

SECTION **PG**

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

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PRECAUTIONS

PRECAUTIONS

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

GKS000C9

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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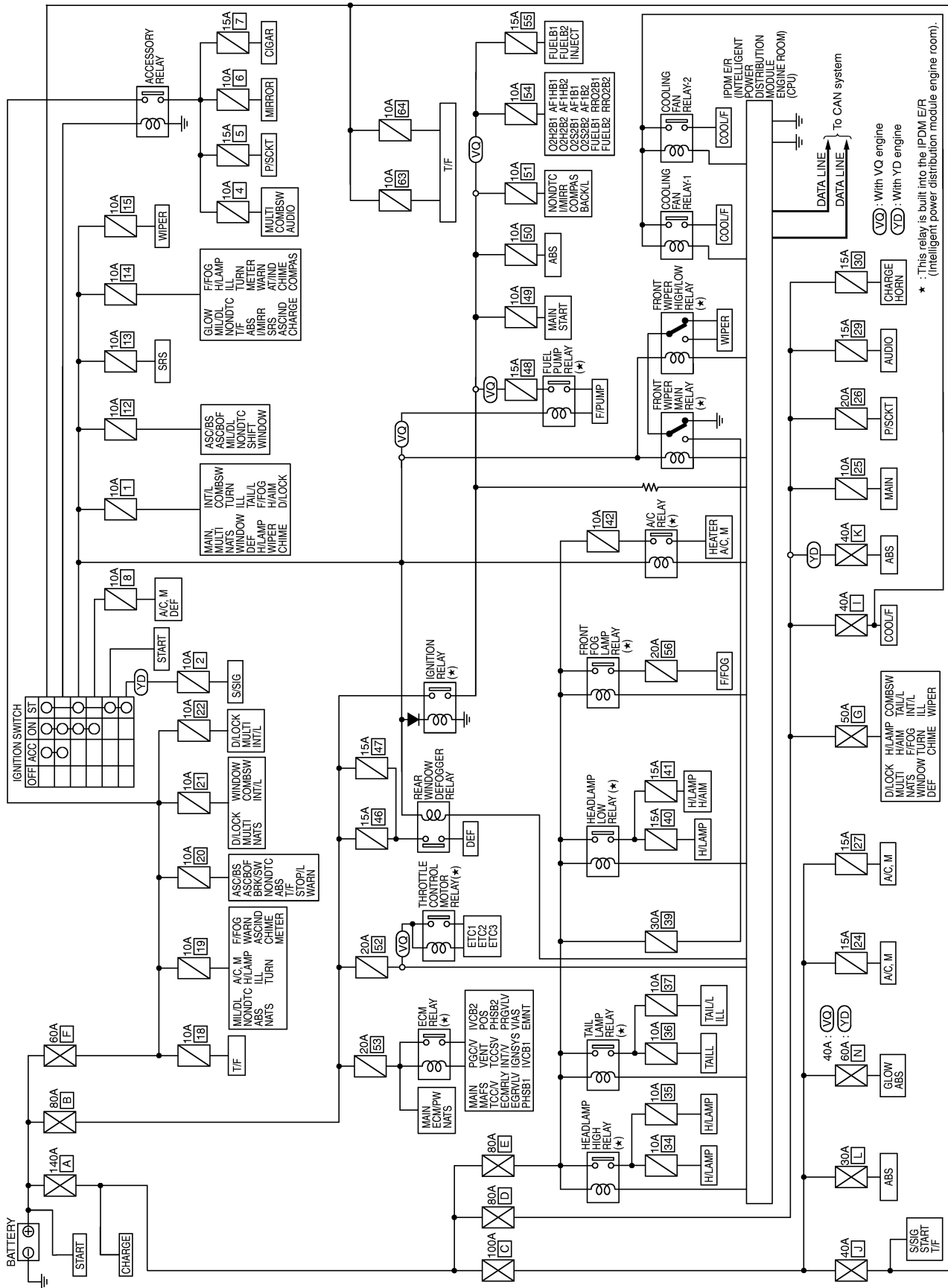
POWER SUPPLY ROUTING CIRCUIT

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POWER SUPPLY ROUTING CIRCUIT

Schematic



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



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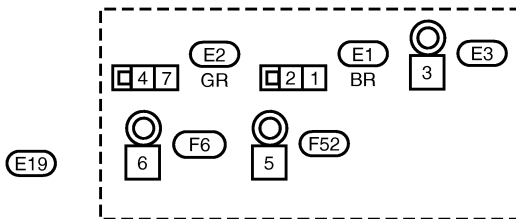
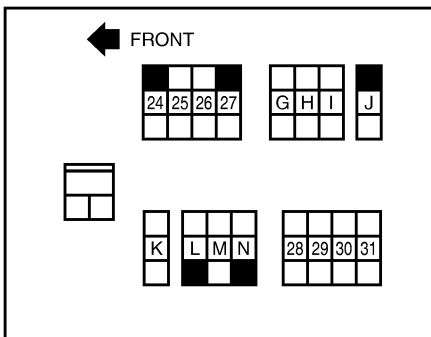
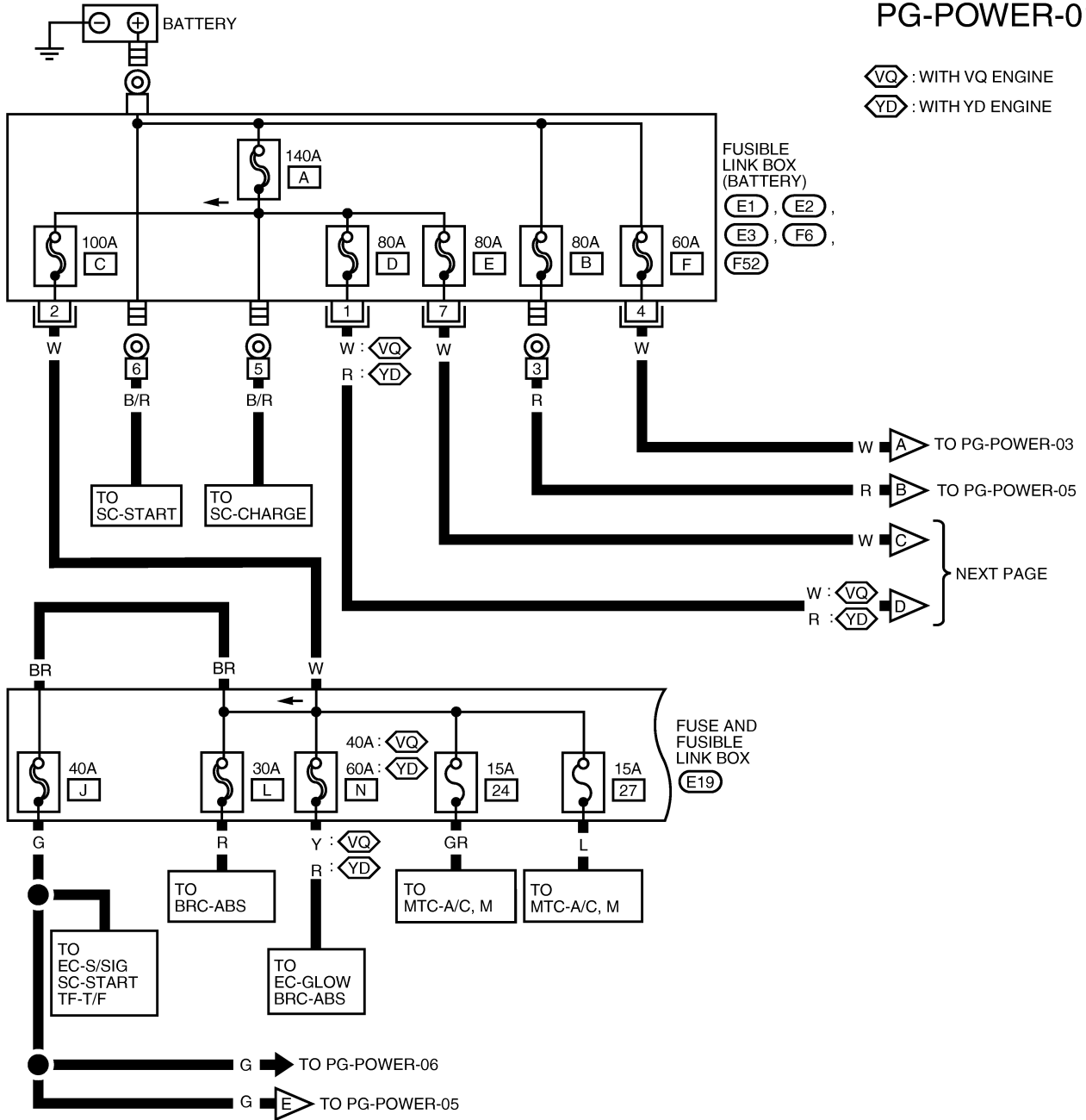
POWER SUPPLY ROUTING CIRCUIT

GKS000CC

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

PG-POWER-01

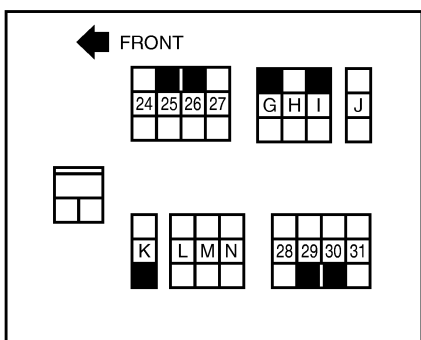
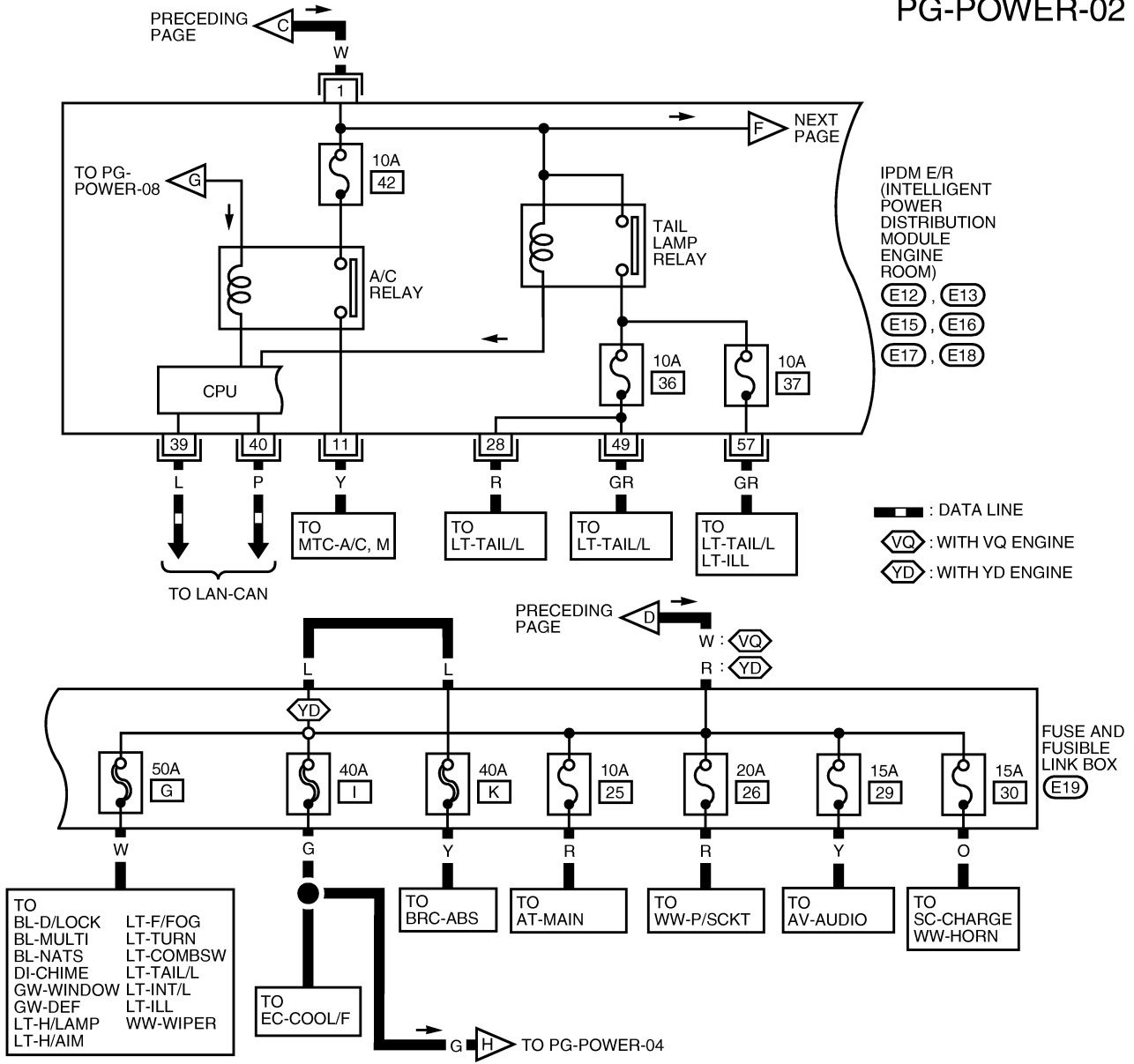
 : WITH VQ ENGINE
 : WITH YD ENGINE



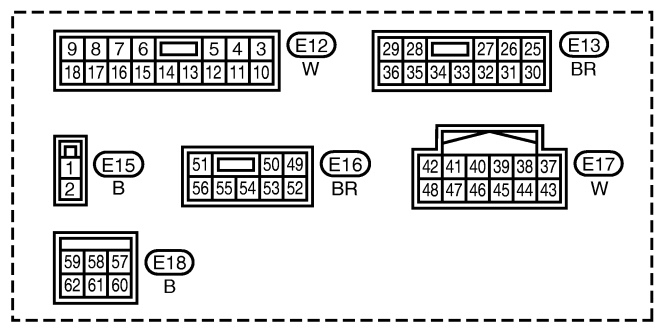
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POWER SUPPLY ROUTING CIRCUIT

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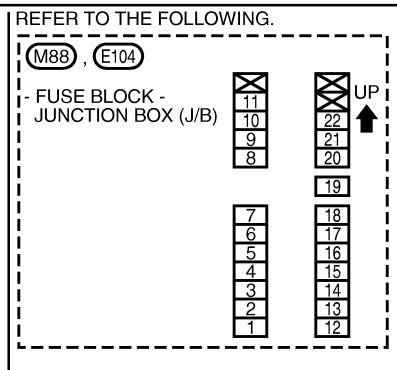
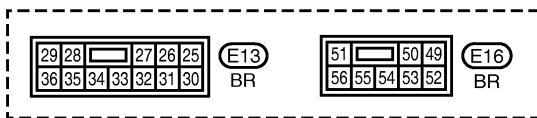
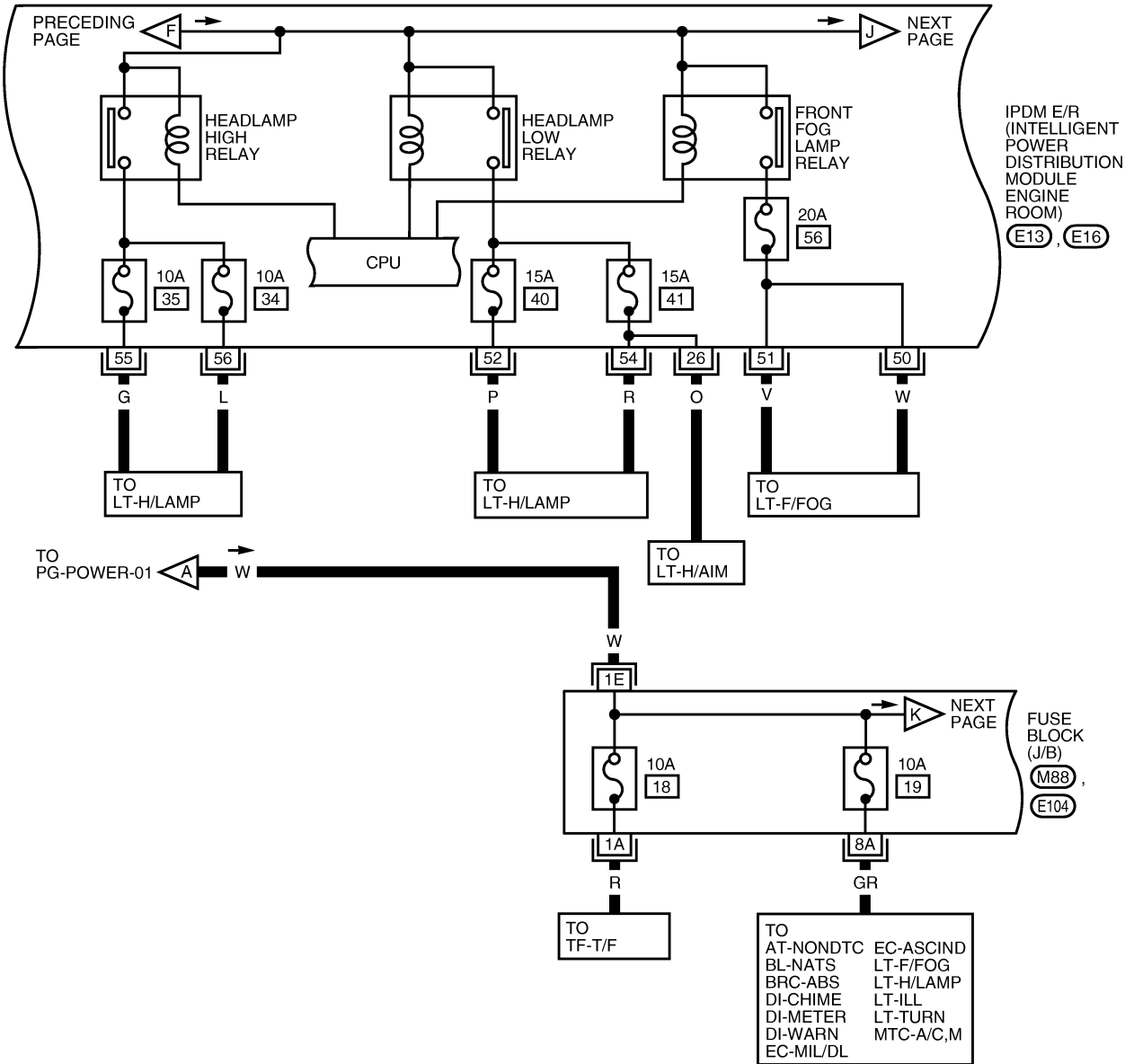
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POWER SUPPLY ROUTING CIRCUIT

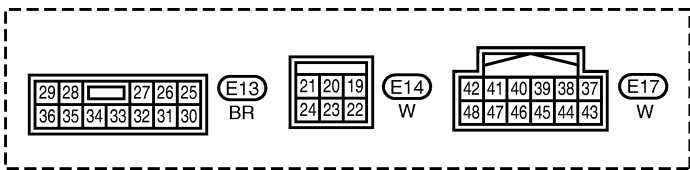
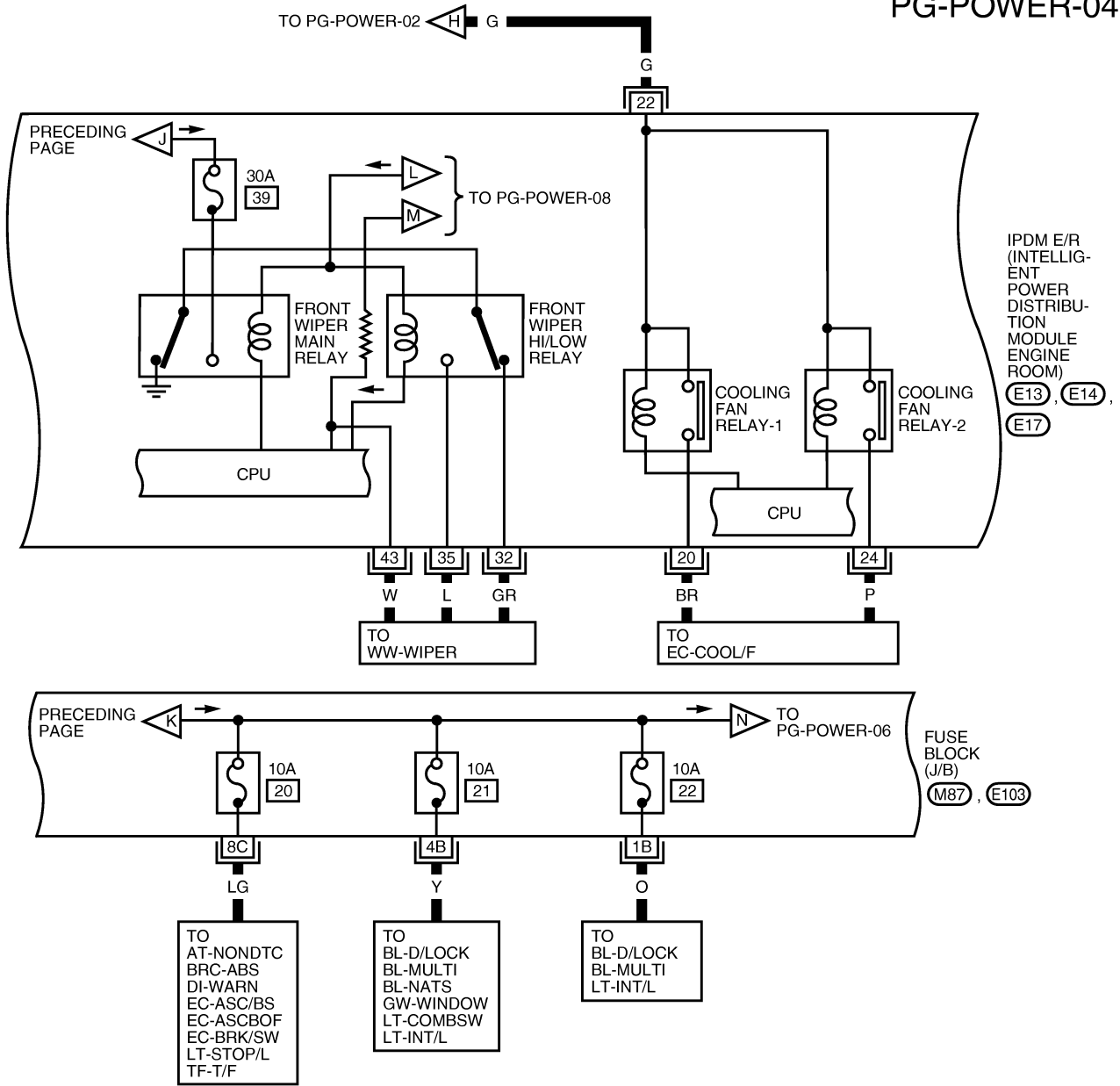
PG-POWER-03



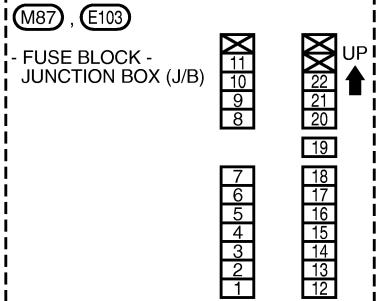
MKWA4212E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-04



REFER TO THE FOLLOWING.



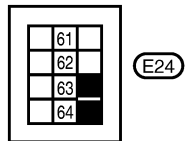
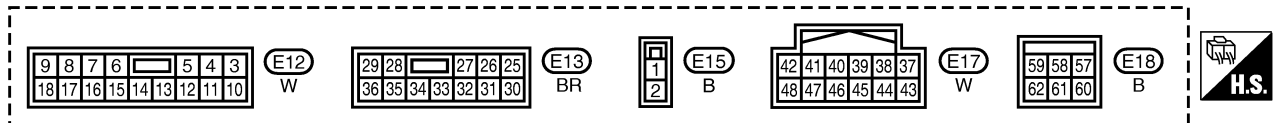
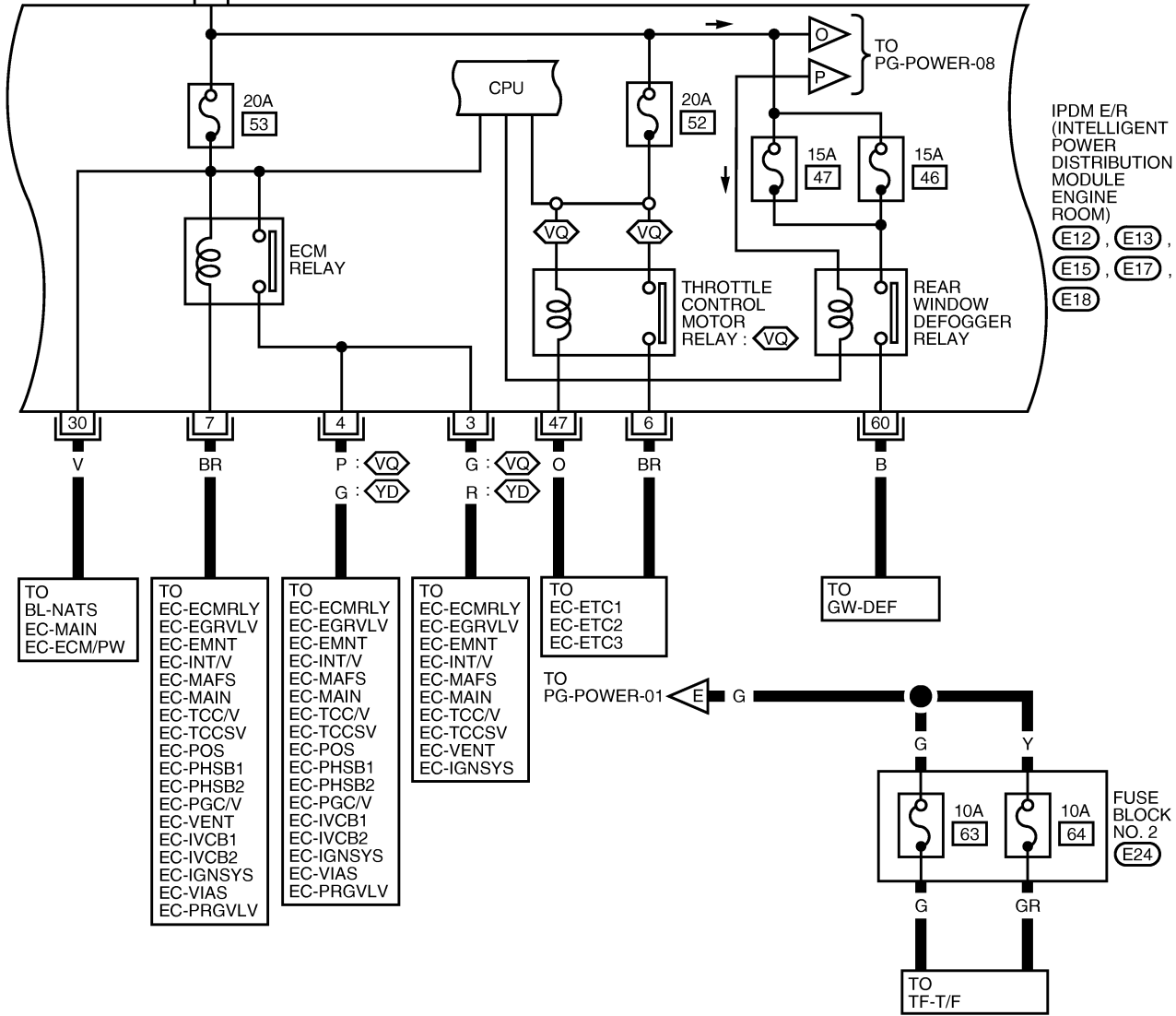
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POWER SUPPLY ROUTING CIRCUIT

PG-POWER-05

TO PG-POWER-01

: WITH VQ ENGINE
 : WITH YD ENGINE

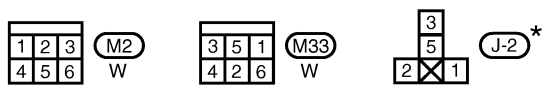
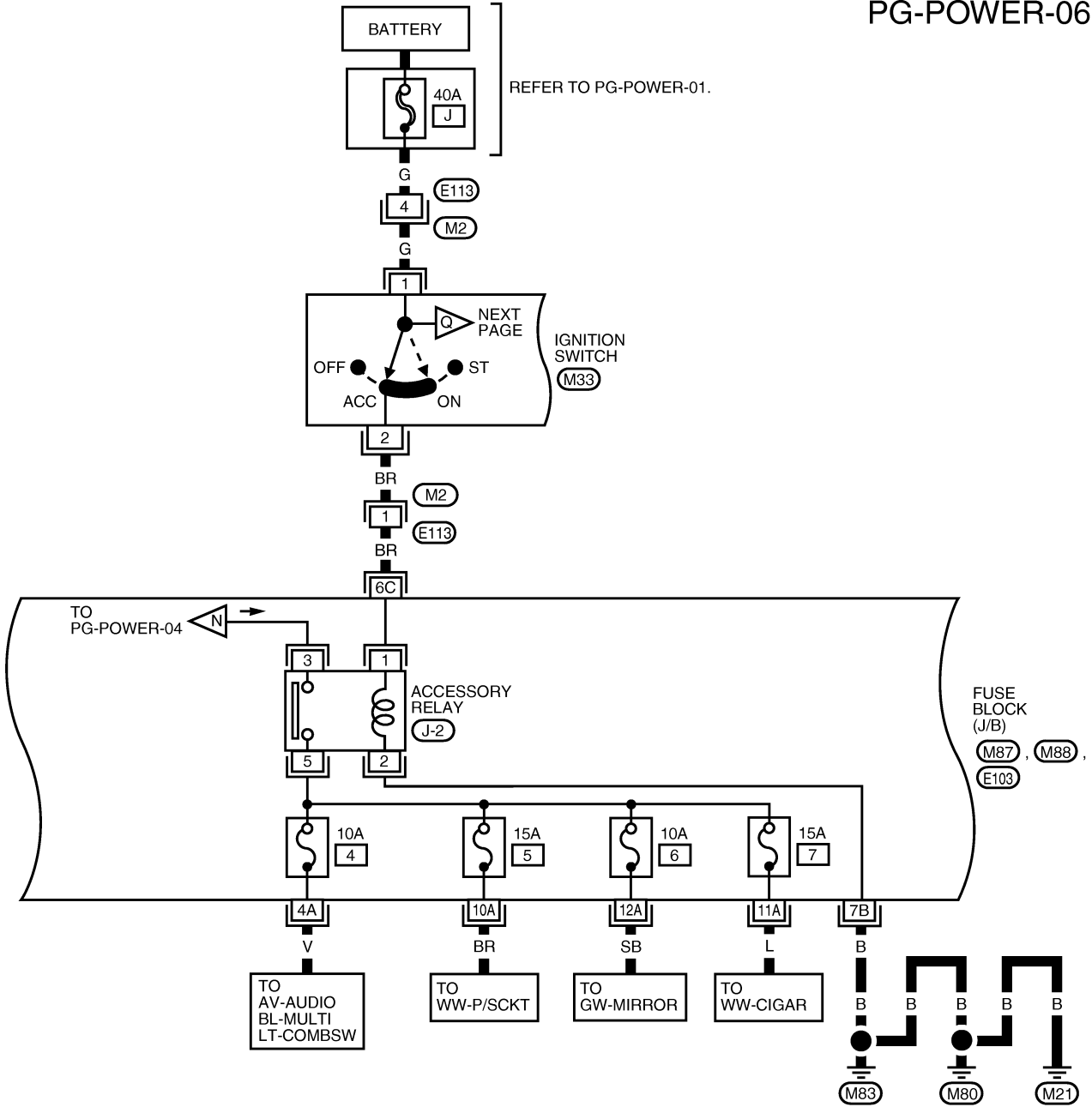


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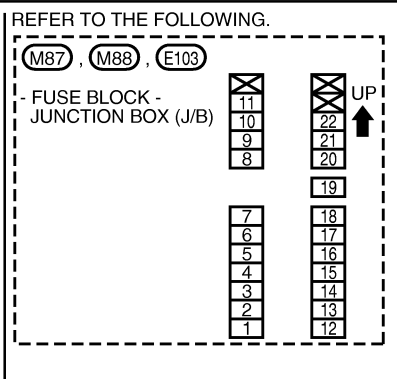
POWER SUPPLY ROUTING CIRCUIT

ACCESSORY POWER SUPPLY — IGNITION SW. IN ACC OR ON

PG-POWER-06



* THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

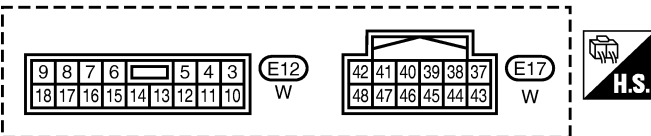
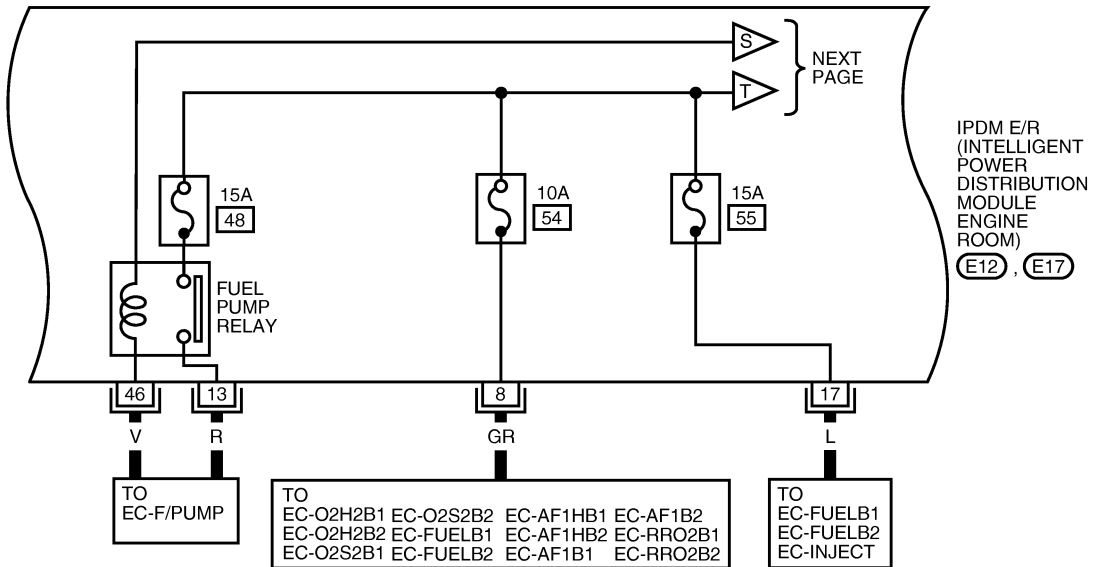
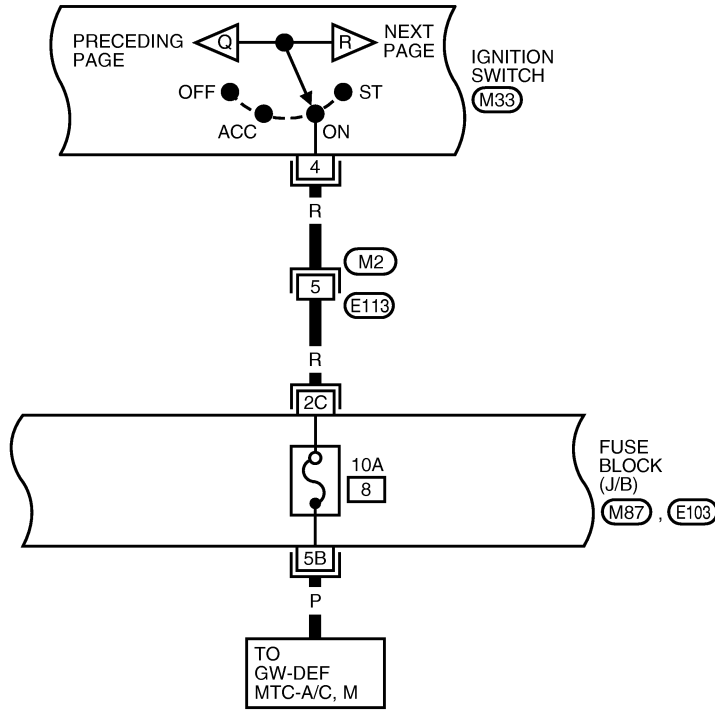


POWER SUPPLY ROUTING CIRCUIT

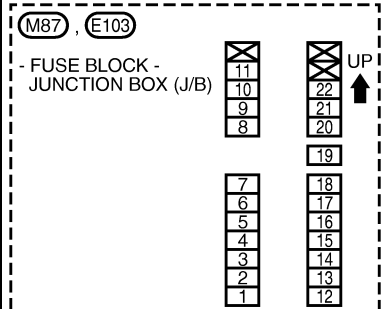
IGNITION POWER SUPPLY — IGNITION SW. IN ON

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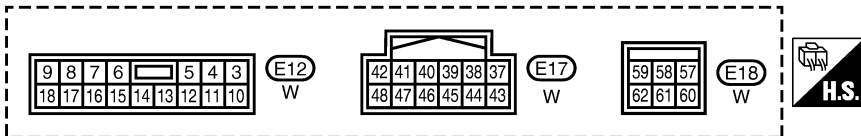
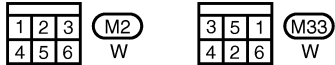
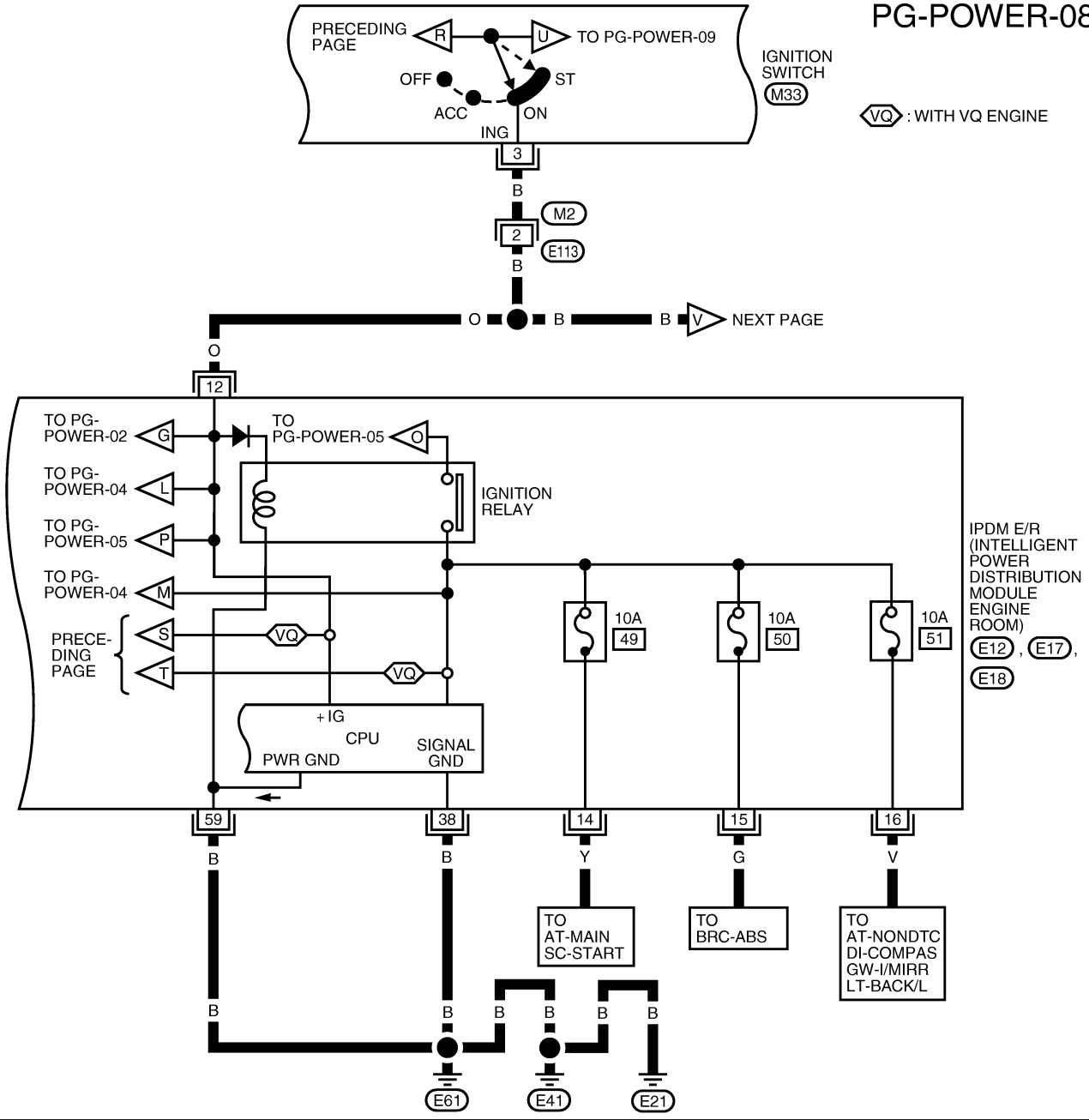


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POWER SUPPLY ROUTING CIRCUIT

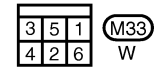
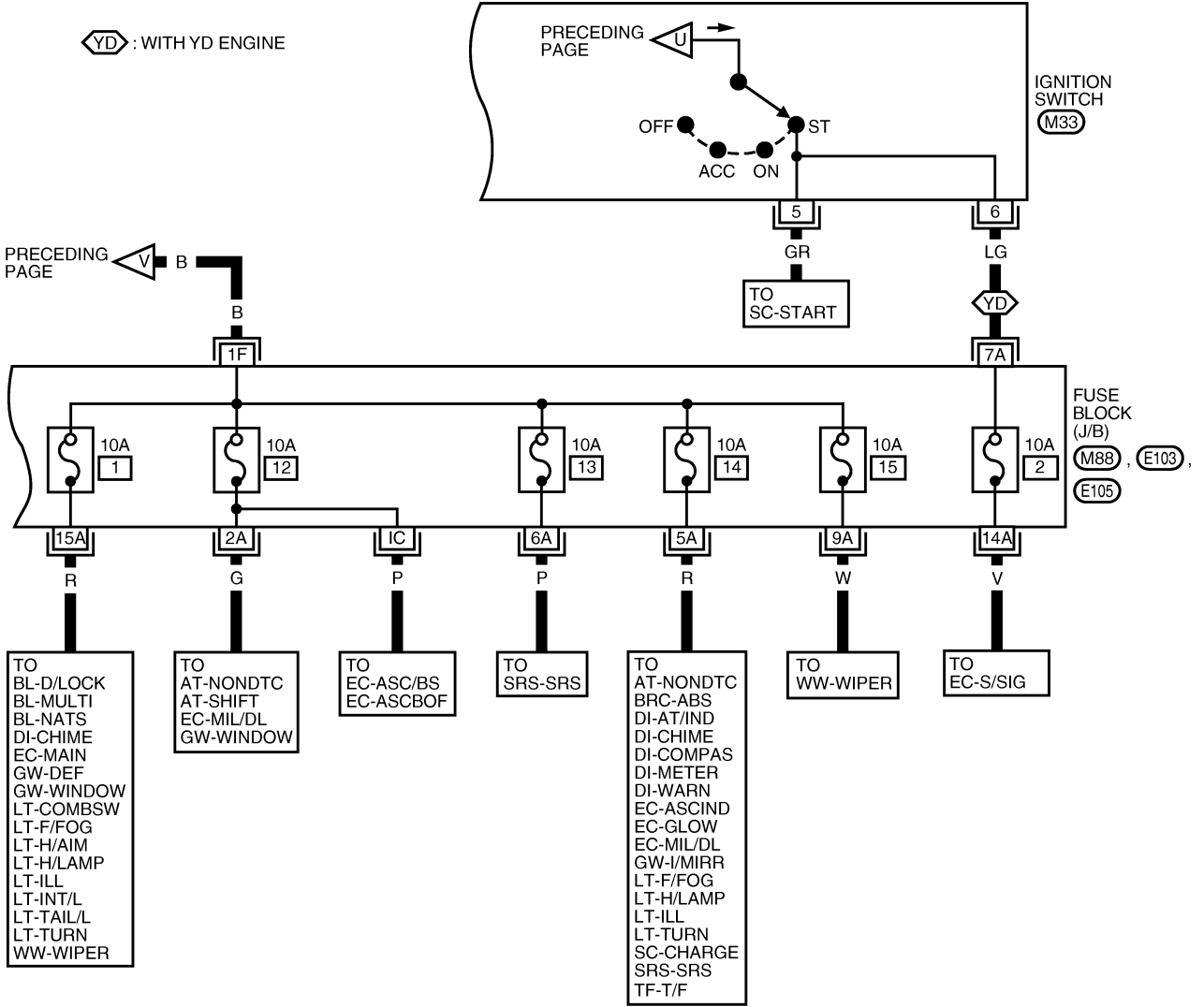
IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START

PG-POWER-08

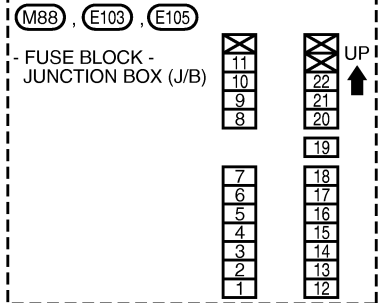


POWER SUPPLY ROUTING CIRCUIT

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REFER TO THE FOLLOWING.



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

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

PFP:284B7

System Description

GKS000CD

- IPDM E/R (Intelligent Power Distribution Module Engine Room) integrates the relay box and fuse block which were originally placed in engine compartment. It controls integrated relays via IPDM E/R control circuits.
- IPDM E/R-integrated control circuits perform ON-OFF operation of relays, CAN communication control, etc.
- It controls operation of each electrical component via ECM, BCM and CAN communication lines.

CAUTION:

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

SYSTEMS CONTROLLED BY IPDM E/R

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

Control system	Transmit control unit	Control part
Lamp control	BCM	<ul style="list-style-type: none">● Head lamps (HI, LO)● Tail lamps, parking and license plate lamps● Front fog lamps
Wiper control	BCM	Front wipers
Rear window defogger control	BCM	Rear window defogger
A/C compressor control	ECM	A/C compressor
Cooling fan control	ECM	Cooling fan

CAN COMMUNICATION LINE CONTROL

With CAN communication, by connecting each control unit using two communication lines (CAN L-line, CAN H-line), it is possible to transmit a maximum amount of information with minimum wiring. Each control unit can transmit and receive data, and reads necessary information only.

1. Fail-safe control

- When CAN communication with other control units is impossible, IPDM E/R performs fail-safe control. After CAN communication returns to normal operation, it also returns to normal control.
- Operation of control parts by IPDM E/R during fail-safe mode is as follows:

Controlled system	Fail-safe mode
Headlamps	<ul style="list-style-type: none">● With the ignition switch ON, the headlamp low is ON.● With the ignition switch OFF, the headlamp low is OFF.
Tail, parking and license plate lamps	<ul style="list-style-type: none">● With the ignition switch ON, the tail lamp is ON.● With the ignition switch OFF, the tail lamp 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 wipers	Until the ignition switch is turned off, the front wiper LO and HI remains in the same status it was in just before fail-safe control was initiated.
Rear window defogger	Rear window defogger OFF
A/C compressor	A/C compressor OFF
Front fog lamps	Front fog lamp 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.
 - A status is changed into sleep transient status when receiving a sleep request signal from BCM while all the systems controlled by IPDM E/R under suspension.
2. Sleep transient status
 - Process to stop CAN communication is activated.
 - All systems controlled by IPDM E/R are stopped. When 3 second has elapsed after CAN communication with other control units is stopped, status 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 signal is detected, status switches to CAN communication status.
 - When a change in ignition switch signal is detected, status switches to CAN communication status.

CAN Communication System Description

GKS000CE

Refer to [LAN-21, "CAN COMMUNICATION"](#) .

Function of Detecting Ignition Relay Malfunction

GKS000CF

- When the integrated ignition relay is stuck in a “closed contact” position and cannot be turned OFF, IPDM E/R turns ON tail and parking lamps for 10 minutes to indicate IPDM E/R malfunction.
- When the state of the integrated ignition relay does not agree with the state of the ignition switch signal received with CAN communication, the IPDM E/R activates the tail lamp relay.

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

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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)

GKS000CG

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

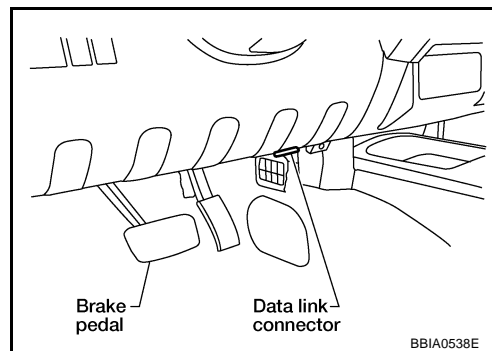
Inspection Item, Diagnosis Mode	Description
SELF-DIAG RESULTS	The IPDM E/R performs diagnosis of CAN communication and self-diagnosis.
DATA MONITOR	The input/output data of the IPDM E/R is displayed in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can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

CONSULT-II BASIC OPERATION

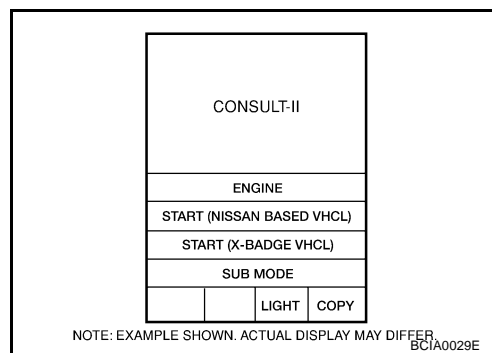
CAUTION:

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

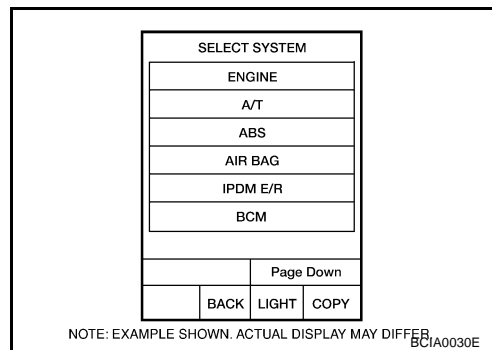
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, and then turn ignition switch ON.



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

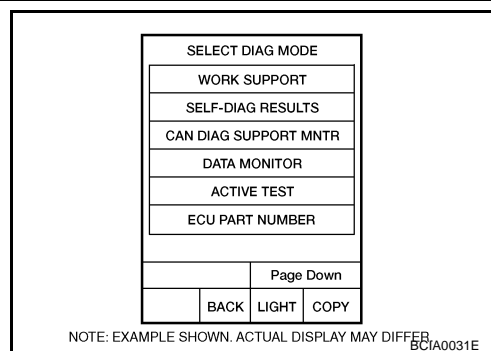


3. Touch "IPDM E/R" on "SELECT SYSTEM" screen. If "IPDM E/R" is not displayed. Refer to [GI-47, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



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

4. Select the desired part to be diagnosed on the “SELECT DIAG MODE” screen.

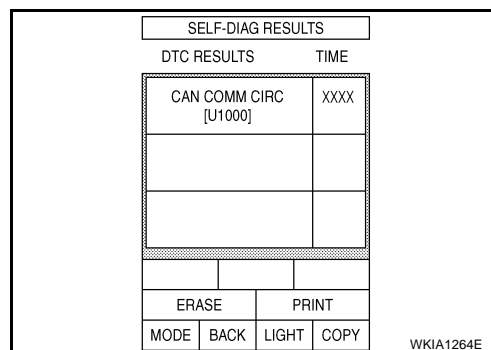


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SELF-DIAGNOSTIC RESULTS

Operation Procedure

1. Touch “SELF-DIAG RESULTS” on “SELECT DIAG MODE” screen.
2. Check display content in self-diagnostic results.



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Display Item List

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

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NOTE:

The details for display of the period are as follows:

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

DATA MONITOR

Operation Procedure

1. Touch “DATA MONITOR” on “SELECT DIAG MODE” screen.
2. Touch “ALL SIGNALS”, “MAIN SIGNALS” or “SELECTION FROM MENU” on the “DATA MONITOR” screen.

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

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”.

M

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

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

All Signals, Main Signals, Selection From Menu

Item name	CONSULT-II screen display	Display or unit	Monitor item selection			Description
			ALL SIGNALS	MAIN SIGNALS	SELECTION FROM MENU	
Motor fan request	MOTOR FAN REQ	1/2/3/4	X	X	X	Signal status input from ECM
A/C compressor request	AC COMP REQ	ON/OFF	X	X	X	Signal status input from ECM
Tail & clear request	TAIL & CLR REQ	ON/OFF	X	X	X	Signal status input from BCM
Headlamp LO request	HL LO REQ	ON/OFF	X	X	X	Signal status input from BCM
Headlamp HI request	HL HI REQ	ON/OFF	X	X	X	Signal status input from BCM
Front fog lamp request	FR FOG REQ	ON/OFF	X	X	X	Signal status input from BCM
Headlamp washer request	HL WASHER REQ*	ON/OFF	X		X	—
Front wiper request	FR WIP REQ	STOP/1LOW/LOW/HI	X	X	X	Signal status input from BCM
Wiper auto stop	WIP AUTO STOP	ACT P/STOP P	X	X	X	Output status of IPDM E/R
Wiper protection	WIP PROT	OFF/BLOCK	X	X	X	Control status of IPDM E/R
Starter request	ST RLY REQ	ON/OFF	X		X	Status of input signal
Ignition relay status	IGN RLY	ON/OFF	X	X	X	Ignition relay status monitored with IPDM E/R
Rear defogger request	RR DEF REQ	ON/OFF	X	X	X	Signal status input from BCM
Oil pressure switch	OIL P SW	OPEN/CLOSE	X		X	Signal status monitored IPDM E/R
Hood switch	HOOD SW*	OFF	X			—
Theft warning horn request	THFT HRN REQ*	ON/OFF	X		X	—
Horn chirp	HORN CHIRP*	ON/OFF	X		X	—

NOTE:

Perform monitoring of IPDM E/R data with the ignition switch ON. When the ignition switch is in ACC position, display may not be correct.

*: This item is displayed, but cannot be monitored

CAN DIAG SUPPORT MNTR

Refer to [LAN-15, "CAN Diagnostic Support Monitor"](#).

ACTIVE TEST

Operation Procedure

- Touch "ACTIVE TEST" on "SELECT DIAG-MODE" screen.
- Touch item to be tested, and check operation.
- Touch "START".
- Touch "STOP" while testing to stop the operation.

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

Test name	CONSULT-II screen display	Description
Rear defogger output	REAR DEFOGGER	With a certain ON-OFF operation, the rear defogger relay can be operated.
Front wiper (HI, LO) output	FRONT WIPER	With a certain operation (OFF, HI ON, LO ON), the front wiper relay (Lo, Hi) can be operated.
Cooling fan output	MOTOR FAN	With a certain operation (1, 2, 3, 4), the cooling fan can be operated.
Lamp (HI, LO, TAIL, FOG) output	EXTERNAL LAMPS	With a certain operation (OFF, HI ON, LO ON, TAIL ON, FOG ON), the lamp relay (Low, High, Tail, Fog) can be operated.
Horn output	HORN ^{NOTE}	—

NOTE:

This item is displayed, but cannot be tested.

Auto Active Test DESCRIPTION

GKS000CH

- 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 wiper
 - Tail lamps, front fog lamps, parking lamps and license plate lamps
 - Headlamps (HI, LO)
 - A/C compressor (magnetic clutch)
 - Cooling fan
 - Oil pressure warning lamp

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 driver's 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, 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.

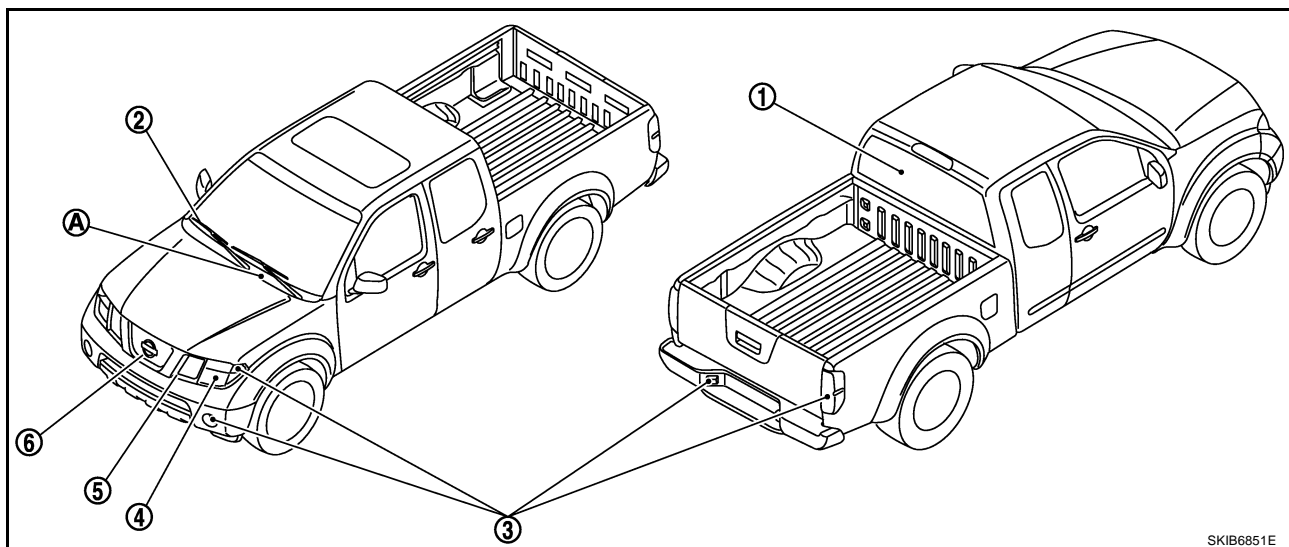
CAUTION:

Be sure to perform [BL-35. "Check Door Switch"](#) when the auto active test cannot be performed.

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

INSPECTION IN AUTO ACTIVE TEST MODE

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

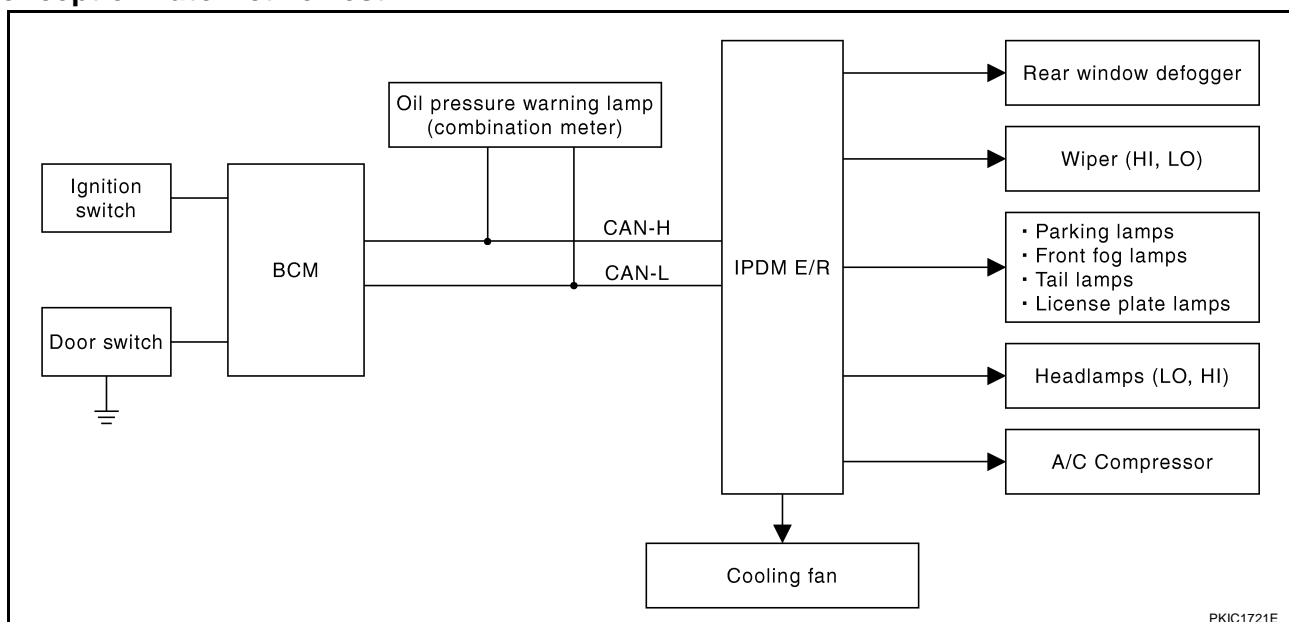


A: Oil pressure warning lamp is blinking when the auto active test operating.

Operation steps

Step	Test item	Operation time/ frequency
1	Rear window defogger	10 seconds
2	Front wiper	LO 5 seconds → HI 5 seconds
3	Tail lamps, front fog lamps, parking lamps, license plate lamps	10 seconds
4	Headlamps	LO 10 seconds → HI ON-OFF 5 times
5	A/C compressor	ON-OFF 5 times
6	Cooling fan	LO 5 seconds → HI 5 seconds

Concept of Auto Active Test



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

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

Diagnosis chart in auto active test mode

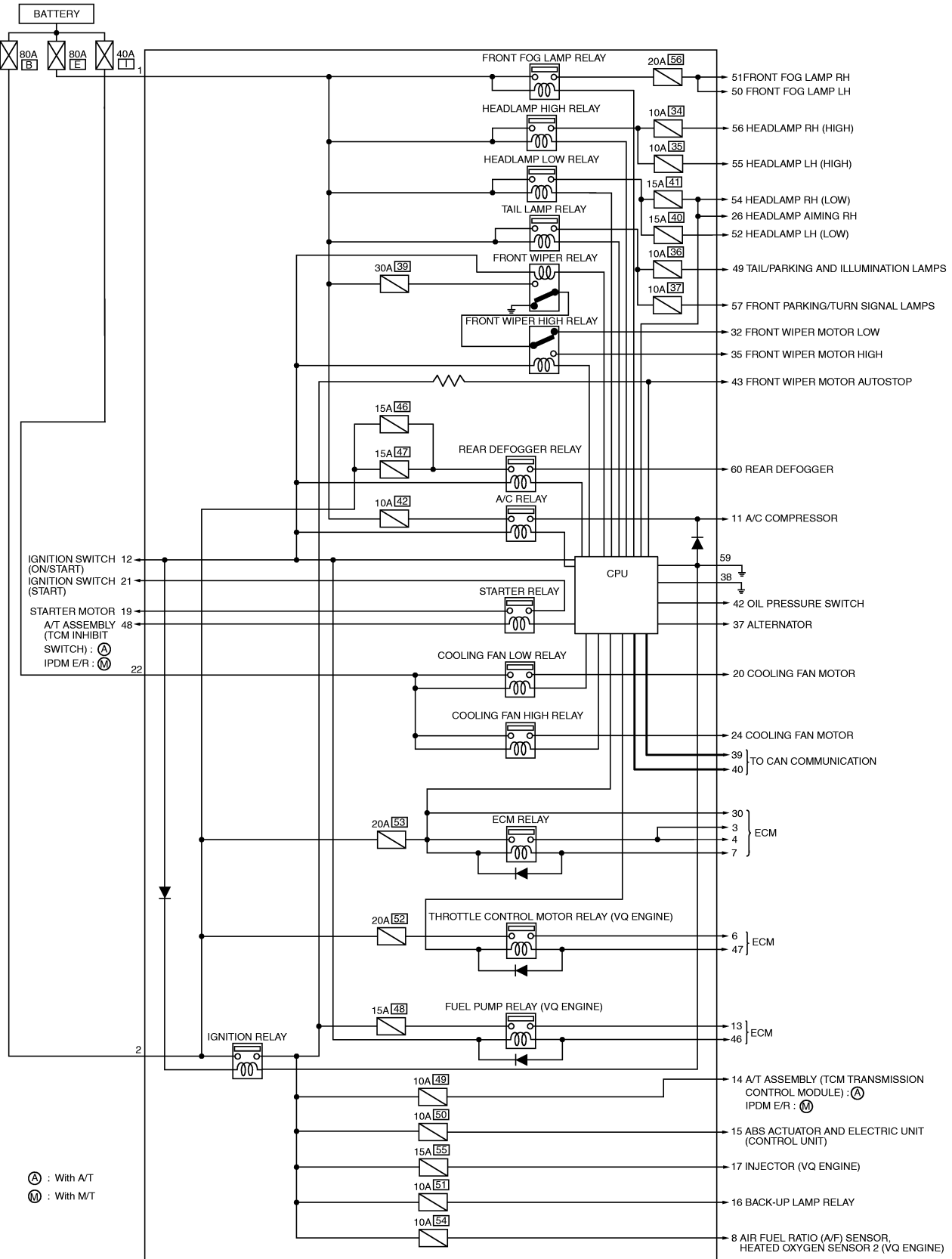
Symptom	Inspection contents	Possible cause
Any of front wipers, tail and parking lamps, front fog lamps, and headlamps (HI, LO) do not operate.	Perform auto active test. Does system in question operate?	YES ● BCM signal input system malfunction
		NO ● Lamp/wiper motor malfunction ● Lamp/wiper motor ground circuit malfunction ● Harness/connector malfunction between IPDM E/R and system in question ● IPDM E/R (integrated relay) malfunction
Rear window defogger does not operate.	Perform auto active test. Does rear window defogger operate?	YES ● BCM signal input circuit malfunction
		NO ● Rear window defogger relay malfunction ● Open circuit of rear window defogger ● Harness or connector malfunction between IPDM E/R and rear window defogger ● IPDM E/R (integrated relay) malfunction
A/C compressor does not operate.	Perform auto active test. Does magnetic clutch operate?	YES ● BCM signal input circuit malfunction ● CAN communication signal malfunction between BCM and ECM ● CAN communication signal malfunction between ECM and IPDM E/R
		NO ● Magnetic clutch malfunction ● Harness/connector malfunction between IPDM E/R and magnetic clutch ● IPDM E/R (integrated relay) malfunction
Cooling fan does not operate.	Perform auto active test. Does cooling fan operate?	YES ● ECM signal input circuit malfunction ● CAN communication signal malfunction between ECM and IPDM E/R
		NO ● Cooling fan motor malfunction ● Harness/connector malfunction between IPDM E/R and cooling fan motor ● IPDM E/R (integrated relay) malfunction
Oil pressure warning lamp does not operate.	Perform auto active test. Does oil pressure warning lamp blink?	YES ● Harness/connector malfunction between IPDM E/R and oil pressure switch ● Oil pressure switch malfunction ● IPDM E/R malfunction
		NO ● CAN communication signal malfunction between IPDM E/R and combination meter ● Combination meter malfunction

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

Schematic

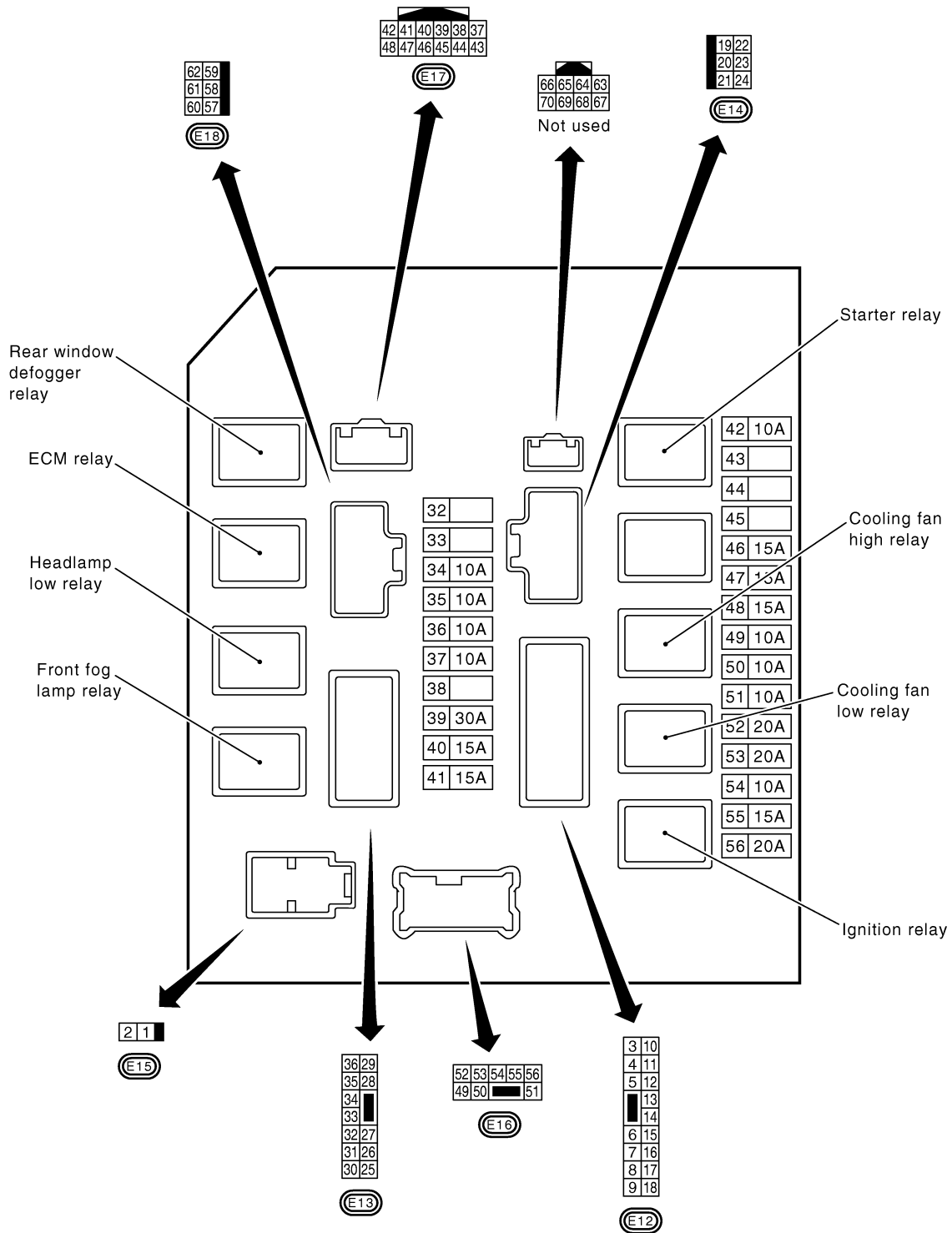
GKS000CI



MKWA4219E

IPDM E/R Terminal Arrangement

GKS000CJ



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MKWA4220E

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

Check IPDM E/R Power Supply and Ground Circuit

GKS000CK

1. CHECK FUSES AND FUSIBLE LINK

Check for blown fuses and fusible link.

Terminal No.	Power source	Fuse and fusible link No.
1	Battery	E
2		B
22		1

OK or NG

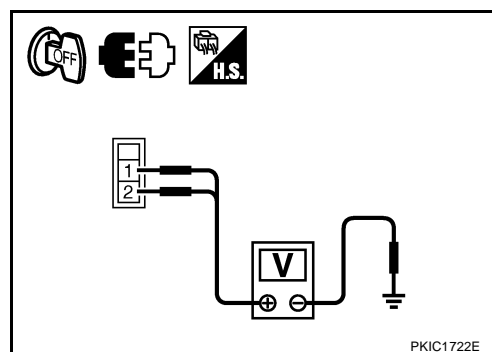
OK >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

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

Terminal (+)		Terminal (-)	Voltage
IRDM E/R connector	Terminal		
E15	1	Ground	Battery voltage
	2		Battery voltage



OK or NG

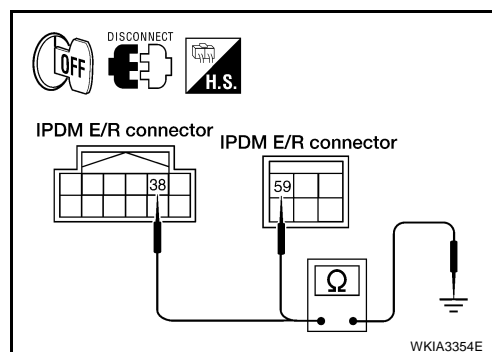
OK >> GO TO 3.

NG >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

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

IPDM E/R connector	Terminal	Ground	Continuity
E17	38		Ground
E18	59		



OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.

Inspection with CONSULT-II (Self-Diagnosis)

GKS000CL

CAUTION:

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

1. SELF-DIAGNOSIS RESULT CHECK

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

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

NOTE:

The details for display for the period are as follows:

- CRNT: Error currently detected by IPDM E/R.
- PAST: Error detected in the past and stored in IPDM E/R memory.

Contents displayed

NO DTC DETECTED. FURTHER TESTING MAY BE REQUIRED.>> INSPECTION END
 CAN COMM CIRC>> Print out the self-diagnosis result and refer to [LAN-21, "CAN COMMUNICATION"](#) .

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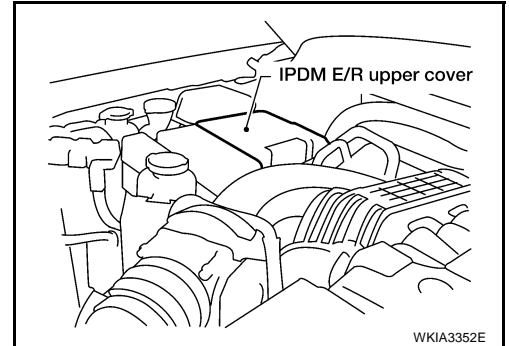
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

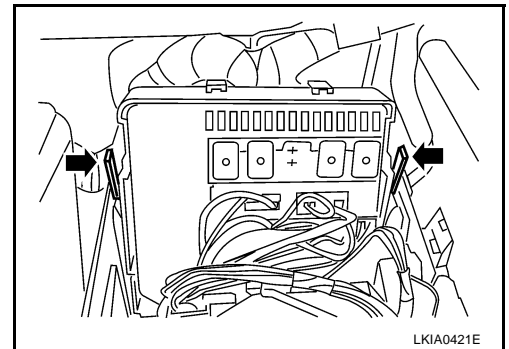
GKS000CM

Removal and Installation of IPDM E/R REMOVAL

1. Disconnect the battery cable from the negative terminal.
2. Remove IPDM E/R upper cover.



3. Release 2 clips and pull IPDM E/R up from case.
4. Disconnect IPDM E/R connectors and remove IPDM E/R.



INSTALLATION

Installation is the reverse order of removal.

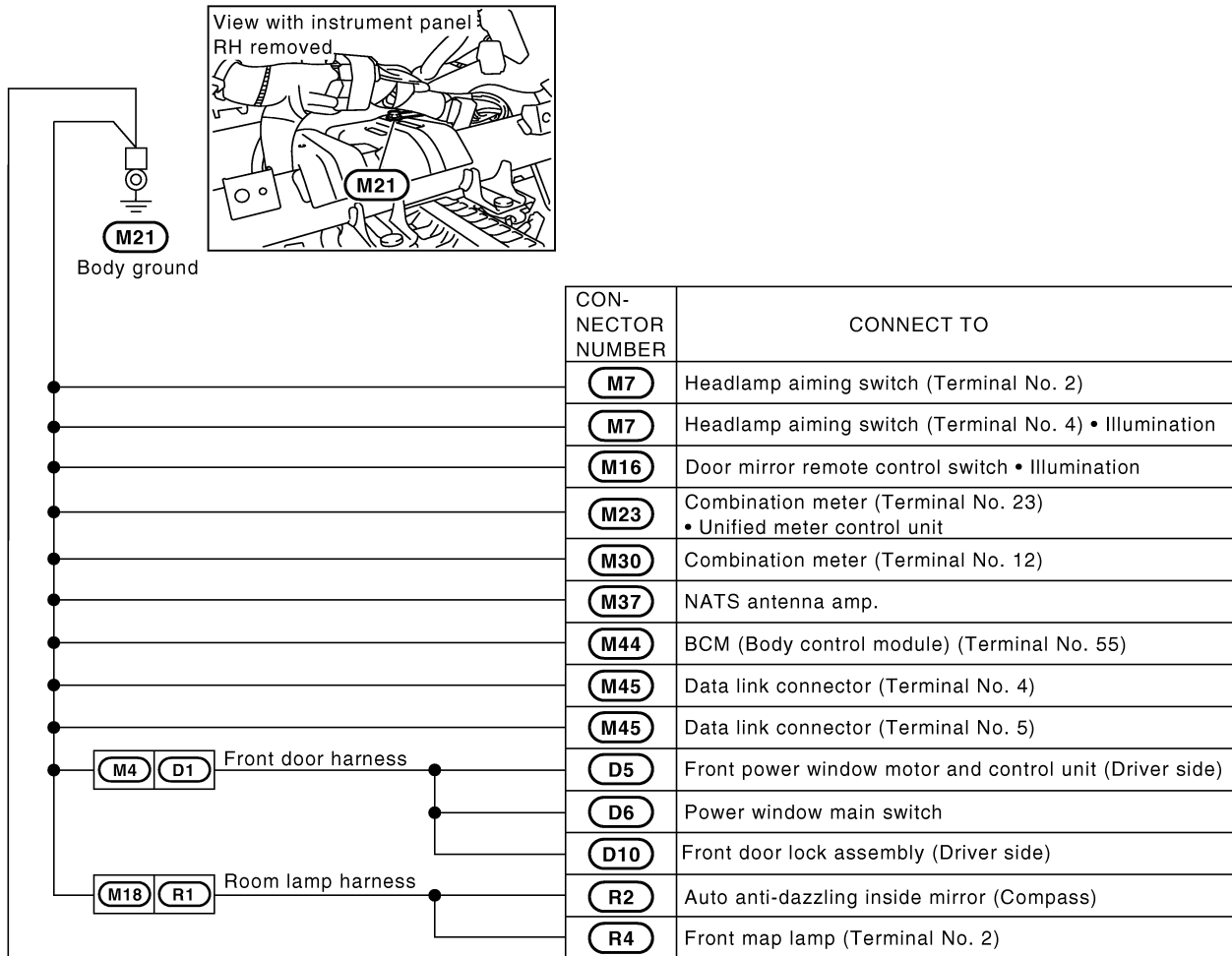
GROUND CIRCUIT

PFP:24080

GKS000CN

GROUND CIRCUIT

Ground Distribution MAIN HARNESS



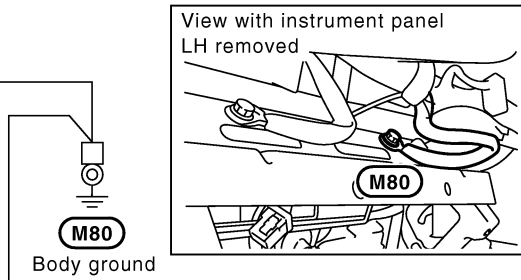
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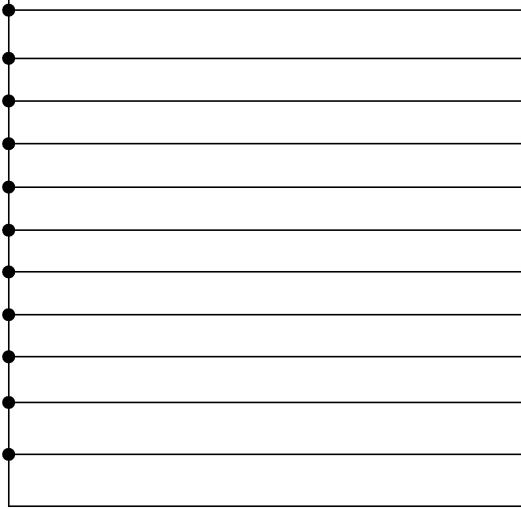
A
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GROUND CIRCUIT

Preceding page



Body ground



CON- NECTOR NUMBER	CONNECT TO
M23	Combination meter (Terminal No. 13) • Unified meter control unit
M48	Hazard switch (Terminal No. 1)
M59	Front blower switch (Terminal No. 4)
M78	Air bag diagnosis sensor unit
M79	A/T device (Terminal No. 2) (With A/T)
M79	A/T device (Terminal No. 8) (With A/T)
M79	A/T device (Terminal No. 10) (With A/T)
M98	Front air control (Terminal No. 20)
M102	Option connector for telephone (Terminal No. 10)
M105	Transfer control unit (Terminal No. 6) (With part-time 4WD)
M105	Transfer control unit (Terminal No. 18) (With part-time 4WD)
M106	Transfer control unit (Terminal No. 32) (With part-time 4WD)



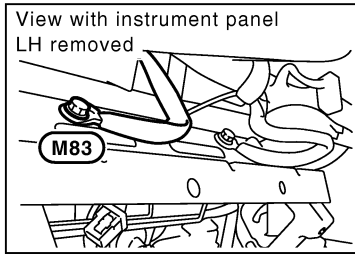
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MKWA4202E

GROUND CIRCUIT

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B



M83

Body ground

CONNECTOR NUMBER	CONNECT TO
M48	Hazard switch (Terminal No. 4)
M51	4WD shift switch (With part-time 4WD)
M52	Door lock/unlock switch <ul style="list-style-type: none"> • Switch • Illumination
M73	Cigarette lighter socket
M74	Front power socket
M79	A/T device (Terminal No. 5) (With A/T)
M85	Glove box lamp
M98	Front air control
M77 M202	Console sub-harness
M203	Ashtray <ul style="list-style-type: none"> • Illumination
M76 M201	Console sub-harness
M205	Console power socket
M91 E101	Engine room harness
E28	Front blower motor relay
M89 D31	Front door harness
D39	Front door lock actuator (Passenger side)

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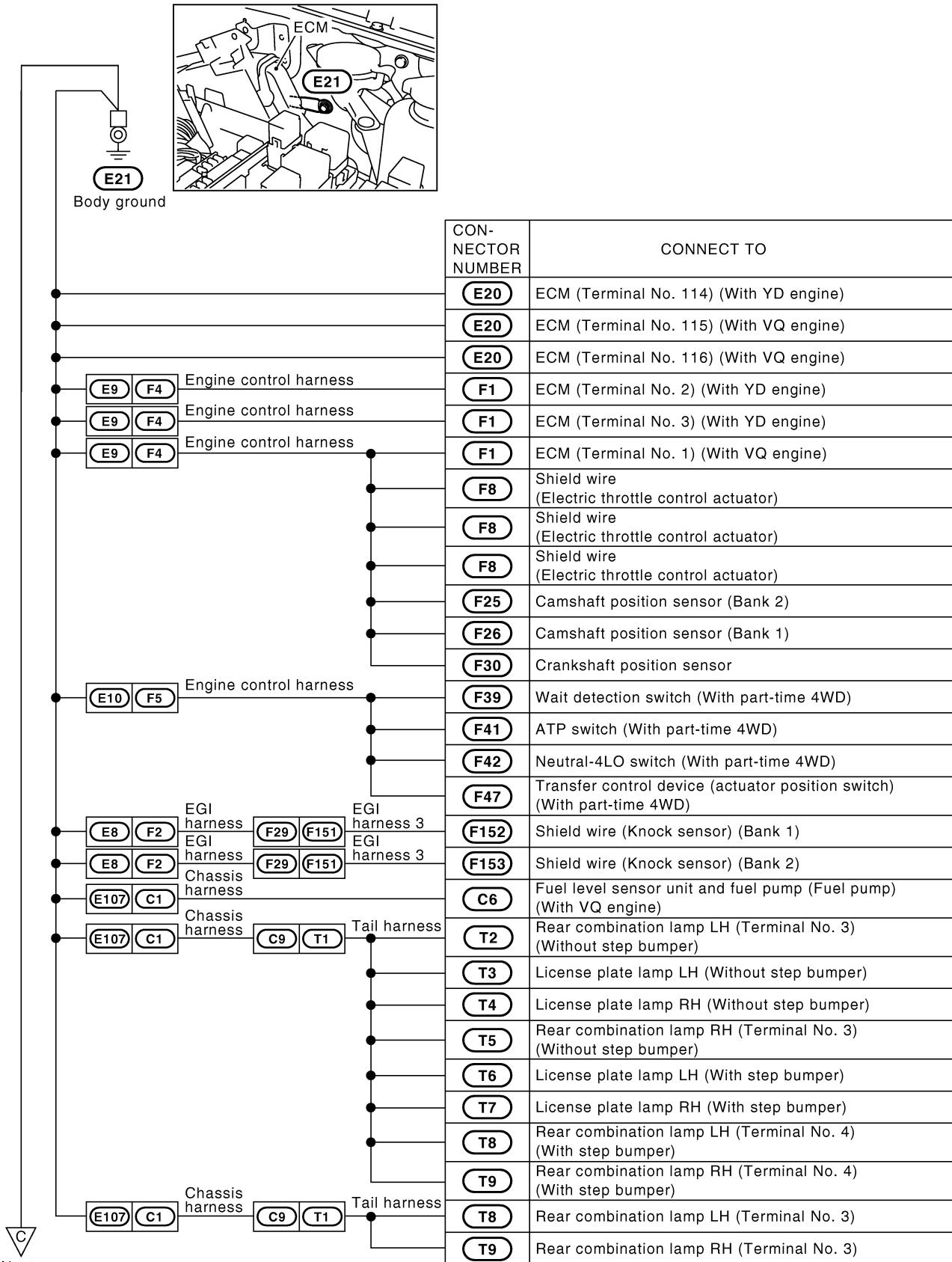
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GROUND CIRCUIT

ENGINE ROOM HARNESS

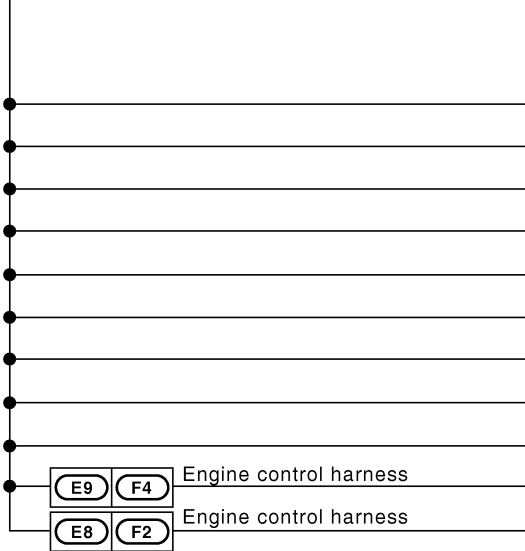
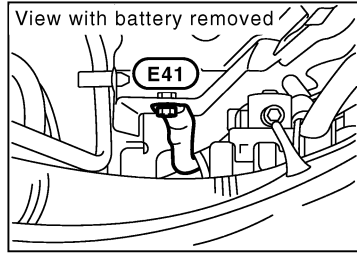
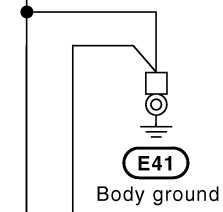


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MKWA4204E

GROUND CIRCUIT

Preceding page



CON-NECTOR NUMBER	CONNECT TO
E36	Front combination lamp RH (Turn signal)
E37	Front combination lamp RH (Headlamp aiming motor)
E42	Cooling fan motor
E54	Front combination lamp LH (Headlamp)
E56	Front fog lamp LH
E57	Front combination lamp LH (Clearance lamp)
E73	Side turn signal lamp RH
E75	Washer fluid level switch
E84	Transfer shut off relay 1 (With part-time 4WD)
F1	ECM (Terminal No. 1) (With YD engine)
F38	Park/neutral position switch (With M/T)



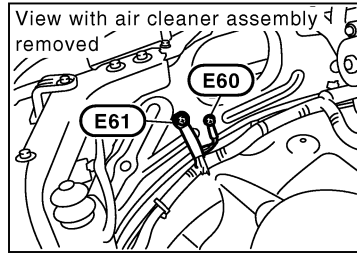
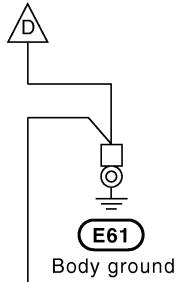
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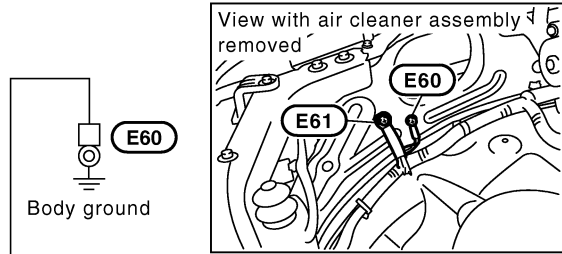
GROUND CIRCUIT

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CONNECTOR NUMBER	CONNECT TO
E17	IPDE E/R (Terminal No.38) (Intelligent power distribution module engine room)
E18	IPDE E/R (Terminal No.59) (Intelligent power distribution module engine room)
E35	Front combination lamp RH (Clearance lamp)
E39	Front combination lamp RH (Headlamp)
E40	Front fog lamp RH
E50	Horn
E52	Front combination lamp LH (Headlamp aiming motor)
E55	Front combination lamp LH (Turn signal)
E65	Brake fluid level switch
E71	Side turn signal lamp LH
E72	Front wiper motor
E83	Water in fuel sensor

GROUND CIRCUIT



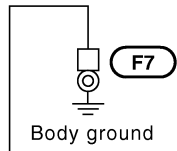
CON-NECTOR NUMBER	CONNECT TO
E63	ABS actuator and electric unit (Control unit) (Terminal No. 16)
E63	ABS actuator and electric unit (Control unit) (Terminal No. 47)

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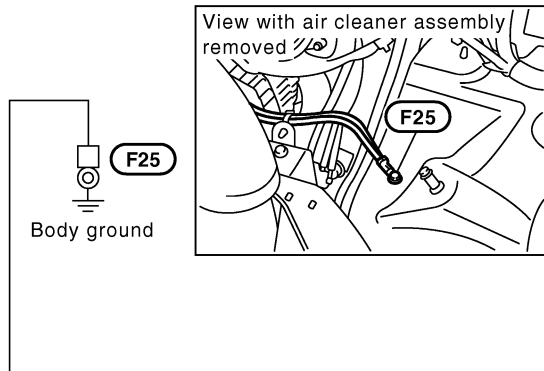
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GROUND CIRCUIT

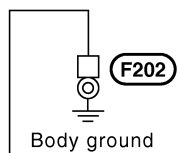
ENGINE CONTROL HARNESS



CON-NECTOR NUMBER	CONNECT TO
F36	A/T assembly (Transmission control module) (Terminal No.5) (With A/T)
F36	A/T assembly (Transmission control module) (Terminal No.10) (With A/T)



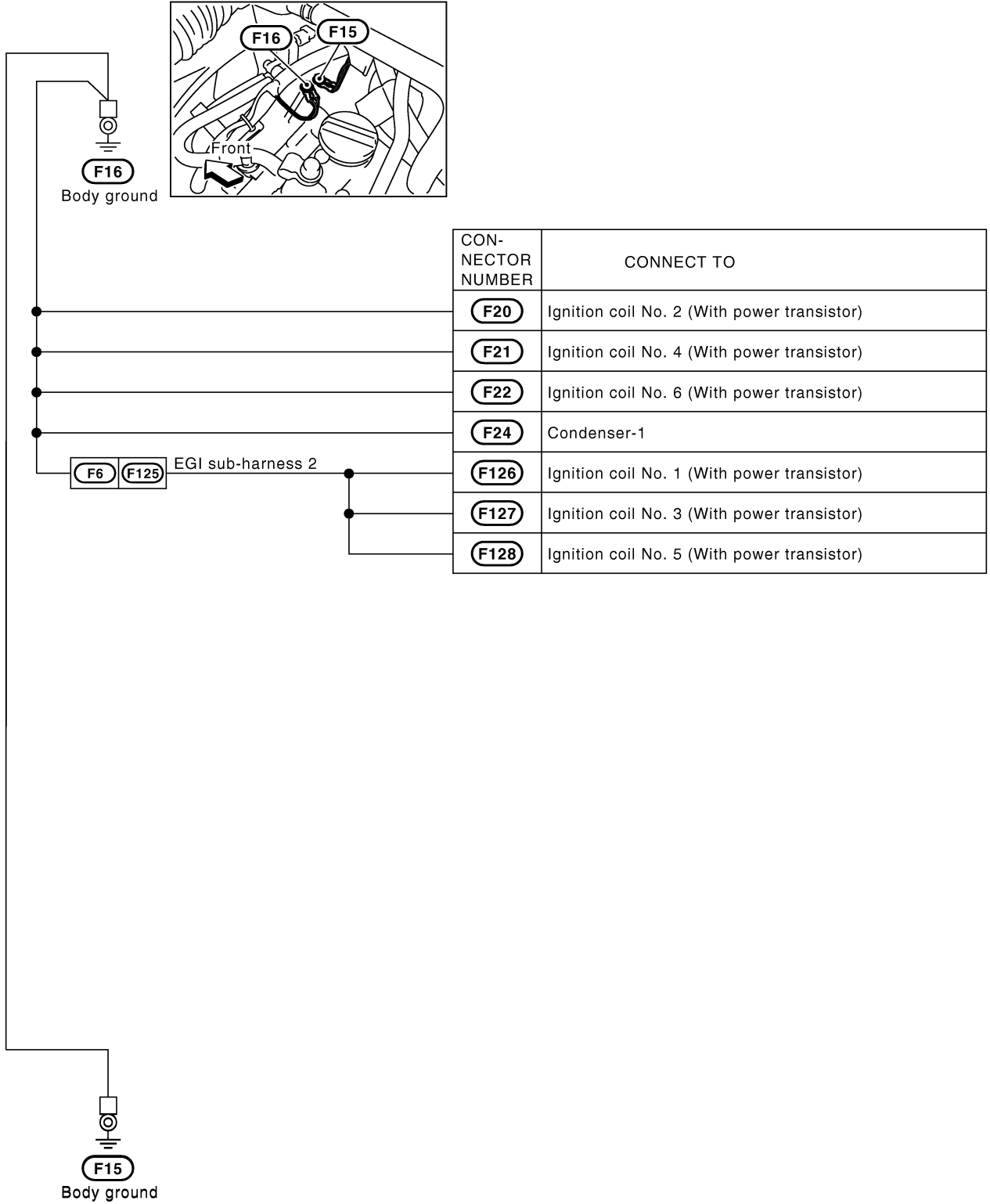
CON-NECTOR NUMBER	CONNECT TO
F19	Alternator (With YD engine)



CON-NECTOR NUMBER	CONNECT TO
F207	Alternator (With VQ engine)

GROUND CIRCUIT

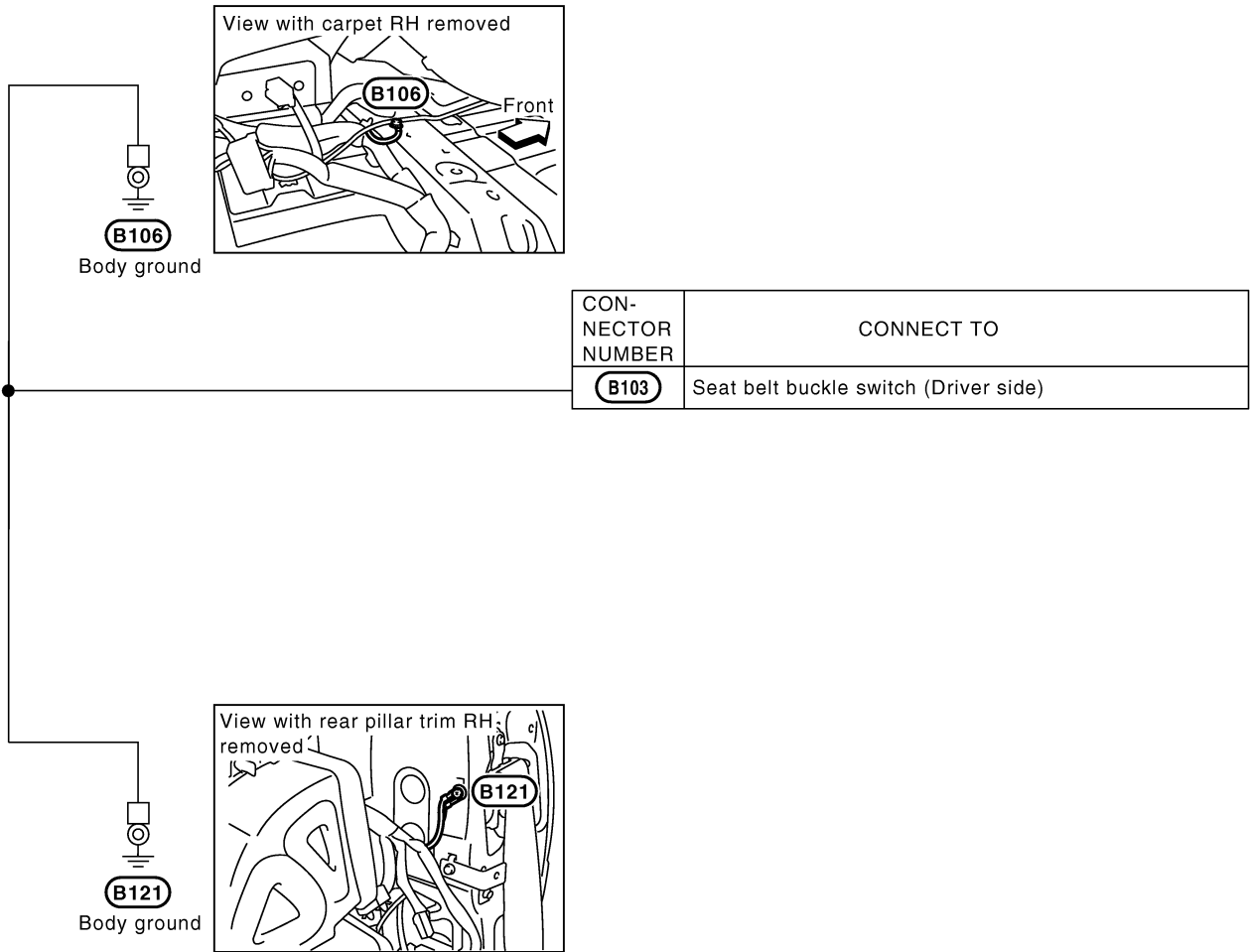
With VQ Engine



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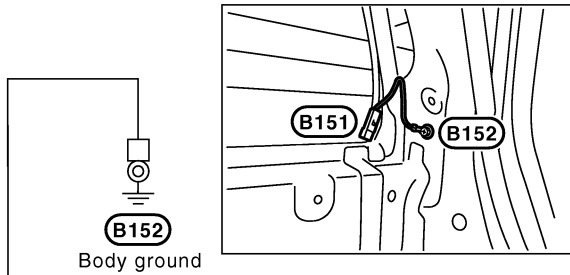
GROUND CIRCUIT

BODY HARNESS (RH SIDE)



GROUND CIRCUIT

DEFOGGER CABLE



CON-NECTOR NUMBER	CONNECT TO
B151	Rear window defogger

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HARNESSES

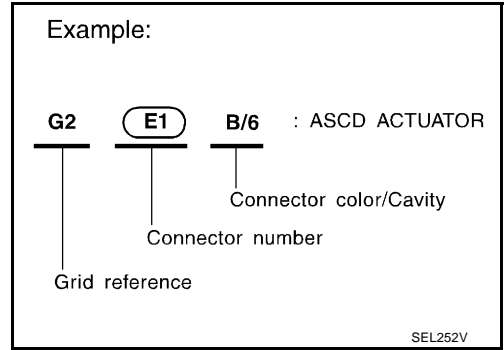
Harness Layout

GKS000CO

HOW TO READ HARNESSES LAYOUT

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

- Main Harness
- Engine Room Harness
- Engine Control Harness
- Chassis Harness
- Body Harness
- Room Lamp Harness
- Door Harness




















To use the grid reference

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

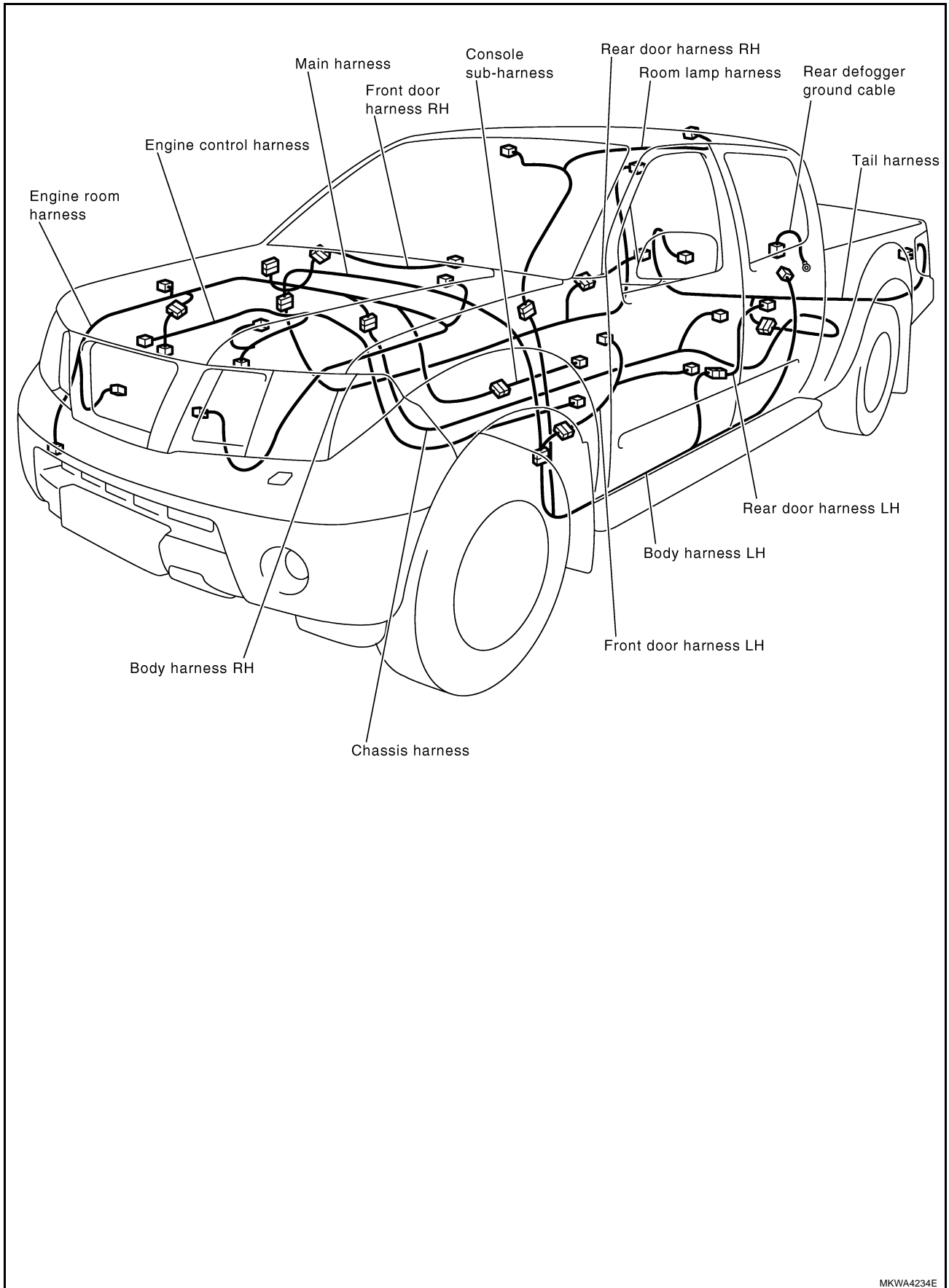
CONNECTOR SYMBOL

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

Connector type	Water proof type		Standard type	
	Male	Female	Male	Female
● Cavity: Less than 4				
● Relay connector				
● Cavity: From 5 to 8				
● Cavity: More than 9				
● Ground terminal etc.	—			

HARNESS

OUTLINE



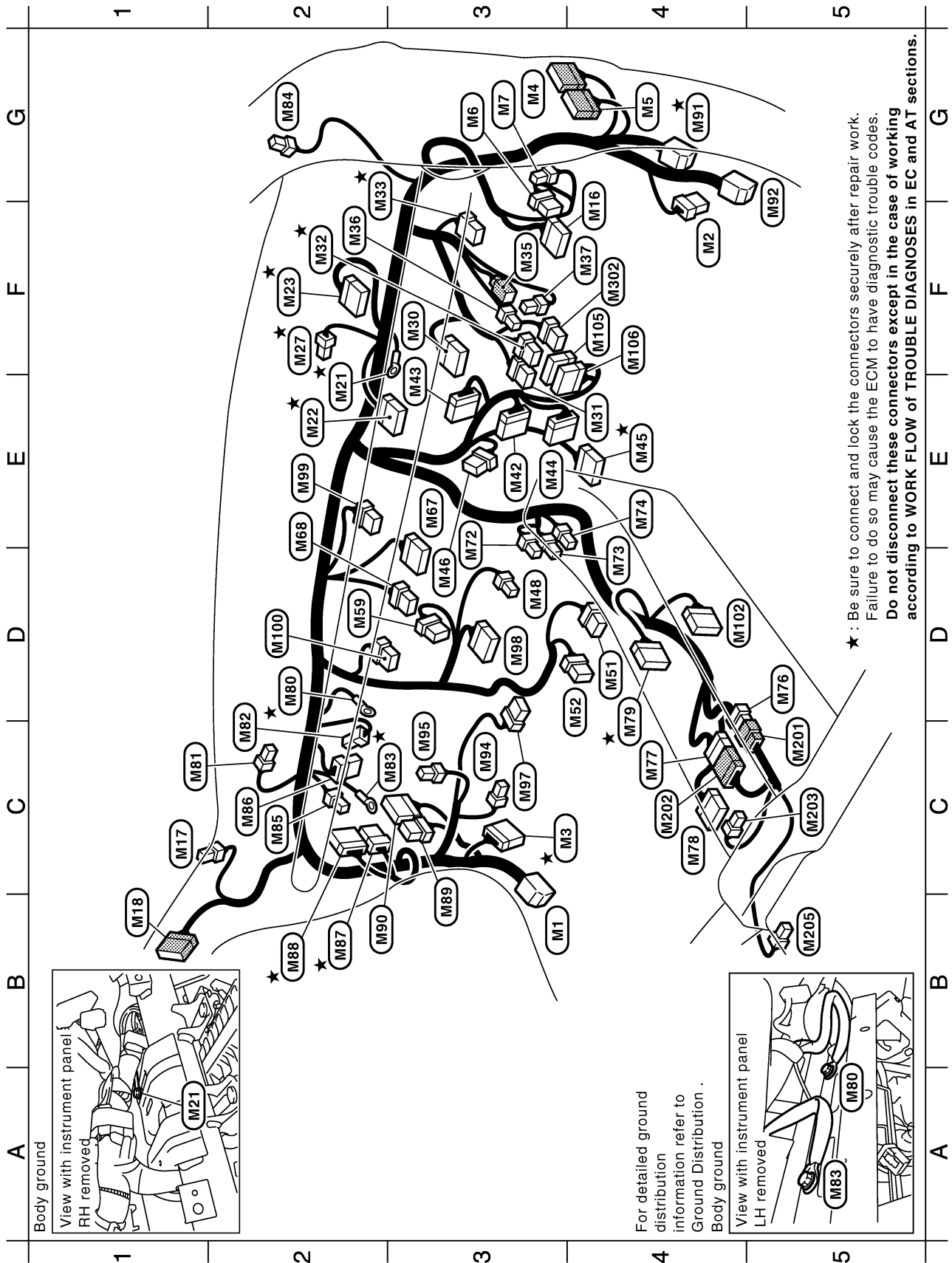
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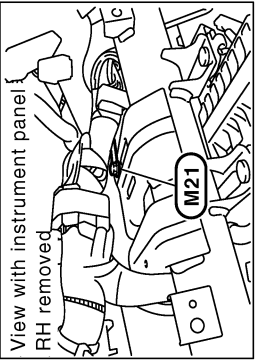
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MAIN HARNESS

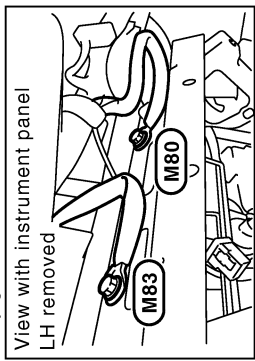


★ : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

Body ground



For detailed ground distribution information refer to Ground Distribution .
 Body ground



Console sub harness

F4 **M105** W/26 : Transfer control unit
F4 **M106** W/24 : Transfer control unit
D5 **M201** W/6 : To **M76**
C5 **M202** W/16 : To **M77**
C5 **M203** -/2 : Ashtray illumination
B5 **M205** B/2 : Console power socket
F4 **M302** GR/8 : Combination switch (Spiral cable)

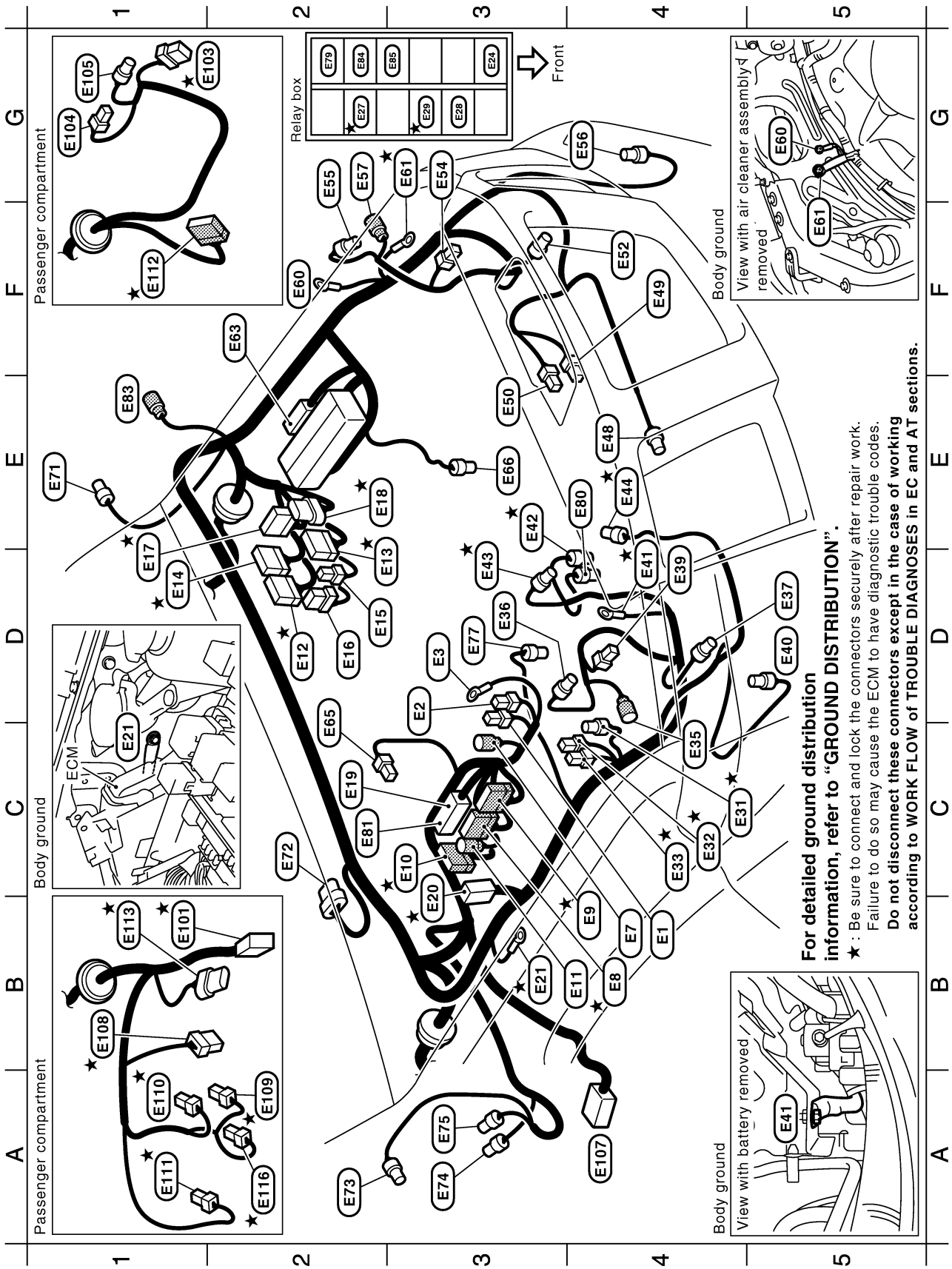
Diode **M27**



★ : 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, TF and AT sections.

HARNESS

ENGINE ROOM HARNESS



For detailed 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 and AT sections.

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HARNESS

Passenger compartment

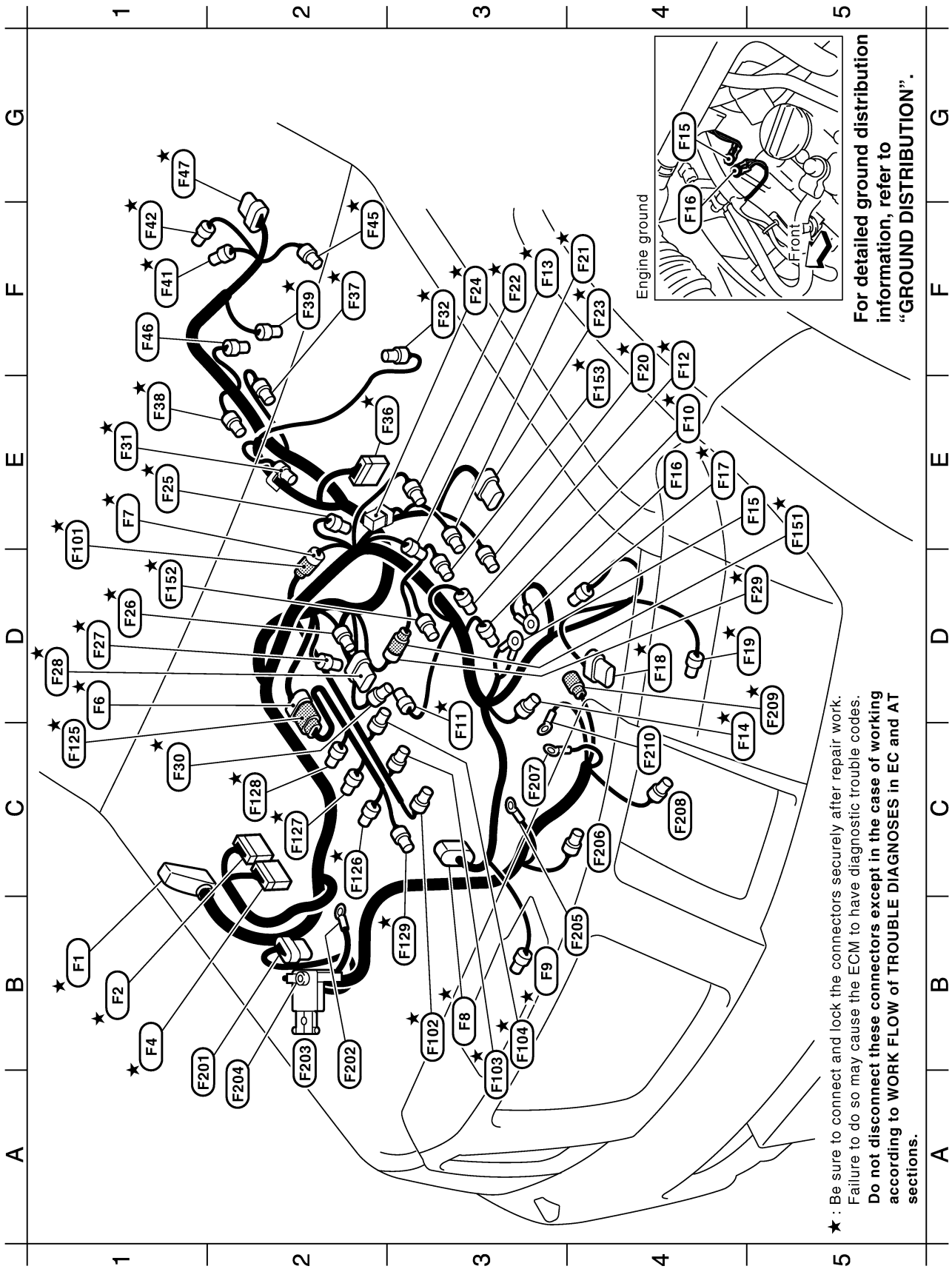
B4	(E1)	BR/2	: Fusible link holder	D4	(E39)	B/3	: Head lamp RH	B1	★ (E101)	SMJ	: To (M91)
D3	(E2)	GR/2	: Fusible link holder	D5	(E40)	-/2	: Front fog lamp RH	G1	★ (E103)	W/8	: Fuse block (J/B)
D3	(E3)	-	: Fusible link holder	D4	★ (E41)	-	: Body ground	G1	(E104)	B/1	: Fuse block (J/B)
B4	(E7)	GR/1	: To (F8)	D3	(E43)	B/3	: Refrigerant pressure sensor	G1	(E105)	B/2	: Fuse block (J/B)
B4	★ (E8)	W/24	: To (F2)	E4	★ (E44)	GR/3	: Turbocharger boost sensor	A4	(E107)	SMJ	: To (C1)
B4	★ (E9)	W/16	: To (F4)	E4	(E48)	B/4	: Ambient sensor	B1	★ (E108)	B/6	: Accelerator pedal position sensor
C3	★ (E10)	W/16	: To (F5)	F4	(E49)	B/1	: Horn (+)	A2	★ (E109)	W/4	: Stop lamp switch (With A/T)
B4	(E11)	B/2	: To (F3)	E3	(E50)	B/1	: Horn (-)	A1	★ (E110)	BR/2	: ASCD brake switch
D2	★ (E12)	W/16	: IPDM E/R (Intelligent power distribution module engine room)	F4	(E52)	B/3	: Head lamp aimer LH	A1	★ (E111)	L/2	: ASCD clutch switch
D3	★ (E13)	BR/12	: IPDM E/R (Intelligent power distribution module engine room)	G3	(E54)	B/3	: Head lamp LH	F1	★ (E112)	GR/16	: To (M3)
D1	★ (E14)	W/6	: IPDM E/R (Intelligent power distribution module engine room)	G2	(E55)	BR/2	: Front turn signal lamp LH	B1	★ (E113)	W/6	: To (M2)
D2	(E15)	B/2	: IPDM E/R (Intelligent power distribution module engine room)	G4	(E56)	-/2	: Front fog lamp LH	A2	★ (E116)	B/2	: Stop lamp switch (With M/T)
D2	(E16)	BR/8	: IPDM E/R (Intelligent power distribution module engine room)	G2	(E57)	GR/2	: Clearance lamp LH				
D1	★ (E17)	W/12	: IPDM E/R (Intelligent power distribution module engine room)	F2	(E60)	-	: Body ground				
E2	★ (E18)	B/6	: IPDM E/R (Intelligent power distribution module engine room)	G3	★ (E61)	-	: Body ground				
C2	(E19)	-	: Fusible link holder No.2	F2	(E63)	B/47	: ABS actuator and electric unit (Control unit) (With ABS)				
B3	★ (E20)	B/40	: ECM	C2	(E65)	GR/2	: Brake fluid level switch				
B3	★ (E21)	-	: Body ground	E3	(E66)	GR/2	: Front wheel sensor LH				
G3	(E24)	-/12	: Fuse block No.2	E1	(E71)	-/2	: Side turn signal lamp LH				
G2	★ (E27)	B/5	: Transfer shift high relay	C2	(E72)	GR/5	: Front wiper motor				
G3	(E28)	BR/6	: Front blower motor relay	A2	(E73)	-/2	: Side turn signal lamp RH				
G3	★ (E29)	B/5	: Transfer shift low relay	A3	(E74)	B/2	: Front and rear washer motor				
C4	★ (E31)	G/2	: Glow relay	A3	(E75)	GR/2	: Washer fluid level switch				
C4	★ (E32)	W/1	: Glow relay	D3	(E77)	GR/2	: Front wheel sensor RH				
C4	★ (E33)	W/1	: Glow relay	G2	(E79)	L/4	: Back-up lamp relay (With A/T)				
C4	(E35)	GR/2	: Clearance lamp RH	E4	★ (E80)	GR/2	: Cooling fan motor				
D3	(E36)	BR/2	: Front turn signal lamp RH	C2	(E81)	-/3	: Horn relay				
D5	(E37)	B/3	: Head lamp aimer RH	E1	(E83)	BR/2	: Water in fuel sensor (YD engine)				
				G2	(E84)	L/4	: Transfer shut off relay 1				
				G3	(E85)	L/4	: Transfer shut off relay 2				

★ : 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.

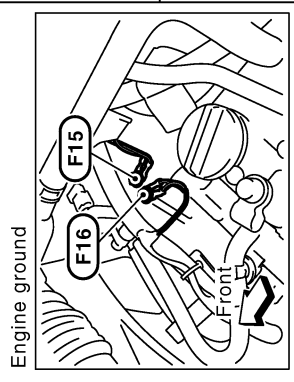
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC, TF and AT sections.

HARNESS

ENGINE CONTROL HARNESS/VQ 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.

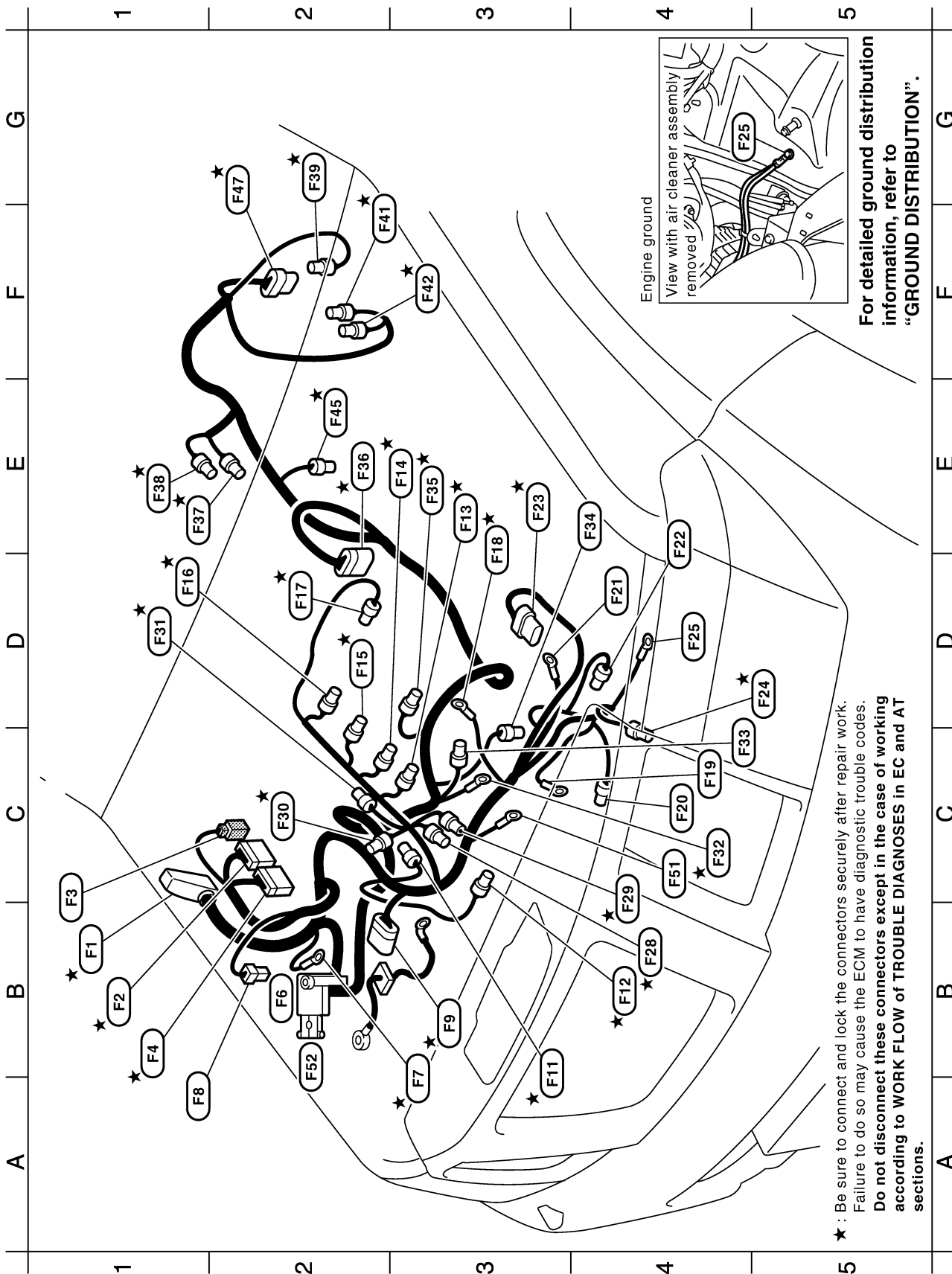


For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

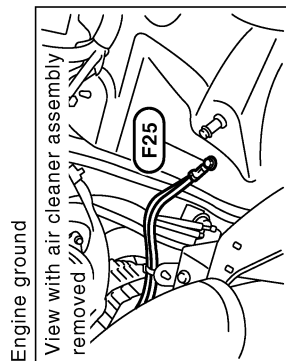
★ (F1)	B/81	:	ECM	★ (F41)	B/2	:	ATP switch
★ (F2)	W/24	:	To (E8)	★ (F42)	GR/2	:	Neutral-4LO switch
★ (F4)	W/16	:	To (E9)	★ (F45)	GR/3	:	Front revolution sensor (With part-time 4WD and without ABS)
★ (F6)	G/8	:	To (F125)	★ (F46)	GR/2	:	Vehicle speed sensor (Without ABS)
★ (F7)	G/4	:	To (F10)	★ (F47)	B/8	:	Transfer control device (With part-time 4WD)
★ (F8)	B/6	:	Electric throttle control actuator	EGL sub-harness 1			
★ (F9)	B/3	:	Power steering pressure sensor	★ (F101)	G/4	:	To (F7)
★ (F10)	GR/2	:	Fuel injector No. 2	★ (F102)	GR/2	:	Fuel injector No. 1
★ (F11)	B/2	:	VIAS control solenoid valve	★ (F103)	GR/2	:	Fuel injector No. 3
★ (F12)	GR/2	:	Fuel injector No. 4	★ (F104)	GR/2	:	Fuel injector No. 5
★ (F13)	GR/2	:	Fuel injector No. 6	EGL sub-harness 2			
★ (F14)	GR/2	:	EVAP canister purge volume control solenoid valve	C1	★ (F125)	G/8	To (F6)
E5	(F15)	-	Body ground	C2	★ (F126)	GR/3	Ignition coil No. 1
E4	(F16)	-	Body ground	C2	★ (F127)	GR/3	Ignition coil No. 3
E4	★ (F17)	G/2	Intake valve timing control solenoid valve (bank 2)	C2	★ (F128)	GR/3	Ignition coil No. 5
D4	★ (F18)	B/6	Mass air flow sensor	B3	★ (F129)	G/2	Intake valve timing control solenoid valve (bank 1)
D5	★ (F19)	B/1	Compressor	EGL sub-harness 3			
F4	★ (F20)	GR/3	Ignition coil No. 2	E5	★ (F151)	L/4	To (F29)
F4	★ (F21)	GR/3	Ignition coil No. 4	D1	★ (F152)	B/2	Knock sensor (Bank 1)
F3	★ (F22)	GR/3	Ignition coil No. 6	E4	★ (F153)	B/2	Knock sensor (Bank 2)
F4	★ (F23)	B/6	Air fuel ratio (A/F) sensor 1 (Bank 2)	Engine No. 2 harness			
F3	★ (F24)	GR/2	Condenser-1	B1	★ (F201)	GR/9	To (E82)
E1	★ (F25)	B/3	Camshaft position sensor (PHASE) (Bank 2)	B2	★ (F202)	-	Body ground
D1	★ (F26)	G/3	Camshaft position sensor (PHASE) (Bank 1)	B2	★ (F203)	-	Fusible link holder No. 1
D1	★ (F27)	GR/2	Engine coolant temperature sensor	A2	★ (F204)	-	Fusible link holder No. 1
D1	★ (F28)	B/6	Air fuel ratio (A/F) sensor 1 (Bank 1)	B4	★ (F205)	-	Alternator
D5	★ (F29)	L/4	To (F151)	C4	★ (F206)	B/3	Alternator
C1	★ (F30)	B/3	Crankshaft position sensor (POS)	C3	★ (F207)	-	Alternator (B)
E1	★ (F31)	L/4	Heated oxygen sensor 2 (Bank 1)	C4	★ (F208)	B/1	Oil pressure switch
F3	★ (F32)	G/4	Heated oxygen sensor 2 (Bank 2)	D5	★ (F209)	GR/1	Starter motor
E2	★ (F36)	G/10	A/T assembly (With A/T)	C4	★ (F210)	-	Starter motor
F2	★ (F37)	W/2	Back-up lamp switch (With M/T)				
E1	★ (F38)	B/2	Park/neutral position switch (With M/T)				
F2	★ (F39)	B/2	Wait detection switch				

HARNESS

ENGINE CONTROL HARNESS/YD 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 detailed ground distribution information, refer to "GROUND DISTRIBUTION".

HARNESS

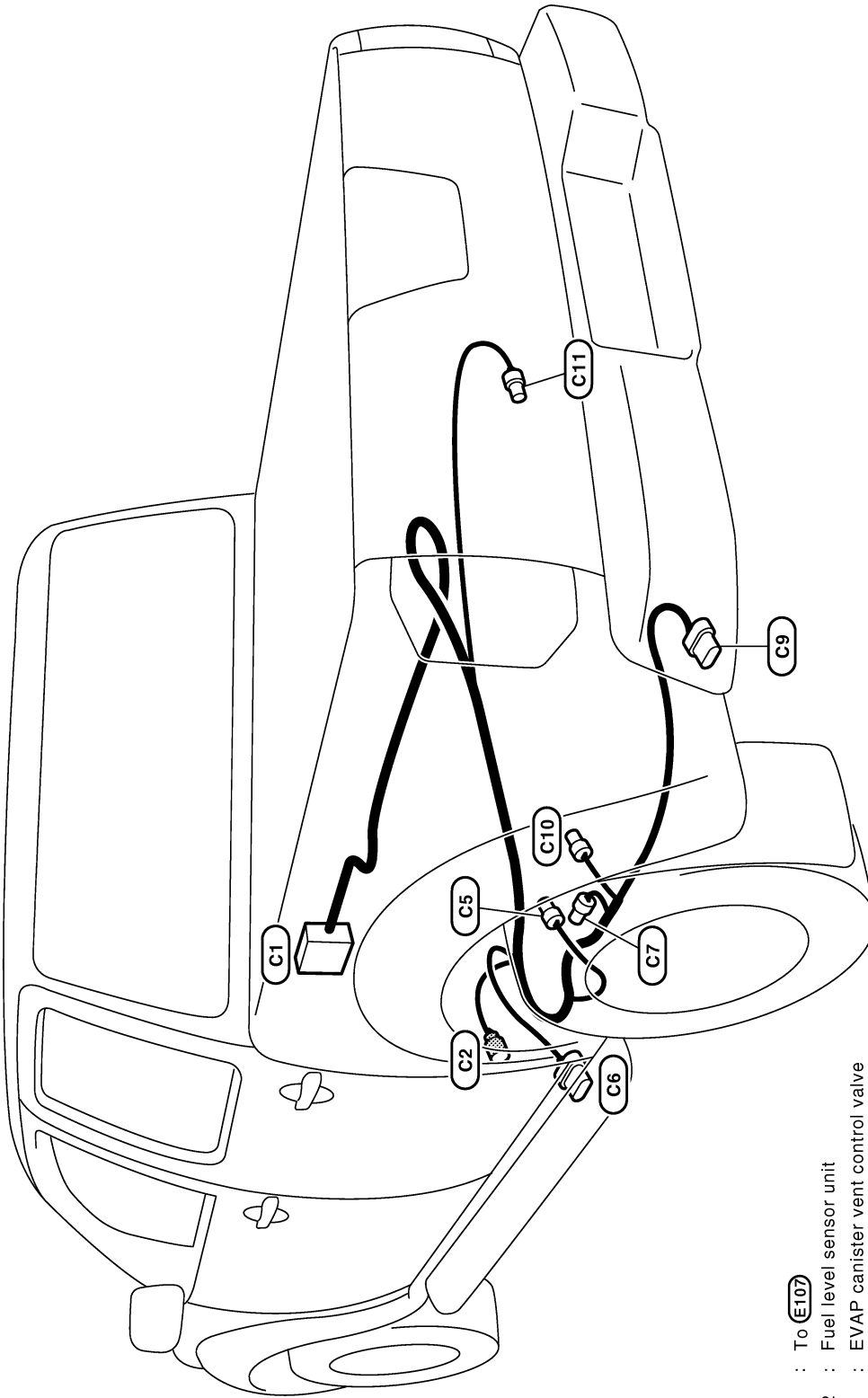
★ B1 (F1)	B/81	:	ECM	★ E1 (F37)	W/2	:	Back-up lamp switch
★ B1 (F2)	W/24	:	To (E8)	★ E1 (F38)	B/2	:	Park/neutral position switch
C1 (F3)	B/2	:	To (E11)	★ G2 (F39)	GR/2	:	Wait detection switch
★ B1 (F4)	W/16	:	To (E9)	★ F2 (F41)	B/2	:	ATP switch
B2 (F6)	-	:	Fusible link holder	★ F3 (F42)	GR/2	:	Neutral-4LO switch
B3 (F7)	-	:	Body ground (With A/T)	★ E2 (F45)	GR/3	:	Front revolution sensor
★ A1 (F8)	GR/1	:	To (E7)	★ G2 (F47)	B/8	:	Transfer control device (Actuator motor)
★ B3 (F9)	GR/6	:	EGR volume control valve				
B3 (F11)	-/3	:	Fuel rail pressure sensor				
★ B4 (F12)	GR/2	:	Engine coolant temperature sensor				
★ E3 (F13)	LGR/2	:	Fuel injector No. 1				
★ E3 (F14)	LGR/2	:	Fuel injector No. 3				
★ D2 (F15)	LGR/2	:	Fuel injector No. 4				
★ D1 (F16)	LGR/2	:	Fuel injector No. 2				
★ D2 (F17)	B/3	:	Camshaft position sensor				
★ E3 (F18)	-	:	Glow plug				
C4 (F19)	-/1	:	Alternator				
C4 (F20)	B/1	:	Compressor				
D4 (F21)	-/1	:	Alternator (B)				
E4 (F22)	B/3	:	Alternator				
★ E3 (F23)	B/6	:	Mass air flow sensor				
★ D5 (F24)	B/2	:	Turbocharger boost control solenoid valve				
D4 (F25)	-	:	Body ground				
B4 (F28)	-/2	:	Fuel pump				
★ C4 (F29)	-/2	:	Fuel pump temperature sensor				
★ C2 (F30)	G/2	:	Electronic controlled engine mount control solenoid valve				
★ D1 (F31)	B/2	:	Intake air control valve control solenoid valve				
C4 (F32)	B/1	:	Starter motor				
C4 (F33)	B/1	:	Oil pressure switch				
E4 (F34)	SB/3	:	Oil level sensor				
★ E3 (F35)	B/3	:	Crankshaft position sensor				
★ E2 (F36)	G/10	:	A/T assembly				

Sub harness			
C4 (F51)	B/1	:	Starter motor
B2 (F52)	-/1	:	Fusible link holder

★ : 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, TF and AT sections.

HARNESS

CHASSIS HARNESS



- C1 SMJ : To (E107)
- C2 GR/2 : Fuel level sensor unit
- C5 B/2 : EVAP canister vent control valve
(With VQ engine)
- C6 GR/5 : Fuel level sensor unit and Fuel pump
(With VQ engine)
- C7 GR/3 : EVAP control system pressure sensor
(With VQ engine)
- C9 GR/8 : To (T1)
- C10 BR/2 : Rear wheel sensor LH
- C11 GR/2 : Rear wheel sensor RH

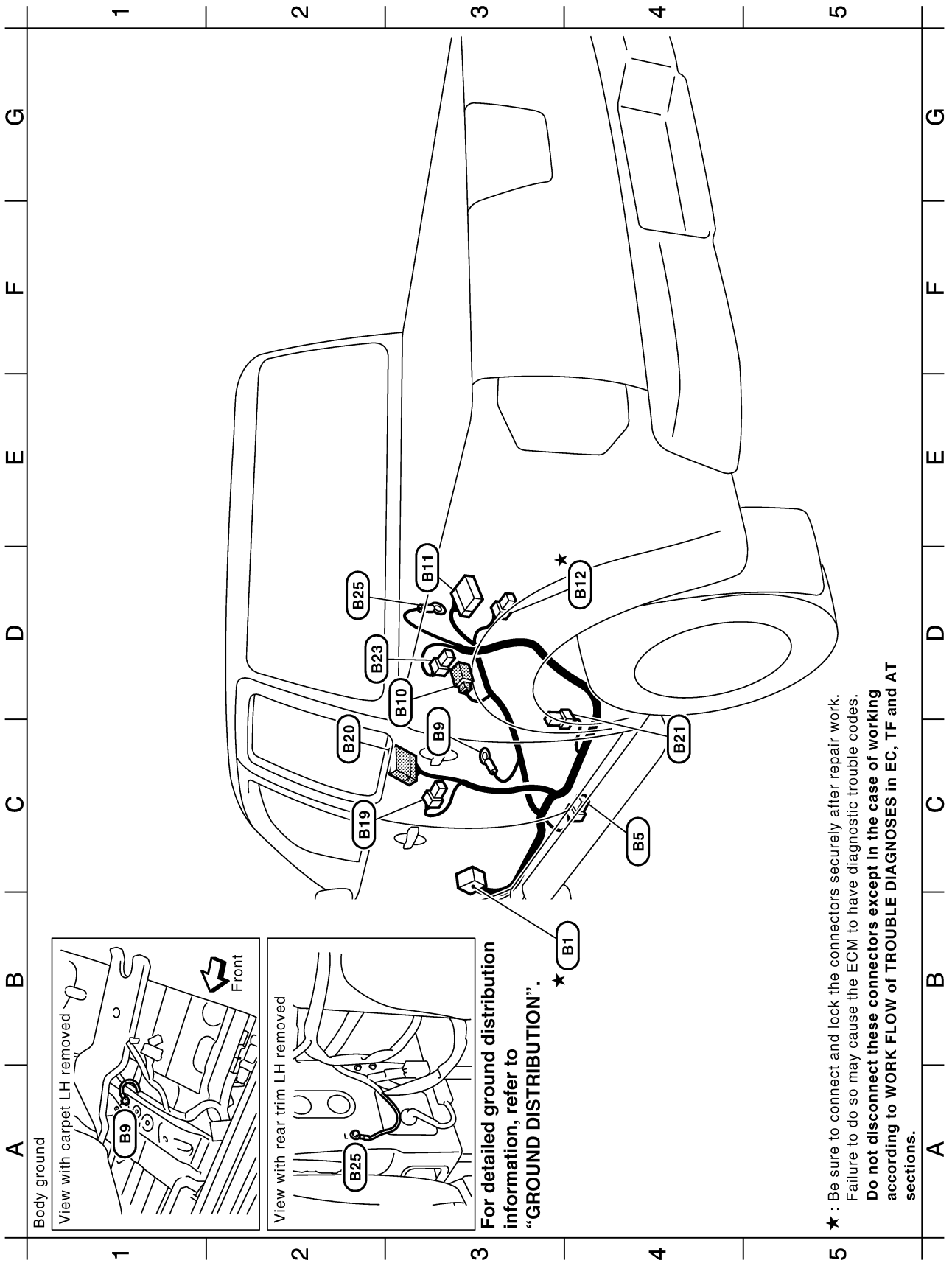
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HARNESS

BODY HARNESS (LH SIDE)



MKWA4141E

HARNESS

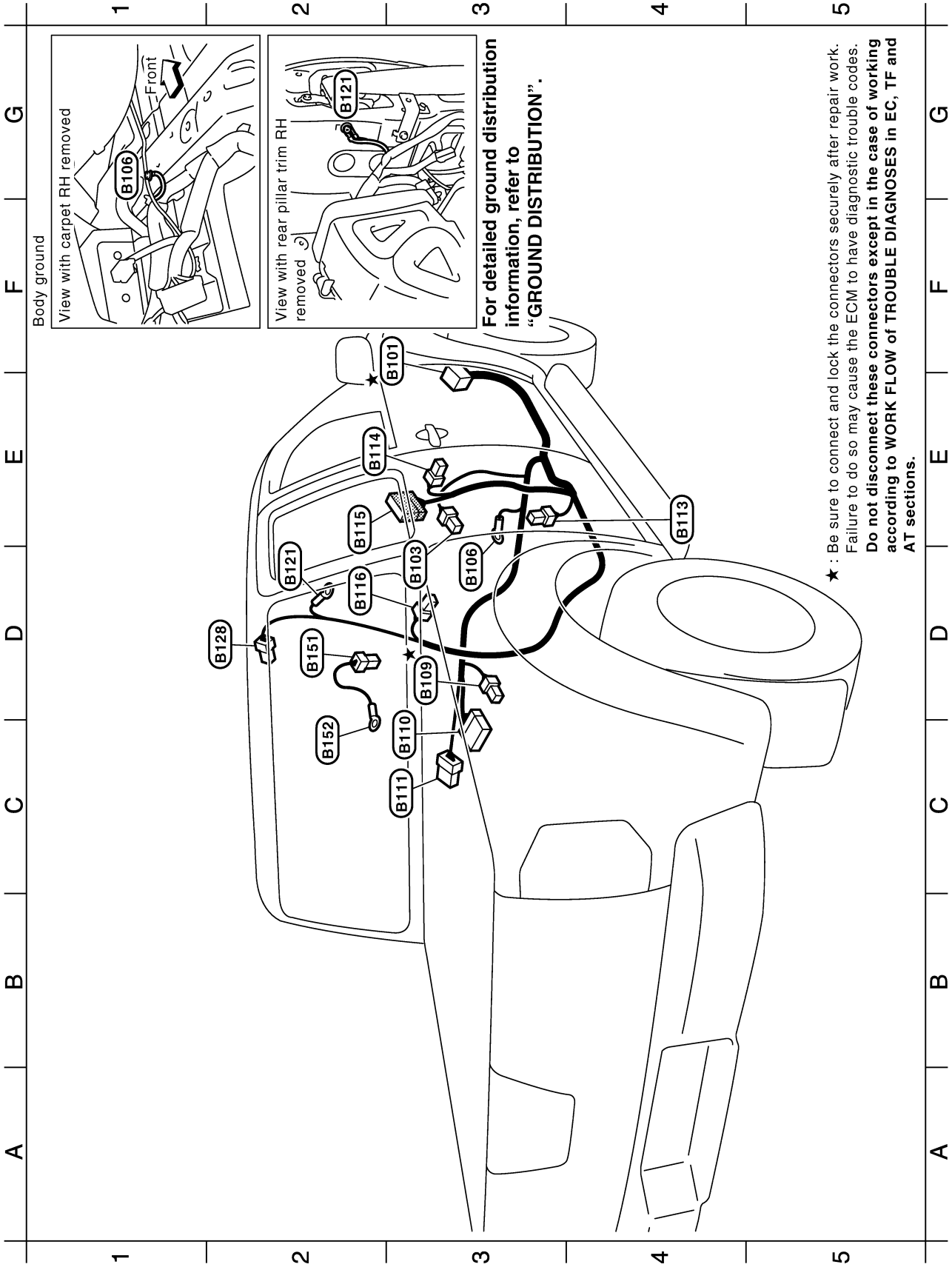
B4★	(B1)	SMJ	:	To	(M1)
C3	(B9)	-	:	Body ground	
D3	(B10)	Y/3	:	To	(B11)
D3	(B11)	Y/12	:	Air bag diagnosis sensor unit	
C2	(B19)	W/3	:	Front door switch LH	
C2	(B20)	W/12	:	To	(D61)
C4	(B21)	Y/2	:	Front LH seat belt pre-tensioner	
D2	(B23)	W/3	:	Rear door switch LH	
D2	(B25)	-	:	Body ground	

★ : 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, TF and AT sections.

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HARNESS

BODY HARNESS (RH SIDE)



★ : 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, TF and AT sections.

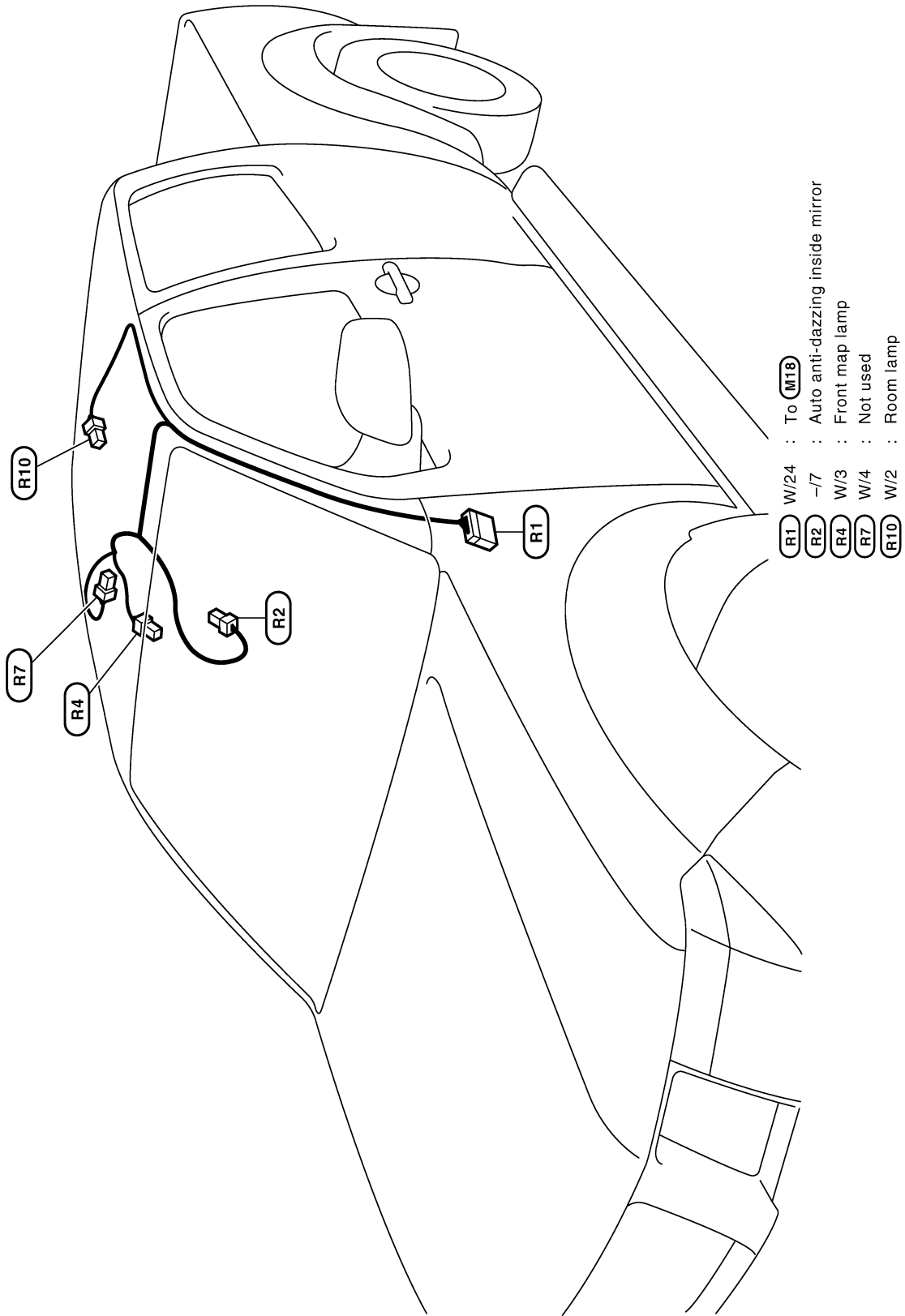
F3	(B101)	SMJ	:	To	(M92)
D3	(B103)	W/3	:	Seat belt buckle switch RH	
D3	(B106)	-	:	Body ground	
D3	(B109)	B/1	:	Parking brake switch	
C3	(B110)	Y/12	:	Air bag diagnosis sensor unit	
C3	(B111)	Y/2	:	To	(B10)
E4	(B113)	Y/2	:	Front RH seat belt pre-tensioner RH	
E2	(B114)	W/3	:	Front door switch RH	
E2	(B115)	W/12	:	To	(D81)
D2	(B116)	W/3	:	Rear door switch RH	
D2	(B121)	-	:	Body ground	
D2	(B128)	B/1	:	Rear window defogger (+)	
D2	(B151)	B/1	:	Rear window defogger (-)	
C2	(B152)	-	:	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, TF and AT sections.

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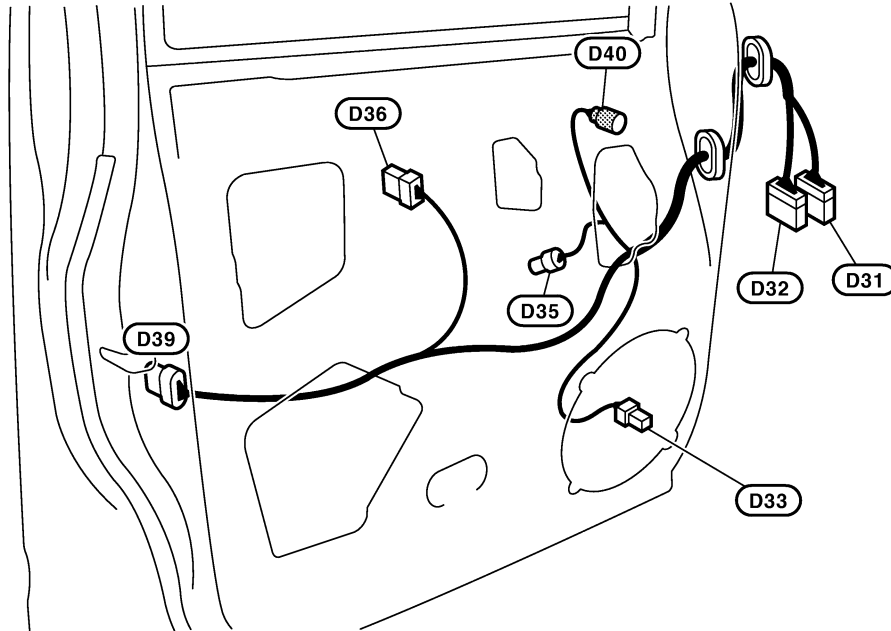
ROOM LAMP HARNESS



HARNESS

FRONT DOOR LH HARNESS

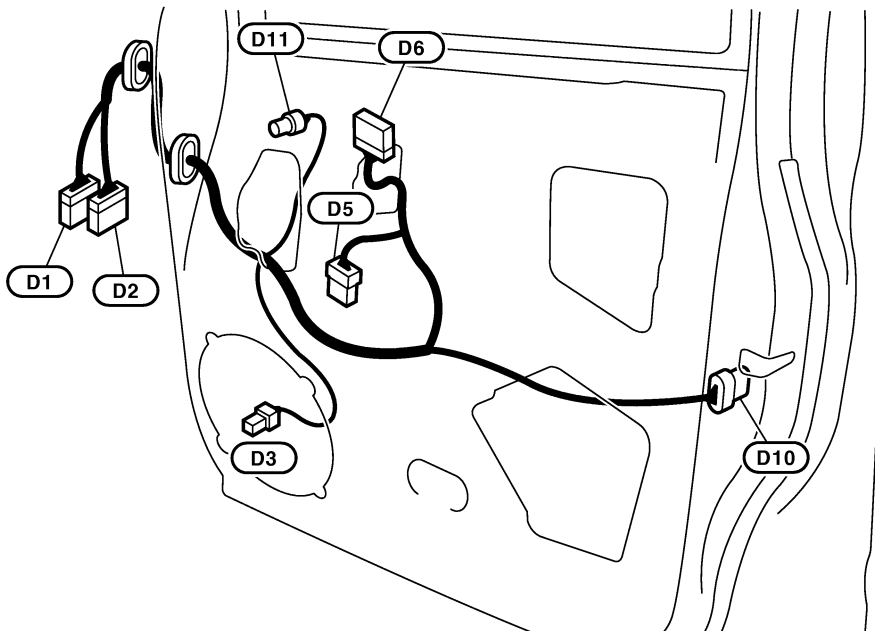
- | | | | |
|------------|--|-----------|---|
| (D31) W/16 | : To (M89) | (D39) B/6 | : Front door lock actuator (Passenger side) |
| (D32) W/16 | : To (M90) | (D40) B/3 | : Door mirror (Passenger side) |
| (D33) W/2 | : Front door speaker LH | | |
| (D35) -/2 | : Front power window motor RH | | |
| (D36) W/8 | : Front power window switch (Passenger side) | | |



MKWA4146E

FRONT DOOR RH HARNESS

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|-----------|-------------------------|-----------|---|
| (D1) W/16 | : To (M4) | (D5) -/6 | : Front power window motor and control unit (Driver side) |
| (D2) W/24 | : To (M5) | (D6) W/16 | : Power window main switch |
| (D3) W/2 | : Front door speaker RH | (D10) B/6 | : Front door lock actuator (Driver side) |
| | | (D11) B/3 | : Door mirror (Driver side) |

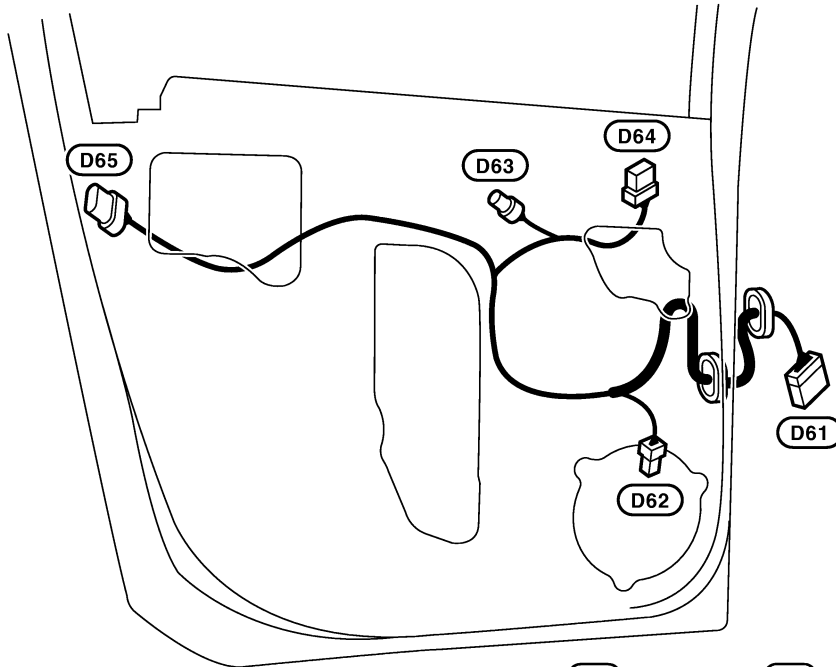


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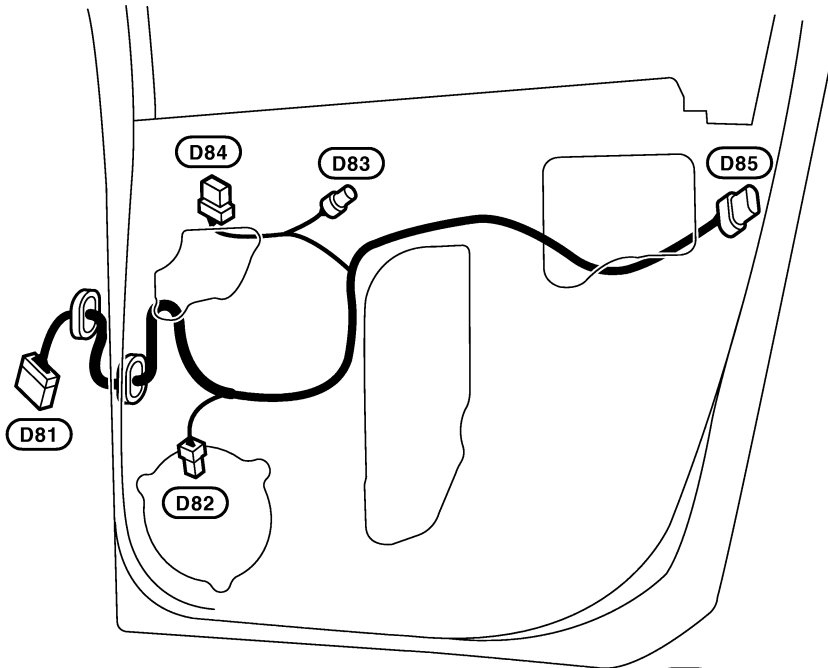
REAR DOOR LH HARNESS



- D61** W/12 : To **B20**
- D62** W/2 : Rear door speaker LH
- D63** -/2 : Rear power window motor LH
- D64** W/8 : Rear power window switch LH
- D65** B/6 : Rear door actuator LH

MKWA4148E

REAR DOOR RH HARNESS



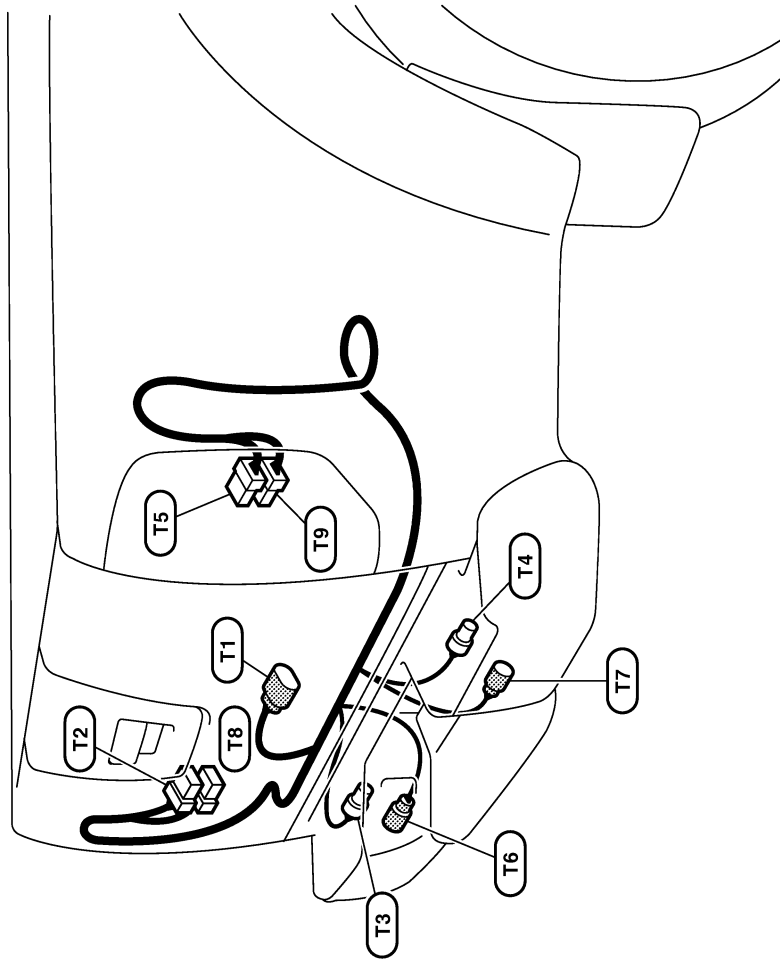
- D81** W/12 : To **B115**
- D82** W/2 : Rear door speaker RH
- D83** -/2 : Rear power window motor RH
- D84** W/8 : Rear power window switch RH
- D85** B/6 : Rear door lock actuator RH

MKWA4149E

HARNESS

TAIL HARNESS

T1	GR/8	:	To C9
T2	GR/6	:	Rear combination lamp LH (Without step bumper)
T3	BR/2	:	License plate lamp LH (Without step bumper)
T4	BR/2	:	License plate lamp RH (Without step bumper)
T5	GR/6	:	Rear combination lamp RH (Without step bumper)
T6	GR/2	:	License plate lamp LH (With step bumper)
T7	GR/2	:	License plate lamp RH (With step bumper)
T8	GR/8	:	Rear combination lamp LH (With step bumper)
T9	GR/8	:	Rear combination lamp RH (With step bumper)



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HARNESS

Wiring Diagram Codes (Cell Codes)

GKS000CP

Use the chart below to find out what each wiring diagram code stands for.

Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
A/C,M	MTC	Manual Air Conditioner
ABS	BRC	Anti-lock Brake System
AF1B1	EC	Air Fuel Ratio Sensor 1 (Bank 1)
AF1B2	EC	Air Fuel Ratio Sensor 1 (Bank 2)
AF1HB1	EC	Air Fuel Ratio Sensor 1 Heater Bank 1
AF1HB2	EC	Air Fuel Ratio Sensor 1 Heater Bank 2
APP1PW	EC	Accelerator Pedal Position Sensor 1 Power
APP2PW	EC	Accelerator Pedal Position Sensor 2 Power
APPS1	EC	Accelerator Pedal Position Sensor 1
APPS2	EC	Accelerator Pedal Position Sensor 2
APPS3	EC	Accelerator Pedal Position Sensor
ASC/BS	EC	ASCD Brake Switch
ASC/SW	EC	ASCD Steering Switch
ASCBOF	EC	ASCD Brake Switch
ASCIND	EC	ASCD Indicator
AT/IND	DI	A/T Indicator Lamp
AUDIO	AV	Audio
BACK/L	LT	Back-up Lamp
BOOST	EC	Turbocharger Boost Sensor
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
CKPS	EC	Crankshaft Position Sensor
CMPS	EC	Camshaft Position Sensor
COMBSW	LT	Combination Switch
COMPAS	DI	Compass
COOL/F	EC	Cooling Fan Control
D/LOCK	BL	Power Door Lock
DEF	GW	Rear Window Defogger
ECM/PW	EC	ECM Power Supply
ECMRLY	EC	ECM Relay
ECTS	EC	Engine Coolant Temperature Sensor
EGRVLV	EC	EGR Volume Control System
EMNT	EC	Electronic Controlled Engine Mount Control Solenoid Valve
ETC1	EC	Electrical Throttle Control Function
ETC2	EC	Electrical Throttle Control Motor Relay
ETC3	EC	Electrical Throttle Control Motor

HARNESSES

Code	Section	Wiring Diagram Name
F/FOG	LT	Front Fog Lamp
F/PUMP	EC	Fuel Pump
FRPS	EC	Fuel Rail Pressure Sensor
FTS	AT	A/T Fluid Temperature Sensor
FTS	EC	Fuel Pump Temperature Sensor
FUELB1	EC	Fuel Injection System Function (Bank 1)
FUELB2	EC	Fuel Injection System Function (Bank 2)
GLOW	EC	Glow Control System
H/AIM	LT	Headlamp Aiming Control System
H/LAMP	LT	Headlamp
HORN	WW	Horn
I/MIRR	GW	Inside Mirror (Auto Anti-dazzling Mirror)
IATS	EC	Intake Air Temperature Sensor
IATSEN	EC	Intake Air Temperature Sensor
IGNSYS	EC	Ignition Signal
ILL	LT	Illumination
INJ/PW	EC	Fuel Injector Power Supply
INJECT	EC	Fuel Injector
INT/L	LT	Room and Map Lamps
INT/V	EC	Intake Air Control Valve Control Solenoid Valve
IVCB1	EC	Intake Valve Timing Control Solenoid Valve Bank 1
IVCB2	EC	Intake Valve Timing Control Solenoid Valve Bank 2
KS	EC	Knock Sensor
MAFS	EC	Mass Air Flow Sensor
MAIN	AT	Main Power Supply and Ground Circuit
MAIN	EC	Main Power Supply and Ground Circuit
METER	DI	Speedometer, Tachometer, Temp. and Fuel Gauges
MIL/DL	EC	Malfunction Indicator Lamp, Data Link Connector
MIRROR	GW	Door Mirror
MULTI	BL	Multi-remote Control System
NATS	BL	NATS (Nissan Anti-Theft System)
NONDTC	AT	NON-detective Items
O2H2B1	EC	Heated Oxygen Sensor 2 Heater Bank 1
O2H2B2	EC	Heated Oxygen Sensor 2 Heater Bank 2
O2S2B1	EC	Heated Oxygen Sensor 2 Bank 1
O2S2B2	EC	Heated Oxygen Sensor 2 Bank 2
P/SCKT	WW	Power Socket
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHSB1	EC	Camshaft Position Sensor (PHASE) (Bank 1)
PHSB2	EC	Camshaft Position Sensor (PHASE) (Bank 2)
PNP/SW	AT	Park/Neutral Position Switch
PNP/SW	EC	Park/Neutral Position Switch
POS	EC	Crankshaft Position Sensor (CKPS) (POS)
POWER	PG	Power Supply Routing

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HARNESSES

Code	Section	Wiring Diagram Name
PRGVLV	EC	EVAP Canister Purge Volume Control Solenoid Valve
RS/SEN	EC	Power Steering Pressure (PSP) Sensor
RP/SEN	EC	Refrigerant Pressure Sensor
RRO2B1	EC	Heated Oxygen Sensor 2 Bank 1
RRO2B2	EC	Heated Oxygen Sensor 2 Bank 2
S/SIG	EC	Start Signal
SEN/PW	EC	Sensor Power Supply
SHIFT	AT	A/T Shift Lock System
SRS	SRS	Supplemental Restraint System
START	SC	Starting System
STOP/L	LT	Stop Lamp
STSIG	AT	Start Signal Circuit
T/F	TF	Transfer
TAIL/L	LT	Parking, License and Tail Lamps
TCC/V	EC	Turbocharger Boost Control Solenoid Valve
TCCSV	EC	Turbocharger Boost Control Solenoid Valve
TPS1	EC	Electric Throttle Control Actuator (Throttle Position Sensor 1)
TPS2	EC	Electric Throttle Control Actuator (Throttle Position Sensor 2)
TPS3	EC	Electric Throttle Control Actuator (Throttle Position Sensor)
TURN	LT	Turn Signal and Hazard Warning Lamp
VENT	EC	EVAP Canister Vent Control Valve
VIAS	EC	Variable Induction Air Control System
VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)
WARN	DI	Warning Lamps
WINDOW	GW	Power Window
WIPER	WW	Front Wiper and Washer

ELECTRICAL UNITS LOCATION

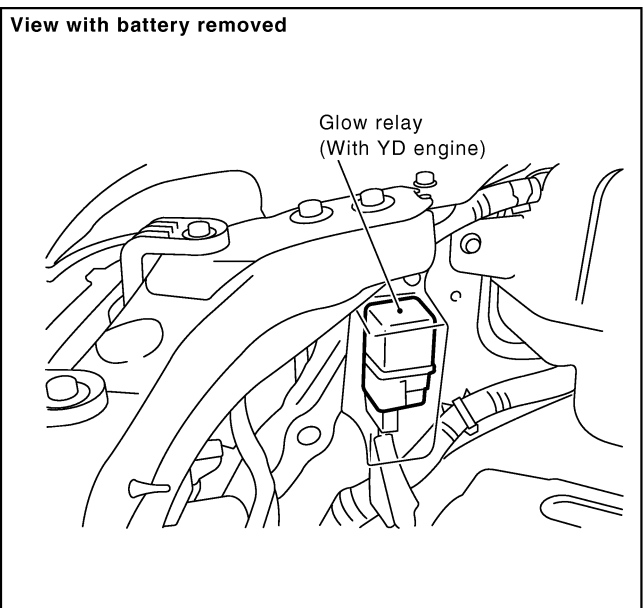
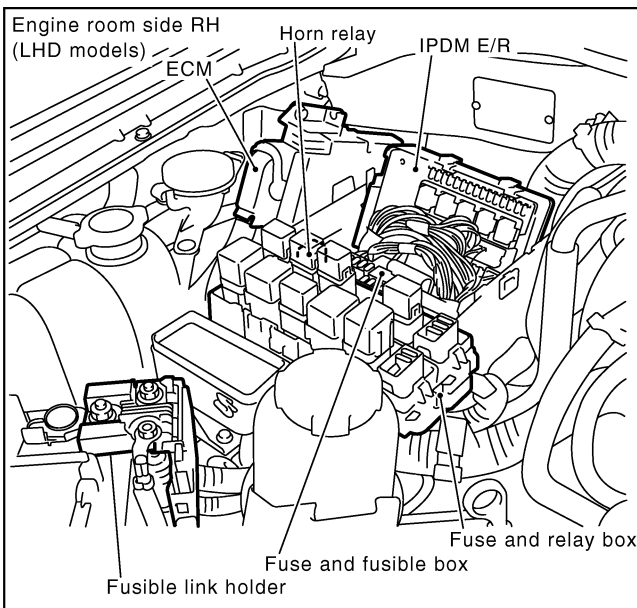
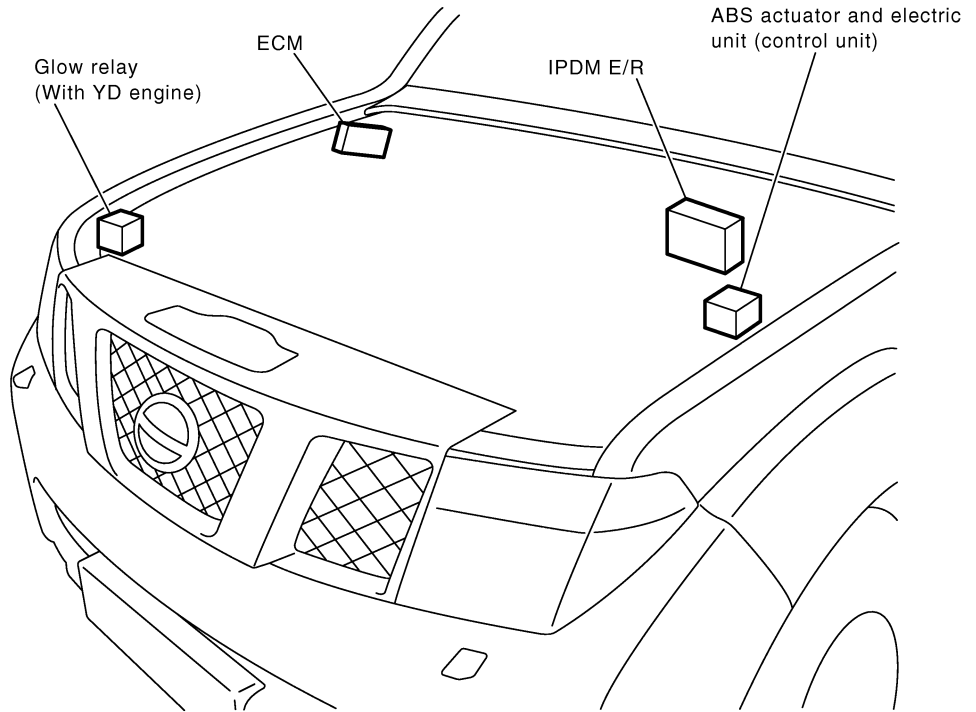
ELECTRICAL UNITS LOCATION

PFP:25230

Electrical Units Location ENGINE COMPARTMENT

GKS000CQ

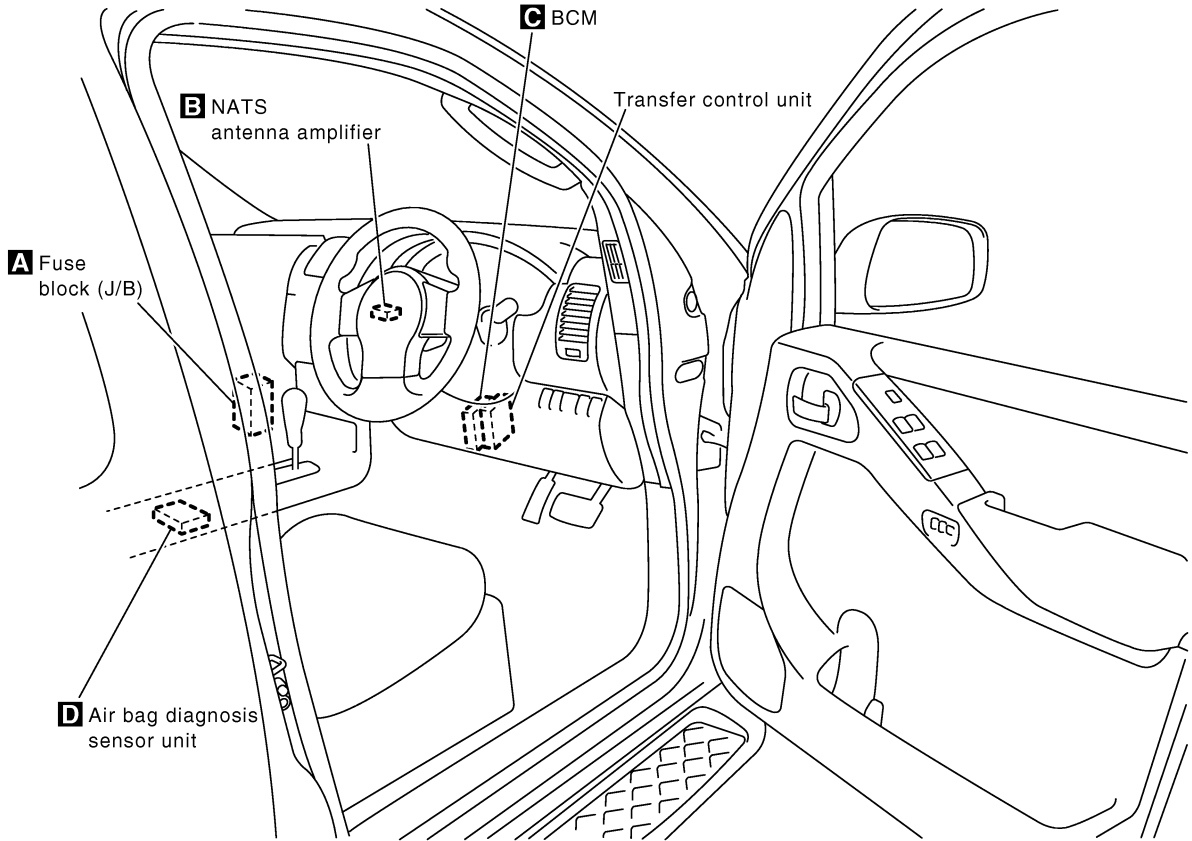
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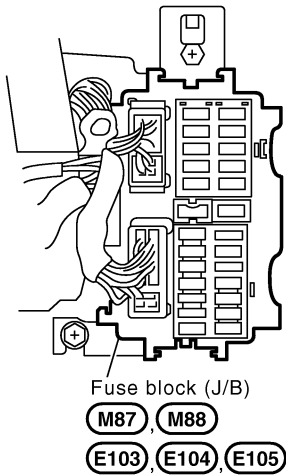
ELECTRICAL UNITS LOCATION

PASSENGER COMPARTMENT

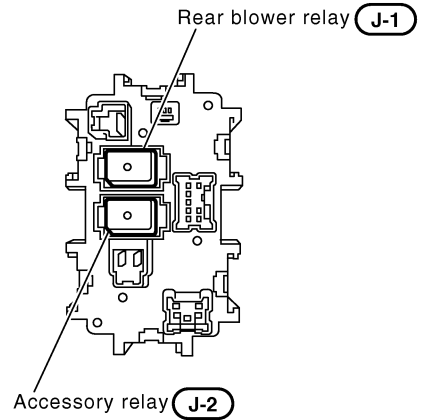


A Instrument panel side LH

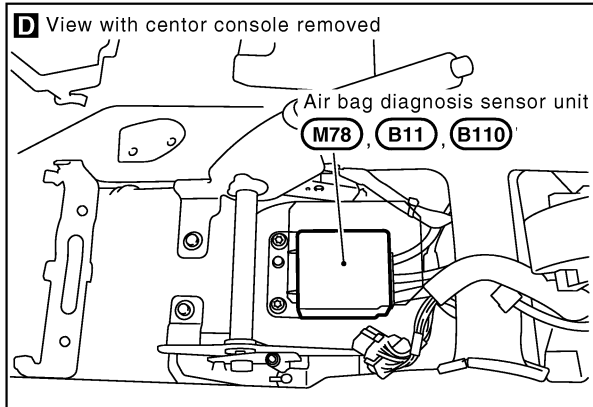
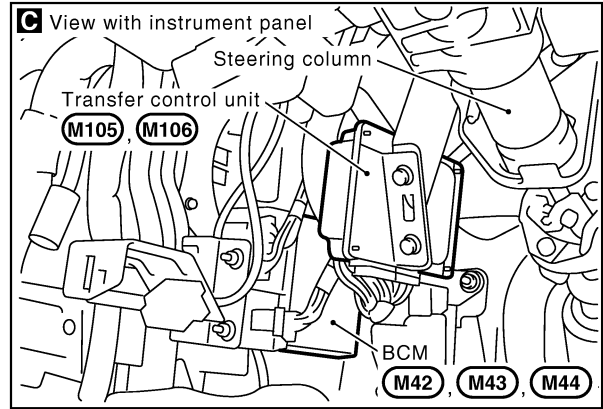
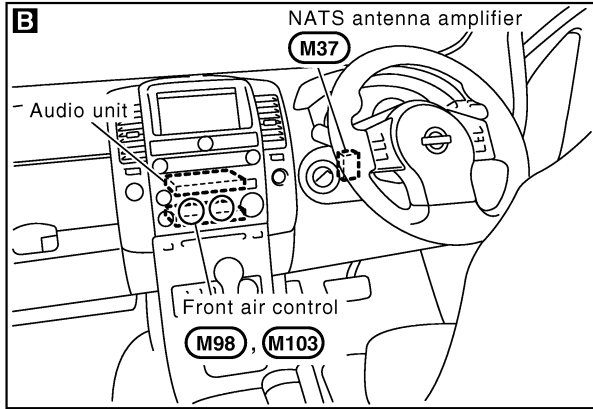
Fuse block (J/B) front view



Fuse block (J/B) rear view



ELECTRICAL UNITS LOCATION



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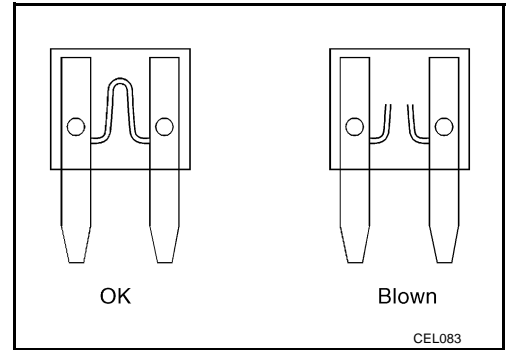
PG

ELECTRICAL UNITS LOCATION

Fuse

GKS000CR

- If fuse is blown, be sure to eliminate cause of incident before installing new fuse.
- Use fuse of specified rating. Never use fuse of more than specified rating.
- Do not partially install fuse; always insert it into fuse holder properly.
- Remove fuse for "ELECTRICAL PARTS (BAT)" if vehicle is not used for a long period of time.



Fusible Link

GKS000CS

A melted fusible link can be detected either by visual inspection or by feeling with finger tip. If its condition is questionable, use circuit tester or test lamp.

CAUTION:

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

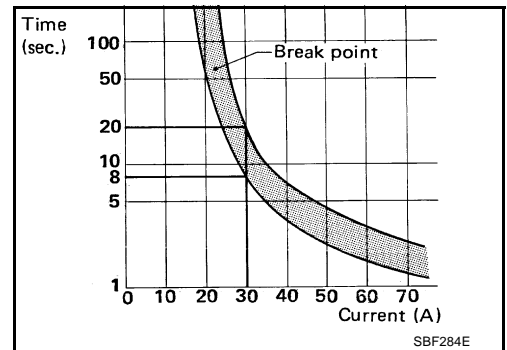
Circuit Breaker (Built Into BCM)

GKS000CT

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

A circuit breaker is used for the following systems:

- Power seat
- Power windows
- Power door locks
- Remote keyless entry system
- Power sunroof
- Rear window wiper



HARNESS CONNECTOR

HARNESS CONNECTOR

PFP:B4341

Description

HARNESS CONNECTOR (TAB-LOCKING TYPE)

GKS000CU

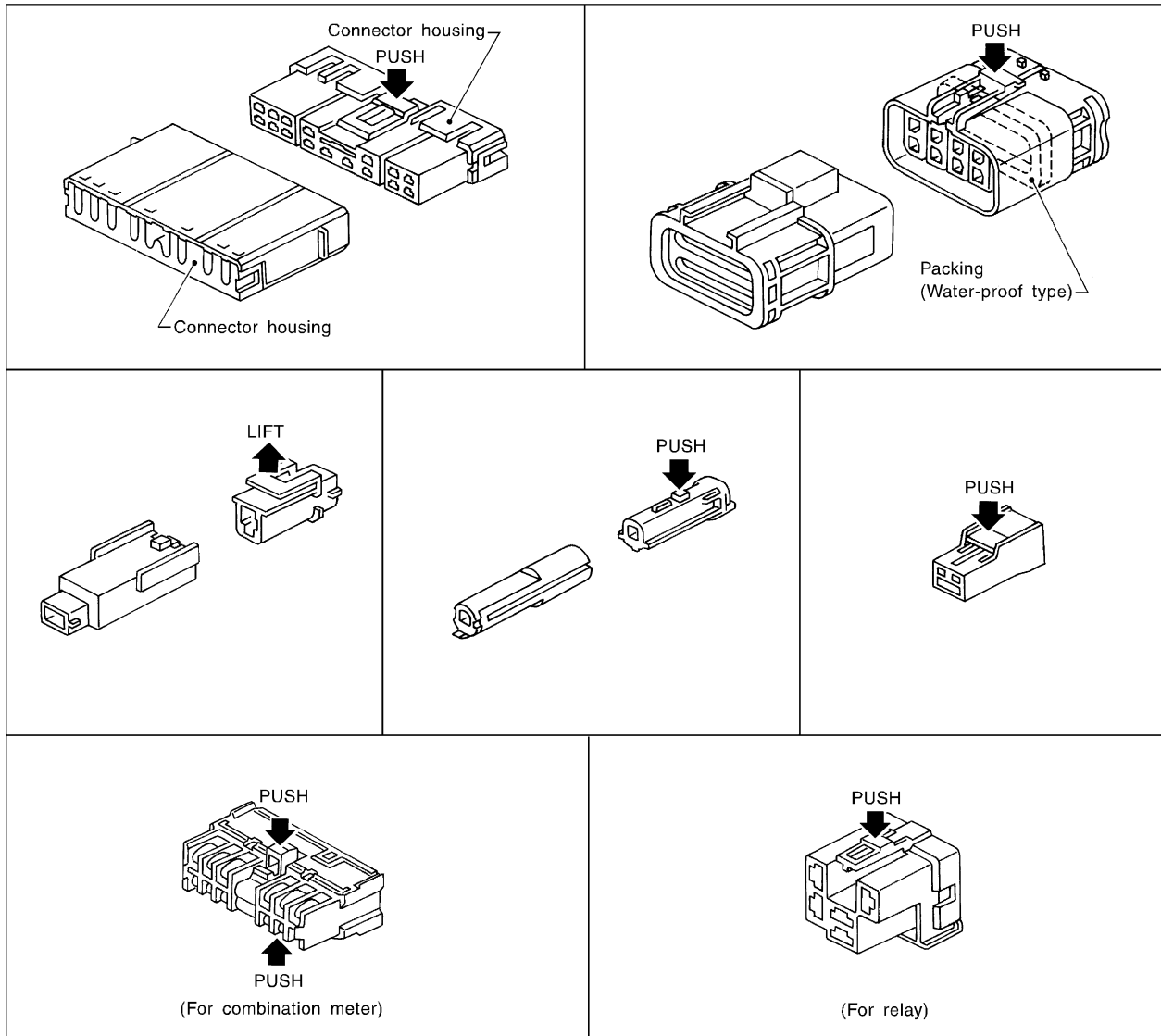
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

Refer to the next page for description of the slide-locking type connector.

CAUTION:

Do not pull the harness or wires when disconnecting the connector.

[Example]



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SEL769DA

HARNESS CONNECTOR

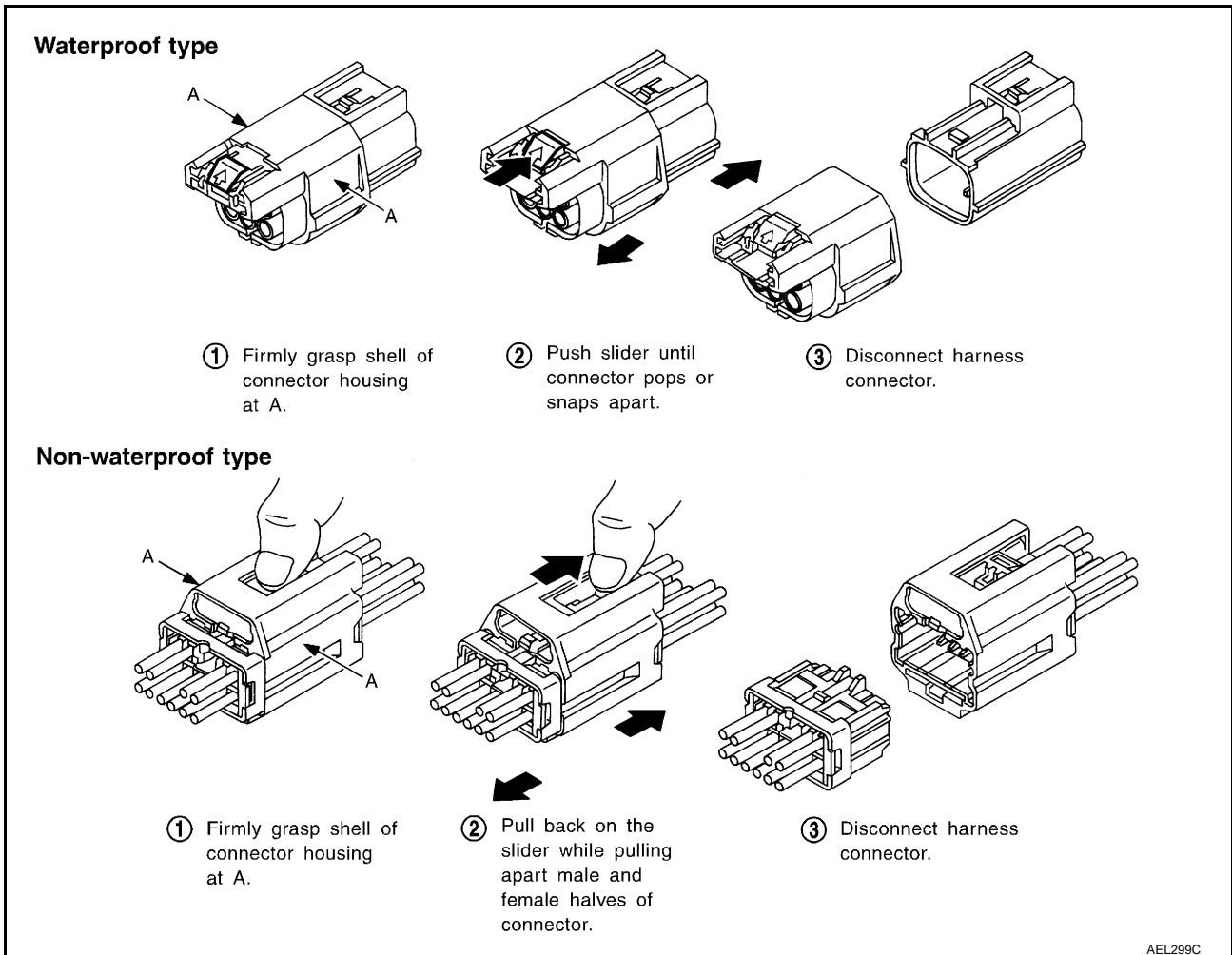
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

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

CAUTION:

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

[Example]



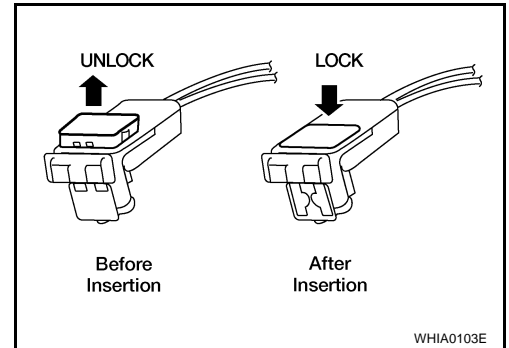
HARNESS CONNECTOR

HARNESS CONNECTOR (DIRECT-CONNECT SRS COMPONENT TYPE)

- SRS direct-connect type harness connectors are used on certain SRS components such as air bag modules and seat belt pre-tensioners.
- Always pull up to release black locking tab prior to removing connector from SRS component.
- Always push down to lock black locking tab after installing connector to SRS component. When locked, the black locking tab is level with the connector housing.

CAUTION:

- **Do not pull the harness or wires when removing connectors from SRS components.**



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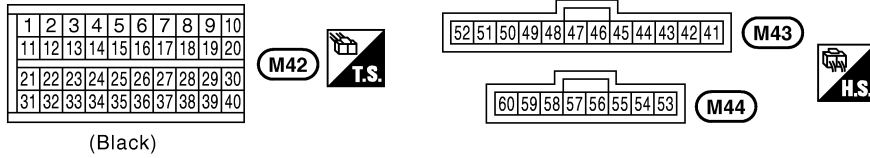
ELECTRICAL UNITS

ELECTRICAL UNITS Terminal Arrangement

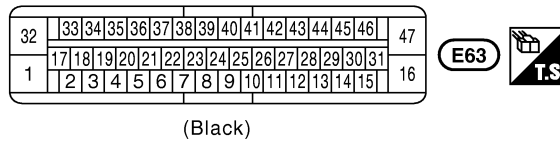
PFP:23710

GKS000CV

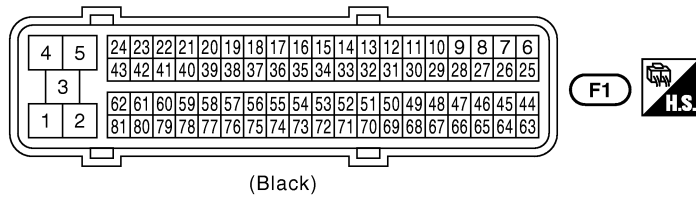
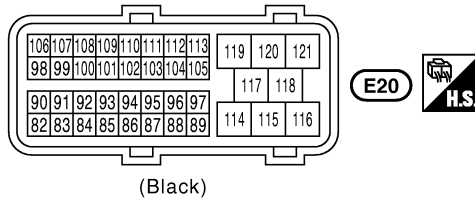
BCM (BODY CONTROL MODULE)



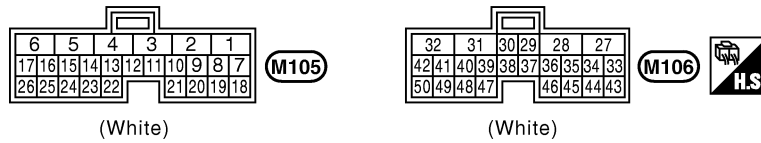
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



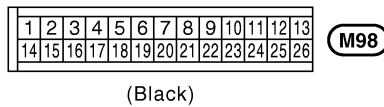
ECM



TRANSFER CONTROL UNIT



FRONT AIR CONTROL



STANDARDIZED RELAY

PFP:25230

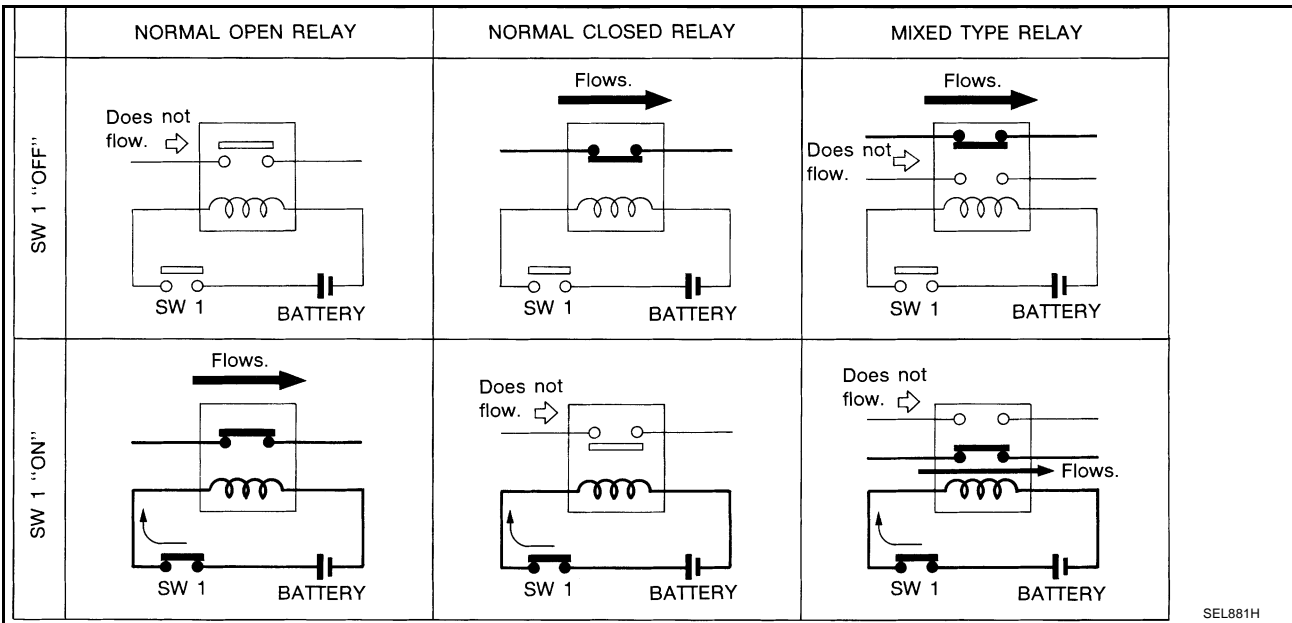
GKS000CW

STANDARDIZED RELAY

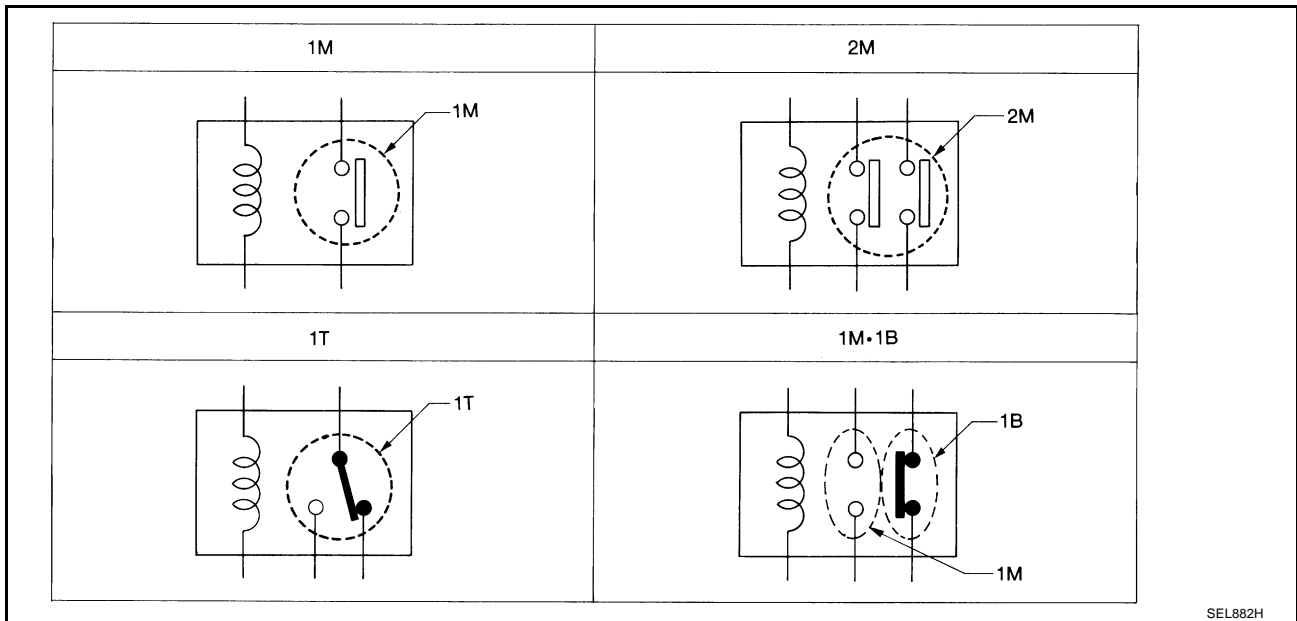
Description

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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



TYPE OF STANDARDIZED RELAYS

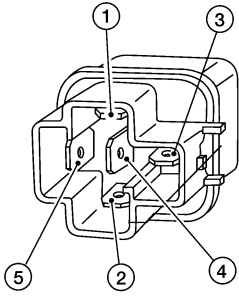
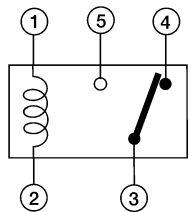
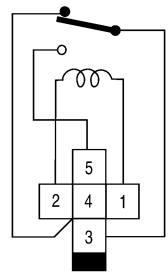
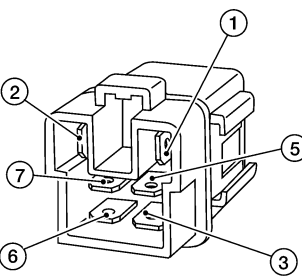
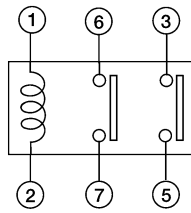
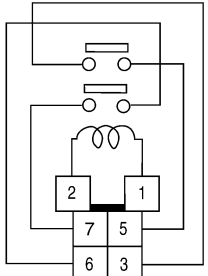
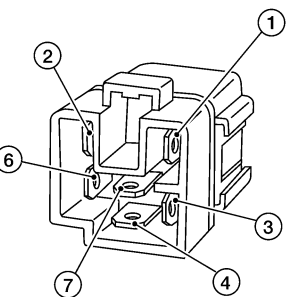
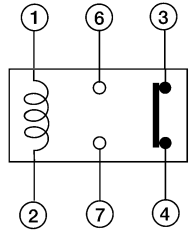
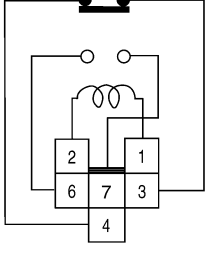
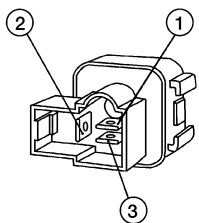
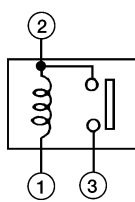
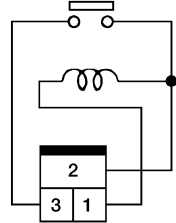
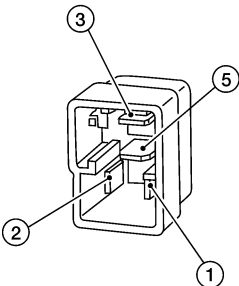
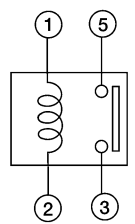
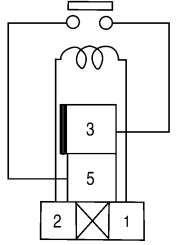


1M	1 Make	2M	2 Make
1T	1 Transfer	1M•1B	1 Make 1 Break

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STANDARDIZED RELAY

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

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

WKIA0253E

SUPER MULTIPLE JUNCTION (SMJ)

SUPER MULTIPLE JUNCTION (SMJ)

PPF:84341

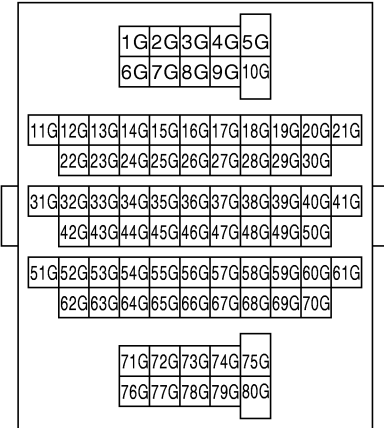
Terminal Arrangement

GKS000CX

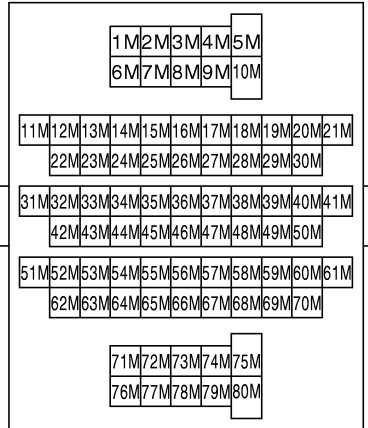
MAIN HARNESS



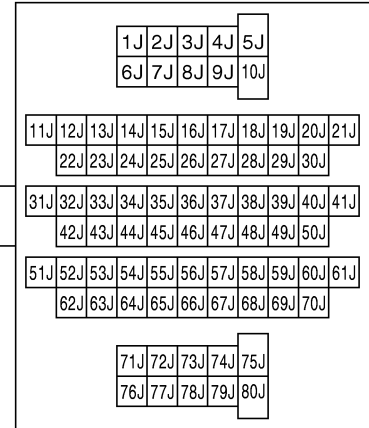
M91 (White)



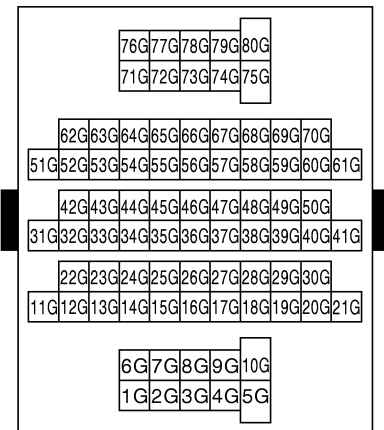
M92 (White)



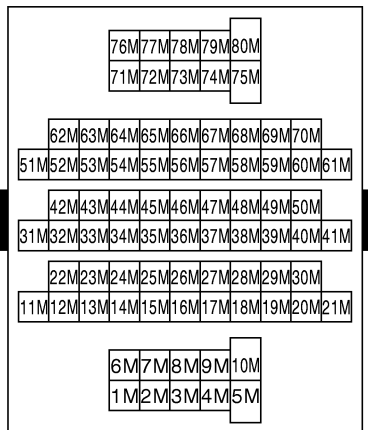
M1 (White)



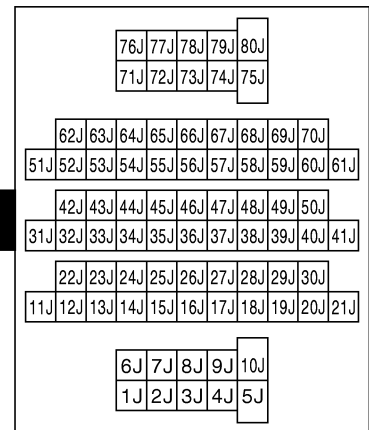
E101 (White)



B101 (White)



B1 (White)



ENGINE ROOM HARNESS

BODY HARNESS (RH)

BODY HARNESS (LH)

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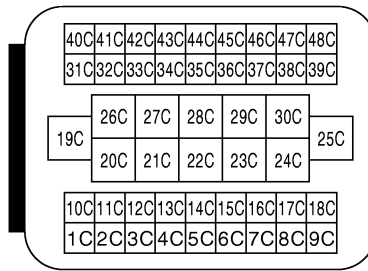
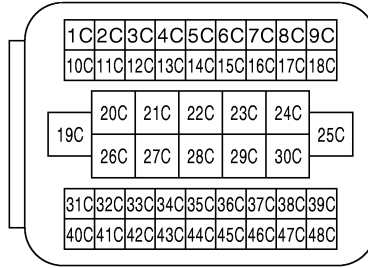
PG

SUPER MULTIPLE JUNCTION (SMJ)

CHASSIS HARNESS



C1 (Black)



E107 (Black)

ENGINE ROOM HARNESS

FUSE BLOCK - JUNCTION BOX (J/B)

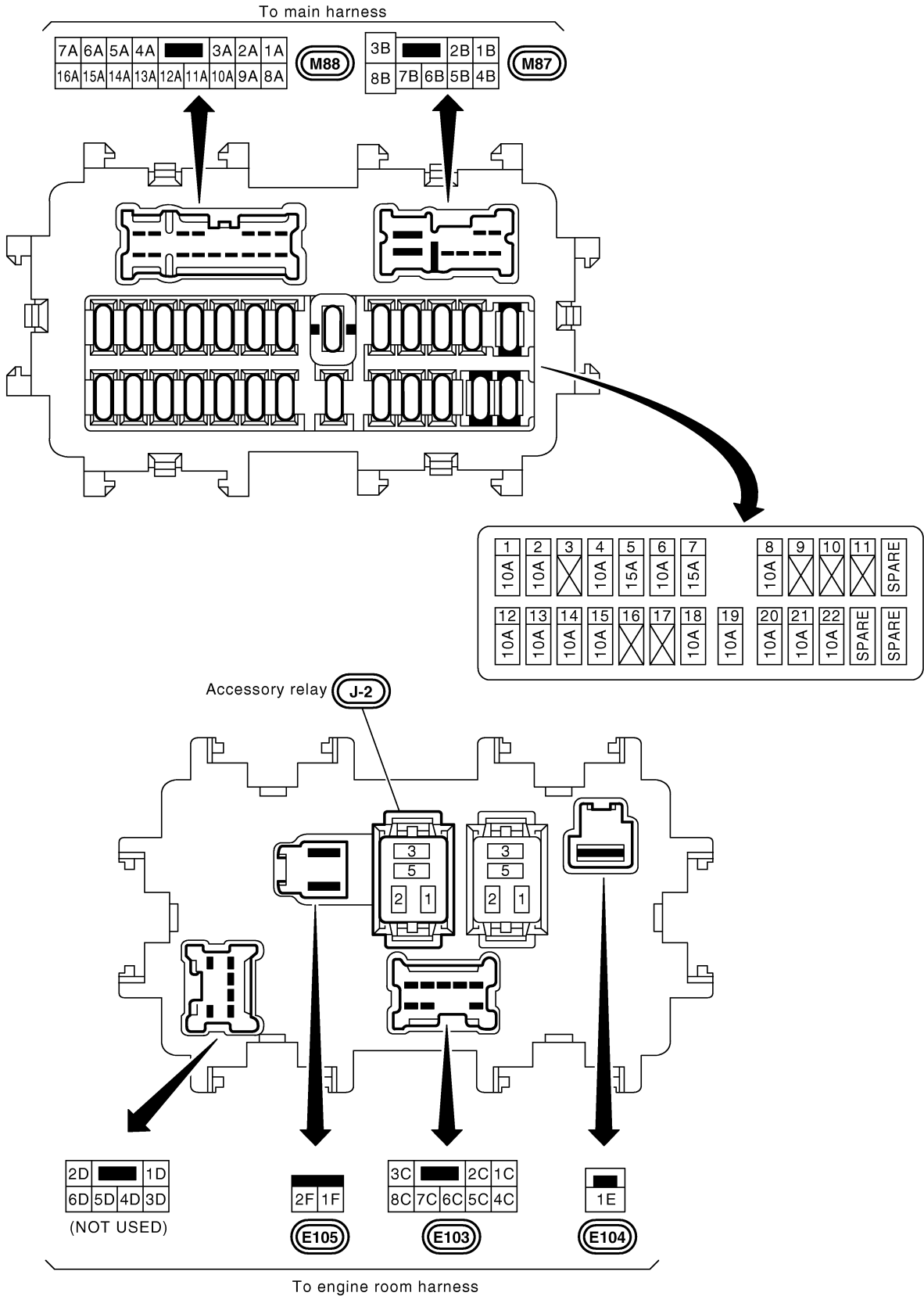
PPF:24350

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FUSE BLOCK - JUNCTION BOX (J/B)

Terminal Arrangement

GKS000CY



MKWA4226E

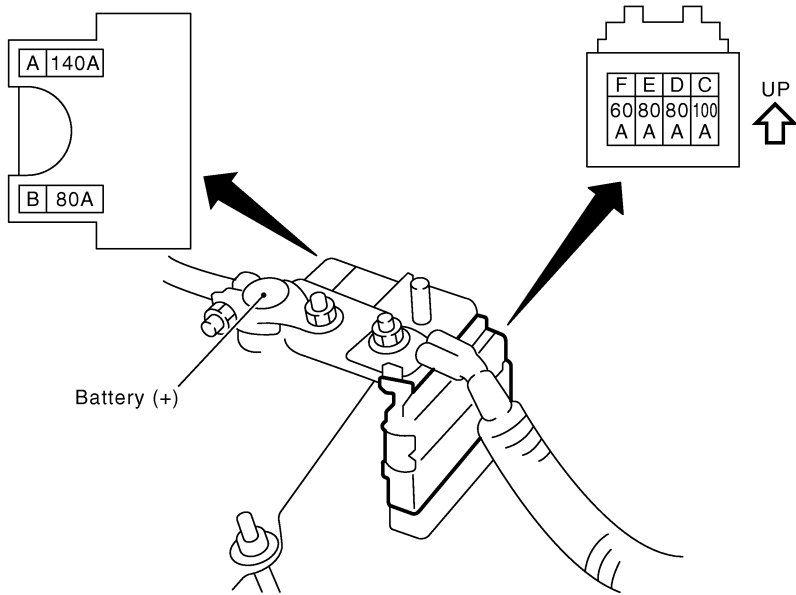
FUSE AND FUSIBLE LINK BOX

PFP:24381

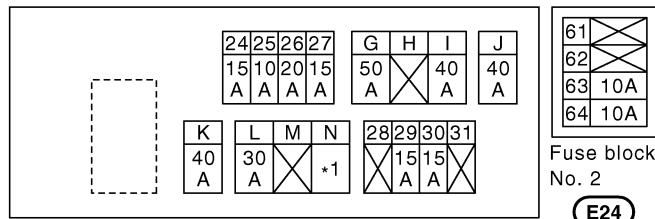
GKS000CZ

FUSE AND FUSIBLE LINK BOX

Terminal Arrangement



Fusible link holder No.1 **E1**, **E2**, **E3**, **F6**, **F52**



Front

Fusible link holder No. 2

E19

G - N: FUSIBLE LINK
No. 24 - 31: FUSE
No. 61 - 66: FUSE

- VQ** : With VQ engine
- YD** : With YD engine
- *1 40A: **VQ**
- 60A: **YD**

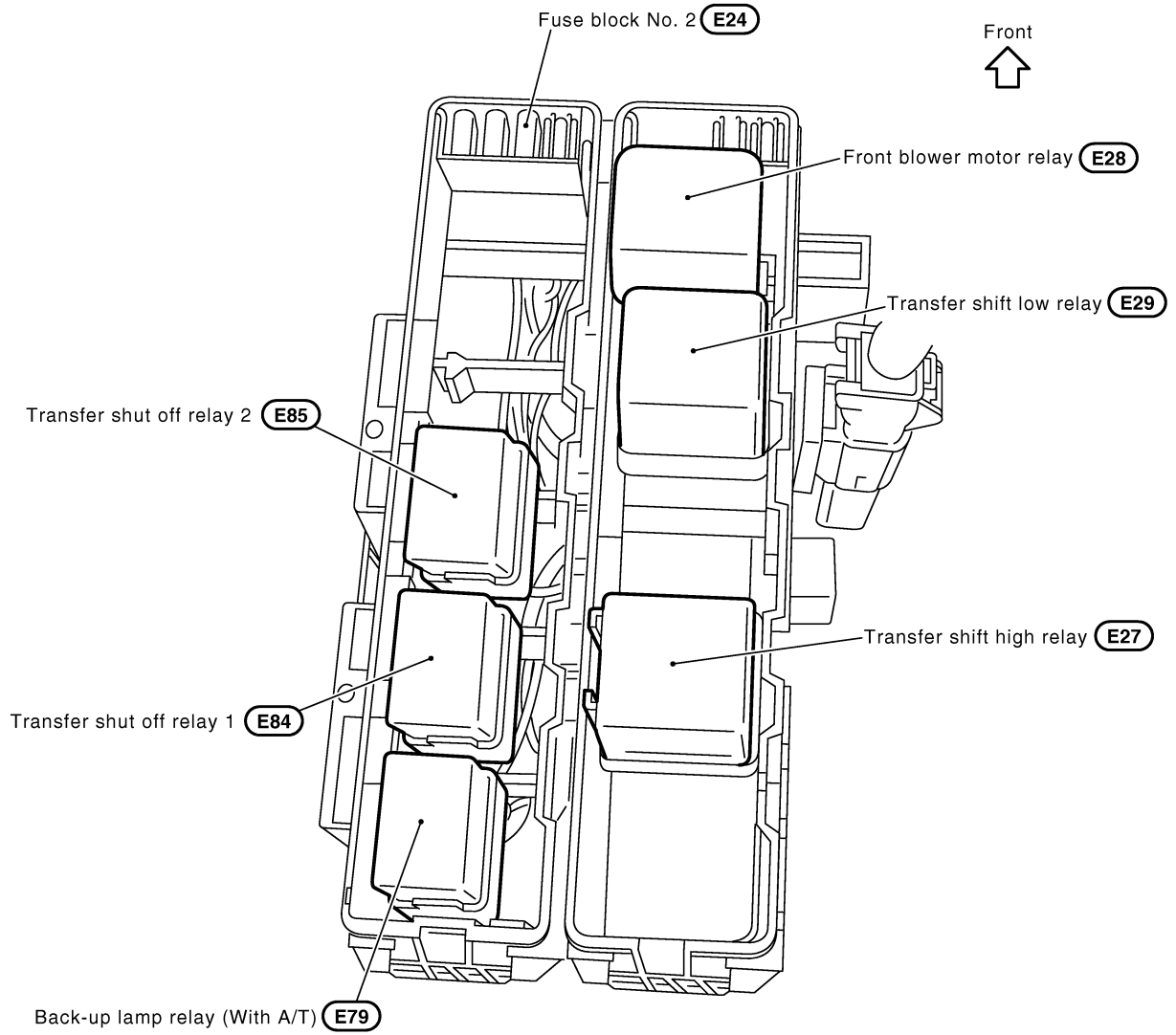
MKWA4227E

FUSE AND RELAY BOX

FUSE AND RELAY BOX Terminal Arrangement

PFP:24012

GKS000D0



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FUSE AND RELAY BOX
