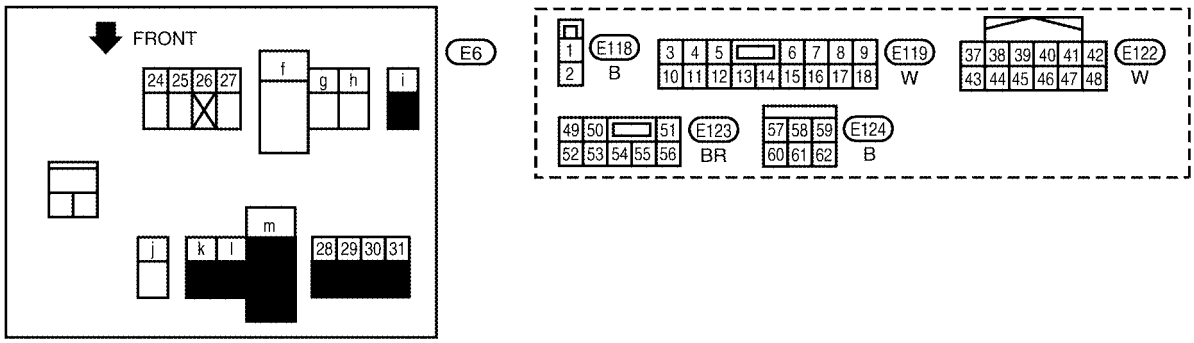
BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION



WKWA2806E

PG-POWER-02





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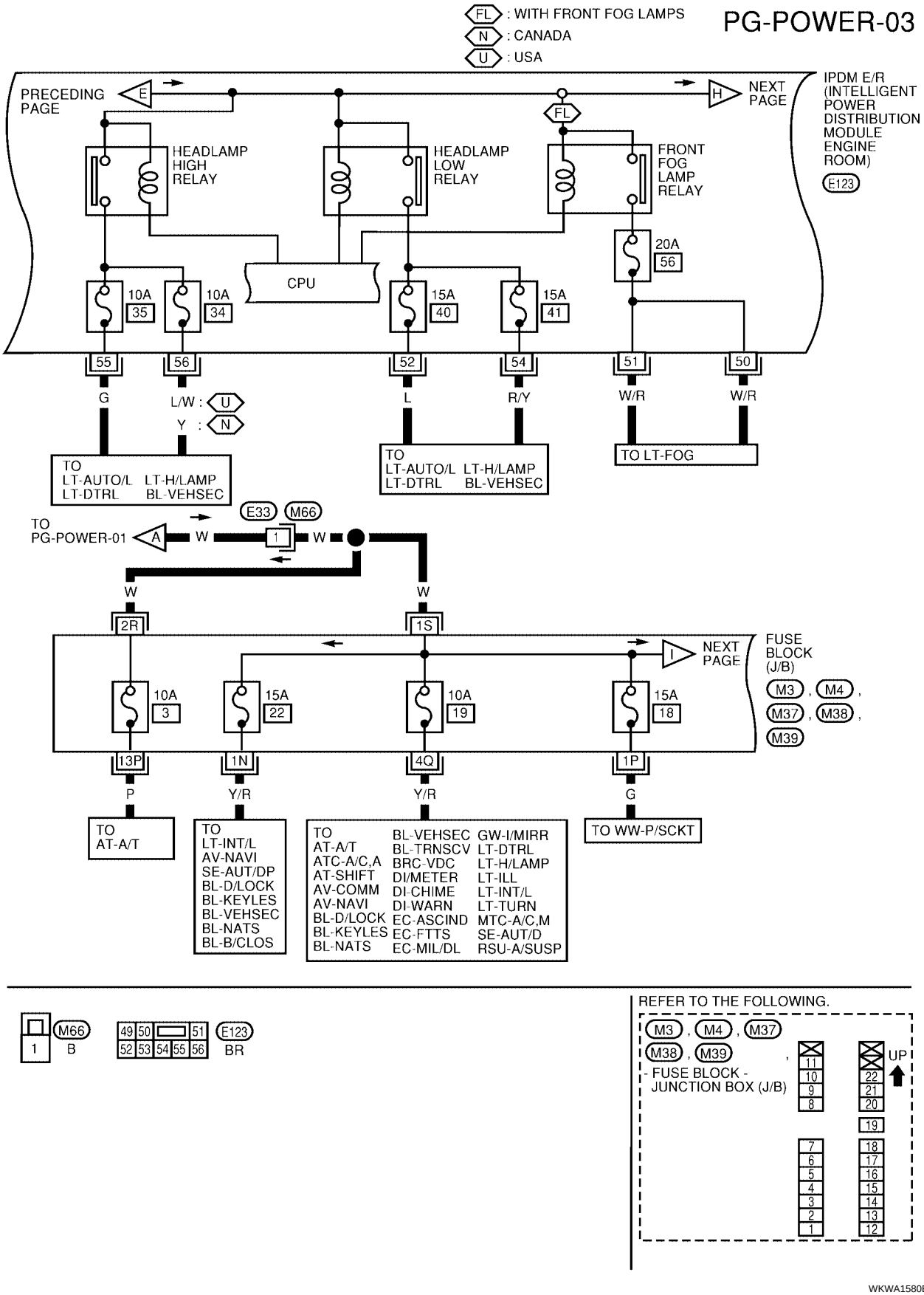
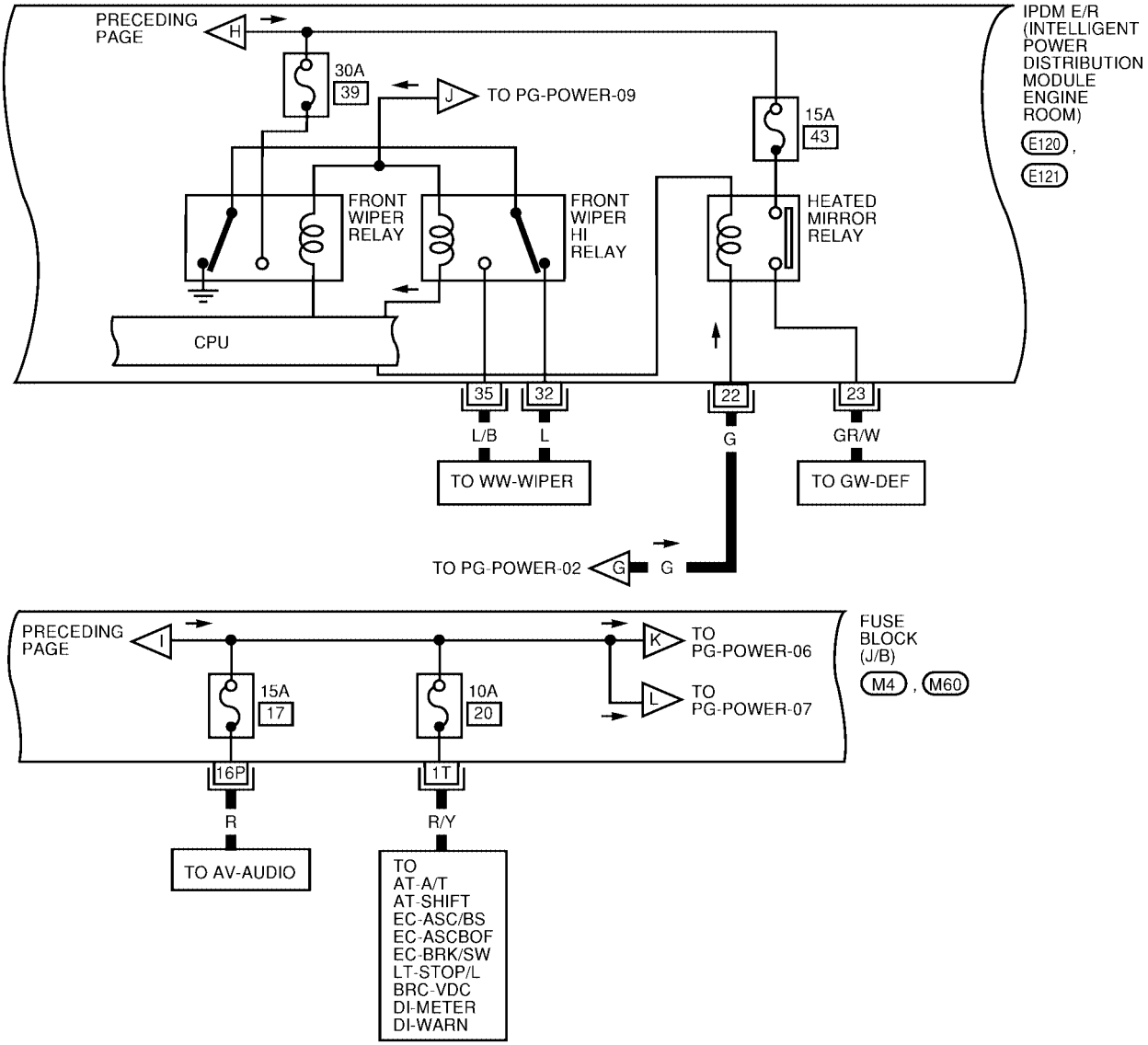
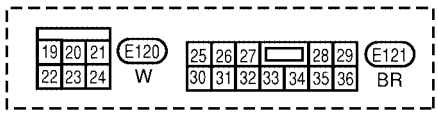

FL : WITH FRONT FOG LAMPS
N : CANADA
U : USA
PG-POWER-03
PRECEDING PAGE
E
H
NEXT PAGE
FL
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E123
HEADLAMP HIGH RELAY
HEADLAMP LOW RELAY
FRONT FOG LAMP RELAY
CPU
10A 35
10A 34
15A 40
15A 41
20A 56
55
56
52
54
51
50
G
L/W : U
Y : N
L
R/Y
W/R
W/R
TO LT-AUTO/L LT-H/LAMP LT-DTRL BL-VEHSEC
TO LT-AUTO/L LT-H/LAMP LT-DTRL BL-VEHSEC
TO LT-FOG
TO PG-POWER-01
A
W
E33
M66
1
W
W
W
2R
1S
NEXT PAGE
I
FUSE BLOCK (J/B)
M3, M4, M37, M38, M39
10A 3
15A 22
10A 19
15A 18
13P
1N
4Q
1P
P
Y/R
Y/R
G
TO AT-A/T
TO LT-INT/L AV-NAVI SE-AUT/DP BL-D/LOCK BL-KEYLES BL-VEHSEC BL-NATS BL-B/CLOS
TO AT-A/T ATC-A/C,A AT-SHIFT AV-COMM AV-NAVI BL-D/LOCK BL-KEYLES BL-NATS
BL-VEHSEC BL-TRNSCV BRC-VDC DI/METER DI-CHIME DI-WARN EC-ASCIND EC-FTTS EC-MIL/DL
GW-I/MIRR LT-DTRL LT-H/LAMP LT-ILL LT-INT/L LT-TURN MTC-A/C,M SE-AUT/D RSU-A/SUSP
TO WW-P/SCKT
M66
1
B
49 50 51 52 53 54 55 56
E123
BR
REFER TO THE FOLLOWING.
M3, M4, M37, M38, M39
- FUSE BLOCK - JUNCTION BOX (J/B)
UP
11 10 9 8 7 6 5 4 3 2 1
22 21 20 19 18 17 16 15 14 13 12

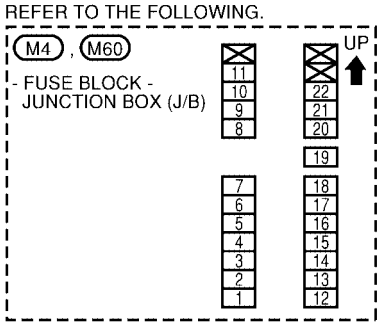
WKWA1580E

PG-POWER-04



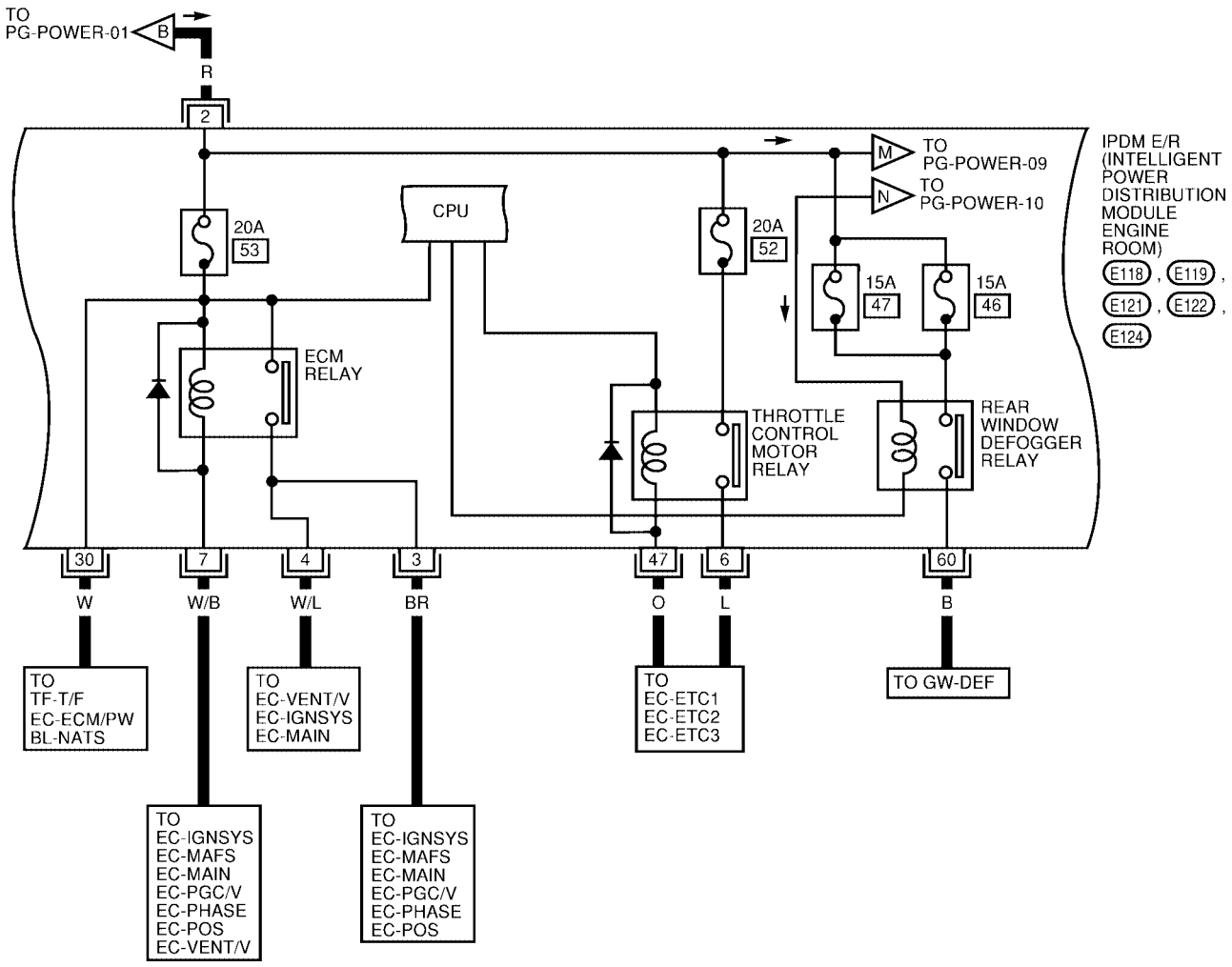


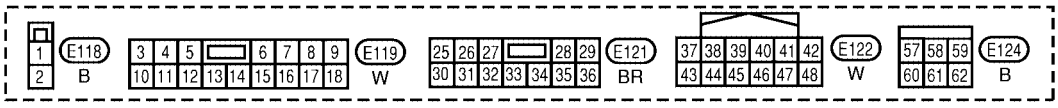
REFER TO THE FOLLOWING.



WKWA1581E

PG-POWER-05

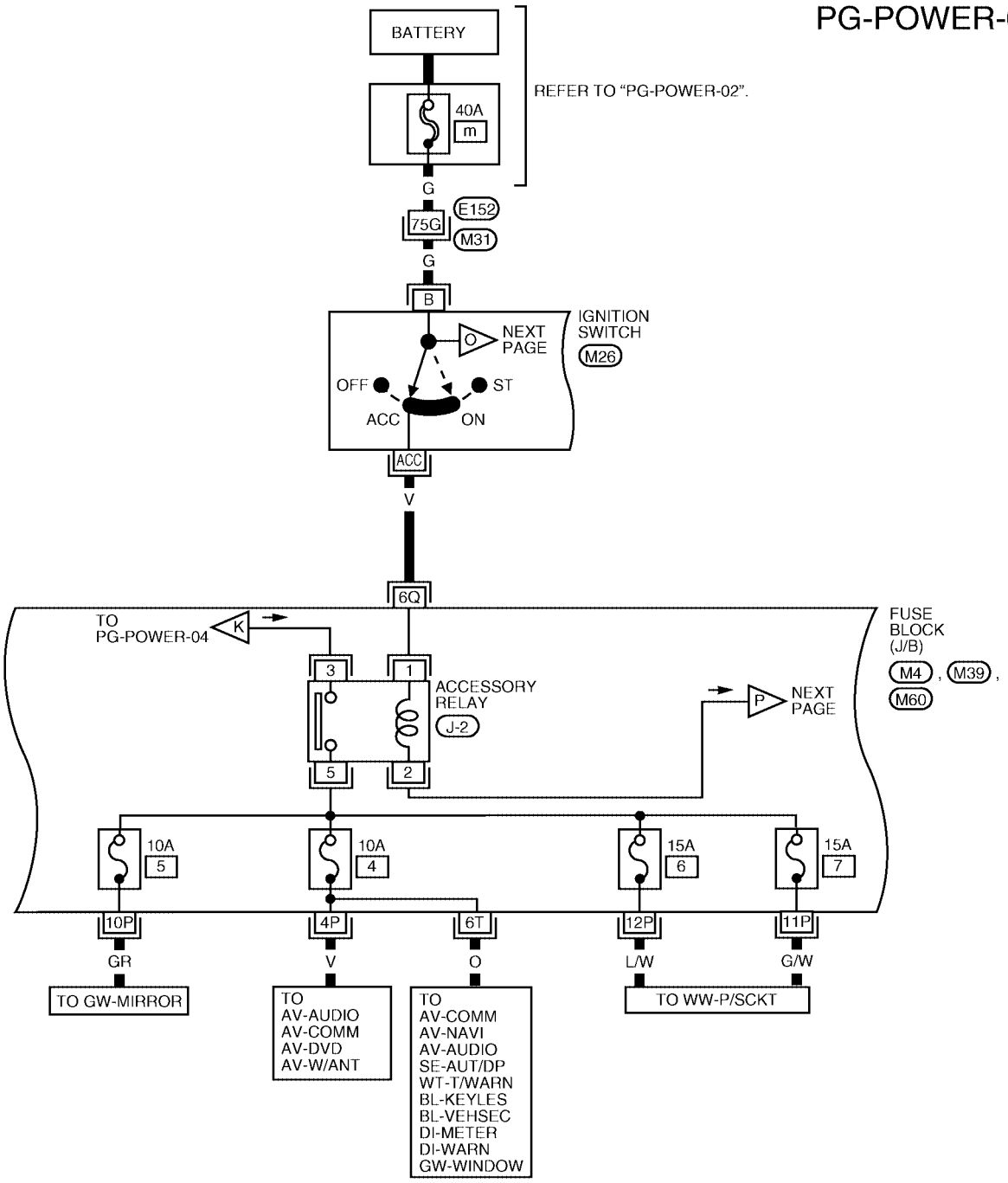


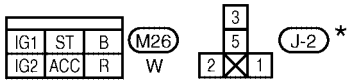


WKWA1582E

ACCESSORY POWER SUPPLY — IGNITION SW. IN ACC OR ON

PG-POWER-06

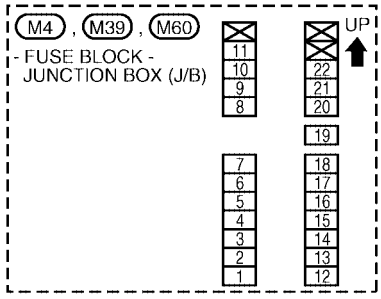




* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT".

REFER TO THE FOLLOWING.

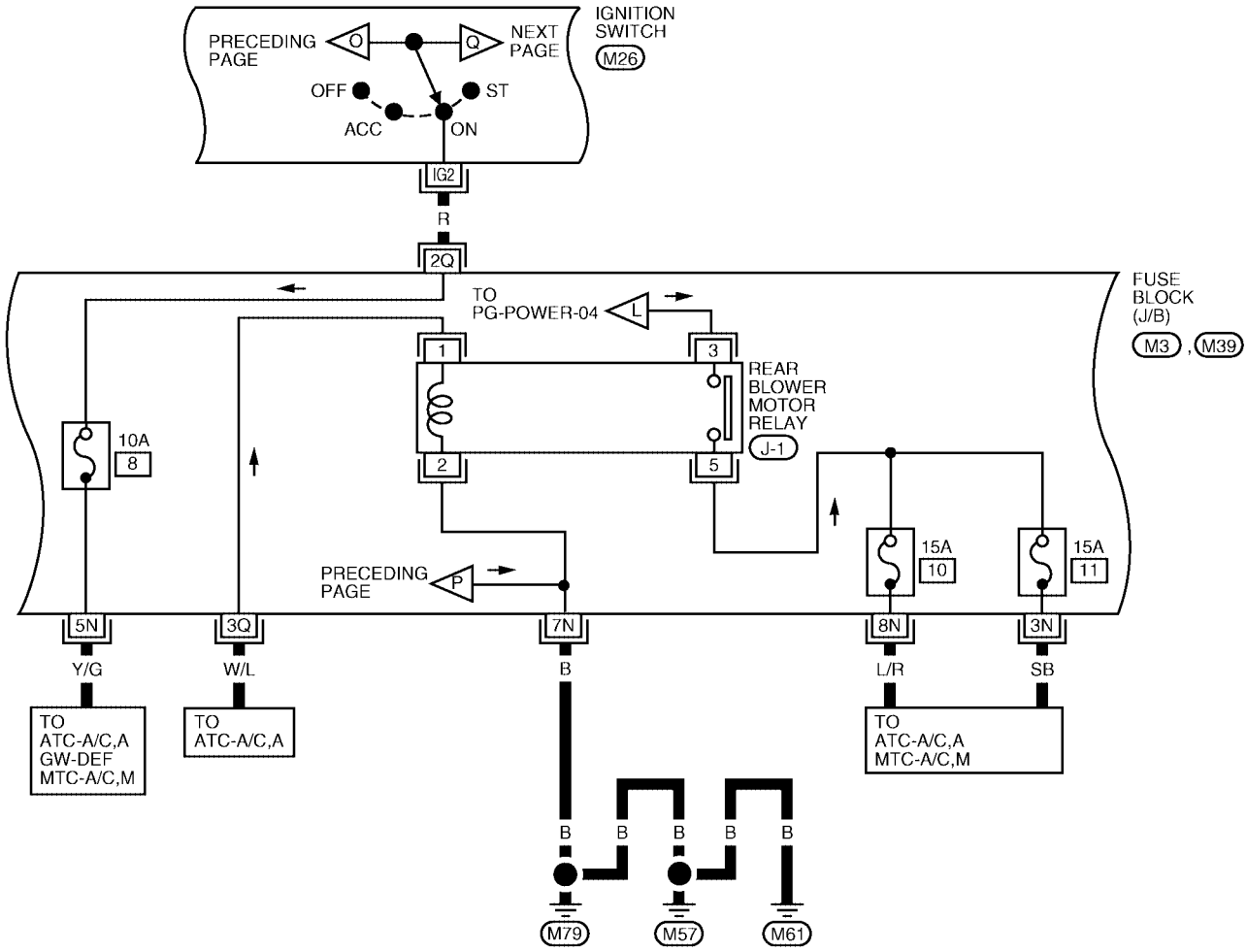
M31 - SUPER MULTIPLE JUNCTION (SMJ)

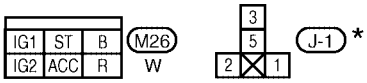


WKWA1583E

IGNITION POWER SUPPLY — IGNITION SW. IN ON

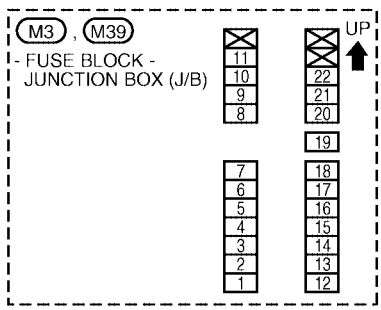
PG-POWER-07





*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT".

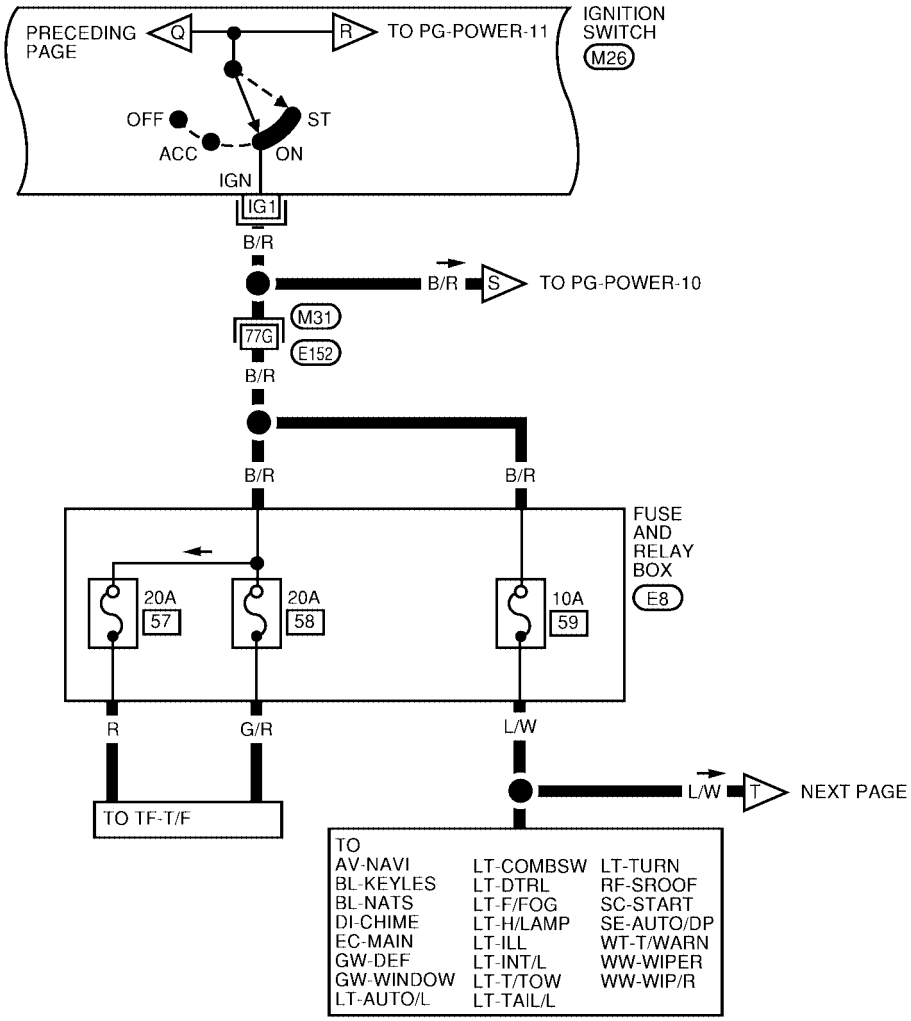
REFER TO THE FOLLOWING.



WKWA1584E

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

PG-POWER-08

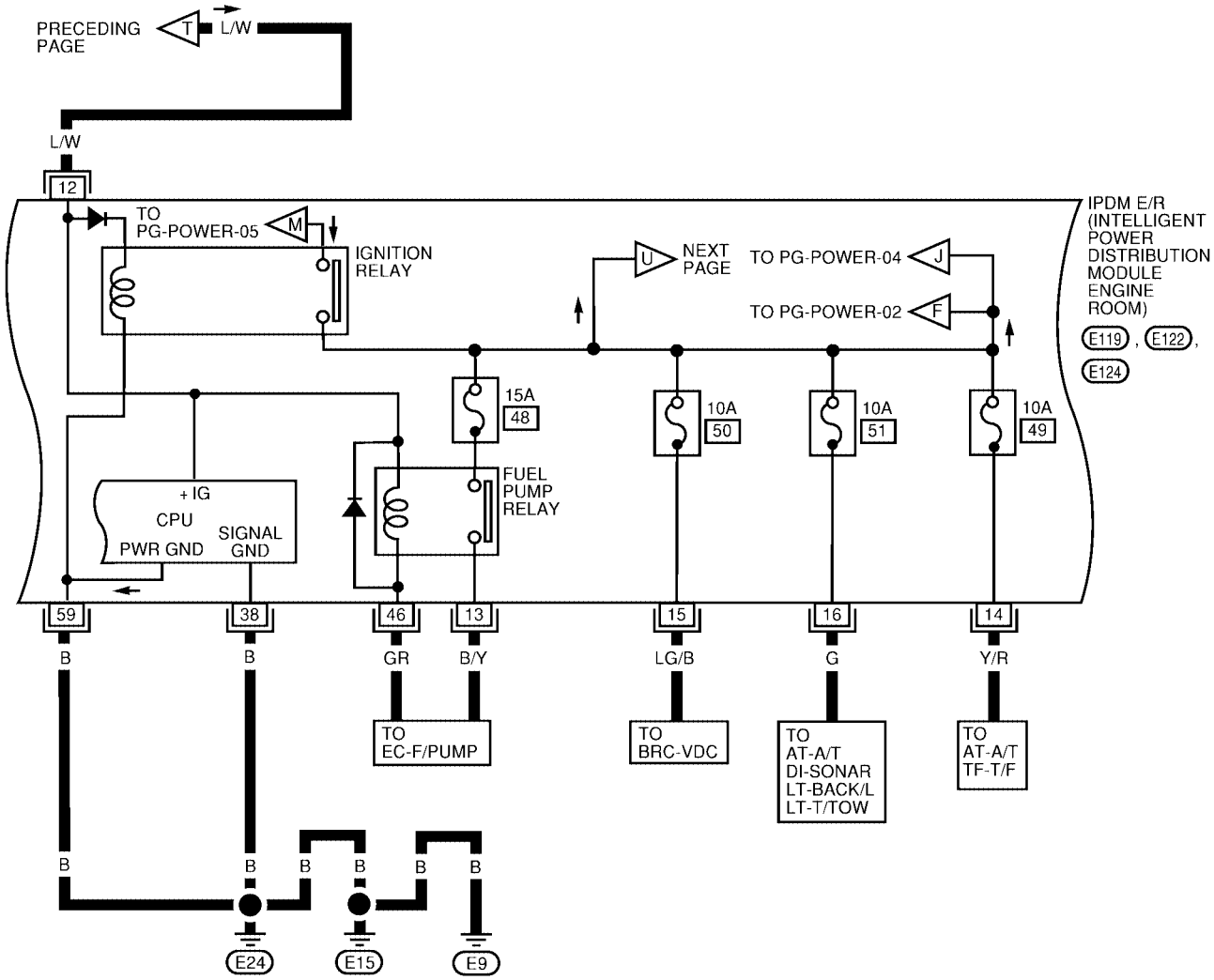


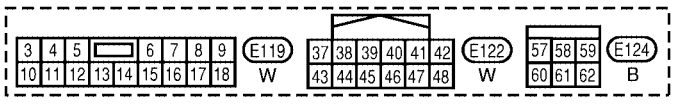
IG1	ST	B	M26
IG2	ACC	R	W

REFER TO THE FOLLOWING.
M31 - SUPER MULTIPLE JUNCTION (SMJ)

WKWA1585E

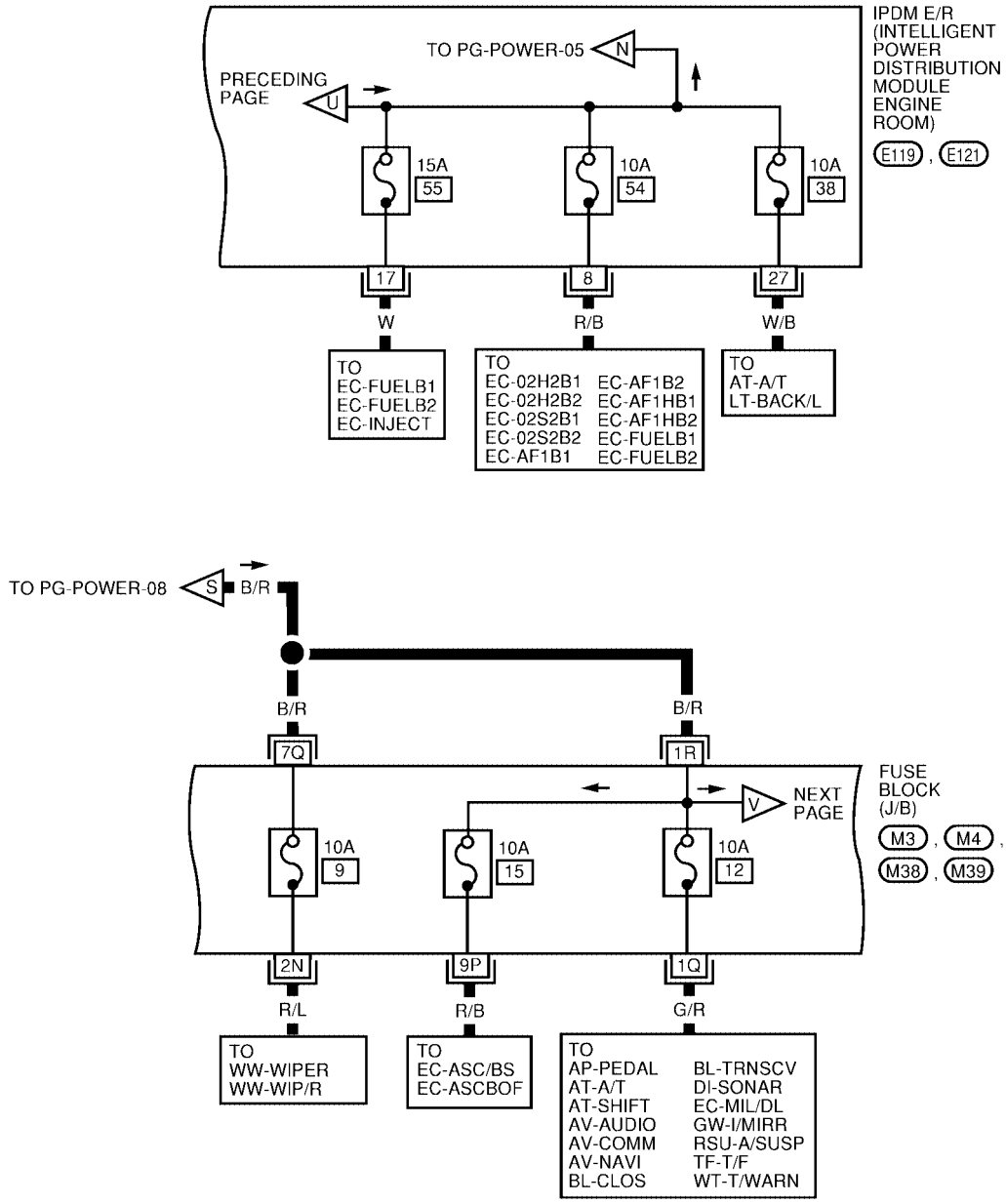
PG-POWER-09

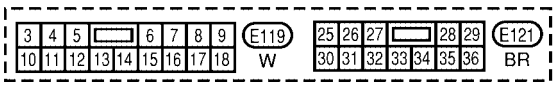


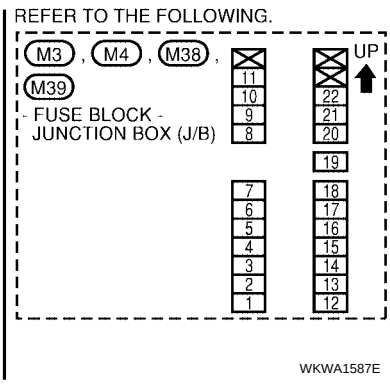


WKWA1586E

PG-POWER-10

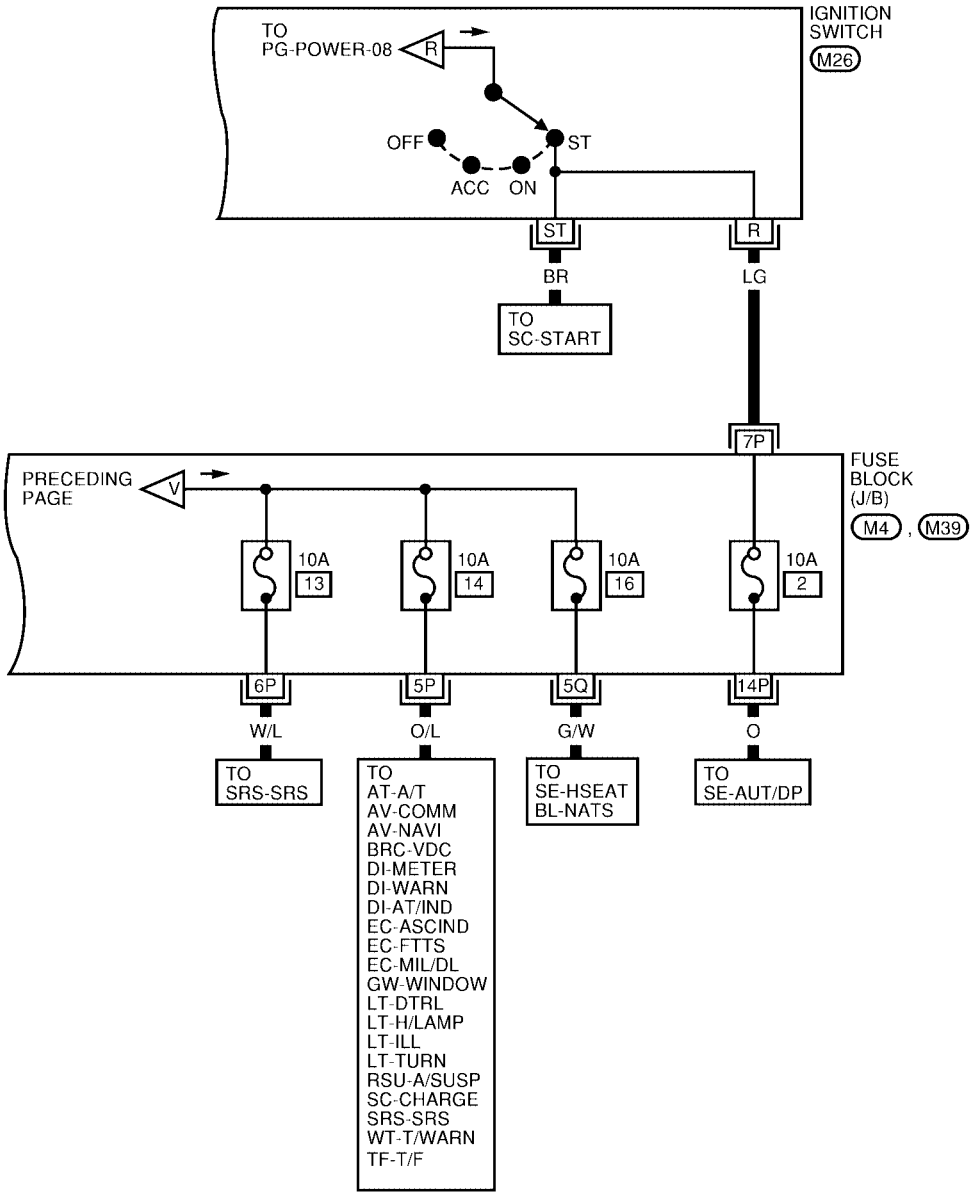


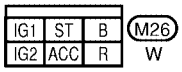


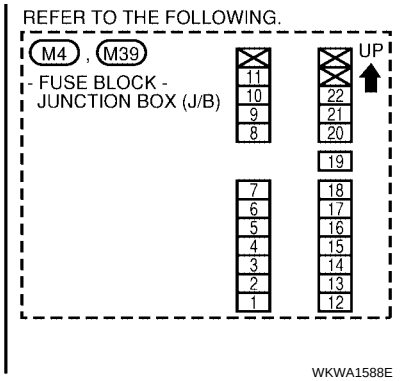


WKWA1587E

PG-POWER-11







WKWA1588E

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

PFP:284B7

System Description

EKS006RS

- 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 circuits.
- IPDM E/R-integrated control circuits perform ON-OFF operation of relays, CAN communication control, etc.
- It controls operation of each electrical component via ECM, 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 signals from the BCM and controls the following lamps:
   - Headlamps (Hi, Lo)
   - Parking lamps
   - Tail lamps
   - Front fog lamps
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 (magnetic clutch).
5. Starter control
   Using CAN communication lines, it receives signals from the ECM 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) is ON. ● With the ignition switch OFF, the headlamp (low) is OFF.
Tail and parking lamps	● With the ignition switch ON, the tail and parking lamps are ON. ● With the ignition switch OFF, the tail and parking lamps are OFF.
Cooling fan	● With the ignition switch ON, the cooling fan HI operates. ● With the ignition switch OFF, the cooling fan stops.
Front wiper	Until the ignition switch is turned off, the front wiper LO and HI remains in the same status it was in just before fail–safe control was initiated.
Rear window defogger	Rear window defogger relay OFF

Controlled system	Fail-safe mode
A/C compressor	A/C compressor OFF
Front fog lamps	Front fog lamp relay 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

EKS006RT

Refer to LAN-5, "CAN COMMUNICATION" .

Function of Detecting Ignition Relay Malfunction

EKS006RU

- When the integrated ignition relay is stuck in a "closed contact" position and cannot be turned OFF, IPDM E/R turns ON tail and parking lamps 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.

Ignition switch signal	Ignition relay status	Tail lamp relay
ON	ON	—
OFF	OFF	—
ON	OFF	—
OFF	ON	ON (10 minutes)

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

CONSULT-II Function (IPDM E/R)

EKS006RV

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

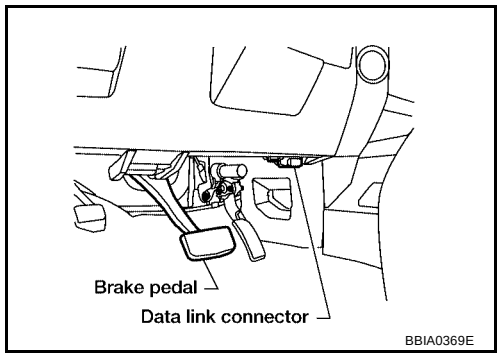
Inspection Item, Diagnosis Mode	Description
SELF-DIAG RESULTS	The IPDM E/R performs diagnosis of CAN communication and self-diagnosis.
DATA MONITOR	The input/output data of the IPDM E/R is displayed in real time.
ACTIVE TEST	The IPDM E/R sends a drive signal to electronic components to check their operation.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.

CONSULT-II BASIC OPERATION

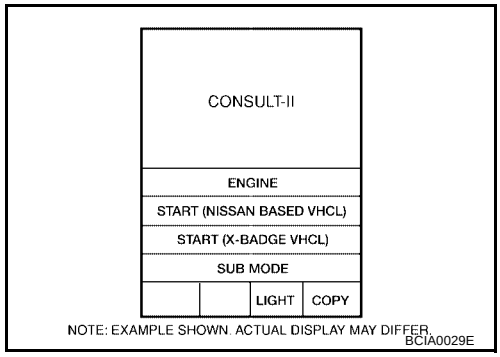
CAUTION:

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

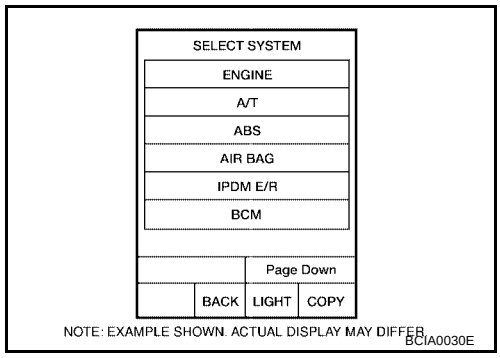
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



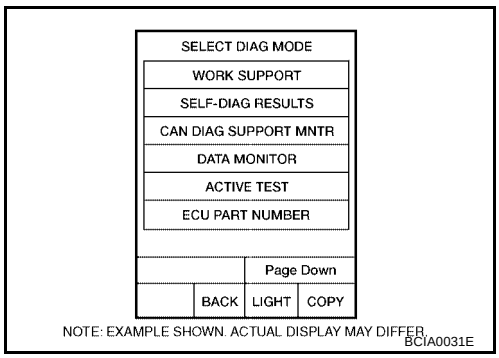
2. Touch “START (NISSAN BASED VHCL)”.



3. Touch “IPDM E/R” on “SELECT SYSTEM” screen.
   - If “IPDM E/R” is not displayed, print "SELECT SYSTEM" screen, then refer to LAN-3, "PRECAUTIONS" .



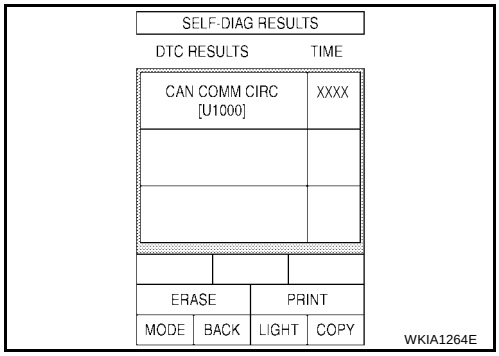
4. Select the desired part to be diagnosed on the "SELECT DIAG MODE" screen.



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	Malfunction detection	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 a malfunction, 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 “SELECT FROM MENU” on the “DATA MONITOR” screen.

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

3. Touch “START”.
4. Touch the required monitoring item on "SELECT ITEM MENU".

5. Touch “RECORD” while monitoring to record the status of the item being monitored. To stop recording, touch “STOP”.

All Signals, Main Signals, Select From Menu

Item name	CONSULT-II screen display	Display or unit	Monitor item selection			Description
			ALL SIGNALS	MAIN SIGNALS	SELECT 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
Tail & clear request	TAIL & CLR REQ	ON/OFF	X	X	X	Signal status input from BCM
H/L LO request	HL LO REQ	ON/OFF	X	X	X	Signal status input from BCM
H/L HI request	HL HI REQ	ON/OFF	X	X	X	Signal status input from BCM
FR fog 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/Block	X	X	X	Control status of IPDM E/R
Starter request	ST RLY REQ	ON/OFF	X		X	Status of input signal NOTE
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 (function is not enabled)
Hood switch	HOOD SW	OFF	X			Signal status input from IPDM E/R (function is not enabled)
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
Daytime running lamp request	DTRL REQ	ON/OFF	X		X	Signal status input from BCM

NOTE:
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.

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
Rear defogger output	REAR DEFOGGER	With a certain ON-OFF operation, the rear defogger relay can be operated.
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.

Test name	CONSULT-II screen display	Description
Lamp (HI, LO, TAIL, FOG) output	EXTERNAL LAMPS	With a certain operation (OFF, HI ON, LO ON, TAIL ON, FOG ON), the lamp relay (Low, High, Tail, Fog) can be operated.
Cornering lamp output	CORNERING LAMP	—
Horn output	HORN	With a certain ON-OFF operation, the horn relay can be operated.

Auto Active Test

EKS006RW

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 and parking lamps
  - Front fog lamps
  - Headlamps (Hi, Lo)
  - A/C compressor (magnetic 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).

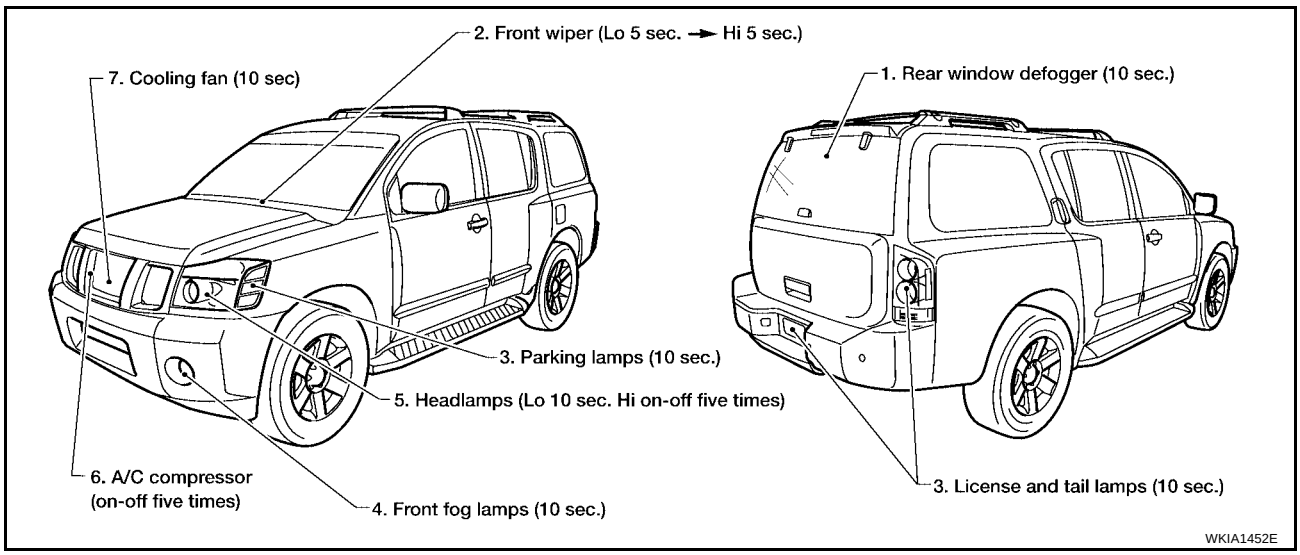
   NOTE:
   When auto active test is performed with hood opened, sprinkle water on windshield beforehand.
2. Turn ignition switch OFF.
3. Turn ignition switch ON and, within 20 seconds, press front door switch LH 10 times. Then turn ignition switch OFF.
4. Turn ignition switch ON within 10 seconds after 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-28, "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 seven steps are repeated three times.



Concept of Auto Active Test

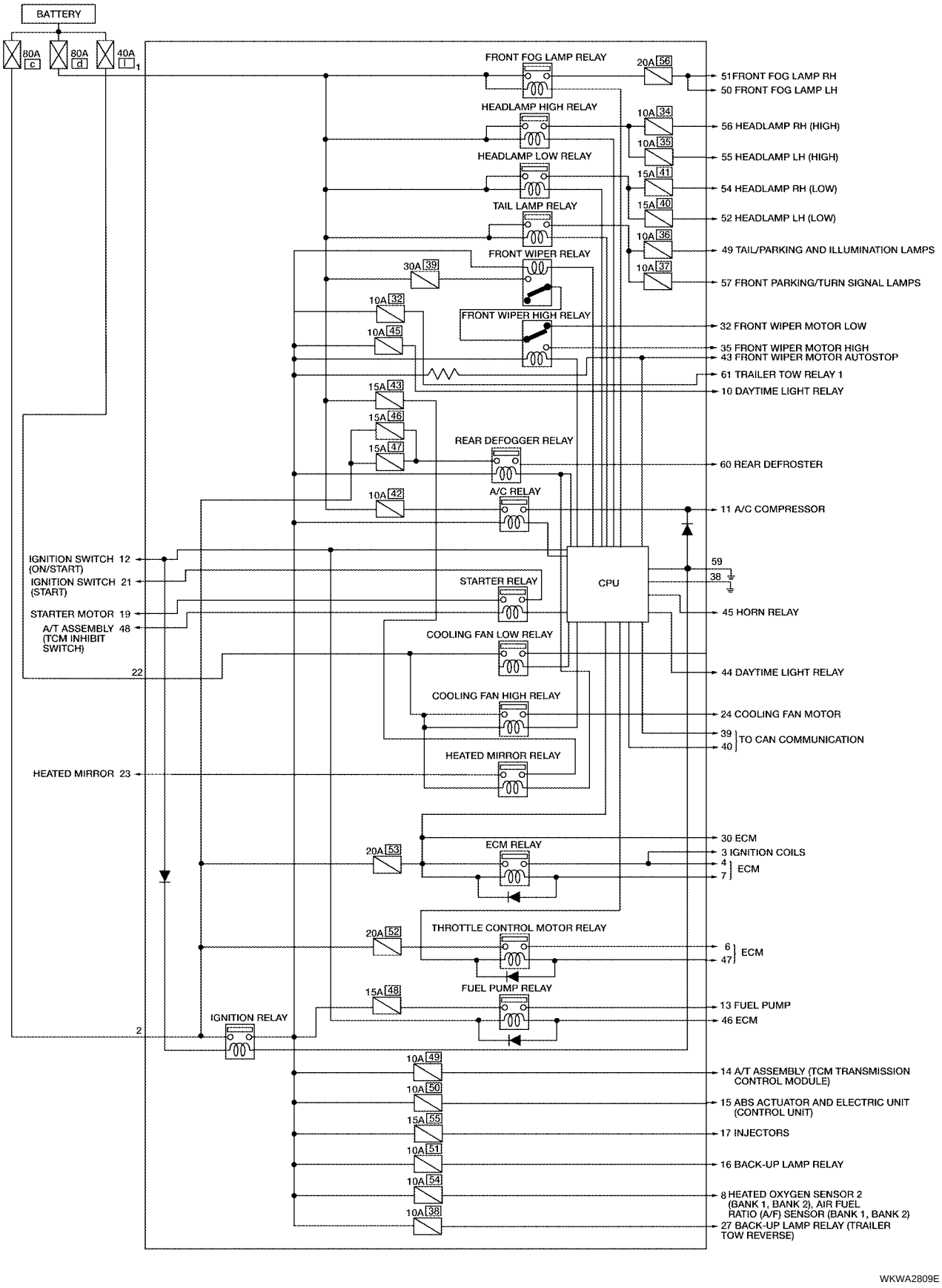
- IPDM E/R actuates auto active test mode when it receives door switch signal from BCM via CAN communication line. Therefore, when auto active test mode is activated successfully, CAN communication between IPDM E/R and BCM is normal.
- If any of the systems controlled by IPDM E/R cannot be operated,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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
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 ● Open circuit of rear window defogger ● IPDM E/R malfunction ● Harness or connector malfunction between IPDM E/R and rear window defogger
Any of front wipers, tail and parking lamps, front fog lamps, and headlamps (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
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	● Magnetic clutch malfunction ● Harness/connector malfunction between IPDM E/R and magnetic 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

Schematic

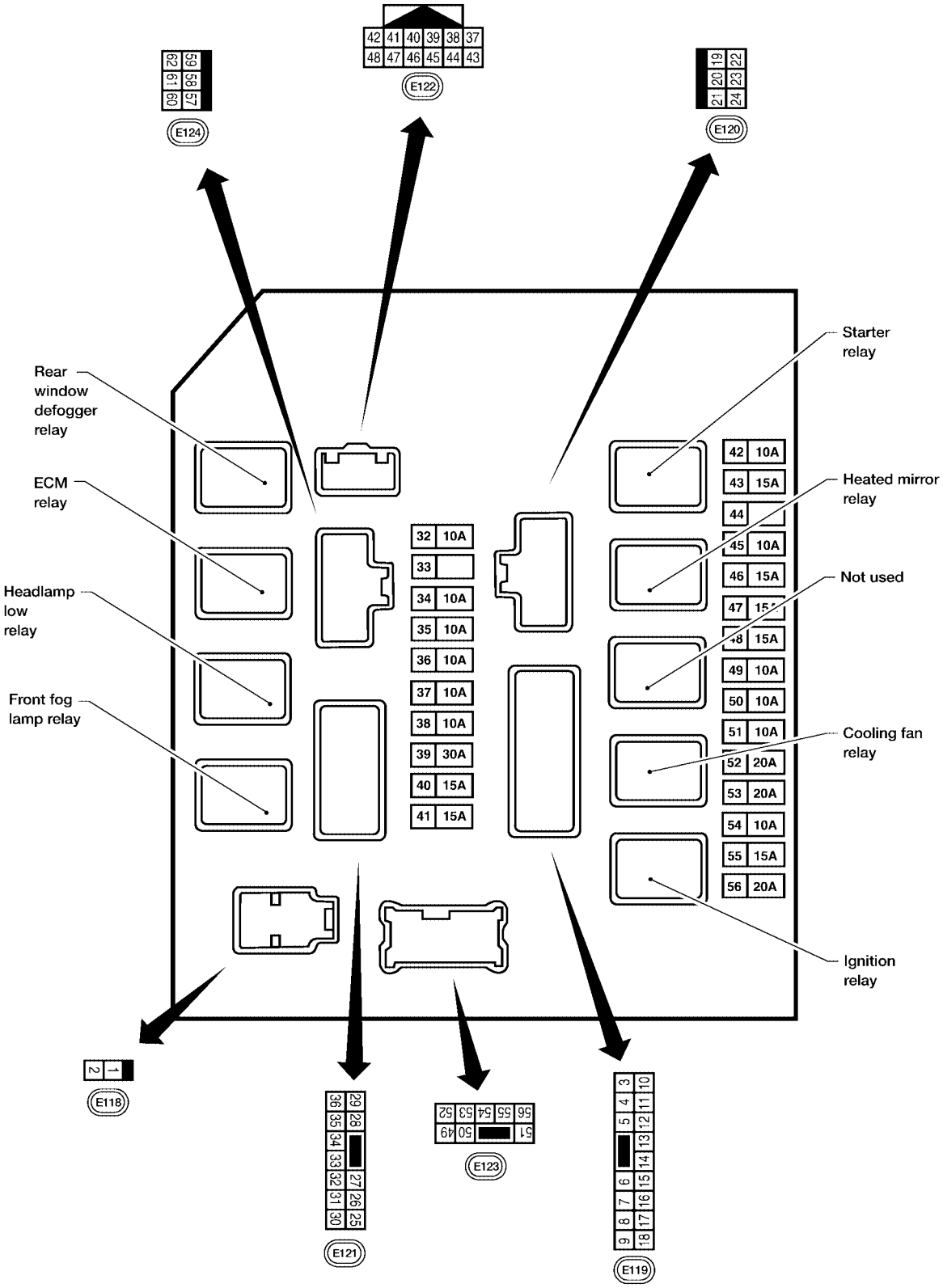
EKS006RX



WKWA2809E

IPDM E/R Terminal Arrangement

EKS006RY



WKIA3923E

IPDM E/R Power/Ground Circuit Inspection

EKS006RZ

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, 22	Battery power	a, c, d, e, l

OK or NG

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

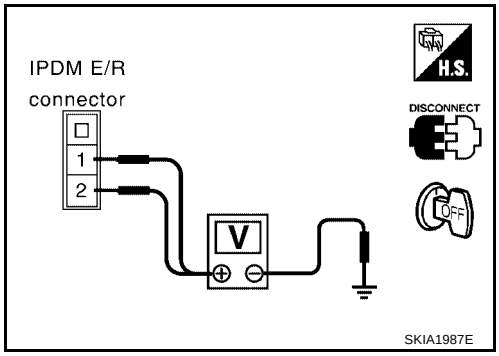
2. POWER CIRCUIT INSPECTION

1. Disconnect IPDM E/R harness connector E118.
2. Check voltage between IPDM E/R harness connector E118 terminals 1 (B/Y), 2 (R) and ground.

Battery voltage should exist.

OK or NG

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



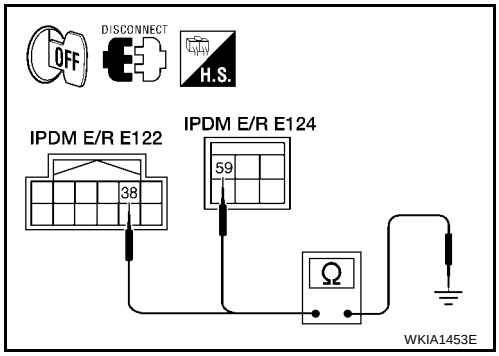
3. GROUND CIRCUIT INSPECTION

1. Disconnect IPDM E/R harness connectors E122 and E124.
2. Check continuity between IPDM E/R harness connector E122 terminal 38 (B), and E124 terminal 59 (B) and ground.

Continuity should exist.

OK or NG

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



Inspection with CONSULT-II (Self-Diagnosis)

EKS006S0

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 Diagnosis System Selection screen.
2. Select "SELF-DIAG RESULTS" on the diagnosis mode selection 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

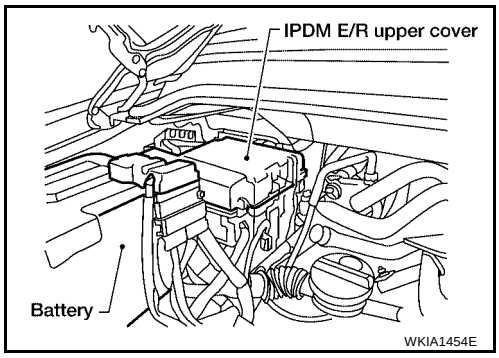
NO DTC DETECTED. FURTHER TESTING MAY BE REQUIRED.>>INSPECTION END.
CAN COMM CIRC>>Print out the self-diagnosis result and refer to LAN-5, "CAN COMMUNICATION" .

Removal and Installation of IPDM E/R

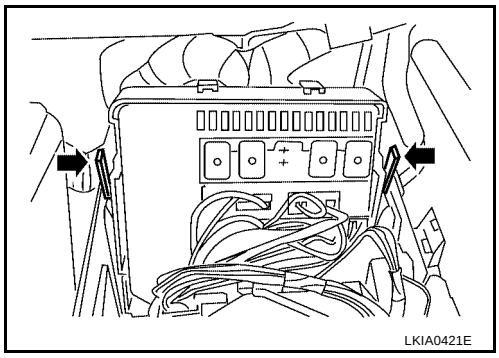
EKS006S1

REMOVAL

1. Disconnect negative battery cable.
2. Remove IPDM E/R upper cover.



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



INSTALLATION

Installation is in the reverse order of removal.

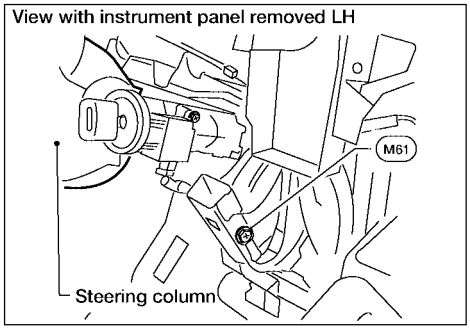
GROUND CIRCUIT

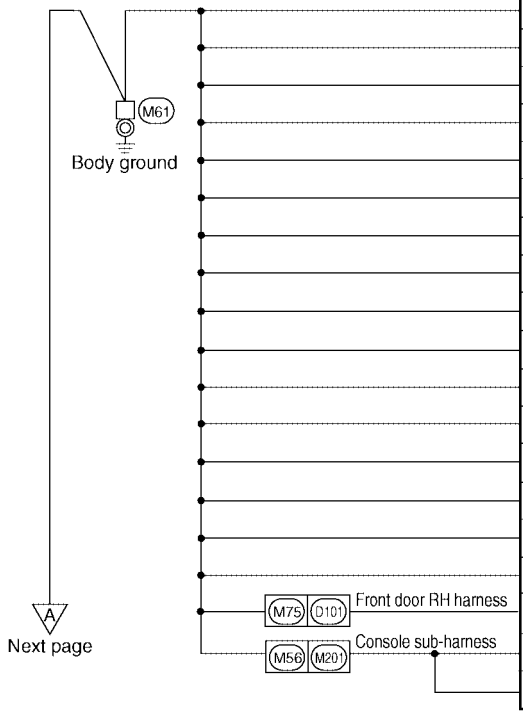
PFP:24080

Ground Distribution

EKS006S2

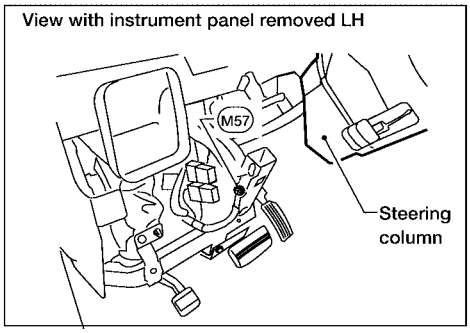
MAIN HARNESS

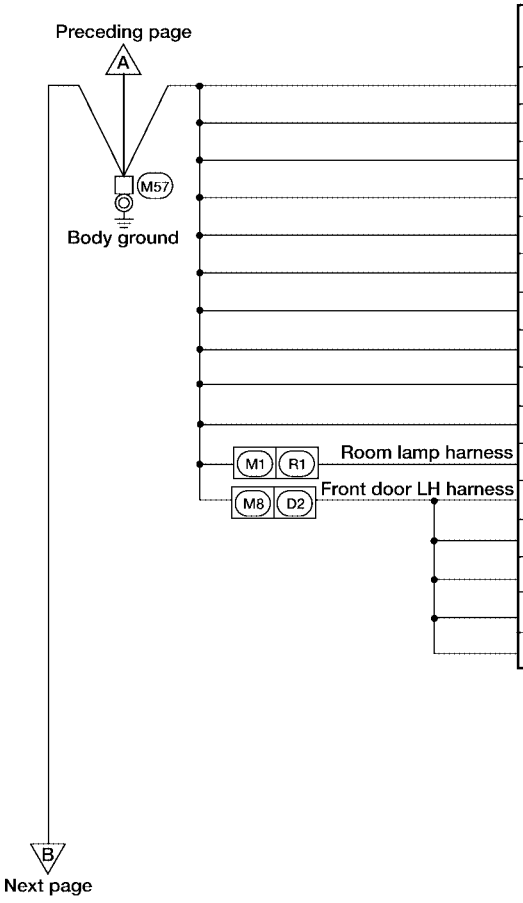




CONNECTOR NUMBER	CONNECT TO
M5	Illumination control switch
M20	BCM (Terminal 67)
M21	NATS antenna amp
M22	Data link connector (Terminal 4)
M22	Data link connector (Terminal 5)
M24	Combination meter (Terminal 17)
M28	Combination switch (Terminal 12)
M35	Air bag diagnosis sensor
M47	Steering angle sensor
M51	Front blower switch
M87	Rear power vent window relay (open)
M89	Rear power vent window relay (close)
M97	Heated seat relay
M112	BOSE speaker amp (Terminal 17)
M122	Variable blower control
M139	Diode-1
D107	Door mirror RH (door mirror defogger)
M203	A/T device (Terminal 2)
M203	A/T device (Terminal 8)

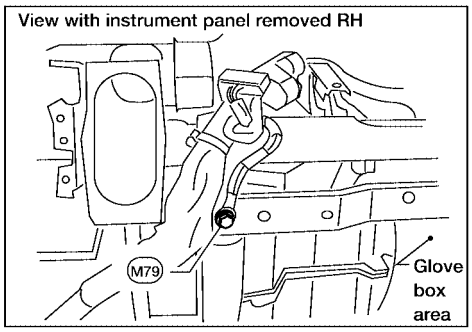
WKIA2808E

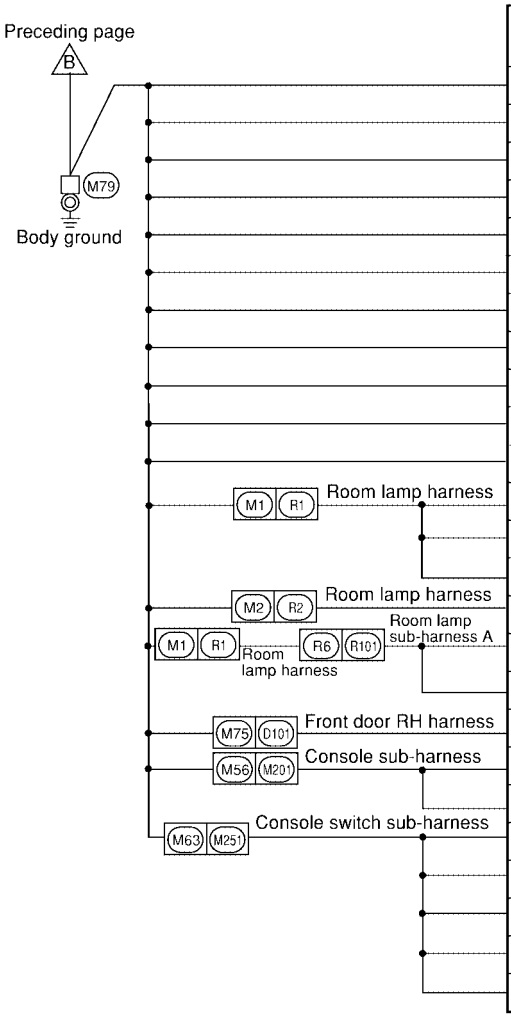




CONNECTOR NUMBER	CONNECT TO
M14	Pedal adjusting control unit
M34	Automatic drive positioner (Terminal 40)
M34	Automatic drive positioner (Terminal 48)
M76	Electric brake (pre-wire)
M92	Power liftgate switch
M93	Display unit (Terminal 1)
M94	Display control unit (Terminal 3)
M96	Pedal adjusting switch
M116	Rear sonar system off switch (Terminal 3)
M116	Rear sonar system off switch (Terminal 2)
R7	Auto anti-dazzling inside mirror
D4	Door mirror LH (door mirror defogger)
D5	Seat memory switch
D8	Main power window and door lock/unlock switch (Terminal 17)
D10	Door mirror switch
D14	Front door lock assembly LH

WKIA3849E

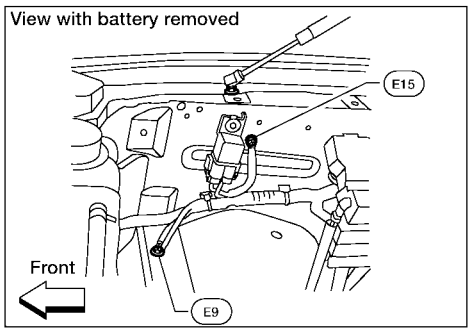


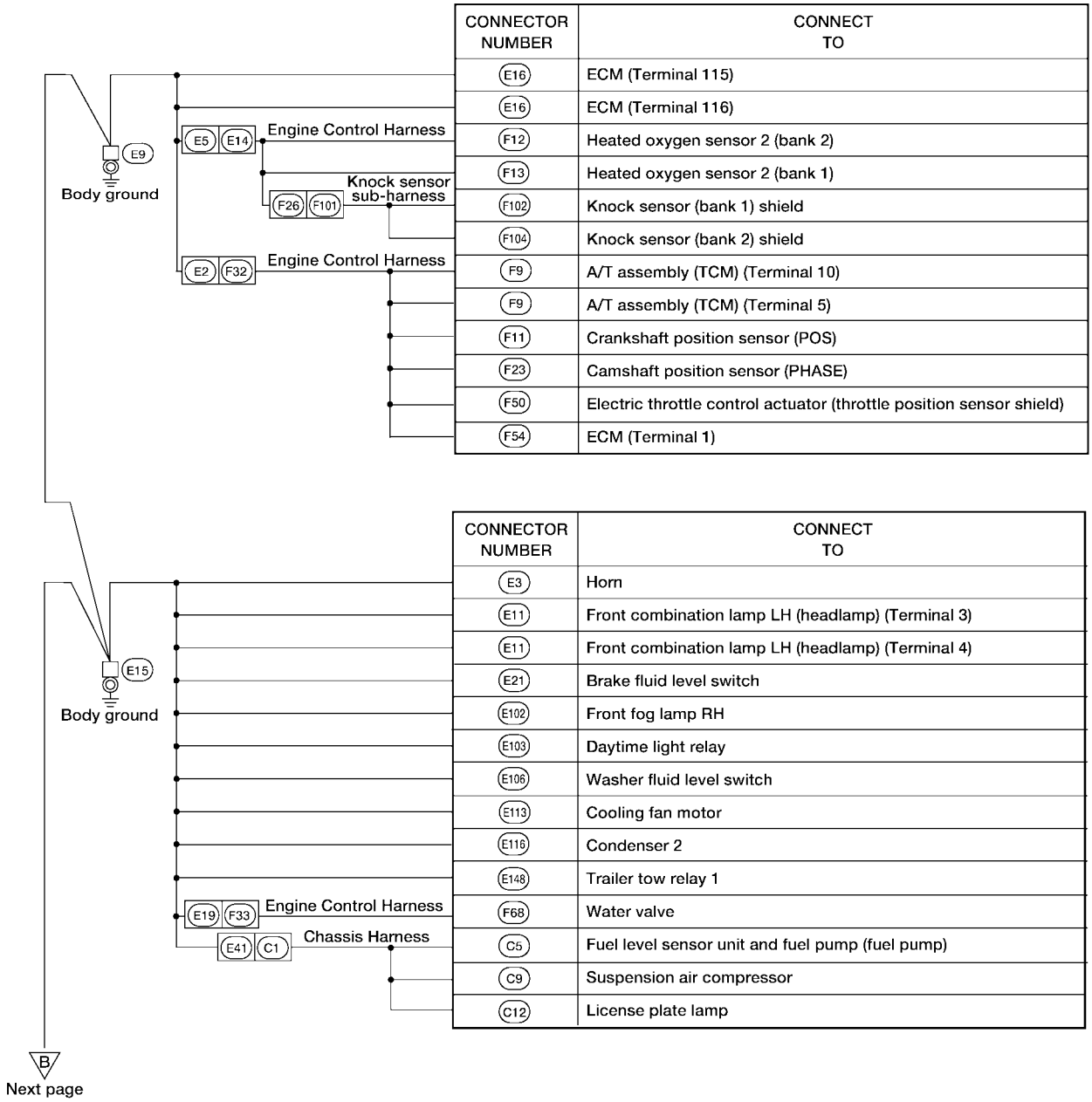


CONNECTOR NUMBER	CONNECT TO
M3	Fuse block J/B
M13	Front passenger air bag off indicator
M49	Front air control (Terminal 1)
M52	Rear blower switch (front)
M53	Front power socket LH
M54	Front power socket RH (for cigarette lighter)
M55	Hazard switch
M59	Glove box lamp
M81	Shift lock control unit
M98	AV switch
M107	Front blower motor relay
R3	Vanity lamp LH
R7	Auto anti-dazzling inside mirror
R8	Vanity lamp RH
R4	Sunroof motor
R102	Front room/map lamp assembly
R103	Rear power vent window switch
D105	Power window and door lock/unlock switch RH
M206	DVD player (Terminal 22)
M207	Console power socket
M252	Front heated seat switch RH
M253	VDC OFF switch
M254	Tow mode switch (Terminal 2)
M254	Tow mode switch (Terminal 6)
M255	Front heated seat switch LH

WKIA2810E

ENGINE ROOM HARNESS

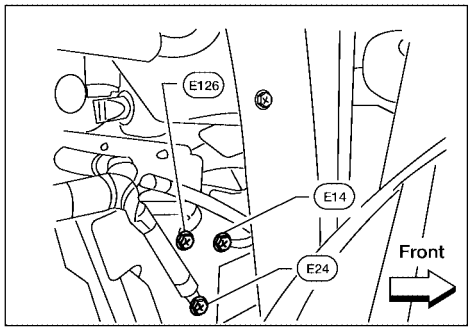




CONNECTOR NUMBER	CONNECT TO
E16	ECM (Terminal 115)
E16	ECM (Terminal 116)
F12	Heated oxygen sensor 2 (bank 2)
F13	Heated oxygen sensor 2 (bank 1)
F102	Knock sensor (bank 1) shield
F104	Knock sensor (bank 2) shield
F9	A/T assembly (TCM) (Terminal 10)
F9	A/T assembly (TCM) (Terminal 5)
F11	Crankshaft position sensor (POS)
F23	Camshaft position sensor (PHASE)
F50	Electric throttle control actuator (throttle position sensor shield)
F54	ECM (Terminal 1)

CONNECTOR NUMBER	CONNECT TO
E3	Horn
E11	Front combination lamp LH (headlamp) (Terminal 3)
E11	Front combination lamp LH (headlamp) (Terminal 4)
E21	Brake fluid level switch
E102	Front fog lamp RH
E103	Daytime light relay
E106	Washer fluid level switch
E113	Cooling fan motor
E116	Condenser 2
E148	Trailer tow relay 1
F68	Water valve
C5	Fuel level sensor unit and fuel pump (fuel pump)
C9	Suspension air compressor
C12	License plate lamp

WKIA3898E



Preceding page

B

E2 F32 Engine Control Harness

E41 C1 Chassis Harness

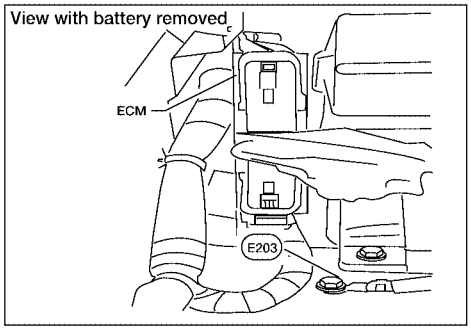
E24

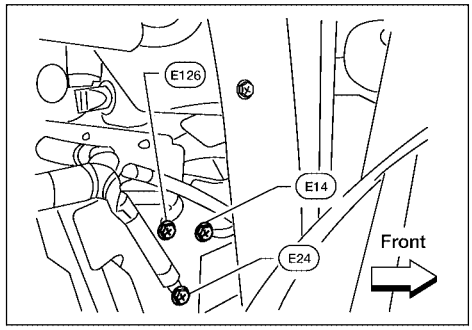
Body ground

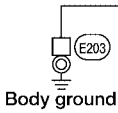
CONNECTOR NUMBER	CONNECT TO
E46	Transfer shift high relay (Terminal 1)
E46	Transfer shift high relay (Terminal 4)
E47	Transfer shift low relay (Terminal 1)
E47	Transfer shift low relay (Terminal 4)
E130	Compressor motor relay
E140	Trailer tow relay 2
E148	Trailer tow relay 1
E142	Transfer control unit (Terminal 3)
F55	ATP switch
F57	Transfer motor
F58	Transfer control device (actuator position switch) (Terminal 22)
F59	Wait detection switch
F60	Neutral-4LO switch
C2	Trailer
C9	Suspension air compressor

CONNECTOR NUMBER	CONNECT TO
E107	Front combination lamp RH (headlamp) (Terminal 3)
E107	Front combination lamp RH (headlamp) (Terminal 4)
E23	Front wiper motor
E101	Front fog lamp LH
E122	IPDM E/R (Terminal 38)
E124	IPDM E/R (Terminal 59)

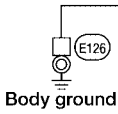
WKIA2812E



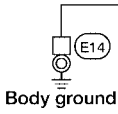




CONNECTOR NUMBER	CONNECT TO
E204	Generator



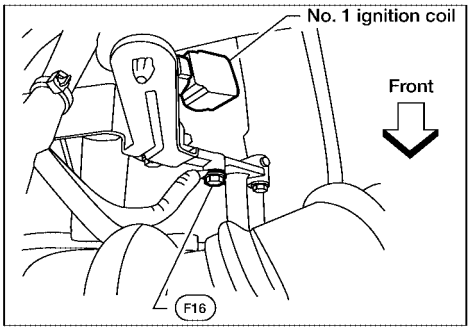
CONNECTOR NUMBER	CONNECT TO
E125	ABS actuator and electric unit (control unit) (Terminal No. 16)
E125	ABS actuator and electric unit (control unit) (Terminal No. 47)

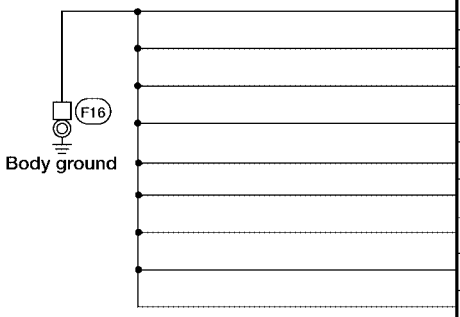


CONNECTOR NUMBER	CONNECT TO
E4	Crash zone sensor (shield wire)

WKIA1459E

ENGINE CONTROL HARNESS

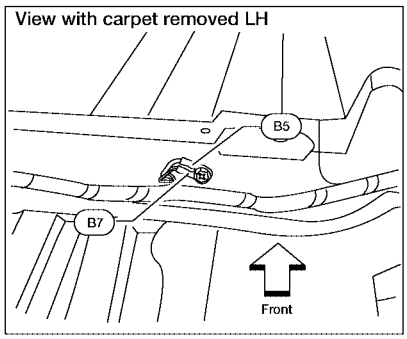


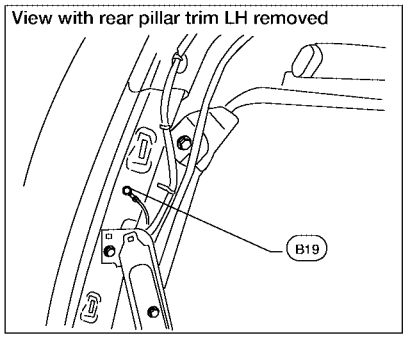


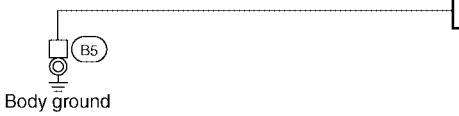
CONNECTOR NUMBER	CONNECT TO
F6	Ignition coil No. 2 (with power transistor)
F7	Ignition coil No. 4 (with power transistor)
F8	Ignition coil No. 6 (with power transistor)
F21	Condenser-1
F47	Ignition coil No. 1 (with power transistor)
F48	Ignition coil No. 3 (with power transistor)
F49	Ignition coil No. 5 (with power transistor)
F51	Ignition coil No. 7 (with power transistor)
F52	Ignition coil No. 8 (with power transistor)

WKIA1460E

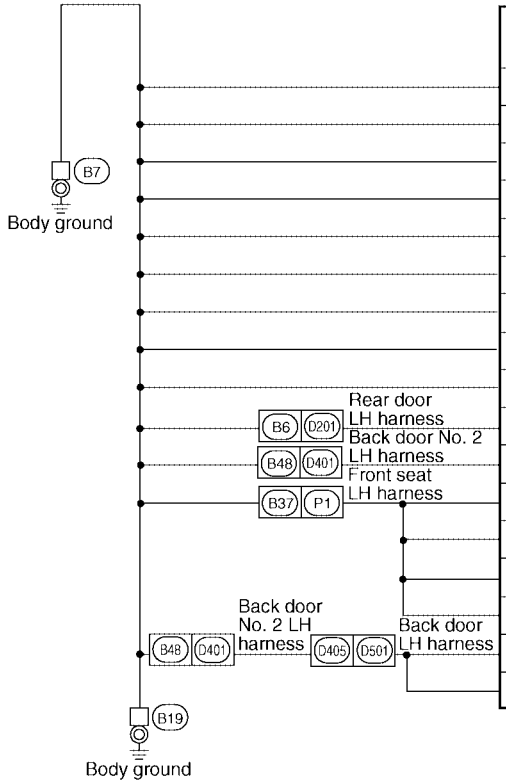
BODY HARNESS







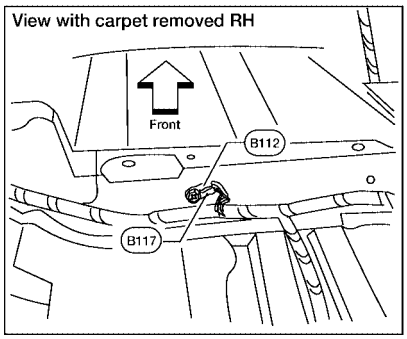
CONNECTOR NUMBER	CONNECT TO
B15	LH side air bag satellite sensor (shield wire)

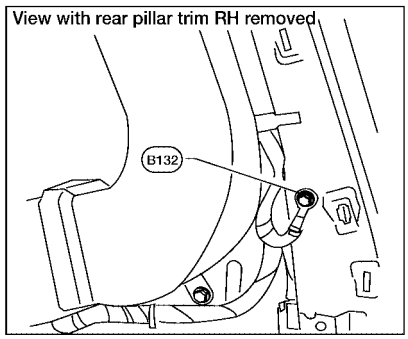


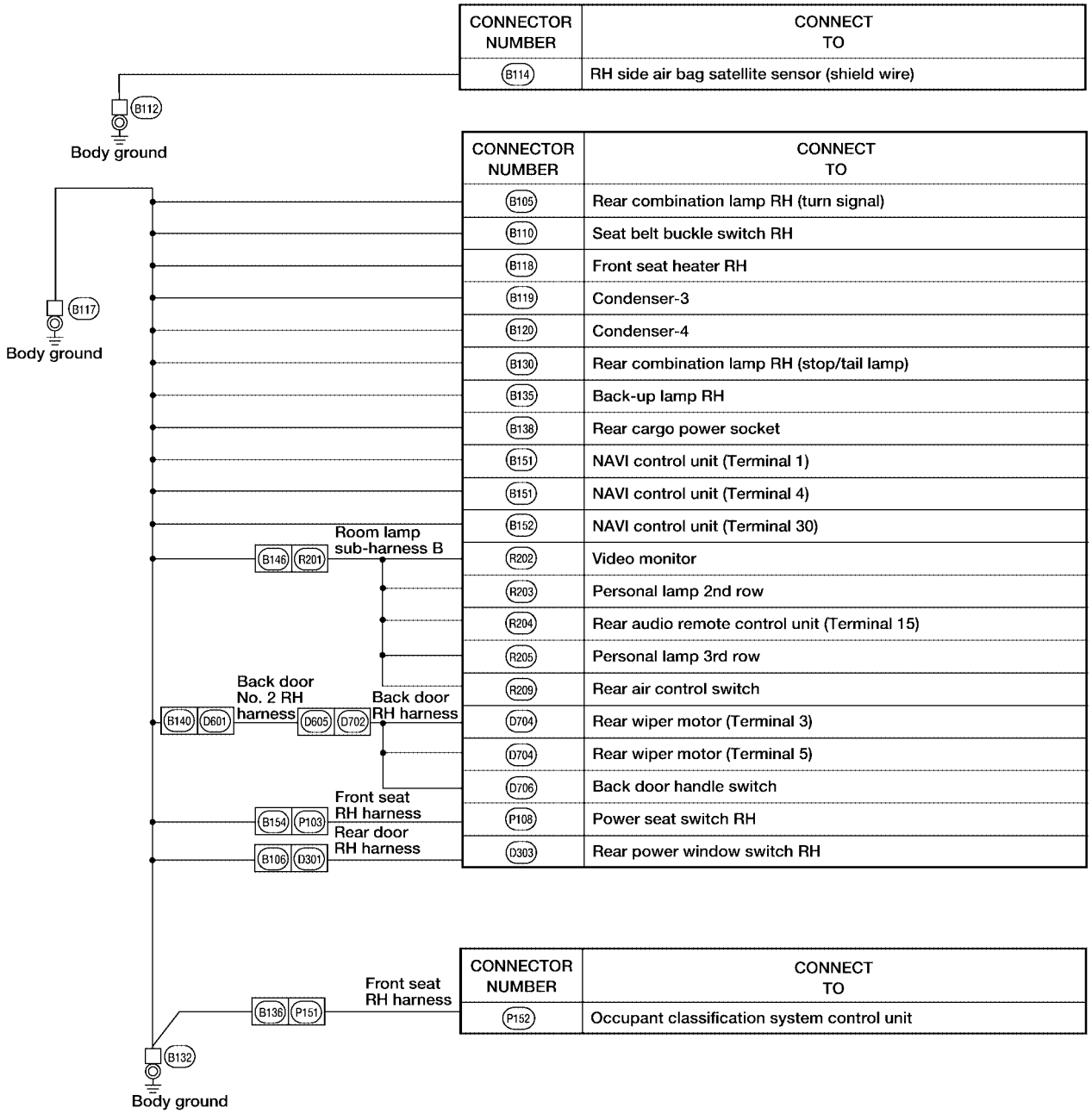
CONNECTOR NUMBER	CONNECT TO
B3	Suspension control unit (Terminal 16)
B12	Seat belt buckle switch LH
B35	Rear combination lamp LH (turn signal)
B55	Back door control unit (Terminal 1)
B55	Back door control unit (Terminal 2)
B56	Sonar control unit
B63	Back door close switch
B70	Rear combination lamp LH (stop/tail lamp)
B72	Subwoofer
D203	Rear power window switch LH
D403	High mounted stop lamp
P2	Driver seat control unit (signal ground) (Terminal 32)
P3	Driver seat control unit (power ground) (Terminal 48)
P8	Power seat switch LH (Terminal 3)
P9	Front seat heater LH
D502	Back door switch
D503	Back door latch

WKIA2813E

BODY NO. 2 HARNESS







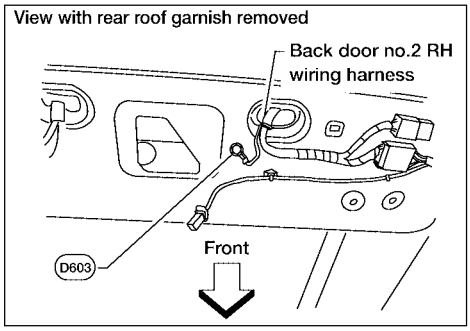
CONNECTOR NUMBER	CONNECT TO
B114	RH side air bag satellite sensor (shield wire)

CONNECTOR NUMBER	CONNECT TO
B105	Rear combination lamp RH (turn signal)
B110	Seat belt buckle switch RH
B118	Front seat heater RH
B119	Condenser-3
B120	Condenser-4
B130	Rear combination lamp RH (stop/tail lamp)
B135	Back-up lamp RH
B138	Rear cargo power socket
B151	NAVI control unit (Terminal 1)
B151	NAVI control unit (Terminal 4)
B152	NAVI control unit (Terminal 30)
R202	Video monitor
R203	Personal lamp 2nd row
R204	Rear audio remote control unit (Terminal 15)
R205	Personal lamp 3rd row
R209	Rear air control switch
D704	Rear wiper motor (Terminal 3)
D704	Rear wiper motor (Terminal 5)
D706	Back door handle switch
P108	Power seat switch RH
D303	Rear power window switch RH

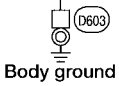
CONNECTOR NUMBER	CONNECT TO
P152	Occupant classification system control unit

WKIA2814E

BACK DOOR NO. 2 RH HARNESS



CONNECTOR NUMBER	CONNECT TO
D604	Rear window defogger



WKIA1461E

HARNESS

PFP:24010

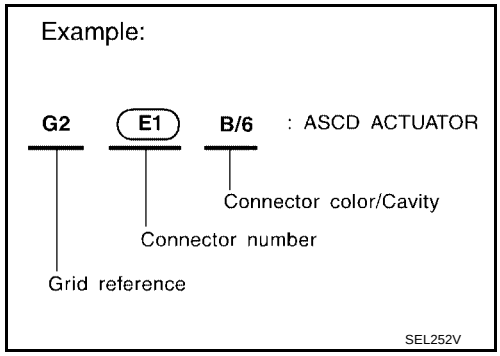
Harness Layout

EKS006S3

HOW TO READ HARNESS LAYOUT

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

- Main Harness
- Engine Room Harness LH View (Engine Compartment)
- Engine Room Harness RH View (Engine Compartment)
- Engine Control Harness
- Chassis Harness
- Body Harness
- Body No. 2 Harness



To use the grid reference

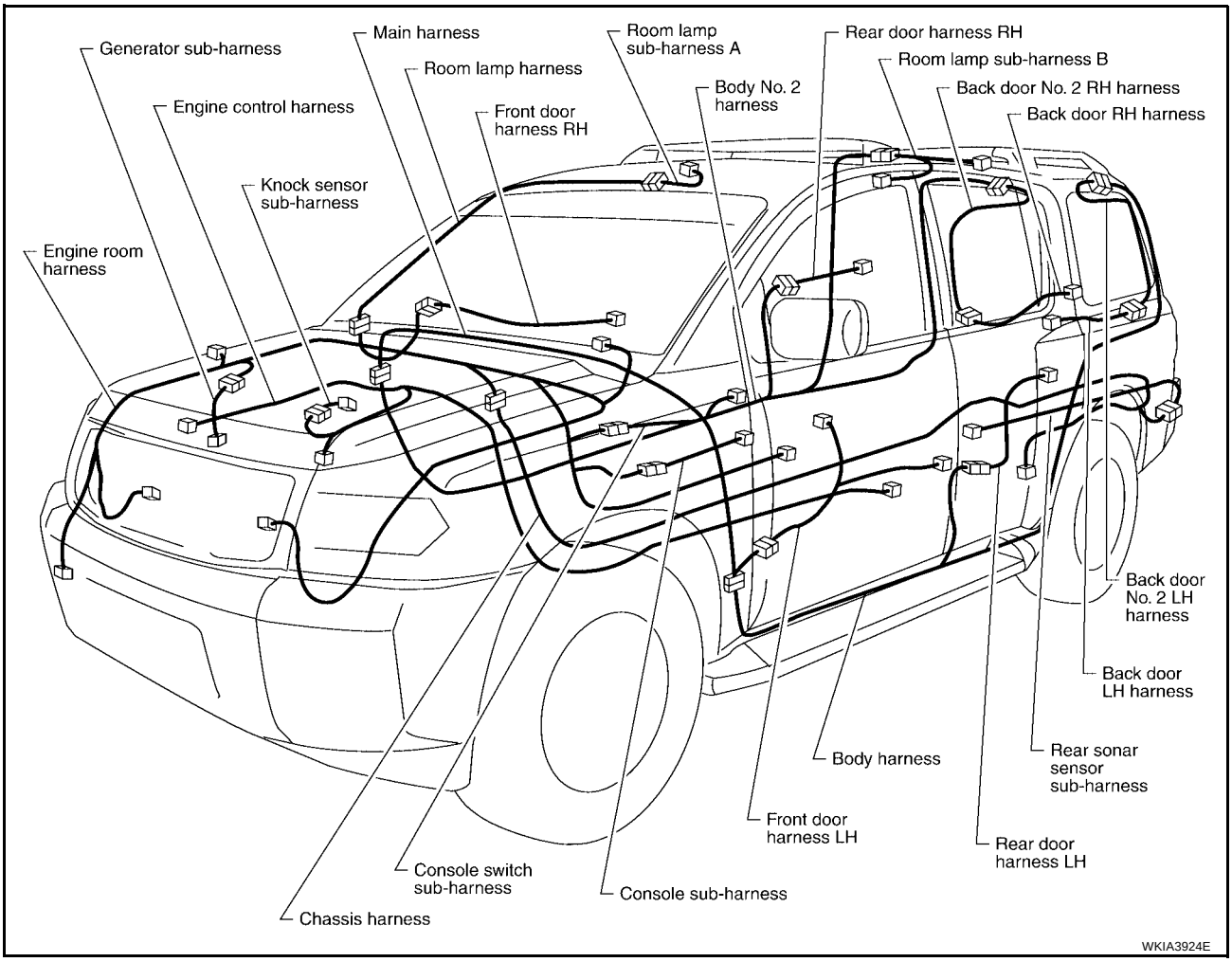
1. Find the desired connector number on the connector list.
2. Find the grid reference.
3. On the drawing, find the crossing of the grid reference letter column and number row.
4. Find the connector number in the crossing zone.
5. Follow the line (if used) to the connector.

CONNECTOR SYMBOL

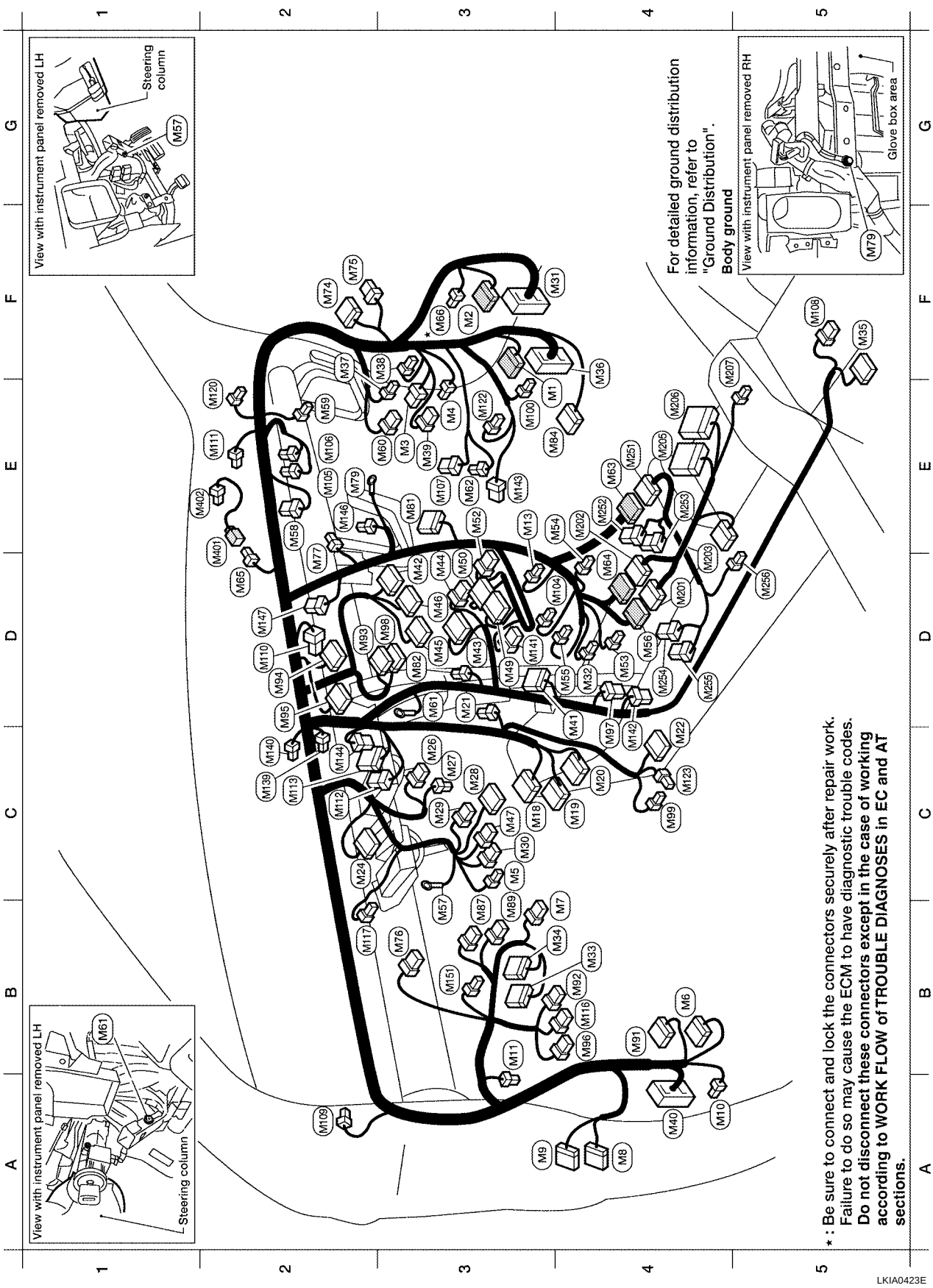
Main symbols of connector (in Harness Layout) are indicated below.

Connector type	Water proof type		Standard type	
	Male	Female	Male	Female
● Cavity: Less than 4 ● Relay connector				
● Cavity: From 5 to 8				
● Cavity: 9 or More				
● Ground terminal etc.	—			

OUTLINE


Generator sub-harness
Main harness
Room lamp sub-harness A
Rear door harness RH
Room lamp harness
Room lamp sub-harness B
Body No. 2 harness
Back door No. 2 RH harness
Engine control harness
Front door harness RH
Back door RH harness
Knock sensor sub-harness
Engine room harness
Back door No. 2 LH harness
Back door LH harness
Body harness
Rear sonar sensor sub-harness
Front door harness LH
Rear door harness LH
Console switch sub-harness
Console sub-harness
Chassis harness
WKIA3924E

MAIN HARNESS



E4 (M1) W/16 : To (R1)
F3 (M2) W/12 : To (R2)
E3 (M3) W/8 : Fuse block (J/B)
E3 (M4) W/16 : Fuse block (J/B)
C3 (M5) W/3 : Illumination control switch
B4 (M6) W/10 : To (E10)
B4 (M7) L/5 : Water valve relay
A4 (M8) W/16 : To (D2)
A4 (M9) BR/24 : To (D1)
A4 (M10) Y/4 : To (E29)
B3 (M11) B/1 : Parking brake switch
E3 (M13) W/3 : Front passenger air bag off indicator
C3 (M18) W/40 : BCM (body control module)
C4 (M19) W/15 : BCM (body control module)
C4 (M20) B/15 : BCM (body control module)
C3 (M21) W/4 : NATS antenna amplifier
C4 (M22) W/16 : Data link connector
C2 (M24) W/40 : Combination meter
C3 (M26) W/6 : Ignition switch
C3 (M27) W/4 : Key switch and key lock solenoid
C3 (M28) W/16 : Combination switch
C3 (M29) Y/6 : Combination switch (spiral cable)
C3 (M30) GR/8 : Combination switch (spiral cable)
F4 (M31) SMJ : To (E152)
D4 (M32) W/4 : In-vehicle sensor
B4 (M33) W/32 : Automatic drive positioner control unit
B4 (M34) W/16 : Automatic drive positioner control unit
F5 (M35) Y/28 : Air bag diagnosis sensor unit
E4 (M36) SMJ : To (B149)
E2 (M37) B/1 : Fuse block (J/B)
E3 (M38) B/2 : Fuse block (J/B)
E3 (M39) W/8 : Fuse block (J/B)
A4 (M40) SMJ : To (B69)
C4 (M41) W/16 : Satellite radio tuner (pre-wiring)
D3 (M42) W/12 : Audio unit
D3 (M43) W/10 : Audio unit
D3 (M44) W/6 : Audio unit
D3 (M45) W/16 : Audio unit
D3 (M46) W/20 : Audio unit
C3 (M47) W/8 : Steering angle sensor

D3 (M49) B/26 : Front air control
D3 (M50) W/18 : Front air control
E3 (M52) W/8 : Rear blower switch (front)
D4 (M53) B/2 : Front power socket LH
E3 (M54) B/2 : Front power socket RH (for cigarette lighter)
D4 (M55) W/8 : Hazard switch
D4 (M56) W/16 : To (M201)
B3 (M57) - : Body ground
E2 (M58) B/6 : Intake door motor
E2 (M59) BR/2 : Glove box lamp
E3 (M60) W/6 : Fuse block (J/B)
D3 (M61) - : Body ground
E3 (M62) B/2 : Front blower motor
E4 (M63) BR/20 : To (M251)
D4 (M64) BR/24 : To (M202)
D2 (M65) W/4 : To (M401)
F3 *(M66) B/1 : To (E33)
F2 (M74) BR/20 : To (D102)
F2 (M75) W/8 : To (D101)
B3 (M76) W/6 : Electric brake (pre-wiring)
D2 (M77) Y/4 : Front passenger air bag module (service replacement)
E2 (M79) - : Body ground
E3 (M81) GR/12 : Shift lock control unit
D3 (M82) W/2 : Circuit breaker-2
E4 (M84) W/16 : To (B101)
B3 (M87) W/5 : Rear power vent window relay (open)
B3 (M89) W/5 : Rear power vent window relay (close)
B4 (M91) W/16 : To (E26)
B4 (M92) GR/6 : Power liftgate switch
D2 (M93) W/24 : Display unit
D2 (M94) W/24 : Display control unit (with NAVI)
C2 (M95) W/32 : Display control unit (with NAVI)
B4 (M96) BR/6 : Pedal adjusting switch
C4 (M97) BR/7 : Heated seat relay
D3 (M98) W/24 : AV switch
C4 (M99) BR/2 : Foot lamp LH
E3 (M100) BR/2 : Foot lamp RH
D4 (M104) W/4 : Auxiliary in jack (audio)
E2 (M105) Y/2 : Front passenger air bag module

E2 (M106) O/2 : Front passenger air bag module
E3 (M107) BR/6 : Front blower motor relay
F5 (M108) B/6 : Yaw rate/side decel G-sensor
A2 (M109) BR/2 : Front tweeter LH
D2 (M110) BR/2 : Center speaker (with BOSE)
E2 (M111) BR/2 : Front tweeter RH
C2 (M112) W/8 : BOSE speaker amp.
C2 (M113) L/24 : BOSE speaker amp.
B4 (M116) GR/8 : Rear sonar system OFF switch
B3 (M117) B/2 : Sonar buzzer
E2 (M120) W/4 : Remote keyless entry receiver
E3 (M122) B/4 : Variable blower control (ATC)
E3 (M122) B/4 : Front blower motor resistor (MTC)
C4 (M123) W/2 : Tire pressure warning check connector
C2 (M139) B/2 : Diode-1
C2 (M140) B/2 : Diode-2
D3 (M141) W/8 : 4WD shift switch
C4 (M142) B/6 : Mode door motor
E3 (M143) B/6 : Air mix door motor (passenger)
C2 (M144) B/6 : Defroster door motor
E2 (M146) W/2 : Intake sensor
D2 (M147) B/6 : Air mix door motor (driver) (with ATC)
D2 (M147) B/6 : Air mix door motor (front) (with MTC)

Console sub-harness

D4 (M201) W/16 : To (M56)
E4 (M202) BR/24 : To (M64)
D4 (M203) W/12 : A/T device
E5 (M205) GR/16 : DVD player
E5 (M206) L/16 : DVD player
E5 (M207) B/2 : Console power socket

Console switch sub-harness

E4 (M251) BR/20 : To (M63)
E4 (M252) BR/6 : Heated seat switch (passenger)
E4 (M253) GR/6 : VDC OFF switch
D4 (M254) GR/8 : Tow mode switch
D4 (M255) BR/6 : Heated seat switch (driver)
D5 (M256) B/2 : A/T device illumination

Optical sensor sub-harness

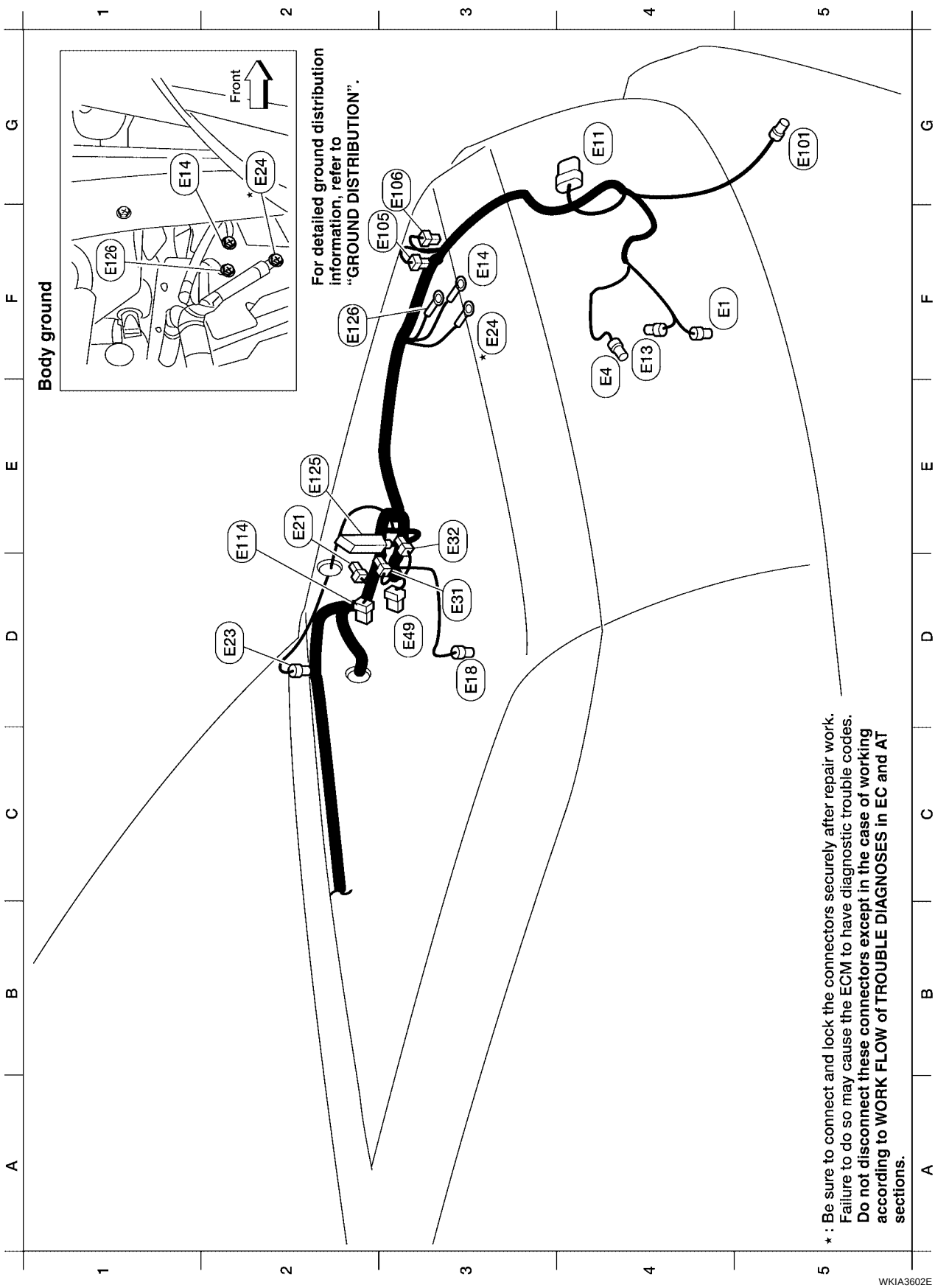
D2 (M401) W/4 : To (M65)
E2 (M402) B/4 : Optical sensor

* : Refer to previous page

WKIA2815E

ENGINE ROOM HARNESS (LH VIEW)

Engine Compartment



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

F4	E1	B/2	: Ambient sensor
E4	E4	Y/2	: Crash zone sensor
G4	E11	GR/2	: Front combination lamp LH
F4	E13	GR/2	: Ambient sensor 2
F3	E14	-	: Body ground
D3	E18	GR/2	: Front wheel sensor LH
E2	E21	GR/2	: Brake fluid level switch
D2	E23	GR/6	: Front wiper motor
F3	*E24	-	: Body ground
D3	E31	B/3	: Front pressure sensor
E3	E32	B/3	: Rear pressure sensor
D3	E49	B/6	: Active booster
G5	E101	B/2	: Front fog lamp LH
F3	E105	GR/2	: Washer motor
G3	E106	BR/2	: Washer fluid level switch
E2	E114	B/6	: Delta S sensor
E2	E125	B/47	: ABS actuator and electric unit (control unit)
F2	E126	-	: Body ground

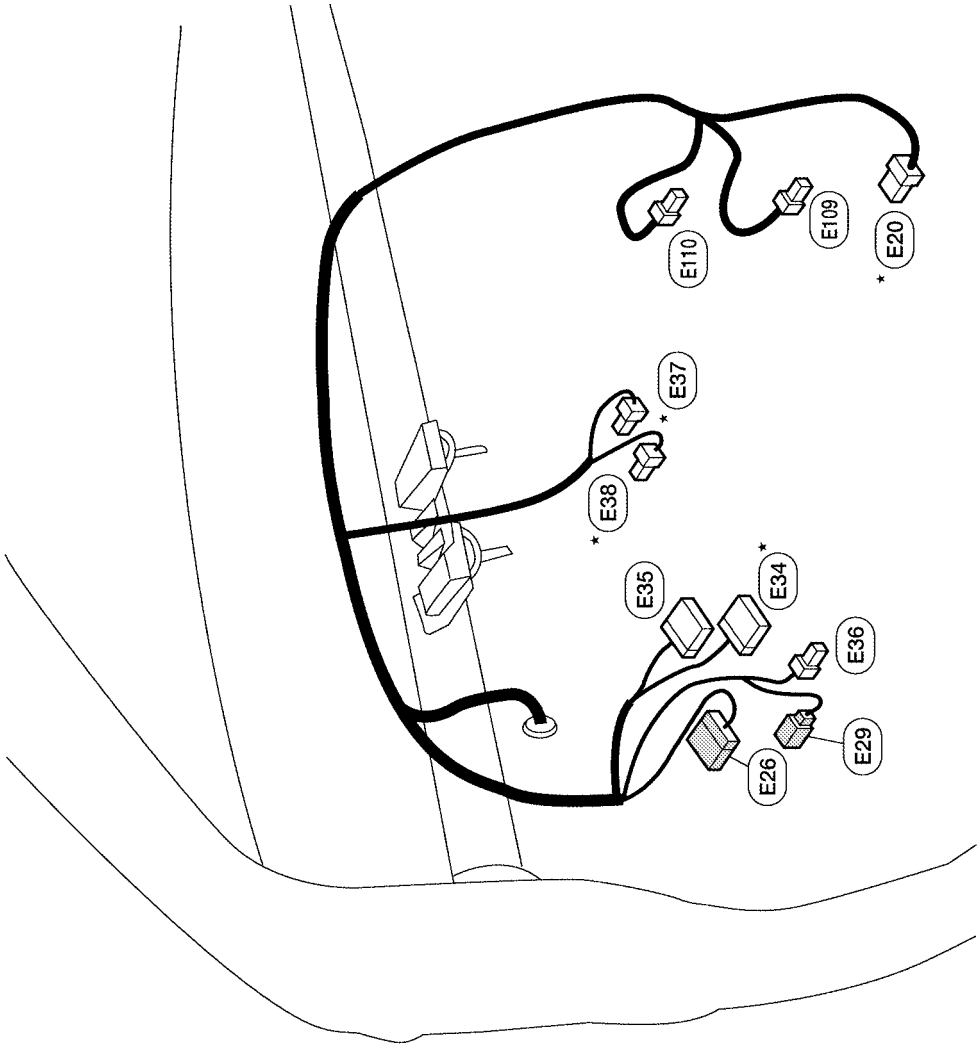
WKIA3897E

★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

Passenger Compartment

* (E20) B/8 : Accelerator pedal position (APP) sensor
(E26) W/16 : To (M91)
(E29) Y/4 : To (M10)
* (E34) W/24 : To (B40)
(E35) W/12 : To (B41)
(E36) W/2 : To (B42)
* (E37) BR/2 : ASCD brake switch
* (E38) B/2 : Stop lamp switch
(E109) W/2 : Pedal adjusting motor
(E110) W/3 : Pedal adjusting motor

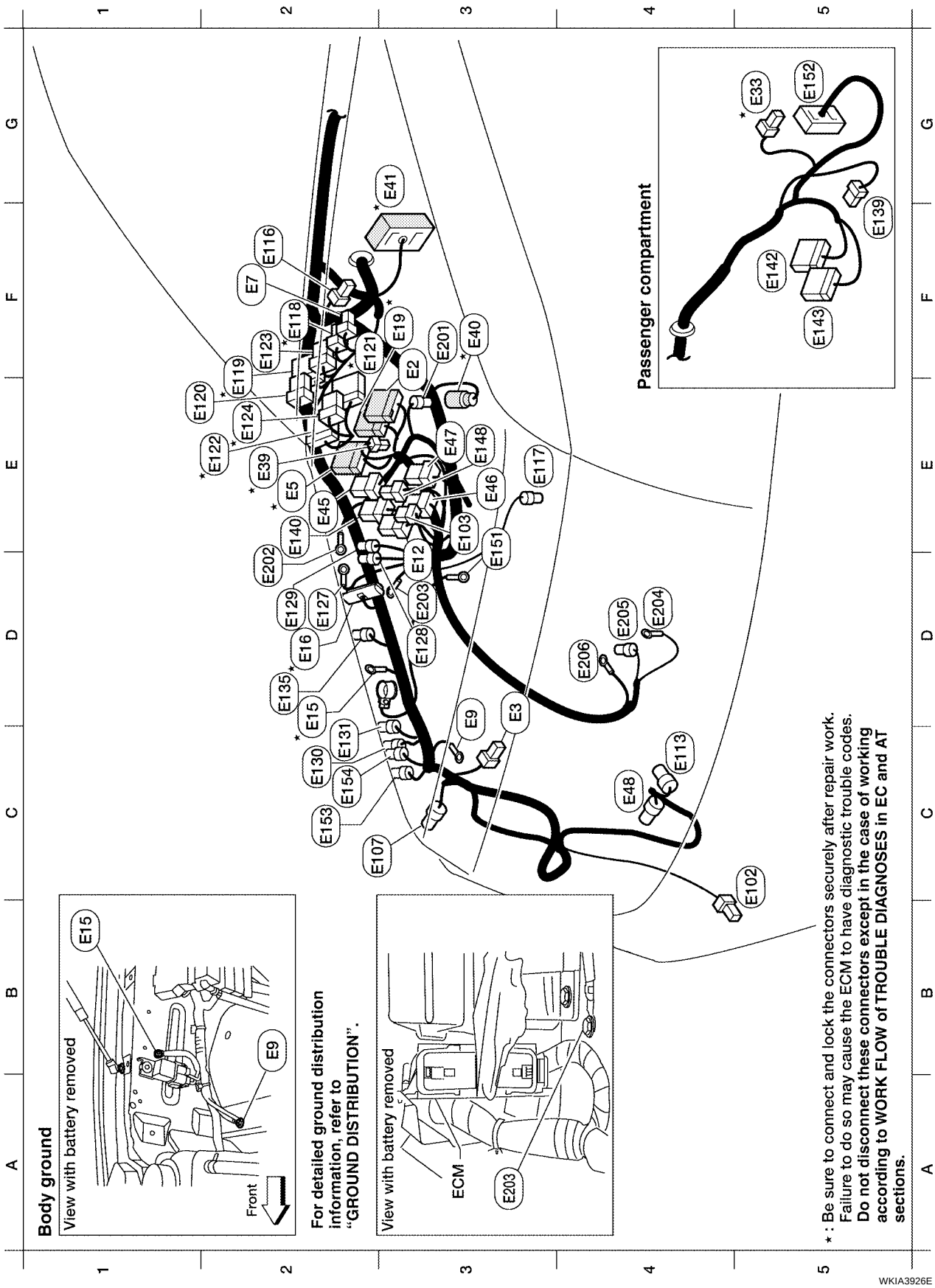
* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.



WKIA3925E

ENGINE ROOM HARNESS (RH VIEW)

Engine Compartment



Refer to PG-43, "ENGINE ROOM HARNESS (LH VIEW)" for continuation of engine room harness.

E3	(E2)	W/16	: To (F32)
C3	(E3)	B/2	: Horn
E2	* (E5)	W/24	: To (F14)
F2	(E7)	GR/2	: Fuse and fusible link box
C3	(E9)	-	: Body ground
D3	(E12)	B/5	: Stop lamp relay
C2	* (E15)	-	: Body ground
D2	* (E16)	B/32	: ECM
F3	* (E19)	W/16	: To (F33)
G5	* (E33)	B/1	: To (M66)
E2	* (E39)	W/2	: To (F34)
F3	* (E40)	GR/2	: To (E201)
F3	* (E41)	SMJ	: To (C1) (located RH rear of engine compartment)
E2	(E45)	BR/6	: Back-up lamp relay
E3	(E46)	B/5	: Transfer shift high relay
E3	(E47)	B/5	: Transfer shift low relay
C4	(E48)	B/3	: Refrigerant pressure sensor
C5	(E102)	B/2	: Front fog lamp RH
E3	(E103)	B/5	: Daytime light relay
C2	(E107)	B/6	: Front combination lamp RH
C4	(E113)	GR/2	: Cooling fan motor
F2	(E116)	W/2	: Condenser-2
E3	(E117)	GR/2	: Front wheel sensor RH
F2	* (E118)	B/2	: IPDM E/R (intelligent power distribution module engine room)
E2	* (E119)	W/16	: IPDM E/R (intelligent power distribution module engine room)
E2	(E120)	W/6	: IPDM E/R (intelligent power distribution module engine room)
F3	* (E121)	BR/12	: IPDM E/R (intelligent power distribution module engine room)
E2	* (E122)	W/12	: IPDM E/R (intelligent power distribution module engine room)
F2	(E123)	BR/8	: IPDM E/R (intelligent power distribution module engine room)
E2	* (E124)	B/6	: IPDM E/R (intelligent power distribution module engine room)
D2	(E127)	-	: Fuse link box (battery)
D3	(E128)	GR/2	: Fuse link box (battery)
D2	(E129)	BR/2	: Fuse link box (battery)
C2	(E130)	W/2	: Compressor motor relay
C2	(E131)	W/2	: Compressor motor relay
D2	(E135)	GR/2	: Transfer dropping resistor
F5	(E139)	W/8	: To (B107)
E2	(E140)	BR/6	: Trailer tow relay 2
F5	(E142)	L/24	: Transfer control unit
F5	(E143)	G/24	: Transfer control unit
E3	(E148)	L/4	: Trailer tow relay 1
D3	(E151)	-	: Battery ground
G5	(E152)	SMJ	: To (M31)
C2	(E153)	GR/2	: Transfer motor relay
C2	(E154)	GR/2	: Transfer motor relay
	(H-1)	-	: Horn relay

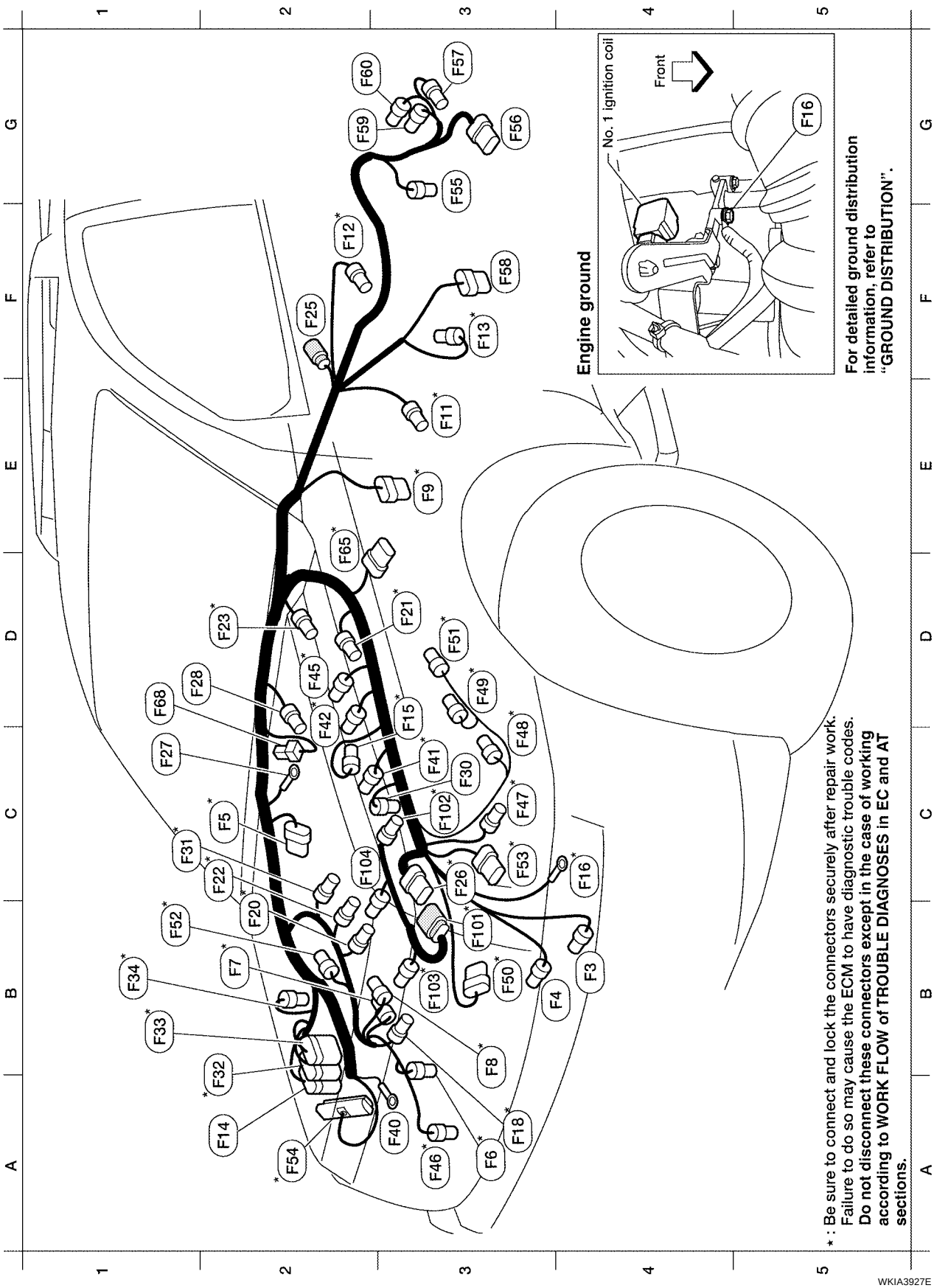
Generator sub-harness

F3	(E201)	GR/2	: To (E40)
D2	(E202)	B/1	: To fuse and fusible link box
D3	(E203)	-	: Body ground
D4	(E204)	-	: Generator
D4	(E205)	GR/2	: Generator
D4	(E206)	-	: Generator

WKIA3961E

* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

ENGINE CONTROL HARNESS



B4	(F3)	B/1	: A/C Compressor
B4	(F4)	B/3	: Oil pressure sensor
C2 *	(F5)	B/6	: Air/fuel ratio (A/F) sensor 1 (bank 2)
A3 *	(F6)	GR/3	: Ignition coil No. 2 (with power transistor)
B2 *	(F7)	GR/3	: Ignition coil No. 4 (with power transistor)
B3 *	(F8)	GR/3	: Ignition coil No. 6 (with power transistor)
E3 *	(F9)	G/10	: A/T assembly
E3 *	(F11)	B/3	: Crankshaft position sensor (POS)
F2 *	(F12)	G/4	: Heated oxygen sensor 2 (bank 2)
F3 *	(F13)	G/4	: Heated oxygen sensor 2 (bank 1)
A2	(F14)	W/24	: To (E5)
C3 *	(F15)	L/2	: EVAP canister purge volume control solenoid valve
C4 *	(F16)	-	: Engine ground
A3 *	(F18)	GR/2	: Injector No. 2
B2 *	(F20)	GR/2	: Injector No. 4
D3 *	(F21)	GR/2	: Condenser-1
C2 *	(F22)	GR/2	: Injector No. 6
D2 *	(F23)	B/3	: Camshaft position sensor (PHASE)
F2	(F25)	W/2	: Diode No. 2
C3 *	(F26)	B/6	: To (F101)
C2	(F27)	B/1	: Starter motor
D2	(F28)	GR/1	: Starter motor
C3 *	(F30)	GR/2	: Injector No. 1
C2 *	(F31)	GR/2	: Injector No. 8
A2 *	(F32)	W/16	: To (E2)
B1 *	(F33)	W/16	: To (E19)
B1 *	(F34)	W/2	: To (E39)
A3	(F40)	-	: Fusible link box (battery)
C3 *	(F41)	GR/2	: Injector No. 3
C2 *	(F42)	GR/2	: Injector No. 5
D2 *	(F45)	GR/2	: Injector No. 7
A3 *	(F46)	B/3	: Power steering pressure sensor
C3 *	(F47)	GR/3	: Ignition coil No. 1 (with power transistor)
C3 *	(F48)	GR/3	: Ignition coil No. 3 (with power transistor)
D3 *	(F49)	GR/3	: Ignition coil No. 5 (with power transistor)
B3 *	(F50)	B/6	: Electric throttle control actuator
D3 *	(F51)	GR/3	: Ignition coil No. 7 (with power transistor)
B1 *	(F52)	GR/3	: Ignition coil No. 8 (with power transistor)
C3 *	(F53)	B/6	: Mass air flow sensor
A2 *	(F54)	B/81	: ECM
G3	(F55)	B/2	: ATP switch (4WD only)
G3	(F56)	B/8	: Terminal cord assembly (4WD only)
G3	(F57)	B/2	: Transfer motor (4WD only)
F3	(F58)	GR/6	: Transfer control device (4WD only)
G2	(F59)	B/2	: Wait detection switch (4WD only)
G2	(F60)	GR/2	: Neutral-4LO switch (4WD only)
D2 *	(F65)	B/6	: Air/fuel ratio (A/F) sensor 1 (bank 1)
D1	(F68)	B/2	: Water valve

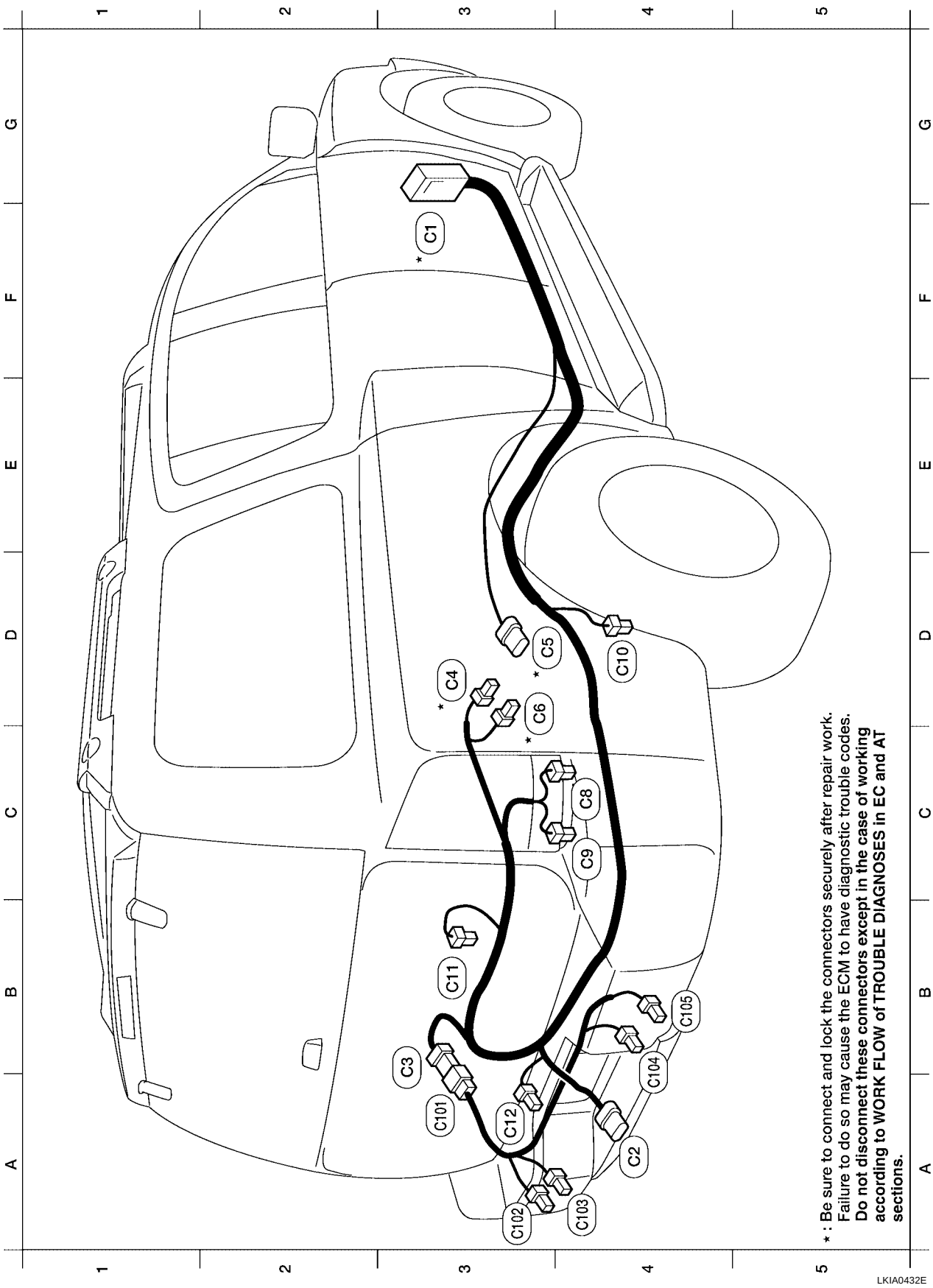
Knock sensor sub-harness

B3 *	(F101)	B/6	: To (F26)
C3 *	(F102)	GR/2	: Knock sensor (bank 1)
B3 *	(F103)	GR/2	: Engine coolant temperature sensor
C2	(F104)	GR/2	: Knock sensor (bank 2)

* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

WKIA3928E

CHASSIS HARNESS



F3	*	C1	SMJ	: To E41 (located RH rear of engine compartment)
A4		C2	B/7	: Trailer
B3		C3	GR/6	: To C101
D3	*	C4	GR/3	: EVAP control system pressure sensor
D4	*	C5	GR/5	: Fuel level sensor unit and fuel pump
C3	*	C6	B/2	: EVAP canister vent control valve
C4		C8	B/3	: Height sensor
C4		C9	B/4	: Suspension air compressor
D4		C10	BR/2	: Rear wheel sensor RH
B3		C11	BR/2	: Rear wheel sensor LH
A3		C12	GR/2	: License plate lamps

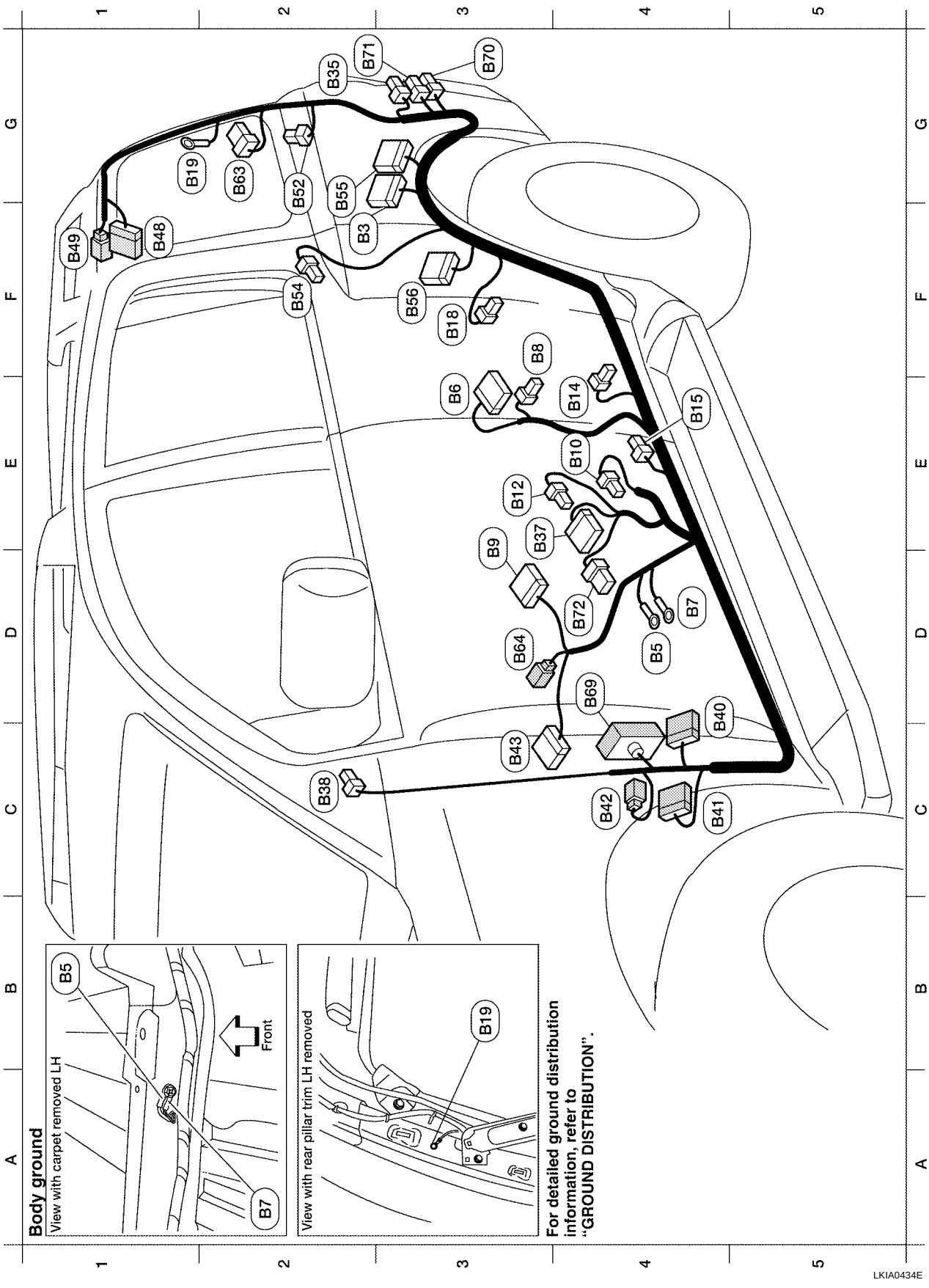
Rear sonar sensor sub-harness

A3	C101	GR/6	: To C3
A3	C102	B/3	: Rear sonar sensor LH outer
A4	C103	B/3	: Rear sonar sensor LH inner
B4	C104	B/3	: Rear sonar sensor RH inner
B4	C105	B/3	: Rear sonar sensor RH outer

WKIA3940E

★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

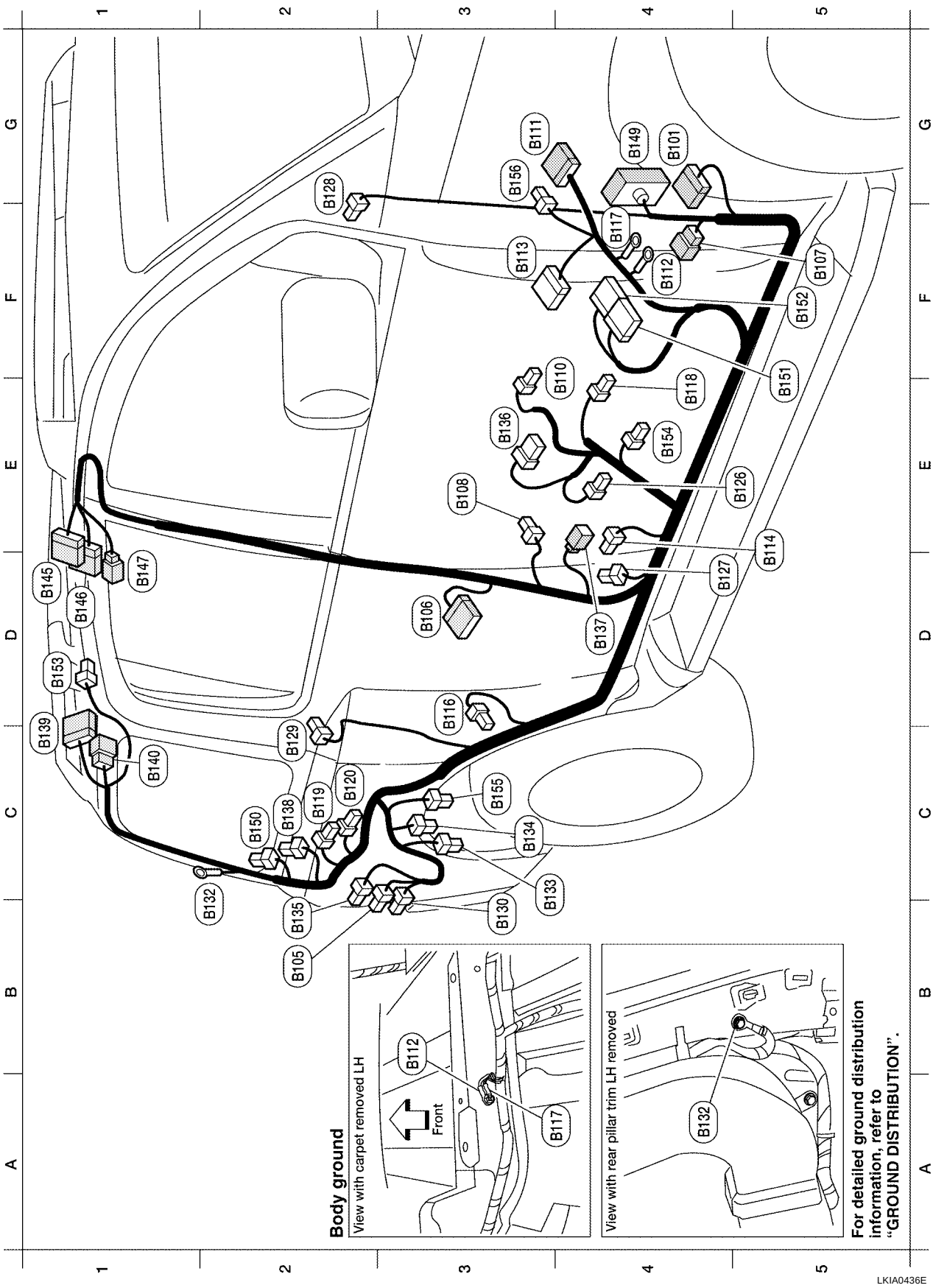
BODY HARNESS



F2 (B3) W/16 : Suspension control unit
D4 (B5) - : Body ground
E3 (B6) W/18 : To (C201)
D4 (B7) - : Body ground
F3 (B8) W/3 : Front door switch LH
E3 (B9) Y/12 : Air bag diagnosis sensor unit
E4 (B10) Y/2 : Front LH side air bag module
E3 (B12) W/3 : Seat belt buckle switch LH
E4 (B14) Y/2 : Front LH seat belt pre-tensioner
E4 (B15) Y/2 : LH side air bag (satellite) sensor
F3 (B18) W/3 : Rear door switch LH
G1 (B19) - : Body ground
G2 (B35) B/3 : Rear combination lamp LH (turn signal)
D4 (B37) W/16 : To (P1)
C2 (B38) Y/2 : LH side curtain air bag module
C4 (B40) W/24 : To (E34)
C4 (B41) W/12 : To (E35)
C4 (B42) W/2 : To (E36)
C3 (B43) W/12 : To (B111)
F1 (B48) W/16 : To (D401)
F1 (B49) W/2 : To (D402)
F2 (B52) W/2 : Rear power vent window motor LH
F2 (B54) Y/2 : LH side curtain air bag module
G2 (B55) W/26 : Back door control unit
F3 (B56) W/16 : Sonar control unit
G2 (B63) W/6 : Back door close switch
D3 (B64) W/4 : To (B156)
D4 (B69) SMJ : To (M40)
G3 (B70) B/3 : Rear combination lamp LH (stop/tail)
G2 (B71) B/2 : Back-up lamp LH
D4 (B72) BR/6 : Subwoofer (with BOSE audio system)

WKIA2822E

BODY NO. 2 HARNESS

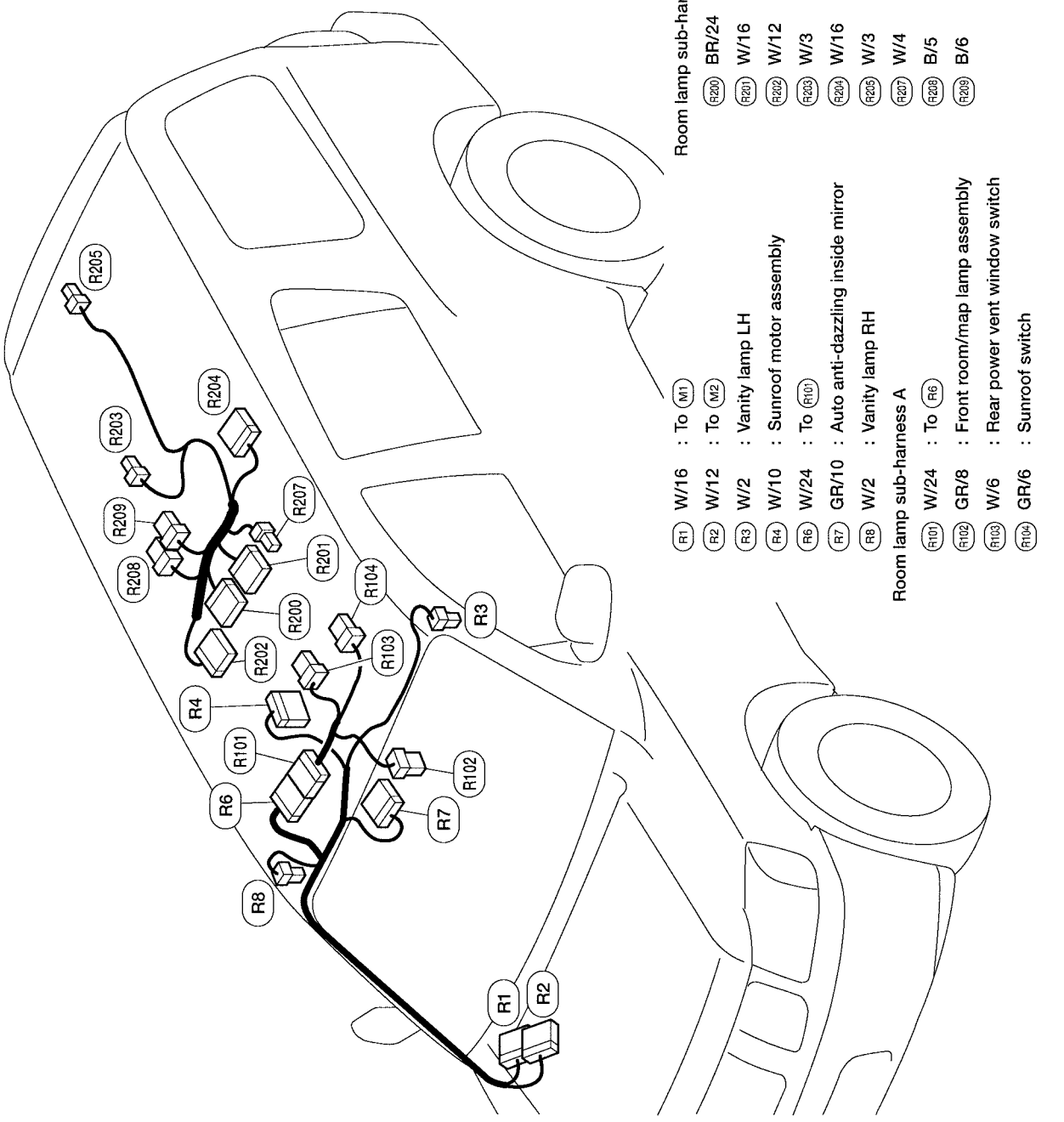


G4 (B101) W/16 : To (M84)
B2 (B105) B/3 : Rear combination lamp RH (turn signal)
D3 (B106) W/18 : To (D301)
F5 (B107) W/8 : To (E139)
E3 (B108) W/3 : Front door switch RH
E4 (B110) W/3 : Seat belt buckle switch RH
G3 (B11) W/12 : To (B43)
F4 (B112) - : Body ground (RH satellite sensor)
F3 (B113) Y/12 : Air bag diagnosis sensor unit
D5 (B114) Y/2 : RH side air bag (satellite) sensor
D3 (B116) W/3 : Rear door switch RH
F4 (B117) - : Body ground
E4 (B118) W/3 : Front seat heater RH
C2 (B119) W/2 : Condensor-3
C3 (B120) W/2 : Condensor-4
E5 (B126) Y/2 : Front RH side air bag module
D5 (B127) Y/2 : Front RH seat belt pre-tensioner
F2 (B128) Y/2 : RH side curtain air bag module
C2 (B129) Y/2 : RH side curtain air bag module
B3 (B130) B/3 : Rear combination lamp RH (stop/tail)
B2 (B132) - : Body ground
C4 (B133) W/4 : Rear blower motor resistor
C3 (B134) W/2 : Rear blower motor
B2 (B135) B/2 : Back-up lamp RH
E3 (B136) W/8 : To (P151)
D4 (B137) B/3 : Belt tension sensor
C2 (B138) B/2 : Rear cargo power socket
C1 (B139) W/20 : To (R602)
C1 (B140) W/6 : To (R601)
D1 (B145) BR/24 : To (R200)
D1 (B146) W/16 : To (R201)
D1 (B147) W/4 : To (R207)

G4 (B149) SMJ : To (M36)
C2 (B150) W/2 : Rear power vent window motor RH
F5 (B151) W/24 : NAVI control unit
F5 (B152) GR/24 : NAVI control unit
D1 (B153) W/2 : Cargo lamp
E4 (B154) W/2 : To (P103)
C3 (B155) B/6 : Air mix door motor (rear)
G3 (B156) W/4 : To (B64)

WKIA2823E

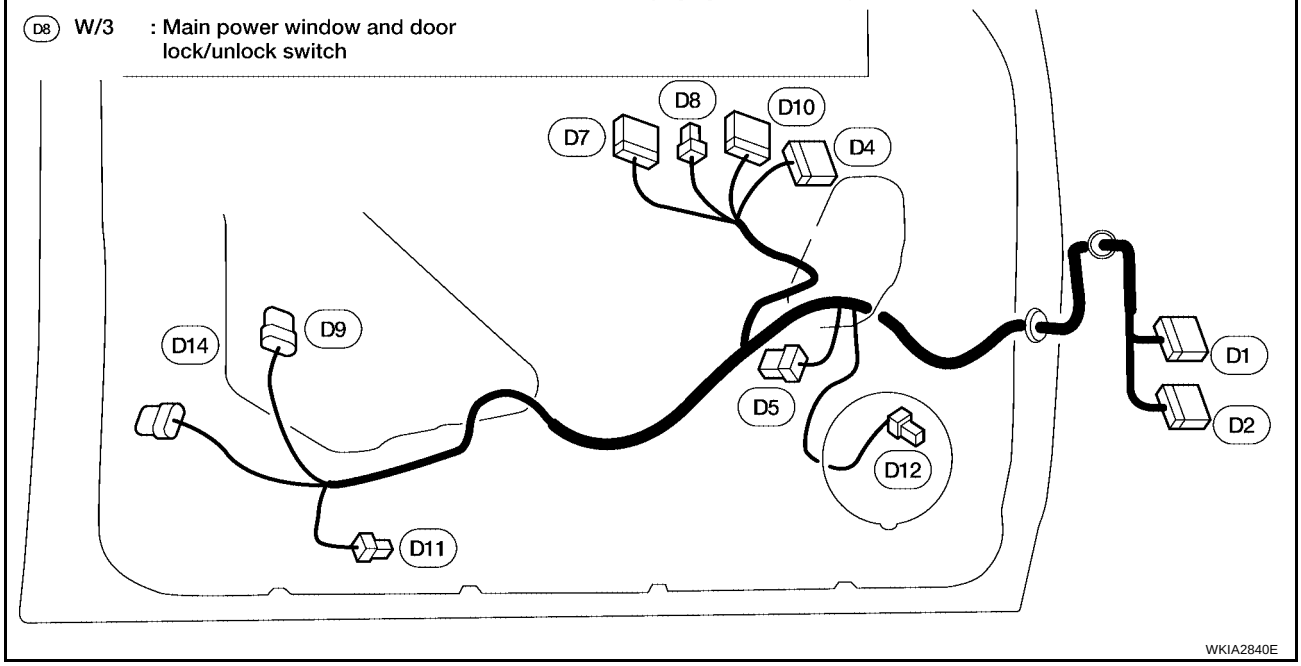
ROOM LAMP HARNESS



WKIA2824E

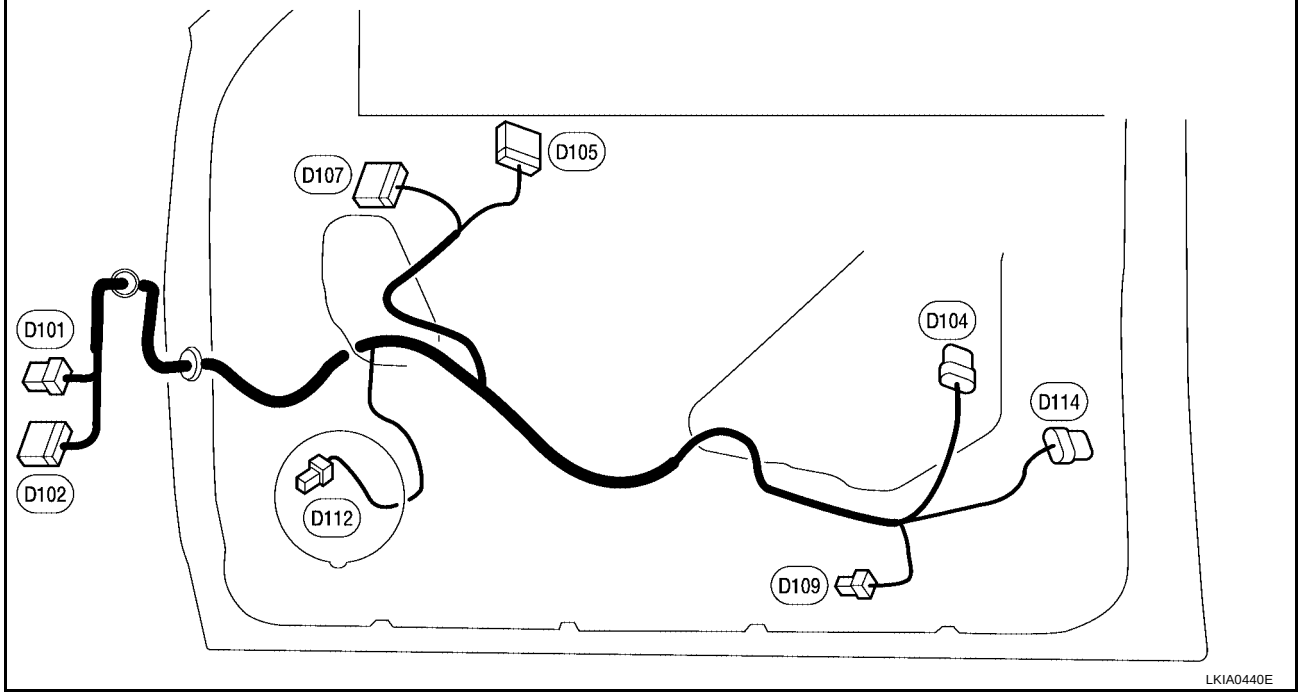
FRONT DOOR LH HARNESS

D1	W/24	: To M9	D9	GR/6	: Front power window motor LH
D2	W/16	: To M8	D10	W/10	: Door mirror switch
D4	W/16	: Door mirror LH	D11	W/2	: Front step lamp LH
D5	W/8	: Seat memory switch	D12	W/2	: Front door speaker LH
D7	W/16	: Main power window and door lock/unlock switch	D14	B/6	: Front door lock assembly LH (key cylinder switch)
D8	W/3	: Main power window and door lock/unlock switch			

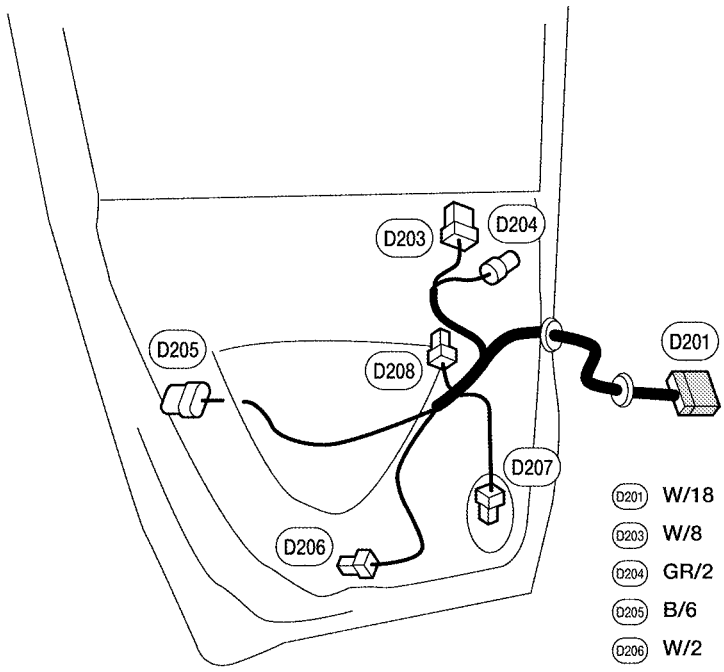


FRONT DOOR RH HARNESS

D101	W/8	: To M75	D107	W/16	: Door mirror RH
D102	W/20	: To M74	D109	W/2	: Front step lamp RH
D104	GR/6	: Front power window motor RH	D112	W/2	: Front door speaker RH
D105	W/16	: Power window and door lock/unlock switch RH	D114	B/6	: Front door lock actuator RH



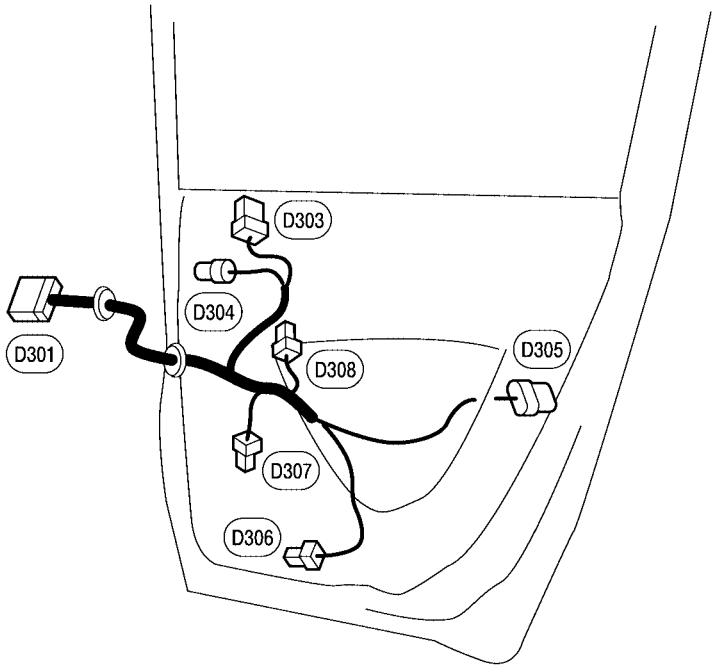
REAR DOOR LH HARNESS



D201	W/18	: To B6
D203	W/8	: Rear power window switch LH
D204	GR/2	: Rear power window motor LH
D205	B/6	: Rear door lock actuator LH
D206	W/2	: Rear step lamp LH
D207	W/2	: Rear door speaker LH
D208	BR/2	: Rear door tweeter LH

LKIA0441E

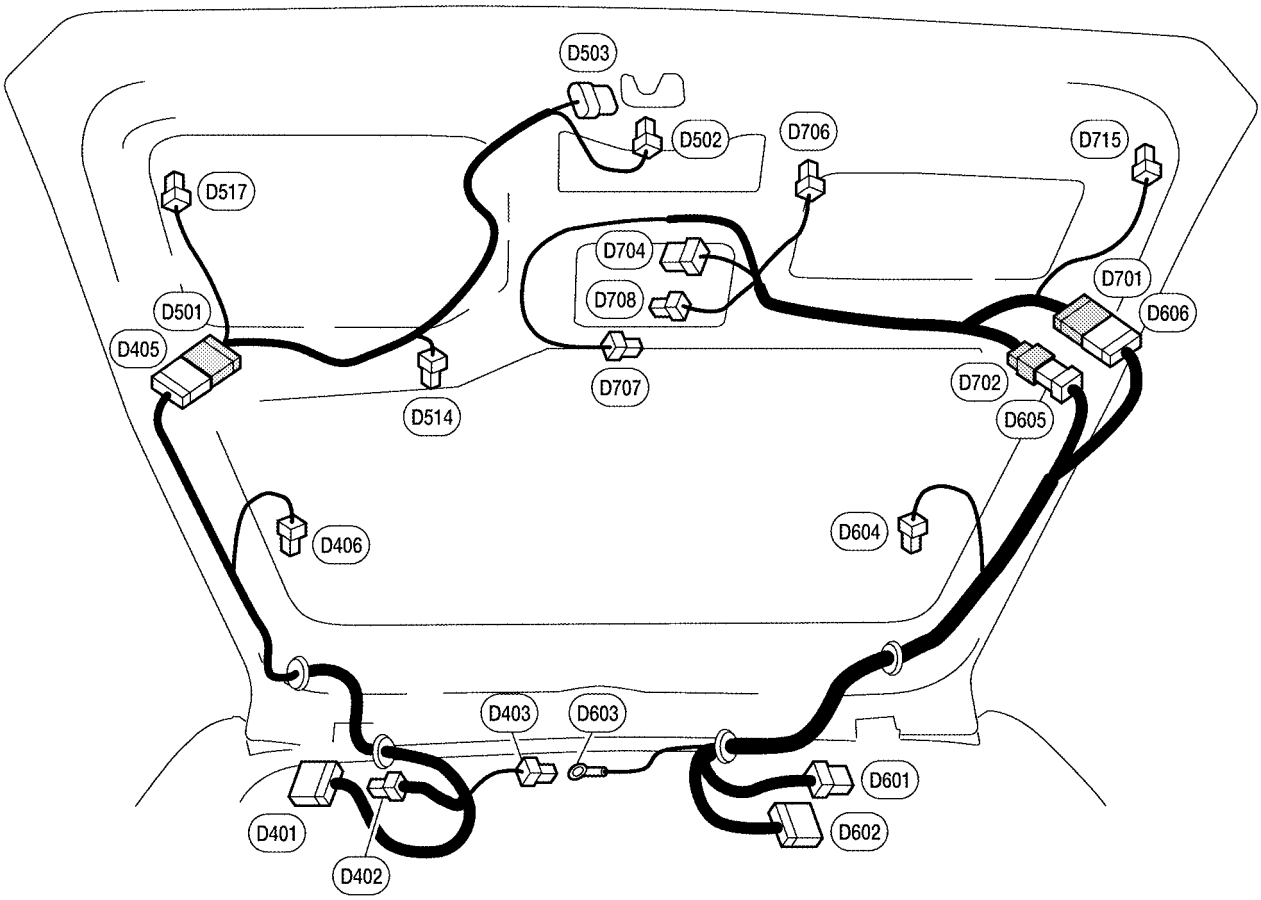
REAR DOOR RH HARNESS



D301	W/18	: To B106
D303	W/8	: Rear power window switch RH
D304	GR/2	: Rear power window motor RH
D305	B/6	: Rear door lock actuator RH
D306	W/2	: Rear step lamp RH
D307	W/2	: Rear door speaker RH
D308	BR/2	: Rear door tweeter RH

LKIA0442E

BACK DOOR HARNESS



Back door No. 2 LH harness

- D401 W/16 : To B48
- D402 W/2 : To B49
- D403 GR/2 : High-mounted stop lamp
- D405 W/16 : To D501
- D406 B/1 : Rear window defogger

Back door LH harness

- D501 W/16 : To D405
- D502 W/3 : Back door switch
- D503 W/8 : Back door latch
- D514 BR/2 : Back door warning chime
- D517 BR/2 : Pinch strip LH

Back door No. 2 RH harness

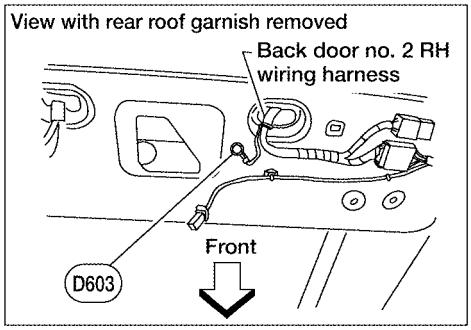
- D601 W/6 : To B140
- D602 W/20 : To B139
- D603 - : Body ground
- D604 B/1 : Rear defogger ground
- D605 W/8 : To D702
- D606 W/20 : To D701

Back door RH harness

- D701 W/20 : To D606
- D702 W/8 : To D605
- D704 W/6 : Rear wiper motor
- D706 GR/2 : Back door handle switch
- D707 B/1 : Glass hatch ajar switch
- D708 W/4 : Back door lock actuator
- D715 BR/2 : Pinch strip RH

For detailed ground distribution information, refer to "Ground Distribution".

Body ground



WKIA3929E

Wiring Diagram Codes (Cell Codes)

EKS006S4

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
A/C,M	MTC	Manual Air Conditioner
A/SUSP	RSU	Rear Air Suspension
AF1B1	EC	Air Fuel Ratio Sensor 1 Bank 1
AF1B2	EC	Air Fuel Ratio Sensor 1 Bank 2
APPS1	EC	Accelerator Pedal Position Sensor
APPS2	EC	Accelerator Pedal Position Sensor
APPS3	EC	Accelerator Pedal Position Sensor
ASC/BS	EC	ASCD Brake Switch
ASC/SW	EC	ASCD Steering Switch
ASCBOF	EC	ASCD Brake Switch
ASCIND	EC	ASCD Indicator
A/T	AT	A/T Assembly
AT/IND	DI	A/T Indicator Lamp
AUDIO	AV	Audio
AUTO/DP	SE	Automatic Drive Positioner
AUTO/L	LT	Auto Light Control
B/CLOS	BL	Back Door Auto Closure System
BACK/L	LT	Back-up Lamp
BRK/SW	EC	Brake Switch
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
D/LOCK	BL	Power Door Lock
DEF	GW	Rear Window Defogger
DTRL	LT	Headlamp - With Daytime Light System
DVD	AV	DVD Entertainment System
ECM/PW	EC	ECM Power Supply for Back-Up
ECTS	EC	Engine Coolant Temperature Sensor
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
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
HSEAT	SE	Heated Seat
I/MIRR	GW	Inside Mirror (Auto Anti-Dazzling Mirror)
IATS	EC	Intake Air Temperature Sensor
IGNSYS	EC	Ignition System

ILL	LT	Illumination
INJECT	EC	Injectors
INT/L	LT	Room/Map, Vanity, Cargo, Personal, Foot, Step, and Puddle Lamps
KEYLES	BL	Remote Keyless Entry System
KS	EC	Knock Sensor
MAFS	EC	Mass Air Flow Sensor
MAIN	EC	Main Power Supply and Ground Circuit
METER	DI	Speedometer, Tachometer, Temp. and Fuel Gauges
MIL/DL	EC	Malfunction Indicator Lamp
MIRROR	GW	Door Mirror
NATS	BL	Nissan Anti-Theft System
NAVI	AV	Navigation System
O2H2B1	EC	Rear Heated Oxygen Sensor 2 Heater Bank 1
O2H2B2	EC	Rear Heated Oxygen Sensor 2 Heater Bank 2
O2S2B1	EC	Heated Oxygen Sensor 2 Bank 1
O2S2B2	EC	Heated Oxygen Sensor 2 Bank 2
P/SCKT	WW	Power Socket
PEDAL	AP	Adjustable Pedal System
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHASE	EC	Camshaft Position Sensor (PHASE) (Bank 1)
PNP/SW	EC	Park/Neutral Position Switch
POS	EC	Crankshaft Position Sensor (POS)
POWER	PG	Power Supply Routing
PRE/SE	EC	EVAP Control System Pressure Sensor
PS/SEN	EC	Power Steering Pressure Sensor
RP/SEN	EC	Refrigerant Pressure Sensor
SEAT	SE	Power Seat
SEN/PW	EC	Sensor Power Supply
SHIFT	AT	A/T Shift Lock System
SONAR	DI	Rear Sonar System
SROOF	RF	Sunroof
SRS	SRS	Supplemental Restraint System
START	SC	Starting System
STOP/L	LT	Stop Lamp
T/TOW	LT	Trailer Tow
T/WARN	WT	Low Tire Pressure Warning System
TAIL/L	LT	Parking, License and Tail Lamps
T/F	TF	Transfer Case
TPS1	EC	Throttle Position Sensor
TPS2	EC	Throttle Position Sensor
TPS3	EC	Throttle Position Sensor
TRNSCV	BL	HOMELINK® Universal Transceiver
TURN	LT	Turn Signal and Hazard Warning Lamps
VDC	BRC	Vehicle Dynamic Control System
VEHSEC	BL	Vehicle security (theft warning) system
VENT/V	EC	EVAP Canister Vent Control Valve
W/ANT	AV	Audio Antenna
WARN	DI	Warning Lamps
WINDOW	GW	Power Window
WIP/R	WW	Rear Wiper and Washer
WIPER	WW	Front Wiper and Washer

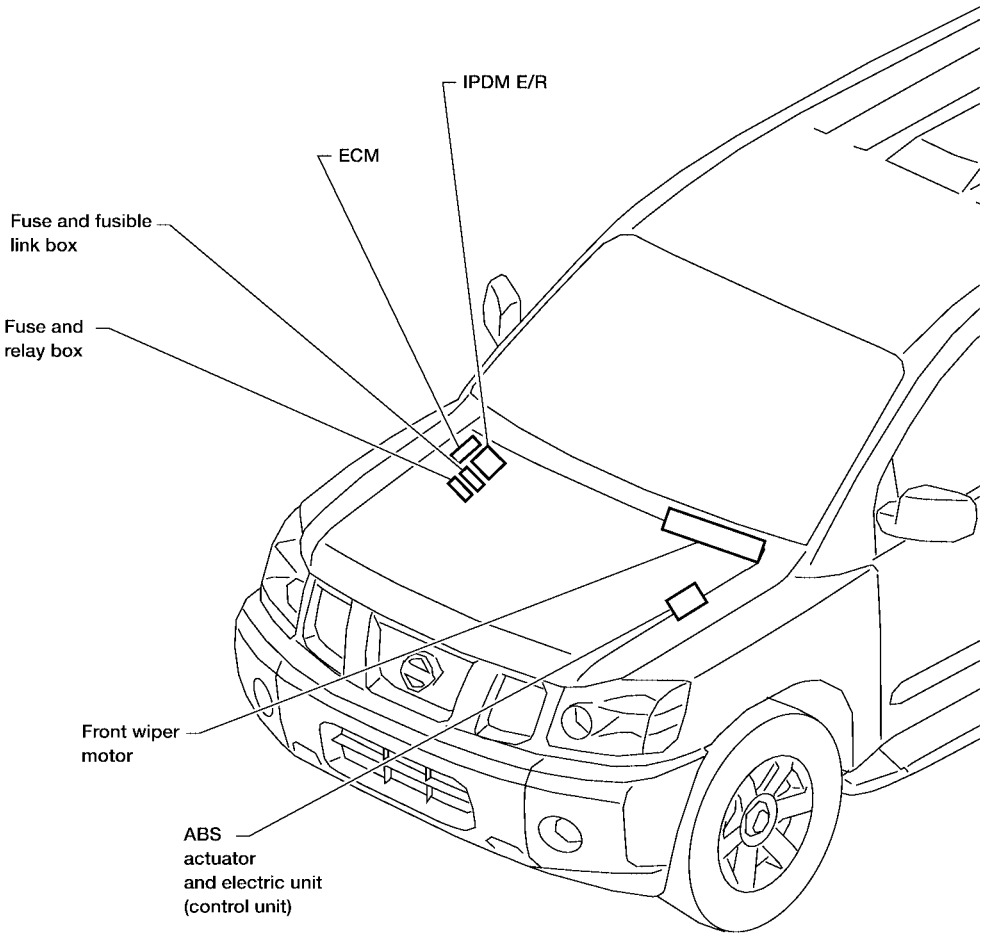
ELECTRICAL UNITS LOCATION

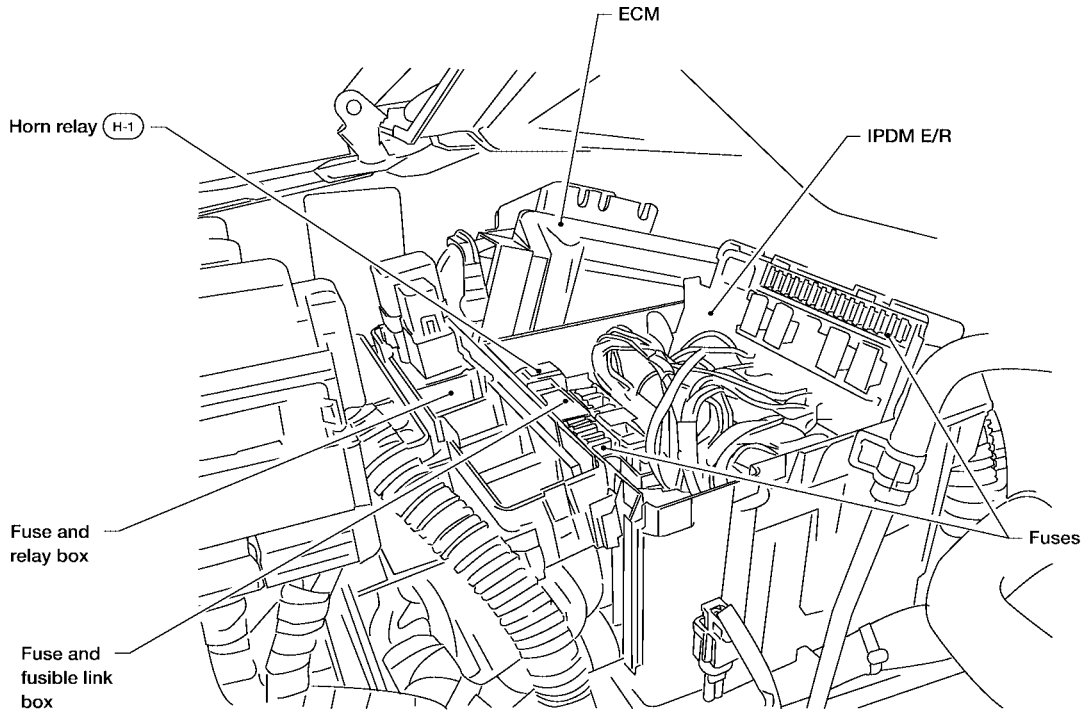
PFP:25230

Electrical Units Location

EKS006S5

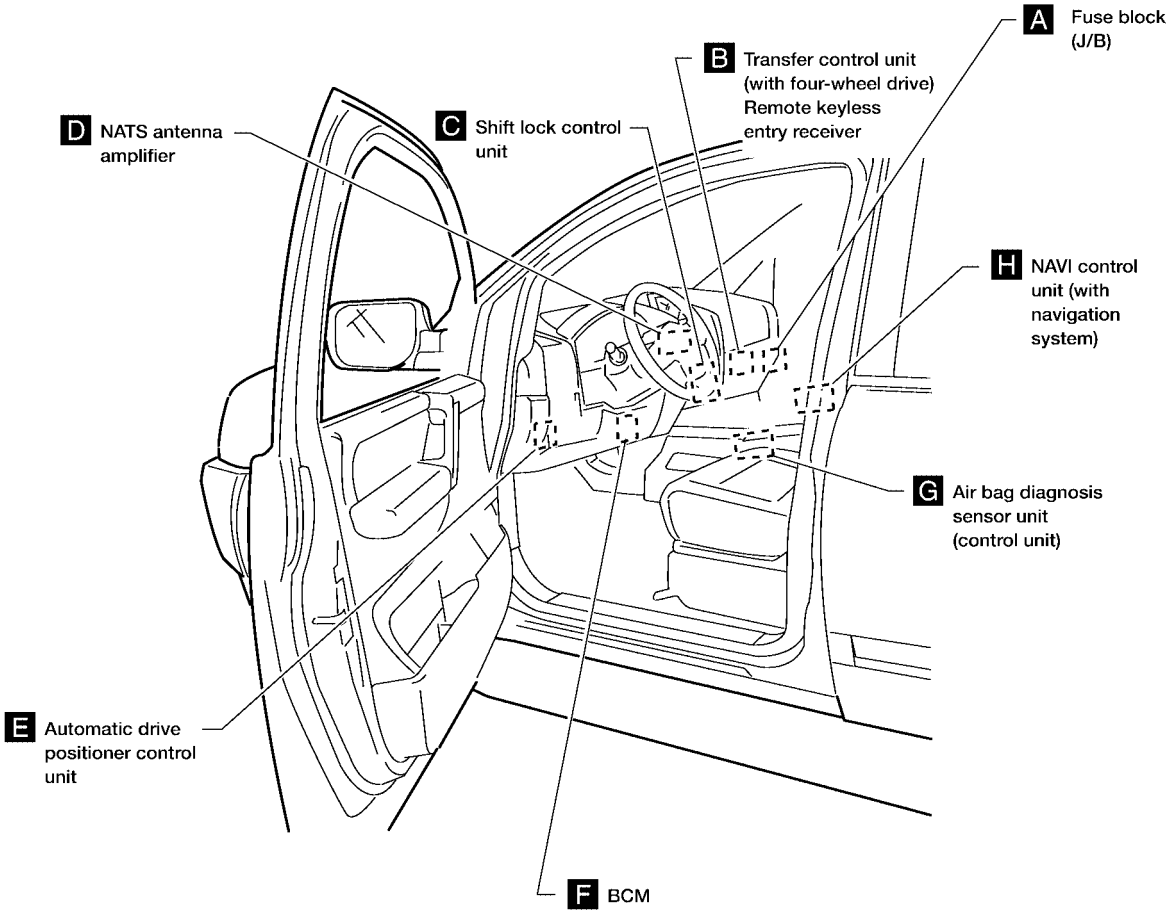
ENGINE COMPARTMENT



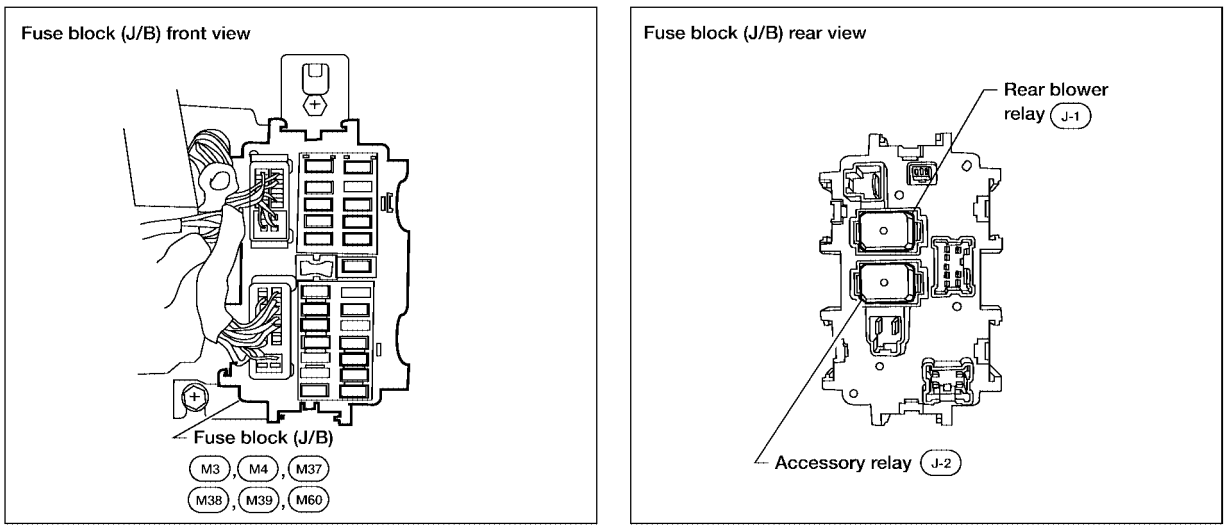


LKIA0444E

PASSENGER COMPARTMENT

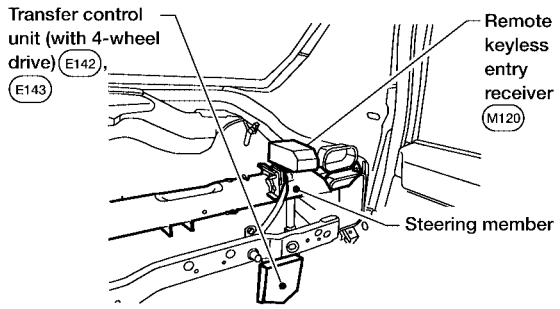


A Instrument panel side RH

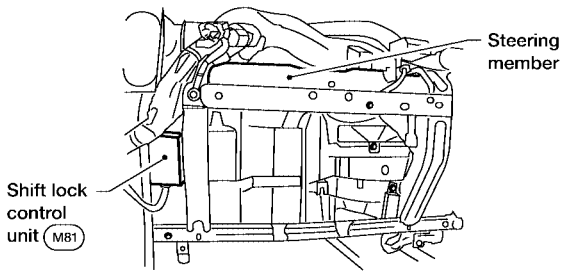


WKIA3930E

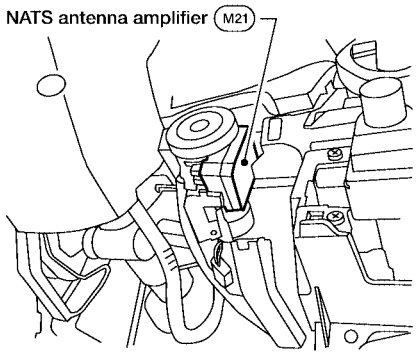
B View with instrument panel removed RH



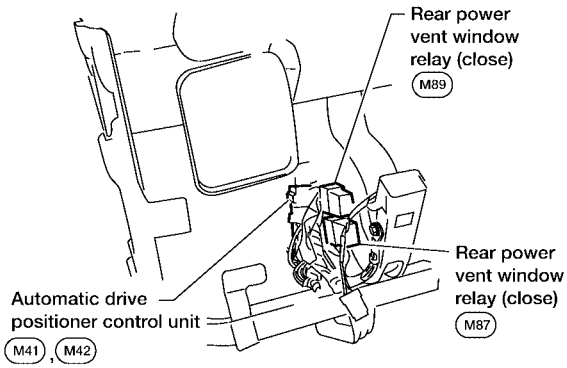
C View with instrument panel removed RH



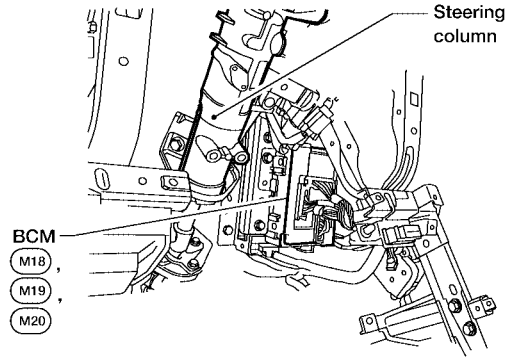
D View with lower driver instrument panel removed



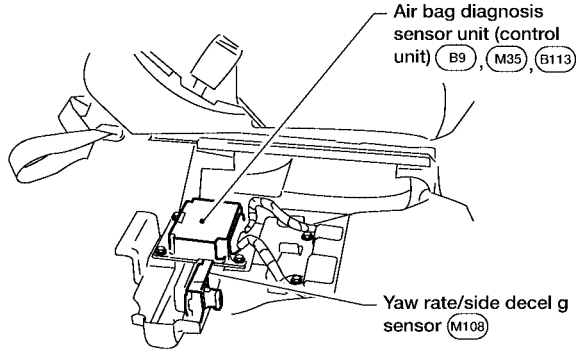
E View with steering member removed LH



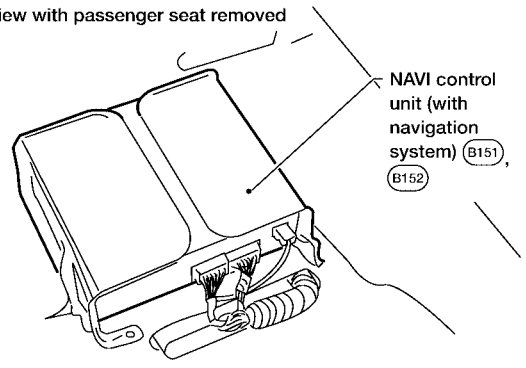
F View with instrument panel removed



G View with center console removed



H View with passenger seat removed

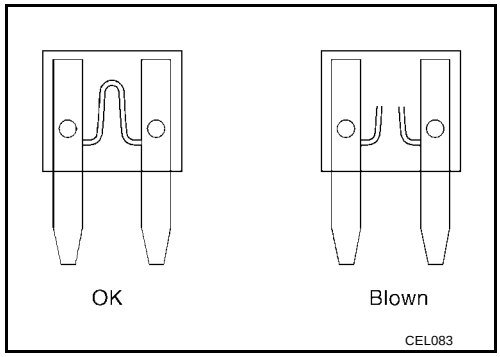


WKIA1536E

Fuse

EKS006S6

- 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

EKS006S7

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:

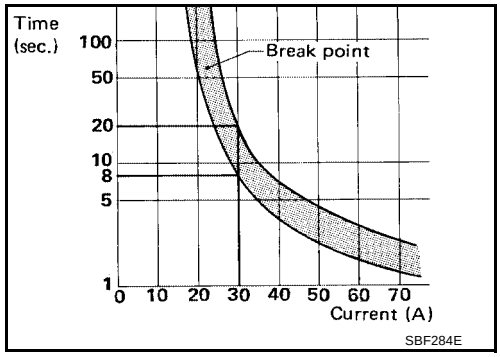
- **If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of incident.**
- **Never wrap outside of fusible link with vinyl tape.**
- **Never let fusible link touch any other wiring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

Circuit Breaker (Built Into BCM)

EKS006S8

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 door locks
- Remote keyless entry system
- Power sunroof
- Rear window wiper



HARNESS CONNECTOR

PFP:B4341

Description

EKS006S9

HARNESS CONNECTOR (TAB-LOCKING TYPE)

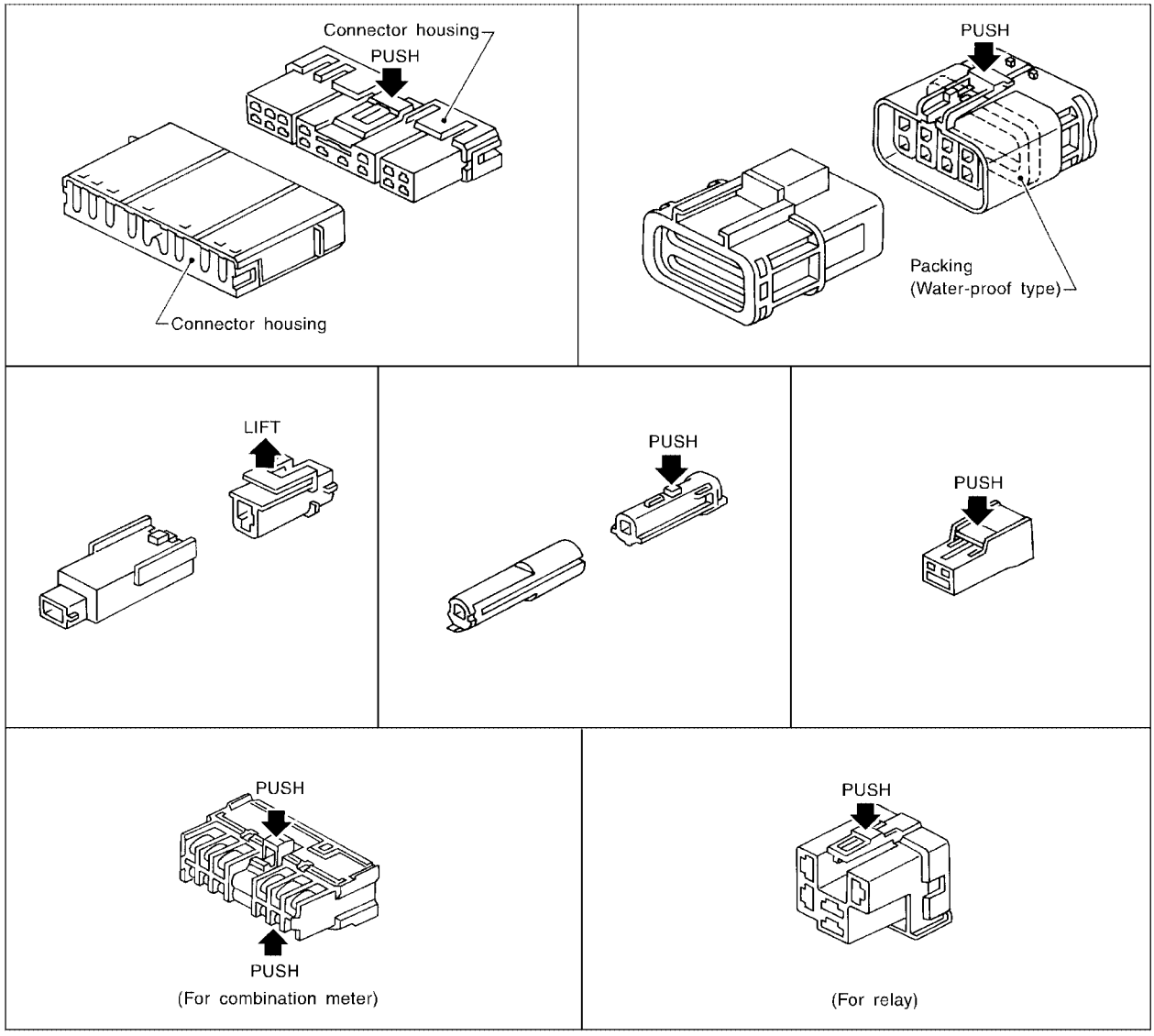
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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

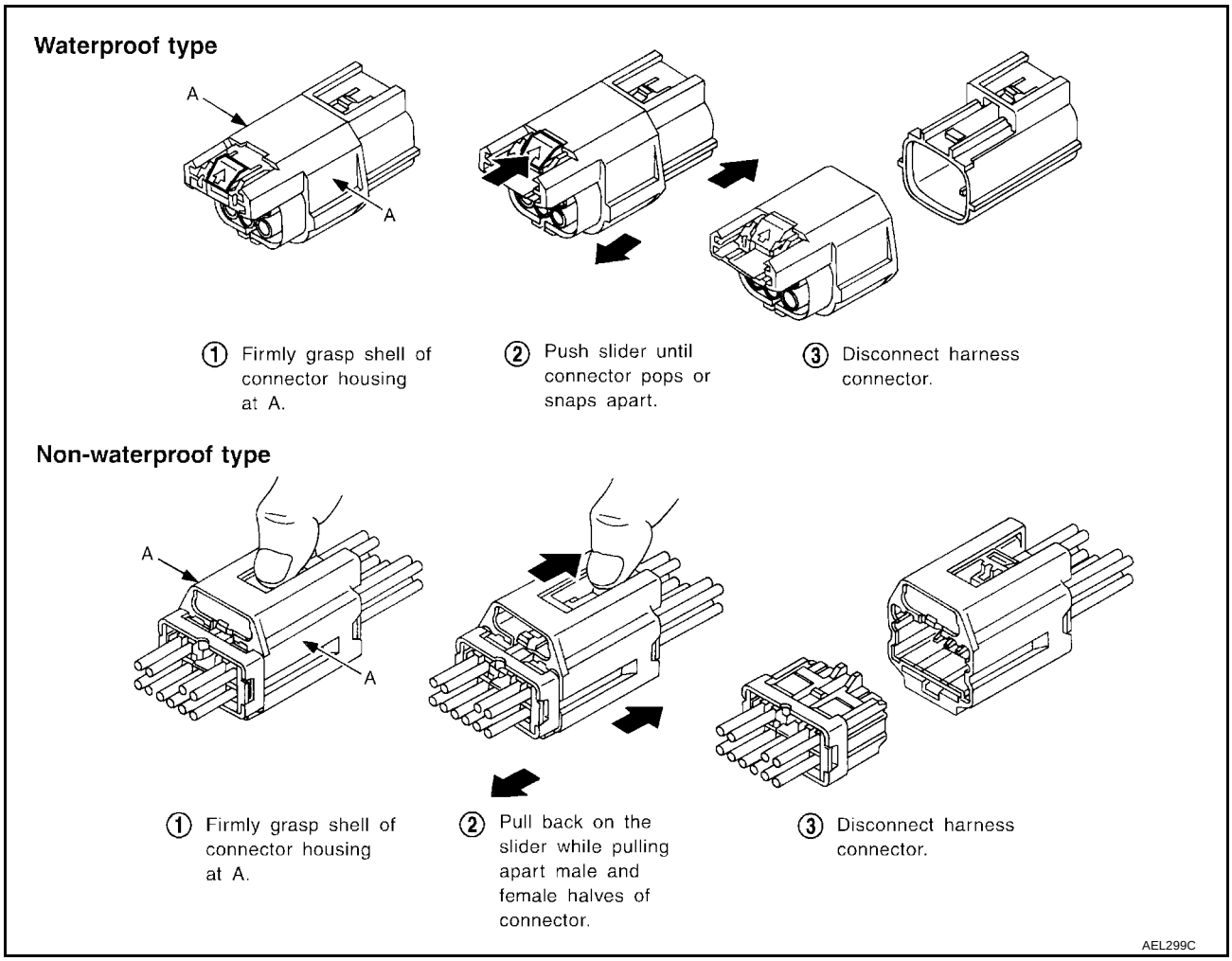
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

- 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]

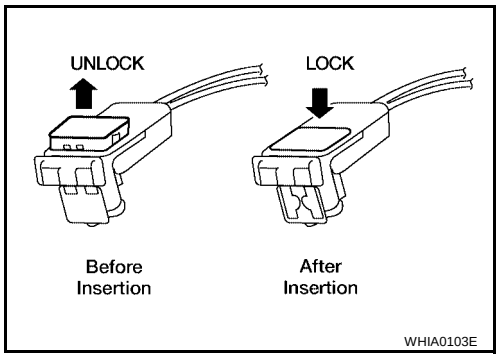


HARNESS CONNECTOR (DIRECT-CONNECT SRS COMPONENT TYPE)

- 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.**



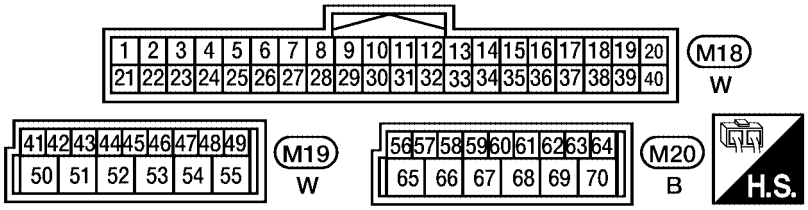
ELECTRICAL UNITS

PFP:23710

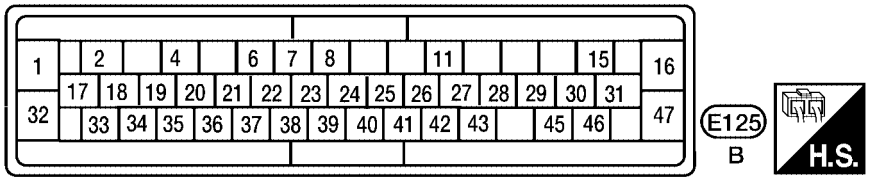
Terminal Arrangement

EKS006TW

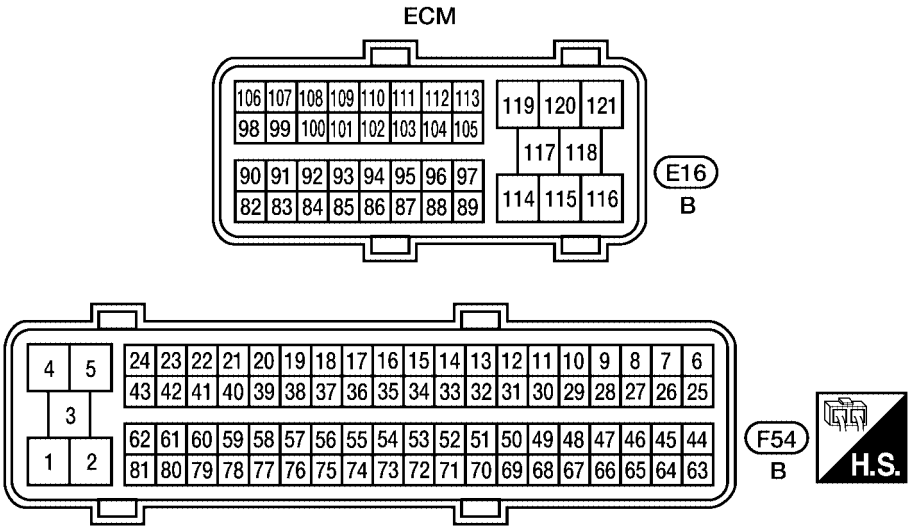
BCM (BODY CONTROL MODULE)



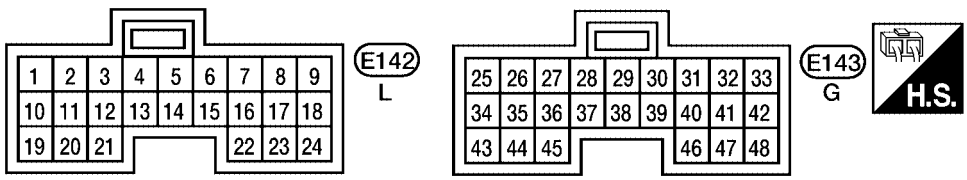
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



ECM



TRANSFER CONTROL UNIT



WKIA1251E

STANDARDIZED RELAY

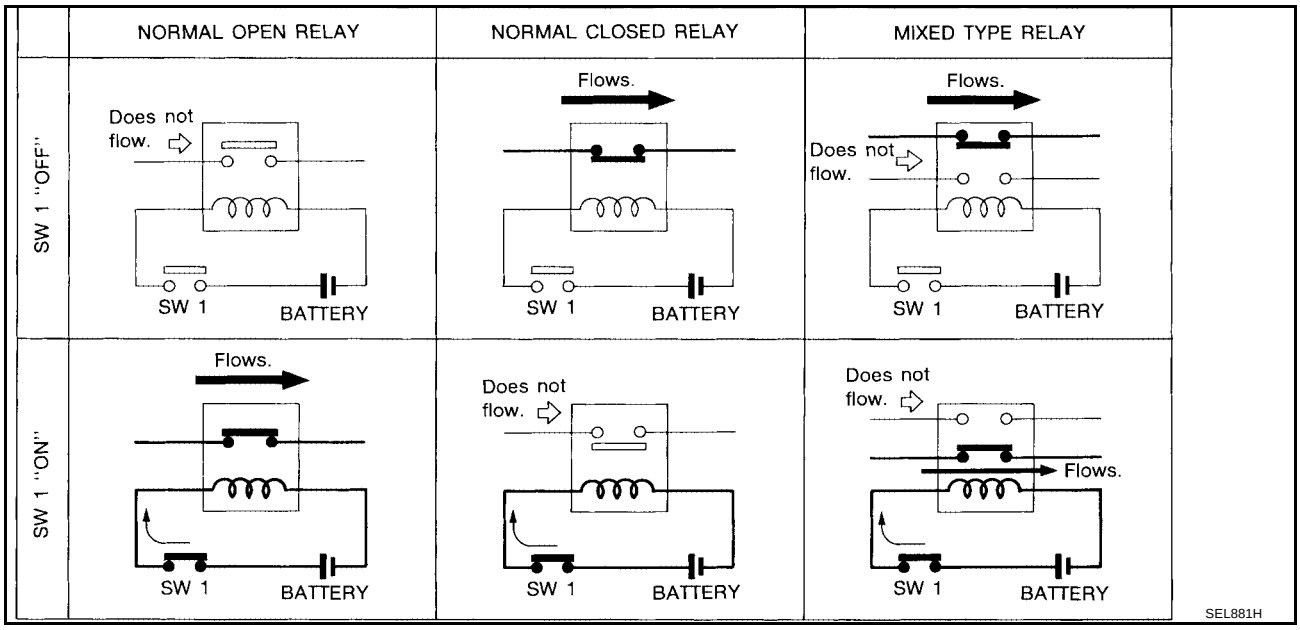
PFP:25230

Description

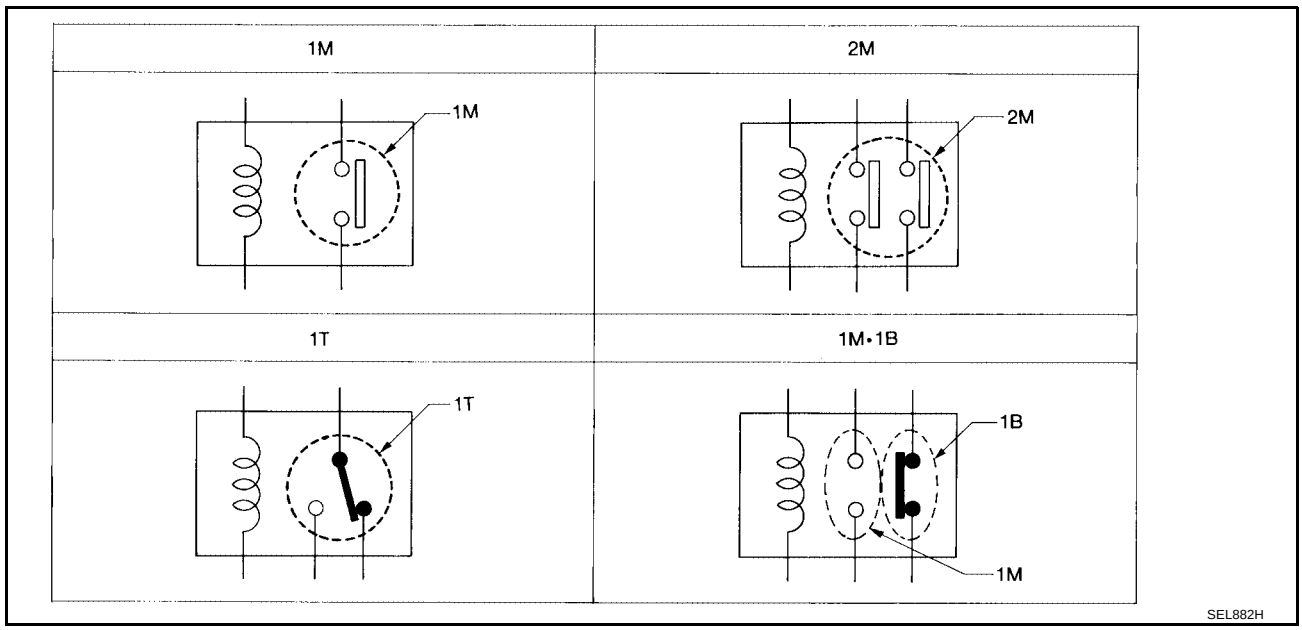
EKS006TX

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

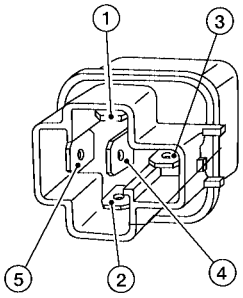
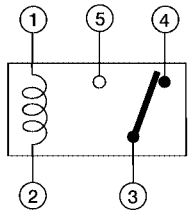
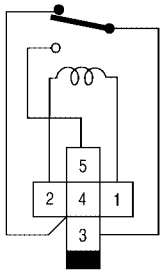
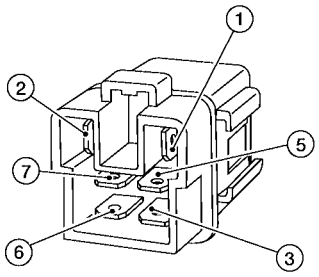
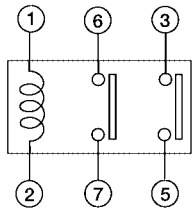
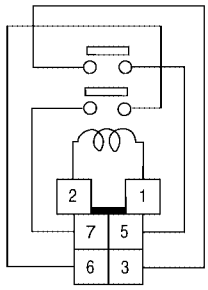
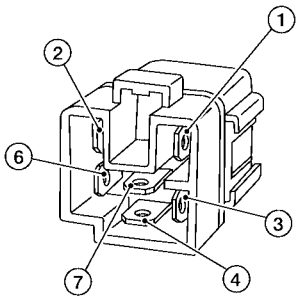
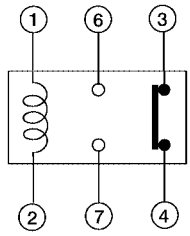
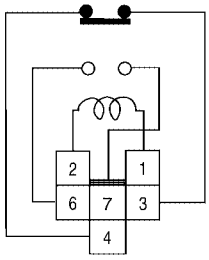
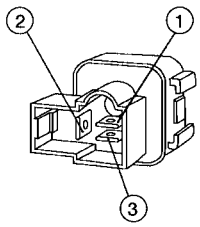
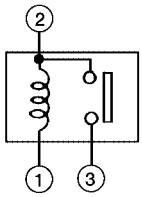
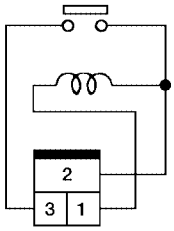
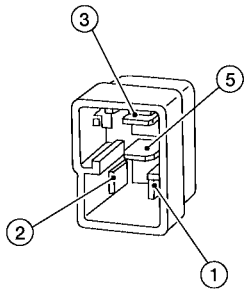
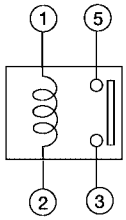
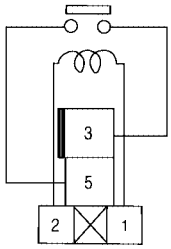
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



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.

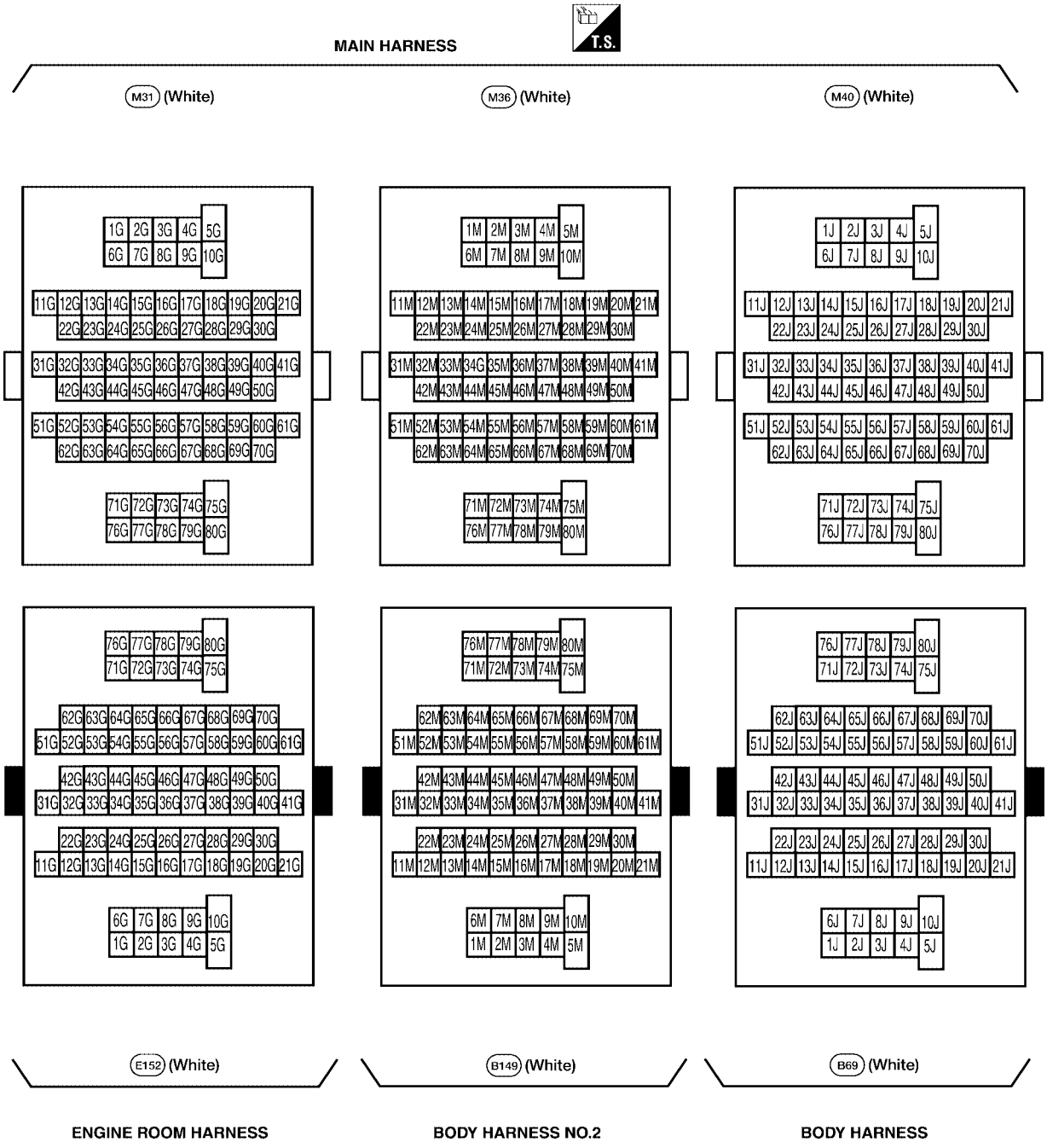
WKIA0253E

SUPER MULTIPLE JUNCTION (SMJ)

PFP:84341

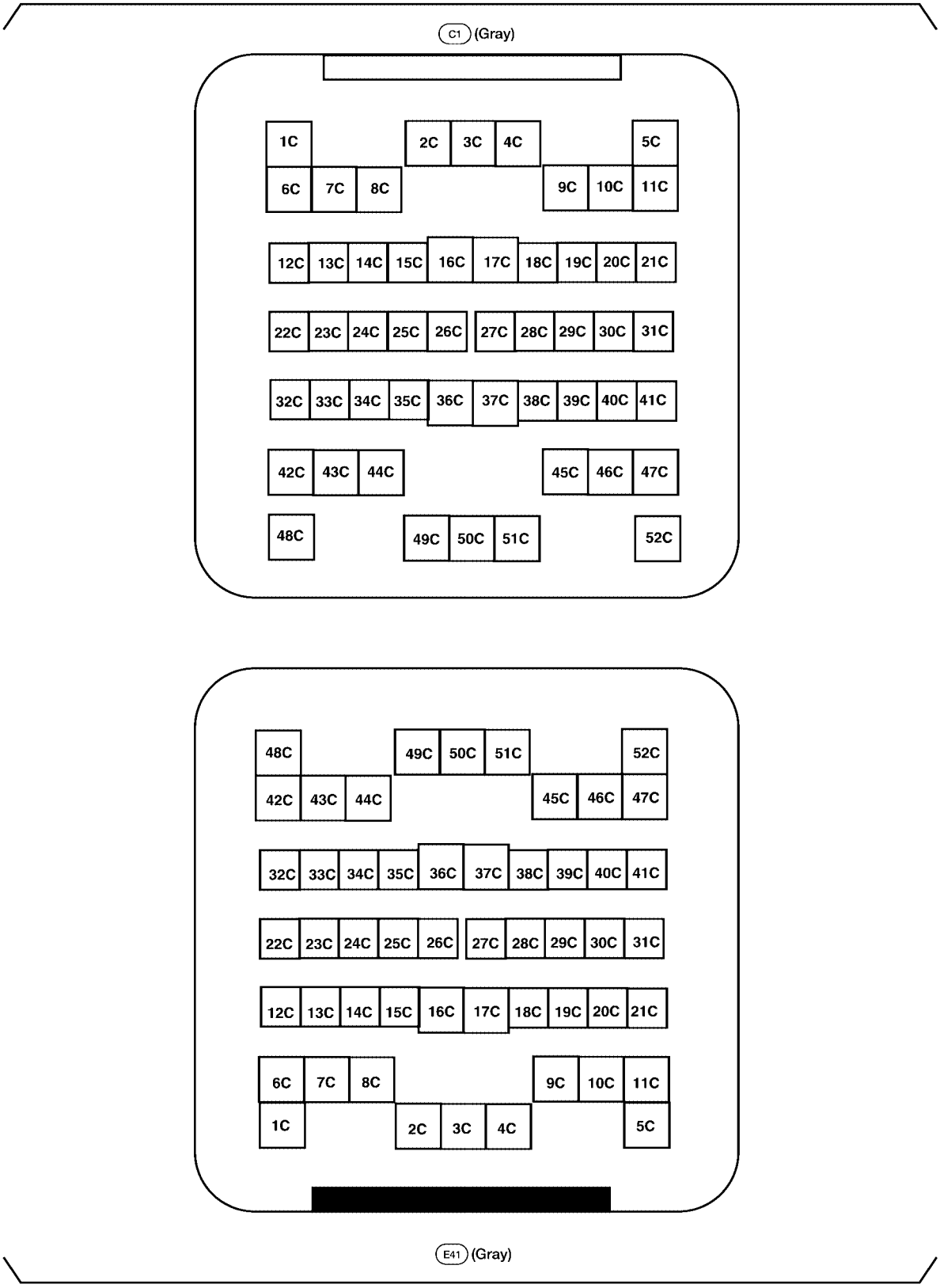
Terminal Arrangement

EKS006TY



LKIA0385E

CHASSIS HARNESS T.S.



ENGINE ROOM HARNESS

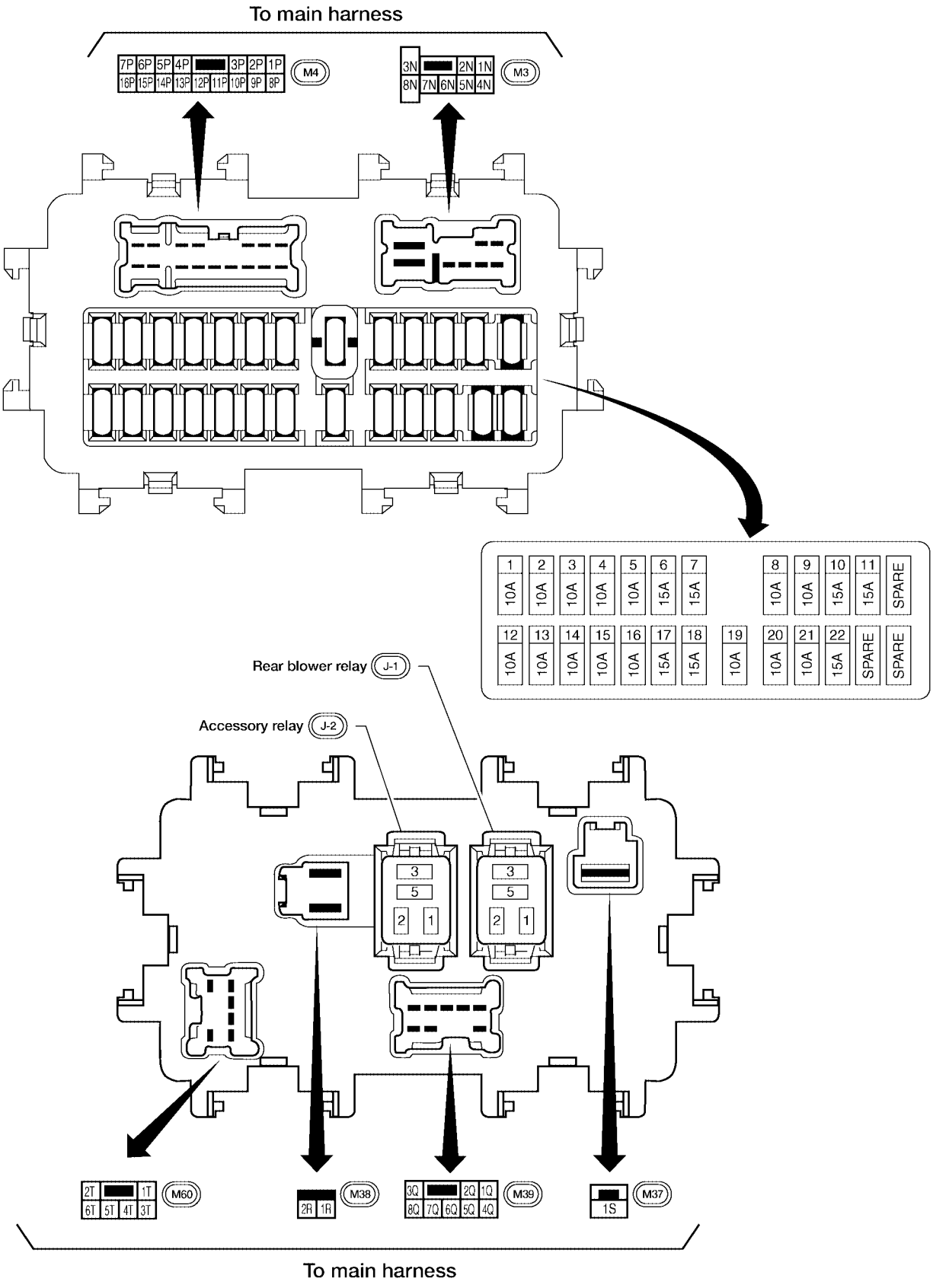
WKIA1845E

FUSE BLOCK-JUNCTION BOX(J/B)

PFP:24350

Terminal Arrangement

EKS006TZ



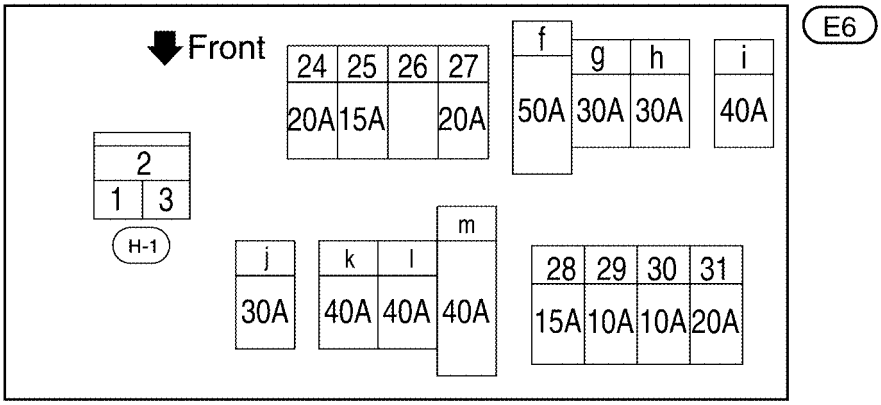
WKIA2016E

FUSE AND FUSIBLE LINK BOX

PFP:24381

Terminal Arrangement

EKS006U0



24 - 31: FUSE f - m: FUSIBLE LINK

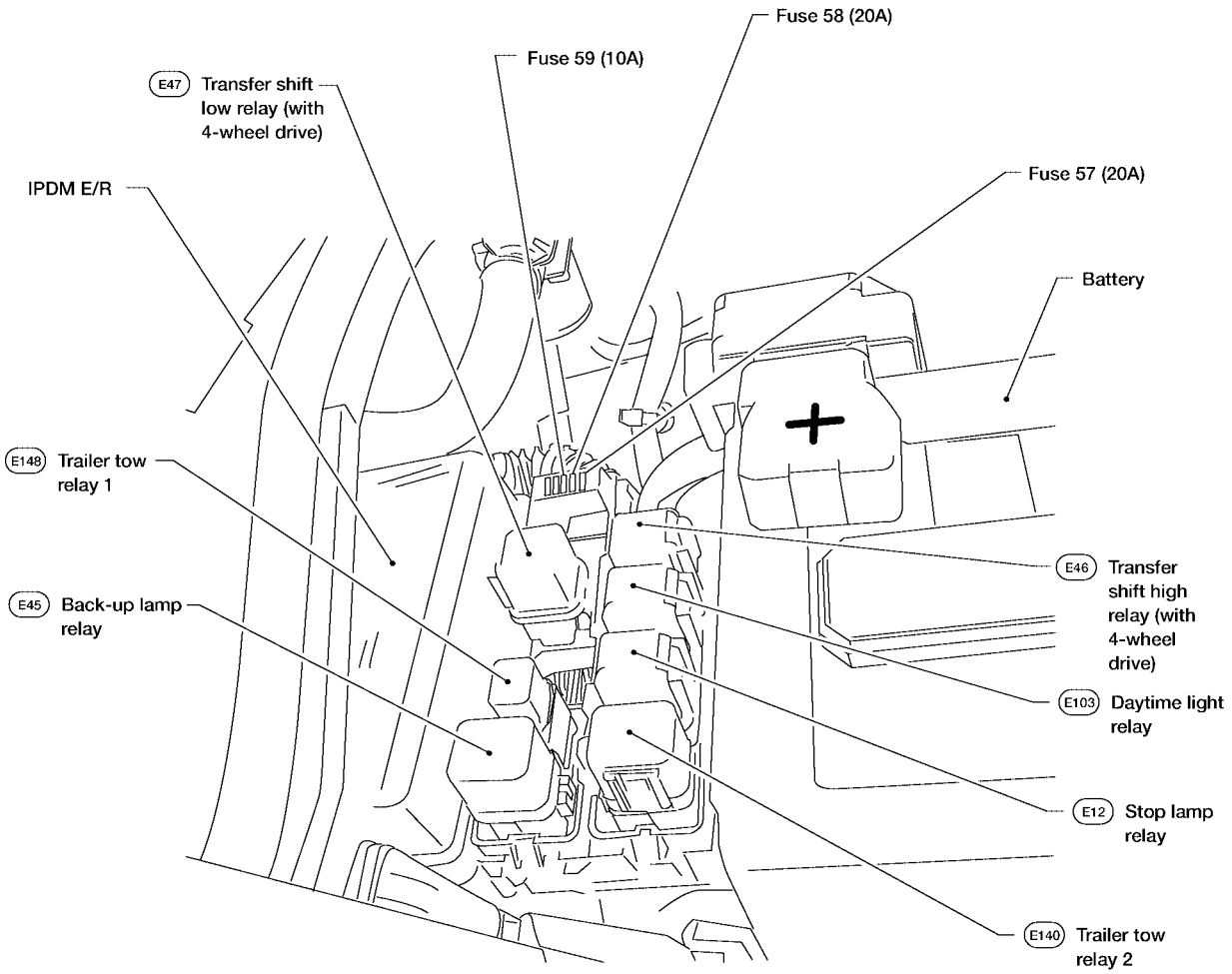
WKIA3896E

FUSE AND RELAY BOX

PFP:24012

Terminal Arrangement

EKS006U1



WKIA2017E