# SECTION PG

# POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

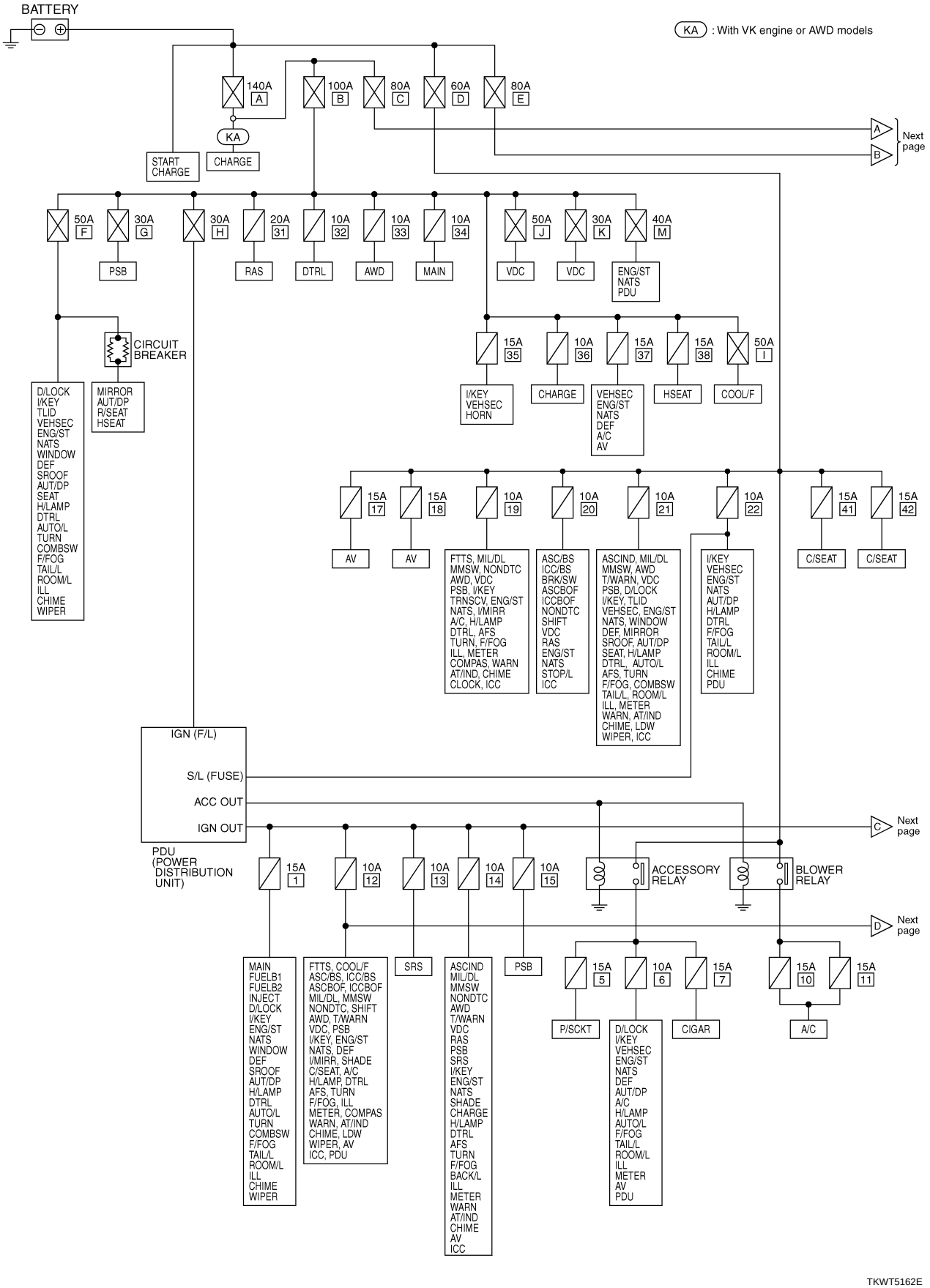
## CONTENTS

# POWER SUPPLY ROUTING CIRCUIT

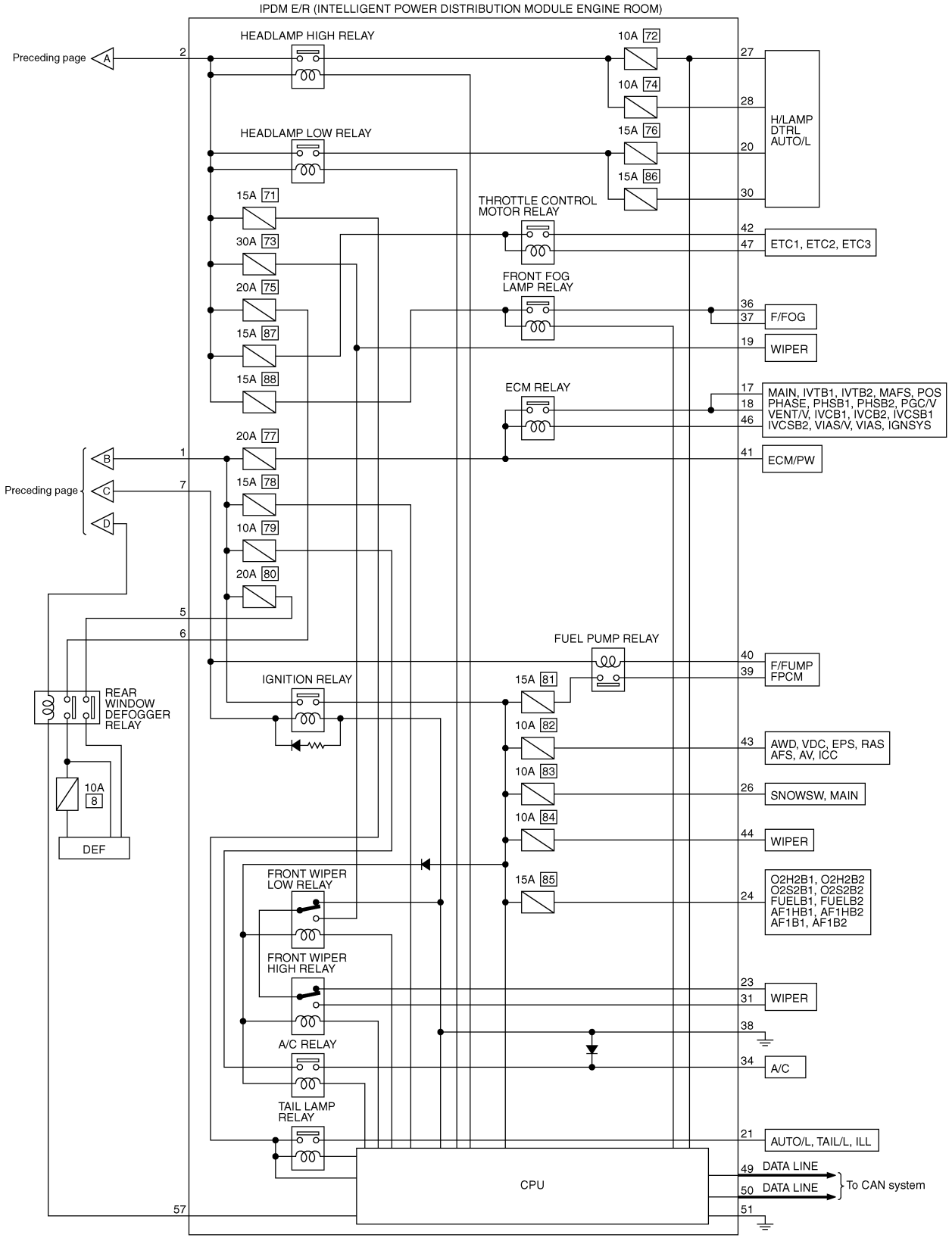
PFP:24110

## Schematic

NKS004DX




TKWT5162E

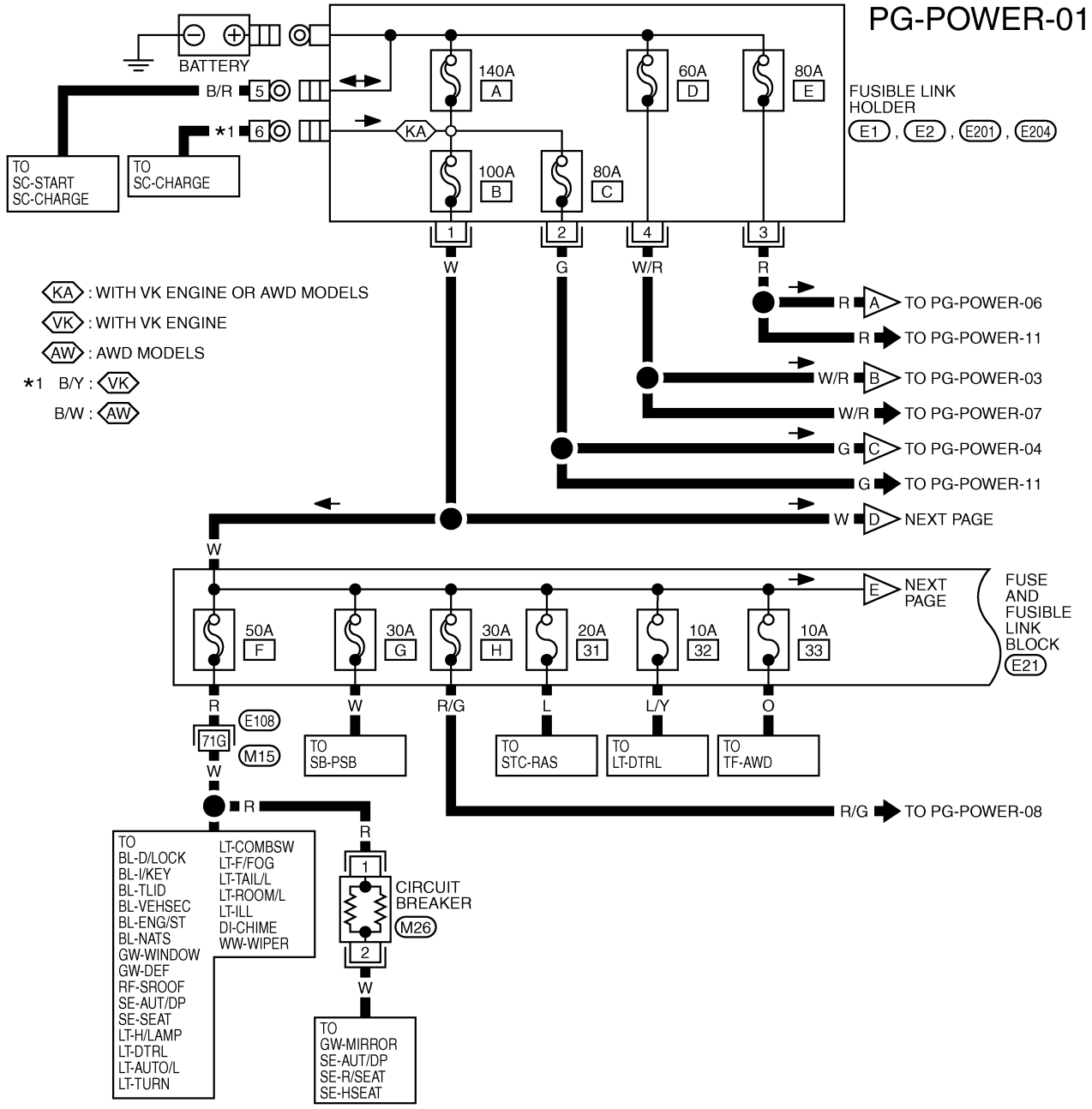

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Preceding page
A
B
C
D
HEADLAMP HIGH RELAY
HEADLAMP LOW RELAY
THROTTLE CONTROL MOTOR RELAY
FRONT FOG LAMP RELAY
ECM RELAY
FUEL PUMP RELAY
IGNITION RELAY
REAR WINDOW DEFOGGER RELAY
DEF
FRONT WIPER LOW RELAY
FRONT WIPER HIGH RELAY
A/C RELAY
TAIL LAMP RELAY
CPU
10A 72
10A 74
15A 76
15A 86
15A 71
30A 73
20A 75
15A 87
15A 88
20A 77
15A 78
10A 79
20A 80
15A 81
10A 82
10A 83
10A 84
15A 85
10A 8
H/LAMP DTRL AUTO/L
ETC1, ETC2, ETC3
F/FOG
WIPER
MAIN, IVTB1, IVTB2, MAFS, POS PHASE, PHSB1, PHSB2, PGC/V VENT/V, IVCB1, IVCB2, IVCSB1 IVCSB2, VIAS/V, VIAS, IGNSYS
ECM/PW
F/FUMP FPCM
AWD, VDC, EPS, RAS AFS, AV, ICC
SNOWSW, MAIN
WIPER
O2H2B1, O2H2B2 O2S2B1, O2S2B2 FUELB1, FUELB2 AF1HB1, AF1HB2 AF1B1, AF1B2
WIPER
A/C
AUTO/L, TAIL/L, ILL
DATA LINE
DATA LINE
To CAN system
2
1
7
5
6
57
27
28
20
30
42
47
36
37
19
17
18
46
41
40
39
43
26
44
24
23
31
38
34
21
49
50
51

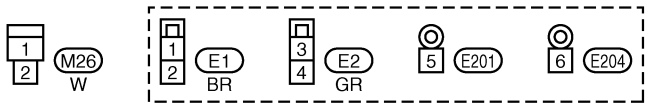
TKWT3565E

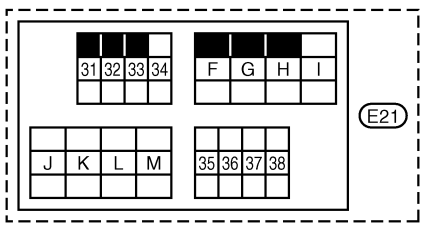
## Wiring Diagram — POWER —

NKS004DY

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

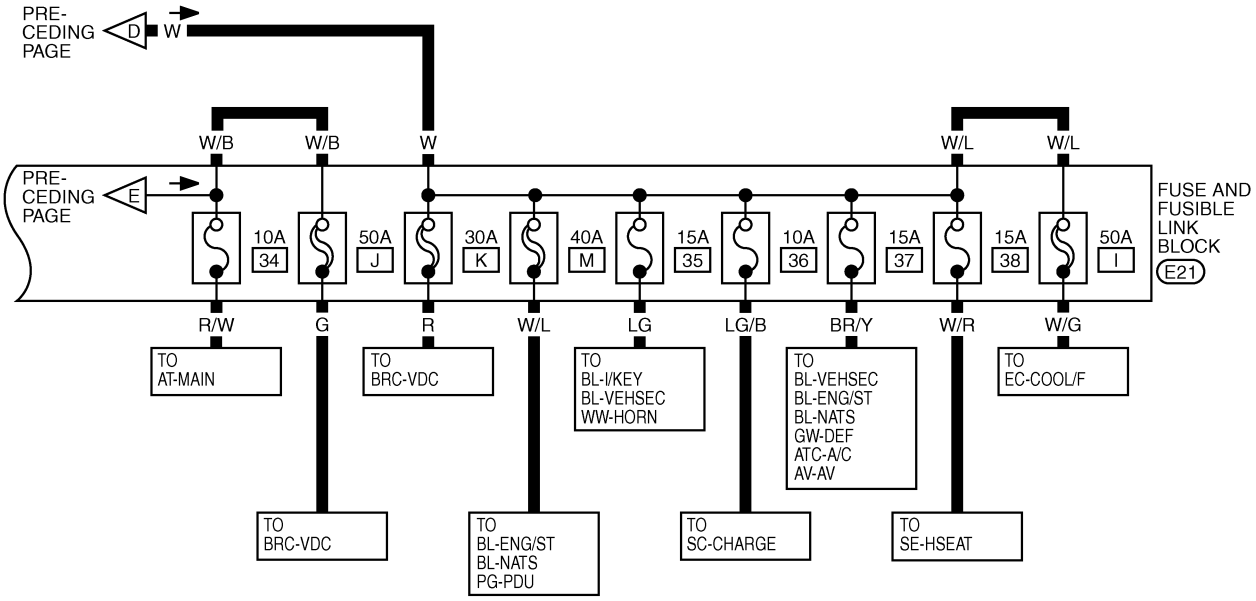


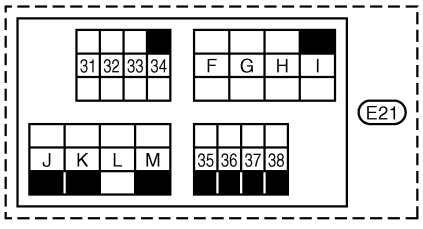




REFER TO THE FOLLOWING.
E108 -SUPER MULTIPLE JUNCTION (SMJ)

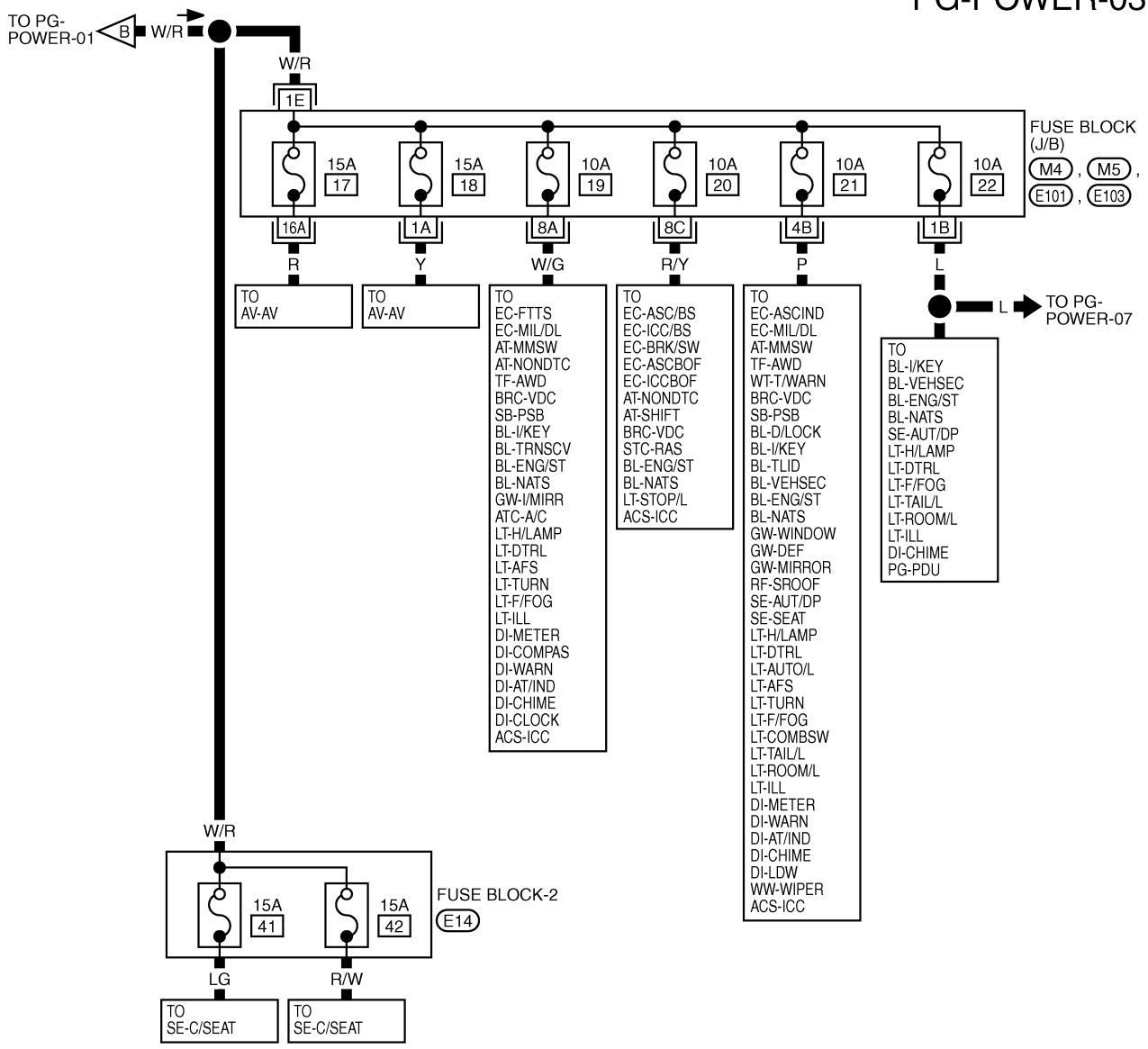
TKWT5163E

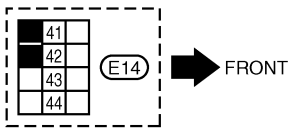

PRE-
CEDING
PAGE
D
W
W/B
W/B
W
W/L
W/L
PRE-
CEDING
PAGE
E
10A
34
50A
J
30A
K
40A
M
15A
35
10A
36
15A
37
15A
38
50A
I
FUSE AND
FUSIBLE
LINK
BLOCK
E21
R/W
G
R
W/L
LG
LG/B
BR/Y
W/R
W/G
TO
AT-MAIN
TO
BRC-VDC
TO
BL-I/KEY
BL-VEHSEC
WW-HORN
TO
BL-VEHSEC
BL-ENG/ST
BL-NATS
GW-DEF
ATC-A/C
AV-AV
TO
EC-COOL/F
TO
BRC-VDC
TO
BL-ENG/ST
BL-NATS
PG-PDU
TO
SC-CHARGE
TO
SE-HSEAT


31
32
33
34
F
G
H
I
E21
J
K
L
M
35
36
37
38

TKWT3567E

PG-POWER-03




REFER TO THE FOLLOWING.

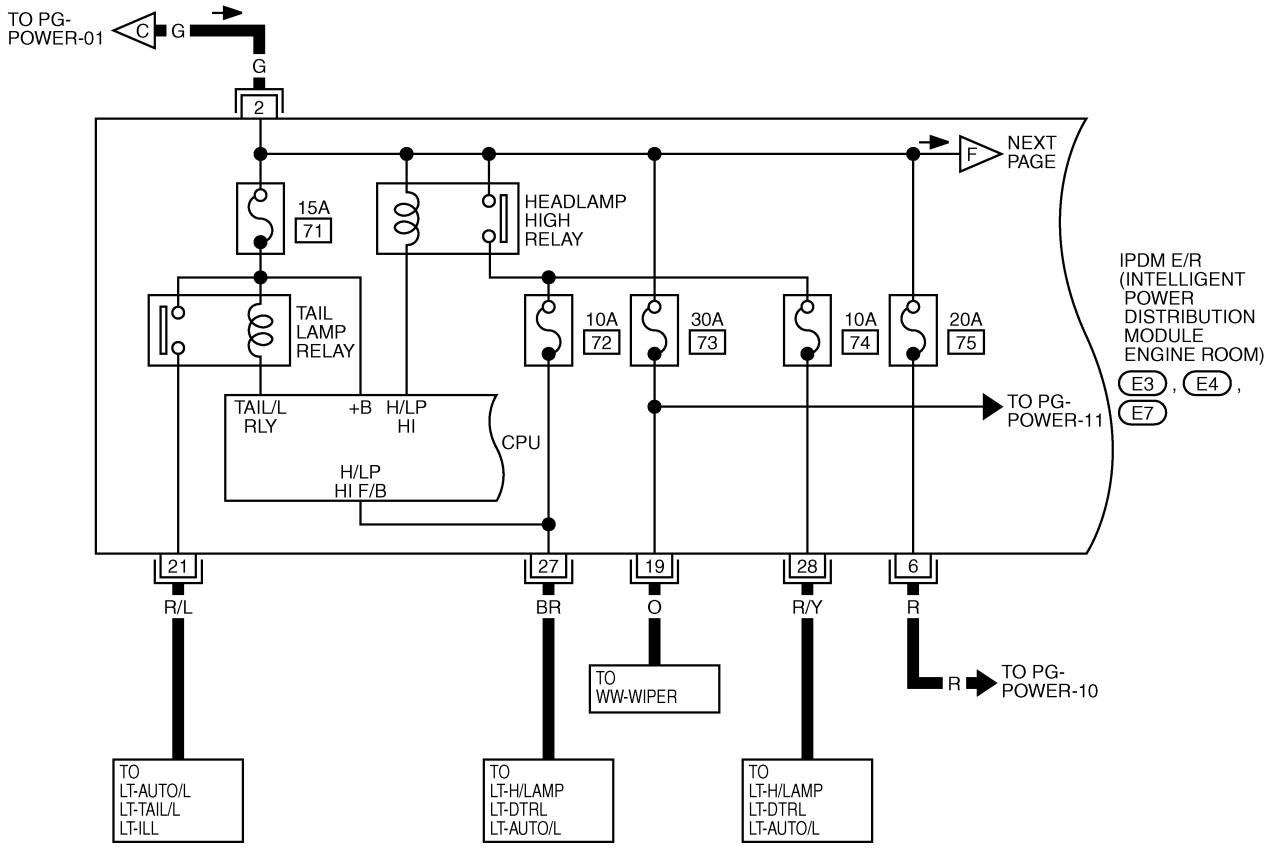
M4, M5, E101, E103

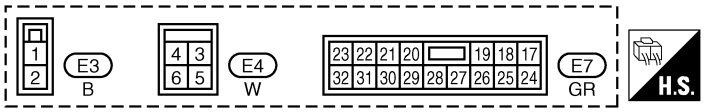
-FUSE BLOCK-JUNCTION BOX (J/B)

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

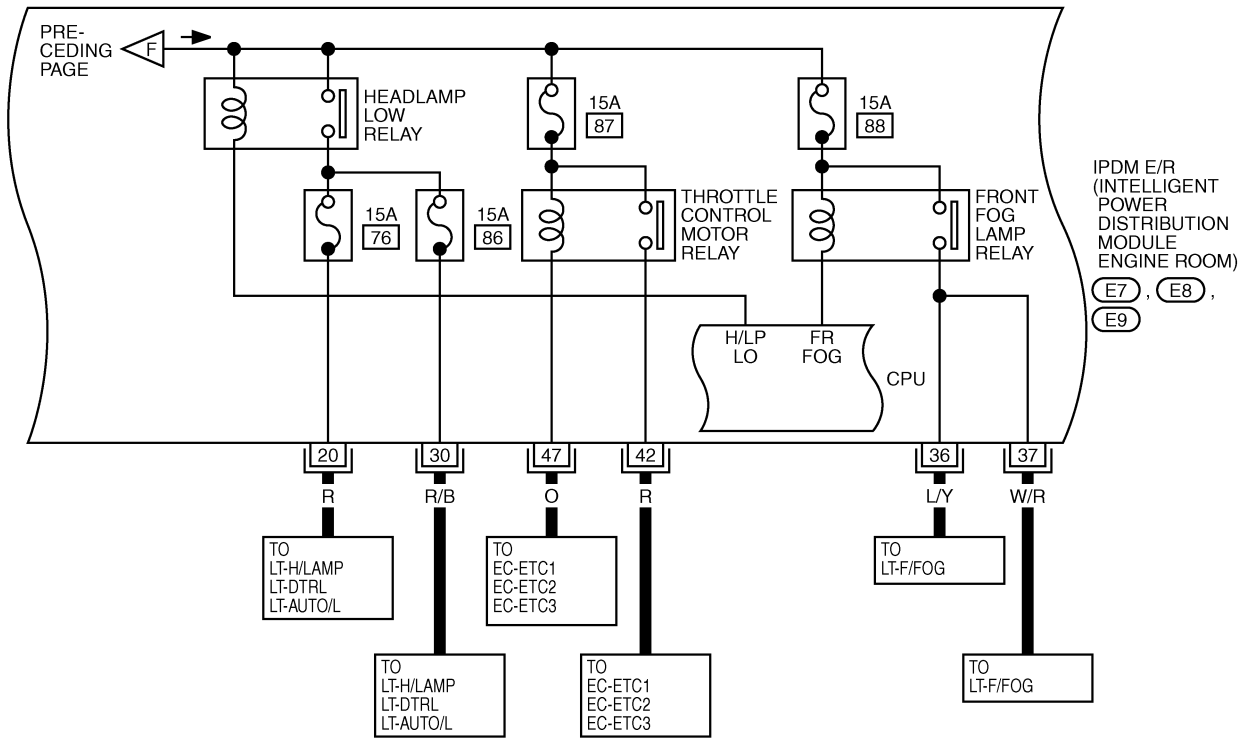
TKWT5164E

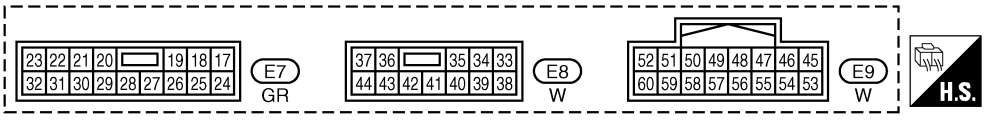
PG-POWER-04



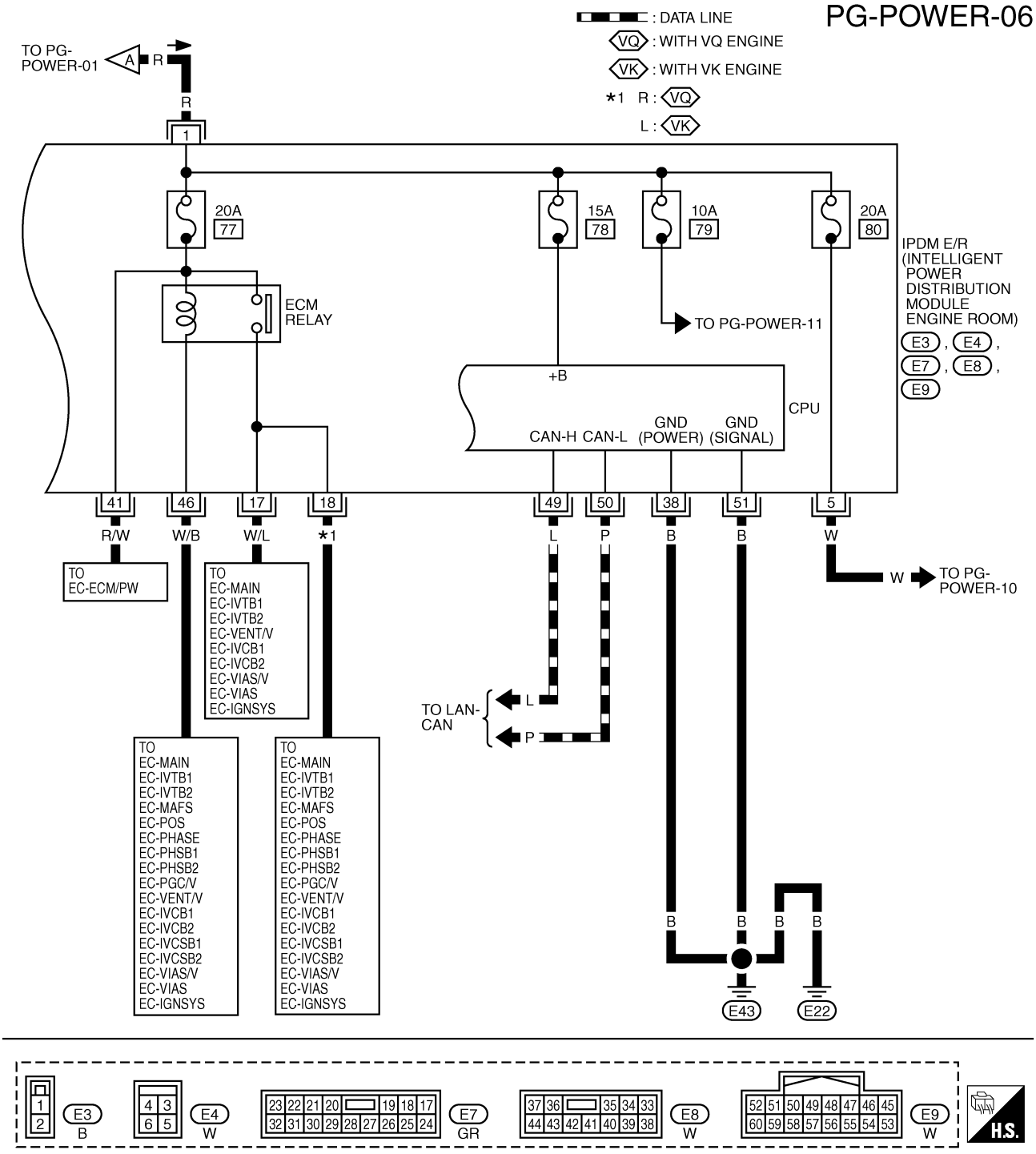




TKWT3569E


PRE-
CEDING
PAGE
F
HEADLAMP
LOW
RELAY
15A
87
15A
88
15A
76
15A
86
THROTTLE
CONTROL
MOTOR
RELAY
FRONT
FOG
LAMP
RELAY
IPDM E/R
(INTELLIGENT
POWER
DISTRIBUTION
MODULE
ENGINE ROOM)
E7
E8
E9
H/LP
LO
FR
FOG
CPU
20
30
47
42
36
37
R
R/B
O
R
L/Y
W/R
TO
LT-H/LAMP
LT-DTRL
LT-AUTO/L
TO
EC-ETC1
EC-ETC2
EC-ETC3
TO
LT-F/FOG
TO
LT-H/LAMP
LT-DTRL
LT-AUTO/L
TO
EC-ETC1
EC-ETC2
EC-ETC3
TO
LT-F/FOG


23 22 21 20 19 18 17
32 31 30 29 28 27 26 25 24
E7
GR
37 36 35 34 33
44 43 42 41 40 39 38
E8
W
52 51 50 49 48 47 46 45
60 59 58 57 56 55 54 53
E9
W
H.S.

TKWT3570E

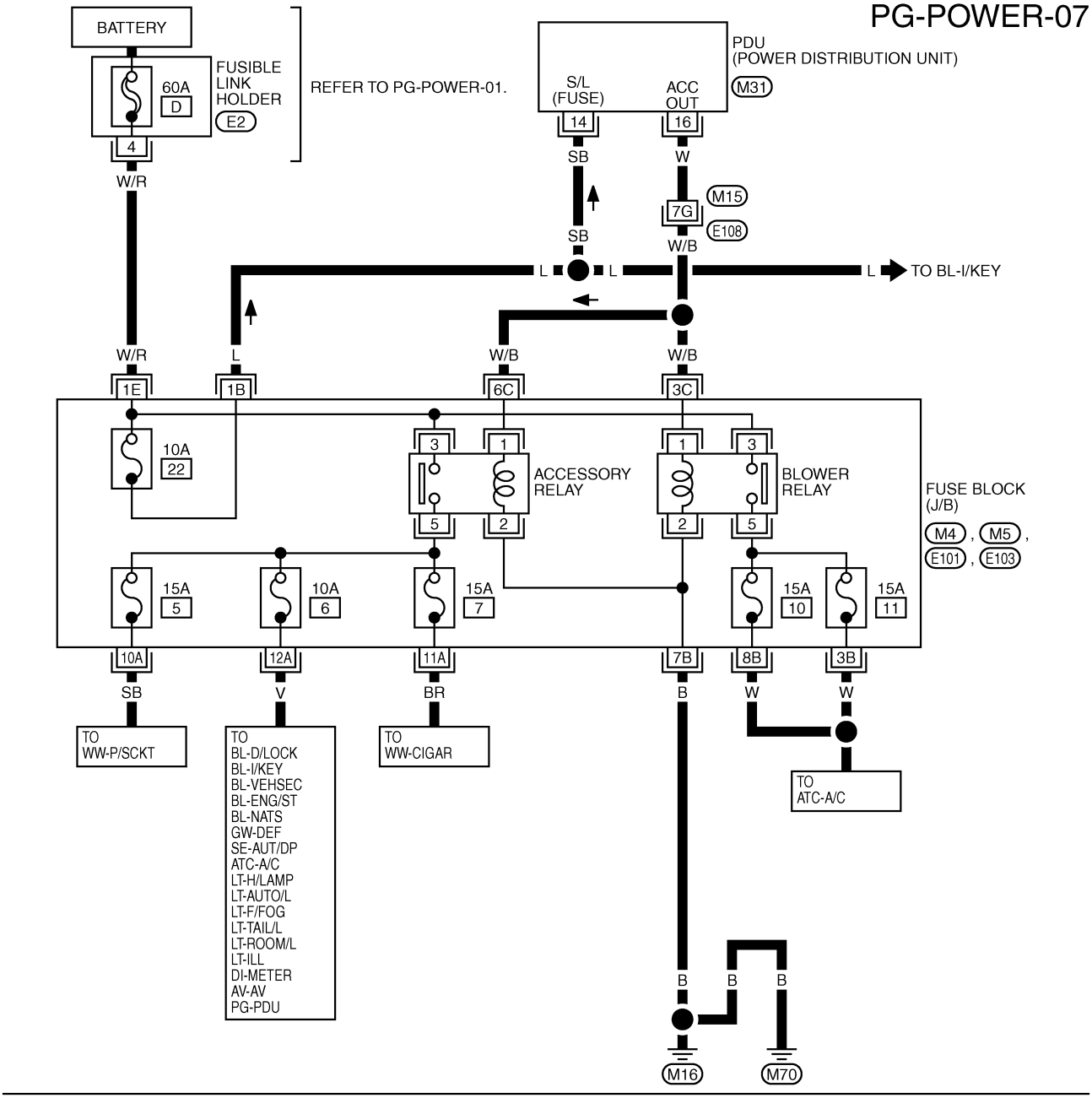

PG-POWER-06
: DATA LINE
VQ : WITH VQ ENGINE
VK : WITH VK ENGINE
*1 R : VQ
L : VK
TO PG-POWER-01
A
R
1
20A 77
15A 78
10A 79
20A 80
ECM RELAY
TO PG-POWER-11
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E3, E4, E7, E8, E9
+B
CPU
CAN-H CAN-L
GND (POWER)
GND (SIGNAL)
41 46 17 18 49 50 38 51 5
R/W W/B W/L *1 L P B B W
TO EC-ECM/PW
TO EC-MAIN EC-IVTB1 EC-IVTB2 EC-VENT/V EC-IVCB1 EC-IVCB2 EC-VIAS/V EC-VIAS EC-IGNSYS
TO LAN-CAN
L
P
W
TO PG-POWER-10
TO EC-MAIN EC-IVTB1 EC-IVTB2 EC-MAFS EC-POS EC-PHASE EC-PHSB1 EC-PHSB2 EC-PGC/V EC-VENT/V EC-IVCB1 EC-IVCB2 EC-IVCSB1 EC-IVCSB2 EC-VIAS/V EC-VIAS EC-IGNSYS
TO EC-MAIN EC-IVTB1 EC-IVTB2 EC-MAFS EC-POS EC-PHASE EC-PHSB1 EC-PHSB2 EC-PGC/V EC-VENT/V EC-IVCB1 EC-IVCB2 EC-IVCSB1 EC-IVCSB2 EC-VIAS/V EC-VIAS EC-IGNSYS
B B B B
E43
E22

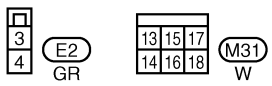

E3 B
E4 W
E7 GR
E8 W
E9 W
H.S.

TKWT5165E

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

PG-POWER-07




REFER TO THE FOLLOWING.

E108 -SUPER MULTIPLE JUNCTION (SMJ)

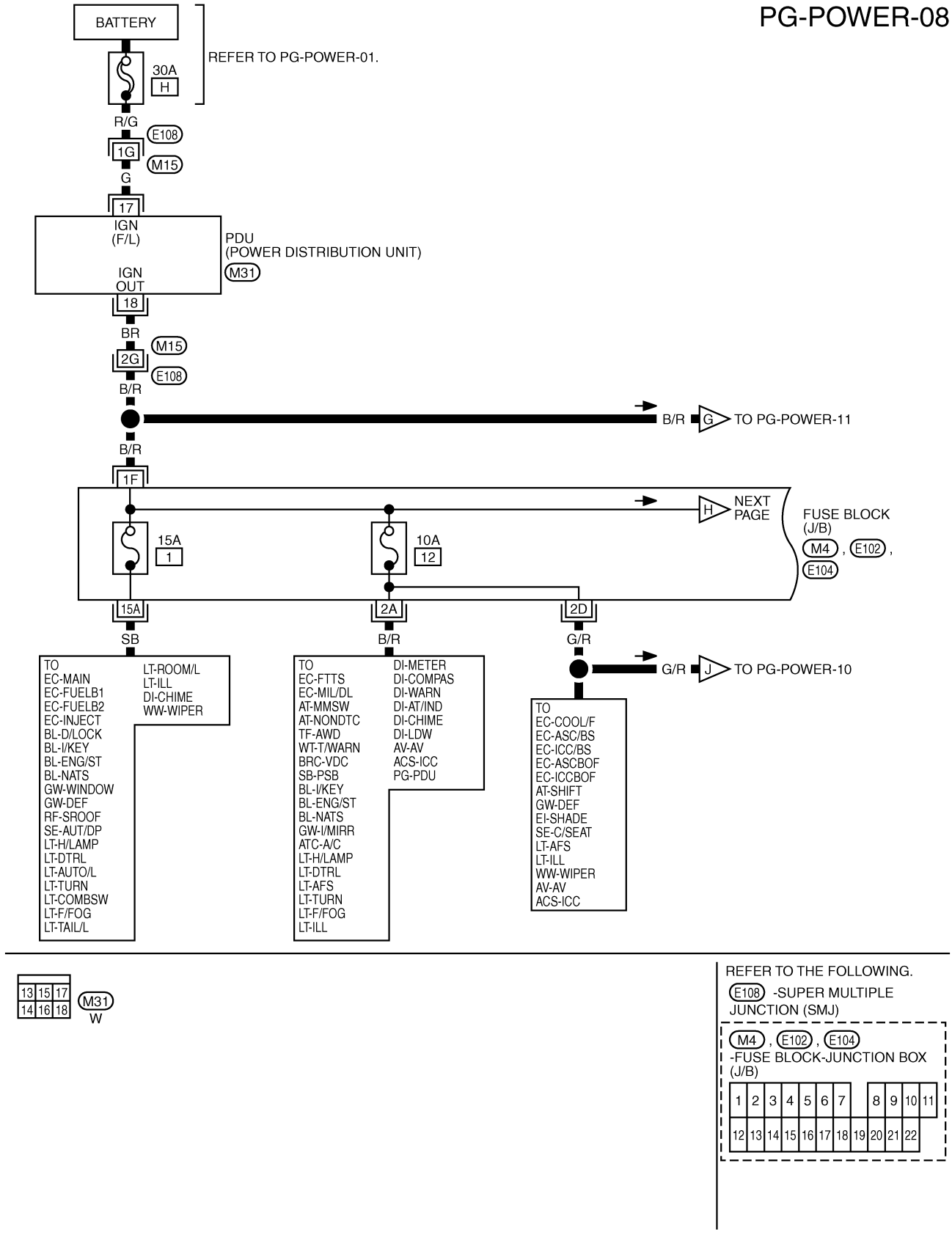
M4 , M5 , E101 , E103 -FUSE BLOCK-JUNCTION BOX (J/B)

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

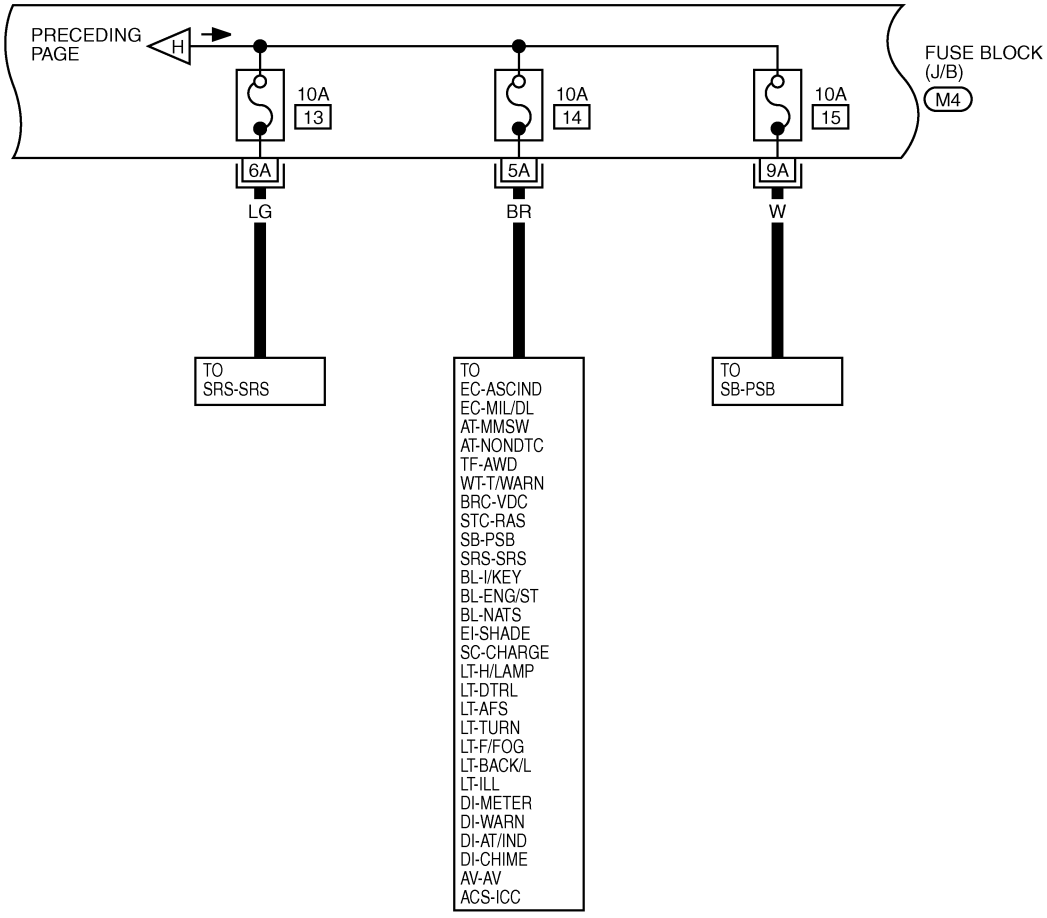
TKWT3572E

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

PG-POWER-08




TKWT3573E



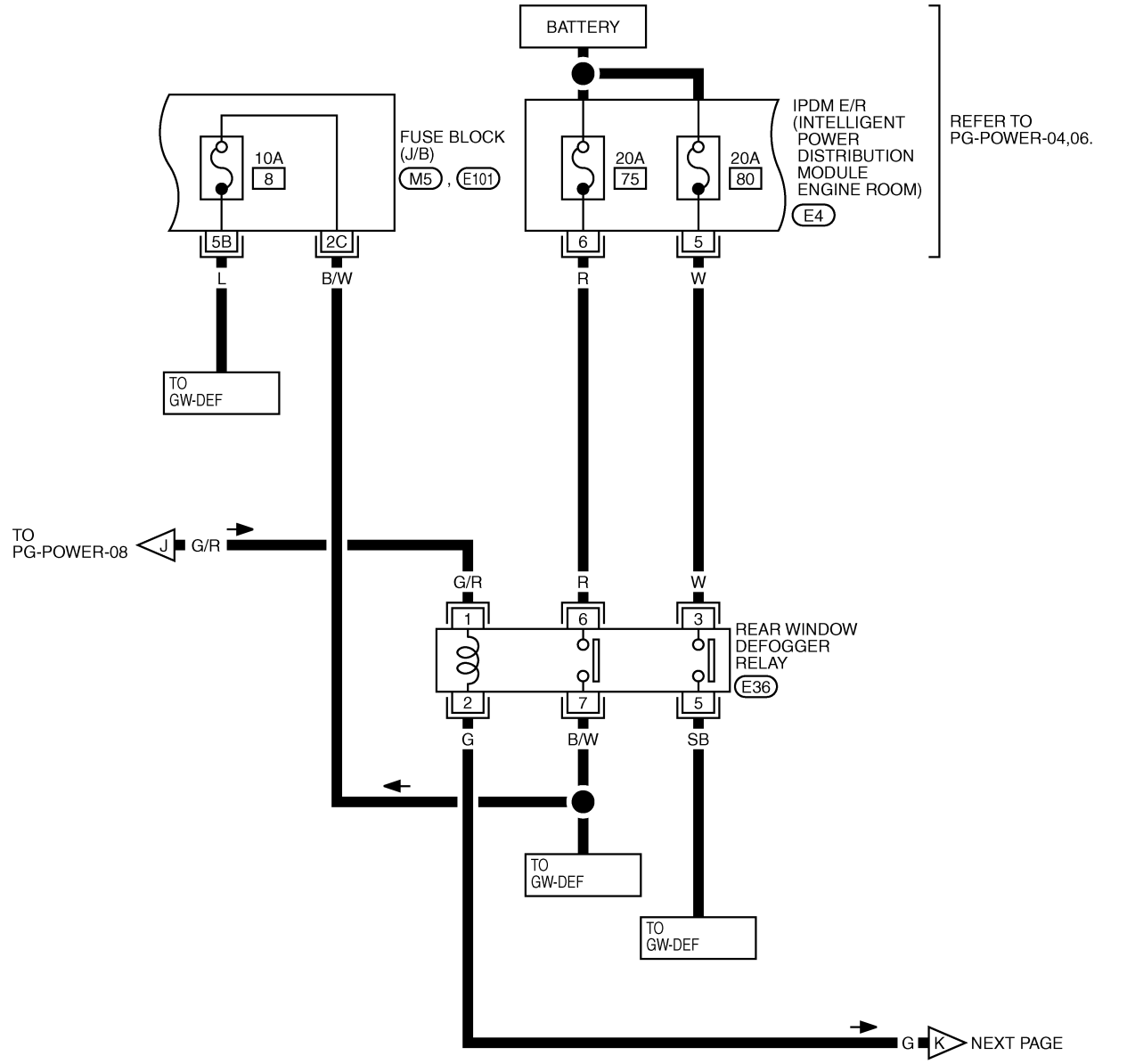

REFER TO THE FOLLOWING.

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

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

TKWT3574E

PG-POWER-10





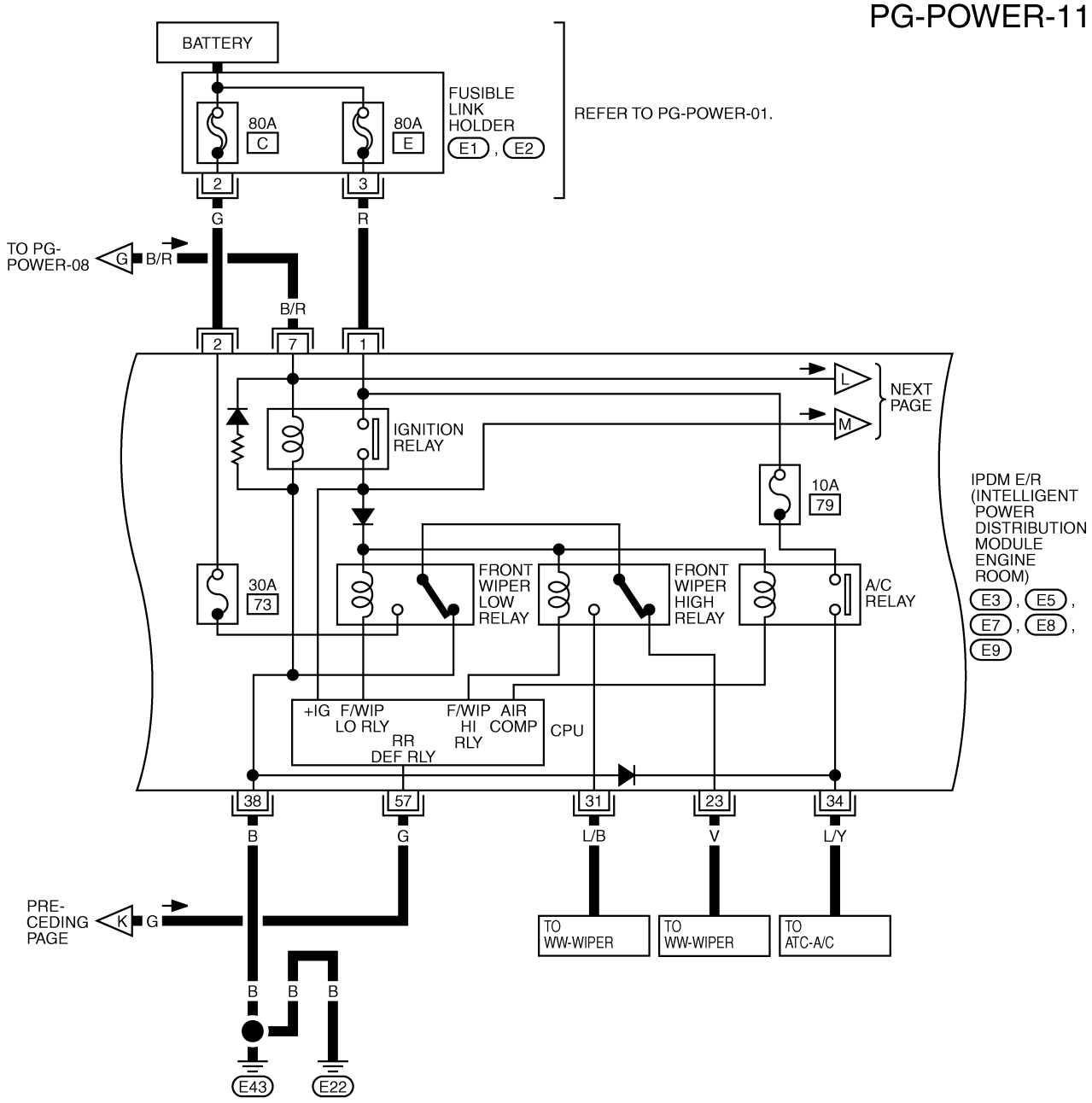
REFER TO THE FOLLOWING.

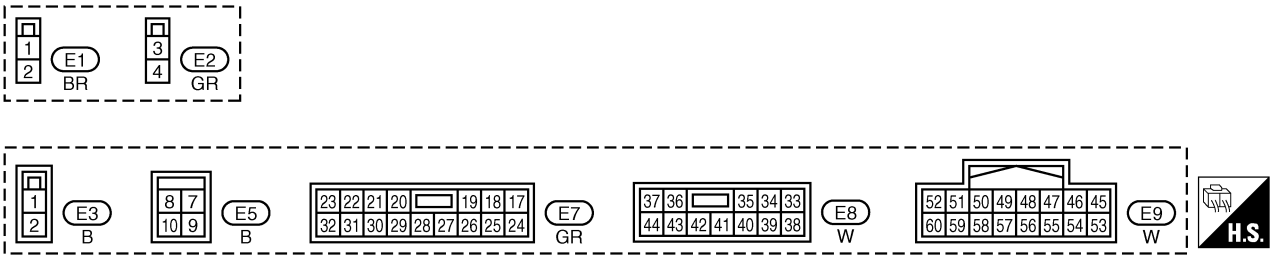
M5 , E101 -FUSE BLOCK-JUNCTION BOX (J/B)

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

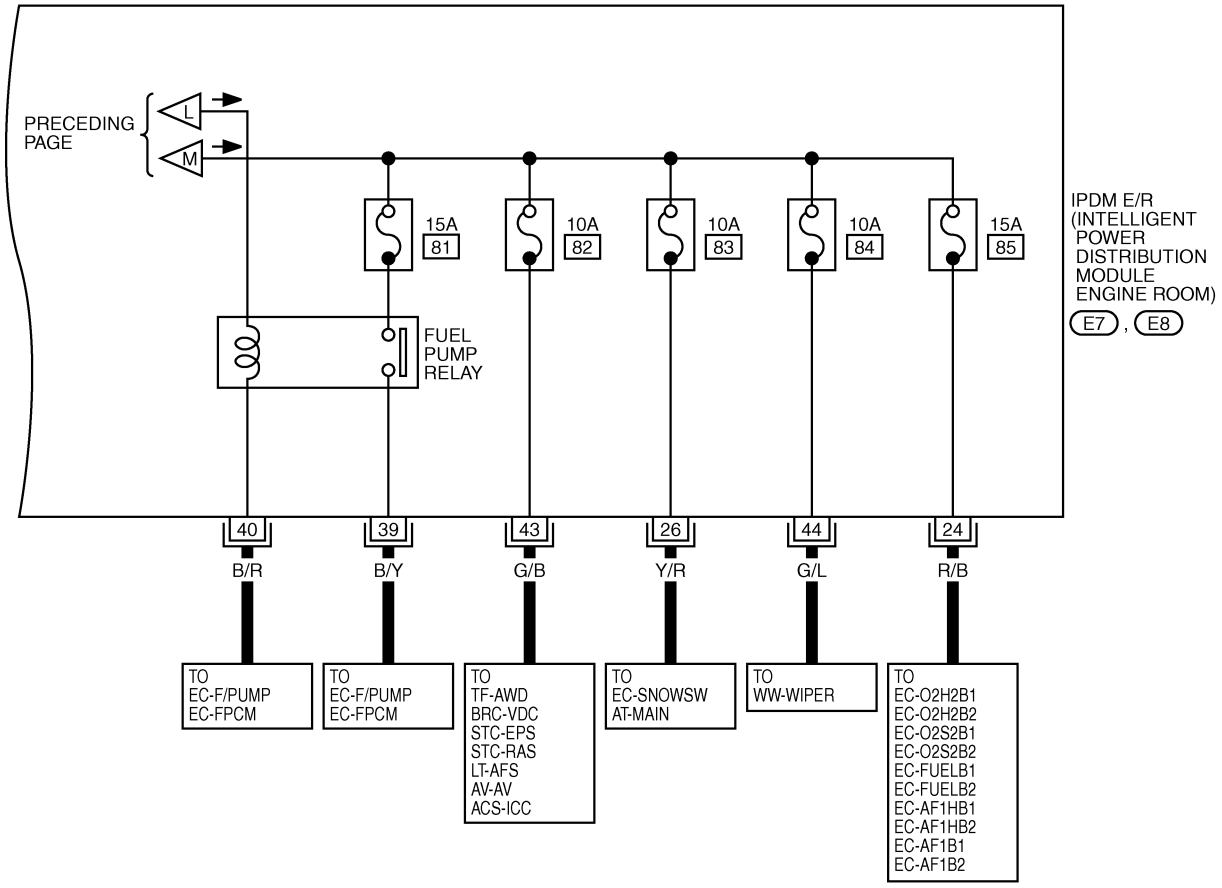
TKWT3575E

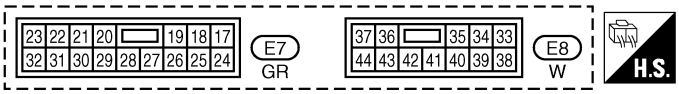
PG-POWER-11




TKWT3576E


PRECEDING PAGE
L
M
15A 81
10A 82
10A 83
10A 84
15A 85
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E7 , E8
FUEL PUMP RELAY
40
39
43
26
44
24
B/R
B/Y
G/B
Y/R
G/L
R/B
TO EC-F/PUMP EC-FPCM
TO EC-F/PUMP EC-FPCM
TO TF-AWD BRC-VDC STC-EPS STC-RAS LT-AFS AV-AV ACS-ICC
TO EC-SNOWSW AT-MAIN
TO WW-WIPER
TO EC-O2H2B1 EC-O2H2B2 EC-O2S2B1 EC-O2S2B2 EC-FUELB1 EC-FUELB2 EC-AF1HB1 EC-AF1HB2 EC-AF1B1 EC-AF1B2

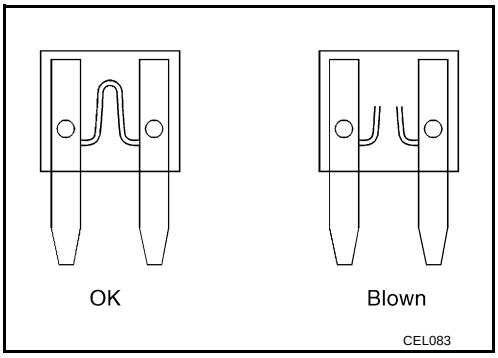

23 22 21 20 19 18 17
32 31 30 29 28 27 26 25 24
E7
GR
37 36 35 34 33
44 43 42 41 40 39 38
E8
W
H.S.

TKWT3577E

## Fuse

NKS004DZ

- 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.



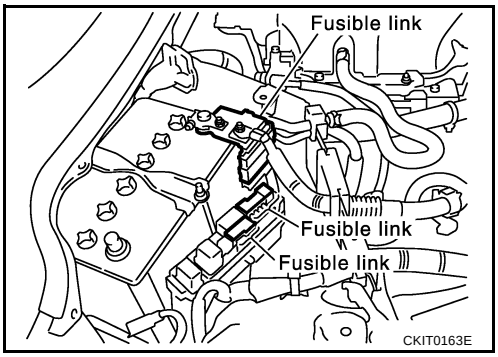

## Fusible Link

NKS004E0

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:**

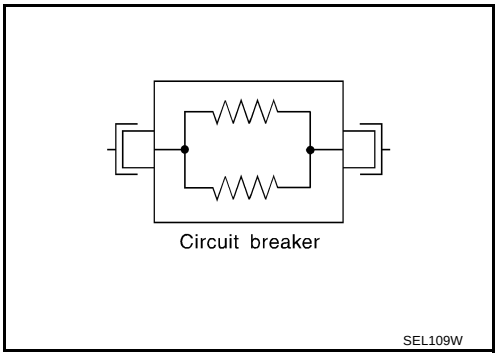
- **If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of malfunction.**
- **Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any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




## Circuit Breaker

NKS004E1

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



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

PFP:284B7

## System Description

NKS004E2

- 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 and oil pressure 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, it receives signal from BCM and controls the following lamps:
   - Headlamps (HI, LO)
   - Tail, parking and license plate lamps
   - Front fog lamps
2. Daytime light relay control (for Canada models)
   Using CAN communication, it receives signals from BCM and controls the daytime light relay.
3. Wiper control
   Using CAN communication, it receives signals from BCM and controls the front wipers.
4. Rear window defogger relay control
   Using CAN communication, it receives signals from BCM and controls the rear window defogger relay.
5. A/C compressor control
   Using CAN communication, it receives signals from ECM and controls the A/C relay.
6. Cooling fan control
   Using CAN communication, it receives signals from ECM and controls cooling fan via cooling fan control module.
7. Horn control
   Using CAN communication, it receives signals from BCM and controls horn relay.
8. Starter motor relay control
   Using CAN communication, it receives signals from BCM and controls starter motor relay.
9. Alternator control
   Using CAN communication, it receives signal from ECM and controls power generation voltage.

### 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 |
|---|---|
| Headlamps | ● With the ignition switch ON, the headlamp low relay is ON.<br>● With the ignition switch OFF, the headlamp low relay is OFF. |
| Tail, parking and license plate lamps | ● With the ignition switch ON, the tail lamp relay is ON.<br>● With the ignition switch OFF, the tail lamp relay is OFF. |
| Cooling fan | ● With the ignition switch ON, the cooling fan HI operates.<br>● 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. |

| Controlled system | Fail-safe mode |
|---|---|
| Rear window defogger | Rear window defogger relay OFF |
| A/C compressor | A/C relay OFF |
| Front fog lamps | Front fog lamp relay OFF |

### IPDM E/R STATUS CONTROL

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

1. CAN communication status
   - CAN communication is normally performed with other control units.
   - Individual unit control by IPDM E/R is normally performed.
   - When sleep request signal is received from BCM, mode is switched to sleep transient status.
2. Sleep transient 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

NKS004E3

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

NKS004E4

Refer to LAN-50, "CAN System Specification Chart" .

## Function of Detecting Ignition Relay Malfunction

NKS004E5

- 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.

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

NKS004E6

CONSULT-II can display each diagnostic item using the diagnostic test modes 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 BASIC OPERATION

Refer to GI-38, "CONSULT-II Start Procedure" .

### SELF-DIAG RESULTS

#### Operation Procedure

1. Touch “SELF-DIAG RESULTS” on “SELECT DIAG MODE” screen.
2. 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 | ● If CAN communication reception/transmission data has a malfunction, or if any of the control units malfunction, data reception/transmission cannot be confirmed.<br>● When the data in CAN communication is not received before the specified time | × | × | Any of or several items below have errors.<br>● TRANSMIT DIAG<br>● ECM<br>● 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.

## 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 | Monitor item selection | | | Description |
|---|---|---|---|---|---|---|
| | | | ALL SIGNALS | MAIN SIGNALS | SELECTION FROM MENU | |
| Motor fan request | MOTOR FAN REQ | 1/2/3/4 | × | × | × | Signal status input from ECM |
| A/C Compressor request | AC COMP REQ | ON/OFF | × | × | × | Signal status input from ECM |
| Tail & clearance request | TAIL&CLR REQ | ON/OFF | × | × | × | Signal status input from BCM |
| Headlamp LO request | HL LO REQ | ON/OFF | × | × | × | Signal status input from BCM |
| Headlamp HI request | HL HI REQ | ON/OFF | × | × | × | Signal status input from BCM |
| Front fog lamp request | FR FOG REQ | ON/OFF | × | × | × | Signal status input from BCM |
| Front wiper request | FR WIP REQ | STOP/1LOW/ LOW/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 | ON/OFF | × | | × | Signal status input from BCM |
| 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 |
| Daytime running light request | DTRL REQ*1 | ON/OFF | × | | × | Signal status input from BCM |
| Hood switch | HOOD SW | ON/OFF | × | | × | Signal status input in IPDM E/R |
| 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 |

**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: Only the vehicle with day time light system operates.

## CAN DIAG SUPPORT MNTR

Refer to LAN-44, "CAN Diagnostic Support Monitor" in LAN section.

## ACTIVE TEST

### Operation Procedure

1. Touch “ACTIVE TEST” on “SELECT DIAG MODE” screen.
2. Touch item to be tested.
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. |
| Horn operation | HORN | Push “ON” button, horn relay operates 20ms. |

## Auto Active Test

NKS004E7

### 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 wiper (LO, HI)
- Tail lamps, parking lamps and license plate lamps
- Front fog lamps
- Headlamps (LO, HI)
- 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).

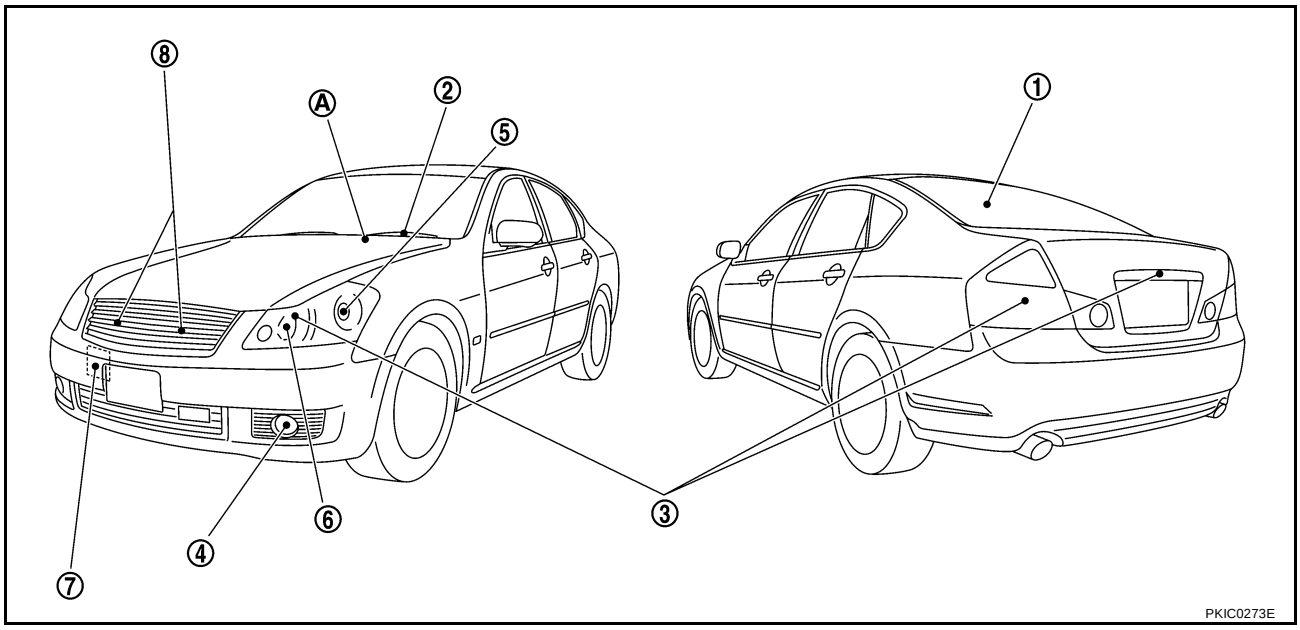
   **NOTE:**
   When auto active test is performed with hood opened, sprinkle water on windshield beforehand.
2. Turn ignition switch OFF.
3. Turn ignition switch ON, and within 20 seconds, press driver's door switch 10 times (close other doors). Then turn ignition switch OFF.
4. Turn ignition switch ON within 10 seconds after ignition switch OFF.
5. When auto active test mode is actuated, 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:**
   - **Never start the engine.**
   - **If the engine starting operation is made, delete DTC on the self-diag results of CONSULT-II. Refer to BL-79, "CONSULT-II Application Items" .**
   - **Be sure to inspect GW-50, "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.

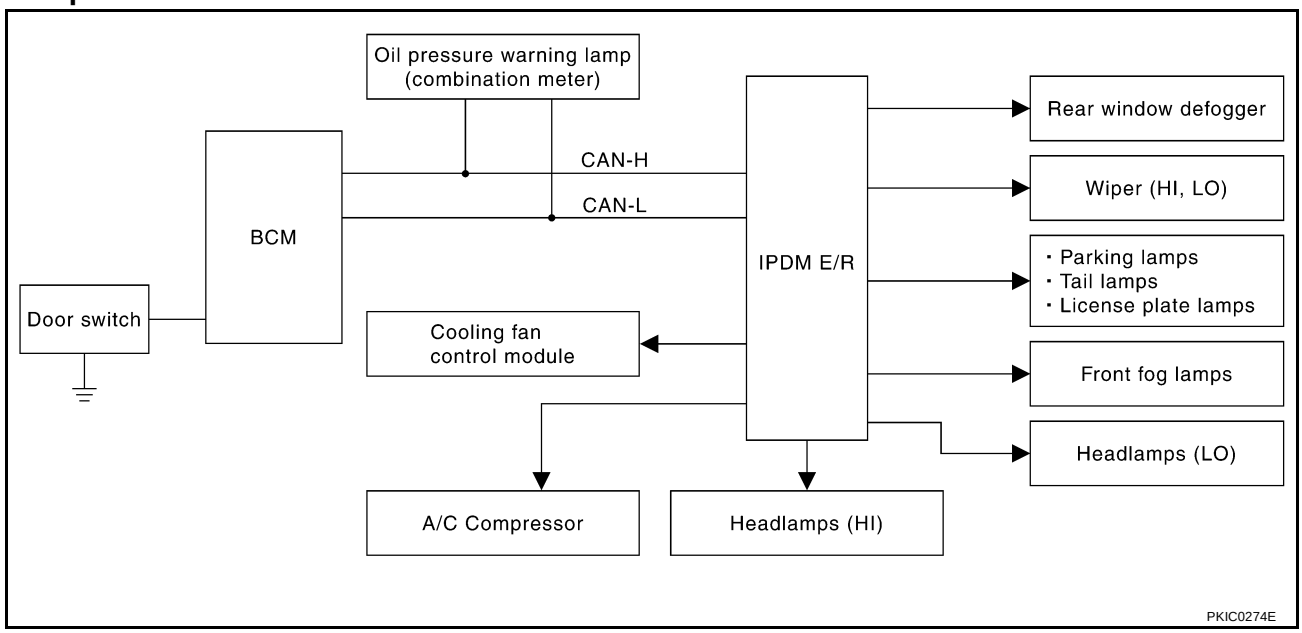



(A): Oil pressure warning lamp is blinking when the auto active test operating.

**Operation steps**

| | Test item | Operation time/ frequency |
|---|---|---|
| 1 | Rear window defogger | 10 seconds |
| 2 | Front wiper | LO 5 seconds → HI 5 seconds |
| 3 | Tail lamps, parking lamps, license plate lamps | 10 seconds |
| 4 | Front fog lamps | 10 seconds |
| 5 | Headlamp (LO) | 10 seconds |
| 6 | Headlamp (HI) | ON-OFF 5 times |
| 7 | A/C compressor (magnetic clutch) | ON-OFF 5 times |
| 8 | 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 systems controlled by IPDM E/R cannot be operated, possible cause can be easily diagnosed using auto active test.

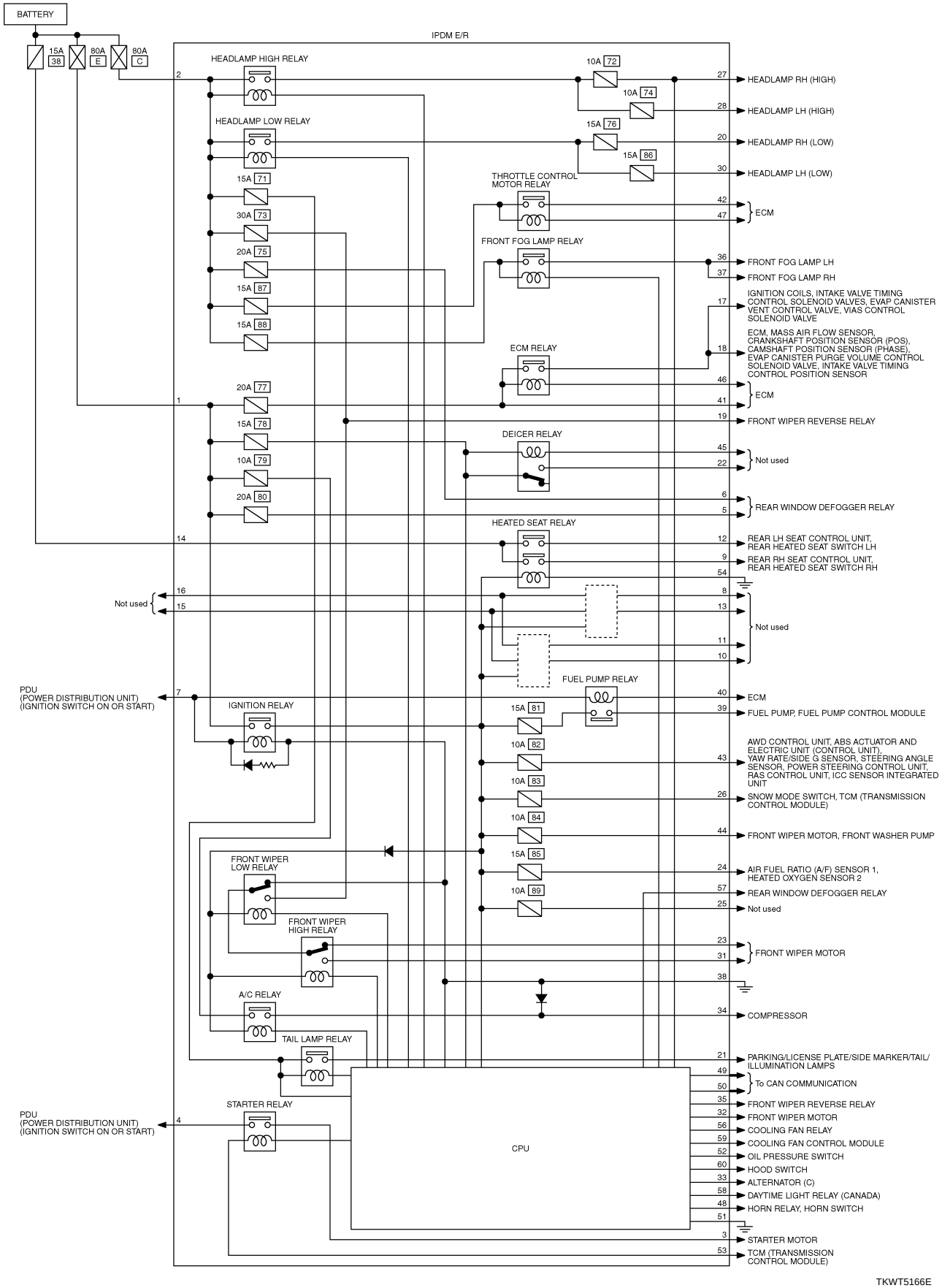
Diagnosis chart in auto active test mode

| Symptom | Inspection contents | | Possible cause |
|---|---|---|---|
| Any of front wipers, tail lamps, 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 | ● Lamp/wiper motor malfunction<br>● Lamp/wiper motor ground circuit malfunction<br>● Harness/connector malfunction between IPDM E/R and system in question<br>● 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<br>● Harness/connector malfunction between IPDM E/R and rear window defogger relay<br>● Open circuit of rear window defogger<br>● IPDM E/R malfunction |
| A/C compressor does not operate. | Perform auto active test. Does magnetic clutch operate? | YES | ● BCM signal input circuit malfunction<br>● CAN communication signal malfunction between BCM and ECM.<br>● CAN communication signal malfunction between ECM and IPDM E/R |
| | | NO | ● Magnetic clutch malfunction<br>● Harness/connector malfunction between IPDM E/R and magnetic clutch<br>● IPDM E/R (integrated relay) malfunction |

| Symptom | Inspection contents | | Possible cause |
|---|---|---|---|
| Cooling fan does not operate. | Perform auto active test. Does cooling fan operate? | YES | ● ECM signal input circuit malfunction<br>● CAN communication signal malfunction between ECM and IPDM E/R |
| | | NO | ● Cooling fan motor malfunction<br>● Harness/connector malfunction between cooling fan motor and cooling fan control module<br>● Cooling fan control module malfunction<br>● Harness/connector malfunction between IPDM E/R and cooling fan control module<br>● Cooling fan relay malfunction<br>● Harness/connector malfunction between IPDM E/R and cooling fan relay<br>● IPDM E/R 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<br>● Oil pressure switch malfunction<br>● IPDM E/R malfunction |
| | | NO | ● CAN communication signal malfunction between IPDM E/R and unified meter and A/C amp.<br>● Combination meter malfunction |

## Schematic

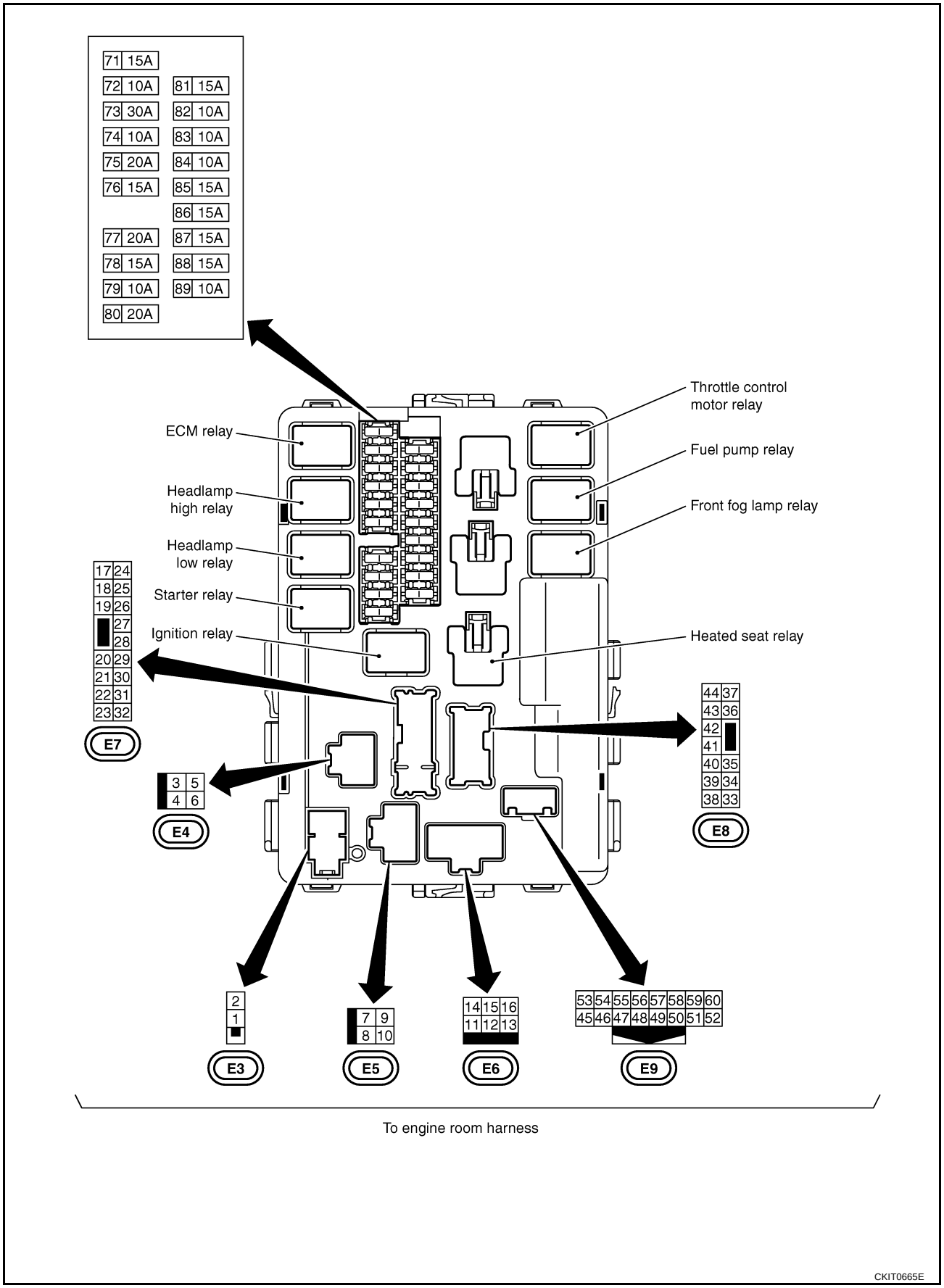
NKS004E8




TKWT5166E

## IPDM E/R Terminal Arrangement

NKS004E9



## Check IPDM E/R Power Supply and Ground Circuit

NKS004EA

### 1. CHECK FUSES AND FUSIBLE LINKS

Check for blown fuses and fusible link.

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

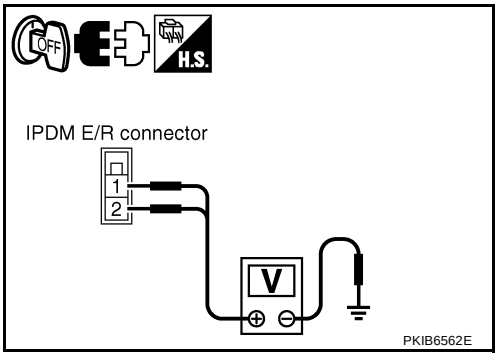
OK or NG

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.

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



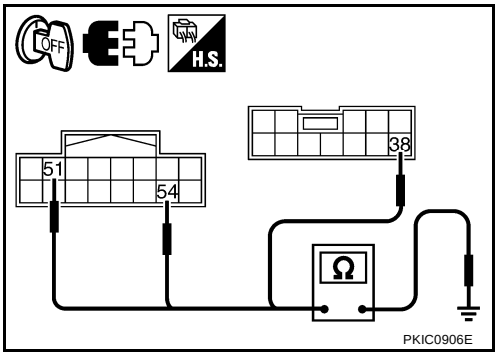

OK or NG

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 | | Continuity |
|---|---|---|---|
| E8 | 38 | Ground | |
| E9 | 51 | | Yes |
| | 54 | | |




OK or NG

OK >> INSPECTION END
NG >> Repair harness or connector.

## Inspection with CONSULT-II (Self-Diagnosis)

NKS004EB

**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.<br>FURTHER TESTING MAY BE REQUIRED. | - | - | - | No malfunction |
| CAN COMM CIRC | U1000 | × | × | Any of or several items below have errors.<br>● TRANSMIT DIAG<br>● ECM<br>● 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>>After print-out of the monitor items, refer to LAN-50, "CAN System Specification Chart" .

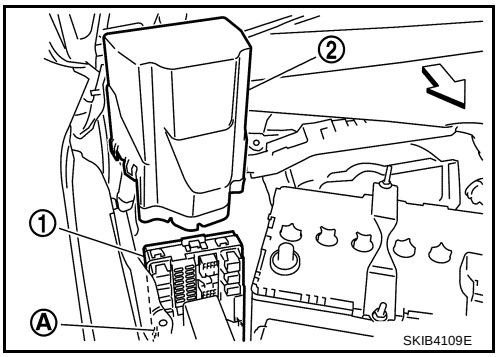
## Removal and Installation of IPDM E/R

NKS004EC

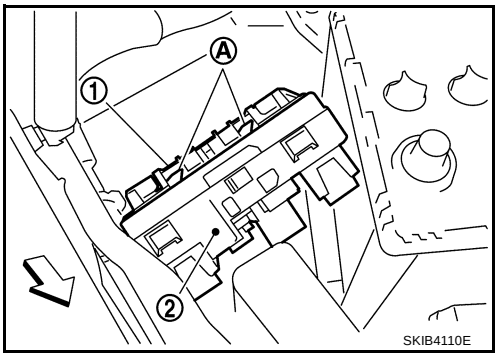
⇦: Vehicle front

### REMOVAL

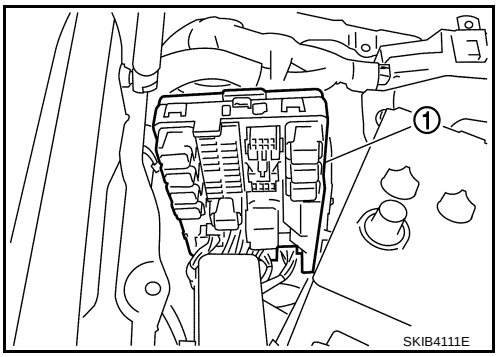
1. Remove cowl top cover (RH). Refer to EI-18, "COWL TOP" .
2. Disengage pawls (A) on both side of IPDM E/R cover B (1), remove IPDM E/R cover A (2).




3. While pushing pawl (A) on backside of IPDM E/R cover B (1) toward vehicle front to unlock, lift up IPDM E/R (2).




4. Disengage pawls on both side of IPDM E/R (1), remove IPDM E/R cover B.
5. Remove harness connector from IPDM E/R (1) and remove IPDM E/R (1).




### INSTALLATION

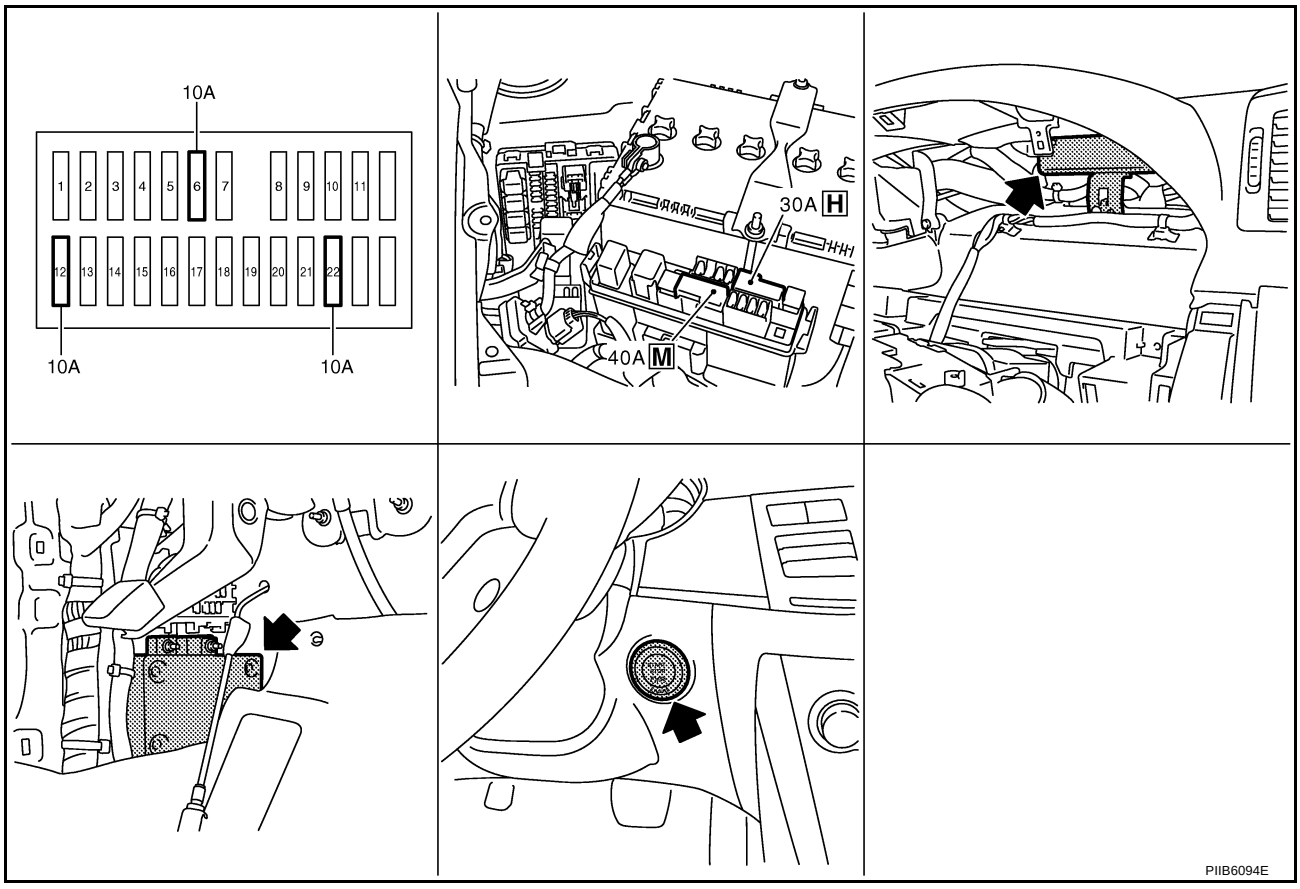
Installation is the reverse order of removal.

# PDU (POWER DISTRIBUTION UNIT)

PFP:285F1

## Component Parts and Harness Connector Location

NKS004ED




1. Fuse block (J / B) fuse layout
2. Fuse and fusible link box
3. PDU (power distribution unit) M30,M31
4. Intelligent key unit M32,M33
5. Push-button ignition switch M27

## System Description

NKS004EE

- PDU (Power Distribution Unit) is the unit that executes the power distribution with the control signal from the Intelligent Key unit, instead of the mechanical power supply mechanism by conventional key cylinder.
- The push-button ignition switch is operable when the Intelligent Key is within the detention area of the interior antenna or is inserted to the key slot.
- The push-button ignition switch operation is input to the Intelligent Key unit as a request signal. Then, the Intelligent Key unit processes the request signal and orders the PDU to switch into the appropriate power supply position.

  **NOTE:**
  The prerequisite for starting the engine varies by the state of brake pedal, A/T selector lever, and vehicle speed.
- PDU distributes power to each power supply circuit according to the request signal received.
- The power supply position can be confirmed by illumination of the indicators in the upper surroundings of the push-button ignition switch.

### PUSH-BUTTON IGNITION SWITCH OPERATING PROCEDURE

The power supply position switching operation can be performed by the following operation.

**NOTE:**

- When an Intelligent Key is within the detection area of inside antenna and when it is inserted to the key slot, it is equivalent to the operations below.
- When starting the engine, the Intelligent Key unit monitors the engine start conditions (brake pedal operating condition, A/T selector lever position, and vehicle speed).

- Unless each start condition is fulfilled, the engine will not response regardless of how many times the push-button ignition switch is pushed. At that time, illumination repeats the position in the order of LOCK → ACC → ON → LOCK.

| Power supply position | Engine start/stop condition | | Push-button ignition switch operation frequency |
|---|---|---|---|
| | Brake pedal operation condition | A/T selector lever position | |
| LOCK → ACC | Not depressed<br>(When A/T selector lever is in any position other than P or N, there will be no effect even if it is depressed.) | Any position other than P or N<br>(When the brake pedal is not depressed, there will be no effect even if the A/T selector lever is in P or N position.) | 1 |
| LOCK → ACC → ON | Not depressed<br>(When A/T selector lever is in any position other than P or N, there will be no effect even if it is depressed.) | Any position other than P or N<br>(When the brake pedal is not depressed, there will be no effect even if the A/T selector lever is in P or N position.) | 2 |
| LOCK → ACC → ON → LOCK | Not depressed<br>(When A/T selector lever is in any position other than P or N, there will be no effect even if it is depressed.) | Any position other than P or N<br>(When the brake pedal is not depressed, there will be no effect even if the A/T selector lever is in P or N position.) | 3 |
| LOCK → START<br>ACC → START<br>ON → START<br>(Engine start) | Depressed | P or N position (*1) | 1<br>[If the switch is pushed once, the engine starts from any power supply position (LOCK, ACC, and ON)] |
| Engine start condition → LOCK<br>(Engine stop) | — | P position | 1 |
| Engine start condition → ACC<br>(Engine stop) | — | Any position other than P (*2) | 1 |
| Engine stall return operation while driving | — | N position | 1 |

*1: When the A/T selector lever position is N position, the engine start condition is different according to the vehicle speed.

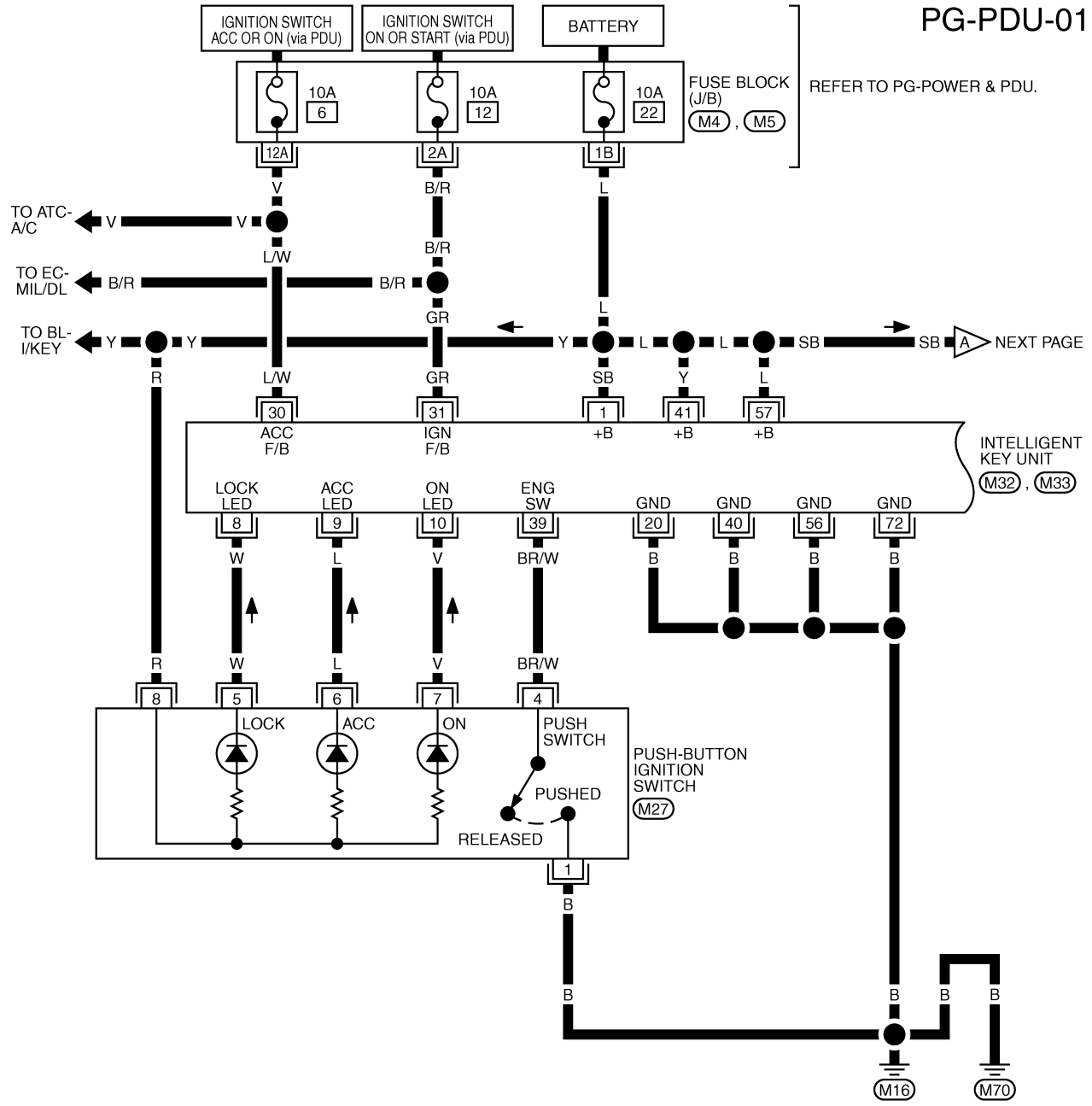
- At vehicle speed of 5 km/h or less, the engine can start only when the brake pedal is depressed.
- At vehicle speed of 5 km/h or more, the engine can start even if the brake pedal is not depressed. (It is the same as “Engine stall return operation while driving”.)

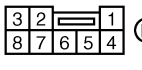
*2: When the A/T selector lever position is any position other than P position and when the vehicle speed is 5 km/h or more, the engine stop condition is different.

- Press and hold the push-button ignition switch for 2 seconds or more. (When the push-button ignition switch is pressed for too short a time, the operation may be invalid, so properly press and hold to prevent the incorrect operation.)
- Press the push-button ignition switch 3 times within 1.5 seconds. (Emergency stop operation)

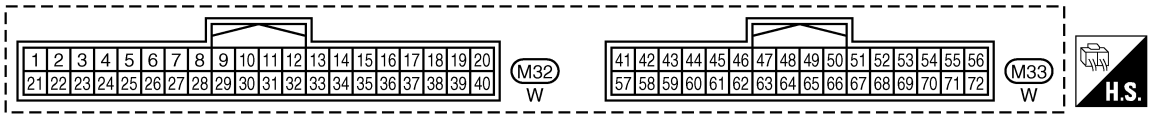
## Wiring Diagram — PDU —

NKS004EF

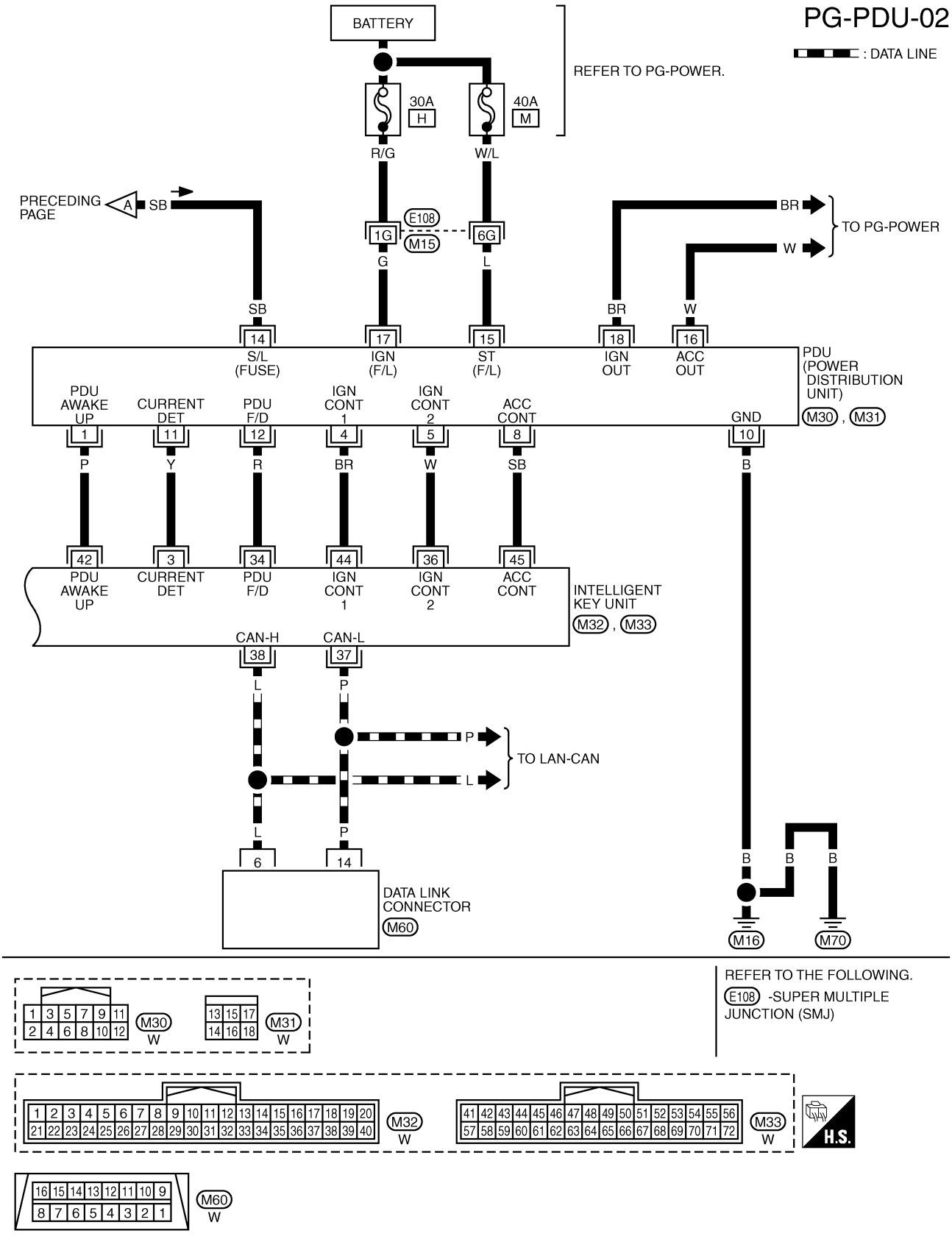



REFER TO THE FOLLOWING.
M4 , M5 -FUSE BLOCK-JUNCTION BOX (J/B)




TKWT3320E


PG-PDU-02
: DATA LINE
BATTERY
REFER TO PG-POWER.
30A H
40A M
R/G
W/L
PRECEDING PAGE
A
SB
E108
M15
1G
6G
G
L
BR
W
TO PG-POWER
SB
BR
W
14
17
15
18
16
S/L (FUSE)
IGN (F/L)
ST (F/L)
IGN OUT
ACC OUT
PDU (POWER DISTRIBUTION UNIT)
M30 , M31
PDU AWAKE UP
CURRENT DET
PDU F/D
IGN CONT 1
IGN CONT 2
ACC CONT
GND
1
11
12
4
5
8
10
P
Y
R
BR
W
SB
B
42
3
34
44
36
45
INTELLIGENT KEY UNIT
M32 , M33
CAN-H
CAN-L
38
37
L
P
TO LAN-CAN
6
14
DATA LINK CONNECTOR
M60
B
M16
M70
REFER TO THE FOLLOWING.
E108 -SUPER MULTIPLE JUNCTION (SMJ)
M30
W
M31
W
M32
W
M33
W
H.S.
M60
W

TKWT3321E

## Terminals and Reference Value for Intelligent Key Unit

NKS004EG

| Terminal | Wire Color | Item | Signal Input/ Output | Condition | | Voltage (V) Approx. |
|---|---|---|---|---|---|---|
| | | | | Ignition Switch Position | Operation or Conditions | |
| 1 | SB | Power source (Fuse) | Input | LOCK | — | Battery voltage |
| 3 | Y | IPDM E/R status signal | Output | — | Engine starting (During Cranking) | 5 |
| | | | | | Other than above | 2 |
| 8 | W | Push-button ignition switch (LOCK LED) | Input | LOCK | Push-button ignition switch is in LOCK position | 0 |
| | | | | — | Push-button ignition switch is in any position (Except LOCK position) | 1.2 |
| 9 | L | Push-button ignition switch (ACC LED) | Input | ACC | Push-button ignition switch is in ACC position | 0 |
| | | | | — | Push-button ignition switch is in any position (Except ACC position) | 1.2 |
| 10 | V | Push-button ignition switch (ON LED) | Input | ON | Push-button ignition switch is in ON position | 0 |
| | | | | — | Push-button ignition switch is in any position (Except ON position) | 1.2 |
| 20 | B | Ground | — | — | — | 0 |
| 30 | L/W | Ignition switch (ACC) | Input | ACC | — | Battery voltage |
| 31 | GR | Ignition switch (ON) | Input | ON | — | Battery voltage |
| 34 | R | PDU feedback signal | Output | LOCK | Push-button ignition switch is in LOCK state, 30 seconds after all doors closed | 1 |
| | | | | | Other than above | 0 |
| 36 | W | Ignition signal 2 | Input | LOCK | — | Battery voltage |
| | | | | ACC | — | Battery voltage |
| | | | | ON | — | 0 |
| 37 | P | CAN-L | Input/ Output | — | — | — |
| 38 | L | CAN-H | Input/ Output | — | — | — |
| 39 | BR/W | Push switch | Input | — | Depress push-button ignition switch | 0 |
| | | | | | Other than above | Battery voltage |
| 40 | B | Ground | — | — | — | 0 |
| 41 | Y | Power source (Fuse) | Input | LOCK | — | Battery voltage |
| 42 | P | PDU wake up signal | Output | LOCK | Push-button ignition switch is in LOCk state, 30 seconds after all doors closed | Battery voltage |
| | | | | | Other than above | 0 |
| 44 | BR | Ignition signal 1 | Input | LOCK | — | Battery voltage |
| | | | | ACC | — | Battery voltage |
| | | | | ON | — | 0 |
| 45 | SB | ACC signal | Input | LOCK | — | Battery voltage |
| | | | | ACC | — | 0 |
| | | | | ON | — | 0 |
| 56 | B | Ground | — | — | — | 0 |

| Terminal | Wire Color | Item | Signal Input/ Output | Condition | | Voltage (V) Approx. |
|---|---|---|---|---|---|---|
| | | | | Ignition Switch Position | Operation or Conditions | |
| 57 | L | Power source (Fuse) | Input | LOCK | — | Battery voltage |
| 72 | B | Ground | — | — | — | 0 |

## Terminals and Reference Value for PDU

NKS004EH

| Terminal | Wire Color | Item | Signal Input/ Output | Condition | | Voltage (V) Approx. |
|---|---|---|---|---|---|---|
| | | | | Ignition Switch Position | Operation or Conditions | |
| 1 | P | PDU wake up signal | Output | LOCK | Push-button ignition switch is in LOCK state, 30 seconds after all doors close | Battery voltage |
| | | | | | Other than above | 0 |
| 4 | BR | Ignition signal 1 | Output | LOCK | — | Battery voltage |
| | | | | ACC | — | Battery voltage |
| | | | | ON | — | 0 |
| 5 | W | Ignition signal 2 | Output | LOCK | — | Battery voltage |
| | | | | ACC | — | Battery voltage |
| | | | | ON | — | 0 |
| 8 | SB | ACC signal | Output | LOCK | — | Battery voltage |
| | | | | ACC | — | 0 |
| | | | | ON | — | 0 |
| 10 | B | Ground | — | — | — | 0 |
| 11 | Y | IPDM E/R status signal | Input | — | Engine starting (During Cranking) | 5 |
| | | | | | Other than above | 2 |
| 12 | R | PDU feedback signal | Input | LOCK | Push-button ignition switch is in LOCK state, 30 seconds after all doors close | 1 |
| | | | | | Other than above | 0 |
| 14 | SB | Power source (Fuse) | Input | LOCK | — | Battery voltage |
| 15 | L | Power source (F/L) | Input | LOCK | — | Battery voltage |
| 16 | W | ACC power output | Output | LOCK | — | 0 |
| | | | | ACC | — | Battery voltage |
| | | | | ON | — | Battery voltage |
| 17 | G | Power source (Fuse) | Input | LOCK | — | Battery voltage |
| 18 | BR | ON power output | Output | LOCK | — | 0 |
| | | | | ACC | — | 0 |
| | | | | ON | — | Battery voltage |

## Work Flow

NKS004EI

1. Check the symptom and customer's requests.
2. Understand outline of system. Refer to PG-32, "System Description" .
3. Confirm that Intelligent Key system operates normally.
   Refer to BL-24, "POWER DOOR LOCK SYSTEM" .
4. Repair or replace any malfunctioning parts.
   Refer to PG-38, "Trouble Diagnosis Symptom Chart" .
5. INSPECTION END

## Trouble Diagnosis Symptom Chart

NKS004EJ

Before performing the diagnosis in the following table, check the contents of PG-37, "Work Flow" .

| Symptom | Suspect Systems | Refer to |
|---|---|---|
| Even if the push-button ignition switch is pressed, the power supply position and the push-button ignition switch position indicator does not response. | 1. Check push-button ignition switch (ignition switch) system | PG-39 |
| | 2. Replace Intelligent Key unit | BL-123 |
| The push-button ignition switch position indicator turns on synchronizing with the push-button ignition switch operation. But the actual power supply is not input. | 1. Check PDU power supply and ground circuit system | PG-39 |
| | 2. Check PDU communication circuit system 1 | PG-42 |
| | 3. Replace PDU | PG-44 |
| The push-button ignition switch position indicator turns on synchronizing with the push-button ignition switch operation. But the actual ON power supply is not input. (ACC power supply input is normal.) | 1. Check PDU communication circuit system 2 | PG-43 |
| | 2. Replace PDU | PG-44 |
| The power supply changing operation is normal. But the push-button ignition switch position indicator does not turn on. | 1. Check push-button ignition switch (indicator circuit) system | PG-41 |
| | 2. Replace Intelligent Key unit | BL-123 |

## Check CAN Communication System

NKS004EK

### 1. CHECK SELF-DIAGNOSTIC RESULTS

**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 performs CAN communication.**

**With CONSULT-II**

- Connect CONSULT-II, and turn ignition switch ON.
- Touch “INTELLIGENT KEY” on “SELECT SYSTEM” screen.
- Touch “SELF-DIAG RESULTS” on “SELECT DIAG MODE” screen.
- Check display content in self-diagnostic results.

| CONSULT-II display item | DTC code |
|---|---|
| NO DTC IS DETECTED | — |
| CAN COMM CIRCUIT | U1000 |
| CONTROL UNIT (CAN) | U1010 |

OK or NG

NO DTC IS DETECTED>> INSPECTION END

CAN COMM CIRCUIT [U1000]>> After printing “SELF-DIAGNOSIS RESULTS”, go to “CAN SYSTEM”, Refer to LAN-42, "Precautions When Using CONSULT-II" .

CONTROL UNIT (CAN) [U1010]>> Replace Intelligent Key unit.

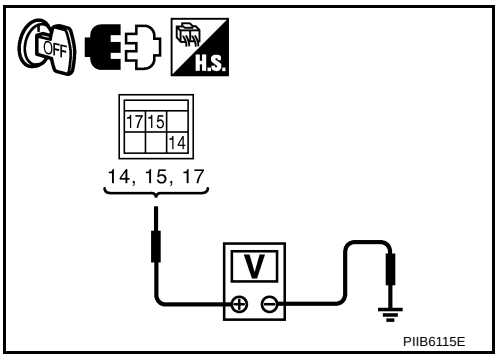
## Check PDU Power Supply and Ground Circuit

NKS004EL

### 1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect PDU connector.
3. Check voltage between PDU harness connector and ground.

| PDU connector | Terminal | | Voltage (V) (Approx.) |
|---|---|---|---|
| | (+) | (-) | |
| M31 | 14 | Ground | Battery voltage |
| | 15 | | |
| | 17 | | |




OK or NG

OK >> GO TO 2.
NG >> Repair or replace PDU power supply circuit.

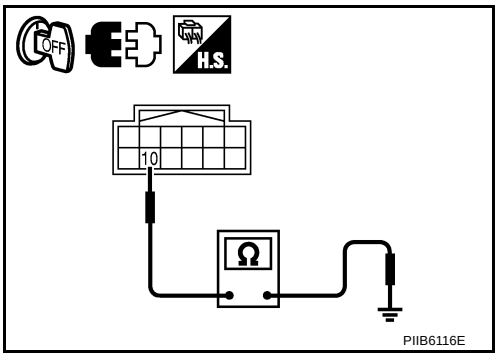
### 2. CHECK GROUND CIRCUIT

Check continuity between PDU harness connector and ground.

| PDU connector | Terminal | | Continuity |
|---|---|---|---|
| M30 | 10 | Ground | Yes |

OK or NG

OK >> Power supply and ground circuits are OK.
NG >> Repair or replace the PDU ground circuit.



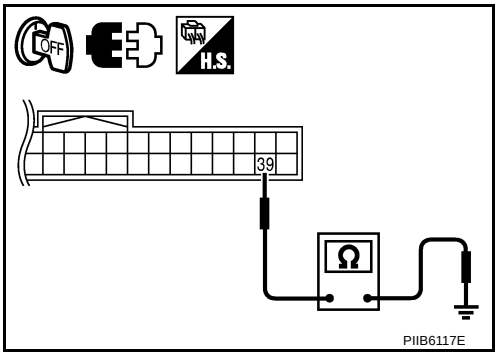

## Check Push-Button Ignition Switch (Ignition Switch) System

NKS004EM

### 1. CHECK PUSH-BUTTON IGNITION SWITCH

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check continuity between Intelligent Key unit harness connector and ground.

| Intelligent Key unit connector | Terminal | | Condition | Continuity |
|---|---|---|---|---|
| M32 | 39 | Ground | Push-button ignition switch is pressed | Yes |
| | | | Push-button ignition switch is released | No |



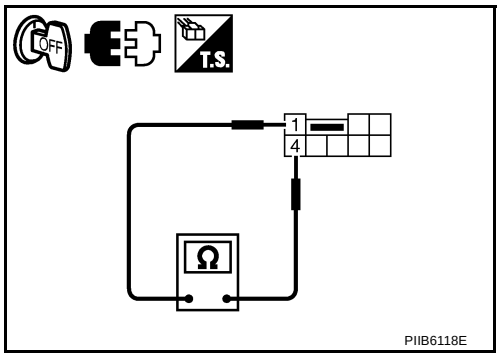

OK or NG

OK >> Push-button ignition switch system is OK.
NG >> GO TO 2.

## 2. CHECK PUSH-BUTTON IGNITION SWITCH OPERATION

1. Turn ignition switch OFF.
2. Check continuity push-button ignition switch connector.

| Push-button ignition switch connector | Terminal | | Condition | Continuity |
|---|---|---|---|---|
| M27 | 1 | 4 | Push-button ignition switch is pressed | Yes |
| | | | Push-button ignition switch is released | No |



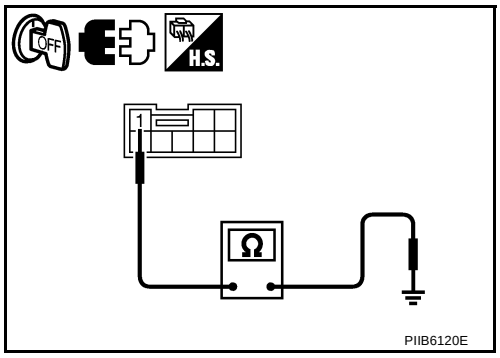

OK or NG

OK >> GO TO 3.
NG >> Replace push-button ignition switch.

## 3. CHECK PUSH-BUTTON IGNITION SWITCH GROUND CIRCUIT SYSTEM

Check continuity between push-button ignition switch harness connector and ground.

| Push-button ignition switch connector | Terminal | | Continuity |
|---|---|---|---|
| M27 | 1 | Ground part of push-button ignition switch | Yes |




OK or NG

OK >> GO TO 4.
NG >> Repair or replace push-button ignition switch ground circuit.

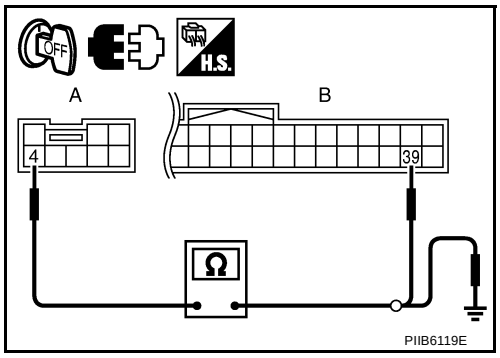
## 4. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector and push-button switch harness connector.

| A | | B | | Continuity |
|---|---|---|---|---|
| Push-button ignition switch connector | Terminal | Intelligent Key unit connector | Terminal | |
| M27 | 4 | M32 | 39 | Yes |

3. Check continuity between push-button ignition switch harness connector and ground.

| Push-button ignition switch connector | Terminal | | Continuity |
|---|---|---|---|
| M27 | 4 | Ground | No |




OK or NG

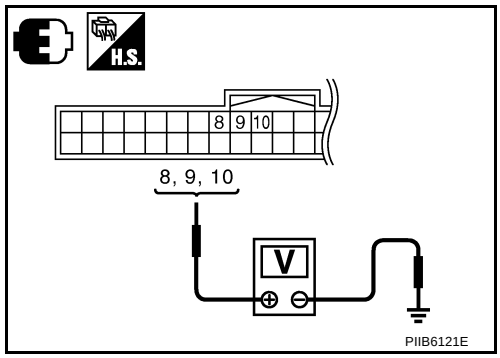
OK >> GO TO 5.
NG >> Repair or replace harness between Intelligent Key unit and ignition switch.

## Check Push-Button Ignition Switch (Indicator Circuit) System

NKS004EN

### 1. CHECK PUSH-BUTTON IGNITION SWITCH INDICATOR SYSTEM

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit connector and ground.



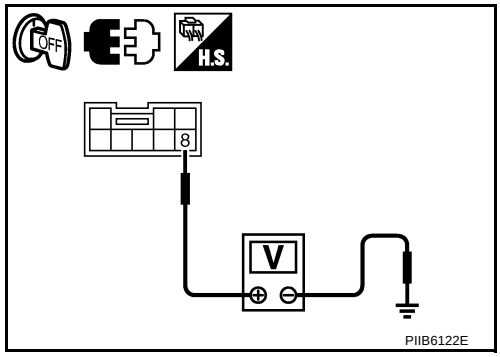

| Intelligent Key unit connector | Terminal (+) | Terminal (-) | Push-button ignition switch condition | Voltage (V) (Approx) |
|---|---|---|---|---|
| M32 | 8 | Ground part of push-button ignition switch | LOCK position | 0 |
| | | | Except LOCK position | 1.2 |
| | 9 | | ACC position | 0 |
| | | | Except ACC position | 1.2 |
| | 10 | | ON position | 0 |
| | | | Except ON position | 1.2 |

OK or NG

OK >> GO TO 2.
NG >> Repair or replace push-button ignition switch.

### 2. PUSH-BUTTON IGNITION SWITCH INDICATOR POWER SUPPLY SIGNAL

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch.
3. Check voltage between push-button ignition switch connector and ground.



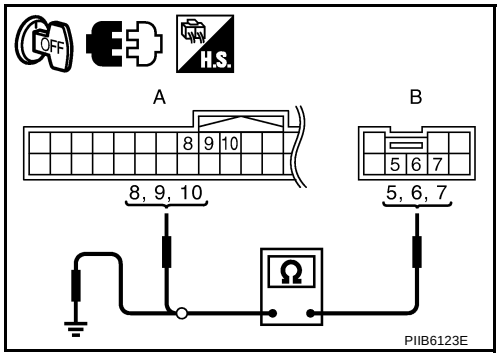

| Push-button ignition switch connector | Terminal (+) | Terminal (-) | Voltage (V) (Approx) |
|---|---|---|---|
| M27 | 8 | Ground | Battery voltage |

OK or NG

OK >> GO TO 3.
NG >> Repair or replace push-button ignition switch.

## 3. PUSH-BUTTON IGNITION SWITCH INDICATOR GROUND CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit connector and push-button ignition switch connector.




| A | | B | | Continuity |
|---|---|---|---|---|
| Intelligent Key unit connector | Terminal | Push-button ignition switch connector | Terminal | |
| M32 | 8 | M27 | 5 | Yes |
| | 9 | | 6 | |
| | 10 | | 7 | |

3. Check continuity between push-button ignition switch connector.

| Push-button ignition switch connector | Terminal | | Continuity |
|---|---|---|---|
| M27 | 5 | Ground | No |
| | 6 | | |
| | 7 | | |

OK or NG

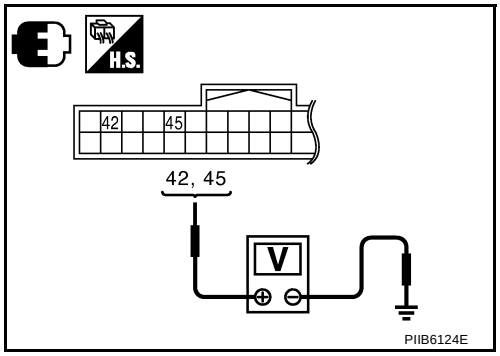
OK >> Check harness condition.
NG >> Repair or replace harness.

## PDU Communication Circuit System 1

NKS004EO

## 1. CHECK PDU COMMUNICATION CIRCUIT 1

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit connector and ground.




| Intelligent Key unit connector | Terminal | | Condition | Voltage (V) (Approx) |
|---|---|---|---|---|
| M33 | 42 | Ground | Driver side door is opened (PDU wake up mode) | 0 |
| | | | Push-button ignition switch is in lock state, 30 seconds after all doors are closed (PDU sleep mode) | Battery voltage |
| | 45 | Ground | Push-button ignition switch is in LOCK position | Battery voltage |
| | | | Push-button ignition switch is in ACC position | 0 |
| | | | Push-button ignition switch is in ON position | 0 |

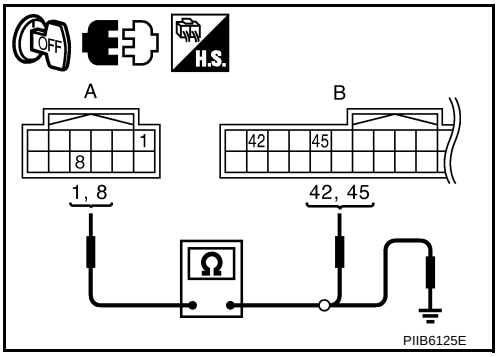
OK or NG

OK >> Check harness condition.
NG >> GO TO 2.

## 2. CHECK PDU SIGNAL CIRCUIT

1. Disconnect Intelligent Key unit, PDU connector.
2. Check continuity between Intelligent Key unit connector and PDU harness side connector.

| A | | B | | Continuity |
|---|---|---|---|---|
| PDU connector | Terminal | Intelligent Key unit connector | Terminal | |
| M30 | 1 | M33 | 42 | Yes |
| | 8 | | 45 | |




3. Check continuity between PDU connector and ground.

| PDU connector | Terminal | | Continuity |
|---|---|---|---|
| M30 | 1 | Ground | No |
| | 8 | | |

OK or NG

OK >> Replace Intelligent Key.
NG >> Check harness condition between Intelligent Key unit and PDU.

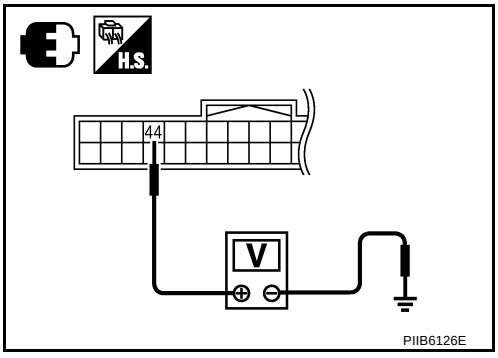
## PDU Communication Circuit System 2

NKS004EP

## 1. CHECK PDU COMMUNICATION CIRCUIT 2

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit connector while operating push-button ignition switch.

| Intelligent Key unit connector | Terminal | | Push-button ignition switch position | Voltage (V) (Approx) |
|---|---|---|---|---|
| | (+) | (-) | | |
| M33 | 44 | Ground part of push-button ignition switch | LOCK position | 12 |
| | | | ACC position | 12 |
| | | | ON position | 0 |



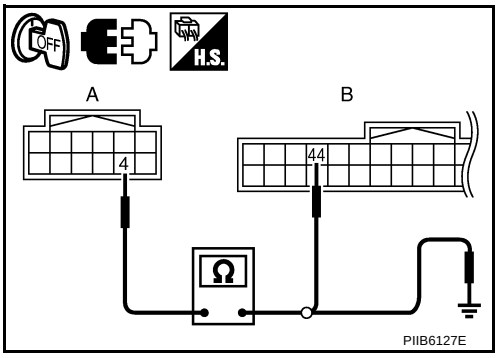

OK or NG

OK >> Check connector condition.
NG >> GO TO 2.

## 2. CHECK PDU SIGNAL CIRCUIT

1. Disconnect Intelligent Key unit, PDU connectors.
2. Check continuity between Intelligent Key unit connector and PDU connector.

| A | | B | | Continuity |
|---|---|---|---|---|
| PDU connector | Terminal | Intelligent Key unit connector | Terminal | |
| M30 | 4 | M33 | 44 | Yes |




3. Check continuity between PDU connector and ground.

| PDU connector | Terminal | | Continuity |
|---|---|---|---|
| M30 | 4 | Ground | No |

OK or NG

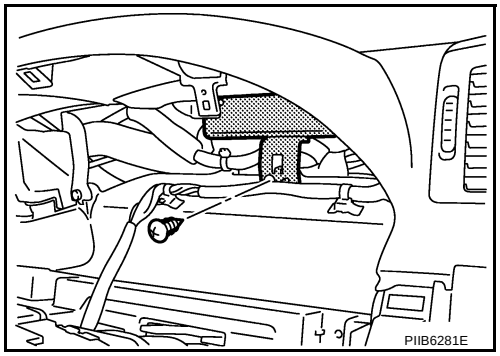
OK >> Replace Intelligent Key unit.
NG >> Repair or replace harness between Intelligent Key unit or PDU.

## Removal and Installation of PDU

NKS004EQ

### REMOVAL

1. Removal the combination meter. Refer to DI-27, "Removal and Installation of Combination Meter" .
2. Disconnect PDU unit connector, remove screw and PDU.




### INSTALLATION

Installation is in the reverse order of removal.

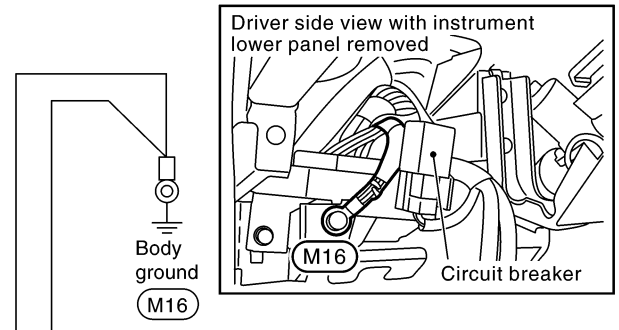
# GROUND

PFP:00011

## Ground Distribution

NKS004ER

### MAIN HARNESS




| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| M5 | Fuse block (J/B)<br>• Accessory relay<br>• Blower relay |
| M8 | Power steering control unit |
| M19 | Low tire pressure warning control unit |
| M24 | VDC off swith |
| M27 | Push-button ignition switch |
| M29 | Combination switch |
| M30 | PDU (Power distribution unit) |
| M32 | Intelligent Key unit (Terminal No. 20) |
| M32 | Intelligent Key unit (Terminal No. 40) |
| M33 | Intelligent Key unit (Terminal No. 56) |
| M33 | Intelligent Key unit (Terminal No. 72) |
| M35 | Steering lock unit (Terminal No. 5) |
| M35 | Steering lock unit (Terminal No. 6) |
| M43 | Illumination control switch |
| M47 | Steering angle sensor |
| M52 | Combination meter (Terminal No. 9)<br>• Air bag warning lamp<br>• Meter illumination control switch<br>• Odo/trip meter switch<br>• Unifled meter control unit |
| M52 | Combination meter (Terminal No. 10)<br>• Air bag warning lamp<br>• Meter illumination control switch<br>• Odo/trip meter switch<br>• Unifled meter control unit |
| M52 | Combination meter (Terminal No. 11)<br>• Air bag warning lamp<br>• Meter illumination control switch<br>• Odo/trip meter switch<br>• Unifled meter control unit |
| M60 | Data link connector (Terminal No. 4) |
| M60 | Data link connector (Terminal No. 5) |
| M63 | Clock |
| M69 | Multifunction switch |

A B Next page

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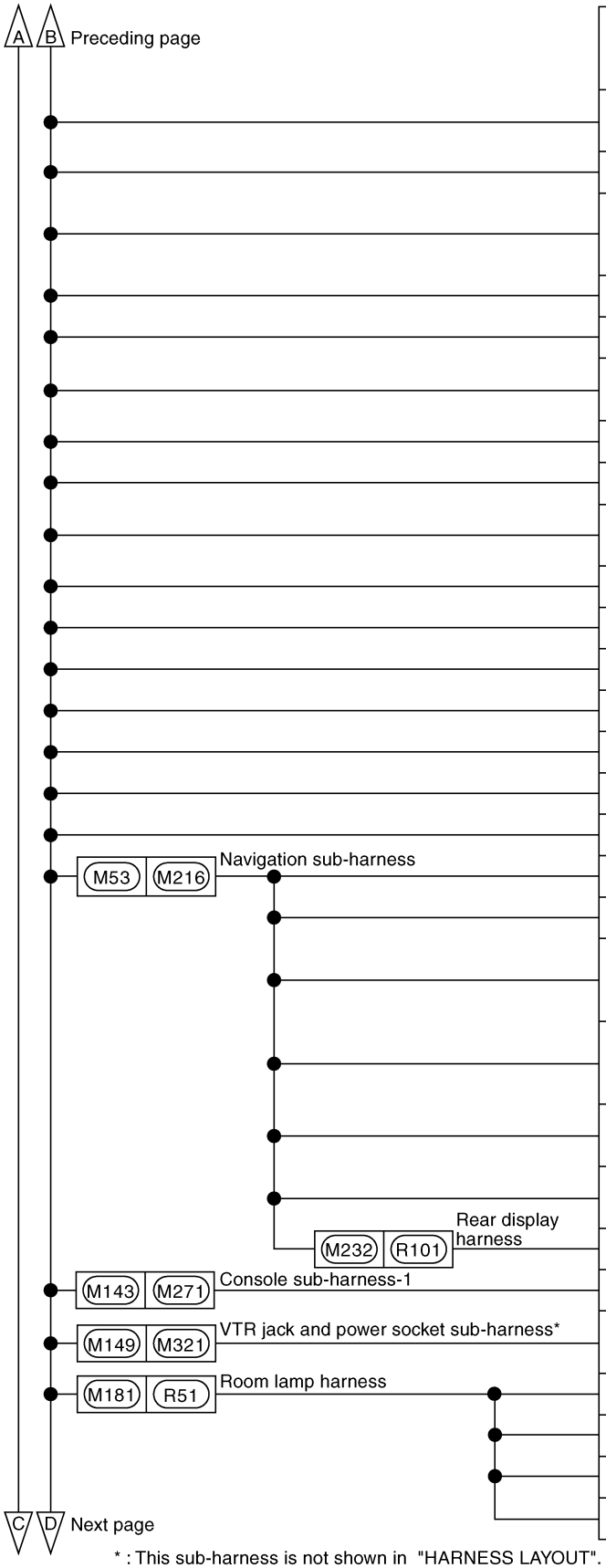
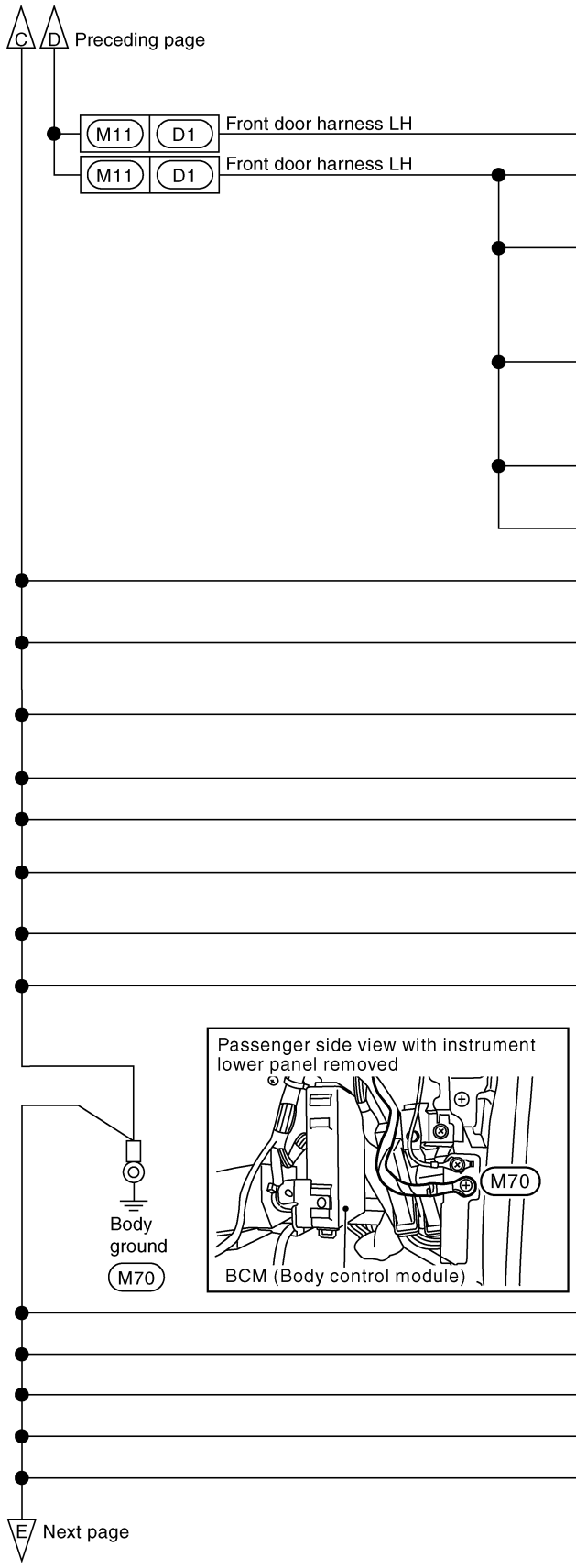



| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| M83 | Shield wire [Inside key antenna (Instrument center)] |
| M91 | Blower motor |
| M95 | Door mirror remote control switch (Terminal No. 13)<br>• Changeover switch<br>• Mirror switch |
| M99 | Trunk lid opener cancel switch (Terminal No. 3) |
| M132 | Cigarette lighter socket |
| M133 | A/T device (Terminal No. 4)<br>• Mode select switch |
| M135 | Snow mode switch |
| M137 | Rear sunshade front switch |
| M140 | Power socket (Floor console inside)<br>(Without DVD player) |
| M142 | Shield wire [Inside key antenna (Console)] |
| M147 | Air bag diagnosis sensor unit |
| M182 | LDW camera unit (Terminal No. 6) |
| M182 | LDW camera unit (Terminal No. 12) |
| M183 | Vanity mirror lamp LH |
| M187 | Auto anti-dazzling inside mirror |
| M188 | Vanity mirror lamp RH |
| M203 | Front display unit |
| M208 | Video distributor |
| M210 | Shield wire (NAVI control unit)<br>(With BOSE system and navigation system)<br>(For circuit from terminal No.69,70) |
| M210 | Shield wire (AV control unit)<br>(With BOSE system without navigation system)<br>(For circuit from terminal No.69,70) |
| M210 | Shield wire (NAVI control unit)<br>(With navigation system) |
| M210 | Shield wire (AV control unit)<br>(Without navigation system) |
| R103 | Headphone amp. |
| M272 | DVD player (Terminal No. 17) |
| M323 | Power socket (Floor console rear)<br>(With DVD player) |
| R54 | Map lamp (Terminal No. 1) |
| R54 | Map lamp (Terminal No. 4) |
| R55 | Personal lamp RH |
| R57 | Personal lamp LH |

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

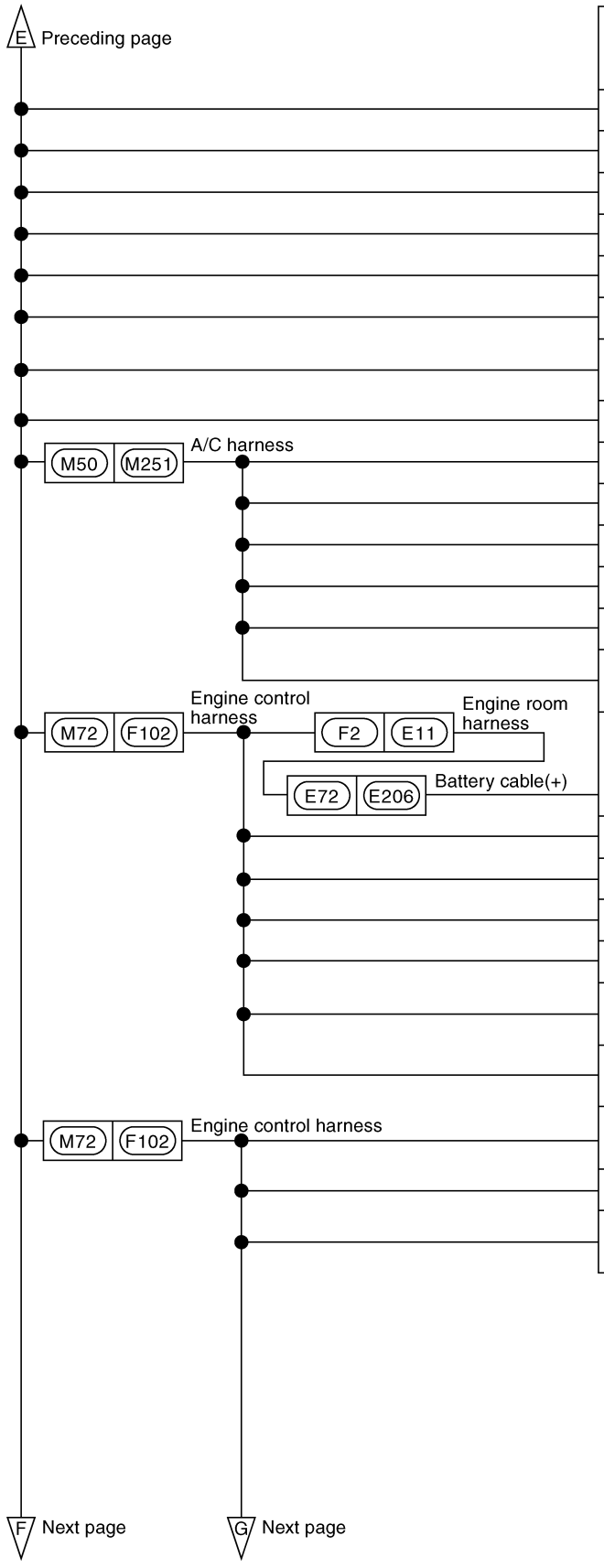
CKIT0828E




| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| D2 | Door mirror LH |
| D6 | Power window main switch illumination |
| D9 | Seat memory switch<br>• Memory switch-1<br>• Memory switch-2<br>• Set switch |
| D11 | Power window main switch<br>• CPU<br>• Door lock and unlock switch<br>• Illumination<br>• Power window lock switch |
| D14 | Front door lock assembly (Driver side)<br>• Key cylinder switch<br>• Unlock sensor |
| D15 | Front outside handle LH |
| M7 | Automatic drive positioner control unit (Terminal No. 40) |
| M7 | Automatic drive positioner control unit (Terminal No. 48) |
| M46 | ADP steering switch<br>• Telescopic switch<br>• Tilt switch |
| M49 | LDW switch |
| M58 | LDW chime |
| M76 | Shield wire (Audio unit) (For circuit from terminal No. 2,3) |
| M76 | Shield wire (Audio unit) (For circuit from terminal No. 11,12) |
| M186 | Sunroof motor assembly |

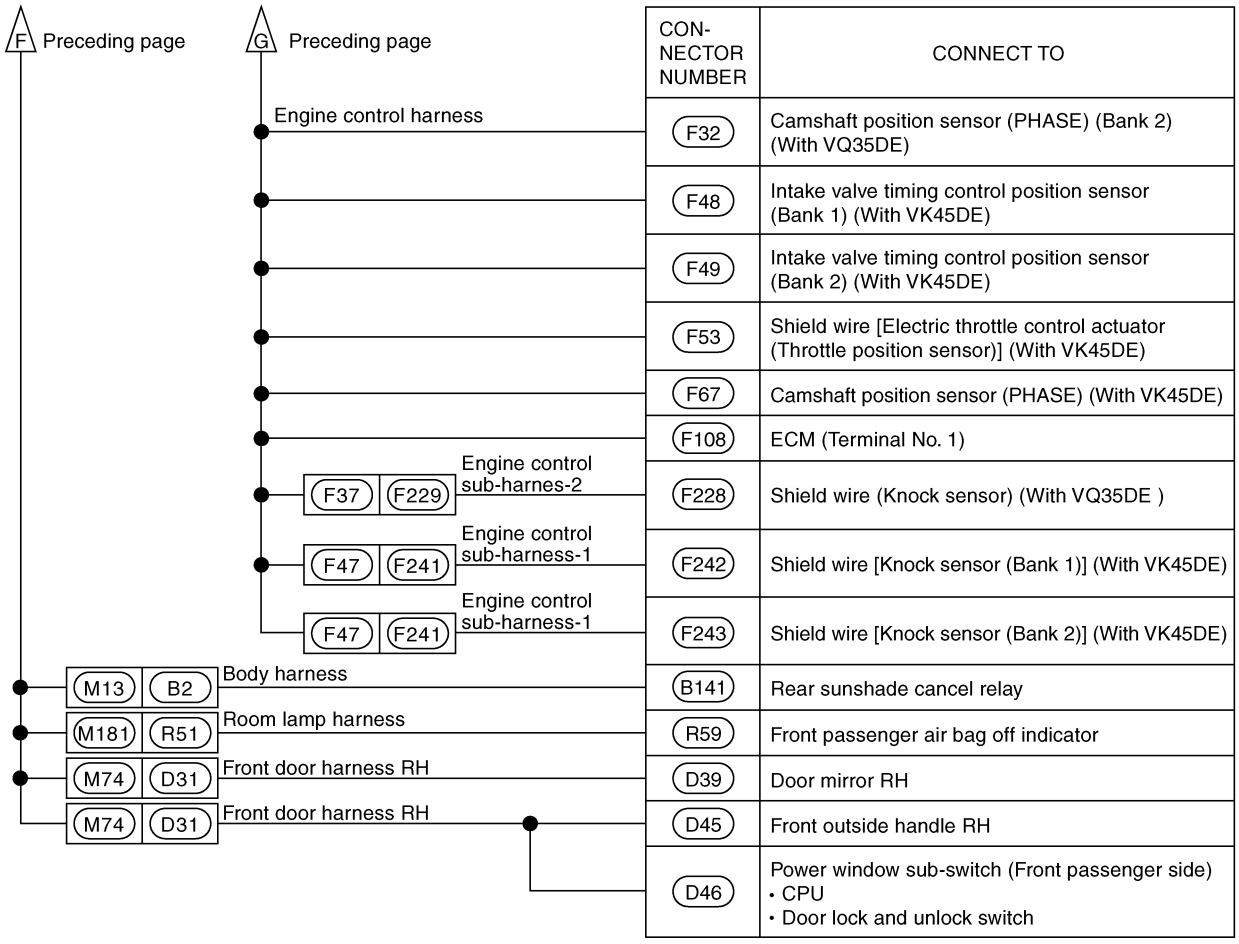
| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| M2 | BCM (Body control module) |
| M14 | Key slot |
| M34 | Diode |
| M65 | Unified meter and A/C amp. (Terminal No. 55) |
| M65 | Unified meter and A/C amp. (Terminal No. 71) |

CKIT0829E

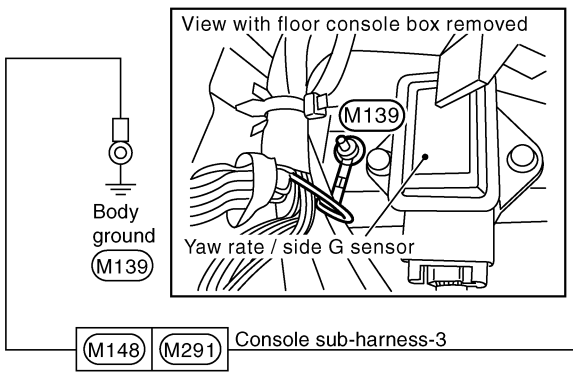



| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| M71 | ECM (Terminal No. 115) |
| M71 | ECM (Terminal No. 116) |
| M76 | Audio unit |
| M78 | AV control unit (Without navigation system) |
| M78 | NAVI control unit (With navigation system) |
| M81 | Glove box lamp |
| M133 | A/T device (Terminal No. 8)<br>• Shift look solenoid |
| M151 | Rear control cancel switch |
| M252 | Mode door motor (Driver side) |
| M253 | Air mix door motor (Driver side) |
| M254 | Upper ventilator door motor |
| M255 | Mode door motor (Passenger side) |
| M256 | Air mix door motor (Passenger side) |
| M257 | Intake door motor |
| E211 | Power steering solenoid valve (With VK45DE) |
| F25 | Power steering solenoid valve (With VQ35DE) |
| F109 | AWD control unit (Terminal No. 10) |
| F109 | AWD control unit (Terminal No. 11) |
| F110 | AFS control unit (Terminal No. 25) |
| F110 | Shield wire (AFS control unit)<br>(For circuit from terminal No. 11,13,32,34) |
| F110 | Shield wire (AFS control unit)<br>(For circuit from terminal No. 15,17,36,38) |
| F4 | Camshaft position sensor (PHASE) (Bank 1)<br>(With VQ35DE) |
| F10 | Crankshaft position sensor (POS) |
| F31 | Shield wire [Electric throttle control actuator (Throttle position sensor) ] (With VQ35DE) |

CKIT0830E



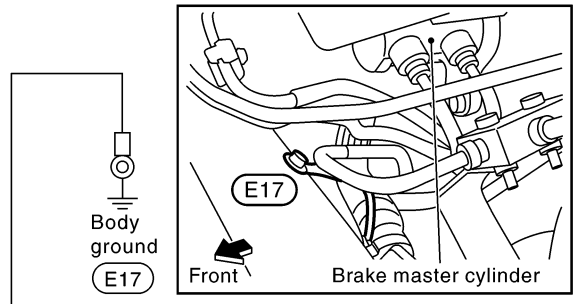

| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| F32 | Camshaft position sensor (PHASE) (Bank 2) (With VQ35DE) |
| F48 | Intake valve timing control position sensor (Bank 1) (With VK45DE) |
| F49 | Intake valve timing control position sensor (Bank 2) (With VK45DE) |
| F53 | Shield wire [Electric throttle control actuator (Throttle position sensor)] (With VK45DE) |
| F67 | Camshaft position sensor (PHASE) (With VK45DE) |
| F108 | ECM (Terminal No. 1) |
| F228 | Shield wire (Knock sensor) (With VQ35DE ) |
| F242 | Shield wire [Knock sensor (Bank 1)] (With VK45DE) |
| F243 | Shield wire [Knock sensor (Bank 2)] (With VK45DE) |
| B141 | Rear sunshade cancel relay |
| R59 | Front passenger air bag off indicator |
| D39 | Door mirror RH |
| D45 | Front outside handle RH |
| D46 | Power window sub-switch (Front passenger side)<br>• CPU<br>• Door lock and unlock switch |



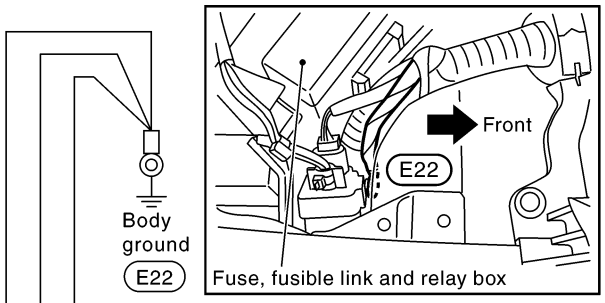

| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| M292 | DVD player (Terminal No. 49) |

CKIT0831E

## ENGINE ROOM HARNESS



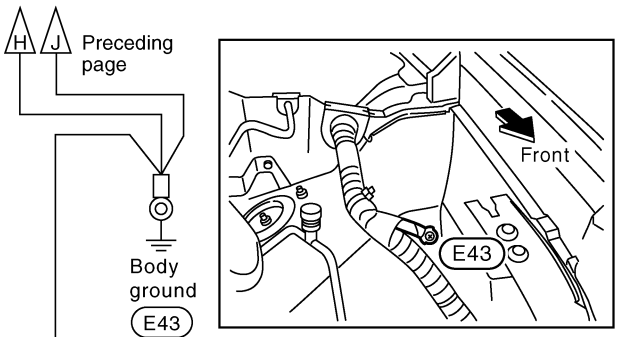

| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| E30 | ABS actuator and electric unit (Control unit) (Terminal No. 1)<br>• Motor |
| E30 | ABS actuator and electric unit (Control unit) (Terminal No.4)<br>• VDC/TCS/ABS control unit |




| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| E16 | Climate controlled seat relay |
| E27 | Front wiper motor |
| E28 | Side turn signal lamp RH |
| E33 | Front wiper reverse relay |
| E42 | Cooling fan control module |
| E47 | Front combination lamp RH (With xenon headlamp)(Terminal No. 4)<br>• Headlamp low |
| E49 | Front combination lamp RH (Terminal No. 9)<br>• Turn signal |
| E54 | Front combination lamp LH (Terminal No. 1)<br>• Side marker<br>• Parking |
| E54 | Front combination lamp LH (Terminal No. 2)<br>• Headlamp high |
| E54 | Front combination lamp LH (With halogen headlamp)(Terminal No. 4)<br>• Headlamp low |
| E60 | Front fog lamp LH |
| E70 | Front combination lamp RH (Terminal No. 11)<br>• Aiming motor |
| E79 | Washer level sensor |

H J Next page

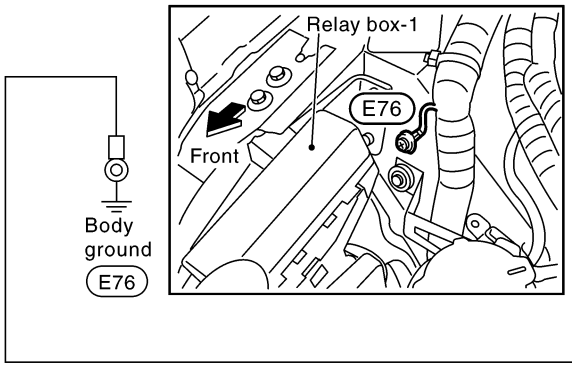
CKIT0671E




| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| E8 | IPDM E/R (Intelligent power distribution module engine room) (Terminal No. 38)<br>• CPU<br>• Front wiper low relay<br>• Ignition relay |
| E9 | IPDM E/R (Intelligent power distribution module engine room)(Terminal No. 51)<br>• CPU |
| E9 | IPDM E/R (Intelligent power distribution module engine room) (Terminal No. 54)<br>• Heated seat relay |
| E23 | Brake fluid level switch |
| E34 | Daytime light relay |
| E44 | Hood switch |
| E45 | Front fog lamp RH |
| E47 | Front combination lamp RH (Terminal No. 1)<br>• Side marker<br>• Parking |
| E47 | Front combination lamp RH (For U.S.A.) (Terminal No. 2)<br>• Headlamp high |
| E47 | Front combination lamp RH (With halogen headlamp) (Terminal No. 4)<br>• Headlamp low |
| E54 | Front combination lamp LH (With xenon headlamp)(Terminal No. 4)<br>• Headlamp low |
| E55 | Front combination lamp LH (Terminal No. 9)<br>• Turn signal |
| E57 | Horn (Low) |
| E61 | ICC sensor integrated unit |
| E65 | Horn (High) |
| E68 | Side turn signal lamp LH |
| E71 | Front combination lamp LH (Terminal No. 11)<br>• Aiming motor |
| E78 | Resistor |
| E80 | ICC brake hold relay |
| B142 | Shield wire (Pre-crash seat belt control unit ) (For circuit from terminal No. 2) |

E106 B4 Body harness

CKIT0837E



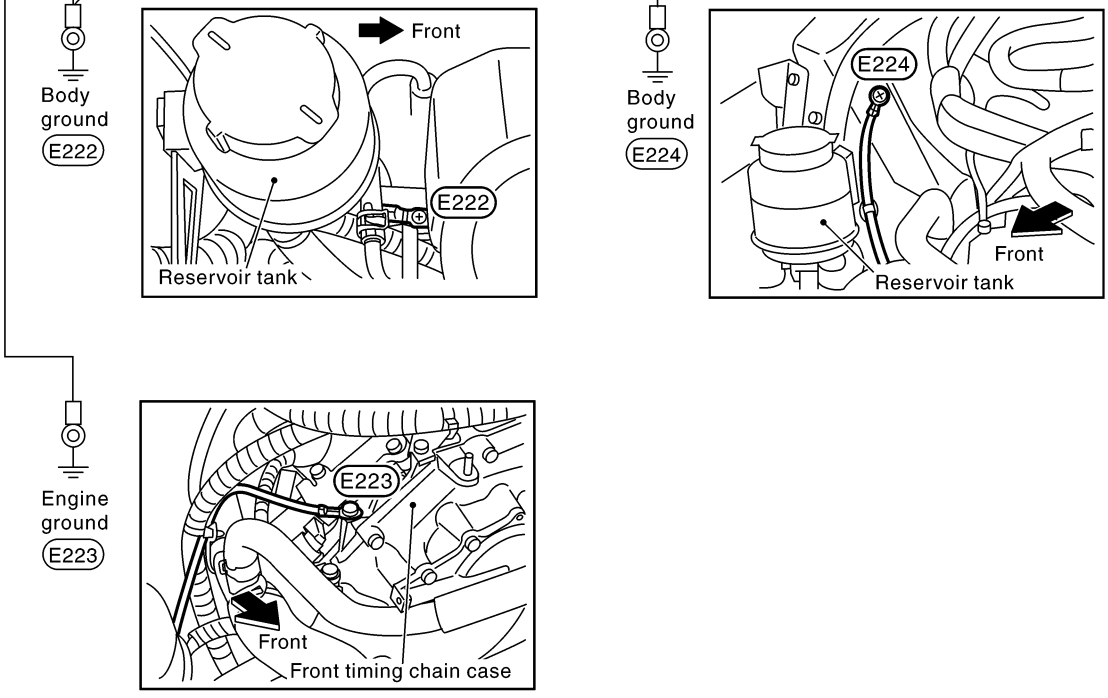

| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| E77 | Crash zone sensor |

CKIT0673E

## Battery Cable

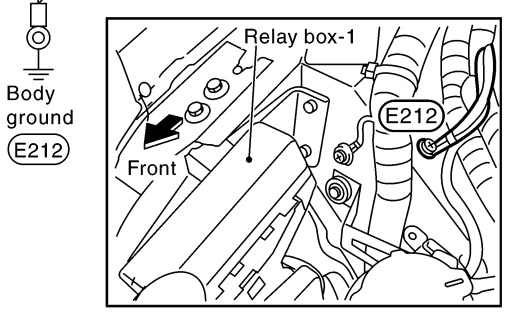
### VQ35DE

| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| E221 | Alternator (E) |



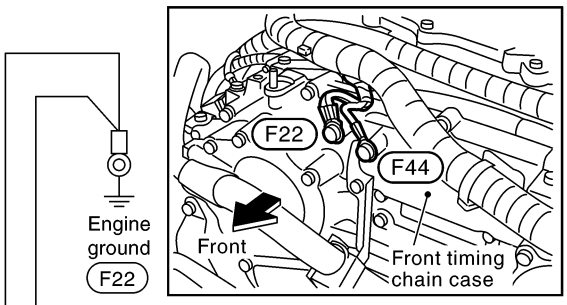

### VK45DE

| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| E207 | Alternator (E) |




CKIT0674E

## ENGINE CONTROL HARNESS/VQ ENGINE MODELS





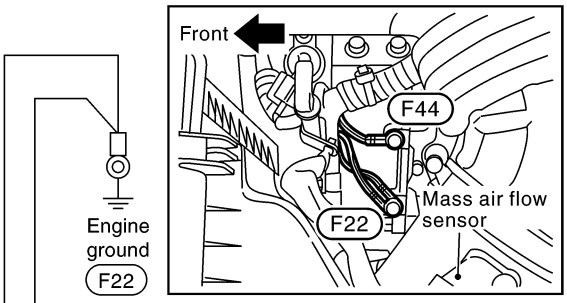


| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| F15 | Ignition coil No. 5 (With power transistor) |
| F27 | Ignition coil No. 2 (With power transistor) |
| F28 | Ignition coil No. 4 (With power transistor) |
| F29 | Ignition coil No. 6 (With power transistor) |
| F202 | Ignition coil No. 3 (With power transistor) |
| F203 | Ignition coil No. 1 (With power transistor) |

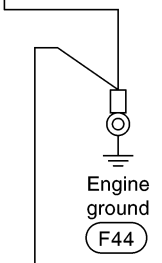
| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| F38 | Condenser |
| F42 | A/T assembly (Terminal No. 5)<br>• TCM (Transmission control module) |
| F42 | A/T assembly (Terminal No. 10)<br>• TCM (Transmission control module) |

CKIT0675E

## ENGINE CONTROL HARNESS/VK ENGINE MODELS



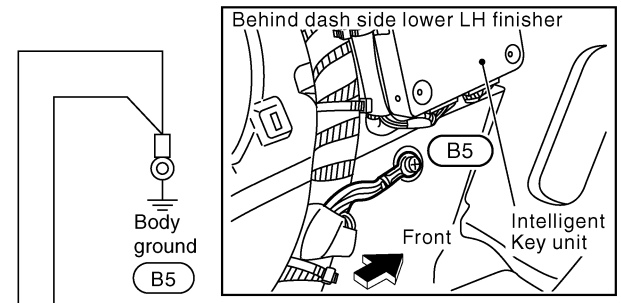

| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| F42 | A/T assembly (Terminal No. 5)<br>• TCM (Transmission control module) |
| F42 | A/T assembly (Terminal No. 10)<br>• TCM (Transmission control module) |
| F59 | Ignition coil No. 1 (With power transistor) |
| F60 | Ignition coil No. 3 (With power transistor) |
| F61 | Ignition coil No. 5 (With power transistor) |
| F62 | Ignition coil No. 7 (With power transistor) |
| F63 | Ignition coil No. 2 (With power transistor) |
| F64 | Ignition coil No. 4 (With power transistor) |
| F65 | Ignition coil No. 6 (With power transistor) |
| F66 | Ignition coil No. 8 (With power transistor) |




| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| F38 | Condenser |

CKIT0676E

## BODY HARNESS



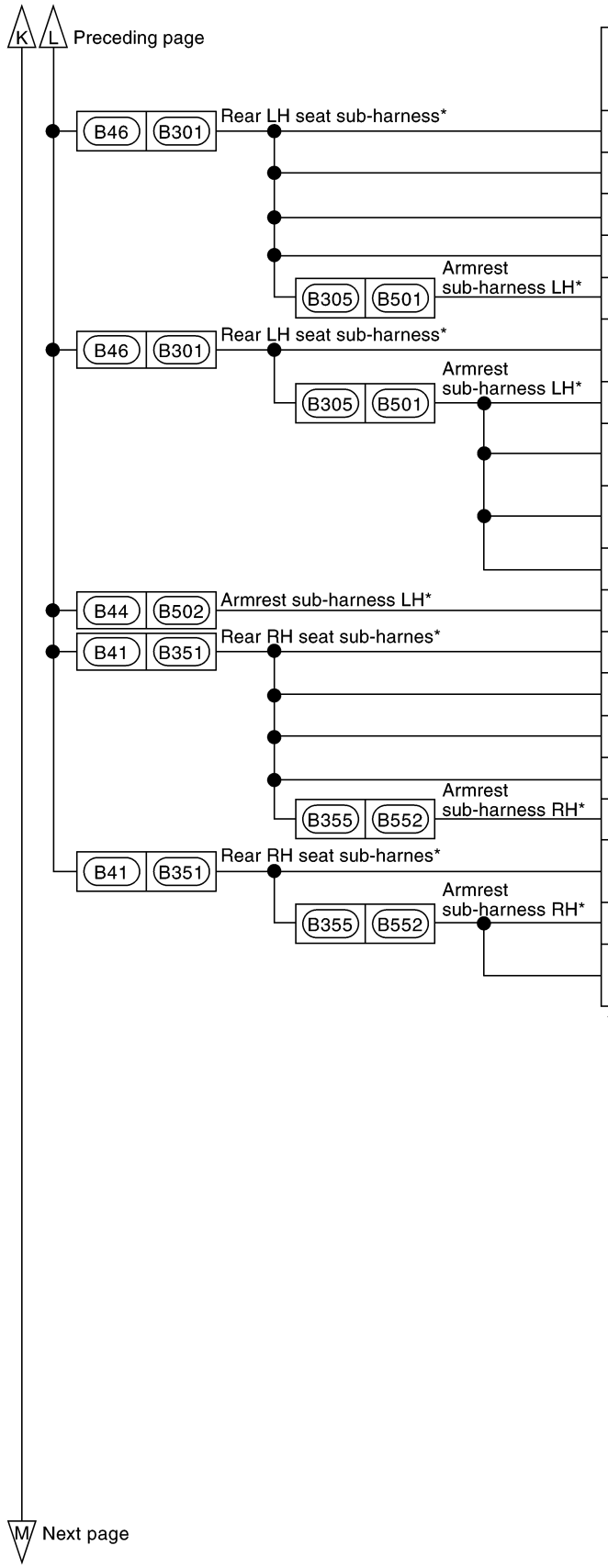




| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| B32 | Shield wire (Pre-crash seat belt motor LH) |
| B111 | Fuel pump control module |
| B130 | Rear combination lamp RH<br>• Side marker<br>• Stop<br>• Tail<br>• Turn signal |
| B135 | Rear combination lamp LH<br>• Side marker<br>• Stop<br>• Tail<br>• Turn signal |
| B142 | Shield wire (Pre-crash seat belt control unit)<br>(For circuit from terminal No. 1,3) |
| B142 | Shield wire (Pre-crash seat belt control unit)<br>(For circuit from terminal No. 4,6) |
| B204 | Driver seat control unit (Terminal No. 32) |
| B213 | Power seat switch (Driver side)<br>• Lifting switch (Front)<br>• Lifting switch (Rear)<br>• Reclining switch<br>• Sliding switch |
| B205 | Driver seat control unit (Terminal No. 48) |
| B212 | Lumbar support switch |
| B284 | Climate controlled seat control unit (Driver side) |
| B294 | Climate controlled seat control unit<br>(Passenger side) |

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

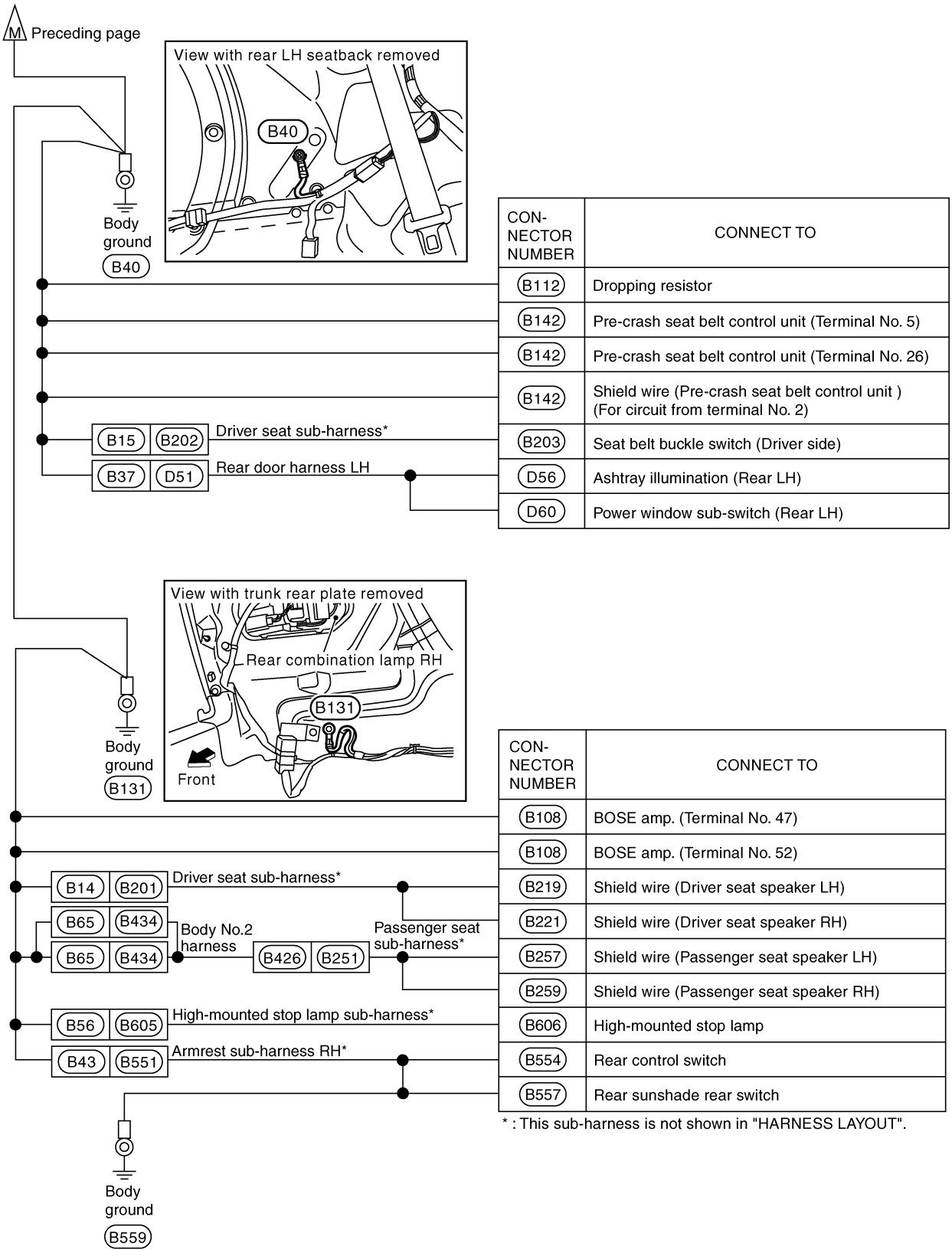
CKIT0832E




| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| B308 | Condenser |
| B303 | Rear LH seat control unit (Terminal No. 8) |
| B310 | Rear seatback heater LH |
| B311 | Rear LH seat sliding motor |
| B507 | Rear heated seat switch LH (Terminal No. 3) |
| B304 | Rear LH seat control unit (Terminal No. 13) |
| B504 | Rear power seat switch LH |
| B507 | Rear heated seat switch LH (Terminal No. 8)<br>• Illumination |
| B508 | Automatic return cancel switch (Terminal No. 2)<br>• Illumination |
| B508 | Automatic return cancel switch (Terminal No. 3) |
| B505 | Shield wire (Rear control switch) (Terminal No. 5,7) |
| B353 | Rear RH seat control unit (Terminal No. 8) |
| B358 | Condenser |
| B360 | Rear seatback heater RH |
| B361 | Rear RH seat sliding motor |
| B558 | Rear heated seat switch RH (Terminal No. 3) |
| B354 | Rear RH seat control unit (Terminal No. 13) |
| B555 | Rear power seat switch RH |
| B558 | Rear heated seat switch RH (Terminal No. 8)<br>• Illumination |

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

CKIT0678E

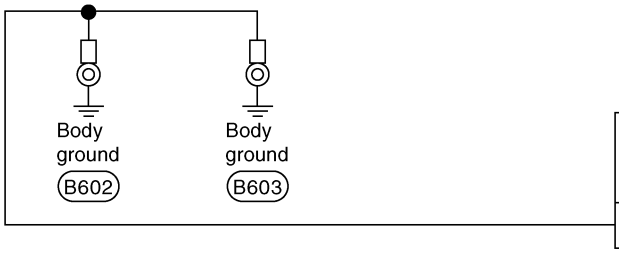



| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| B112 | Dropping resistor |
| B142 | Pre-crash seat belt control unit (Terminal No. 5) |
| B142 | Pre-crash seat belt control unit (Terminal No. 26) |
| B142 | Shield wire (Pre-crash seat belt control unit ) (For circuit from terminal No. 2) |
| B203 | Seat belt buckle switch (Driver side) |
| D56 | Ashtray illumination (Rear LH) |
| D60 | Power window sub-switch (Rear LH) |

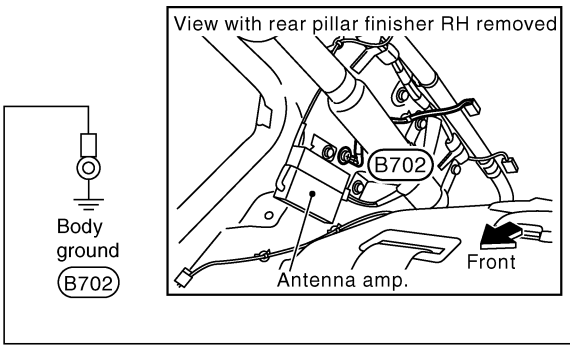
| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| B108 | BOSE amp. (Terminal No. 47) |
| B108 | BOSE amp. (Terminal No. 52) |
| B219 | Shield wire (Driver seat speaker LH) |
| B221 | Shield wire (Driver seat speaker RH) |
| B257 | Shield wire (Passenger seat speaker LH) |
| B259 | Shield wire (Passenger seat speaker RH) |
| B606 | High-mounted stop lamp |
| B554 | Rear control switch |
| B557 | Rear sunshade rear switch |

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

CKIT0833E



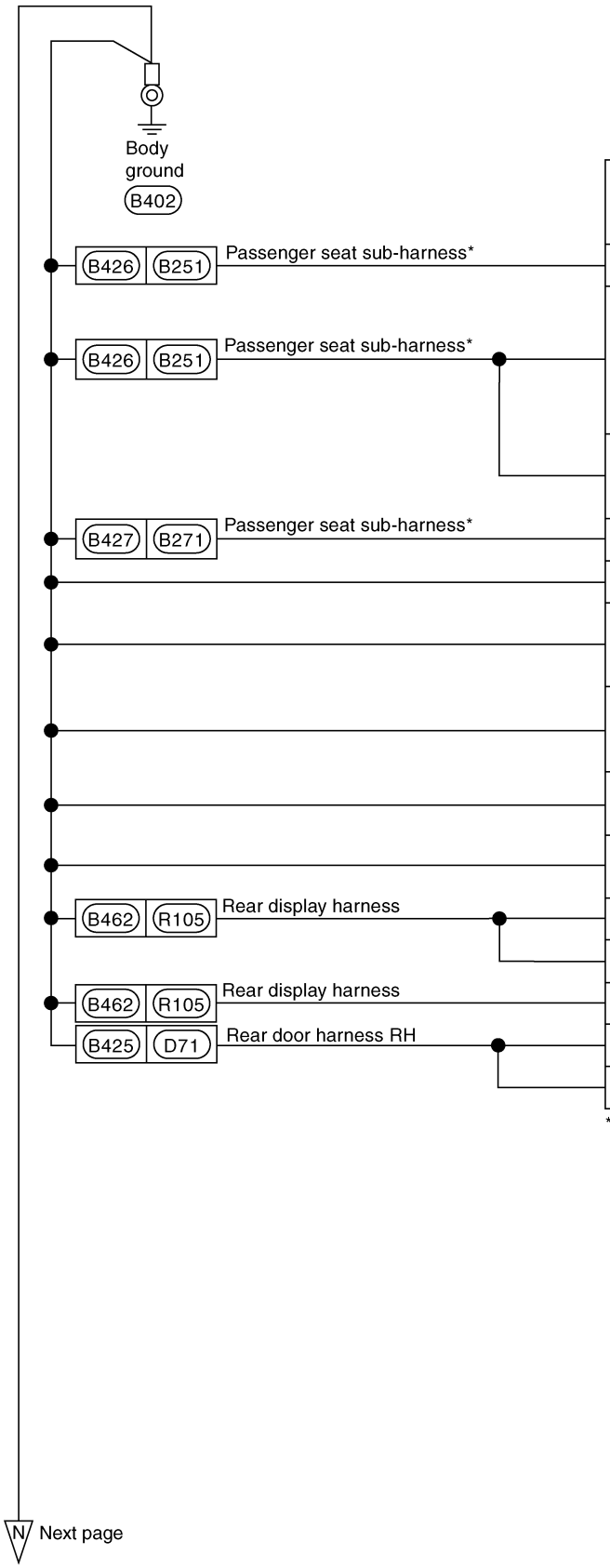

| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| B601 | RAS motor |




| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| B701 | Rear window defogger |

CKIT0834E

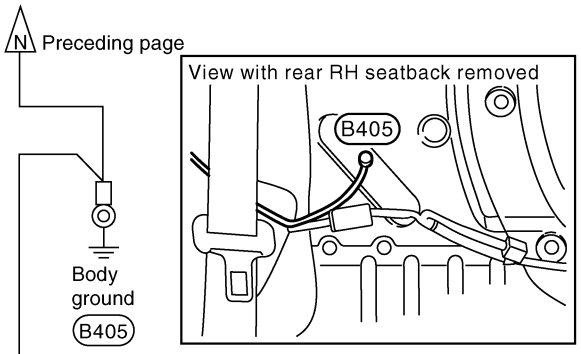
## BODY NO. 2 HARNESS



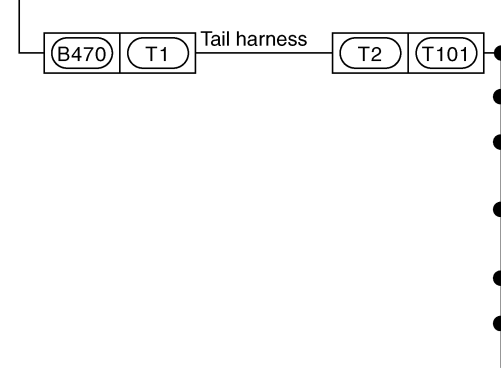

| CON-NECTOR NUMBER | CONNECT TO |
|---|---|
| B253 | Seat belt buckle switch (Passenger side) |
| B267 | Power seat switch (Passenger side)<br>(Terminal No. 48)<br>• Lifting switch (Front)<br>• Lifting switch (Rear)<br>• Reclining switch<br>• Sliding switch |
| B267 | Power seat switch (Passenger side)<br>(Terminal No. 48A)<br>• Lumbar support switch |
| B272 | Occupant classification system control unit |
| B422 | Shield wire (Pre-crash seat belt motor RH) |
| B429 | Climate controlled seat switch passenger side<br>• Cool indicator<br>• Heat indicator |
| B430 | Climate controlled seat switch driver side<br>• Cool indicator<br>• Heat indicator |
| B481 | Shield wire [Camera control unit (With BOSE system)] (For circuit from terminal No. 19,20) |
| B481 | Shield wire [Jumping connector (With RAS without BOSE system)] (For circuit from terminal No. 19,20) |
| R102 | Rear display unit (Terminal No. 1) |
| R102 | Rear display unit (Terminal No. 2) |
| R102 | Shield wire (Rear display unit) |
| D76 | Ashtray illumination (Rear RH) |
| D80 | Power window sub-switch (Rear RH) |

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

CKIT0835E




| CONNECTOR NUMBER | CONNECT TO |
|---|---|
| B463 | Shield wire (RAS motor) |
| B473 | Shield wire [Inside key antenna (Trunk room)] |
| B474 | Rear sunshade unit (With built-in motor) (Terminal No. 2) |
| B474 | Rear sunshade unit (With built-in motor) (Terminal No. 6) |
| B476 | RAS control unit |
| B478 | Noise Suppressor (With RAS) |
| B480 | RAS motor relay |
| B481 | Camera control unit |
| B481 | Shield wire [Jumping connector (With RAS without BOSE system)] (For circuit from terminal No. 17,18) |
| T102 | Back-up lamp RH |
| T104 | Trunk lid key cylinder switch |
| T105 | License plate lamp RH |
| T106 | Trunk lid lock assembly<br>• Trunk room lamp switch<br>• Trunk lid opener actuator |
| T107 | Trunk opener request switch |
| T108 | License plate lamp LH |
| T110 | Back-up lamp LH |




CKIT0836E

# HARNESS

PFP:00011

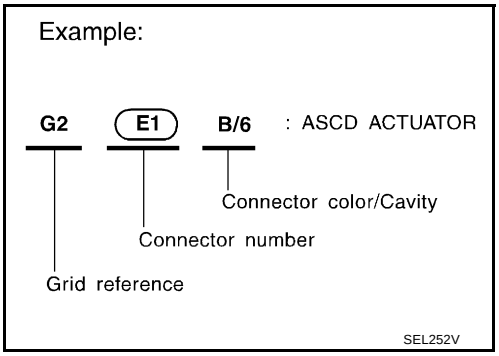
## Harness Layout

NKS004ES

### HOW TO READ HARNESS LAYOUT

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

- Main Harness (Instrument Panel)
- Engine Room Harness (Engine Compartment)
- Engine Control Harness (Engine Compartment)
- Body Harness
- Body No. 2 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.

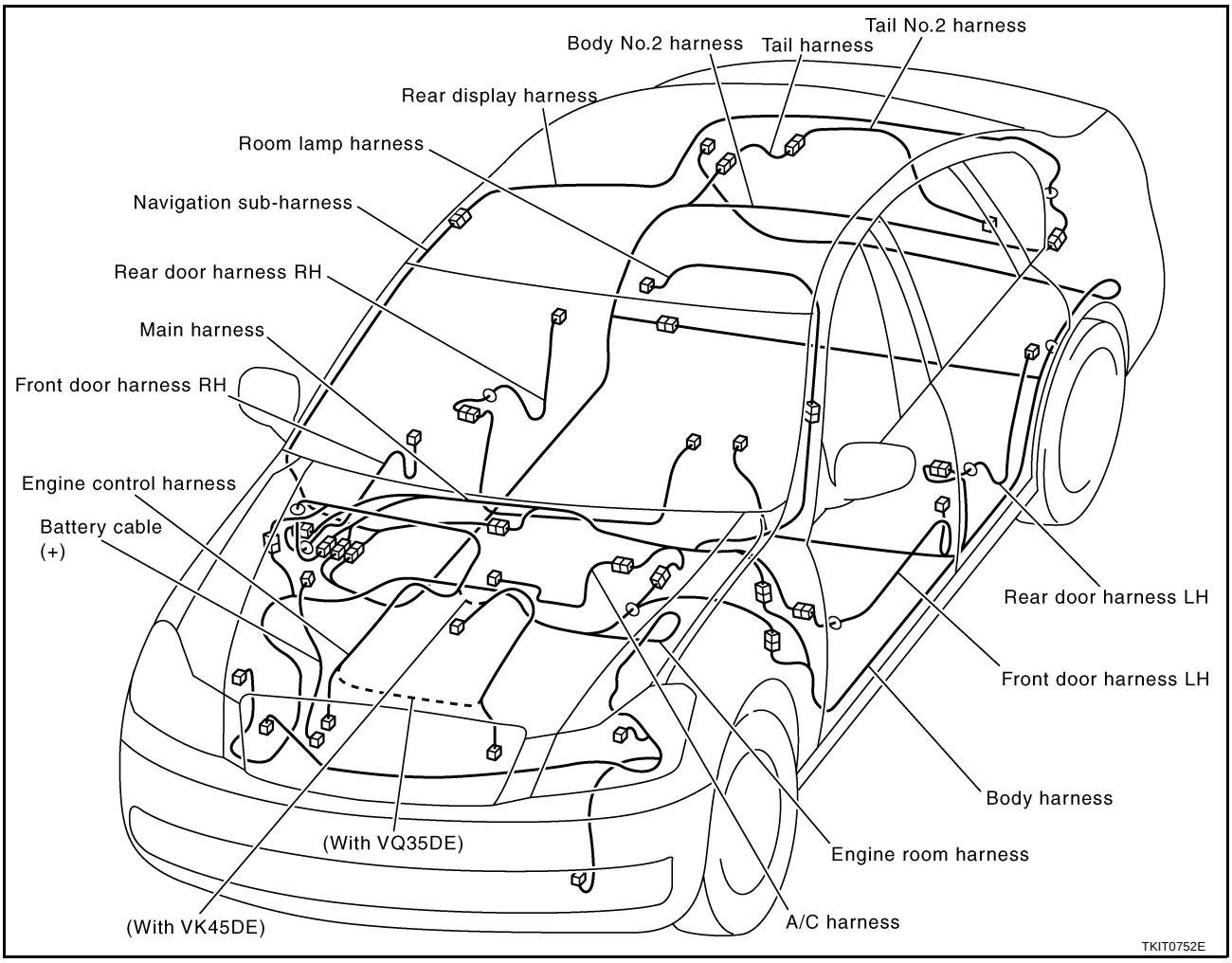
### CONNECTOR SYMBOL

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

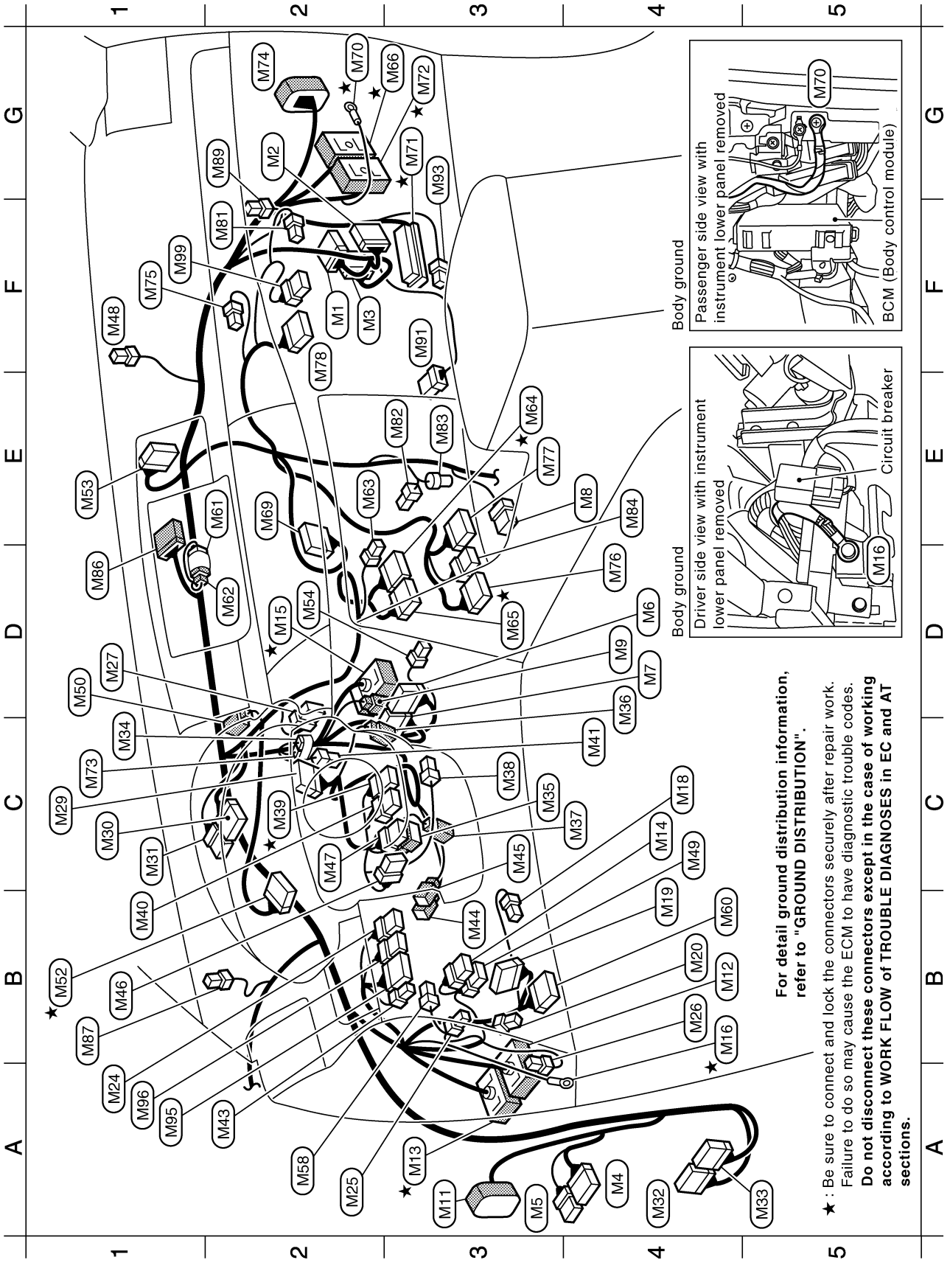
| Connector type | Water proof type | | Standard type | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| • Cavity: Less than 4<br>• Relay connector |  |  |  |  |
| • Cavity: From 5 to 8 |  |  |  |  |
| • Cavity: More than 9 |  |  |  |  |
| • Ground terminal etc. | — | |  | |

CKIT0108E

## OUTLINE


Tail No.2 harness
Body No.2 harness
Tail harness
Rear display harness
Room lamp harness
Navigation sub-harness
Rear door harness RH
Main harness
Front door harness RH
Engine control harness
Battery cable
(+)
Rear door harness LH
Front door harness LH
Body harness
(With VQ35DE)
Engine room harness
(With VK45DE)
A/C harness
TKIT0752E

## MAIN HARNESS
### Instrument Panel

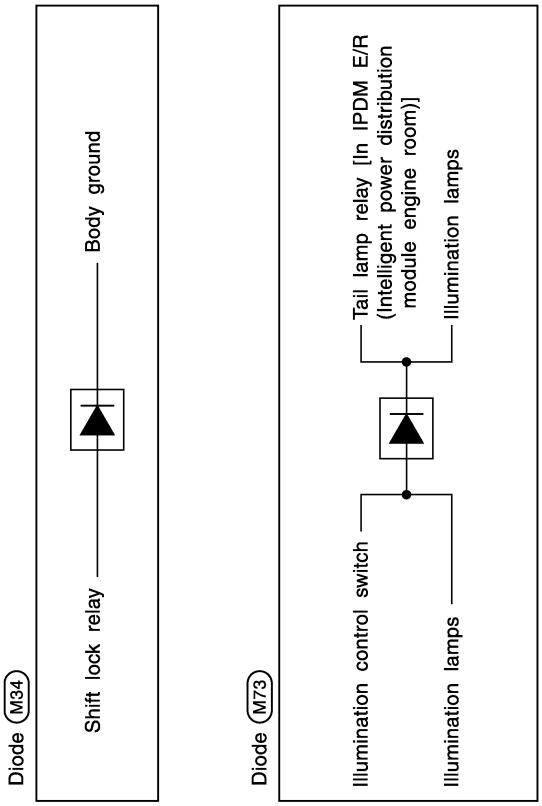


F2 (M1) W/40 : BCM (Body control module)
G2 (M2) B/16 : BCM (Body control module)
F2 (M3) W/16 : BCM (Body control module)
A4 (M4) W/16 : Fuse block (J/B)
A3 (M5) W/8 : Fuse block (J/B)
D4 (M6) W/32 : Automatic drive positioner control unit
D4 (M7) W/16 : Automatic drive positioner control unit
E4 (M8) W/8 : Power steering control unit
D4 (M9) Y/4 : To (E126)
A3 (M11) SMJ : To (D1)
B4 (M12) SMJ : To (B1)
A3 ★ (M13) SMJ : To (B2)
C4 (M14) W/8 : Key slot
D2 ★ (M15) SMJ : To (E108)
B4 ★ (M16) — : Body ground
C4 (M18) W/2 : Foot lamp (Driver side)
B4 (M19) W/32 : Low tire pressure warning control unit
B4 (M20) W/2 : Tire pressure warning check connecter
A1 (M24) GR/6 : VDC off switch
A2 (M25) W/4 : Trunk lid opener switch
B4 (M26) W/2 : Circuit breaker
D1 (M27) BR/8 : Push-button ignition switch
C1 (M29) W/16 : Combination switch
C1 (M30) W/12 : PDU (Power distribution unit)
C1 (M31) W/6 : PDU (Power distribution unit)
A4 (M32) W/40 : Intelligent Key unit
A5 (M33) W/32 : Intelligent Key unit
C1 (M34) W/2 : Diode
C3 (M35) W/8 : Steering lock unit
D4 (M36) W/2 : Tilt motor
C4 (M37) W/3 : Tilt sensor
C3 (M38) BR/2 : Microphone (For audio pilot)
C2 ★ (M39) GR/8 : Combination switch (Spiral cable)
B1 (M40) Y/6 : Combination switch (Spiral cable)
C4 (M41) L/4 : Resistor
A2 (M43) W/3 : Illumination control switch
B3 (M44) W/3 : Telescopic sensor
C3 (M45) W/2 : Telescopic motor
B1 (M46) GR/6 : ADP steering switch
C2 (M47) W/8 : Steering angle sensor

F1 (M48) W/3 : Optical sensor
C4 (M49) GR/8 : LDW switch (With lane departure warning)
D1 (M50) W/3 : To (M251)
B1 ★ (M52) W/24 : Combination meter
E1 (M53) W/24 : To (M216)
D2 (M54) W/2 : In-vehicle sensor
A2 (M58) BR/4 : LDW chime (With lane departure warning)
B4 (M60) W/16 : Data link connector
E2 (M61) W/2 : To (M62)
D2 (M62) W/2 : To (M61)
E2 (M63) W/4 : Clock
E3 ★ (M64) W/40 : Unified meter and A/C amp.
D3 ★ (M65) W/32 : Unified meter and A/C amp.
G3 ★ (M66) SMJ : To (B418)
E2 (M69) W/16 : Multifunction switch
G2 ★ (M70) — : Body ground
G3 ★ (M71) SMJ : ECM
G3 ★ (M72) SMJ : To (F102)
C1 (M73) W/2 : Diode
G2 (M74) SMJ : To (D31)
F1 (M75) Y/4 : Front passenger air bag module
D4 (M76) W/20 : Audio unit
E3 (M77) W/12 : Audio unit
F2 (M78) W/40 : AV control unit (Without navigation system)
: NAVI control unit (With navigation system)
F2 (M81) BR/2 : Glove box lamp
E3 (M82) W/4 : Intake sensor
E3 (M83) GR/2 : Inside key antenna (Instrument center)
E4 (M84) W/8 : Audio unit
D1 (M86) W/16 : To (M215) (For navigation system or rear view monitor)
B1 (M87) B/2 : Sunload sensor
G2 (M89) B/4 : Remote keyless entry receiver
F3 (M91) W/6 : Blower motor
G3 (M93) W/2 : Foot lamp (Passenger side)
A1 (M95) BR/16 : Door mirror remote control switch
A1 (M96) W/6 : AFS switch
F1 (M99) W/6 : Trunk lid opener cancel switch

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

TKIT0754E


Diode M34
Shift lock relay
Body ground
Diode M73
Illumination control switch
Illumination lamps
Tail lamp relay [In IPDM E/R (Intelligent power distribution module engine room)]
Illumination lamps

TKIT0444E

| | | | |
|---|---|---|---|
| M132 | W/3 | : | Cigarette lighter socket |
| ★ M133 | W/10 | : | A/T device |
| M134 | BR/2 | : | A/T illumination |
| M135 | W/8 | : | Snow mode switch |
| M137 | W/6 | : | Rear sunshade front switch |
| M139 | — | : | Body ground (With DVD player) |
| M140 | B/2 | : | Power socket (Floor console inside) |
| M142 | GR/2 | : | Inside key antenna (Console) |
| M143 | W/32 | : | To M271 (With DVD player) |
| M144 | W/16 | : | To M281 (With DVD player) |
| M145 | B/6 | : | Yaw rate / side G sensor |
| M147 | Y/28 | : | Air bag diagnosis sensor unit |
| M148 | W/2 | : | To M291 (With DVD player) |
| M149 | W/8 | : | Auxiliary input jacks and power socket (Via sub-harness) (Floor console rear) (With DVD player) |
| M151 | W/8 | : | Rear control cancel switch |
| M153 | W/4 | : | To B431 (For rear view monitor) |

**Console sub-harness-1 (With DVD player)**

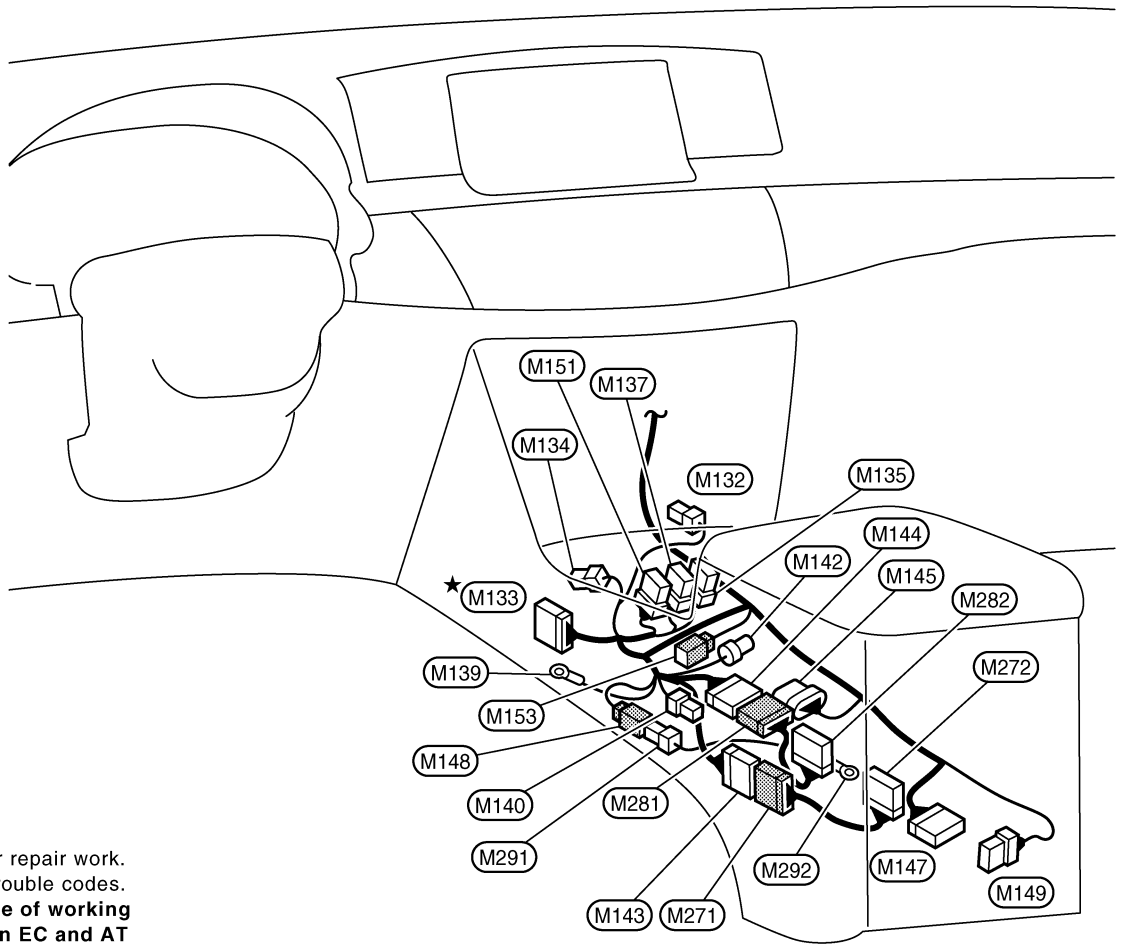
| | | | |
|---|---|---|---|
| M271 | W/32 | : | To M143 |
| M272 | W/32 | : | DVD player |

**Console sub-harness-2 (With DVD player)**

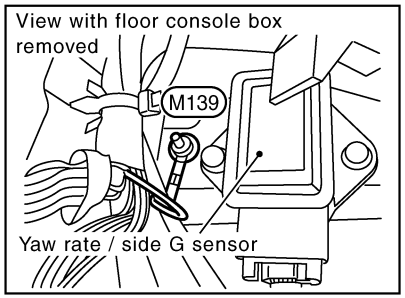
| | | | |
|---|---|---|---|
| M281 | W/16 | : | To M144 |
| M282 | W/16 | : | DVD player |

**Console sub-harness-3 (With DVD player)**

| | | | |
|---|---|---|---|
| M291 | W/2 | : | To M148 |
| M292 | — | : | DVD player |




Body ground

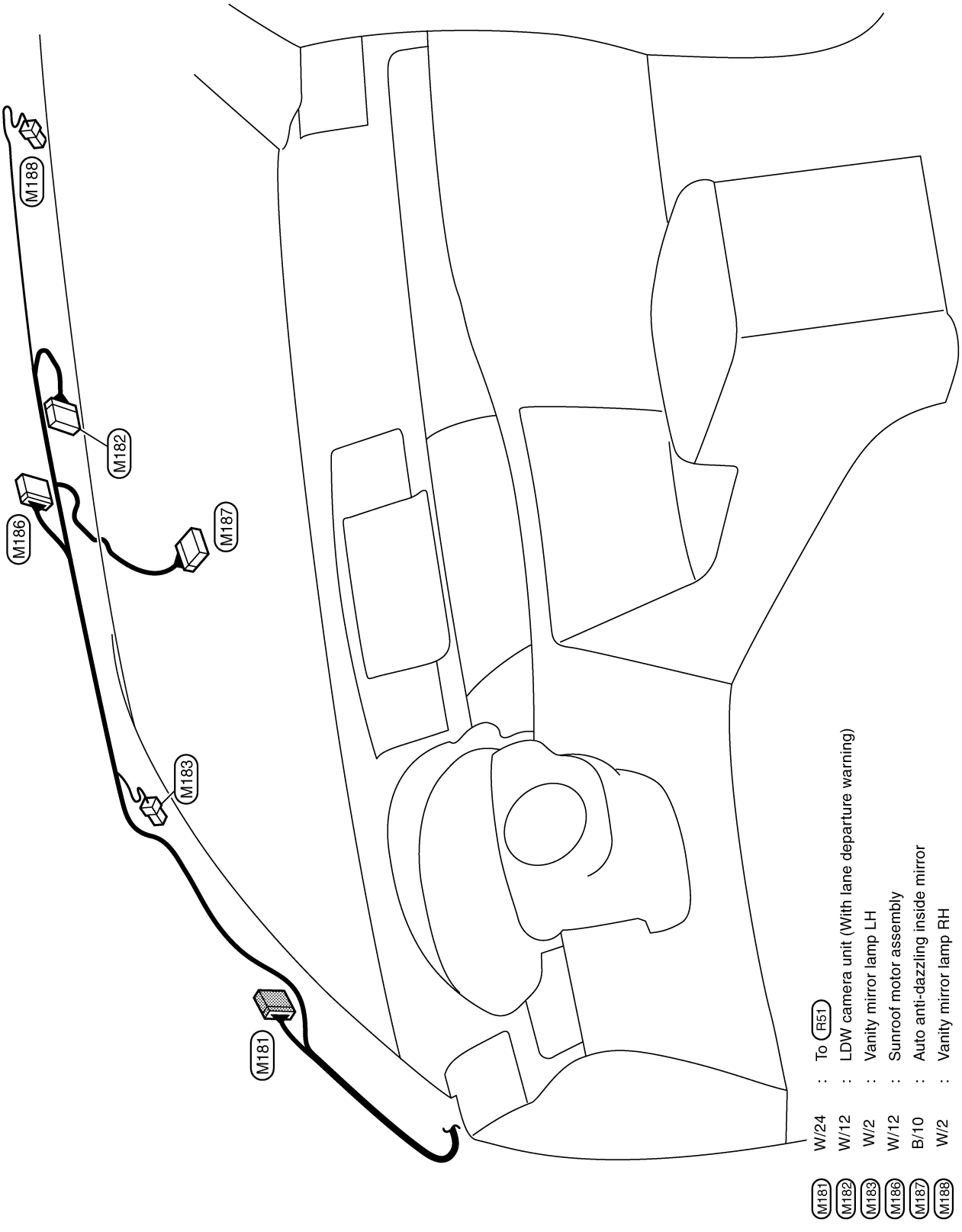



**For detail ground distribution information, refer to "GROUND DISTRIBUTION".**

★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the 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.**

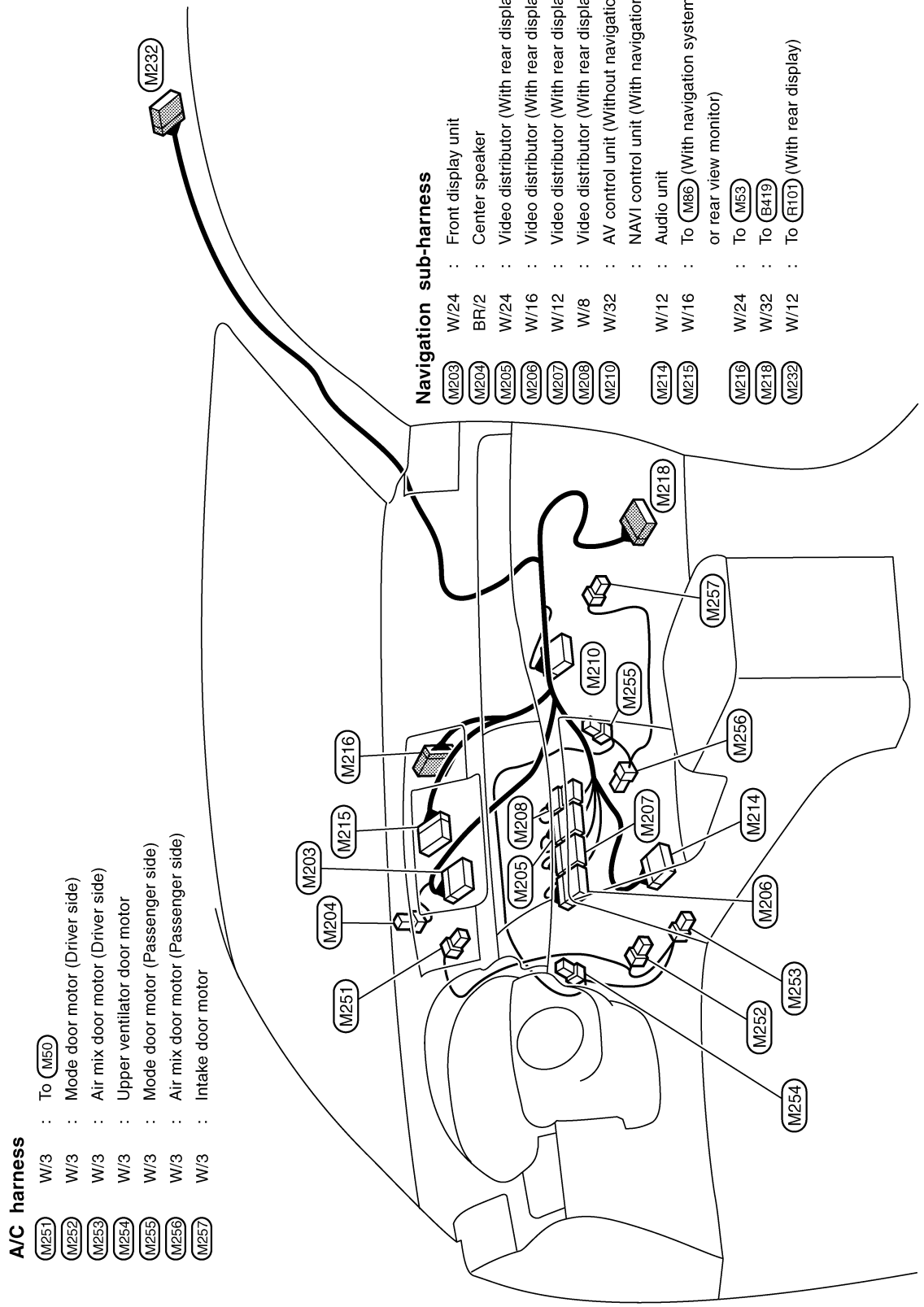
TKIT0755E

## Roof




TKIT0756E

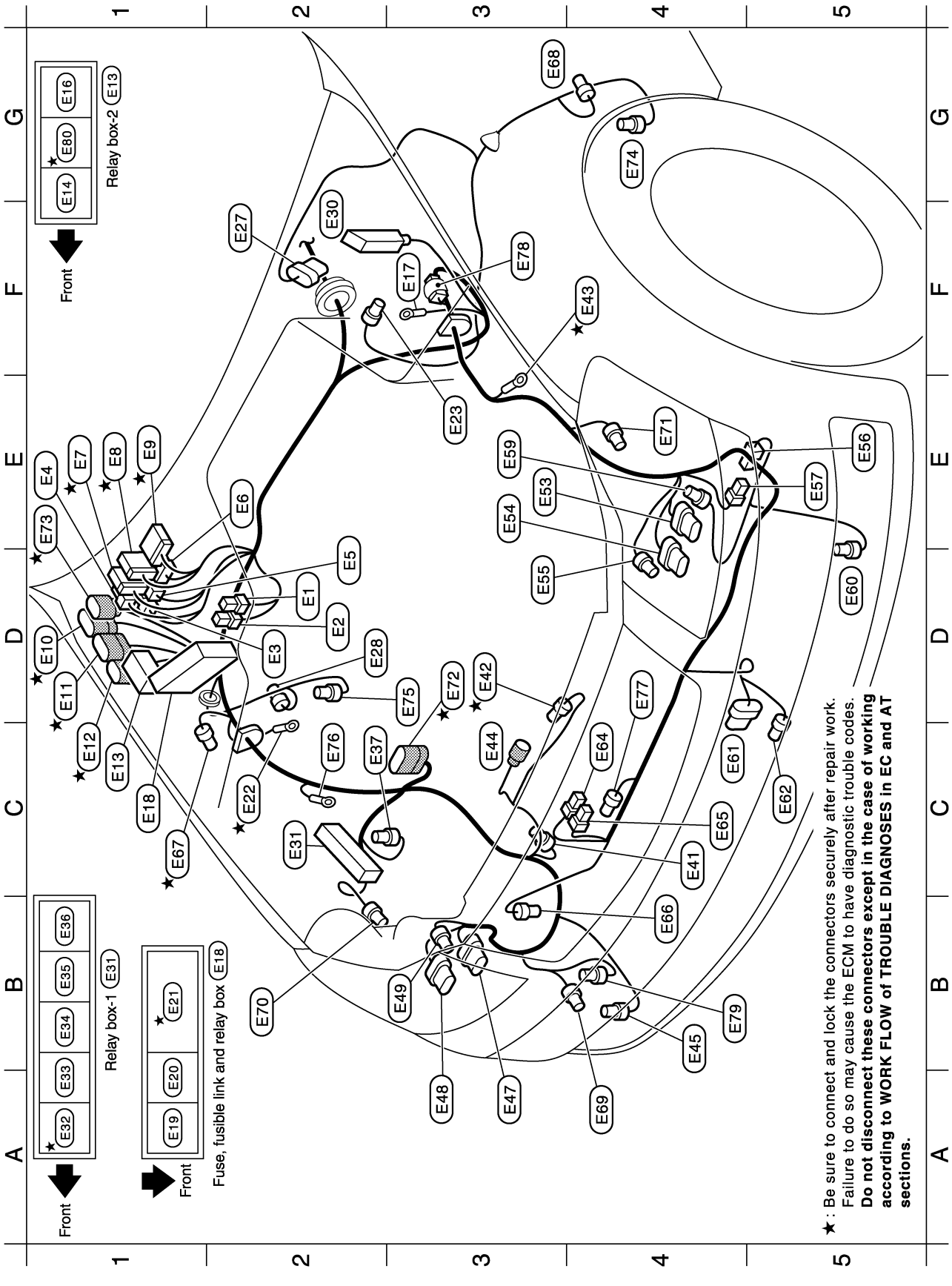
## NAVIGATION SUB-HARNESS & A/C HARNESS



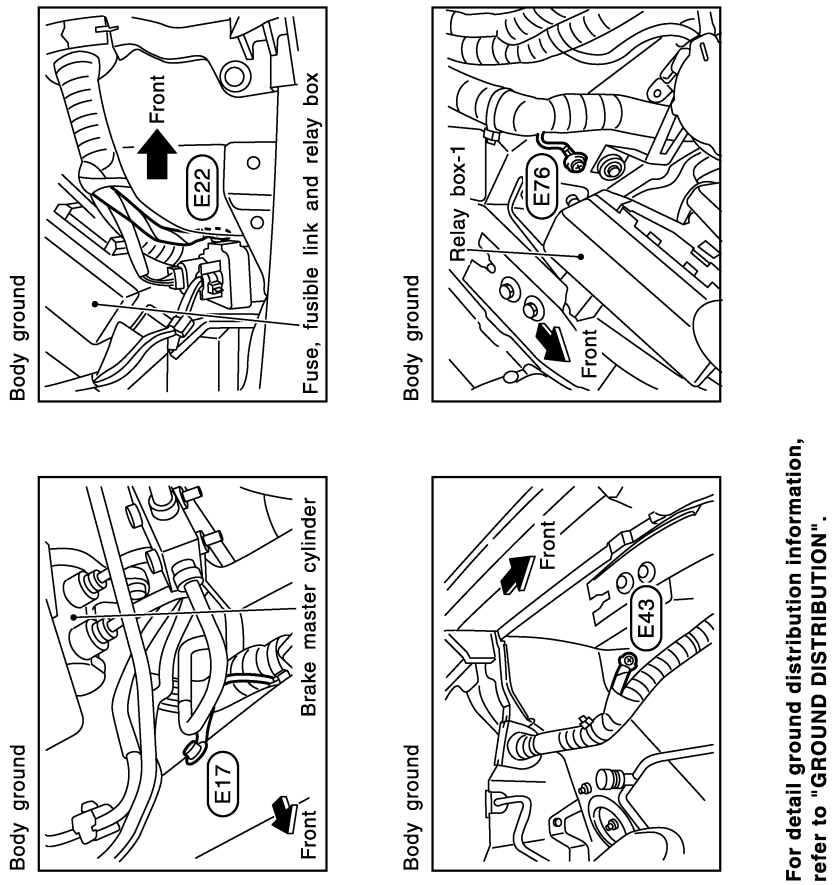

TKIT0757E

## ENGINE ROOM HARNESS

### Engine Compartment




TKIT0448E




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

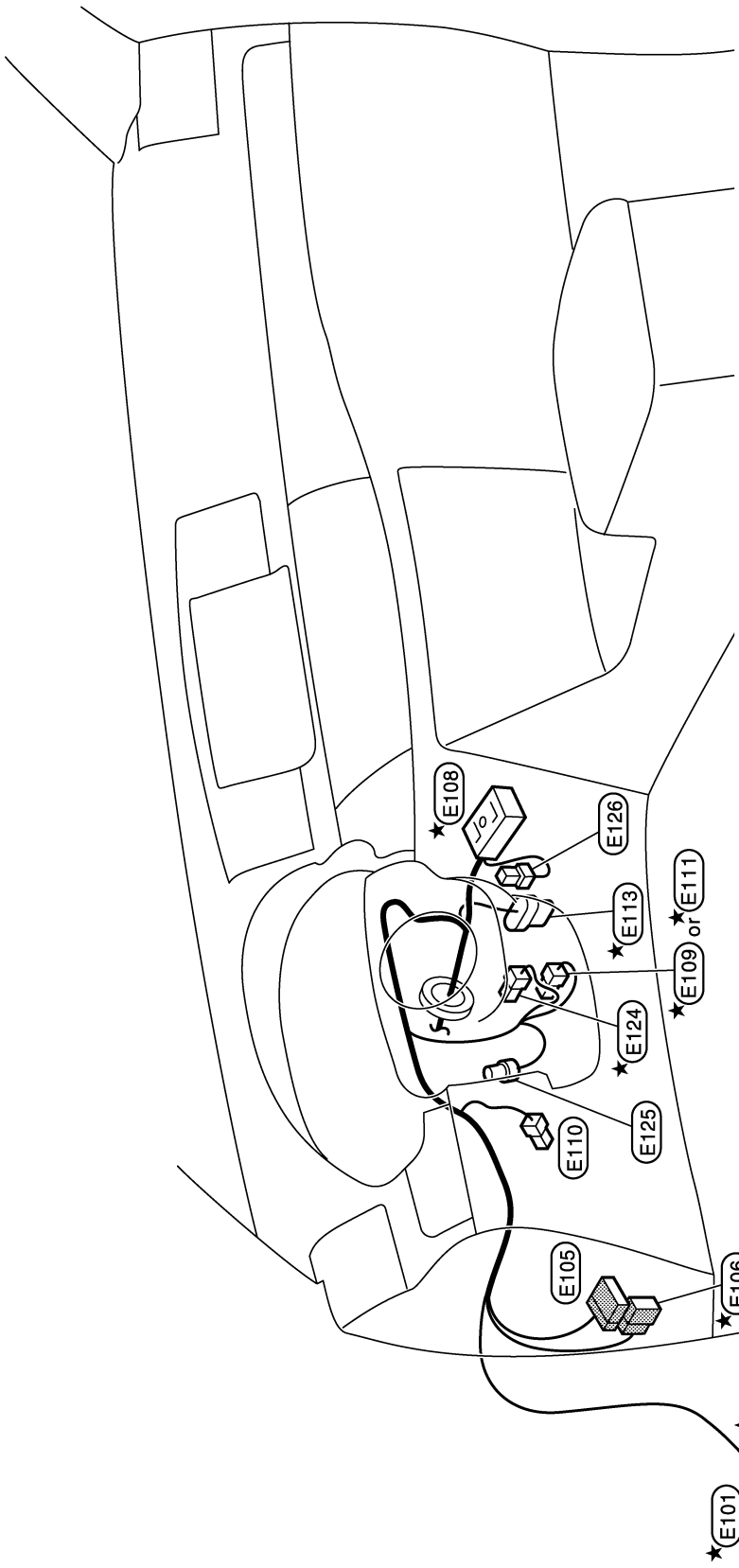
TKIT0449E

| | | | | |
|---|---|---|---|---|
| D2 | E1 | BR/2 | : | Fusible link holder |
| D2 | E2 | GR/2 | : | Fusible link holder |
| D2 | E3 | B/2 | : | IPDM E/R (Intelligent power distribution module engine room) |
| E1 | E4 | W/4 | : | IPDM E/R (Intelligent power distribution module engine room) |
| D2 | E5 | B/4 | : | IPDM E/R (Intelligent power distribution module engine room) |
| E2 | E6 | W/6 | : | IPDM E/R (Intelligent power distribution module engine room) |
| E1 ★ | E7 | GR/16 | : | IPDM E/R (Intelligent power distribution module engine room) |
| E1 ★ | E8 | W/12 | : | IPDM E/R (Intelligent power distribution module engine room) |
| E1 ★ | E9 | W/16 | : | IPDM E/R (Intelligent power distribution module engine room) |
| D1 ★ | E10 | GR/9 | : | To F1 (With VQ35DE) |
| D1 ★ | E11 | B/10 | : | To F2 |
| C1 ★ | E12 | B/8 | : | To F3 |
| C1 | E13 | — | : | Relay box-2 |
| G1 | E14 | — | : | Fuse block-2 |
| G1 | E16 | BR/6 | : | Climate controlled seat relay |
| F3 | E17 | — | : | Body ground |
| C1 | E18 | — | : | Fuse, fusible link and relay box |
| A1 | E19 | L/4 | : | Back-up lamp relay |
| A1 | E20 | — | : | Fuse and fusible link block (Horn relay) |
| B1 ★ | E21 | — | : | Fuse and fusible link block |
| C2 ★ | E22 | — | : | Body ground |
| E3 | E23 | GR/2 | : | Brake fluid level switch |
| F2 | E27 | GR/6 | : | Front wiper motor |
| D2 | E28 | G/2 | : | Side turn signal lamp RH |
| F2 | E30 | SMJ | : | ABS actuator and electric unit (Control unit) |
| C2 | E31 | — | : | Relay box-1 |
| A1 ★ | E32 | -/4 | : | Cooling fan relay |
| A1 | E33 | B/5 | : | Front wiper reverse relay |
| B1 | E34 | B/5 | : | Daytime light relay (For Canada) |
| B1 | E35 | L/4 | : | Shift lock relay |
| B1 | E36 | BR/6 | : | Rear window defogger relay |
| C2 | E37 | BR/3 | : | Intelligent Key warning buzzer |
| C4 | E41 | B/2 | : | Front wheel sensor RH |
| D3 ★ | E42 | GR/3 | : | Cooling fan control module |
| F4 ★ | E43 | — | : | Body ground |
| C3 | E44 | GR/2 | : | Hood switch |
| B4 | E45 | -/2 | : | Front fog lamp RH |
| A3 | E47 | B/8 | : | Front combination lamp RH |
| A3 | E48 | GR/8 | : | Front combination lamp RH (With xenon headlamp) |
| B3 | E49 | GR/2 | : | Front combination lamp RH |
| E3 | E53 | GR/8 | : | Front combination lamp LH (With xenon headlamp) |
| E3 | E54 | B/8 | : | Front combination lamp LH |
| D3 | E55 | GR/2 | : | Front combination lamp LH |
| E5 | E56 | B/1 | : | Horn (Low) |
| E5 | E57 | B/1 | : | Horn (Low) |
| E3 | E59 | B/2 | : | Front wheel sensor LH |
| D5 | E60 | -/2 | : | Front fog lamp LH |
| C4 | E61 | B/6 | : | ICC sensor integrated unit (With ICC) |
| C5 | E62 | B/2 | : | Ambient sensor |
| C4 | E64 | B/1 | : | Horn (High) |
| C4 | E65 | B/1 | : | Horn (High) |
| B4 | E66 | B/3 | : | Refrigerant pressure sensor |
| C1 ★ | E67 | B/3 | : | Battery current sensor |
| G3 | E68 | G/2 | : | Side turn signal lamp LH |
| A4 | E69 | GR/2 | : | Front washer motor |
| B2 | E70 | GR/3 | : | Front combination lamp RH (Aiming motor) (With xenon headlamp) |
| E4 | E71 | GR/3 | : | Front combination lamp LH (Aiming motor) (With xenon headlamp) |
| D3 ★ | E72 | GR/9 | : | To E206 (With VK45DE) |
| E1 ★ | E73 | B/8 | : | To F68 (With VK45DE) |
| G4 | E74 | B/4 | : | Tire pressure receiver front LH |
| D3 | E75 | B/4 | : | Tire pressure receiver front RH |
| C2 | E76 | — | : | Body ground |
| D4 | E77 | Y/2 | : | Crash zone sensor |
| F3 | E78 | BR/2 | : | Resistor |
| B4 | E79 | BR/2 | : | Washer level sensor |
| G1 ★ | E80 | L/4 | : | ICC brake hold relay (With ICC) |

★: 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.**

TKIT0450E

## Passenger Compartment

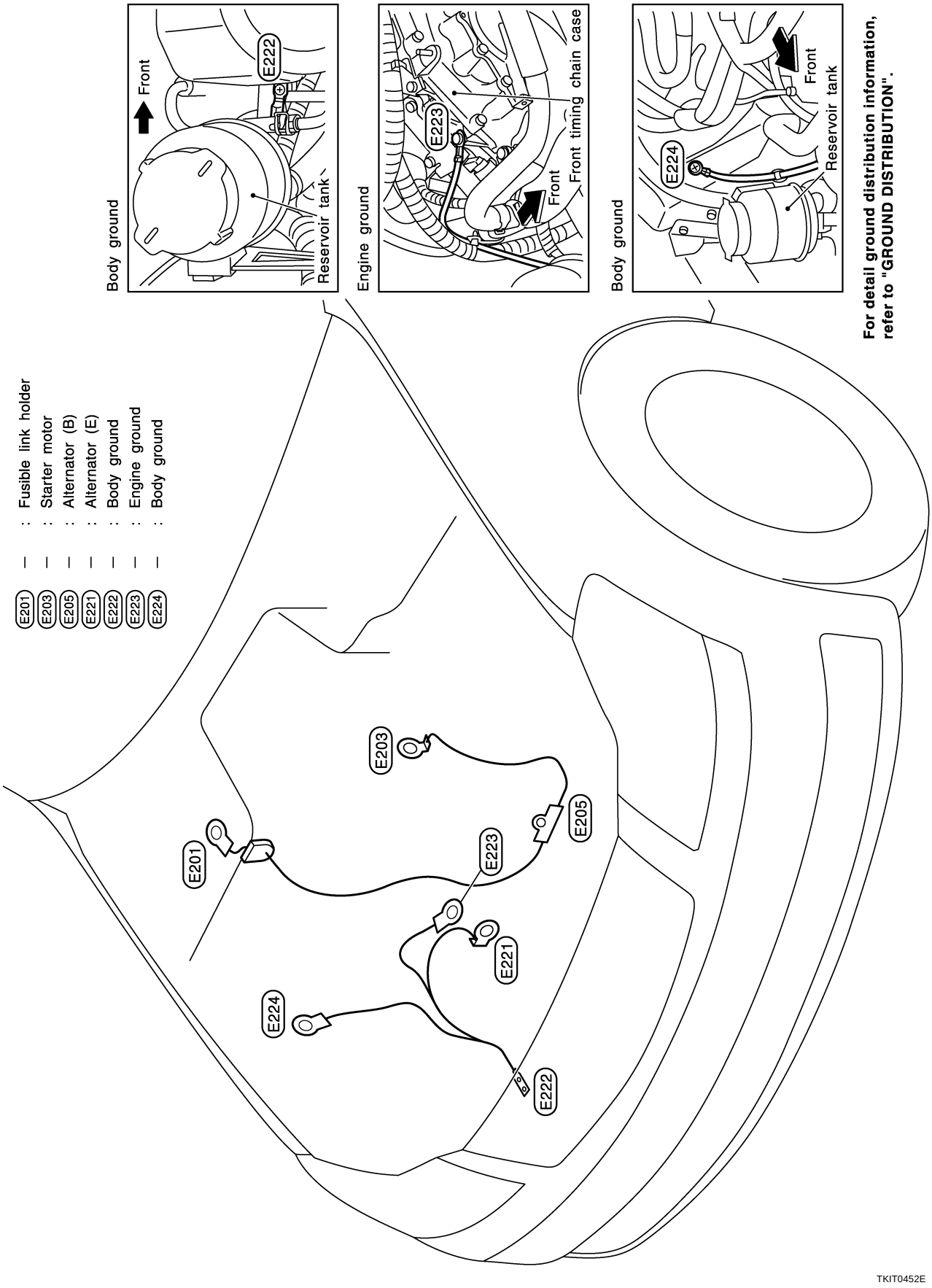



★ E101 W/8 : Fuse block (J/B)
★ E102 W/6 : Fuse block (J/B)
E103 B/1 : Fuse block (J/B)
E104 B/2 : Fuse block (J/B)
E105 W/24 : To B3
★ E106 B/8 : To B4
★ E108 SMJ : To M15
★ E109 BR/2 : ASCD brake switch (Without ICC)
E110 W/1 : Parking brake switch
★ E111 BR/2 : ICC brake switch (With ICC)
★ E113 B/6 : Accelerator pedal position sensor
★ E124 W/4 : Stop lamp switch
E125 B/4 : Brake pedal stroke sensor (With pre-crash seat belt)
E126 Y/4 : To M9

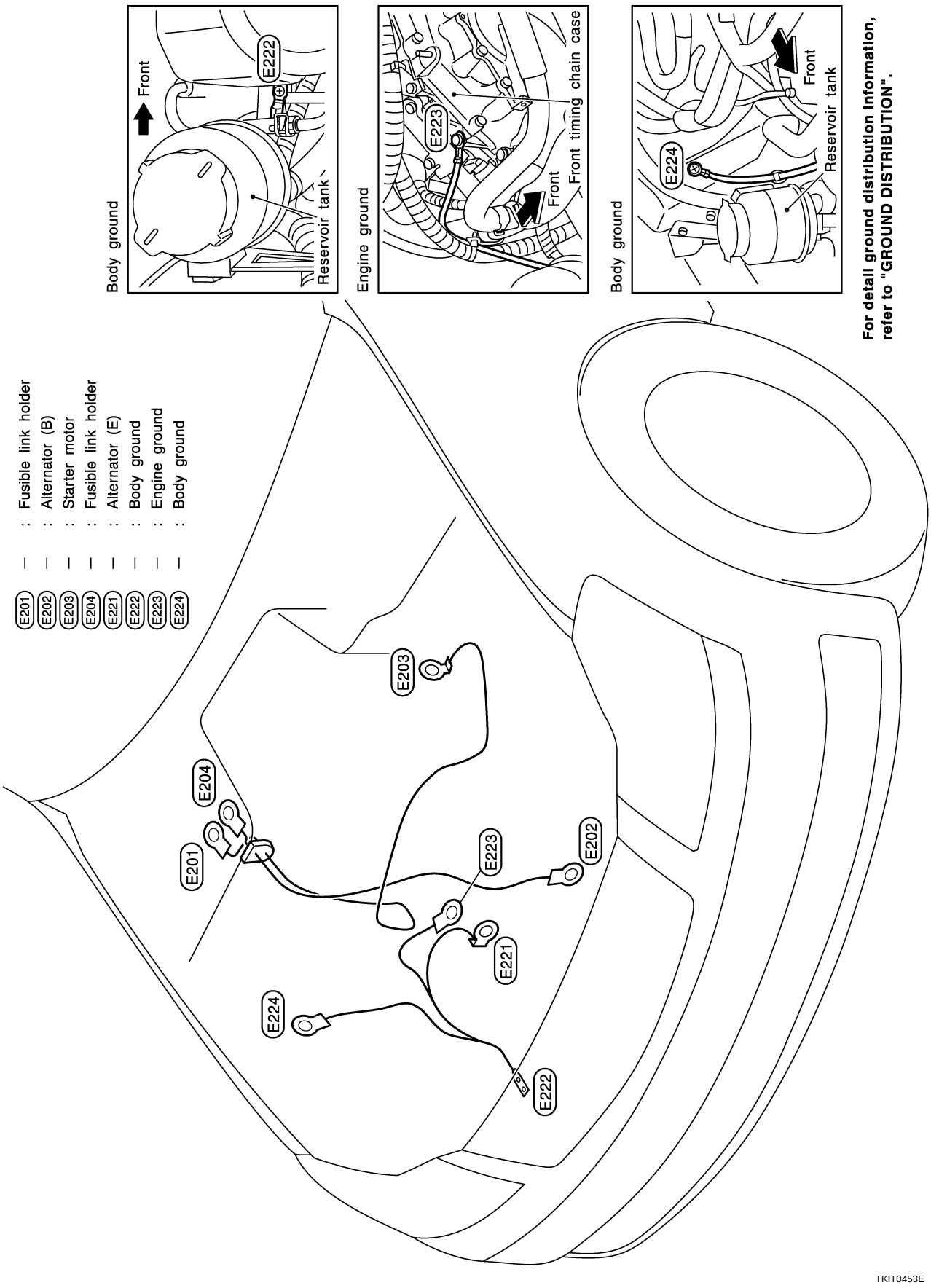
★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

TKIT0451E

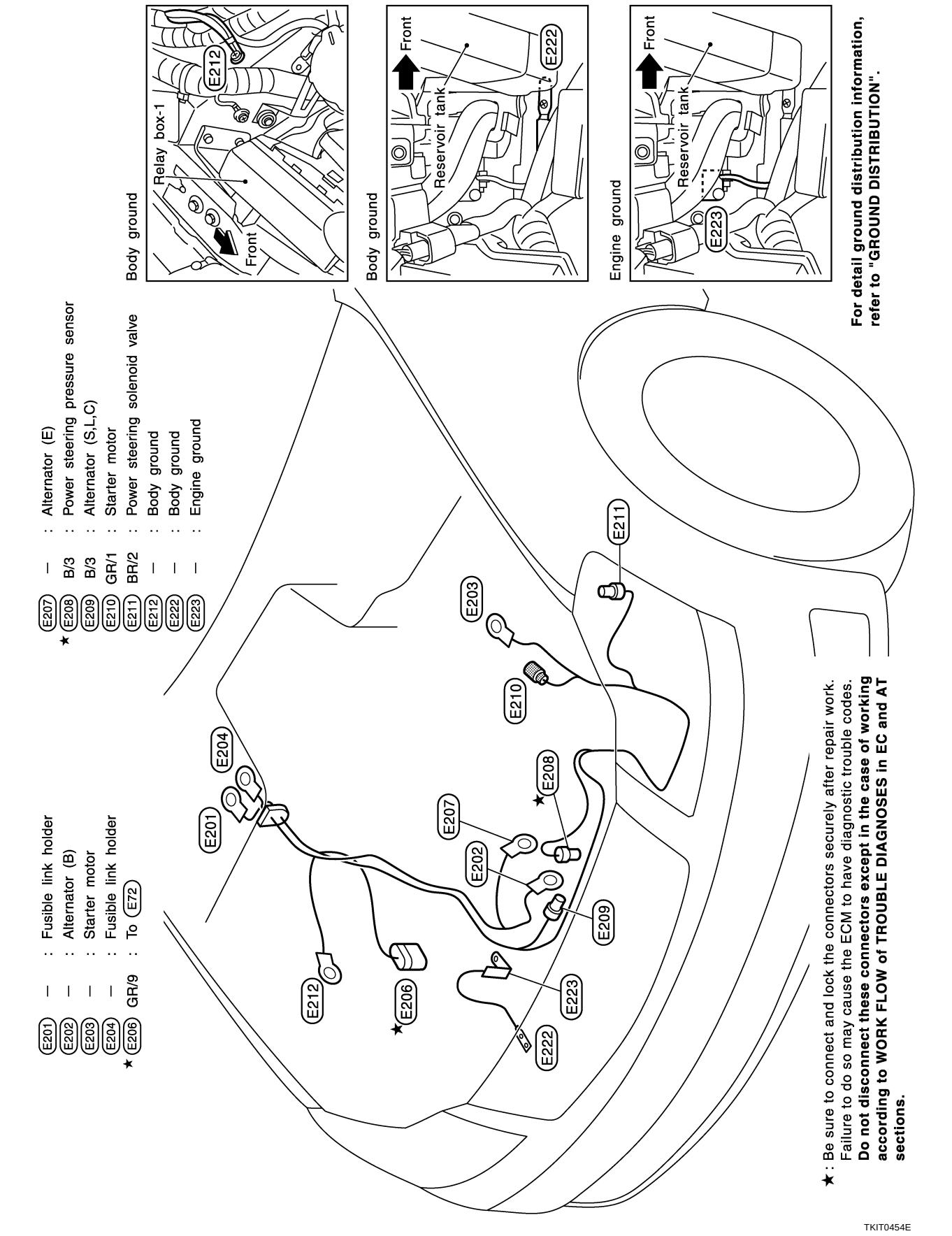
## Battery Cable (2WD Models with VQ Engine)



## Battery Cable (AWD Models with VQ Engine)

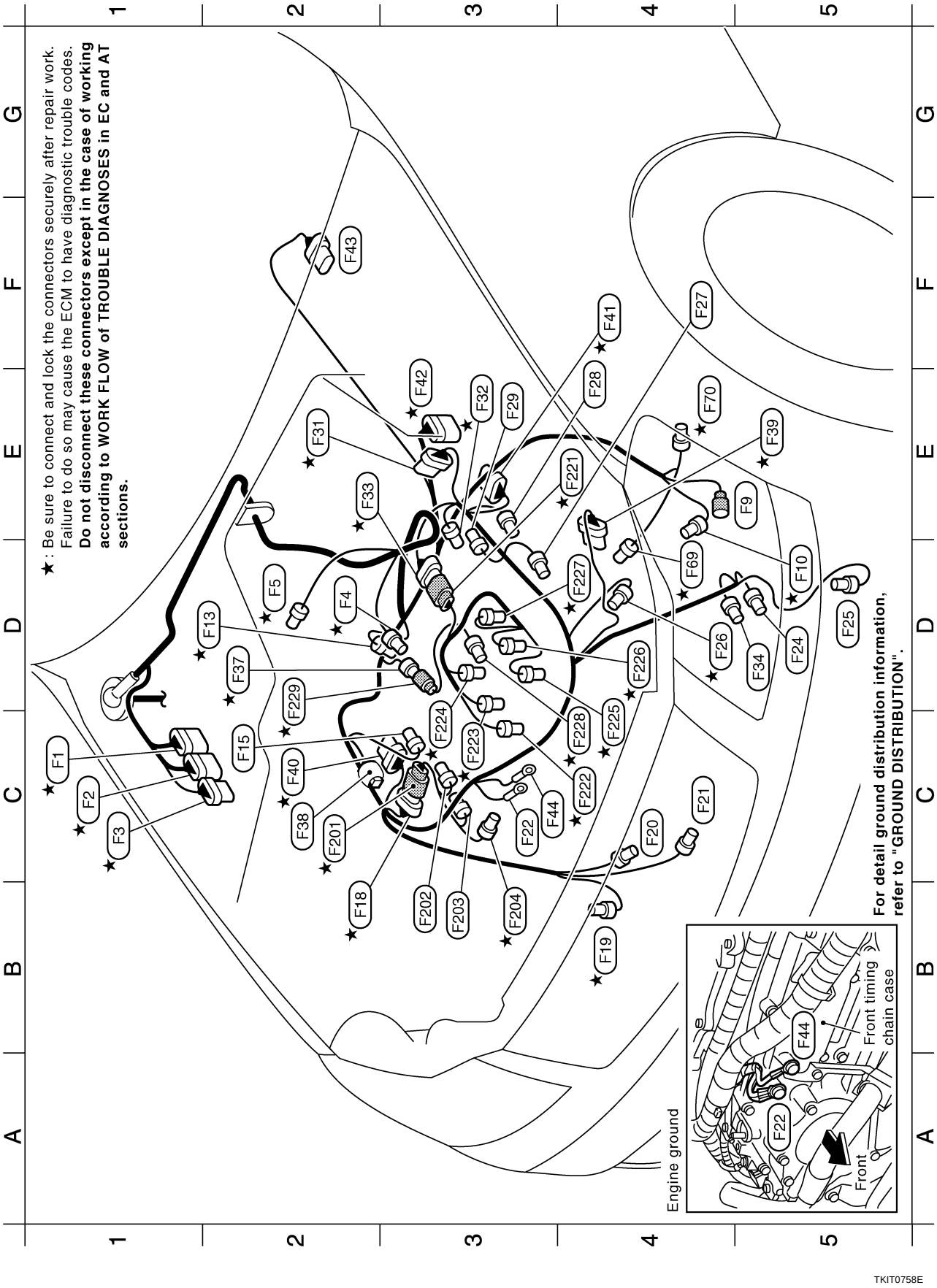


## Battery Cable (VK Engine)



## ENGINE CONTROL HARNESS (VQ ENGINE)

### Engine Compartment




TKIT0758E

| | | | | |
|---|---|---|---|---|
| C1 ★ | F1 | GR/9 | : | To E10 |
| C1 ★ | F2 | B/10 | : | To E11 |
| C1 ★ | F3 | B/8 | : | To E12 |
| D2 ★ | F4 | G/3 | : | Camshaft position sensor (PHASE) (Bank 1) |
| D2 ★ | F5 | GR/2 | : | EVAP canister purge volume control solenoid valve |
| E5 | F9 | GR/1 | : | Starter motor |
| D5 ★ | F10 | B/3 | : | Crankshaft position sensor (POS) |
| D2 ★ | F13 | GR/2 | : | Engine coolant temperature sensor |
| C2 | F15 | GR/3 | : | Ignition coil No.5 (With power transistor) |
| B2 ★ | F18 | L/6 | : | To F201 |
| B4 ★ | F19 | B/3 | : | Power steering pressure sensor |
| C4 | F20 | B/3 | : | Alternator (S,L,C) |
| C4 | F21 | GR/1 | : | Oil pressure switch |
| C3 | F22 | — | : | Engine ground |
| D5 | F24 | B/1 | : | Compressor |
| D5 | F25 | BR/2 | : | Power steering solenoid valve |
| D4 ★ | F26 | G/2 | : | Intake valve timing control solenoid valve (Bank 2) |
| F4 | F27 | GR/3 | : | Ignition coil No.2 (With power transistor) |
| E4 | F28 | GR/3 | : | Ignition coil No.4 (With power transistor) |
| E3 | F29 | GR/3 | : | Ignition coil No.6 (With power transistor) |
| E2 ★ | F31 | G/6 | : | Electric throttle control actuator |
| E3 ★ | F32 | B/3 | : | Camshaft position sensor (PHASE) (Bank 2) |
| E2 ★ | F33 | G/8 | : | To F221 |
| D5 | F34 | GR/2 | : | Compressor |
| D2 ★ | F37 | SB/2 | : | To F229 |
| C2 | F38 | W/2 | : | Condenser |
| E5 ★ | F39 | B/6 | : | Mass air flow sensor |
| C2 ★ | F40 | B/6 | : | Air fuel ratio (A/F) sensor 1 (Bank 1) |
| F4 ★ | F41 | B/6 | : | Air fuel ratio (A/F) sensor 1 (Bank 2) |
| E3 ★ | F42 | G/10 | : | A/T assembly |
| F2 | F43 | B/8 | : | Transfer assembly (AWD models) |
| C3 | F44 | — | : | Engine ground |
| D4 ★ | F69 | B/4 | : | Heated oxygen sensor 2 (Bank 1) |
| E4 ★ | F70 | B/4 | : | Heated oxygen sensor 2 (Bank 2) |

**Engine control sub-harness-1**

| | | | | |
|---|---|---|---|---|
| C2 ★ | F201 | L/6 | : | To F18 |
| B3 | F202 | GR/3 | : | Ignition coil No.3 (With power transistor) |
| B3 | F203 | GR/3 | : | Ignition coil No.1 (With power transistor) |
| B3 ★ | F204 | G/2 | : | Intake valve timing control solenoid valve (Bank 1) |

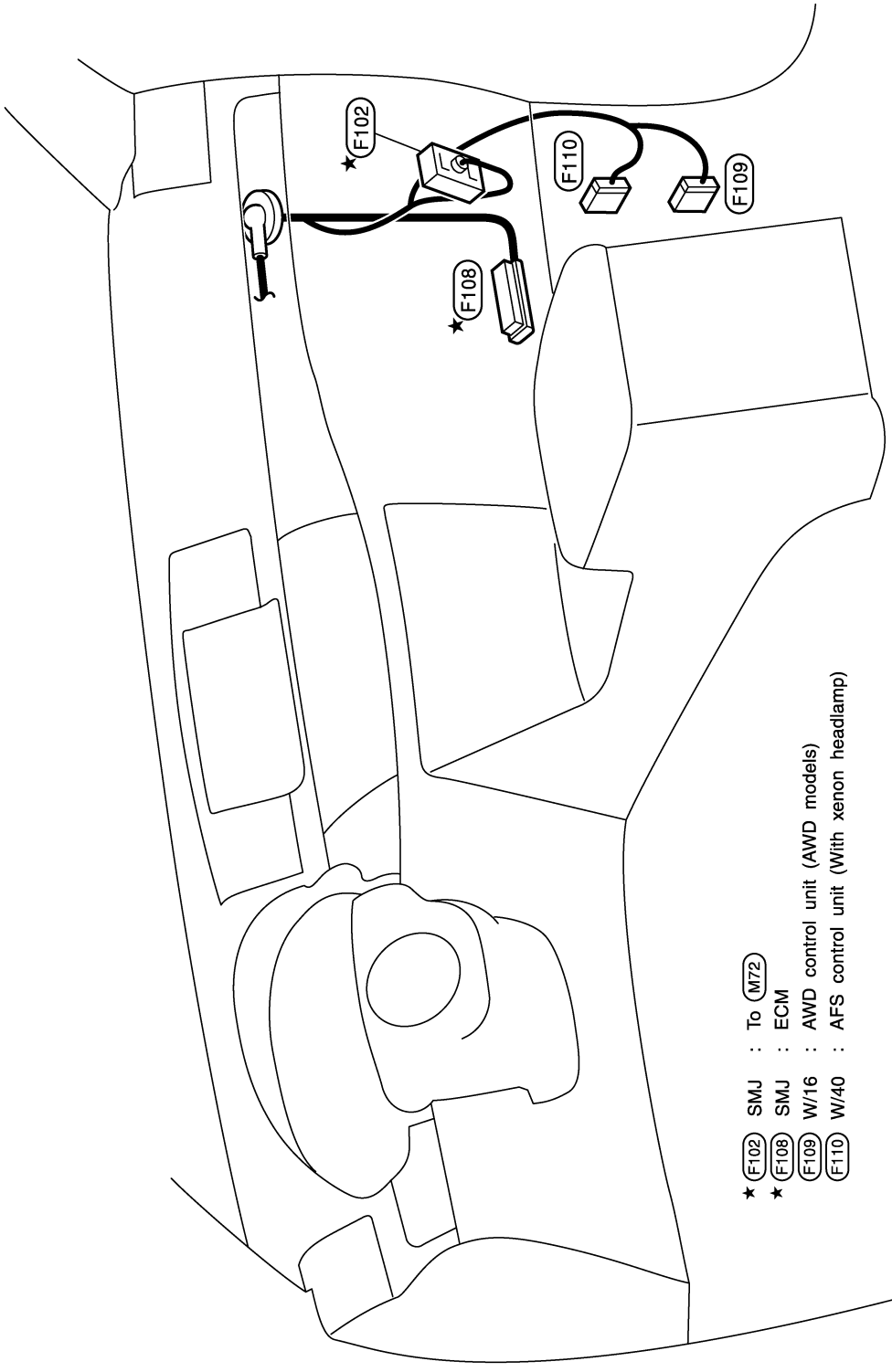
**Engine control sub-harness-1**

| | | | | |
|---|---|---|---|---|
| E4 ★ | F221 | G/8 | : | To F33 |
| C4 ★ | F222 | GR/2 | : | Fuel injector No.1 |
| C3 ★ | F223 | GR/2 | : | Fuel injector No.3 |
| C3 ★ | F224 | GR/2 | : | Fuel injector No.5 |
| C4 ★ | F225 | GR/2 | : | Fuel injector No.2 |
| D4 ★ | F226 | GR/2 | : | Fuel injector No.4 |
| D4 ★ | F227 | GR/2 | : | Fuel injector No.6 |
| C4 ★ | F228 | L/2 | : | Knock sensor |
| D2 ★ | F229 | SB/2 | : | To F37 |

★: 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.**

TKIT0759E

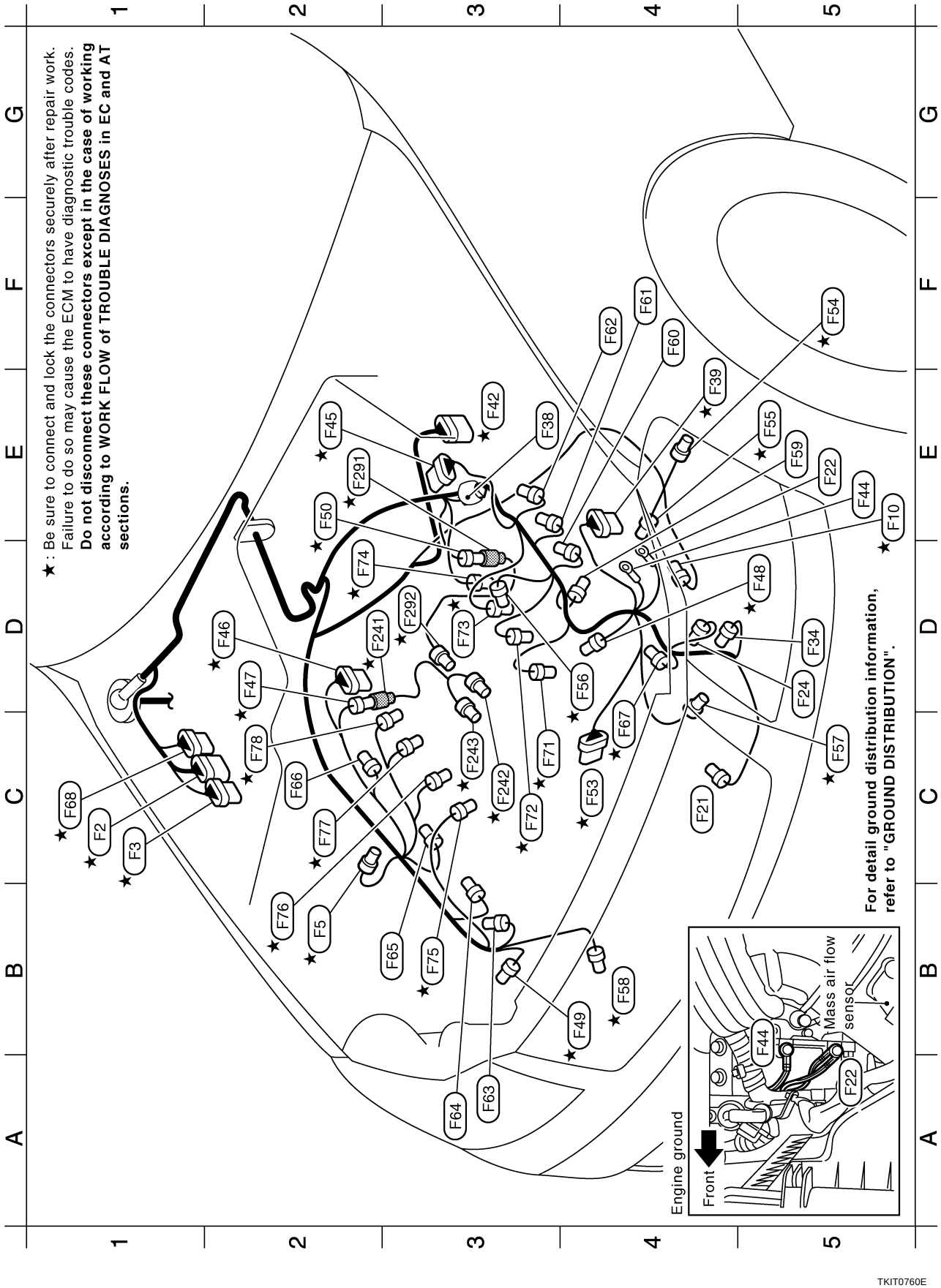
## Passenger Compartment




TKIT0457E

## ENGINE CONTROL HARNESS (VK ENGINE)

### Engine Compartment




TKIT0760E

| | | | | |
|---|---|---|---|---|
| C1 ★ | F2 | B/10 | : | To E11 |
| C1 ★ | F3 | B/8 | : | To E12 |
| B2 ★ | F5 | GR/2 | : | EVAP canister purge volume control solenoid valve |
| E5 ★ | F10 | B/3 | : | Crankshaft position sensor (POS) |
| C4 | F21 | GR/1 | : | Oil pressure switch |
| E5 | F22 | — | : | Engine ground |
| D5 | F24 | B/1 | : | Compressor |
| D5 | F34 | GR/2 | : | Compressor |
| E3 | F38 | W/2 | : | Condenser |
| E4 ★ | F39 | B/6 | : | Mass air flow sensor |
| E3 ★ | F42 | G/10 | : | A/T assembly |
| E5 | F44 | — | : | Engine ground |
| E2 ★ | F45 | B/6 | : | Air fuel ratio (A/F) sensor 1 (Bank 1) |
| D2 ★ | F46 | B/6 | : | Air fuel ratio (A/F) sensor 1 (Bank 2) |
| D2 ★ | F47 | B/4 | : | To F241 |
| D5 ★ | F48 | B/3 | : | Intake valve timing control position sensor (Bank 1) |
| B4 ★ | F49 | B/3 | : | Intake valve timing control position sensor (Bank 2) |
| E2 ★ | F50 | SB/2 | : | To F291 |
| C4 ★ | F53 | B/6 | : | Electric throttle control actuator |
| F5 ★ | F54 | G/4 | : | Heated oxygen sensor 2 (Bank 1) |
| E5 ★ | F55 | L/4 | : | Heated oxygen sensor 2 (Bank 2) |
| D4 ★ | F56 | B/2 | : | VIAS control solenoid valve |
| C5 ★ | F57 | G/2 | : | Intake valve timing control solenoid valve (Bank 1) |
| B4 ★ | F58 | G/2 | : | Intake valve timing control solenoid valve (Bank 2) |
| E5 | F59 | GR/3 | : | Ignition coil No.1 (With power transistor) |
| F4 | F60 | GR/3 | : | Ignition coil No.3 (With power transistor) |
| F4 | F61 | GR/3 | : | Ignition coil No.5 (With power transistor) |
| F4 | F62 | GR/3 | : | Ignition coil No.7 (With power transistor) |
| A3 | F63 | GR/3 | : | Ignition coil No.2 (With power transistor) |
| A3 | F64 | GR/3 | : | Ignition coil No.4 (With power transistor) |
| B3 | F65 | GR/3 | : | Ignition coil No.6 (With power transistor) |
| C2 | F66 | GR/3 | : | Ignition coil No.8 (With power transistor) |
| C4 ★ | F67 | B/3 | : | Camshaft position sensor (PHASE) |
| C1 ★ | F68 | B/8 | : | To E73 |
| C3 ★ | F71 | GR/2 | : | Fuel injector No.1 |
| C3 ★ | F72 | GR/2 | : | Fuel injector No.3 |
| D3 ★ | F73 | GR/2 | : | Fuel injector No.5 |
| D2 ★ | F74 | GR/2 | : | Fuel injector No.7 |
| B3 ★ | F75 | GR/2 | : | Fuel injector No.2 |
| B2 ★ | F76 | GR/2 | : | Fuel injector No.4 |
| C2 ★ | F77 | GR/2 | : | Fuel injector No.6 |
| C2 ★ | F78 | GR/2 | : | Fuel injector No.8 |

**Engine control sub-harness-1**

| | | | | |
|---|---|---|---|---|
| D2 ★ | F241 | B/4 | : | To F47 |
| C3 ★ | F242 | L/2 | : | Knock sensor (Bank 1) |
| C3 ★ | F243 | L/2 | : | Knock sensor (Bank 2) |

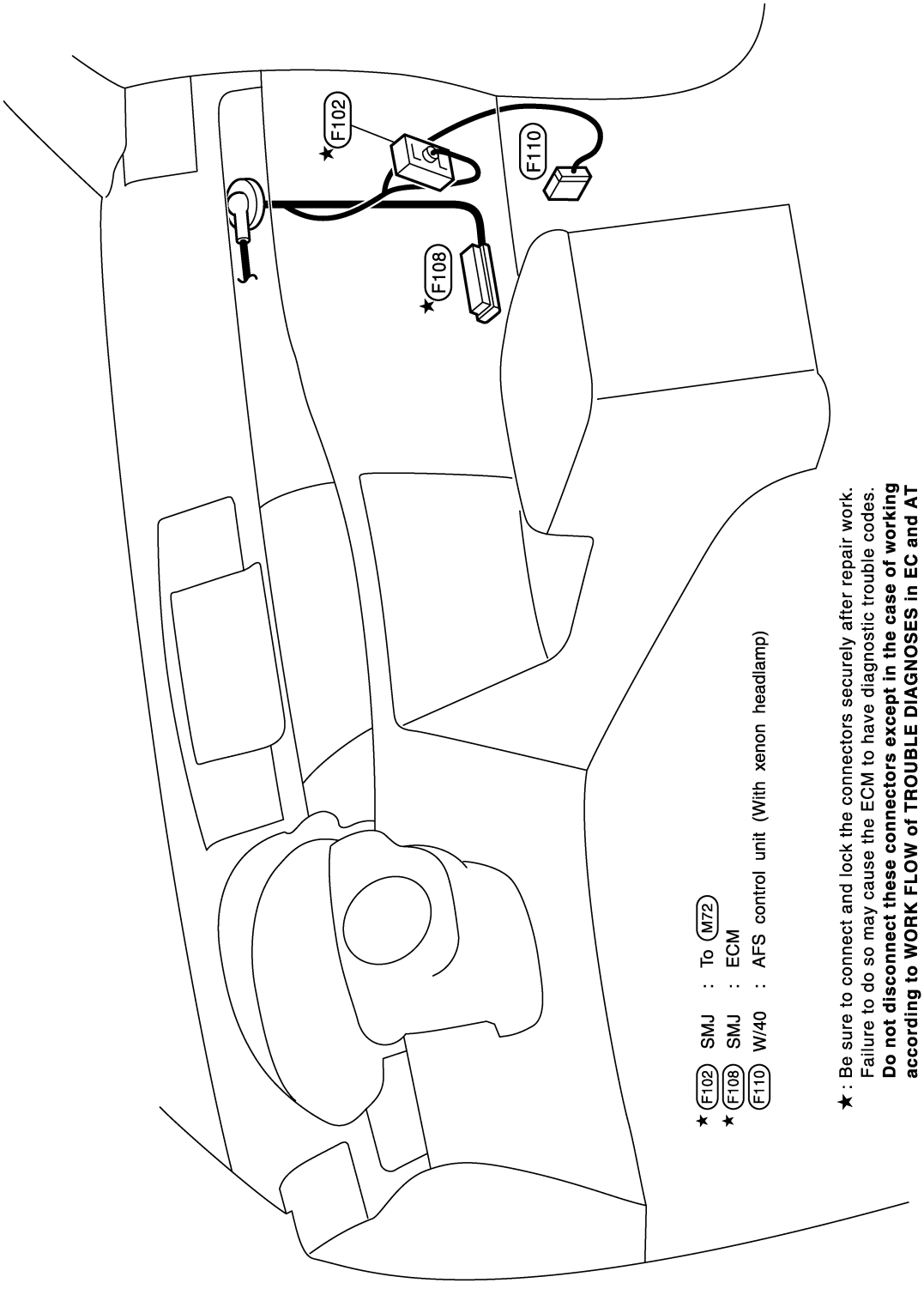
**Engine control sub-harness-2**

| | | | | |
|---|---|---|---|---|
| E2 ★ | F291 | SB/2 | : | To F50 |
| D3 ★ | F292 | GR/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.**

TKIT0761E

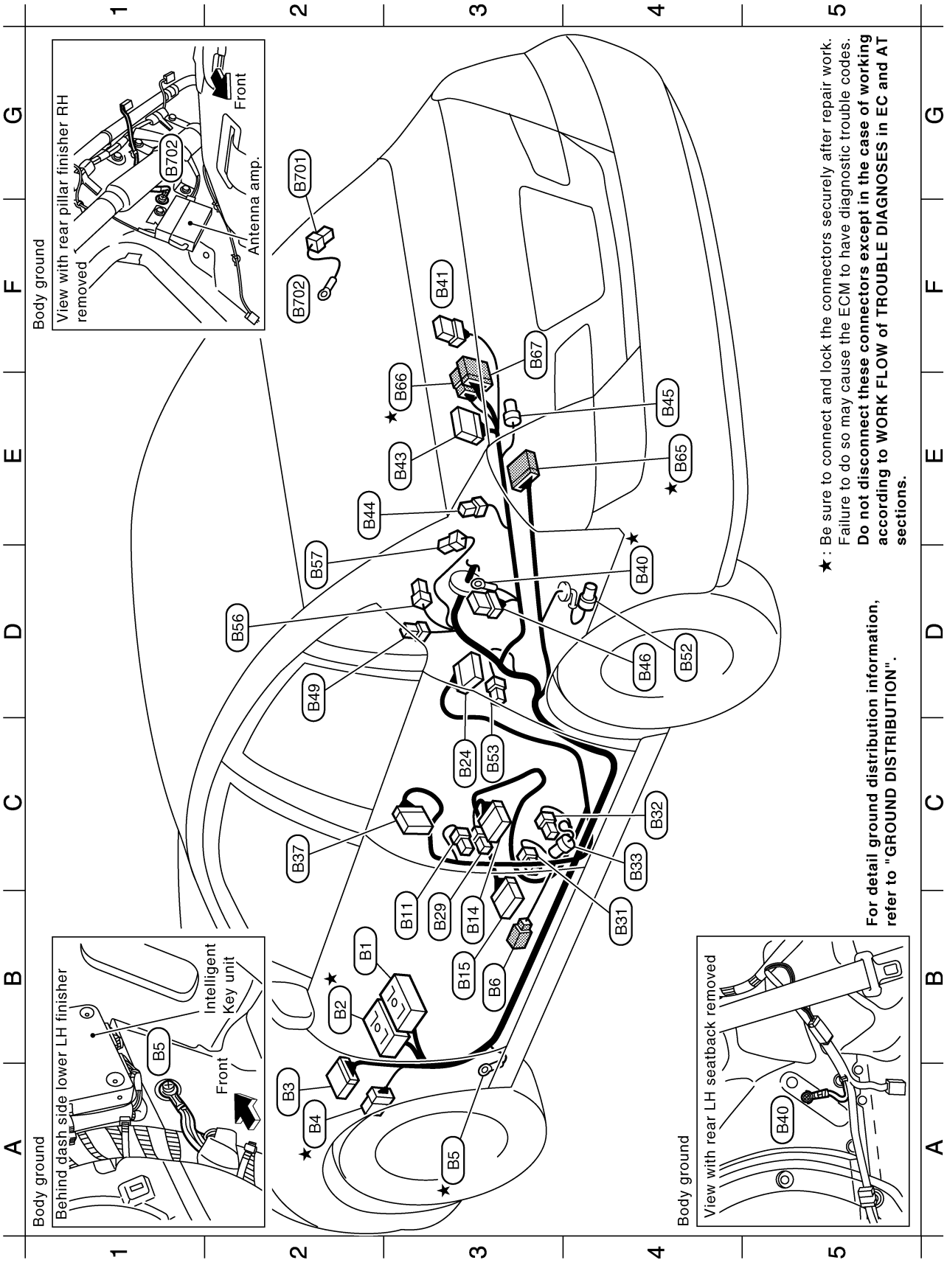
## Passenger Compartment




TKIT0460E

## BODY HARNESS

### Passenger Compartment



| | | | | |
|---|---|---|---|---|
| B2 | B1 | SMJ | : | To M12 |
| B2 ★ | B2 | SMJ | : | To M13 |
| A2 | B3 | W/24 | : | To E105 |
| A2 ★ | B4 | B/8 | : | To E106 |
| A3 ★ | B5 | — | : | Body ground |
| B3 | B6 | W/2 | : | Kicking plate illumination driver side |
| B3 | B11 | W/3 | : | Front door switch driver side |
| B3 | B14 | W/12 | : | Front seat (Driver side)<br>[With climate controlled seat or BOSE (5.1ch) system] |
| B3 | B15 | W/16 | : | Front seat (Driver side) |
| C3 | B24 | Y/12 | : | Air bag diagnosis sensor unit |
| B3 | B29 | Y/2 | : | Front LH side air bag module |
| B4 | B31 | Y/2 | : | Front LH seat belt pre-tensioner |
| C4 | B32 | W/2 | : | Pre-crash seat belt motor LH |
| C4 | B33 | Y/2 | : | LH side air bag (satellite) sensor |
| C2 | B37 | W/18 | : | To D51 |
| D4 ★ | B40 | — | : | Body ground |
| F3 | B41 | W/6 | : | Rear seat RH (With rear power seat) |
| E3 | B43 | W/10 | : | Rear seat armrest RH (With rear power seat) |
| E2 | B44 | GR/4 | : | Rear seat armrest LH (With rear power seat) |
| E4 | B45 | GR/2 | : | Inside key antenna (Rear seat) |
| D4 | B46 | W/6 | : | Rear seat LH (With rear power seat) |
| D2 | B49 | W/1 | : | Condenser |
| D4 | B52 | GR/2 | : | Fuel level sensor unit (Sub) |
| C3 | B53 | W/3 | : | Rear door switch LH |
| D2 | B56 | W/3 | : | High-mounted stop lamp (Via sub-harness) |
| D2 | B57 | Y/2 | : | LH side curtain air bag module |
| E4 ★ | B65 | W/16 | : | To B434 |
| E3 ★ | B66 | B/8 | : | To B436 |
| F3 | B67 | BR/24 | : | To B437 |

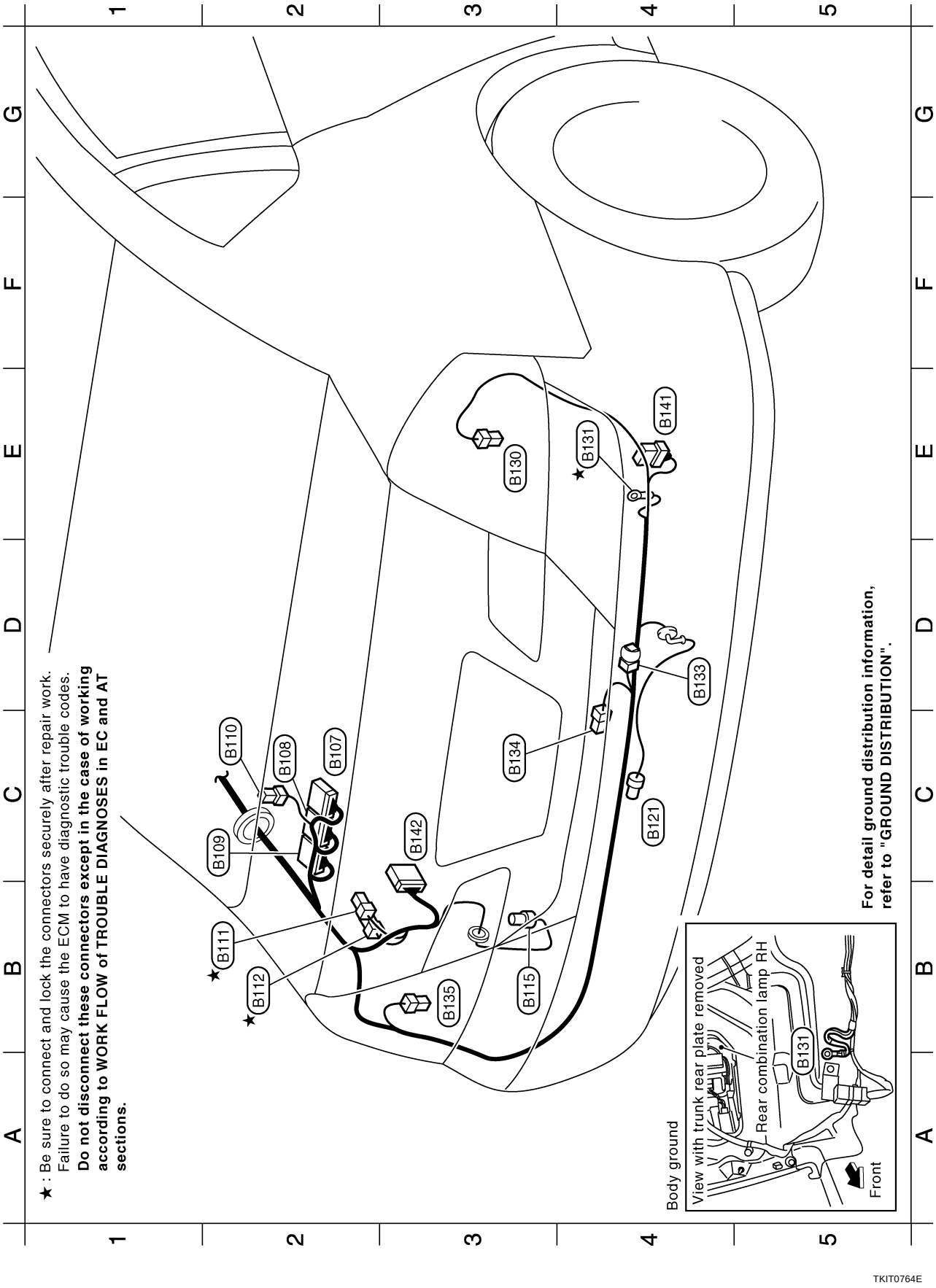
**Body sub-harness**

| | | | | |
|---|---|---|---|---|
| G2 | B701 | B/1 | : | Rear window defogger |
| F2 | B702 | — | : | 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.**

TKIT0763E

## Luggage Compartment




TKIT0764E

| | | | | |
|---|---|---|---|---|
| C2 | B107 | W/40 | : | BOSE amp. (With BOSE system) |
| C2 | B108 | BR/14 | : | BOSE amp. (With BOSE system) |
| C2 | B109 | BR/23 | : | BOSE amp. (With BOSE system) |
| C2 | B110 | BR/2 | : | Rear surround speaker LH (With BOSE system) |
| B2 ★ | B111 | W/4 | : | Fuel pump control module |
| B2 ★ | B112 | W/2 | : | Dropping resistor |
| B3 | B115 | B/4 | : | Tire pressure receiver rear LH |
| C4 | B121 | GR/2 | : | Outside key antenna (Trunk room) |
| E3 | B130 | W/4 | : | Rear combination lamp RH |
| E4 ★ | B131 | — | : | Body ground |
| D4 | B133 | W/2 | : | Diode |
| C3 | B134 | W/2 | : | Trunk room lamp (Lower) |
| B3 | B135 | W/4 | : | Rear combination lamp LH |
| E4 | B141 | BR/6 | : | Rear sunshade cancel relay |
| C3 | B142 | W/26 | : | Pre-crash seat belt control unit |

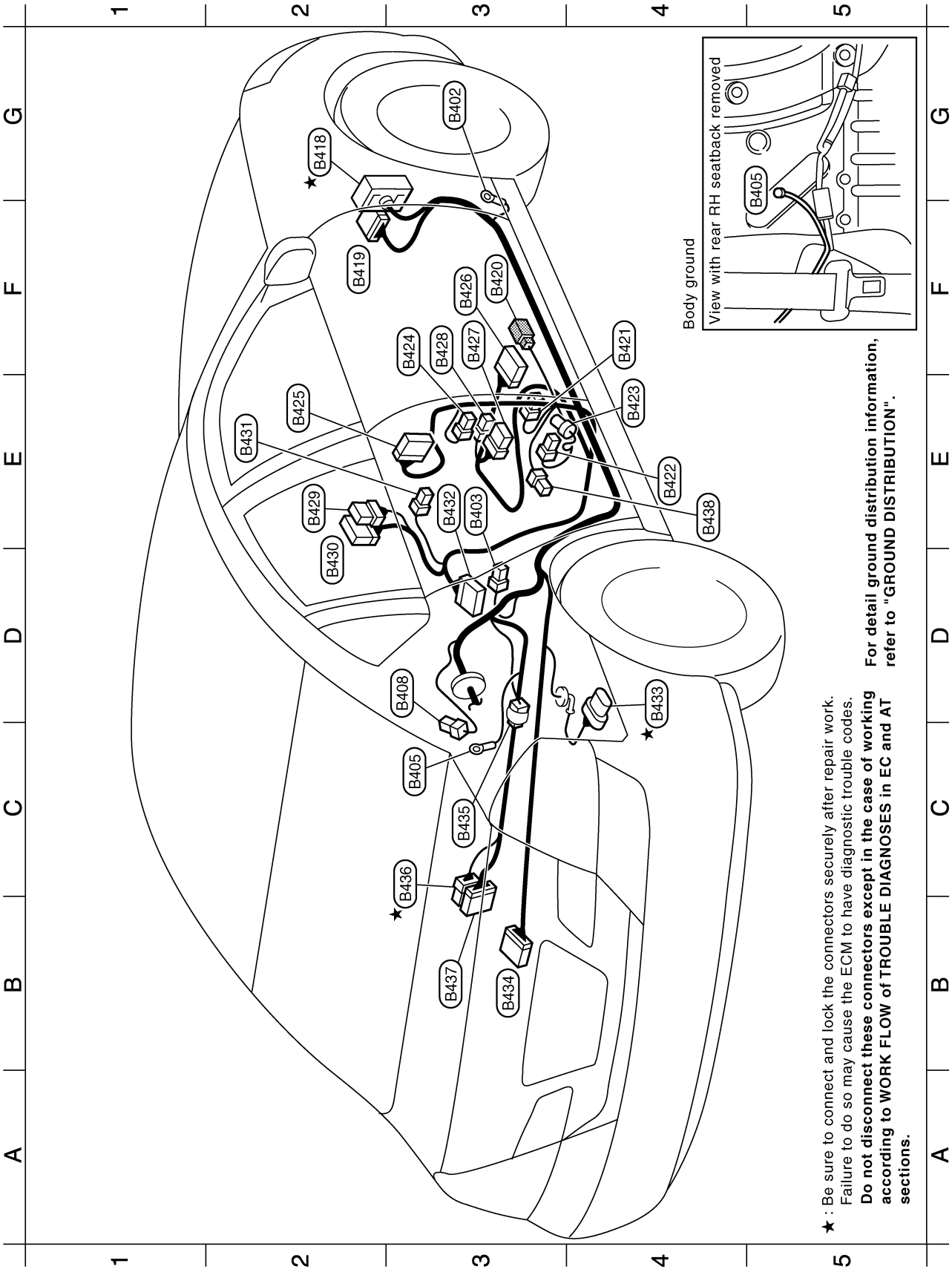



★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

TKIT0765E

## BODY NO. 2 HARNESS

### Passenger Compartment



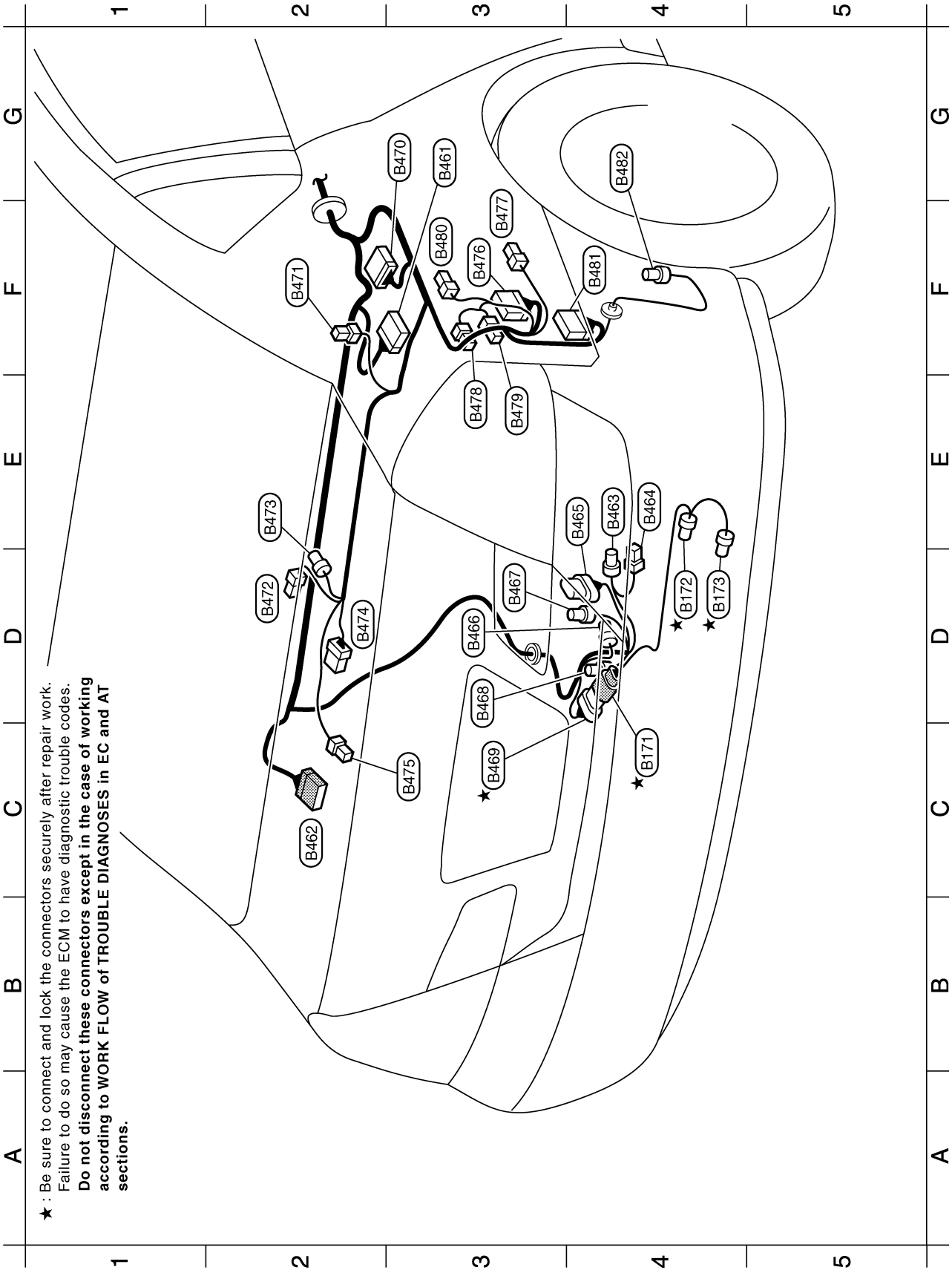

TKIT0766E

| | | | | |
|---|---|---|---|---|
| G3 | B402 | — | : | Body ground |
| E3 | B403 | W/3 | : | Rear door switch RH |
| C3 | B405 | — | : | Body ground |
| D3 | B408 | Y/2 | : | RH side curtain air bag module |
| G2★ | B418 | SMJ | : | To M66 |
| F2 | B419 | W/32 | : | To M218 |
| F3 | B420 | W/2 | : | Kicking plate illumination passenger side |
| F4 | B421 | Y/2 | : | Front RH seat belt pre-tensioner |
| E4 | B422 | W/2 | : | Pre-crash seat belt motor RH |
| E4 | B423 | Y/2 | : | RH side air bag (satellite) sensor |
| F3 | B424 | W/3 | : | Front door switch passenger side |
| E2 | B425 | W/18 | : | To D71 |
| F3 | B426 | W/18 | : | Front seat (Passenger side) |
| F3 | B427 | W/8 | : | Front seat (Passenger side) |
| F3 | B428 | Y/2 | : | Front RH side air bag module |
| E2 | B429 | BR/8 | : | Climate controlled seat switch passenger side |
| D2 | B430 | W/10 | : | Climate controlled seat switch driver side |
| E2 | B431 | W/4 | : | To M153 (For rear view monitor) |
| E3 | B432 | Y/12 | : | Air bag diagnosis sensor unit |
| D4★ | B433 | GR/5 | : | Fuel level sensor unit and fuel pump |
| B3 | B434 | W/16 | : | To B65 |
| C3 | B435 | W/2 | : | Condenser |
| C3★ | B436 | B/8 | : | To B66 |
| B3 | B437 | BR/24 | : | To B67 |
| E4 | B438 | W/3 | : | Belt tension 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.**

TKIT0767E

## Luggage Compartment




TKIT0768E

| | | | | |
|---|---|---|---|---|
| G3 | B461 | W/16 | : | Satellite radio tuner |
| C2 | B462 | W/20 | : | To R105 (With rear display) |
| E4 | B463 | B/2 | : | RAS motor (With RAS) |
| E4 | B464 | B/1 | : | Body ground (With RAS) |
| E4 | B465 | GR/6 | : | Rear wheel steering angle sensor (With RAS) |
| D3 | B466 | B/2 | : | Rear wheel sensor RH |
| D3 | B467 | B/2 | : | Rear wheel sensor LH |
| D3 | B468 | B/3 | : | Height sensor |
| C3★ | B469 | B/6 | : | To B171 |
| G3 | B470 | W/12 | : | To T1 |
| F2 | B471 | BR/2 | : | Rear surround speaker RH (With BOSE system) |
| D2 | B472 | W/2 | : | Woofer (With BOSE system) |
| E2 | B473 | GR/2 | : | Inside key antenna (Trunk room) |
| D2 | B474 | W/8 | : | Rear sunshade unit (With built-in motor) |
| C3 | B475 | W/2 | : | Trunk room lamp (Upper) |
| F3 | B476 | W/40 | : | RAS control unit (With RAS) |
| F3 | B477 | W/4 | : | Fuel lid lock actuator |
| E3 | B478 | W/2 | : | Noise Suppressor (With RAS) |
| E3 | B479 | W/3 | : | Noise Suppressor (With RAS) |
| F3 | B480 | L/4 | : | RAS motor relay (With RAS) |
| F4 | B481 | W/32 | : | Camera control unit |
| G4 | B482 | B/4 | : | Tire pressure receiver rear RH |

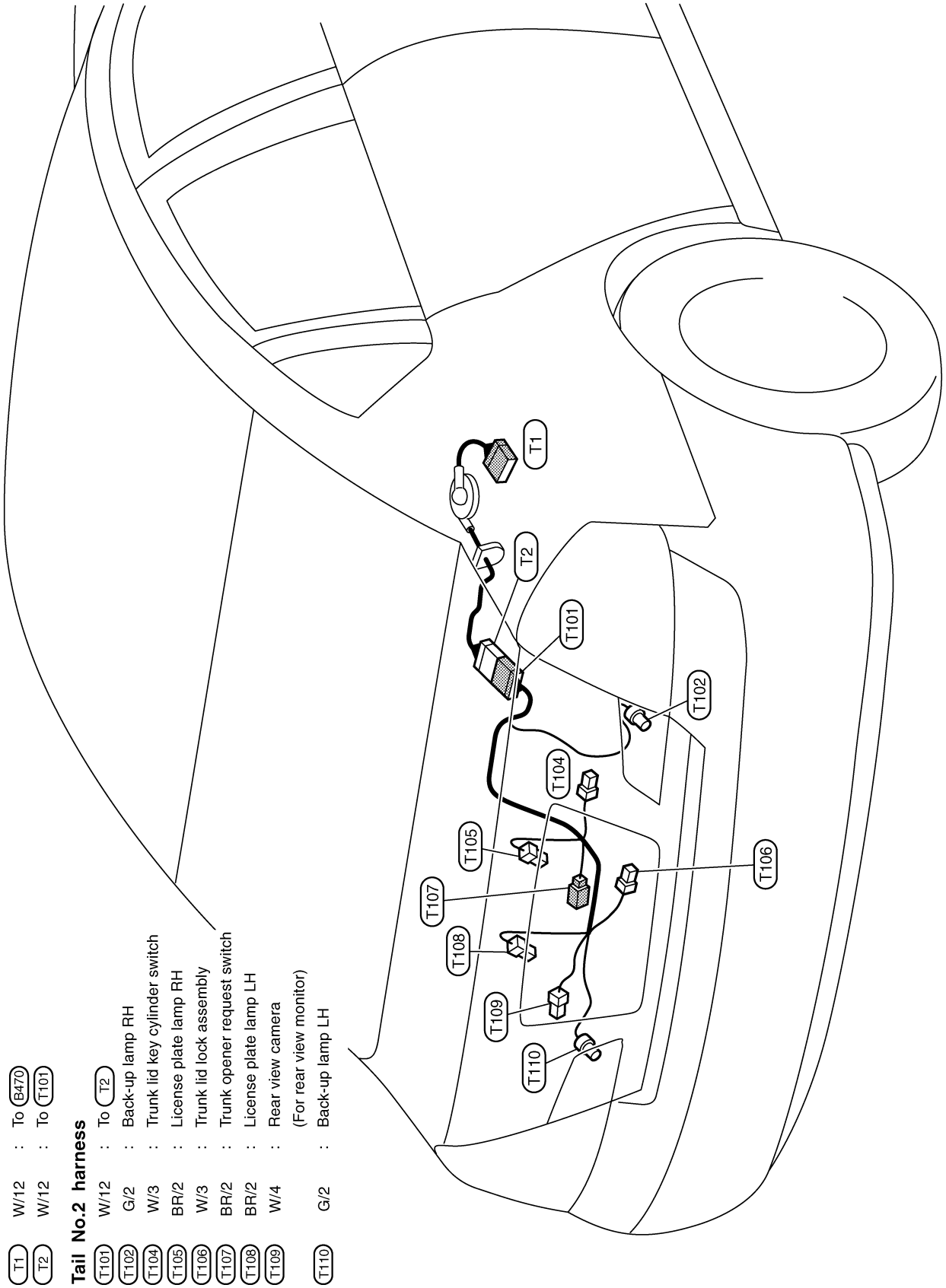
**EVAP sub-harness**

| | | | | |
|---|---|---|---|---|
| C4★ | B171 | B/6 | : | To B469 |
| D4★ | B172 | GR/3 | : | EVAP control system pressure sensor |
| D4★ | B173 | B/2 | : | EVAP canister vent control valve |

★: 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.**

TKIT0769E

## TAIL HARNESS




T1 W/12 : To B470
T2 W/12 : To T101

**Tail No.2 harness**

T101 W/12 : To T2
T102 G/2 : Back-up lamp RH
T104 W/3 : Trunk lid key cylinder switch
T105 BR/2 : License plate lamp RH
T106 W/3 : Trunk lid lock assembly
T107 BR/2 : Trunk opener request switch
T108 BR/2 : License plate lamp LH
T109 W/4 : Rear view camera (For rear view monitor)
T110 G/2 : Back-up lamp LH

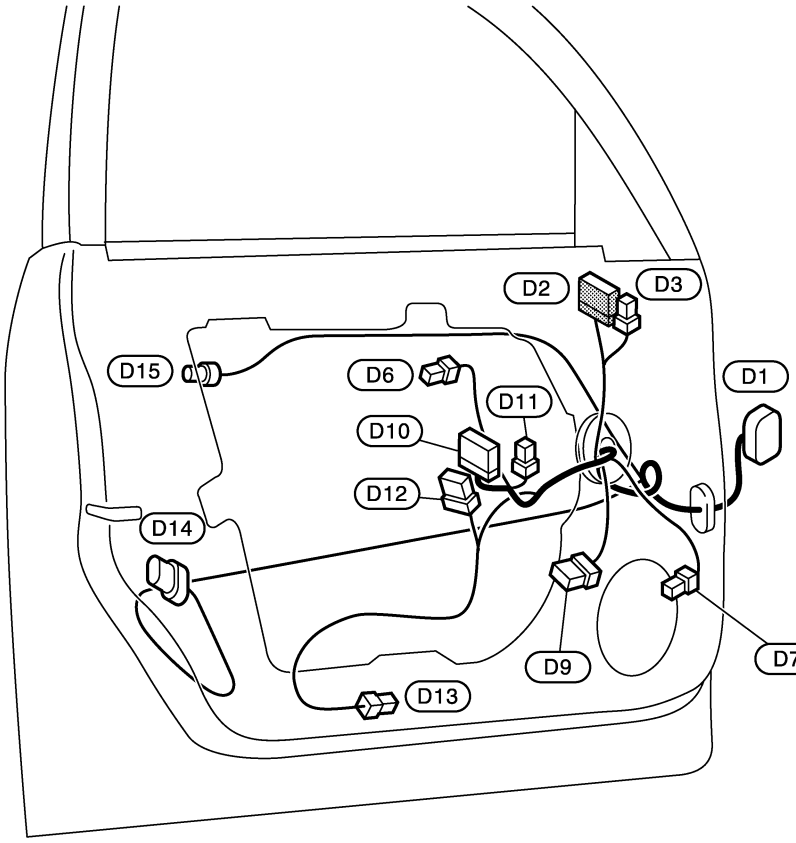
TKIT0770E

## ROOM LAMP HARNESS


TKIT0771E

## FRONT DOOR HARNESS

### LH Side

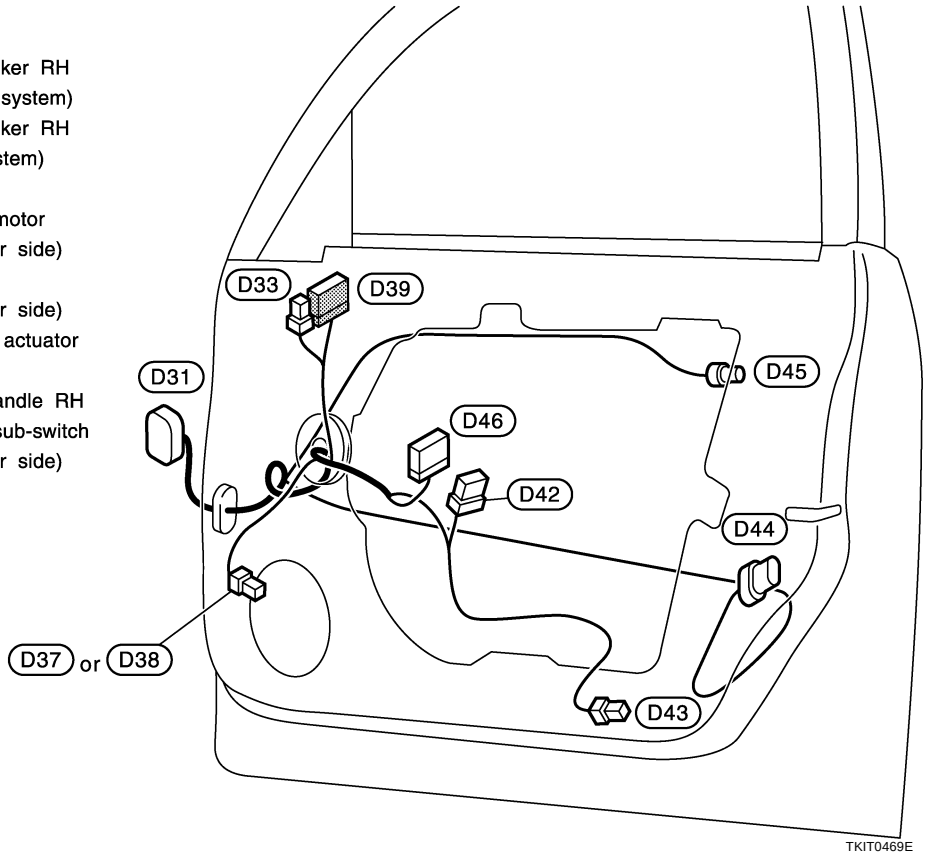



TKIT0468E

| | | | |
|---|---|---|---|
| D1 | SMJ | : | To M11 |
| D2 | W/12 | : | Door mirror LH |
| D3 | BR/2 | : | Tweeter LH |
| D6 | W/2 | : | Power window main switch illumination |
| D7 | W/2 | : | Front door speaker LH (Without BOSE system) |
| D8 | BR/2 | : | Front door speaker LH (With BOSE system) |
| D9 | W/8 | : | Seat memory switch |
| D10 | W/16 | : | Power window main switch |
| D11 | W/3 | : | Power window main switch |
| D12 | W/6 | : | Power window motor (Driver side) |
| D13 | W/2 | : | Step lamp (Driver side) |
| D14 | GR/6 | : | Front door lock assembly (Driver side) |
| D15 | B/4 | : | Front outside handle LH |

### RH Side

| | | | |
|---|---|---|---|
| D31 | SMJ | : | To M74 |
| D33 | BR/2 | : | Tweeter RH |
| D37 | W/2 | : | Front door speaker RH (Without BOSE system) |
| D38 | BR/2 | : | Front door speaker RH (With BOSE system) |
| D39 | W/12 | : | Door mirror RH |
| D42 | W/6 | : | Power window motor (Front passenger side) |
| D43 | W/2 | : | Step lamp (Front passenger side) |
| D44 | GR/6 | : | Front door lock actuator passenger side |
| D45 | B/4 | : | Front outside handle RH |
| D46 | W/16 | : | Power window sub-switch (Front passenger side) |

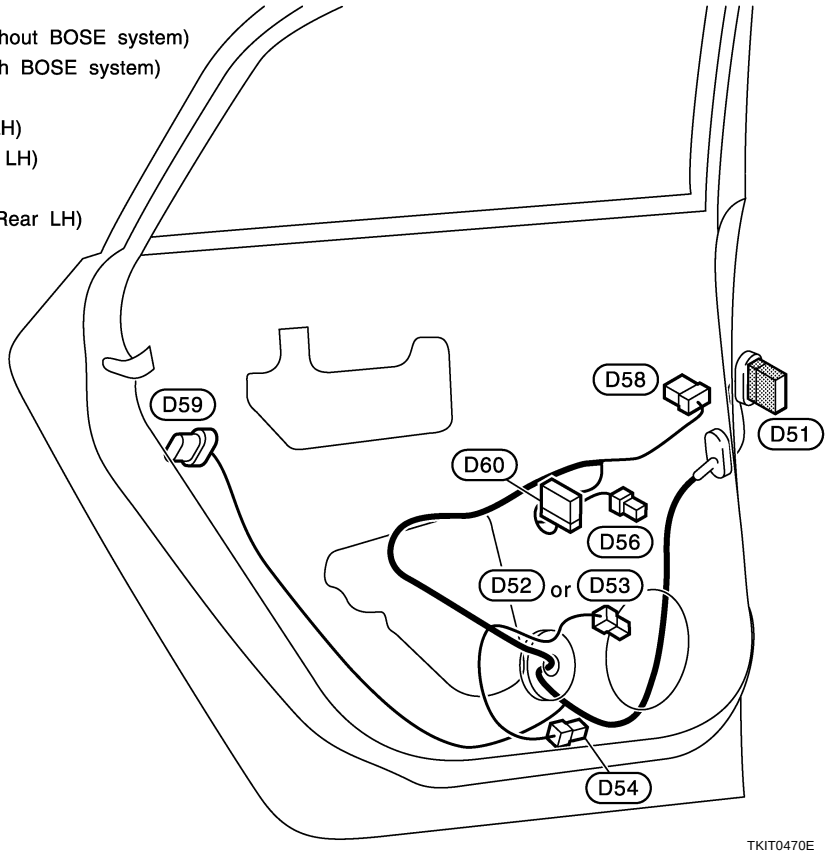



TKIT0469E

## REAR DOOR HARNESS

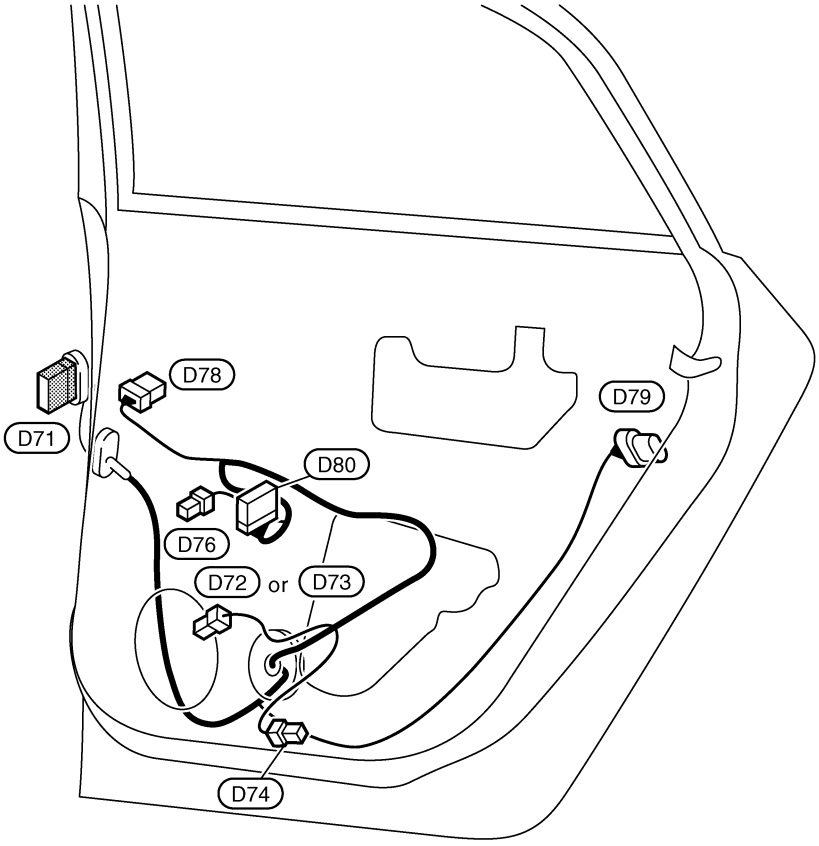
### LH Side

(D51) W/18 : To (B37)
(D52) W/2 : Rear door speaker LH (Without BOSE system)
(D53) BR/2 : Rear door speaker LH (With BOSE system)
(D54) W/2 : Step lamp (Rear LH)
(D56) W/3 : Ashtray illumination (Rear LH)
(D58) W/6 : Power window motor (Rear LH)
(D59) GR/6 : Rear door lock actuator LH
(D60) W/16 : Power window sub-switch (Rear LH)




TKIT0470E

### RH Side




(D71) W/18 : To (B425)
(D72) W/2 : Rear door speaker RH (Without BOSE system)
(D73) BR/2 : Rear door speaker RH (With BOSE system)
(D74) W/2 : Step lamp (Rear RH)
(D76) W/3 : Ashtray illumination (Rear RH)
(D78) W/6 : Power window motor (Rear RH)
(D79) GR/6 : Rear door lock actuator RH
(D80) W/16 : Power window sub-switch (Rear RH)

TKIT0772E

## Wiring Diagram Codes (Cell Codes)

NKS004ET

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 |
| 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 |
| AFS | LT | Adaptive Front Lighting System |
| 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 |
| AUT/DP | SE | Automatic Drive Positioner |
| AUTO/L | LT | Automatic Light System |
| AV | AV | Audio and Visual System |
| AWD | TF | AWD Control System |
| BACK/L | LT | Back-Up Lamp |
| BRK/SW | EC | Brake Switch |
| C/SEAT | SE | Climate Controlled Seat |
| 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 |
| COMPAS | DI | Compass and Thermometer |
| COOL/F | EC | Cooling Fan Control |
| CUR/SE | EC | Battery Current Sensor |
| 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 |
| ENG/ST | BL | Engine Start System |
| EPS | STC | Electric Controlled Power Steering System |
| ETC1 | EC | Electric Throttle Control Function |
| ETC2 | EC | Electric Throttle Control Motor Relay |

| Code | Section | Wiring Diagram Name |
|---|---|---|
| ETC3 | EC | Electric Throttle Control Motor |
| F/FOG | LT | Front Fog Lamp |
| F/PUMP | EC | Fuel Pump |
| FPCM | EC | Fuel Pump Control Module |
| 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) |
| 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 |
| 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) |
| KS | EC | Knock Sensor |
| LDW | DI | Lane Departure Warning System |
| 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., Oil and Fuel Gauges |
| MIL/DL | EC | MIL & Data Link Connector |
| MIRROR | GW | Door Mirror |
| MMSW | AT | Manual Mode Switch |
| NATS | BL | 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 |
| PDU | PG | Power Distribution Unit |

| Code | Section | Wiring Diagram Name |
|---|---|---|
| PGC/V | EC | EVAP Canister Purge Volume Control Solenoid Valve |
| PHASE | EC | Camshaft Position Sensor (PHASE) |
| 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 Circuit |
| PRE/SE | EC | EVAP Control System Pressure Sensor |
| PS/SEN | EC | Power Steering Pressure Sensor |
| PSB | SB | Pre-Crash Seat Belt |
| R/SEAT | SE | Auto Return Seat |
| RAS | STC | Rear Active Steer |
| ROOM/L | LT | Interior Room Lamp |
| RP/SEN | EC | Refrigerant Pressure Sensor |
| SEAT | SE | Power Seat |
| SEN/PW | EC | Sensor Power Supply |
| SHADE | EI | Rear Sunshade |
| SHIFT | AT | A/T Shift Lock System |
| SNOWSW | EC | Snow  Mode Switch |
| SROOF | RF | Sunroof |
| SRS | SRS | Supplemental Restraint System |
| START | SC | Starting System |
| STOP/L | LT | Stop Lamp |
| STSIG | AT | Start Signal Circuit |
| T/WARN | WT | Low Tire Pressure Warning System |
| TAIL/L | LT | Parking, License and Tail Lamps |
| TLID | BL | Trunk Lid Opener |
| TPS1 | EC | Throttle Position Sensor (Sensor 1) |
| TPS2 | EC | Throttle Position Sensor (Sensor 2) |
| TPS3 | EC | Throttle Position Sensor |
| TRNSCV | BL | Homelink Universal Transceiver |
| TURN | LT | Turn Signal and Hazard Warning Lamp |
| VDC | BRC | Vehicle Dynamics Control System |
| VEHSEC | BL | Vehicle Security System |
| VENT/V | EC | EVAP Canister Vent Control Valve |
| VIAS | EC | Variable Induction Air Control System |
| 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 |
| WIPER | WW | Front Wiper and Washer |

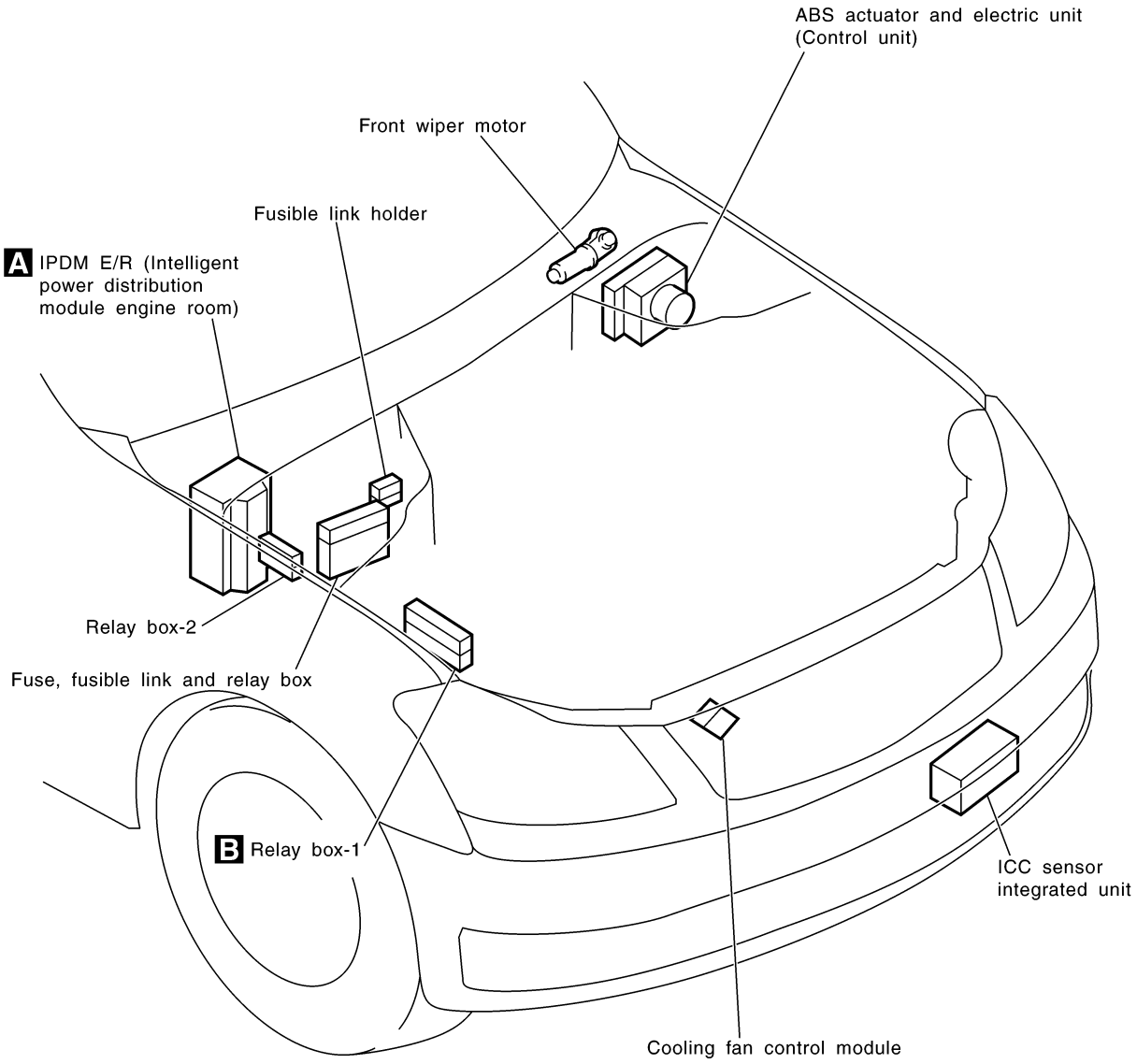
# ELECTRICAL UNITS LOCATION

PFP:25230

## Electrical Units Location

NKS004EU

### ENGINE COMPARTMENT

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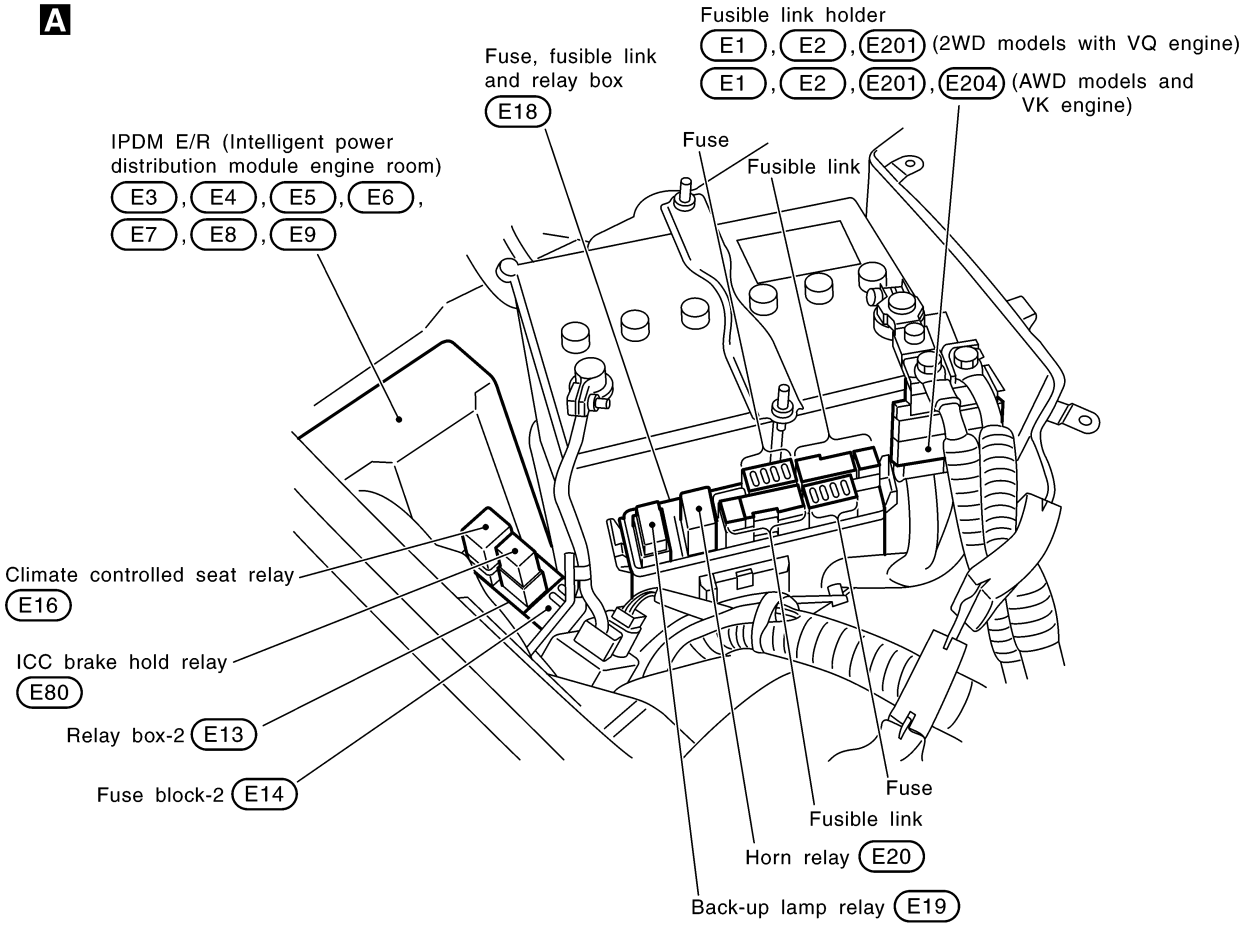
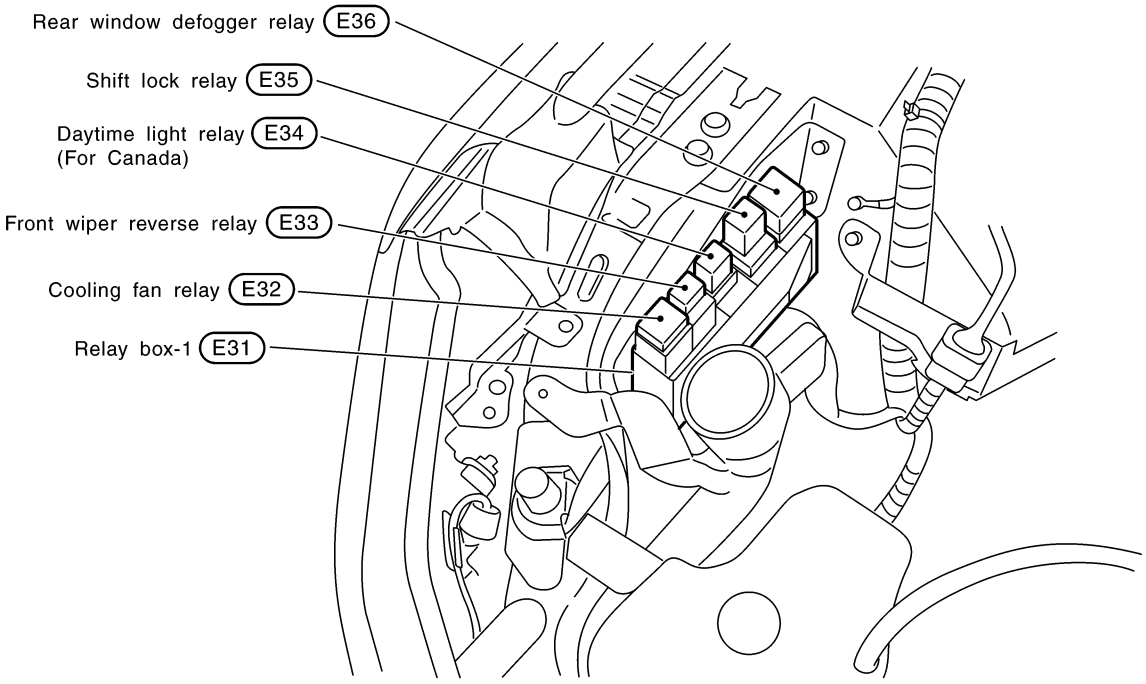
**A**




**B**

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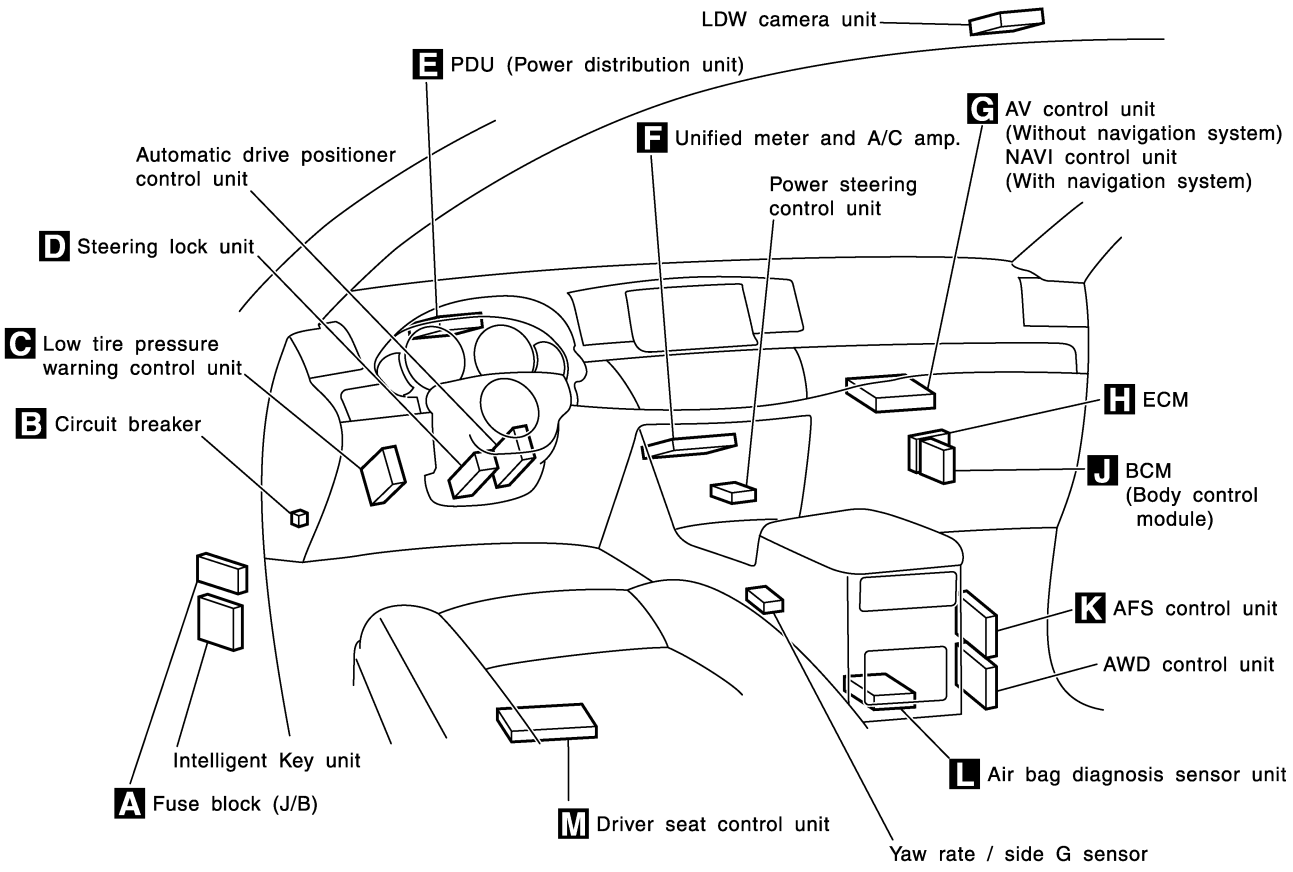
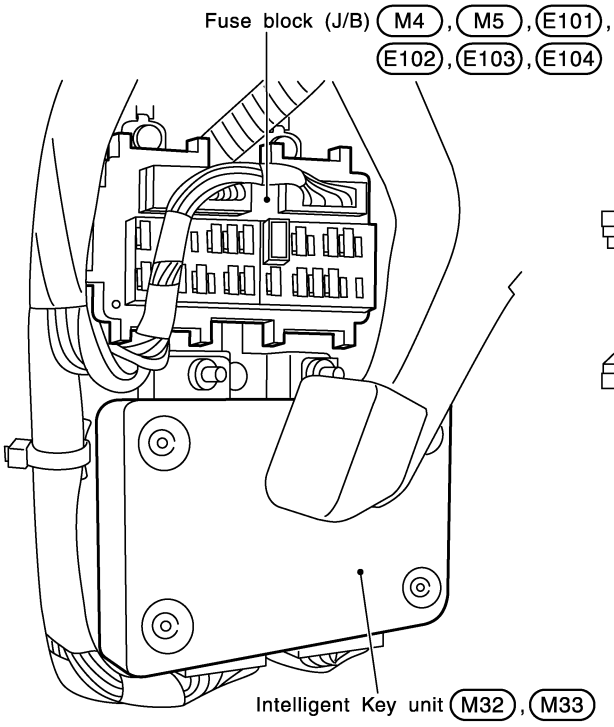
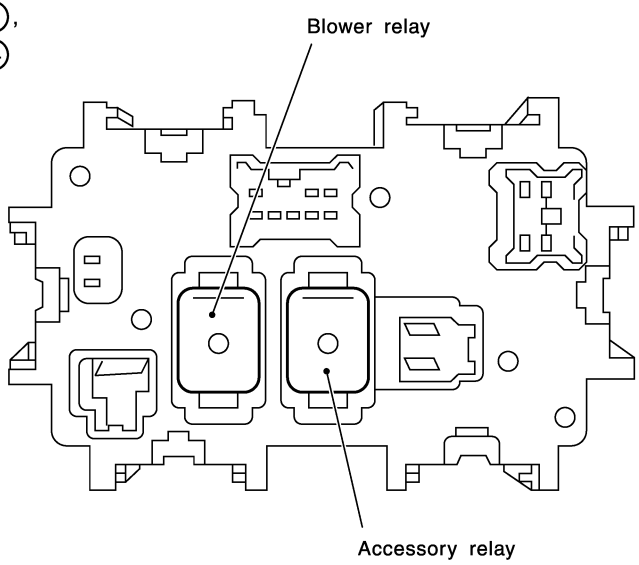
## PASSENGER COMPARTMENT




A Behind dash side lower LH finisher

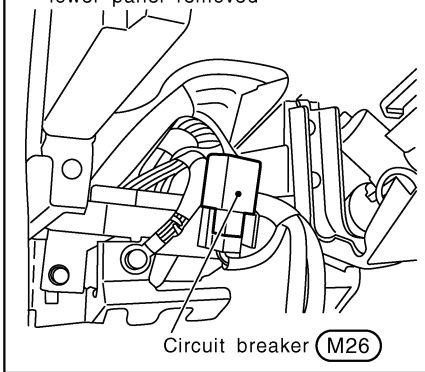



Fuse block (J/B) rear view

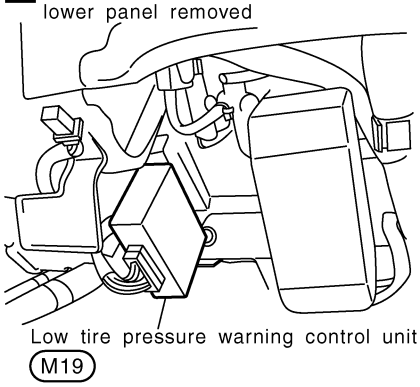



CKIT0657E

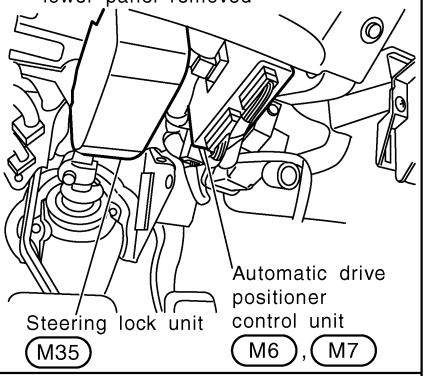
**B** Driver side view with instrument lower panel removed



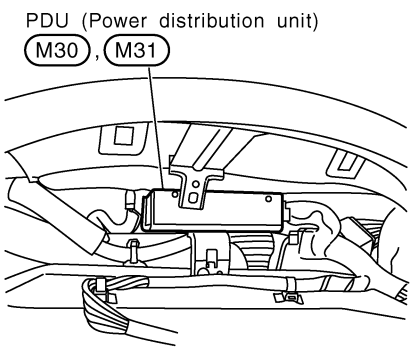

**C** Driver side view with instrument lower panel removed



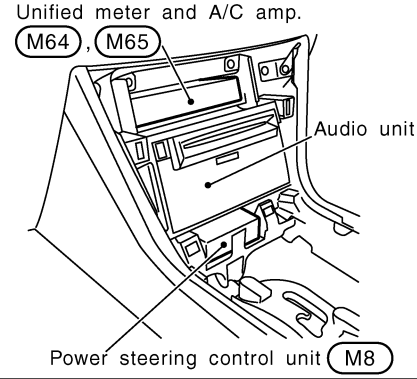

**D** Driver side view with instrument lower panel removed



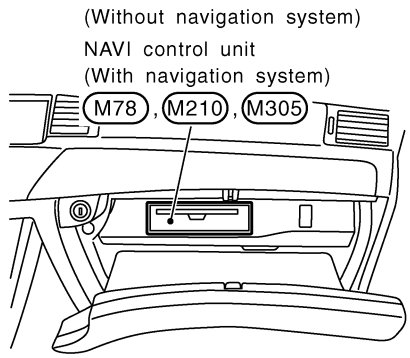

**E** View with combination meter removed



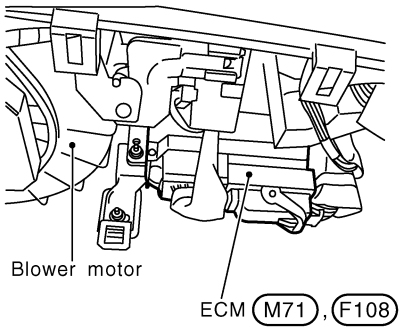

**F** View with cluster lid C removed



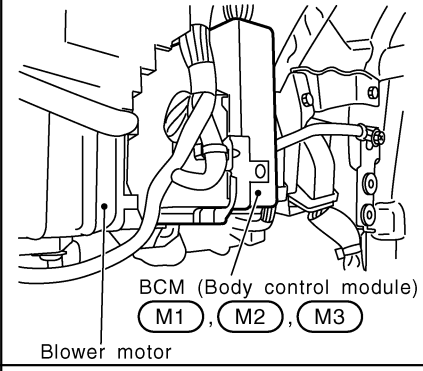

**G** Inside of glove box



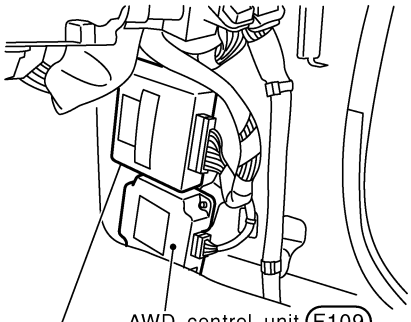

**H** Passenger side view with instrument lower cover removed



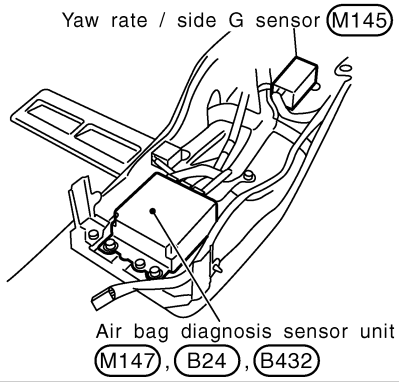

**J** Passenger side view with instrument lower cover removed



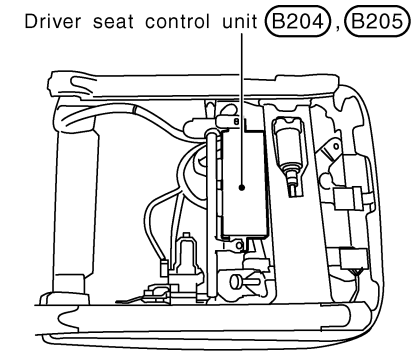

**K** Behind dash side lower RH finisher



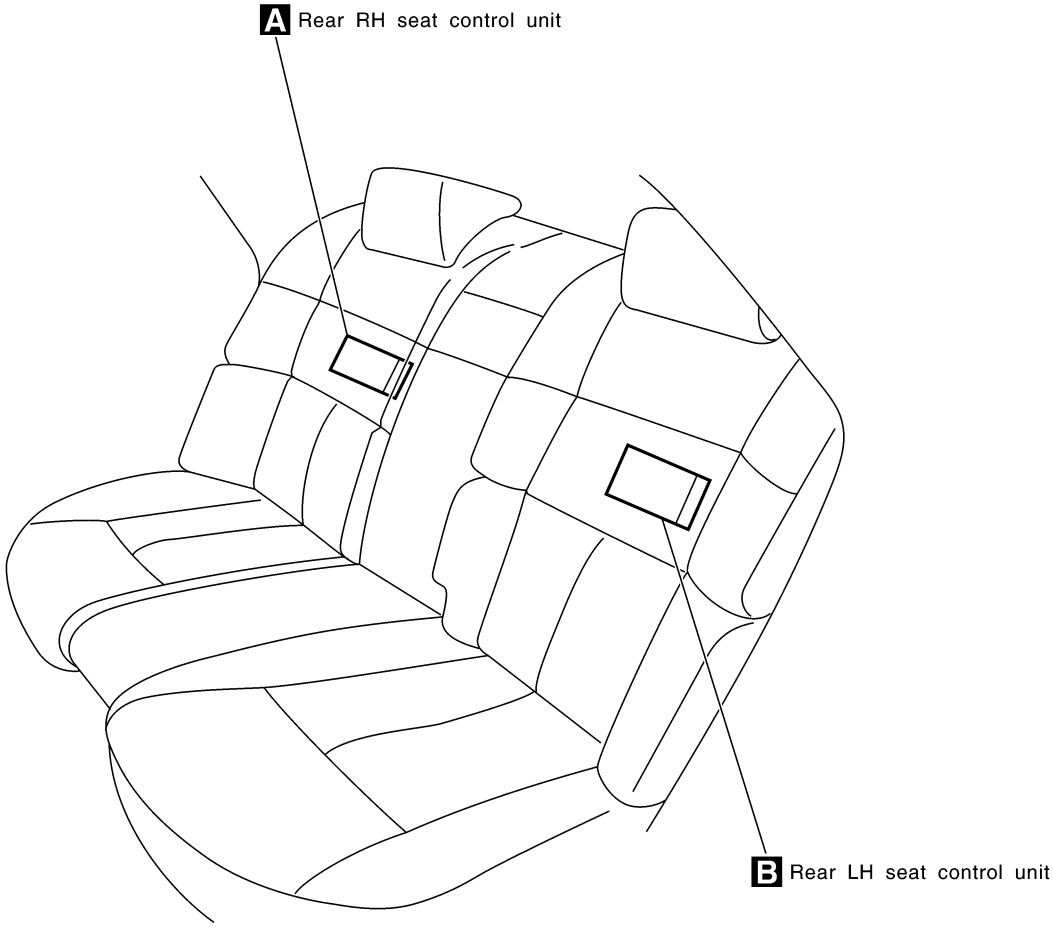

**L** View with floor console box removed

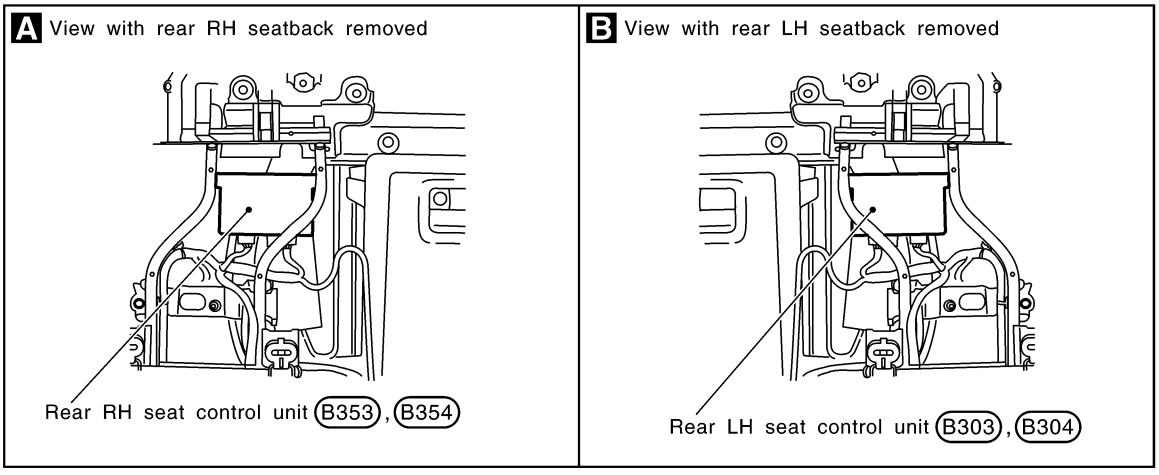



**M** Under driver's seat



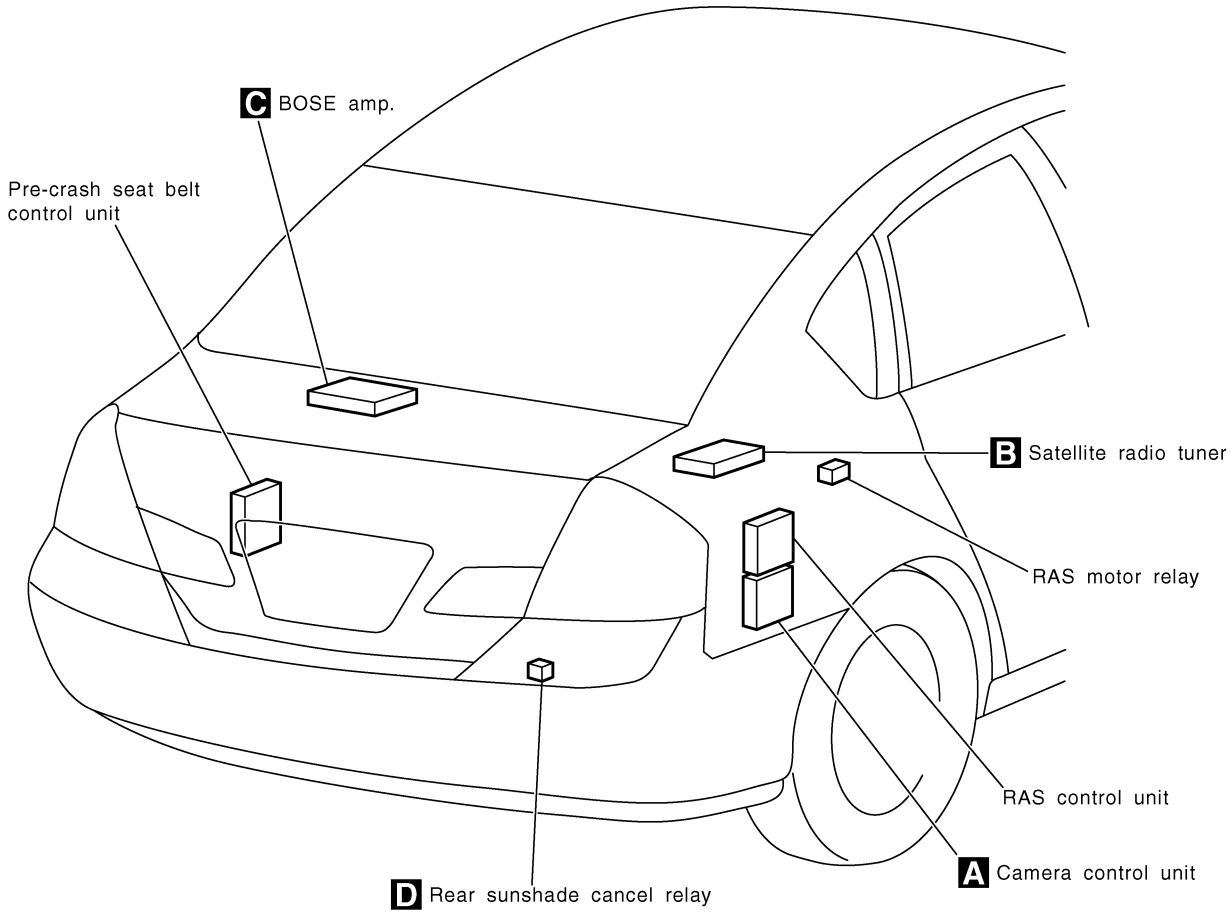

CKIT0819E

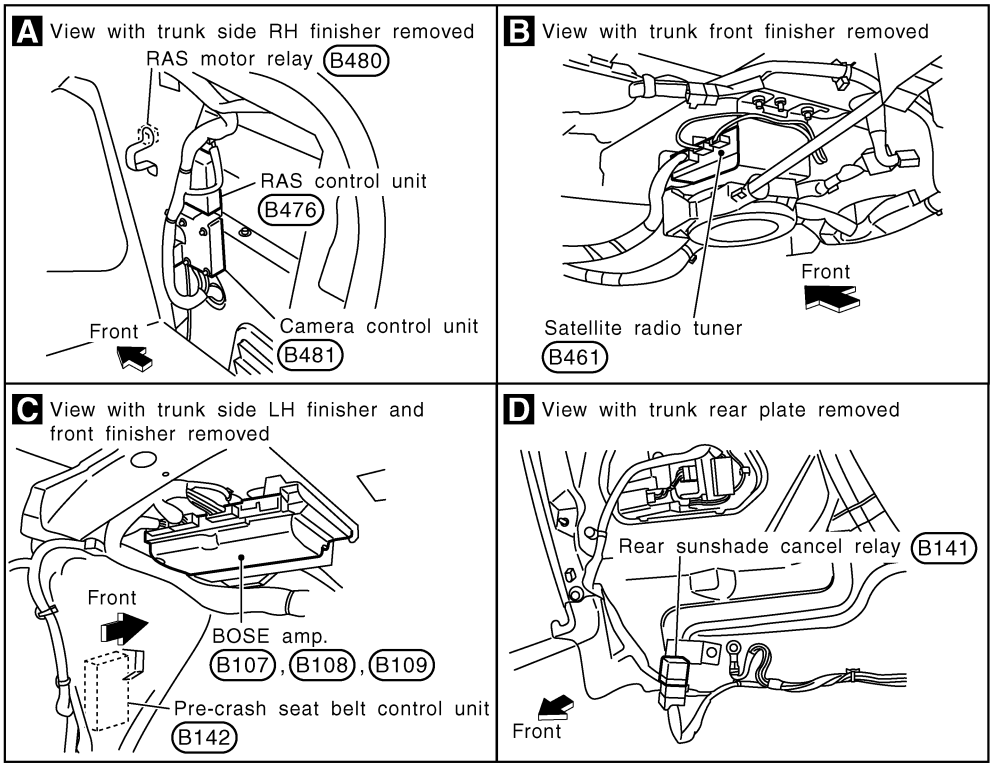

A Rear RH seat control unit
B Rear LH seat control unit


A View with rear RH seatback removed
Rear RH seat control unit B353, B354
B View with rear LH seatback removed
Rear LH seat control unit B303, B304

CKIT0659E

## LUGGAGE COMPARTMENT




CKIT0820E

# HARNESS CONNECTOR

PFP:00011

## Description

NKS004EV

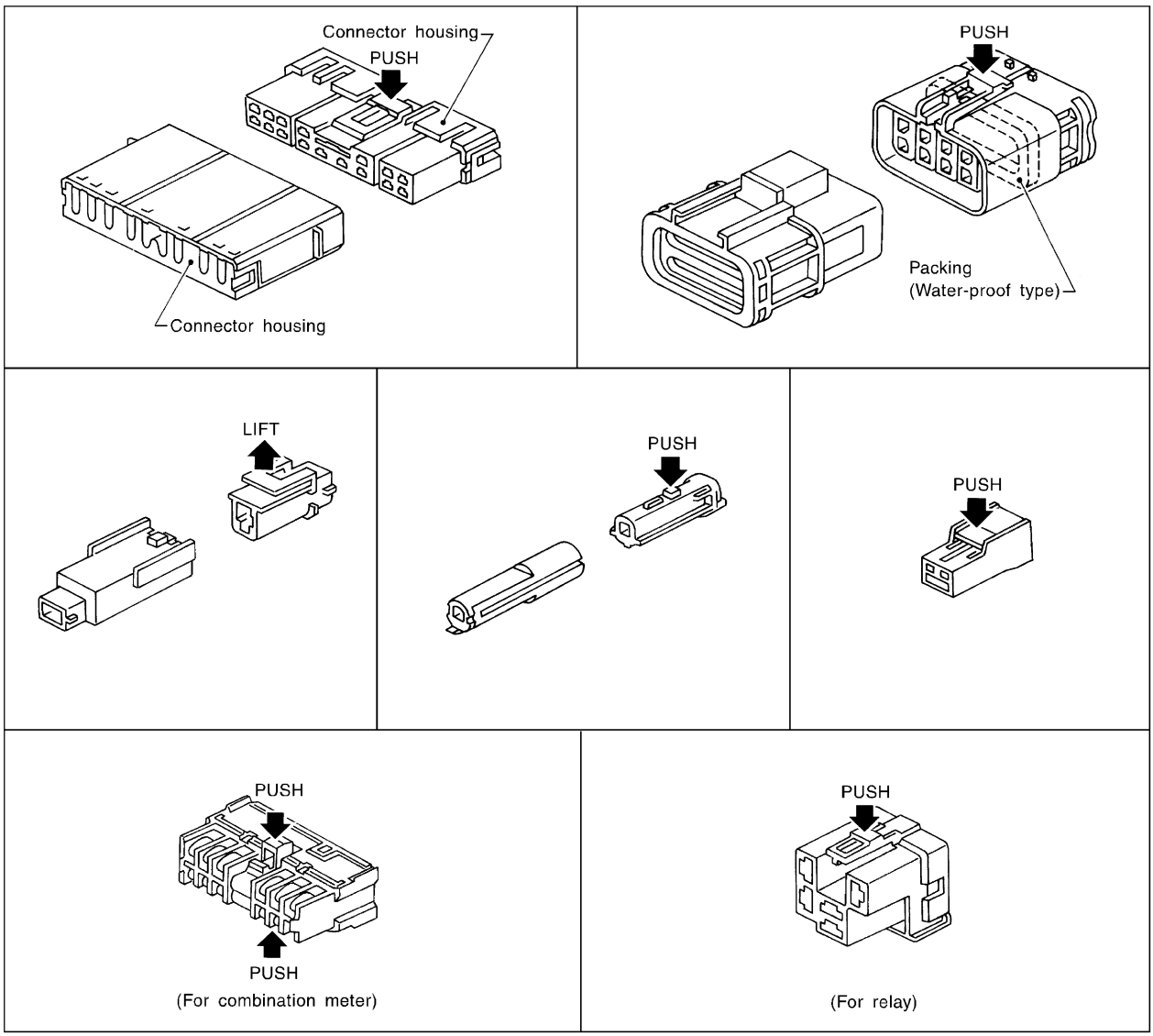
### HARNESS CONNECTOR (TAB-LOCKING TYPE)

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

**CAUTION:**

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

[Example]




SEL769DA

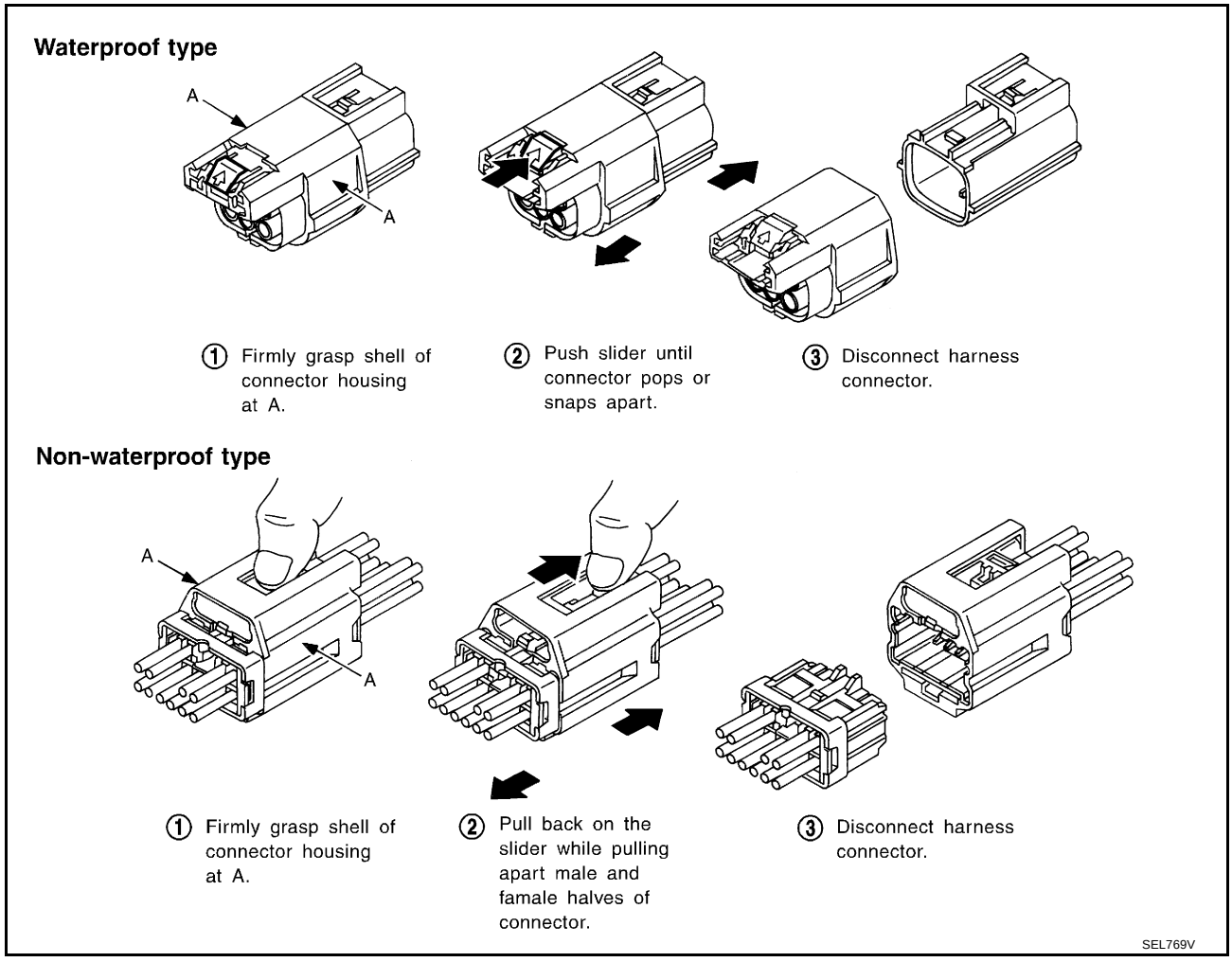
## HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

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

**CAUTION:**

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

[Example]

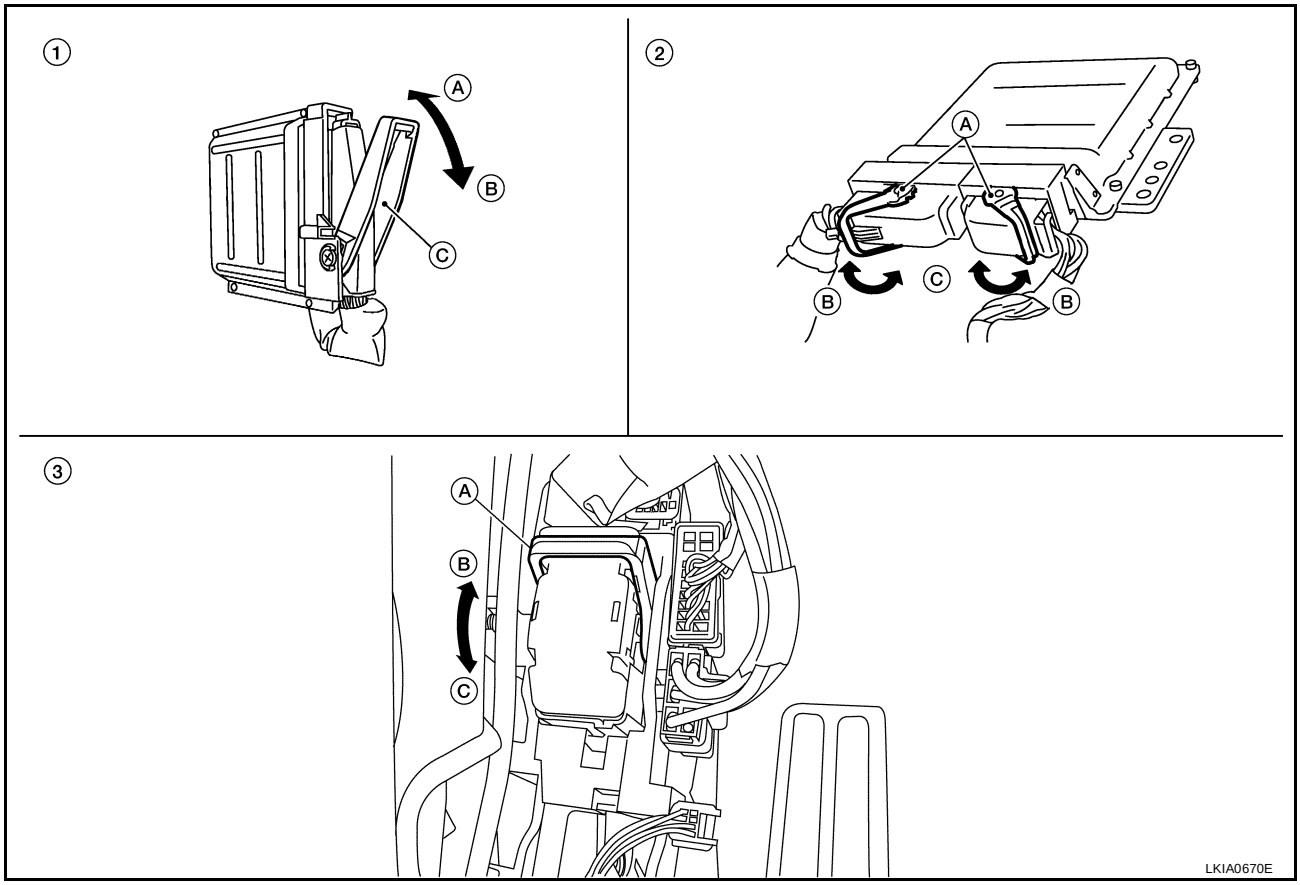


## HARNESS CONNECTOR (LEVER LOCKING TYPE)

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

**CAUTION:**

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




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

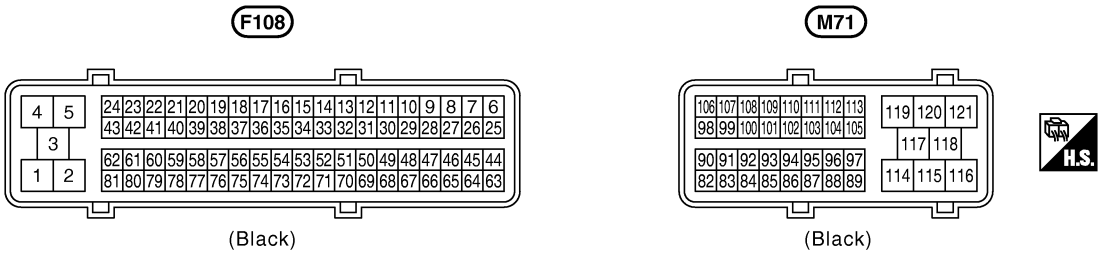
# ELECTRICAL UNITS

PFP:00011

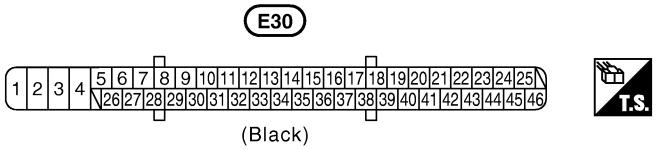
## Terminal Arrangement

NKS004EW

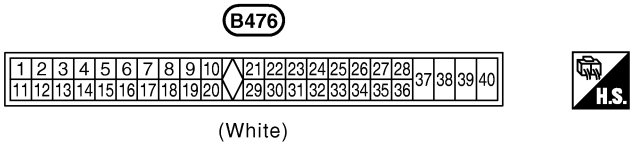
ECM



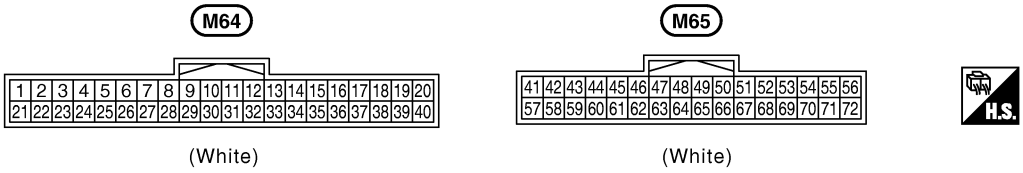

ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



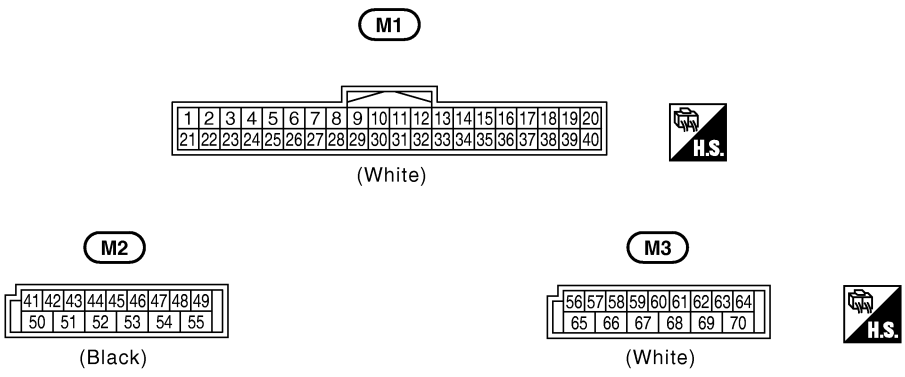

RAS CONTROL UNIT




UNIFIED METER AND A/C AMP.



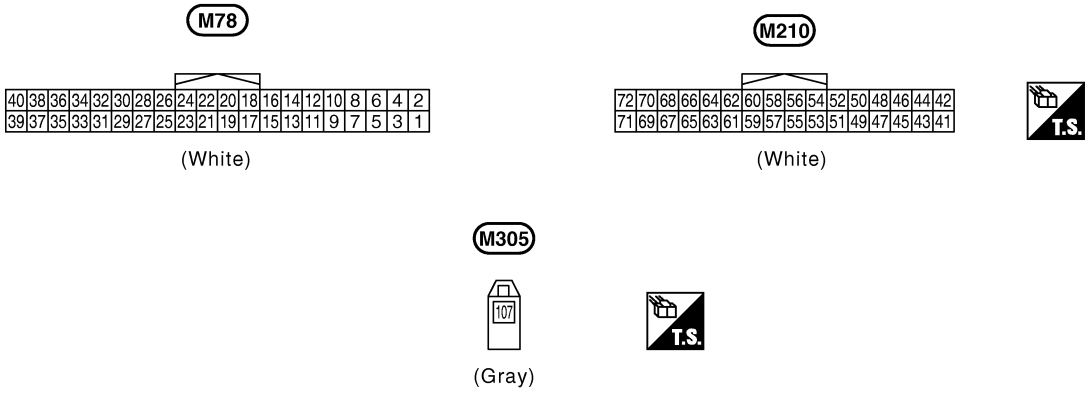

BCM (BODY CONTROL MODULE)




CKIT0821E

INTELLIGENT KEY UNIT


AV CONTROL UNIT (WITHOUT NAVIGATION SYSTEM)
NAVI CONTROL UNIT (WITH NAVIGATION SYSTEM)



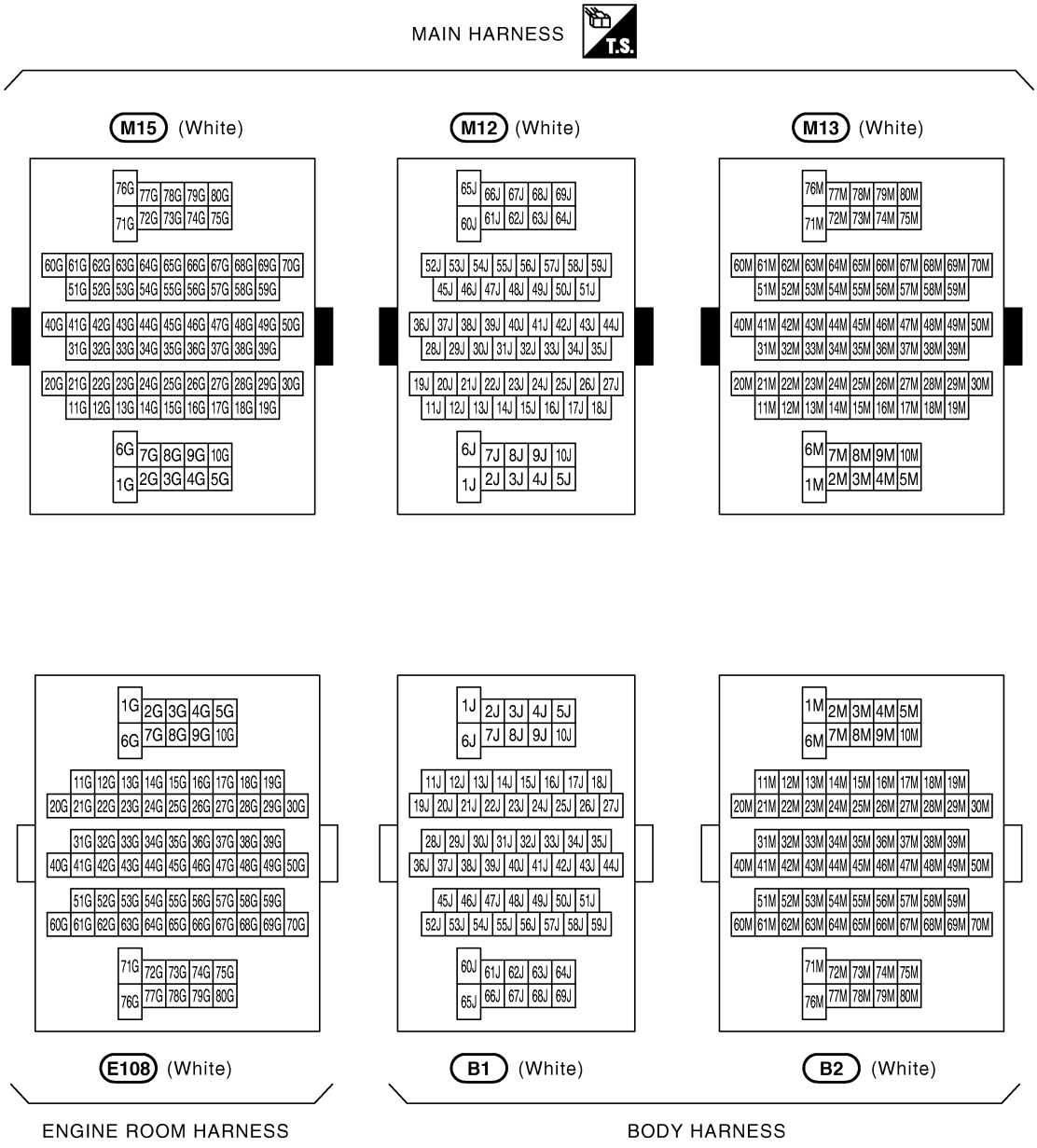

CKIT0684E

# SMJ (SUPER MULTIPLE JUNCTION)

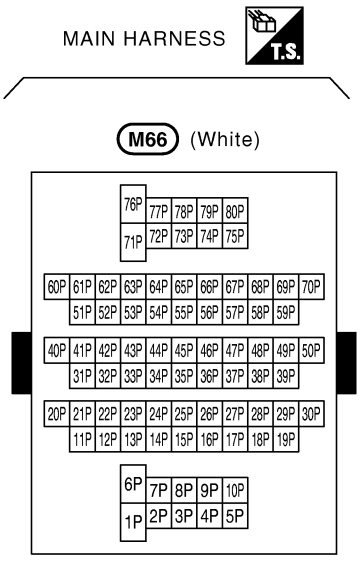
PFP:B4341

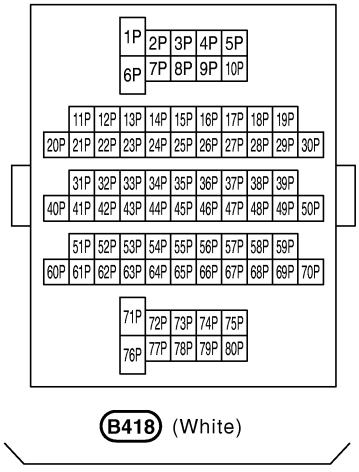
## Terminal Arrangement

NKS004EX

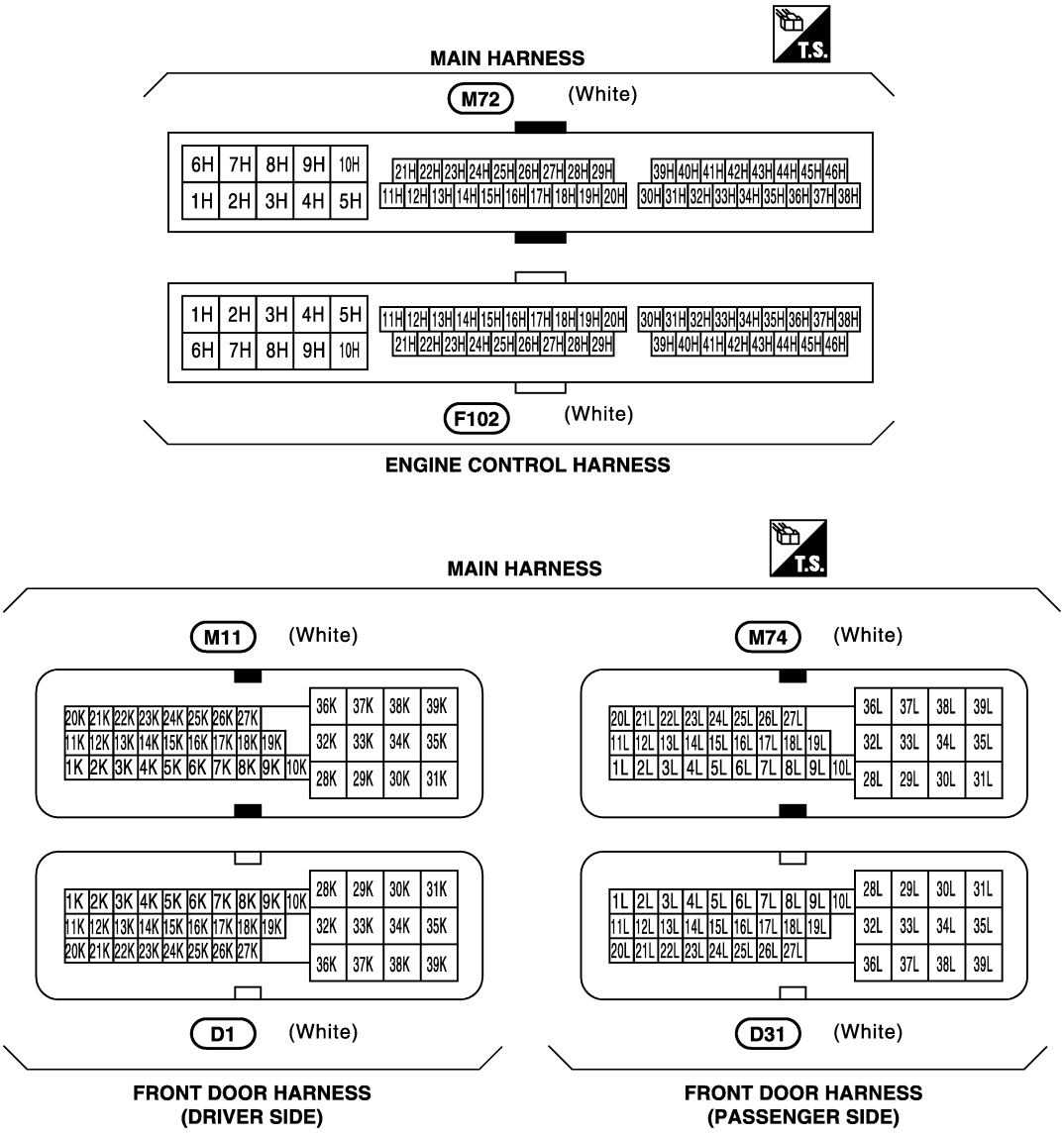



CKIT0685E


MAIN HARNESS
T.S.
M66 (White)
76P 77P 78P 79P 80P
71P 72P 73P 74P 75P
60P 61P 62P 63P 64P 65P 66P 67P 68P 69P 70P
51P 52P 53P 54P 55P 56P 57P 58P 59P
40P 41P 42P 43P 44P 45P 46P 47P 48P 49P 50P
31P 32P 33P 34P 35P 36P 37P 38P 39P
20P 21P 22P 23P 24P 25P 26P 27P 28P 29P 30P
11P 12P 13P 14P 15P 16P 17P 18P 19P
6P 7P 8P 9P 10P
1P 2P 3P 4P 5P


1P 2P 3P 4P 5P
6P 7P 8P 9P 10P
11P 12P 13P 14P 15P 16P 17P 18P 19P
20P 21P 22P 23P 24P 25P 26P 27P 28P 29P 30P
31P 32P 33P 34P 35P 36P 37P 38P 39P
40P 41P 42P 43P 44P 45P 46P 47P 48P 49P 50P
51P 52P 53P 54P 55P 56P 57P 58P 59P
60P 61P 62P 63P 64P 65P 66P 67P 68P 69P 70P
71P 72P 73P 74P 75P
76P 77P 78P 79P 80P
B418 (White)
BODY No. 2 HARNESS

CKIT0822E


MAIN HARNESS
T.S.
M72
(White)
6H 7H 8H 9H 10H
1H 2H 3H 4H 5H
21H 22H 23H 24H 25H 26H 27H 28H 29H
11H 12H 13H 14H 15H 16H 17H 18H 19H 20H
39H 40H 41H 42H 43H 44H 45H 46H
30H 31H 32H 33H 34H 35H 36H 37H 38H
1H 2H 3H 4H 5H
6H 7H 8H 9H 10H
11H 12H 13H 14H 15H 16H 17H 18H 19H 20H
21H 22H 23H 24H 25H 26H 27H 28H 29H
30H 31H 32H 33H 34H 35H 36H 37H 38H
39H 40H 41H 42H 43H 44H 45H 46H
F102
(White)
ENGINE CONTROL HARNESS
MAIN HARNESS
T.S.
M11
(White)
20K 21K 22K 23K 24K 25K 26K 27K
11K 12K 13K 14K 15K 16K 17K 18K 19K
1K 2K 3K 4K 5K 6K 7K 8K 9K 10K
36K 37K 38K 39K
32K 33K 34K 35K
28K 29K 30K 31K
M74
(White)
20L 21L 22L 23L 24L 25L 26L 27L
11L 12L 13L 14L 15L 16L 17L 18L 19L
1L 2L 3L 4L 5L 6L 7L 8L 9L 10L
36L 37L 38L 39L
32L 33L 34L 35L
28L 29L 30L 31L
1K 2K 3K 4K 5K 6K 7K 8K 9K 10K
11K 12K 13K 14K 15K 16K 17K 18K 19K
20K 21K 22K 23K 24K 25K 26K 27K
28K 29K 30K 31K
32K 33K 34K 35K
36K 37K 38K 39K
D1
(White)
1L 2L 3L 4L 5L 6L 7L 8L 9L 10L
11L 12L 13L 14L 15L 16L 17L 18L 19L
20L 21L 22L 23L 24L 25L 26L 27L
28L 29L 30L 31L
32L 33L 34L 35L
36L 37L 38L 39L
D31
(White)
FRONT DOOR HARNESS
(DRIVER SIDE)
FRONT DOOR HARNESS
(PASSENGER SIDE)

CKIT0158E

# STANDARDIZED RELAY

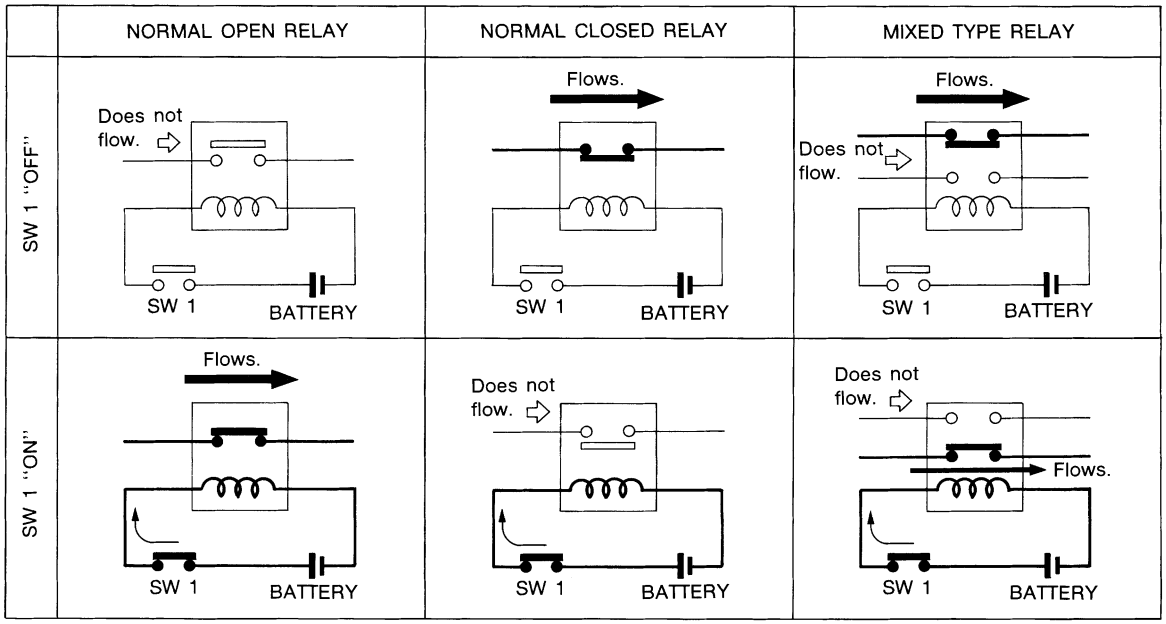
PFP:00011

## Description

NKS004EY

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

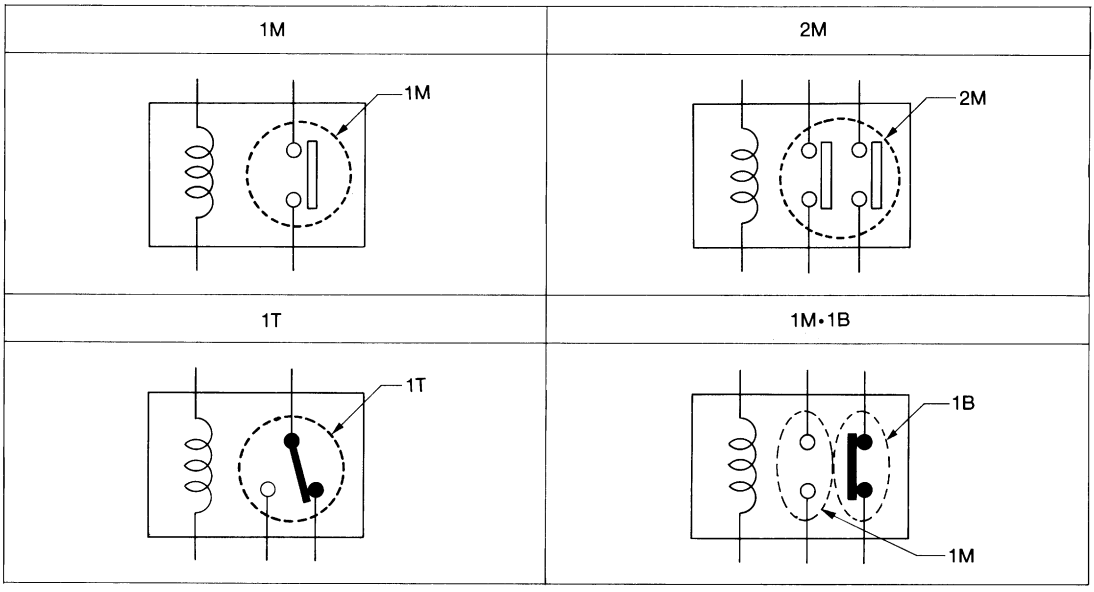
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



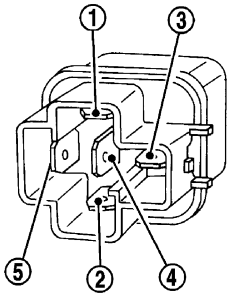
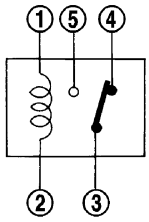
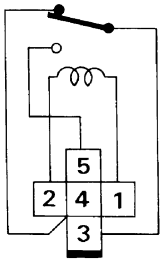
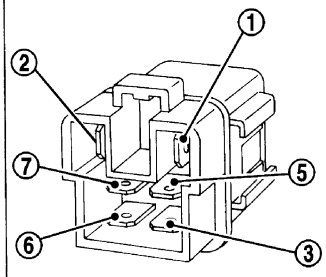
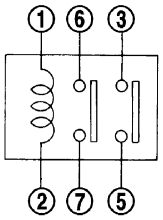
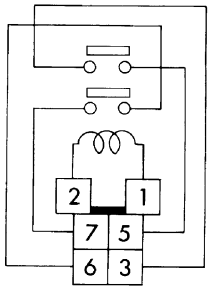
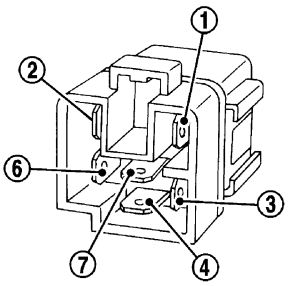
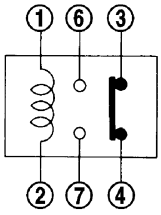
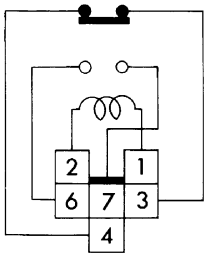
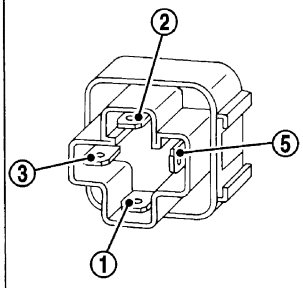
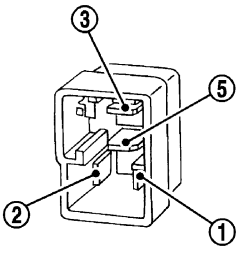
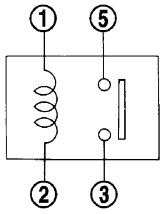
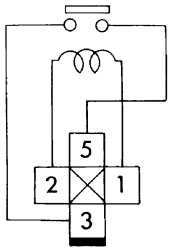
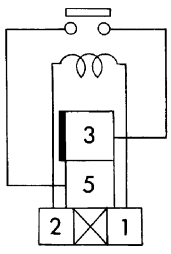

SEL881H

### TYPE OF STANDARDIZED RELAYS

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




SEL882H

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

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

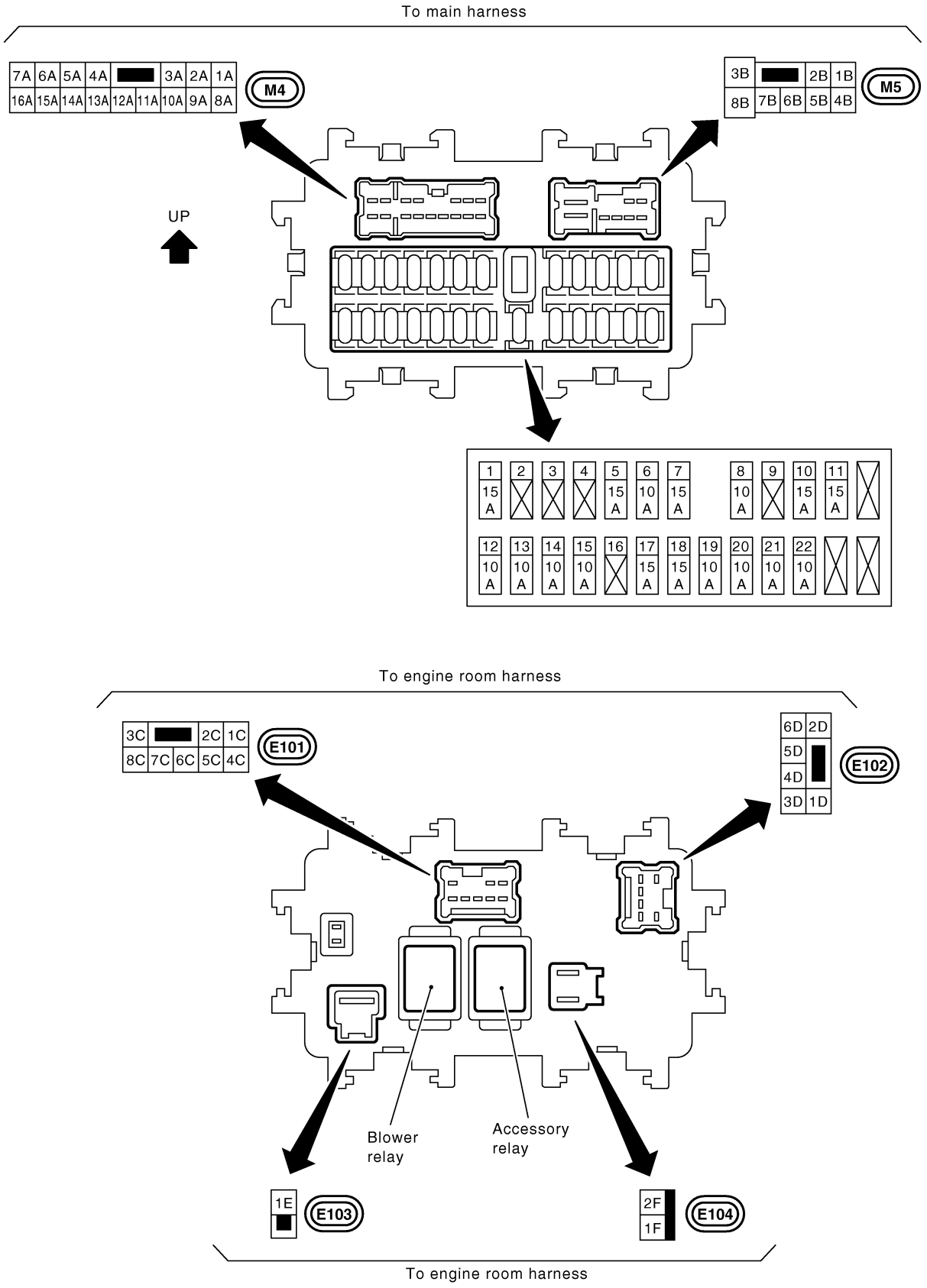
SEL188W

# FUSE BLOCK - JUNCTION BOX (J/B)

PFP:24350

## Terminal Arrangement

NKS004EZ



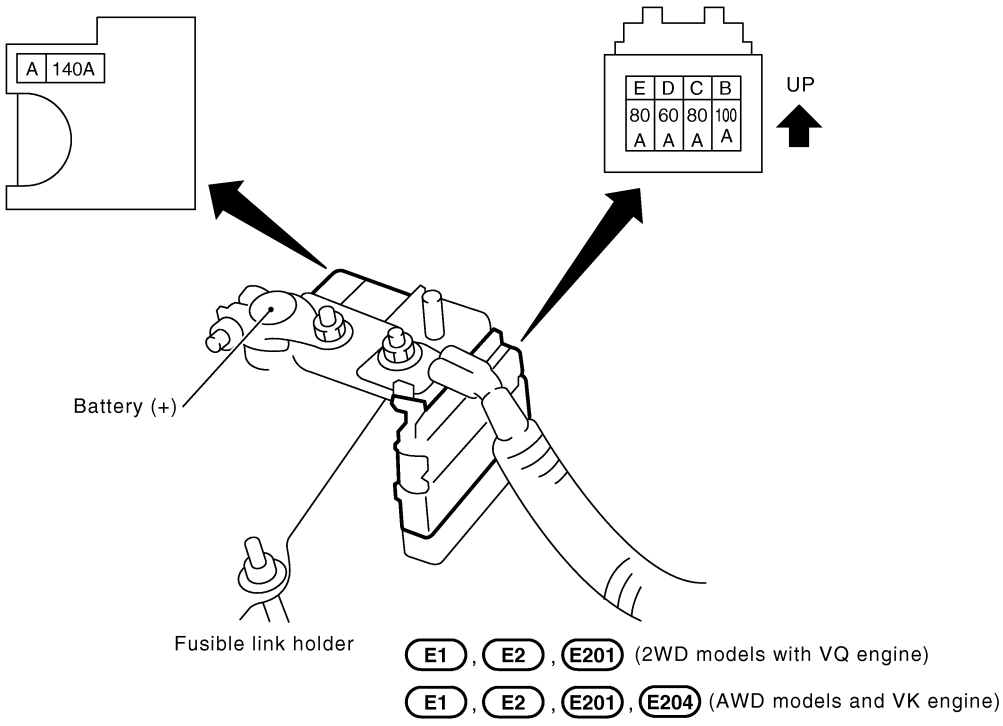

CKIT0663E

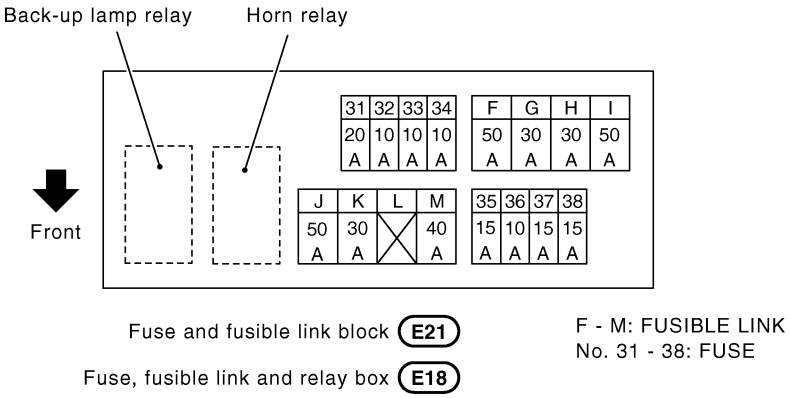
# FUSE, FUSIBLE LINK AND RELAY BOX

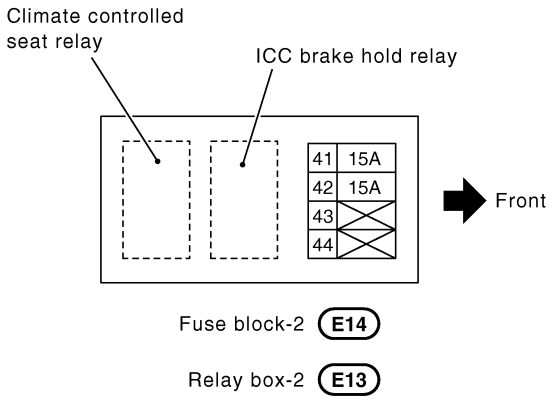
PFP:24382

## Terminal Arrangement

NKS004F0




CKIT0664E