

SECTION **PG**

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

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PRECAUTIONS

PRECAUTIONS

PFP:00011

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

EKS00F9S

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

EKS007QB

When you read wiring diagrams, refer to the following:

- Refer to [GI-14, "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.

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POWER SUPPLY ROUTING CIRCUIT

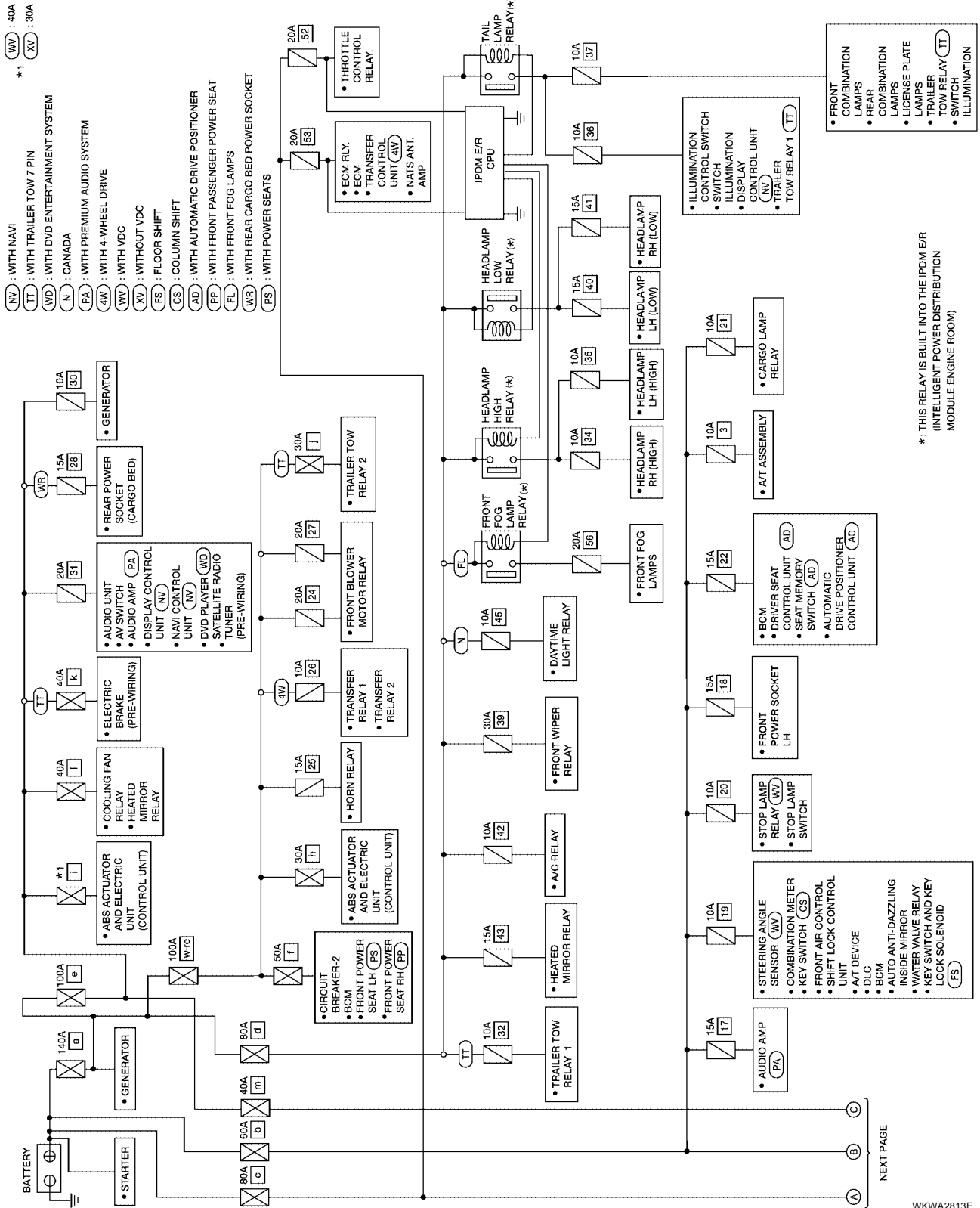
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EKS0070C

POWER SUPPLY ROUTING CIRCUIT

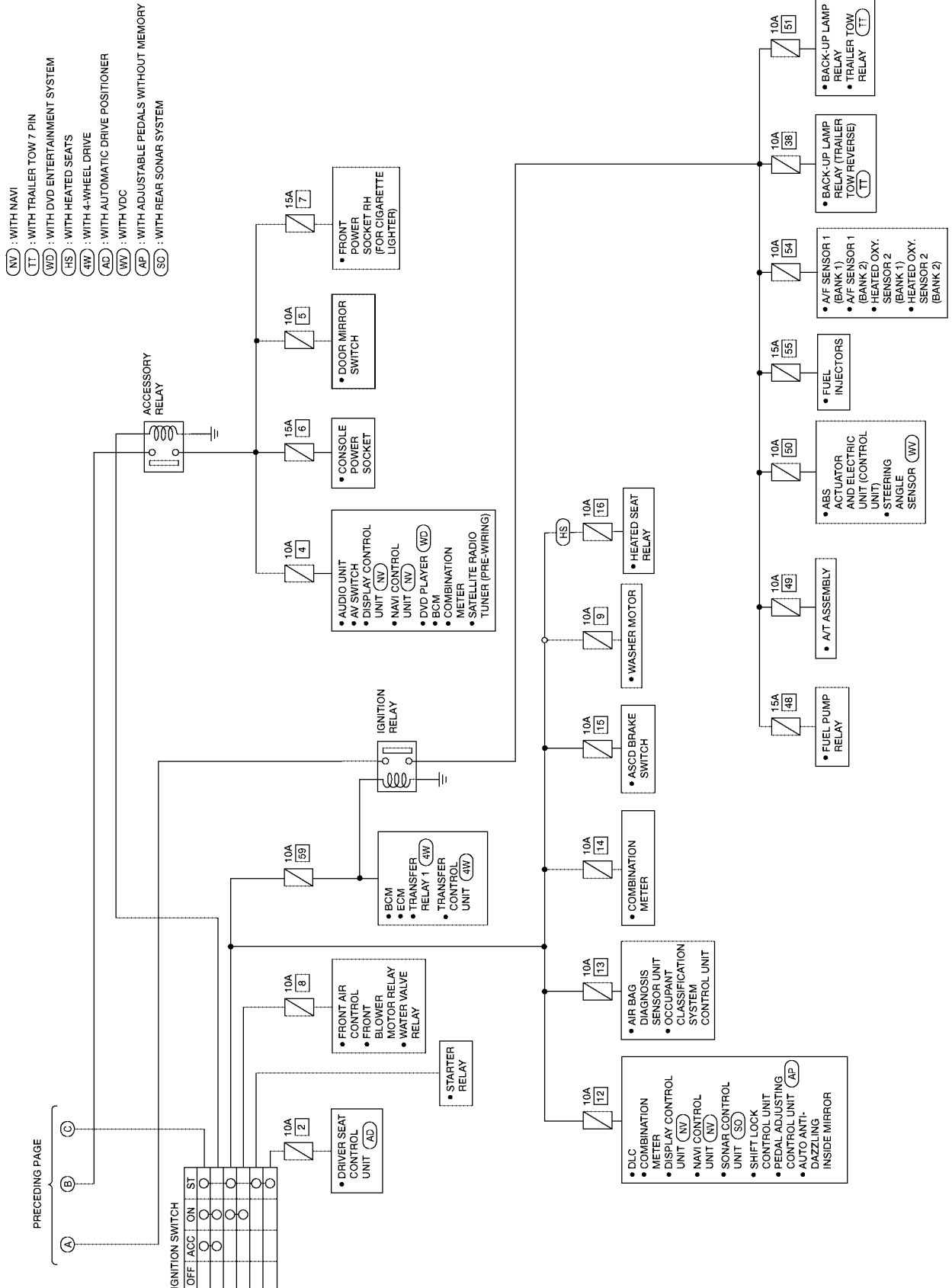
Schematic

For detailed ground distribution, refer to [PG-29, "Ground Distribution"](#).



WKWA2813E

POWER SUPPLY ROUTING CIRCUIT



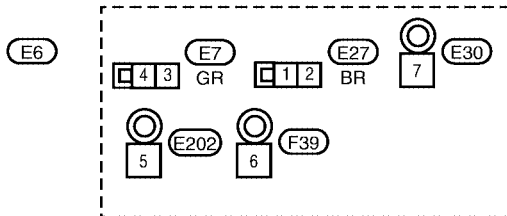
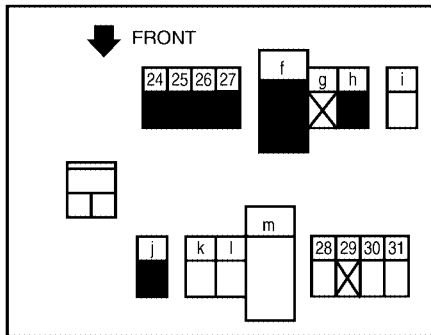
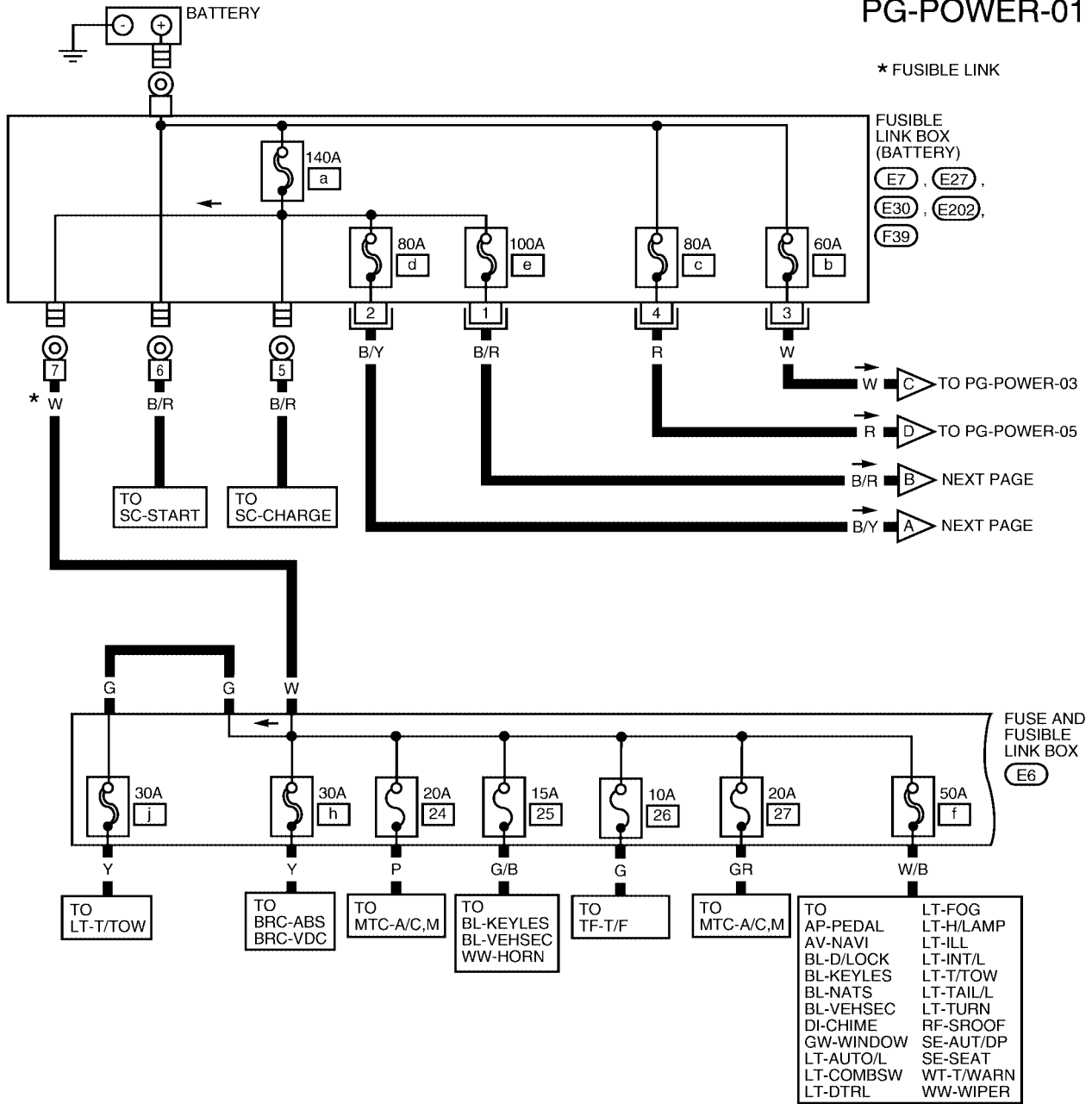
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POWER SUPPLY ROUTING CIRCUIT

Wiring Diagram — POWER — BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

EKS007QD

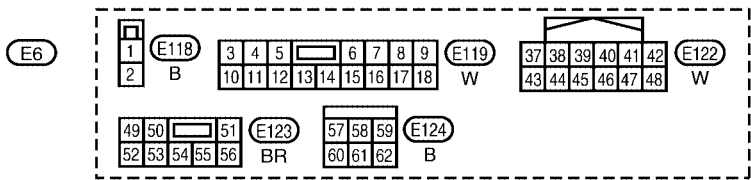
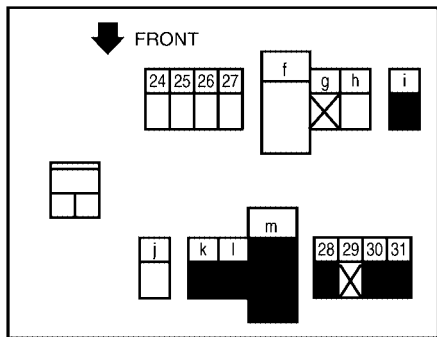
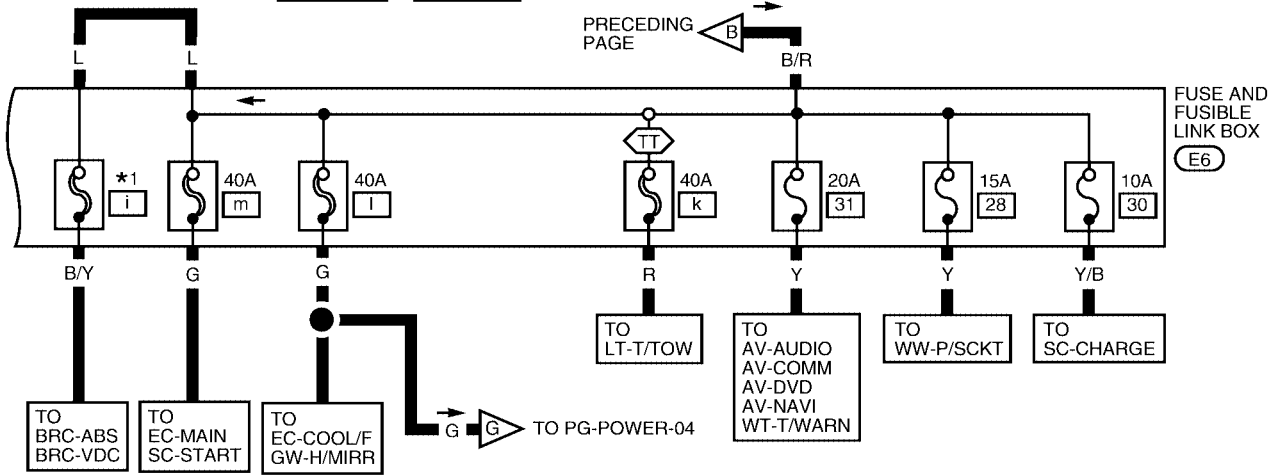
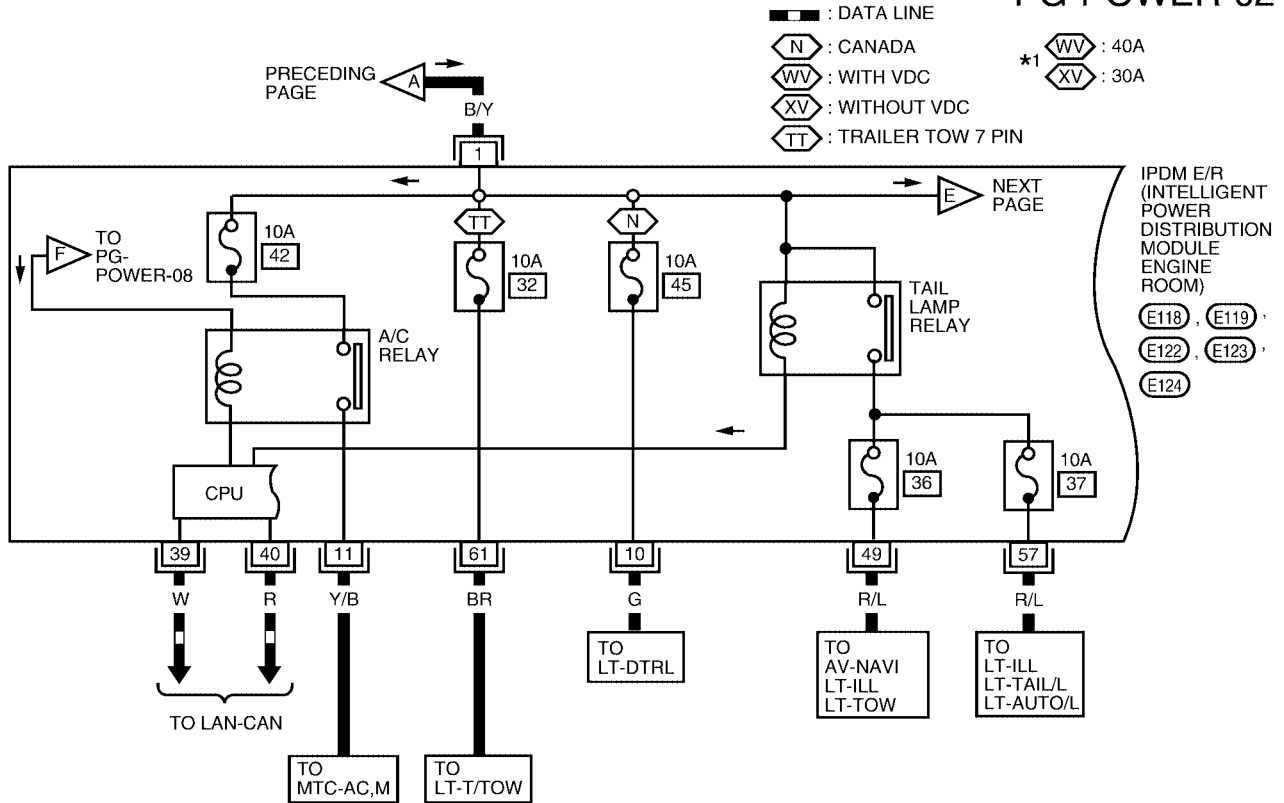
PG-POWER-01



WKWA2810E

POWER SUPPLY ROUTING CIRCUIT

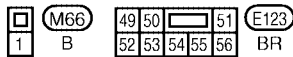
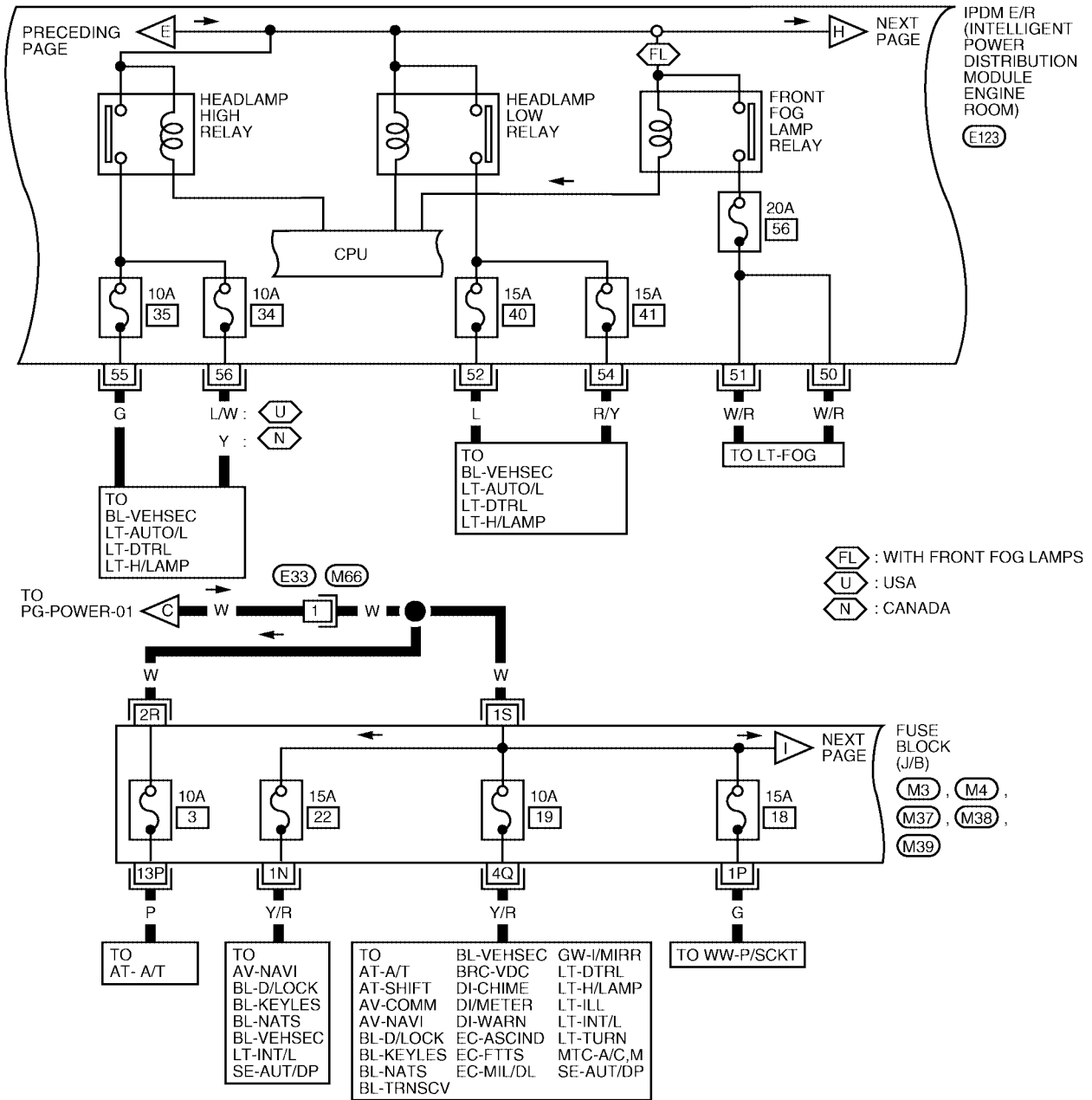
PG-POWER-02



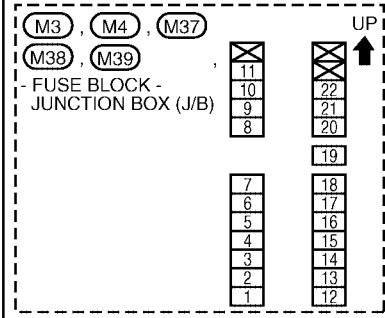
WKWA2811E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-03



REFER TO THE FOLLOWING.

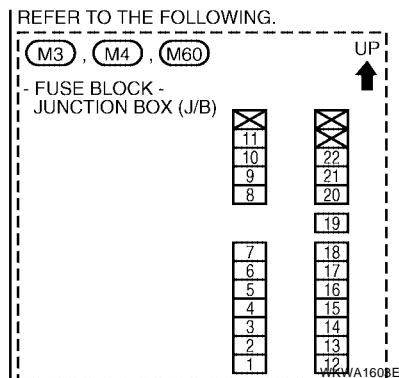
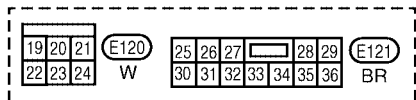
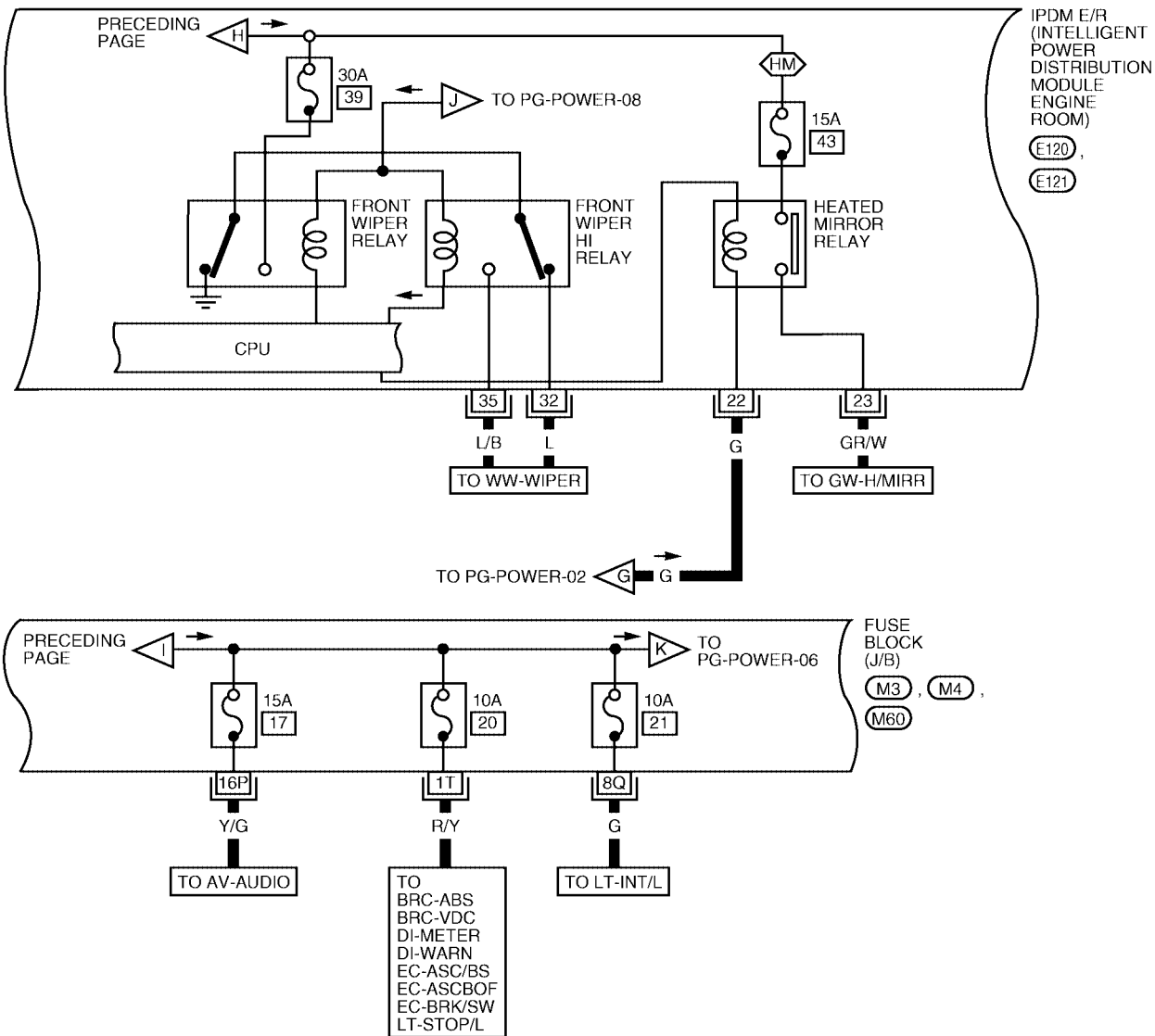


WKWA1602E

POWER SUPPLY ROUTING CIRCUIT

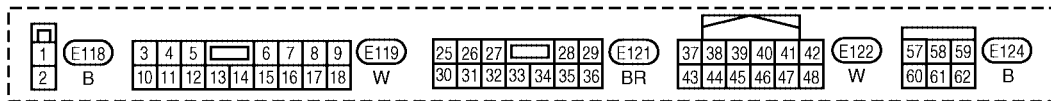
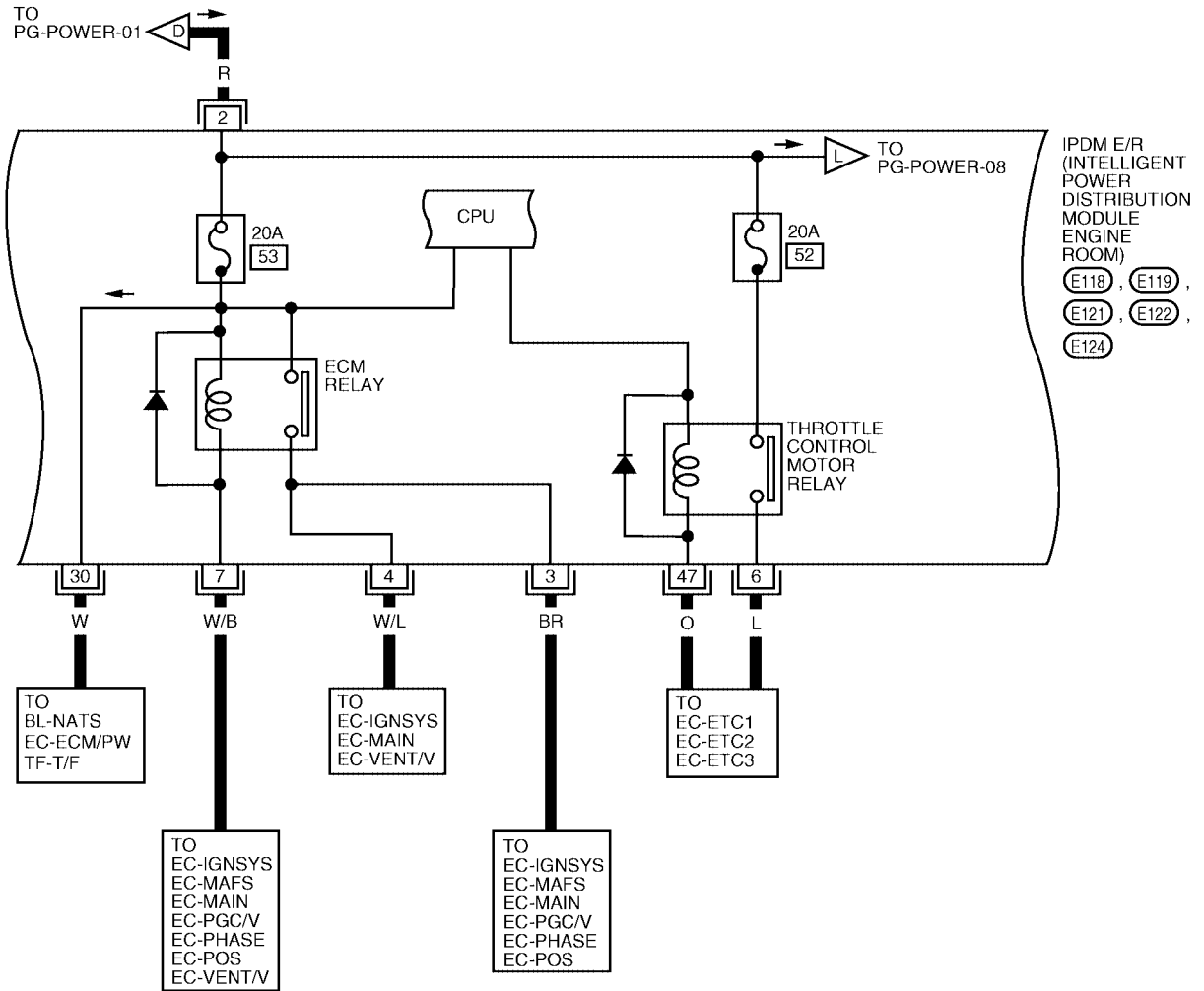
PG-POWER-04

HM : WITH HEATED MIRRORS



POWER SUPPLY ROUTING CIRCUIT

PG-POWER-05

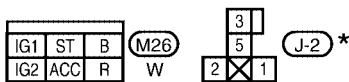
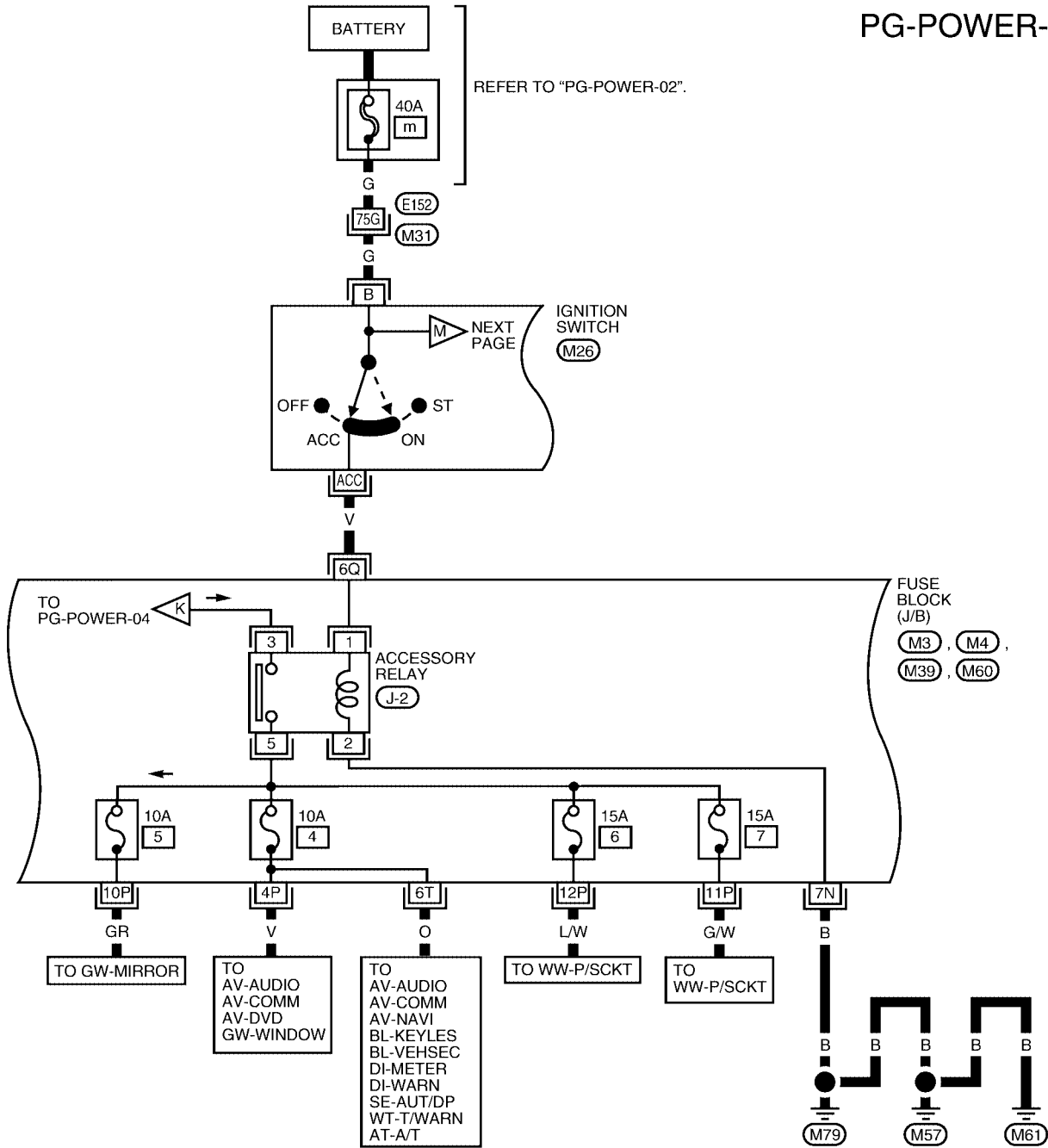


WKWA1604E

POWER SUPPLY ROUTING CIRCUIT

ACCESSORY POWER SUPPLY — IGNITION SW. IN ACC OR ON

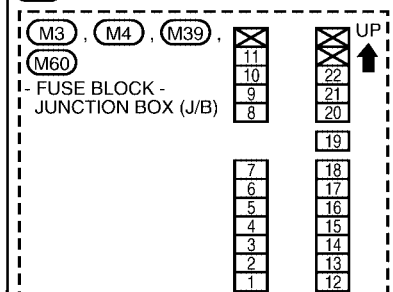
PG-POWER-06



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

REFER TO THE FOLLOWING.

(M31) - SUPER MULTIPLE JUNCTION (SMJ)

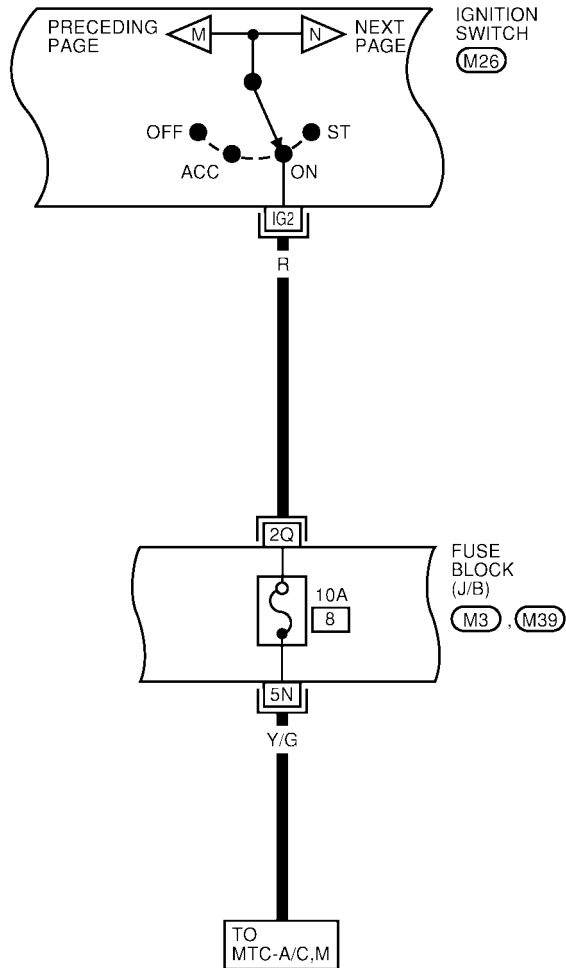


WKWA2814E

POWER SUPPLY ROUTING CIRCUIT

IGNITION POWER SUPPLY — IGNITION SW. IN ON

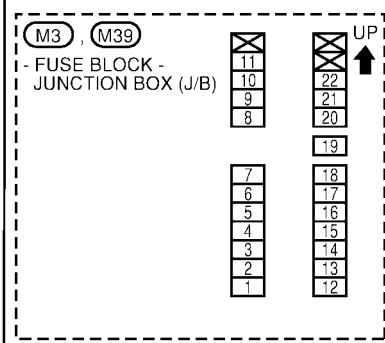
PG-POWER-07



IG1	ST	B	(M26)
IG2	ACC	R	

W

REFER TO THE FOLLOWING.



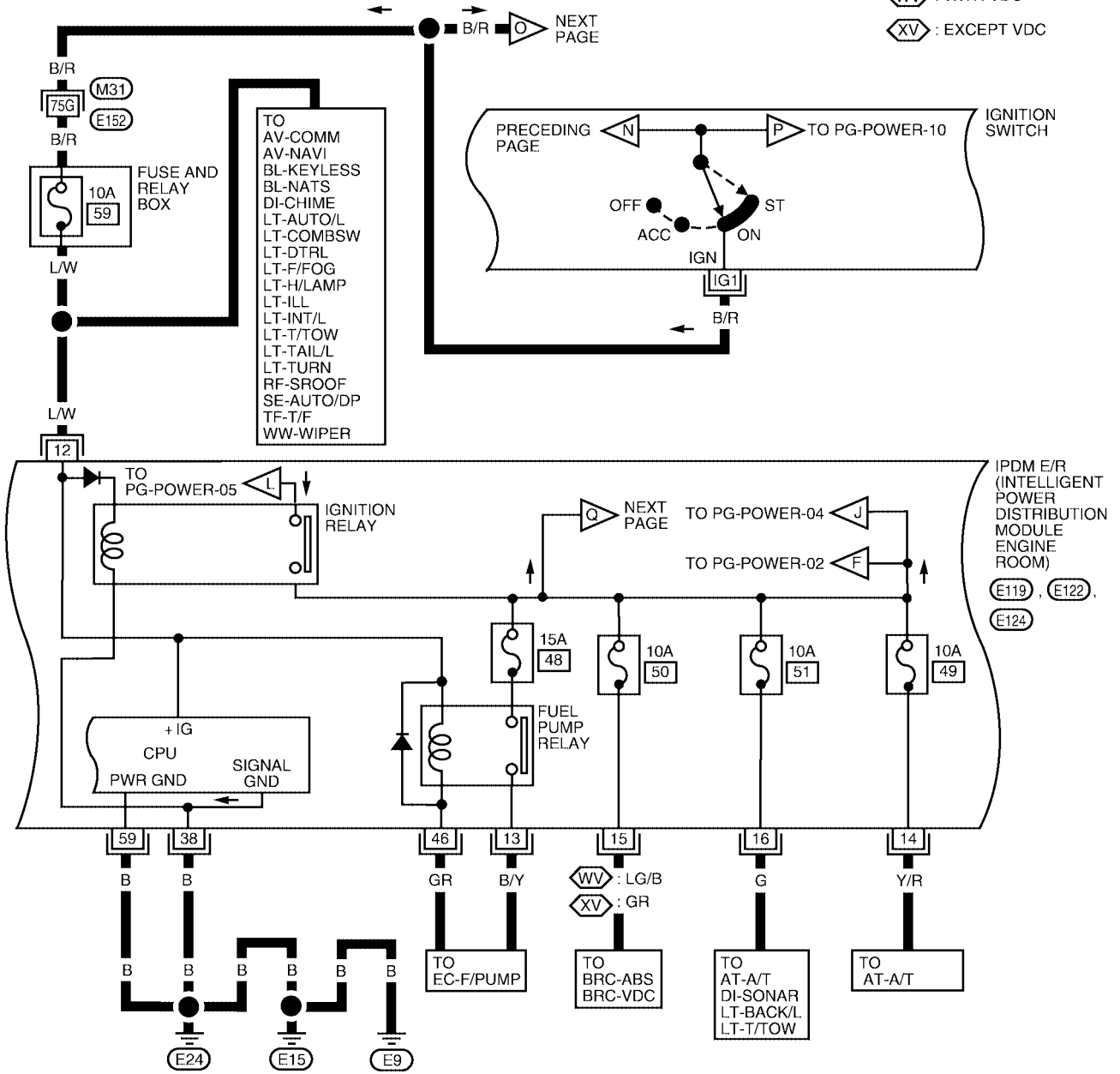
WKWA1606E

POWER SUPPLY ROUTING CIRCUIT

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

PG-POWER-08

⬡WV : WITH VDC
 ⬡XV : EXCEPT VDC

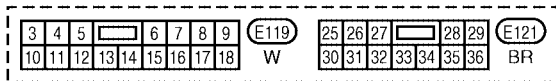
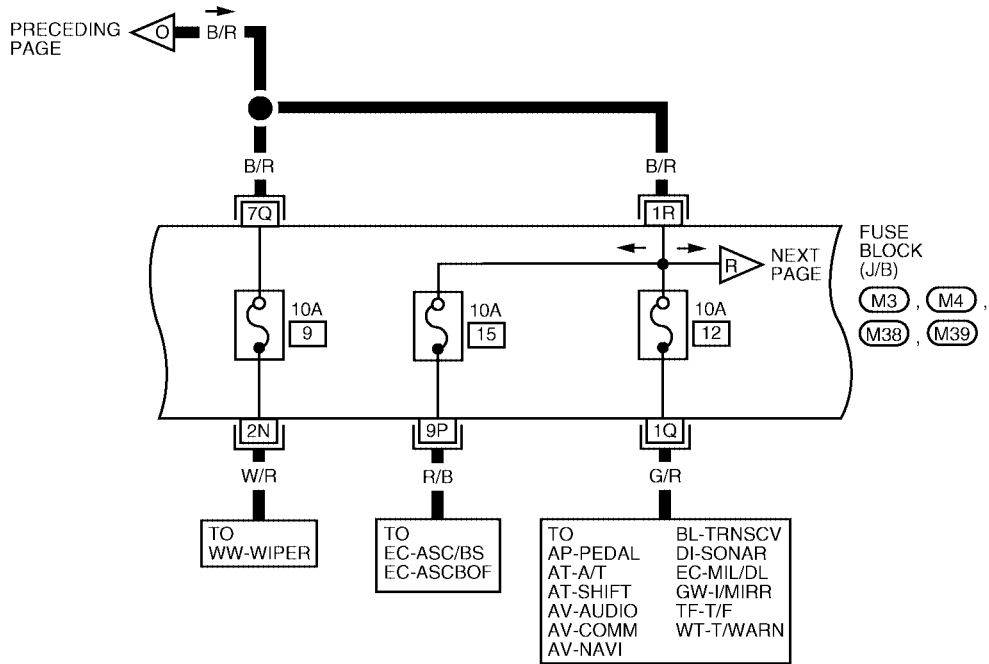
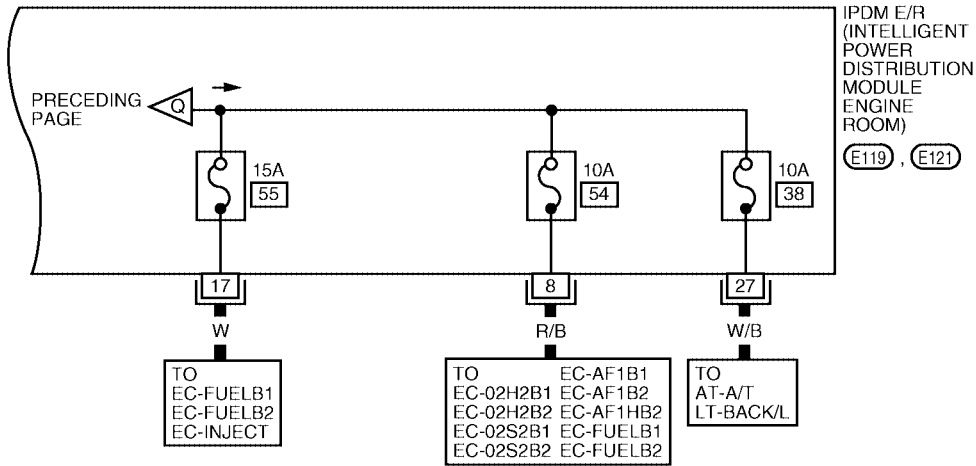


IG1	ST	B	M26	3	4	5	6	7	8	9	E119	37	38	39	40	41	42	E122	57	58	59	E124	
IG2	ACC	R	W	10	11	12	13	14	15	16	17	18	43	44	45	46	47	48	W	60	61	62	B

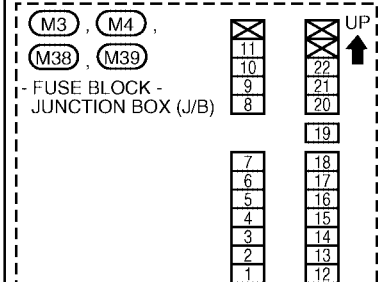
REFER TO THE FOLLOWING.
 M31 - SUPER MULTIPLE JUNCTION (SMJ)

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-09



REFER TO THE FOLLOWING.

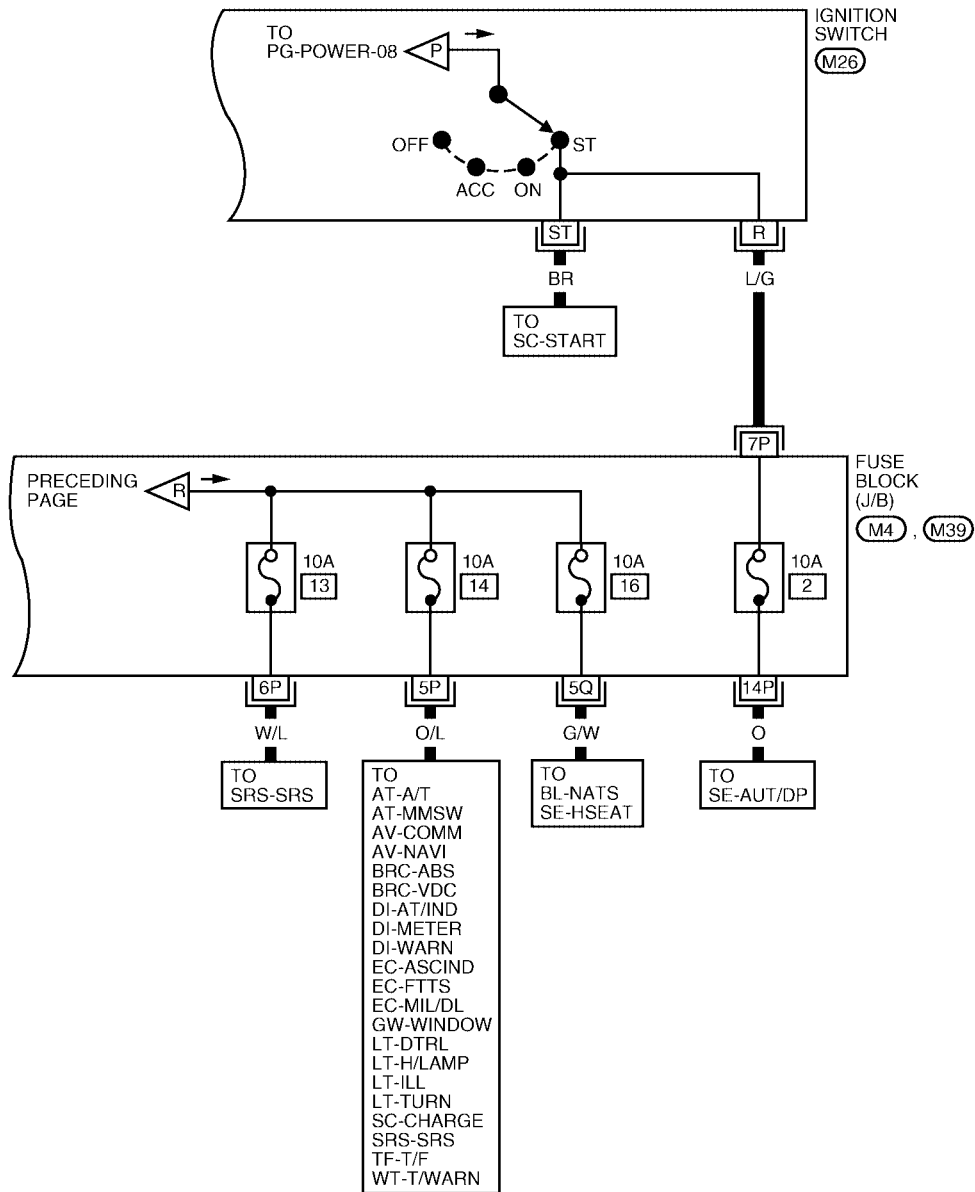


WKWA1608E

POWER SUPPLY ROUTING CIRCUIT

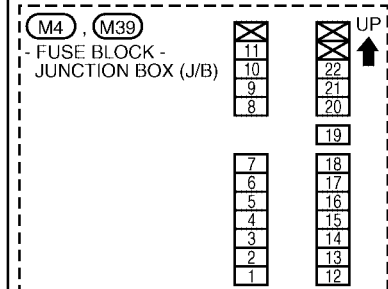
PG-POWER-10

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IG1	ST	B	M26 W
IG2	ACC	R	

REFER TO THE FOLLOWING.



WKWA1609E

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

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

PF2:284B7

System Description

EKS007QE

- 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 and license lamps
 - Front fog lamps
2. Wiper control
Using CAN communication lines, it receives signals from the BCM and controls the front wipers.
3. Heated mirror relay control
Using CAN communication lines, it receives signals from the BCM and controls the heated mirror 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	<ul style="list-style-type: none">● With the ignition switch ON, the headlamp (low) is ON.● With the ignition switch OFF, the headlamp (low) is OFF.
Tail and parking lamps	<ul style="list-style-type: none">● 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	<ul style="list-style-type: none">● 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.
Heated mirrors	Heated mirror relay OFF
A/C compressor	A/C compressor OFF
Front fog lamps	Front fog lamp relay OFF

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

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

EKS007QF

Refer to [LAN-8, "CAN COMMUNICATION"](#) .

Function of Detecting Ignition Relay Malfunction

EKS007QG

- 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.

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

CONSULT-II Function (IPDM E/R)

EKS007QH

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

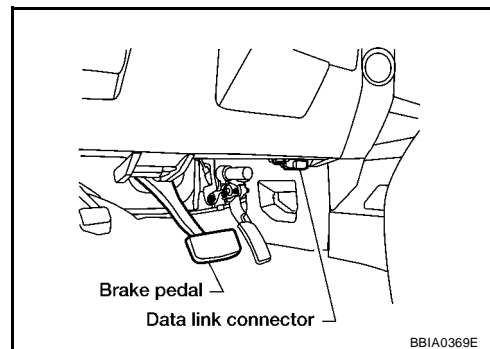
Inspection Item, Diagnosis Mode	Description
SELF-DIAG RESULTS	The IPDM E/R performs diagnosis of CAN communication and self-diagnosis.
DATA MONITOR	The input/output data of the IPDM E/R is displayed in real time.
ACTIVE TEST	The IPDM E/R sends a drive signal to electronic components to check their operation.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

CONSULT-II BASIC OPERATION

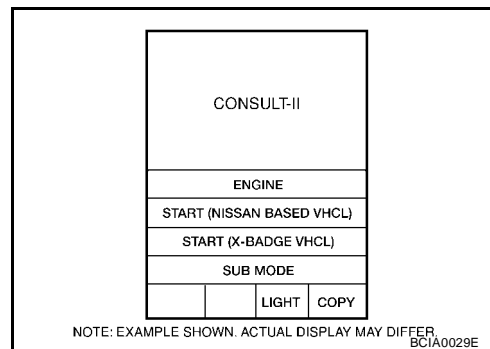
CAUTION:

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.

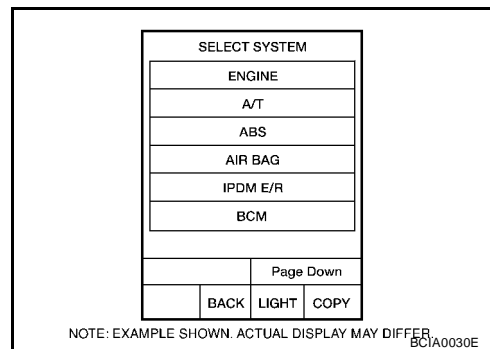
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".

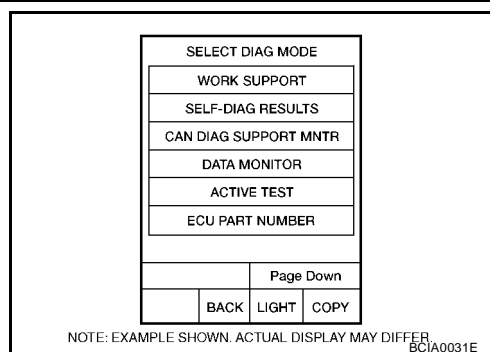


3. Touch "IPDM E/R" on "SELECT SYSTEM" screen.
 - If "IPDM E/R" is not displayed, print "SELECT SYSTEM" screen, then refer to [LAN-6, "PRECAUTIONS"](#).



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

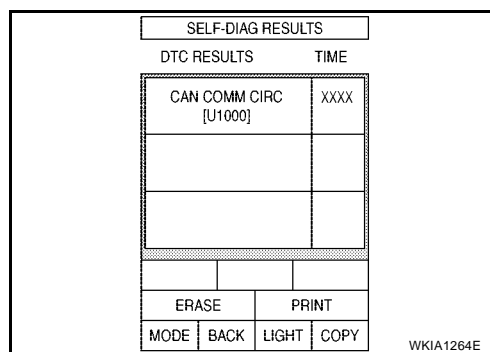
- Select the desired part to be diagnosed on the "SELECT DIAG MODE" screen.



SELF-DIAGNOSTIC RESULTS

Operation Procedure

- Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen.
- 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	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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

- Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
- 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).

- Touch "START".
- Touch the required monitoring item on "SELECT ITEM MENU".

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

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

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

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 (heated mirror)	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
Heated mirror	REAR DEFOGGER	With a certain ON-OFF operation, the heated mirror 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.
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.

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

Test name	CONSULT-II screen display	Description
Cornering lamp output	CORNERING LAMP	—
Horn output	HORN	With a certain ON-OFF operation, the horn relay can be operated.

Auto Active Test DESCRIPTION

EKS007Q1

- In auto active test mode, operation inspection can be performed when IPDM E/R sends a drive signal to the following systems:
 - Front wipers
 - Tail, parking, and license lamps
 - Front fog lamps
 - Headlamps (Hi, Lo) (Daytime light system if equipped)
 - 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:

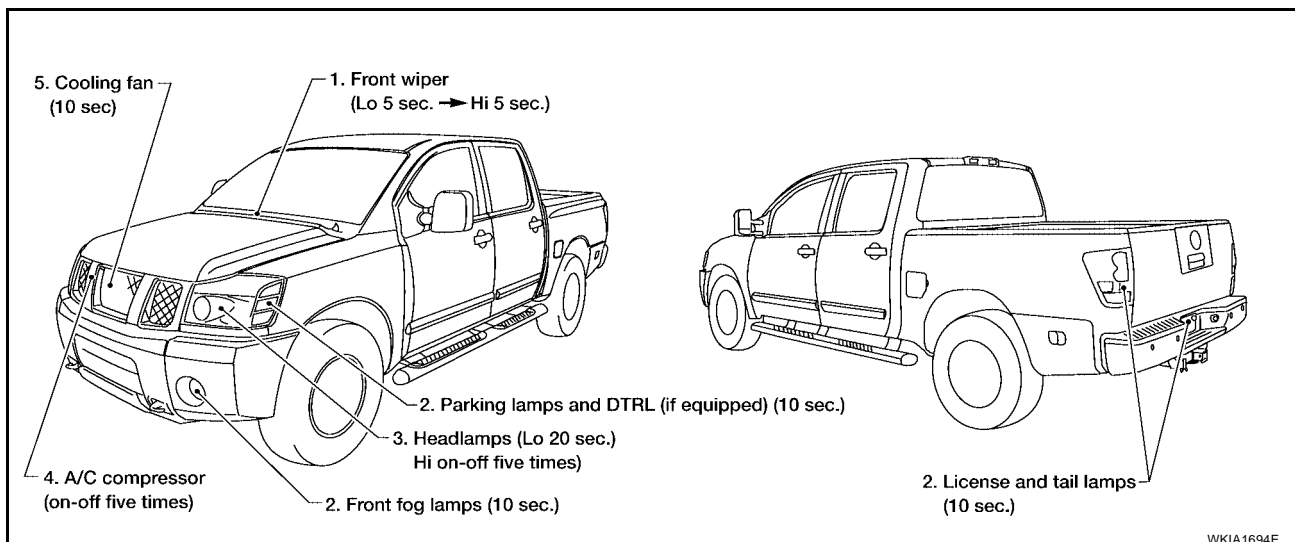
When auto active test mode has to be cancelled halfway, turn ignition switch OFF.

CAUTION:

Be sure to perform [BL-35, "Door Switch Check \(King Cab\)"](#) or [BL-37, "Door Switch Check \(Crew Cab\)"](#) when the auto active test cannot be performed.

INSPECTION IN AUTO ACTIVE TEST MODE

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



WKIA1694E

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

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, and head-lamps (Hi, Lo) do not operate.	Perform auto active test. Does system in question operate?	YES	● BCM signal input system
		NO	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● BCM signal input circuit ● CAN communication signal between BCM and ECM ● CAN communication signal between ECM and IPDM E/R
		NO	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● ECM signal input circuit ● CAN communication signal between ECM and IPDM E/R
		NO	<ul style="list-style-type: none"> ● Cooling fan motor malfunction ● Harness/connector malfunction between IPDM E/R and cooling fan motor ● IPDM E/R (integrated relay) malfunction

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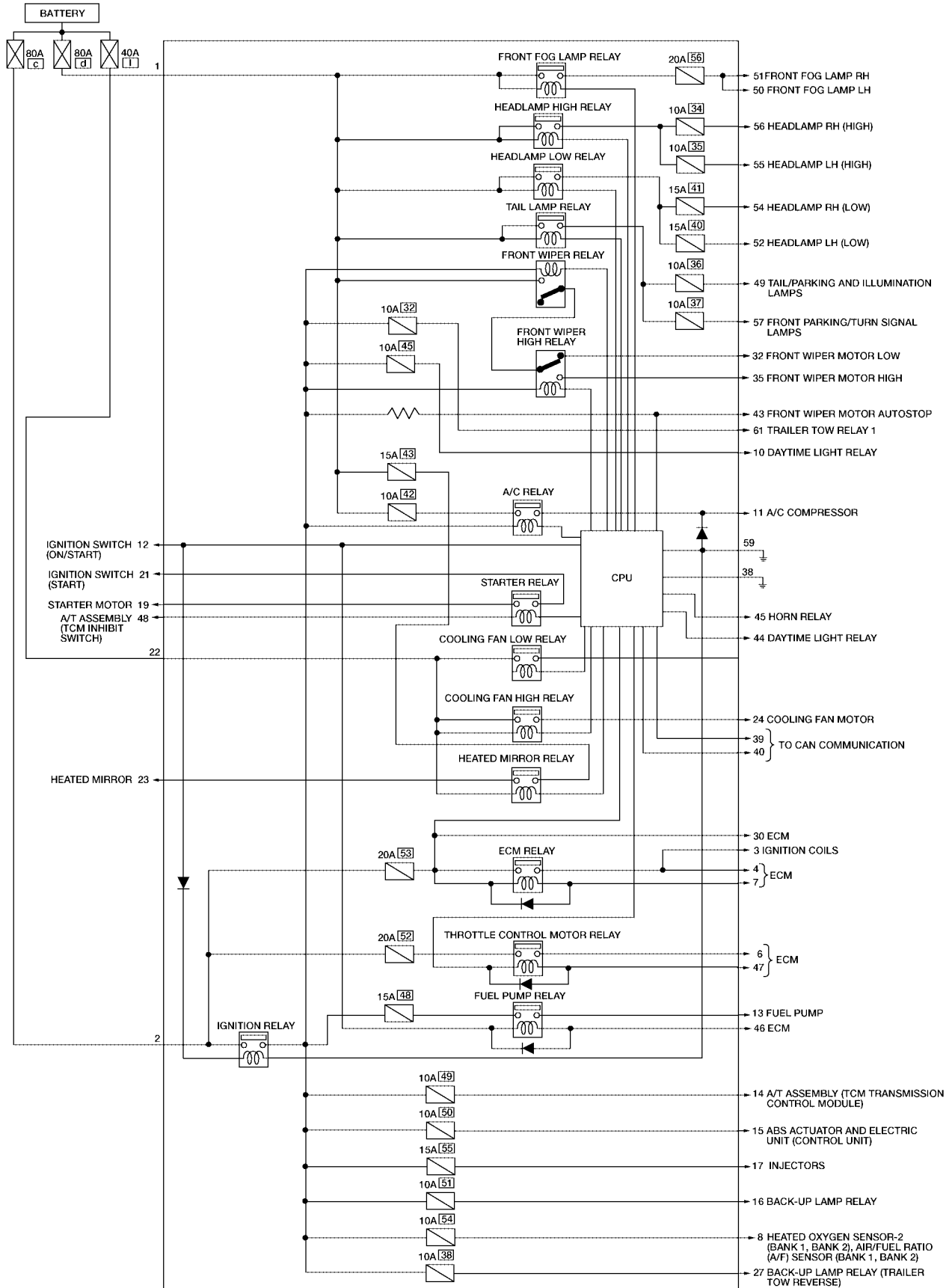
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

EKS007QJ

Schematic

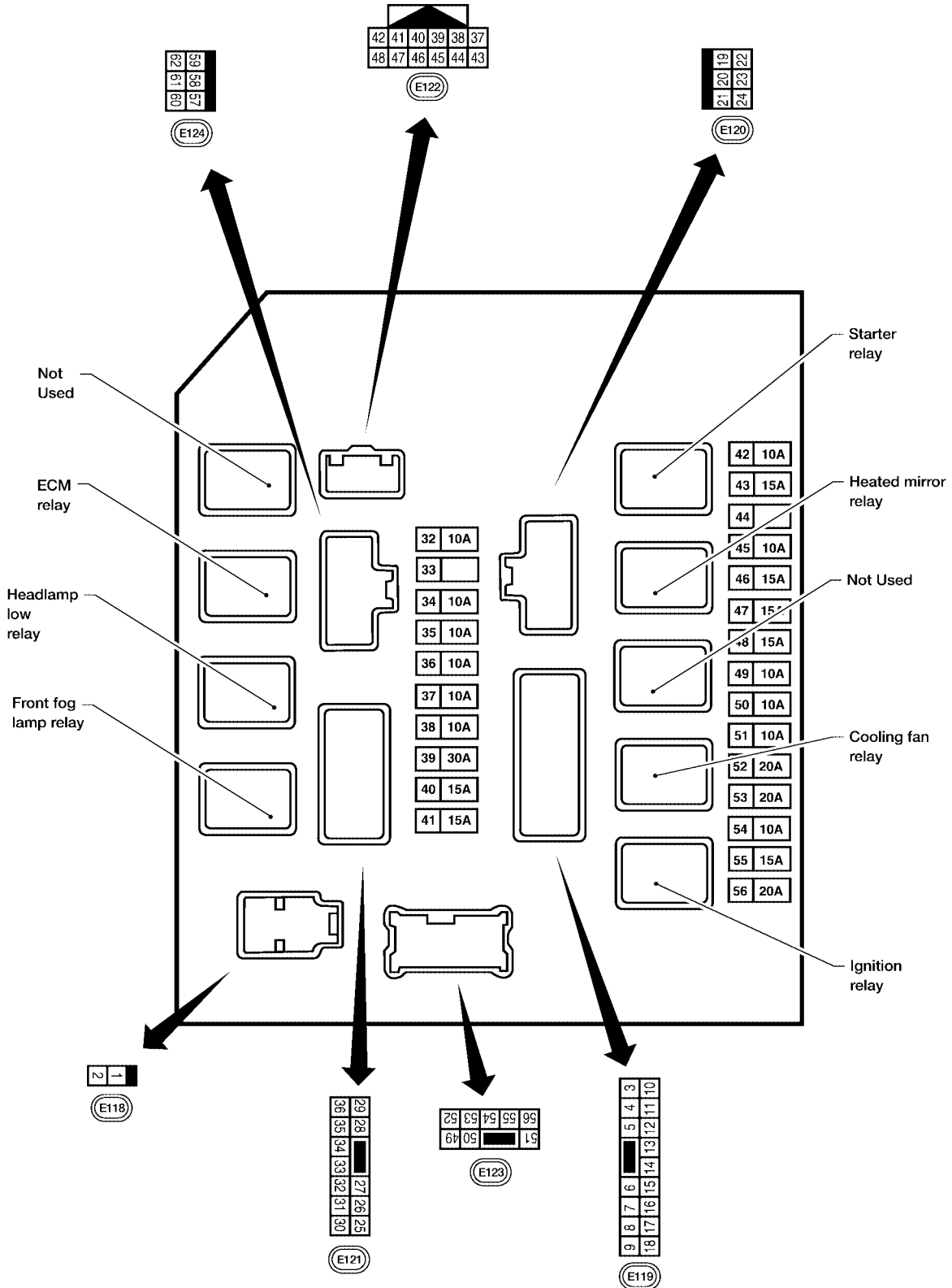


WKWA1610E

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

IPDM E/R Terminal Arrangement

EKS0070K



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

EKS0070L

IPDM E/R Power/Ground Circuit Inspection

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.

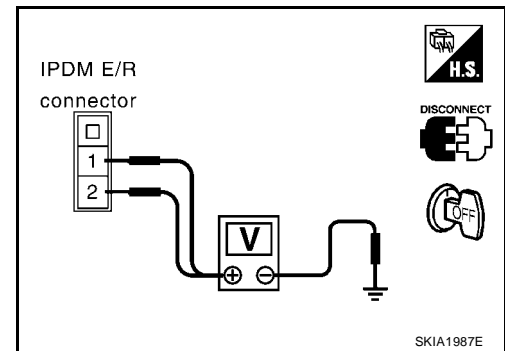
2. POWER CIRCUIT INSPECTION

- Disconnect IPDM E/R harness connector E118.
- 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.



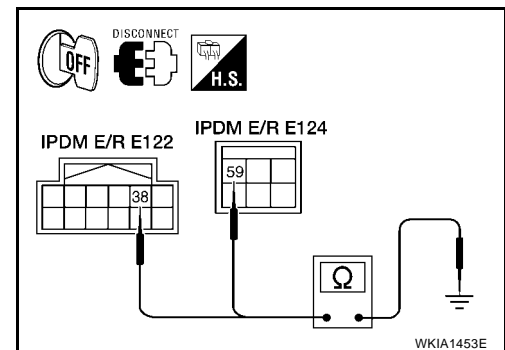
3. GROUND CIRCUIT INSPECTION

- Disconnect IPDM E/R harness connectors E122 and E124.
- 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)

EKS007QM

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: <ul style="list-style-type: none"> ● 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-8, "CAN COMMUNICATION"](#) .

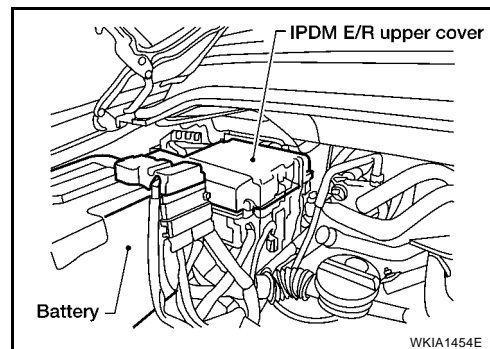
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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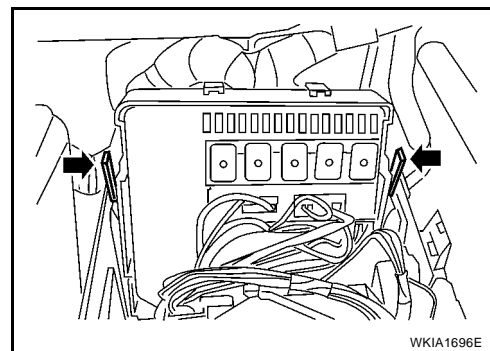
Removal and Installation of IPDM E/R

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.

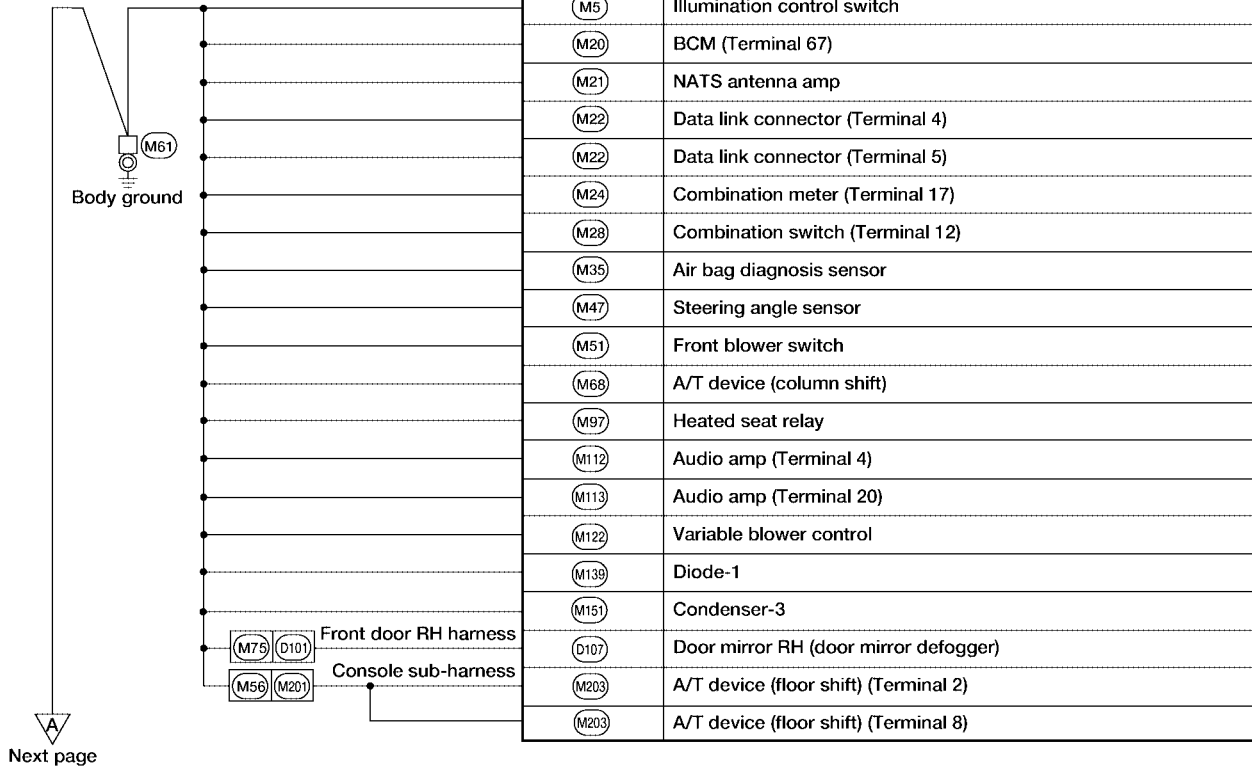
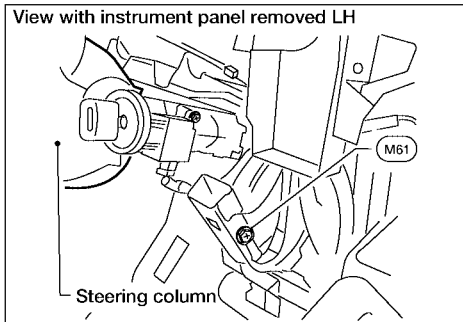
GROUND CIRCUIT

GROUND CIRCUIT

Ground Distribution MAIN HARNESS

PFP:24080

EKS00700

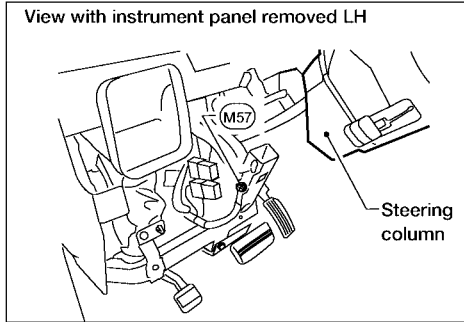


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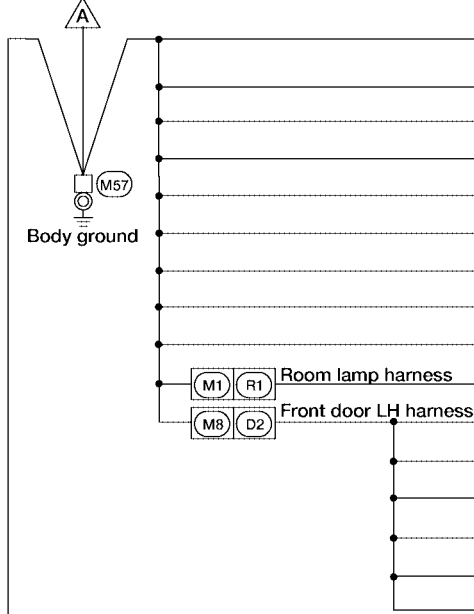
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WKIA2845E

GROUND CIRCUIT



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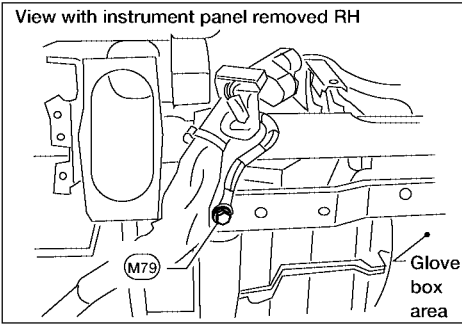


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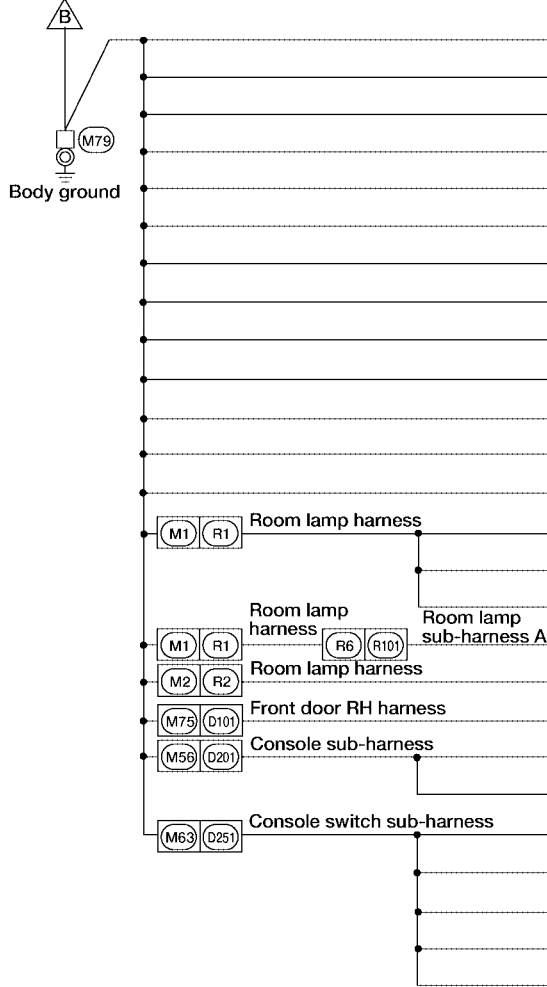
CONNECTOR NUMBER	CONNECT TO
(M14)	Pedal adjusting control unit
(M34)	Automatic drive positioner (Terminal 40)
(M34)	Automatic drive positioner (Terminal 48)
(M76)	Electric brake (pre-wiring)
(M93)	Display unit (Terminal 1)
(M94)	Display control unit (Terminal 3)
(M96)	Pedal adjusting switch
(M116)	Rear sonar system off switch (Terminal 3)
(M116)	Rear sonar system off switch (Terminal 2)
(R7)	Auto anti-dazzling inside mirror
(D7)	Door mirror LH (door mirror defogger)
(D8)	Seat memory switch
(D10)	Main power window and door lock/unlock switch (Terminal 15)
(D14)	Main power window and door lock/unlock switch (Terminal 17)
(M96)	Door mirror switch
(R7)	Front door lock assembly LH

WKIA2846E

GROUND CIRCUIT



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CONNECTOR NUMBER	CONNECT TO
(M3)	Fuse block J/B
(M6)	VDC off switch (column shift)
(M13)	Front passenger air bag off indicator
(M49)	Front air control (Terminal 1)
(M53)	Front power socket LH
(M54)	Front power socket RH (for cigarette lighter)
(M55)	Hazard switch
(M59)	Glove box lamp
(M67)	Tow mode switch (column shift) (Terminal 2)
(M67)	Tow mode switch (column shift) (Terminal 6)
(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
(R102)	Front room/map lamp assembly
(R4)	Sunroof motor
(D105)	Power window and door lock/unlock switch RH
(M206)	DVD player (Terminal 22)
(M207)	Console power socket
(M252)	Heated seat switch (passenger)
(M253)	VDC off switch (floor shift)
(M254)	Tow mode switch (floor shift) (Terminal 2)
(M254)	Tow mode switch (floor shift) (Terminal 6)
(M255)	Front heated seat switch LH

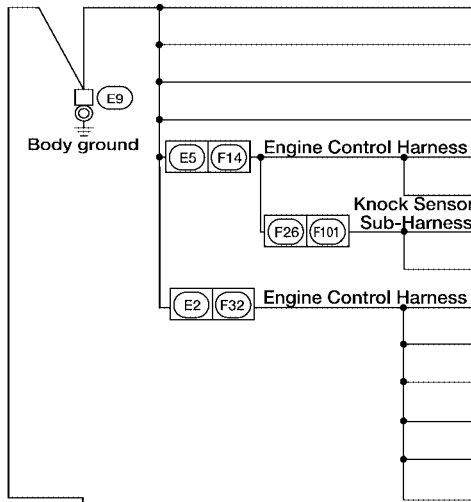
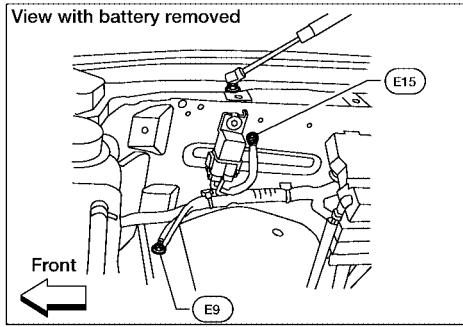
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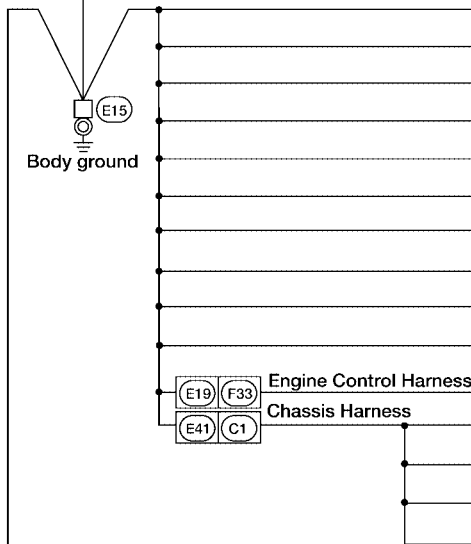
WKIA2847E

GROUND CIRCUIT

ENGINE ROOM HARNESS



CONNECTOR NUMBER	CONNECT TO
(E16)	ECM (Terminal 115)
(E16)	ECM (Terminal 116)
(E142)	Transfer control unit (Terminal 6)
(E142)	Transfer control unit (Terminal 18)
(F12)	Heated oxygen sensor 2 (bank 2)
(F13)	Heated oxygen sensor 2 (bank 1)
(F102)	Knock sensor (bank 1) shield
(F103)	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)

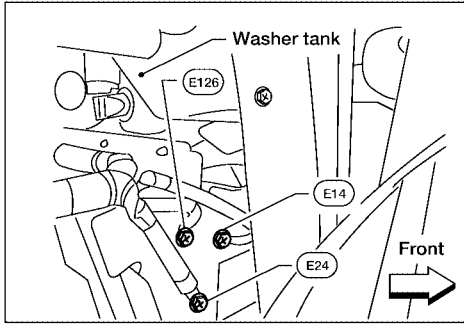


CONNECTOR NUMBER	CONNECT TO
(E3)	Horn
(E11)	Front combination lamp LH (headlamp) (Terminal 3)
(E11)	Front combination lamp LH (headlamp) (Terminal 4)
(E21)	Brake fluid level switch
(E102)	Front fog lamp RH
(E103)	Daytime light relay
(E106)	Washer fluid level switch
(E113)	Cooling fan motor
(E116)	Condenser-2
(E148)	Trailer tow relay 1
(F68)	Water valve
(C5)	Fuel level sensor unit and fuel pump (fuel pump)
(C12)	License plate lamp
(C13)	Rear combination lamp LH
(C14)	Rear combination lamp RH

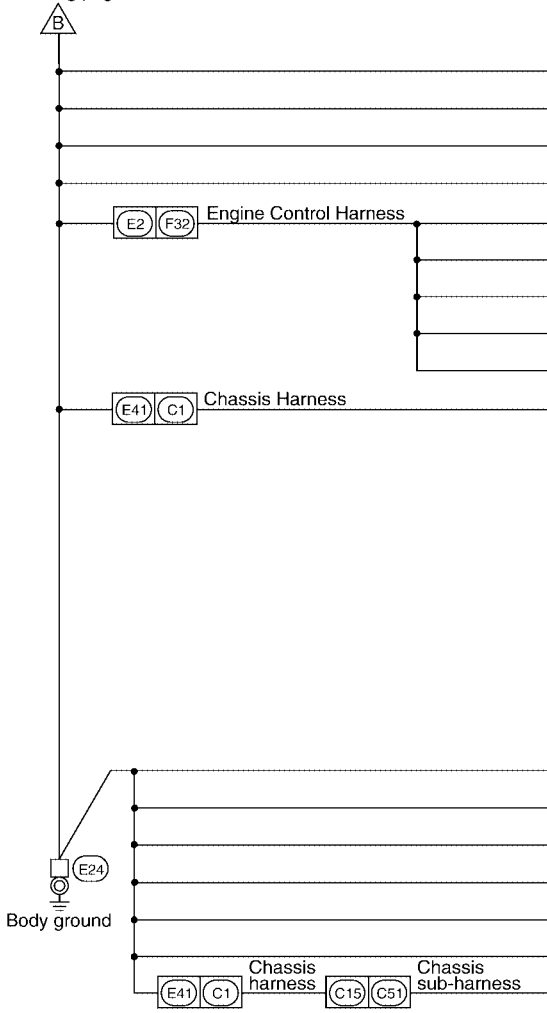
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WKIA3899E

GROUND CIRCUIT



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CONNECTOR NUMBER	CONNECT TO
(E46)	Transfer shift relay 1 (Terminal 1)
(E140)	Trailer tow relay 2
(E143)	Transfer control unit (Terminal 32)
(E148)	Trailer tow relay 1
(F55)	ATP switch
(F57)	Transfer motor
(F58)	Transfer control device (actuator position switch) (Terminal 22)
(F59)	Wait detection switch
(F60)	4LO switch
(C2)	Trailer

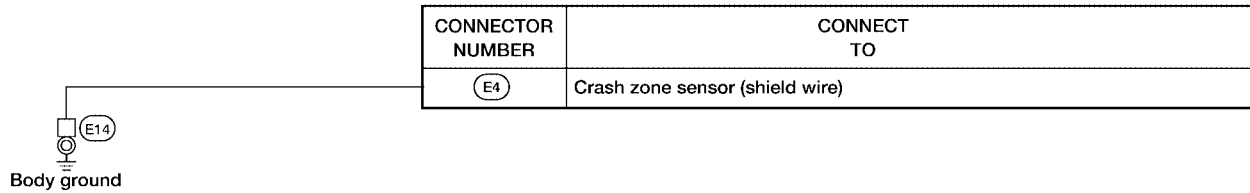
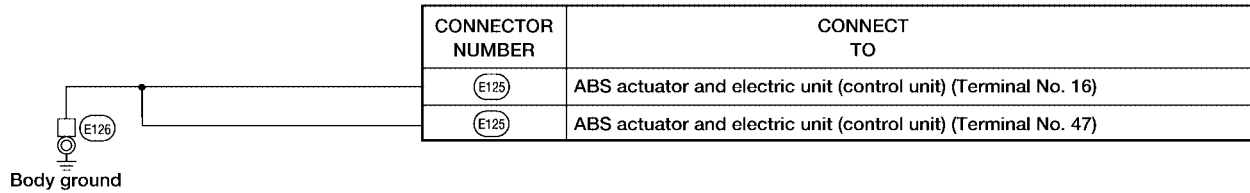
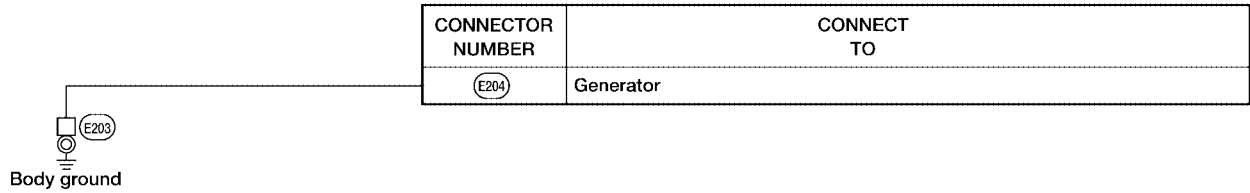
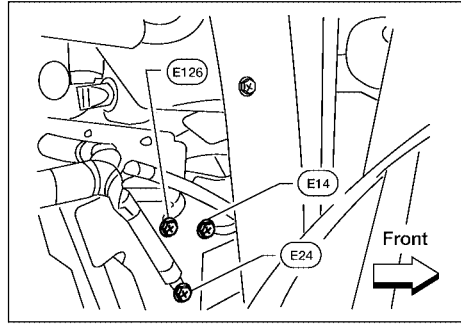
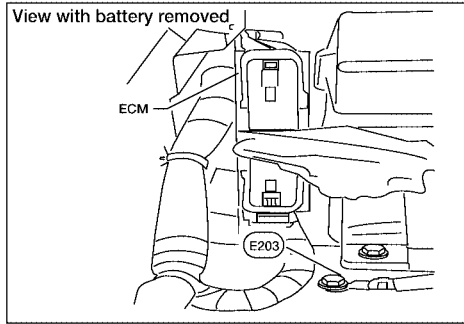
CONNECTOR NUMBER	CONNECT TO
(E23)	Front wiper motor
(E101)	Front fog lamp LH
(E107)	Front combination lamp RH (headlamp) (Terminal 3)
(E107)	Front combination lamp RH (headlamp) (Terminal 4)
(E122)	IPDM E/R (Terminal 38)
(E124)	IPDM E/R (Terminal 59)
(C52)	Rear power socket (cargo bed)

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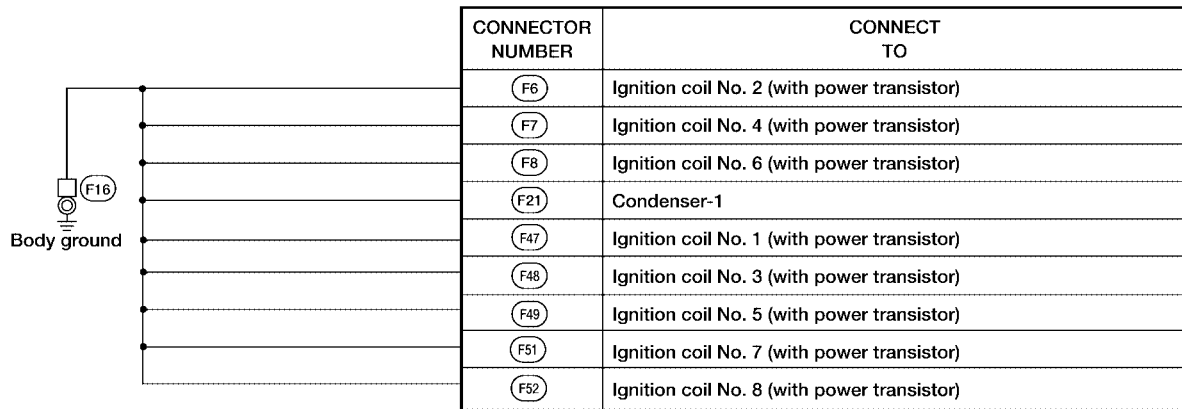
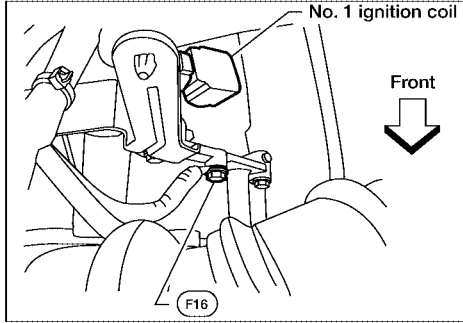
GROUND CIRCUIT



WKIA1459E

GROUND CIRCUIT

ENGINE CONTROL HARNESS

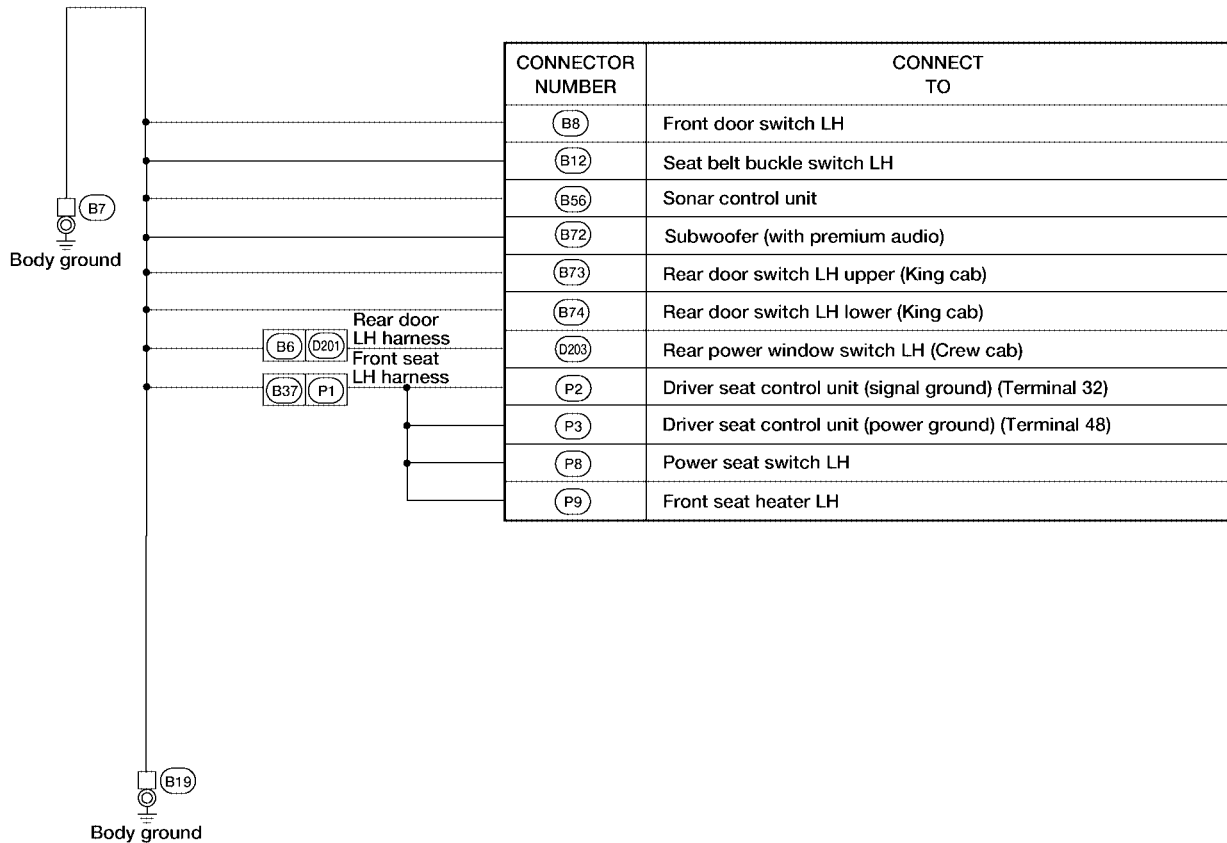
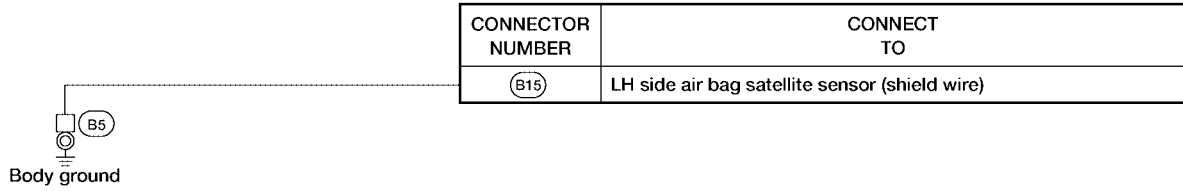
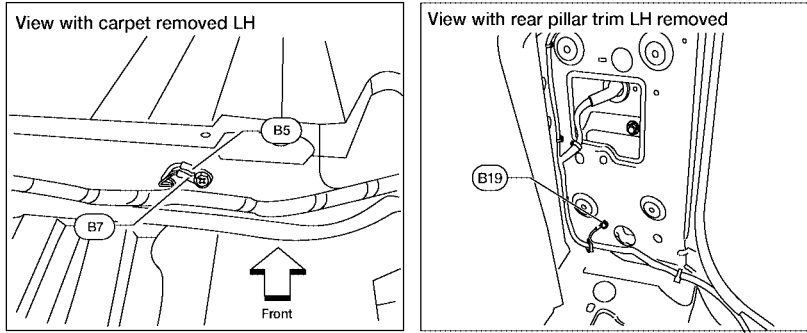


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GROUND CIRCUIT

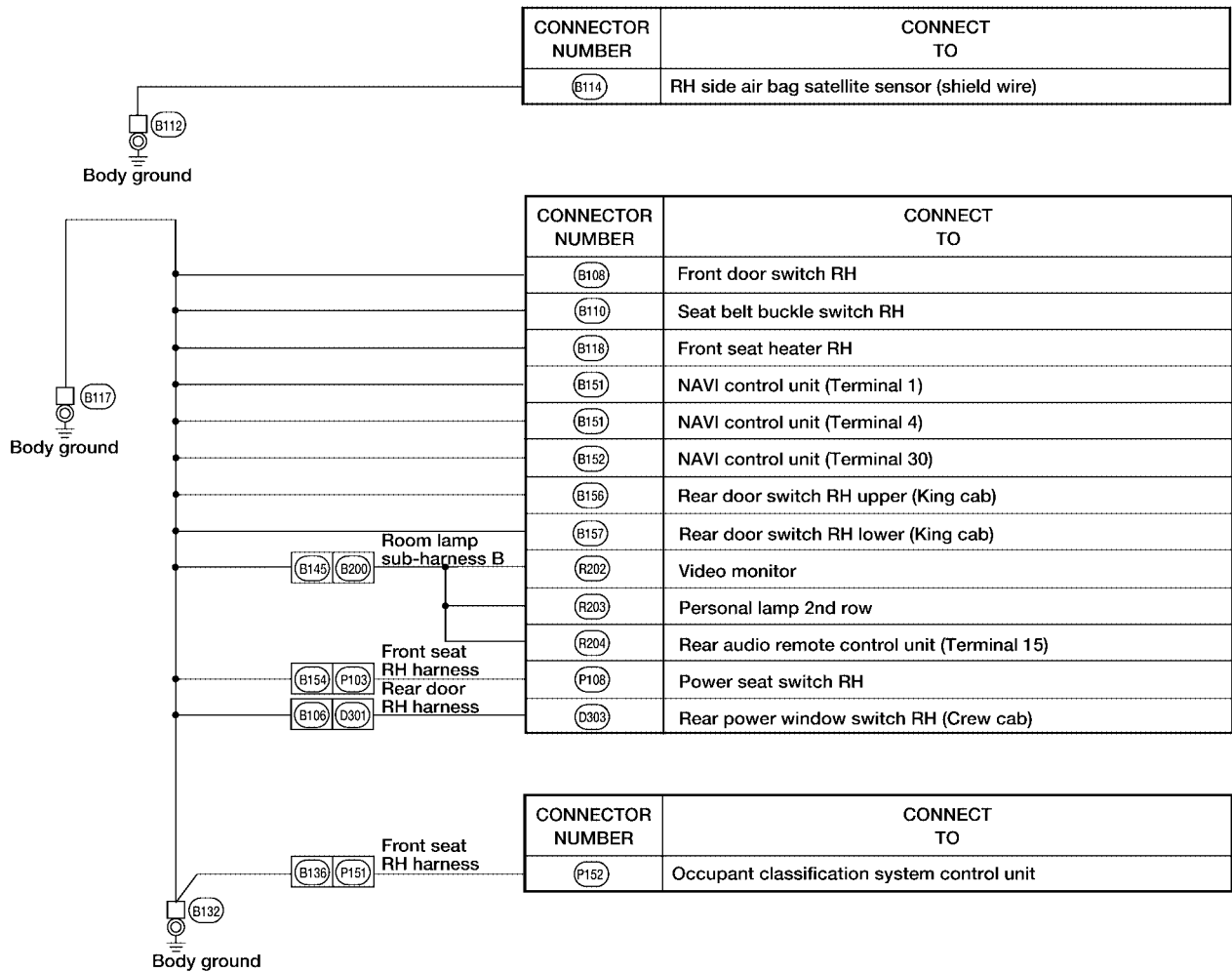
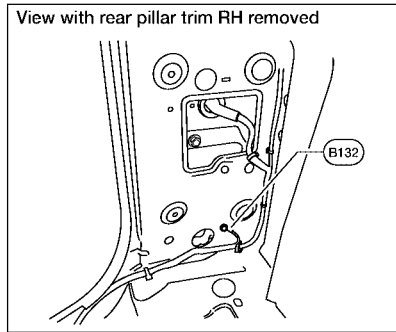
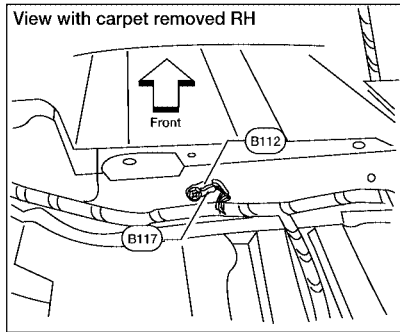
BODY HARNESS



WKIA2850E

GROUND CIRCUIT

BODY NO. 2 HARNESS



WKIA3914E

HARNESS

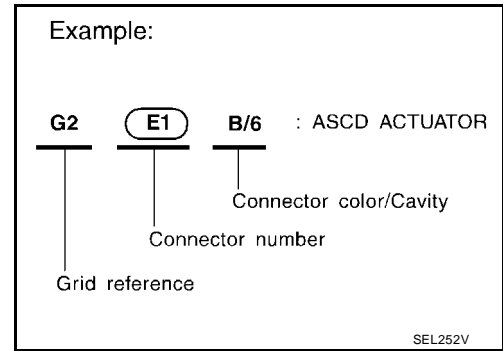
Harness Layout

HOW TO READ HARNESS LAYOUT

EKS007QP

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 (King Cab Models)
- Body Harness (Crew Cab Models)
- Body No. 2 Harness (King Cab Models)
- Body No. 2 Harness (Crew Cab Models)
















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.

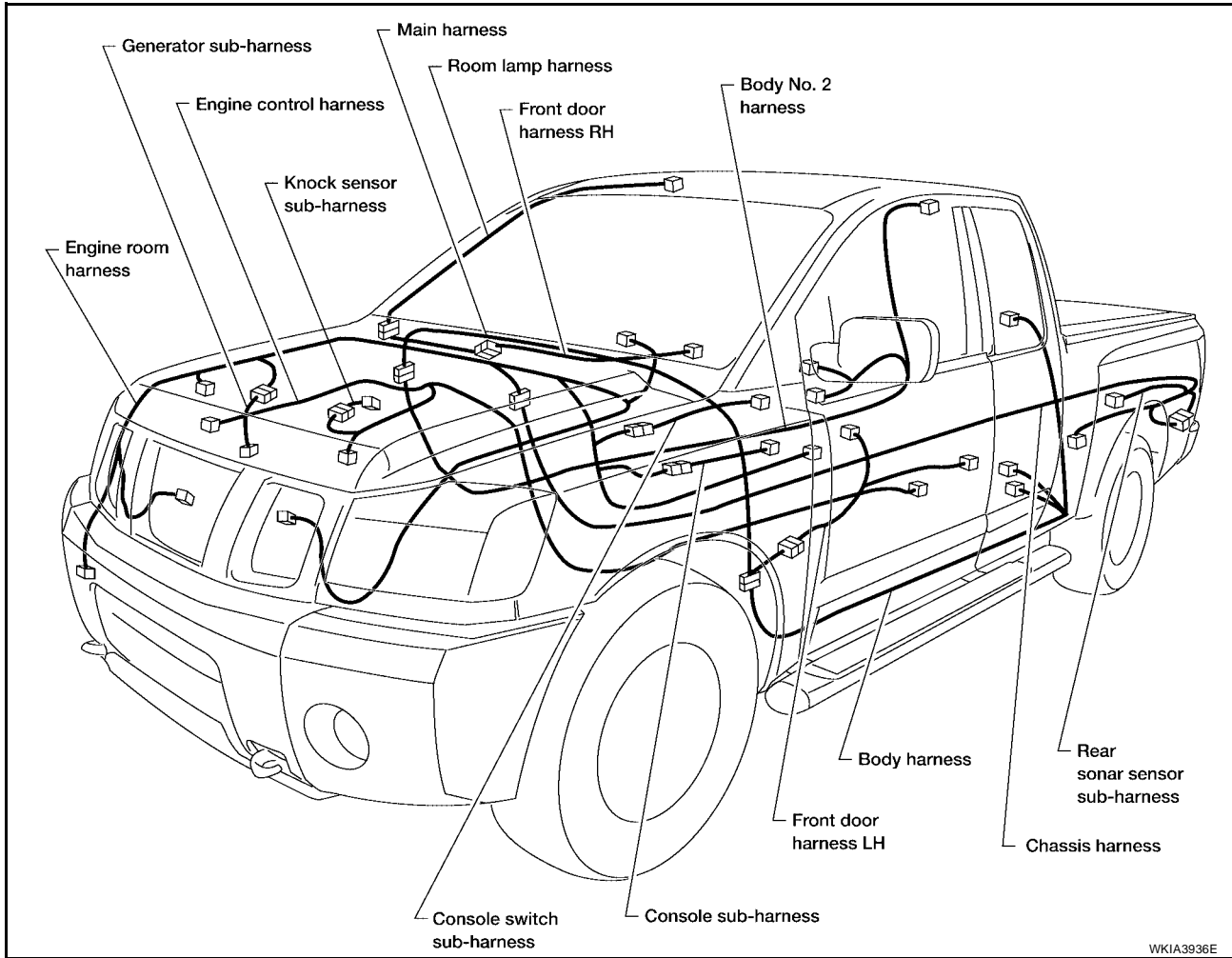
CONNECTOR SYMBOL

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.	—			

HARNESS

OUTLINE (KING CAB MODELS)



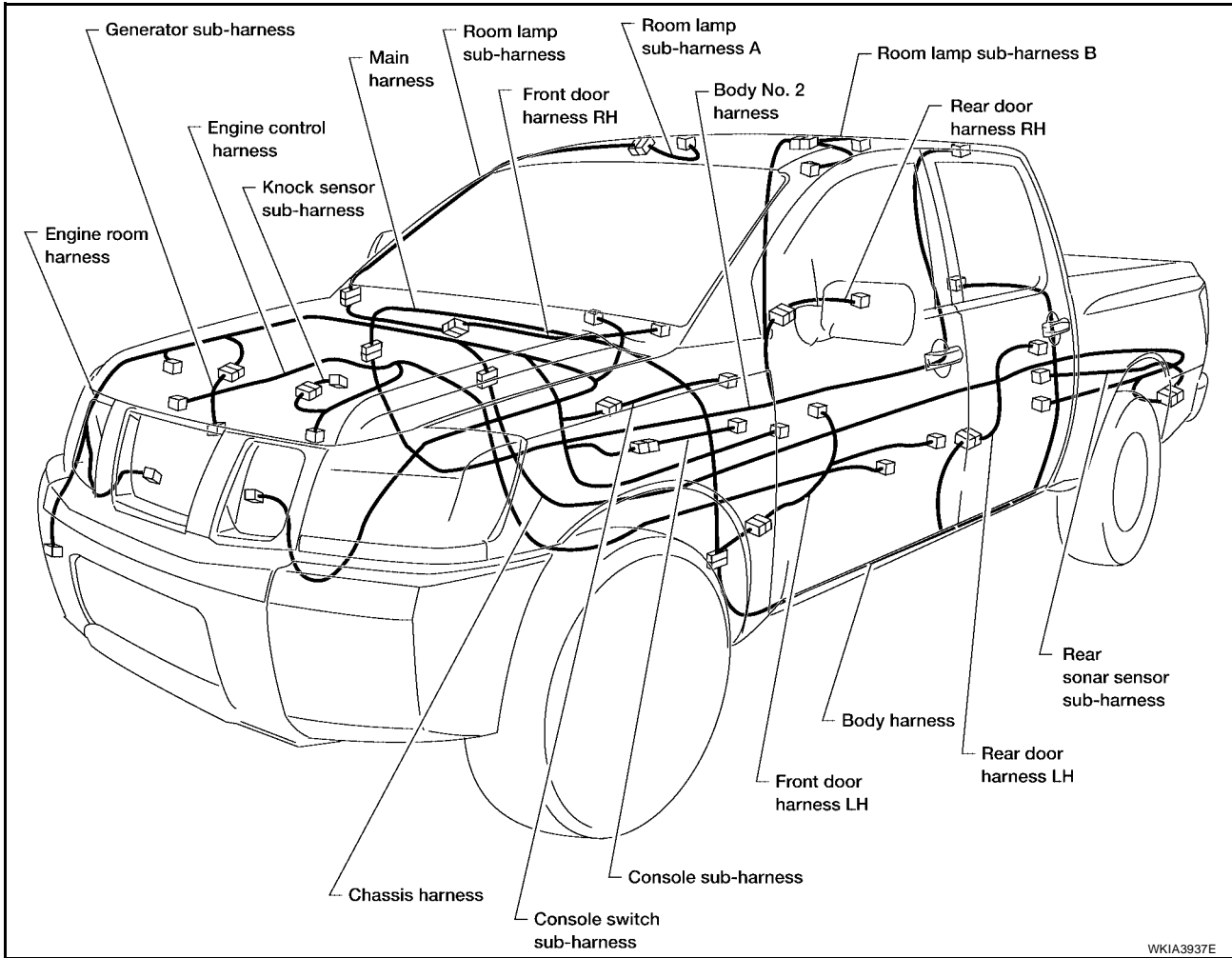
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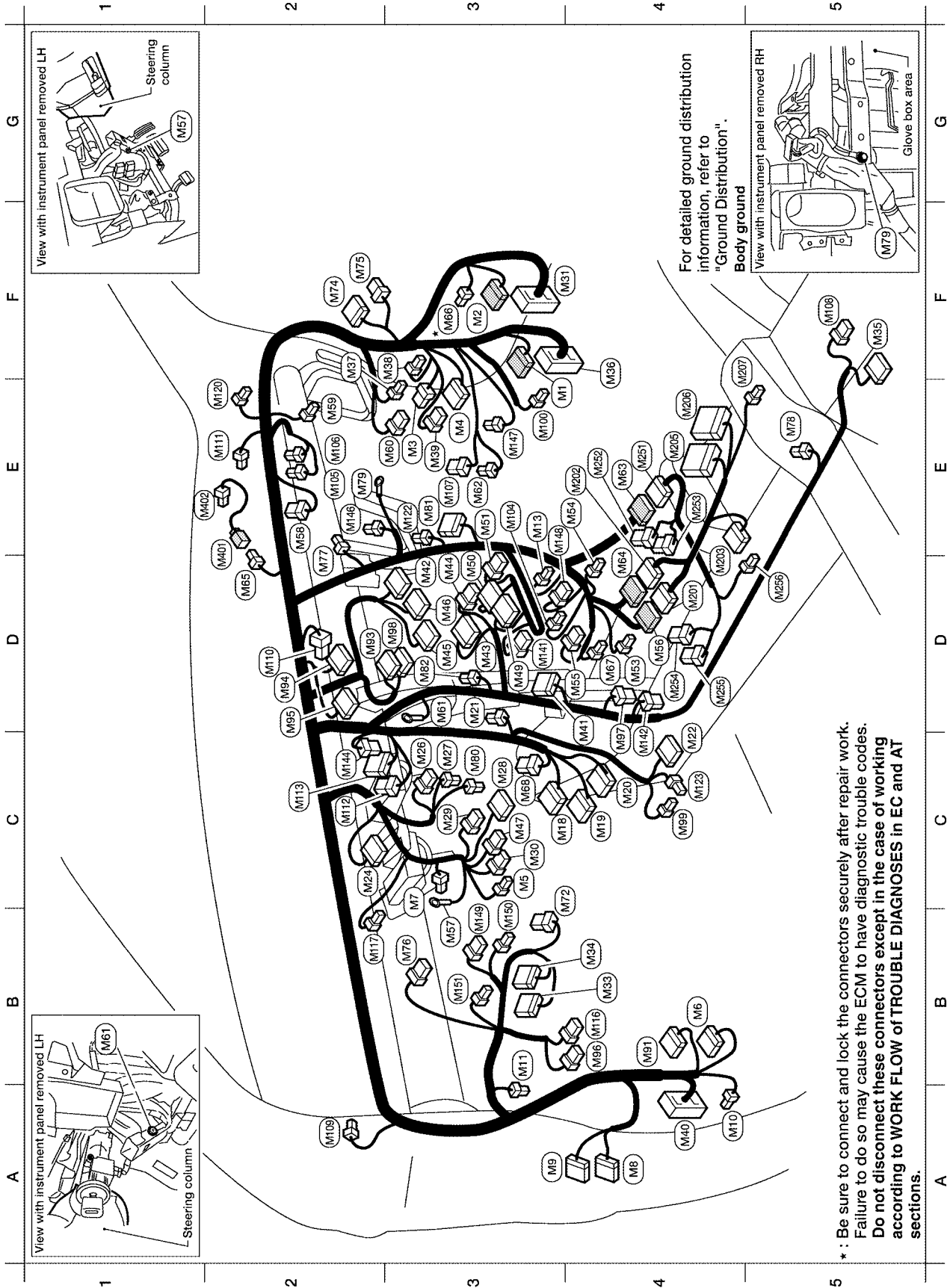
HARNESS

OUTLINE (CREW CAB MODELS)



HARNESS

MAIN HARNESS



WKIA3900E

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HARNESS

E4 (M1)	W/16 : To (R1)	D3 (M50)	W/18 : Front air control	E2 (M105)	Y/2 : Front passenger air bag module
F3 (M2)	W/12 : To (R2) (with sunroof)	E3 (M51)	W/8 : Front blower switch	E2 (M106)	O/2 : Front passenger air bag module
E3 (M3)	W/8 : Fuse block (J/B)	D4 (M53)	B/2 : Front power socket LH	E3 (M107)	BR/6 : Front blower motor relay
E3 (M4)	W/16 : Fuse block (J/B)	E3 (M54)	B/2 : Front power socket RH (for cigarette lighter)	F5 (M109)	B/6 : Yaw rate/side decel G-sensor (VDC)
C3 (M5)	W/3 : Illumination control switch	D4 (M55)	W/8 : Hazard switch	A2 (M109)	BR/2 : Front tweeter LH
B4 (M6)	W/10 : To (E10)	D4 (M56)	W/16 : To (M201) (floor shift)	D2 (M110)	BR/2 : Center speaker (with premium audio)
B3 (M7)	L/5 : Water valve relay	B3 (M57)	- : Body ground	E2 (M111)	BR/2 : Front tweeter RH
A4 (M8)	W/16 : To (D2)	E2 (M58)	B/6 : Intake door motor	C2 (M112)	W/8 : Audio amplifier (with premium audio)
A4 (M9)	BR/24 : To (D1)	E2 (M59)	BR/2 : Glove box lamp	C2 (M113)	L/24 : Audio amplifier (with premium audio)
A4 (M10)	Y/4 : To (E29)	E3 (M60)	W/6 : Fuse block (J/B)	B4 (M116)	GR/8 : Rear sonar system OFF switch
B3 (M11)	B/1 : Parking brake switch	D3 (M61)	- : Body ground	B2 (M117)	B/2 : Sonar buzzer
E3 (M13)	W/3 : Front passenger air bag off indicator	E3 (M62)	B/2 : Front blower motor	E2 (M120)	W/4 : Remote keyless entry receiver
C3 (M18)	W/40 : BCM (body control module)	E4 (M63)	BR/20 : To (M25) (floor shift)	E3 (M122)	B/4 : Front blower motor resistor
C4 (M19)	W/15 : BCM (body control module)	D4 (M64)	BR/24 : To (M22) (floor shift)	C4 (M123)	W/2 : Tire pressure warning check connector
C4 (M20)	B/15 : BCM (body control module)	D2 (M65)	W/4 : To (M40)	D3 (M141)	W/8 : 4WD shift switch
D3 (M21)	W/4 : NATS antenna amplifier	F3* (M65)	B/1 : To (E33)	C4 (M142)	B/6 : Mode door motor
C4 (M22)	W/16 : Data link connector	D4 (M67)	GR/8 : Tow mode switch (column shift)	C2 (M144)	B/6 : Defroster door motor
C2 (M24)	W/40 : Combination meter	C3 (M68)	W/8 : A/T device (column shift)	E2 (M146)	W/2 : Intake sensor
C3 (M26)	W/6 : Ignition switch	C4 (M72)	W/6 : Differential lock mode switch (late production)	E3 (M147)	B/6 : Air mix door motor (front)
C3 (M27)	W/4 : Key switch/key lock sol (floor shift)	F2 (M74)	BR/20 : To (G102)	D3 (M149)	GR/6 : VDC OFF switch (column shift)
C3 (M28)	W/16 : Combination switch	F2 (M75)	W/8 : To (G101)	B3 (M149)	W/6 : Cargo lamp switch
C3 (M29)	Y/6 : Combination switch (spiral cable)	B3 (M76)	W/6 : Electric brake (pre-wiring)	B3 (M150)	L/4 : Cargo lamp relay
C3 (M30)	GR/8 : Combination switch (spiral cable)	D2 (M77)	Y/4 : Front pass air bag module (service replacement)	B3 (M151)	W/2 : Condenser-3
F4 (M31)	SMJ : To (E152)	E5 (M78)	B/2 : Armrest power socket (bench seat)	Console sub-harness (floor shift)	
B4 (M33)	W/32 : Automatic drive positioner control unit	E2 (M79)	- : Body ground	D4 (M207)	W/16 : To (M56)
B4 (M34)	W/16 : Automatic drive positioner control unit	C3 (M80)	W2 : Key switch (column shift)	E4 (M202)	BR/24 : To (M64)
F5 (M35)	Y/28 : Air bag diagnosis sensor unit	E3 (M81)	GR/12 : Shift lock control unit (floor shift)	D4 (M203)	W/12 : A/T device
F4 (M36)	SMJ : To (G149)	D3 (M82)	W/2 : Circuit breaker-2	E4 (M205)	GR/16 : DVD player
E2 (M37)	B/1 : Fuse block (J/B)	B4 (M81)	W/16 : To (E26)	E4 (M206)	L/16 : DVD player
E3 (M38)	B/2 : Fuse block (J/B)	D2 (M83)	W/24 : Display unit (with NAVI)	F5 (M207)	B/2 : Console power socket
E3 (M39)	W/8 : Fuse block (J/B)	D2 (M84)	W/24 : Display control unit (with NAVI)	Console switch sub-harness (floor shift)	
A4 (M40)	SMJ : To (E69)	D2 (M85)	W/24 : Display control unit (with NAVI)	E4 (M251)	BR/20 : To (M65)
C4 (M41)	W/16 : Satellite radio tuner (pre-wiring)	D2 (M86)	W/32 : Display control unit (with NAVI)	E4 (M252)	BR/6 : Heated seat switch (passenger)
D3 (M42)	W/12 : Audio unit	B4 (M86)	BR/6 : Pedal adjusting switch	D4 (M253)	GR/6 : VDC OFF switch
D3 (M43)	W/10 : Audio unit	C4 (M87)	BR/7 : Heated seat relay	D4 (M254)	GR/8 : Tow mode switch
D3 (M44)	W/6 : Audio unit	D3 (M88)	W/24 : AV switch	D4 (M255)	BR/6 : Heated seat switch (driver)
D3 (M45)	W/16 : Audio unit	C4 (M89)	BR/2 : Foot lamp LH	D5 (M256)	B/2 : A/T device illumination
D3 (M46)	W/20 : Audio unit	E3 (M100)	BR/2 : Foot lamp RH	Optical sensor sub-harness	
C3 (M47)	W/8 : Steering angle sensor	E3 (M104)	W/4 : Auxiliary in jack (audio)	D2 (M401)	W/4 : To (M65)
D3 (M49)	B/26 : Front air control	E3 (M104)	W/4 : Auxiliary in jack (audio)	E2 (M402)	B/4 : Optical sensor

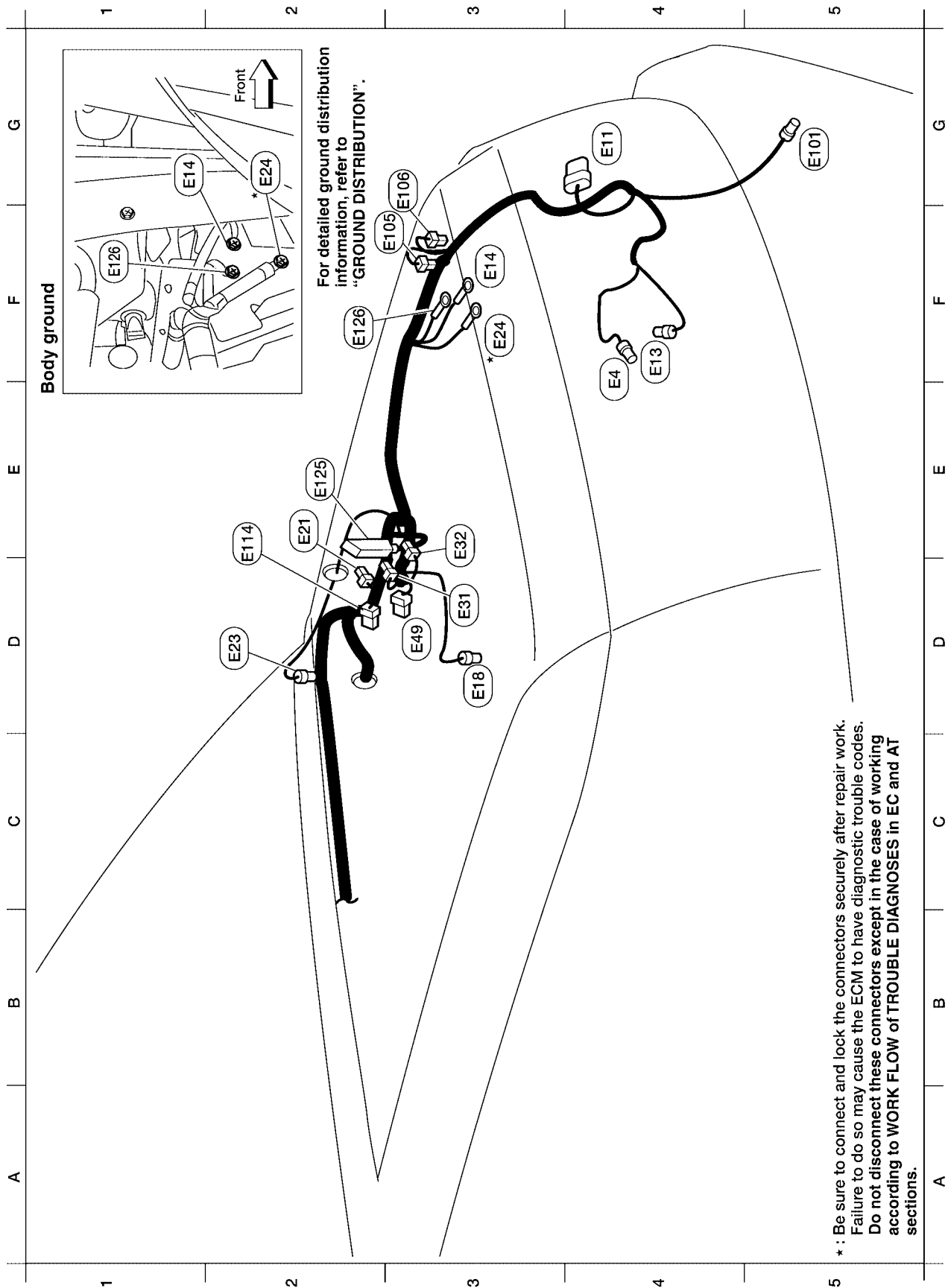
* : Refer to previous page

WKIA3901E

HARNESS

ENGINE ROOM HARNESS (LH VIEW)

Engine Compartment



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

HARNESS

E4	(E4)	Y/2	: Crash zone sensor
G4	(E11)	B/6	: Front combination lamp LH
F4	(E13)	GR/2	: Ambient sensor 2
F3	(E14)	-	: Body ground
D3	(E16)	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 stroke sensor
E2	(E125)	B/47	: ABS actuator and electric unit (control unit)
F2	(E126)	-	: Body ground

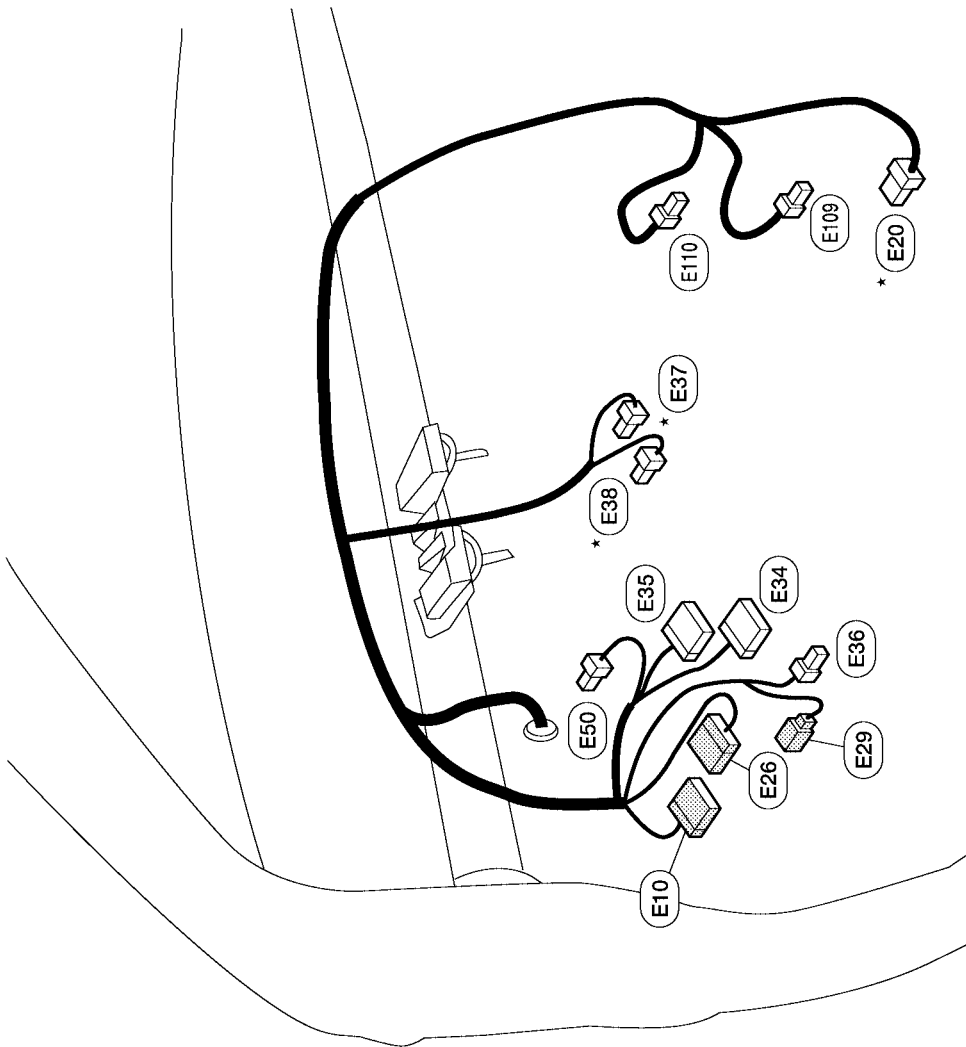
* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to **WORK FLOW of TROUBLE DIAGNOSES** in EC and AT sections.

WKIA3902E

HARNESS

Passenger Compartment

- (E10) W/10 : To (M6)
- * (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) W/4 : Stop lamp switch (column shift)
- * (E39) B/2 : Stop lamp switch (floor shift)
- (E50) BR/2 : To (B75)
- (E109) W/2 : Pedal adjusting motor
- (E110) W/3 : Pedal adjusting motor

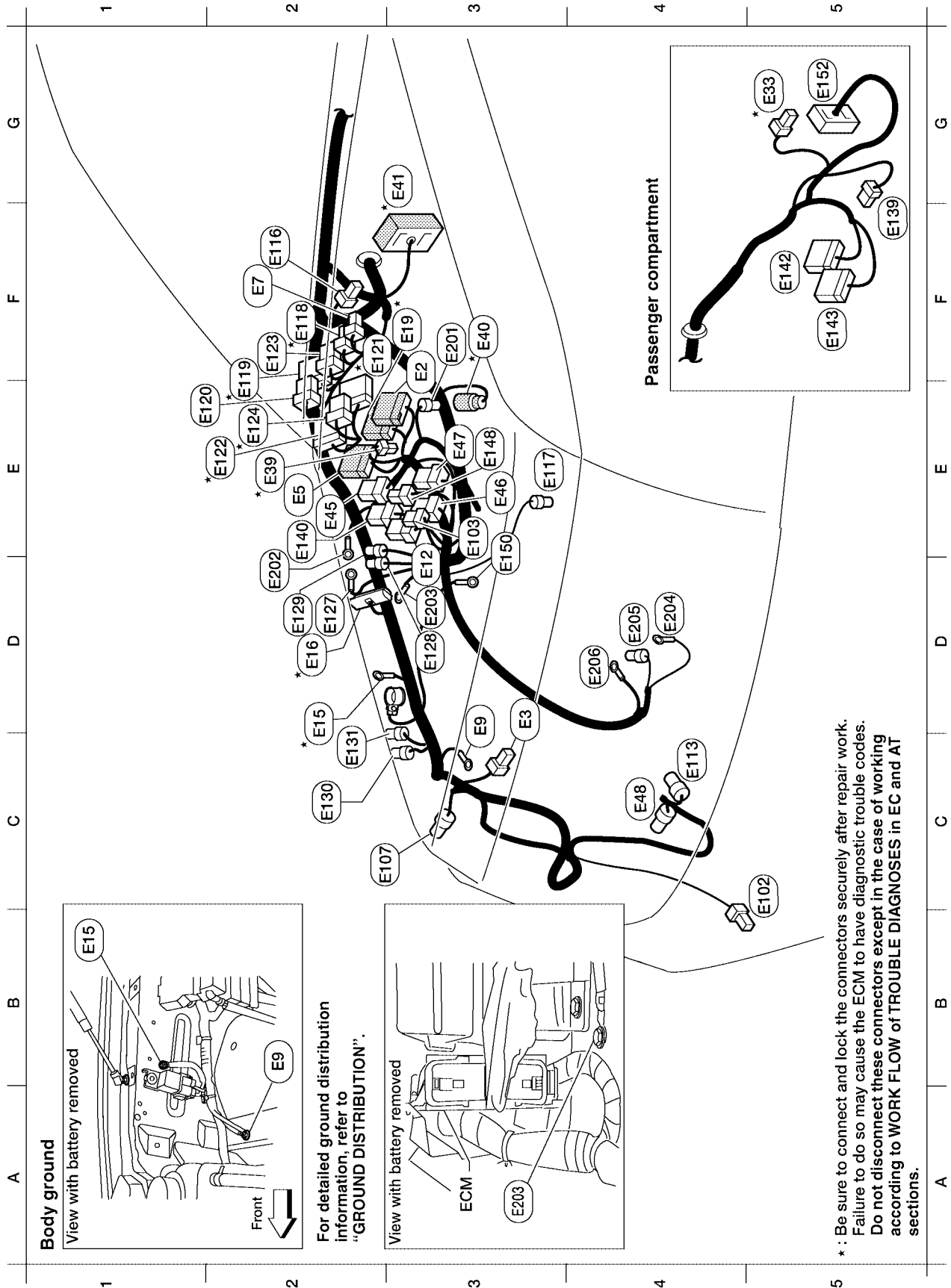


* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
 Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

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HARNESS

ENGINE ROOM HARNESS (RH VIEW) Engine Compartment



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

WKIA2860E

E3	(E2)	W/16	: To (F32)		
C3	(E3)	B/2	: Horn		
E2 *	(E5)	W/24	: To (F14)		
F2	(E7)	GR/2	: Fuse link box (battery)	D3	(E28)
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 (M56)		
E2 *	(E39)	W/2	: To (F34)		
F3 *	(E40)	GR/2	: To (E20)		
F3 *	(E41)	SMJ	: To (C1) (located RH rear of engine compartment)		
E2	(E45)	BR/6	: Back-up lamp relay		
E3	(E46)	L/5	: Transfer relay 1		
E3	(E47)	L/5	: Transfer relay 2		
C4	(E48)	B/3	: Refrigerant pressure sensor		
C5	(E02)	B/2	: Front fog lamp RH		
E3	(E03)	B/5	: Daytime light relay		
C2	(E07)	B/6	: Front combination lamp RH		
C4	(E13)	GR/2	: Cooling fan motor		
F2	(E16)	W/2	: Condenser-2		
E3	(E17)	GR/2	: Front wheel sensor RH		
F2 *	(E18)	B/2	: IPDM E/R (intelligent power distribution module engine room)		
E2 *	(E19)	W/16	: IPDM E/R (intelligent power distribution module engine room)		
E2	(E20)	W/6	: IPDM E/R (intelligent power distribution module engine room)		
F3 *	(E21)	BR/12	: IPDM E/R (intelligent power distribution module engine room)		
E2 *	(E22)	W/12	: IPDM E/R (intelligent power distribution module engine room)		
F2	(E23)	BR/8	: IPDM E/R (intelligent power distribution module engine room)		
E2 *	(E24)	B/6	: IPDM E/R (intelligent power distribution module engine room)		
D2	(E27)	-	: Fuse link box (battery)		

D3	(E28)	GR/2	: Fuse link box (battery)		
D2	(E29)	BR/2	: Fuse link box (battery)		
C2	(E30)	W/2	: Compressor motor relay		
C2	(E31)	W/2	: Compressor motor relay		
F5	(E39)	W/8	: To (E107)		
E2	(E40)	BR/6	: Trailer tow relay 2		
F5	(E42)	W/26	: Transfer control unit		
F5	(E43)	W/24	: Transfer control unit		
E3	(E46)	L/4	: Trailer tow relay 1		
D3	(E15)	-	: Battery ground		
G5	(E32)	SMJ	: To (M31)		

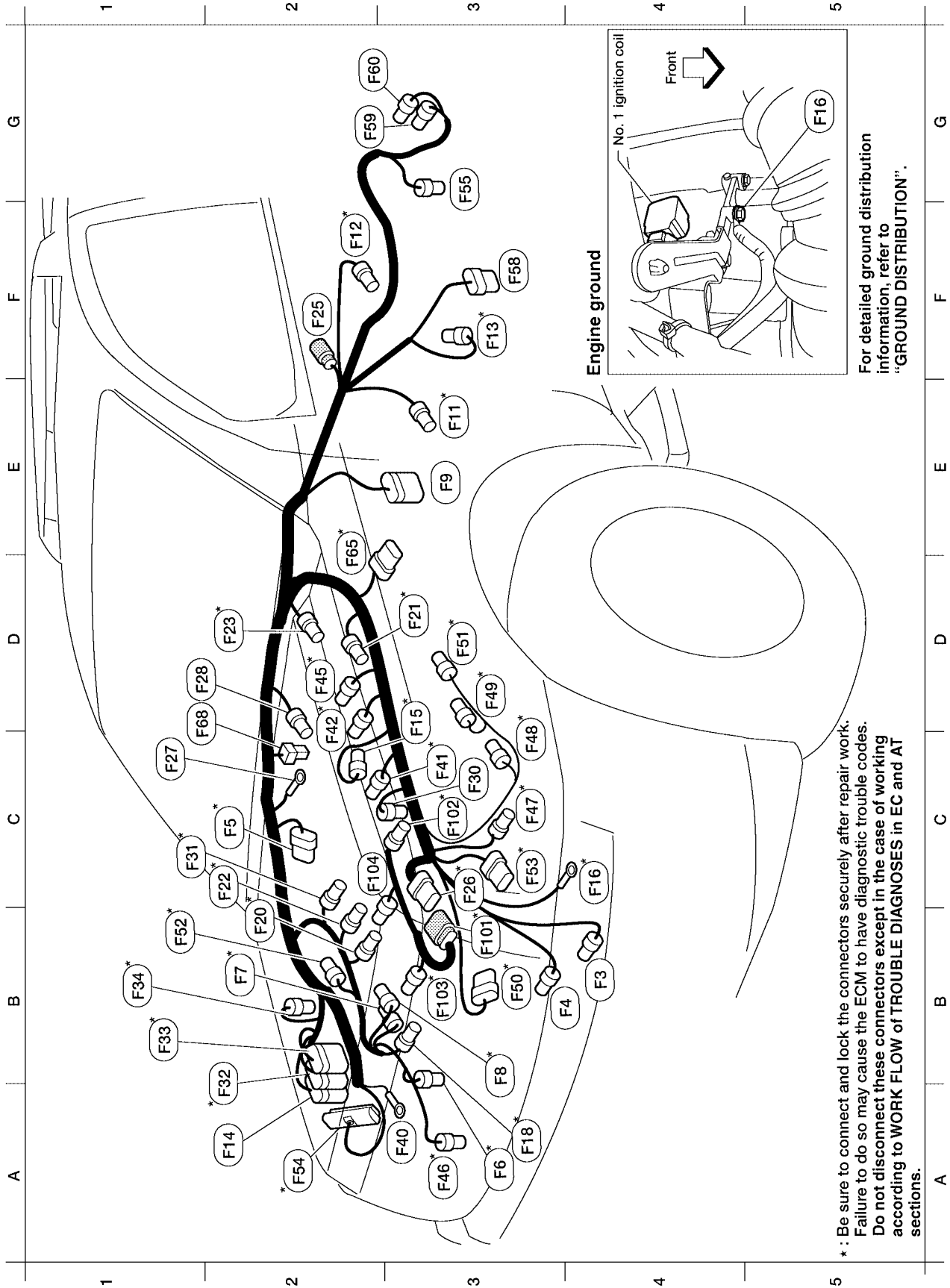
Generator sub-harness

F3	(E20)	GR/2	: To (E40)		
D2	(E20)	B/1	: To fuse and fusible link box		
D3	(E20)	-	: Body ground		
D4	(E20)	-	: Generator		
D4	(E20)	GR/2	: Generator		
D4	(E20)	-	: Generator		

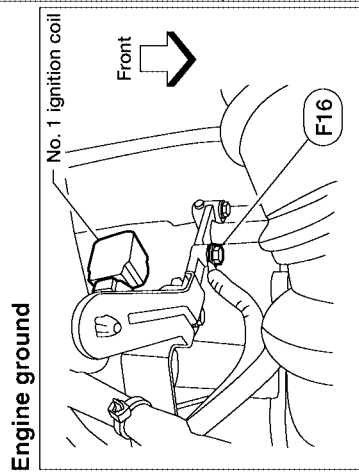
* : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
 Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

HARNESS

ENGINE CONTROL HARNESS



* : 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.



For detailed ground distribution
 information, refer to
 "GROUND DISTRIBUTION".

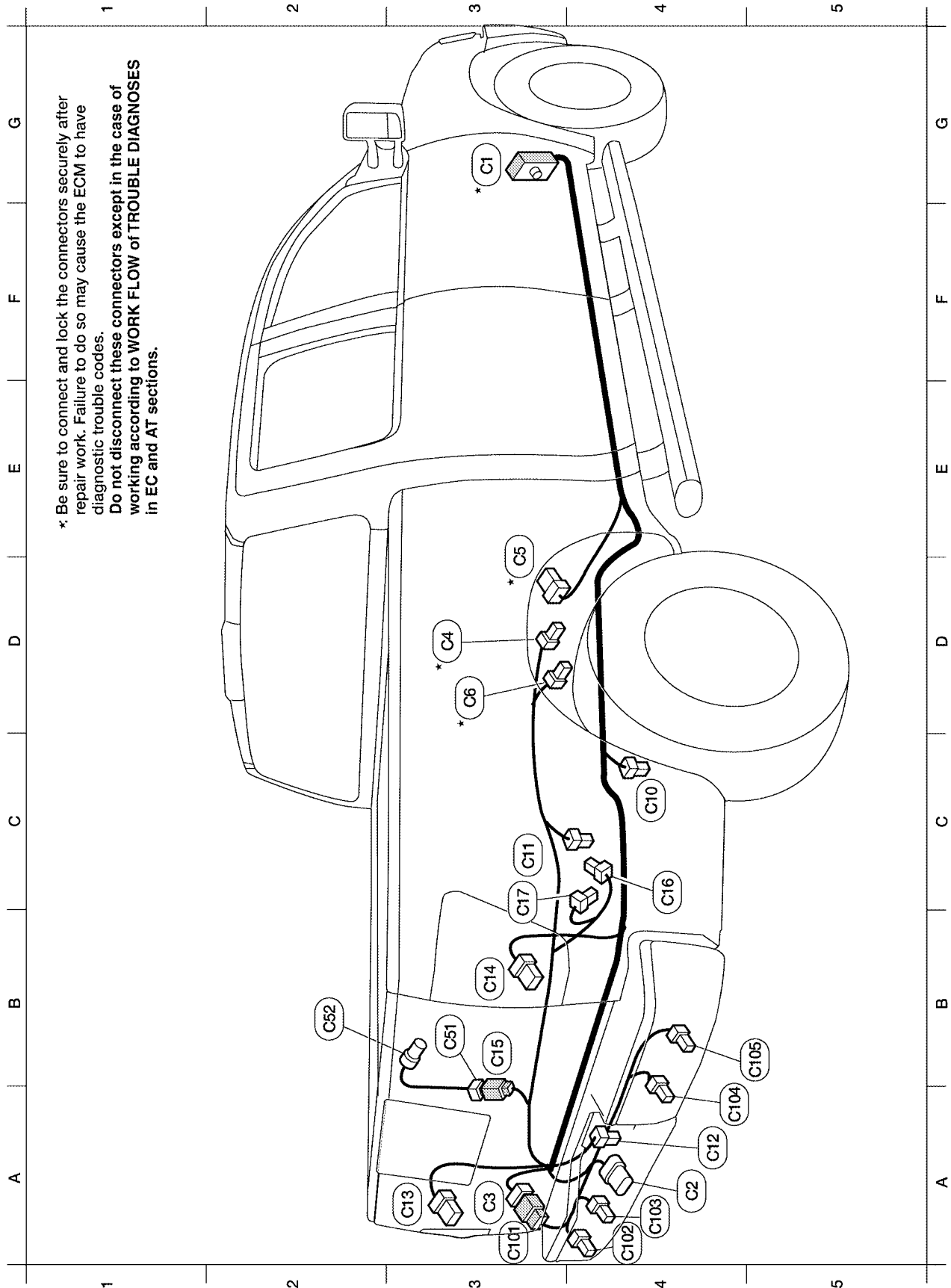
WKIA2862E

B4 (F3)	B/1	: A/C Compressor	C3 * (F48)	GR/3	: Ignition coil No. 3 (with power transistor)
B4 (F4)	B/3	: Oil pressure sensor	D3 * (F49)	GR/3	: Ignition coil No. 5 (with power transistor)
C2 * (F5)	B/6	: Air/fuel ratio (A/F) sensor 1 (bank 2)	B3 * (F50)	B/6	: Electric throttle control actuator
A3 * (F6)	GR/3	: Ignition coil No. 2 (with power transistor)	D3 * (F51)	GR/3	: Ignition coil No. 7 (with power transistor)
B2 * (F7)	GR/3	: Ignition coil No. 4 (with power transistor)	B1 * (F52)	GR/3	: Ignition coil No. 8 (with power transistor)
B3 * (F8)	GR/3	: Ignition coil No. 6 (with power transistor)	C3 * (F53)	B/6	: Mass air flow sensor
E3 * (F9)	G/10	: A/T assembly	A2 * (F54)	B/81	: ECM
E3 * (F11)	B/3	: Crankshaft position sensor (POS)	G3 * (F55)	B/2	: ATP switch (4WD only)
F2 * (F12)	G/4	: Heated oxygen sensor 2 (bank 2)	F3 (F58)	B/8	: Transfer control device (4WD only)
F3 * (F13)	G/4	: Heated oxygen sensor 2 (bank 1)	G2 (F59)	GR/2	: Wait detection switch (4WD only)
A2 (F14)	W/24	: To (E5)	G2 (F60)	GR/2	: 4LO switch (4WD only)
C3 * (F15)	L/2	: EVAP canister purge volume control solenoid valve	D2 * (F65)	B/6	: Air/fuel ratio (A/F) sensor 1 (bank 1)
C4 * (F16)	-	: Engine ground	D1 * (F68)	B/2	: Water valve
A3 * (F18)	GR/2	: Injector No. 2	Knock sensor sub-harness		
B2 * (F20)	GR/2	: Injector No. 4	B3 * (F101)	B/6	: To (F26)
D3 * (F21)	GR/2	: Condenser-1	C3 * (F102)	GR/2	: Knock sensor (bank 1)
C2 * (F22)	GR/2	: Injector No. 6	B3 * (F103)	GR/2	: Engine coolant temperature sensor
D2 * (F23)	B/3	: Camshaft position sensor (PHASE)	C2 * (F104)	GR/2	: Knock sensor (bank 2)
F2 (F25)	W/2	: Diode No. 2			
C3 * (F26)	B/6	: To (F101)			
C1 (F27)	B/1	: Starter motor			
D2 (F28)	GR/1	: Starter motor			
C3 * (F30)	GR/2	: Injector No. 1			
C1 * (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)			

* : 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.

HARNESS

CHASSIS HARNESS



WKIA3916E

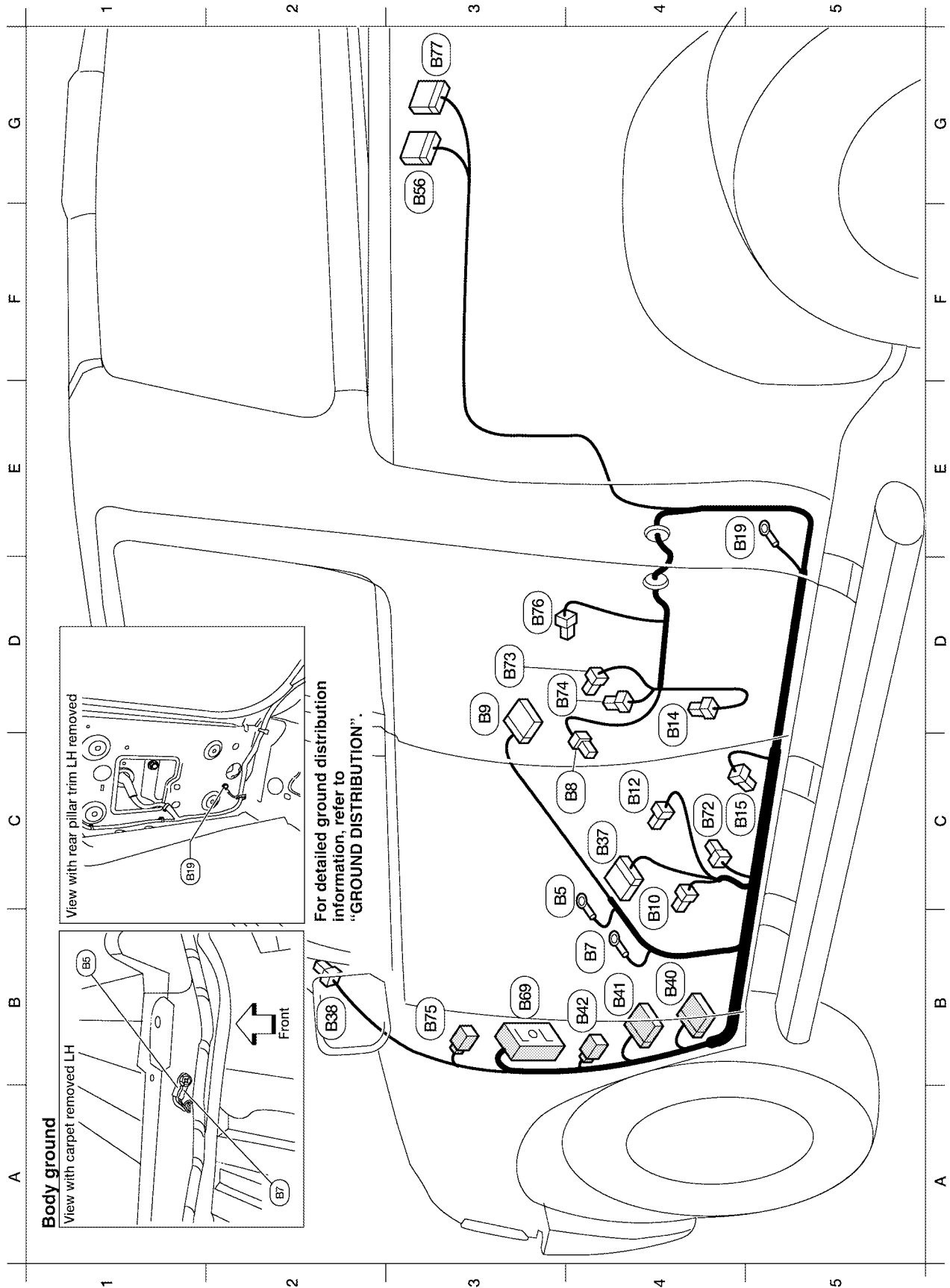
- G3 * C1 SMJ : To E41 (located RH rear of engine compartment)
- A4 C2 B/7 : Trailer
- A3 C3 GR/6 : To C101
- D3 * C4 GR/3 : EVAP control system pressure sensor
- D3 * C5 GR/5 : Fuel level sensor unit and fuel pump
- D3 * C6 B/2 : EVAP canister vent control valve
- C4 C10 GR/2 : Rear wheel sensor RH
- C3 C11 BR/2 : Rear wheel sensor LH
- A4 C12 W/2 : License plate lamps
- A3 C13 GR/8 : Rear combination lamp LH
- B3 C14 GR/8 : Rear combination lamp RH
- B3 C15 W/2 : To C51
- C4 C16 GR/2 : Differential lock position switch (late production)
- C3 C17 B/2 : Differential lock solenoid (late Production)
- Rear power socket sub-harness**
- B3 C51 W/2 : To C15
- B2 C52 BR/2 : Rear power socket (cargo bed)
- Rear sonar sensor sub-harness**
- A3 C101 GR/6 : To C3
- A4 C102 B/3 : Rear sonar sensor LH outer
- A4 C103 B/3 : Rear sonar sensor LH inner
- A4 C104 B/3 : Rear sonar sensor RH inner
- B5 C105 B/3 : Rear sonar sensor RH outer

* : 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.

WKIA3917E

HARNESS

BODY HARNESS (KING CAB MODELS)



WKIA3903E

HARNESS

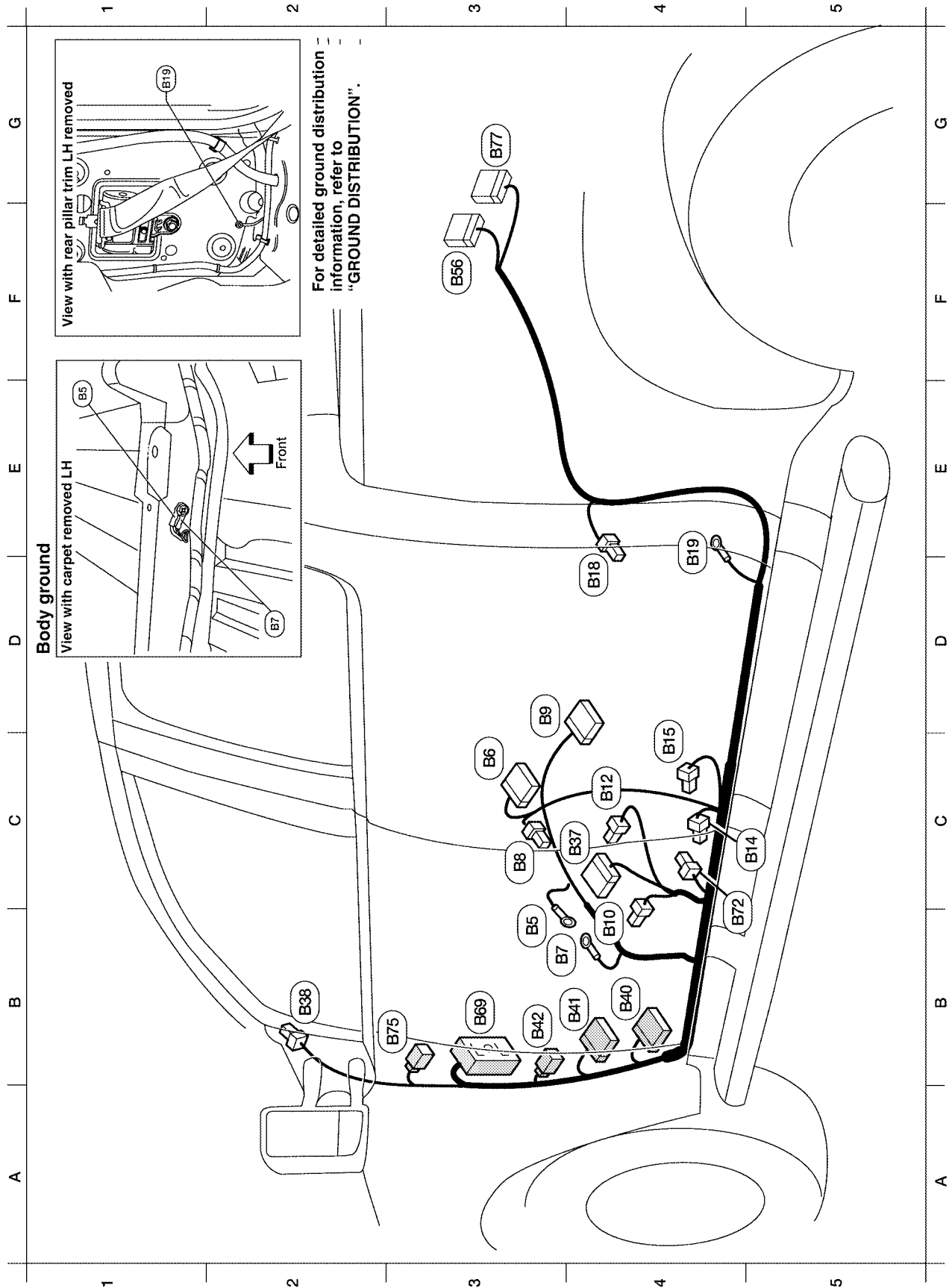
C3	(B5)	-	: Body ground (LH satellite sensor)
B4	(B7)	-	: Body ground
C4	(B6)	W/3	: Front door switch LH
D3	(B9)	Y/12	: Air bag diagnosis sensor unit
B4	(B10)	Y/2	: Front LH side air bag module
C4	(B12)	W/3	: Seat belt buckle switch LH
D4	(B14)	Y/2	: Front LH seat belt pre-tensioner
C4	(B15)	Y/2	: LH side air bag (satellite) sensor
E5	(B19)	-	: Body ground
C4	(B37)	W/16	: To (P1)
B2	(B38)	Y/2	: LH side curtain air bag module
B4	(B40)	W/24	: To (E34)
B4	(B41)	W/12	: To (E35)
B4	(B42)	W/2	: To (E36)
G3	(B56)	W/16	: Sonar control unit
B3	(B69)	SMJ	: To (M40)
C4	(B72)	W/4	: Subwoofer (with premium audio system)
D3	(B73)	B/2	: Rear door switch upper LH
D3	(B74)	B/2	: Rear door switch lower LH
B3	(B75)	BR/2	: To (E50)
D3	(B76)	W/2	: Rear door speaker LH
G3	(B77)	B/26	: Differential lock control unit (late production)

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HARNESS

BODY HARNESS (CREW CAB MODELS)



WKIA3918E

HARNESS

B3 (B5) - : Body ground (LH satellite sensor)
 C3 (B6) W/18 : To (D20)
 B3 (B7) - : Body ground
 C3 (B8) W/3 : Front door switch LH
 C3 (B9) Y/12 : Air bag diagnosis sensor unit
 B4 (E10) Y/2 : Front LH side air bag module
 C3 (B12) W/3 : Seat belt buckle switch LH
 C4 (E14) Y/2 : Front LH seat belt pre-tensioner
 C4 (E15) Y/2 : LH side air bag (satellite) sensor
 D4 (E18) W/3 : Rear door switch LH
 E4 (E19) - : Body ground
 C3 (B37) W/16 : To (P1)
 B2 (E38) Y/2 : LH side curtain air bag module
 B4 (E40) W/24 : To (E34)
 B4 (E41) W/12 : To (E35)
 B3 (E42) W/2 : To (E36)
 F3 (E56) W/16 : Sonar control unit
 B3 (E69) SMJ : To (M40)
 B4 (E72) W/4 : Subwoofer (with premium audio system)
 B3 (E75) BR/2 : To (E50)
 C3 (E77) B/26 : Differential lock control unit (late production)

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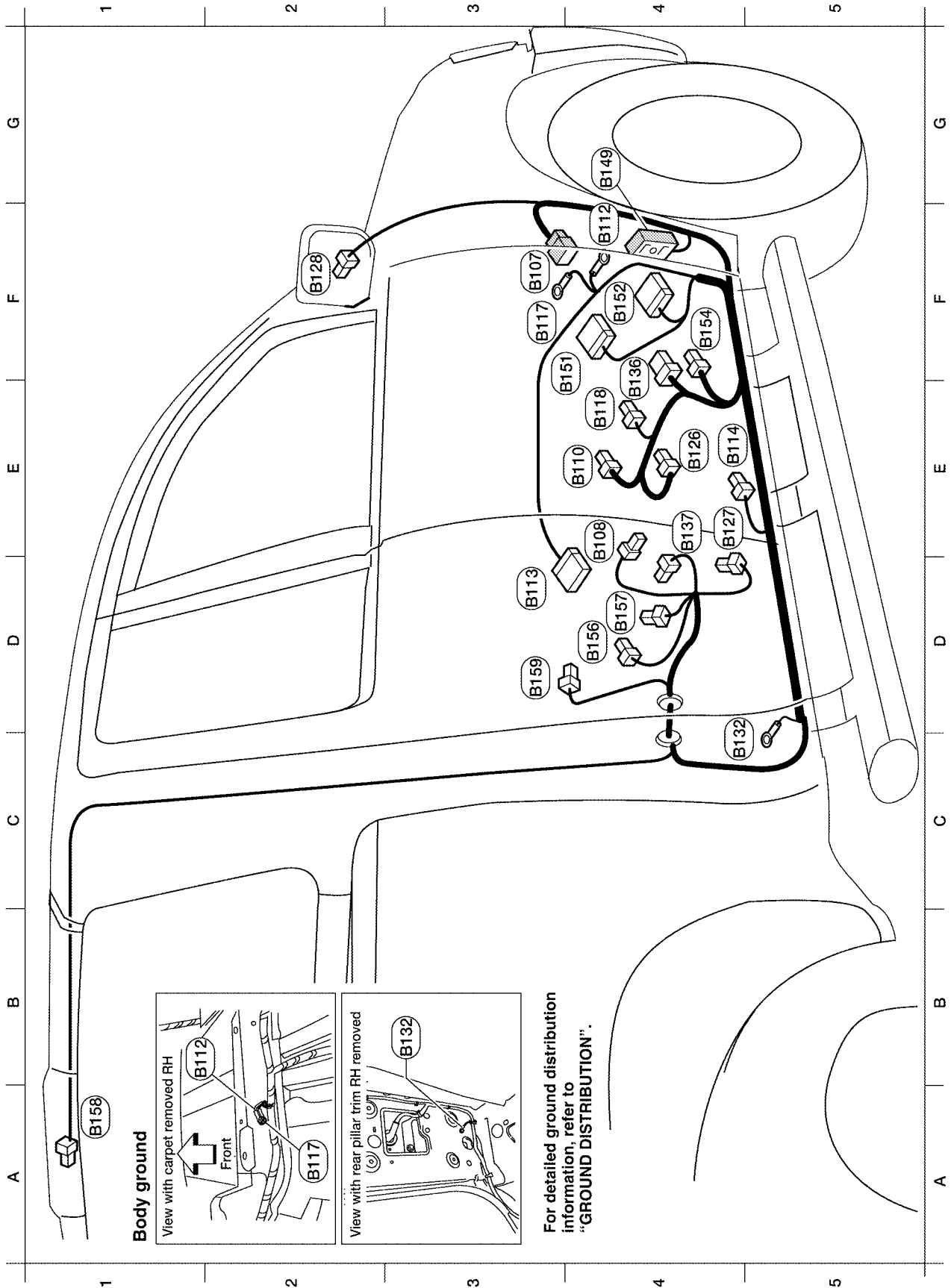
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HARNESS

BODY NO. 2 HARNESS (KING CAB MODELS)



LKIA0462E

HARNESS

F3	(E107)	W/8	: To (E139)	G4	(B149)	SMJ	: To (M36)
D4	(E108)	W/3	: Front door switch RH	F4	(B151)	W/24	: NAVI control unit (with NAVI)
E4	(E110)	W/3	: Seat belt buckle switch RH	F4	(B152)	GR/24	: NAVI control unit (with NAVI)
F4	(E112)	-	: Body ground (RH satellite sensor)	F4	(B154)	W/2	: To (P103)
D3	(E113)	Y/12	: Air bag diagnosis sensor unit	D4	(B156)	B/2	: Rear door switch upper RH
E5	(E114)	Y/2	: RH side air bag (satellite) sensor	D4	(B157)	B/2	: Rear door switch lower RH
F3	(E117)	-	: Body ground	A1	(B158)	W/3	: High mounted stop lamp
E4	(E118)	W/3	: Front seat heater RH	D3	(B159)	W/2	: Rear door speaker RH
E4	(E126)	Y/2	: Front RH side air bag module				
D5	(E127)	Y/2	: Front RH seat belt pre-tensioner				
F2	(E128)	Y/2	: RH side curtain air bag module				
C4	(E132)	-	: Body ground				
E4	(E136)	W/8	: To (P151)				
D4	(E137)	B/3	: Belt tension sensor				

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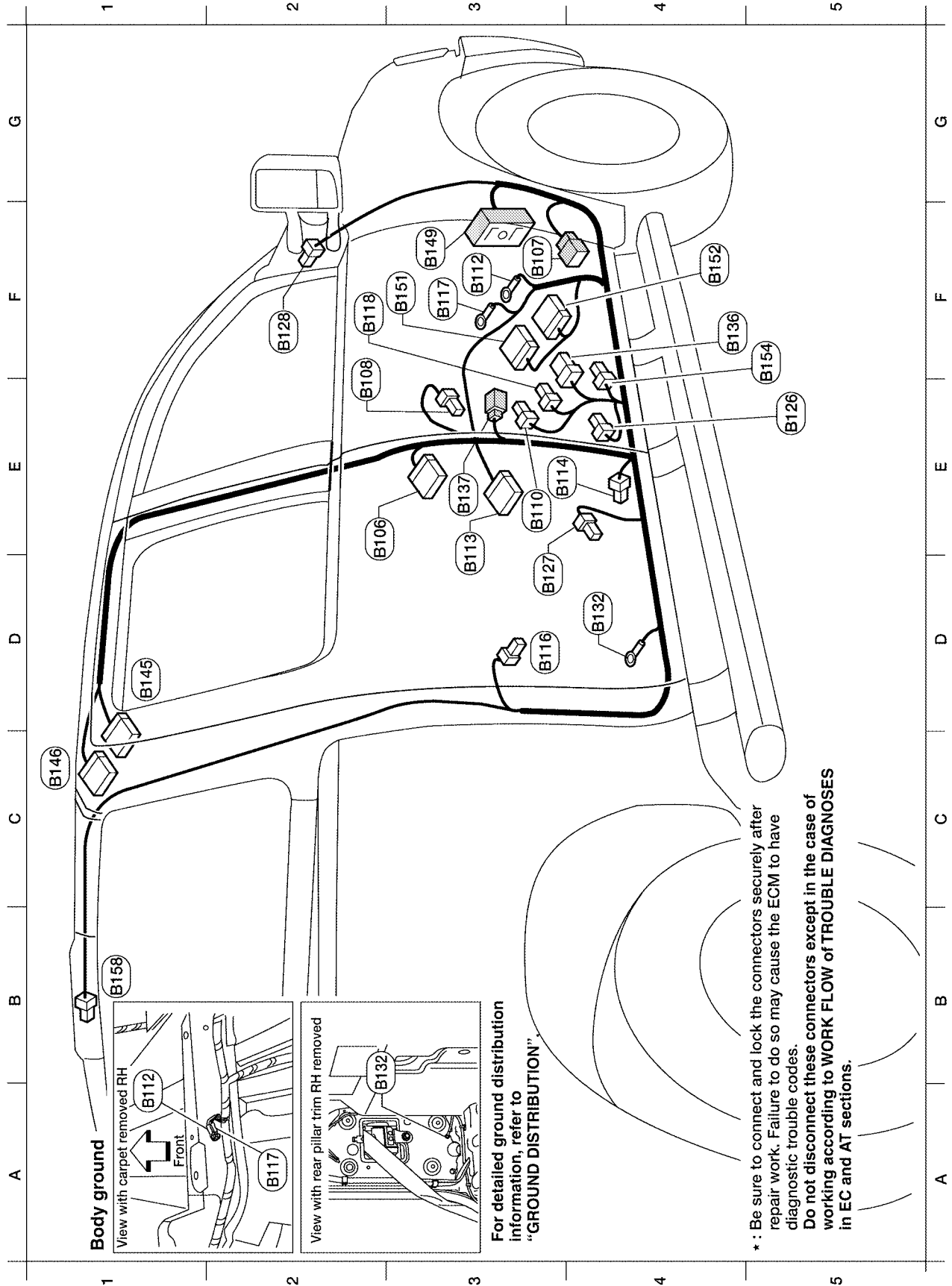
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HARNESS

BODY NO. 2 HARNESS (CREW CAB MODELS)



HARNESS

D3 (E106) W/18 : To (O307)
 F3 (E107) W/8 : To (E139)
 E2 (E108) W/3 : Front door switch RH
 E4 (E110) W/3 : Seat belt buckle switch RH
 F3 (E112) - : Body ground (RH satellite sensor)
 E3 (E113) Y/12 : Air bag diagnosis sensor unit
 E3 (E114) Y/2 : RH side air bag (satellite) sensor
 D3 (E116) W/3 : Rear door switch RH
 F3 (E117) - : Body ground
 F2 (E118) W/3 : Front seat heater RH
 E5 (E126) Y/2 : Front RH side air bag module
 D4 (E127) Y/2 : Front RH seat belt pre-tensioner
 F2 (E128) Y/2 : RH side curtain air bag module
 D4 (E132) - : Body ground
 F4 (E136) W/8 : To (P151)
 E3 (E137) B/3 : Belt tension sensor
 D1 (E145) BR/24 : To (R20D)
 C1 (E146) W/16 : To (R20T)

F3 (E149) SMJ : To (M36)
 F3 (E151) W/24 : NAVI control unit (with NAVI)
 F4 (E152) GR/24 : NAVI control unit (with NAVI)
 F5 (E154) W/2 : To (P103)

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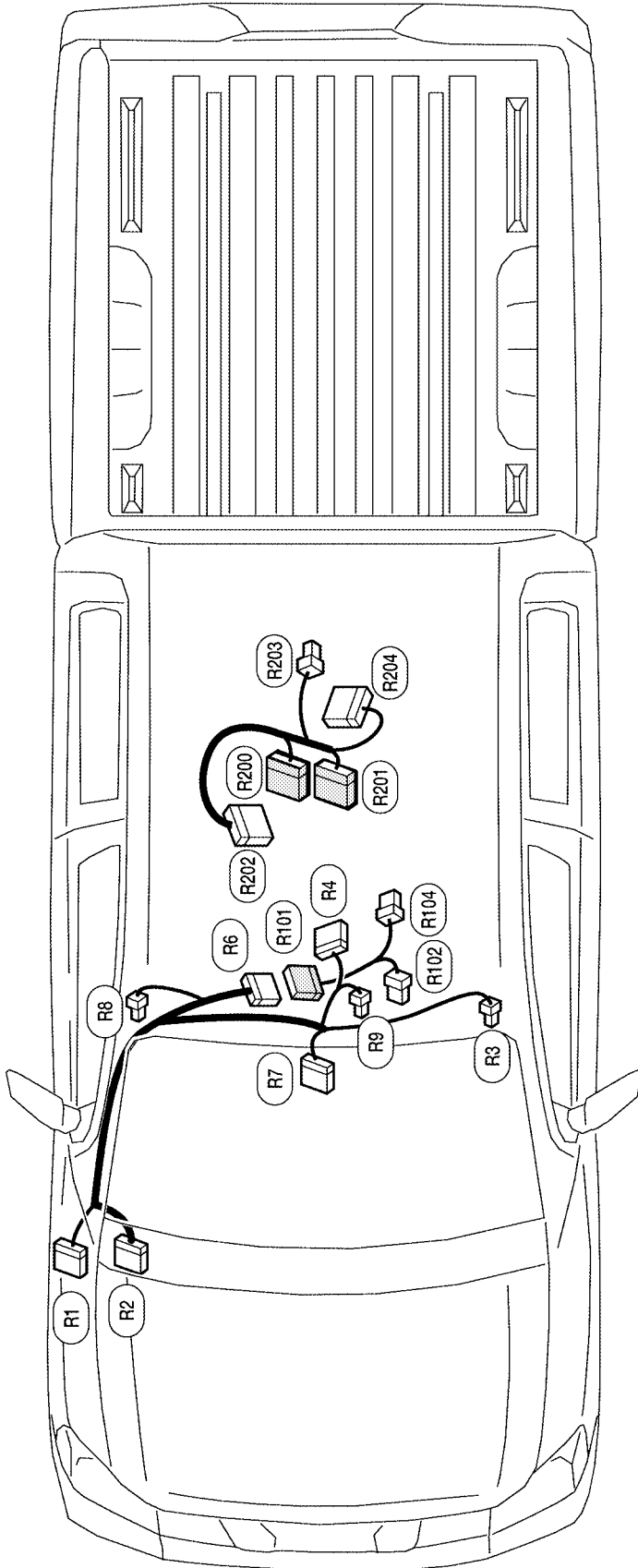
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HARNESS

ROOM LAMP HARNESS



Room lamp sub-harness B (Crew Cab)

- (R200) BR/24 : To (B145)
- (R201) W/16 : To (B146)
- (R202) W/12 : Video monitor
- (R203) W/3 : Personal lamp 2nd row
- (R204) W/16 : Rear audio remote control unit

- (R1) W/16 : To (M1)
- (R2) W/12 : To (M2)
- (R3) W/2 : Vanity lamp LH
- (R4) W/10 : Sunroof motor assembly
- (R6) W/24 : To (R101)
- (R7) B/10 : Auto anti-dazzling inside mirror
- (R8) W/2 : Vanity lamp RH
- (R9) W/2 : Room lamp

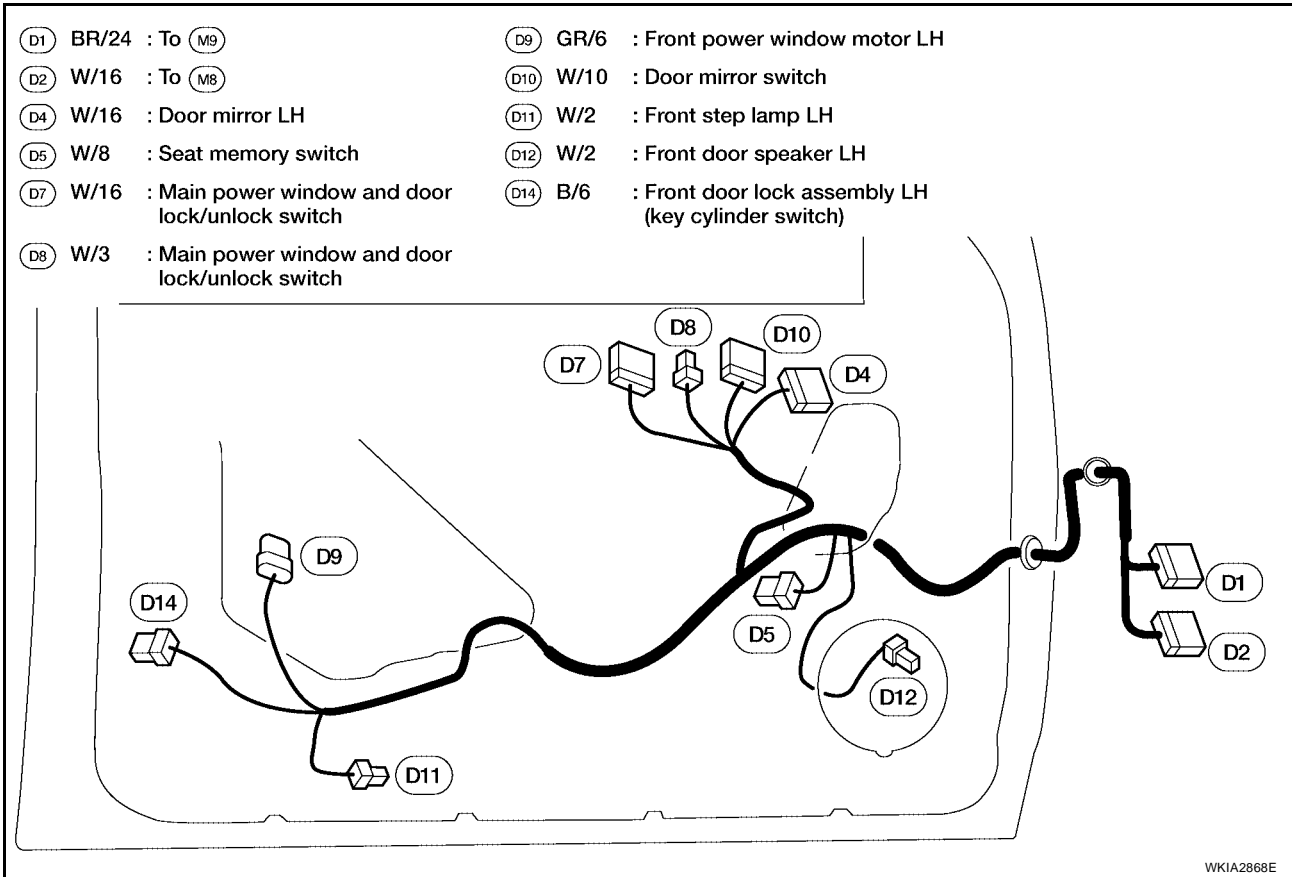
Room lamp sub-harness A (Crew Cab)

- (R101) W/24 : To (R6)
- (R102) W/8 : Front room/map lamp assembly
- (R104) GR/6 : Sunroof switch

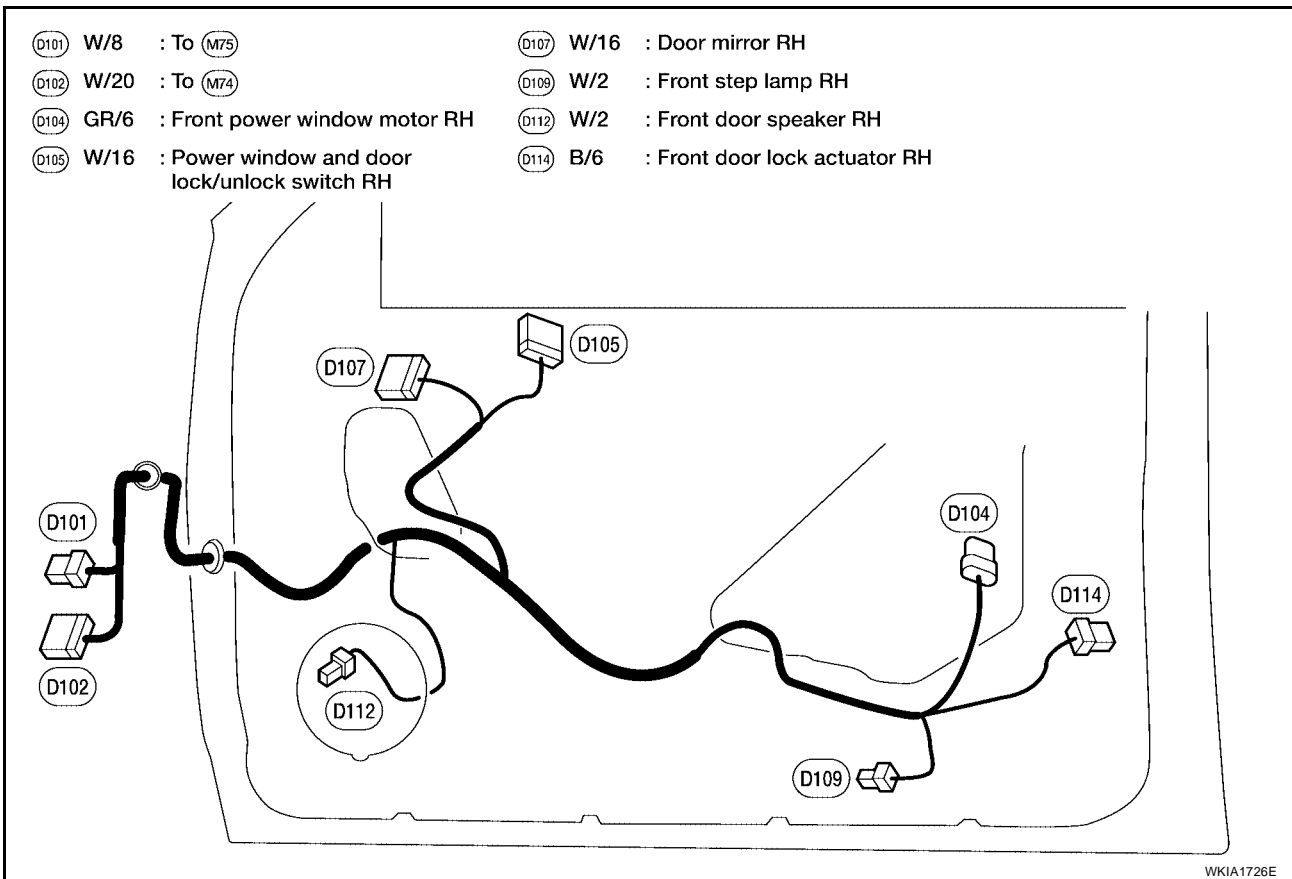
WKIA3920E

HARNESS

FRONT DOOR HARNESS LH



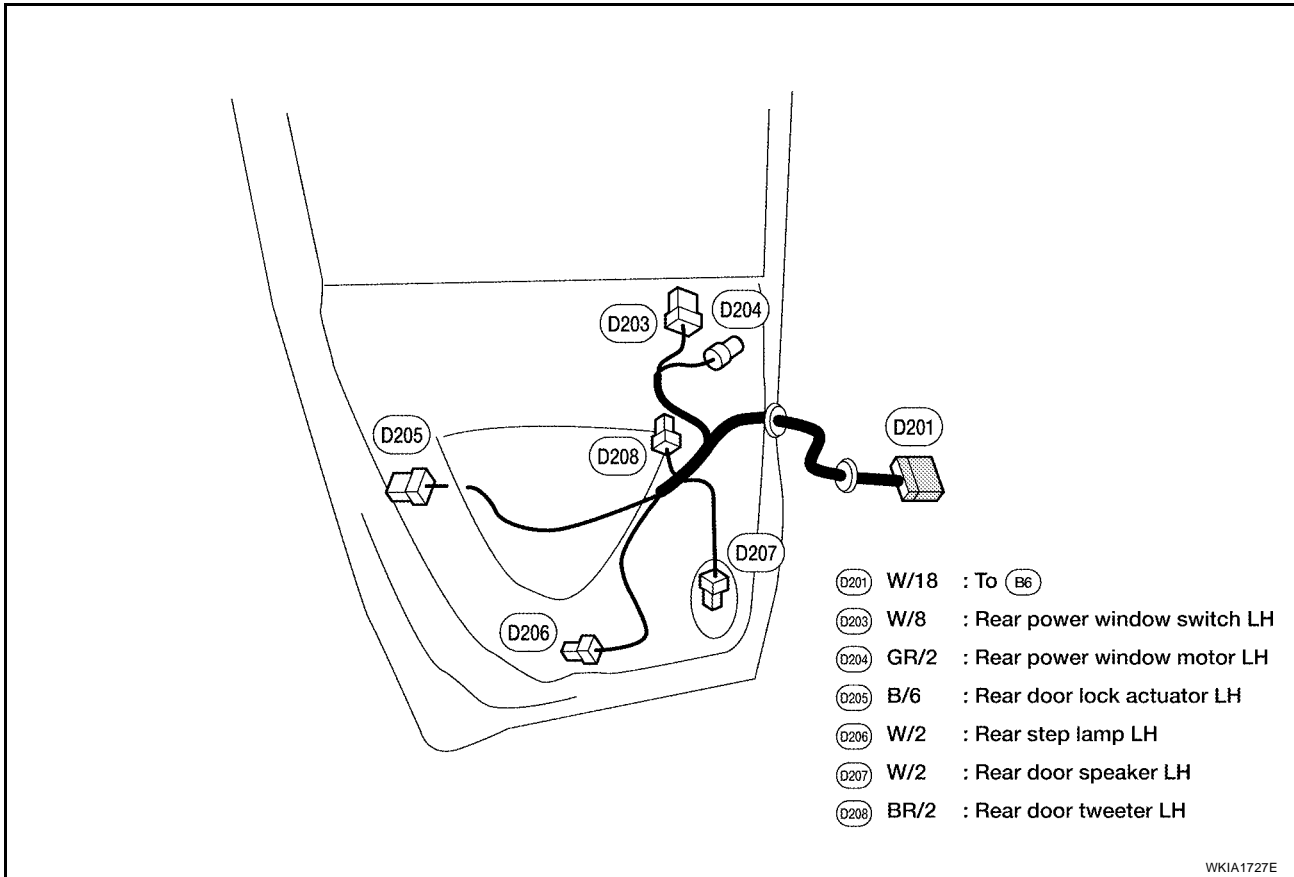
FRONT DOOR HARNESS RH



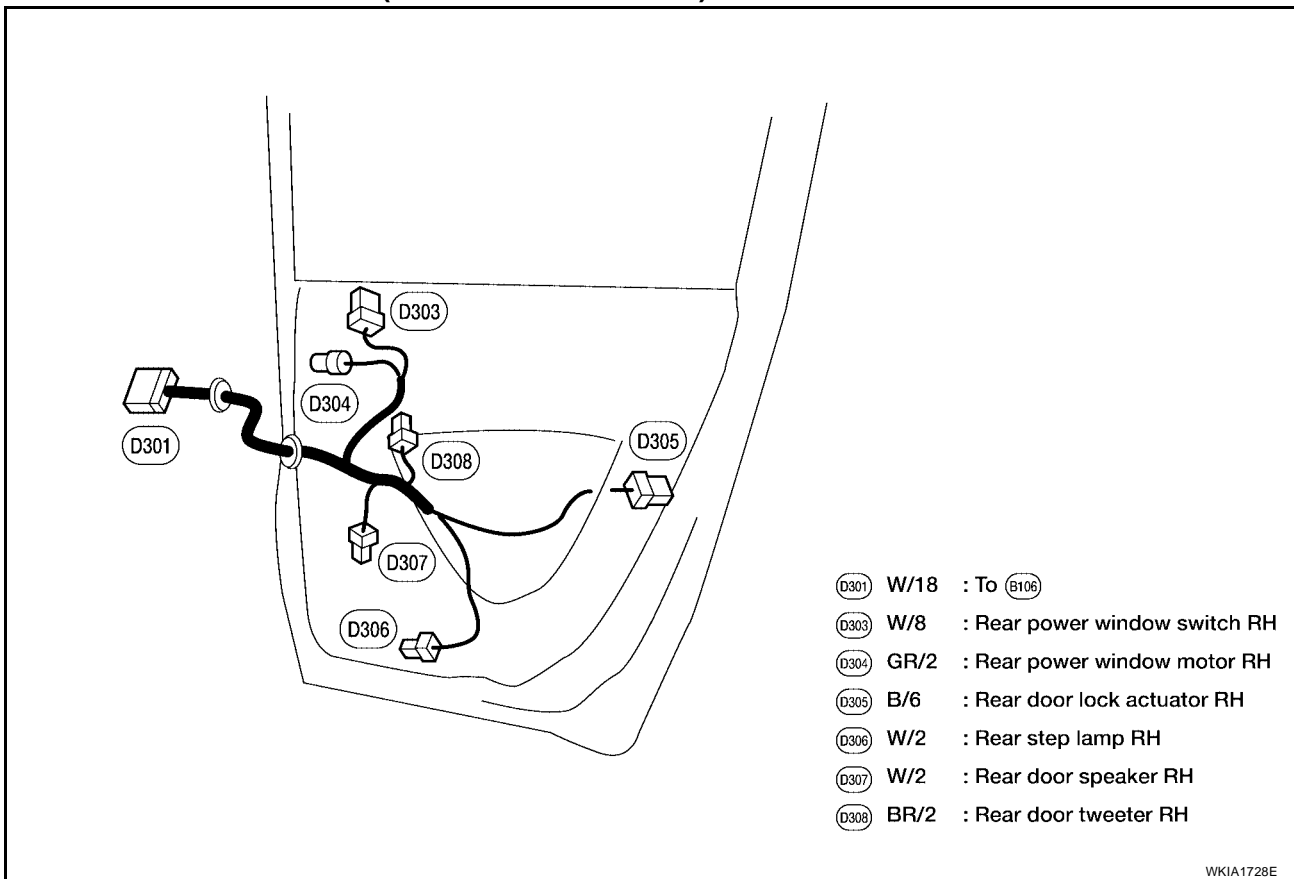
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HARNESS

REAR DOOR HARNESS LH (CREW CAB MODELS)



REAR DOOR HARNESS RH (CREW CAB MODELS)



HARNESS

Wiring Diagram Codes (Cell Codes)

EKS00700

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,M	MTC	Manual Air Conditioner
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
ABLS	BRC	Anti-Lock Brake System Limited Slip
ABS	BRC	Anti-Lock Brake System
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
BACK/L	LT	Back-up Lamp
BRK/SW	EC	Brake Switch
CAN	EC	CAN Communication Line
CAN	LAN	CAN System
CHARGE	SC	Charging System
COOL/F	EC	Cooling Fan Control
COMBSW	LT	Combination Switch
COMM	AV	Audio Visual Communication System
COMPAS	DI	Compass and Thermometer
D/LOCK	BL	Power Door Lock
DIFLOC	RFD	Rear Final Drive
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

HARNESSES

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
MMSW	AT	Manual Mode Switch
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
WARN	DI	Warning Lamps
WINDOW	GW	Power Window
WIPER	WW	Front Wiper and Washer

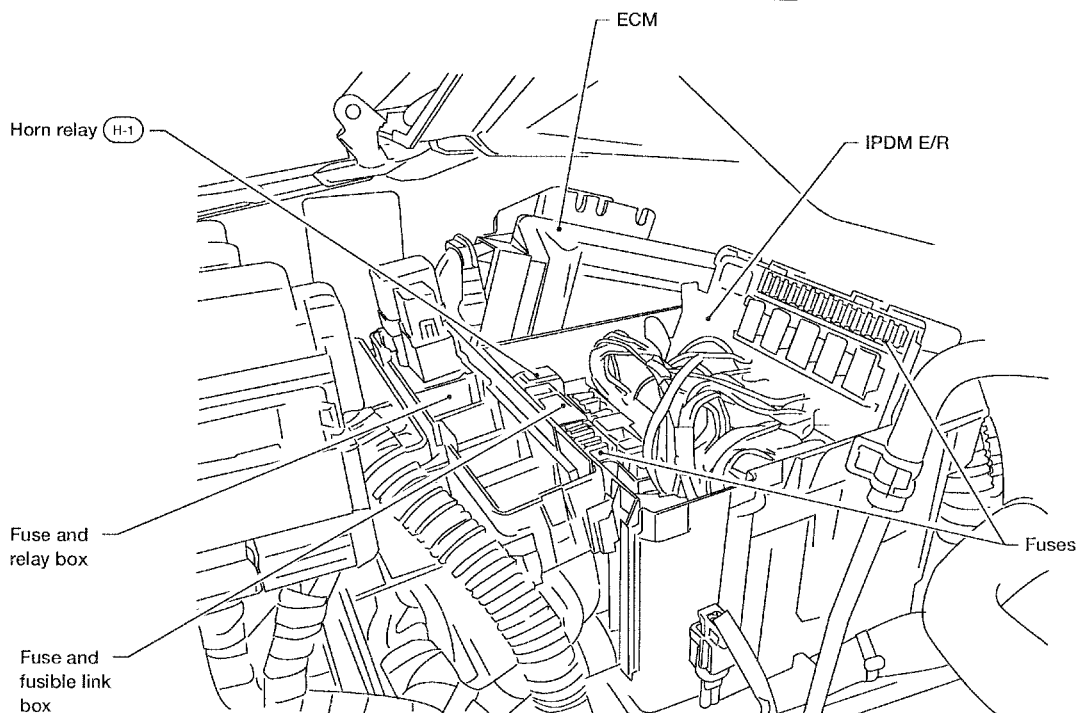
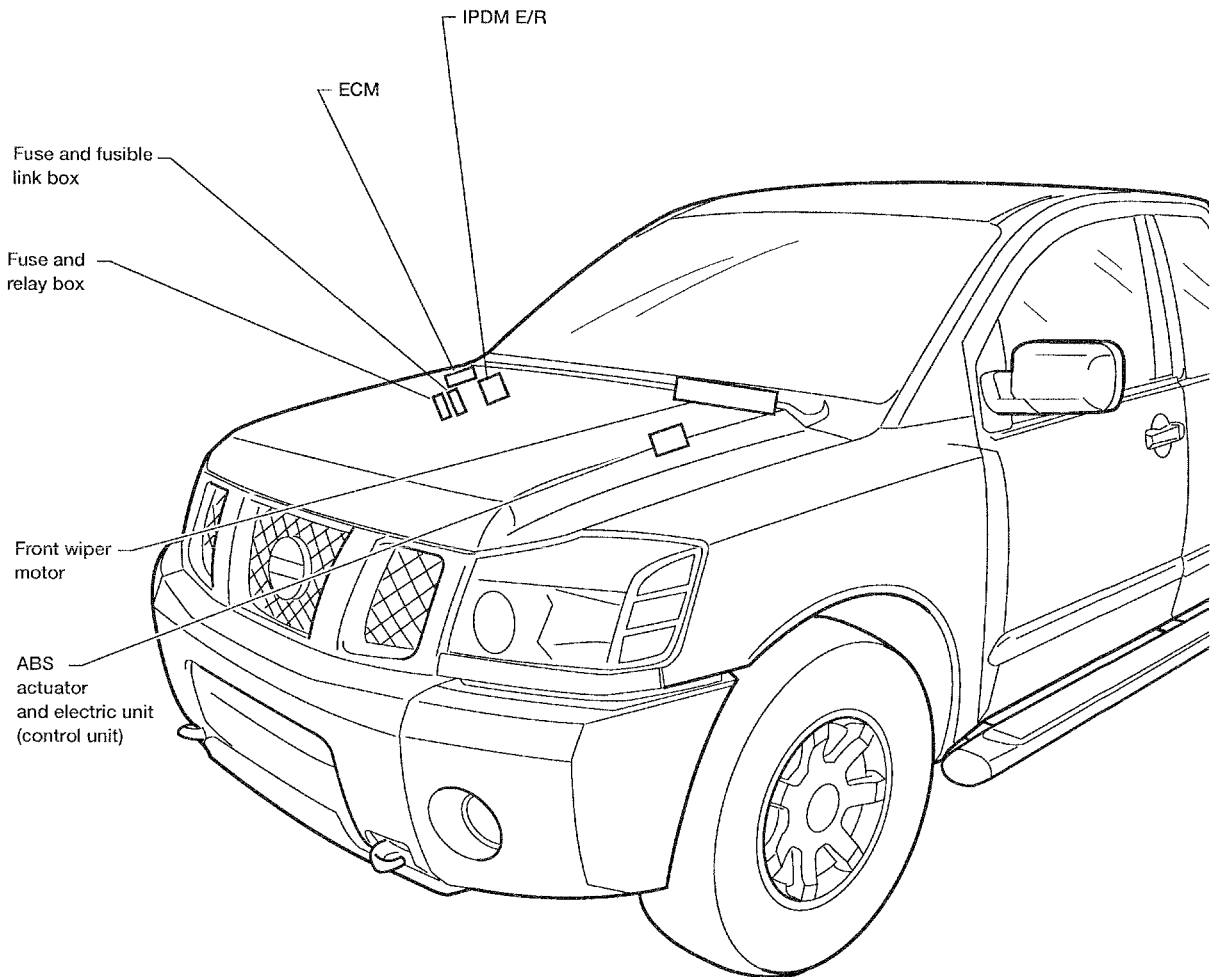
ELECTRICAL UNITS LOCATION

ELECTRICAL UNITS LOCATION

PFP:25230

Electrical Units Location ENGINE COMPARTMENT

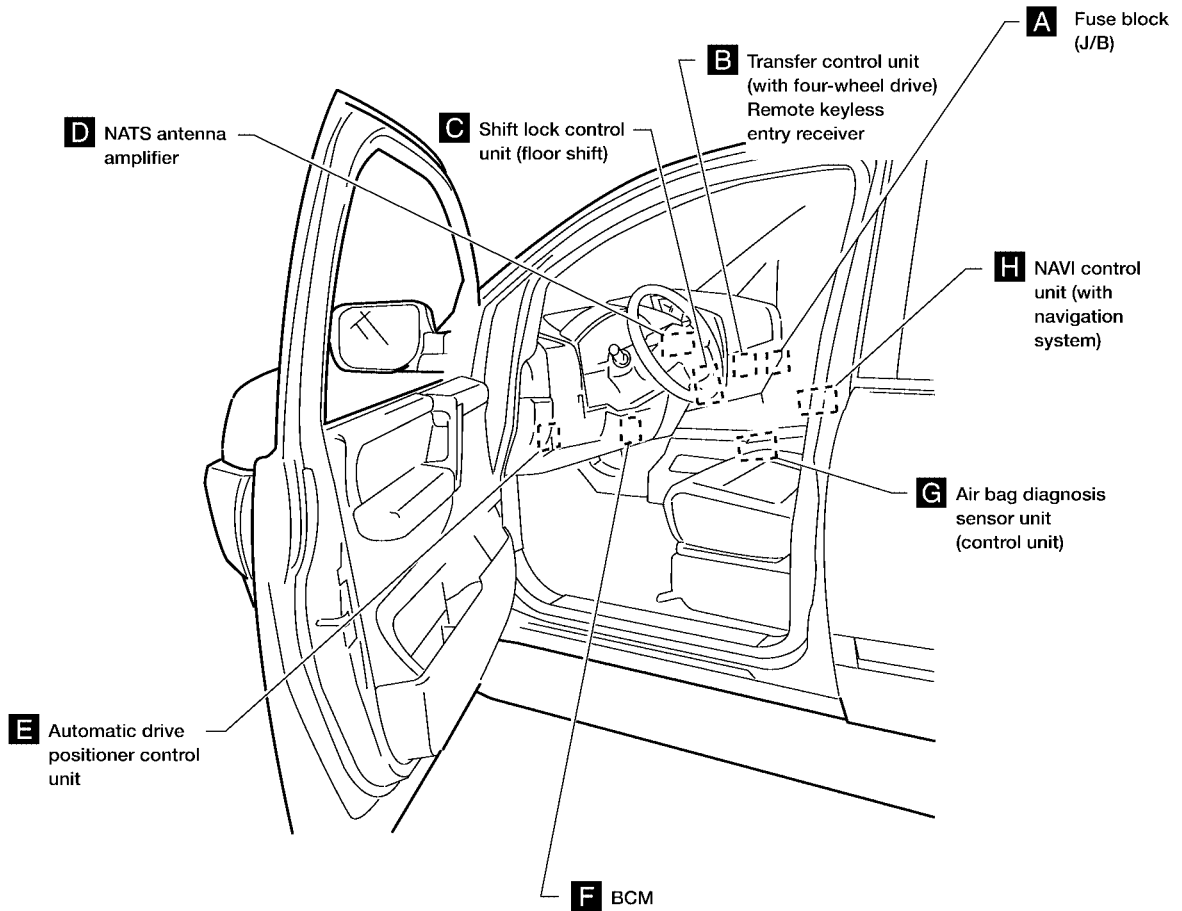
EKS007QR



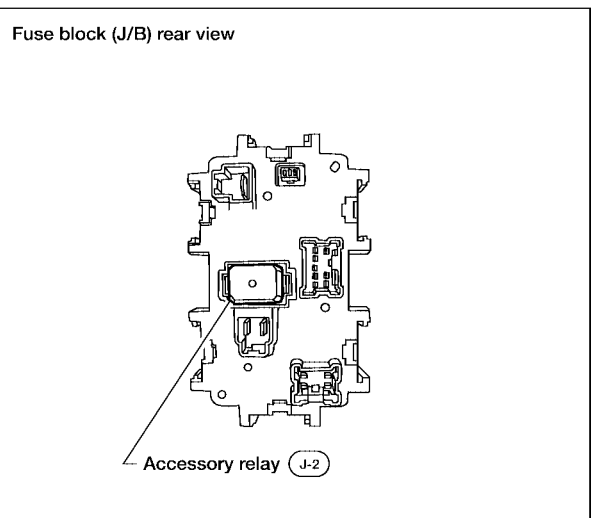
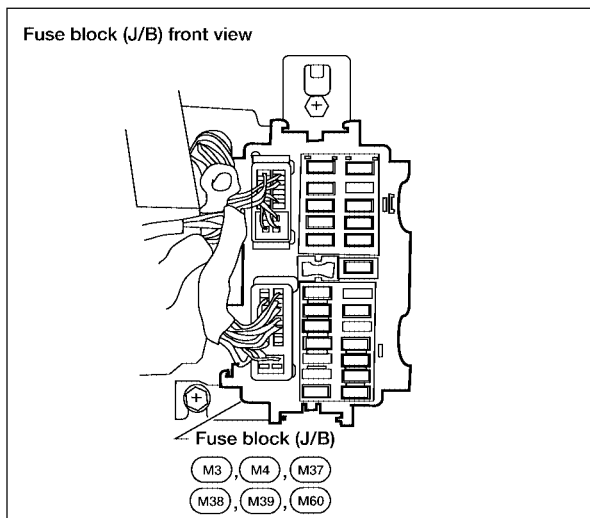
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ELECTRICAL UNITS LOCATION

PASSENGER COMPARTMENT



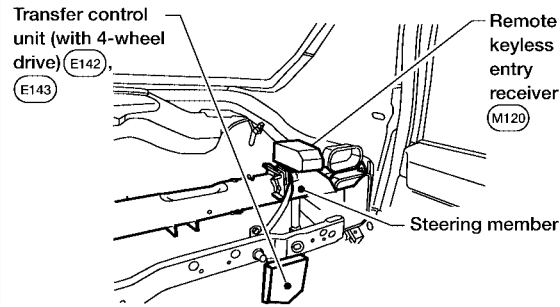
A Instrument panel side RH



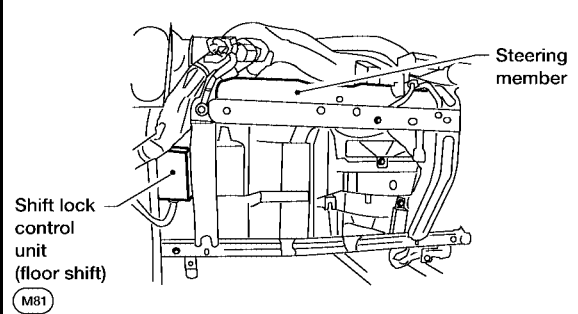
WKIA3921E

ELECTRICAL UNITS LOCATION

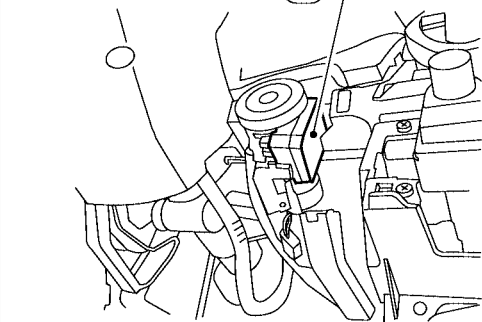
B View with instrument panel removed RH



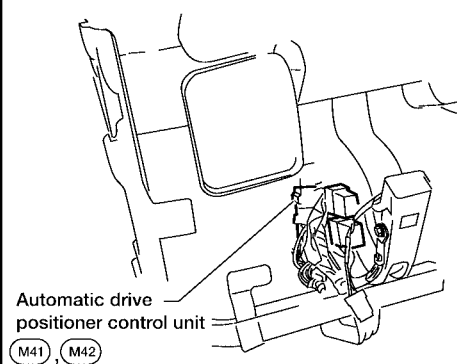
C View with instrument panel removed RH



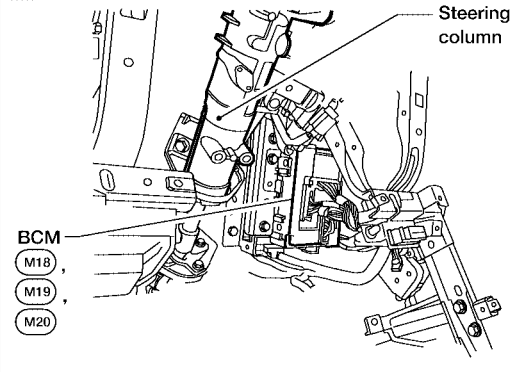
D View with lower driver instrument panel removed
NATS antenna amplifier (M21)



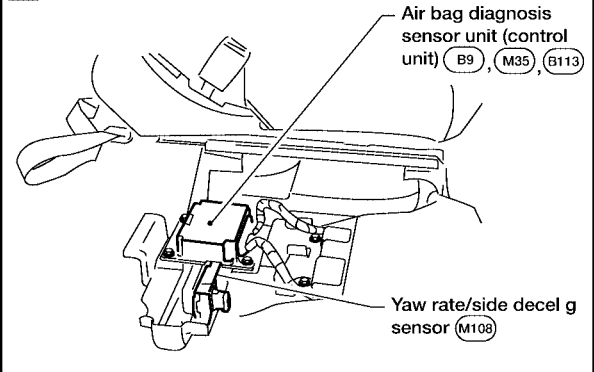
E View with steering member removed LH



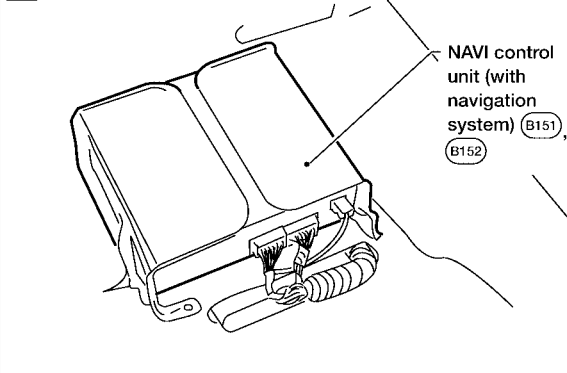
F View with instrument panel removed



G View with center console removed



H View with passenger seat removed



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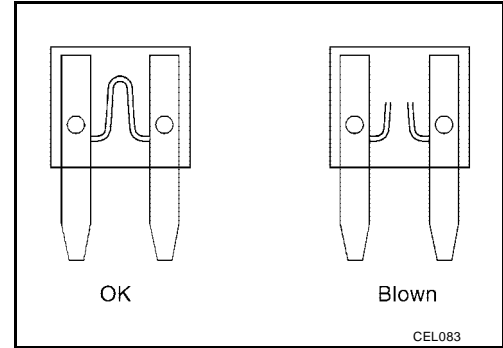
WKIA1705E

ELECTRICAL UNITS LOCATION

Fuse

EKS007QS

- 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

EKS007QT

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.

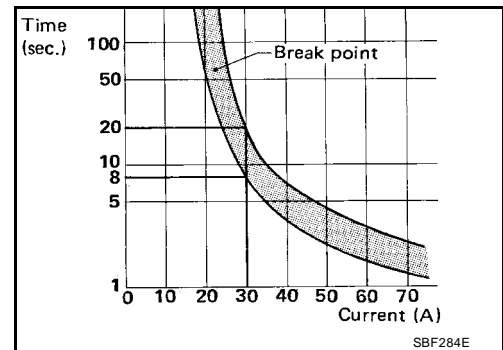
Circuit Breaker (Built Into BCM)

EKS007QU

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



HARNESS CONNECTOR

PFP:B4341

EKS007QV

HARNESS CONNECTOR

Description

HARNESS CONNECTOR (TAB-LOCKING TYPE)

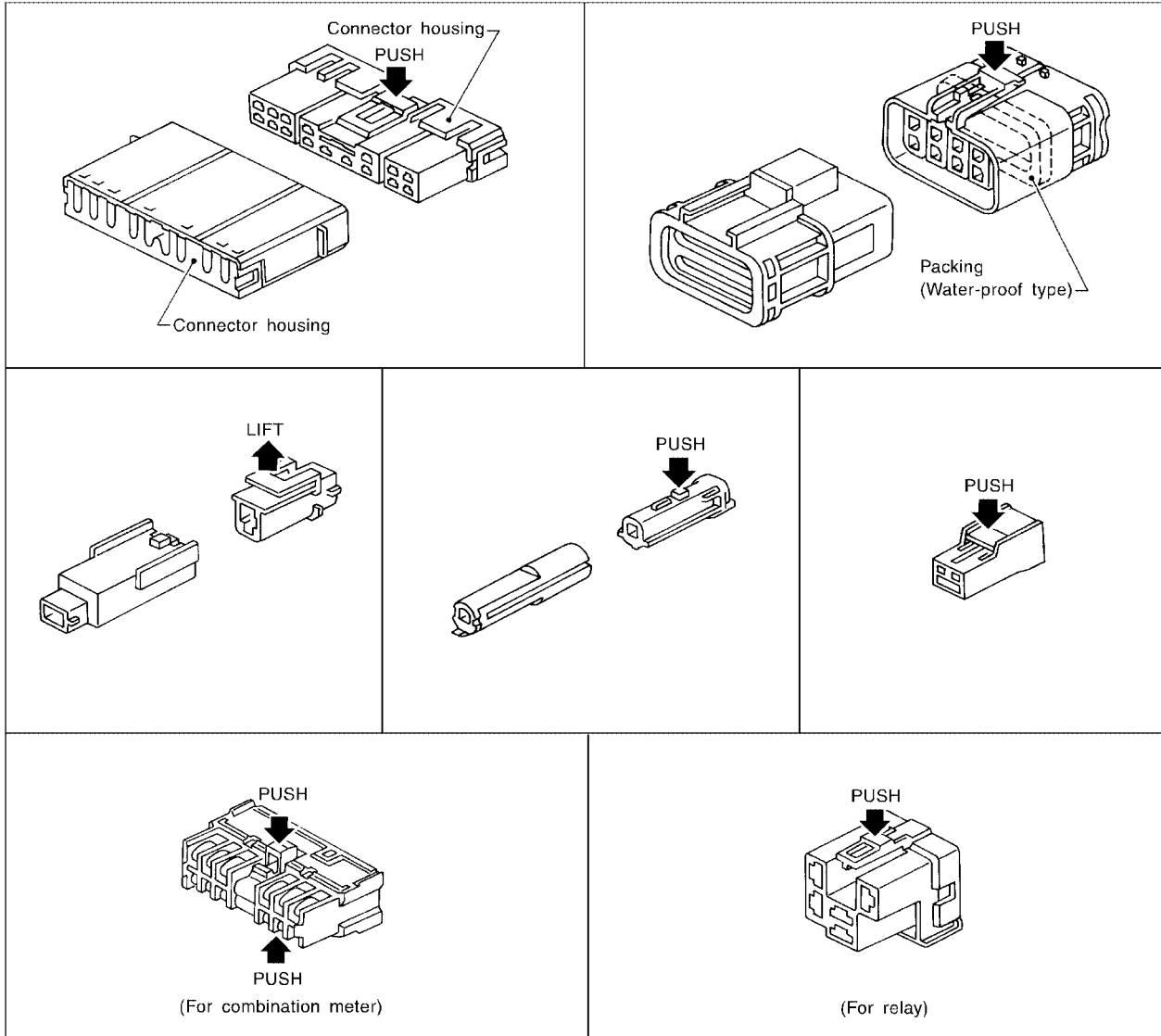
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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]



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HARNESS CONNECTOR

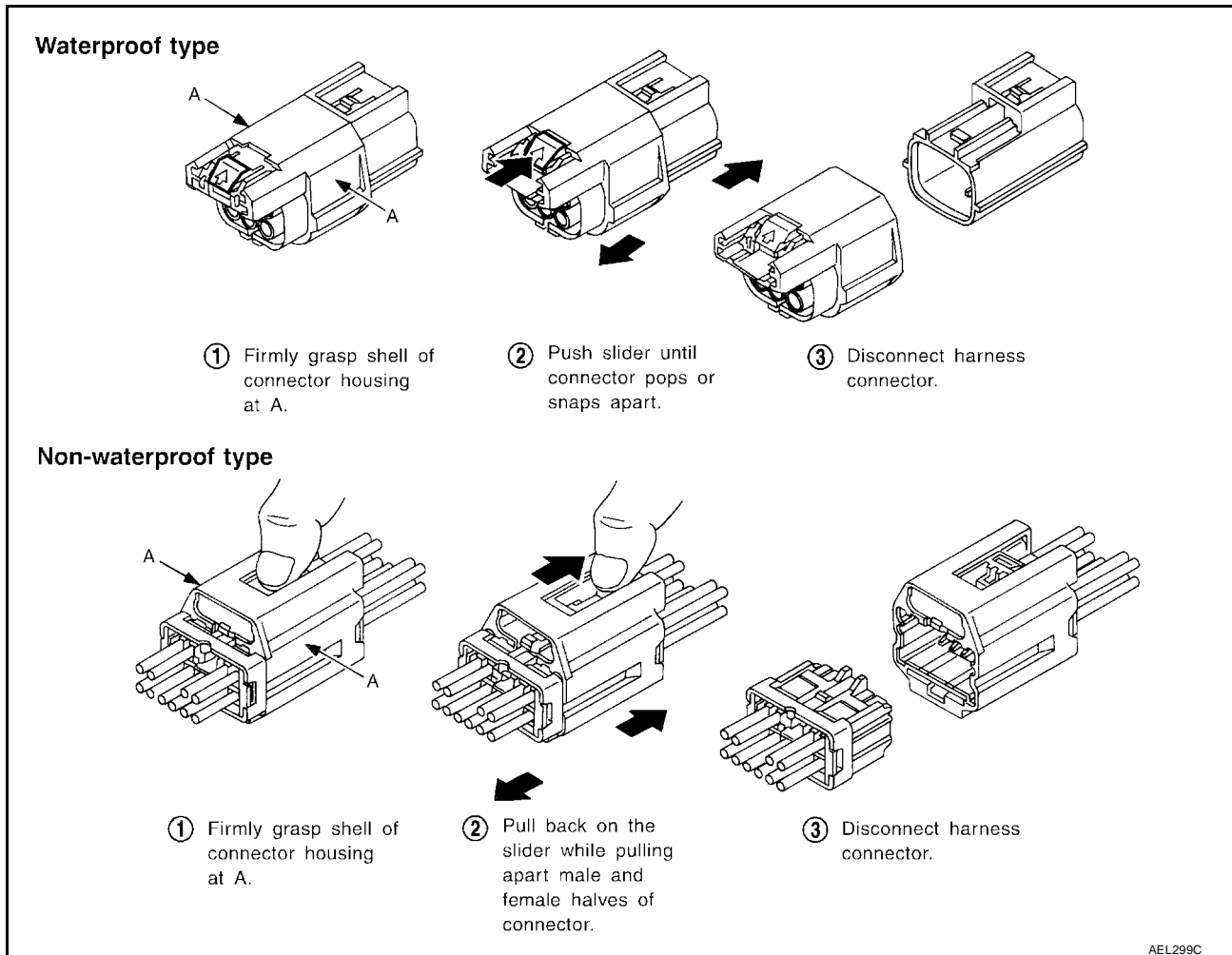
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

- 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]



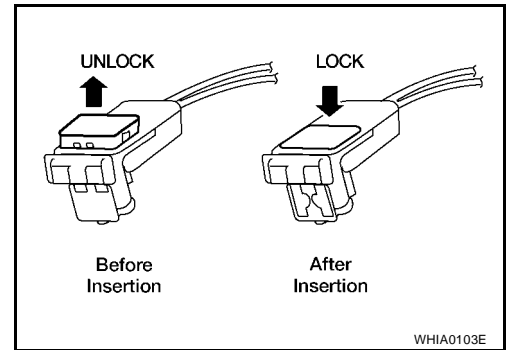
HARNES CONNECTOR

HARNES CONNECTOR (DIRECT-CONNECT SRS COMPONENT TYPE)

- SRS direct-connect type harness connectors are used on certain SRS components such as air bag modules and seat belt pre-tensioners.
- Always pull up to release black locking tab prior to removing connector from SRS 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.**



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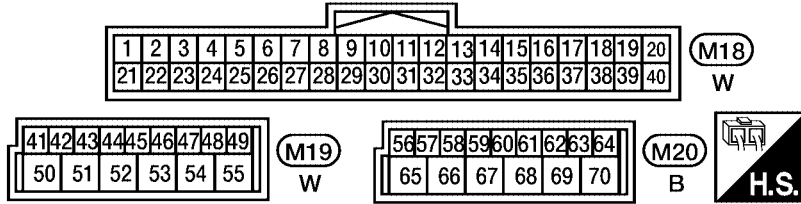
ELECTRICAL UNITS

PF2:23710

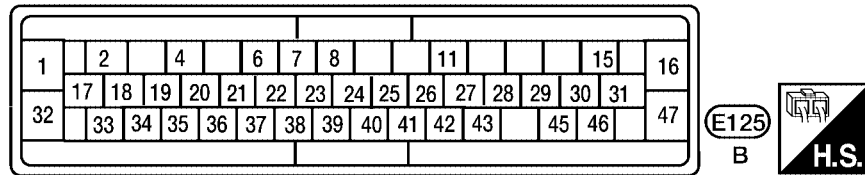
EKS0070W

ELECTRICAL UNITS Terminal Arrangement

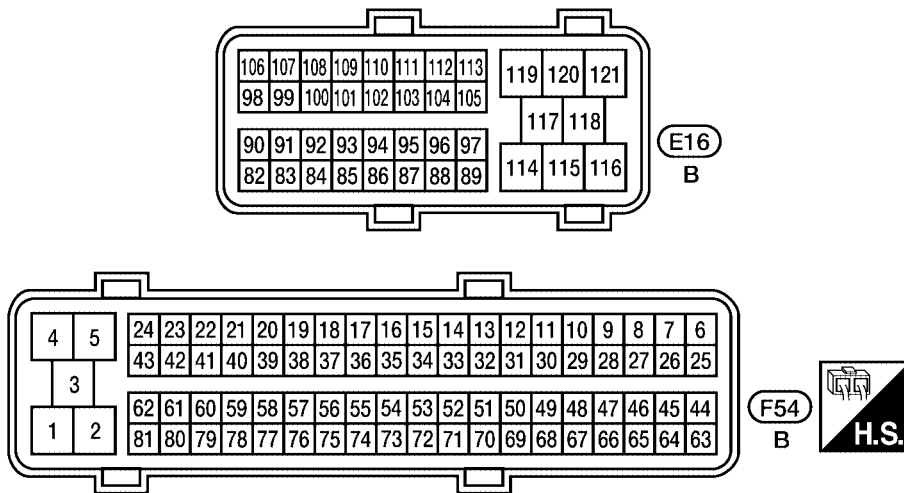
BCM (BODY CONTROL MODULE)



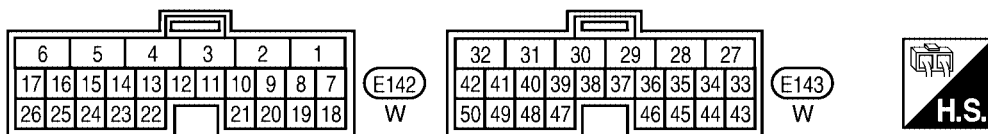
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



ECM



TRANSFER CONTROL UNIT



WKIA1795E

STANDARDIZED RELAY

PFP:25230

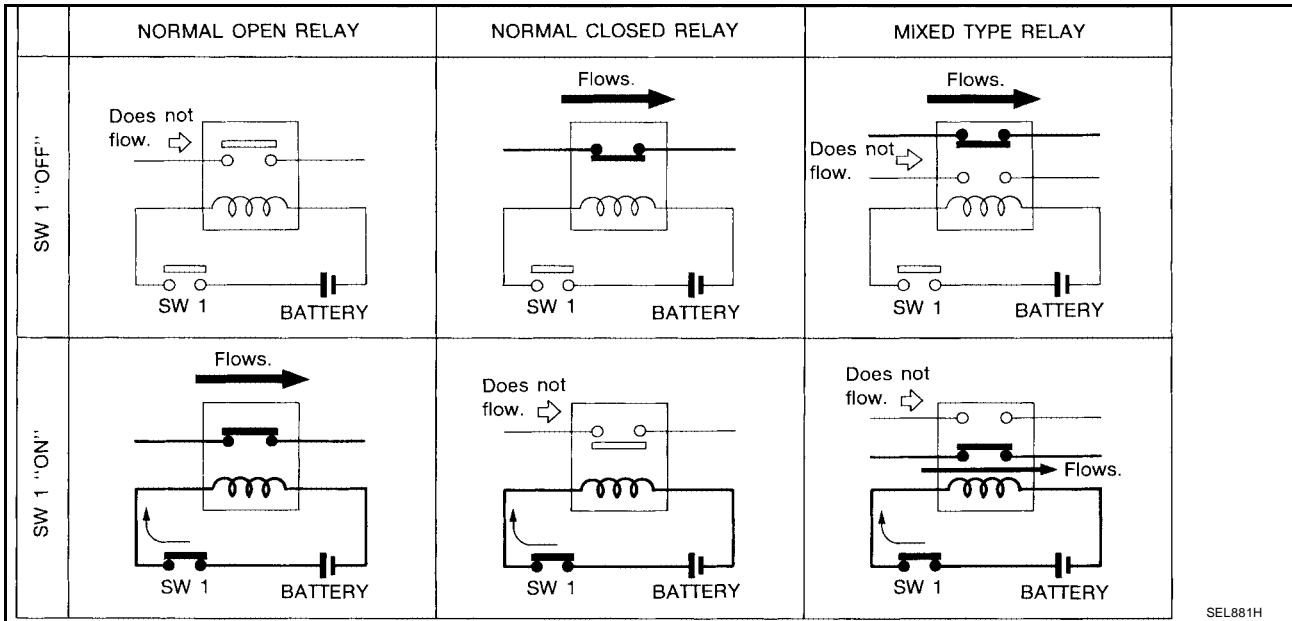
EKS0070X

STANDARDIZED RELAY

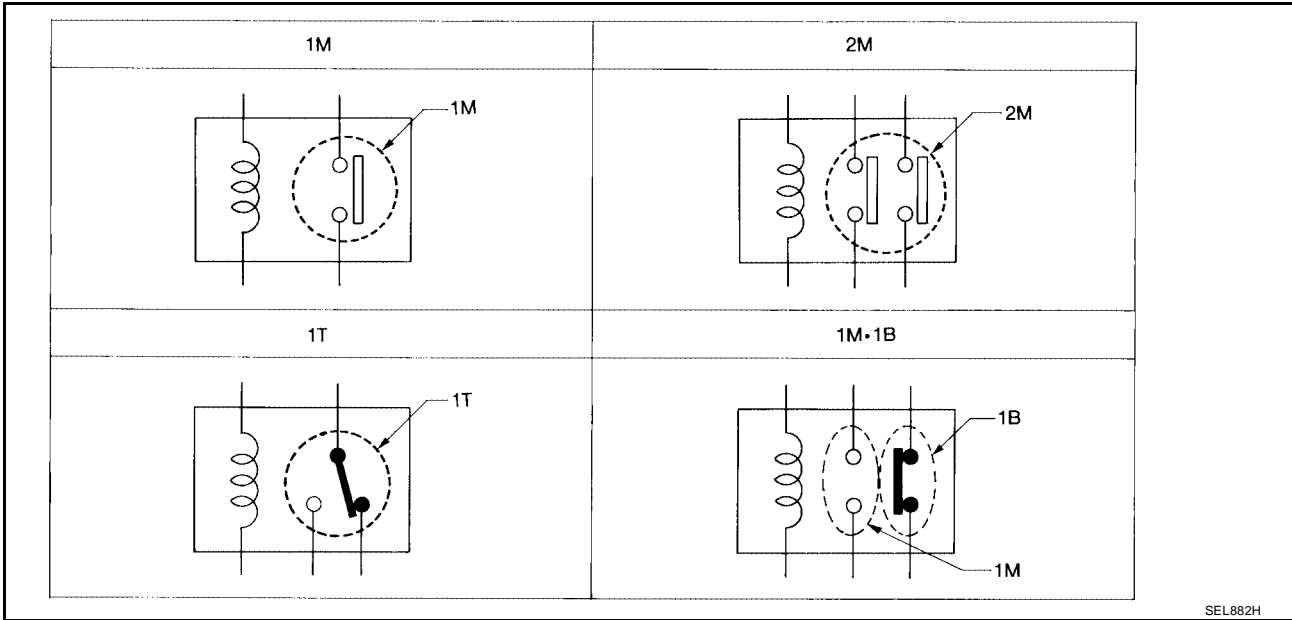
Description

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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

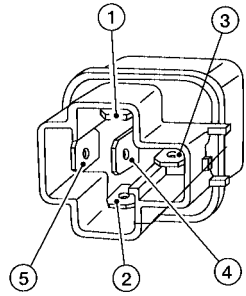
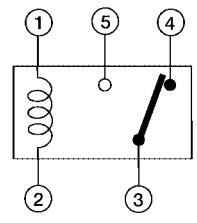
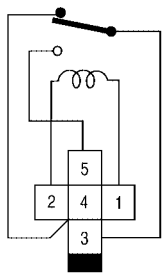
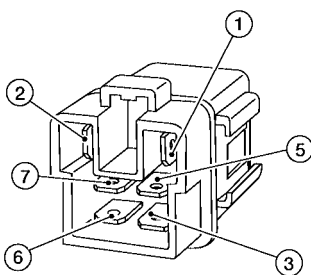
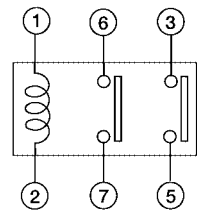
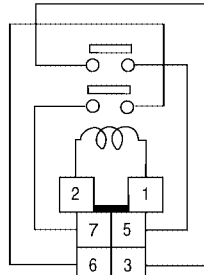
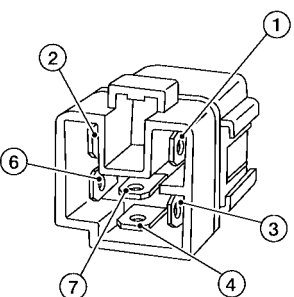
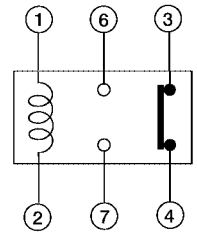
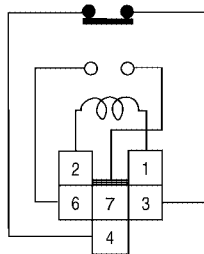
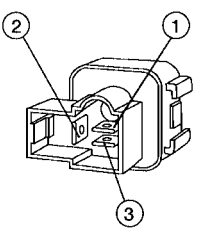
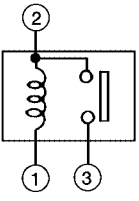
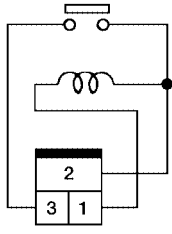
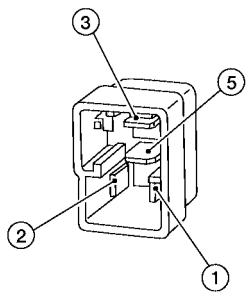
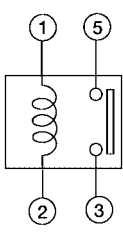
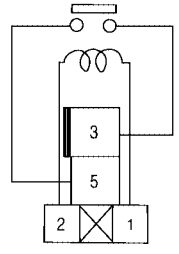


TYPE OF STANDARDIZED RELAYS



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

STANDARDIZED RELAY

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)

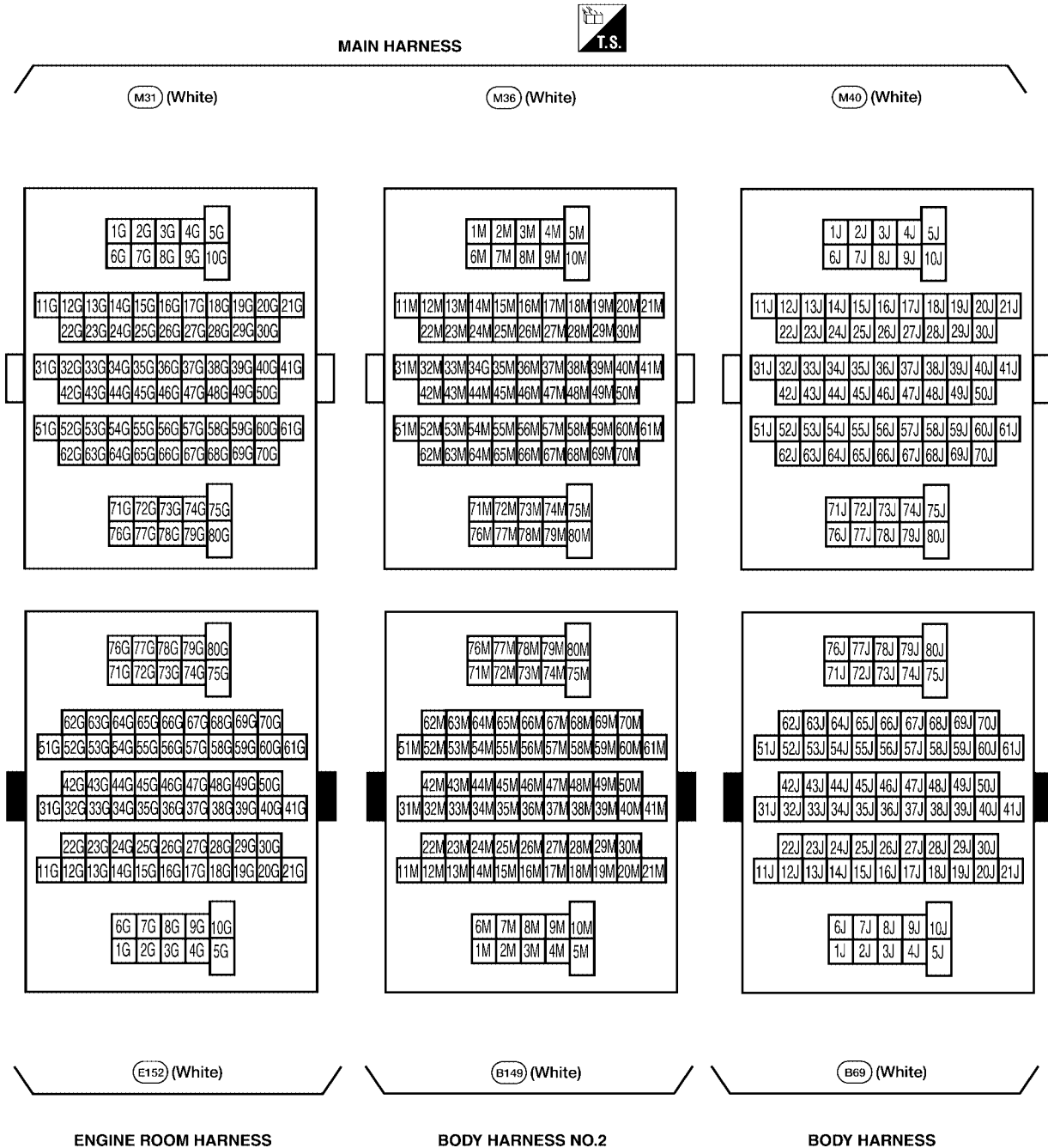
SUPER MULTIPLE JUNCTION (SMJ)

Terminal Arrangement

PF:84341

EKS007QY

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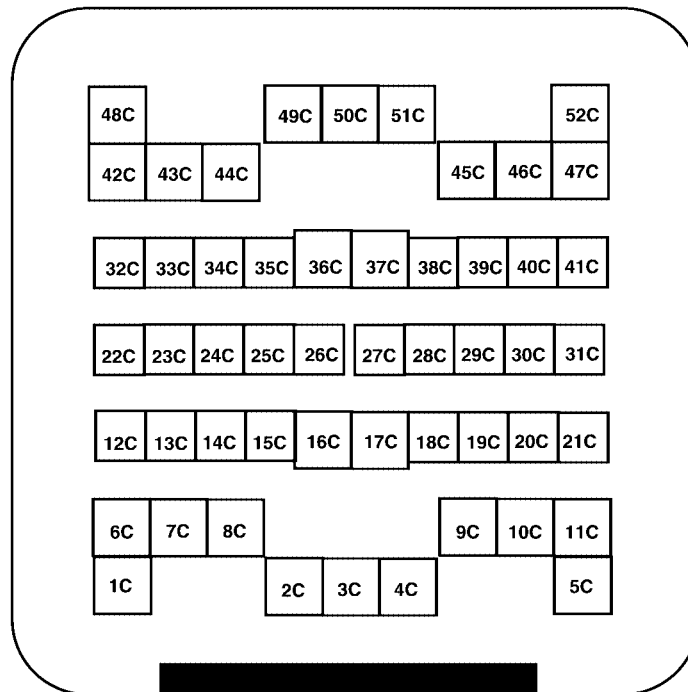
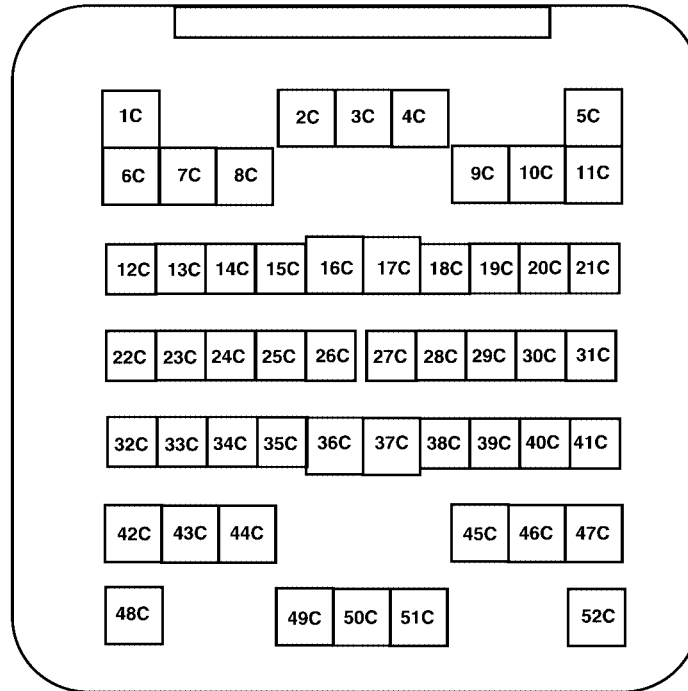


SUPER MULTIPLE JUNCTION (SMJ)

CHASSIS HARNESS



(C1) (Gray)



(E41) (Gray)

ENGINE ROOM HARNESS

WKIA1845E

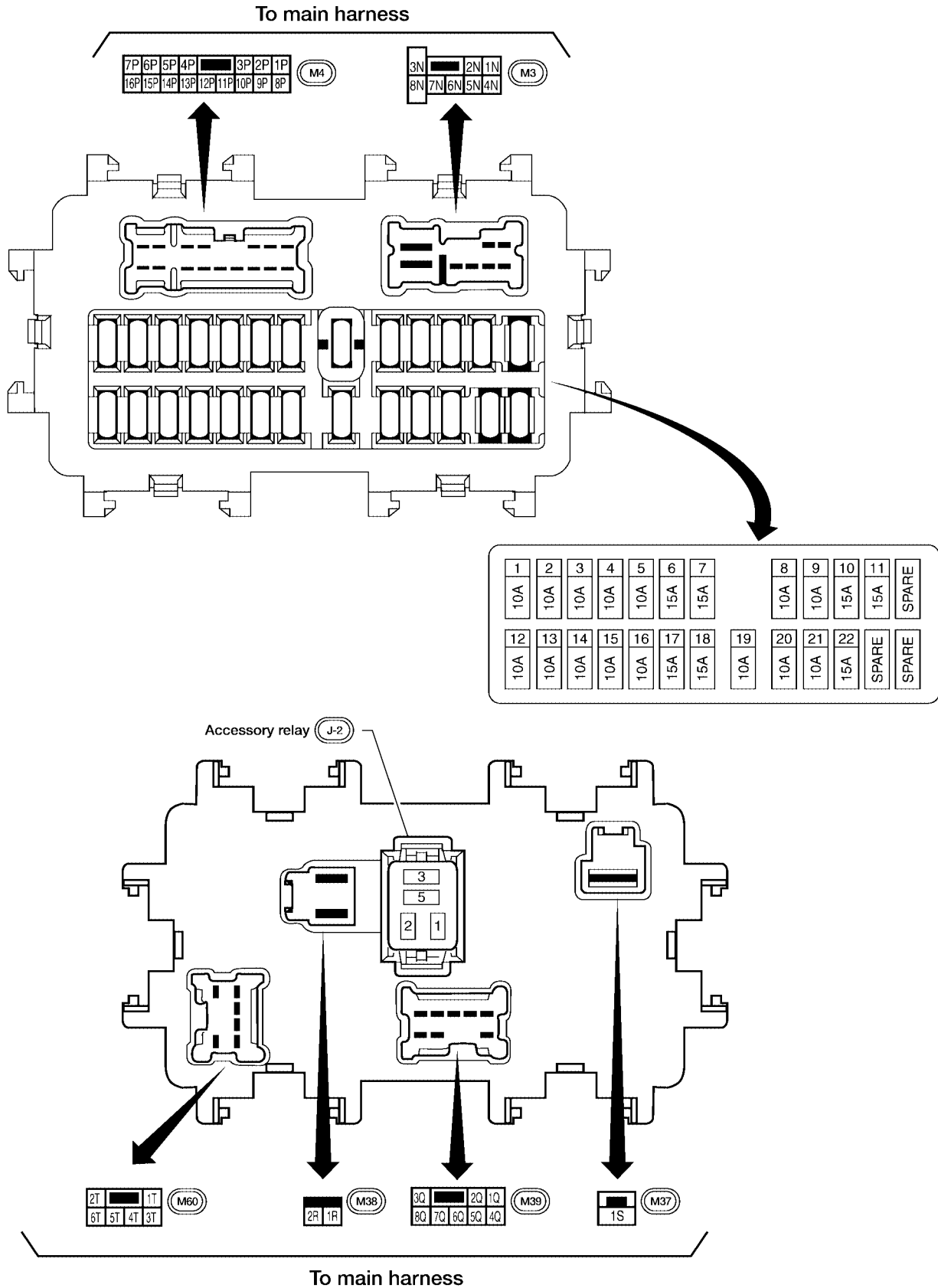
FUSE BLOCK-JUNCTION BOX(J/B)

FUSE BLOCK-JUNCTION BOX(J/B)

Terminal Arrangement

PF24350

EKS007QZ



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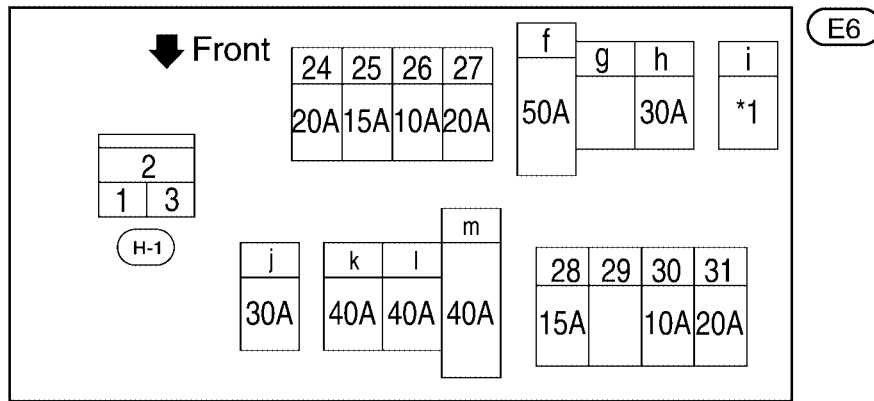
FUSE AND FUSIBLE LINK BOX

FUSE AND FUSIBLE LINK BOX

PF:24381

Terminal Arrangement

EKS007R0



24 - 31: FUSE f - m: FUSIBLE LINK

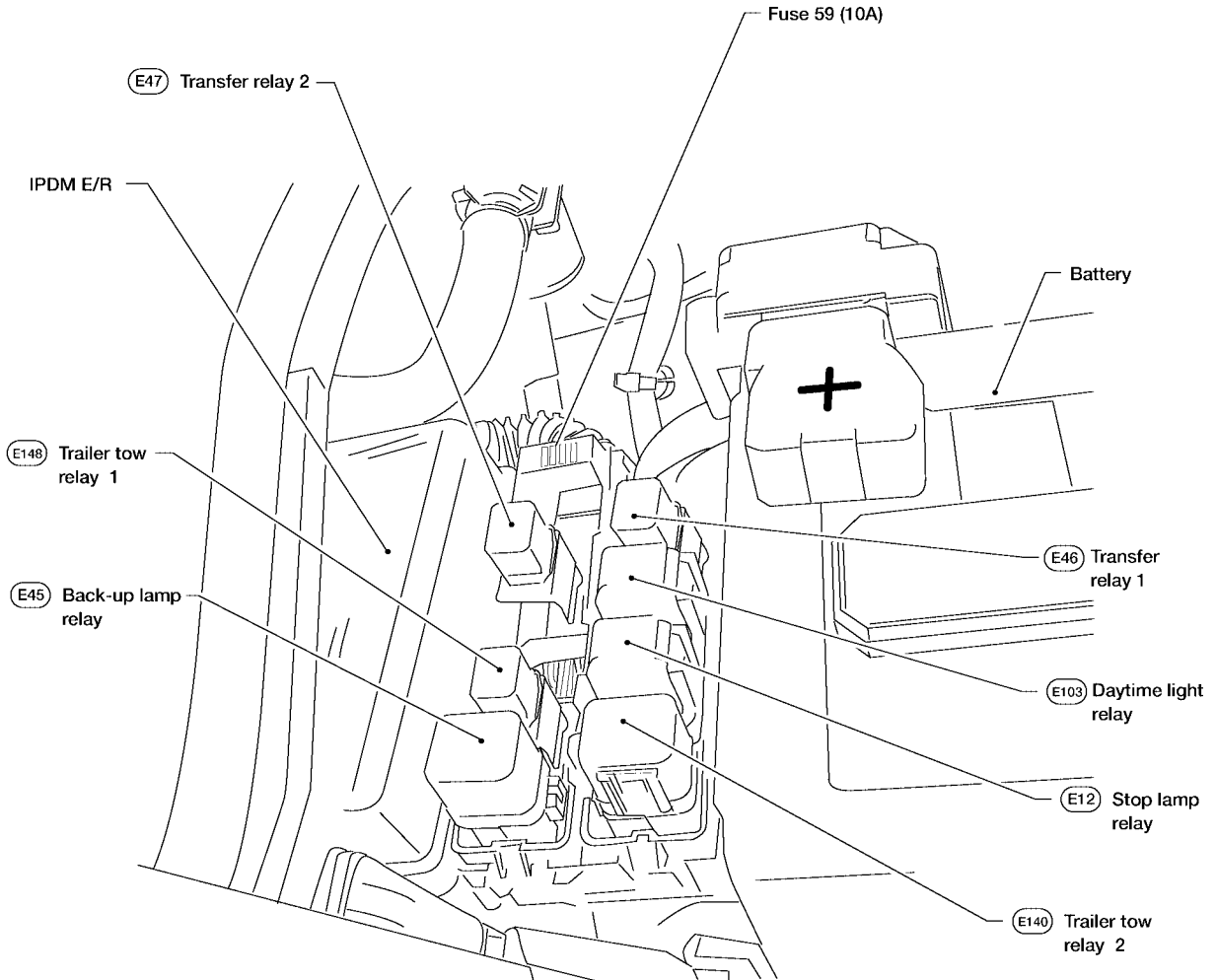
*1 40A with VDC
30A without VDC

FUSE AND RELAY BOX

PFP:24012

EKS007R1

FUSE AND RELAY BOX Terminal Arrangement



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WKIA2870E

FUSE AND RELAY BOX
