

SECTION **PG**

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

POWER SUPPLY ROUTING CIRCUIT	3	GROUND	31
Schematic	3	Ground Distribution	31
Wiring Diagram - POWER -	4	MAIN HARNESS	31
BATTERY POWER SUPPLY - IGNITION SW. IN		ENGINE ROOM HARNESS	34
ANY POSITION	4	ENGINE HARNESS/VK ENGINE MODELS	37
ACCESSORY POWER SUPPLY - IGNITION SW.		ENGINE HARNESS/VQ ENGINE MODELS	38
IN "ACC" OR "ON"	10	ENGINE CONTROL HARNESS/VK ENGINE	
IGNITION POWER SUPPLY - IGNITION SW. IN		MODELS	39
"ON" AND/OR "START"	12	ENGINE CONTROL HARNESS/VQ ENGINE	
Fuse	17	MODELS	40
Fusible Link	17	BODY HARNESS	41
Circuit Breaker	17	BODY NO. 2 HARNESS	44
IPDM E/R (INTELLIGENT POWER DISTRIBUTION		ROOM LAMP HARNESS	45
MODULE ENGINE ROOM)	18	HARNESS	46
System Description	18	Harness Layout	46
SYSTEMS CONTROLLED BY IPDM E/R	18	HOW TO READ HARNESS LAYOUT	46
CAN COMMUNICATION LINE CONTROL	18	OUTLINE	47
IPDM E/R STATUS CONTROL	19	MAIN HARNESS	48
CAN Communication System Description	19	ENGINE ROOM HARNESS	51
CAN Communication Unit	19	ENGINE HARNESS/VK ENGINE MODELS	54
Function of Detecting Ignition Relay Malfunction ...	19	ENGINE HARNESS/VQ ENGINE MODELS	55
CONSULT-II Function (IPDM E/R)	20	ENGINE CONTROL HARNESS/VK ENGINE	
CONSULT-II INSPECTION PROCEDURE	20	MODELS	56
SELF-DIAG RESULTS	21	ENGINE CONTROL HARNESS/VQ ENGINE	
DATA MONITOR	22	MODELS	58
ACTIVE TEST	22	BODY HARNESS	60
Auto Active Test	24	BODY NO. 2 HARNESS	62
DESCRIPTION	24	ROOM LAMP HARNESS	63
OPERATION PROCEDURE	24	FRONT DOOR HARNESS	64
INSPECTION IN AUTO ACTIVE TEST MODE ...	24	REAR DOOR HARNESS	65
Schematic	26	BACK DOOR HARNESS	66
IPDM E/R Terminal Arrangement	27	Wiring Diagram Codes (Cell Codes)	67
IPDM E/R Power/Ground Circuit Inspection	28	ELECTRICAL UNITS LOCATION	70
Inspection With CONSULT-II (Self-Diagnosis)	29	Electrical Units Location	70
Removal and Installation of IPDM E/R	30	ENGINE COMPARTMENT	70
REMOVAL	30	PASSENGER COMPARTMENT	71
INSTALLATION	30	LUGGAGE COMPARTMENT	73
		HARNESS CONNECTOR	74
		Description	74
		HARNESS CONNECTOR (TAB-LOCKING	

TYPE)	74	STANDARDIZED RELAY	80
HARNESS CONNECTOR (SLIDE-LOCKING		Description	80
TYPE)	75	NORMAL OPEN, NORMAL CLOSED AND	
ELECTRICAL UNITS	76	MIXED TYPE RELAYS	80
Terminal Arrangement	76	TYPE OF STANDARDIZED RELAYS	80
SMJ (SUPER MULTIPLE JUNCTION)	78	FUSE BLOCK - JUNCTION BOX (J/B)	82
Terminal Arrangement	78	Terminal Arrangement	82
		FUSE, FUSIBLE LINK AND RELAY BOX	83
		Terminal Arrangement	83

POWER SUPPLY ROUTING CIRCUIT

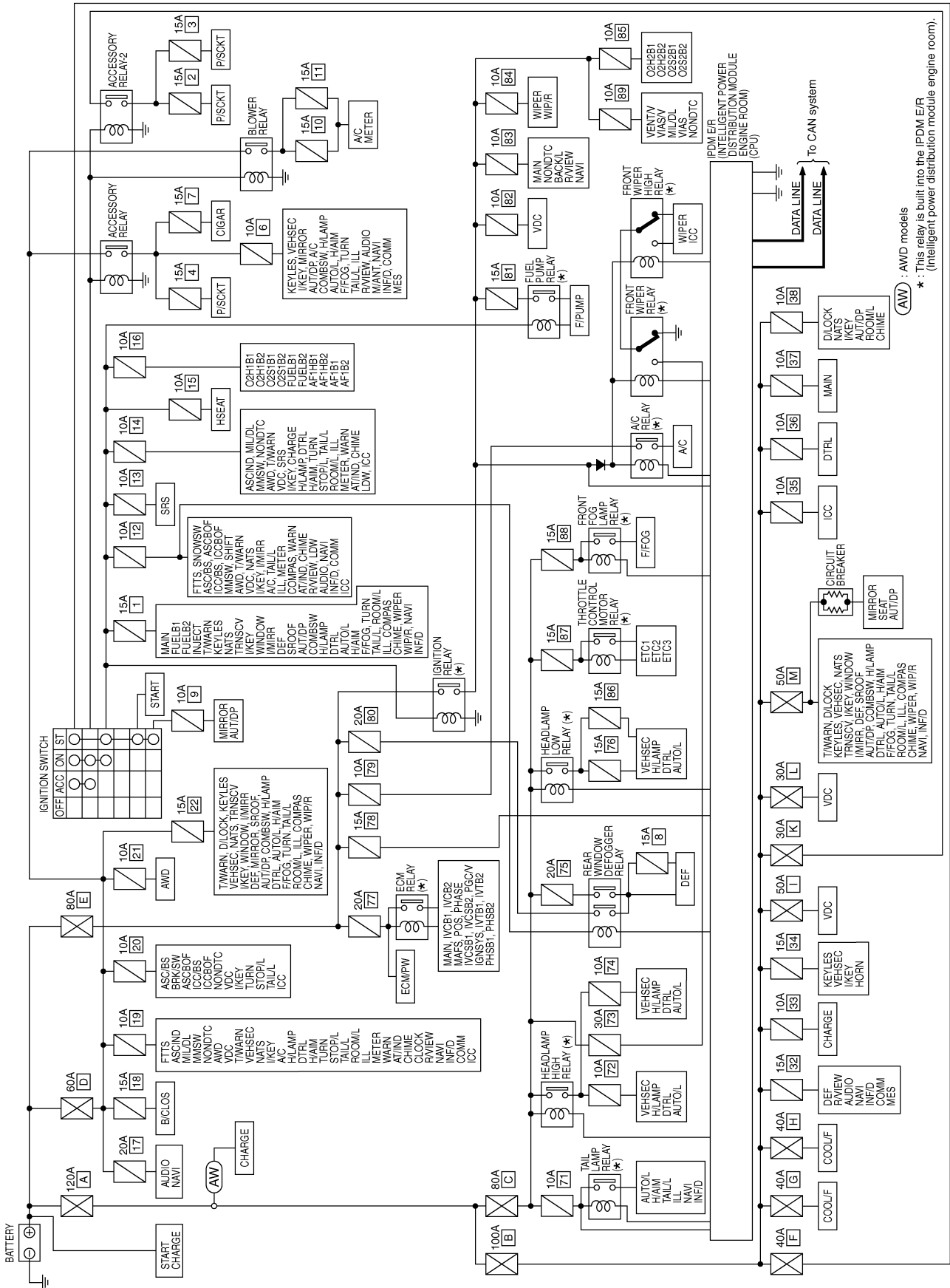
PPF:24110

POWER SUPPLY ROUTING CIRCUIT

Schematic

AKS007VU

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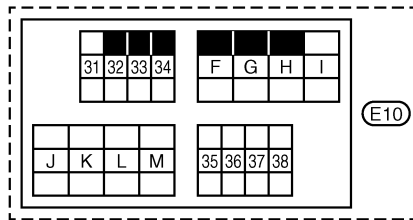
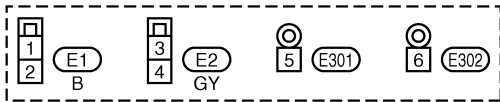
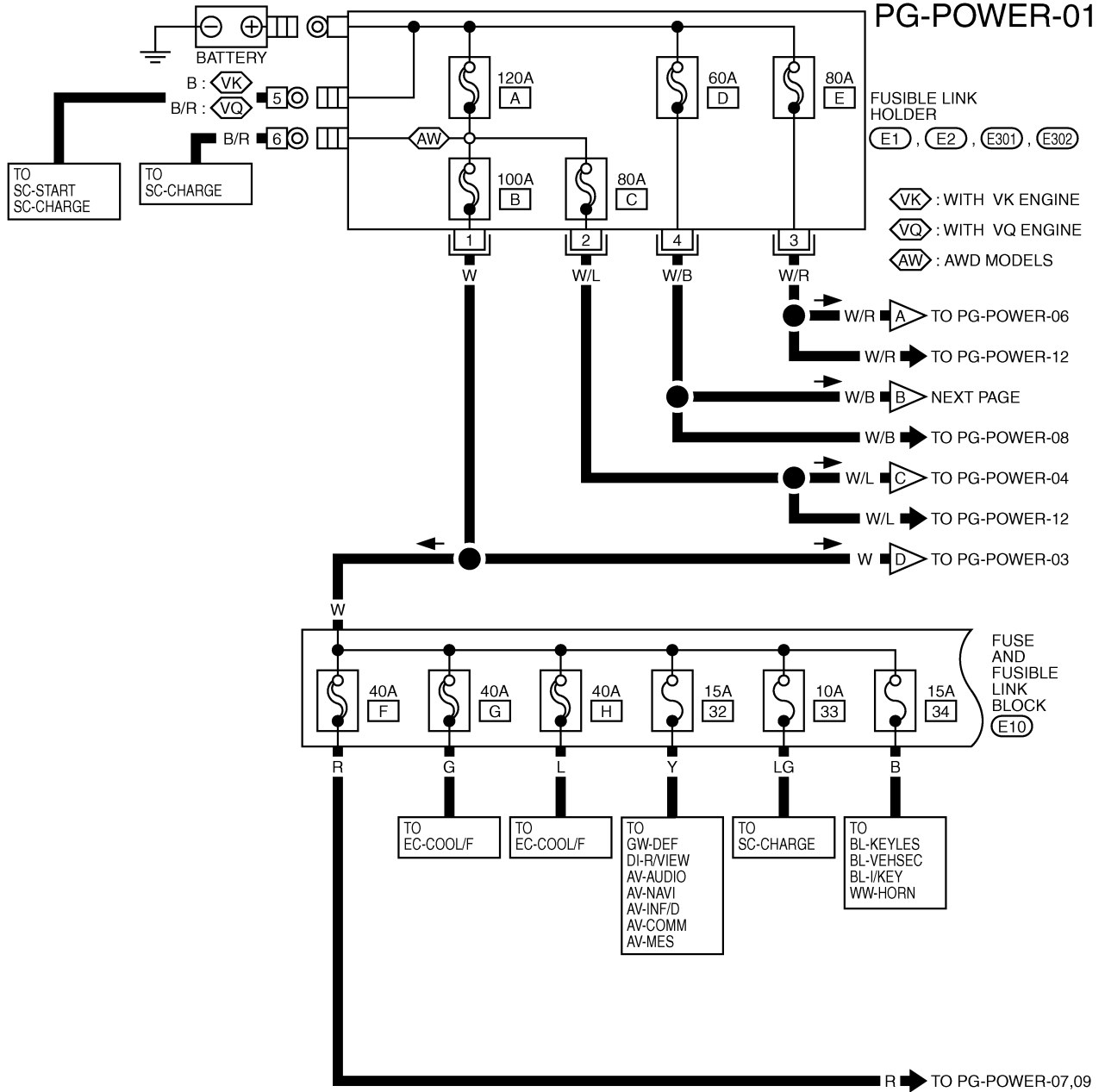


TKWM2095E

POWER SUPPLY ROUTING CIRCUIT

AKS007VV

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

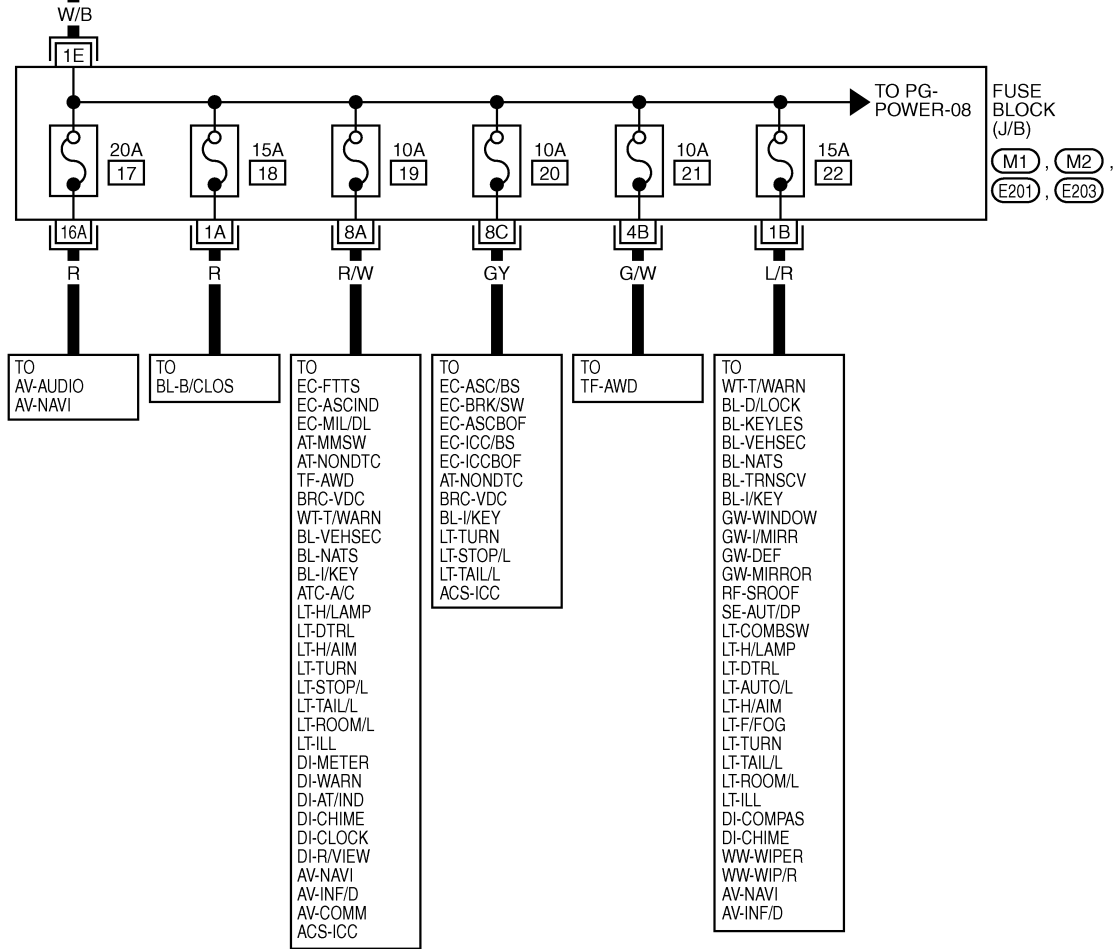


TKWM0708E

POWER SUPPLY ROUTING CIRCUIT

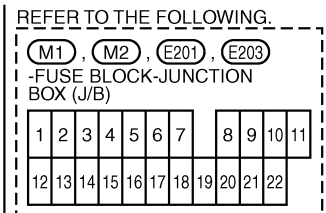
PG-POWER-02

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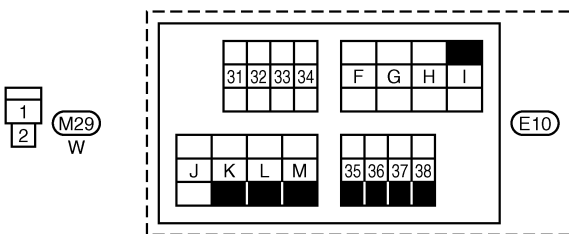
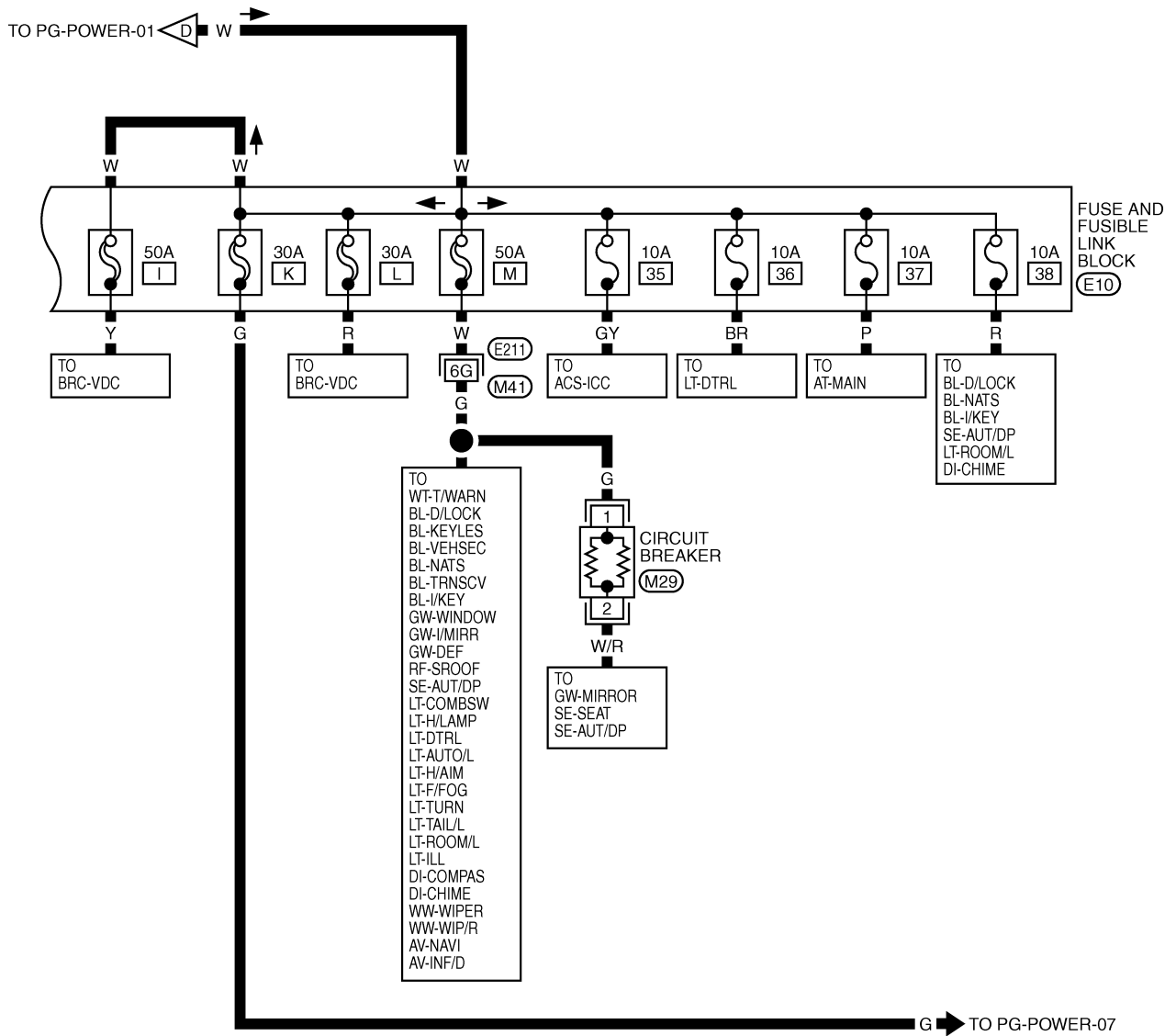
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TKWM1306E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-03



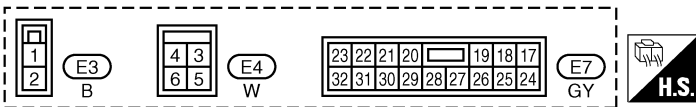
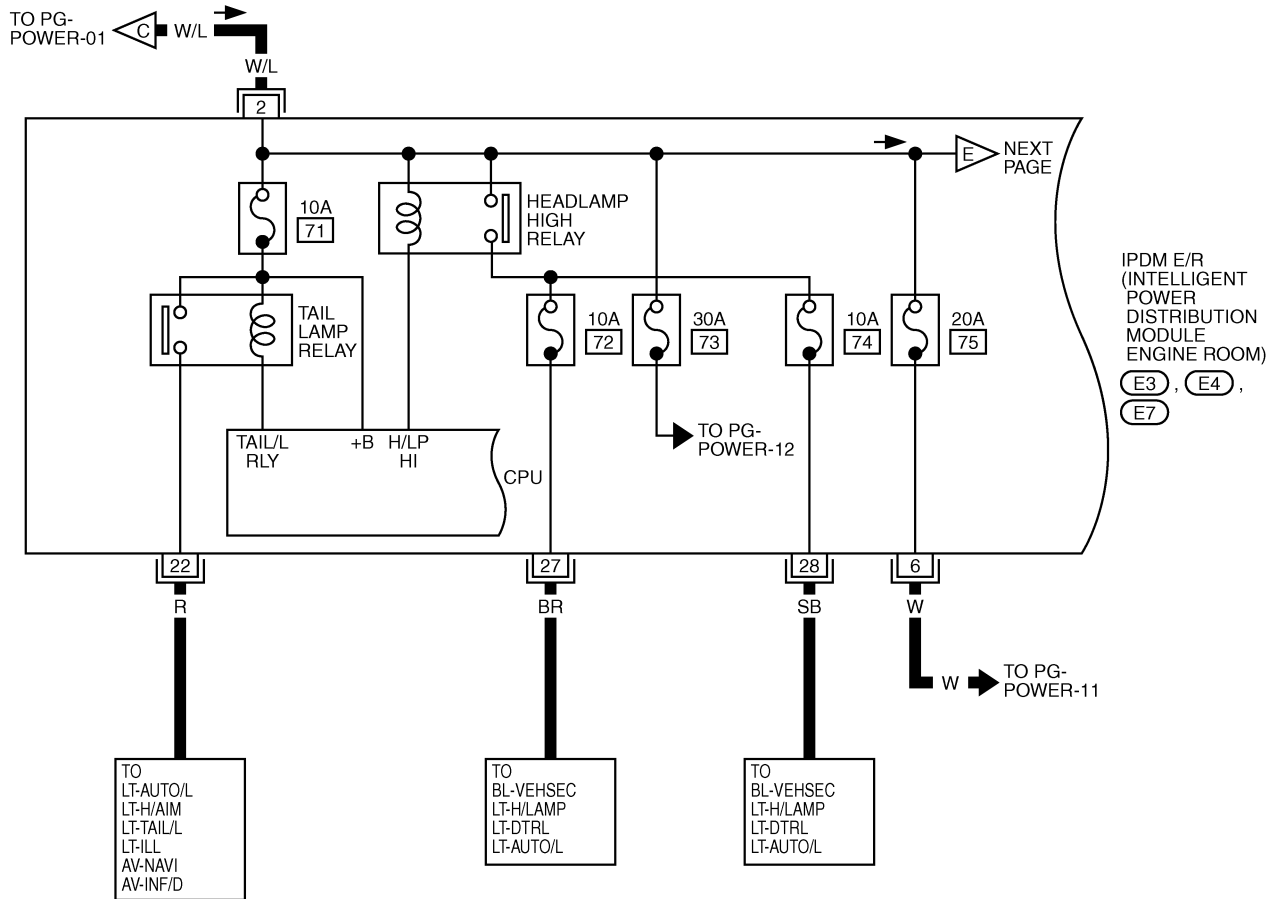
REFER TO THE FOLLOWING.
 (E21) -SUPER MULTIPLE JUNCTION (SMJ)

TKWB0264E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-04

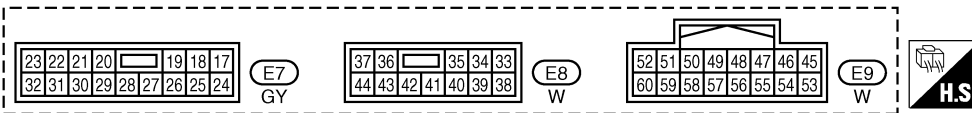
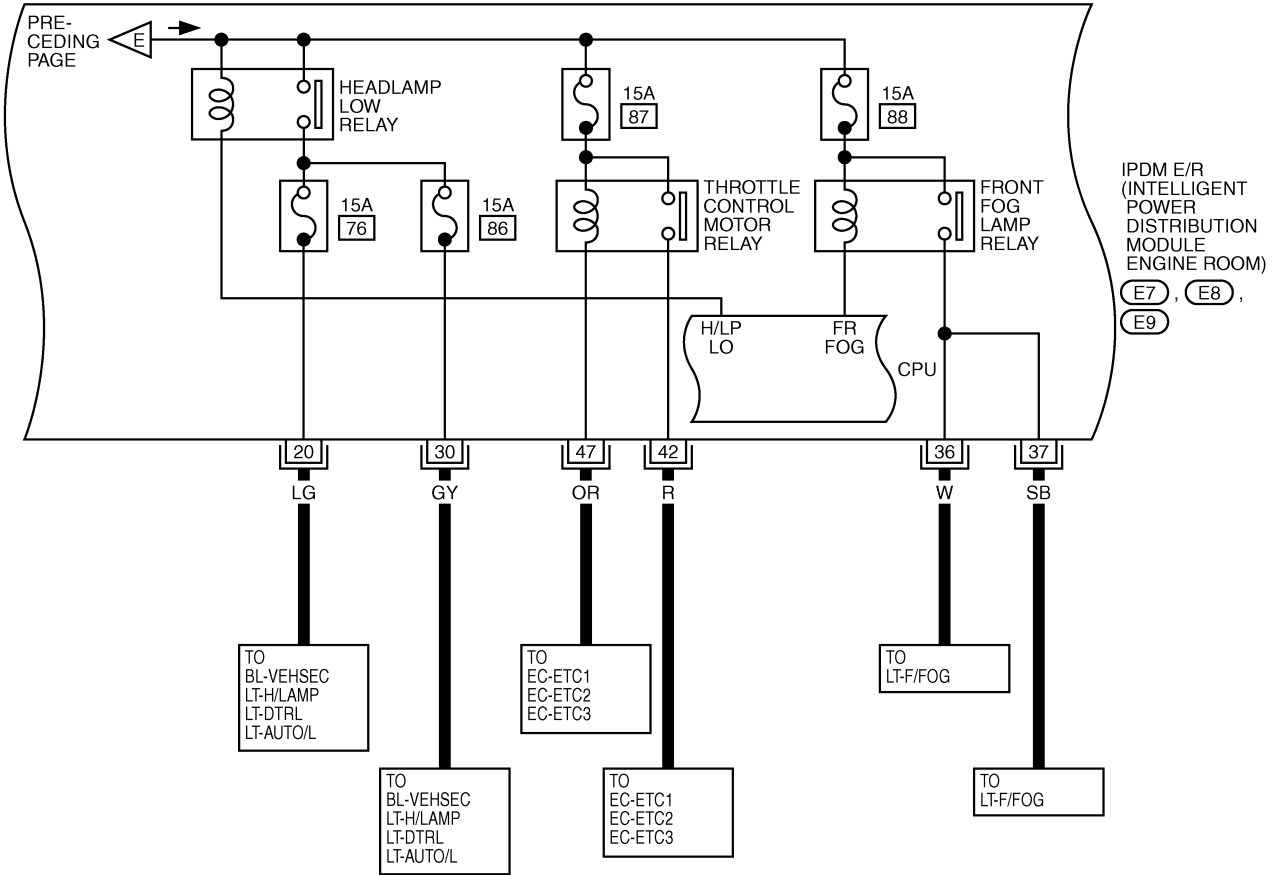
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TKWM0711E

POWER SUPPLY ROUTING CIRCUIT

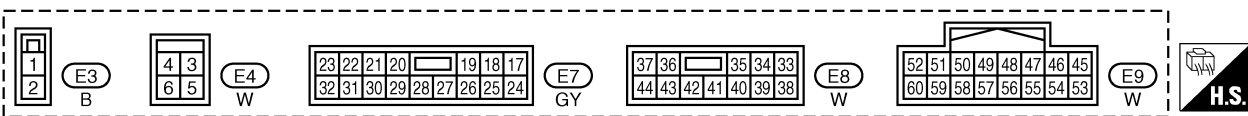
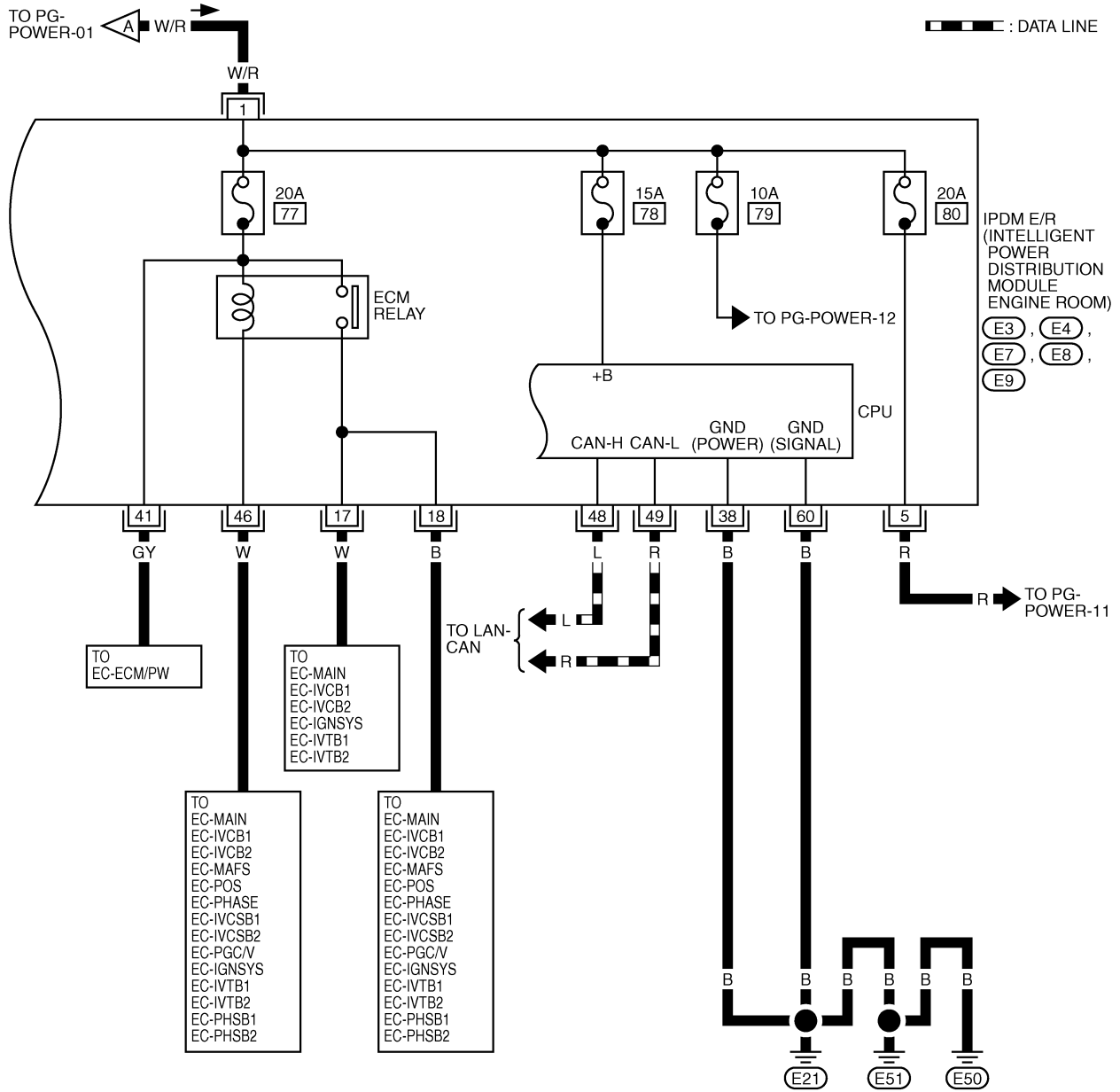
PG-POWER-05



TKWM0712E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-06

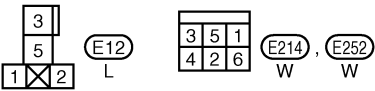
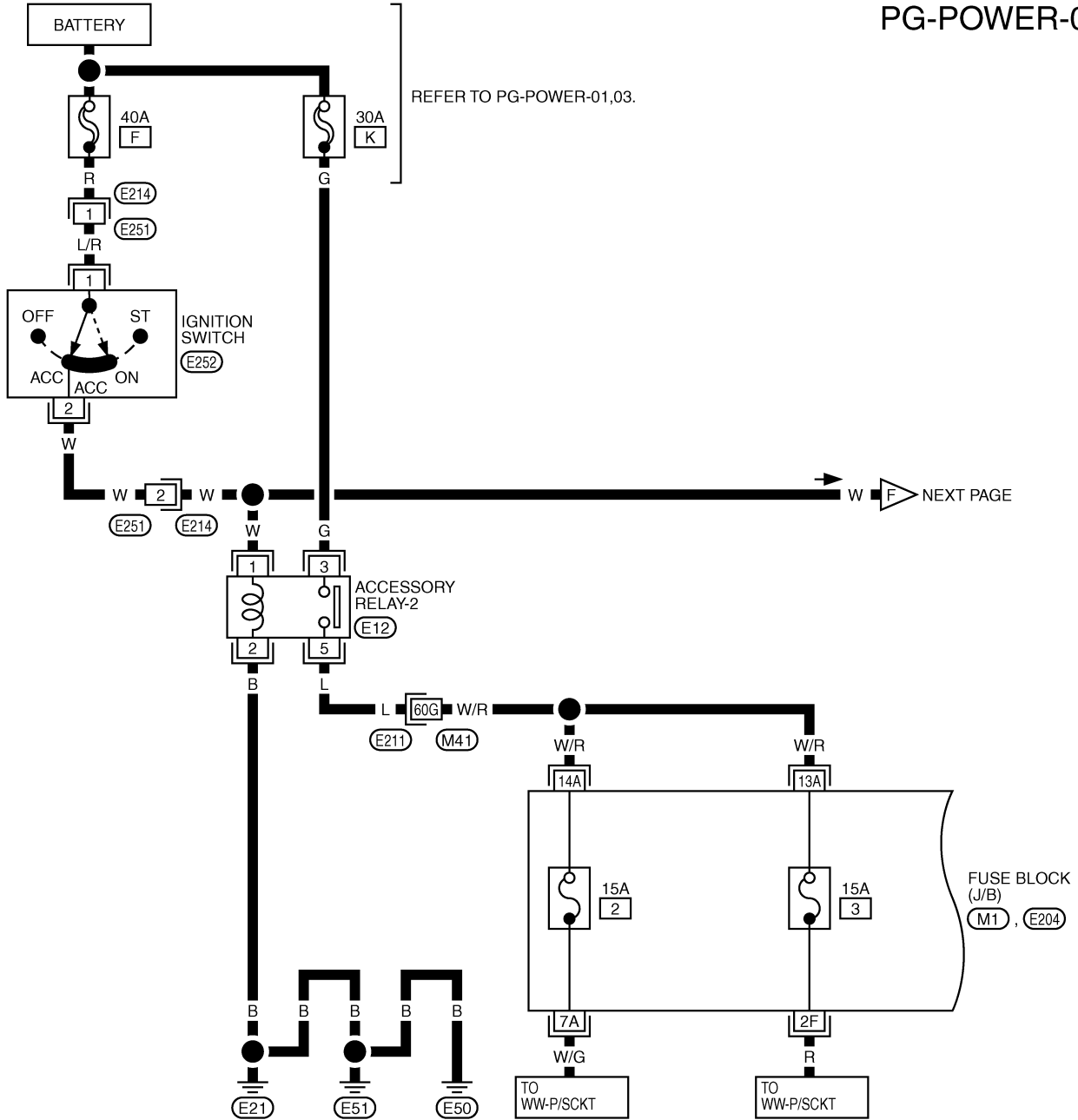


TKWM0713E

POWER SUPPLY ROUTING CIRCUIT

ACCESSORY POWER SUPPLY - IGNITION SW. IN "ACC" OR "ON"

PG-POWER-07



REFER TO THE FOLLOWING.

(E211) -SUPER MULTIPLE JUNCTION (SMJ)

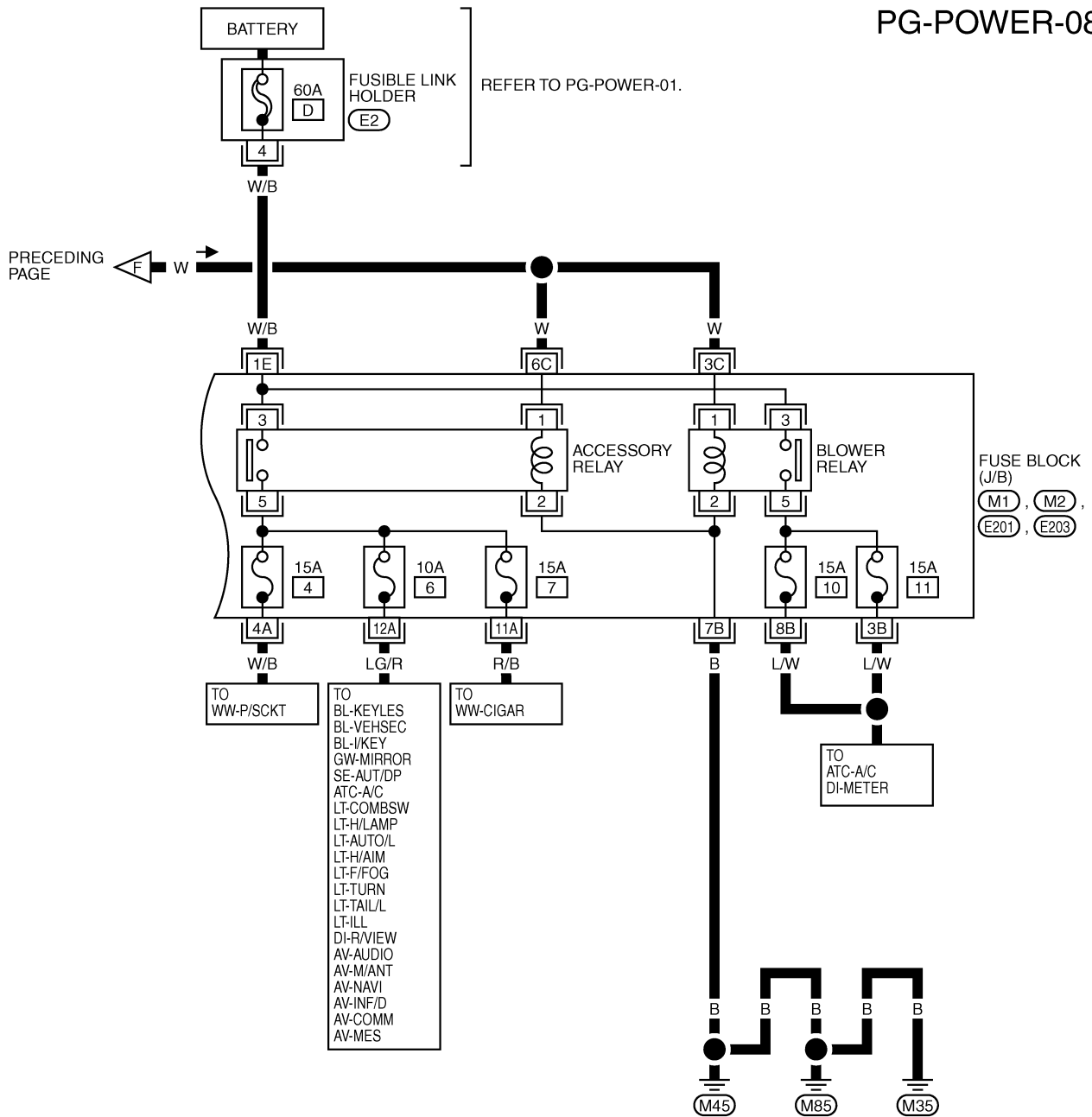
(M1), (E204) -FUSE BLOCK-JUNCTION BOX(J/B)

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

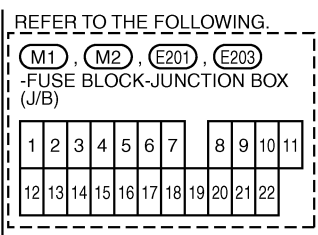
TKWM0714E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-08



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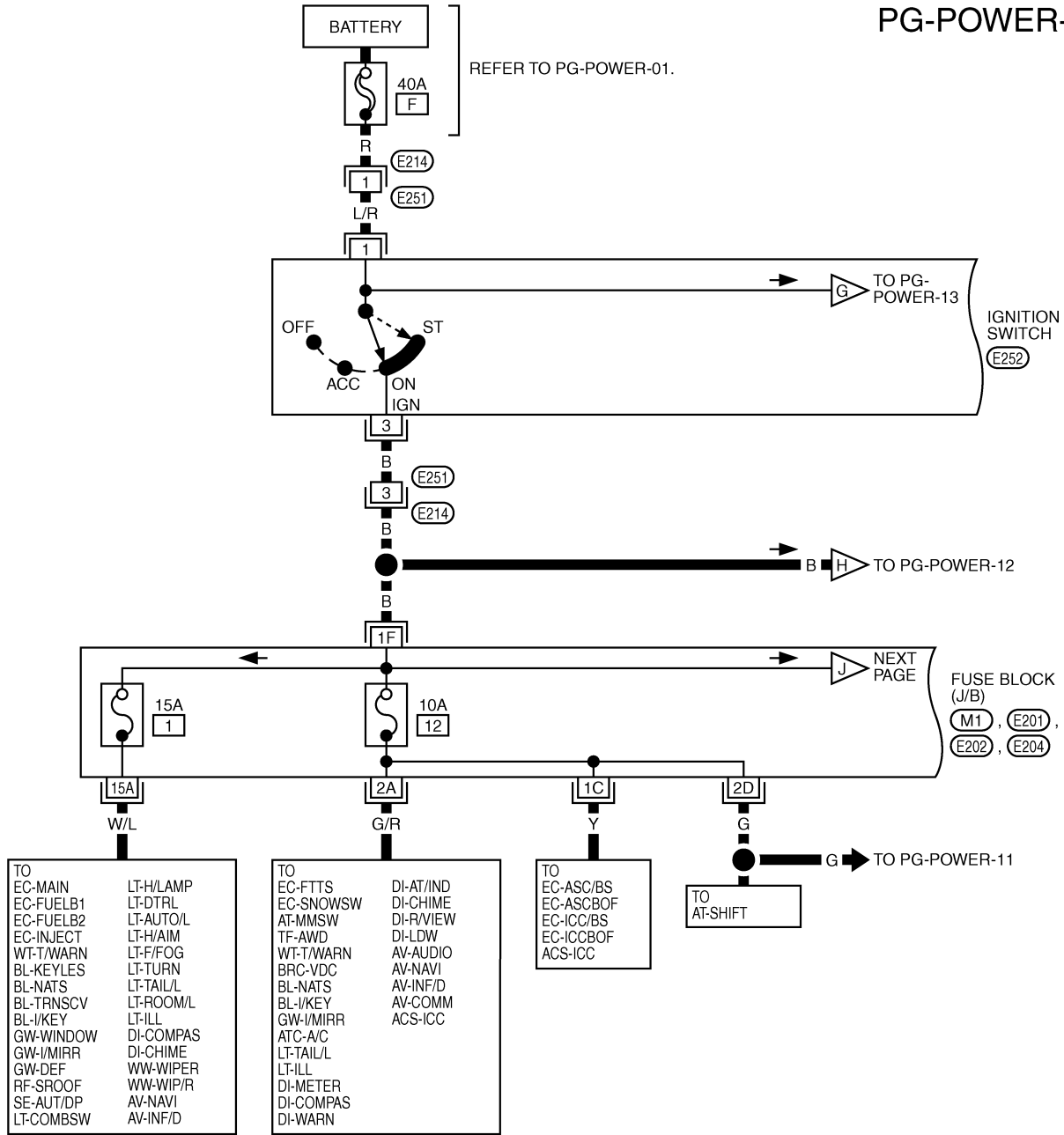


TKWM2097E

POWER SUPPLY ROUTING CIRCUIT

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)

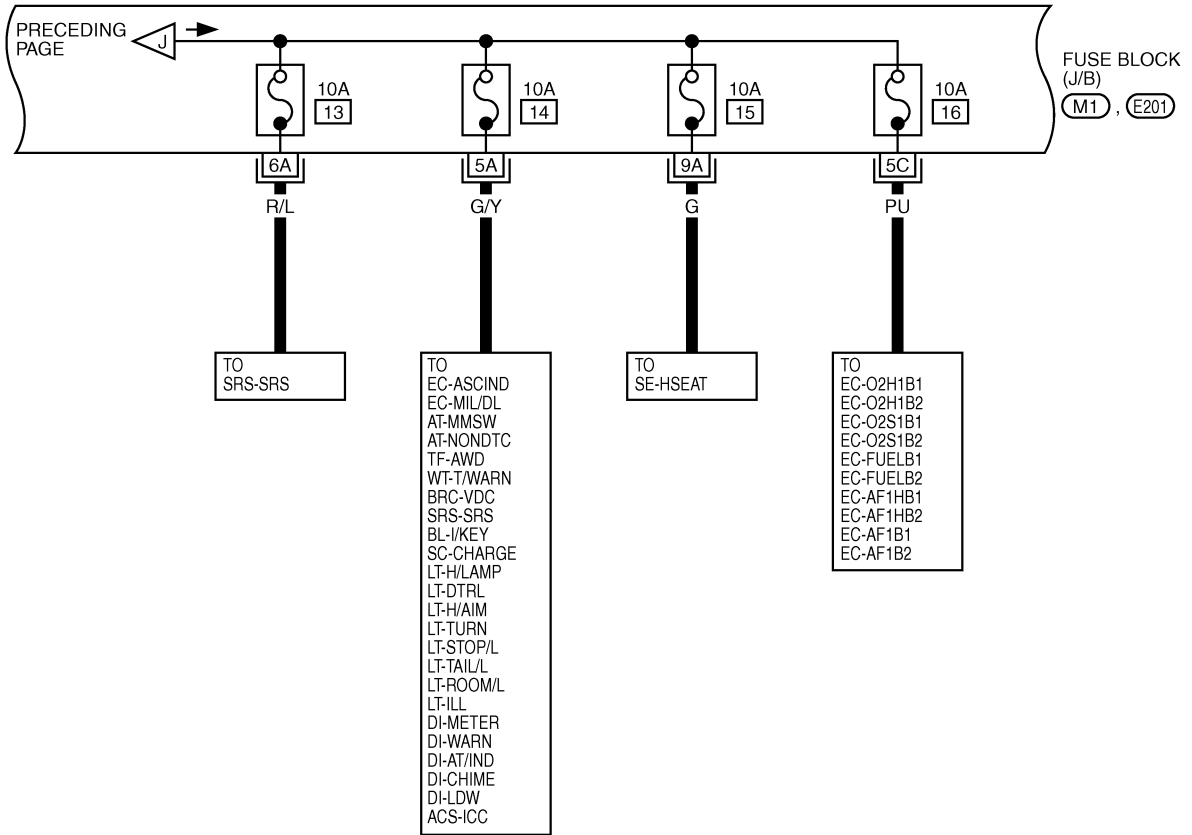
1	2	3	4	5	6	7	8	9	10	11
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TKWM2098E

POWER SUPPLY ROUTING CIRCUIT

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REFER TO THE FOLLOWING.

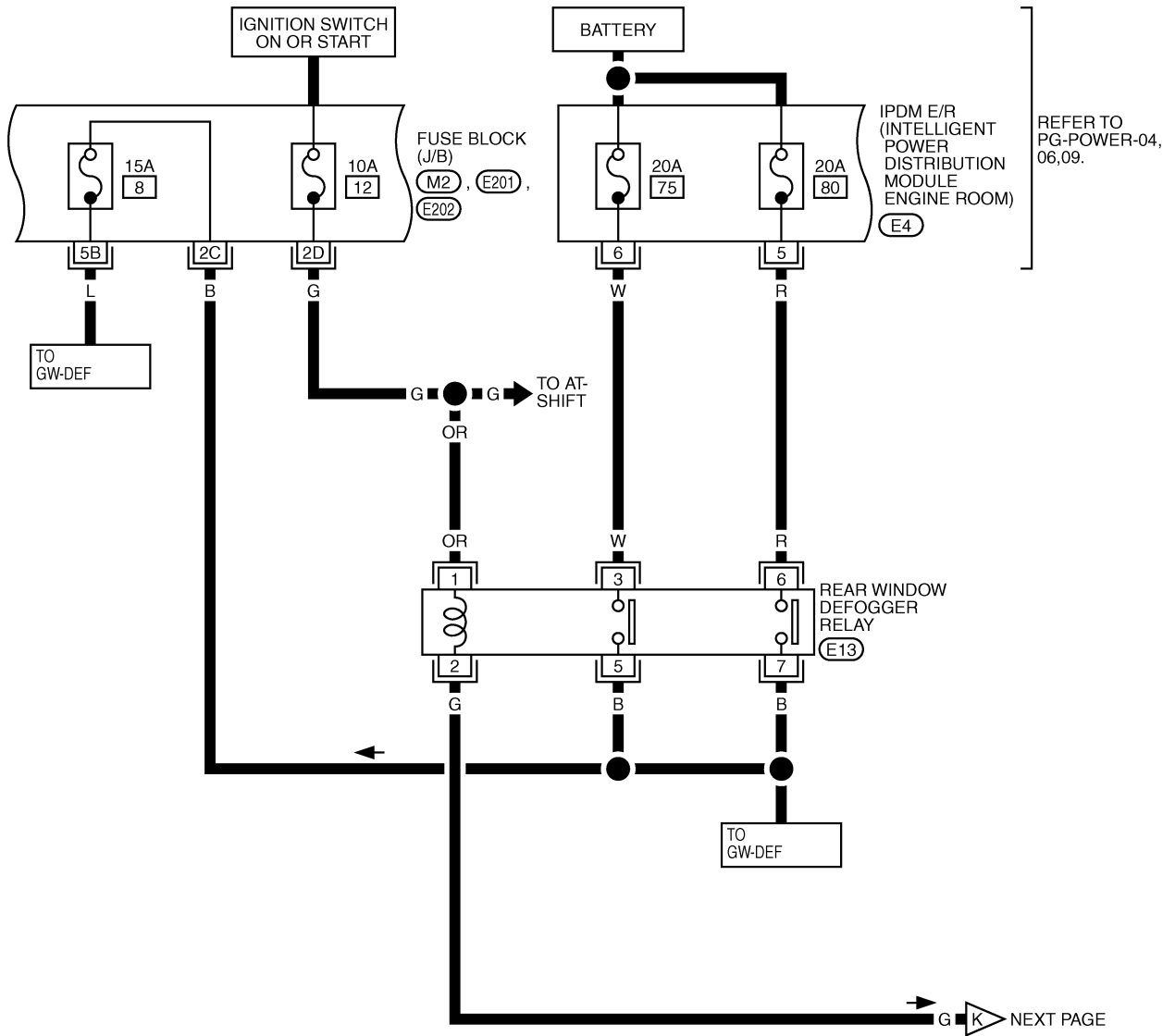
(M1), (E201) - FUSE BLOCK-JUNCTION BOX (J/B)

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

TKWM2099E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-11



(E4)
W



(E13)
BR

REFER TO THE FOLLOWING.

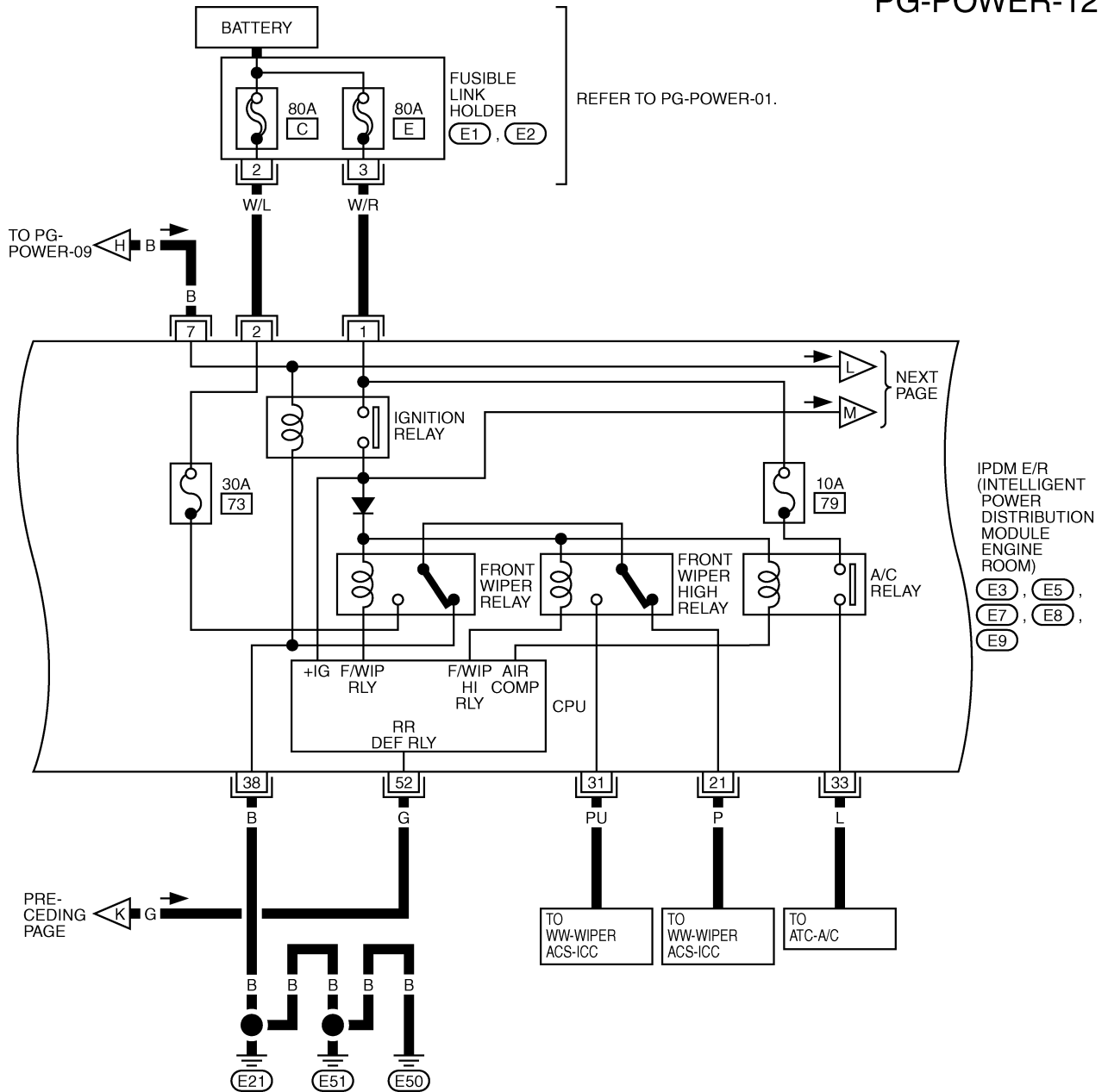
(M2), (E201), (E202) - FUSE BLOCK-JUNCTION BOX (J/B)

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

TKWM1096E

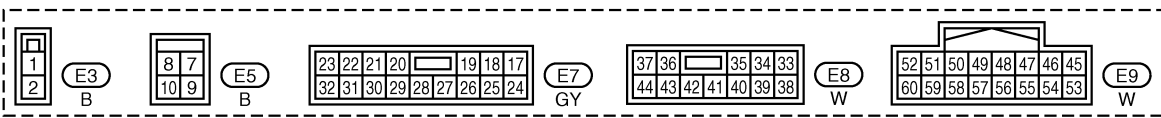
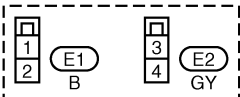
POWER SUPPLY ROUTING CIRCUIT

PG-POWER-12



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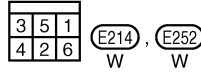
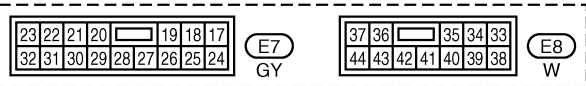
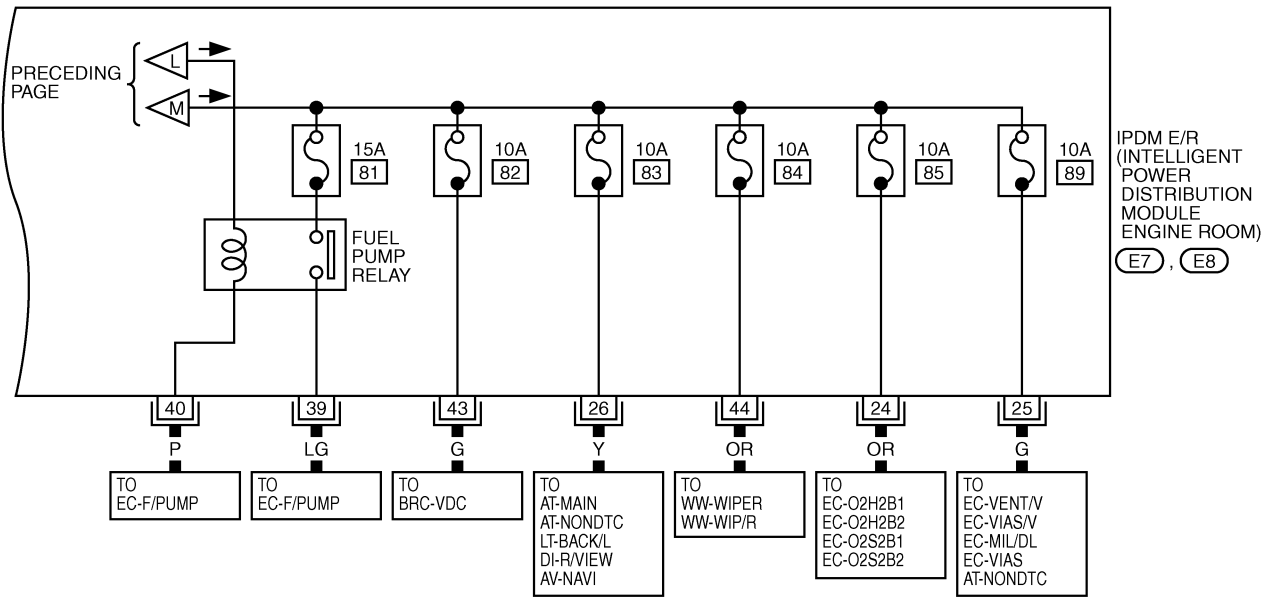
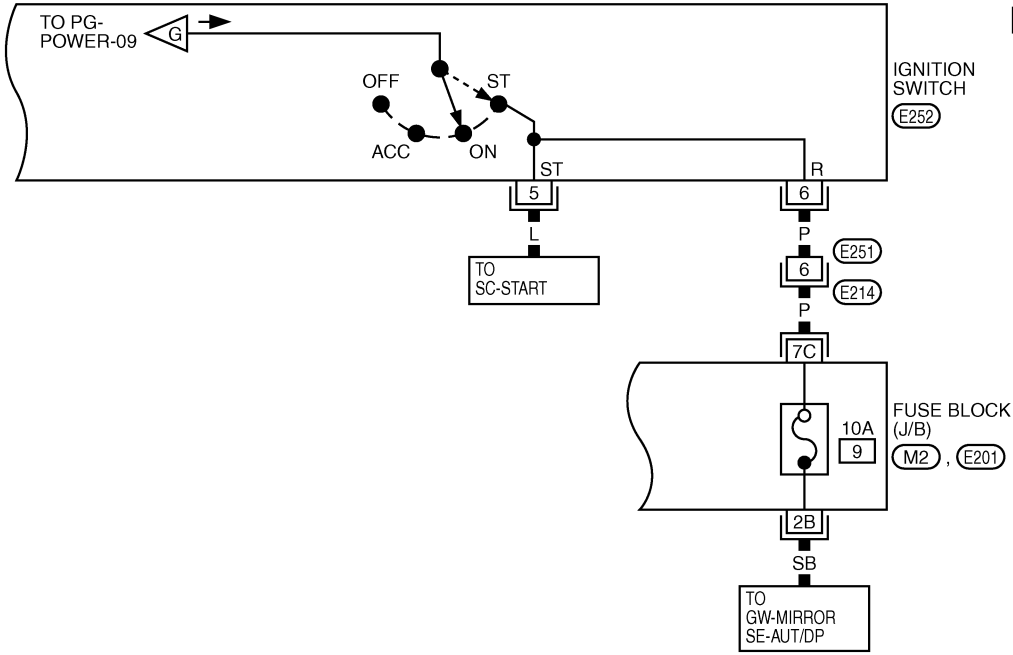
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TKWM0719E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-13



REFER TO THE FOLLOWING.

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

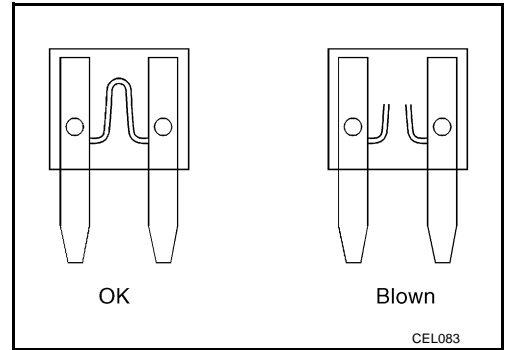
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWM2525E

POWER SUPPLY ROUTING CIRCUIT

Fuse

- 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.

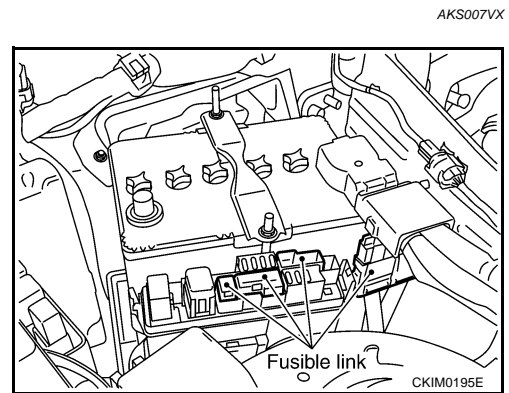


Fusible Link

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.

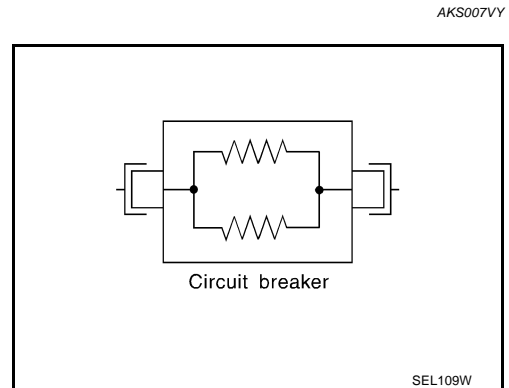
CAUTION:

- 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

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.



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

PFP:284B7

System Description

AKS005S9

- 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

1. Lamp control
Using CAN communication line, it receives signal from BCM and controls the following lamps:
 - Headlamps (Hi, Lo)
 - Parking, license plate and tail lamps
 - Tail lamps
 - Front fog 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 compressor.
5. Cooling fan control
Using CAN communication line, it receives signals from ECM and controls cooling fan .
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"> ● With the ignition switch ON, the headlamp (low) is ON. ● With the ignition switch OFF, the headlamp (low) is OFF.
Parking, license plate and tail lamps	<ul style="list-style-type: none"> ● With the ignition switch ON, the parking, license plate and tail lamps is ON. ● With the ignition switch OFF, the parking, license plate and tail lamps is OFF.
Cooling fan	<ul style="list-style-type: none"> ● With the ignition switch ON, the cooling fan HI operates. ● With the ignition switch OFF, the cooling fan stops.
Front wiper	Until the ignition switch is turned off, the front wiper LO and HI remains in the same status it was in just before fail-safe control was initiated.
Rear window defogger	Rear window defogger relay is OFF
A/C compressor	A/C compressor is OFF
Front fog lamps	Front fog lamp is 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 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

AKS005SA

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

AKS00AOF

Refer to [LAN-30, "CAN Communication Unit"](#).

Function of Detecting Ignition Relay Malfunction

AKS005SB

- 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 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.

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

CONSULT-II Function (IPDM E/R)

AKS005SC

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

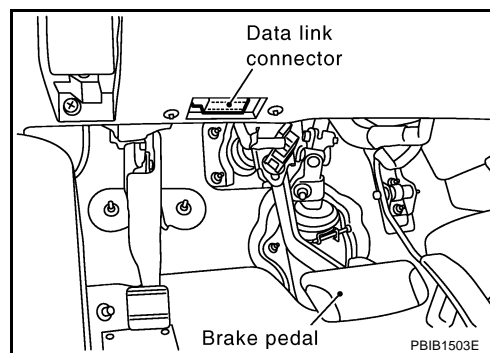
Inspection Item, Diagnosis Mode	Description
SELF-DIAG RESULTS	The IPDM E/R performs diagnosis of the CAN communication and self-diagnosis.
DATA MONITOR	The input/output data of the IPDM E/R is displayed in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication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

CONSULT-II INSPECTION PROCEDURE

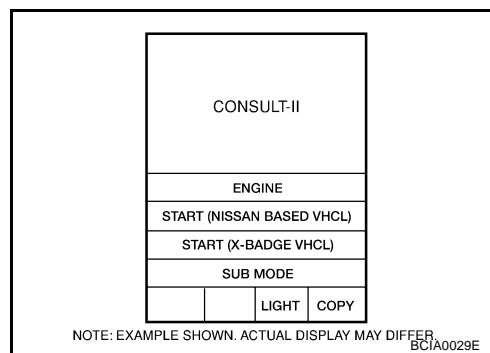
CAUTION:

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

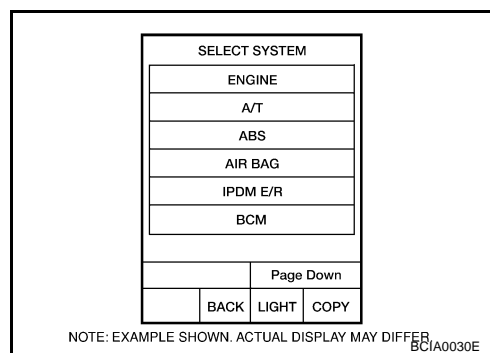
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.



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

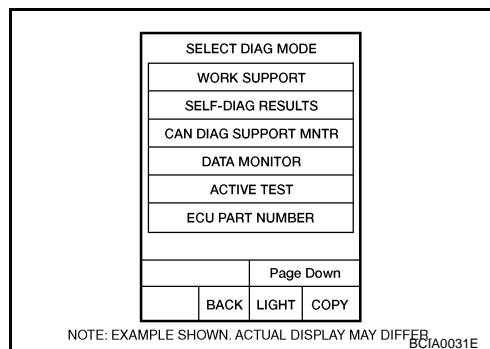


3. Touch "IPDM E/R" on "SELECT SYSTEM" screen. If "IPDM E/R" is not indicated, refer to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



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

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



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SELF-DIAG RESULTS

Operation Procedure

- Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen.
- Check display content in self-diagnostic results.

Display Item List

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

NOTE:

The details for display of the period are as follows:

- CRNT: Error currently detected with IPDM E/R.
- PAST: Error detected in the past and memorized with IPDM E/R.

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

DATA MONITOR

Operation Procedure

1. Touch "DATA MONITOR" on "SELECT MONITOR ITEM" screen.
2. Touch "ALL SIGNALS", "MAIN SIGNALS" or "SELECTION FROM MENU" on the "DATA MONITOR" screen.

ALL SIGNALS	All items will be monitored.
MAIN SIGNALS	Monitor the predetermined item.
SELECTION FROM MENU	Select any item for monitoring.

3. Touch the required monitoring item on "SELECTION FROM MENU". In "ALL SIGNALS", all items are monitored. In "MAIN SIGNALS", predetermined items are monitored.
4. Touch "START".
5. Touch "RECORD" while monitoring to record the status of the item being monitored. To stop recording, touch "STOP".

All Signals, Main Signals, Selection From Menu

Item name	CONSULT-II screen display	Display or unit	SELECT MONITOR ITEM			Description
			ALL SIGNALS	MAIN SIGNALS	SELECTION FROM MENU	
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/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*1	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*2	OFF/LEFT/RIGHT	×		×	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

Operation Procedure

1. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
2. Touch item to be tested.

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

3. Touch "START", and confirm its operation.
4. Touch "STOP" while testing to stop the operation.

Test item	CONSULT-II 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.
Front wiper (HI, LO) operation	FRONT WIPER	With a certain operation (OFF, HI ON, LO ON), 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 ON, LO ON, FOG ON), the lamp relay (Lo, Hi, Fog) can be operated.
Cornering lamp operation	CORNERING LAMP ^{NOTE}	—
Horn operation	HORN	With a certain ON-OFF operation, the horn relay can be operated.

NOTE:

This item is displayed, but cannot be tested.

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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
- Parking, license plate 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:

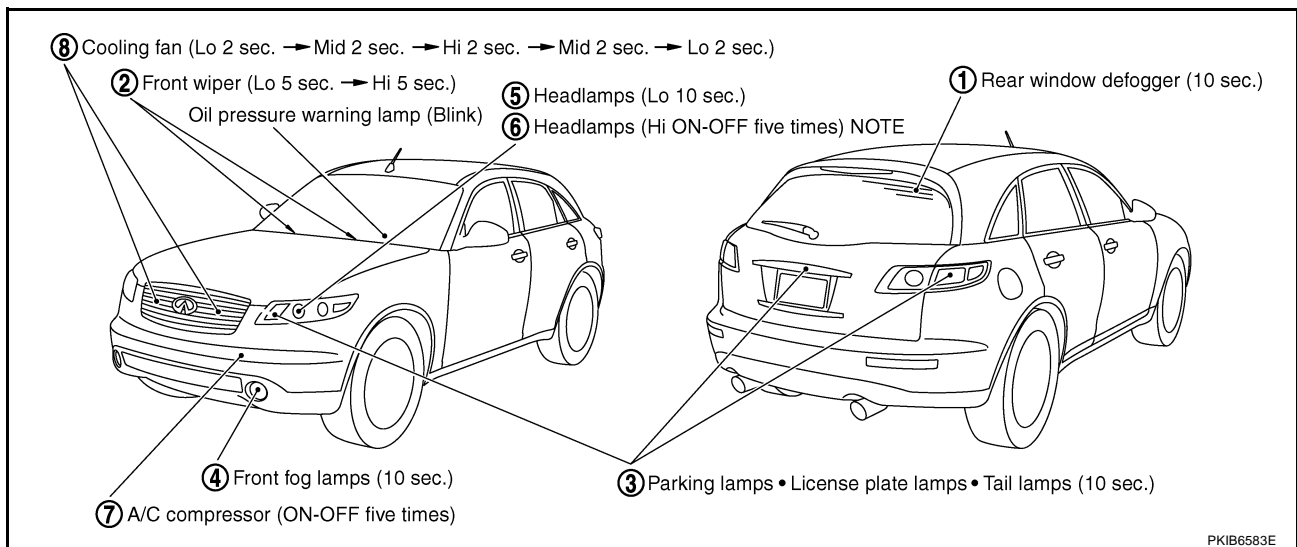
When auto active test mode has to be cancelled halfway, turn ignition switch OFF.

CAUTION:

Be sure to inspect **BL-42. "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.



NOTE:

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

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.

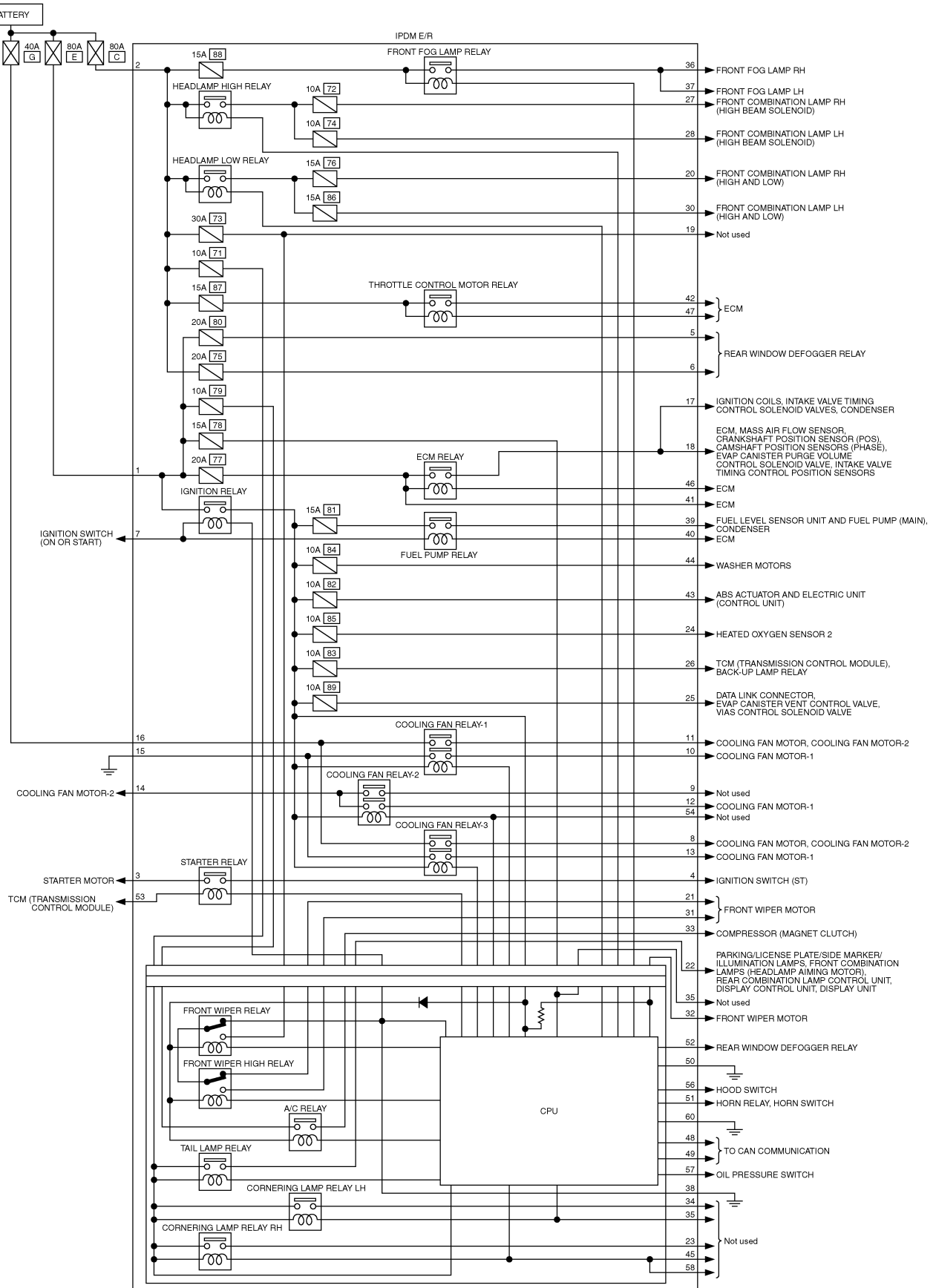
Diagnosis chart in auto active test mode

Symptom	Inspection contents	Possible cause	
Any of front wipers, tail and parking lamps, front fog lamps, and head lamps (Hi, Lo) do not operate.	Perform auto active test. Does system in question operate?	YES	● BCM signal input system malfunction
		NO	<ul style="list-style-type: none"> ● Lamp/wiper motor malfunction ● Lamp/wiper motor ground circuit malfunction ● Harness/connector malfunction between IPDM E/R and system in question ● IPDM E/R (integrated relay) malfunction
Rear window defogger does not operate.	Perform auto active test. Does rear window defogger operate?	YES	● BCM signal input circuit malfunction
		NO	<ul style="list-style-type: none"> ● 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.	Perform auto active test. Does magnetic clutch operate?	YES	<ul style="list-style-type: none"> ● BCM signal input circuit malfunction ● CAN communication signal between BCM and ECM. ● CAN communication signal between ECM and IPDM E/R
		NO	<ul style="list-style-type: none"> ● Magnetic clutch malfunction ● Harness/connector malfunction between IPDM E/R and magnetic clutch ● IPDM E/R (integrated relay) malfunction
Cooling fan does not operate.	Perform auto active test. Does cooling fan operate?	YES	<ul style="list-style-type: none"> ● ECM signal input circuit ● CAN communication signal between ECM and IPDM E/R
		NO	<ul style="list-style-type: none"> ● Cooling fan motor malfunction ● Harness/connector malfunction between IPDM E/R and cooling fan motor ● IPDM E/R (integrated relay) malfunction
Oil pressure warning lamp does not operate.	Perform auto active test. Does oil pressure warning lamp blink?	YES	<ul style="list-style-type: none"> ● Harness/connector malfunction between IPDM E/R and oil pressure switch ● Oil pressure switch malfunction ● IPDM E/R malfunction
		NO	<ul style="list-style-type: none"> ● CAN communication signal between BCM and Unified Meter and A/C Amp ● Combination meter

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

AKS005SE

Schematic

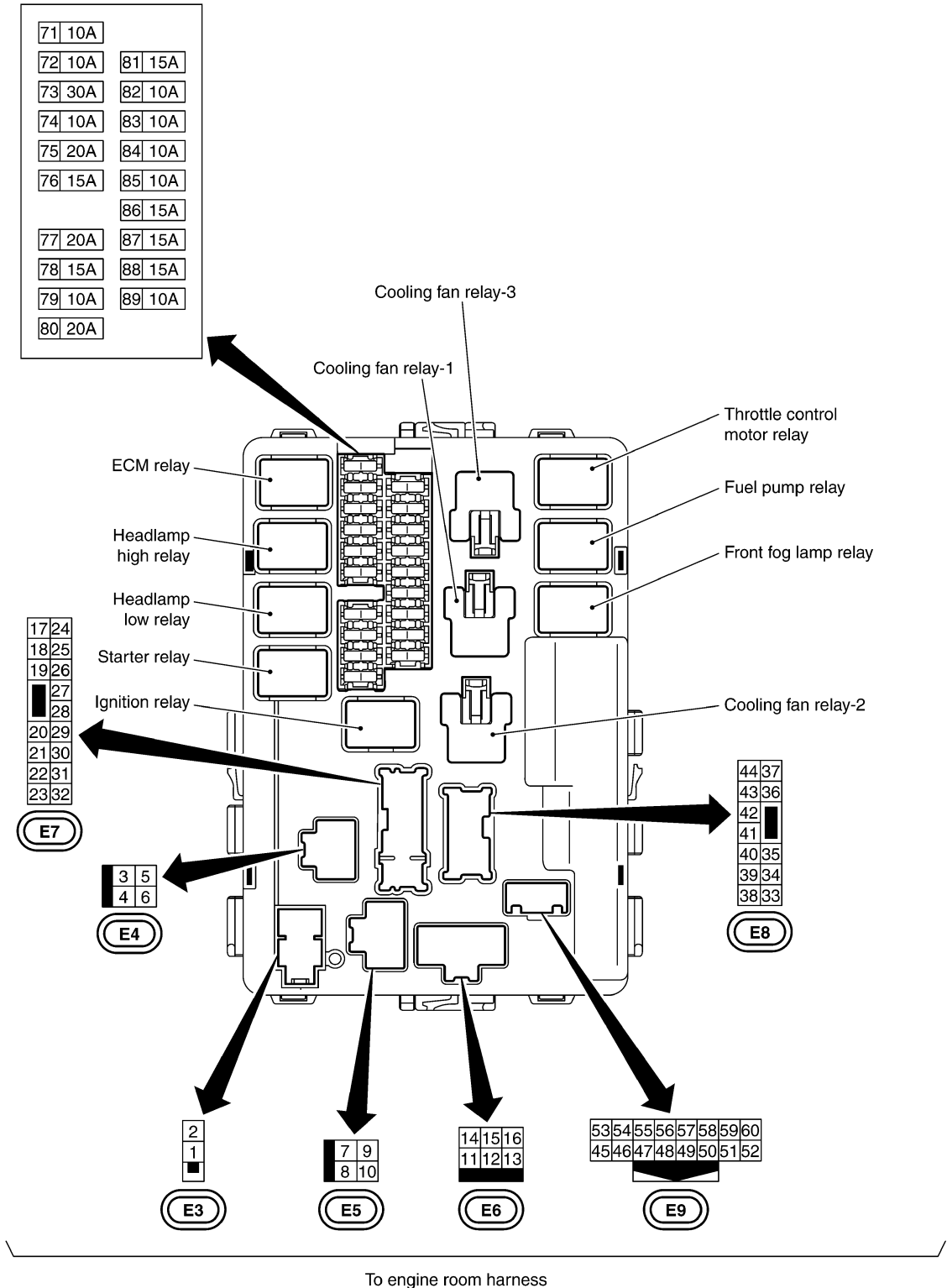


TKWM0654E

IPDM E/R Terminal Arrangement

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CKIM0237E

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

IPDM E/R Power/Ground Circuit Inspection

AKS007NW

1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Power source	Fuse and fusible link No.
1, 2	Battery power	C
		E
		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

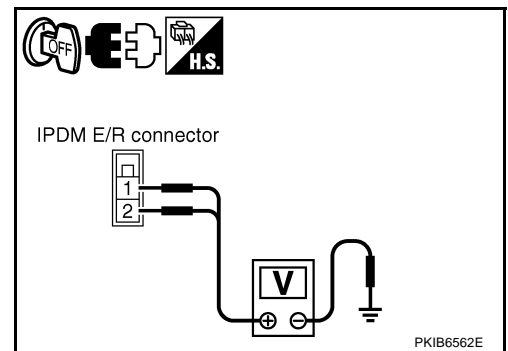
1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector E3.
3. Check voltage between IPDM E/R harness connector E3 terminals 1 (W/R), 2 (W/L) and ground.

1, 2 – Ground : Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Replace IPDM E/R power supply circuit harness.



3. CHECK GROUND CIRCUIT

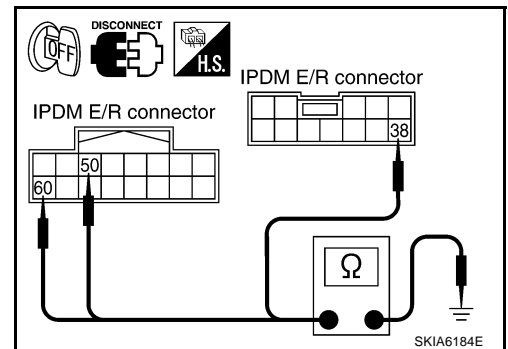
1. Disconnect IPDM E/R harness connectors E8 and E9.
2. Check continuity between IPDM E/R harness connectors E8 terminal 38 (B), E9 terminal 50 (B), 60 (B) and ground.

38, 50, 60 – Ground : Continuity should exist.

OK or NG

OK >> INSPECTION END

NG >> Replace ground circuit harness of IPDM E/R.



Inspection With CONSULT-II (Self-Diagnosis)

AKS005SG

CAUTION:

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

1. CHECK SELF DIAGNOSTIC RESULT

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

CONSULT-II display	CONSULT-II display code	TIME		Details of diagnosis result
		CRNT	PAST	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	-	-	-	No malfunction
CAN COMM CIRC	U1000	×	×	Any of or several items below have errors. <ul style="list-style-type: none"> ● TRANSMIT DIAG ● ECM ● BCM/SEC

NOTE:

The details for display of the period are as follows:

- CRNT: Error currently detected with IPDM E/R.
- PAST: Error detected in the past and memorized with IPDM E/R.

Contents displayed

NO DTC IS DETECTED.FURTHER TESTING MAY BE REQUIRED.>>INSPECTION END
 CAN COMM CIRC>>[LAN-5, "Precautions When Using CONSULT-II"](#).

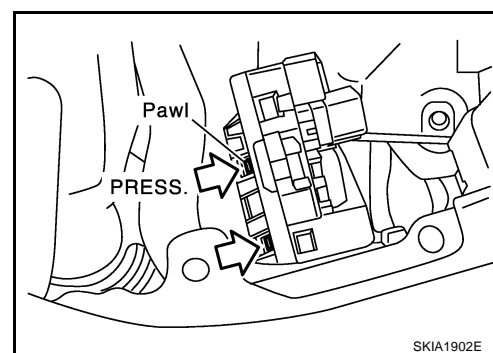
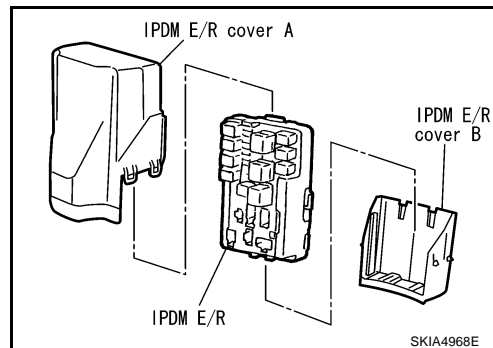
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

AKS005SM

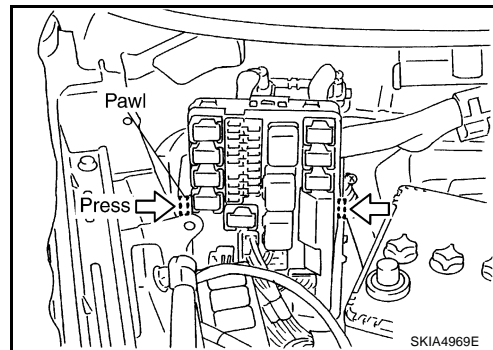
Removal and Installation of IPDM E/R

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

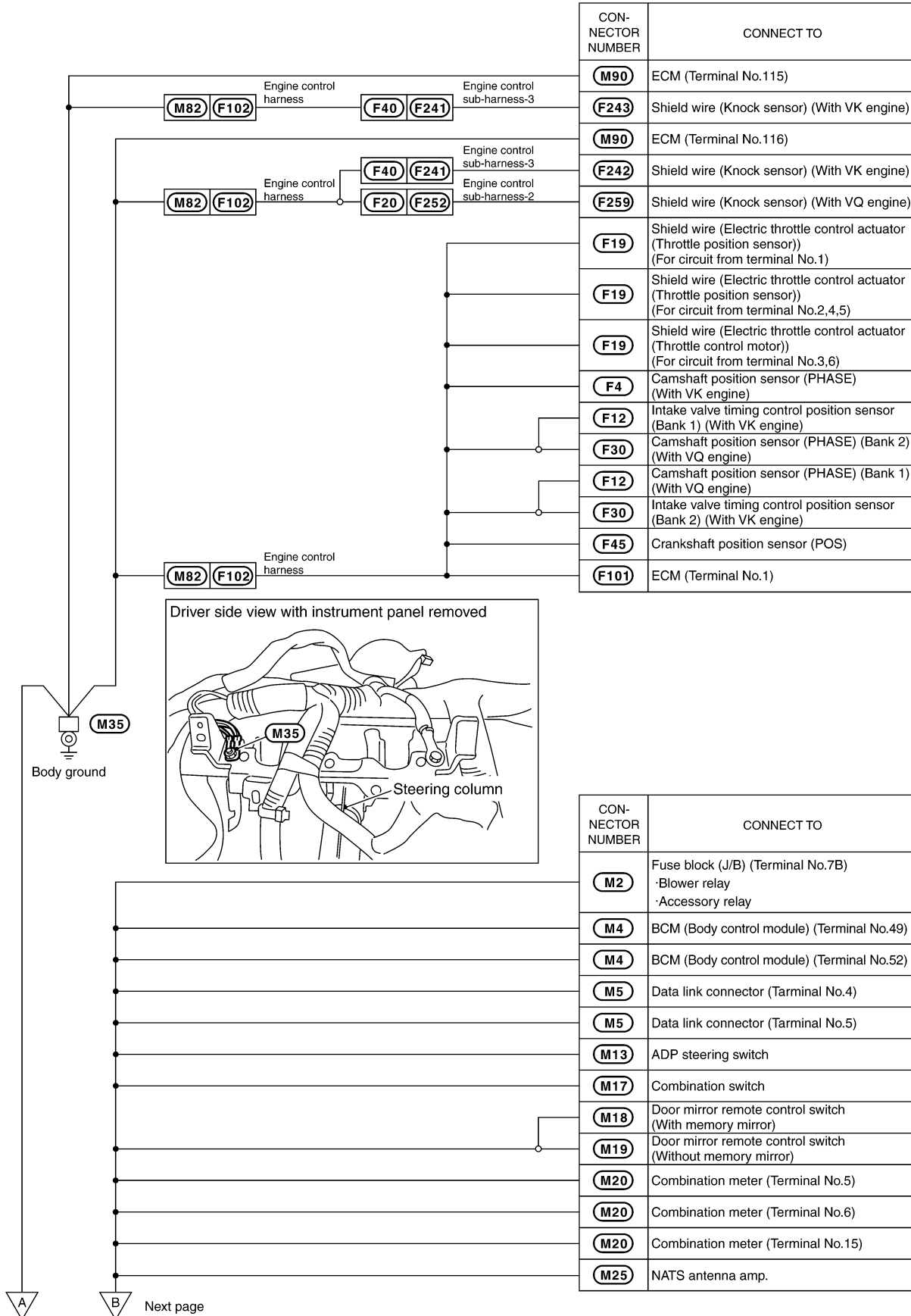
Installation is the reverse order of removal.

GROUND

PF0:00011

Ground Distribution MAIN HARNESS

AKS007VZ



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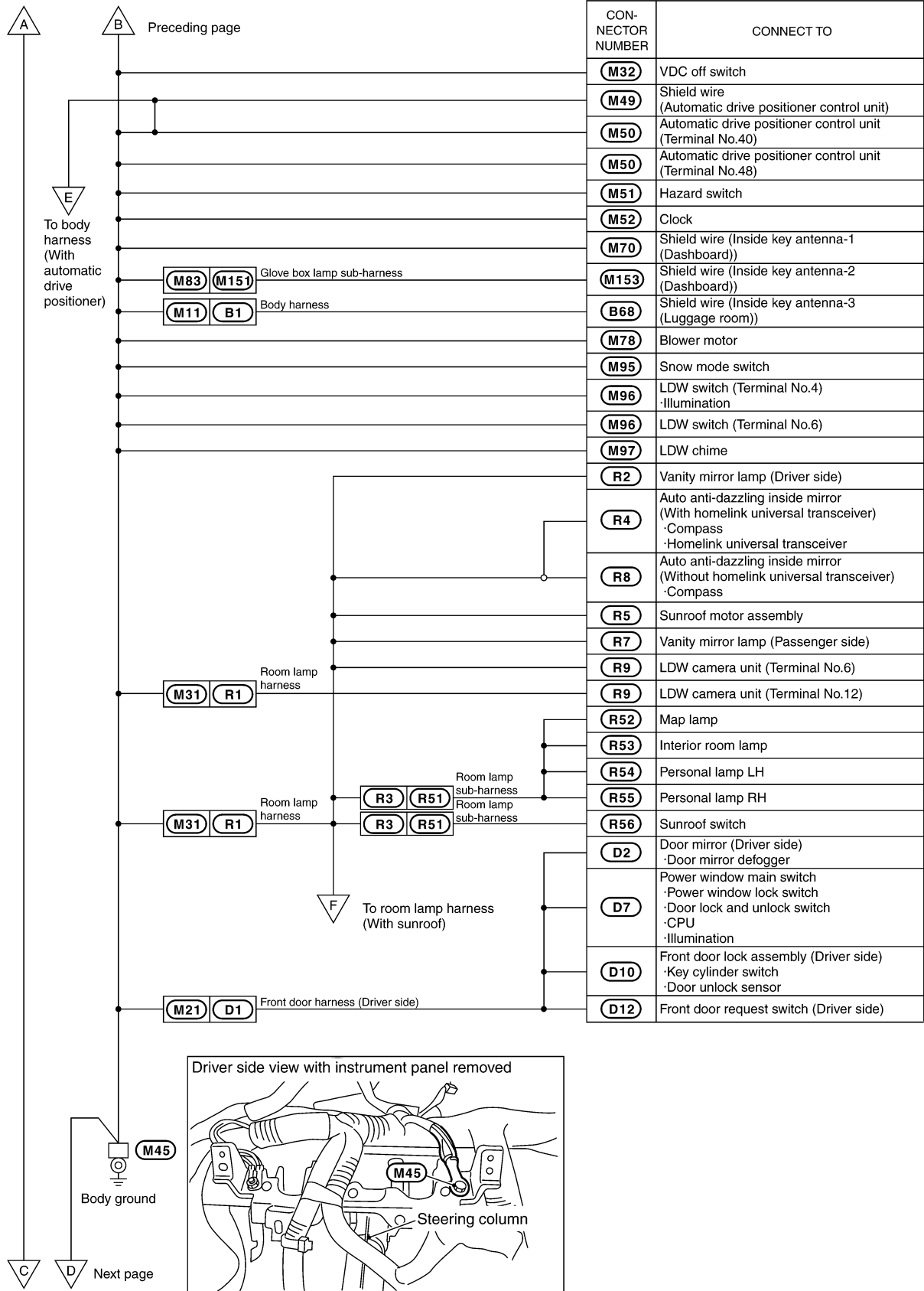
Next page

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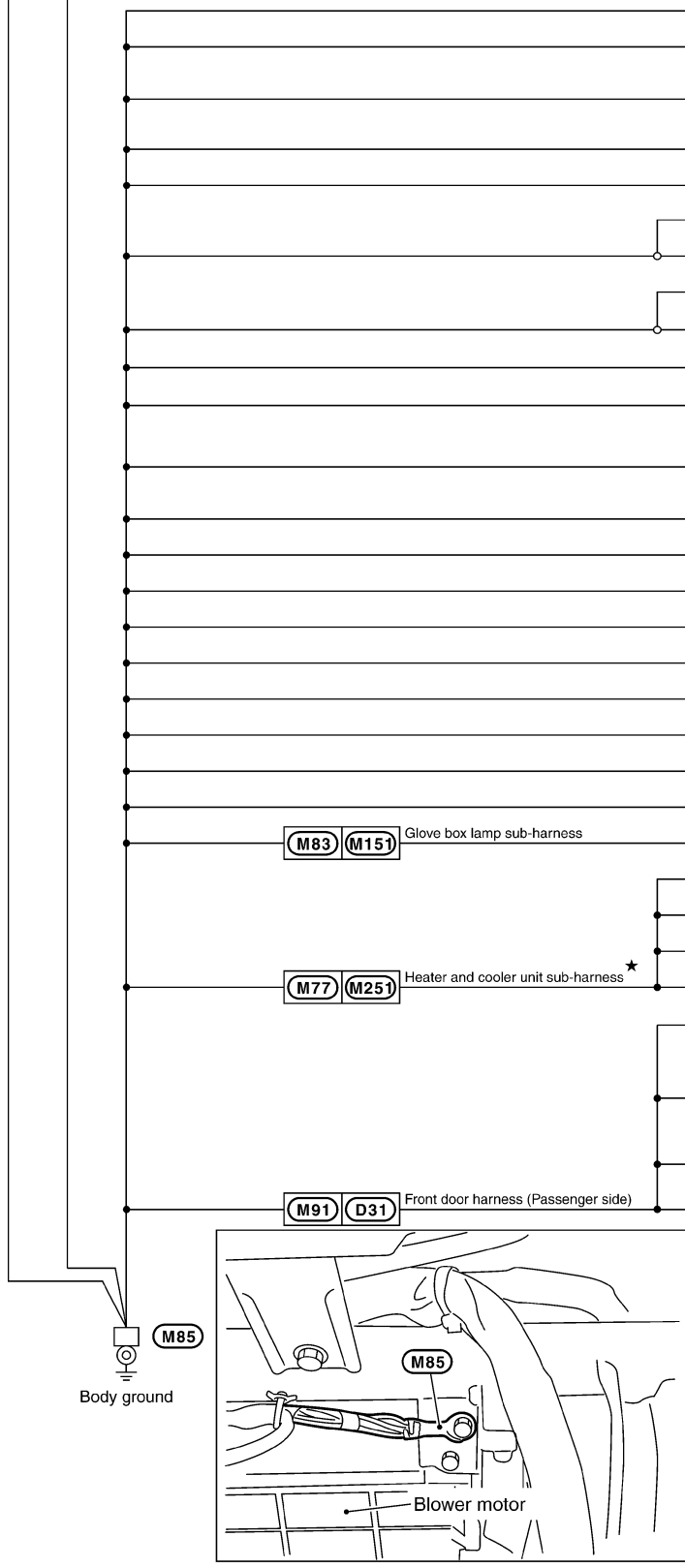
GROUND



CKIM0406E

GROUND

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CON-NECTOR NUMBER	CONNECT TO
M34	Intelligent Key unit
M48	Rear view camera control unit
M53	Front cigarette lighter socket ·Cigarette lighter socket illumination ·Ashtray illumination
M56	Unified meter and A/C amp.(Terminal No.29)
M56	Unified meter and A/C amp.(Terminal No.30)
M62	Display unit (Terminal No.6) (Without NAVI)
M63	Display (With NAVI)
M62	Display unit (Terminal No.15) (Without NAVI)
M75	Display control unit (Terminal No.13) (With NAVI)
M64	A/C and AV switch
M67	A/T device (Terminal No.2) ·Detention switch
M67	A/T device (Terminal No.9) ·Mode select switch ·Position select switch
M68	Heated seat switch (Driver side)
M69	Heated seat switch (Passenger side)
M72	Air bag diagnosis sensor unit (Terminal No.2)
M75	Display control unit (Terminal No.3)
M88	ICC unit (Terminal No.19)
M88	ICC unit (Terminal No.20)
M89	ICC unit (Terminal No.46)
M92	AWD control unit (Terminal No.10)
M92	AWD control unit (Terminal No.11)
M83 M151	Glove box lamp sub-harness
M152	Glove box lamp
M252	Air mix door motor (Driver side)
M253	Intake door motor
M257	Air mix door motor (Passenger side)
M258	Mode door motor
D32	Door mirror (Passenger side) ·Door mirror defogger
D36	Front power window switch (Passenger side) ·Door lock and unlock switch ·CPU ·Illumination
D40	Front door lock assembly (Passenger side) ·Door unlock sensor
M91 D31	Front door harness (Passenger side)
D42	Front door request switch (Passenger side)

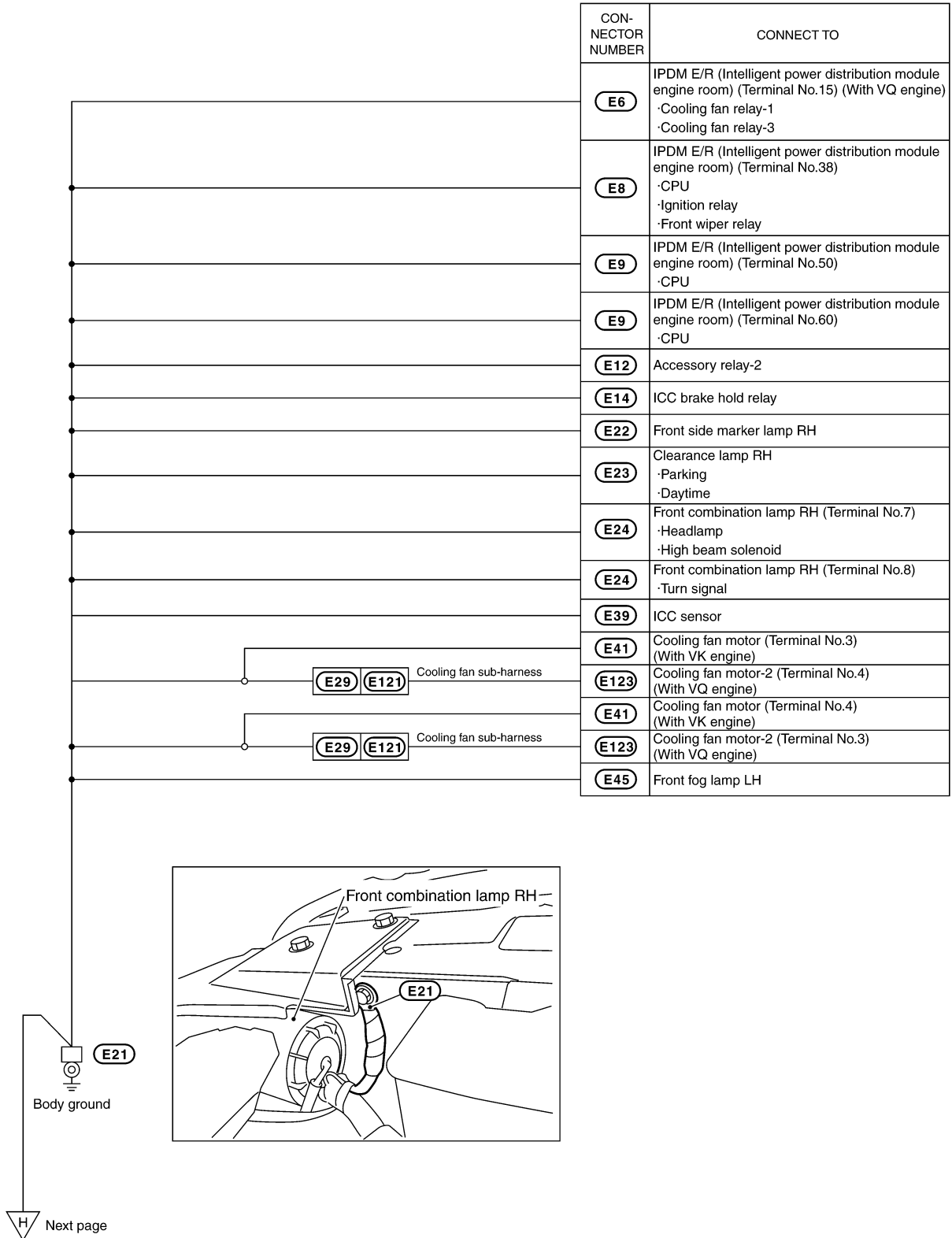
★:This sub-harness is not shown in "HARNES LAYOUT".

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GROUND

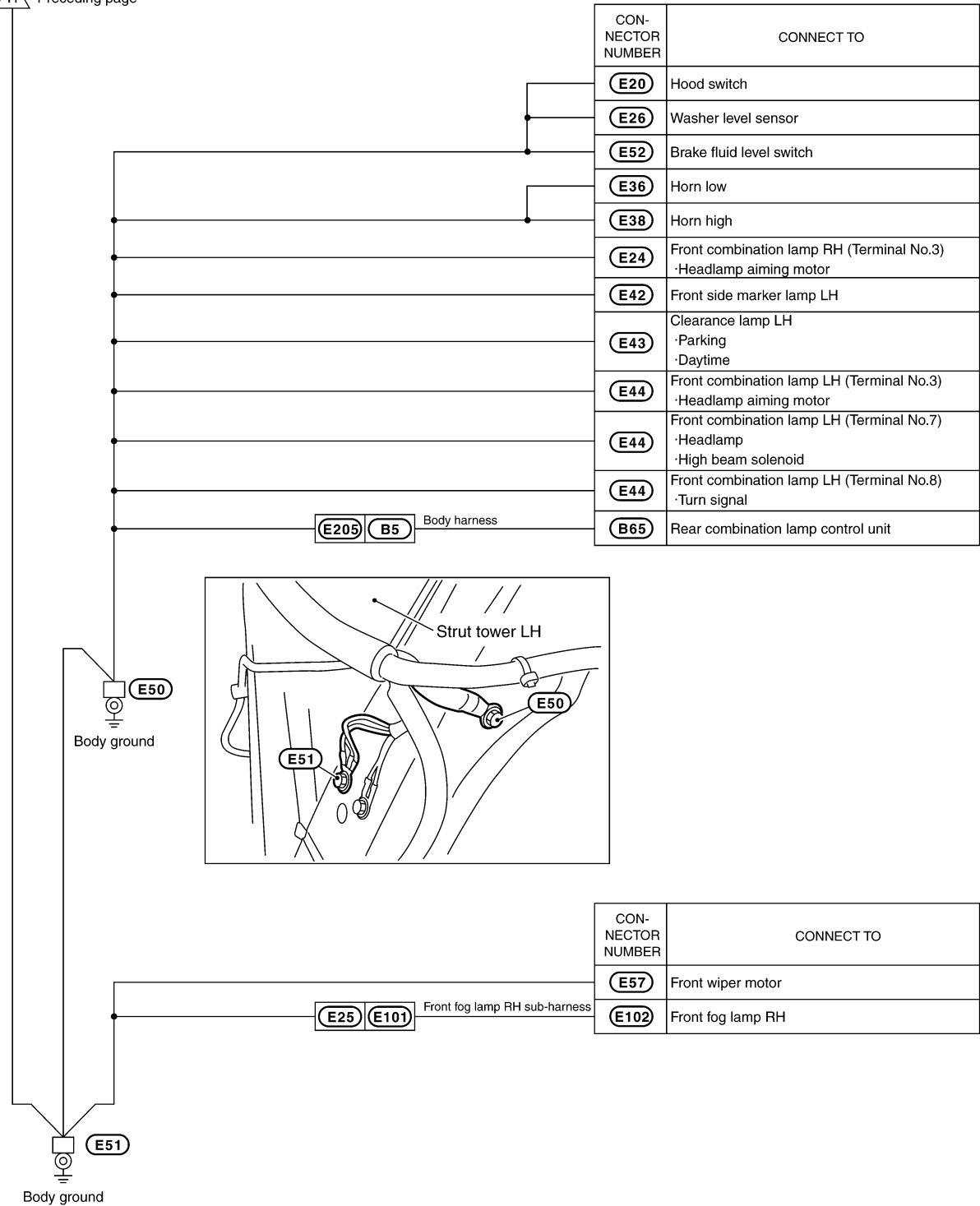
ENGINE ROOM HARNESS



CKIM0200E

GROUND

H Preceding page



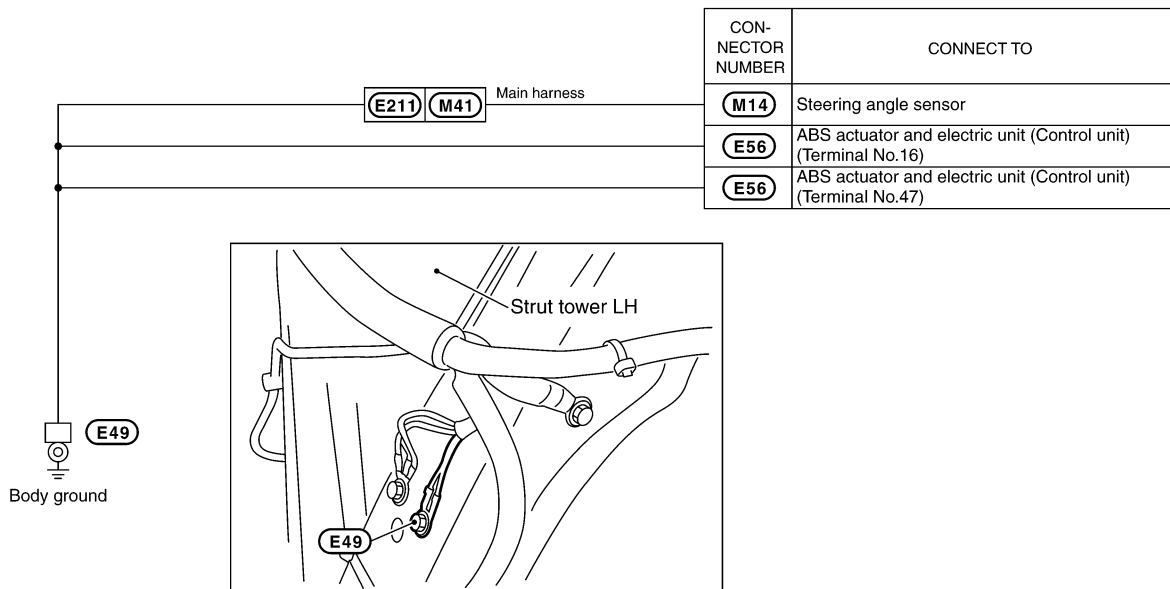
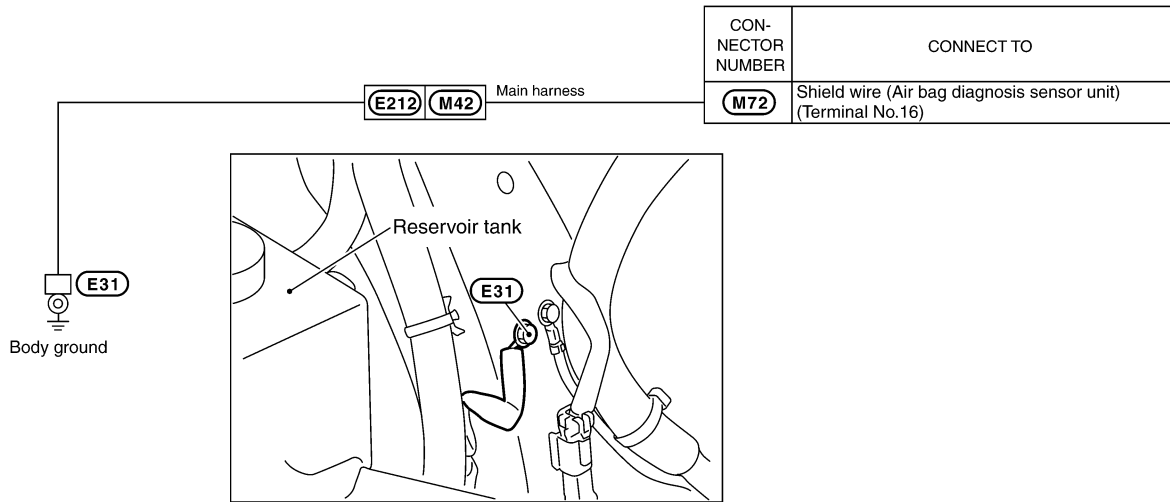
CON-NECTOR NUMBER	CONNECT TO
E20	Hood switch
E26	Washer level sensor
E52	Brake fluid level switch
E36	Horn low
E38	Horn high
E24	Front combination lamp RH (Terminal No.3) ·Headlamp aiming motor
E42	Front side marker lamp LH
E43	Clearance lamp LH ·Parking ·Daytime
E44	Front combination lamp LH (Terminal No.3) ·Headlamp aiming motor
E44	Front combination lamp LH (Terminal No.7) ·Headlamp ·High beam solenoid
E44	Front combination lamp LH (Terminal No.8) ·Turn signal
B65	Rear combination lamp control unit

CON-NECTOR NUMBER	CONNECT TO
E57	Front wiper motor
E102	Front fog lamp RH

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GROUND



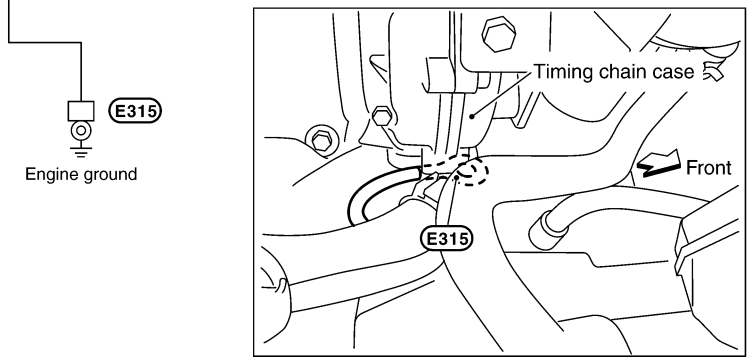
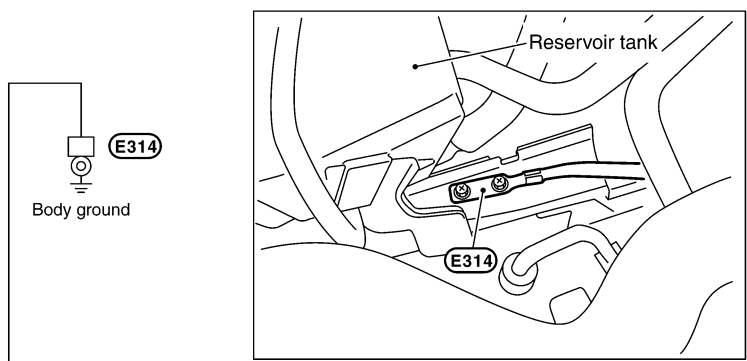
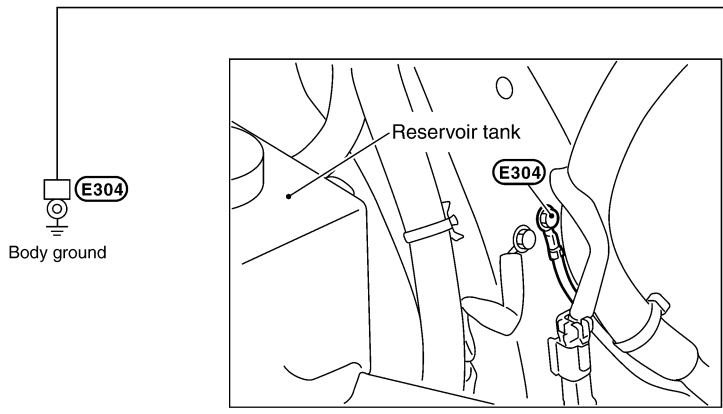
CKIM0202E

GROUND

ENGINE HARNESS/VK ENGINE MODELS

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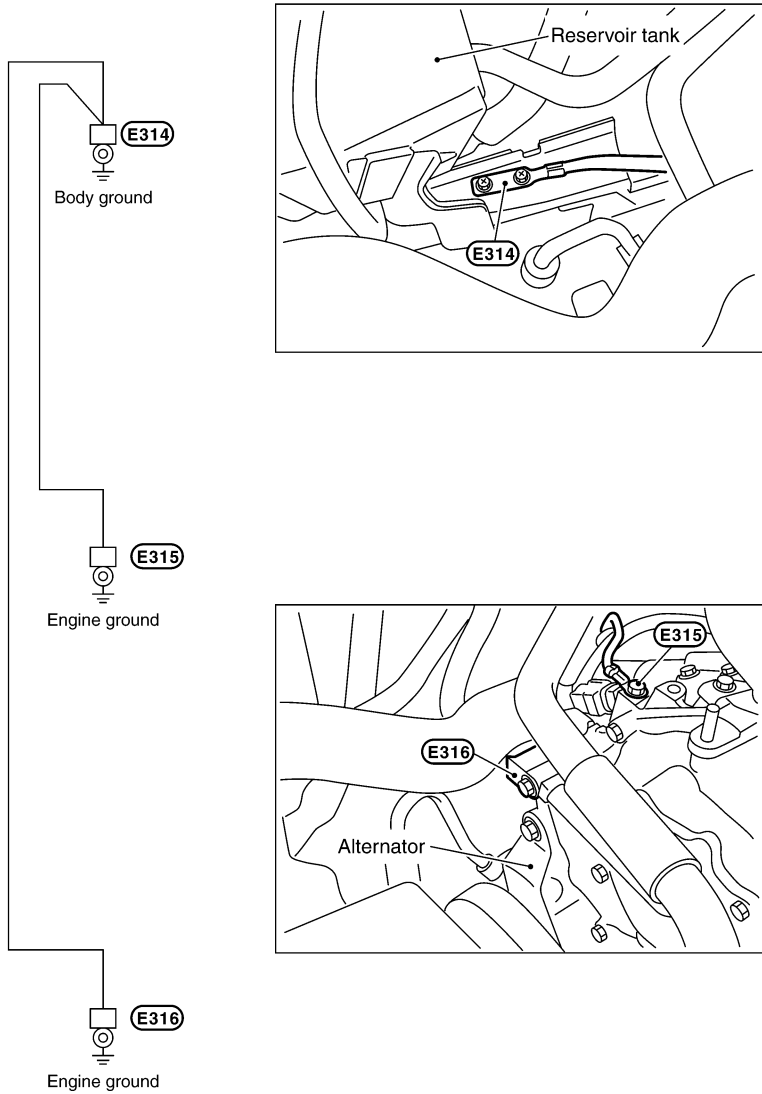
CON-NECTOR NUMBER	CONNECT TO
E309	Alternator



CKIM0203E

GROUND

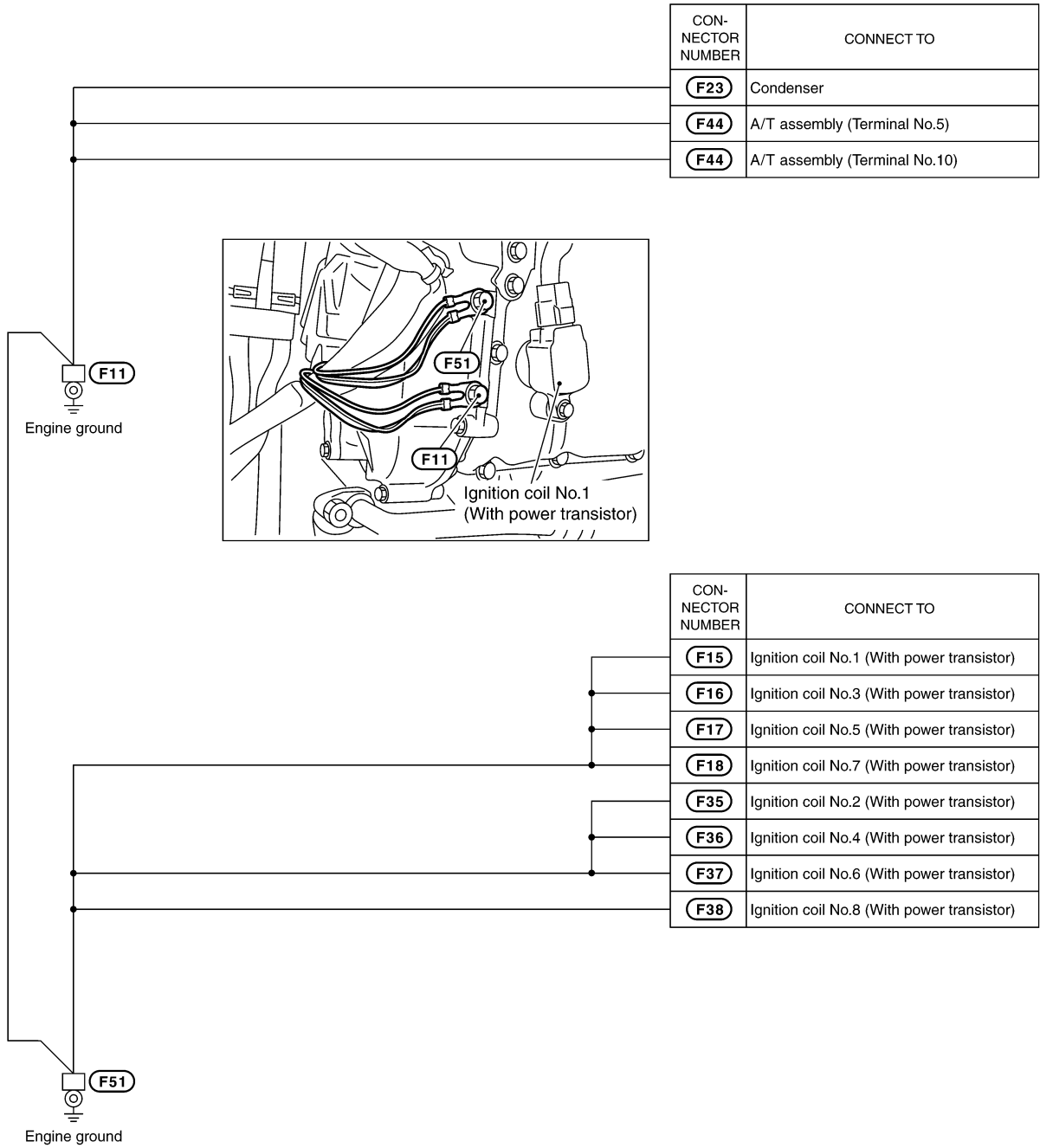
ENGINE HARNESS/VQ ENGINE MODELS



CKIM0204E

GROUND

ENGINE CONTROL HARNESS/VK ENGINE MODELS



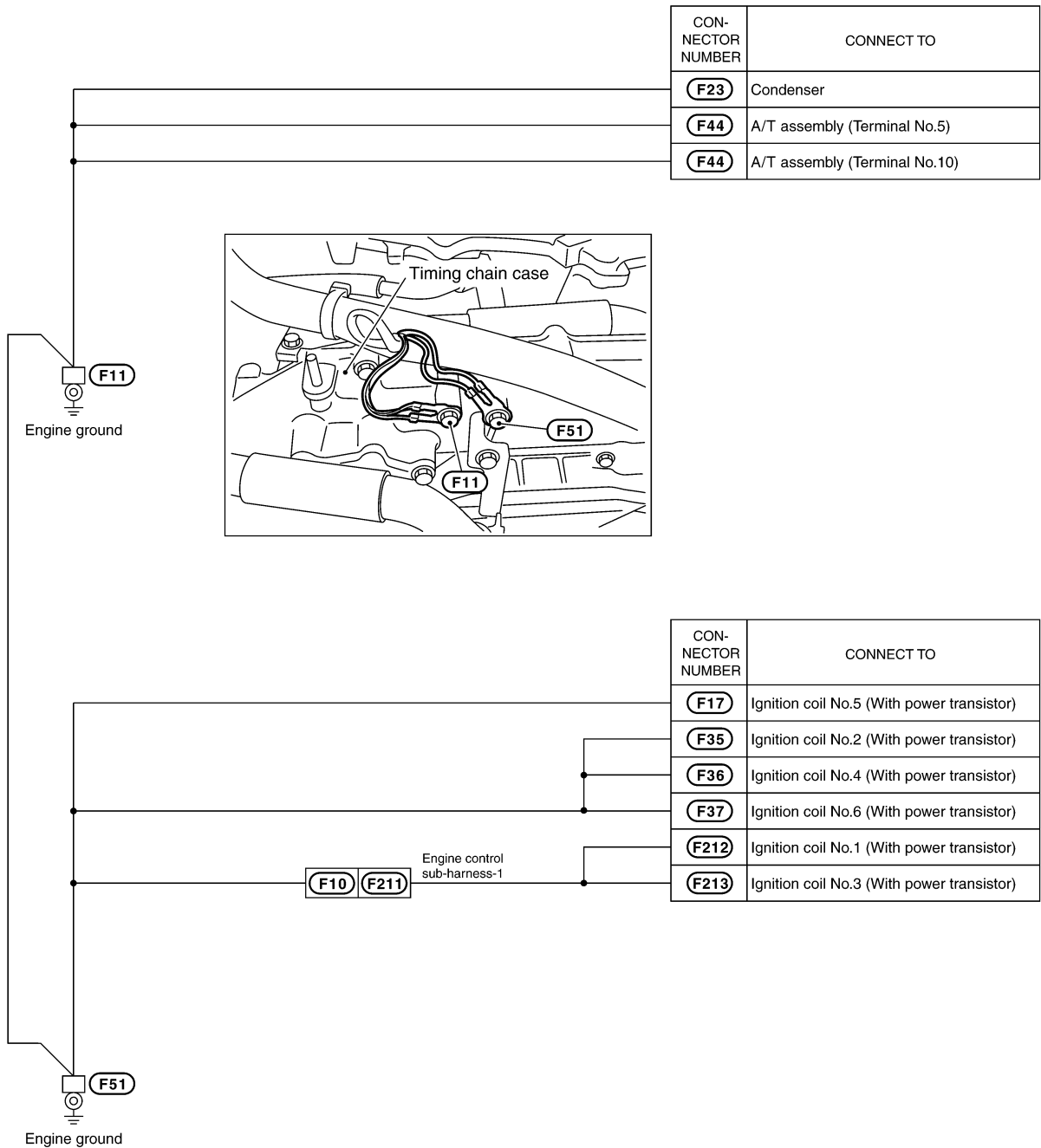
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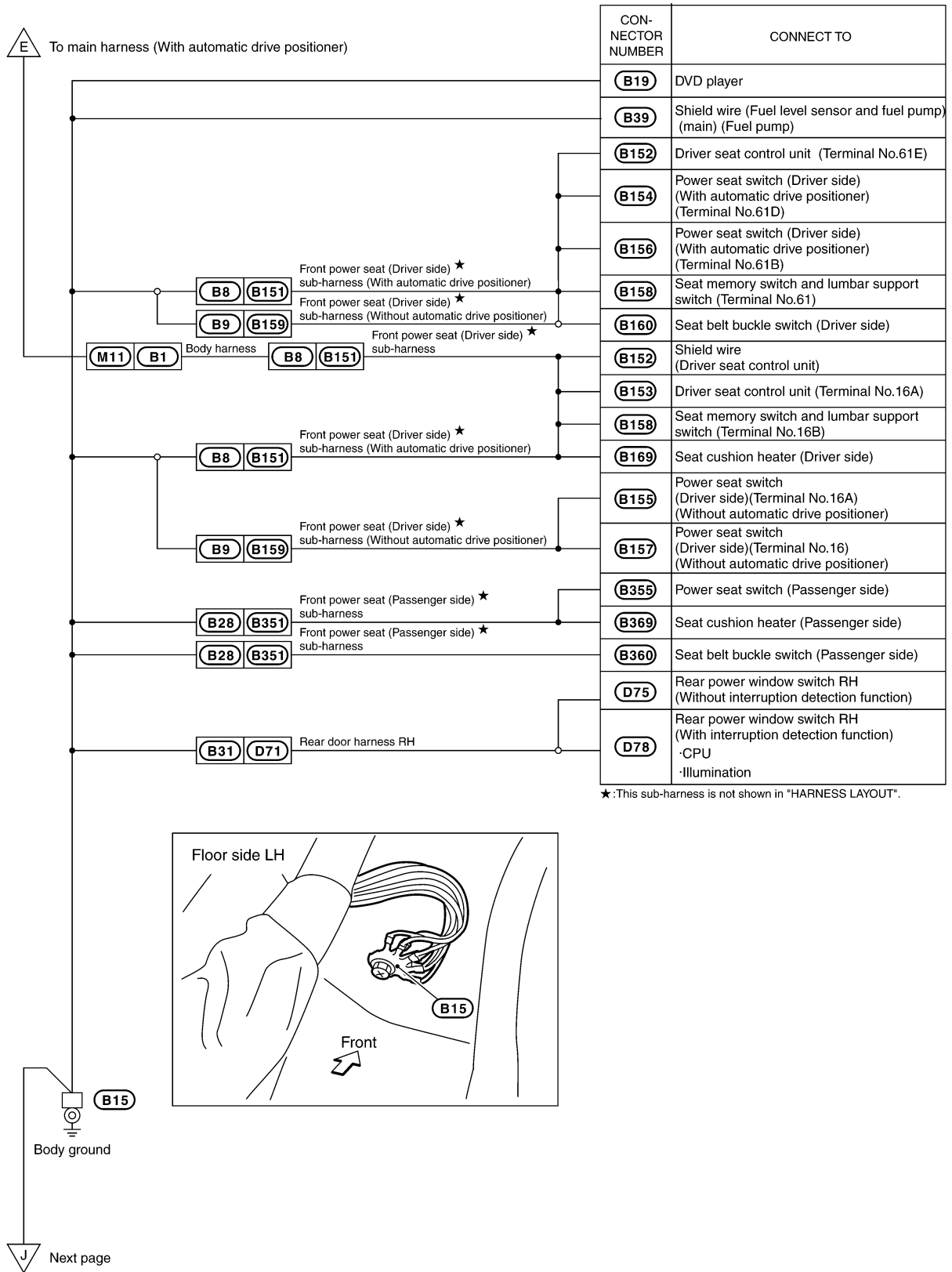
ENGINE CONTROL HARNESS/VQ ENGINE MODELS



CKIM0409E

GROUND

BODY HARNESS

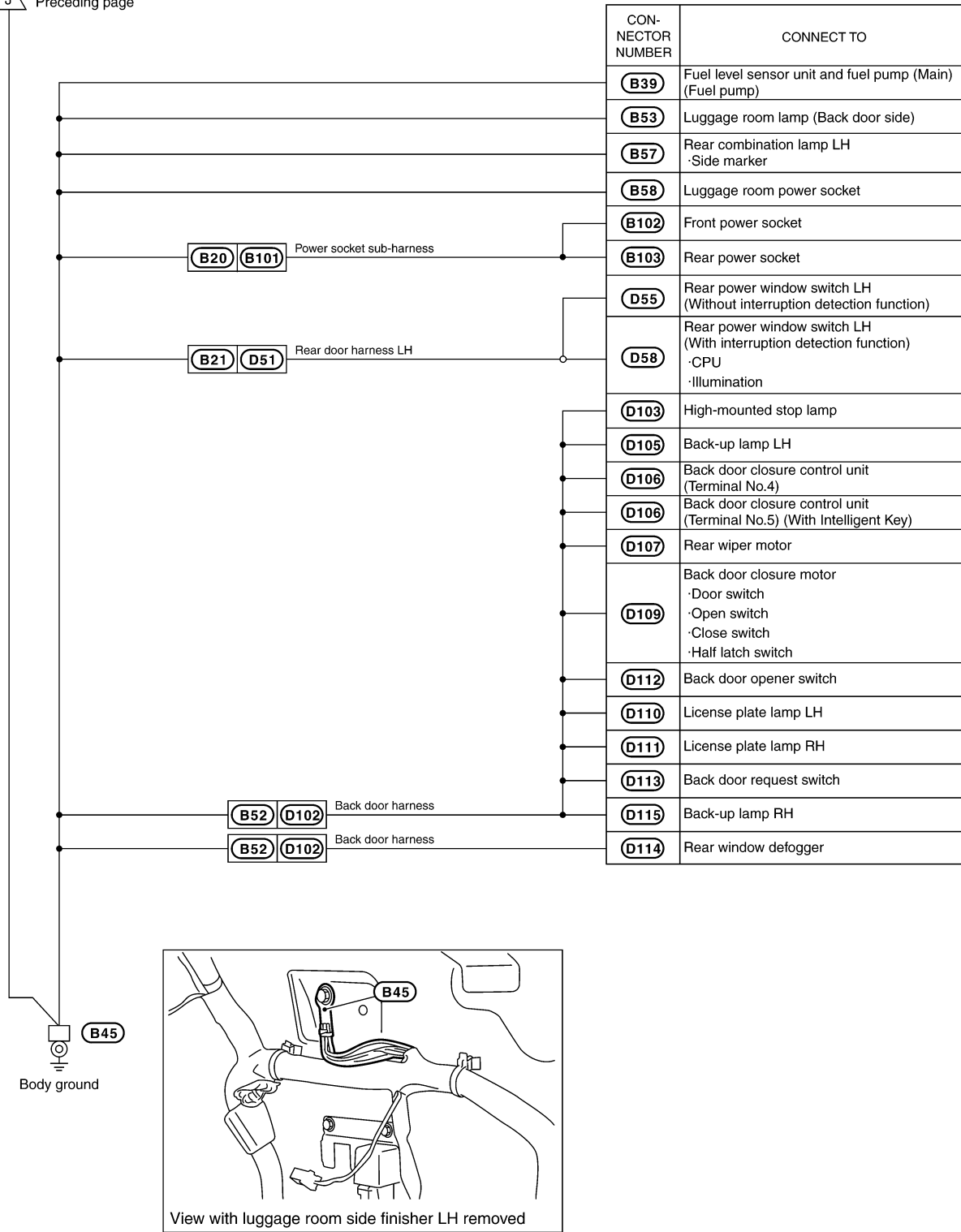


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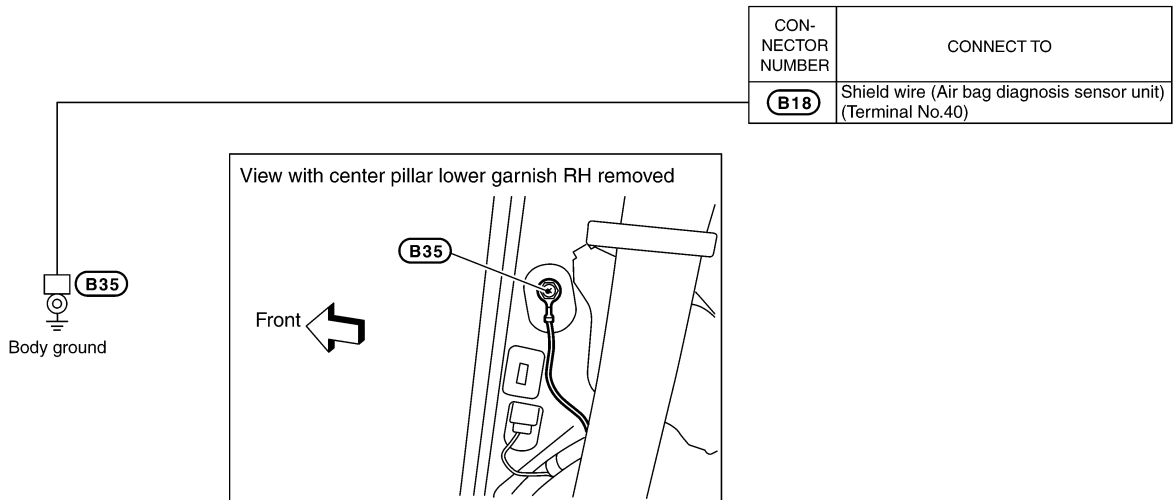
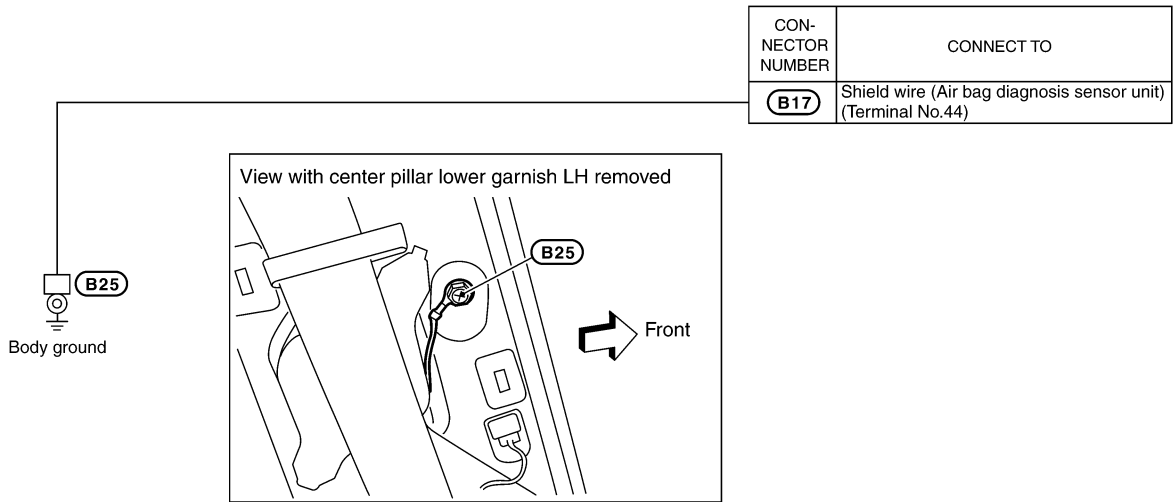
GROUND

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CKIM0410E

GROUND

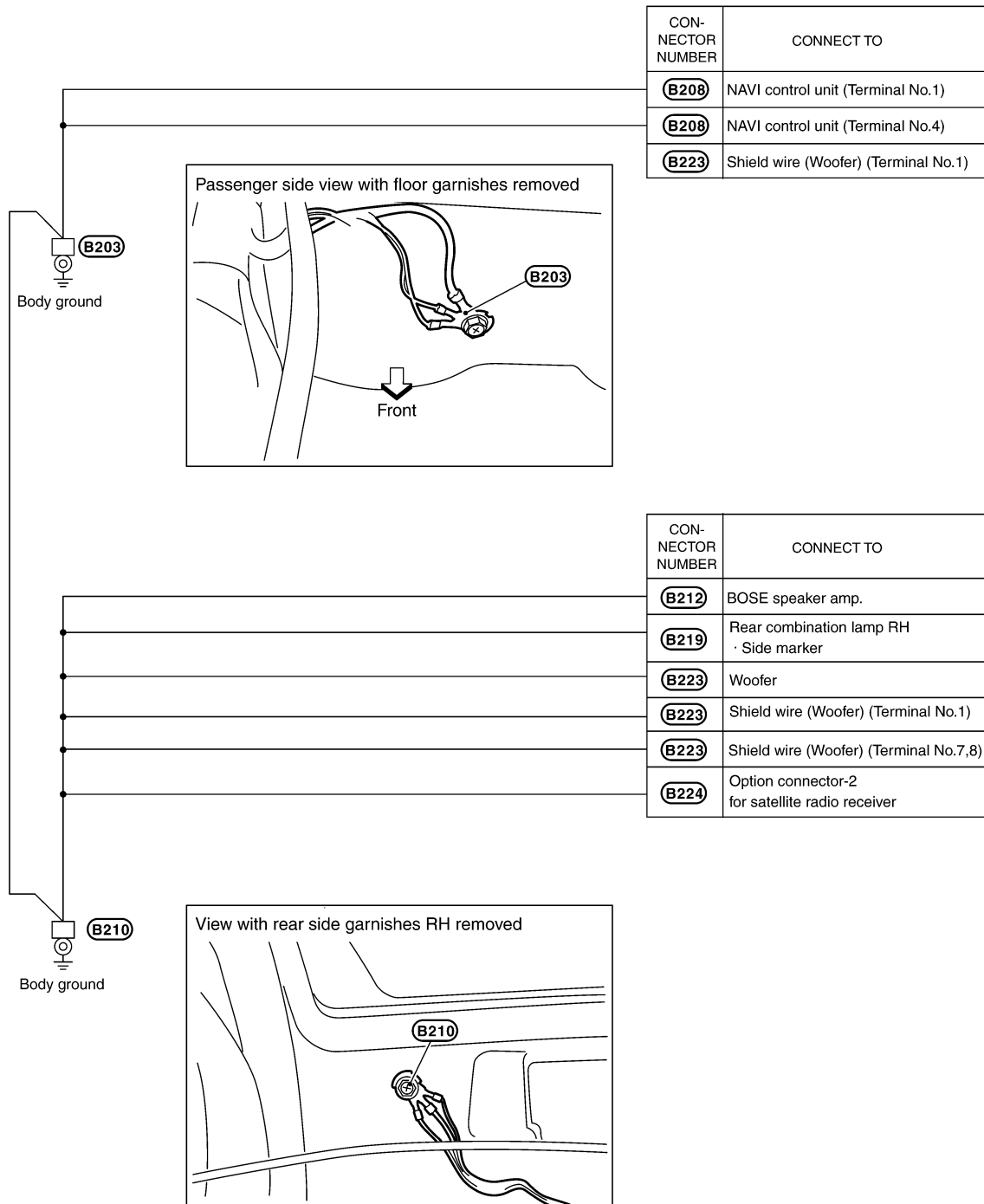


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GROUND

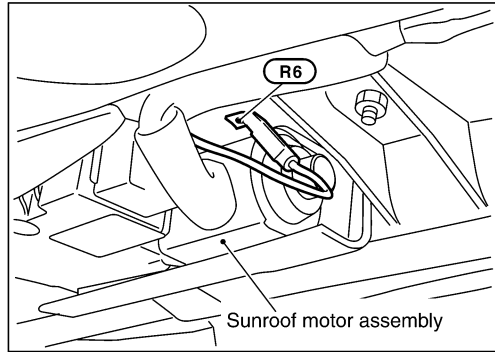
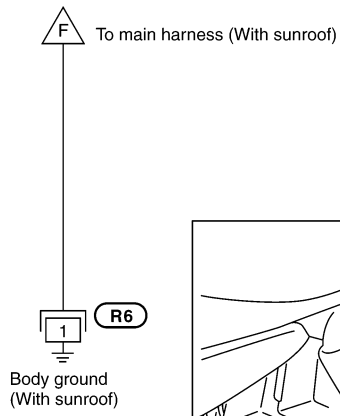
BODY NO. 2 HARNESS



CKIH0253E

GROUND

ROOM LAMP HARNESS



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HARNESS

HARNESS

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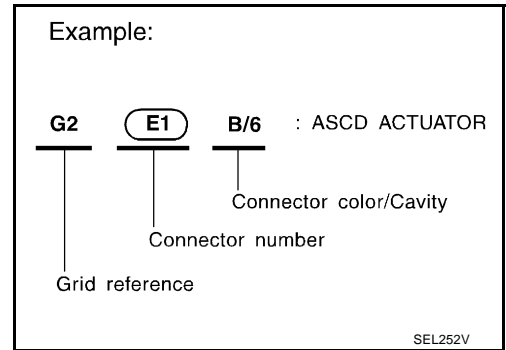
Harness Layout

AKS007W0

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

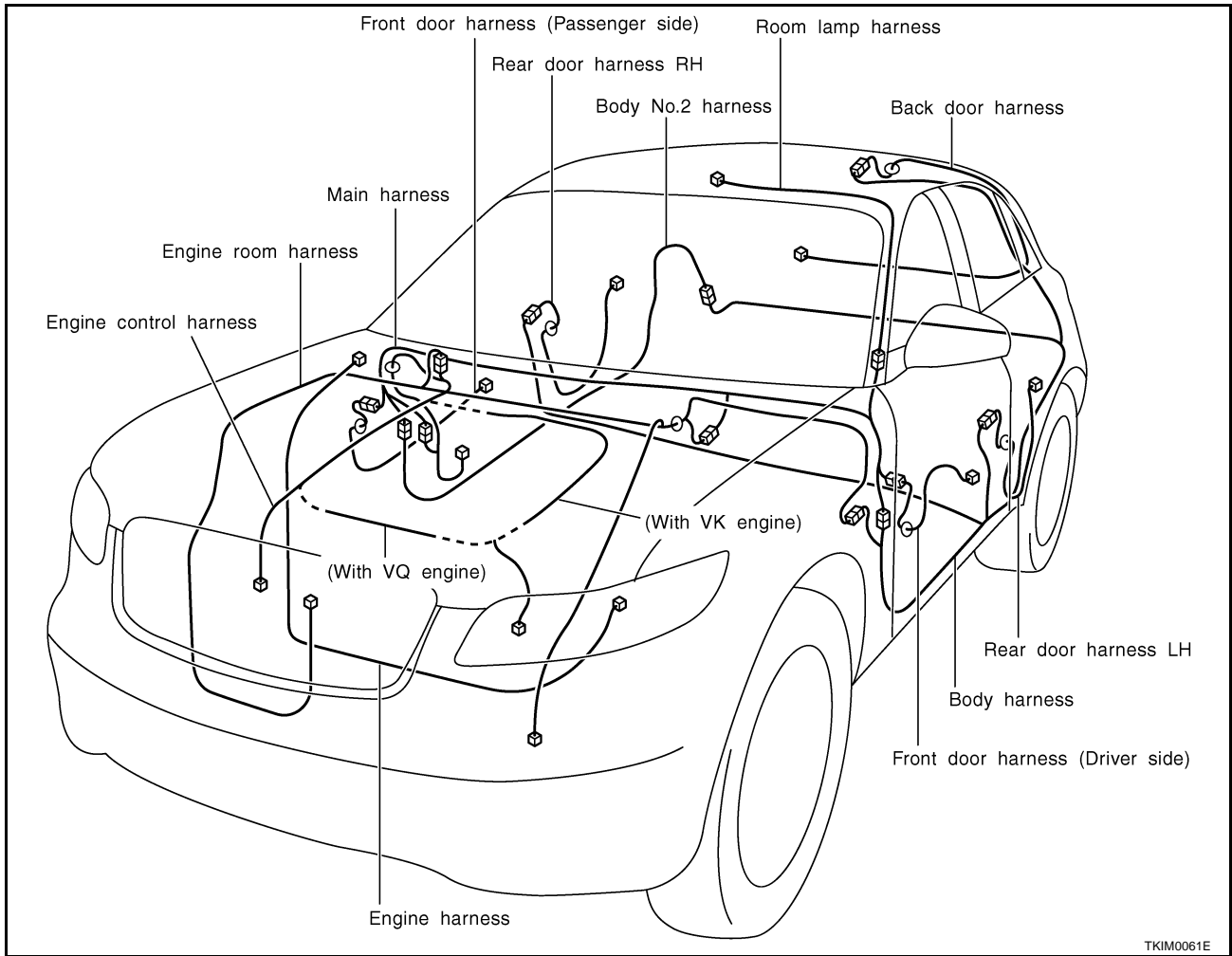
Main symbols of connector (in Harness Layout) are indicated in the below.

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

CKIT0108E

HARNESS

OUTLINE



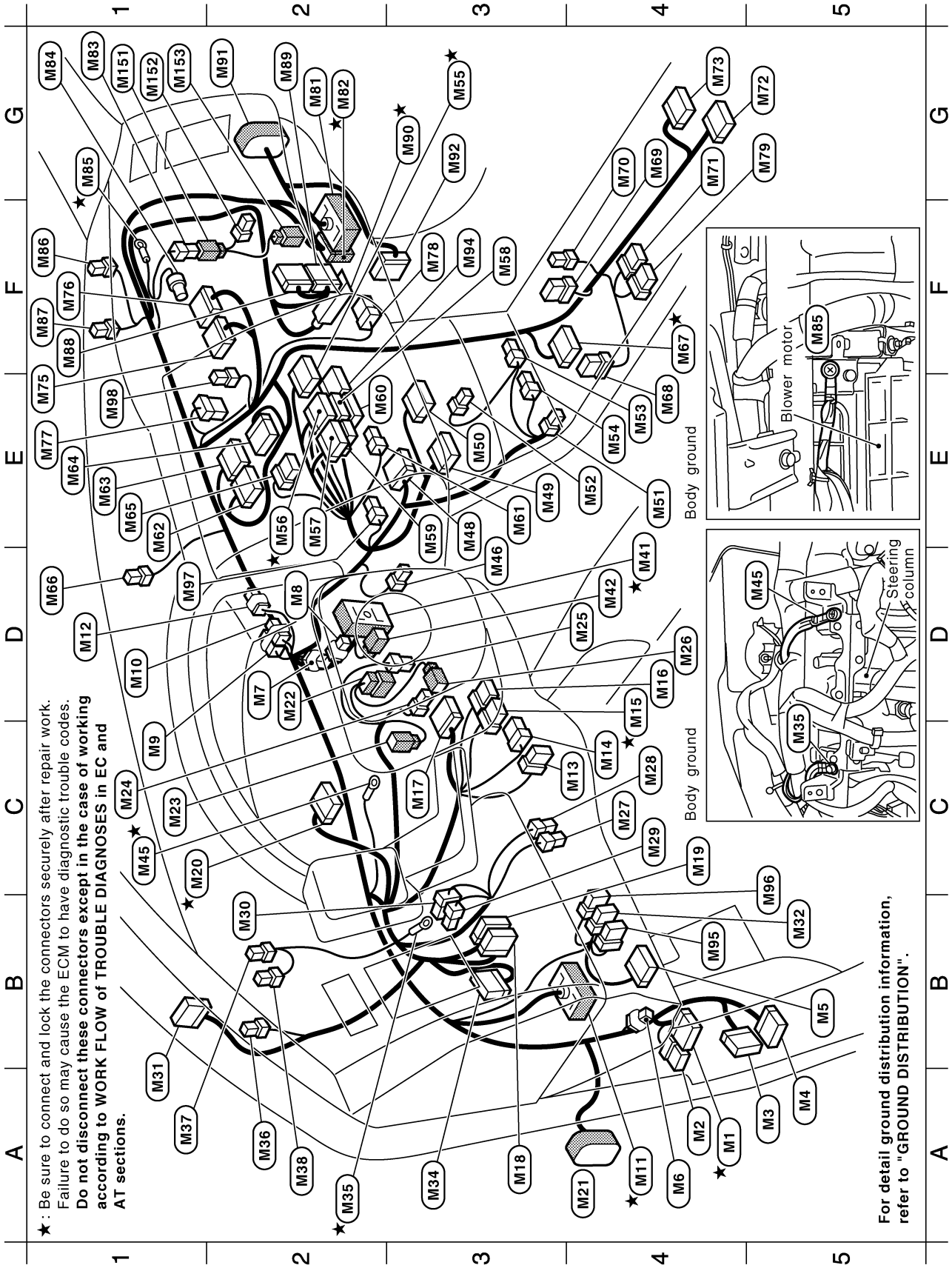
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HARNESS

MAIN HARNESS



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

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

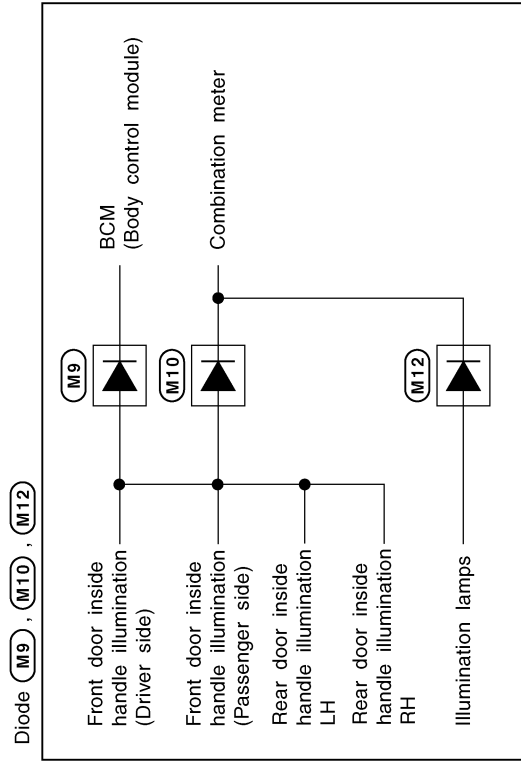
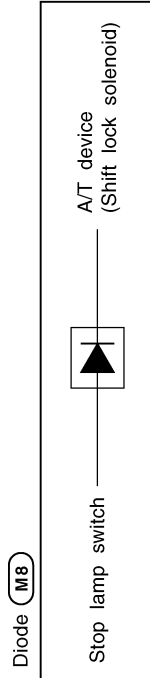
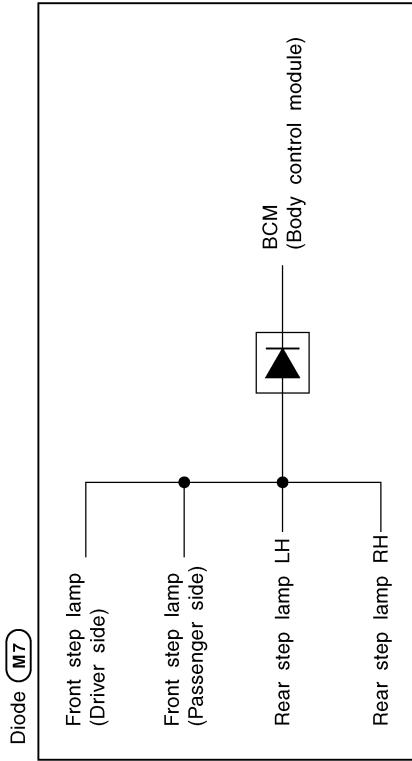
TKIM0291E

HARNESS

A4★	(M1)	W/16 : Fuse block (J/B)	D3	(M146)	W/2 : In vehicle sensor
A4	(M2)	W/8 : Fuse block (J/B)	E3	(M148)	W/16 : Rear view camera control unit
A5	(M3)	W/40 : BCM (Body control module)	E3	(M149)	W/32 : Automatic drive positioner control unit
A5	(M4)	B/15 : BCM (Body control module)	E3	(M150)	W/16 : Automatic drive positioner control unit
B5	(M5)	W/16 : Data link connector	E4	(M151)	W/4 : Hazard switch
A4	(M6)	W/2 : Low tire pressure warning check switch	E4	(M152)	W/4 : Clock
D2	(M7)	W/2 : Diode	E4	(M153)	W/3 : Front cigarette lighter socket
D2	(M8)	W/2 : Diode	E4	(M154)	BR/2 : A/T device (Illumination)
C1	(M9)	W/2 : Diode	G3★	(M155)	GY/20 : Unified meter and A/C amp.
D1	(M10)	W/2 : Diode	E2	(M156)	GY/16 : Unified meter and A/C amp.
A4★	(M11)	SMJ : To (B1)	E2	(M157)	W/24 : Unified meter and A/C amp.
D1	(M12)	W/2 : Diode	F3	(M158)	W/10 : Audio unit
C4	(M13)	GY/6 : ADP steering switch	E3	(M159)	W/6 : Audio unit
C4	(M14)	W/8 : Steering angle sensor	E2	(M160)	W/16 : Audio unit
D4★	(M15)	GY/8 : Combination switch (Spiral cable)	E3	(M161)	BR/2 : Antenna amp.
D4	(M16)	Y/6 : Combination switch (Spiral cable)	E1	(M162)	W/24 : Display unit (Without NAVI)
C3	(M17)	W/16 : Combination switch	E1	(M163)	W/24 : Display (With NAVI)
A3	(M18)	BR/16 : Door mirror remote control switch (With automatic drive positioner)	E1	(M164)	W/16 : A/C and AV switch
C4	(M19)	W/16 : Door mirror remote control switch (Without automatic drive positioner)	E1	(M165)	BR/8 : Audio unit
C1★	(M20)	W/24 : Combination meter	D1	(M166)	BR/2 : Instrument speaker center
A4	(M21)	SMJ : To (D1)	F4★	(M167)	W/10 : A/T device
D2	(M22)	GY/6 : Key switch and ignition knob switch (With Intelligent Key)	E4	(M168)	W/6 : Heated seat switch (Driver side)
C1	(M23)	BR/2 : Key switch (Without Intelligent Key)	G4	(M169)	BR/6 : Heated seat switch (Passenger side)
C1	(M24)	W/2 : Ignition keyhole illumination	G4	(M170)	W/2 : Inside key antenna-1 (Dashboard)
D4	(M25)	W/4 : NATS antenna amp.	G4	(M171)	B/6 : Yaw rate / Side / Decel G sensor (AWD models)
D4	(M26)	W/4 : Steering lock unit	G5	(M172)	Y/28 : Air bag diagnosis sensor unit
C4	(M27)	W/4 : Tilt motor and telescopic motor	G4	(M173)	-/16 : DVD player
C4	(M28)	W/4 : Tilt sensor and telescopic sensor	E1	(M175)	W/24 : Display control unit (With NAVI)
C4	(M29)	W/2 : Circuit breaker	F1	(M176)	W/32 : Display control unit (With NAVI)
B2	(M30)	B/5 : Passenger side select unlock relay	E1	(M177)	W/6 : Heater and cooling unit (Via sub-harness)
A1	(M31)	W/18 : To (R1)	F3	(M178)	W/6 : Blower motor
B5	(M32)	GY/6 : VDC off switch	G5	(M179)	B/6 : Yaw rate / Side G sensor (2WD models)
A3	(M34)	W/40 : Intelligent Key unit	G2	(M181)	SMJ : To (B201)
A2★	(M35)	— : Body ground	G2★	(M182)	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)			
D4	(M42)	Y/4 : To (E212)			
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.

TKIM0292E



(M83)	W/4	: To (M151)
G1	Y/4	: Front passenger air bag module
G1	—	: Body ground
F1	BR/2	: Instrument speaker RH
F1	B/2	: Sunload sensor
F1	W/24	: ICC unit
G2	GY/24	: ICC unit
G3	SMJ	: ECM
G2	SMJ	: To (D31)
G3	W/16	: AWD control unit
F3	W/12	: Option connector-1 for audio unit
B4	(M95)	: Snow mode switch
C5	(M96)	: LDW switch
D1	(M97)	: LDW chime
E1	(M98)	: Remote keyless entry receiver

Glove box lamp sub-harness

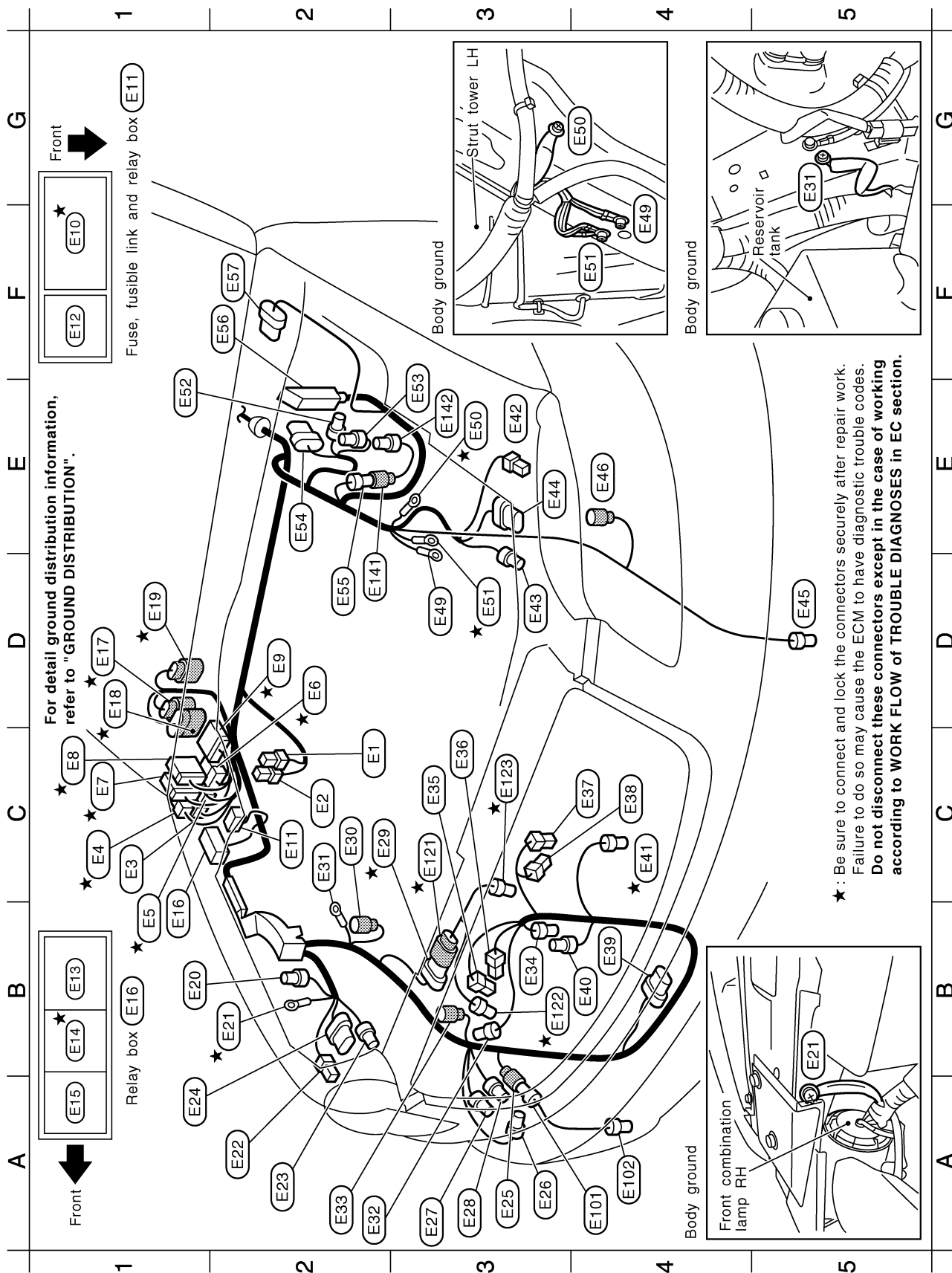
G1	(M151)	W/4	: To (M83)
G1	(M152)	W/2	: Glove box lamp
G1	(M153)	W/2	: Inside key antenna-2 (Dashboard)

★ : 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.

HARNESS

ENGINE ROOM HARNESS

Engine Compartment



* : 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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PG

TKIH0004E

Engine room harness

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 (E47) (With VK engine)
D1	(E18)	GY/9	: To (E48) (With VQ engine)
D1	(E19)	B/8	: To (E49)
B1	(E20)	GY/2	: Hood switch
B2	(E21)	—	: Body ground
A2	(E22)	B/2	: Front side marker lamp RH
A2	(E23)	GY/3	: Clearance lamp RH
A1	(E24)	B/8	: Front combination lamp RH
A3	(E25)	B/2	: To (E101)
A3	(E26)	GY/2	: Washer level sensor
A3	(E27)	BR/2	: Rear washer motor
A3	(E28)	GY/2	: Front washer motor
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	: Clearance lamp LH
E3	(E44)	B/8	: Front combination lamp LH
D5	(E45)	BR/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

Front fog lamp RH sub-harness

A4	(E101)	B/2	: To (E25)
A4	(E102)	BR/2	: Front fog lamp RH

Cooling fan sub-harness (With VQ engine)

C3	(E121)	DGY/8	: To (E29)
B3	(E122)	GY/4	: Cooling fan motor-1
C3	(E123)	GY/4	: Cooling fan motor-2

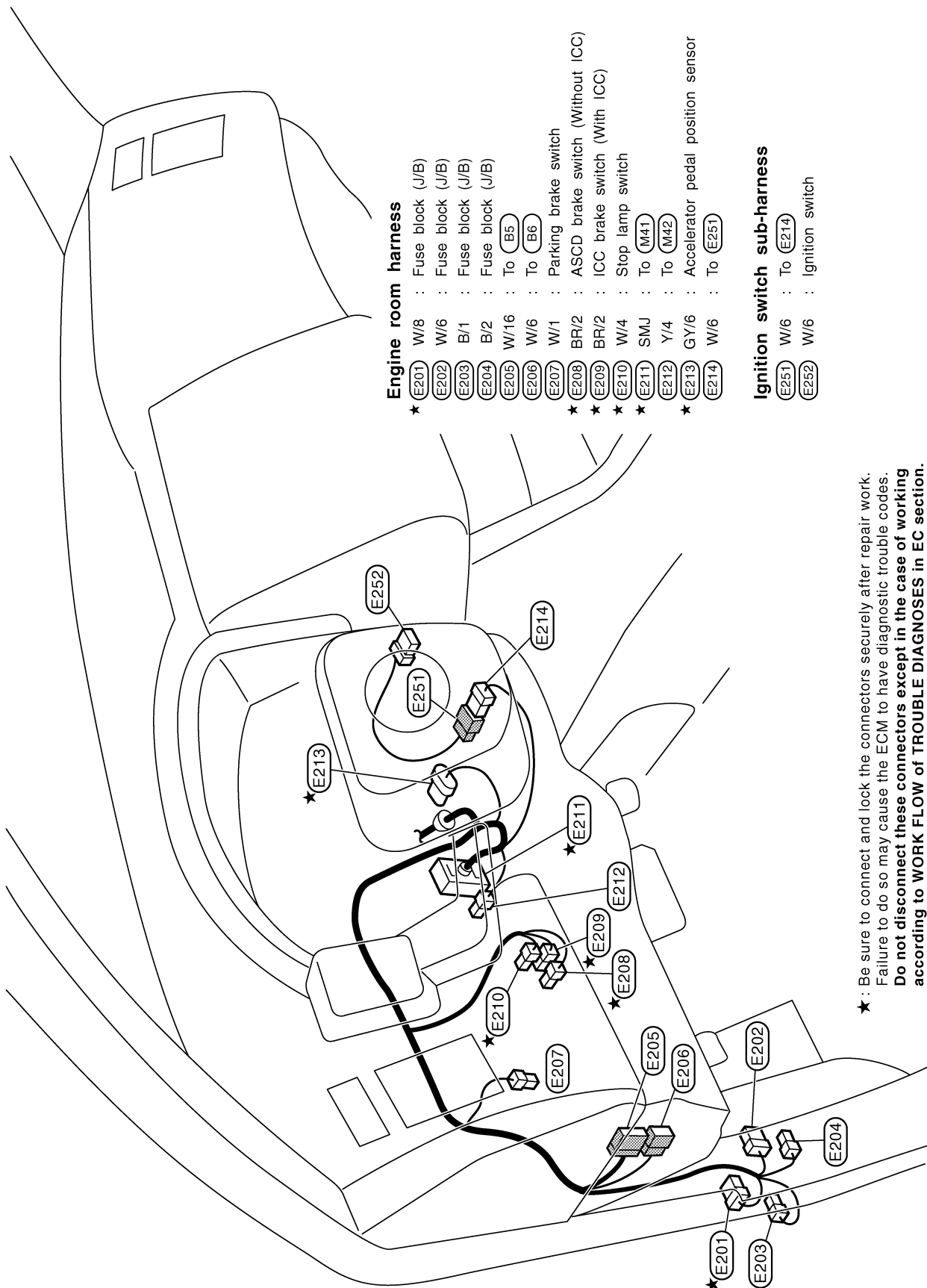
ICC sub-harness

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 section.

HARNESS

Passenger Compartment

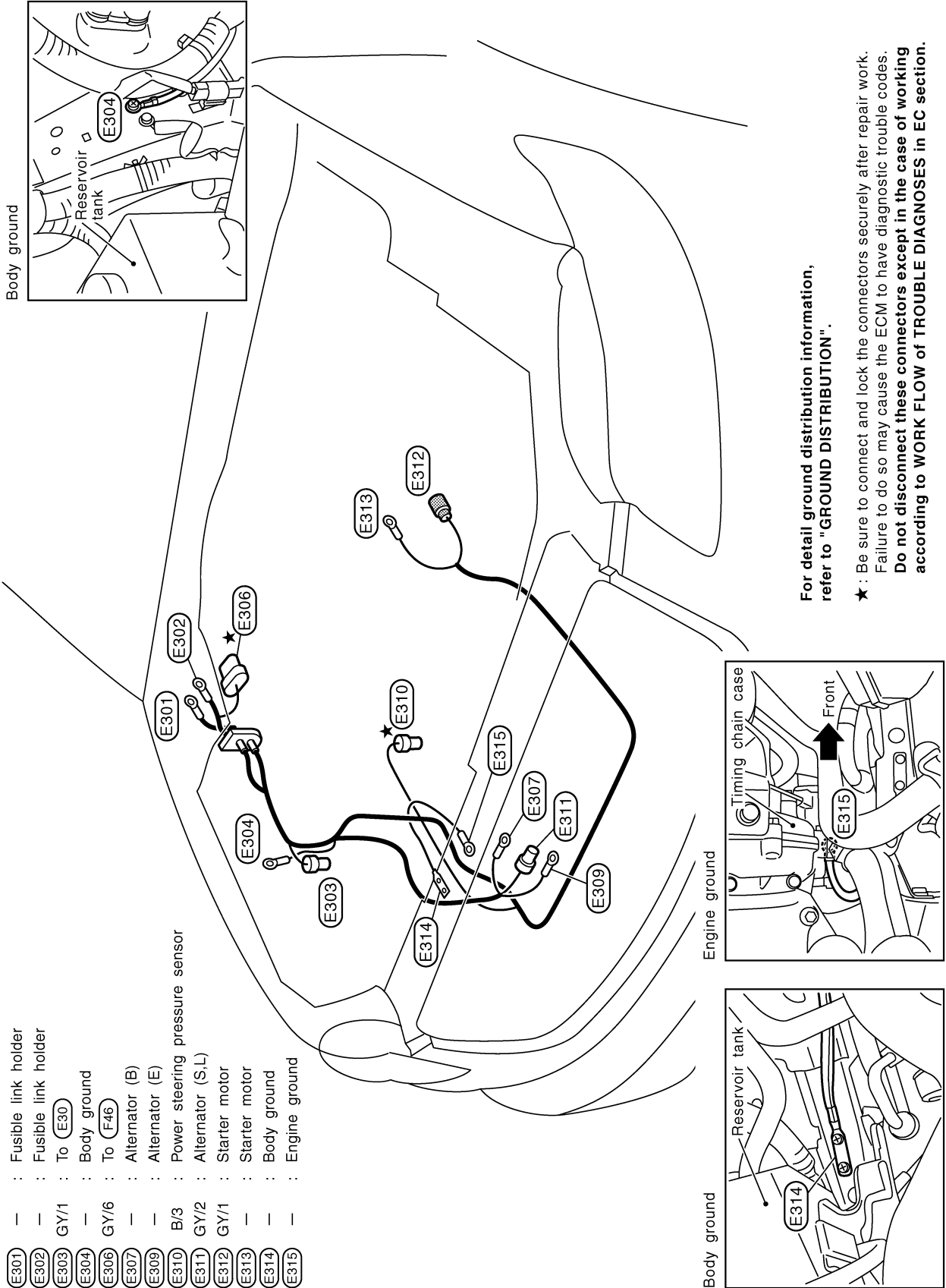


★ : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

TKIM0162E

HARNESSES

ENGINE HARNESS/VK ENGINE MODELS



- E301 : Fusible link holder
- E302 : Fusible link holder
- E303 : To E30
- E304 : Body ground
- E306 : To F46
- E307 : Alternator (B)
- E309 : Alternator (E)
- E310 : Power steering pressure sensor
- E311 : Alternator (S,L)
- E312 : Starter motor
- E313 : Starter motor
- E314 : Body ground
- E315 : Engine ground

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

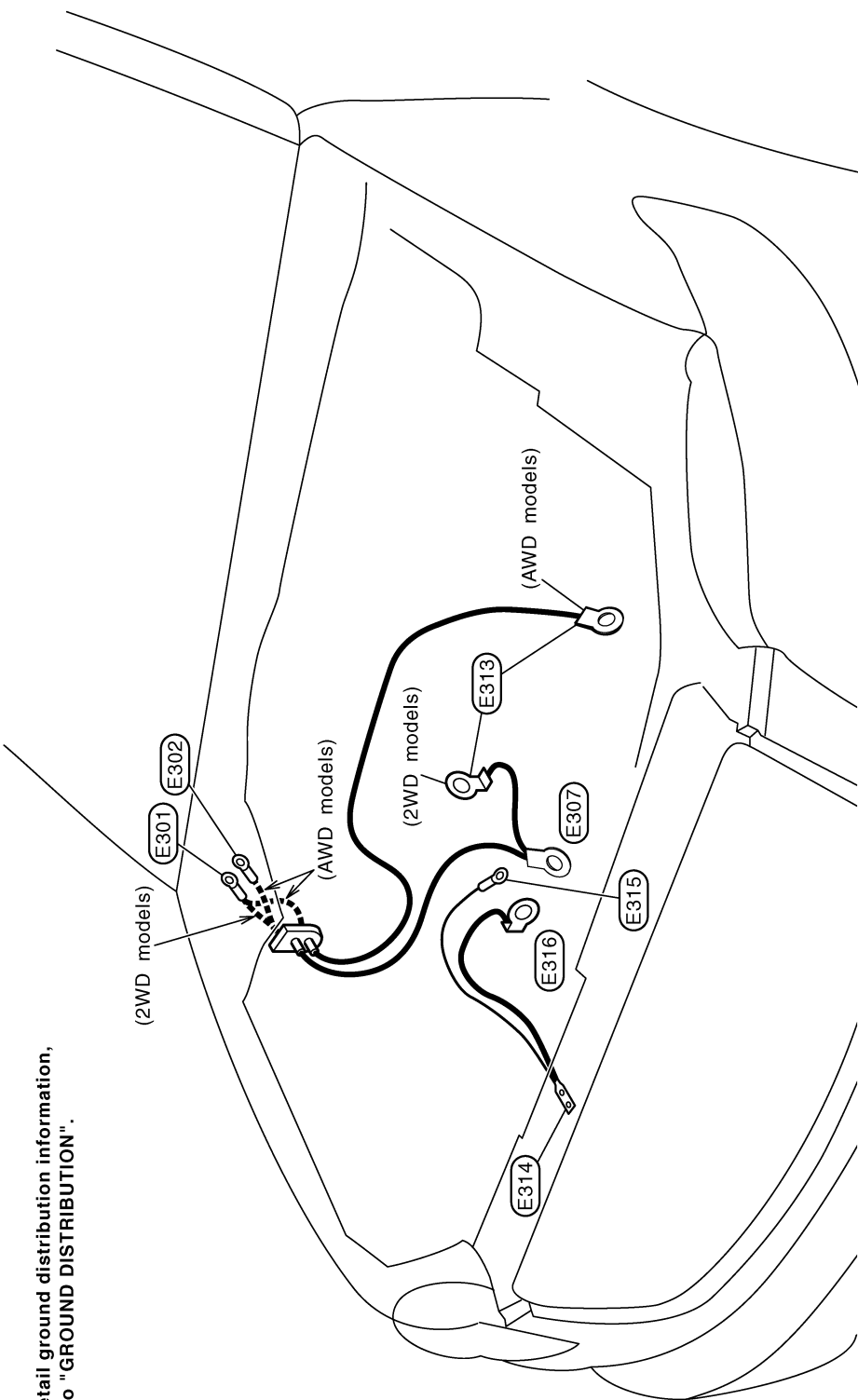
★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

TKIM0068E

HARNESS

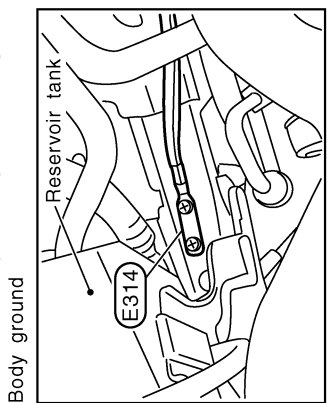
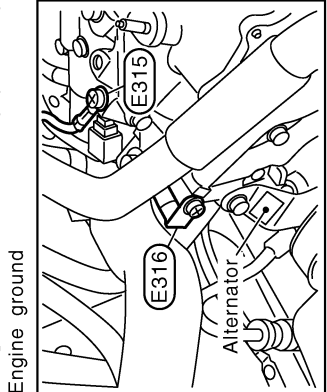
ENGINE HARNESS/VQ ENGINE MODELS

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

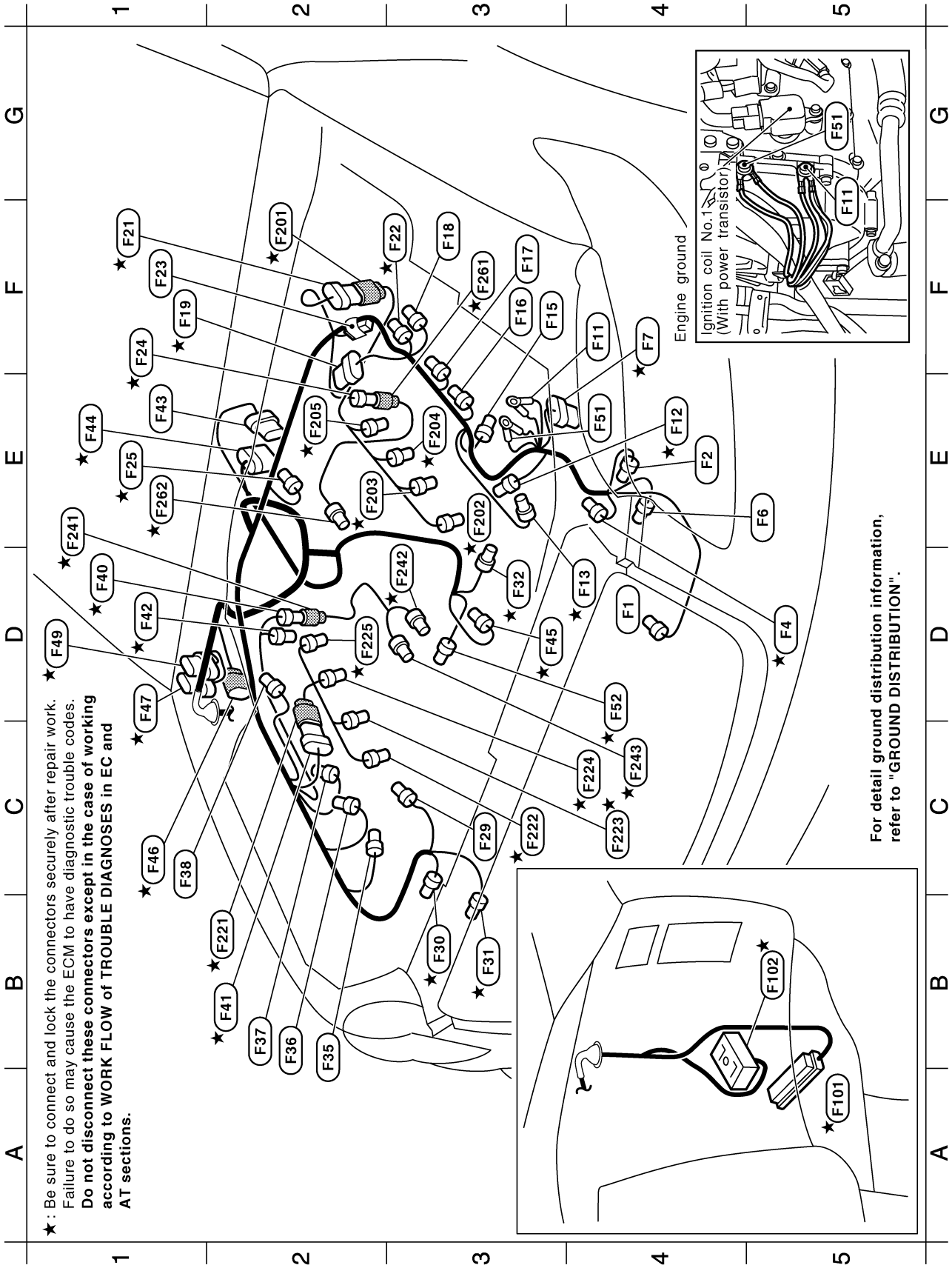
- (E301) : Fusible link holder
- (E302) : Fusible link holder
- (E307) : Alternator (B)
- (E313) : Starter motor
- (E314) : Body ground
- (E315) : Engine ground
- (E316) : Engine ground



TKIM0069E

HARNESS

ENGINE CONTROL HARNESS/VK ENGINE MODELS



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

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

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)
F1	(F19)	DGY/6	: Electric throttle control actuator
F1	(F21)	DGY/6	: To (F201)
F3	(F22)	GY/4	: Heated oxygen sensor 1 (Bank 1)
F1	(F23)	W/2	: Condenser
F1	(F24)	B/2	: To (F261)
E1	(F25)	LG/2	: EVAP canister purge volume control solenoid valve
C3	(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)	GY/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)
D1	(F42)	GY/4	: Heated oxygen sensor 1 (Bank 2)
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)
D1	(F47)	GY/6	: To (E17)

D1	(F49)	B/8	: To (E19)
E4	(F51)	—	: Engine ground
D4	(F52)	B/4	: Heated oxygen sensor 2 (Bank 2)
A5	(F101)	SMJ	: ECM
B5	(F102)	SMJ	: To (M82)

Engine control sub-harness-1

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

Engine control sub-harness-2

B2	(F221)	G/6	: To (F41)
C3	(F222)	GY/2	: Injector No.2
C4	(F223)	GY/2	: Injector No.4
C4	(F224)	GY/2	: Injector No.6
D2	(F225)	GY/2	: 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

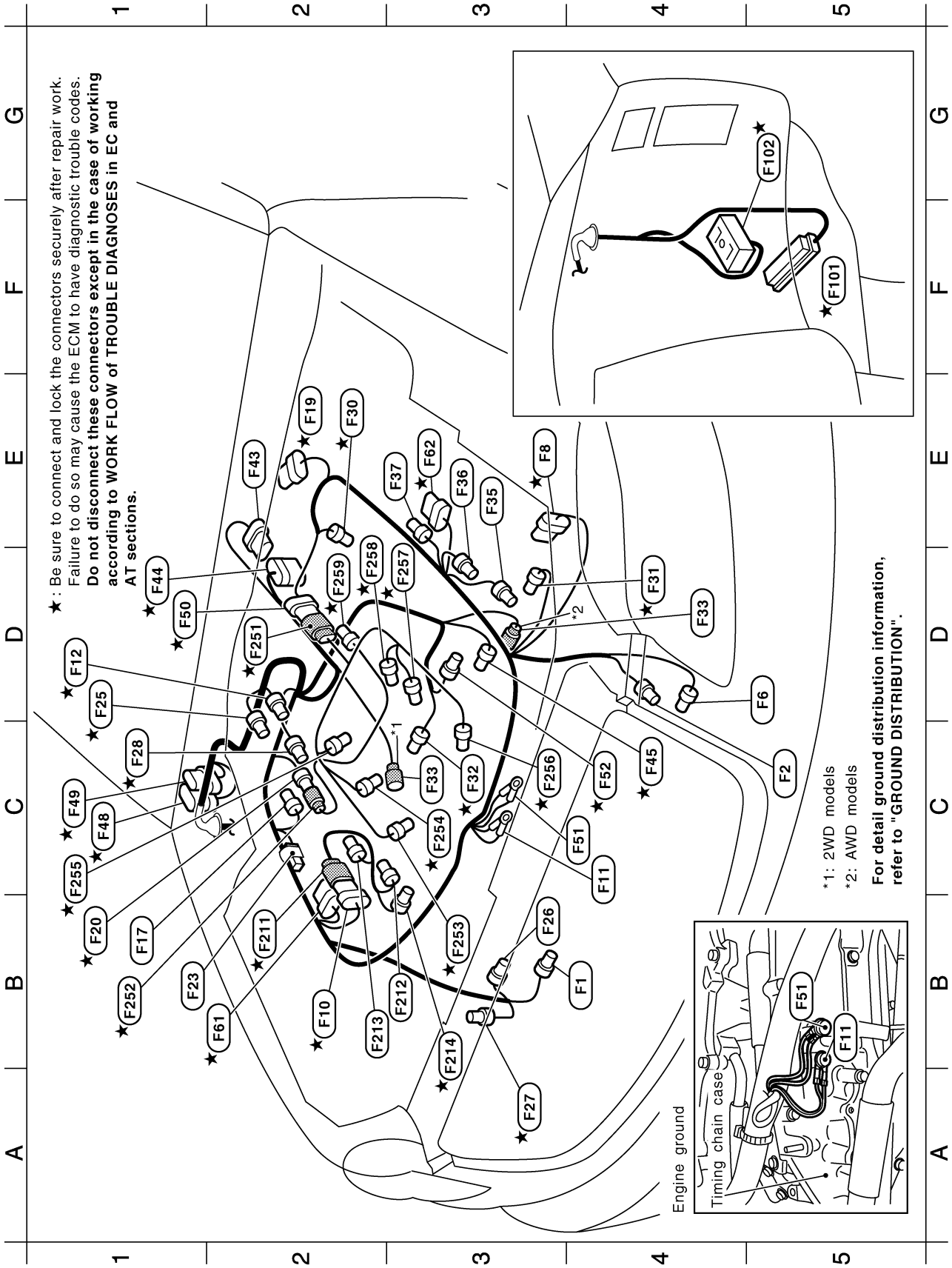
F3	(F261)	SB/2	: To (F24)
E1	(F262)	GY/2	: Engine coolant temperature sensor

★ : 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.

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HARNESS

ENGINE CONTROL HARNESS/VQ ENGINE MODELS



TKIM0296E

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)	LGY/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)	LGY/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)
C1	(F49)	B/8	: To (E19)
D1	(F50)	G/8	: To (F251)
C4	(F51)	—	: Engine ground
C4	(F52)	GY/4	: Heated oxygen sensor 2 (Bank 2)
B2	(F61)	-/6	: Air fuel ratio (A/F) sensor 1 (Bank 1)
E3	(F62)	-/6	: Air fuel ratio (A/F) sensor 1 (Bank 2)
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

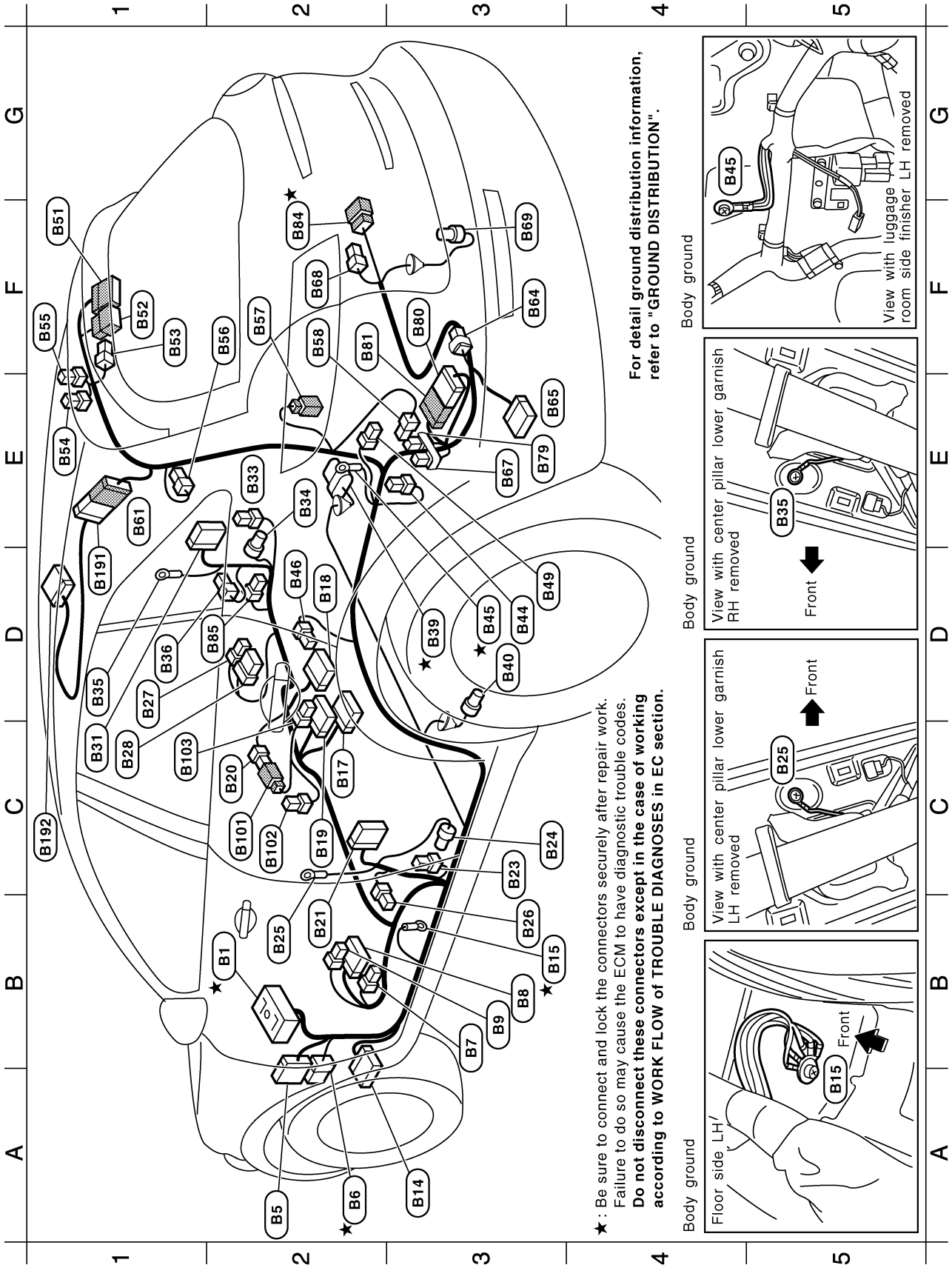
D2	(F251)	G/8	: To (F50)
B1	(F252)	SB/2	: To (F20)
B3	(F253)	GY/2	: Injector No.1
C3	(F254)	GY/2	: Injector No.3
C1	(F255)	GY/2	: Injector No.5
C3	(F256)	GY/2	: Injector No.2
D3	(F257)	GY/2	: Injector No.4
D2	(F258)	GY/2	: Injector No.6
D2	(F259)	L/2	: Knock sensor

★ : 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.

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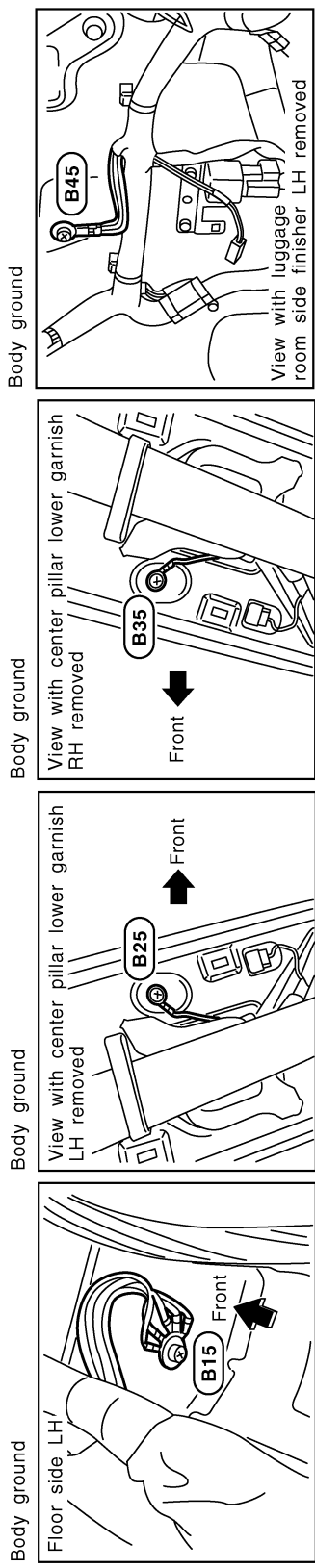
HARNESS

BODY 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.

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



Body harness

B2	★	(B1)	SMJ	:	To	(M11)
A2		(B5)	W/16	:	To	(E205)
A2	★	(B6)	W/6	:	To	(E206)
B3		(B7)	Y/2	:	Front LH side air bag module	
B3		(B8)	W/16	:	Front power seat (Driver side) (With automatic drive positioner)	
B3		(B9)	W/4	:	Front power seat (Driver side) (Without automatic drive positioner)	
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	
B2		(B25)	—	:	Body ground	
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)	
C1		(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		(B35)	—	:	Body ground	
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		(B44)	W/4	:	Back-up lamp relay	
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	

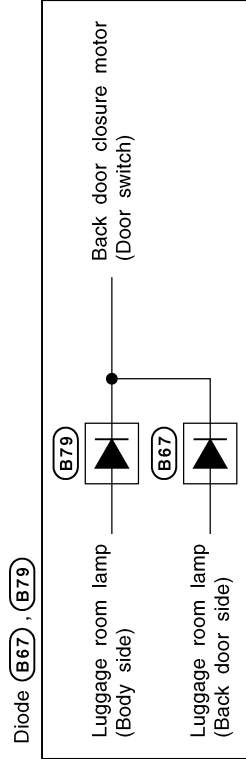
E1	(B61)	W/16	:	To	(B191)	(With DVD player)
F3	(B64)	GY/1	:	Not used		
E3	(B65)	W/12	:	Rear combination lamp control unit		
E3	(B67)	W/2	:	Diode		
F2	(B68)	BR/2	:	Inside key antenna-3 (Luggage room)		
F3	(B69)	SB/4	:	Rear wheel sensor		
E3	(B79)	W/2	:	Diode		
F3	(B80)	W/12	:	To (B81)		
F2	(B81)	W/12	:	To (B80)		
F2	★	(B84)	GY/6	:	To (B216)	
D2	(B85)	W/4	:	To (B217)		

Power socket sub-harness

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

DVD display sub-harness (With DVD player)

D1	(B191)	W/16	:	To	(B61)
C1	(B192)	-/16	:	DVD display	



★ : 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.

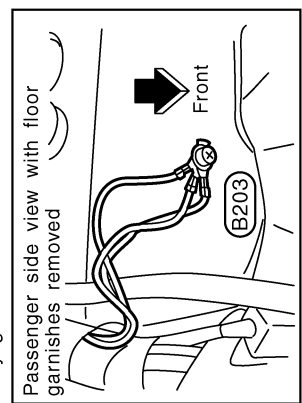
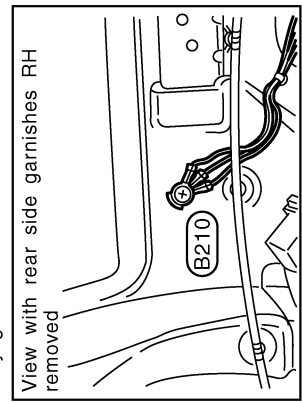
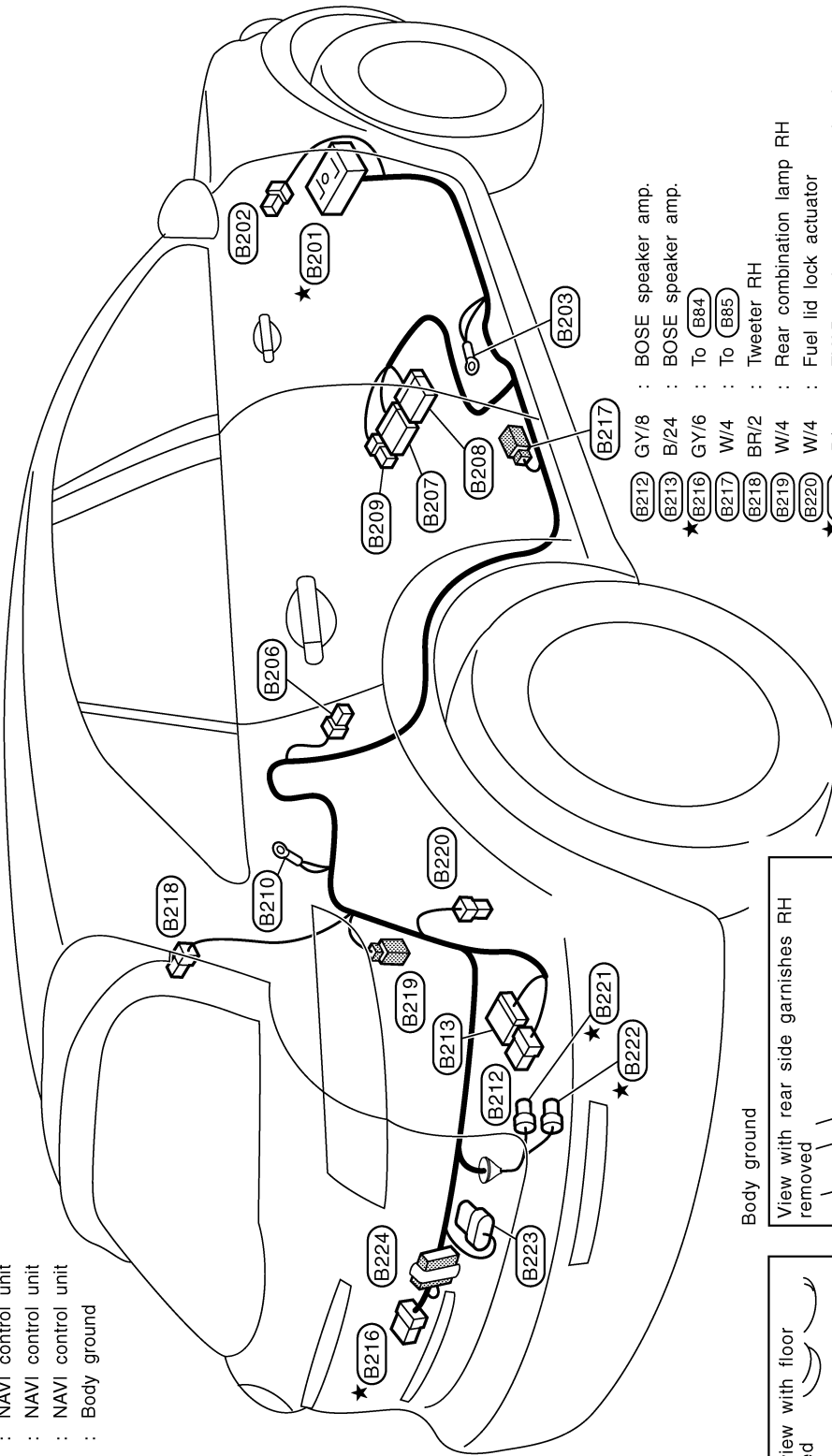
HARNESS

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) : To (M81)
- (B202) : GPS antenna
- (B203) : Body ground
- (B206) : Rear door switch RH
- (B207) : NAVI control unit
- (B208) : NAVI control unit
- (B209) : NAVI control unit
- (B210) : Body ground

- (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 receiver



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

TKIM0169E

ROOM LAMP HARNESS

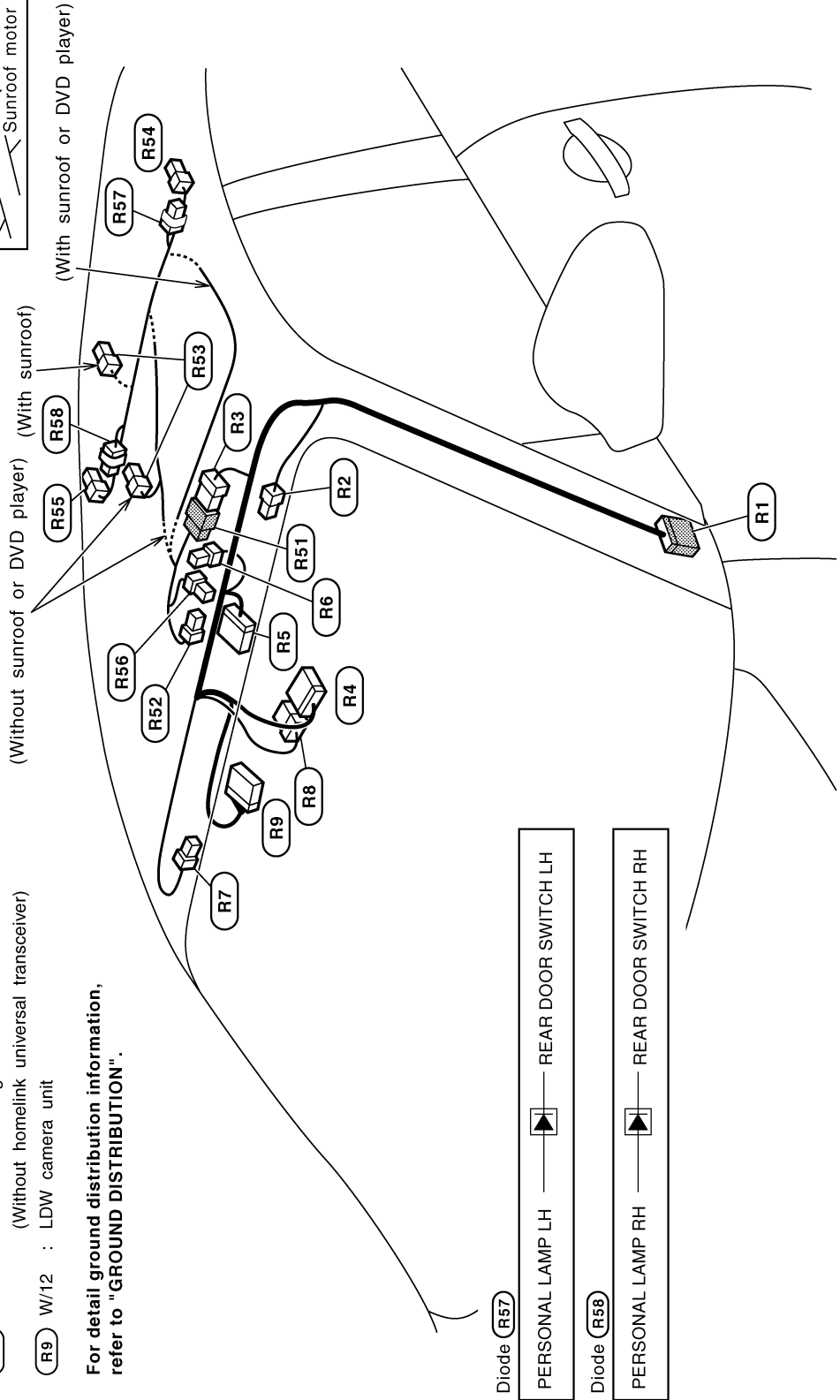
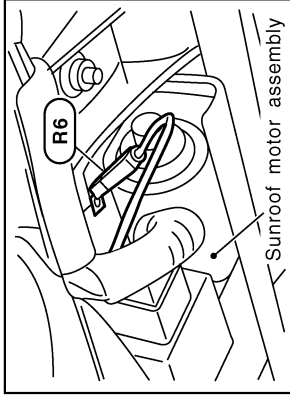
Room lamp harness

- (R1) W/18 : To (M31)
- (R2) W/2 : Vanity mirror lamp (Driver side)
- (R3) W/8 : To (R51)
- (R4) B/10 : Auto anti-dazzling inside mirror
(With homelink universal transceiver)
- (R5) GY/10 : Sunroof motor assembly
- (R6) B/1 : Body ground (With sunroof)
- (R7) W/2 : Vanity mirror lamp (Passenger side)
- (R8) B/7 : Auto anti-dazzling inside mirror
(Without homelink universal transceiver)
- (R9) W/12 : LDW camera unit

Room lamp sub-harness

- (R51) W/8 : To (R3)
- (R52) W/3 : Map lamp
- (R53) W/3 : Interior room lamp (Without DVD player)
- (R54) W/3 : Personal lamp LH
- (R55) W/3 : Personal lamp RH
- (R56) W/3 : Sunroof switch
- (R57) W/2 : Diode
- (R58) W/2 : Diode

Body ground



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

Diode (R57)

PERSONAL LAMP LH — — REAR DOOR SWITCH LH

Diode (R58)

PERSONAL LAMP RH — — REAR DOOR SWITCH RH

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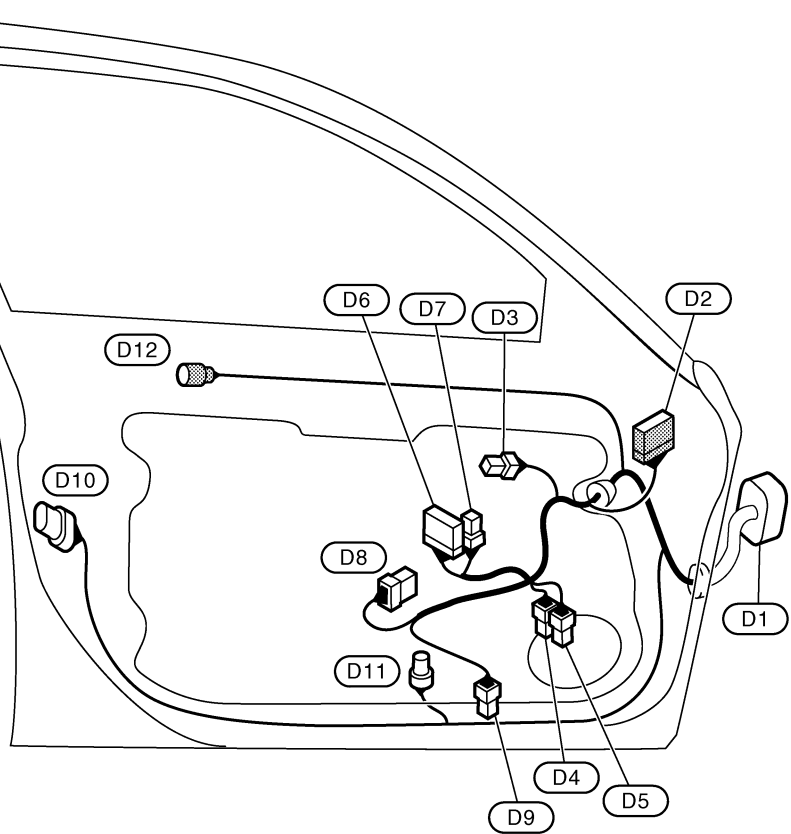
PG

HARNESS

FRONT DOOR HARNESS

LH Side

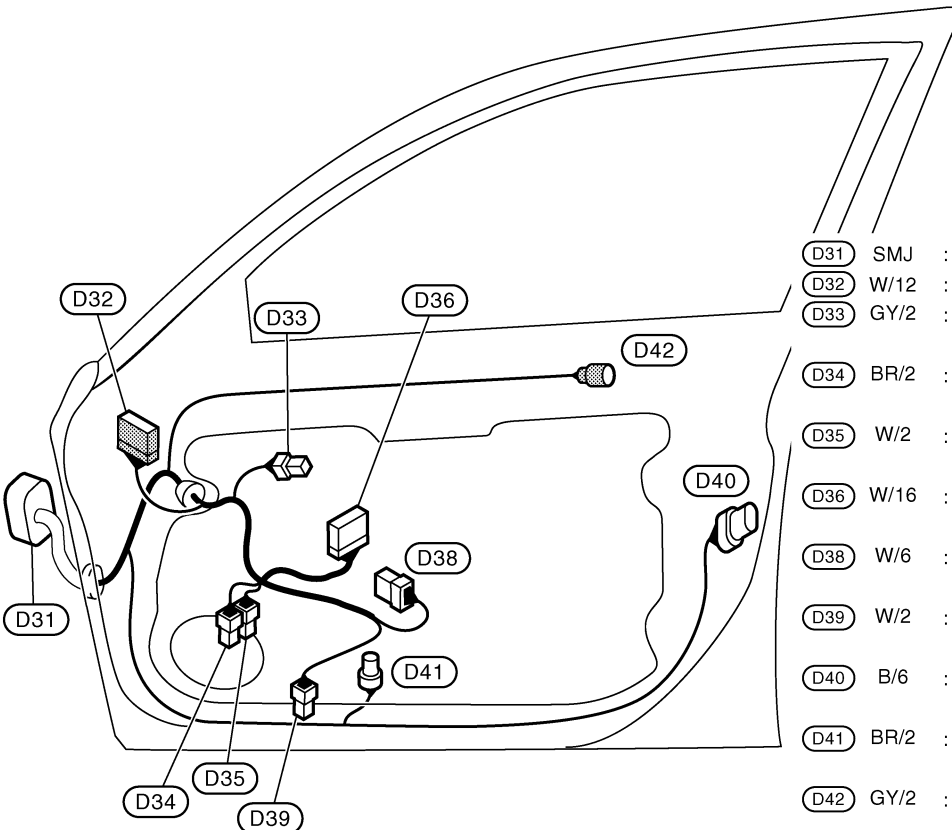
- (D1) SMJ : To (M21)
- (D2) W/12 : Door mirror (Driver side)
- (D3) GY/2 : Front door inside handle illumination (Driver side)
- (D4) BR/2 : Front door speaker LH (With BOSE system)
- (D5) W/2 : Front door speaker LH (Without BOSE system)
- (D6) W/16 : Power window main switch
- (D7) W/3 : Power window main switch
- (D8) W/6 : Front power window motor (Driver side)
- (D9) W/2 : Front step lamp (Driver side)
- (D10) B/6 : Front door lock assembly (Driver side)
- (D11) BR/2 : Intelligent Key warning buzzer (Driver side)
- (D12) GY/2 : Front door request switch (Driver side)



TKIH0012E

RH Side

- (D31) SMJ : To (M91)
- (D32) W/12 : Door mirror (Passenger side)
- (D33) GY/2 : Front door inside handle illumination (Passenger side)
- (D34) BR/2 : Front door speaker RH (With BOSE system)
- (D35) W/2 : Front door speaker RH (Without BOSE system)
- (D36) W/16 : Front power window switch (Passenger side)
- (D38) W/6 : Front power window motor (Passenger side)
- (D39) W/2 : Front step lamp (Passenger side)
- (D40) B/6 : Front door lock assembly (Passenger side)
- (D41) BR/2 : Intelligent Key warning buzzer (Passenger side)
- (D42) GY/2 : Front door request switch (Passenger side)



TKIH0013E

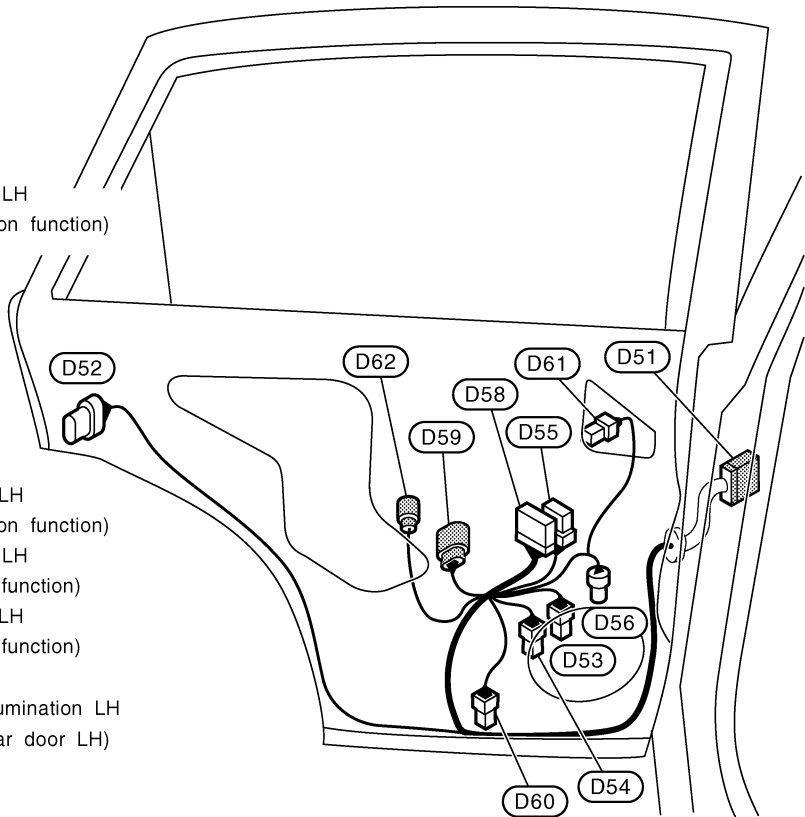
HARNESS

REAR DOOR HARNESS

LH Side

- (D51) W/18 : To (B21)
- (D52) B/6 : Rear door lock actuator LH
- (D53) BR/2 : Rear door speaker LH
(With BOSE system)
- (D54) W/2 : Rear door speaker LH
(Without BOSE system)
- (D55) W/8 : Rear power window switch LH
(Without interruption detection function)

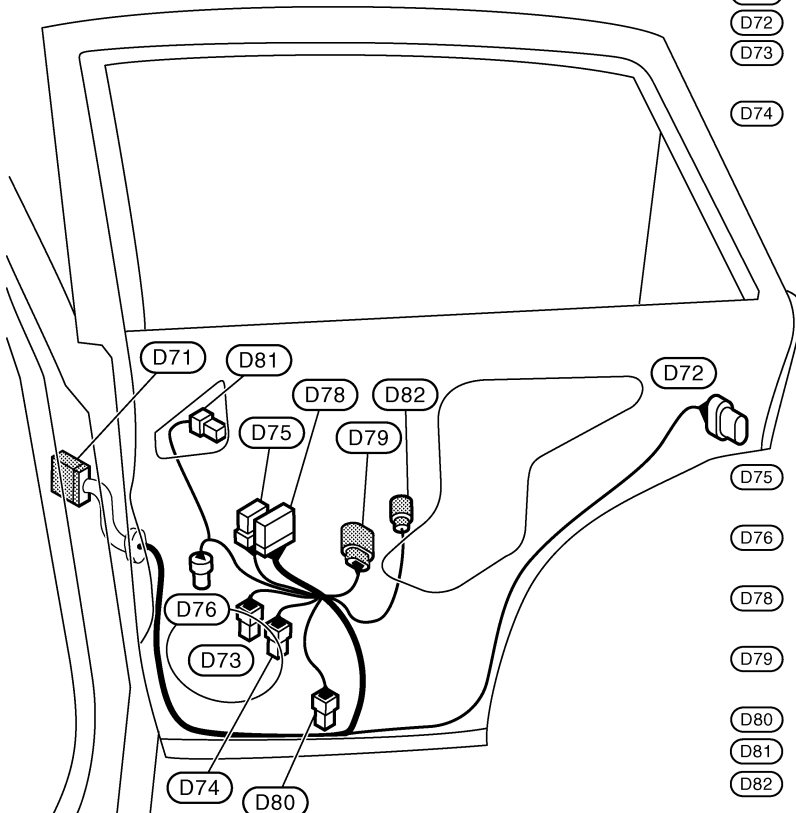
- (D56) BR/2 : Rear power window motor LH
(Without interruption detection function)
- (D58) W/16 : Rear power window switch LH
(With interruption detection function)
- (D59) GY/6 : Rear power window motor LH
(With interruption detection function)
- (D60) W/2 : Rear step lamp LH
- (D61) GY/2 : Rear door inside handle illumination LH
- (D62) GY/2 : Outside key antenna-1 (Rear door LH)



TKIH0014E

RH Side

- (D71) W/18 : To (B31)
- (D72) B/6 : Rear door lock actuator RH
- (D73) BR/2 : Rear door speaker RH
(With BOSE system)
- (D74) W/2 : Rear door speaker RH
(Without BOSE system)



- (D75) W/8 : Rear power window switch RH
(Without interruption detection function)
- (D76) BR/2 : Rear power window motor RH
(Without interruption detection function)
- (D78) W/16 : Rear power window switch RH
(With interruption detection function)
- (D79) GY/6 : Rear power window motor RH
(With interruption detection function)
- (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)

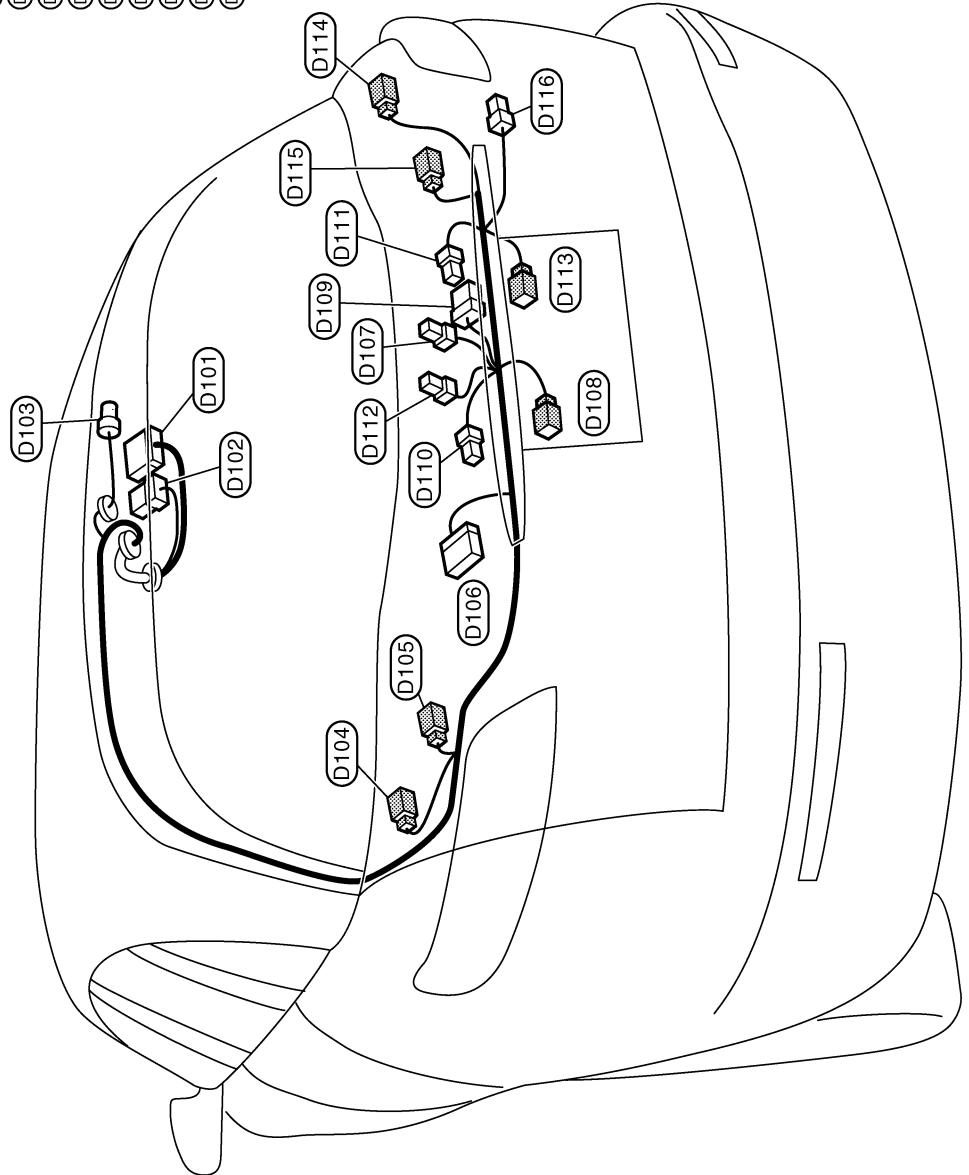
TKIH0015E

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HARNESS

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

HARNESSES

Wiring Diagram Codes (Cell Codes)

AKS007X0

Use the chart below to find out what each wiring diagram code stands for. Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
A/C	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
AT/IND	DI	A/T Indicator Lamp
AUDIO	AV	Audio
AUT/DP	SE	Automatic Drive Positioner
AUTO/L	LT	Automatic Light System
AWD	TF	AWD Control System
B/CLOS	BL	Back Door Closure System
BACK/L	LT	Back-Up Lamp
BRK/SW	EC	Brake Switch
CAN	AT	CAN Communication Line
CAN	EC	CAN Communication Line
CAN	LAN	CAN System
CHARGE	SC	Charging System
CHIME	DI	Warning Chime
CIGAR	WW	Cigarette Lighter
CLOCK	DI	Clock
COMBSW	LT	Combination Switch
COMM	AV	Audio Visual Communication Line
COMPAS	DI	Compass
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	Electric Throttle Control Function
ETC2	EC	Electric Throttle Control Motor Relay
ETC3	EC	Electric Throttle Control Motor
F/FOG	LT	Front Fog Lamp
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)

HARNESSES

Code	Section	Wiring Diagram Name
H/AIM	LT	Headlamp Aiming Control System
H/LAMP	LT	Headlamp
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 Connectors
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
O2H1B1	EC	Heated Oxygen Sensor 1 Heater Bank 1
O2H1B2	EC	Heated Oxygen Sensor 1 Heater Bank 2
O2H2B1	EC	Heated Oxygen Sensor 2 Heater Bank 1
O2H2B2	EC	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	Heated Oxygen Sensor 2 Bank 1
O2S2B2	EC	Heated Oxygen Sensor 2 Bank 2

HARNESS

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

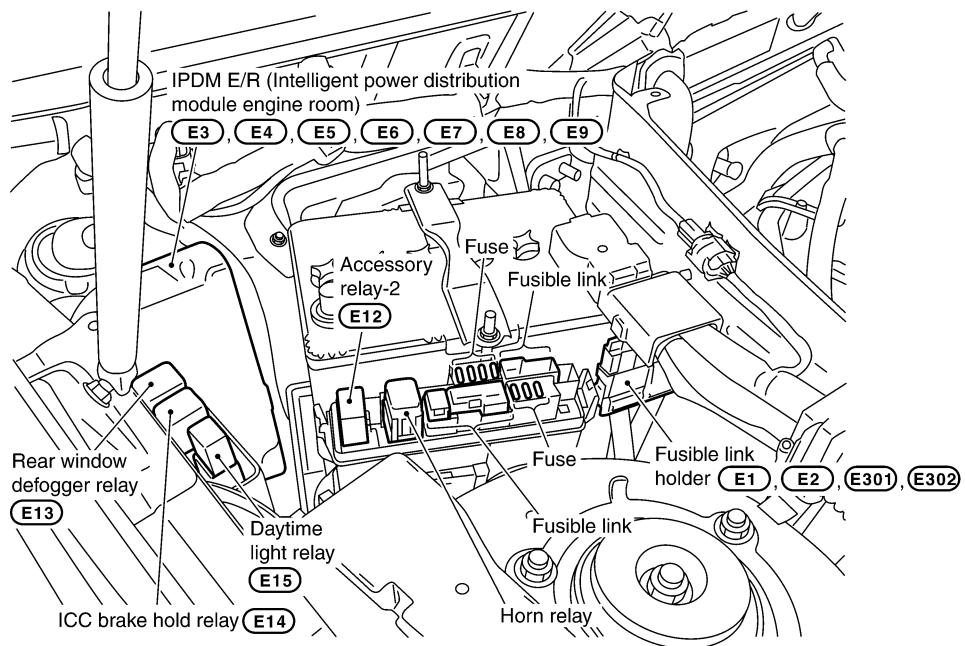
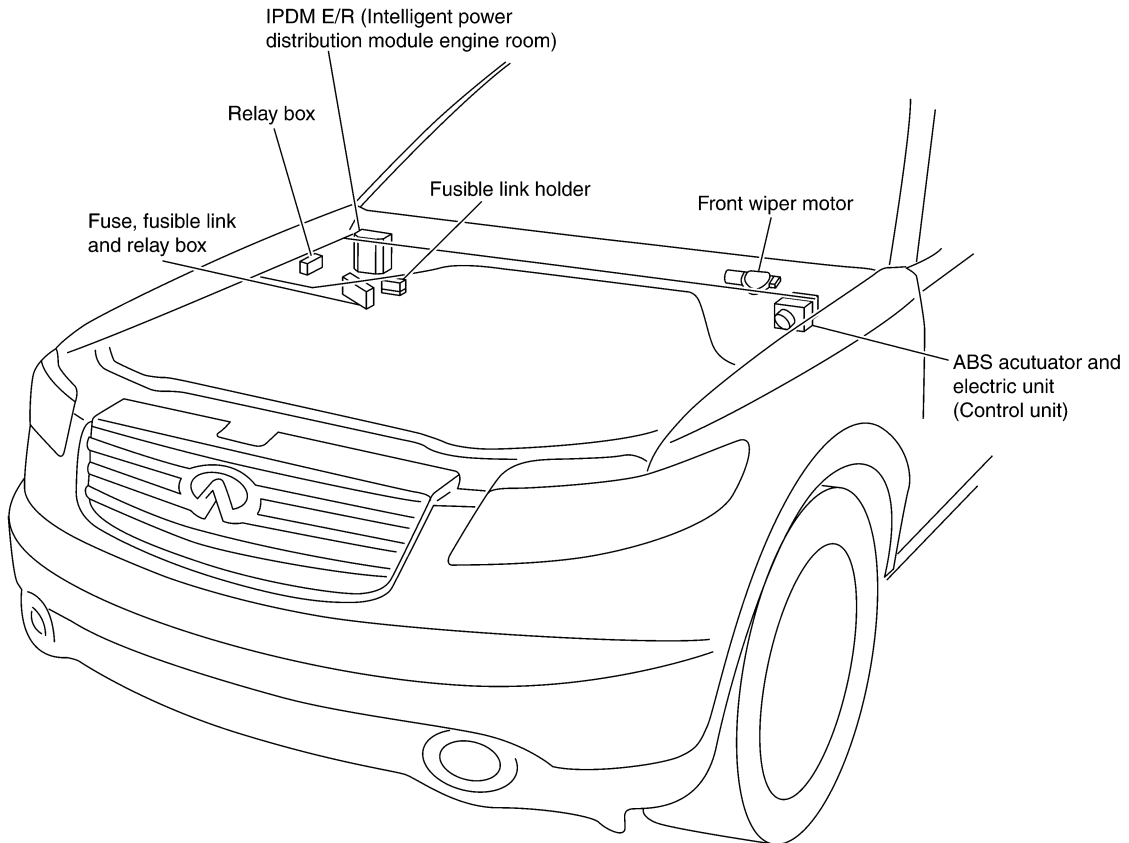
ELECTRICAL UNITS LOCATION

ELECTRICAL UNITS LOCATION

PFP:25230

Electrical Units Location ENGINE COMPARTMENT

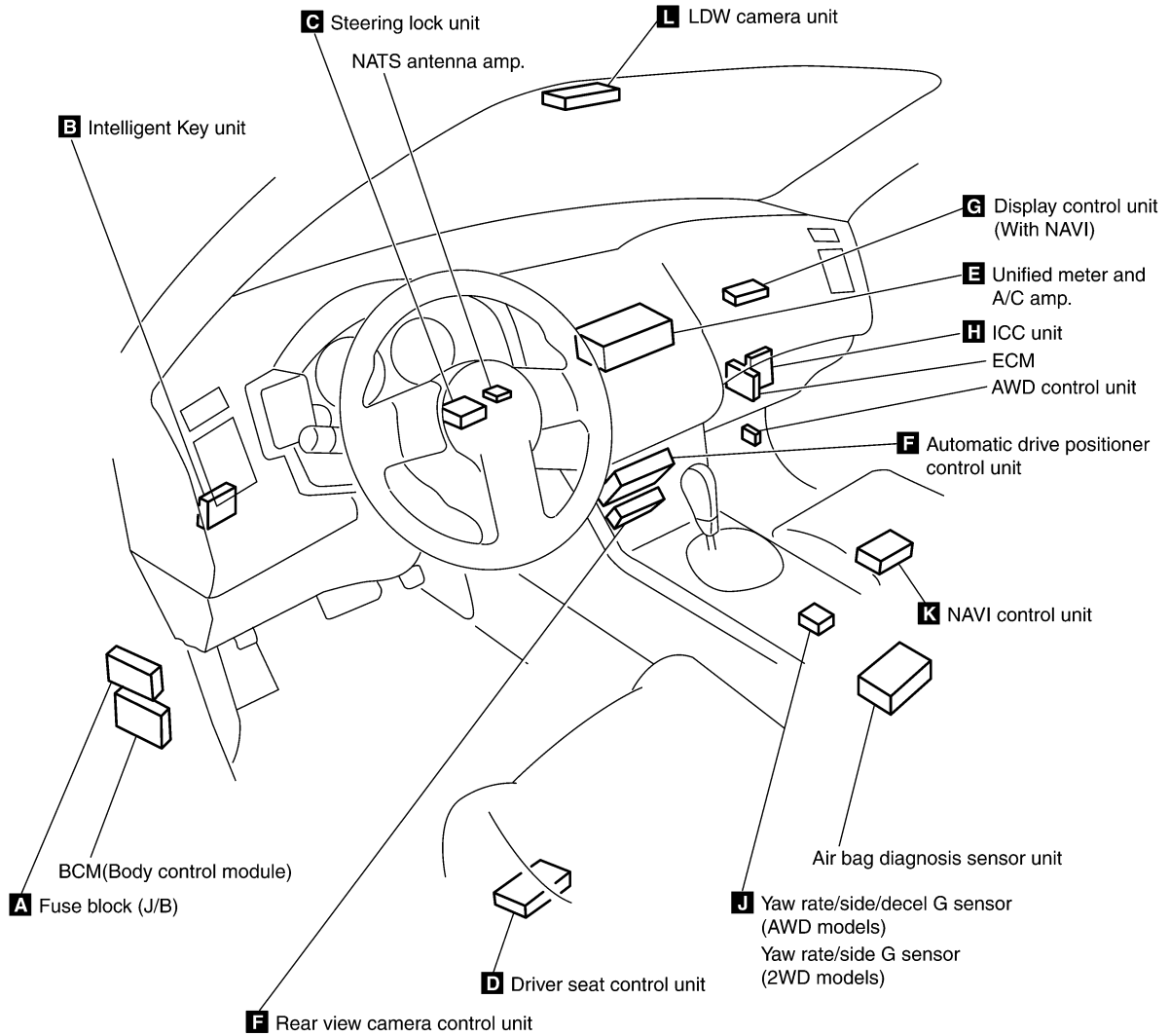
AKS007W2



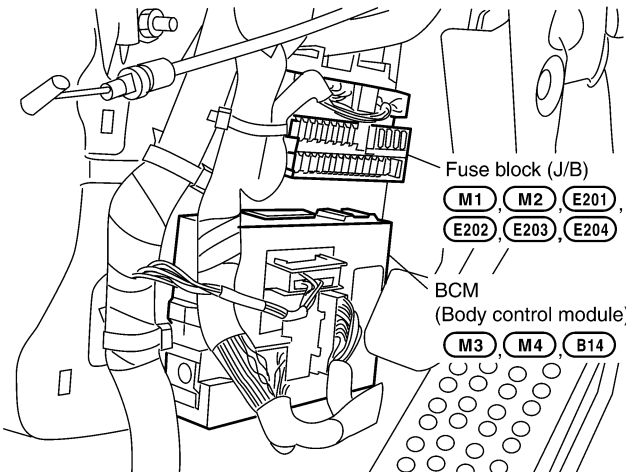
CKIM0212E

ELECTRICAL UNITS LOCATION

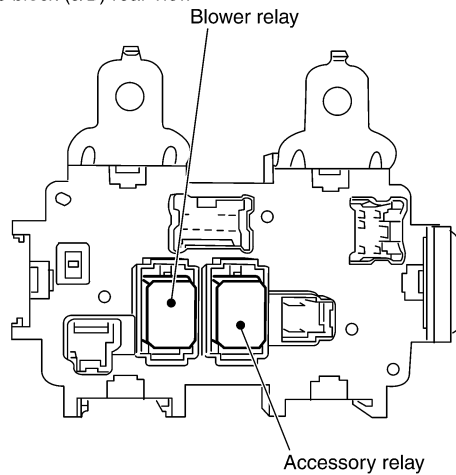
PASSENGER COMPARTMENT



A Behind dash side lower finisher LH



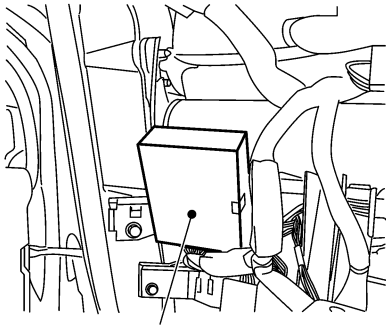
Fuse block (J/B) rear view



CKIM0411E

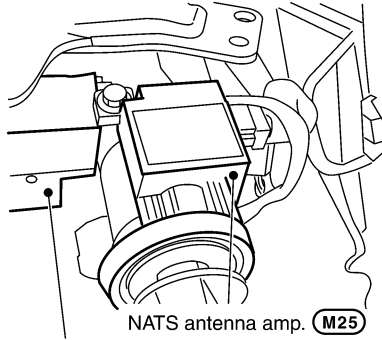
ELECTRICAL UNITS LOCATION

B Driver side view with lower instrument panel removed



Intelligent Key unit (M34)

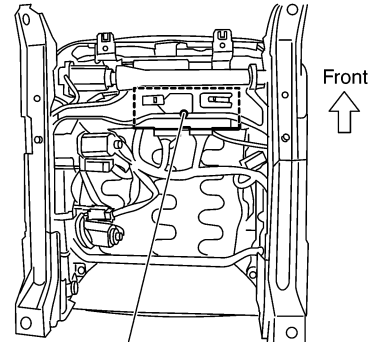
C Driver side view with cluster lid A removed



NATS antenna amp. (M25)

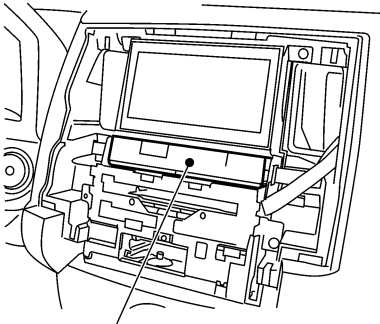
Steering lock unit (M26)

D Under driver seat



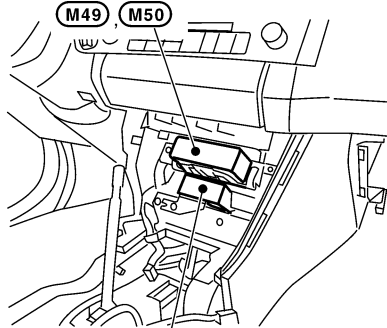
Driver seat control unit (B152, B153)

E View with cluster lid C removed



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

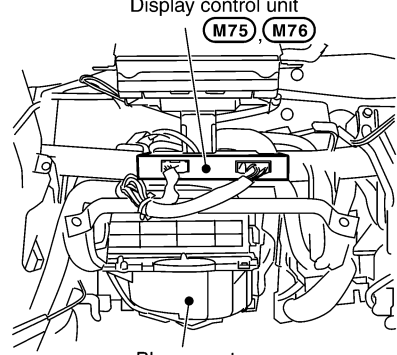
F View with instrument panel center removed



Automatic drive positioner control unit (M49, M50)

Rear view camera control unit (M48)

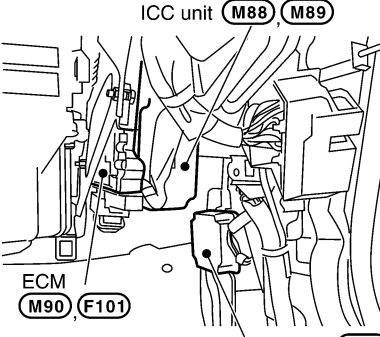
G Behind lower instrument panel on passenger side



Display control unit (M75, M76)

Blower motor

H Behind lower instrument panel on passenger side

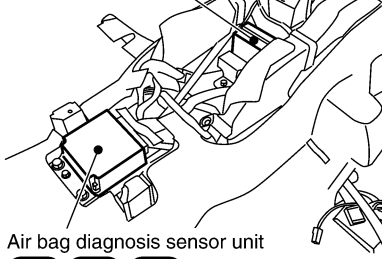


ICC unit (M88, M89)

ECM (M90, F101)

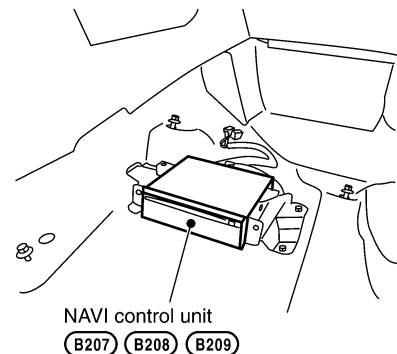
AWD control unit (M92)

J View with floor console box removed
Yaw rate/side/decel G sensor (AWD models) (M71)
Yaw rate/side G sensor (2WD models) (M79)



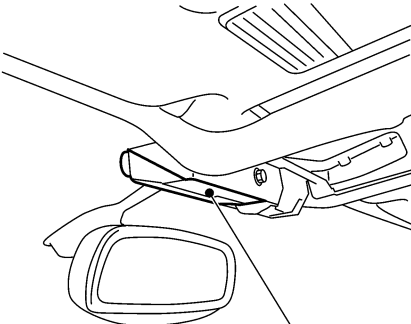
Air bag diagnosis sensor unit (M72, B17, B18)

K View with passenger seat removed



NAVI control unit (B207, B208, B209)

L Map lamp garnish removed

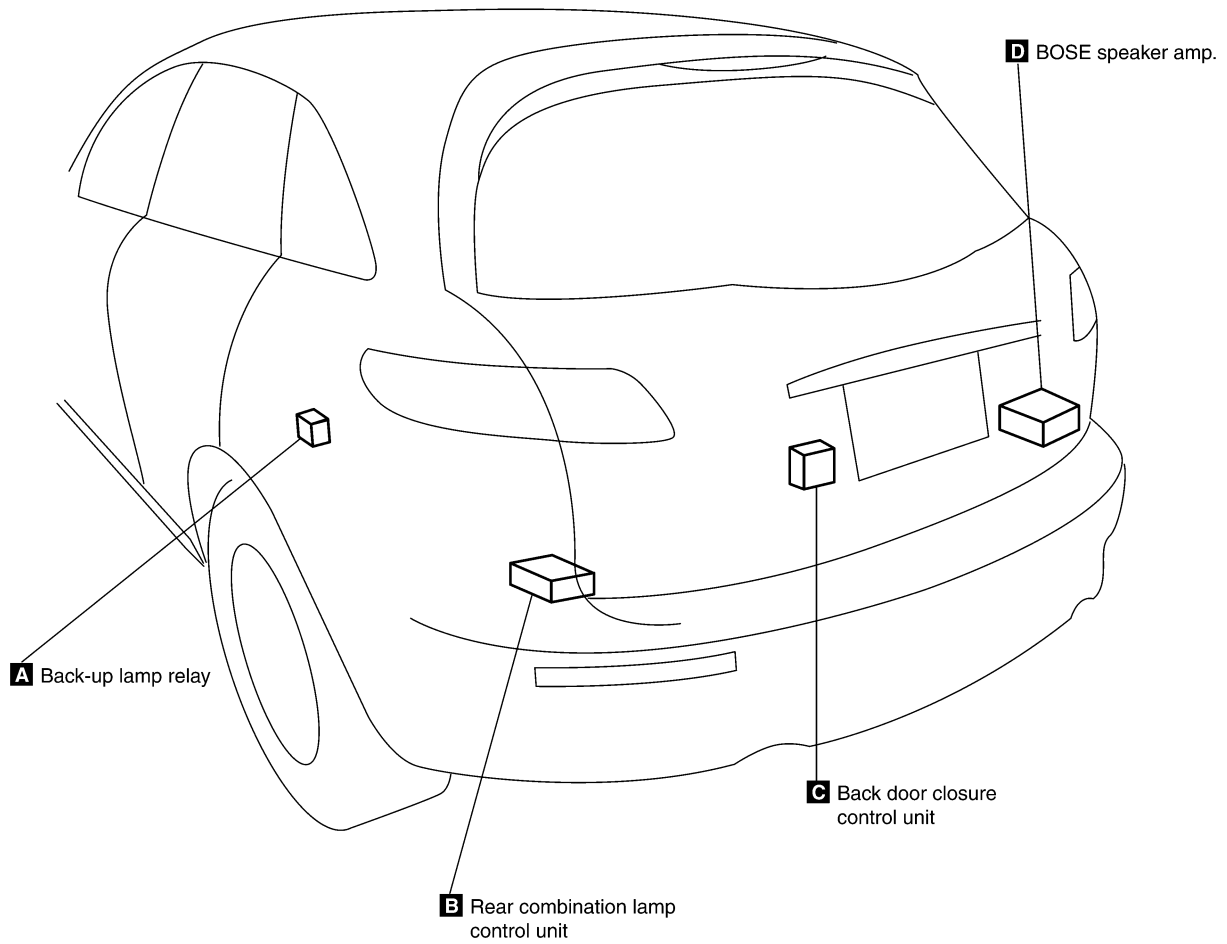


LDW camera unit (R9)

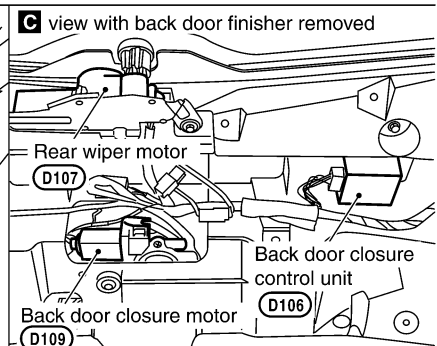
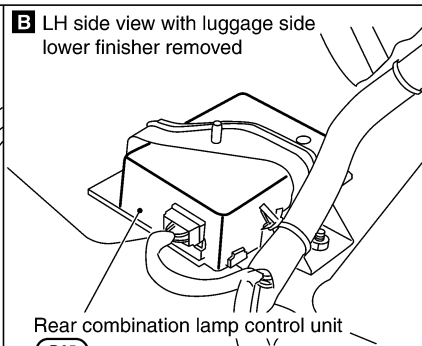
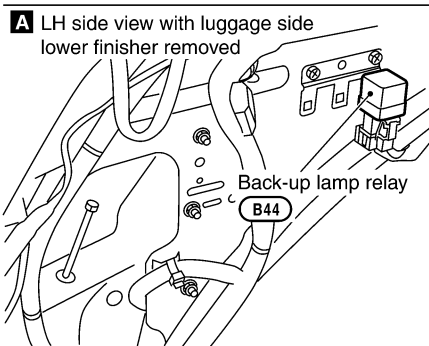
CKIM0412E

ELECTRICAL UNITS LOCATION

LUGGAGE COMPARTMENT

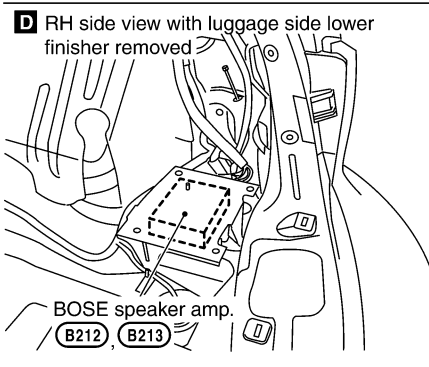


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CKIM0215E

HARNESS CONNECTOR

PFP:00011

AKS007W3

HARNESS CONNECTOR

Description

HARNESS CONNECTOR (TAB-LOCKING TYPE)

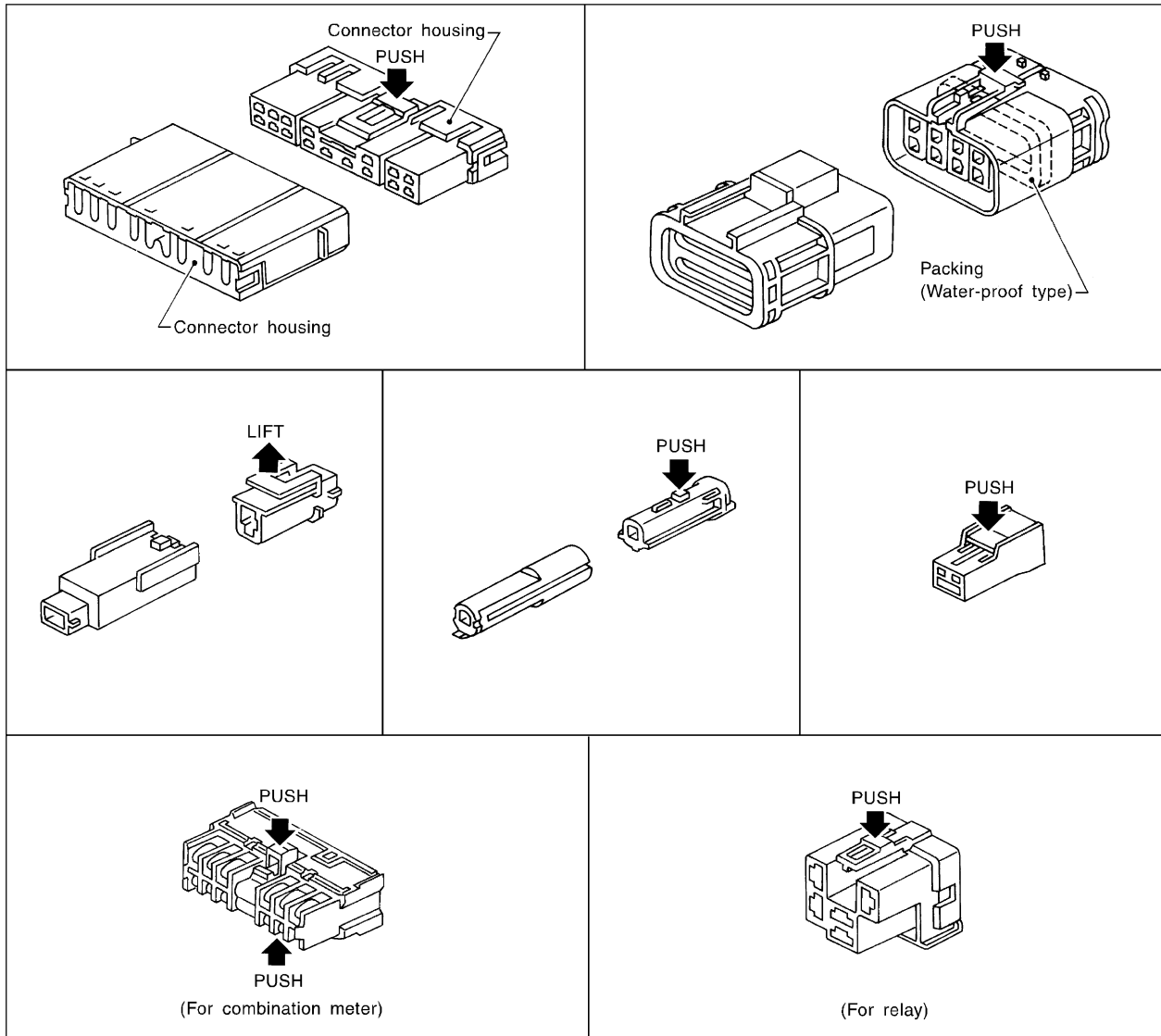
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the figure below.

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

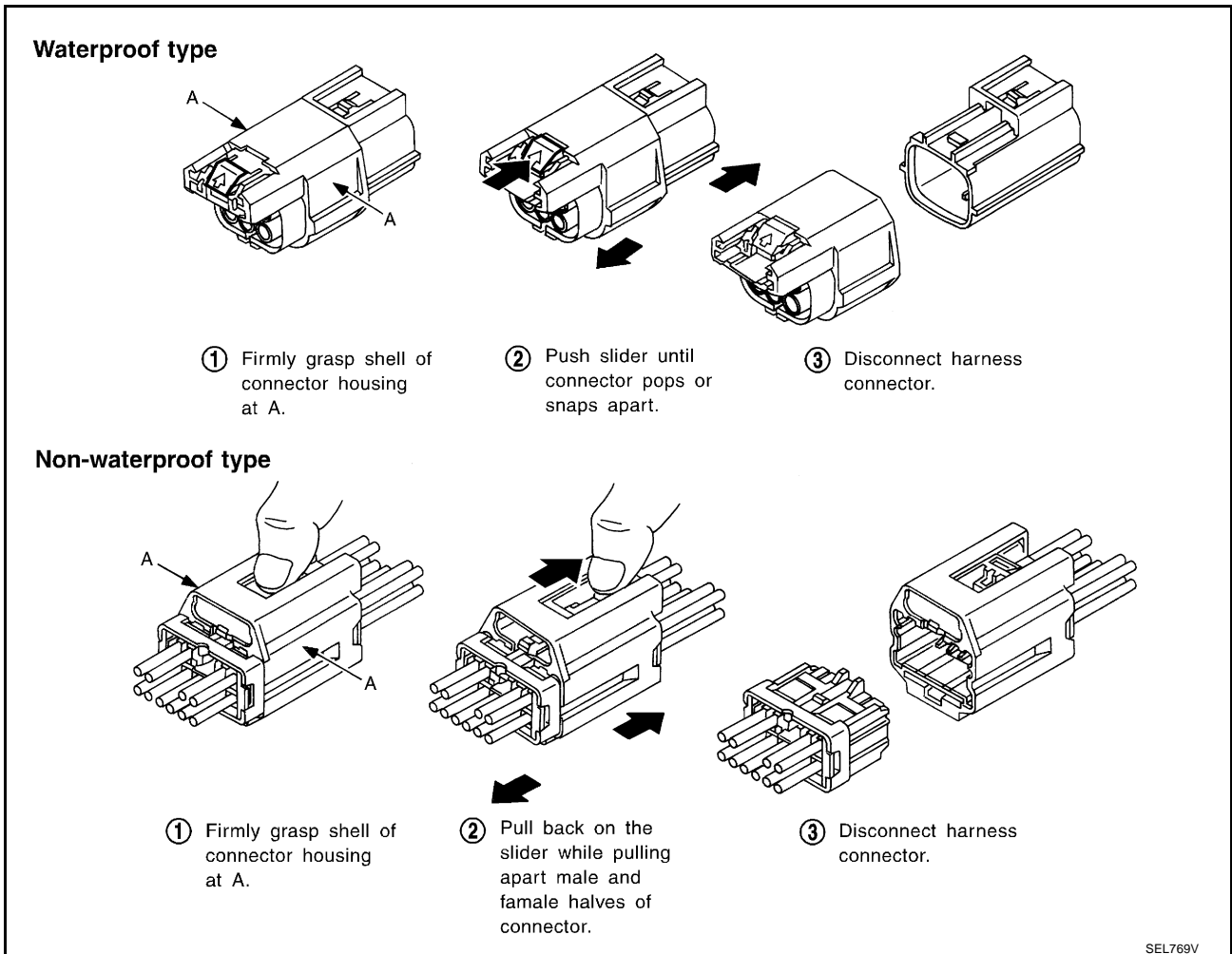
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

- 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 figure below.

CAUTION:

- Do not pull the harness or wires when disconnecting the connector.
- Be careful not to damage the connector support bracket when disconnecting the connector.

[Example]



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ELECTRICAL UNITS

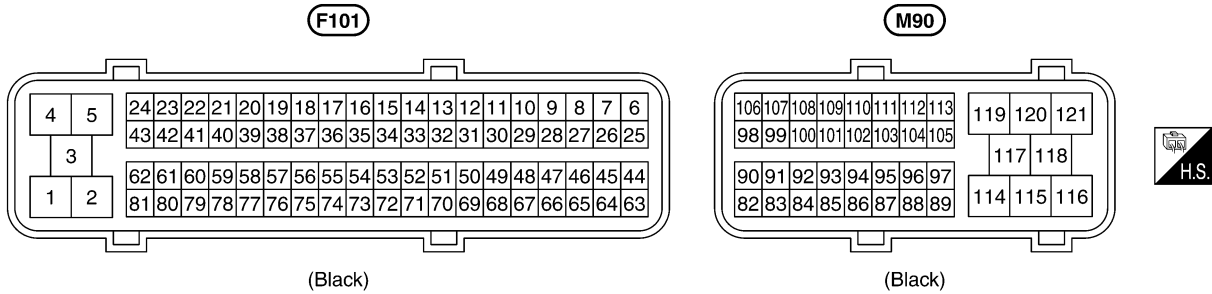
PPF:00011

AKS007W5

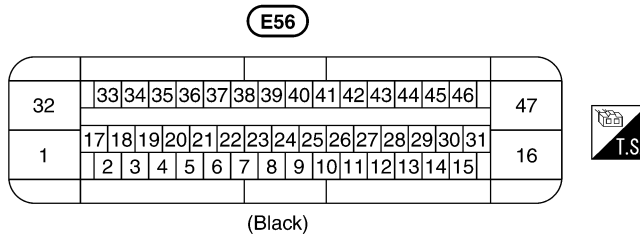
ELECTRICAL UNITS

Terminal Arrangement

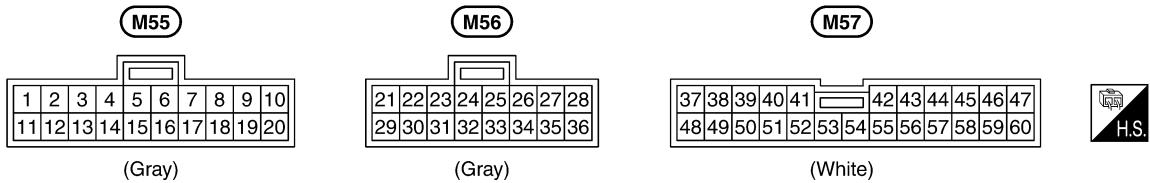
ECM



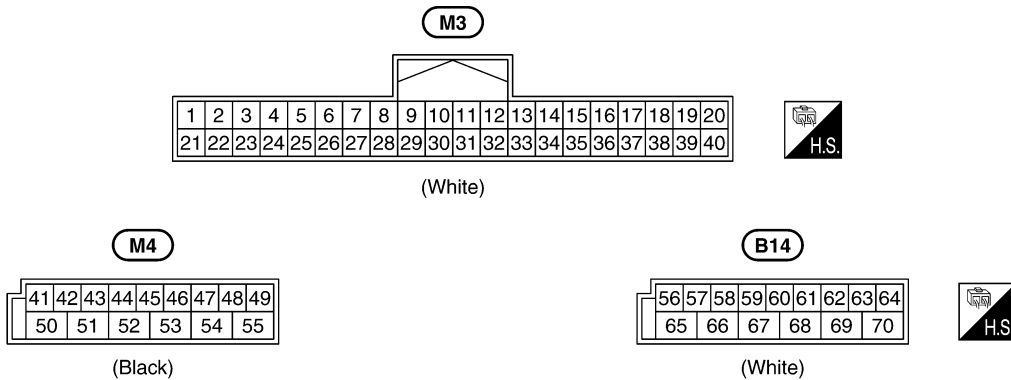
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



UNIFIED METER AND A/C AMP.



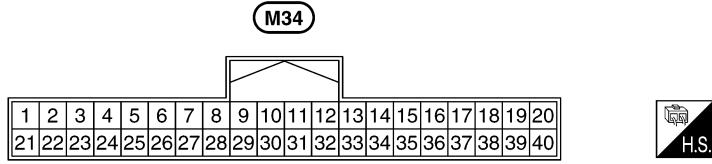
BCM (BODY CONTROL MODULE)



CKIM0217E

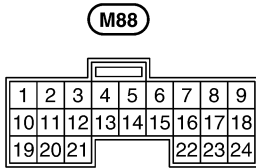
ELECTRICAL UNITS

INTELLIGENT KEY UNIT

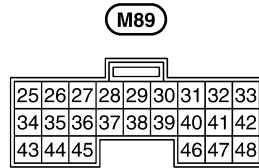


(White)

ICC UNIT



(White)



(Gray)



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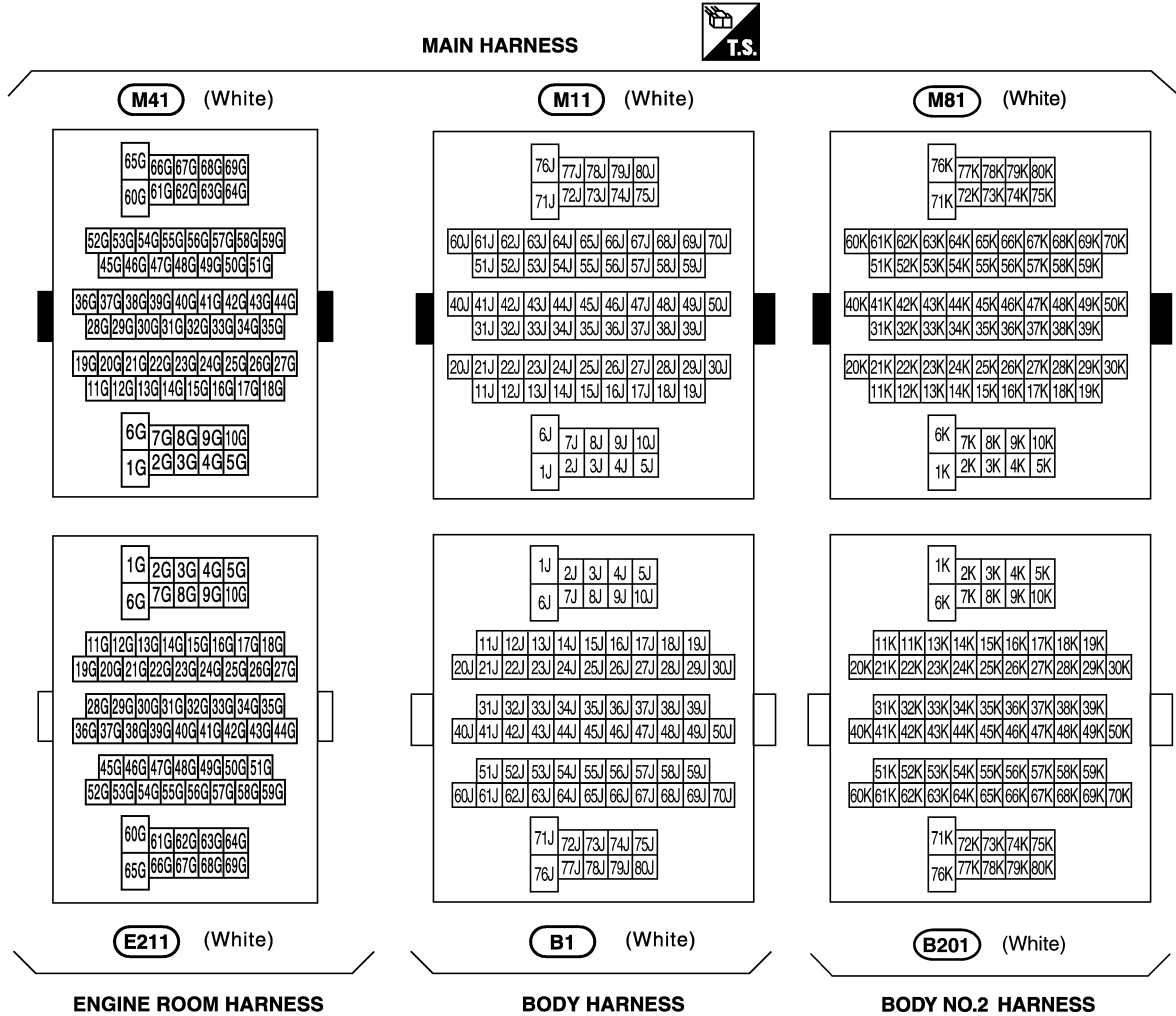
SMJ (SUPER MULTIPLE JUNCTION)

SMJ (SUPER MULTIPLE JUNCTION)

PF-P:B4341

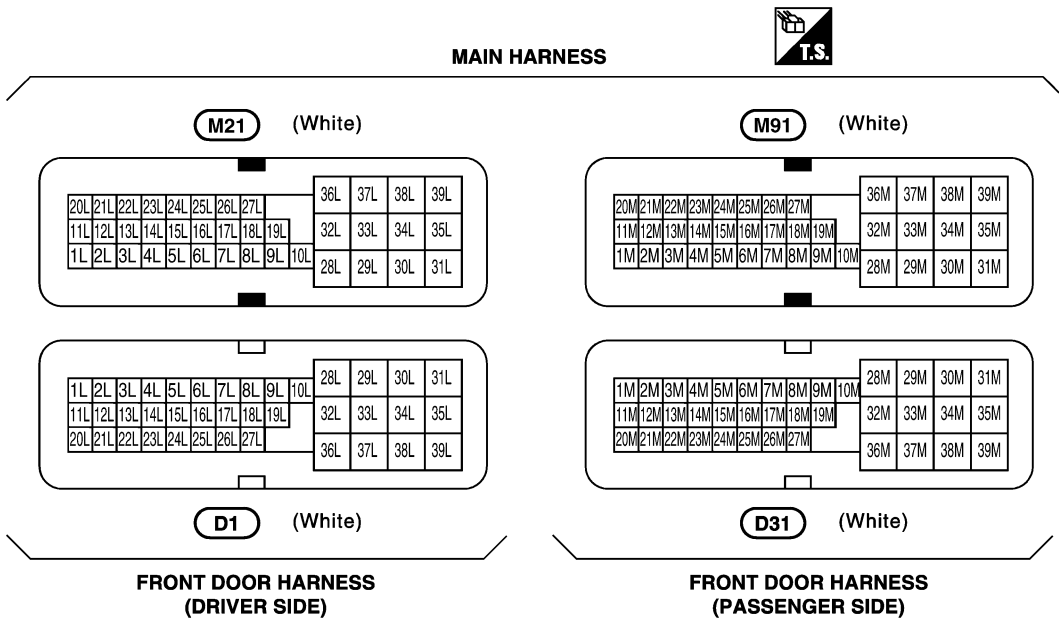
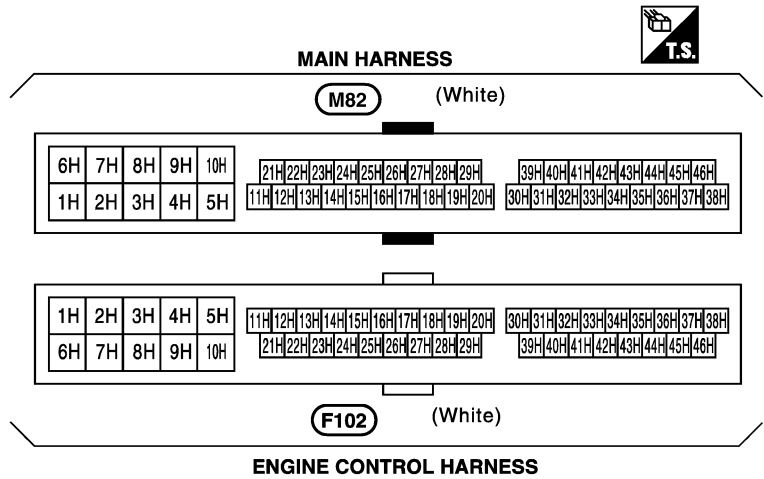
Terminal Arrangement

AKS007W6



CKIH0255E

SMJ (SUPER MULTIPLE JUNCTION)



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STANDARDIZED RELAY

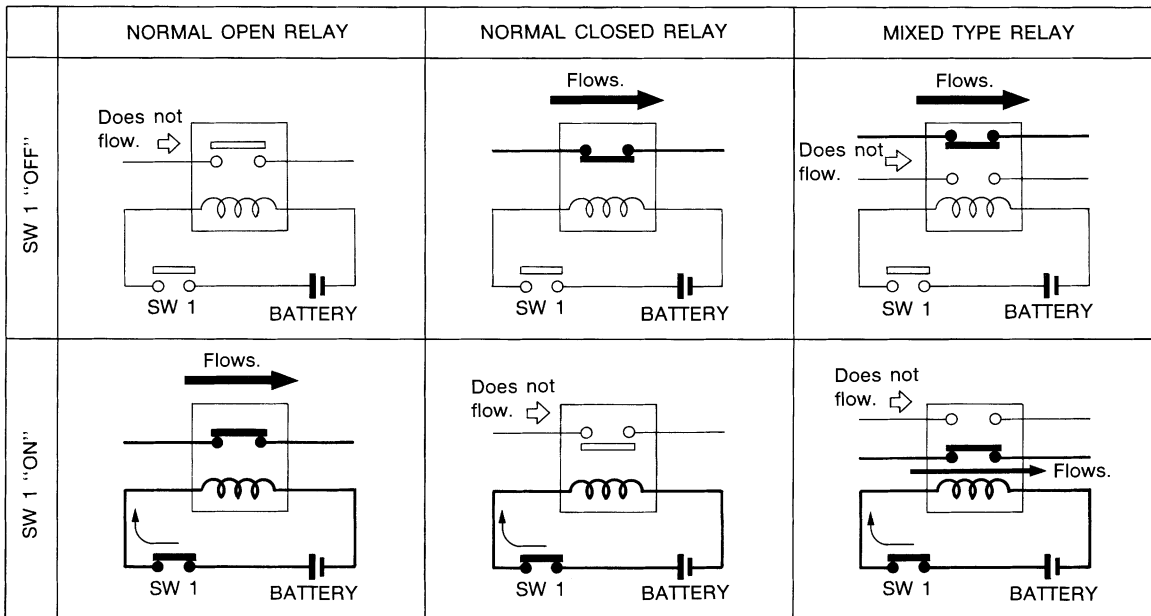
PFP:00011

AKS007W7

STANDARDIZED RELAY

Description NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

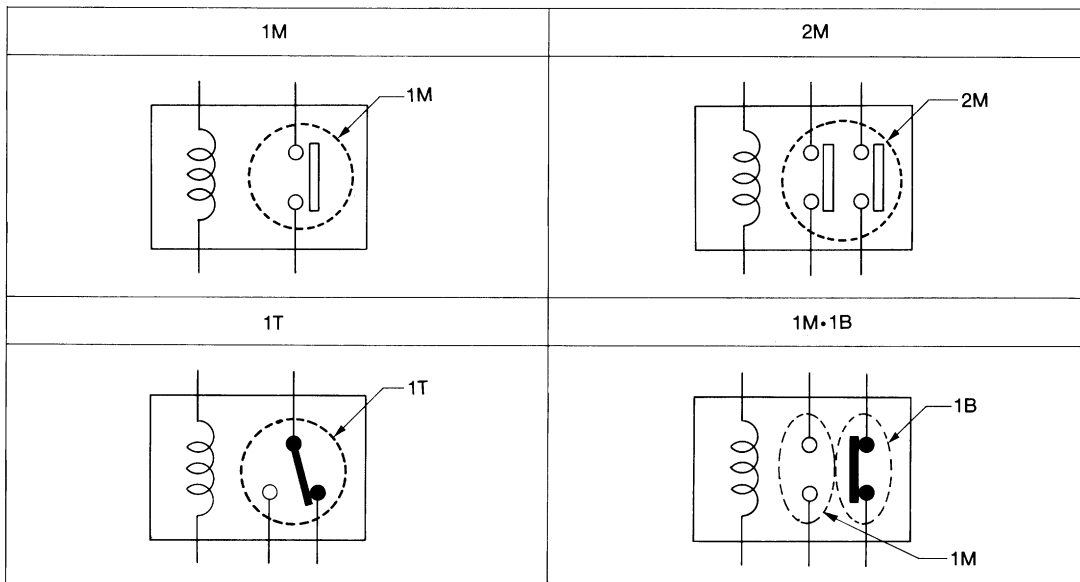
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



SEL881H

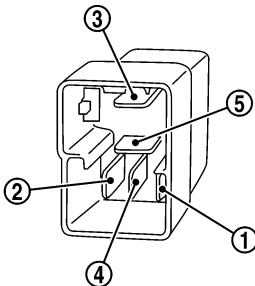
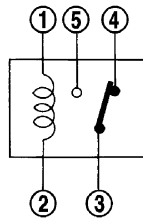
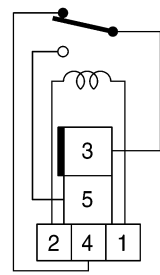
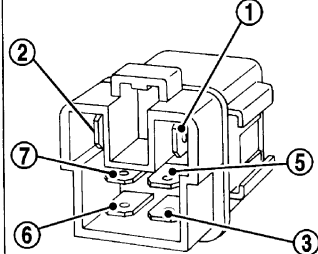
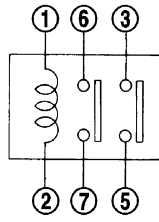
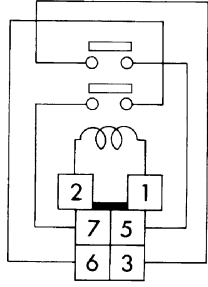
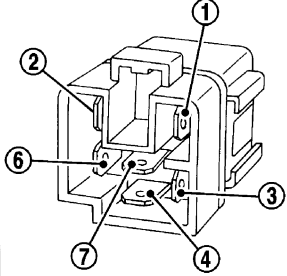
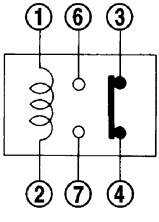
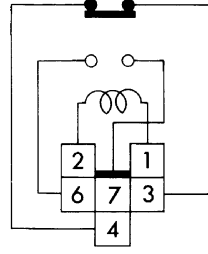
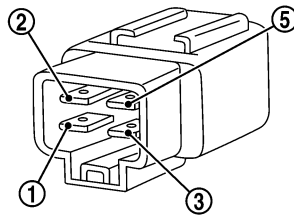
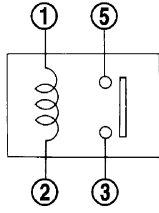
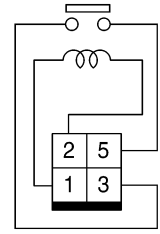
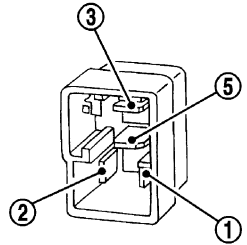
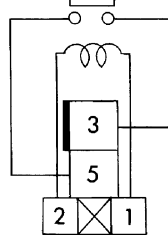
TYPE OF STANDARDIZED RELAYS

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



SEL882H

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.

CKIM0221E

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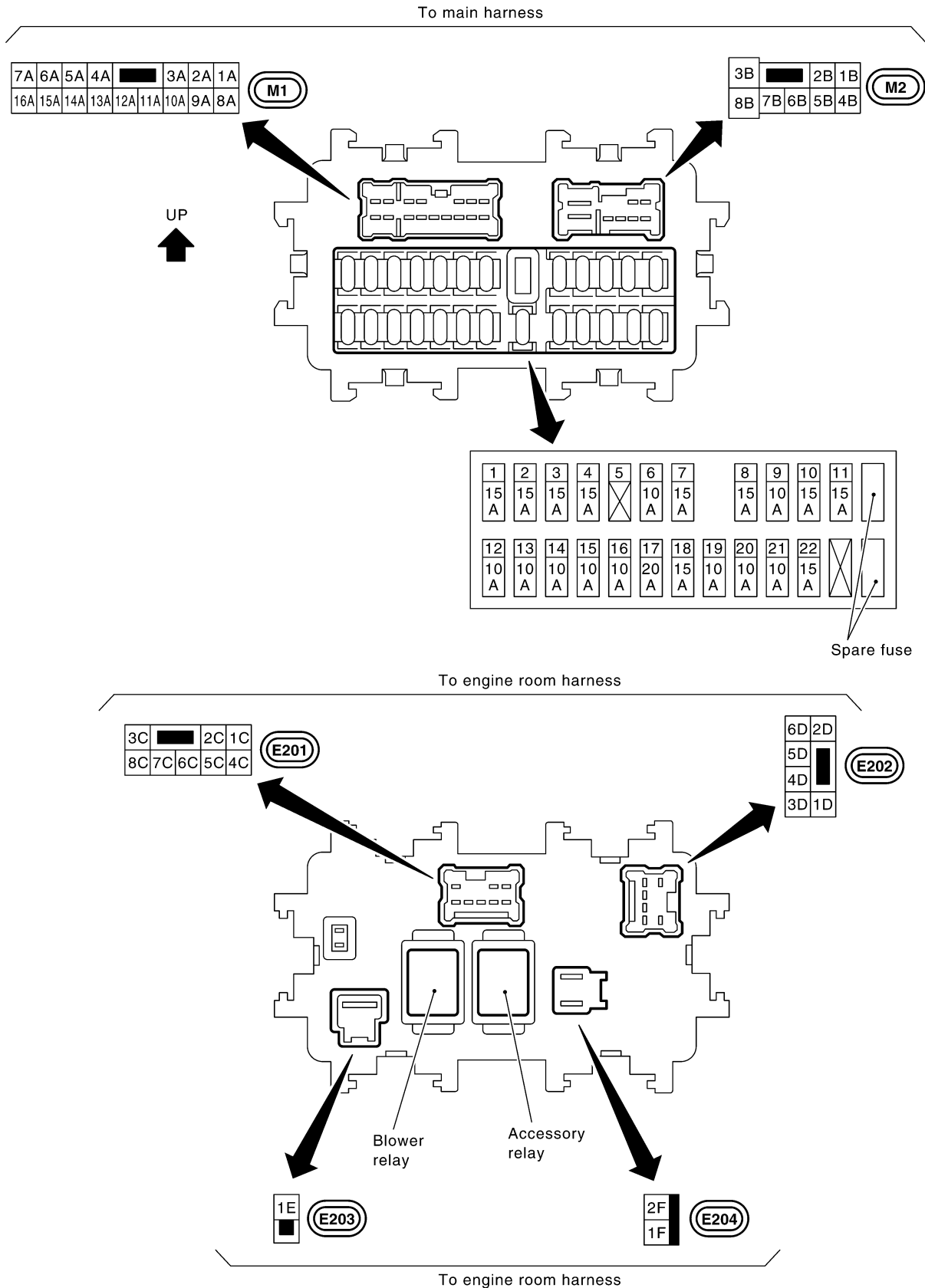
FUSE BLOCK - JUNCTION BOX (J/B)

FUSE BLOCK - JUNCTION BOX (J/B)

PFP:24350

Terminal Arrangement

AKS007WB



CKIM0222E

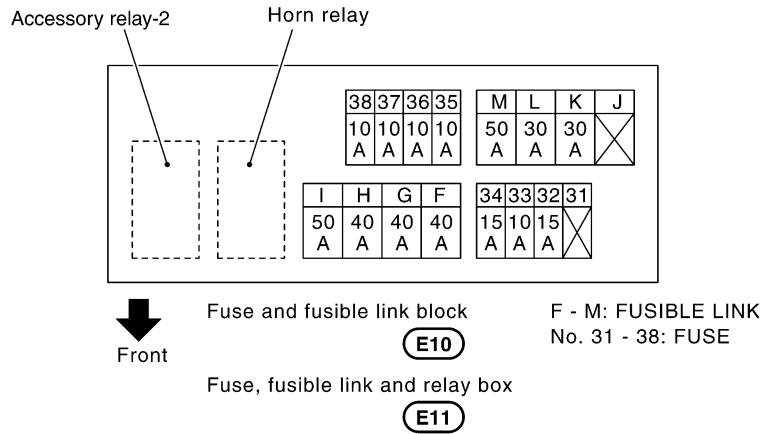
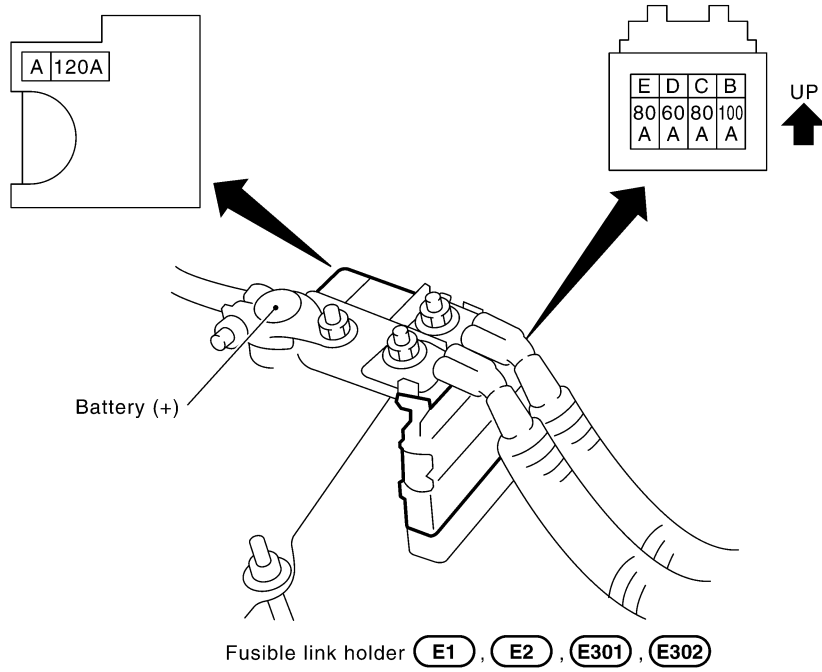
FUSE, FUSIBLE LINK AND RELAY BOX

FUSE, FUSIBLE LINK AND RELAY BOX

PPF:24382

Terminal Arrangement

AKS007W9



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FUSE, FUSIBLE LINK AND RELAY BOX
