

SECTION PG

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

SERVICE INFORMATION	2	Wiring Diagram - PDU -	31	
DTC INDEX	2	Terminal and Reference Value for Intelligent Key		
U1000	2	Unit	33	
PRECAUTIONS	3	Terminal and Reference Value for PDU	34	
Precaution for Supplemental Restraint System		Work Flow	34	
(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-		Trouble Diagnosis Symptom Chart	35	
SIONER"	3	Check CAN Communication System	35	
Precaution for Procedure without Cowl Top Cover.....	3	Check PDU Power Supply and Ground Circuit	35	
POWER SUPPLY ROUTING CIRCUIT	4	Check Push-Button Ignition Switch (Ignition		
Schematic	4	Switch) System	36	
Wiring Diagram - POWER -	6	Check Push-Button Ignition Switch (Indicator Cir-		
Fuse	18	cuit) System	37	
Fusible Link	18	PDU Communication Circuit System 1	38	
Circuit Breaker	18	PDU Communication Circuit System 2	39	
IPDM E/R (INTELLIGENT POWER DISTRI-		Removal and Installation of PDU	40	
BUTION MODULE ENGINE ROOM)	19	HARNESS	41	
System Description	19	Harness Layout	41	
CAN Communication System Description	20	HARNESS CONNECTOR	74	
CAN Communication Unit	20	Description	74	
Function of Detecting Ignition Relay Malfunction	20	ELECTRICAL UNITS	77	
CONSULT-III Function (IPDM E/R)	20	Terminal Arrangement	77	
Auto Active Test	22	SMJ (SUPER MULTIPLE JUNCTION)	79	
Schematic	25	Terminal Arrangement	79	
IPDM E/R Terminal Arrangement	26	STANDARDIZED RELAY	82	
Check IPDM E/R Power Supply and Ground Cir-		Description	82	
cuit	26	FUSE BLOCK - JUNCTION BOX (J/B)	84	
U1000 CAN COMM CIRCUIT	27	Terminal Arrangement	84	
Removal and Installation of IPDM E/R	27	FUSE, FUSIBLE LINK AND RELAY BOX	85	
PDU (POWER DISTRIBUTION UNIT)	29	Terminal Arrangement	85	
Component Parts and Harness Connector Loca-				
tion	29			
System Description	29			

DTC INDEX

< SERVICE INFORMATION >

SERVICE INFORMATION

DTC INDEX

U1000

INFOID:000000005351695

DTC	Items (CONSULT screen terms)	Reference
U1000	CAN COMM CIRCUIT	PG-27, "U1000 CAN COMM CIRCUIT"

PRECAUTIONS

< SERVICE INFORMATION >

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000005351696

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SUPPLEMENTAL RESTRAINT SYSTEM" and "SEAT BELTS" of this Service Manual.

WARNING:

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

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

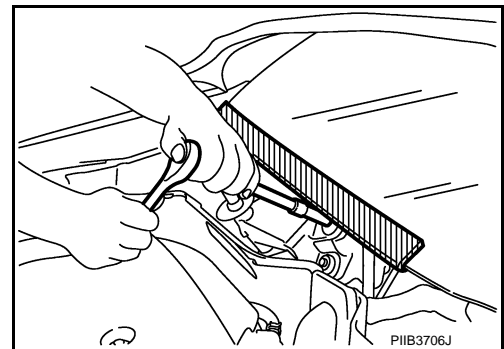
WARNING:

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Procedure without Cowl Top Cover

INFOID:000000005351697

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



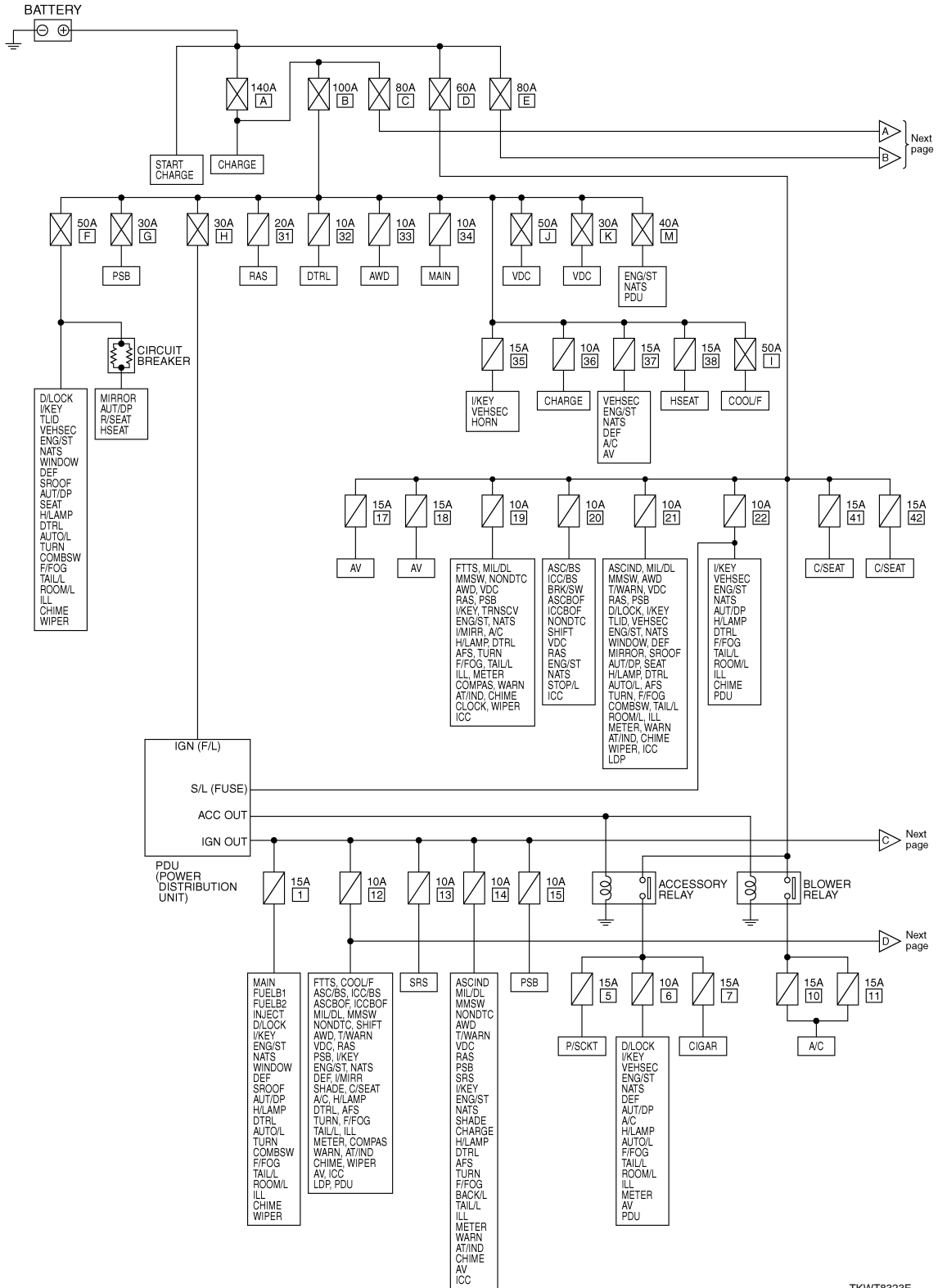
POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

POWER SUPPLY ROUTING CIRCUIT

Schematic

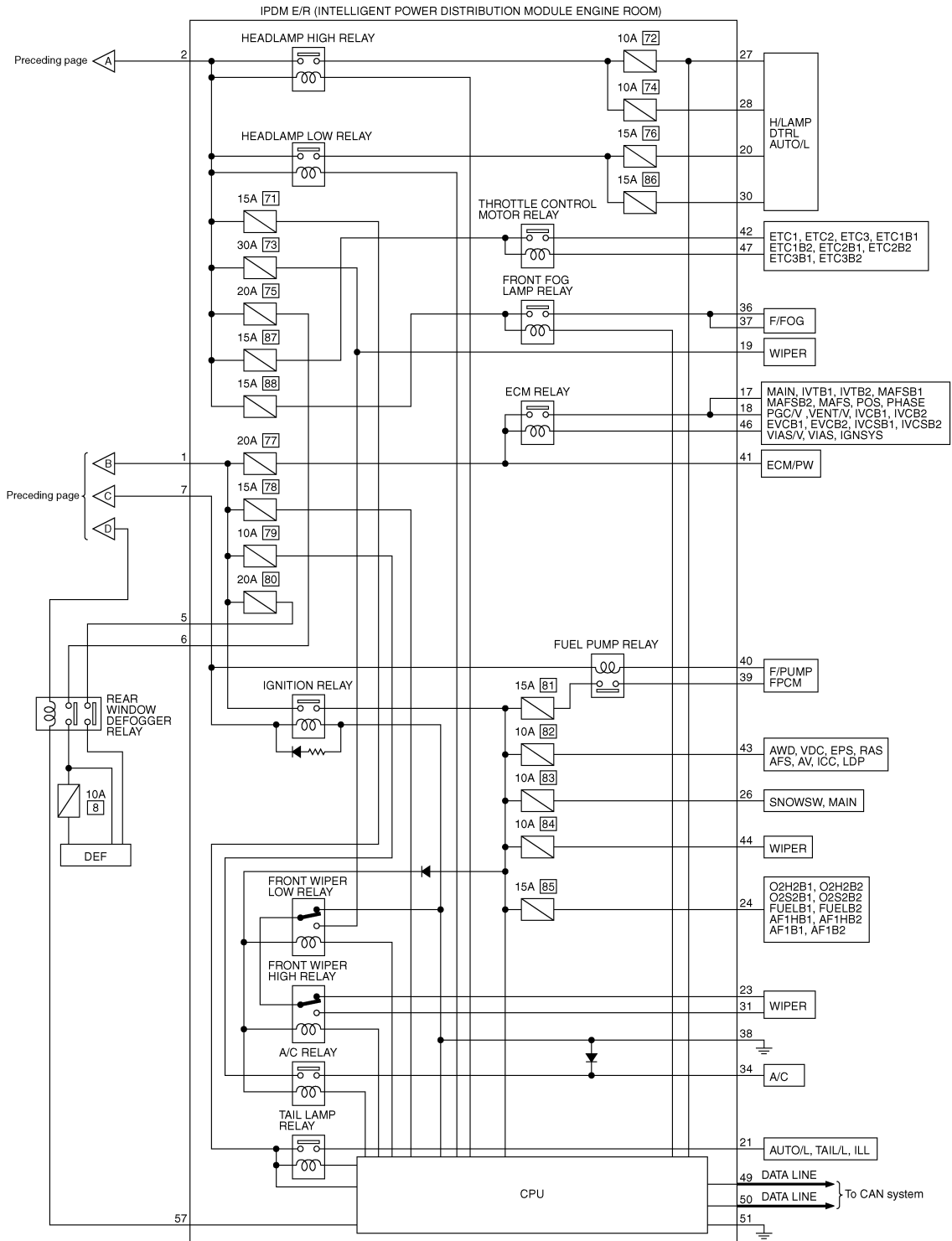
INFOID:000000005351698



TKWT8323E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >



TKWT8324E

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

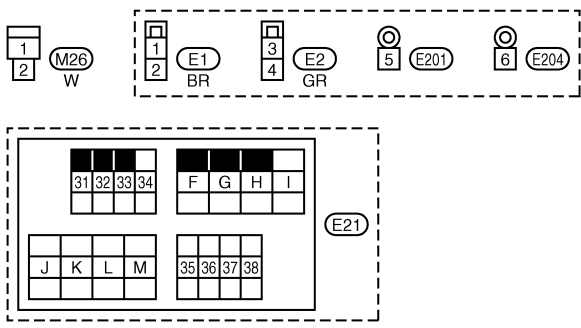
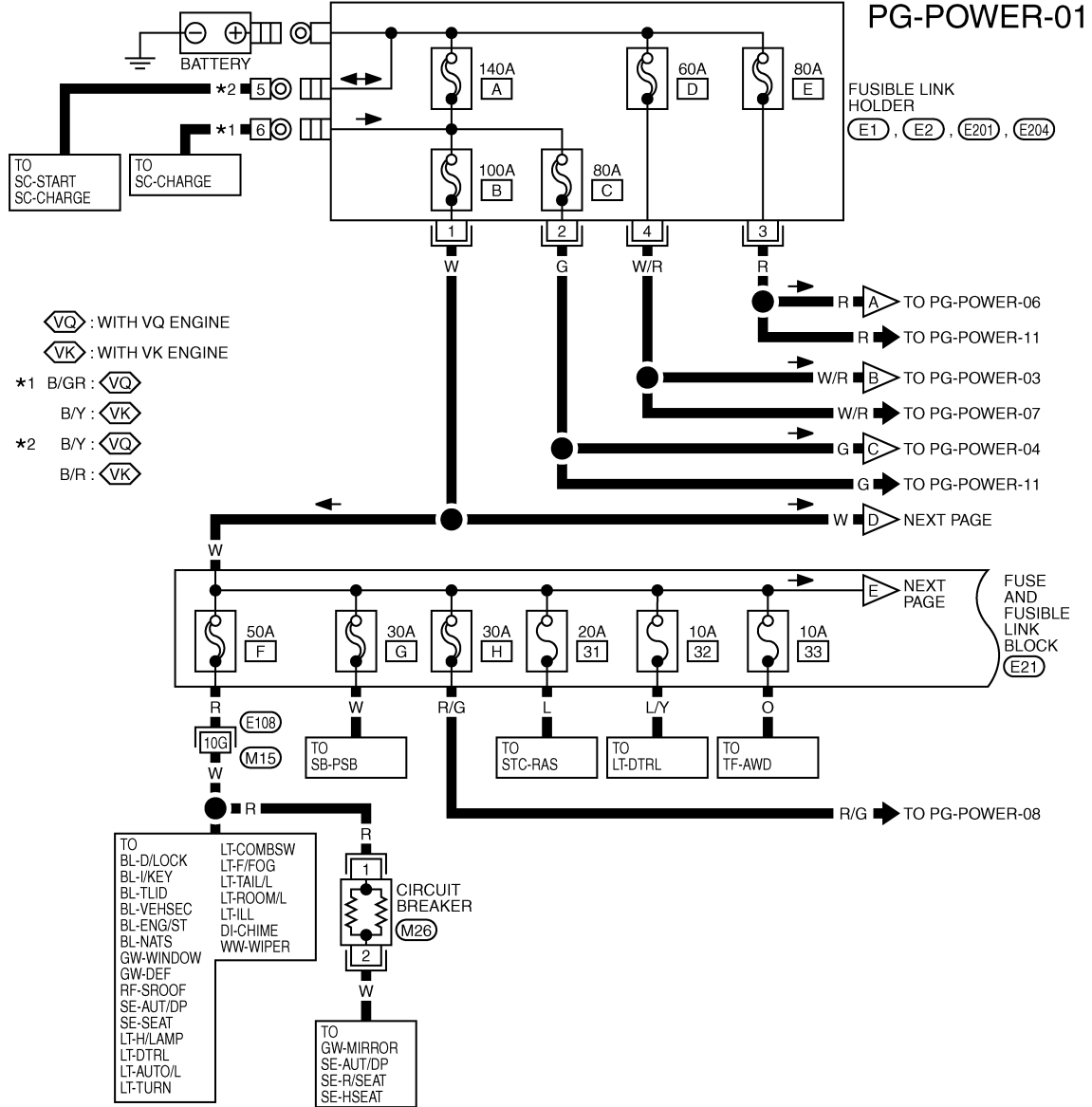
POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

Wiring Diagram - POWER -

INFOID:000000005351699

BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION



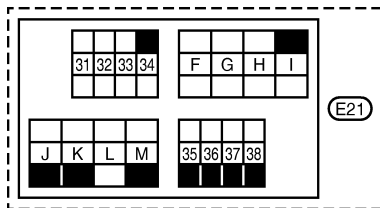
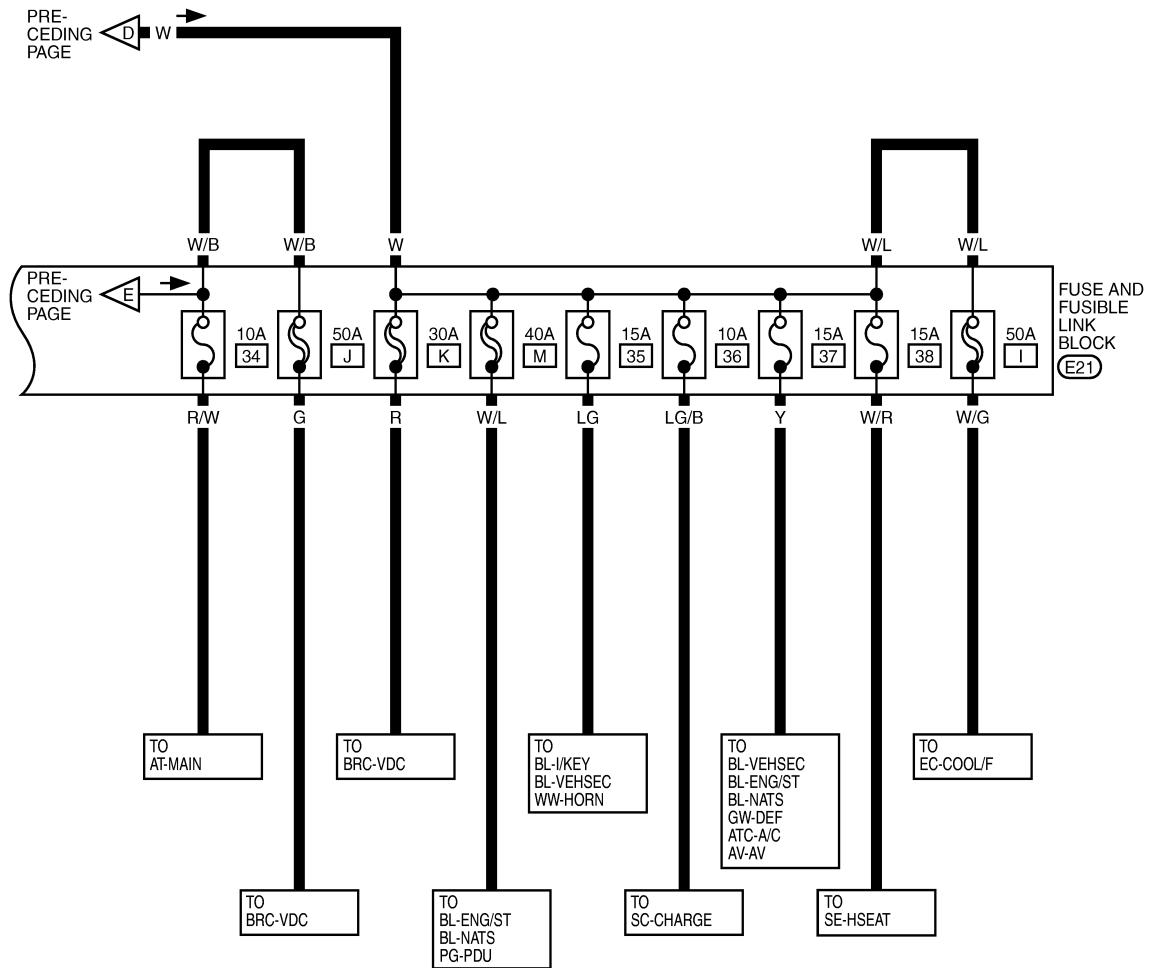
REFER TO THE FOLLOWING.
 (E108) -SUPER MULTIPLE JUNCTION (SMJ)

TKWT8325E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-02



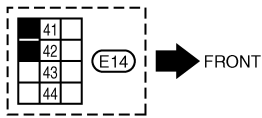
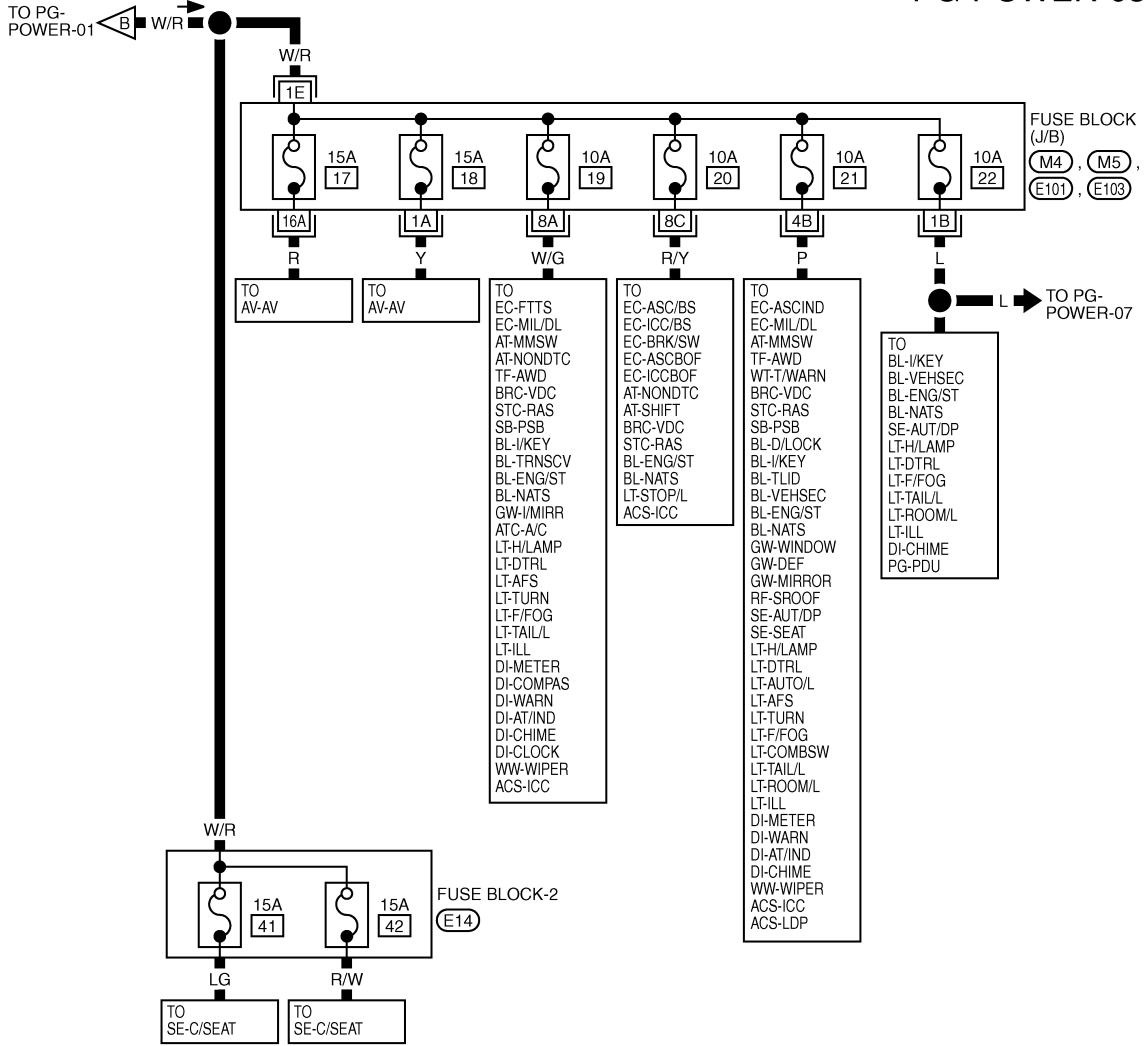
TKWT6904E

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

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-03



REFER TO THE FOLLOWING:

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

- FUSE BLOCK-JUNCTION BOX (J/B)

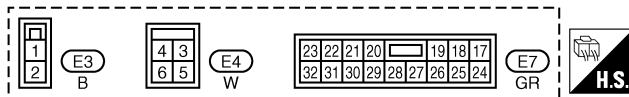
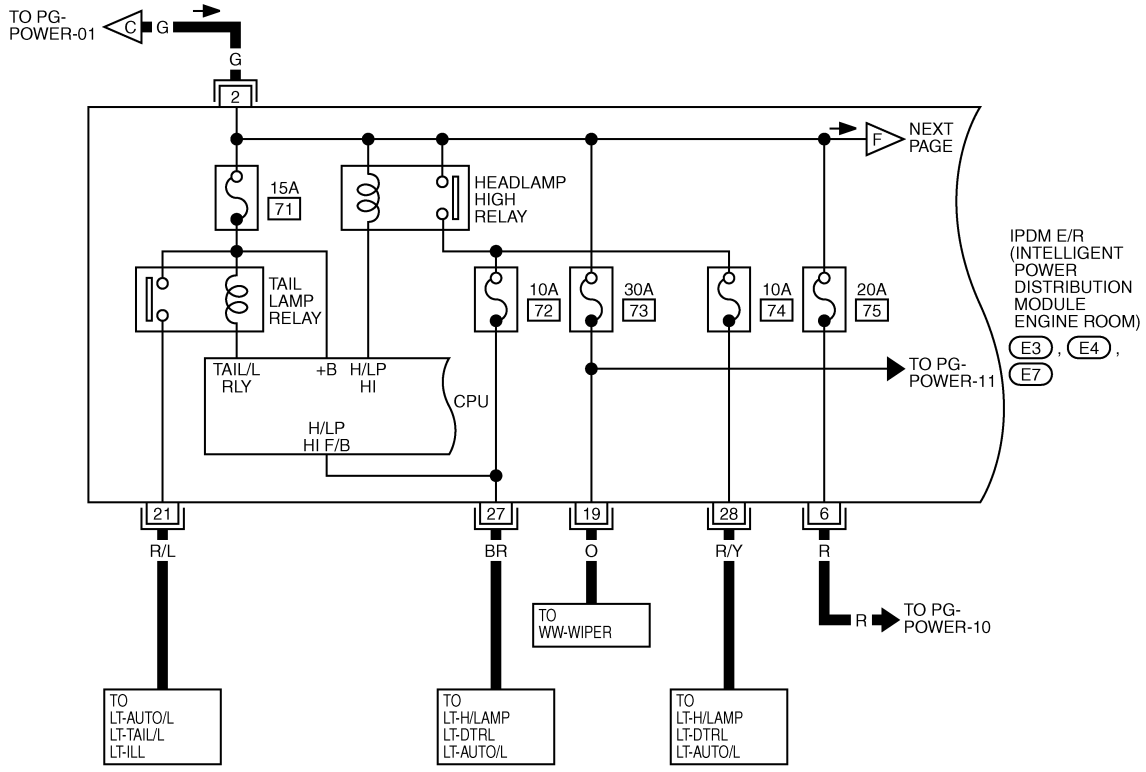
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWT8326E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-04



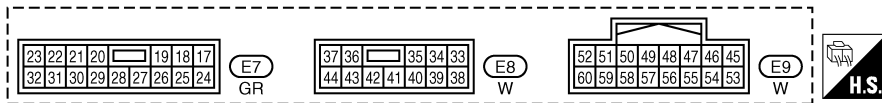
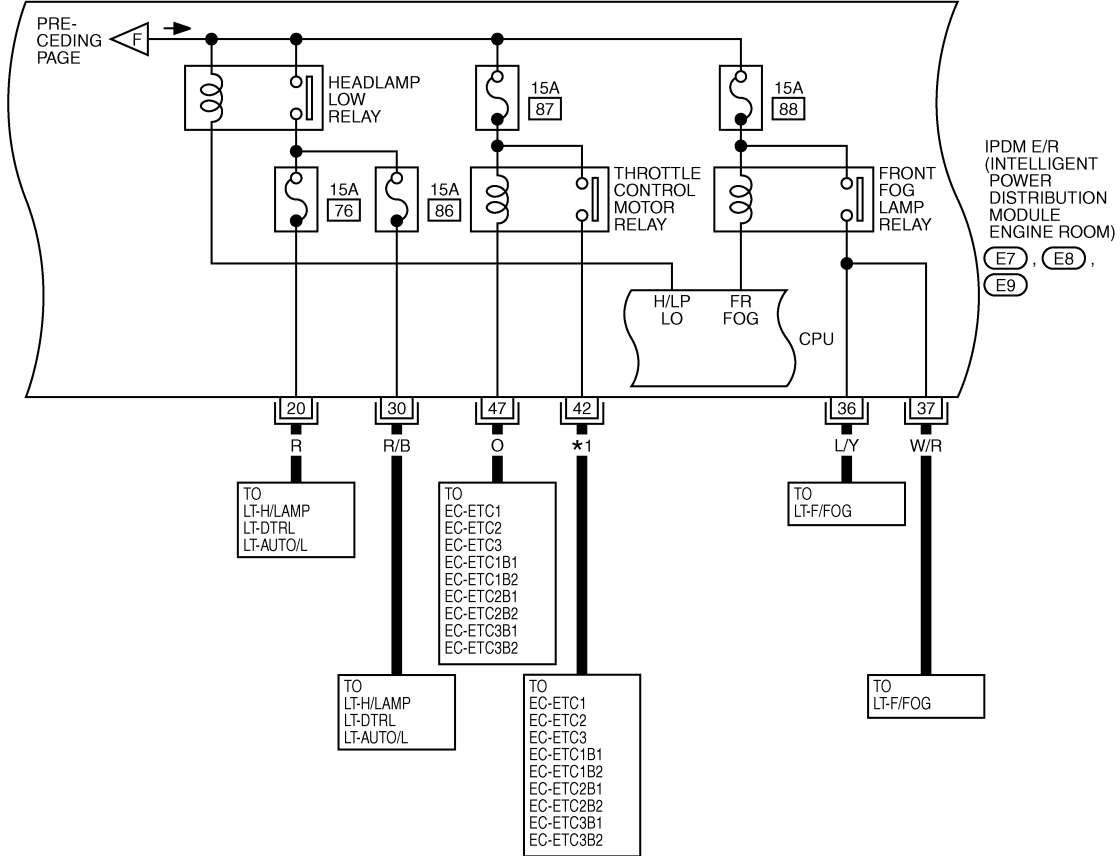
TKWT3569E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-05

- ◊VQ : WITH VQ ENGINE
- ◊VK : WITH VK ENGINE
- *1 BR : ◊VQ
- R : ◊VK

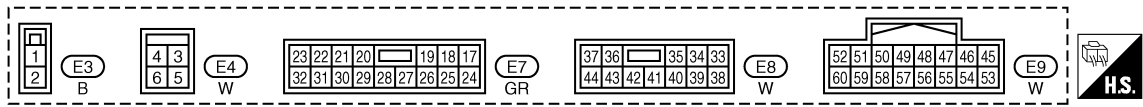
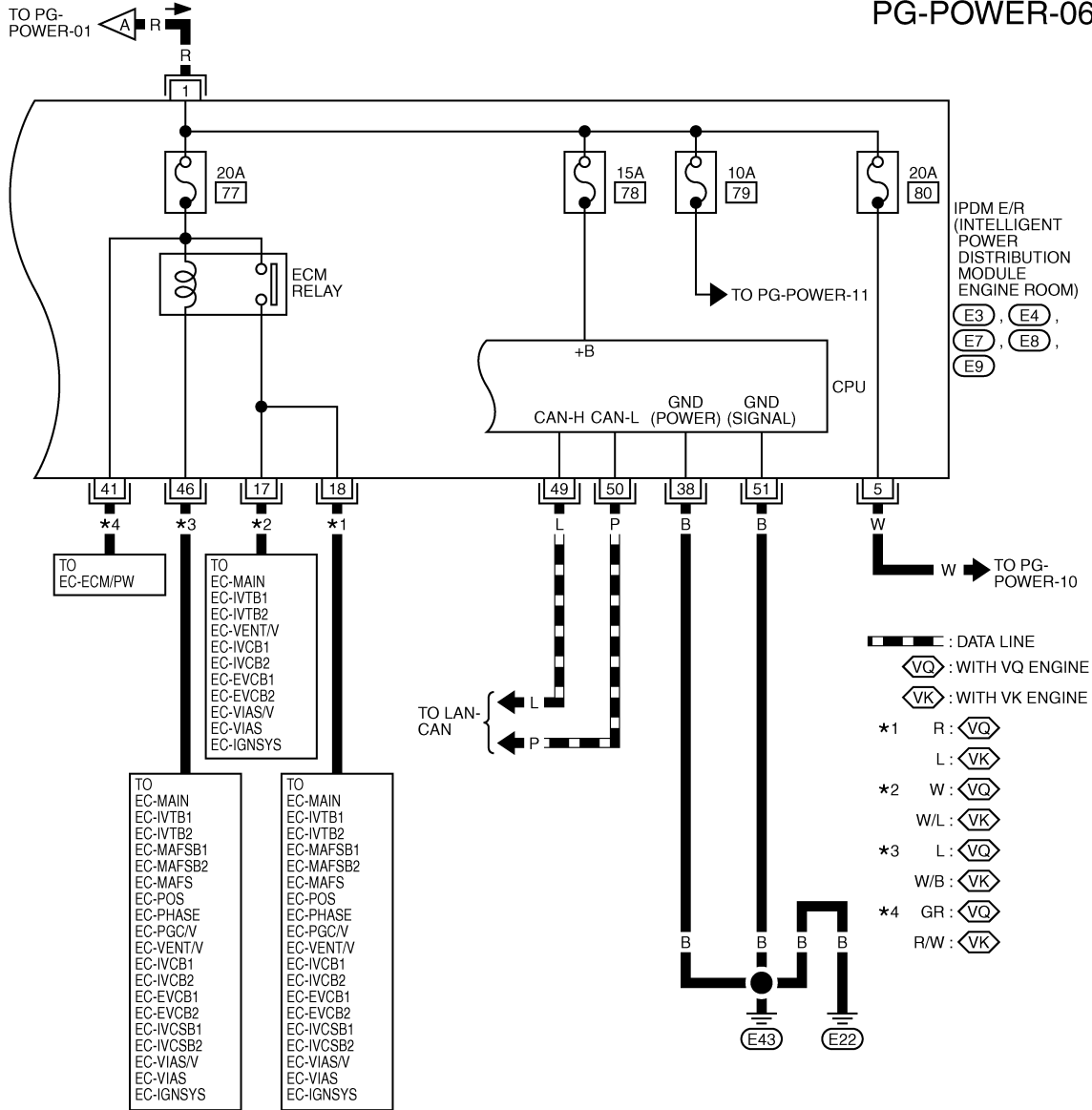


TKWT8327E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-06



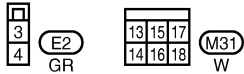
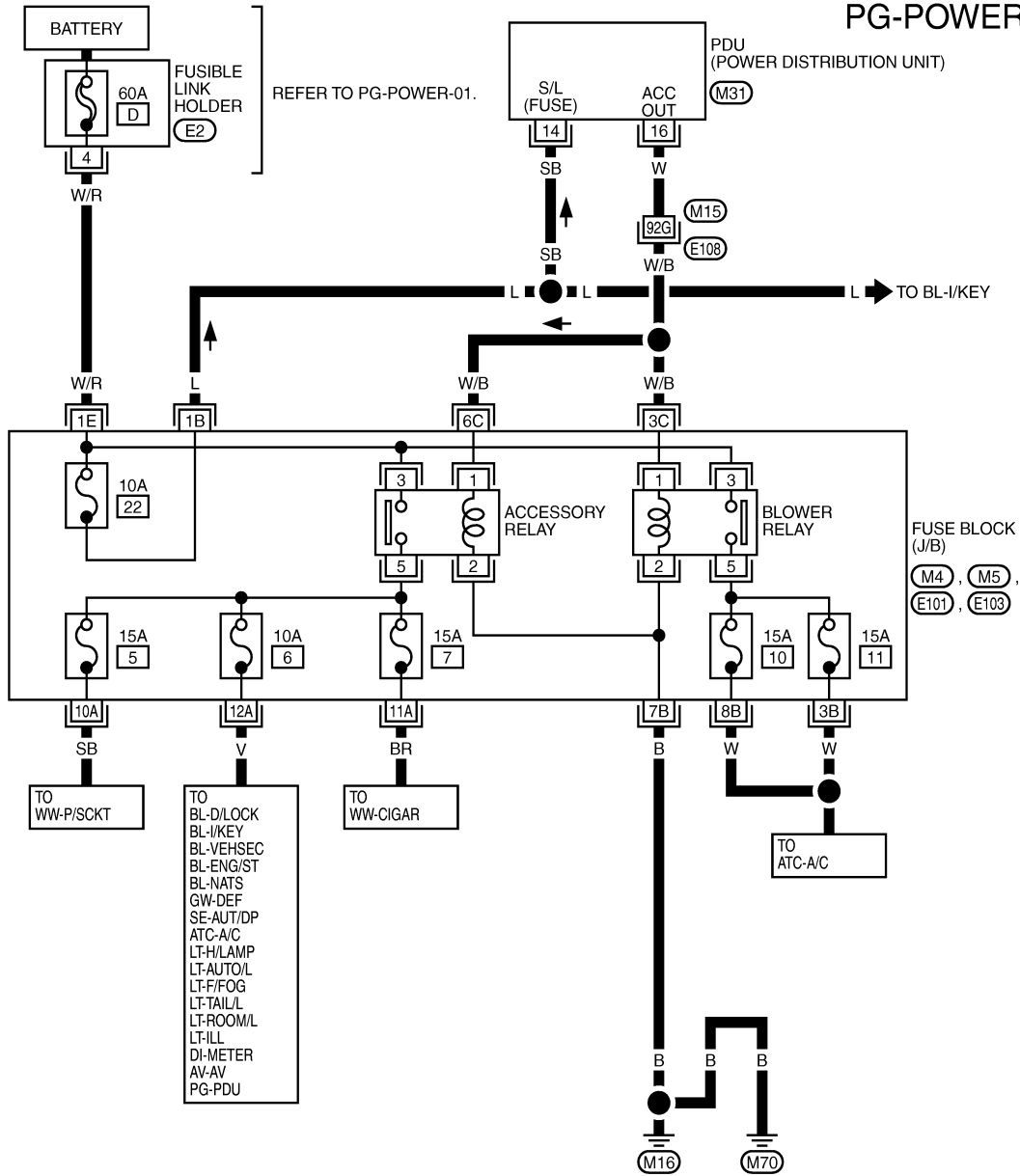
TKWT8328E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

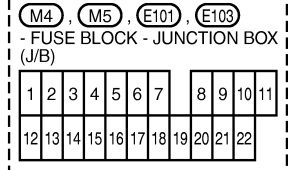
ACCESSORY POWER SUPPLY — IGNITION SW. IN "ACC" OR "ON"

PG-POWER-07



REFER TO THE FOLLOWING.

(E108) - SUPER MULTIPLE JUNCTION (SMJ)

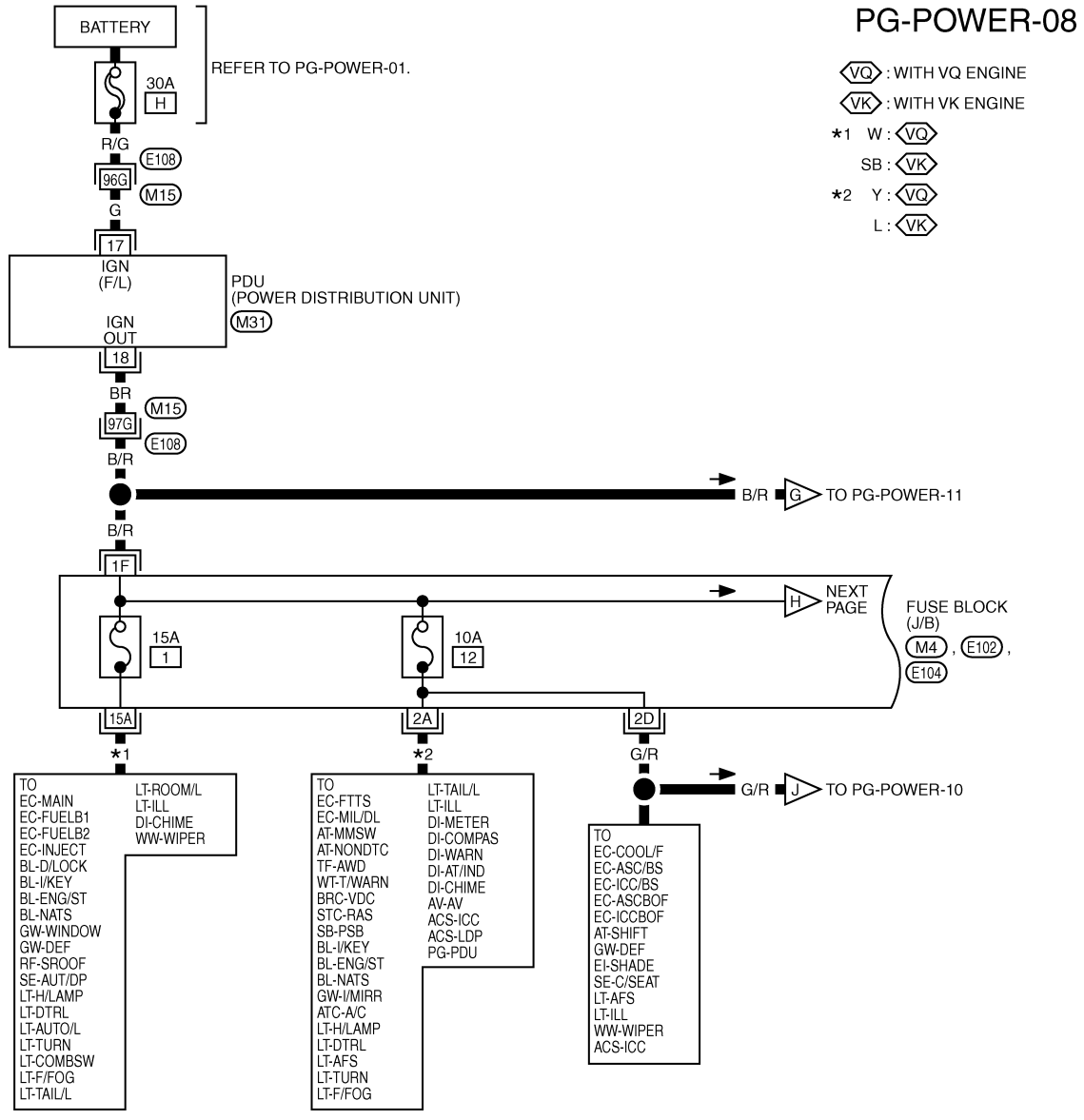


TKWT6906E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

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



PG-POWER-08

- ⬡VQ : WITH VQ ENGINE
- ⬡VK : WITH VK ENGINE
- *1 W : ⬡VQ
- SB : ⬡VK
- *2 Y : ⬡VQ
- L : ⬡VK

13	15	17
14	16	18

(M31)
W

REFER TO THE FOLLOWING.

(E108) -SUPER MULTIPLE JUNCTION (SMJ)

(M4 , E102 , E104)
-FUSE BLOCK-JUNCTION BOX (J/B)

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

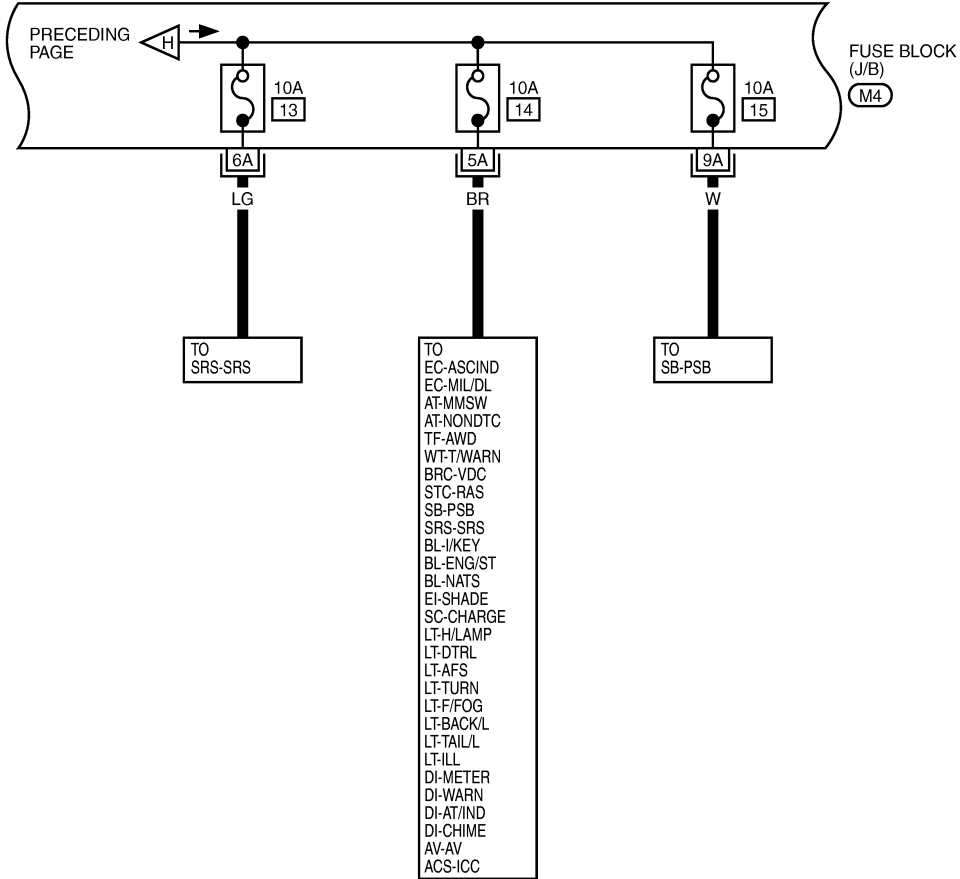
TKWT8329E

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

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-09



REFER TO THE FOLLOWING.

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

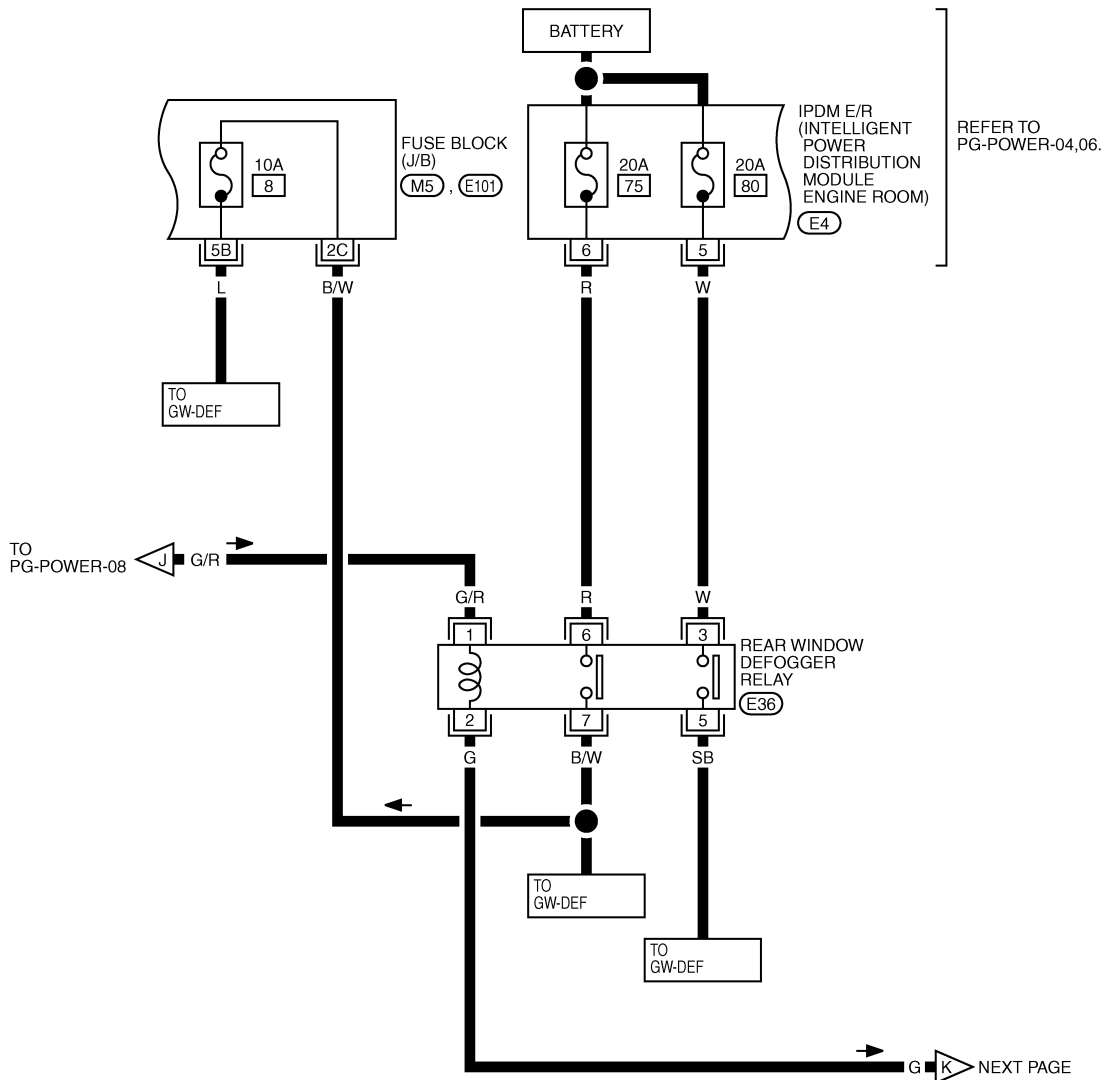
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWT7192E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-10



E4
W



E36
BR

REFER TO THE FOLLOWING.

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

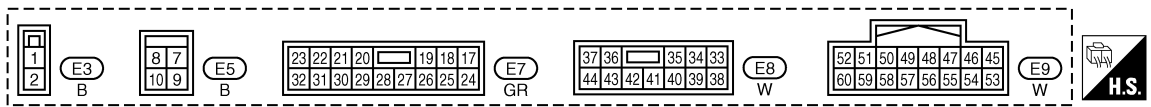
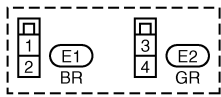
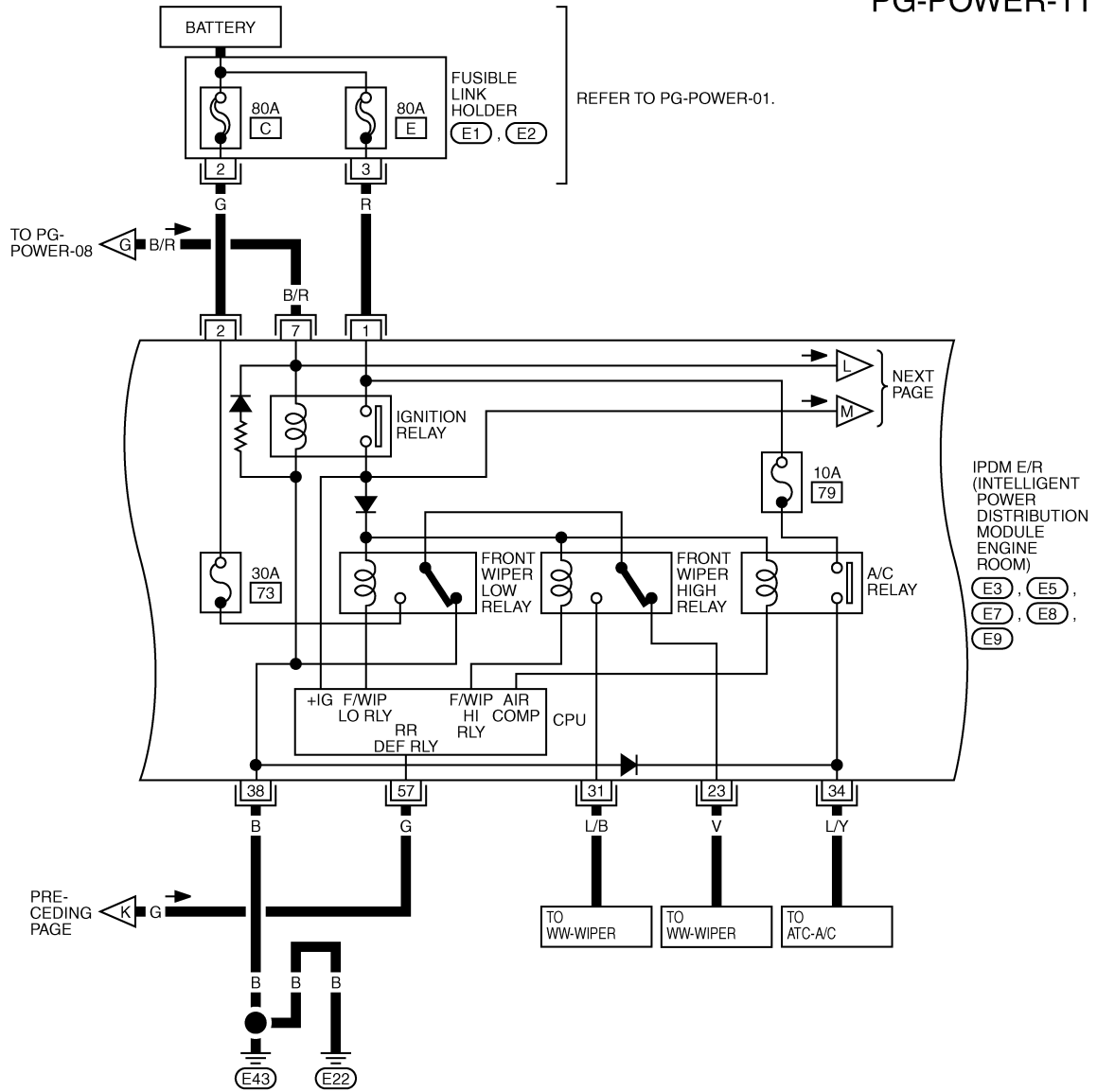
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWT3575E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-11



TKWT3576E

POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

PG-POWER-12

◊VQ◊ : WITH VQ ENGINE

◊VK◊ : WITH VK ENGINE

*1 R : ◊VQ◊

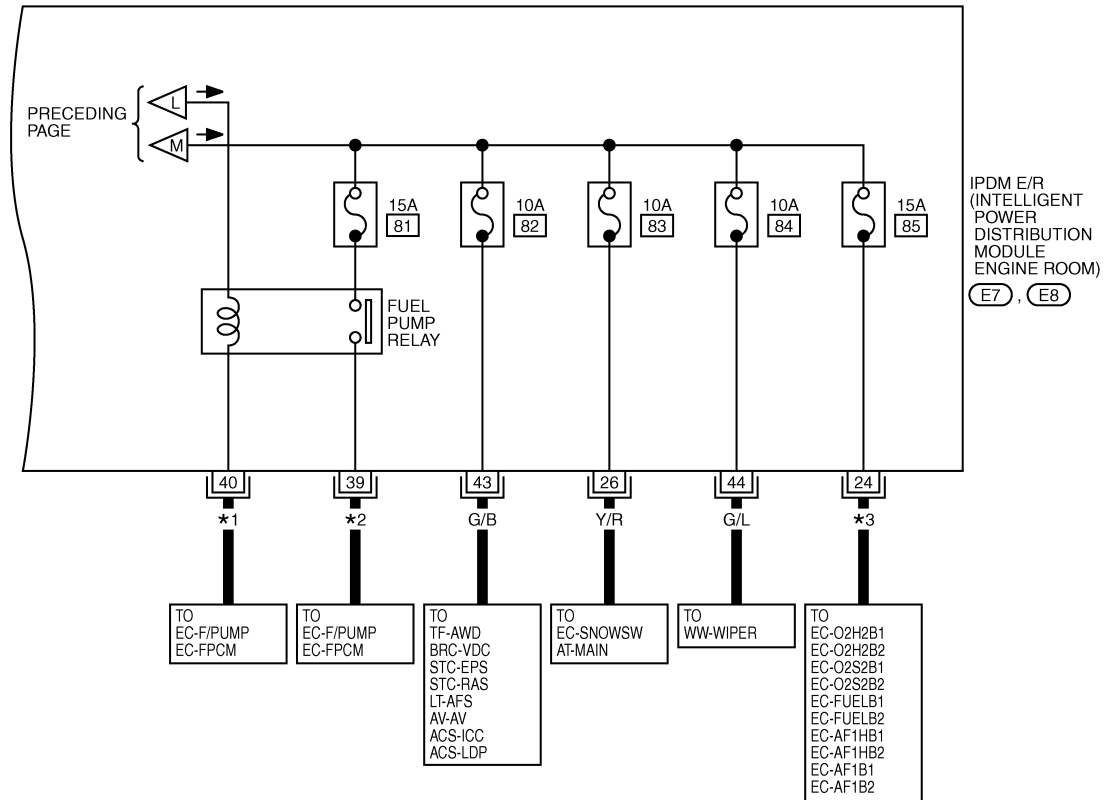
B/R : ◊VK◊

*2 Y : ◊VQ◊

B/Y : ◊VK◊

*3 V : ◊VQ◊

R/B : ◊VK◊



TKWT8330E

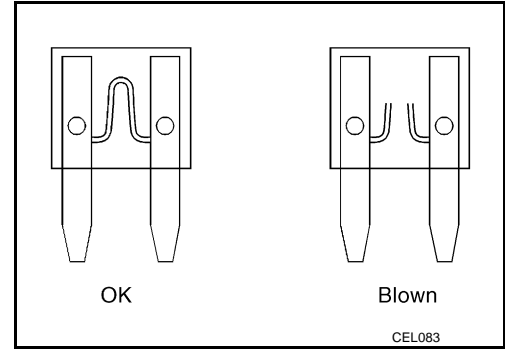
POWER SUPPLY ROUTING CIRCUIT

< SERVICE INFORMATION >

Fuse

INFOID:000000005351700

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



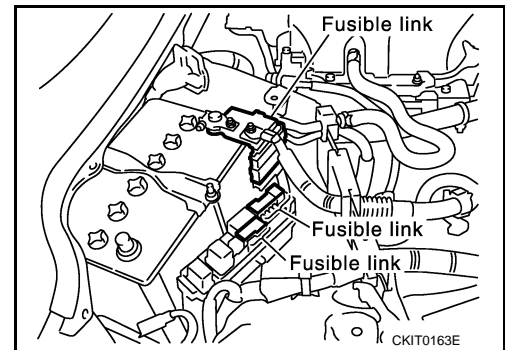
Fusible Link

INFOID:000000005351701

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

CAUTION:

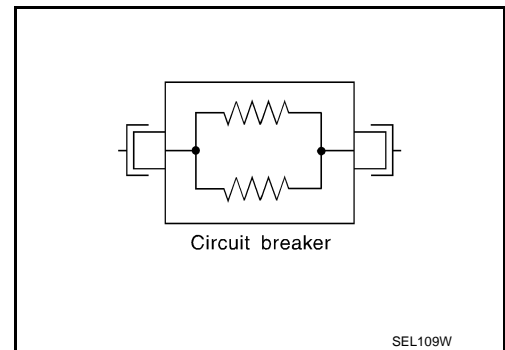
- If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of malfunction.
- Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other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



Circuit Breaker

INFOID:000000005351702

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



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

< SERVICE INFORMATION >

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

System Description

INFOID:000000005351703

- 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	<ul style="list-style-type: none">• With the ignition switch ON, the headlamp low relay is ON.• With the ignition switch OFF, the headlamp low relay is OFF.
Tail, parking and license plate lamps	<ul style="list-style-type: none">• With the ignition switch ON, the tail lamp relay is ON.• With the ignition switch OFF, the tail lamp relay is OFF.
Cooling fan	<ul style="list-style-type: none">• With the ignition switch ON, the cooling fan HI operates.• With the ignition switch OFF, the cooling fan stops.
Front wiper	Until the ignition switch is turned off, the front wiper LO and HI remains in the same status it was in just before fail-safe control was initiated.
Rear window defogger	Rear window defogger relay OFF

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

< SERVICE INFORMATION >

Controlled system	Fail-safe mode
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

INFOID:000000005351704

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

CAN Communication Unit

INFOID:000000005351705

Refer to [LAN-29, "CAN System Specification Chart"](#).

Function of Detecting Ignition Relay Malfunction

INFOID:000000005351706

- 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-III Function (IPDM E/R)

INFOID:000000005351707

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

Inspection Item, Diagnosis Mode	Description
Self-Diagnostic Result	The IPDM E/R performs diagnosis of the CAN communication and self-diagnosis.
Data Monitor	The input/output data of the IPDM E/R is displayed in real time.

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

< SERVICE INFORMATION >

Inspection Item, Diagnosis Mode	Description
CAN Diag Support Monitor	The result of transmit/receive diagnosis of CAN communication can be read.
Active Test	The IPDM E/R sends a drive signal to electronic components to check their operation.

SELF-DIAGNOSTIC RESULT

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

NOTE:

The details for display of the period are as follows:

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

DATA MONITOR

Item name	CONSULT-III screen display	Display or unit	MAIN SIGNALS	Description
Cooling fan speed 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
Position light request	TAIL&CLR REQ	On/Off	×	Signal status input from BCM
Low beam request	HL LO REQ	On/Off	×	Signal status input from BCM
High beam request	HL HI REQ	On/Off	×	Signal status input from BCM
Front fog light 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
Front wiper stop position	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 switch	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*	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.
- *: Only the vehicle with daytime light system operates.

ACTIVE TEST

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

< SERVICE INFORMATION >

Test item	CONSULT-III screen display	Description
Tail lamp operation	TAIL LAMP	With a certain On-Off operation, the tail lamp relay can be operated.
Rear window defogger operation	REAR DEFOGGER	With a certain On-Off operation, the rear window defogger relay can be operated.
Front wiper (HI, LO) operation	FRONT WIPER	With a certain operation (Off, Hi, Lo), the front wiper relay (Low, High) can be operated.
Cooling fan operation	MOTOR FAN	With a certain operation (1, 2, 3, 4), the cooling fan can be operated.
Lamp (HI, LO, FOG) operation	LAMPS	With a certain operation (Off, Hi, Lo, Fog), the lamp relay (Low, High, Front fog) can be operated.
Horn operation	HORN	Push "On" button, horn relay operates 20ms.

Auto Active Test

INFOID:000000005351708

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)
- Parking, license plate and tail 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:

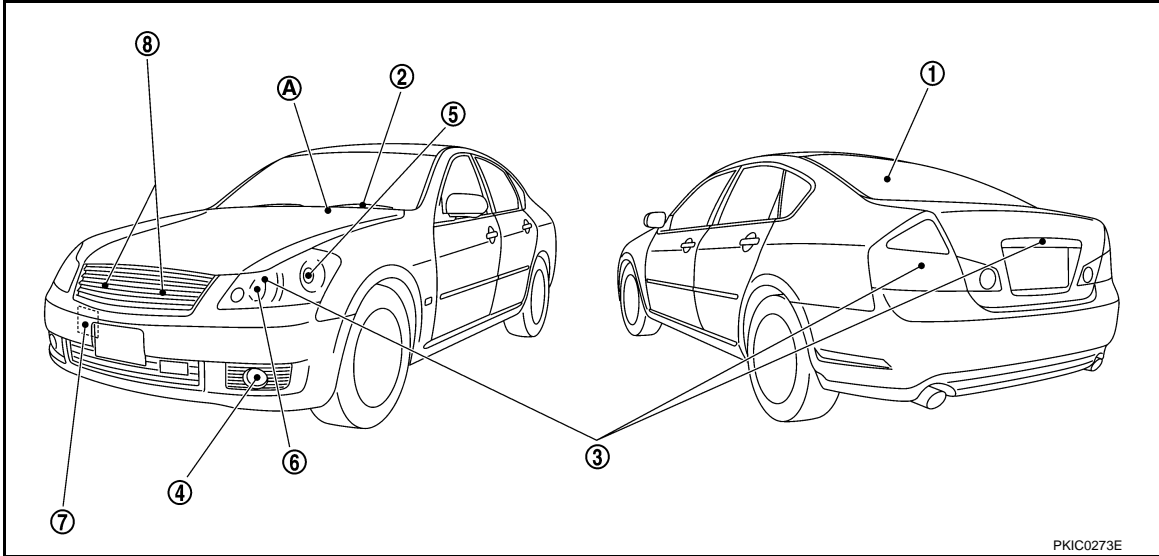
- **Never start the engine.**
- **If the engine starting operation is made, delete DTC on Self-Diagnostic Result of CONSULT-III. Refer to [BL-139, "CONSULT-III Functions \(INTELLIGENT KEY\)"](#).**
- **Be sure to inspect [GW-44, "Check door Switch"](#) when the auto active test cannot be performed.**

INSPECTION IN AUTO ACTIVE TEST MODE

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

< SERVICE INFORMATION >

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

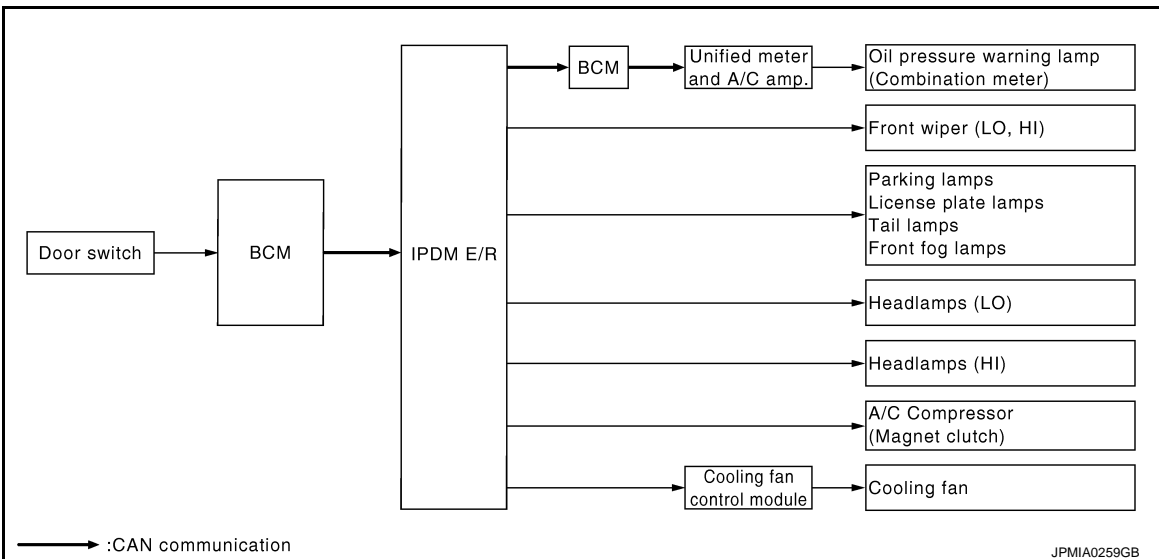


(A): Oil pressure warning lamp is blinking when the auto active test operating.

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

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

< SERVICE INFORMATION >

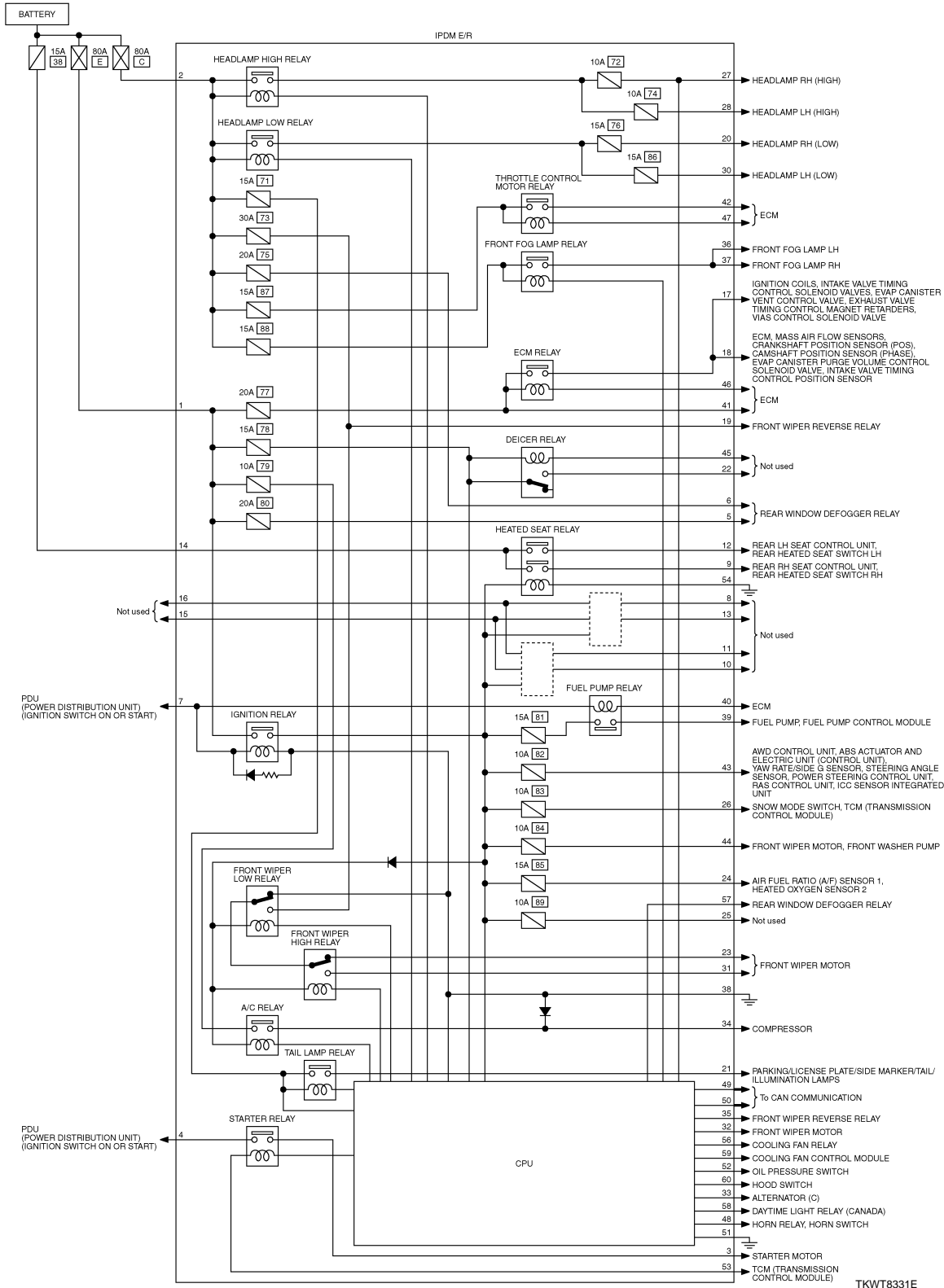
Symptom	Inspection contents	Possible cause	
Any of front wipers, tail lamps, parking lamps, front fog lamps, and head lamps (HI, LO) do not operate.	Perform auto active test. Does system in question operate?	YES	<ul style="list-style-type: none"> • BCM signal input system malfunction
		NO	<ul style="list-style-type: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

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

< SERVICE INFORMATION >

Schematic

INFOID:000000005351709



TKWT8331E

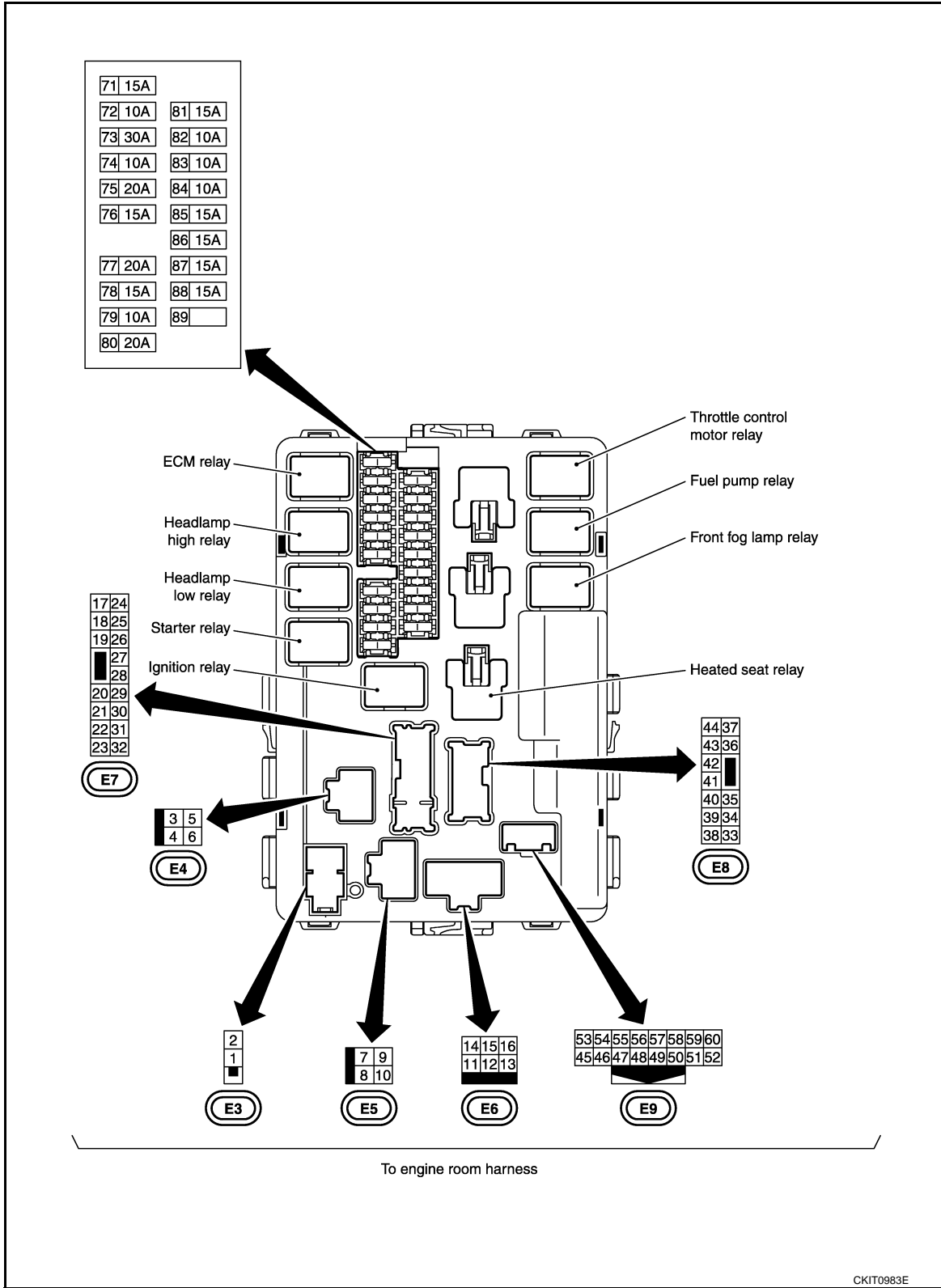
A
B
C
D
E
F
G
H
I
J
PG
L
M
N
O
P

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

< SERVICE INFORMATION >

IPDM E/R Terminal Arrangement

INFOID:000000005351710



Check IPDM E/R Power Supply and Ground Circuit

INFOID:000000005351711

1. CHECK FUSES AND FUSIBLE LINKS

Check for blown fuses and fusible links.

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

< SERVICE INFORMATION >

Power source	Fuse and fusible link No.
Battery	E
	C
	71
	78

OK or NG

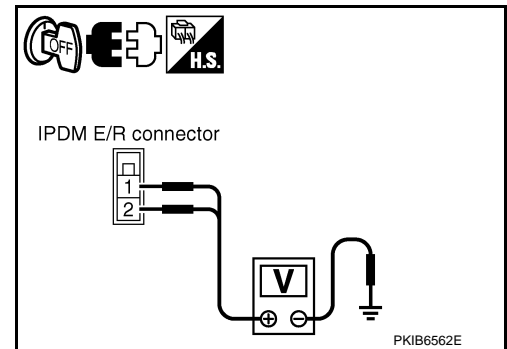
OK >> GO TO 2.

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	Ground
E3	1	
	2	Battery voltage



OK or NG

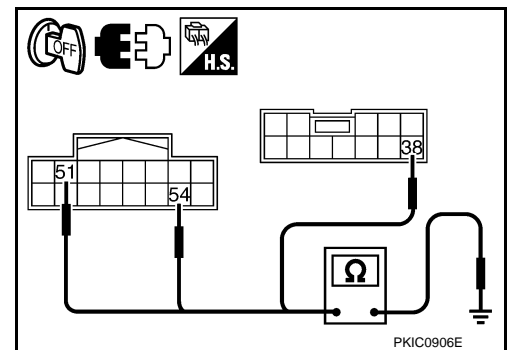
OK >> GO TO 3.

NG >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

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

IPDM E/R connector	Terminal	Ground	Continuity
E8	38		Ground
E9	51		
	54		



OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.

U1000 CAN COMM CIRCUIT

INFOID:000000005351712

1.PERFORM SELF DIAGNOSTIC

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

Is "U1000: CAN COMM CIRCUIT" displayed?

YES >> Refer to [LAN-20, "Trouble Diagnosis Flow Chart"](#).

NO >> Refer to [GI-26, "How to Perform Efficient Diagnosis for an Electrical Incident"](#).

Removal and Installation of IPDM E/R

INFOID:000000005351713

↔ Vehicle front

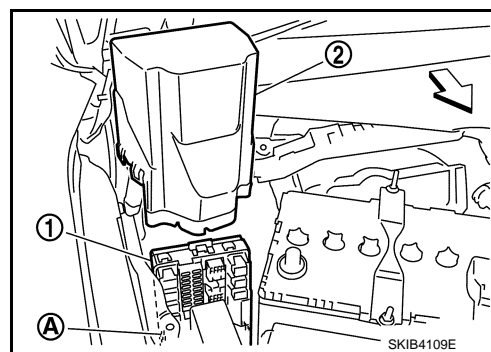
REMOVAL

1. Remove cowl top cover (RH). Refer to [EI-29](#).

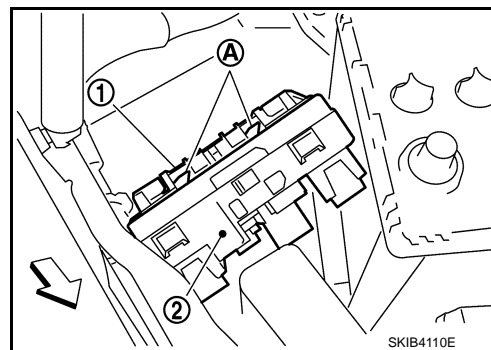
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< SERVICE INFORMATION >

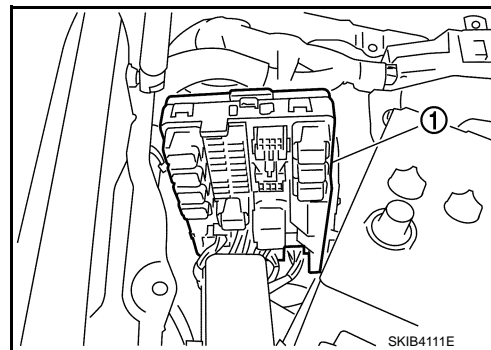
2. Disengage pawls (A) on both side of IPDM E/R cover B (1), remove IPDM E/R cover A (2).



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.

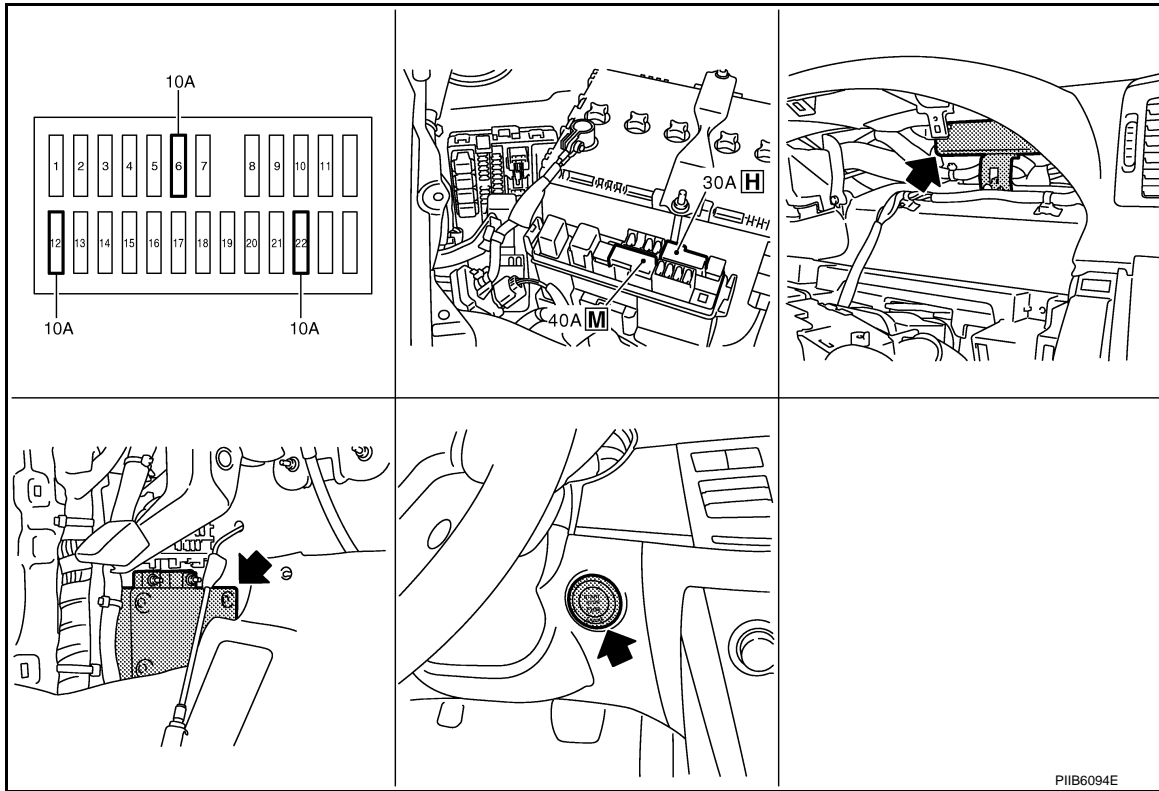
PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

PDU (POWER DISTRIBUTION UNIT)

Component Parts and Harness Connector Location

INFOID:000000005351714



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

INFOID:000000005351715

- 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 detection 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.

A
B
C
D
E
F
G
H
I
J

PG

L
M
N
O
P

PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

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 (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 (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 (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 (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 (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 (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 ACC → START ON → START (Engine start)	Depressed	P or N position (*1)	1 [If the switch is pushed once, the engine starts from any power supply position (LOCK, ACC, and ON)]
Engine start condition → LOCK (Engine stop)	—	P position	1
Engine start condition → ACC (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)

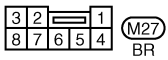
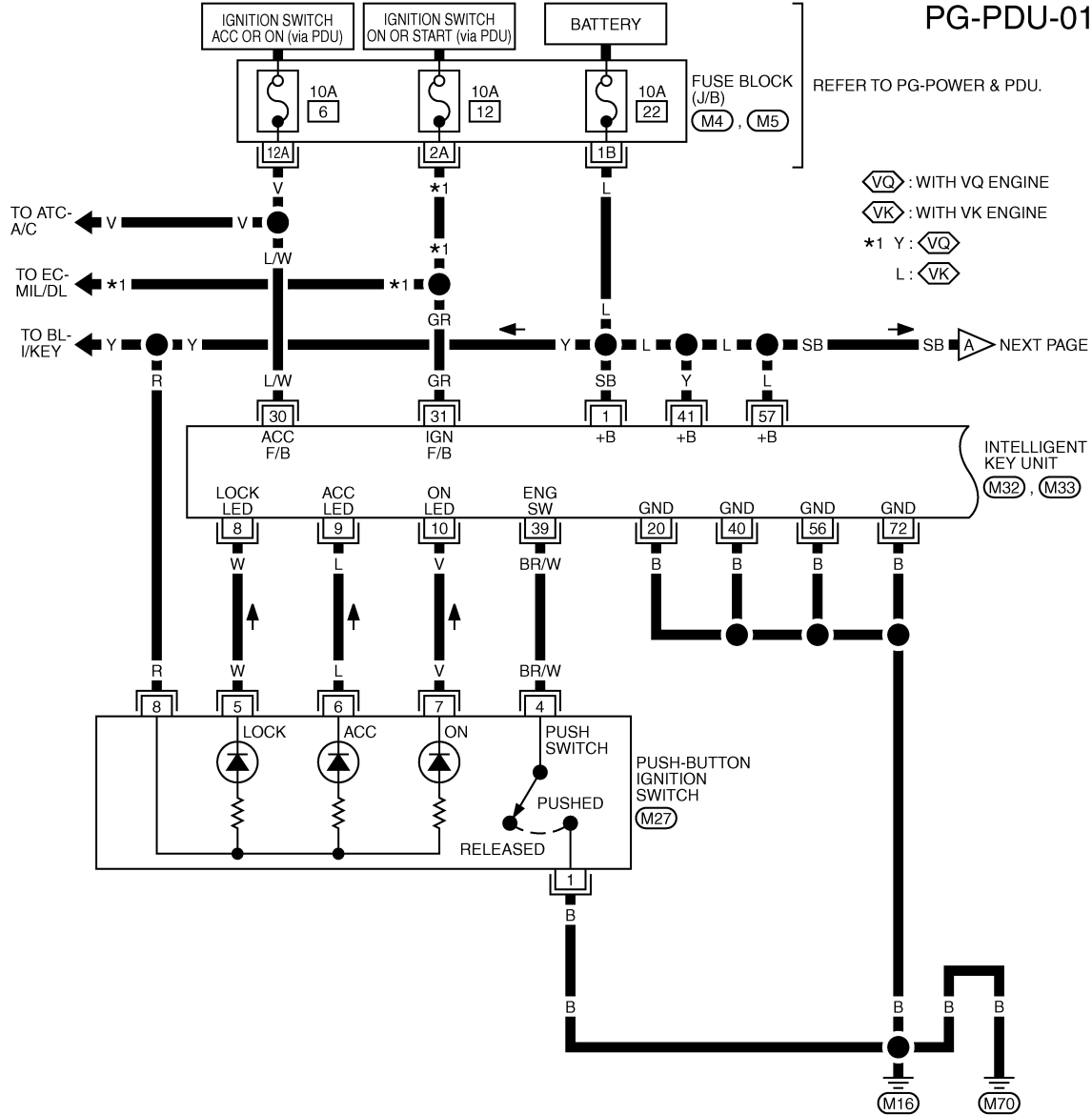
PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

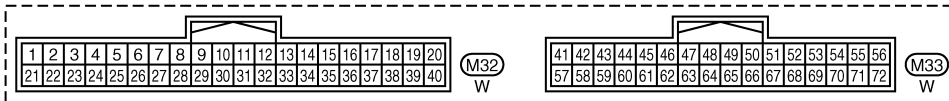
Wiring Diagram - PDU -

INFOID:000000005351716

PG-PDU-01



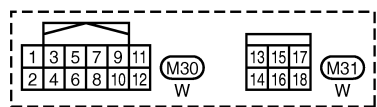
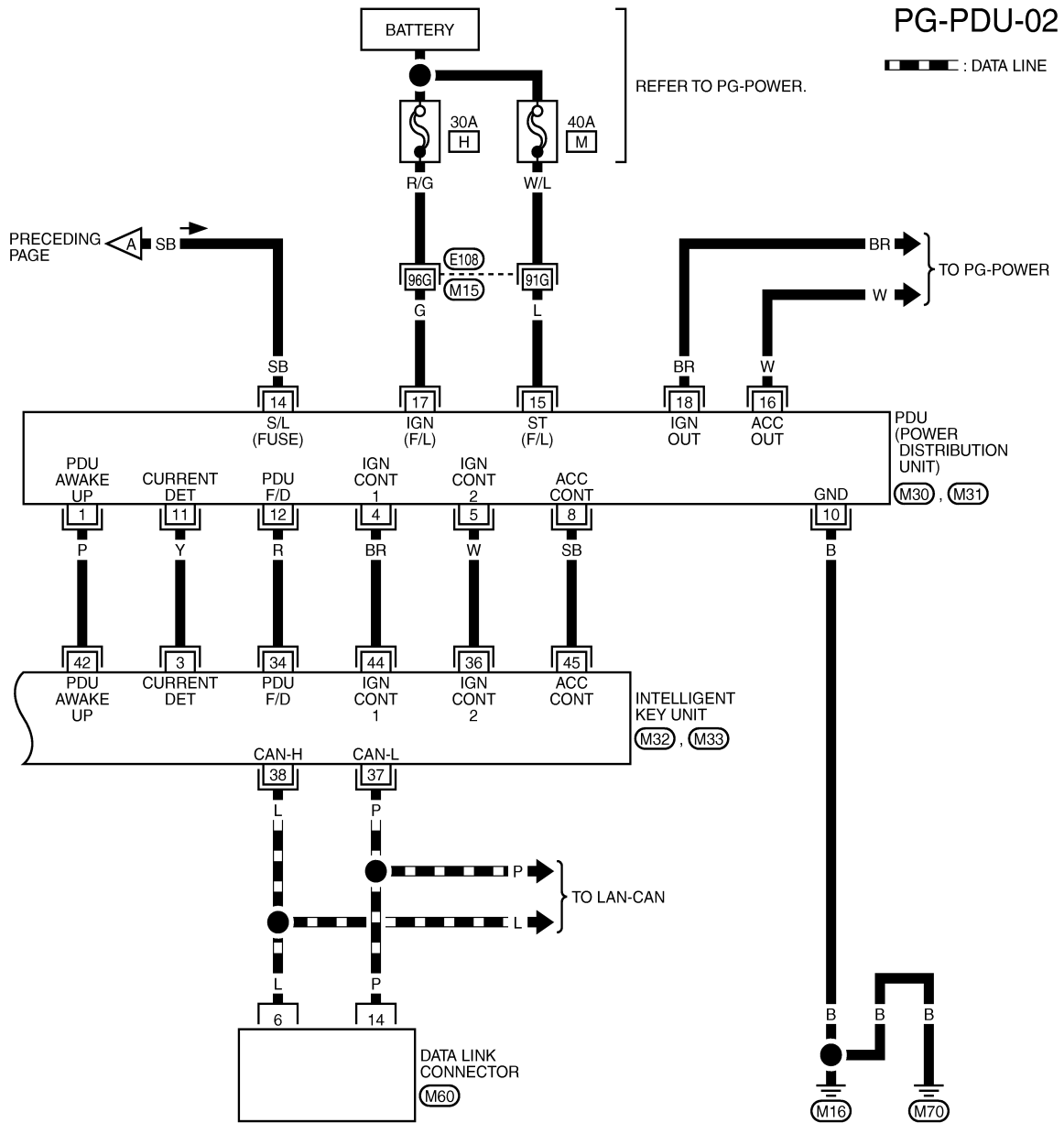
REFER TO THE FOLLOWING.
 (M4), (M5) - FUSE BLOCK-JUNCTION BOX (J/B)



TKWT8332E

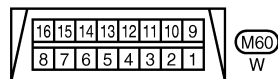
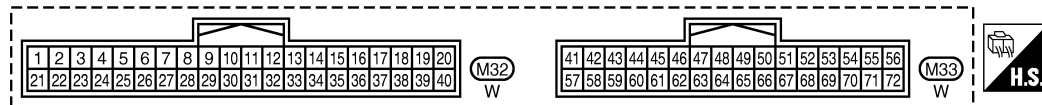
PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >



REFER TO THE FOLLOWING.

E108 - SUPER MULTIPLE JUNCTION (SMJ)



TKWT6910E

PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

Terminal and Reference Value for Intelligent Key Unit

INFOID:000000005351717

Terminal	Wire Color	Item	Signal In-put/Out-put	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

PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

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

Terminal and Reference Value for PDU

INFOID:000000005351718

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

INFOID:000000005351719

1. Check the symptom and customer's requests.
2. Understand outline of system. Refer to [PG-29, "System Description"](#).
3. Confirm that Intelligent Key system operates normally.
Refer to [BL-24](#).
4. Repair or replace any malfunctioning parts.

PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

Refer to [PG-35, "Trouble Diagnosis Symptom Chart"](#).

5. INSPECTION END

Trouble Diagnosis Symptom Chart

INFOID:000000005351720

Before performing the diagnosis in the following table, check the contents of [PG-34, "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-36
	2. Replace Intelligent Key unit	BL-113
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-35
	2. Check PDU communication circuit system 1	PG-38
	3. Replace PDU	PG-40
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-39
	2. Replace PDU	PG-40
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-37
	2. Replace Intelligent Key unit	BL-113

Check CAN Communication System

INFOID:000000005351721

1. CHECK SELF-DIAGNOSTIC RESULTS

With CONSULT-III

- Connect CONSULT-III, 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-III 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]>> Refer to [LAN-20, "Trouble Diagnosis Flow Chart"](#).

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

Check PDU Power Supply and Ground Circuit

INFOID:000000005351722

1. CHECK POWER SUPPLY CIRCUIT

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

PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

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.

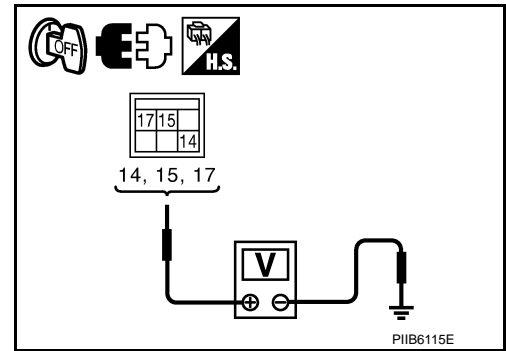
2.CHECK GROUND CIRCUIT

Check continuity between PDU harness connector and ground.

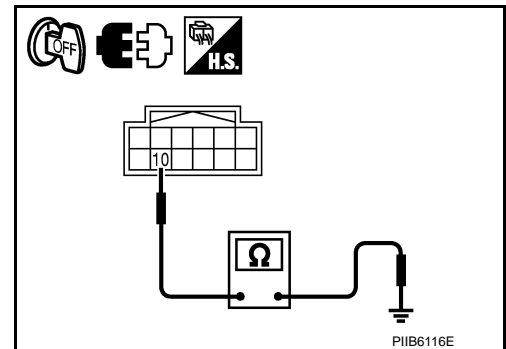
PDU connector	Terminal	Continuity
M30	10	Yes

OK or NG

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



PIIB6115E



PIIB6116E

Check Push-Button Ignition Switch (Ignition Switch) System

INFOID:000000005351723

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 switches released	No

OK or NG

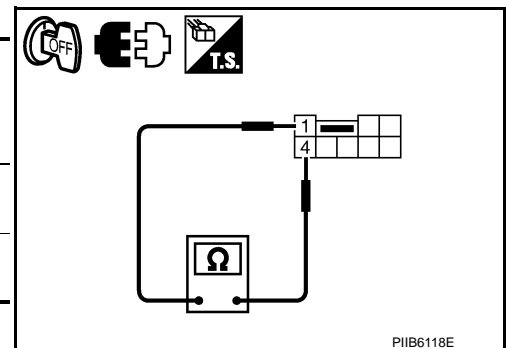
- OK >> Push-button ignition switch system is OK.
- NG >> GO TO 2.

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



PIIB6118E

PDU (POWER DISTRIBUTION UNIT)

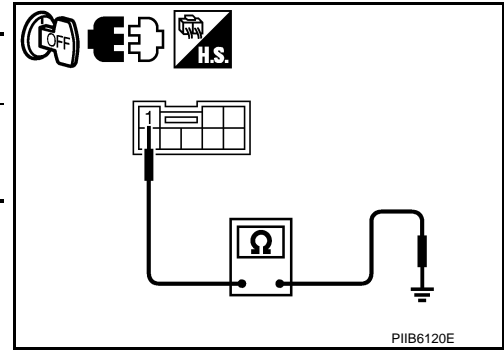
< SERVICE INFORMATION >

- 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



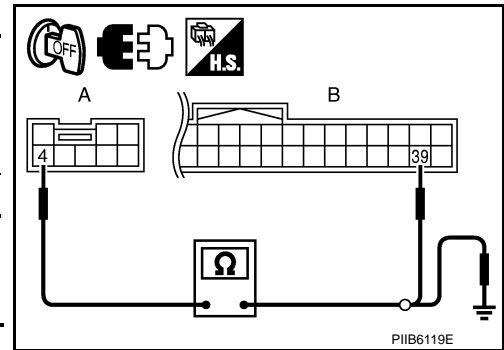
OK or NG

- 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 >> Check continuity the harness and the connector.
- NG >> Repair or replace harness between Intelligent Key unit and ignition switch.

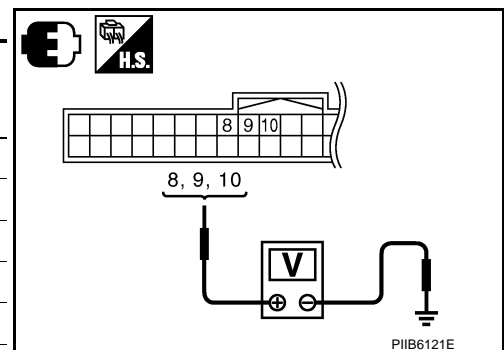
Check Push-Button Ignition Switch (Indicator Circuit) System

INFOID:000000005351724

1. CHECK PUSH-BUTTON IGNITION SWITCH INDICATOR SYSTEM

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

Intelligent Keyunit connector	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.

PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

NG >> Repair or replace push-button ignition switch.

2. PUSH-BUTTON IGNITION SWITCH INDICATOR POWER SUPPLY SIGNAL

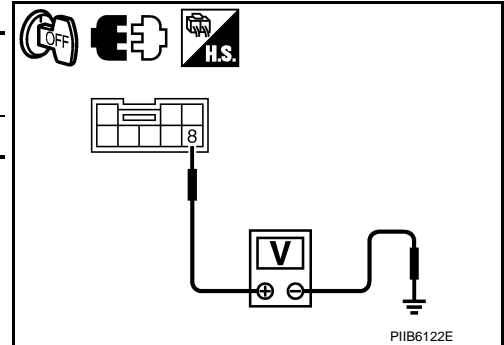
1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch.
3. Check voltage between push-button ignition switch connector and ground.

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

OK or NG

OK >> GO TO 3.

NG >> Repair or replace push-button ignition switch.

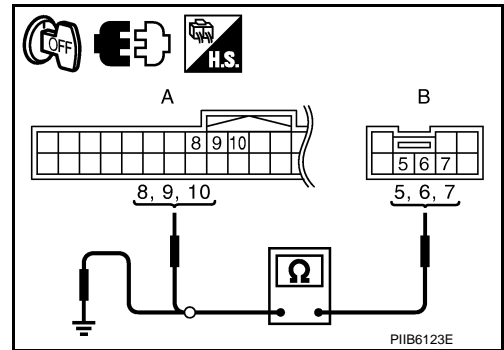


3. PUSH-BUTTON IGNITION SWITCH INDICATOR GROUND CIRCUIT

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

A		B		Continuity
Intelligent Keyunit 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 switchconnector	Terminal	Continuity
M27	5	No
	6	
	7	

OK or NG

OK >> Check harness condition.

NG >> Repair or replace harness.

PDU Communication Circuit System 1

INFOID:000000005351725

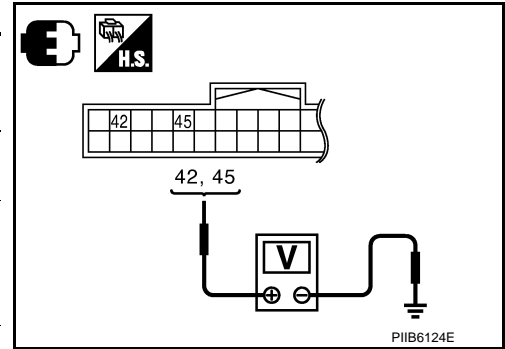
1. CHECK PDU COMMUNICATION CIRCUIT 1

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

PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

Intelligent Keyunit 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



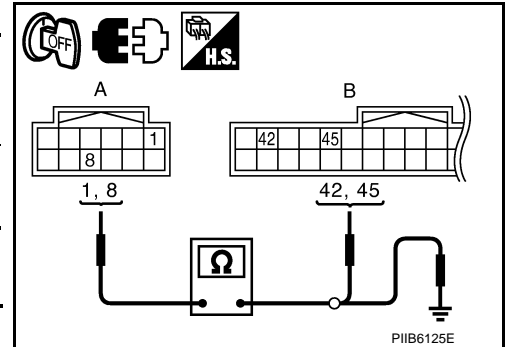
OK or NG

- 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 Keyunit connector	Terminal	
M30	1	M33	42	Yes
	8		45	



3. Check continuity between PDU connector and ground.

PDU connector	Terminal	Continuity
M30	1	No
	8	

OK or NG

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

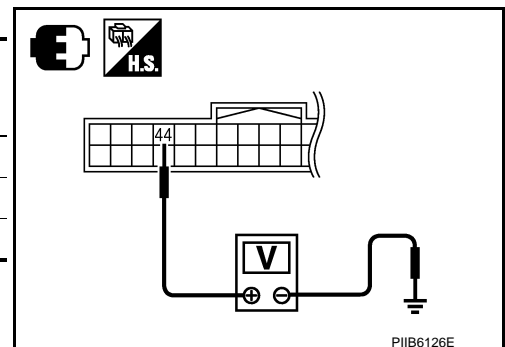
PDU Communication Circuit System 2

INFOID:000000005351726

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 Keyunit 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.

PDU (POWER DISTRIBUTION UNIT)

< SERVICE INFORMATION >

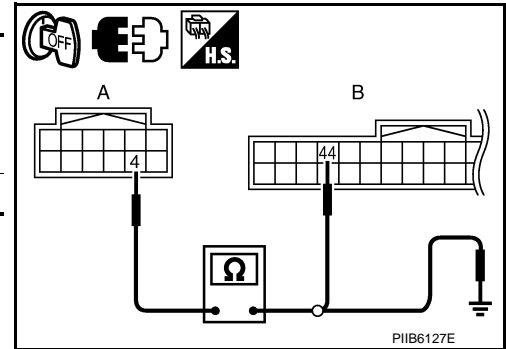
2. CHECK PDU SIGNAL CIRCUIT

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 Keyunit 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

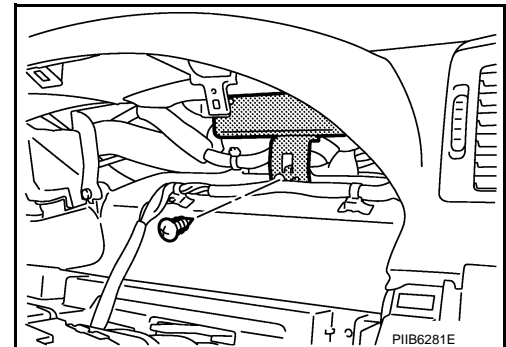
- OK >> Replace Intelligent Key unit.
- NG >> Repair or replace harness between Intelligent Key unit or PDU.

Removal and Installation of PDU

INFOID:000000005351727

REMOVAL

1. Removal the combination meter. Refer to [DI-25. "Removal and Installation of Combination Meter"](#).
2. Disconnect PDU unit connector, remove screw and PDU.



INSTALLATION

Installation is in the reverse order of removal.

HARNESS

< SERVICE INFORMATION >

HARNESS

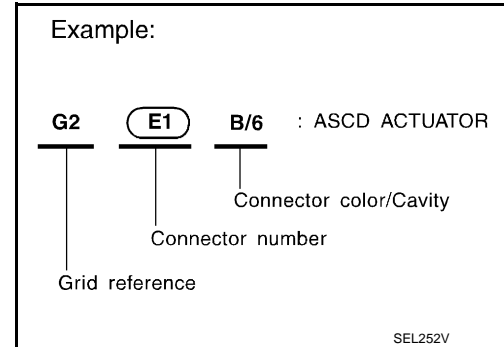
Harness Layout

INFOID:000000005351728

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 • Relay connector				
• Cavity: From 5 to 8				
• Cavity: More than 9				
• Ground terminal etc.	—			

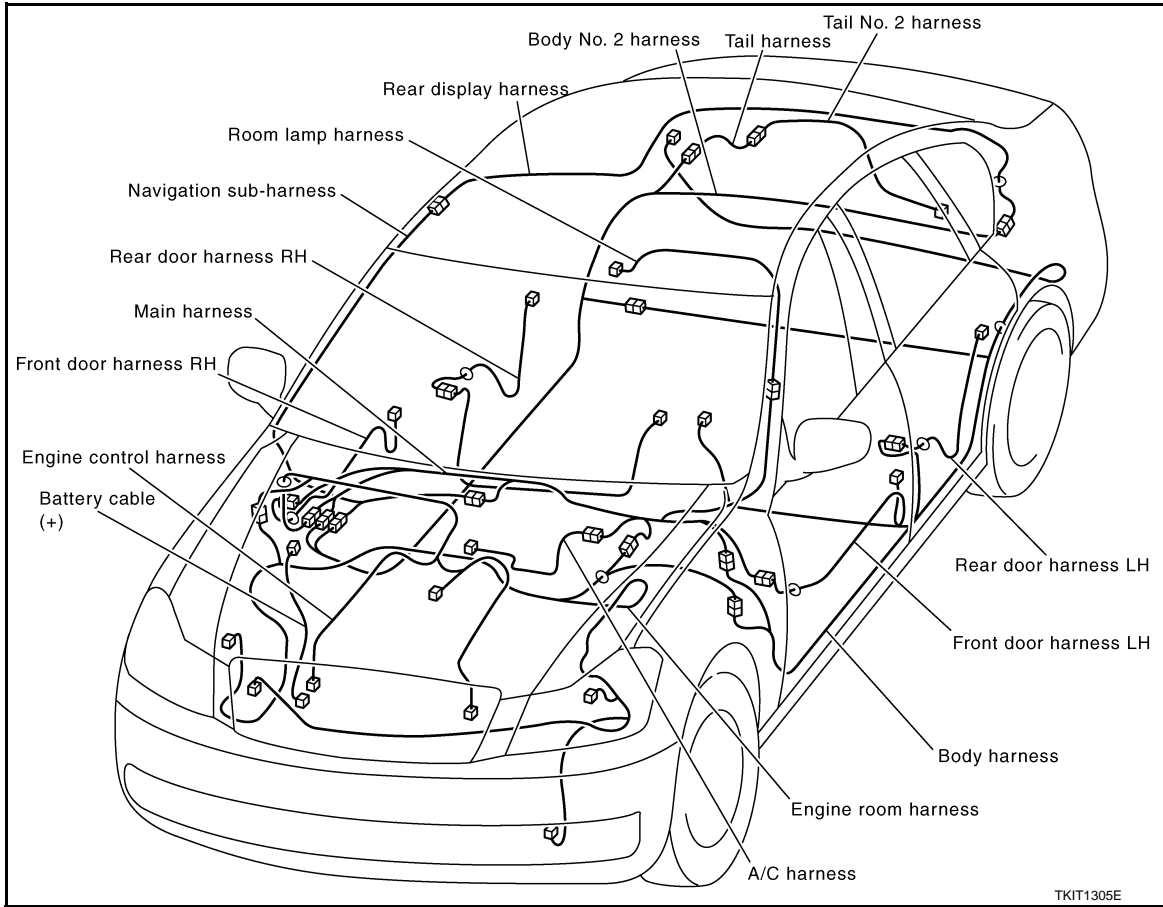
CKIT0108E

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

HARNESS

< SERVICE INFORMATION >

OUTLINE

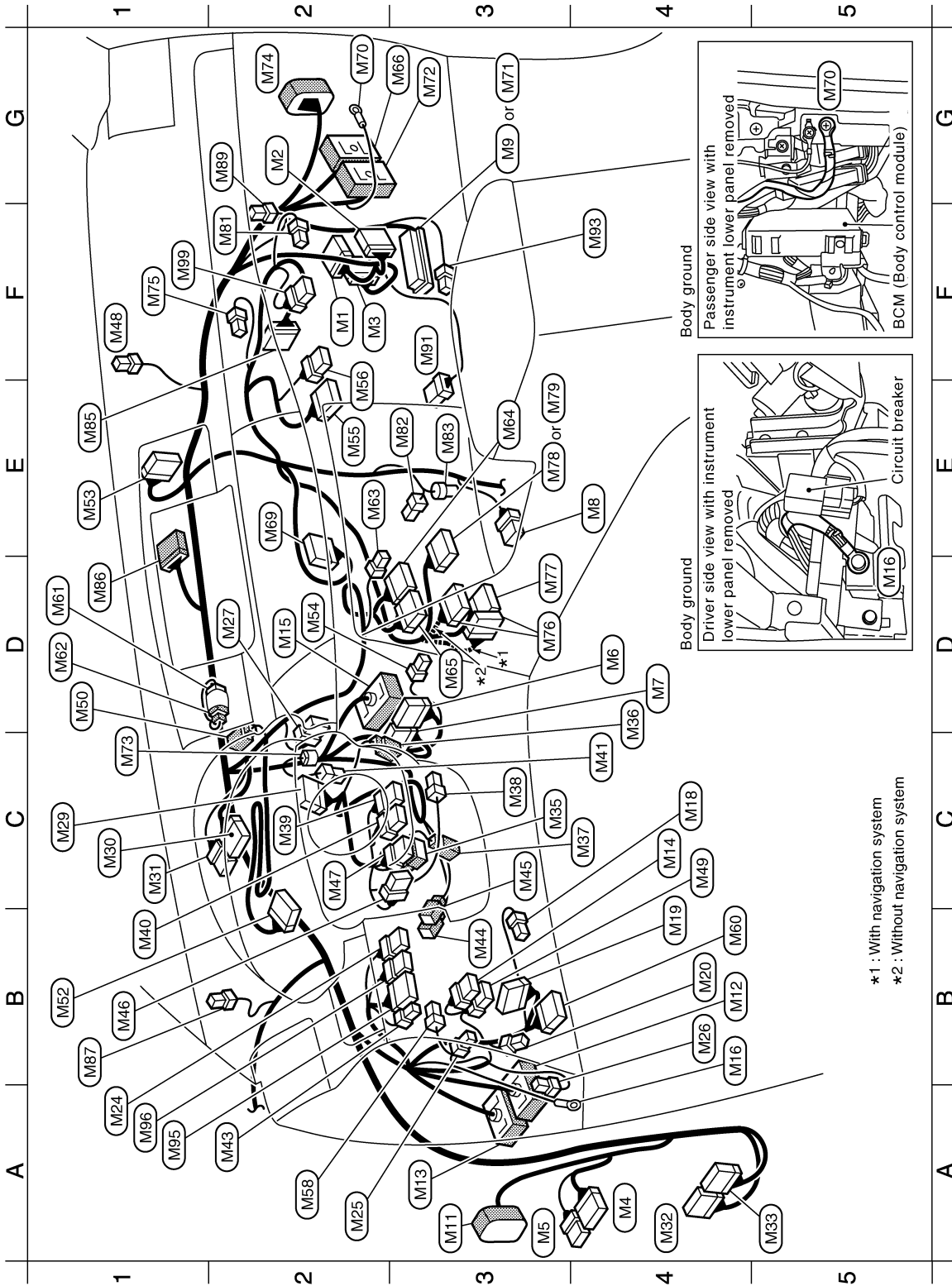


MAIN HARNESS

HARNESS

< SERVICE INFORMATION >

Instrument Panel



*1 : With navigation system
 *2 : Without navigation system

TKIT1306E

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

PG

HARNESS

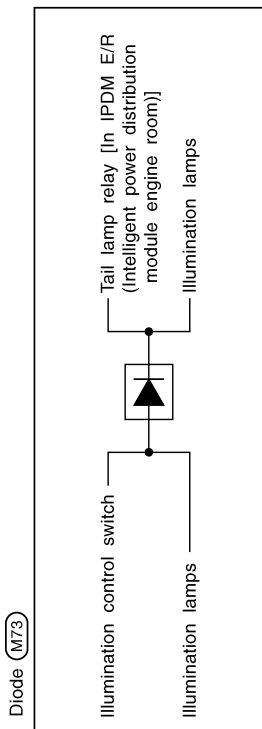
< SERVICE INFORMATION >

F2	(M1)	W/40	:	BCM (Body control module)	F1	(M48)	W/3	:	Optical sensor
G2	(M2)	B/16	:	BCM (Body control module)	C4	(M49)	GR/8	:	LDW switch (With lane departure prevention)
F2	(M3)	W/16	:	BCM (Body control module)	D1	(M50)	W/3	:	To (M251)
A4	(M4)	W/16	:	Fuse block (J/B)	B1	(M52)	W/24	:	Combination meter
A3	(M5)	W/8	:	Fuse block (J/B)	E1	(M53)	W/24	:	To (M215) (With navigation system)
D4	(M6)	W/32	:	Automatic drive positioner control unit	D2	(M54)	W/2	:	In-vehicle sensor
D4	(M7)	W/16	:	Automatic drive positioner control unit	E2	(M55)	W/32	:	TEL adapter unit (Without navigation system)
E4	(M8)	W/8	:	Power steering control unit	E2	(M56)	W/8	:	TEL adapter unit (Without navigation system)
G3	(M9)	SMJ	:	ECM (With VQ35HR)	A2	(M58)	BR/4	:	Lane departure warning buzzer (With lane departure prevention)
A3	(M11)	SMJ	:	To (D1)	B4	(M60)	W/16	:	Data link connector
B4	(M12)	SMJ	:	To (B1) (With navigation system)	D1	(M62)	W/2	:	To (M62)
A3	(M13)	SMJ	:	To (B2)	D1	(M62)	W/2	:	To (M61)
C4	(M14)	W/8	:	Key slot	E2	(M63)	W/4	:	Clock
D2	(M15)	SMJ	:	To (E10B)	E3	(M64)	W/40	:	Unified meter and A/C amp.
B4	(M16)	—	:	Body ground	D3	(M65)	W/32	:	Unified meter and A/C amp.
C4	(M18)	W/2	:	Foot lamp (Driver side)	G3	(M66)	SMJ	:	To (B41B)
B4	(M19)	W/32	:	Low tire pressure warning control unit	E2	(M69)	W/16	:	Multifunction switch
B4	(M20)	W/2	:	Tire pressure warning check connector	G2	(M70)	—	:	Body ground
A1	(M24)	GR/6	:	VDC off switch	G3	(M71)	SMJ	:	ECM (With VK45DE)
A2	(M25)	W/4	:	Trunk lid opener switch	G3	(M72)	SMJ	:	To (E102)
B4	(M26)	W/2	:	Circuit breaker	C1	(M73)	W/2	:	Diode
D2	(M27)	BR/8	:	Push-button ignition switch	G2	(M74)	SMJ	:	To (D31)
C1	(M29)	W/16	:	Combination switch	F1	(M75)	Y/4	:	Front passenger air bag module
C1	(M30)	W/12	:	PDU (Power distribution unit)	D3	(M76)	W/20	:	AV control unit
C1	(M31)	W/6	:	PDU (Power distribution unit)	D3	(M77)	W/16	:	AV control unit (Without navigation system)
A4	(M32)	W/40	:	Intelligent Key unit	E3	(M78)	W/40	:	AV control unit (With navigation system)
A5	(M33)	W/32	:	Intelligent Key unit	E3	(M79)	W/32	:	AV control unit (Without navigation system)
C3	(M35)	W/8	:	Steering lock unit	F2	(M81)	BR/2	:	Glove box lamp (Via sub-harness)
D4	(M36)	W/2	:	Tilt motor	E3	(M82)	W/4	:	Intake sensor
C4	(M37)	W/3	:	Tilt sensor	E3	(M83)	GR/2	:	Inside key antenna (Instrument center)
C3	(M38)	BR/2	:	Microphone (For audio pilot)	E1	(M85)	W/24	:	iPod adapter (With navigation system)
C2	(M39)	GR/8	:	Combination switch (Spiral cable)	D1	(M86)	W/16	:	To (M215) (With navigation system)
B1	(M40)	Y/6	:	Combination switch (Spiral cable)	B1	(M87)	B/2	:	Sunload sensor
C4	(M41)	L/4	:	Resistor	G2	(M89)	B/4	:	Remote keyless entry receiver
A2	(M43)	W/3	:	Illumination control switch	F3	(M91)	W/6	:	Blower motor
B3	(M44)	W/3	:	Telescopic sensor	F4	(M93)	W/2	:	Foot lamp (Passenger side)
C3	(M45)	W/2	:	Telescopic motor	A1	(M95)	BR/16	:	Door mirror remote control switch
B1	(M46)	GR/6	:	ADP steering switch	A1	(M96)	W/6	:	AFS switch
C2	(M47)	W/8	:	Steering angle sensor	F1	(M99)	W/6	:	Trunk lid opener cancel switch

TKIT1307E

HARNESS

< SERVICE INFORMATION >



A

B

C

D

E

F

G

H

I

J

PG

L

M

N

O

P

TKIT1076E

HARNESS

< SERVICE INFORMATION >

Floor Console

Console sub-harness-3 (With DVD player)
 (M291) W/2 : To (M149)
 (M292) - : DVD player

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

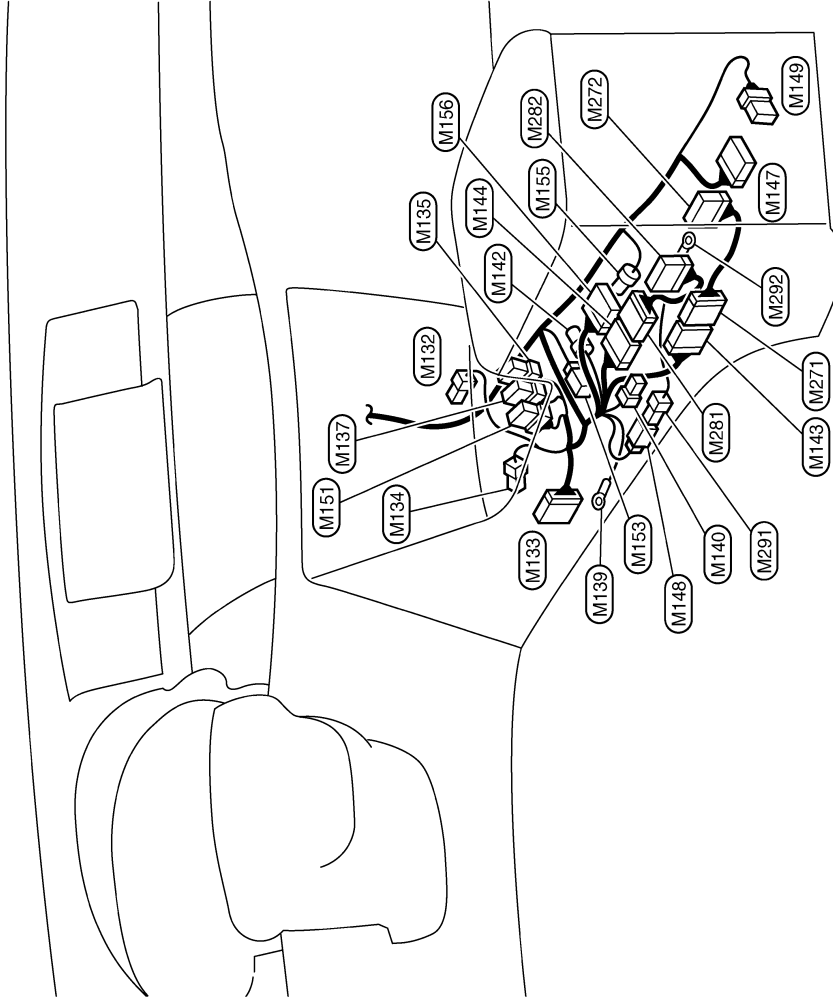
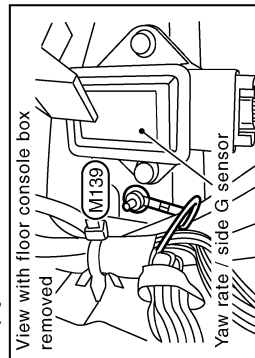
(M132) W/3 : Cigarette lighter socket
 (M133) L/10 : A/T shift selector
 (M134) BR/2 : A/T illumination
 (M135) L/8 : Snow mode switch
 (M137) W/6 : Rear sunshade front switch
 (With rear sunshade)

(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)
 (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)

(M151) W/8 : Rear control cancel switch
 (With rear power seat)
 (M153) W/4 : To (B431) (For rear view monitor)
 (M155) B/4 : Yaw rate / side G sensor
 (M156) GR/16 : iPod side (With navigation system)

Body ground

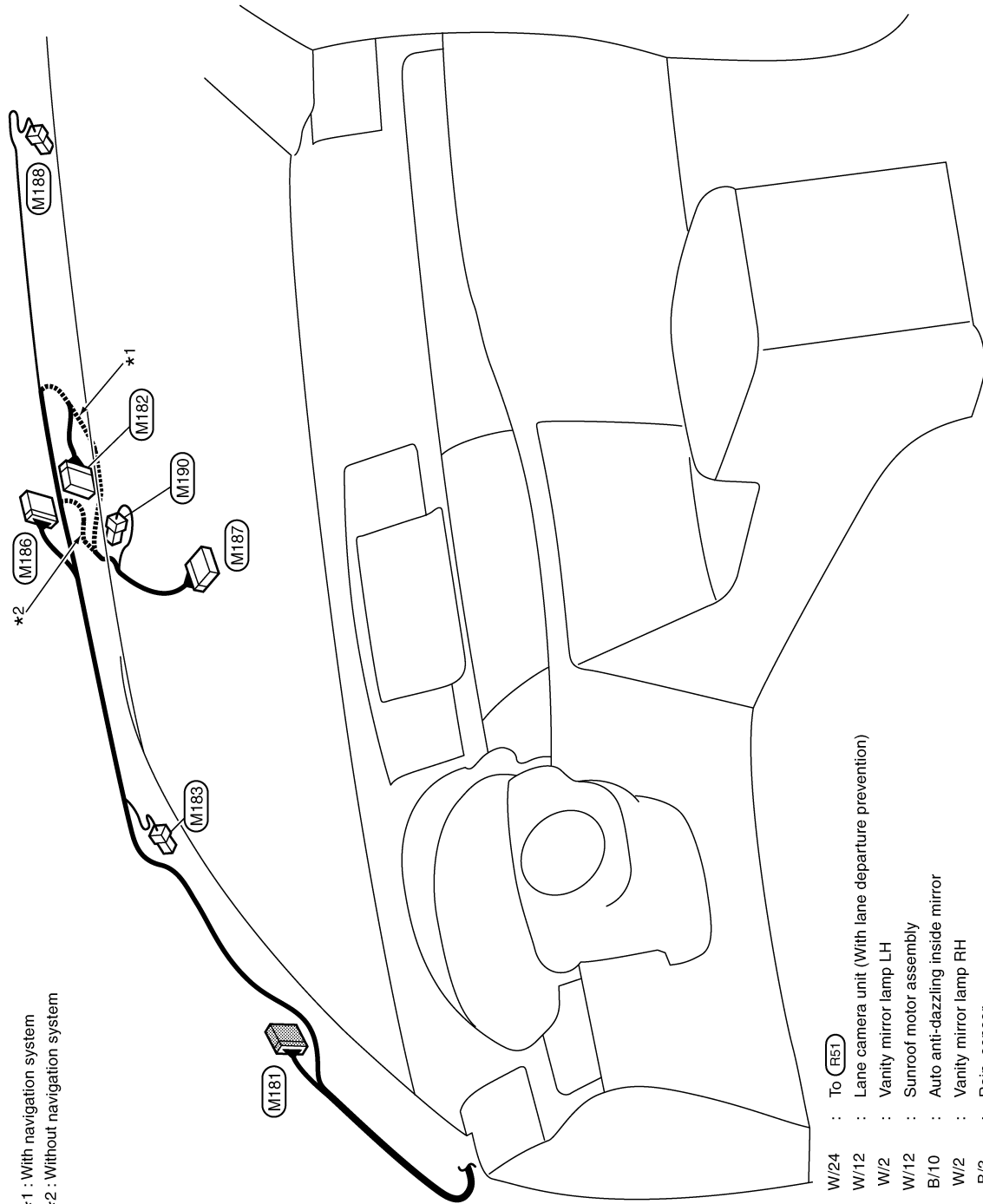


TKIT1308E

HARNESS

< SERVICE INFORMATION >

Roof



*1 : With navigation system
*2 : Without navigation system

(M181)	W/24	: To (RS1)
(M182)	W/12	: Lane camera unit (With lane departure prevention)
(M183)	W/2	: Vanity mirror lamp LH
(M186)	W/12	: Sunroof motor assembly
(M187)	B/10	: Auto anti-dazzling inside mirror
(M188)	W/2	: Vanity mirror lamp RH
(M190)	B/3	: Rain sensor

TKIT1309E

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

HARNESS

< SERVICE INFORMATION >

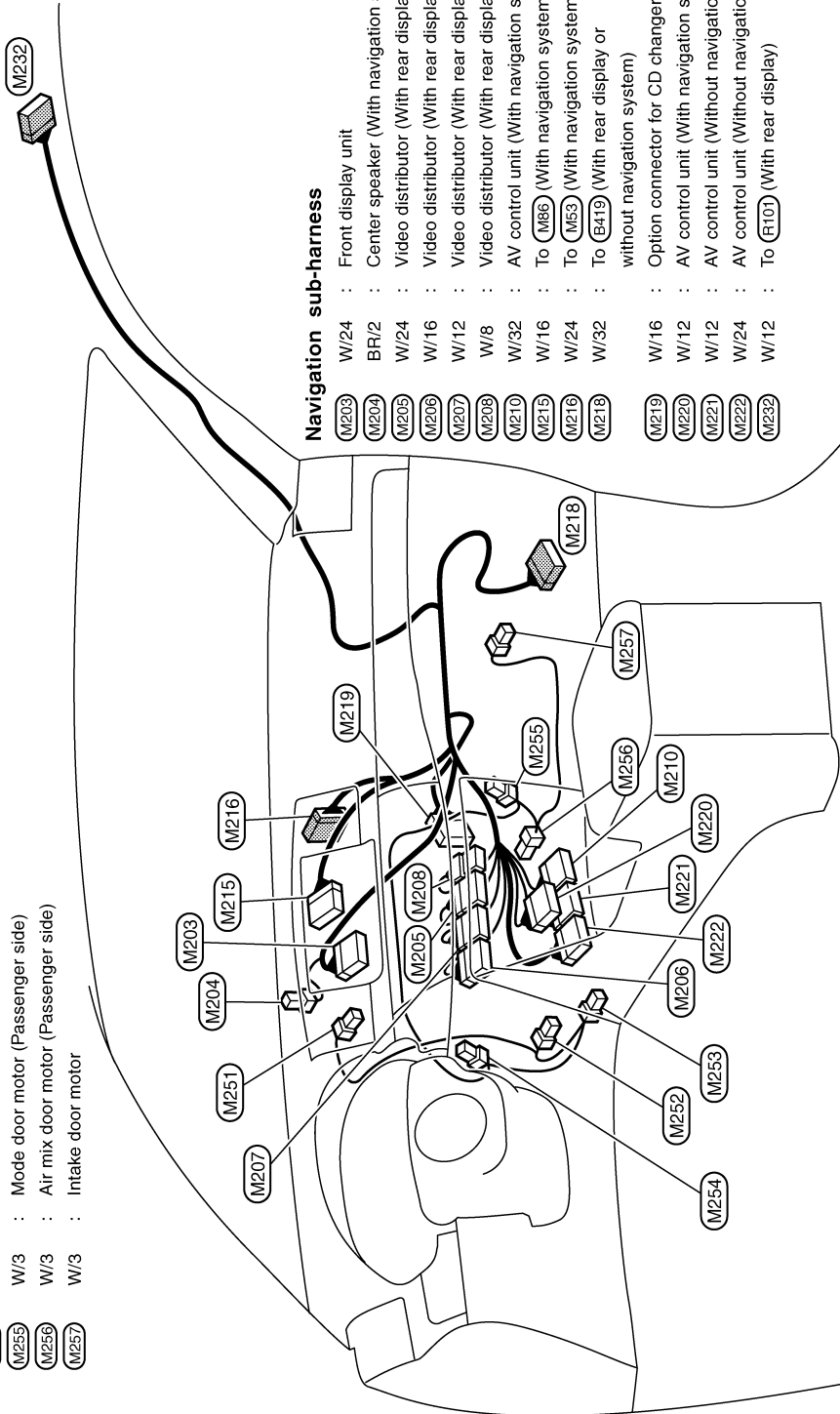
NAVIGATION SUB-HARNESS & A/C HARNESS

A/C harness

- (M251) W/3 : To (M50)
- (M252) W/3 : Mode door motor (Driver side)
- (M253) W/3 : Air mix door motor (Driver side)
- (M254) W/3 : Upper ventilator door motor
- (M255) W/3 : Mode door motor (Passenger side)
- (M256) W/3 : Air mix door motor (Passenger side)
- (M257) W/3 : Intake door motor

Navigation sub-harness

- (M203) W/24 : Front display unit
- (M204) BR/2 : Center speaker (With navigation system)
- (M205) W/24 : Video distributor (With rear display)
- (M206) W/16 : Video distributor (With rear display)
- (M207) W/12 : Video distributor (With rear display)
- (M208) W/8 : Video distributor (With rear display)
- (M210) W/32 : AV control unit (With navigation system)
- (M215) W/16 : To (M86) (With navigation system)
- (M216) W/24 : To (M53) (With navigation system)
- (M219) W/32 : To (E419) (With rear display or without navigation system)
- (M219) W/16 : Option connector for CD changer
- (M220) W/12 : AV control unit (With navigation system)
- (M221) W/12 : AV control unit (Without navigation system)
- (M222) W/24 : AV control unit (Without navigation system)
- (M229) W/12 : To (E101) (With rear display)



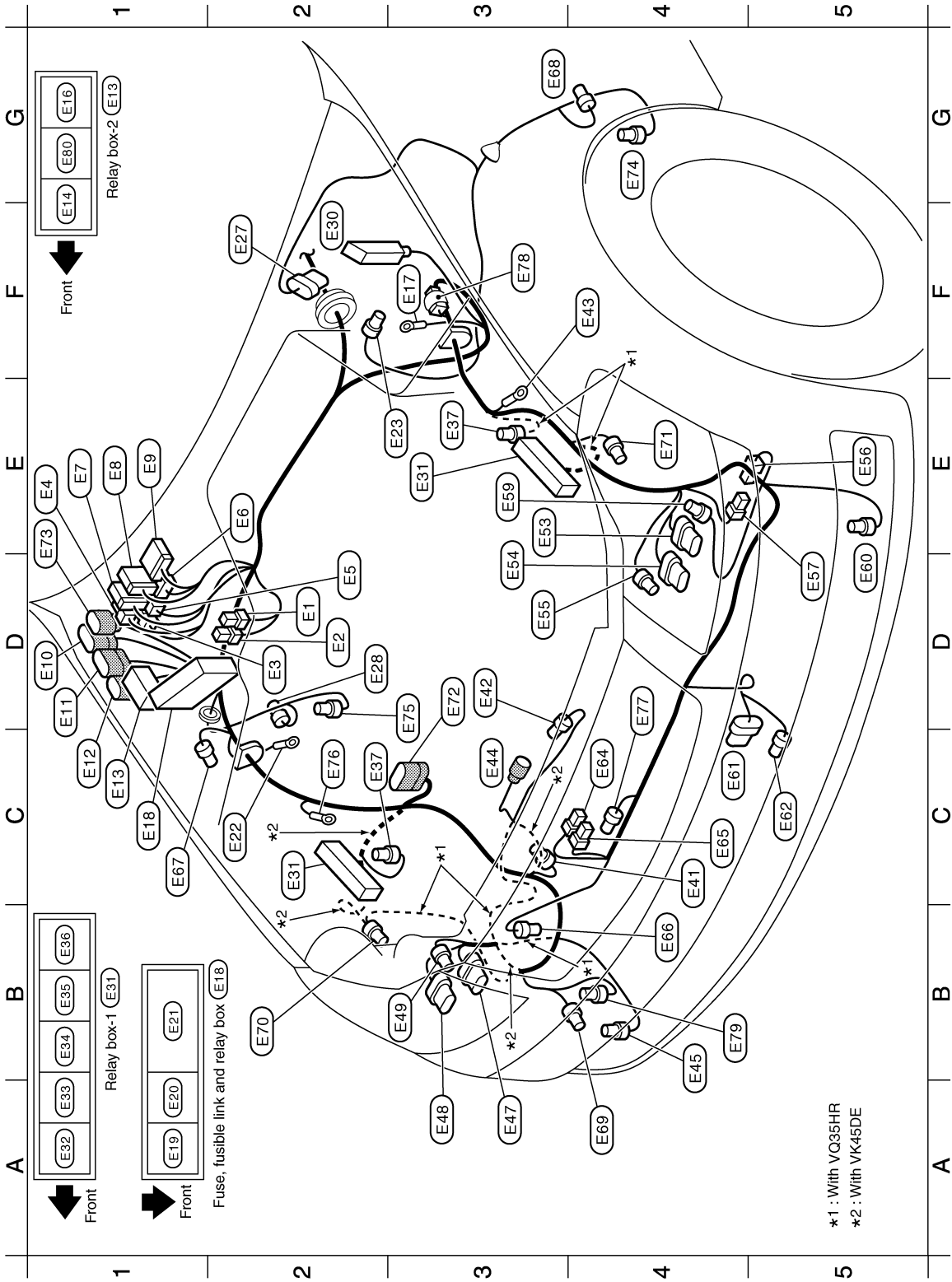
TKIT1310E

ENGINE ROOM HARNESS

HARNESS

< SERVICE INFORMATION >

Engine Compartment



*1 : With VQ35HR
*2 : With VK45DE

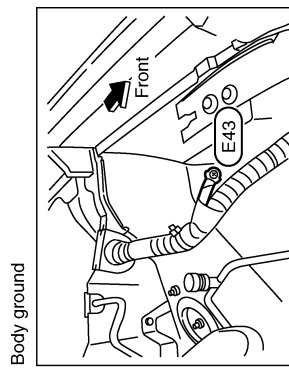
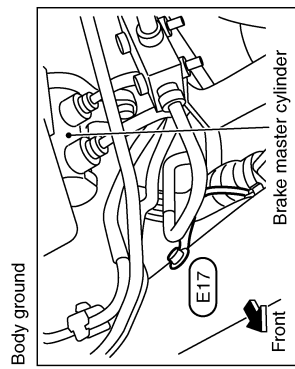
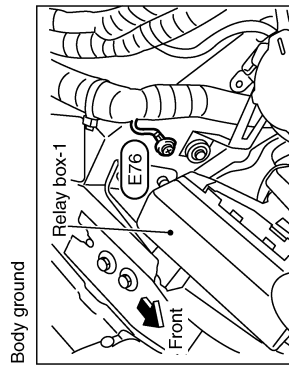
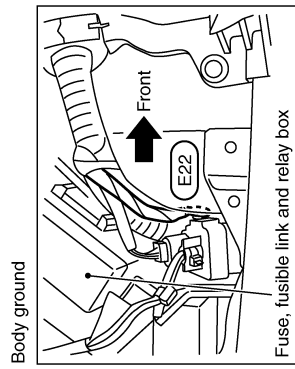
TKIT1311E

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

PG

HARNESS

< SERVICE INFORMATION >



TKIT0779E

HARNESS

< SERVICE INFORMATION >

D2	(E1)	BR/2	: Fusible link holder	E3	(E53)	GR/8	: Front combination lamp LH
D2	(E2)	GR/2	: Fusible link holder	D3	(E54)	B/8	: Front combination lamp LH
D2	(E3)	B/2	: IPDM E/R (Intelligent power distribution module engine room)	D3	(E55)	GR/2	: Front combination lamp LH
E1	(E4)	W/4	: IPDM E/R (Intelligent power distribution module engine room)	E5	(E56)	B/1	: Horn (Low)
D2	(E5)	B/4	: IPDM E/R (Intelligent power distribution module engine room)	D5	(E57)	B/1	: Horn (Low)
E2	(E6)	W/6	: IPDM E/R (Intelligent power distribution module engine room)	E3	(E59)	B/2	: Front wheel sensor LH
E1	(E7)	GR/16	: IPDM E/R (Intelligent power distribution module engine room)	D5	(E60)	B/2	: Front fog lamp LH
E1	(E8)	W/12	: IPDM E/R (Intelligent power distribution module engine room)	C4	(E61)	B/6	: ICC sensor integrated unit (With ICC)
E1	(E9)	W/16	: IPDM E/R (Intelligent power distribution module engine room)	C5	(E62)	B/2	: Ambient sensor
D1	(E10)	GR/9	: To (F1) (With VQ35HR)	C4	(E64)	B/1	: Horn (High)
D1	(E11)	B/10	: To (F2)	C4	(E65)	B/1	: Horn (High)
C1	(E12)	B/8	: To (F3)	B4	(E66)	B/3	: Refrigerant pressure sensor
C1	(E13)	—	: Relay box-2	C1	(E67)	B/3	: Battery current sensor
G1	(E14)	—	: Fuse block-2	G3	(E68)	GR/2	: Side turn signal lamp LH
G1	(E16)	BR/6	: Climate controlled seat relay	A4	(E69)	GR/2	: Front washer pump
F3	(E17)	—	: Body ground	B2	(E70)	GR/3	: Front combination lamp RH (Aiming motor)
C1	(E18)	—	: Fuse, fusible link and relay box	E4	(E71)	GR/3	: Front combination lamp LH (Aiming motor)
A1	(E19)	L/4	: Back-up lamp relay	D3	(E72)	GR/9	: To (E20B) (With VK45DE)
A1	(E20)	—	: Fuse and fusible link block (Horn relay)	E1	(E73)	B/8	: To (F68) (With VK45DE)
B1	(E21)	—	: Fuse and fusible link block	G4	(E74)	B/4	: Tire pressure receiver front LH
C2	(E22)	—	: Body ground	D3	(E75)	B/4	: Tire pressure receiver front RH
E3	(E23)	GR/2	: Brake fluid level switch	C2	(E76)	—	: Body ground
F2	(E27)	GR/6	: Front wiper motor	D4	(E77)	Y/2	: Crash zone sensor
D2	(E28)	GR/2	: Side turn signal lamp RH	F3	(E78)	BR/2	: Resistor (With ICC)
F2	(E30)	SMJ	: ABS actuator and electric unit (Control unit)	B4	(E79)	BR/2	: Washer level sensor
C2,E3	(E31)	—	: Relay box-1	G1	(E80)	L/4	: ICC brake hold relay (With ICC)
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,E3	(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)	B/2	: Front fog lamp RH				
A3	(E47)	B/8	: Front combination lamp RH				
A3	(E48)	GR/8	: Front combination lamp RH				
B3	(E49)	GR/2	: Front combination lamp RH				

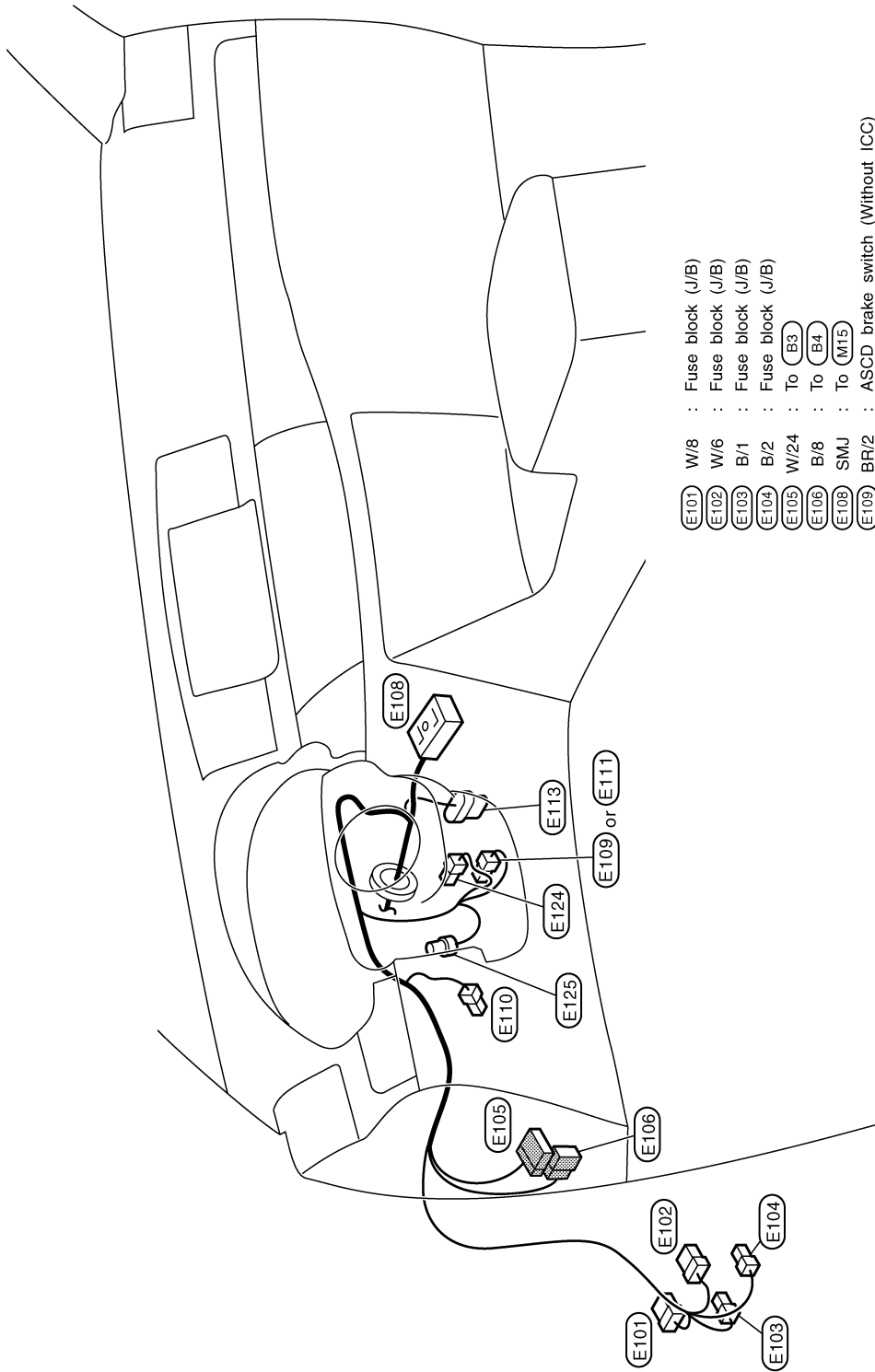
TKIT1312E

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

HARNESS

< SERVICE INFORMATION >

Passenger Compartment



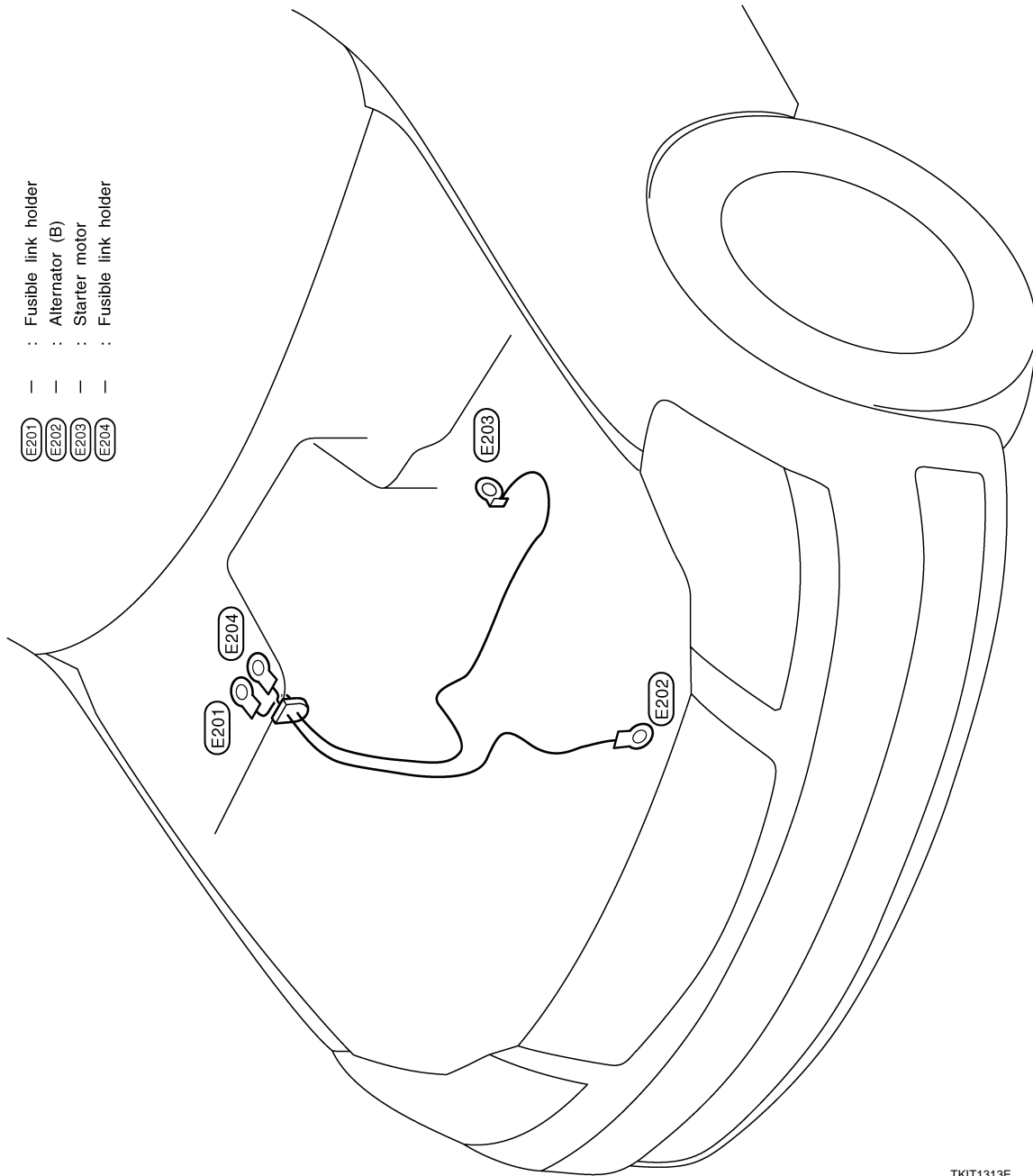
- (E101)** W/8 : Fuse block (J/B)
- (E102)** W/6 : Fuse block (J/B)
- (E103)** B/1 : Fuse block (J/B)
- (E104)** B/2 : Fuse block (J/B)
- (E105)** W/24 : To **(B3)**
- (E106)** B/8 : To **(B4)**
- (E108)** SMJ : To **(M15)**
- (E109)** BR/2 : ASCD brake switch (Without ICC)
- (E110)** W/1 : Parking brake 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

TKIT1082E

HARNESS

< SERVICE INFORMATION >

Battery Cable (With VQ Engine)



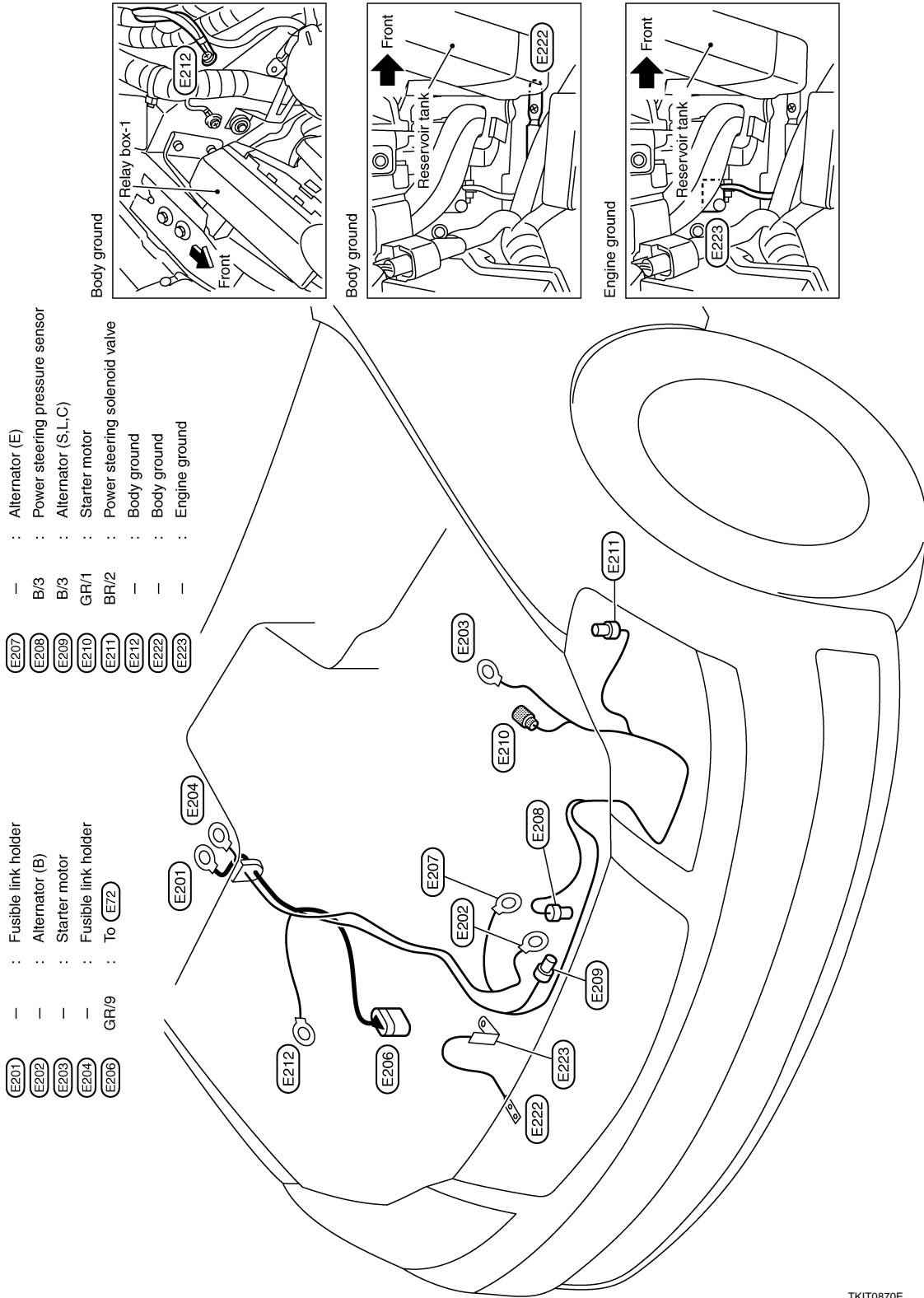
TKIT1313E

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

HARNESS

< SERVICE INFORMATION >

Battery Cable (2WD Models with VK Engine)

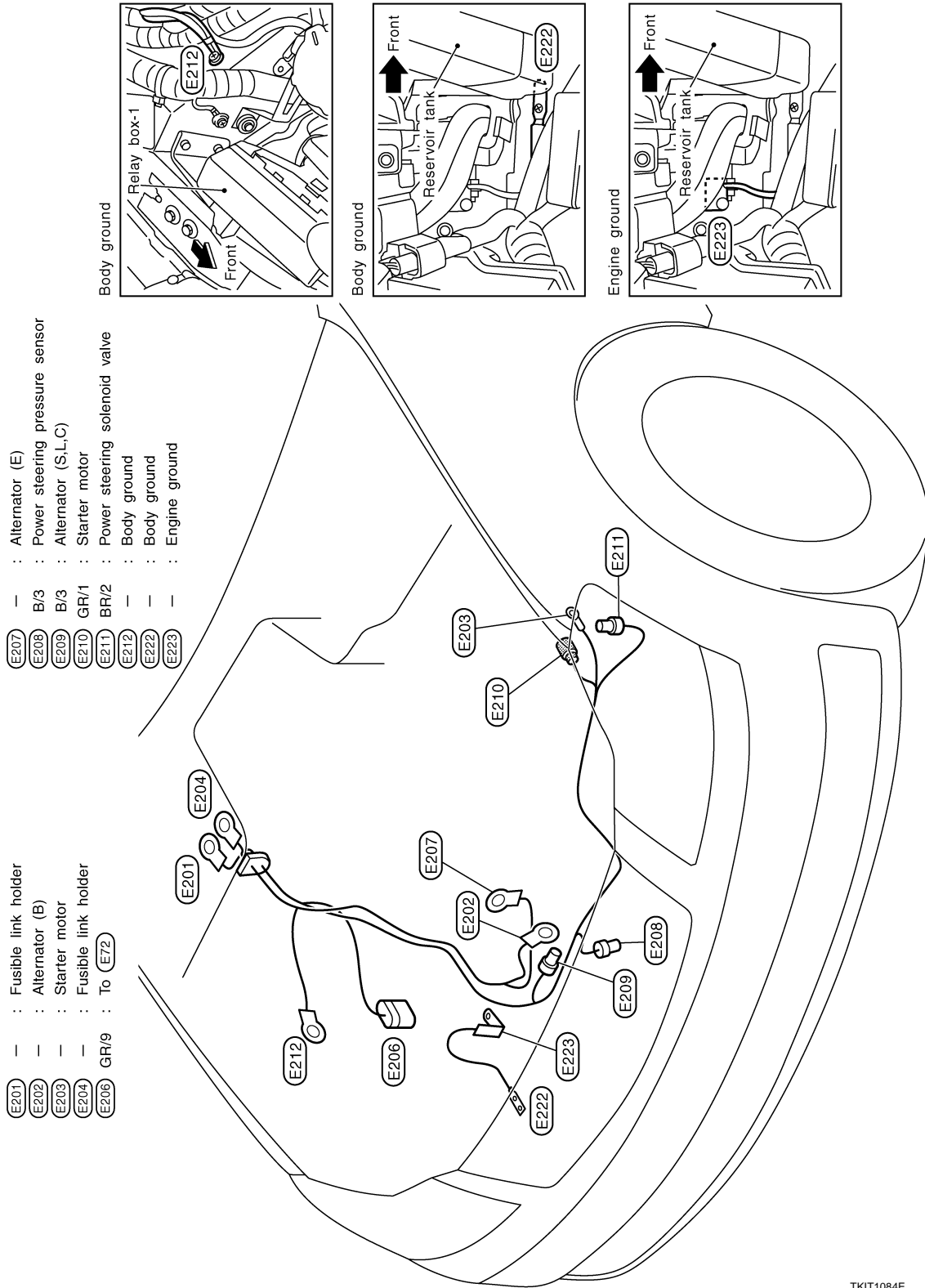


TKIT0870E

HARNESS

< SERVICE INFORMATION >

Battery Cable (AWD Models with VK Engine)



ENGINE CONTROL HARNESS (VQ ENGINE)

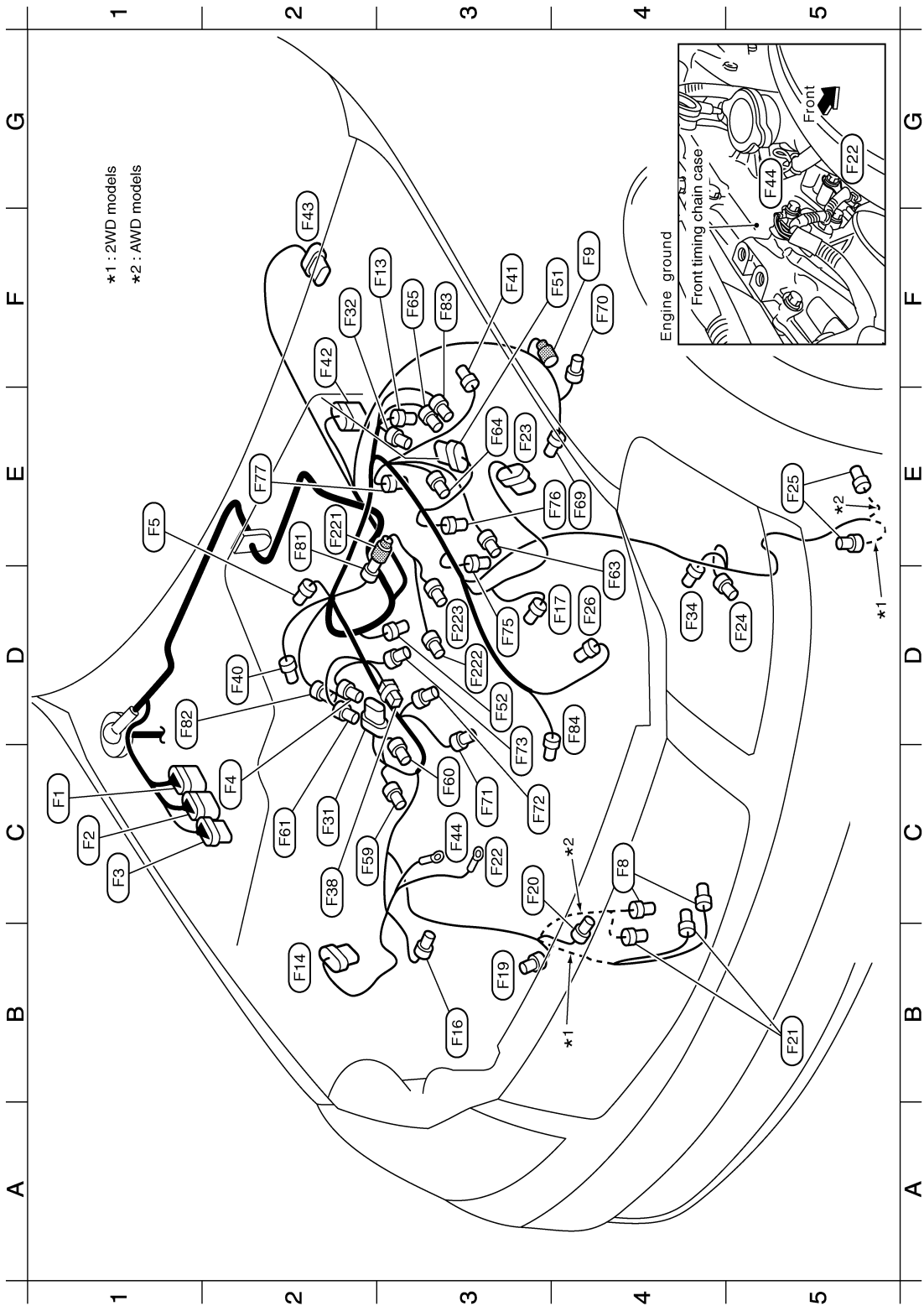
TKIT1084E

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

HARNESS

< SERVICE INFORMATION >

Engine Compartment



TKIT1314E

C1	(F1)	GR/9	:	To (E10)	
C1	(F2)	B/10	:	To (E11)	
C1	(F3)	B/8	:	To (E12)	
C2	(F4)	B/3	:	Camshaft position sensor (PHASE) (Bank 1)	
E1	(F5)	GR/2	:	EVAP canister purge volume control solenoid valve	
C4	(F8)	GR/2	:	Engine oil temperature sensor	
F4	(F9)	GR/1	:	Starter motor	
F3	(F13)	GR/2	:	Engine coolant temperature sensor	
B2	(F14)	B/6	:	Mass air flow sensor (Bank 1)	
B3	(F16)	B/4	:	Exhaust valve timing control magnet retarder (Bank 1)	
D4	(F17)	B/4	:	Exhaust valve timing control magnet retarder (Bank 2)	
B3	(F19)	B/3	:	Power steering pressure sensor	
C3	(F20)	B/3	:	Alternator (S.L.C)	
B5	(F21)	GR/1	:	Oil pressure switch	
C3	(F22)	—	:	Engine ground	
E3	(F23)	B/6	:	Mass air flow sensor (Bank 2)	
D5	(F24)	B/1	:	Compressor	
E5	(F25)	BR/2	:	Power steering solenoid valve	
D4	(F26)	GR/2	:	Intake valve timing control solenoid valve (Bank 2)	
C2	(F31)	B/6	:	Electric throttle control actuator (Bank 1)	
F2	(F32)	B/3	:	Camshaft position sensor (PHASE) (Bank 2)	
D4	(F34)	GR/2	:	Compressor	
C2	(F38)	W/2	:	Condenser	
D2	(F40)	GR/4	:	Air fuel ratio (A/F) sensor 1 (Bank 1)	
F3	(F41)	GR/4	:	Air fuel ratio (A/F) sensor 1 (Bank 2)	
F2	(F42)	G/10	:	A/T assembly	
F2	(F43)	B/8	:	Transfer assembly (AWD models)	
C3	(F44)	—	:	Engine ground	
F4	(F51)	B/6	:	Electric throttle control actuator (Bank 2)	
D3	(F52)	B/3	:	Crankshaft position sensor (POS)	
C2	(F59)	GR/3	:	Ignition coil No. 1 (With power transistor)	
C3	(F60)	GR/3	:	Ignition coil No. 3 (With power transistor)	
C2	(F61)	GR/3	:	Ignition coil No. 5 (With power transistor)	
D4	(F63)	GR/3	:	Ignition coil No. 2 (With power transistor)	
E3	(F64)	GR/3	:	Ignition coil No. 4 (With power transistor)	
F3	(F65)	GR/3	:	Ignition coil No. 6 (With power transistor)	
E4	(F69)	B/4	:	Heated oxygen sensor 2 (Bank 1)	
F4	(F70)	B/4	:	Heated oxygen sensor 2 (Bank 2)	

C3	(C71)	GR/2	:	Fuel injector No. 1	
C3	(F72)	GR/2	:	Fuel injector No. 3	
C3	(F73)	GR/2	:	Fuel injector No. 5	
D3	(F75)	GR/2	:	Fuel injector No. 2	
E4	(F76)	GR/2	:	Fuel injector No. 4	
E2	(F77)	GR/2	:	Fuel injector No. 6	
E2	(F81)	B/4	:	To (F221)	
D1	(F82)	B/3	:	Exhaust valve timing control position sensor (Bank 1)	
F3	(F83)	B/3	:	Exhaust valve timing control position sensor (Bank 2)	
D4	(F84)	GR/2	:	Intake valve timing control solenoid valve (Bank 1)	

Engine control sub-harness

E2	(F221)	B/4	:	To (F81)	
D3	(F222)	B/2	:	Knock sensor (Bank 1)	
D3	(F223)	B/2	:	Knock sensor (Bank 2)	

TKIT1315E

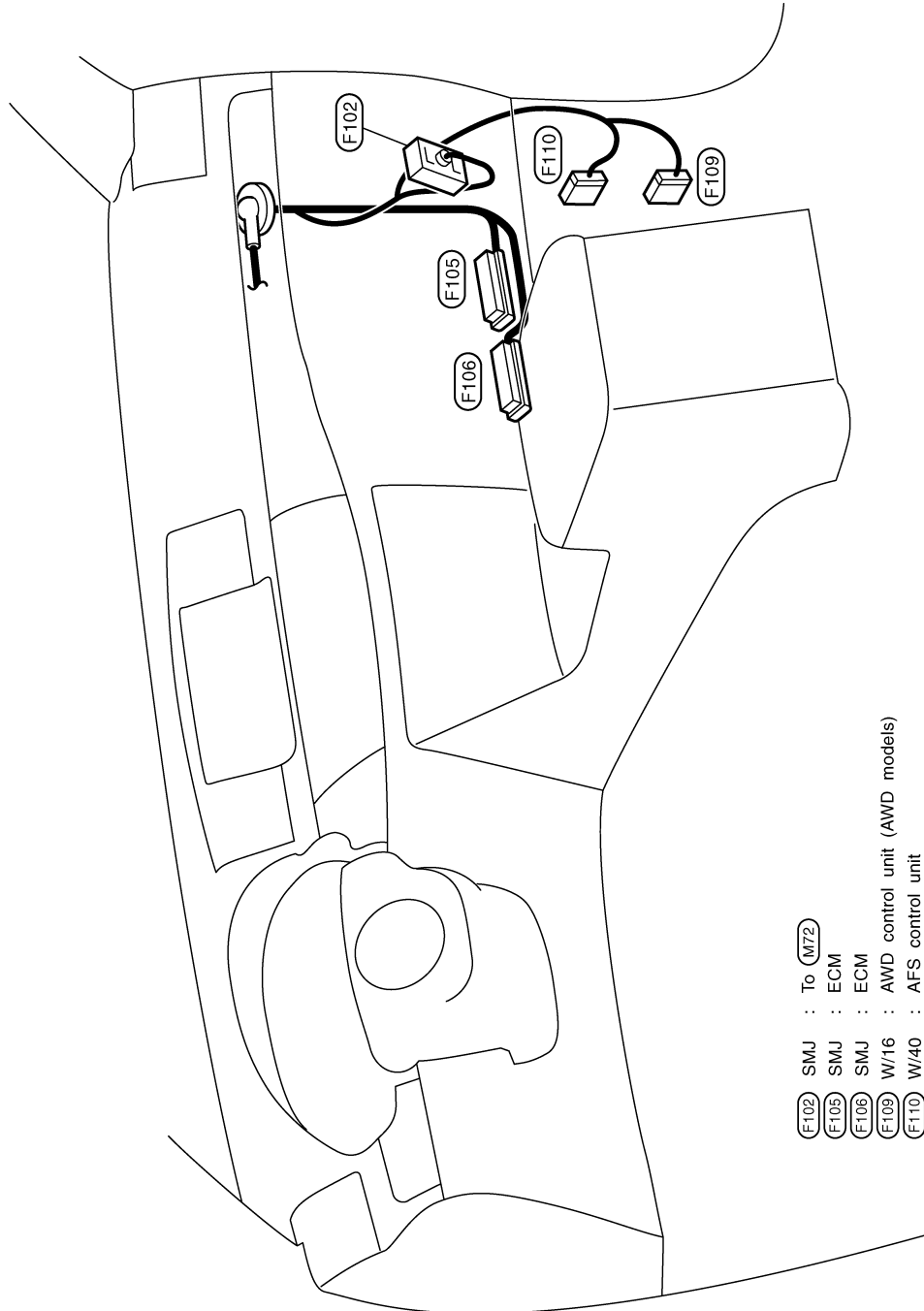
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P



HARNESS

< SERVICE INFORMATION >

Passenger Compartment



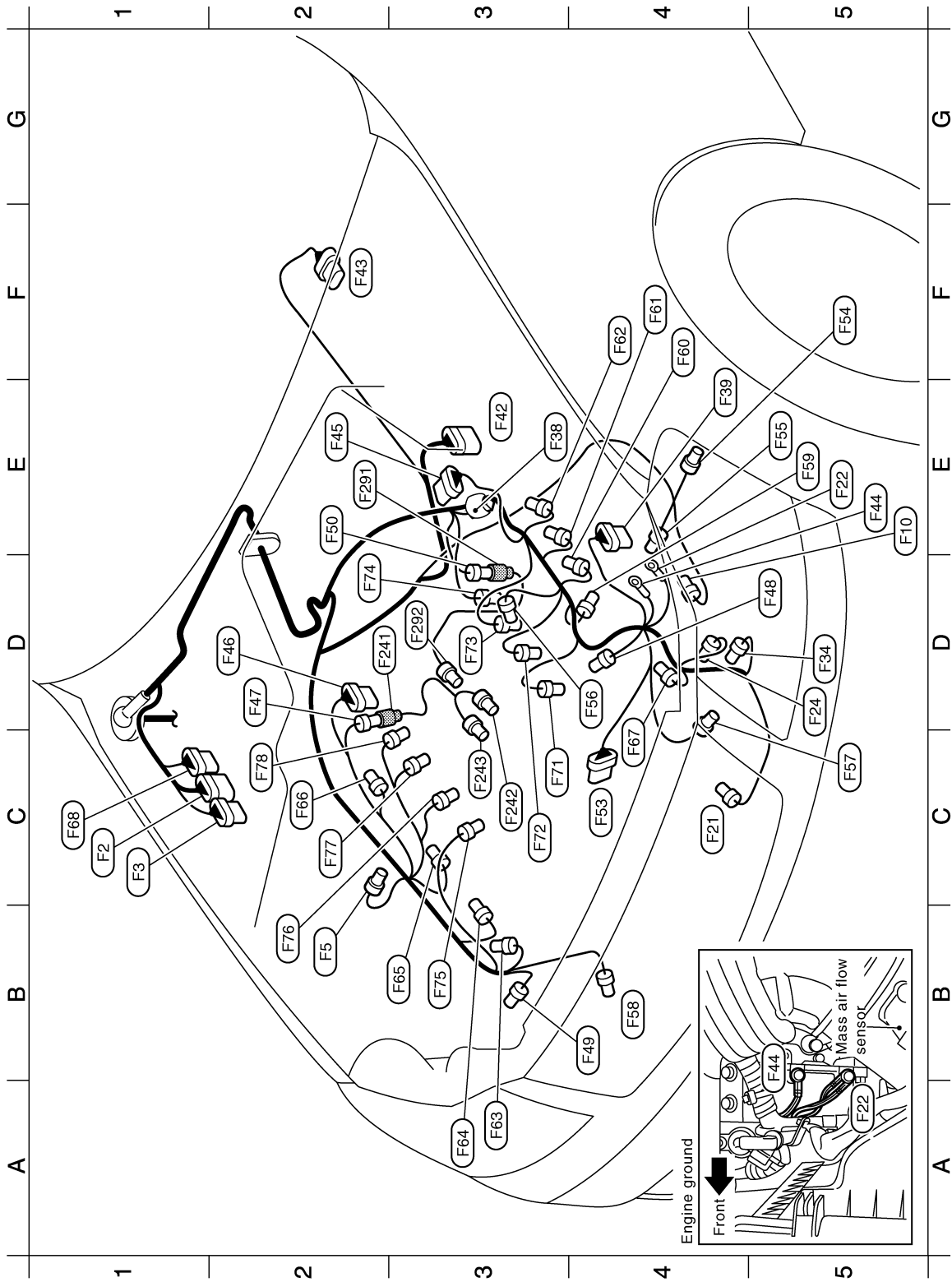
TKIT1316E

ENGINE CONTROL HARNESS (VK ENGINE)

HARNESS

< SERVICE INFORMATION >

Engine Compartment



TKIT1088E

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

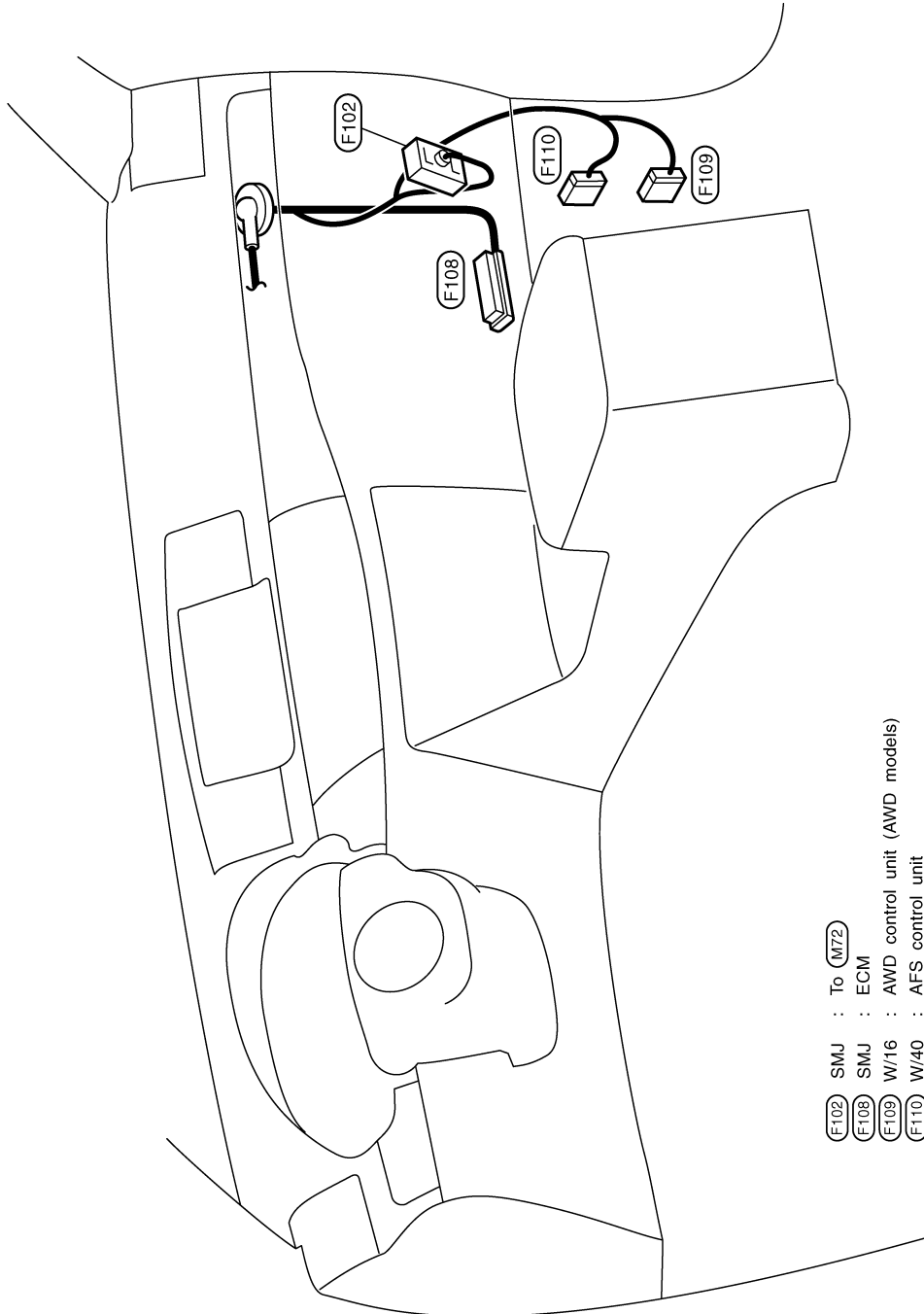
PG

C1	F2	B/10	:	To (E11)	C3	(F71)	GR/2	:	Fuel injector No.1
C1	F3	B/8	:	To (E12)	C3	(F72)	GR/2	:	Fuel injector No.3
B2	F5	GR/2	:	EVAP canister purge volume control solenoid valve	D3	(F73)	GR/2	:	Fuel injector No.5
E4	F10	B/3	:	Crankshaft position sensor (POS)	D2	(F74)	GR/2	:	Fuel injector No.7
C4	F21	GR/1	:	Oil pressure switch	B3	(F75)	GR/2	:	Fuel injector No.2
E5	F22	—	:	Engine ground	B2	(F76)	GR/2	:	Fuel injector No.4
D5	F24	B/1	:	Compressor	C2	(F77)	GR/2	:	Fuel injector No.6
D5	F34	GR/2	:	Compressor	C2	(F78)	GR/2	:	Fuel injector No.8
E3	F38	W/2	:	Condenser	Engine control sub-harness-1				
E4	F39	B/6	:	Mass air flow sensor	D2	(F241)	B/4	:	To (F47)
E3	F42	G/10	:	A/T assembly	C3	(F242)	L/2	:	Knock sensor (Bank 1)
F2	F43	B/8	:	Transfer assembly (AWD models)	C3	(F243)	L/2	:	Knock sensor (Bank 2)
E5	F44	—	:	Engine ground	Engine control sub-harness-2				
E2	F45	B/6	:	Air fuel ratio (A/F) sensor 1 (Bank 1)	E2	(F291)	SB/2	:	To (F50)
D2	F46	B/6	:	Air fuel ratio (A/F) sensor 1 (Bank 2)	D3	(F292)	GR/2	:	Engine coolant temperature sensor
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	:	VIA 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)					

HARNESS

< SERVICE INFORMATION >

Passenger Compartment



(F102) SMJ : To (M72)
(F108) SMJ : ECM
(F109) W/16 : AWD control unit (AWD models)
(F110) W/40 : AFS control unit

BODY HARNESS

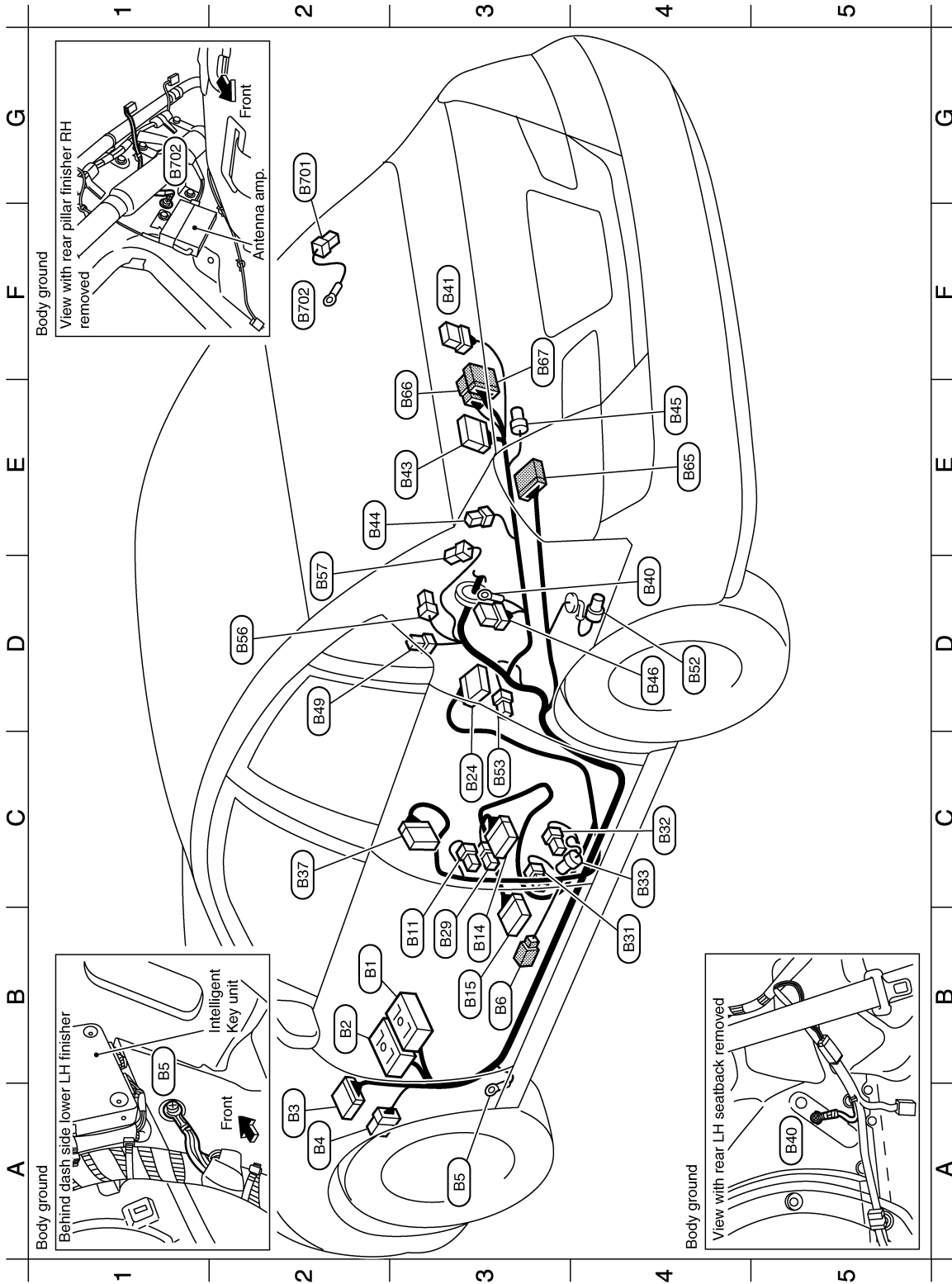
TKIT1090E

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

HARNESS

< SERVICE INFORMATION >

Passenger Compartment



TKIT0876E

HARNESS

< SERVICE INFORMATION >

Body sub-harness

G2 (B701) B/1 : Rear window defogger
 F2 (B702) — : Body ground

B2 (B1)	SMJ	:	To (M12) (With BOSE system)
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)
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 (For rear power seat)
E3 (B43)	W/10	:	Rear seat armrest RH (For rear power seat)
E2 (B44)	GR/4	:	Rear seat armrest LH (With BOSE system)
E4 (B45)	GR/2	:	Inside key antenna (Rear seat)
D4 (B46)	W/6	:	Rear seat LH (For 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)

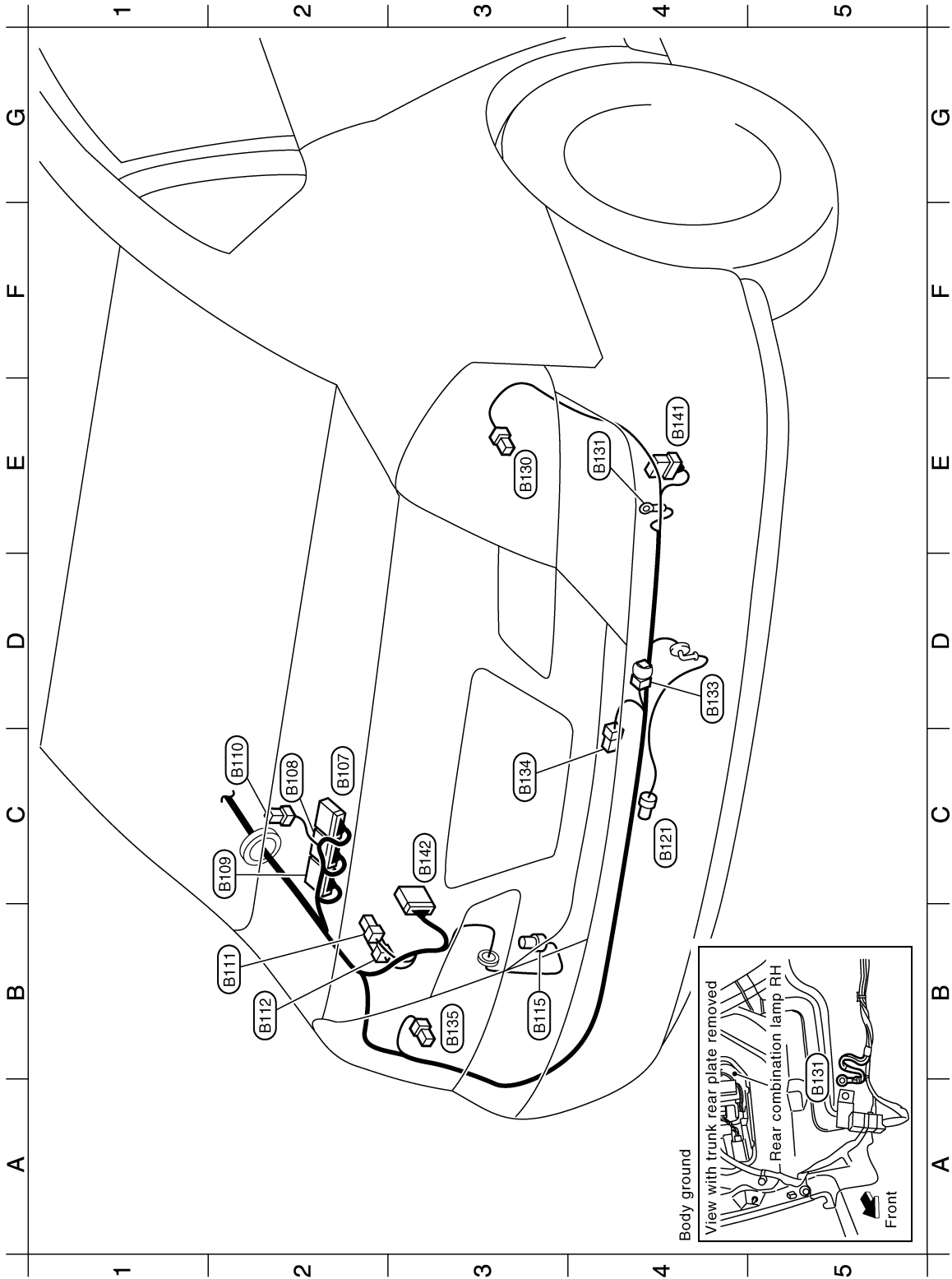
TKIT1091E

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

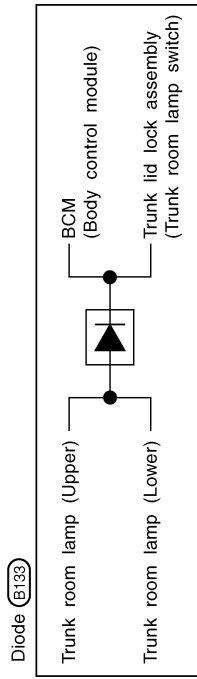
HARNES

< SERVICE INFORMATION >

Luggage Compartment



TKIT1092E



(B107)	W/40	: BOSE amp. (With BOSE system)
(B108)	BR/14	: BOSE amp. (With BOSE system)
(B109)	BR/23	: BOSE amp. (With BOSE system)
(B110)	BR/2	: Rear surround speaker LH [With BOSE (5.1ch) system]
(B111)	W/4	: Fuel pump control module
(B112)	W/2	: Dropping resistor
(B115)	B/4	: Tire pressure receiver rear LH
(B121)	GR/2	: Outside key antenna (Trunk room)
(B130)	W/4	: Rear combination lamp RH
(B131)	—	: Body ground
(B133)	W/2	: Diode
(B134)	W/2	: Trunk room lamp (Lower)
(B135)	W/4	: Rear combination lamp LH
(B141)	BR/6	: Rear sunshade cancel relay
(B142)	W/26	: Pre-crash seat belt control unit

BODY NO. 2 HARNESS

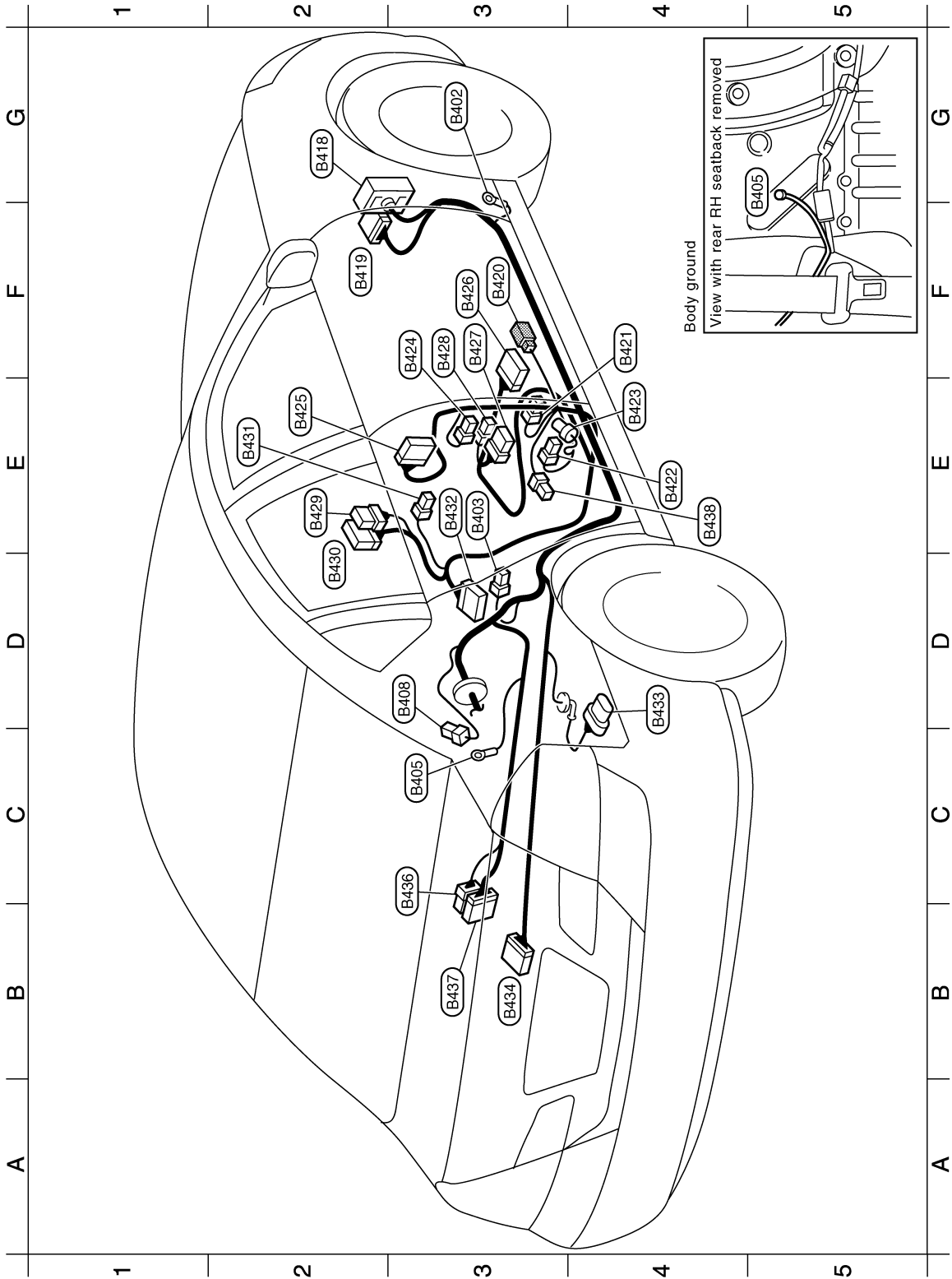
TKIT1093E

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

HARNESS

< SERVICE INFORMATION >

Passenger Compartment



TKIT1094E

HARNESS

< SERVICE INFORMATION >

G3	(E402)	—	:	Body ground
E3	(E403)	W/3	:	Rear door switch RH
C3	(E405)	—	:	Body ground
D3	(E408)	Y/2	:	RH side curtain air bag module
G2	(E418)	SMJ	:	To (M66)
F2	(E419)	W/32	:	To (M21B)
F3	(E420)	W/2	:	Kicking plate illumination passenger side
F4	(E421)	Y/2	:	Front RH seat belt pre-tensioner
E4	(E422)	W/2	:	Pre-crash seat belt motor RH
E4	(E423)	Y/2	:	RH side air bag (satellite) sensor
F3	(E424)	W/3	:	Front door switch passenger side
E2	(E425)	W/18	:	To (D71)
F3	(E426)	W/18	:	Front seat (Passenger side)
F3	(E427)	W/8	:	Front seat (Passenger side)
F3	(E428)	Y/2	:	Front RH side air bag module
E2	(E429)	BR/8	:	Climate controlled seat switch passenger side
D2	(E430)	W/10	:	Climate controlled seat switch driver side
E2	(E431)	W/4	:	To (MT53) (For rear view monitor)
E3	(E432)	Y/12	:	Air bag diagnosis sensor unit
D4	(E433)	GR/5	:	Fuel level sensor unit and fuel pump
B3	(E434)	W/16	:	To (B65)
C3	(E436)	B/8	:	To (B66)
B3	(E437)	BR/24	:	To (B67)
E4	(E438)	W/3	:	Belt tension sensor

TKIT1095E

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

HARNESS

< SERVICE INFORMATION >

Luggage Compartment



TKIT1096E

HARNESS

< SERVICE INFORMATION >

EVAP sub-harness	
C4	(B171) : To (B469)
D4	(B172) : EVAP control system pressure sensor
D4	(B173) : EVAP canister vent control valve
W/16	: Satellite radio tuner (Without navigation system)
W/20	: To (R105) (With rear display)
B/2	: RAS motor (With RAS)
B/1	: Body ground (With RAS)
B/2	: Rear wheel sensor RH
B/2	: Rear wheel sensor LH
B/3	: Height sensor
B/6	: To (B171)
W/12	: To (T1)
BR/2	: Rear surround speaker RH [With BOSE (5.1ch) system]
W/2	: Woofer (With BOSE system)
GR/2	: Inside key antenna (Trunk room)
W/8	: Rear sunshade unit (With built-in motor)
W/2	: Trunk room lamp (Upper)
W/40	: RAS control unit (With RAS)
W/4	: Fuel lid lock actuator
W/2	: Noise Suppressor (With RAS)
W/3	: Noise Suppressor (With RAS)
L/4	: RAS motor relay (With RAS)
W/32	: Camera control unit (With BOSE system)
B/4	: Tire pressure receiver rear RH
GR/4	: Rear wheel steering angle sensor (With RAS)
G3	(E461)
C2	(E462)
E4	(E463)
E4	(E464)
D3	(E466)
D3	(E467)
D3	(E468)
C3	(E469)
G3	(E470)
F2	(E471)
D2	(E472)
E2	(E473)
D2	(E474)
C3	(E475)
F3	(E476)
F3	(E477)
E3	(E478)
E3	(E479)
F3	(E480)
F4	(E481)
G4	(E482)
E4	(E487)

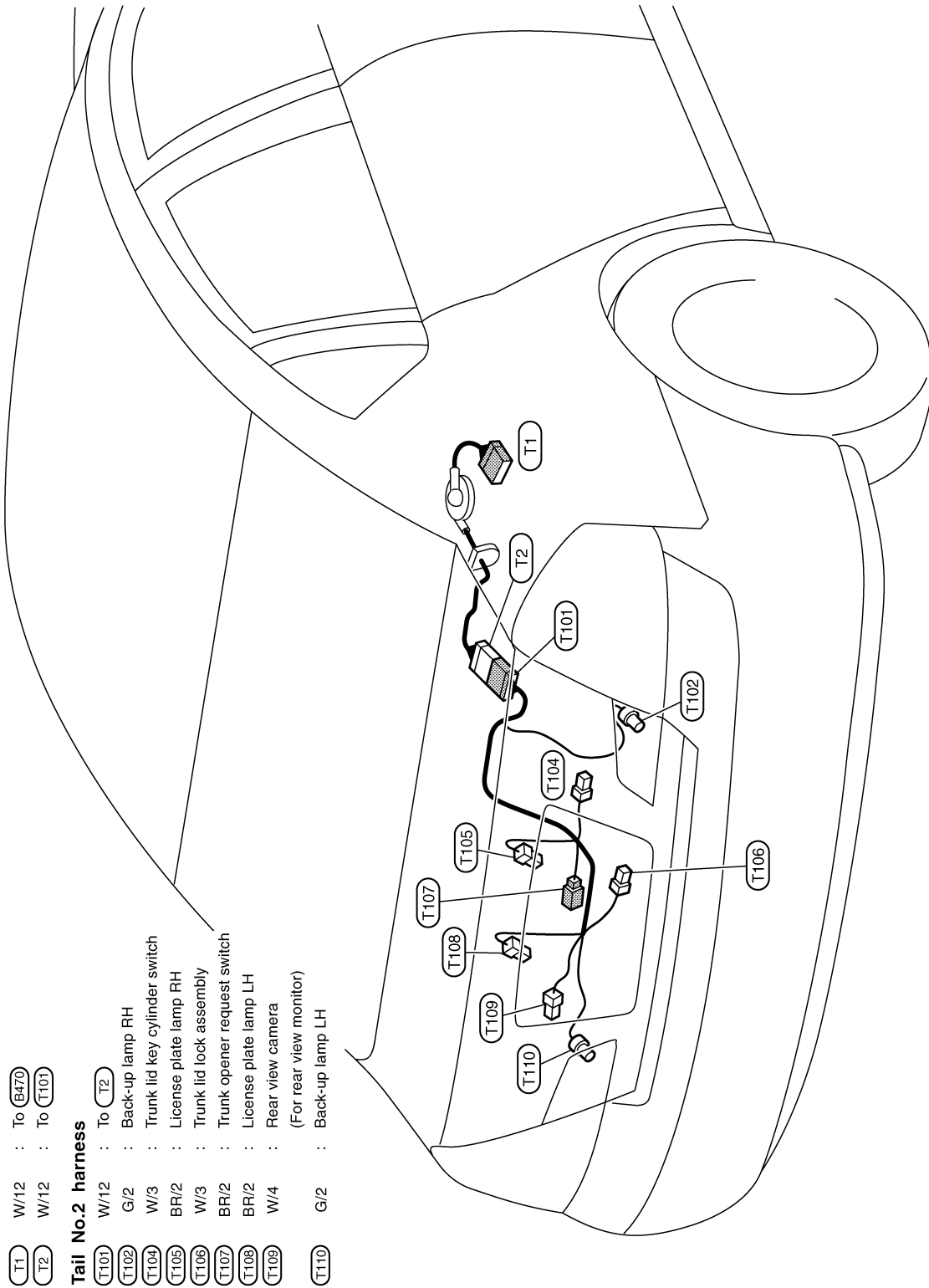
TKIT1097E

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

HARNESS

< SERVICE INFORMATION >

TAIL HARNESS



TKIT0770E

HARNESS

< SERVICE INFORMATION >

ROOM LAMP HARNESS



Room lamp harness

- R51 W/24 : To (M181)
- R52 W/4 : Microphone
- R53 W/3 : Sunroof switch
- R54 W/8 : Map lamp
- R55 W/3 : Personal lamp RH
- R57 W/3 : Personal lamp LH
- R59 W/3 : Front passenger air bag off indicator

Rear display harness

- R101 W/12 : To (M232)
- R102 W/24 : Rear display unit
- R103 W/12 : Headphone amp.
- R104 W/4 : Headphone amp. (Remote control receiver)
- R105 W/20 : To (E462)

TKIT0771E

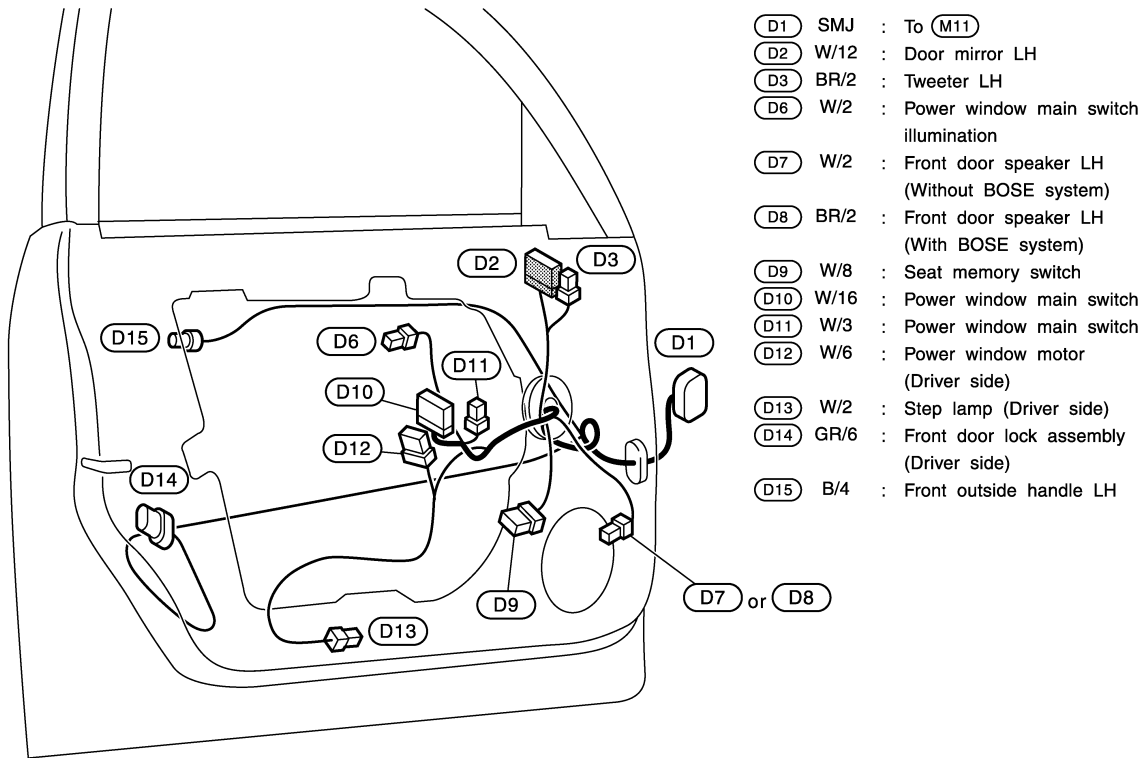
FRONT DOOR HARNESS

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

HARNESS

< SERVICE INFORMATION >

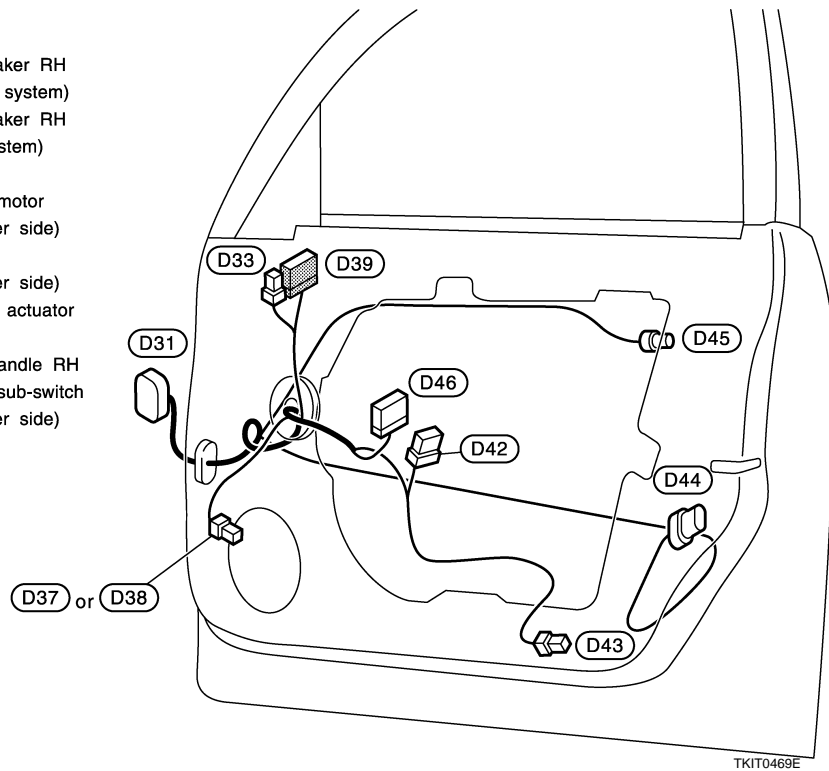
LH Side



TKIT0468E

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

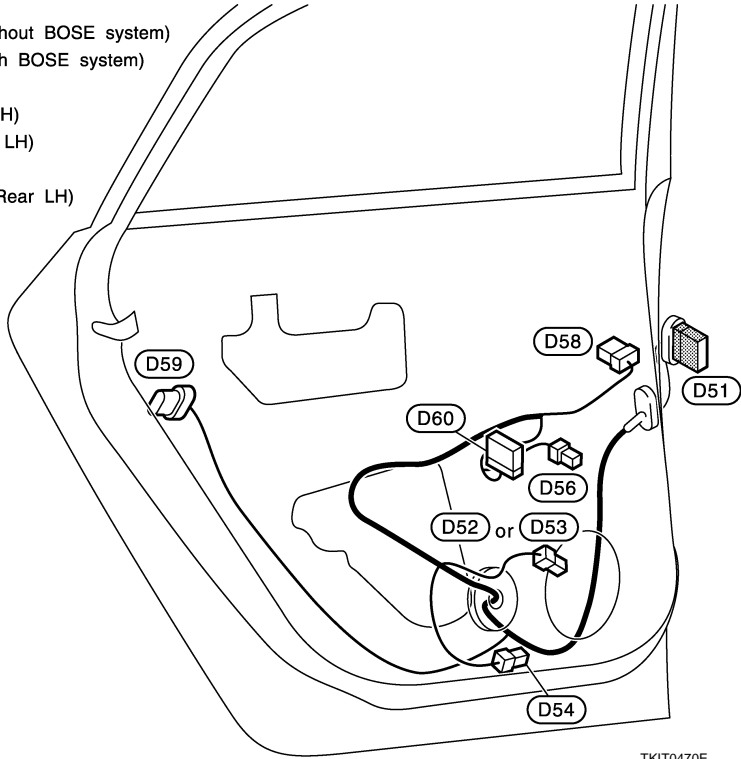
REAR DOOR HARNESS

HARNESS

< SERVICE INFORMATION >

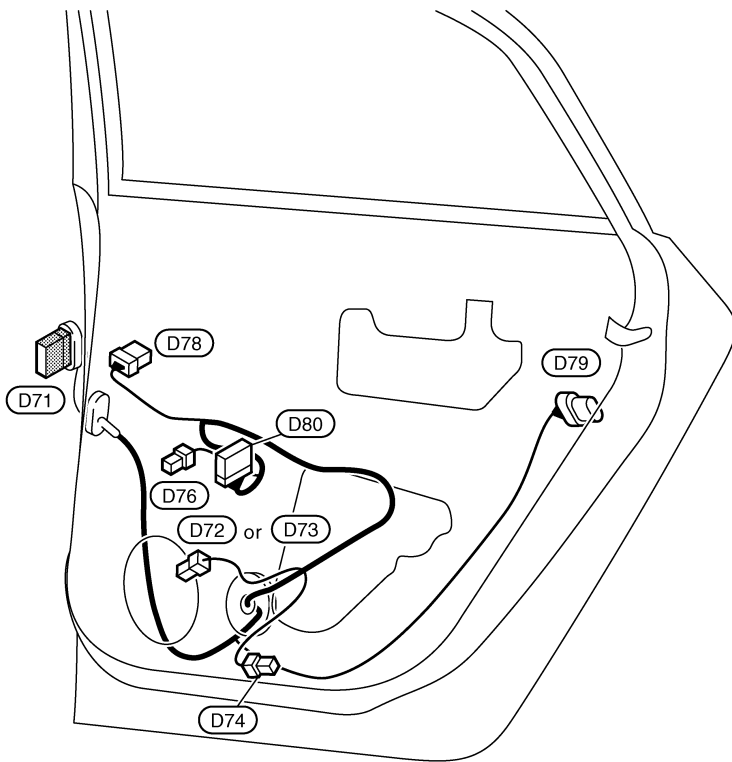
LH Side

- (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)



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)



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

HARNESS CONNECTOR

< SERVICE INFORMATION >

HARNESS CONNECTOR

Description

INFOID:000000005351729

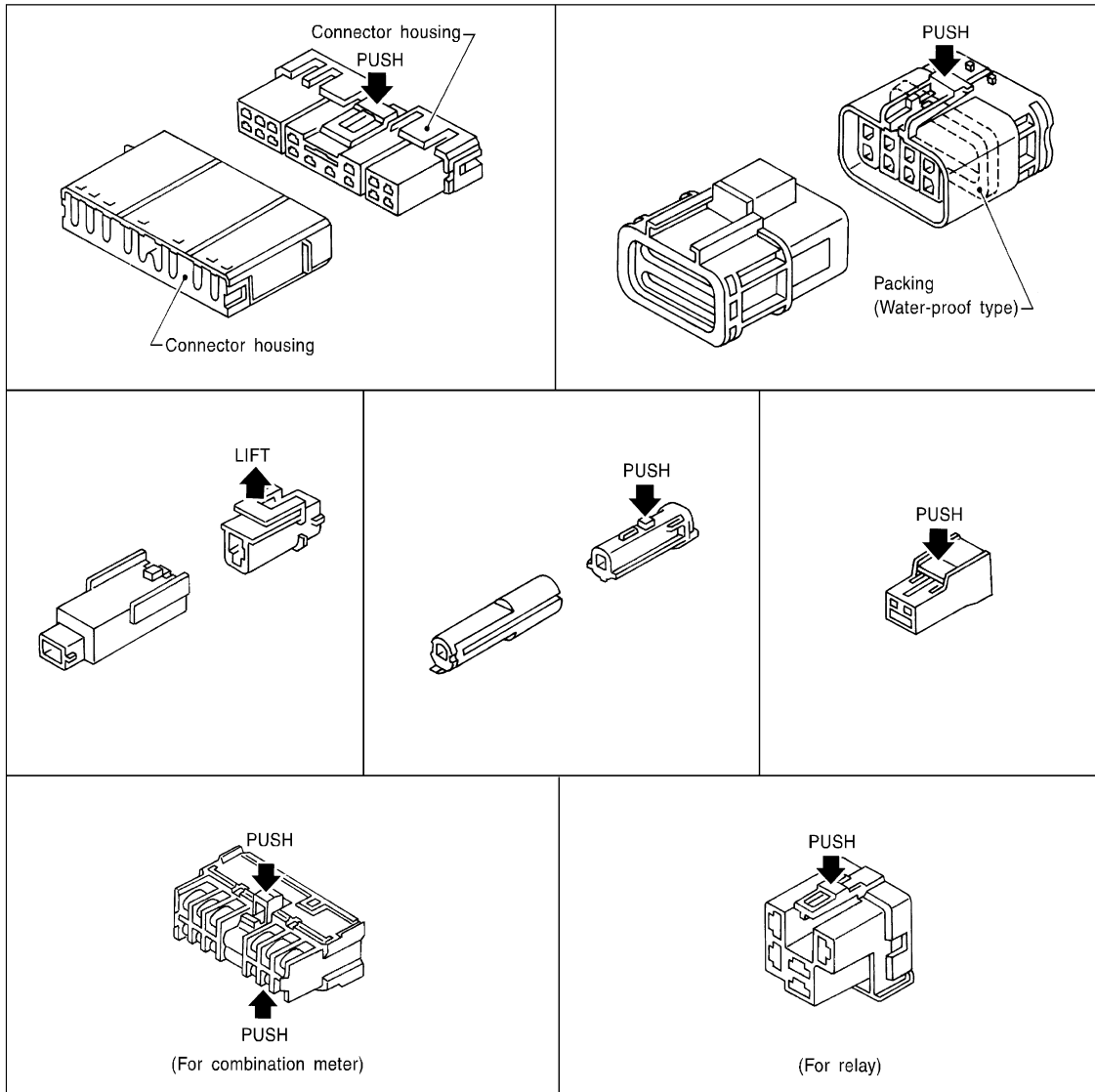
HARNESS CONNECTOR (TAB-LOCKING TYPE)

- 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.

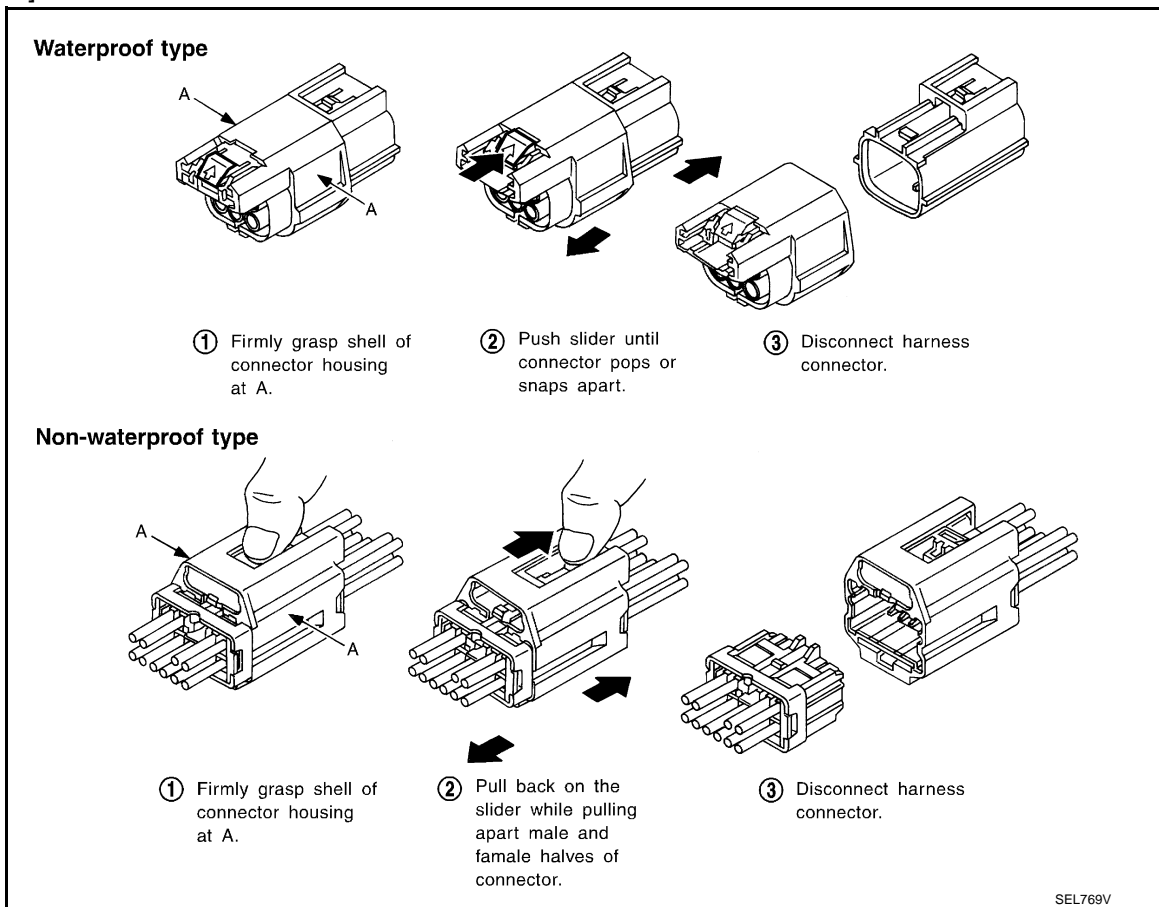
HARNESS CONNECTOR

< SERVICE INFORMATION >

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.

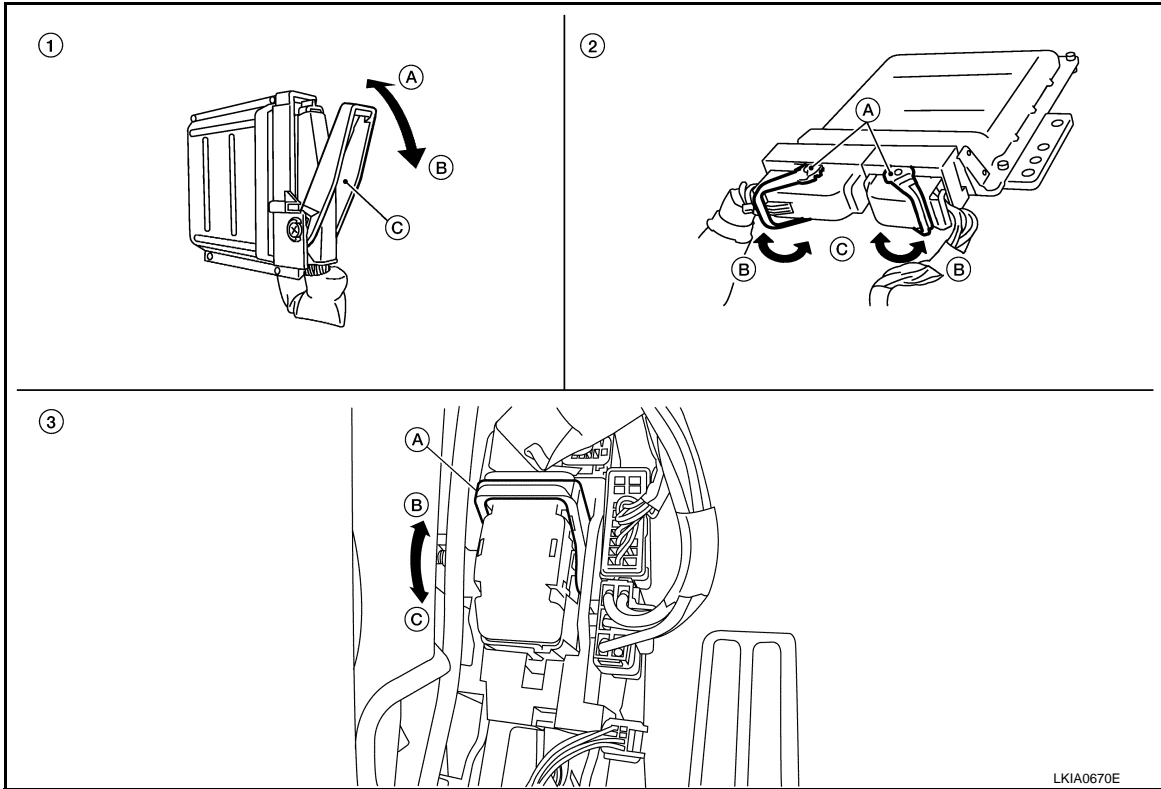
CAUTION:

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

HARNESS CONNECTOR

< SERVICE INFORMATION >

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



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

ELECTRICAL UNITS

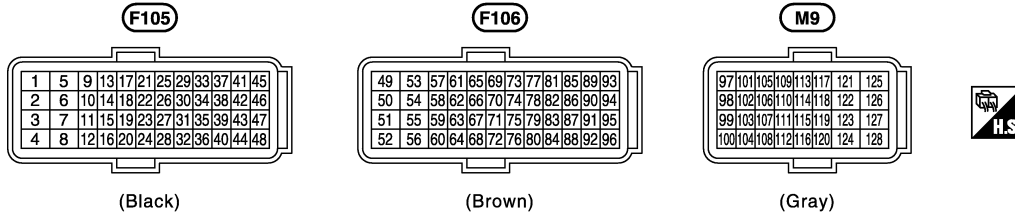
< SERVICE INFORMATION >

ELECTRICAL UNITS

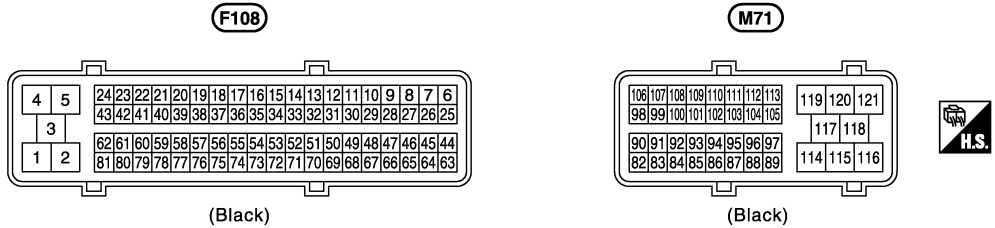
Terminal Arrangement

INFOID:000000005351730

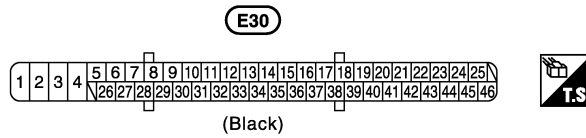
ECM (With VQ35HR)



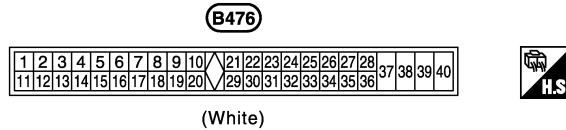
ECM (With VK45DE)



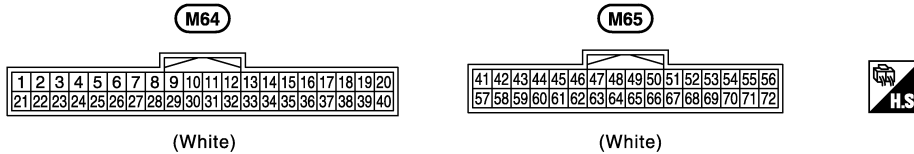
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



RAS CONTROL UNIT



UNIFIED METER AND A/C AMP.



CKIT0984E

ELECTRICAL UNITS

< SERVICE INFORMATION >

BCM (BODY CONTROL MODULE)

M1

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

(White)



M2

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

(Black)

M3

56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

(White)



INTELLIGENT KEY UNIT

M32

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

(White)

M33

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72

(White)



CKIT0985E

SMJ (SUPER MULTIPLE JUNCTION)

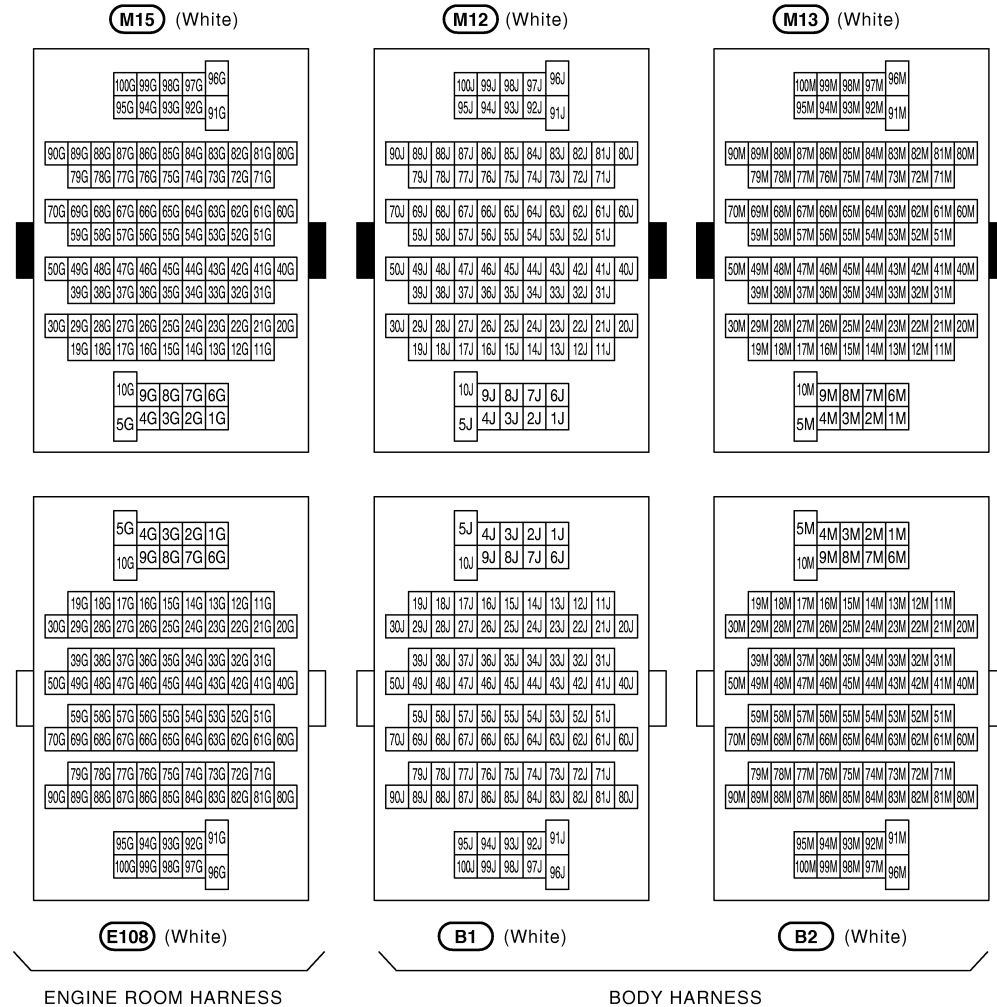
< SERVICE INFORMATION >

SMJ (SUPER MULTIPLE JUNCTION)

Terminal Arrangement

INFOID:000000005351731

MAIN HARNESS



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

CKIT0958E

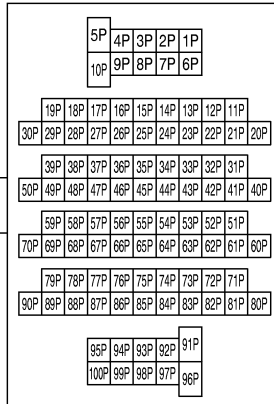
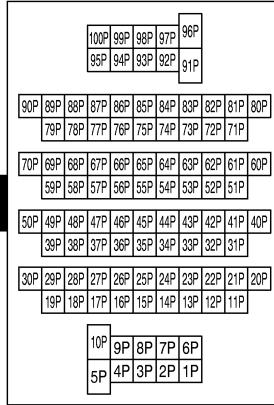
SMJ (SUPER MULTIPLE JUNCTION)

< SERVICE INFORMATION >

MAIN HARNESS



M66 (White)



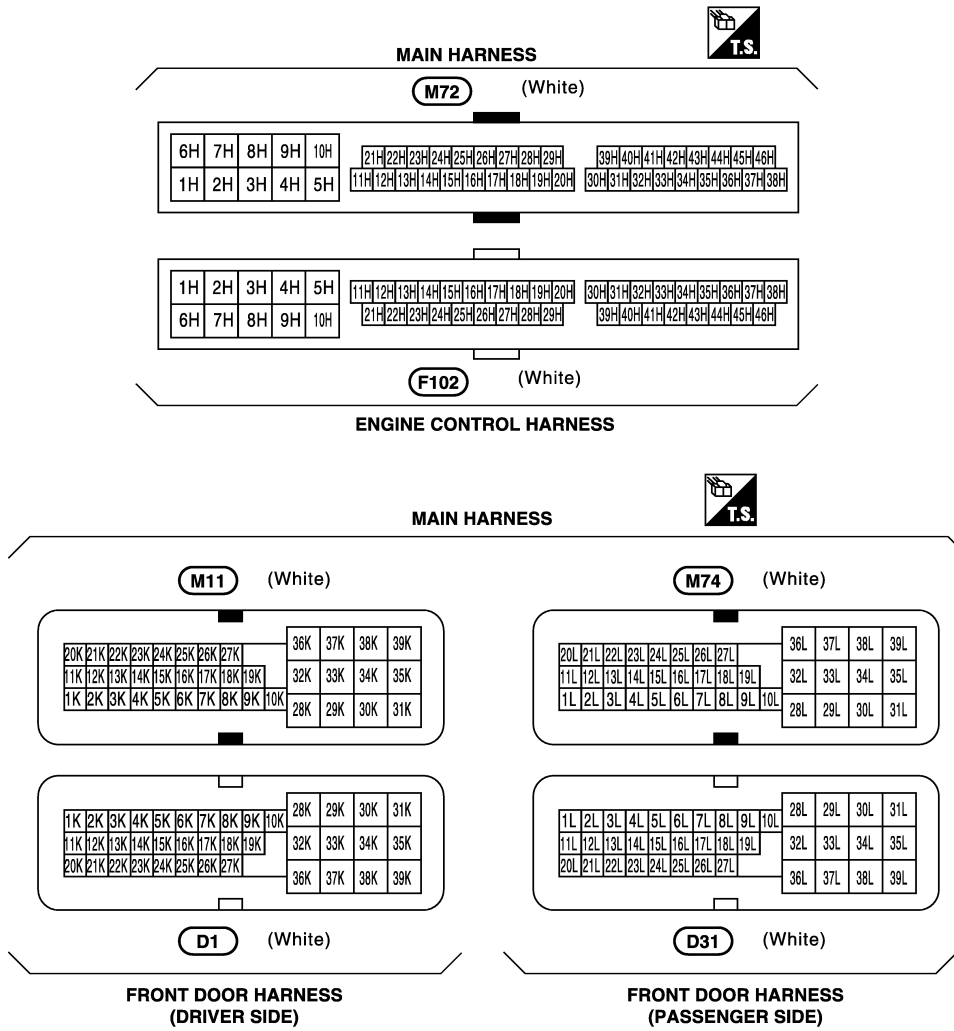
B418 (White)

BODY No. 2 HARNESS

CKIT0959E

SMJ (SUPER MULTIPLE JUNCTION)

< SERVICE INFORMATION >



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

PG

CKIT0158E

STANDARDIZED RELAY

< SERVICE INFORMATION >

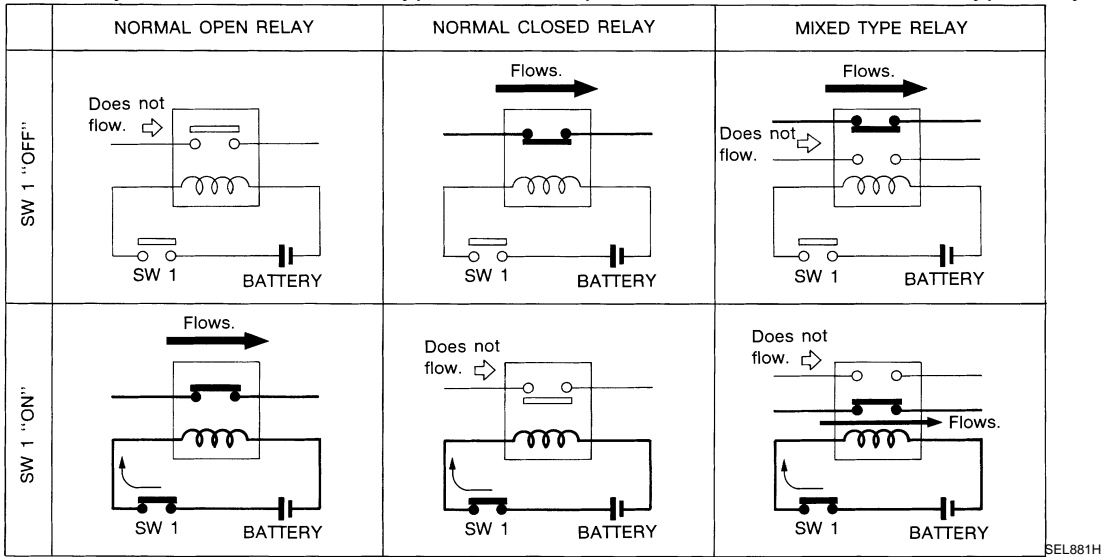
STANDARDIZED RELAY

Description

INFOID:000000005351732

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

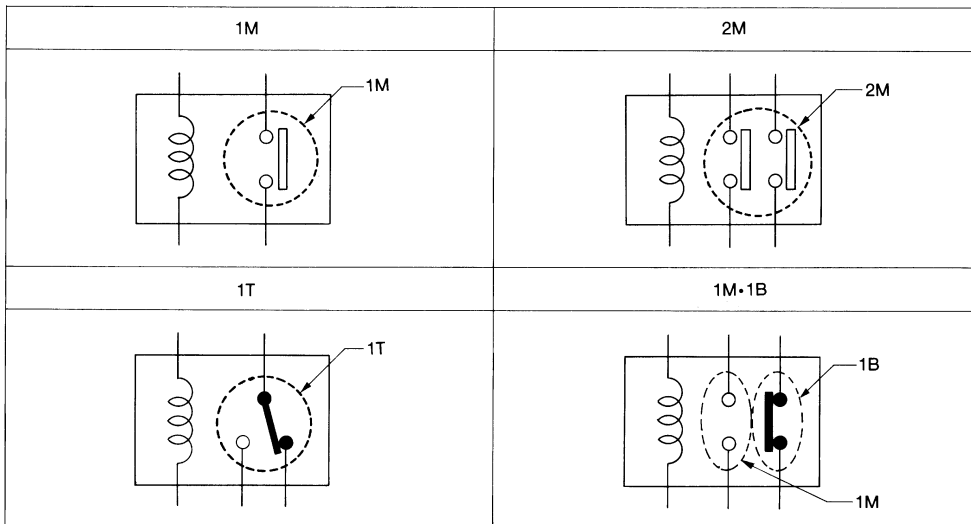
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



SEL881H

TYPE OF STANDARDIZED RELAYS

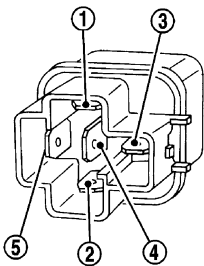
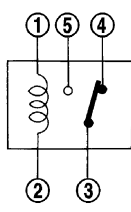
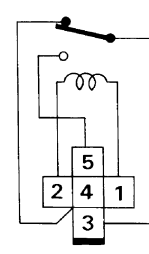
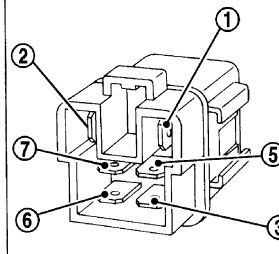
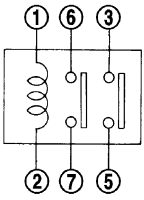
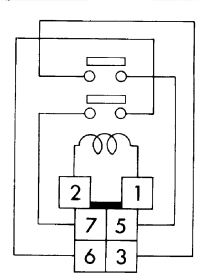
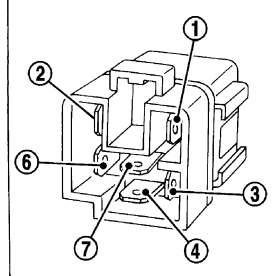
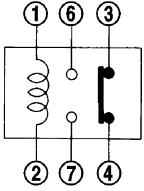
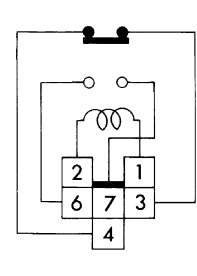
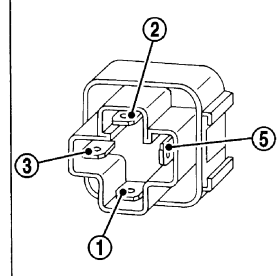
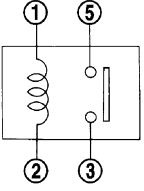
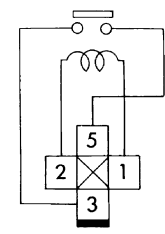
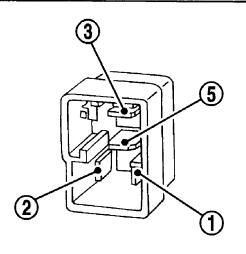
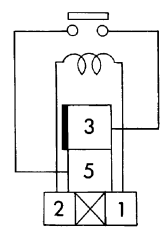
- 1M 1 Make
- 2M 2 Make
- 1T 1 Transfer
- 1M-1B 1 Make 1 Break



SEL882H

STANDARDIZED RELAY

< SERVICE INFORMATION >

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

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

SEL188W

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

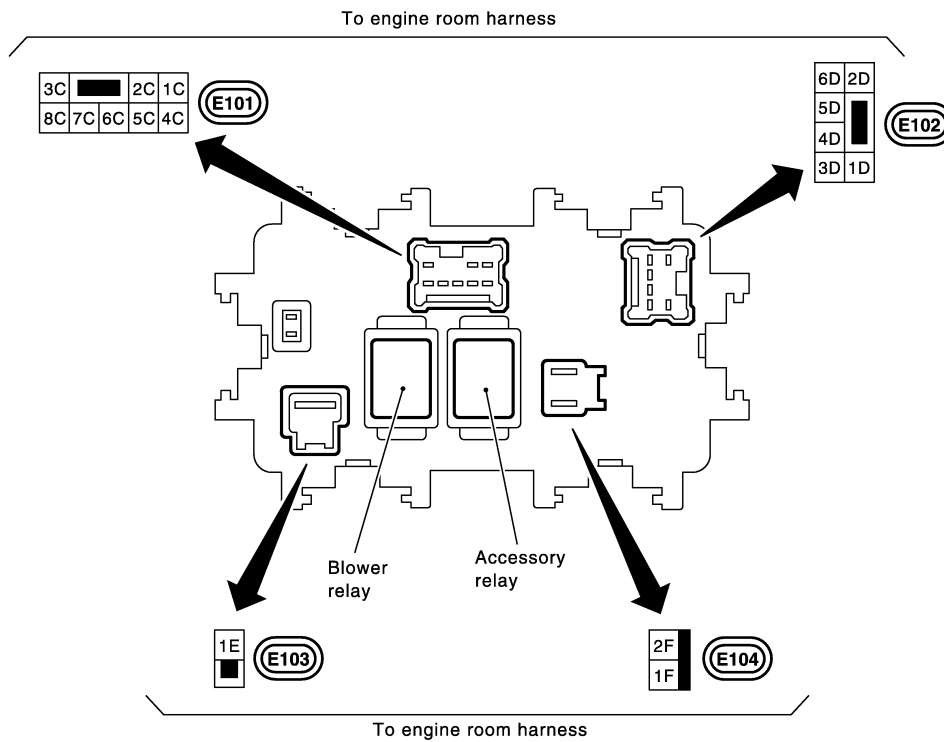
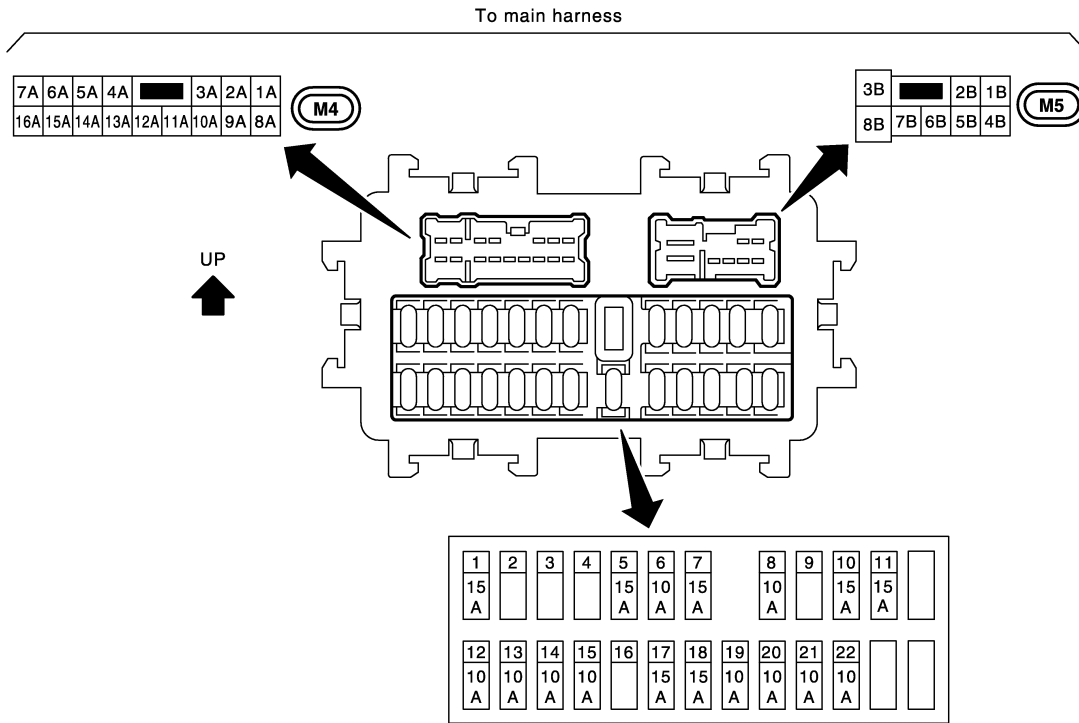
FUSE BLOCK - JUNCTION BOX (J/B)

< SERVICE INFORMATION >

FUSE BLOCK - JUNCTION BOX (J/B)

Terminal Arrangement

INFOID:000000005351733



CKIT0986E

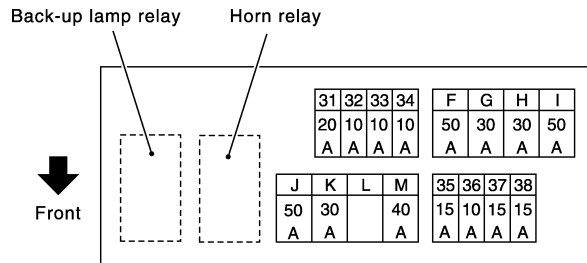
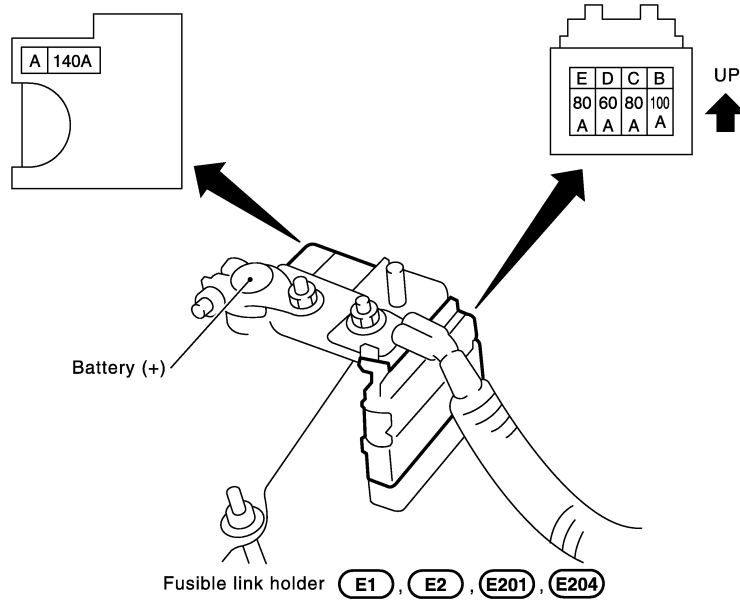
FUSE, FUSIBLE LINK AND RELAY BOX

< SERVICE INFORMATION >

FUSE, FUSIBLE LINK AND RELAY BOX

Terminal Arrangement

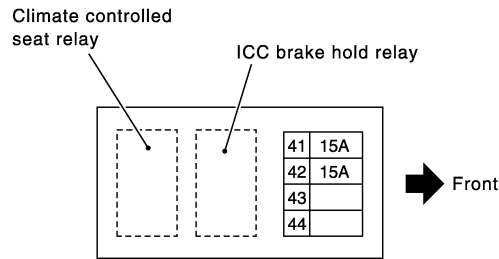
INFOID:000000005351734



Fuse and fusible link block **(E21)**

F - M: FUSIBLE LINK
No. 31 - 38: FUSE

Fuse, fusible link and relay box **(E18)**



Fuse block-2 **(E14)**

Relay box-2 **(E13)**

CKIT0987E

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