

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”

EKS009X6

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

EKS009X7

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.

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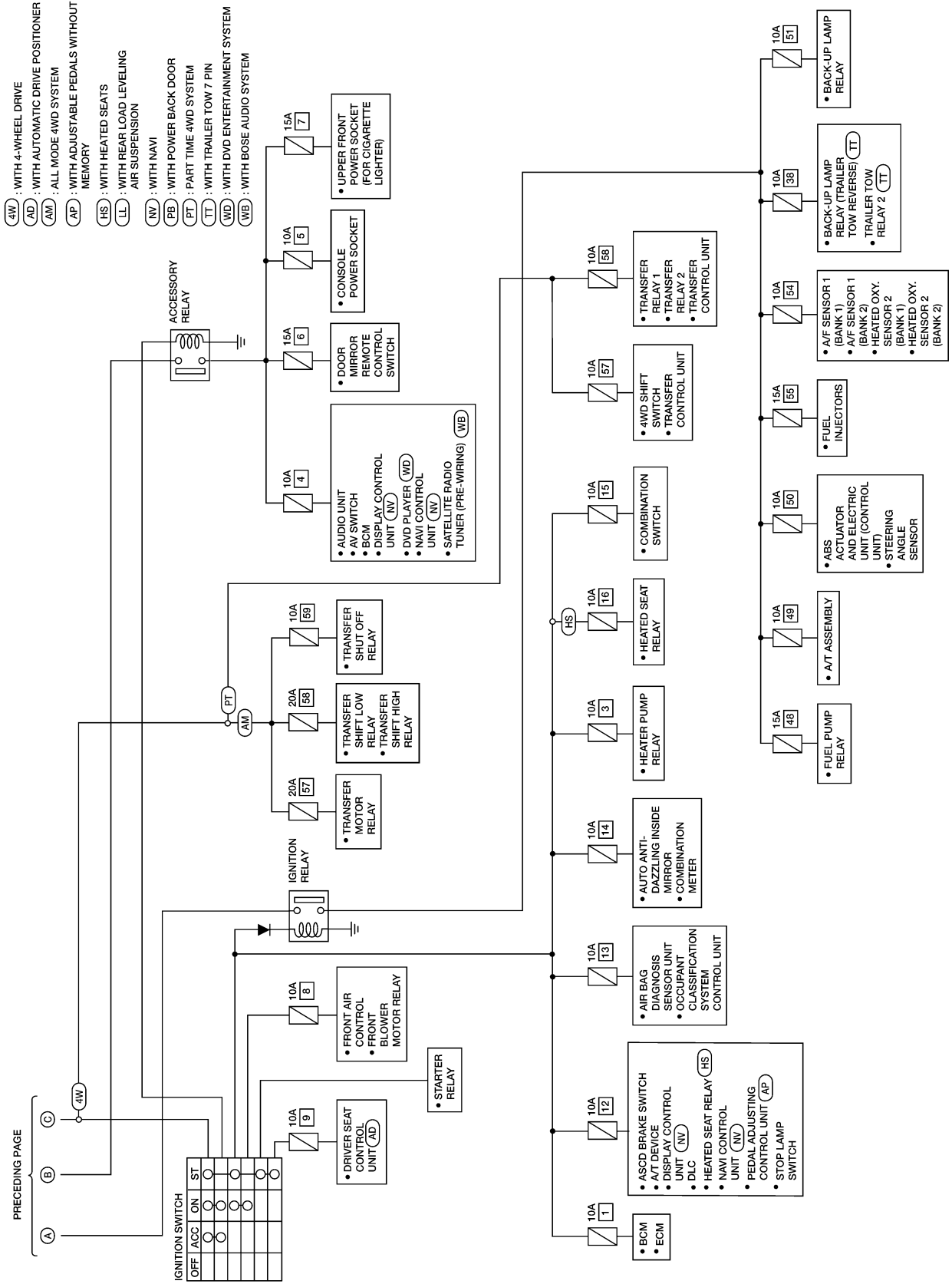
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POWER SUPPLY ROUTING CIRCUIT



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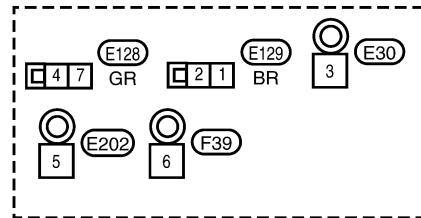
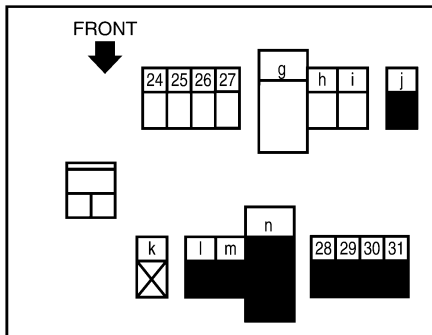
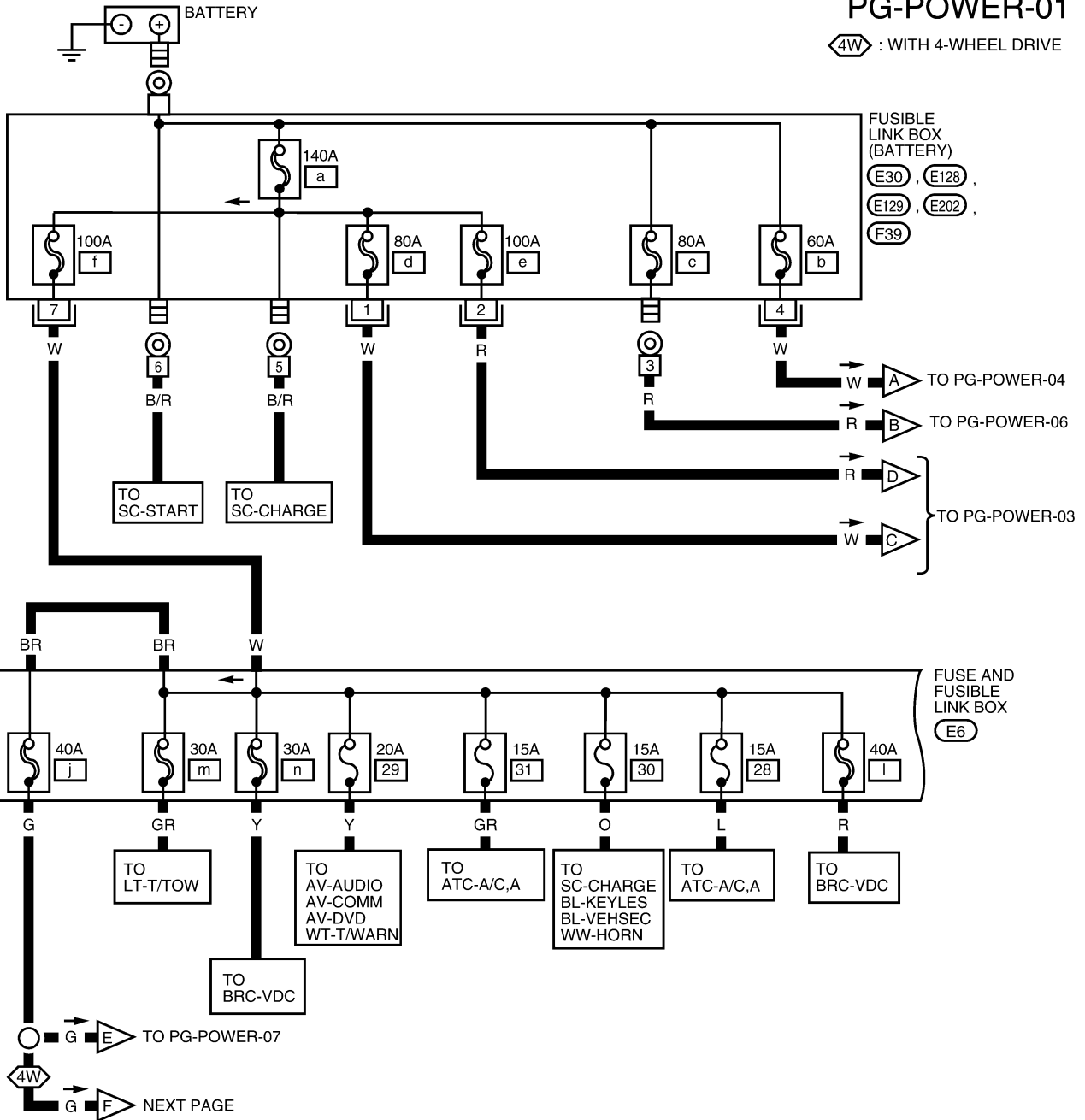
POWER SUPPLY ROUTING CIRCUIT

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

EKS009X9

PG-POWER-01

(4W) : WITH 4-WHEEL DRIVE

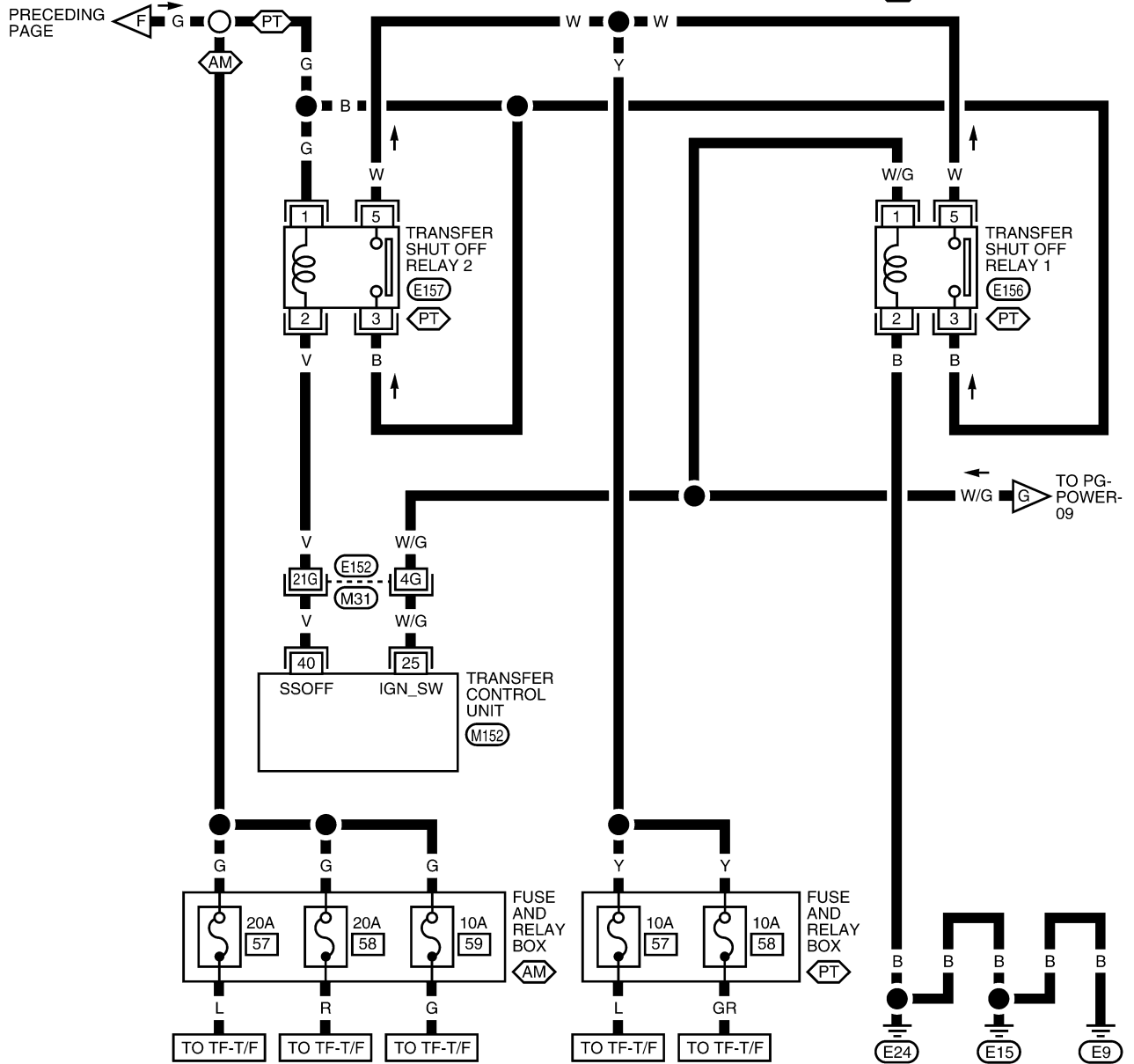


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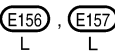
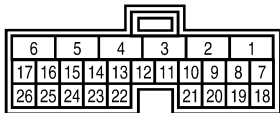
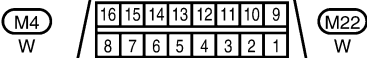
POWER SUPPLY ROUTING CIRCUIT

PG-POWER-02

AM : ALL-MODE 4WD SYSTEM
PT : PART TIME 4WD SYSTEM



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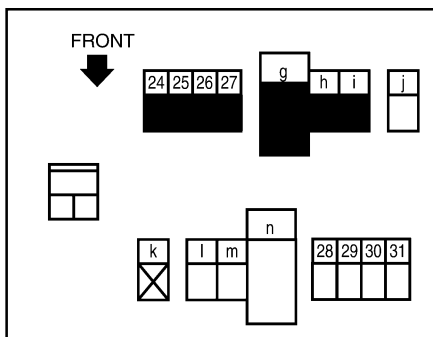
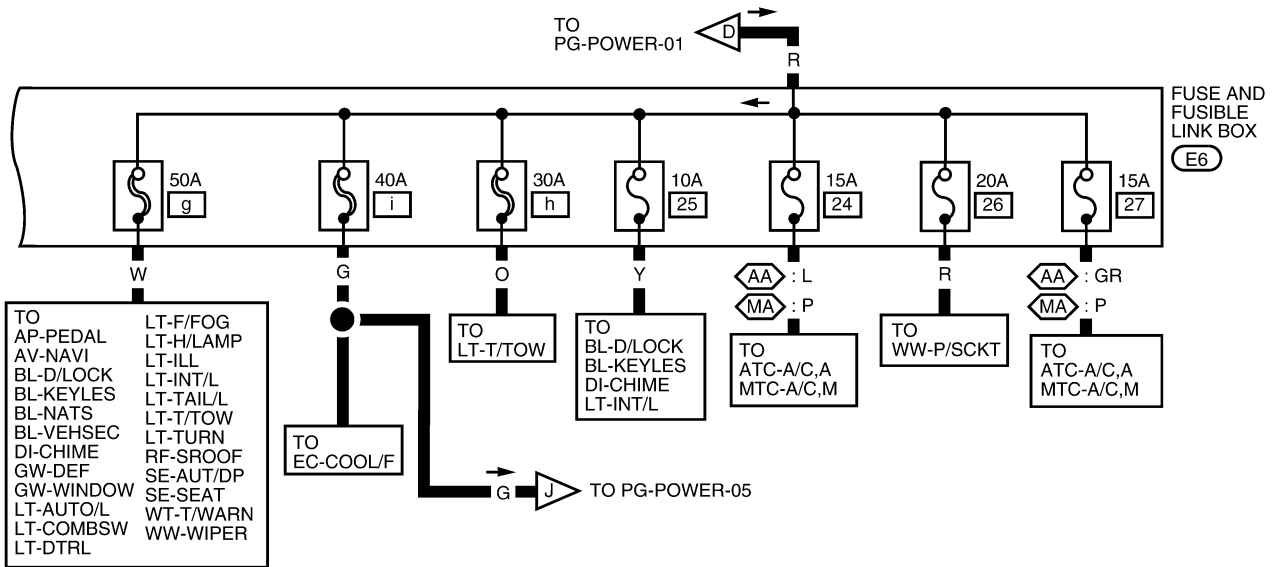
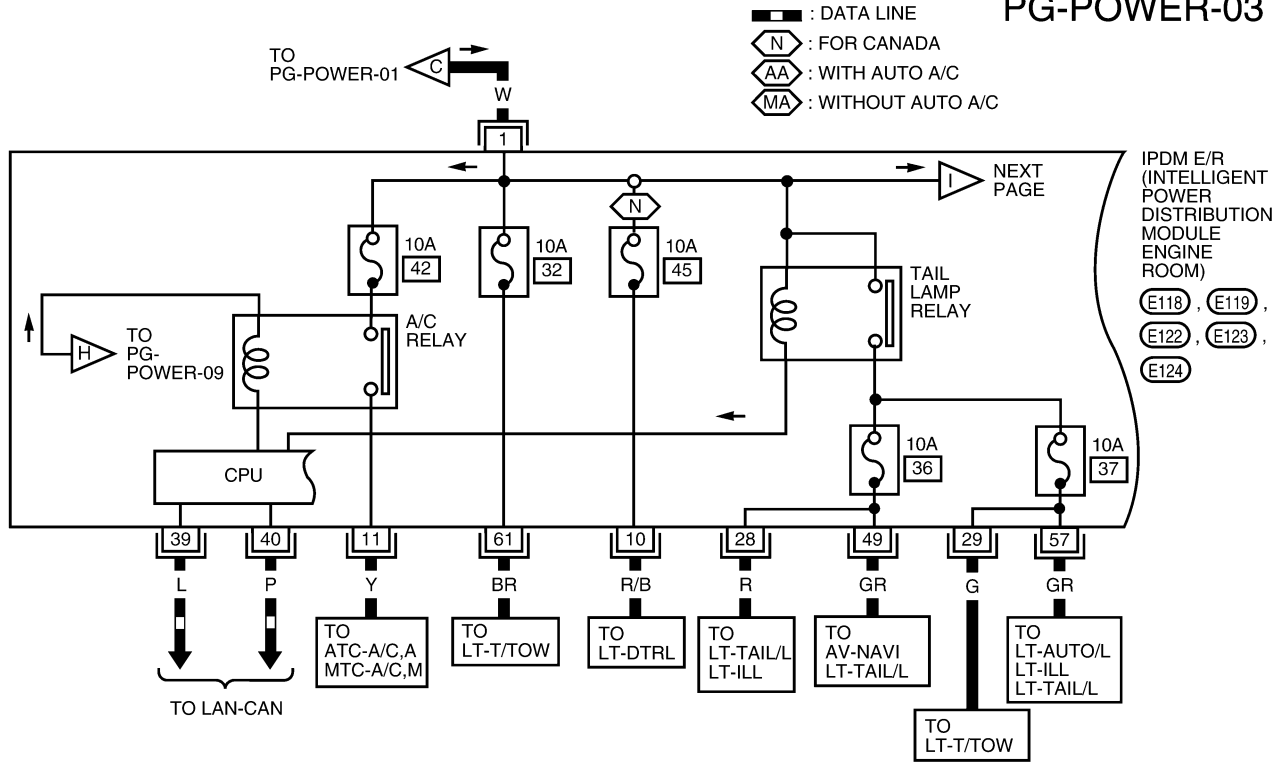


REFER TO THE FOLLOWING.
M31 - SUPER MULTIPLE JUNCTION (SMJ)

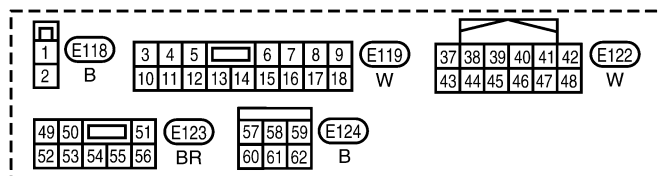
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POWER SUPPLY ROUTING CIRCUIT

PG-POWER-03



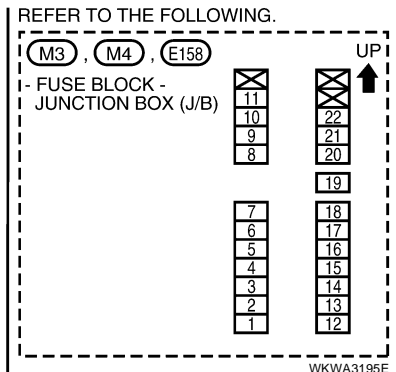
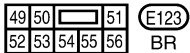
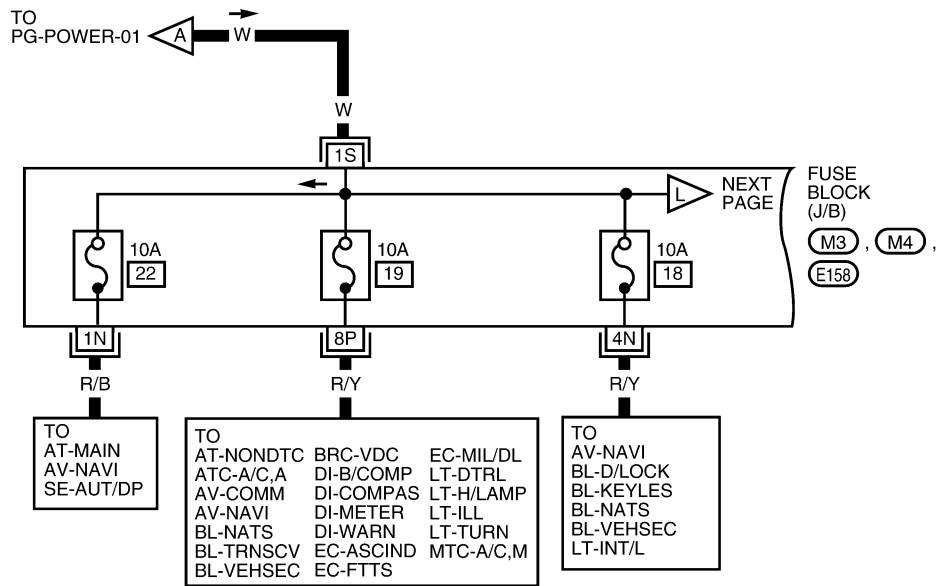
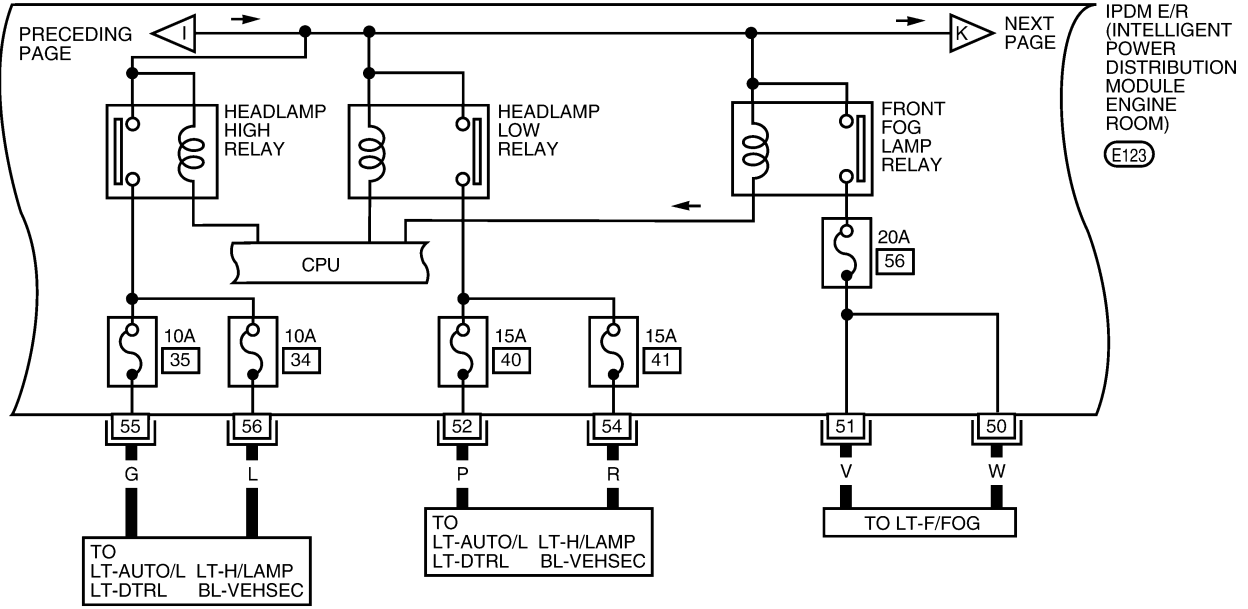
(E6)



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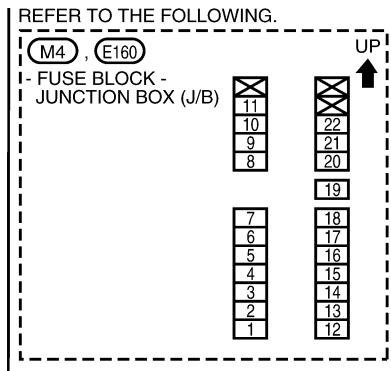
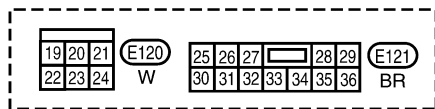
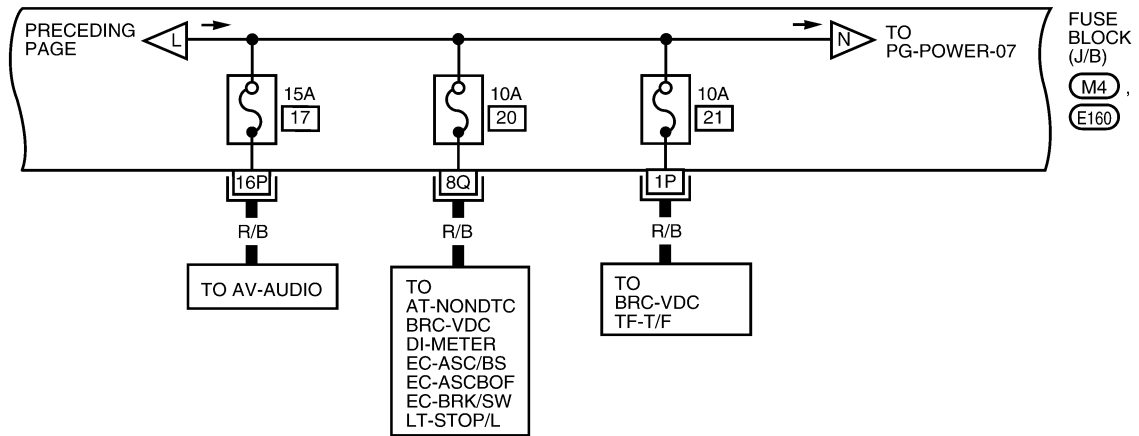
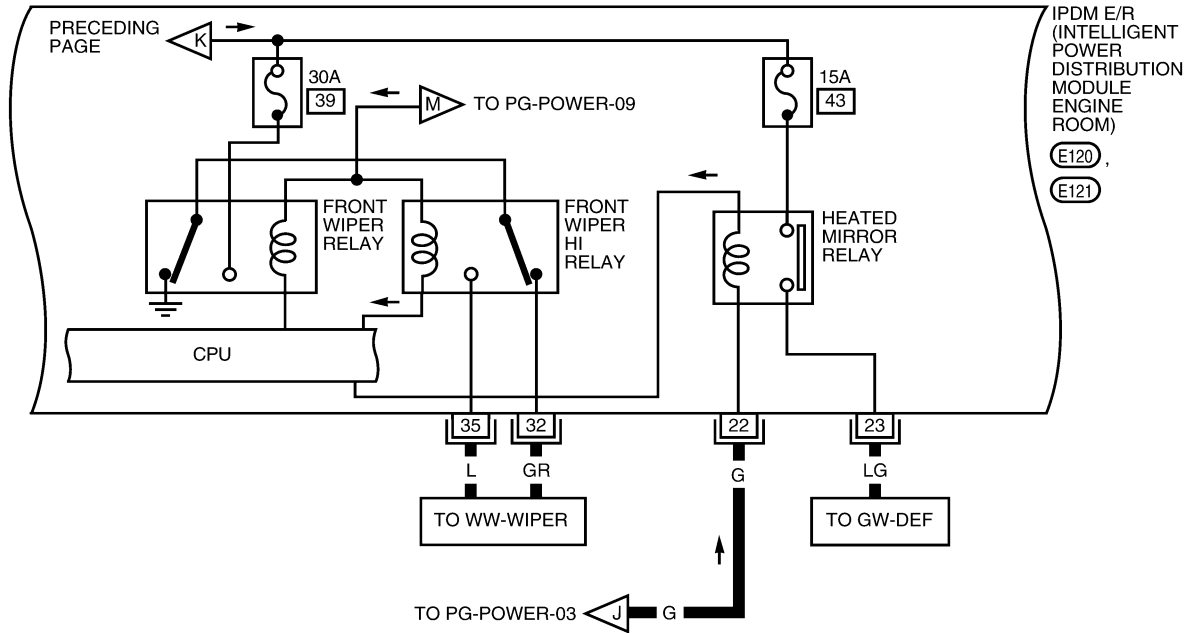
POWER SUPPLY ROUTING CIRCUIT

PG-POWER-04



POWER SUPPLY ROUTING CIRCUIT

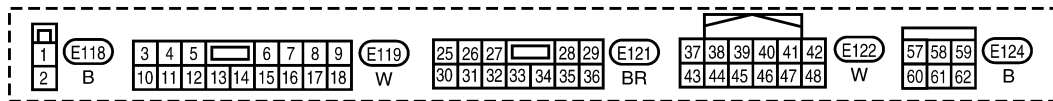
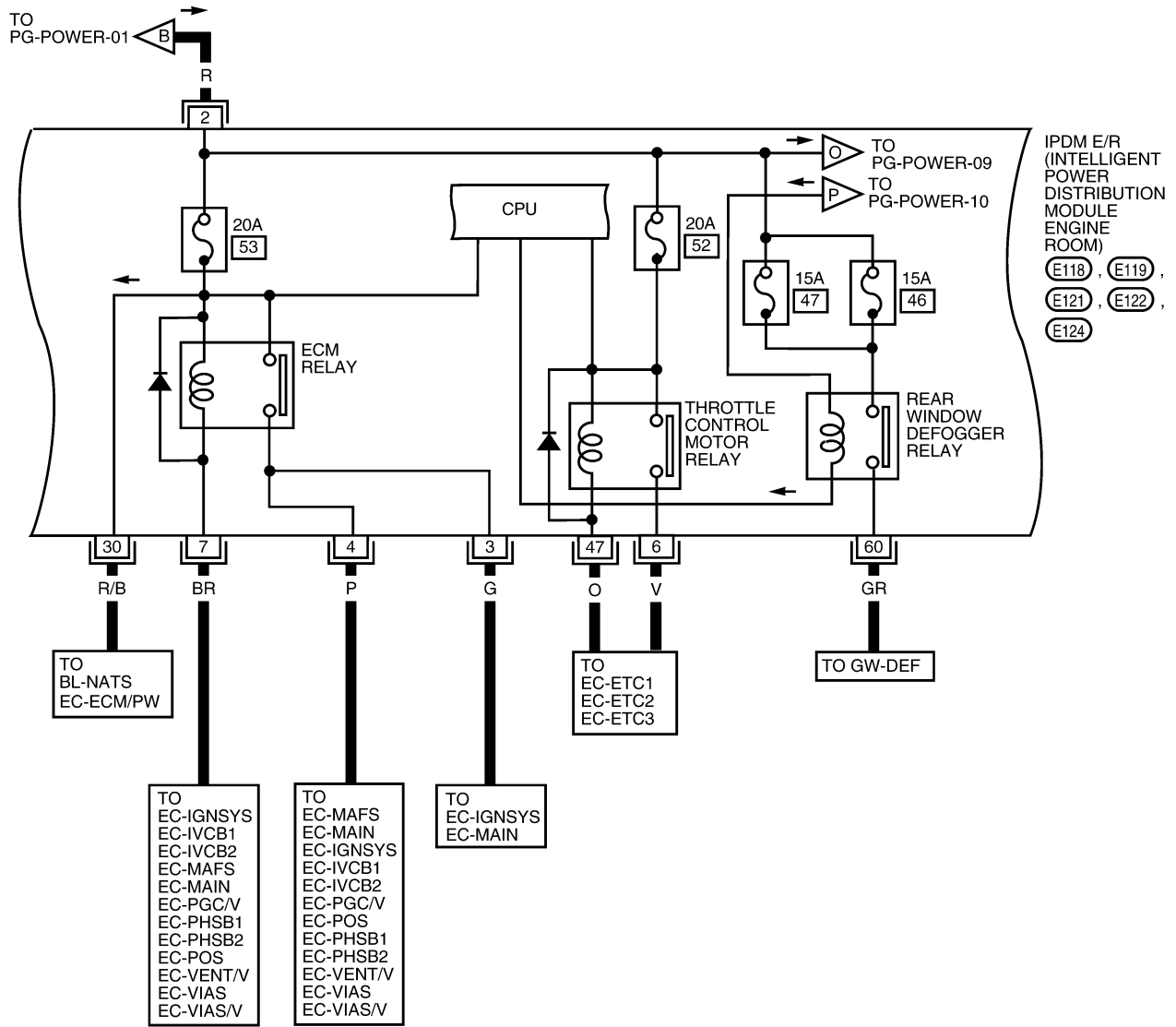
PG-POWER-05



WKWA4499E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-06

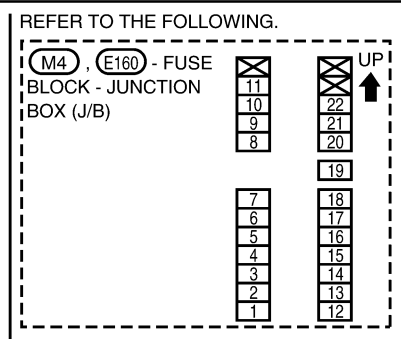
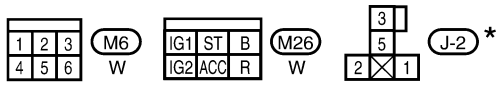
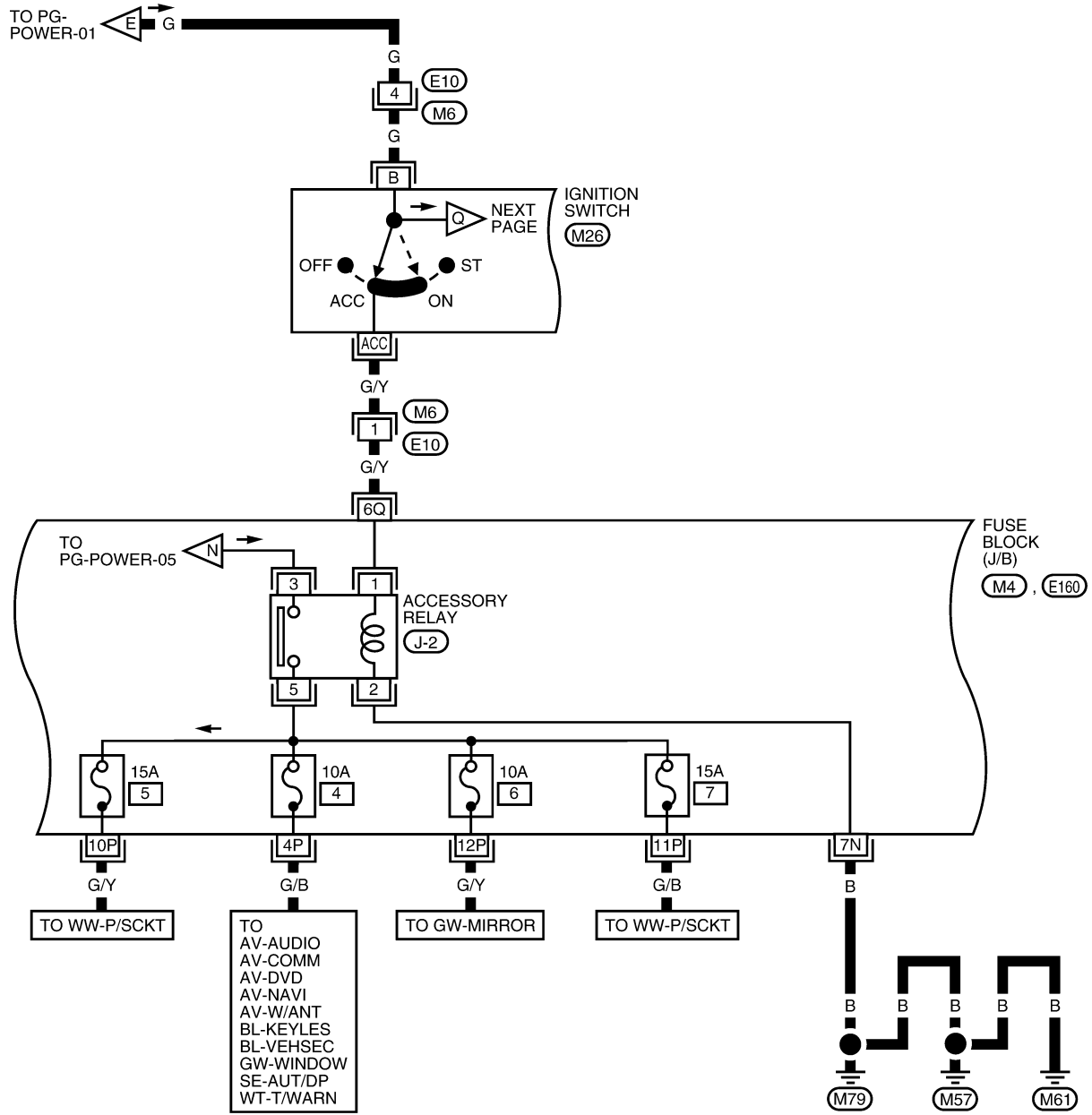


WKWA2528E

POWER SUPPLY ROUTING CIRCUIT

ACCESSORY POWER SUPPLY — IGNITION SW. IN ACC OR ON

PG-POWER-07



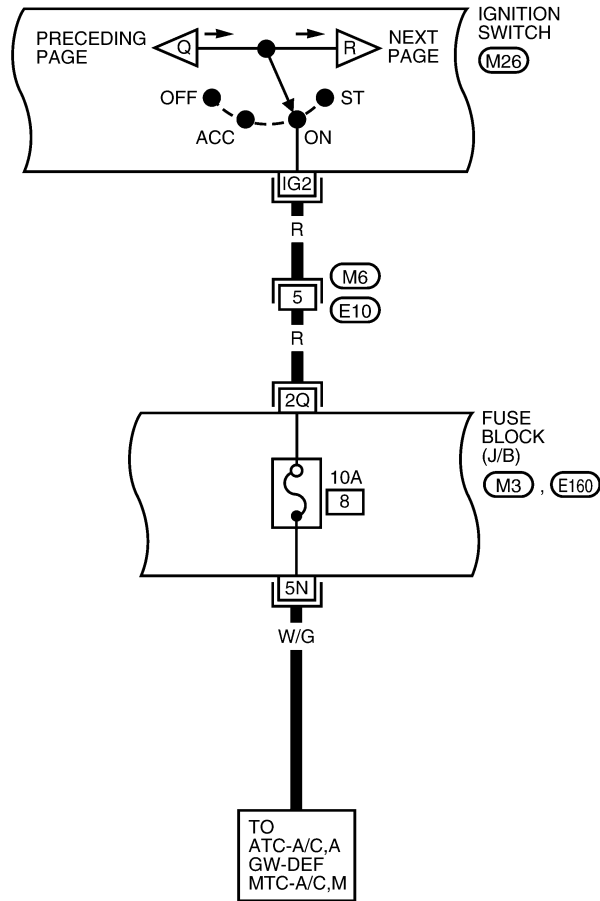
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT".

WKWA2529E

POWER SUPPLY ROUTING CIRCUIT

IGNITION POWER SUPPLY — IGNITION SW. IN ON

PG-POWER-08

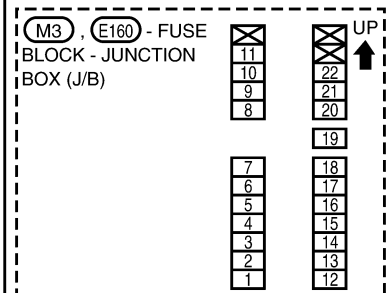


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1	2	3	M6 W
4	5	6	

IG1	ST	B	M26 W
IG2	ACC	R	

REFER TO THE FOLLOWING.

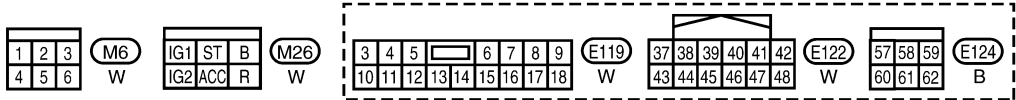
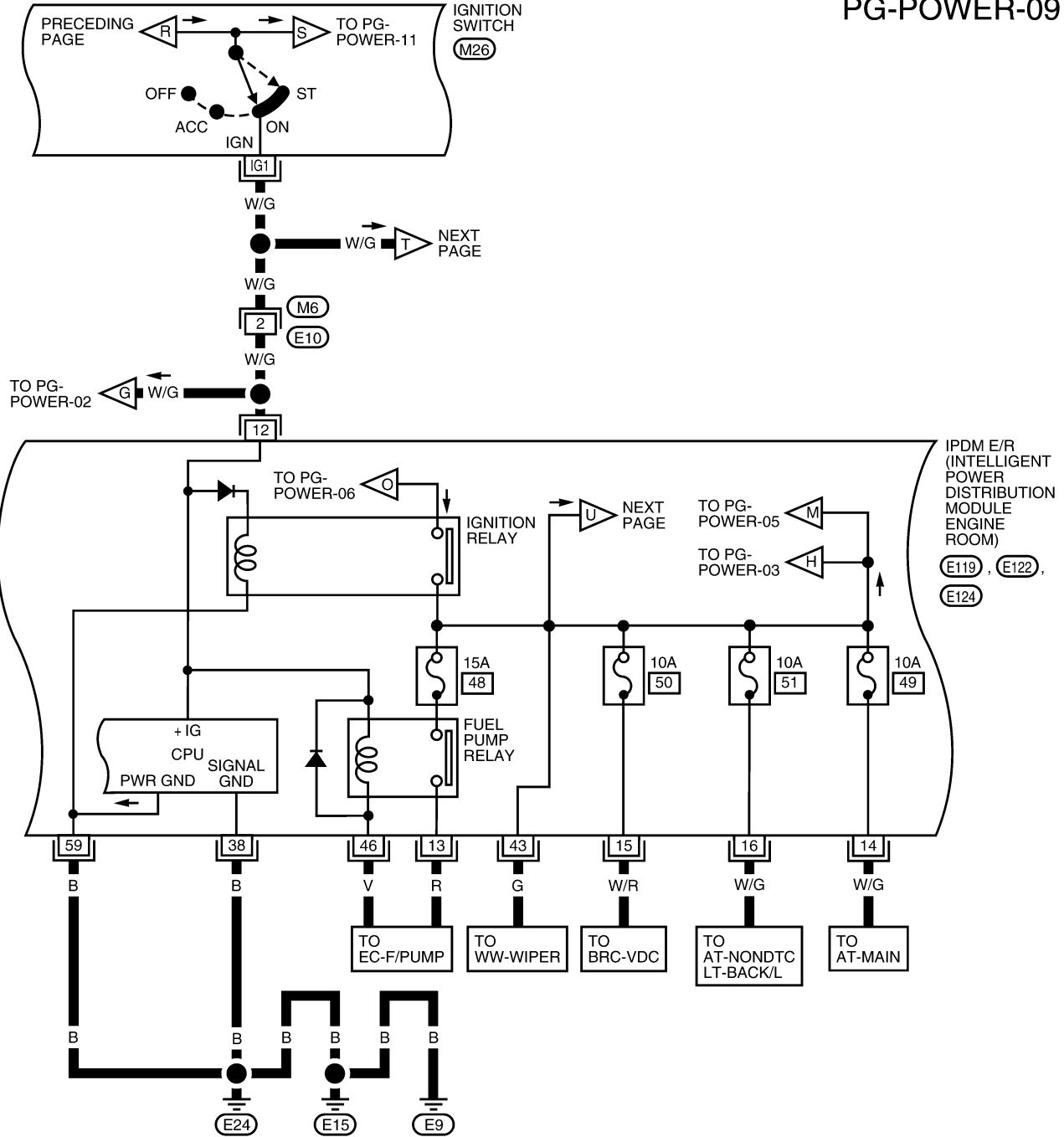


WKWA4500E

POWER SUPPLY ROUTING CIRCUIT

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

PG-POWER-09

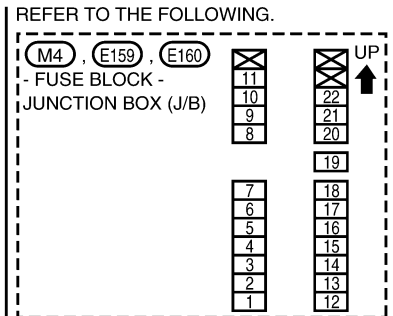
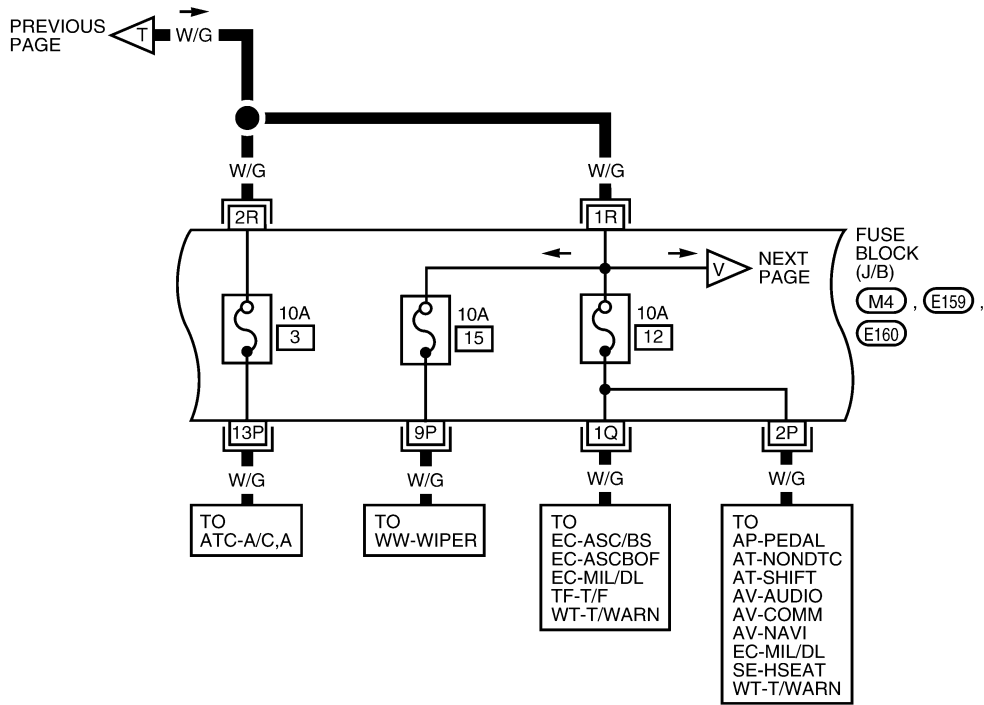
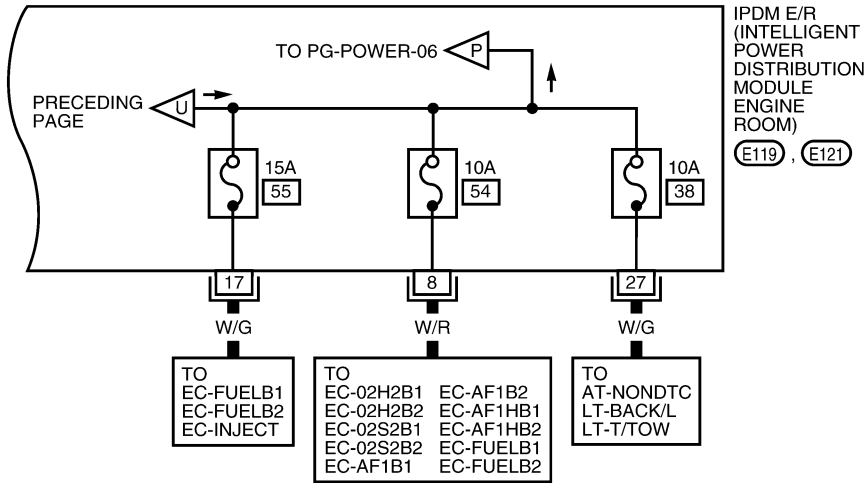


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POWER SUPPLY ROUTING CIRCUIT

PG-POWER-10

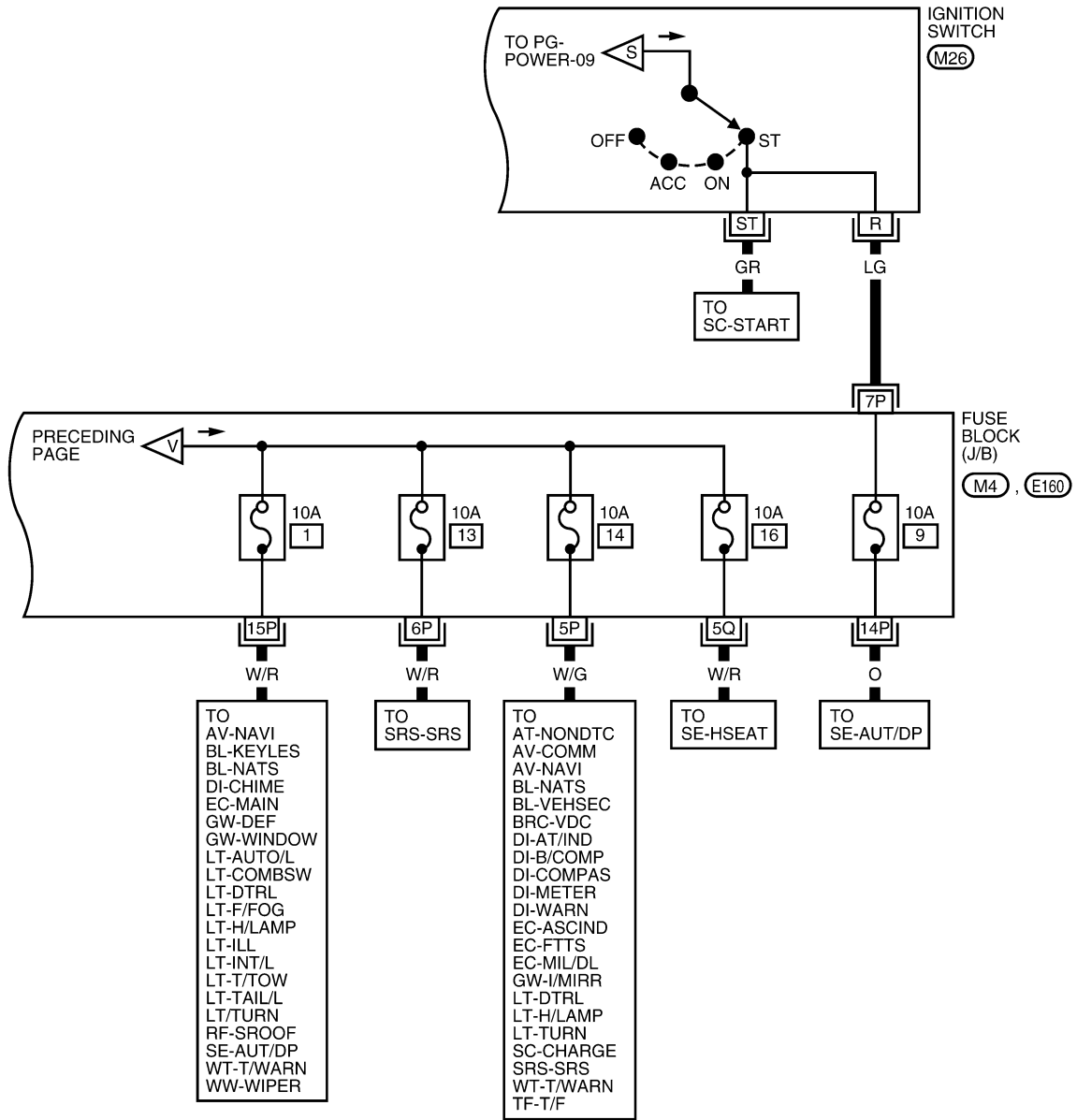
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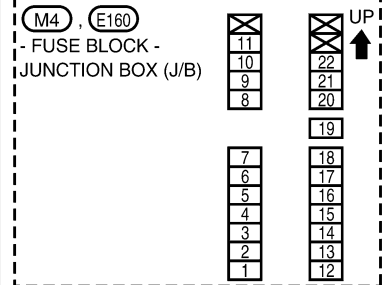
WKWA4501E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-11



REFER TO THE FOLLOWING.



WKWA3197E

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

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

PF:284B7

System Description

EKS009XA

- 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 (High, Low)
 - Parking lamps
 - Tail and license plate lamps
 - Front fog lamps
2. Wiper control
Using CAN communication lines, it receives signals from the BCM and controls the front wipers.
3. Daytime light relay control (Canada only)
Using CAN communication lines, it receives signals from the BCM and controls the daytime light relay.
4. Rear window defogger relay control
Using CAN communication lines, it receives signals from the BCM and controls the rear window defogger relay.
5. A/C compressor control
Using CAN communication lines, it receives signals from the BCM and controls the A/C compressor (magnetic clutch).
6. Starter control
Using CAN communication lines, it receives signals from the BCM and controls the starter relay.
7. Cooling fan control
Using CAN communication lines, it receives signals from the ECM and controls the cooling fan relays.
8. 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, license plate and parking lamps	<ul style="list-style-type: none"> ● With the ignition switch ON, the tail lamp relay is ON. ● With the ignition switch OFF, the tail lamp relay is OFF.
Cooling fan	<ul style="list-style-type: none"> ● With the ignition switch ON, the cooling fan HIGH operates. ● With the ignition switch OFF, the cooling fan stops.
Front wiper	Until the ignition switch is turned off, the front wiper LOW and HIGH remains in the same status it was in just before fail-safe control was initiated.

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

Controlled system	Fail-safe mode
Rear window defogger	Rear window defogger relay OFF
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 3 seconds have 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

EKS009XB

Refer to [LAN-24, "CAN COMMUNICATION"](#).

Function of Detecting Ignition Relay Malfunction

EKS009XC

- 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)

EKS009XD

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

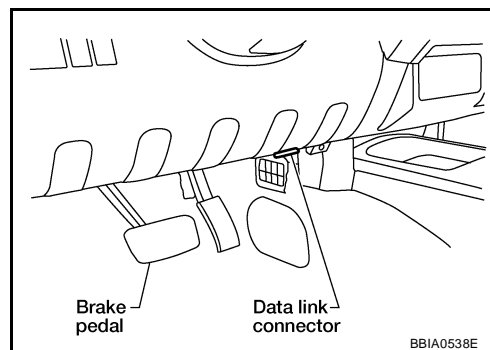
IPDM E/R diagnostic Mode	Description
SELF-DIAG RESULTS	Displays IPDM E/R self-diagnosis results.
DATA MONITOR	Displays IPDM E/R input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
ACTIVE TEST	Operation of electrical loads can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

CONSULT-II BASIC OPERATION

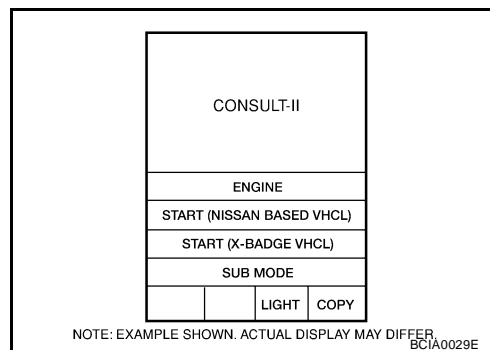
CAUTION:

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.

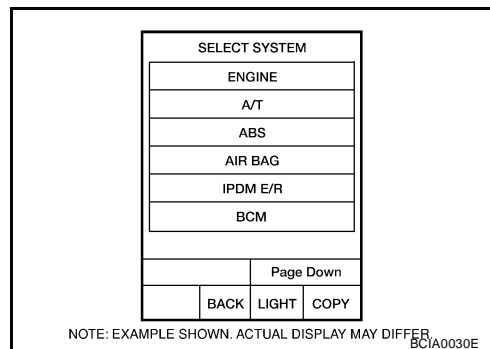
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



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

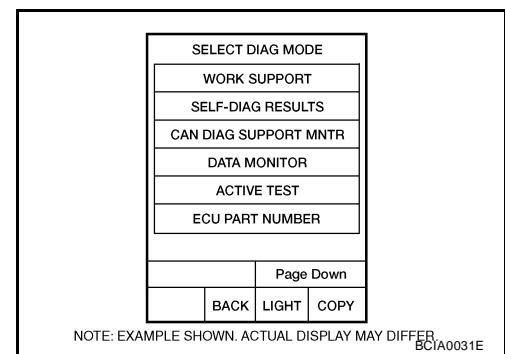


3. Touch "IPDM E/R" on "SELECT SYSTEM" screen.
 - If "IPDM E/R" is not displayed, go to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#) .



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

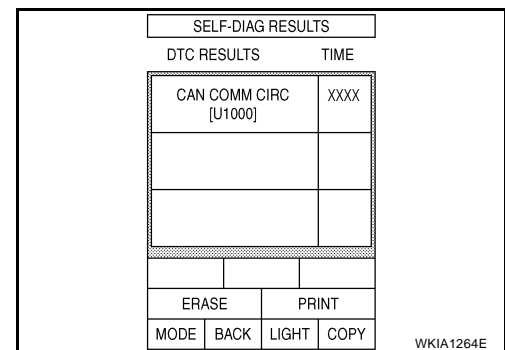
- Select the desired part to be diagnosed on the "SELECT DIAG MODE" screen.



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 "SELECTION FROM MENU" on the "DATA MONITOR" screen.

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

- Touch "START".

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

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

All Signals, Main Signals, Selection From Menu

Item name	CONSULT-II screen display	Display or unit	Monitor item selection			Description
			ALL SIGNALS	MAIN SIGNALS	SELECTION FROM MENU	
Motor fan request	MOTOR FAN REQ	1/2/3/4	X	X	X	Signal status input from ECM
Compressor request	AC COMP REQ	ON/OFF	X	X	X	Signal status input from BCM
Parking, license plate, and tail lamp request	TAIL & CLR REQ	ON/OFF	X	X	X	Signal status input from BCM
Headlamp low beam request	HL LO REQ	ON/OFF	X	X	X	Signal status input from BCM
Headlamp high beam request	HL HI REQ	ON/OFF	X	X	X	Signal status input from BCM
Front fog lamps request	FR FOG REQ	ON/OFF	X	X	X	Signal status input from BCM
Front wiper request	FR WIP REQ	STOP/1LO/LO/HI	X	X	X	Signal status input from BCM
Wiper auto stop	WIP AUTO STOP	ACT P/STOP P	X	X	X	Output status of IPDM E/R
Wiper protection	WIP PROT	OFF/LS/HS/BLOCK	X	X	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
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 lights 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.

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

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.
Headlamp relay (HI, LO) 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.
Front fog lamp relay (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.
Tail lamp relay 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.
Horn output	HORN	With a certain ON-OFF operation, the horn relay can be operated.

Auto Active Test DESCRIPTION

EKS009XE

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

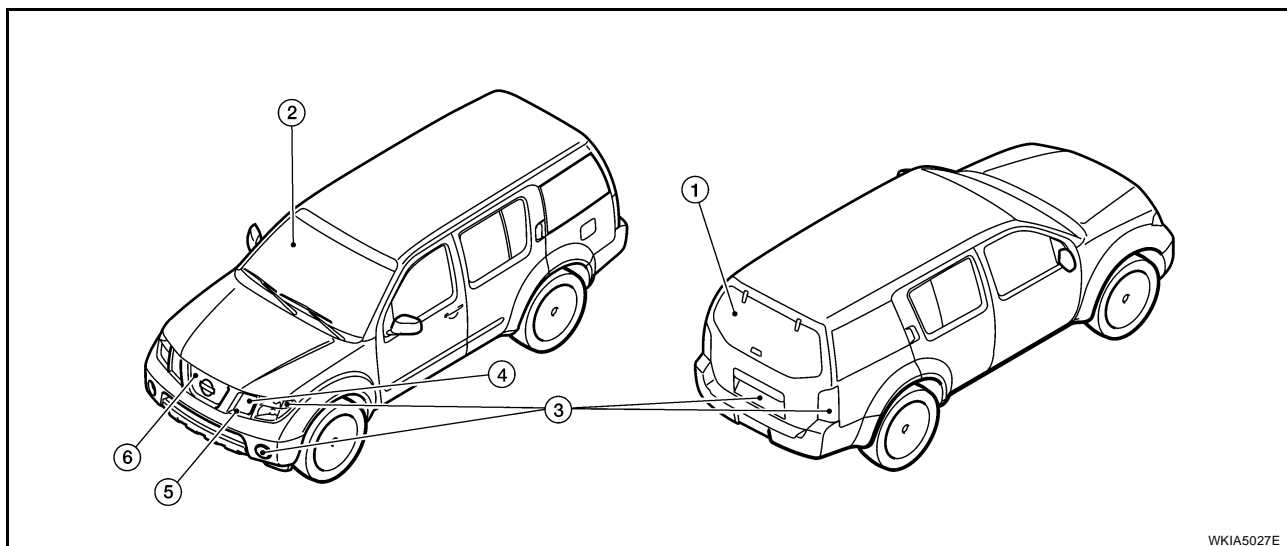
CAUTION:

Be sure to perform [BL-29, "Door Switch Check"](#) when the auto active test cannot be performed.

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

INSPECTION IN AUTO ACTIVE TEST MODE

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



Item Number	Test Item	Operation Time/Frequency
1	Rear window defogger	10 seconds
2	Front wipers	LOW 5 seconds then HIGH 5 seconds
3	Tail, license plate, front fog and parking lamps	10 seconds
4	Headlamps	Low ON then high ON-OFF five times for ten seconds
5	A/C compressor (magnetic clutch)	ON-OFF 5 times
6	Cooling fan	LOW 5 seconds then HIGH 5 seconds

Concept of Auto Active Test

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

Diagnosis chart in auto active test mode

Symptom	Inspection contents	Possible cause
Rear window defogger does not operate.	YES	<ul style="list-style-type: none"> BCM signal input circuit
	NO	<ul style="list-style-type: none"> 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 (High, Low) do not operate.	YES	<ul style="list-style-type: none"> 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

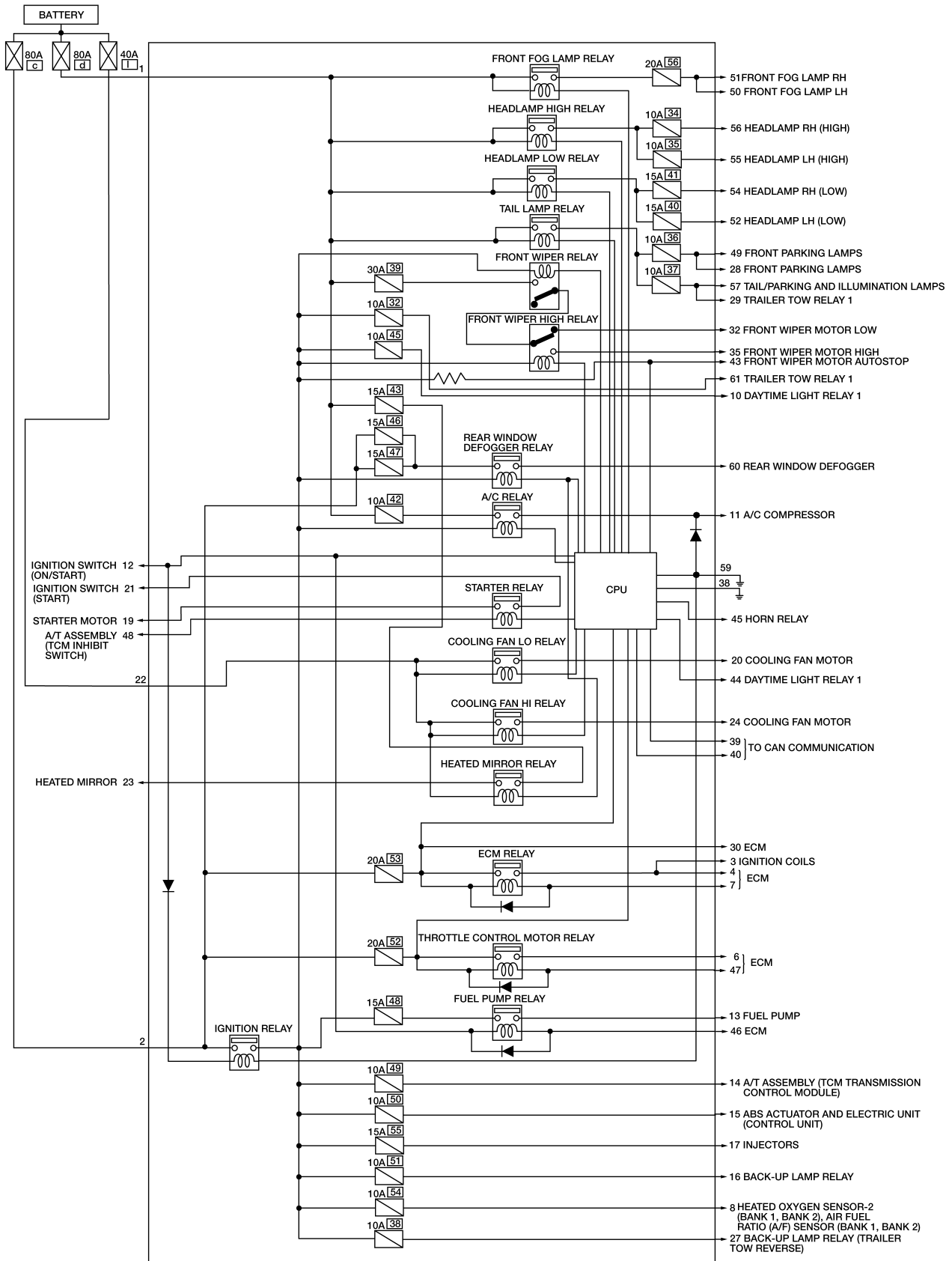
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Symptom	Inspection contents	Possible cause	
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

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

Schematic

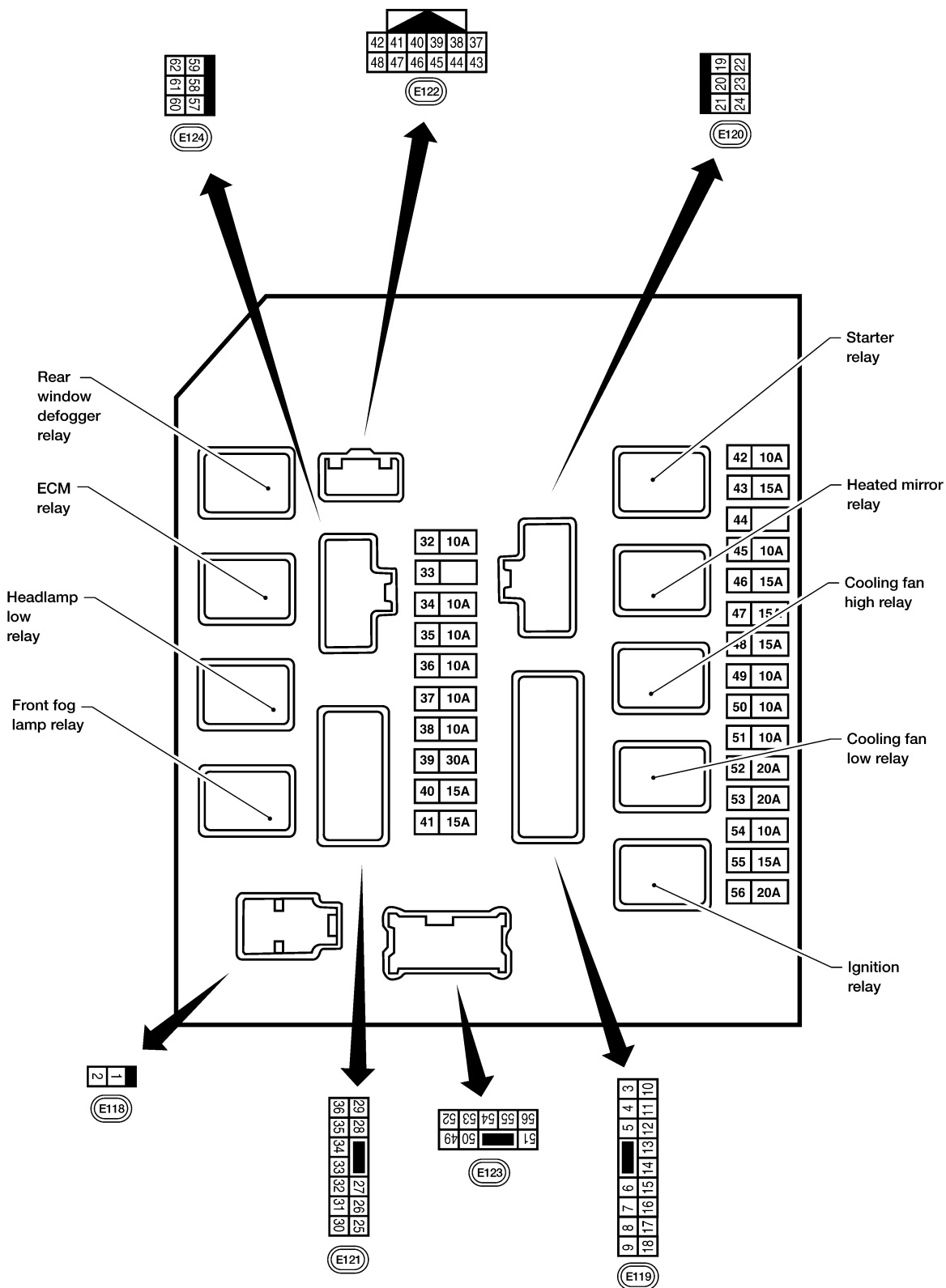
EKS009XF



WKWA4458E

IPDM E/R Terminal Arrangement

EKS009XG



WKIA1695E

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

IPDM E/R Power/Ground Circuit Inspection

EKS009XH

1. FUSE AND FUSIBLE LINK INSPECTION

Check that the following fusible links are not blown.

Terminal No.	Signal name	Fusible link No.
1, 2	Battery power	a, c, d

OK or NG

- OK >> GO TO 2.
- NG >> Replace fusible link.

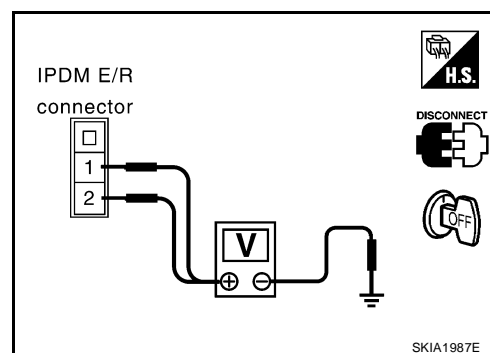
2. POWER CIRCUIT INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R harness connector E118.
3. Check voltage between IPDM E/R harness connector E118 terminals 1, 2 and ground.

Battery voltage should exist.

OK or NG

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



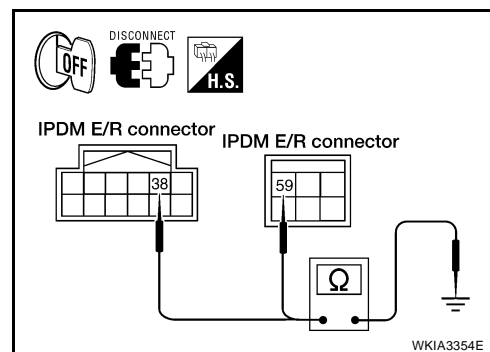
3. GROUND CIRCUIT INSPECTION

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

Continuity should exist.

OK or NG

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



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

Inspection with CONSULT-II (Self-Diagnosis)

EKS009X1

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) carries out CAN communication.

1. SELF-DIAGNOSIS RESULT CHECK

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

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

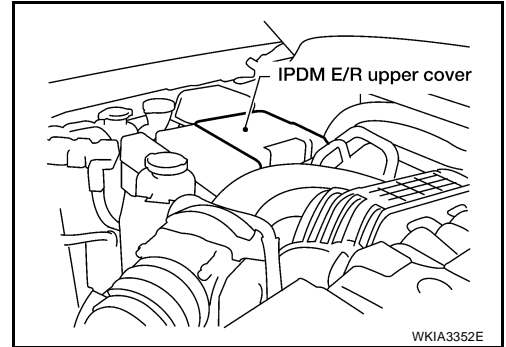
CAN COMM CIRC>>Print out the self-diagnosis result and refer to [LAN-24, "CAN COMMUNICATION"](#) .

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

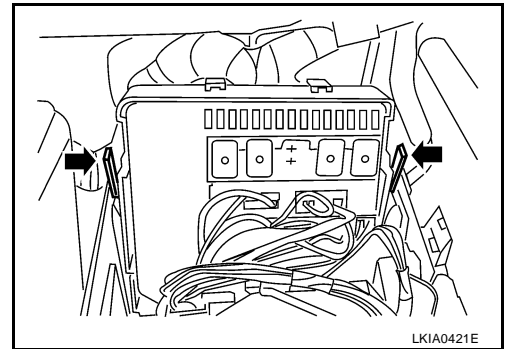
EKS009XJ

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.

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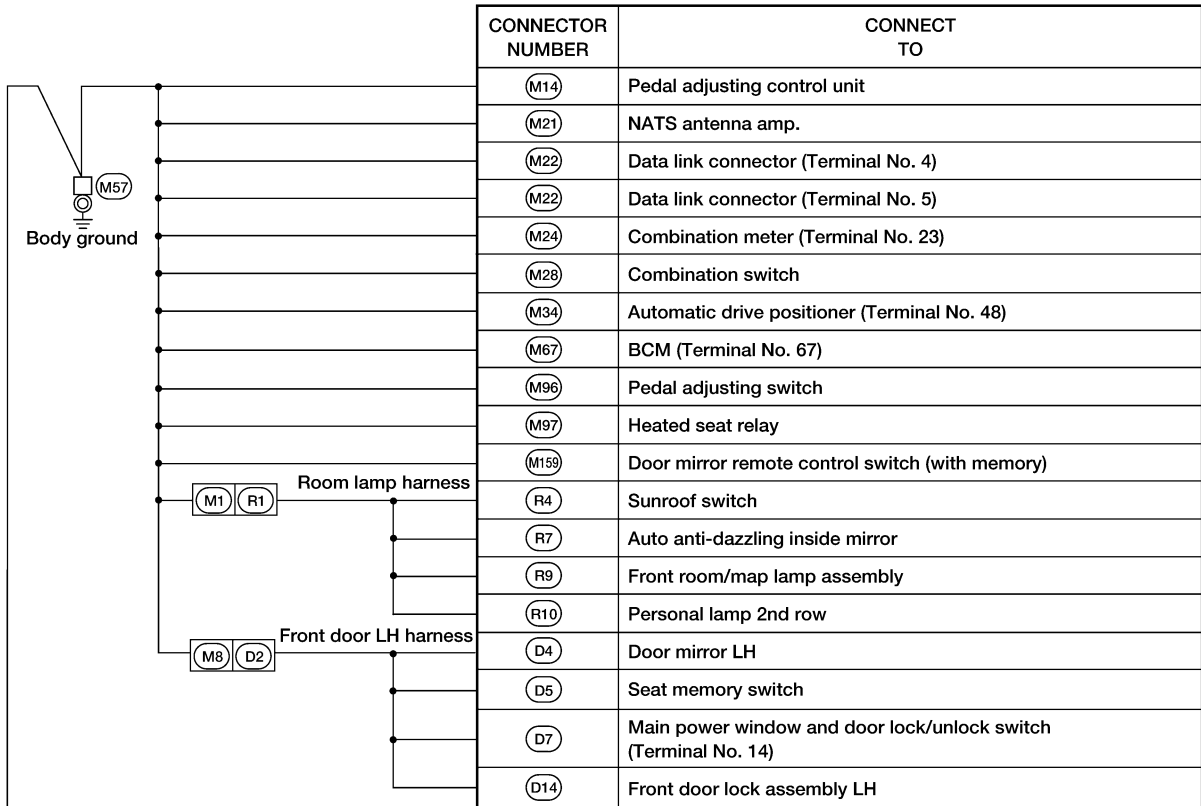
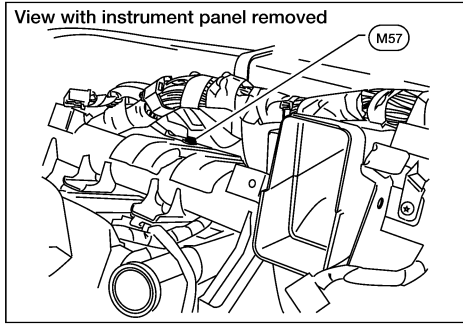
GROUND CIRCUIT

PFP:24080

EKS009XK

GROUND CIRCUIT

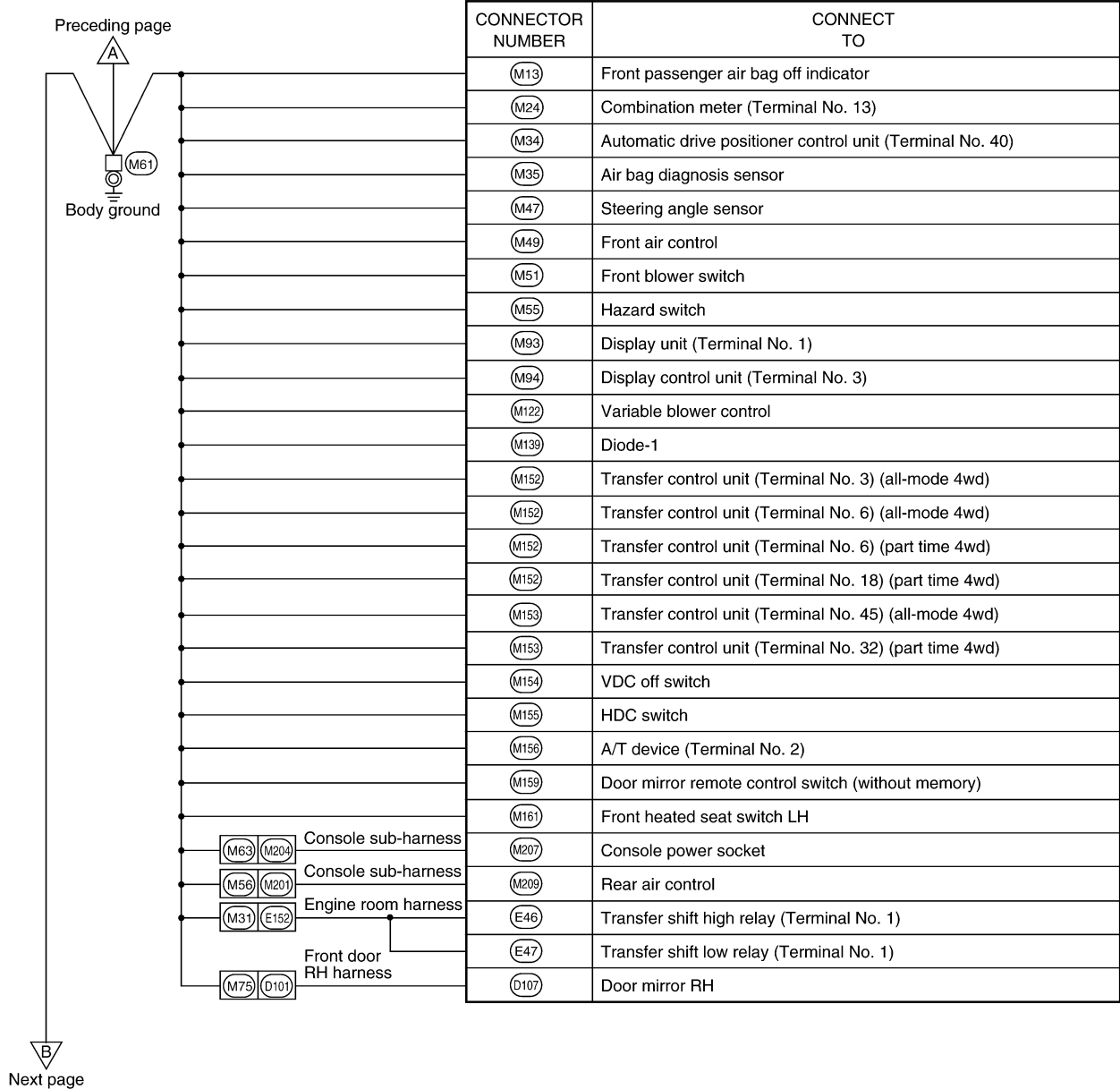
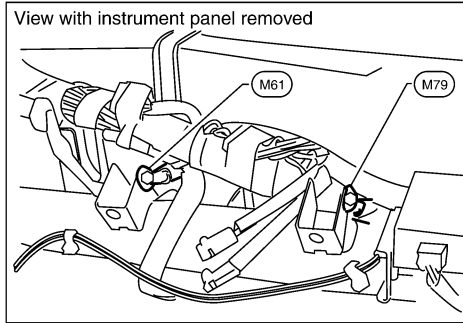
Ground Distribution MAIN HARNESS



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WKIA3566E

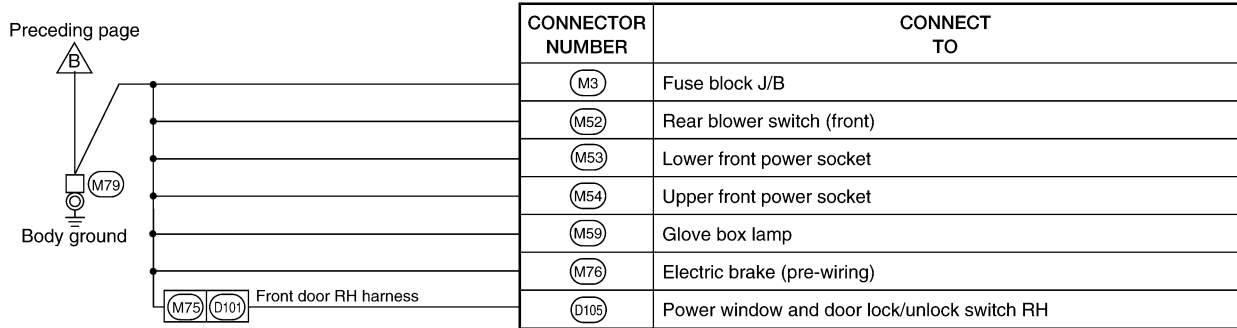
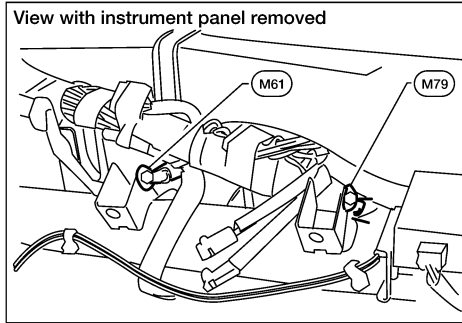
GROUND CIRCUIT



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WKIA4171E

GROUND CIRCUIT

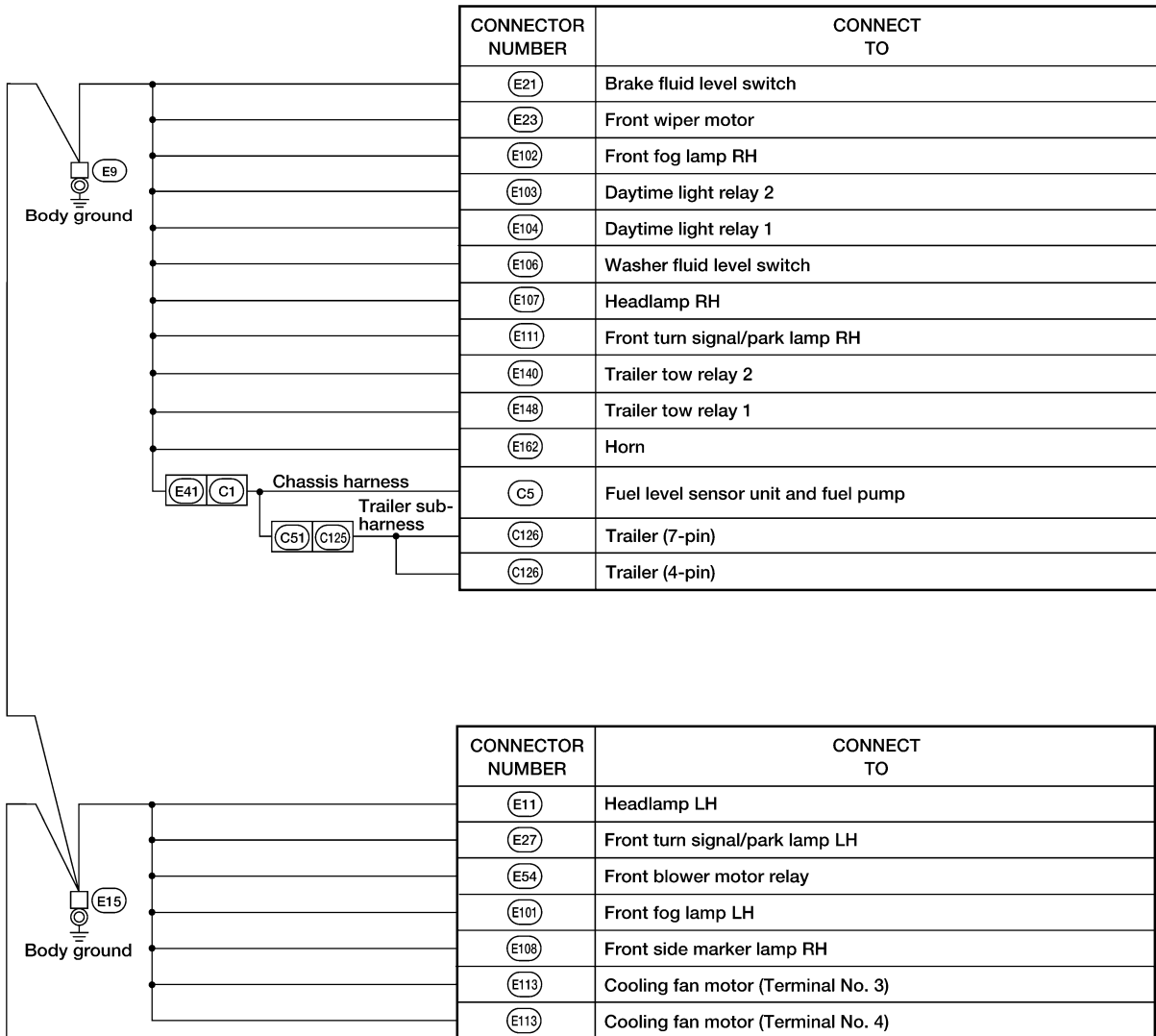
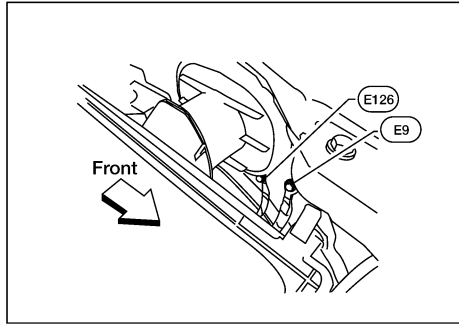
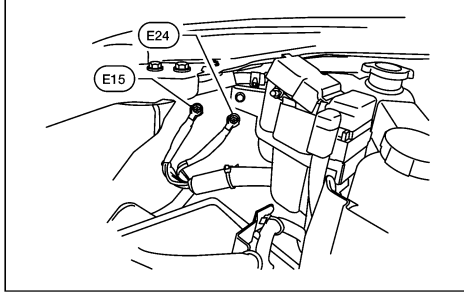


WKIA3568E

GROUND CIRCUIT

ENGINE ROOM HARNESS

View with battery removed



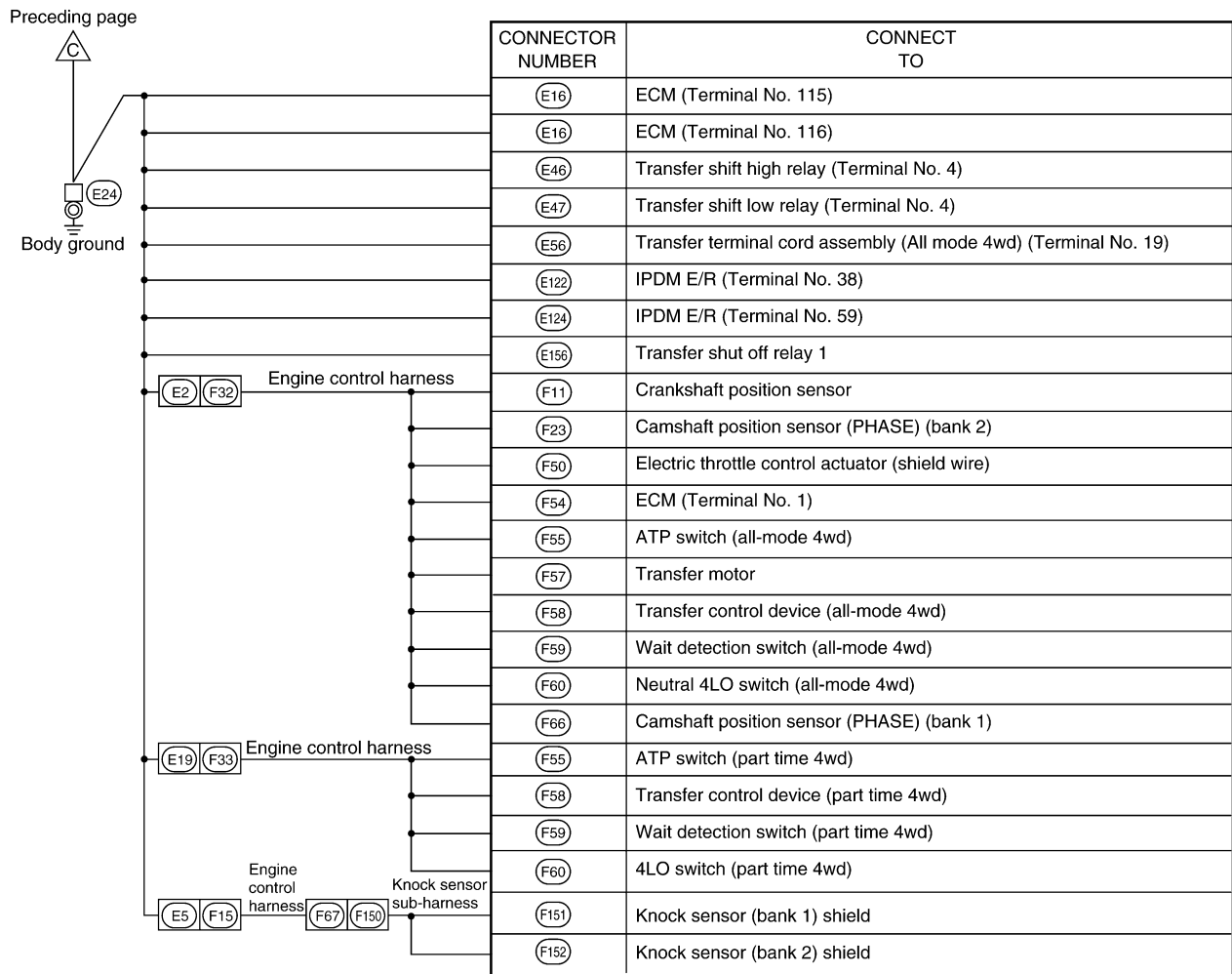
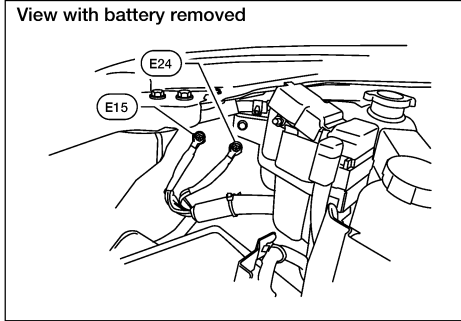
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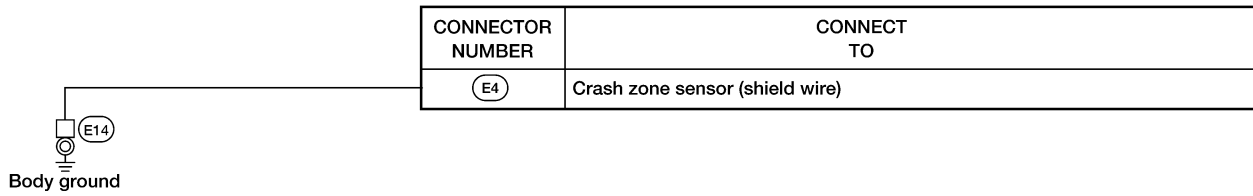
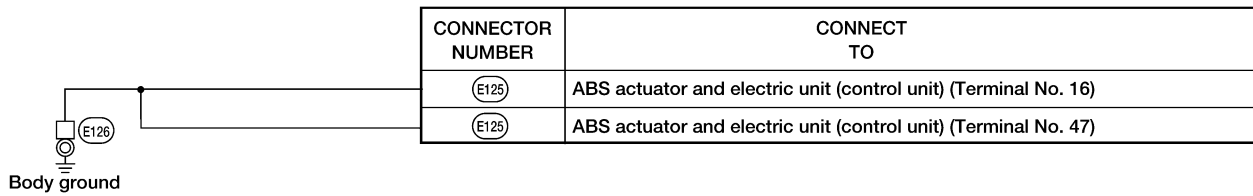
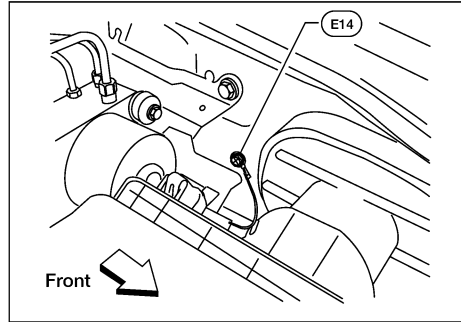
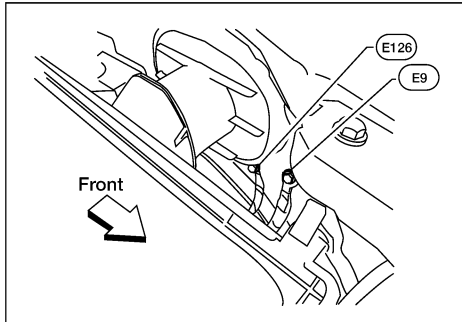
WKIA4172E

GROUND CIRCUIT



WKIA4173E

GROUND CIRCUIT



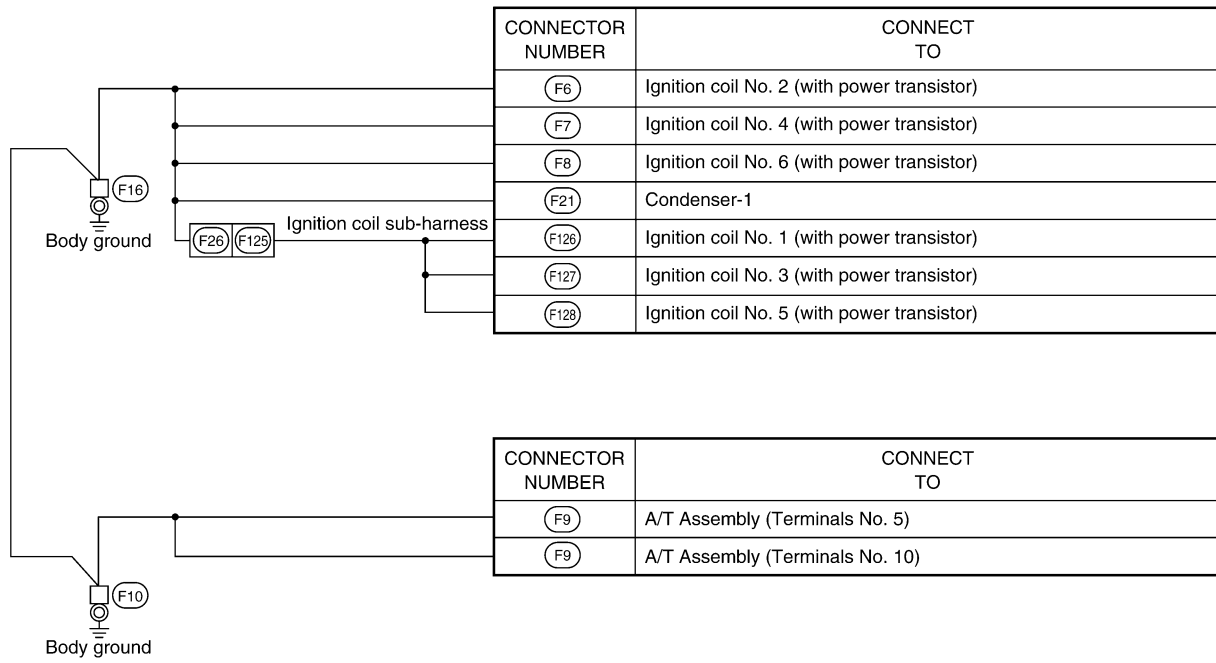
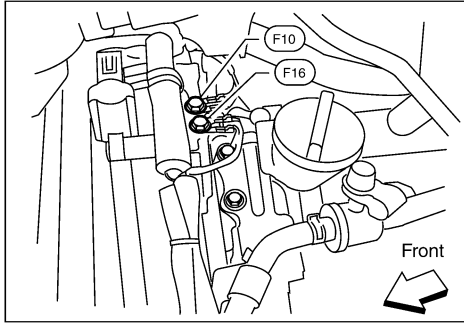
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WKIA3571E

GROUND CIRCUIT

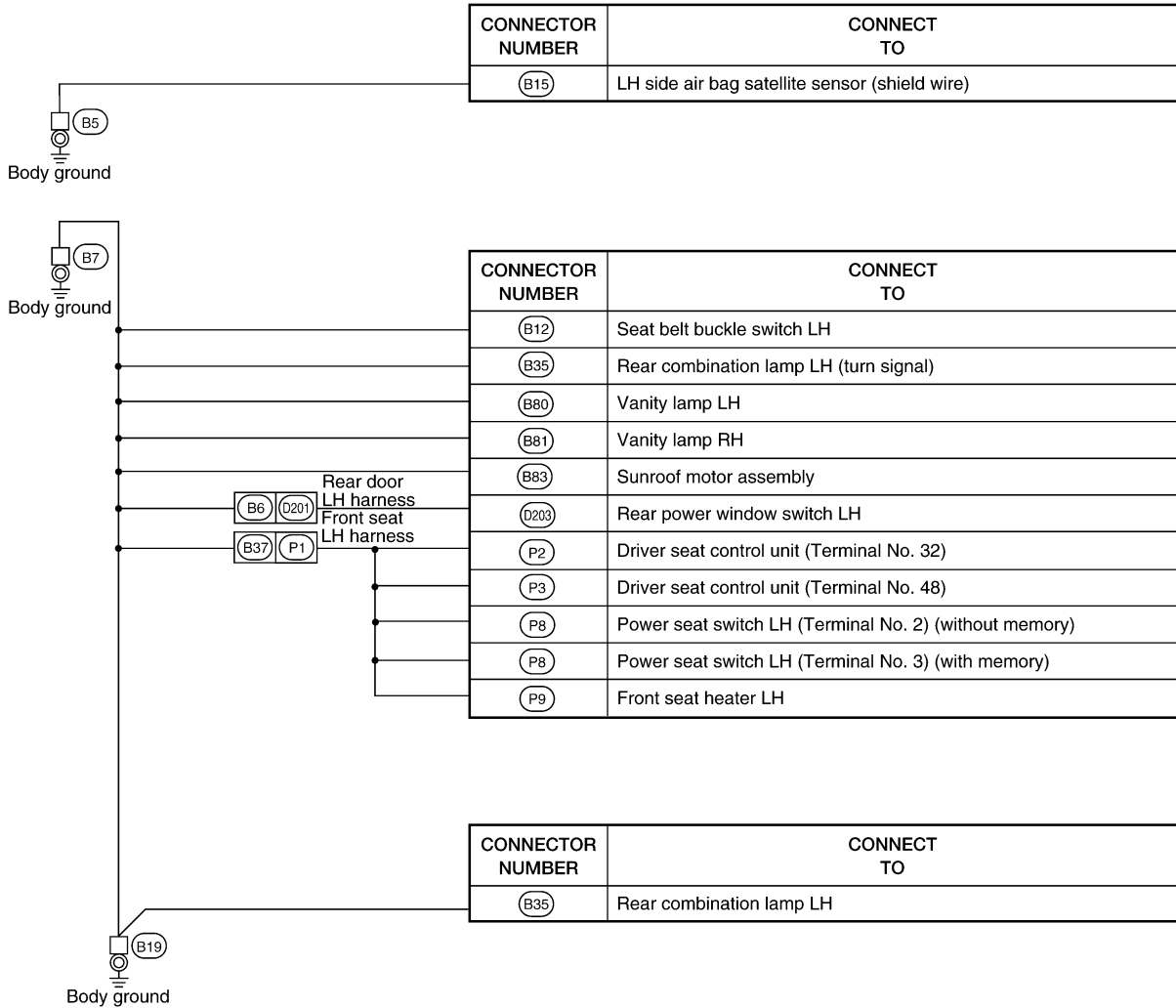
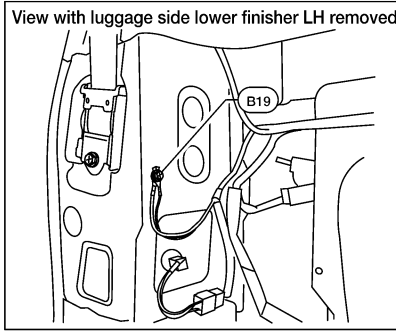
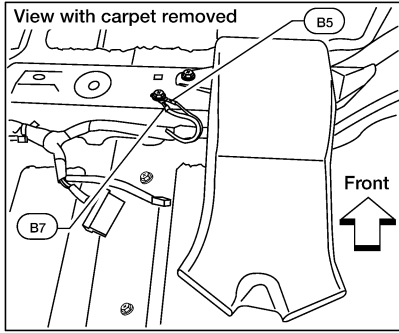
ENGINE CONTROL HARNESS



WKIA4174E

GROUND CIRCUIT

BODY HARNESS

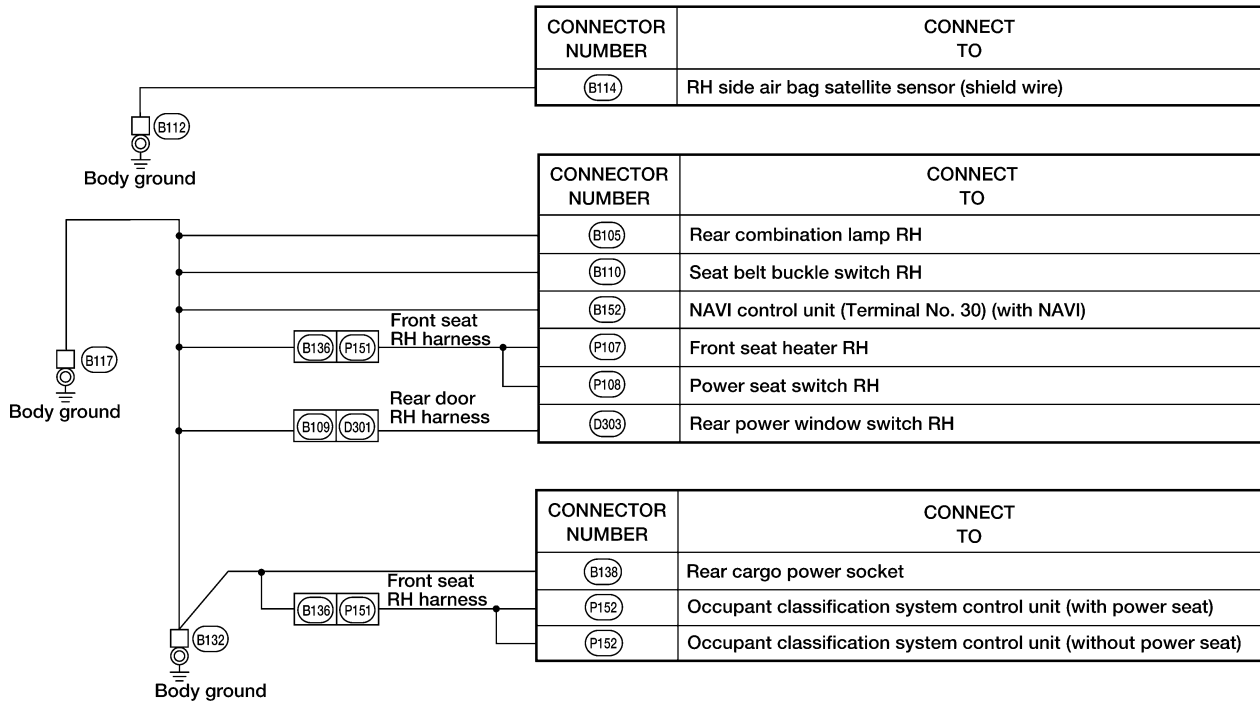
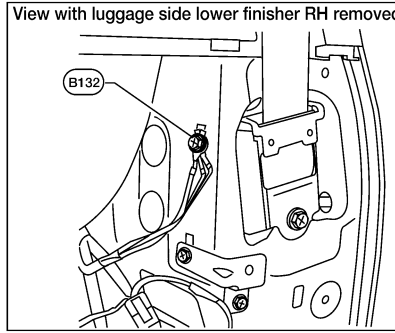
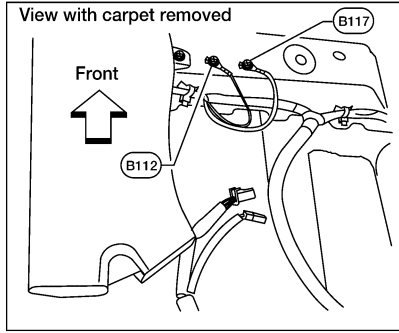


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WKIA3573E

GROUND CIRCUIT

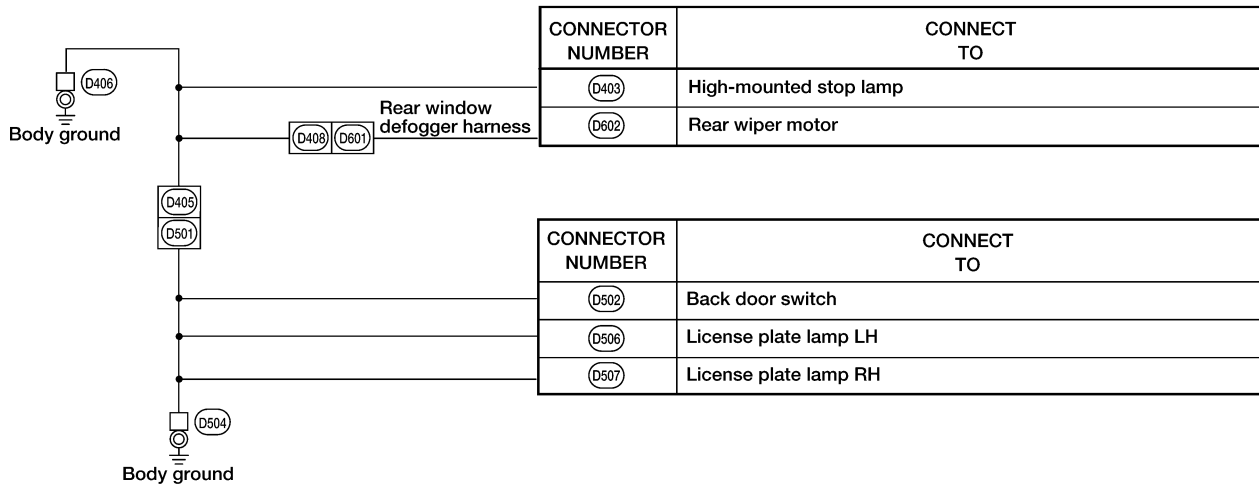
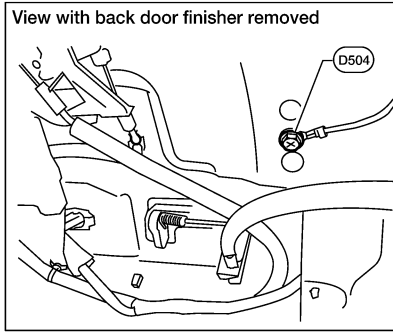
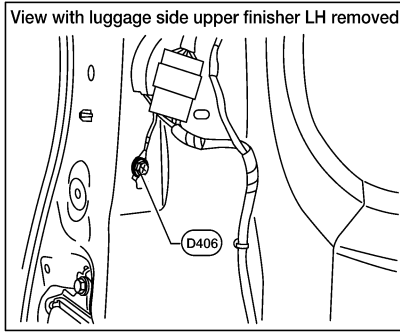
BODY NO. 2 HARNESS



WKIA4175E

GROUND CIRCUIT

BACK DOOR NO. 2 AND BACK DOOR HARNESS



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WKIA3575E

HARNESS

PFP:24010

EKS009XL

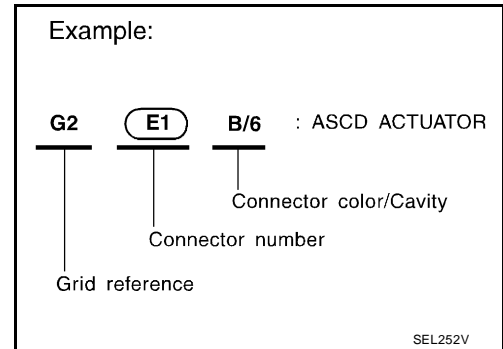
HARNESS

Harness Layout

HOW TO READ HARNESS LAYOUT

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

- Main Harness and Console Harness
- Engine Room Harness RH View (Engine Compartment) and Generator Sub-harness
- Engine Room Harness (Passenger Compartment)
- Engine Room Harness LH View (Engine Compartment)
- Engine Control Harness, Injector Sub-harness, Ignition Coil Sub-harness, and Knock Sensor Sub-harness
- Chassis Harness and Trailer Sub-harness
- Body Harness
- Body No. 2 Harness and Rear Blower Motor Sub-harness
- Room Lamp Harness
- Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-harness, and Rear Window Defogger Sub-harness



To use the grid reference

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

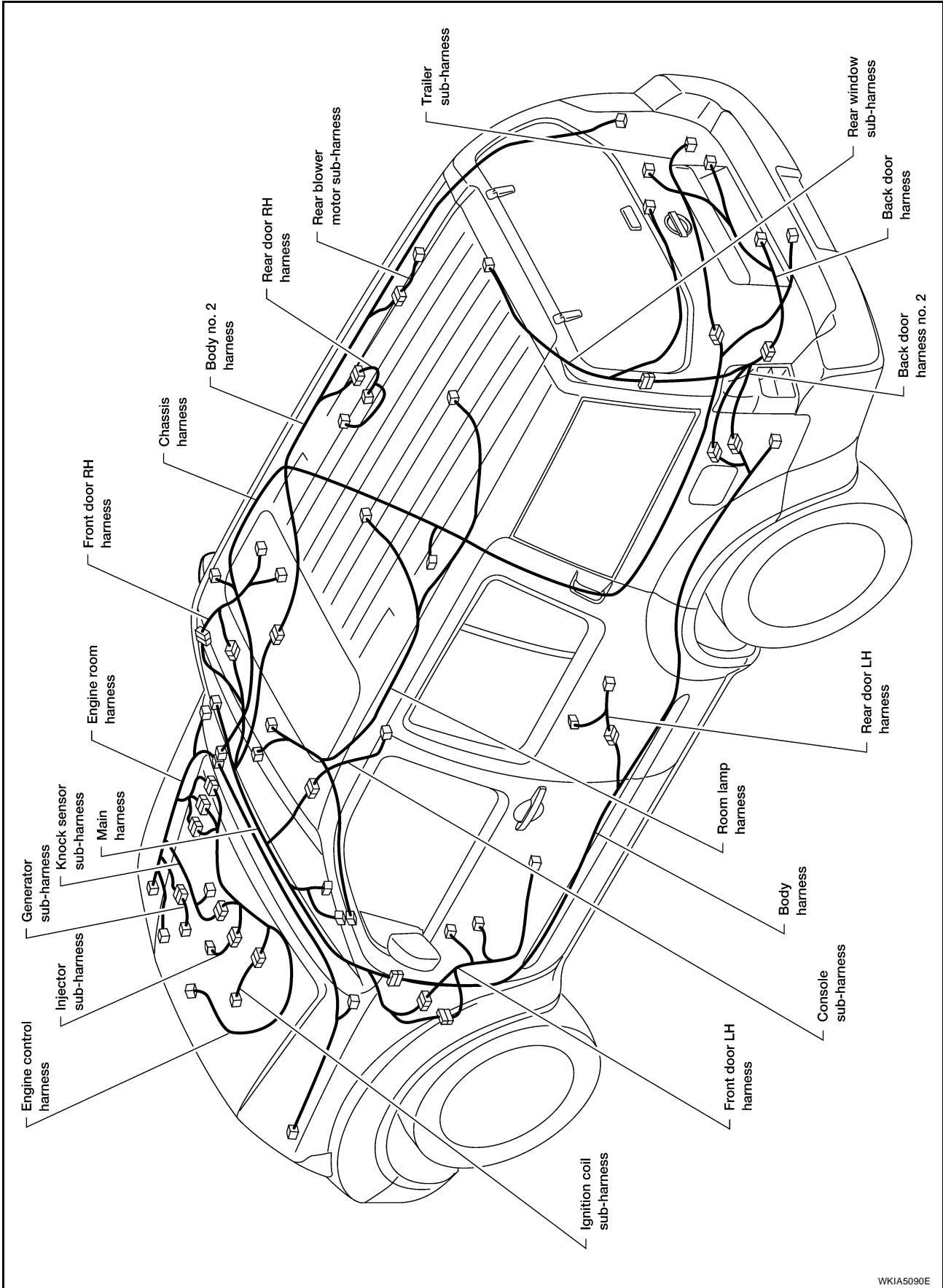
CONNECTOR SYMBOL

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

Connector type	Water proof type		Standard type	
	Male	Female	Male	Female
<ul style="list-style-type: none"> ● Cavity: 4 or Less ● Relay connector 				
<ul style="list-style-type: none"> ● Cavity: From 5 to 8 				
<ul style="list-style-type: none"> ● Cavity: 9 or More 				
<ul style="list-style-type: none"> ● Ground terminal etc. 	—			

HARNESS

OUTLINE

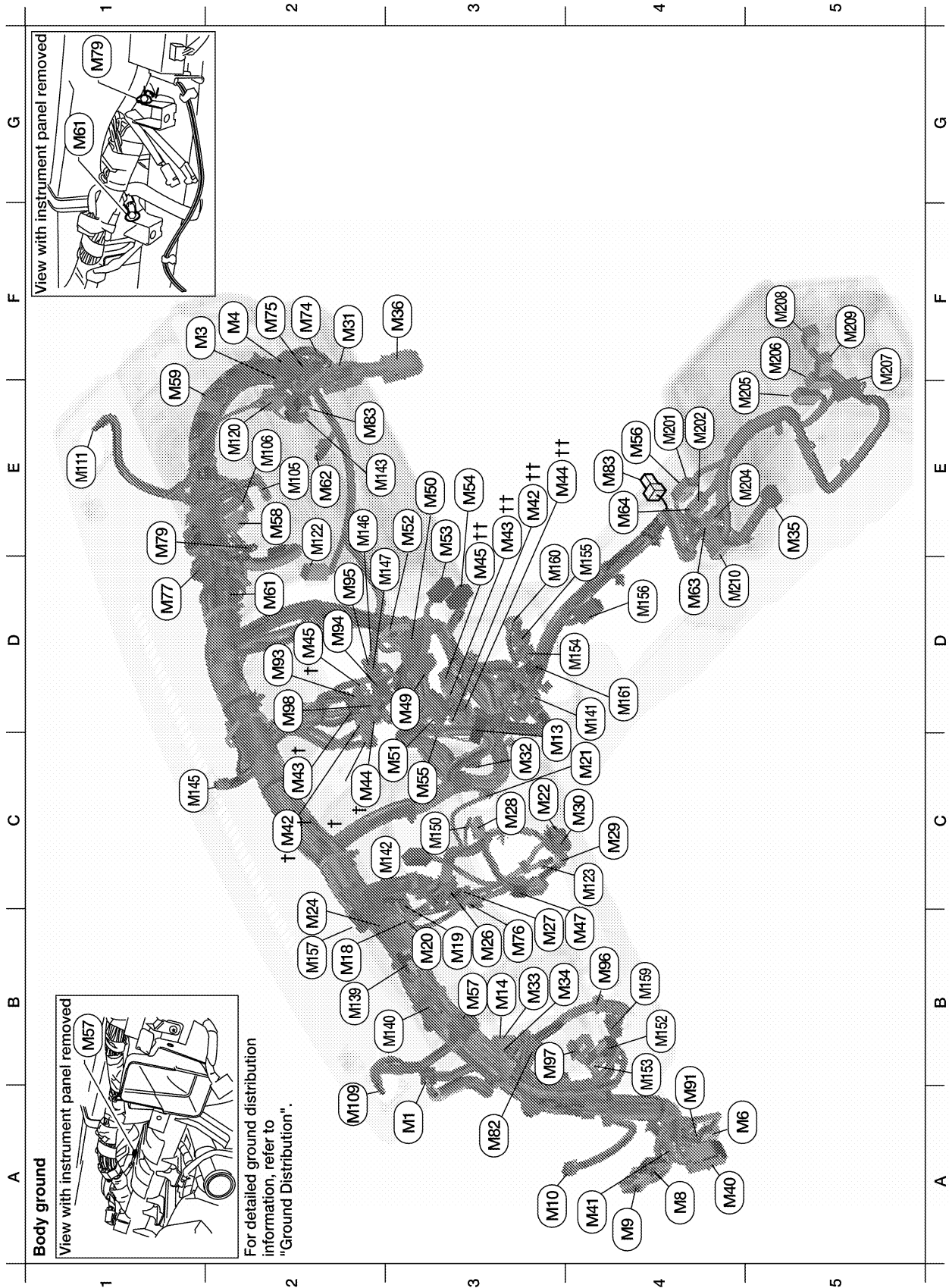


WKIA5090E

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HARNESS

MAIN HARNESS



WKIA4176E

HARNESS

A3	M1	W/12	: To R1	C3	M55	W/4	: Hazard switch	A
F2	M3	W/8	: Fuse block (J/B)	E4	M56	W/16	: To M201	
F2	M4	W/16	: Fuse block (J/B)	B3	M57	—	: Body ground	B
A5	M6	W/6	: To E10	E2	M58	B/6	: Intake door motor	
A4	M8	W/16	: To D2	E2	M59	BR/2	: Glove box lamp	C
A4	M9	W/24	: To D1	D2	M61	—	: Body ground	
A3	M10	Y/4	: To E29	E3	M62	B/2	: Front blower motor	D
C3	M13	W/3	: Front passenger air bag OFF indicator	D4	M63	W/6	: To M204	
B3	M14	W/16	: Pedal adjusting control unit	D4	M64	W/6	: To M202	E
B2	M18	W/40	: BCM (body control module)	F2	M74	W/16	: To D102	
B3	M19	W/15	: BCM (body control module)	F2	M75	W/12	: To D101	F
B3	M20	B/15	: BCM (body control module)	B3	M76	W/6	: Electric brake (pre-wiring)	
C4	M21	W/4	: NATS antenna amp.	D2	M77	Y/4	: Front passenger air bag module (service replacement)	G
C3	M22	W/16	: Data link connector	E1	M79	—	: Body ground	
B2	M24	W/40	: Combination meter	A3	M82	W/2	: Circuit breaker-2	H
B3	M26	W/6	: Ignition switch	E4	M83	W/4	: To B142	
B3	M27	W/2	: Key switch	B4	M91	W/16	: To E26	I
C3	M28	W/16	: Combination switch	D2	M93	W/24	: Display unit	
C4	M29	Y/6	: Combination switch (spiral cable)	D2	M94	W/24	: Display control unit (with NAVI)	J
C4	M30	GR/8	: Combination switch (spiral cable)	D2	M95	W/32	: Display control unit (with NAVI)	
F2	M31	SMJ	: To E152	B4	M96	BR/6	: Pedal adjusting switch	K
C3	M32	W/4	: In-vehicle sensor	B4	M97	BR/5	: Heated seat relay	
B3	M33	W/32	: Automatic drive positioner control unit	D2	M98	W/16	: AV switch	L
B4	M34	W/16	: Automatic drive positioner control unit	E2	M105	Y/2	: Front passenger air bag module	
E5	M35	Y/28	: Air bag diagnosis sensor unit	E2	M106	O/2	: Front passenger air bag module	M
F3	M36	SMJ	: To B149	B2	M109	BR/2	: Front tweeter LH	
A4	M40	SMJ	: To B69	E1	M111	BR/2	: Front tweeter RH	PG
A4	M41	W/16	: Satellite radio tuner (pre-wiring)	E2	M120	W/4	: Remote keyless entry receiver	
C2	†M42	W/12	: Audio unit (without NAVI)	E2	M122	W/4	: Variable blower control (with ATC)	
E3	††M42	W/12	: Audio unit (with NAVI)	E2	M122	B/4	: Front blower motor resistor (with MTC)	
C2	†M43	W/10	: Audio unit (without NAVI)	C4	M123	W/2	: Tire pressure warning check connector	
E3	††M43	W/10	: Audio unit (with NAVI)	B3	M139	B/2	: Diode-1	
C2	†M44	W/6	: Audio unit (without NAVI)	B3	M140	B/2	: Diode-2	
E3	††M44	W/6	: Audio unit (with NAVI)	D4	M141	GR/8	: 4WD shift switch	
D2	†M45	W/16	: Audio unit (without NAVI)	C3	M142	B/6	: Mode door motor	
D3	††M45	W/16	: Audio unit (with NAVI)	E3	M143	B/6	: Air mix door motor (passenger)	
B4	M47	W/8	: Steering angle sensor	C1	M145	B/4	: Optical sensor	
D3	M49	B/26	: Front air control	E2	M146	W/2	: Intake sensor	
E3	M50	W/18	: Front air control	D2	M147	B/6	: Air mix door motor (driver) (with ATC)	
C2	M51	W/8	: Front blower switch	D2	M147	B/6	: Air mix door motor (front) (with MTC)	
E3	M52	W/8	: Rear blower switch (front)	C3	M150	BR/2	: Ignition keyhole illumination	
E3	M53	B/2	: Power socket	B4	M152	W/26	: Transfer case control unit (part time 4WD)	
B4	M152	L/24	: Transfer case control unit (all-mode 4WD)	B4	M153	W/24	: Transfer case control unit (part time 4WD)	
E3	M54	GR/2	: Power socket	D4	M153	G/24	: Transfer case control unit (all-mode 4WD)	

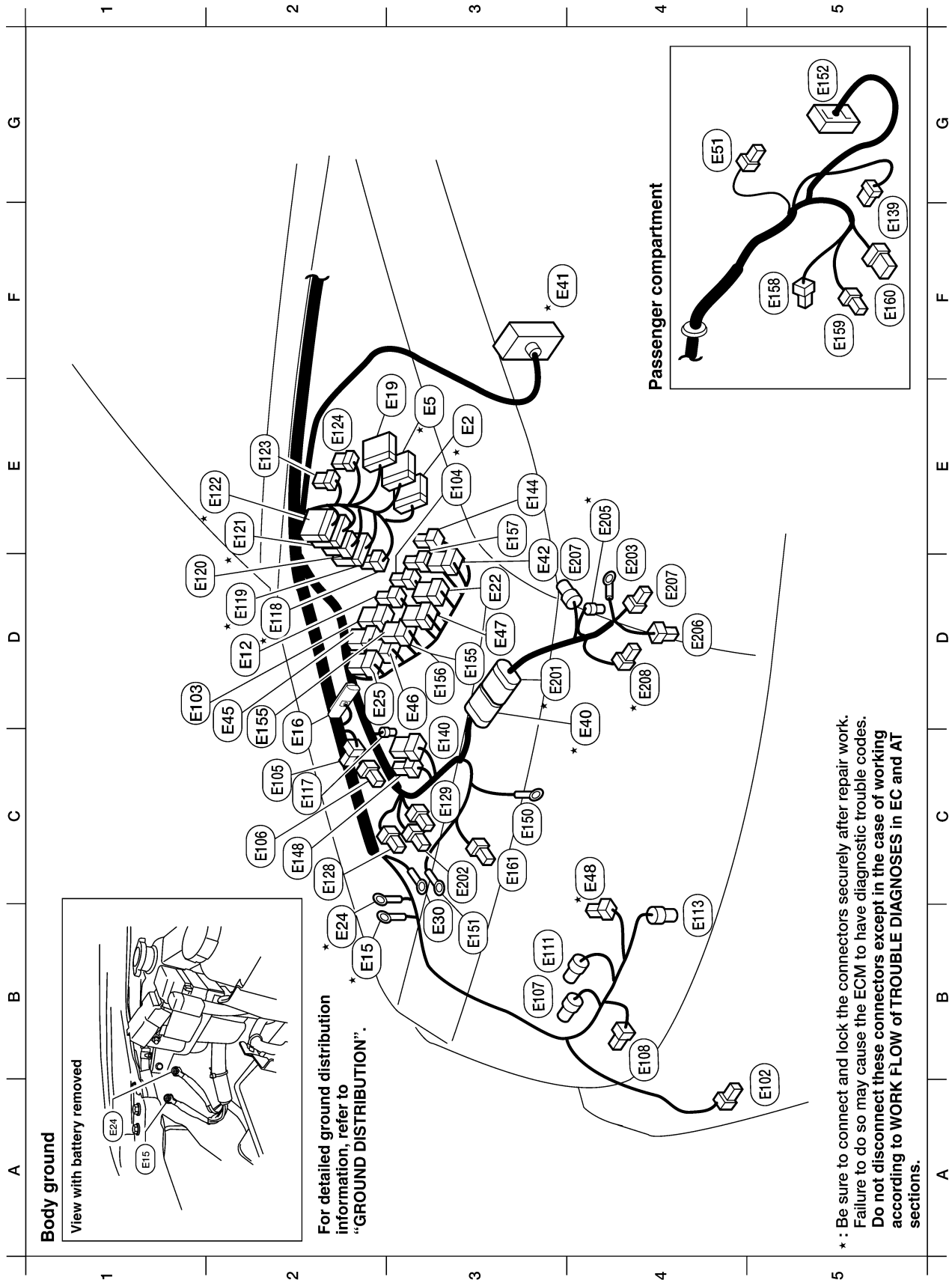
HARNESS

D4	M154	GR/6	: VDC off switch				
E4	M155	W/8	: HDC switch				
D4	M156	W/10	: A/T device				
B2	M157	W/2	: Diode-5				
B4	M159	W/16	: Door mirror remote control switch				
D4	M160	BR/6	: Front heated seat switch RH				
D4	M161	BR/6	: Front heated seat switch LH				
Console sub-harness							
E4	M201	W/16	: To M56				
E4	M202	W/6	: To M64				
D4	M204	W/6	: To M63				
E5	M205	GR/16	: DVD player				
E5	M206	L/16	: DVD player				
F5	M207	B/2	: Console power socket				
F5	M208	GR/5	: Rear air control				
F5	M209	GR/6	: Rear air control				
D4	M210	W/18	: To B77				

HARNESS

ENGINE ROOM HARNESS (RH VIEW)

Engine Compartment



Refer to [PG-49, "ENGINE ROOM HARNESS \(LH VIEW\)"](#) for continuation of engine room harness.

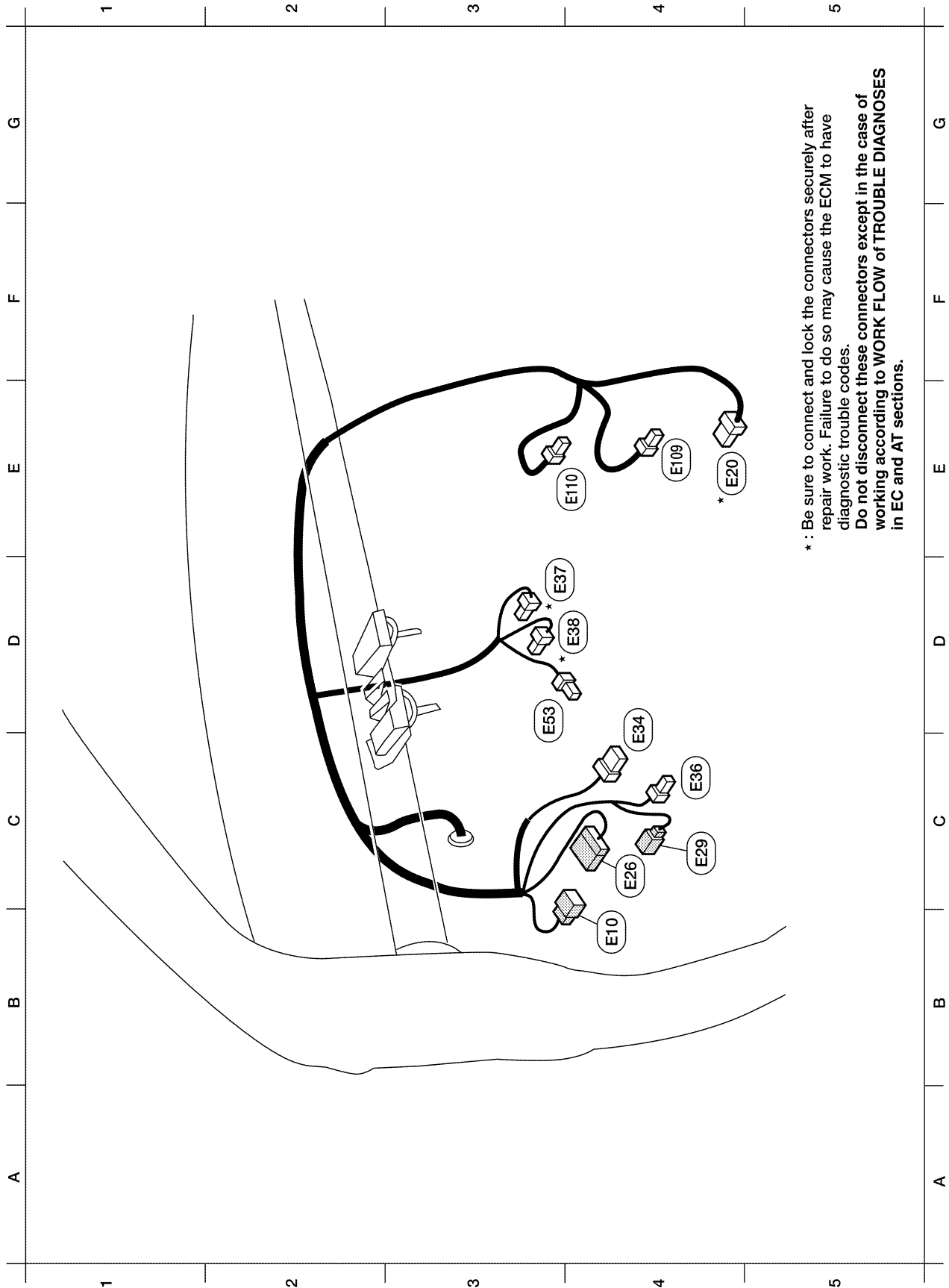
HARNESS

E3	*E2	W/16	: To F32	E2	E123	BR/8	: IPDM E/R (intelligent power distribution module engine room)
E3	*E5	W/24	: To F14	E2	*E124	B/6	: IPDM E/R (intelligent power distribution module engine room)
D4	E12	L/5	: Stop lamp relay	C3	E128	GR/2	: Fusible link box (battery)
B3	*E15	—	: Body ground	C3	E129	BR/2	: Fusible link box (battery)
C2	*E16	B/40	: ECM	F5	E139	W/8	: To B107
E3	*E19	W/16	: To F33	C3	E140	BR/6	: Trailer tow relay 2
D3	E22	BR/6	: Front blower motor relay	E3	E144	L/4	: Heater pump relay
B2	*E24	—	: Body ground	C3	E148	L/4	: Trailer tow relay 1
D2	E25	BR/6	: Rear blower motor relay	C3	E150	—	: Battery ground
B3	*E30	—	: Fusible link box (battery)	C3	E151	—	: Negative battery cable
D3	*E40	GR/9	: To E201	G5	E152	SMJ	: To M31
F4	*E41	SMJ	: To C1	D3	E155	L/4	: Transfer shut off relay (all-mode 4WD)
D3	E42	—	: Relay box	D3	E156	L/4	: Transfer shut off relay 1 (part time 4WD)
D2	E45	BR/6	: Back-up lamp relay	E3	E157	L/4	: Transfer shut off relay 2 (part time 4WD)
D3	E46	B/5	: Transfer relay 1 (part time 4WD)	F5	E158	B/1	: Fuse block (J/B)
D3	E46	B/5	: Transfer shift high relay (all-mode 4WD)	F5	E159	B/2	: Fuse block (J/B)
D3	E47	B/5	: Transfer relay 2 (part time 4WD)	F2	E160	W/8	: Fuse block (J/B)
D3	E47	B/5	: Transfer shift low relay (all-mode 4WD)	C3	*E161	B/3	: Battery current sensor
C4	*E48	B/3	: Refrigerant pressure sensor	Generator sub-harness			
G4	E51	W/2	: To B104	D3	*E201	GR/9	: To E40
A5	E102	B/2	: Front fog lamp RH	C3	E202	B/1	: Fusible link box (battery)
D2	E103	B/5	: Daytime light relay 1	E4	E203	—	: Body ground
E3	E104	L/4	: Daytime light relay 2	E4	*E205	GR/3	: Generator
C2	E105	B/2	: Front and rear washer motor	D4	*E206	—	: Generator
C3	E106	BR/2	: Washer fluid level switch	D4	E207	GR/1	: Starter motor
B3	E107	B/3	: Front headlamp RH	D5	*E208	B/3	: Oil pressure sensor
B4	E108	GR/2	: Front side marker lamp RH				
B3	E111	GR/3	: Front turn signal/park lamp RH				
B4	E113	GR/4	: Cooling fan motor				
C2	E117	GR/2	: Front wheel sensor RH				
D2	*E118	B/2	: IPDM E/R (intelligent power distribution module engine room)				
D2	*E119	W/18	: IPDM E/R (intelligent power distribution module engine room)				
D2	E120	W/6	: IPDM E/R (intelligent power distribution module engine room)				
E2	*E121	BR/12	: IPDM E/R (intelligent power distribution module engine room)				
C2	*E122	W/12	: IPDM E/R (intelligent power distribution module engine room)				

*: 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 DIAGNOSIS in EC and AT sections.

HARNESS

Passenger Compartment



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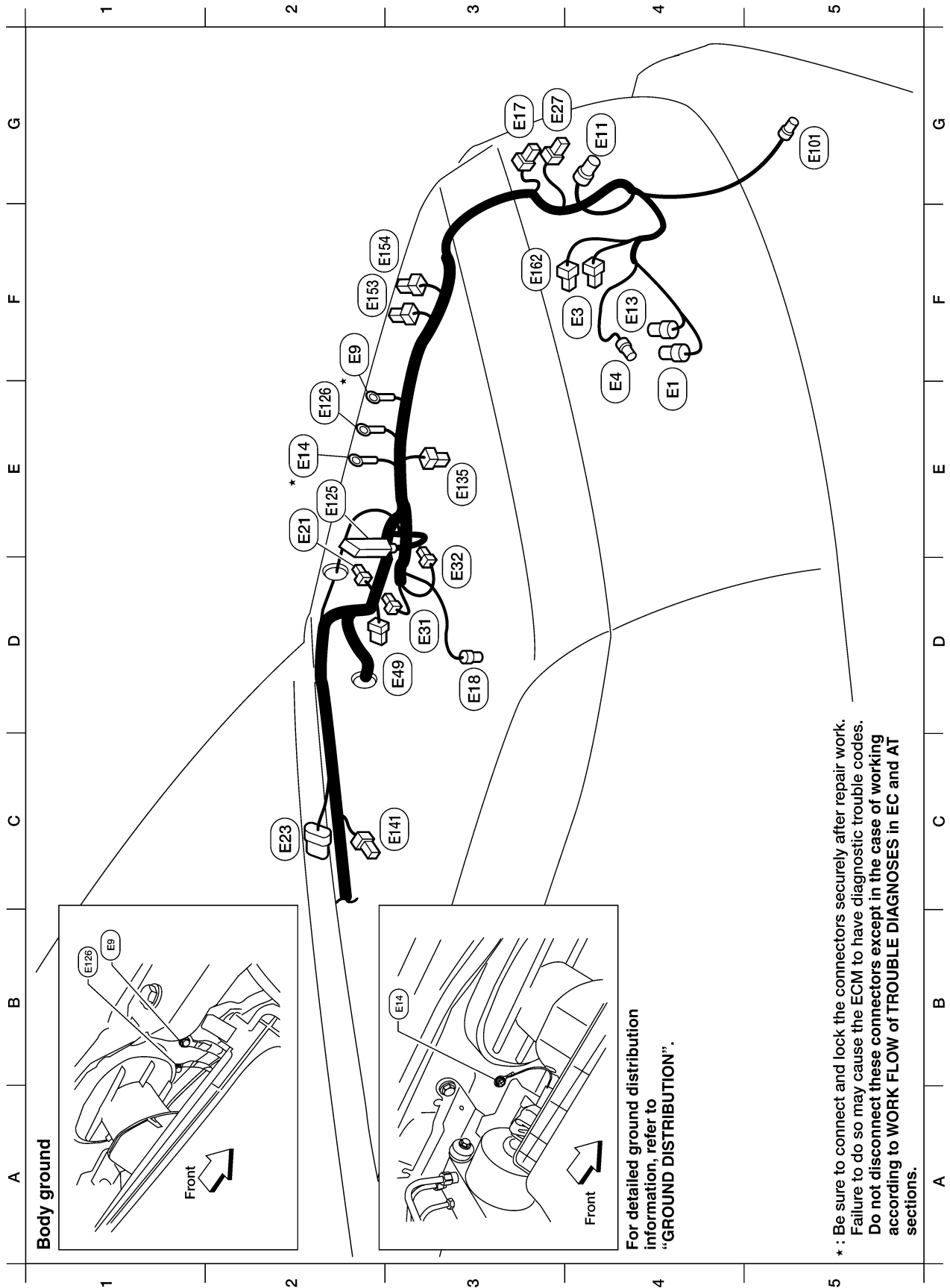
B4	E10	W/6	: To M6				
E4	*E20	B/6	: Accelerator pedal position (APP) sensor				
C4	E26	W/16	: To M91				
C4	E29	Y/4	: To M10				
C4	E34	W/8	: To B40				
C4	E36	W/2	: To B42				
D4	*E37	BR/2	: ASCD brake switch				
D4	E38	W/4	: Stop lamp switch				
C3	E53	B/1	: Park brake switch				
E4	E109	GR/2	: Pedal adjusting motor				
E3	E110	W/4	: 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 DIAGNOSIS in EC and AT sections.

HARNESS

ENGINE ROOM HARNESS (LH VIEW)

Engine Compartment



Refer to [PG-45, "ENGINE ROOM HARNESS \(RH VIEW\)"](#) for continuation of engine room harness.

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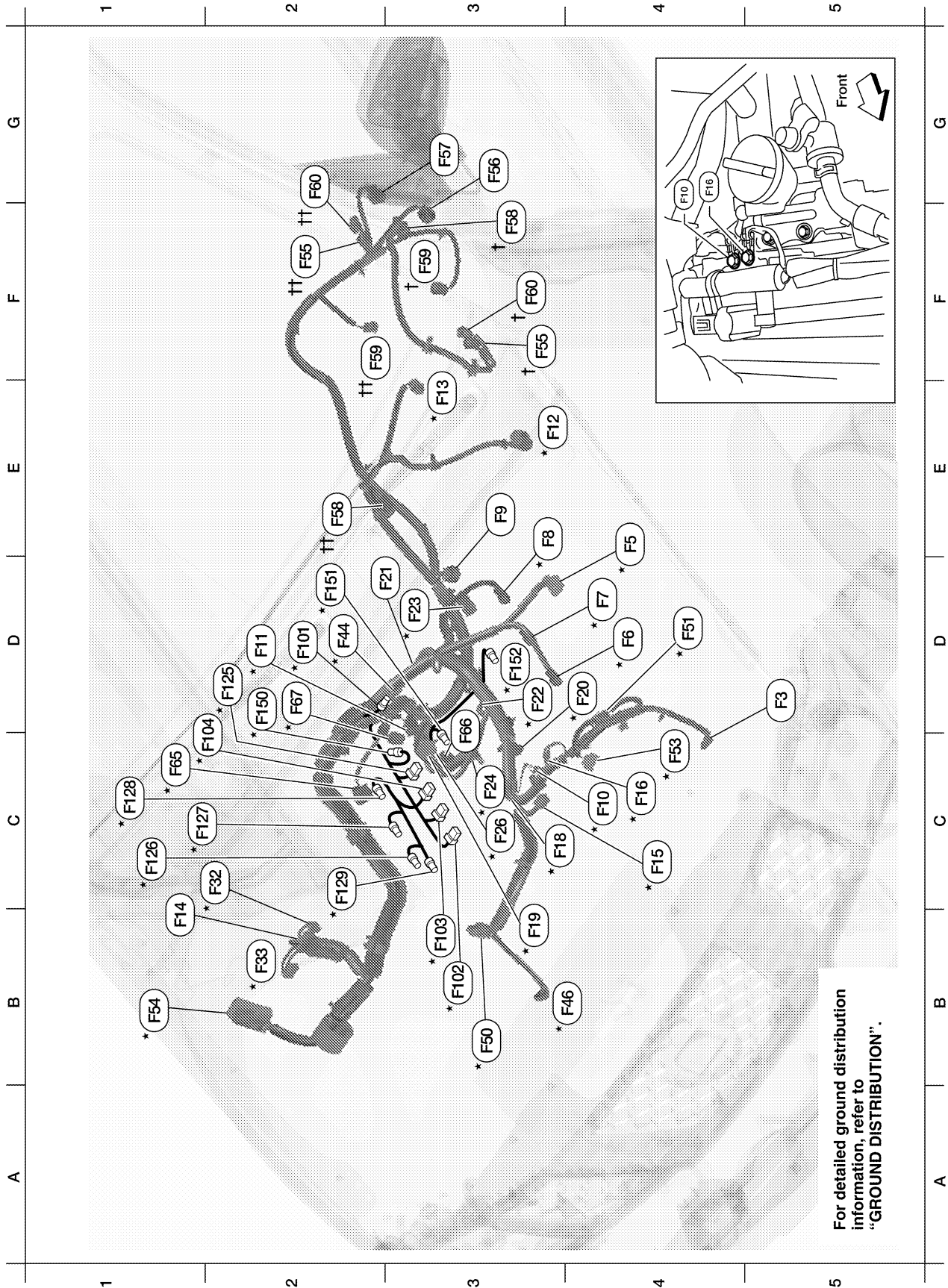
HARNESS

E4	E1	B/2	: Ambient sensor 1				
F4	E3	B/1	: Horn				
E4	E4	Y/2	: Crash zone sensor				
F2	*E9	—	: Body ground				
G4	E11	B/3	: Front headlamp LH				
F4	E13	GR/2	: Ambient sensor 2				
E2	*E14	—	: Body ground				
G3	E17	GR/2	: Front side marker lamp LH				
D3	E18	GR/2	: Front wheel sensor LH				
E2	E21	GR/2	: Brake fluid level switch				
C2	E23	GR/5	: Front wiper motor				
G3	E27	GR/3	: Front turn signal/park lamp LH				
D3	E31	B/3	: Front pressure sensor				
D3	E32	B/3	: Rear pressure sensor				
D3	E49	B/6	: Active booster				
G5	E101	B/2	: Front fog lamp LH				
E2	E125	B/47	: ABS actuator and electric unit (control unit)				
E2	E126	—	: Body ground				
E3	E135	GR/2	: Transfer dropping resistor				
C3	E141	BR/2	: Heater pump				
F2	E153	W/2	: Transfer motor relay (all-mode 4WD)				
F2	E154	W/2	: Transfer motor relay (all-mode 4WD)				
F3	E162	B/1	: Horn				

*: 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 DIAGNOSIS in EC and AT sections.

HARNESS

ENGINE CONTROL HARNESS



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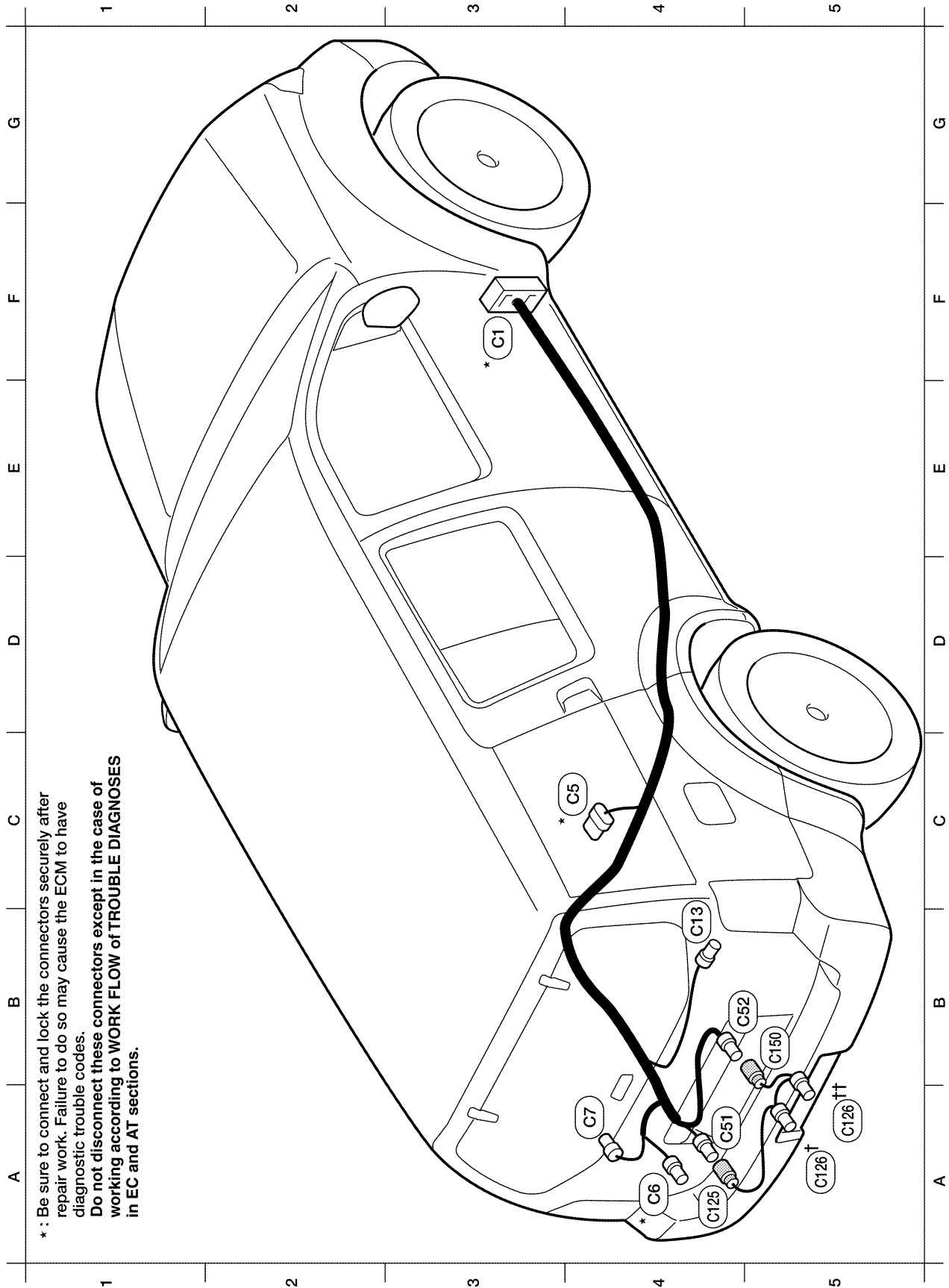
HARNESS

D5	F3	B/1	: A/C Compressor	E2	††F58	GR/6	: Transfer control device (all-mode 4WD)
E4	*F5	B/6	: Air fuel ratio (A/F) sensor 1 (bank 2)	F3	†F59	GR/2	: Wait detection switch (part time 4WD)
D4	*F6	GR/3	: Ignition coil No. 2 (with power transistor)	F2	††F59	B/2	: Wait detection switch (all mode 4WD)
D4	*F7	GR/3	: Ignition coil No. 4 (with power transistor)	G2	†F60	GR/2	: 4LO switch (part time 4WD)
E3	*F8	GR/3	: Ignition coil No. 6 (with power transistor)	C1	††F60	GR/2	: 4LO switch (all-mode 4WD)
E3	F9	G/10	: A/T assembly		*F65	B/6	: Air fuel ratio (A/F) sensor 1 (bank 1)
C4	*F10	—	: Engine ground	D3	*F66	GR/3	: Camshaft position sensor (PHASE) (bank 1)
D2	*F11	B/3	: Crankshaft position sensor (POS)	D2	*F67	L/4	: To F150
E3	*F12	G/4	: Heated oxygen sensor 2 (bank 2)	Injector sub-harness			
E3	*F13	L/4	: Heated oxygen sensor 2 (bank 1)	D2	*F101	GR/4	: To F44
B1	F14	W/24	: To E5	B3	*F102	GR/2	: Injector No. 1
C4	*F15	L/2	: EVAP canister purge volume control solenoid valve	B3	*F103	GR/2	: Injector No. 3
C4	*F16	—	: Engine ground	C1	*F104	GR/2	: Injector No. 5
C3	*F18	GR/2	: Injector No. 2	Ignition coil sub-harness			
B3	*F19	B/2	: VIAS control solenoid valve	D2	*F125	G/8	: To F26
D4	*F20	GR/2	: Injector No. 4	C1	*F126	GR/3	: Ignition coil No. 1 (with power transistor)
D2	*F21	GR/2	: Condenser-1	C1	*F127	GR/3	: Ignition coil No. 3 (with power transistor)
D3	*F22	GR/2	: Injector No. 6	C1	*F128	GR/3	: Ignition coil No. 5 (with power transistor)
D3	*F23	B/3	: Camshaft position sensor (PHASE) (bank 1)	C2	*F129	G/2	: Intake valve timing control solenoid valve (bank 1)
C3	*F24	GR/2	: Engine coolant temperature sensor	Knock sensor sub-harness			
C3	*F26	G/8	: To F125	D2	*F150	L/4	: To F67
C3	F27	B/1	: Starter motor	D2	*F151	B/2	: Knock sensor (bank 1)
C2	*F32	W/16	: To E2	D3	*F152	B/2	: Knock sensor (bank 2)
B2	*F33	W/16	: To E19				
B4	F39	—	: Fusible link box (battery)				
D2	*F44	GR/4	: To F101				
B4	*F46	B/3	: Power steering pressure sensor				
B3	*F50	B/6	: Electric throttle control actuator				
D4	*F51	G/2	: Intake valve timing control solenoid valve (bank 2)				
C4	*F53	B/6	: Mass air flow sensor				
B1	*F54	B/81	: ECM				
F3	†F55	B/2	: ATP switch (all-mode 4WD)				
F2	††F55	B/2	: ATP switch (part time 4WD)				
G3	F56	B/8	: Terminal cord assembly (all-mode 4WD)				
G3	F57	B/2	: Transfer motor (all-mode 4WD)				
F3	†F58	B/8	: Transfer control device (part time 4WD)				

*: 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 DIAGNOSIS in EC and AT sections.

HARNESS

CHASSIS HARNESS



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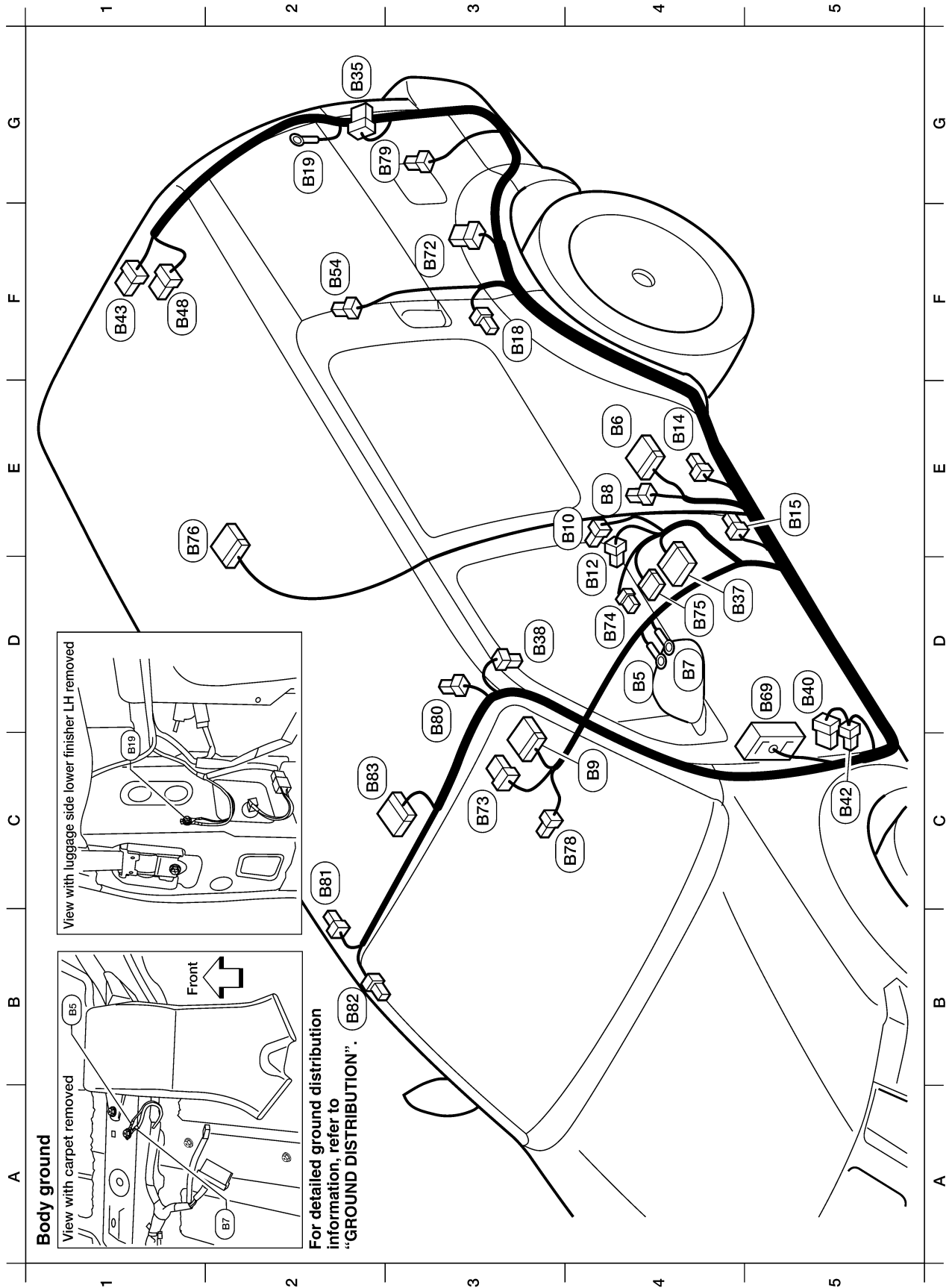
HARNESS

F3	*C1	SMJ	: To E41				
C4	*C5	GR/5	: Fuel level sensor unit and fuel pump				
A4	*C6	B/2	: EVAP canister vent control valve				
B4	C13	GR/4	: Rear wheel sensor assembly				
A4	C51	GR/6	: To C125				
B4	C52	B/2	: To C150				
Trailer sub-harness							
A4	C125	GR/6	: To C51				
A5	†C126	B/7	: Trailer (7-pin)				
A5	††C126	B/4	: Trailer (4-pin)				
B5	C150	B/2	: To C52				

*: 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 DIAGNOSIS in EC and AT sections.

HARNESS

BODY HARNESS



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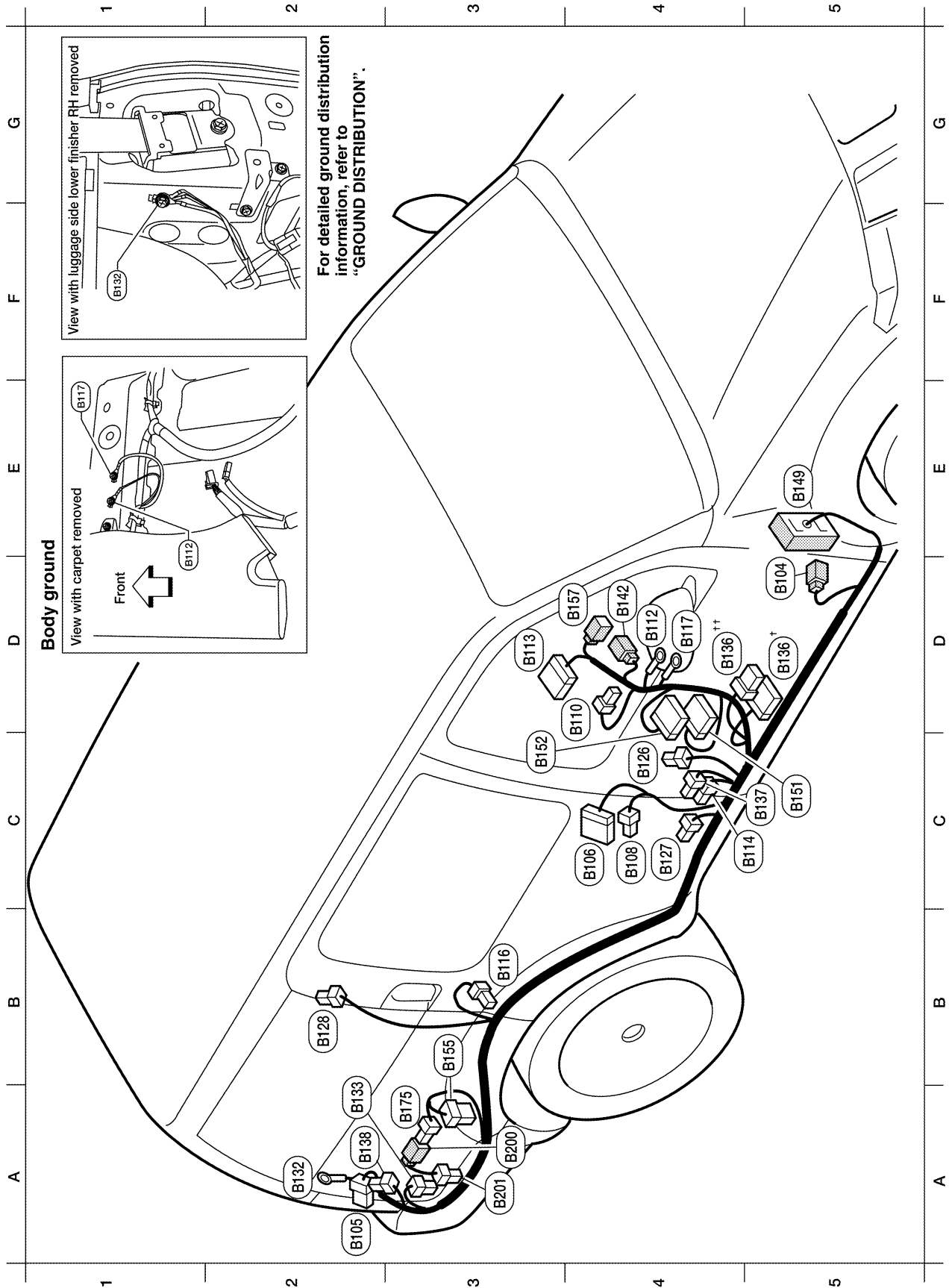
LKIA0621E

HARNESSES

D4	B5	—	: Body ground (LH satellite sensor)				
E4	B6	W/12	: To D201				
D4	B7	—	: Body ground				
E4	B8	W/3	: Front door switch LH				
C4	B9	Y/12	: Air bag diagnosis sensor unit				
E4	B10	Y/2	: Front LH side air bag module				
D4	B12	W/3	: Seat belt buckle switch LH				
E4	B14	Y/2	: Front LH seat belt pre-tensioner				
E5	B15	Y/2	: LH side air bag (satellite) sensor				
F3	B18	W/3	: Rear door switch LH				
G2	B19	—	: Body ground				
G2	B35	W/6	: Rear combination lamp LH				
D5	B37	W/16	: To P1				
D3	B38	Y/2	: LH side front curtain air bag module				
D5	B40	W/8	: To E34				
C5	B42	W/2	: To E36				
F1	B43	W/8	: To D401				
F1	B48	W/6	: To D402				
F2	B54	Y/2	: LH side rear curtain air bag module				
D5	B69	SMJ	: To M40				
F3	B72	W/8	: Subwoofer (with BOSE audio system)				
C3	B73	B/6	: Yaw rate/side/decel G sensor				
D4	B74	GR/8	: BOSE speaker amp.				
D4	B75	B/24	: BOSE speaker amp.				
E1	B76	W/16	: Video monitor				
C4	B78	Y/2	: To B157				
G3	B79	W/4	: Fuel lid lock actuator				
D3	B80	W/2	: Vanity lamp LH				
C2	B81	W/2	: Vanity lamp RH				
B2	B82	Y/2	: RH side front curtain air bag module				
C3	B83	B/10	: Sunroof motor assembly				

HARNESS

BODY NO. 2 HARNESS



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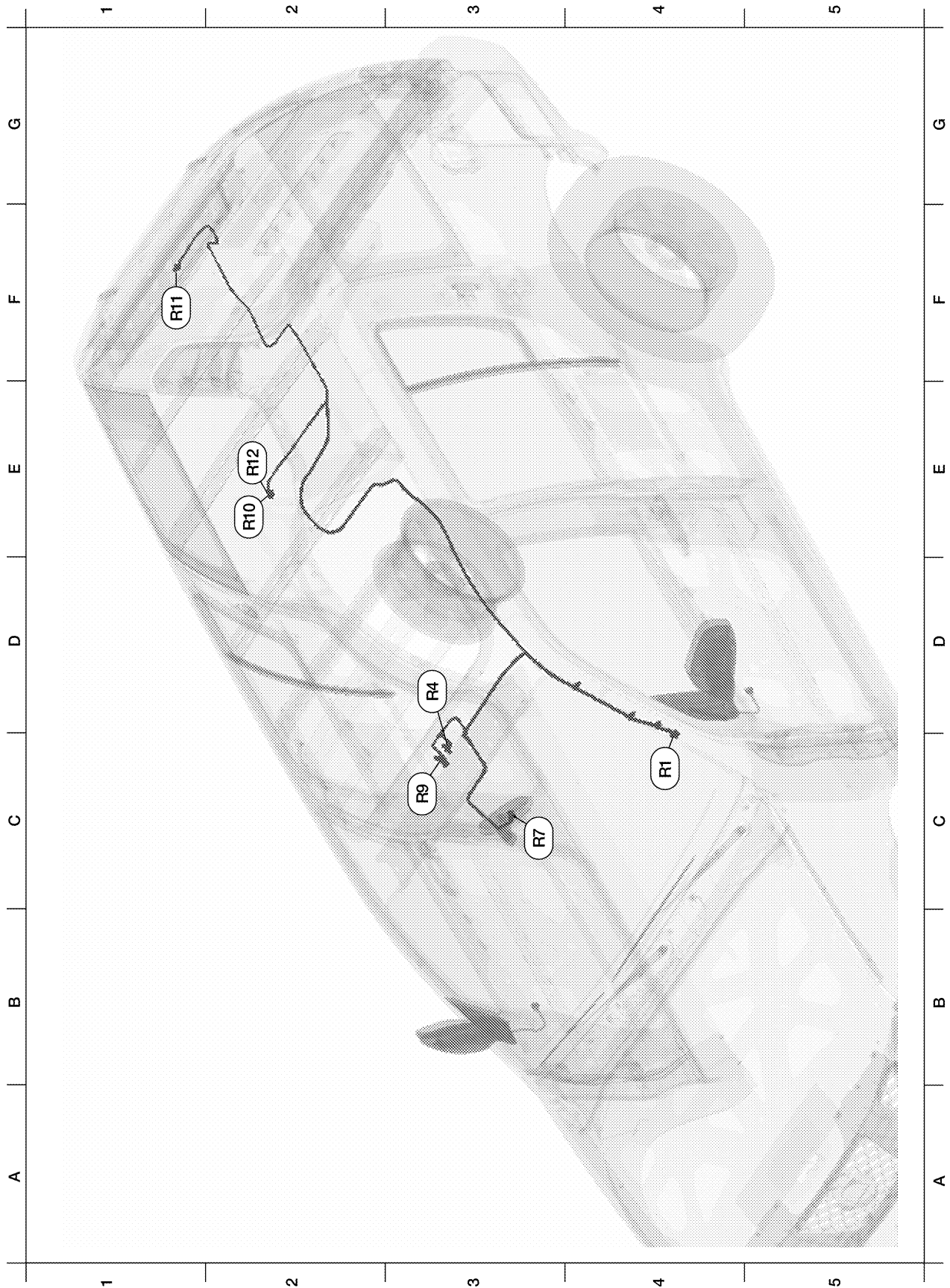
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HARNESSES

D5	B104	W/2	: To E51				
A2	B105	W/6	: Rear combination lamp RH				
C4	B106	W/12	: To D301				
C4	B108	W/3	: Front door switch RH				
D4	B110	W/3	: Seat belt buckle switch RH				
D4	B112	—	: Body ground (RH satellite sensor)				
D3	B113	Y/12	: Air bag diagnosis sensor unit				
C5	B114	Y/2	: RH side air bag (satellite) sensor				
B3	B116	W/3	: Rear door switch RH				
D4	B117	—	: Body ground				
C4	B126	Y/2	: Front RH side air bag module				
C4	B127	Y/2	: Front RH seat belt pre-tensioner				
B2	B128	Y/2	: RH side rear curtain air bag module				
A2	B132	—	: Body ground				
A2	B133	W/4	: Rear blower motor resistor				
D5	†B136	W/16	: To P151 (with power seat)				
D4	††B136	W/8	: To P151 (without power seat)				
C5	B137	B/3	: Belt tension sensor				
A2	B138	B/2	: Rear cargo power socket				
D4	B142	W/4	: To M83				
E5	B149	SMJ	: To M36				
C5	B151	W/24	: NAVI control unit (with NAVI)				
C3	B152	GR/24	: NAVI control unit (with NAVI)				
B3	B155	B/6	: Air mix door motor (rear)				
D4	B157	Y/2	: To B78				
A3	B175	W/2	: To B200				
Rear blower motor sub-harness							
A3	B200	W/2	: To B175				
A3	B201	B/2	: Rear blower motor				

HARNESS

ROOM LAMP HARNESS



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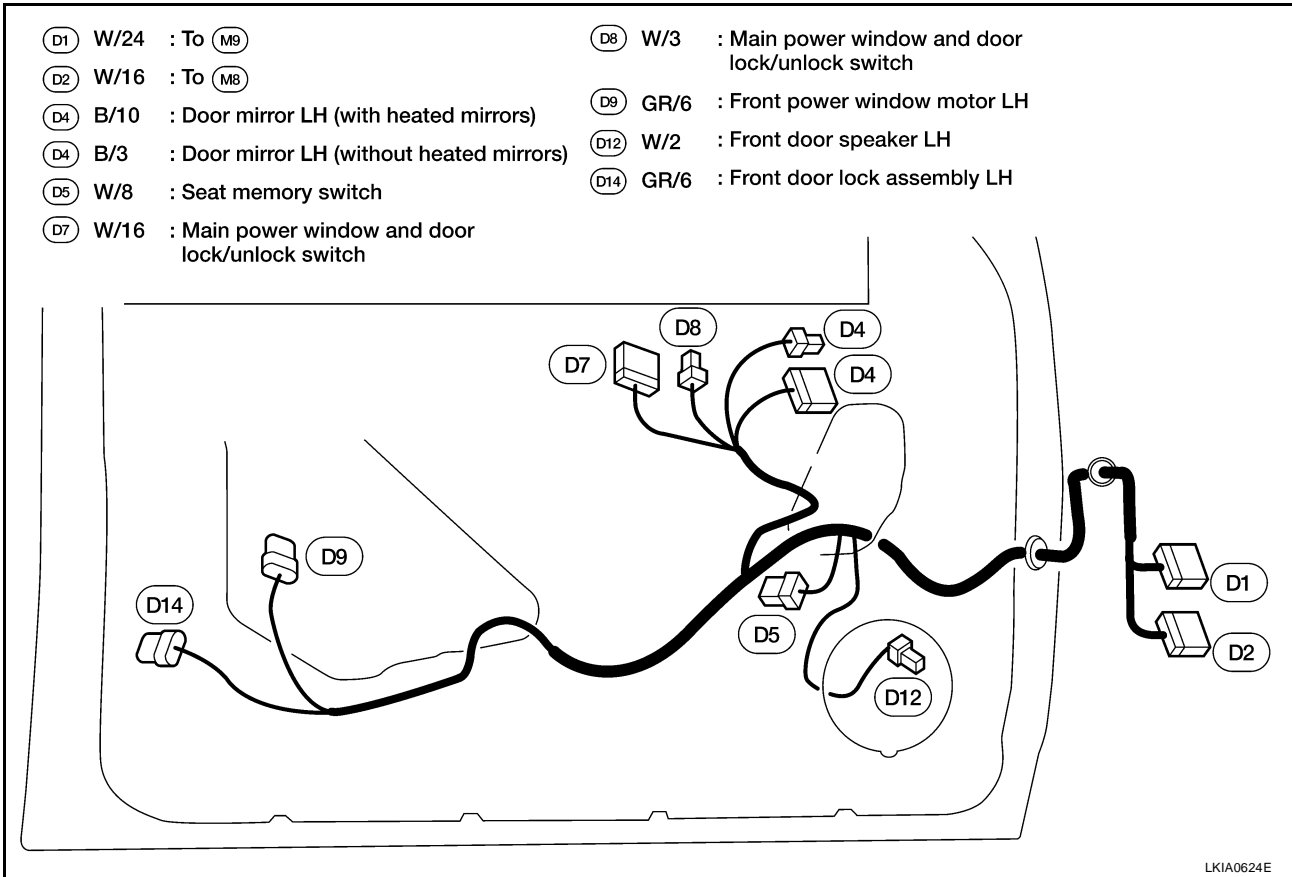
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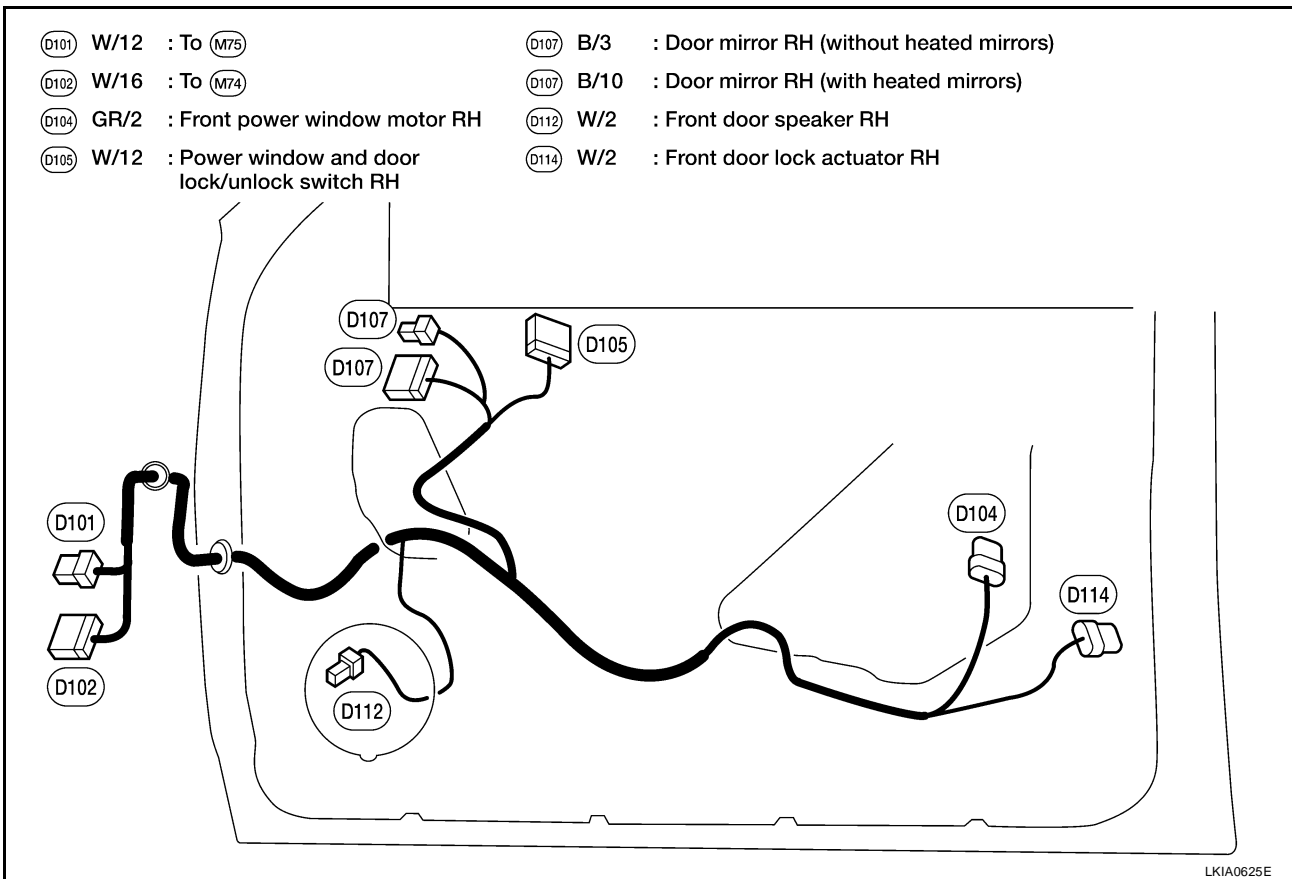
C4	R1	W/12	: To M1				
D3	R4	W/3	: Sunroof switch				
C3	R7	W/7	: Auto anti-dazzling inside mirror (without HOMELINK® universal transceiver)				
C3	R7	B/10	: Auto day/night inside mirror (with- HOMELINK® universal transceiver)				
C3	R9	W/3	: Front room/map lamp assembly				
E2	R10	W/3	: Personal lamp 2nd row				
F1	R11	W/2	: Cargo lamp				
E2	R12	W/3	: Room lamp 2nd row				

HARNESS

FRONT DOOR LH HARNESS



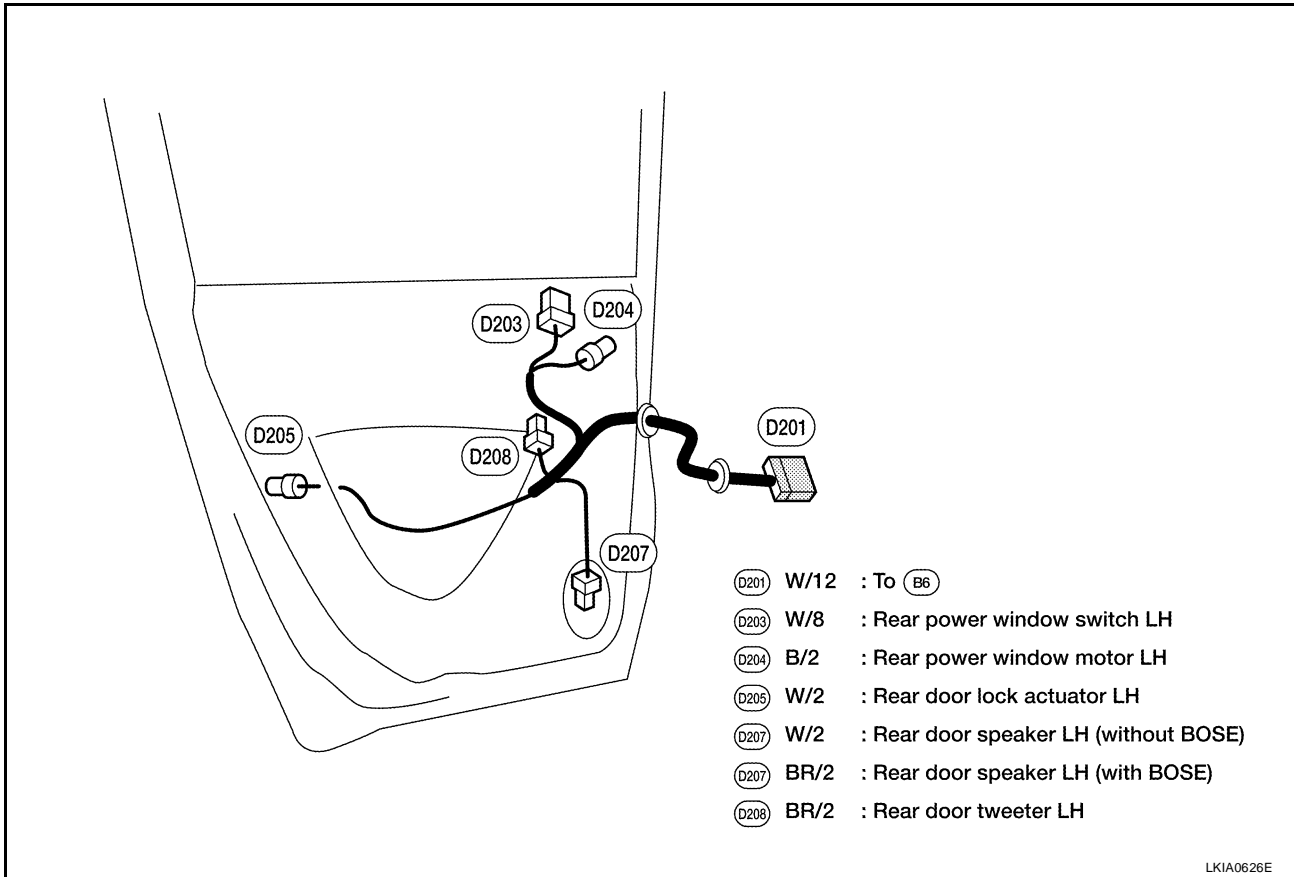
FRONT DOOR RH HARNESS



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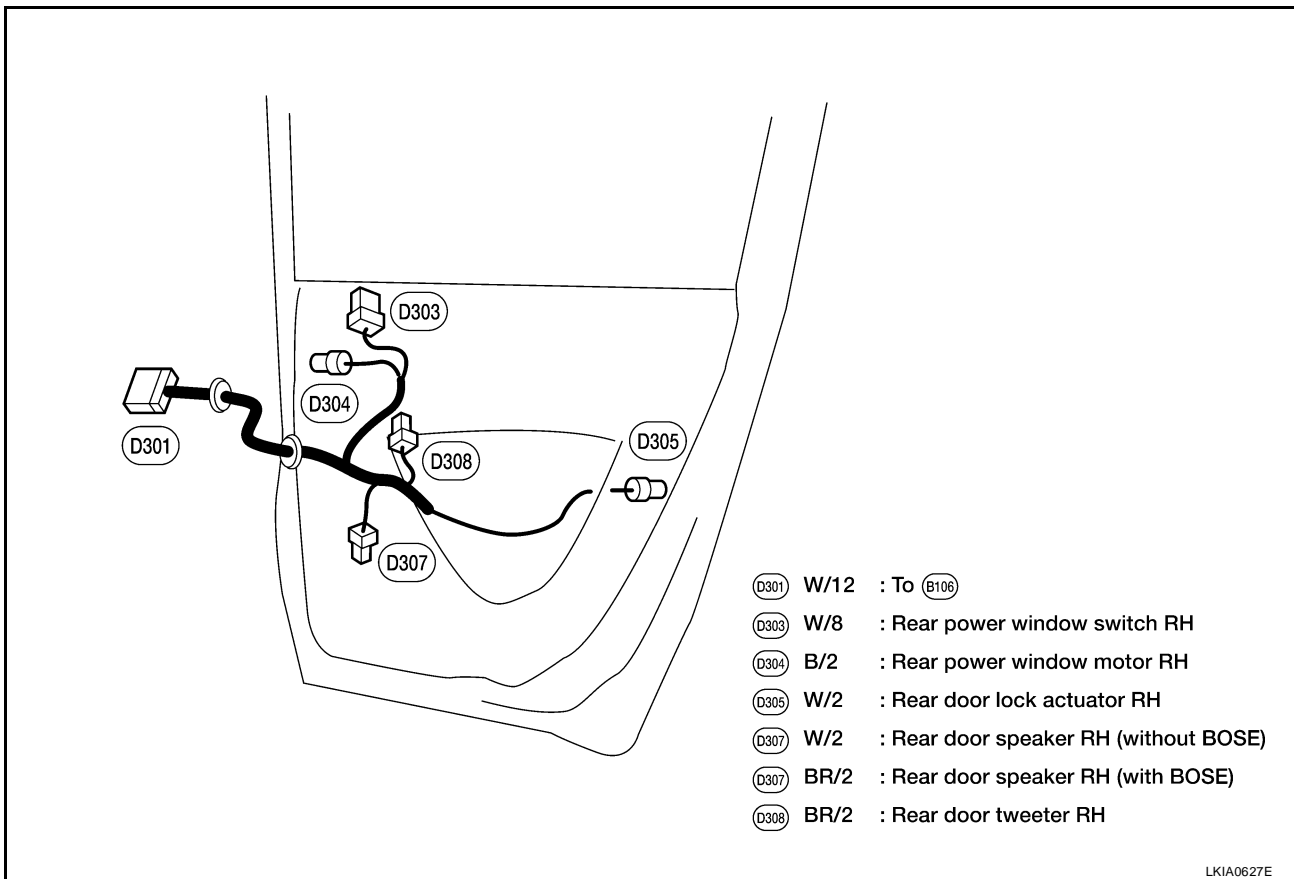
HARNESS

REAR DOOR LH HARNESS



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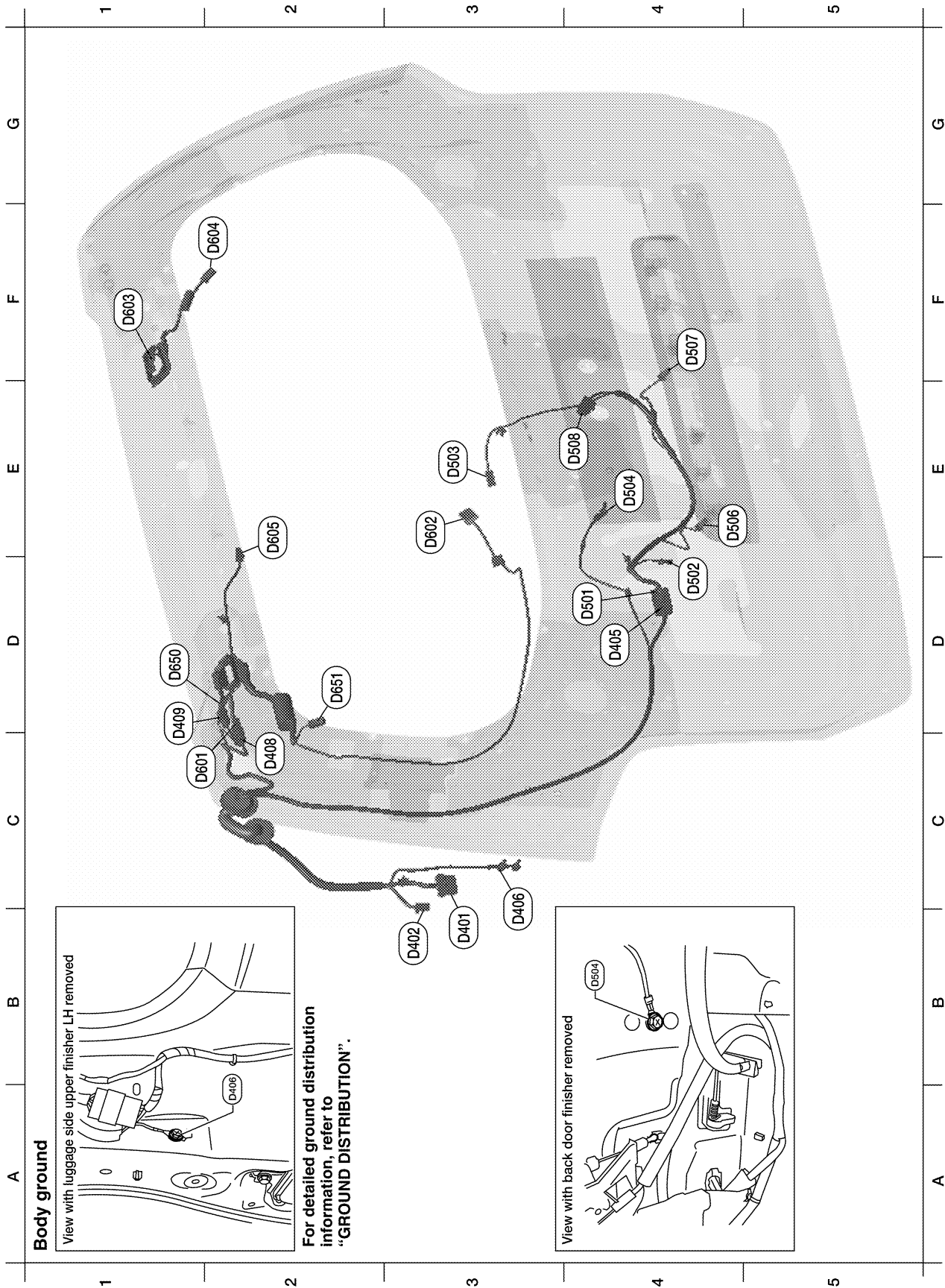
REAR DOOR RH HARNESS



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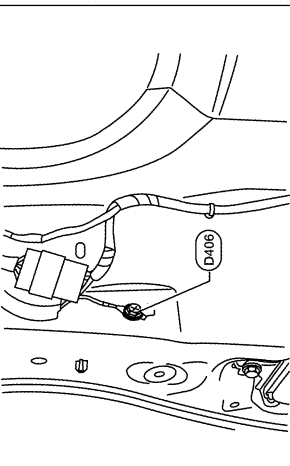
HARNESS

BACK DOOR HARNESS



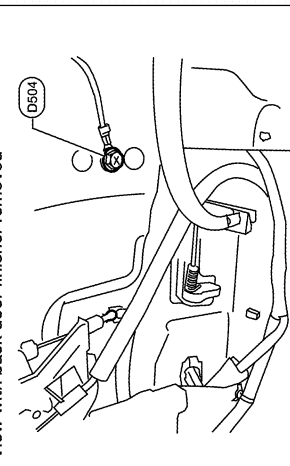
Body ground

View with luggage side upper finisher LH removed



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

View with back door finisher removed



PG

HARNESS

Back door No. 2 harness							
B3	D401	W/8	: To B43				
B3	D402	W/6	: To B48				
D4	D405	W/8	: To D501				
B3	D406	—	: Body ground				
C2	D408	W/4	: To D601				
D1	D409	W/1	: To D650				
Back door harness							
D4	D501	W/8	: To D405				
D4	D502	W/3	: Back door switch				
E3	D503	B/1	: Glass hatch ajar switch				
E4	D504	—	: Body ground				
E4	D506	W/2	: License plate lamp LH				
F4	D507	W/2	: License plate lamp RH				
E4	D508	W/4	: Back door lock actuator				
Rear window sub-harness							
C1	D601	W/4	: To D405				
E3	D602	W/4	: Rear wiper motor				
F1	D603	—	: Body ground (defogger)				
F2	D604	B/1	: Rear window defogger				
E2	D605	W/2	: High mounted stop lamp				
Rear window defogger sub-harness							
D1	D650	W/1	: To D409				
D2	D651	B/1	: Rear window defogger				

HARNESSES

Wiring Diagram Codes (Cell Codes)

EKS009XM

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
AF1B1	EC	Air Fuel Ratio (A/F) Sensor 1 Bank 1
AF1B2	EC	Air Fuel Ratio (A/F) Sensor 1 Bank 2
AF1HB1	EC	Air Fuel Ratio (A/F) Sensor 1 Heater Bank 1
AF1HB2	EC	Air Fuel Ratio (A/F) Sensor 1 Heater 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
ASCB0F	EC	ASCD Brake Switch
ASCIND	EC	ASCD Indicator
AT/IND	DI	A/T Indicator Lamp
AUDIO	AV	Audio
AUT/DP	SE	Automatic Drive Positioner
AUTO/L	LT	Auto Light Control
B/COMP	DI	Combination Meter Board Computer
BACK/L	LT	Back-up Lamp
BRK/SW	EC	Brake Switch
CAN	AT	CAN Communication Line
CAN	EC	CAN Communication Line
CAN	LAN	CAN System
CHARGE	SC	Charging System
CHIME	DI	Warning Chime
COOL/F	EC	Cooling Fan Control
COMBSW	LT	Combination Switch
COMM	AV	Audio Visual Communication System
COMPAS	DI	Compass
CUR/SE	EC	Battery Current Sensor
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
FTS	AT	A/T Fluid Temperature Sensor
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

HARNESSES

HSEAT	SE	Heated Seat
IMIRR	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, and Personal Lamps
IVCB1	EC	Intake Valve Timing Control Solenoid Valve Bank 1
IVCB2	EC	Intake Valve Timing Control Solenoid Valve Bank 2
KEYLES	BL	Remote Keyless Entry System
KS	EC	Knock Sensor
MAFS	EC	Mass Air Flow Sensor
MAIN	AT	Main Power Supply and Ground Circuit
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
NONDTC	AT	Non-Detective Items
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
PHSB1	EC	Camshaft Position Sensor (PHASE) (Bank 1)
PHSB2	EC	Camshaft Position Sensor (PHASE) (Bank 1)
PNP/SW	AT	Park/Neutral Position Switch
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
SROOF	RF	Sunroof
SRS	SRS	Supplemental Restraint System
STSIG	AT	Start Signal Circuit
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

HARNESSES

TURN	LT	Turn Signal and Hazard Warning Lamps	
VDC	BRC	Vehicle Dynamic Control System	A
VEHSEC	BL	Vehicle security (theft warning) system	
VENT/V	EC	EVAP Canister Vent Control Valve	
VIAS	EC	Variable Air Induction Control System	B
VIAS/V	EC	Variable Air Induction Control System Valve	
VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)	C
W/ANT	AV	Audio Antenna	
WARN	DI	Warning Lamps	
WINDOW	GW	Power Window	D
WIP/R	WW	Rear Wiper and Washer	
WIPER	WW	Front Wiper and Washer	

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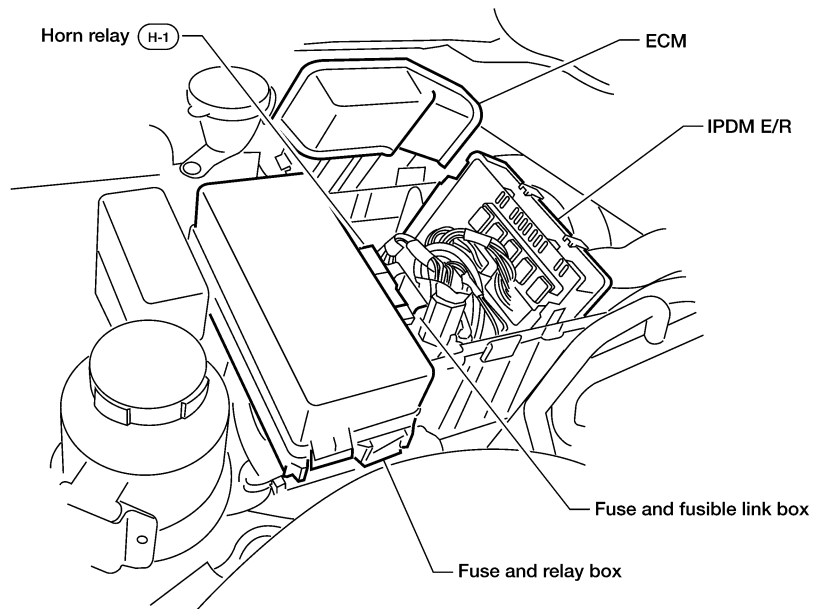
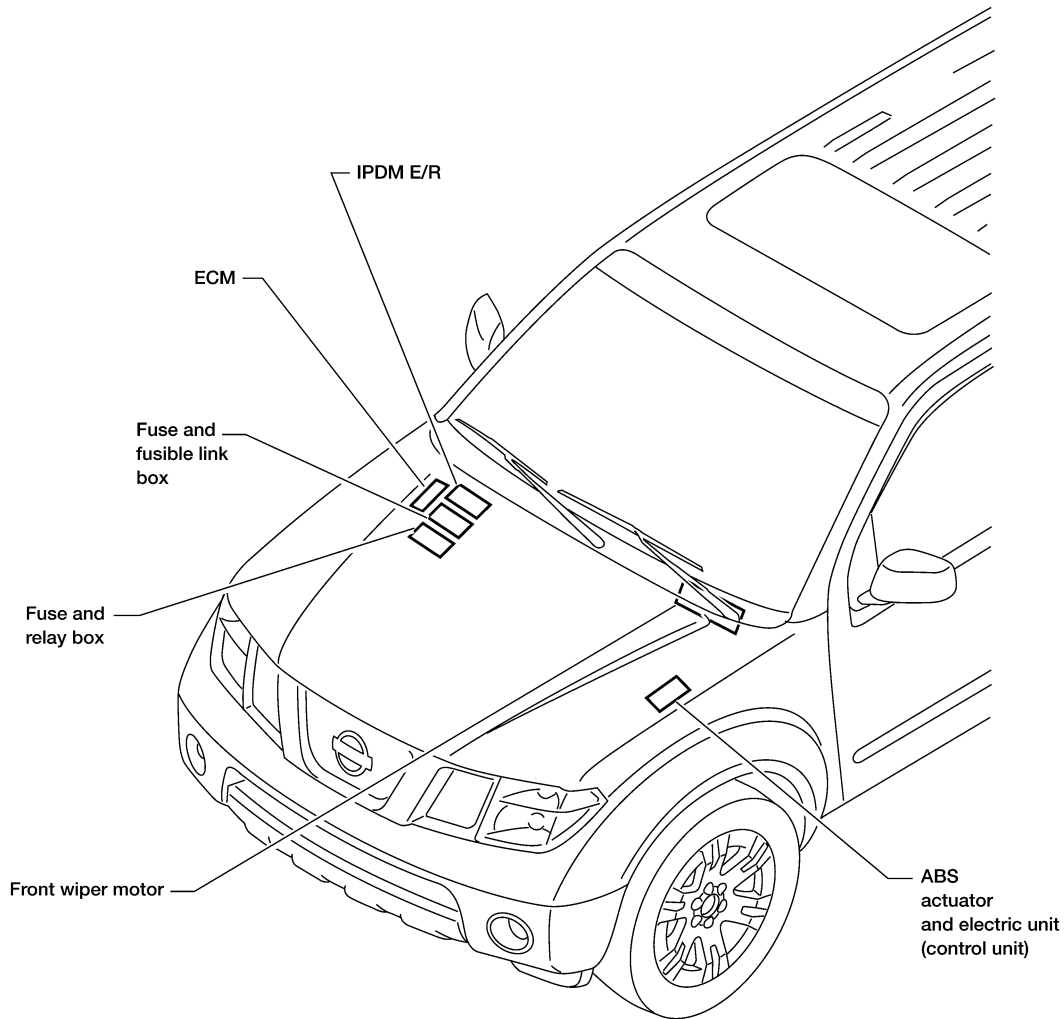
ELECTRICAL UNITS LOCATION

PF2:25230

EKS009XN

ELECTRICAL UNITS LOCATION

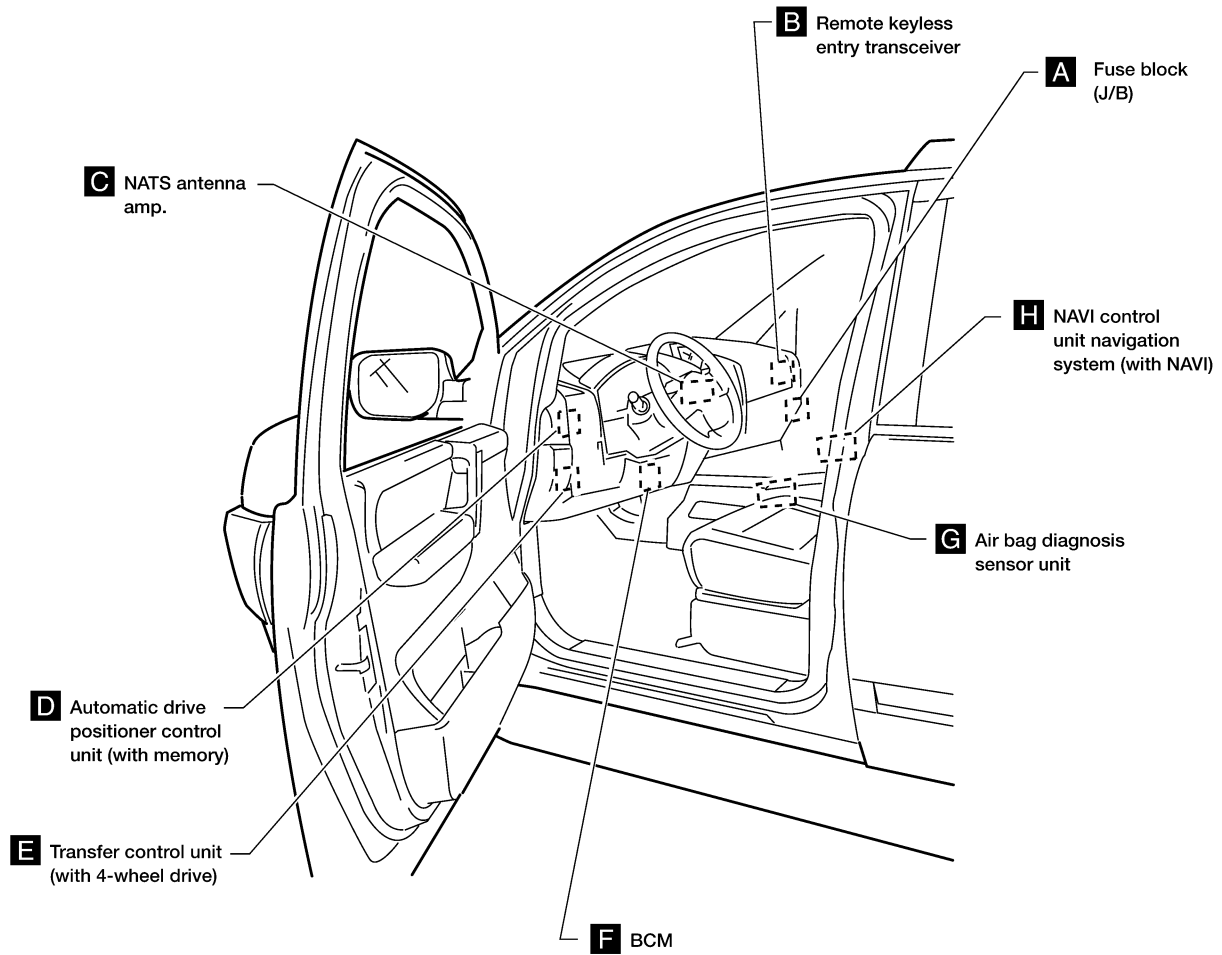
Electrical Units Location ENGINE COMPARTMENT



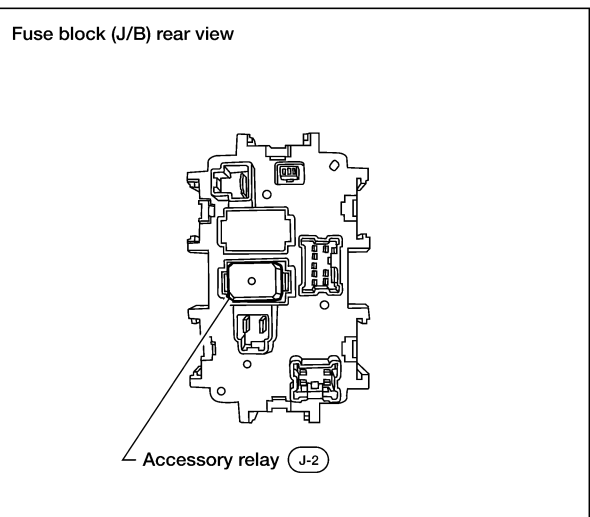
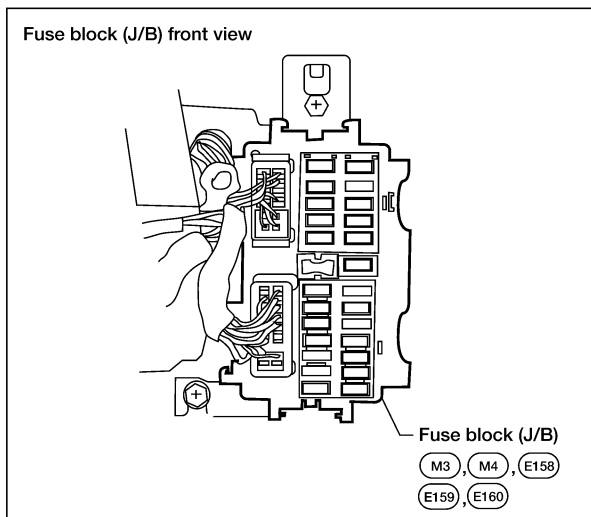
LKIA0629E

ELECTRICAL UNITS LOCATION

PASSENGER COMPARTMENT

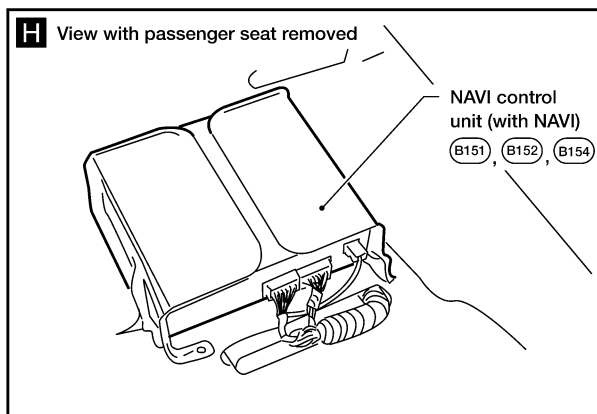
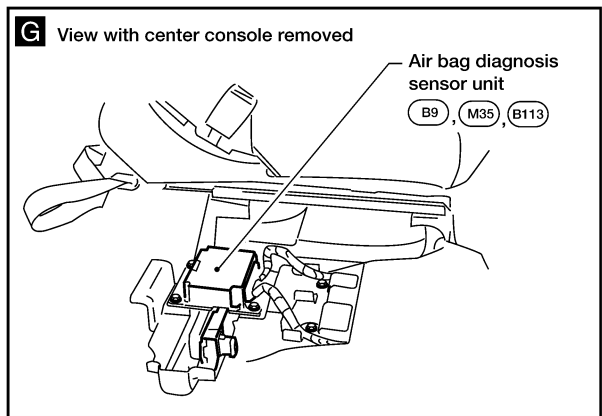
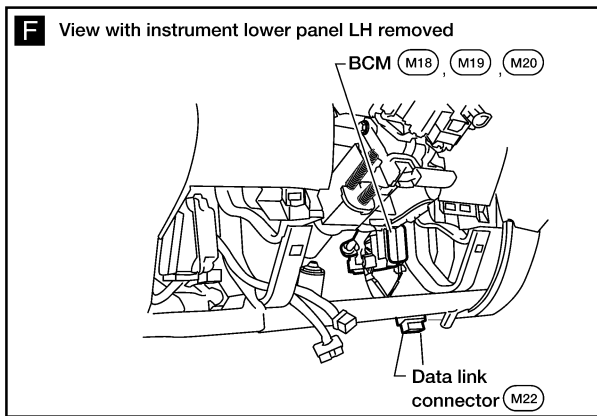
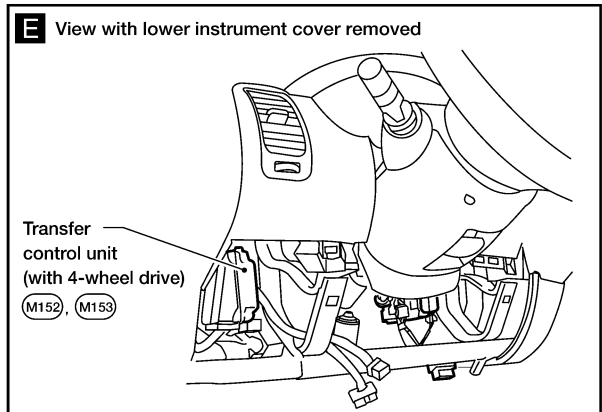
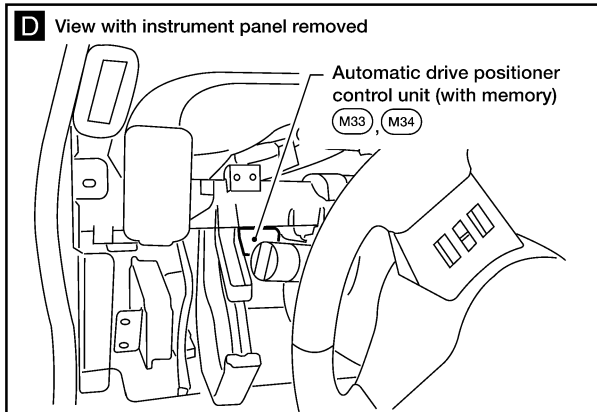
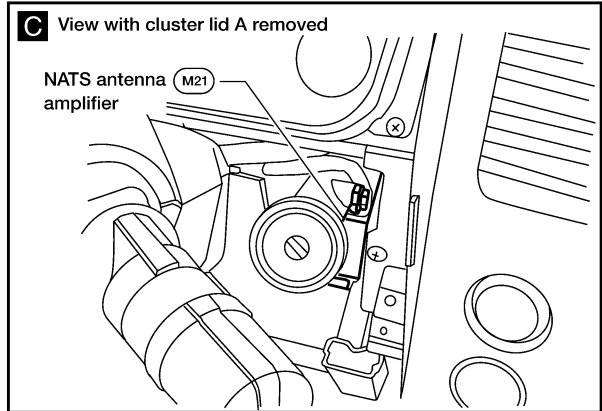
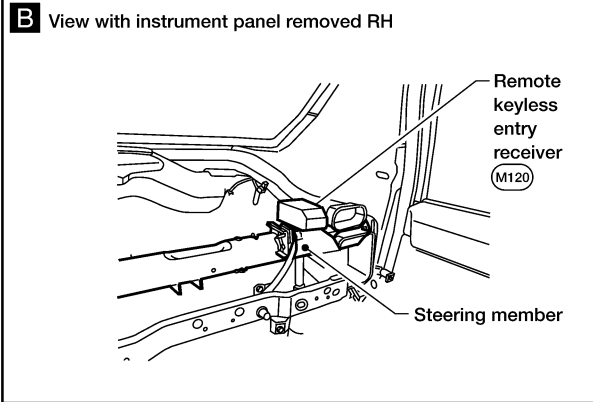


A Instrument panel side RH



WKIA5092E

ELECTRICAL UNITS LOCATION



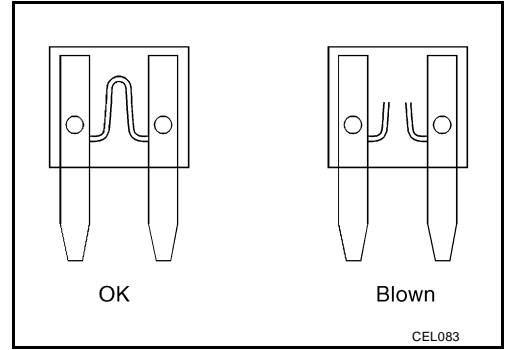
WKIA5093E

ELECTRICAL UNITS LOCATION

Fuse

EKS009XO

- 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

EKS009XP

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.

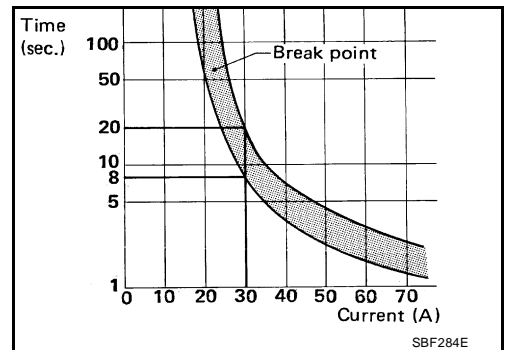
Circuit Breaker (Built Into BCM)

EKS009XQ

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

A circuit breaker is used for the following systems:

- Power windows
- Power sunroof



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HARNESS CONNECTOR

PFP:B4341

HARNESS CONNECTOR

Description

HARNESS CONNECTOR (TAB-LOCKING TYPE)

EKS009XR

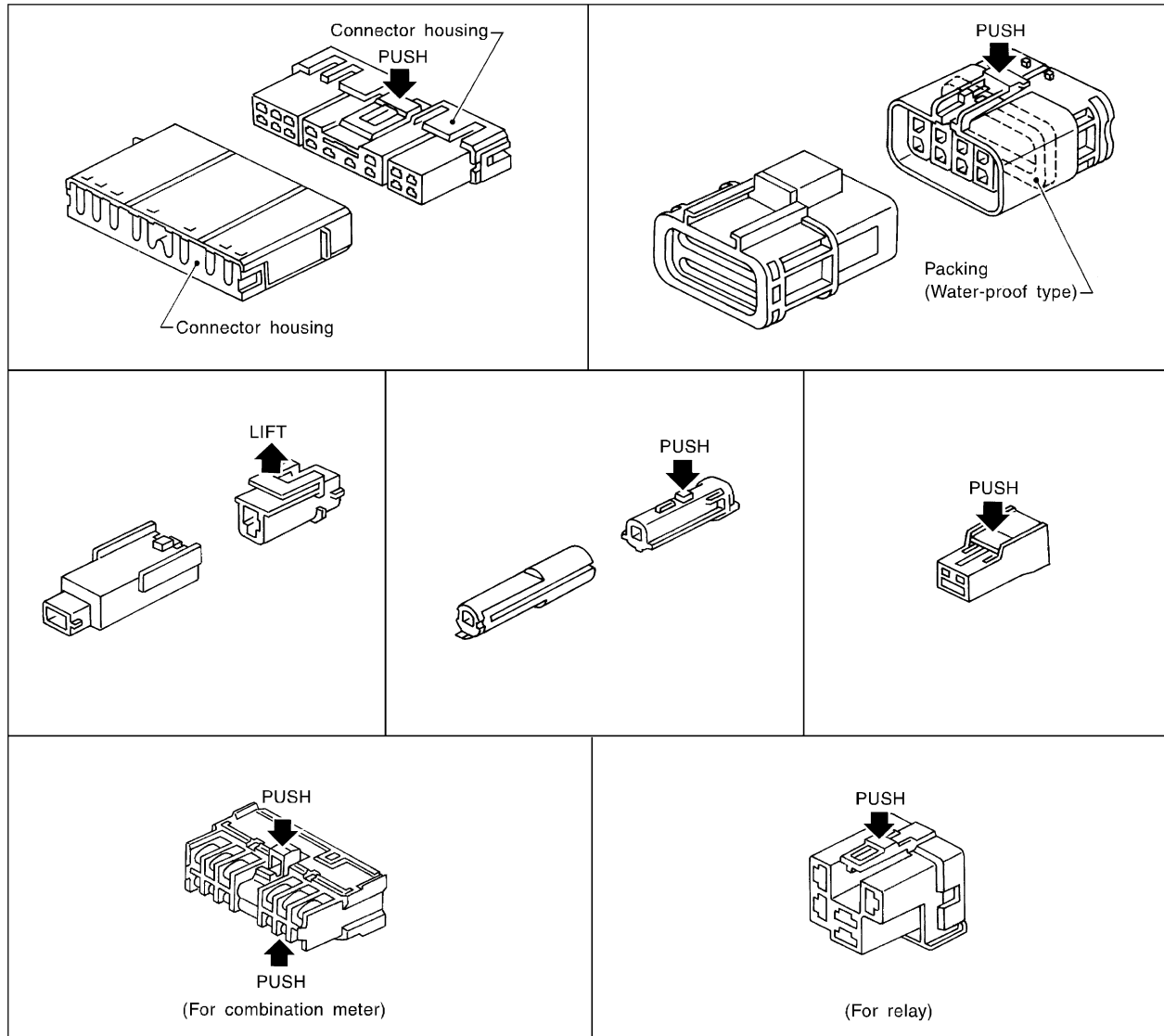
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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

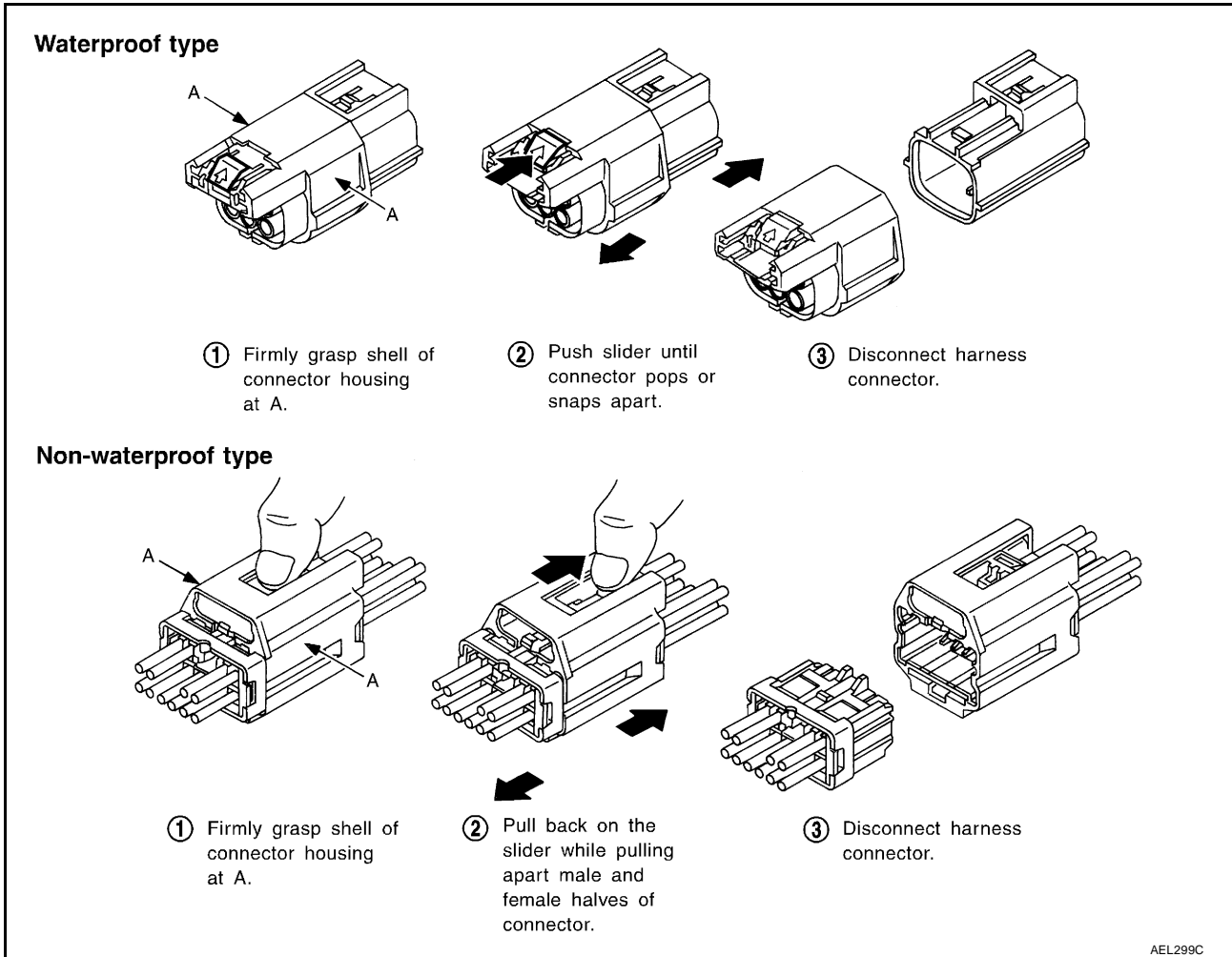
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

- 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]



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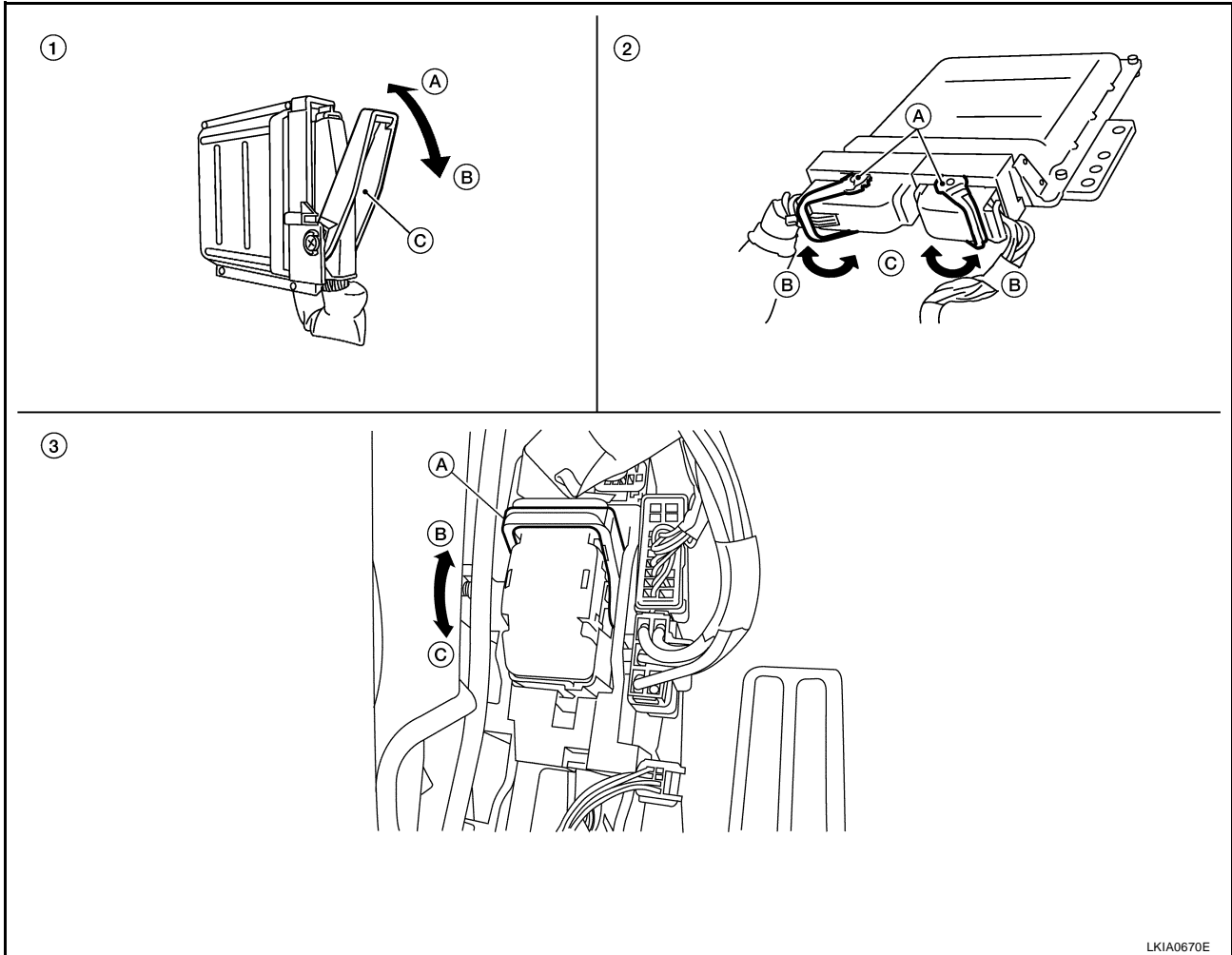
HARNES CONNECTOR

HARNES CONNECTOR (LEVER LOCKING TYPE)

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

CAUTION:

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



LKIA0670E

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

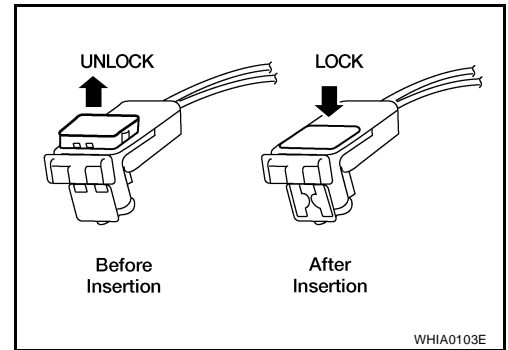
HARNES CONNECTOR

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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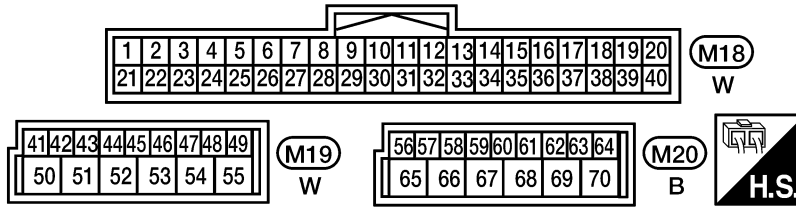
ELECTRICAL UNITS

PF2:23710

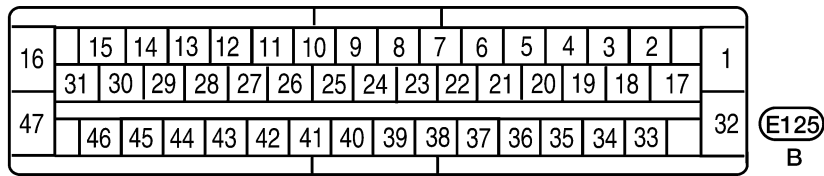
EKS009XS

ELECTRICAL UNITS Terminal Arrangement

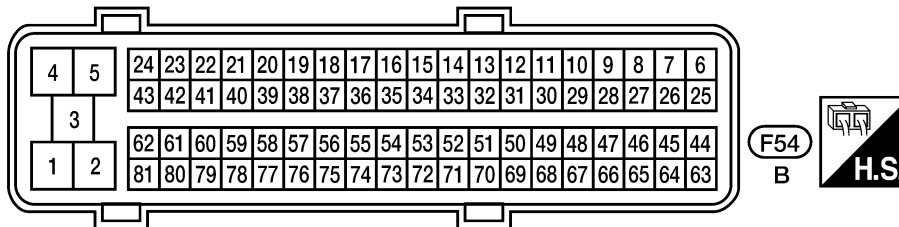
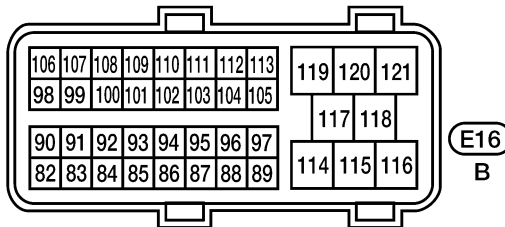
BCM (BODY CONTROL MODULE)



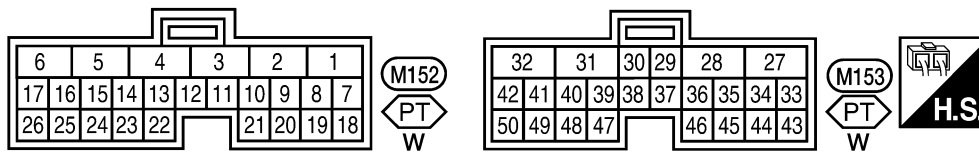
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



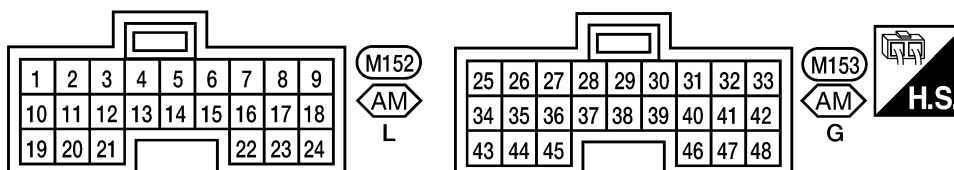
ECM



TRANSFER CONTROL UNIT



TRANSFER CONTROL UNIT



(AM): ALL-MODE 4WD SYSTEM

(PT): PART TIME 4WD SYSTEM

WKIA4178E

STANDARDIZED RELAY

PFP:25230

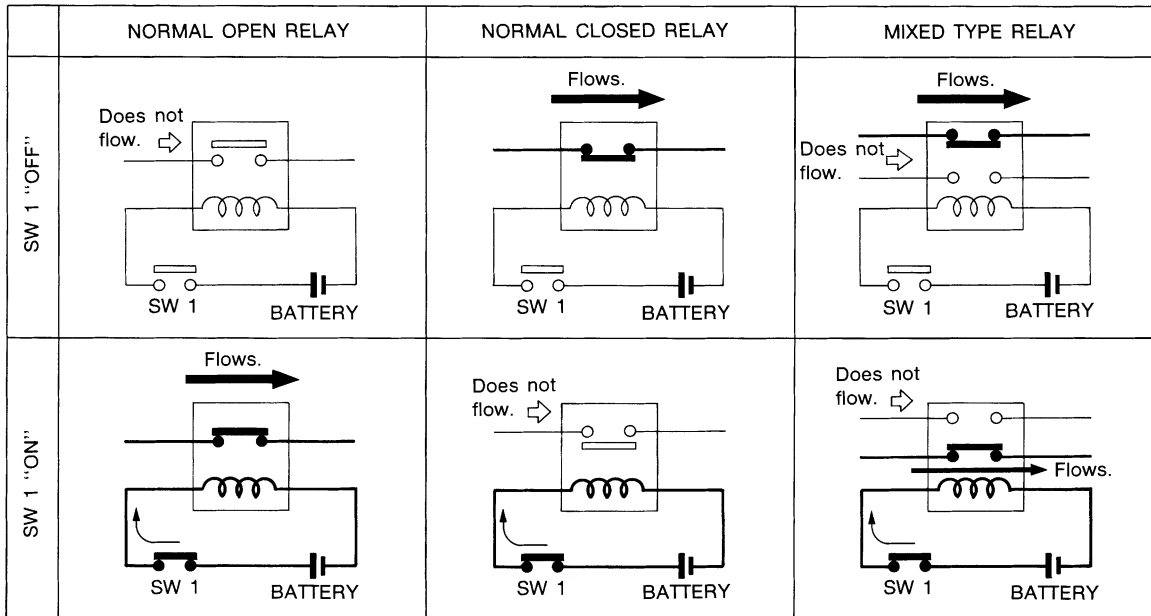
EKS009XT

STANDARDIZED RELAY

Description

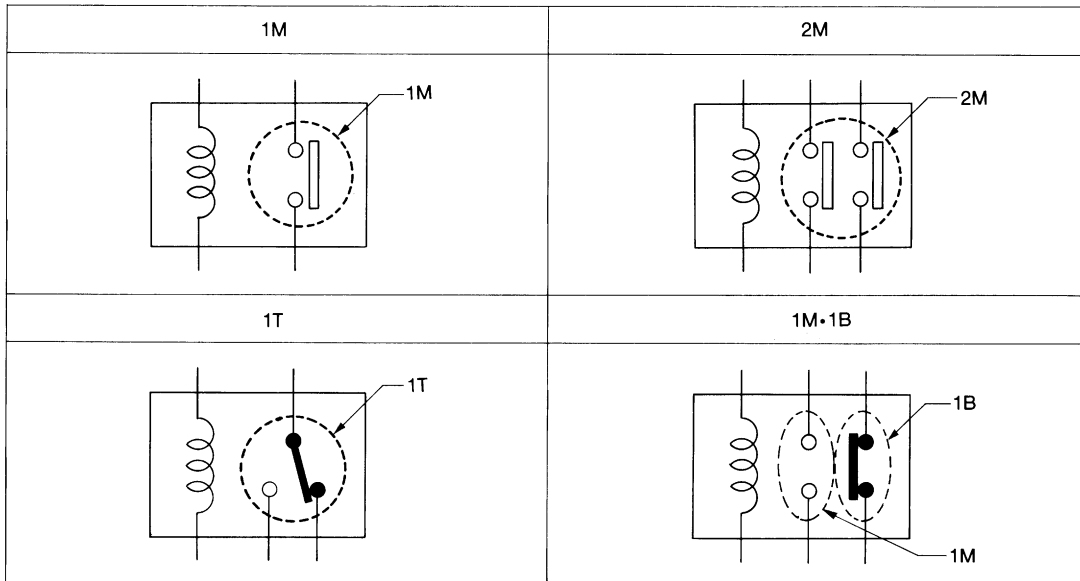
NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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



SEL881H

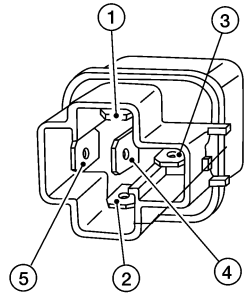
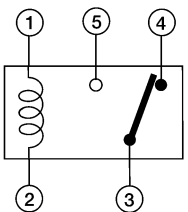
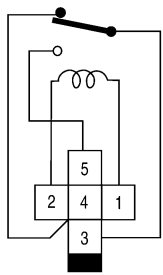
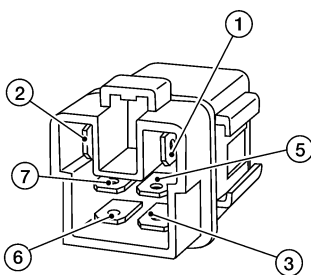
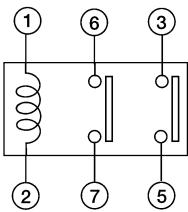
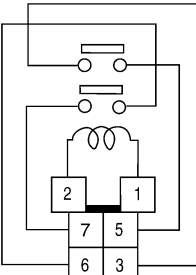
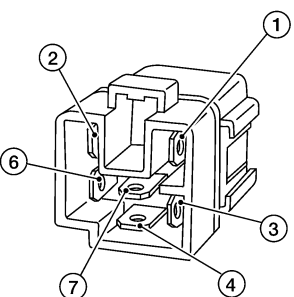
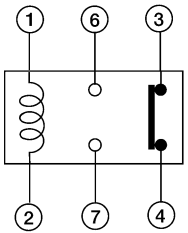
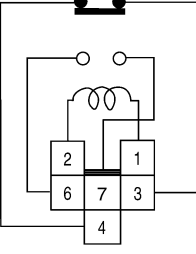
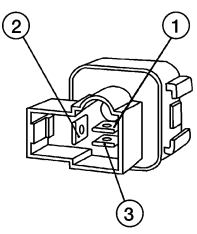
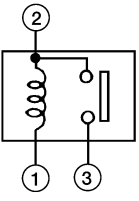
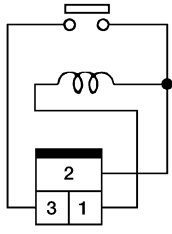
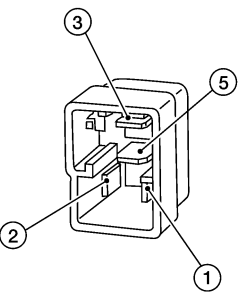
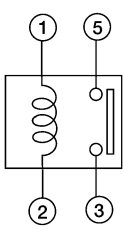
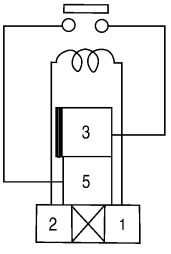
TYPE OF STANDARDIZED RELAYS



SEL882H

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)

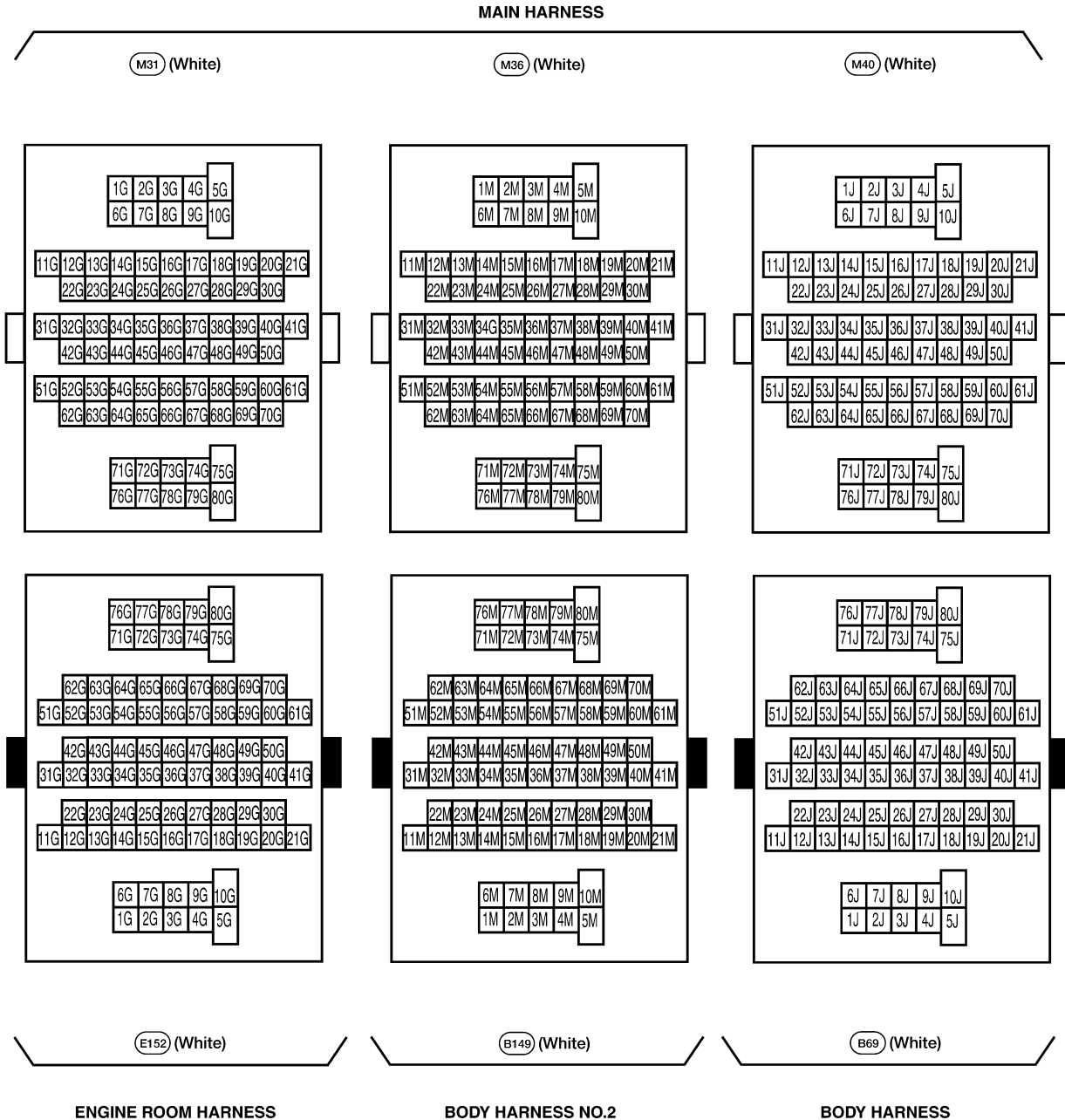
SUPER MULTIPLE JUNCTION (SMJ)

Terminal Arrangement

PF:84341

EKS009XU

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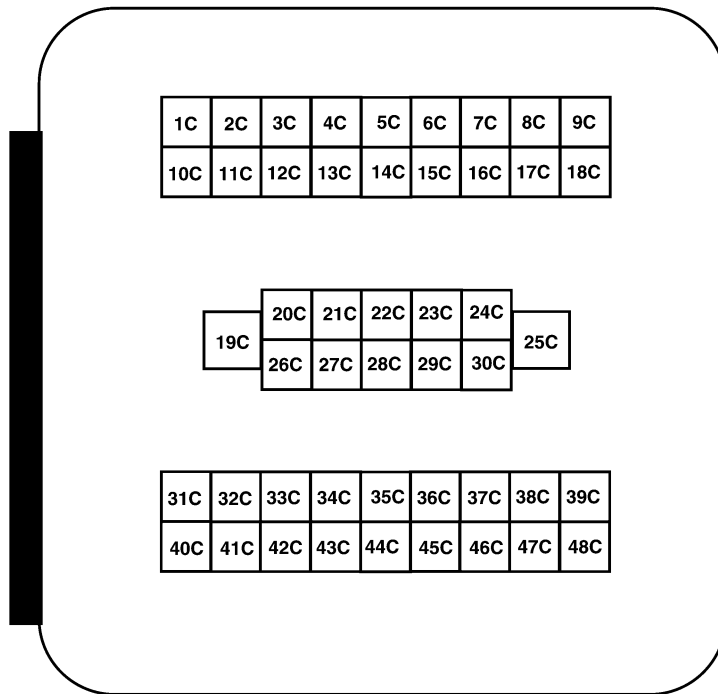
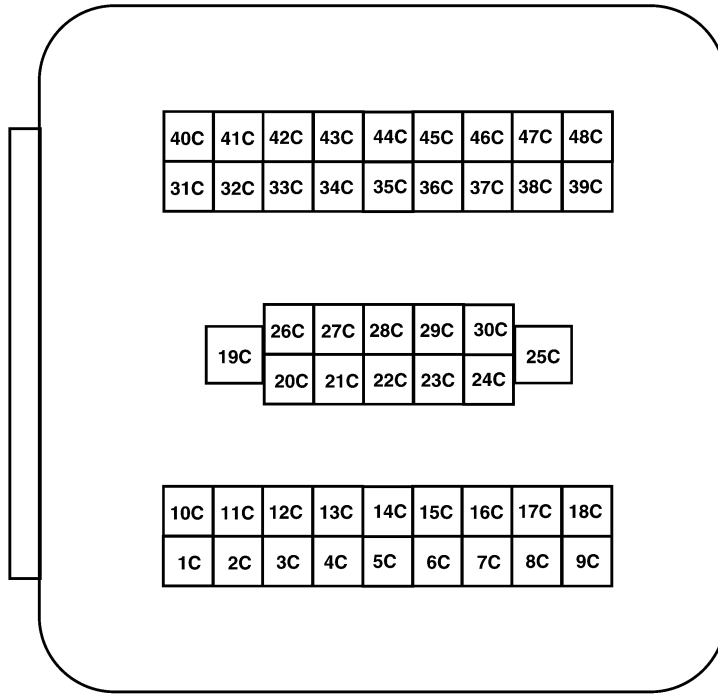


WKIA3590E

SUPER MULTIPLE JUNCTION (SMJ)

CHASSIS HARNESS

C1 (Black)



E41 (Black)

ENGINE ROOM HARNESS

WKIA4179E

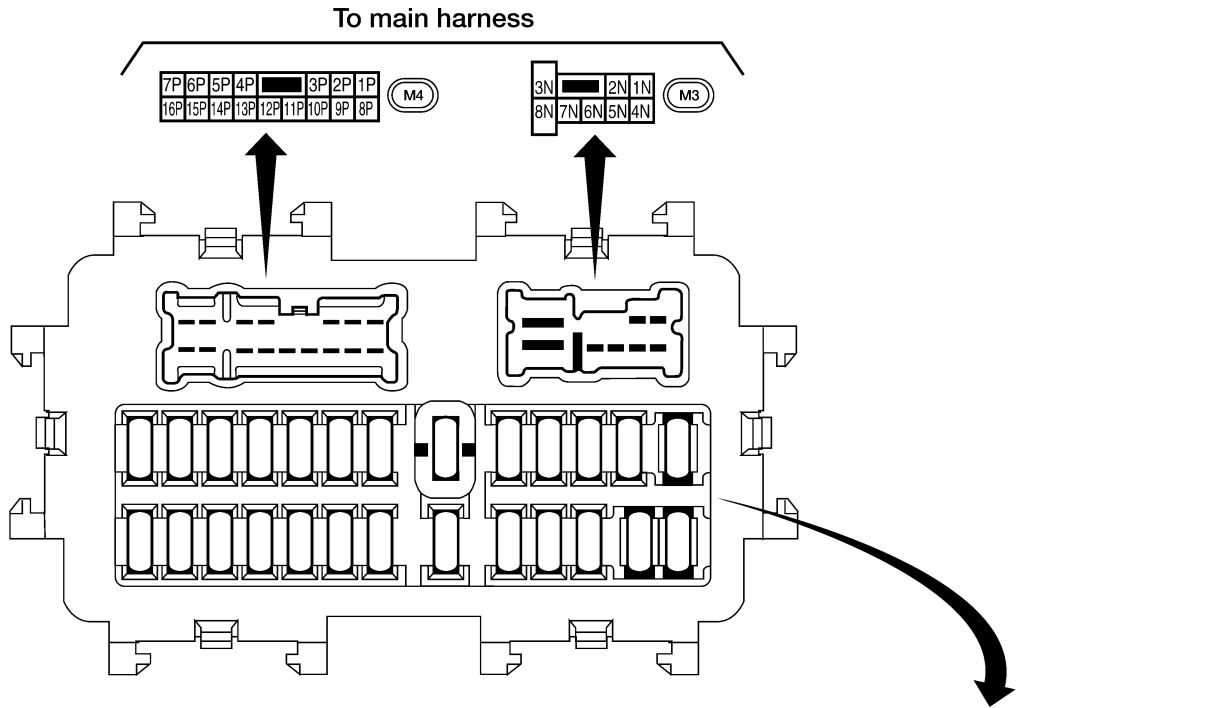
FUSE BLOCK-JUNCTION BOX(J/B)

FUSE BLOCK-JUNCTION BOX(J/B)

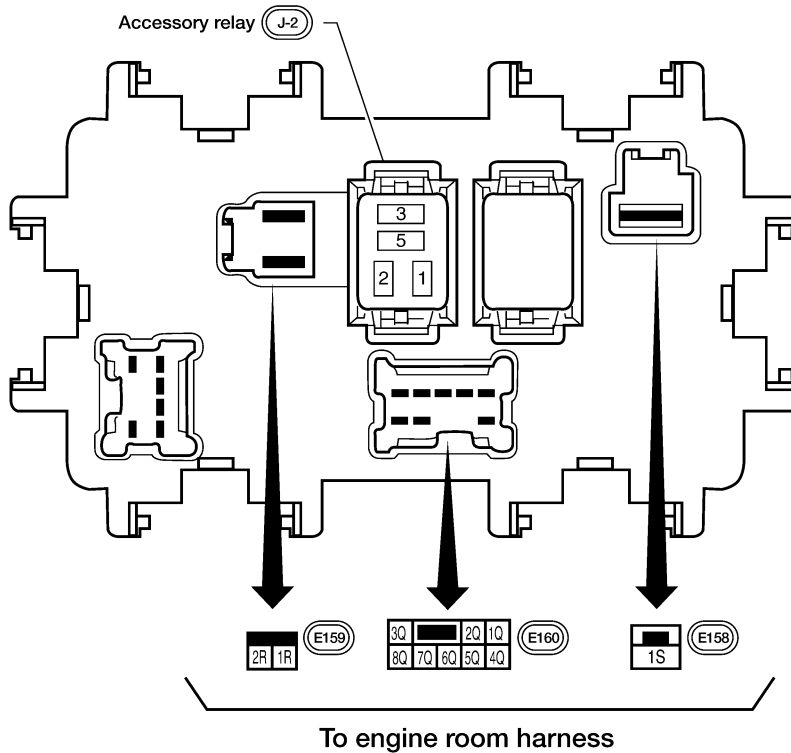
Terminal Arrangement

PF024350

EKS009XV



1 10A	2 X	3 10A	4 10A	5 15A	6 10A	7 15A	8 10A	9 10A	10 X	11 X	SPARE
12 10A	13 10A	14 10A	15 10A	16 10A	17 15A	18 10A	19 10A	20 10A	21 10A	22 10A	SPARE
											SPARE



WKIA4180E

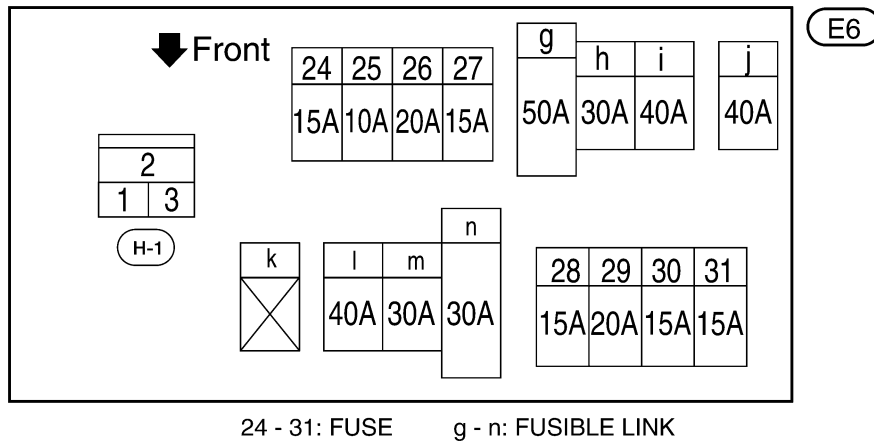
FUSE AND FUSIBLE LINK BOX

FUSE AND FUSIBLE LINK BOX

PFP:24381

Terminal Arrangement

EKS009XW



WKIA4181E

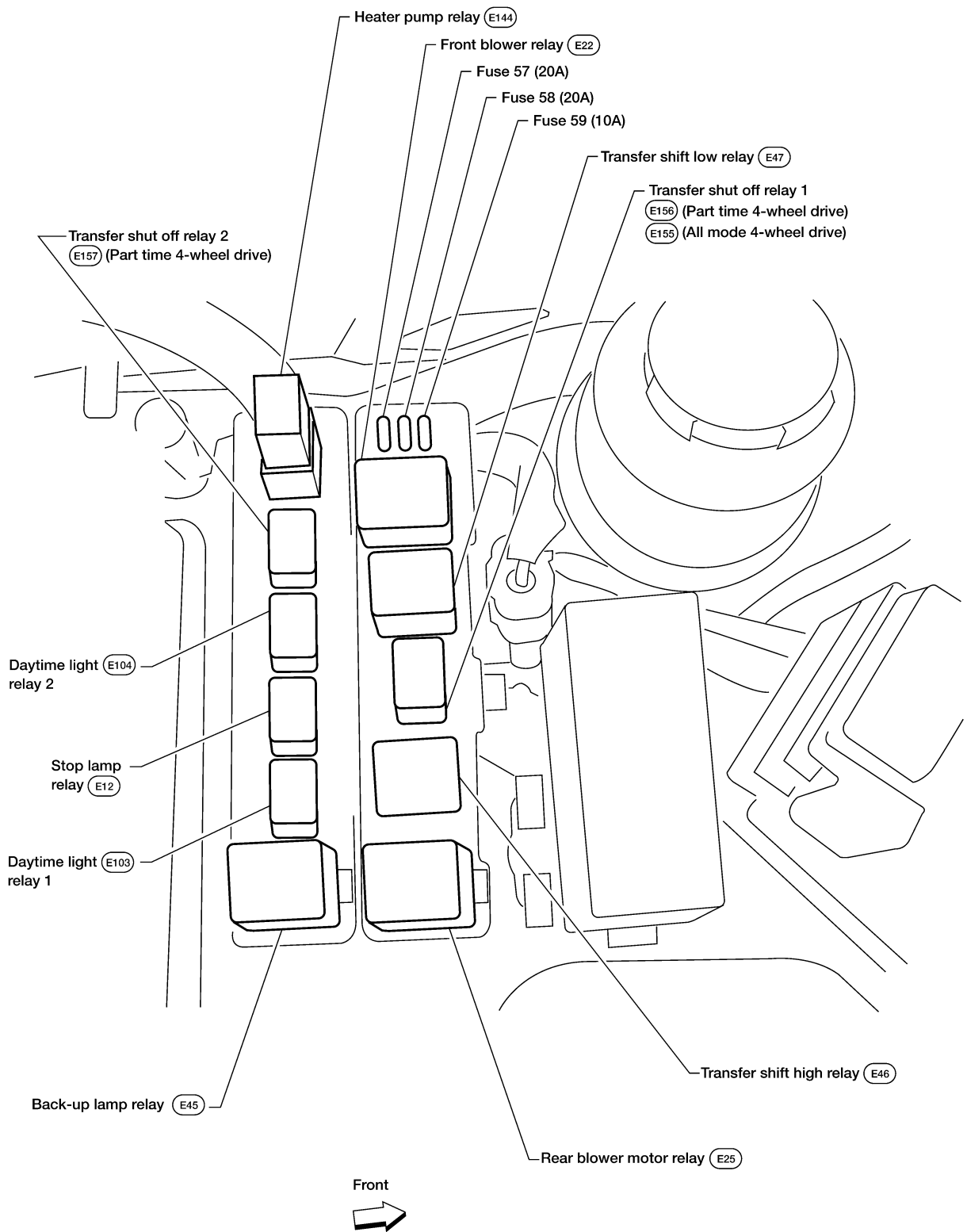
FUSE AND RELAY BOX

PFP:24012

EKS009XX

FUSE AND RELAY BOX

Terminal Arrangement



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FUSE AND RELAY BOX
