

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

# SECTION PG

## POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

### CONTENTS

<b>PRECAUTIONS</b> .....	<b>3</b>	<b>GROUND</b> .....	<b>31</b>
Precautions for Battery Service .....	3	Ground Distribution .....	31
<b>POWER SUPPLY ROUTING CIRCUIT</b> .....	<b>4</b>	MAIN HARNESS .....	31
Schematic .....	4	ENGINE ROOM HARNESS .....	33
Wiring Diagram — POWER — .....	5	ENGINE CONTROL HARNESS .....	36
BATTERY POWER SUPPLY — IGNITION SW.		BODY HARNESS .....	38
IN ANY POSITION .....	5	BODY NO.2 HARNESS .....	40
ACCESSORY POWER SUPPLY — IGNITION		TAIL HARNESS .....	41
SW. IN “ACC” OR “ON” .....	10	BACK DOOR HARNESS .....	42
IGNITION POWER SUPPLY — IGNITION SW.		<b>HARNESS</b> .....	<b>43</b>
IN “ON” AND/OR “START” .....	11	Harness Layout .....	43
Fuse .....	16	HOW TO READ HARNESS LAYOUT .....	43
Fusible Link .....	16	OUTLINE .....	44
Circuit Breaker .....	16	MAIN HARNESS .....	45
<b>IPDM E/R (INTELLIGENT POWER DISTRIBUTION</b>		ENGINE ROOM HARNESS .....	47
<b>MODULE ENGINE ROOM)</b> .....	<b>17</b>	ENGINE CONTROL HARNESS .....	51
System Description .....	17	BODY HARNESS .....	53
SYSTEMS CONTROLLED BY IPDM E/R .....	17	BODY NO.2 HARNESS .....	55
CAN COMMUNICATION LINE CONTROL .....	17	TAIL HARNESS .....	56
IPDM E/R STATUS CONTROL .....	18	ROOM LAMP HARNESS .....	57
CAN Communication System Description .....	18	DOOR HARNESS .....	58
CAN Communication Unit .....	18	Wiring Diagram Codes (Cell Codes) .....	60
TYPE 1 .....	19	<b>ELECTRICAL UNITS LOCATION</b> .....	<b>63</b>
TYPE 2/TYPE3 .....	20	Electrical Units Location .....	63
TYPE 4/TYPE5 .....	21	ENGINE COMPARTMENT .....	63
TYPE 6/TYPE7 .....	22	PASSENGER COMPARTMENT .....	64
Function of Detecting Ignition Relay Malfunction ...	23	LUGGAGE COMPARTMENT .....	67
Auto Active Test .....	24	<b>HARNESS CONNECTOR</b> .....	<b>68</b>
DESCRIPTION .....	24	Description .....	68
OPERATION PROCEDURE .....	24	HARNESS CONNECTOR (TAB-LOCKING	
INSPECTION IN AUTO ACTIVE TEST MODE ...	24	TYPE) .....	68
Schematic .....	26	HARNESS CONNECTOR (SLIDE-LOCKING	
IPDM E/R Terminal Arrangement .....	27	TYPE) .....	69
IPDM E/R Terminal Inspection .....	28	<b>JOINT CONNECTOR (J/C)</b> .....	<b>70</b>
IPDM E/R Power/Ground Circuit Inspection .....	29	Terminal Arrangement .....	70
Removal and Installation of IPDM E/R .....	30	<b>ELECTRICAL UNITS</b> .....	<b>71</b>
REMOVAL .....	30	Terminal Arrangement .....	71
INSTALLATION .....	30	<b>SMJ (SUPER MULTIPLE JUNCTION)</b> .....	<b>73</b>
		Terminal Arrangement .....	73

---

<b>STANDARDIZED RELAY</b> .....	<b>75</b>	<b>FUSE BLOCK - JUNCTION BOX (J/B)</b> .....	<b>77</b>
Description .....	75	Terminal Arrangement .....	77
NORMAL OPEN, NORMAL CLOSED AND		<b>FUSE, FUSIBLE LINK AND RELAY BOX</b> .....	<b>78</b>
MIXED TYPE RELAYS .....	75	Terminal Arrangement .....	78
TYPE OF STANDARDIZED RELAYS .....	75		

# PRECAUTIONS

---

## PRECAUTIONS

PPF:00001

### Precautions for Battery Service

AKS003RD

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

A

B

C

D

E

F

G

H

I

J

**PG**

L

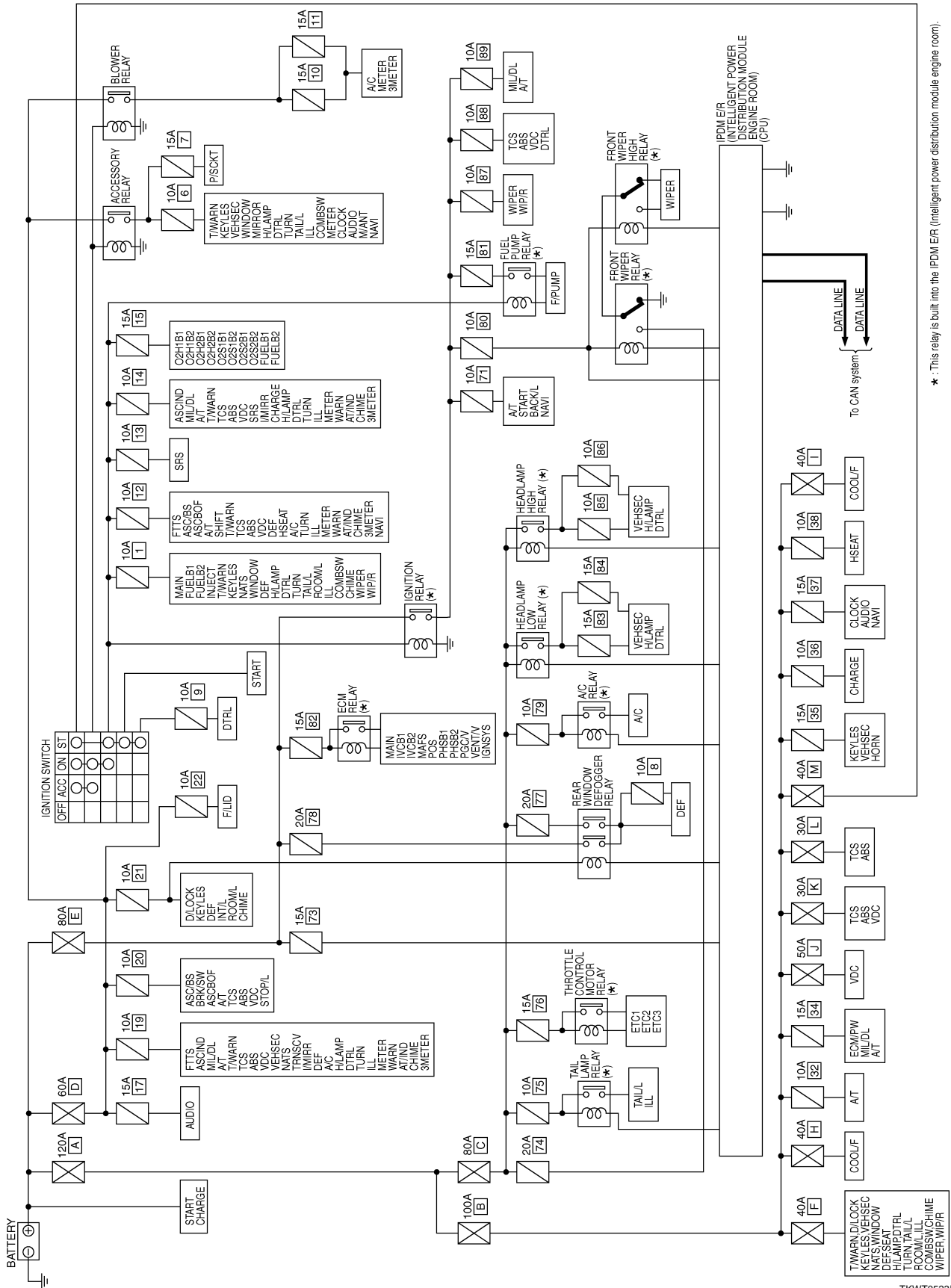
M

# POWER SUPPLY ROUTING CIRCUIT

PFP:24110

AKS0012B

## POWER SUPPLY ROUTING CIRCUIT Schematic



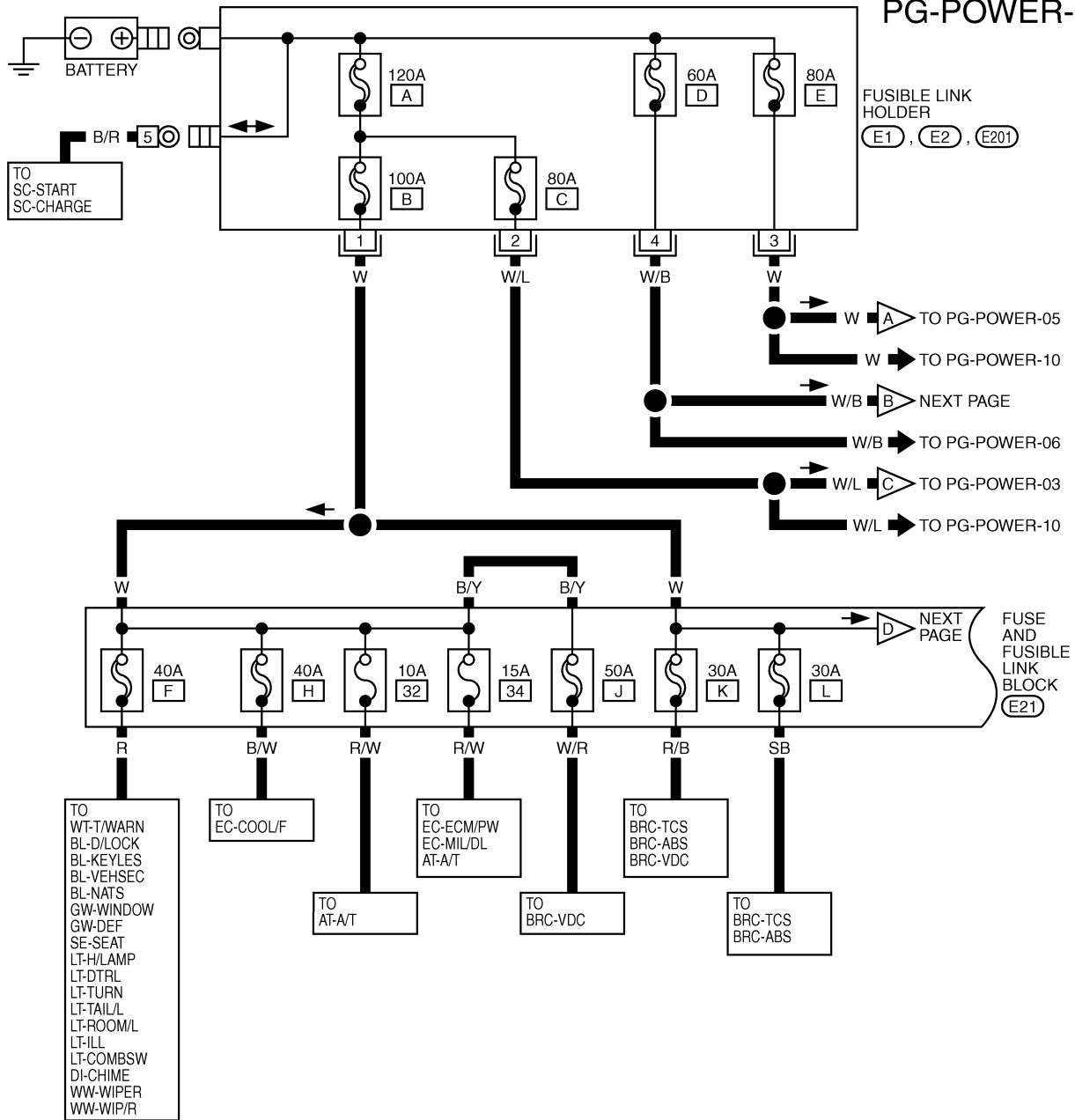
\* This relay is built into the IPDM E/R (Intelligent power distribution module engine room).

TKWT0523E

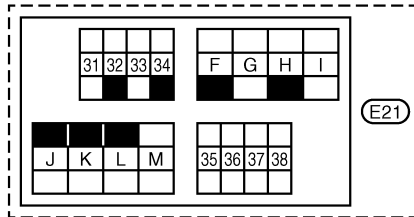
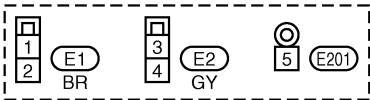
# POWER SUPPLY ROUTING CIRCUIT

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

AKS0012C



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

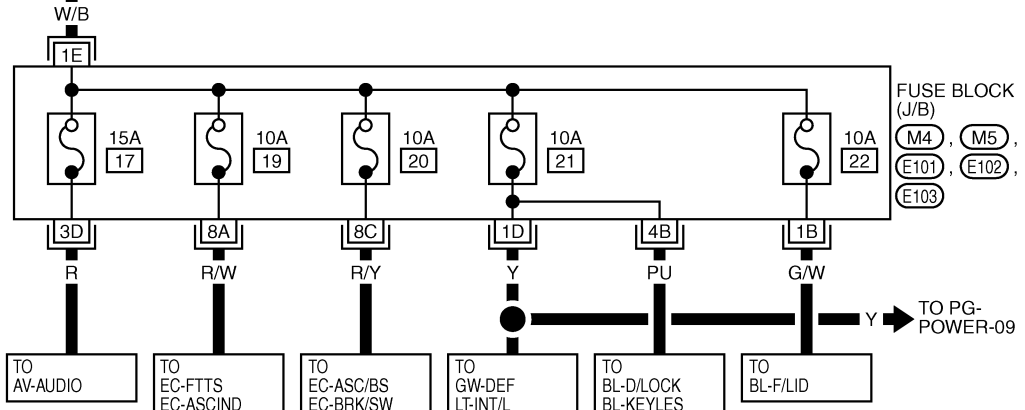


TKWT0524E

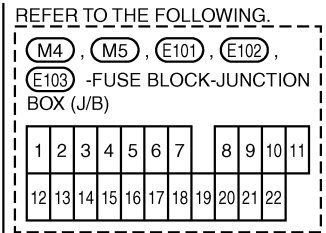
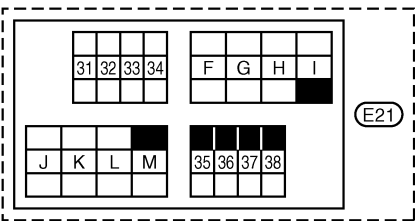
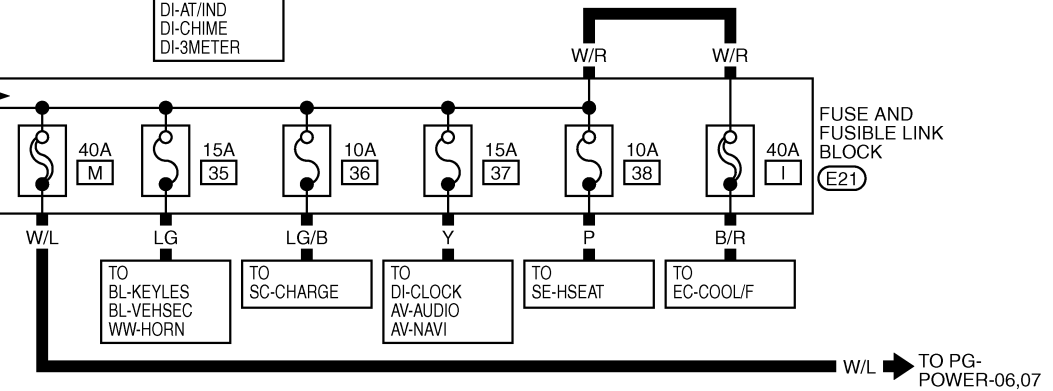
# POWER SUPPLY ROUTING CIRCUIT

PG-POWER-02

PRECEDING PAGE B W/B



PRECEDING PAGE D

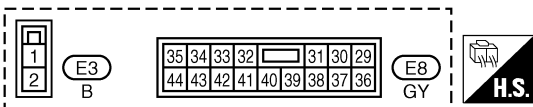
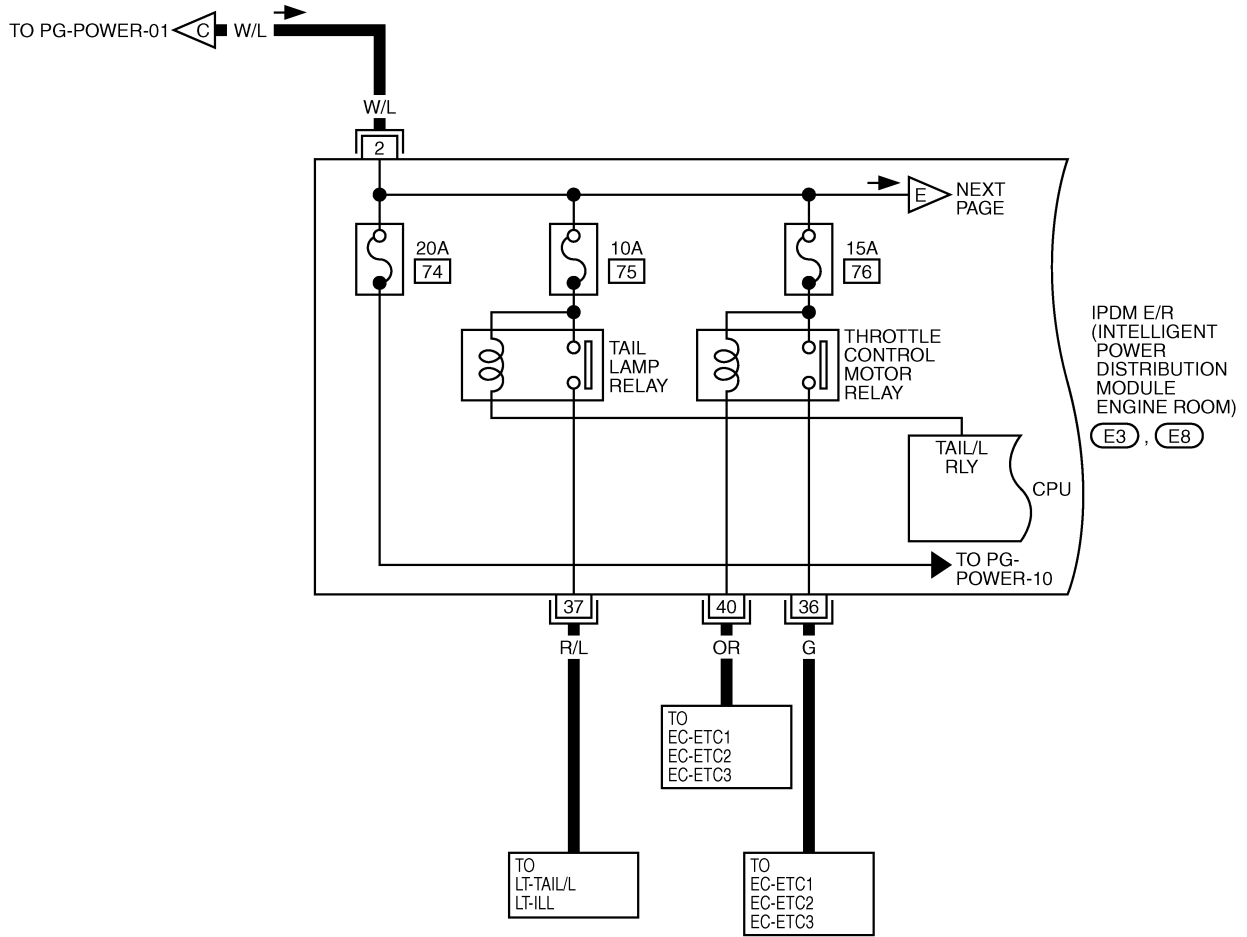


TKWT0525E

# POWER SUPPLY ROUTING CIRCUIT

PG-POWER-03

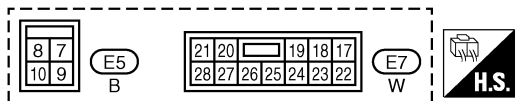
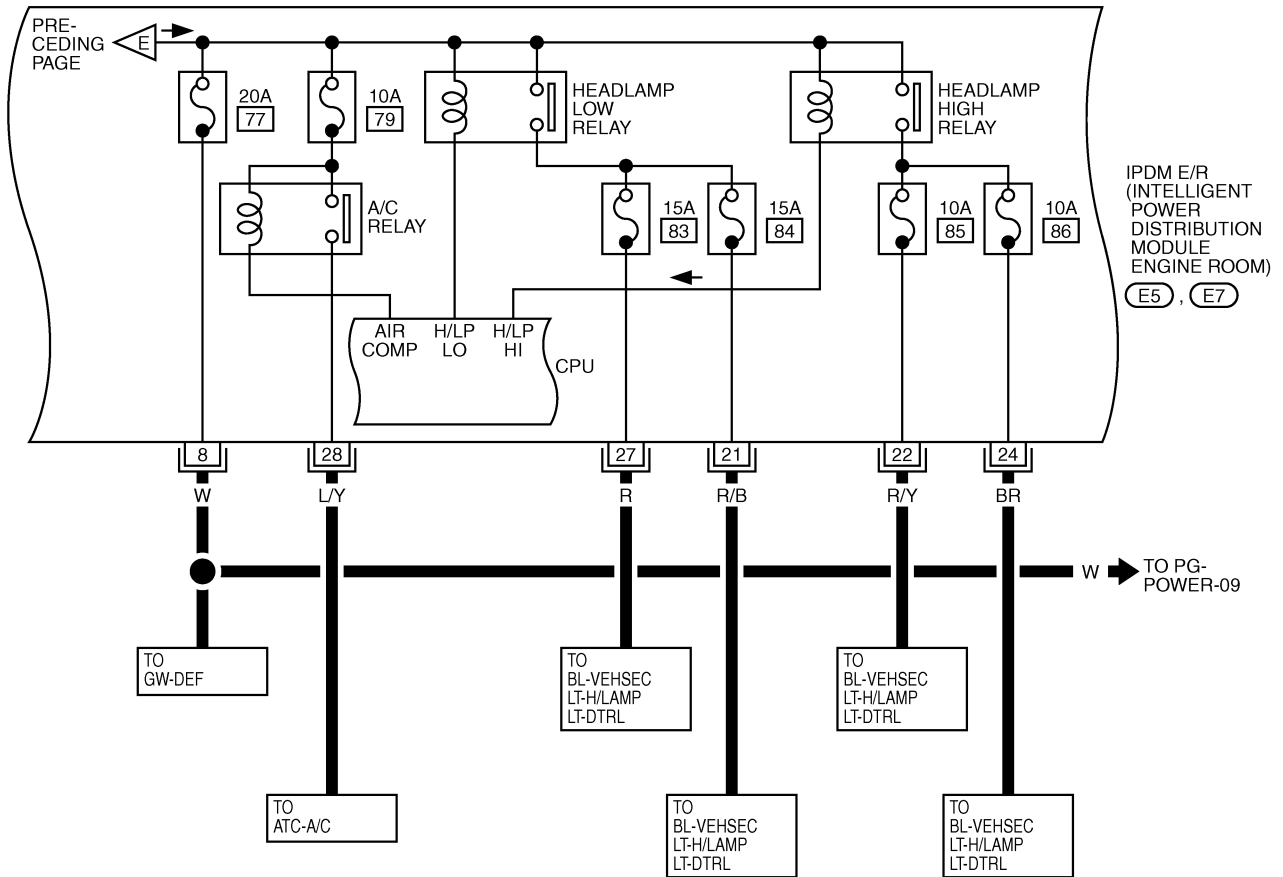
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M



TKWT0526E

# POWER SUPPLY ROUTING CIRCUIT

PG-POWER-04

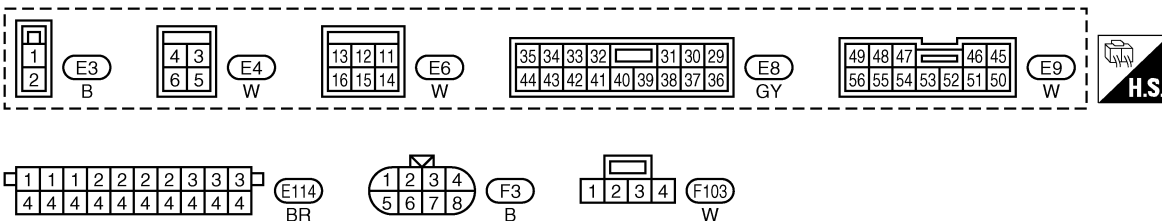
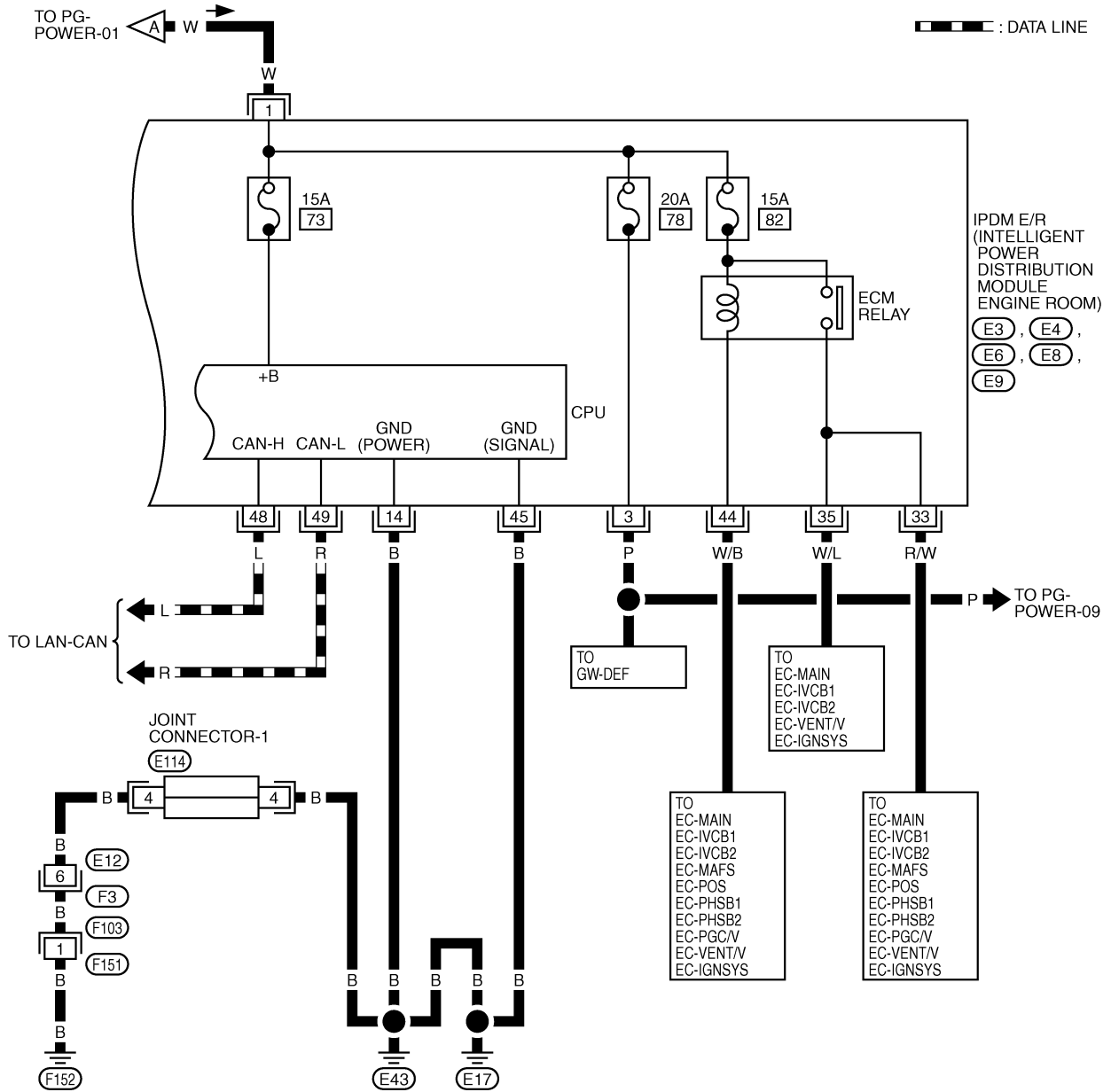


TKWT0527E



# POWER SUPPLY ROUTING CIRCUIT

PG-POWER-05

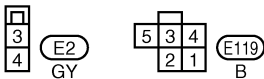
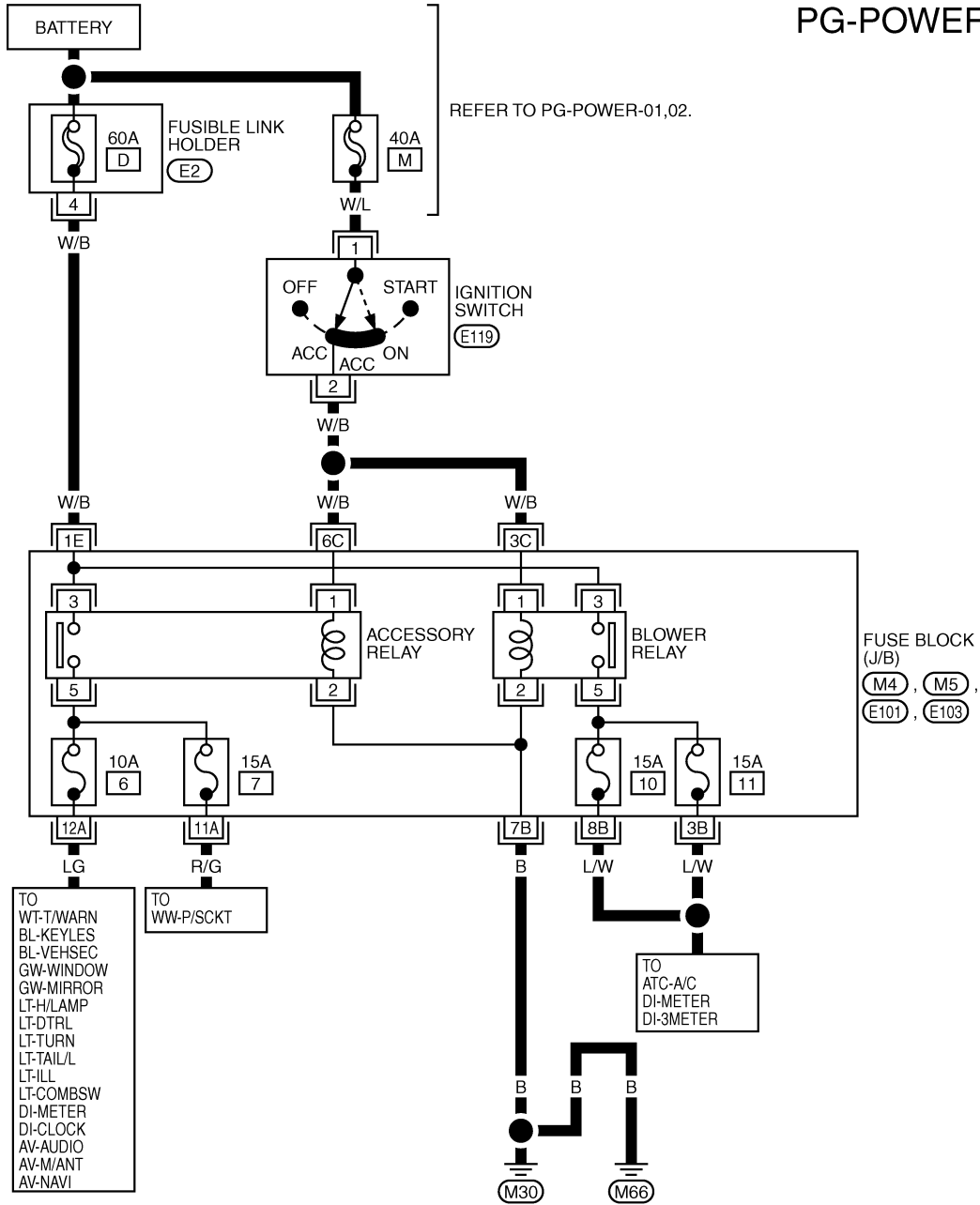


A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

# POWER SUPPLY ROUTING CIRCUIT

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

PG-POWER-06



REFER TO THE FOLLOWING.

(M4), (M5), (E101), (E103)

- FUSE BLOCK-JUNCTION BOX (J/B)

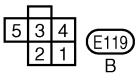
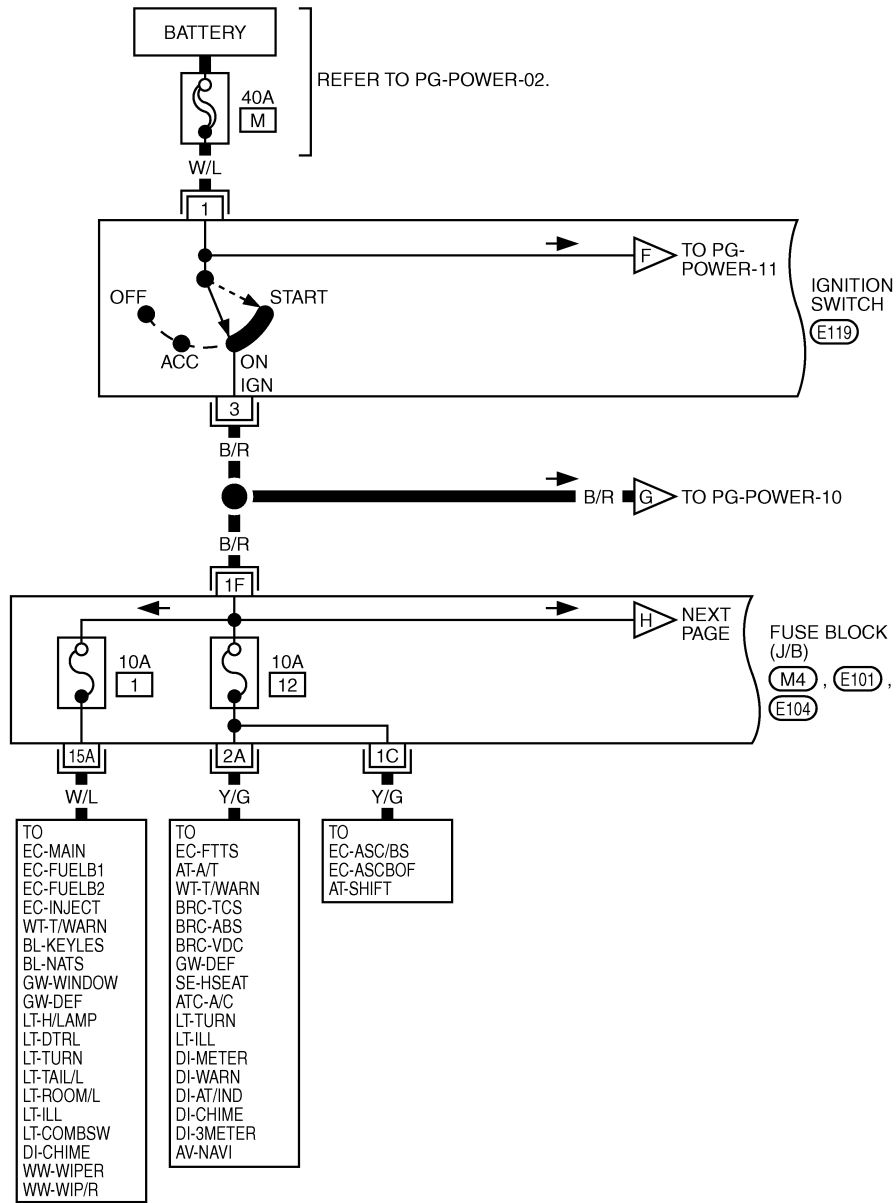
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWT0529E

# POWER SUPPLY ROUTING CIRCUIT

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

PG-POWER-07



REFER TO THE FOLLOWING.

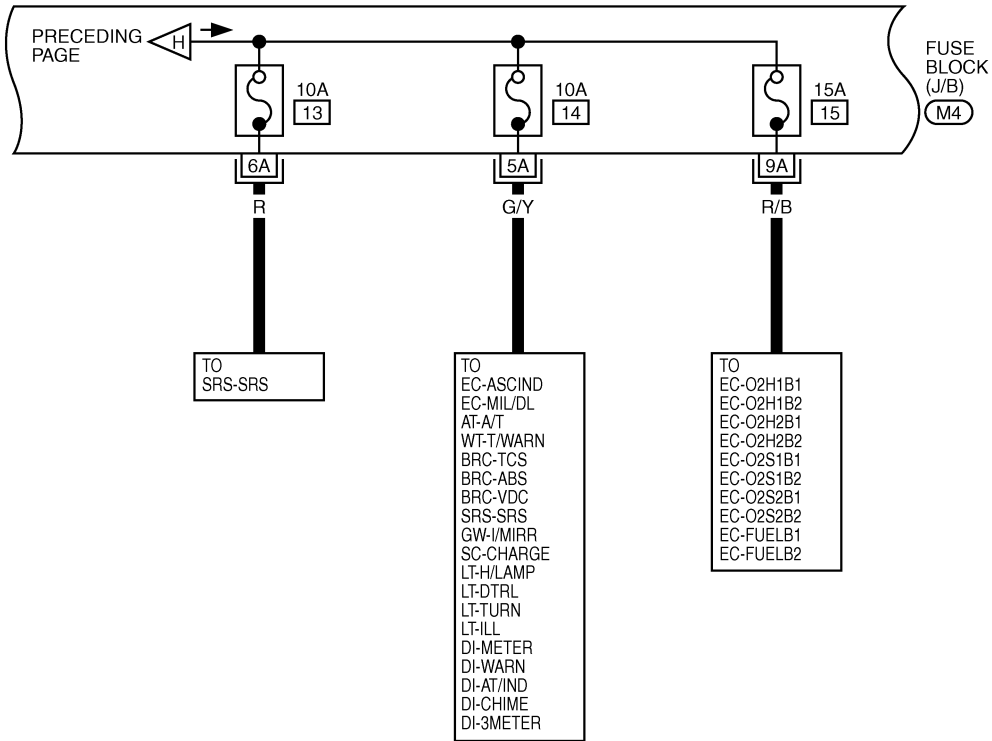
(M4), (E101), (E104)  
-FUSE BLOCK-JUNCTION BOX (J/B)

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

TKWT0530E

# POWER SUPPLY ROUTING CIRCUIT

PG-POWER-08



REFER TO THE FOLLOWING.

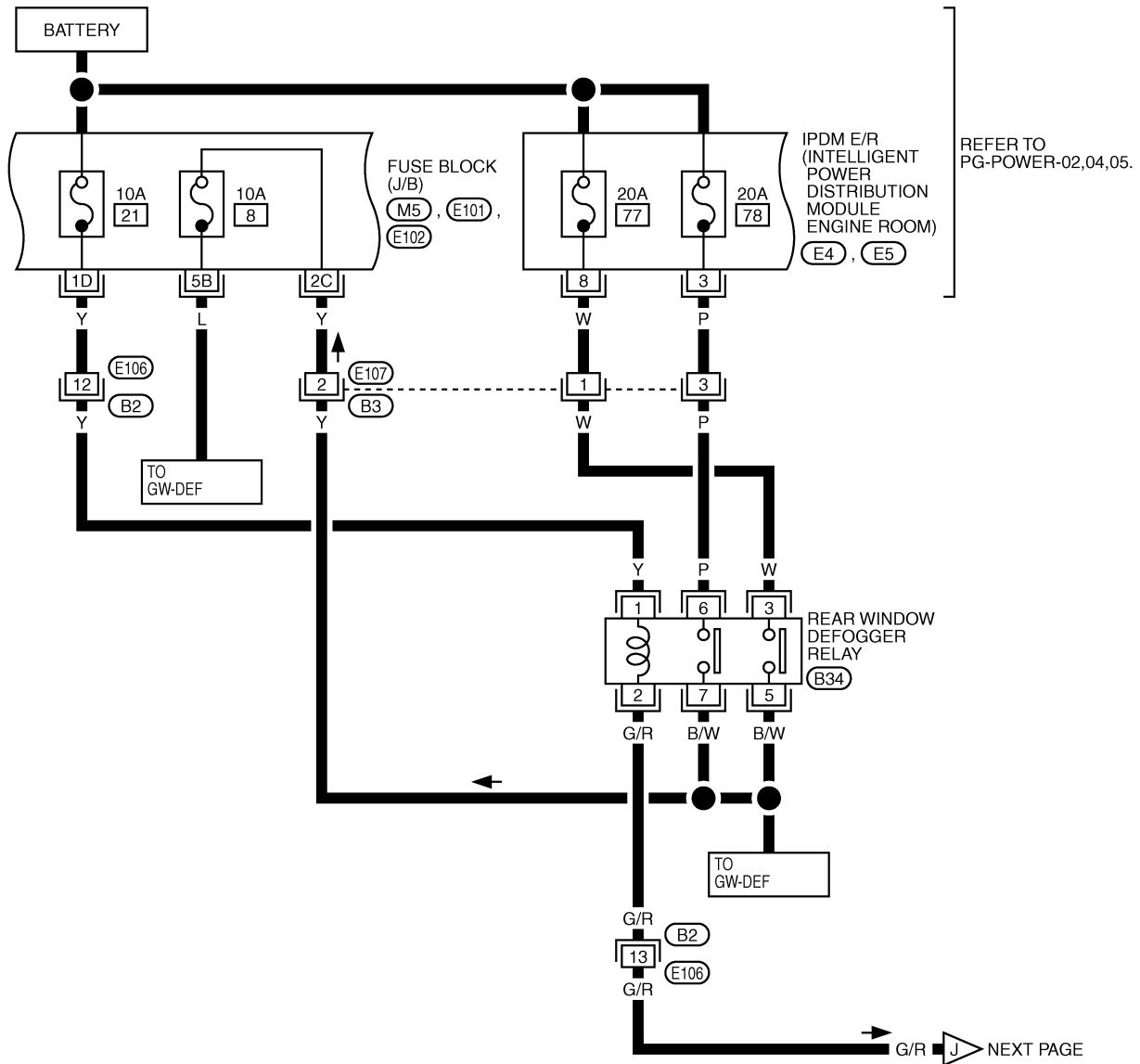
(M4) - FUSE BLOCK-  
JUNCTION BOX (J/B)

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

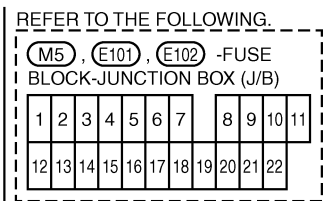
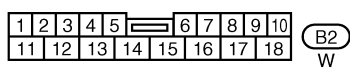
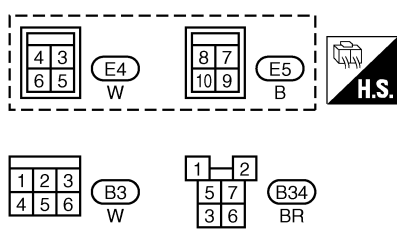
TKWT0531E

# POWER SUPPLY ROUTING CIRCUIT

PG-POWER-09



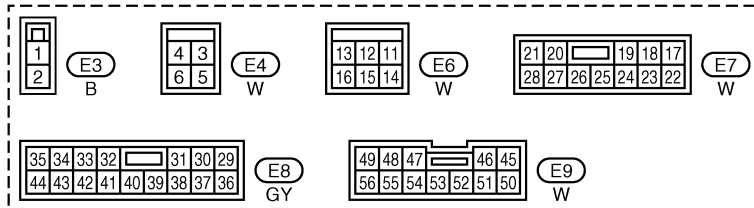
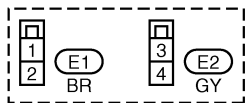
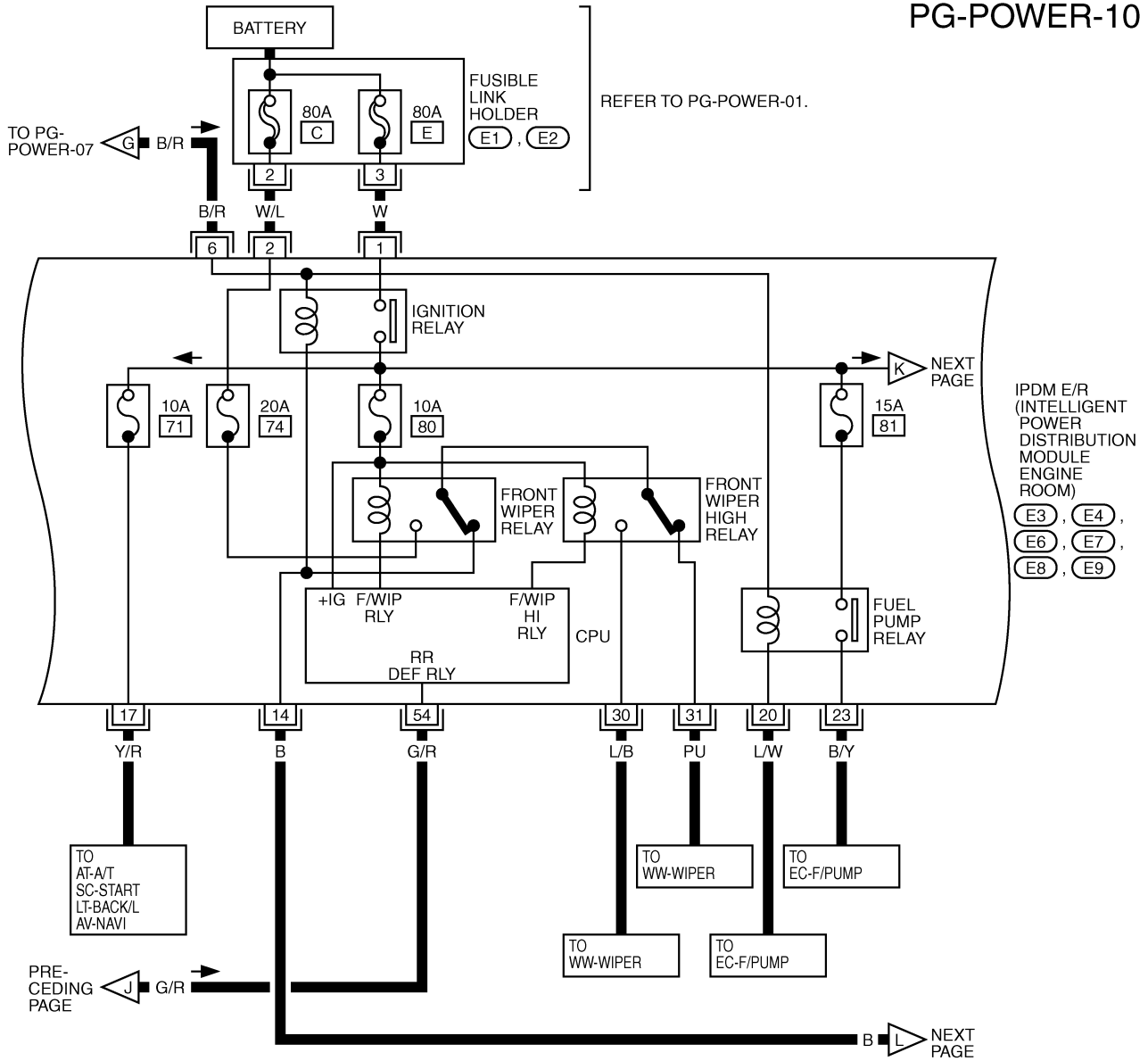
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M



TKWT0532E

# POWER SUPPLY ROUTING CIRCUIT

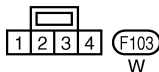
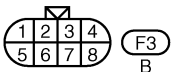
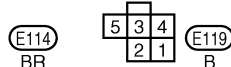
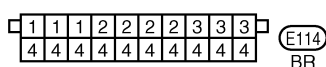
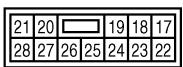
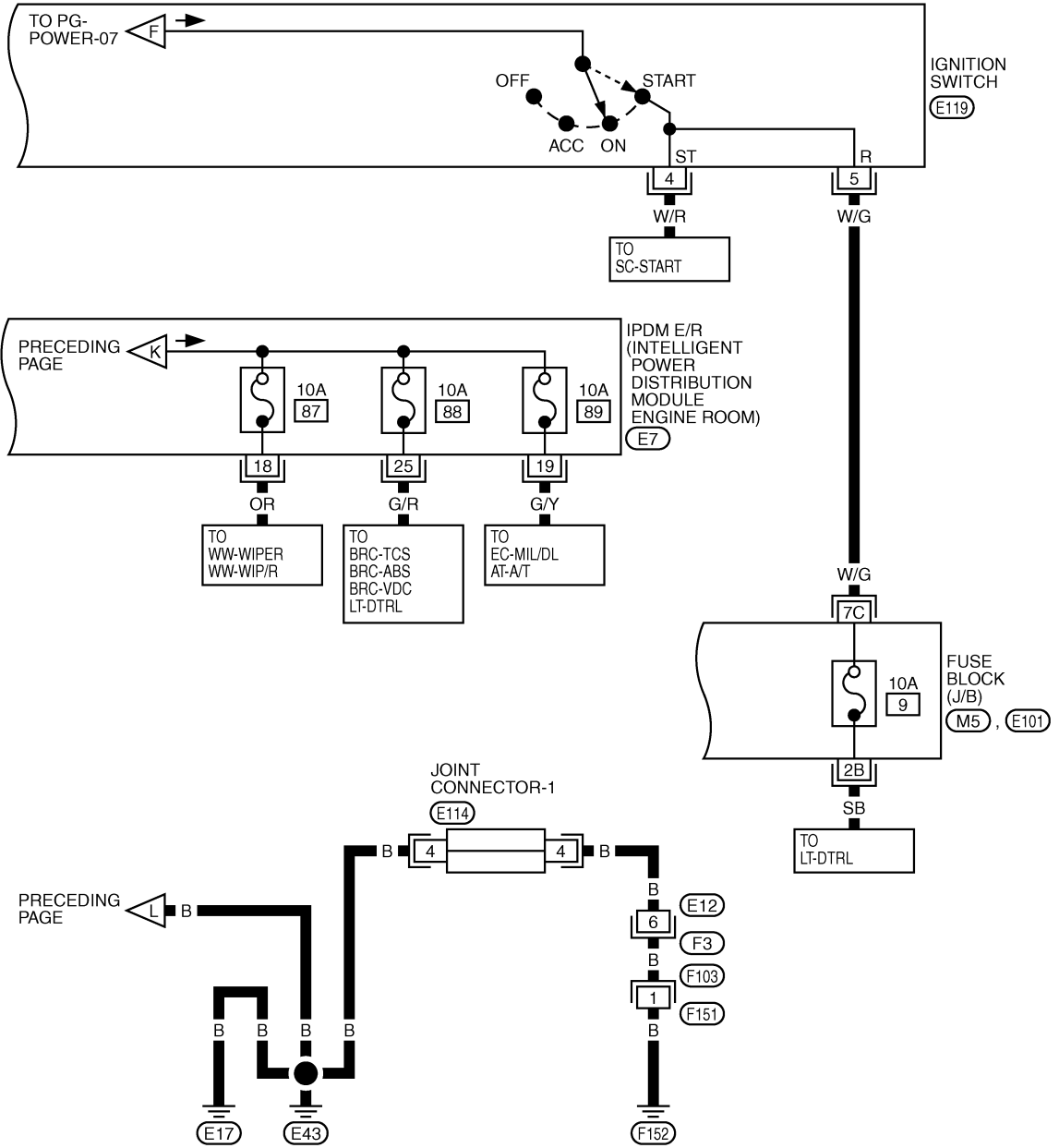
PG-POWER-10



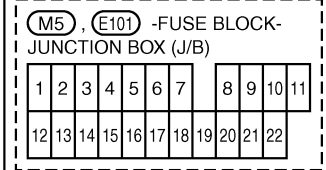
TKWT0533E

# POWER SUPPLY ROUTING CIRCUIT

PG-POWER-11



REFER TO THE FOLLOWING:



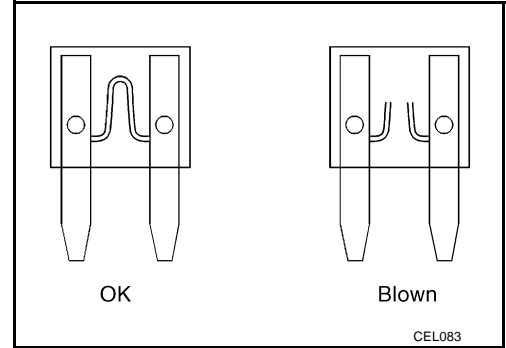
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

# POWER SUPPLY ROUTING CIRCUIT

## Fuse

AKS0012D

- 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.



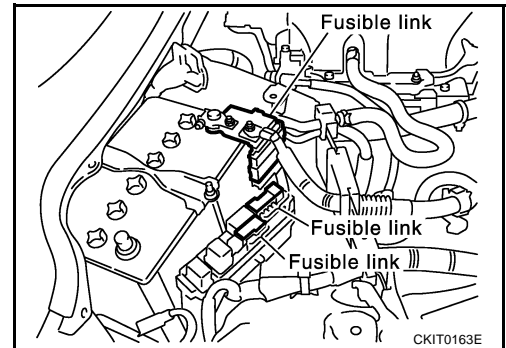
## Fusible Link

AKS0012E

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:

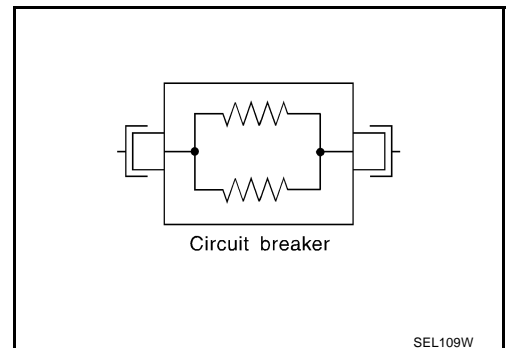
- If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of incident.
- Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other wiring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



## Circuit Breaker

AKS0012F

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)

PFP:284B7

### System Description

AKS0012G

- 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, etc.
- It controls operation of each electrical part via BCM and CAN communication lines.

#### CAUTION:

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

### SYSTEMS CONTROLLED BY IPDM E/R

1. Lamp control  
Using CAN communication line, it receives signal from BCM and controls the following lamps:
  - Head lamps (Hi, Lo)
  - Parking lamps
  - Tail lamps
2. Wiper control  
Using CAN communication line, it receives signals from BCM and controls the front wipers.
3. Rear window defogger relay control  
Using CAN communication line, it receives signals from BCM and controls the rear window defogger relay.
4. A/C compressor control  
Using CAN communication line, it receives signals from ECM and controls the A/C relay.
5. Cooling fan control  
Using CAN communication line, it receives signals from ECM and controls cooling fan relay.
6. Horn control  
Using CAN communication line, it receives signals from BCM and controls 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 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 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>
Tail and parking lamps	Tail and parking lamps OFF.
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 OFF
A/C compressor	A/C compressor OFF

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

## IPDM E/R STATUS CONTROL

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

1. CAN communication status
  - CAN communication is normally performed with other control units.
  - Individual unit control by IPDM E/R is normally performed.
  - When sleep request signal is received from BCM, mode is switched to sleep waiting status.
2. Sleep waiting status
  - Process to stop CAN communication is activated.
  - All systems controlled by IPDM E/R are stopped. When 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 hood switch signal is detected, mode switches to CAN communication status.

## CAN Communication System Description

AKS003MM

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

AKS003MN

Body type	Coupe						
Axle	2WD						
Engine	VQ35DE						
Transmission	A/T	M/T					
Brake control	TCS	ABS		TCS		VDC	
Low tire pressure warning system	Not applicable	Not applicable	Applicable	Not applicable	Applicable	Not applicable	Applicable
CAN communication unit							
ECM	×	×	×	×	×	×	×
TCM	×						
Data link connector	×	×	×	×	×	×	×
Unified meter and A/C amp.	×	×	×	×	×	×	×
BCM	×	×	×	×	×	×	×
Low tire pressure warning control unit			×		×		×
Steering angle sensor						×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×		
VDC/TCS/ABS control unit						×	×
IPDM E/R	×	×	×	×	×	×	×
CAN communication type	<a href="#">PG-19, "TYPE 1"</a>	<a href="#">PG-20, "TYPE 2/TYPE3"</a>		<a href="#">PG-21, "TYPE 4/TYPE5"</a>		<a href="#">PG-22, "TYPE 6/TYPE7"</a>	

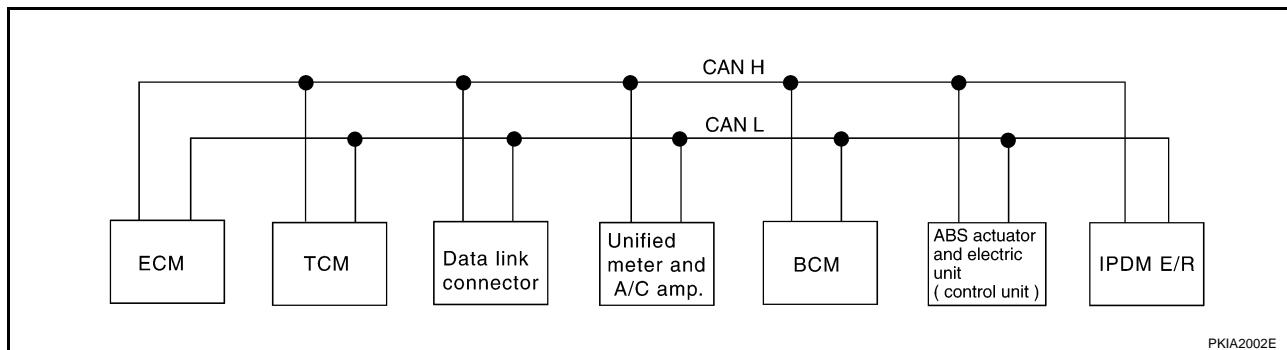
×: Applicable

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

## TYPE 1

### System diagram

- Type1



### Input/output signal chart

T: Transmit R: Receive

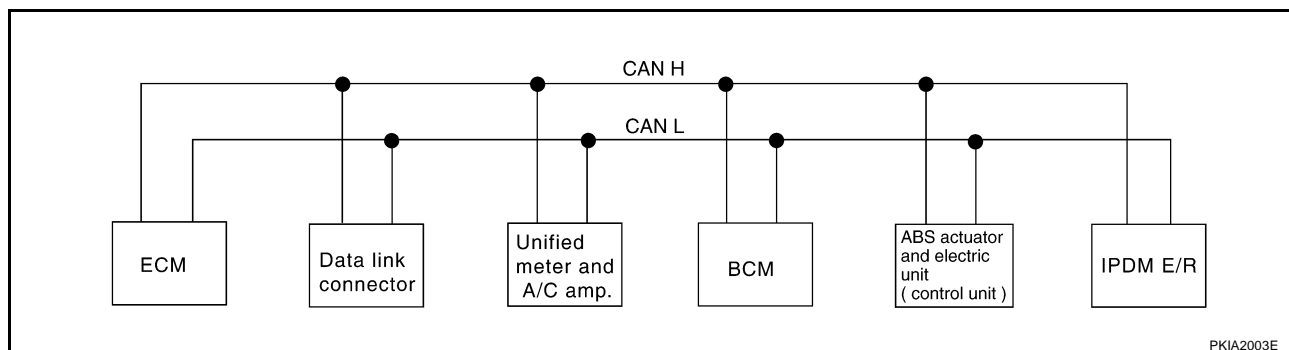
Signals	ECM	TCM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
A/C switch signal	R			T		
A/C compressor request signal	T					R
A/C compressor feedback signal	T		R			
Blower fan motor switch signal	R			T		
Cooling fan speed request signal	T					R
Position lights request signal			R	T		R
Low beam request signal				T		R
Low beam status signal	R					T
High beam request signal			R	T		R
High beam status signal	R					T
Vehicle speed signal			R		T	
	R	R	T	R		
Sleep request 1 signal			R	T		
Sleep request 2 signal				T		R
Wake up request 1 signal			R	T		
Door switch signal			R	T		R
Turn indicator signal			R	T		
Seat belt buckle switch signal			T	R		
Buzzer output signal			R	T		
Front wiper request signal				T		R
Front wiper stop position signal				R		T
Rear window defogger switch signal				T		R
Rear window defogger control signal	R					T
Hood switch signal				R		T
Theft warning horn request signal				T		R
Horn chirp signal				T		R

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

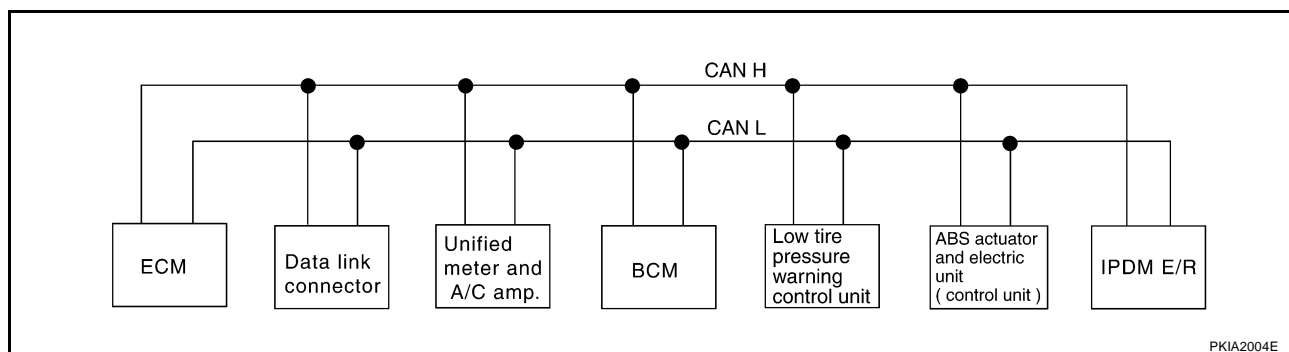
## TYPE 2/TYPE3

### System diagram

- Type2



- Type3



### Input/output signal chart

T: Transmit R: Receive

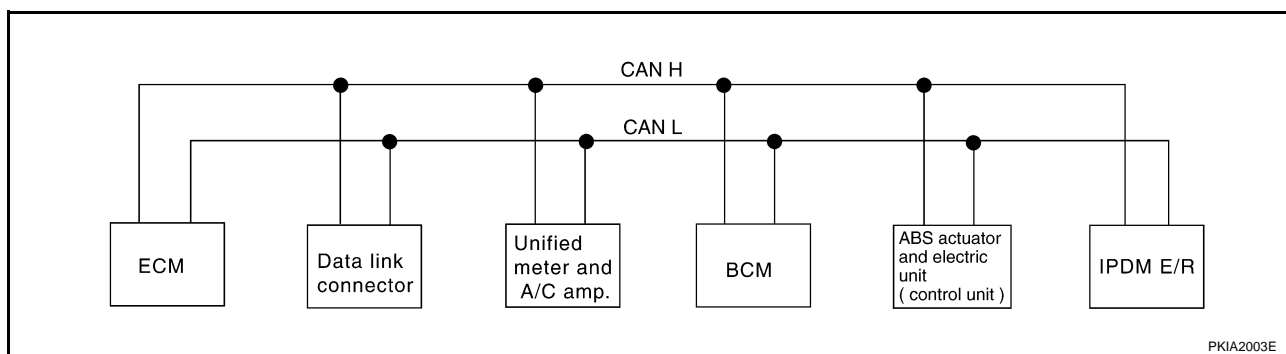
Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
A/C switch signal	R		T			
A/C compressor request signal	T					R
A/C compressor feedback signal	T	R				
Blower fan motor switch signal	R		T			
Cooling fan speed request signal	T					R
Position lights request signal			R	T		R
Low beam request signal			T			R
Low beam status signal	R					T
High beam request signal		R	T			R
High beam status signal	R					T
Vehicle speed signal		R			T	
	R	T	R	R		
Sleep request 1 signal		R	T			
Sleep request 2 signal			T			R
Wake up request 1 signal		R	T			
Door switch signal		R	T			R
Turn indicator signal		R	T			
Seat belt buckle switch signal		T	R			
Buzzer output signal		R	T			

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

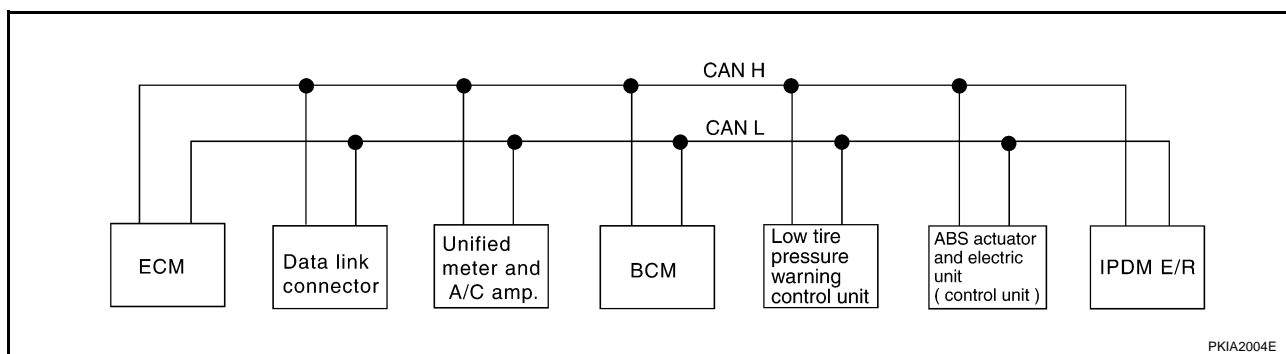
Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Front wiper request signal			T			R
Front wiper stop position signal			R			T
Rear window defogger switch signal			T			R
Rear window defogger control signal	R					T
Hood switch signal			R			T
Theft warning horn request signal			T			R
Horn chirp signal			T			R

## TYPE 4/TYPES System diagram

- Type4



- Type5



## Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
A/C switch signal	R		T			
A/C compressor request signal	T					R
A/C compressor feedback signal	T	R				
Blower fan motor switch signal	R		T			
Cooling fan speed request signal	T					R
Position lights request signal		R	T			R
Low beam request signal			T			R
Low beam status signal	R					T

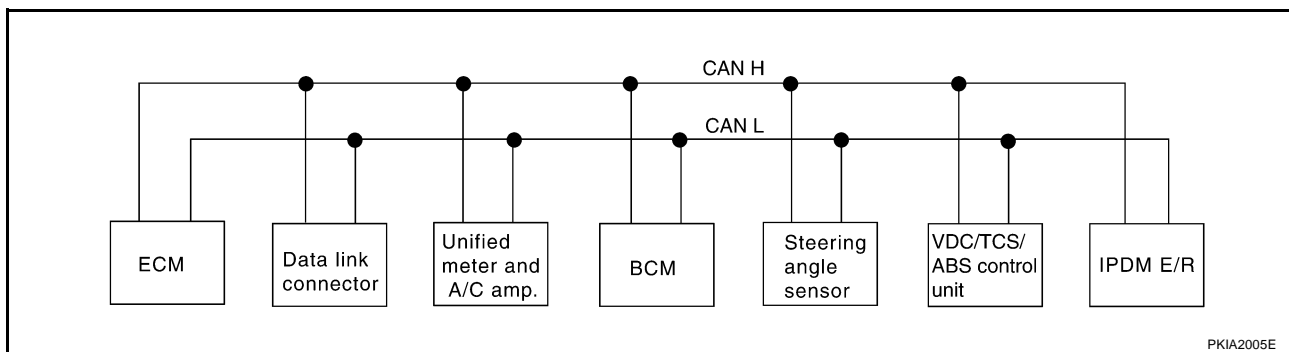
# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
High beam request signal		R	T			R
High beam status signal	R					T
Vehicle speed signal		R			T	
	R	T	R	R		
Sleep request 1 signal		R	T			
Sleep request 2 signal			T			R
Wake up request 1 signal		R	T			
Door switch signal		R	T			R
Turn indicator signal		R	T			
Seat belt buckle switch signal		T	R			
Buzzer output signal		R	T			
Front wiper request signal			T			R
Front wiper stop position signal			R			T
Rear window defogger switch signal			T			R
Rear window defogger control signal	R					T
Hood switch signal			R			T
Theft warning horn request signal			T			R
Horn chirp signal			T			R

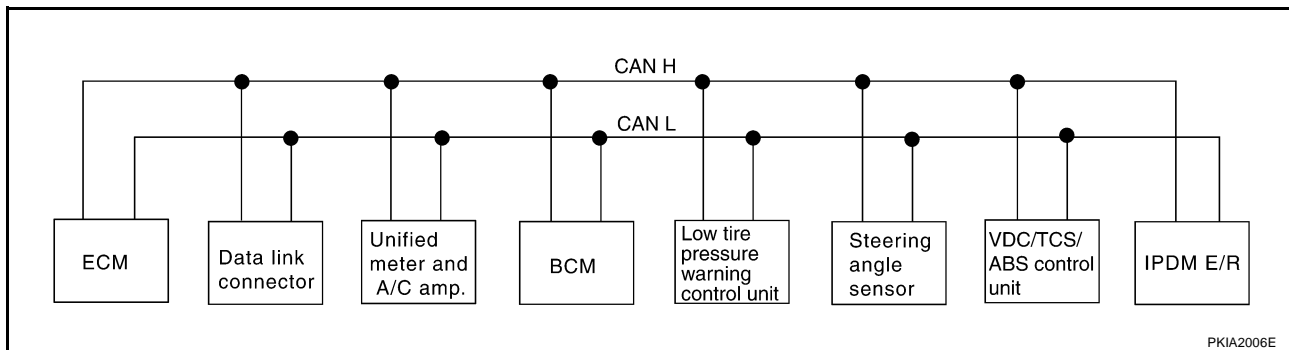
## TYPE 6/TYPE7

### System diagram

- Type6



- Type7



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

## Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	Steering angle sensor	VDC/TCS/ABS control unit	IPDM E/R
A/C switch signal	R		T				
A/C compressor request signal	T						R
A/C compressor feedback signal	T	R					
Blower fan motor switch signal	R		T				
Cooling fan speed request signal	T						R
Position lights request signal		R	T				R
Low beam request signal			T				R
Low beam status signal	R						T
High beam request signal		R	T				R
High beam status signal	R						T
Vehicle speed signal		R				T	
	R	T	R	R			
Sleep request 1 signal		R	T				
Sleep request 2 signal			T				R
Wake up request 1 signal		R	T				
Door switch signal		R	T				R
Turn indicator signal		R	T				
Seat belt buckle switch signal		T	R				
Buzzer output signal		R	T				
Front wiper request signal			T				R
Front wiper stop position signal			R				T
Rear window defogger switch signal			T				R
Rear window defogger control signal	R						T
Hood switch signal			R				T
Theft warning horn request signal			T				R
Horn chirp signal			T				R

## Function of Detecting Ignition Relay Malfunction

AKS0012I

- When contact point of integrated ignition relay is stuck and cannot be turned OFF, IPDM E/R turns ON tail and parking lamps for 10 minutes to indicate IPDM E/R malfunction.

### NOTE:

When the ignition switch is turned ON, the tail lamp is off.

## Auto Active Test DESCRIPTION

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

- Rear window defogger
- Front wipers
- Tail and parking lamps
- Headlamps (Hi, Lo)
- A/C compressor (magnetic clutch)
- Cooling fan

## OPERATION PROCEDURE

1. Close hood, 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:

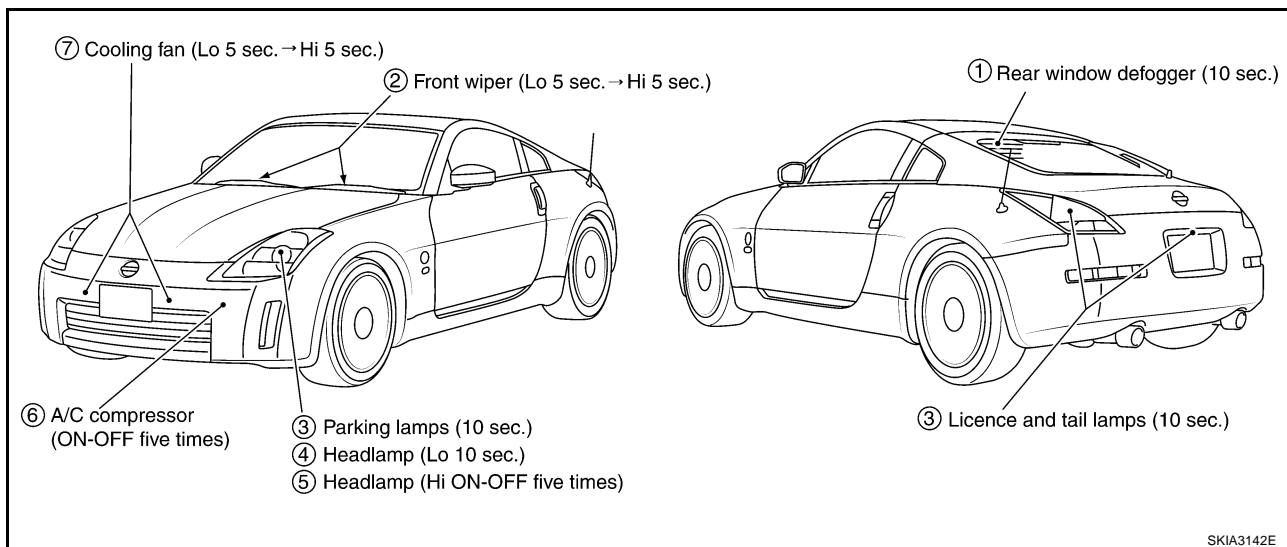
When auto active test mode has to be cancelled halfway, turn ignition switch OFF.

### CAUTION:

Be sure to inspect **BL-71, "Door Switch Check"** when the auto active test cannot be performed.

## INSPECTION IN AUTO ACTIVE TEST MODE

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



### NOTE:

It will take ten seconds from 3 to 4.



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

## Concept of Auto Active Test

- IPDM E/R actuates auto active test mode when it receives door switch signal from BCM via CAN communication line. Therefore, when auto active test mode is activated successfully, CAN communication between IPDM E/R and BCM is normal.
- If any of 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, and head lamps (Hi, Lo) do not operate.	Perform auto active test. Does system in question operate?	YES	● BCM signal input system
		NO	<ul style="list-style-type: none"> <li>● Lamp/wiper motor malfunction</li> <li>● Lamp/wiper motor ground circuit malfunction</li> <li>● Harness/connector malfunction between IPDM E/R and system in question</li> <li>● IPDM E/R (integrated relay) malfunction</li> </ul>
Rear window defogger does not operate.	Perform auto active test. Does rear window defogger operate?	YES	● BCM signal input circuit
		NO	<ul style="list-style-type: none"> <li>● Rear window defogger relay circuit</li> <li>● Open circuit of rear window defogger</li> <li>● IPDM E/R malfunction</li> </ul>
A/C compressor does not operate.	Perform auto active test. Does magnetic clutch operate?	YES	<ul style="list-style-type: none"> <li>● BCM signal input circuit</li> <li>● CAN communication signal between BCM and ECM.</li> <li>● CAN communication signal between ECM and IPDM E/R</li> </ul>
		NO	<ul style="list-style-type: none"> <li>● Magnetic clutch malfunction</li> <li>● Harness/connector malfunction between IPDM E/R and magnetic clutch</li> <li>● IPDM E/R (integrated relay) malfunction</li> </ul>
Cooling fan does not operate.	Perform auto active test. Does cooling fan operate?	YES	<ul style="list-style-type: none"> <li>● ECM signal input circuit</li> <li>● CAN communication signal between ECM and IPDM E/R</li> </ul>
		NO	<ul style="list-style-type: none"> <li>● Cooling fan motor malfunction</li> <li>● Harness/connector malfunction between IPDM E/R and cooling fan motor</li> <li>● IPDM E/R (integrated relay) malfunction</li> </ul>

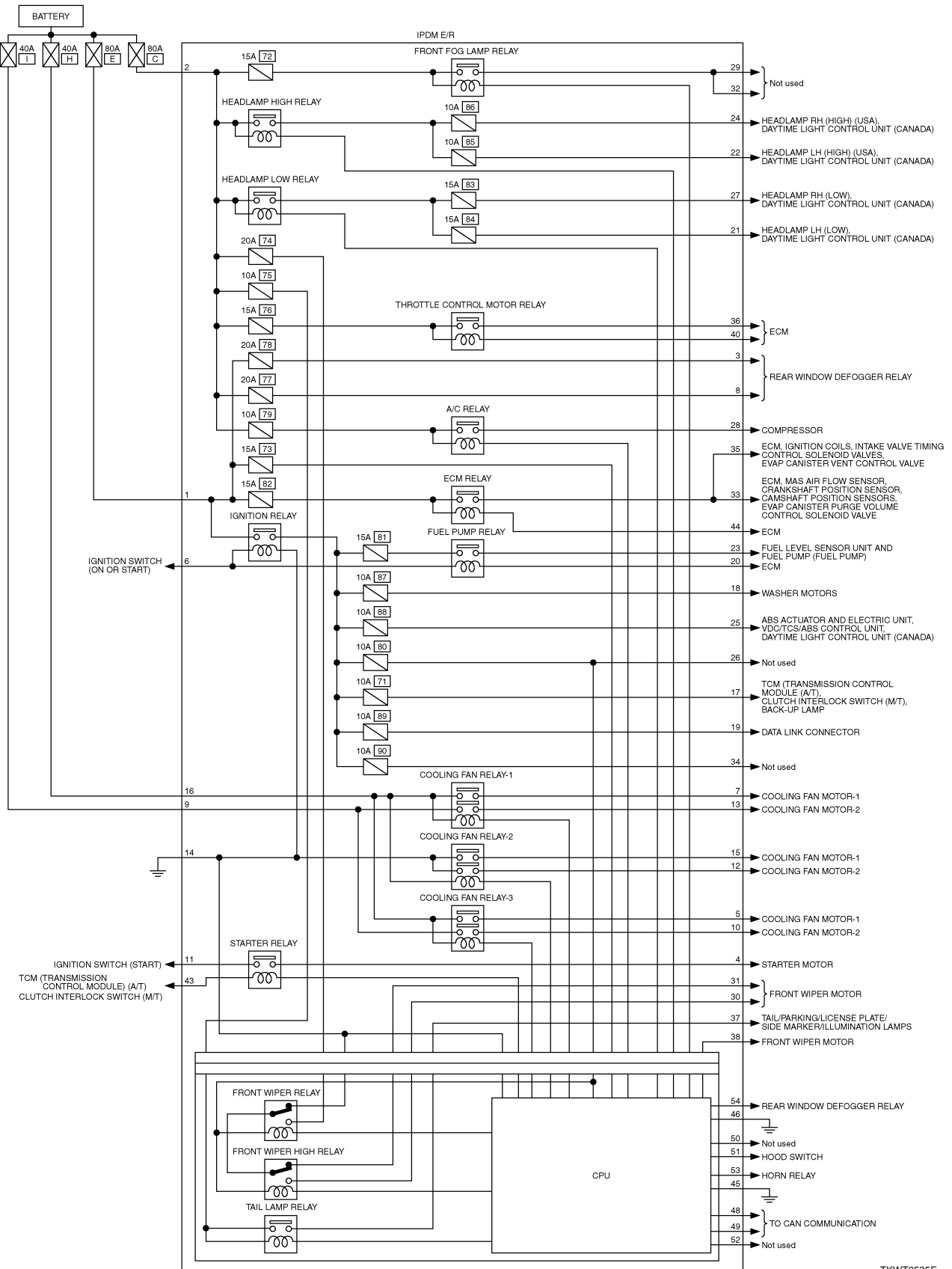
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

PG

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

## Schematic

AKS0012K



TKWT0535E

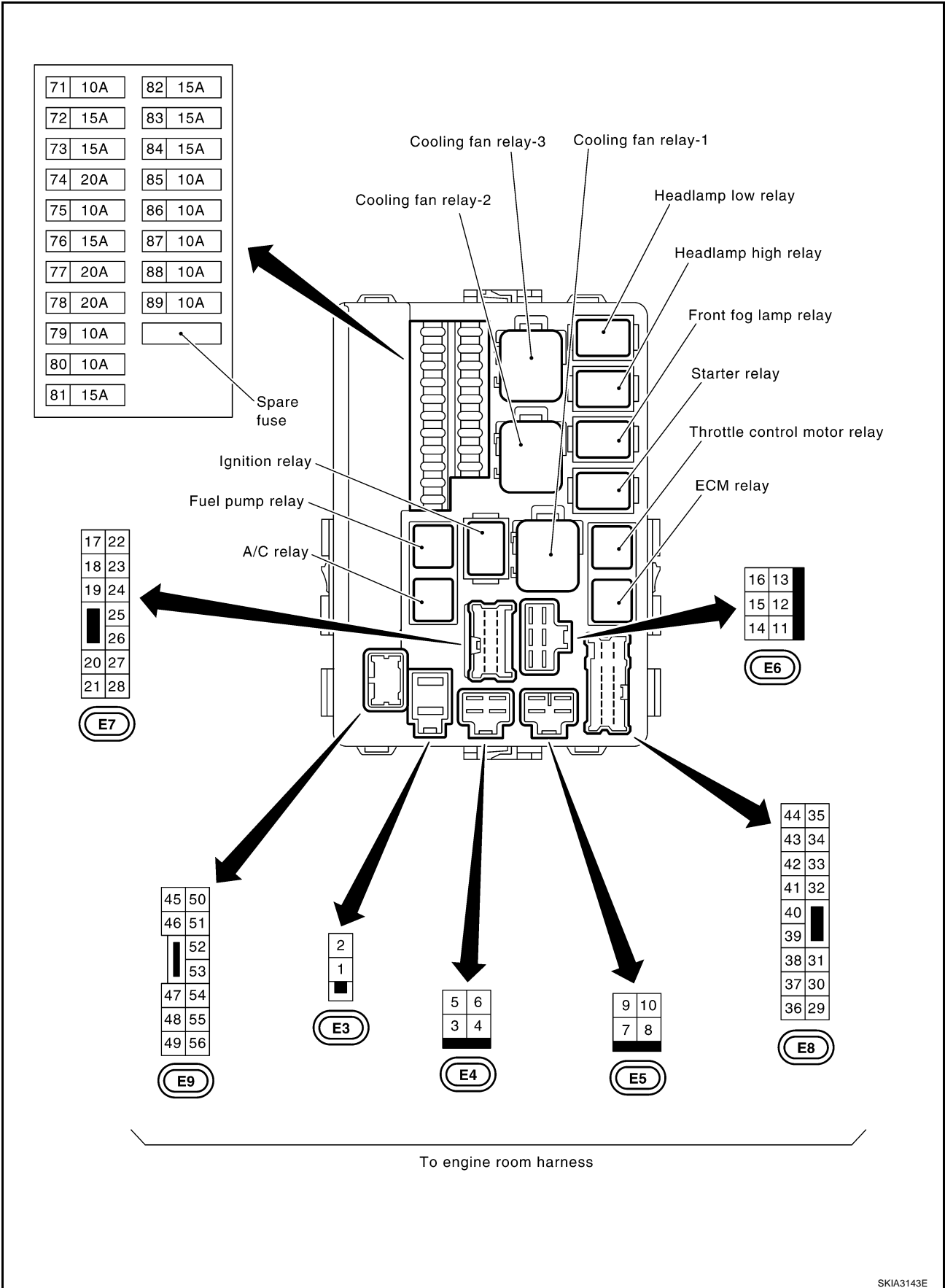
**NOTE:**  
Front fog lamp relay does not used.

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

## IPDM E/R Terminal Arrangement

AKS0012L

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M



SKIA3143E

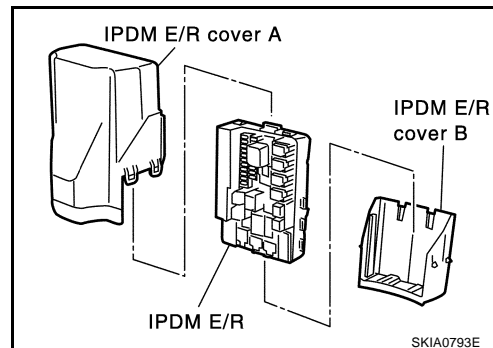
**NOTE:**  
Front fog lamp relay does not used.

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

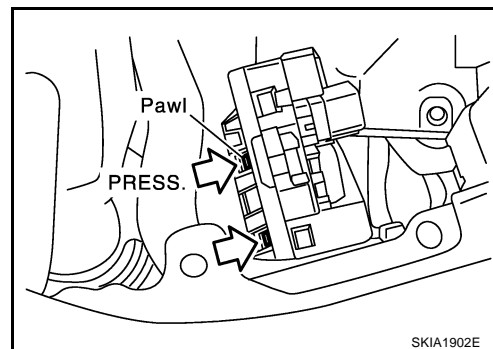
AKS0012M

## IPDM E/R Terminal Inspection

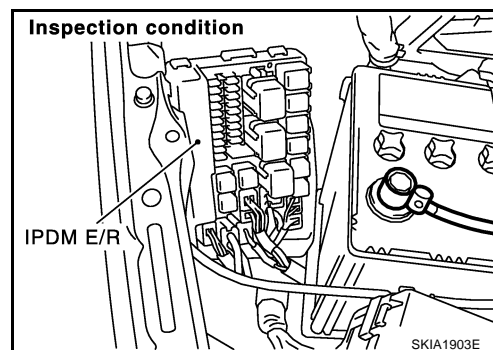
1. Remove hood ledge cover. Refer to [SC-9, "Removal and Installation"](#) .
2. Remove cowl top cover (right). Refer to [EI-20, "COWL TOP"](#) .
3. Pull up to remove IPDM E/R cover A.



4. While pressing pawl on back side of IPDM E/R cover "B" toward vehicle front to unlock, lift up IPDM E/R.



5. Be sure to incline IPDM E/R when placing it. Then perform inspection on each terminal.



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

## IPDM E/R Power/Ground Circuit Inspection

AKS0012N

### 1. FUSE AND FUSIBLE LINK INSPECTION

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

Terminal No.	Signal name	Fuse, fusible link No.
1, 2	Battery power	F/L-C, F/L-E, 73
-	Ignition power	80

OK or NG?

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

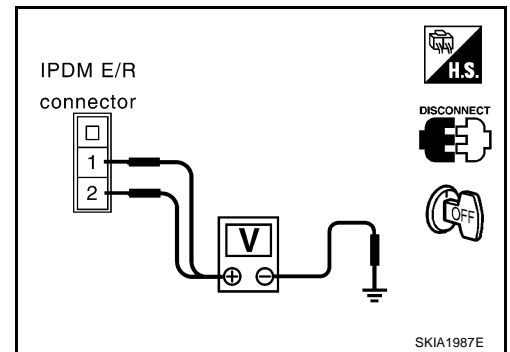
### 2. POWER CIRCUIT INSPECTION

1. Disconnect IPDM E/R harness connector E3.
2. Check voltage between IPDM E/R harness connector E3 terminals 1 (W), 2 (W/L) and ground.

**Battery voltage should exist**

OK or NG

- OK >> GO TO 3.
- NG >> Replace IPDM E/R power circuit harness.



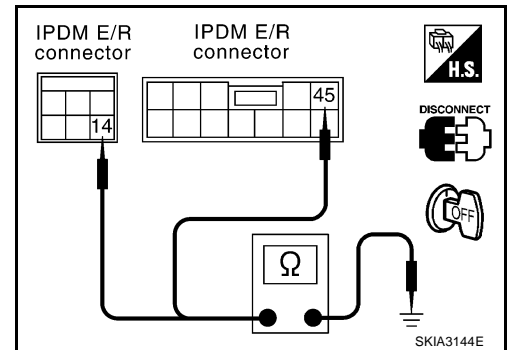
### 3. GROUND CIRCUIT INSPECTION

1. Disconnect IPDM E/R harness connectors E6 and E9.
2. Check continuity between IPDM E/R harness connectors E6 terminal 14 (B), E9 terminal 45 (B) and ground.

**Continuity should exist**

OK or NG

- OK >> Inspection end.
- NG >> Replace ground circuit harness of IPDM E/R.



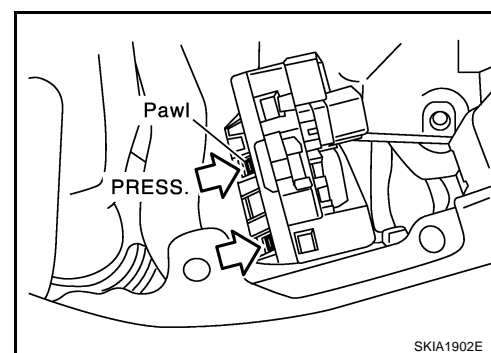
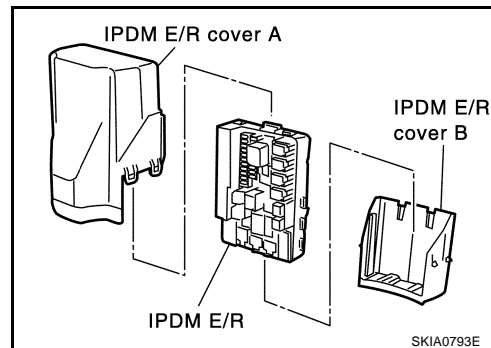
# IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

AKS00120

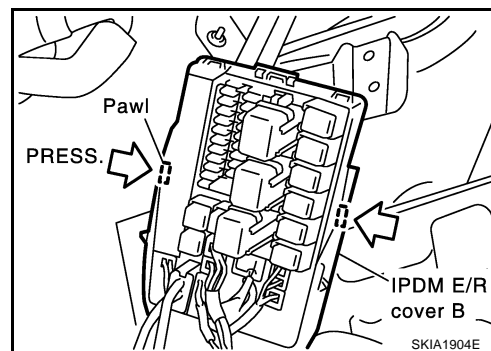
## Removal and Installation of IPDM E/R

### REMOVAL

1. Remove battery. Refer to [SC-9, "Removal and Installation"](#) in "Starting and Charging System (SC)" section.
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

- Install in the reverse order of removal.

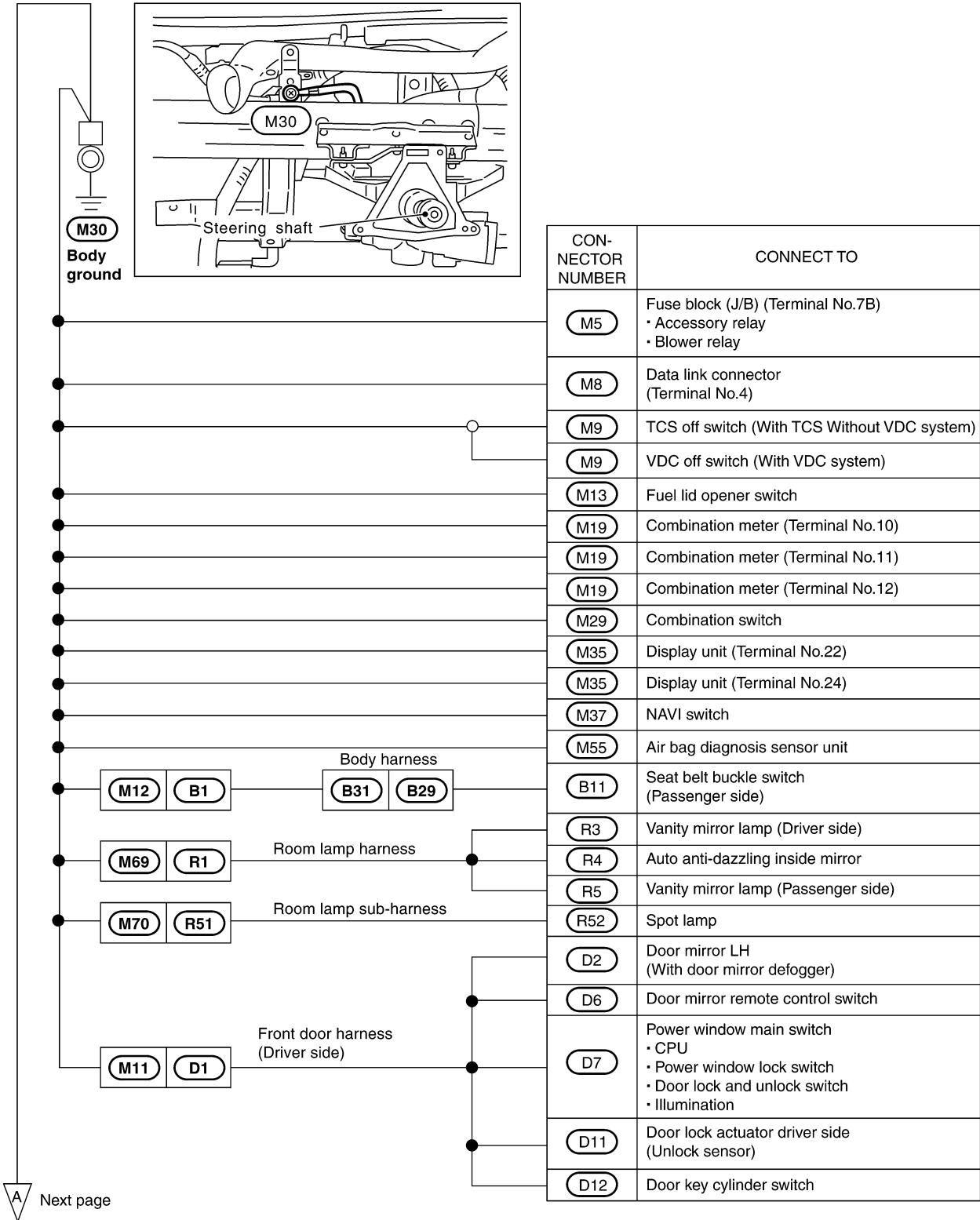
# GROUND

## GROUND

PFP:00011

### Ground Distribution MAIN HARNESS

AKS0012P



Next page

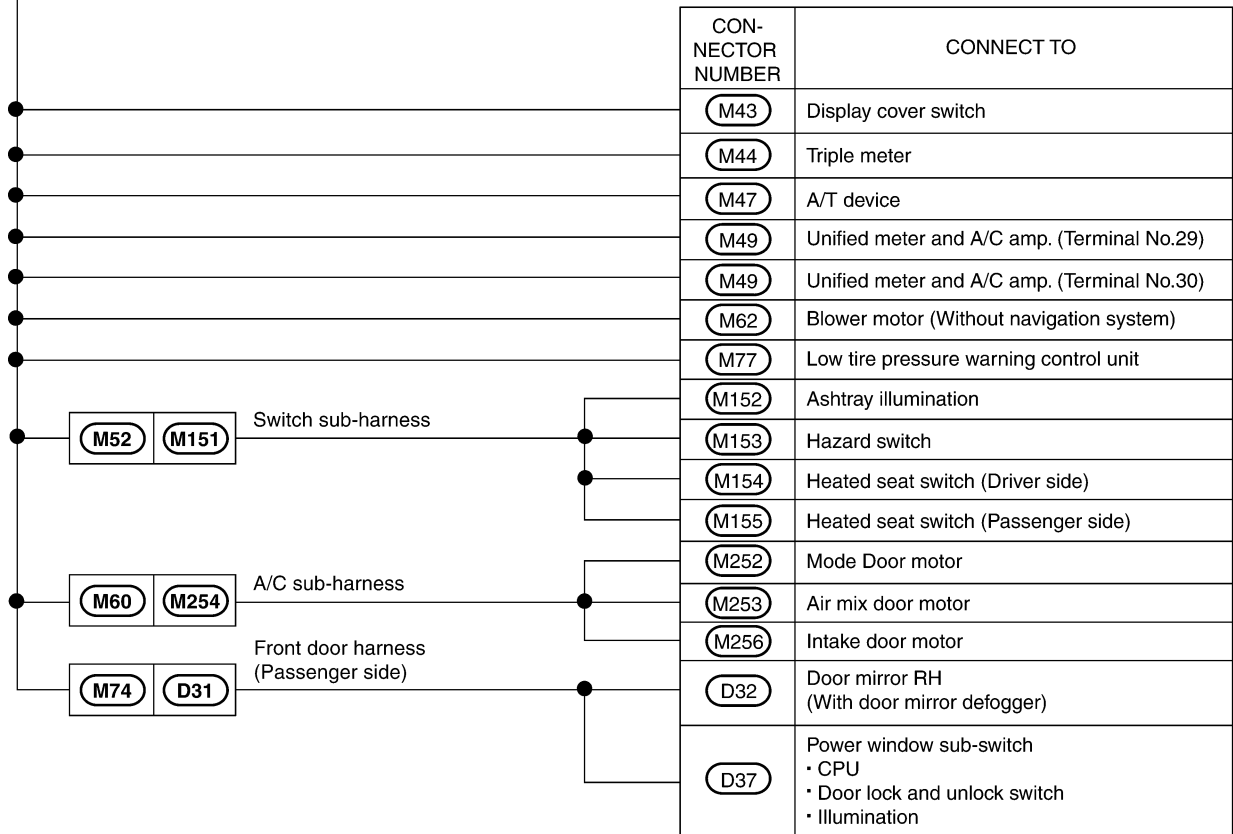
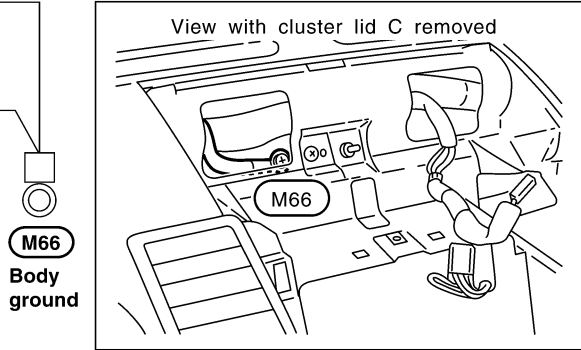
PG

L

M

# GROUND

A Preceding page

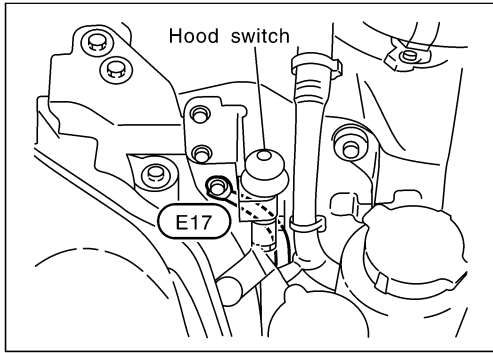
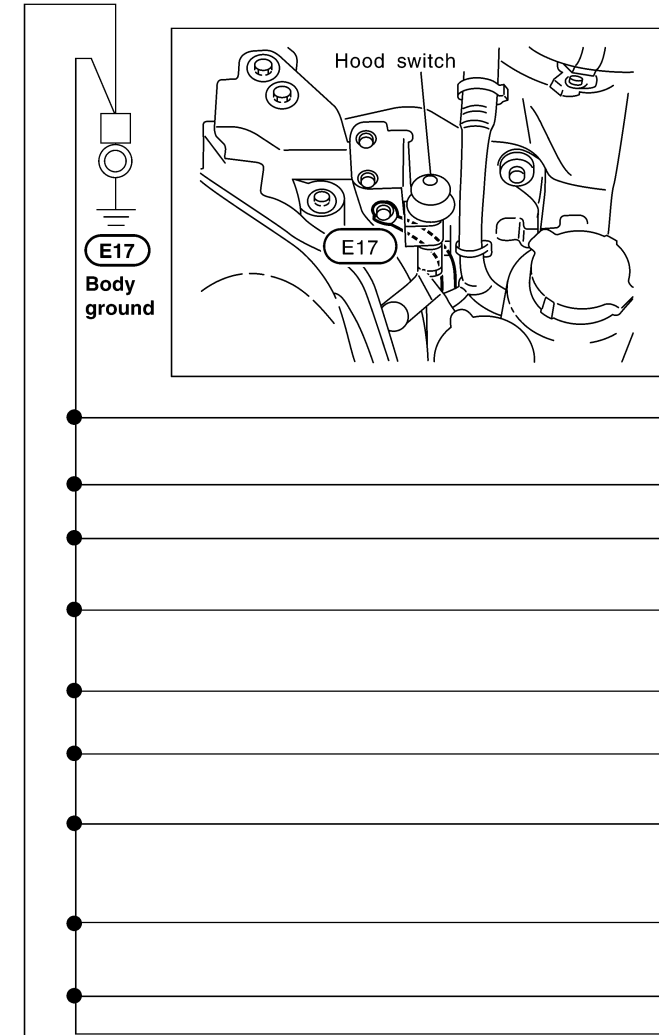


CKIT0167E

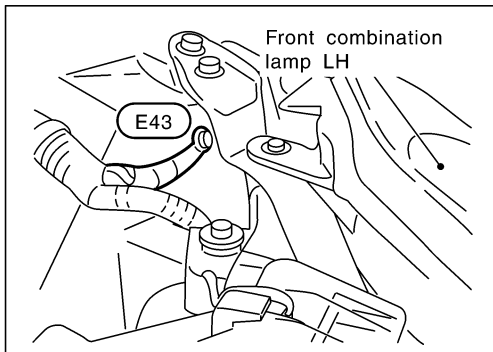
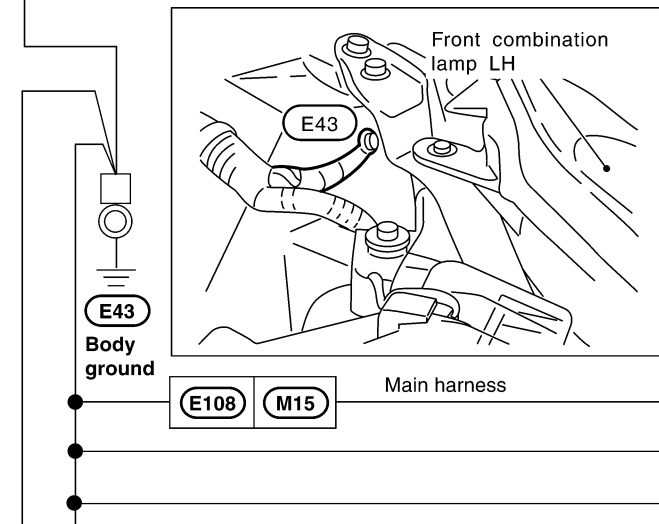


# GROUND

## ENGINE ROOM HARNESS



CON-NECTOR NUMBER	CONNECT TO
E9	IPDM E/R (Intelligent power distribution module engine room) (Terminal No.45)
E9	IPDM E/R (Intelligent power distribution module engine room) (Terminal No.46)
E15	Daytime light control unit (Terminal No.16)
E24	Front combination lamp RH (Terminal No.1) • Turn signal • Parking • Side marker
E24	Front combination lamp RH (Terminal No.4) • Headlamp (High)
E24	Front combination lamp RH (Terminal No.8) • Headlamp (Low)
E25	Front combination lamp RH (Terminal No.3) • Headlamp (High) • Headlamp (Low)
E25	Front combination lamp RH (Terminal No.4) • Turn signal • Parking • Side marker
E38	Cooling fan motor-1
E39	Cooling fan motor-2



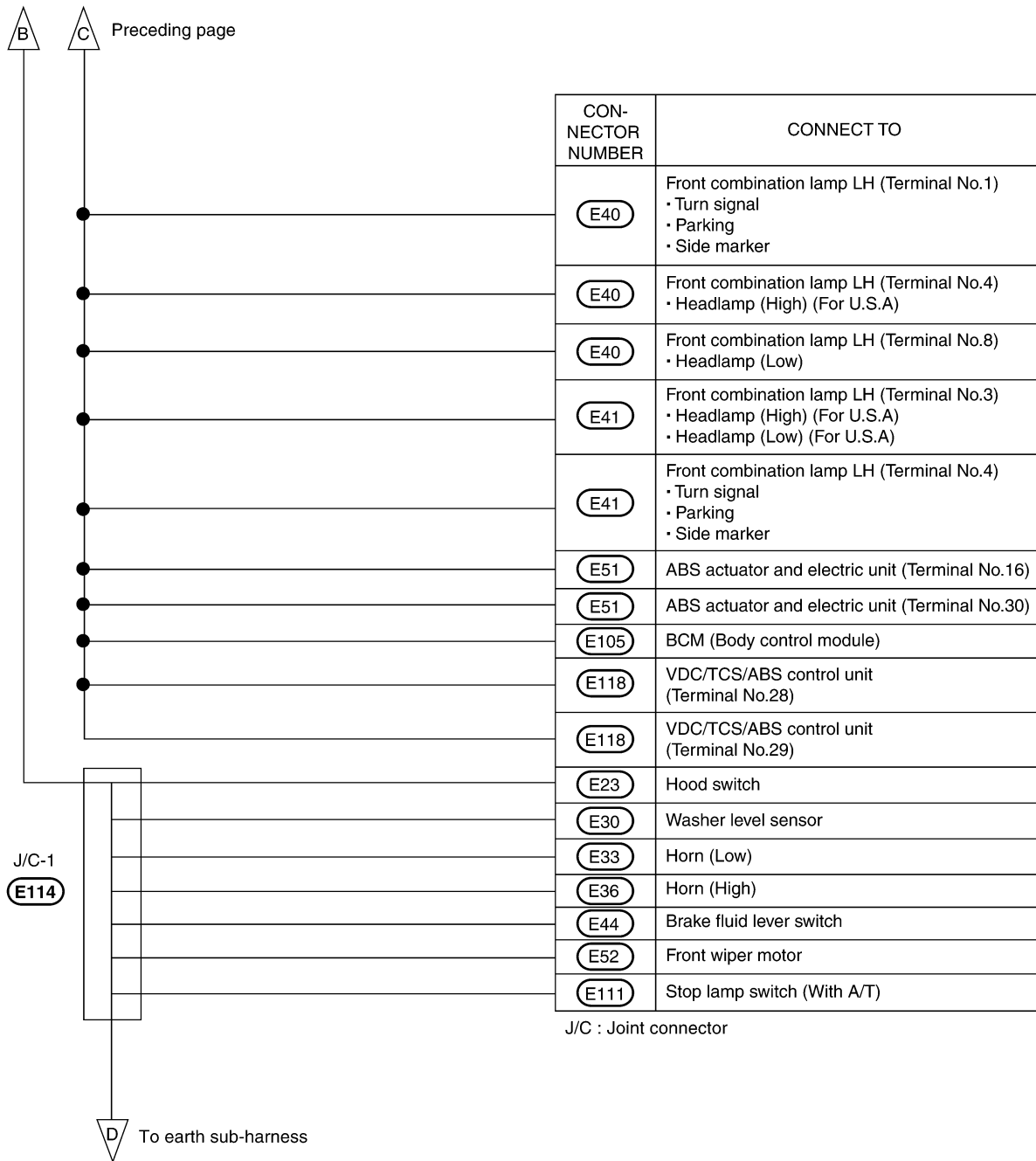
CON-NECTOR NUMBER	CONNECT TO
M22	Steering angle sensor
E6	IPDM E/R (Intelligent power distribution module engine room) (Terminal No.14)
E14	Daytime light control unit (Terminal No.14)

B C Next page

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

CKIT0168E

# GROUND

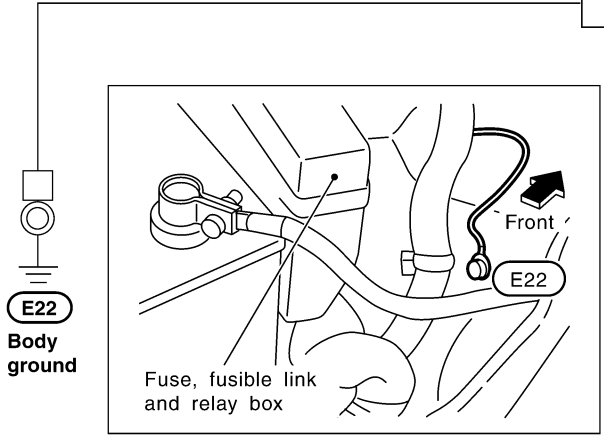


CKIT0169E

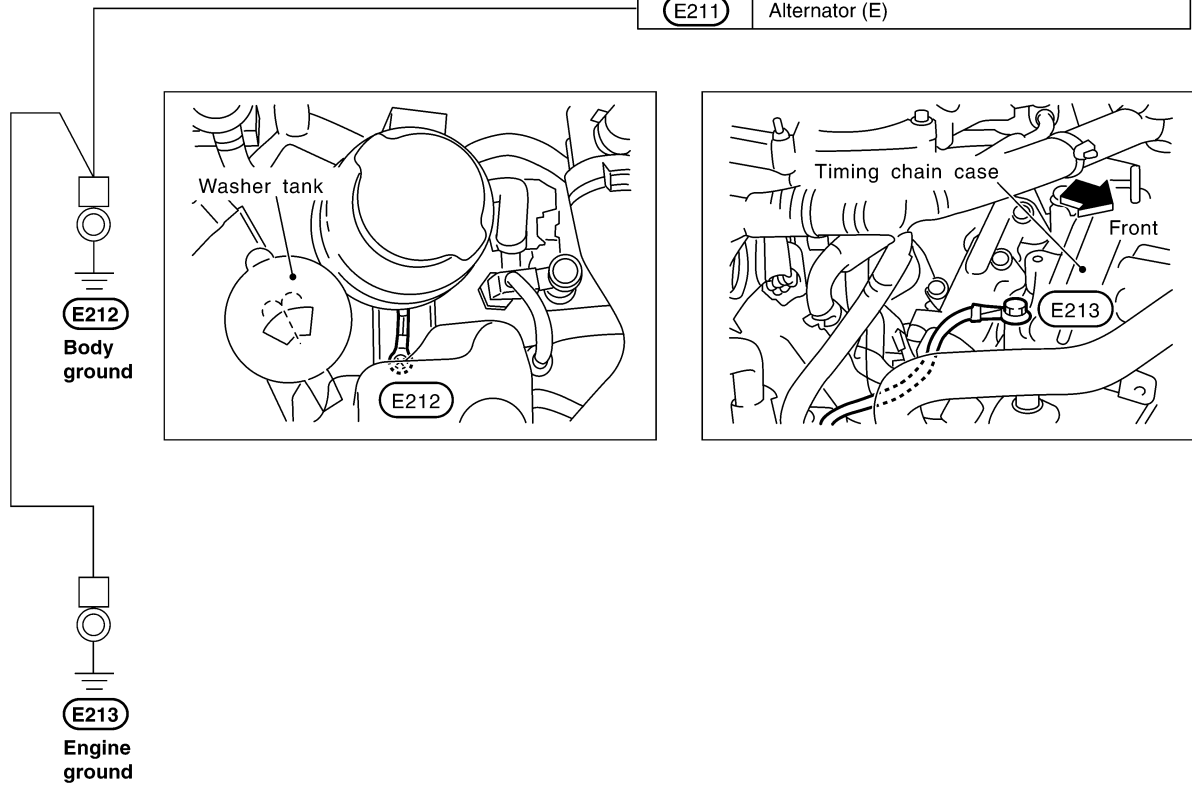
# GROUND

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

CONNECTOR NUMBER	CONNECT TO
E37	Shield wire (Crash zone sensor)



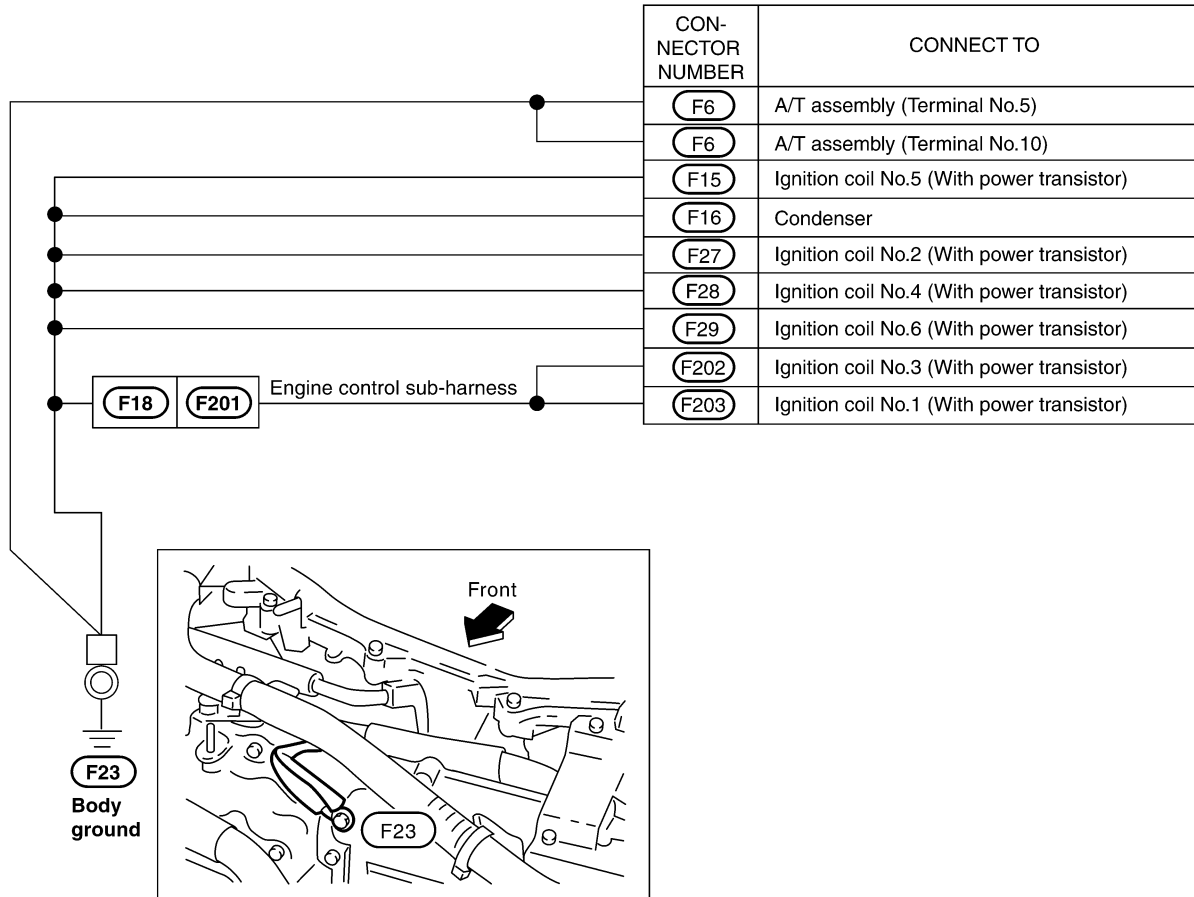
CONNECTOR NUMBER	CONNECT TO
E211	Alternator (E)



CKIT0170E

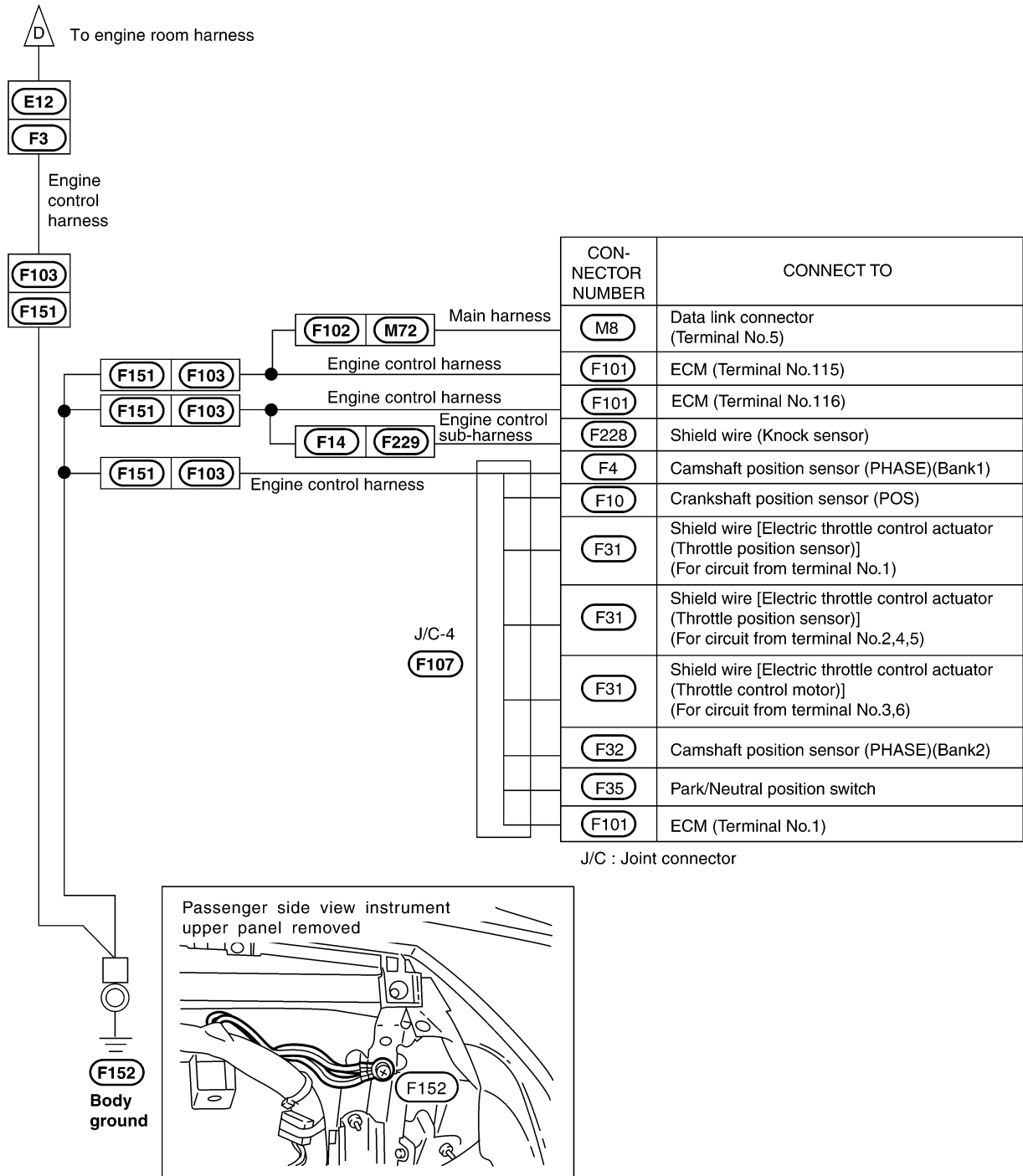
# GROUND

## ENGINE CONTROL HARNESS



CKIT0171E

# GROUND

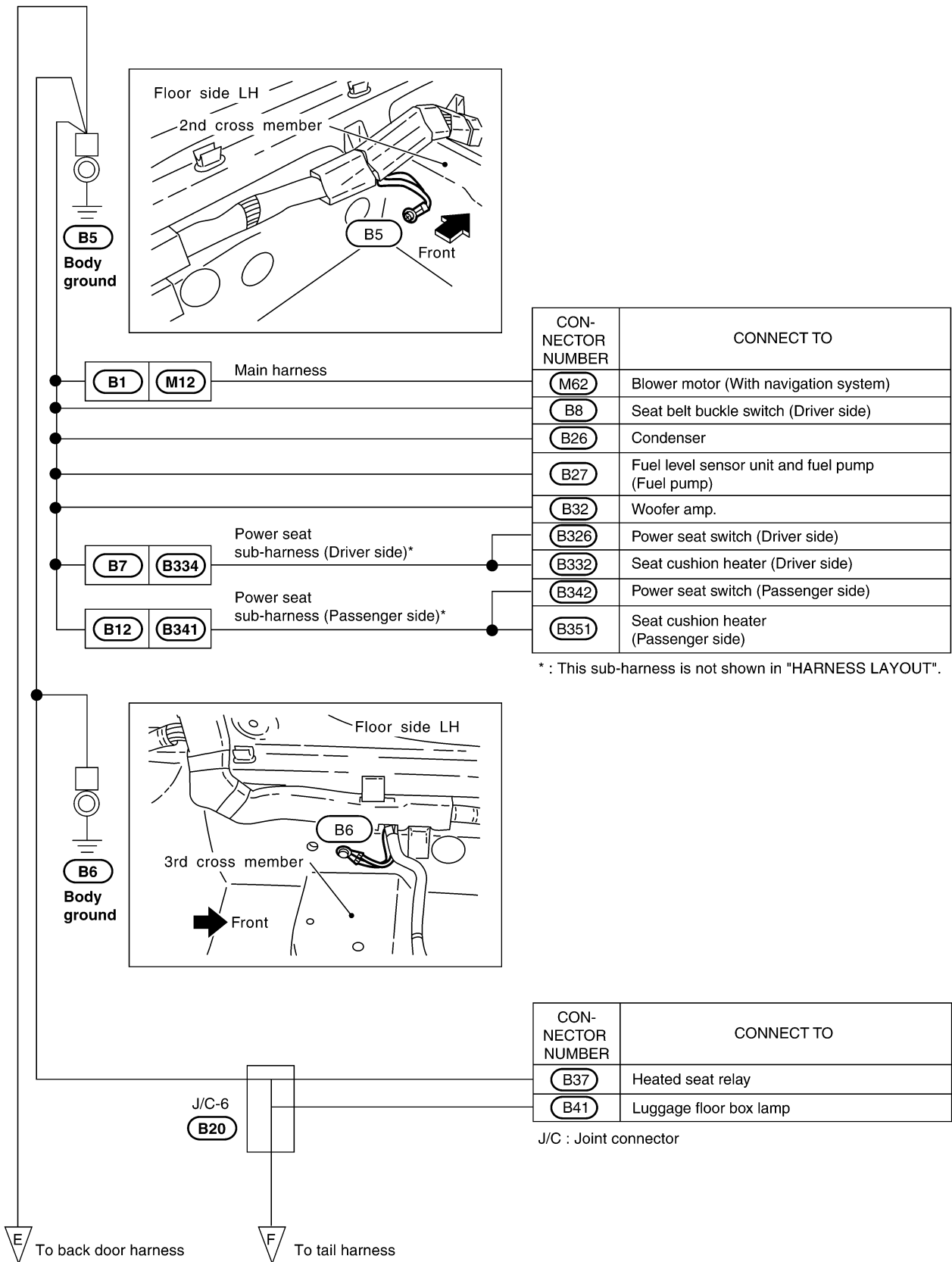


A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

CKIT0172E

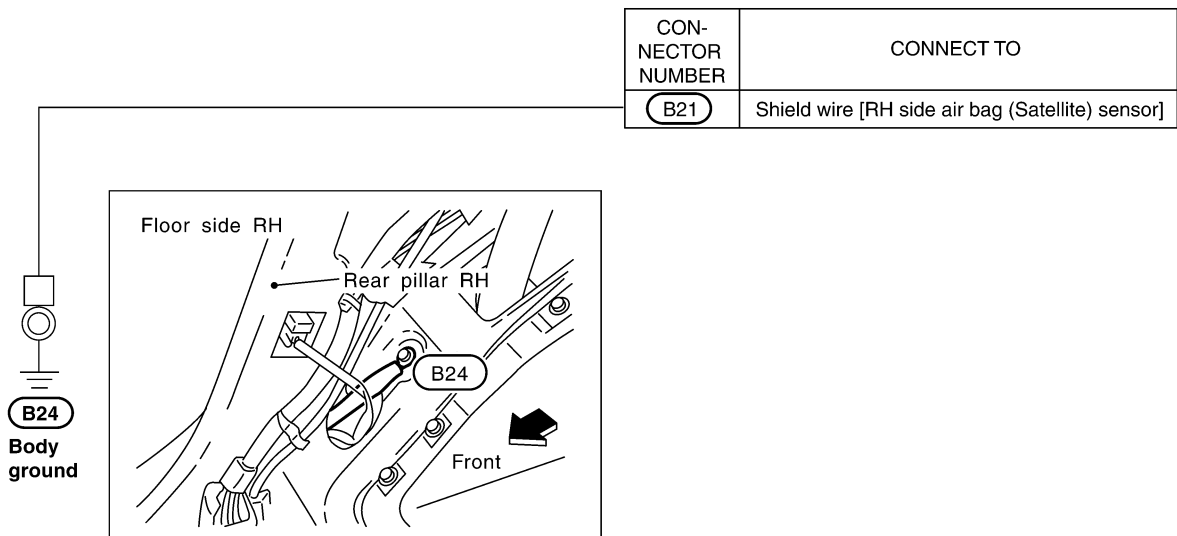
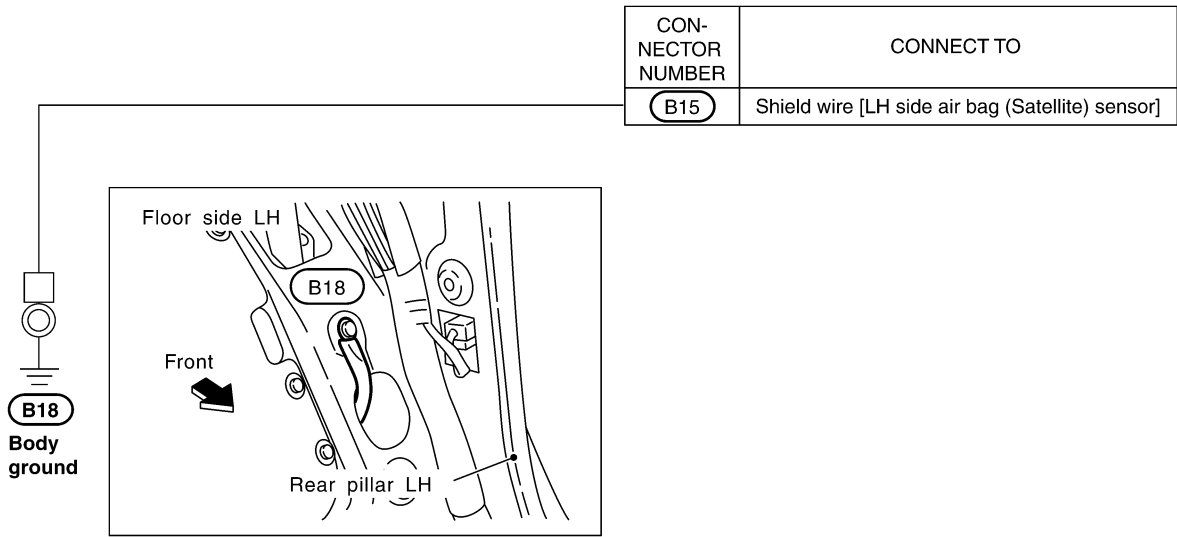
# GROUND

## BODY HARNESS



CKIT0173E

# GROUND

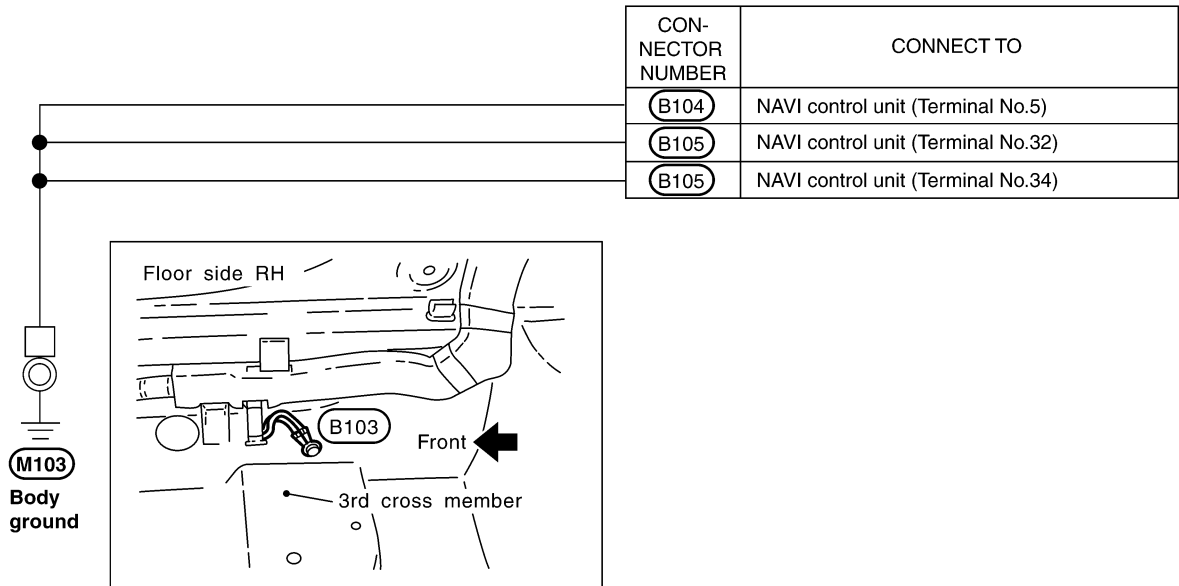
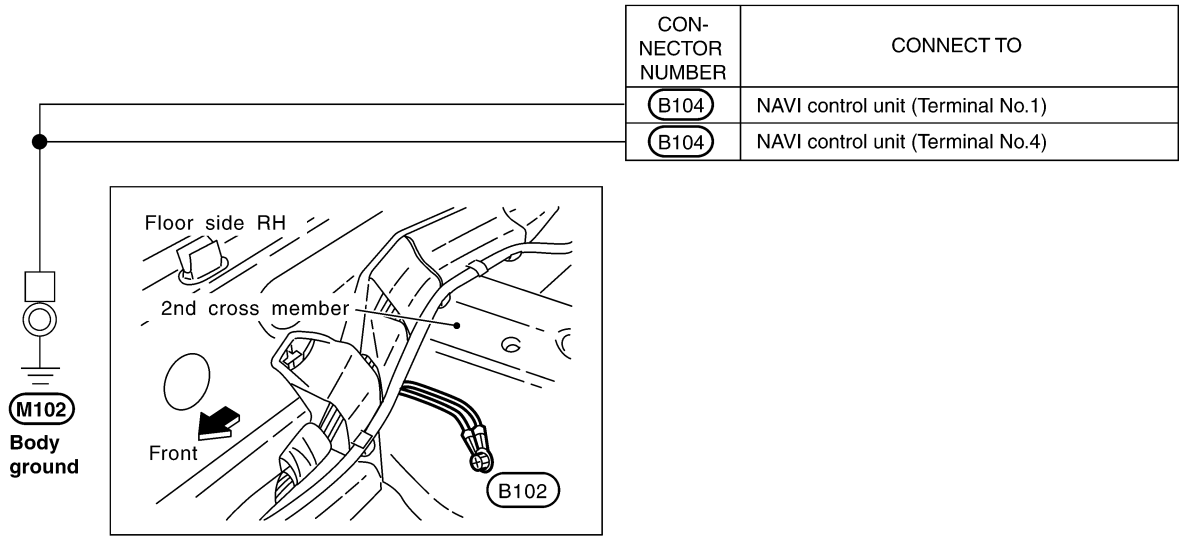


A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

CKIT0174E

# GROUND

## BODY NO.2 HARNESS

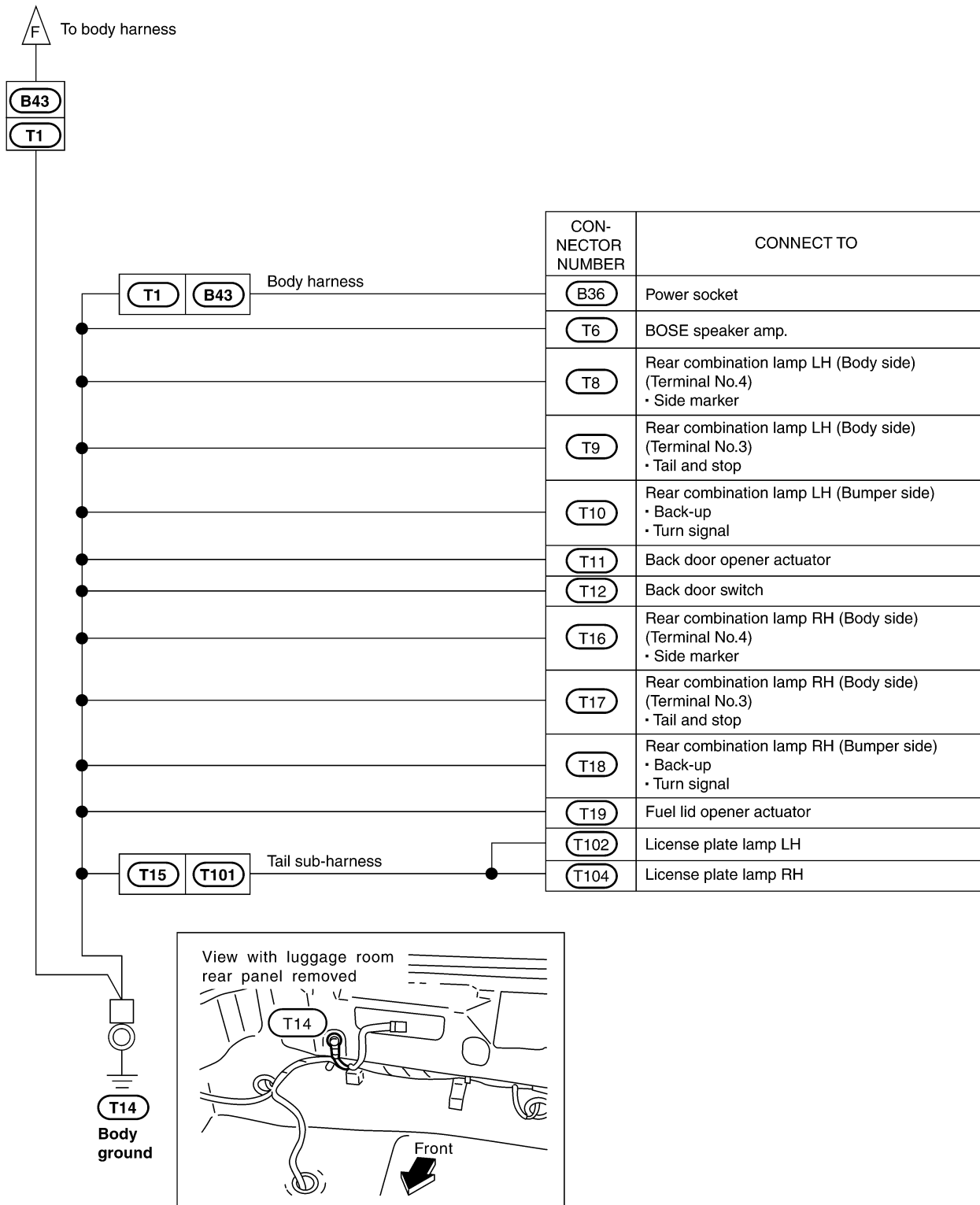


CKIT0175E



# GROUND

## TAIL HARNESS

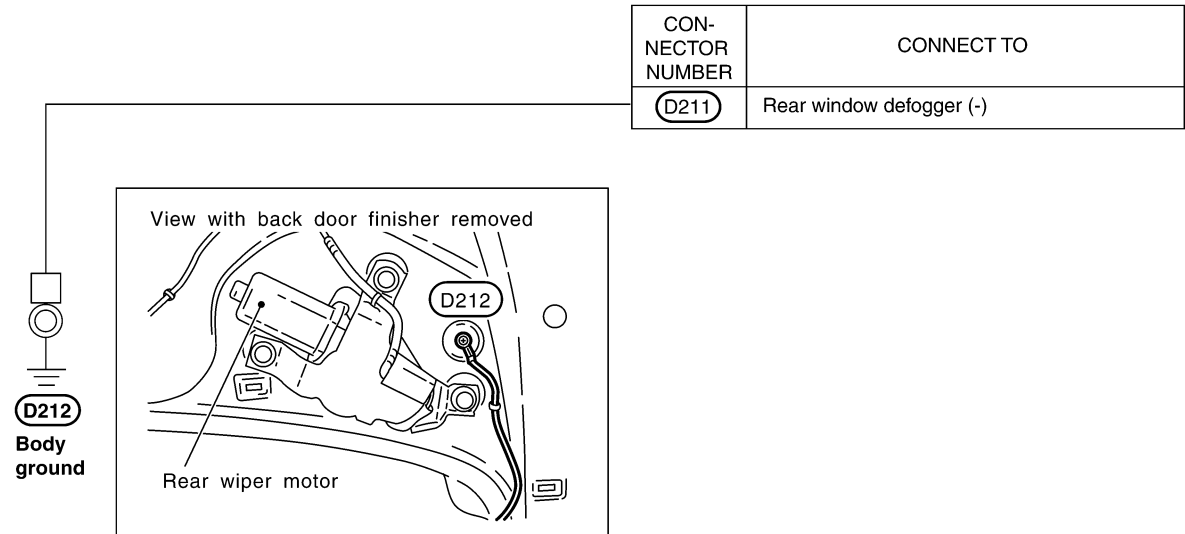
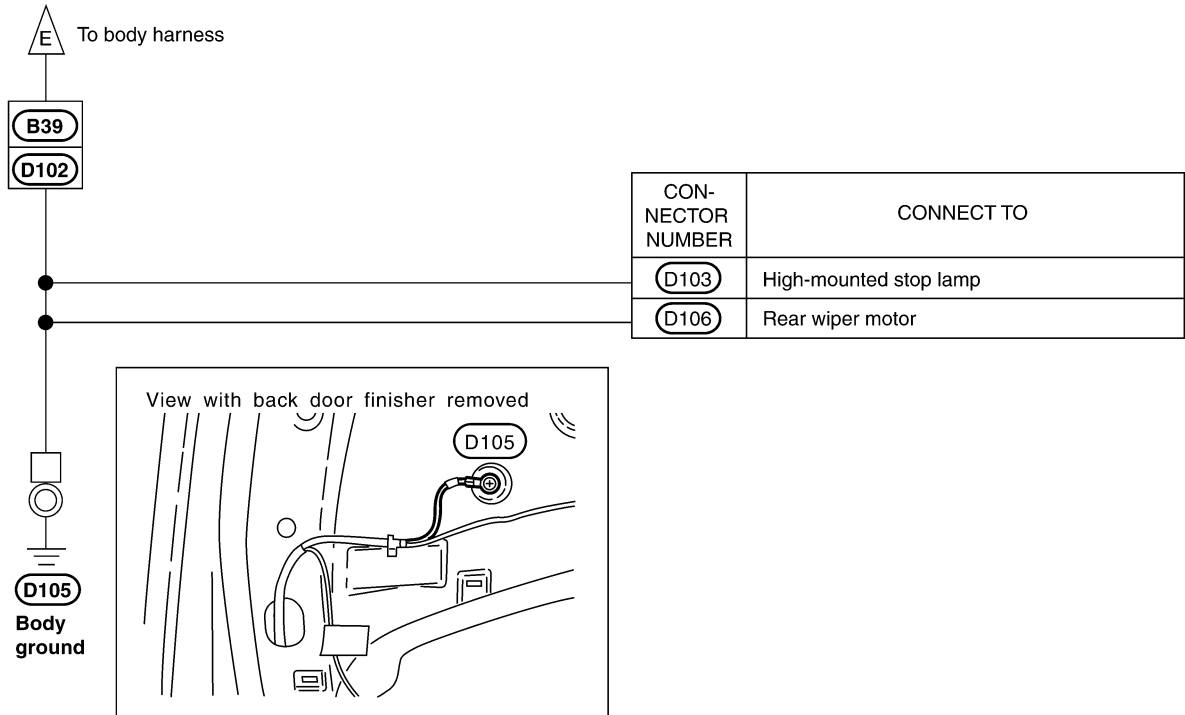


A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

CKIT0176E

# GROUND

## BACK DOOR HARNESS



CKIT0177E

## HARNESS

PFP:00011

### Harness Layout

AKS0012Q

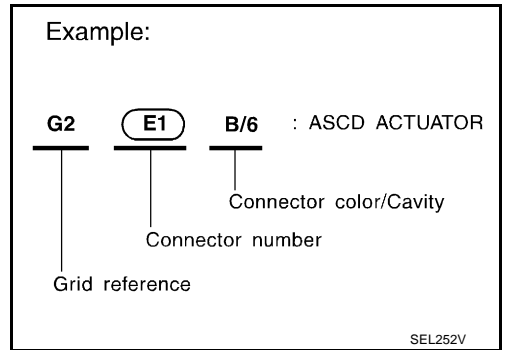
#### HOW TO READ HARNESS LAYOUT

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

- Main Harness
- Engine Room Harness (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 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 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>	—			

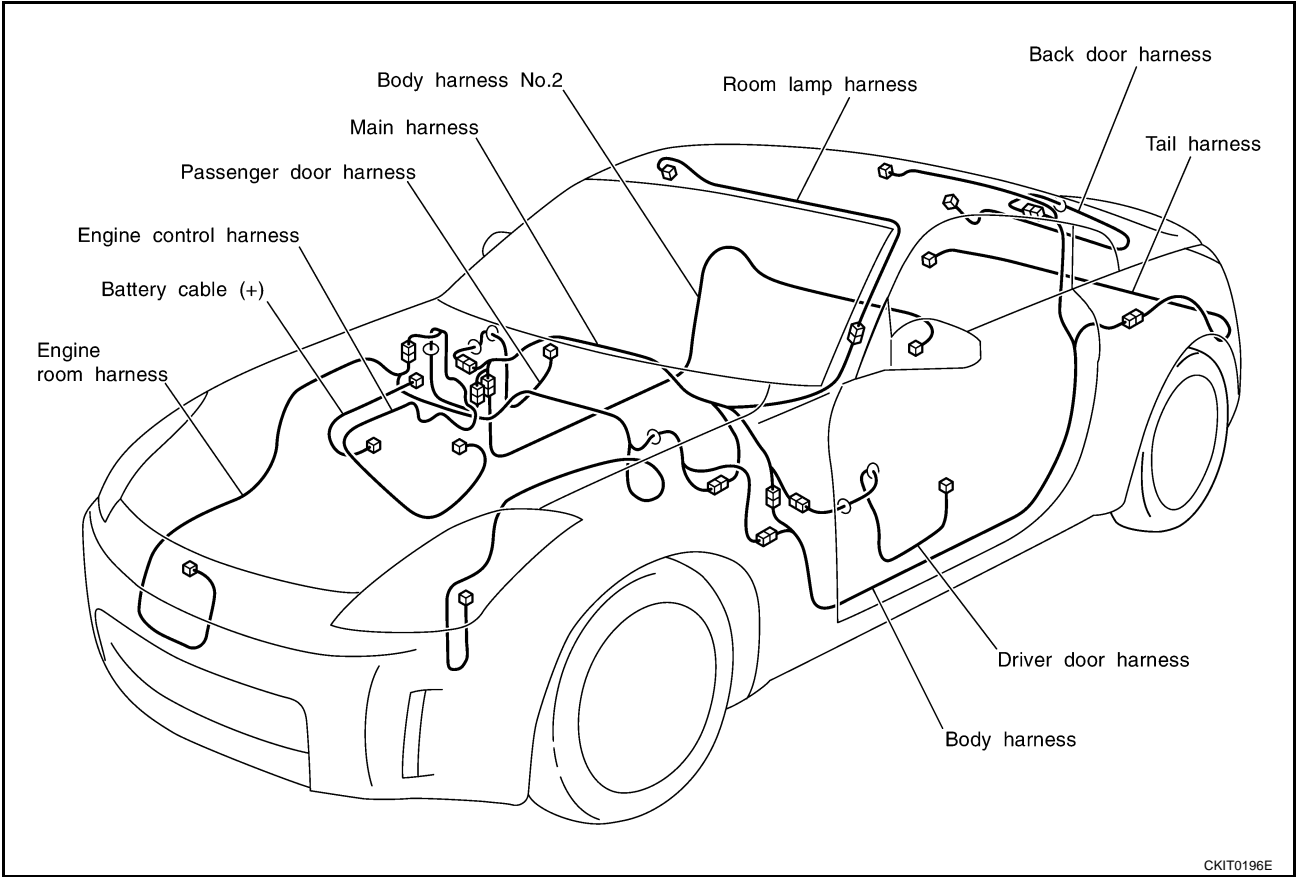
CKIT0108E

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

PG

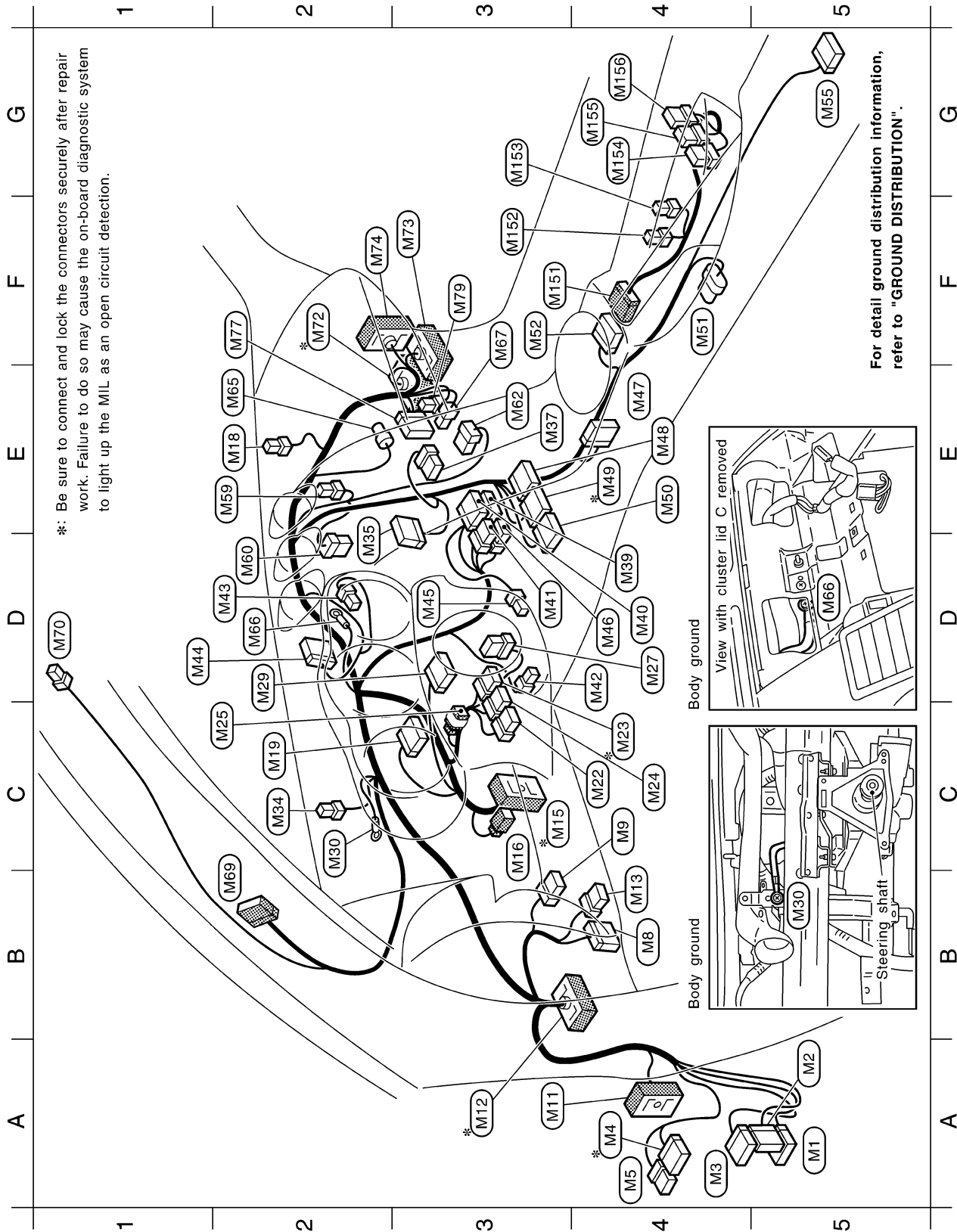
# HARNESS

## OUTLINE



# HARNESS

## MAIN HARNESS



\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.

CKIT0197E

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PG

A5 (M1)	W/16	: BCM (Body control module)
A5 (M2)	W/16	: BCM (Body control module)
A4 (M3)	BR/24	: BCM (Body control module)
A4 (M4)	W/16	: Fuse block (J/B)
A4 (M5)	W/8	: Fuse block (J/B)
B4 (M6)	W/16	: Data link connector
C4 (M9)	GY/6	: VDC off switch (With VDC system)
	GY/6	: TCS off switch (With TCS without VDC system)
A3 (M11)	SMJ	: To (D1)
A3 (M12)	SMJ	: To (B1)
B4 (M13)	GY/6	: Fuel lid opener switch
C3 (M15)	SMJ	: To (E108)
C3 (M16)	Y/4	: To (E109)
E2 (M18)	B/2	: Sunload sensor
C2 (M19)	W/24	: Combination meter
C4 (M22)	W/8	: Steering angle sensor
C4 (M23)	GY/8	: Combination switch (Spiral cable)
C4 (M24)	Y/6	: Combination switch (Spiral cable)
C2 (M25)	BR/2	: Key switch
D4 (M27)	W/8	: NATS antenna amp.
D2 (M29)	W/16	: Combination switch
C2 (M30)	—	: Body ground
C2 (M34)	BR/2	: Security indicator lamp
D2 (M35)	GY/24	: Display unit (With navigation system)
E3 (M37)	W/8	: NAVI switch
D4 (M39)	W/16	: Audio unit
D4 (M40)	W/10	: Audio unit
D3 (M41)	W/6	: Audio unit
D4 (M42)	W/2	: In-vehicle sensor
D2 (M43)	W/3	: Display cover switch
D1 (M44)	W/12	: Triple meter
D3 (M45)	BR/2	: Antenna amp. (Via sub-harness)
D4 (M46)	BR/8	: Not used (With navigation system)
E4 (M47)	W/10	: A/T device
E4 (M48)	GY/20	: Unified meter and A/C amp.
E4 (M49)	GY/16	: Unified meter and A/C amp.
E4 (M50)	W/24	: Unified meter and A/C amp.
F4 (M51)	B/6	: Yaw rate / side G sensor
F3 (M52)	W/12	: To (M151)
G5 (M55)	Y/28	: Air bag diagnosis sensor unit
E2 (M59)	L/4	: Fuel lid opener relay
D2 (M60)	W/6	: To (M254)
E3 (M62)	W/6	: Blower motor
E2 (M65)	Y/4	: Front passenger air bag module

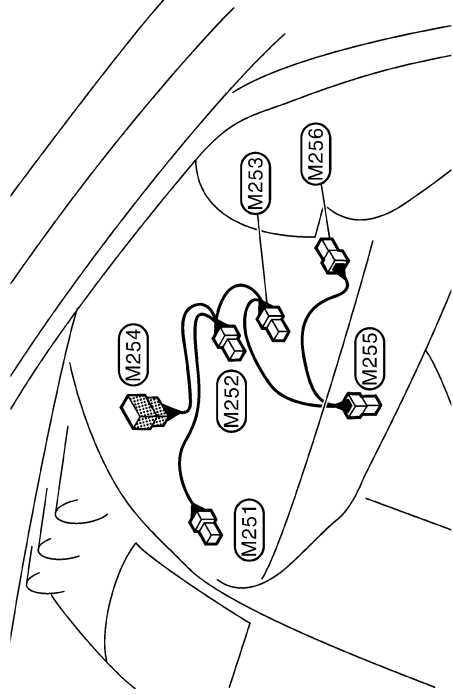
D2 (M66)	—	: Body ground
F3 (M67)	W/3	: Not used
B2 (M69)	W/10	: To (R1)
D1 (M70)	W/4	: To (R51)
F2 (M72)	SMJ	: To (E102)
F3 (M73)	SMJ	: To (B101)
F2 (M74)	SMJ	: To (D31)
F2 (M77)	W/24	: Low tire pressure warning control unit
F3 (M79)	W/2	: Tire pressure warning check connector

**Switch sub-harness**

F3 (M151)	W/12	: To (M52)
F3 (M152)	W/2	: Ashtray illumination
G3 (M153)	W/4	: Hazard switch
G4 (M154)	W/6	: Heated seat switch (Driver side) (With heated seat)
G4 (M155)	BR/6	: Heated seat switch (Passenger side) (With heated seat)
G4 (M156)	W/6	: Not used

## A/C sub-harness

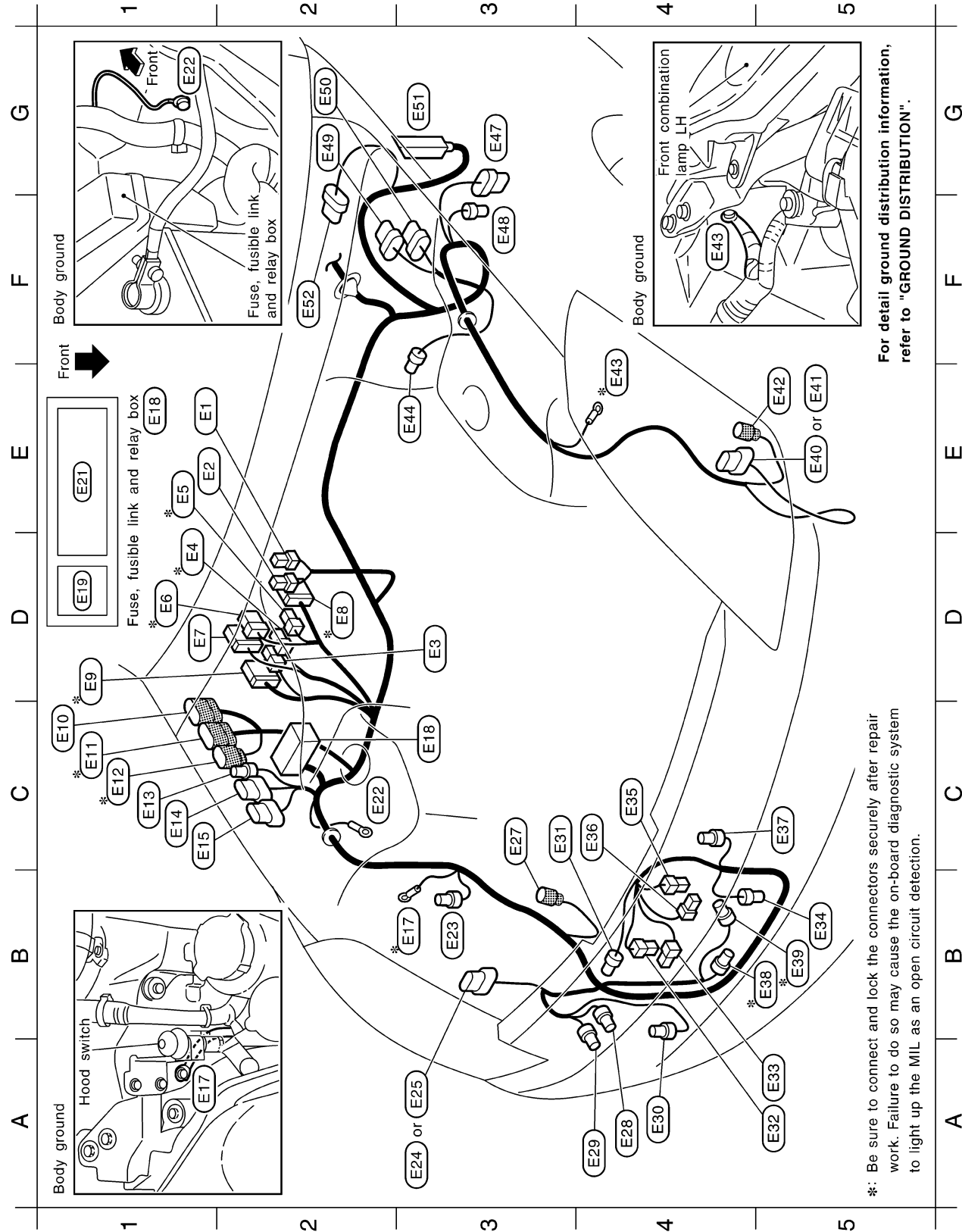
(M251)	W/3	: Not used
(M252)	W/3	: Mode door motor
(M253)	W/3	: Air mix door motor
(M254)	W/6	: To (M60)
(M255)	W/4	: Intake sensor
(M256)	W/3	: Intake door motor



\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.

# HARNESS

## ENGINE ROOM HARNESS Engine Compartment



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

\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U  
V  
W  
X  
Y  
Z

PG

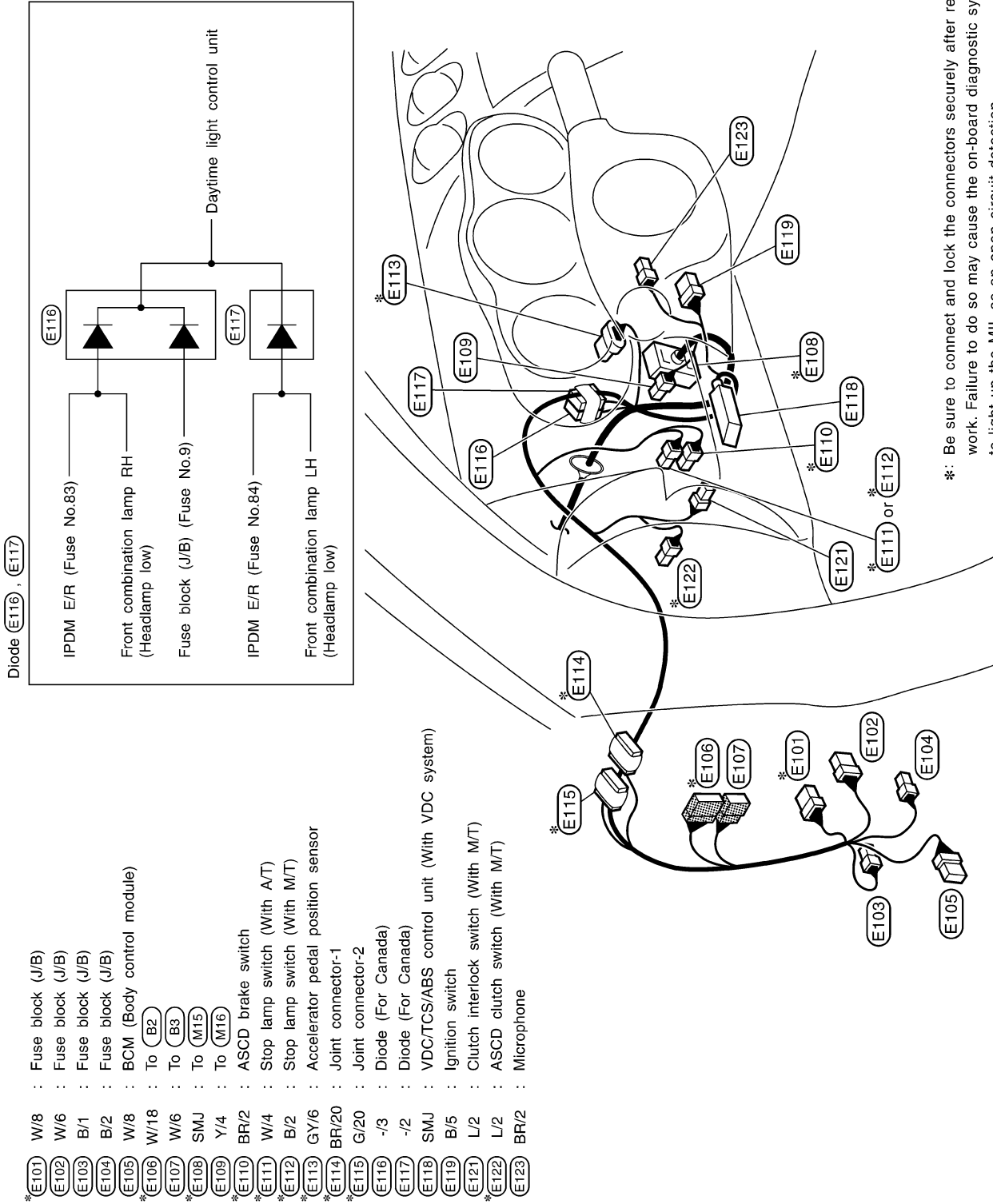
# HARNESSES

E1	E1	BR/2	: Fusible link holder	A4	E29	GY/2	: Front washer motor
E1	E2	GY/2	: Fusible link holder	A4	E30	BR/2	: Washer level sensor
D3	E3	B/2	: IPDM E/R (Intelligent power distribution module engine room)	C3	E31	B/3	: Refrigerant pressure sensor
D1	E4	W/4	: IPDM E/R (Intelligent power distribution module engine room)	A5	E32	B/1	: Horn (Low)
E1	E5	B/4	: IPDM E/R (Intelligent power distribution module engine room)	A5	E33	B/1	: Horn (Low)
D1	E6	W/6	: IPDM E/R (Intelligent power distribution module engine room)	B5	E34	B/2	: Ambient sensor
D1	E7	W/12	: IPDM E/R (Intelligent power distribution module engine room)	C4	E35	B/1	: Horn (High)
D2	E8	GY/16	: IPDM E/R (Intelligent power distribution module engine room)	C4	E36	B/1	: Horn (High)
D1	E9	W/12	: IPDM E/R (Intelligent power distribution module engine room)	C5	E37	Y/2	: Crash zone sensor
C1	E10	GY/9	: To F1	B5*	E38	GY/4	: Cooling fan motor-1 (Via sub-harness)
C1*	E11	GY/10	: To F2	B5*	E39	GY/4	: Cooling fan motor-2 (Via sub-harness)
C1	E12	B/8	: To F3	E5	E40	SB/8	: Front combination lamp LH (With xenon headlamp)
C1	E13	GY/4	: Daytime light control unit (For Canada)	E5	E41	SB/6	: Front combination lamp LH (Without xenon headlamp)
C1	E14	GY/6	: Daytime light control unit (For Canada)	E5	E42	L/2	: Front wheel sensor LH
C1	E15	GY/8	: Daytime light control unit (For Canada)	E4*	E43	—	: Body ground
B3	E17	—	: Body ground	E3	E44	GY/2	: Brake fluid level switch
C3	E18	—	: Fuse, fusible link and relay box	G3	E47	B/8	: VDC relay box (With VDC system)
D1	E19	L/4	: Back-up lamp relay (With A/T)	F3	E48	B/2	: VDC relay box (With VDC system)
E1	E21	—	: Fuse and fusible link block	G2	E49	SB/8	: VDC actuator (With VDC system)
C2	E22	—	: Body ground	G2	E50	GY/8	: VDC actuator (With VDC system)
B3	E23	GY/2	: Hood switch	G3	E51	SMJ	: ABS actuator and electric unit (Without VDC system)
A3	E24	SB/8	: Front combination lamp RH (With xenon headlamp)	F2	E52	GY/5	: Front wiper motor
A3	E25	SB/6	: Front combination lamp RH (Without xenon headlamp)				
C3	E27	GY/2	: Front wheel sensor RH				
A4	E28	G/2	: Rear washer motor				

\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.



## Passenger Compartment



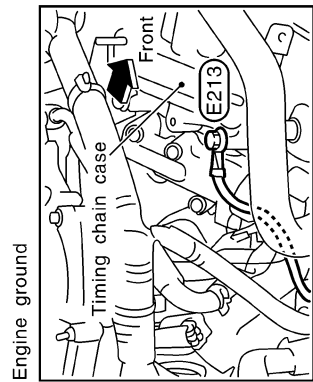
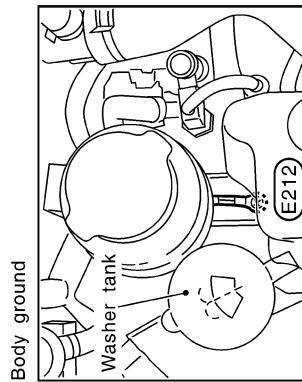
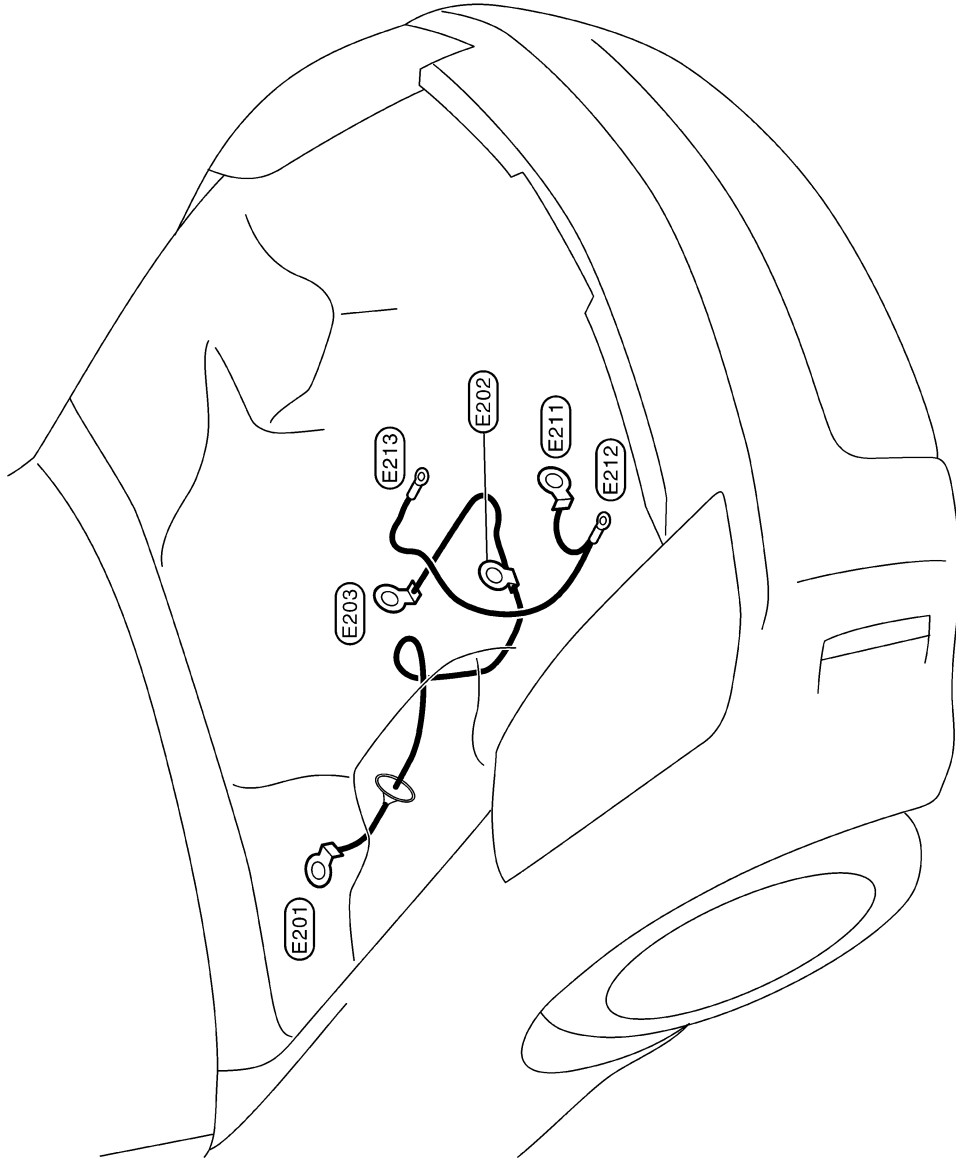
\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M

# HARNESS

## Battery Cable

- (E201) : Fusible link holder
- (E202) : Alternator (B)
- (E203) : Starter motor
- (E211) : Alternator (E)
- (E212) : Body ground
- (E213) : Engine ground

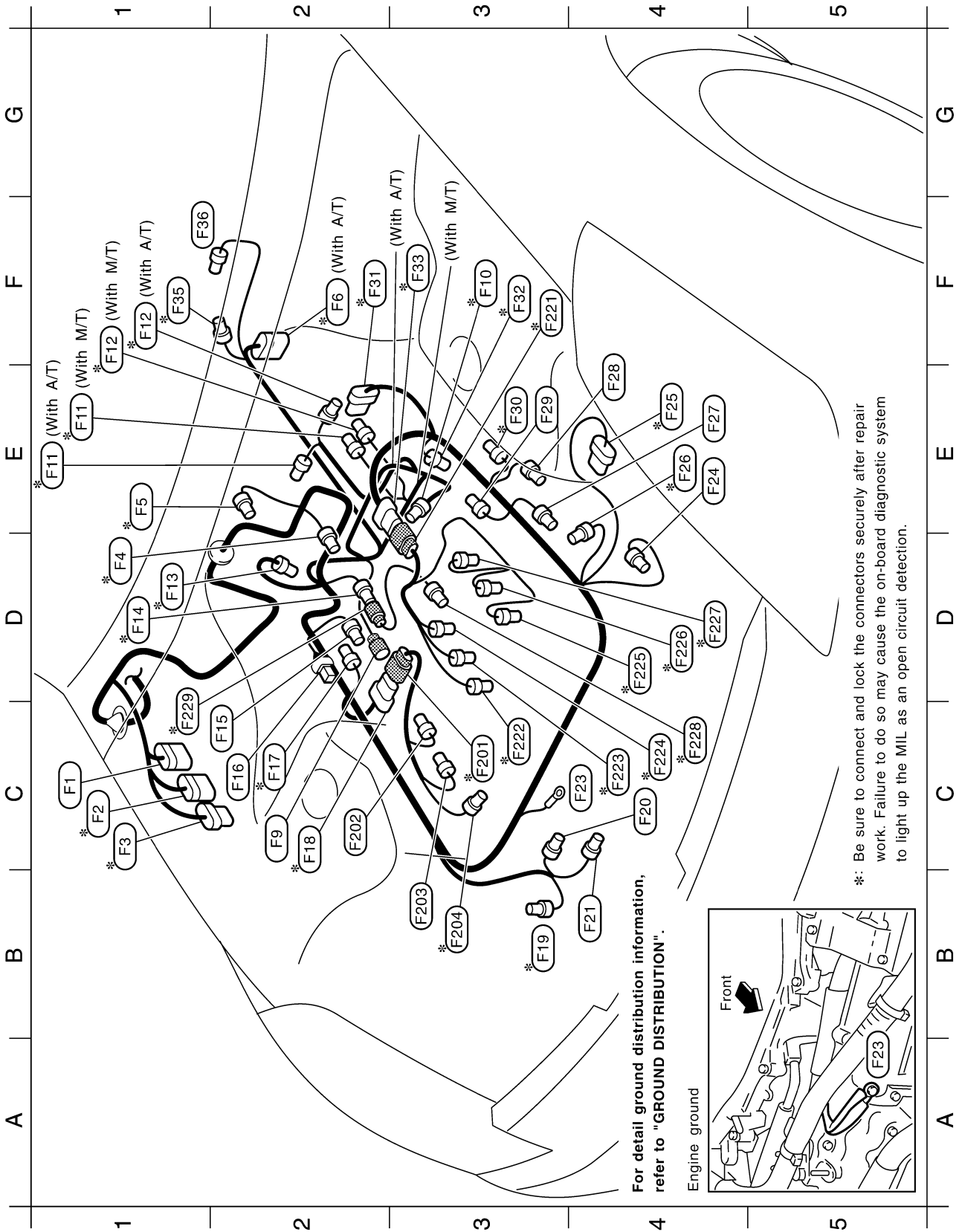


For detail ground distribution information, refer to "GROUND DISTRIBUTION".

CKIT0202E

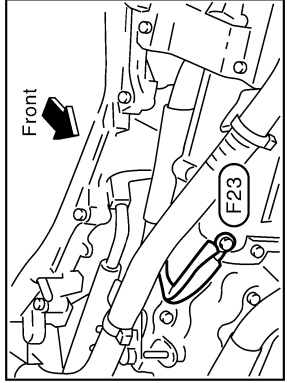
# HARNESS

## ENGINE CONTROL HARNESS



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

Engine ground



\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U  
V  
W  
X  
Y  
Z

PG

C1	(F1)	GY/9	:	To	(E10)
C1*	(F2)	GY/10	:	To	(E11)
C1*	(F3)	B/8	:	To	(E12)
D1*	(F4)	G/3	:	Camshaft position sensor (PHASE) (Bank1)	
E1*	(F5)	GY/2	:	EVAP canister purge volume control solenoid valve	
F2*	(F6)	G/10	:	A/T assembly (With A/T)	
C2	(F9)	GY/1	:	Starter motor	
F3*	(F10)	B/3	:	Crankshaft position sensor (POS)	
E1*	(F11)	L/4	:	Heated oxygen sensor 2 (Bank1)	
F1*	(F12)	G/4	:	Heated oxygen sensor 2 (Bank2)	
D1*	(F13)	GY/2	:	Engine coolant temperature sensor	
D1*	(F14)	SB/2	:	To (F229)	
C2	(F15)	GY/3	:	Ignition coil No.5 (With power transistor)	
C2	(F16)	W/2	:	Condenser	
C2*	(F17)	GY/4	:	Heated oxygen sensor 1 (Bank1)	
C2*	(F18)	B/6	:	To (F201)	
B3*	(F19)	B/3	:	Not used	
C4	(F20)	GY/2	:	Alternator (S, L)	
B4	(F21)	B/3	:	Oil pressure sensor	
C4	(F23)	—	:	Engine ground	
E4	(F24)	B/1	:	Compressor	
E4*	(F25)	B/6	:	Mass air flow sensor	
E4*	(F26)	GY/2	:	Intake valve timing control solenoid valve (Bank2)	
E4	(F27)	GY/3	:	Ignition coil No.2 (With power transistor)	
E4	(F28)	GY/3	:	Ignition coil No.4 (With power transistor)	
E3	(F29)	GY/3	:	Ignition coil No.6 (With power transistor)	
E3*	(F30)	G/4	:	Heated oxygen sensor 1 (Bank2)	
F2*	(F31)	GY/6	:	Electric throttle control actuator	
F3*	(F32)	B/3	:	Camshaft position sensor (PHASE) (Bank2)	
F3*	(F33)	G/8	:	To (F221)	
F1*	(F35)	B/2	:	Park/Neutral position switch (With M/T)	
F1	(F36)	B/2	:	Back-up lamp switch (With M/T)	

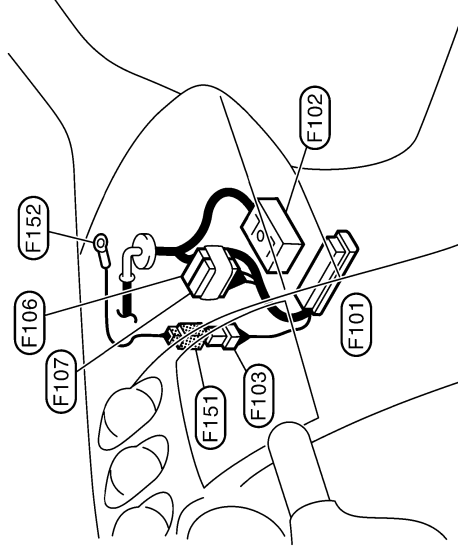
<b>Engine control sub-harness-1</b>					
C3*	(F201)	L/6	:	To	(F18)
C2	(F202)	GY/3	:	Ignition coil No.3 (With power transistor)	
B3	(F203)	GY/3	:	Ignition coil No.1 (With power transistor)	
B3*	(F204)	G/2	:	Intake valve timing control solenoid valve (Bank1)	

<b>Engine control sub-harness-2</b>					
F3*	(F221)	G/8	:	To	(F33)
C3*	(F222)	GY/2	:	Injector No.1	
C4*	(F223)	GY/2	:	Injector No.3	

C4*	(F224)	GY/2	:	Injector No.5
D4*	(F225)	GY/2	:	Injector No.2
D4*	(F226)	GY/2	:	Injector No.4
D4*	(F227)	GY/2	:	Injector No.6
C4*	(F228)	L/2	:	Knock sensor
C1*	(F229)	SB/2	:	To (F14)

## PASSENGER COMPARTMENT

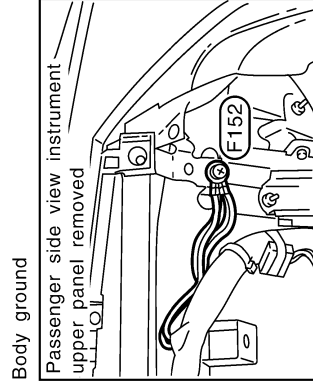


## Engine control harness

* (F101)	SMJ	:	ECM
* (F102)	SMJ	:	To (M72)
* (F103)	W/4	:	To (F151)
* (F106)	L/20	:	Joint connector-3
* (F107)	P/20	:	Joint connector-4

## Earth sub-harness

* (F151)	W/4	:	To (F103)
* (F152)	—	:	Body ground

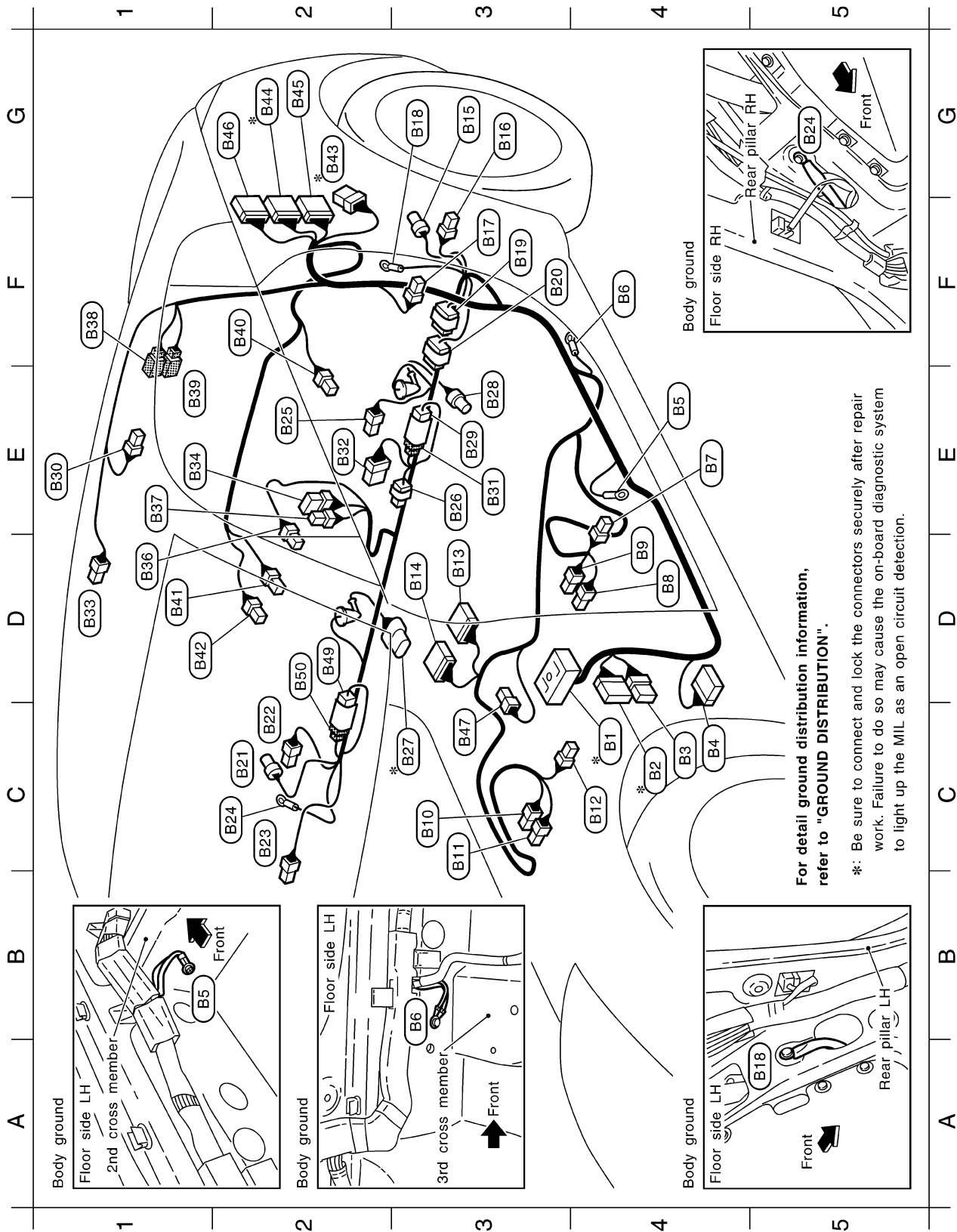


For detail ground distribution information, refer to "GROUND DISTRIBUTION".

\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.

# HARNESS

## BODY HARNESS



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U  
V  
W  
X  
Y  
Z

PG

E1 (B37)	L/4	: Heated seat relay (With heated seat or side air bag)
F1 (B38)	W/3	: To (D101)
E1 (B39)	GY/2	: To (D102)
F2 (B40)	BR/2	: Rear speaker LH
D1 (B41)	W/2	: Luggage floor box lamp
D1 (B42)	BR/2	: Rear speaker RH
G2* (B43)	W/6	: To (T1)
G2* (B44)	W/16	: To (T2)
G2 (B45)	W/10	: To (T3) (With BOSE system)
G2 (B46)	BR/20	: To (T4) (With BOSE system)
C3 (B47)	B/1	: Parking brake switch
D2 (B49)	BR/2	: To (B50)
D2 (B50)	BR/2	: To (B49)

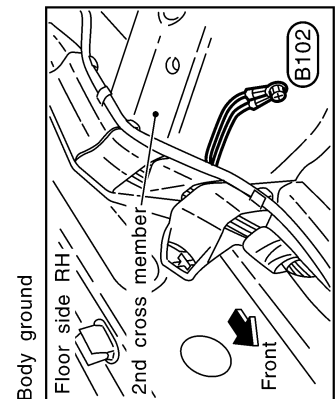
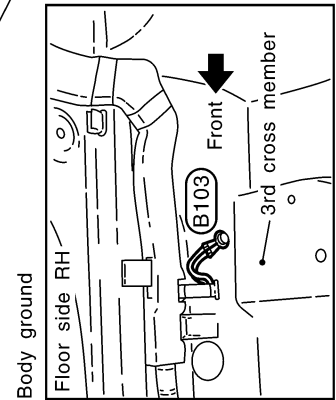
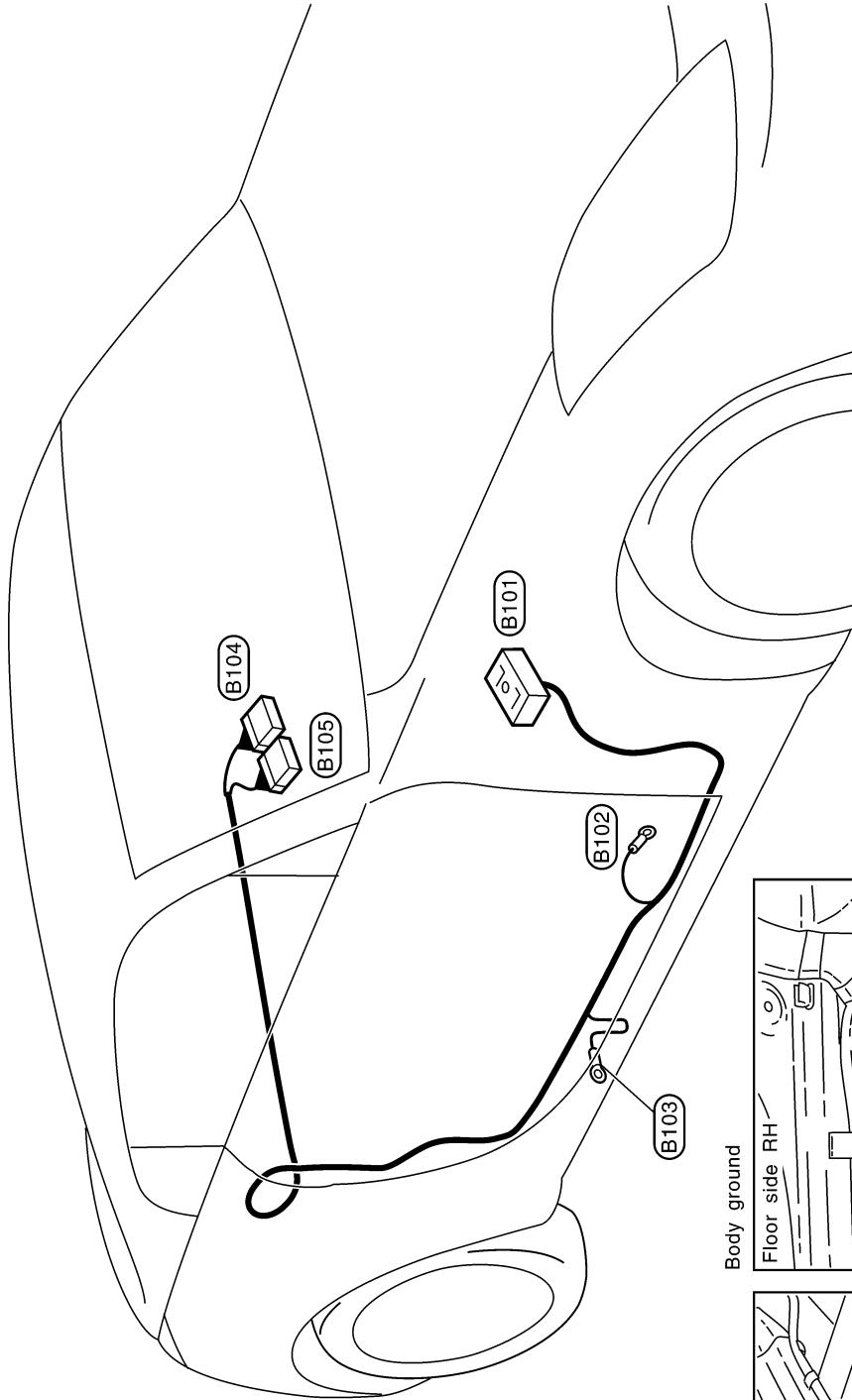
\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.

C4* (B1)	SMJ	: To (M12)
C4* (B2)	W/18	: To (E106)
C4 (B3)	W/6	: To (E107)
C4 (B4)	W/12	: BCM (Body control module)
E4 (B5)	—	: Body ground
F4 (B6)	—	: Body ground
E4 (B7)	W/4	: Driver side seat (With heated seat or side air bag)
D4 (B8)	W/3	: Seat belt buckle switch (Driver side)
D4 (B9)	Y/2	: LH side air bag module (With side air bag)
C3 (B10)	Y/2	: RH side air bag module (With side air bag)
C3 (B11)	W/3	: Seat belt buckle switch (Passenger side)
C4 (B12)	W/4	: Passenger side seat (With heated seat or side air bag)
D3 (B13)	Y/12	: Air bag diagnosis sensor unit
D3 (B14)	Y/12	: Air bag diagnosis sensor unit
G3 (B15)	Y/2	: LH side air bag (satellite) sensor (With side air bag)
G3 (B16)	Y/2	: Seat belt pre-tensioner LH
F3 (B17)	W/3	: Driver side door switch
G3 (B18)	—	: Body ground (With side air bag)
F3 (B19)	OR/20	: Joint connector-5
F3 (B20)	GY/6	: Joint connector-6
C2 (B21)	Y/2	: RH side air bag (satellite) sensor (With side air bag)
C2 (B22)	Y/2	: Seat belt pre-tensioner RH
C2 (B23)	W/3	: Passenger side door switch
C2 (B24)	—	: Body ground (With side air bag)
E2 (B25)	W/2	: Woofer (With BOSE system)
E3 (B26)	W/2	: Condenser
C3* (B27)	GY/5	: Fuel level sensor unit and fuel pump
E3 (B28)	GY/2	: Fuel level sensor unit (Sub)
E3 (B29)	W/2	: To (B31)
E1 (B30)	Y/2	: LH side curtain air bag module (With side air bag)
E3 (B31)	W/2	: To (B29)
E2 (B32)	BR/8	: Woofer amp. (With BOSE system)
D1 (B33)	Y/2	: RH side curtain air bag module (With side air bag)
E1 (B34)	BR/6	: Rear window defogger relay
D1 (B36)	B/2	: Power socket

# HARNESS

## BODY NO.2 HARNESS

- (B101) SMJ : To (M73)
- (B102) — : Body ground
- (B103) — : Body ground
- (B104) W/24 : NAVI control unit
- (B105) GY/24 : NAVI control unit



CKIT0217E

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

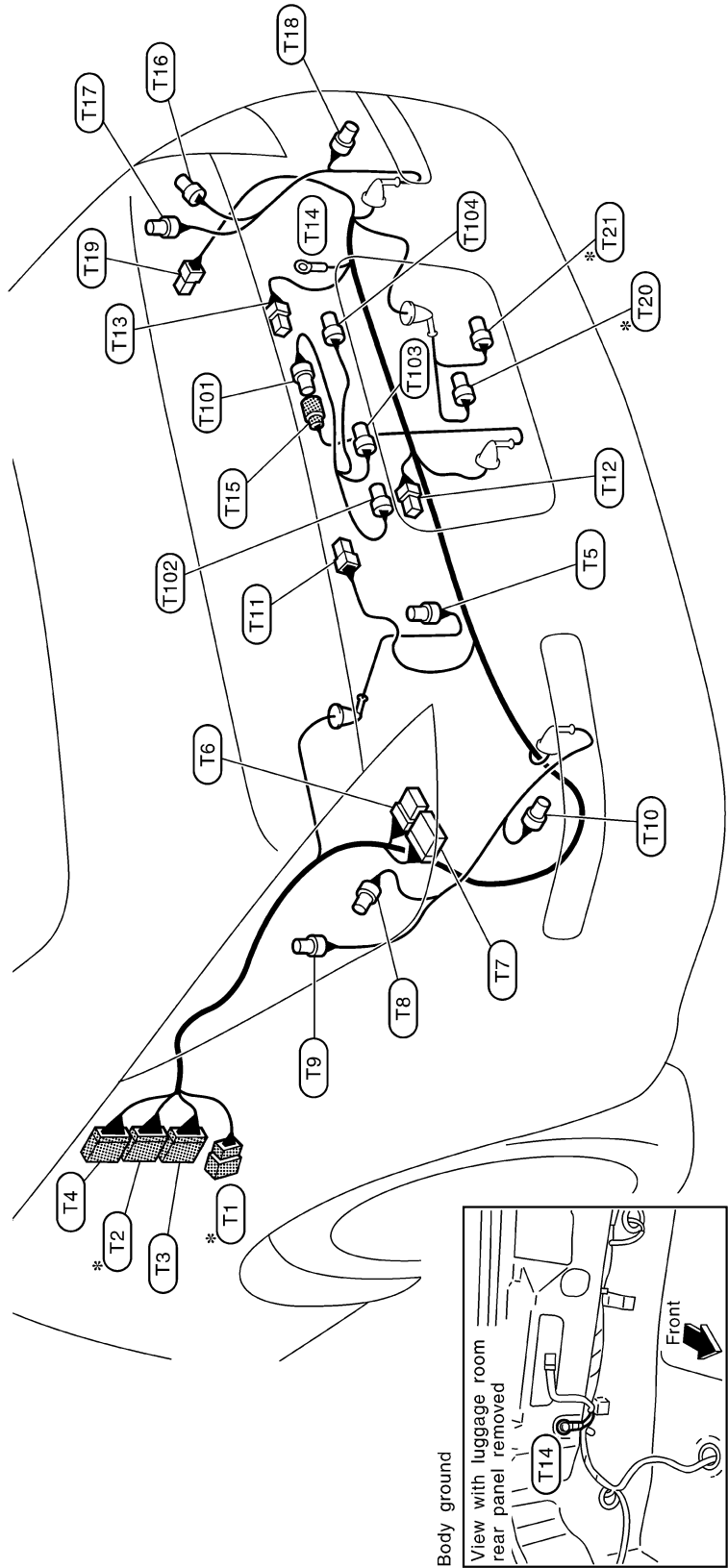
## TAIL HARNESS

- \* T1 : To B43
- \* T2 : To B44
- T3 : To B45 (With BOSE system)
- T4 : To B46 (With BOSE system)
- T5 : Rear wheel sensor
- T6 : BOSE speaker amp. (With BOSE system)
- T7 : BOSE speaker amp. (With BOSE system)
- T8 : Rear combination lamp LH (Body side)
- T9 : Rear combination lamp LH (Body side)
- T10 : Rear combination lamp LH (Bumper side)
- T11 : Back door opener actuator
- T12 : Back door switch
- T13 : Luggage room lamp
- T14 : Body ground
- T15 : To T101
- T16 : Rear combination lamp RH (Body side)
- W/6 : To B43
- W/16 : To B44
- W/10 : To B45 (With BOSE system)
- BR/20 : To B46 (With BOSE system)
- SB/4 : Rear wheel sensor
- GY/8 : BOSE speaker amp. (With BOSE system)
- B/24 : BOSE speaker amp. (With BOSE system)
- GY/2 : Rear combination lamp LH (Body side)
- GY/3 : Rear combination lamp LH (Body side)
- SB/4 : Rear combination lamp LH (Bumper side)
- W/4 : Back door opener actuator
- W/3 : Back door switch
- GY/2 : Luggage room lamp
- : Body ground
- GY/4 : To T101
- GY/2 : Rear combination lamp RH (Body side)
- GY/3 : Rear combination lamp RH (Body side)
- SB/4 : Rear combination lamp RH (Bumper side)
- W/4 : Fuel lid opener actuator
- B/2 : EVAP canister vent control valve
- GY/3 : EVAP control system pressure sensor

### Tail sub-harness

- T101 : GY/4 : To T15
- T102 : BR/2 : License plate lamp LH
- T103 : GY/2 : Back door opener switch
- T104 : BR/2 : License plate lamp RH

\*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.



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



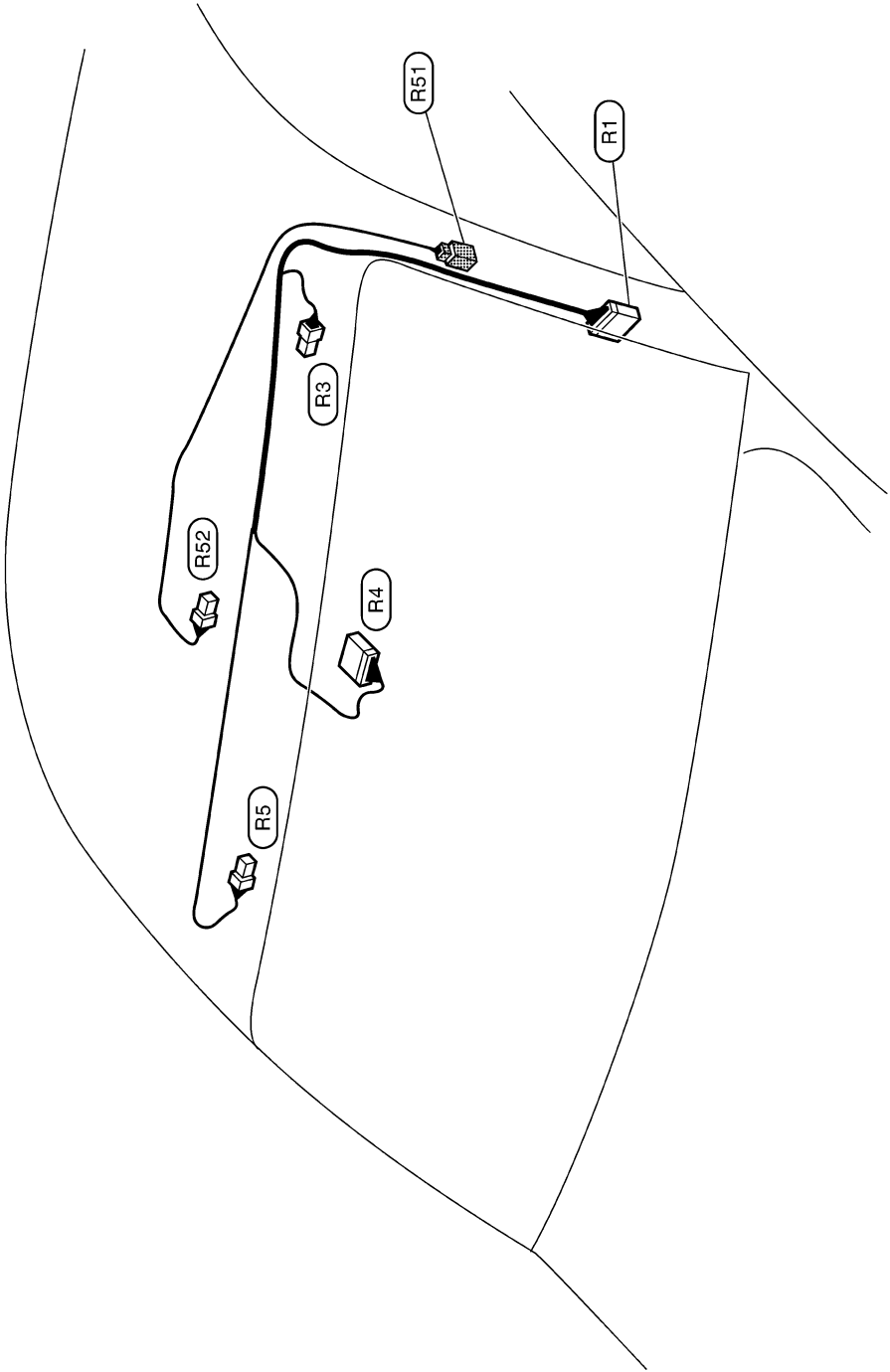
# HARNESS

## ROOM LAMP HARNESS

### Room lamp sub-harness

(R51) W/4 : To (M70)  
(R52) W/3 : Spot lamp

(R1) W/10 : To (M69)  
(R3) -/2 : Vanity mirror lamp (Driver side)  
(R4) B/10 : Auto anti-dazzling inside mirror  
(R5) -/2 : Vanity mirror lamp (Passenger side)



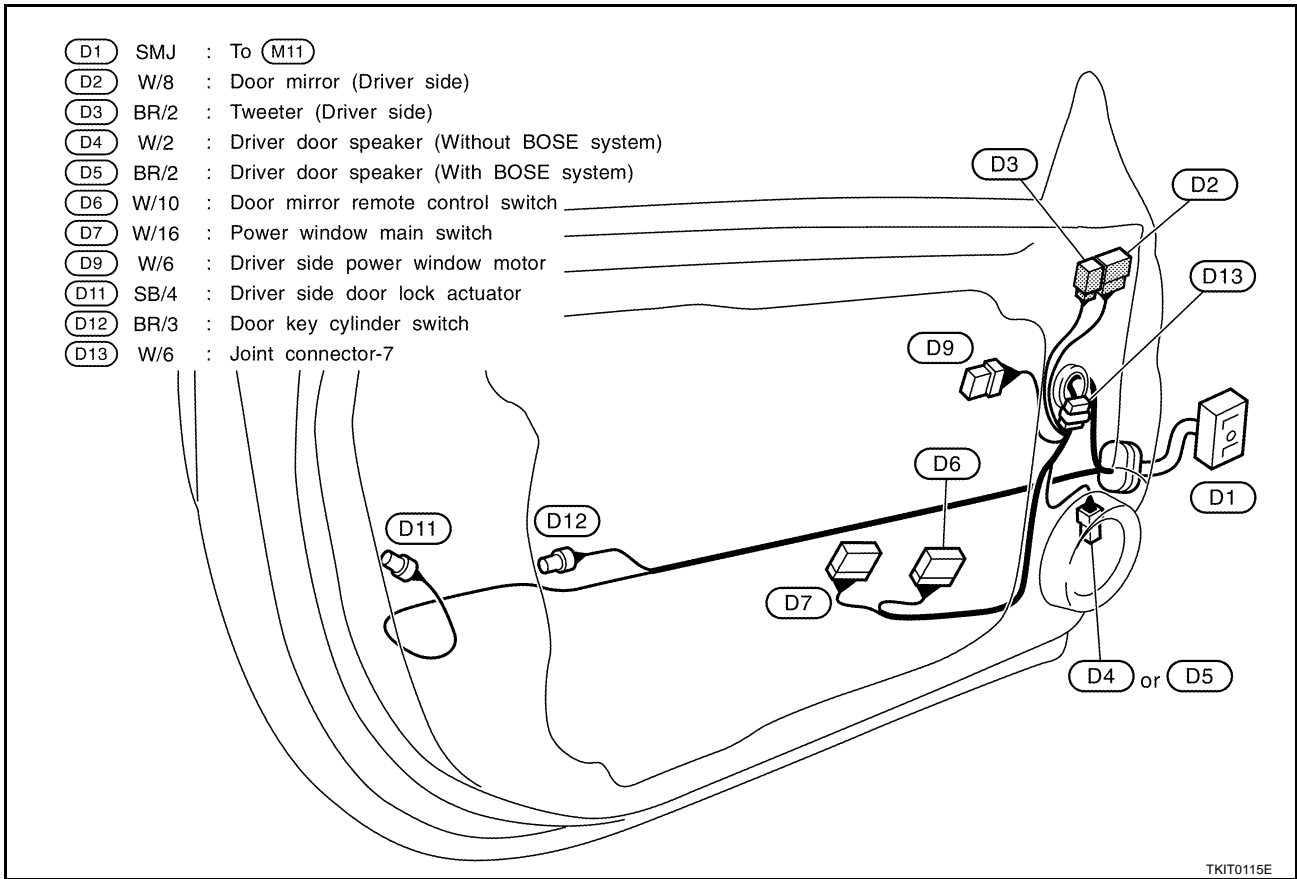
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

CKIT0208E

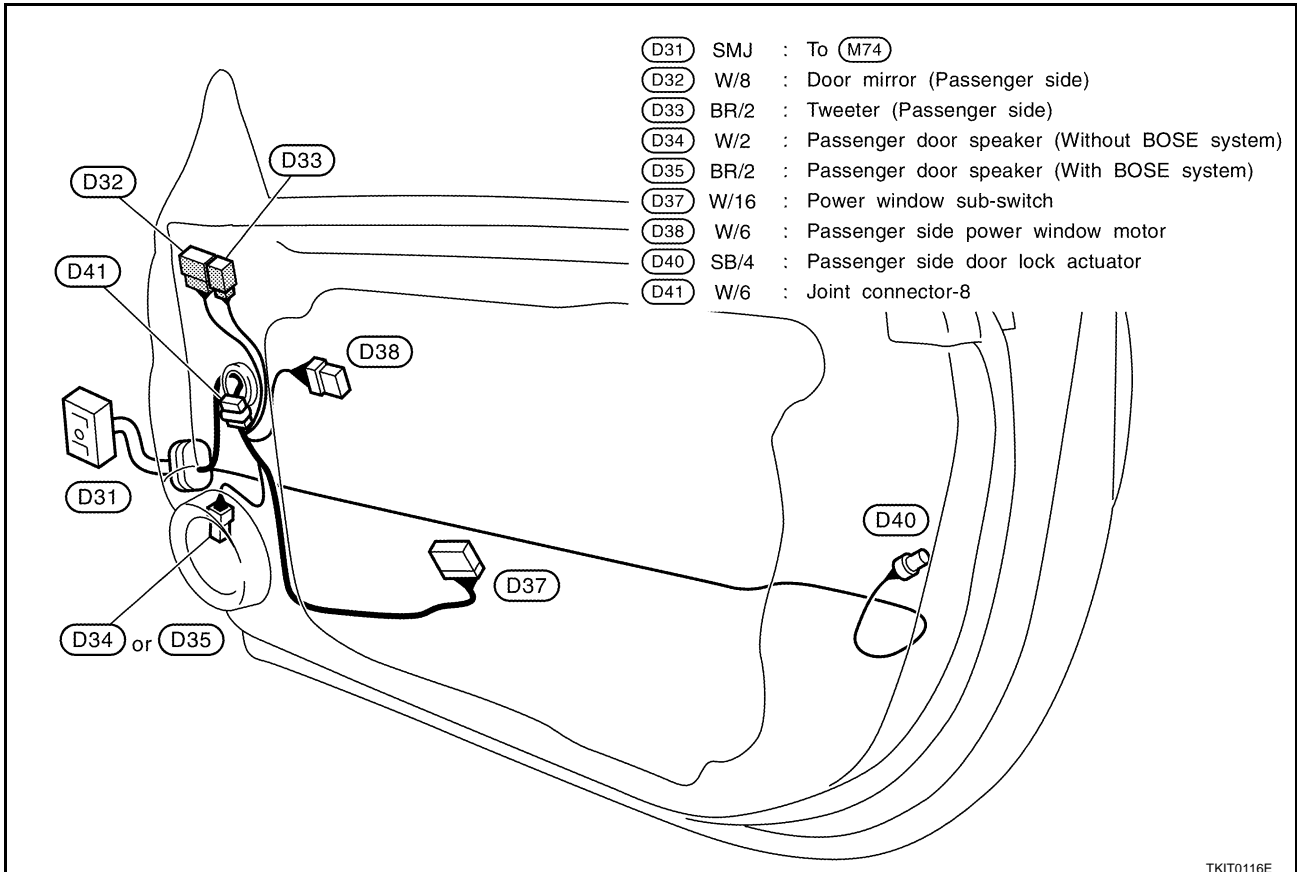
# HARNESS

## DOOR HARNESS

### Driver Side Door



### Passenger Side Door



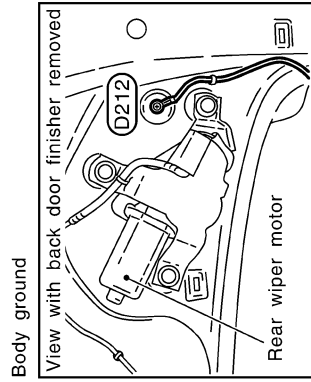
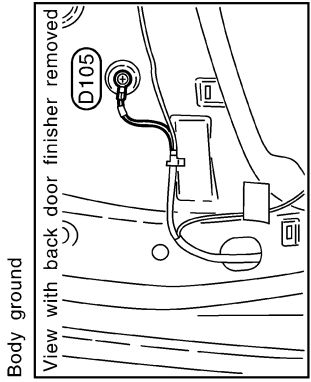
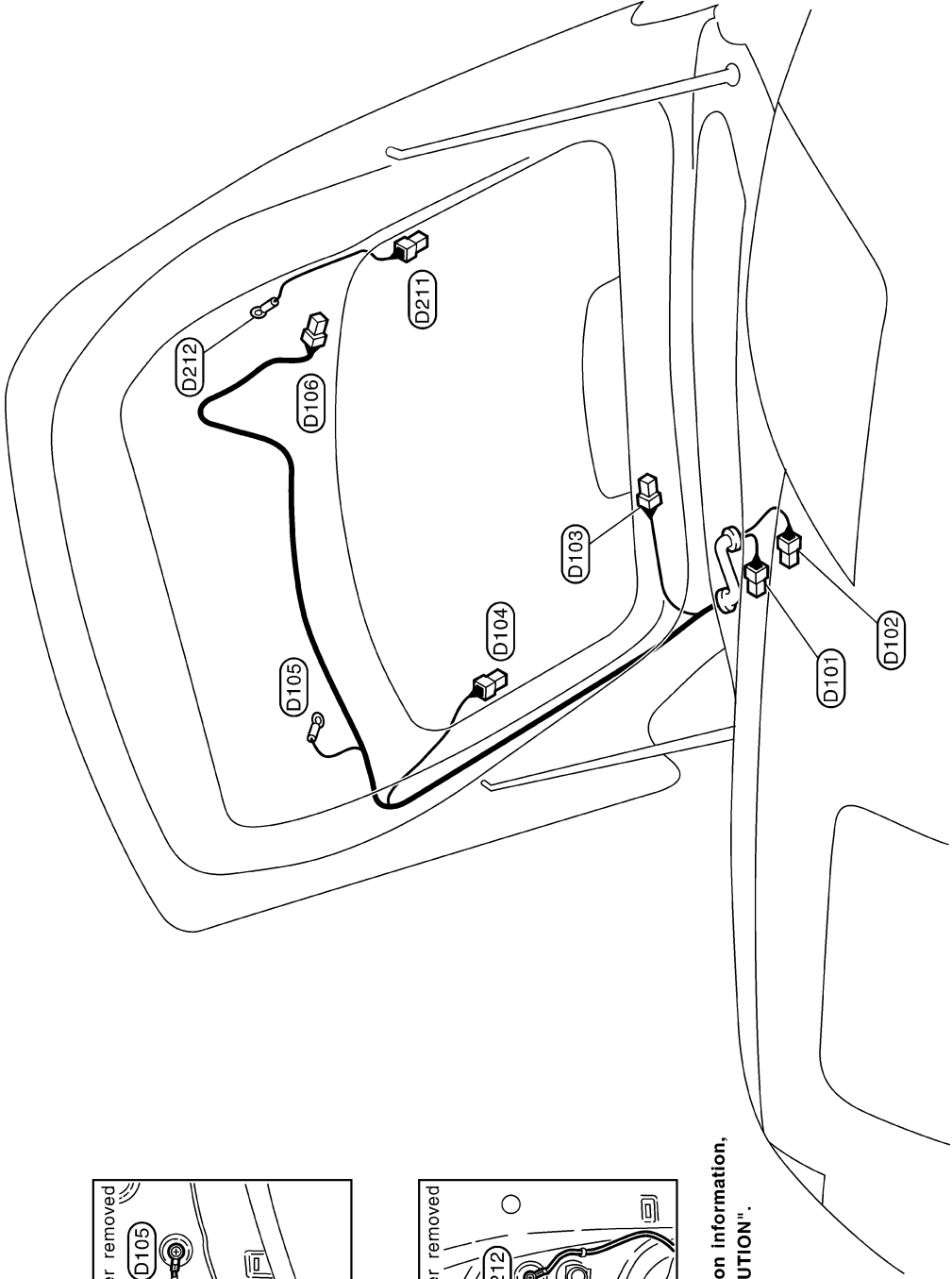
# HARNESS

## Back Door

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

**Defogger harness (-)**  
 (D211) B/1 : Rear window defogger (-)  
 (D212) — : Body ground

(D101) W/3 : To (E38)  
 (D102) GY/2 : To (E39)  
 (D103) BR/2 : High-mounted stop lamp  
 (D104) B/1 : Condenser  
 (D105) — : Body ground  
 (D106) W/4 : Rear wiper motor



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

CKIT0211E

# HARNESS

## Wiring Diagram Codes (Cell Codes)

AKS0012R

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
3METER	DI	Triple Meter
ABS	BRC	Anti-lock Brake System
A/C	ATC	Air Conditioner
APPS1	EC	Accelerator Pedal Position Sensor
APPS2	EC	Accelerator Pedal Position Sensor
APPS3	EC	Accelerator Pedal Position Sensor
ASC/BS	EC	Automatic Speed Control Device (ASCD) Brake Switch
ASC/SW	EC	Automatic Speed Control Device (ASCD) Steering Switch
ASCBOF	EC	Automatic Speed Control Device (ASCD) Brake Switch
ASCIND	EC	Automatic Speed Control Device (ASCD) Indicator
A/T	AT	A/T
AT/IND	DI	A/T Indicator Lamp
AUDIO	AV	Audio
BACK/L	LT	Back-Up Lamp
BRK/SW	EC	Brake Switch
CAN	EC	CAN Communication Line
CAN	LAN	CAN System
CHARGE	SC	Charging System
CHIME	DI	Warning Chime
CLOCK	DI	Clock
COMBSW	LT	Combination Switch
COOL/F	EC	Cooling Fan Control
D/LOCK	BL	Power Door Lock
DEF	GW	Rear Window Defogger
DTRL	LT	Headlamp - With Daytime Light System
ECM/PW	EC	ECM Power Supply For Back-Up
ECTS	EC	Engine Coolant Temperature Sensor
ETC1	EC	Electrical Throttle Function
ETC2	EC	Electrical Throttle Control Motor Relay
ETC3	EC	Electrical Throttle Control Motor
F/LID	BL	Fuel Lid Opener
F/PUMP	EC	Fuel Pump
FTTS	EC	Fuel Tank Temperature Sensor
FUELB1	EC	Fuel Injection System Function (Bank 1)
FUELB2	EC	Fuel Injection System Function (Bank 2)
H/LAMP	LT	Headlamp
HORN	WW	Horn
HSEAT	SE	Heated Seat
I/MIRR	GW	Inside Mirror (Auto Anti-Dazzling Mirror)
IATS	EC	Intake Air Temperature Sensor
IGNSYS	EC	Ignition System

# HARNESSES

Code	Section	Wiring Diagram Name
ILL	LT	Illumination
INJECT	EC	Injector
INT/L	LT	Trunk Room Lamp
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	EC	Main Power Supply And Ground Circuit
M/ANT	AV	Manual Antenna
METER	DI	Speedometer, Tachometer, Temp., And Fuel Gauges
MIL/DL	EC	Mil&Data Link Connectors
MIRROR	GW	Power Door Mirror
NATS	BL	Nissan Anti - Theft System
NAVI	AV	Navigation System
O2H1B1	EC	Heated Oxygen Sensor 1 Heater Bank 1
O2H1B2	EC	Heated Oxygen Sensor 1 Heater Bank 2
O2H2B1	EC	Rear Heated Oxygen Sensor 2 Heater Bank 1
O2H2B2	EC	Rear Heated Oxygen Sensor 2 Heater Bank 2
O2S1B1	EC	Heated Oxygen Sensor 1 Bank 1
O2S1B2	EC	Heated Oxygen Sensor 1 Bank 2
O2S2B1	EC	Rear Heated Oxygen Sensor 2 Bank 1
O2S2B2	EC	Rear Heated Oxygen Sensor 2 Bank 2
PGC/V	EC	Evap Canister Purge Volume Control Solenoid Valve
PHSB1	EC	Camshaft Position Sensor (Phase) (Bank1)
PHSB2	EC	Camshaft Position Sensor (Phase) (Bank2)
PNP/SW	EC	Park / Neutral Position Switch
POS	EC	Crankshaft Position Sensor (Ckps) (Pos)
POWER	PG	Power Supply Routing
PRE/SE	EC	Evap Control System Pressure Sensor
P/SCKT	WW	Power Socket
PS/SEN	EC	Power Steering Pressure Sensor
ROOM/L	LT	Interior Room Lamp
RP/SEN	EC	Refrigerant Pressure Sensor
SEAT	SE	Power Seat
SEN/PW	EC	Sensor Power Supply
SHIFT	AT	A/T Shift Lock System
SRS	SRS	Supplemental Restraint System
START	SC	Starting System
STOP/L	LT	Stop Lamp
TAIL/L	LT	Parking, License and Tail Lamps
TCS	BRC	Traction Control System
TPS1	EC	Throttle Position Sensor (Sensor 1)
TPS2	EC	Throttle Position Sensor (Sensor 2)

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

# HARNESS

Code	Section	Wiring Diagram Name
TPS3	EC	Throttle Position Sensor
TRANSCV	BL	Homelink Universal Transceiver
TURN	LT	Turn Signal and Hazard Warning Lamp
T/WARN	WT	Low Tire Pressure Warning System
VDC	BRC	Vehicle Dynamics Control System
VEHSEC	BL	Vehicle Security System
VENT/V	EC	Evap Canister Vent Control Valve
WARN	DI	Warning Lamps
WINDOW	GW	Power Window
WIPER	WW	Front Wiper and Washer
WIP/R	WW	Rear Wiper and Washer

# ELECTRICAL UNITS LOCATION

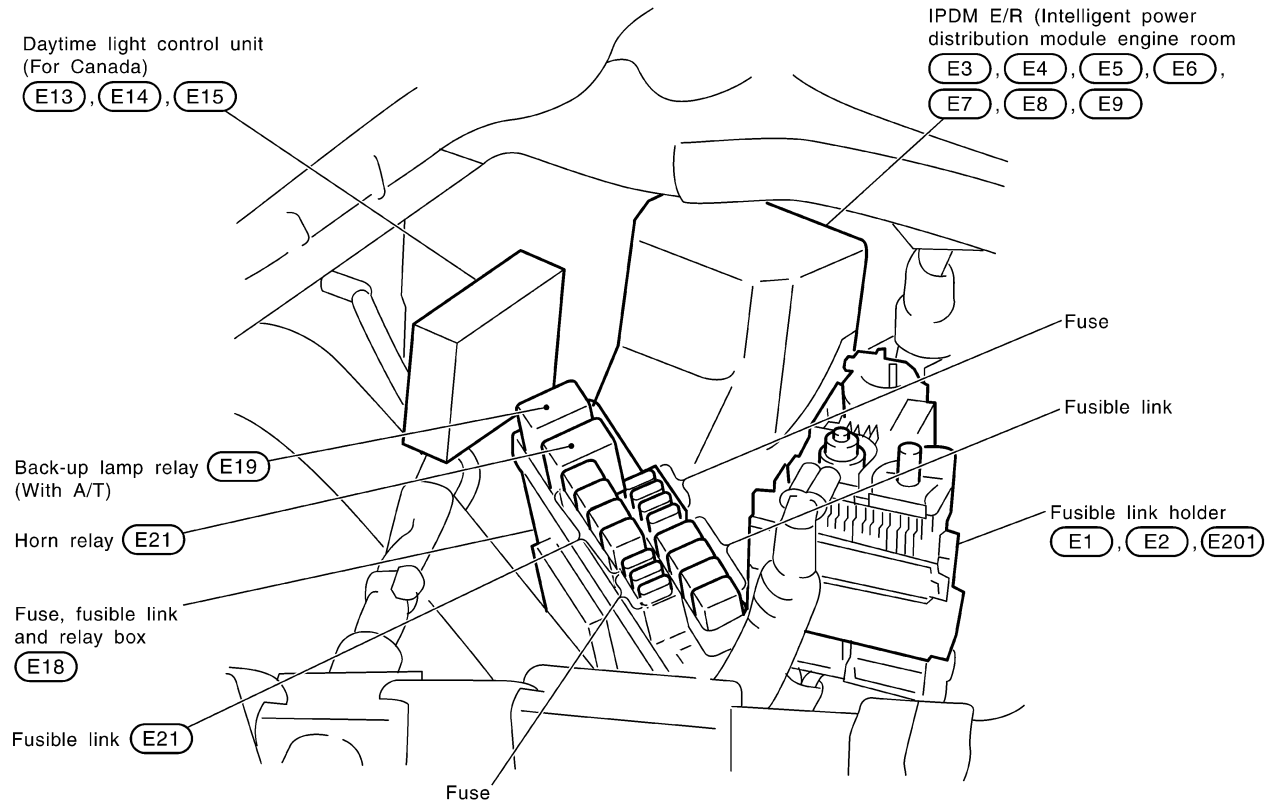
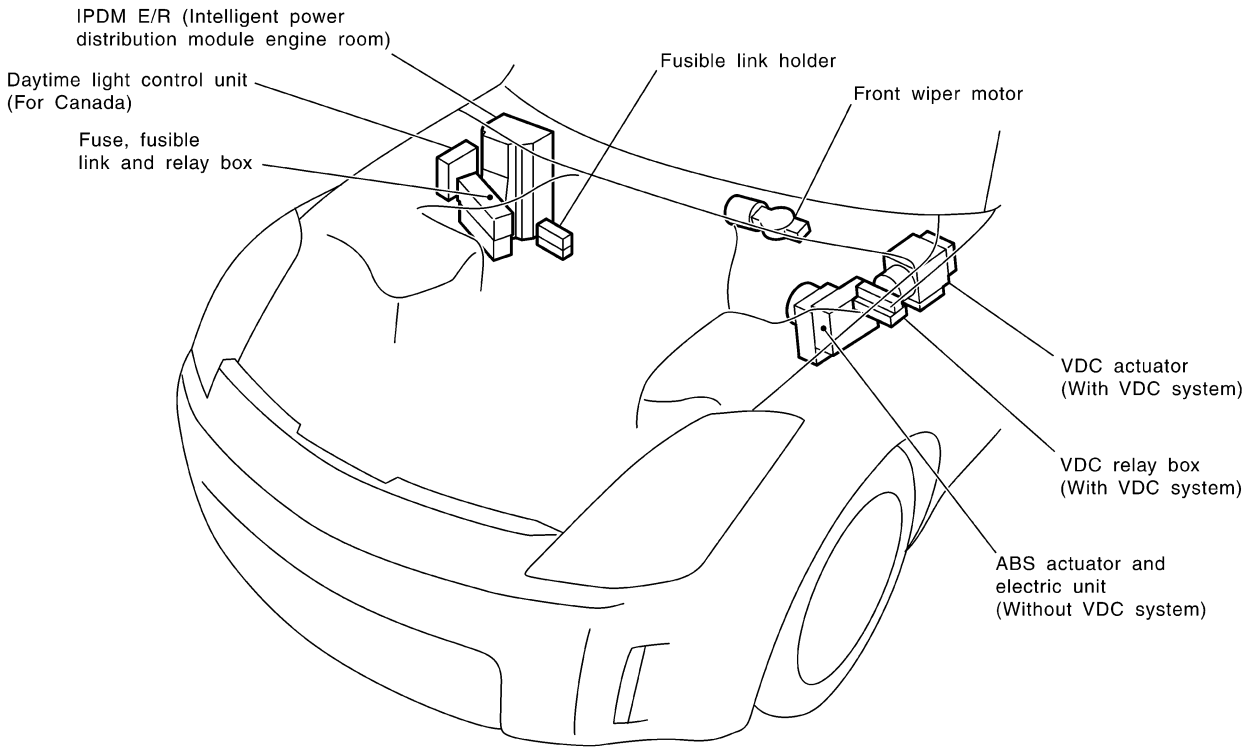
## ELECTRICAL UNITS LOCATION

PPF:25230

### Electrical Units Location ENGINE COMPARTMENT

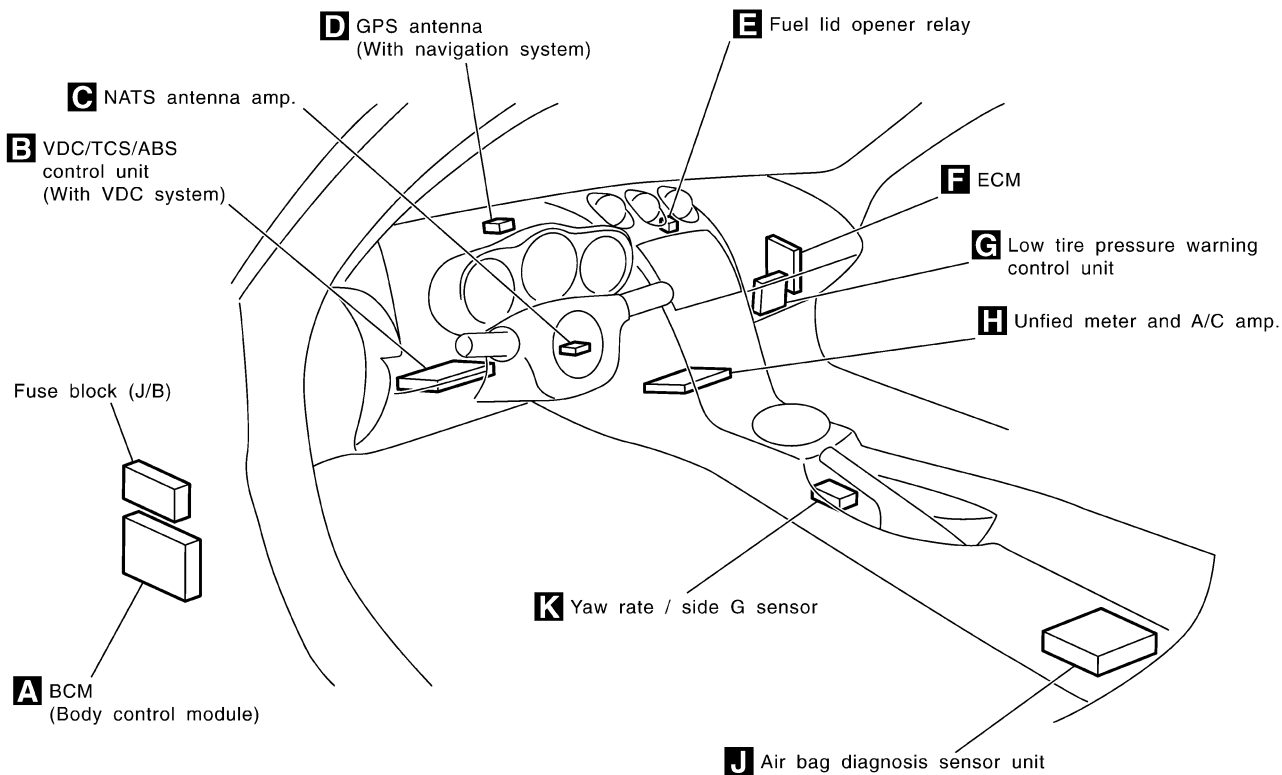
AKS0012S

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

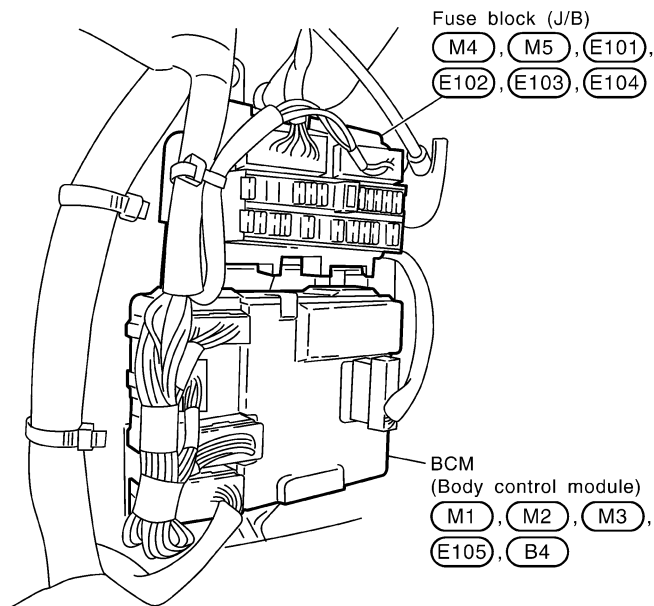


# ELECTRICAL UNITS LOCATION

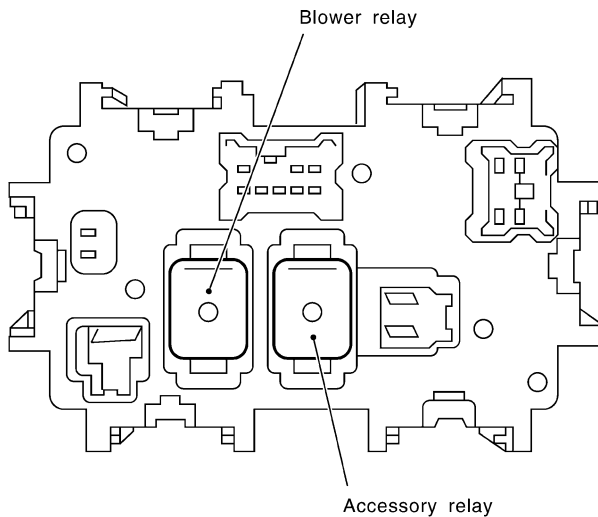
## PASSENGER COMPARTMENT



**A** Behind the dash side lower LH finisher



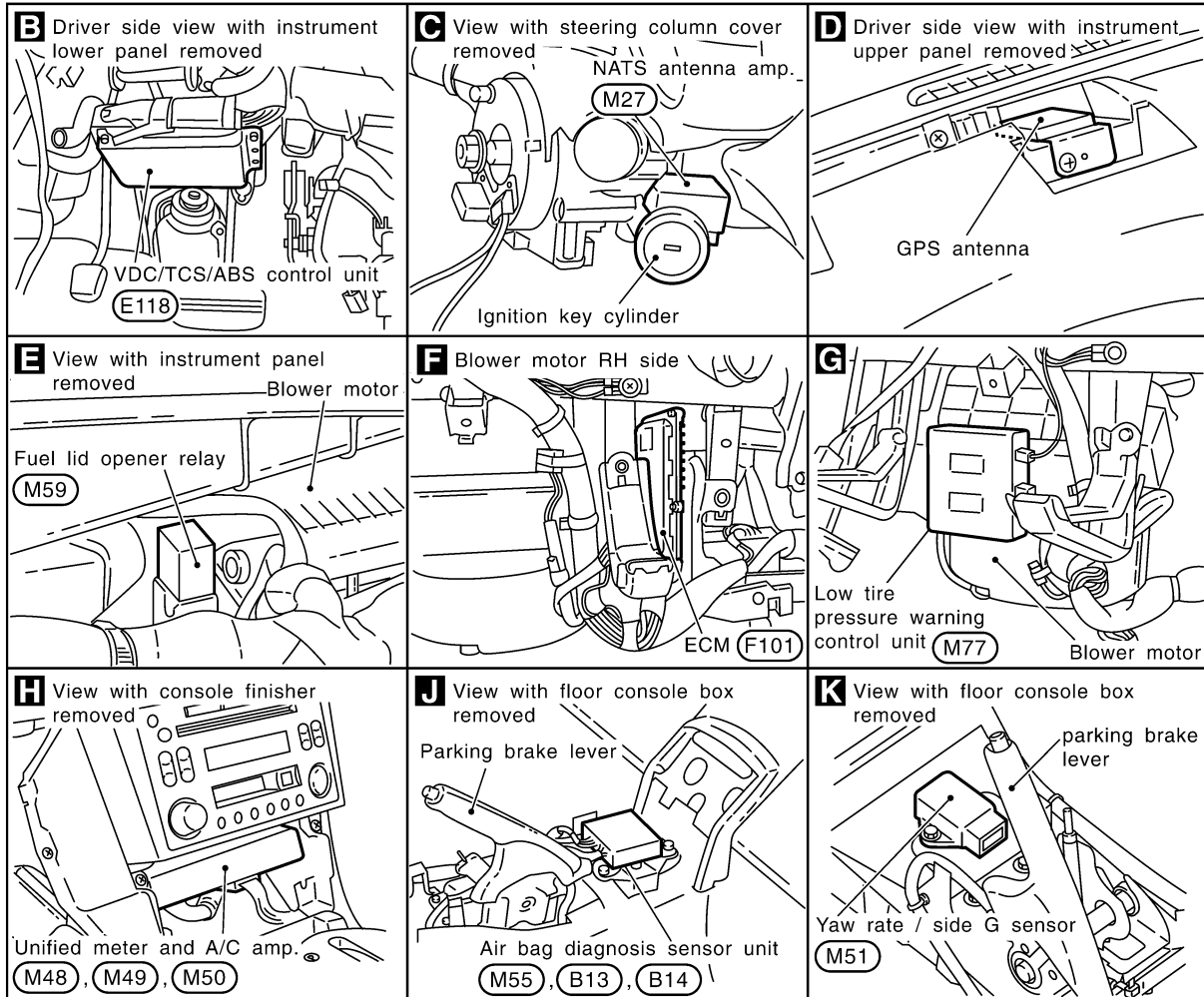
Fuse block (J/B) rear view



CKIT0213E



# ELECTRICAL UNITS LOCATION



A

B

C

D

E

F

G

H

I

J

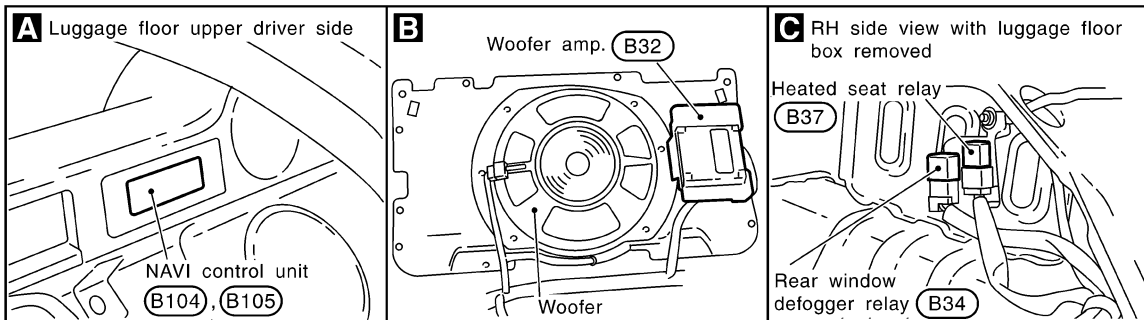
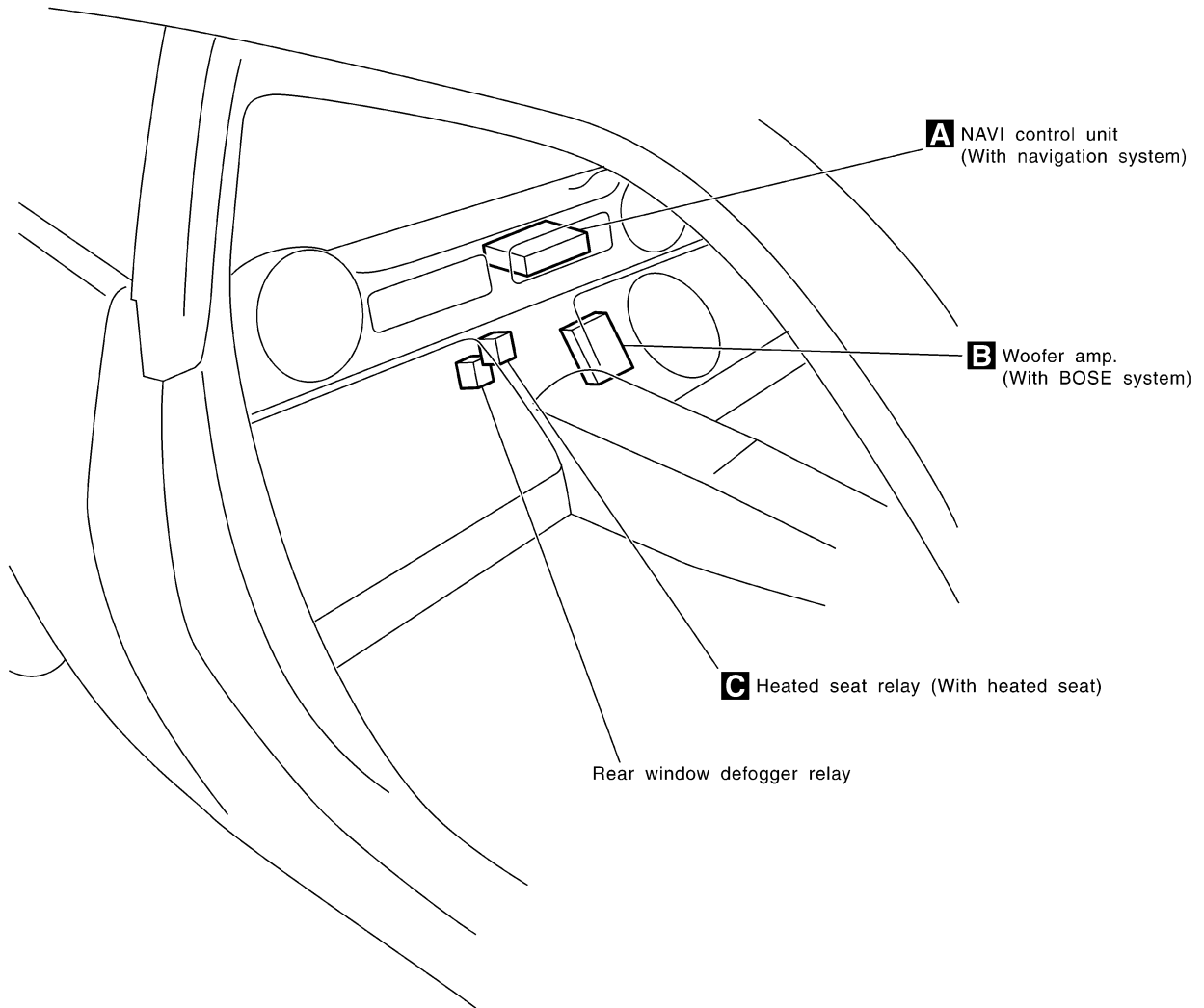
PG

L

M

CKIT0214E

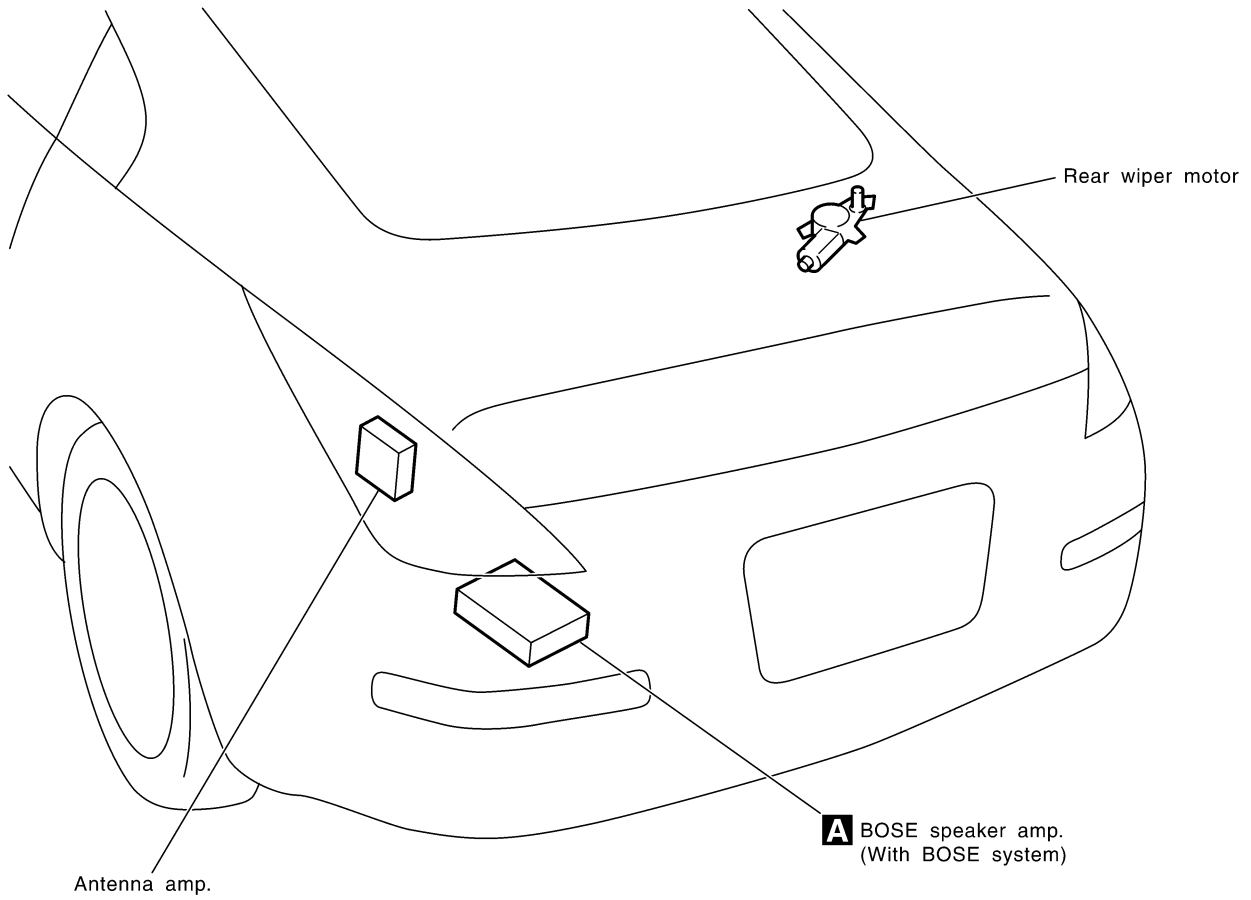
# ELECTRICAL UNITS LOCATION



CKIT0215E

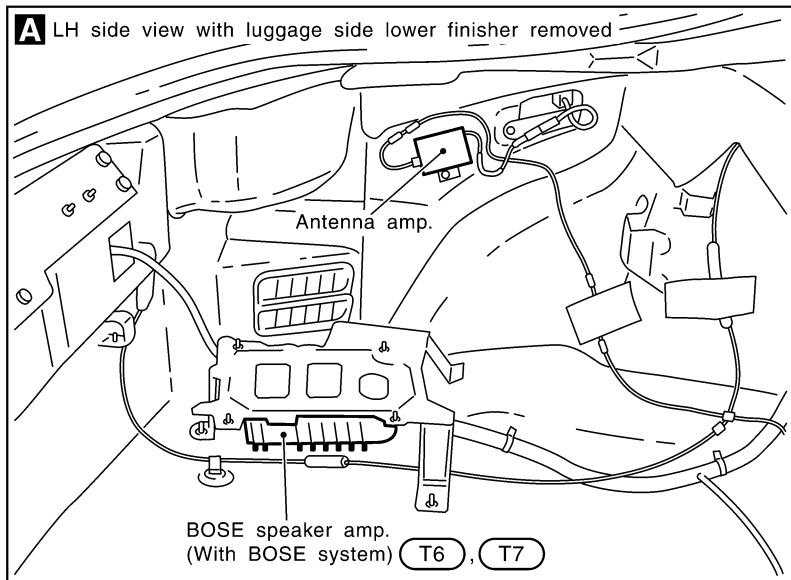
# ELECTRICAL UNITS LOCATION

## LUGGAGE COMPARTMENT



A  
B  
C  
D  
E  
F  
G  
H  
I  
J

PG



L  
M

CKIT0216E

# HARNESS CONNECTOR

PFP:00011

## HARNESS CONNECTOR

### Description

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

AKS0012T

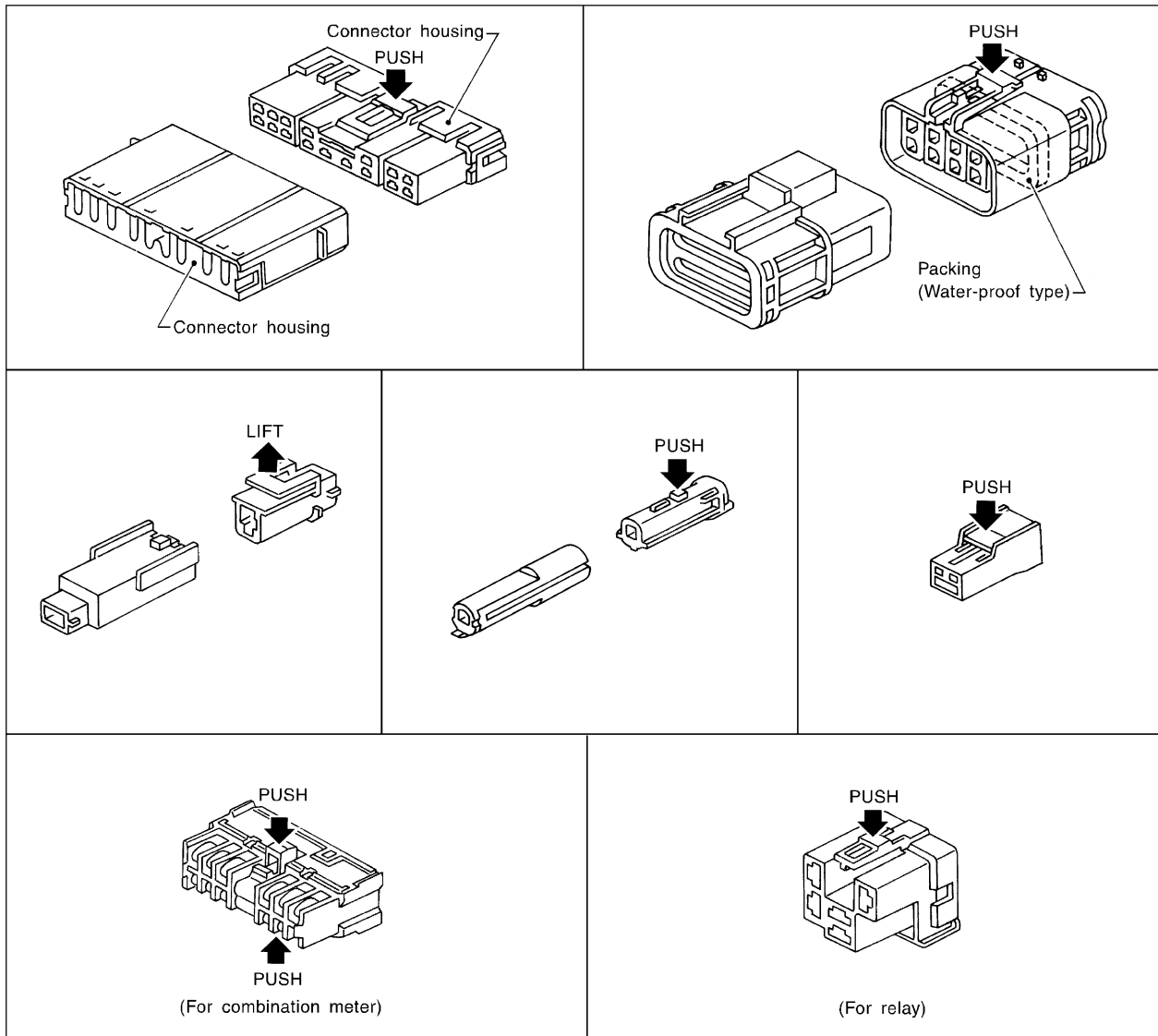
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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

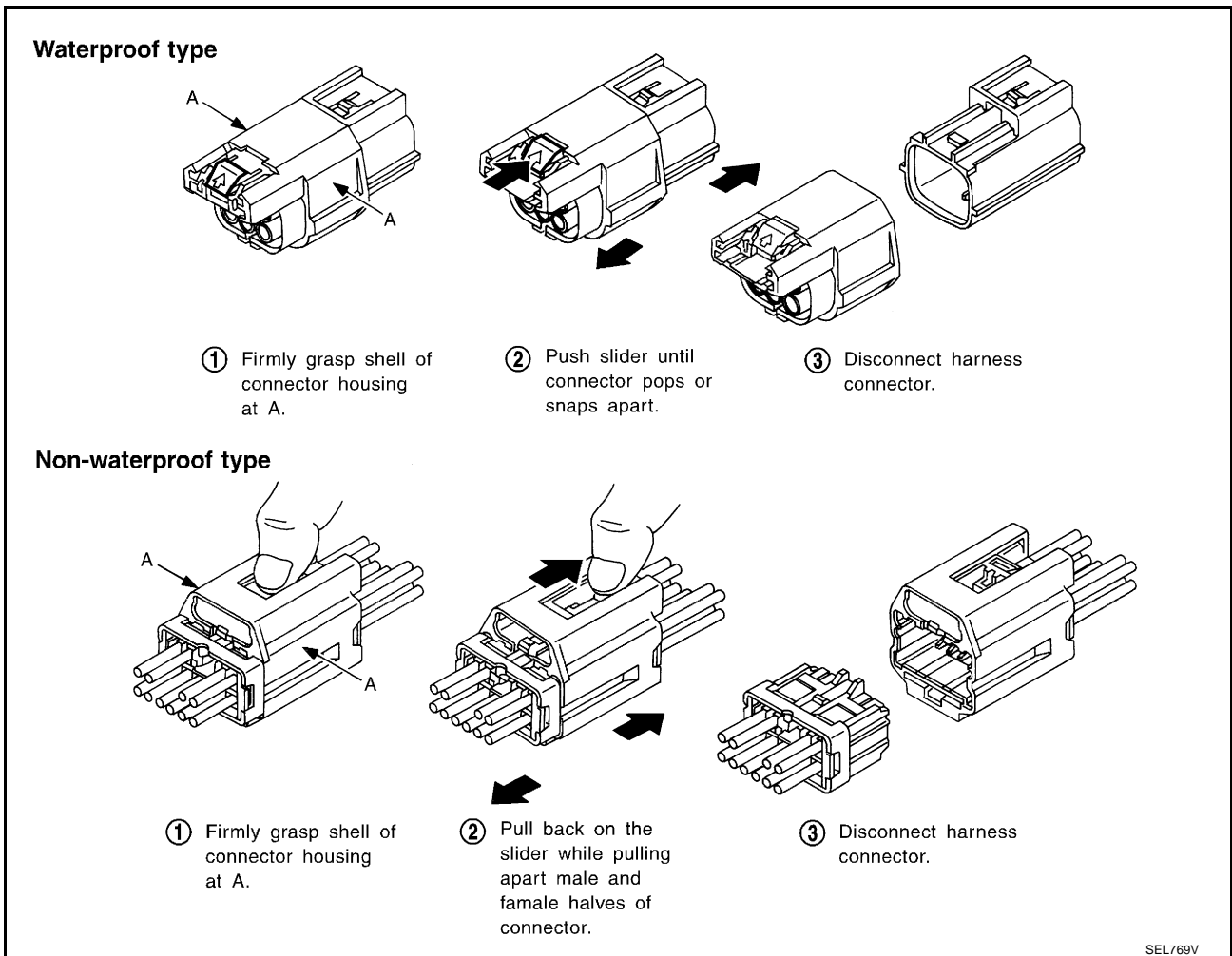
## HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

- 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]



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

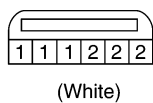
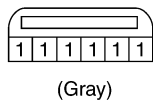
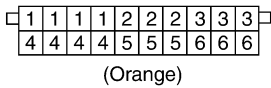
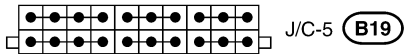
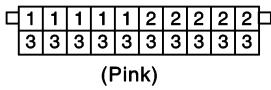
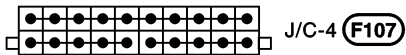
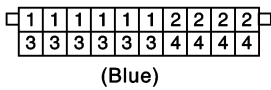
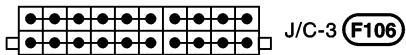
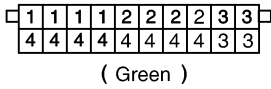
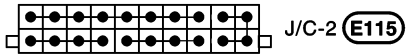
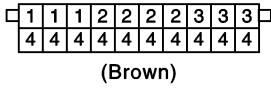
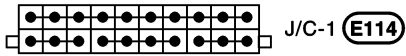
# JOINT CONNECTOR (J/C)

PFP:B4341

AKS0012U

## JOINT CONNECTOR (J/C)

### Terminal Arrangement



CKIT0182E

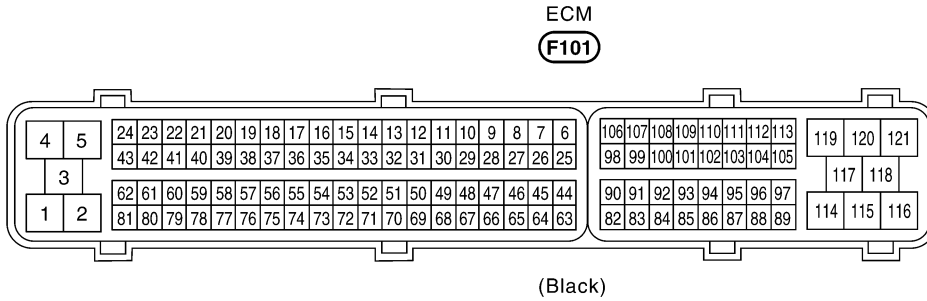
# ELECTRICAL UNITS

## ELECTRICAL UNITS

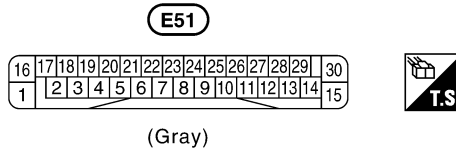
### Terminal Arrangement

PPF:00011

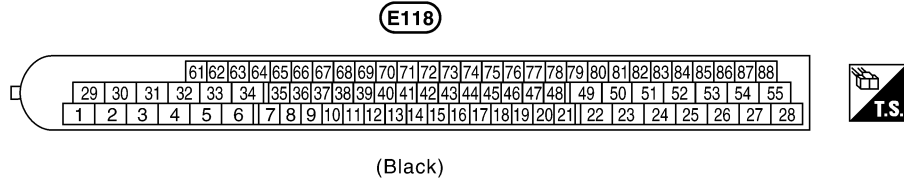
AKS0012V



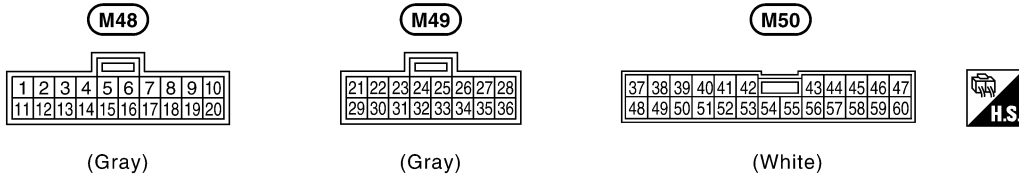
### ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



### VDC/TCS/ABS CONTROL UNIT



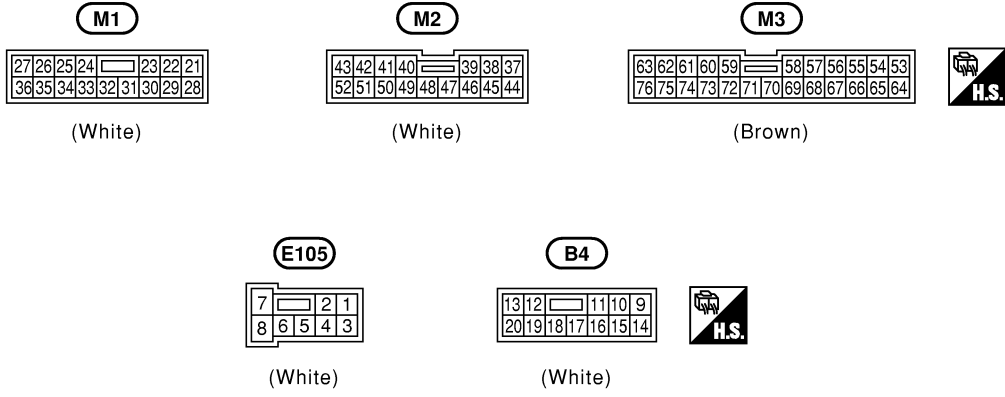
### UNIFIED METER AND A/C AMP.



CKIT0183E

# ELECTRICAL UNITS

## BCM (BODY CONTROL MODULE)



CKIT0156E



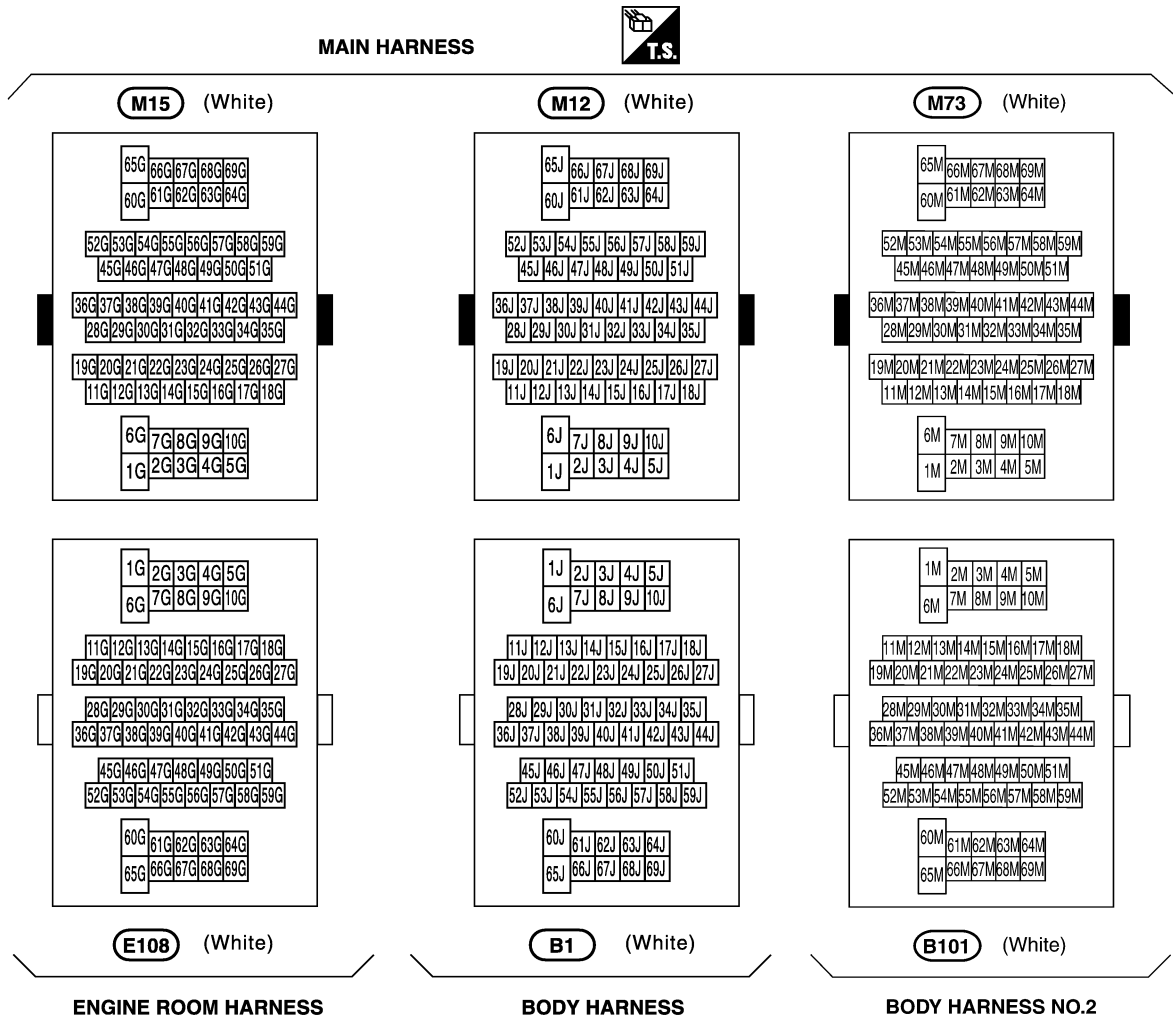
# SMJ (SUPER MULTIPLE JUNCTION)

## SMJ (SUPER MULTIPLE JUNCTION)

PFP:B4341

### Terminal Arrangement

AKS0012W



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

CKIT0184E

# SMJ (SUPER MULTIPLE JUNCTION)



## MAIN HARNESS

**M72** (White)

6H	7H	8H	9H	10H	21H	22H	23H	24H	25H	26H	27H	28H	29H	39H	40H	41H	42H	43H	44H	45H	46H		
1H	2H	3H	4H	5H	11H	12H	13H	14H	15H	16H	17H	18H	19H	20H	30H	31H	32H	33H	34H	35H	36H	37H	38H

1H	2H	3H	4H	5H	11H	12H	13H	14H	15H	16H	17H	18H	19H	20H	30H	31H	32H	33H	34H	35H	36H	37H	38H
6H	7H	8H	9H	10H	21H	22H	23H	24H	25H	26H	27H	28H	29H	39H	40H	41H	42H	43H	44H	45H	46H		

**F102** (White)

## ENGINE CONTROL HARNESS



## MAIN HARNESS

**M11** (White)

20K	21K	22K	23K	24K	25K	26K	27K	36K	37K	38K	39K		
11K	12K	13K	14K	15K	16K	17K	18K	19K	32K	33K	34K	35K	
1K	2K	3K	4K	5K	6K	7K	8K	9K	10K	28K	29K	30K	31K

**M74** (White)

20L	21L	22L	23L	24L	25L	26L	27L	36L	37L	38L	39L		
11L	12L	13L	14L	15L	16L	17L	18L	19L	32L	33L	34L	35L	
1L	2L	3L	4L	5L	6L	7L	8L	9L	10L	28L	29L	30L	31L

**D1** (White)

1K	2K	3K	4K	5K	6K	7K	8K	9K	10K	28K	29K	30K	31K
11K	12K	13K	14K	15K	16K	17K	18K	19K	32K	33K	34K	35K	
20K	21K	22K	23K	24K	25K	26K	27K	36K	37K	38K	39K		

**D31** (White)

1L	2L	3L	4L	5L	6L	7L	8L	9L	10L	28L	29L	30L	31L
11L	12L	13L	14L	15L	16L	17L	18L	19L	32L	33L	34L	35L	
20L	21L	22L	23L	24L	25L	26L	27L	36L	37L	38L	39L		

## FRONT DOOR HARNESS (DRIVER SIDE)

## FRONT DOOR HARNESS (PASSENGER SIDE)

CKIT0158E

# STANDARDIZED RELAY

PPF:00011

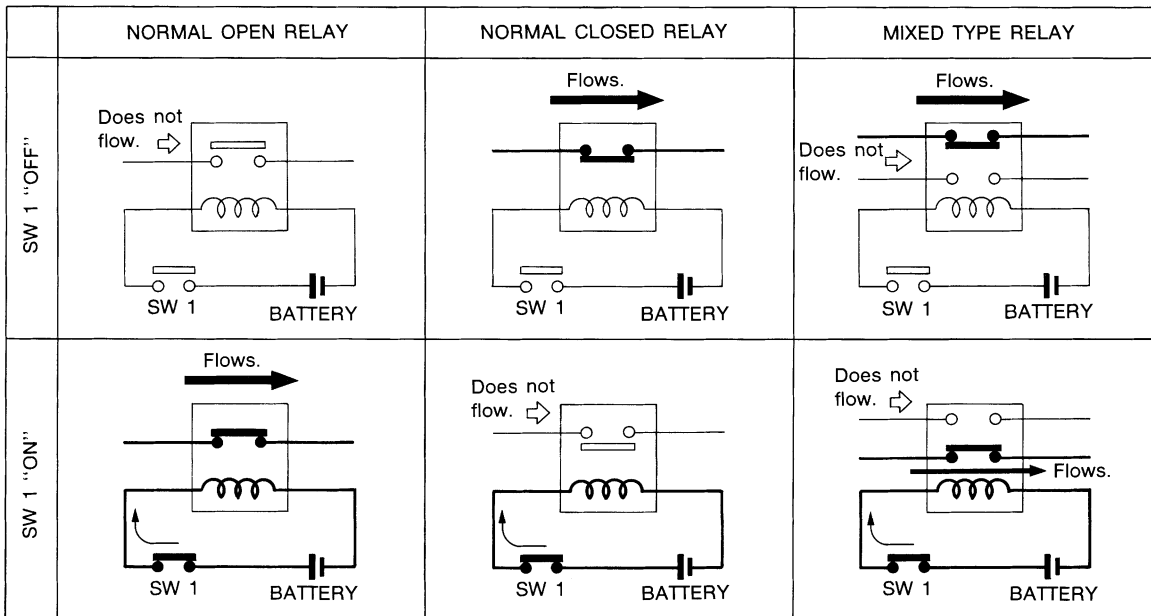
AKS0012X

## STANDARDIZED RELAY

### Description

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

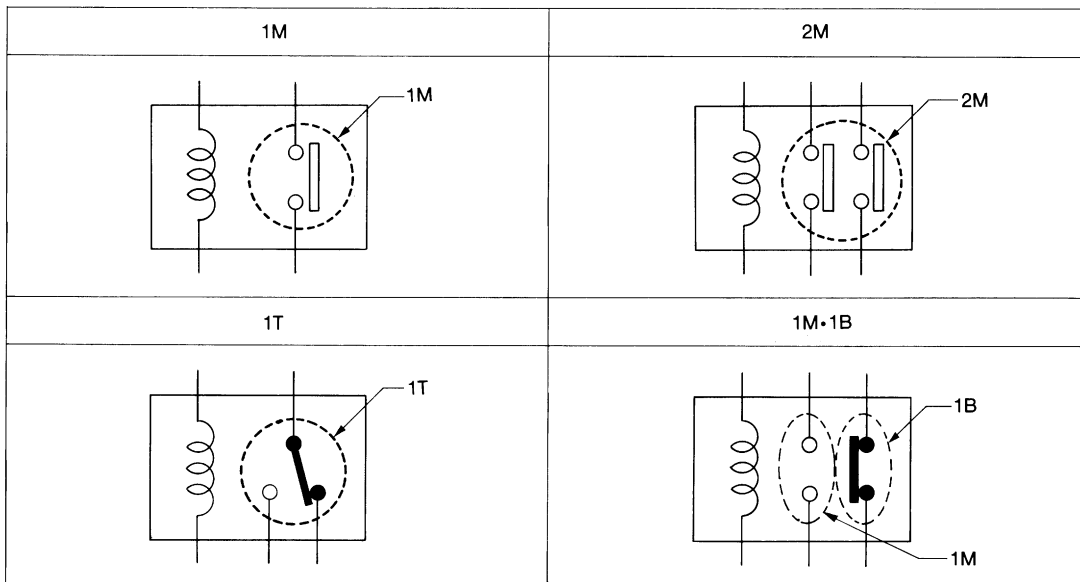
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



SEL881H

### TYPE OF STANDARDIZED RELAYS

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



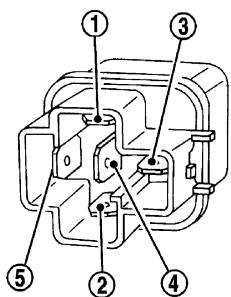
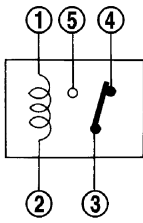
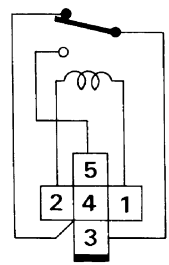
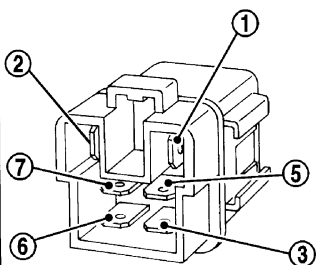
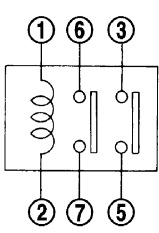
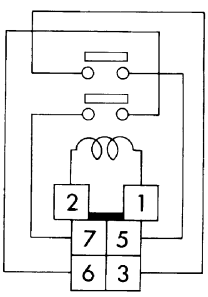
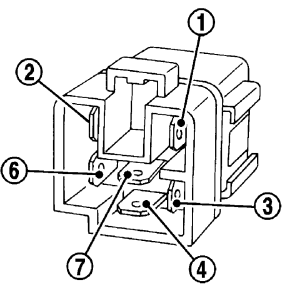
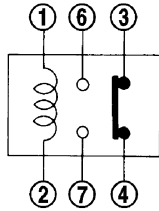
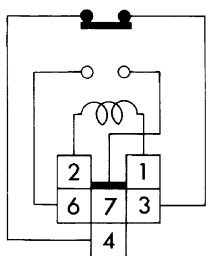
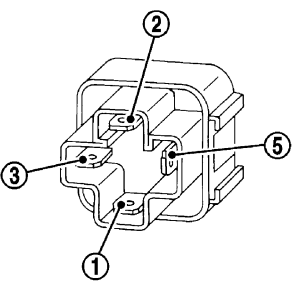
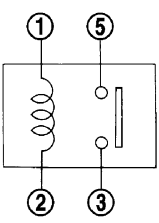
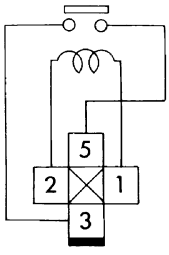
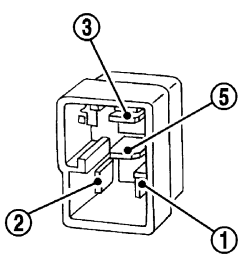
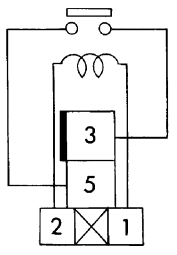
SEL882H

A  
B  
C  
D  
E  
F  
G  
H  
I  
J

PG

L  
M

# STANDARDIZED RELAY

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.

SEL188W

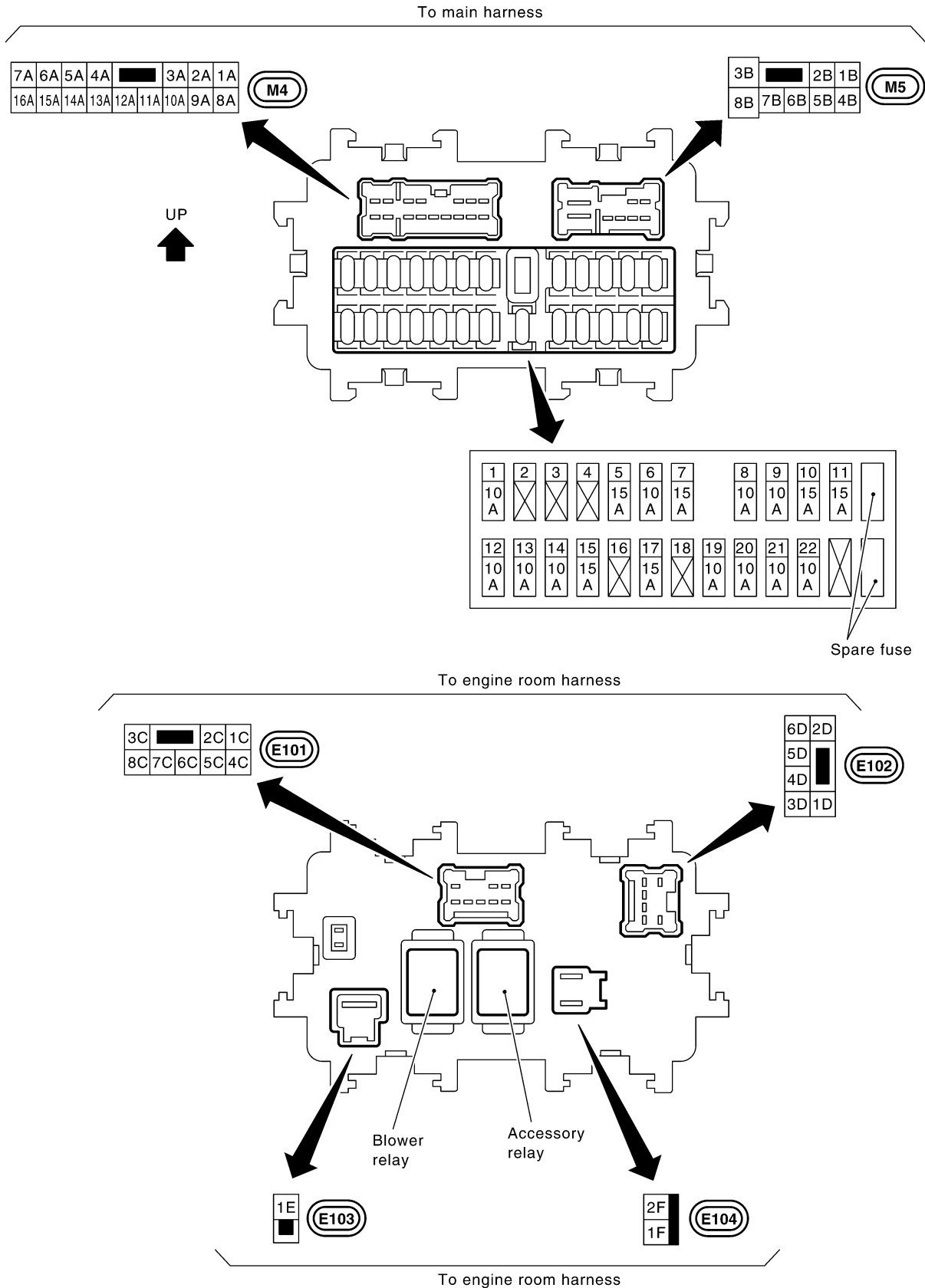
# FUSE BLOCK - JUNCTION BOX (J/B)

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

PPF:24350

### Terminal Arrangement

AKS0012Y



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
PG  
L  
M

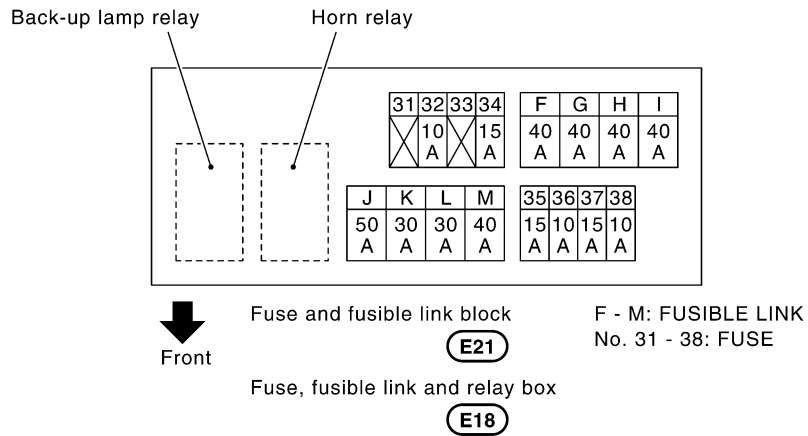
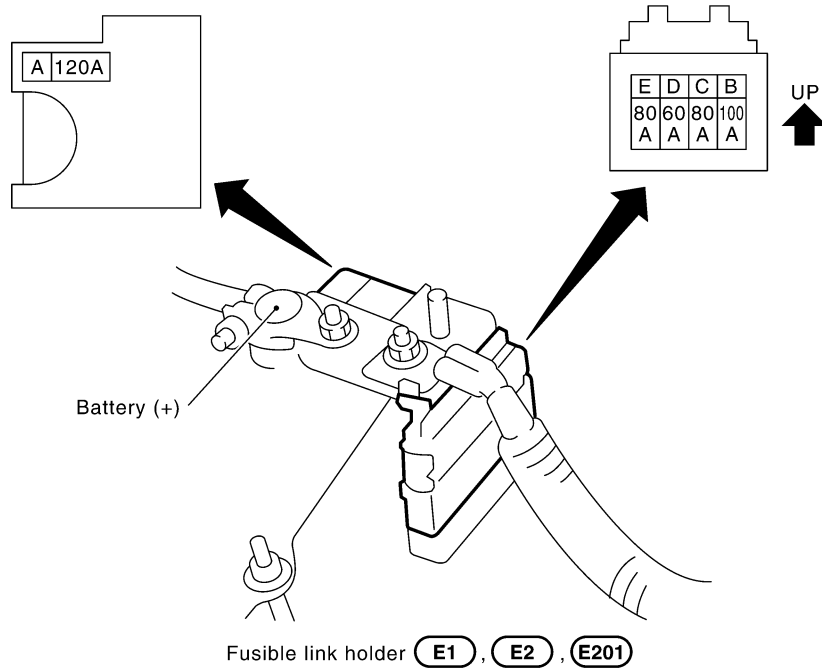
# FUSE, FUSIBLE LINK AND RELAY BOX

PFP:24382

## FUSE, FUSIBLE LINK AND RELAY BOX

### Terminal Arrangement

AKS0012Z



CKIT0186E