# POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

# CONTENTS

PRECAUTION 3
PRECAUTIONS
PREPARATION4
PREPARATION
SYSTEM DESCRIPTION5
COMPONENT PARTS5Circuit Breaker5Battery5Harness Connector5Standardized Relay8
WIRING DIAGRAM11
POWER SUPPLY ROUTING CIRCUIT11Wiring Diagram - BATTERY POWER SUPPLY11Wiring Diagram - BATTERY POWER SUPPLYFUSIBLE LINK No. K -29Wiring Diagram - BATTERY POWER SUPPLYFUSIBLE LINK No. S -33Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 6 -37Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 7 -43Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 9 -46Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 9 -46Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 10 -51Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 35 -54Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 43 -60Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 43 -60Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 43 -60Wiring Diagram - BATTERY POWER SUPPLYFUSE No. 46 -64

Wiring Diagram - BATTERY POWER SUPPLY FUSE No. 4767	F
Wiring Diagram - ACCESSORY POWER SUP-	
PLY80 Wiring Diagram - ACCESSORY POWER SUP-	G
PLY FUSE No. 19	
Wiring Diagram - ACCESSORY POWER SUP- PLY FUSE No. 20	Н
Wiring Diagram - IGNITION POWER SUPPLY89	
Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 3105	I
Wiring Diagram - IGNITION POWER SUPPLY	
FUSE No. 4109	
Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 37115	J
Wiring Diagram - IGNITION POWER SUPPLY	
FUSE No. 55	K
Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 57123	
Wiring Diagram - IGNITION POWER SUPPLY	
FUSE No. 61	L
FUSE No. 80	
OPTION HARNESS133	PG
Wiring Diagram	
FUSE BLOCK - JUNCTION BOX (J/B)	N
Fuse, Connector and Terminal Arrangement140	
FUSE, FUSIBLE LINK AND RELAY BOX 141	0
Fuse and Fusible Link Arrangement141	0
IPDM E/R (INTELLIGENT POWER DISTRI-	
BUTION MODULE ENGINE ROOM)	Ρ
Fuse, Connector and Terminal Arrangement143	
HARNESS LAYOUT	
Outline	
Engine Room Harness146 Engine Control Harness148	
Engine Control Harness 148	

\_\_\_\_

А

В

С

D

Е

Main Harness	
Body Harness	150
Chassis Harness	
Door Harness	
Room Lamp Harness	158
BASIC INSPECTION	159
BATTERY INSPECTION	
How to Handle Battery	159
Work Flow	161
FUSE INSPECTION	-
How To Check	162
FUSIBLE LINK INSPECTION	
How To Check	

REMOVAL AND INSTALLATION164
BATTERY164Exploded View164Removal and Installation164
BATTERY TERMINAL WITH FUSIBLE LINK165 Exploded View
SERVICE DATA AND SPECIFICATIONS (SDS)
SERVICE DATA AND SPECIFICATIONS (SDS)

# < PRECAUTION > PRECAUTION PRECAUTIONS

Precaution 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 AIR BAG" and "SEAT BELT" 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 that 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 AIR BAG".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

#### WARNING:

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

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# < PREPARATION > PREPARATION PREPARATION

# Special Service Tools

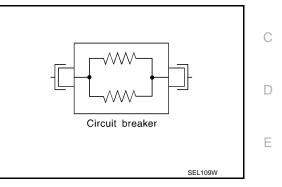
INFOID:000000006288131

Tool number (Kent-Moore No.) Tool name		Description
 (J-48087) Battery Service Center	WKIA5280E	Tests battery. For operating instructions, refer to Technical Service Bulletin and Battery Service Center User Guide.

# <u>SYSTEM DESCRIPTION ></u> SYSTEM DESCRIPTION COMPONENT 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.



#### Battery

Туре		115D31R	(-
20 hour rate capacity	[V – Ah]	12 - 82	
Cold cranking current (For reference value)	[A]	782	
	6,4	102	

#### Harness Connector

#### HARNESS CONNECTOR (TAB-LOCKING TYPE)

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

#### **CAUTION:**

Never pull the harness or wires when disconnecting the connector.

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INFOID:000000006275746

INFOID:000000006275747

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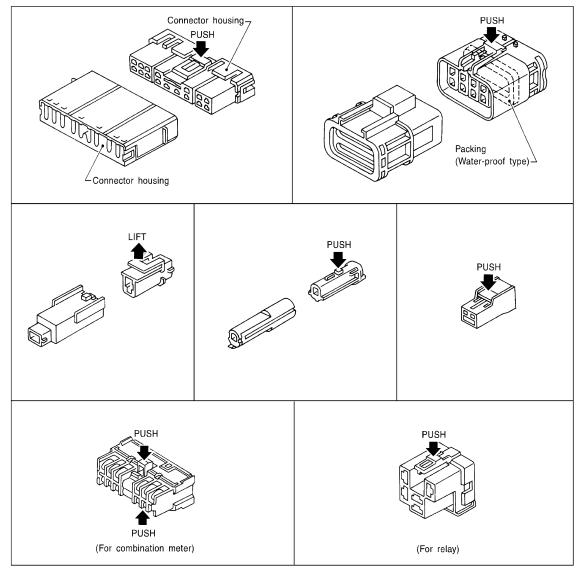
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#### < SYSTEM DESCRIPTION >

#### [Example]



SEL769DA

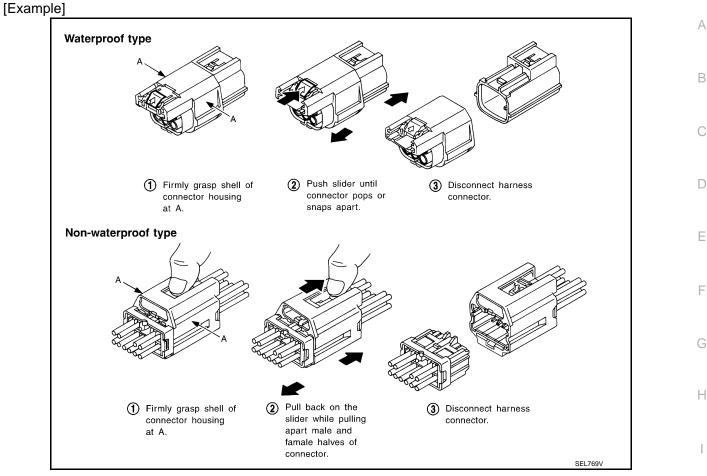
#### HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

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

#### CAUTION:

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

#### < SYSTEM DESCRIPTION >



#### 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:

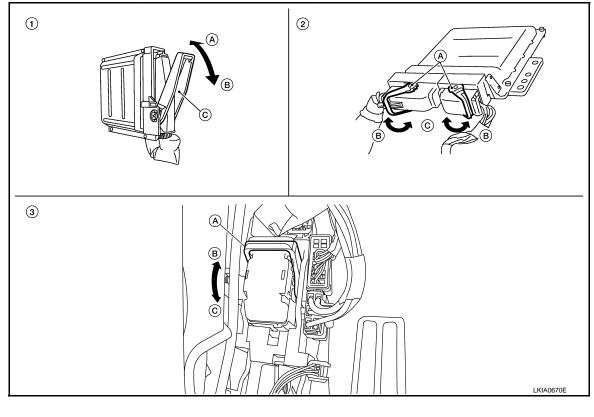
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#### < SYSTEM DESCRIPTION >

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



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

Control unit with dual levers
 A. Levers
 B. Fasten

C. Loosen

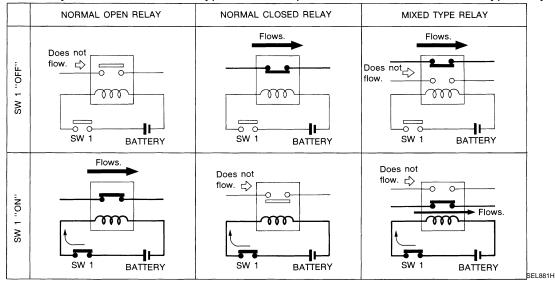
- 3. SMJ connector
  - A. Lever
  - B. Fasten
  - C. Loosen

#### Standardized Relay

INFOID:000000006275748

# 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

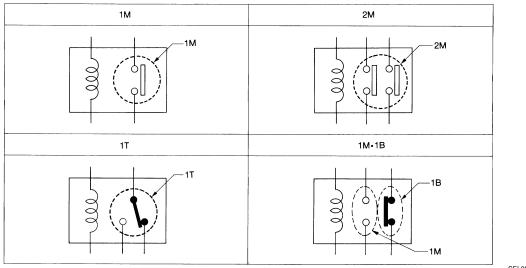
#### < SYSTEM DESCRIPTION >

#### 1M ..... 1 Make

2M ······ 2 Make

1T ..... 1 Transfer





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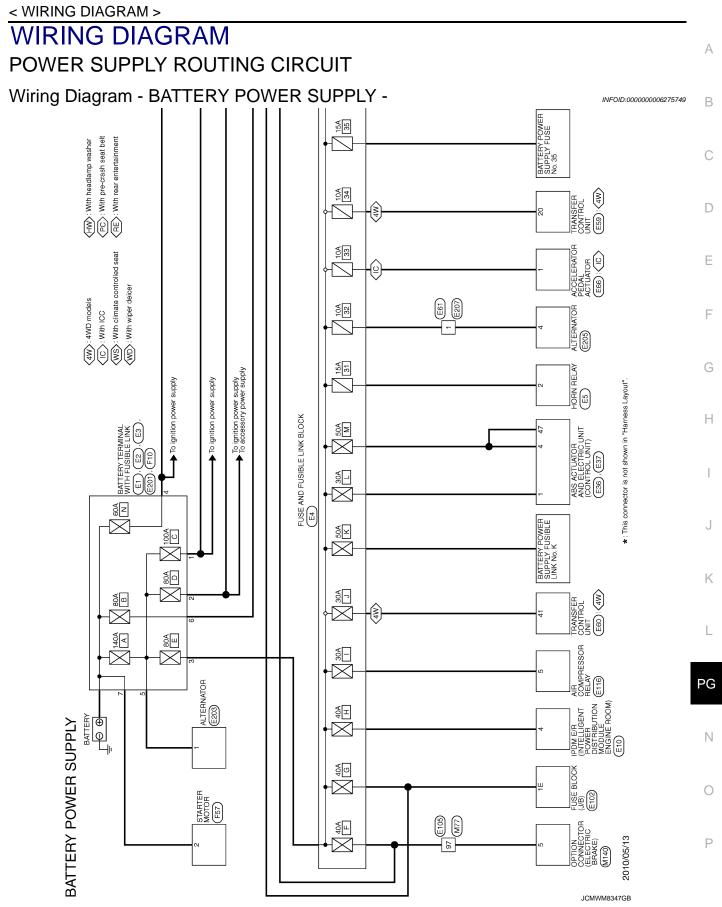
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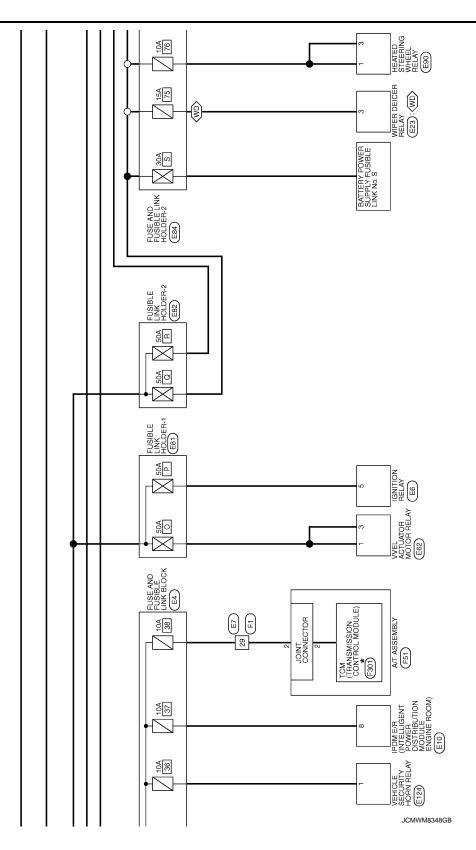
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#### < SYSTEM DESCRIPTION >

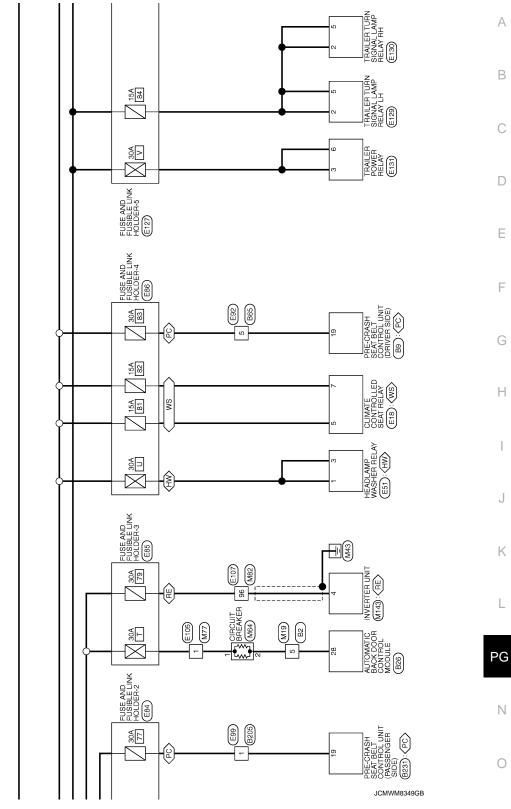
Туре	Outer view	Circuit	Connector symbol and connection	Case color
1T				BLACK
2M				BROWN
1M•1B				GRAY
1M				BLUE
The arrar	Ingement of terminal numbers on th	e actual relays may differ from	those shown above.	SEL188W



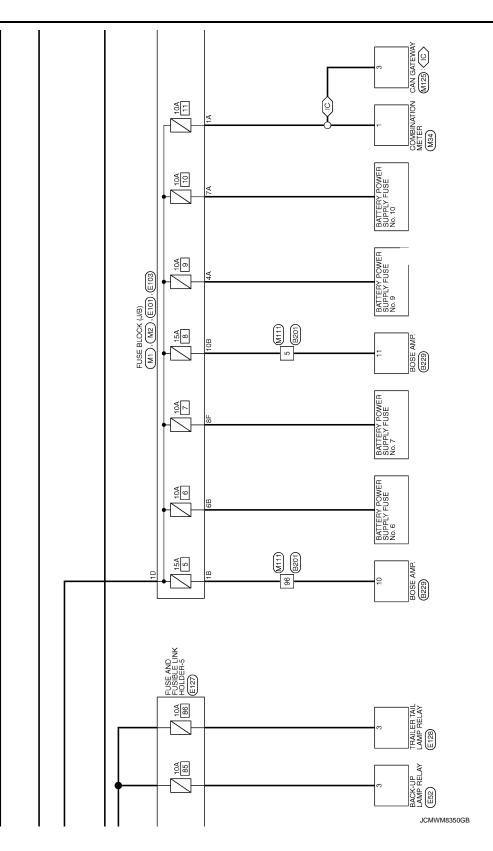
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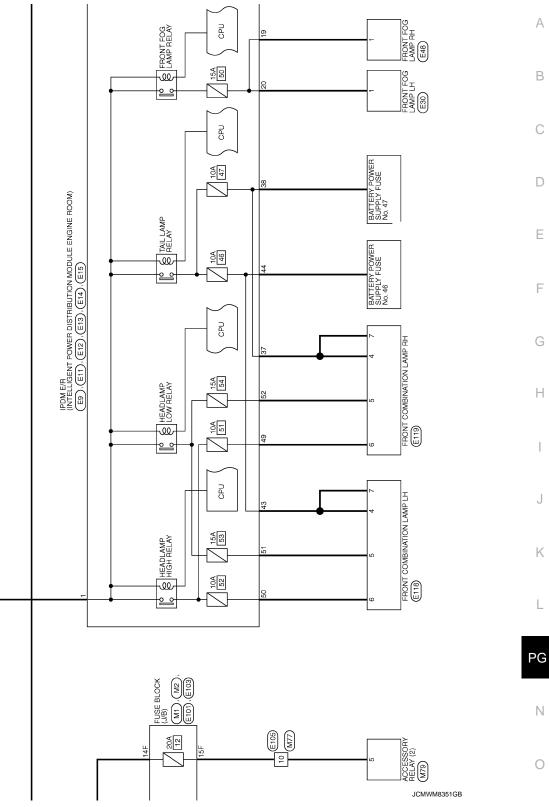
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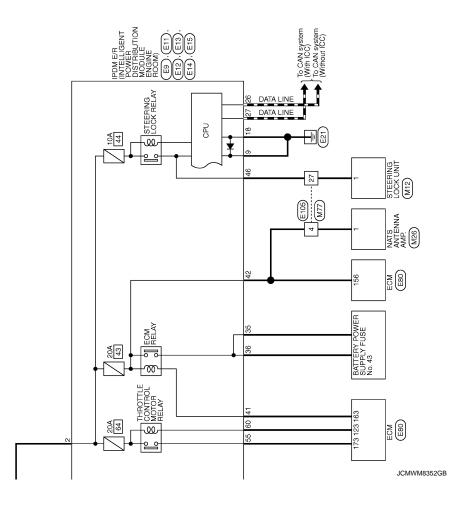


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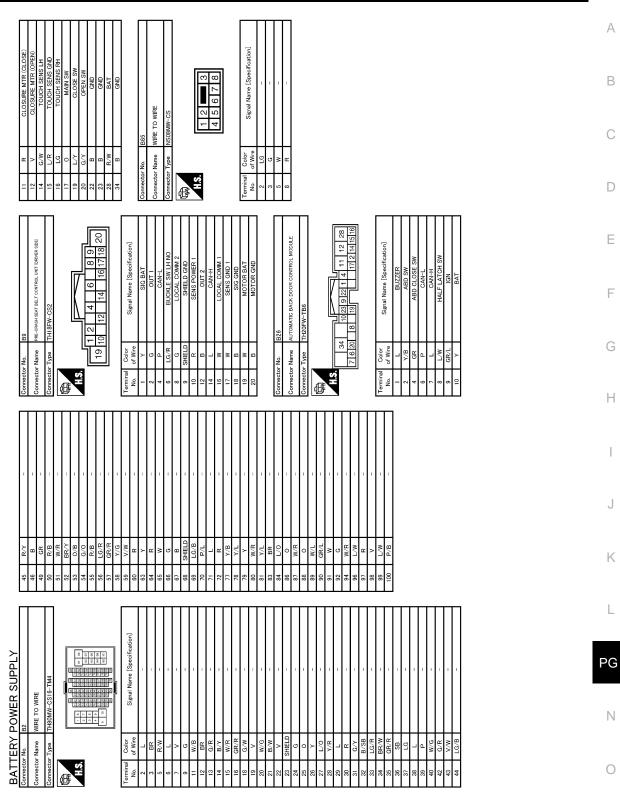


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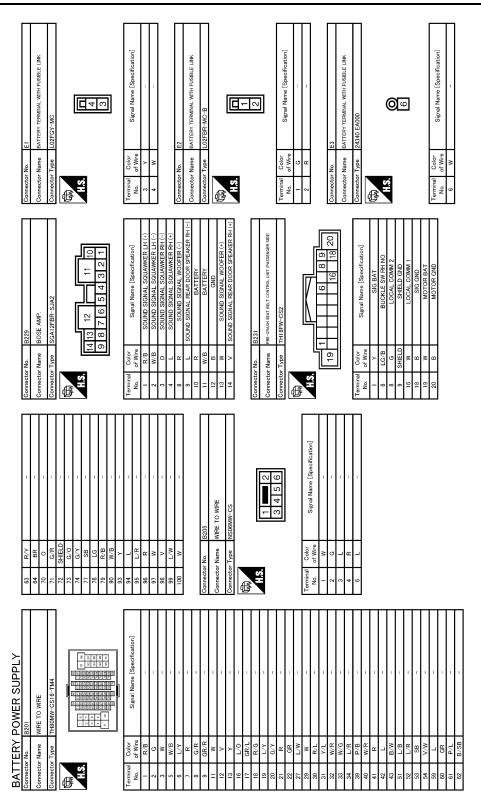


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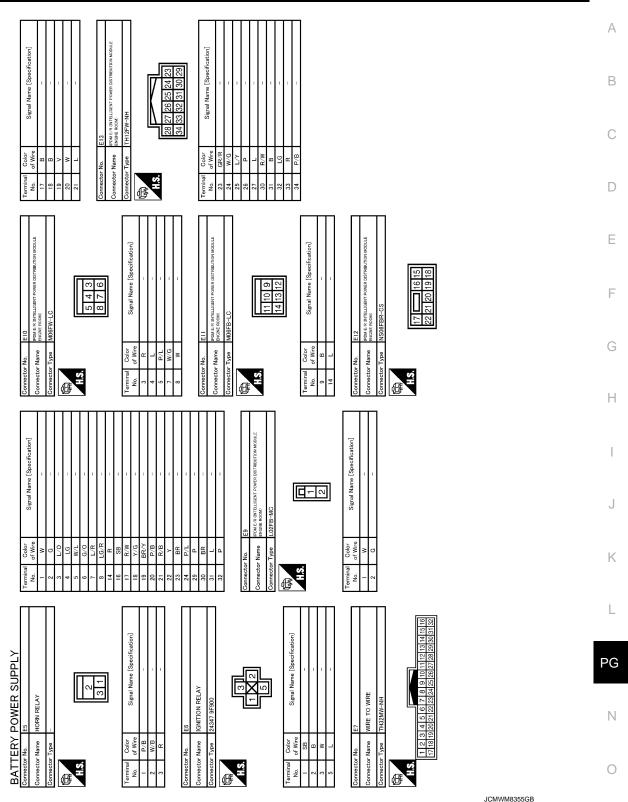
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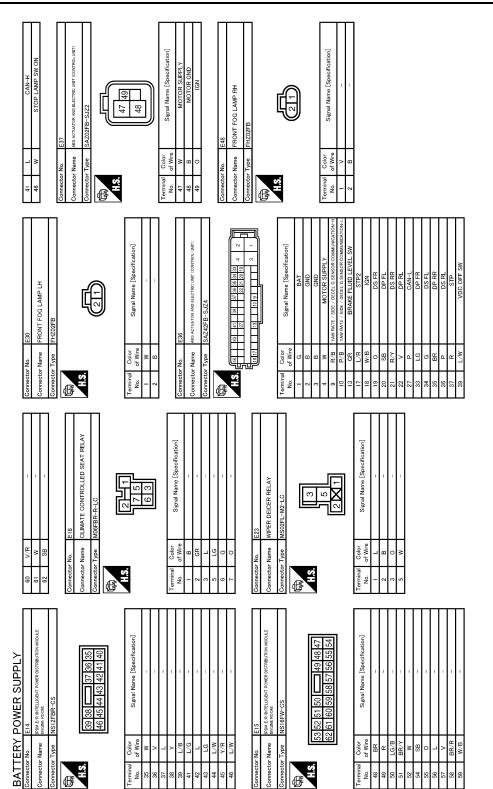
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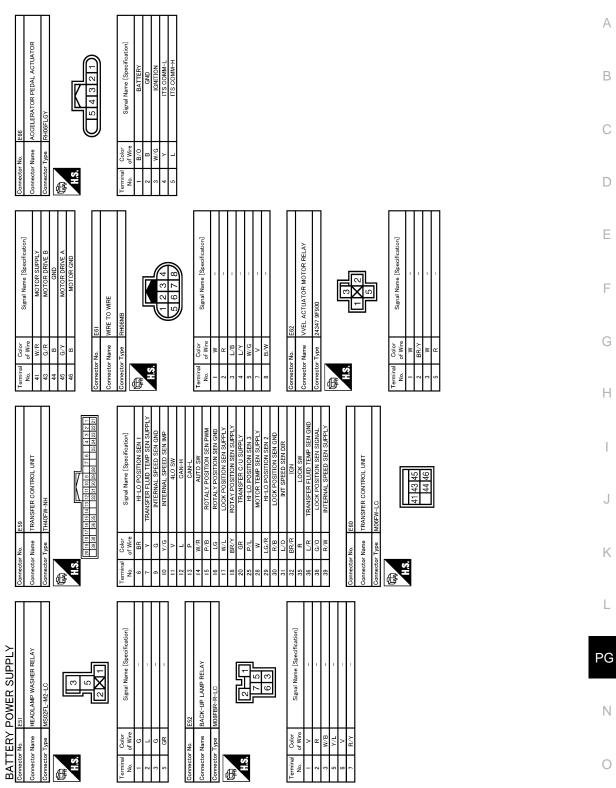
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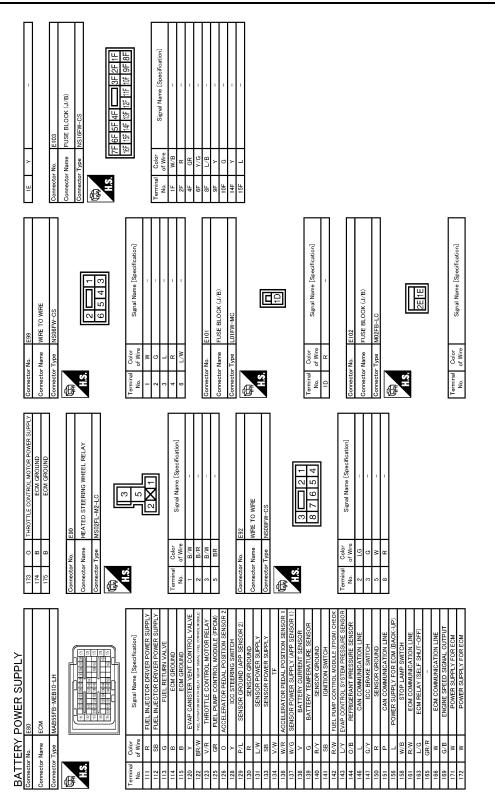
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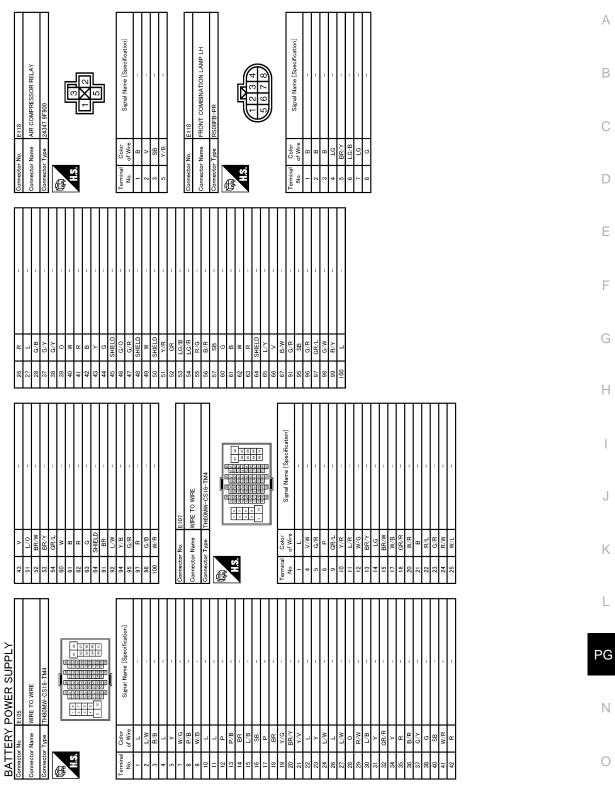
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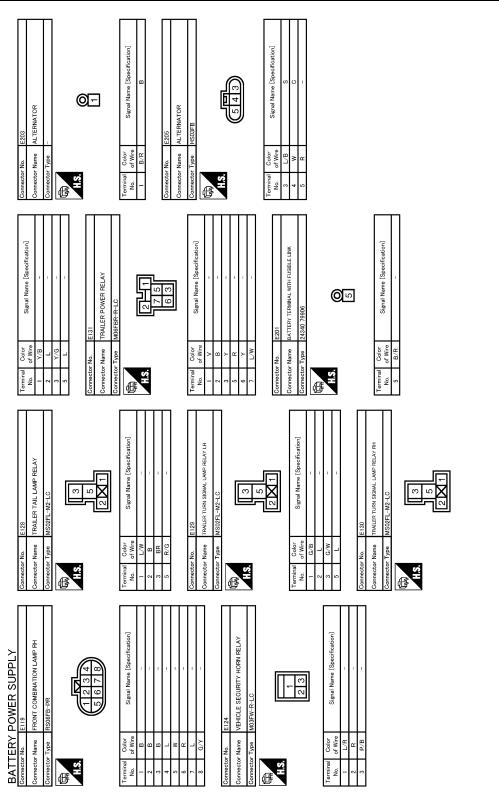
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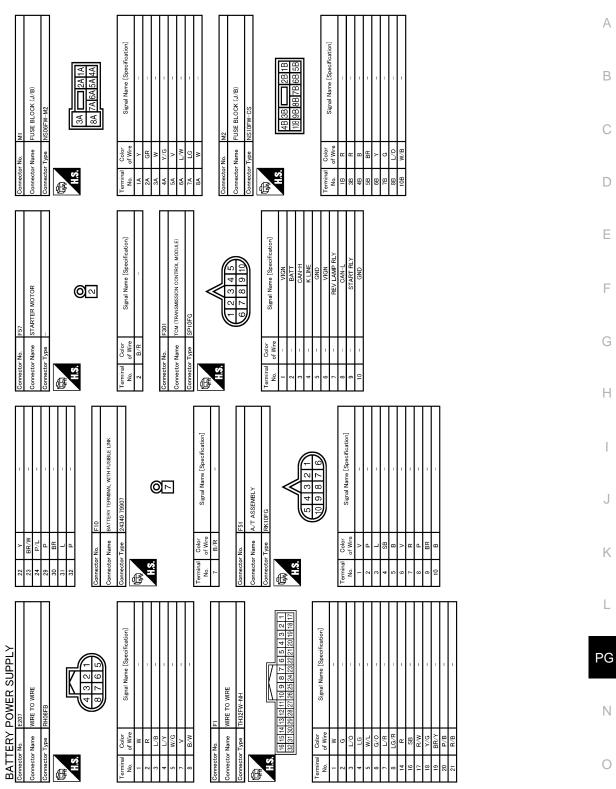
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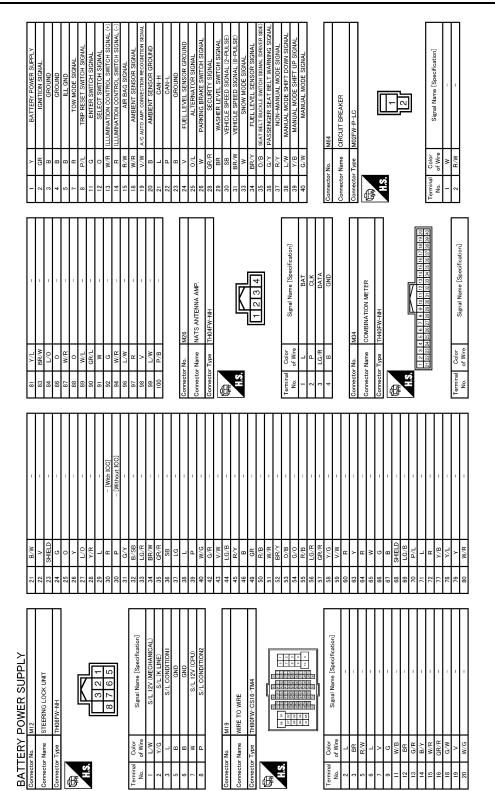
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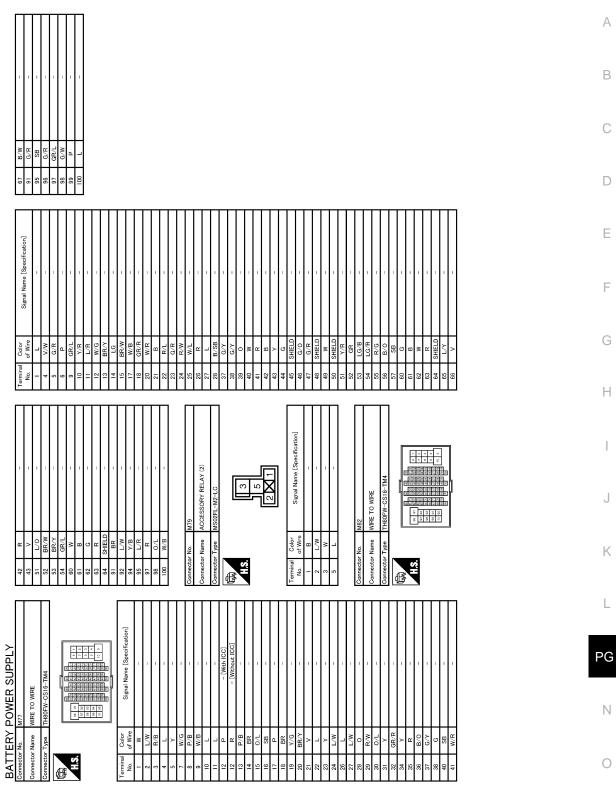
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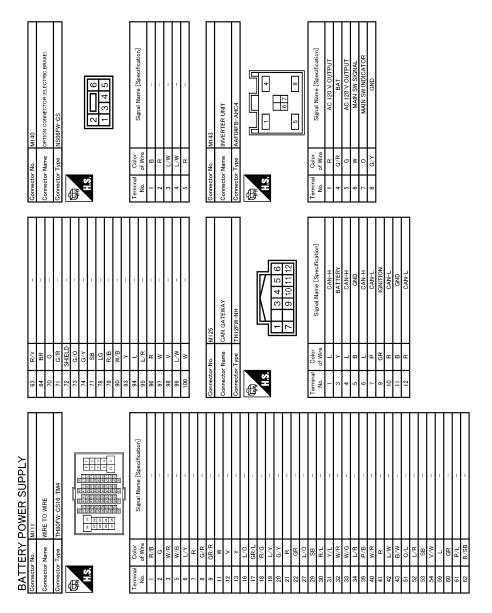


JCMWM8362GB

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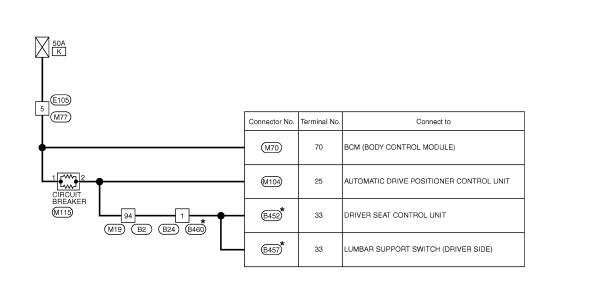
JCMWM8363GB



JCMWM8364GB

< WIRING DIAGRAM >

# Wiring Diagram - BATTERY POWER SUPPLY FUSIBLE LINK No. K - INFOID:000000002283133 BATTERY POWER SUPPLY FUSIBLE LINK No. K



\*: This connector is not shown in "Harness Layout".

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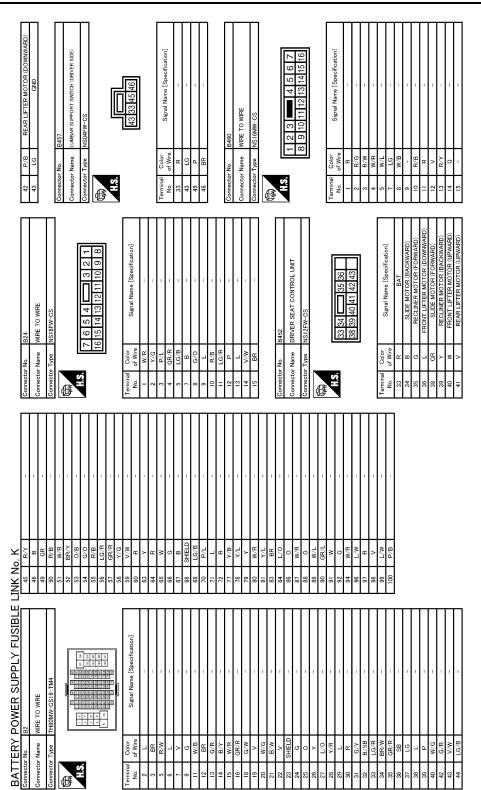
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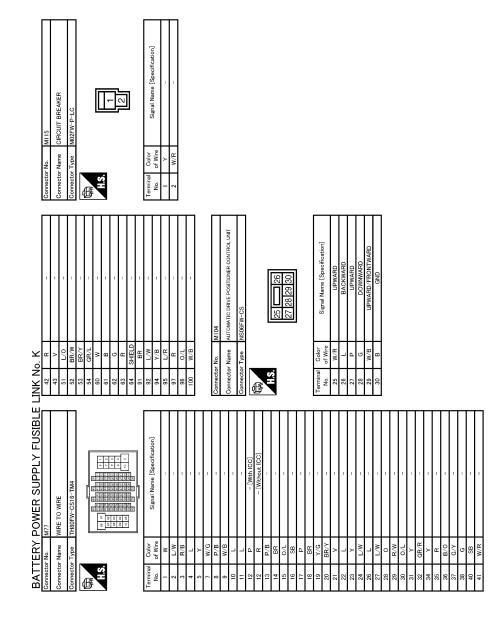


JCMWM8366GB

< WIRING DIAGRAM >

	A
M0 M0 M0 M0 M0 M0 M0 M0 M0 M0	В
	C
87         W/R           88         0           88         0           99         W/R           99         W/R           99         W/R           99         W/R           91         W/R           92         W/R           93         W/R	D
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	F.
く して して して して して して して して して して	G
1     1 <td>88 81 0 3 3 3 1 3 8 1 0 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td>	88 81 0 3 3 3 1 3 8 1 0 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Kernel Lange Lan	
Terminal         Connector No.         Mill           43         V         51         L/O           53         E/O         86/V         86/V           61         B         86/V         86/V           92         L/W         95         67/K           93         Connector Name         MI9           000         W/R         10           000         W/R         10           000         C/R         11           000         C/R         11           000         U/R         11           000         U/R         11           000         U/R         11           000         U/R         11           0         W/R         10           1         W/R         1           1         W/R         1           0         W/R         1           0         M/R         1           0         M/R         1           0         C/R         1           0         C/R         1	
LINK No. K 31 L/O 32 ER/W 33 ER/Y 34 C/O 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 36 C/R 37 Connector Name WRE 10 WR 10	H H H H H H H H H H H H H H H H H H H
LINK No. K 31 L/O 32 ER/W 33 ER/Y 34 C/O 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 36 C/R 37 Connector Name WRE 10 WR 10	H H H H H H H H H H H H H H H H H H H
LINK No. K 31 L/O 32 ER/W 33 ER/Y 34 C/O 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 35 ER/Y 36 C/R 37 Connector Name WRE 10 WR 10	
POWER SUPPLY FUSIBLE     INK No. K       File     INK No. K       Immomw-cstor-TMH     Immomw-cstor-TMH       Immomw-cstor-TMH	H I J J K R PG N
Interview     Signal Mane Signa Mane Signal Mane Signa Mane Signal Mane Signal Mane Sign	

JCMWM8367GB



JCMWM8368GB

< WIRING DIAGRAM >

< WIRING DIAGRAM >

#### Wiring Diagram - BATTERY POWER SUPPLY FUSIBLE LINK No. S -INFOID:000000006288134 А BATTERY POWER SUPPLY FUSIBLE LINK No. S В С D 30A 2S: With second seat power unlock system Е Connector No. Terminal No. Connect to F (B485)\* POWER UNLOCK RELAY LH 3 8 B78 B482 E92 B65 (B495)\* 3 POWER UNLOCK RELAY RH 25 B248 B492 (E99) (B205) (B583)\* 3 UP RELAY 2 LH 2 (B80) (B581) Н (B585)\* 3 DOWN RELAY 2 LH

(B593)\*

(B595)\*

2 (B244) (B591) 3

3

\*: This connector is not shown in "Harness Layout".

UP RELAY 2 RH

DOWN RELAY 2 RH

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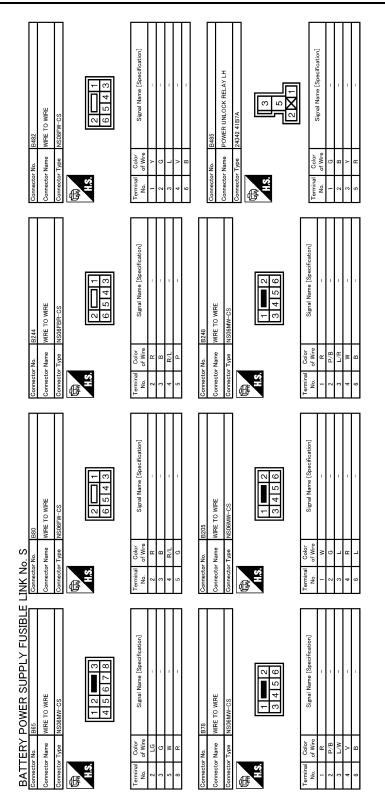
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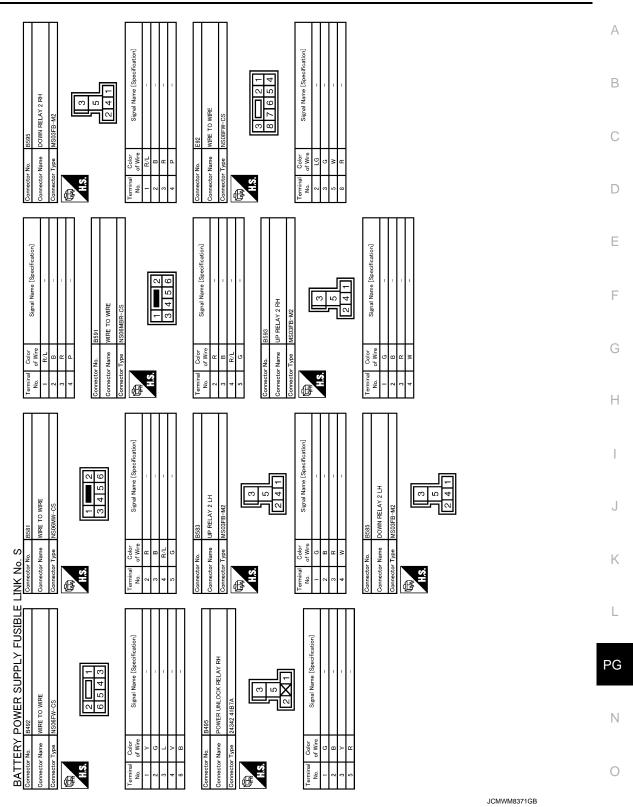
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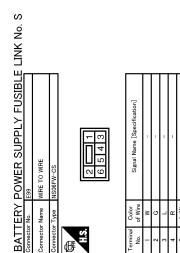


JCMWM8370GB

< WIRING DIAGRAM >



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JCMWM8372GB

### Wiring Diagram - BATTERY POWER SUPPLY FUSE No. 6 -BATTERY POWER SUPPLY FUSE No. 6

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2S: With second seat power unlock system

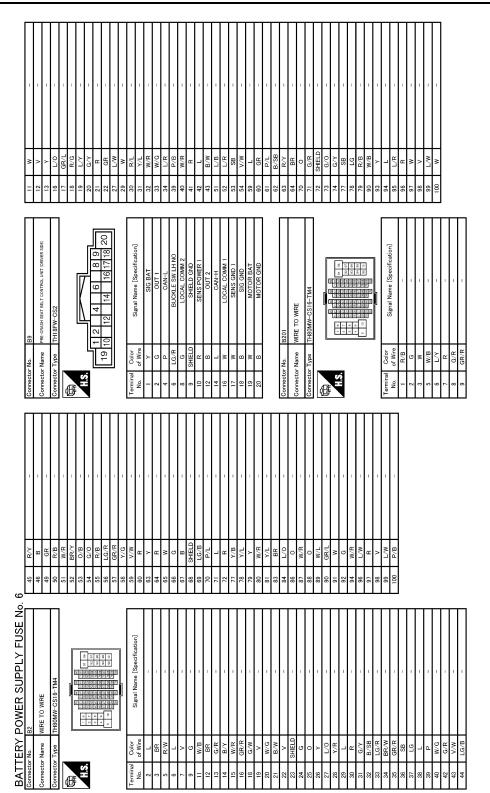
IDA 6 (J/B) M2			
	Connector No.	Terminal No.	Connect to
	M4)	16	DATA LINK CONNECTOR
	M92	1	OPTION CONNECTOR (1)
	M136	1	CLOCK
25	M137	1	SECOND SEAT POWER UNLOCK SWITCH LH
25	M138	1	SECOND SEAT POWER UNLOCK SWITCH RH
31 (M77) (E105)	E25	1	INTELLIGENT KEY WARNING BUZZER
PC26 (M19) (B2)	ВЭ	1	PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE)
PC 13 (M11) (B201)	B231	1	PRE-CRASH SEAT BELT CONTROL UNIT (PASSENGER SIDE)
[12] (M23); (R1)	R9	1	LIGHT & RAIN SENSOR
	(R25)	10	AUTO ANTI-DAZZLING INSIDE MIRROR

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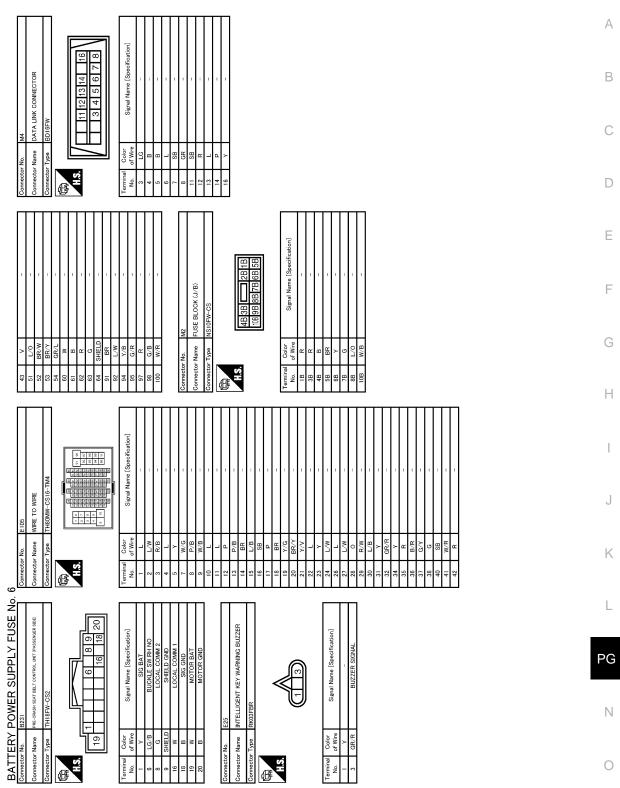
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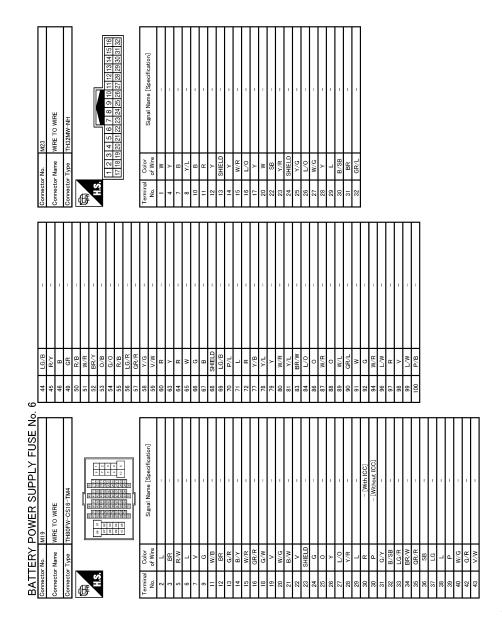


JCMWM8374GB

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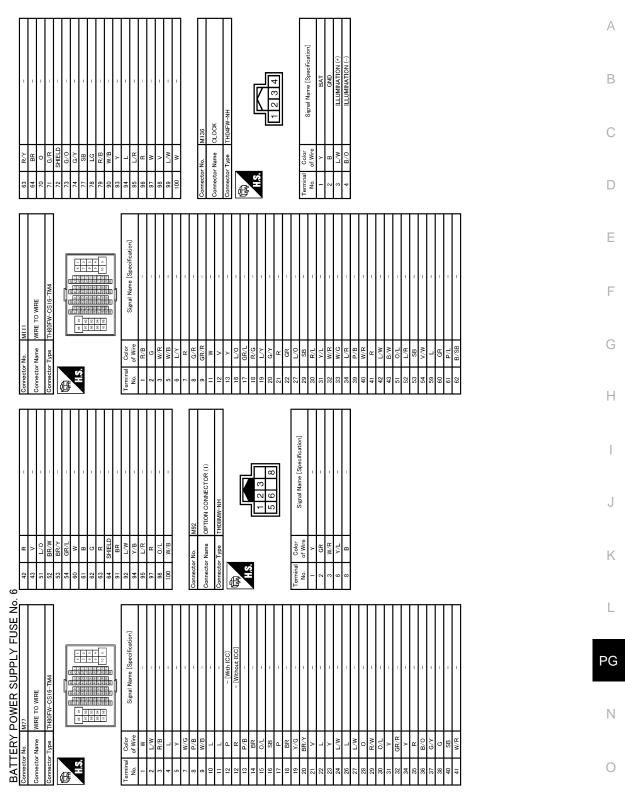


JCMWM8375GB

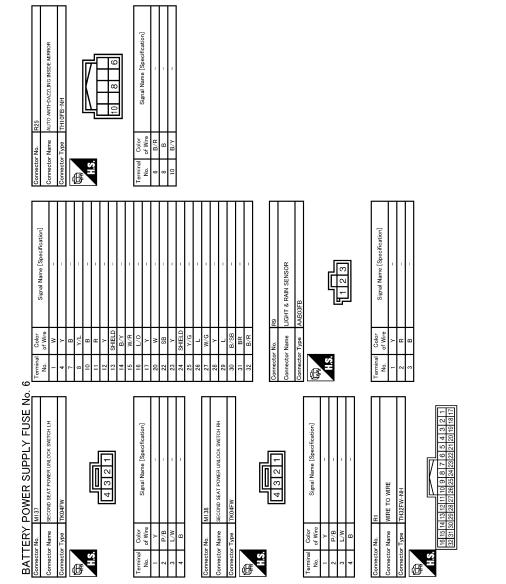


JCMWM8376GB

< WIRING DIAGRAM >



JCMWM8377GB



JCMWM8378GB

< WIRING DIAGRAM >					
Wiring Diagram - BATTERY POWER	r Supf	PLY F	USE No. 7 -	INFOID:000000006288136	
BATTERY POWER SUPPLY FUSE N	lo. 7				А
					В
			CC: With ICC		
					С
					D
8F					Е
	Connector No.	Terminal No.	Connect to		F
30 (E105) (M77)	(M71)	105	BCM (BODY CONTROL MODULE)		Г
•	(E58)	3	STOP LAMP RELAY		G
	(E64)	3	ICC BRAKE HOLD RELAY		
	E115	1	STOP LAMP SWITCH		Н

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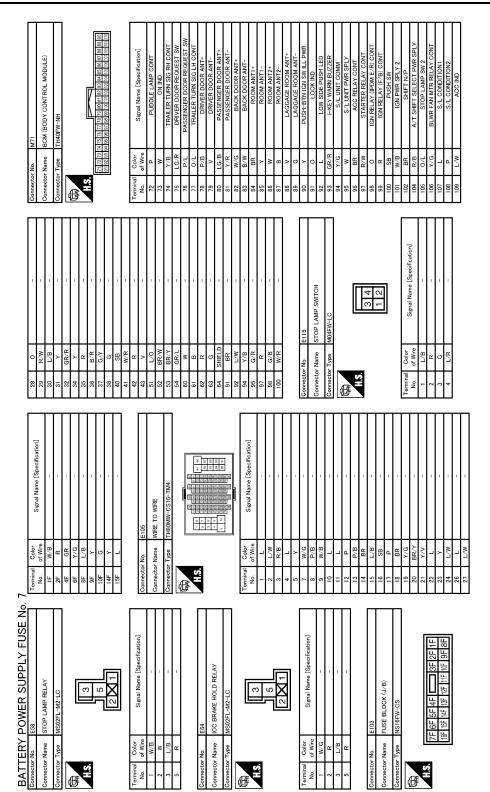
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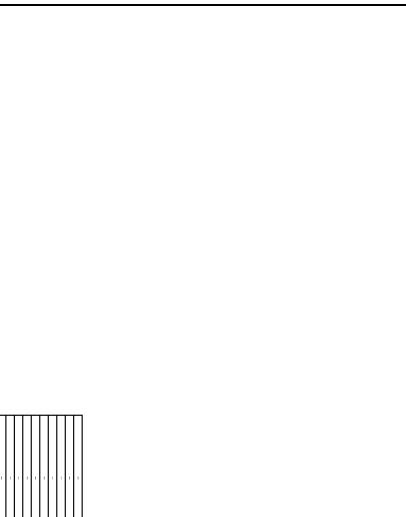
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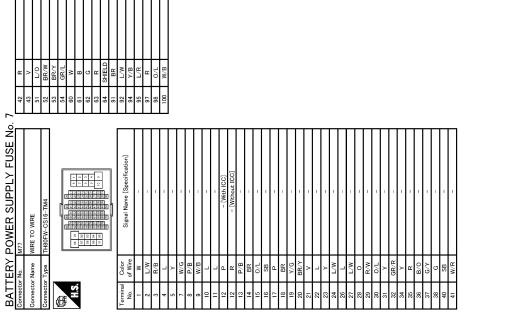
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< WIRING DIAGRAM >



JCMWM8380GB





JCMWM8381GB

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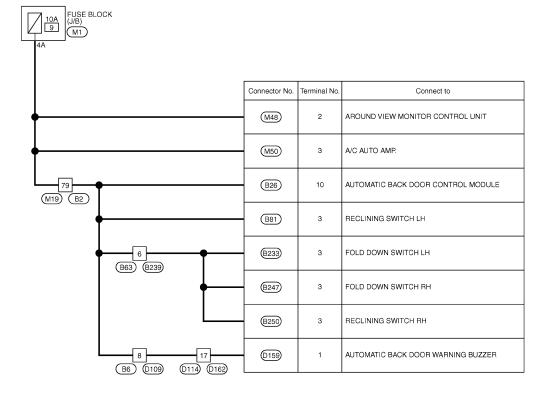
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# Wiring Diagram - BATTERY POWER SUPPLY FUSE No. 9 -

INFOID:000000006288137

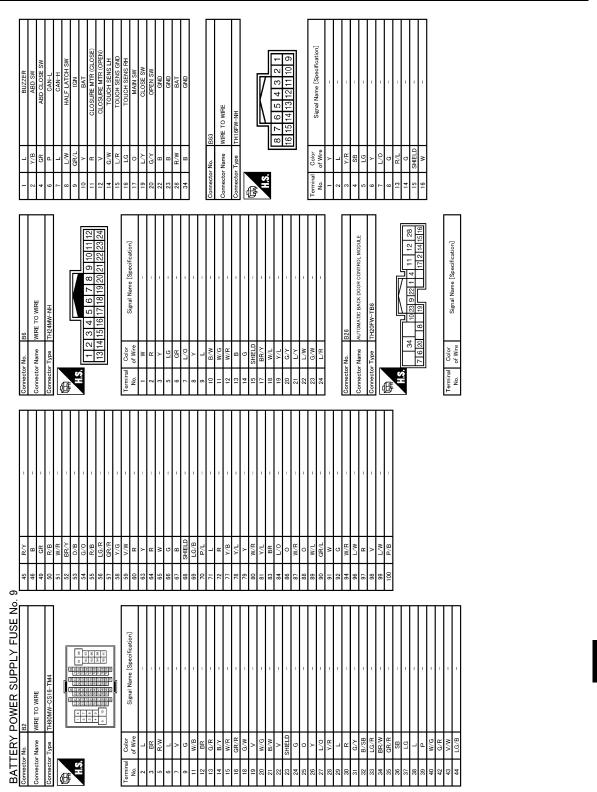
BATTERY POWER SUPPLY FUSE No. 9



2010/05/13

JCMWM8382GB

< WIRING DIAGRAM >



JCMWM8383GB

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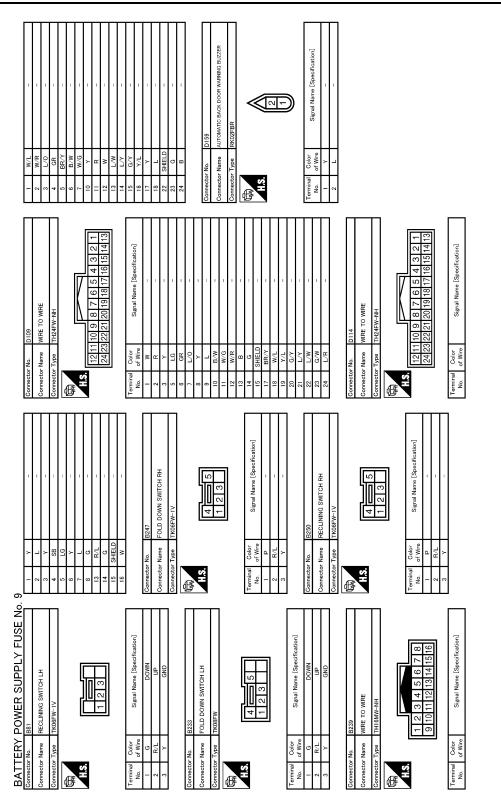
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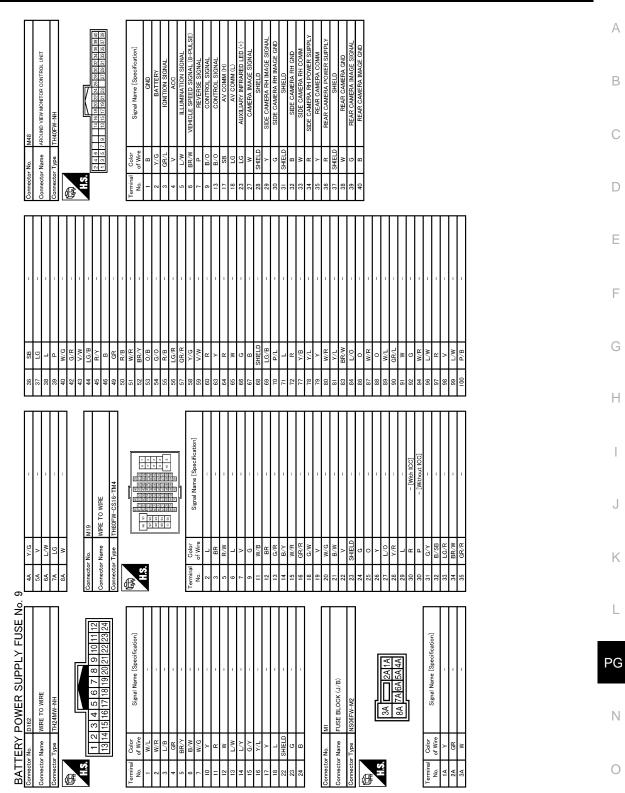
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< WIRING DIAGRAM >



JCMWM8384GB

< WIRING DIAGRAM >



JCMWM8385GB

BATTERY POWER SUPPLY FUSE No. 9

A/C AUTO AMP.

stor Name

H.S.H.

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rminal No.

< WIRING DIAGRAM >



 [1/2] 3] 4.6.1
 [1/2] 3.4.6.1

 [1/2] 3] 4.6.1
 [1/2] 3.4.6.1

 [1/2] 3.4.6.1
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< WIRING DIAGRAM >	
Wiring Diagram - BATTERY POWER SUPPLY FUSE No. 10 -	INFOID:00000006288138
BATTERY POWER SUPPLY FUSE No. 10	

TA FUSE BLOCK (J/B) M1			
	Connector No.	Terminal No.	Connect to
•	(M70)	57	BCM (BODY CONTROL MODULE)
•	M101)	8	PUSH-BUTTON IGNITION SWITCH
43 (M20) (D1)	D13	5	SEAT MEMORY SWITCH

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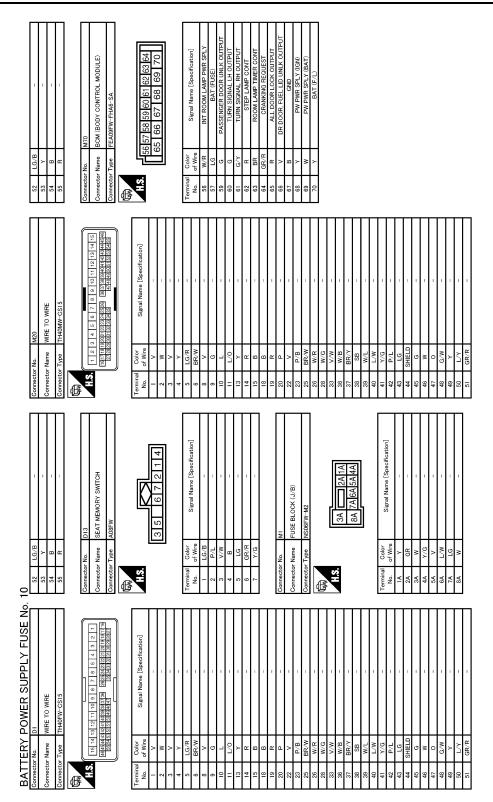
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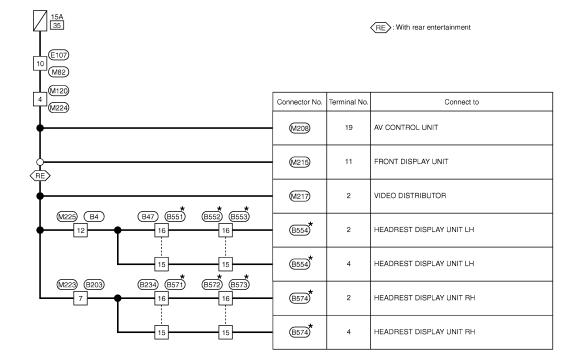


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### Wiring Diagram - BATTERY POWER SUPPLY FUSE No. 35 -

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BATTERY POWER SUPPLY FUSE No. 35

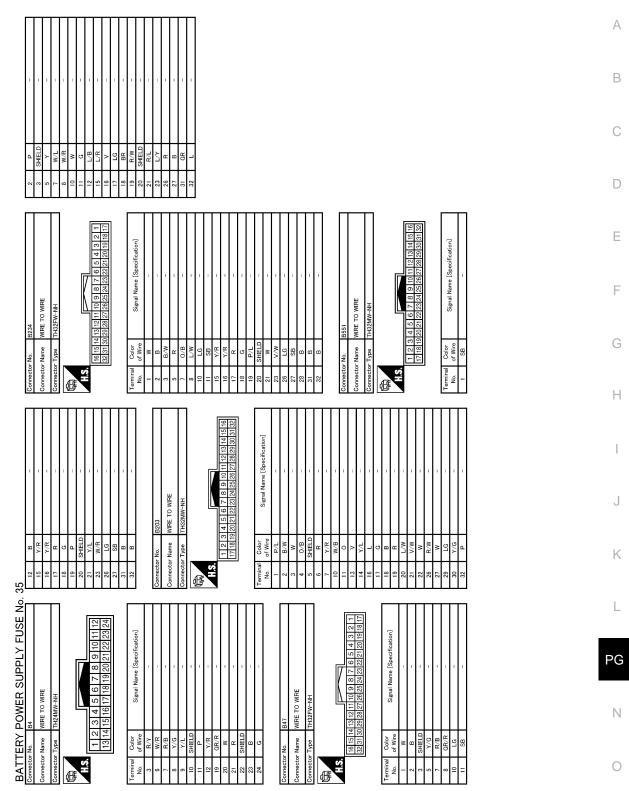


 $\bigstar$  : This connector is not shown in "Harness Layout".

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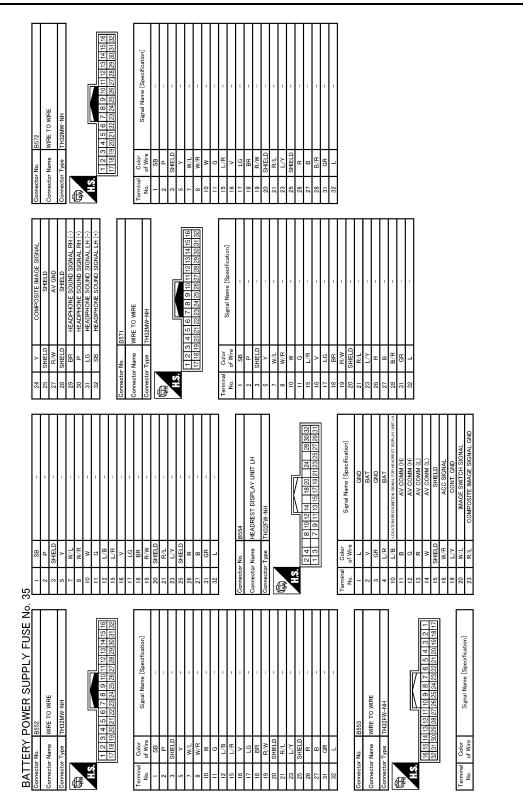
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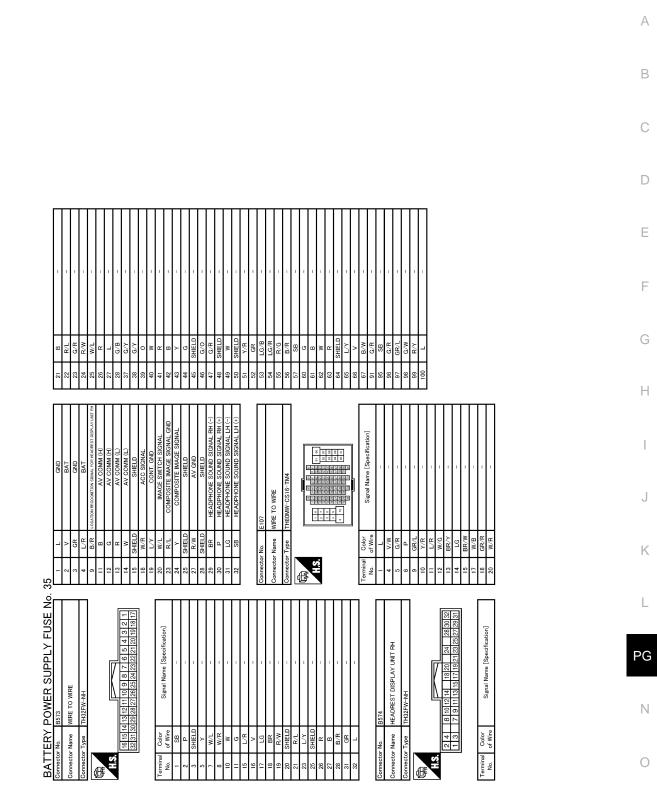


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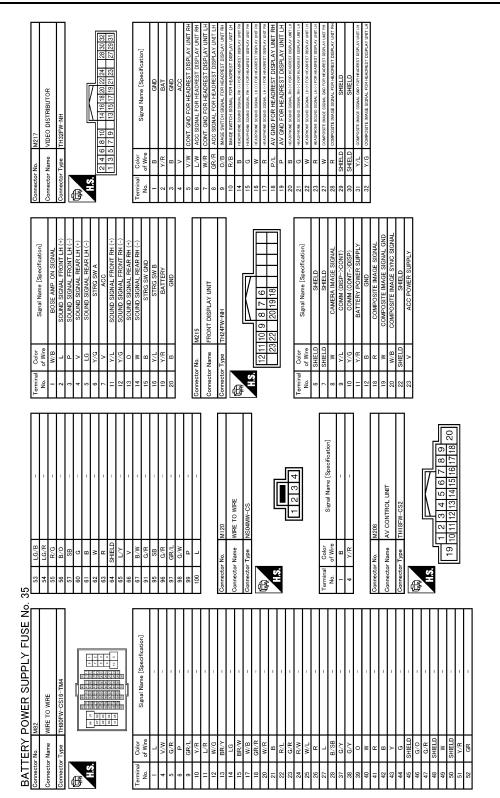


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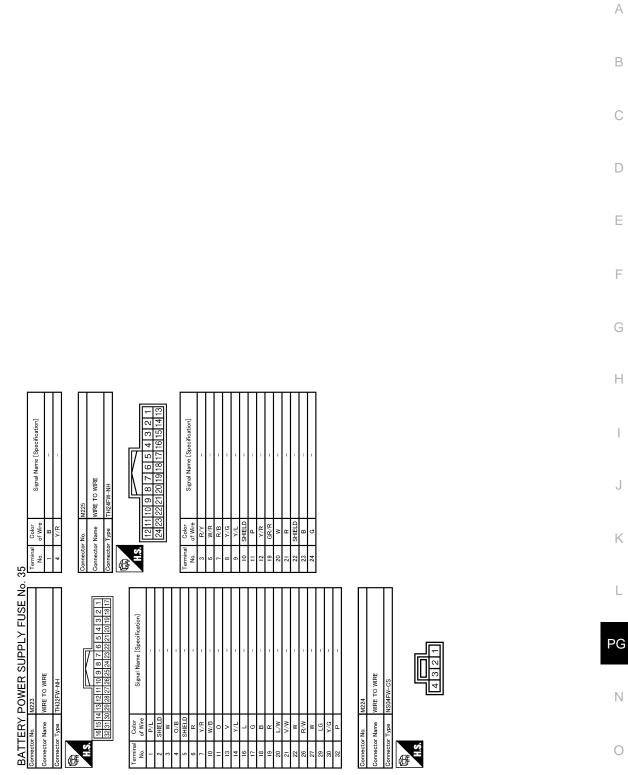
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# Wiring Diagram - BATTERY POWER SUPPLY FUSE No. 43 -

BATTERY POWER SUPPLY FUSE No. 43

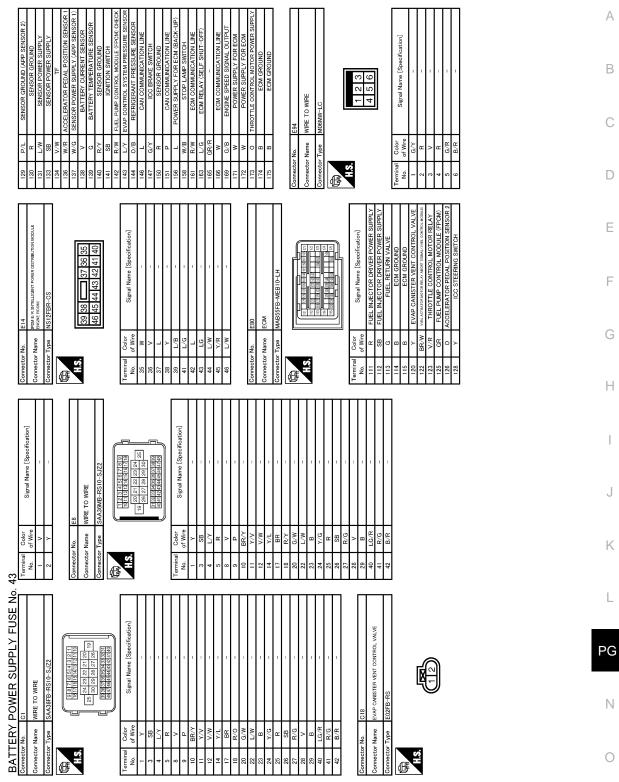
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ECM RELAY 36 35			
	Connector No.	Terminal No.	Connect to
	E80	171	ECM
	(E80)	172	ECM
	(F31)	5	MASS AIR FLOW SENSOR
(E96) (F105) 7	(F48)	1	EVAP CANISTER PURGE VOLUME CONTROL SOLENOID VALVE
	(F56)	8	VVEL CONTROL MODULE
	(F47)	2	INTAKE VALVE TIMING CONTROL SOLENOID VALVE (BANK 1)
(E94) (F103)	(F61)	2	INTAKE VALVE TIMING CONTROL SOLENOID VALVE (BANK 2)
	(F67)	5	AIR FUEL RATIO (A/F) SENSOR 1 (BANK 1)
	(F68)	5	AIR FUEL RATIO (A/F) SENSOR 1 (BANK 2)
<b> </b>	(F87)	2	HEATED OXYGEN SENSOR 2 (BANK 1)
<b> </b>	(F88)	2	HEATED OXYGEN SENSOR 2 (BANK 2)
	(F212)	1	FUEL RETURN VALVE (Not used for engine control system)
(F50) (F211) 28 (E8) (C1)	C18	1	EVAP CANISTER VENT CONTROL VALVE

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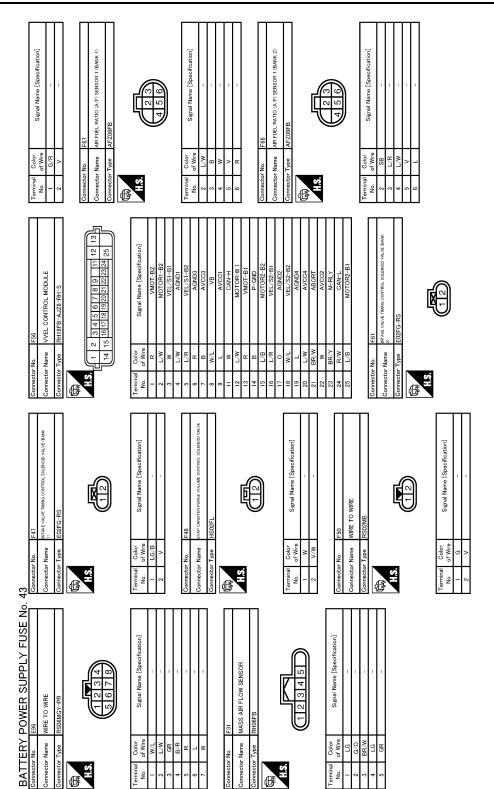
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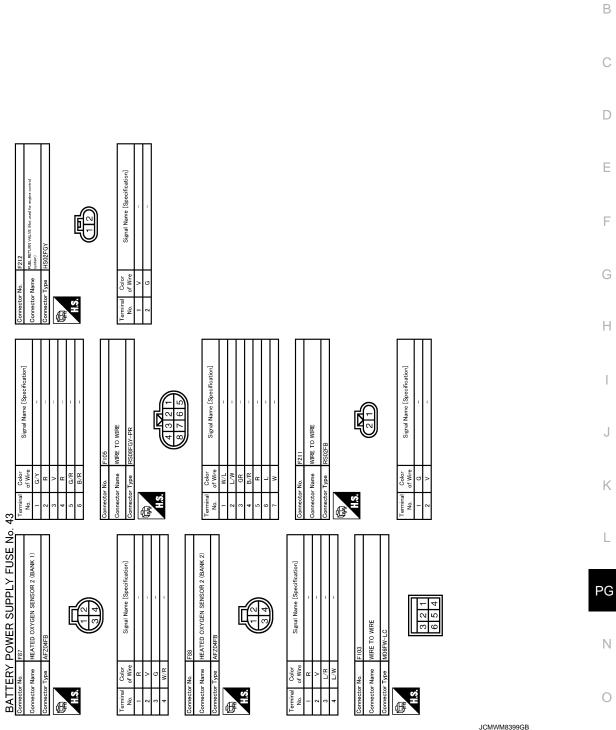


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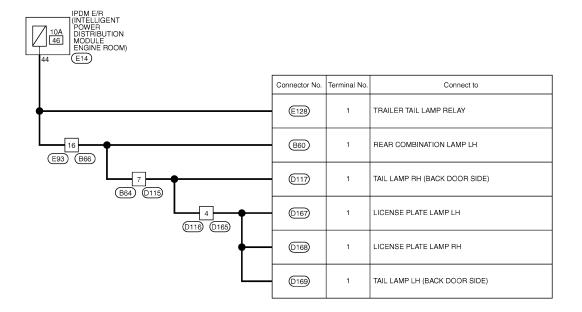


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### Wiring Diagram - BATTERY POWER SUPPLY FUSE No. 46 -

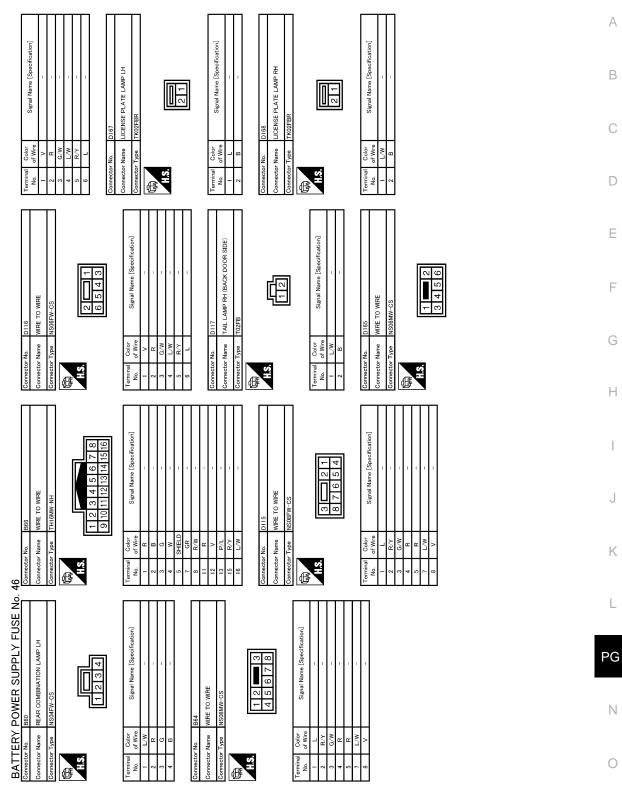
BATTERY POWER SUPPLY FUSE No. 46



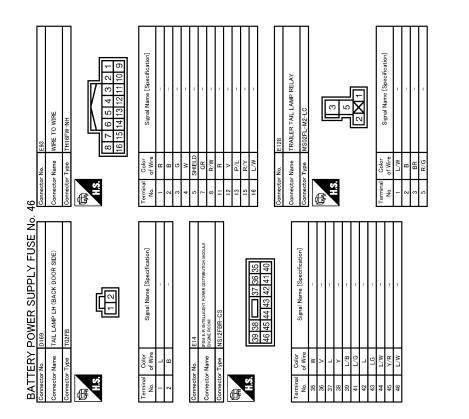
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JCMWM8402GB

## Wiring Diagram - BATTERY POWER SUPPLY FUSE No. 47 -

BATTERY POWER SUPPLY FUSE No. 47

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) 9F FUSE BLOCK (JB) (M2), (E103), (E104)			2W): 2WD models         4W): 4WD models         WS): With climate controlled seat         FH): With front heated seat         2H): With second heated seat         2S): With second seat power unlock system         WA): With AFS         RE): With rear entertainment	B
8B 4G (WL) (2109)	Connector No	. Terminal No.	Connect to	D
2 (E105) (M77)	(M36)	1	GLOVE BOX LAMP	E
	(M38)	7	CLIMATE CONTROLLED SEAT SWITCH (DRIVER SIDE)	
	(M39)	7	CLIMATE CONTROLLED SEAT SWITCH (PASSENGER SIDE)	F
│	(M41)	5	REAR A/C CONTROL	G
│		5	AROUND VIEW MONITOR CONTROL UNIT	G
│	(M52)	3	HEATED STEERING WHEEL SWITCH	Н
4₩	(M54)	13	4WD SWITCH ASSEMBLY	
•	(M57)	9	A/T SHIFT SELECTOR	
•	(M72)	4	MULTIFUNCTION SWITCH	J
FH FH	(M131)	5	FRONT HEATED SEAT SWITCH (DRIVER SIDE)	
	M132	5	FRONT HEATED SEAT SWITCH (PASSENGER SIDE)	K
2H	M133	5	SECOND HEATED SEAT SWITCH LH	L
	M134	5	SECOND HEATED SEAT SWITCH RH	
│	M136	3	CLOCK	PG
- <u>25</u>	M137	3	SECOND SEAT POWER UNLOCK SWITCH LH	Ν
	M138	3	SECOND SEAT POWER UNLOCK SWITCH RH	
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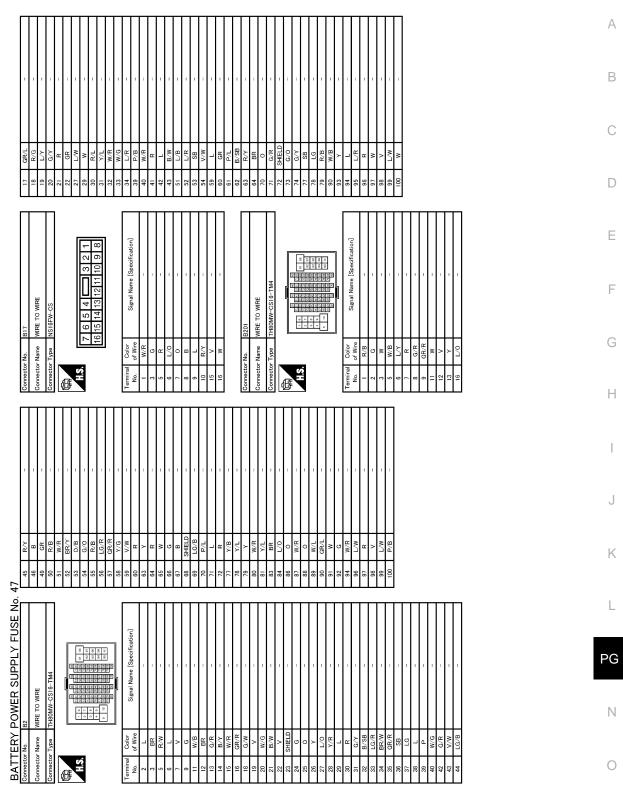
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		Connector No.	Terminal No.	Connect to
│		M140	4	OPTION CONNECTOR (ELECTRIC BRAKE)
RE		M144	4	AC 120V OUTLET MAIN SWITCH
│		M146	2	CONSOLE POWER SOCKET (CUP HOLDER)
200	·	M147)	13	SNOW MODE / TOW MODE / VDC OFF SWITCH ASSEMBLY
│	(M22) (D21)	(D30)	1	MOOD LAMP FRONT DOOR GRIP (PASSENGER SIDE)
	42 6 111) (B201) (B202) (D41)	D76	1	MOOD LAMP REAR DOOR GRIP (RH)
		<u>M6</u>	3	HEADLAMP AIMING SWITCH
•		<u>M8</u>	16	DOOR MIRROR REMOTE CONTROL SWITCH
•		(M32)	23	COMBINATION SWITCH (SPIRAL CABLE)
•		(M45)	3	HAZARD SWITCH
•		(M83)	1	TRIP RESET AND ILLUMINATION CONTROL SWITCH
•		(M84)	1	TRIP COMPUTER SWITCH
•		M110	4	AUTOMATIC BACK DOOR MAIN SWITCH
		M126	6	TRIPLE SWITCH
+		M127)	5	TWIN SWITCH
(M	27 1111) (B201)	(B232)	1	REAR COMBINATION LAMP RH
•	11 /20 D1	(D10)	1	MOOD LAMP FRONT DOOR GRIP (DRIVER SIDE)
•	84 6 /19) (B2) (B17) (D61)	D75	1	MOOD LAMP REAR DOOR GRIP (LH)
	16 17 123 R1 R2 R11	(R18)	3	MAP LAMP

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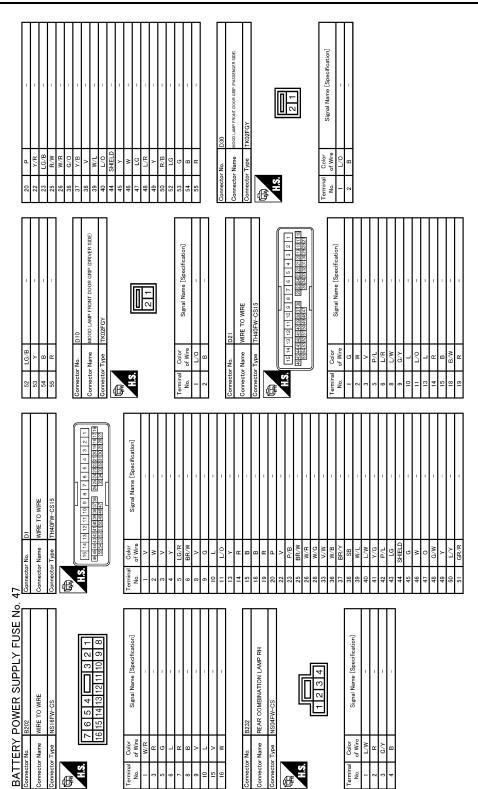
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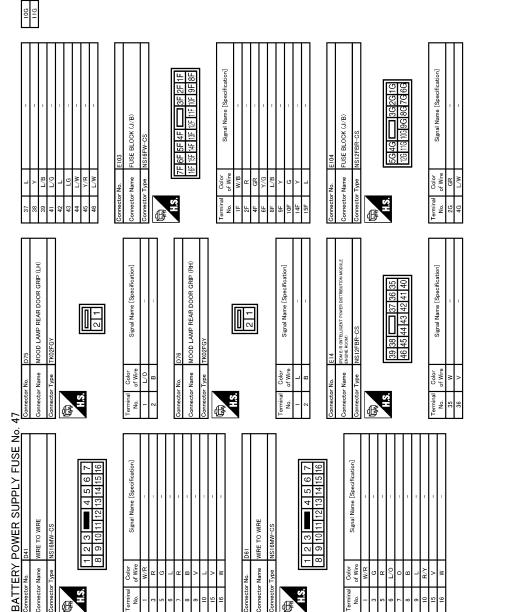
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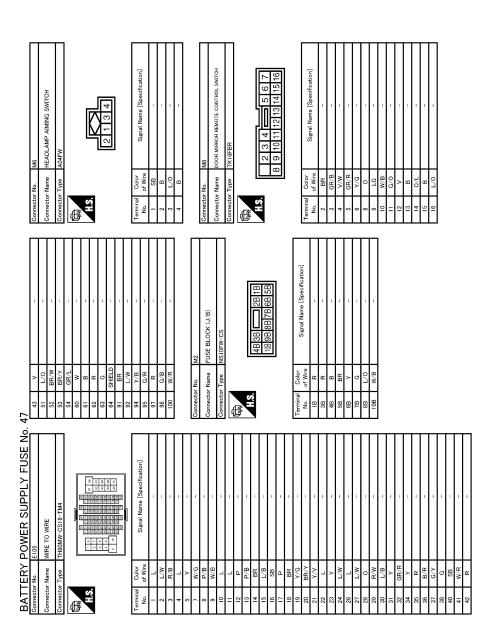
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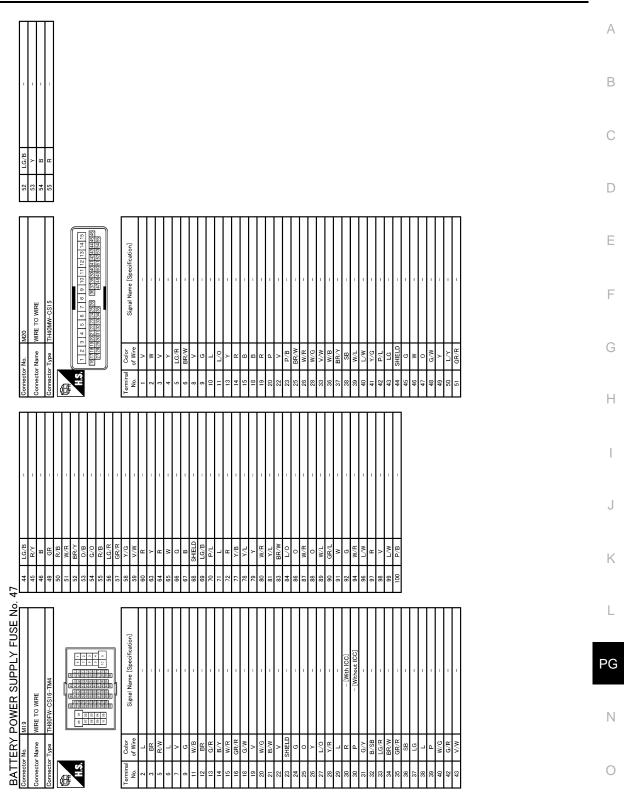
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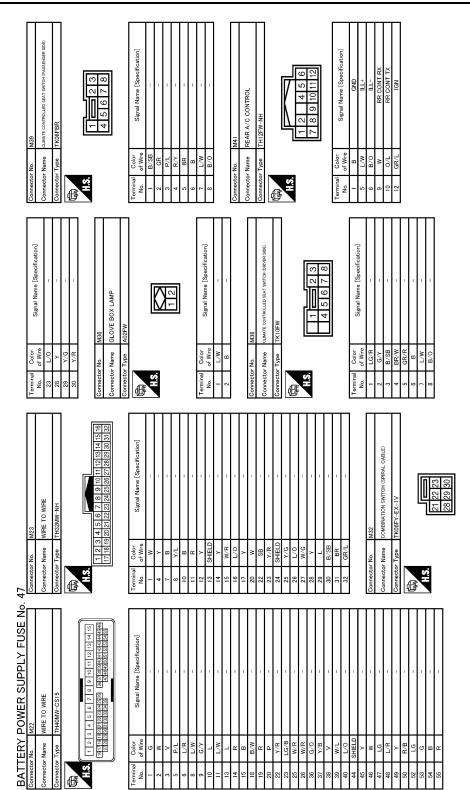
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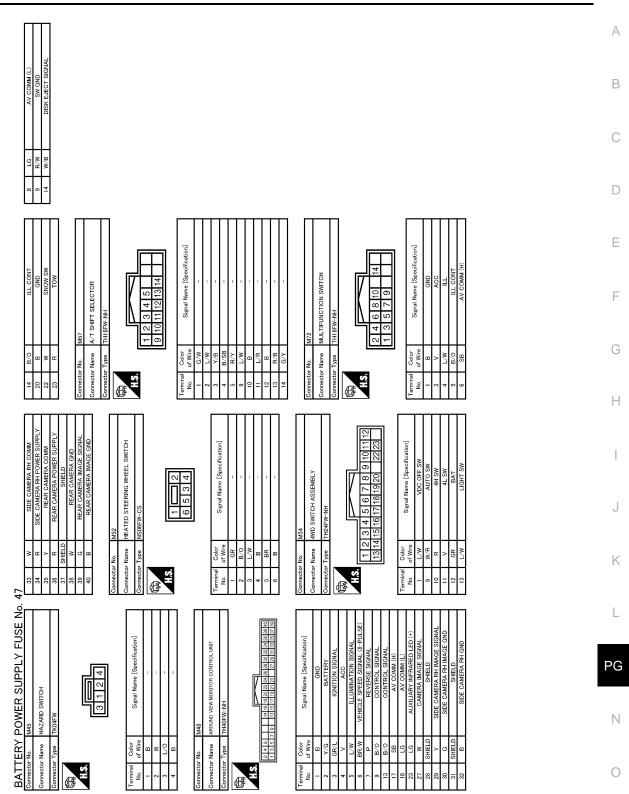
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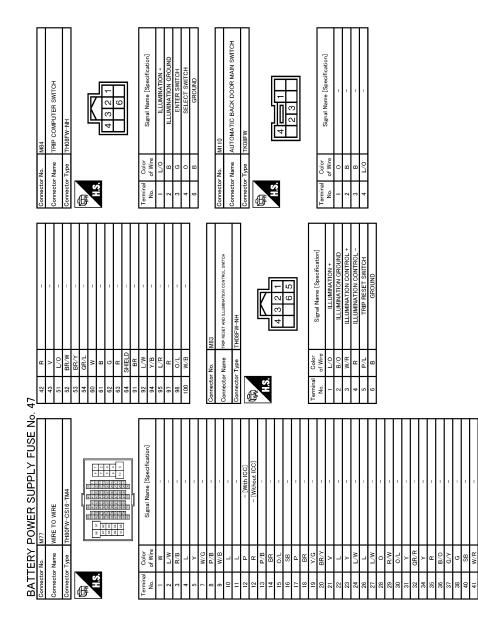
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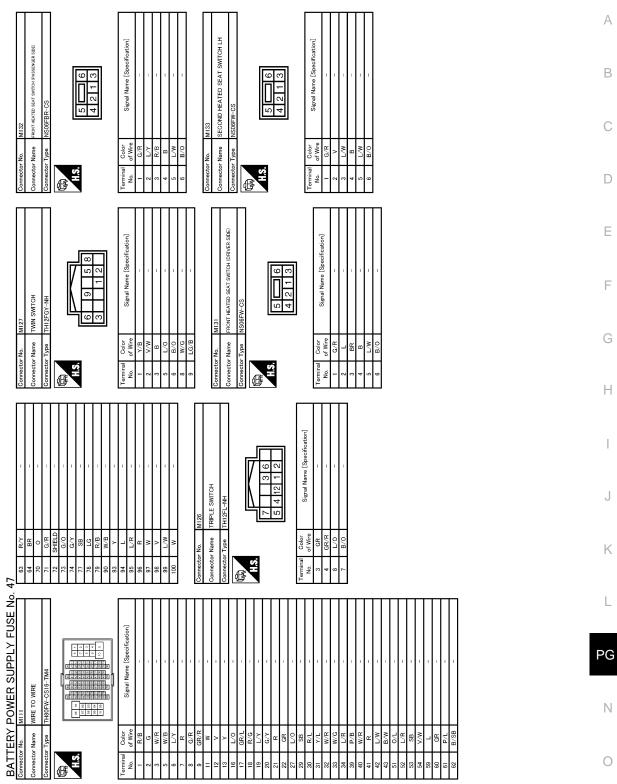


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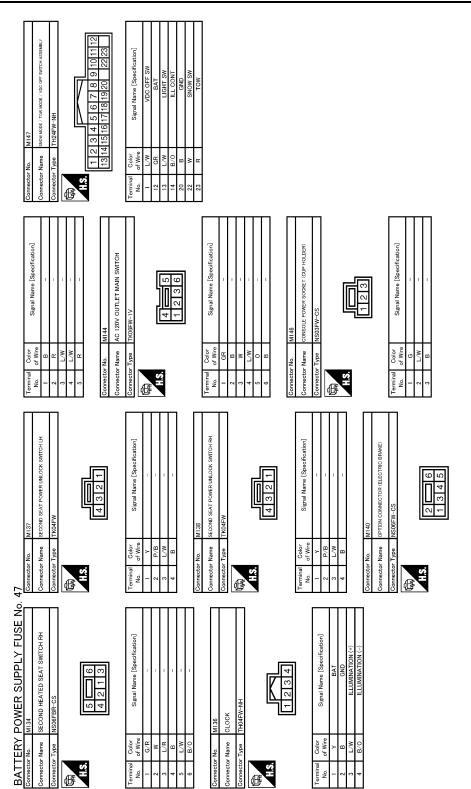
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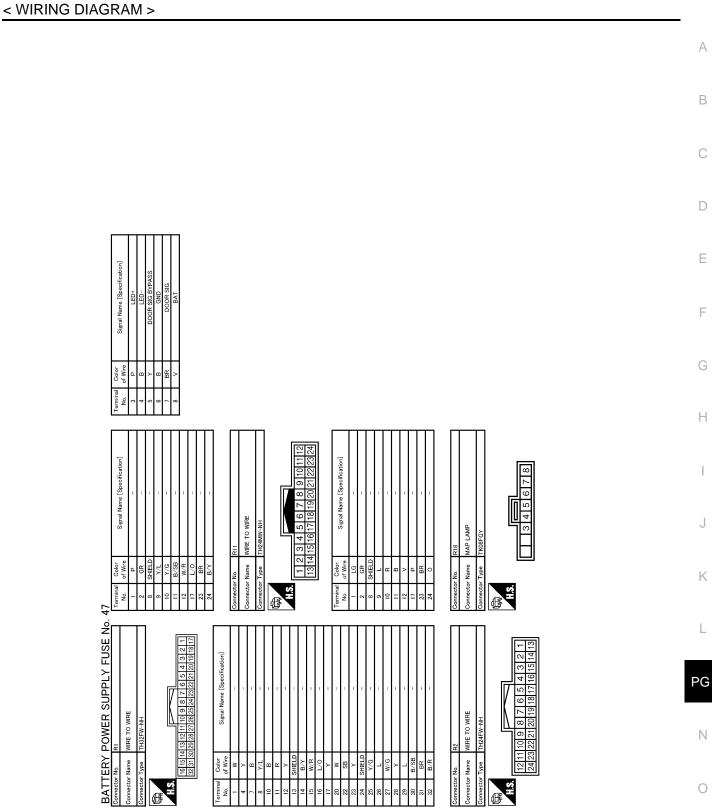


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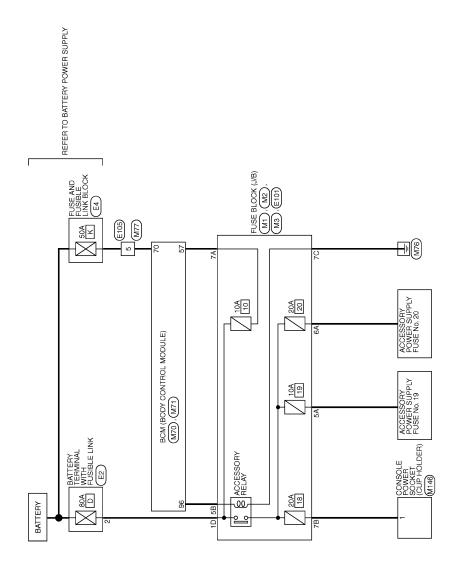


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## Wiring Diagram - ACCESSORY POWER SUPPLY -

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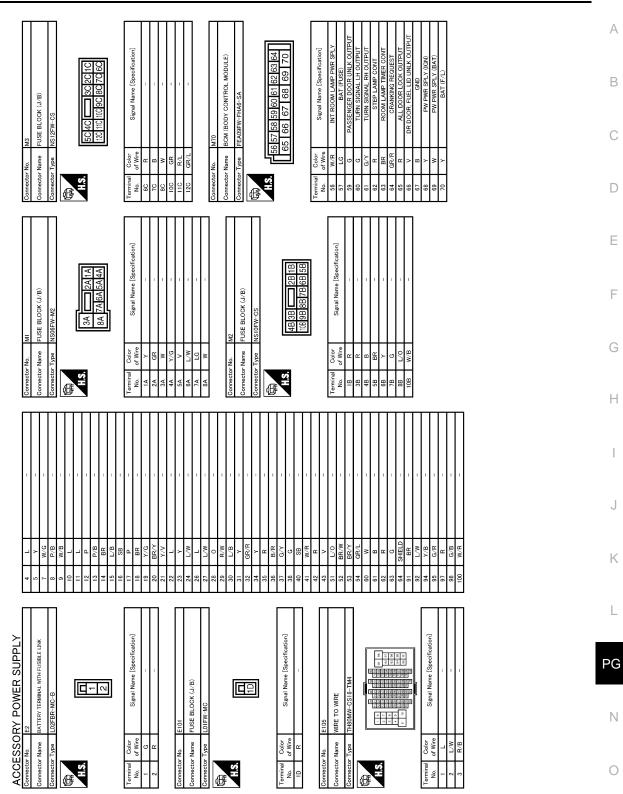


ACCESSORY POWER SUPPLY

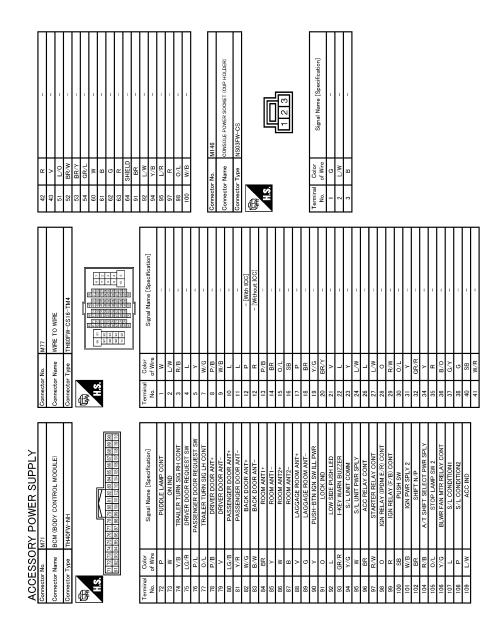
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JCMWM8418GB

#### Wiring Diagram - ACCESSORY POWER SUPPLY FUSE No. 19 -INFOID:000000006288143 А ACCESSORY POWER SUPPLY FUSE No. 19 В С D USE BLOCK RE: With rear entertainment (M1) Е Connector No. Terminal No. Connect to F (M8) DOOR MIRROR REMOTE CONTROL SWITCH 12 (M47) 13 SONAR CONTROL UNIT (M48) 4 AROUND VIEW MONITOR CONTROL UNIT Н (M50) 4 A/C AUTO AMP. MULTIFUNCTION SWITCH (M72) 3 28 (M119) (M222) (M208) 7 AV CONTROL UNIT J M215 23 FRONT DISPLAY UNIT

(M217)

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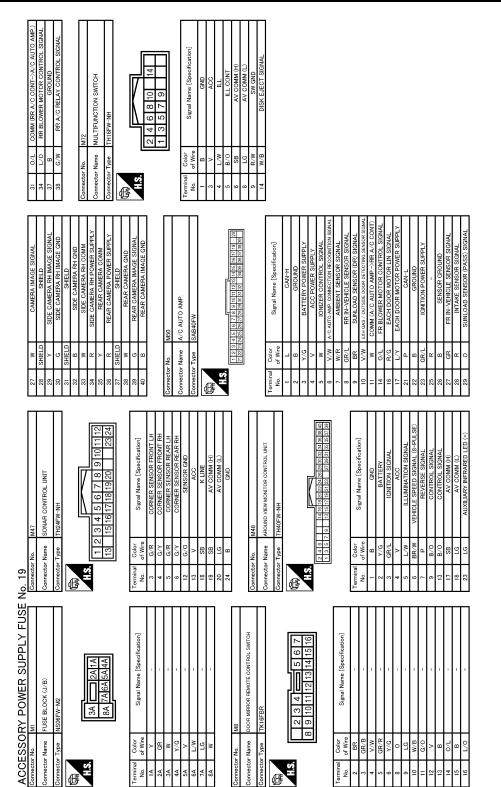
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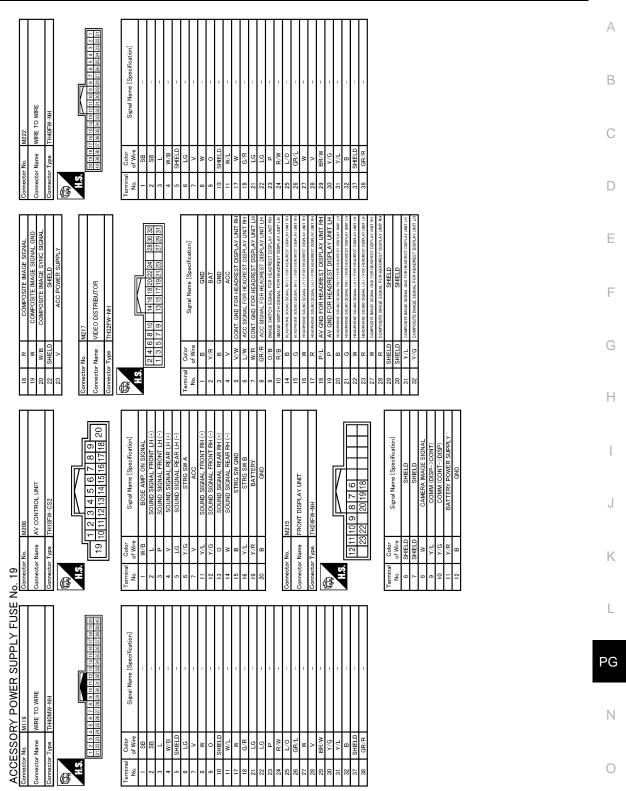
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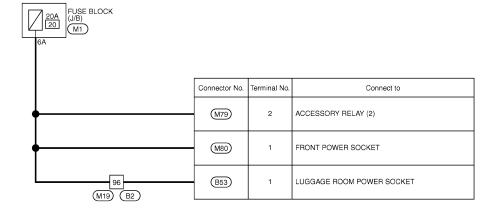
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Wiring Diagram - ACCESSORY POWER SUPPLY FUSE No. 20 -

ACCESSORY POWER SUPPLY FUSE No. 20



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	Io.         20           45         45           50         50           51         51           53         53           54         55           55         55           55         55		
	PRY POWER SUPPLY FUSE WIRE TO WIRE THEOMIN-CSIG-TIMA THEOMIN-CSIG-T	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

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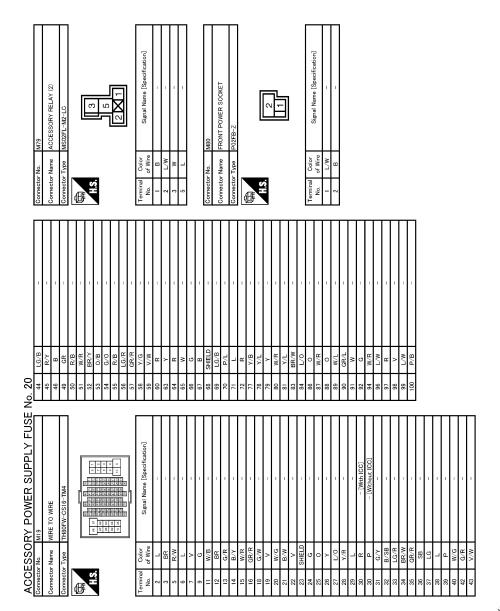
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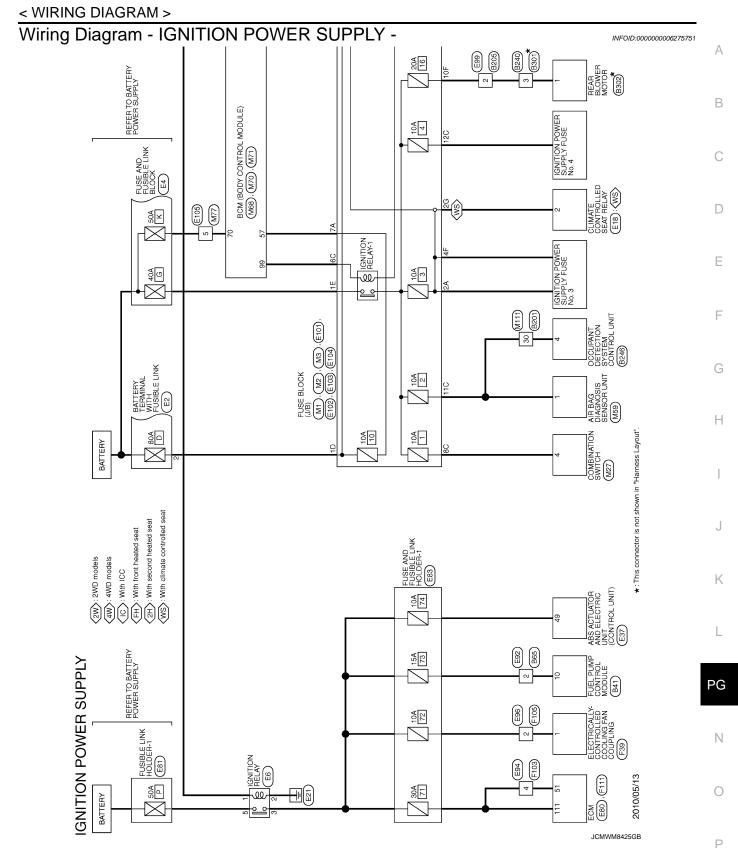
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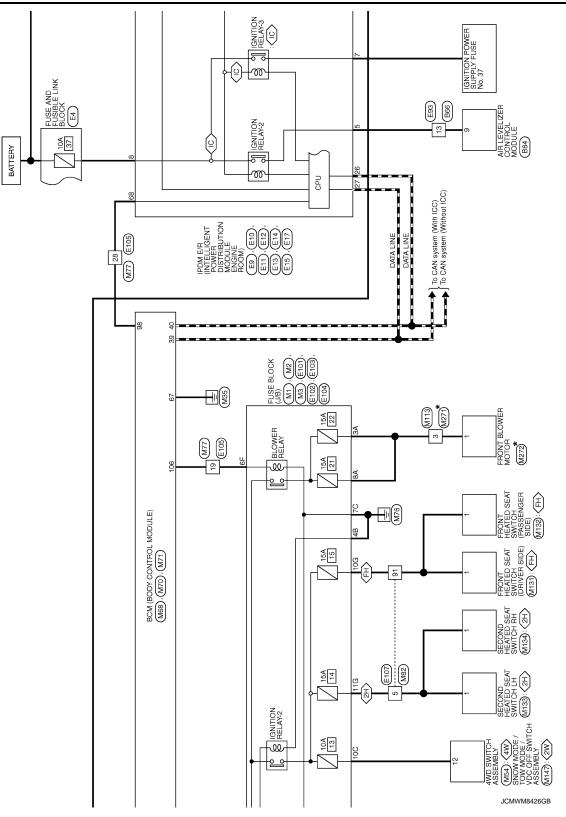
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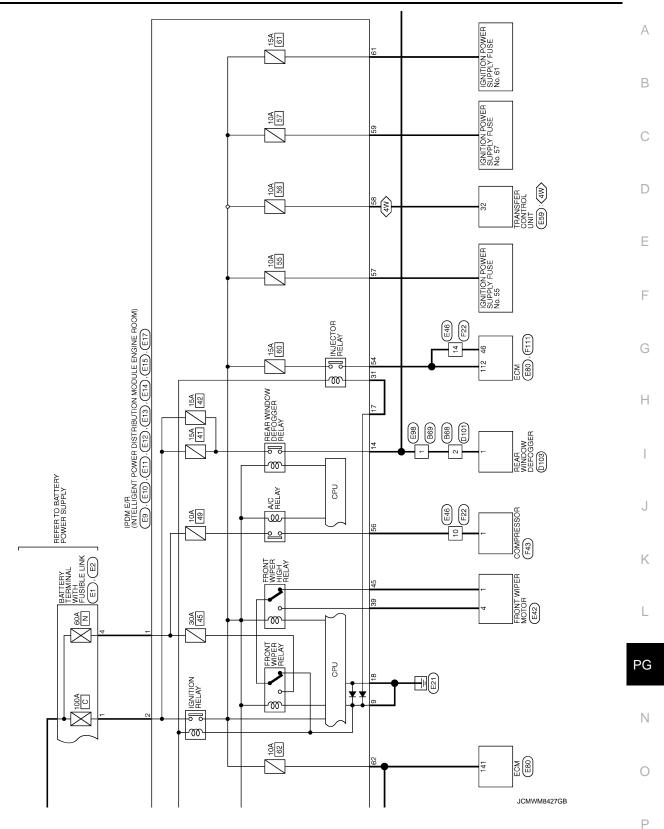
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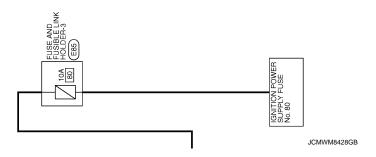


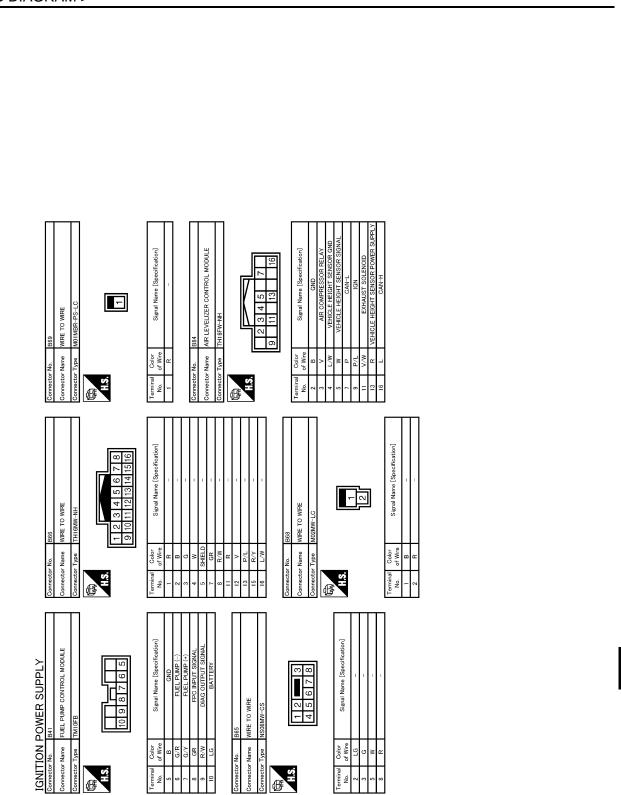
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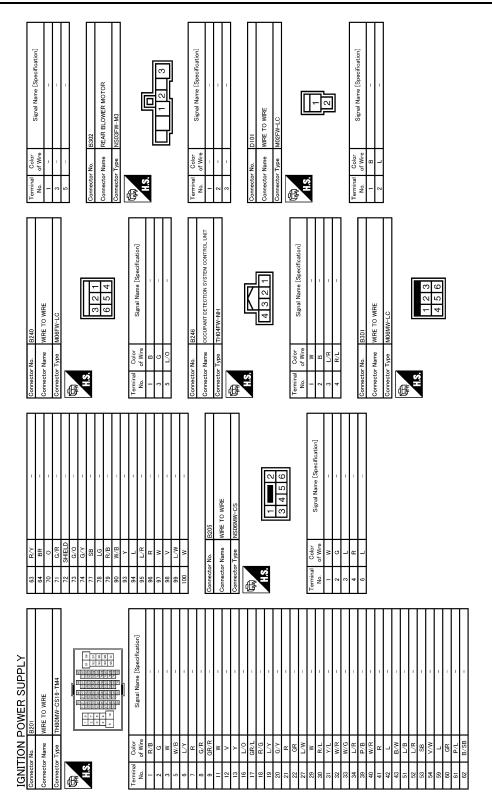
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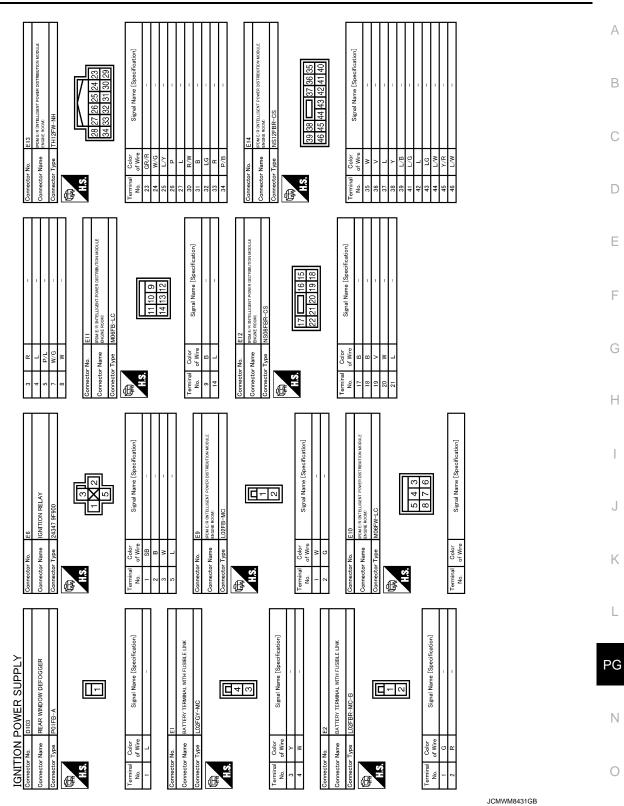
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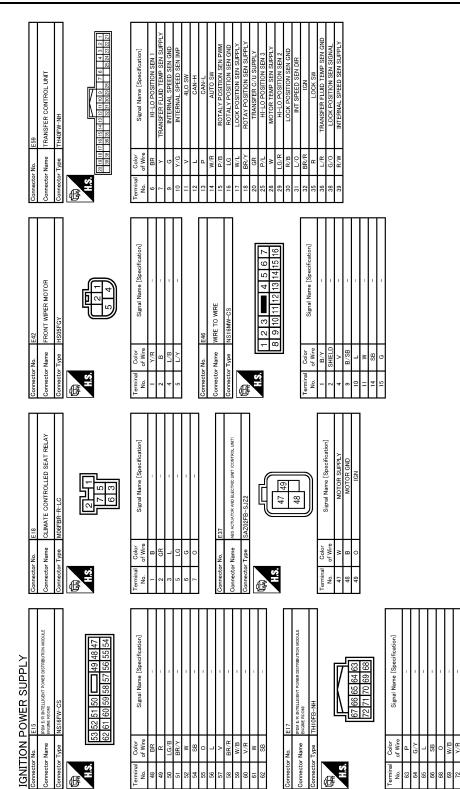


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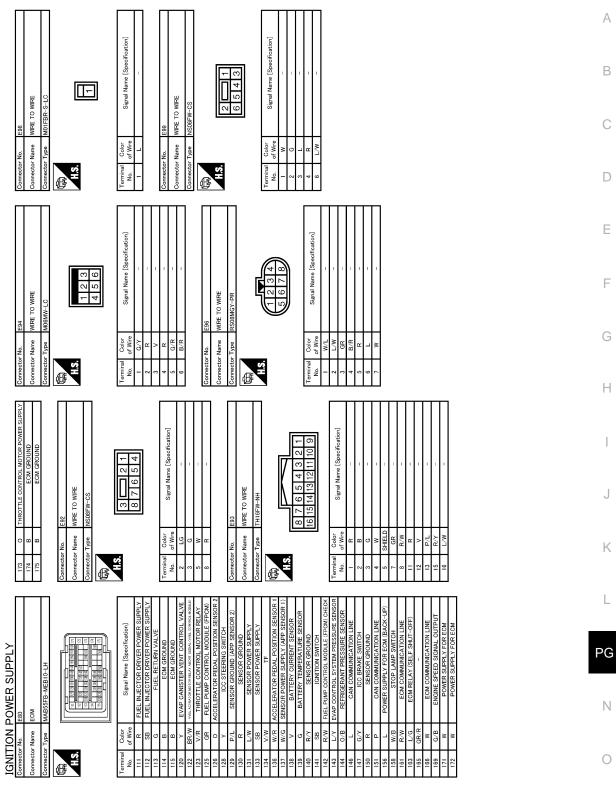
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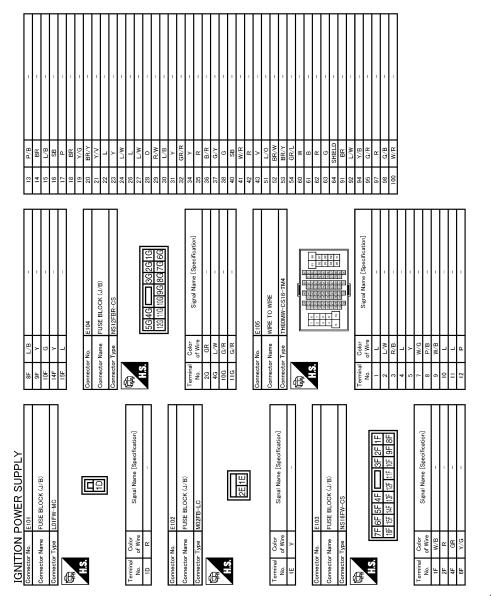
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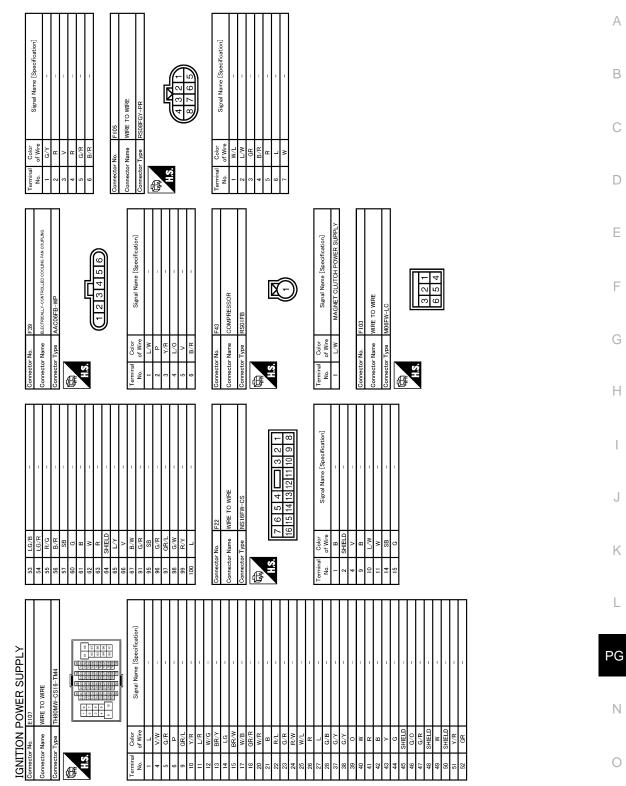
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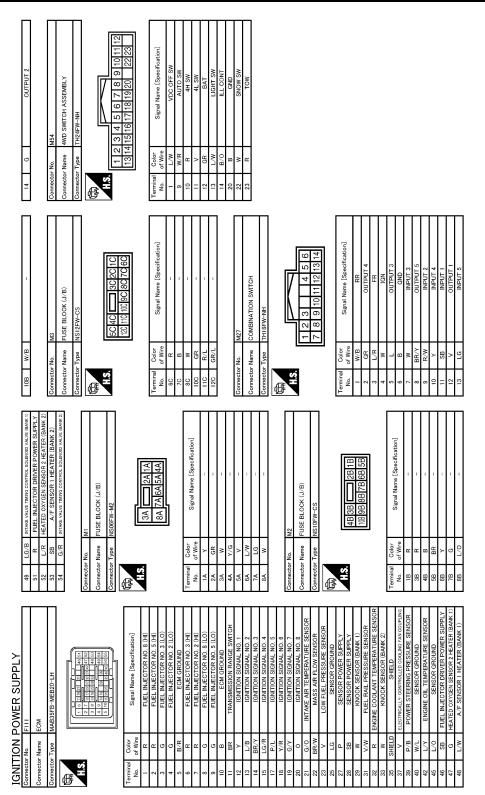


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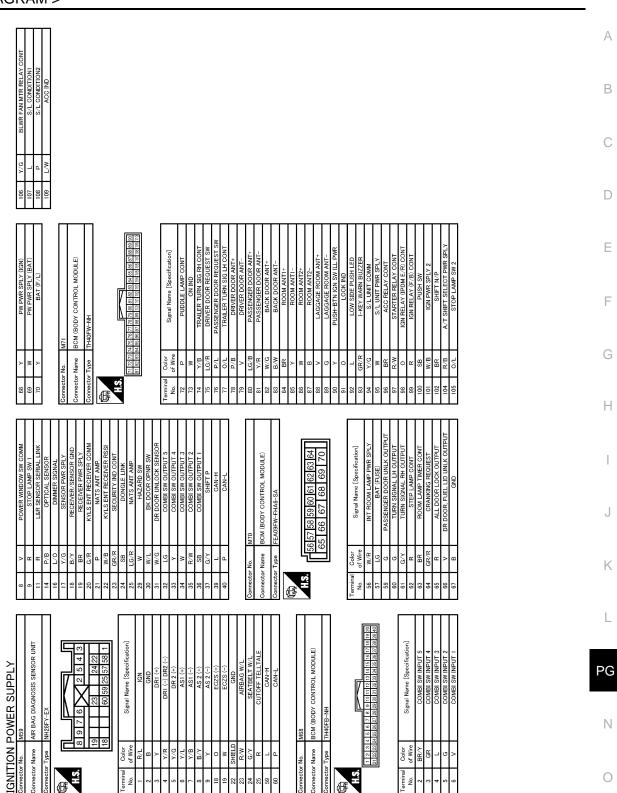
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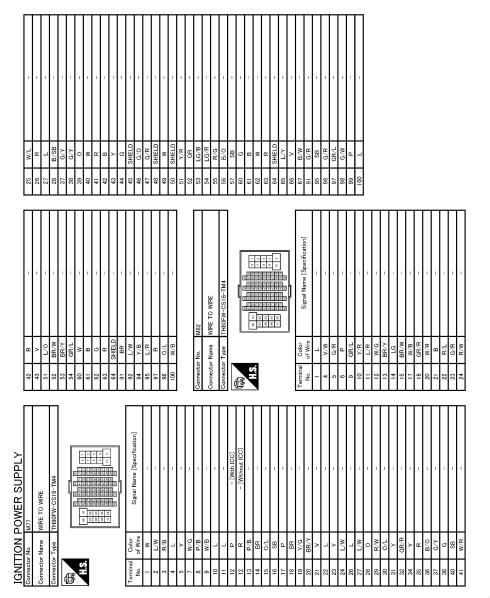


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# POWER SUPPLY ROUTING CIRCUIT < WIRING DIAGRAM >

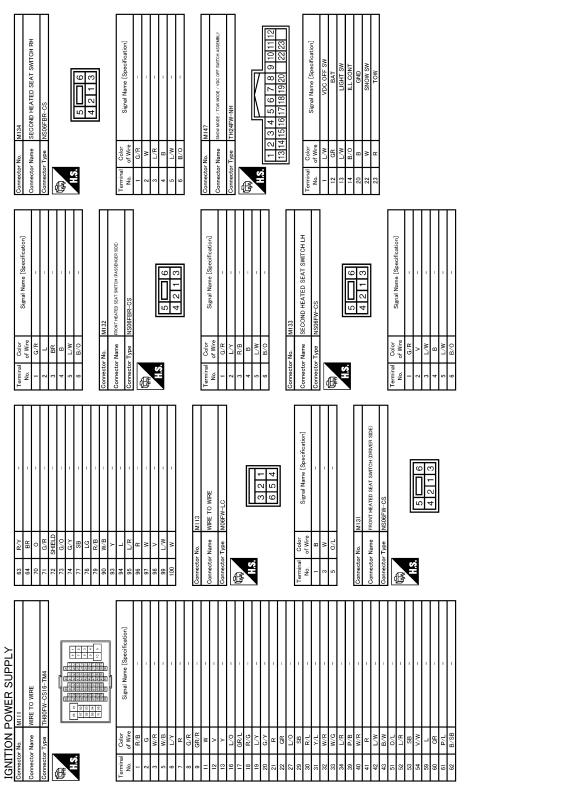


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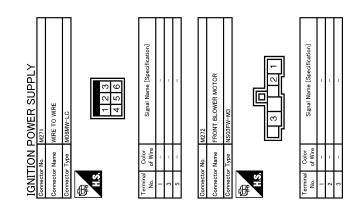
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# Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 3 -

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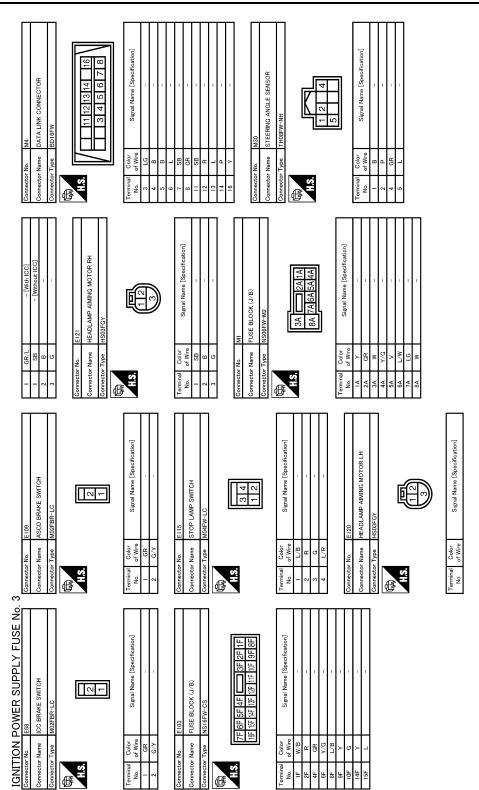
IGNITION POWER SUPPLY FUSE No. 3

FUSE BLOCK (J/B) (J/B) (M1).(E103)			ut ICC	
	Connector No.	Terminal No.	Connect to	
	(E68)	1	ICC BRAKE SWITCH	
	E109	1	ASCD BRAKE SWITCH	
+	E115	3	STOP LAMP SWITCH	
+	E120	3	HEADLAMP AIMING MOTOR LH	
	E121)	3	HEADLAMP AIMING MOTOR RH	
•	<u>M4</u>	8	DATA LINK CONNECTOR	
•	(M30)	4	STEERING ANGLE SENSOR	
•	(M34)	2	COMBINATION METER	
•	(M52)	1	HEATED STEERING WHEEL SWITCH	
•	(M92)	2	OPTION CONNECTOR (1)	
•	(M96)	15	LOW TIRE PRESSURE WARNING CONTROL UNIT	
	M108	3	POWER STEERING CONTROL UNIT	
•	M125	9	CAN GATEWAY	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	M126	3	TRIPLE SWITCH (AFS SWITCH)	F
	M135	1	AFS CONTROL UNIT	
Ť	M144	1	AC 120V OUTLET MAIN SWITCH	

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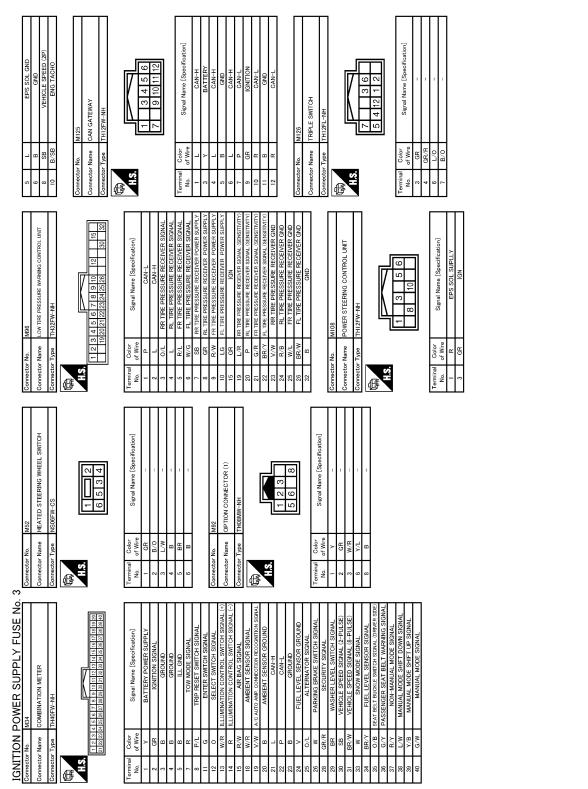
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AC 120V OUTLET MAIN SWITCH

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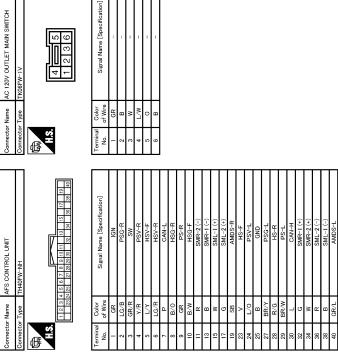
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IGNITION POWER SUPPLY FUSE No.

AFS CONTROL UNIT TH40FV

pe. inector Name



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### Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 4 -IGNITION POWER SUPPLY FUSE No. 4

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TUSE BLOCK (J/B) 2C			With ACCS
	Connector No.	Terminal No.	Connect to
	(M41)	12	REAR A/C CONTROL
	(M48)	3	AROUND VIEW MONITOR CONTROL UNIT
	(M50)	23	A/C AUTO AMP.
(AC)	M130	1	IONIZER
26 (M113) (M222)	M210	80	AV CONTROL UNIT
97 (M82):(E107)	(E87)	1	REAR A/C RELAY
	(E87)	3	REAR A/C RELAY
(AC) 9	E117	1	EXHAUST GAS / OUTSIDE DOOR DETECTING SENSOR
90 (M19) (B2)	(B26)	9	AUTOMATIC BACK DOOR CONTROL MODULE
32 (M23) (R1)	R25	6	AUTO ANTI-DAZZLING INSIDE MIRROR

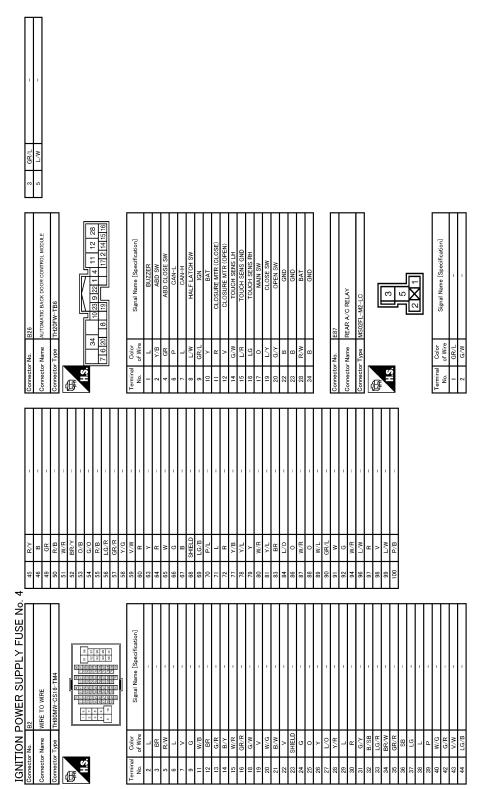
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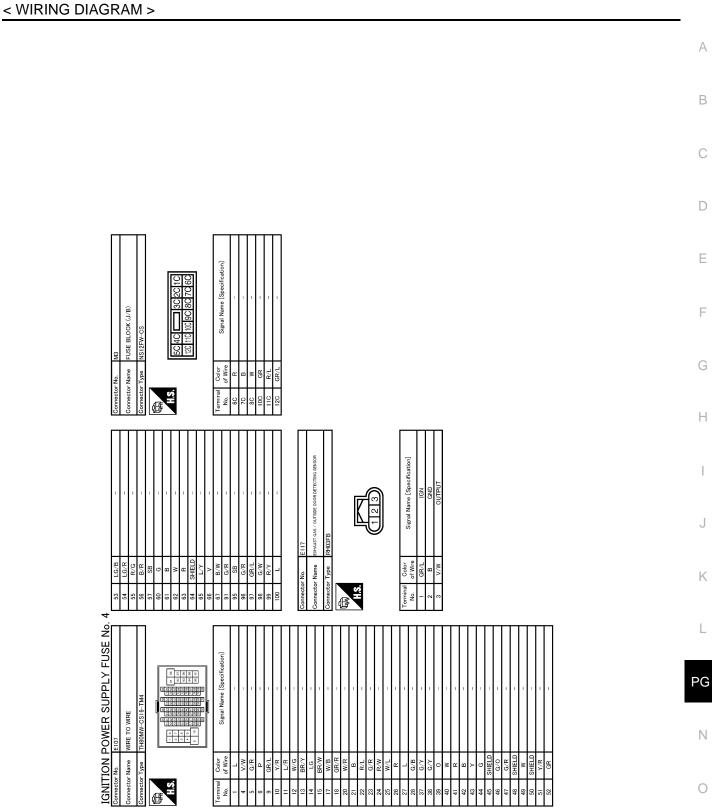
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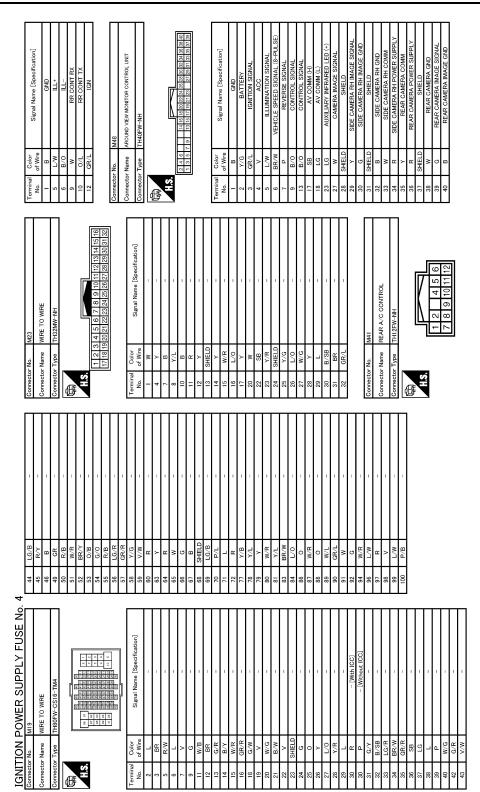
JCMWM8446GB



JCMWM8447GB

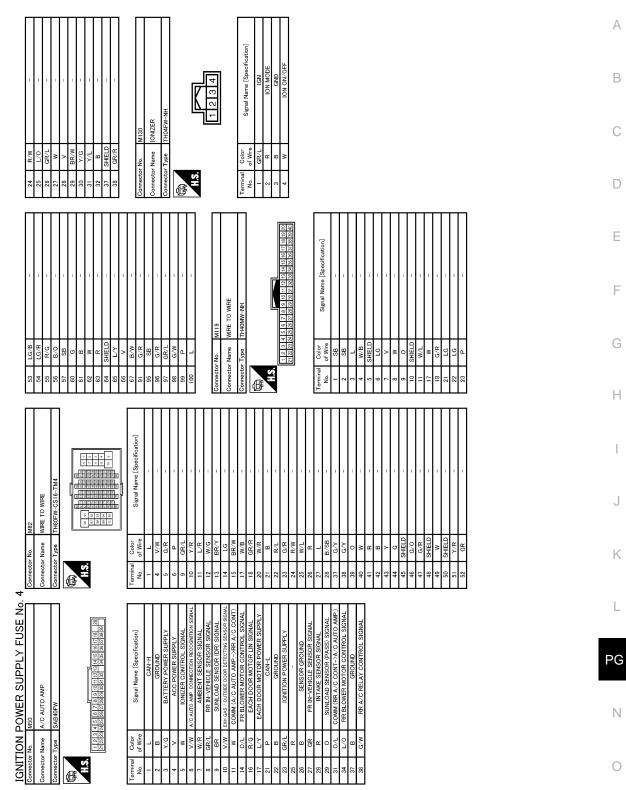
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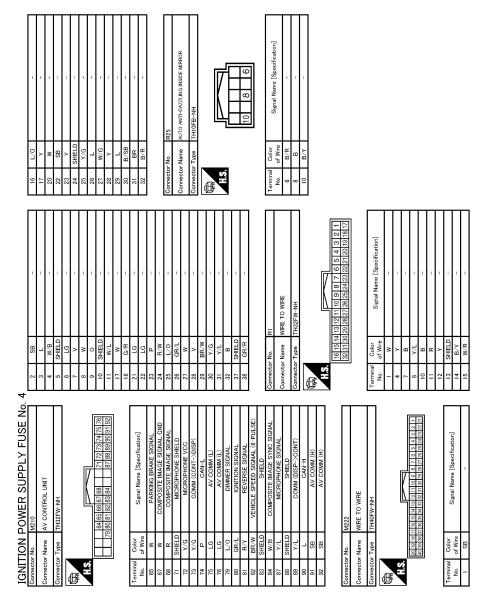


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< WIRING DIAGRAM >



JCMWM8449GB



JCMWM8450GB

# Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 37 - INFOID:00000006288147 IGNITION POWER SUPPLY FUSE No. 37

	TRIBUTION DULE GINE ROOM)				
		Connector No.	Terminal No.	Connect to	
(E105) (M77)	•	(M94)	1	WARNING BUZZER	
	•	M127	8	TWIN SWITCH (WARNING SYSTEMS SWITCH)	
•		(E64)	1	ICC BRAKE HOLD RELAY	
•		E65	1	ICC SENSOR	
		(E66)	3	ACCELERATOR PEDAL ACTUATOR	
	40 (M19) (B2)	B61)	16	ADAS CONTROL UNIT	
		B74)	5	SIDE RADAR LH	
	33 (M111) (B201)	B243	5	SIDE RADAR RH	
	27 (M23) (R1)	R8	7	LANE CAMERA UNIT	

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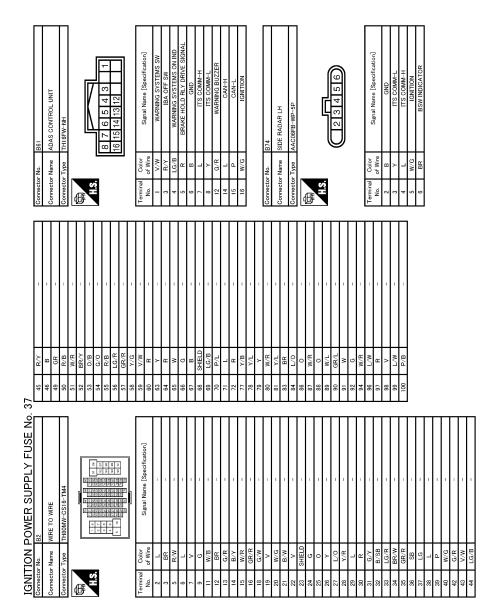
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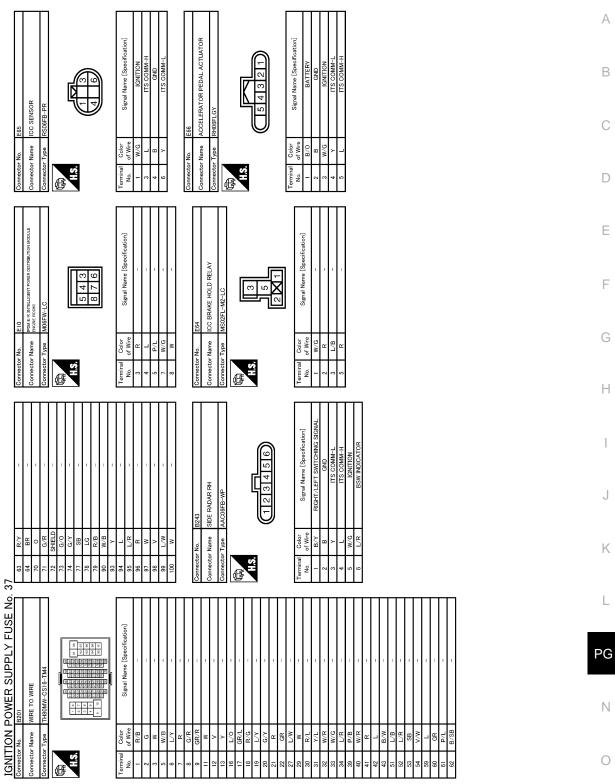
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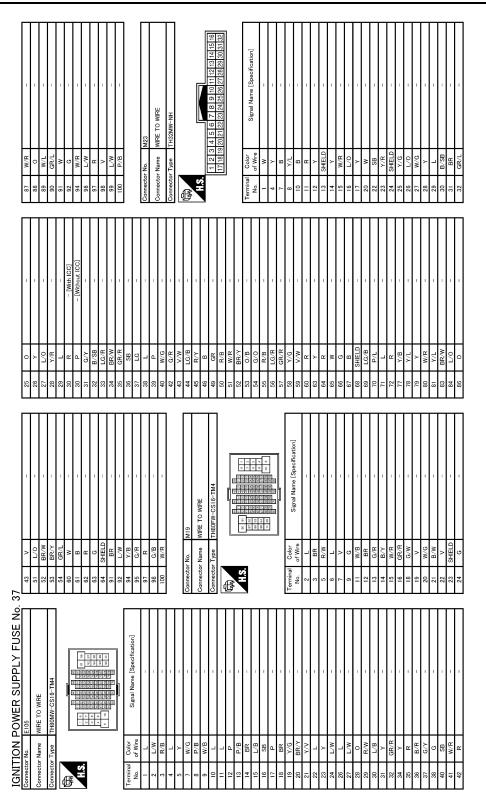
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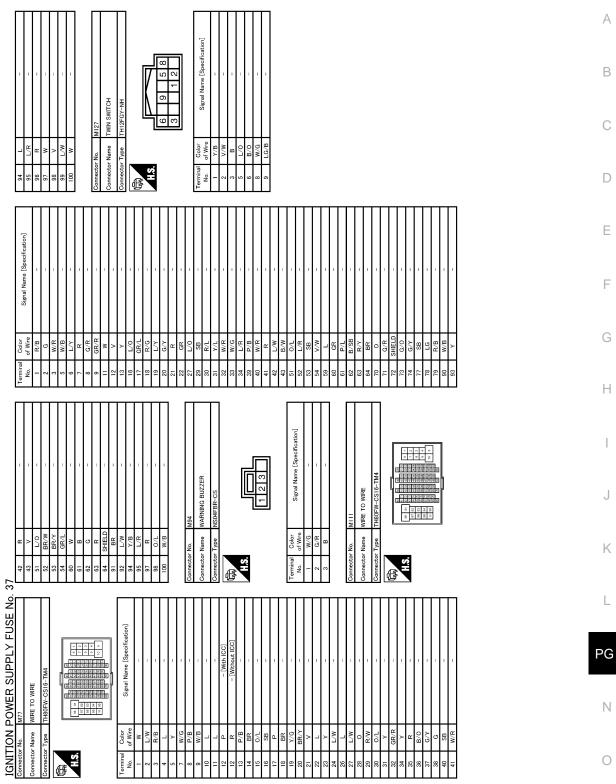
JCMWM8453GB

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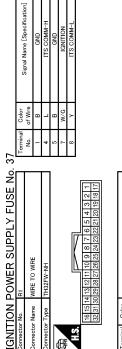


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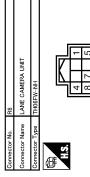


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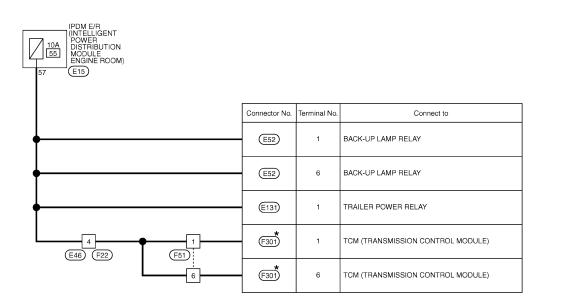


Signal Name [Specification]	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	-	1	1	-	-	1
Color of Wire	N	Y	в	Y/L	в	Я	Y	SHIELD	B/Υ	W/R	L/0	Y	M	SB	٢	SHIELD	γ/G	٦	W/G	Y	٦	B/SB	BR	B/R
Terminal No.	-	4	7	8	10	11	12	13	14	15	16	17	20	22	23	24	25	26	27	28	29	30	31	32



JCMWM8456GB

# Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 55 - INFOID:00000000228148 IGNITION POWER SUPPLY FUSE No. 55



\*: This connector is not shown in "Harness Layout".

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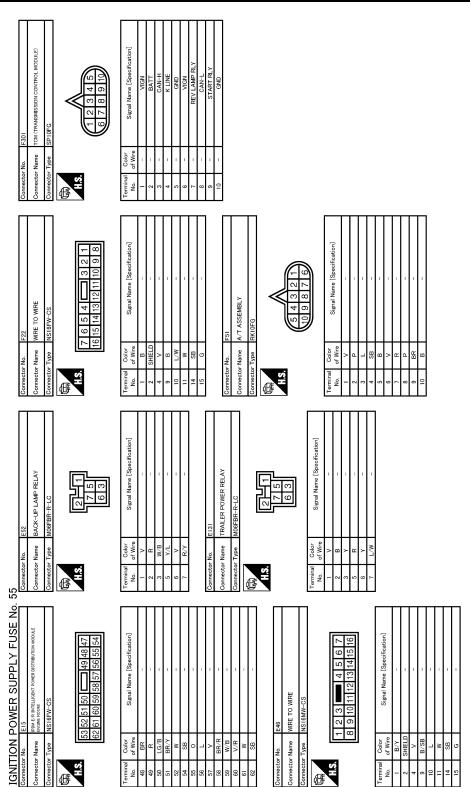
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< WIRING DIAGRAM >



JCMWM8458GB

# Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 57 - INFOID:00000005288149 IGNITION POWER SUPPLY FUSE No. 57

10A 10A 59 IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E15			
	Connector No.	Terminal No.	Connect to
9 (E105) (M77)	M55	3	YAW RATE / SIDE / DECEL G SENSOR
	(E36)	18	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
	E58	1	STOP LAMP RELAY

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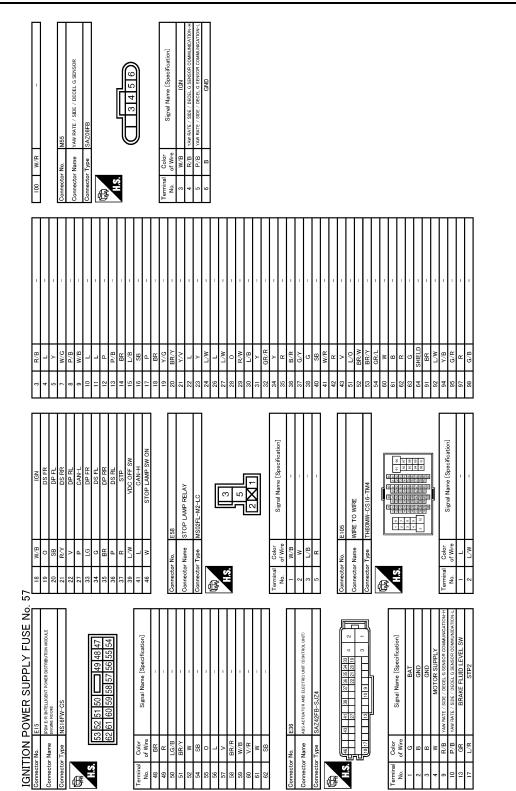
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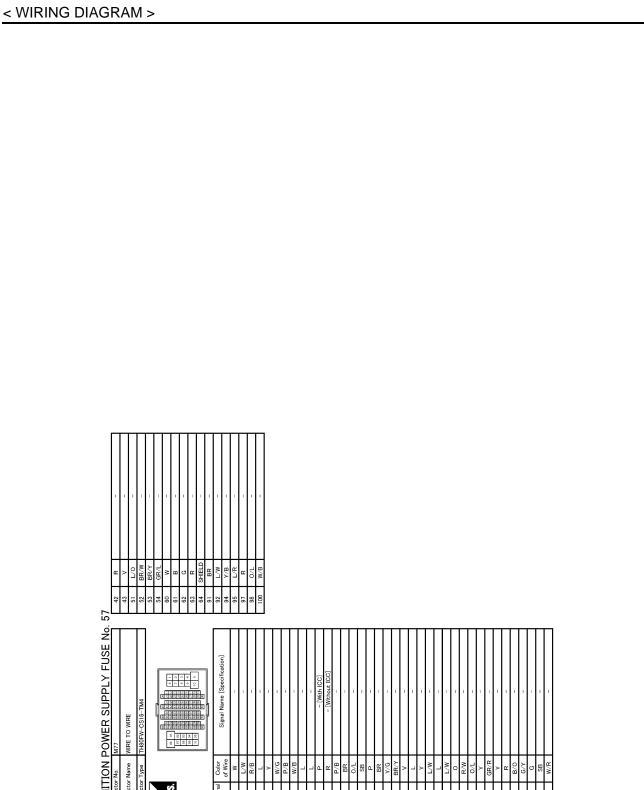
JCMWM8460GB

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**IGNITION POWER SUPPLY FUSE No.** 

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# Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 61 -

IGNITION POWER SUPPLY FUSE No. 61

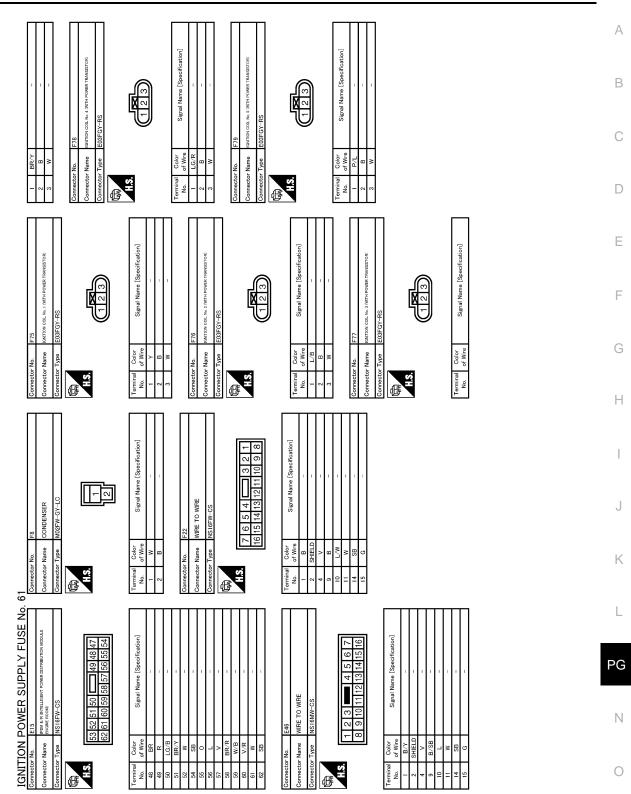
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E15			
	Connector No.	Terminal No.	Connect to
•	F8	1	CONDENSER
•	(F75)	3	IGNITION COIL No. 1 (WITH POWER TRANSISTOR)
•	(F76)	3	IGNITION COIL No. 2 (WITH POWER TRANSISTOR)
•	(F77)	3	IGNITION COIL No. 3 (WITH POWER TRANSISTOR)
•	(F78)	3	IGNITION COIL No. 4 (WITH POWER TRANSISTOR)
•	(F79)	3	IGNITION COIL No. 5 (WITH POWER TRANSISTOR)
•	(F80)	3	IGNITION COIL No. 6 (WITH POWER TRANSISTOR)
•	(F81)	3	IGNITION COIL No. 7 (WITH POWER TRANSISTOR)
	(F82)	3	IGNITION COIL No. 8 (WITH POWER TRANSISTOR)

JCMWM8462GB

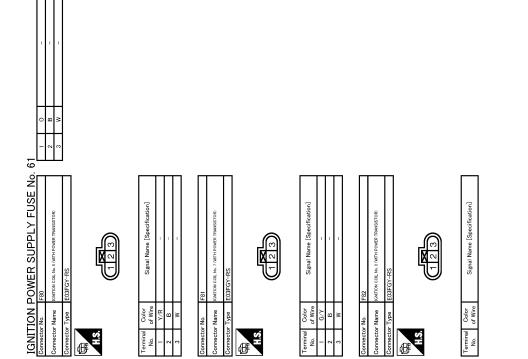
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INFOID:000000006288150

< WIRING DIAGRAM >



JCMWM8463GB



JCMWM8464GB

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# Wiring Diagram - IGNITION POWER SUPPLY FUSE No. 80 - INFOLD:00000006288151 IGNITION POWER SUPPLY FUSE No. 80

				WD : With wiper deicer
		Connector No.	Terminal No.	Connect to
		(E23)	1	WIPER DEICER RELAY
(E107) (M82)	10 (M20) (D1)	D3	7	DOOR MIRROR (DRIVER SIDE)
	10 M22 D21	D23	7	DOOR MIRROR (PASSENGER SIDE)

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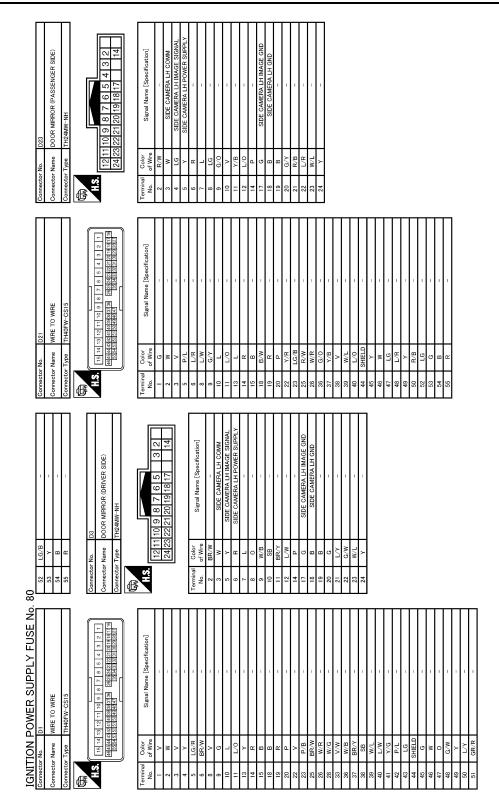
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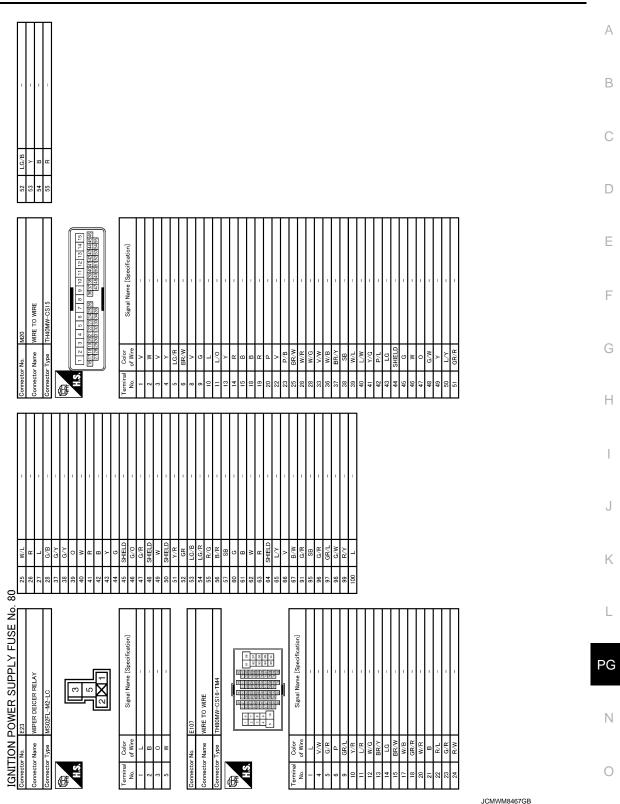
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#### Signal Name [Specification] 0 7 6 1 0 2 0 1 0 0 4 WIRE TO WIRE H80FW M82 B/SB G/Y B R R R R R R Y G SHIELD G/R G/R SHIELD W SHIELD Y/R GR Connector Name Connector Type Color of Wire L V/W G/R P GR/L V/R W/G BR/Y W/B BR/W W/B W/R W/R B R/L G/R R/W W/L R L ector No. erminal No. 80 IGNITION POWER SUPPLY FUSE No. Signal Name [Specification] WIRE TO WIRE TH40MW-Color of Wire ype Connector Name σ H.S.H Terminal No.

B/0 SB G G C R R R R R R L/Y L/Y L/Y C/R SB G/R C/R SB C/R C/R C/R

8 6 <u>0</u>

95 96 97

62 63 65 65 67 91

8 5

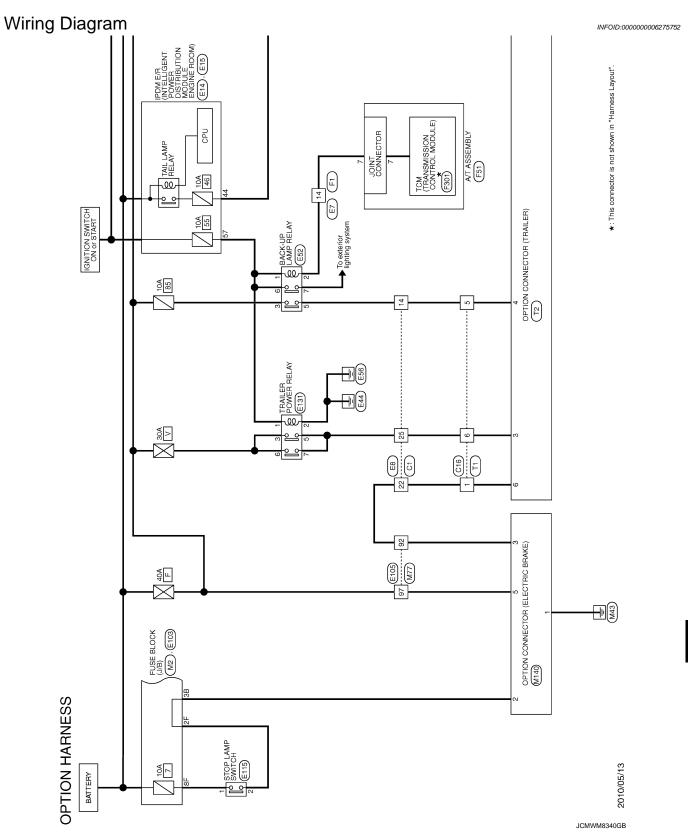
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### **OPTION HARNESS**



Revision: 2010 May

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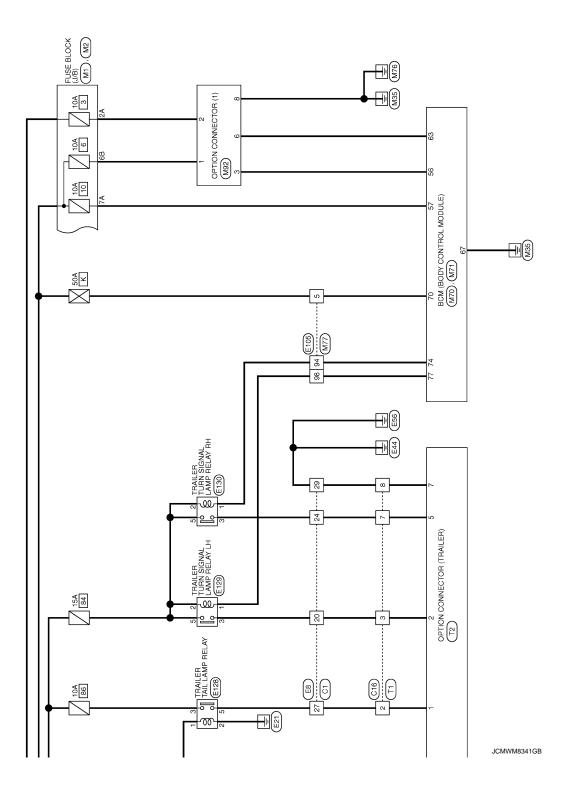
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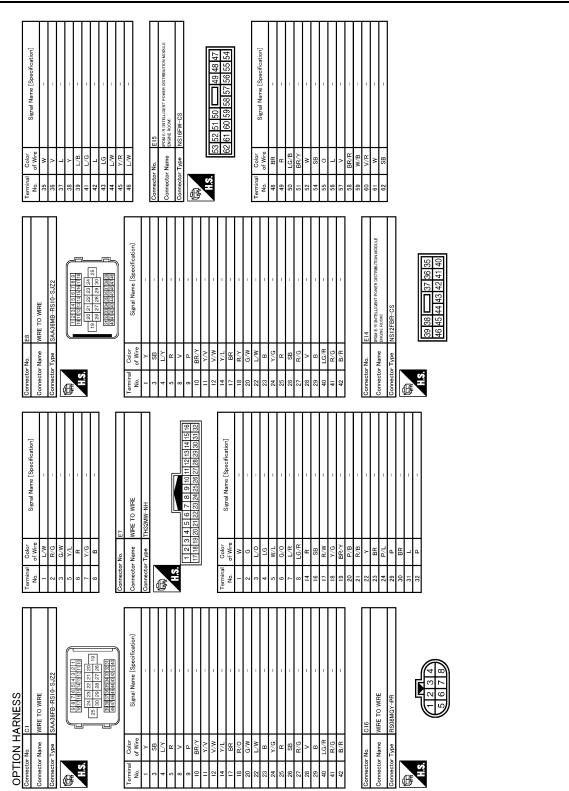
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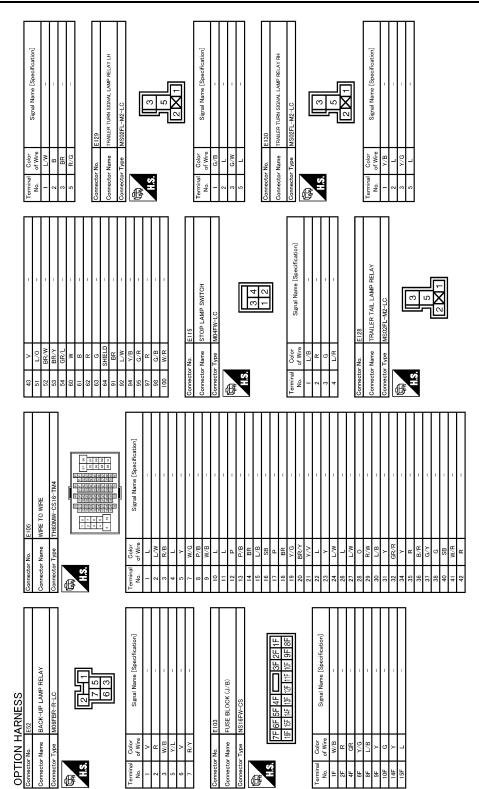
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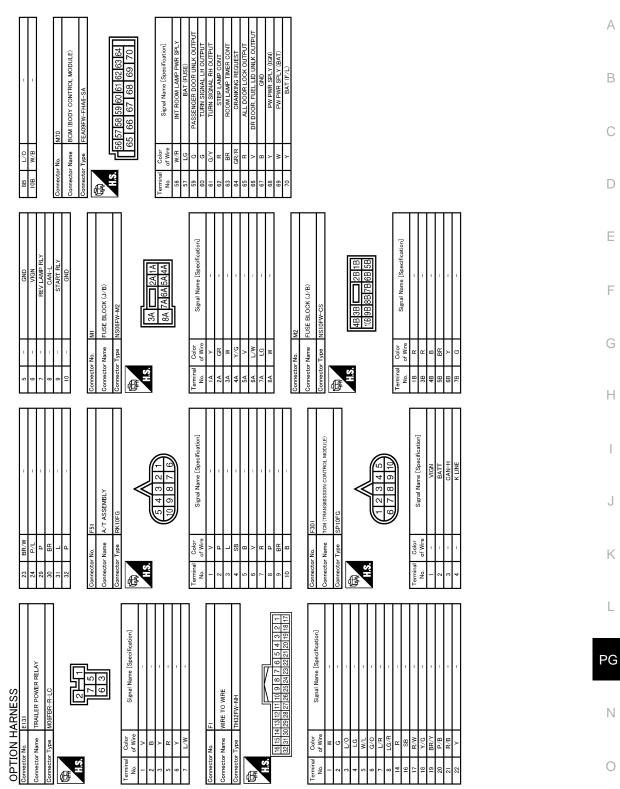
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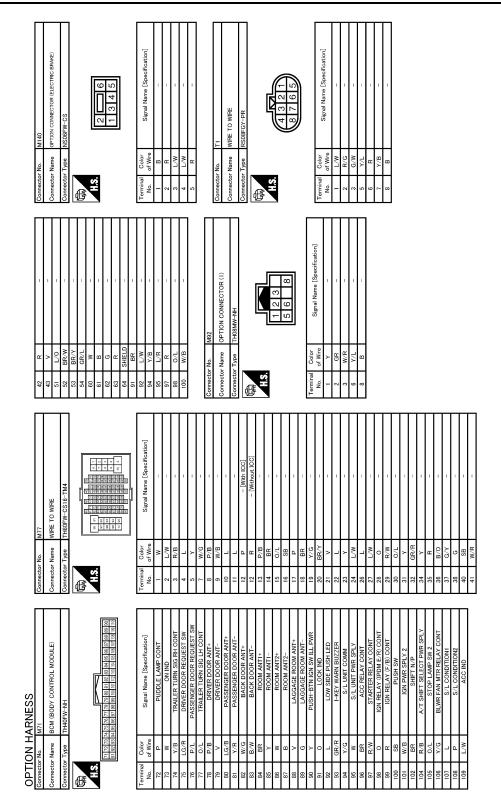
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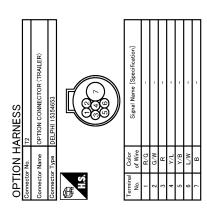
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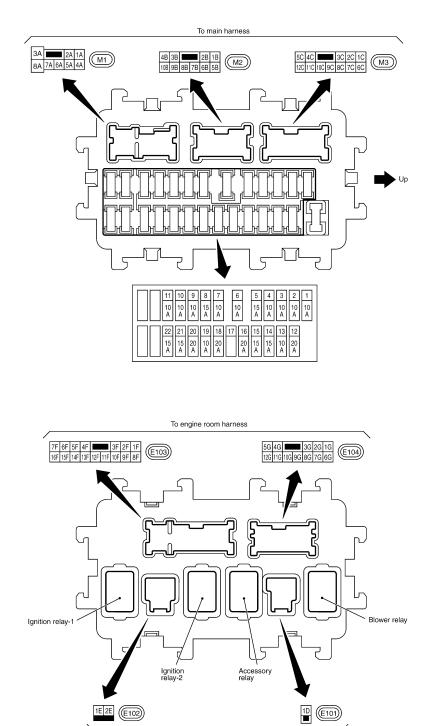
JCMWM8346GB

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

Fuse, Connector and Terminal Arrangement

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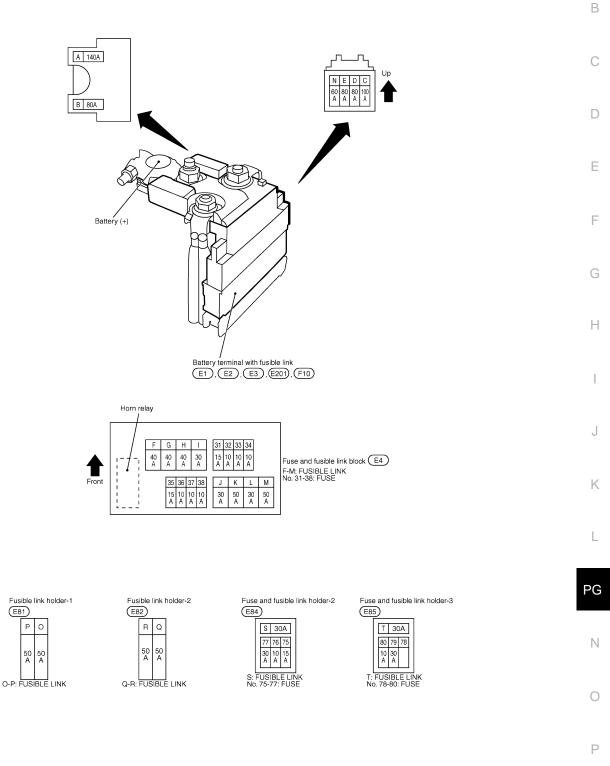
2010/03/12

JCMWM8094GB

To engine room harness

### FUSE, FUSIBLE LINK AND RELAY BOX

Fuse and Fusible Link Arrangement

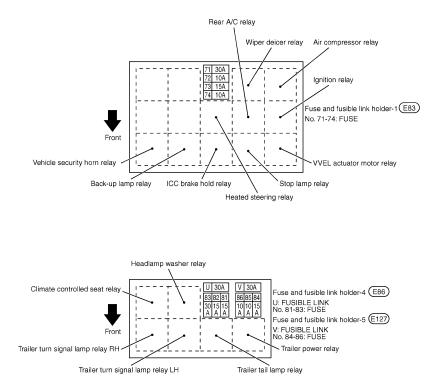


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INFOID:000000006275754



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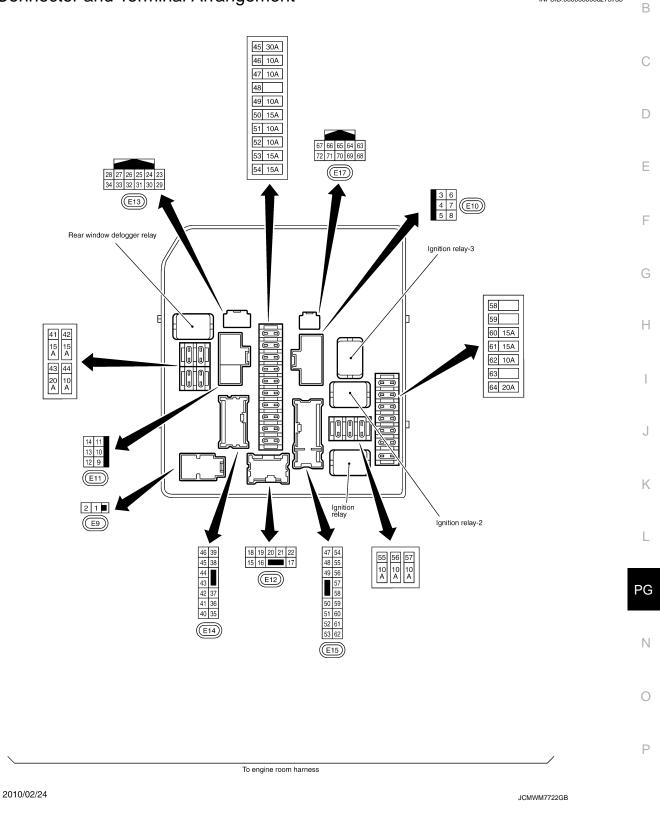
JCMWM8470GB

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

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

Fuse, Connector and Terminal Arrangement



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## HARNESS LAYOUT

### How To Read Harness Layout

INFOID:000000006288672

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- 1 : Connector model
- 2 : Cavity
- 3 : Male (M) and female (F) terminals
- 4 : Connector color
- 5 : Special type

Example:			
RS	04	F	G – GY
	T	T	$\top$ $\top$
1	2	3	<b>(4) (5)</b>
			JPMIA0113GB

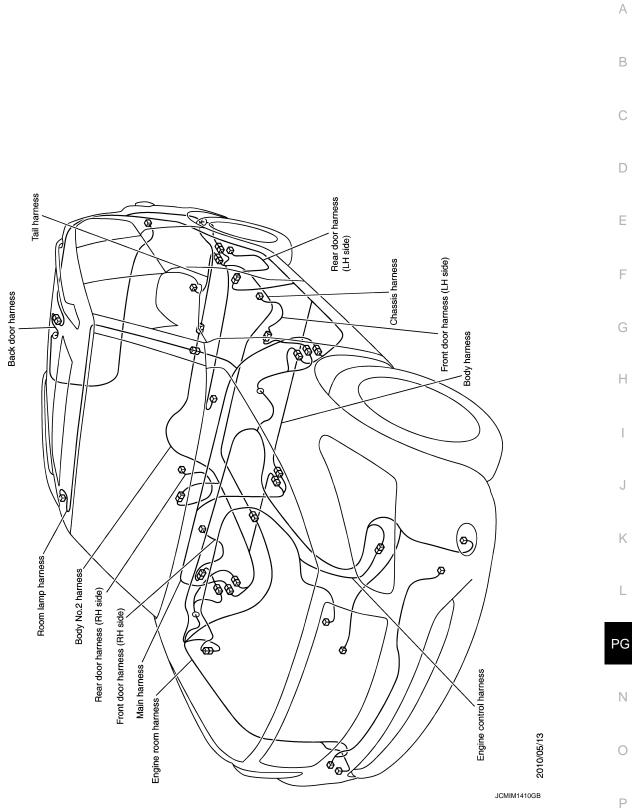
#### CONNECTOR SYMBOL

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

Connector type	Water pr	ird type		
Connector type	Male	Female	Male	Female
Connector symbol	Ø	6	Ø	Ø
Ground terminal etc.	-	_	G	P

## Outline





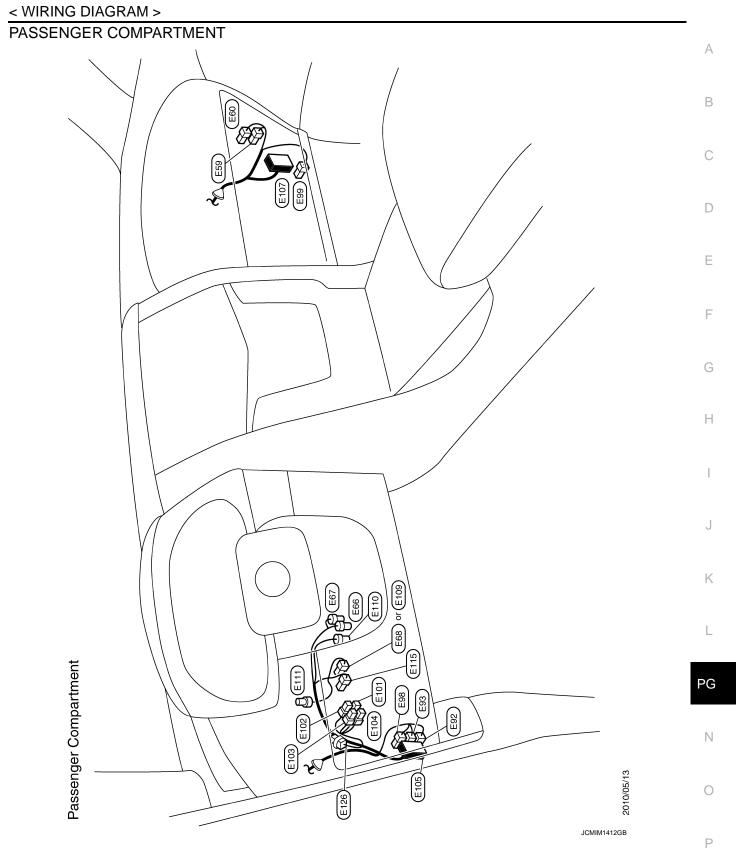
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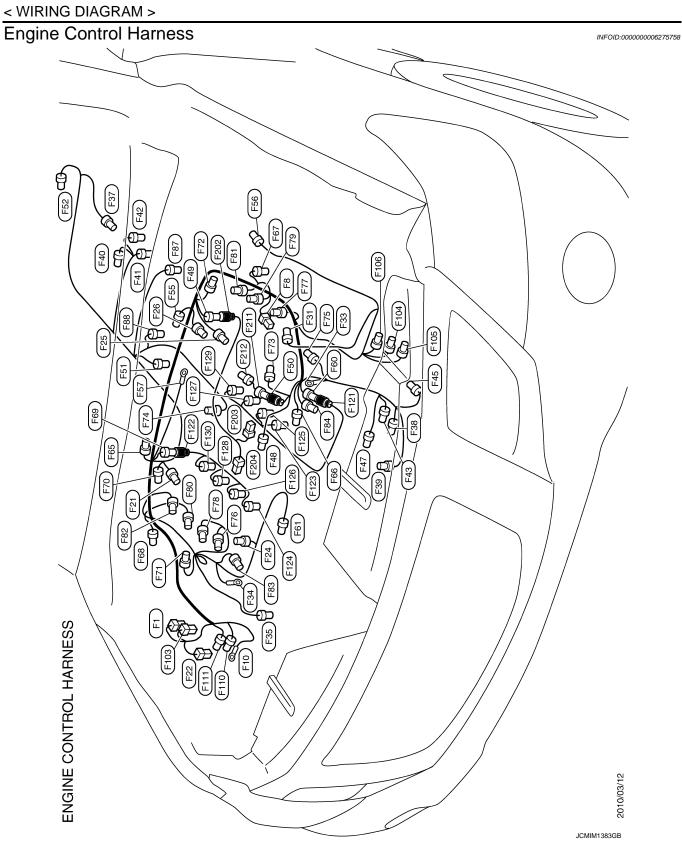
## **Engine Room Harness**

INFOID:000000006275757

#### ENGINE COMPARTMENT (E131) E127 E86 (E51) 6 E22 E43 E128 E129 E130 E120 E128 E29 (C) E35 ற (E30 ESO E37 ė E97 യ് P E44 E47 ന (Egg E25 E95 ß E87 E23 E83 E62 <u>Е</u>0 E90 E40 E52 80 E39 Ξ E58 E64 E124) Ш E70 E19 Ы E31 E3 E76 E54 E200 E82 Ø E203 E202 ESO E205 ð E41 E5 E81 j**g**e E72 E204) E84 ENGINE ROOM HARNESS / Engine Compartment E85 E61 [Н Т D E71 E94 208 മ E77 E117 E21 E113 E65 E12 <u>6</u>Ш E63 Ш 14 0 E46 E125 E38 E15 E225 <u>[</u>] Ø07 2010/05/13 E10 E121 E17 Щ Ш E48 E123 E222 E1197

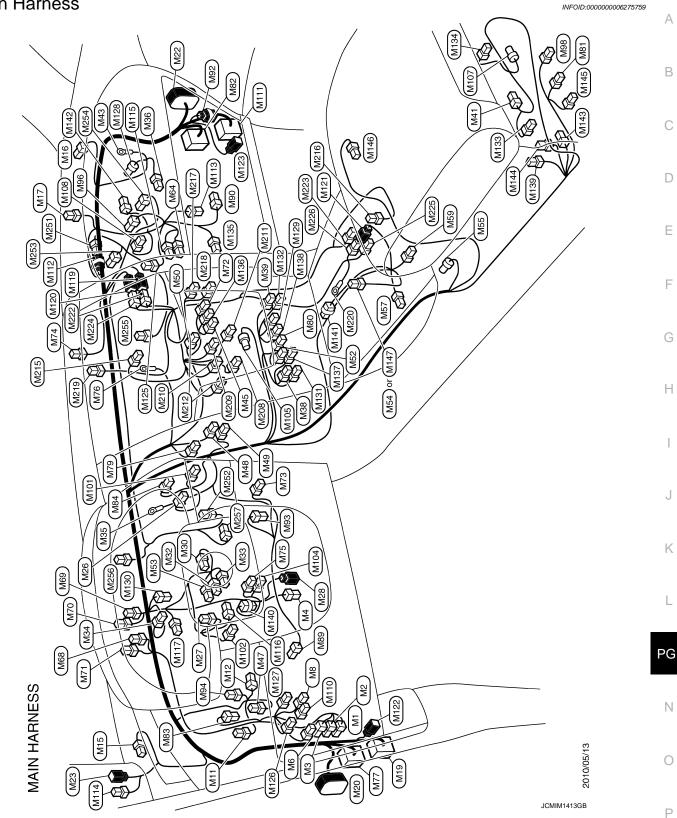
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## Main Harness

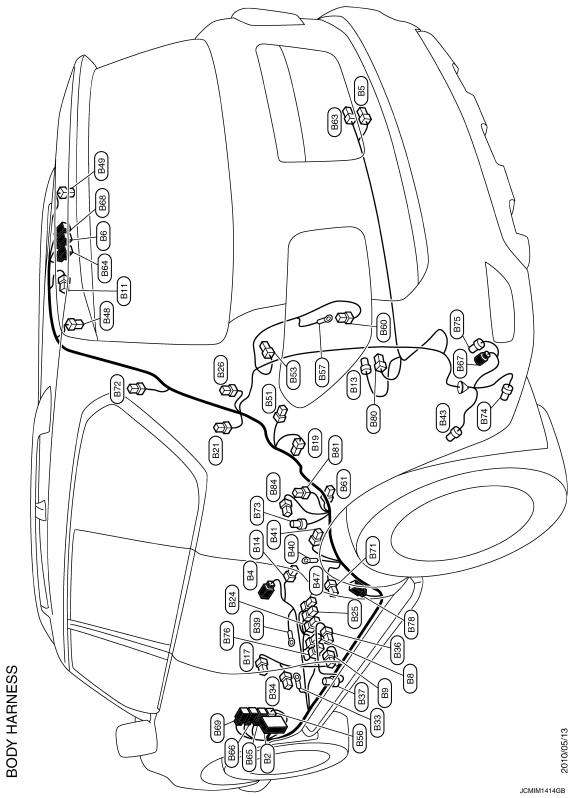


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## **Body Harness**

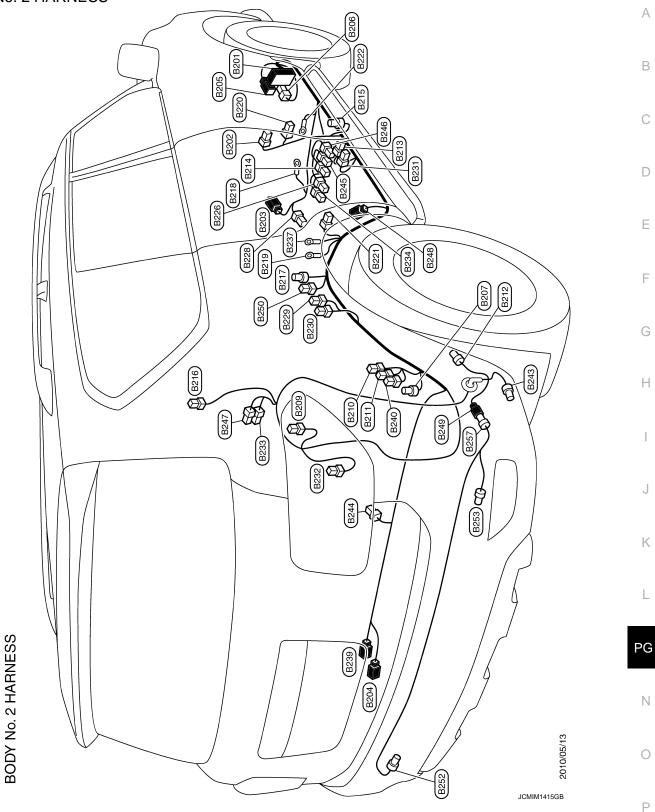
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## **BODY HARNESS**



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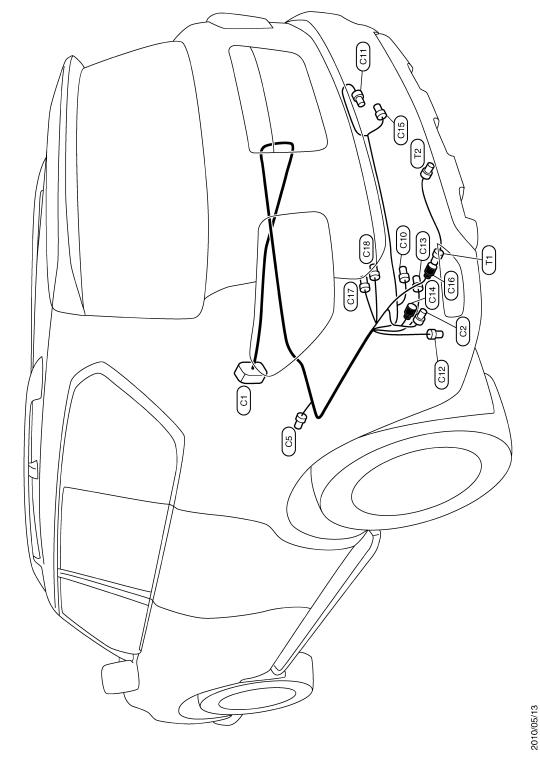
BODY No. 2 HARNESS



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## Chassis Harness

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CHASSIS HARNESS

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## Door Harness

## FRONT DOOR HARNESS (LH SIDE)

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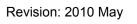
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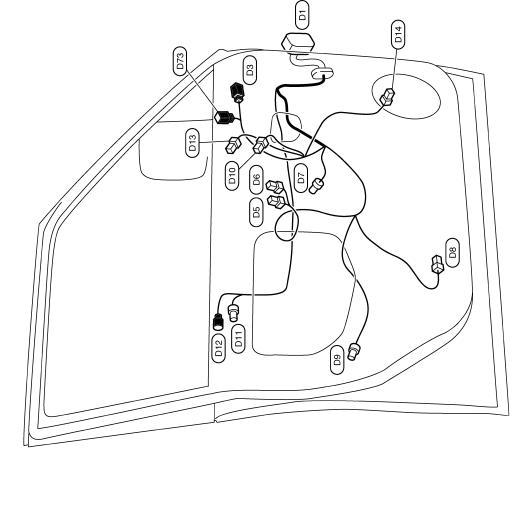




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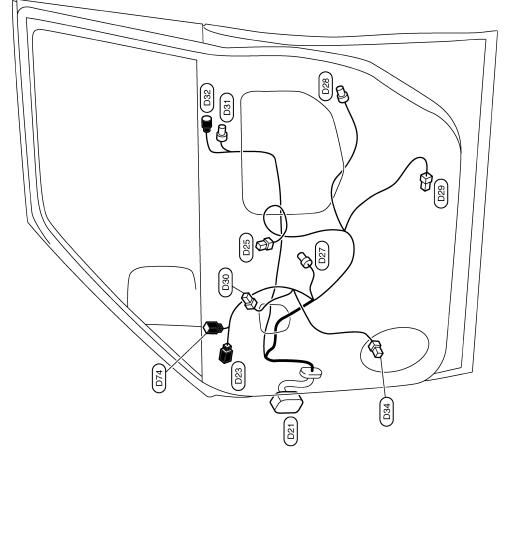
JCMIM1417GB

FRONT DOOR HARNESS (LH SIDE)



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FRONT DOOR HARNESS (RH SIDE)



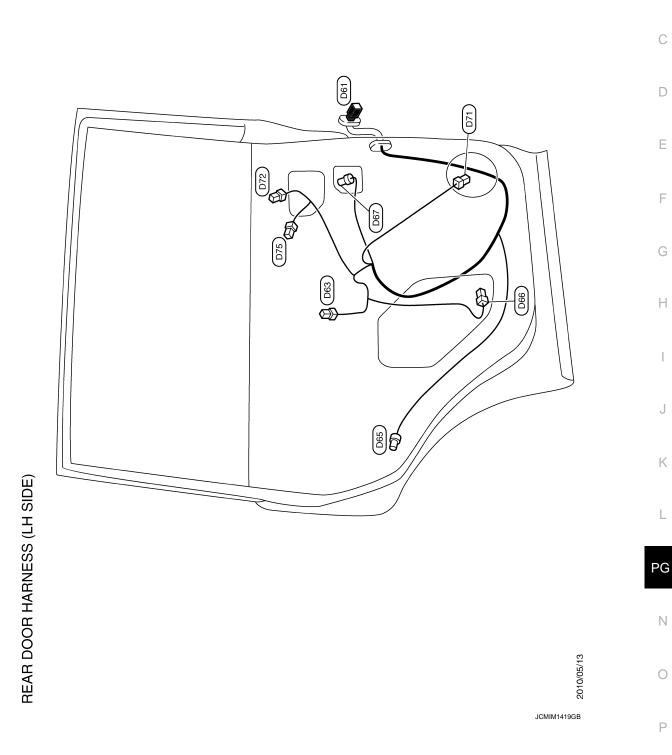
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FRONT DOOR HARNESS (RH SIDE)

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REAR DOOR HARNESS (LH SIDE)

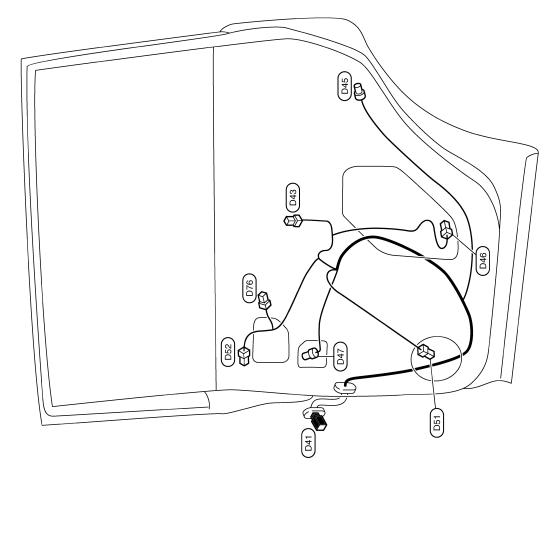


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REAR DOOR HARNESS (RH SIDE)



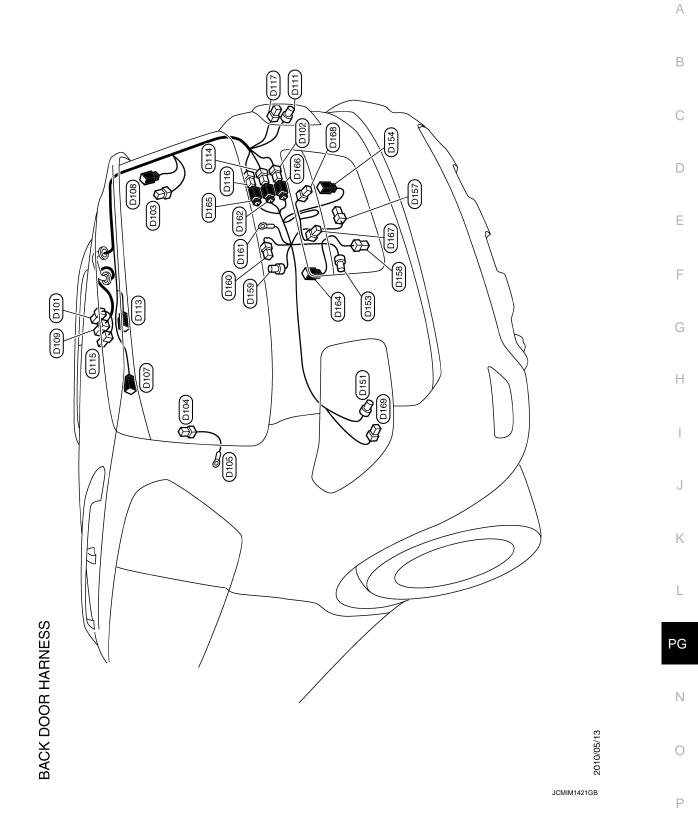
REAR DOOR HARNESS (RH SIDE)

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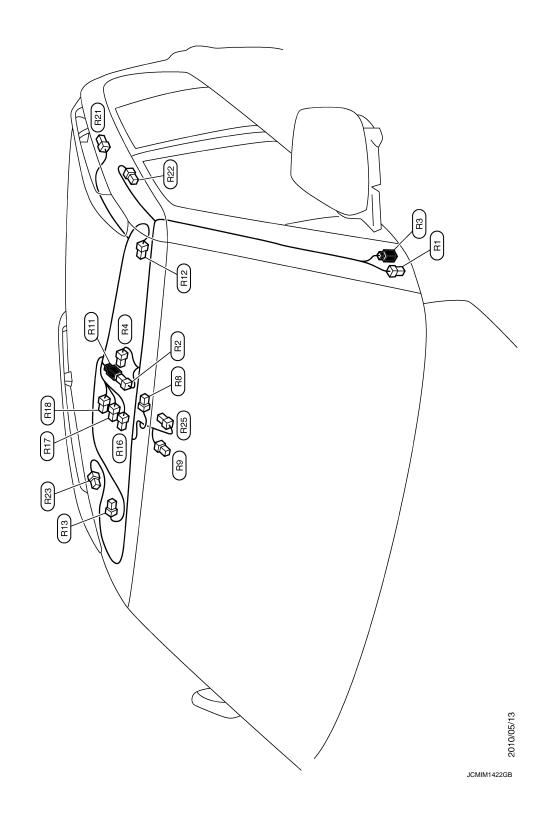
## BACK DOOR HARNESS



< WIRING DIAGRAM >

## Room Lamp Harness

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ROOM LAMP HARNESS

# **BASIC INSPECTION** BATTERY INSPECTION

### How to Handle Battery

#### **CAUTION:**

- If it becomes necessary to start the engine with a booster battery and jumper cables, use a 12-volt booster battery.
- After connecting battery cables, ensure that they are tightly clamped to battery terminals for good contact.
- Never add distilled water through the hole used to check specific gravity.

#### METHODS OF PREVENTING OVER-DISCHARGE

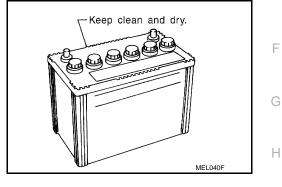
The following precautions must be taken to prevent over-discharging a battery.

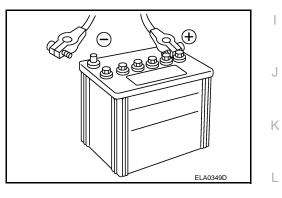
- The battery surface (particularly its top) should always be kept clean and drv.
- The terminal connections should be clean and tight.
- At every routine maintenance, check the electrolyte level. This also applies to batteries designated as "low maintenance" and "maintenance-free"

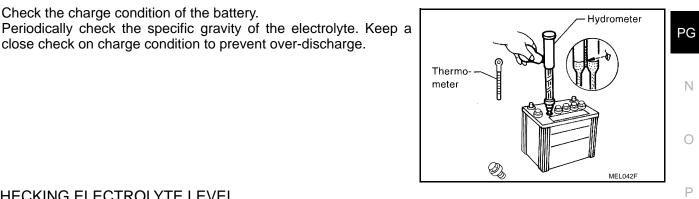
• When the vehicle is not going to be used over a long period of time, disconnect the battery cable from the negative terminal. (If

the vehicle has an extended storage switch, turn it off.)

close check on charge condition to prevent over-discharge.







## CHECKING ELECTROLYTE LEVEL

#### WARNING:

Never allow battery fluid to come in contact with skin, eyes, fabrics, or painted surfaces. After touching a battery, never touch or rub your eyes until you have thoroughly washed your hands. If acid contacts eyes, skin or clothing, immediately flush with water for 15 minutes and seek medical attention.

· Check the charge condition of the battery.

Revision: 2010 May

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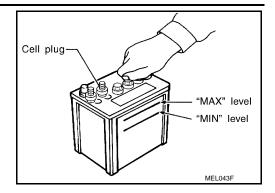
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## **BATTERY INSPECTION**

#### < BASIC INSPECTION >

- Remove the cell plug using a suitable tool.
- Add distilled water up to the MAX level.



Sulphation

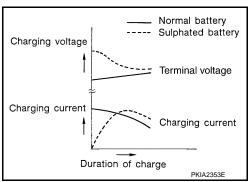
A battery will be completely discharged if it is left unattended for a long time and the specific gravity will become less than 1.100. This may result in sulphation on the cell plates.

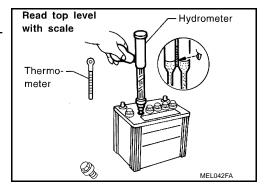
To determine if a battery has been "sulphated", note its voltage and current when charging it. As shown in the figure, less current and higher voltage are observed in the initial stage of charging sulphated batteries.

A sulphated battery may sometimes be brought back into service by means of a long, slow charge, 12 hours or more, followed by a battery capacity test.



- 1. Read hydrometer and thermometer indications at eye level.
- 2. Use the chart below to correct your hydrometer reading according to electrolyte temperature.





Hydrometer Temperature Correction

Battery electrolyte temperature [°C (°F)]	Add to specific gravity reading
71 (160)	0.032
66 (150)	0.028
60 (140)	0.024
54 (130)	0.020
49 (120)	0.016
43 (110)	0.012
38 (100)	0.008
32 (90)	0.004
27 (80)	0
21 (70)	-0.004
16 (60)	-0.008
10 (50)	-0.012
4 (40)	-0.016
-1 (30)	-0.020
-7 (20)	-0.024

## **BATTERY INSPECTION**

#### < BASIC INSPECTION >

Battery electrolyte temperature [°C (°F)]	Add to specific gravity reading
-12 (10)	-0.028
-18 (0)	-0.032
Corrected specific gravity	Approximate charge condition
1.260 - 1.280	Fully charged
1.230 - 1.250	3/4 charged
1.200 - 1.220	1/2 charged
1.170 - 1.190	1/4 charged
1.140 - 1.160	Almost discharged
1.110 - 1.130	Completely discharged

#### CHARGING THE BATTERY

#### **CAUTION:**

- Never "quick charge" a fully discharged battery.
- Keep the battery away from open flame while it is being charged.
- When connecting the charger, connect the leads first, then turn on the charger. Never turn on the charger first, as this may cause a spark.
- If battery electrolyte temperature rises above 55 °C (131 °F), stop charging. Always charge battery at G a temperature below 55 °C (131 °F).

Amps	Time
50	1 hour
25	2 hours
10	5 hours
5	10 hours

#### Do not charge at more than 50 ampere rate.

#### NOTE:

The ammeter reading on your battery charger will automatically decrease as the battery charges. This indicates that the voltage of the battery is increasing normally as the state of charge improves. The charging amps indicated above refer to initial charge rate.

• If, after charging, the specific gravity of any two cells varies more than 0.050, the battery should be replaced.

### Work Flow

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### TROUBLE DIAGNOSIS WITH BATTERY SERVICE CENTER

For battery testing, use Battery Service Center (J-48087). For details and operating instructions, refer to Technical Service Bulletin and/or Battery Service Center User Guide.

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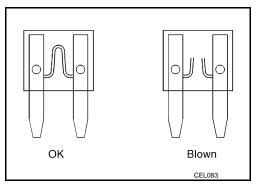
## **FUSE INSPECTION**

## < BASIC INSPECTION >

## FUSE INSPECTION

## How To Check

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



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#### < BASIC INSPECTION >

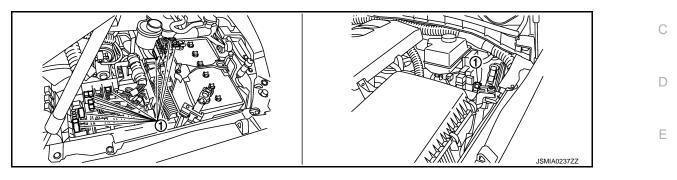
## FUSIBLE LINK INSPECTION

### How To Check

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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.



#### 1. Fusible link

#### **CAUTION:**

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



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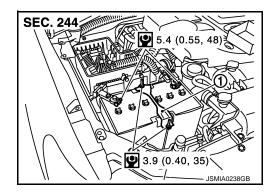
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## < REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION BATTERY

## Exploded View

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1 : Battery fix frame Refer to <u>GI-4, "Components"</u> for symbols in the figure.



## Removal and Installation

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#### REMOVAL

- 1. Remove cover of battery positive terminal.
- 2. Loosen battery terminal nuts, and disconnect both battery cables from battery terminals. CAUTION:

#### When disconnecting, disconnect the battery cable from the negative terminal first.

- 3. Remove battery fix frame mounting nuts and battery fix frame.
- 4. Remove battery.

#### INSTALLATION

Install in the reverse order of removal.

#### CAUTION:

#### When connecting, connect the battery cable to the positive terminal first.

Reset electronic systems as necessary. Refer to <u>GI-65</u>, "ADDITIONAL SERVICE WHEN REMOVING BAT-TERY NEGATIVE TERMINAL : Required Procedure After Battery Disconnection".

## **BATTERY TERMINAL WITH FUSIBLE LINK**

#### < REMOVAL AND INSTALLATION >

: Harness connector

: Battery terminal with fusible link

Refer to GI-4, "Components" for symbols in the figure.

## BATTERY TERMINAL WITH FUSIBLE LINK

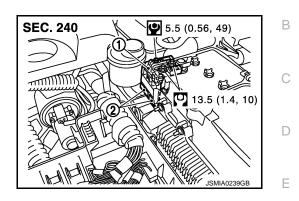
## **Exploded View**

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### Removal and Installation

#### REMOVAL

- 1. Disconnect the battery cable from the negative terminal.
- 2. Remove cover of battery positive terminal.
- 3. Remove harness mounting nut and battery terminal with fusible link mounting nut.
- 4. Disconnect harness connector and remove battery terminal with fusible link.

#### INSTALLATION

Install in the reverse order of removal.

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## SERVICE DATA AND SPECIFICATIONS (SDS)

### < SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS) SERVICE DATA AND SPECIFICATIONS (SDS)

## Battery

INFOID:000000006275783

Туре		115D31R
20 hour rate capacity	[V – Ah]	12 – 82
Cold cranking current (For reference value)	[A]	782