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POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

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APPLICATION NOTICE

APPLICATION NOTICE

PPF:00000

How to Check Vehicle Type

EKS00PAP

Confirm K9K engine type with Model written on identification plate (refer to [GI-44, "IDENTIFICATION INFORMATION"](#)), then refer to service information in PG section.

Vehicle type	Engine type
xTKxxxxK12Vxx	Euro3 48kW
xTKxxxxK12Yxx	Euro3 60kW
xTKxxxxK12Txx	Euro4 50kW
xTKxxxxK12Uxx	Euro4 63kW

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PRECAUTIONS

PFP:00001

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

EKS008IN

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. 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.

Maintenance Information

EKS008IP

If any of following part is replaced, always replace with new* one.

If it's not (or fail to do so), the electrical system may not be operated properly.

*: New one means a virgin control unit that has never been energized on-board.

RHD MODELS

- BCM (Models without Intelligent Key system)
- Intelligent Key unit (Models with Intelligent Key system)
- ECM
- IPDM E/R
- Combination meter
- EPS control unit

LHD MODELS

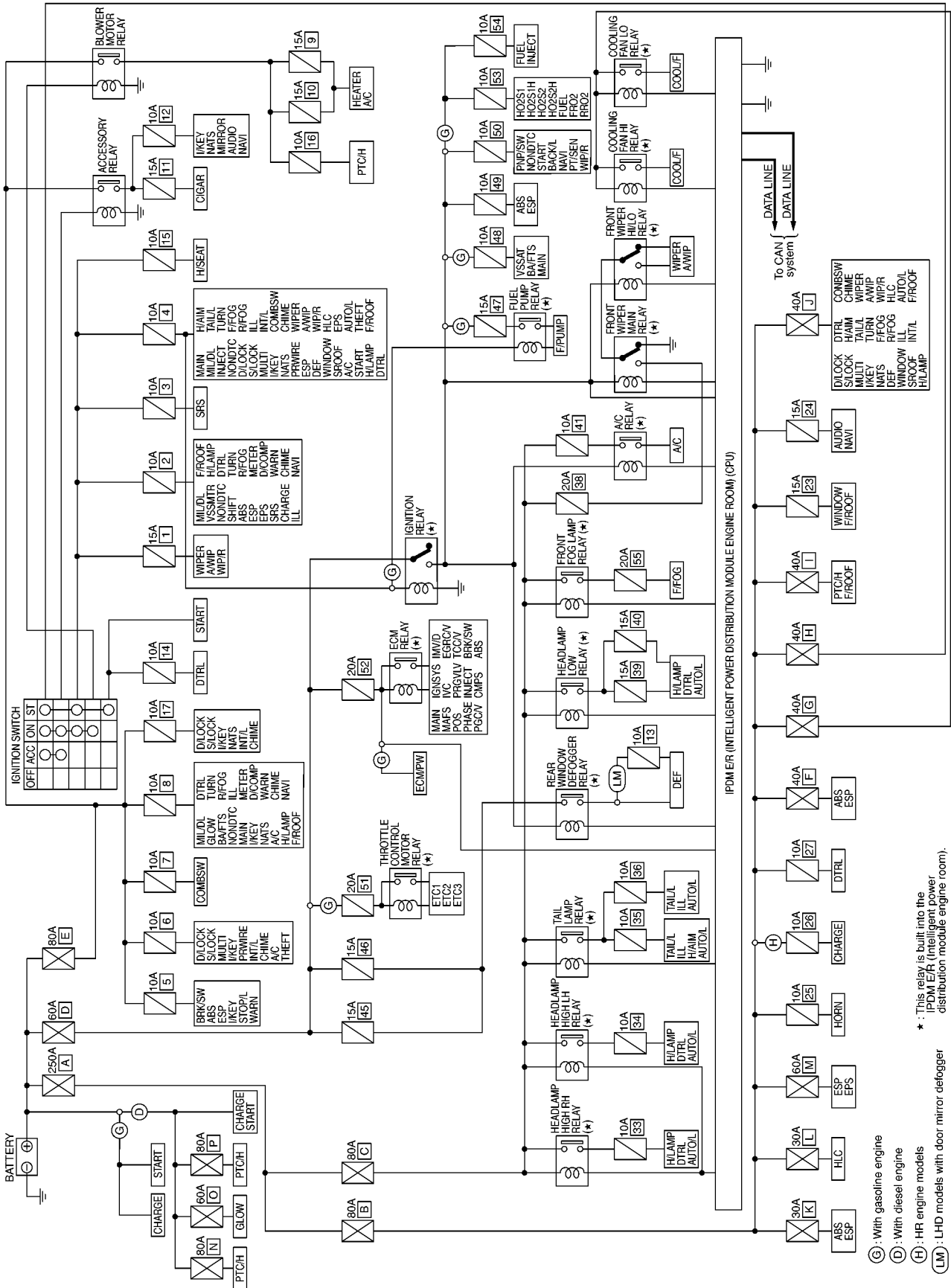
- BCM (Models without Intelligent Key system)
- Intelligent Key unit (Models with Intelligent Key system)
- ECM

POWER SUPPLY ROUTING

PPF:00011

Schematic

EKS00795



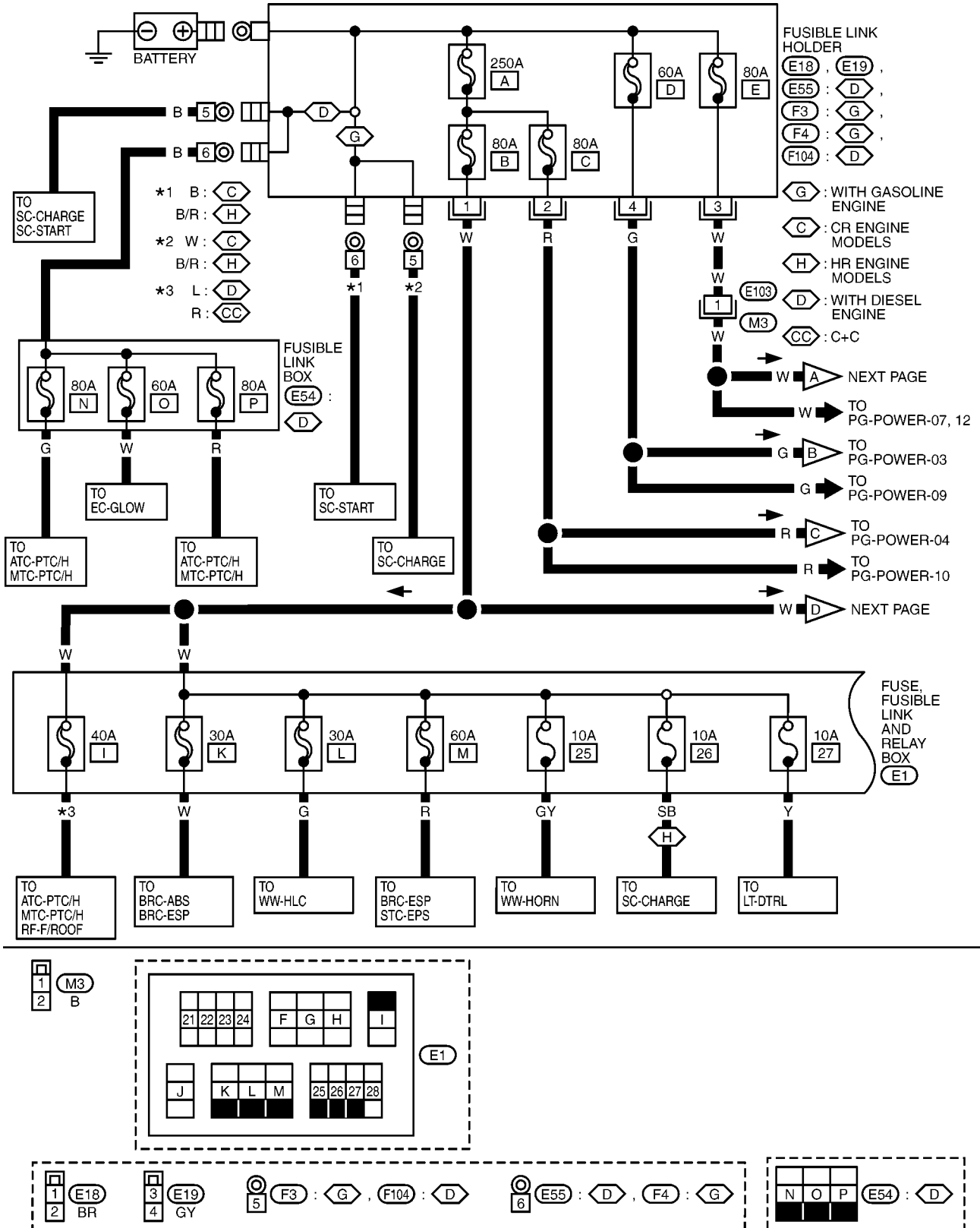
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POWER SUPPLY ROUTING

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

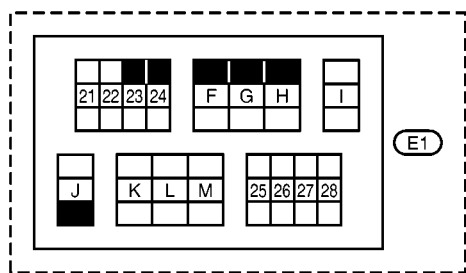
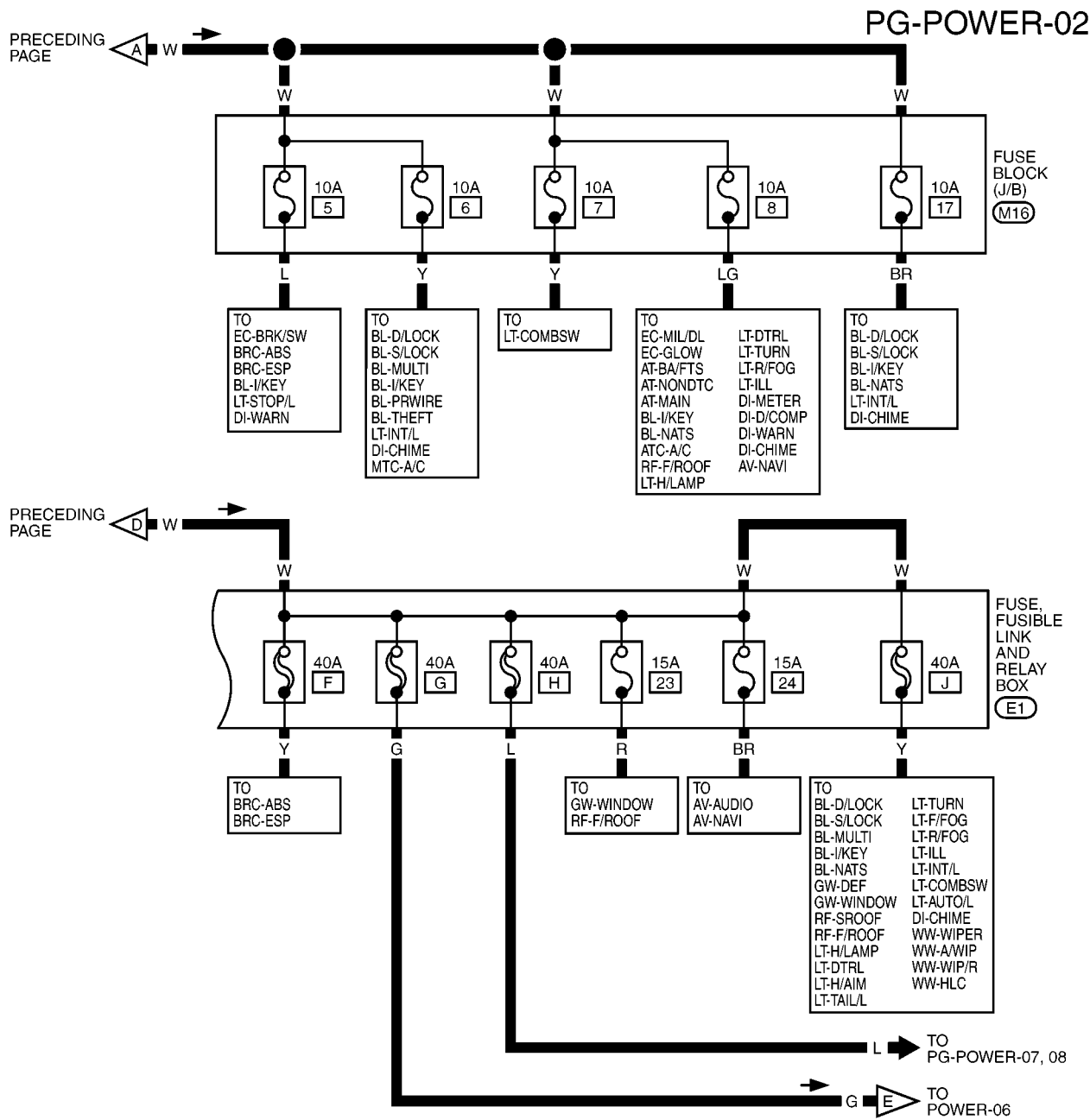
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PG-POWER-01

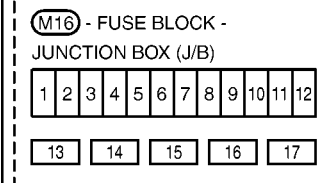


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POWER SUPPLY ROUTING



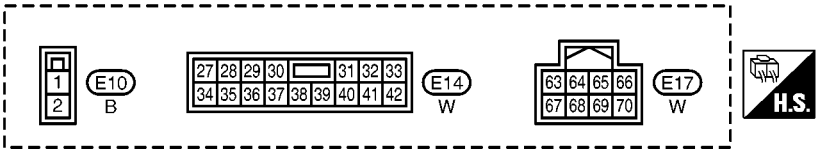
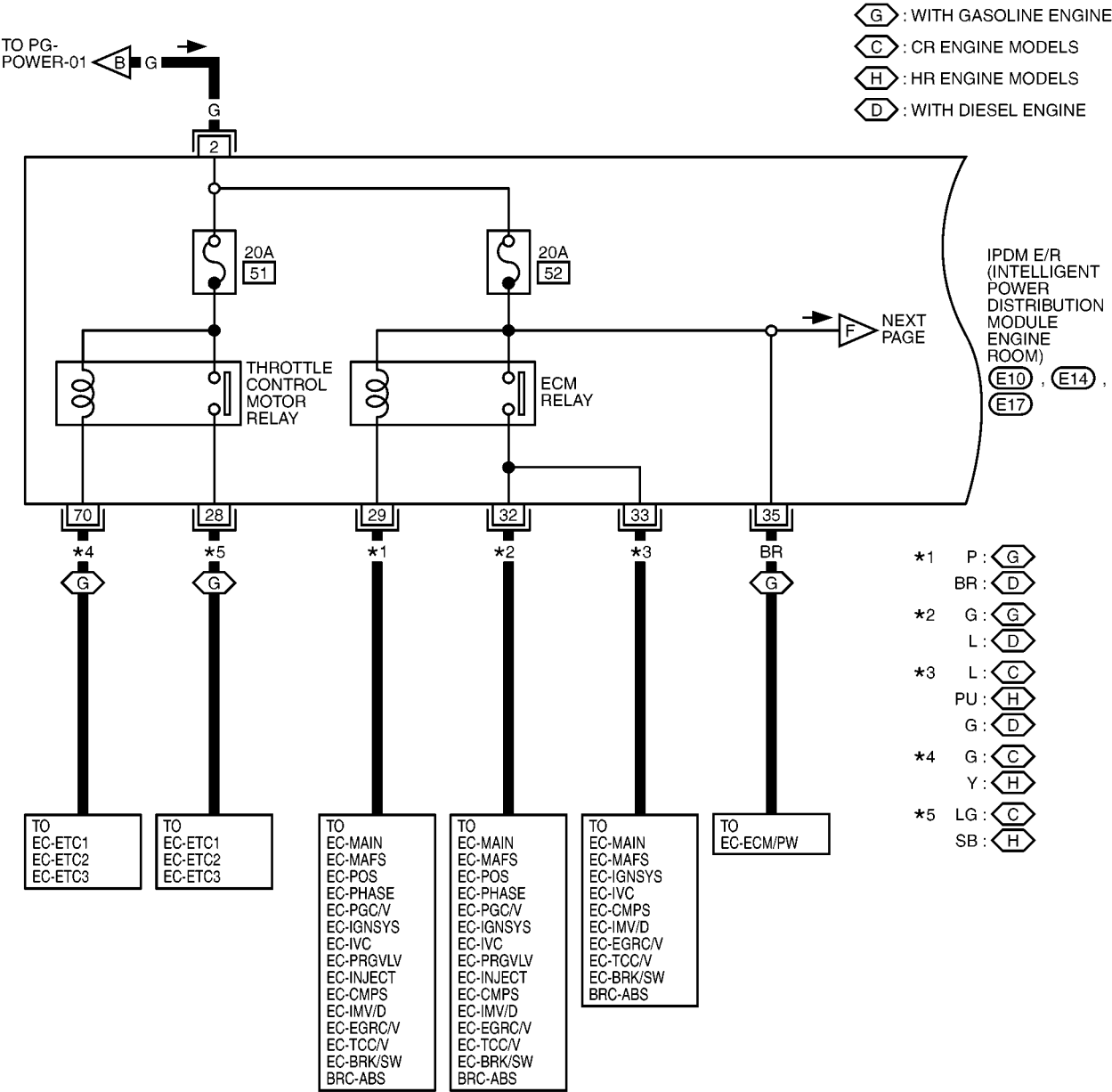
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POWER SUPPLY ROUTING

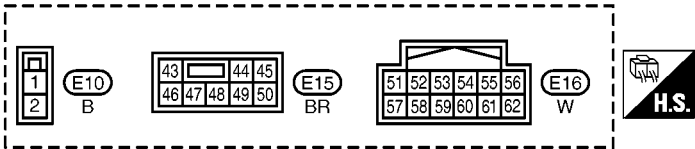
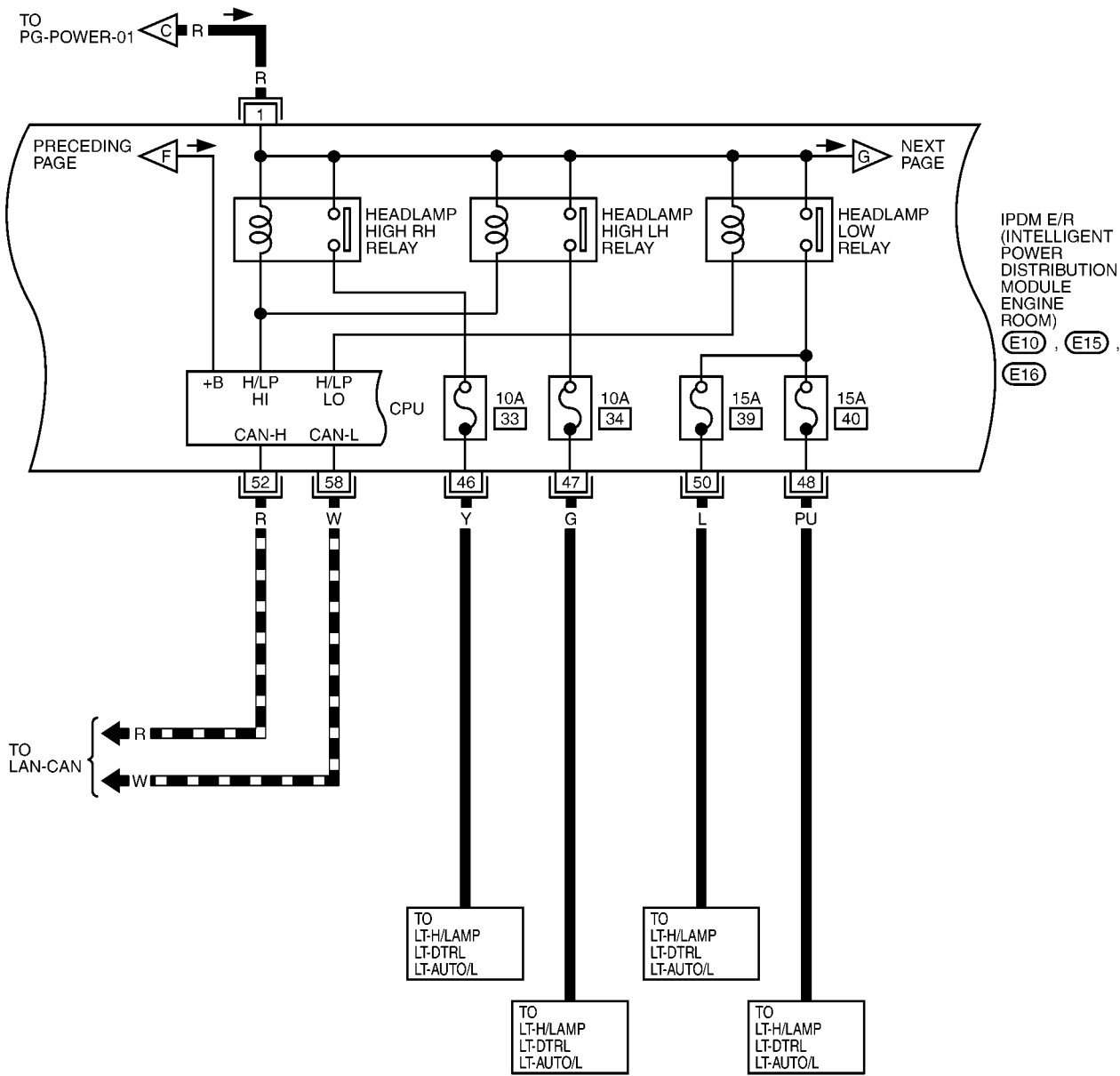
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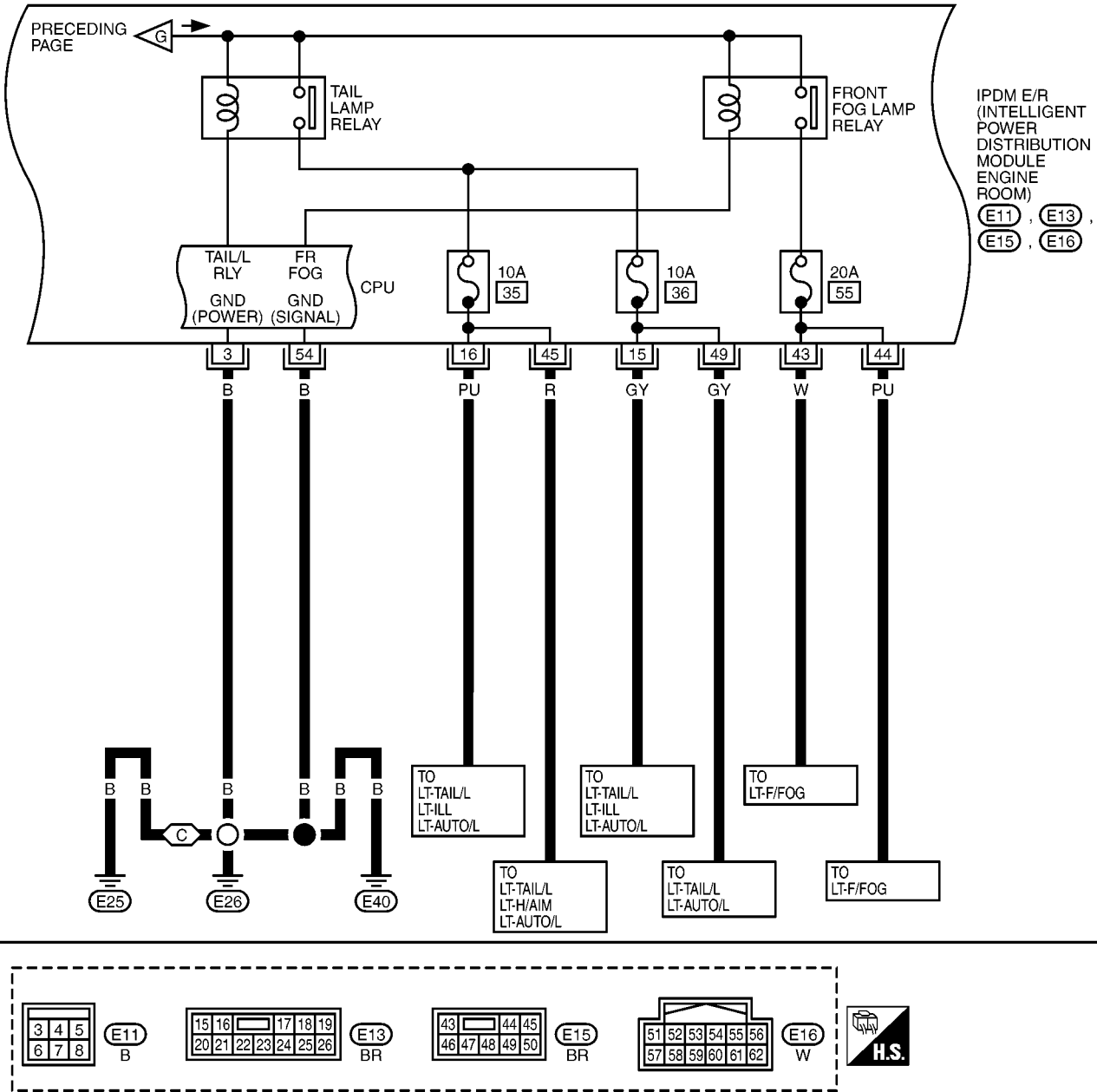
POWER SUPPLY ROUTING

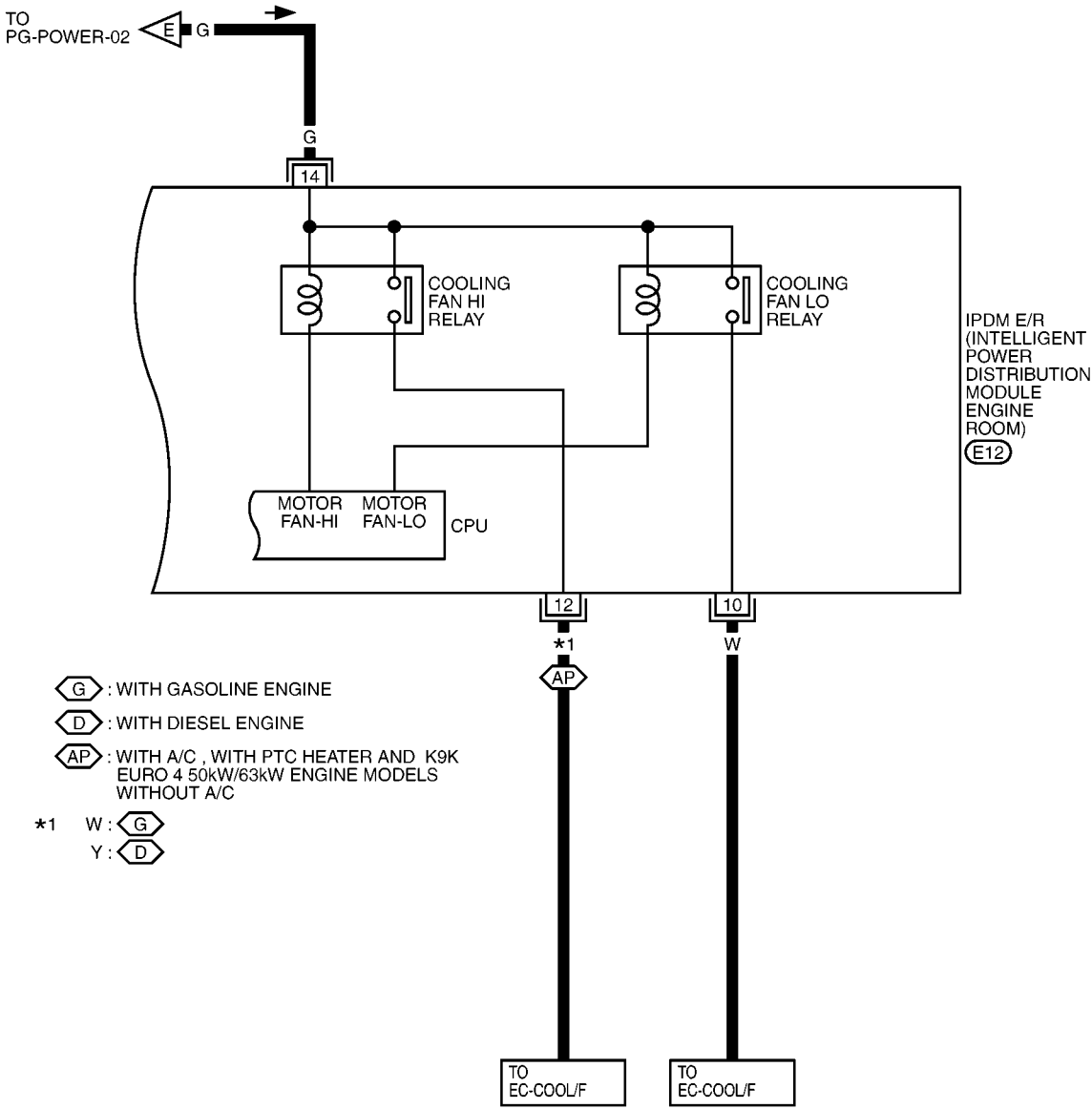
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DATA LINE



MKWA4088E





POWER SUPPLY ROUTING

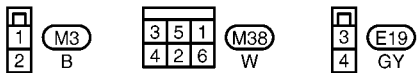
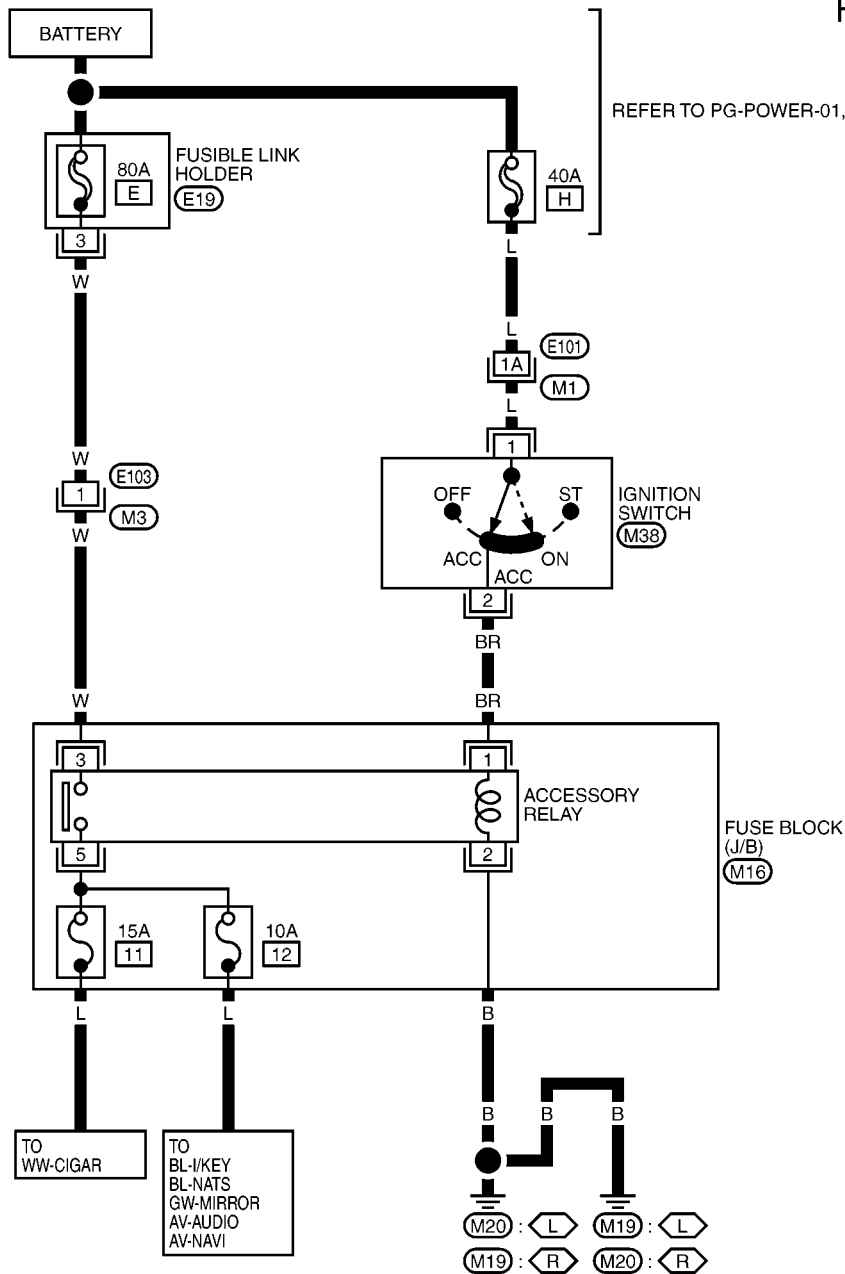
ACCESSORY POWER SUPPLY — IGNITION SW. IN “ACC” OR “ON”

PG-POWER-07

 : LHD MODELS

: RHD MODELS

REFER TO PG-POWER-01, 02.



REFER TO THE FOLLOWING.

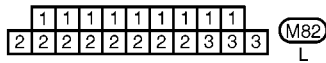
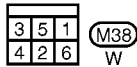
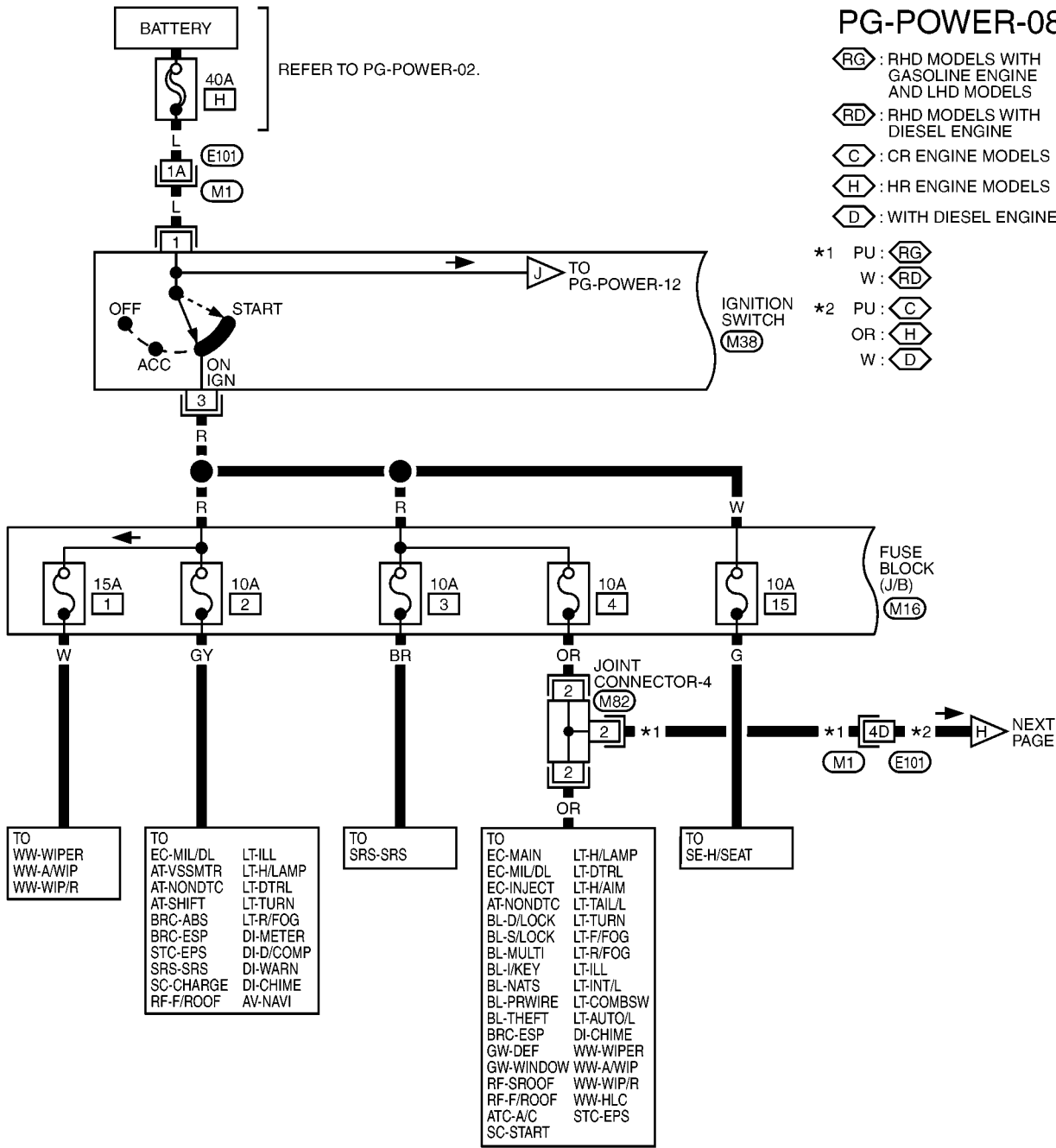
**(M1) -SUPER MULTIPLE
JUNCTION (SMJ)**

**(M16) - FUSE BLOCK-
JUNCTION BOX (J/B)**

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17							

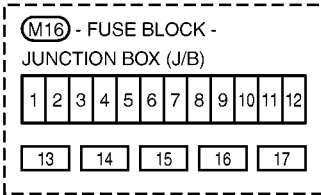
POWER SUPPLY ROUTING

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



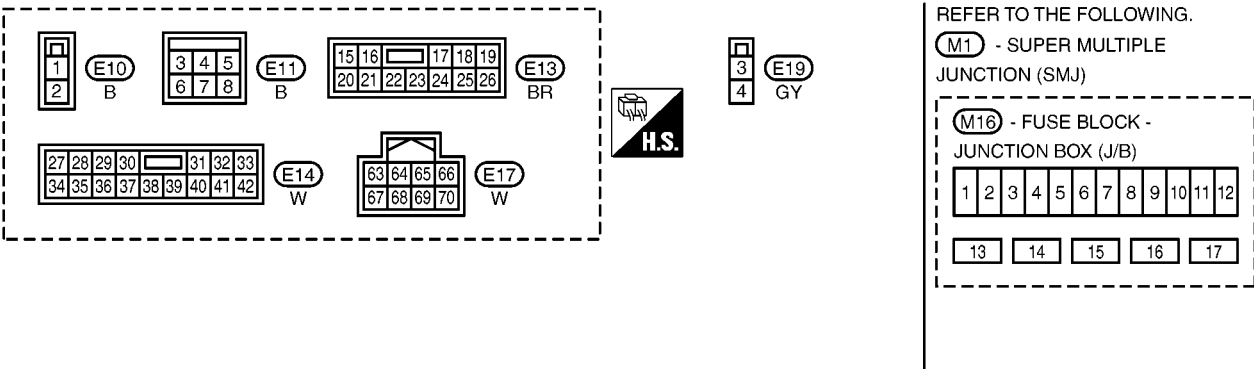
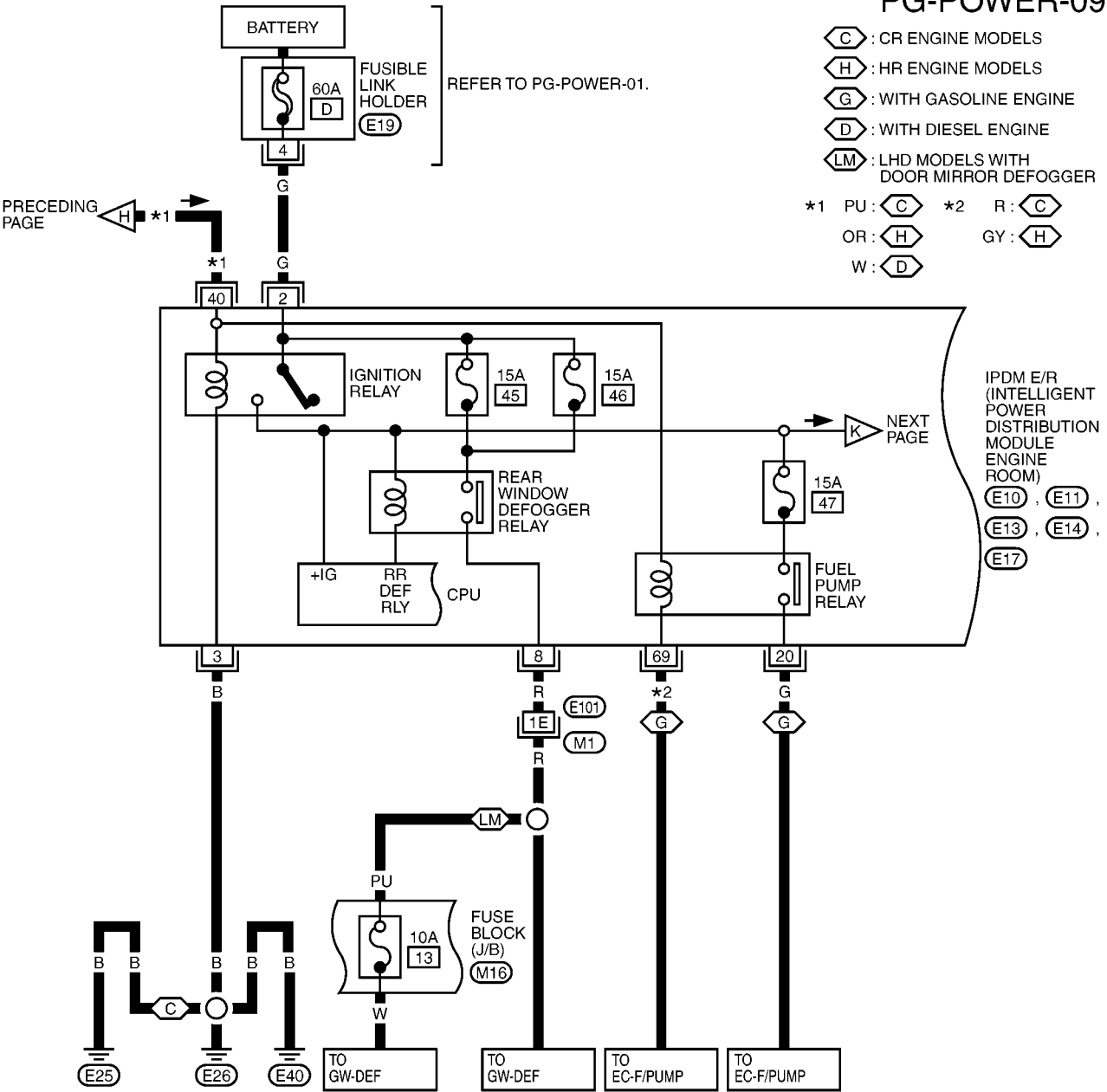
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M1 - SUPER MULTIPLE JUNCTION (SMJ)



POWER SUPPLY ROUTING

PG-POWER-09

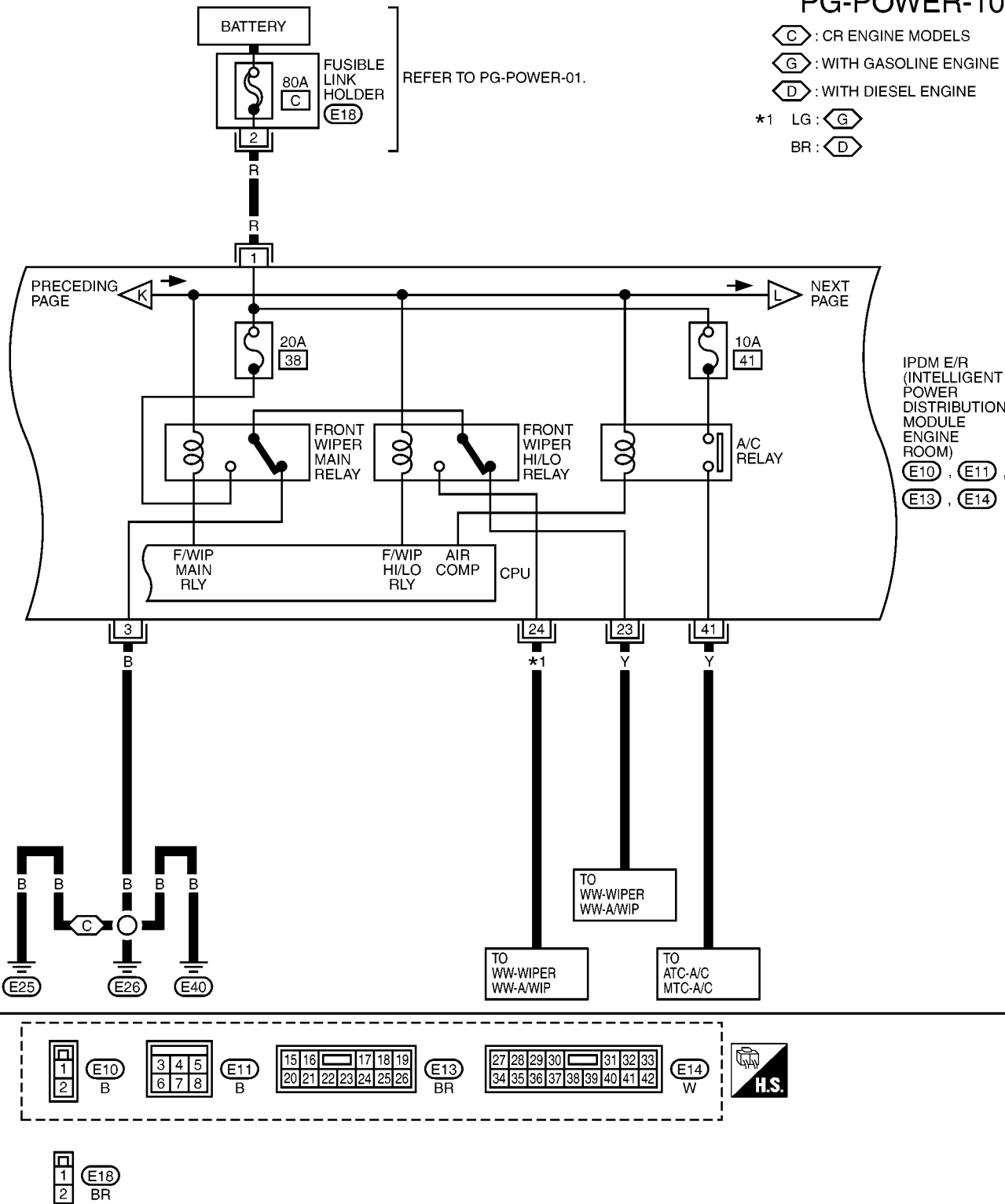


POWER SUPPLY ROUTING

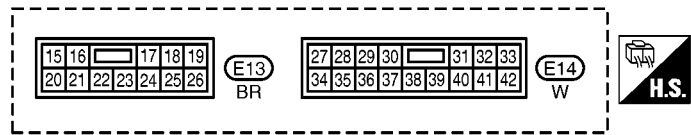
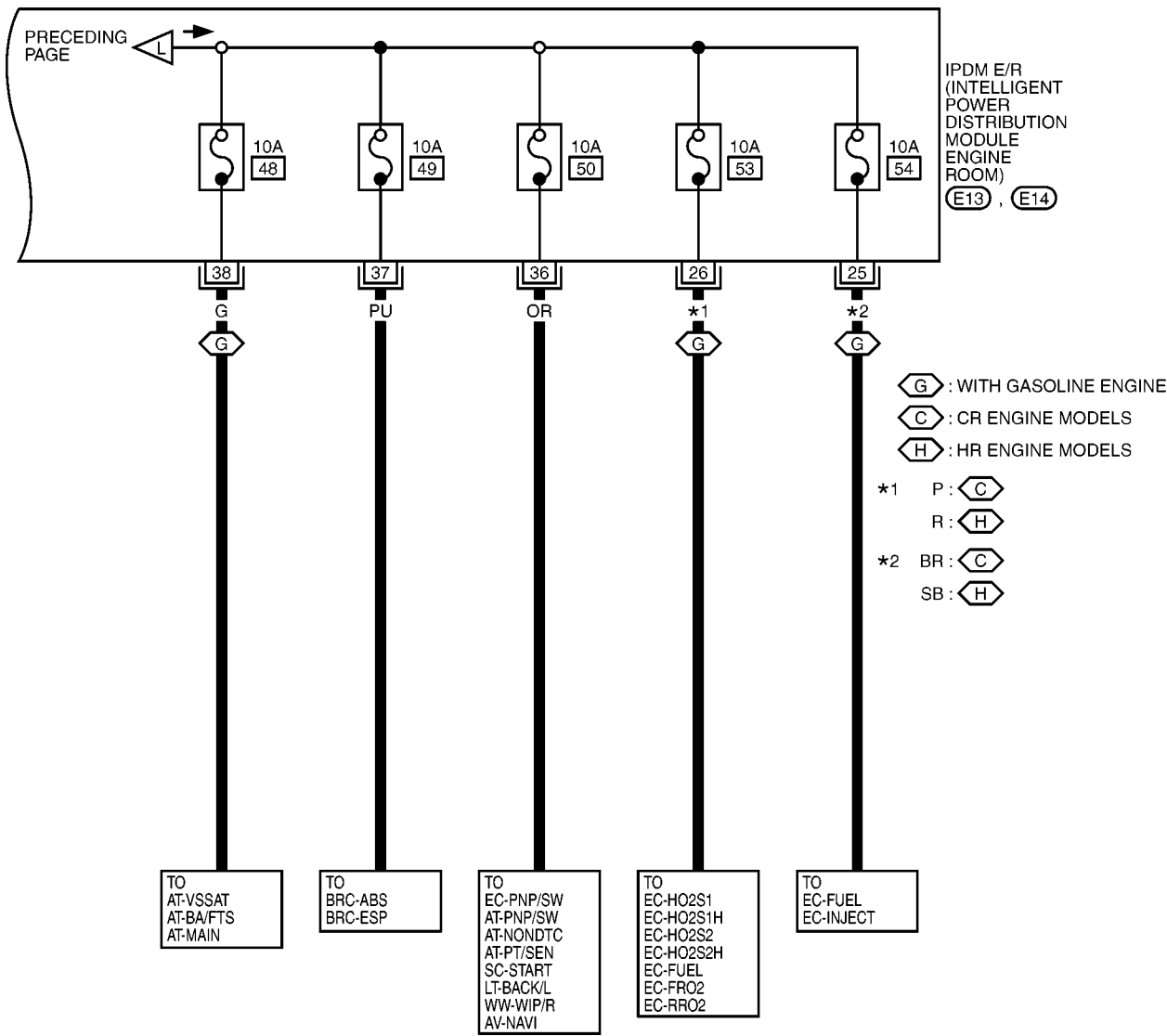
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- C : CR ENGINE MODELS
- G : WITH GASOLINE ENGINE
- D : WITH DIESEL ENGINE

*1 LG : G
BR : D



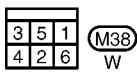
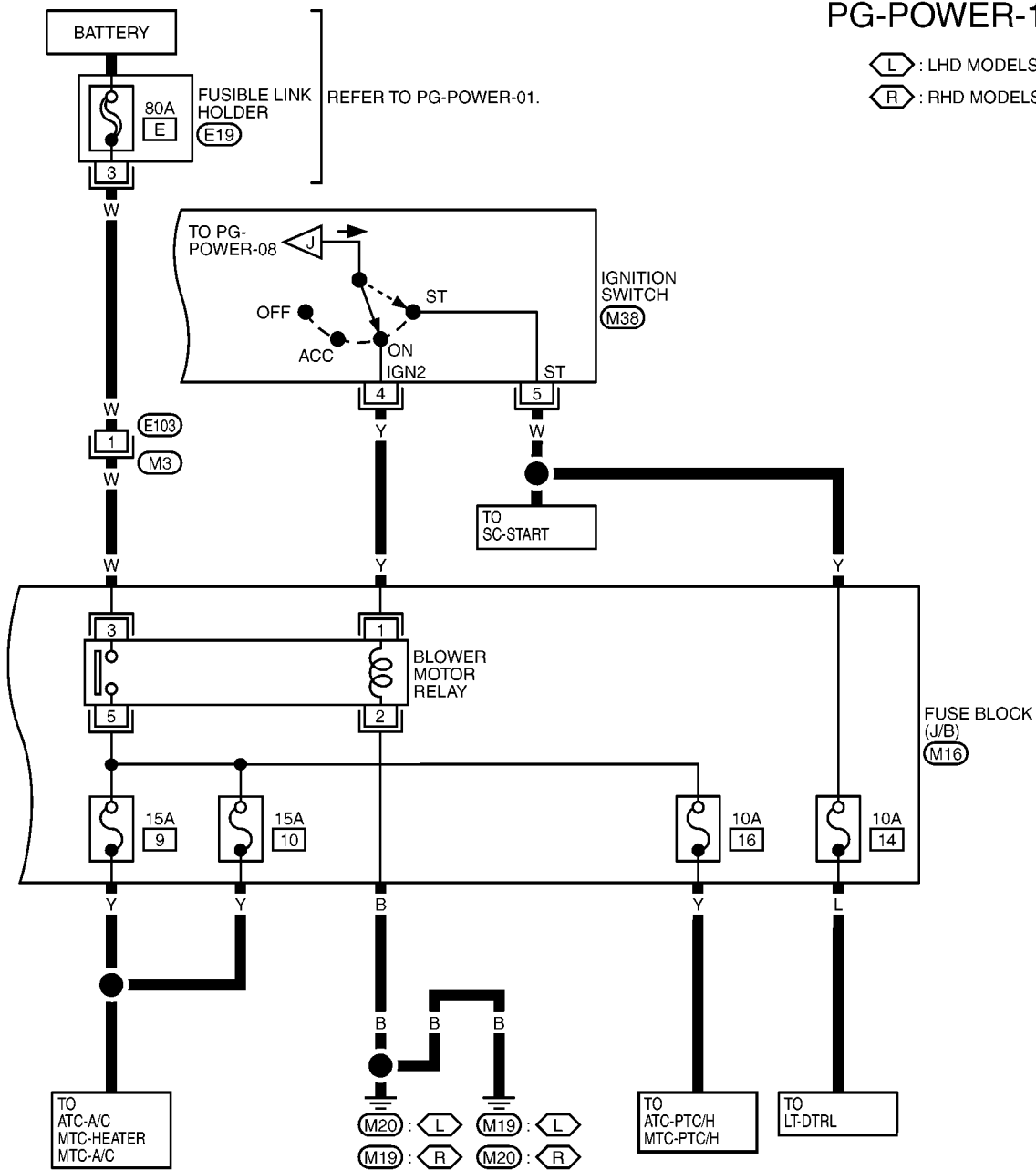
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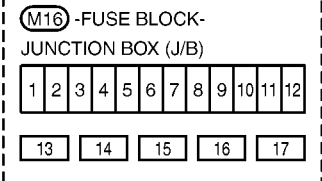
POWER SUPPLY ROUTING

PG-POWER-12

L : LHD MODELS
R : RHD MODELS



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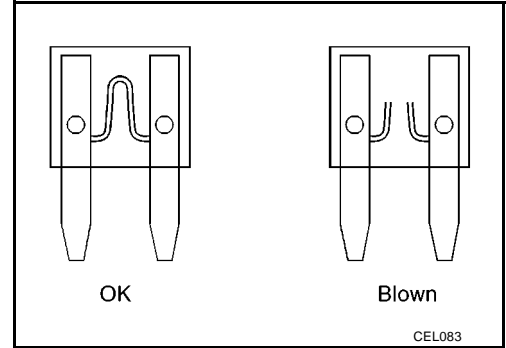


POWER SUPPLY ROUTING

Fuse

EKS00797

- 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.



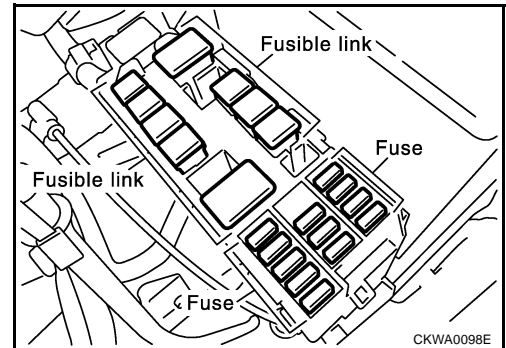
Fusible Link

EKS00798

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

CAUTION:

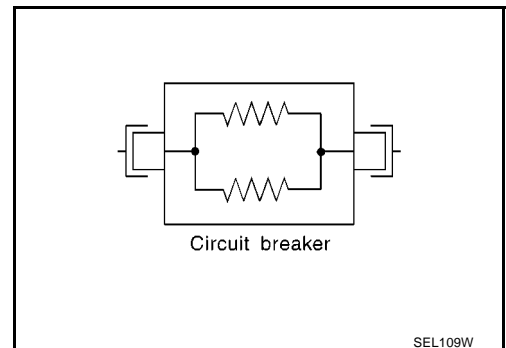
- If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of incident.
- Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other wiring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



Circuit Breaker

EKS00799

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



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

PFP:284B7

System Description

EKS0080P

- IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) integrates the relay box and the fuse box which has been conventionally placed in the engine room. It controls the built-in relay with the control circuit in IPDM E/R.
- IPDM E/R integrated control circuit performs ON-OFF control of the relay and transmission of various signals (oil pressure switch, park/neutral position switch, reverse switch) through CAN communication with BCM and ECM.

NOTE:

All IPDM E/R integrated relays can never be removed.

SYSTEMS CONTROLLED BY IPDM E/R

1. Lamp control
Using the CAN communication line, it receives signals from BCM and controls following lamps:
 - Headlamps (Hi, Lo)
 - Parking lamps, tail lamps and license plate lamp
 - Front fog lamps
2. Front wiper control
Using the CAN communication line, it receives signals from BCM and controls front wiper.
3. Headlamp washer control
Using the CAN communication line, it receives signals from BCM and controls headlamp washer.
4. Rear window defogger control
Using the CAN communication line, it receives signals from BCM and controls rear window defogger.
5. A/C compressor control
Using the CAN communication line, it receives signals from ECM and controls A/C compressor.
6. Cooling fan control
Using the CAN communication line, it receives signals from ECM and controls cooling fan.

PG

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

FAIL-SAFE FUNCTION

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

Controlled parts	Fail-safe mode
Headlamp	With the ignition switch ON, the headlamp (low) is ON. With the ignition switch OFF, the headlamp (low) is OFF.
Parking lamp/ license plate lamp/ tail lamp	With the ignition switch ON, the tail lamp is ON. With the ignition switch OFF, the tail lamp is OFF.
Cooling fan	With the ignition switch ON, the cooling fan HI operates. With the ignition switch OFF, the cooling fan stops.
Front wiper	Until the ignition switch is turned off, the front wiper LO and HI remains in the same status it was in just before fail-safe control was initiated.
Rear window defogger	Rear window defogger is OFF
Front fog lamp	Front fog lamp is OFF
Headlamp washer	Headlamp washer is OFF
A/C compressor	A/C compressor is OFF

IPDM E/R STATUS CONTROL

In order to save power, the 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 the IPDM E/R is normally performed.
 - When the IPDM E/R is not controlling any load, a sleep request signal is received from the BCM and the mode is switched to sleep waiting status.
2. Sleep waiting status
 - Process to stop CAN communication is activated.
 - All systems controlled by IPDM E/R are stopped. When 1 second has elapsed after CAN communication with other control units is stopped, mode switches to sleep status.
3. Sleep status
 - The IPDM E/R operates in low current consumption mode.
 - CAN communication is not active.
 - When a change in the CAN communication line or ignition switch ON is detected, the mode switches to CAN communication status.

FUNCTION OF IPDM E/R

- Park/neutral position switch signal output function
The signal (ON/OFF) input from the Park/neutral position is output to ECM.
- Oil pressure switch output function
The signal (ON/OFF) input from the oil pressure switch is output to the combination meter using the CAN communication line.
- Reverse switch signal output function
The signal (ON/OFF) input from the reverse switch is output to BCM using the CAN communication line.

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

CAN Communication SYSTEM DESCRIPTION

EKS00KKK

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

CAN Communication Unit

EKS00QPE

Body type	3door/5door		3door/5door/C+C				3door/5door		3door/5door/C+C				3door/5door	
Axle	2WD													
Engine	CR12DE/CR14DE				HR16DE		CR12DE/CR14DE				HR16DE		K9K	
Handle	LHD/RHD													
Brake control	ABS						ESP						ABS	
Transmission	A/T		M/T				A/T		M/T					
Intelligent Key system	×		×		×		×		×		×		×	
CAN communication unit														
ECM	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Combination meter	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Intelligent Key unit	×		×		×		×		×		×		×	
EPS control unit	×	×	×	×	×	×	×	×	×	×	×	×	×	×
BCM	×	×	×	×	×	×	×	×	×	×	×	×	×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×	×	×	×	×	×	×	×	×	×
TCM	×	×					×	×						
IPDM E/R	×	×	×	×	×	×	×	×	×	×	×	×	×	×
CAN communication type	PG-22. "TYPE 1/ TYPE 2"		PG-25. "TYPE 3/TYPE 4/ TYPE 5/TYPE 6"				PG-27. "TYPE 7/ TYPE 8"		PG-30. "TYPE 9/TYPE 10/ TYPE 11/TYPE 12"				PG-32. "TYPE 13/ TYPE 14"	

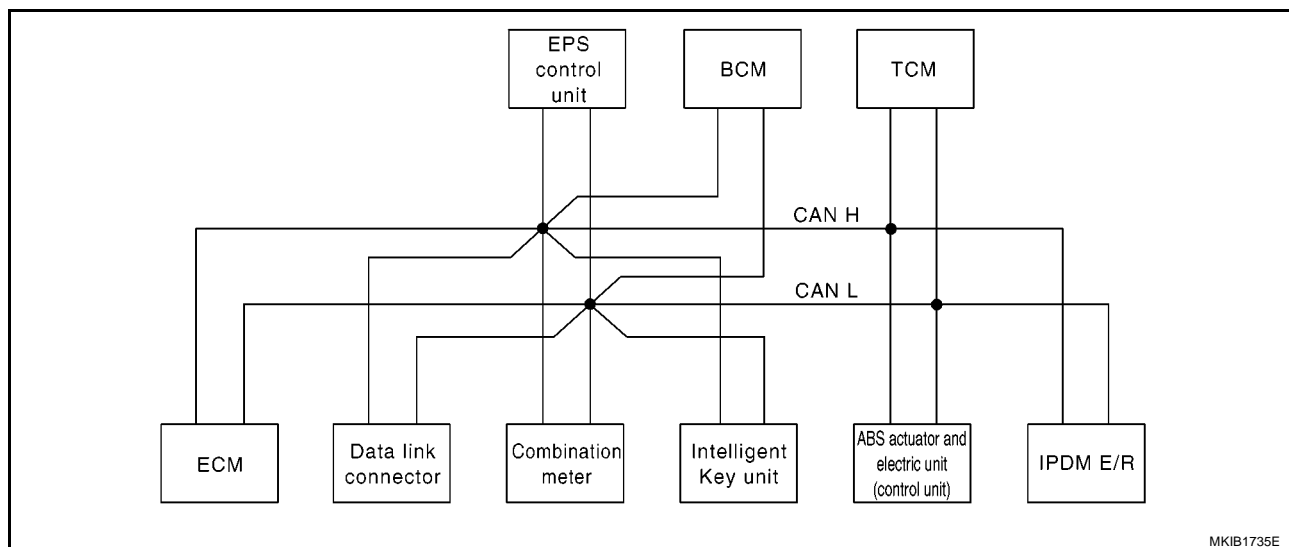
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

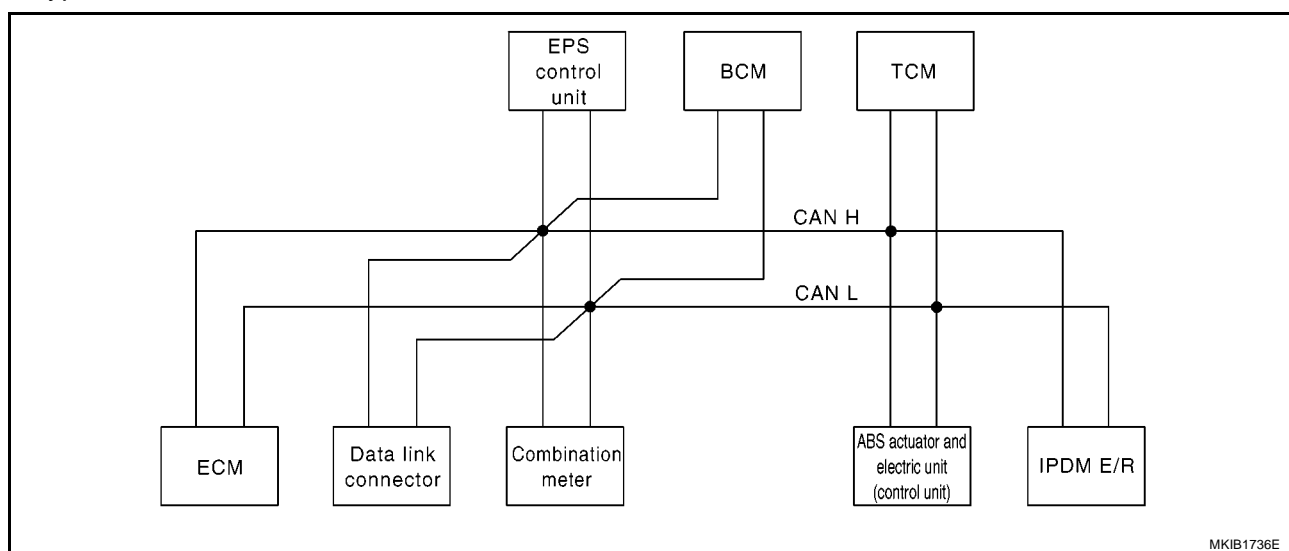
TYPE 1/TYPE 2

System diagram

• Type 1



• Type 2



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Combination meter.	Intelligent Key unit	EPS control unit	BCM	ABS actuator and electric unit (control unit)	TCM	IPDM E/R
Engine speed signal	T	R						
Engine coolant temperature signal	T	R						
A/T self-diagnosis signal	R						T	
Output shaft revolution signal	R						T	
Accelerator pedal position signal	T						R	
Closed throttle position signal	T						R	
Wide open throttle position signal	T						R	
Overdrive control switch signal		T					R	

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

Signals	ECM	Combination meter.	Intelligent Key unit	EPS control unit	BCM	ABS actuator and electric unit (control unit)	TCM	IPDM E/R
A/T position indicator signal		R					T	
Stop lamp switch signal		T					R	
O/D OFF indicator signal		R					T	
Engine and A/T integrated control signal	T						R	
	R						T	
Fuel consumption monitor signal	T	R						
Oil pressure switch signal		R						T
A/C compressor request signal	T							R
Heater fan switch signal	R				T			
Cooling fan speed request signal	T							R
Position lights request signal		R			T			R
Low beam request signal					T			R
Low beam status signal	R							T
High beam request signal		R			T			R
High beam status signal	R							T
Day time light request signal					T			R
Vehicle speed signal	R	R		R		T		
	R	T	R	R	R			
Sleep/wake up signal		R	R		T			R
Door switch signal		R	R		T			R
Turn indicator signal		R			T			
Buzzer output signal		R			T			
		R	T					
MI signal	T	R						
Front wiper request signal					T			R
Front wiper stop position signal					R			T
Rear window defogger switch signal					T			R
Rear window defogger control signal	R							T
EPS warning lamp signal		R		T				
ABS warning lamp signal		R				T		
Brake warning lamp signal		R				T		
Back-up lamp signal				R	T			
Front fog lamp request signal		R			T			R
Rear fog lamp status signal		R			T			
Headlamp washer request signal					T			R
Door lock/unlock request signal			T		R			
Door lock/unlock status signal			R		T			
KEY indicator signal		R	T					
LOCK indicator signal		R	T					
Engine status signal	T			R				

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

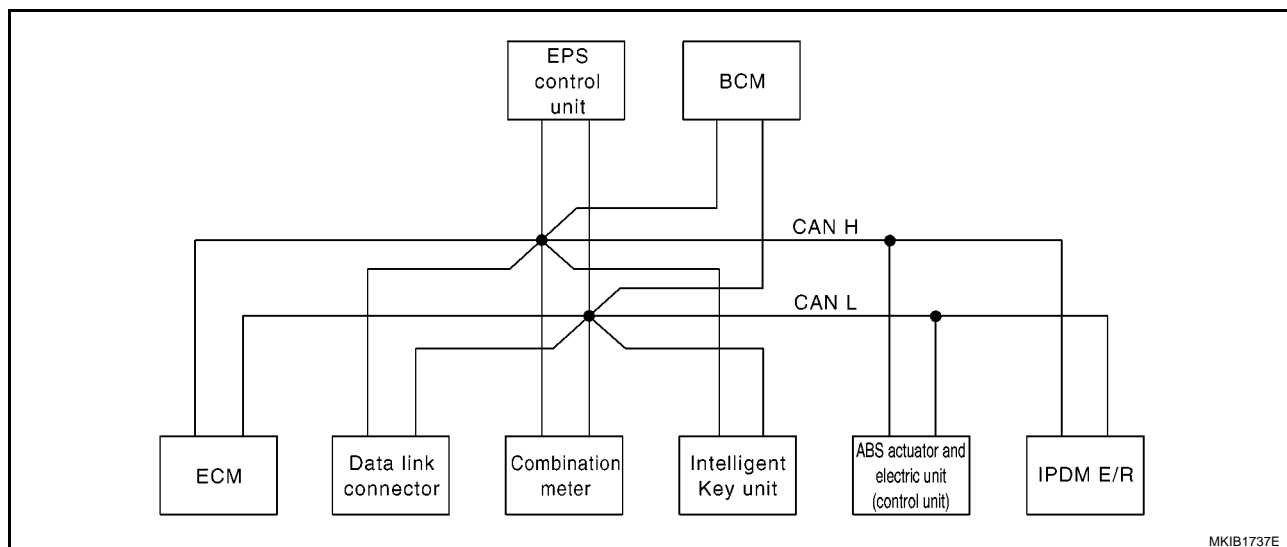
Signals	ECM	Combination meter.	Intelligent Key unit	EPS control unit	BCM	ABS actuator and electric unit (control unit)	TCM	IPDM E/R
A/C switch signal	R				T			
Brake system malfunction signal		T		R				
Parking brake switch signal		T		R				
R range signal					R			T

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

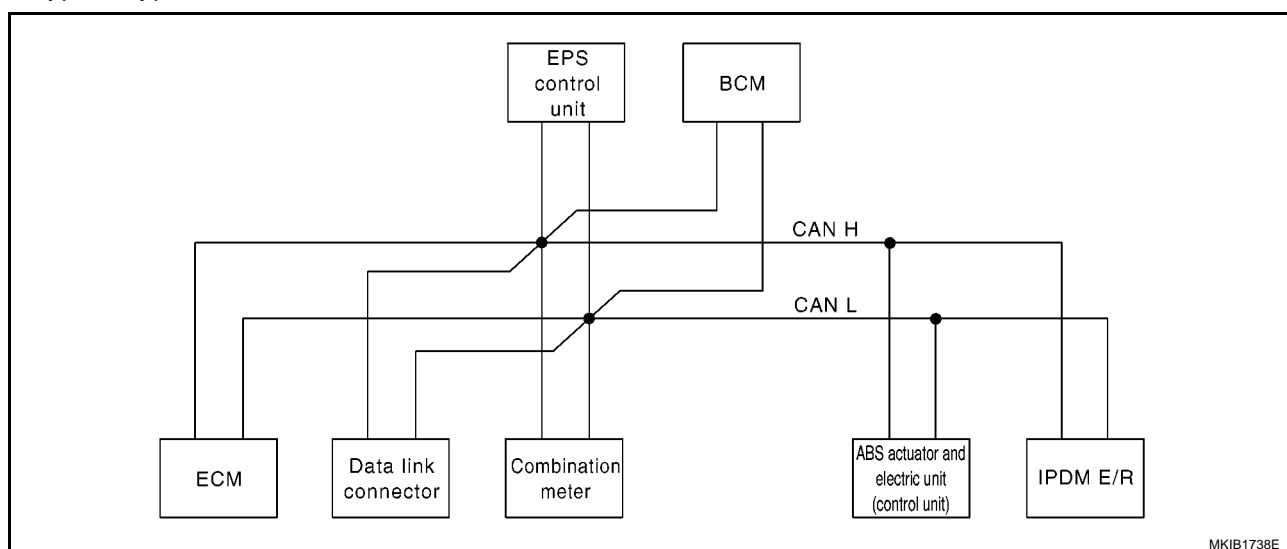
TYPE 3/TYPER 4/TYPER 5/TYPER 6

System diagram

- Type 3/Type 5



- Type 4/Type 6



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Combina- tion meter.	Intelligent Key unit	EPS con- trol unit	BCM	ABS actu- ator and electric unit (con- trol unit)	IPDM E/R
Engine speed signal	T	R					
Engine coolant temperature signal	T	R					
Fuel consumption monitor signal	T	R					
Oil pressure switch signal		R					T
A/C compressor request signal	T						R
Heater fan switch signal	R				T		
Cooling fan speed request signal	T						R
Position lights request signal		R			T		R
Low beam request signal					T		R

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

Signals	ECM	Combina- tion meter.	Intelligent Key unit	EPS con- trol unit	BCM	ABS actu- ator and electric unit (con- trol unit)	IPDM E/R
Low beam status signal	R						T
High beam request signal		R			T		R
High beam status signal	R						T
Day time light request signal					T		R
Vehicle speed signal	R	R		R		T	
	R	T	R	R	R		
Sleep/wake up signal		R	R		T		R
Door switch signal		R	R		T		R
Turn indicator signal		R			T		
Buzzer output signal		R			T		
		R	T				
MI signal	T	R					
Front wiper request signal					T		R
Front wiper stop position signal					R		T
Rear window defogger switch signal					T		R
Rear window defogger control signal	R						T
EPS warning indicator signal		R		T			
ABS warning lamp signal		R				T	
Brake warning lamp signal		R				T	
Back-up lamp signal				R	T		
Front fog lamp request signal		R			T		R
Rear fog lamp status signal		R			T		
Headlamp washer request signal					T		R
Door lock/unlock request signal			T		R		
Door lock/unlock status signal			R		T		
KEY indicator signal		R	T				
LOCK indicator signal		R	T				
Engine status signal	T			R			
A/C switch signal	R				T		
Brake system malfunction signal		T		R			
Parking brake switch signal		T		R			
R range signal					R		T
Retractable hard top warning lamp signal*		R			T		

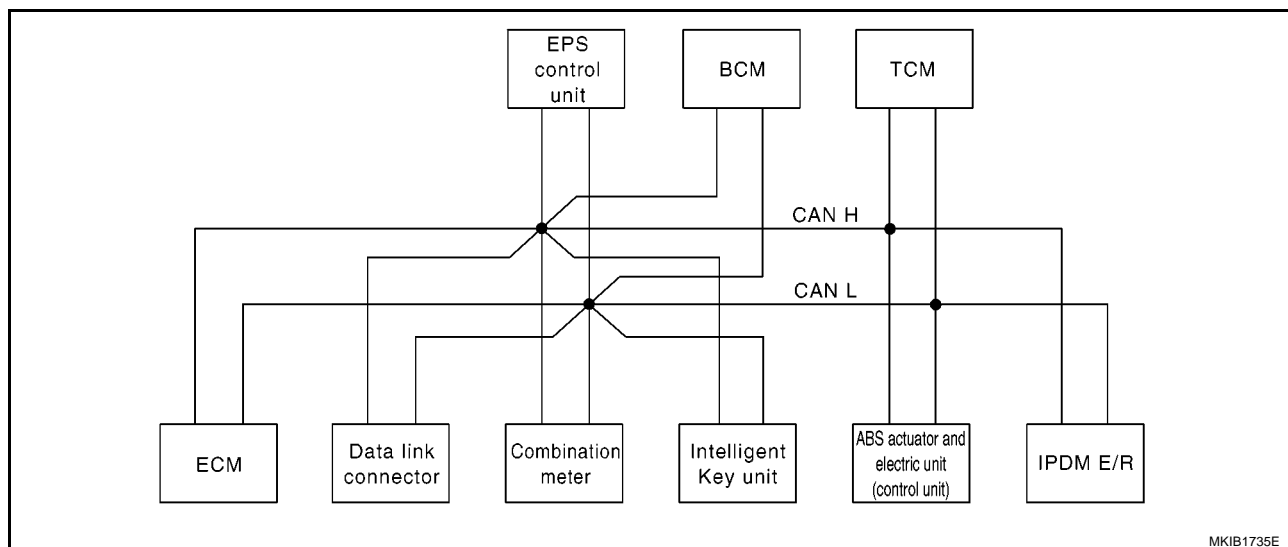
*: C+C only

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

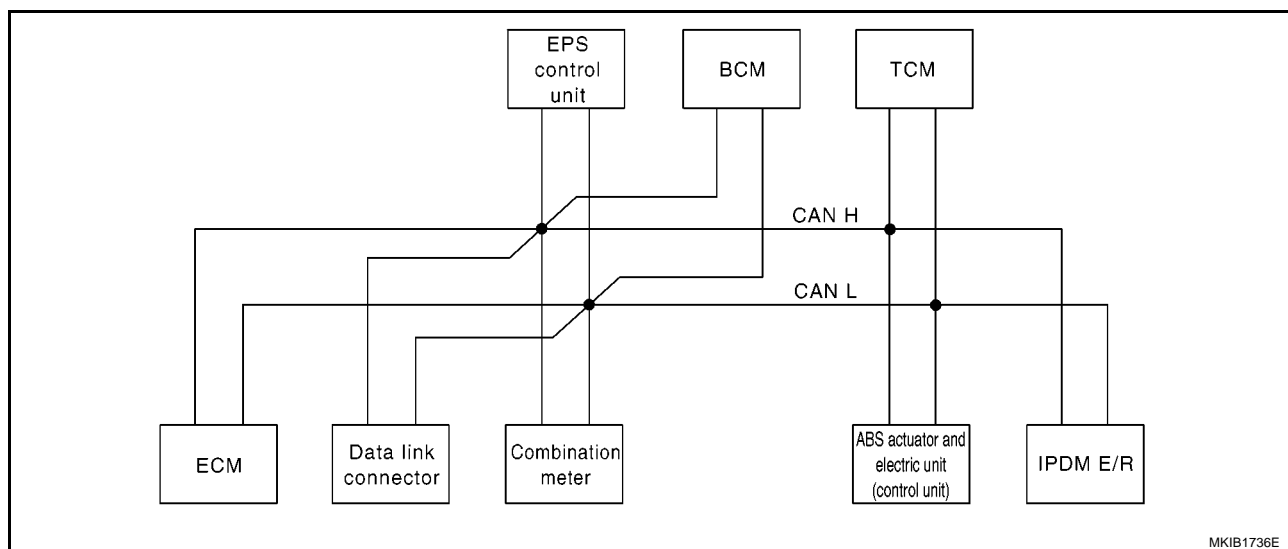
TYPE 7/TYPE 8

System diagram

• Type 7



• Type 8



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Combina- tion meter.	Intelli- gent Key unit	EPS con- trol unit	BCM	ABS actuator and elec- tric unit (control unit)	TCM	IPDM E/ R
Engine speed signal	T	R				R		
Engine coolant temperature signal	T	R						
A/T self-diagnosis signal	R						T	
Output shaft revolution signal	R						T	
Accelerator pedal position signal	T					R	R	
Closed throttle position signal	T						R	
Wide open throttle position signal	T						R	
Overdrive control switch signal		T					R	
A/T position indicator signal		R					T	

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

Signals	ECM	Combina- tion meter.	Intelli- gent Key unit	EPS con- trol unit	BCM	ABS actuator and elec- tric unit (control unit)	TCM	IPDM E/ R
A/T shift schedule change demand signal						T	R	
Stop lamp switch signal		T					R	
O/D OFF indicator lamp signal		R					T	
Engine and A/T integrated control signal	T						R	
	R						T	
Fuel consumption monitor signal	T	R						
Oil pressure switch signal		R						T
A/C compressor request signal	T							R
Heater fan switch signal	R				T			
Cooling fan speed request signal	T							R
Position lights request signal		R			T			R
Low beam request signal					T			R
Low beam status signal	R							T
High beam request signal		R			T			R
High beam status signal	R							T
Day time light request signal					T			R
Vehicle speed signal	R	R		R		T		
	R	T	R	R	R			
Sleep/wake up signal		R	R		T			R
Door switch signal		R	R		T			R
Turn indicator signal		R			T			
Buzzer output signal		R			T			
		R	T					
MI signal	T	R						
Front wiper request signal					T			R
Front wiper stop position signal					R			T
Rear window defogger switch signal					T			R
Rear window defogger control sig- nal	R							T
EPS warning lamp signal		R		T				
ABS warning lamp signal		R				T		
ESP warning lamp signal		R				T		
ESP OFF indicator signal		R				T		
SLIP indicator lamp signal		R				T		
Steering angle signal				T		R		
Brake warning lamp signal		R				T		
Back-up lamp signal				R	T			
Front fog lamp request signal		R			T			R
Rear fog lamp status signal		R			T			
Headlamp washer request signal					T			R
Door lock/unlock request signal			T		R			

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

Signals	ECM	Combina- tion meter.	Intelli- gent Key unit	EPS con- trol unit	BCM	ABS actuator and elec- tric unit (control unit)	TCM	IPDM E/ R
Door lock/unlock status signal			R		T			
KEY indicator signal		R	T					
LOCK indicator signal		R	T					
Engine status signal	T			R				
A/C switch signal	R				T			
A/T torque signal						R	T	
Brake system malfunction signal		T		R				
Parking brake switch signal		T		R				
R range signal					R			T

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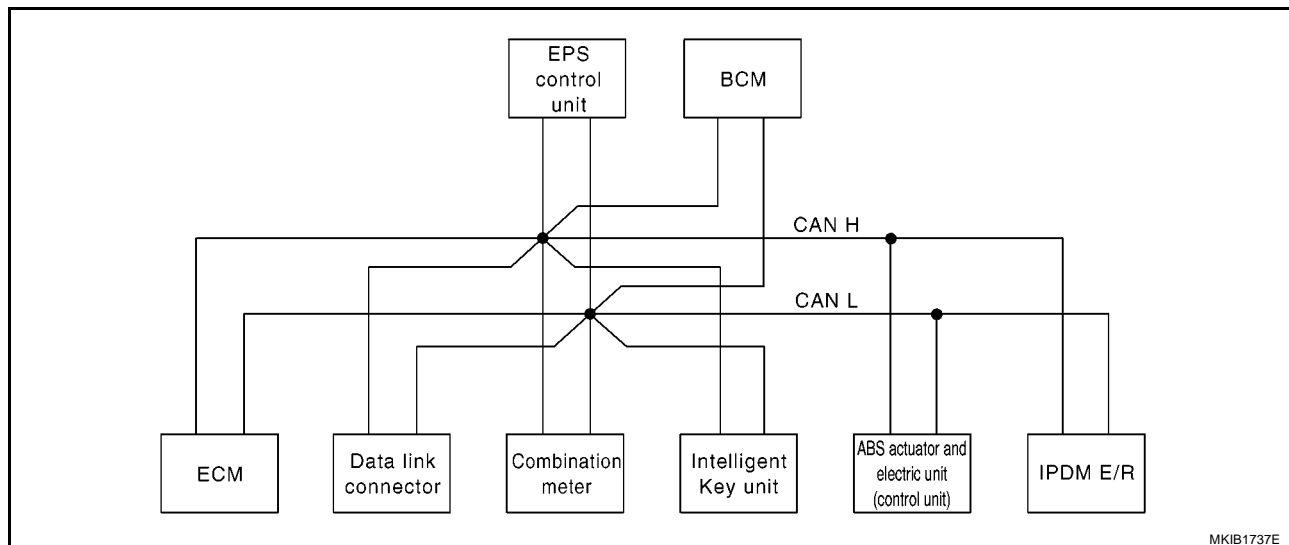
PG

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

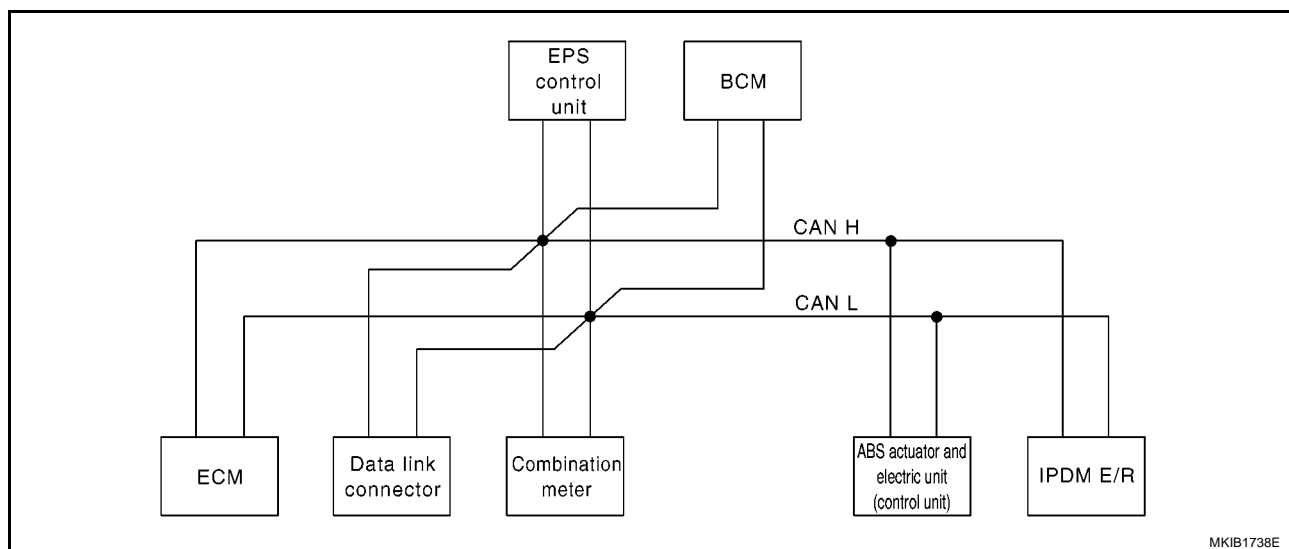
TYPE 9/TYPE 10/TYPE 11/TYPE 12

System diagram

- Type 9/Type 11



- Type 10/Type 12



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Combina- tion meter.	Intelligent Key unit	EPS con- trol unit	BCM	ABS actu- ator and electric unit (con- trol unit)	IPDM E/R
Engine speed signal	T	R				R	
Engine coolant temperature signal	T	R					
Fuel consumption monitor signal	T	R					
Accelerator pedal position signal	T					R	
Oil pressure switch signal		R					T
A/C compressor request signal	T						R
Heater fan switch signal	R				T		
Cooling fan speed request signal	T						R
Position lights request signal		R			T		R

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

Signals	ECM	Combina- tion meter.	Intelligent Key unit	EPS con- trol unit	BCM	ABS actu- ator and electric unit (con- trol unit)	IPDM E/R	A
Low beam request signal					T		R	B
Low beam status signal	R						T	C
High beam request signal		R			T		R	D
High beam status signal	R						T	E
Day time light request signal					T		R	F
Vehicle speed signal	R	R		R		T		G
	R	T	R	R	R			H
Sleep/wake up signal		R	R		T		R	I
Door switch signal		R	R		T		R	J
Turn indicator signal		R			T			PG
Buzzer output signal		R			T			L
		R	T					M
MI signal	T	R						
Front wiper request signal					T		R	
Front wiper stop position signal					R		T	
Rear window defogger switch signal					T		R	
Rear window defogger control signal	R						T	
EPS warning indicator signal		R		T				
ABS warning lamp signal		R				T		
ESP warning lamp signal		R				T		
ESP OFF indicator signal		R				T		
SLIP indicator lamp signal		R				T		
Steering angle signal				T		R		
Brake warning lamp signal		R				T		
Back-up lamp signal				R	T			
Front fog lamp request signal		R			T		R	
Rear fog lamp status signal		R			T			
Headlamp washer request signal					T		R	
Door lock/unlock request signal			T		R			
Door lock/unlock status signal			R		T			
KEY indicator signal		R	T					
LOCK indicator signal		R	T					
Engine status signal	T			R				
A/C switch signal	R				T			
Brake system malfunction signal		T		R				
Parking brake switch signal		T		R				
R range signal					R		T	
Retractable hard top warning lamp signal*		R			T			

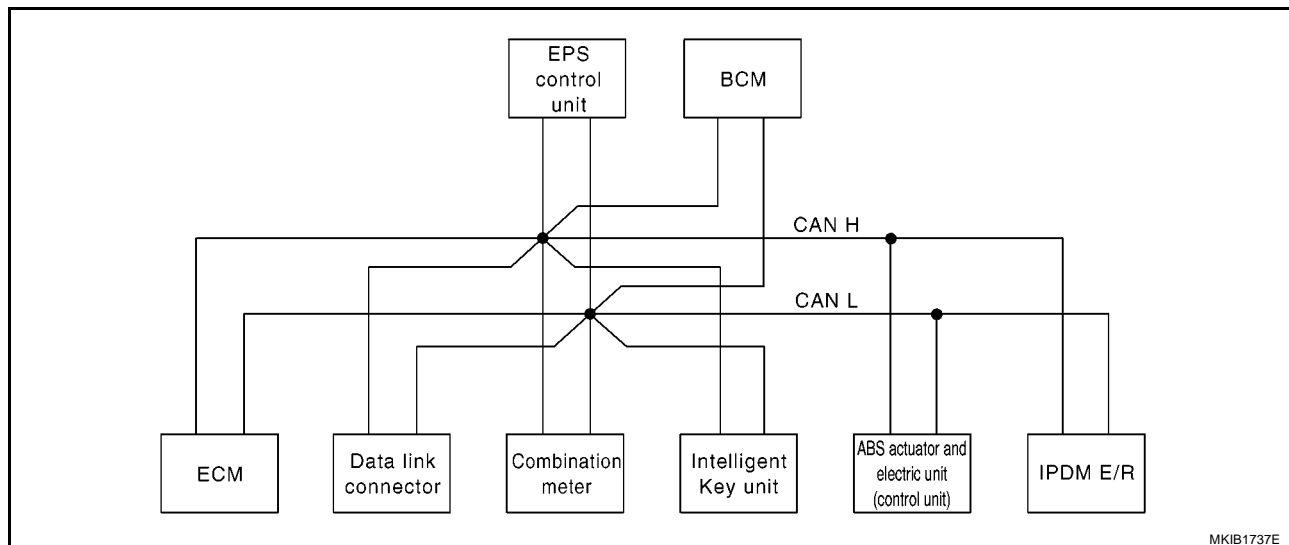
*: C+C only

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

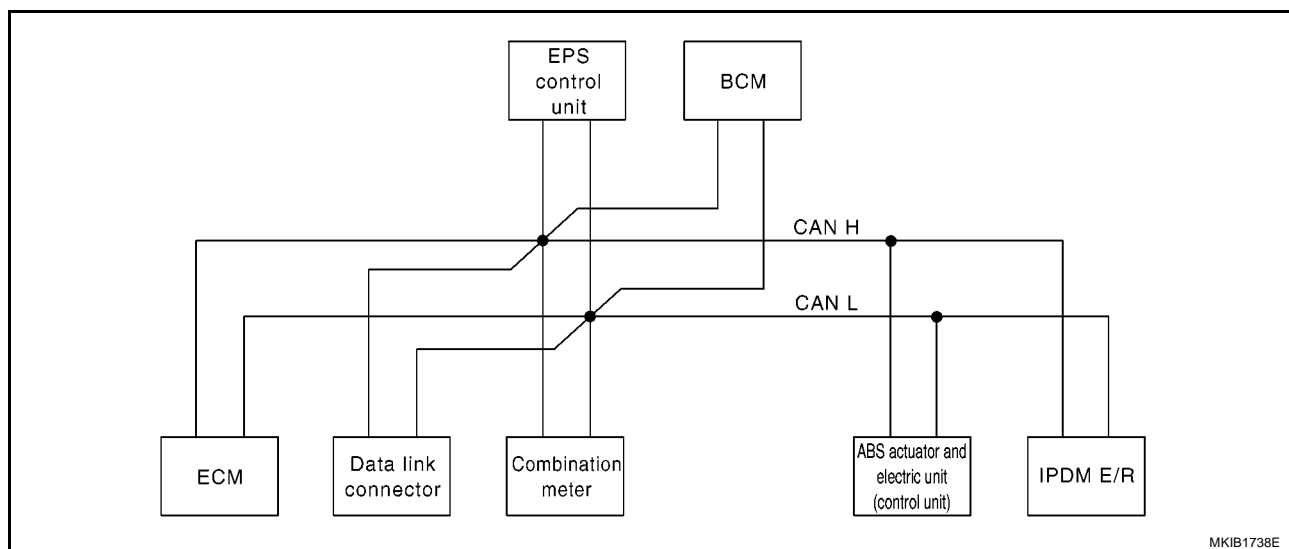
TYPE 13/TYPE 14

System diagram

- Type 13



- Type 14



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

Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Combina- tion meter.	Intelligent Key unit	EPS con- trol unit	BCM	ABS actu- ator and electric unit (con- trol unit)	IPDM E/R
Engine speed signal	T	R					
Engine coolant temperature signal	T	R			R		
Fuel consumption monitor signal	T	R					
Oil pressure switch signal		R					T
A/C compressor request signal	T						R
Heater fan switch signal	R				T		
Cooling fan speed request signal	T						R
Position lights request signal		R			T		R
Low beam request signal					T		R
High beam request signal		R			T		R
Day time light request signal					T		R
Vehicle speed signal	R	R		R	R	T	
	R	T	R	R			
Sleep/wake up signal		R	R		T		R
Door switch signal		R	R		T		R
Turn indicator signal		R			T		
Buzzer output signal		R			T		
		R	T				
MI signal	T	R					
Front wiper request signal					T		R
Front wiper stop position signal					R		T
Rear window defogger switch signal					T		R
EPS warning indicator signal		R		T			
ABS warning lamp signal		R				T	
Brake warning lamp signal		R				T	
Back-up lamp signal				R	T		
Front fog lamp request signal		R			T		R
Rear fog lamp status signal		R			T		
Headlamp washer request signal					T		R
Door lock/unlock request signal			T		R		
Door lock/unlock status signal			R		T		
KEY indicator signal		R	T				
LOCK indicator signal		R	T				
Engine status signal	T			R			
Brake system malfunction signal		T		R			
Parking brake switch signal		T		R			
Glow indicator signal	T	R					
R range signal					R		T

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

Function of Detecting Ignition Relay Malfunction

EKS0080R

- When a contact point of the integrated ignition relay is stuck and cannot be turned OFF, the IPDM E/R turns ON tail lamp relay for 10 minutes to indicate IPDM E/R malfunction.

NOTE:

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

CONSULT-II Function (IPDM E/R)

EKS0080S

CONSULT-II can display each diagnostic item using the diagnostic modes shown following. Data is received and transmitted via the control module communication line.

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

CONSULT-II BASIC OPERATION

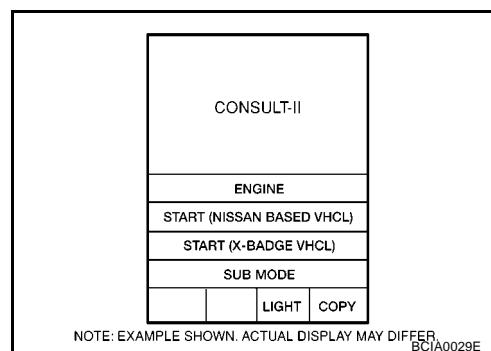
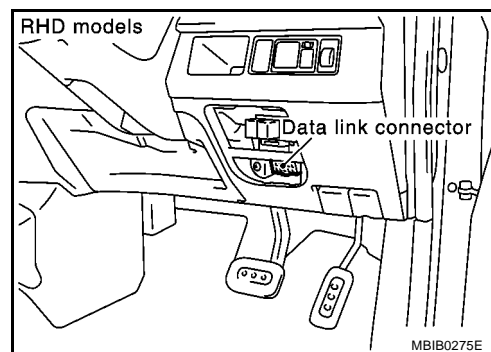
- Turn ignition switch OFF.
- Connect CONSULT-II CONVERTER and CONSULT-II to data link connector.

CAUTION:

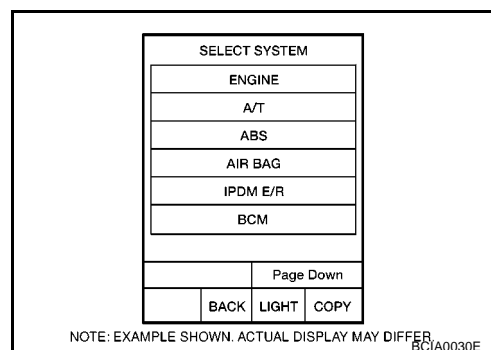
If CONSULT-II is used without connecting CONSULT-II CONVERTER, malfunction may be detected in some control unit performing CAN communication by self-diagnosis.

- Turn ignition switch ON.

- Touch "START (NISSAN BASED VHCL)".

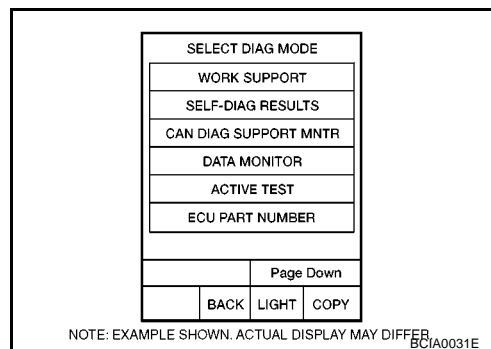


- Touch "IPDM E/R" on "SELECT SYSTEM" screen.
 - If "IPDM E/R" is not displayed, print "SELECT SYSTEM" screen, then refer to [GI-36, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



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

6. Select part to be diagnosed on “SELECT DIAG MODE” screen.



SELF-DIAG RESULTS

Operation Procedure

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

Display Item List

Display Items	Malfunction Return Condition	TIME		Possible causes
		CRNT	PAST	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	—	—	—	—
CAN COMM CIRCUIT	<ul style="list-style-type: none"> ● If CAN communication reception/transmission data has an malfunction, or if any of the control units malfunction, data reception/transmission cannot be confirmed. ● When the data in CAN communication is not received before the specified time 	×	×	Any of or several items below have malfunctions. <ul style="list-style-type: none"> ● CAN CIRC 1 ● CAN CIRC 2 ● CAN CIRC 3 ● CAN1 STAT ● CAN2 STAT ● CAN3 STAT
IGN RELAY ON	When the ignition switch is not ON position, the ignition relay in the IPDM E/R is ON.	×	×	Ignition relay (integrated in IPDM E/R)
IGN RELAY OFF	When the ignition switch is ON position, the ignition relay in the IPDM E/R is OFF.	×	×	Ignition relay (integrated in IPDM E/R)
EEPROM	Malfunction is detected with the integrated EEPROM memory diagnosis.	×	×	IPDM E/R

×:Applicable

NOTE:

The details for display of the period are as follows:

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

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

DATA MONITOR

Operation Procedure

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

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

3. Touch "START".
4. Touch the required monitoring item on "SELECT ITEM MENU". In "ALL SIGNALS", all items are monitored. In "MAIN SIGNALS", predetermined items are monitored.
5. Touch "RECORD" while monitoring to record the status of the item being monitored. To stop recording, touch "STOP".

All Items, Main Items, Select Item Menu

Item name	Display or unit	Monitor item selection			Description
		ALL SIGNALS	MAIN SIGNALS	SELECT FROM MENU	
MOTOR FAN REQ	1/2/3/4	×	×	×	Signal status input from ECM
AC COMP REQ	ON/OFF	×	×	×	Signal status input from ECM
TAIL & CLR REQ	ON/OFF	×	×	×	Signal status input from BCM
HL LO REQ	ON/OFF	×	×	×	Signal status input from BCM
HL HI REQ	ON/OFF	×	×	×	Signal status input from BCM
FR FOG REQ	ON/OFF	×	×	×	Signal status input from BCM
HL WASHER REQ	ON/OFF	×		×	This item cannot be monitored. (No change of display)
FR WIP REQ	STOP/1LO/LO/HI	×	×	×	Signal status input from BCM
WIP AUTO STOP	ON/OFF	×	×	×	Output status of IPDM E/R
WIP PROT	OFF/LS/HS/Block	×	×	×	Control status of IPDM E/R
ST RLY REQ	ON/OFF	×		×	Status of input signal ^{CAUTION}
IGN RLY	ON/OFF	×	×	×	Ignition relay status monitored with IPDM E/R
RR DEF REQ	ON/OFF	×	×	×	Signal status input from BCM
DEF STOP REQ	ON/OFF	×		×	Input signal status
ALT LOAD	%	×		×	This item cannot be monitored. (No change of display)
ALT CRNT	A	×		×	
ALT NO	##	×		×	
BAT VOLT	V	×		×	Value measured with IPDM E/R
ENG COOL TEMP	°C	×		×	Signal status input from ECM
OIL P SW	OPEN/CLOSE	×		×	Signal status input in IPDM E/R
REV SW	OPEN/CLOSE	×		×	Signal status input in IPDM E/R

×:applicable

NOTE:

- Perform monitoring of IPDM E/R data with the ignition switch ON. When the ignition switch is at ACC, the display may not be correct.
- The vehicle without the intelligent key system displays only ON without change.

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

ACTIVE TEST

Operation Procedure

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

Test item	CONSULT-II screen display	Description
Headlamp (HI, LO) output	HEAD LAMP	With a certain operation (OFF, HI ON, LO ON), the headlamp relay (Lo, Hi) can be operated.
Front fog lamp output	FRONT FOG LAMP	With a certain ON-OFF operation, the fog lamp relay can be operated.
Tail lamp output	TAIL LAMP	With a certain ON-OFF operation, the tail lamp relay can be operated.
Rear window defogger output	REAR DEFOGGER	With a certain ON-OFF operation, the rear window defogger relay can be operated.
Front wiper (HI, LO) output	FRONT WIPER	With a certain operation (OFF, HI ON, LO ON), the front wiper relay (Lo, Hi) can be operated.
Cooling fan output	MOTOR FAN	With a certain operation (OFF, Status 1, Status 2, Status 3), the cooling fan can be operated.
Headlamp washer output	HEAD LAMP WASHER	With a certain ON-OFF operation, the headlamp washer can be operated.

Configuration DESCRIPTION

EKS00EJ9

There are two CONFIGURATION functions, as follows.

READ CONFIGURATION is a function for confirming the vehicle configuration written on IPDM E/R.
WRITE CONFIGURATION is a function for writing a vehicle configuration to IPDM E/R.

CAUTION:

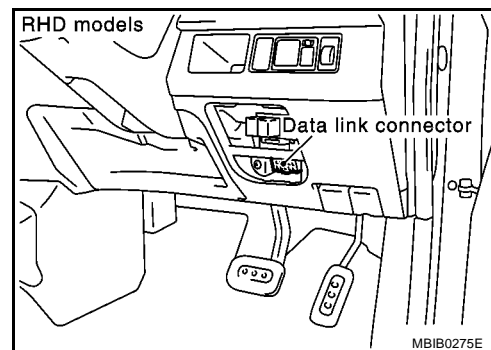
- When replacing IPDM E/R, completely perform WRITE CONFIGURATION with CONSULT-II.
- Orderly complete the procedure of WRITE CONFIGURATION.
- If you set incorrect WRITE CONFIGURATION, vehicle operation will not be correct.
- Configuration is different by each vehicle model, confirm configuration in each case.

READ CONFIGURATION PROCEDURE

CAUTION:

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

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



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

2. Touch “START(NISSAN BASED VHCL)”.

CONSULT-II

ENGINE

START (NISSAN BASED VHCL)

START (X-BADGE VHCL)

SUB MODE

LIGHT COPY

NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER.

3. Touch "IPDM E/R" on "SELECT SYSTEM" screen.
If "IPDM E/R" is not indicated, go to [GI-36, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).

SELECT SYSTEM			
ENGINE			
A/T			
ABS			
AIR BAG			
IPDM E/R			
BCM			
		Page Down	
	BACK	LIGHT	COPY

NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER

BCIA0030E

4. Touch “CONFIGURATION” on “SELECT DIAG MODE” screen.

SELECT DIAG MODE	
SELF-DIAG RESULTS	
DATA MONITOR	
ACTIVE TEST	
CONFIGURATION	
Page Up	

5. Touch “K12”, and “OK” on “VEHICLE SELECT” screen.
For canceling, touch “CANCEL” on “VEHICLE SELECT” screen.

NOTE:

Confirm vehicle model on IDENTIFICATION PLATE, refer to GI section.

SELECT DIAG MODE

SELECT DIAG RESULTS

VEHICLE SELECT

K12

SCROLL UP SCROLL DOWN

OK CANCEL

Page Up

MKIB0758F

6. Touch “READ CONFIGURATION” on “CONFIGURATION” screen.

CONFIGURATION	
READ CONFIGURATION	
WRITE CONFIGURATION	

MKIR0759F

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

7. Configuration of current IPDM E/R are printed out automatically. Configuration of brand-new IPDM E/R before executing "WRITE CONFIGURATION" is as follows.

MANUAL SET ITEM	
ITEM	SET VAL
ALT TYPE	TYPE 1

AUTO SET ITEM	
STARTER MODE	MODE 1

**NISSAN
CONSULT-II
READ CONFIGURATION**

SYSTEM	IPDM E/R
DATE	MM/DD/YYYY HH:MM:SS
P#	P#
VEHICLE	XX

MANUAL SET ITEM	
ITEM	SET VAL
ALT TYPE	TYPE 1

AUTO SET ITEM	
ITEM	SET VAL
STARTER MODE	MODE 1

MKIB0760E

8. Touch "BACK" on " READ CONFIGURATION"screen.

READ CONFIGURATION

ITEM	SET VAL
ALT TYPE	TYPE 1

MODE
BACK
LIGHT
COPY

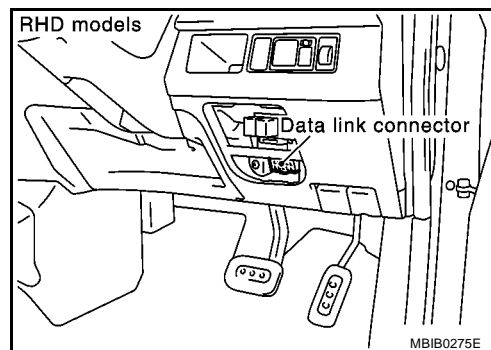
MKIB0761E

WRITE CONFIGURATION PROCEDURE

CAUTION:

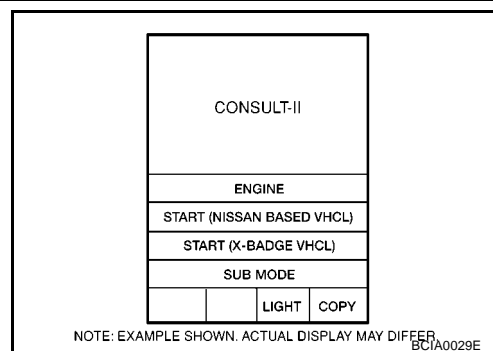
If CONSULT-II is used with no connection of CONSULT CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

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

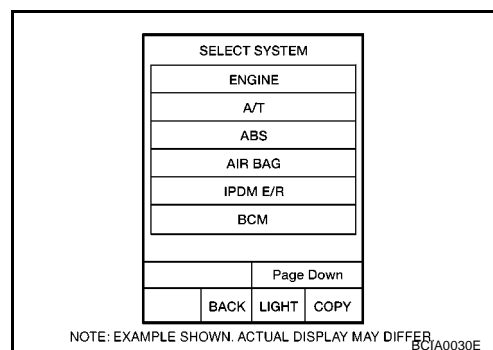


IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

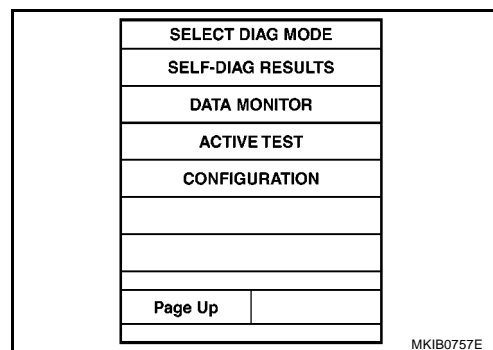
2. Touch "START(NISSAN BASED VHCL)".



3. Touch "IPDM E/R" on "SELECT SYSTEM" screen.
If "IPDM E/R" is not indicated, go to [GI-36, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



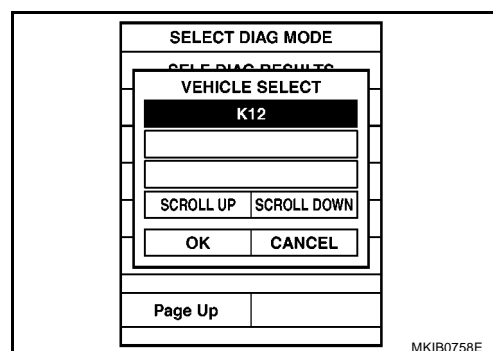
4. Touch "CONFIGURATION" on "SELECT DIAG MODE" screen.



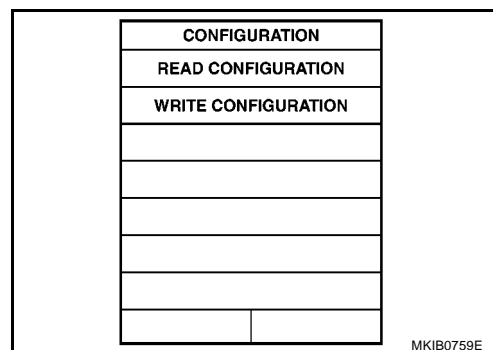
5. Touch "K12", and "OK" on "VEHICLE SELECT" screen.
For canceling, touch "CANCEL" on "VEHICLE SELECT" screen.

NOTE:

Confirm vehicle model on IDENTIFICATION PLATE, refer to GI section.



6. Touch "WRITE CONFIGURATION" on "CONFIGURATION" screen.



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

7. Touch "YES".
For canceling, touch "NO".

8. Touch "TYPE 1", "TYPE 2" or "TYPE 3" on "WRITE CONFIGURATION" screen based on the following ITEM LIST.
< ITEM LIST >

ITEM	SET VAL	NOTE
Alternator type	TYPE 1	Gasoline engine models
	TYPE 2	PTC heater is not equipped, if 14 digits of the applied model code is marked without "H" or "J". i.e.:EDHARAFK12EEA "E" ...
	TYPR 3	PTC heater is equipped, if 14 digits of the applied model code is marked with "H" or "J". i.e.:EDHARAFK12EEA "H" ...

For canceling, touch "CANCEL".

9. Touch "CHNG SETTING" on "WRITE CONFIGURATION" screen.

CAUTION:

Make sure to touch "CHNG SETTING" even if the indicated configuration of brand new IPDM E/R is same as the desirable configuration.

If not, configuration which is set automatically by selecting vehicle model can not be memorized.

10. Touch "OK" on "WRITE CONFIGURATION" screen.
When touched "CANCEL", go to previous screen.

11. Wait until the next screen during setting.

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

12. WRITE CONFIGURATION results are printed out automatically. Check "WRITE CONFIGURATION" is correctly executed by comparing sheet automatically printed out with desirable configuration.

NISSAN CONSULT-II WRITE CONFIGURATION	
SYSTEM	IPDM E/R
DATE	MM/DD/YYYY HH:MM:SS
P#	P#
VEHICLE	XX
MANUAL SET ITEM	
ITEM	SET VAL
ALT TYPE	TYPE 2
AUTO SET ITEM	
ITEM	SET VAL
STARTER MODE	MODE 2

MKIB0766E

13. Touch "OK" on "WRITE CONFIGURATION" screen. WRITE CONFIGURATION is completed.

WRITE CONFIGURATION	
PLEASE CHECK THE PRINTOUT AND PRESS 'OK' TO RETURN SYSTEM SELECTION SCREEN	
ITEM	SET VAL
ALT TYPE	TYPE 1
OK	

MKIB0767E

Auto Active Test

EKS0080T

DESCRIPTION

- In the auto active test, the IPDM E/R sends a drive signal to the following systems to check operation.
 - Rear window defogger
 - Front wiper (Low, High)
 - Parking lamps, license lamps, tail lamps
 - Front fog lamp
 - Headlamp (Low, High)
 - Headlamp washer
 - A/C compressor (magnetic clutch)
 - Cooling fan

OPERATION PROCEDURE

1. Close hood, and keep wiper arms off the windshield (to prevent glass damage by wiper operation).

NOTE:
When auto active test is performed with hood opened, sprinkle water on windshield beforehand.
2. Turn ignition switch OFF.
3. Turn ignition switch ON, and within 20 seconds, press the driver side door switch 10 times. Then turn ignition switch OFF.

CAUTION:

Keep passenger side door closed.

4. Turn ignition switch ON within 10 seconds.
5. When auto active test mode is actuated, oil pressure warning lamp starts blinking.
6. After a series of operations is repeated 3 times, auto active test is completed.

NOTE:

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

CAUTION:

When the auto active test cannot be started, check the oil pressure switch system DI-74, "Oil Pressure Warning Lamp Stays Off (Ignition Switch ON)" and the BL-62, "Check Door Switch" .

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INSPECTION IN AUTO ACTIVE TEST MODE

When the auto active test is started, repeat steps 1 to 9 as below three times.

- Step 1: Rear window defogger is operated for 10 seconds.
- Step 2: Front wiper is operated with low speed for 5 seconds and high speed for 5 seconds.
- Step 3: Parking, license plate, tail lamp are turned on for 10 seconds.
- Step 4: Front fog lamp is turned on for 10 seconds.

NOTE:

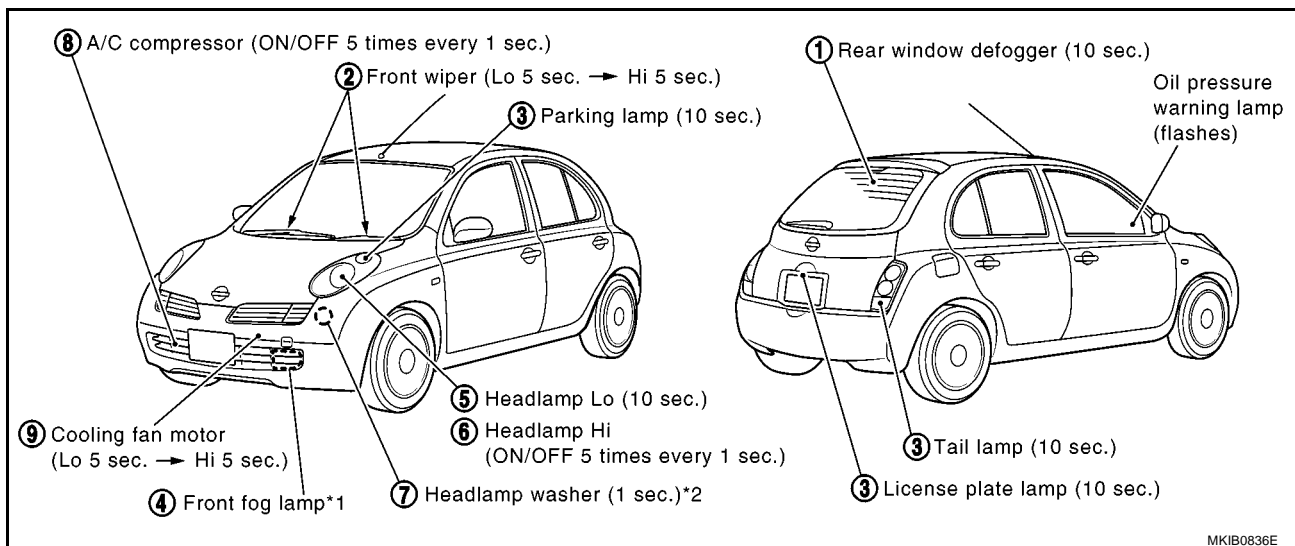
If the fog lamp is not equipped, this step will be skipped. (In this case, next step will be start after 10 seconds.)

- Step 5: Headlamp (low) is turned on for 10 seconds.
- Step 6: Headlamp (high) is blinked ON and OFF for 5 times.
- Step 7: Headlamp washer is operated for 1 second and it is stopped for 9 seconds.

NOTE:

If the headlamp washer is not equipped, this step will be skipped. (In this case, next step will be start after 10 seconds.)

- Step 8: A/C compressor ON and OFF operation is repeated for 5 times.
- Step 9: Cooling fan motor is operated with low speed for 5 seconds and high speed for 5 seconds.



*1: Step 4 will be skipped, if the front fog lamp is not equipped. (In the case, next step will be start after 10 seconds.)

*2: Step 7 will be skipped, if the headlamp washer is not equipped. (In the case, next step will be start after 10 seconds.)

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

CONCEPT OF AUTO ACTIVE TEST

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

Diagnosis Chart in Auto Active Test Mode

Symptom	Inspection Contents	Possible causes		Reference page
Rear window defogger does not operate.	Perform auto active test. Does rear window defogger operate?	YES	● BCM signal input system	GW-16
		NO	<ul style="list-style-type: none"> ● Harness for open or short between the IPDM E/R and the rear window defogger ● Open circuit of rear window defogger ● IPDM E/R (integrated relay) malfunction (Rear window defogger relay) 	
Front wiper does not illuminate.	Perform auto active test. Does the front wiper operate?	YES	● BCM signal input system	WW-6 (without rain sensor) or WW-51 (with rain sensor)
		NO	<ul style="list-style-type: none"> ● Wiper motor malfunction ● Front wiper motor ground. 	
Either of parking lamp, license plate lamp and tail lamp does not illuminate.	Perform auto active test. Does parking lamp, license plate lamp and tail lamp illuminate?	YES	● BCM signal input system	LT-169
		NO	<ul style="list-style-type: none"> ● Bulb ● Harness for open or short between IPDM E/R and parking, license plate or tail lamp. ● IPDM E/R (integrated relay) malfunction 	
Front fog lamp does not illuminate.	Perform auto active test. Does the front fog lamp illuminate?	YES	● BCM signal input system	LT-98
		NO	<ul style="list-style-type: none"> ● Bulb ● Harness for open or short between IPDM E/R and front fog lamp. ● IPDM E/R (integrated relay) malfunction 	
Headlamp (Hi, Lo) does not illuminate.	Perform auto active test. Does headlamp?	YES	● BCM signal input system	LT-7 , "HEAD-LAMP - CONVENTIONAL TYPE-" or LT-42 , "HEAD-LAMP - DAYTIME LIGHT SYSTEM -"
		NO	<ul style="list-style-type: none"> ● Bulb ● Headlamp ground system malfunction ● Open or short in harness or headlamp between IPDM E/R and headlamps ● IPDM E/R (integrated relay) malfunction (headlamp relay) 	
Headlamp washer does not operate.	Perform auto active test. Does the Headlamp washer operate?	YES	● BCM signal input system	WW-112
		NO	<ul style="list-style-type: none"> ● Harness for open or short between IPDM E/R and headlamp washer. ● Headlamp washer relay is malfunction. 	
The cooling fan is inoperative.	Perform auto active test. Does the cooling fan operate?	YES	<ul style="list-style-type: none"> ● Signal input system of ECM ● CAN communication signal between ECM and IPDM E/R* 	EC-341 (with EURO-OBD) or EC-658 (without EURO-OBD)
		NO	<ul style="list-style-type: none"> ● Malfunction of cooling fan ● Harness open or short between the IPDM E/R and the cooling fan. ● IPDM E/R (integrated relay) malfunction 	

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

Symptom	Inspection Contents		Possible causes	Reference page
The A/C compressor is inoperative.	Perform auto active test. Does magnetic clutch operate?	YES	<ul style="list-style-type: none"> ● CAN communication signal between BCM and ECM*. ● CAN communication signal between ECM and IPDM E/R*. ● BCM signal input system ● Signal input system of ECM. 	ATC-61
		NO	<ul style="list-style-type: none"> ● Magnetic clutch inoperative. ● Harness for open or short between IPDM E/R and magnetic clutch. ● IPDM E/R (integrated relay) malfunction 	
Oil pressure warning lamp does not operate.	Perform auto active test. Does oil pressure warning lamp blink?	YES	<ul style="list-style-type: none"> ● Harness for open or short between IPDM E/R and oil pressure switch. ● Oil pressure switch malfunction 	DI-62
		NO	<ul style="list-style-type: none"> ● CAN communication signal between IPDM E/R and combination meter*. ● Combination meter 	

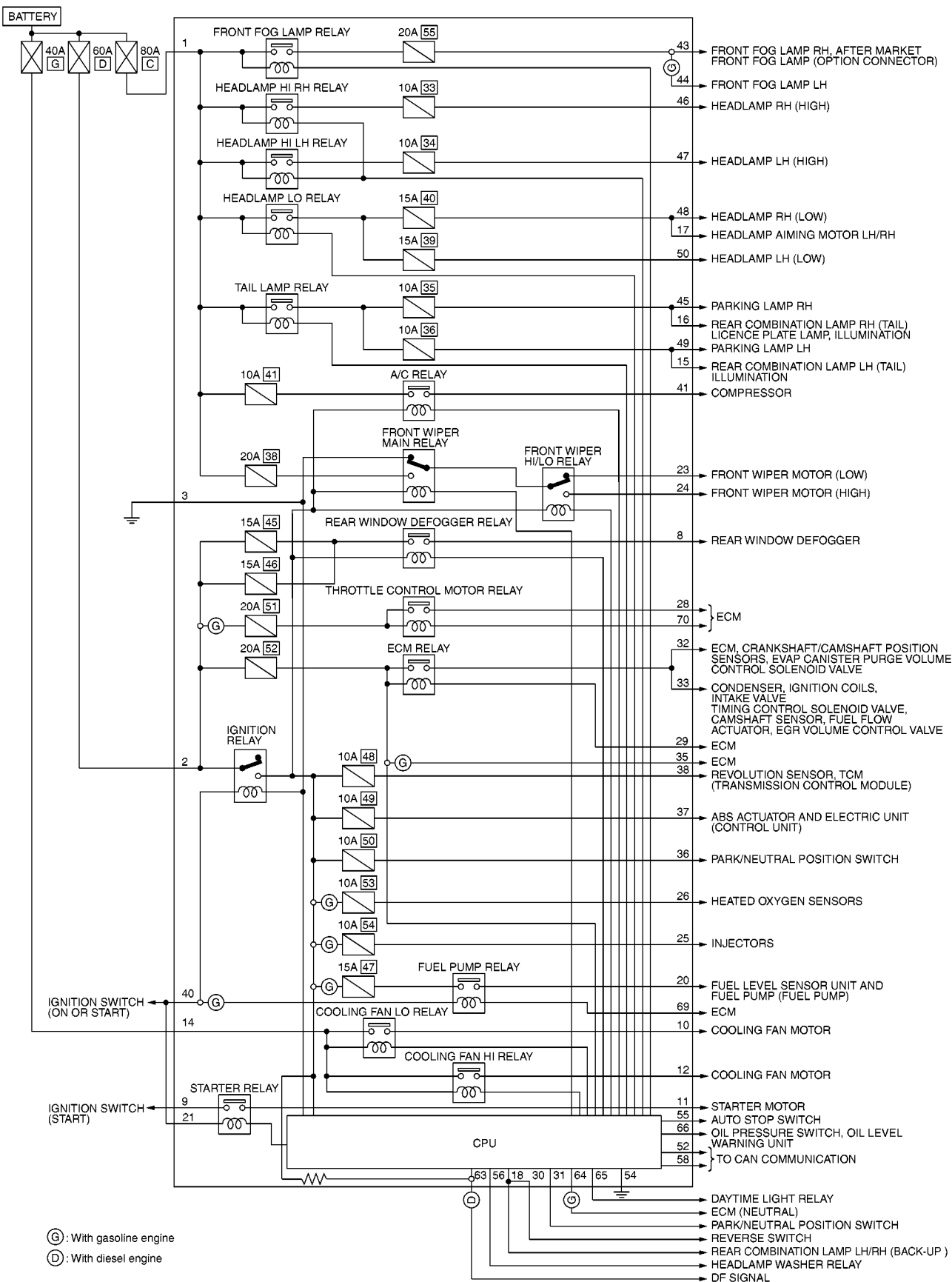
*: Perform IPDM E/R self-diagnosis with CONSULT-II. Refer to [PG-49, "Inspection With CONSULT-II \(Self-Diagnosis\)"](#)

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

Schematic

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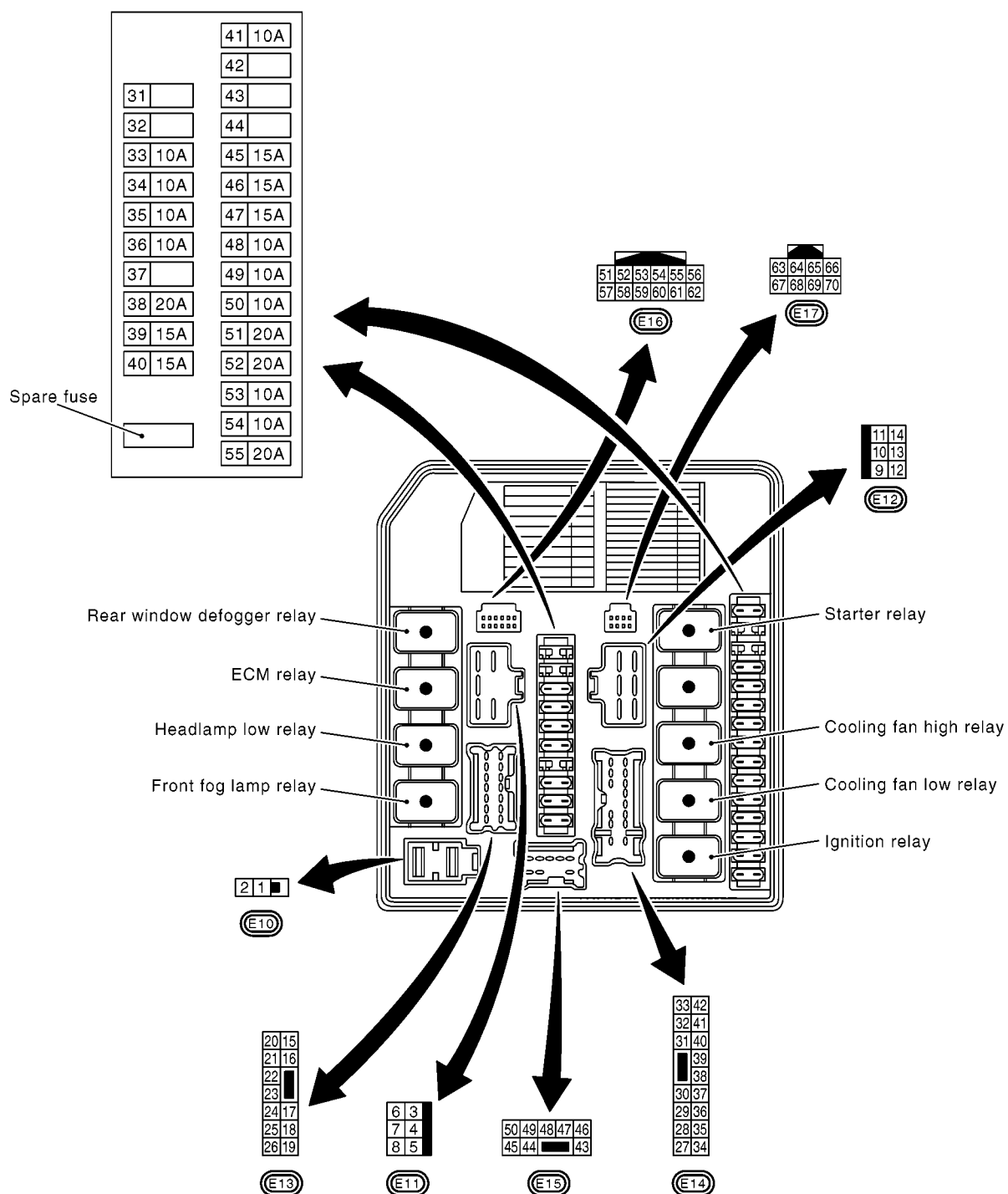


MKWA1514E

NOTE:
Refer to each control system for details of connecting parts.

IPDM E/R Terminal Arrangement

EKS0080V



MKWA3442E

Inspection With CONSULT-II (Self-Diagnosis)

EKS0080W

1. CHECK SELF-DIAGNOSTIC RESULT

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

CONSULT-II display	CONSULT-II display code	TIME		Details of diagnosis result
		CRN T	PAS T	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	—	—	—	—
IGN RELAY ON	B2098	×	×	Ignition relay malfunction (integrated in IPDM E/R)
IGN RELAY OFF	B2099	×	×	Ignition relay malfunction (integrated in IPDM E/R)
EEPROM	B2100	×	×	IPDM E/R malfunction
CAN COMM CIRCUIT	U1000	×	×	Any of or several items below have malfunction. <ul style="list-style-type: none"> ● TRANSMIT DIAG ● ECM ● BCM/SEC

x: Applicable

CAUTION:

If errors of the CAN communication system and the ignition relay ON or OFF are displayed at the same time after the self-diagnostic result, replace the IPDM E/R and perform the self-diagnosis again.

NOTE:

The details for display of the period are as follows:

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

Contents displayed

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

CAN COMM CIRCUIT>>[LAN-5, "Precautions When Using CONSULT-II"](#).

IGN RELAY ON>>Replace IPDM E/R.

IGN RELAY OFF>>Replace IPDM E/R.

EEPROM>>Replace IPDM E/R.

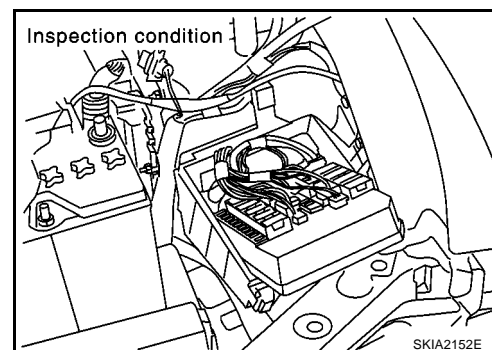
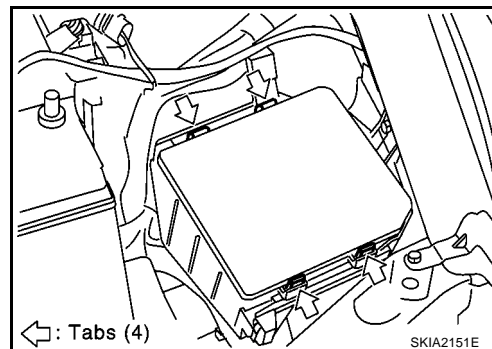
IPDM E/R Terminal Inspection

EKS0080X

CAUTION:

This is performed when the IPDM E/R is checked without removing the battery.

1. Remove the headlamp (LH). Refer to [LT-41, "Removal and Installation"](#) .
2. Remove tabs of the IPDM E/R and place the IPDM E/R with its connector facing upward. Check each terminal.



IPDM E/R Power Supply and Ground Circuit Check

EKS0089R

1. CHECK FUSE AND FUSIBLE LINK

Make sure that the following fusible links or IPDM E/R fuses are not blown.

Terminal No.	Power source	Fuse, fusible link No.
1	Battery	Letter C
2	Battery	Letter D
40	Ignition switch (ON)	4

OK or NG

- OK >> GO TO 2.
 NG >> Replace fuse or fusible link.

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

2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect IPDM E/R harness connector.
2. Check voltage between IPDM E/R and ground.

Terminals		Ignition switch position			
(+) <div>Connector</div> <div>Terminal (wire color)</div>		(-)	OFF	ACC	ON
E10	1 (R)	Ground	Battery voltage	Battery voltage	Battery voltage
	2 (G)		Battery voltage	Battery voltage	Battery voltage
E14	40 (PU ^{*1} or OR ^{*2} or W ^{*3})		0V	Battery voltage	Battery voltage

*1: With CR engine models.

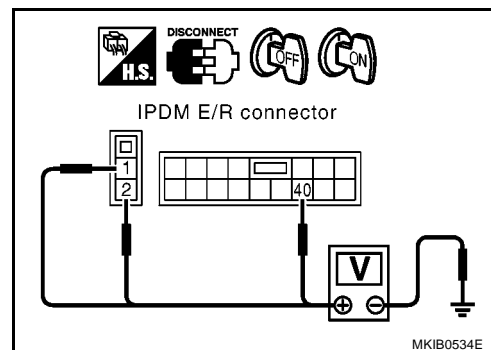
*2: With HR engine models.

*3: With diesel engine models.

OK or NG

OK >> GO TO 3.

NG >> Check harness between fuse, fusible link and IPDM E/R.



3. CHECK GROUND CIRCUIT

1. Disconnect IPDM E/R harness connectors.
2. Check continuity between IPDM E/R harness connectors E11 terminal 3 (B), E16 terminal 54 (B) and ground.

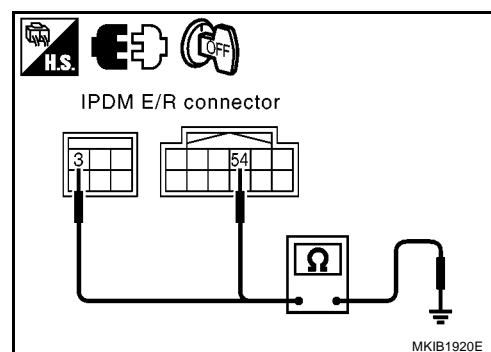
3 (B) – Ground :Continuity should exist.

54 (B) – Ground :Continuity should exist.

OK or NG

OK >> INSPECTION END.

NG >> Repair harness for ground circuit.



Diagnosis of IPDM E/R Integrated Relay

EKS0080Z

1. CHECK SYMPTOM

Check the symptom of the malfunction relay.

What is the symptom?

No operation>>GO TO 2.

No stop>> GO TO 4.

2. CHECK RELAY TYPE

Which is the relay with error?

Front fog lamp relay, headlamp relay (Hi, Lo), tail lamp relay, front wiper relay (main, Hi/Lo), rear window defogger relay, A/C relay, starter motor relay, cooling fan relay (1, 2, 3)>>GO TO 5.

Ignition relay>> Go to [PG-49, "Inspection With CONSULT-II \(Self-Diagnosis\)"](#)

ECM relay>>Go to [EC-126, "POWER SUPPLY AND GROUND CIRCUIT"](#) (CR engine models with EURO-OBD), [EC-539, "POWER SUPPLY AND GROUND CIRCUIT"](#) (CR engine models without EURO-OBD), [EC-919, "POWER SUPPLY AND GROUND CIRCUIT"](#) (HR engine models with EURO-OBD), [EC-1342, "POWER SUPPLY AND GROUND CIRCUIT"](#) (HR engine models without EURO-OBD) or EC-K9K-474, "Wiring diagram — Main power supply and ground circuit", "DIESEL INJECTION" (K9K engine models).

Throttle motor relay>>Go to [EC-293, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY"](#) (CR engine models with EURO-OBD), [EC-640, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY"](#) (CR engine models without EURO-OBD), [EC-1091, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY"](#) (HR engine models with EURO-OBD) or [EC-1444, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY"](#) (HR engine models without EURO-OBD).

Fuel pump relay>>Go to [EC-431, "FUEL PUMP"](#) (CR engine models with EURO-OBD), [EC-783, "FUEL PUMP"](#) (CR engine models without EURO-OBD), [EC-1215, "FUEL PUMP"](#) (HR engine models with EURO-OBD) or [EC-1544, "FUEL PUMP"](#) (HR engine models without EURO-OBD).

3. CHECK RELAY

Send an operation signal to the relay using a diagnosis tool. Check the voltage at the input and output terminals of inoperative relays according to the table below or check for continuity between input and output terminals. Refer to [PG-37, "ACTIVE TEST"](#) or [PG-43, "Auto Active Test"](#).

Relay name	IPDM E/R terminal number		Voltage [V]	Diagnosis tool	
	Input side	Output side		CONSULT-II ACTIVE TEST	Auto ACTIVE TEST
Front fog lamp relay	1	43, 44	Battery voltage	×	×
Headlamp Hi relay		46, 47		×	×
Headlamp Lo relay		48, 50		×	×
Tail lamp relay		15, 16, 45, 49		×	×
Front wiper main relay		23		×	×
Front wiper HI/LO relay		24		×	×
A/C relay		41			×
Rear windows defogger relay	2	8		×	×
Cooling fan Lo relay 1	14	10		×	×
Cooling fan Hi relay 2		12		×	×

×: Applicable

OK or NG

OK >> Check the control unit that controls the inoperative relay. (system)

NG >> Replace the IPDM E/R. (malfunction of relay)

4. CHECK RELAY TYPE

Which is the relay with error?

Front fog lamp relay, headlamp relay (Hi, Lo), tail lamp relay, front wiper relay (main, Hi/Lo), rear window defogger relay, A/C relay, starter motor relay, cooling fan relay (1, 2, 3)>>GO TO 5.

Ignition relay>> Go to [PG-49, "Inspection With CONSULT-II \(Self-Diagnosis\)"](#)

ECM relay>>Go to [EC-126, "POWER SUPPLY AND GROUND CIRCUIT"](#) (CR engine models with EURO-OBD), [EC-539, "POWER SUPPLY AND GROUND CIRCUIT"](#) (CR engine models without EURO-OBD), [EC-919, "POWER SUPPLY AND GROUND CIRCUIT"](#) (HR engine models with EURO-OBD), [EC-1342, "POWER SUPPLY AND GROUND CIRCUIT"](#) (HR engine models without EURO-OBD) or EC-K9K-474, "Wiring diagram — Main power supply and ground circuit", "DIESEL INJECTION" (K9K engine models).

Throttle motor relay>>Go to [EC-293, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY"](#) (CR engine models with EURO-OBD), [EC-640, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY"](#) (CR engine models without EURO-OBD), [EC-1091, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY"](#) (HR engine models with EURO-OBD) or [EC-1444, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY"](#) (HR engine models without EURO-OBD).

Fuel pump relay>>Go to [EC-431, "FUEL PUMP"](#) (CR engine models with EURO-OBD), [EC-783, "FUEL PUMP"](#) (CR engine models without EURO-OBD), [EC-1215, "FUEL PUMP"](#) (HR engine models with EURO-OBD) or [EC-1544, "FUEL PUMP"](#) (HR engine models without EURO-OBD).

5. CHECK INPUT SIGNAL

Check the control signal status of the relay on the IPDM E/R that receives from each control unit with the data monitor of CONSULT-II. Refer to [PG-36, "DATA MONITOR"](#).

What is the data monitor result?

Other than OFF>>Check the control unit that controls the relay (system) not deactivated.

OFF >> Replace the IPDM E/R. (error of relay ON)

Removal and Installation of IPDM E/R

EKS0087Q

CAUTION:

Always replace with new* IPDM E/R when the IPDM E/R replacement is required.

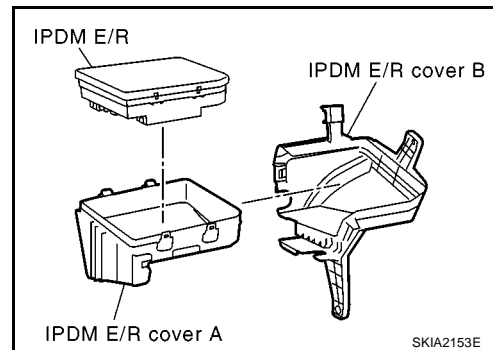
*: New one means virgin control unit that has never been energized on-board.

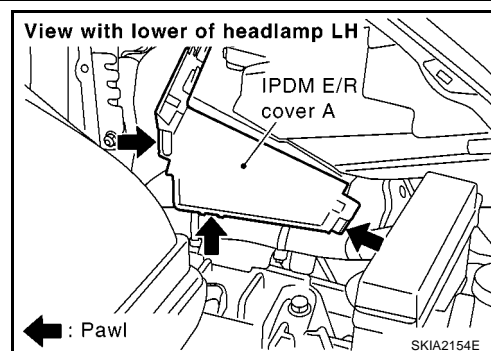
REMOVAL

NOTE:

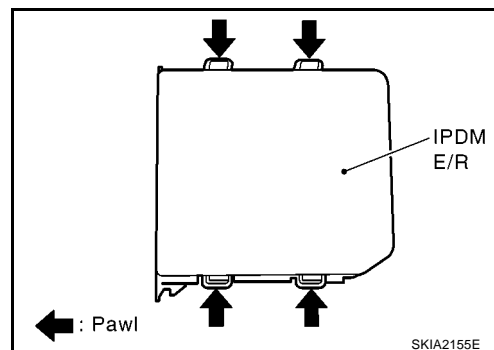
If possible, before removing IPDM E/R, retrieve current IPDM E/R configuration to use for reference when configuring brand-new IPDM E/R after installation. Refer to [PG-37, "Configuration"](#).

1. Remove battery. Refer to [SC-15, "Removal and Installation"](#).
2. Pull out IPDM E/R cover A from IPDM cover B.





3. Disconnect harness connector from IPDM E/R.
4. Remove IPDM E/R from IPDM E/R cover A.



INSTALLATION

- Install in the reverse order of removal.

NOTE:

When replacing IPDM E/R, it must be configured. Refer to [PG-37, "Configuration"](#).

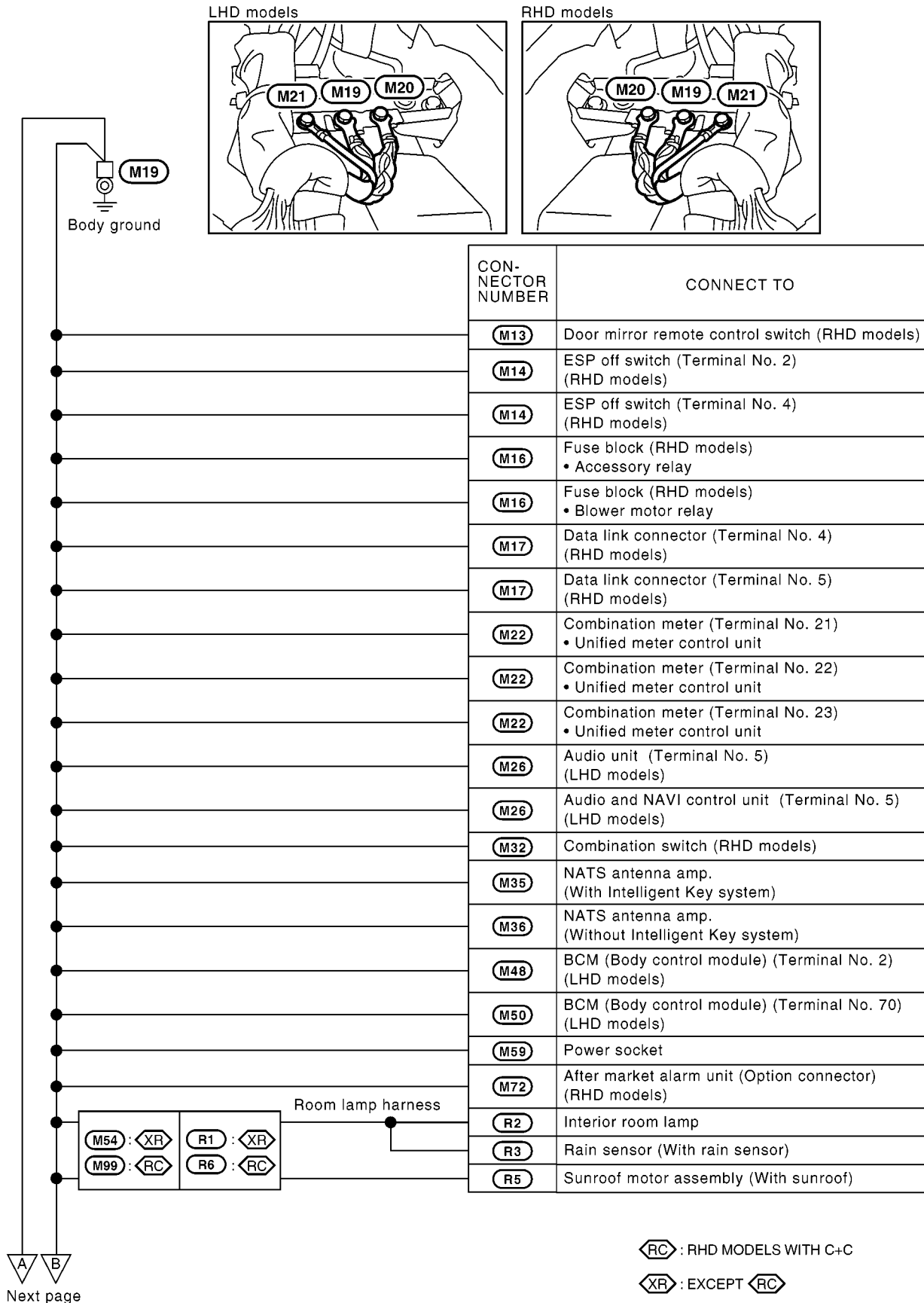
GROUND

GROUND

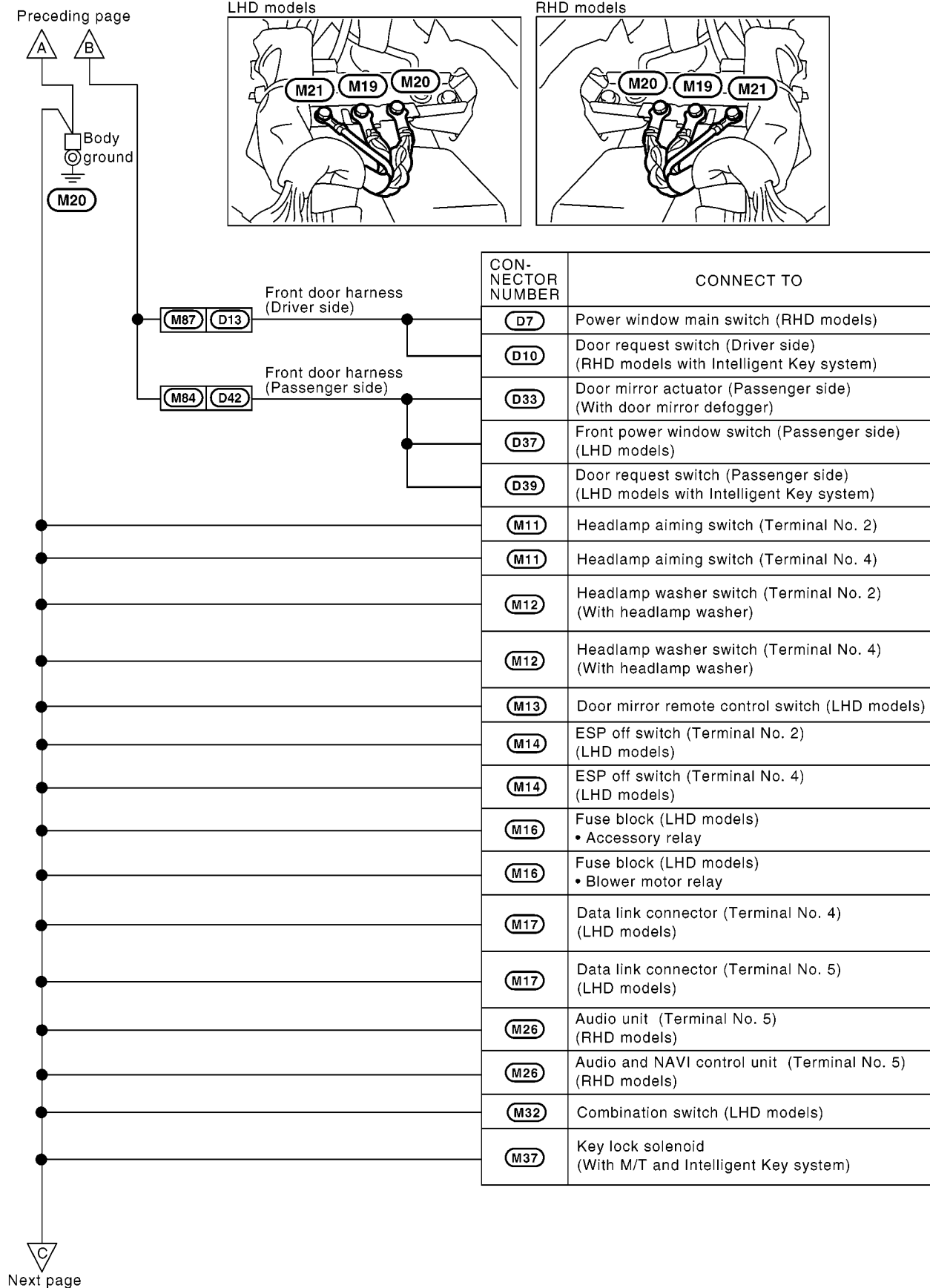
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Ground Distribution MAIN HARNESS

EKS0079A



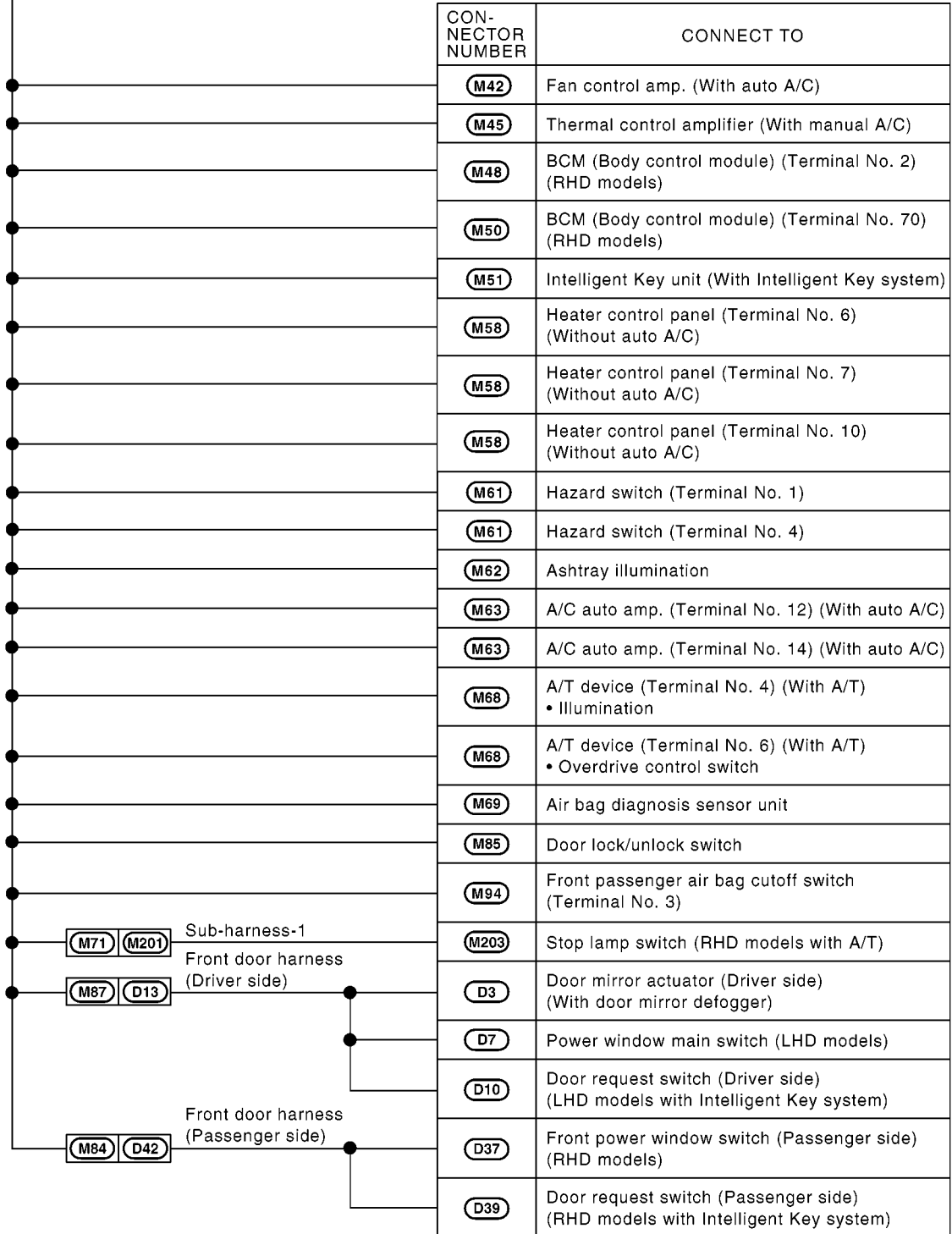
GROUND



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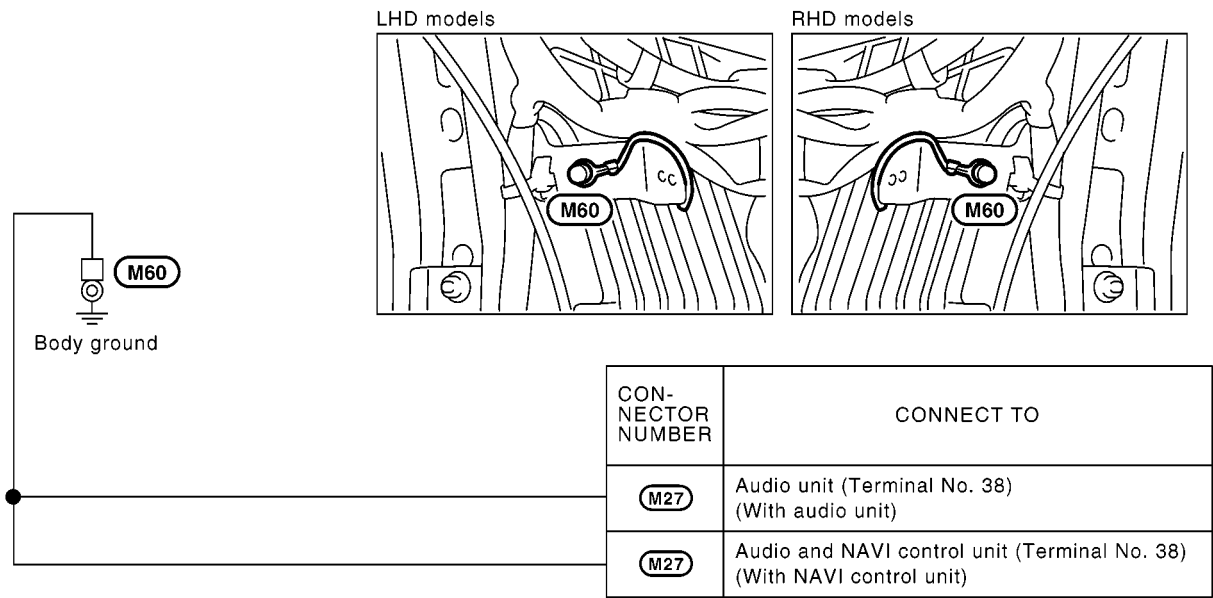
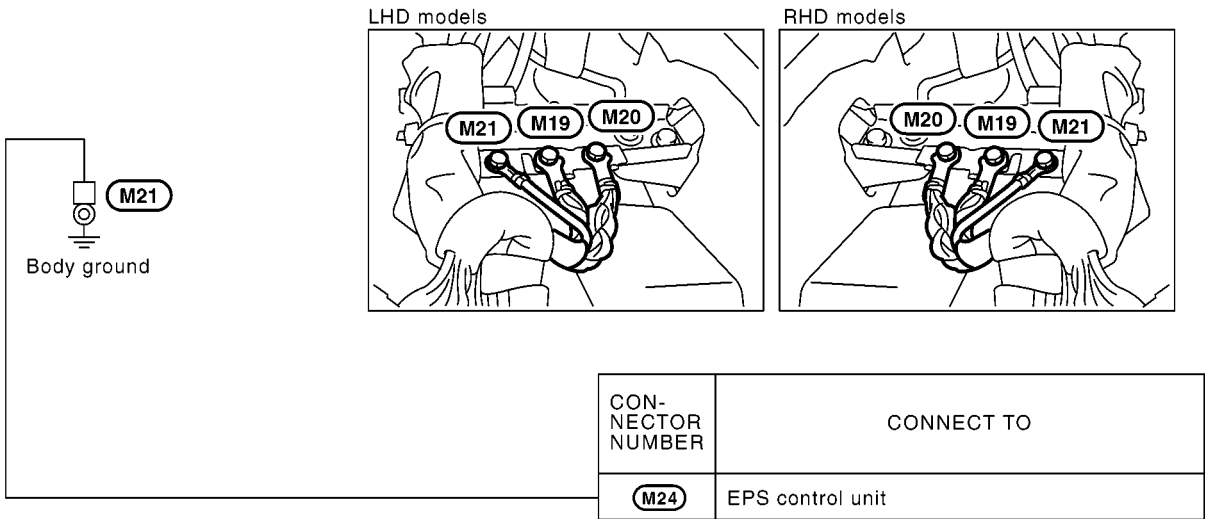
GROUND

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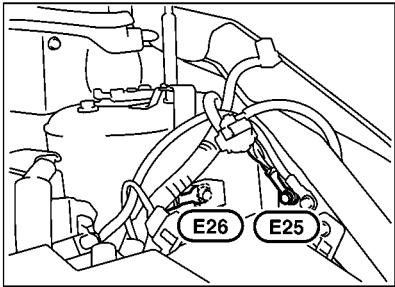
GROUND



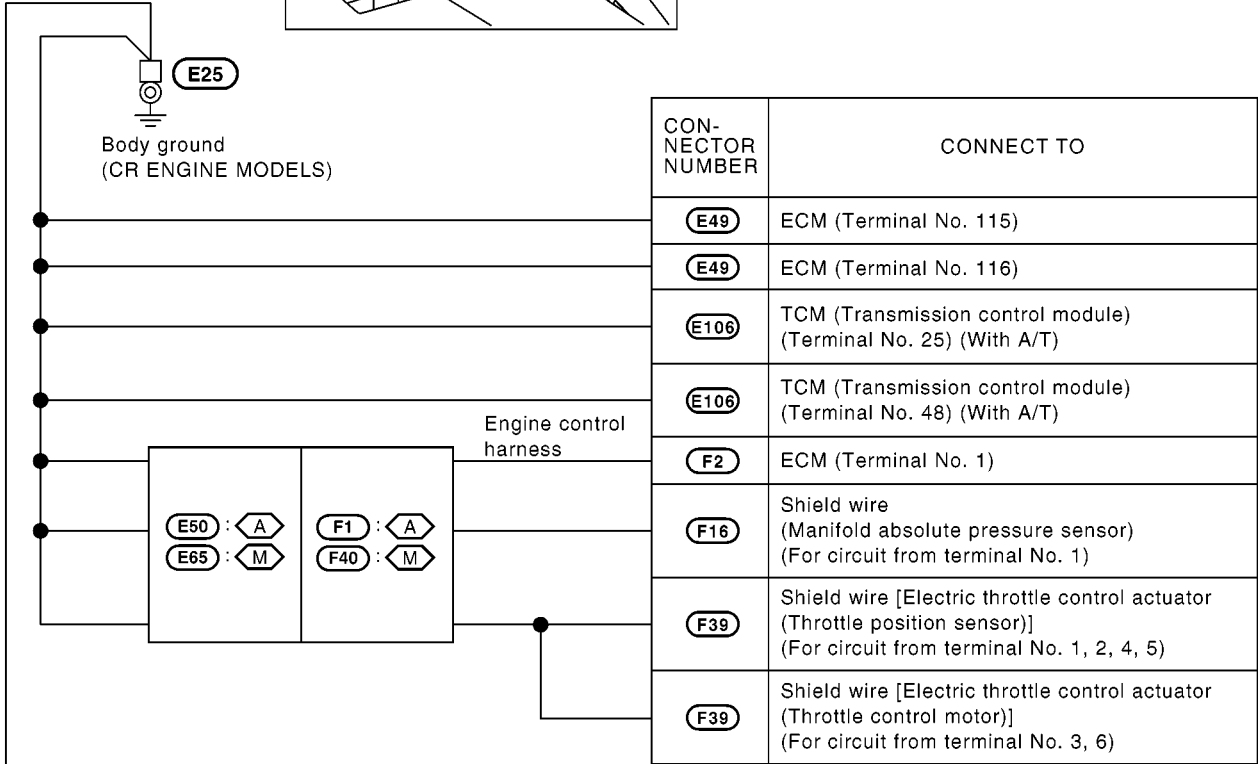
GROUND

ENGINE ROOM HARNESS

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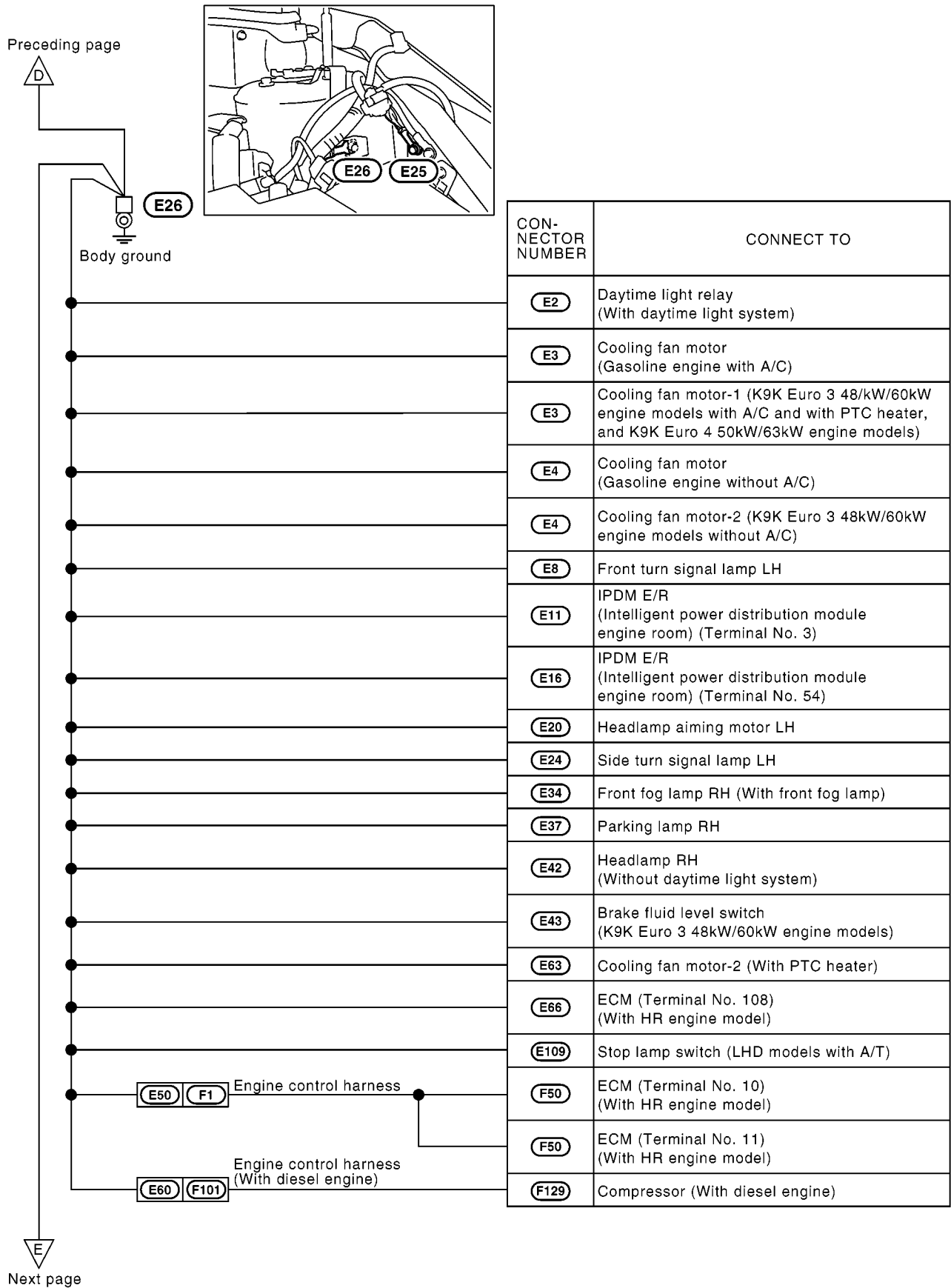


A : WITH A/T
M : WITH M/T



D
Next
page

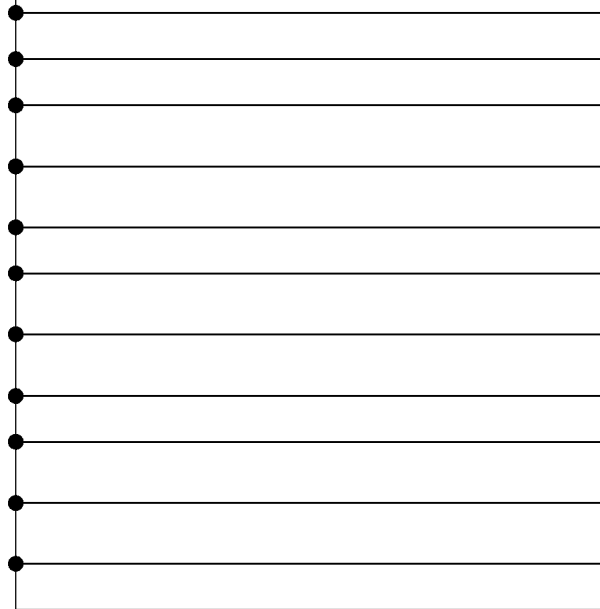
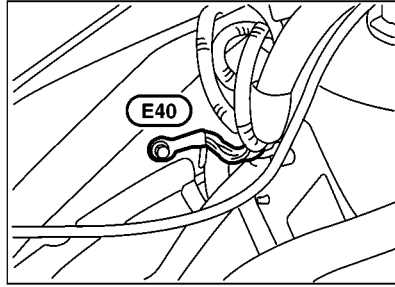
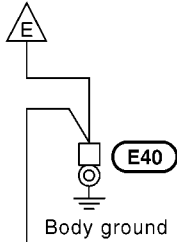
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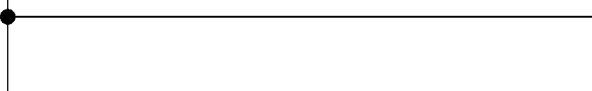
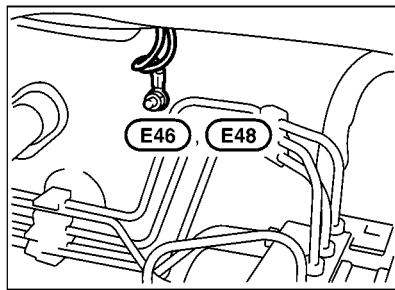
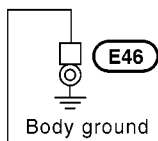
MKWA4098E

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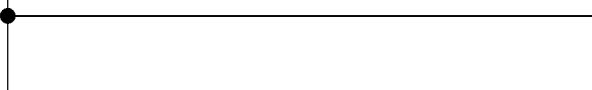
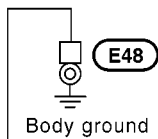
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CON- NECTOR NUMBER	CONNECT TO
E7	Front fog lamp LH (With front fog lamp)
E21	Headlamp LH
E22	Parking lamp LH
E27	Shield wire (Crash zone sensor) (For circuit from terminal No. 1, 2)
E30	Horn
E32	Front turn signal lamp RH
E33	Headlamp washer motor (With headlamp washer)
E35	Side turn signal lamp RH
E39	Headlamp aiming motor RH
E43	Brake fluid level switch (With gasoline engine and K9K Euro 4 50kW/63kW engine models)
E44	Front wiper motor
E70	Hood switch



CON- NECTOR NUMBER	CONNECT TO
E45	ABS actuator and electric unit (Control unit) (Terminal No. 1) (Without ESP)
E45	ABS actuator and electric unit (Control unit) (Terminal No. 4) (Without ESP)

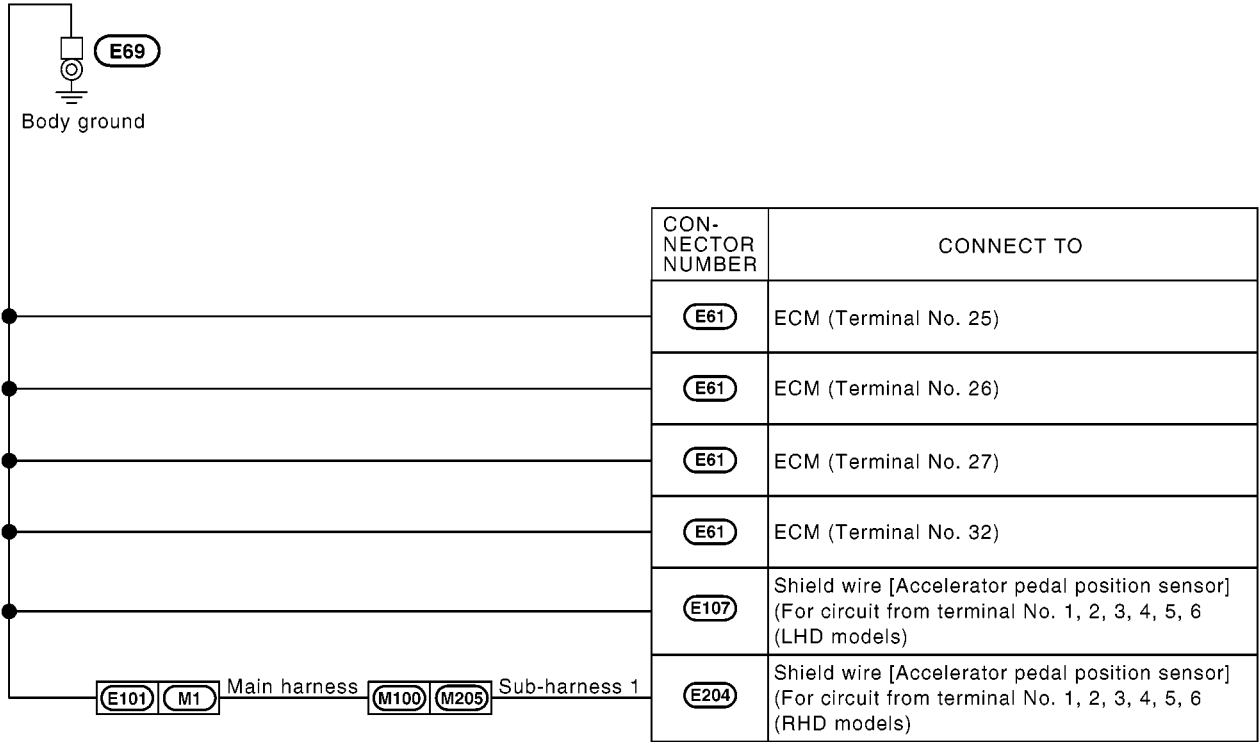


CON- NECTOR NUMBER	CONNECT TO
E47	ABS actuator and electric unit (Control unit) (Terminal No. 1) (With ESP)
E47	ABS actuator and electric unit (Control unit) (Terminal No. 4) (With ESP)

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GROUND

ENGINE ROOM HARNESS/K9K EURO 4 50KW/63KW ENGINE MODELS



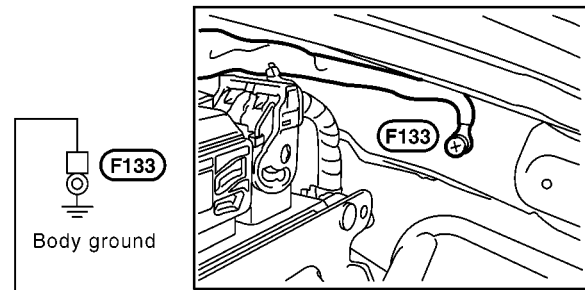
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ENGINE CONTROL HARNESS/K9K EURO 3 48KW/60KW ENGINE MODELS

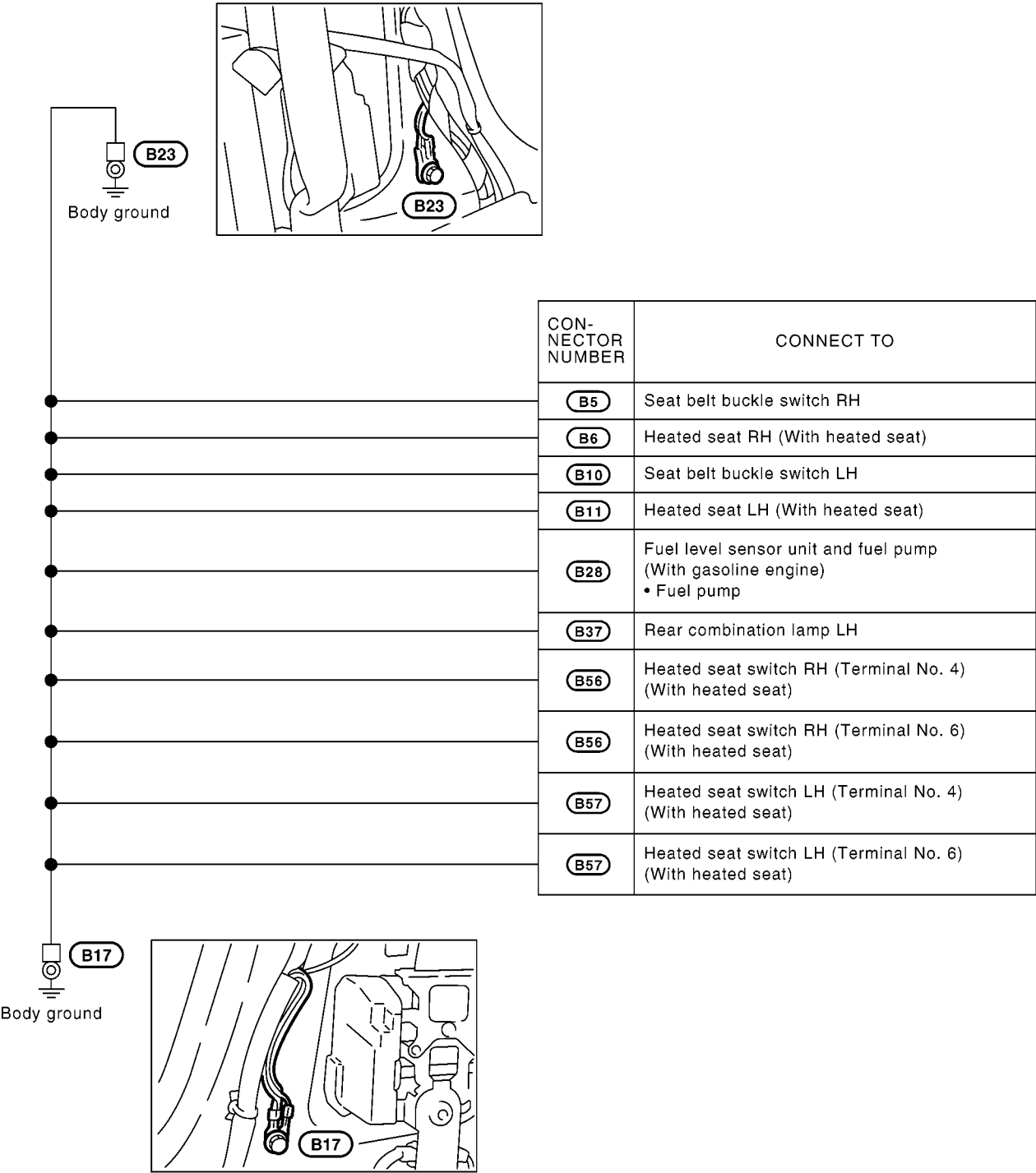


CON- NECTOR NUMBER	CONNECT TO
F134	ECM (Terminal No. 111)
F134	ECM (Terminal No. 112)

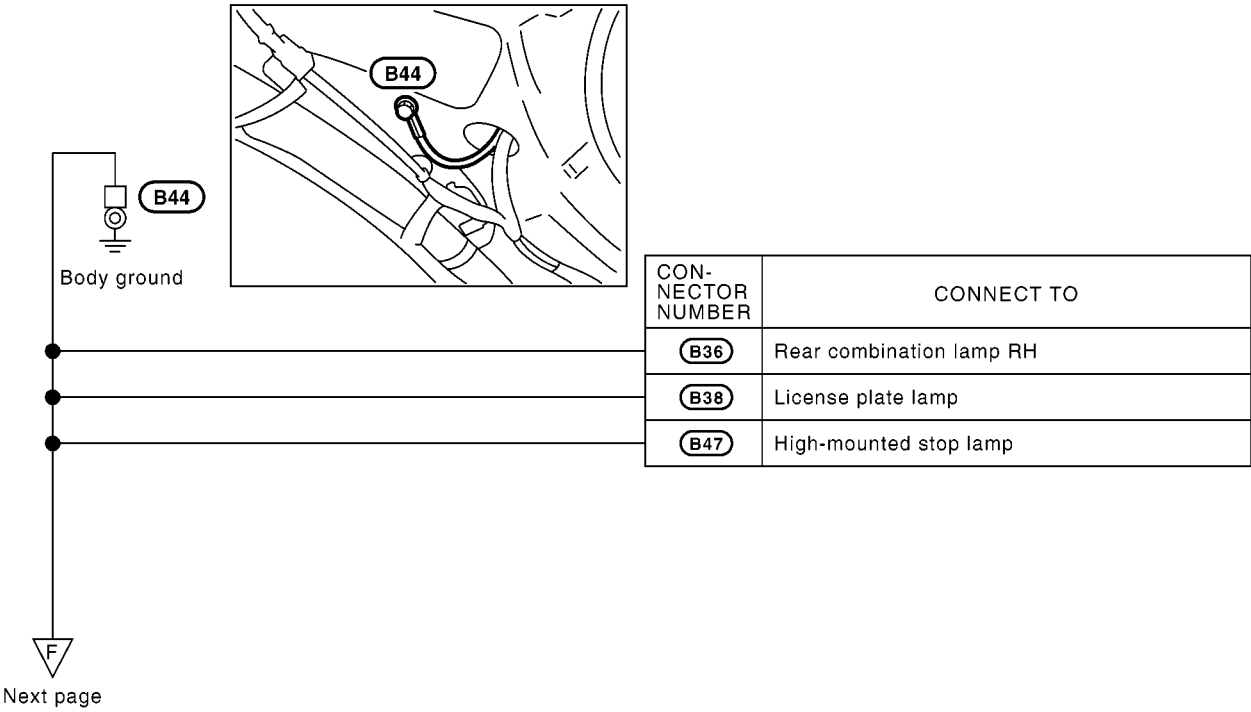
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BODY HARNESS/HATCHBACK

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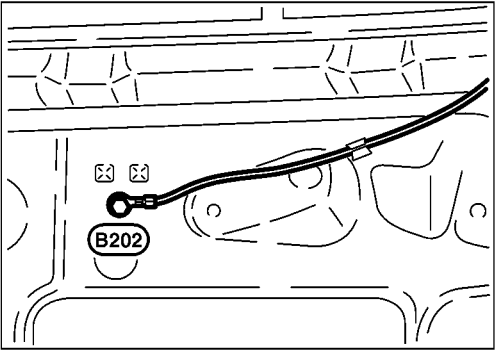
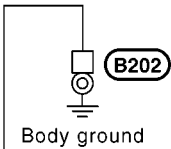
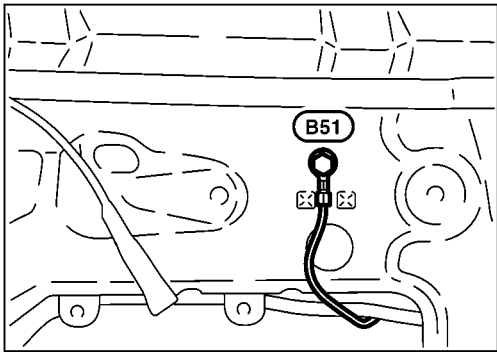
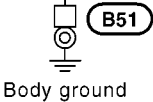


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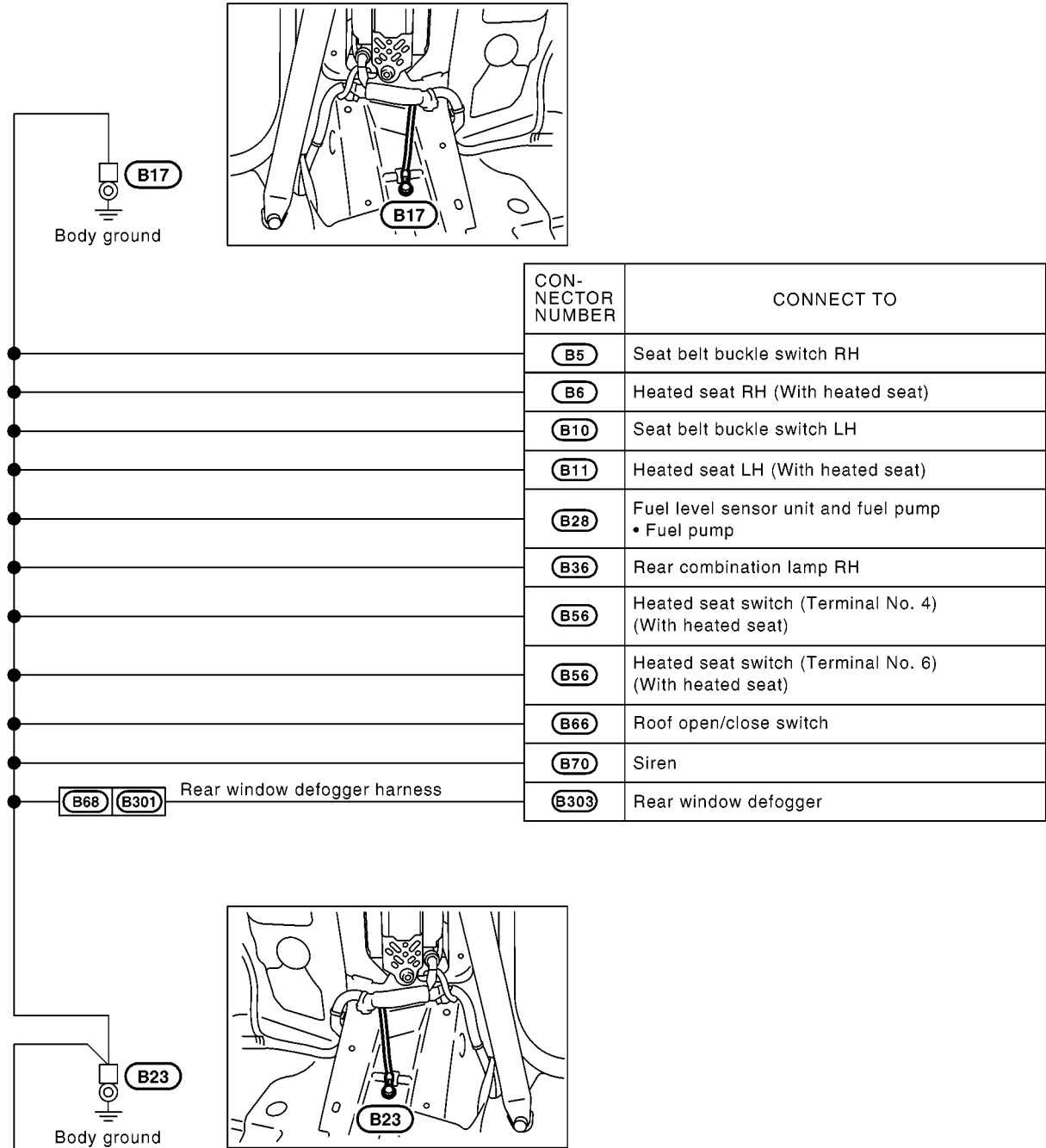
CON-NECTOR NUMBER	CONNECT TO
B52	External back door release switch
B53	Rear wiper motor
B54	Door request switch (Back door) (With Intelligent Key system)
B55	Back door release actuator (Terminal No. 2) • Back door switch
B55	Back door release actuator (Terminal No. 4) • Release motor



CON-NECTOR NUMBER	CONNECT TO
B201	Rear window defogger

GROUND

BODY HARNESS/C+C

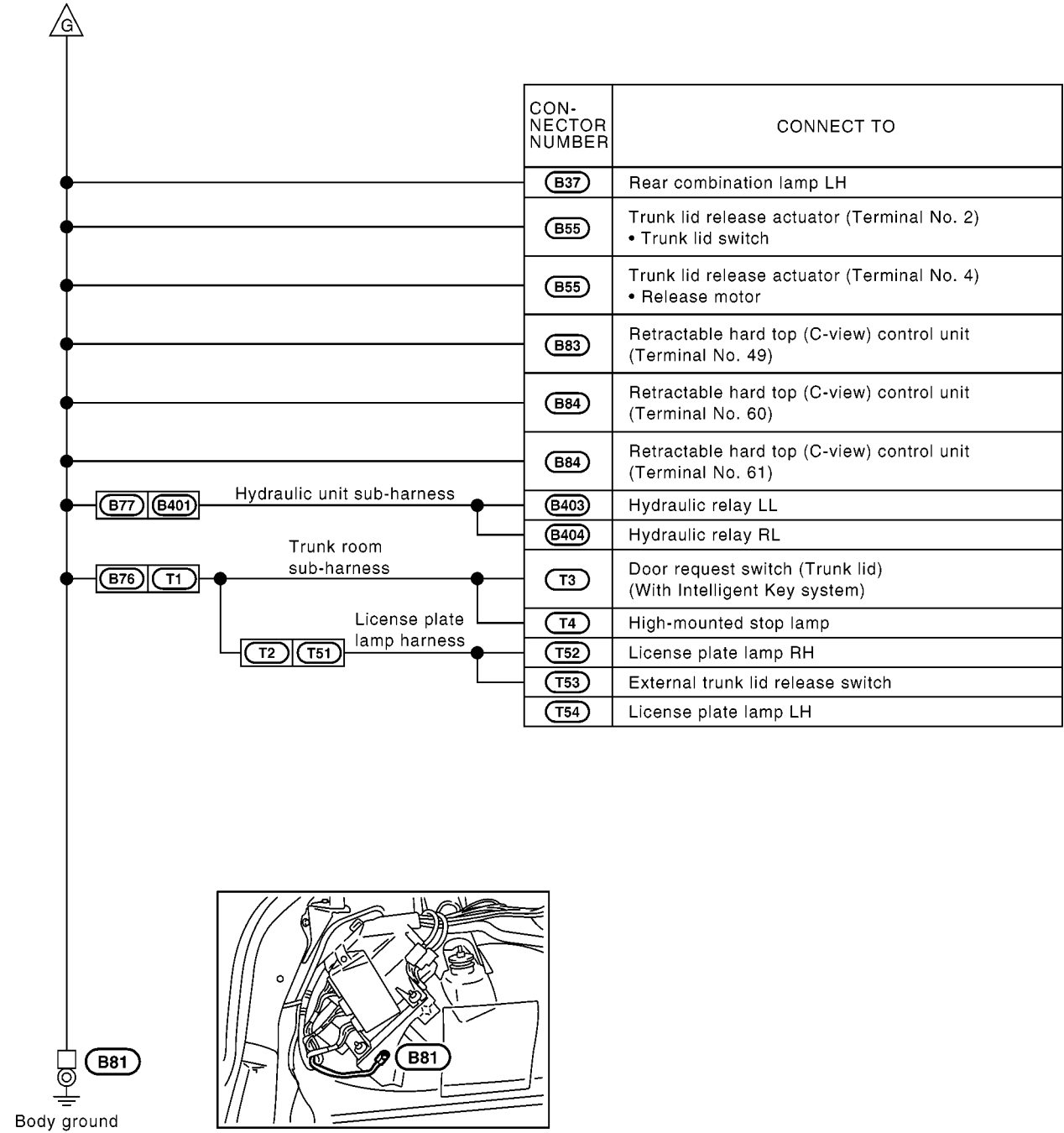


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MKWA4104E

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HARNESS

PFP:00011

Harness Layout
HOW TO READ HARNESS LAYOUTS

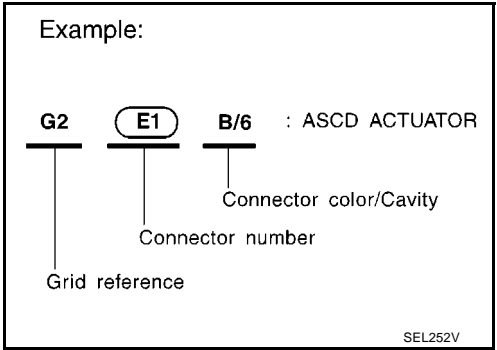
EKS0079B

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

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

To use the grid reference

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



CONNECTOR SYMBOL

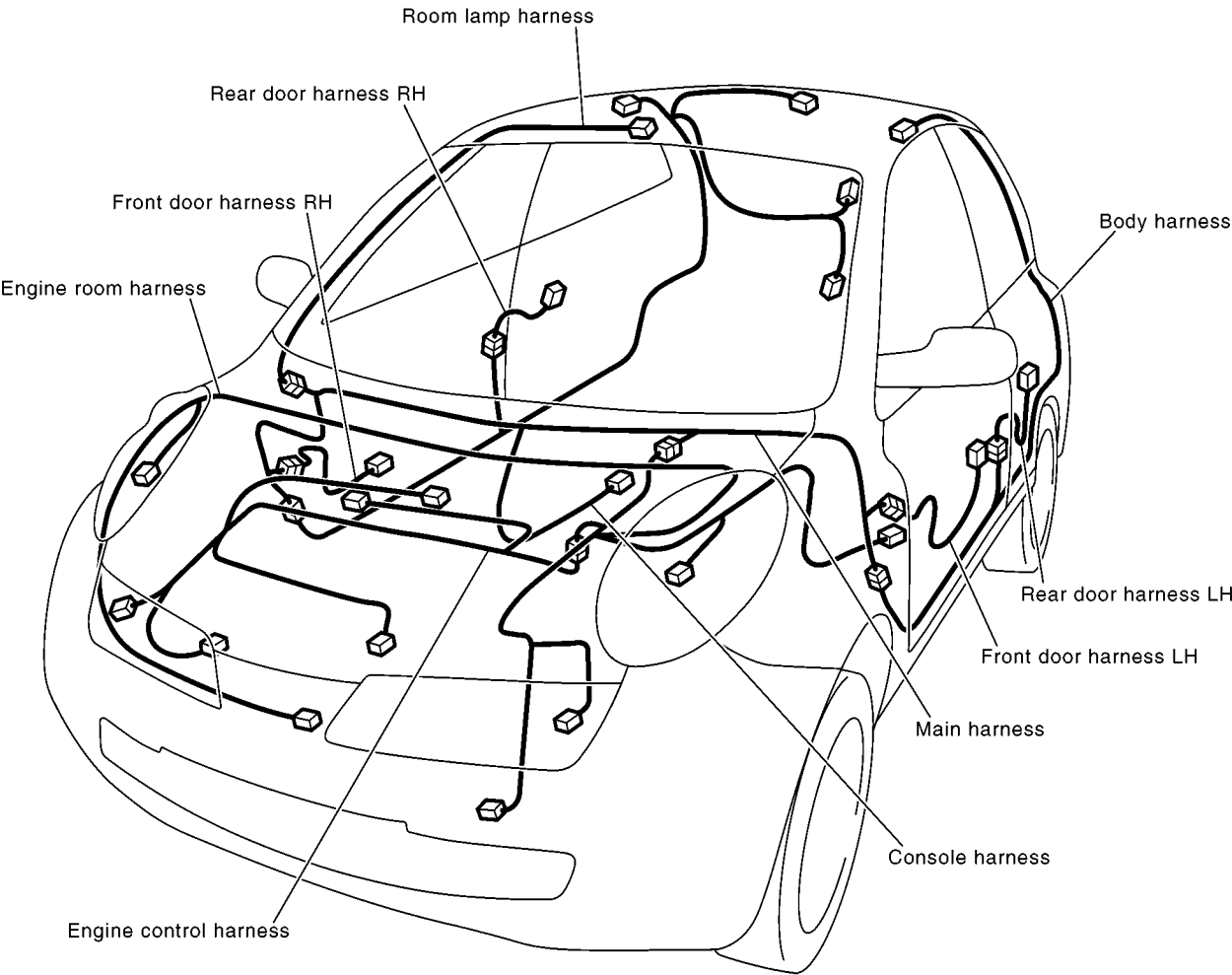
Main symbols of connector (in Harness Layout) are indicated in the below.

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

CKIT0108E

HARNESS

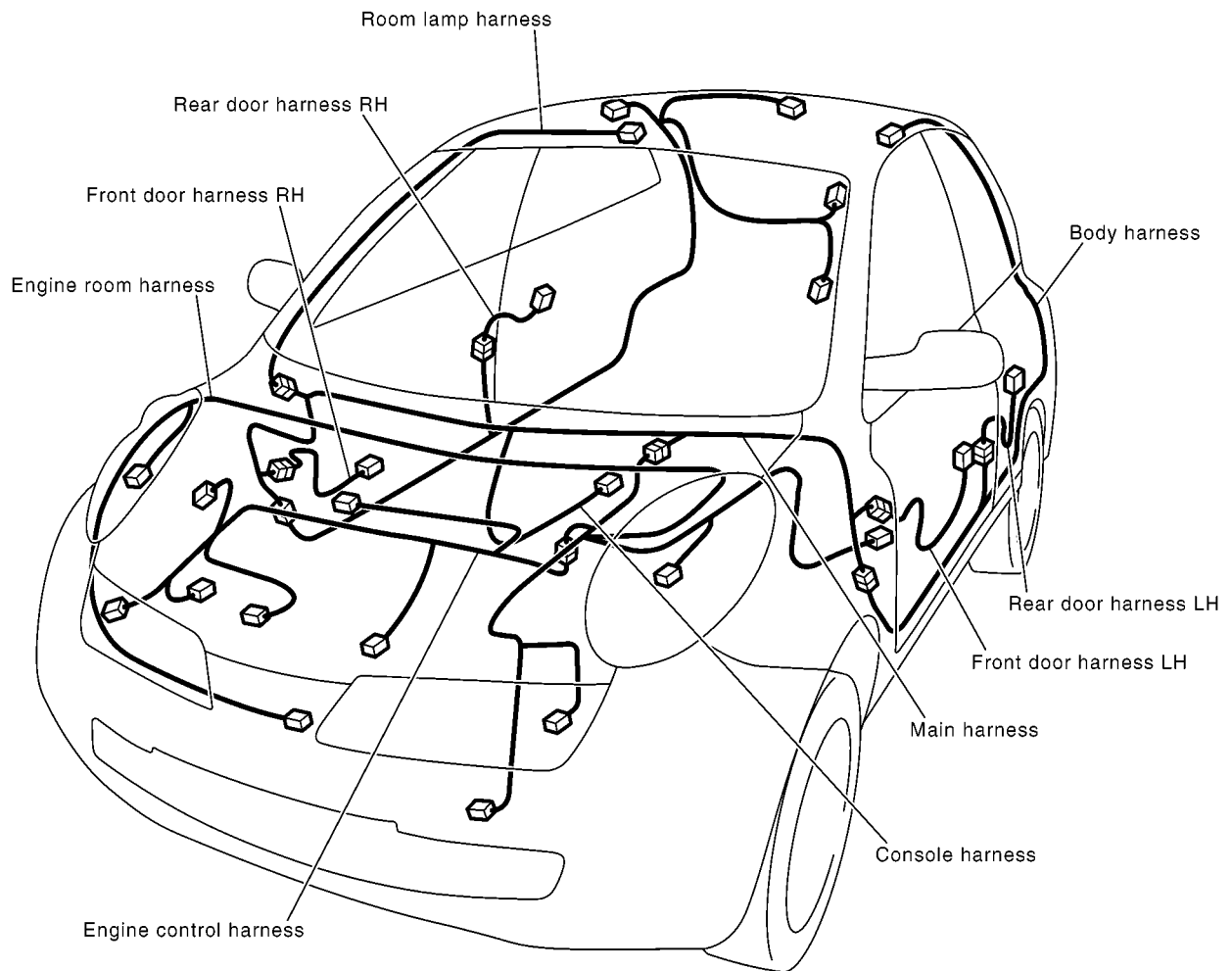
HARNESS OUTLINE/CR AND HR ENGINE MODELS (HATCHBACK)



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HARNESS

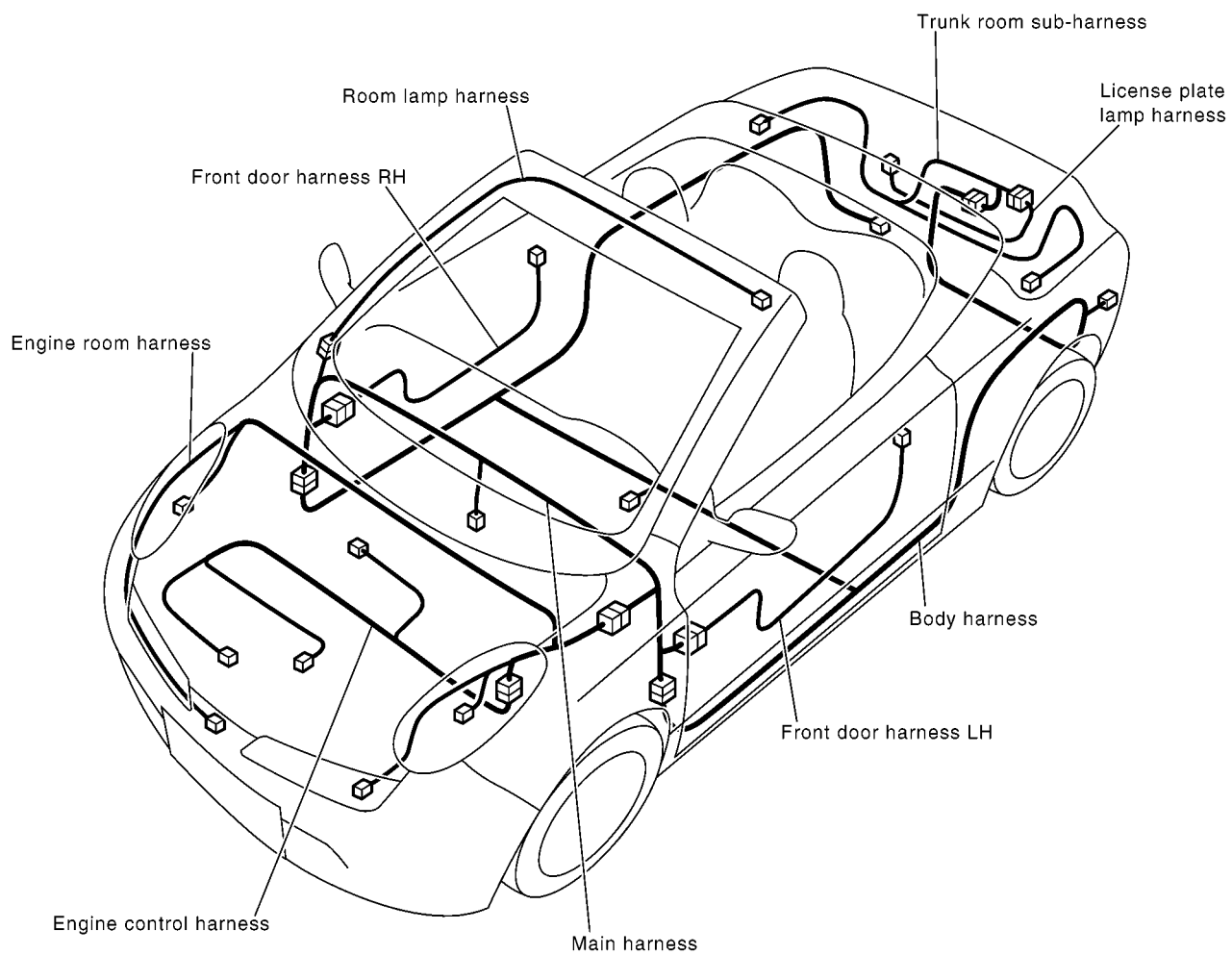
HARNESS OUTLINE/K9K ENGINE MODELS (HATCHBACK)



MKWA1490E

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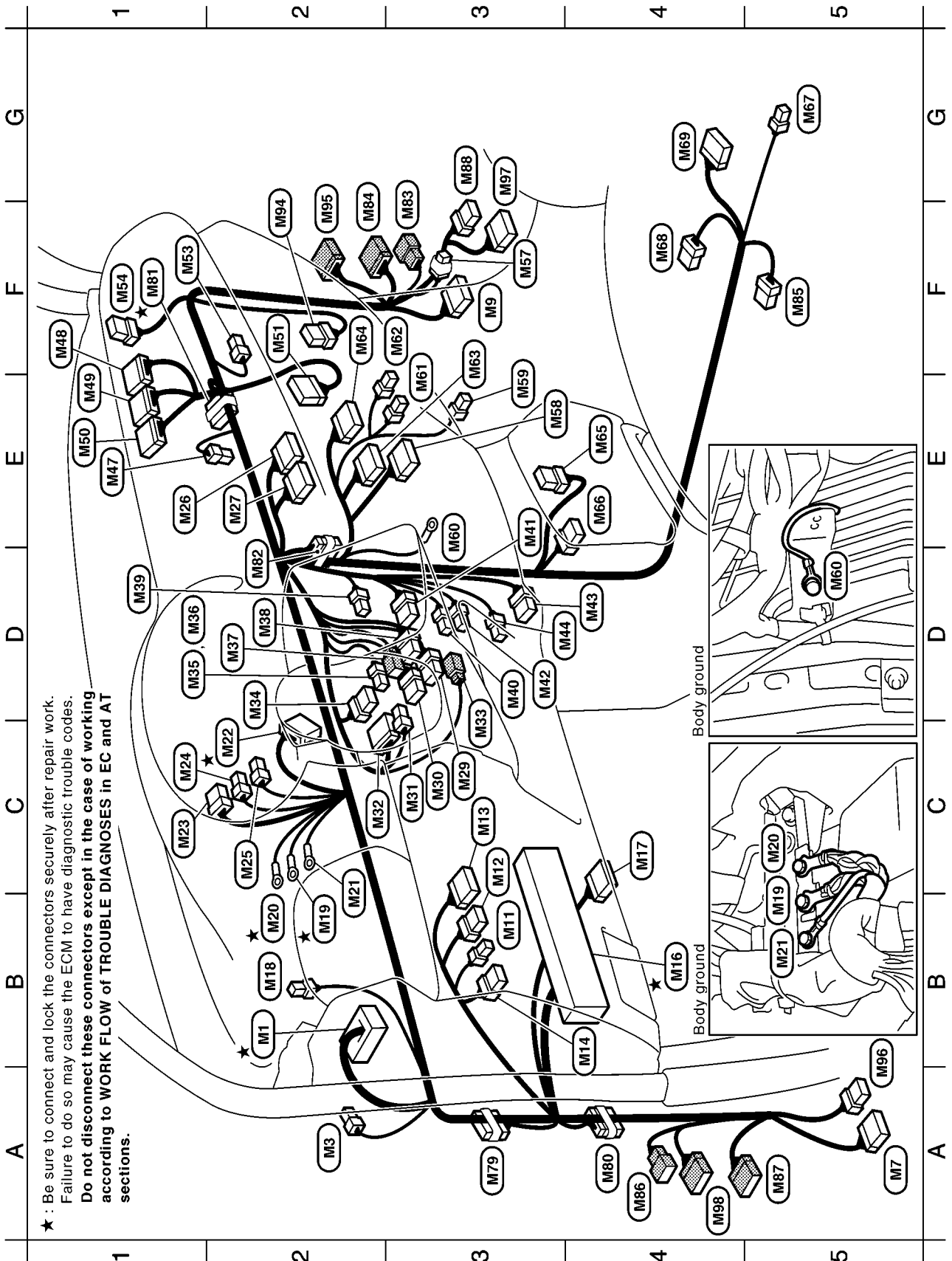
HARNESS OUTLINE/C+C



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HARNESS

MAIN HARNESS/LHD MODELS



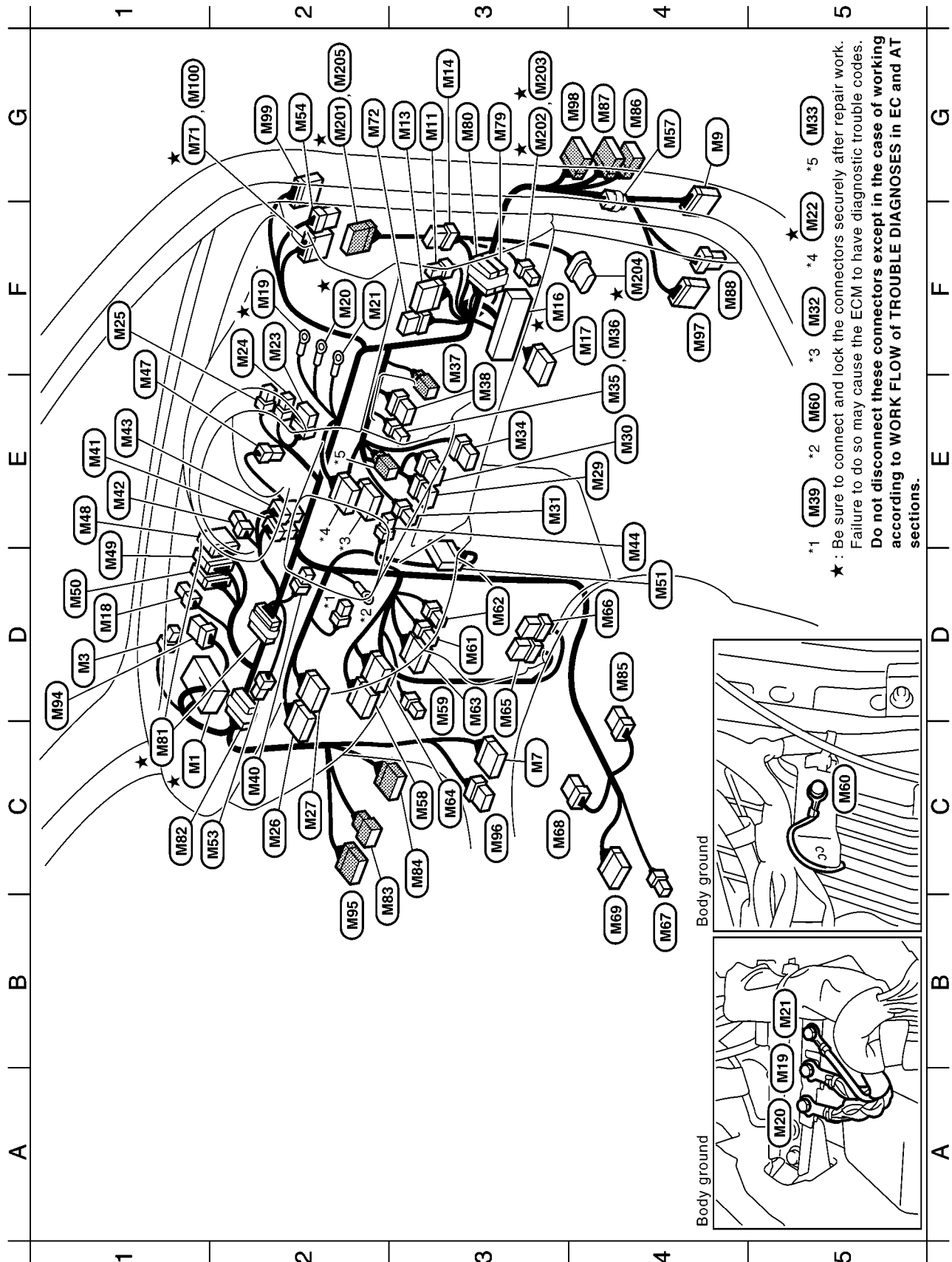
MKWA4107E

★ : Be sure to connect and lock the connectors securely after repair work.
Failure to do so may cause the ECM to have diagnostic trouble codes.

Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

MAIN HARNESS/RHD MODELS

MAIN HARNESS/RHD MODELS



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

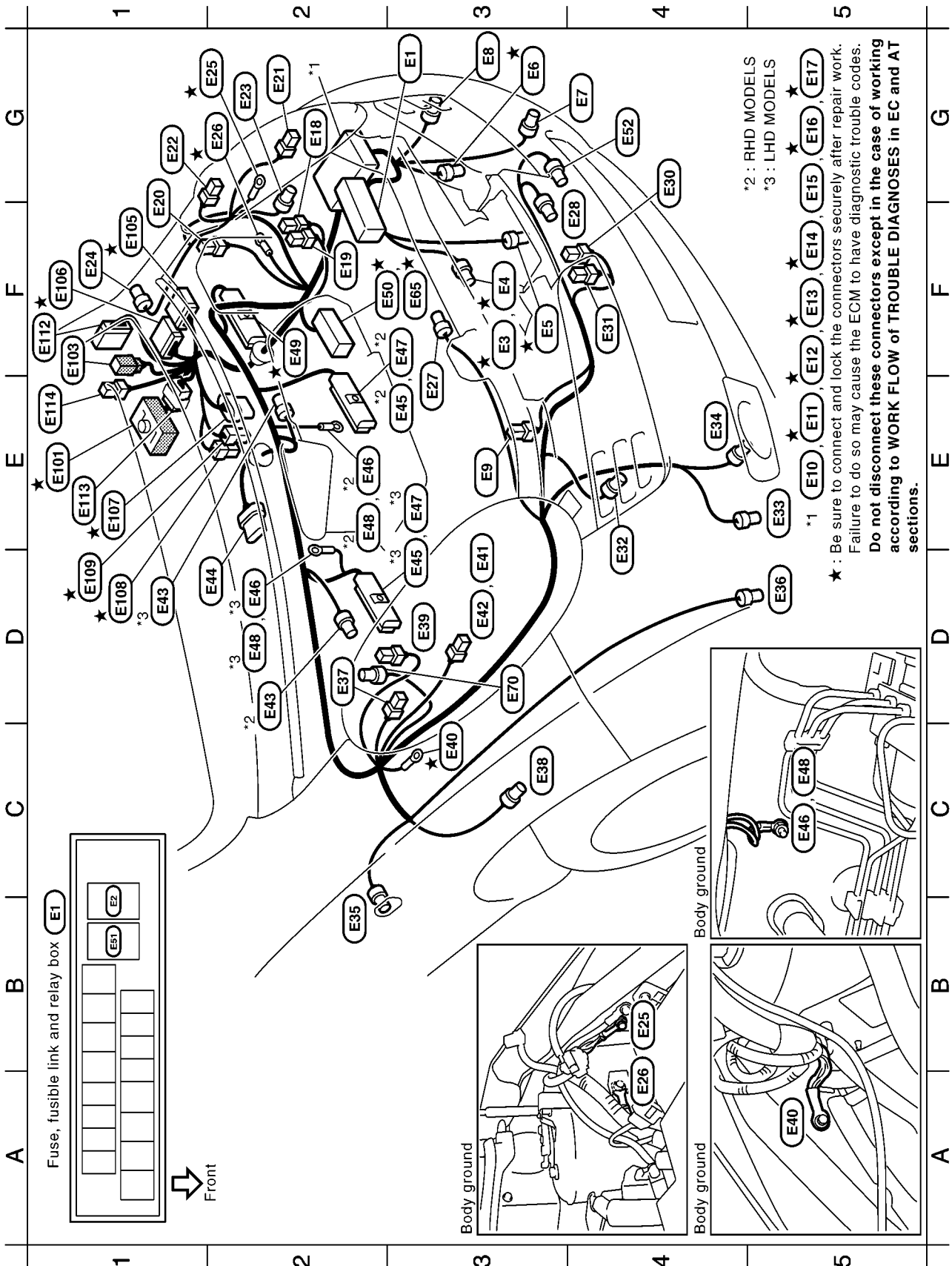
★ C1	(M1)	SMJ	: To (E101)	F3	(M37)	BR/2	: Key lock solenoid (With M/T and Intelligent Key system)	G3	(M79)	W/20	: Joint connector-1
D1	(M3)	B/2	: To (E103)	E3	(M38)	W/6	: Ignition switch	G3	(M80)	W/20	: Joint connector-2
C3	(M7)	W/12	: To (B4)	E5	(M39)	W/2	: In-vehicle sensor (With auto A/C)	C1	★ (M81)	L/20	: Joint connector-3
G4	(M9)	W/24	: To (B2)	C2	(M40)	W/4	: Fan resistor (Without auto A/C)	C1	(M82)	L/20	: Joint connector-4
G3	(M11)	W/4	: Headlamp aiming switch	E1	(M41)	G/6	: Fan control amp. (With auto A/C)	B2	(M83)	GY/6	: To (D41)
G3	(M13)	W/10	: Door mirror remote control switch	E1	(M42)	G/2	: Fan control amp. (With auto A/C)	C3	(M84)	W/12	: To (D42)
G3	(M14)	GY/6	: ESP off switch	E1	(M43)	B/6	: Intake door motor (With auto A/C)	D4	(M85)	W/6	: Door lock/unlock switch
F3	★ (M16)	—	: Fuse block (J/B)	E1	(M44)	W/3	: Intake sensor	G4	(M86)	GY/6	: To (D12)
F4	(M17)	W/16	: Data link connector	D4	(M47)	W/3	: Blower motor	G4	(M87)	W/12	: To (D13)
D1	(M18)	W/2	: Sunload sensor (With auto A/C)	F1	(M48)	—/2	: BCM (Body control module)	F4	(M88)	W/6	: To (B60)
F2	★ (M19)	—	: Body ground	E1	(M49)	W/40	: BCM (Body control module)	D1	(M94)	BR/6	: Passenger air bag cut off switch
F2	★ (M20)	—	: Body ground	D1	(M50)	W/24	: BCM (Body control module)	B2	(M95)	W/12	: To (D43)
F2	(M21)	—	: Body ground	D1	(M51)	B/15	: Intelligent Key unit	C3	(M96)	W/8	: To (B65)
F5	★ (M22)	W/40	: Combination meter	D4	(M52)	W/40	: (With Intelligent Key system)	F4	(M97)	W/10	: To (B62)
F2	(M23)	W/6	: EPS control unit	C2	(M53)	Y/2	: Front passenger air bag module	G4	(M98)	W/12	: To (D14)
F2	(M24)	W/1	: EPS control unit	G2	(M54)	W/8	: To (R1)	G2	(M99)	W/12	: To (R6)
F1	(M25)	B/1	: EPS control unit	G4	(M57)	W/1	: Towbar kit	G1	(M100)	W/12	: To (M205)
C2	(M26)	—/20	: Audio unit or NAVI control unit	C3	(M58)	W/15	: Heater control panel (Without auto A/C)	Sub-harness 1			
C2	(M27)	B/16	: Audio unit or NAVI control unit	D3	(M59)	B/2	: Power socket	G2	★ (M201)	W/10	: To (M71)
E4	(M29)	GY/8	: Combination switch (Spiral cable) (Steering switch)	E5	(M60)	—	: Body ground	G3	★ (M202)	B/2	: Stop lamp switch
E4	(M30)	Y/6	: Combination switch (Spiral cable) (Air bag)	D3	(M61)	W/4	: Hazard switch				(Gasoline engine with M/T and K9K Euro 3 48kW/60kW engine models)
E3	(M31)	W/4	: Steering lock unit	D3	(M62)	W/2	: After market ashtray illumination (Option connector)	G3	★ (M203)	W/4	: Stop lamp switch
F5	(M32)	W/16	: (With Intelligent Key system)	D3	(M63)	B/18	: A/C auto amp. (With auto A/C)				(Gasoline engine with A/T and K9K Euro 4 50kW/63kW engine models)
G5	(M33)	W/2	: Key switch	C3	(M64)	W/18	: A/C auto amp. (With auto A/C)	F4	★ (M204)	B/6	: Accelerator pedal position sensor
E3	(M34)	GY/6	: Key switch and ignition knob switch	D3	(M65)	B/6	: Mode door motor (With auto A/C)	G2	(M205)	W/12	: To (M100)
E4	(M35)	GY/4	: (With Intelligent Key system)	D4	(M66)	B/6	: Air mix door motor (With auto A/C)				
F4	(M36)	—/4	: NATS antenna amp. (With Intelligent Key system)	B4	(M67)	B/1	: Parking brake switch				
			: NATS antenna amp. (Without Intelligent Key system)	C3	(M68)	W/6	: A/T device (With A/T)				
				B4	(M69)	Y/20	: Air bag diagnosis sensor unit				
				G1	★ (M71)	W/10	: To (M20)				
				G2	(M72)	W/6	: After market alarm unit (Option connector)				

★ : Be sure to connect and lock the connectors securely after repair work.
Failure to do so may cause the ECM to have diagnostic trouble codes.

Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

HARNESS

ENGINE ROOM HARNESS/CR ENGINE MODELS



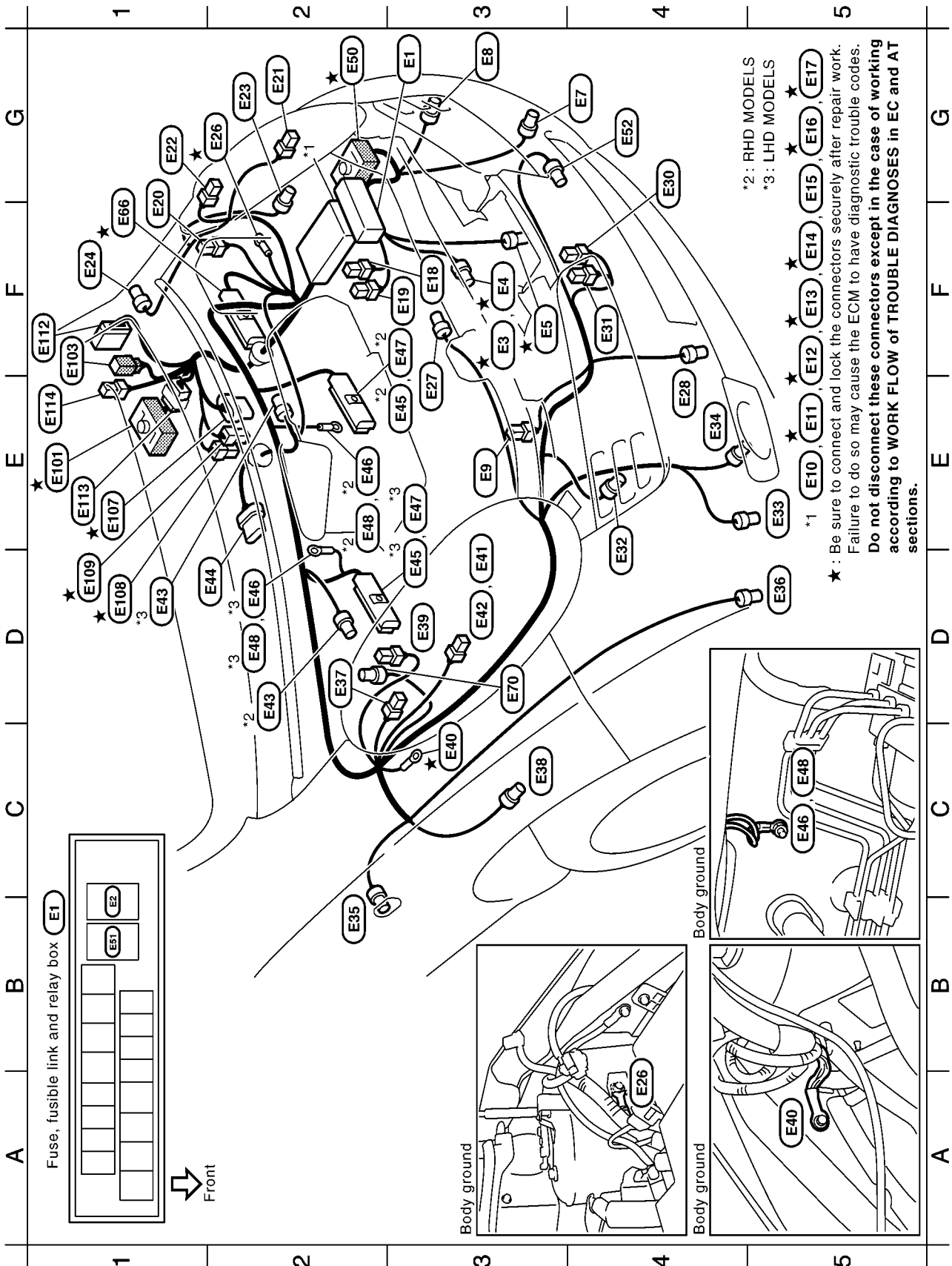
MKWA4111E

G3	(E1)	-	: Fuse, fusible link and relay box	C3	(E40)	-	: Body ground
B1	(E2)	W/5	: Daytime light relay (With daytime light system)	D3	(E41)	B/3	: Headlamp RH (With daytime light system)
F3	(E3)	B/2	: Cooling fan motor (With A/C)	D3	(E42)	B/3	: Headlamp RH (Without daytime light system)
F3	(E4)	-/2	: Cooling fan motor (Without A/C)	D1, D2	(E43)	GY/2	: Brake fluid level switch
F3	(E5)	B/2	: Resistor (With A/C)	D2	(E44)	GY/6	: Front wiper motor
G3	(E6)	GY/2	: Dropping resistor (With A/T)	D3, E3	(E45)	B/26	: ABS actuator and electric unit (Control unit) (Without ESP)
G4	(E7)	B/2	: Front fog lamp LH (With front fog lamp)	D2, E2	(E46)	-	: Body ground (Without ESP)
G3	(E8)	GY/2	: Front turn signal lamp LH	E3, F3	(E47)	SMJ	: ABS actuator and electric unit (Control unit) (With ESP)
E3	(E9)	B/1	: After market alarm unit (Hood switch) (RHD Hatchback models)	D2, E2	(E48)	-	: Body ground (With ESP)
E5	(E10)	B/2	: IPDM E/R (Intelligent power distribution module engine room)	F2	(E49)	SMJ	: ECM
E5	(E11)	B/6	: IPDM E/R (Intelligent power distribution module engine room)	F2	(E50)	SMJ	: To (F1) (With A/T)
F5	(E12)	W/6	: IPDM E/R (Intelligent power distribution module engine room)	B1	(E51)	W/3	: Horn relay
F5	(E13)	BR/12	: IPDM E/R (Intelligent power distribution module engine room)	G4	(E52)	B/4	: Ambient sensor
F5	(E14)	W/16	: IPDM E/R (Intelligent power distribution module engine room)	F3	(E65)	B/24	: To (F40) (With M/T)
G5	(E15)	BR/8	: IPDM E/R (Intelligent power distribution module engine room)	D3	(E70)	GY/2	: Hood switch (RHD models with C+C)
G5	(E16)	W/12	: IPDM E/R (Intelligent power distribution module engine room)	E1	(E101)	SMJ	: To (M1)
G5	(E17)	W/8	: IPDM E/R (Intelligent power distribution module engine room)	F1	(E103)	B/2	: To (M3)
G2	(E18)	BR/2	: Fusible link holder	F1	(E105)	W/24	: TCM (With A/T)
F2	(E19)	GY/2	: Fusible link holder	F1	(E106)	GY/24	: TCM (With A/T)
F1	(E20)	B/3	: Headlamp aiming motor LH	E1	(E107)	B/6	: Accelerator pedal position sensor (LHD models)
G2	(E21)	B/3	: Headlamp LH	D1	(E108)	B/2	: Stop lamp switch (LHD models with M/T)
G1	(E22)	B/2	: Parking lamp LH	D1	(E109)	W/4	: Stop lamp switch (LHD models with A/T)
G2	(E23)	B/2	: Front wheel sensor LH	F1	(E112)	W/16	: To (E59)
F1	(E24)	W/2	: Side turn signal lamp LH	E1	(E113)	W/5	: Headlamp washer relay (With headlamp washer and with ESP)
G2	(E25)	-	: Body ground	E1	(E114)	W/2	: Circuit breaker (With C+C)
G2	(E26)	-	: Body ground				
E3	(E27)	Y/2	: Crash zone sensor				
F4	(E28)	B/3	: Refrigerant pressure sensor (With A/C)				
G4	(E30)	B/1	: Horn (-)				
F4	(E31)	B/1	: Horn (+)				
D4	(E32)	GY/2	: Front turn signal lamp RH				
E5	(E33)	-/2	: Headlamp washer motor (With headlamp washer)				
E4	(E34)	B/2	: Front fog lamp RH (With front fog lamp)				
B2	(E35)	-/2	: Side turn signal lamp RH				
D5	(E36)	B/2	: Washer motor				
D2	(E37)	B/2	: Parking lamp RH				
C3	(E38)	B/2	: Front wheel sensor RH				
D3	(E39)	B/3	: Headlamp aiming motor RH				

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

HARNESS

ENGINE ROOM HARNESS/HR ENGINE MODELS

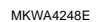


MKWA4113E

G3	(E1)	–	: Fuse, fusible link and relay box	C3	(E40)	–	: Body ground
B1	(E2)	W/5	: Daytime light relay (With daytime light system)	D3	(E41)	B/3	: Headlamp RH (With daytime light system)
F3	(E3)	B/2	: Cooling fan motor (With A/C)	D3	(E42)	B/3	: Headlamp RH (Without daytime light system)
F3	(E4)	–/2	: Cooling fan motor (Without A/C)	D1, D2	(E43)	GY/2	: Brake fluid level switch
F3	(E5)	B/2	: Resistor (With A/C)	D2	(E44)	GY/6	: Front wiper motor
G4	(E7)	B/2	: Front fog lamp LH (With front fog lamp)	D3, E3	(E45)	B/26	: ABS actuator and electric unit (Control unit) (Without ESP)
G3	(E8)	GY/2	: Front turn signal lamp LH	D2, E2	(E46)	–	: Body ground (Without ESP)
E3	(E9)	B/1	: After market alarm unit (Hood switch) (RHD Hatchback models)	E3, F3	(E47)	SMJ	: ABS actuator and electric unit (Control unit) (With ESP)
E5	(E10)	B/2	: IPDM E/R (Intelligent power distribution module engine room)	D2, E2	(E48)	–	: Body ground (With ESP)
E5	(E11)	B/6	: IPDM E/R (Intelligent power distribution module engine room)	G2	(E50)	SMJ	: To (F1)
F5	(E12)	W/6	: IPDM E/R (Intelligent power distribution module engine room)	B1	(E51)	W/3	: Horn relay
F5	(E13)	BR/12	: IPDM E/R (Intelligent power distribution module engine room)	G4	(E52)	B/4	: Ambient sensor
F5	(E14)	W/16	: IPDM E/R (Intelligent power distribution module engine room)	F1	(E66)	SMJ	: ECM
G5	(E15)	BR/8	: IPDM E/R (Intelligent power distribution module engine room)	D3	(E70)	GY/2	: Hood switch (RHD models with C+C)
G5	(E16)	W/12	: IPDM E/R (Intelligent power distribution module engine room)	E1	(E101)	SMJ	: To (M1)
G5	(E17)	W/8	: IPDM E/R (Intelligent power distribution module engine room)	F1	(E103)	B/2	: To (M3)
F3	(E18)	BR/2	: Fusible link holder	E1	(E107)	B/6	: Accelerator pedal position sensor (LHD models)
F3	(E19)	GY/2	: Fusible link holder	D1	(E108)	B/2	: Stop lamp switch (LHD models with M/T)
F1	(E20)	B/3	: Headlamp aiming motor LH	D1	(E109)	W/4	: Stop lamp switch (LHD models with A/T)
G2	(E21)	B/3	: Headlamp LH	F1	(E112)	W/16	: To (B59)
G1	(E22)	B/2	: Parking lamp LH	E1	(E113)	W/5	: Headlamp washer relay
G2	(E23)	B/2	: Front wheel sensor LH				(With headlamp washer and with ESP)
F1	(E24)	W/2	: Side turn signal lamp LH	E1	(E114)	W/2	: Circuit breaker (With C+C)
G2	(E26)	–	: Body ground				
E3	(E27)	Y/2	: Crash zone sensor				
E4	(E28)	B/3	: Refrigerant pressure sensor (With A/C)				
G4	(E30)	B/1	: Horn (–)				
F4	(E31)	B/1	: Horn (+)				
D4	(E32)	GY/2	: Front turn signal lamp RH				
E5	(E33)	–/2	: Headlamp washer motor (With headlamp washer)				
E4	(E34)	B/2	: Front fog lamp RH (With front fog lamp)				
B2	(E35)	–/2	: Side turn signal lamp RH				
D5	(E36)	B/2	: Washer motor				
D2	(E37)	B/2	: Parking lamp RH				
C3	(E38)	B/2	: Front wheel sensor RH				
D3	(E39)	B/3	: Headlamp aiming motor RH				

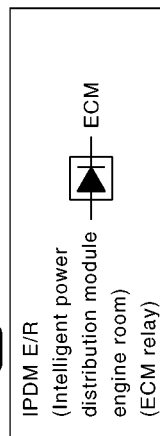
★ : Be sure to connect and lock the connectors securely after repair work.
Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

ENGINE ROOM HARNESS/K9K EURO 3 48KW/60KW ENGINE MODELS



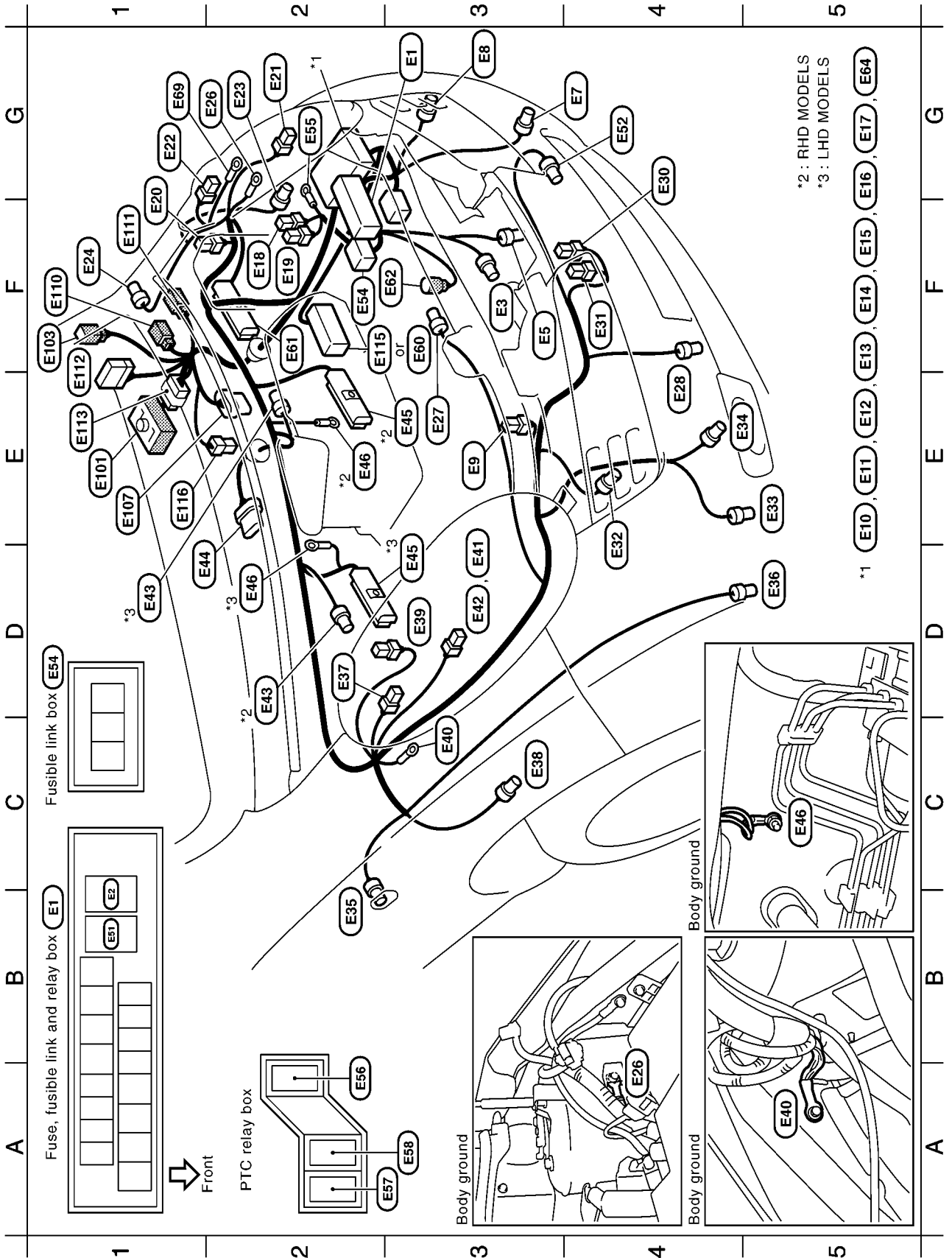
G3	(E1)	-	: Fuse, fusible link and relay box	C3	(E40)	-	: Body ground
B1	(E2)	W/5	: Daytime light relay (With daytime light system)	D3	(E41)	B/3	: Headlamp RH (With daytime light system)
G3	(E3)	B/2	: Cooling fan motor-1 (With A/C and with PTC heater)	D3	(E42)	B/3	: Headlamp RH (Without daytime light system)
F3	(E4)	-/2	: Cooling fan motor-2 (Without A/C)	D2, D1	(E43)	GY/2	: Brake fluid level switch
F3	(E5)	B/2	: Resistor (With A/C and with PTC heater)	D2	(E44)	GY/6	: Front wiper motor
G4	(E7)	B/2	: Front fog lamp LH (With front fog lamp)	D3, E3	(E45)	B/26	: ABS actuator and electric unit (Control unit)
G3	(E8)	GY/2	: Front turn signal lamp LH	D2, E2	(E46)	-	: Body ground
E3	(E9)	B/1	: After market alarm unit (Hood switch) (RHD models)	B1	(E51)	W/3	: Horn relay
E5	(E10)	B/2	: IPDM E/R (Intelligent power distribution module engine room)	G4	(E52)	B/4	: Ambient sensor
E5	(E11)	B/6	: IPDM E/R (Intelligent power distribution module engine room)	F2	(E54)	-	: Fusible link box
E5	(E12)	W/6	: IPDM E/R (Intelligent power distribution module engine room)	G2	(E55)	-	: Fusible link holder
F5	(E13)	BR/12	: IPDM E/R (Intelligent power distribution module engine room)	A2	(E56)	-/4	: PTC heater relay 1 (With PTC heater)
F5	(E14)	W/16	: IPDM E/R (Intelligent power distribution module engine room)	A3	(E57)	-/4	: PTC heater relay 2 (With PTC heater)
F5	(E15)	BR/8	: IPDM E/R (Intelligent power distribution module engine room)	A3	(E58)	-/4	: PTC heater relay 3 (With PTC heater)
G5	(E16)	W/12	: IPDM E/R (Intelligent power distribution module engine room)	G4	(E59)	GY/1	: Not used
G5	(E17)	W/8	: IPDM E/R (Intelligent power distribution module engine room)	F3	(E60)	SMJ	: To (F101)
F2	(E18)	BR/2	: Fusible link holder	F2	(E61)	SMJ	: ECM
F2	(E19)	GY/2	: Fusible link holder	F3	(E62)	GY/1	: To (F103)
F1	(E20)	B/3	: Headlamp aiming motor LH	F3	(E63)	-/2	: Cooling fan motor-2 (With PTC heater)
G2	(E21)	B/3	: Headlamp LH	G5	(E64)	W/2	: Diode
G1	(E22)	B/2	: Parking lamp LH	E1	(E101)	SMJ	: To (M1)
G2	(E23)	B/2	: Front wheel sensor LH	F1	(E103)	B/2	: To (M3)
F1	(E24)	W/2	: Side turn signal lamp LH	E1	(E107)	B/6	: Accelerator pedal position sensor (LHD models)
G1	(E26)	-	: Body ground	E1	(E108)	B/2	: Stop lamp switch (LHD models)
E3	(E27)	Y/2	: Crash zone sensor	F1	(E110)	B/1	: PTC heater
E4	(E28)	B/3	: Refrigerant pressure sensor (With A/C)	F1	(E111)	B/2	: PTC heater
G4	(E30)	B/1	: Horn (-)	E1	(E112)	W/16	: To (B59)
F4	(E31)	B/1	: Horn (+)	E1	(E113)	W/5	: Headlamp washer relay (LHD models)
D4	(E32)	GY/2	: Front turn signal lamp RH				
E5	(E33)	-/2	: Headlamp washer motor (With headlamp washer)				
E5	(E34)	B/2	: Front fog lamp RH (With front fog lamp)				
B2	(E35)	W/2	: Side turn signal lamp RH				
D5	(E36)	B/2	: Washer motor				
D2	(E37)	B/2	: Parking lamp RH				
C3	(E38)	B/2	: Front wheel sensor RH				
D3	(E39)	B/3	: Headlamp aiming motor RH				

Diode (E64)



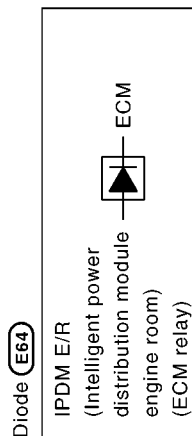
HARNESS

ENGINE ROOM HARNESS/K9K EURO 4 50KW/63KW ENGINE MODELS



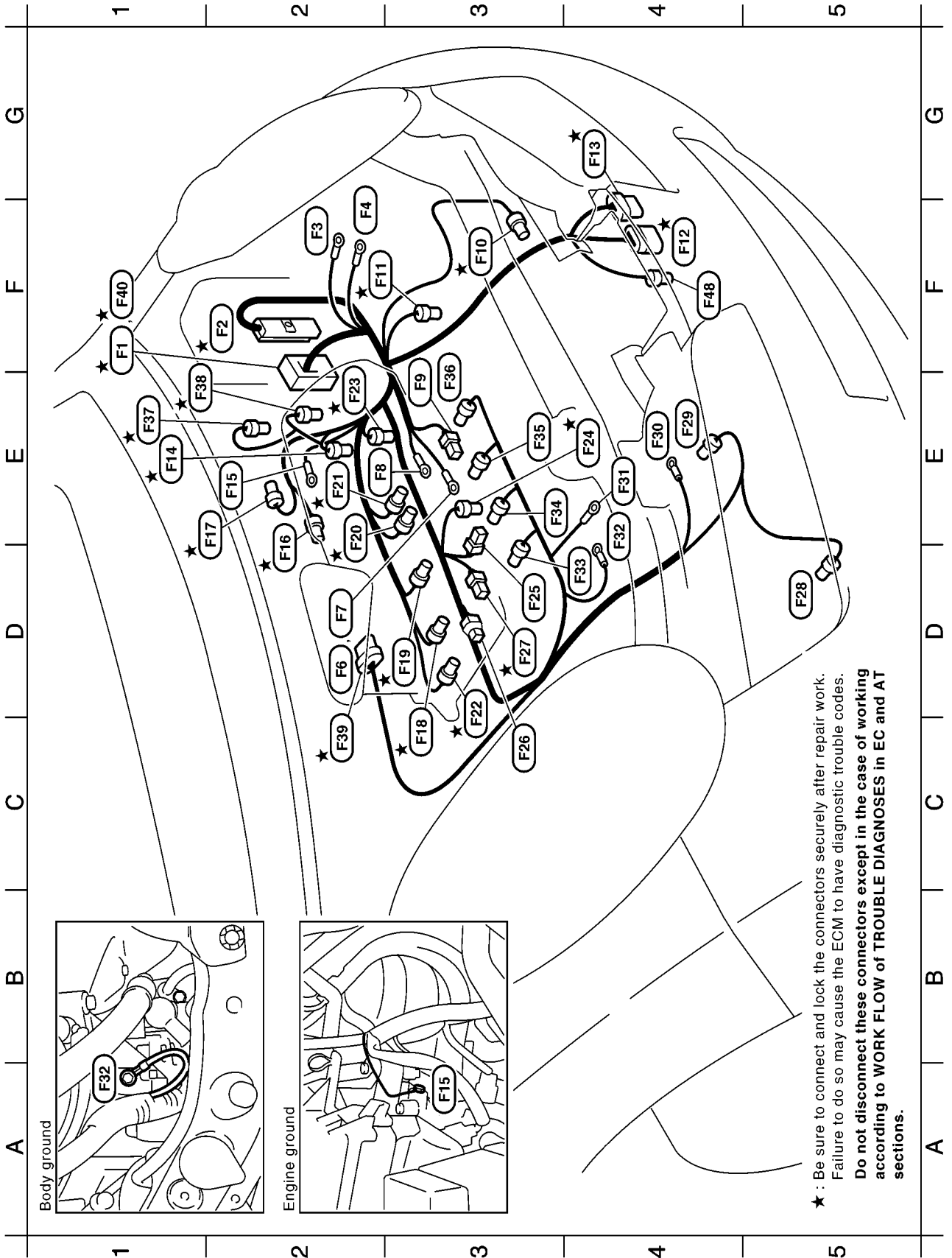
MKWA4250E

G3	(E1)	-	: Fuse, fusible link and relay box	C3	(E40)	-	: Body ground
B1	(E2)	W/5	: Daytime light relay (With daytime light system)	D3	(E41)	B/3	: Headlamp RH (With daytime light system)
F3	(E3)	B/2	: Cooling fan motor-1	D3	(E42)	B/3	: Headlamp RH (Without daytime light system)
F3	(E5)	B/2	: Resistor (With A/C and with PTC heater)	D2, D1	(E43)	GY/2	: Brake fluid level switch
G4	(E7)	B/2	: Front fog lamp LH (With front fog lamp)	D2	(E44)	GY/6	: Front wiper motor
G3	(E8)	GY/2	: Front turn signal lamp LH	D3, E3	(E45)	B/26	: ABS actuator and electric unit (Control unit)
E3	(E9)	B/1	: After market alarm unit (Hood switch) (RHD models)	D2, E2	(E46)	-	: Body ground
E5	(E10)	B/2	: IPDM E/R (Intelligent power distribution module engine room)	B1	(E51)	W/3	: Horn relay
E5	(E11)	B/6	: IPDM E/R (Intelligent power distribution module engine room)	G4	(E52)	B/4	: Ambient sensor
E5	(E12)	W/6	: IPDM E/R (Intelligent power distribution module engine room)	F2	(E54)	-	: Fusible link box
F5	(E13)	BR/12	: IPDM E/R (Intelligent power distribution module engine room)	G2	(E55)	-	: Fusible link holder
F5	(E14)	W/16	: IPDM E/R (Intelligent power distribution module engine room)	A2	(E56)	-/4	: PTC heater relay 1 (With PTC heater)
F5	(E15)	BR/8	: IPDM E/R (Intelligent power distribution module engine room)	A3	(E57)	-/4	: PTC heater relay 2 (With PTC heater)
G5	(E16)	W/12	: IPDM E/R (Intelligent power distribution module engine room)	A3	(E58)	-/4	: PTC heater relay 3 (With PTC heater)
G5	(E17)	W/8	: IPDM E/R (Intelligent power distribution module engine room)	F3	(E60)	SMJ	: To (F101)
F2	(E18)	BR/2	: Fusible link holder	F2	(E61)	SMJ	: ECM
F2	(E19)	GY/2	: Fusible link holder	F3	(E62)	GY/1	: To (F103)
F1	(E20)	B/3	: Headlamp aiming motor LH	G5	(E64)	W/2	: Diode
G2	(E21)	B/3	: Headlamp LH	G1	(E69)	-	: Body ground
G1	(E22)	B/2	: Parking lamp LH	E1	(E101)	SMJ	: To (M1)
G2	(E23)	B/2	: Front wheel sensor LH	F1	(E103)	B/2	: To (M3)
F1	(E24)	W/2	: Side turn signal lamp LH	E1	(E107)	B/6	: Accelerator pedal position sensor (LHD models)
G1	(E26)	-	: Body ground	F1	(E110)	B/1	: PTC heater
E3	(E27)	Y/2	: Crash zone sensor	F1	(E111)	B/2	: PTC heater
E4	(E28)	B/3	: Refrigerant pressure sensor (With A/C)	E1	(E112)	W/16	: To (B59)
G4	(E30)	B/1	: Horn (-)	E1	(E113)	W/5	: Headlamp washer relay (LHD models)
F4	(E31)	B/1	: Horn (+)	F3	(E115)	B/24	: To (F138) (Without PTC heater)
D4	(E32)	GY/2	: Front turn signal lamp RH	E1	(E116)	W/4	: Stop lamp switch (LHD models)
E5	(E33)	-/2	: Headlamp washer motor (With headlamp washer)				
E5	(E34)	B/2	: Front fog lamp RH (With front fog lamp)				
B2	(E35)	W/2	: Side turn signal lamp RH				
D5	(E36)	B/2	: Washer motor				
D2	(E37)	B/2	: Parking lamp RH				
C3	(E38)	B/2	: Front wheel sensor RH				
D3	(E39)	B/3	: Headlamp aiming motor RH				



HARNESS

ENGINE CONTROL HARNESS/CR ENGINE MODELS



MKWA4115E

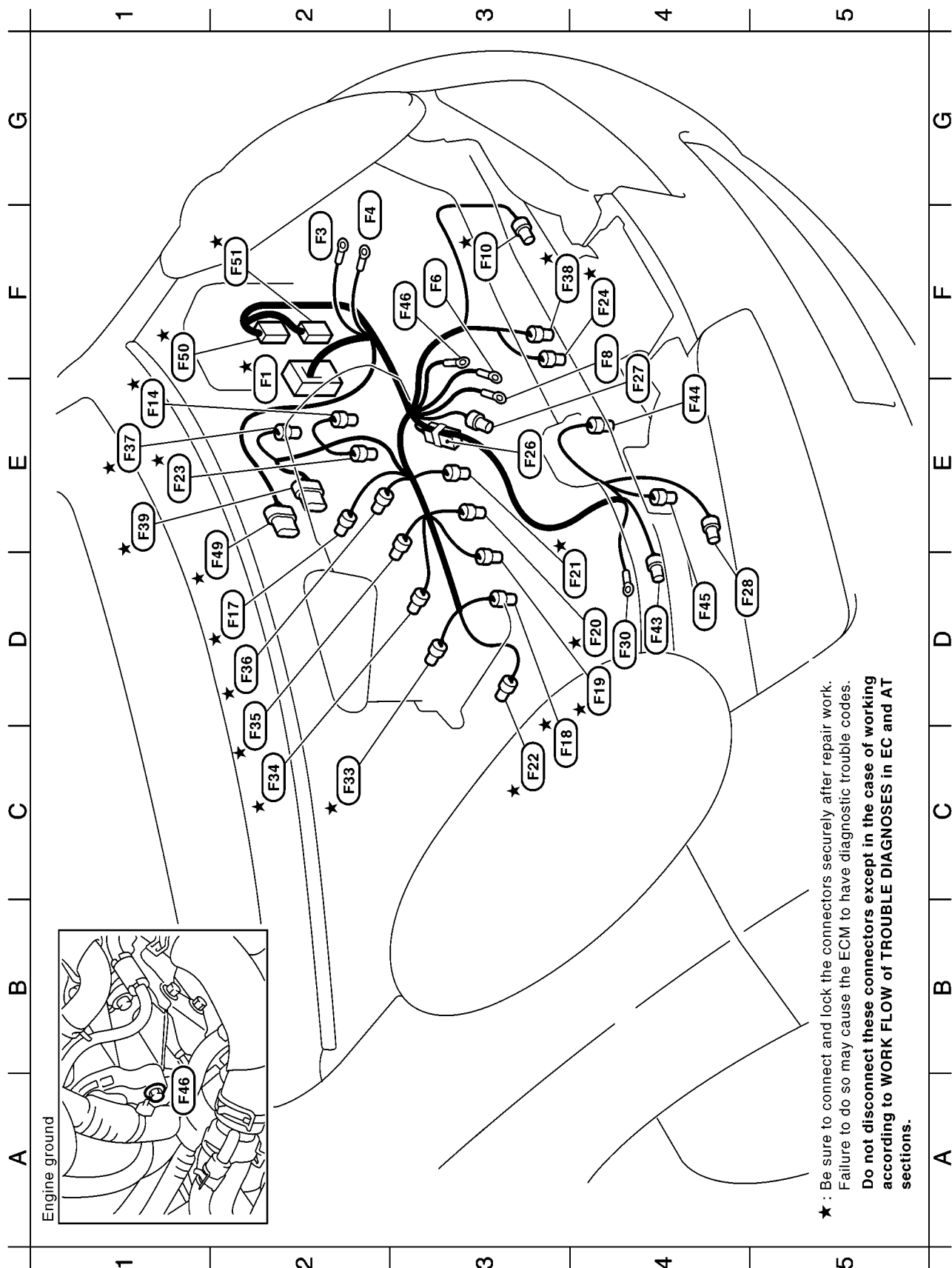
★ F1	SMJ	:	To (E50)
★ F2	SMJ	:	ECM
F2	F3	-	Fusible link holder
F2	F4	-	Fusible link holder
D2	F6	-	Starter motor (Except for cold area)
D2	F7	-	Starter motor (For cold area)
E2	F8	-	Starter motor (Except for cold area)
E3	F9	B/1	Starter motor (For cold area)
★ F3	F10	G/3	Park/neutral position switch (With M/T)
★ F2	F11	BR/3	Revolution sensor (With A/T)
★ F4	F12	B/10	Park/neutral position switch (With A/T)
G4	F13	B/8	Terminal cord assembly (With A/T)
E1	F14	B/3	Camshaft position sensor
E2	F15	-	Engine ground
★ D2	F16	GY/4	Manifold absolute pressure sensor
★ E2	F17	L/2	EVAP canister purge volume control solenoid valve
★ C3	F18	GY/2	Fuel injector No. 1
★ D3	F19	GY/2	Fuel injector No. 2
★ E2	F20	GY/2	Fuel injector No. 3
★ E2	F21	GY/2	Fuel injector No. 4
★ D3	F22	G/2	Intake valve timing control solenoid valve
★ E2	F23	GY/2	Engine coolant temperature sensor
★ E4	F24	G/4	Heated oxygen sensor 2
D3	F25	B/1	Oil pressure switch
C3	F26	W/2	Condenser
★ D3	F27	B/2	Knock sensor
D5	F28	B/1	Compressor (With A/C)
E4	F29	B/2	Alternator
E4	F30	-	Alternator
E4	F31	-	Alternator (E)
E4	F32	-	Body ground
D4	F33	GY/3	Ignition coil No. 1
E3	F34	GY/3	Ignition coil No. 2
E3	F35	GY/3	Ignition coil No. 3
E3	F36	GY/3	Ignition coil No. 4
★ E1	F37	B/4	Heated oxygen sensor 1
★ E1	F38	G/3	Crankshaft position sensor
★ C2	F39	B/6	Electric throttle control actuator

F1 (F40) B/24 : To (E55)
F4 (F48) B/3 : Power train sensor (With A/T)

★ : Be sure to connect and lock the connectors securely after repair work.
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Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

HARNESS

ENGINE CONTROL HARNESS/HR ENGINE MODELS



MKWA4117E

★ E1	F1	SMJ	:	To E50		D4	F43	B/3	:	Alternator
F2	F3	—	:	Fusible link holder		E4	F44	SB/3	:	Oil level sensor
F2	F4	—	:	Fusible link holder		D4	F45	GY/1	:	Oil pressure switch
F3	F6	—	:	Starter motor		F3	F46	—	:	Engine ground
F4	F8	—	:	Starter motor		E2	F49	B/6	:	Mass air flow sensor
F3	F10	GY/3	:	Park/neutral position switch (With M/T)		F1	F50	SMJ	:	ECM
E1	F14	B/3	:	Camshaft position sensor		F2	F51	SMJ	:	ECM
D2	F17	L/2	:	EVAP canister purge volume control solenoid valve						
C3	F18	GY/2	:	Fuel injector No. 1						
D4	F19	GY/2	:	Fuel injector No. 2						
D4	F20	GY/2	:	Fuel injector No. 3						
D4	F21	GY/2	:	Fuel injector No. 4						
C3	F22	GI/2	:	Intake valve timing control solenoid valve						
E1	F23	GY/2	:	Engine coolant temperature sensor						
F4	F24	B/4	:	Heated oxygen sensor 2						
E3	F26	W/2	:	Condenser						
E4	F27	B/2	:	Knock sensor						
D4	F28	B/1	:	Compressor (With A/C)						
D4	F30	—	:	Alternator						
C2	F33	GY/3	:	Ignition coil No. 1						
C2	F34	GY/3	:	Ignition coil No. 2						
D2	F35	GY/3	:	Ignition coil No. 3						
D2	F36	GY/3	:	Ignition coil No. 4						
E1	F37	B/4	:	Heated oxygen sensor 1						
F4	F38	B/3	:	Crankshaft position sensor						
E1	F39	B/6	:	Electric throttle control actuator						

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

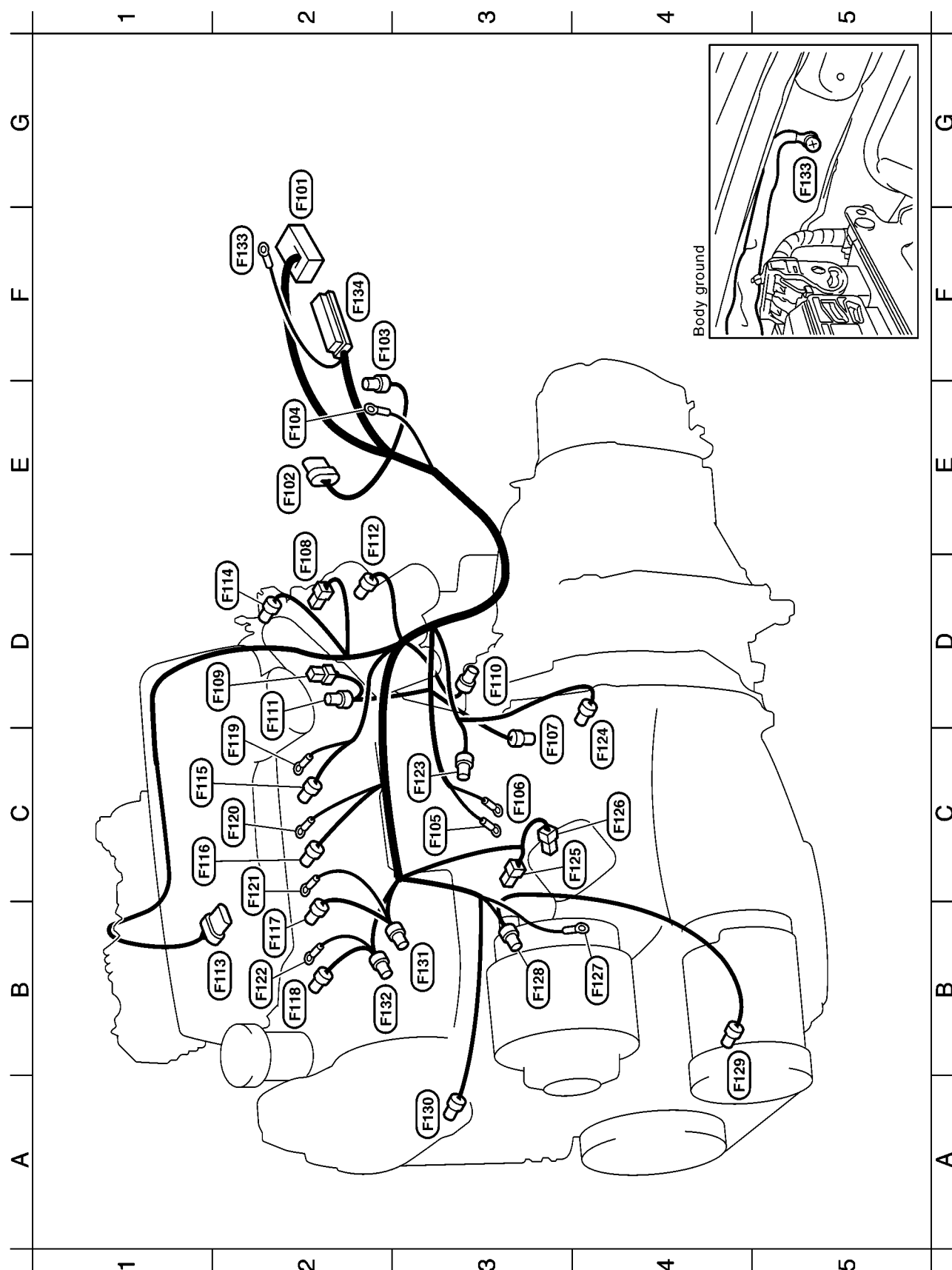
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HARNESS

ENGINE CONTROL HARNESS/K9K EURO 3 48KW/60KW ENGINE MODELS

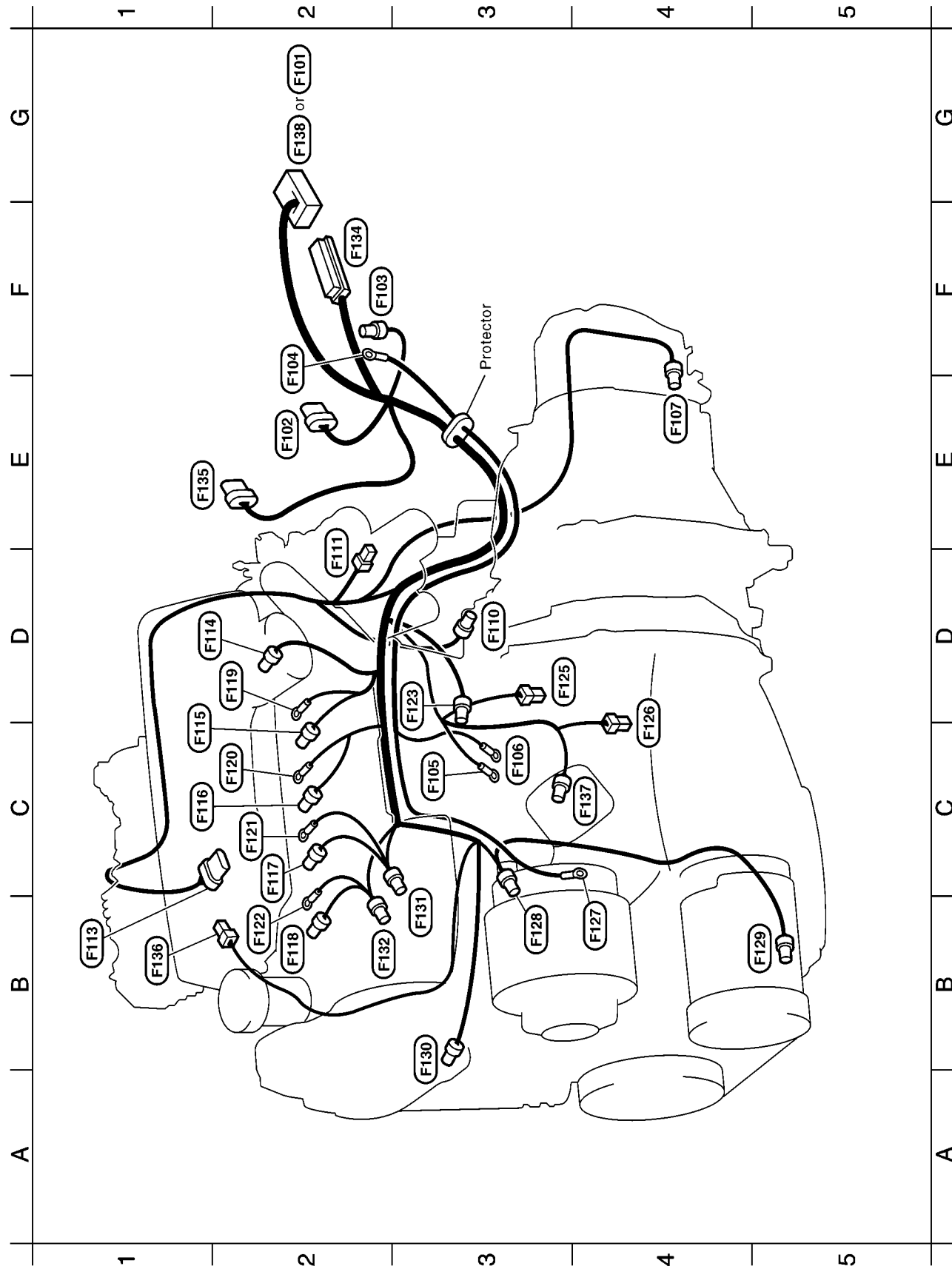


MKWA4252E

G2	(F101)	SMJ	:	To (E60)
E2	(F102)	B/8	:	Glow relay
F3	(F103)	GY/1	:	To (E62)
E2	(F104)	-	:	Fusible link holder
C3	(F105)	-	:	Starter motor
C3	(F106)	-	:	Starter motor
C3	(F107)	G/3	:	Park/neutral position switch
D2	(F108)	-/2	:	Charge air temperature sensor (Without intercooler)
D2	(F109)	-/2	:	Intake air temperature sensor
D3	(F110)	B/2	:	Crankshaft position sensor (POS)
D2	(F111)	-/4	:	Engine coolant temperature sensor
E2	(F112)	-/4	:	Charge air pressure sensor (With intercooler)
B2	(F113)	-/6	:	EGR volume control solenoid valve
D2	(F114)	-/3	:	Charge air pressure sensor (Without intercooler)
C1	(F115)	-/2	:	Fuel injector No. 1
C1	(F116)	-/2	:	Fuel injector No. 2
B2	(F117)	-/2	:	Fuel injector No. 3
B2	(F118)	-/2	:	Fuel injector No. 4
C2	(F119)	B/1	:	Glow plug No. 1
C2	(F120)	B/1	:	Glow plug No. 2
C2	(F121)	B/1	:	Glow plug No. 3
B2	(F122)	B/1	:	Glow plug No. 4
C3	(F123)	B/3	:	Common rail fuel pressure sensor
C4	(F124)	B/2	:	Oil pressure switch
C3	(F125)	B/2	:	Knock sensor (Accelometer)
C4	(F126)	B/2	:	Oil level sensor
B4	(F127)	-	:	Alternator (B)
B3	(F128)	B/2	:	Alternator (S), (L)
B4	(F129)	GY/2	:	Compressor (With A/C)
A3	(F130)	B/3	:	Camshaft sensor
B3	(F131)	BR/2	:	Fuel flow actuator
B2	(F132)	G/2	:	Fuel temperature sensor
F2	(F133)	-	:	Body ground
F2	(F134)	SMJ	:	ECM

HARNESS

ENGINE CONTROL HARNESS/K9K EURO 4 50KW/63KW ENGINE MODELS



MKWA4254E

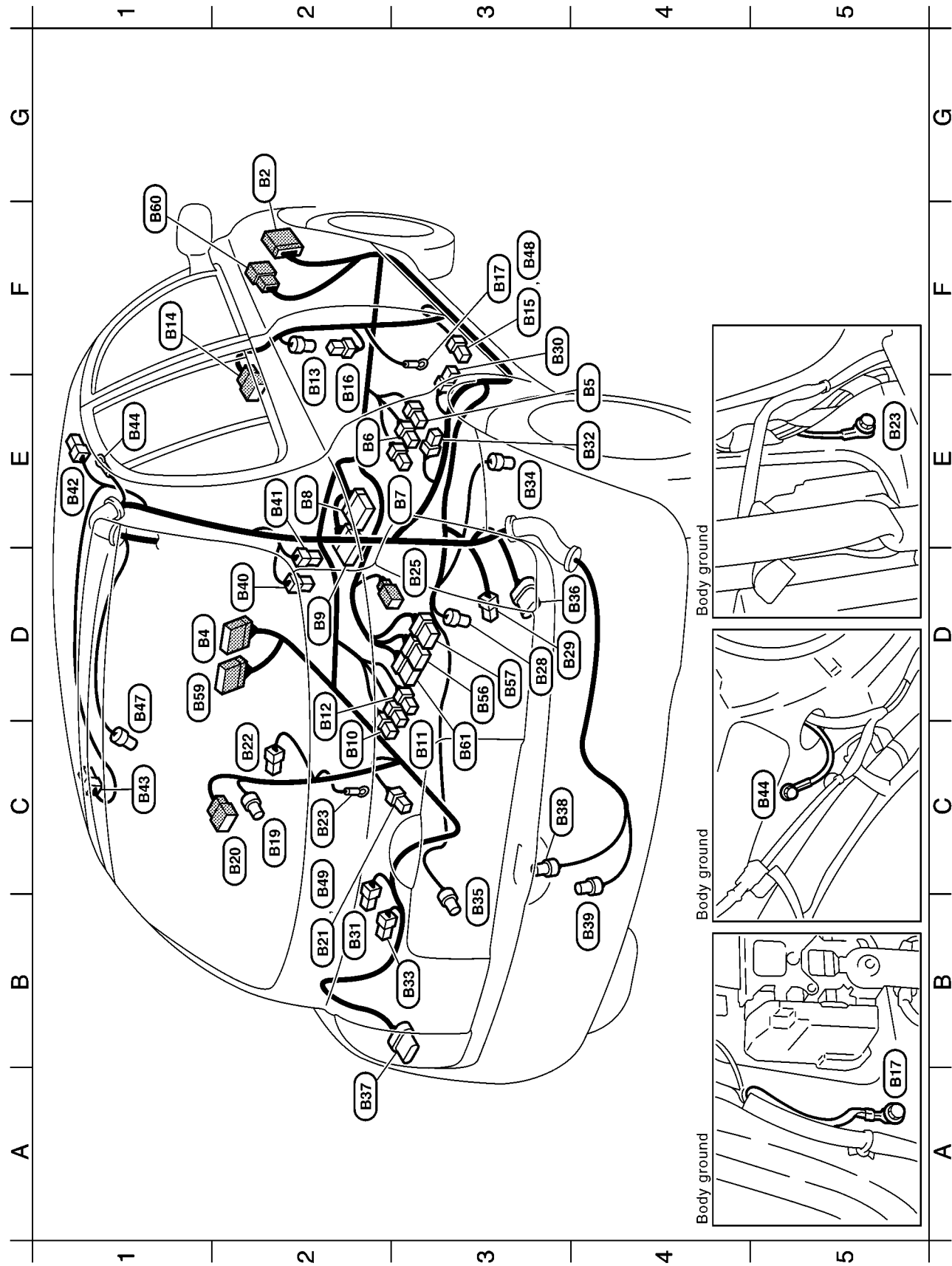
G2	(F101)	SMJ	:	To (E60) (With PTC heater)
E2	(F102)	B/8	:	Glow relay
F2	(F103)	GY/1	:	To (E62)
F2	(F104)	-	:	Fusible link holder
C3	(F105)	-	:	Starter motor
C3	(F106)	-	:	Starter motor
E4	(F107)	G/3	:	Park/neutral position switch
D3	(F110)	B/2	:	Crankshaft position sensor (POS)
D2	(F111)	-/4	:	Engine coolant temperature sensor
B1	(F113)	-/6	:	EGR volume control solenoid valve
D2	(F114)	-/3	:	Charge air pressure sensor
C1	(F115)	-/2	:	Fuel injector No. 1
C1	(F116)	-/2	:	Fuel injector No. 2
C2	(F117)	-/2	:	Fuel injector No. 3
B2	(F118)	-/2	:	Fuel injector No. 4
D2	(F119)	B/1	:	Glow plug No. 1
C2	(F120)	B/1	:	Glow plug No. 2
C2	(F121)	B/1	:	Glow plug No. 3
B2	(F122)	B/1	:	Glow plug No. 4
D3	(F123)	B/3	:	Common rail fuel pressure sensor
D3	(F125)	B/2	:	Knock sensor (Accelometer)
C4	(F126)	B/2	:	Oil level sensor
B4	(F127)	-	:	Alternator (B)
B3	(F128)	B/2	:	Alternator (S), (L)
B5	(F129)	GY/2	:	Compressor (With A/C)
B3	(F130)	B/3	:	Camshaft sensor
B3	(F131)	BR/2	:	Fuel flow actuator
B2	(F132)	G/2	:	Fuel temperature sensor
F2	(F134)	SMJ	:	ECM
E1	(F135)	B/6	:	Mass air flow sensor
B1	(F136)	B/2	:	Turbocharger boost control solenoid valve
C4	(F137)	B/2	:	Oil pressure switch
G2	(F138)	B/24	:	To (E115) (Without PTC heater)

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HARNESS

BODY HARNESS 1/HATCHBACK



MKWA3536E

PG

HARNESS

BODY HARNESS 2/HATCHBACK

- B50

B/1

:

Rear window defogger (+)
- B51

-

:

Body ground
- B52

W/2

:

External back door release switch
- B53

W/3

:

Rear wiper motor
- B54

GY/2

:

Door request switch (Back door) (With Intelligent Key system)
- B55

W/4

:

Back door release actuator
- B201

B/1

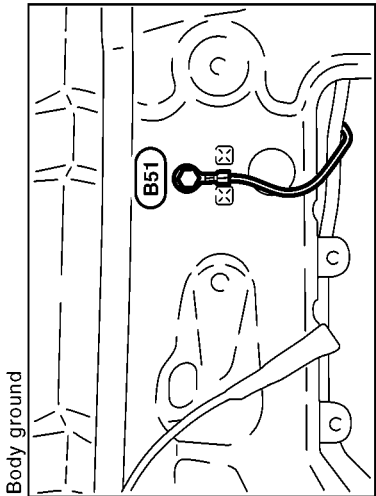
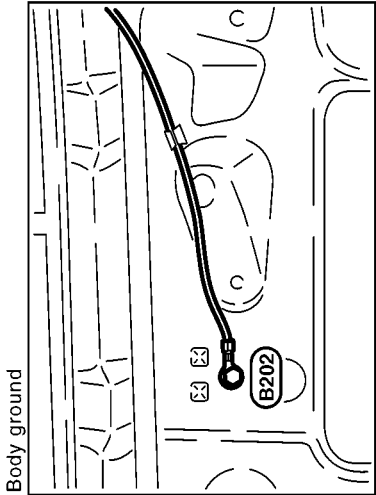
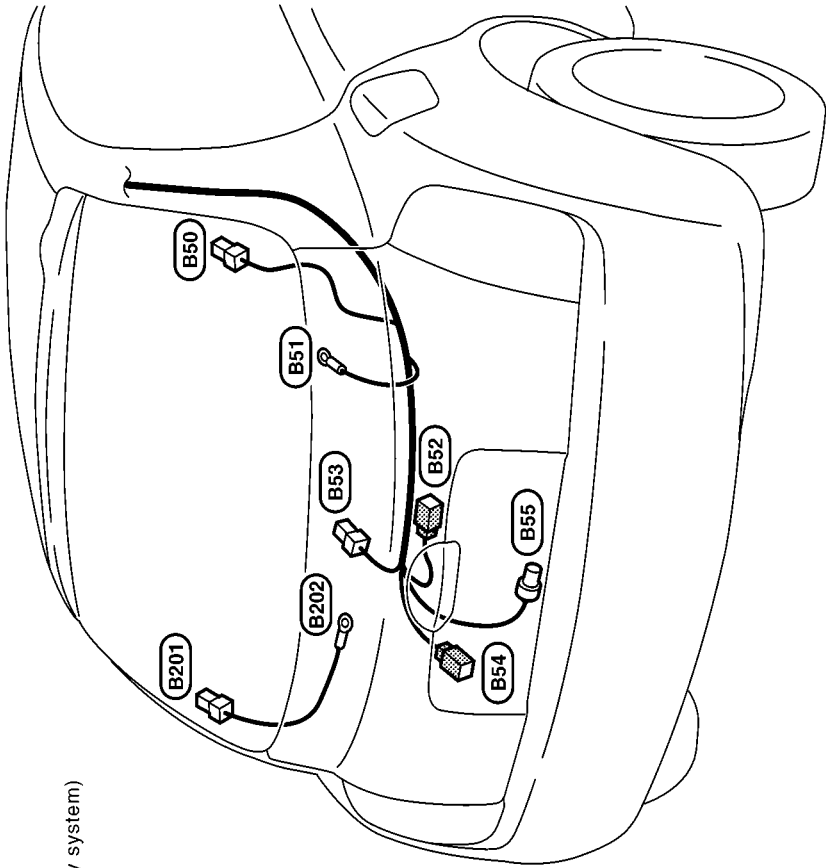
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Rear window defogger (-)
- B202

-

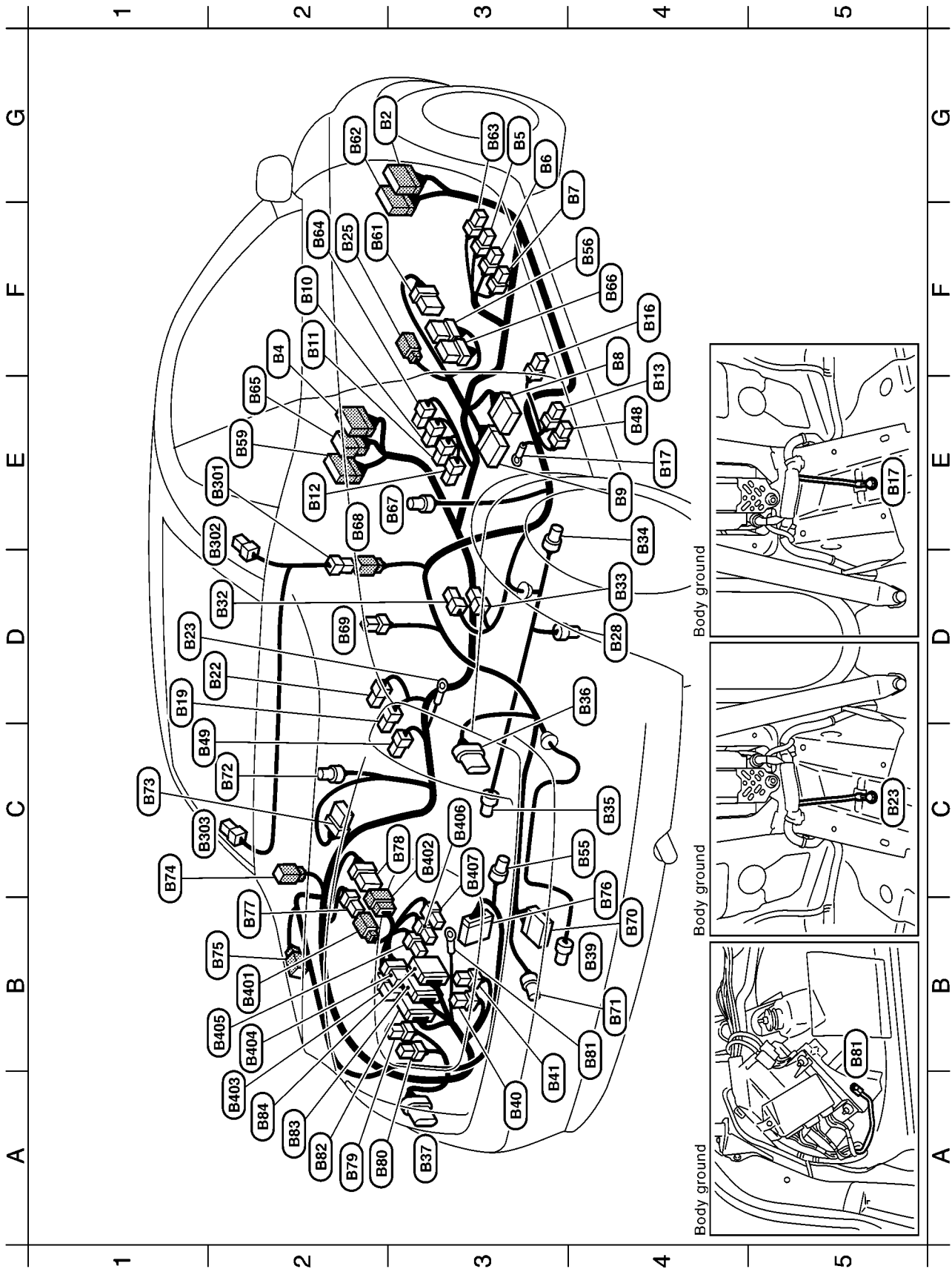
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Body ground



HARNESS

BODY HARNESS 3/C+C



PG

G2	B2	W/24	:	To M9	G2	B62	W/10	:	To M97
F2	B4	W/12	:	To M7	G3	B63	W/2	:	Seat undertray lock actuator (LHD models)
G3	B5	W/2	:	Seat belt buckle switch RH (RHD models)	F2	B64	W/2	:	Seat undertray lock actuator (RHD models)
G3	B6	W/3	:	Heated seat RH (With heated seat)	E2	B65	W/8	:	To M96
G4	B7	BR/2	:	Front RH side air bag module	F4	B66	W/8	:	Roof open/close switch
F4	B8	Y/12	:	Air bag diagnosis sensor unit	E3	B67	GY/2	:	Rear power window motor RH
E4	B9	Y/12	:	Air bag diagnosis sensor unit	E2	B68	W/2	:	To B301
F2	B10	W/2	:	Seat belt buckle switch LH (LHD models)	D2	B69	-/3	:	Fuel lid lock actuator
F2	B11	W/3	:	Heated seat LH (With heated seat)	B4	B70	W/12	:	Siren (RHD models)
E2	B12	BR/2	:	Front LH side air bag module	B4	B71	GY/2	:	Inside key antenna (Trunk room) (With Intelligent Key system)
E4	B13	Y/2	:	RH side air bag (satellite) sensor	C2	B72	GY/2	:	Rear power window motor LH
F4	B16	W/3	:	Front door switch RH	C1	B73	W/6	:	Parcel shelf
E4	B17	-	:	Body ground	C1	B74	GY/2	:	Roof limit switch (Open)
D1	B19	Y/2	:	LH side air bag (satellite) sensor	B2	B75	GY/2	:	Hall sensor
D2	B22	W/3	:	Front door switch LH	C4	B76	W/12	:	To T1
D1	B23	-	:	Body ground	B2	B77	W/2	:	To B401
F2	B25	GY/2	:	Inside key antenna (Center console) (With Intelligent Key system)	C3	B78	W/6	:	To B402
D4	B28	GY/4	:	Fuel level sensor unit and fuel pump	A2	B79	-/1	:	Roof storage switch
D2	B32	BR/2	:	Rear speaker top	A2	B80	-/1	:	Roof storage switch
D4	B33	BR/2	:	Rear speaker low	B4	B81	-	:	Body ground
E4	B34	B/2	:	Rear wheel sensor RH	A2	B82	W/40	:	Retractable hard top (C-view) control unit
C4	B35	B/2	:	Rear wheel sensor LH	A2	B83	W/12	:	Retractable hard top (C-view) control unit
D4	B36	B/6	:	Rear combination lamp RH	A2	B84	W/10	:	Retractable hard top (C-view) control unit
A3	B37	B/6	:	Rear combination lamp LH					
B4	B39	GY/2	:	Outside antenna (Trunk lid) (With Intelligent Key system)					
A3	B40	B/1	:	Trunk room lamp (+)					
A3	B41	B/1	:	Trunk room lamp					
E4	B48	Y/2	:	Front RH seat belt pre-tensioner					
C1	B49	Y/2	:	Front LH seat belt pre-tensioner					
C4	B55	W/4	:	Trunk lid release actuator					
F4	B56	BR/6	:	Heated seat switch (With heated seat)					
E2	B59	W/16	:	To E112					
F2	B61	B/6	:	Yaw rate/side G sensor (With ESP)					

Rear window defogger harness

E2	B301	W/2	:	To B68
E2	B302	B/1	:	Rear window defogger (+)
C1	B303	B/1	:	Rear window defogger (-)

Hydraulic unit sub-harness

A2	B403	-/5	:	Hydraulic relay LL
B2	B404	-/5	:	Hydraulic relay RL
B2	B405	-/2	:	Hydraulic valve
C3	B406	-/1	:	Hydraulic pump
C3	B407	-/1	:	Hydraulic pump

HARNESS

TRUNK ROOM HARNESS/C+C

- T1

W/12

:

To

B76
- T2

W/4

:

To

T51
- T3

GY/2

:

Door request switch (Trunk lid) (With Intelligent Key system)
- T4

-/2

:

High-mounted stop lamp
- T5

-/4

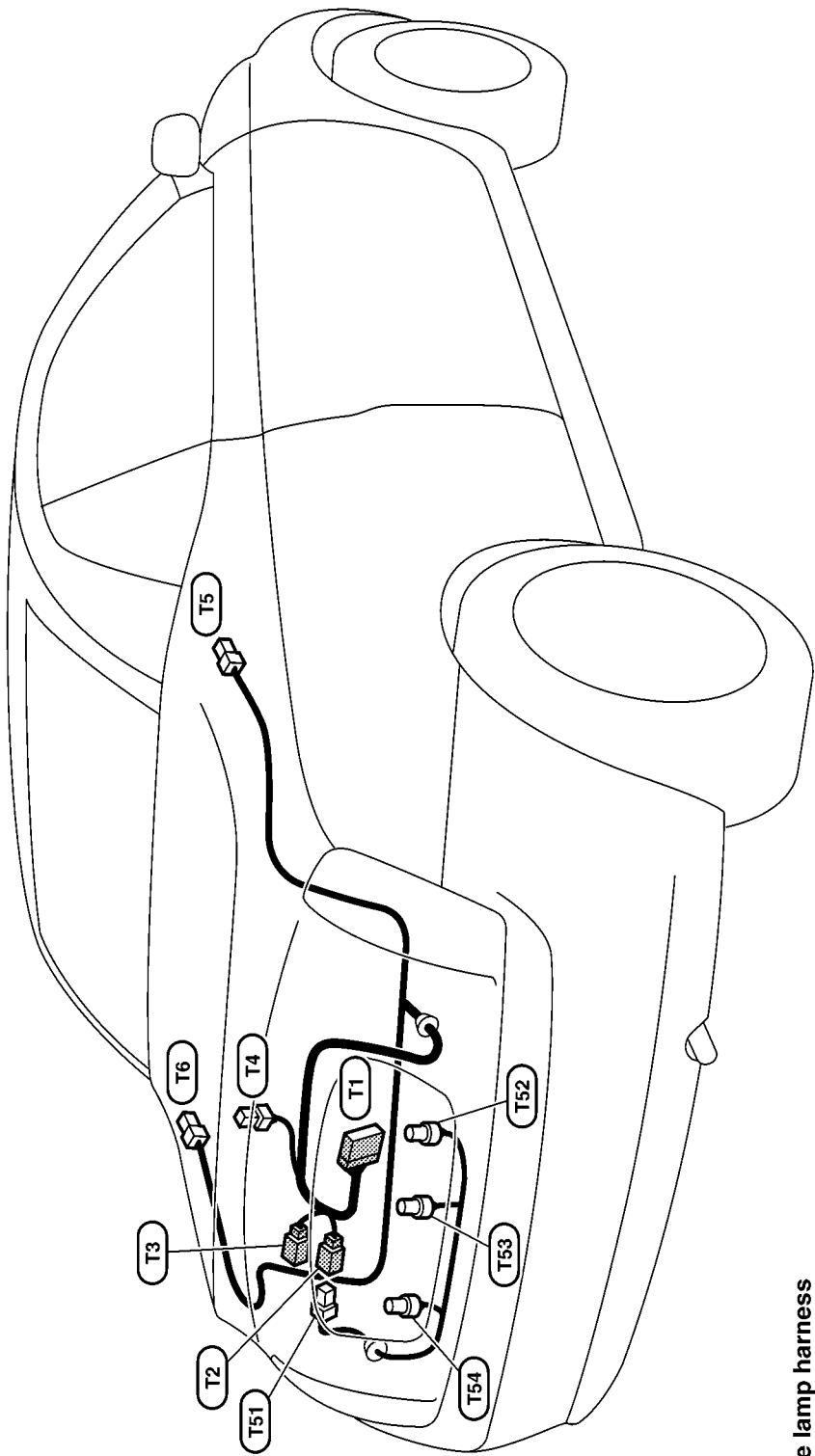
:

Trunk lid side latch RH
- T6

-/4

:

Trunk side latch LH



- License plate lamp harness**
- T51

W/4

:

To

T2
- T52

B/2

:

License plate lamp RH
- T53

GY/2

:

External trunk lid release switch
- T54

B/2

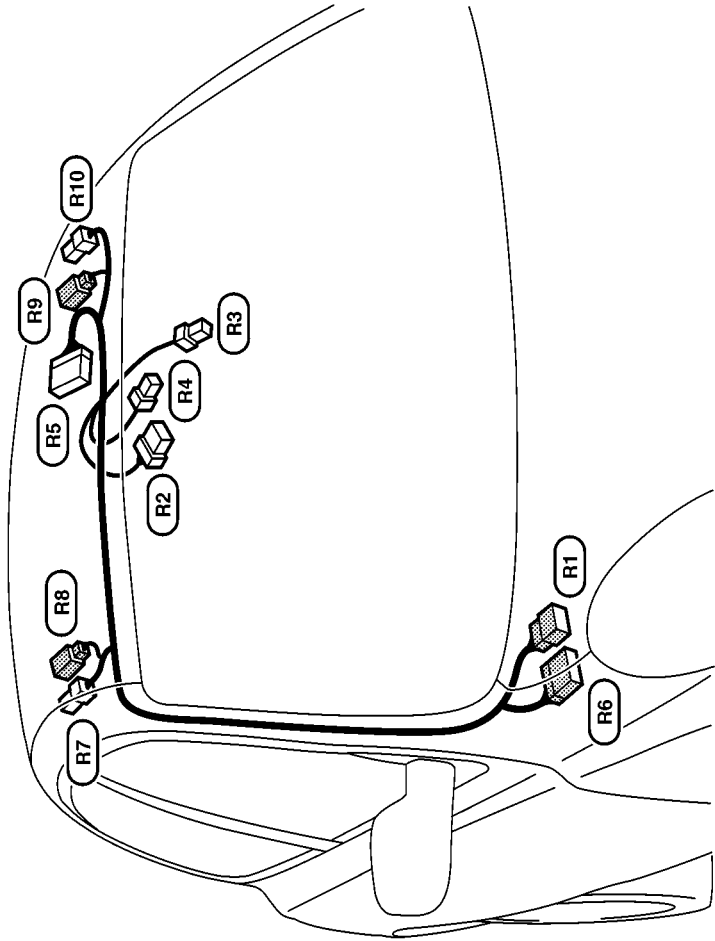
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License plate lamp LH

MKWA4121E

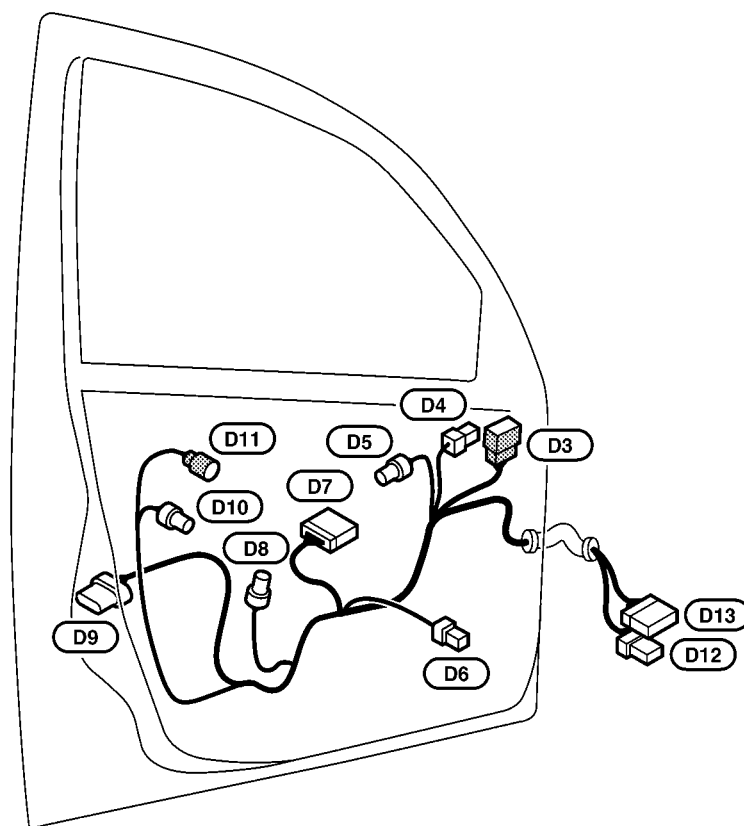
ROOM LAMP HARNESS

- | | | |
|------------|-------|---|
| R1 | W/8 | : To M54 |
| R2 | W/6 | : Interior room lamp |
| R3 | B/3 | : Light and rain sensor (With rain sensor) |
| R4 | W/3 | : Sunroof switch (With sunroof) |
| R5 | GY/10 | : Sunroof motor assembly (With sunroof) |
| R6 | W/12 | : To M99 |
| R7 | —/3 | : Roof limit switch (Lock) (With C+C) |
| R8 | W/2 | : Ultra sonic sensor RH (RHD models with C+C) |
| R9 | W/2 | : Ultra sonic sensor LH (RHD models with C+C) |
| R10 | —/3 | : Roof limit switch (close) (With C+C) |



HARNESS

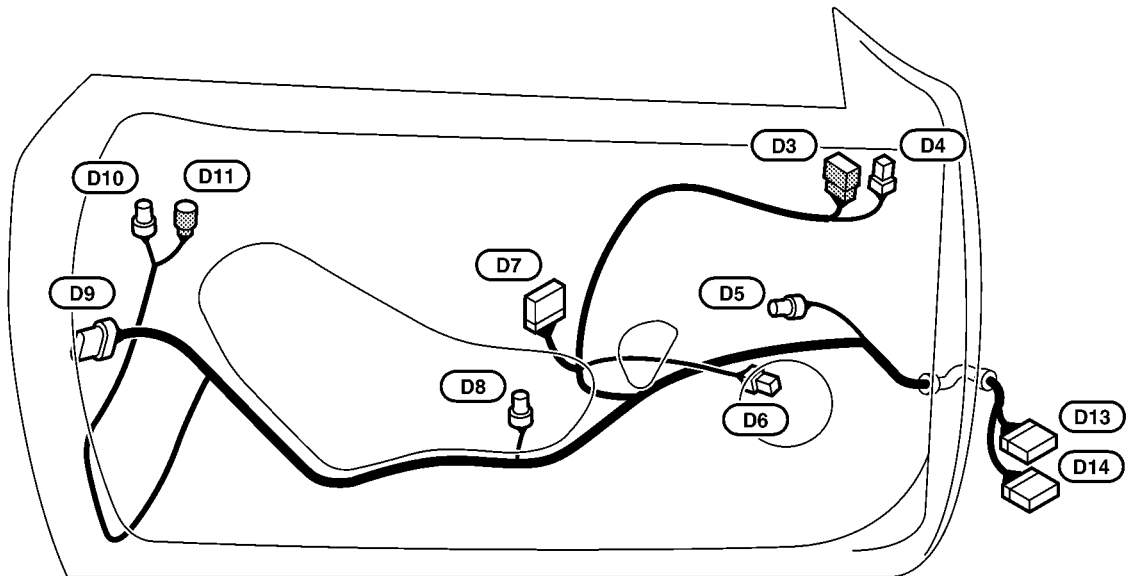
FRONT DOOR HARNESS LH SIDE/LHD MODELS (HATCHBACK)



- (D3)** GY/6 : Door mirror actuator (Driver side)
- (D4)** BR/2 : Tweeter LH (With 6 speakers)
- (D5)** GY/2 : Front power window motor (Driver side)
- (D6)** W/2 : Front door speaker LH
- (D7)** W/16 : Power window main switch
- (D8)** BR/2 : Intelligent Key warning buzzer (With Intelligent Key system)
- (D9)** B/6 : Door lock actuator (Driver side)
- (D10)** GY/2 : Door request switch (Driver side) (With Intelligent Key system)
- (D11)** W/2 : Outside antenna (Driver side) (With Intelligent Key system)
- (D12)** GY/6 : To **(M86)**
- (D13)** W/12 : To **(M87)**

HARNESS

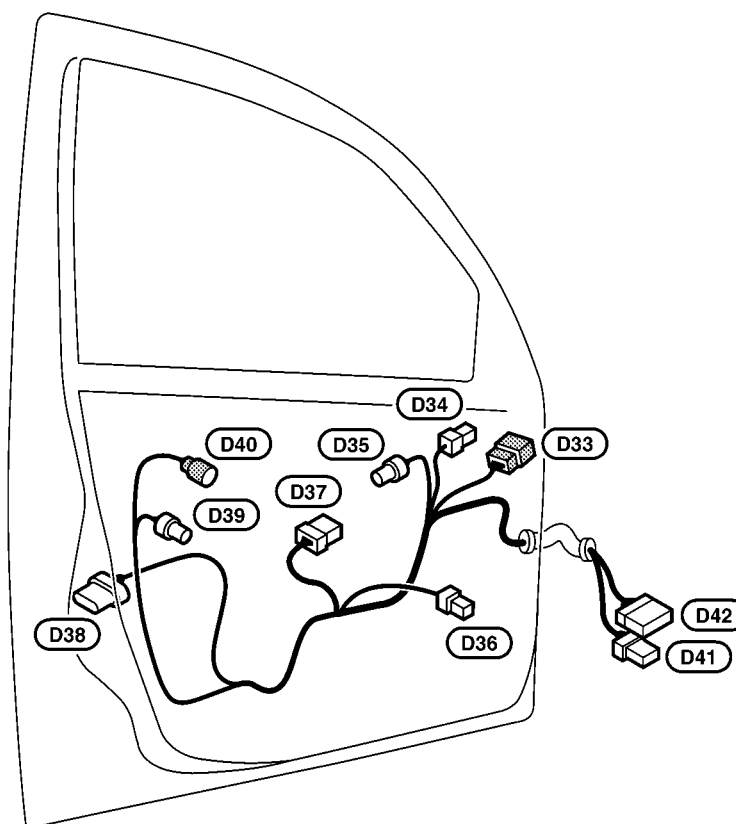
FRONT DOOR HARNESS LH SIDE/LHD MODELS (C+C)



- (D3) GY/6 : Door mirror actuator (Driver side)
- (D4) BR/2 : Tweeter LH
- (D5) GY/2 : Front power window motor (Driver side)
- (D6) W/2 : Front door speaker LH
- (D7) W/16 : Power window main switch
- (D8) BR/2 : Intelligent Key warning buzzer (With Intelligent Key system)
- (D9) B/6 : Door lock actuator (Driver side)
- (D10) GY/2 : Door request switch (Driver side) (With Intelligent Key system)
- (D11) W/2 : Outside antenna (Driver side) (With Intelligent Key system)
- (D13) W/12 : To (M87)
- (D14) W/12 : To (M98)

HARNESS

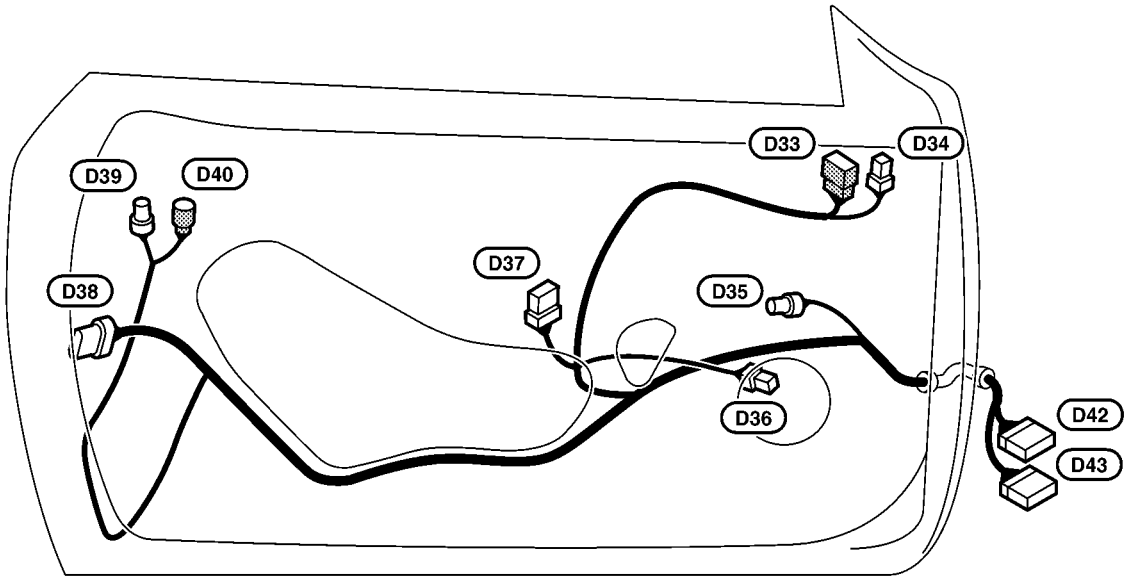
FRONT DOOR HARNESS LH SIDE/RHD MODELS (HATCHBACK)



- (D33)** GY/6 : Door mirror actuator (Passenger side)
- (D34)** BR/2 : Tweeter LH (With 6 speakers)
- (D35)** GY/2 : Front power window motor (Passenger side)
- (D36)** W/2 : Front door speaker LH
- (D37)** W/8 : Front power window switch (Passenger side)
- (D38)** B/6 : Door lock actuator (Passenger side)
- (D39)** GY/2 : Door request switch (Passenger side) (With Intelligent Key system)
- (D40)** W/2 : Outside antenna (Passenger side) (With Intelligent Key system)
- (D41)** GY/6 : To **(M83)**
- (D42)** W/12 : To **(M84)**

HARNESS

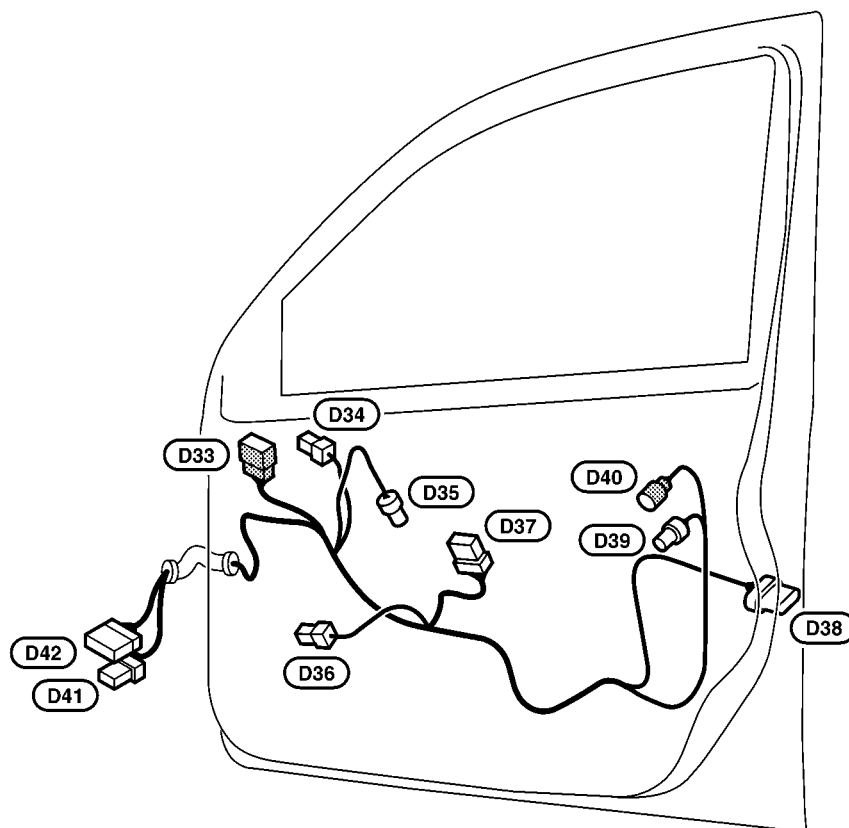
FRONT DOOR HARNESS LH SIDE/RHD MODELS (C+C)



- D33** GY/6 : Door mirror actuator (Passenger side)
- D34** BR/2 : Tweeter LH
- D35** GY/2 : Front power window motor (Passenger side)
- D36** W/2 : Front door speaker LH
- D37** W/8 : Front power window switch (Passenger side)
- D38** B/6 : Door lock actuator (Passenger side)
- D39** GY/2 : Door request switch (Passenger side) (With Intelligent Key system)
- D40** W/2 : Outside antenna (Passenger side) (With Intelligent Key system)
- D42** W/12 : To **M84**
- D43** W/12 : To **M95**

HARNESS

FRONT DOOR HARNESS RH SIDE/LHD MODELS (HATCHBACK)

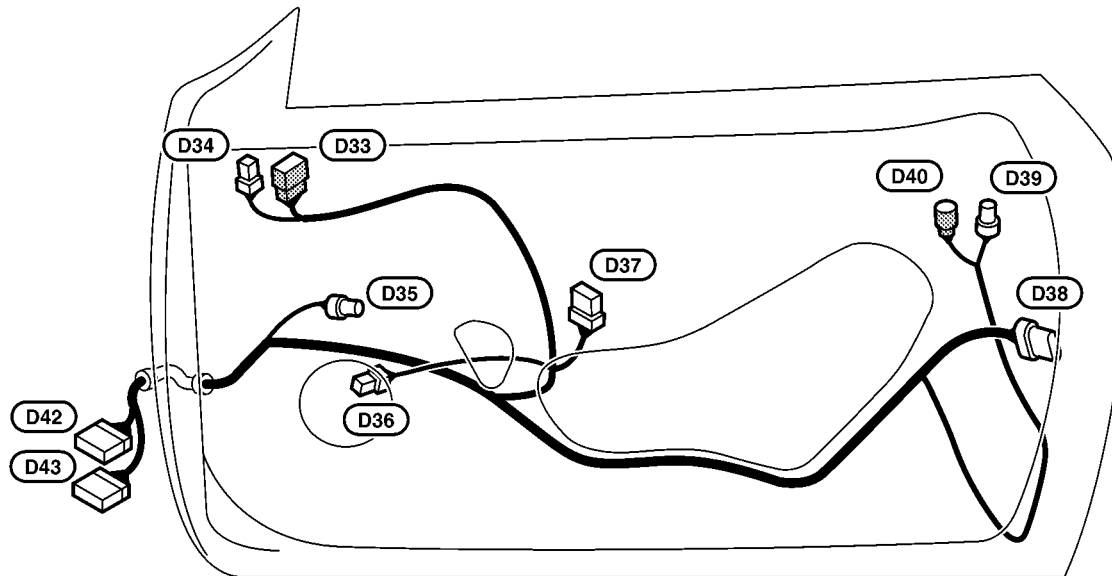


- (D33)** GY/6 : Door mirror actuator (Passenger side)
- (D34)** BR/2 : Tweeter RH (With 6 speakers)
- (D35)** GY/2 : Front power window motor (Passenger side)
- (D36)** W/2 : Front door speaker RH
- (D37)** W/8 : Front power window switch (Passenger side)
- (D38)** B/6 : Door lock actuator (Passenger side)
- (D39)** GY/2 : Door request switch (Passenger side) (With Intelligent Key system)
- (D40)** W/2 : Outside antenna (Passenger side) (With Intelligent Key system)
- (D41)** GY/6 : To **(M83)**
- (D42)** W/12 : To **(M84)**

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HARNESS

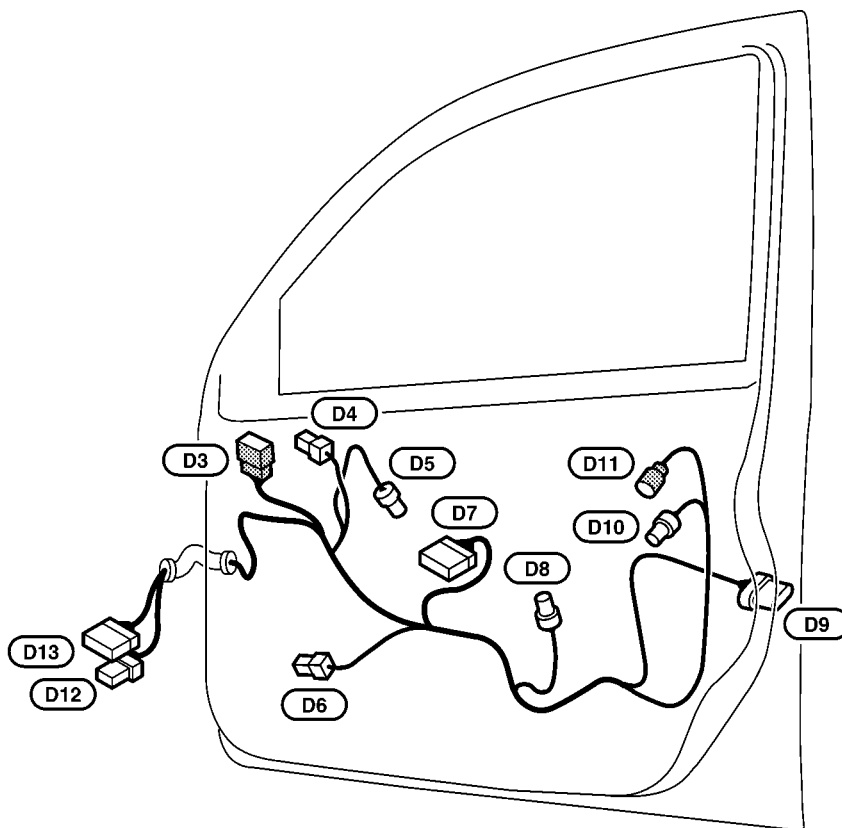
FRONT DOOR HARNESS RH SIDE/LHD MODELS (C+C)



- (D33) GY/6 : Door mirror actuator (Passenger side)
- (D34) BR/2 : Tweeter RH
- (D35) GY/2 : Front power window motor (Passenger side)
- (D36) W/2 : Front door speaker RH
- (D37) W/8 : Front power window switch (Passenger side)
- (D38) B/6 : Door lock actuator (Passenger side)
- (D39) GY/2 : Door request switch (Passenger side) (With Intelligent Key system)
- (D40) W/2 : Outside antenna (Passenger side) (With Intelligent Key system)
- (D42) W/12 : To (M84)
- (D43) W/12 : To (M95)

HARNESS

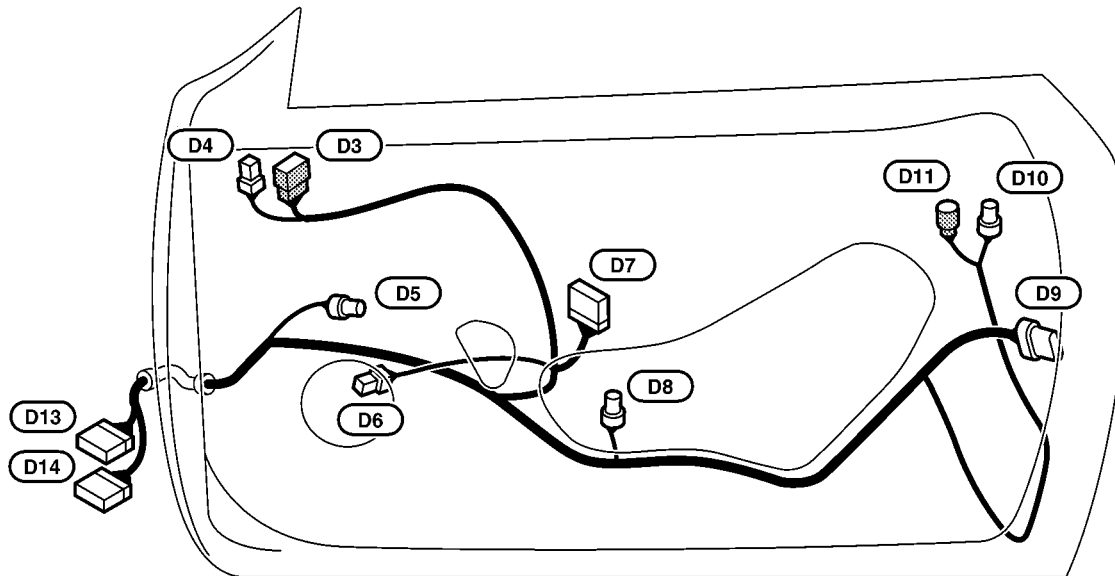
FRONT DOOR HARNESS RH SIDE/RHD MODELS (HATCHBACK)



- (D3) GY/6 : Door mirror actuator (Driver side)
- (D4) BR/2 : Tweeter RH (With 6 speakers)
- (D5) GY/2 : Front power window motor (Driver side)
- (D6) W/2 : Front door speaker RH
- (D7) W/16 : Power window main switch
- (D8) BR/2 : Intelligent Key warning buzzer (With Intelligent Key system)
- (D9) B/6 : Door lock actuator (Driver side)
- (D10) GY/2 : Door request switch (Driver side) (With Intelligent Key system)
- (D11) W/2 : Outside antenna (Driver side) (With Intelligent Key system)
- (D12) GY/6 : To (M86)
- (D13) W/12 : To (M87)

HARNESS

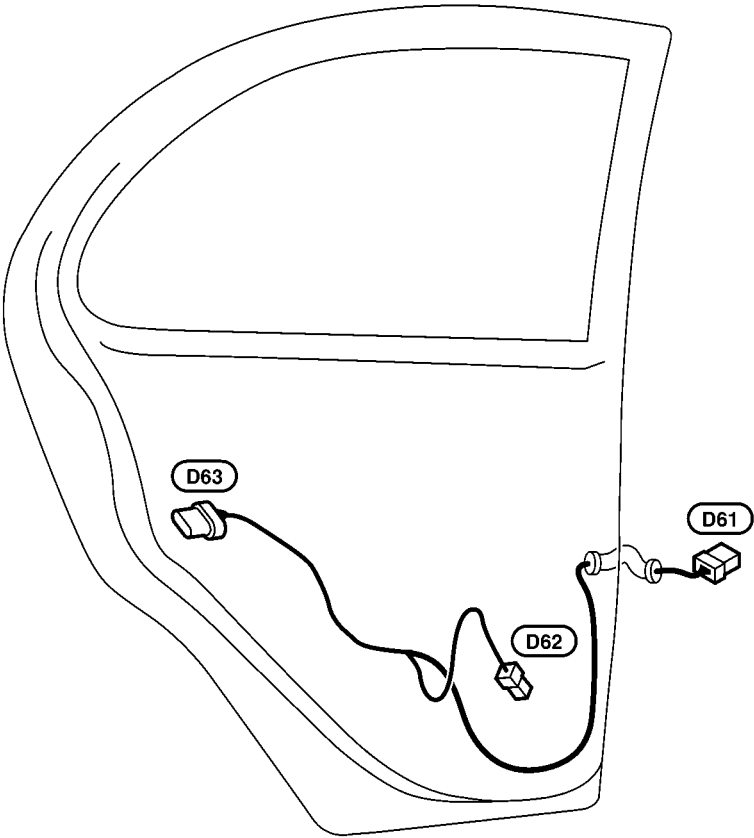
FRONT DOOR HARNESS RH SIDE/RHD MODELS (C+C)



- (D3) GY/6 : Door mirror actuator (Driver side)
- (D4) BR/2 : Tweeter RH
- (D5) GY/2 : Front power window motor (Driver side)
- (D6) W/2 : Front door speaker RH
- (D7) W/16 : Power window main switch
- (D8) BR/2 : Intelligent Key warning buzzer (With Intelligent Key system)
- (D9) B/6 : Door lock actuator (Driver side)
- (D10) GY/2 : Door request switch (Driver side) (With Intelligent Key system)
- (D11) W/2 : Outside antenna (Driver side) (With Intelligent Key system)
- (D13) W/12 : To (M87)
- (D14) W/12 : To (M98)

HARNESS

REAR DOOR HARNESS LH SIDE/WITH 5 DOOR HATCHBACK

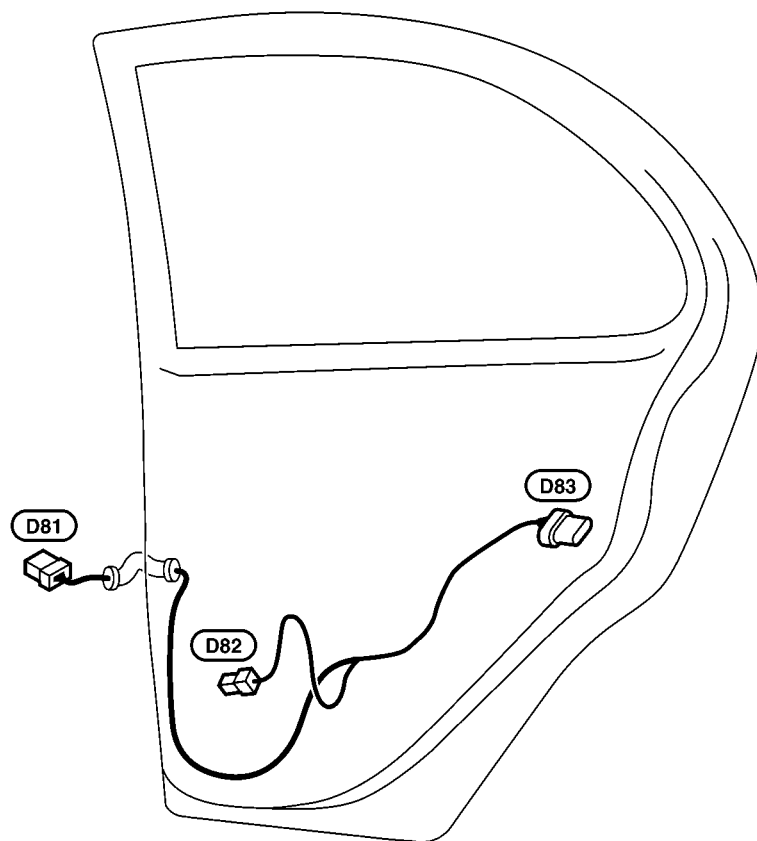


- D61 W/6 : To B20
- D62 W/2 : Rear door speaker LH (With 6 speakers)
- D63 B/6 : Rear door lock actuator LH

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HARNESS

REAR DOOR HARNESS RH SIDE/WITH 5 DOOR HATCHBACK



- D81** W/6 : To **B14**
- D82** W/2 : Rear door speaker RH (With 6 speakers)
- D83** B/6 : Rear door lock actuator RH

HARNESS

Wiring Diagram Codes (Cell Codes)

EKS0079C

Use the chart below to find out what each wiring diagram code stands for.

Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
A/C	ATC	Auto Air Conditioner
A/C	MTC	Manual Air Conditioner
A/WIP	WW	Front Wiper and Washer System (With Rain Sensor)
ABS	BRC	Anti-lock Brake System
AP/SEN	EC	Manifold Absolute Pressure Sensor
APPS	EC	Accelerator Pedal Position Sensor
APPS1	EC	Accelerator Pedal Position Sensor 1
APPS2	EC	Accelerator Pedal Position Sensor 2
APPS3	EC	Accelerator Pedal Position Sensor
AUDIO	AV	Audio
AUTO/L	LT	Automatic Light Control
BA/FTS	AT	A/T Fluid Temperature Sensor and TCM Power Source
BACK/L	LT	Back-up Lamp
BRK/SW	EC	Brake Switch
BTS	EC	Turbocharger Air Temperature Sensor
CAN	AT	CAN Communication Line
CAN	EC	CAN Communication Line
CAN	LAN	CAN System
CHARGE	SC	Charging System
CHIME	DI	Warning Chime
CIGAR	WW	Power Socket
CKPS	EC	Crankshaft Position Sensor
CMPS	EC	Camshaft Position Sensor
COMBSW	LT	Combination Switch
COOL/F	EC	Cooling System
CRFPS	EC	Common Rail Fuel Pressure Sensor
D/COMP	DI	Drive Computer
D/LOCK	BL	Power Door Lock
DEF	GW	Rear Window Defogger
DTRL	LT	Headlamp - With Daytime Light System
ECM/PW	EC	ECM Power Supply
ECTS	EC	Engine Coolant Temperature Sensor
EGRC/V	EC	EGR Control System
ENGSS	AT	Engine Speed Signal
EPS	STC	Electric Power Steering System
ESP	BRC	Electronic Stability Program System
ETC1	EC	Electrical Throttle Control Function
ETC2	EC	Electrical Throttle Control Motor Relay
ETC3	EC	Electrical Throttle Control Motor
F/FOG	LT	Front Fog Lamp
F/PUMP	EC	Fuel Pump

HARNESS

Code	Section	Wiring Diagram Name
F/ROOF	RF	Retractable Hard Top (C-view)
FRO2	EC	Heated Oxygen Sensor 1
FTS	AT	A/T Fluid Temperature Sensor
FTS	EC	Fuel Temperature Sensor
FUEL	EC	Fuel Injection System Function
GLOW	EC	Glow Control System
H/AIM	LT	Headlamp Aiming Control System
H/LAMP	LT	Headlamp
H/SEAT	SE	Heated Seat
HEATER	MTC	Heater
HLC	WW	Headlamp Washer
HO2S1	EC	Heated Oxygen Sensor 1
HO2S1H	EC	Heated Oxygen Sensor 1 Heater
HO2S2	EC	Heated Oxygen Sensor 2
HO2S2H	EC	Heated Oxygen Sensor 2 Heater
HORN	WW	Horn
I/KEY	BL	Intelligent Key System
IATS	EC	Intake Air Temperature Sensor
IATSEN	EC	Intake Air Temperature Sensor
IGNSYS	EC	Ignition Signal
ILL	LT	Illumination
IMV/D	EC	Fuel Flow Actuator
INJECT	EC	Injector
INT/L	LT	Interior and Luggage Room Lamps
IVC	EC	Intake Valve Timing Control Solenoid Valve
KS	EC	Knock Sensor
LPSV	AT	Line Pressure Solenoid Valve
MAFS	EC	Mass Air Flow Sensor
MAIN	AT	Main Power Supply and Ground Circuit
MAIN	EC	Main Power Supply and Ground Circuit
METER	DI	Combination Meters
MIL/DL	EC	Malfunction Indicator, Data Link Connector for CONSULT-II
MIRROR	GW	Door Mirror
MULTI	BL	Multi-remote Control System
NATS	BL	NATS (Nissan Anti-Theft System)
NAVI	AV	Audio and Navigation System
NONDTC	AT	NON-detective Items
OVRCSV	AT	Overrun Clutch Solenoid Valve
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHASE	EC	Camshaft Position Sensor (PHASE)
PNP/SW	AT	Park/Neutral Position (PNP) Switch
PNP/SW	EC	Park/Neutral Position (PNP) Switch
POS	EC	Crankshaft Position Sensor (POS)
POWER	PG	Power Supply Routing Circuit

HARNESS

Code	Section	Wiring Diagram Name	
PRGVLV	EC	EVAP Canister Purge Volume Control Solenoid Valve	A
PRWIRE	BL	After Market Alarm - Prewire	
PTC/H	ATC	PTC Heater	B
PTC/H	MTC	PTC Heater	
PT/SEN	AT	Power Train Sensor	
R/FOG	LT	Rear Fog Lamp	C
RP/SEN	EC	Refrigerant Pressure Sensor	
RRO2	EC	Heated Oxygen Sensor 2	D
S/LOCK	BL	Power Door Lock-Super Lock	
SEN/PW	EC	Electric Throttle Control Actuator (Throttle Position Sensor)	
SHIFT	AT	A/T Shift Lock System	E
SROOF	RF	Sunroof	
SRS	SRS	Supplemental Restraint System	F
SSV/A	AT	Shift Solenoid Valve A	
SSV/B	AT	Shift Solenoid Valve B	
START	SC	Starting System	G
STOP/L	LT	Stop Lamp	
TAIL/L	LT	Parking, License Plate and Tail Lamps	H
TCBST	EC	TC Boost Pressure Sensor	
TCC/V	EC	Turbocharger Boost Control Solenoid Valve	
TCV	AT	Torque Converter Clutch Solenoid Valve	I
THEFT	BL	Theft Warning System	
TPS1	EC	Electric Throttle Control Actuator (Throttle Position Sensor 1)	J
TPS2	EC	Electric Throttle Control Actuator (Throttle Position Sensor 2)	
TPS3	EC	Electric Throttle Control Actuator	
TURN	LT	Turn Signal and Hazard Warning Lamps	PG
VSSAT	AT	Vehicle Speed Sensor A/T (Revolution Sensor)	
VSSMTR	AT	Vehicle Speed Sensor MTR	
WARN	DI	Warning Lamps	L
WINDOW	GW	Power Window System	
WIP/R	WW	Rear Wiper and Washer System	M
WIPER	WW	Front Wiper and Washer System	

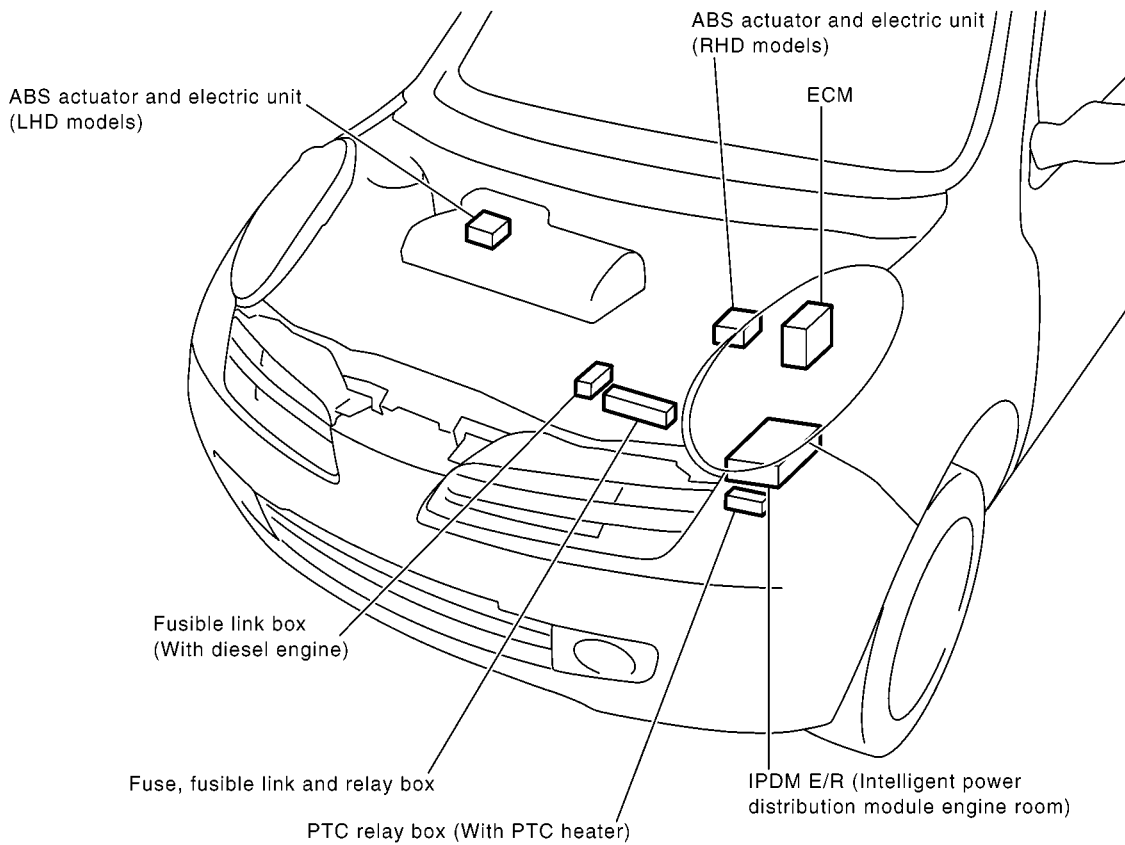
ELECTRICAL UNITS LOCATION

ELECTRICAL UNITS LOCATION

PFP:25230

Electrical Units Location ENGINE COMPARTMENT

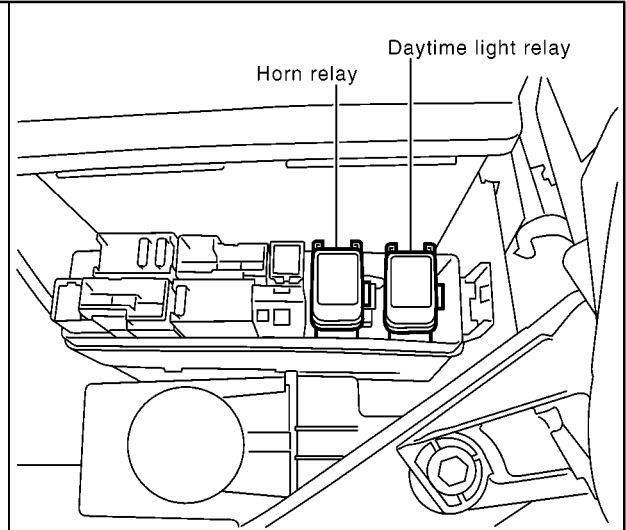
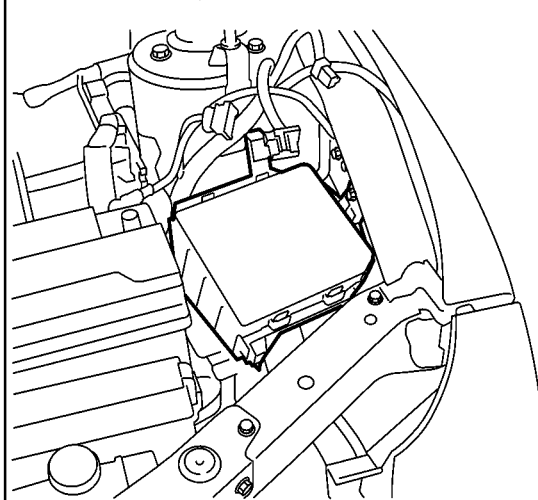
EKS0079D



IPDM E/R (Intelligent power distribution module engine room)

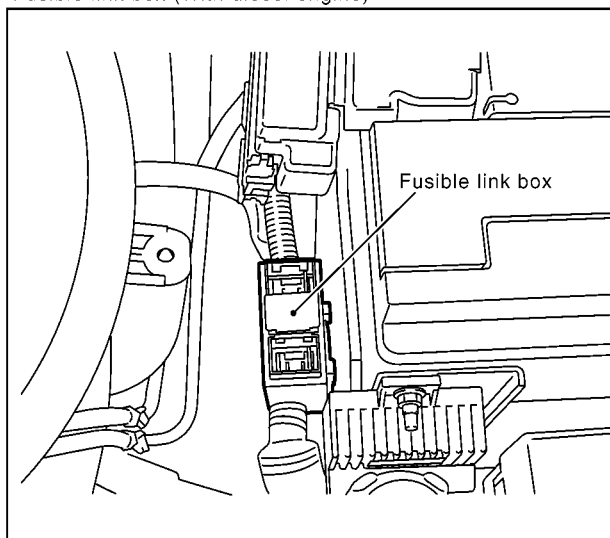
Fuse, fusible link and relay box

View with headlamp LH removed

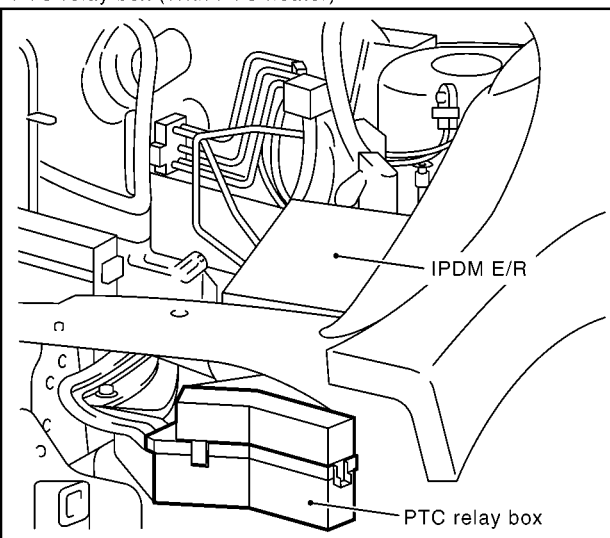


ELECTRICAL UNITS LOCATION

Fusible link box (With diesel engine)



PTC relay box (With PTC heater)



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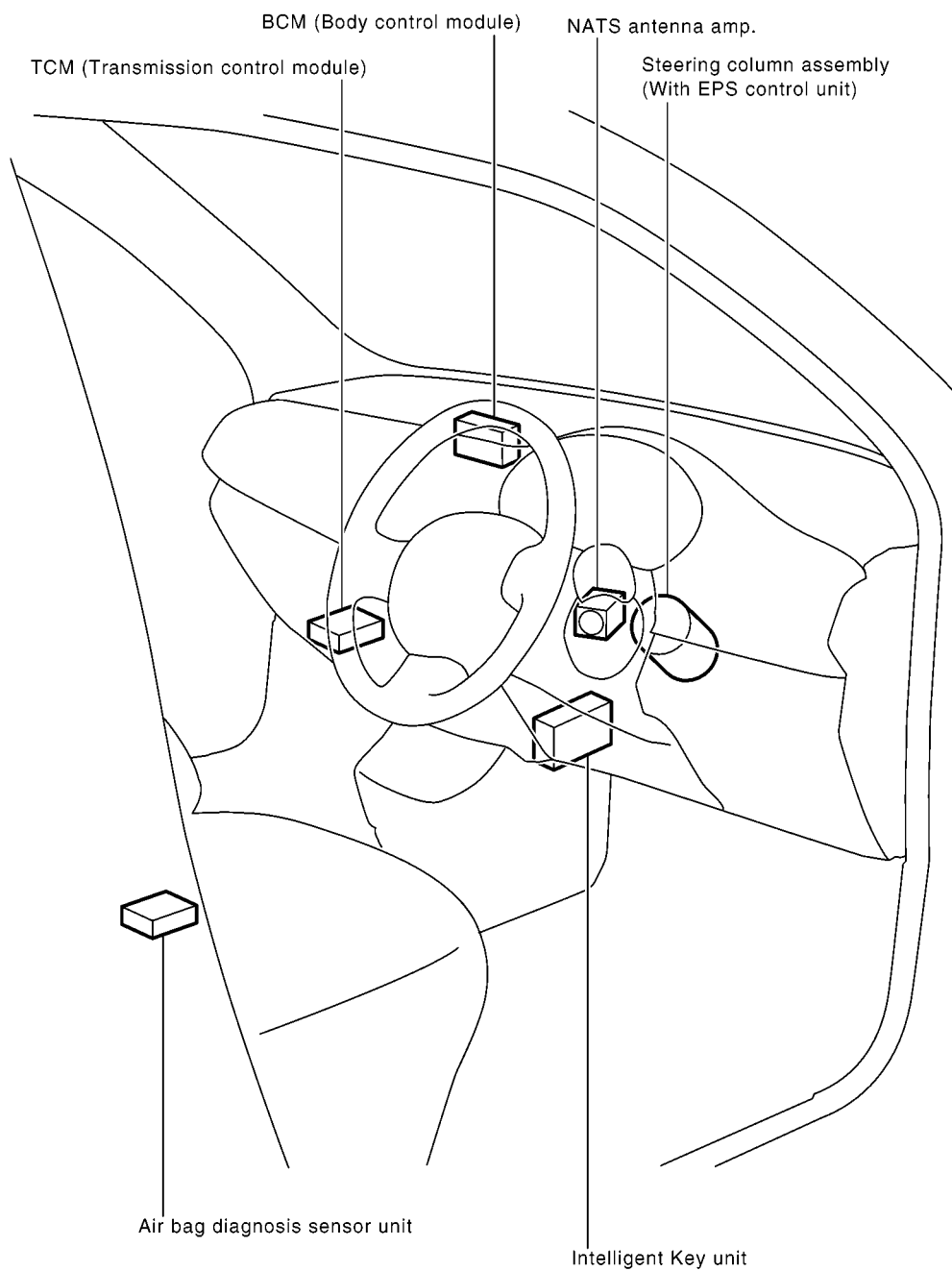
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MKWA1870E

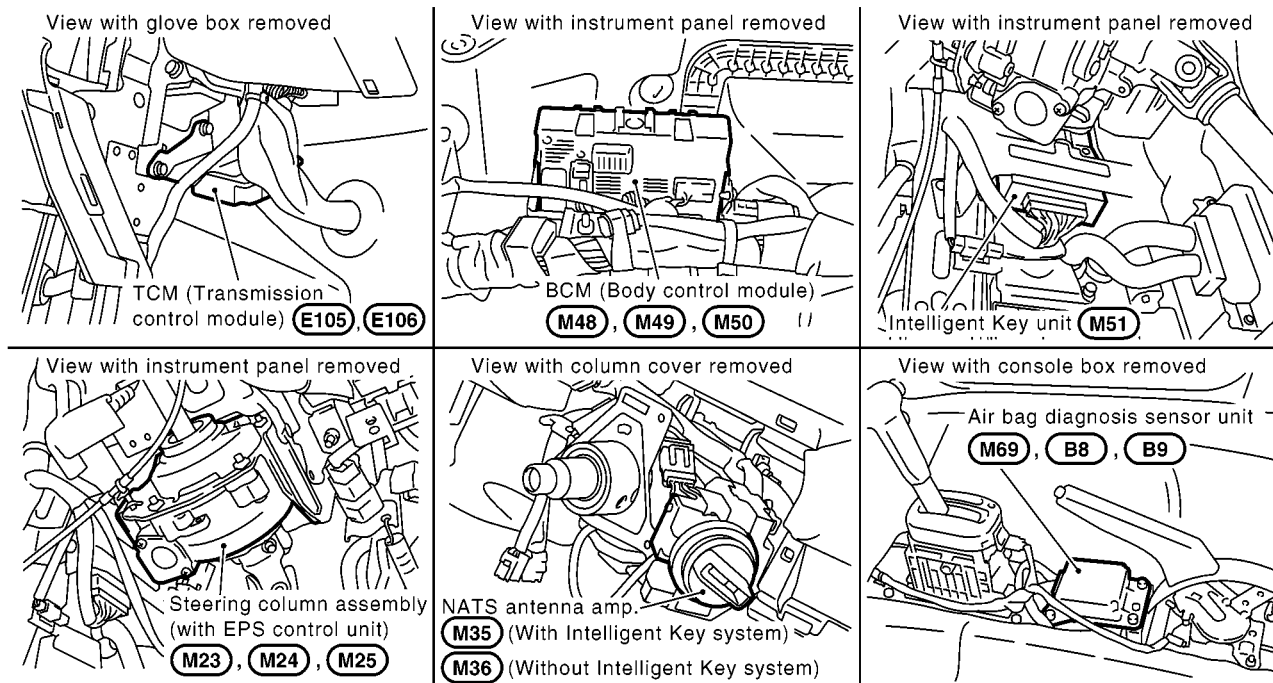
ELECTRICAL UNITS LOCATION

PASSENGER COMPARTMENT



MKWA3782E

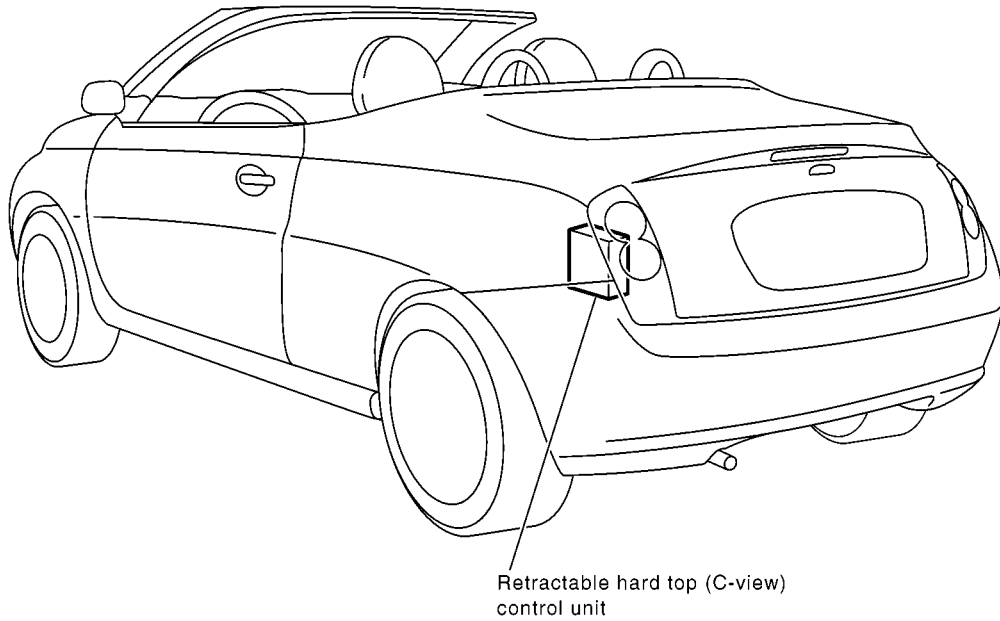
ELECTRICAL UNITS LOCATION



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ELECTRICAL UNITS LOCATION

TRUNK ROOM COMPARTMENT



HARNESS CONNECTOR

PFP:00011

Description

HARNESS CONNECTOR (TAB-LOCKING TYPE)

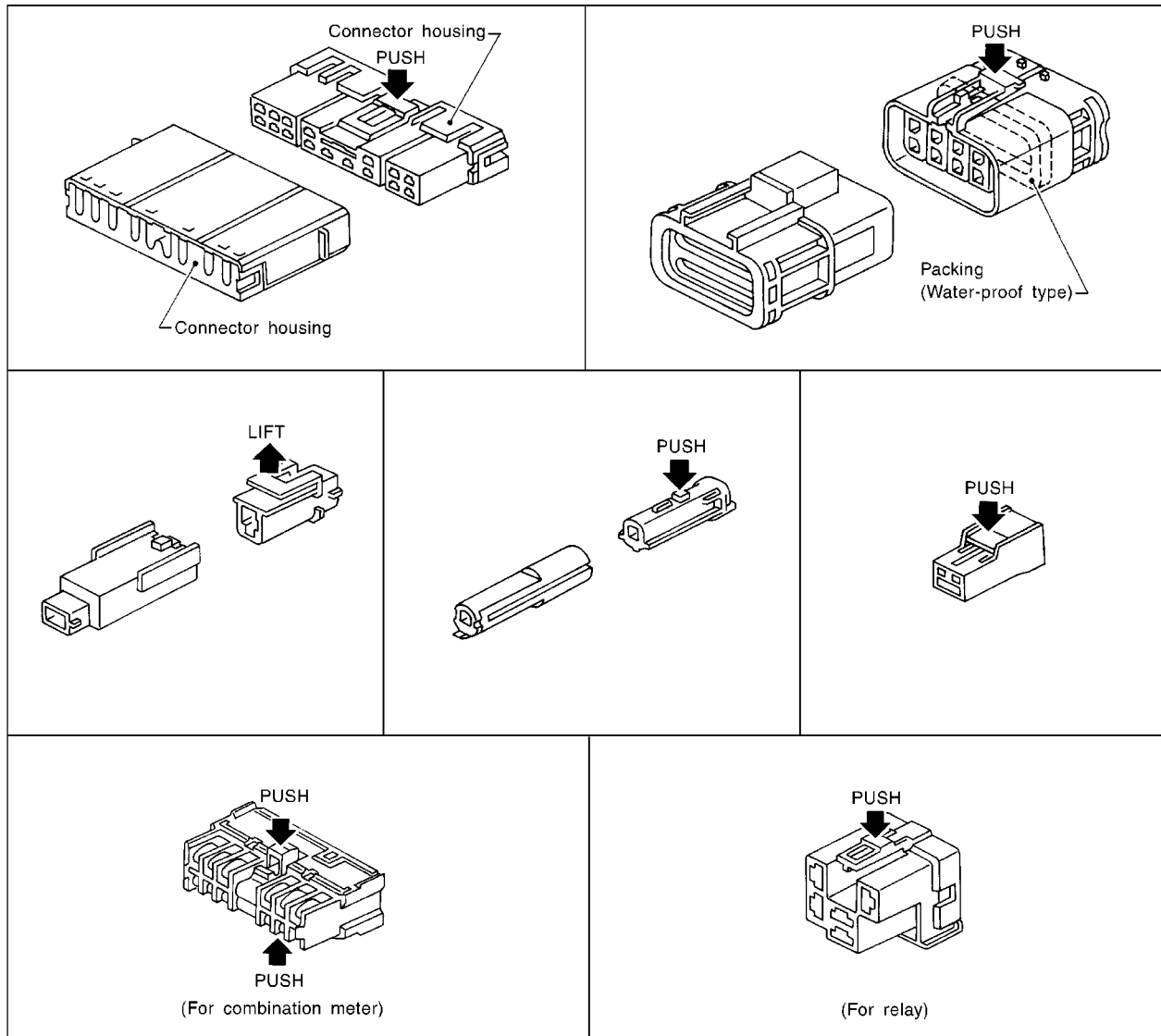
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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]



SEL769DA

HARNESS CONNECTOR

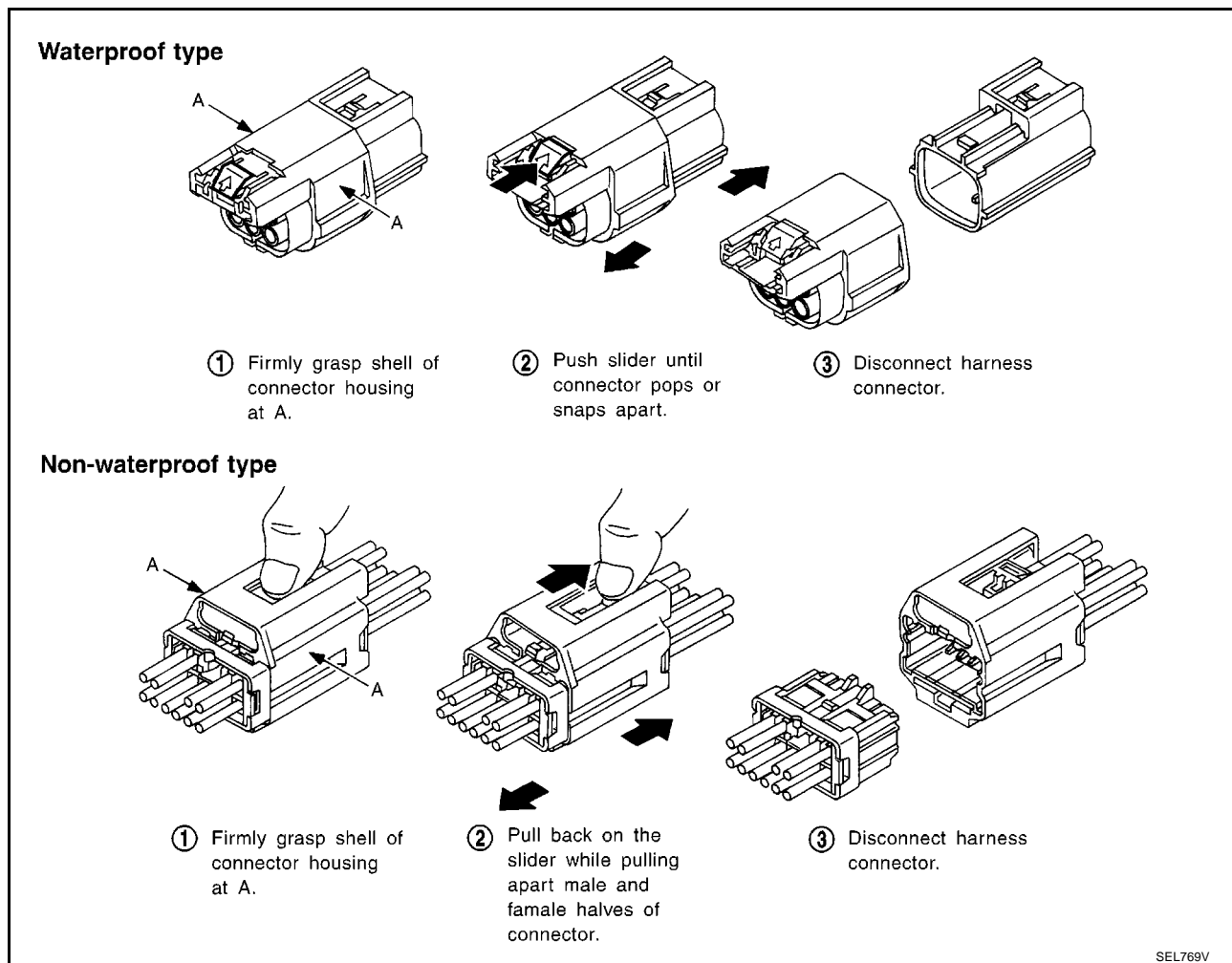
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

- 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.

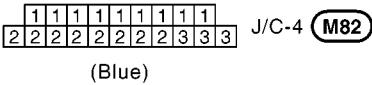
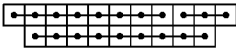
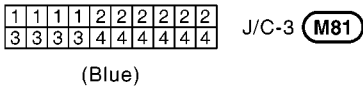
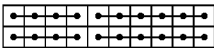
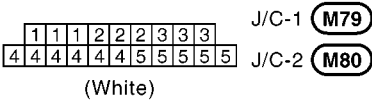
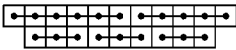
[Example]



JOINT CONNECTOR (J/C)
Terminal Arrangement

PFP:B4341

EKS00EOL



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ELECTRICAL UNITS

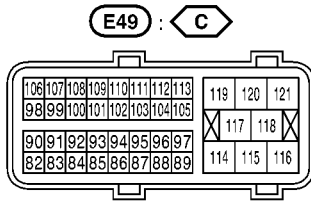
ELECTRICAL UNITS

Terminal Arrangement

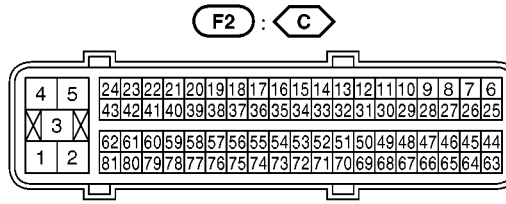
PFP:00011

EKS0079F

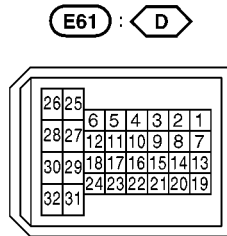
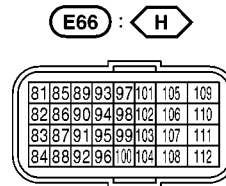
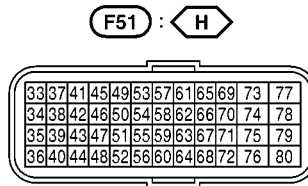
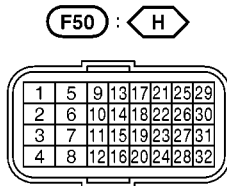
ECM



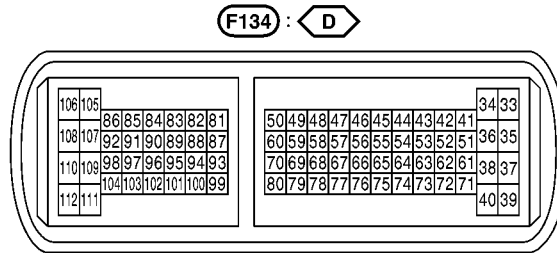
(Black)



(Black)



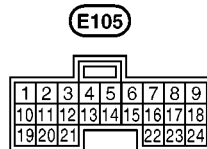
(Black)



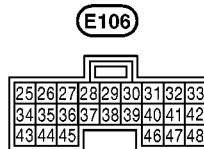
(Black)



TCM (TRANSMISSION CONTROL MODULE)



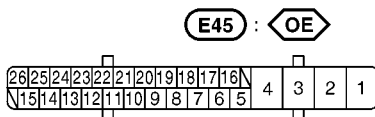
(White)



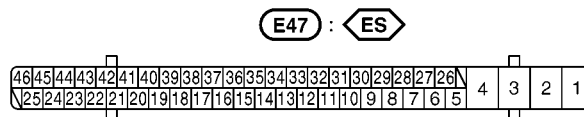
(Gray)



ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



(Black)



(Black)

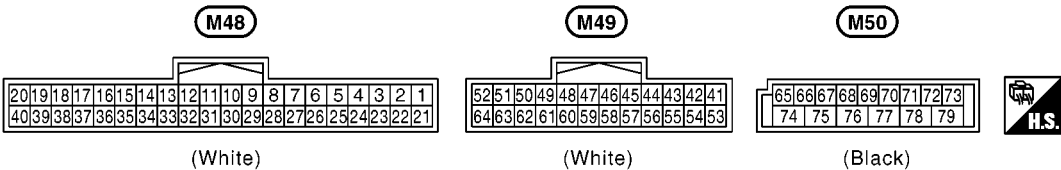


- C** : CR engine models
- H** : HR engine models
- D** : With diesel engine
- ES** : With ESP
- OE** : Without ESP

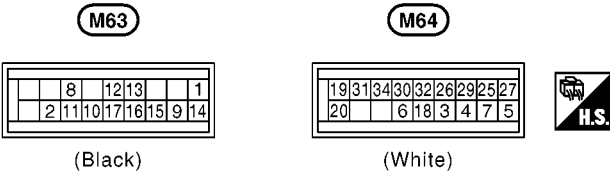
MKWA4128E

ELECTRICAL UNITS

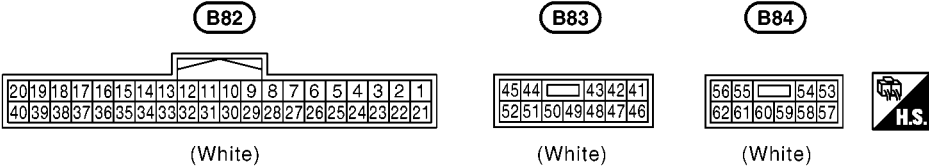
BCM (BODY CONTROL MODULE)



A/C AUTO AMP.



RETRACTABLE HARD TOP (C-VIEW) CONTROL UNIT



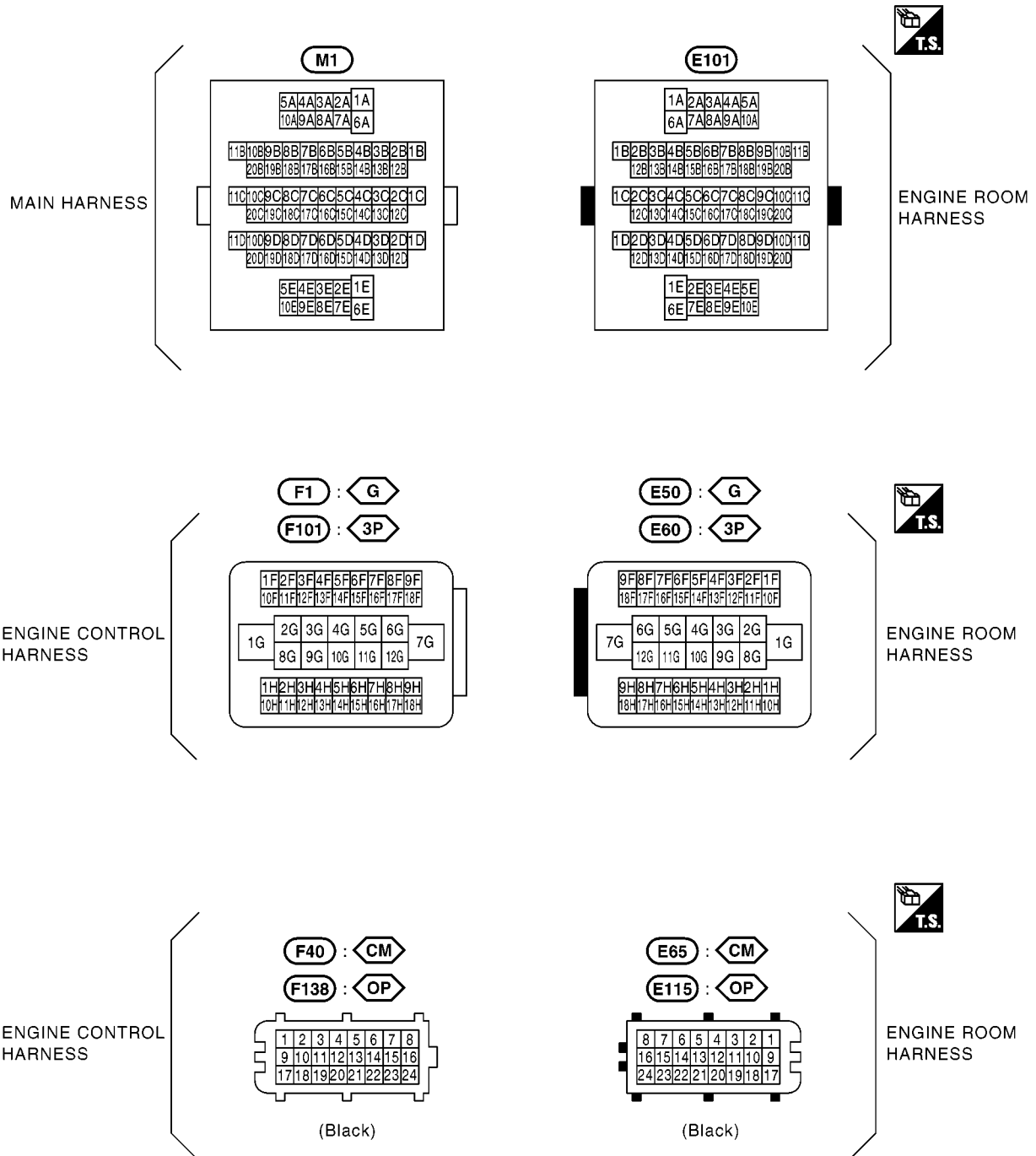
SMJ (SUPER MULTIPLE JUNCTION)

SMJ (SUPER MULTIPLE JUNCTION)

PFP:B4341

Terminal Arrangement

EKS007XZ



G : With gasoline engine except for CR engine M/T models

CM : CR engine M/T models

3P : K9K Euro 3 48kW/60kW models and Euro 4 50kW/63kW With PTC heater models

OP : K9K Euro 4 50kW/63kW Without PTC heater models

MKWA3448E

STANDARDIZED RELAY

STANDARDIZED RELAY

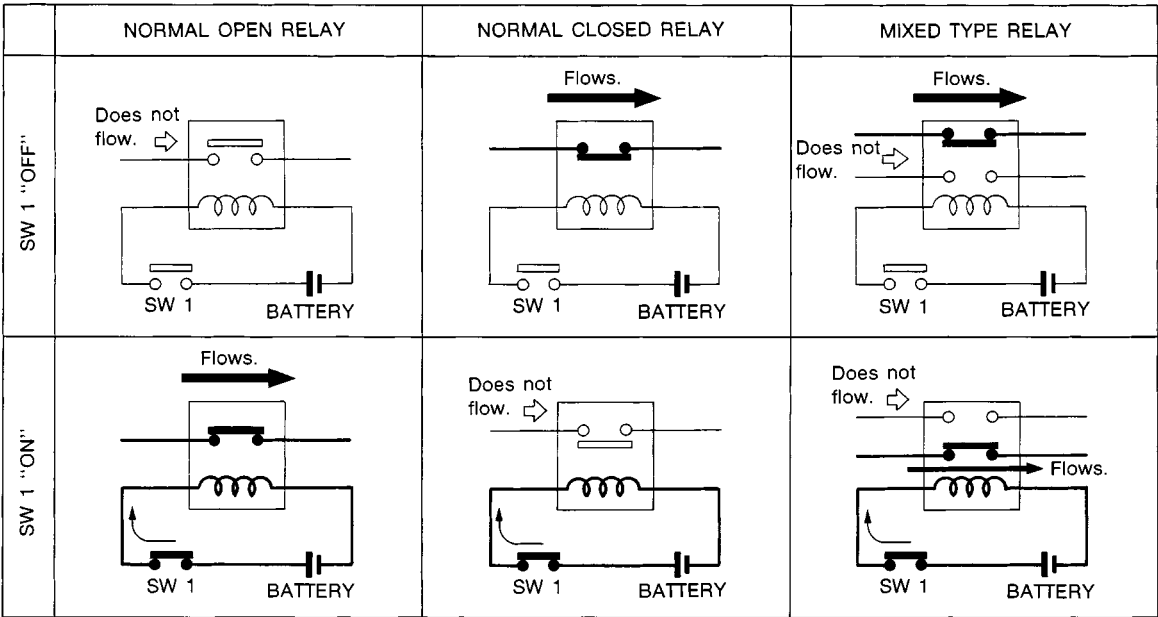
PFP:00011

Description

EKS0079G

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

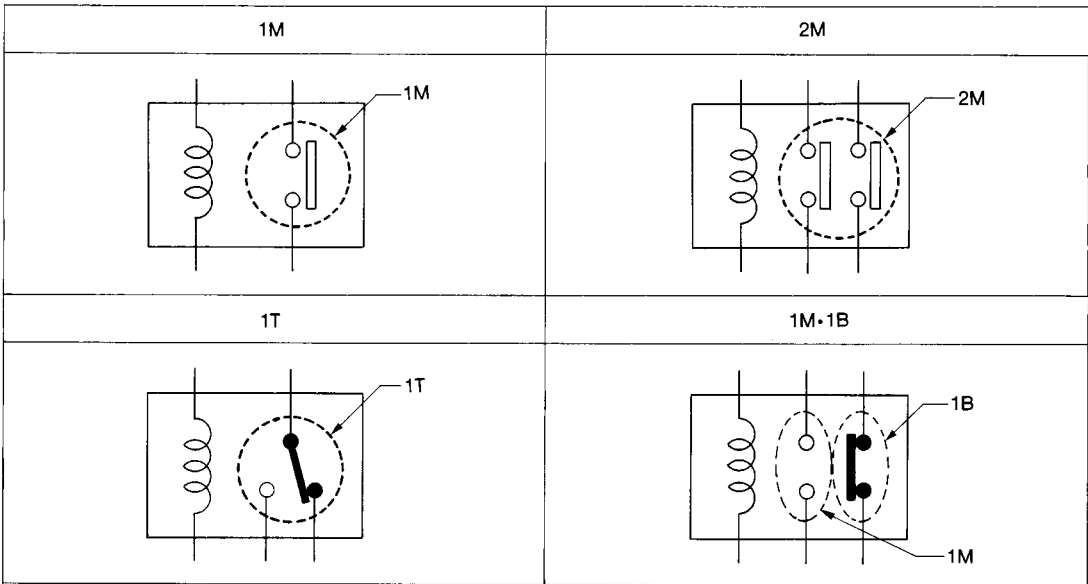
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



SEL881H

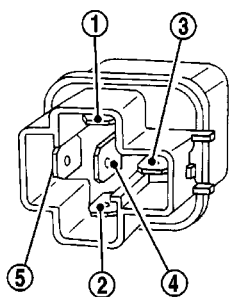
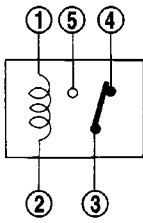
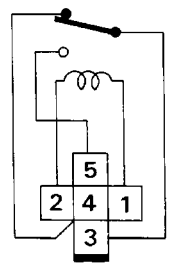
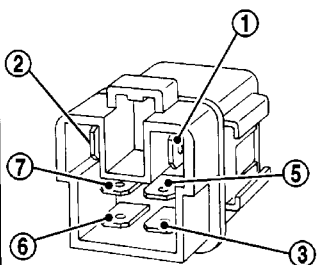
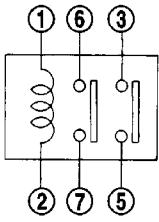
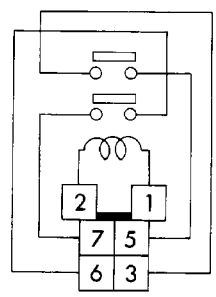
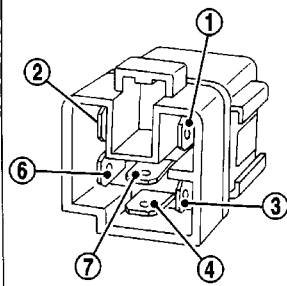
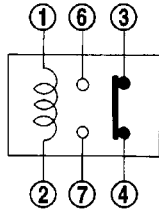
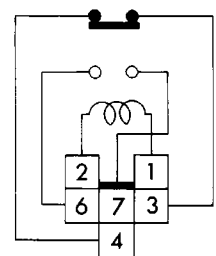
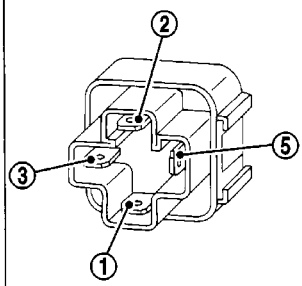
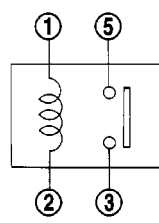
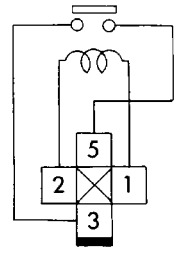
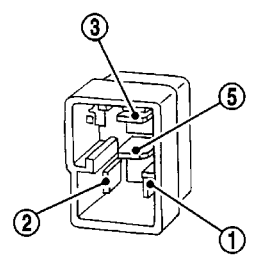
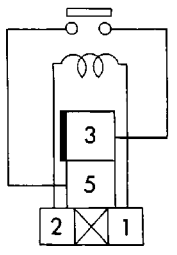
TYPE OF STANDARDIZED RELAYS

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



SEL882H

STANDARDIZED RELAY

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

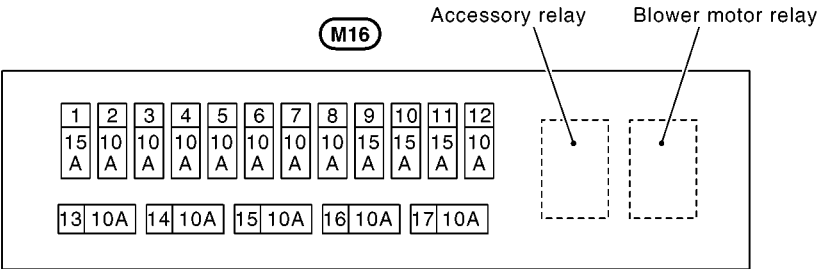
The arrangement of terminal numbers on the actual relays may differ from those shown above.

SEL188W

FUSE BLOCK - JUNCTION BOX (J/B)

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

PFP:24350
EKS0079H



PG

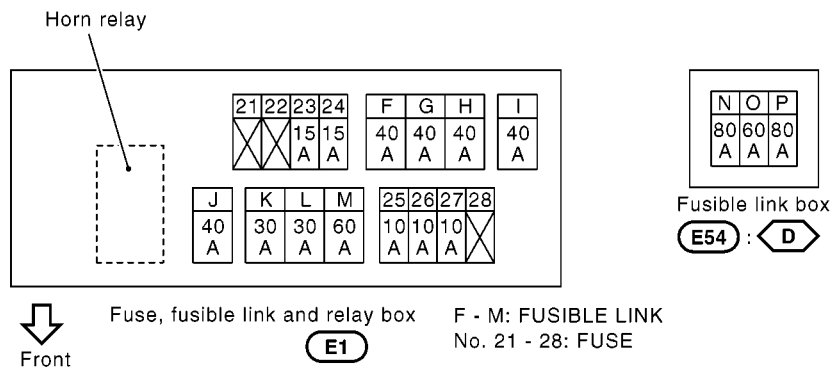
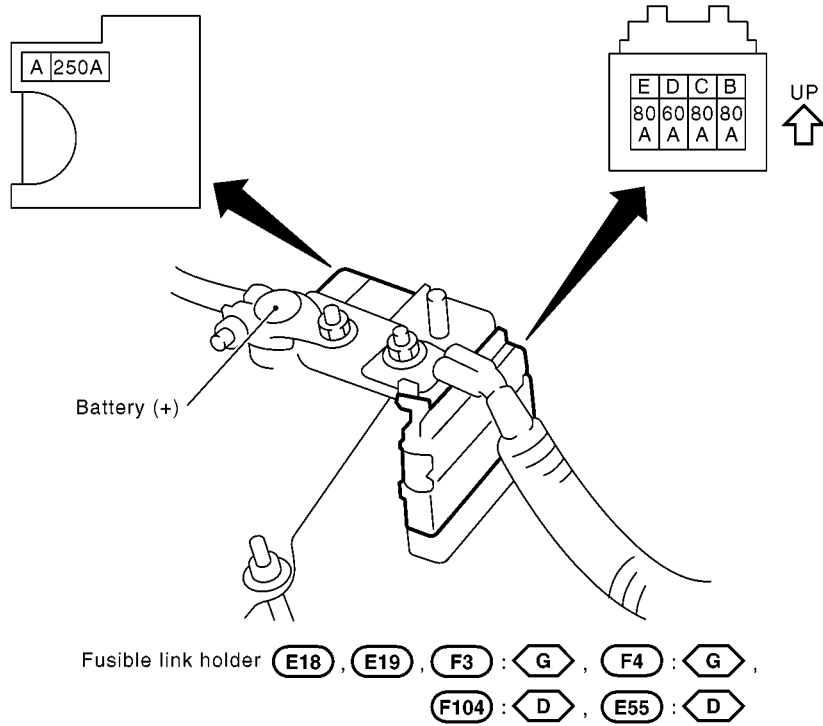
FUSE AND FUSIBLE LINK BOX

FUSE AND FUSIBLE LINK BOX

PFP:24381

Terminal Arrangement

EKS0079I



G : With gasoline engine

D : With diesel engine

MKWA4130E