

SECTION **PG**

**POWER SUPPLY, GROUND & CIRCUIT ELEMENTS**

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# DTC INDEX

< SERVICE INFORMATION >

## SERVICE INFORMATION

### DTC INDEX

U1000

INFOID:000000001351918

DTC	Items (CONSULT screen terms)	Reference
U1000	CAN COMM CIRCUIT	<a href="#">PG-24, "U1000 CAN COMM CIRCUIT"</a>

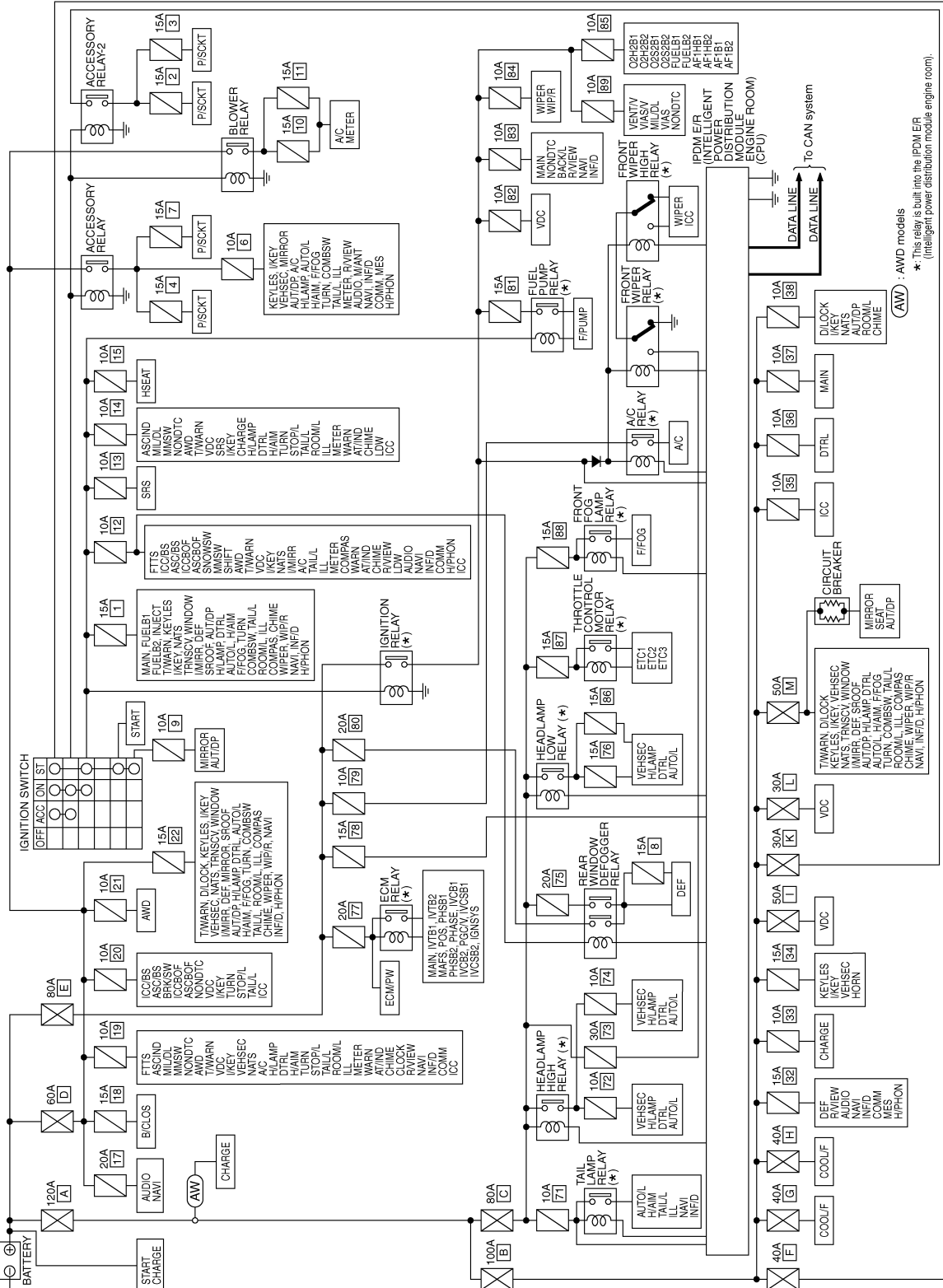
# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

## POWER SUPPLY ROUTING CIRCUIT

Schematic

INFOID:000000001328865



TWKWM4905E

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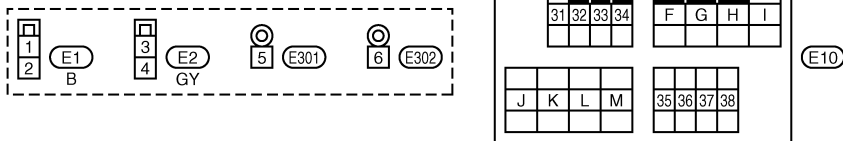
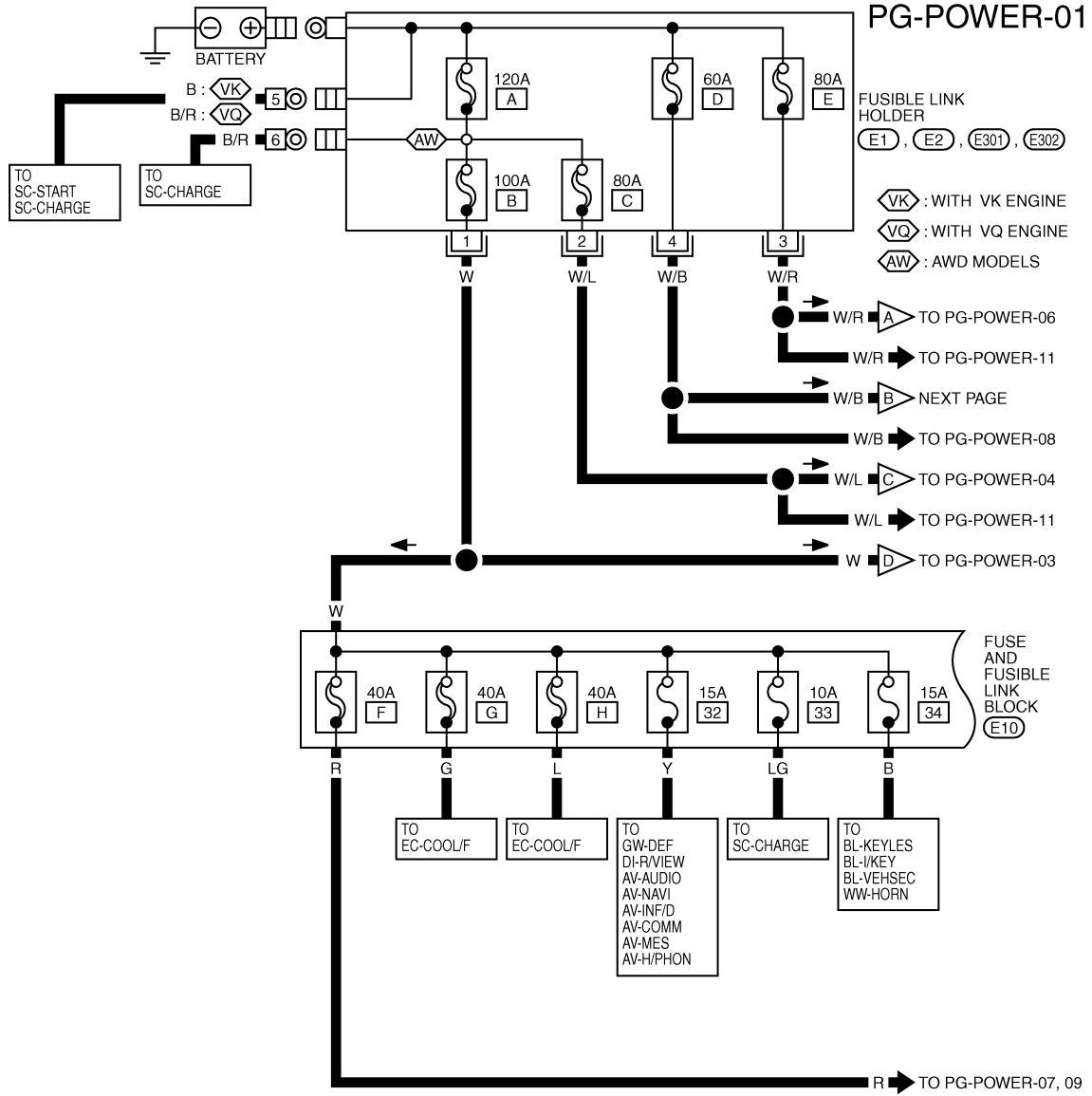
# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

## Wiring Diagram - POWER -

INFOID:000000001328866

### BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

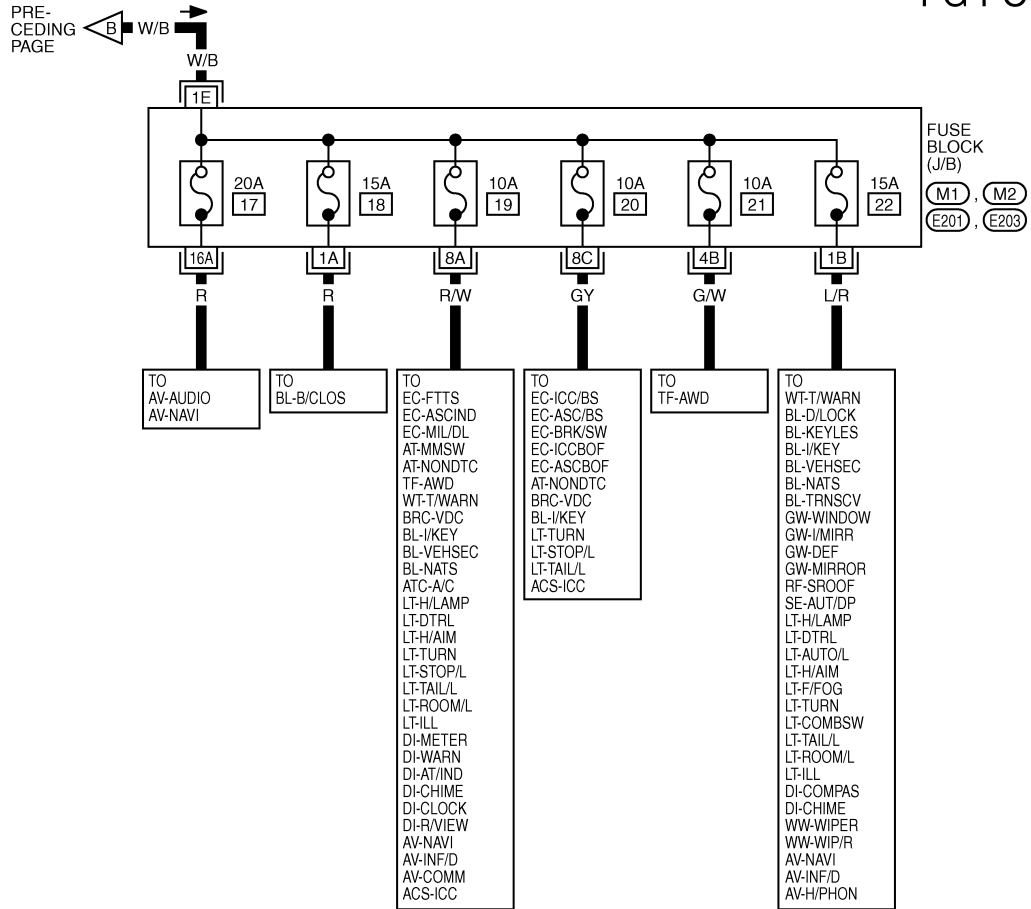


TKWM4458E

# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-02



REFER TO THE FOLLOWING.

M1, M2, E201, E203

-FUSE BLOCK-JUNCTION BOX (J/B)

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

TKWM4459E

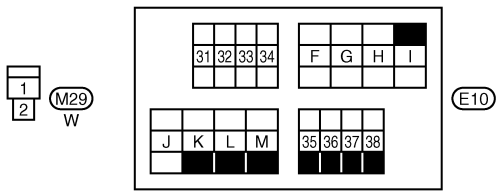
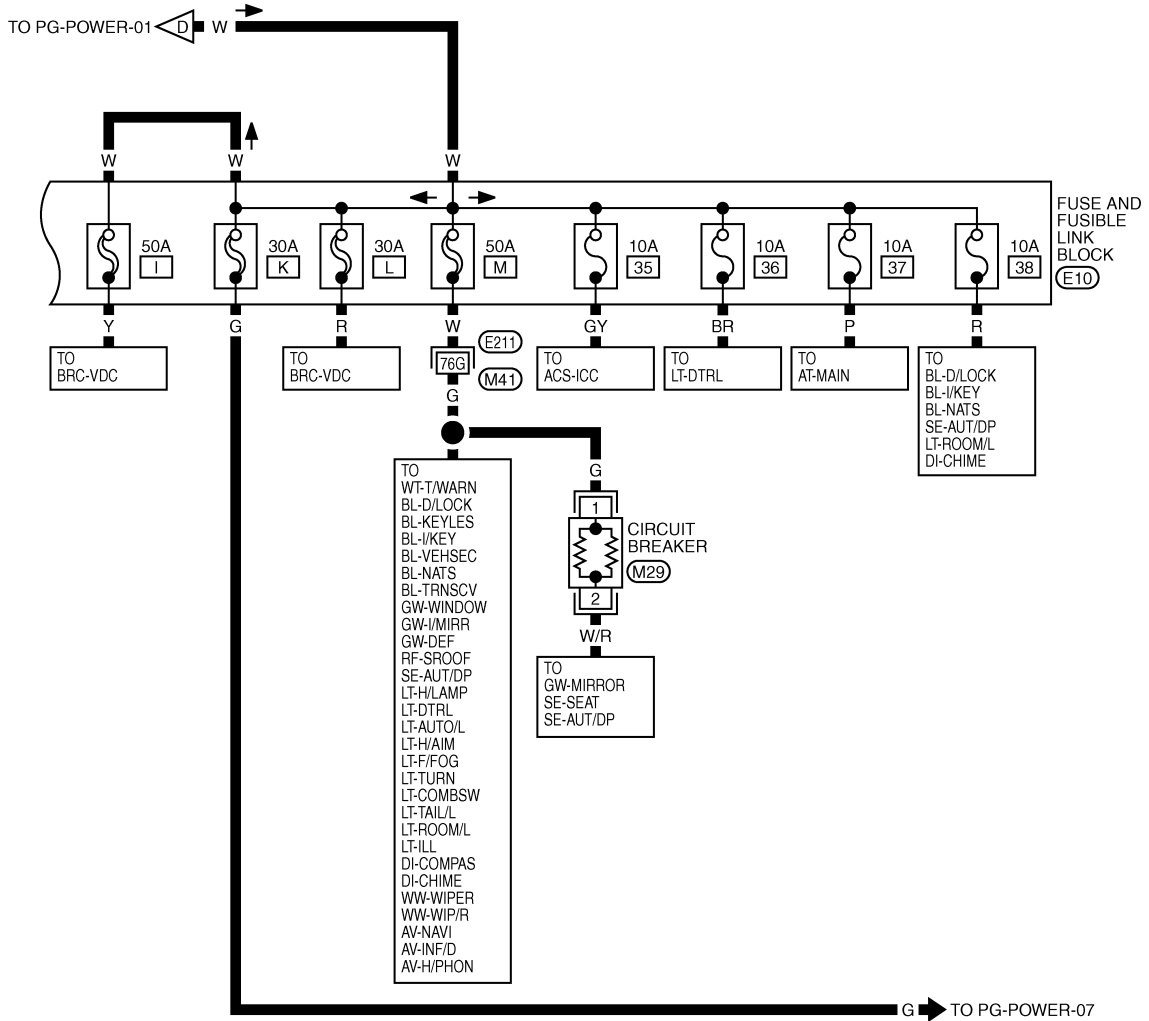
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PG

# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-03



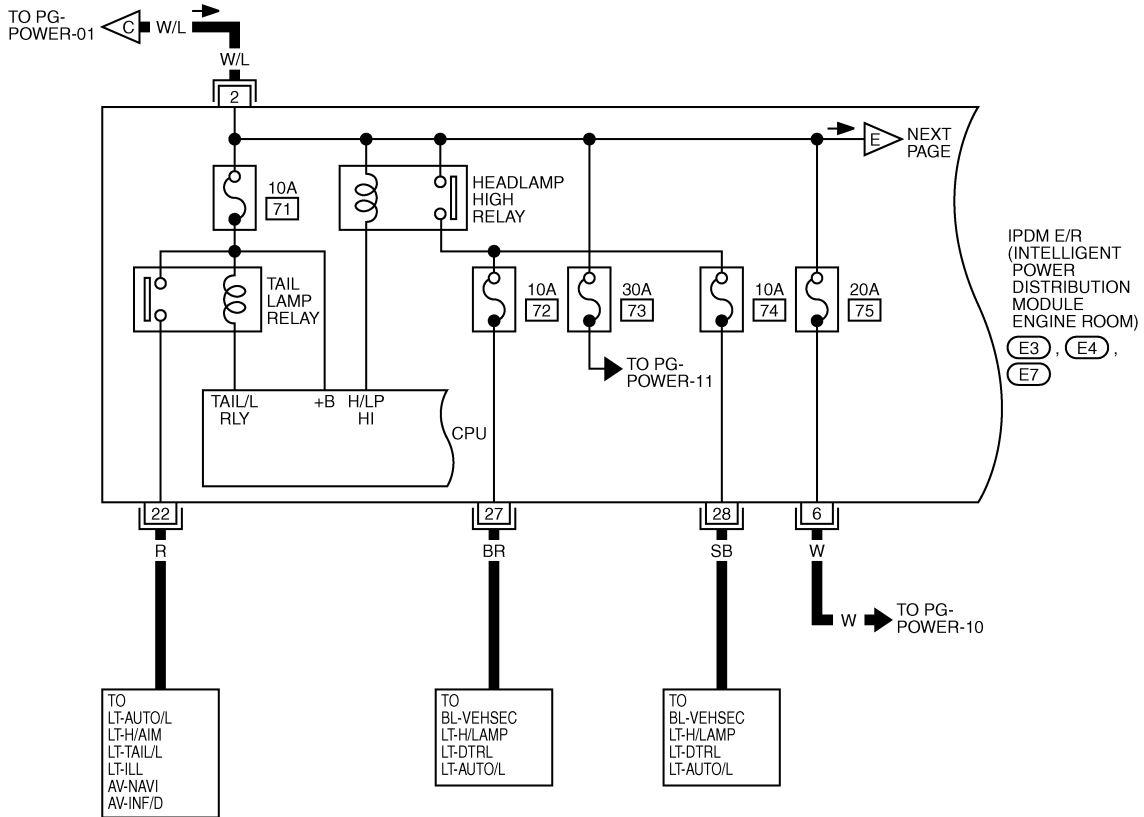
REFER TO THE FOLLOWING.  
 (E211) -SUPER MULTIPLE JUNCTION (SMJ)

TKWM4460E

# POWER SUPPLY ROUTING CIRCUIT

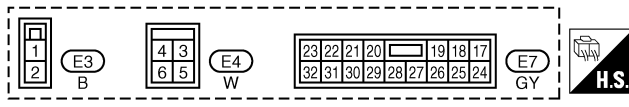
< SERVICE INFORMATION >

PG-POWER-04



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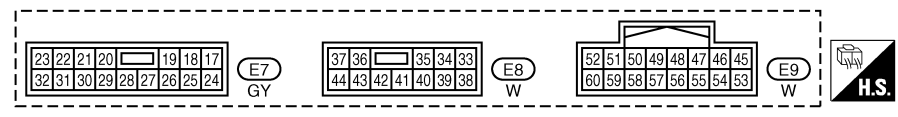
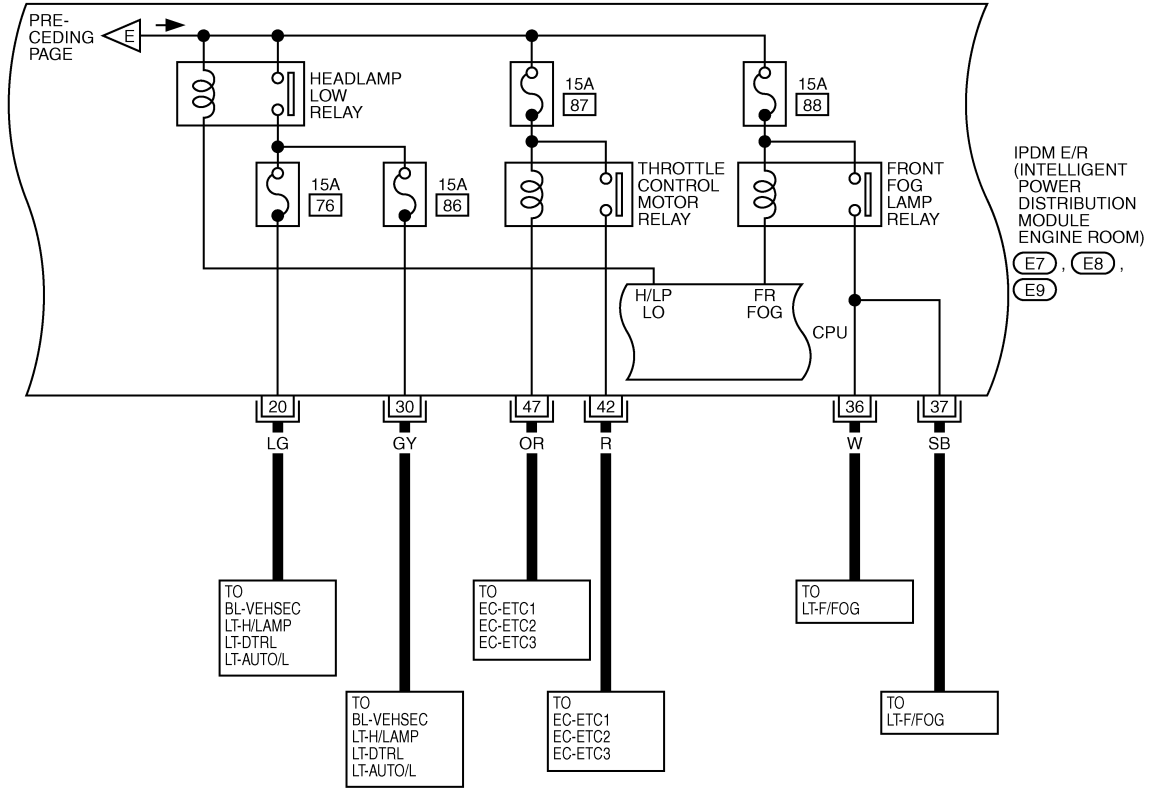
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TKWM4461E

# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-05



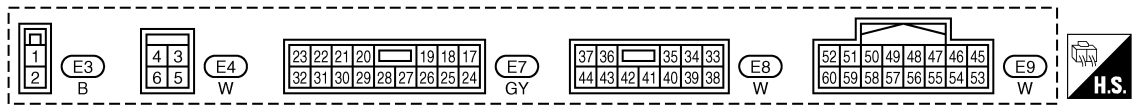
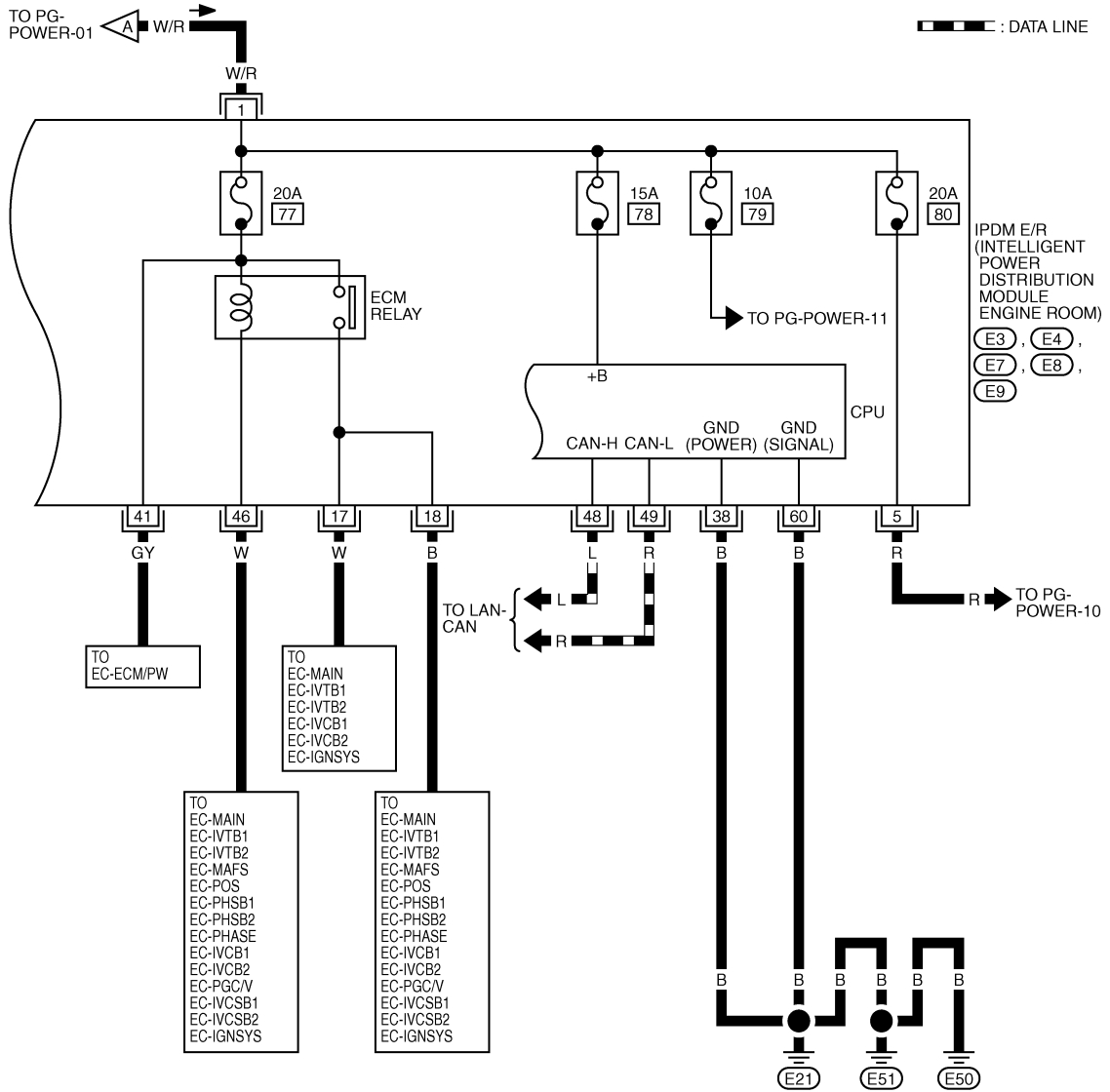
TKWM0712E



# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-06



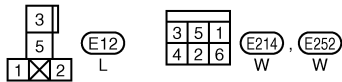
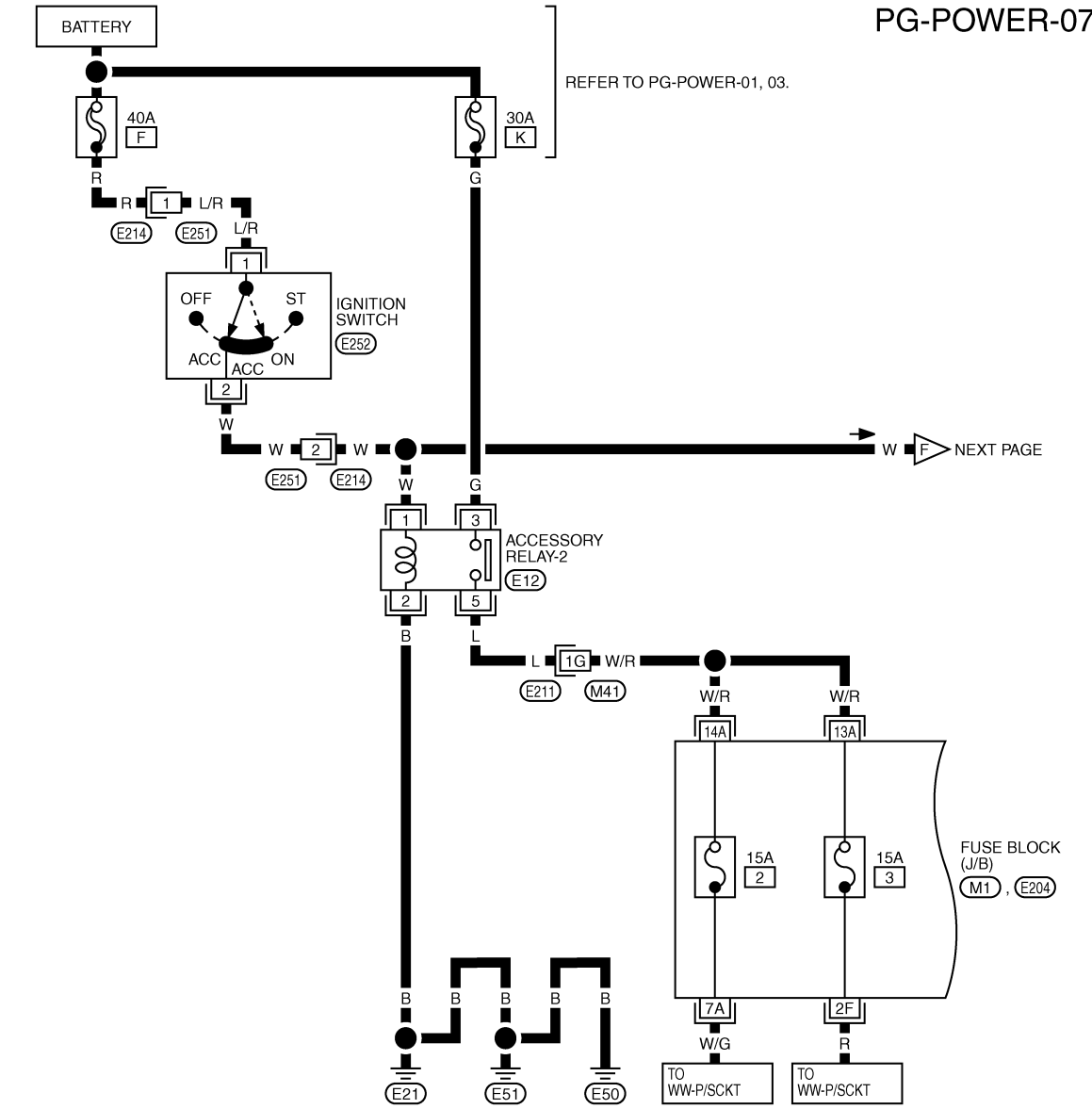
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# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

ACCESSORY POWER SUPPLY — IGNITION SW. IN “ACC” OR “ON”

PG-POWER-07



REFER TO THE FOLLOWING.

(E211) -SUPER MULTIPLE JUNCTION (SMJ)

(M1), (E204) -FUSE BLOCK-JUNCTION BOX (J/B)

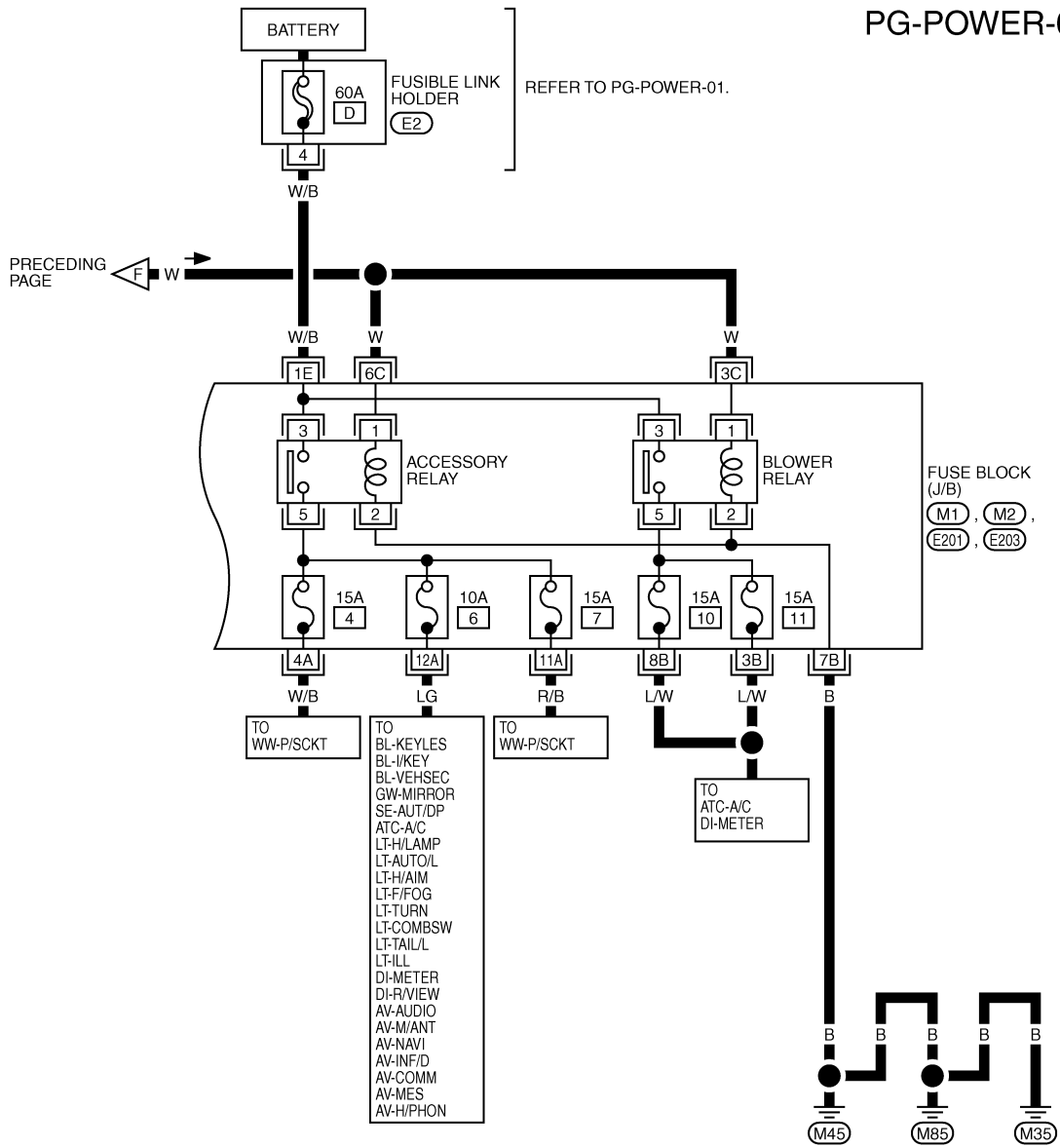
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWM4463E

# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-08

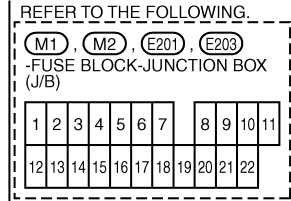


PRECEDING PAGE

REFER TO PG-POWER-01.

FUSE BLOCK (J/B)  
 (M1), (M2),  
 (E201), (E203)

- TO WW-P/SCKT
- TO BL-KEYLES
- TO BL-I/KEY
- TO BL-VEHSEC
- TO GW-MIRROR
- TO SE-AUT/DP
- TO ATC-A/C
- TO LT-H/LAMP
- TO LT-AUTO/L
- TO LT-H/AIM
- TO LT-F/FOG
- TO LT-TURN
- TO LT-COMBSW
- TO LT-TAIL/L
- TO LT-ILL
- TO DI-METER
- TO DI-R/VIEW
- TO AV-AUDIO
- TO AV-M/ANT
- TO AV-NAVI
- TO AV-INF/D
- TO AV-COMM
- TO AV-MES
- TO AV-H/PHON



TKWM4904E

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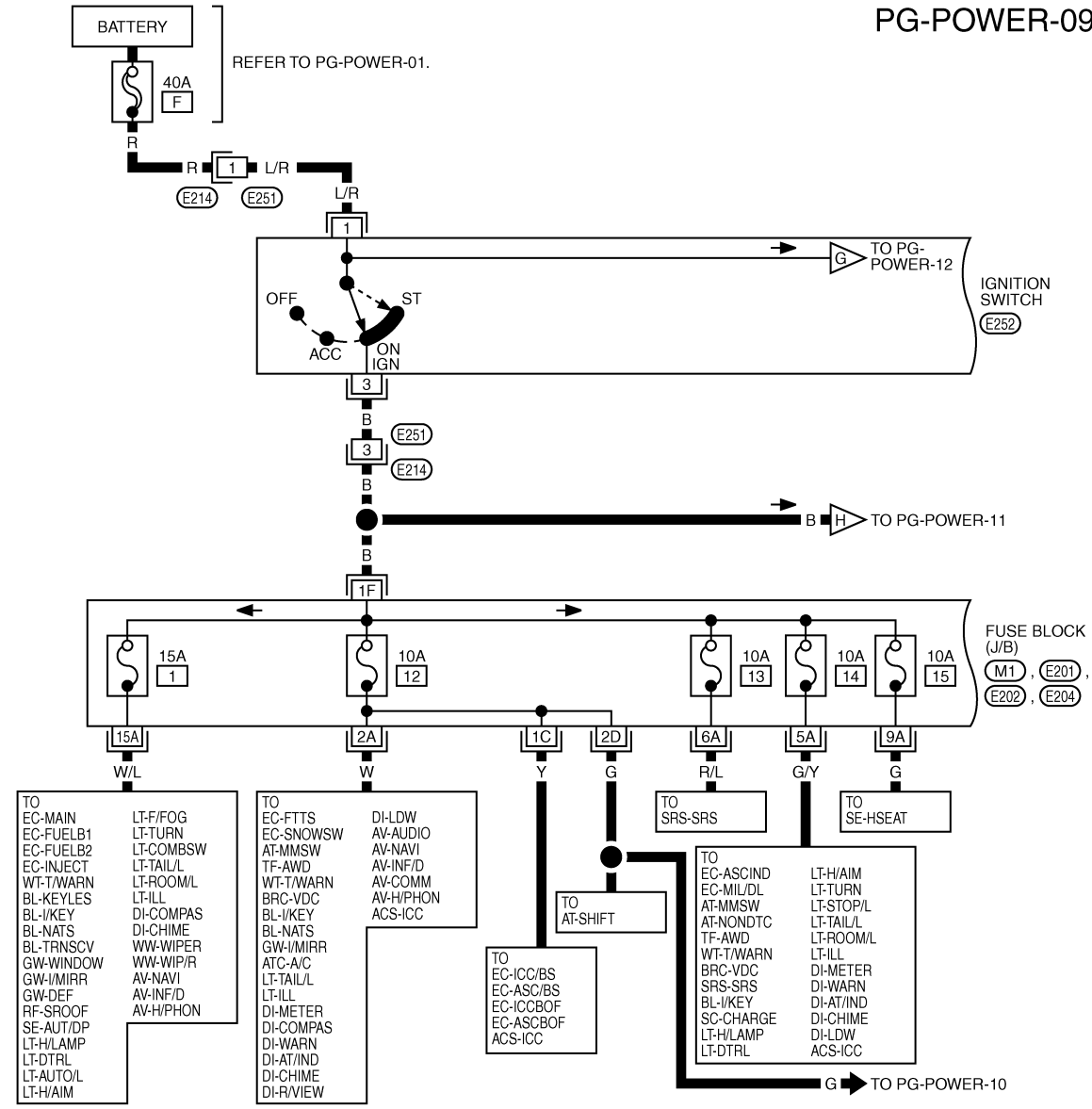
PG

# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

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

PG-POWER-09



3	5	1
4	2	6

(E214), (E252)  
W W

REFER TO THE FOLLOWING.

(M1), (E201), (E202), (E204)

- FUSE BLOCK-JUNCTION BOX (J/B)

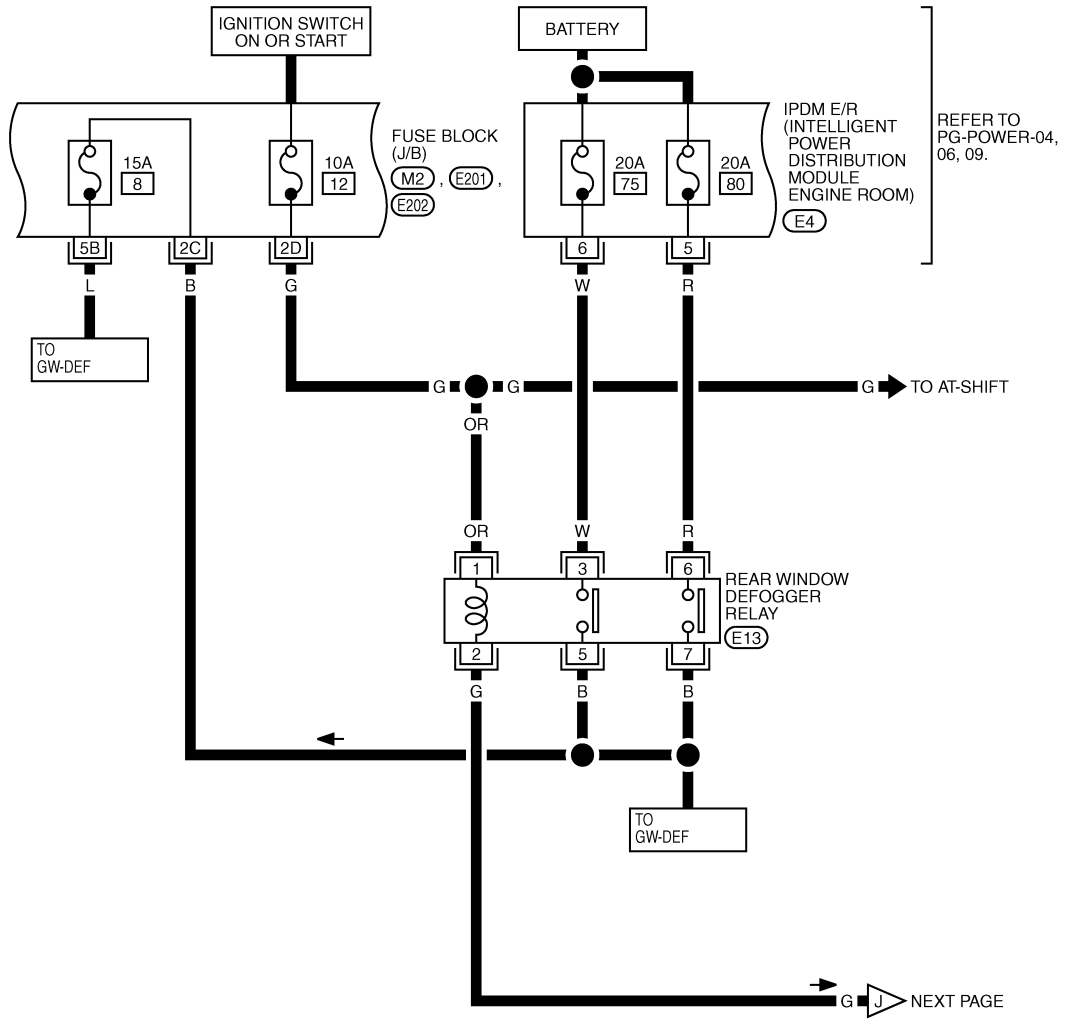
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12	13	14	15	16	17	18	19	20	21	22

TKWMM4465E

# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-10



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E4  
W



E13  
BR

REFER TO THE FOLLOWING.

(M2), (E201), (E202) - FUSE BLOCK-JUNCTION BOX (J/B)

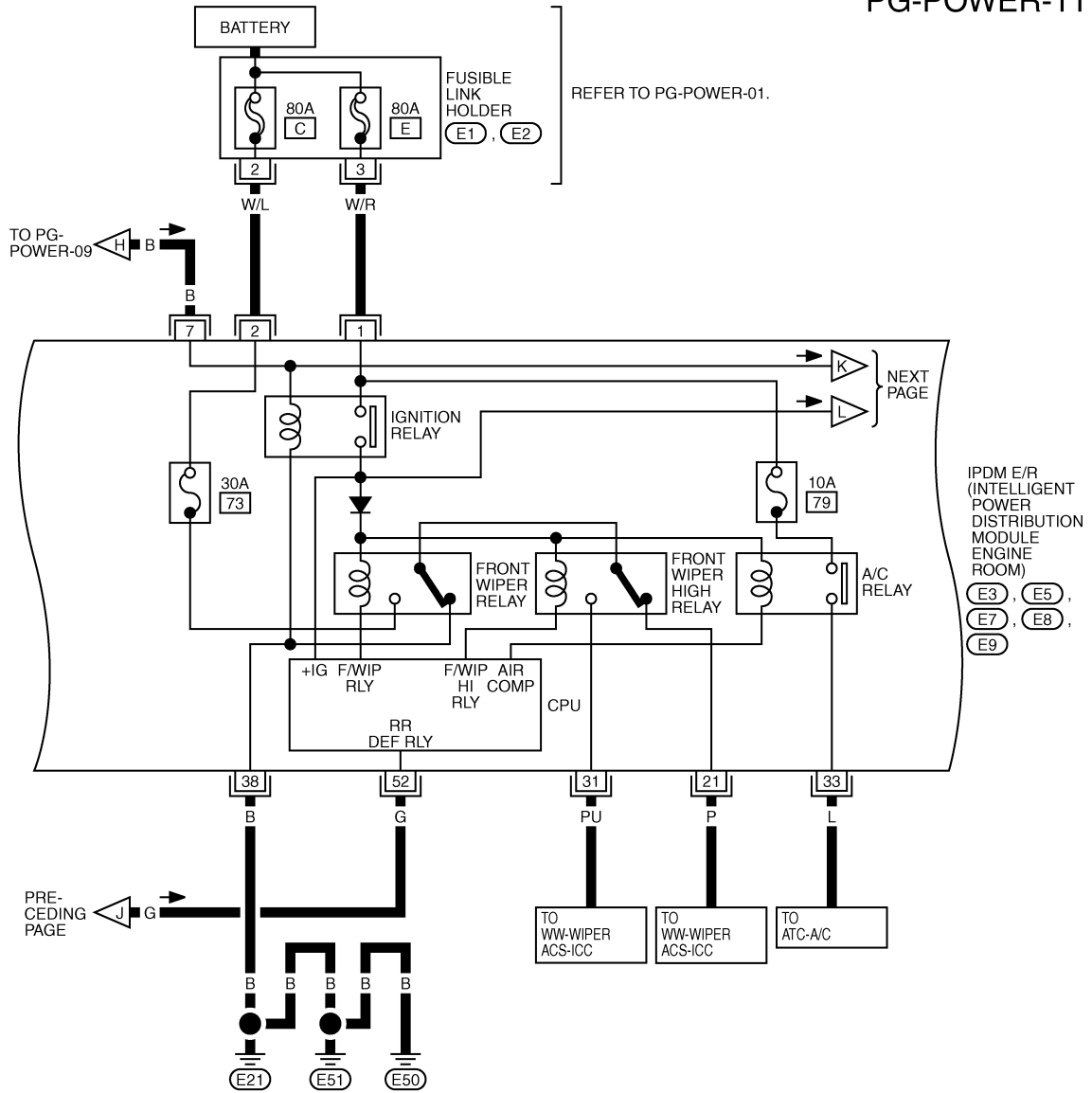
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TKWM4466E

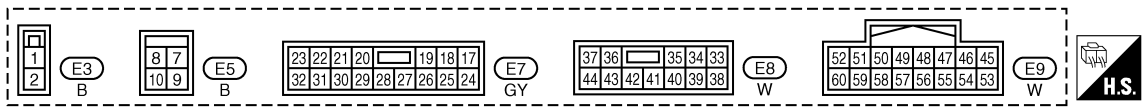
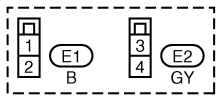
# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-11



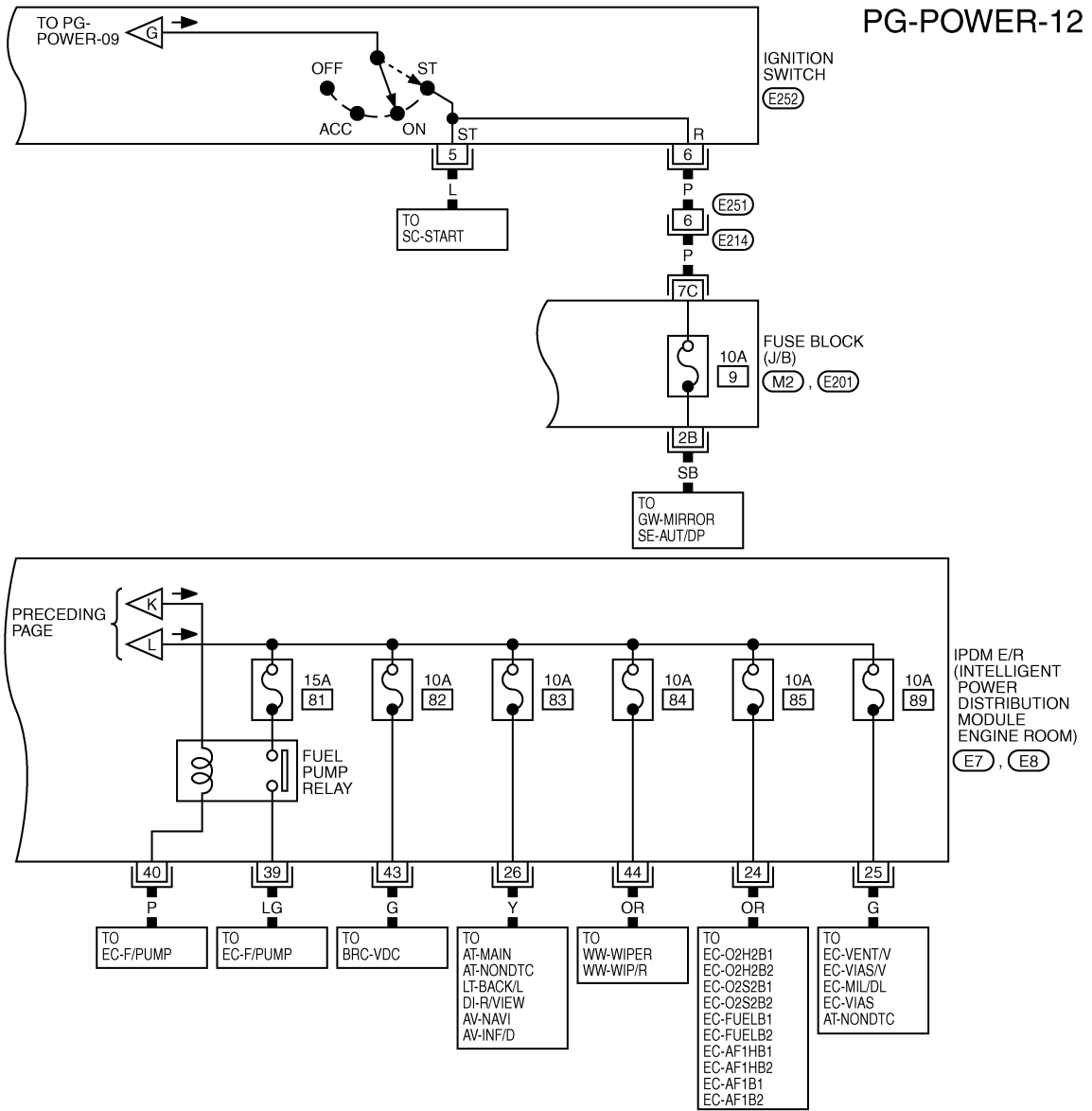
IPDM E/R  
(INTELLIGENT  
POWER  
DISTRIBUTION  
MODULE  
ENGINE  
ROOM)  
E3, E5,  
E7, E8,  
E9



TKWM4467E

# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >



23	22	21	20	19	18	17	E7 GY	
32	31	30	29	28	27	26		25

37	36	35	34	33	E8 W	
44	43	42	41	40		39

**H.S.**

3	5	1	E214, E252 W W
4	2	6	

REFER TO THE FOLLOWING:

(M2, E201) - FUSE BLOCK-JUNCTION BOX (J/B)

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

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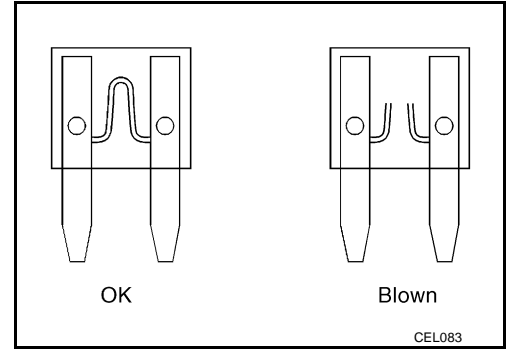
# POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

## Fuse

INFOID:000000001328867

- If fuse is blown, be sure to eliminate cause of malfunction 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.



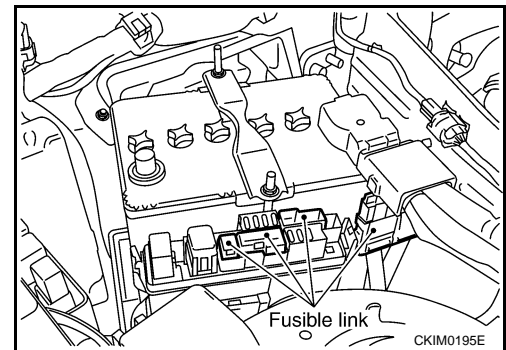
## Fusible Link

INFOID:000000001328868

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:

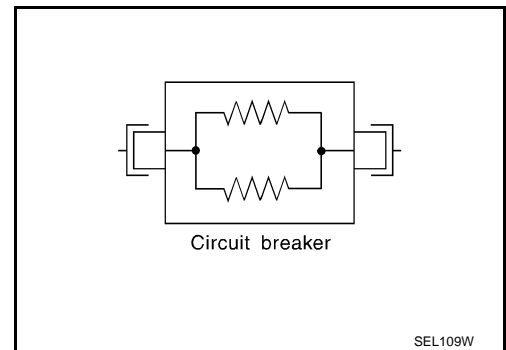
- If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of malfunction.
- Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other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



## Circuit Breaker

INFOID:000000001328869

The PTC thermistor generates heat in response to current flow. The temperature (and resistance) of the thermistor element varies with current flow. Excessive current flow will cause the element's temperature to rise. When the temperature reaches a specified level, the electrical resistance will rise sharply to control the circuit current. Reduced current flow will cause the element to cool. Resistance falls accordingly and normal circuit current flow is allowed to resume.





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

< SERVICE INFORMATION >

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

### System Description

INFOID:000000001328870

- 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 relay via IPDM E/R control circuit.
- IPDM E/R-integrated control circuit performs ON-OFF operation of relay, CAN communication control, oil pressure switch signal, and hood switch signal reception, etc.
- It controls operation of each electrical part 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

IPDM E/R receives a request signal from each control unit with CAN communication. It controls each system.

Control system	Transmit control unit	Control part
Lamp control	BCM	<ul style="list-style-type: none"><li>• Headlamps (HI, LO)</li><li>• Front fog lamps</li><li>• Parking, license plate, side marker and tail lamps</li></ul>
Wiper control	BCM	Front wipers
Rear window defogger control	BCM	Rear window defogger
A/C compressor control	ECM	A/C compressor (magnet clutch)
Cooling fan control	ECM	Cooling fan
Horn control	BCM	Horn

### 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 maximum amount of information with minimum wiring. Each control unit can transmit and receive data, and reads necessary information only.

#### Fail- Safe Control

- When CAN communication with other control units is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, 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"><li>• With the ignition switch ON, the headlamp (low) is ON.</li><li>• With the ignition switch OFF, the headlamp (low) is OFF.</li></ul>
Parking, license plate side marker, and tail lamps	<ul style="list-style-type: none"><li>• With the ignition switch ON, the parking, license plate, side marker and tail lamps is ON.</li><li>• With the ignition switch OFF, the parking, license plate, side marker and tail lamps is OFF.</li></ul>
Cooling fan	<ul style="list-style-type: none"><li>• With the ignition switch ON, the cooling fan HI operates.</li><li>• With the ignition switch OFF, the cooling fan stops.</li></ul>
Front wiper	Until the ignition switch is turned OFF, the front wiper LO and HI remains in the same status it was in just before fail-safe control was initiated.
Rear window defogger	Rear window defogger relay OFF
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.

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

## < SERVICE INFORMATION >

- 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 power mode.
  - CAN communication is stopped.
  - When a change in CAN communication line is detected, mode switches to CAN communication status.
  - When a change hood switch or ignition switch signal is detected, mode switches to CAN communication status.

## CAN Communication System Description

INFOID:000000001328871

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicles are equipped with many electronic control units and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

## CAN Communication Unit

INFOID:000000001328872

Refer to [LAN-43, "CAN System Specification Chart"](#).

## Function of Detecting Ignition Relay Malfunction

INFOID:000000001328873

- When contact point of integrated ignition relay is stuck and cannot be turned OFF, IPDM E/R turns ON parking, license plate, side marker and tail lamps for 10 minutes to indicate ignition relay malfunction.
- When a state of ignition relay having built-in does not agree with a state of ignition switch signal input by a CAN communication from BCM, IPDM E/R lets tail lamp relay operate.

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

### NOTE:

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

## CONSULT-III Function (IPDM E/R)

INFOID:000000001328874

CONSULT-III can display each diagnostic item using the diagnostic test mode shown following.

Inspection Item, Diagnosis Mode	Description
Self Diagnostic Result	The IPDM E/R performs diagnosis of the CAN communication and self-diagnosis.
Data Monitor	The input/output data of the IPDM E/R is displayed in real time.
CAN Diag Support Monitor	The result of transmit/receive diagnosis of CAN communication can be read.
Active test	The IPDM E/R sends a drive signal to electronic components to check their operation.

## Self Diagnostic Result

### Display Item List

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

## < SERVICE INFORMATION >

DTC	Display Items	Malfunction detecting condition	TIME		Possible causes
			CRNT	PAST	
—	NO DTC IS DETECTED.FURTHER TESTING MAY BE REQUIRED.	—	—	—	—
U1000	CAN COMM CIRCUIT	<ul style="list-style-type: none"> <li>If CAN communication reception/transmission data has a malfunction, or if any of the control units malfunction, data reception/transmission cannot be confirmed.</li> <li>When the data in CAN communication is not received before the specified time</li> </ul>	×	×	Any of or several items below have errors. <ul style="list-style-type: none"> <li>TRANSMIT DIAG</li> <li>ECM</li> <li>BCM/SEC</li> </ul>

### 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 memorized with IPDM E/R.

### DATA MONITOR

Item name	CONSULT-III screen display	Display or unit	MAIN SIGNALS	Description
Motor fan request	MOTOR FAN REQ	1/2/3/4	×	Signal status input from ECM
Compressor request	AC COMP REQ	On/Off	×	Signal status input from ECM
Tail & clear request	TAIL&CLR REQ	On/Off	×	Signal status input from BCM
H/L LO request	HL LO REQ	On/Off	×	Signal status input from BCM
H/L HI request	HL HI REQ	On/Off	×	Signal status input from BCM
FR fog request	FR FOG REQ	On/Off	×	Signal status input from BCM
FR wiper request	FR WIP REQ	Stop/1LOW/Lo/Hi	×	Signal status input from BCM
Wiper auto stop	WIP AUTO STOP	ACT P/STOP P	×	Output status of IPDM E/R
Wiper protection	WIP PROT	Off/BLOCK	×	Control status of IPDM E/R
Starter request	ST RLY REQ <sup>*1</sup>	On/Off		Status of input signal
Ignition relay status	IGN RLY	On/Off	×	Ignition relay status monitored with IPDM E/R
Rear window defogger request	RR DEF REQ	On/Off	×	Signal status input from BCM
Oil pressure switch	OIL P SW	Open/Close		Signal status input in IPDM E/R
Hood switch	HOOD SW	On/Off		Input signal status
Theft warning horn request	THFT HRN REQ	On/Off		Signal status input from BCM
Horn chirp	HORN CHIRP	On/Off		Output status of IPDM E/R
Cornering lamp request	CRNRNG LMP REQ <sup>*2</sup>	Off		Signal status input from BCM

### NOTE:

- Perform monitoring of IPDM E/R data with the ignition switch ON. When the ignition switch is at ACC, the display may not be correct.
- \*1: The vehicle without the Intelligent Key system displays only ON without change.
- \*2:The cornering lamp item is displayed, but it cannot be monitored.

### ACTIVE TEST

Test item	CONSULT-III screen display	Description
Tail lamp operation	TAIL LAMP	With a certain On-Off operation, the tail lamp relay can be operated.
Rear window defogger operation	REAR DEFOGGER	With a certain On-Off operation, the rear window defogger relay can be operated.

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

## < SERVICE INFORMATION >

Test item	CONSULT-III screen display	Description
Front wiper (HI, LO) operation	FRONT WIPER	With a certain operation (Off, Hi, Lo), the front wiper relay (Lo, Hi) can be operated.
Cooling fan operation	MOTOR FAN	With a certain operation (1, 2, 3, 4), the cooling fan can be operated.
Lamp (HI, LO, FOG) operation	LAMPS	With a certain operation (Off, Hi, Lo, Fog), the lamp relay (Lo, Hi, Fog) can be operated.
Cornering lamp operation	CORNERING LAMP <sup>NOTE</sup>	—
Horn operation	HORN	With a certain On-Off operation, the horn relay can be operated.

### NOTE:

This item is displayed, but cannot be tested.

## Auto Active Test

INFOID:000000001328875

### DESCRIPTION

In auto active test mode, operation inspection can be performed when IPDM E/R sends a drive signal to the following systems:

- Rear window defogger
- Front wipers
- Parking, license plate, side marker and tail lamps
- Front fog lamps
- Headlamps (Hi, Lo)
- A/C compressor (magnetic clutch)
- Cooling fan

### OPERATION PROCEDURE

1. Close hood and front door (passenger side), and then 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 drivers door switch 10 times (close other doors). 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 oil pressure warning lamp starts blinking.
6. After a series of operations is repeated three times, auto active test is completed.

#### NOTE:

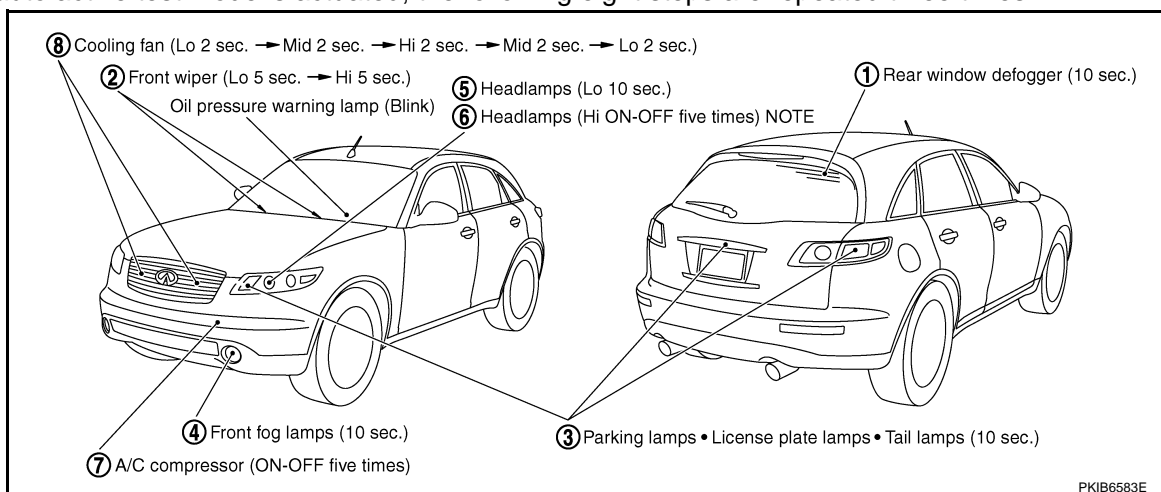
When auto active test mode has to be cancelled halfway, turn ignition switch OFF.

#### CAUTION:

Be sure to inspect **BL-38. "Check Door Switch"** when the auto active test cannot be performed.

### INSPECTION IN AUTO ACTIVE TEST MODE

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



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

## < SERVICE INFORMATION >

### NOTE:

Turns ON-OFF the solenoid to switch Hi/Lo. In this case, the bulb does not illuminate.

### 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 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.	YES	• BCM signal input system malfunction
	NO	• Lamp/wiper motor malfunction • Lamp/wiper motor ground circuit malfunction • Harness/connector malfunction between IPDM E/R and system in question • IPDM E/R (integrated relay) malfunction
Rear window defogger does not operate.	YES	• BCM signal input circuit malfunction
	NO	• Rear window defogger relay malfunction • Harness/connector malfunction between IPDM E/R and rear window defogger relay. • Open circuit of rear window defogger • IPDM E/R malfunction
A/C compressor does not operate.	YES	• BCM signal input circuit malfunction • CAN communication signal between BCM and ECM. • CAN communication signal between ECM and IPDM E/R
	NO	• Magnetic clutch malfunction • Harness/connector malfunction between IPDM E/R and magnetic clutch • IPDM E/R (integrated relay) malfunction
Cooling fan does not operate.	YES	• ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
	NO	• Cooling fan motor malfunction • Harness/connector malfunction between IPDM E/R and cooling fan motor • IPDM E/R (integrated relay) malfunction
Oil pressure warning lamp does not operate.	YES	• Harness/connector malfunction between IPDM E/R and oil pressure switch • Oil pressure switch malfunction • IPDM E/R malfunction
	NO	• CAN communication signal between BCM and unified meter and A/C amp. • Combination meter

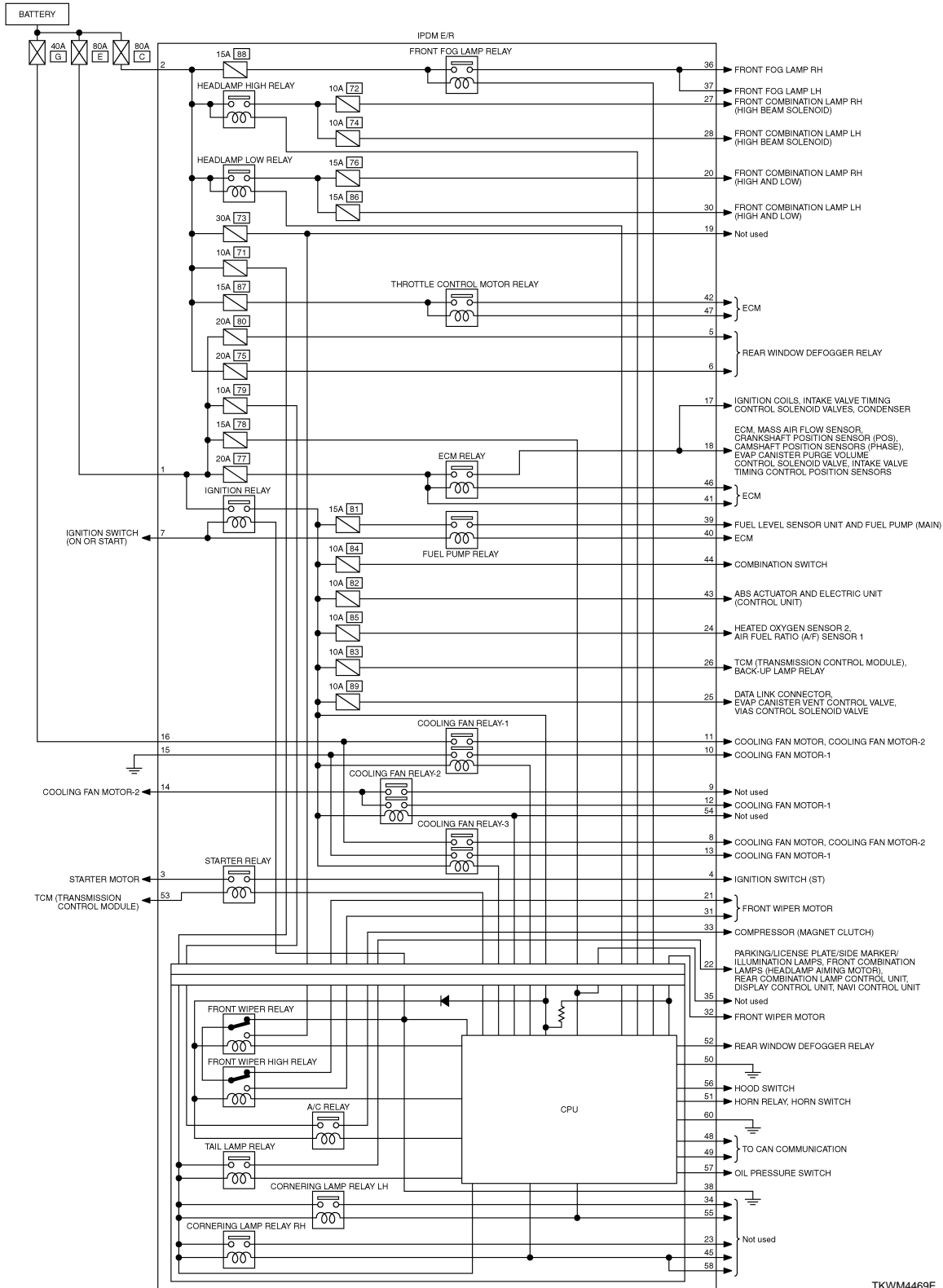
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# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< SERVICE INFORMATION >

## Schematic

INFOID:000000001328876



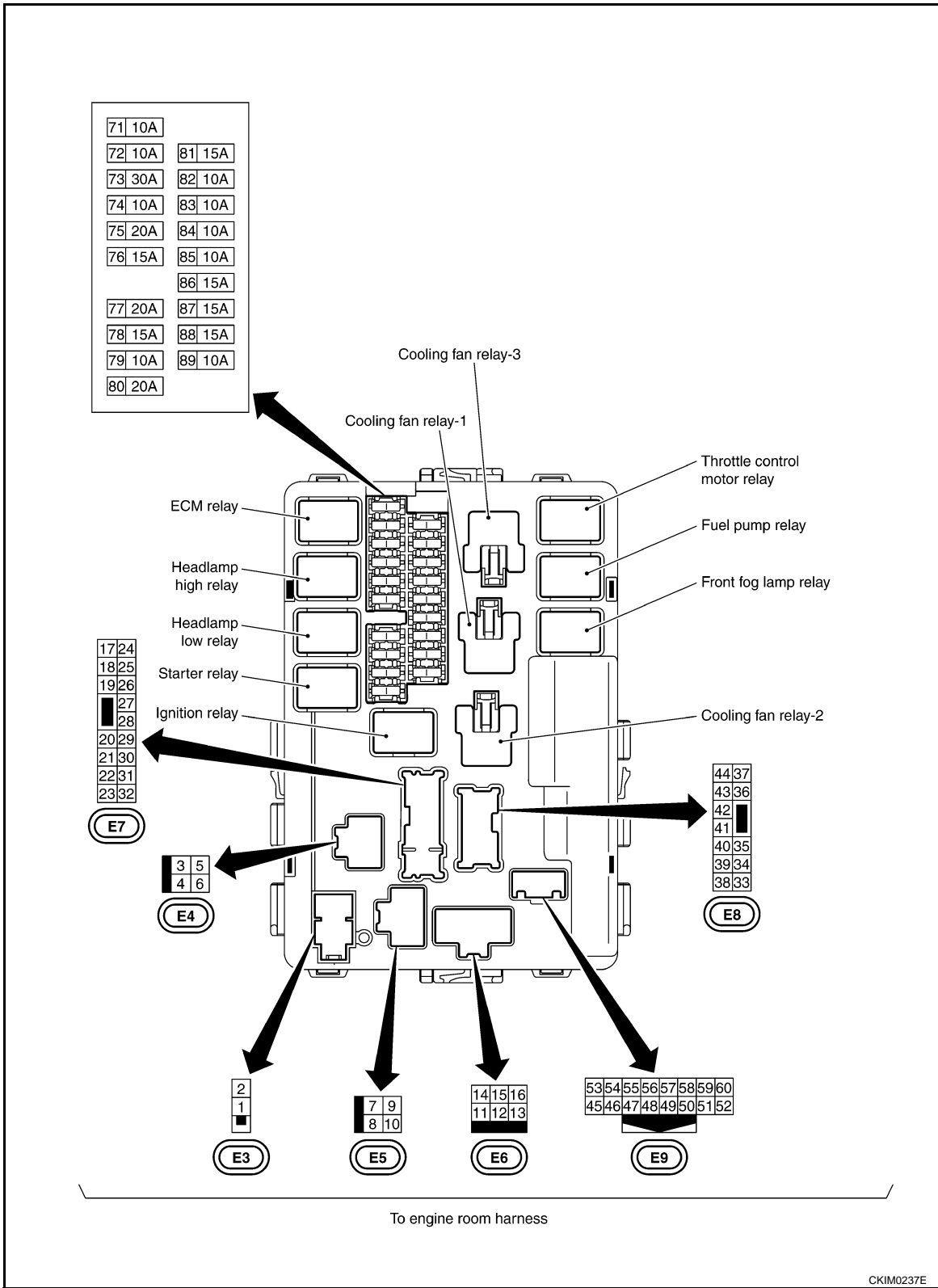
TKWM4469E

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

< SERVICE INFORMATION >

## IPDM E/R Terminal Arrangement

INFOID:000000001328877



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## IPDM E/R Power/Ground Circuit Inspection

INFOID:000000001370717

### 1. CHECK FUSE AND FUSIBLE LINK

Make sure the following fusible links or IPDM E/R fuses are not blown.

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

## < SERVICE INFORMATION >

Terminal No.	Power source	Fuse and fusible link No.
1	Battery power	E
2		C
—		71
—		78

### OK or NG

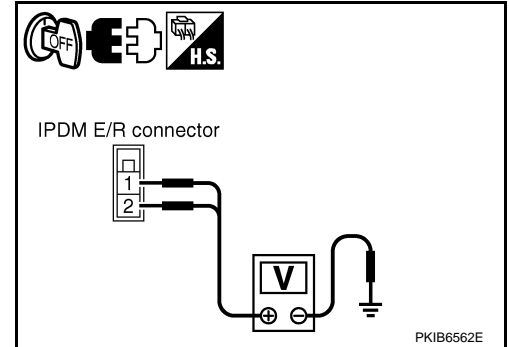
OK >> GO TO 2.

NG >> If fuse or fusible link blown, be sure to eliminate cause of malfunction before installing new one.

## 2. CHECK POWER SUPPLY CIRCUIT

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

Terminals		Voltage (Approx.)
(+)	(-)	
IPDM E/R connector	Terminal	Ground
E3	1	
	2	Battery voltage



### OK or NG

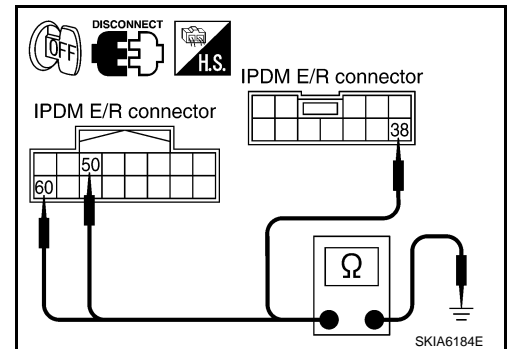
OK >> GO TO 3.

NG >> Repair harness or connector.

## 3. CHECK GROUND CIRCUIT

1. Disconnect IPDM E/R harness connectors.
2. Check continuity between IPDM E/R harness connectors and ground.

IPDM E/R connector	Terminal	Ground	Continuity
E8	38		Ground
E9	50		
	60		



### OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.

## U1000 CAN COMM CIRCUIT

INFOID:000000001366489

### 1. PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check "Self Diagnostic Result" of IPDM E/R.

#### Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to [LAN-43. "CAN System Specification Chart"](#).

NO >> Refer to [GI-25. "How to Perform Efficient Diagnosis for an Electrical Incident"](#).

## Removal and Installation of IPDM E/R

INFOID:000000001328880

### REMOVAL

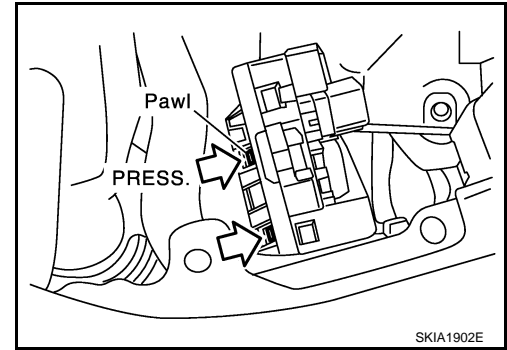
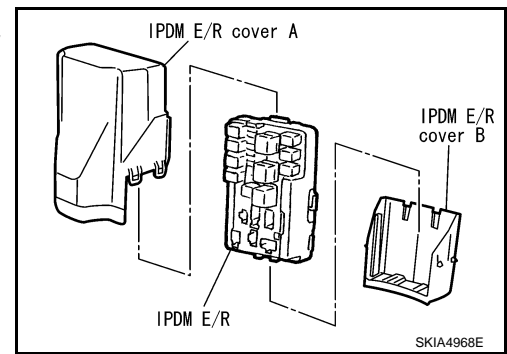
1. Remove battery. Refer to [SC-6. "Removal and Installation"](#).



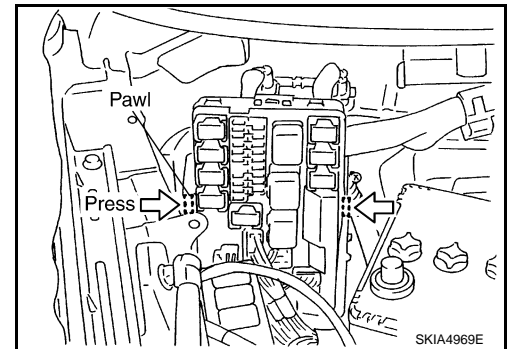
# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

## < SERVICE INFORMATION >

2. Remove IPDM E/R cover A. While pressing pawl on backside of IPDM E/R cover B toward vehicle front to unlock, lift up IPDM E/R.



3. While pressing pawls on right and left side of IPDM E/R, remove IPDM E/R cover B from IPDM E/R.
4. Remove harness connector from IPDM E/R.



## INSTALLATION

Installation is the reverse order of removal.

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# GROUND

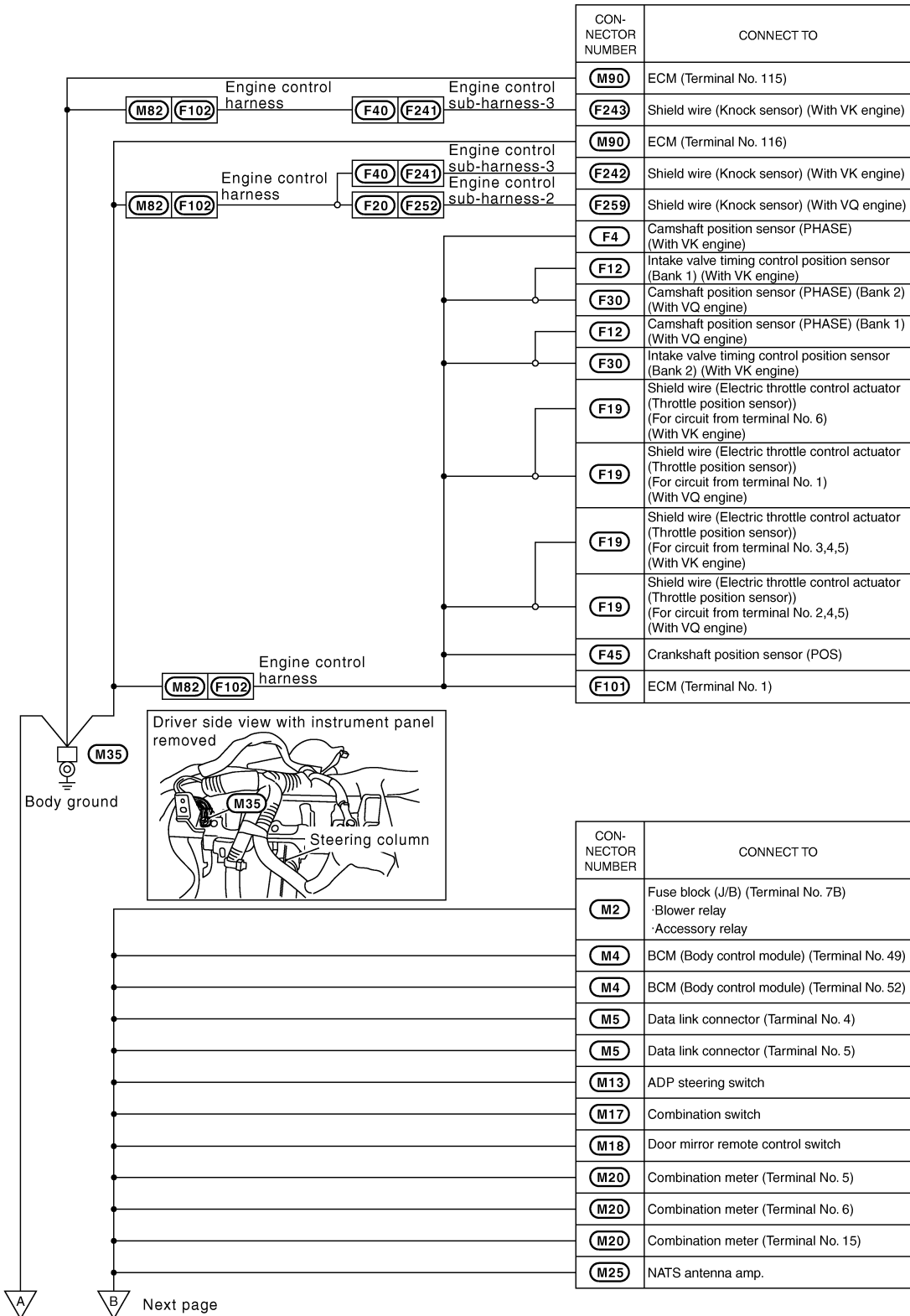
< SERVICE INFORMATION >

## GROUND

### Ground Distribution

INFOID:000000001328881

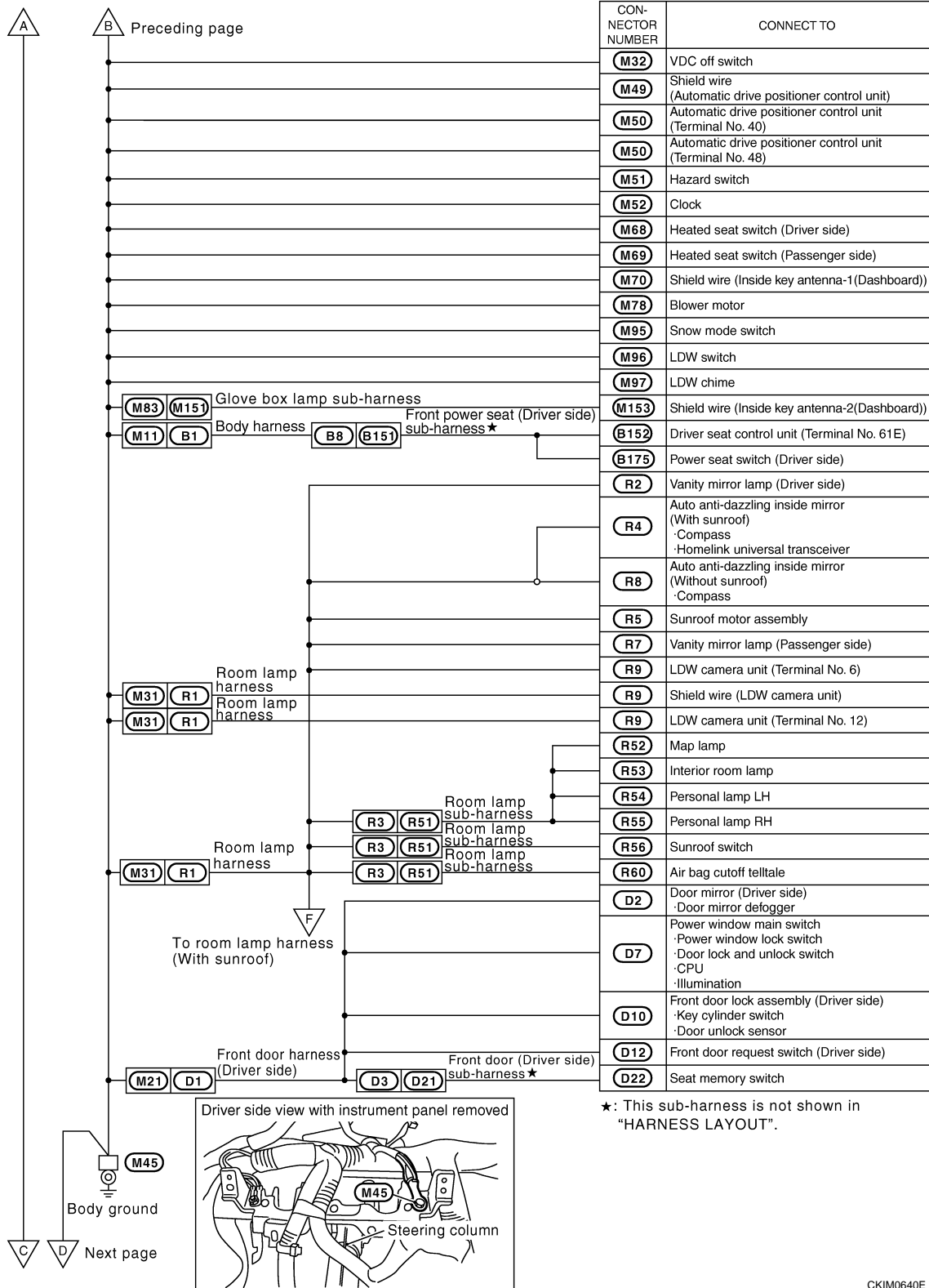
### MAIN HARNESS



CKIM0639E

# GROUND

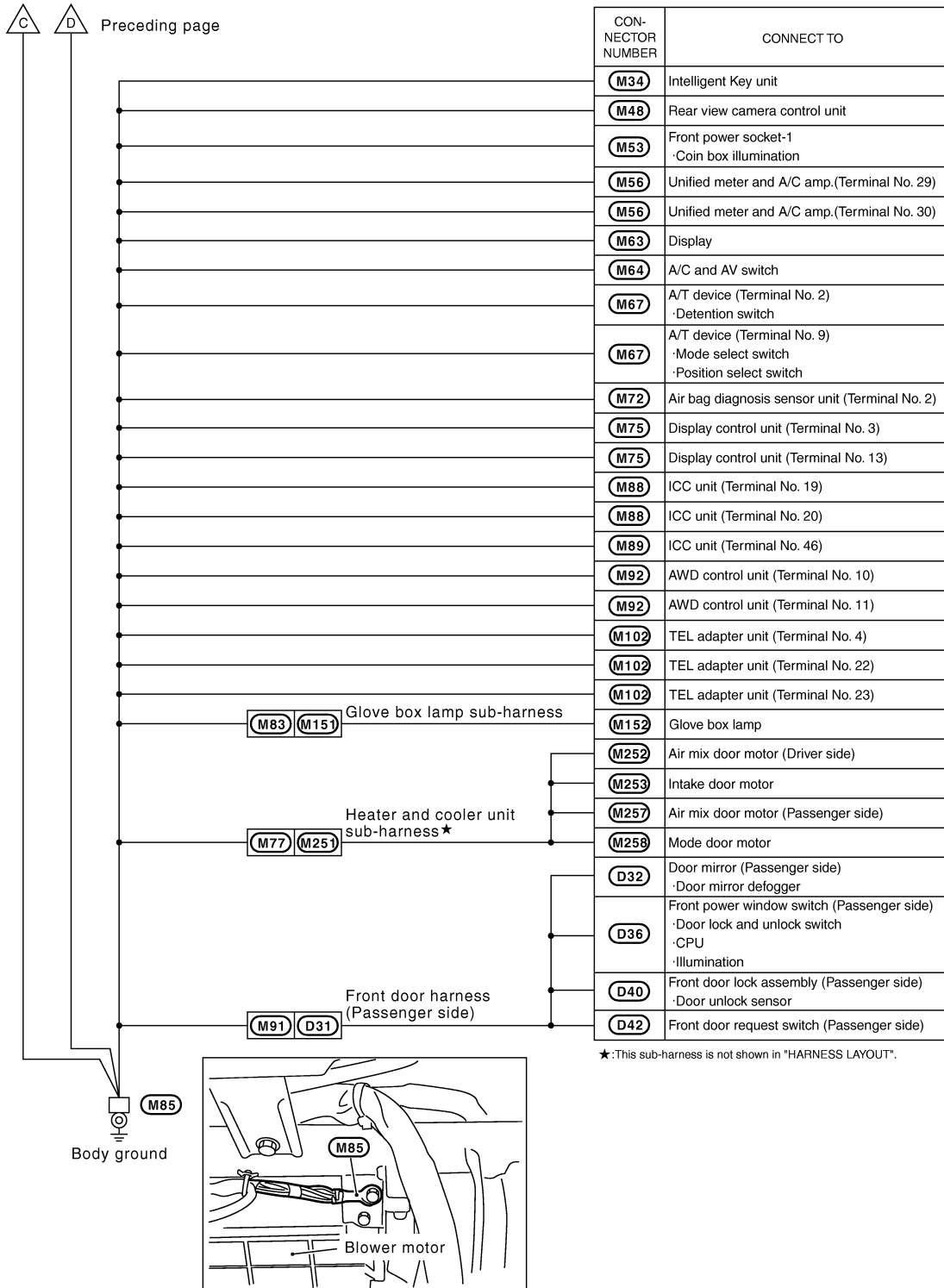
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CKIM0640E

# GROUND

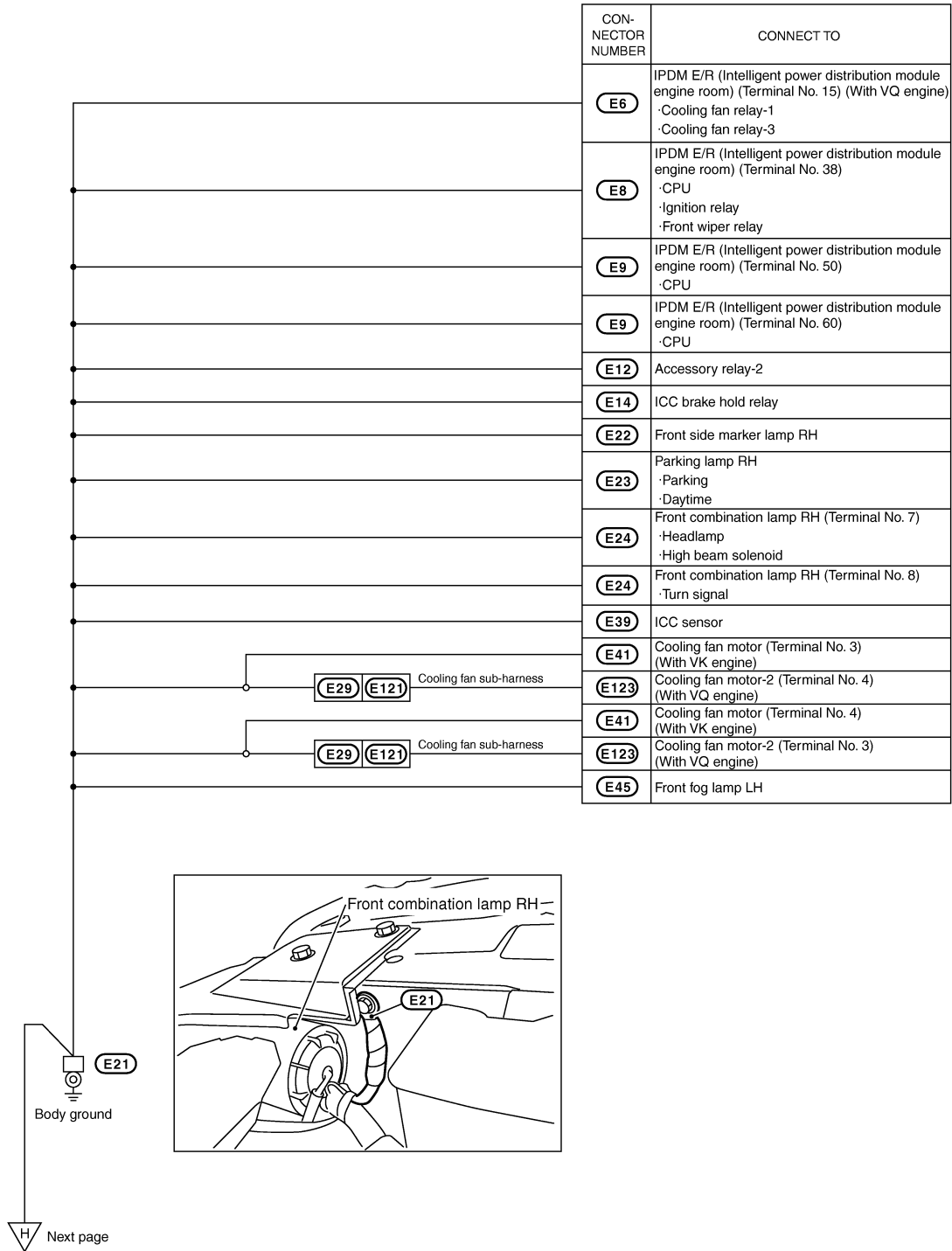
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# GROUND

## < SERVICE INFORMATION > ENGINE ROOM HARNESS

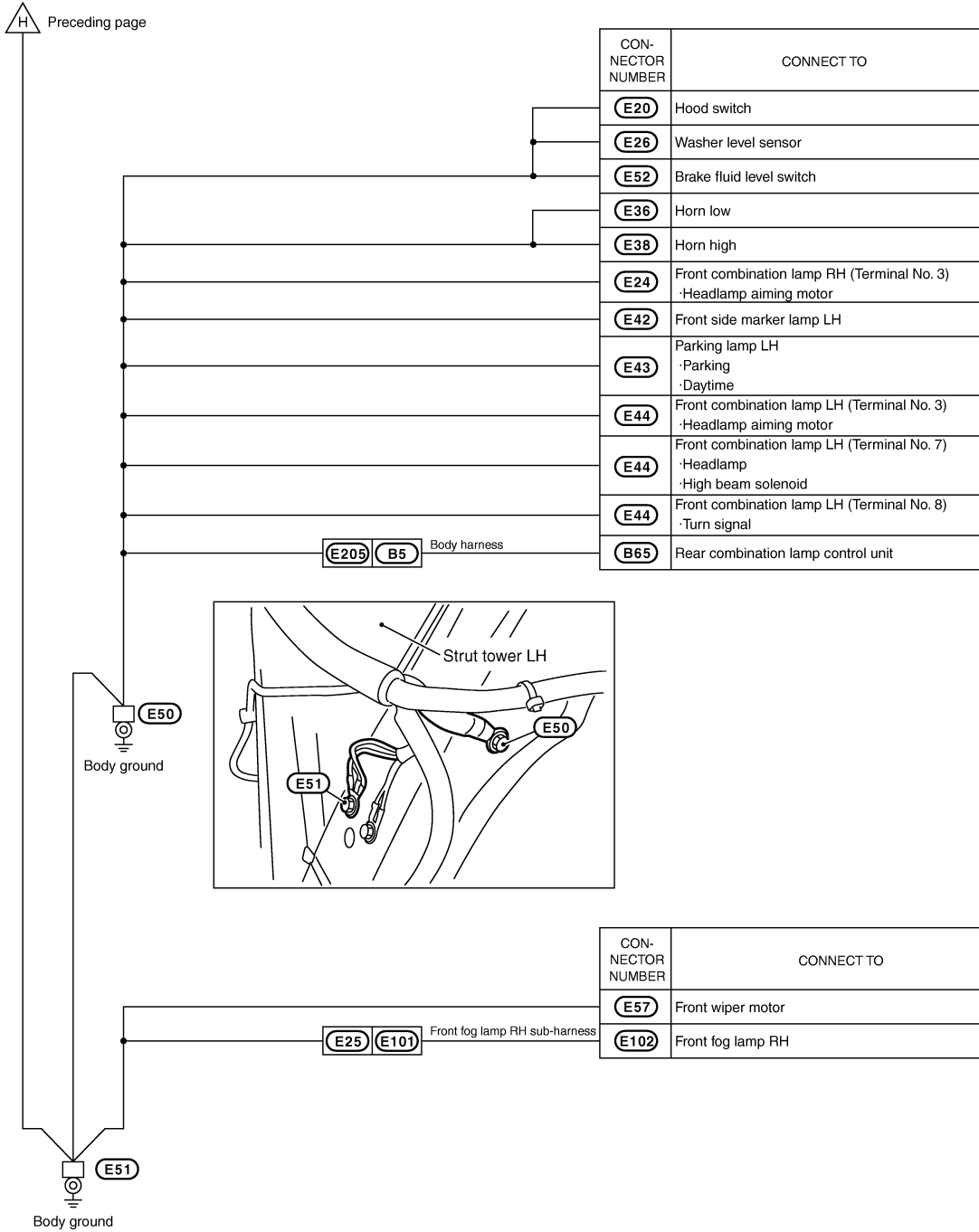


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# GROUND

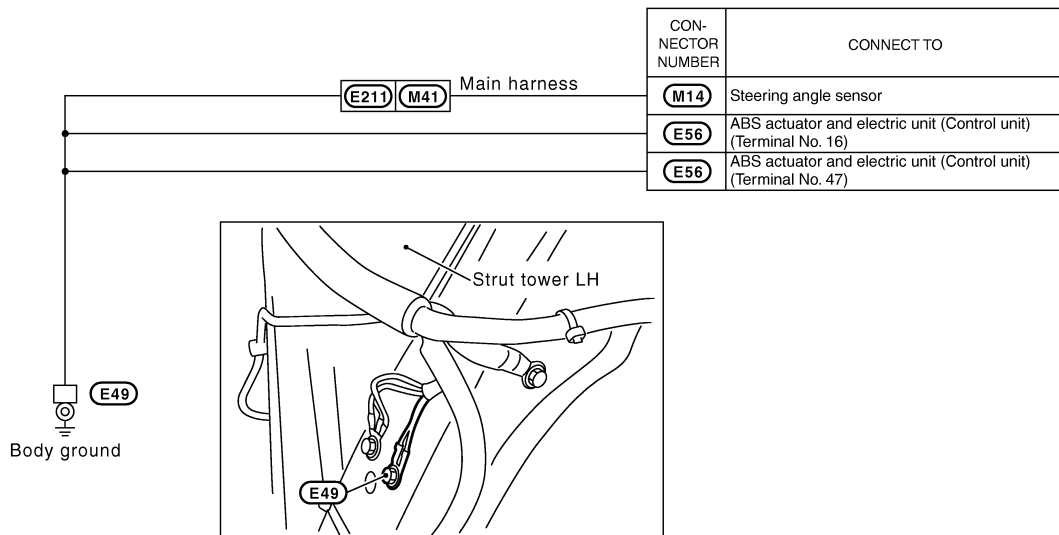
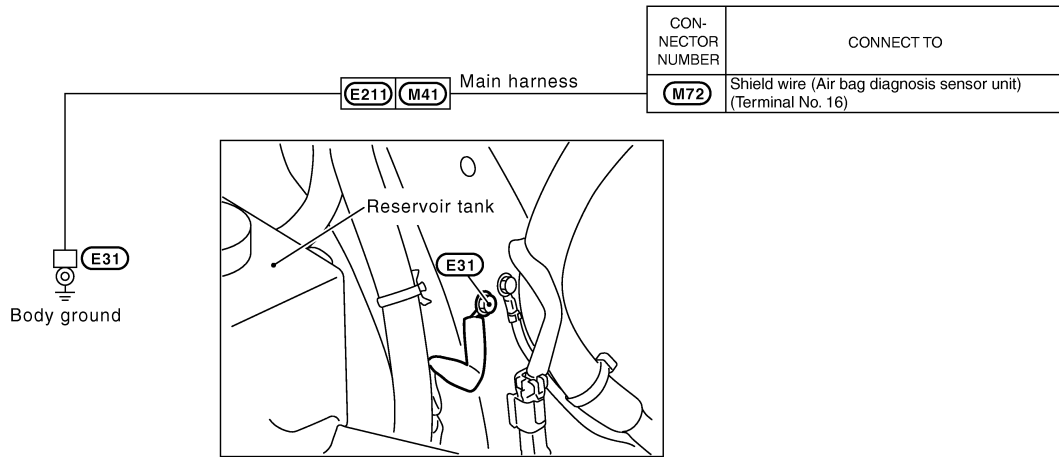
< SERVICE INFORMATION >



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# GROUND

## < SERVICE INFORMATION >



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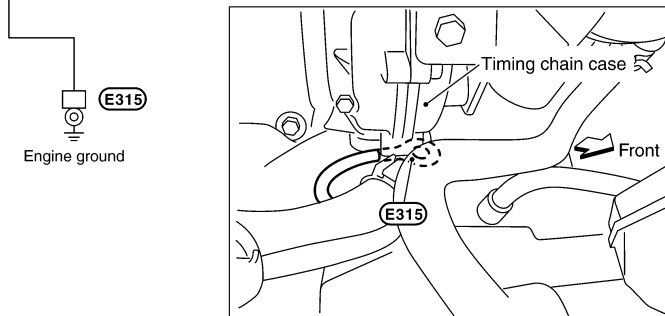
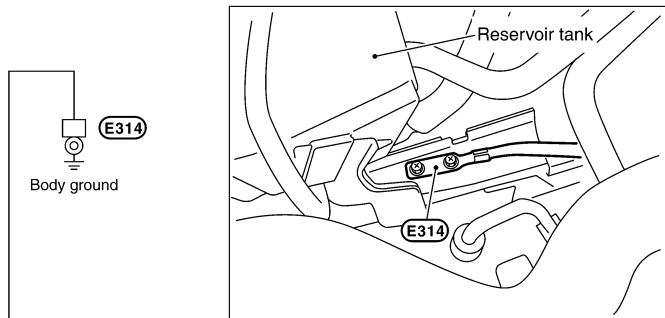
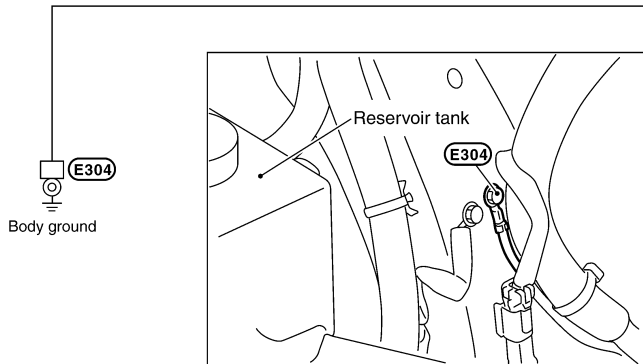
CKIM0642E

# GROUND

< SERVICE INFORMATION >

## ENGINE HARNESS/VK ENGINE MODELS

CON-NECTOR NUMBER	CONNECT TO
<b>E309</b>	Alternator



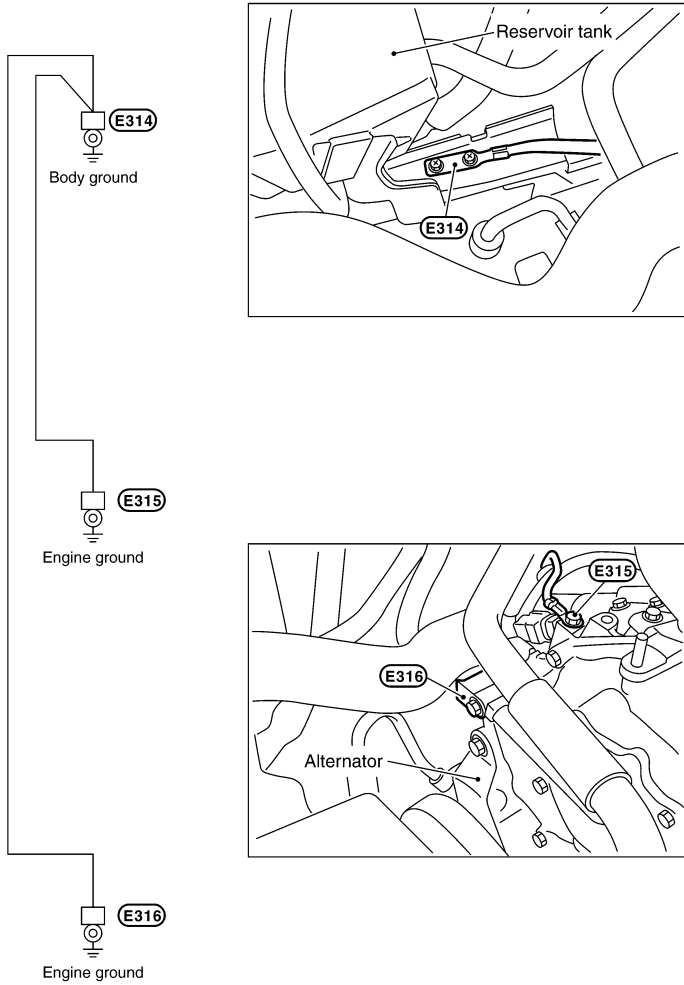
CKIM0203E



# GROUND

< SERVICE INFORMATION >

## ENGINE HARNESS/VQ ENGINE MODELS



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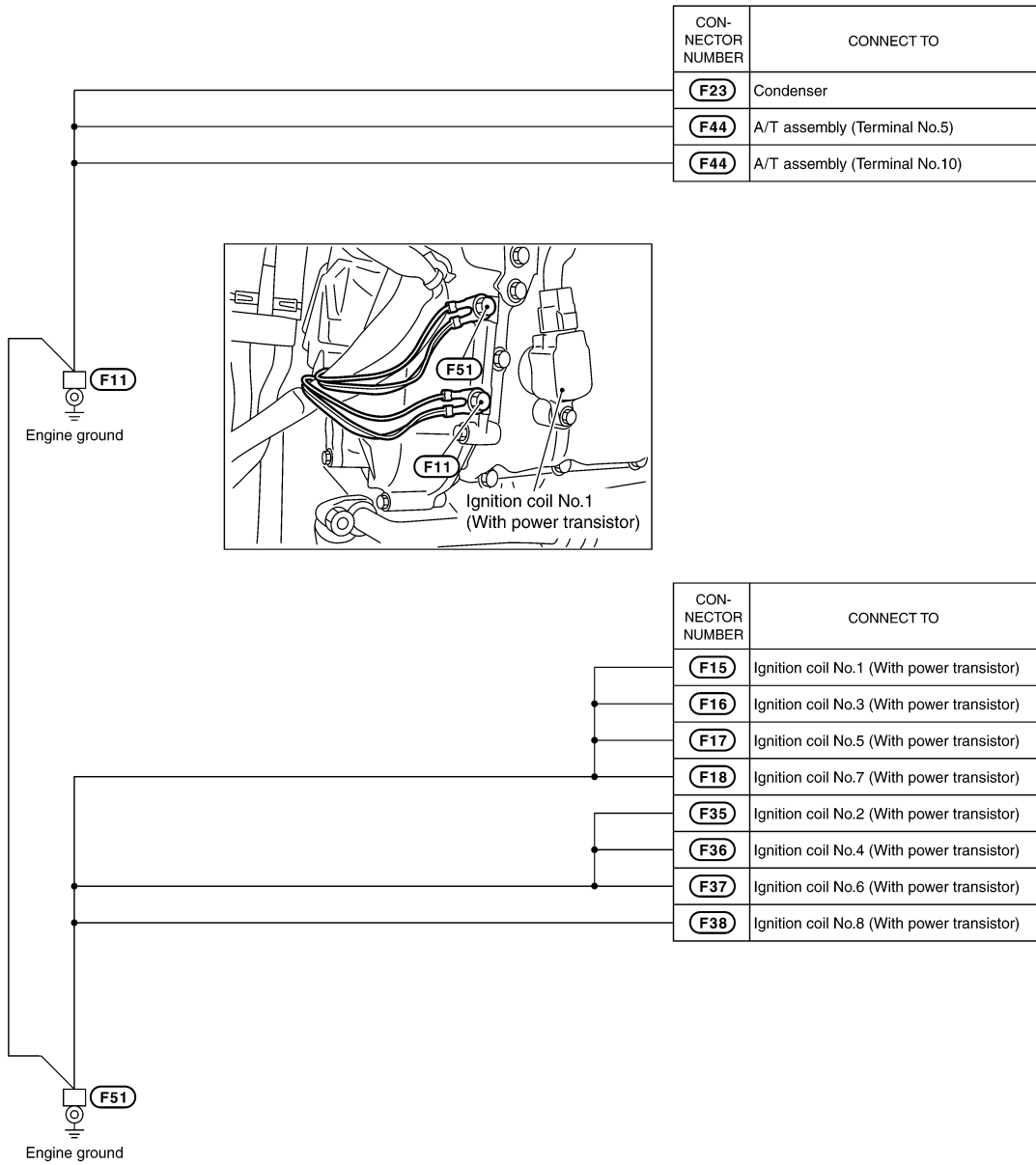
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CKIM0204E

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< SERVICE INFORMATION >

## ENGINE CONTROL HARNESS/VK ENGINE MODELS

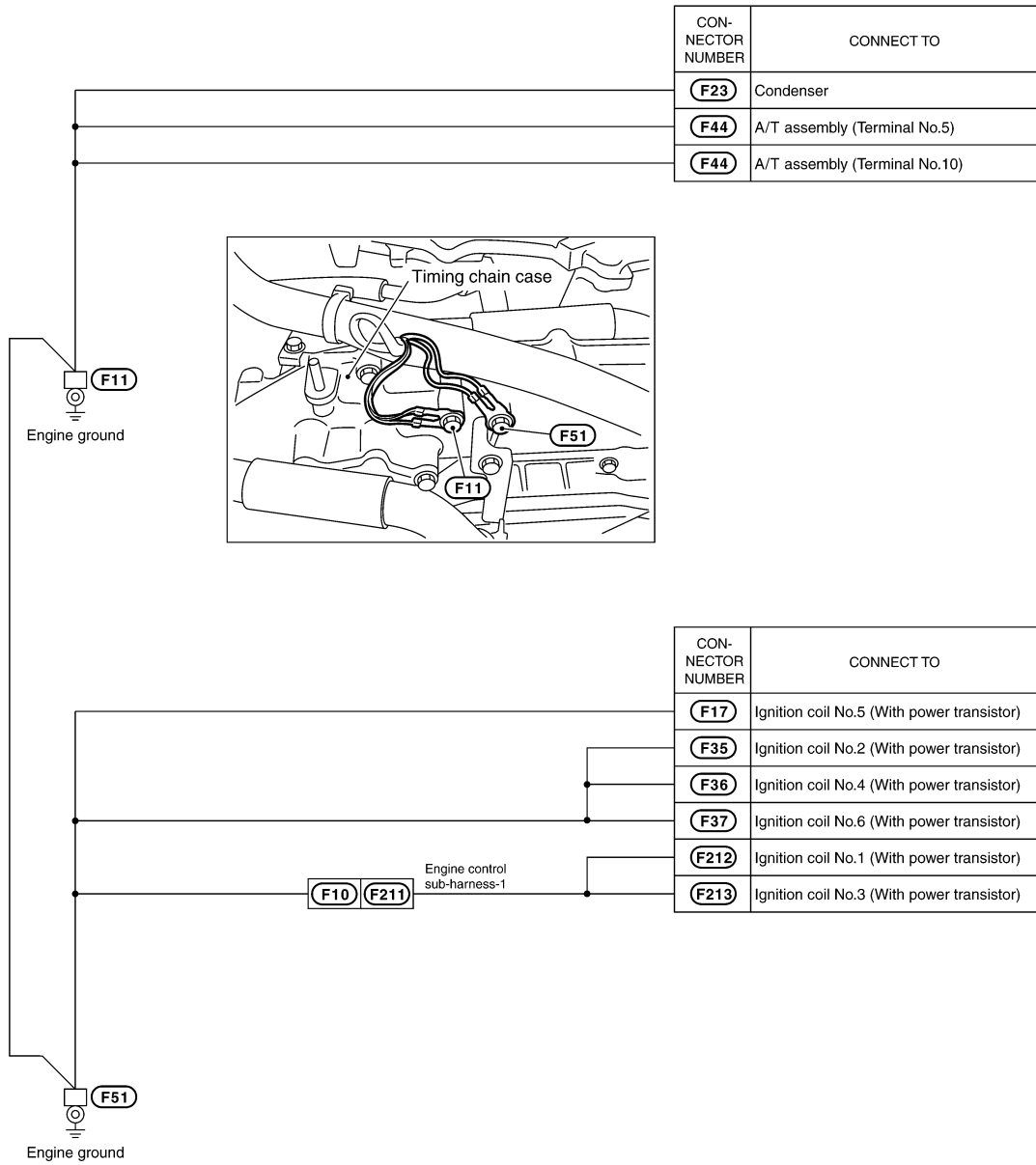


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# GROUND

< SERVICE INFORMATION >

## ENGINE CONTROL HARNESS/VQ ENGINE MODELS



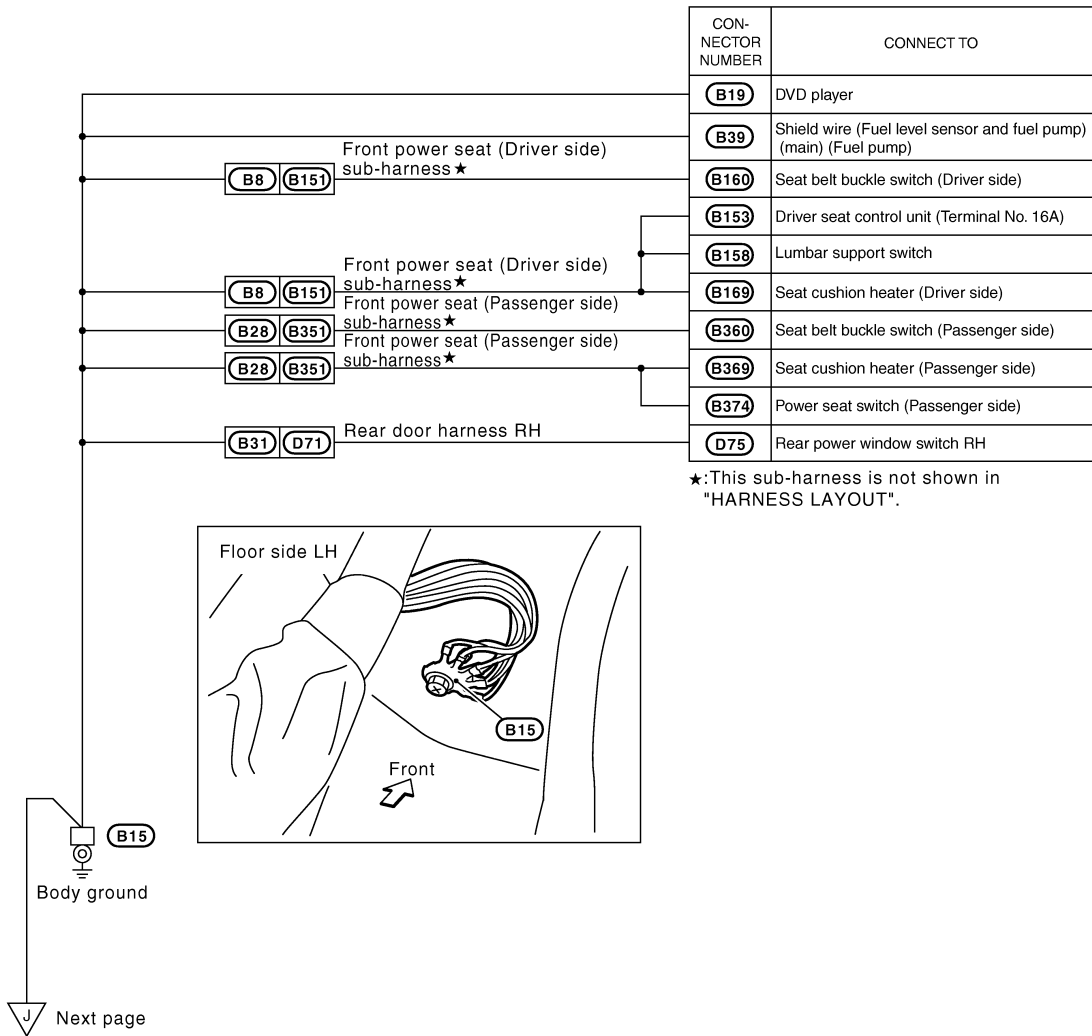
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< SERVICE INFORMATION >

## BODY HARNESS

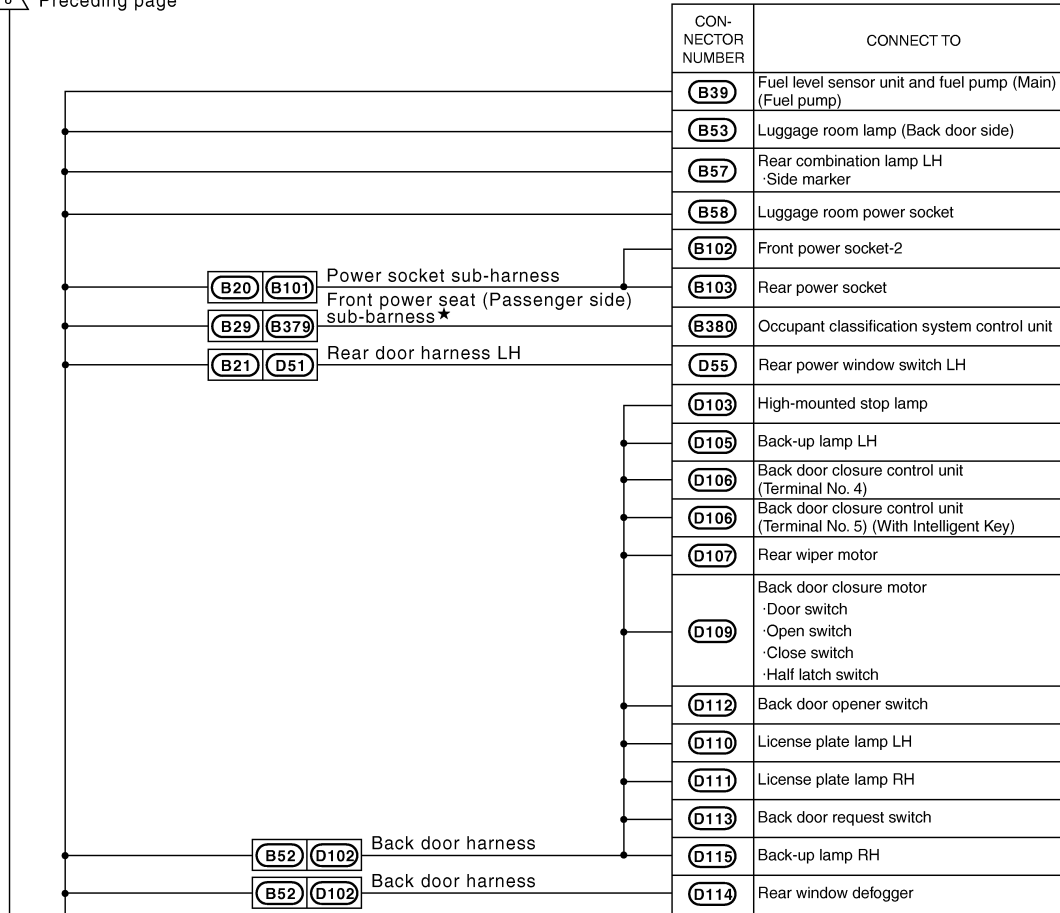


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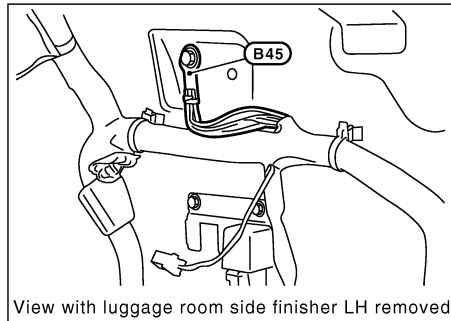
# GROUND

< SERVICE INFORMATION >

△ J Preceding page



★:This sub-harness is not shown in "HARNESS LAYOUT".



Body ground

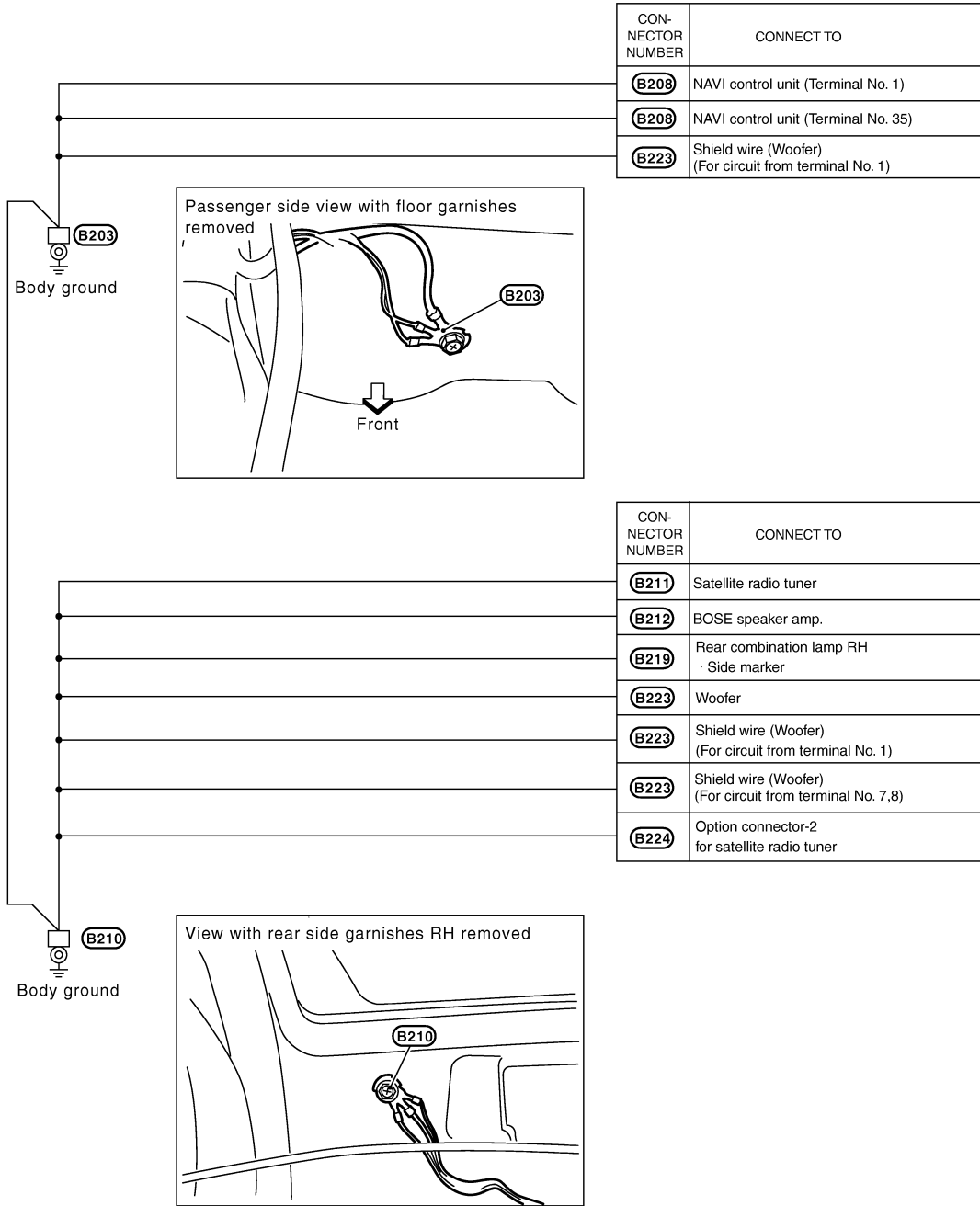
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# GROUND

< SERVICE INFORMATION >

## BODY NO. 2 HARNESS

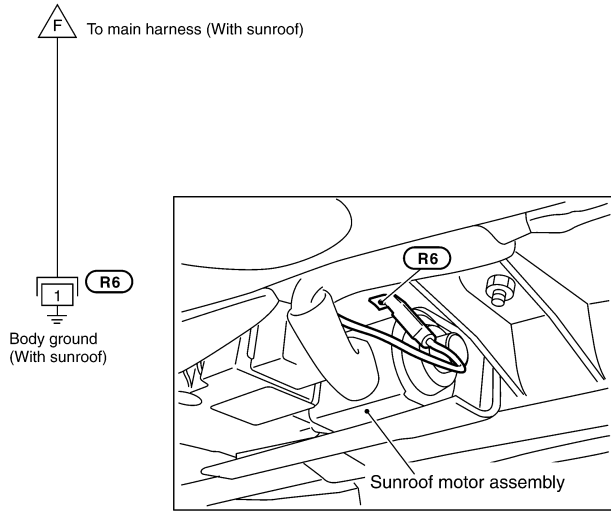


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# GROUND

< SERVICE INFORMATION >

## ROOM LAMP HARNESS



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# HARNESS

< SERVICE INFORMATION >

## HARNESS

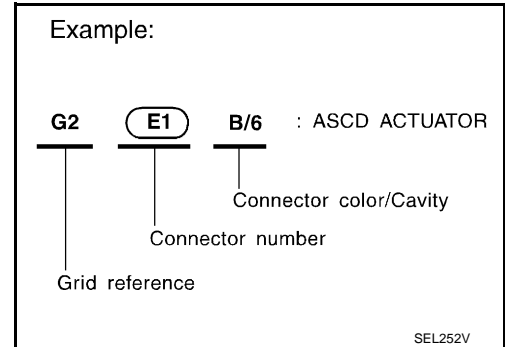
### Harness Layout

INFOID:000000001328882

#### HOW TO READ HARNESS LAYOUT

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

- Main Harness
- Engine Room Harness (Engine Compartment)
- Engine Control Harness
- Body Harness



To Use the Grid Reference

1. Find the desired connector number on the connector list.
2. Find the grid reference.
3. On the figure, 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 in the below.

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

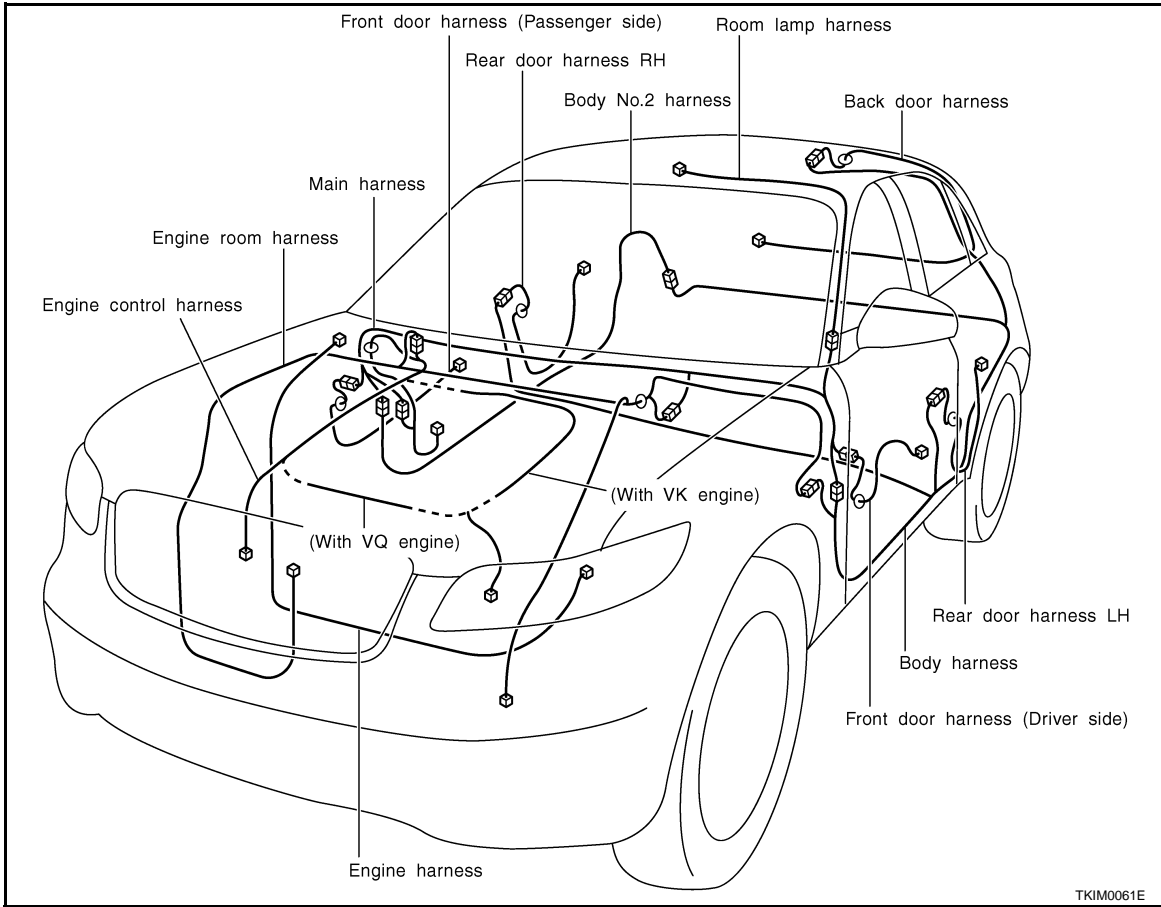
CKIT0108E



# HARNESS

< SERVICE INFORMATION >

## OUTLINE

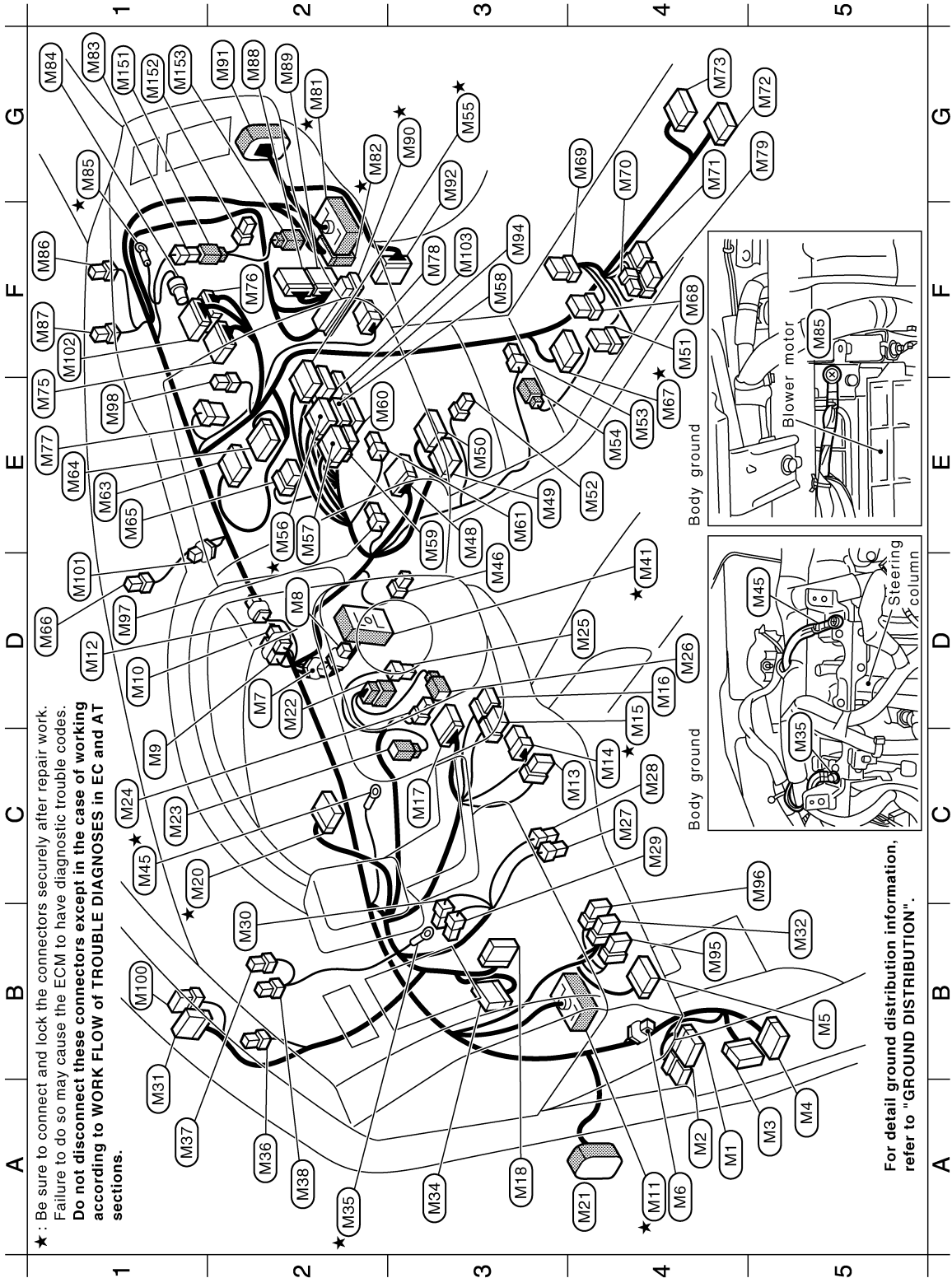


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# HARNESS

< SERVICE INFORMATION >

## MAIN HARNESS



TKIM0624E

# HARNESS

< SERVICE INFORMATION >

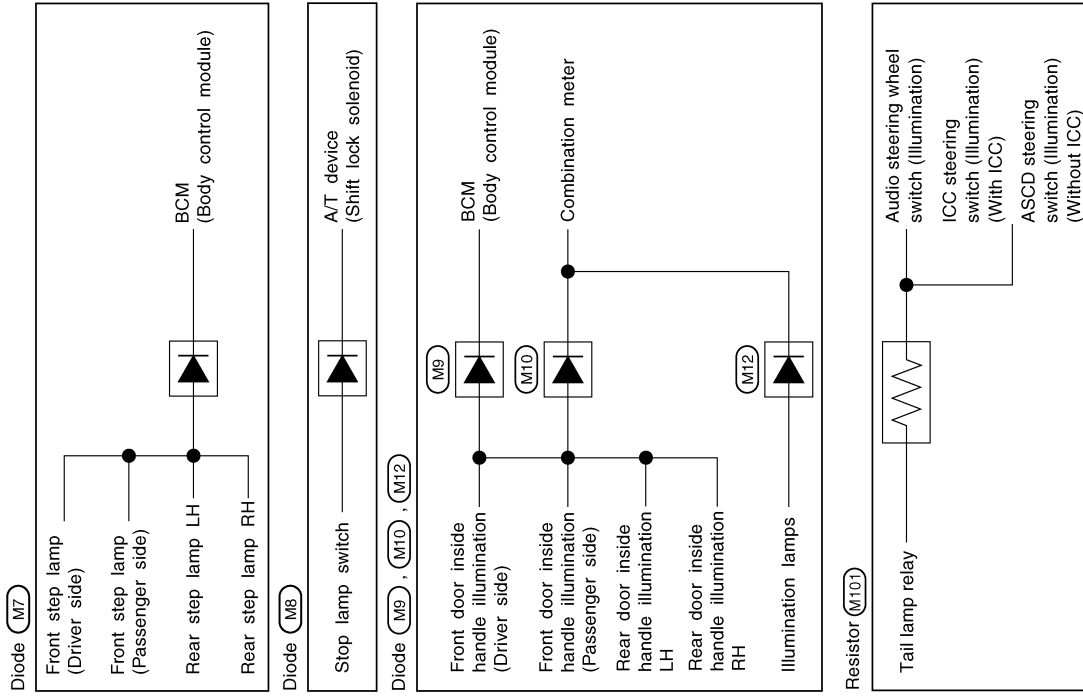
A4	(M1)	W/16	: Fuse block (J/B)	D3	(M46)	W/2	: In-vehicle sensor
A4	(M2)	W/8	: Fuse block (J/B)	E3	(M48)	W/16	: Rear view camera control unit
A5	(M3)	W/40	: BCM (Body control module)	E3	(M49)	W/32	: Automatic drive positioner control unit
A5	(M4)	BR/15	: BCM (Body control module)	E3	(M50)	W/16	: Automatic drive positioner control unit
B5	(M5)	W/16	: Data link connector	F4	(M51)	W/4	: Hazard switch
A4	(M6)	W/2	: Low tire pressure warning check switch	E4	(M52)	W/4	: Clock
D2	(M7)	W/2	: Diode	E4	(M53)	W/3	: Front power socket-1
D2	(M8)	W/2	: Diode	E4	(M54)	BR/2	: A/T device (Illumination)
C1	(M9)	W/2	: Diode	G3	(M55)	GY/20	: Unified meter and A/C amp.
D1	(M10)	W/2	: Diode	E2	(M56)	GY/16	: Unified meter and A/C amp.
A4	(M11)	SMJ	: To (E1)	E2	(M57)	W/24	: Unified meter and A/C amp.
D1	(M12)	W/2	: Diode	F3	(M58)	W/10	: Audio unit
C4	(M13)	GY/6	: ADP steering switch	E3	(M59)	W/6	: Audio unit
C4	(M14)	W/8	: Steering angle sensor	E2	(M60)	W/16	: Audio unit
D4	(M15)	GY/8	: Combination switch (Spiral cable)	E3	(M61)	BR/2	: Antenna amp.
D4	(M16)	Y/6	: Combination switch (Spiral cable)	E1	(M63)	W/24	: Display
C3	(M17)	W/16	: Combination switch	E1	(M64)	W/16	: A/C and AV switch
A3	(M18)	BR/16	: Door mirror remote control switch	E1	(M65)	BR/8	: Audio unit
C1	(M20)	W/24	: Combination meter	D1	(M66)	BR/2	: Instrument speaker center
A4	(M21)	SMJ	: To (D1)	E4	(M67)	W/10	: A/T device
D2	(M22)	GY/6	: Key switch and ignition knob switch (With Intelligent Key)	F4	(M68)	W/6	: Heated seat switch (Driver side)
C1	(M23)	BR/2	: Key switch (Without Intelligent Key)	G4	(M69)	BR/6	: Heated seat switch (Passenger side)
C1	(M24)	W/2	: Ignition keyhole illumination	G4	(M70)	W/2	: Inside key antenna-1 (Dashboard)
D4	(M25)	W/4	: NATS antenna amp.	G4	(M71)	B/6	: Yaw rate / Side / Decel G sensor (AWD models)
D4	(M26)	W/4	: Steering lock unit	G5	(M72)	Y/28	: Air bag diagnosis sensor unit
C4	(M27)	W/4	: Tilt motor and telescopic motor	G4	(M73)	-/16	: DVD player
C4	(M28)	W/4	: Tilt sensor and telescopic sensor	E1	(M75)	W/24	: Display control unit
C4	(M29)	W/2	: Circuit breaker	F2	(M76)	W/32	: Display control unit
B2	(M30)	B/5	: Passenger side select unlock relay	E1	(M77)	W/6	: Heater and cooling unit (Via sub-harness)
A1	(M31)	W/18	: To (E1)	F3	(M78)	W/6	: Blower motor
B5	(M32)	GY/6	: VDC off switch	G5	(M79)	B/6	: Yaw rate / Side G sensor (2WD models)
A3	(M34)	W/40	: Intelligent Key unit	G2	(M81)	SMJ	: To (E201)
A2	(M35)	-	: Body ground	G2	(M82)	SMJ	: To (F102)
A2	(M36)	BR/2	: Instrument speaker LH				
A1	(M37)	W/3	: Optical sensor				
A2	(M38)	BR/2	: Security indicator lamp				
D4	(M41)	SMJ	: To (E211)				
C1	(M45)	-	: 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.**

TKIM0625E

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- G1 (M83) W/4 : To (M15)
  - G1 (M84) Y/4 : Front passenger air bag module
  - G1 (M85) — : Body ground
  - F1 (M86) BR/2 : Instrument speaker RH
  - F1 (M87) B/2 : Sunload sensor
  - G2 (M88) W/24 : ICC unit
  - G2 (M89) GY/24 : ICC unit
  - G3 (M90) SMJ : ECM
  - G2 (M91) SMJ : To (D31)
  - G3 (M92) W/16 : AWD control unit
  - F3 (M94) W/12 : Option connector-1 for audio unit (Without satellite radio)
  - B4 (M95) W/8 : Snow mode switch
  - C5 (M96) GY/8 : LDW switch
  - D1 (M97) BR/4 : LDW chime
  - E1 (M98) W/4 : Remote keyless entry receiver
  - B1 (M100) W/8 : To (R10)
  - D1 (M101) -/2 : Resistor
  - F1 (M102) W/32 : TEL adapter unit
  - F3 (M103) W/12 : Audio unit (With satellite radio)
- Glove box lamp sub-harness**
- G1 (M151) W/4 : To (M83)
  - G1 (M152) W/2 : Glove box lamp
  - G1 (M153) W/2 : Inside key antenna-2 (Dashboard)

★ : 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.**

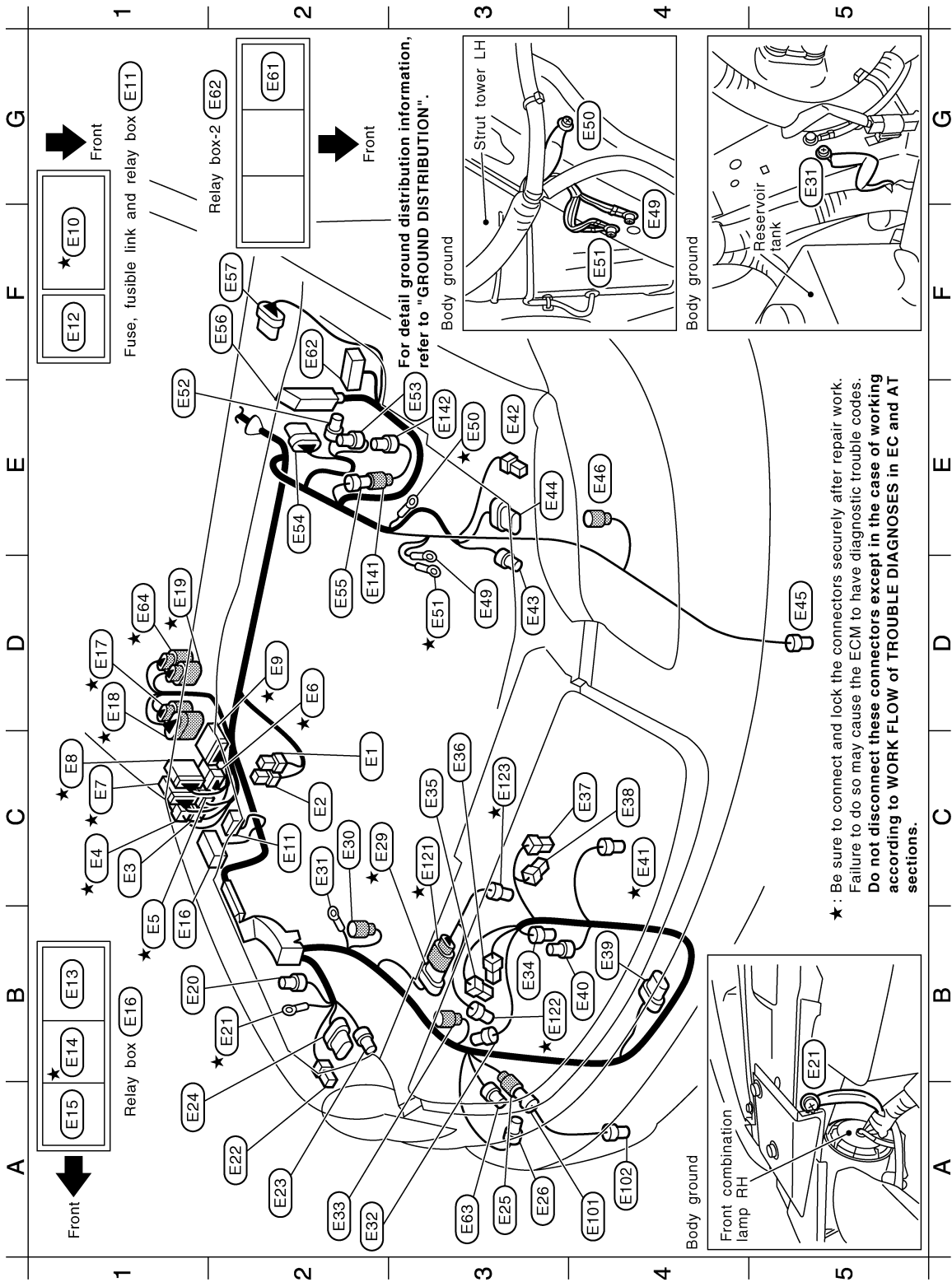
TKIM0626E

## ENGINE ROOM HARNESS

# HARNESS

< SERVICE INFORMATION >

Engine Compartment



TKIM0627E

A B C D E F G A B C D E F G A B C D E F G H I J K L M N O P

PG

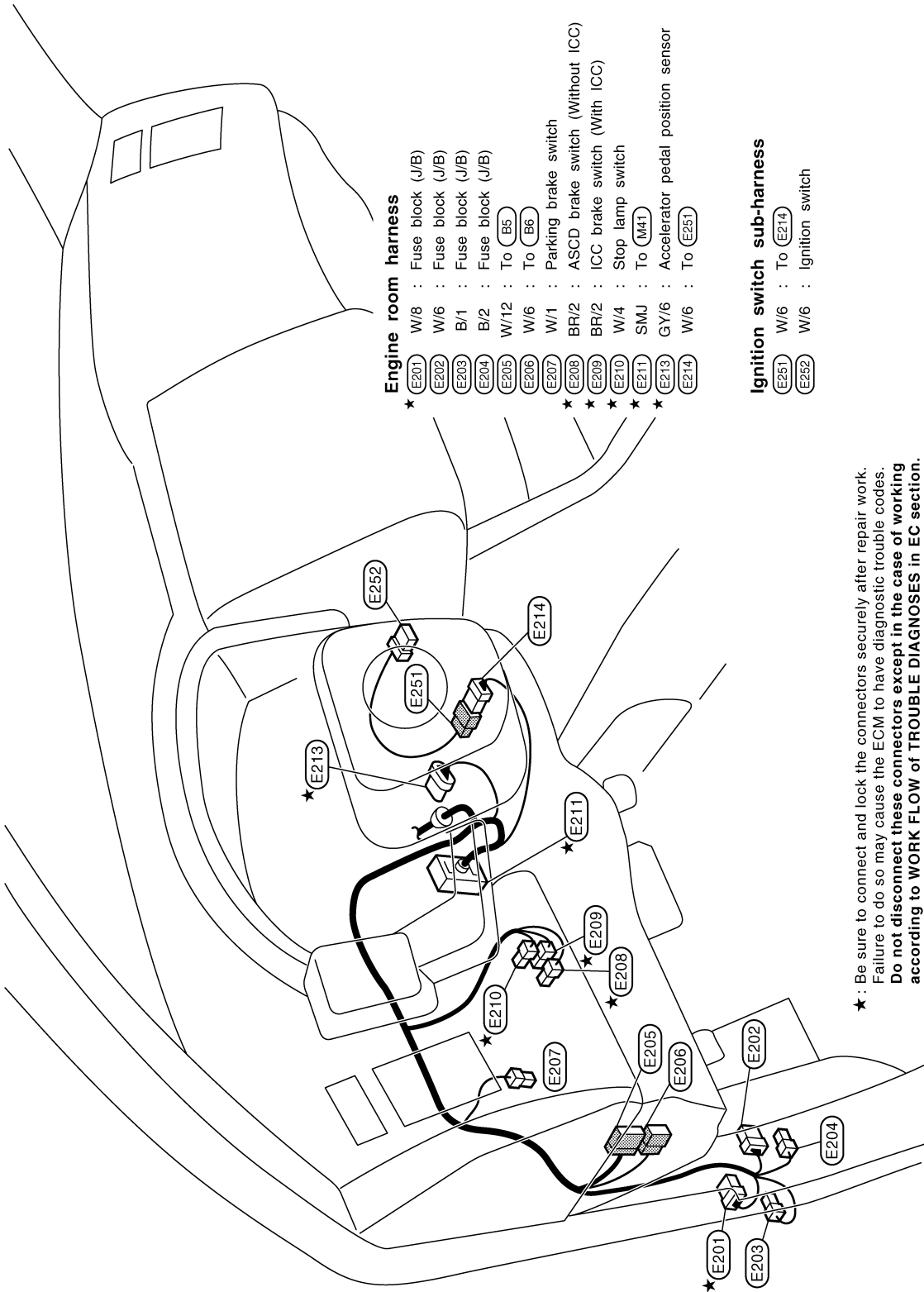
<b>Engine room harness</b>		
C2	(E1) B/2 : Fusible link holder	
C2	(E2) GY/2 : Fusible link holder	
C1	(E3) B/2 : IPDM E/R (Intelligent power distribution module engine room)	
C1	(E4) W/4 : IPDM E/R (Intelligent power distribution module engine room)	
B1	(E5) B/4 : IPDM E/R (Intelligent power distribution module engine room)	
D2	(E6) W/6 : IPDM E/R (Intelligent power distribution module engine room)	
C1	(E7) GY/16 : IPDM E/R (Intelligent power distribution module engine room)	
C1	(E8) W/12 : IPDM E/R (Intelligent power distribution module engine room)	
D2	(E9) W/16 : IPDM E/R (Intelligent power distribution module engine room)	
F1	(E10) — : Fuse and fusible link block	
C2	(E11) — : Fuse, fusible link and relay box	
F1	(E12) L/4 : Accessory relay-2	
B1	(E13) BR/6 : Rear window defogger relay	
B1	(E14) GY/6 : ICC brake hold relay	
A1	(E15) L/4 : Daytime light relay	
B1	(E16) — : Relay box	
D1	(E17) GY/6 : To (F47) (With VK engine)	
D1	(E18) GY/9 : To (F48) (With VQ engine)	
D1	(E19) B/8 : To (F49) (With VK engine)	
B1	(E20) GY/2 : Hood switch	
B2	(E21) — : Body ground	
A2	(E22) B/2 : Front side marker lamp RH	
A2	(E23) GY/3 : Parking lamp RH	
A1	(E24) B/8 : Front combination lamp RH	
A3	(E25) B/2 : To (E101)	
A3	(E26) BR/2 : Washer level sensor	
C2	(E29) B/8 : To (E121) (With VQ engine)	
C2	(E30) GY/1 : To (E303)	
C2	(E31) — : Body ground	
A2	(E32) B/3 : Refrigerant pressure sensor	
A2	(E33) GY/2 : Front wheel sensor RH	
B3	(E34) B/2 : Ambient sensor	
C3	(E35) B/1 : Horn low	
C3	(E36) B/1 : Horn low	
C4	(E37) B/1 : Horn high	
C4	(E38) B/1 : Horn high	
B4	(E39) GY/6 : ICC sensor	
B4	(E40) Y/2 : Crash zone sensor	
C4	(E41) GY/4 : Cooling fan motor (With VK engine)	
E3	(E42) B/2 : Front side marker lamp LH	
D3	(E43) GY/3 : Parking lamp LH	
E3	(E44) B/8 : Front combination lamp LH	
D5	(E45) -/2 : Front fog lamp LH	
E4	(E46) GY/2 : Front wheel sensor LH	
D3	(E49) — : Body ground	
E3	(E50) — : Body ground	
D3	(E51) — : Body ground	
E1	(E52) GY/2 : Brake fluid level switch	
E3	(E53) B/3 : Pressure sensor	
E2	(E54) GY/6 : Brake booster	
D2	(E55) BR/3 : To (E141)	
F2	(E56) SMJ : ABS actuator and electric unit (Control unit)	
F2	(E57) GY/5 : Front wiper motor	
G2	(E61) L/4 : Back-up lamp relay	
F2	(E62) — : Relay box-2	
A3	(E63) GY/2 : Front and rear washer pump	
D1	(E64) GY/6 : To (F65) (With VQ engine)	
<b>Front fog lamp RH sub-harness</b>		
A4	(E101) B/2 : To (E25)	
A4	(E102) -/2 : Front fog lamp RH	
<b>Cooling fan sub-harness (With VQ engine)</b>		
C3	(E121) DGY/8 : To (E29)	
B3	(E122) GY/4 : Cooling fan motor-1	
C3	(E123) GY/4 : Cooling fan motor-2	
<b>ICC sub-harness</b>		
D2	(E141) BR/3 : To (E55)	
E3	(E142) B/3 : Brake pressure sensor	

★ : 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

< SERVICE INFORMATION >

Passenger Compartment



### Engine room harness

- ★ E201 W/8 : Fuse block (J/B)
- E202 W/6 : Fuse block (J/B)
- E203 B/1 : Fuse block (J/B)
- E204 B/2 : Fuse block (J/B)
- E205 W/12 : To B5
- E206 W/6 : To B6
- E207 W/1 : Parking brake switch
- ★ E208 BR/2 : ASCD brake switch (Without ICC)
- ★ E209 BR/2 : ICC brake switch (With ICC)
- ★ E210 W/4 : Stop lamp switch
- ★ E211 SMJ : To M41
- ★ E213 GY/6 : Accelerator pedal position sensor
- E214 W/6 : To E251

### Ignition switch sub-harness

- E251 W/6 : To E214
- E252 W/6 : Ignition switch

★ : 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 section.**

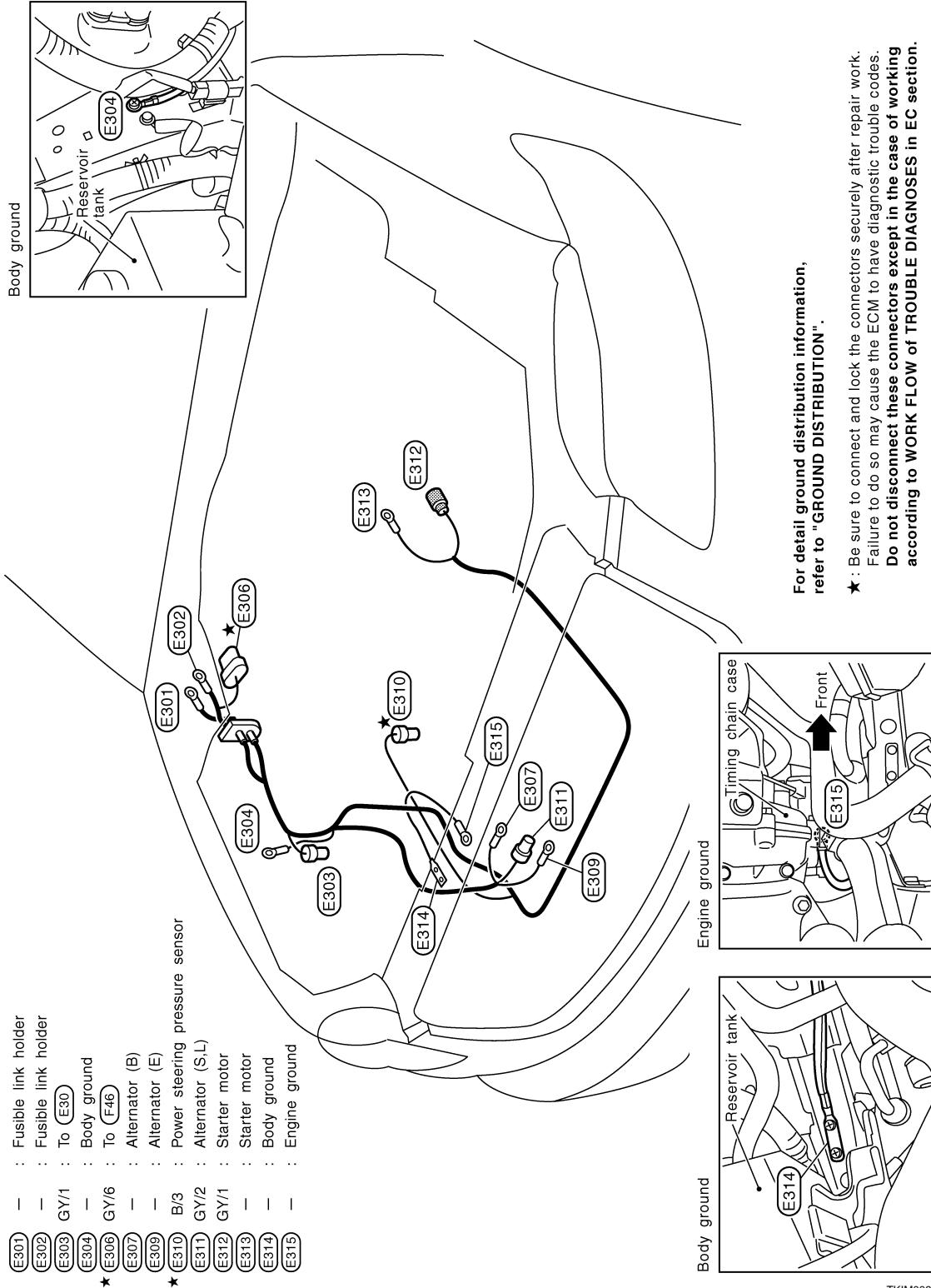
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# HARNESS

< SERVICE INFORMATION >

## ENGINE HARNESS/VK ENGINE MODELS



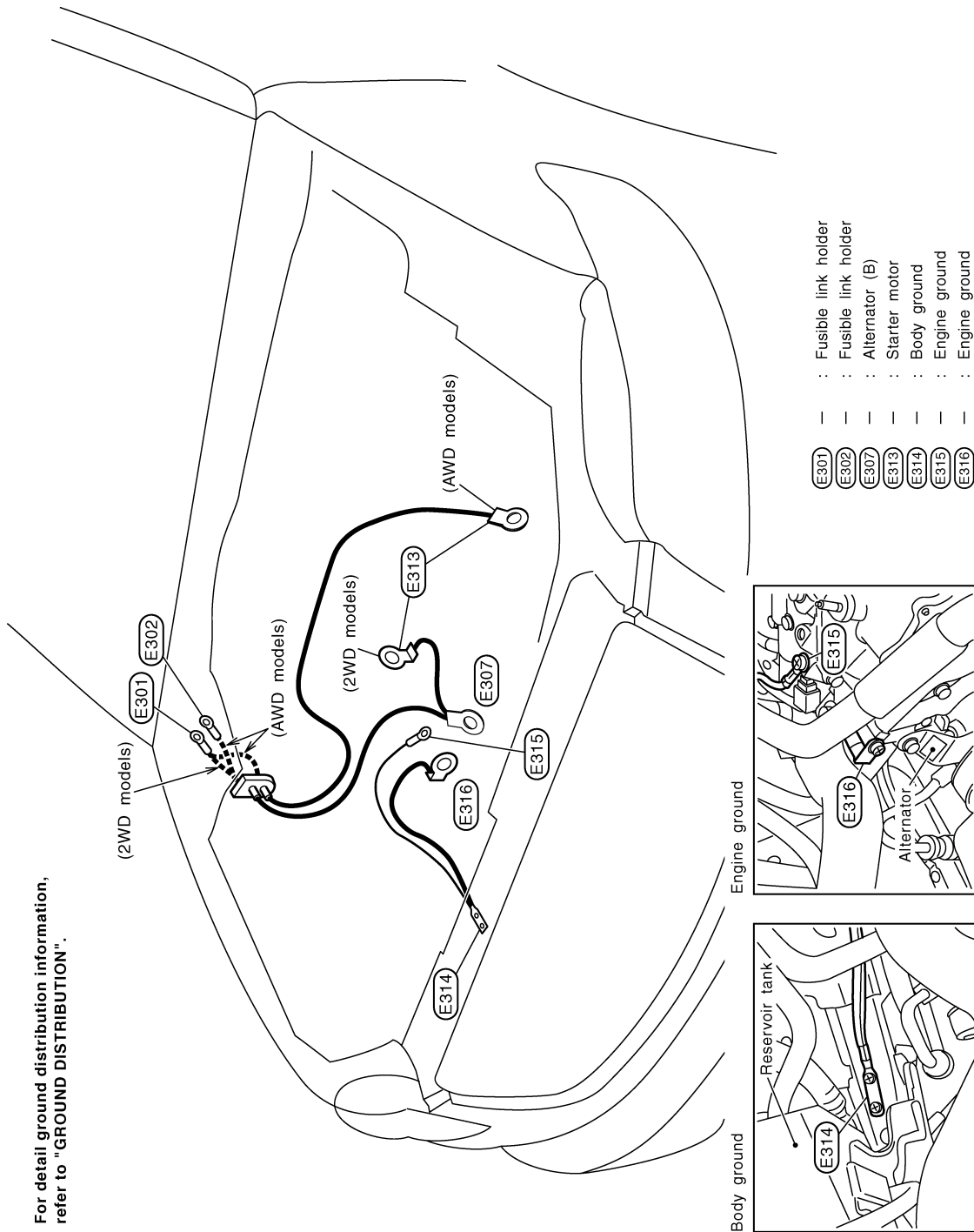
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# HARNESS

## < SERVICE INFORMATION >

### ENGINE HARNESS/VQ ENGINE MODELS



- (E301) : Fusible link holder
- (E302) : Fusible link holder
- (E307) : Alternator (B)
- (E313) : Starter motor
- (E314) : Body ground
- (E315) : Engine ground
- (E316) : Engine ground

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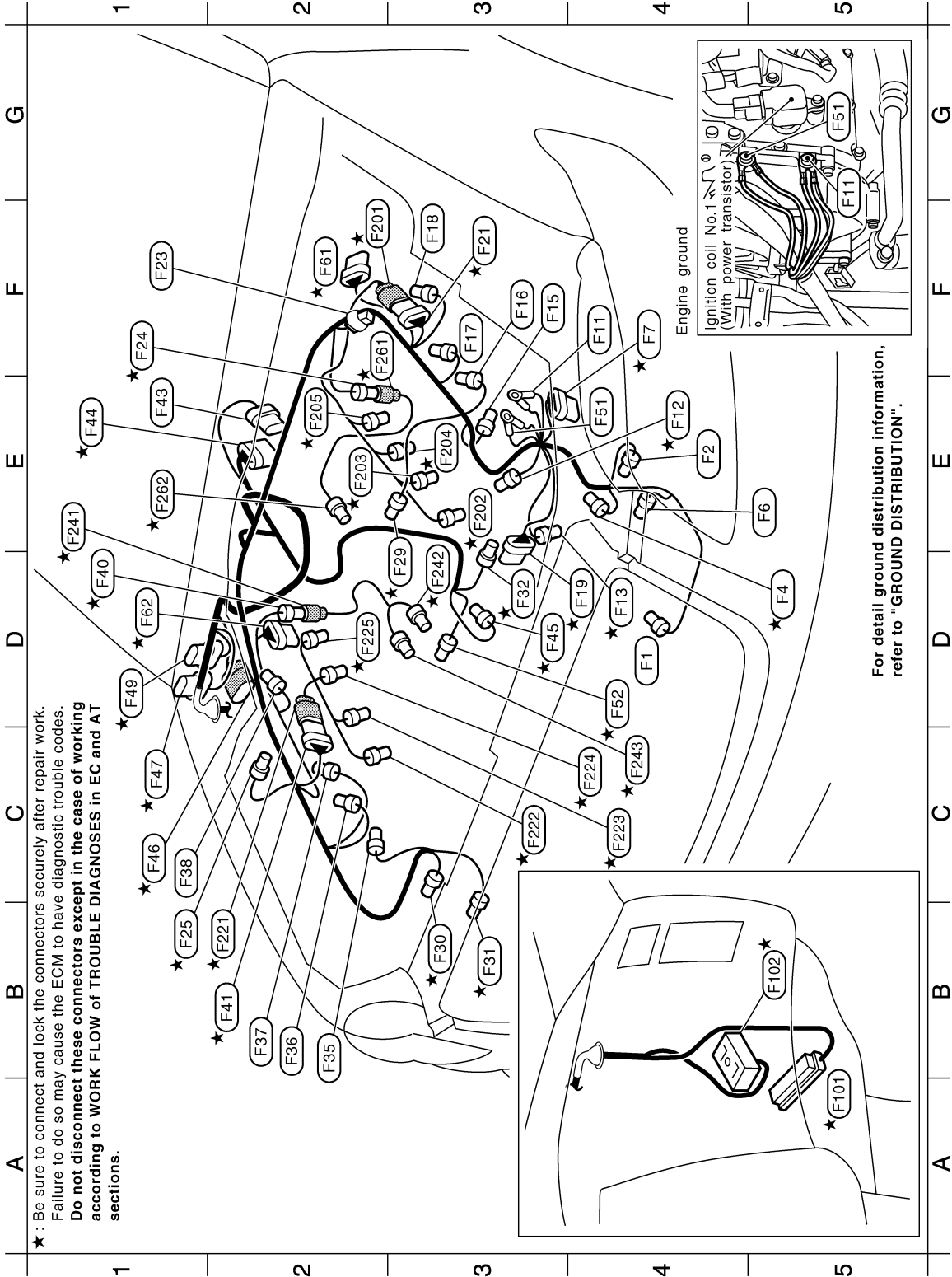
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# HARNESS

< SERVICE INFORMATION >

## ENGINE CONTROL HARNESS/VK ENGINE MODELS



TKIM0630E

## Engine control harness

D4	(F1)	GY/1	: Oil pressure switch
E4	(F2)	B/1	: Compressor (Magnet clutch)
D5	(F4)	B/3	: Camshaft position sensor (PHASE)
E5	(F6)	B/2	: Compressor (ECV solenoid valve)
F4	(F7)	B/6	: Mass air flow sensor
F4	(F11)	—	: Engine ground
E4	(F12)	B/3	: Intake valve timing control position sensor (Bank 1)
D4	(F13)	LG/2	: Intake valve timing control solenoid valve (Bank 1)
F3	(F15)	GY/3	: Ignition coil No.1 (With power transistor)
F3	(F16)	GY/3	: Ignition coil No.3 (With power transistor)
F3	(F17)	GY/3	: Ignition coil No.5 (With power transistor)
F3	(F18)	GY/3	: Ignition coil No.7 (With power transistor)
D4	(F19)	B/6	: Electric throttle control actuator
F3	(F21)	DGY/6	: To (F201)
F1	(F23)	W/2	: Condenser
F1	(F24)	B/2	: To (F261)
B1	(F25)	LG/2	: EVAP canister purge volume control solenoid valve
D3	(F29)	B/2	: VIAS control solenoid valve
B3	(F30)	B/3	: Intake valve timing control position sensor (Bank 2)
B3	(F31)	LG/2	: Intake valve timing control solenoid valve (Bank 2)
D3	(F32)	G/4	: Heated oxygen sensor 2 (Bank 1)
B2	(F35)	GY/3	: Ignition coil No.2 (With power transistor)
B2	(F36)	GY/3	: Ignition coil No.4 (With power transistor)
B2	(F37)	GY/3	: Ignition coil No.6 (With power transistor)
C1	(F38)	GY/3	: Ignition coil No.8 (With power transistor)
D1	(F40)	B/4	: To (F241)
B2	(F41)	DGY/6	: To (F221)
E1	(F43)	B/8	: Transfer assembly
E1	(F44)	DGY/10	: A/T assembly
D3	(F45)	B/3	: Crankshaft position sensor (POS)
C1	(F46)	GY/6	: To (E306)
C1	(F47)	GY/6	: To (E17)
D1	(F49)	B/8	: To (E19)
E4	(F51)	—	: Engine ground

D4	(F52)	L/4	: Heated oxygen sensor 2 (Bank 2)
F2	(F61)	—/6	: Air fuel ratio (A/F) sensor 1 (Bank 1)
D1	(F62)	—/6	: Air fuel ratio (A/F) sensor 1 (Bank 2)
A5	(F101)	SMJ	: ECM
B5	(F102)	SMJ	: To (M82)

## Engine control sub-harness-1

F2	(F201)	Gi/6	: To (F21)
E3	(F202)	GY/2	: Fuel injector No.1
E2	(F203)	GY/2	: Fuel injector No.3
E3	(F204)	GY/2	: Fuel injector No.5
E2	(F205)	GY/2	: Fuel injector No.7

## Engine control sub-harness-2

B2	(F221)	Gi/6	: To (F41)
C3	(F222)	GY/2	: Fuel injector No.2
C4	(F223)	GY/2	: Fuel injector No.4
C4	(F224)	GY/2	: Fuel injector No.6
D2	(F225)	GY/2	: Fuel injector No.8

## Engine control sub-harness-3

E1	(F241)	B/4	: To (F40)
D3	(F242)	L/2	: Knock sensor (Bank 1)
C4	(F243)	L/2	: Knock sensor (Bank 2)

## Engine control sub-harness-4

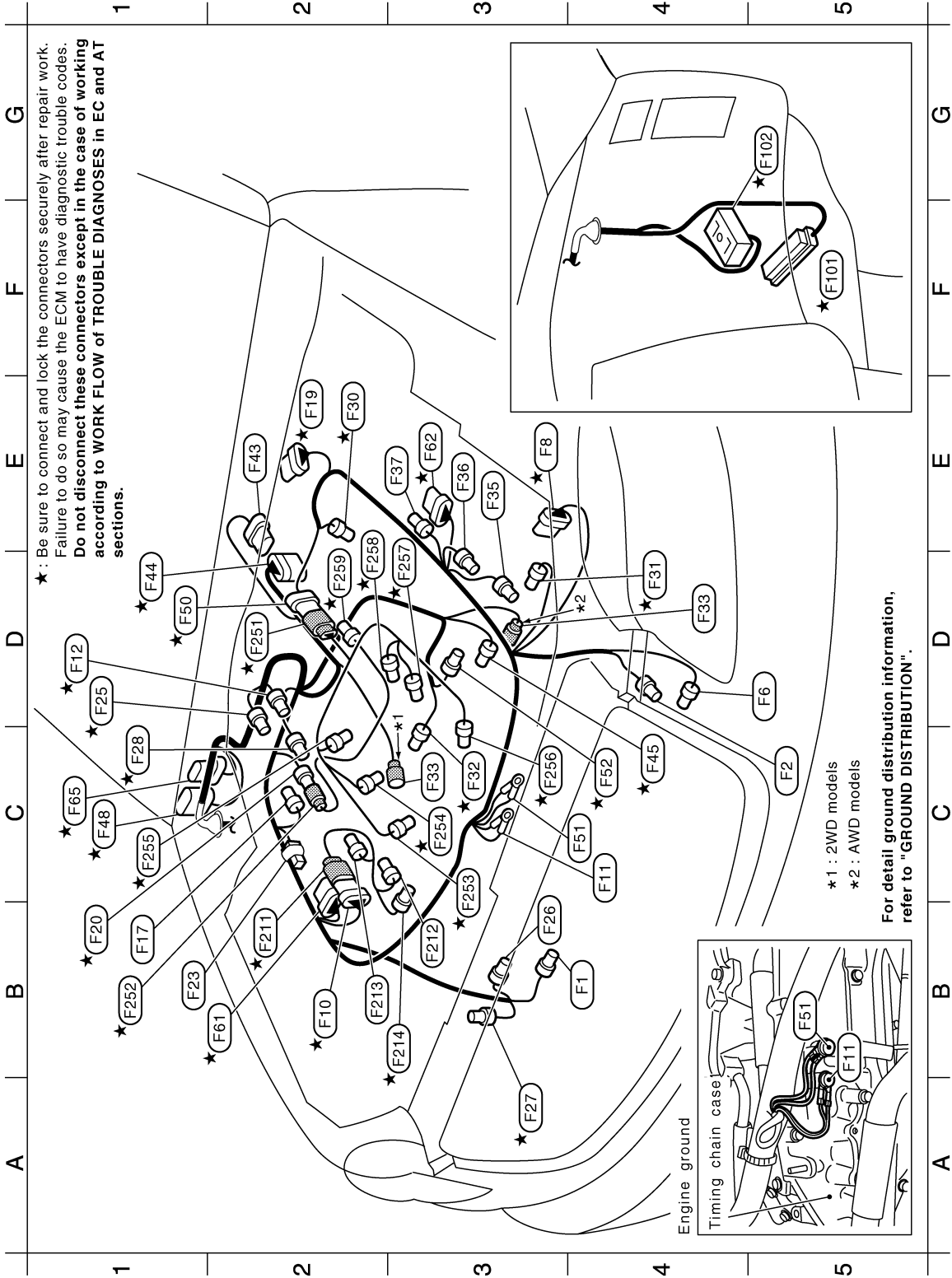
F2	(F261)	SB/2	: To (F24)
E1	(F262)	GY/2	: Engine coolant temperature sensor

★: 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

< SERVICE INFORMATION >

## ENGINE CONTROL HARNESS/VQ ENGINE MODELS



TKIM0632E

## Engine control harness

B4	(F1)	GY/1	: Oil pressure switch
C5	(F2)	B/1	: Compressor (Magnet clutch)
D5	(F6)	B/2	: Compressor (ECV solenoid valve)
E3	(F8)	B/6	: Mass air flow sensor
B2	(F10)	B/6	: To (F211)
C4	(F11)	—	: Engine ground
D1	(F12)	GY/3	: Camshaft position sensor (PHASE) (Bank 1)
B1	(F17)	GY/3	: Ignition coil No.5 (With power transistor)
E2	(F19)	DGY/6	: Electric throttle control actuator
B1	(F20)	B/2	: To (F252)
B1	(F23)	W/2	: Condenser
D1	(F25)	LG/2	: EVAP canister purge volume control solenoid valve
B3	(F26)	GY/2	: Alternator
A3	(F27)	B/3	: Power steering pressure sensor
C1	(F28)	GY/2	: Engine coolant temperature sensor
E2	(F30)	B/3	: Camshaft position sensor (PHASE) (Bank 2)
D4	(F31)	LG/2	: Intake valve timing control solenoid valve (Bank 2)
C3	(F32)	B/4	: Heated oxygen sensor 2 (Bank 1)
C3,D4	(F33)	GY/1	: Starter motor
E3	(F35)	GY/3	: Ignition coil No.2 (With power transistor)
E3	(F36)	GY/3	: Ignition coil No.4 (With power transistor)
E3	(F37)	GY/3	: Ignition coil No.6 (With power transistor)
E2	(F43)	B/8	: Transfer assembly
D1	(F44)	DGY/10	: A/T assembly
C4	(F45)	B/3	: Crankshaft position sensor (POS)
C1	(F48)	GY/9	: To (E18)
D1	(F50)	G/8	: To (F251)
C4	(F51)	—	: Engine ground
C4	(F52)	B/4	: Heated oxygen sensor 2 (Bank 2)
B2	(F61)	B/6	: Air fuel ratio (A/F) sensor 1 (Bank 1)
E3	(F62)	B/6	: Air fuel ratio (A/F) sensor 1 (Bank 2)
C1	(F65)	GY/6	: To (E64)
F5	(F101)	SMJ	: ECM
G5	(F102)	SMJ	: To (M82)

## Engine control sub-harness-1

B2	(F211)	L/6	: To (F10)
B3	(F212)	GY/3	: Ignition coil No.1 (With power transistor)
B2	(F213)	GY/3	: Ignition coil No.3 (With power transistor)
B3	(F214)	G/2	: Intake valve timing control solenoid valve (Bank 1)

## Engine control sub-harness-2

D2	(F251)	G/8	: To (F50)
B1	(F252)	SB/2	: To (F20)
C3	(F253)	GY/2	: Fuel injector No.1
C3	(F254)	GY/2	: Fuel injector No.3
C1	(F255)	GY/2	: Fuel injector No.5
C3	(F256)	GY/2	: Fuel injector No.2
D3	(F257)	GY/2	: Fuel injector No.4
D2	(F258)	GY/2	: Fuel injector No.6
D2	(F259)	L/2	: Knock sensor

★ : 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.**

TKIM0750E

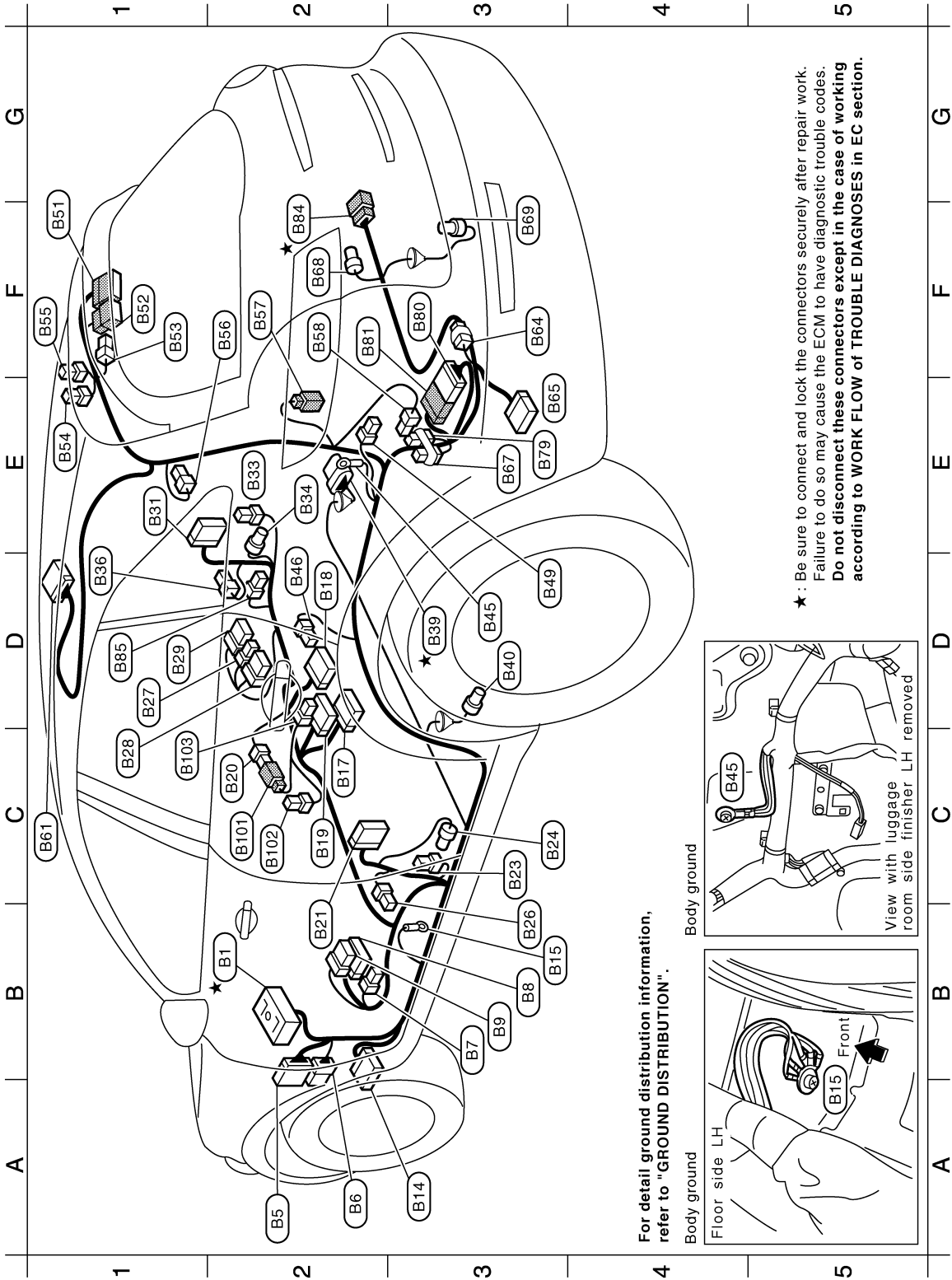
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# HARNESS

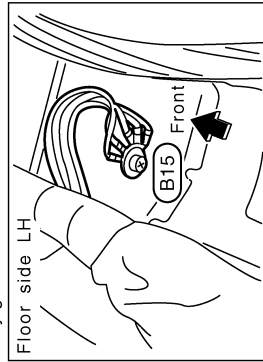
< SERVICE INFORMATION >

## BODY HARNESS

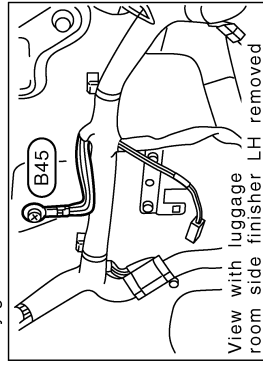


For detail ground distribution information, refer to "GROUND DISTRIBUTION".

Body ground



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 section.

TKIM0751E

**Body harness**

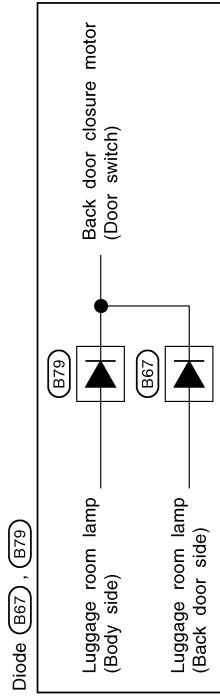
B2	★	B1	SMJ	:	To	(M11)
A2		B5	W/12	:	To	(E205)
A2		B6	W/6	:	To	(E206)
B3		B7	Y/2	:	Front LH side air bag module	
B3		B8	W/18	:	Front power seat (Driver side)	
B3		B9	W/8	:	Front power seat (Driver side)	
A3		B14	W/15	:	BCM (Body control module)	
B3		B15	—	:	Body ground	
C2		B17	Y/12	:	Air bag diagnosis sensor unit	
D2		B18	Y/12	:	Air bag diagnosis sensor unit	
C2		B19	—/16	:	DVD player	
C2		B20	W/3	:	To (B101)	
B2		B21	W/18	:	To (D51)	
C3		B23	Y/2	:	Front LH seat belt pre-tensioner	
C3		B24	Y/2	:	LH side air bag (Satellite) sensor	
B3		B26	W/3	:	Front door switch (Driver side)	
D1		B27	Y/2	:	Front RH side air bag module	
C1		B28	W/6	:	Front power seat (Passenger side)	
D1		B29	W/8	:	Front power seat (Passenger side)	
E1		B31	W/18	:	To (D71)	
E2		B33	Y/2	:	Front RH seat belt pre-tensioner	
E2		B34	Y/2	:	RH side air bag (Satellite) sensor	
D1		B36	W/3	:	Front door switch (Passenger side)	
D3	★	B39	GY/5	:	Fuel level sensor unit and fuel pump (Main)	
D3		B40	GY/2	:	Fuel level sensor unit (Sub)	
D3		B45	—	:	Body ground	
D2		B46	W/3	:	Rear door switch LH	
D3		B49	W/3	:	Luggage room lamp (Body side)	
F1		B51	W/16	:	To (D101)	
F1		B52	W/6	:	To (D102)	
F1		B53	W/3	:	Luggage room lamp (Back door side)	
E1		B54	OR/2	:	LH side curtain air bag module	
F1		B55	Y/2	:	RH side curtain air bag module	
F2		B56	BR/2	:	Tweeter LH	
F2		B57	W/4	:	Rear combination lamp LH	
F2		B58	B/2	:	Luggage room power socket	

TKIM0752E

C1	(B61)	—/16	:	DVD display
F3	(B64)	GY/1	:	Not used
E3	(B65)	W/12	:	Rear combination lamp control unit
E3	(B67)	W/2	:	Diode
F3	(B68)	GY/2	:	Inside key antenna-3 (Luggage room)
F2	(B69)	SB/4	:	Rear wheel sensor
E3	(B79)	W/2	:	Diode
F3	(B80)	W/12	:	To (B81)
F2	(B81)	W/12	:	To (B80)
F2	★ (B84)	GY/6	:	To (B216)
D1	(B85)	W/4	:	To (B217)

**Power socket sub-harness**

C2	(B101)	W/3	:	To (B20)
C2	(B102)	B/2	:	Front power socket-2
C1	(B103)	B/2	:	Rear power socket



★ : 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 section.

# HARNESS

< SERVICE INFORMATION >

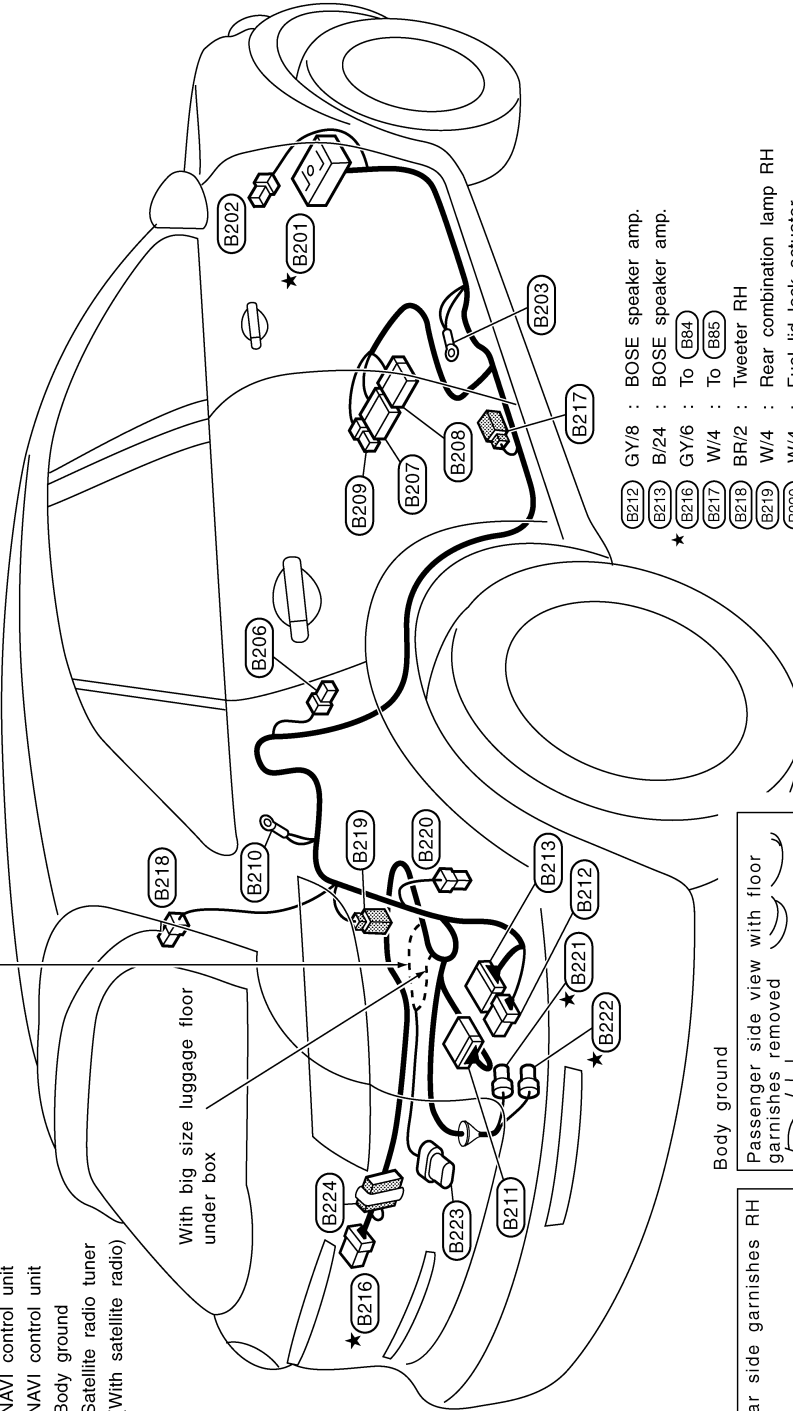
## BODY NO. 2 HARNESS

★ : 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 section.

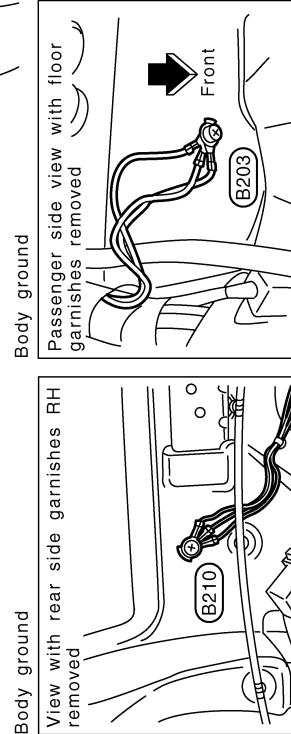
- ★ (B201) SMJ : To (MB1)
- (B202) GY/1 : GPS antenna
- (B203) — : Body ground
- (B206) W/3 : Rear door switch RH
- (B207) W/32 : NAVI control unit
- (B208) W/40 : NAVI control unit
- (B209) GY/1 : NAVI control unit
- (B210) — : Body ground
- (B211) W/16 : Satellite radio tuner (With satellite radio)

Without big size luggage floor under box

With big size luggage floor under box



- (B212) GY/8 : BOSE speaker amp.
- (B213) B/24 : BOSE speaker amp.
- ★ (B216) GY/6 : To (B84)
- (B217) W/4 : To (B85)
- (B218) BR/2 : Tweeter RH
- (B219) W/4 : Rear combination lamp RH
- (B220) W/4 : Fuel lid lock actuator
- ★ (B221) B/2 : EVAP canister vent control valve
- ★ (B222) GY/3 : EVAP control system pressure sensor
- (B223) B/8 : Woofer
- (B224) W/12 : Option connector-2 for satellite radio tuner (Without satellite radio)



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

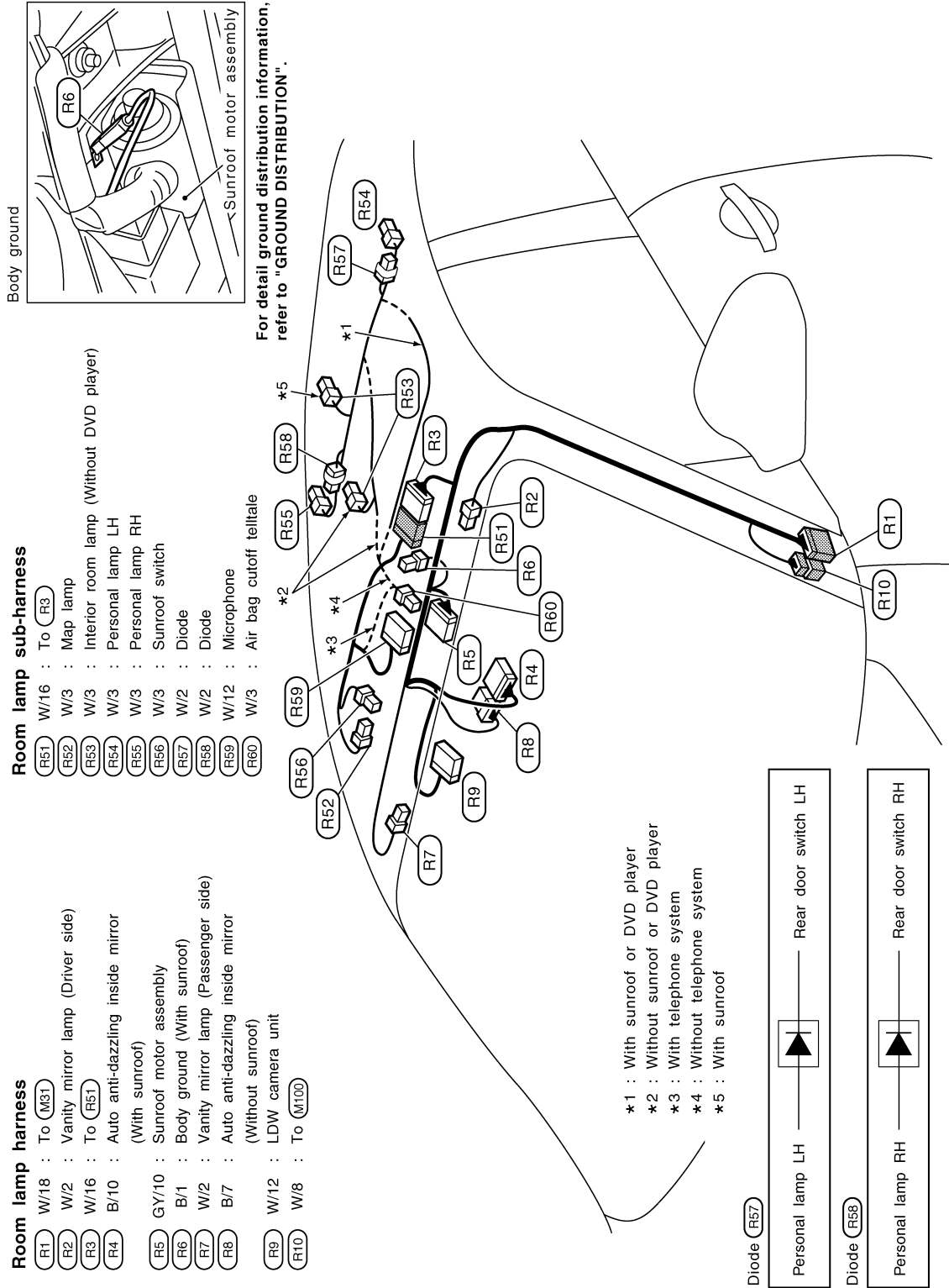
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# HARNESS

< SERVICE INFORMATION >

## ROOM LAMP HARNESS



## FRONT DOOR HARNESS

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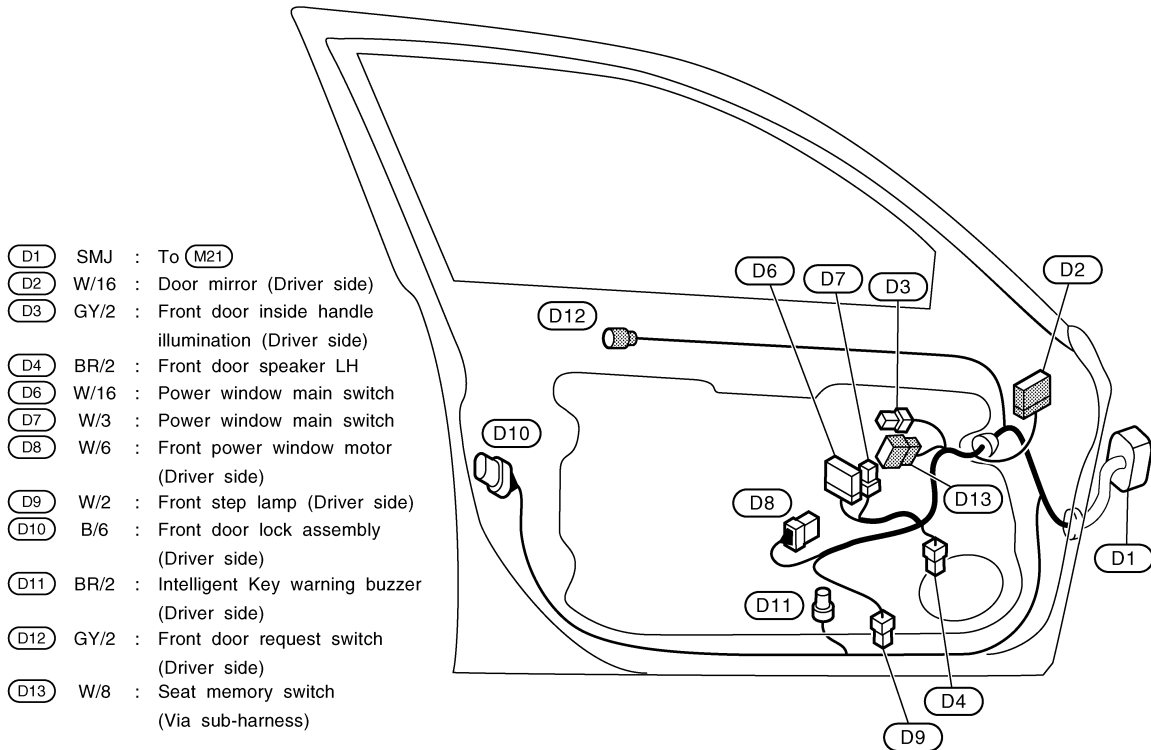
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# HARNESS

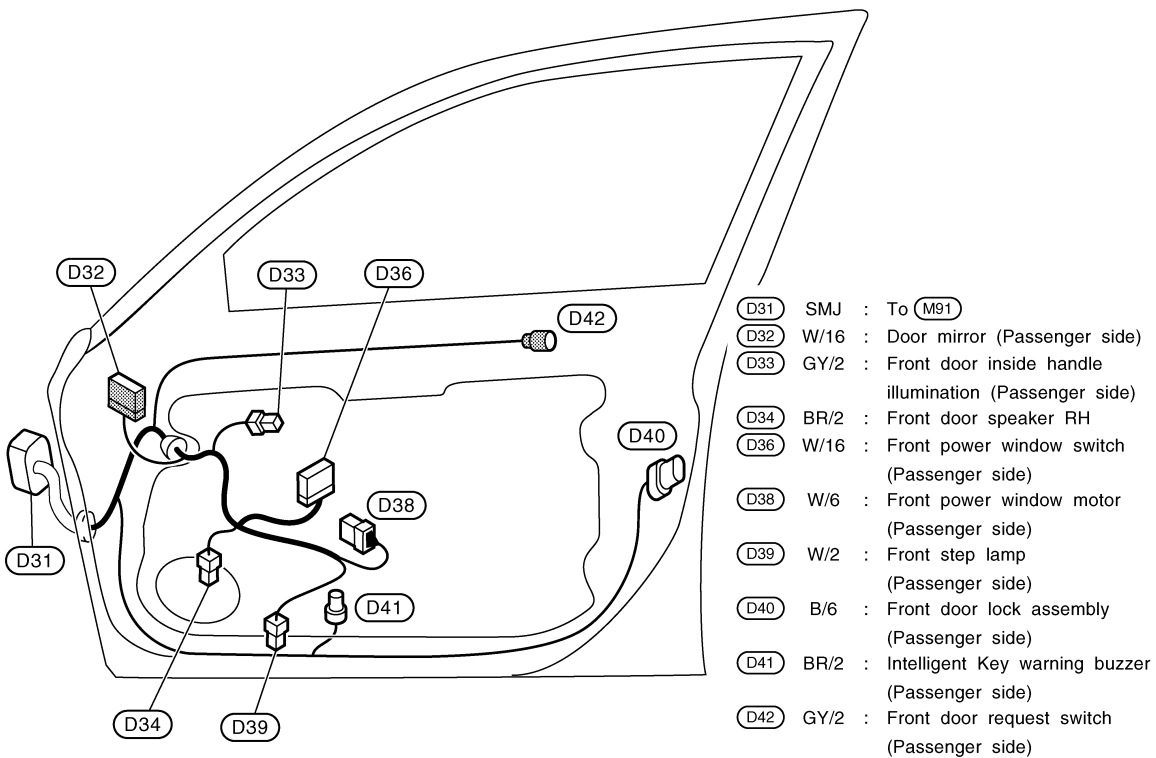
## < SERVICE INFORMATION >

LH Side



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RH Side



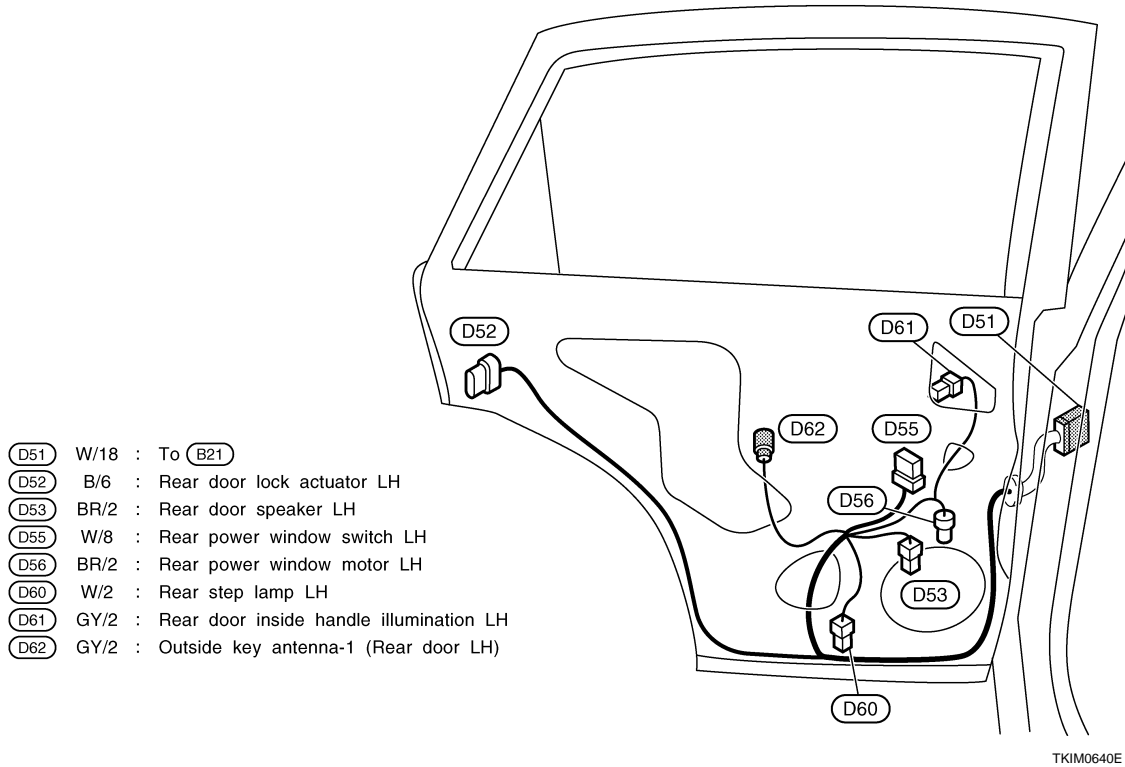
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## REAR DOOR HARNESS

# HARNESS

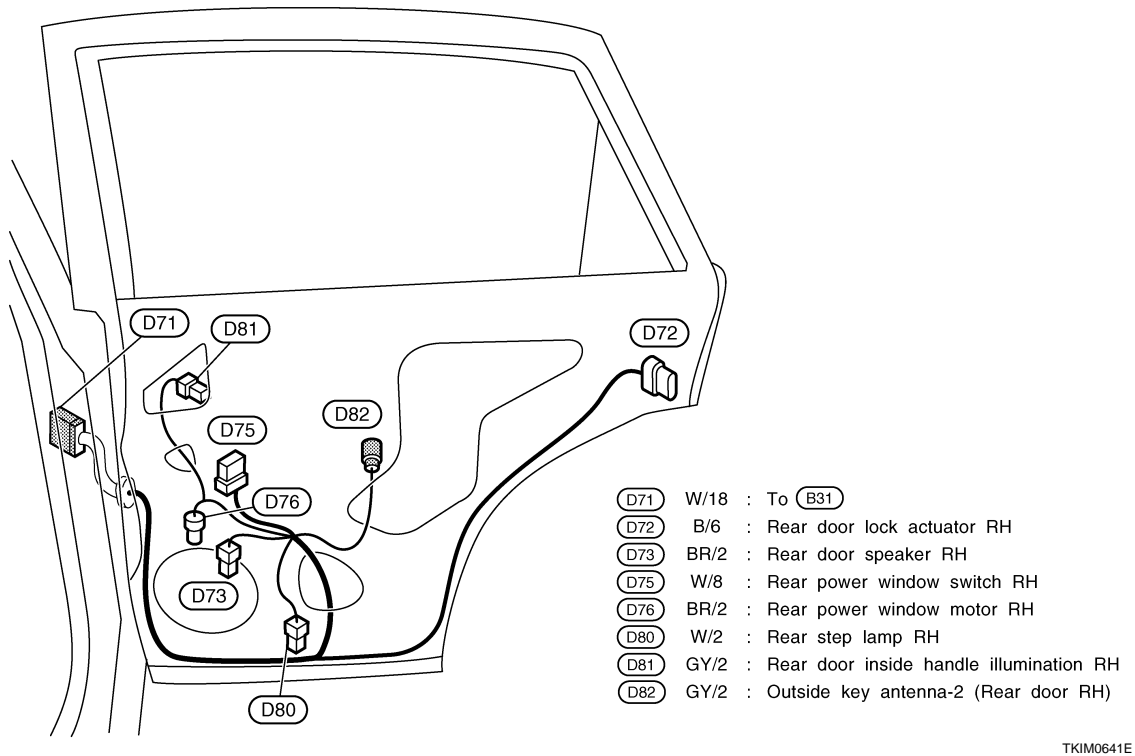
## < SERVICE INFORMATION >

### LH Side



- (D51) W/18 : To (B21)
- (D52) B/6 : Rear door lock actuator LH
- (D53) BR/2 : Rear door speaker LH
- (D55) W/8 : Rear power window switch LH
- (D56) BR/2 : Rear power window motor LH
- (D60) W/2 : Rear step lamp LH
- (D61) GY/2 : Rear door inside handle illumination LH
- (D62) GY/2 : Outside key antenna-1 (Rear door LH)

### RH Side



- (D71) W/18 : To (B31)
- (D72) B/6 : Rear door lock actuator RH
- (D73) BR/2 : Rear door speaker RH
- (D75) W/8 : Rear power window switch RH
- (D76) BR/2 : Rear power window motor RH
- (D80) W/2 : Rear step lamp RH
- (D81) GY/2 : Rear door inside handle illumination RH
- (D82) GY/2 : Outside key antenna-2 (Rear door RH)

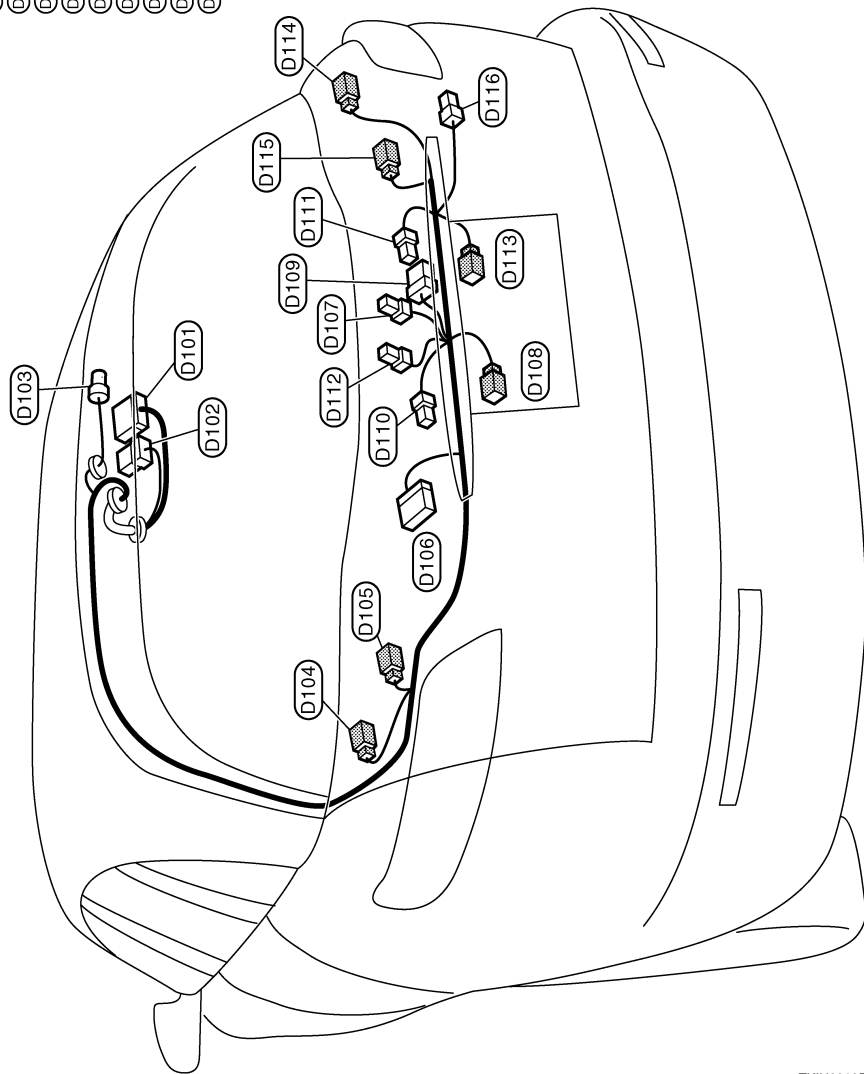
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# HARNESS

< SERVICE INFORMATION >

## BACK DOOR HARNESS

(D101)	W/16	:	To	(B51)
(D102)	W/6	:	To	(B52)
(D103)	GY/2	:	High-mounted stop lamp	
(D104)	GY/1	:	Rear window defogger (+)	
(D105)	W/2	:	Back-up lamp LH	
(D106)	W/10	:	Back door closure control unit	
(D107)	W/4	:	Rear wiper motor	
(D108)	W/4	:	Rear view camera	
(D109)	W/8	:	Back door closure motor	
(D110)	W/2	:	License plate lamp LH	
(D111)	W/2	:	License plate lamp RH	
(D112)	W/2	:	Back door opener switch	
(D113)	BR/2	:	Back door request switch	
(D114)	GY/1	:	Rear window defogger (-)	
(D115)	W/2	:	Back-up lamp RH	
(D116)	BR/2	:	Outside key antenna-3 (Back door)	



TKIH0016E

INFOID:000000001328883

### Wiring Diagram Codes (Cell Codes)

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.

# HARNESS

## < SERVICE INFORMATION >

Code	Section	Wiring Diagram Name	
A/C	ATC	Air Conditioner	A
AF1B1	EC	Air Fuel Ratio Sensor 1 Bank 1	
AF1B2	EC	Air Fuel Ratio Sensor 1 Bank 2	B
AF1HB1	EC	Air Fuel Ratio Sensor 1 Heater Bank 1	
AF1HB2	EC	Air Fuel Ratio Sensor 1 Heater Bank 2	C
APPS1	EC	Accelerator Pedal Position Sensor	
APPS2	EC	Accelerator Pedal Position Sensor	
APPS3	EC	Accelerator Pedal Position Sensor	D
ASC/BS	EC	Automatic Speed Control Device (ASCD) Brake Switch	
ASC/SW	EC	Automatic Speed Control Device (ASCD) Steering Switch	E
ASCBOF	EC	Automatic Speed Control Device (ASCD) Brake Switch	
ASCIND	EC	Automatic Speed Control Device (ASCD) Indicator	
AT/IND	DI	A/T Indicator Lamp	F
AUDIO	AV	Audio	
AUT/DP	SE	Automatic Drive Positioner	
AUTO/L	LT	Automatic Light System	G
AWD	TF	AWD Control System	
B/CLOS	BL	Back Door Closure System	H
BACK/L	LT	Back-Up Lamp	
BRK/SW	EC	Brake Switch	
CAN	AT	CAN Communication Line	I
CAN	EC	CAN Communication Line	
CAN	LAN	CAN System	J
CHARGE	SC	Charging System	
CHIME	DI	Warning Chime	
CLOCK	DI	Clock	PG
COMBSW	LT	Combination Switch	
COMM	AV	Audio Visual Communication Line	L
COMPAS	DI	Compass	
COOL/F	EC	Cooling Fan Control	
D/LOCK	BL	Power Door Lock	M
DEF	GW	Rear Window Defogger	
DTRL	LT	Headlamp - With Daytime Light System	
ECM/PW	EC	ECM Power Supply for Back-Up	N
ECTS	EC	Engine Coolant Temperature Sensor	
ETC1	EC	Electric Throttle Control Function	O
ETC2	EC	Electric Throttle Control Motor Relay	
ETC3	EC	Electric Throttle Control Motor	
F/FOG	LT	Front Fog Lamp	P
F/PUMP	EC	Fuel Pump	
FTS	AT	A/T Fluid Temperature Sensor Circuit	
FTTS	EC	Fuel Tank Temperature Sensor	
FUELB1	EC	Fuel Injection System Function (Bank 1)	
FUELB2	EC	Fuel Injection System Function (Bank 2)	

# HARNES

## < SERVICE INFORMATION >

Code	Section	Wiring Diagram Name
H/AIM	LT	Headlamp Aiming Control System
H/LAMP	LT	Headlamp
H/PHON	AV	Hands Free Telephone
HORN	WW	Horn
HSEAT	SE	Heated Seat
I/KEY	BL	Intelligent Key System
I/MIRR	GW	Inside Mirror (Auto Anti-Dazzling Mirror)
IATS	EC	Intake Air Temperature Sensor
ICC	ACS	Intelligent Cruise Control System
ICC/BS	EC	ICC Brake Switch
ICC/SW	EC	ICC Steering Switch
ICCBOF	EC	ICC Brake Switch
IGNSYS	EC	Ignition System
ILL	LT	Illumination
INF/D	AV	Vehicle Information and Integrated Switch System
INJECT	EC	Injector
IVCB1	EC	Intake Valve Timing Control Solenoid Valve Bank 1
IVCB2	EC	Intake Valve Timing Control Solenoid Valve Bank 2
IVCSB1	EC	Intake Valve Timing Control Position Sensor Bank 1
IVCSB2	EC	Intake Valve Timing Control Position Sensor Bank 2
IVTB1	EC	Intake Valve Timing Control System (Bank 1)
IVTB2	EC	Intake Valve Timing Control System (Bank 2)
KEYLES	BL	Remote Keyless Entry System
KS	EC	Knock Sensor
LDW	DI	Lane Departure Warning System
M/ANT	AV	Manual Antenna
MAFS	EC	Mass Air Flow Sensor
MAIN	AT	Main Power Supply and Ground Circuit
MAIN	EC	Main Power Supply and Ground Circuit
MES	AV	Mobile Entertainment System
METER	DI	Speedometer, Tachometer, Temp. and Fuel Gauges
MIL/DL	EC	MIL & Data Link Connector
MIRROR	GW	Power Door Mirror
MMSW	AT	Manual Mode Switch
NATS	BL	Nissan Anti-Theft System
NAVI	AV	Navigation System
NONDTC	AT	Non-Detective Items
O2H2B1	EC	Heated Oxygen Sensor 2 Heater Bank 1
O2H2B2	EC	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
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHASE	EC	Camshaft Position Sensor (PHASE)

# HARNESS

## < SERVICE INFORMATION >

Code	Section	Wiring Diagram Name	
PHSB1	EC	Camshaft Position Sensor (PHASE) (Bank 1)	A
PHSB2	EC	Camshaft Position Sensor (PHASE) (Bank 2)	
PNP/SW	AT	Park/Neutral Position Switch	B
PNP/SW	EC	Park/Neutral Position Switch	
POS	EC	Crankshaft Position Sensor (CKPS) (POS)	
POWER	PG	Power Supply Routing	C
PRE/SE	EC	EVAP Control System Pressure Sensor	
PS/SEN	EC	Power Steering Pressure Sensor	D
R/VIEW	DI	Rear View Camera Control System	
ROOM/L	LT	Interior Room Lamp	
RP/SEN	EC	Refrigerant Pressure Sensor	E
SEAT	SE	Power Seat	
SEN/PW	EC	Sensor Power Supply	F
SHIFT	AT	A/T Shift Lock System	
SNOWSW	EC	Snow Mode Switch	
SROOF	RF	Sunroof	G
SRS	SRS	Supplemental Restraint System	
START	SC	Starting System	
STOP/L	LT	Stop Lamp	H
STSIG	AT	Start Signal Circuit	
T/WARN	WT	Low Tire Pressure Warning System	I
TAIL/L	LT	Parking, License and Tail Lamps	
TPS1	EC	Throttle Position Sensor (Sensor 1)	J
TPS2	EC	Throttle Position Sensor (Sensor 2)	
TPS3	EC	Throttle Position Sensor	
TRNSCV	BL	Homelink Universal Transceiver	PG
TURN	LT	Turn Signal and Hazard Warning Lamp	
VDC	BRC	Vehicle Dynamics Control System	
VEHSEC	BL	Vehicle Security System	L
VENT/V	EC	EVAP Canister Vent Control Valve	
VIAS	EC	Variable Induction Air Control System	M
VIAS/V	EC	VIAS Control Solenoid Valve	
VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)	
WARN	DI	Warning Lamps	N
WINDOW	GW	Power Window	
WIP/R	WW	Rear Wiper and Washer	O
WIPER	WW	Front Wiper and Washer	P

# ELECTRICAL UNITS LOCATION

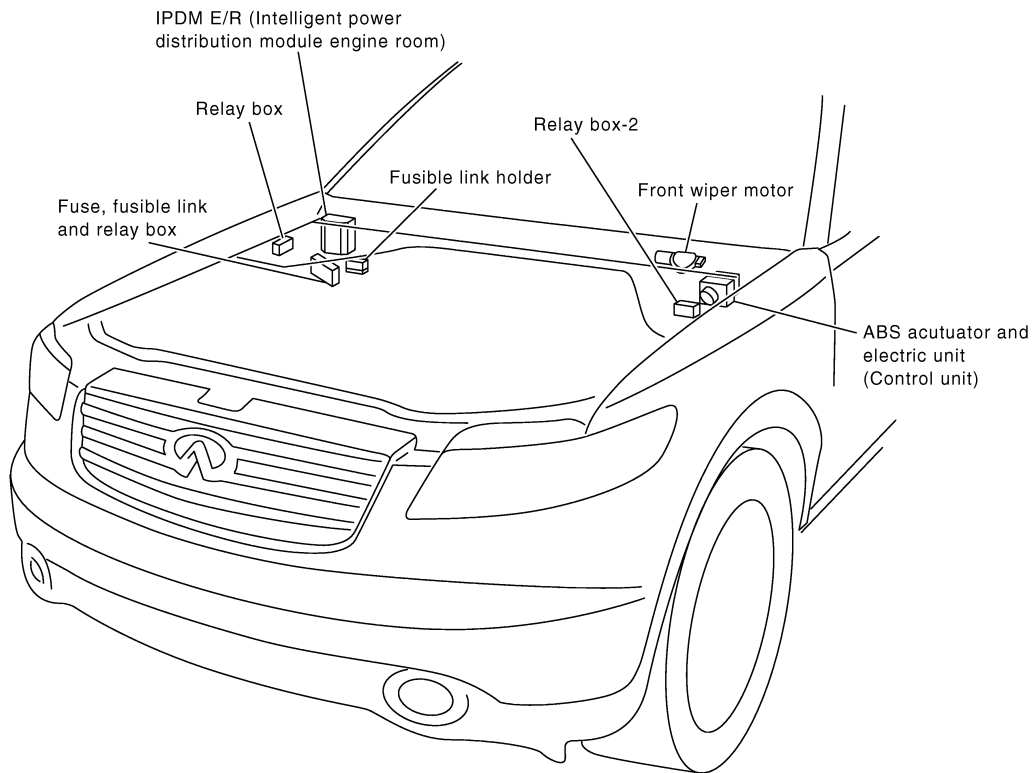
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## ELECTRICAL UNITS LOCATION

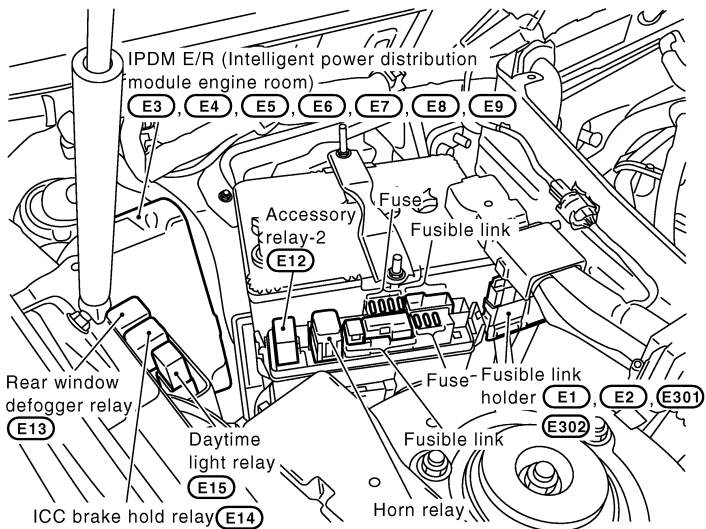
### Electrical Units Location

INFOID:000000001328884

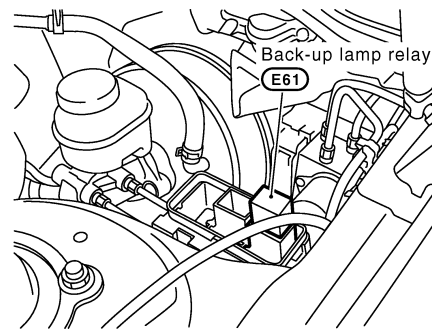
### ENGINE COMPARTMENT



### FUSE, FUSIBLE LINK AND RELAY BOX



### RELAY BOX-2

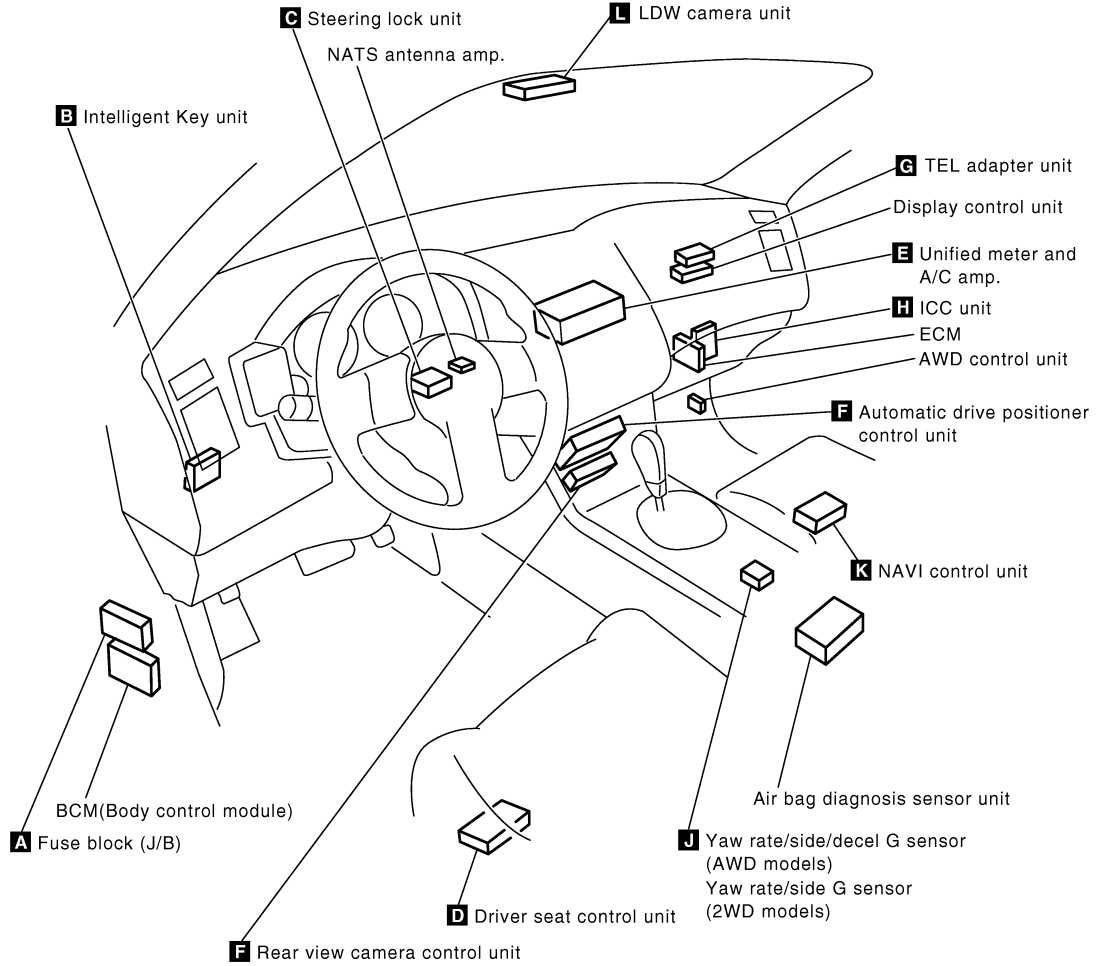


CKIM0646E

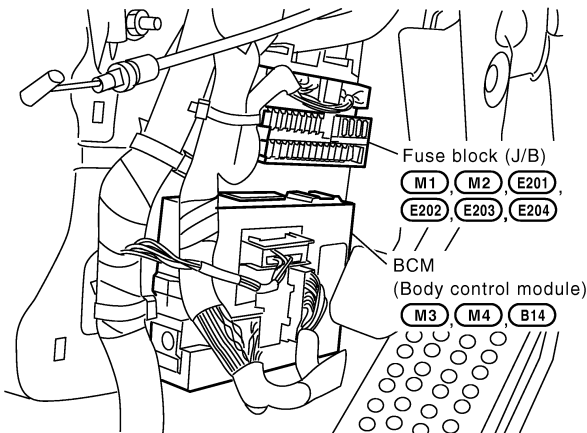


# ELECTRICAL UNITS LOCATION

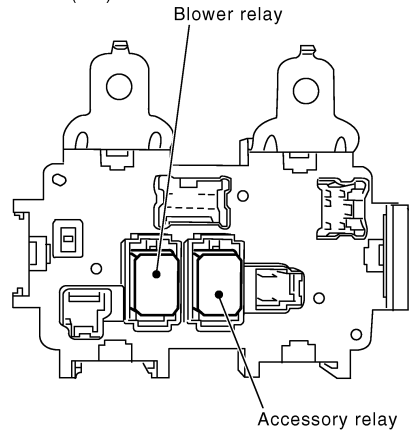
## < SERVICE INFORMATION > PASSENGER COMPARTMENT



**A** Behind dash side lower finisher LH



Fuse block (J/B) rear view



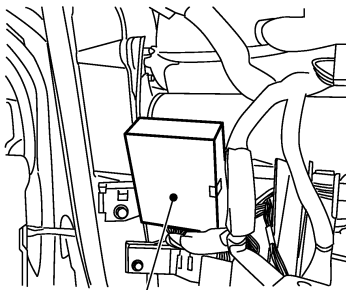
CKIM0647E

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# ELECTRICAL UNITS LOCATION

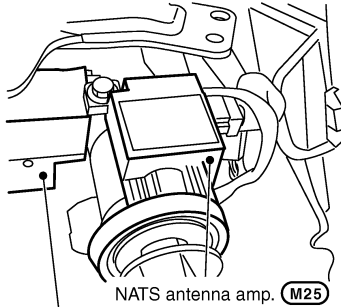
< SERVICE INFORMATION >

**B** Driver side view with lower instrument panel removed



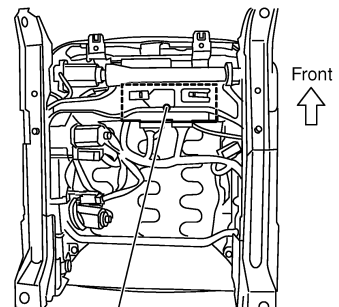
Intelligent Key unit (M34)

**C** Driver side view with cluster lid A removed



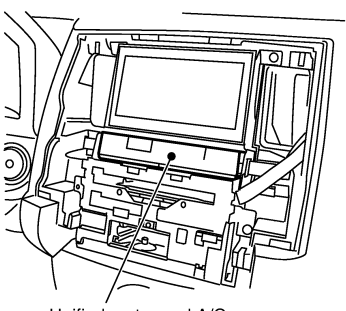
Steering lock unit (M26)

**D** Under driver seat



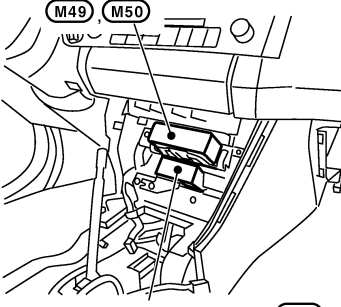
Driver seat control unit (B152, B153)

**E** View with cluster lid C removed



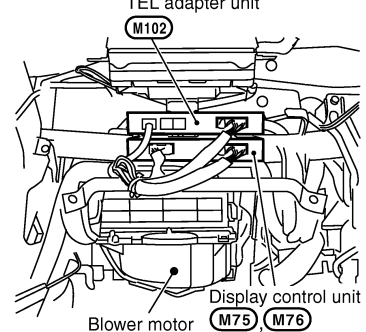
Unified meter and A/C amp. (M55, M56, M57)

**F** View with instrument panel center removed



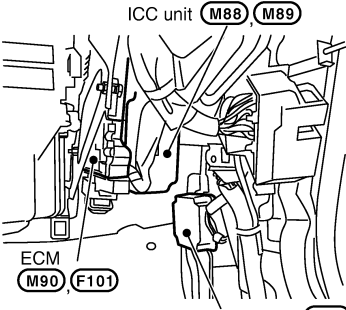
Rear view camera control unit (M48)

**G** Behind lower instrument panel on passenger side



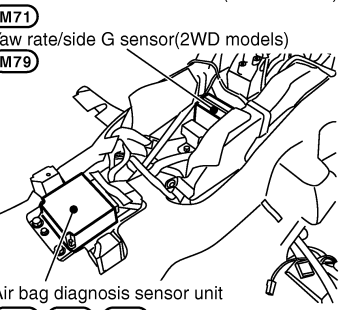
Blower motor (M75, M76)

**H** Behind lower instrument panel on passenger side



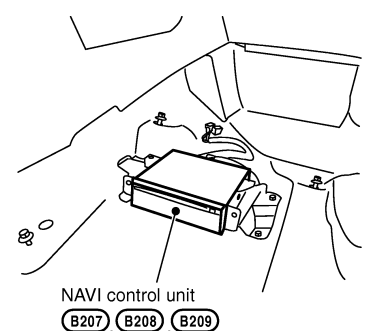
AWD control unit (M92)

**J** View with floor console box removed



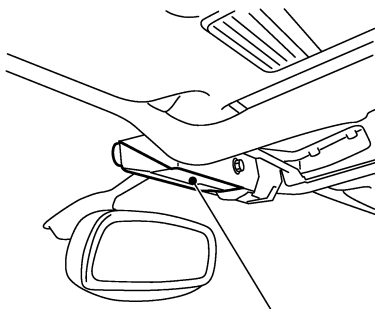
Air bag diagnosis sensor unit (M72, B17, B18)

**K** View with passenger seat removed



NAVI control unit (B207, B208, B209)

**L** Map lamp garnish removed

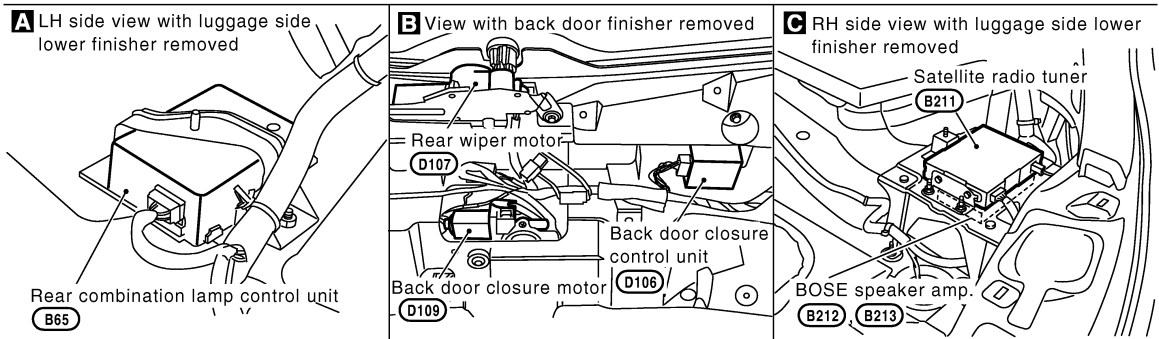
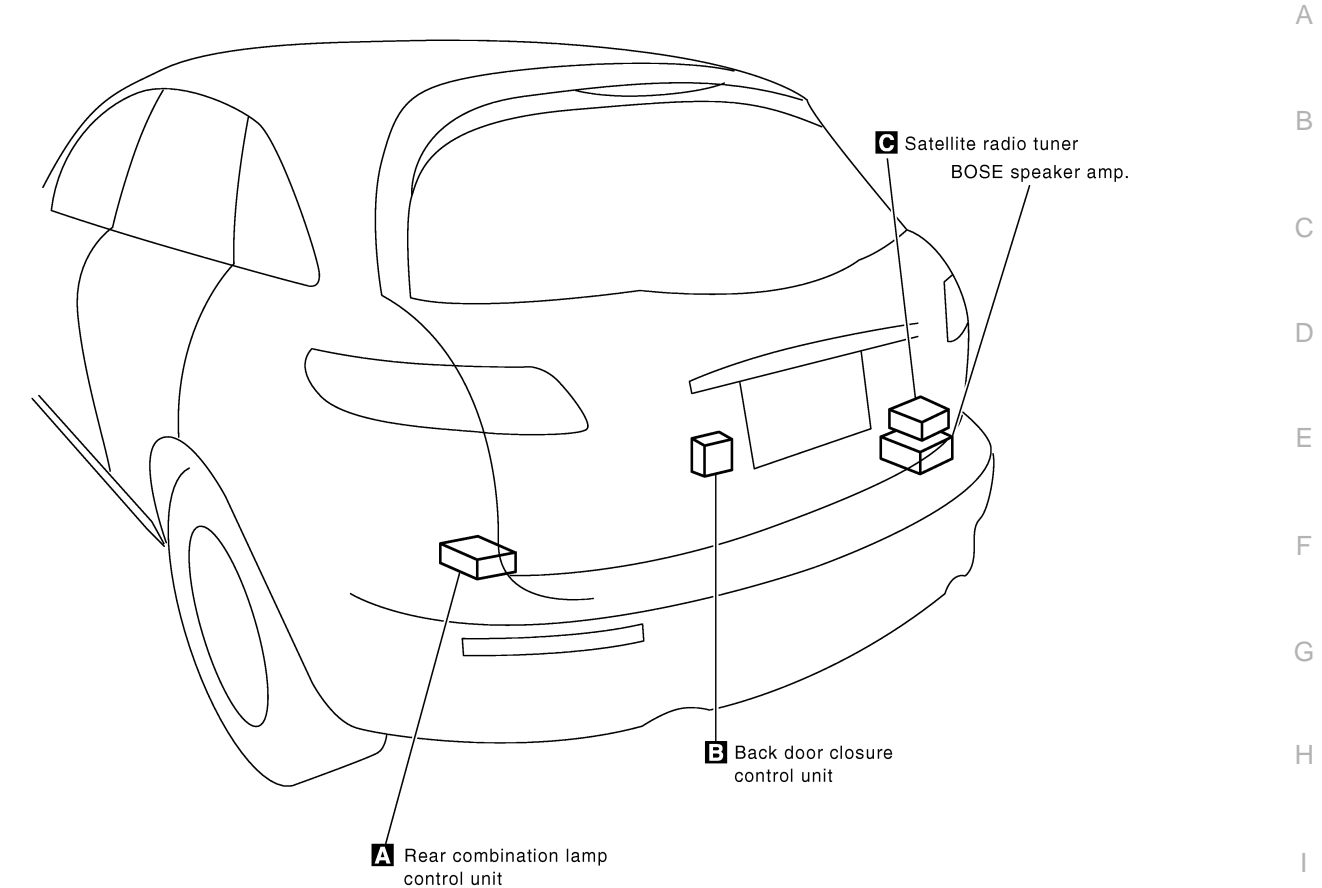


LDW camera unit (R9)

CKIM0648E

# ELECTRICAL UNITS LOCATION

< SERVICE INFORMATION >  
LUGGAGE COMPARTMENT



CKIM0649E

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# HARNESS CONNECTOR

< SERVICE INFORMATION >

## HARNESS CONNECTOR

### Description

INFOID:000000001328885

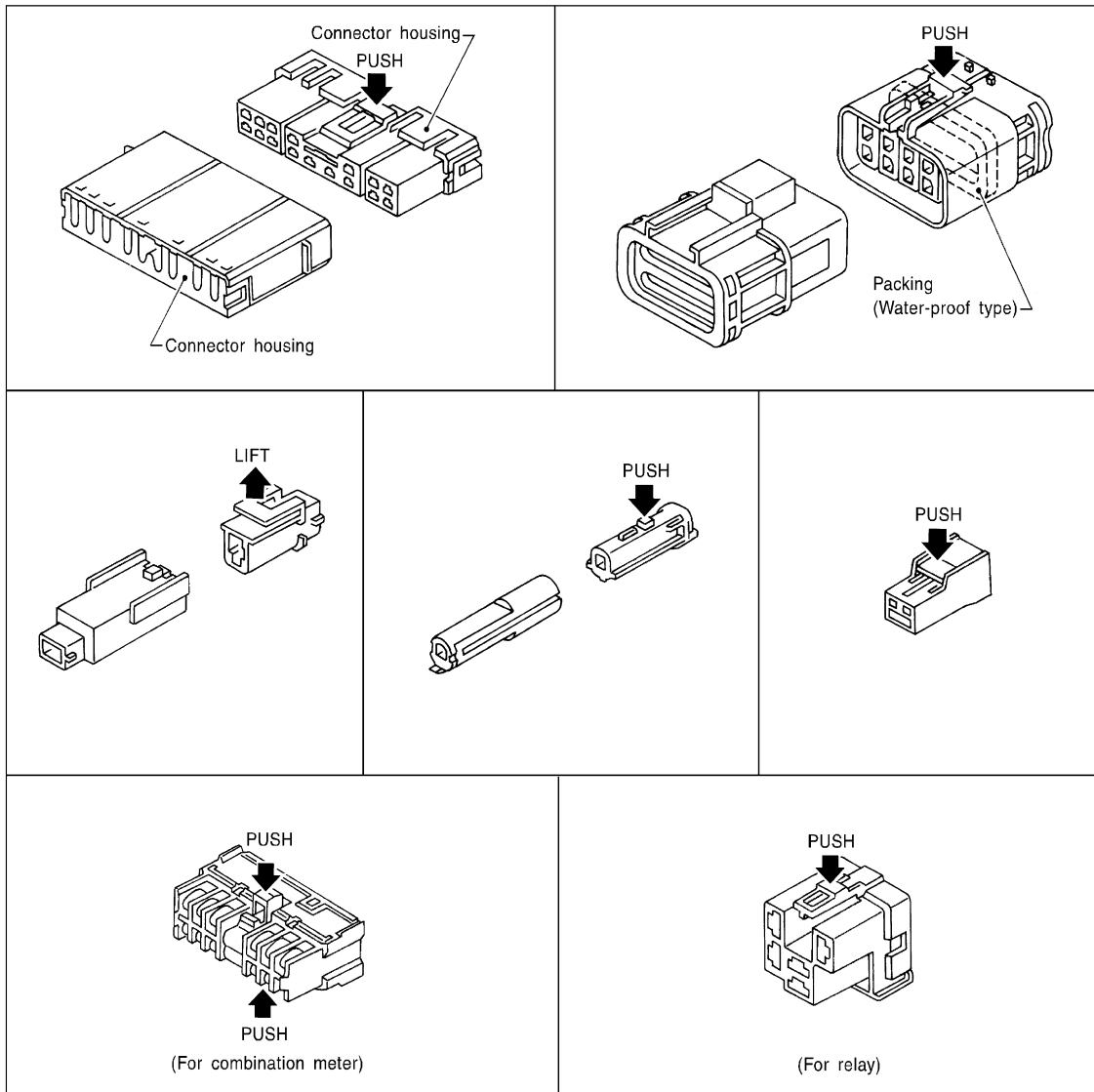
#### HARNESS CONNECTOR (TAB-LOCKING TYPE)

- 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 figure below.

**CAUTION:**

**Never pull the harness or wires when disconnecting the connector.**

[Example]



SEL769DA

#### HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

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

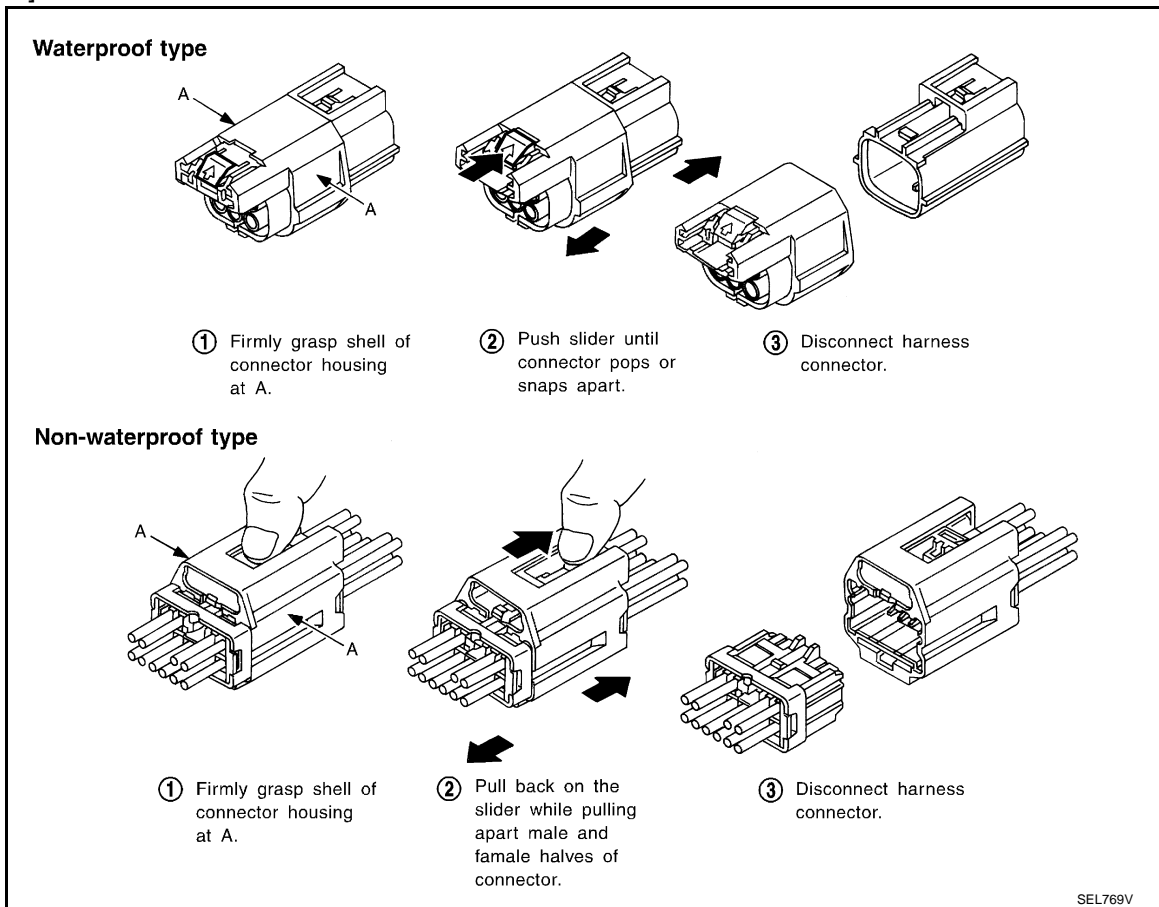
**CAUTION:**

# HARNESS CONNECTOR

## < SERVICE INFORMATION >

- Never pull the harness or wires when disconnecting the connector.
- Be careful not to damage the connector support bracket when disconnecting the connector.

[Example]



## HARNESS CONNECTOR (LEVER LOCKING TYPE)

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

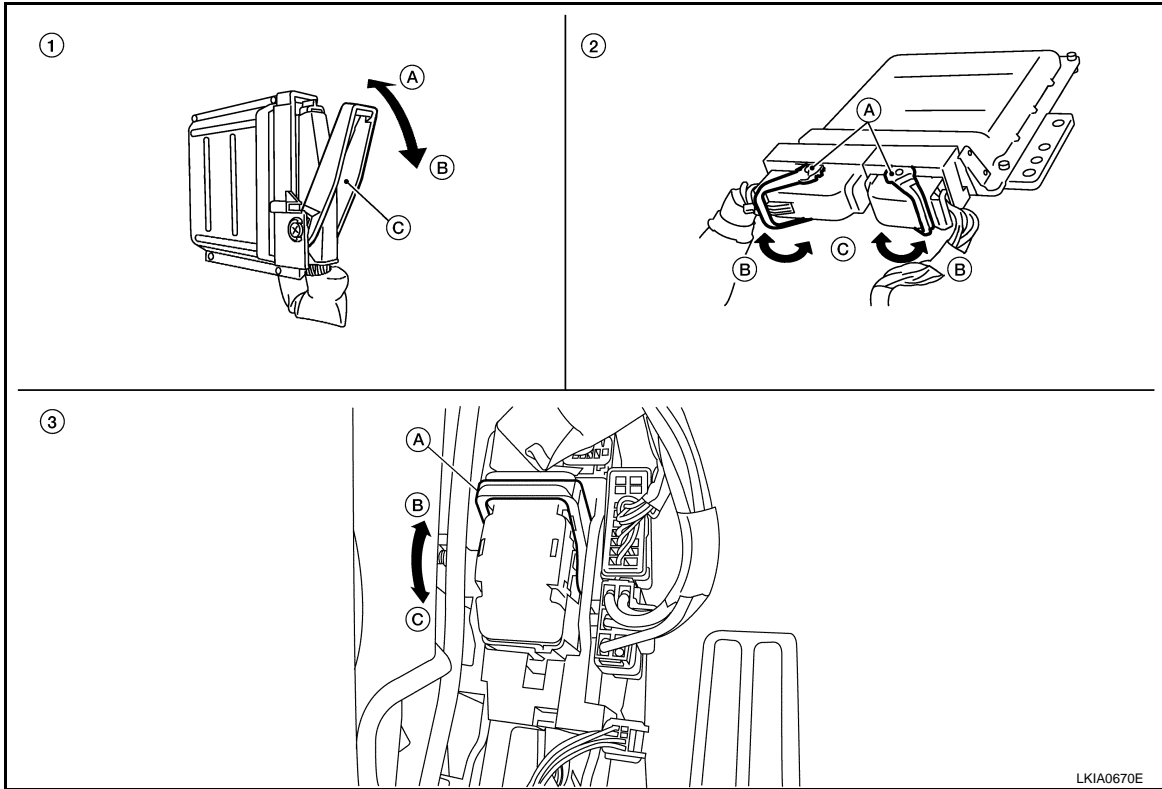
**CAUTION:**

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# HARNESS CONNECTOR

## < SERVICE INFORMATION >

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



- |                                   |                                  |                  |
|-----------------------------------|----------------------------------|------------------|
| 1. Control unit with single lever | 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        |

# ELECTRICAL UNITS

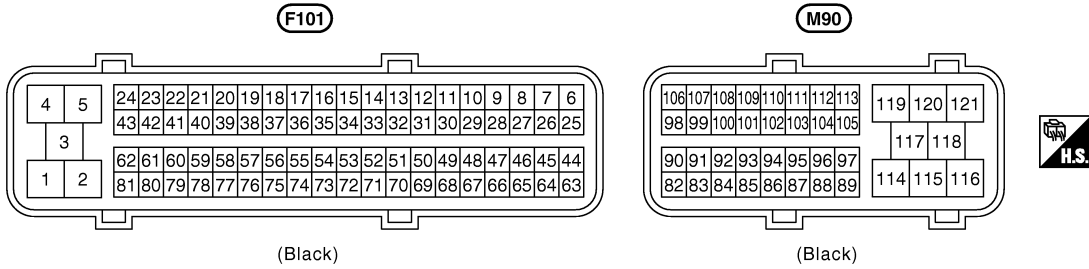
< SERVICE INFORMATION >

## ELECTRICAL UNITS

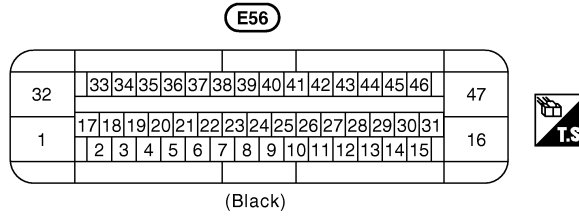
### Terminal Arrangement

INFOID:000000001328886

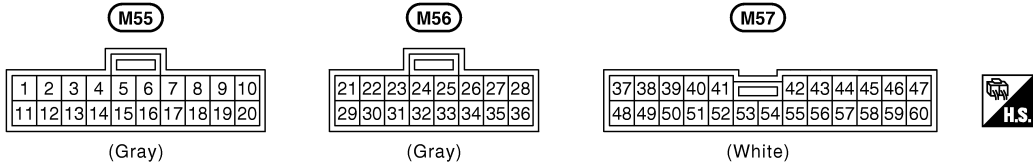
ECM



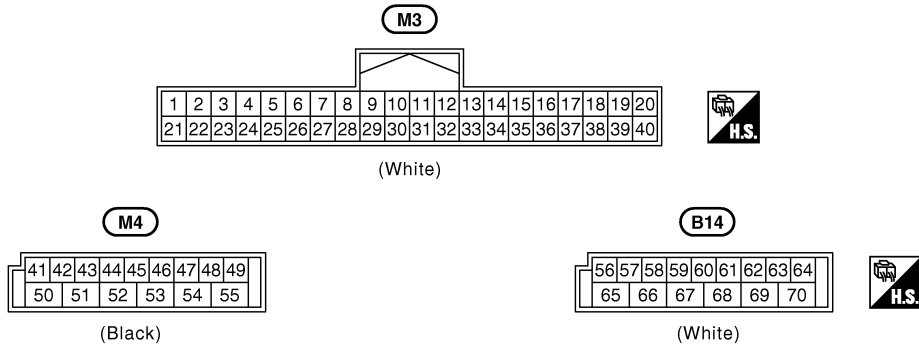
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



UNIFIED METER AND A/C AMP.



BCM (BODY CONTROL MODULE)

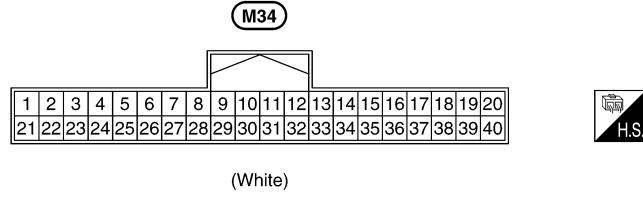


CKIM0650E

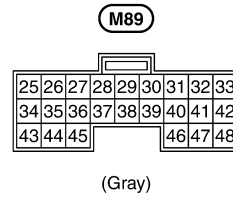
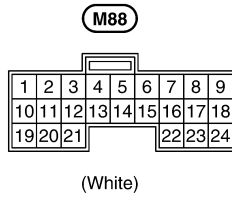
# ELECTRICAL UNITS

< SERVICE INFORMATION >

## INTELLIGENT KEY UNIT



## ICC UNIT



CKIM0218E



# SMJ (SUPER MULTIPLE JUNCTION)

< SERVICE INFORMATION >

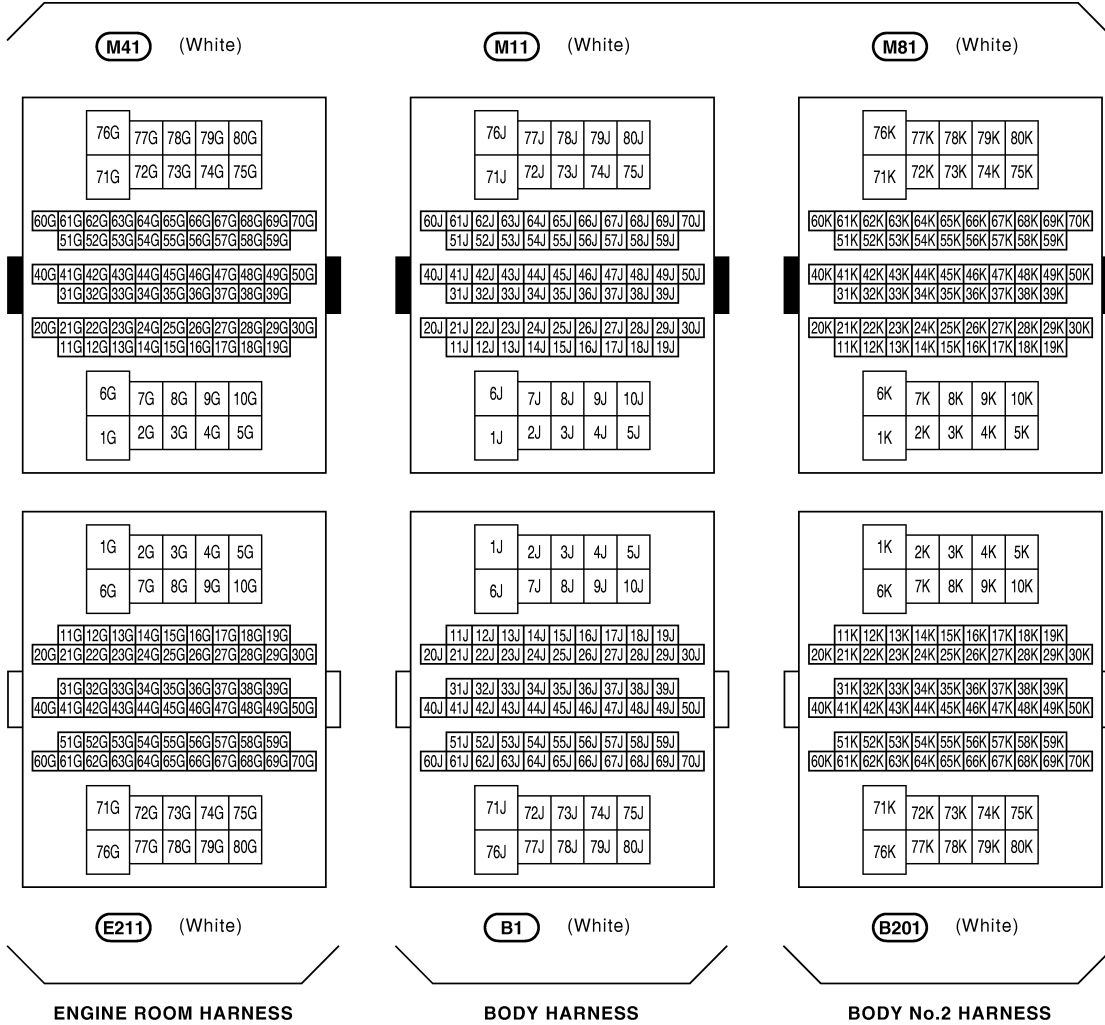
## SMJ (SUPER MULTIPLE JUNCTION)

### Terminal Arrangement

INFOID:000000001328887

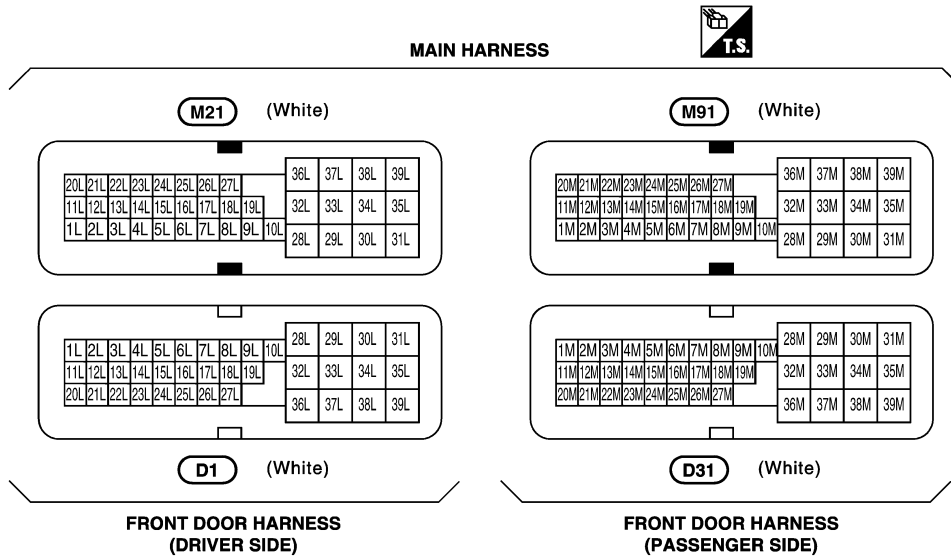
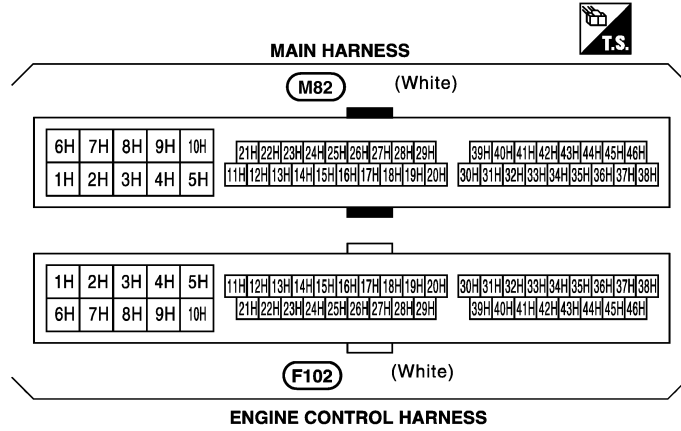
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MAIN HARNESS



# SMJ (SUPER MULTIPLE JUNCTION)

< SERVICE INFORMATION >



CKIM0220E

# STANDARDIZED RELAY

< SERVICE INFORMATION >

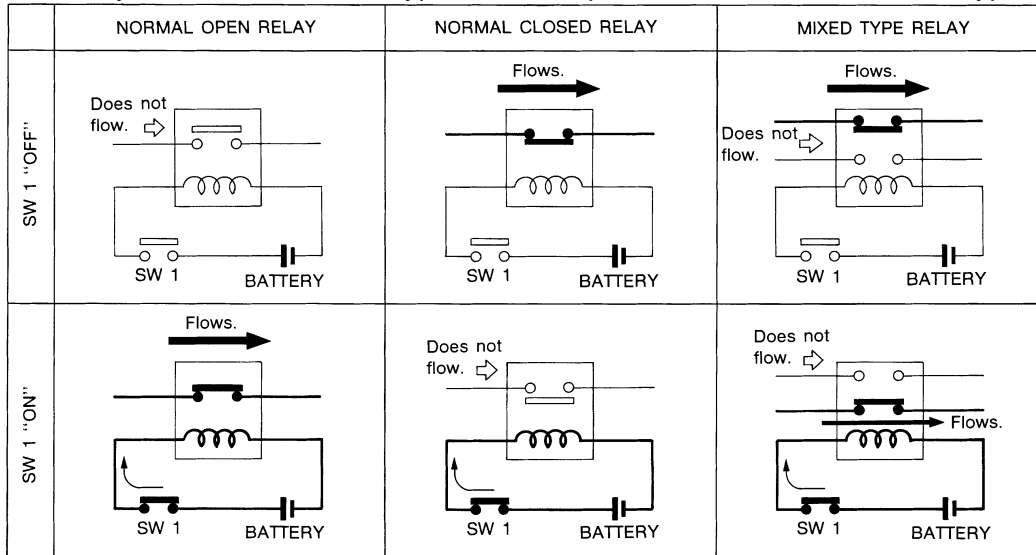
## STANDARDIZED RELAY

### Description

INFOID:000000001328888

### NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

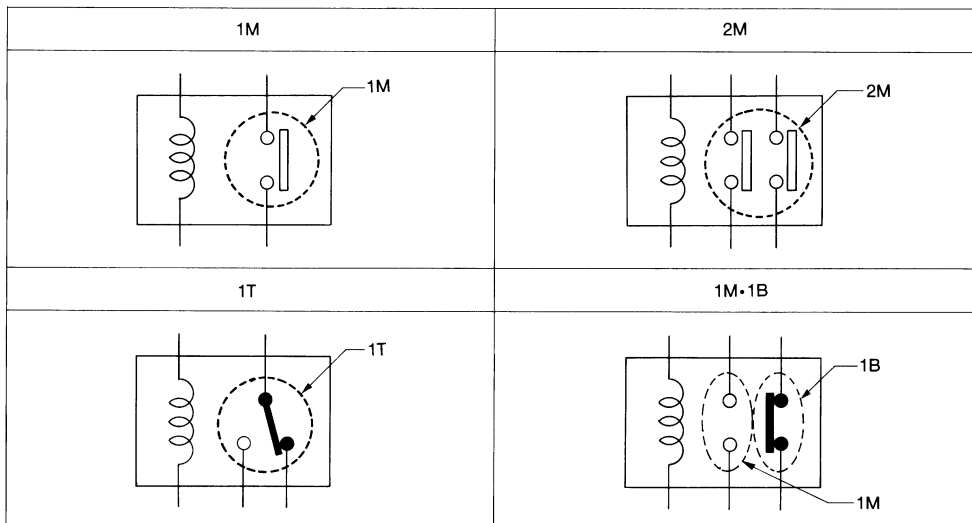
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



SEL881H

### TYPE OF STANDARDIZED RELAYS

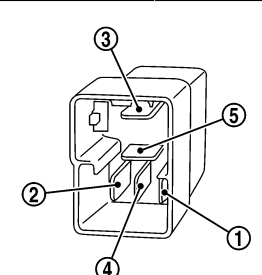
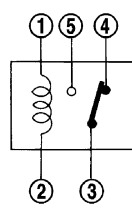
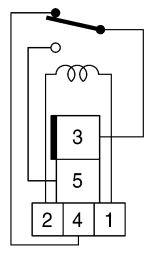
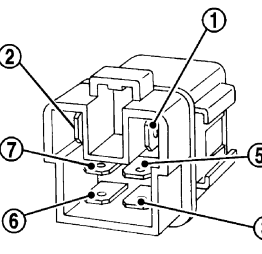
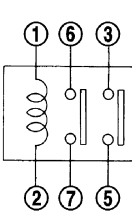
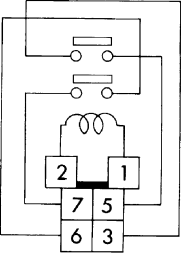
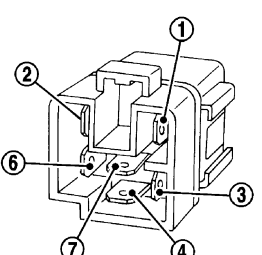
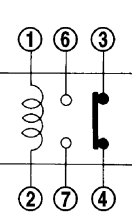
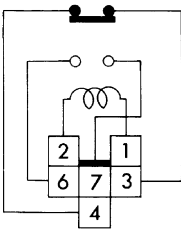
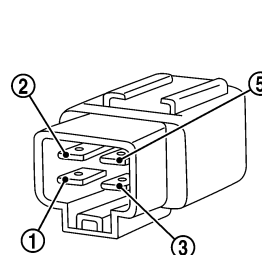
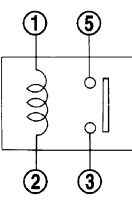
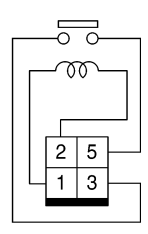
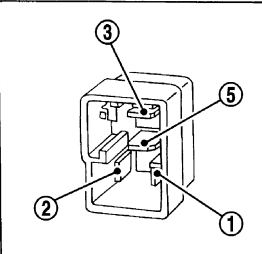
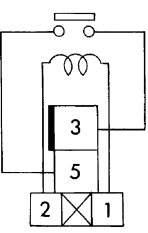
- 1M ..... 1 Make
- 1T ..... 1 Transfer
- 2M ..... 2 Make
- 1M-1B ..... 1 Make 1 Break



SEL882H

# STANDARDIZED RELAY

< SERVICE INFORMATION >

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

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

CKIM0221E

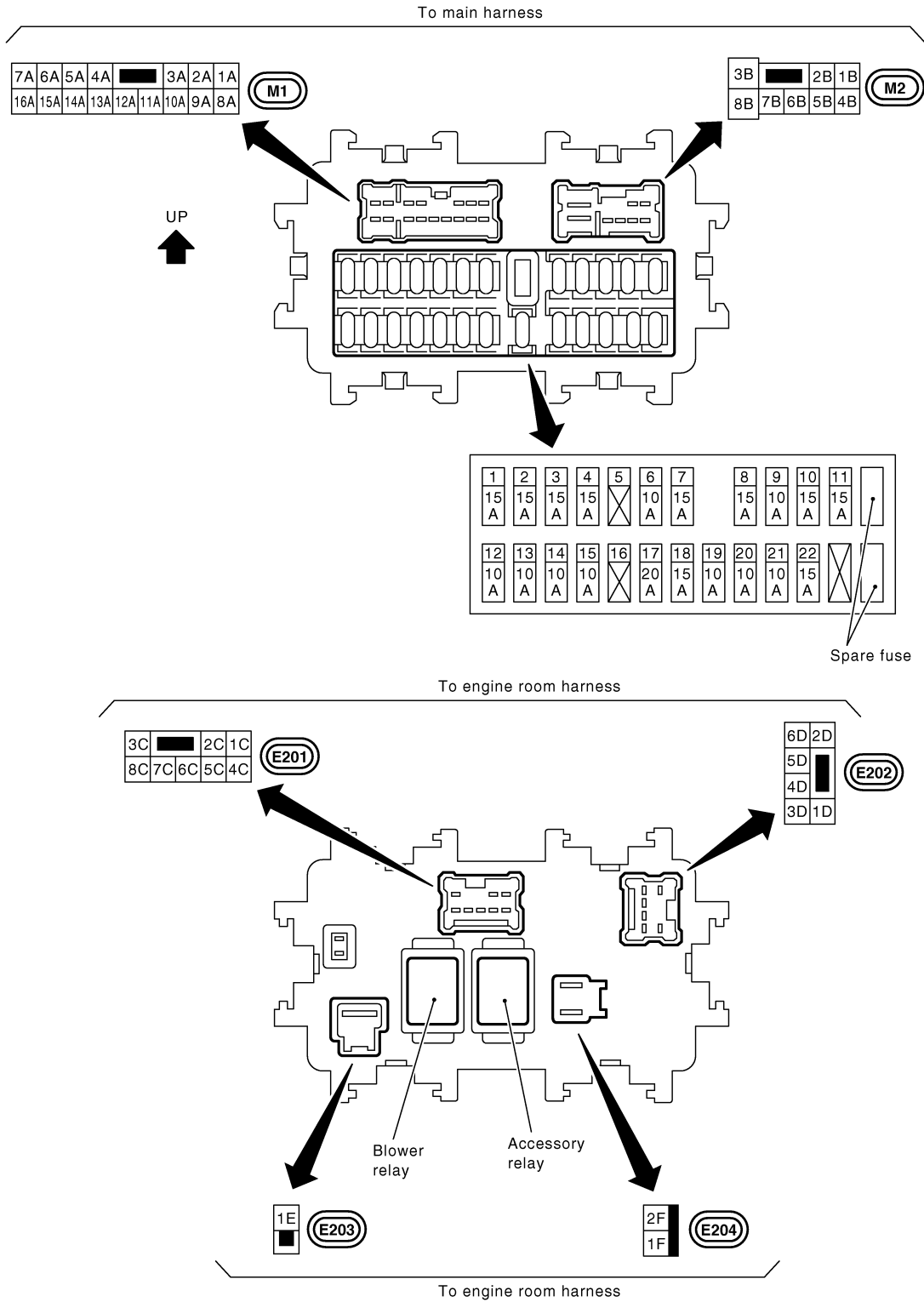
# FUSE BLOCK - JUNCTION BOX (J/B)

< SERVICE INFORMATION >

## FUSE BLOCK - JUNCTION BOX (J/B)

### Terminal Arrangement

INFOID:000000001328889



CKIM0652E

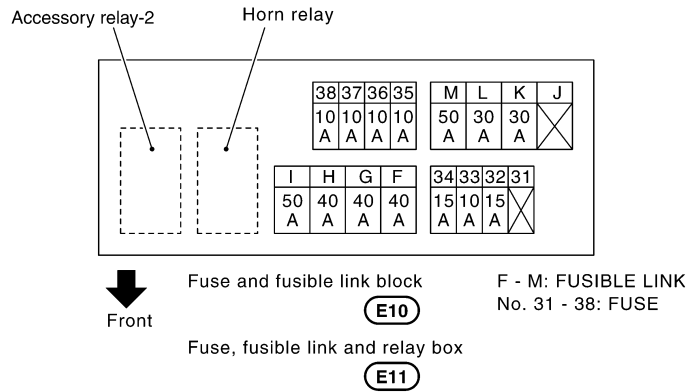
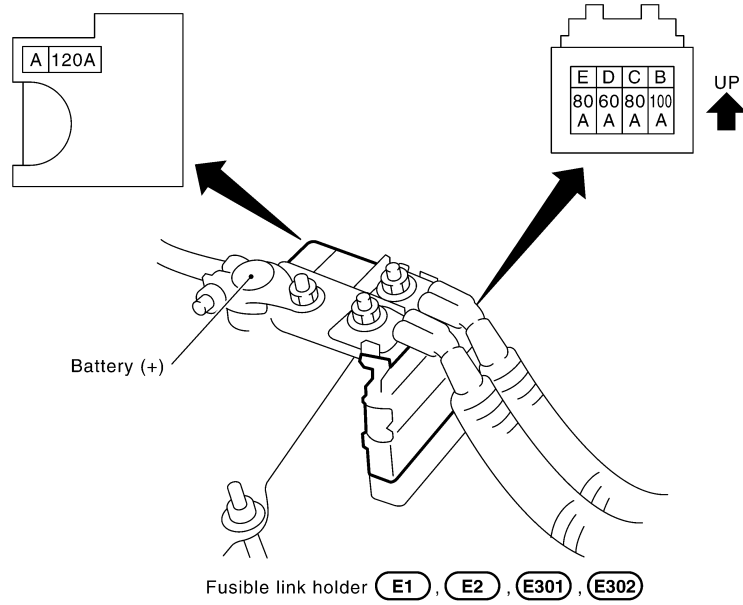
# FUSE, FUSIBLE LINK AND RELAY BOX

< SERVICE INFORMATION >

## FUSE, FUSIBLE LINK AND RELAY BOX

### Terminal Arrangement

INFOID:000000001328890



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