POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

PRECAUTIONS
Precautions for Battery Service
POWER SUPPLY ROUTING CIRCUIT
Schematic 4
Wiring Diagram — POWER —5
BATTERY POWER SUPPLY — IGNITION SW.
IN ANY POSITION
ACCESSORY POWER SUPPLY — IGNITION
SW. IN "ACC" OR "ON" 10
IGNITION POWER SUPPLY — IGNITION SW.
IN "ON" AND/OR "START"11
Fuse
Fusible Link
Circuit Breaker 16
IPDM E/R (INTELLIGENT POWER DISTRIBUTION
MODULE ENGINE ROOM) 17
System Description 17
SYSTEMS CONTROLLED BY IPDM E/R
CAN COMMUNICATION LINE CONTROL 17
IPDM E/R STATUS CONTROL 18
CAN Communication System Description
CAN Communication Unit 19
Function of Detecting Ignition Relay Malfunction 19
CONSULT-II
CONSULT-II BASIC OPERATION
SELF-DIAG RESULTS
DATA MONITOR
ACTIVE TEST
Auto Active Test24
DESCRIPTION
OPERATION PROCEDURE
INSPECTION IN AUTO ACTIVE TEST MODE 24
Schematic
IPDM E/R Terminal Arrangement 27
IPDM E/R Power/Ground Circuit Inspection
Inspection With CONSULT-II (Self-Diagnosis) 29
Removal and Installation of IPDM E/R
REMOVAL
INSTALLATION

GROUND	F
Ground Distribution31	
MAIN HARNESS31	
ENGINE ROOM HARNESS	(-
ENGINE CONTROL HARNESS	
BODY HARNESS	
BODY NO.2 HARNESS43	
TAIL HARNESS 44	F
BACK DOOR HARNESS46	
HARNESS	
Harness Layout47	
HOW TO READ HARNESS LAYOUT	
OUTLINE 48	
MAIN HARNESS 49	J
ENGINE ROOM HARNESS51	
ENGINE CONTROL HARNESS55	_
BODY HARNESS57	
BODY NO.2 HARNESS62	
TAIL HARNESS63	
TAIL NO.2 HARNESS66	
ROOM LAMP HARNESS67	L
DOOR HARNESS69	
Wiring Diagram Codes (Cell Codes)71	
ELECTRICAL UNITS LOCATION	N
Electrical Units Location74	
ENGINE COMPARTMENT74	
PASSENGER COMPARTMENT75	
LUGGAGE COMPARTMENT78	
HARNESS CONNECTOR80	
Description80	
HARNESS CONNECTOR (TAB-LOCKING	
TYPE)80	
HARNESS CONNECTOR (SLIDE-LOCKING	
TYPE)	
ELECTRICAL UNITS82	
Terminal Arrangement82	
SMJ (SUPER MULTIPLE JUNCTION)	
Terminal Arrangement	

А

В

С

D

Е

STANDARDIZED RELAY	FUSE BLOCK - JUNCTION BOX (J/B)
Description86	Terminal Arrangement
NORMAL OPEN, NORMAL CLOSED AND	FUSE, FUSIBLE LINK AND RELAY BOX
MIXED TYPE RELAYS86	Terminal Arrangement89
TYPE OF STANDARDIZED RELAYS 86	-

PRECAUTIONS

PRECAUTIONS

PFP:00001

AKS00AV9

А

С

D

F

F

G

Н

I

J

Precautions for Battery Service

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

PG

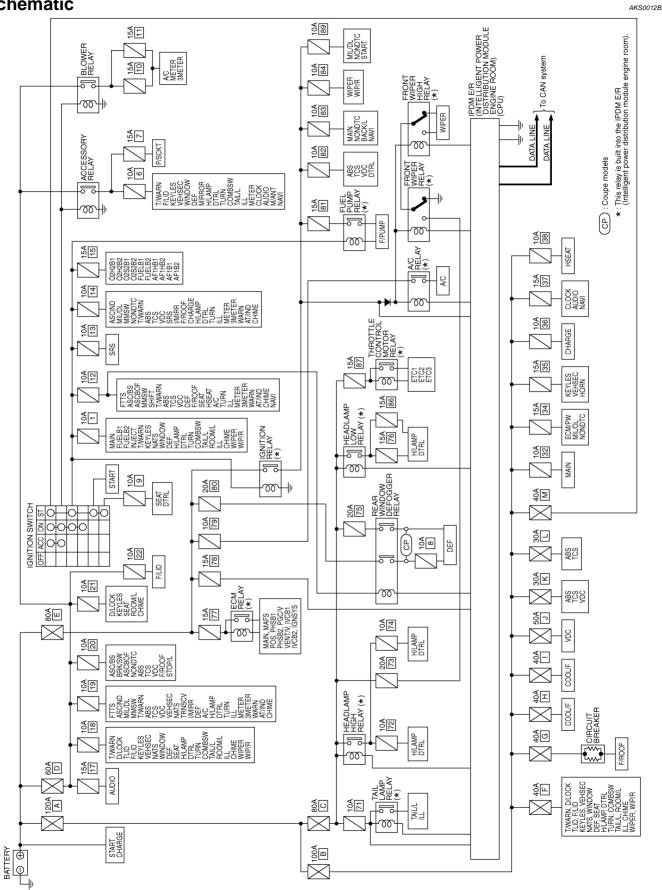
L

POWER SUPPLY ROUTING CIRCUIT

POWER SUPPLY ROUTING CIRCUIT

PFP:24110

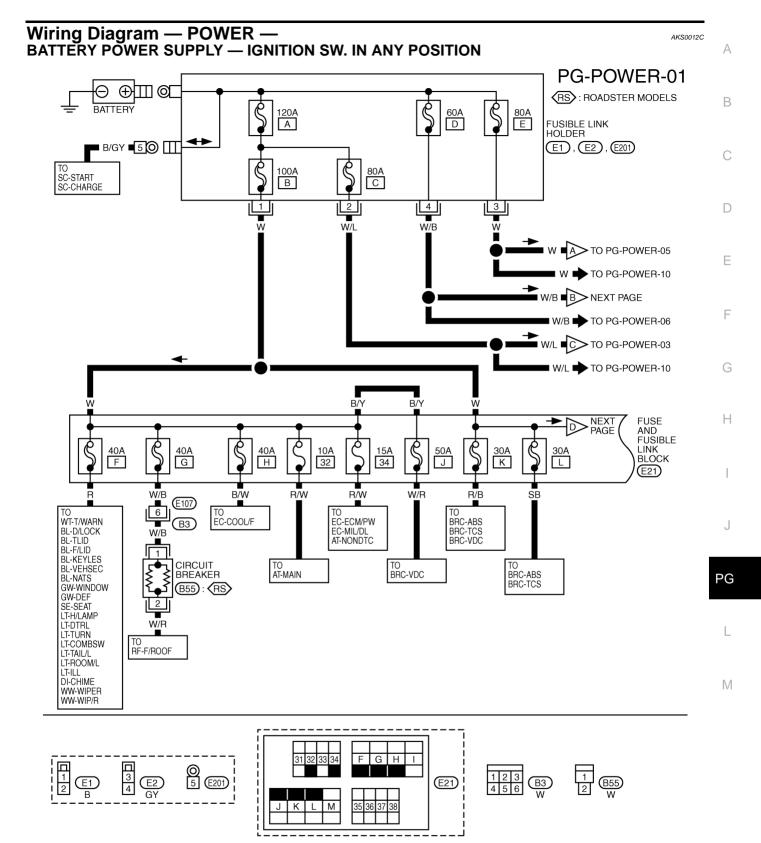




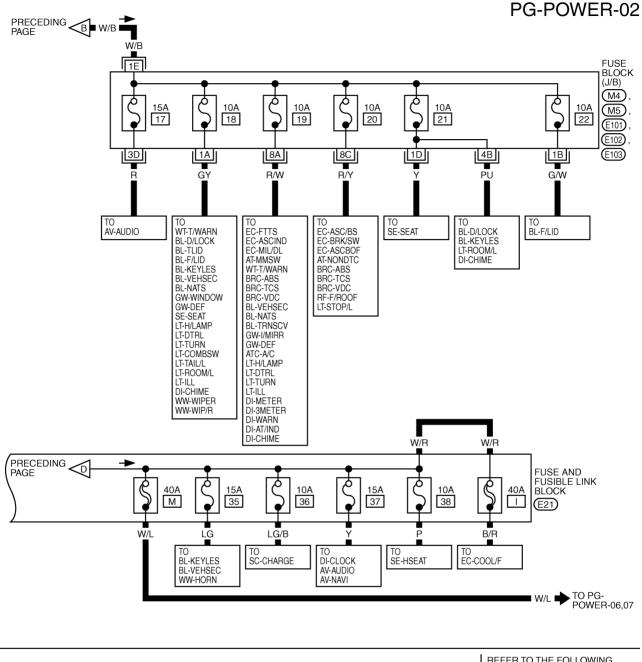
TKWM1377E

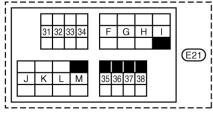


POWER SUPPLY ROUTING CIRCUIT



TKWB0267E





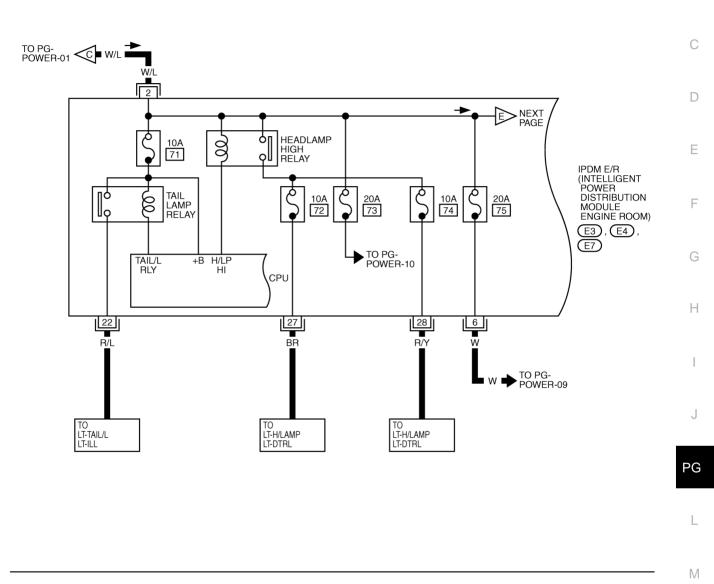
REFER TO THE FOLLOWING. (M4), (M5), (E101), (E102), (E103) -FUSE BLOCK-JUNCTION BOX (J/B)													
1 2 3 4 5 6 7 8 9 10 11										li			
12 13 14 15 16 17 18 19 20 21 22													
Ĺ			-			-			-			-	-'

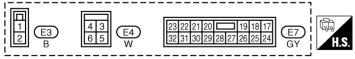
TKWM1378E

PG-POWER-03

А

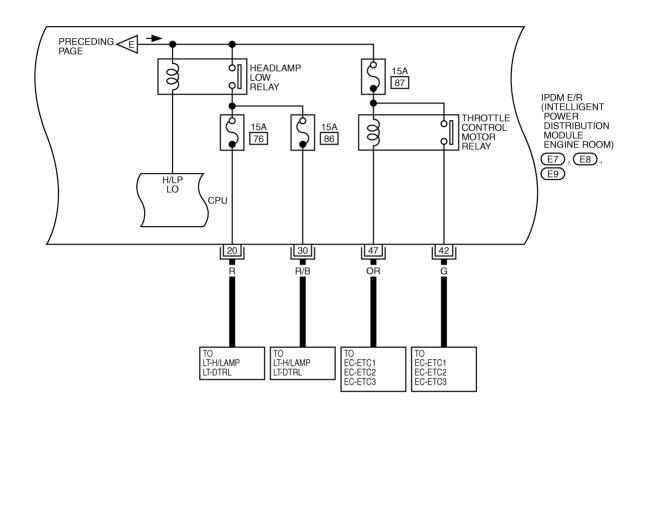
В

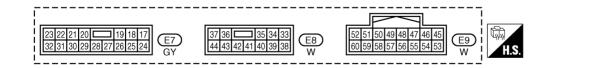




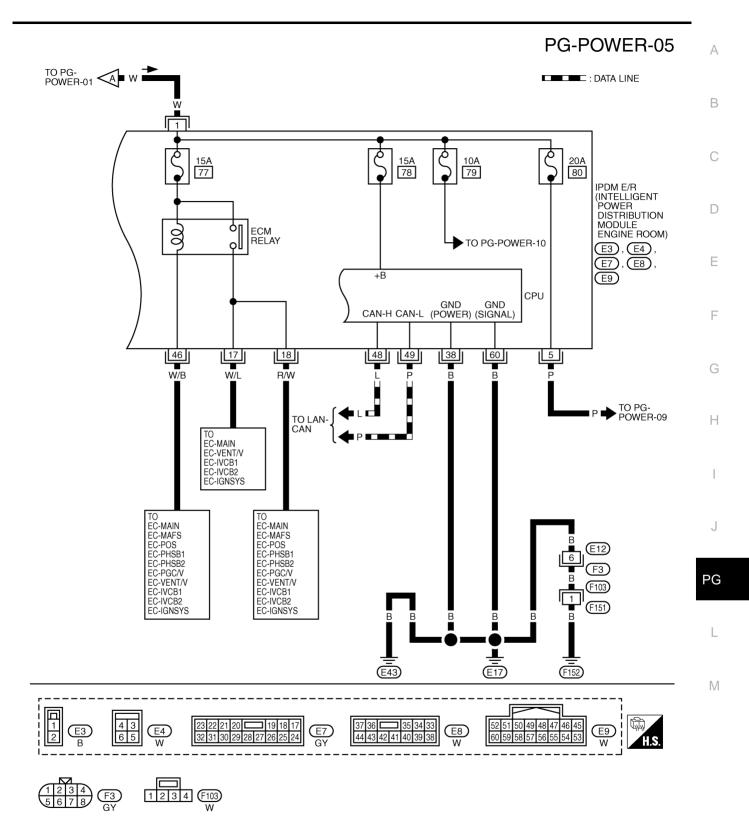
TKWT1642E

PG-POWER-04



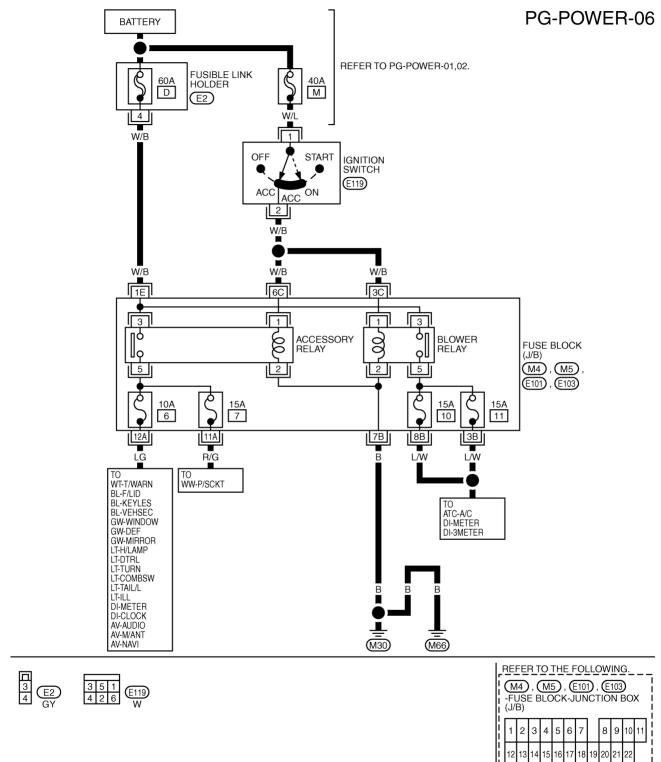


TKWT1643E



POWER SUPPLY ROUTING CIRCUIT

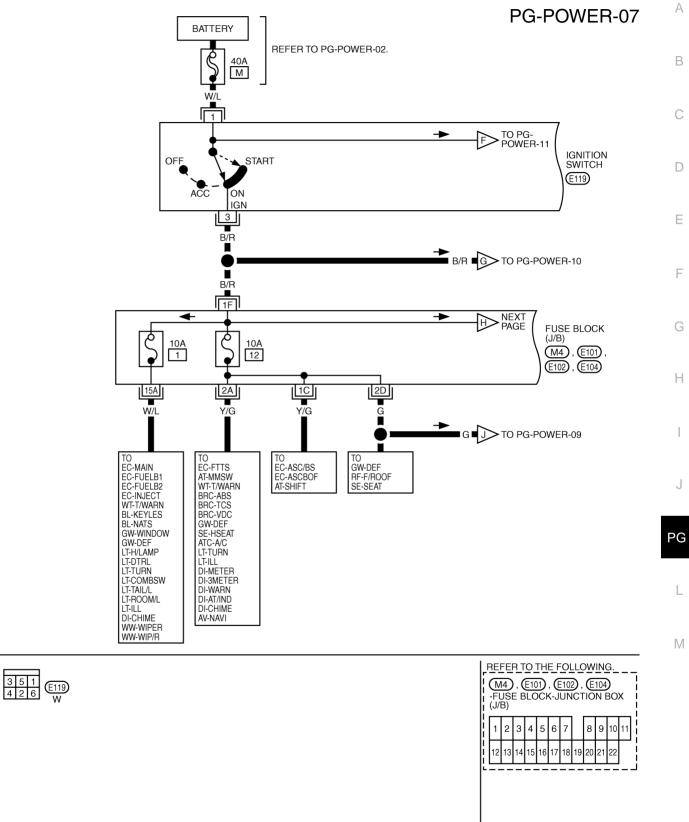
ACCESSORY POWER SUPPLY - IGNITION SW. IN "ACC" OR "ON"



TKWT2238E

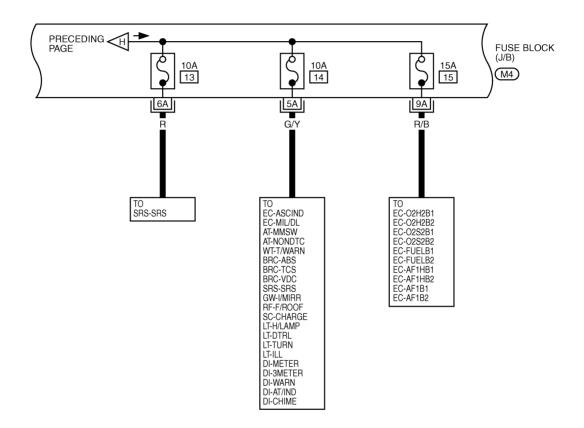
POWER SUPPLY ROUTING CIRCUIT

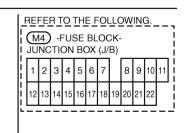
IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START"



TKWM1328E

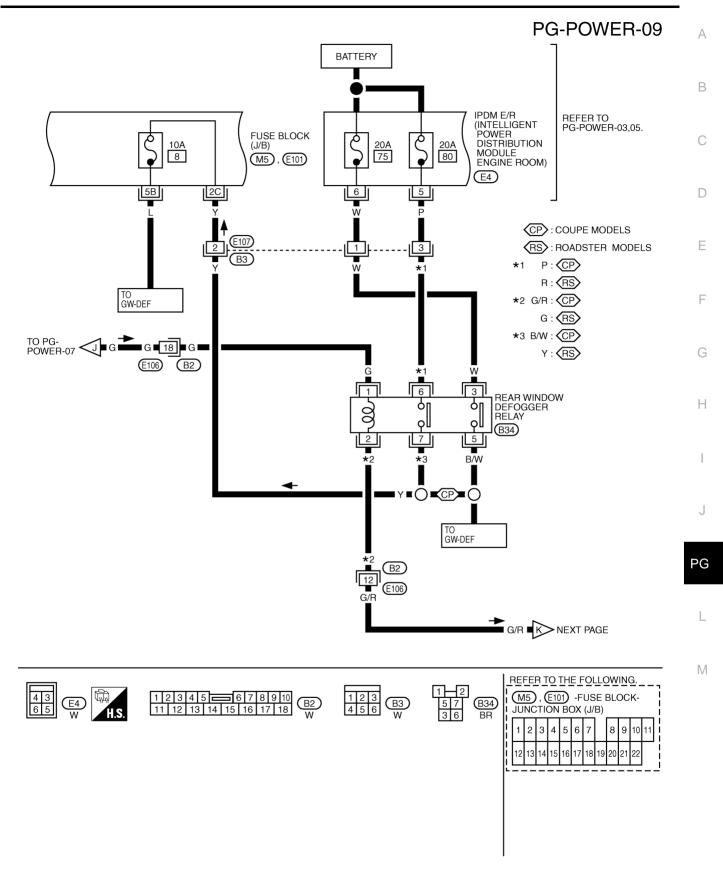
PG-POWER-08





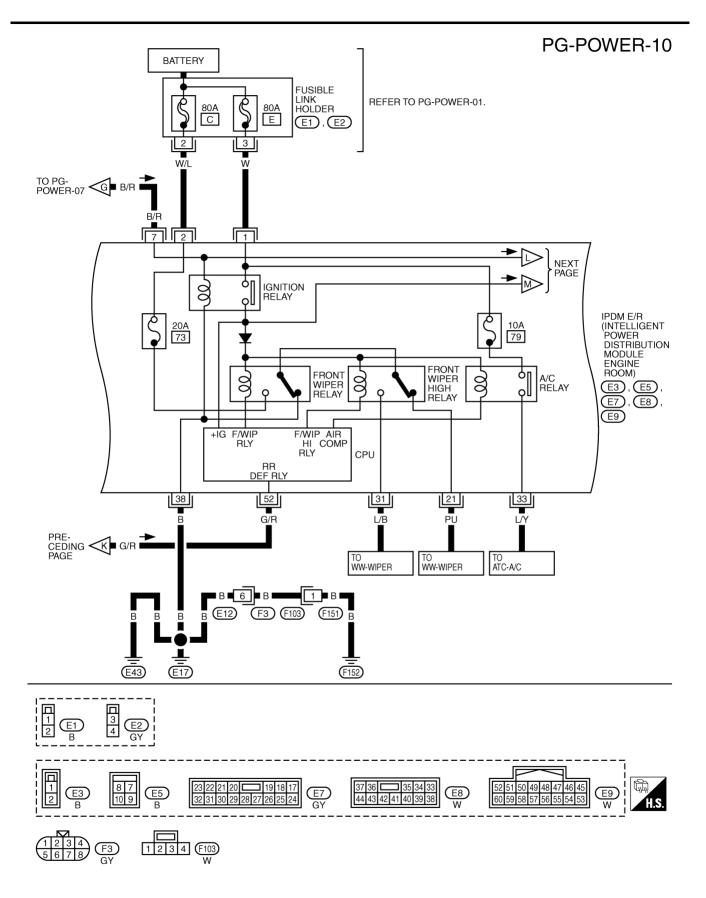
TKWM1379E

POWER SUPPLY ROUTING CIRCUIT

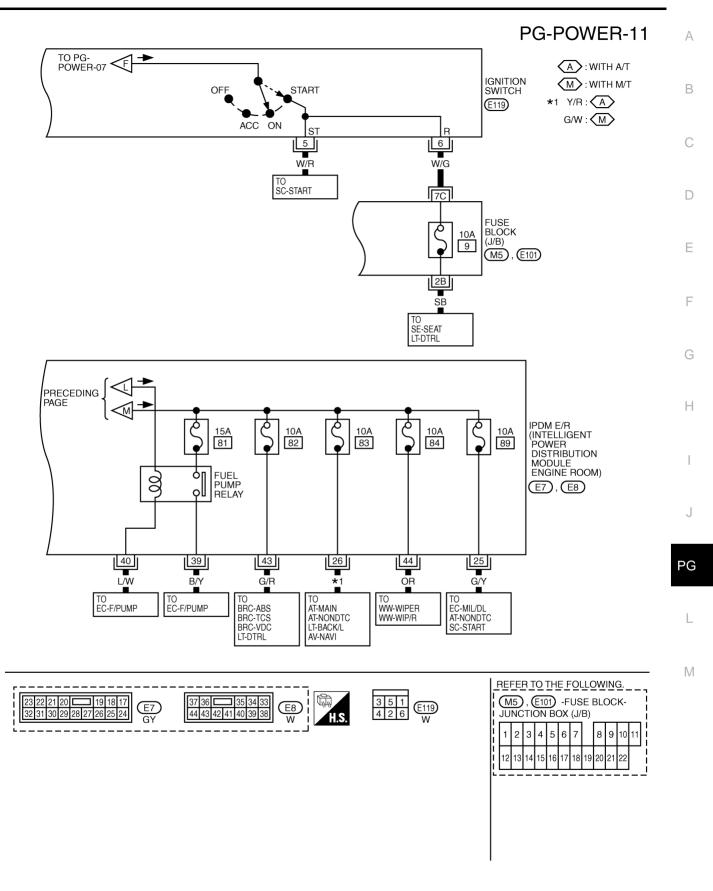


TKWT1648E

POWER SUPPLY ROUTING CIRCUIT



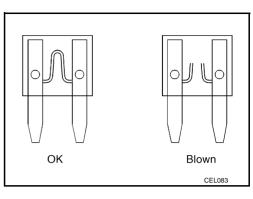
TKWT1649E



TKWB0268E

Fuse

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



Fusible Link

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

CAUTION:

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

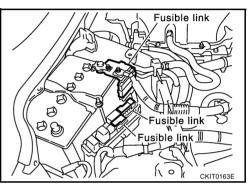
Circuit Breaker

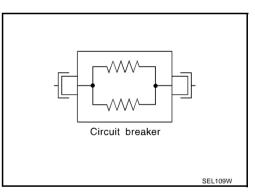
The PTC thermistor generates heat in response to current flow. The temperature (and resistance) of the thermistor element varies with current flow. Excessive current flow will cause the element's temperature to rise. When the temperature reaches a specified level, the electrical resistance will rise 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.

AKS0012E

AKS0012F

AKS0012D





IP	DM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) PFP:284B7	А
Sy	stem Description	
•	IPDM E/R (Intelligent Power Distribution Module Engine Room) integrates the relay box and fuse block which were originally placed in engine room. It controls integrated relay via IPDM E/R control circuit. IPDM E/R-integrated control circuit performs ON-OFF operation of relay, CAN communication control, oil	В
	pressure switch signal, hood switch signal reception, etc.	С
•	It controls operation of each electrical part via ECM, BCM and CAN communication lines.	0
	UTION:	
	ne of the IPDM E/R-integrated relays can be removed.	D
	STEMS CONTROLLED BY IPDM E/R	
1.	Lamp control Using CAN communication line, it receives signal from BCM and controls the following lamps:	_
	 Headlamps (Hi, Lo) 	Ε
	Parking lamps	
	Tail lamps	F
	License plate lamps	
2	Wiper control	
2.	Using CAN communication line, it receives signals from BCM and controls the front wipers.	G
3.	Headlamp washer control Using CAN communication line, it receives signals from BCM and controls the headlamp washer.	
4.	Rear window defogger relay control Using CAN communication line, it receives signals from BCM and controls the rear window defogger relay.	Н
5.	A/C compressor control Using CAN communication line, it receives signals from ECM and controls the A/C relay.	I
6.	Cooling fan control Using CAN communication line, it receives signals from ECM and controls cooling fan relay.	J
CA	N COMMUNICATION LINE CONTROL	
line	th CAN communication, by connecting each control unit using two communication lines (CAN L line, CAN H e), it is possible to transmit maximum amount of information with minimum wiring. Each control unit can Insmit and receive data, and reads necessary information only.	PG

- 1. Fail-safe control
 - When CAN communication with other control units is impossible, IPDM E/R performs fail-safe control.
 - Operation of control parts by IPDM E/R during fail-safe mode is as follows:

Controlled system	Fail-safe mode		
	• With the ignition switch ON, the headlamp (low) is ON.		
Headlamp	• With the ignition switch OFF, the headlamp (low) is OFF.		
Tall and a solute a large s	With the ignition switch ON, the tail and parking lamps is ON.		
Tail and parking lamps	• With the ignition switch OFF, the tail and parking lamps is OFF.		
Cooling for	With the ignition switch ON, the cooling fan HI operates.		
Cooling fan	• 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		
A/C compressor	A/C compressor 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 waiting status.
- 2. Sleep waiting status
 - Process to stop CAN communication is activated.
 - All systems controlled by IPDM E/R are stopped. When 1 seconds have elapsed after CAN communication with other control units is stopped, mode switches to sleep status.
- 3. Sleep status
 - IPDM E/R operates in low current-consumption mode.
 - CAN communication is stopped.
 - When a change in CAN communication 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

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

Refer to LAN-5, "CAN Communication Unit" .

Function of Detecting Ignition Relay Malfunction

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

NOTE:

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

I

Н

AKS00A2I

AKS00A2J

AKSODA2K

А

В

D

Ε

PG

L

CONSULT-II

AKS00A2L

CONSULT-II performs the following functions with combination of data receiving, command and transmission using the CAN communication line from the IPDM E/R.

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

CONSULT-II BASIC OPERATION

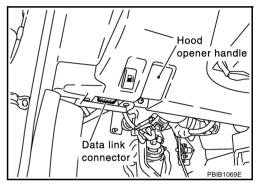
Touch "START (NISSAN BASED VHCL)".

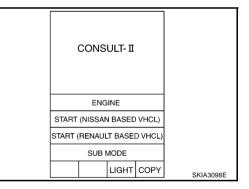
CAUTION:

2.

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

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

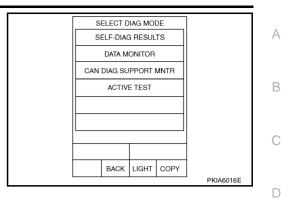




 Touch "IPDM E/R" on "SELECT SYSTEM" screen.
 If "IPDM E/R" is not displayed, refer to <u>GI-39, "CONSULT-II Data</u> <u>Link Connector (DLC) Circuit"</u>.

SELECT SYSTEM
ENGINE
A/T
ABS
AIR BAG
IPDM E/R
ВСМ
BACK LIGHT COPY SKIA8655E
SKIA0035E

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



SELF-DIAG RESULTS

Operation Procedure

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

Display Item List

Display Items	CONSULT-II	Malfunction detecting condition		ME	Possible causes	
Display items	display code			CRNT PAST		
NO DTC IS DETECTED.FURTHER TESTING MAY BE REQUIRED.	-	-	-	-	-	
CAN COMM CIRC	U1000	 If CAN communication reception/transmission data has a malfunction, or if any of the control units malfunction, data reception/transmission cannot be confirmed. When the data in CAN communication is not received before the specified time 	×	×	Any of or several items below have errors. • TRANSMIT DIAG • ECM • BCM/SEC	

NOTE:

The details for display of the period are as follows:

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

PG

Μ

J

F

DATA MONITOR

Operation Procedure

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

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

3. Touch "START".

4. Touch the required monitoring item on "SELECTION FROM MENU". In "ALL SIGNALS", all items are monitored. In "MAIN SIGNALS", predetermined items are monitored.

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

All Items, Main Items, Select Item Menu

	CONSULT-II screen display		Moni	tor item sele	ction	
Item name		Display or unit	ALL SIGNALS	MAIN SIGNALS	SELECT FROM MENU	Description
Motor fan request	MOTOR FAN REQ	1/2/3/4	×	×	×	Signal status input from ECM
Compressor request	AC COMP REQ	ON/OFF	×	×	×	Signal status input from ECM
Tail & clear request	TAIL&CLR REQ	ON/OFF	×	×	×	Signal status input from BCM
H/L LO request	HL LO REQ	ON/OFF	×	×	×	Signal status input from BCM
H/L HI request	HL HI REQ	ON/OFF	×	×	×	Signal status input from BCM
Front fog request NOTE	FR FOG REQ	ON/OFF	×	×	×	Signal status input from BCM
Head lamp washer request	HL WASHER REQ	ON/OFF	×		×	Signal status input from BCM
Front wiper request	FR WIP REQ	STOP/1LOW/ LOW/HI	×	×	×	Signal status input from BCM
Wiper auto stop	WIP AUTO STOP	ACT P/STOP P	×	×	×	Output status of IPDM E/R
Wiper protection	WIP PROT	OFF/Block	×	×	×	Control status of IPDM E/R
Starter request	ST RLY REQ	ON/OFF	×		×	Status of input signal NOTE
Ignition relay status	IGN RLY	ON/OFF	×	×	×	Ignition relay status monitored with IPDM E/R
Rear window defogger request	RR DEF REQ	ON/OFF	×	×	×	Signal status input from BCM
Oil pressure switch NOTE	OIL P SW	OPEN/CLOSE	×		×	Signal status input in IPDM E/R
Day time 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.
- "FR FOG REQ" and "OIL P SW" items are displayed, but they cannot be monitored.
- Only the vehicle which day time light system is mounted with operates.



ACTIVE TEST

Operation Procedure

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

Test item	CONSULT-II screen display	Description	
Tail lamp output	TAIL LAMP	With a certain ON-OFF operation, the tail lamp relay can be oper- ated.	
Rear window defogger output	REAR DEFOGGER	With a certain ON-OFF operation, the rear window defogger relay can be operated.	
Front wiper (HI, LO) output	FRONT WIPER	With a certain operation (OFF, HI ON, LO ON), the front wiper relay (Lo, Hi) can be operated.	
Cooling fan output	MOTOR FAN	With a certain operation (1,2,3,4), the cooling fan can be operated.	
Headlamp washer	HEAD LAMP WASHER	Push "ON" button, headlamp washer relay operates one second.	
Lamp (HI, LO,FOG ^{NOTE}) out- put	LAMPS	With a certain operation (OFF, HI ON, LO ON, FOG ON^{NOTE}), the lamp relay (Lo, Hi, Fog^{NOTE}) can be operated.	
Horn output	HORN	Push "ON" button, horn relay operates 20ms.	

NOTE:

- The cornering lamp items are displayed, but they cannot be tested.
- The fog lamp items are displayed, but they cannot be tested.

J

Н

А

В

Auto Active Test DESCRIPTION

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

- Rear window defogger
- Front wipers

•

- Tail and parking lamps
- Headlamps (Hi, Lo)
- A/C compressor (magnetic clutch)
- Cooling fan

OPERATION PROCEDURE

1. Close hood front door (passenger side) and lift wiper arms away from windshield (to prevent glass damage by wiper operation).

NOTE:

When auto active test is performed with hood opened, sprinkle water on windshield beforehand.

- 2. Turn ignition switch OFF.
- 3. Turn ignition switch ON and, within 20 seconds, press front door switch (driver side) 10 times. Then turn ignition switch OFF.
- 4. Turn ignition switch ON within 10 seconds after ignition switch OFF.
- 5. When auto active test mode is actuated.
- 6. After a series of operations is repeated three times, auto active test is completed.

NOTE:

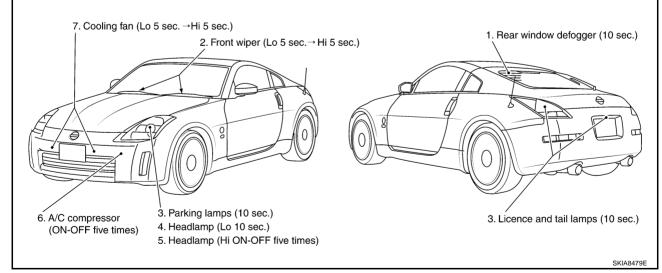
When auto active test mode has to be cancelled halfway, turn ignition switch OFF.

CAUTION:

Be sure to inspect <u>BL-39, "Door Switch Check"</u> when the auto active test cannot be performed.

INSPECTION IN AUTO ACTIVE TEST MODE

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



NOTE:

It will take ten seconds from 3 to 4.

AKS00A2M

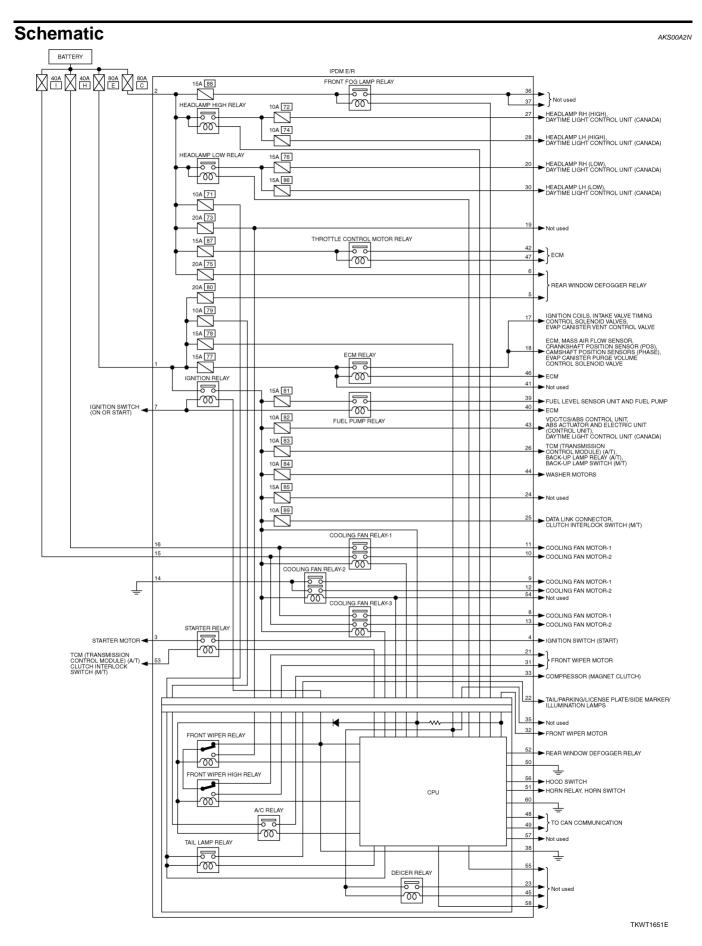
Concept of Auto Active Test

- 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 B using auto active test.

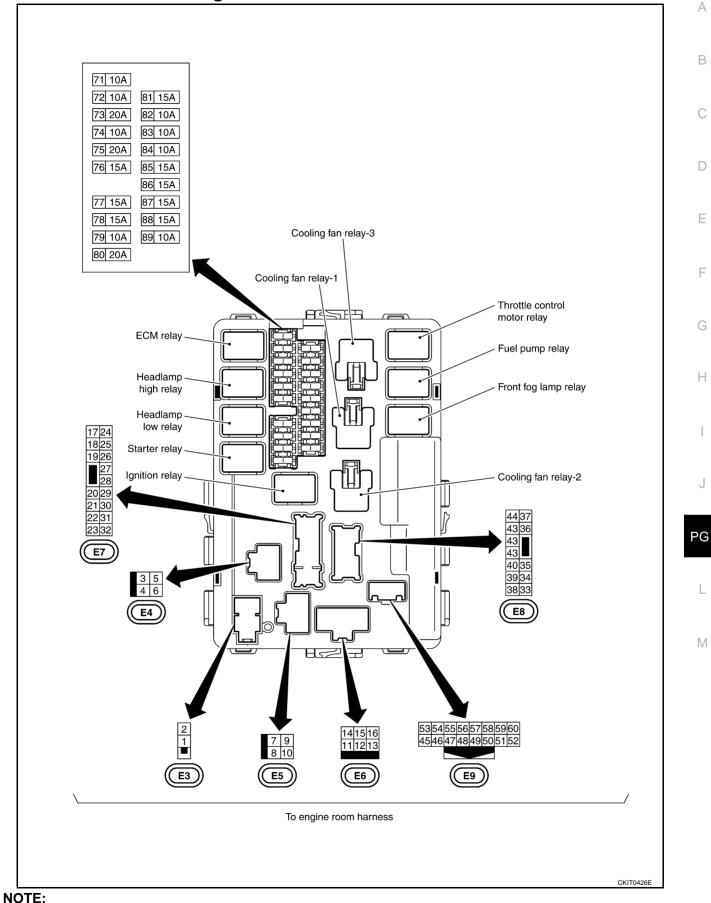
Diagnosis chart in auto active test mode

Symptom	Inspection conte	nts	Possible cause			
Perform auto active		YES	BCM signal input circuit			
Rear window defogger does not operate.	test. Does rear win-		Rear window defogger relay circuit			
	dow defogger oper-	NO	Open circuit of rear window defogger			
	ate?		IPDM E/R malfunction			
		YES	BCM signal input system			
Any of front wipers, tail and parking lamps, front fog lamps, and head lamps (Hi, Lo) do not operate.	Perform auto active test. Does system in question operate?		Lamp/wiper motor malfunction			
			 Lamp/wiper motor ground circuit malfunction 			
		NO	• Harness/connector malfunction between IPDM E/R and system in question			
			 IPDM E/R (integrated relay) malfunction 			
A/C compressor does not operate.	Perform auto active test. Does magnetic clutch operate?	YES	BCM signal input circuit			
			CAN communication signal between BCM and ECM.			
			 CAN communication signal between ECM and IPDM E/R 			
		NO	Magnetic clutch malfunction			
			Harness/connector malfunction between IPDM E/R and magnetic clutch			
			IPDM E/R (integrated relay) malfunction			
Cooling fan does not operate.	Perform auto active test. Does cooling fan operate?	YES	ECM signal input circuit			
			CAN communication signal between ECM and IPDM E/R			
		. Does cooling fan	Cooling fan motor malfunction			
			Harness/connector malfunction between IPDM E/R and cooling fan			
			motor			
			 IPDM E/R (integrated relay) malfunction 			

L



IPDM E/R Terminal Arrangement



Front fog lamp relay does not used.

AKS00A20

IPDM E/R Power/Ground Circuit Inspection

1. CHECK FUSE AND FUSIBLE LINK

AKS00A2F

 Make sure the following fusible links or IPDM E/R fuses are not to
--

Terminal No.	Signal name	Fuse, fusible link No.	
1, 2	Battery power	F/L-C, F/L-E, Fuse No. 71,78	

OK or NG

OK >> GO TO 2.

NG >> Replace fuse or fusible link.

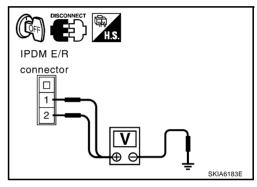
2. CHECK POWER SUPPLY CIRCUIT

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

Battery voltage should exist.

OK or NG

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



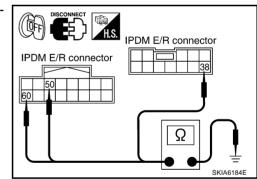
3. CHECK GROUND CIRCUIT

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

Continuity should exist.

OK or NG

- OK >> INSPECTION END
- NG >> Replace ground circuit harness of IPDM E/R.



Inspection With CONSULT-II (Self-Diagnosis)

CAUTION:

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

1. CHECK SELF DIAGNOSTIC RESULT

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

CONSULT-II display	CONSULT-II	TIME		Details of diagnosis result	
CONSULT-II display	display code	CRNT PAST			
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	-	-	-	No malfunction	
CAN COMM CIRC	U1000	×	×	 Any of or several items below have errors. TRANSMIT DIAG ECM BCM/SEC 	
NOTE:					

The Details for Display of the Period Are as Follows:

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

Contents displayed

NO DTC IS DETECTED.FURTHER TESTING MAY BE REQUIRED.>>INSPECTION END

CAN COMM CIRC>>After print-out of the monitor items, refer to <u>LAN-3</u>, "Precautions When Using CON-<u>SULT-II"</u>.

J

Н

AKS00A2Q

А

В

С

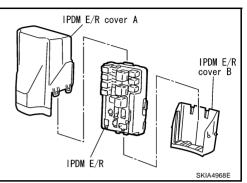
PG

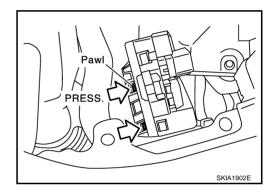
L

Removal and Installation of IPDM E/R REMOVAL

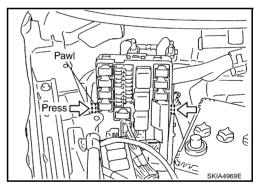
AKS00A2R

- 1. Remove battery. Refer to <u>SC-9, "Removal and Installation"</u> in "Starting and Charging System (SC)" section.
- Remove IPDM E/R cover A. While pressing pawl on backside of IPDM E/R cover B toward vehicle front to unlock, lift up IPDM E/ R.





- 3. While pressing pawls on right and left side of IPDM E/R, remove IPDM E/R cover B from IPDM E/R.
- 4. Remove harness connector from IPDM E/R.



INSTALLATION

• Install in the reverse order of removal.

GROUND

GROUND Ground Distribution MAIN HARNESS

M30		1
Body ground	CON- NECTOR NUMBER	CONNECT TO
•	M5	Fuse block (J/B) (Terminal No.7B) • Accessory relay • Blower relay
•	M8	Data link connector (Terminal No.4)
<u>م</u>	M9	TCS off switch (With TCS Without VDC system)
	M9	VDC off switch (With VDC system)
•	M13	Fuel lid opener switch
•	M14	Soft top switch
•	M19	Combination meter (Terminal No.10)
•	M19	Combination meter (Terminal No.11)
•	M19	Combination meter (Terminal No.12)
•	- M29	Combination switch
•	- M35	Display unit (Terminal No.22)
•	- M35	Display unit (Terminal No.24)
•	- M37	NAVI switch
•	M55	Air bag diagnosis sensor unit
Body harness	- <u>M91</u>	BCM (Body control module)
M12 B1 B31 B29	B11	Seat belt buckle switch (Passenger side)
	- R3	Vanity mirror lamp LH
M69 R1 Room lamp harness	- R4	Auto anti-dazzling inside mirror
Room lamp sub-harness	- <u>R5</u>	Vanity mirror lamp RH
M70 R51 Room lamp sub-namess	- R52	Map lamp (Coupe models)
	R53	Map lamp (Roadster models)

 $\begin{array}{c|c} A & B \\ \hline & B \\ \hline & & \\ \end{array}$ Next page

PFP:00011

AKS0012P

А

В

С

D

Е

F

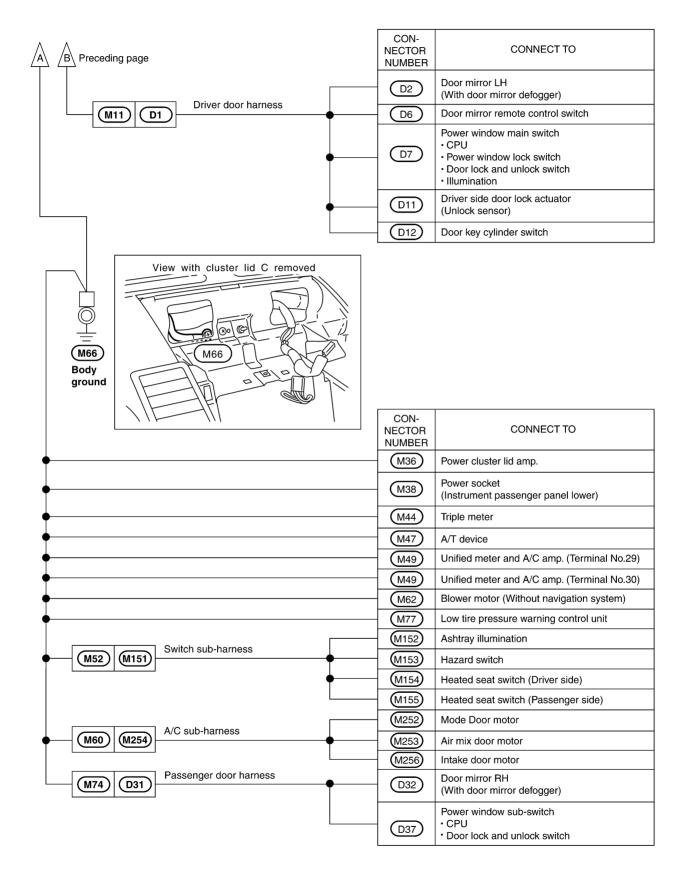
G

Н

J

PG

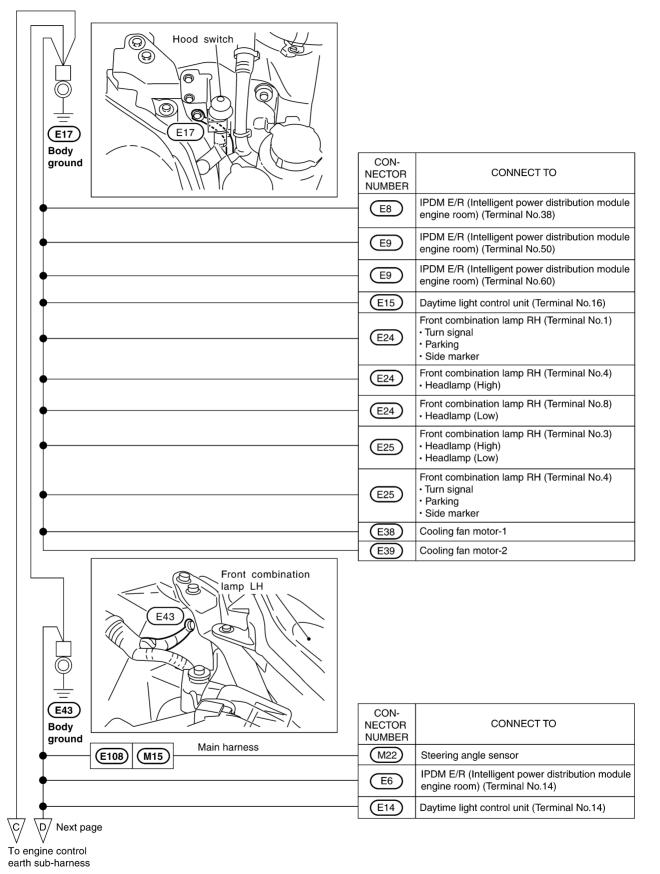
L



CKIT0455E

GROUND

ENGINE ROOM HARNESS



CKIT0456E

А

В

D

F

F

G

Н

J

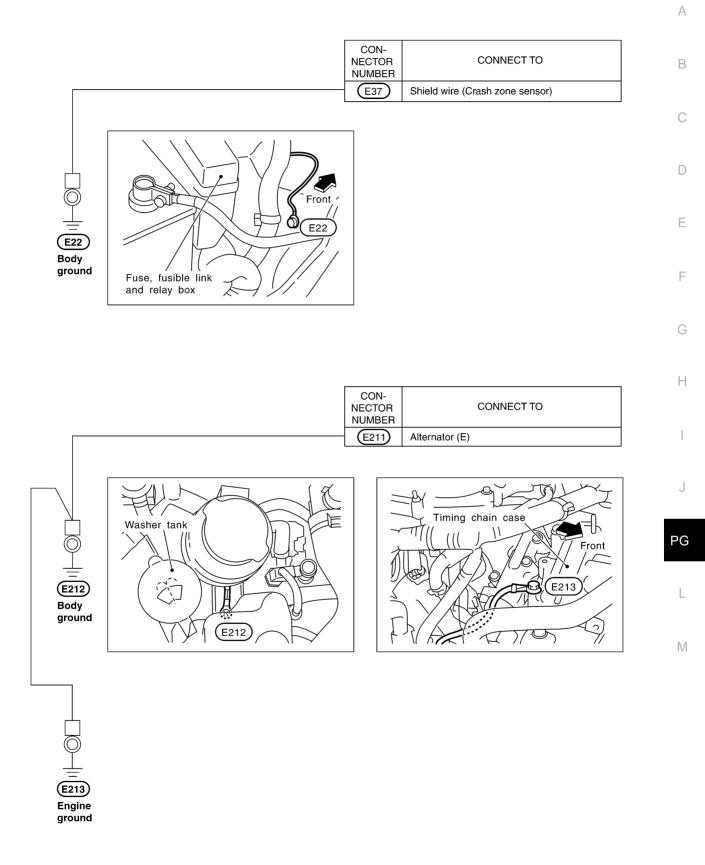
PG

L

Preceding page		
	CON- NECTOR NUMBER	CONNECT TO
•	E23	Hood switch
•	E30	Washer level sensor
•	E33	Horn (Low)
•	E36	Horn (High)
•	E40	Front combination lamp LH (Terminal No.1) • Turn signal • Parking • Side marker
•	E40	Front combination lamp LH (Terminal No.4) • Headlamp (High) (For U.S.A)
•	E40	Front combination lamp LH (Terminal No.8) • Headlamp (Low)
•	E41	Front combination lamp LH (Terminal No.3) • Headlamp (High) (For U.S.A) • Headlamp (Low) (For U.S.A)
•	E41	Front combination lamp LH (Terminal No.4) • Turn signal • Parking • Side marker
•	E44	Brake fluid level switch
•	E51	ABS actuator and electric unit (Terminal No.16)
•	E51	ABS actuator and electric unit (Terminal No.30)
•	E52	Front wiper motor
•	E111	Stop lamp switch (With A/T)
•	E118	VDC/TCS/ABS control unit (Terminal No.28)
	E118	VDC/TCS/ABS control unit (Terminal No.29)

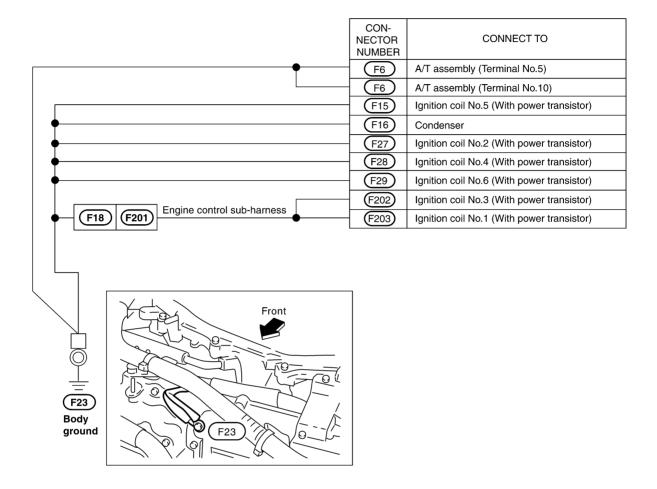
CKIT0469E

GROUND

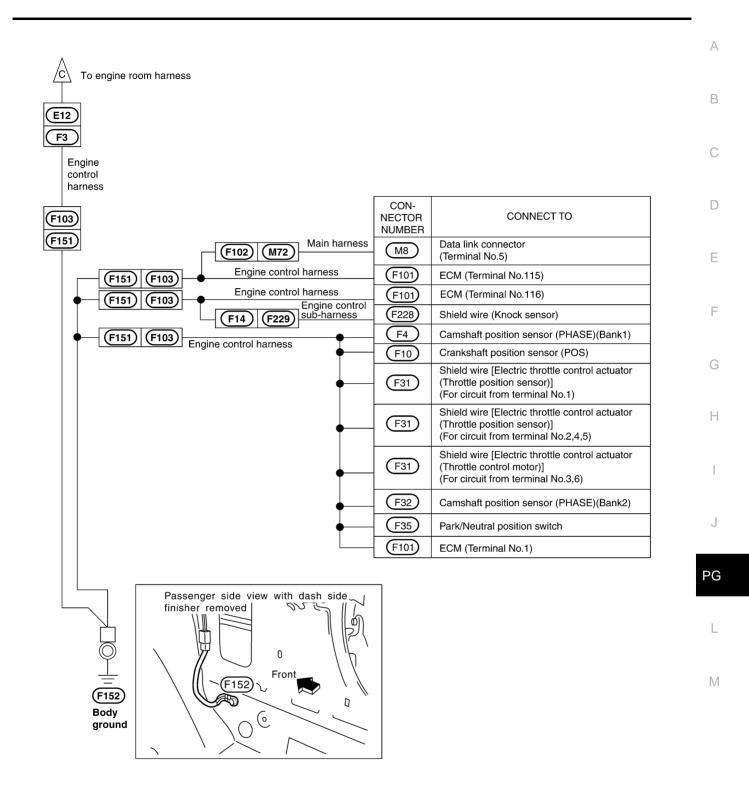


CKIT0170E

ENGINE CONTROL HARNESS

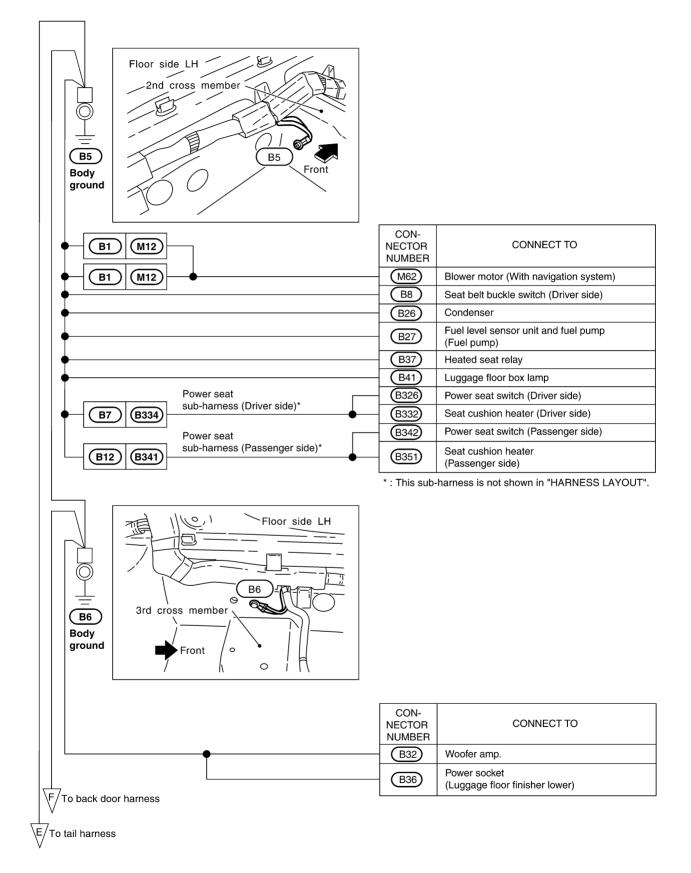


CKIT0171E

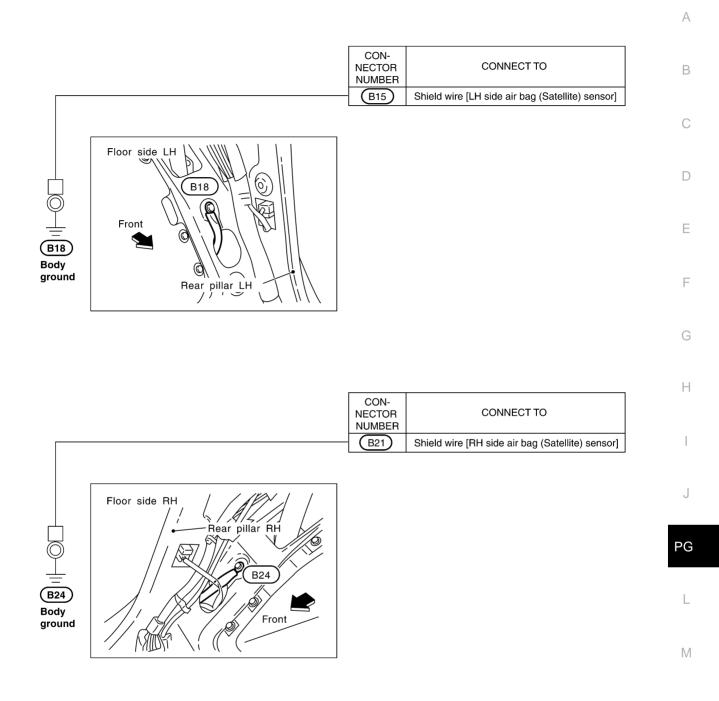


CKIT0458E

BODY HARNESS Coupe Models

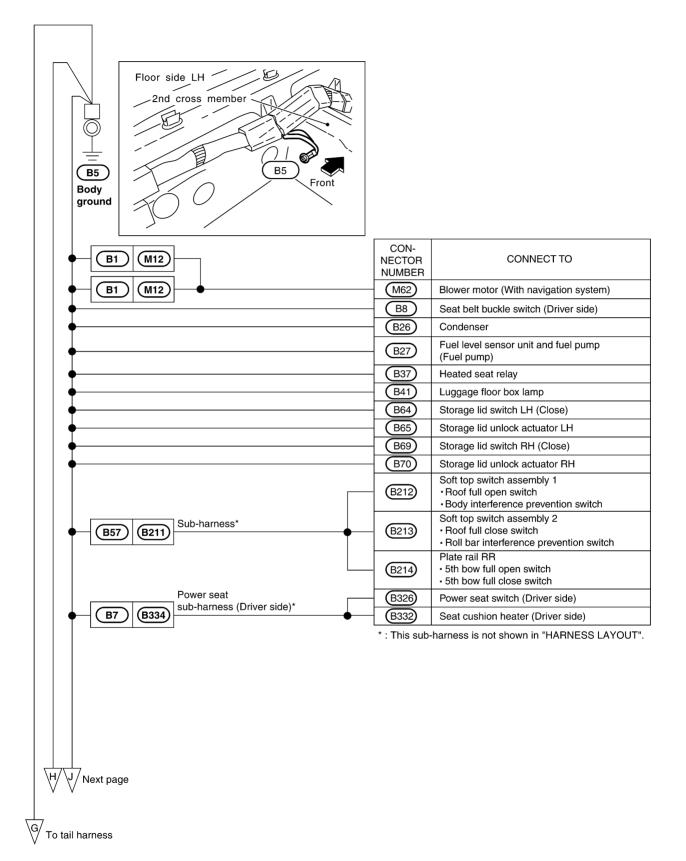


CKIT0459E

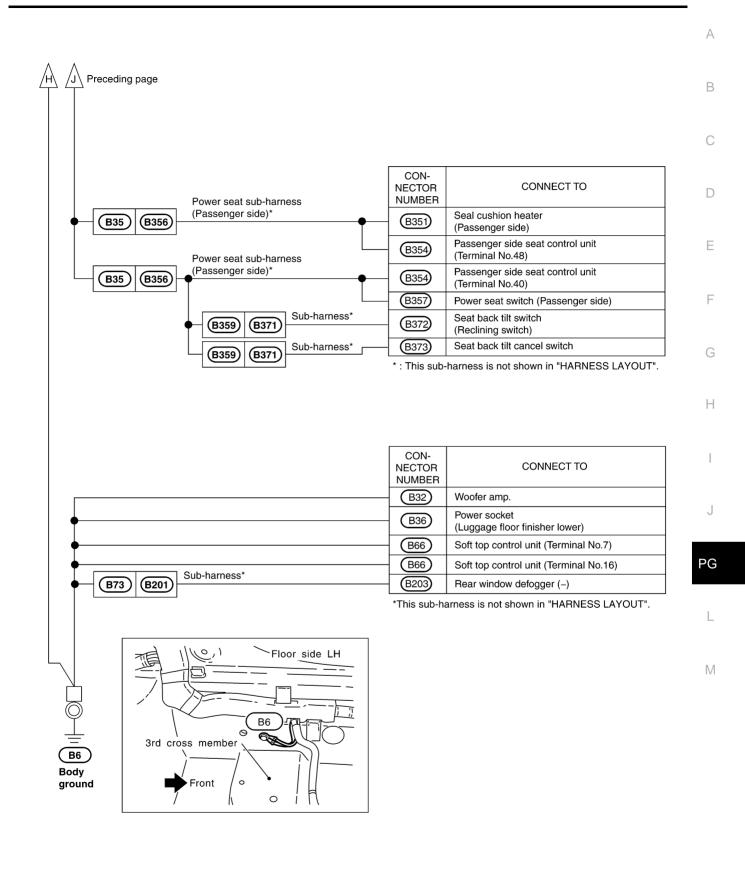


CKIT0174E

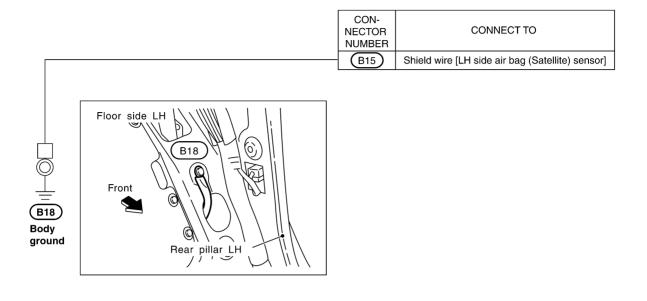
Roadster Models

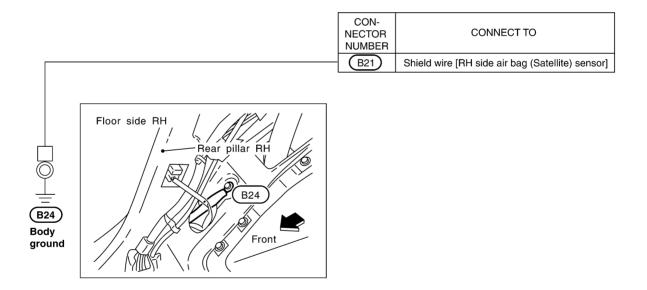


CKIT0460E



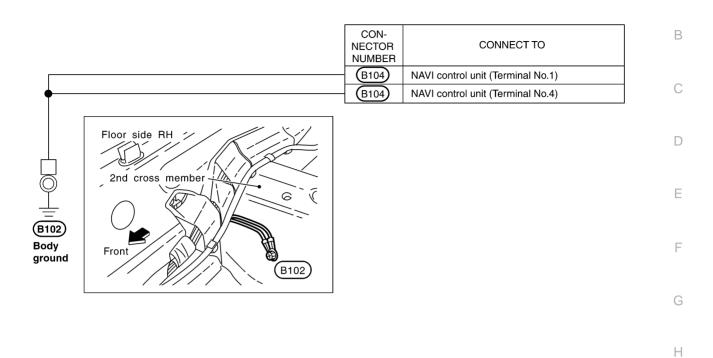
CKIT0470E

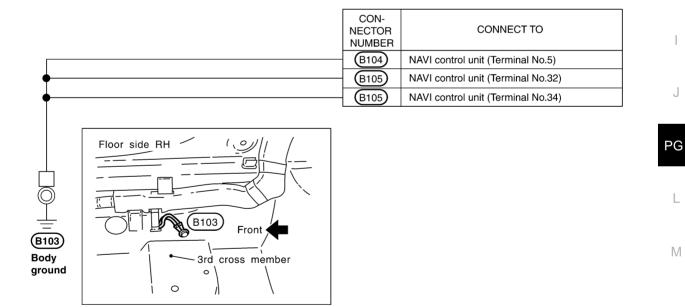




CKIT0174E

BODY NO.2 HARNESS





CKIT0360E

А

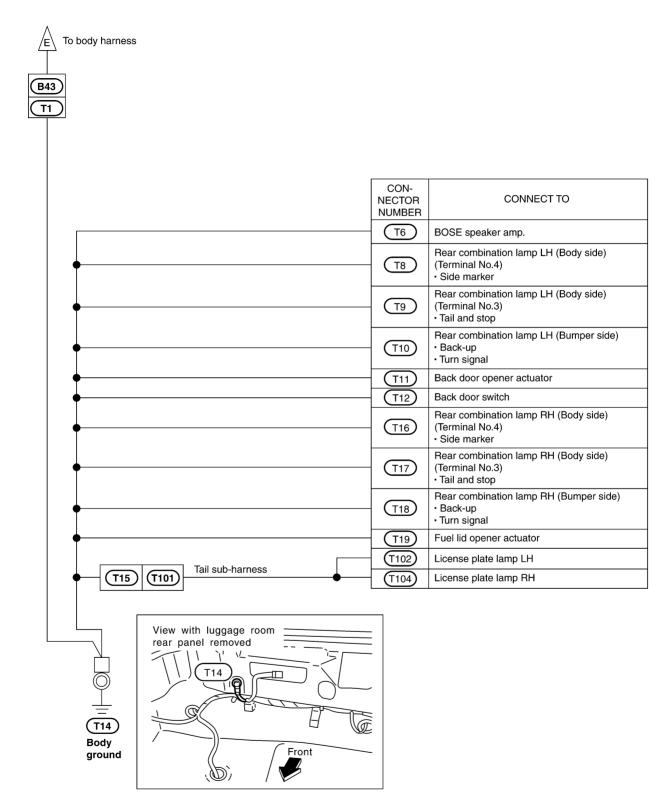
I

J

L

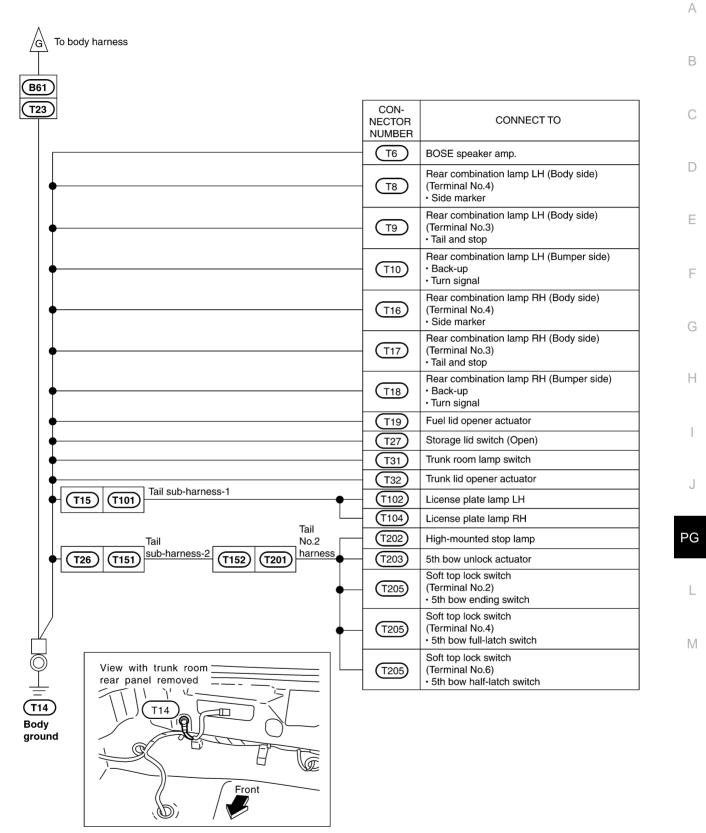
Μ

TAIL HARNESS Coupe Models



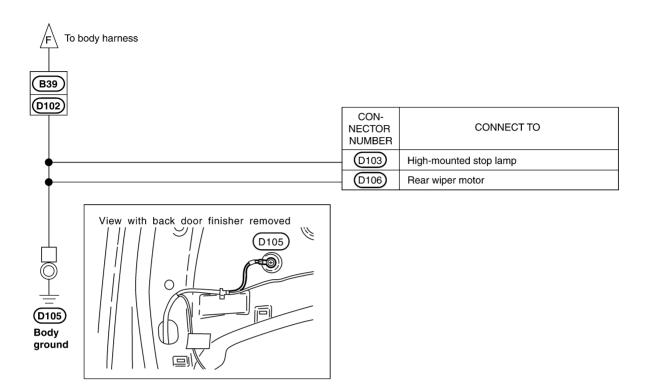
CKIT0462E

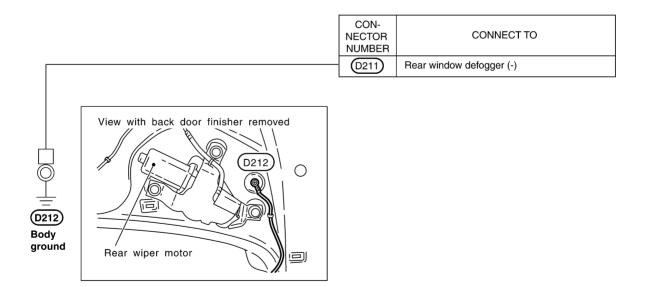
Roadster Models



CKIT0471E

BACK DOOR HARNESS





CKIT0464E

Harness Layout HOW TO READ HARNESS LAYOUT

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

- Main Harness •
- Engine Room Harness (Engine Compartment)
- **Engine Control Harness**
- **Body Harness**
- **Tail Harness**

To use the grid reference

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

CONNECTOR SYMBOL

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

Connector type	Water p	proof type	Standard type		
	Male	Female	Male	Female	
Cavity: Less than 4Relay connector	Ø	D	(
Cavity: From 5 to 8					
Cavity: More than 9		\bigcirc		\Diamond	
Ground terminal etc.	_			e P	

Example: : ASCD ACTUATOR G2 (E1) B/6 Connector color/Cavity D Connector number Grid reference SEL252V F

L

Μ

PG

В

А

F

G

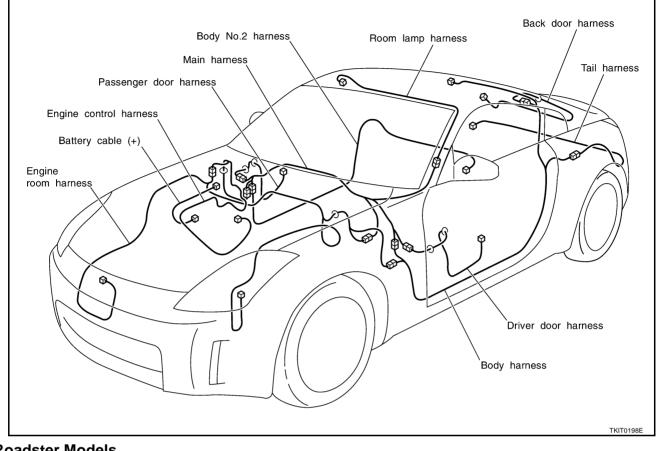
Н

PFP:00011

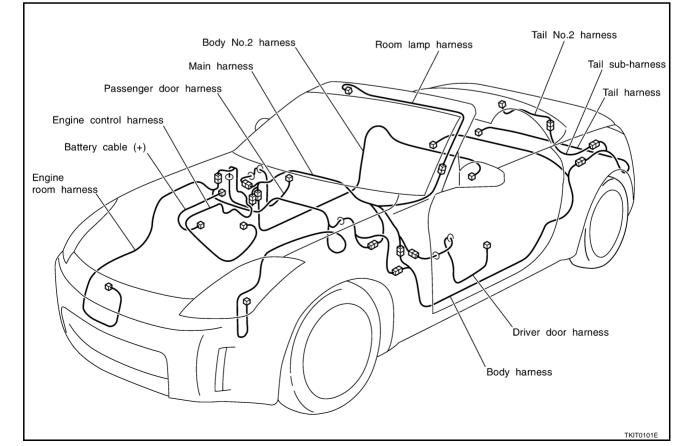
AKS0012Q

CKIT0108E

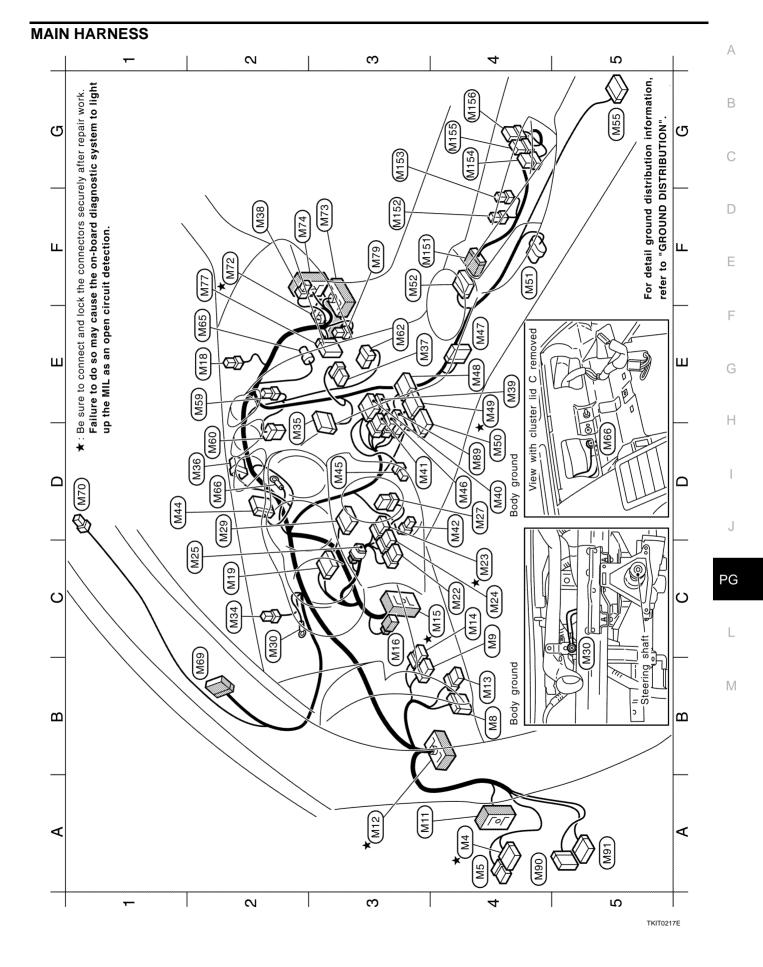
OUTLINE **Coupe Models**

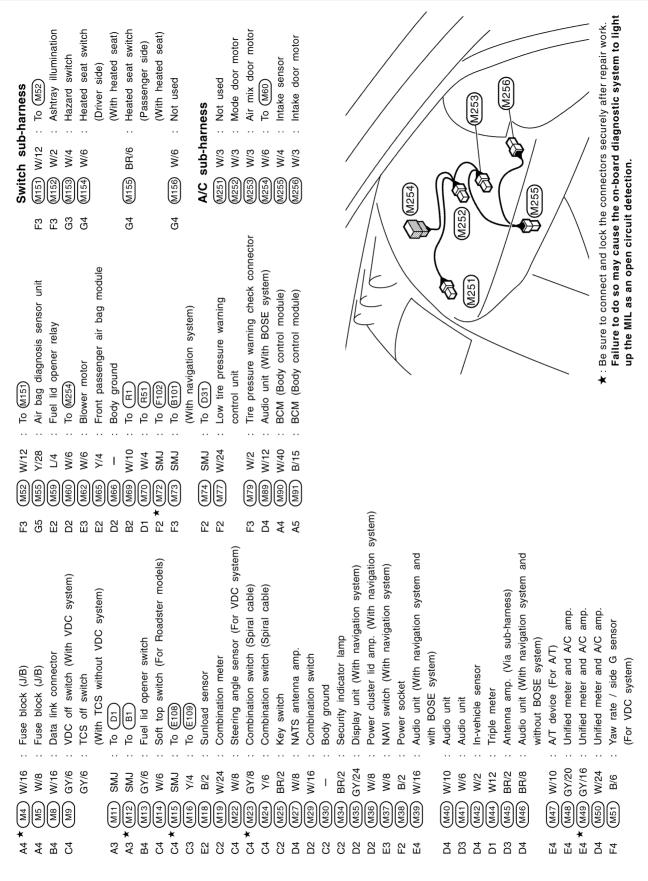


Roadster Models





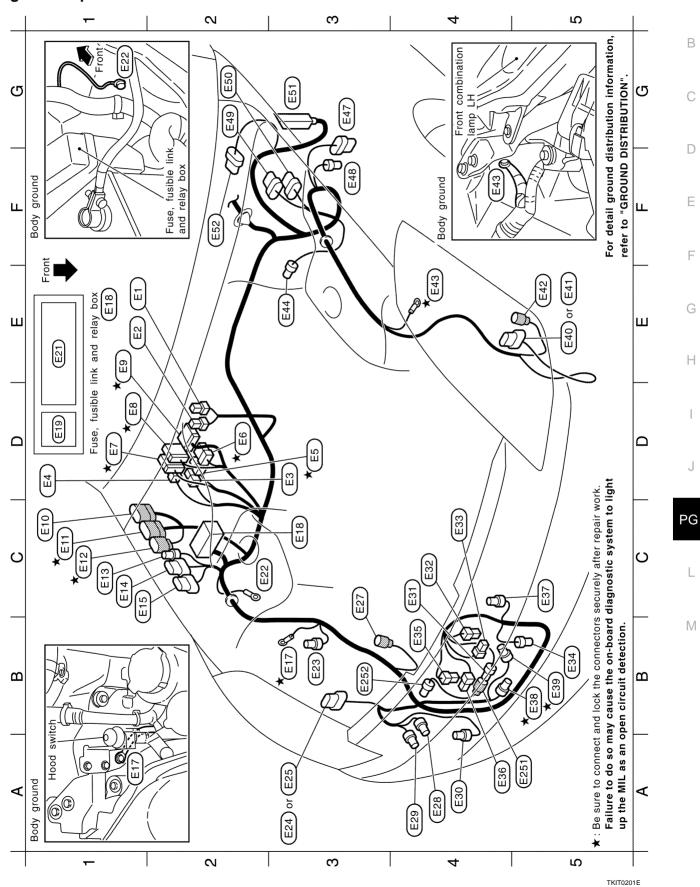




TKIT0218E

HARNESS

ENGINE ROOM HARNESS Engine Compartment



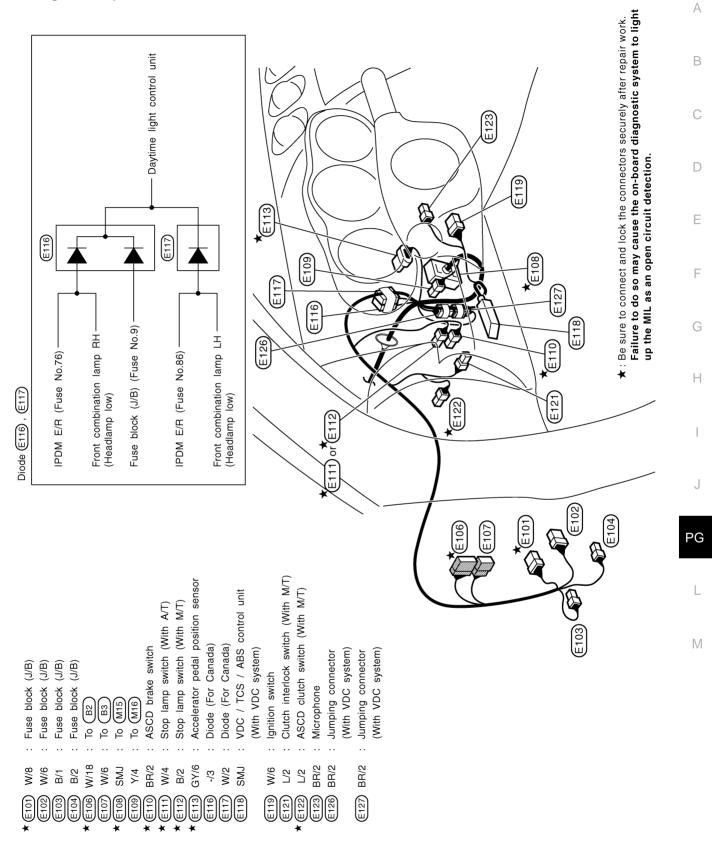
А

A4 E29 GY/2 : Front washer motor A4 E30 BR/2 : Washer level sensor C4 E31 B/3 : To (E251) C4 E32 B/1 : Horn (Low) C4 E33 B/1 : Horn (Low)	B/2 B/1) Y/2 : .		E5 $(E42)$ B/2 : Front wheel sensor LH E4 \star $(E43)$ - : Body ground		F3 (E4B) B/2 : VDC relay box (With VDC system) G2 (E49) GV/8 : VDC relay box (With VDC system)	G2 (E50) GY/8 : VDC relay box (With VDC system) G3 (E51) SMJ : ABS actuator and electric unit (Without VDC system)	F2 (E52) GY/5 : Front wiper motor	Sub-harness A5 E251 B/3 : To E31 B3 E252 B/3 : Refrigerant pressure sensor	★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light up the MIL as an open circuit detection.
E1 (E1) B/2 : Fusible link holder E1 (E2) GY/2 : Fusible link holder D3 (E3) B/2 : IPDM E/R (Intelligent power distribution module engine room) D1 (E4) W/4 : IPDM E/R (Intelligent power distribution module engine room) D3 * (E5) B/4 : IPDM E/R (Intelligent power distribution module engine room)	E6 W/6 : IPDM E/R (Intelligent power distribution module engine E7 GY/16 : IPDM E/R (Intelligent power distribution module engine W/10 · IPDM E/R (Intelligent power distribution module engine	E9 W/16 : IPDM E/R (Intelligent E10 GY/9 : To F1	E12 GY/8 : To (E13 GY/8 : To (E13 GY/4 : Day	E15	*	D1 (E19) L/4 : Back-up lamp relay (With A/T) E1 (E21) - : Fuse and fusible link block	C2 E22 - : Body ground B3 E23 GY/2 : Hood switch	A3 (E24) GY/8 : Front combination lamp RH (With xenon headlamp) A3 (E25) GY/6 : Front combination lamp RH (Without xenon headlamp)	C3 (E27) GY/2 : Front wheel sensor RH A4 (E28) GY/2 : Rear washer motor	

2004.5 350Z

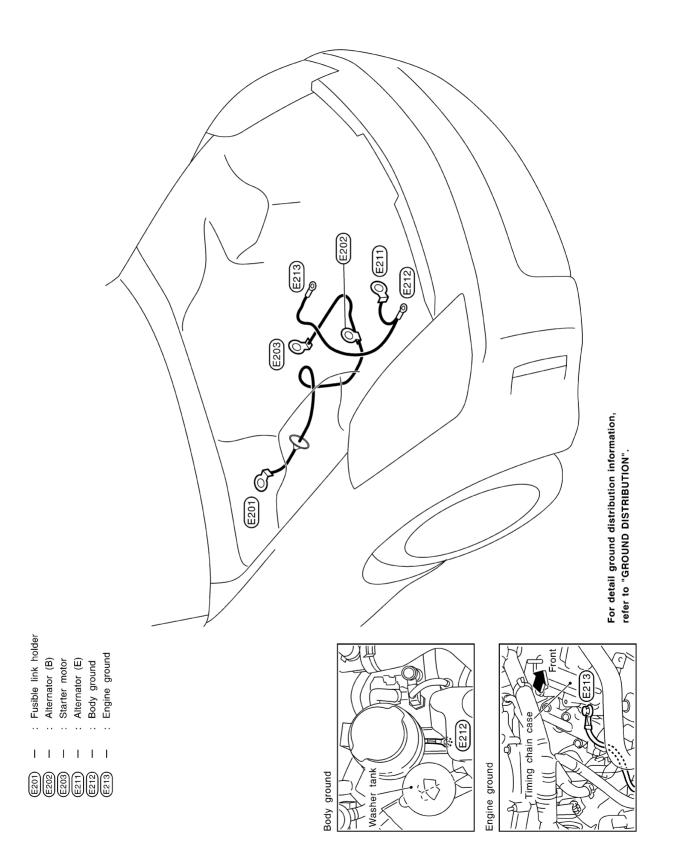
TKIT0202E

Passenger Compartment

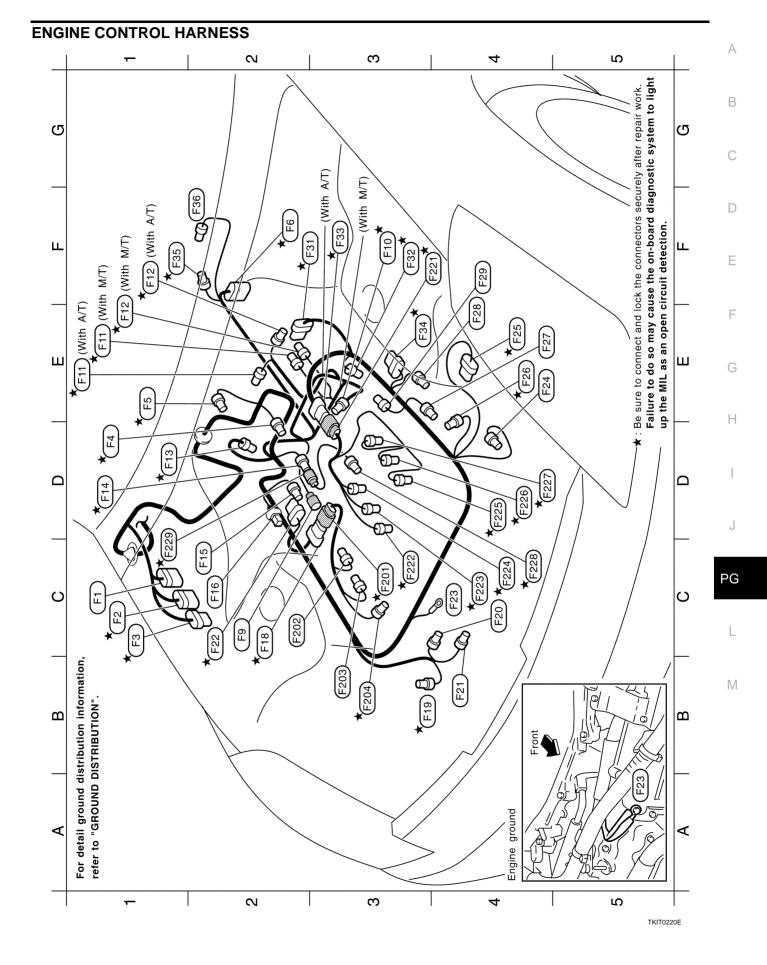


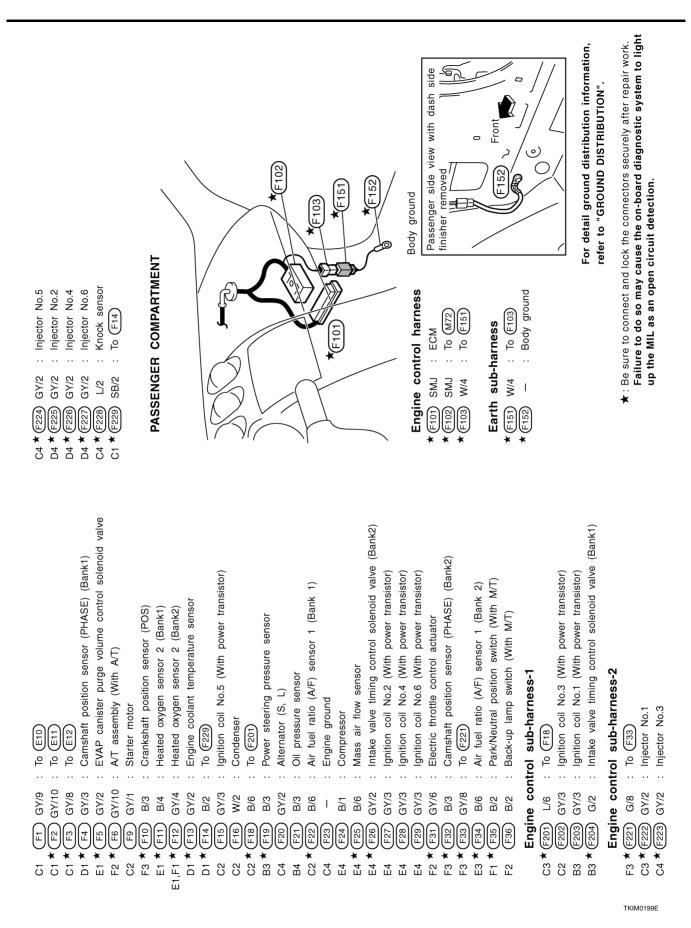
TKIM0198E

Battery Cable



CKIT0202E

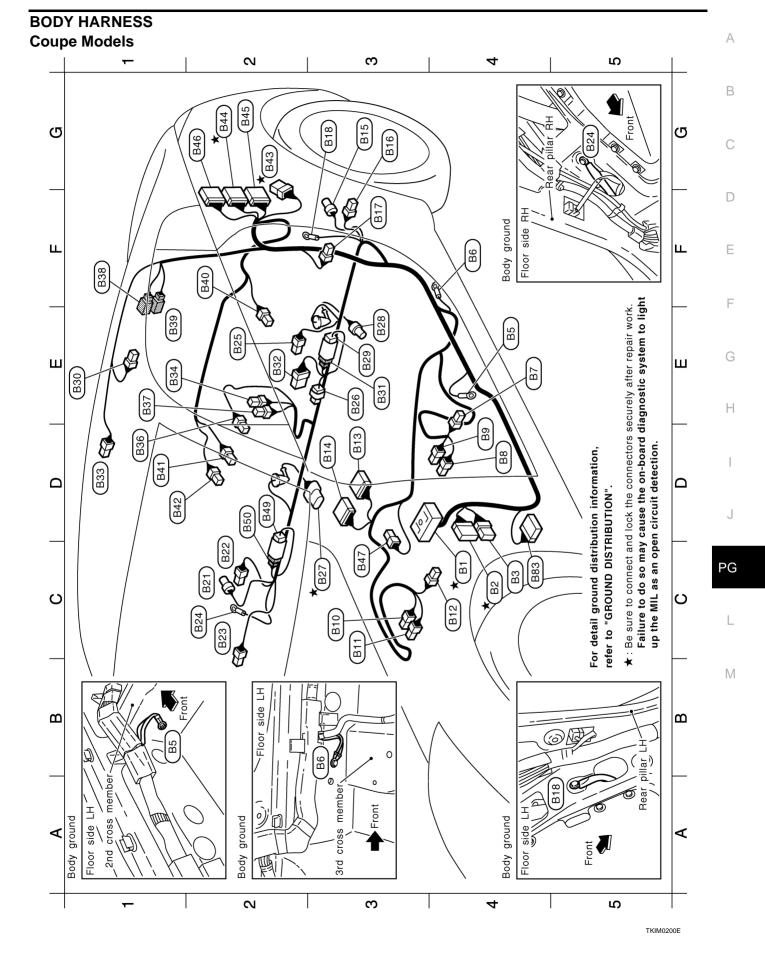


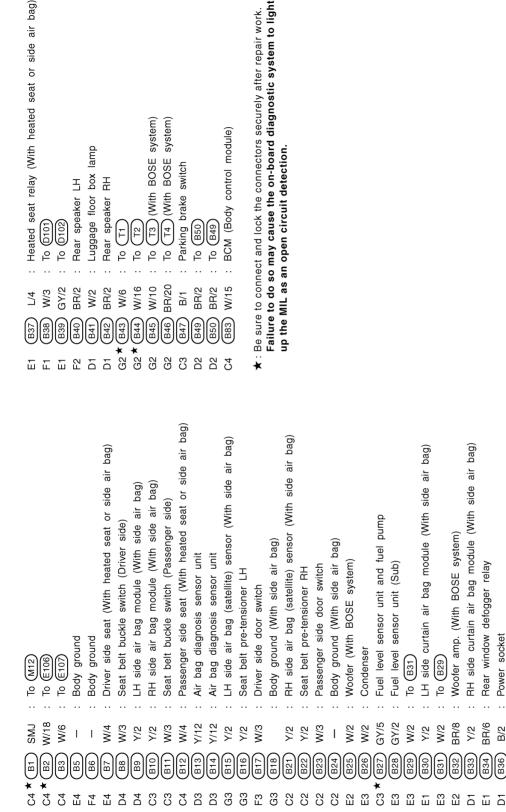


Revision: 2004 December

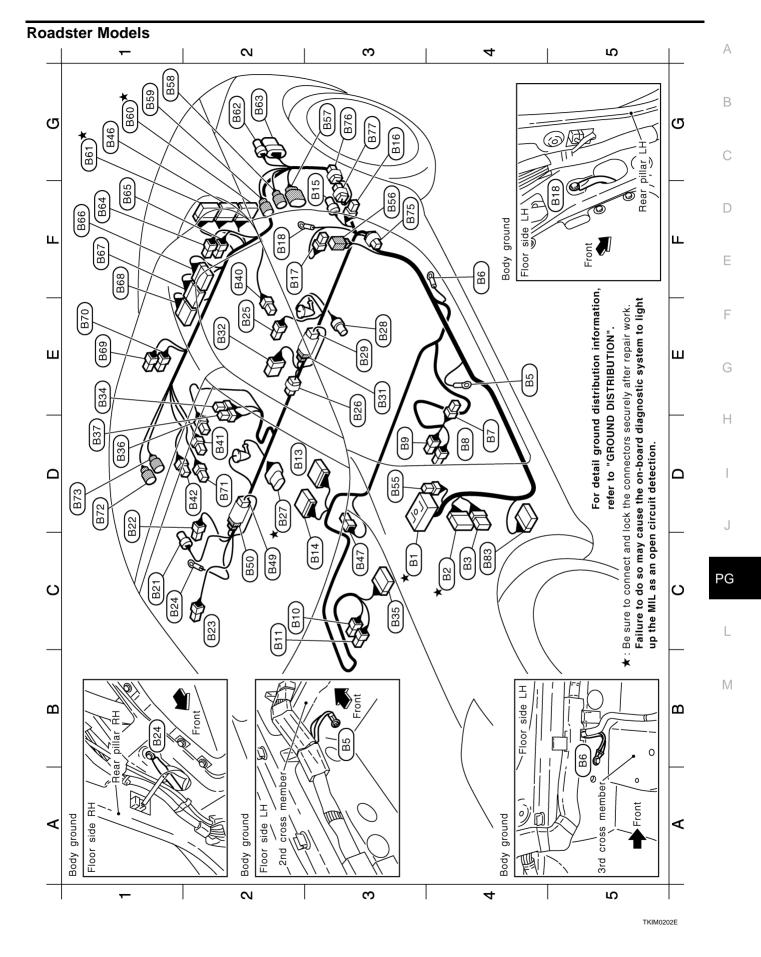
2004.5 350Z

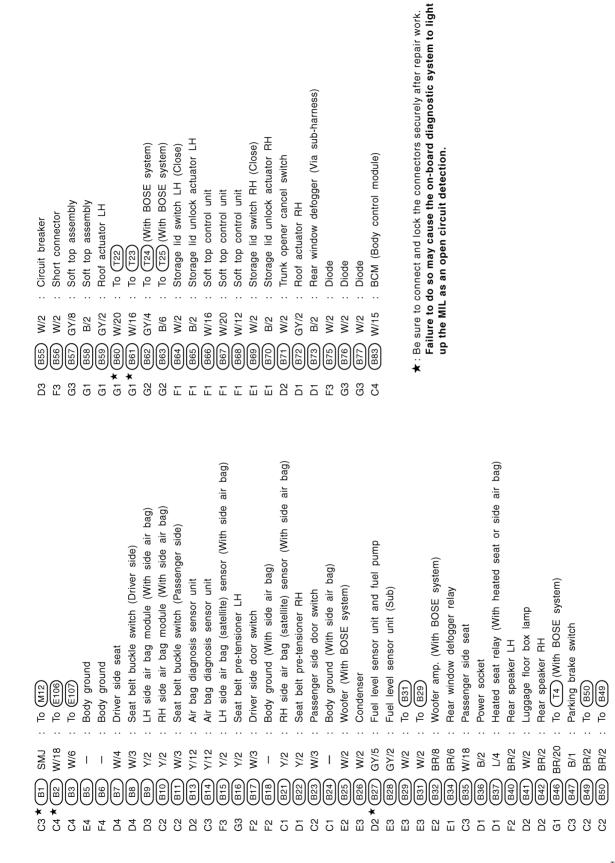
HARNESS

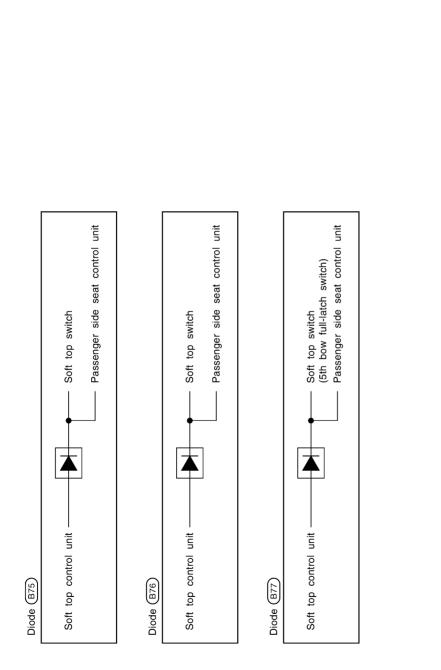




TKIM0201E







TKIT0117E

А

В

С

D

Е

F

G

Н

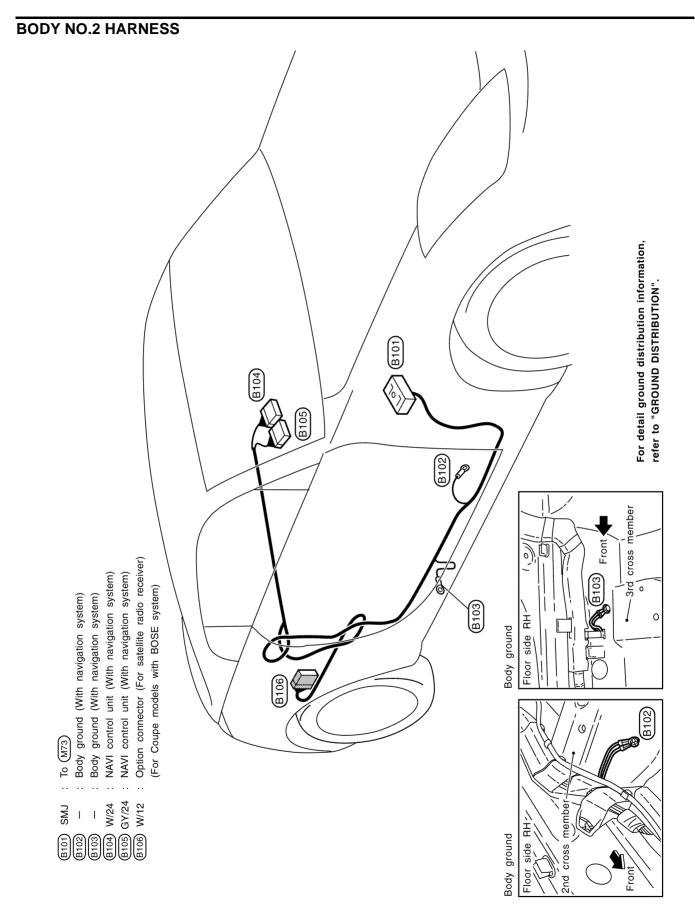
I

J

PG

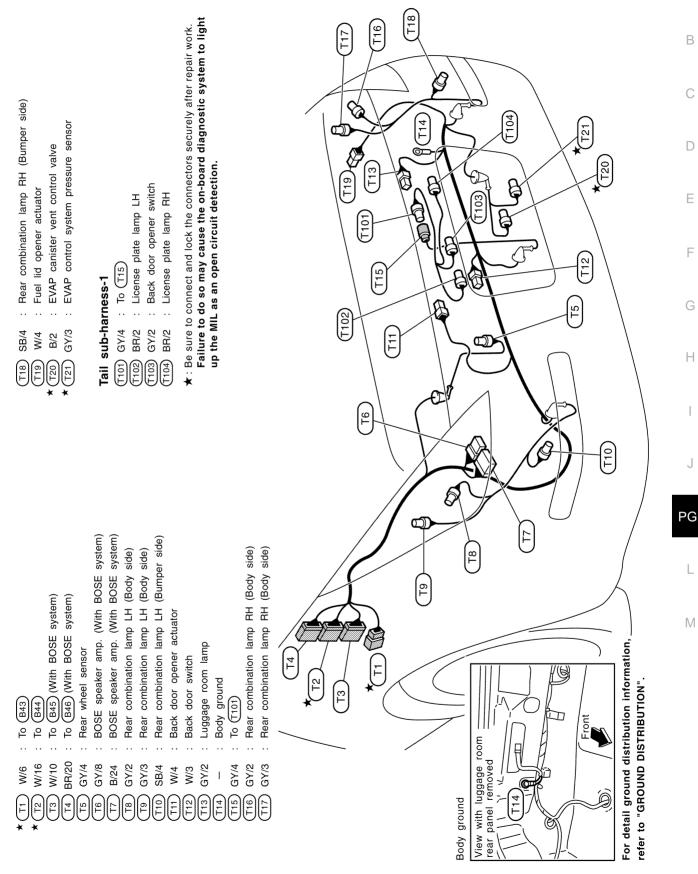
L

M



TKIT0226E

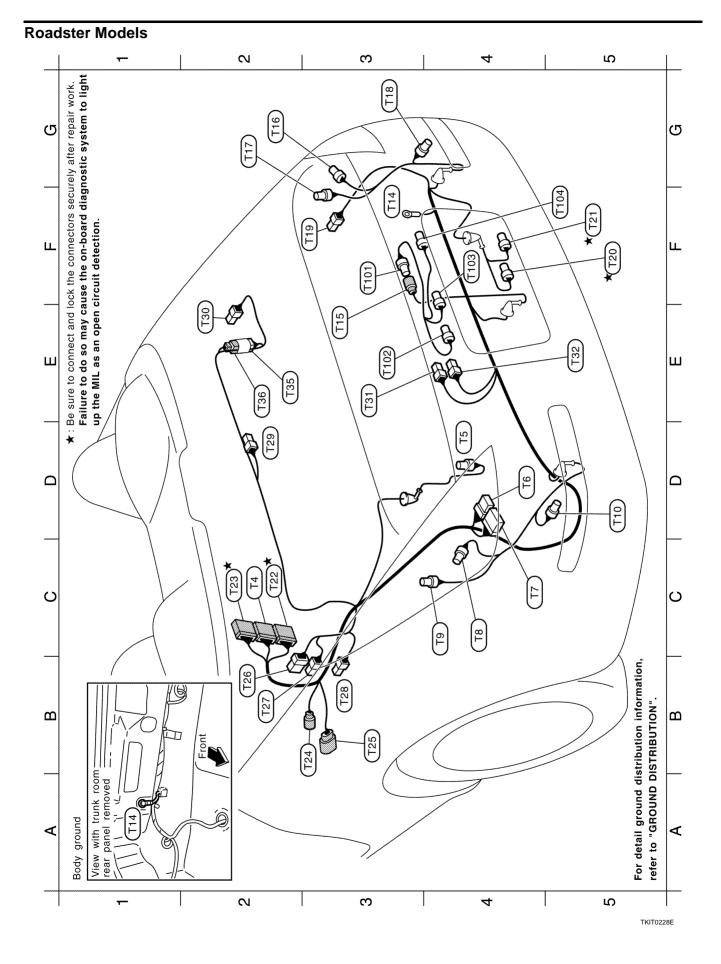
TAIL HARNESS Coupe Models



А

I

J

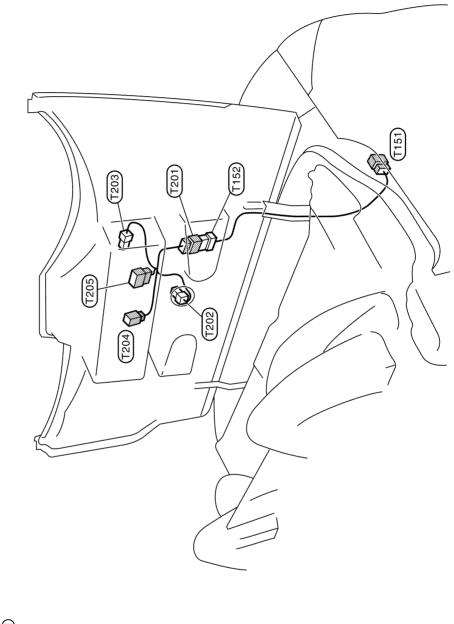


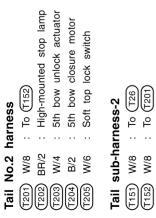
Tail sub-harnes-1 (10) GY/4 To (10) GY/2 Tunk lid opener switch (10) BR/2 Tunk lid opener switch (11) BR/2 Tunk lid opener switch (12) BR/2 Tunk lid opener switch (13) BR/2 Tunk lid opener switch (14) BR/2 State to connect and lock the connectors securely after repair work. Failure to do so may cause the on-board diagnostic system to light Up the MIL as an open circuit detection.	A
diagnostic s	С
witch witch connectors a on-board detection.	D
ess-1 To (Ti5) License plate lamp LH Trunk lid opener switch License plate lamp RH nnect and lock the conn so may cause the on- s an open circuit detec	E
il sub-harness-1 G (4/4 : To (Ti5) BR/2 : License plate lamp LH G (4/2 : Trunk lid opener switch G (2/2 : License plate lamp RH BR/2 : License plate lamp RH BR/2 : License plate lamp RH and lock the connectors Failure to do so may cause the on-boarc up the MIL as an open circuit detection.	F
Tail sub-h Tail sub-h GY/2 GY/2 GY/2 GY/2 BR/2 H H H H H H H H H H H H H H H H H H H	G
υ Ε Ε Ε Ε	1
	J
m) BOSE system) BOSE system) (Body side) (Bumper side) (Bumper side) (Bumper side) (Bumper side) (m) m)	PG
To (B46) (With BOSE system) Rear wheel sensor BOSE speaker amp. (With BOSE system) BOSE speaker amp. (With BOSE system) BOSE speaker amp. (With BOSE system) Rear combination lamp LH (Body side) Rear combination lamp LH (Bumper side) Body ground To (TiO) Rear combination lamp RH (Body side) Rear combination lamp RH (Body side) Rear combination lamp RH (Bumper side) Fuel lid opener actuator To (B60) To (B60) To (B60) To (B60) To (B60) To (B60) To (B60) To (B60) To (15) Storage lid switch (Open) Storage lid switch (Open) Storage lid actuator LH Trunk room lamp switch Trunk id opener actuator To (Ti5) Storage lid actuator LH Trunk room lamp switch Trunk id opener actuator To (Ti6) To (Ti6) To (Ti6) To (Ti6)	L
To (E46) (With BOSE system) Hear wheel sensor BOSE speaker amp. (With BOSE BOSE speaker amp. (With BOSE BOSE speaker amp. (With BOSE Rear combination lamp LH (Body Rear combination lamp LH (Bum Body ground To (Tio) Rear combination lamp RH (Bum Fuel lid opener actuator Fuel lid opener actuator To (B60) To (B60) To (B60) To (B60) To (B60) To (B60) To (15) To (Ti5) Storage lid switch (Open) Storage lid actuator LH Trunk room lamp switch Trunk room lamp switch Trunk lid opener actuator To (Ti5) Storage lid actuator CH Trunk room lamp switch Trunk lid opener actuator To (Ti5) To (Ti5)	Μ
To (B46) (With B06 Rear wheel sensor BOSE speaker am BOSE speaker am BOSE speaker am BOSE speaker am Rear combination 1 Rear co	
Tage M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2 M/2	
UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	

PG-65

TKIT0229E

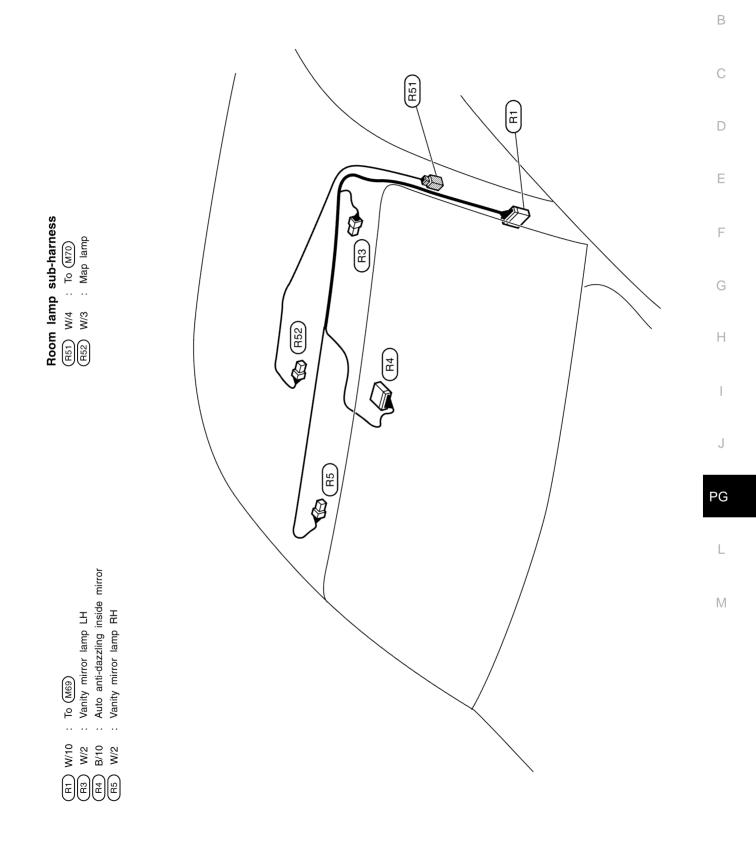
TAIL NO.2 HARNESS Roadster Models





TKIT0113E

ROOM LAMP HARNESS Coupe Models

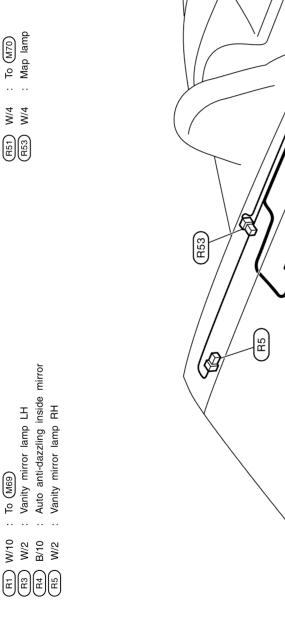


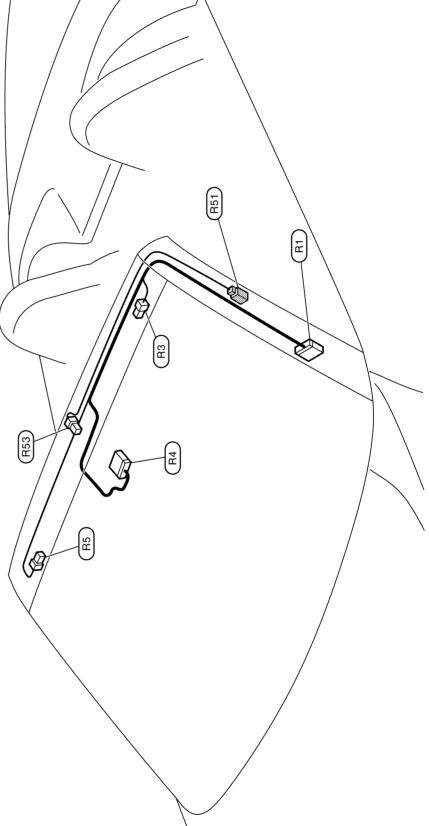
TKIT0209E

А





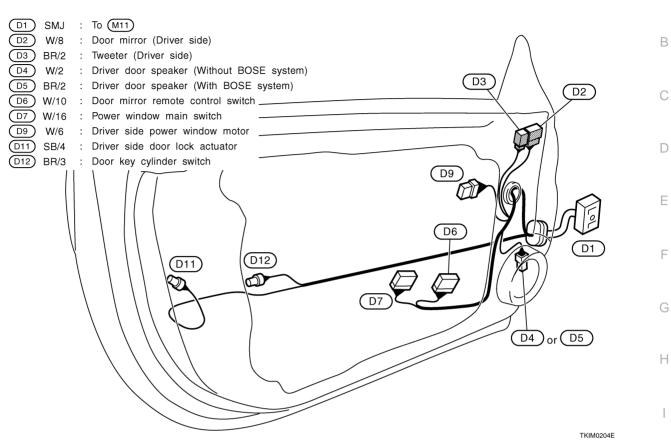




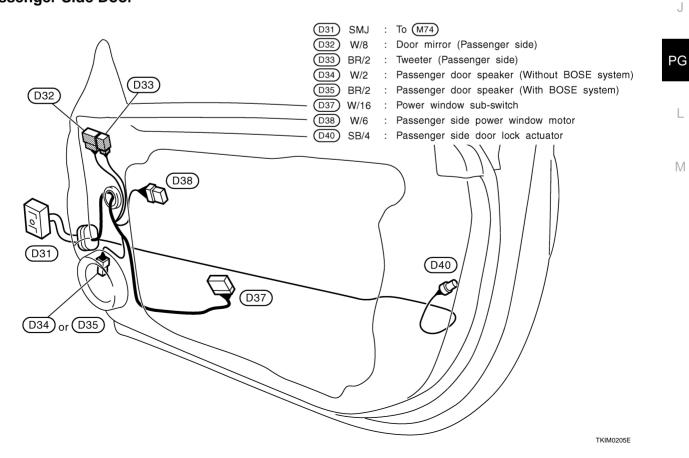
TKIT0210E

: To (M69

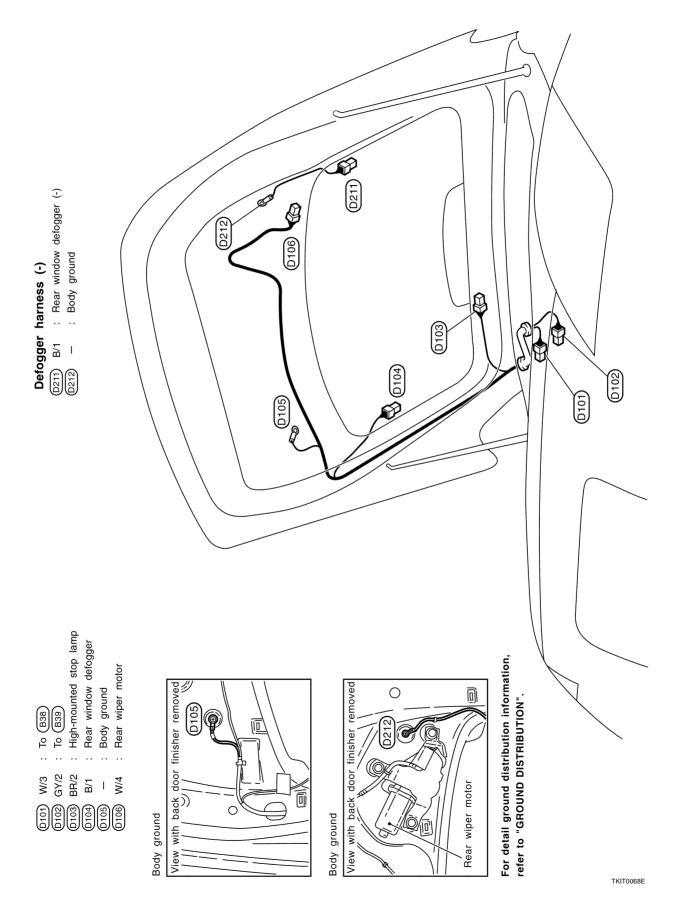
DOOR HARNESS Driver Side Door



Passenger Side Door



А



Wiring Diagram Codes (Cell Codes)

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

Code	Section	Wiring Diagram Name		
3METER	DI	Triple Meter		
ABS	BRC	Anti-Lock Brake System		
A/C	ATC	Air Conditioner		
AF1B1	EC	Air Fuel Ratio Sensor 1 Bank 1		
AF1B2	EC	Air Fuel Ratio Sensor 1 Bank 2		
AF1HB1	EC	Air Fuel Ratio Sensor 1 Heater Bank 1		
AF1HB2	EC	Air Fuel Ratio Sensor 1 Heater Bank 2		
APPS1	EC	Accelerator Pedal Position Sensor		
APPS2	EC	Accelerator Pedal Position Sensor		
APPS3	EC	Accelerator Pedal Position Sensor		
ASC/BS	EC	Automatic Speed Control Device (ASCD) Brake Switch		
ASC/SW	EC	Automatic Speed Control Device (ASCD) Steering Switch		
ASCBOF	EC	Automatic Speed Control Device (ASCD) Brake Switch		
ASCIND	EC	Automatic Speed Control Device (ASCD) Indicator		
AT/IND	DI	A/T Indicator Lamp		
AUDIO	AV	Audio		
BACK/L	LT	Back-Up Lamp		
BRK/SW	EC	Brake Switch		
CAN	AT	CAN Communication Line		
CAN	EC	CAN Communication Line		
CAN	LAN	CAN System		
CHARGE	SC	Charging System		
CHIME	DI	Warning Chime		
CLOCK	DI	Clock		
COMBSW	LT	Combination Switch		
COOL/F	EC	Cooling Fan Control		
DEF	GW	Rear Window Defogger		
D/LOCK	BL	Power Door Lock		
OTRL	LT	Headlamp - With Daytime Light System		
ECM/PW	EC	ECM Power Supply for Back-Up		
ECTS	EC	Engine Coolant Temperature Sensor		
ETC1	EC	Electric Throttle Control Function		
ETC2	EC	Electric Throttle Control Motor Relay		
ETC3	EC	Electric Throttle Control Motor		
F/LID	BL	Fuel Lid Opener		
F/PUMP	EC	Fuel Pump		
F/ROOF	RF	Soft Top		
FTS	AT	A/T Fluid Temperature Sensor Circuit		
FTTS	EC	Fuel Tank Temperature Sensor		
FUELB1	EC	Fuel Injection System Function (Bank 1)		
FUELB2	EC	Fuel Injection System Function (Bank 2)		

AKS00A3P

А

Code	Section	Wiring Diagram Name			
H/LAMP	LT	Headlamp			
HORN	WW	Horn			
HSEAT	SE	Heated Seat			
IATS	EC	Intake Air Temperature Sensor			
IGNSYS	EC	Ignition System			
ILL	LT	Illumination			
I/MIRR	GW	Inside Mirror (Auto Anti-Dazzling Mirror)			
INJECT	EC	Injector			
IVCB1	EC	Intake Valve Timing Control Solenoid Valve Bank 1			
IVCB2	EC	Intake Valve Timing Control Solenoid Valve Bank 2			
KEYLES	BL	Remote Keyless Entry System			
KS	EC	Knock Sensor			
MAFS	EC	Mass Air Flow Sensor			
MAIN	AT	Main Power Supply and Ground Circuit			
MAIN	EC	Main Power Supply and Ground Circuit			
M/ANT	AV	Manual Antenna			
METER	DI	Speedometer, Tachometer, Temp. and Fuel Gauges			
MIL/DL	EC	MIL & Data Link Connectors			
MIRROR	GW	Power Door Mirror			
MMSW	AT	Manual Mode Switch			
NATS	BL	Nissan Anti-Theft System			
NAVI	AV	Navigation System			
NONDTC	AT	Non-Detective Items			
O2H1B1	EC	Heated Oxygen Sensor 1 Heater Bank 1			
O2H1B2	EC	Heated Oxygen Sensor 1 Heater Bank 2			
O2H2B1	EC	Heated Oxygen Sensor 2 Heater Bank 1			
O2H2B2	EC	Heated Oxygen Sensor 2 Heater Bank 2			
O2S1B1	EC	Heated Oxygen Sensor 1 Bank 1			
O2S1B2	EC	Heated Oxygen Sensor 1 Bank 2			
O2S2B1	EC	Heated Oxygen Sensor 2 Bank 1			
O2S2B2	EC	Heated Oxygen Sensor 2 Bank 2			
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve			
PHSB1	EC	Camshaft Position Sensor (PHASE) (Bank 1)			
PHSB2	EC	Camshaft Position Sensor (PHASE) (Bank 2)			
PNP/SW	AT	Park/Neutral Position Switch			
PNP/SW	EC	Park/Neutral Position Switch			
POS	EC	Crankshaft Position Sensor (CKPS) (POS)			
POWER	PG	Power Supply Routing			
PRE/SE	EC	EVAP Control System Pressure Sensor			
P/SCKT	WW	Power Socket			
PS/SEN	EC	Power Steering Pressure Sensor			
ROOM/L	LT	Interior Room Lamp			
RP/SEN	EC	Refrigerant Pressure Sensor			
SEAT	SE	Power Seat			

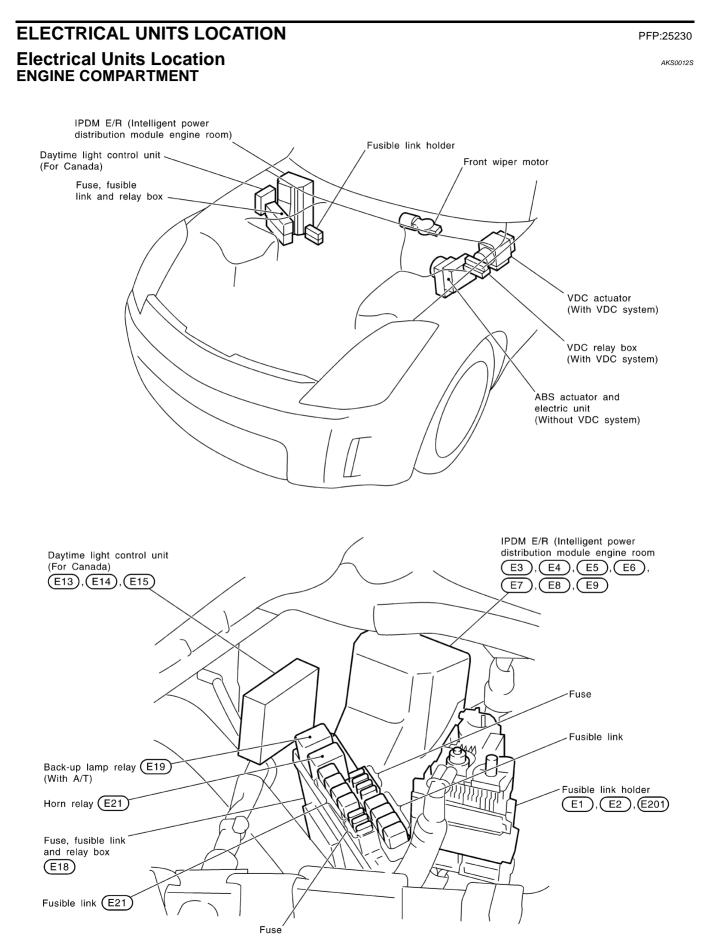
HARNESS

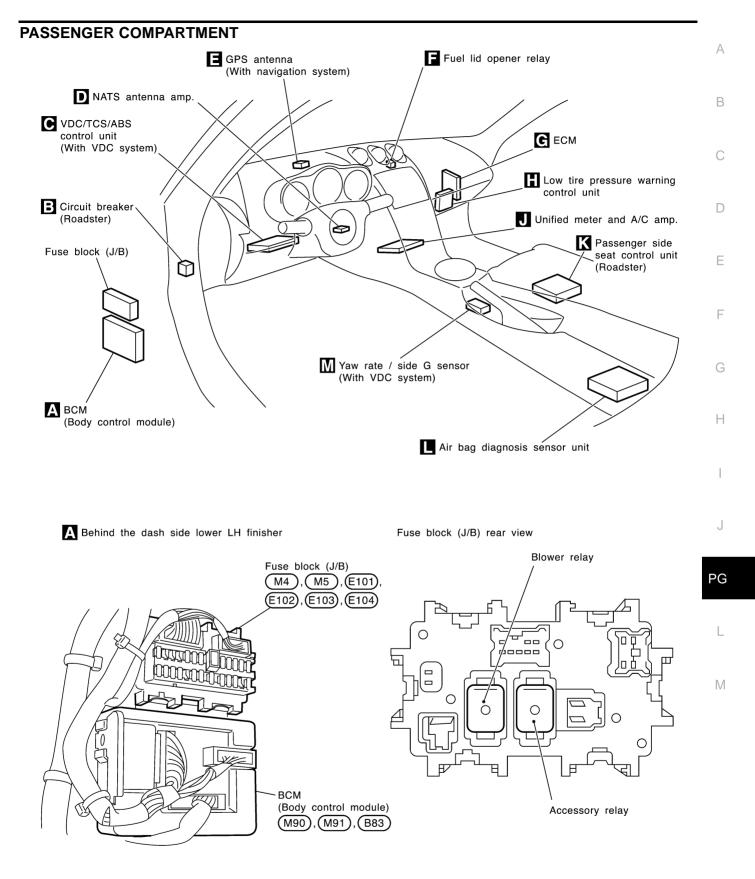
Code	Section	Wiring Diagram Name		
SEN/PW	EC	Sensor Power Supply		
SHIFT	AT	A/T Shift Lock System		
SRS	SRS	Supplemental Restraint System		
START	SC	Starting System		
STOP/L	LT	Stop Lamp		
STSIG	AT	Start Signal Circuit		
TAIL/L	LT	Parking, License and Tail Lamps		
TCS	BRC	Traction Control System		
TLID	BL	Trunk Lid Opener		
TPS1	EC	Throttle Position Sensor (Sensor 1)		
TPS2	EC	Throttle Position Sensor (Sensor 2)		
TPS3	EC	Throttle Position Sensor		
TRANSCV	BL	Homelink Universal Transceiver		
TURN	LT	Turn Signal and Hazard Warning Lamp		
T/WARN	WT	Low Tire Pressure Warning System		
VDC	BRC	Vehicle Dynamics Control System		
VEHSEC	BL	Vehicle Security System		
VENT/V	EC	EVAP Canister Vent Control Valve		
VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)		
WARN	DI	Warning Lamps		
WINDOW	GW	Power Window		
WIPER	WW	Front Wiper and Washer		
WIP/R	WW	Rear Wiper and Washer		

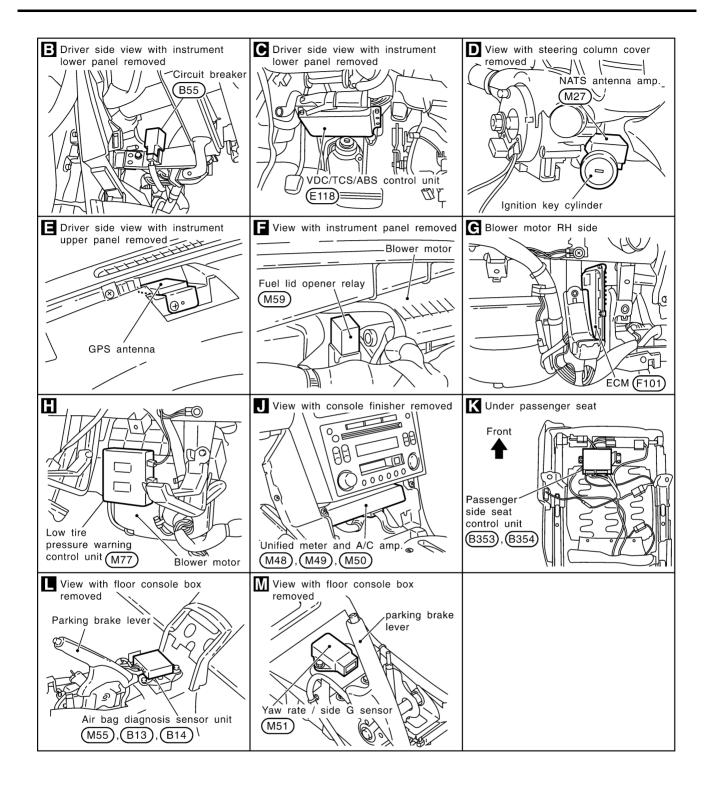
PG

L

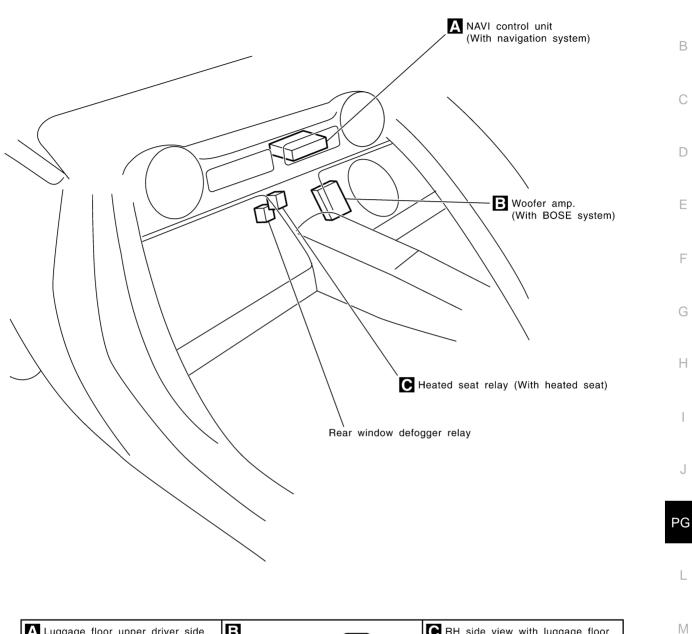
Μ

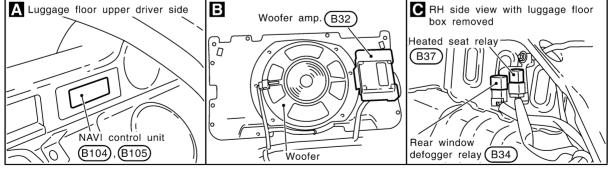






CKIT0436E

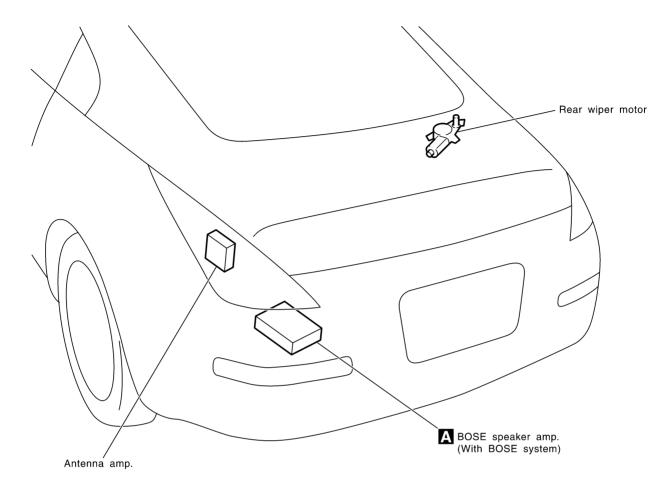


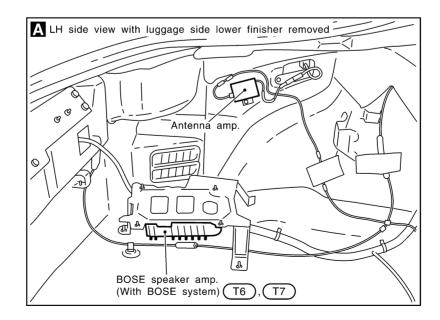


CKIT0349E

А

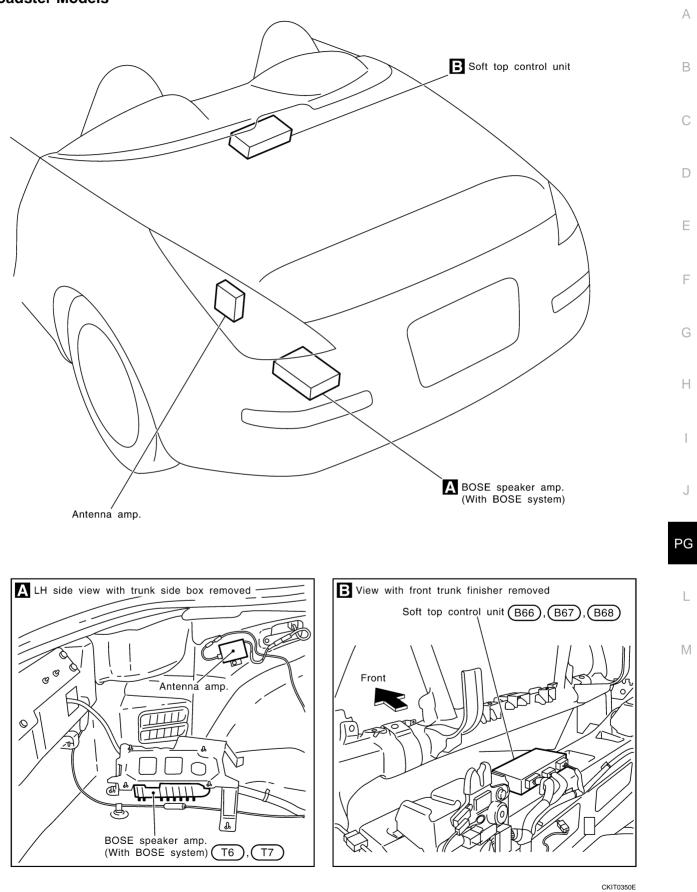
LUGGAGE COMPARTMENT Coupe Models





CKIT0216E

Roadster Models



HARNESS CONNECTOR

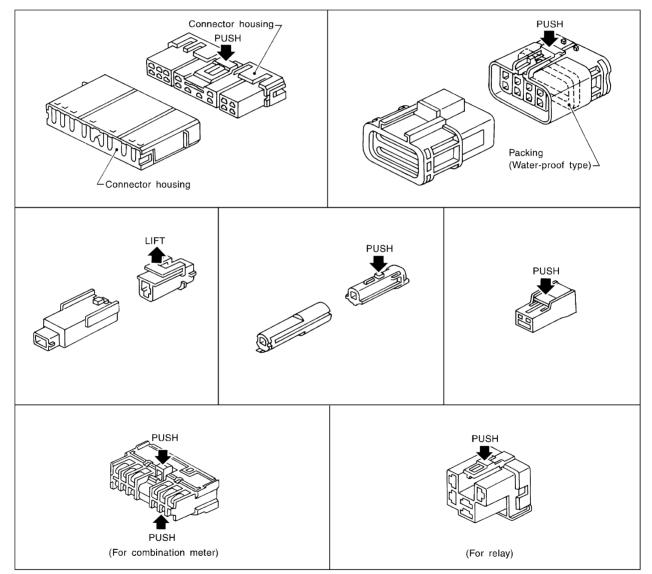
Description HARNESS CONNECTOR (TAB-LOCKING TYPE)

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

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

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

[Example]



PFP:00011

AKS0012T

HARNESS CONNECTOR

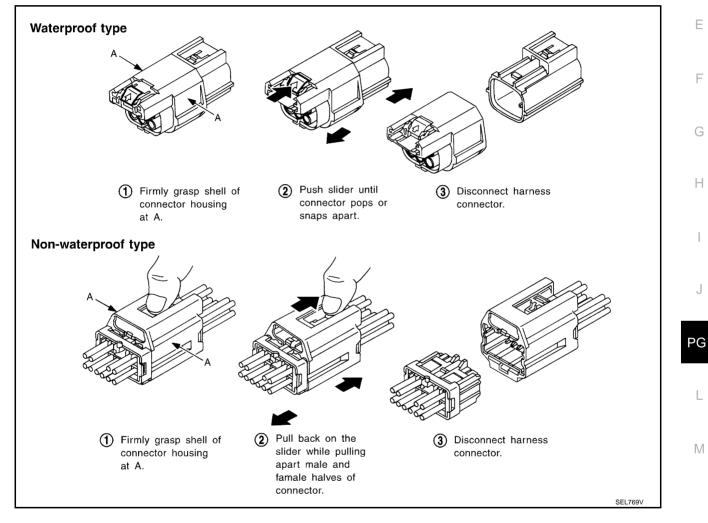
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

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

CAUTION:

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



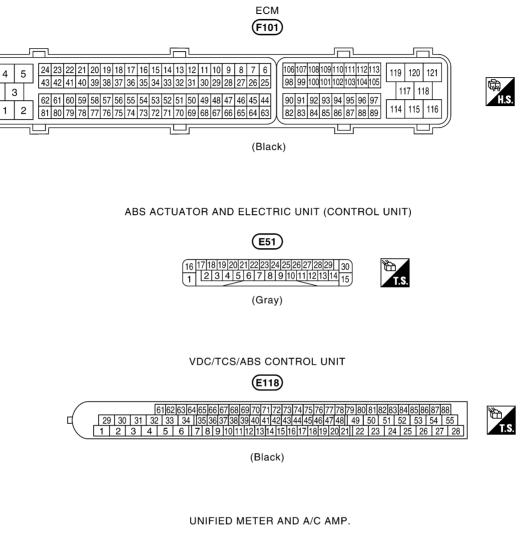


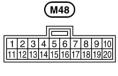
В

С

D

ELECTRICAL UNITS Terminal Arrangement





(Gray)



(Gray)





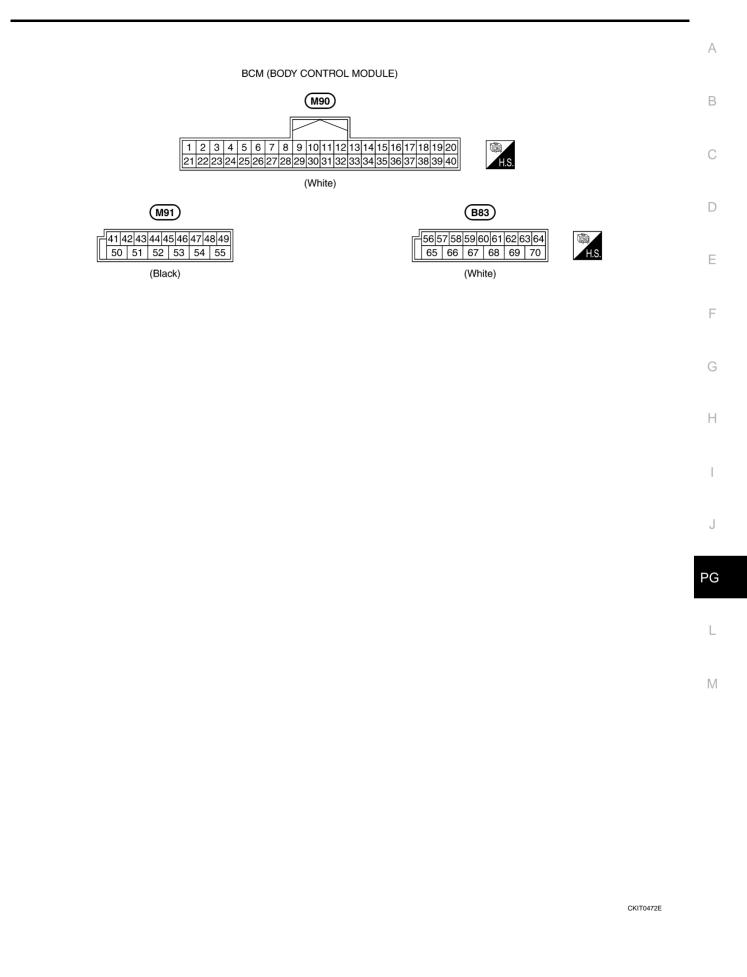
(White)

PFP:00011

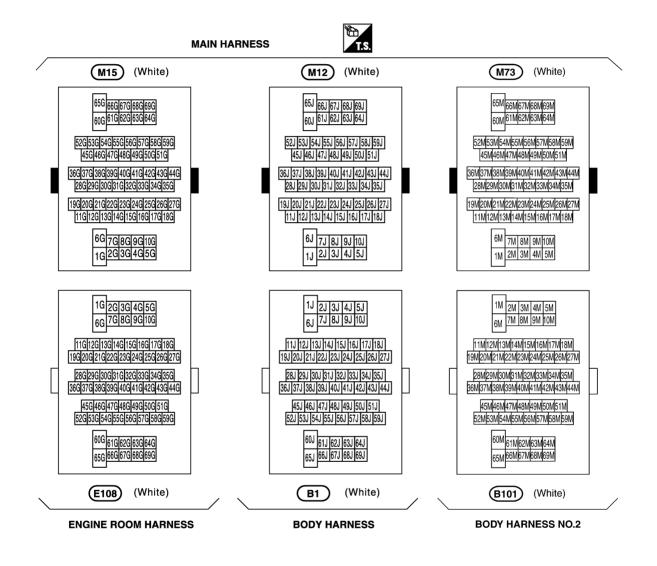
AKS0012V

CKIT0294E

ELECTRICAL UNITS



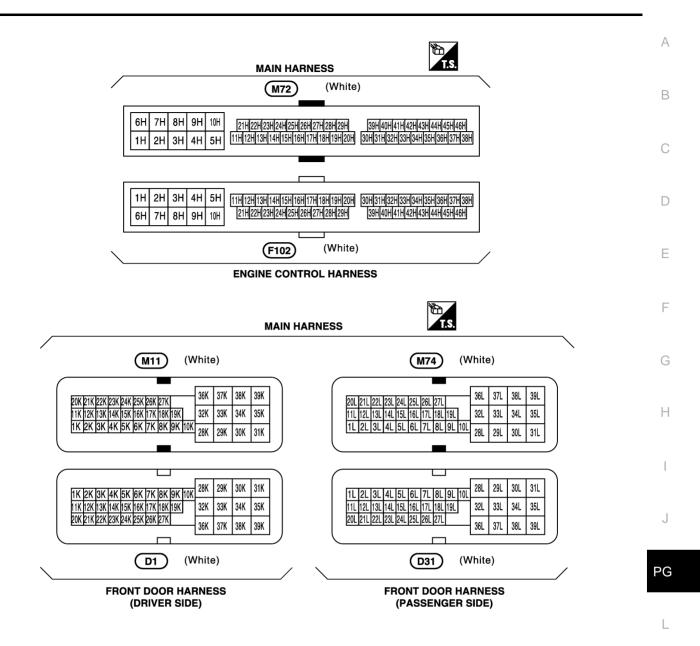
SMJ (SUPER MULTIPLE JUNCTION) Terminal Arrangement



PFP:B4341

AKS0012W

CKIT0184E



М

CKIT0158E

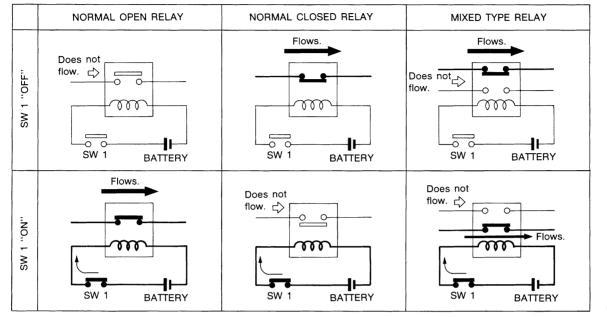
STANDARDIZED RELAY

PFP:00011

AKS0012X

Description NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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



SEL881H

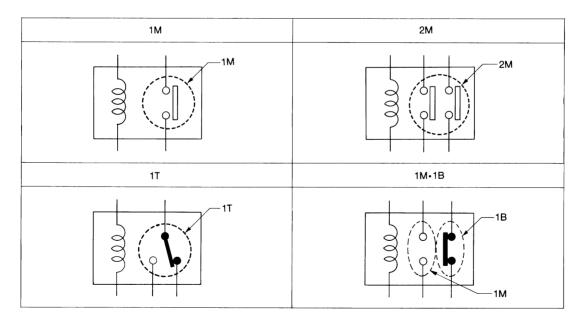
TYPE OF STANDARDIZED RELAYS

1M 1 Make

1T 1 Transfer

2M 2 Make

1M-1B ····· 1 Make 1 Break



SEL882H

STANDARDIZED RELAY

Туре	Outer view	Circuit	Connector symbol and connection	Case color	
1T				BLACK	
2M				BROWN	
1M•1B				GRAY	
1M	a contraction of terminal numbers on the			BLUE	

SEL188W

А

В

С

D

Е

F

G

Н

J

PG

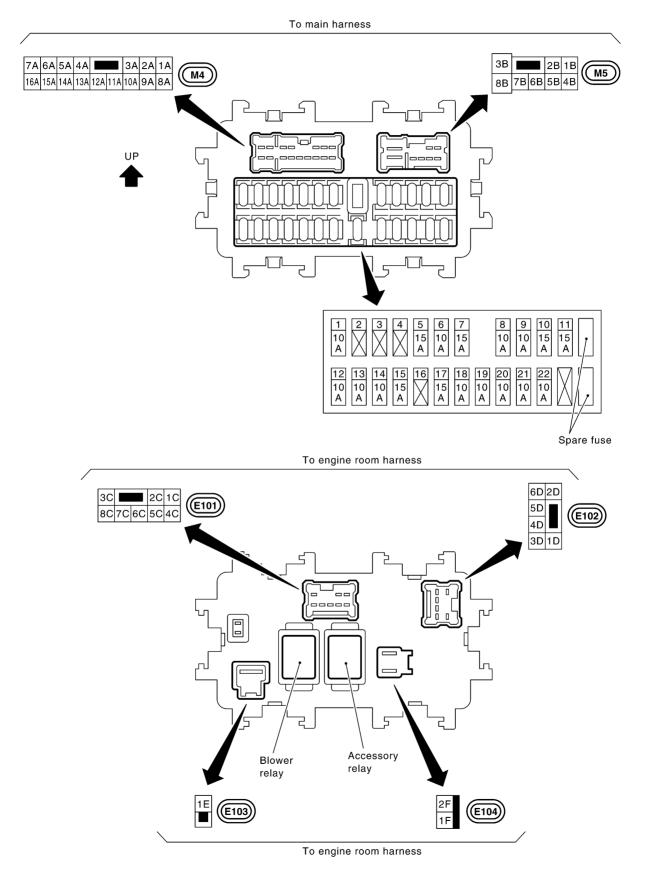
L

Μ

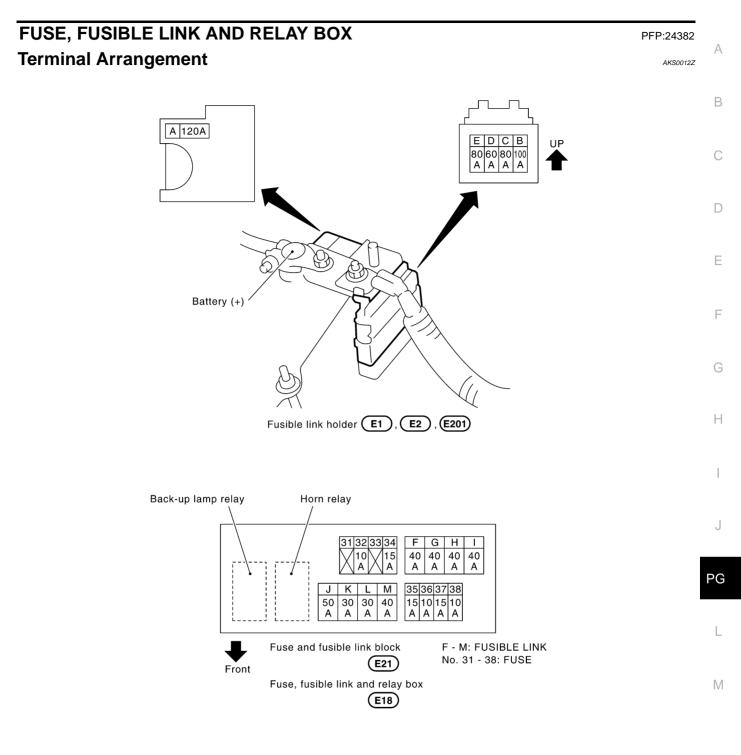
FUSE BLOCK - JUNCTION BOX (J/B) Terminal Arrangement

PFP:24350

AKS0012Y







CKIT0186E