POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

PRECAUTIONS 3 Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN- SIONER" 3 POWER SUPPLY ROUTING CIRCUIT 4 Schematic 4 Wiring Diagram POWER POWER SUPPLY IGNITION SW. IN ANY POSITION 6 ACCESSORY POWER SUPPLY IGNITION SW. IN ANY POSITION 12 IGNITION POWER SUPPLY IGNITION SW. IN ON 13 IGNITION POWER SUPPLY IGNITION SW. IN ON 13 IGNITION POWER SUPPLY IGNITION SW. IN ON AND/OR START 14 IGNITION POWER SUPPLY IGNITION SW. IN ON AND/OR START 14 IGNITION POWER SUPPLY IGNITION SW. IN ON AND/OR START 14 IGNITION POWER SUPPLY IGNITION SW. IN ON AND/OR START 16 Fuse 17 Fusible Link 17 Circuit Breaker (Built Into BCM) 17 IPDM E/R (INTELLIGENT POWER DISTRIBUTION 18
(SRS) "AIR BAG" and "SEAT BELT PRE-TEN- SIONER"3POWER SUPPLY ROUTING CIRCUIT4Schematic4Wiring DiagramPOWERPOWER SUPPLYIGNITION SW.IN ANY POSITION6ACCESSORY POWER SUPPLYIGNITION SW.IN ANY POSITION6ACCESSORY POWER SUPPLYIGNITIONSW. IN ACC OR ON12IGNITION POWER SUPPLYIGNITION SW.IN ON13IGNITION POWER SUPPLYIGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLYIGNITION SW.IN ON AND/OR START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
SIONER" 3 POWER SUPPLY ROUTING CIRCUIT 4 Schematic 4 Wiring Diagram POWER POWER SUPPLY IGNITION SW. IN ANY POSITION 6 ACCESSORY POWER SUPPLY IGNITION SW. IN ANY POSITION 6 ACCESSORY POWER SUPPLY IGNITION SW. IN ACC OR ON 12 IGNITION POWER SUPPLY IGNITION SW. IN ON 13 IGNITION POWER SUPPLY IGNITION SW. IN ON AND/OR START 14 IGNITION POWER SUPPLY IGNITION SWITCH IN START 16 Fuse 17 Fusible Link 17 Circuit Breaker (Built Into BCM) 17 IPDM E/R (INTELLIGENT POWER DISTRIBUTION
Schematic4Wiring Diagram — POWER —6BATTERY POWER SUPPLY — IGNITION SW.IN ANY POSITION6ACCESSORY POWER SUPPLY — IGNITIONSW. IN ACC OR ON12IGNITION POWER SUPPLY — IGNITION SW.IN ON13IGNITION POWER SUPPLY — IGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLY — IGNITIONSWITCH IN START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
Schematic4Wiring Diagram — POWER —6BATTERY POWER SUPPLY — IGNITION SW.IN ANY POSITION6ACCESSORY POWER SUPPLY — IGNITIONSW. IN ACC OR ON12IGNITION POWER SUPPLY — IGNITION SW.IN ON13IGNITION POWER SUPPLY — IGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLY — IGNITIONSWITCH IN START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
Schematic4Wiring Diagram — POWER —6BATTERY POWER SUPPLY — IGNITION SW.6ACCESSORY POWER SUPPLY — IGNITION6ACCESSORY POWER SUPPLY — IGNITION12IGNITION POWER SUPPLY — IGNITION SW.13IN ON13IGNITION POWER SUPPLY — IGNITION SW.14IGNITION POWER SUPPLY — IGNITION SW.14IGNITION POWER SUPPLY — IGNITION SW.16Fuse17Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
Wiring Diagram — POWER —
BATTERY POWER SUPPLY — IGNITION SW.IN ANY POSITIONACCESSORY POWER SUPPLY — IGNITIONSW. IN ACC OR ONSW. IN ACC OR ON12IGNITION POWER SUPPLY — IGNITION SW.IN ONIN ONIN ON AND/OR START14IGNITION POWER SUPPLY — IGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLY — IGNITIONSWITCH IN START16FuseTorcuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
IN ANY POSITION6ACCESSORY POWER SUPPLYIGNITIONSW. IN ACC OR ON12IGNITION POWER SUPPLYIGNITION SW.IN ON13IGNITION POWER SUPPLYIGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLYIGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLYIGNITIONSWITCH IN START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
ACCESSORY POWER SUPPLY — IGNITION SW. IN ACC OR ON
SW. IN ACC OR ON12IGNITION POWER SUPPLY — IGNITION SW.13IN ON13IGNITION POWER SUPPLY — IGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLY — IGNITIONSWITCH IN START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
IGNITION POWER SUPPLY — IGNITION SW.IN ON13IGNITION POWER SUPPLY — IGNITION SW.14IGNITION POWER SUPPLY — IGNITION14SWITCH IN START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
IGNITION POWER SUPPLY — IGNITION SW.IN ON13IGNITION POWER SUPPLY — IGNITION SW.14IGNITION POWER SUPPLY — IGNITION14SWITCH IN START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
IN ON13IGNITION POWER SUPPLYIGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLYIGNITIONSWITCH IN START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
IGNITION POWER SUPPLY — IGNITION SW.IN ON AND/OR START14IGNITION POWER SUPPLY — IGNITION16SWITCH IN START16Fuse17Fusible Link17Circuit Breaker (Built Into BCM)17IPDM E/R (INTELLIGENT POWER DISTRIBUTION
IN ON AND/OR START
IGNITION POWER SUPPLY — IGNITION SWITCH IN START
SWITCH IN START 16 Fuse 17 Fusible Link 17 Circuit Breaker (Built Into BCM) 17 IPDM E/R (INTELLIGENT POWER DISTRIBUTION
Fuse 17 Fusible Link 17 Circuit Breaker (Built Into BCM) 17 IPDM E/R (INTELLIGENT POWER DISTRIBUTION
Fusible Link 17 Circuit Breaker (Built Into BCM) 17 IPDM E/R (INTELLIGENT POWER DISTRIBUTION
Circuit Breaker (Built Into BCM) 17 IPDM E/R (INTELLIGENT POWER DISTRIBUTION
IPDM E/R (INTELLIGENT POWER DISTRIBUTION
IPDM E/R (INTELLIGENT POWER DISTRIBUTION
System Description
SYSTEMS CONTROLLED BY IPDM E/R
CAN COMMUNICATION LINE CONTROL
IPDM E/R STATUS CONTROL 19
CAN Communication System Description 19
Function of Detecting Ignition Relay Malfunction 19
CONSULT-II Function (IPDM E/R) 20
CONSULT-II START PROCEDURE
SELF-DIAGNOSTIC RESULTS
DATA MONITOR
CAN DIAG SUPPORT MNTR
ACTIVE TEST
Auto Active Test
DESCRIPTION
OPERATION PROCEDURE 23
INSPECTION IN AUTO ACTIVE TEST MODE 23
Schematic
IPDM E/R Terminal Arrangement 26

Terminals and Reference Values for IPDM E/R 27	F
IPDM E/R Power/Ground Circuit Inspection29	
Inspection with CONSULT-II (Self-Diagnosis) 31	
Removal and Installation of IPDM E/R	G
REMOVAL	
INSTALLATION	
GROUND CIRCUIT	Н
Ground Distribution	
MAIN HARNESS	
ENGINE ROOM HARNESS	
ENGINE CONTROL HARNESS 39	
BODY HARNESS 40	
BODY NO. 2 HARNESS 41	
BACK DOOR NO. 2 AND BACK DOOR HAR-	J
NESS 42	
HARNESS43	
Harness Layout 43	PG
HOW TO READ HARNESS LAYOUT	
OUTLINE	
MAIN HARNESS45	
ENGINE ROOM HARNESS (RH VIEW)	L
ENGINE ROOM HARNESS (LH VIEW)51	
ENGINE CONTROL HARNESS53	
CHASSIS HARNESS55	M
BODY HARNESS57	
BODY NO. 2 HARNESS59	
ROOM LAMP HARNESS61	
FRONT DOOR LH HARNESS63	
FRONT DOOR RH HARNESS64	
REAR DOOR LH HARNESS65	
REAR DOOR RH HARNESS66	
BACK DOOR HARNESS67	
Wiring Diagram Codes (Cell Codes)69	
ELECTRICAL UNITS LOCATION	
Electrical Units Location	
ENGINE COMPARTMENT71	
PASSENGER COMPARTMENT72	
HARNESS CONNECTOR74	
Description74	

HARNESS CONNECTOR (TAB-LOCKING

А

В

С

D

Е

TYPE)	74
HARNESS CONNECTOR (SLIDE-LOCKING	
TYPE)	75
HARNESS CONNECTOR (LEVER LOCKING	
TYPE)	76
HARNESS CONNECTOR (DIRECT-CONNECT	
SRS COMPONENT TYPE)	
ELECTRICAL UNITS	78
Terminal Arrangement	78
STANDARDIZED RELAY	79
Description	79
NORMAL OPEN, NORMAL CLOSED AND	

MIXED TYPE RELAYS	79
TYPE OF STANDARDIZED RELAYS	79
SUPER MULTIPLE JUNCTION (SMJ)	81
Terminal Arrangement	81
FUSE BLOCK-JUNCTION BOX (J/B)	83
Terminal Arrangement	83
FUSE AND FUSIBLE LINK BOX	84
Terminal Arrangement	84
FUSE AND RELAY BOX	85
Terminal Arrangement	
-	

PRECAUTIONS

PRECAUTIONS

PFP:00011

А

В

D

Е

F

Н

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

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 SRS and SB section of this Service Manual.

WARNING:

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

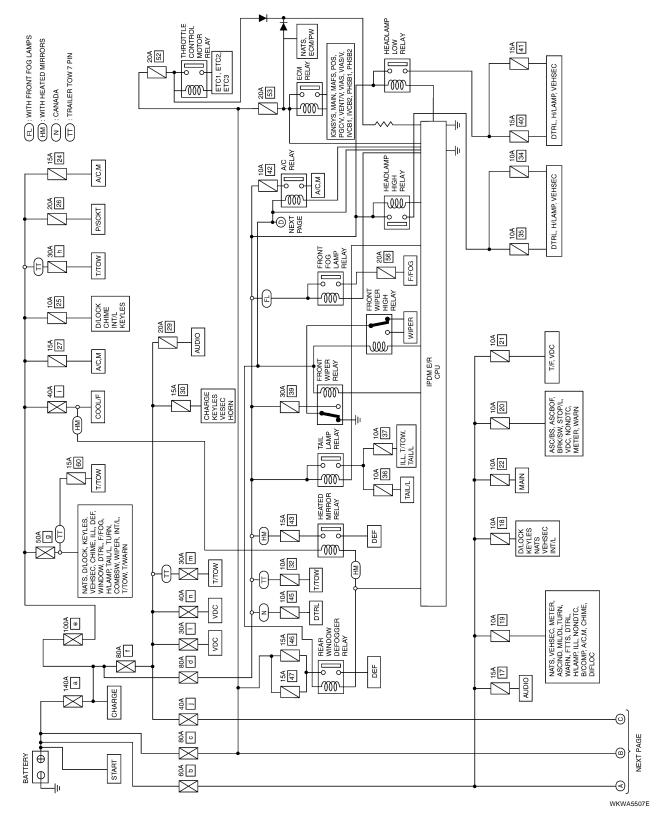
L

Μ

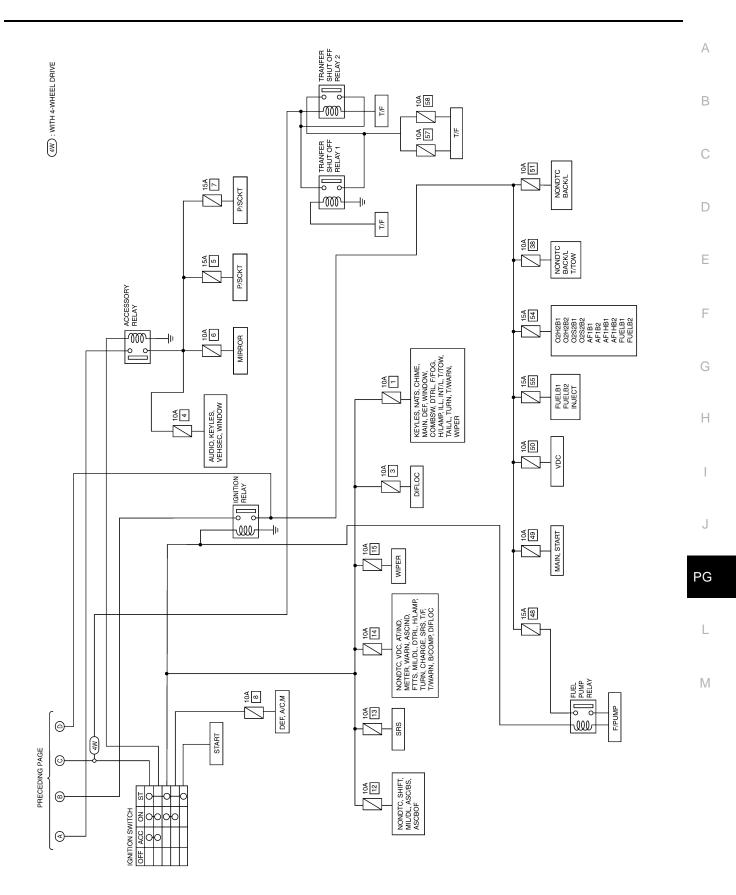
POWER SUPPLY ROUTING CIRCUIT

Schematic

For detailed ground distribution, refer to PG-33, "Ground Distribution" .



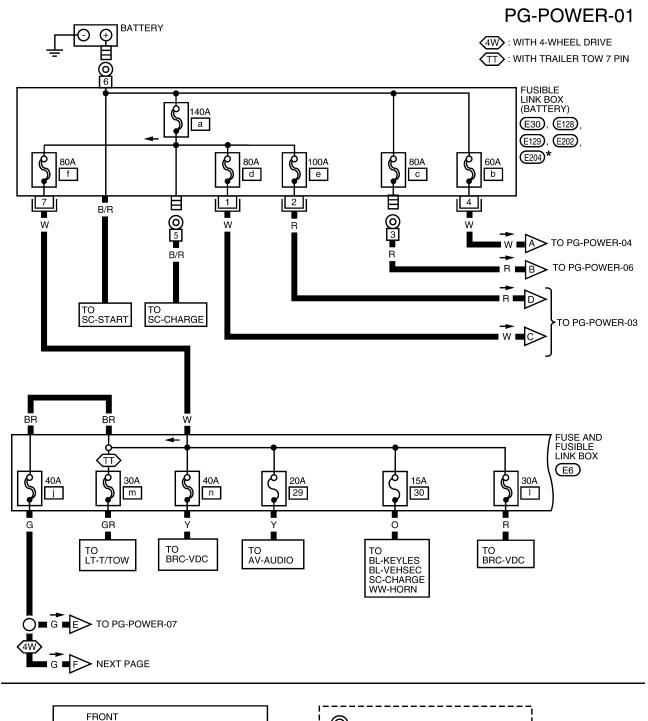
EKS00DNH

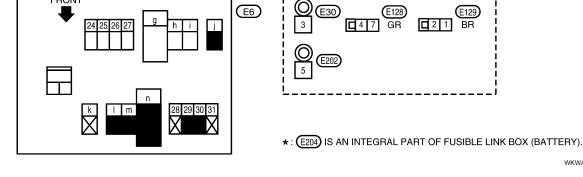


POWER SUPPLY ROUTING CIRCUIT

WKWA5508E

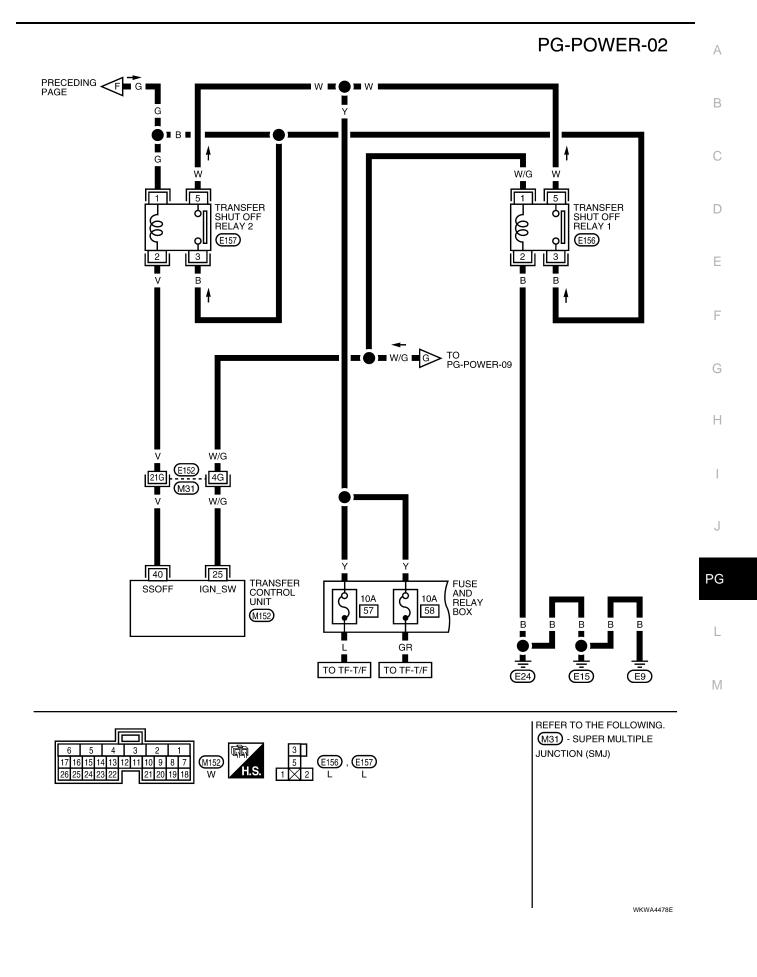
Wiring Diagram — POWER — BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION



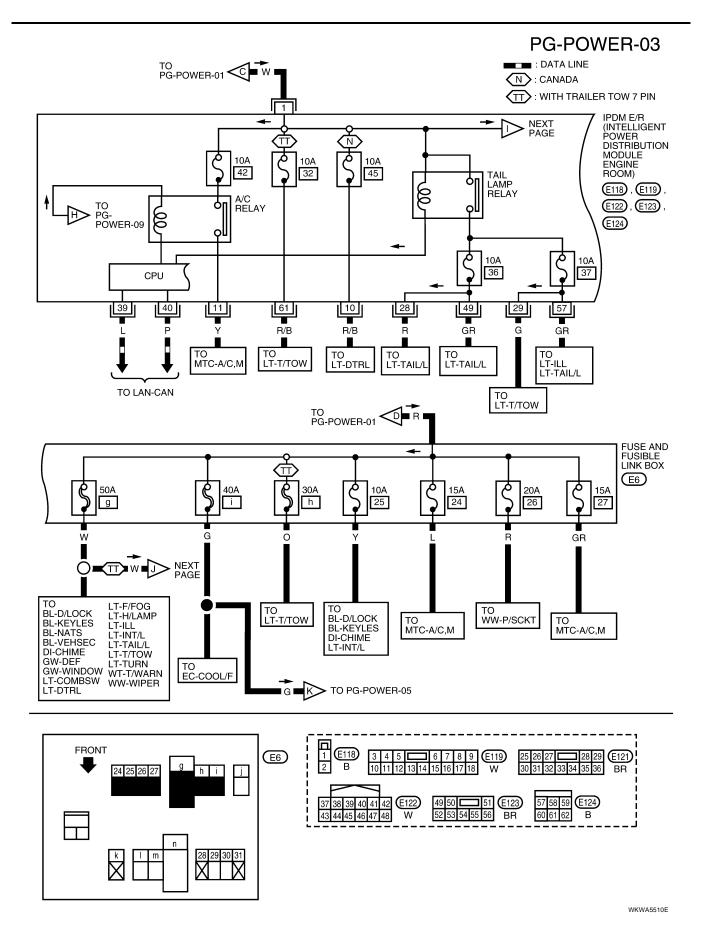


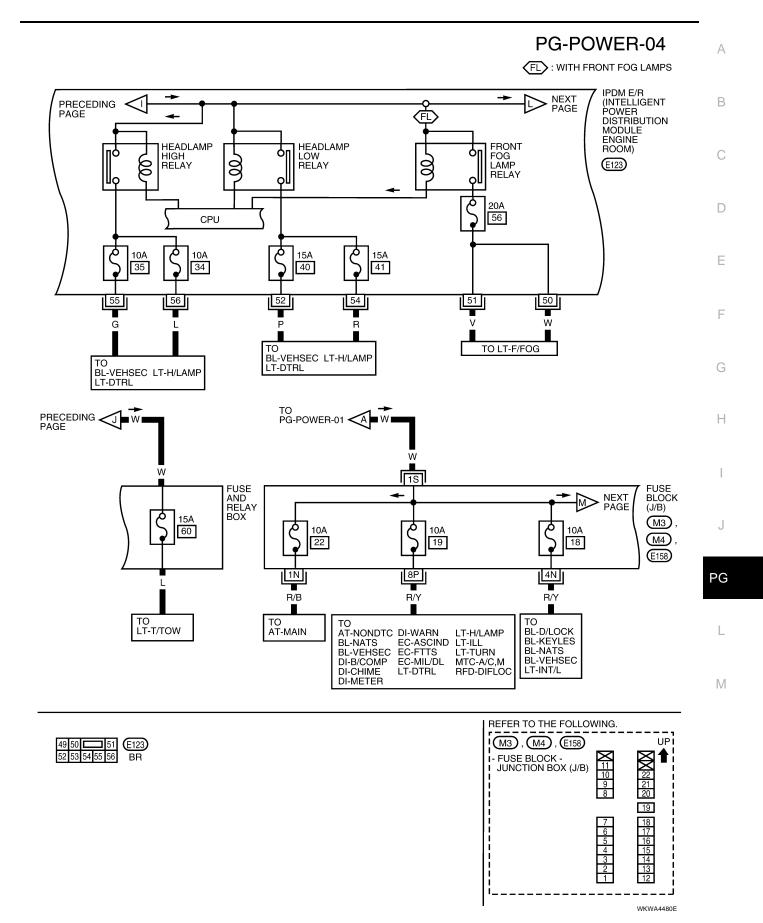
WKWA5509E

EKS00DNI



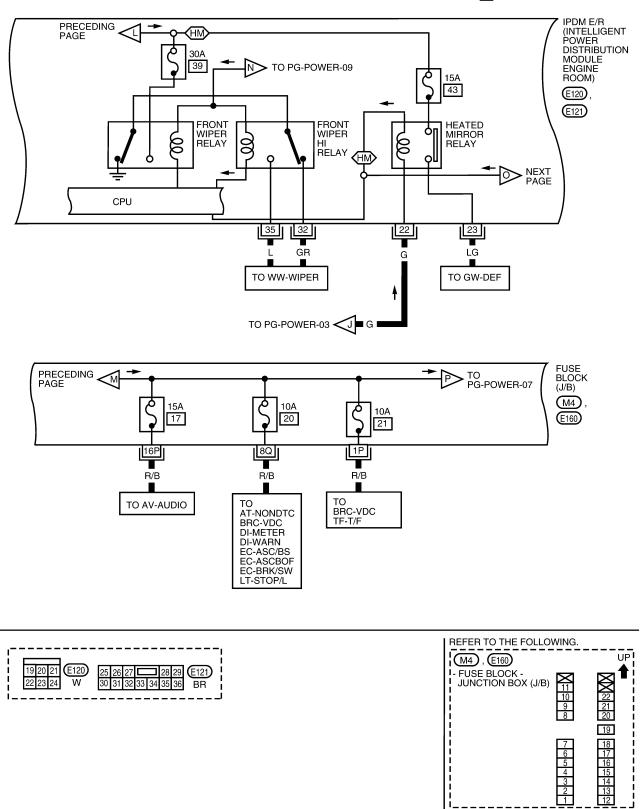
POWER SUPPLY ROUTING CIRCUIT





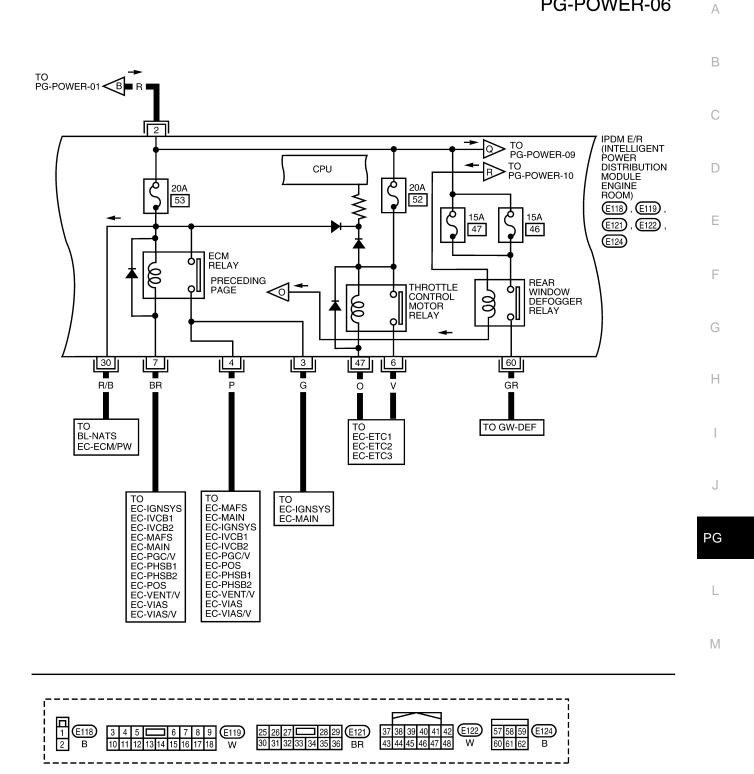
PG-POWER-05

(HM) : WITH HEATED MIRRORS



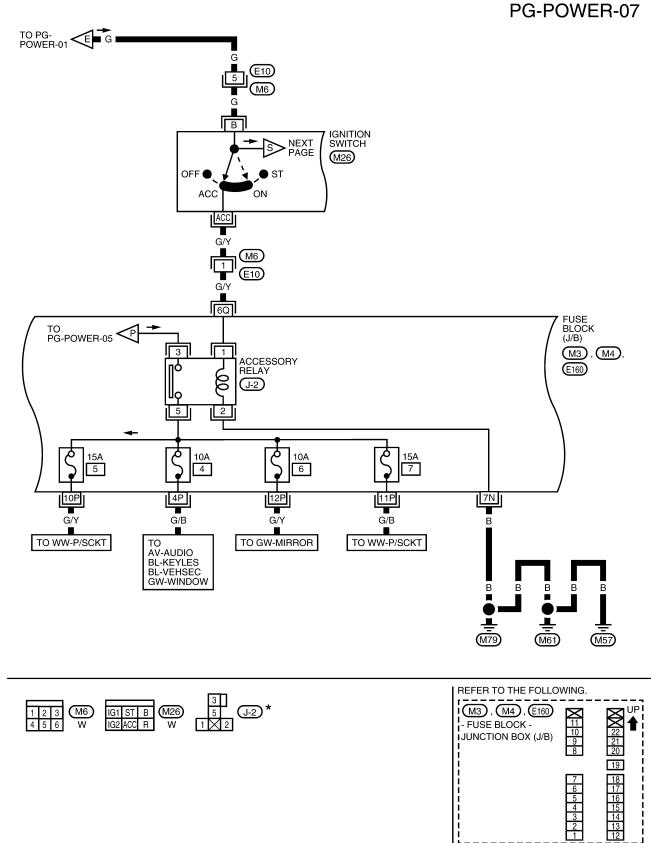
WKWA4481E

PG-POWER-06



WKWA5511E

ACCESSORY POWER SUPPLY - IGNITION SW. IN ACC OR ON



* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT".

WKWA5513E

POWER SUPPLY ROUTING CIRCUIT

IGNITION POWER SUPPLY — IGNITION SW. IN ON





С

D

Ε

F

Н

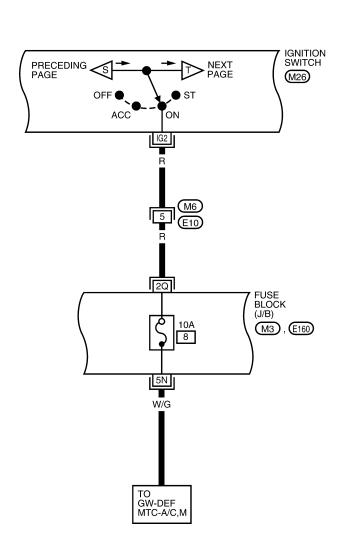
1

J

PG

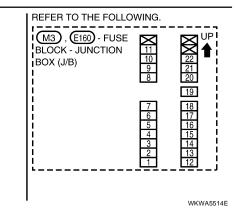
L

А

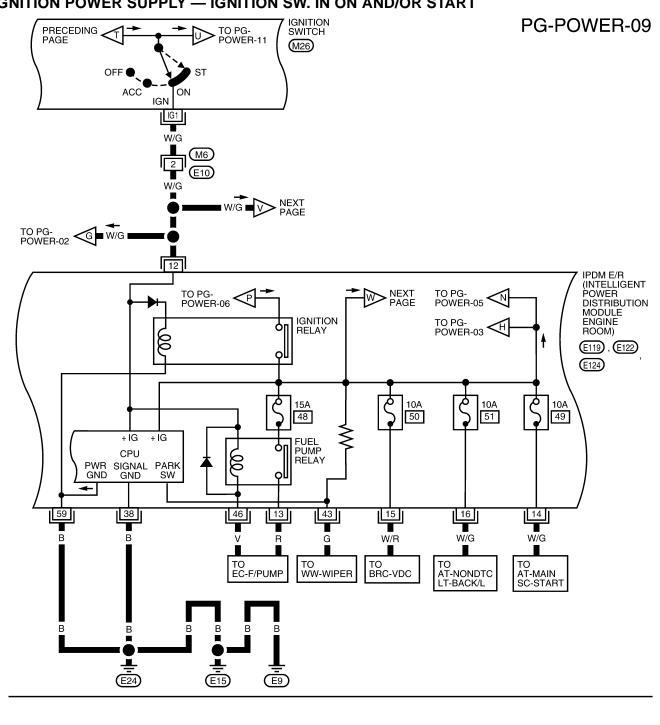








POWER SUPPLY ROUTING CIRCUIT



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



WKWA5515E

PG-POWER-10

А

В

С

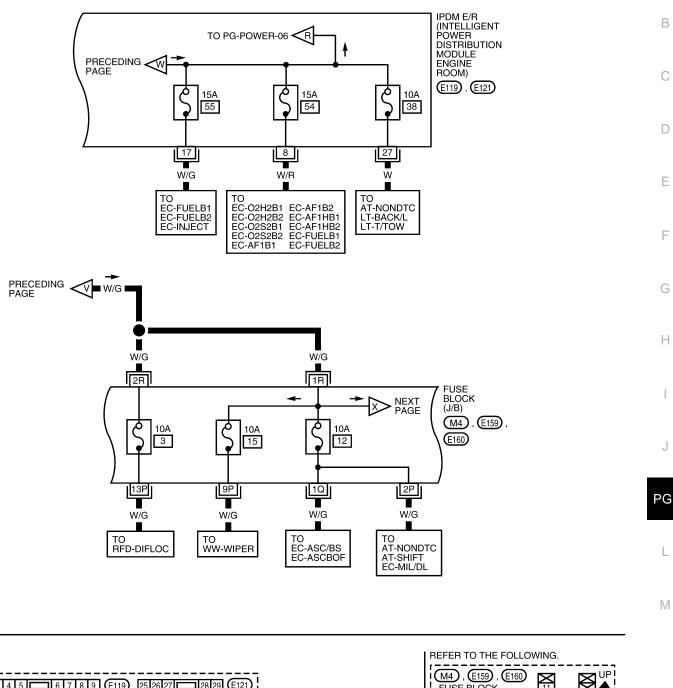
D

Е

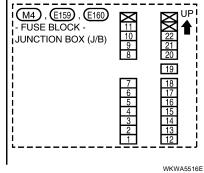
F

Н

L



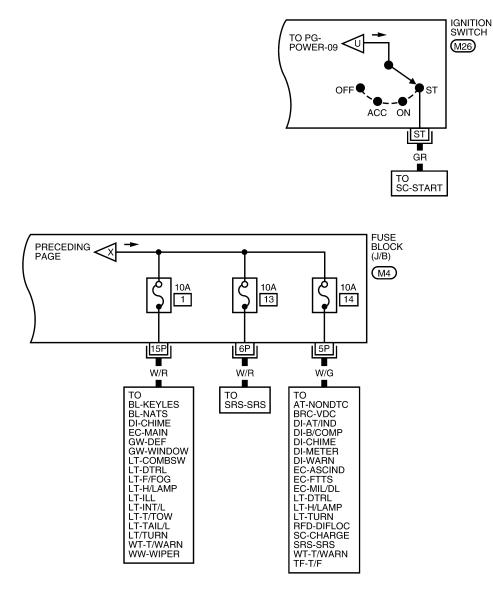
13	4	5			6	7	8	9	(E119)	25	26	27		28	29	(E121)	÷.
10	11	12	13 1	4	15	16	17	18	W	30	31	32	33 34	35	36	BR	Ì



1°

IGNITION POWER SUPPLY — IGNITION SWITCH IN START

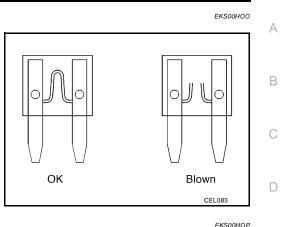
PG-POWER-11





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.

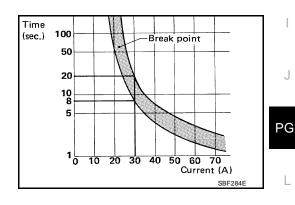
CAUTION:

- 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.
- Never let fusible link touch any other wiring harness, vinyl or rubber parts.

Circuit Breaker (Built Into BCM)

For example, when current is 30A, the circuit is broken within 8 to 20 seconds. A circuit breaker is used for the following systems:

Power windows



М

Е

F

Н

EKS00HOQ

System Description

EKS00DNJ

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

CAUTION:

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

SYSTEMS CONTROLLED BY IPDM E/R

- 1. Lamp control
 - Using CAN communication lines, it receives signals from the BCM and controls the following lamps:
 - Headlamps (High, Low)
 - Daytime light relay control (Canada only)
 - Parking lamps
 - Tail and license plate lamps
 - Front fog lamps
- 2. Wiper control Using CAN communication lines, it receives signals from the BCM and controls the front wipers.
- Daytime light relay control

Using CAN communication lines, it receives signals from the BCM and controls the daytime light relay.

- 4. Generator control Using CAN communication lines, it receives signals from the ECM and controls power generation output.
- 5. Rear window defogger and heated mirror relay control (Canada only) Using CAN communication lines, it receives signals from the BCM and controls the rear window defogger and heated mirror relay (if equipped).
- A/C compressor control Using CAN communication lines, it receives signals from the BCM and controls the A/C compressor (magnet clutch).
- 7. Starter control Using CAN communication lines, it receives signals from the BCM and controls the starter relay.
- Cooling fan control Using CAN communication lines, it receives signals from the ECM and controls the cooling fan relays.
- 9. Horn control Using CAN communication lines, it receives signals from the BCM and controls the horn relay.

CAN COMMUNICATION LINE CONTROL

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

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

Controlled system	Fail-safe mode
Headlamp	With the ignition switch ON, the headlamp low is ON.With the ignition switch OFF, the headlamp low is OFF.
Tail, license plate and parking lamps	With the ignition switch ON, the tail lamp relay is ON.With the ignition switch OFF, the tail lamp relay is OFF.

Controlled system	Fail-safe mode
	• 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
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 waiting status.

2. Sleep waiting status

- Process to stop CAN communication is activated.
- All systems controlled by IPDM E/R are stopped. When 3 seconds have elapsed after CAN communication with other control units is stopped, mode switches to sleep status.

3. Sleep status

- IPDM E/R operates in low current-consumption mode.
- CAN communication is stopped.
- When a change in CAN communication signal is detected, mode switches to CAN communication status.
- When a change in ignition switch signal is detected, mode switches to CAN communication status.

CAN Communication System Description

Refer to LAN-4, "SYSTEM DESCRIPTION" .

Function of Detecting Ignition Relay Malfunction

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

-				
	Ignition switch signal	Ignition relay status	Tail lamp relay	
-	ON	ON	—	N/I
-	OFF	OFF	—	IVI
-	ON	OFF	—	
_	OFF	ON	ON (10 minutes)	

NOTE:

When the ignition switch is turned ON, the tail lamps are OFF.

J

L

EKS00DNK

FKS00DNI

E

F

Н

CONSULT-II Function (IPDM E/R)

EKS00DNM

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

IPDM E/R Diagnostic Mode	Description
SELF-DIAG RESULTS	Displays IPDM E/R self-diagnosis results.
DATA MONITOR	Displays IPDM E/R input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.

CONSULT-II START PROCEDURE

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

SELF-DIAGNOSTIC RESULTS

Display Item List

Display items	CONSULT-II	Malfunction detection		ME	Possible causes
Biopiay Romo	display code		CRNT	PAST	
NO DTC IS DETECTED. FURTHER TEST- ING MAY BE REQUIRED.	_		_	_	_
CAN COMM CIRC	U1000	 If CAN communication reception/transmission data has a malfunction, or if any of the control units fail, data reception/transmission cannot be confirmed. When the data in CAN communication is not received before the specified time. 	x	x	Any of items listed below have errors: • 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 placed in IPDM E/R memory.

DATA MONITOR All Signals, Main Signals, Selection From Menu

			Mo	onitor item se		
Item name	CONSULT-II screen display	Display or unit	ALL SIGNALS	MAIN SIGNALS	SELECTION FROM MENU	Description
Motor fan request	MOTOR FAN REQ	1/2/3/4	x	х	х	Signal status input from ECM
Compressor request	AC COMP REQ	ON/OFF	х	х	х	Signal status input from BCM
Parking, license plate, and tail lamp request	TAIL & CLR REQ	ON/OFF	x	х	х	Signal status input from BCM
Headlamp low beam request	HL LO REQ	ON/OFF	x	х	х	Signal status input from BCM
Headlamp high beam request	HL HI REQ	ON/OFF	х	х	х	Signal status input from BCM
Front fog lamps equest	FR FOG REQ	ON/OFF	x	х	х	Signal status input from BCM
Front wiper request	FR WIP REQ	STOP/1LO/LO/HI	x	х	х	Signal status input from BCM
Niper auto stop	WIP AUTO STOP	ACT P/STOP P	x	х	х	Output status of IPDM E/R
Wiper protection	WIP PROT	OFF/LS/HS/ BLOCK	x	х	х	Control status of IPDM E/R
Starter request	ST RLY REQ	ON/OFF	x		х	Signal status of input from BCM
gnition relay status	IGN RLY	ON/OFF	x	х	х	Ignition relay status monitored with IPDM E/R
Rear defogger request	RR DEF REQ	ON/OFF	x	х	х	Signal status input from BCM
Hood switch	HOOD SW (*1)	OFF	x			Signal status input from IPDM E/R
Theft warning norn request	THFT HRN REQ	ON/OFF	x		х	Signal status input from BCM
Horn chirp	HORN CHIRP	ON/OFF	Х		Х	Output status of IPDM E/R
Daytime lights equest	DTRL REQ	ON/OFF	х		х	Signal status input from BCM
Oil pressure switch	OIL P SW	OPEN/CLOSE	х		х	Signal status input from IPDM E/R (function is not enabled)

NOTE:

- Perform monitoring of IPDM E/R data with the ignition switch ON. When the ignition switch is in ACC position, display may not be correct.
- (*1) This item is displayed, but does not function.

CAN DIAG SUPPORT MNTR

Refer to LAN-4, "SYSTEM DESCRIPTION" .

ACTIVE TEST

Display Item List

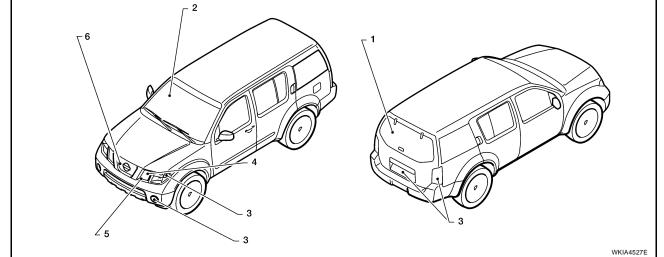
Test name	CONSULT-II screen display	Description
Rear defogger output	REAR DEFOGGER	With a certain ON-OFF operation, the rear defogger relay can be oper- ated.
Front wiper (HI, LO) output	FRONT WIPER	With a certain operation (OFF, HI ON, LO ON), the front wiper relay (Lo, Hi) can be operated.



А

Test name	CONSULT-II screen display	Description
Cooling fan output	MOTOR FAN	With a certain operation (1, 2, 3, 4), the cooling fan can be operated.
Headlamp relay (HI, LO) output	EXTERNAL LAMPS	With a certain operation (OFF, HI ON, LO ON, TAIL ON, FOG ON), the lamp relay (Low, High, Tail, Fog) can be operated.
Front fog lamp relay (FOG) output	EXTERNAL LAMPS	With a certain operation (OFF, HI ON, LO ON, TAIL ON, FOG ON), the lamp relay (Low, High, Tail, Fog) can be operated.
Tail lamp relay output	EXTERNAL LAMPS	With a certain operation (OFF, HI ON, LO ON, TAIL ON, FOG ON), the lamp relay (Low, High, Tail, Fog) can be operated.
Horn output	HORN	With a certain ON-OFF operation, the horn relay can be operated.

Auto Active Test DESCRIPTION	eksoodnn A
 In auto active test mode, operation inspection can be performed when IPE the following systems: 	
 Rear window defogger 	В
- Front wipers	
 Tail, license plate, front fog, and parking lamps 	
- Headlamps (High, Low)	C
 A/C compressor (magnet clutch) 	
- Cooling fan	D
OPERATION PROCEDURE	
 Close hood and front door RH, and lift wiper arms away from windshield wiper operation). 	I (to prevent glass damage by ${}_{\!$
NOTE:	
When auto active test is performed with hood opened, sprinkle water on wi	
2. Turn ignition switch OFF.	F
 Turn ignition switch ON and, within 20 seconds, press front door switch L switch OFF. 	H 10 times. Then turn ignition.
4. Turn ignition switch ON within 10 seconds after ignition switch OFF.	G
5. When auto active test mode is actuated, horn chirps once.	
6. After a series of operations is repeated three times, auto active test is com	
NOTE:	Н
When auto active test mode has to be cancelled halfway, turn ignition swite	ch OFF.
CAUTION: Be sure to perform <u>BL-27, "Door Switch Check"</u> when the auto active	test connet he performed
	test cannot be performed.
INSPECTION IN AUTO ACTIVE TEST MODE	
When auto active test mode is actuated, the following six steps are repeated th	ree times. J
- 2	
	PG



Item Number	Test Item	Operation Time/Frequency
1	Rear window defogger	10 seconds
2	Front wipers	LOW 5 seconds then HIGH 5 seconds
3	License plate, tail, parking and fog lamps	10 seconds
4	Headlamps	LOW 10 seconds then HIGH ON-OFF 5 times
5	A/C compressor (magnet clutch)	ON-OFF 5 times
6	Cooling fan	LOW 5 seconds, then HIGH 5 seconds

L

Μ

Concept of Auto Active Test Rear window defogger CAN-H Front wiper (HI, LO) CAN-L всм Parking lamps IPDM E/R Tail lamps - License plate lamps Door switch Cooling Fan Front fog lamps ÷ Headlamps (LOW) A/C Compressor Headlamps (HIGH) WKIA49928

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

Diagnosis chart in auto active test mode

Symptom	Inspection conte	nts	Possible cause				
		YES	BCM signal input circuit				
Rear window defogger	Perform auto active test. Does rear win-		 Rear window defogger relay Open circuit of rear window defogger 				
does not operate.	dow defogger oper-	NO	IPDM E/R malfunction				
	ate?		Harness or connector malfunction between IPDM E/R and rear window defogger				
		YES	BCM signal input system				
Any of front wipers, tail			Lamp/wiper motor malfunction				
and parking lamps, front fog lamps, and head-	Perform auto active test. Does system in		 Lamp/wiper motor ground circuit malfunction 				
lamps (Hi, Lo) do not operate.	question operate?	NO	 Harness/connector malfunction between IPDM E/R and system in question 				
			IPDM E/R (integrated relay) malfunction				
			BCM signal input circuit				
	Perform auto active test. Does magnet clutch operate?	YES	CAN communication signal between BCM and ECM				
A/C compressor does			 CAN communication signal between ECM and IPDM E/R 				
not operate.			Magnet clutch malfunction				
		NO	• Harness/connector malfunction between IPDM E/R and magnet clutch				
			 IPDM E/R (integrated relay) malfunction 				
		YES	ECM signal input circuit				
	Derferre enteresting	115	 CAN communication signal between ECM and IPDM E/R 				
Cooling fan does not	Perform auto active test. Does cooling fan		Cooling fan motor malfunction				
operate.	operate?	NO	 Harness/connector malfunction between IPDM E/R and cooling fan motor 				
			IPDM E/R (integrated relay) malfunction				

Schematic EKS00DNO BATTERY FRONT FOG LAMP RELAY 2<u>0A 56</u> < 51 FRONT FOG LAMP RH 3 50 FRONT FOG LAMP LH HEADLAMP HIGH RELAY 10A34 56 HEADLAMP RH (HIGH) <u>}</u> 10A35 HEADLAMP LOW RELAY 55 HEADLAMP LH (HIGH) 5<u>A41</u> m 54 HEADLAMP RH (LOW) 5A40 TAIL LAMP RELAY 52 HEADLAMP LH (LOW) 10<u>A36</u> ሙ 49 FRONT PARKING LAMPS FRONT WIPER RELAY 30A 39 28 FRONT PARKING LAMPS 10A37 Ś ► 57 TAIL, LICENSE AND ILLUMINATION LAMPS + 29 TRAILER TOW RELAY 1 0A 32 FRONT WIPER HIG RELAY - 32 FRONT WIPER MOTOR LOW 10A45 ഷ് \sim + 61 TRAILER TOW RELAY 1 1<u>5443</u> + 10 DAYTIME LIGHT RELAY 1 15A46 REAR WINDOW 15<u>447</u> 60 REAR WINDOW DEFOGGER 10A 42 A/C RELAY <u>ڳ</u>ا 11 A/C COMPRESSOR $\overline{}$ 59 IGNITION SWITCH 12 (ON/START) 38 1 IGNITION SWITCH 21 (START) STARTER RELAY CPU ► 42 OIL PRESSURE SWITCH STARTER MOTOR 19 ሙ 45 HORN RELAY A/T ASSEMBLY 48 (TCM INHIBIT SWITCH) COOLING FAN LOW RELAY 0 20 COOLING FAN MOTOR Π m 44 DAYTIME LIGHT RELAY 1 COOLING FAN HIGH RELAY <u>~</u> 24 COOLING FAN MOTOR + 39 + 40 TO CAN COMMUNICATION HEATED MIRROR RELAY PG چ ا HEATED MIBBOB 23 30 ECM ECM RELAY 3 IGNITION COILS 20A 53 F - m • THROTTLE CONTROL MOTOR RELAY 2<u>0A 52</u> 6 47 ക്ര് FUEL PUMP RELAY 15A48 13 FUEL PUMP IGNITION RELAY ഹ + 46 ECM ŝ 10A 49 14 A/T ASSEMBLY (TCM TRANSMISSION CONTROL MODULE) 10A50 15 ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) 15<u>455</u> - 17 INJECTORS 10451 - 16 BACK-UP LAMP RELAY 15A54 8 HEATED OXYGEN SENSOR 2 (BANK 1, BANK 2), AIR FUEL RATIO (A/F) SENSOR (BANK 1, BANK 2) 27 BACK-UP LAMP RELAY (TRAILER TOW REVERSE) 10A38

WKWA5517E

А

В

D

Ε

F

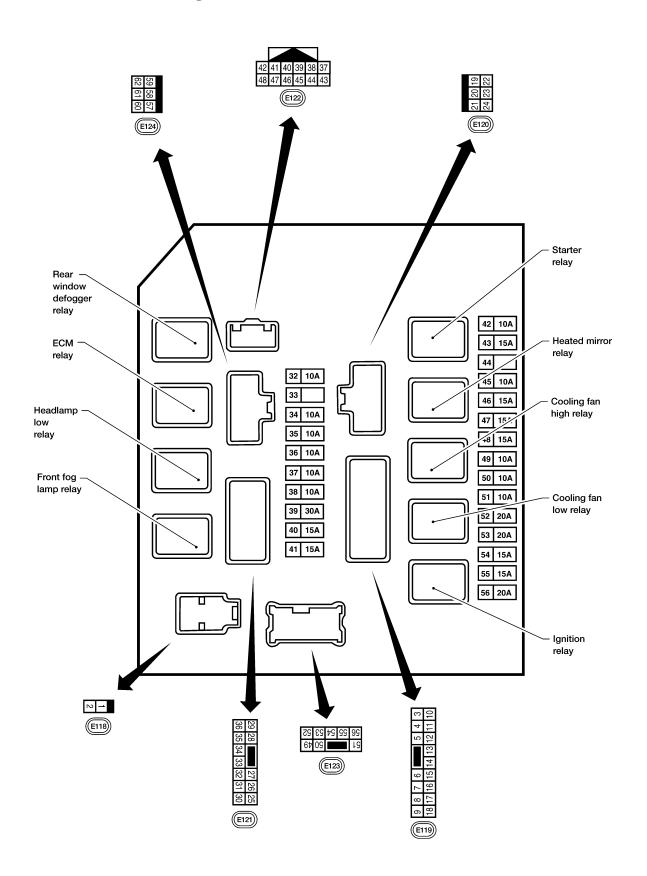
Н

L

Μ

IPDM E/R Terminal Arrangement

EKS00DNP



WKIA5883E

Terminals and Reference Values for IPDM E/R

EKS00HMC	
	A

	14/5				Measuring cond	Reference value	
Terminal	Wire color	Signal name	Signal input/ output	Ignition switch			Reference value (Approx.)
1	W	Battery power supply	Input	OFF	-	_	Battery voltage
2	R	Battery power supply	Input	OFF	-	_	Battery voltage
3	G	Ignition coil	Output	ON or START	-	_	Battery voltage
4	Ρ	ECM relay	Output	ON or START	-	_	Battery voltage
6	V	Throttle control relay	Output	ON or START	-	_	Battery voltage
7	BR	ECM relay control	loout		Ignition switch	ON or START	0V
'	DK	ECIVITEIAY CONTO	Input		Ignition switch	OFF or ACC	Battery voltage
8	W/R	O2 and A/F sensor ignition supply	Output	ON or START	-	_	Battery voltage
10	R/B	Battery power supply (daytime light relay)	Output	OFF	_	_	Battery voltage
11	Y	A/C compressor	Output	ON	A/C switch or a request ON	auto A/C	Battery voltage
12	W/G	Ignition switch	Input	OFF or ACC		0V	
12	W/O	Ignition switch	mput		ON or START		Battery voltage
10	R	Fuel numn	Output		OFF or ACC		0V
13	ĸ	Fuel pump	Output		ON or START		Battery voltage
14	W/G	A/T ignition supply	Output	ON or START	_		Battery voltage
15	W/R	ABS ignition supply	Output	ON or START	_		Battery voltage
16	W/G	Reverse lamp	Output	ON or START	_		Battery voltage
17	W/G	Injector	Output	ON or START	_		Battery voltage
19	W	Starter motor	Output	START	-	_	Battery voltage
20	BR	Cooling fan motor (low)	Output	ON or START	_		Battery voltage
21	GR	Ignition switch	Input	_	OFF or ACC o	r ON	0V
					START		Battery voltage
22	G	Battery power supply (cooling fan relays)	Input	OFF	_		Battery voltage
23	LG	Heated mirror relay	Output	ON or			Battery voltage
				START	Rear window d is OFF	lefogger switch	0V
24	Ρ	Cooling fan motor (high)	Output	ON or START	-	_	Battery voltage
27	W	Trailer tow relay	Output	ON or START	-	_	Battery voltage
20	Р	LH front parking and	0.14		Lighting	OFF	0V
28	R	front side marker lamp	Output	OFF	switch 1ST position	ON	Battery voltage

	Wire		Signal		Measuring cond	dition	Reference value
Terminal	color	Signal name	input/ output	Ignition switch	Operation	or condition	(Approx.)
					Lighting	OFF	0V
29	G	Trailer tow relay	Output	ON	switch 1ST position	ON	Battery voltage
30	R/B	Battery power supply (ECM)	Input	OFF	-	_	Battery voltage
22		Wiper low speed sig-	0			OFF	0V
32	GR	nal	Output	ON	Wiper switch	LO	Battery voltage
05		Wiper high speed sig-	Outrast	01		OFF	0V
35	L	nal	Output	ON	Wiper switch	ні	Battery voltage
37	Y	Generator	Output	ON			_
38	В	Ground	Input	_	-	-	0V
39	L	CAN-H	_	ON	-	-	_
40	Р	CAN-L	_	ON	-	-	_
40	0		la not	01	Wiper in non-p	ark position	Battery voltage
43	G	Wiper auto stop signal	Input	Input ON Wiper in park position		osition	0V
	44 R Daytime light relay 1 signal	Davtime light relay 1			Park brake	OFF	0V
44		Output	ON	switch posi- tion	ON	Battery voltage	
					When door	OFF	Battery voltage
45	45 LG Horn relay	Input	Input OFF	locks are operated using keyfob	ON	0V	
		Fuel pump relay con-			Ignition switch	ON or START	0V
46	V	trol	Input	_	Ignition switch OFF or ACC		Battery voltage
		Throttle control relay			Ignition switch	ON or START	0V
47	0	control	Input	_	Ignition switch	OFF or ACC	Battery voltage
					Selector lever i	n "P" or "N"	Battery voltage
48	R	Starter relay (inhibit switch)	Input	ON or START	Selector lever any other posi- tion		0V
		PH front parking and			Lighting	OFF	
49	GR	RH front parking and front side marker lamp	Output	OFF	switch 1ST position	ON	Battery voltage
					Lighting	OFF	0V
50	w	Front fog lamp (LH)	Output	ON	switch must be in the 2ND position or AUTO posi- tion (LOW beam is ON) and the front fog lamp switch must be ON	ON	Battery voltage

	Wire		Signal		Measuring cond	lition	Reference value
Terminal	color	Signal name	input/ output	Ignition switch	Operation of	or condition	(Approx.)
					Lighting	OFF	0V
51	V	Front fog lamp (RH)	Output	ON	switch must be in the 2ND position or AUTO posi- tion (LOW beam is ON) and the front fog lamp switch must be ON	ON	Battery voltage
50			Lighting		OFF	0V	
52	Р	Headlamp low (LH)	Output	OFF	switch 2ND position	ON	Battery voltage
	54 R Headlamp low (RH)	Output	OFF	FF switch 2ND position	OFF	0V	
54					ON	Battery voltage	
					Lighting	OFF	0V
55	55 G Headlamp high (LH)	Output	ut OFF	switch HIGH or PASS posi- tion	ON	Battery voltage	
				Lighting	OFF	0V	
56	L	Headlamp high (RH)	Output	OFF	switch HIGH or PASS posi- tion	ON	Battery voltage
	~ ~	Rear parking, license,			Lighting	OFF	0V
57	GR	and tail lamp	Input	ON	switch 1ST position	ON	Battery voltage
59	В	Ground	_	—		-	0V
60	GR	Rear window defog-	Output	ON	When rear wind switch is ON	dow defogger	Battery voltage
00	UIX	ger relay output signal	Ουιραι		When rear wind switch is OFF	dow defogger	0V
61	R/B	Battery power supply (trailer tow relay)	Output	OFF	_	-	Battery voltage

IPDM E/R Power/Ground Circuit Inspection

1. FUSE AND FUSIBLE LINK INSPECTION

Check that the following fusible links are not blown.

Terminal No.	Signal name	Fusible link No.
1, 2	Battery power	a, c, d

OK or NG

OK >> GO TO 2.

Revision: September 2006

NG >> Replace fusible link.

EKS00DNQ

Μ

2. POWER CIRCUIT INSPECTION

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector E118.
- 3. Check voltage between IPDM E/R harness connector and ground.

(+)	(-)	Voltage (Approx.)
IPDM E/R connector	Terminal	(-)	
E118	1, 2	Ground	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Repair or replace IPDM E/R power circuit harness.

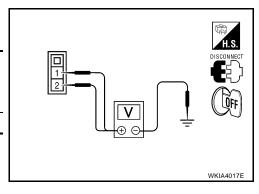
3. GROUND CIRCUIT INSPECTION

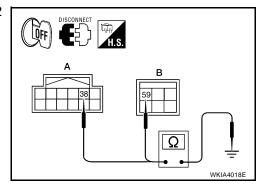
- 1. Disconnect IPDM E/R harness connectors E122 and E124.
- Check continuity between IPDM E/R harness connectors E122 (A) terminal 38, E124 (B) terminal 59 and ground.

Continuity should exist.

OK or NG

- OK >> Inspection End.
- NG >> Repair or replace IPDM E/R ground circuit harness.





Inspection with CONSULT-II (Self-Diagnosis)

CAUTION:

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

1. SELF-DIAGNOSIS RESULT CHECK

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

	CONSULT-II		ИE	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	x	х	Any of items listed below have errors: • TRANSMIT DIAG • ECM • BCM/SEC	-

The Details for Display for the Period are as follows:

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

Contents displayed

NO DTC DETECTED. FURTHER TESTING MAY BE REQUIRED.>>Inspection End. CAN COMM CIRC>>Print out the self-diagnosis result and refer to <u>LAN-4, "SYSTEM DESCRIPTION"</u>.

J

Н

EKS00DNR

А

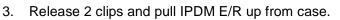
В

L

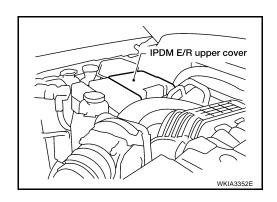
Μ

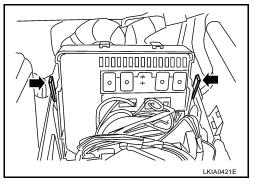
Removal and Installation of IPDM E/R REMOVAL

- 1. Disconnect negative battery cable.
- 2. Remove IPDM E/R upper cover.



4. Disconnect IPDM E/R connectors and remove the IPDM E/R.





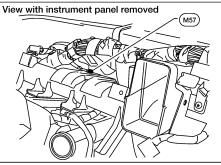
INSTALLATION

Installation is in the reverse order of removal.

EKS00DNS

GROUND CIRCUIT Ground Distribution MAIN HARNESS

Body ground



	CONNECTOR NUMBER	CONNECT TO
	M20	BCM (Terminal No. 67)
	M22	Data link connector (Terminal No. 4)
M1 R1 Room lamp harness Front door LH harness	M22	Data link connector (Terminal No. 5)
	M24)	Combination meter (Terminal No. 23)
	M28	Combination switch
	(R9)	Front room/map lamp assembly
	D4	Door mirror LH
	B	Main power window and door lock/unlock switch (Terminal No. 17)
	D14)	Front door lock assembly LH

M

L

PFP:24080

EKS00DNT

А

В

С

D

Ε

F

G

Н

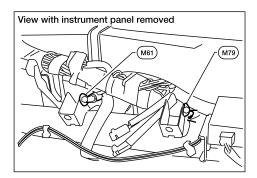
1

J

PG

WKIA5884E

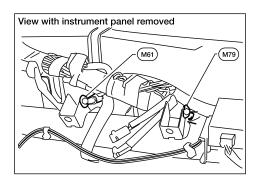
Next page

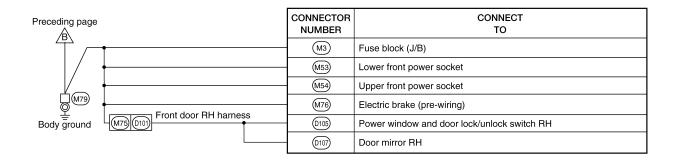


Preceding page	CONNECTOR NUMBER	CONNECT TO
Body ground	M13	Front passenger air bag off indicator
	(M21)	NATS antenna amp.
	M24)	Combination meter (Terminal No. 13)
	M35	Air bag diagnosis sensor
	(M47)	Steering angle sensor
	(M49)	Front air control
	(M51)	Front blower switch
	M55	Hazard switch
	M152	Transfer control unit (Terminal No. 6)
	M152	Transfer control unit (Terminal No. 18)
	M153	Transfer control unit (Terminal No. 32)
	M154	VDC off switch
	M155	HDC switch
	M156	A/T device (Terminal No. 2)
	M156	A/T device (Terminal No. 8)
	M156	A/T device (Terminal No. 10)
	M159	Door mirror remote control switch
	M163	Clutch interlock cancel switch
M63 (M204) sub-harness	(M207)	Console power socket

B Next page

WKIA5080E







J

А

В

С

D

Ε

F

G

Н

I

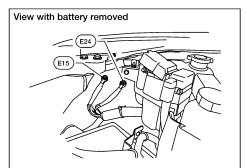
PG

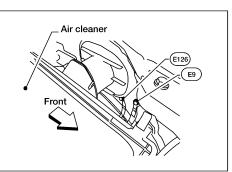
L

 \mathbb{N}

WKIA5081E

ENGINE ROOM HARNESS





		CONNECTOR NUMBER	CONNECT TO
	_ ↑	E3	Horn (with dual note horn)
Body ground	E17	Front combination lamp LH (side marker)	
	E21	Brake fluid level switch	
		(E23)	Front wiper motor
		E102	Front fog lamp RH
		E103	Daytime light relay 2
	(E104)	Daytime light relay 1	
	(E106)	Washer fluid level switch	
	(E107)	Front combination lamp RH (headlamp)	
	(E111)	Front combination lamp RH (parking/turn signal)	
	(E162)	Horn (without dual note horn)	
	(E226)	Back-up lamp relay (with M/T)	
	E41 C1 Chassis harness Trailer C51 C15 Sub-harness	(E227)	Trailer tow relay 1
		(E228)	Trailer tow relay 2
		C5	Fuel level sensor unit and fuel pump
		C126	Trailer (7-pin)
		CONNECTOR NUMBER	CONNECT TO
		E11	Front combination lamp LH (headlamp)
	(E27)	Front combination lamp LH (parking/turn signal)	
		(E101)	Front fog lamp LH
Q ^(E15)		(E108)	Front combination lamp RH (side marker)
Body ground		(E113)	Cooling fan motor (Terminal No. 3)

WKIA5885E

(E113)

(E169)

(E170)

(F66)

Engine control harness

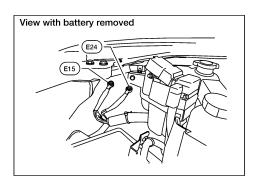
E5 F14

Cooling fan motor (Terminal No. 4)

Park/neutral position switch (with M/T)

Trailer turn relay LH

Trailer turn relay RH



			CONNECTOR	CONNECT
		Main harness	NUMBER	ТО
Preceding page	E153		M70	Differential lock control unit (Terminal No. 3)
个/			(M70)	Differential lock control unit (Terminal No. 10)
/ ·			E16	ECM (Terminal No. 115)
/ .			E16	ECM (Terminal No. 116)
			(E54)	Front blower motor relay
			(E122)	IPDM E/R (Terminal No. 38)
Body ground			E124	IPDM E/R (Terminal No. 59)
			(E156)	Transfer shut off relay 1
•			(E166)	Clutch interlock cancel relay 2
•			(E171)	Clutch interlock cancel relay 1
	E2 F32 En	ngine control harness	(F11)	Crankshaft position sensor
		•	(F23)	Camshaft position sensor (PHASE) (bank 2)
		•	(F50)	Electric throttle control actuator (shield wire)
		•	(F54)	ECM (Terminal No. 1)
	En	gine control harness	(F70)	Camshaft position sensor (PHASE) (bank 1)
•	E19 F33	gine control harness	(F55)	ATP switch
		•	(F58)	Transfer control device
	Engine	Knock	(F59)	Wait detection switch
		sensor sub-harness	(F60)	4LO switch
•	E5 F14 F67 F150	sub-namess	(F151)	Knock sensor (bank 1) (shield wire)
	Chassis	Chassis	(F152)	Knock sensor (bank 2) (shield wire)
	E41 C1 harness	sub-harness	C116	Differential lock position switch
			C12	License plate lamp

D

С

А

В

F

G

Н

Ε

J

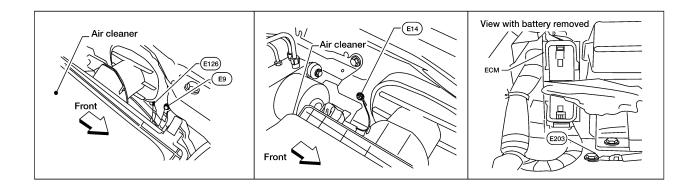
I

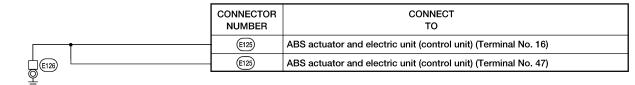
PG

L

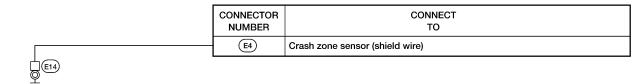
M

WKIA5886E





Body ground



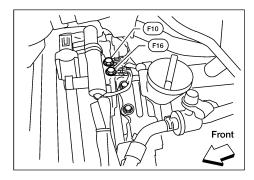


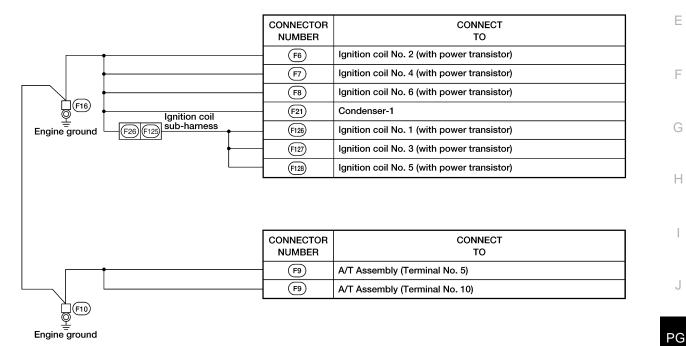
CONNECTOR NUMBER	CONNECT TO
(E209)	Generator

Body ground

WKIA5887E

ENGINE CONTROL HARNESS





А

В

С

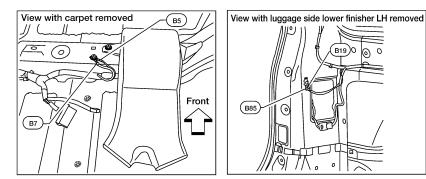
D

L

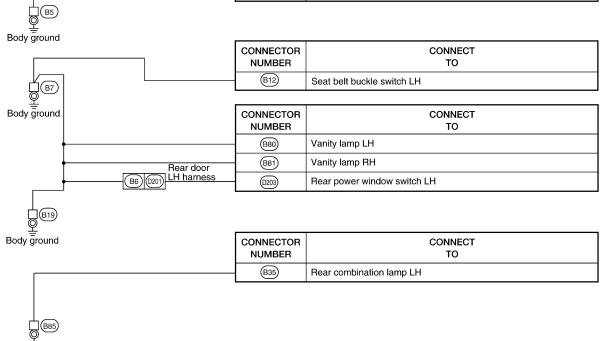
M

WKIA5888E

BODY HARNESS



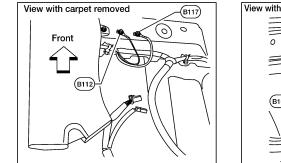
CONNECTOR NUMBER	CONNECT TO
B15	LH side air bag satellite sensor (shield wire)

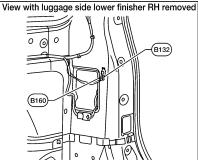


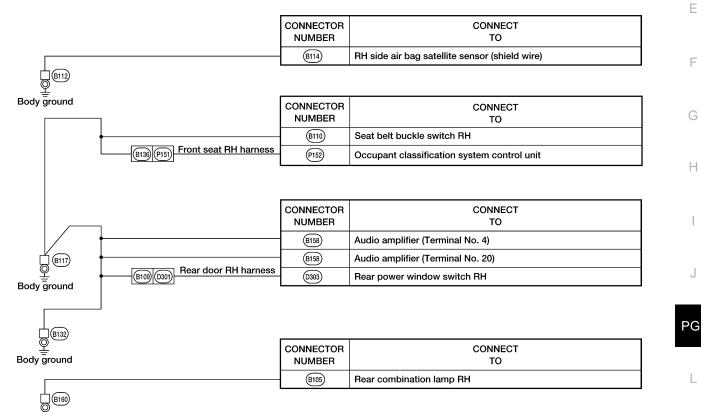
Body ground

WKIA3969E

BODY NO. 2 HARNESS







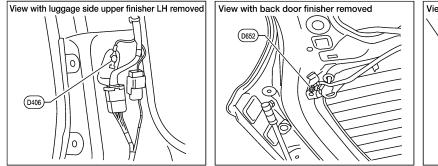
프 Body ground А

В

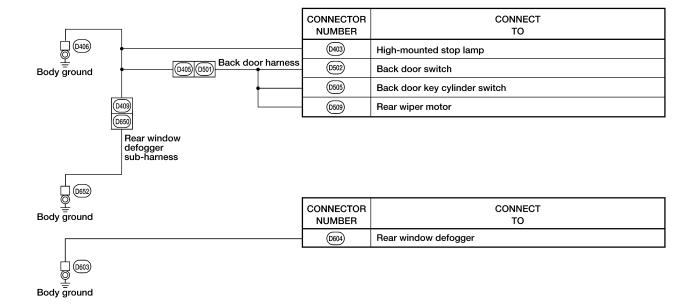
D

WKIA3970E

BACK DOOR NO. 2 AND BACK DOOR HARNESS







WKIA3971E

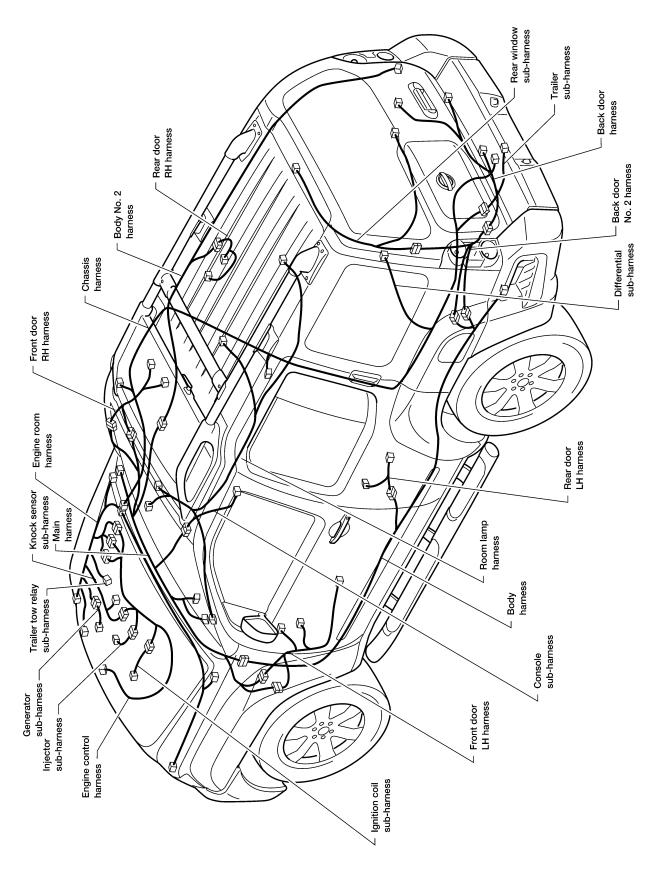
 Harness Layout How TO READ HARNESS LAYOUT The following Harness Layouts use a map style grid to help locate connectors on the drawings: Main Harness and Console Sub-harness Engine Room Harness (RH View) Engine Compartment, Generator Sub-harness (Passenger Compartment) Engine Room Harness (Passenger Compartment) Engine Room Harness (LH View) Engine Compartment Engine Control Harness, Injector Sub-harness Chassis Harness, Differential Sub-harness and Trailer Sub-har Body Harness Body No. 2 Harness Body No. 2 Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-Harness Find the desired connector number on the connector list. Find the desired connector number on the connector list. Find the consector number in the crossing zone. Follow the line (if used) to the connector. 	HARNESS	PFP:24010
 connectors on the drawings: Main Harness and Console Sub-harness Engine Room Harness (RH View) Engine Compartment, Generator Sub-harness, and Trailer Tow Relay Sub-harness Engine Room Harness (Passenger Compartment) Engine Control Harness, Injector Sub-harness, Ignition Coil Sub-harness and Knock Sensor Sub-harness Chassis Harness, Differential Sub-harness and Trailer Sub-harness Body Harness Body No. 2 Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-Harness Find the desired connector number on the connector list. Find the desired connector number on the connector list. Find the connector number in the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector.) EKS00DNU
 Engine Room Harness (RH View) Engine Compartment, Generator Sub-harness, and Trailer Tow Relay Sub-harness Engine Room Harness (Passenger Compartment) Engine Room Harness (LH View) Engine Compartment Engine Control Harness, Injector Sub-harness, Ignition Coll Sub-harness and Knock Sensor Sub-harness Chassis Harness, Differential Sub-harness and Trailer Sub-harness Body Harness Body Harness Body No. 2 Harness Body No. 2 Harness Body No. 2 Harness Body No. 2 Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-Harness To use the grid reference Find the desired connector number on the connector list. Find the connector number in the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector. 		Example:
 ator Sub-harness, and Trailer Tow Relay Sub-harness Engine Room Harness (Passenger Compartment) Engine Room Harness (LH View) Engine Compartment Engine Control Harness, Injector Sub-harness, Ignition Coil Sub-harness and Knock Sensor Sub-harness Chassis Harness, Differential Sub-harness and Trailer Sub-harness Body Harness Body No. 2 Harness Body No. 2 Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-Harness To use the grid reference Find the desired connector number on the connector list. Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector. 	 Main Harness and Console Sub-harness 	
 Engine Room Harness (LH View) Engine Compartment Engine Control Harness, Injector Sub-harness, Ignition Coil Sub-harness and Knock Sensor Sub-harness Chassis Harness, Differential Sub-harness and Trailer Sub-harness Body Harness Body No. 2 Harness Body No. 2 Harness Room Lamp Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-Harness To use the grid reference Find the desired connector number on the connector list. Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Follow the line (if used) to the connector. 		$\begin{array}{c c} \mathbf{G2} & \mathbf{E1} & \mathbf{B/6} & : \text{ ASCD ACTUATOR} \\ \hline \end{array}$
 Engine Room Harness (LH View) Engine Compartment Engine Control Harness, Injector Sub-harness, Ignition Coil Sub-harness and Knock Sensor Sub-harness Chassis Harness, Differential Sub-harness and Trailer Sub-harness Body Harness Body No. 2 Harness Body No. 2 Harness Room Lamp Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub- Harness To use the grid reference Find the desired connector number on the connector list. Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Follow the line (if used) to the connector. 	 Engine Room Harness (Passenger Compartment) 	Connector color/Cavity
 Sub-harness and Knock Sensor Sub-harness Chassis Harness, Differential Sub-harness and Trailer Sub-harness Body Harness Body No. 2 Harness Body No. 2 Harness Room Lamp Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-Harness To use the grid reference Find the desired connector number on the connector list. Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector. 	 Engine Room Harness (LH View) Engine Compartment 	
 ness Body Harness Body No. 2 Harness Body No. 2 Harness Room Lamp Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-Harness To use the grid reference Find the desired connector number on the connector list. Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector. 		il Grid reference
 Body No. 2 Harness Room Lamp Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub- Harness To use the grid reference Find the desired connector number on the connector list. Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector. 		WKIA4020E
 Room Lamp Harness Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-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. 	Body Harness	
 Back Door Harness, Back Door No. 2 Harness, Rear Window Sub-Harness, Rear Window Defogger Sub-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. 	Body No. 2 Harness	
 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. 	Room Lamp Harness	
 Find the desired connector number on the connector list. Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector. 		
 Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector. 	To use the grid reference	
 Find the grid reference. On the drawing, find the crossing of the grid reference letter column and number row. Find the connector number in the crossing zone. Follow the line (if used) to the connector. 	1. Find the desired connector number on the connector list.	
 Find the connector number in the crossing zone. Follow the line (if used) to the connector. 	2. Find the grid reference.	ł
5. Follow the line (if used) to the connector.	3. On the drawing, find the crossing of the grid reference letter co	lumn and number row.
	4. Find the connector number in the crossing zone.	
	5. Follow the line (if used) to the connector.	

PG

L

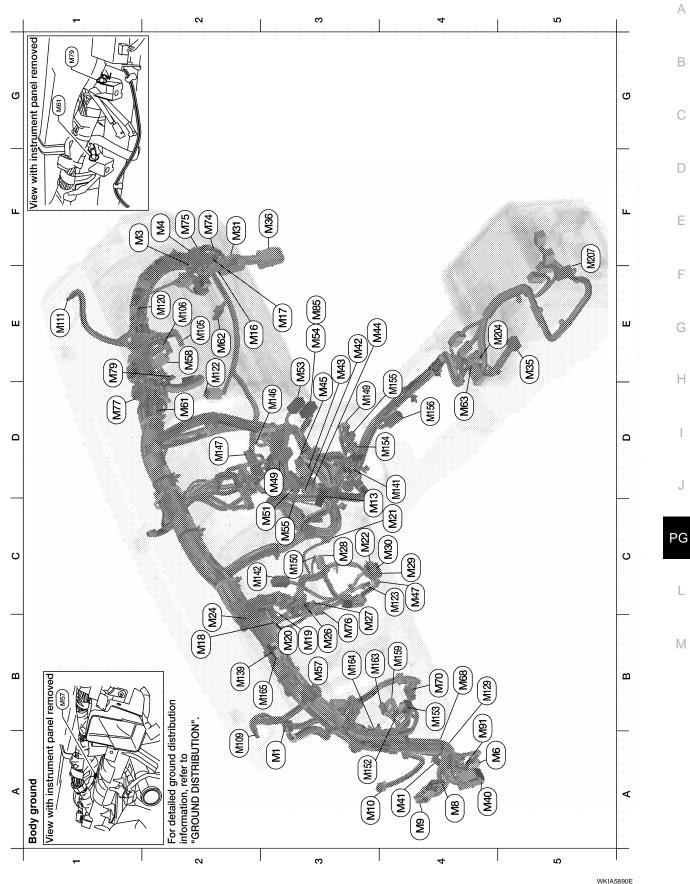
Μ

OUTLINE



WKIA5889E

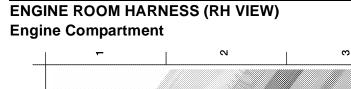
MAIN HARNESS

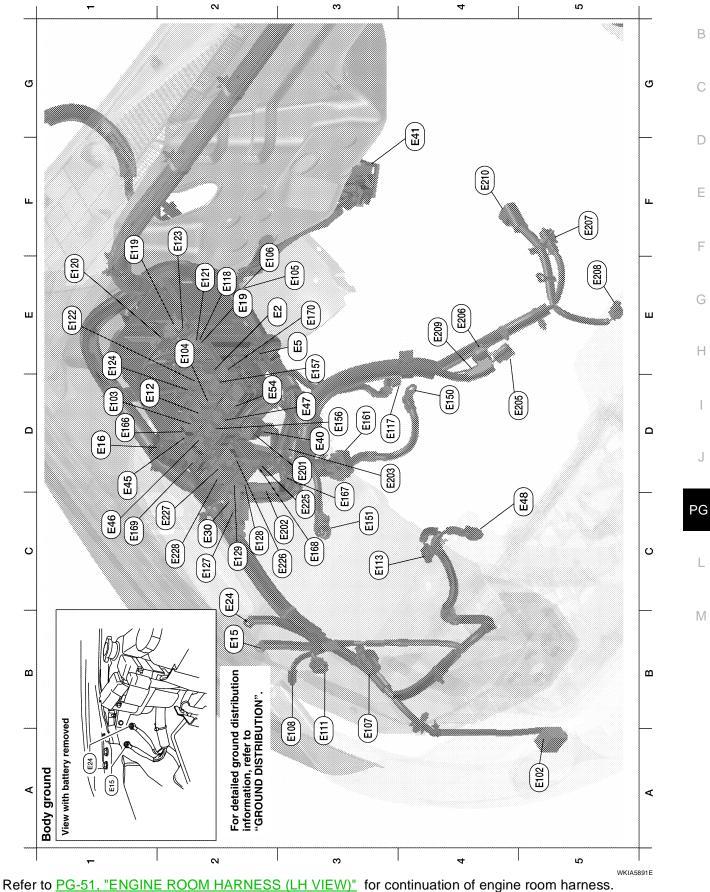


Revision: September 2006

A3	M1	W/12	: To R1	E2	M62	B/2	: Front blower motor
F1	M3	W/8	: Fuse block (J/B)	D4	M63	W/6	: To M204
F2	M4	W/16	: Fuse block (J/B)	B4	M68	V/1	: To M250 (with XM satellite radio tuner)
A4	M6	W/6	: To E10	B4	M68	BR/1	: To M250 (with Sirius satellite radio tuner)
A4	M8	W/16	: To D2	B4	M70	W/26	: Differential lock control unit
A4	M9	W/24	: To D1	F2	M74	W/16	: To D102
A3	M10	Y/4	: To E29	F2	M75	W/12	: To D101
C3	M13	W/3	: Front passenger air bag OFF indicator	B3	M76	W/6	: Electric brake (pre-wiring)
E2	M16	W/12	: To B162	D1	M77	Y/4	: Front passenger air bag module (service replacement)
E3	M17	W/16	: To B163	E1	M79	_	: Body ground
B2	M18	W/40	: BCM (body control module)	E3	M85	W/4	: Aux in jack
B3	M19	W/15	: BCM (body control module)	B4	M91	W/16	: To E26
B3	M20	B/15	: BCM (body control module)	E2	M105	Y/2	: Front passenger air bag module
C4	M21	W/4	: NATS antenna amp.	E2	M106	O/2	: Front passenger air bag module
C3	M22	W/16	: Data link connector	A2	M109	BR/2	: Front tweeter LH
B2	M24	W/40	: Combination meter	E1	M111	BR/2	: Front tweeter RH
B3	M26	W/6	: Ignition switch	E2	M120	W/4	: Remote keyless entry receiver
C3	M27	W/2	: Key switch	E2	M122	B/4	: Front blower motor resistor
C3	M28	W/16	: Combination switch	C4	M123	W/2	: Tire pressure warning check connector
C4	M29	Y/6	: Combination switch (spiral cable)	B4	M129	V/1	: Satellite radio tuner (with XM satellite radio tuner)
C4	M30	GR/8	: Combination switch (spiral cable)	B4	M129	BR/1	: Satellite radio tuner (with Sirius satellite radio tuner)
F2	M31	SMJ	: To E152	B2	M139	B/2	: Diode-1
E5	M35	Y/28	: Air bag diagnosis sensor unit	D4	M141	GR/8	: 4WD shift switch
F3	M36	SMJ	: To B149	C2	M142	B/6	: Mode door motor
A4	M40	SMJ	: To B69	D3	M146	B/2	: Intake sensor
A4	M41	W/16	: Satellite radio tuner	D2	M147	B/6	: Air mix door motor (front)
A4	M41	W/16	: Pre-wiring for satellite radio tuner	D3	M149	W/6	: Differential lock control unit
E3	M42	W/12	: Audio unit	C3	M150	W/2	: Ignition keyhole illumination
E3	M43	W/10	: Audio unit	A3	M152	W/26	: Transfer case control unit
E3	M44	W/6	: Audio unit	B4	M153	W/24	: Transfer case control unit
D3	M45	W/16	: Audio unit	D4	M154	GR/6	: VDC off switch
C4	M47	W/8	: Steering angle sensor	D4	M155	W/8	: HDC switch
D3	M49	B/26	: Front air control	D4	M156	W/10	: A/T device
C3	M51	W/8	: Front blower switch	B4	M159	W/16	: Door mirror remote control switch
E3	M53	B/2	: Lower front power socket	B3	M163	W/8	: Clutch interlock cancel switch
E3	M54	GR/2	: Upper front power socket	B3	M164	B/5	: Clutch interlock cancel relay 1
C3	M55	W/4	: Hazard switch	B3	M165	B/2	: Diode-7
B3	M57	_	: Body ground	Cor	sole sub	-harness	5
E2	M58	B/6	: Intake door motor	E4	M204	W/6	: To M63
D2	M61	_	: Body ground	F5	M207	B/2	: Console power socket

HARNESS





А

E2	E2	W/16	: To F32	E1	E124	B/6	: IPDM E/R (intelligent power distribution mod- ule engine room)
E3	E5	W/24	: To F14	C2	E127	-	: Fusible link box (battery)
D1	E12	L/5	: Stop lamp relay	C2	E128	GR/2	: Fusible link box (battery)
B2	E15	_	: Body ground	C2	E129	BR/2	: Fusible link box (battery)
D1	E16	B/40	: ECM	D4	E150	-	: Battery ground
E2	E19	W/16	: To F33	C3	E151	—	: Negative battery cable
C2	E24	_	: Body ground	D3	E156	L/4	: Transfer shut off relay 1
C2	E30	_	: Fusible link box (battery)	D3	E157	L/4	: Transfer shut off relay 2
D3	E40	GR/9	: To E201	D3	E161	B/3	: Battery current sensor
G4	E41	SMJ	: To C1	D1	E166	BR/6	: Clutch interlock cancel relay 2 (with M/T)
D1	E45	BR/6	: Back-up lamp relay (with A/T)	C3	E167	B/2	: Diode-3
C1	E46	B/5	: Transfer shift high relay	C3	E168	W/2	: To E225
D3	E47	B/5	: Transfer shift low relay	C1	E169	L/4	: Trailer turn relay LH
C5	E48	B/3	: Refrigerant pressure sensor	E3	E170	L/4	: Trailer turn relay RH
D2	E54	BR/6	: Front blower motor relay	Ger	nerator su	ub-harnes	55 55
A5	E102	B/2	: Front fog lamp RH	D3	E201	GR/9	: To E40
D1	E103	B/5	: Daytime light relay 1	C3	E202	B/1	: To fuse and fusible link box
E2	E104	L/4	: Daytime light relay 2	C3	E203	_	: Body ground
F3	E105	B/2	: Front and rear washer motor	D5	E205	GR/3	: Generator
F2	E106	BR/2	: Washer fluid level switch	C3	E206	_	: Generator
A3	E107	B/3	: Front combination lamp RH (head lamp)	F5	E207	GR/1	: Starter motor
A3	E108	GR/2	: Front combination lamp RH (side marker)	E5	E208	GR/1	: Oil pressure switch
A3	E111	GR/3	: Front combination lamp RH (park ing /turn signal lamp)	E4	E209	-	: Generator
C3	E113	GR/4	: Cooling fan motor	F4	E210	-	: Starter motor
D3	E117	GR/2	: Front wheel sensor RH	Trai	ler tow re	elay sub-ł	narness
E2	E118	B/2	: IPDM E/R (intelligent power distri- bution module engine room)	СЗ	E225	W/12	: To E168
F1	E119	W/18	: IPDM E/R (intelligent power distri- bution module engine room)	СЗ	E226	L/4	: Back-up lamp relay (with M/T)
E1	E120	W/6	: IPDM E/R (intelligent power distri- bution module engine room)	C2	E227	L/4	: Trailer tow relay 1
E2	E121	BR/12	: IPDM E/R (intelligent power distri- bution module engine room	C2	E228	BR/6	: Trailer tow relay 2
E1	E122	W/12	: IPDM E/R (intelligent power distri- bution module engine room)				
F2	E123	BR/8	: IPDM E/R (intelligent power distri- bution module engine room)				

-

Passenger Compartment

-

2

HARNESS

ო

E158 E159 E160 E152) G ശ ш ш ш ш ۵ ۵ E20 E37 PG E34 υ E36 υ E38) Ē E26) E29 E43 E163) ш ш ∢ ۷

WKIA5055E

S

4

А

В

С

D

Ε

F

G

Н

1

J

L

Μ

2

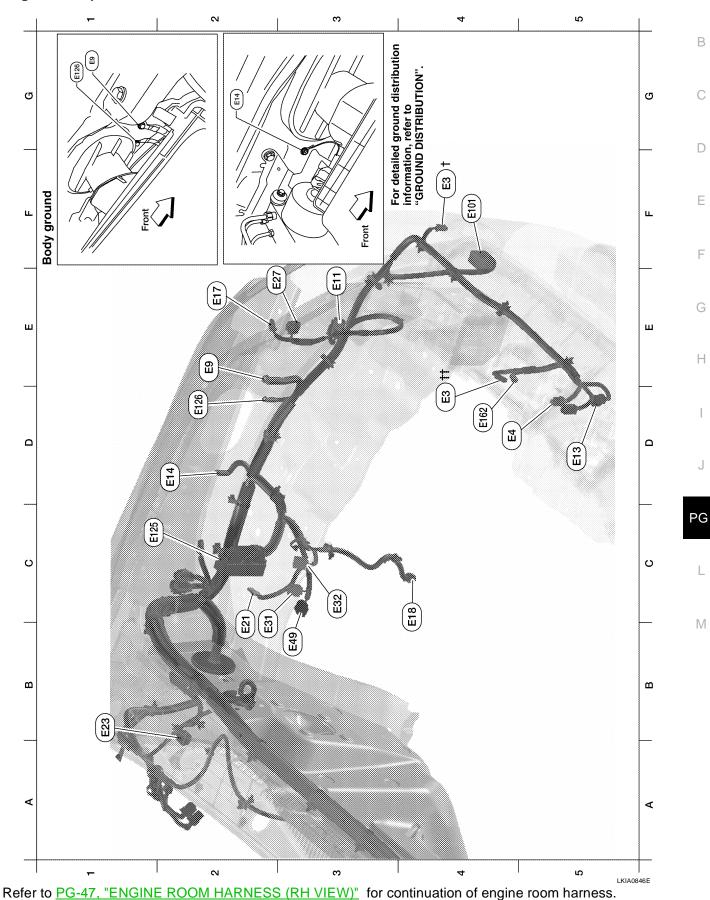
4

ო

2

C4	E10	W/6	: To M6	C3	E38	W/4	: Stop lamp switch (with A/T)
D3	E20	B/6	: Accelerator pedal position (APP) sensor	C3	E43	L/2	: ASCD clutch switch
C4	E26	W/16	: To M91	G3	E152	SMJ	: To M31
C3	E29	Y/4	: To M10	G2	E158	B/1	: Fuse block (J/B)
C4	E34	W/8	: To B40	G2	E159	B/2	: Fuse block (J/B)
C4	E36	W/2	: To B42	G2	E160	W/8	: Fuse block (J/B)
C3	E37	BR/2	: ASCD brake switch	B3	E163	L/2	: Clutch interlock switch

ENGINE ROOM HARNESS (LH VIEW) Engine Compartment

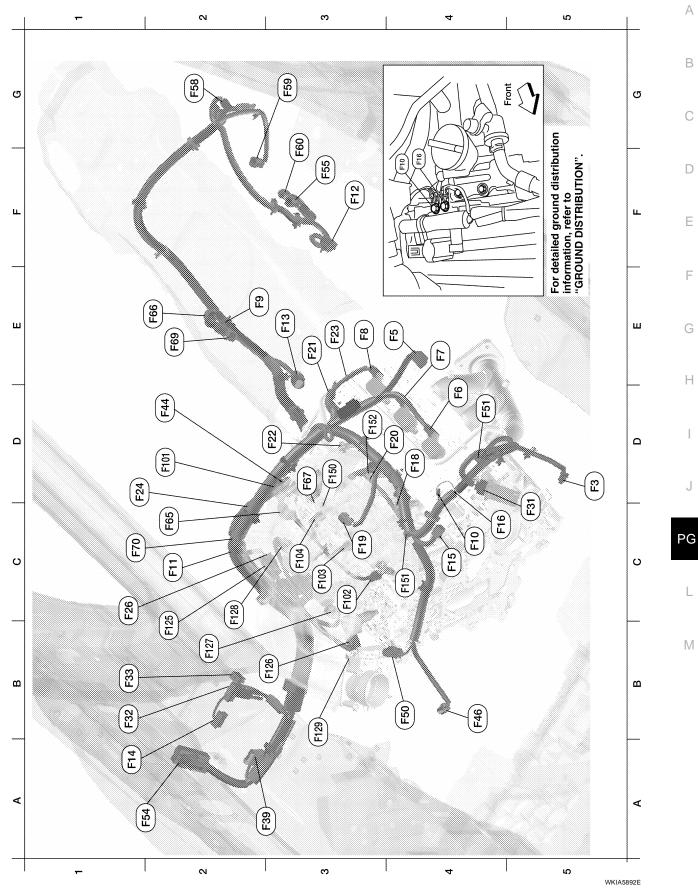


PG-51

А

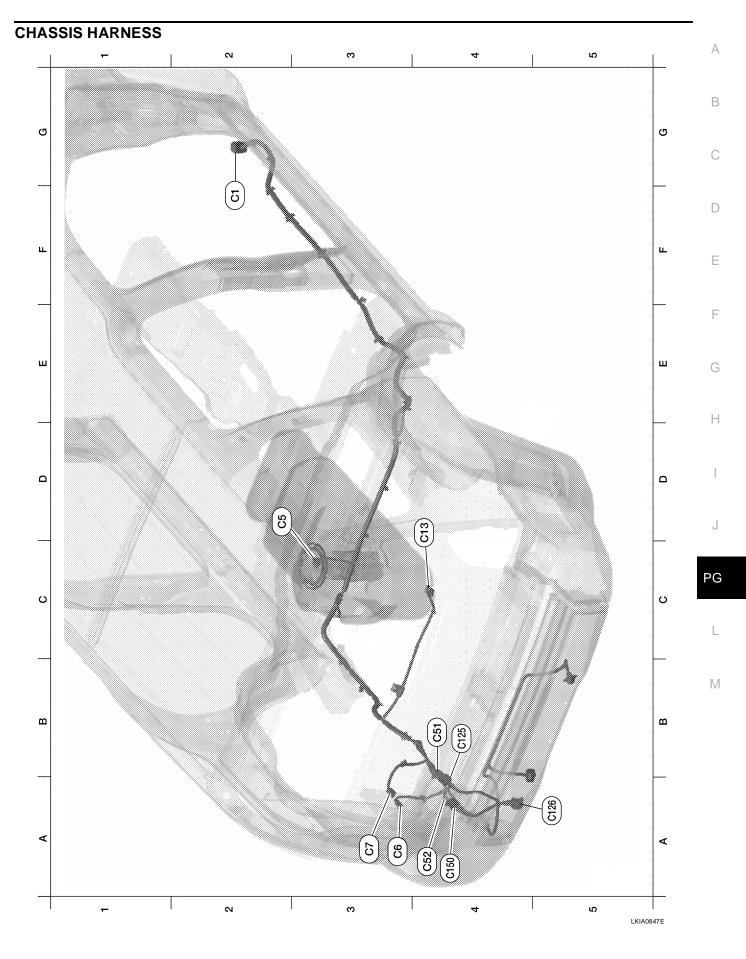
					1	r.	
F4	E3†	B/2	: Horn (with dual note horn)	B1	E23	GR/5	: Front wiper motor
D4	E3††	B/1	: Horn (without dual note horn)	E2	E27	GR/3	: Front combination lamp LH (parking/turn signal)
D4	E4	Y/2	: Crash zone sensor	B2	E31	B/3	: Front pressure sensor
E2	E9	_	: Body ground	C3	E32	B/3	: Rear pressure sensor
E3	E11	B/3	: Front combination lamp LH (head lamp)	В3	E49	B/6	: Active booster
D5	E13	GR/2	: Ambient sensor 2	F4	E101	B/2	: Front fog lamp LH
D2	E14	—	: Body ground	C1	E125	B/47	: ABS actuator and electric unit (control unit)
E2	E17	GR/2	: Front combination lamp LH (side marker)	D2	E126	_	: Body ground
C4	E18	GR/2	: Front wheel sensor LH	D4	E162	B/1	: Horn (with single note horn)
B2	E21	GR/2	: Brake fluid level switch				

ENGINE CONTROL HARNESS



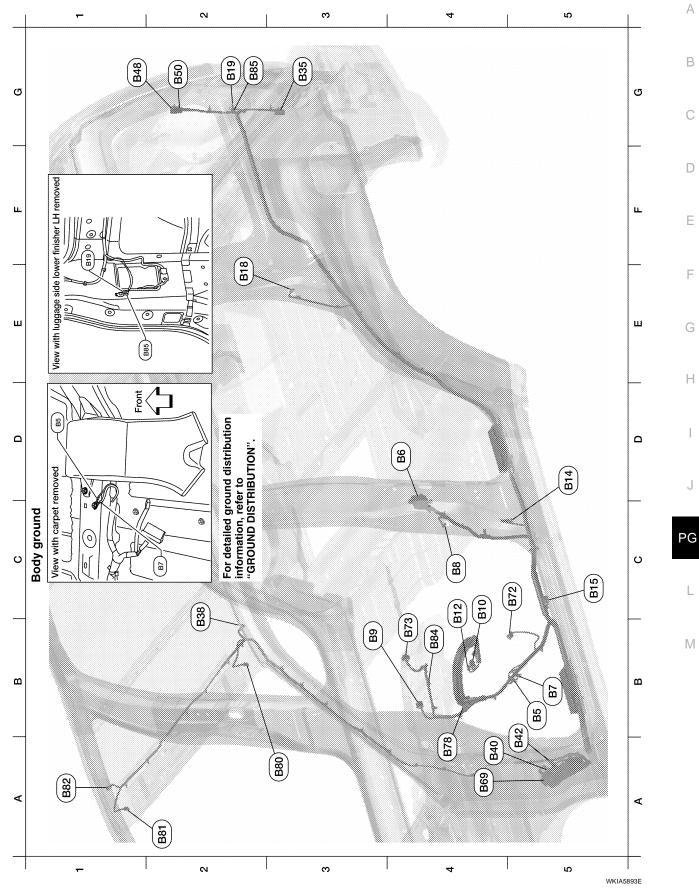
D5	F3	B/1	: A/C Compressor	B4	F50	B/6	: Electric throttle control actuator
E4	F5	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 2)	D4	F51	G/2	: Intake valve timing control solenoid valve (bank 2)
D4	F6	GR/3	: Ignition coil No. 2 (with power tran- sistor)	A1	F54	B/81	: ECM
E4	F7	GR/3	: Ignition coil No. 4 (with power tran- sistor)	F3	F55	B/2	: ATP switch
E3	F8	GR/3	: Ignition coil No. 6 (with power tran- sistor)	G2	F58	B/8	: Transfer control device (actuator motor)
E2	F9	G/10	: A/T assembly	G3	F59	B/2	: Wait detection switch
C4	F10	—	: Engine ground	G3	F60	GR/2	: 4LO switch
C2	F11	B/3	: Crankshaft position sensor (POS)	C2	F65	GR/4	: Air fuel ratio (A/F) sensor 1 (bank 1)
F3	F12	G/4	: Heated oxygen sensor 2 (bank 2)	E2	F66	B/2	: Park/neutral position switch (with M/T)
E3	F13	L/4	: Heated oxygen sensor 2 (bank 1)	D3	F67	L/4	: To F150
A1	F14	W/24	: To E5	E2	F69	W/2	: Back up lamp switch
C4	F15	L/2	: EVAP canister purge volume control solenoid valve	C1	F70	G/3	: Camshaft position sensor (PHASE) (bank 1)
C4	F16	—	: Engine ground	Inje	ctor sub-	harness	·
D4	F18	GR/2	: Fuel injector No. 2	D2	F101	GR/4	: To F44
C3	F19	B/2	: VIAS control solenoid valve	C3	F102	GR/2	: Fuel injector No. 1
D4	F20	GR/2	: Fuel injector No. 4	C3	F103	GR/2	: Fuel injector No. 3
E3	F21	GR/2	: Condenser-1	C3	F104	GR/2	: Fuel injector No. 5
D3	F22	GR/2	: Fuel injector No. 6	Igni	tion coil s	sub-harne	ess
E3	F23	B/3	: Camshaft position sensor (PHASE) (bank 2)	B2	F125	G/8	: To F26
D1	F24	GR/2	: Engine coolant temperature sensor	B3	F126	GR/3	: Ignition coil No. 1 (with power transistor)
C1	F26	G/8	: To F125	B2	F127	GR/3	: Ignition coil No. 3 (with power transistor)
C3	F27	B/1	: Starter motor (not shown, lower RH of engine)	C2	F128	GR/3	: Ignition coil No. 5 (with power transistor)
C5	F31	B/6	: Mass air flow sensor	В3	F129	G/2	: Intake valve timing control solenoid valve (bank 1)
B1	F32	W/16	: To E2	Kno	ck senso	or sub-hai	rness
B1	F33	W/16	: To E19	D3	F150	L/4	: To F67
A3	F39	—	: Fusible link box (battery)	C4	F151	B/2	: Knock sensor (bank 1)
D2	F44	GR/4	: To F101	D3	F152	B/2	: Knock sensor (bank 2)
B4	F46	B/3	: Power steering pressure sensor				
54	1.10	2,5					





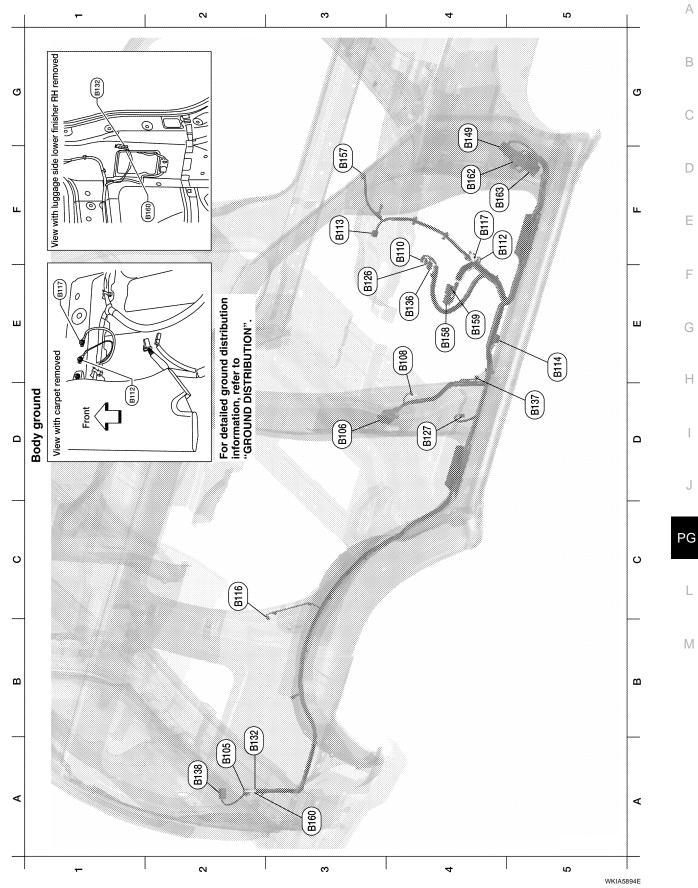
F2	C1	SMJ	: To E41	Diffe	Differential Sub-harness					
D2	C5	GR/5	: Fuel level sensor unit and fuel pump	C3	C115	GR/4	: To C14			
A3	C6	B/2	: EVAP canister vent control valve	C4	C116	GR/2	: Differential lock position switch			
A3	C7	GR/3	: EVAP control system pressure sensor	C4	C117	B/2	: Differential lock solenoid			
E4	C10	G/2	: Rear wheel sensor RH	Trai	ler Sub-hai	mess				
C3	C11	G/2	: Rear wheel sensor LH	B4	C125	GR/6	:To C51			
A4	C12	W/2	: License plate lamp	A5	C126	B/7	: Trailer			
B3	C14	GR/4	: To C115	A4	C150	B/2	: To C52			
B4	C51	GR/6	: To C125							
A4	C52	B/2	: To C150							

BODY HARNESS



B5	B5	_	: Body ground (LH sattelite sensor)	A4	B40	W/8	: To E34
D4	B6	W/12	: To D201	B5	B42	W/2	: To E36
B5	B7	_	: Body ground	G1	B48	W/6	: To D402
C4	B8	W/3	: Front door switch LH	G2	B50	W/2	:To D410
B3	B9	Y/12	: Air bag diagnosis sensor unit	A4	B69	SMJ	: To M40
C4	B10	Y/2	: Front LH side air bag module	C5	B72	W/8	: Subwoofer (with audio amplifier)
C4	B12	W/3	: Seat belt buckle switch LH	B4	B73	B/6	: Yaw rate/side/decel G sensor
D5	B14	Y/2	: Front LH seat belt pre-tensioner	A4	B78	Y/2	: To B157
C5	B15	Y/2	: LH side air bag (satellite) sensor	A3	B80	W/2	: Vanity lamp LH
E2	B18	W/3	: Rear door switch LH	A2	B81	W/2	: Vanity lamp RH
G2	B19	_	: Body ground	A1	B82	Y/2	: RH side front curtain air bag module
G3	B35	W/6	: Rear combination lamp LH	B4	B84	B/1	: Parking brake switch
C2	B38	Y/2	: LH side front curtain air bag module	G2	B85	B/1	: Body ground

BODY NO. 2 HARNESS



_							
A2	B105	W/6	: Rear combination lamp RH	A2	B132	—	: Body ground
D3	B106	W/12	: To D301	E4	B136	W/16	: To P151
E4	B108	W/3	: Front door switch RH	D5	B137	W/3	: Belt tension sensor
F4	B110	W/3	: Seat belt buckle switch RH	A2	B138	B/2	: Rear cargo power socket
F5	B112	—	: Body ground (satellite sensor)	G4	B149	SMJ	: To M36
F3	B113	Y/12	: Air bag diagnosis sensor unit	F3	B157	Y/2	: To B78
E5	B114	Y/2	: RH side air bag (satellite) sensor	E4	B158	W/8	: Audio amplifier
C2	B116	W/3	: Rear door switch RH	E4	B159	W/24	: Audio amplifier
F4	B117	—	: Body ground	A3	B160	—	: Body ground
E3	B126	Y/2	: Front RH side air bag module	F4	B162	W/12	: To M16
D4	B127	Y/2	: Front RH seat belt pre-tensioner	F4	B163	W/16	: To M17

ROOM LAMP HARNESS N S ი 4 Т ശ ര щ ш E ш ш ۵ ۵ R12 PG υ υ ัย (æ) ш ш ∢ ∢ R ო 4 S -WKIA3985E

HARNESS

А

В

С

D

Ε

F

G

Н

1

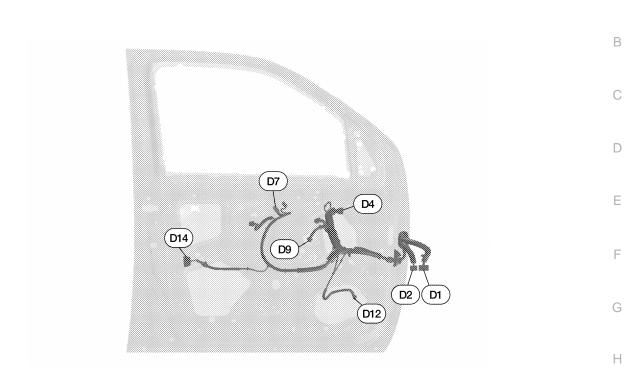
J

L

Μ

B5	R1	W/12	: To M1	E1	R11	W/2	: Cargo lamp
B3	R9	W/3	: Front room/map lamp assembly		R12	W/2	: Room lamp 2nd row

FRONT DOOR LH HARNESS



WKIA3986E

D1	W/24	: To M9	D7	W/16	: Main power window and door lock/unlock switch
D2	W/16	: To M8	D9	GR/2	: Front power window motor LH
D4	B/10	: Door mirror LH (with heated mirror)	D12	W/2	: Front door speaker LH
D4	B/3	: Door mirror LH (without heated mirror)		GR/6	: Front door lock assembly LH

L

Μ

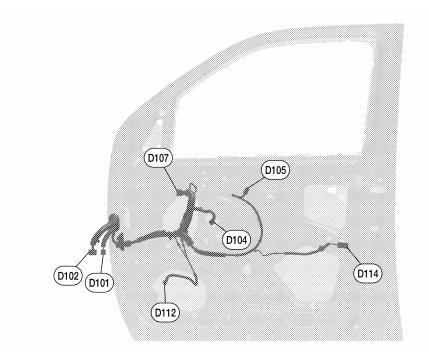
PG

I

J

А

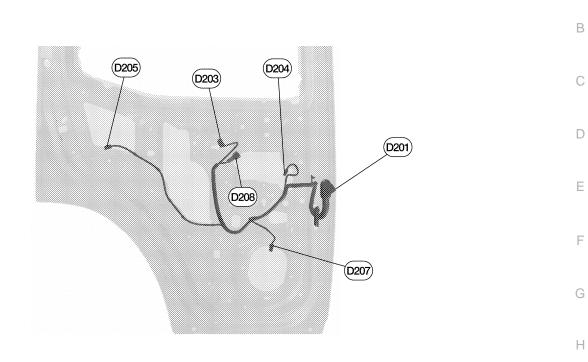
FRONT DOOR RH HARNESS



WKIA3987E

D101	W/12	: To M75	D107	B/3	: Door mirror RH (without heated mirror)
D102	W/16	: To M74	D107	B/10	: Door mirror RH (with heated mirror)
D104	GR/2	: Front power window motor RH	D112	W/2	: Front door speaker RH
D105	W/12	: Power window and door lock/unlock switch RH		W/2	: Front door lock actuator RH

REAR DOOR LH HARNESS



WKIA3989E

D201	W/12	: To B6	D205	W/2	: Rear door lock actuator LH	
D203	W/8	: Rear power window switch LH	D207	W/2	: Rear door speaker LH	
D204	B/2	: Rear power window motor LH	D208	BR/2	: Rear door tweeter LH	

L

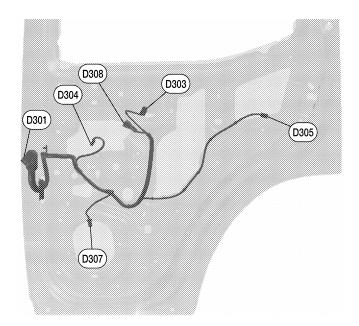
Μ

I

J

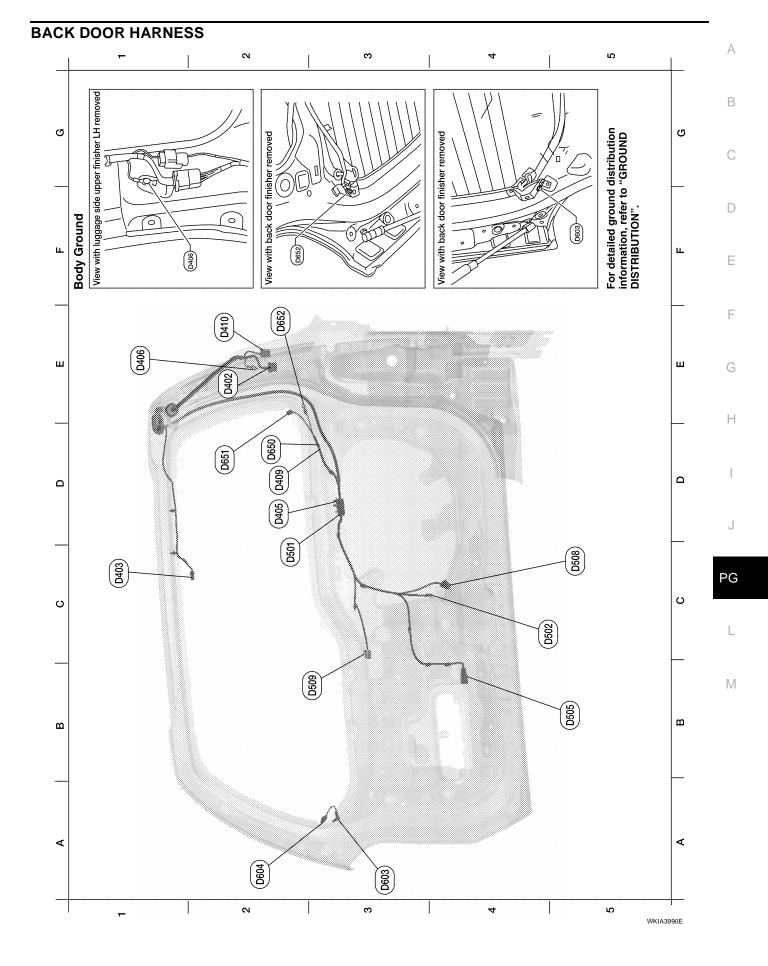
А

REAR DOOR RH HARNESS



WKIA3988E

D301	W/12	: To B106	D305	W/2	: Rear door lock actuator RH
D303	W/8	: Rear power window switch RH	D307	W/2	: Rear door speaker RH
D304	B/2	: Rear power window motor RH	D308	BR/2	: Rear door tweeter RH



Bac	Back door No. 2 harness			Rea	Rear window sub-harness				
E2	D402	W/6	: To B48	B5	D505	BR/3	: Back door key cylinder switch		
C1	D403	W/2	: High mounted stop lamp	C5	D508	W/4	: Back door lock actuator		
D2	D405	W/8	: To D501	B3	D509	W/4	: Rear wiper motor		
E1	D406	—	: Body ground	A3	D603	_	: Body ground (defogger)		
D2	D409	W/2	: To D650	A2	D604	B/1	: Rear window defogger		
E2	D410	W/2	: To B50	Rear window defogger sub-harness		er sub-harness			
Bac	Back door harness		D2	D650	W/2	: To D409			
C2	D501	W/8	: To D405	D2	D651	B/1	: Rear window defogger		
C5	D502	W/3	: Back door switch	E2	D652		: Body ground		

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	B
A/C,M	MTC	Manual Air Conditioner	
AF1B1	EC	Air Fuel Ratio (A/F) Sensor 1 Bank 1	C
AF1B2	EC	Air Fuel Ratio (A/F) Sensor 1 Bank 2	0
AF1HB1	EC	Air Fuel Ratio (A/F) Sensor 1 Heater Bank 1	
AF1HB2	EC	Air Fuel Ratio (A/F) Sensor 1 Heater Bank 2	D
APPS1	EC	Accelerator Pedal Position Sensor	
APPS2	EC	Accelerator Pedal Position Sensor	
APPS3	EC	Accelerator Pedal Position Sensor	F
ASC/BS	EC	ASCD Brake Switch	
ASC/SW	EC	ASCD Steering Switch	
ASCBOF	EC	ASCD Brake Switch	F
ASCIND	EC	ASCD Indicator	
AT/IND	DI	A/T Indicator Lamp	
AUDIO	AV	Audio	G
B/COMP	DI	Combination Meter Board Computer	
BACK/L	LT	Back-up Lamp	
BRK/SW	EC	Brake Switch	Н
CAN	AT	CAN Communication Line	
CAN	EC	CAN Communication Line	
CAN	LAN	CAN System	
CHARGE	SC	Charging System	
CHIME	DI	Warning Chime	
COOL/F	EC	Cooling Fan Control	J
COMBSW	LT	Combination Switch	
CUR/SE	EC	Battery Current Sensor	
D/LOCK	BL	Power Door Lock	PG
DEF	GW	Rear Window Defogger	
DIFLOC	RFD	Electronic Locking Differential	
DTRL	LT	Headlamp - With Daytime Light System	L
ECM/PW	EC	ECM Power Supply for Back-Up	
ECTS	EC	Engine Coolant Temperature Sensor	
ETC1	EC	Electric Throttle Control Function	M
ETC2	EC	Throttle Control Motor Relay	
ETC3	EC	Throttle Control Motor	
F/FOG	LT	Front Fog Lamp	
F/PUMP	EC	Fuel Pump	
FTS	AT	A/T Fluid Temperature Sensor	
FTTS	EC	Fuel Tank Temperature Sensor	
FUELB1	EC	Fuel Injection System Bank 1	
FUELB2	EC	Fuel Injection System Bank 2	
H/LAMP	LT	Headlamp	
HORN	WW	Horn	
IATS	EC	Intake Air Temperature Sensor	
IGNSYS	EC	Ignition System	
ILL	LT	Illumination	
	= 0		
INJECT	EC	Injectors	

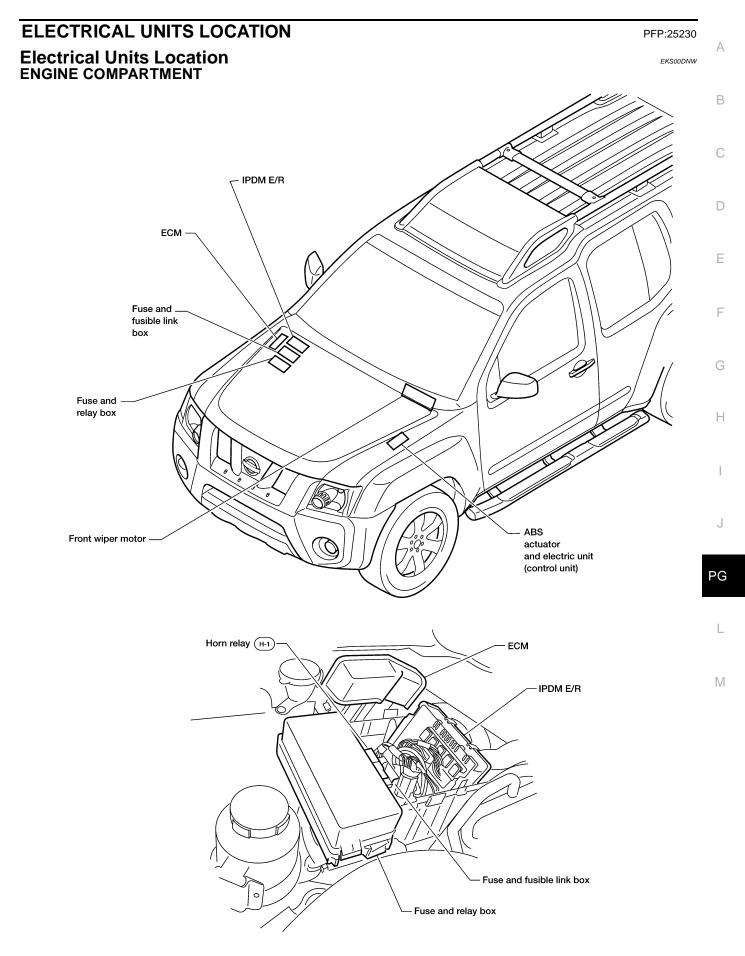


EKS00DNV

А

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
METER	DI	Speedometer, Tachometer, Temp. and Fuel Gauges
MIL/DL	EC	Malfunction Indicator Lamp
MIRROR	GW	Door Mirror
NATS	BL	Nissan Anti-Theft System
NONDTC	AT	Non-Detective Items
O2H2B1	EC	Rear Heated Oxygen Sensor 2 Heater Bank 1
O2H2B2	EC	Rear Heated Oxygen Sensor 2 Heater Bank 2
O2S2B1	EC	Heated Oxygen Sensor 2 Bank 1
O2S2B2	EC	Heated Oxygen Sensor 2 Bank 2
P/SCKT	WW	Power Socket
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHSB1	EC	Camshaft Position Sensor (PHASE) (Bank 1)
PHSB2	EC	Camshaft Position Sensor (PHASE) (Bank 1)
PNP/SW	AT	Park/Neutral Position Switch
PNP/SW	EC	Park/Neutral Position Switch
POS	EC	Crankshaft Position Sensor (POS)
POWER	PG	Power Supply Routing
PRE/SE	EC	EVAP Control System Pressure Sensor
PS/SEN	EC	Power Steering Pressure Sensor
RP/SEN	EC	Refrigerant Pressure Sensor
SEN/PW	EC	Sensor Power Supply
SHIFT	AT	A/T Shift Lock System
SRS	SRS	Supplemental Restraint System
STSIG	AT	Start Signal Circuit
START	SC	Starting System
STOP/L	LT	Stop Lamp
T/TOW	LT	Trailer Tow
T/WARN	WT	Low Tire Pressure Warning System
TAIL/L	LT	Parking, License and Tail Lamps
T/F	TF	Transfer Case
TPS1	EC	Throttle Position Sensor
TPS2	EC	Throttle Position Sensor
TPS3	EC	Throttle Position Sensor
TURN	LT	Turn Signal and Hazard Warning Lamps
VDC	BRC	Vehicle Dynamic Control System
VEHSEC	BL	Vehicle security (theft warning) system
VENT/V	EC	EVAP Canister Vent Control Valve
VIAS	EC	Variable Air Induction Control System
VIAS/V	EC	Variable Air Induction Control System Valve
VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)
WARN	DI	Warning Lamps
WINDOW	GW	Power Window
WIP/R	WW	Rear Wiper and Washer
WIPER	WW	Front Wiper and Washer

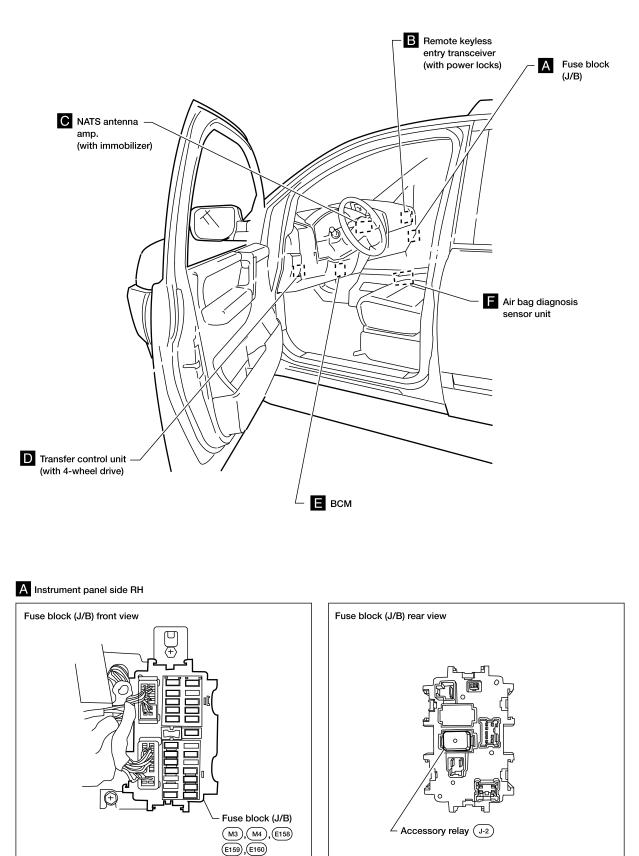
ELECTRICAL UNITS LOCATION





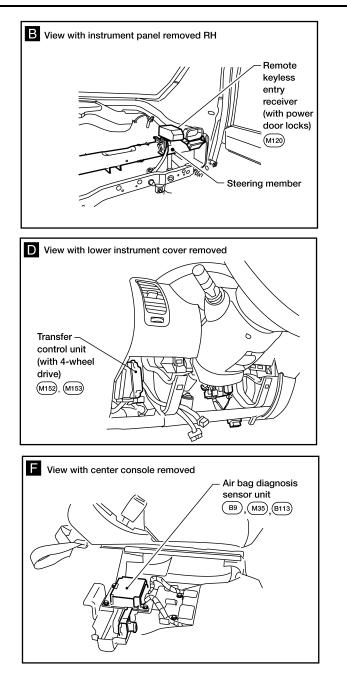
ELECTRICAL UNITS LOCATION

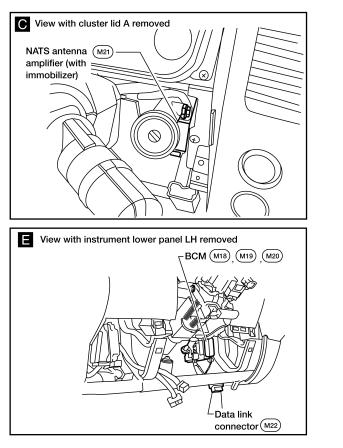
PASSENGER COMPARTMENT



WKIA5071E

ELECTRICAL UNITS LOCATION





J

А

В

С

D

Е

F

Н

PG

L

M

WKIA5072E

HARNESS CONNECTOR

Description HARNESS CONNECTOR (TAB-LOCKING TYPE)

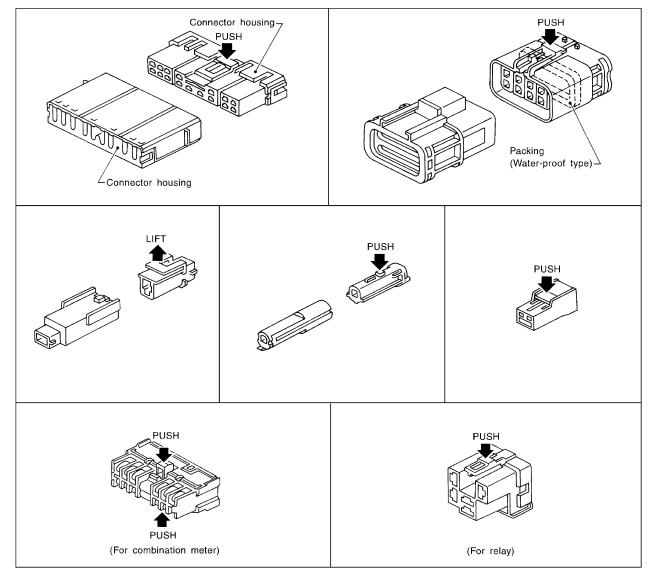
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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:B4341

HARNESS CONNECTOR

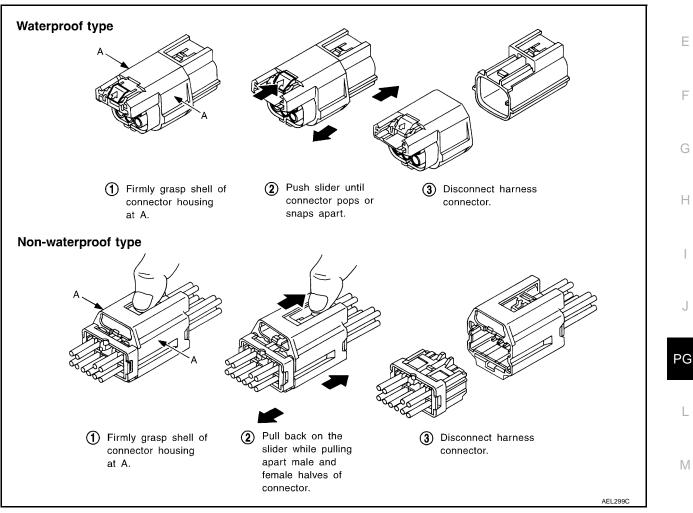
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

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

CAUTION:

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

[Example]



В

С

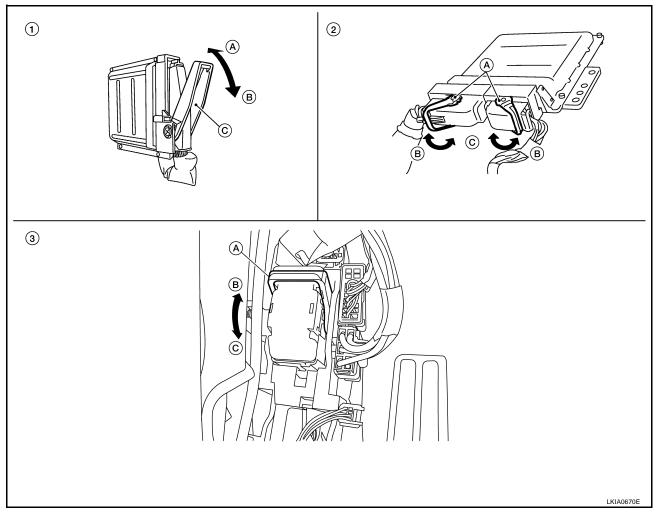
D

HARNESS CONNECTOR (LEVER LOCKING TYPE)

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

CAUTION:

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



- Control unit with single lever
 A. Fasten
 B. Loosen
 - C. Lever

- 2. Control unit with dual levers
 - A. Levers
 - B. Fasten
 - C. Loosen

- 3. SMJ connector
 - A. Lever
 - B. Fasten
 - C. Loosen

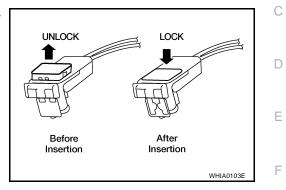
HARNESS CONNECTOR

HARNESS CONNECTOR (DIRECT-CONNECT SRS COMPONENT TYPE)

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

CAUTION:

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



J

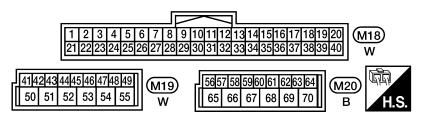
Н

L

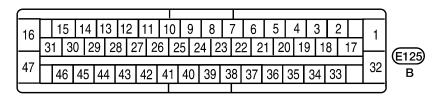
Μ

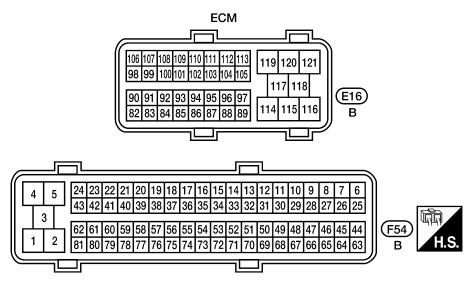
ELECTRICAL UNITS Terminal Arrangement

BCM (BODY CONTROL MODULE)



ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)





TRANSFER CONTROL UNIT

												1										•	
	6		5		4		3	2			1		32		31		30	29	28		27		
	17	16	15	14	13	12	11	10	9	8	7	(E152)	42	41	40	39	38	37	36 3		1 33	(E153) (FIA)	
l	26	25	24	23	22			21	20	19	18	w	50	49	48	47			46 4	5 44	43	w H.	S.

WKIA4003E

PFP:23710

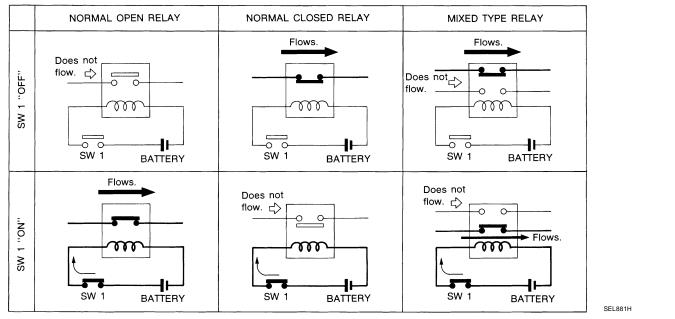
EKS00D01

STANDARDIZED RELAY

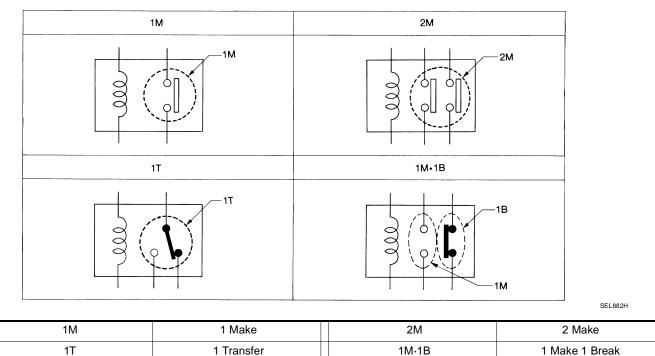
STANDARDIZED RELAY

Description NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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



TYPE OF STANDARDIZED RELAYS



PFP:25230

EKS00D02

А

В

D

Е

F

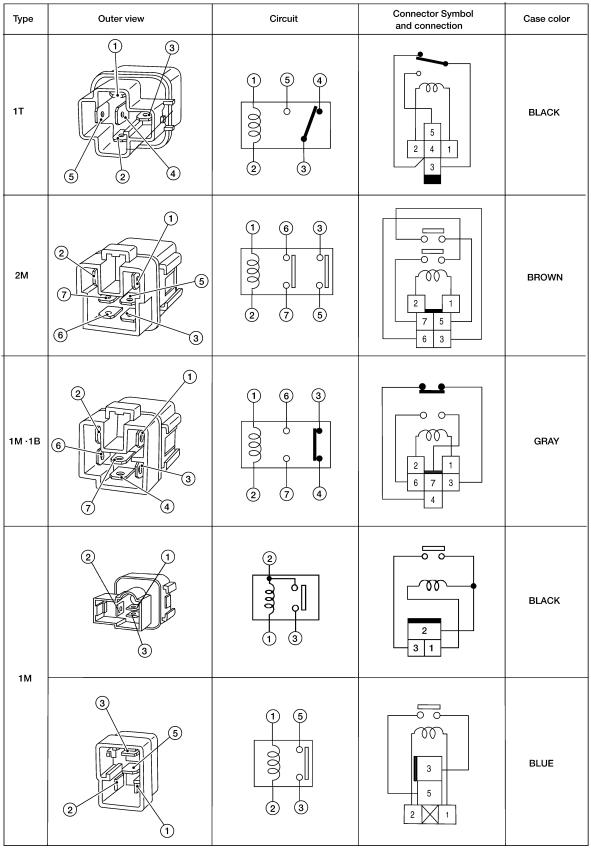
Н

PG

L

Μ

STANDARDIZED RELAY

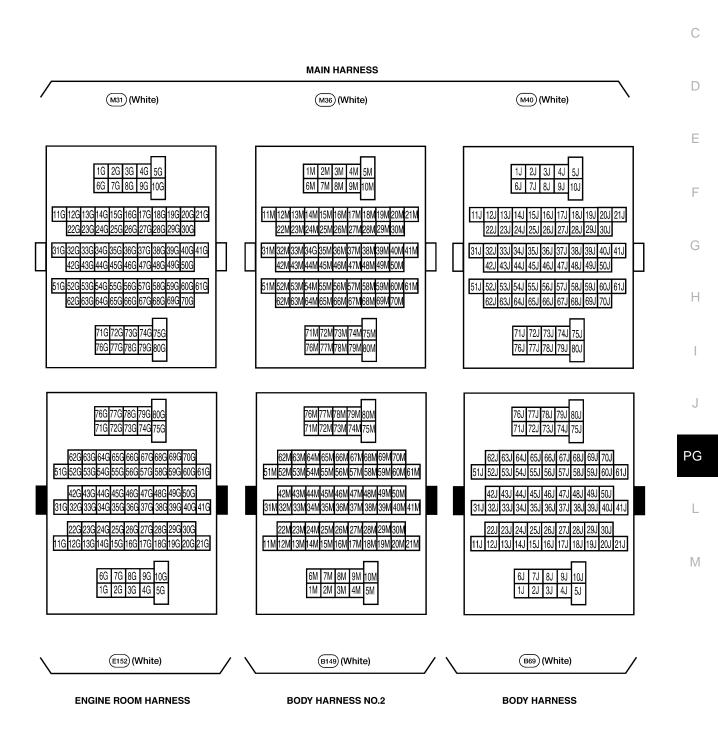


The arrangement of terminal numbers on the actual relays may differ from those shown above.

WKIA0253E

SUPER MULTIPLE JUNCTION (SMJ)

SUPER MULTIPLE JUNCTION (SMJ) Terminal Arrangement



PFP:84341

EKS00D03

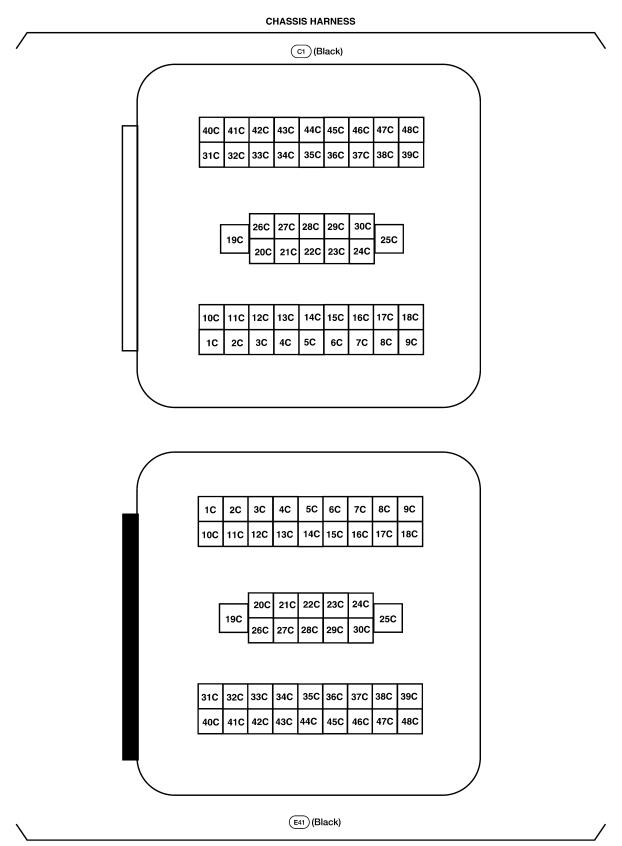
А

В

Revision: September 2006

2007 Xterra

SUPER MULTIPLE JUNCTION (SMJ)

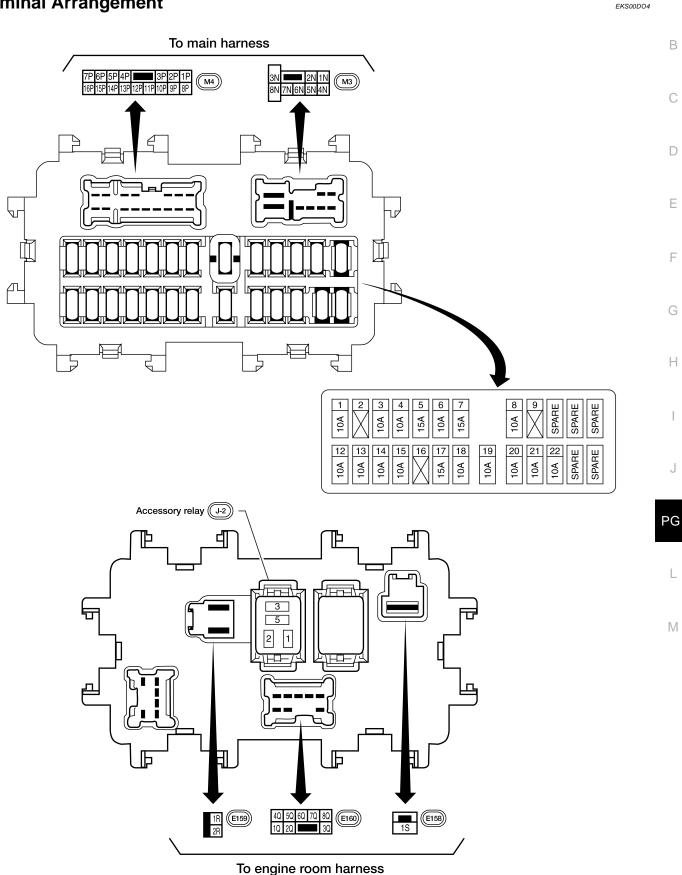


ENGINE ROOM HARNESS

WKIA3972E

FUSE BLOCK-JUNCTION BOX (J/B)

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



WKIA5073E

PFP:24350

А

В

С

D

Е

F

Н

I

J

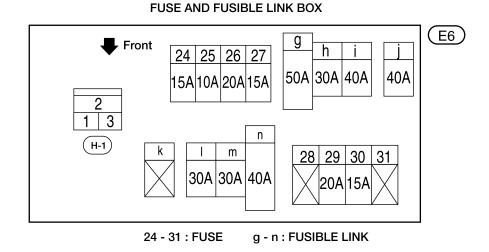
L

Μ

FUSE AND FUSIBLE LINK BOX Terminal Arrangement

PFP:24381

EKS00D05



FUSIBLE LINK BOX (BATTERY) Battery (+) c (80A) a (140A) d (80A) f (80A) e (100A) b (60A) 1)[[] L.S.U 0 C d١ (E129) (B) (E128) (GR)

(E30), (E128), (E129), (E202), (F39)

WKIA5074E

Trailer turn relay RH (E170)

- Fuse 57 (10A)

- Fuse 58 (10A)

- Fuse 60 (15A)

Front blower motor relay (E54)

Transfer shift low relay (E47)



Transfer shut off relay 2 (E157)

Daytime light relay 2 (E104)

Stop lamp relay (E12) ~ (with hill descent control

and hill start assist)

Clutch interlock (E171)

Daytime light relay 1 (E103)

cancel relay 1 (with M/T)

Back-up lamp relay (E45)

cancel relay 2 (with M/T)

Clutch interlock (E166)

(with A/T)

11

Trailer turn relay LH (E169)

11



EKS00D06

В

А



I

Back-up lamp relay (E226)

Trailer tow relay 1 (E227)

Trailer tow relay 2 (E228)

(with M/T)

Ť

Transfer shut off relay 1 (E156)

Transfer shift high relay (E46)



PG

L

М

WKIA5895E

Front