SECTION PG

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

CONTENTS

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 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

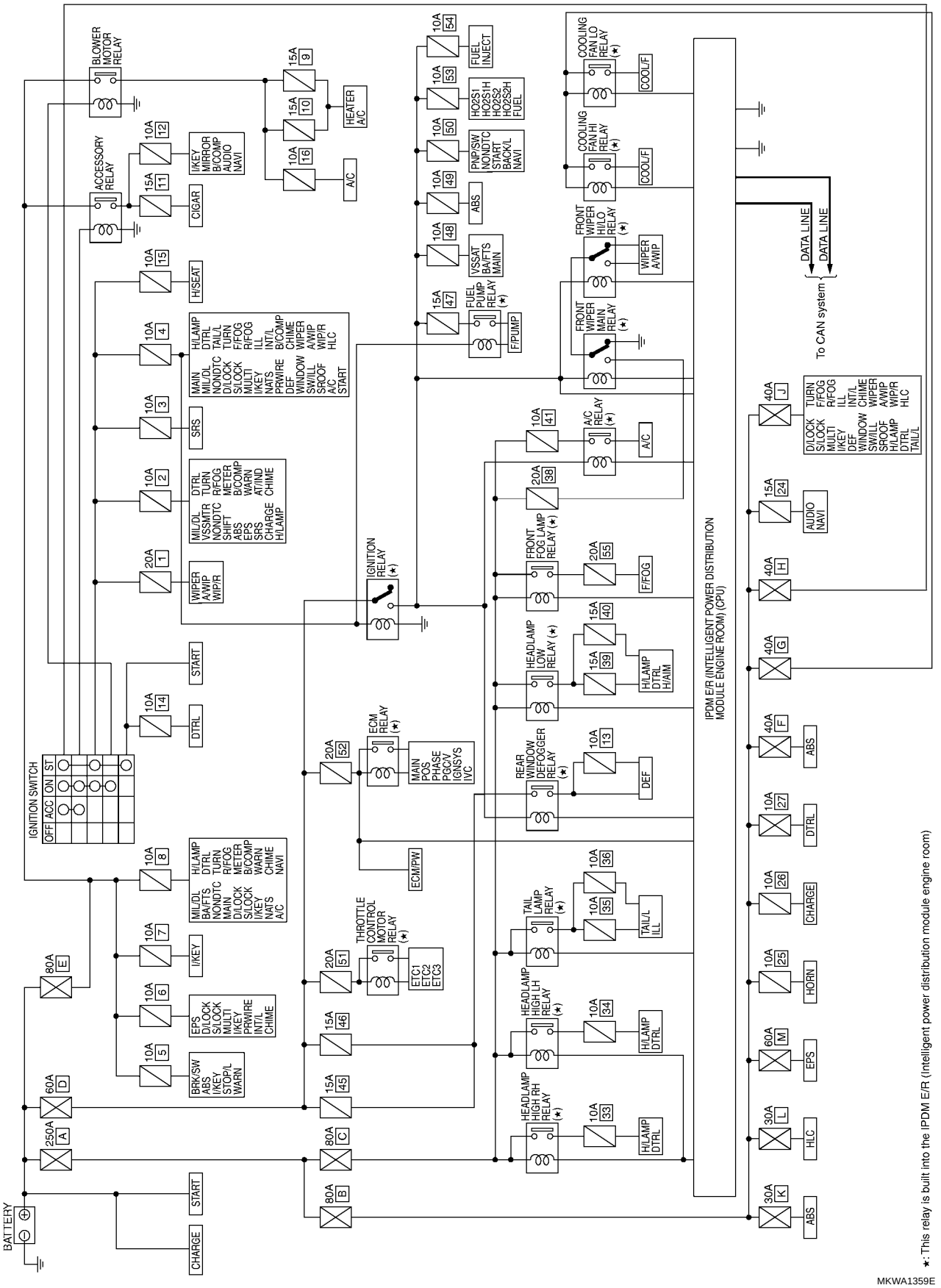
- BCM (Models without Intelligent Key system)
- Intelligent Key unit (Models with Intelligent Key system)
- ECM

POWER SUPPLY ROUTING

PFP:00011

Schematic

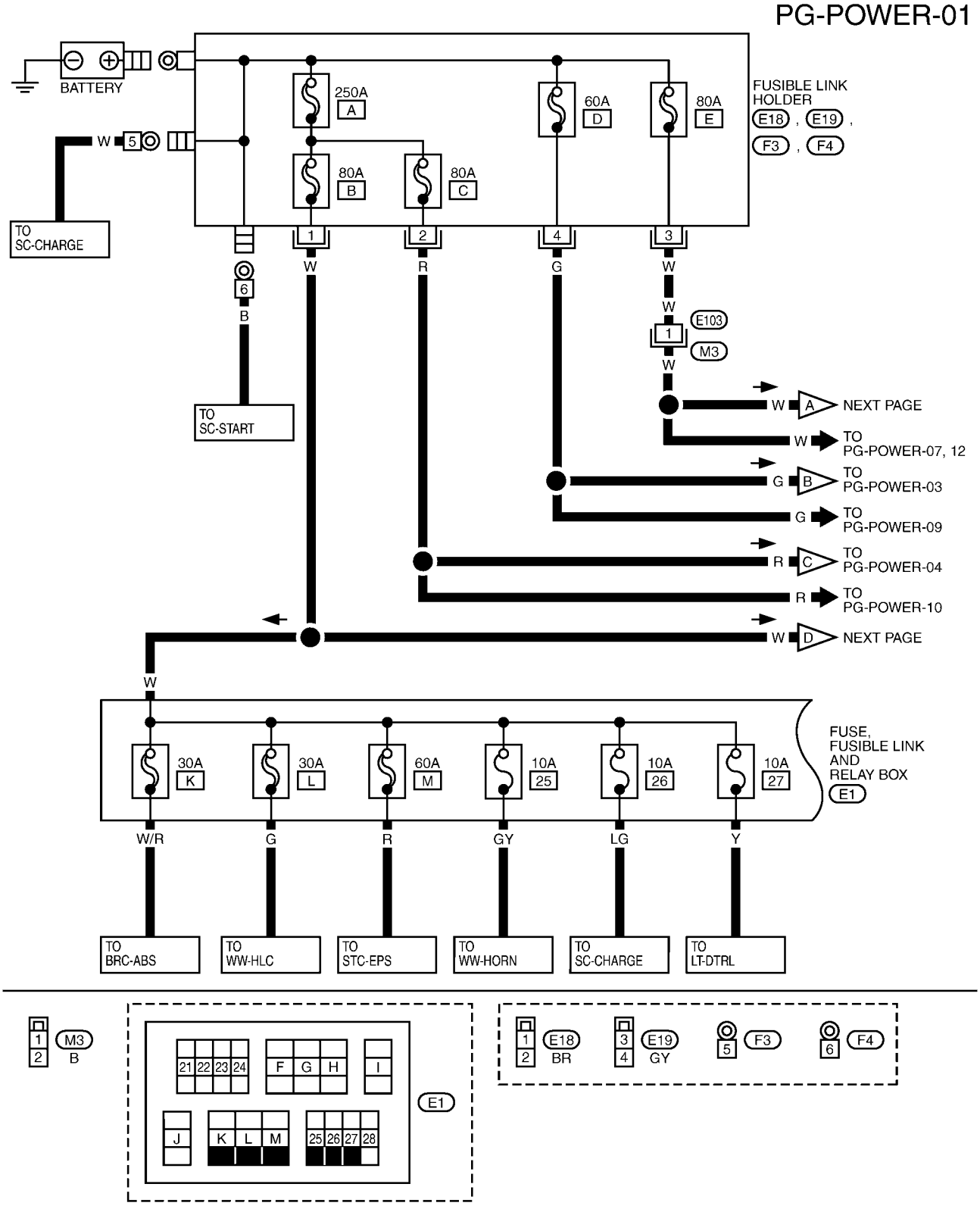
EKS00795



Wiring Diagram — POWER —

EKS00796

BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION



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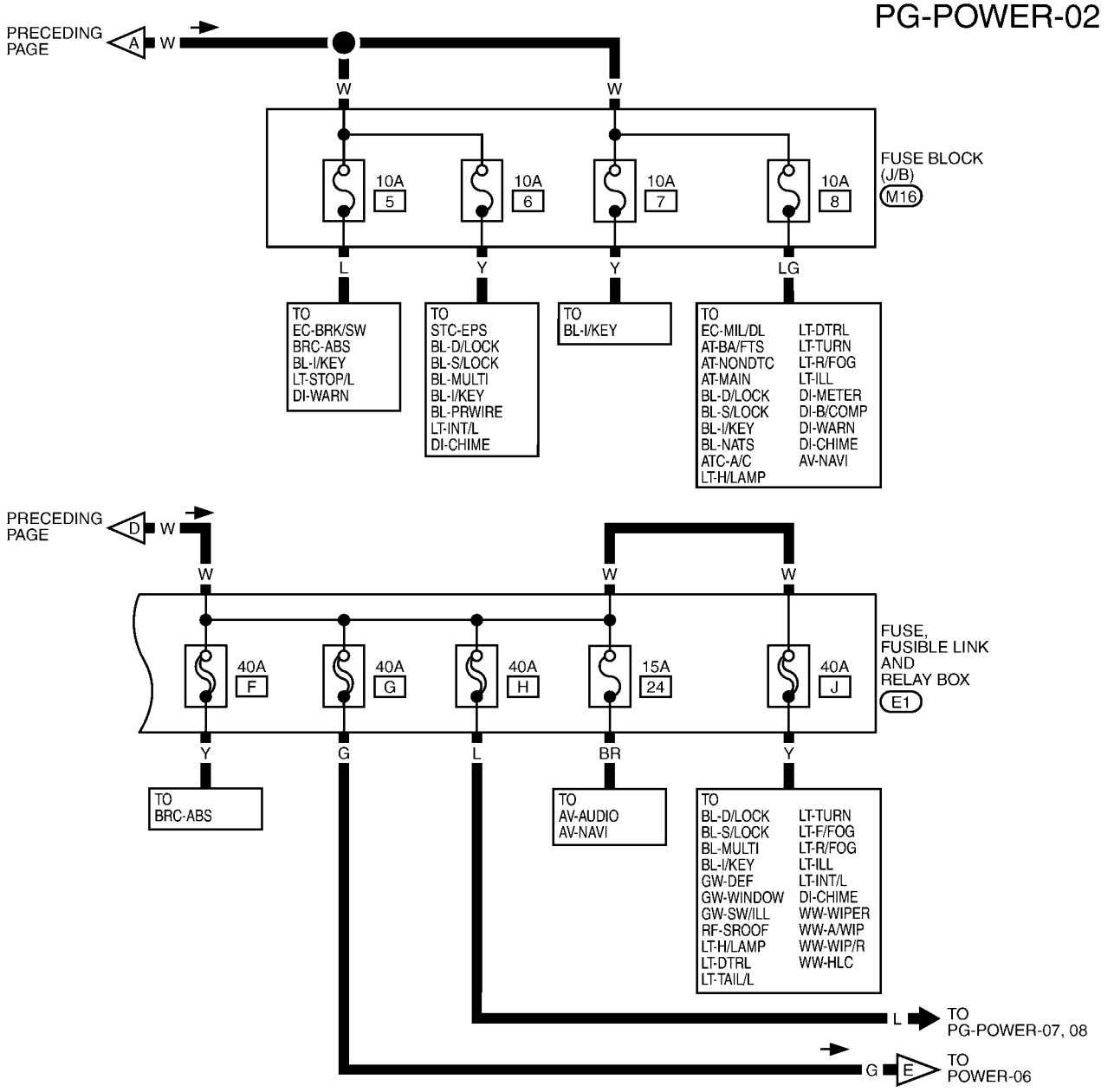
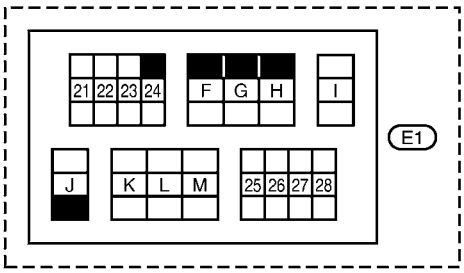
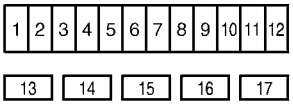
PG-POWER-02





REFER TO THE FOLLOWING.

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



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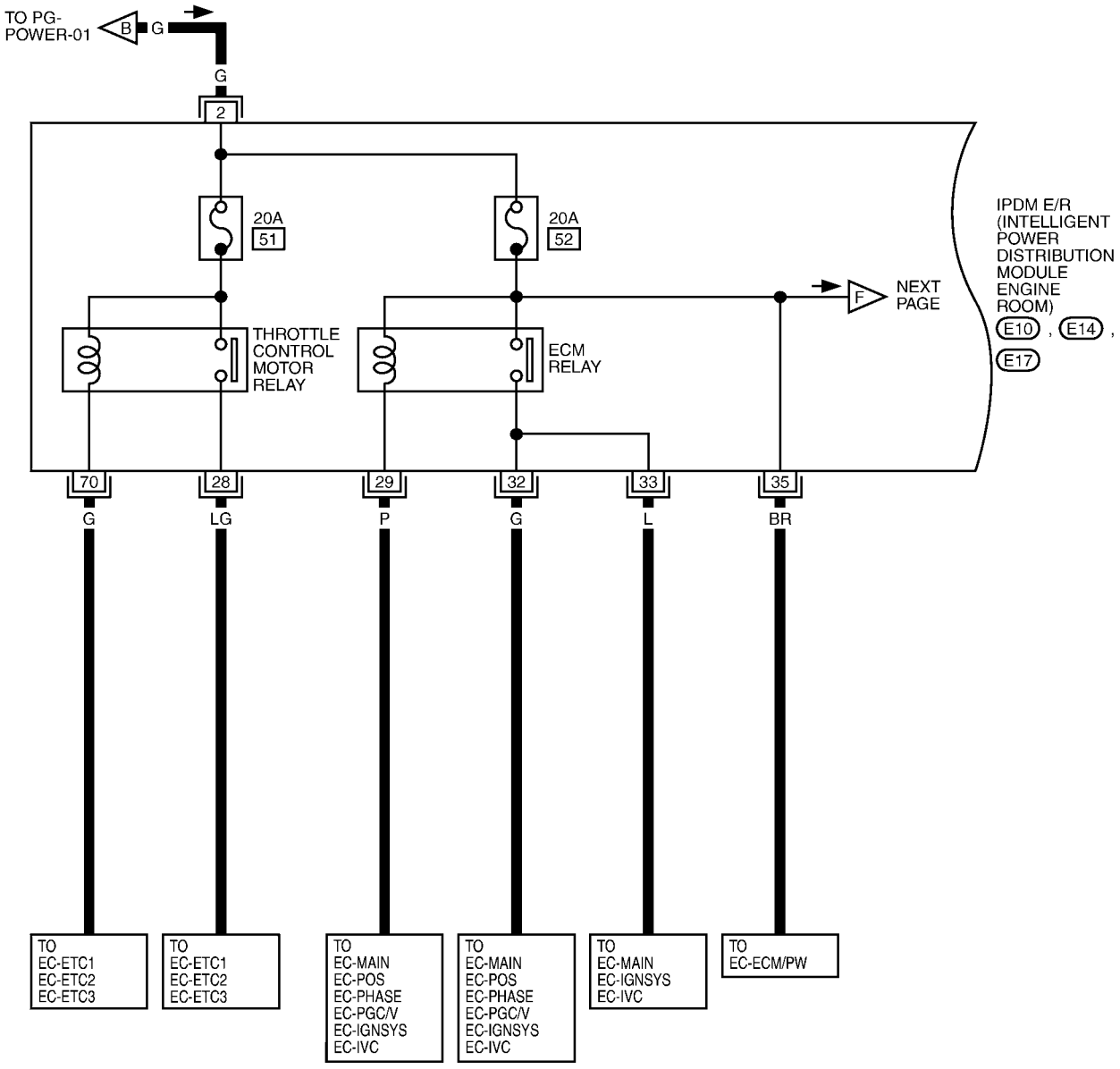

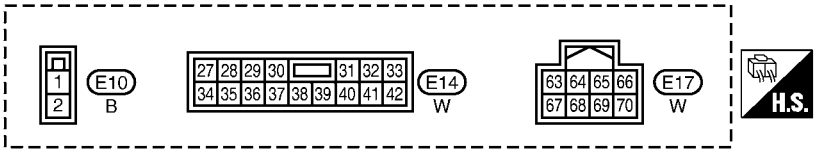

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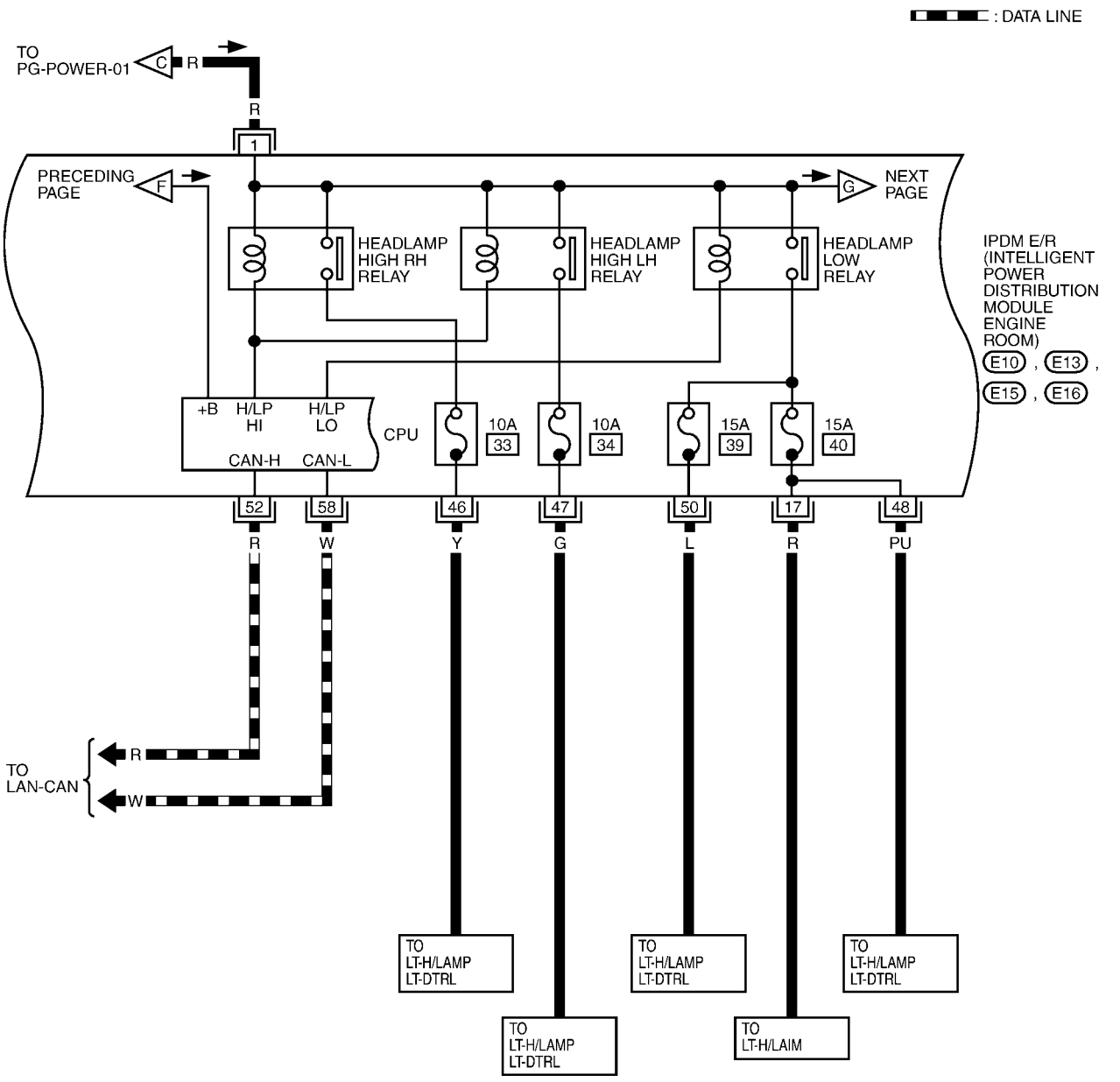
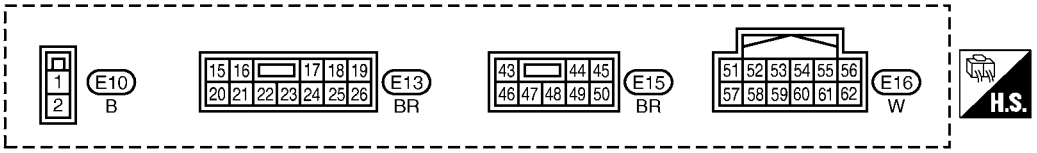
PG-POWER-04





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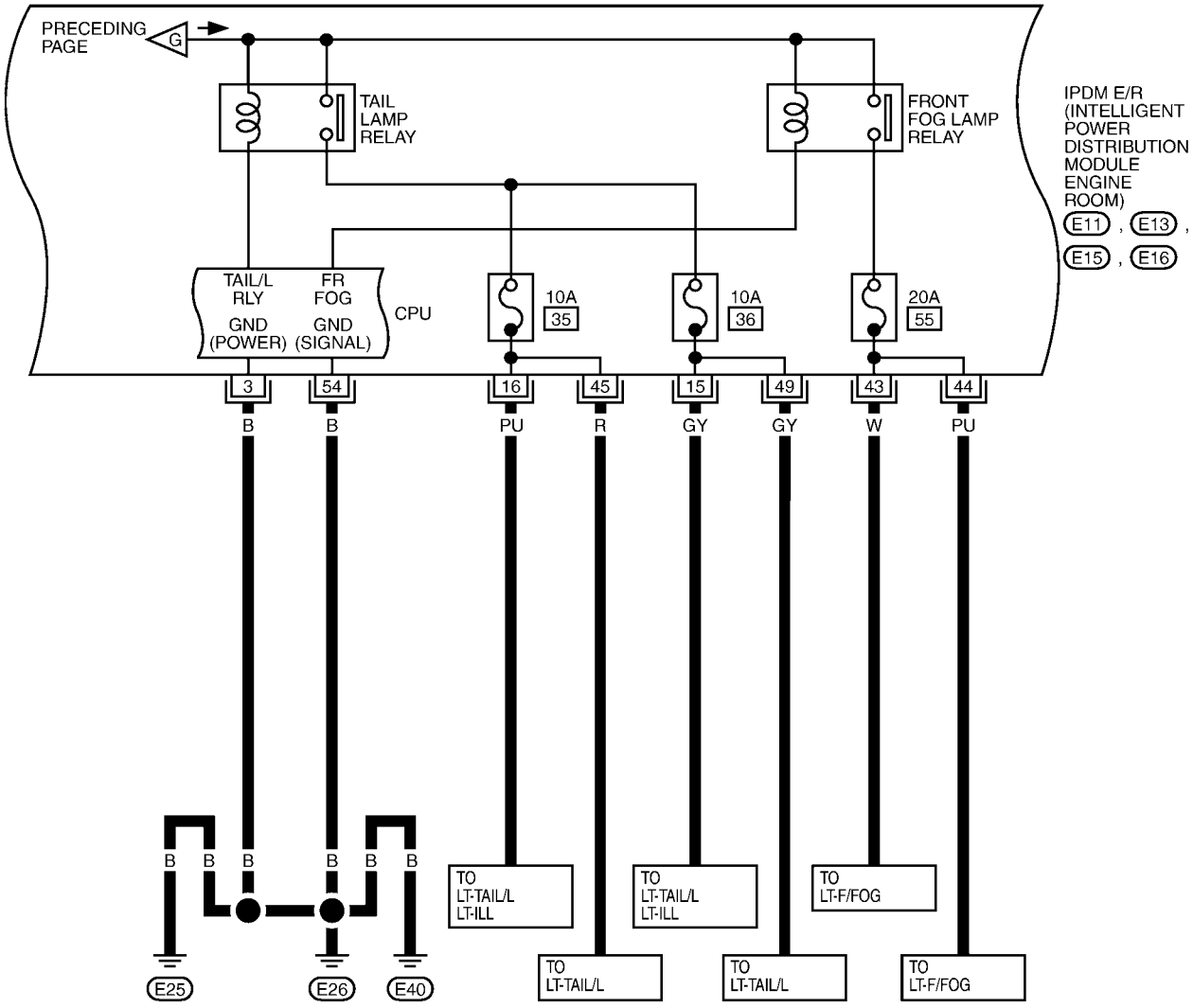
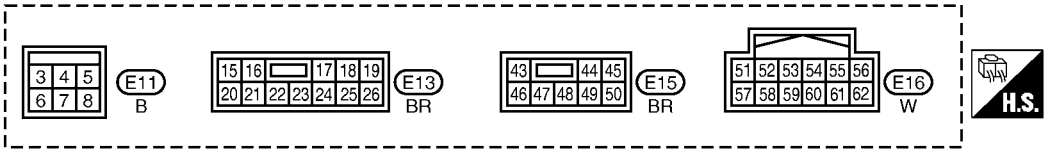
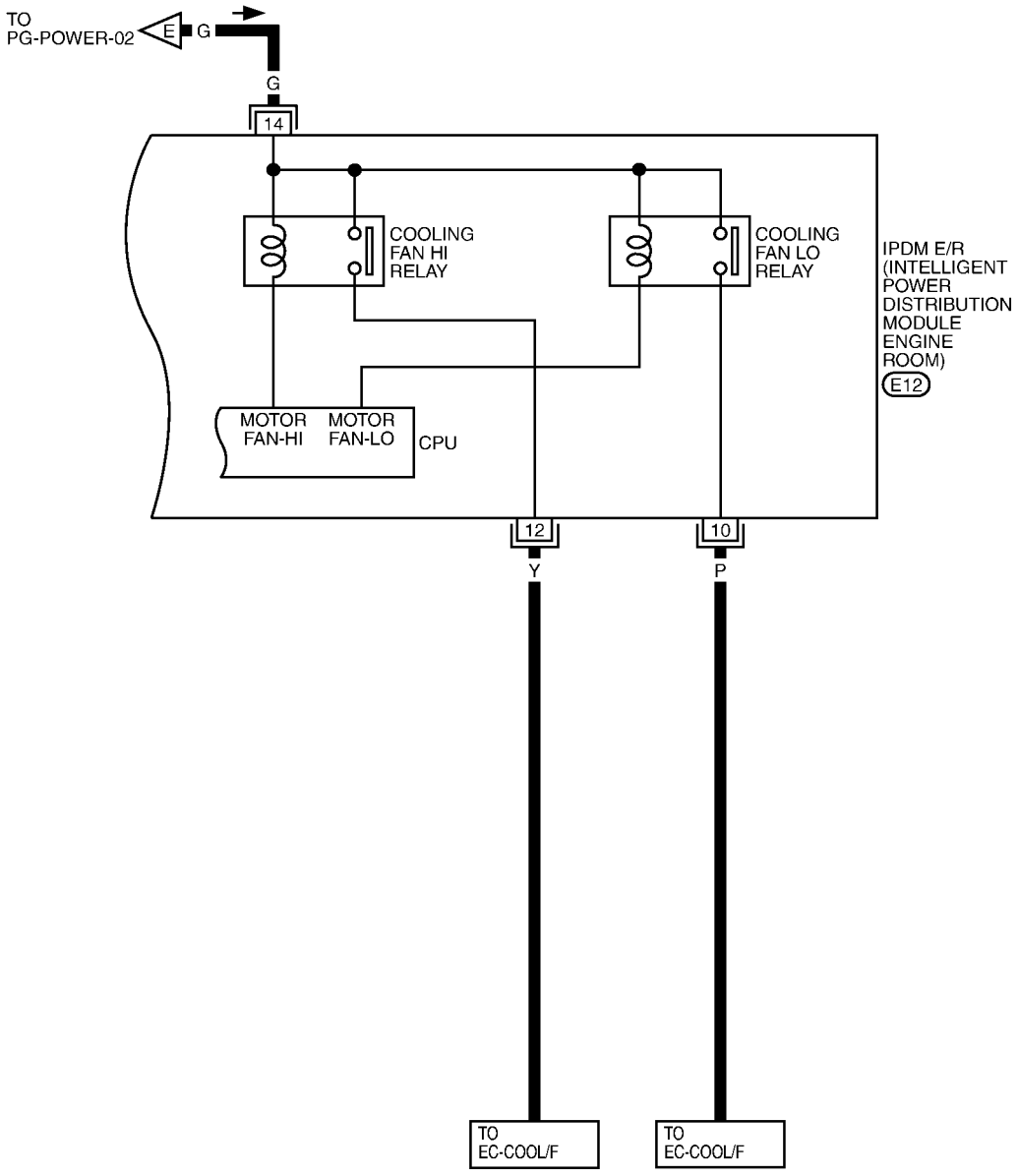

PRECEDING PAGE
G
TAIL LAMP RELAY
FRONT FOG LAMP RELAY
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E11 , E13 , E15 , E16
TAIL/L RLY GND (POWER)
FR FOG GND (SIGNAL)
CPU
10A 35
10A 36
20A 55
3 54 16 45 15 49 43 44
B B PU R GY GY W PU
B B B B B B
E25 E26 E40
TO LT-TAIL/L LT-ILL
TO LT-TAIL/L LT-ILL
TO LT-F/FOG
TO LT-TAIL/L
TO LT-TAIL/L
TO LT-F/FOG


3 4 5 6 7 8
E11
B
15 16 17 18 19 20 21 22 23 24 25 26
E13
BR
43 44 45 46 47 48 49 50
E15
BR
51 52 53 54 55 56 57 58 59 60 61 62
E16
W
H.S.

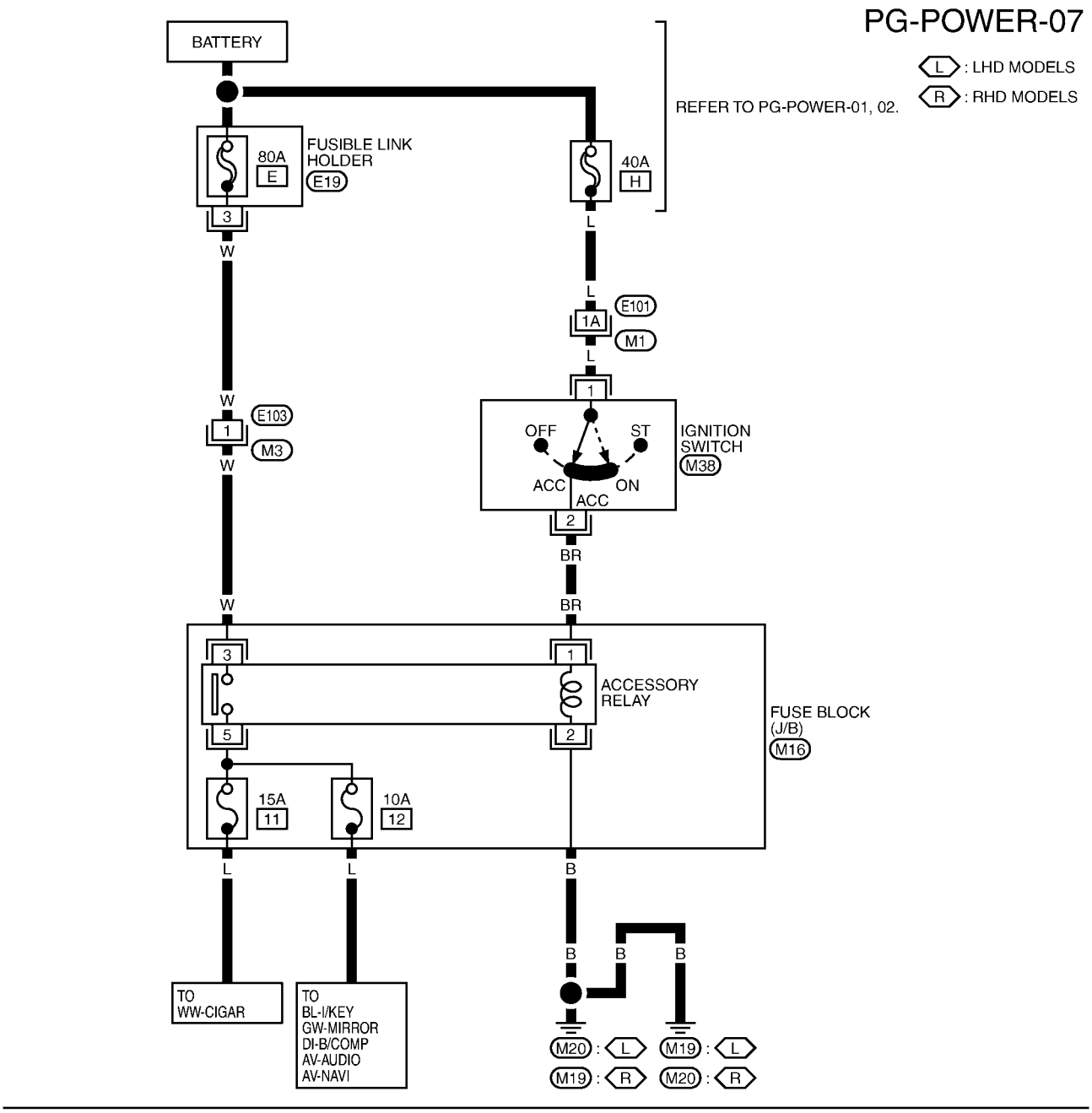
MKWA1328E


TO
PG-POWER-02
E
G
G
14
COOLING
FAN HI
RELAY
COOLING
FAN LO
RELAY
IPDM E/R
(INTELLIGENT
POWER
DISTRIBUTION
MODULE
ENGINE
ROOM)
E12
MOTOR
FAN-HI
MOTOR
FAN-LO
CPU
12
10
Y
P
TO
EC-COOL/F
TO
EC-COOL/F


9
10
11
12
13
14
E12
W
H.S.

MKWA1329E

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



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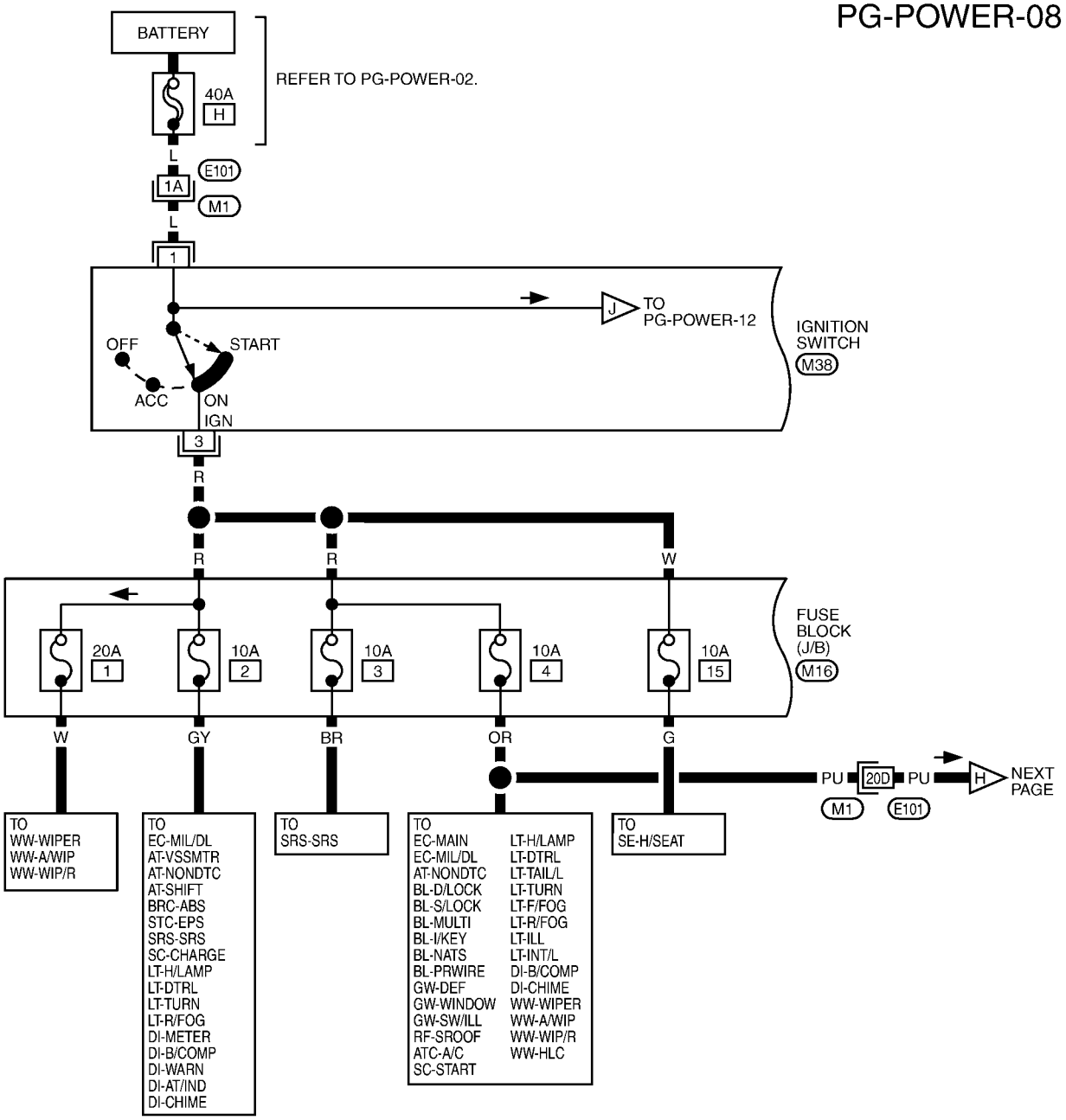
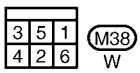
IGNITION POWER SUPPLY — IGNITION SW. IN “ON” AND/OR “START”

PG-POWER-08





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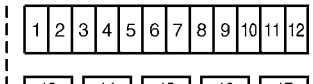
M1 -SUPER MULTIPLE JUNCTION (SMJ)

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



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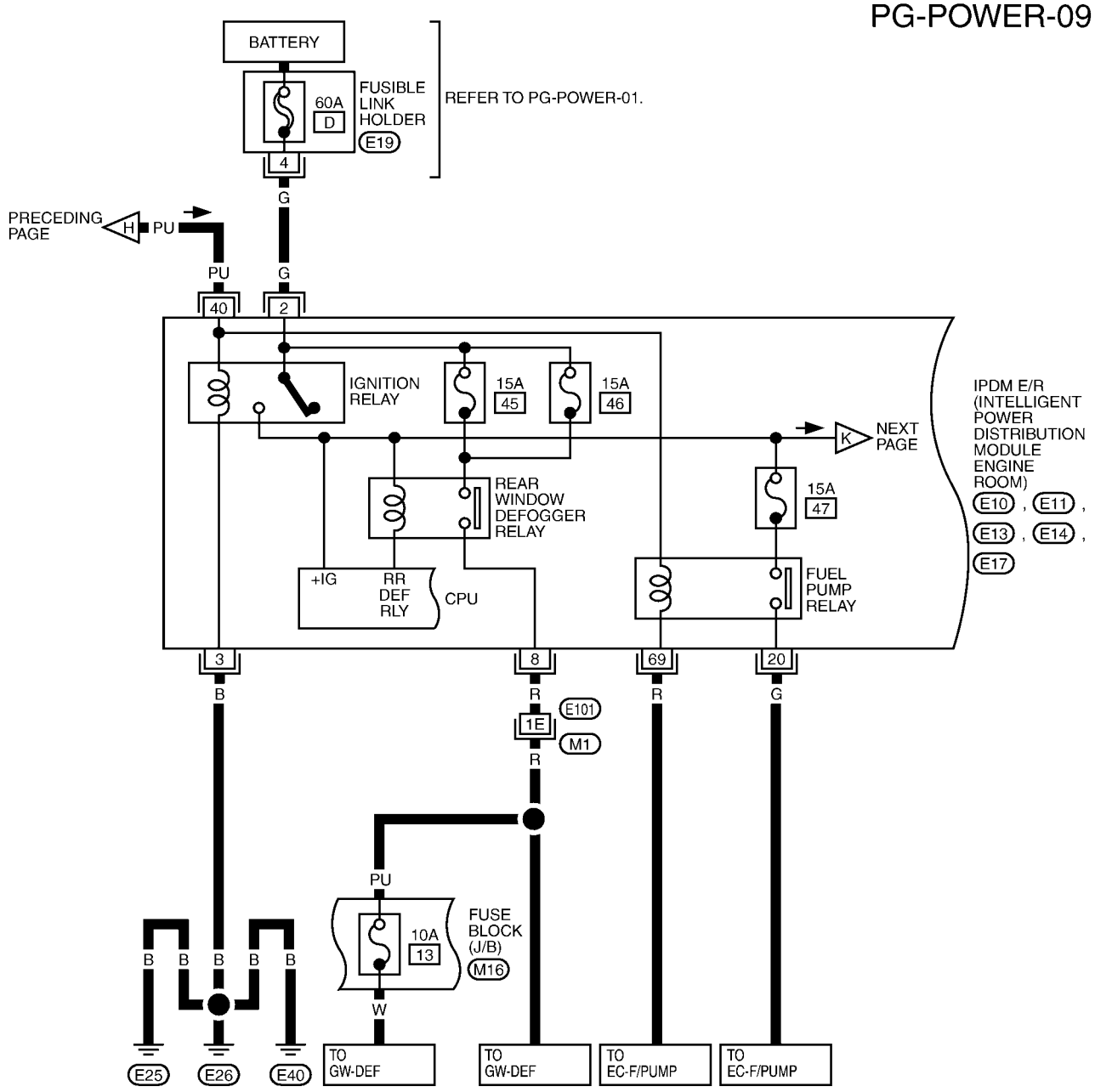
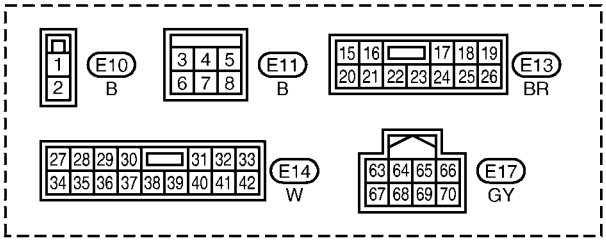
PG-POWER-09





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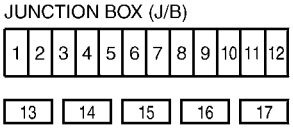
M1 -SUPER MULTIPLE JUNCTION (SMJ)

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



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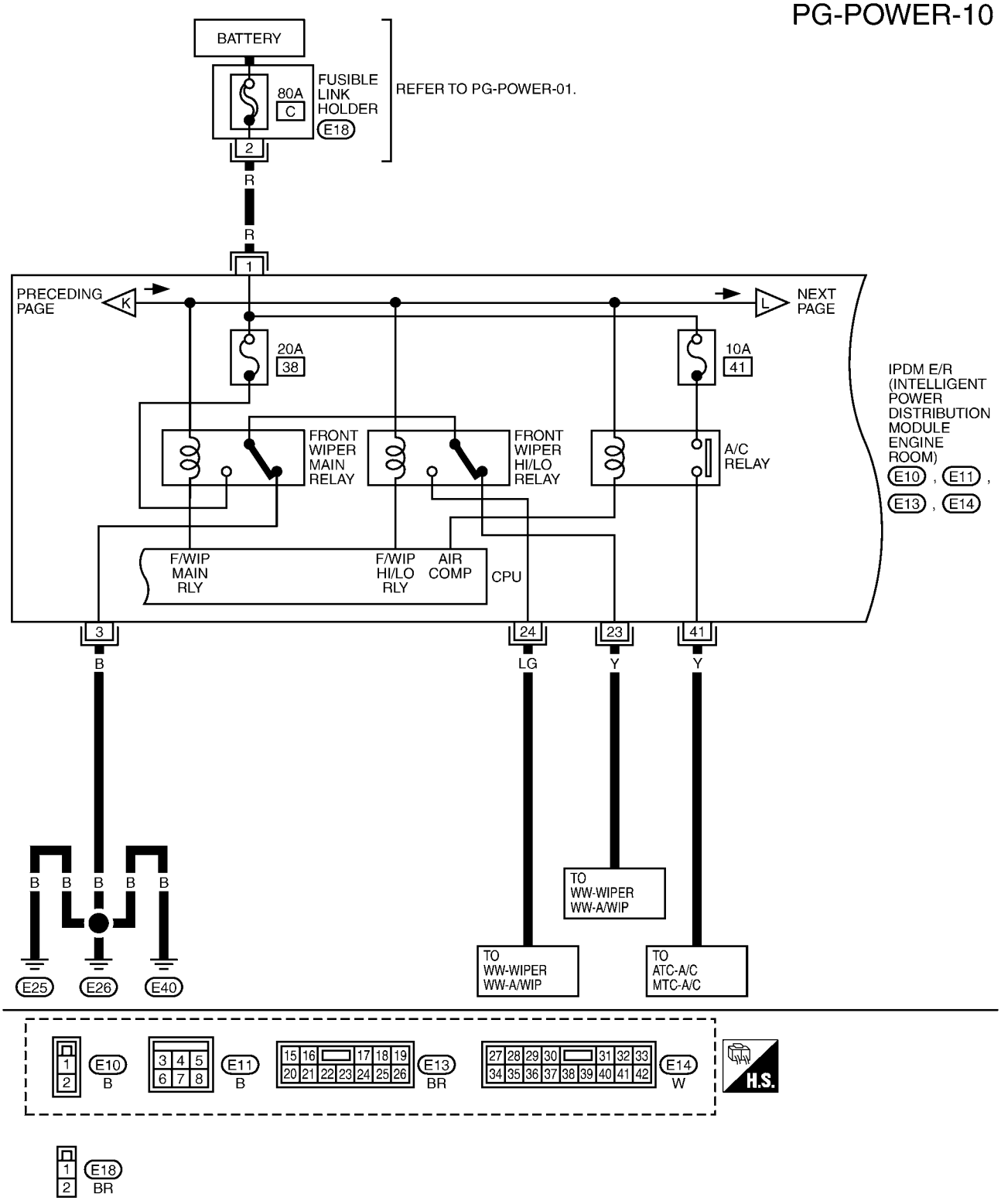
PG-POWER-10



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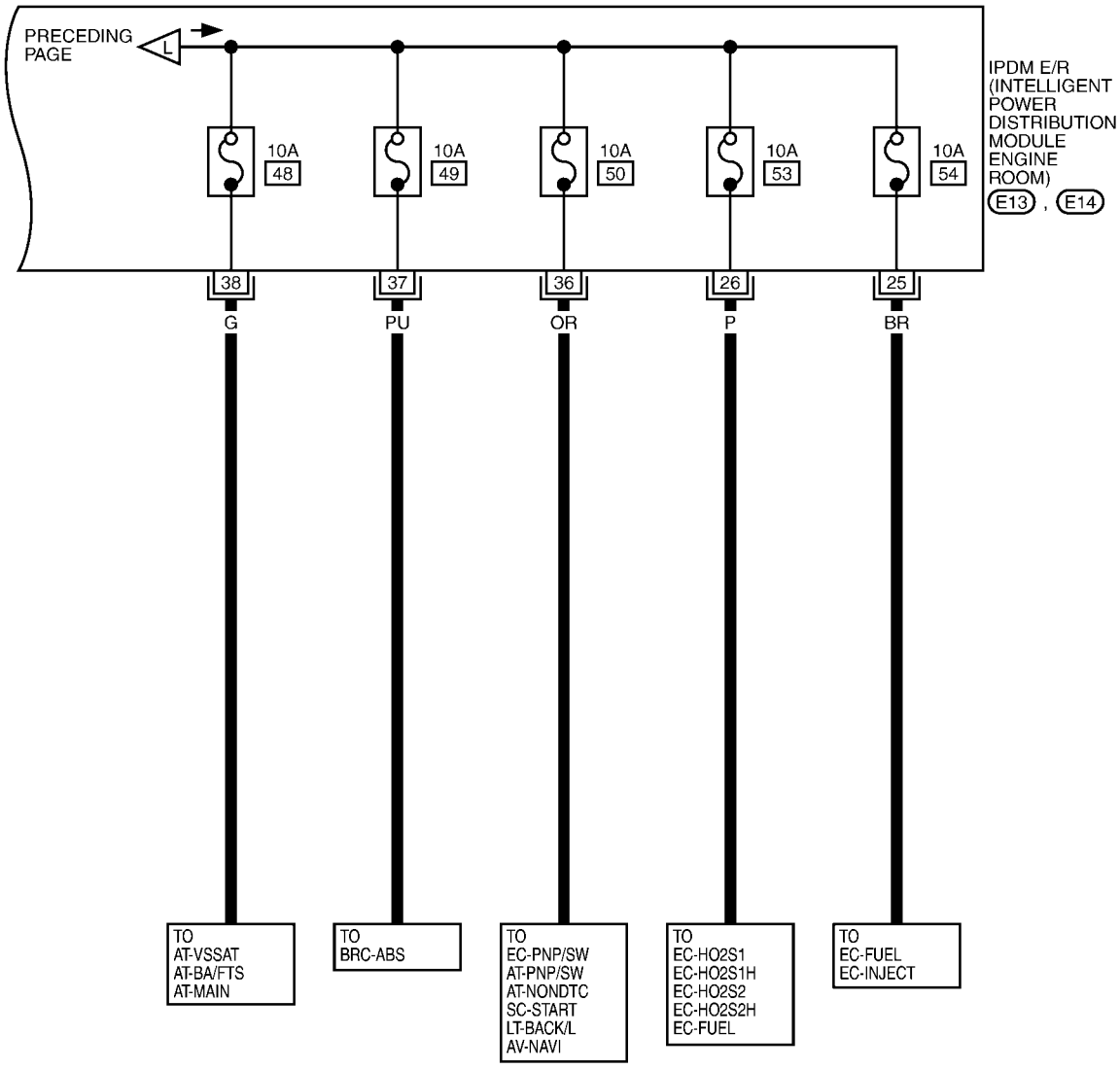
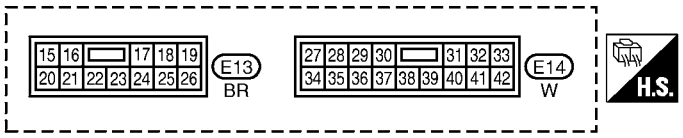
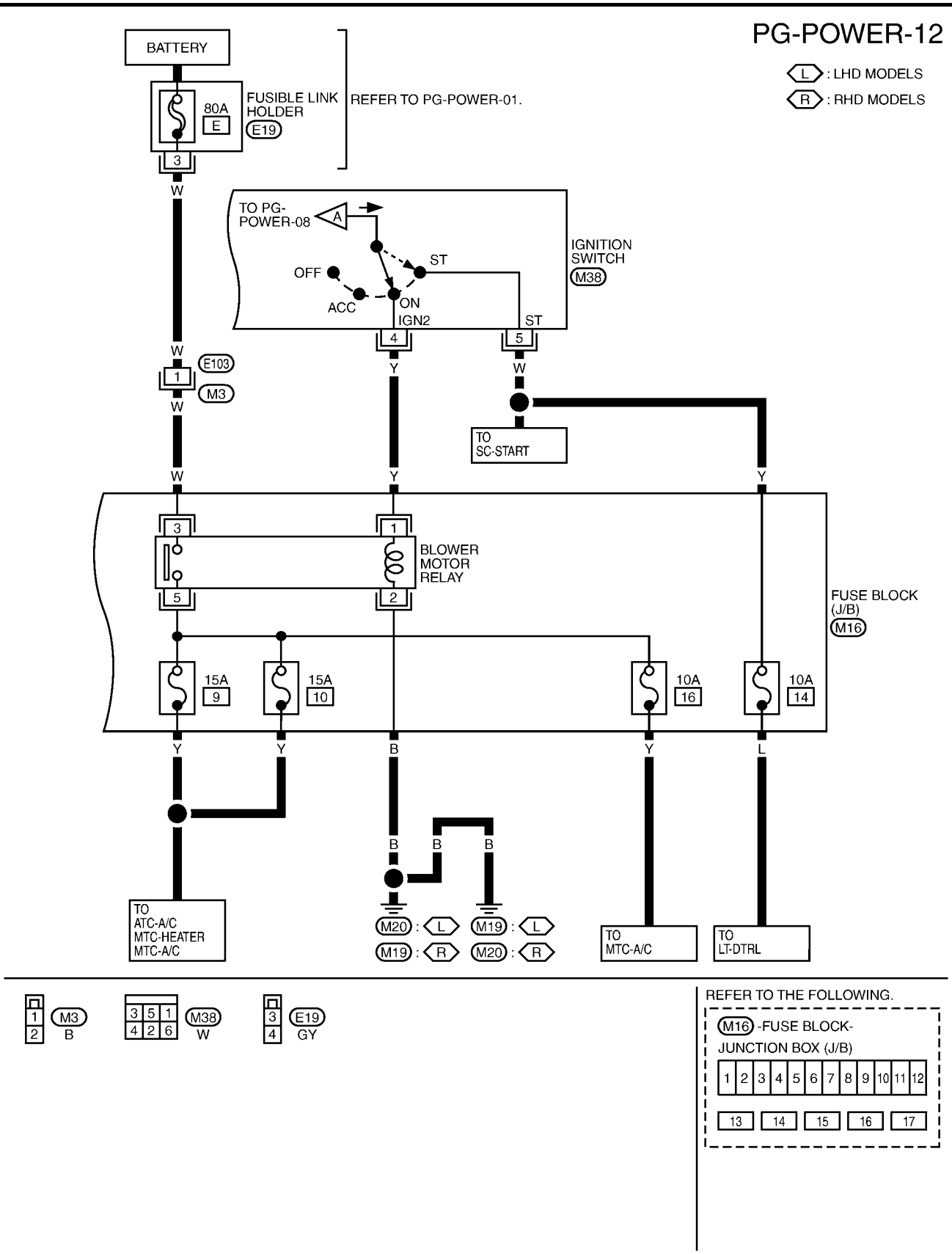

PRECEDING PAGE
L
10A 48
10A 49
10A 50
10A 53
10A 54
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E13 , E14
38
37
36
26
25
G
PU
OR
P
BR
TO AT-VSSAT AT-BA/FTS AT-MAIN
TO BRC-ABS
TO EC-PNP/SW AT-PNP/SW AT-NONDTC SC-START LT-BACK/L AV-NAVI
TO EC-HO2S1 EC-HO2S1H EC-HO2S2 EC-HO2S2H EC-FUEL
TO EC-FUEL EC-INJECT


15 16 17 18 19
20 21 22 23 24 25 26
E13
BR
27 28 29 30 31 32 33
34 35 36 37 38 39 40 41 42
E14
W
H.S.

MKWA1334E

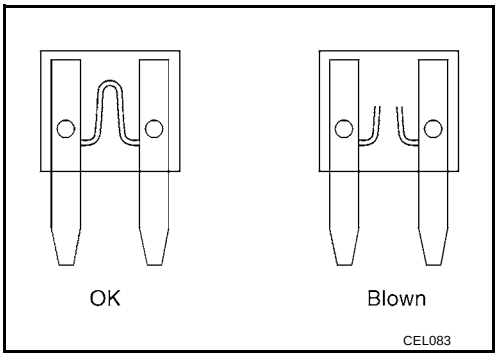

PG-POWER-12
L : LHD MODELS
R : RHD MODELS
BATTERY
80A
E
FUSIBLE LINK HOLDER
E19
3
REFER TO PG-POWER-01.
W
TO PG-POWER-08
A
OFF
ACC
ON
IGN2
ST
ST
IGNITION SWITCH
M38
4
5
W
E103
1
M3
W
Y
W
TO SC-START
W
Y
Y
3
1
5
2
BLOWER MOTOR RELAY
FUSE BLOCK (J/B)
M16
15A
9
15A
10
10A
16
10A
14
Y
Y
B
Y
L
B
B
B
M20 : L
M19 : R
M19 : L
M20 : R
TO ATC-A/C MTC-HEATER MTC-A/C
TO MTC-A/C
TO LT-DTRL
M3
B
M38
W
E19
GY
REFER TO THE FOLLOWING.
M16 -FUSE BLOCK- JUNCTION BOX (J/B)
1 2 3 4 5 6 7 8 9 10 11 12
13 14 15 16 17

MKWA1335E

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.



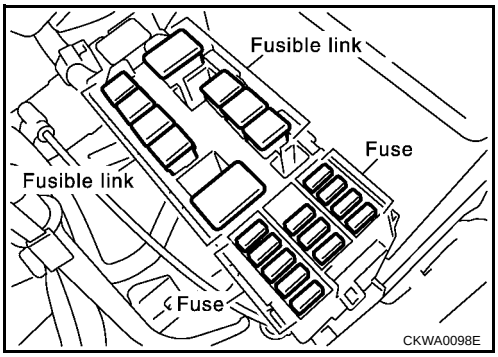
Fusible Link

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:

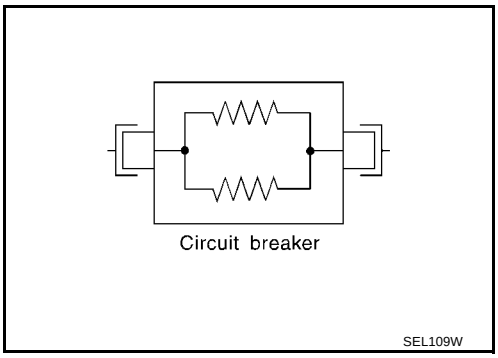
- **If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of incident.**
- **Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other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

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.

CAN Communication

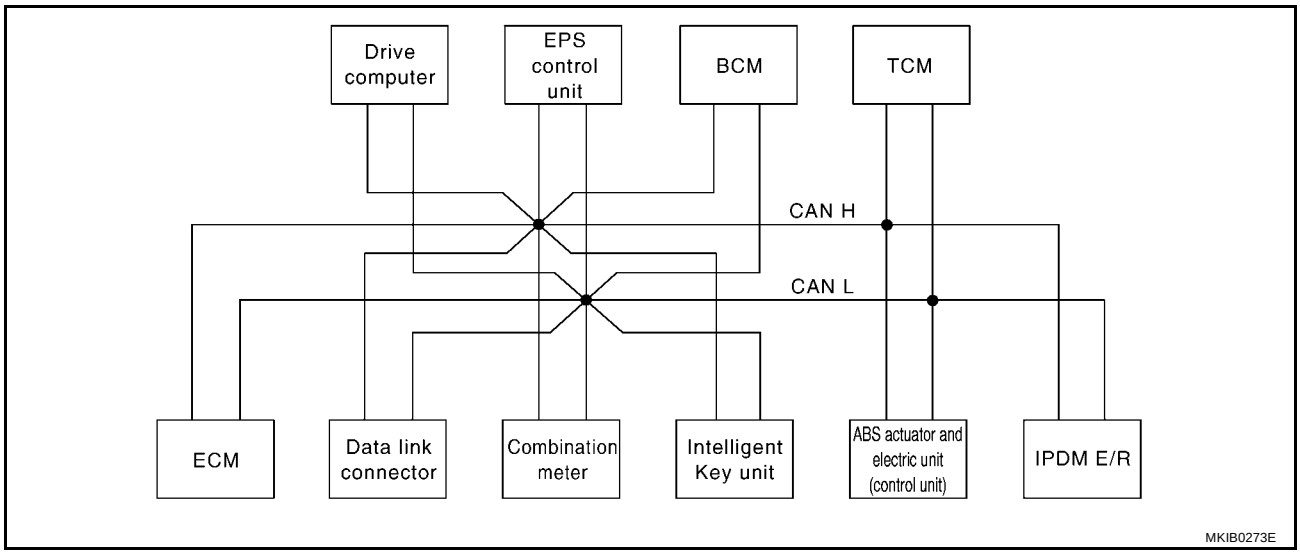
EKS0080Q

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. A modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, two control units are connected with two communication lines (CAN H-line, L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

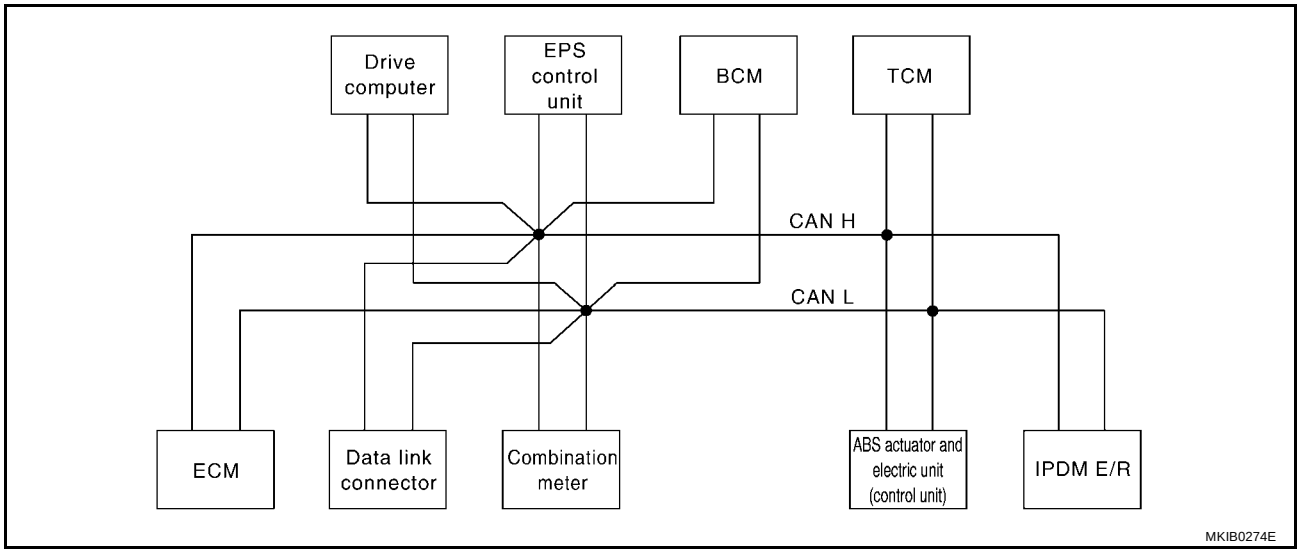
A/T MODELS

System diagram

- With intelligent key unit



- Without intelligent key unit



Input/output signal chart

T: Transmit R: Receive

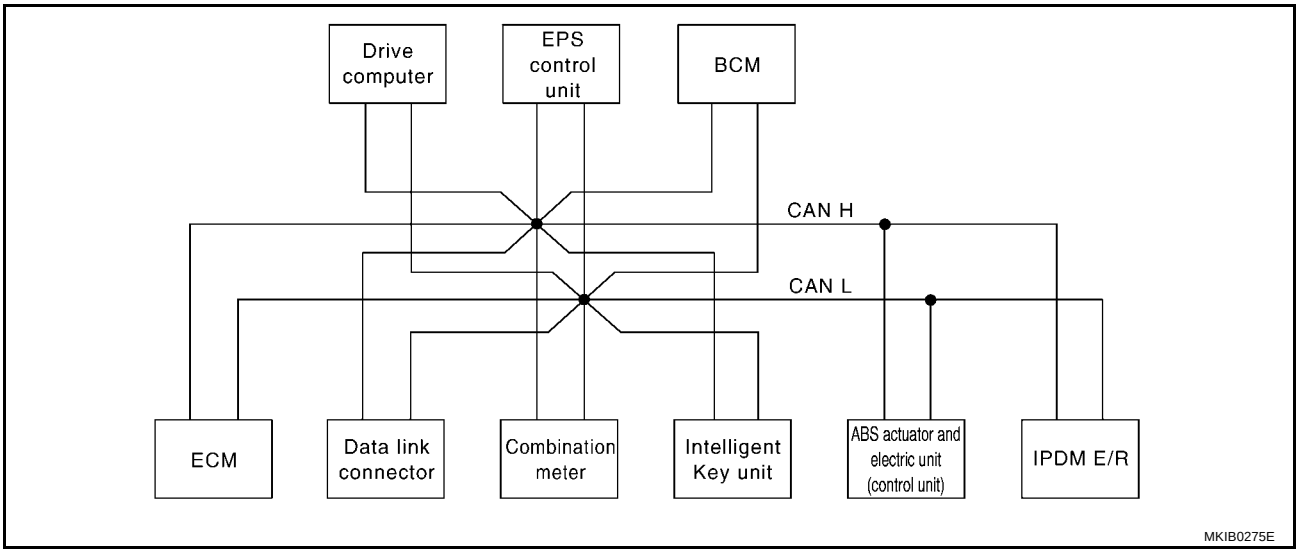
Signals	ECM	Combination meter.	Intelligent Key unit	Drive computer	EPS control unit	BCM	ABS actuator and electric unit (control unit)	TCM	IPDM E/R
Engine speed signal	T	R		R	R				
Engine coolant temperature signal	T	R							
A/T self-diagnosis signal	R							T	
Output shaft revolution signal	R							T	
Accelerator pedal position signal	T							R	
Closed throttle position signal	T							R	
Wide open throttle position signal	T							R	
A/T shift position signal		R						T	
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		R					T
A/C compressor request signal	T								R
Heater fan switch signal	R					T			
Cooling fan speed request signal	T								R
Cooling fan speed status signal	R								T
Position lights request signal		R		R		T			R
Position light status signal	R								T
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	R			
Sleep/wake up signal		R	R			T			R
Door switch signal		R	R	R		T			R
Turn indicator signal		R				T			
Buzzer output signal		R				T			
		R	T						
MI signal	T	R		R					
Front wiper request signal						T			R
Front wiper stop position signal						R			T
Rear window defogger switch signal						T			R

Signals	ECM	Combi-nation meter.	Intelli-gent Key unit	Drive com-puter	EPS control unit	BCM	ABS actuator and electric unit (control unit)	TCM	IPDM E/R
Rear window defogger control signal	R								T
Drive computer signal		T		R					
EPS warning lamp signal		R		R	T				
ABS warning lamp signal		R		R			T		
ABS operation signal	R						T		
Brake warning lamp signal		R		R			T		
Buck-up lamp signal					R	T			
Fuel low warning signal		T		R					
Battery charge malfunction signal		T		R					
Air bag system warning signal		T		R					
Brake fluid level warning signal		T		R					
Engine coolant temperature warning signal		T		R					
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			R			T			
Door lock/unlock status signal			R			T			
KEY indicator signal		R	T						
LOCK indicator signal		R	T						

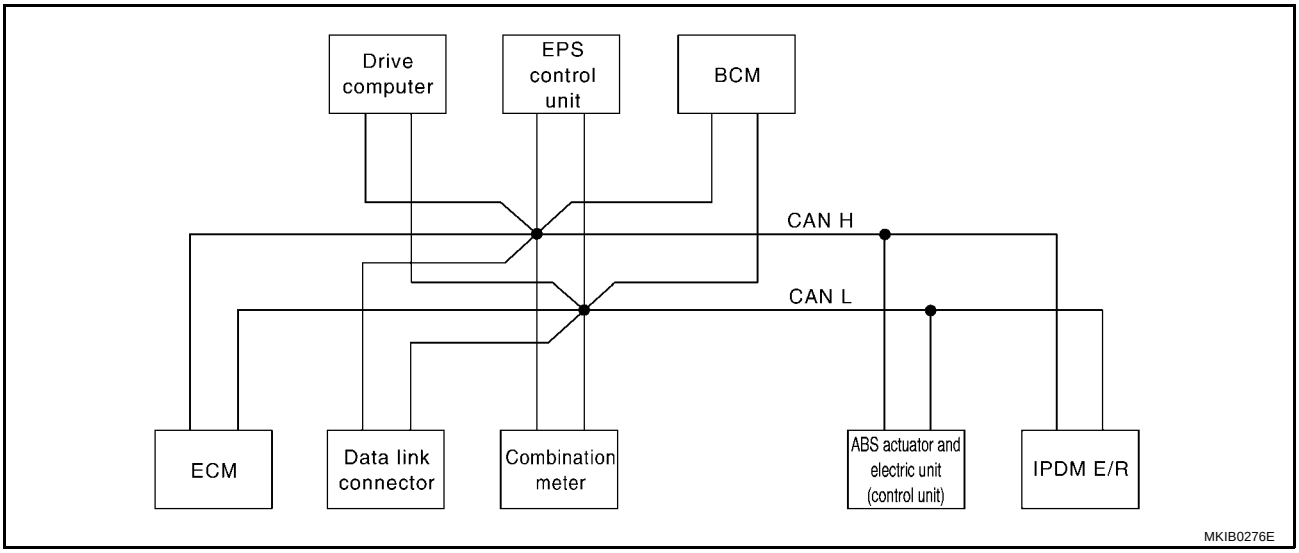
M/T MODELS

System diagram

- With intelligent key unit



- Without intelligent key unit



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Combination meter.	Intelligent Key unit	Drive computer	EPS control unit	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R		R	R			
Engine coolant temperature signal	T	R						
Fuel consumption monitor signal	T	R						
Oil pressure switch signal		R		R				T
A/C compressor request signal	T							R
Heater fan switch signal	R					T		
Cooling fan speed request signal	T							R
Cooling fan speed status signal	R							T
Position lights request signal		R		R		T		R

Signals	ECM	Combination meter.	Intelligent Key unit	Drive computer	EPS control unit	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Position light status signal	R							T
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	R		
Sleep/wake up signal		R	R			T		R
Door switch signal		R	R	R		T		R
Turn indicator signal		R				T		
Buzzer output signal		R				T		
		R	T					
MI signal	T	R		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
Drive computer signal		T		R				
EPS warning indicator signal		R		R	T			
ABS warning lamp signal		R		R			T	
ABS operation signal	R			R			T	
Brake warning lamp signal		R					T	
Buck-up lamp signal					R	T		
Fuel low warning signal		T		R				
Battery charge malfunction signal		T		R				
Air bag system warning signal		T		R				
Brake fluid level warning signal		T		R				
Engine coolant temperature warning signal		T		R				
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			R			T		
Door lock/unlock status signal			R			T		
KEY indicator signal		R	T					
LOCK indicator signal		R	T					

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 Functions

EKS0080S

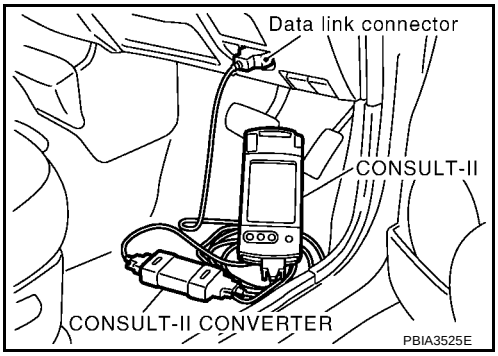
CONSULT-II performs the following functions with combination of data receiving, command and transmission using the CAN communication line from the IPDM E/R.

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

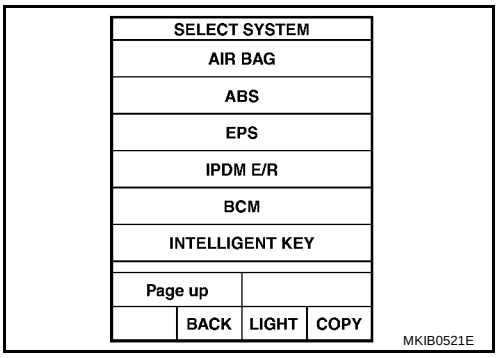
CONSULT-II BASIC OPERATION

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

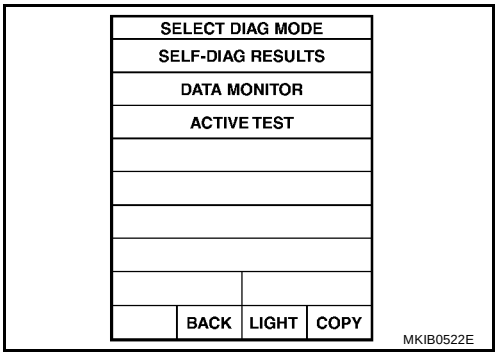
   CAUTION:
   If CONSULT-II is used without connecting CONSULT-II CONVERTER, malfunction may be detected in some control unit performing CAN communication by self-diagnosis.
3. Turn ignition switch ON.



4. Touch “START (NISSAN BASED VHCL)”.
5. 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" .



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

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
A/C 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	OFF/1LO/LO/HI	×	×	×	Signal status input from BCM
WIP AUTO STOP	ON/OFF	×	×	×	Output status of IPDM E/R
WIP PROTECTION	OFF/LS/HS/Block	×		×	Control status of IPDM E/R
ST RLY REQ	ON/OFF	×		×	Status of input signal CAUTION
IGN RLY STATUS	ON/OFF	×	×	×	Ignition relay status monitored with IPDM E/R
RR DEF REQ	ON/OFF	×	×	×	Signal status input from BCM
RR 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.

CAN TROUBLE DIAGNOSIS SUPPORT MONITOR

Operation Procedure

1. Touch “DATA MONITOR” on “SELECT MONITOR ITEM” screen.
2. Touch “CAN DIAG SUPPORT MNTR” on the “DATA MONITOR” screen.
3. Touch “START”.
4. Touch “RECORD” while monitoring to record the status of the item being monitored. To stop recording, touch “STOP”.

Display item	Display
CAN CIRC 1	OK/UNKWN
CAN CIRC 2	OK/UNKWN
CAN CIRC 3	OK/UNKWN
CAN1 STAT	0.00/1.00
CAN2 STAT	0.00/1.00
CAN3 STAT	0.00/1.00

NOTE:

The details for display of the period are as follows:

- 0.00 = Normal
- 1.00 = IPDM E/M detected malfunction of CAN communication in the past.

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	HEADLAMP	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	HEADLAMP WASHER	With a certain ON-OFF operation, the headlamp washer can be operated.

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's seat door switch 10 times. Then turn ignition switch OFF.

   CAUTION:
   Keep passenger's the seat 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-54, "Oil Pressure Warning Lamp Stays Off (Ignition Switch ON)"** **and the** **BL-48, "Check Door Switch"** **.**

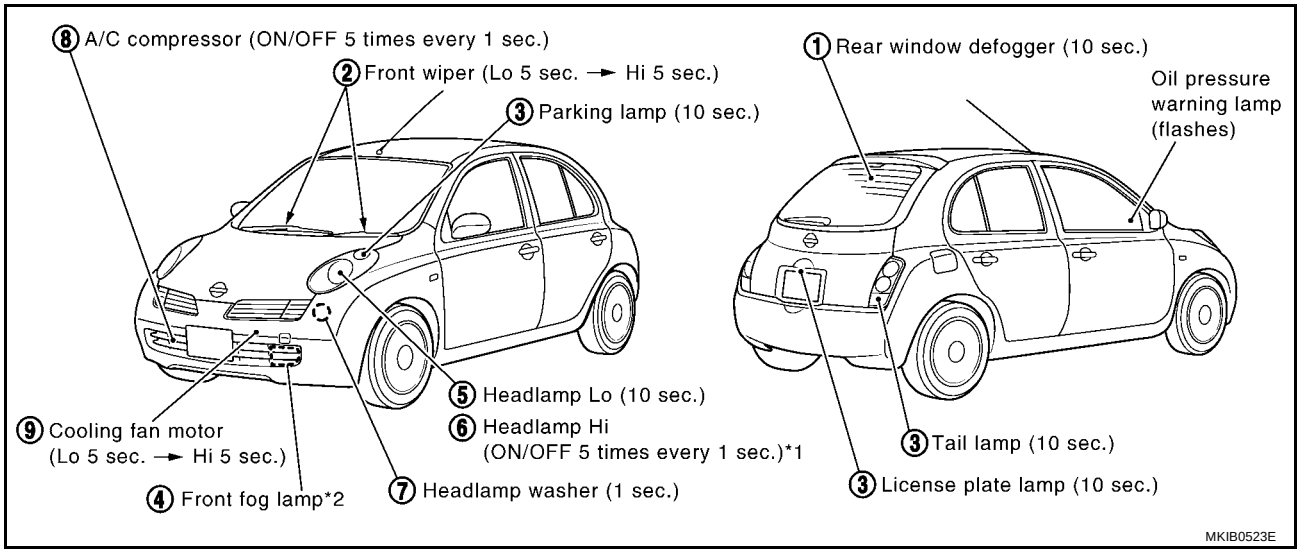
INSPECTION IN AUTO ACTIVE TEST MODE

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.)

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

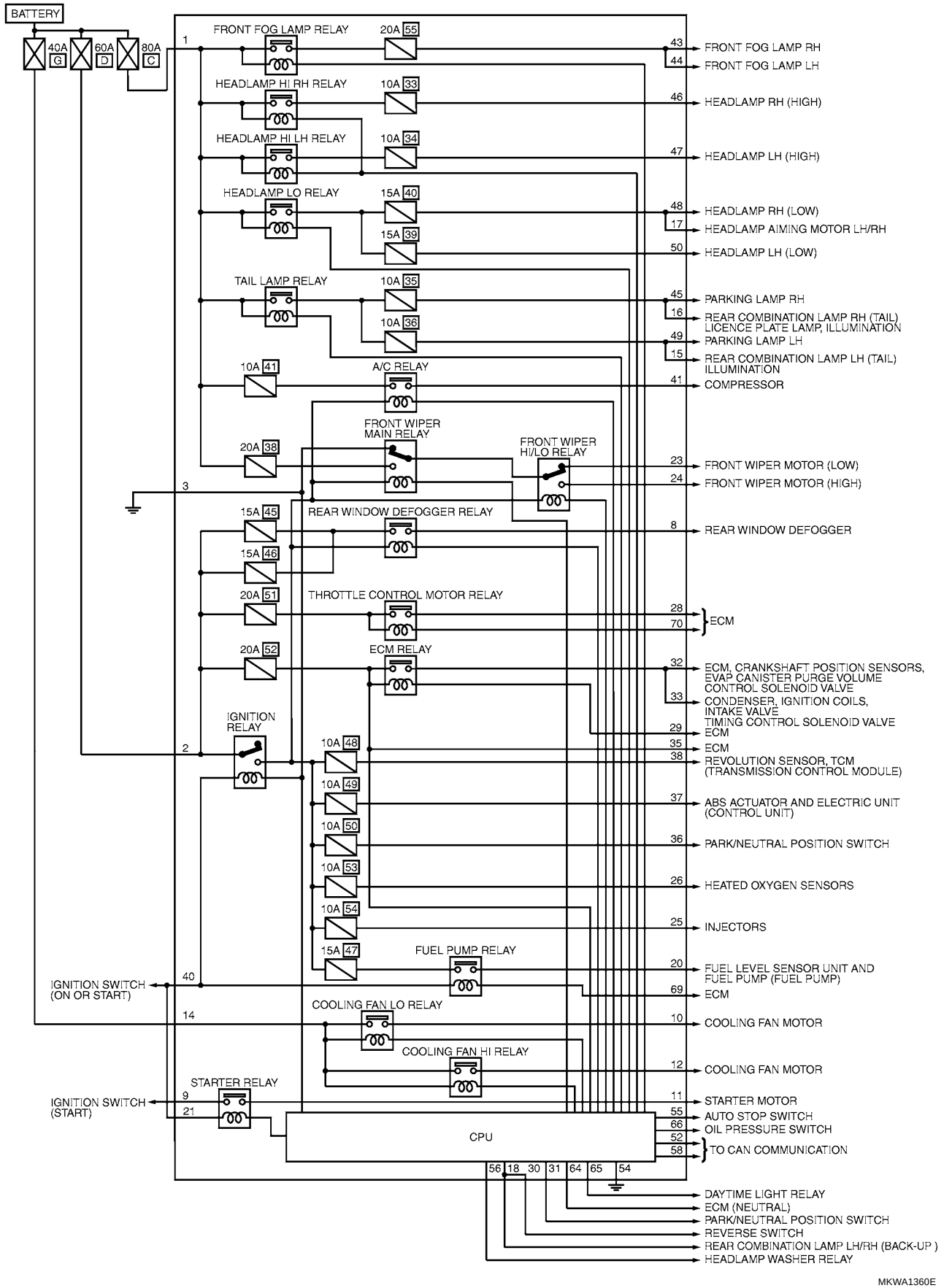
Symptom	Inspection Contents		Possible causes	Reference page
Rear window defogger does not operate.	Perform auto active test. Does rear window defogger operate?	YES	● BCM signal input system	GW-14
		NO	● Harness for open or short between the IPDM E/R and the rear window defogger ● Open circuit of rear 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-4 (without rain sensor) or WW-37 (with rain sensor)
		NO	● 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-82
		NO	● 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-48
		NO	● 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-5, "HEADLAMP - CONVENTIONAL TYPE-" or LT-32, "HEADLAMP - DAYTIME LIGHT SYSTEM -"
		NO	● 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-73
		NO	● 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	● Signal input system of ECM ● CAN communication signal between ECM and IPDM E/R*	EC-326 (with EURO-OBD) or EC-613 (without EURO-OBD)
		NO	● Malfunction of cooling fan ● Harness open or short between the IPDM E/R and the cooling fan. ● IPDM E/R (integrated relay) malfunction	

Symptom	Inspection Contents		Possible causes	Reference page
The A/C compressor is inoperative.	Perform auto active test. Does magnetic clutch operate?	YES	● 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-39
		NO	● 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	● Harness for open or short between IPDM E/R and oil pressure switch. ● Oil pressure switch malfunction	DI-48
		NO	● CAN communication signal between IPDM E/R and combination meter*. ● Combination meter	

*: Perform IPDM E/R self-diagnosis with CONSULT-II. Refer to PG-35, "Inspection With CONSULT-II (Self-Diagnosis)"

Schematic

EKS0080U

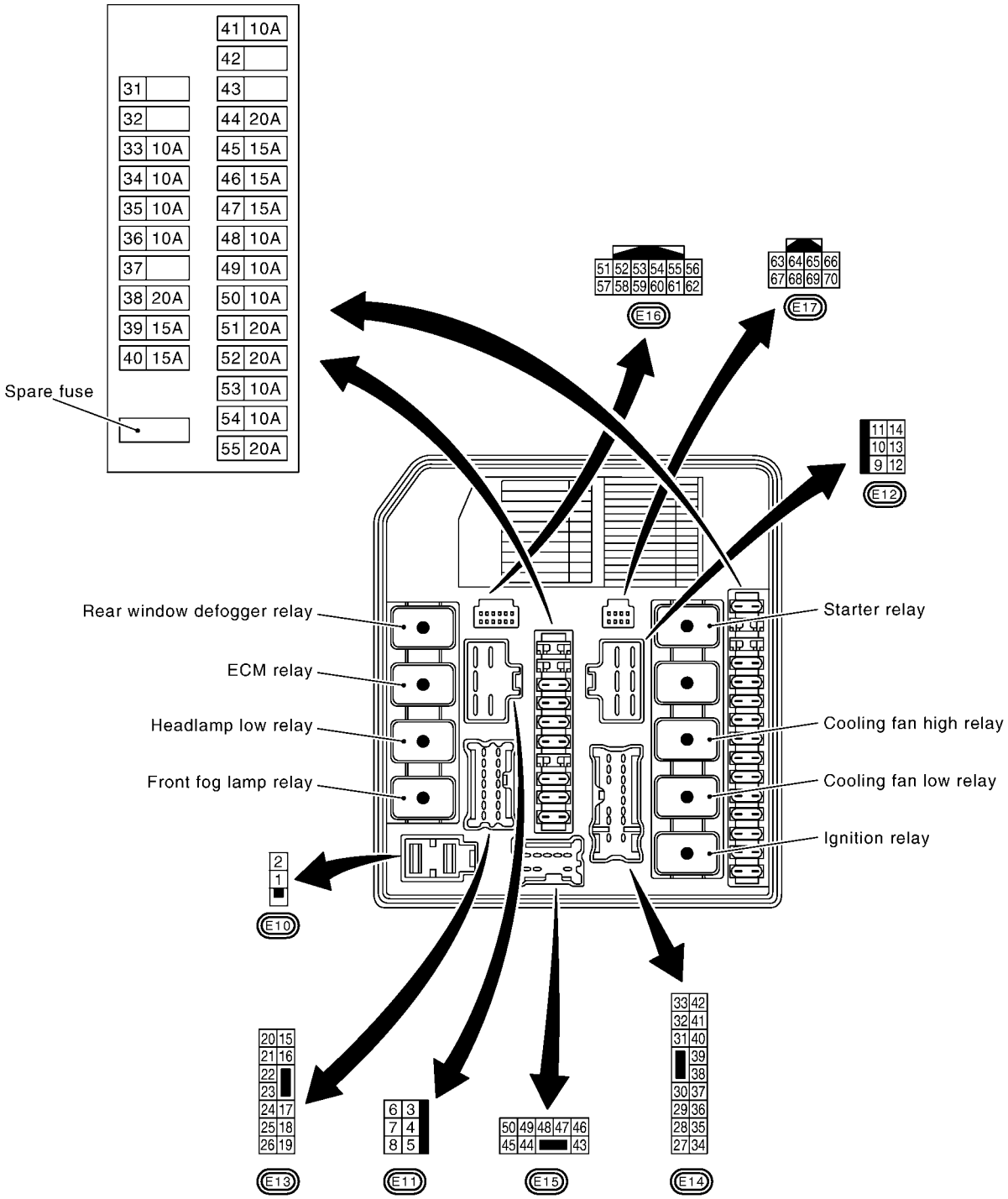


MKWA1360E

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

IPDM E/R Terminal Arrangement

EKS0080V



MKWA1370E

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
		CRNT	PAST	
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. ● CAN CIRC 1 ● CAN CIRC 2 ● CAN CIRC 3 ● CAN1 STAT ● CAN2 STAT ● CAN3 STAT

×: 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>>Print out the self-diagnostic result and go to 2.
IGN RELAY ON>>Replace IPDM E/R.
IGN RELAY OFF>>Replace IPDM E/R.
EEPROM>>Replace IPDM E/R.

2. SYMPTOM CHECK

1. Select “CAN DIAG SUPPORT MNTR” on the DATA MONITOR.
2. Select “START” and check display contents.

Diagnosis item	Data monitor display contents	
	Normal conditions	Malfunction conditions (example)
CAN CIRC 1	OK	UNKWN
CAN CIRC 2	OK	UNKWN
CAN CIRC 3	OK	UNKWN
CAN1 STAT	0.00	1.00
CAN2 STAT	0.00	1.00
CAN3 STAT	0.00	1.00

NOTE:

- 0.00: Normally
- 1.00: IPDM E/R detects malfunction in the past.

>> After print-out of the monitor items, refer to LAN-3, "Precautions When Using CONSULT-II" .

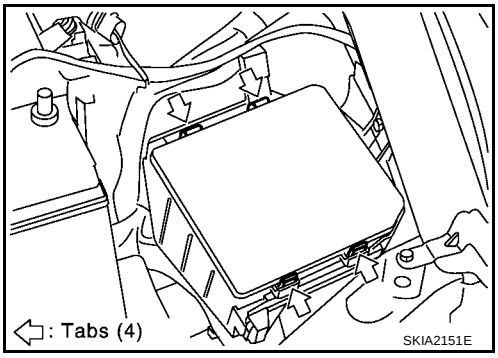
IPDM E/R Terminal Inspection

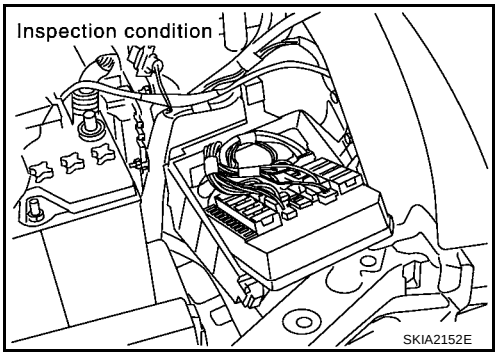
EKS0080X

CAUTION:

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

1. Remove the headlamp (LH).
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)	80

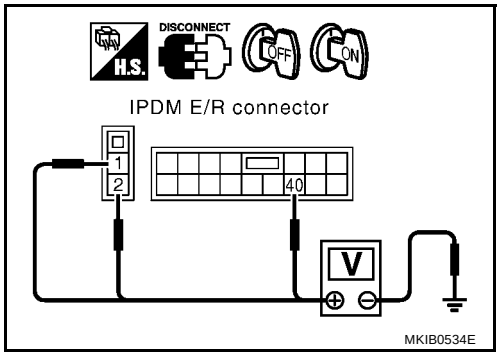
OK or NG

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

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		
(+)		(-)	OFF	ACC	ON
Connector	Terminal (Wire color)				
E10	1 (R)	Ground	Battery voltage	Battery voltage	Battery voltage
	2 (G)		Battery voltage	Battery voltage	Battery voltage
E14	40 (PU)		0V	Battery voltage	Battery voltage



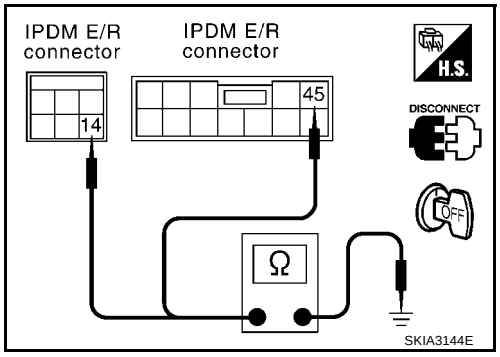
OK or NG

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 E12 terminal 14 (B), E16 terminal 54 (B) and 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-35, "Inspection With CONSULT-II (Self-Diagnosis)"
ECM relay>>Go to EC-115, "POWER SUPPLY CIRCUIT FOR ECM" (with EURO-OBD) or EC-500, "POWER SUPPLY CIRCUIT FOR ECM" (without EURO-OBD) in “EC engine control”.
Throttle motor relay>>Go to EC-284, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY" (with EURO-OBD) or EC-599, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY" (without EURO-OBD) in “EC engine control”
Fuel pump relay>>Go to EC-391, "FUEL PUMP CIRCUIT" (with EURO-OBD) or EC-717, "FUEL PUMP CIRCUIT" (without EURO-OBD) in “EC engine control”

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-28, "ACTIVE TEST" or PG-29, "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-35, "Inspection With CONSULT-II (Self-Diagnosis)"
ECM relay>>Go to EC-115, "POWER SUPPLY CIRCUIT FOR ECM" (with EURO-OBD) or EC-500, "POWER SUPPLY CIRCUIT FOR ECM" (without EURO-OBD) in “EC engine control”.
Throttle motor relay>>Go to EC-284, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY" (with EURO-OBD) or EC-599, "DTC P1124, P1126 THROTTLE CONTROL MOTOR RELAY" (without EURO-OBD) in “EC engine control”
Fuel pump relay>>Go to EC-391, "FUEL PUMP CIRCUIT" (with EURO-OBD) or EC-717, "FUEL PUMP CIRCUIT" (without EURO-OBD) in “EC engine control”

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-27, "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

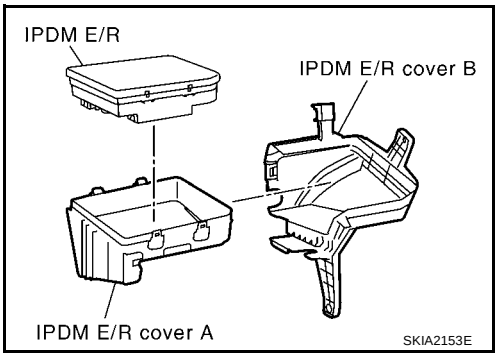
EKS0087Q

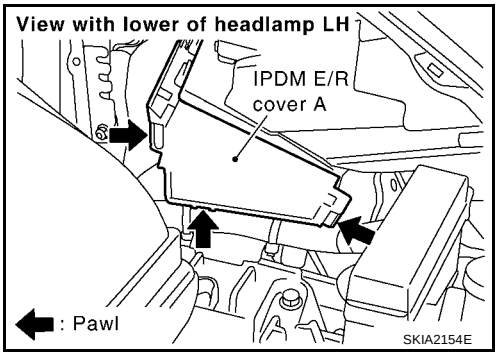
CAUTION:

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.**

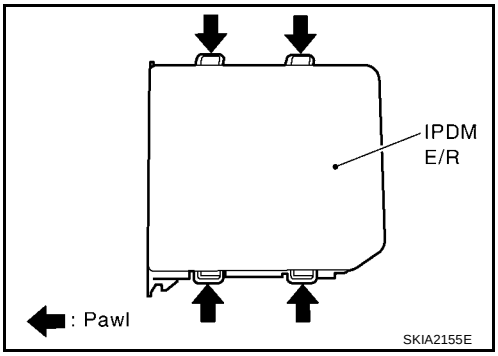
REMOVAL

1. Remove battery. Refer to SC-13, "Removal and Installation" in SC section.
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.

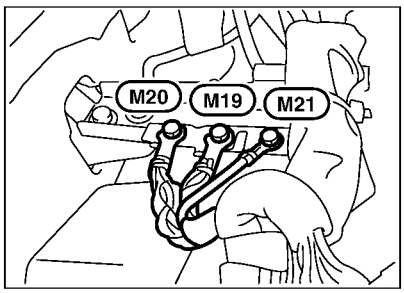
GROUND

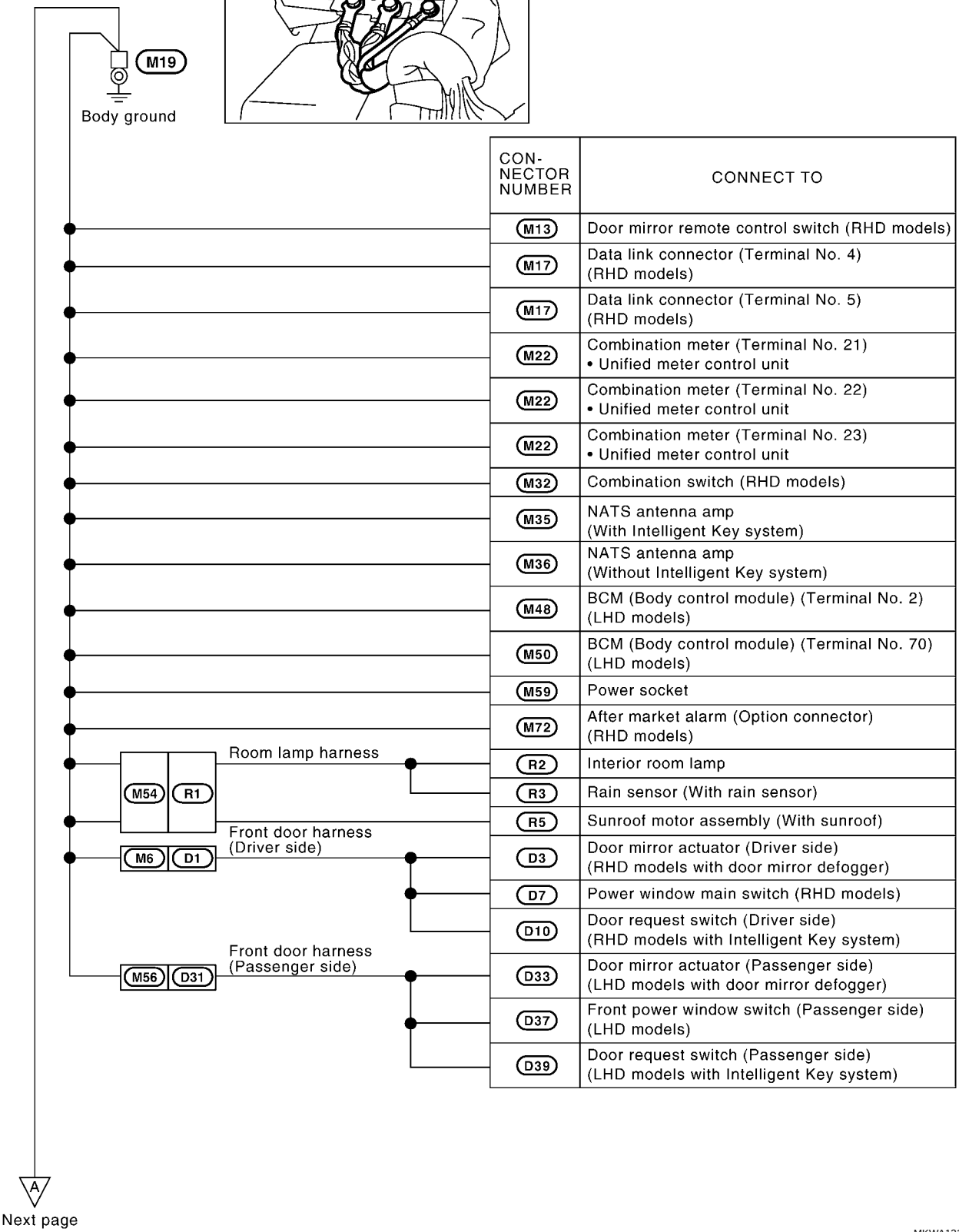
PFP:00011

Ground Distribution

EKS0079A

MAIN HARNESS





CON-NECTOR NUMBER	CONNECT TO
M13	Door mirror remote control switch (RHD models)
M17	Data link connector (Terminal No. 4) (RHD models)
M17	Data link connector (Terminal No. 5) (RHD models)
M22	Combination meter (Terminal No. 21) • Unified meter control unit
M22	Combination meter (Terminal No. 22) • Unified meter control unit
M22	Combination meter (Terminal No. 23) • Unified meter control unit
M32	Combination switch (RHD models)
M35	NATS antenna amp (With Intelligent Key system)
M36	NATS antenna amp (Without Intelligent Key system)
M48	BCM (Body control module) (Terminal No. 2) (LHD models)
M50	BCM (Body control module) (Terminal No. 70) (LHD models)
M59	Power socket
M72	After market alarm (Option connector) (RHD models)
R2	Interior room lamp
R3	Rain sensor (With rain sensor)
R5	Sunroof motor assembly (With sunroof)
D3	Door mirror actuator (Driver side) (RHD models with door mirror defogger)
D7	Power window main switch (RHD models)
D10	Door request switch (Driver side) (RHD models with Intelligent Key system)
D33	Door mirror actuator (Passenger side) (LHD models with door mirror defogger)
D37	Front power window switch (Passenger side) (LHD models)
D39	Door request switch (Passenger side) (LHD models with Intelligent Key system)

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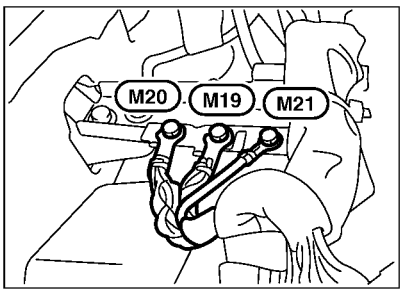
A

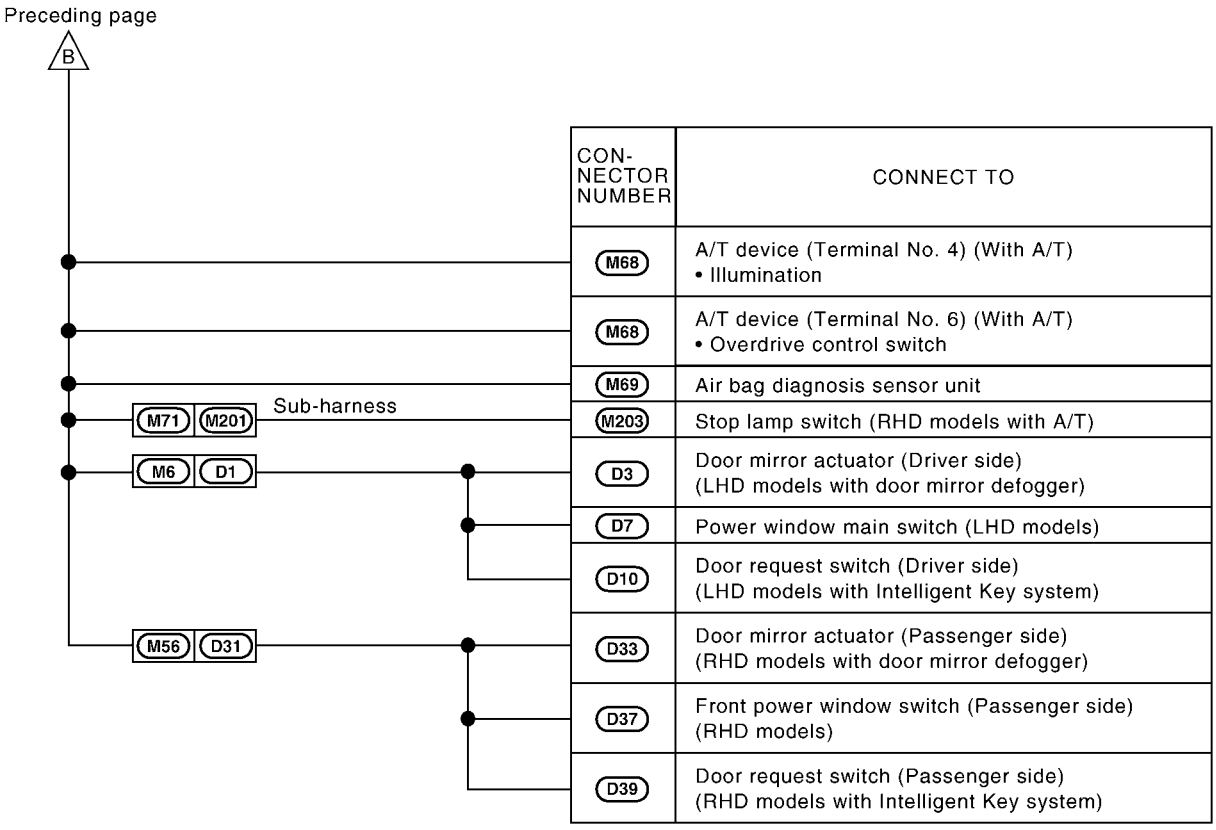


M20
Body ground

CONNECTOR NUMBER	CONNECT TO
M11	Headlamp aiming switch (Terminal No. 2)
M11	Headlamp aiming switch (Terminal No. 4)
M12	Headlamp washer switch (Terminal No. 2) (With headlamp washer)
M12	Headlamp washer switch (Terminal No. 4) (With headlamp washer)
M13	Door mirror remote control switch (LHD models)
M17	Data link connector (Terminal No. 4) (LHD models)
M17	Data link connector (Terminal No. 5) (LHD models)
M28	Drive computer
M32	Combination switch (LHD models)
M37	Clutch interlock switch (With M/T and Intelligent Key system)
M42	Fan control amp. (With auto A/C)
M45	Thermo control amp. (With manual A/C)
M48	BCM (Body control module) (Terminal No. 2) (RHD models)
M50	BCM (Body control module) (Terminal No. 70) (RHD models)
M51	Intelligent Key unit (With intelligent key system)
M58	A/C control unit (Terminal No. 6) (Without auto A/C)
M58	A/C control unit (Terminal No. 7) (Without auto A/C)
M58	A/C control unit (Terminal No. 10) (Without auto A/C)
M61	Hazard switch (Terminal No. 1)
M61	Hazard switch (Terminal No. 4)
M62	Ashtray illumination
M63	A/C auto amp. (Terminal No. 12) (With auto A/C)
M63	A/C auto amp. (Terminal No. 14) (With auto A/C)

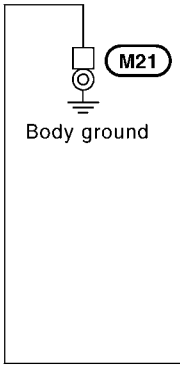
B
Next page

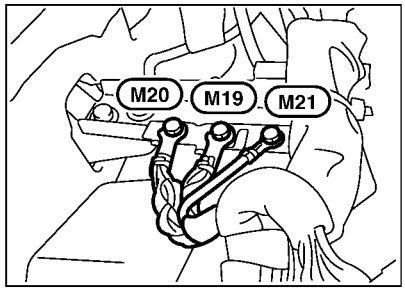
MKWA1313E



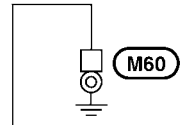
CON-NECTOR NUMBER	CONNECT TO
M68	A/T device (Terminal No. 4) (With A/T) • Illumination
M68	A/T device (Terminal No. 6) (With A/T) • Overdrive control switch
M69	Air bag diagnosis sensor unit
M203	Stop lamp switch (RHD models with A/T)
D3	Door mirror actuator (Driver side) (LHD models with door mirror defogger)
D7	Power window main switch (LHD models)
D10	Door request switch (Driver side) (LHD models with Intelligent Key system)
D33	Door mirror actuator (Passenger side) (RHD models with door mirror defogger)
D37	Front power window switch (Passenger side) (RHD models)
D39	Door request switch (Passenger side) (RHD models with Intelligent Key system)

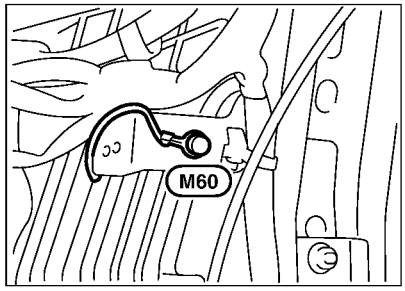
MKWA1314E





CON-NECTOR NUMBER	CONNECT TO
M24	EPS control unit

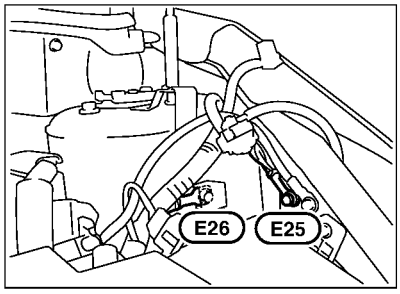


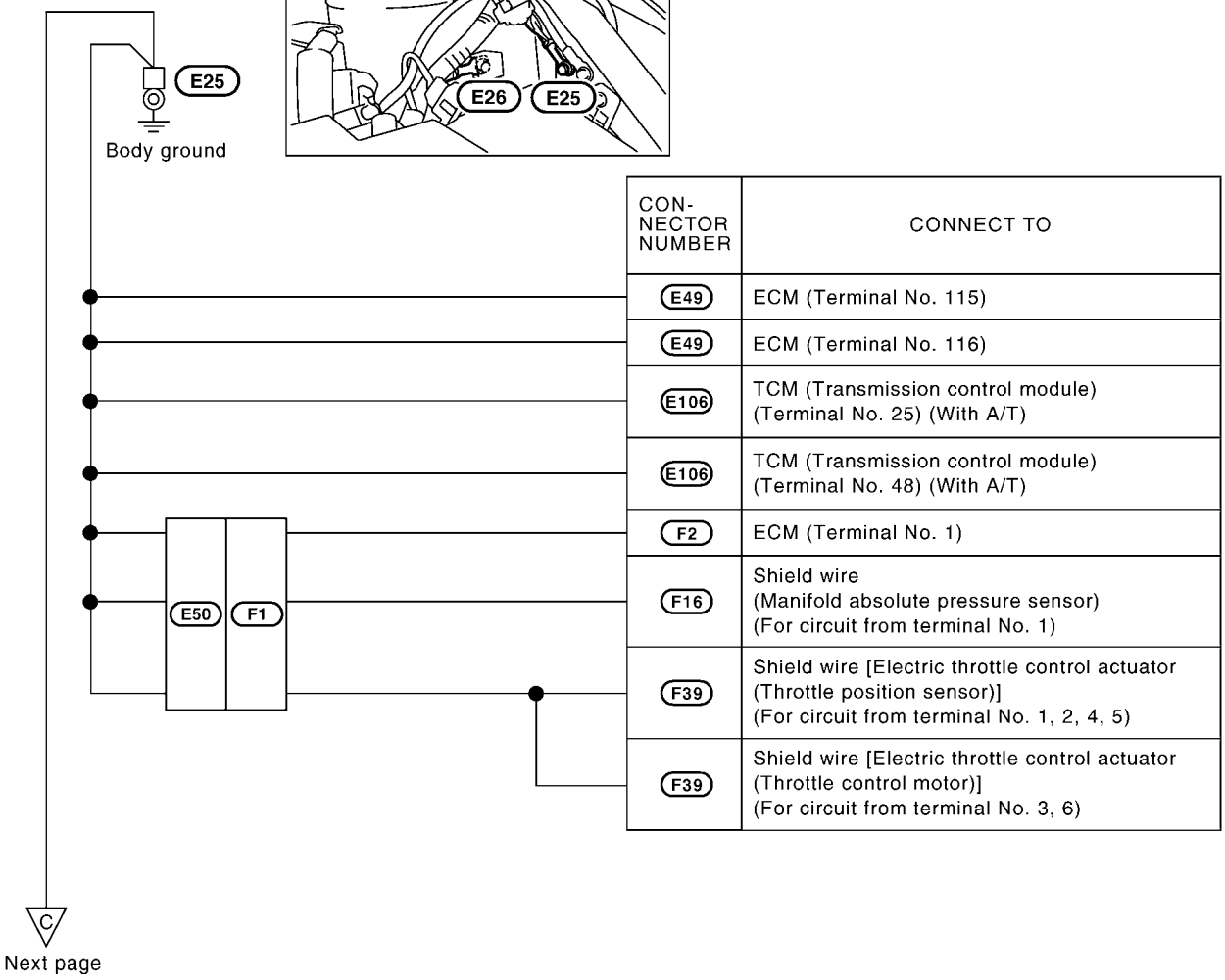


CON-NECTOR NUMBER	CONNECT TO
M27	Audio unit (Terminal No. 38) (With audio unit)
M27	Audio and NAVI control unit (Terminal No. 38) (With NAVI control unit)

MKWA1315E

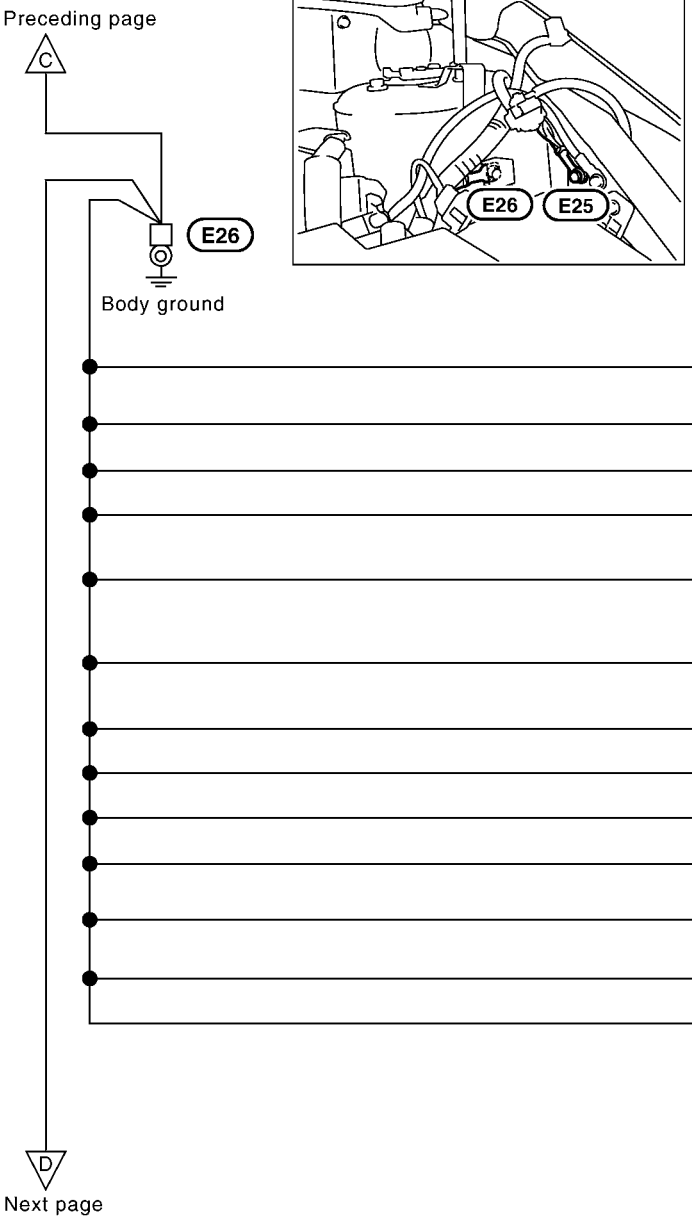
ENGINE ROOM HARNESS





CON-NECTOR NUMBER	CONNECT TO
E49	ECM (Terminal No. 115)
E49	ECM (Terminal No. 116)
E106	TCM (Transmission control module) (Terminal No. 25) (With A/T)
E106	TCM (Transmission control module) (Terminal No. 48) (With A/T)
F2	ECM (Terminal No. 1)
F16	Shield wire (Manifold absolute pressure sensor) (For circuit from terminal No. 1)
F39	Shield wire [Electric throttle control actuator (Throttle position sensor)] (For circuit from terminal No. 1, 2, 4, 5)
F39	Shield wire [Electric throttle control actuator (Throttle control motor)] (For circuit from terminal No. 3, 6)

MKWA1316E



CON-NECTOR NUMBER	CONNECT TO
E2	Daytime light relay (With daytime light system)
E3	Cooling fan motor (With A/C)
E4	Cooling fan motor (Without A/C)
E8	Front turn signal lamp LH
E11	IPDM E/R (Intelligent power distribution module engine room) (Terminal No. 3)
E16	IPDM E/R (Intelligent power distribution module engine room) (Terminal No. 54)
E20	Headlamp aiming motor LH
E24	Side turn signal lamp LH
E34	Front fog lamp RH (With front fog lamp)
E37	Parking lamp RH
E42	Headlamp RH (Without daytime light system)
E43	Brake fluid level switch
E109	Stop lamp switch (LHD models with A/T)

MKWA1317E

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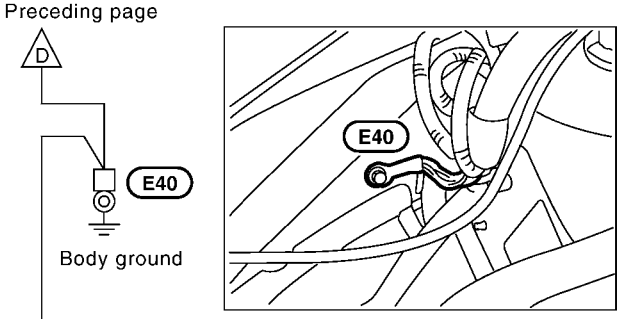
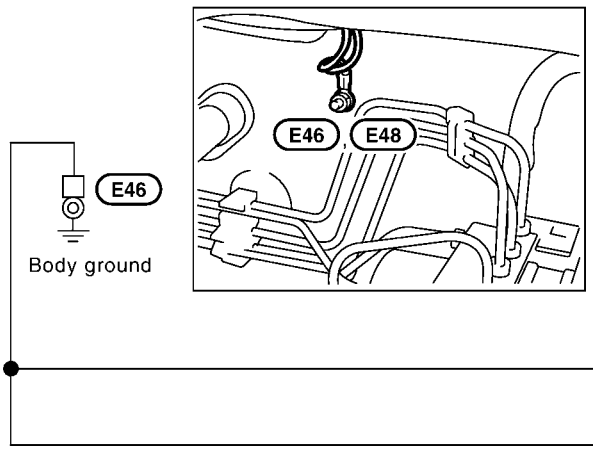


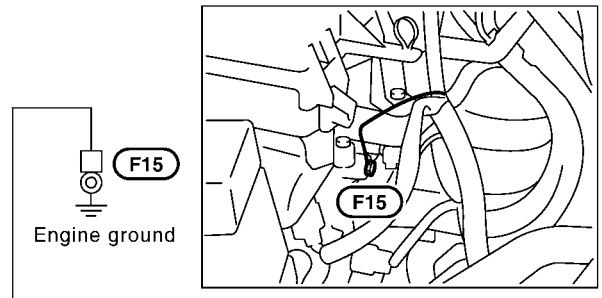
CON-NECTOR NUMBER	CONNECT TO
E7	Front fog lamp LH (With front fog lamp)
E21	Headlamp LH
E22	Parking lamp LH
E27	Shield wire (Crash zone sensor) (For circuit from terminal No. 1, 2)
E30	Horn
E32	Front turn signal lamp RH
E33	Headlamp washer motor (With headlamp washer)
E35	Side turn signal lamp RH
E39	Headlamp aiming motor RH
E44	Front wiper motor



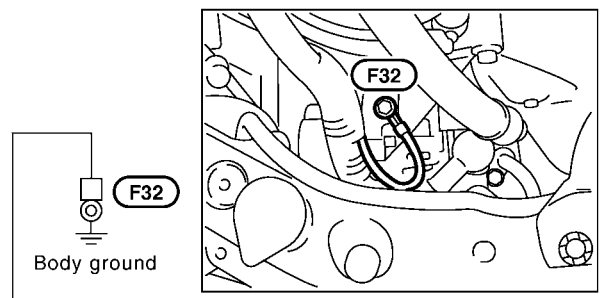
CON-NECTOR NUMBER	CONNECT TO
E45	ABS actuator and electric unit (Control unit) (Terminal No. 1)
E45	ABS actuator and electric unit (Control unit) (Terminal No. 4)

MKWA1318E

ENGINE CONTROL HARNESS/QR ENGINE MODELS



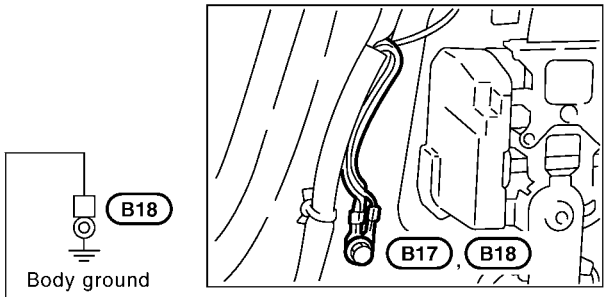
CON-NECTOR NUMBER	CONNECT TO
F26	Condenser
F33	Ignition coil No. 1 (With power transistor)
F34	Ignition coil No. 2 (With power transistor)
F35	Ignition coil No. 3 (With power transistor)
F36	Ignition coil No. 4 (With power transistor)



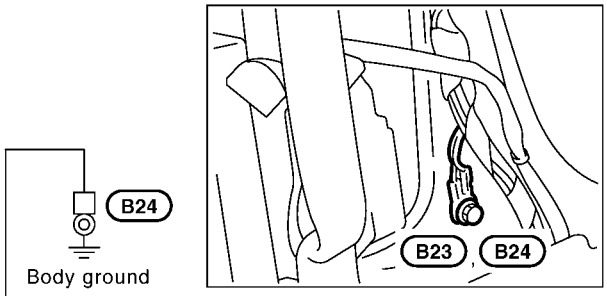
CON-NECTOR NUMBER	CONNECT TO
F31	Alternator (E)

MKWA1319E

BODY HARNESS

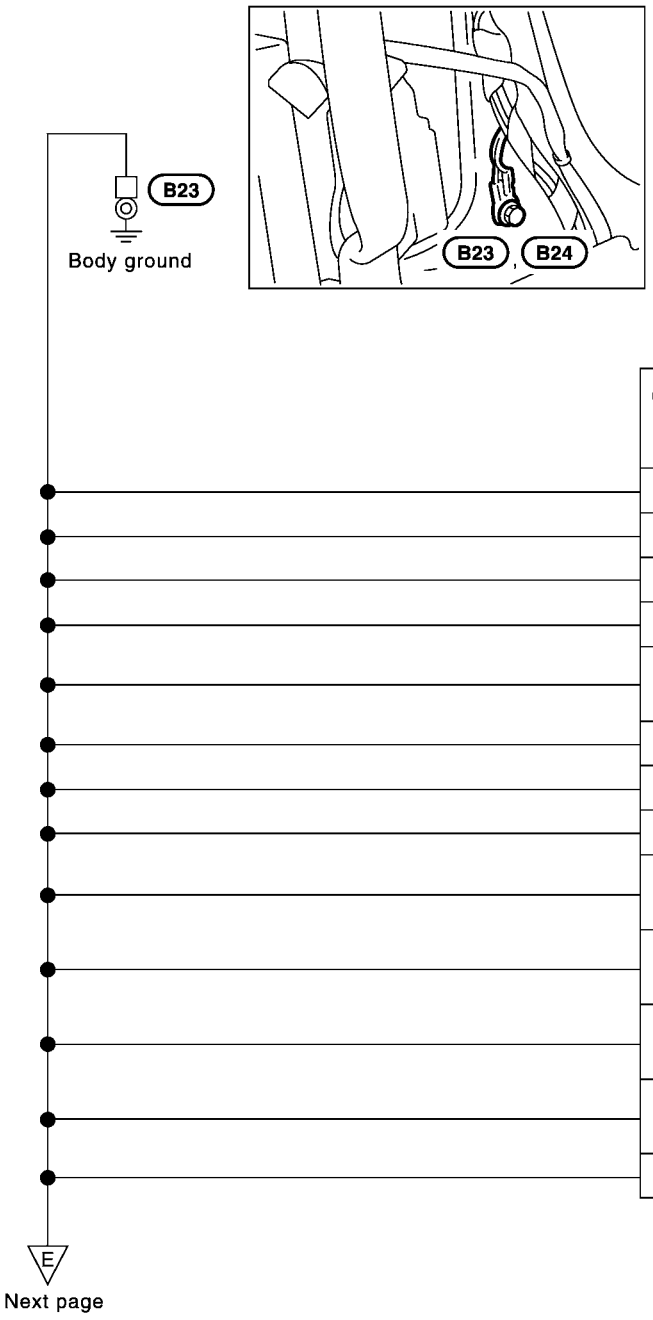


CON-NECTOR NUMBER	CONNECT TO
B13	Shield wire [RH side air bag (Satellite) sensor] (For circuit from terminal No. 1, 2)



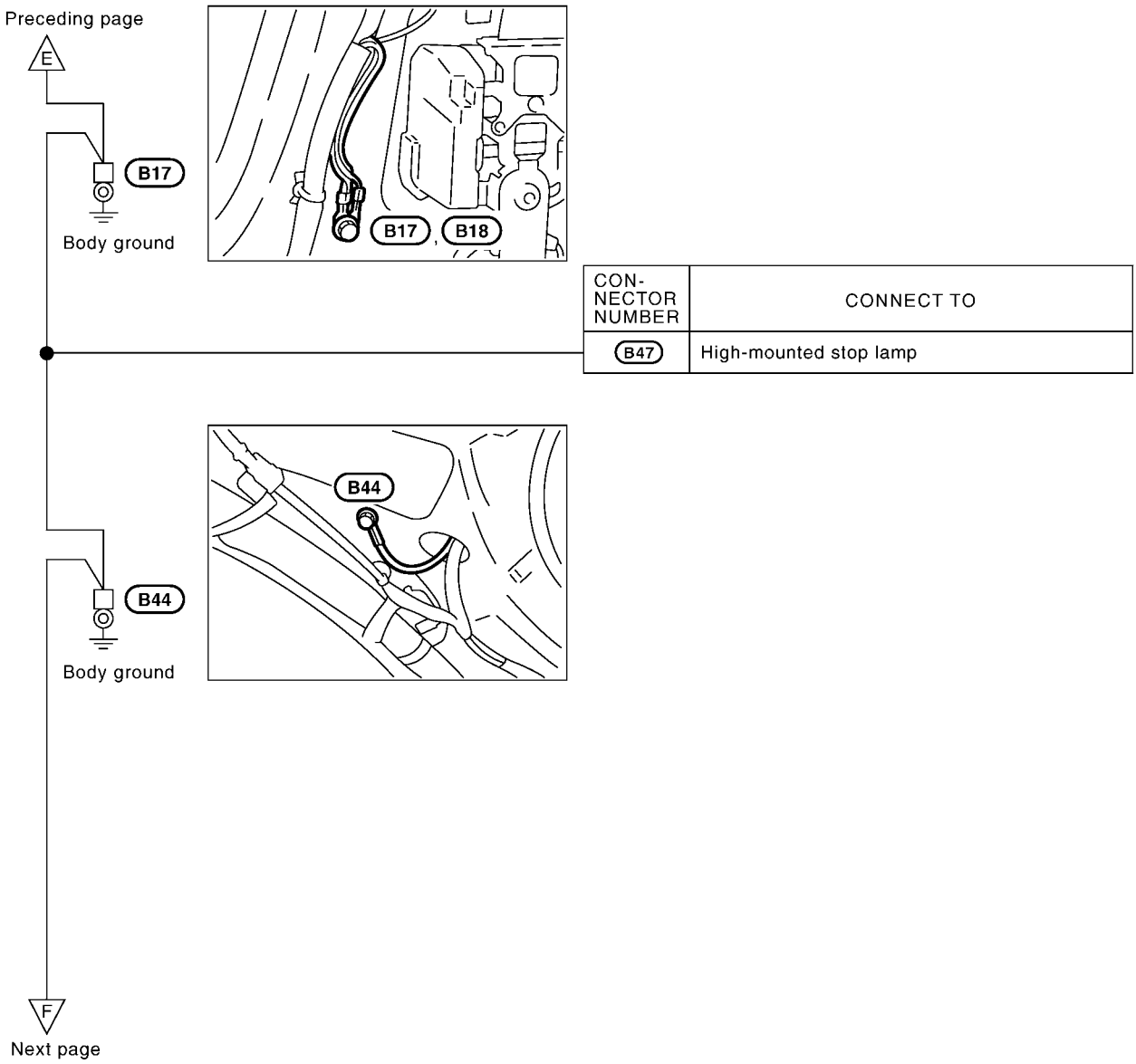
CON-NECTOR NUMBER	CONNECT TO
B19	Shield wire [LH side air bag (Satellite) sensor] (For circuit from terminal No. 1, 2)

MKWA1320E



CON-NECTOR NUMBER	CONNECT TO
B5	Seat belt buckle switch RH
B6	Heated seat RH (With heated seat)
B10	Seat belt buckle switch LH
B11	Heated seat LH (With heated seat)
B28	Fuel level sensor unit and fuel pump • Fuel pump
B36	Rear combination lamp RH
B37	Rear combination lamp LH
B38	License plate lamp
B56	Heated seat switch RH (Terminal No. 4) (With heated seat)
B56	Heated seat switch RH (Terminal No. 6) (With heated seat)
B57	Heated seat switch LH (Terminal No. 4) (With heated seat)
B57	Heated seat switch LH (Terminal No. 6) (With heated seat)
B58	Door lock/unlock switch

MKWA1321E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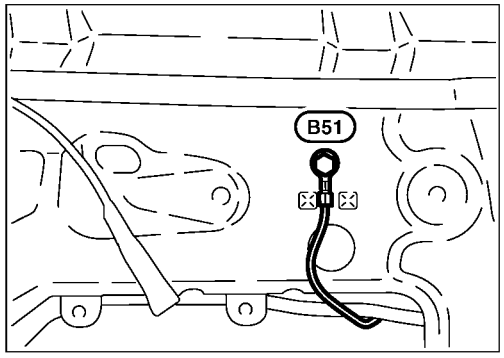
E
B17
Body ground
B17
B18
CON-
NECTOR
NUMBER
CONNECT TO
B47
High-mounted stop lamp
B44
B44
Body ground
F
Next page

MKWA1322E

Preceding page

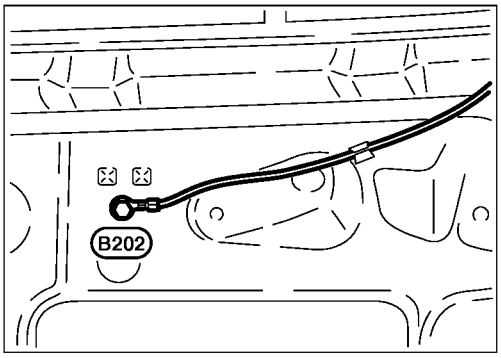
F

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



B51

Body ground



B202

Body ground

CON-NECTOR NUMBER	CONNECT TO
B201	Rear window defogger

MKWA1323E

HARNESS

PFP:00011

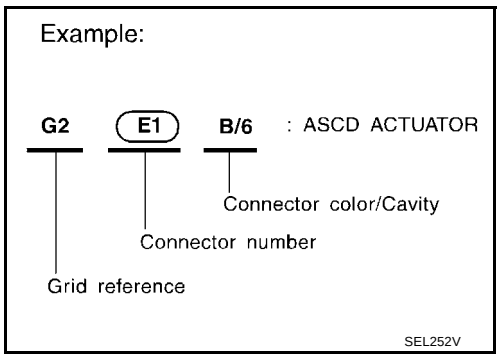
Harness Layout

EKS0079B

HOW TO READ HARNESS LAYOUTS

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.

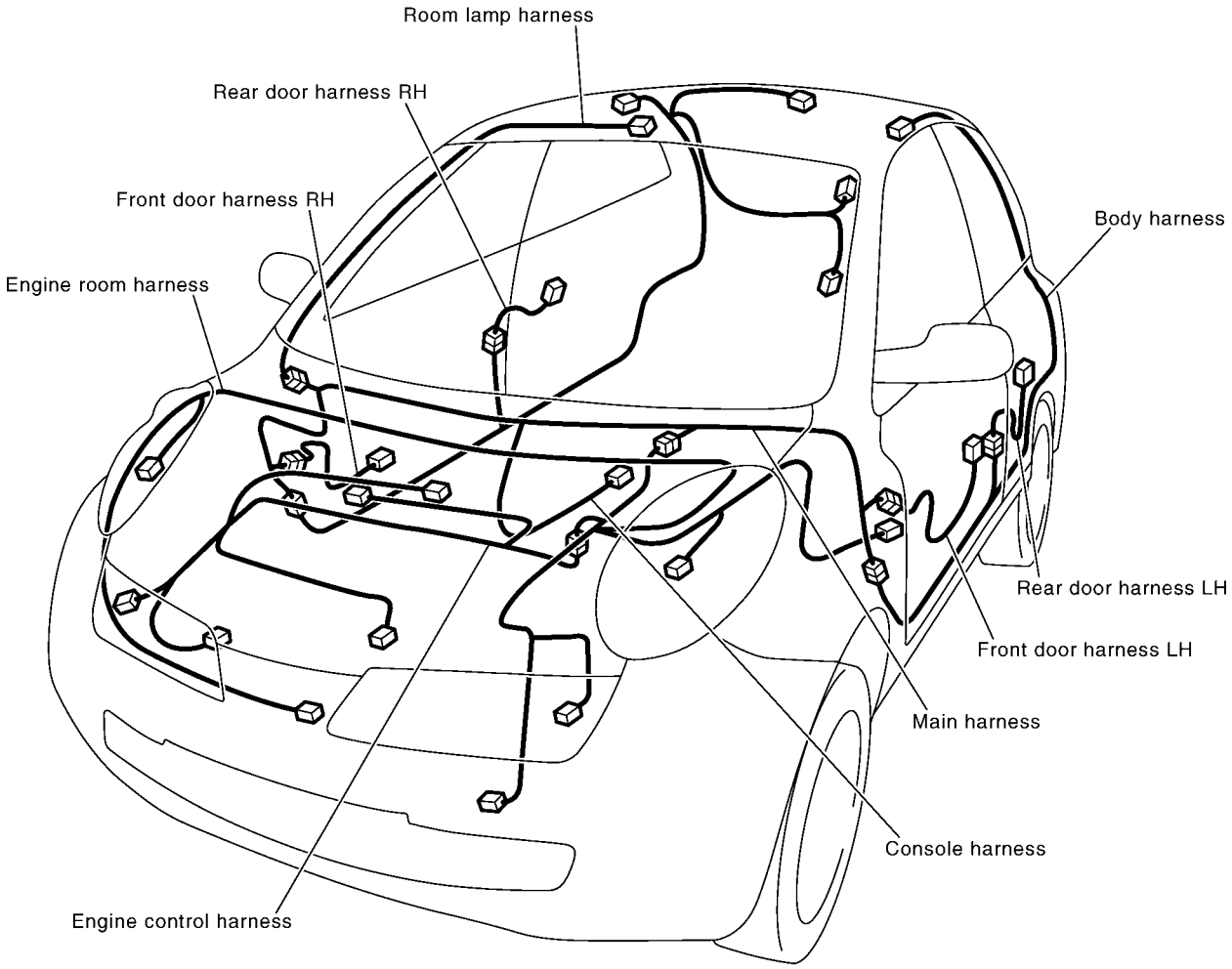
CONNECTOR SYMBOL

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.	—			

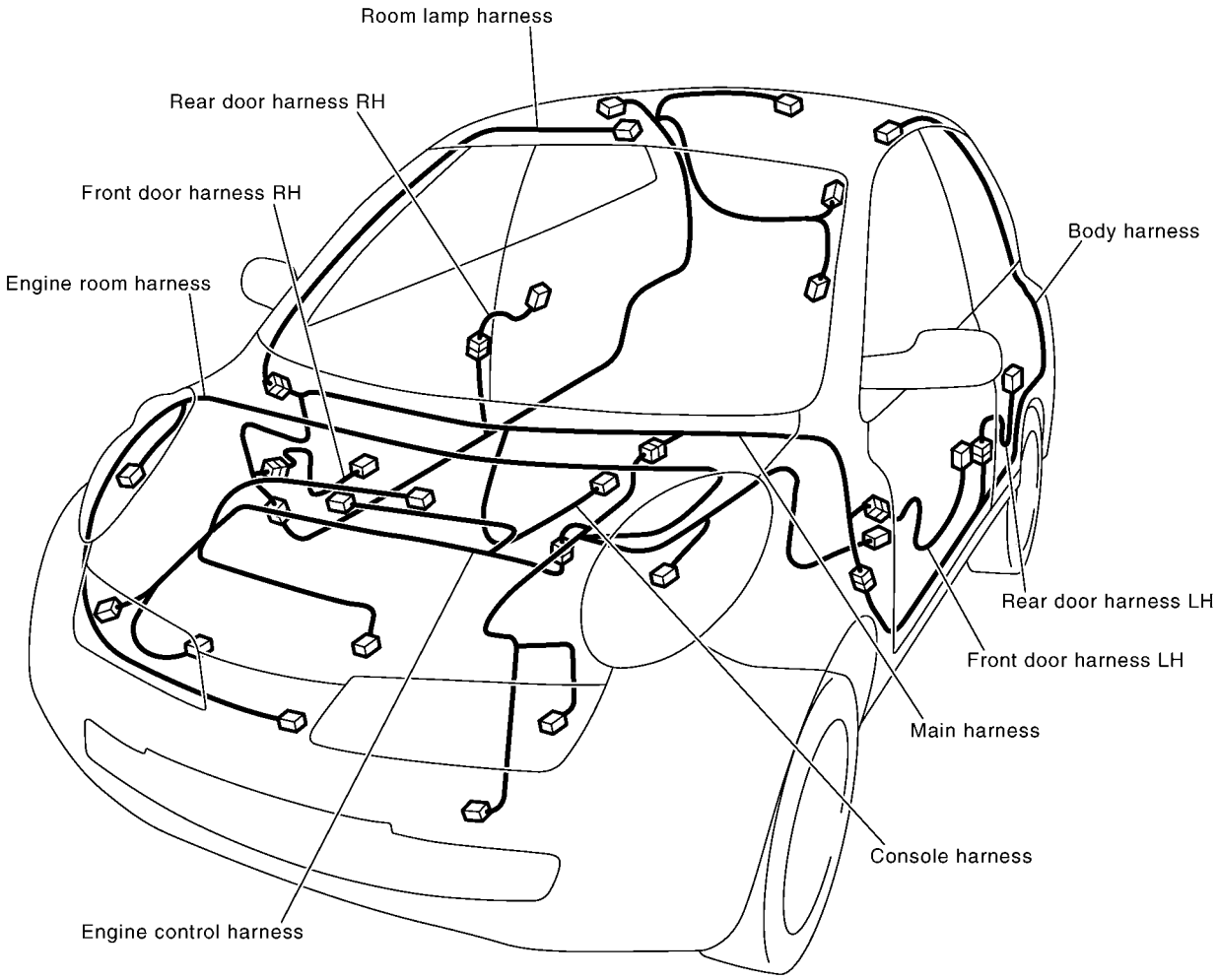
SKIA0404E

OUTLINE/LHD MODELS



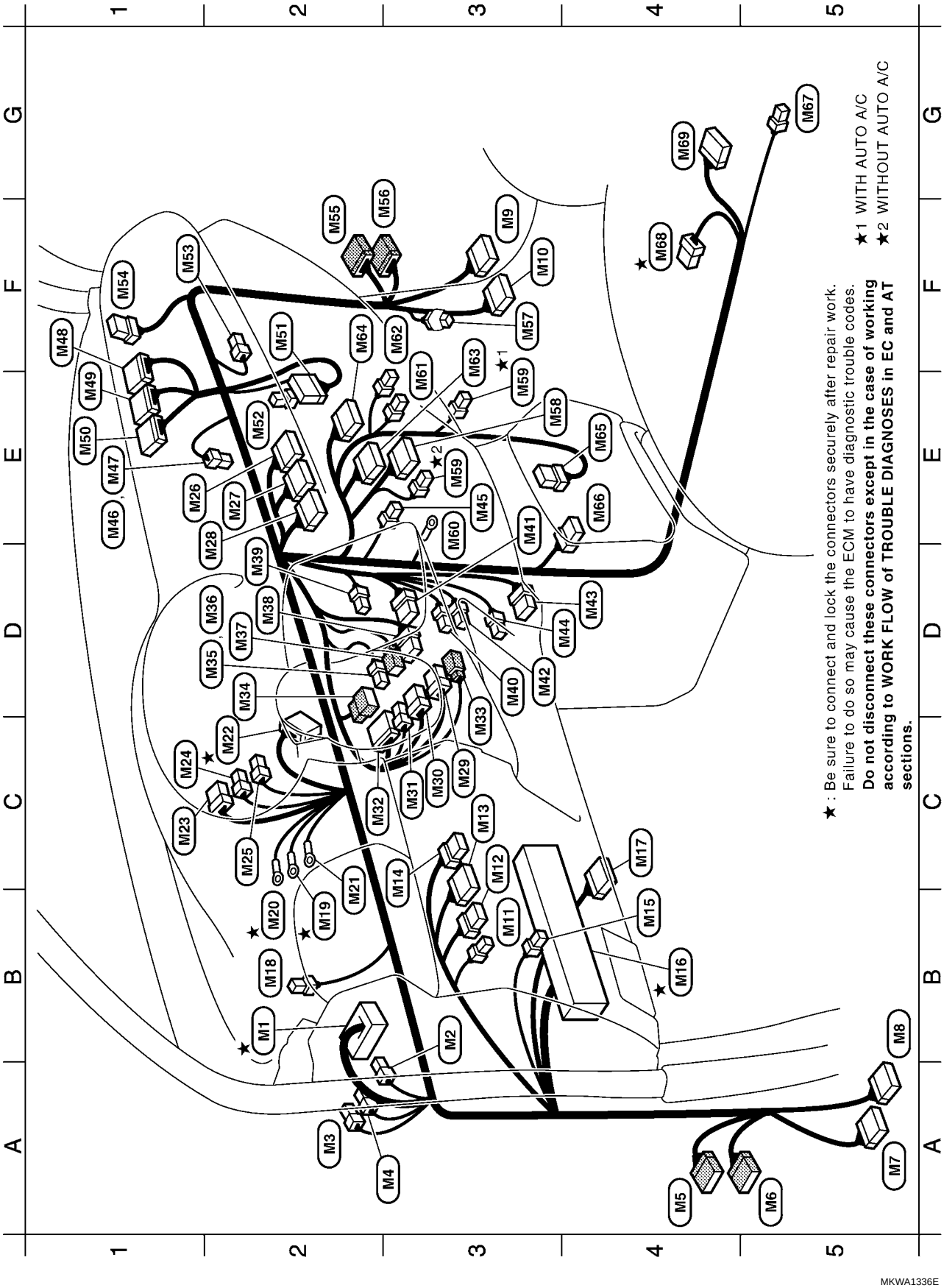
MKWA1354E

OUTLINE/RHD MODELS



MKWA1355E

MAIN HARNESS/LHD MODELS



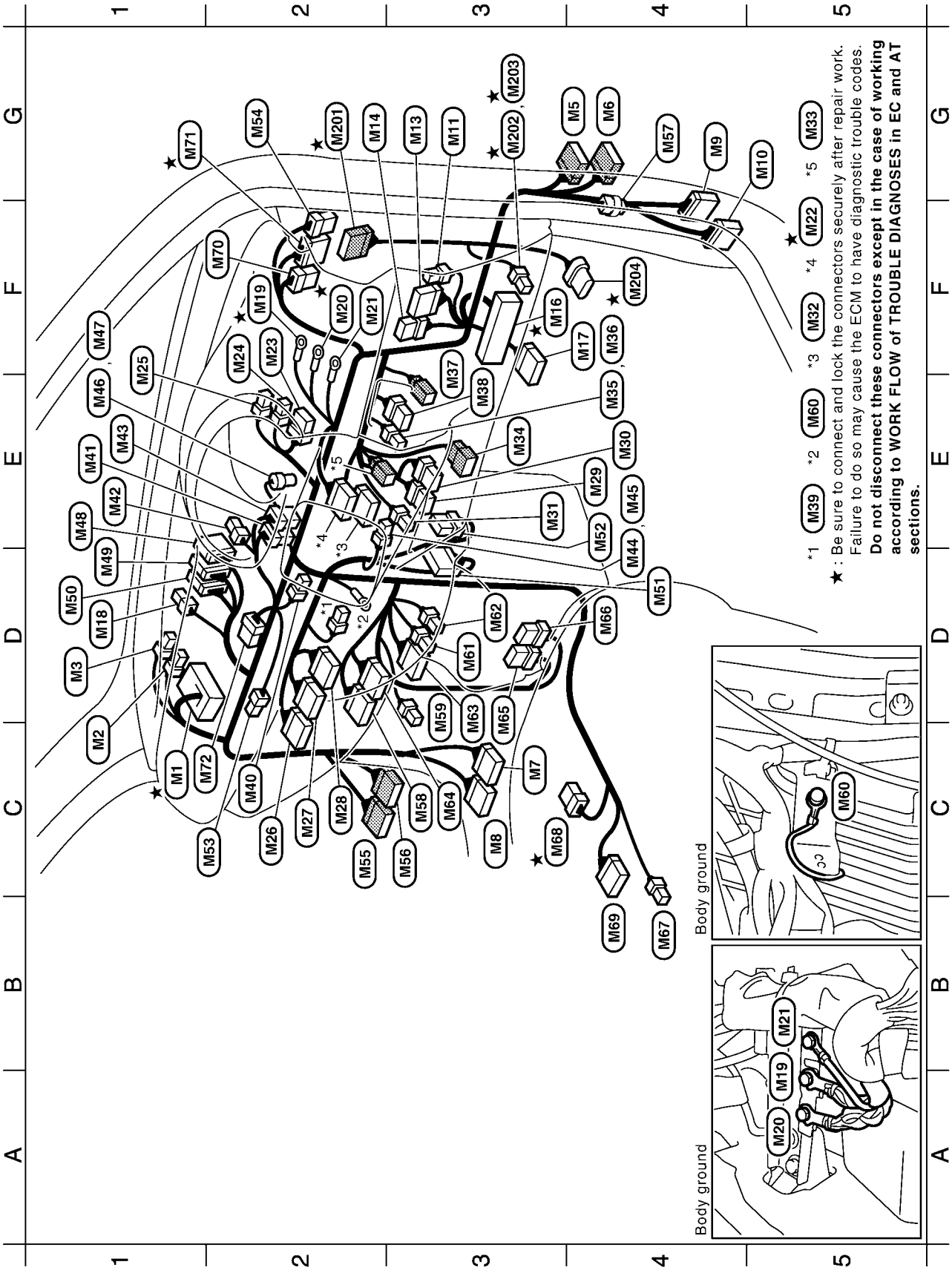
MKWA1336E

B2 ★ M1 SMJ : To E101
B3 M2 Y/4 : To E102
A2 M3 B/2 : To E103
A3 M4 W/2 : To E104 (With headlamp washer)
A4 M5 W/12 : To D2
A5 M6 W/10 : To D1
A5 M7 W/12 : To B4
B5 M8 W/10 : To B3
F3 M9 W/24 : To B2
F3 M10 W/10 : To B1
B3 M11 W/4 : Headlamp aiming switch
C3 M12 GY/8 : Headlamp washer switch (With headlamp sasher)
C3 M13 W/10 : Door mirror remote control switch
C3 M14 GY/6 : VDC off switch (With VDC)
B4 M15 W/5 : Headlamp washer relay (With headlamp washer)
B4 ★ M16 – : Fuse block (J/B)
C4 M17 W/16 : Data link connector
B2 M18 W/2 : Sunload sensor (With auto A/C)
B2 ★ M19 – : Body ground
B2 ★ M20 – : Body ground
B2 M21 – : Body ground
C2 ★ M22 W/40 : Combination meter
C1 M23 W/6 : EPS control unit
C1 M24 W/1 : EPS control unit
C2 M25 B/1 : EPS control unit
E1 M26 –/20 : Audio unit or NAVI control unit
E2 M27 B/16 : Audio unit or NAVI control unit
E2 M28 W/12 : Board computer (With board computer)
C3 M29 GY/8 : Combination switch (Spiral cable) (Steering switch)
C3 M30 Y/6 : Combination switch (Air bag)
C3 M31 W/4 : Steering lock unit (Without multi-remote)
C2 M32 W/16 : Combination switch
C3 M33 W/2 : Key switch (With multi-remote)
D2 M34 GY/6 : Key/push switch (Without multi-remote)
D2 M35 GY/4 : NATS antenna amp. (Without multi-remote)
D2 M36 –/4 : NATS antenna amp. (With multi-remote) AMP
D2 M37 BR/2 : Clutch interlock switch (With M/T and Intelligent Key system)
D2 M38 W/6 : Ignition switch
D2 M39 W/2 : In-vehicle sensor (With auto A/C)
D3 M40 W/4 : Fan switch (Without auto A/C)
E3 M41 G/6 : Fan control amp. (With auto A/C)
D3 M42 G/2 : Fan control amp. (With auto A/C)
D4 M43 B/6 : Intake door motor (With auto A/C)
D4 M44 –/2 : Intake sensor (With auto A/C)
E3 M45 W/3 : Thermal control amplifier (Without auto A/C)
E1 M46 B/2 : Blower motor (With auto A/C)
E1 M47 –/2 : Blower motor (Without auto A/C)
F1 M48 W/40 : BCM (Body control module)
E1 M49 W/24 : BCM (Body control module)
E1 M50 B/15 : BCM (Body control module)
F2 M51 W/40 : Intelligent Key unit (With Intelligent Key system)
E2 M52 W/5 : Door lock relay (Without multi-remote)
F1 M53 Y/2 : Front passenger air bag module
F1 M54 W/8 : To R1
F2 M55 W/12 : To D32
F2 M56 W/10 : To D31
F3 M57 W/1 : Towbav kit
E3 M58 –/15 : Heater control panel (With manual A/C)
E3 M59 B/2 : Power socket
E3 M60 – : Body ground
E3 M61 W/4 : Hazard switch
F3 M62 W/2 : Ashtray illumination
F3 M63 B/18 : A/C auto amp. (With auto A/C)
F2 M64 W/18 : A/C auto amp. (With auto A/C)
E4 M65 B/6 : Mode door motor (With auto A/C)
E4 M66 B/6 : Air mix door motor (With auto A/C)
G5 M67 B/1 : Parking brake switch
F4 ★ M68 W/6 : A/T device (With A/T)
G4 M69 Y/20 : Air bag diagnosis sensor unit

★ : 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.

MKWA1337E

MAIN HARNESS/RHD MODELS



MKWA1338E

C1 ★ M1 SMJ : To E101
C1 M2 Y/4 : To E102
D1 M3 B/2 : To E103
G4 M5 W/12 : To D2
G4 M6 W/10 : To D1
C3 M7 W/12 : To B4
C3 M8 W/10 : To B3
G4 M9 W/24 : To B2
G5 M10 W/10 : To B1
G3 M11 W/4 : Headlamp aiming switch
G3 M13 W/10 : Door mirror remote control switch
G2 M14 GY/6 : VDC off switch (With VDC)
F3 ★ M16 – : Fuse block (J/B)
F4 M17 W/16 : Data link connector
D1 M18 W/2 : Sunload sensor (With auto A/C)
F2 ★ M19 – : Body ground
F2 ★ M20 – : Body ground
F2 M21 – : Body ground
F5 ★ M22 W/40 : Combination meter
F2 M23 W/6 : EPS control unit
F2 M24 W/1 : EPS control unit
F1 M25 B/1 : EPS control unit
C2 M26 –/20 : Audio unit or NAVI control unit
C2 M27 B/16 : Audio unit or NAVI control unit
C2 M28 W/12 : Board computer (With board computer)
E4 M29 GY/8 : Combination switch (Spiral cable) (Steering switch)
E4 M30 Y/6 : Combination switch (Air bag)
E3 M31 W/4 : Steering lock unit (Without multi-remote)
F5 M32 W/16 : Combination switch
F5 M33 W/2 : Key switch (With multi-remote)
G5 M34 GY/6 : Key/push switch (Without multi-remote)
E4 M35 GY/4 : NATS antenna amp. (With Intelligent Key system)
F4 M36 –/4 : NATS antenna amp. (Without Intelligent Key system)

MKWA1339E

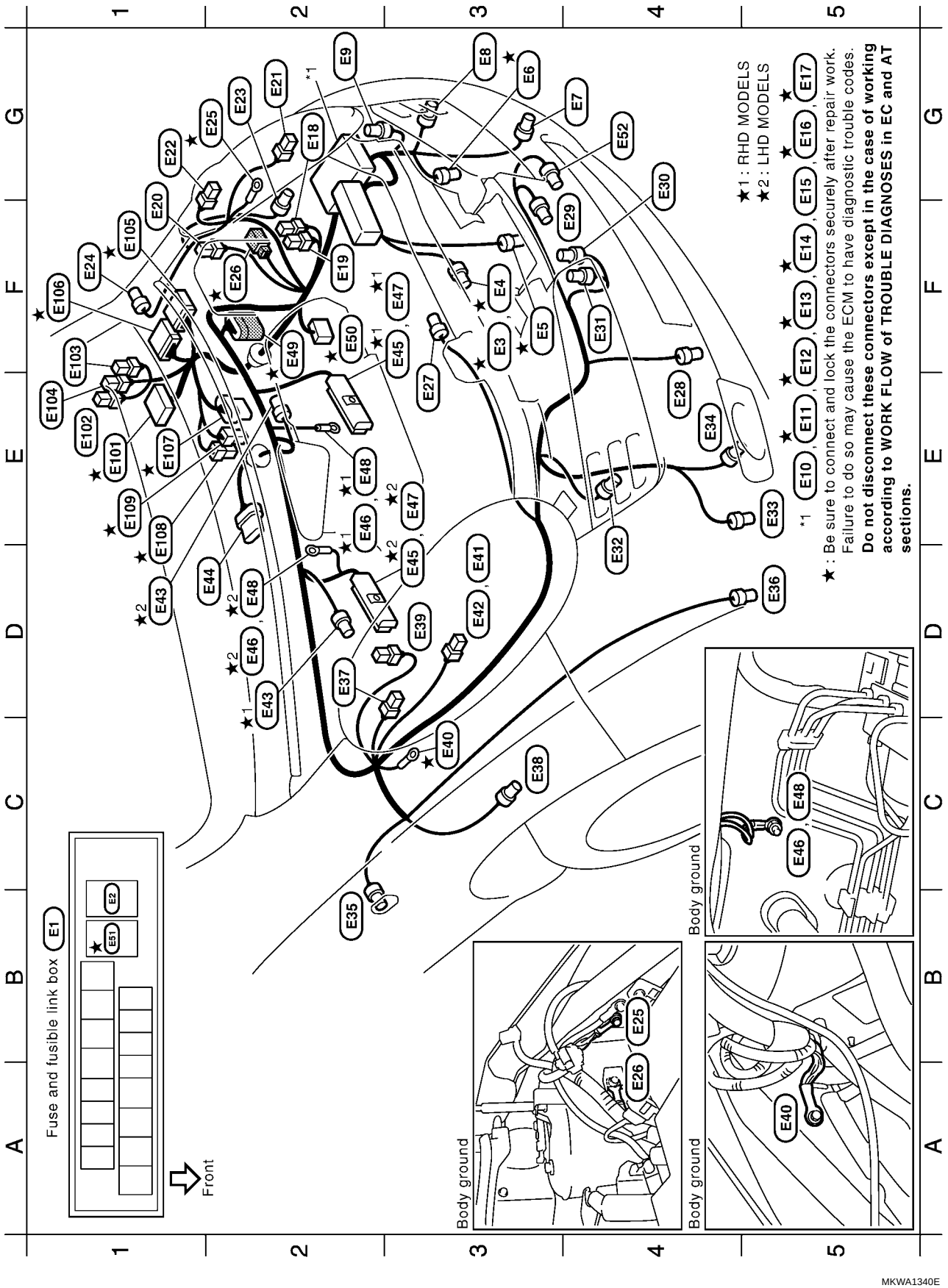
F3 M37 BR/2 : Clutch interlock switch (With M/T and Intelligent Key system)
E3 M38 W/6 : Ignition switch
E5 M39 W/2 : In-vehicle sensor (With auto A/C)
C2 M40 W/4 : Fan switch (Without auto A/C)
E1 M41 G/6 : Fan control amp. (With auto A/C)
E1 M42 G/2 : Fan control amp. (With auto A/C)
E1 M43 B/6 : Intake door motor (With auto A/C)
D4 M44 W/3 : Intake sensor (With auto A/C)
E4 M45 W/3 : Thermal control amplifier (Without auto A/C)
E1 M46 B/2 : Blower motor (With auto A/C)
F1 M47 –/2 : Blower motor (Without auto A/C)
E1 M48 W/40 : BCM (Body control module)
D1 M49 W/24 : BCM (Body control module)
D1 M50 –/2 : BCM (Body control module)
D4 M51 W/40 : Intelligent Key unit (With Intelligent Key system)
E4 M52 W/5 : Door lock relay (Without multi-remote)
C2 M53 Y/2 : Front passenger air bag module
G2 M54 W/8 : Intelligent Key unit
C2 M55 W/12 : To D32
C3 M56 W/10 : To D31
G4 M57 W/1 : Towbav kit
C3 M58 W/12 : Heater control panel (With manual A/C)
D3 M59 B/2 : Power socket
E5 M60 – : Body ground
D3 M61 W/4 : Hazard switch
D3 M62 W/2 : Ashtray illumination
D3 M63 B/18 : A/C auto amp. (With auto A/C)
C3 M64 W/18 : A/C auto amp. (With auto A/C)
D3 M65 B/6 : Mode door motor (With auto A/C)
D4 M66 B/6 : Air mix door motor (With auto A/C)
B4 M67 B/1 : Parking brake switch
C3 ★ M68 W/6 : A/T device (With A/T)
B4 M69 Y/20 : Air bag diagnosis sensor unit
F2 M70 BR/8 : Dougle unit
G1 ★ M71 W/10 : To M201
C1 M72 W/6 : After market alarm unit (Option connector)

Sub-harness 1

G2 ★ M201 W/10 : To M71
G3 ★ M202 B/2 : Stop lamp switch (With M/T)
G3 ★ M203 W/4 : Stop lamp switch (With A/T)
F4 ★ M204 B/6 : Accelerator pedal position sensor

★ : 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



MKWA1340E

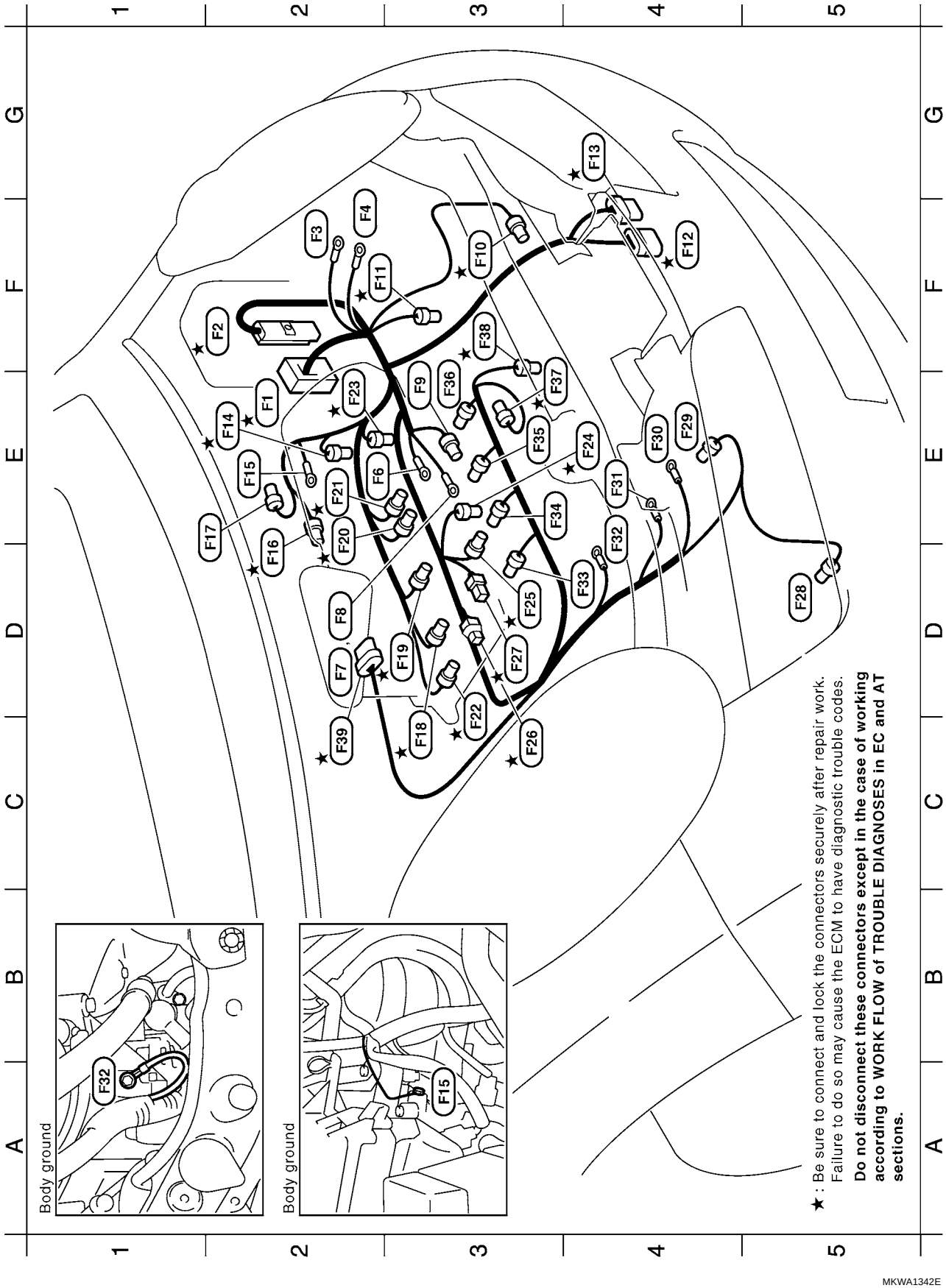
B1	E1	–	:	Fuse and fusible link box
B1	E2	W/5	:	Daytime light relay
F3★	E3	B/2	:	Cooling fan motor (With A/C)
F3★	E4	–/2	:	Cooling fan motor (Without A/C)
F3★	E5	B/2	:	Resistor (With A/C)
G3★	E6	GY/2	:	Dropping resistor (With A/T)
G4	E7	B/2	:	Front fog lamp LH (With front fog lamp)
G3	E8	GY/2	:	Front turn signal lamp LH
G2	E9	B/1	:	After market alarm unit (Hood switch)
E5	E10	B/2	:	IPDM E/R (Intelligent power distribution module engine room)
E5★	E11	B/6	:	IPDM E/R (Intelligent power distribution module engine room)
F5★	E12	W/6	:	IPDM E/R (Intelligent power distribution module engine room)
F5★	E13	BR/12	:	IPDM E/R (Intelligent power distribution module engine room)
F5★	E14	W/16	:	IPDM E/R (Intelligent power distribution module engine room)
F5	E15	BR/8	:	IPDM E/R (Intelligent power distribution module engine room)
G5★	E16	W/12	:	IPDM E/R (Intelligent power distribution module engine room)
G5★	E17	W/8	:	IPDM E/R (Intelligent power distribution module engine room)
G2	E18	BR/2	:	Fusible link holder
F2	E19	GY/2	:	Fusible link holder
F1	E20	B/3	:	Headlamp aiming motor LH
G2	E21	B/3	:	Headlamp LH
G1	E22	B/2	:	Parking lamp LH
G2	E23	B/2	:	Front wheel sensor LH
F1	E24	W/2	:	Side turn signal lamp LH
G1★	E25	–	:	Body ground
F2★	E26	–	:	Body ground
E3	E27	Y/2	:	Crash zone sensor
E4	E28	B/3	:	Refrigerant pressure sensor (With A/C)
F4	E29	B/2	:	Ambient 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	:	Head lamp washer motor (With front fog lamp)
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
C3★	E40	–	:	Body ground
D3	E41	B/3	:	Headlamp RH (With daytime light system)
D3	E42	B/3	:	Headlamp RH (Without daytime light system)
C2, D1	E43	GY/2	:	Brake fluid level switch
D2	E44	GY/6	:	Front wiper motor
D3, F3	E45	B/26	:	ABS actuator and electric unit (Control unit) (With ABS)
D2, E2	E46	–	:	Body ground (With ABS)
E3, F3	E47	–/46	:	VDC/TCS/ABS control unit (With VDC)
D2, E2	E48	–	:	Body ground (With VDC)
F2★	E49	B/40	:	ECM
F2★	E50	SMJ	:	To F1
B1★	E51	W/3	:	Horn relay
G4	E52	–	:	Outside temperature sensor
E1★	E101	SMJ	:	To M1
E1	E102	Y/4	:	To M2
F1	E103	B/2	:	To M3
E1	E104	W/2	:	To M4 (LHD models with headlamp washer)
F1★	E105	W/24	:	TCM
F1★	E106	GY/24	:	TCM
E1★	E107	B/6	:	Accelerator pedal position sensor (LHD models with M/T)
E1★	E108	B/2	:	Stop lamp switch (LHD models with M/T)
E1★	E109	W/4	:	Stop lamp switch (LHD models with A/T)

★ : 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.

MKWA1341E

ENGINE CONTROL HARNESS



MKWA1342E

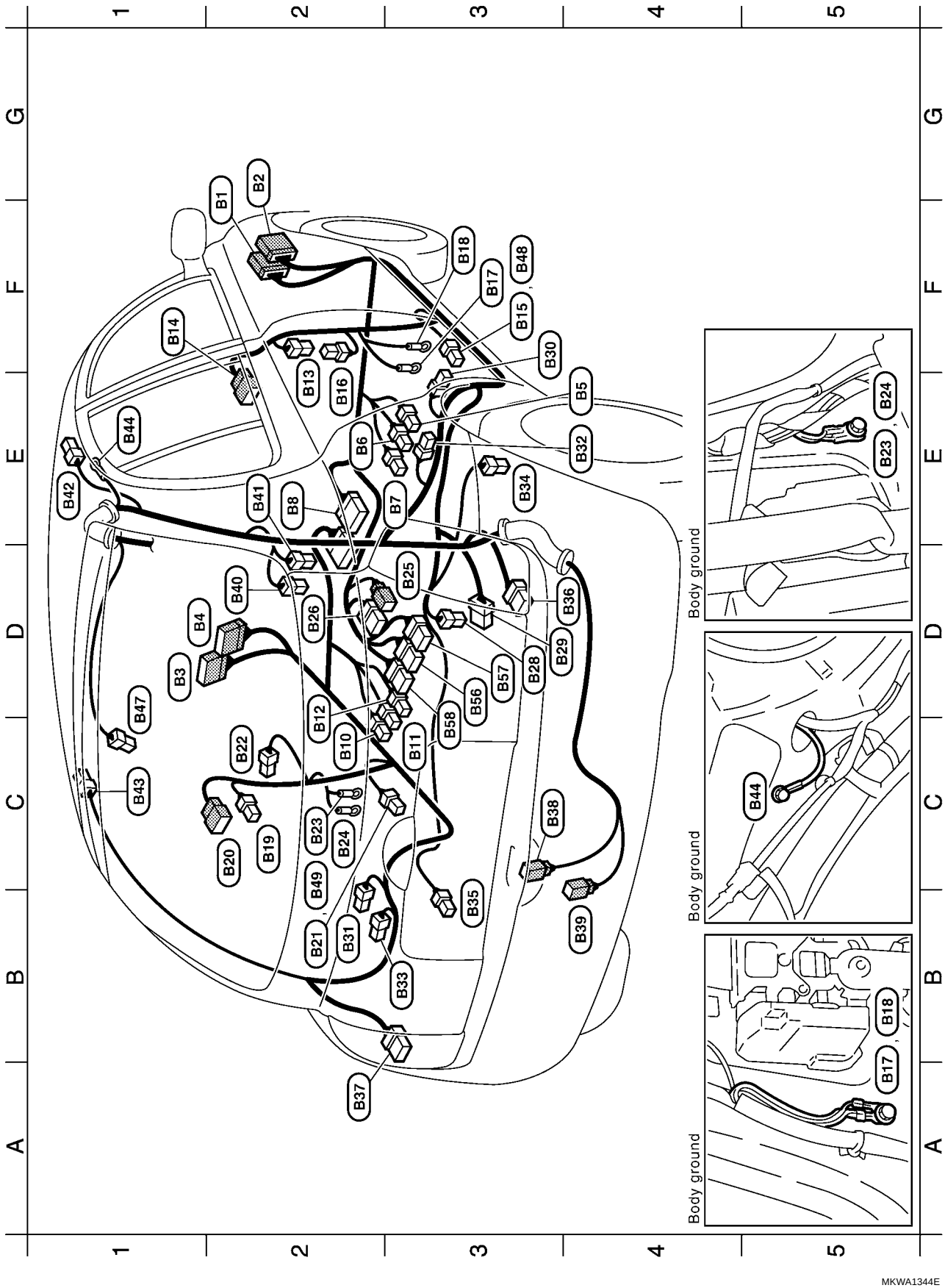
E2	★ F1	SMJ	:	To E50
F2	★ F2	B/81	:	ECM
F2	F3	–	:	Fusible link holder
F2	F4	–	:	Fusible link holder
E2	F6	–	:	Starter motor
D2	F7	–	:	Starter motor (For cold area)
D2	F8	–	:	Starter motor
E3	F9	B/1	:	Starter motor (For cold area)
F3	★ F10	G/3	:	Park/neutral position switch (With M/T)
F2	★ F11	BR/3	:	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)
E2	★ 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	:	Injector No. 1
D3	★ F19	GY/2	:	Injector No. 2
D2	★ F20	GY/2	:	Injector No. 3
E2	★ F21	GY/2	:	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	GY/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	GY/2	:	Alternator
E4	F30	–	:	Alternator
E4	F31	–	:	Alternator (E)
D4	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
E3	★ F37	G/4	:	Heated oxygen sensor 1
F3	★ F38	G/3	:	Crankshaft position sensor
C2	★ F39	B/6	:	Electric throttle control actuator

MKWA1343E

★ : 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.

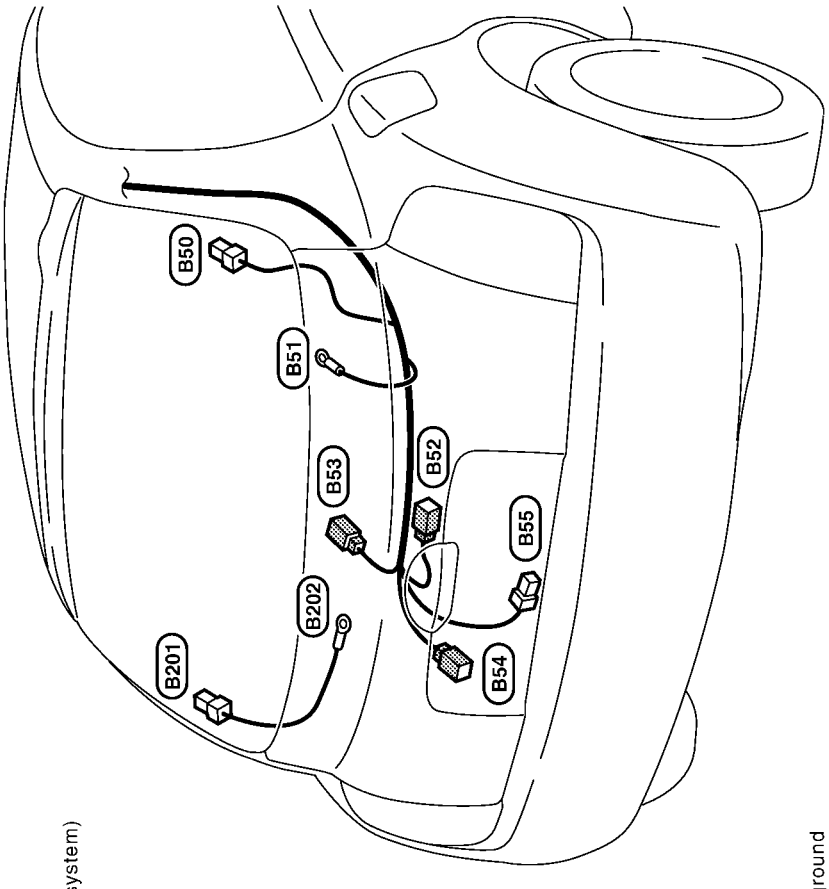
BODY HARNESS

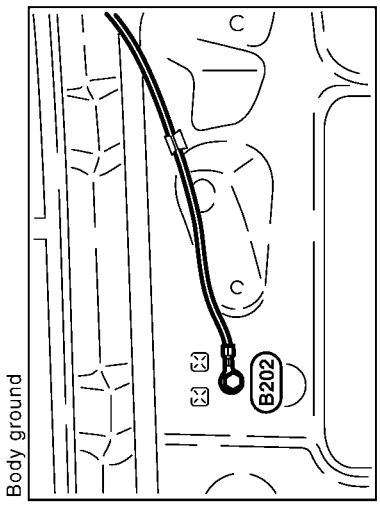


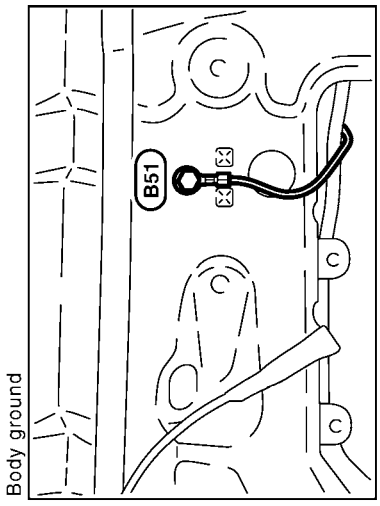
MKWA1344E

G2	B1	W/10	:	To M10
G2	B2	W/24	:	To M9
D1	B3	W/10	:	To M8
D2	B4	W/12	:	To M7
E2	B5	W/2	:	Seat belt buckle switch RH
E2	B6	W/3	:	Heated seat RH
E2	B7	BR/2	:	Front RH side air bag module
E2	B8	Y/12	:	Air bag diagnosis sensor unit
D2	B9	Y/12	:	Air bag diagnosis sensor unit
D2	B10	W/2	:	Seat belt buckle switch LH
C3	B11	W/3	:	Heated seat LH
D3	B12	BR/2	:	Front LH side air bag module
E2	B13	Y/2	:	RH side air bag (satellite) sensor
F1	B14	W/6	:	To D81
F3	B15	B/2	:	Front RH seat belt pre-tensioner (With 5 doors)
E2	B16	W/3	:	Front door switch RH
F3	B17	–	:	Body ground
F3	B18	–	:	Body ground
C2	B19	Y/2	:	LH side air bag (satellite) sensor
C2	B20	W/6	:	To D61
C3	B21	B/2	:	Front LH seat belt pre-tensioner (With 5 doors)
C2	B22	W/3	:	Front door switch LH
C2	B23	–	:	Body ground
C2	B24	–	:	Body ground
D3	B25	GY/2	:	Center console antenna
D2	B26	W/6	:	yaw rate/side G sensor
D3	B28	GY/4	:	Fuel level sensor unit and fuel pump
D3	B29	BR/2	:	Luggage room antenna
F3	B30	W/1	:	Rear door switch RH (With 5 doors)
B2	B31	W/1	:	Rear door switch RH (With 5 doors)
E4	B32	BR/2	:	Rear door speaker RH (With 3 doors)
B3	B33	BR/2	:	Rear door speaker LH (With 3 doors)
E3	B34	B/2	:	Rear wheel sensor RH
B3	B35	B/2	:	Rear wheel sensor LH
D4	B36	B/6	:	Rear combination lamp RH
A2	B37	B/6	:	Rear combination lamp LH
C3	B38	B/2	:	License lamp
B4	B39	GY/2	:	Back door antenna
D2	B40	B/1	:	Luggage room lamp (+)
D2	B41	B/1	:	Luggage room lamp
E1	B42	Y/2	:	RH side curtain air bag module
C1	B43	Y/2	:	LH side curtain air bag module
E1	B44	–	:	Body ground
D1	B47	B/2	:	High-mounted stop lamp
F3	B48	Y/2	:	Front RH seat belt pre-tentioner (With 3 doors)
C3	B49	Y/2	:	Front LH seat belt pre-tentioner (With 3 doors)
D3	B56	BR/6	:	Heated seat switch RH
D3	B57	W/6	:	Heated seat switch LH
C3	B58	W/6	:	Power window main switch

MKWA1346E



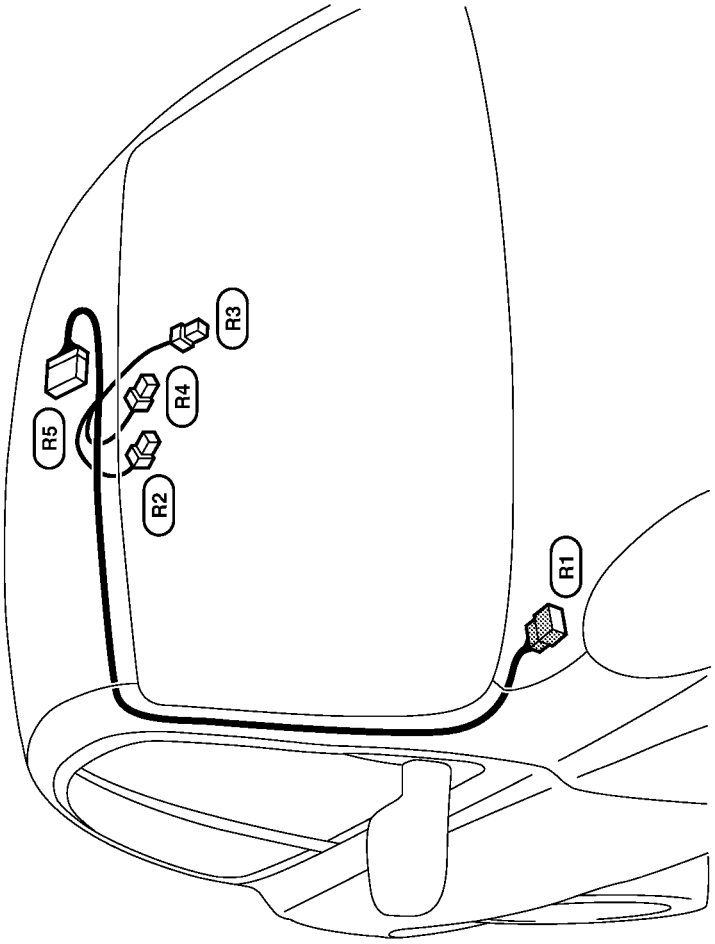




MKWA1345E

B50 B/1 : Rear window defogger (+)
B51 – : Body ground
B52 W/2 : Back door opener switch
B53 W/3 : Rear wiper motor
B54 BR/2 : Back boor request (With Intelligent Key system)
B55 W/4 : Back door release actuator
B201 B/1 : Rear window defogger (–)
B202 – : Body ground

ROOM LAMP HARNESS

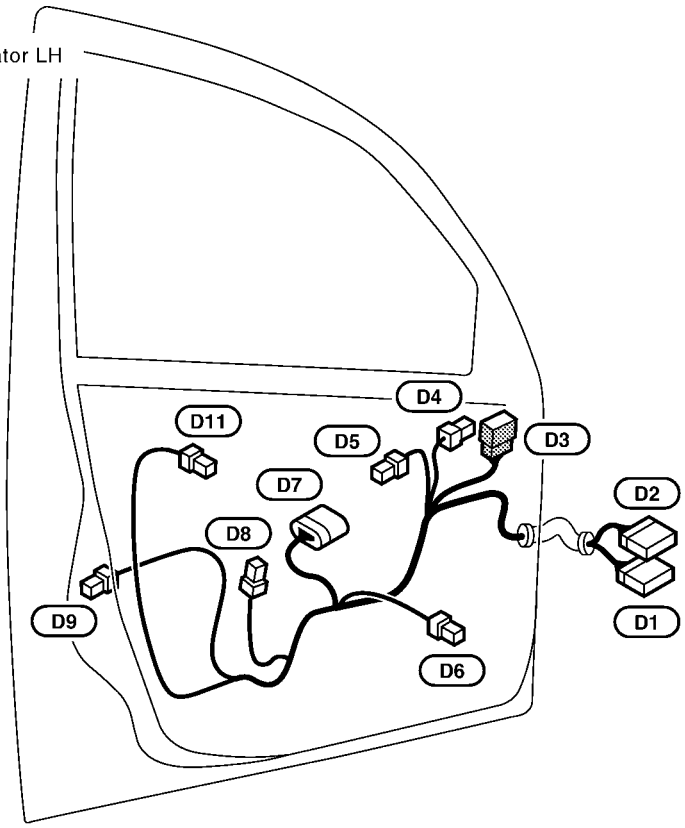


R1 W/8 : To M54
R2 W/3 : Interior room lamp
R3 B/3 : Rain sensor
R4 W/4 : Sunroof switch
R5 GY/10 : Sunroof motor assembly (With sunroof)

MKWA1347E

FRONT DOOR HARNESS LH SIDE/LHD MODELS

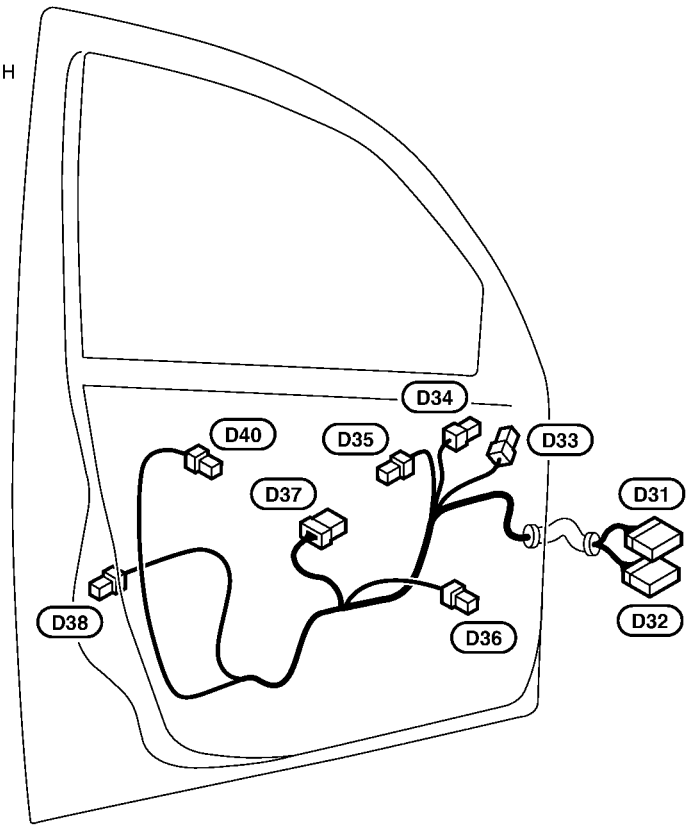
(D1) W/10 : To (M6)
(D2) W/12 : To (M5)
(D3) GY/6 : Door mirror actuator LH
(D4) BR/2 : Tweeter LH
(D5) GY/6 : Front power window regulator LH
(D6) W/2 : Front door speaker LH
(D7) W/16 : Power window main switch
(D8) BR/2 : Buzzer
(D9) B/4 : Door lock actuator LH
(D10) GY/2 : Door request switch LH
(D11) W/2 : Door antenna LH



MKWA1348E

FRONT DOOR HARNESS LH SIDE/RHD MODELS

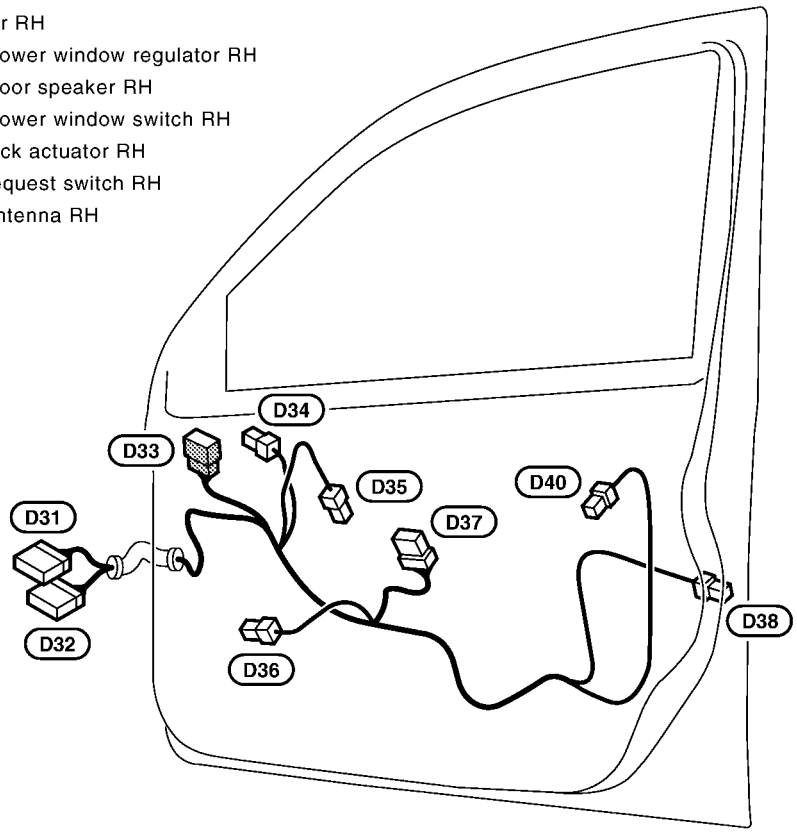
- D31 W/10 : To M56
- D32 W/12 : To M55
- D33 GY/6 : Door mirror actuator LH
- D34 BR/2 : Tweeter LH
- D35 GY/2 : Front power window regulator LH
- D36 W/2 : Front door speaker LH
- D37 W/8 : Front power window switch LH
- D38 B/4 : Door lock actuator LH
- D40 W/2 : Door antenna LH



MKWA1349E

FRONT DOOR HARNESS RH SIDE/LHD MODELS

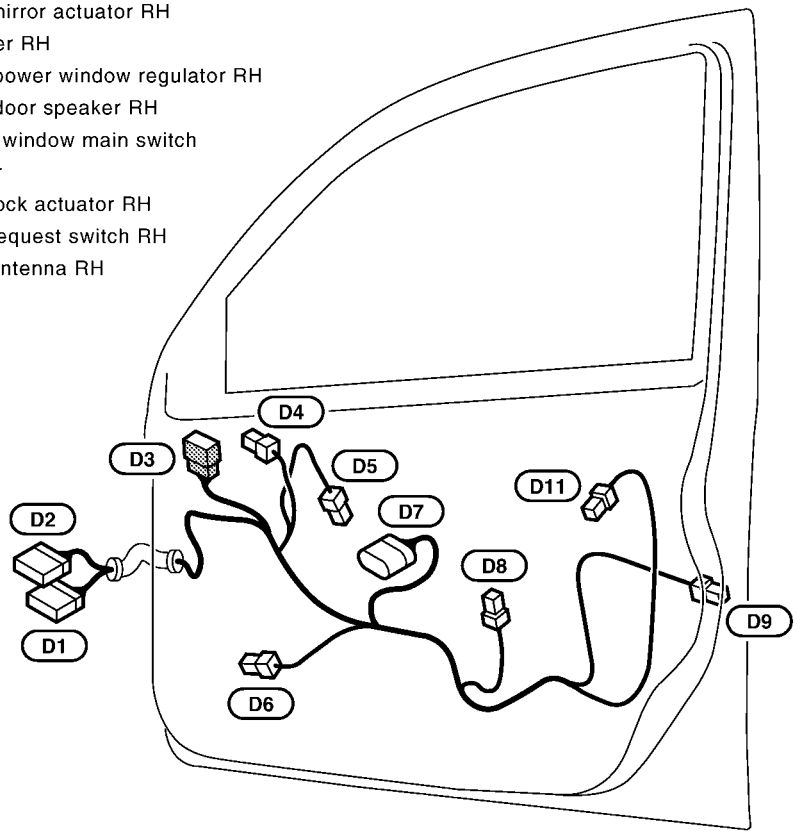
D31	W/10	:	To M56
D32	W/12	:	To M55
D33	GY/8	:	Door mirror actuator RH
D34	BR/2	:	Tweeter RH
D35	GY/2	:	Front power window regulator RH
D36	W/2	:	Front door speaker RH
D37	W/8	:	Front power window switch RH
D38	B/4	:	Door lock actuator RH
D39	GY/2	:	Door request switch RH
D40	W/2	:	Door antenna RH



MKWA1350E

FRONT DOOR HARNESS RH SIDE/RHD MODELS

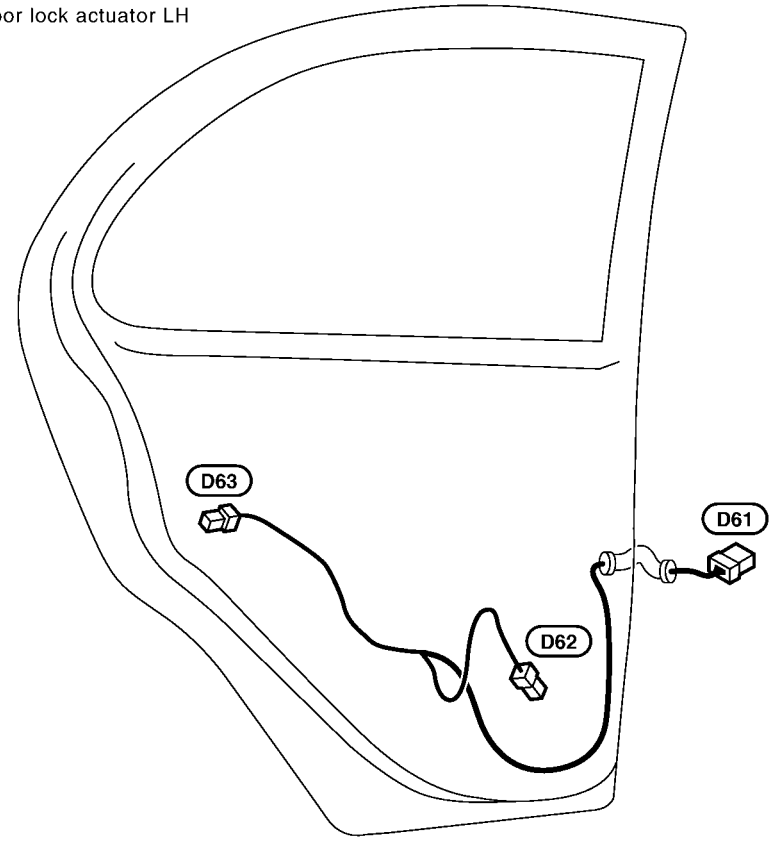
- D1 W/10 : To M6
- D2 W/12 : To M5
- D3 GY/6 : Door mirror actuator RH
- D4 BR/2 : Tweeter RH
- D5 GY/2 : Front power window regulator RH
- D6 W/2 : Front door speaker RH
- D7 W/16 : Power window main switch
- D8 BR/2 : Buzzer
- D9 B/4 : Door lock actuator RH
- D10 GY/2 : Door request switch RH
- D11 W/2 : Door antenna RH



MKWA1351E

REAR DOOR HARNESS LH

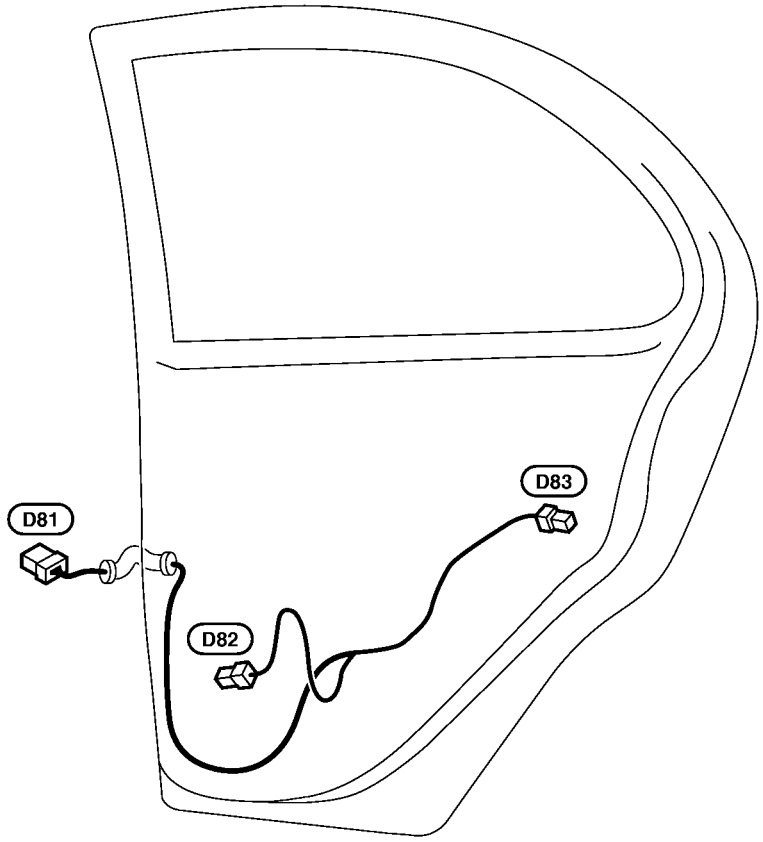
(D61) W/6 : To (B20)
(D62) W/2 : Rear door speaker LH (With 6 speakers)
(D63) B/4 : Rear door lock actuator LH



MKWA1352E

REAR DOOR HARNESS RH

D81 W/6 : To B14
D82 W/2 : Rear door speaker RH
D83 B/4 : Rear door lock actuator RH



MKWA1353E

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
1STSIG	AT	A/T 1ST Signal
2NDSIG	AT	A/T 2ND Signal
3RDSIG	AT	A/T 3RD Signal
4THSIG	AT	A/T 4TH Signal
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
APPS1	EC	Accelerator pedal position Sensor 1
APPS2	EC	Accelerator pedal position Sensor 2
APPS3	EC	Accelerator pedal position Sensor
AUDIO	AV	Audio
BA/FTS	AT	A/T Fluid Temperature Sensor and TCM Power Supply
BACK/L	LT	Back-up Lamp
BRK/SW	EC	Brake Switch
CAN	AT	CAN Communication Line
CAN	EC	CAN Communication Line
CAN	LAN	CAN System
CHARGE	SC	Charging System
CHIME	DI	Warning Chime
CIGAR	WW	Cigarette Lighter
COMBSW	LT	Combination Switch
COOL/F	EC	Cooling Fan Control
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
ENGSS	AT	Engine Speed Signal
EPS	STC	Electric Power Steering 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/FUMP	EC	Fuel Pump
FTS	AT	A/T Fluid Temperature Sensor
FUEL	EC	Fuel Injection System Function
H/AIM	LT	Headlamp Aiming Control System
H/LAMP	LT	Headlamp

Code	Section	Wiring Diagram Name
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
IGNSYS	EC	Ignition Signal
ILL	LT	Illumination
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
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 (CKPS) (POS)
POWER	PG	Power Supply Routing Circuit
PRWIRE	BL	After Market Alarm - Prewire
R/FOG	LT	Rear Fog Lamp
RP/SEN	EC	Refrigerant Pressure Sensor
S/LOCK	BL	Power Door Lock-Super Lock
SHIFT	AT	A/T Shift Lock System
SROOF	RF	Sunroof
SRS	SRS	Supplemental Restraint System
SSV/A	AT	Shift Solenoid Valve A
SSV/B	AT	Shift Solenoid Valve B
START	SC	Starting System
STOP/L	LT	Stop Lamp

Code	Section	Wiring Diagram Name
SW/ILL	GW	Power Window Illumination
TAIL/L	LT	Parking, License and Tail Lamps
TCV	AT	Torque Converter Clutch Solenoid Valve
TPS	AT	Throttle Position Sensor
TPS1	EC	Electric Throttle Control Actuator (Throttle Position Sensor 1)
TPS2	EC	Electric Throttle Control Actuator (Throttle Position Sensor 2)
TPS3	EC	Electric Throttle Control Actuator (Throttle Position Sensor 3)
TURN	LT	Turn Signal and Hazard Warning Lamps
VSSAT	AT	Vehicle Speed Sensor A/T (Revolution Senor)
VSSMTR	AT	Vehicle Speed Sensor MTR
WARN	DI	Warning Lamps
WINDOW	GW	Power Window
WIP/R	WW	Rear Wiper and Washer System
WIPER	WW	Front Wiper and Washer System

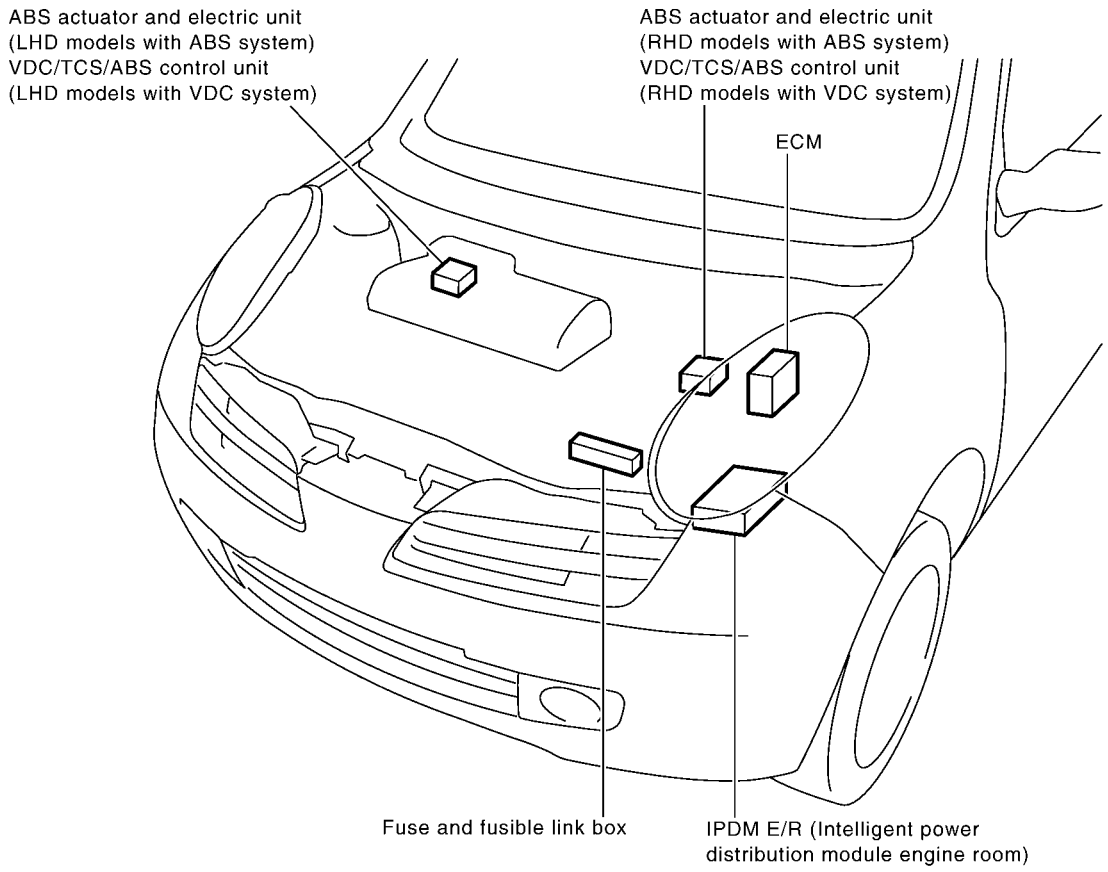
ELECTRICAL UNITS LOCATION

PFP:25230

Electrical Units Location

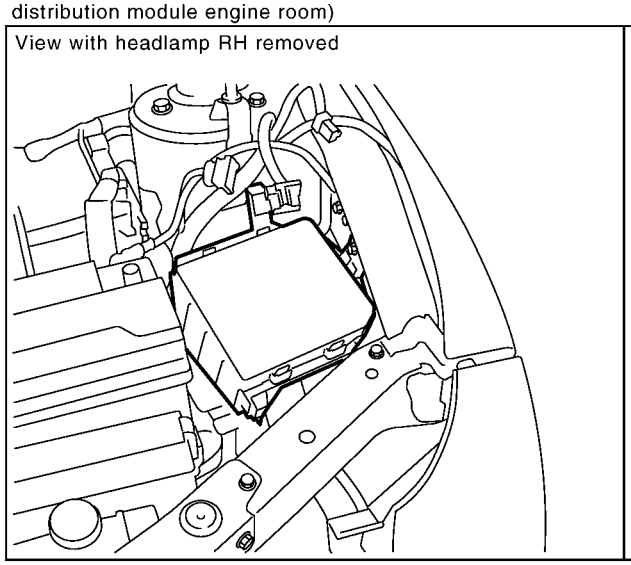
EKS0079D

ENGINE COMPARTMENT

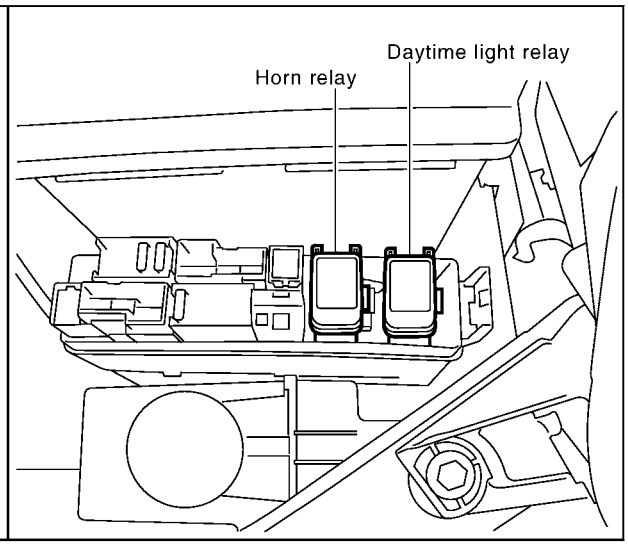


IPDM E/R (Intelligent power distribution module engine room)

View with headlamp RH removed

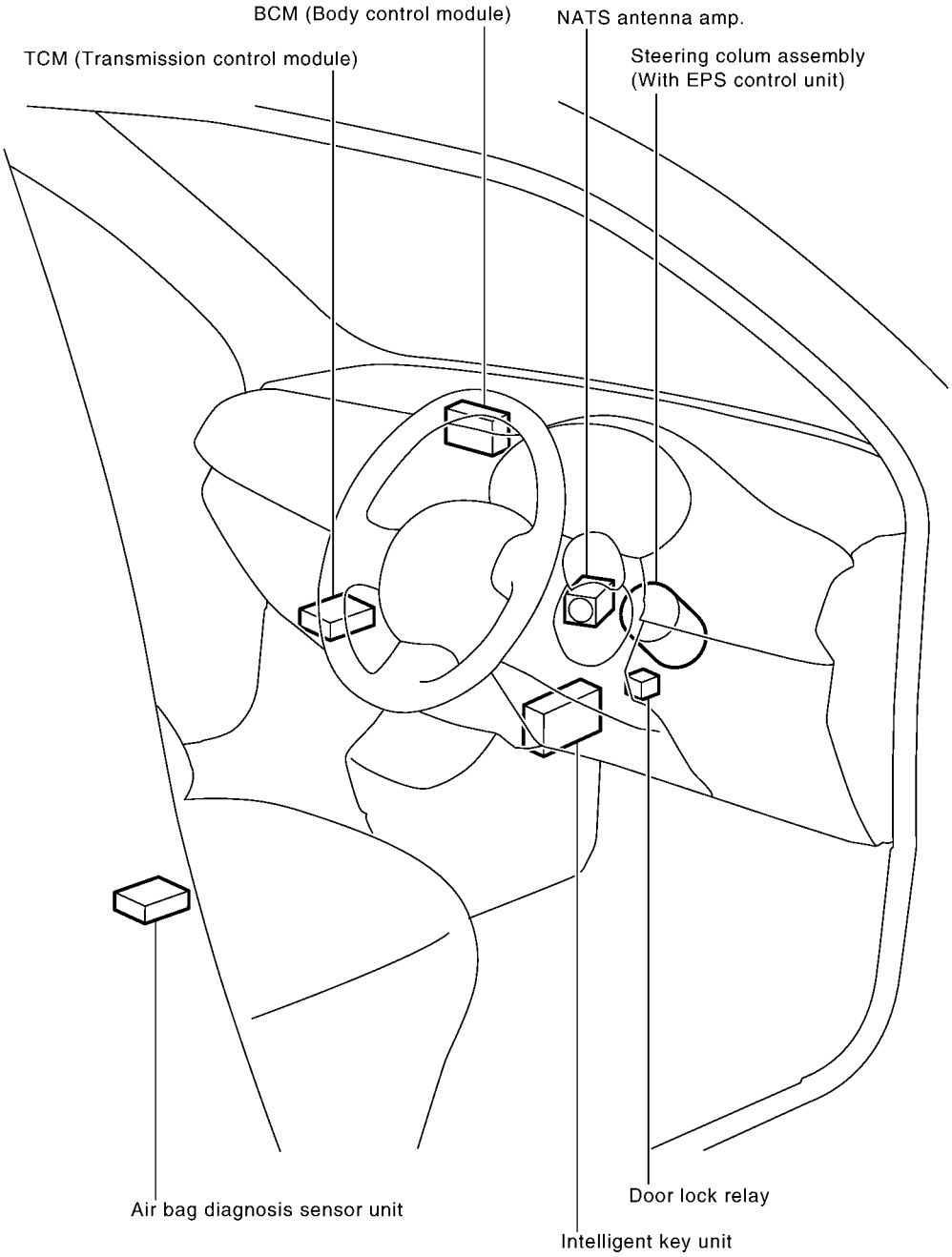


Fuse and fusible link box



MKWA1356E

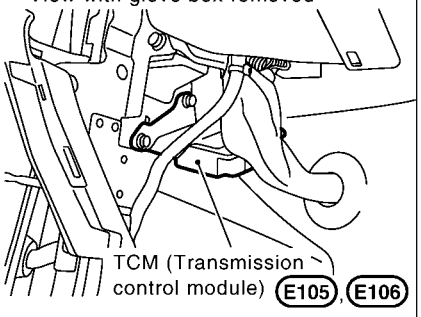
PASSENGER COMPARTMENT/LHD MODELS



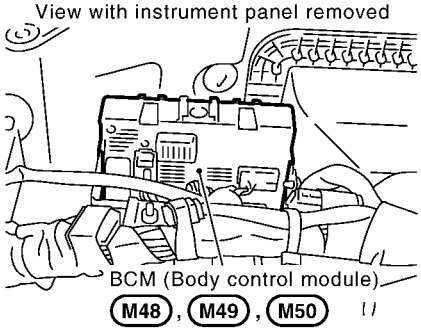
MKWA1357E

ELECTRICAL UNITS LOCATION

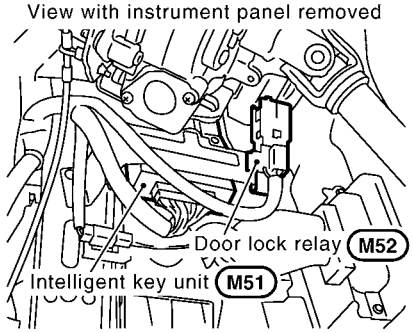
View with glove box removed



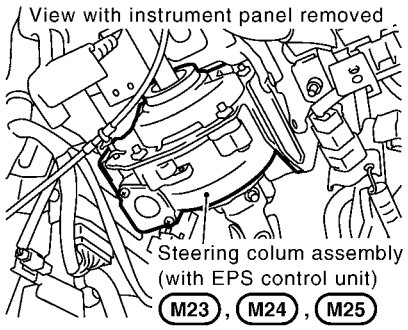
View with instrument panel removed



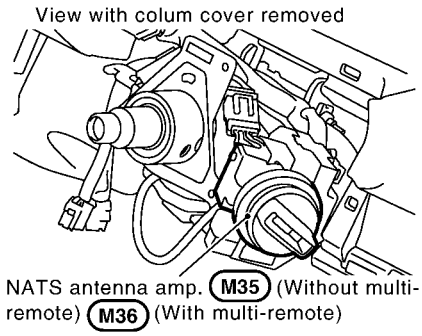
View with instrument panel removed



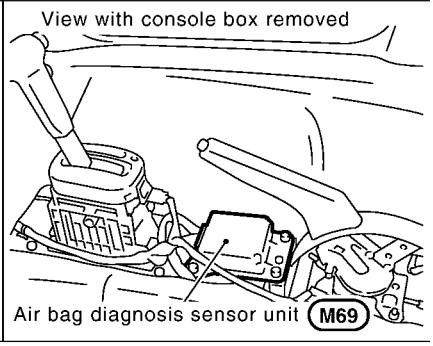
View with instrument panel removed



View with colum cover removed



View with console box removed



MKWA1358E

HARNESS CONNECTOR

PFP:00011

Description

EKS0079E

HARNESS CONNECTOR (TAB-LOCKING TYPE)

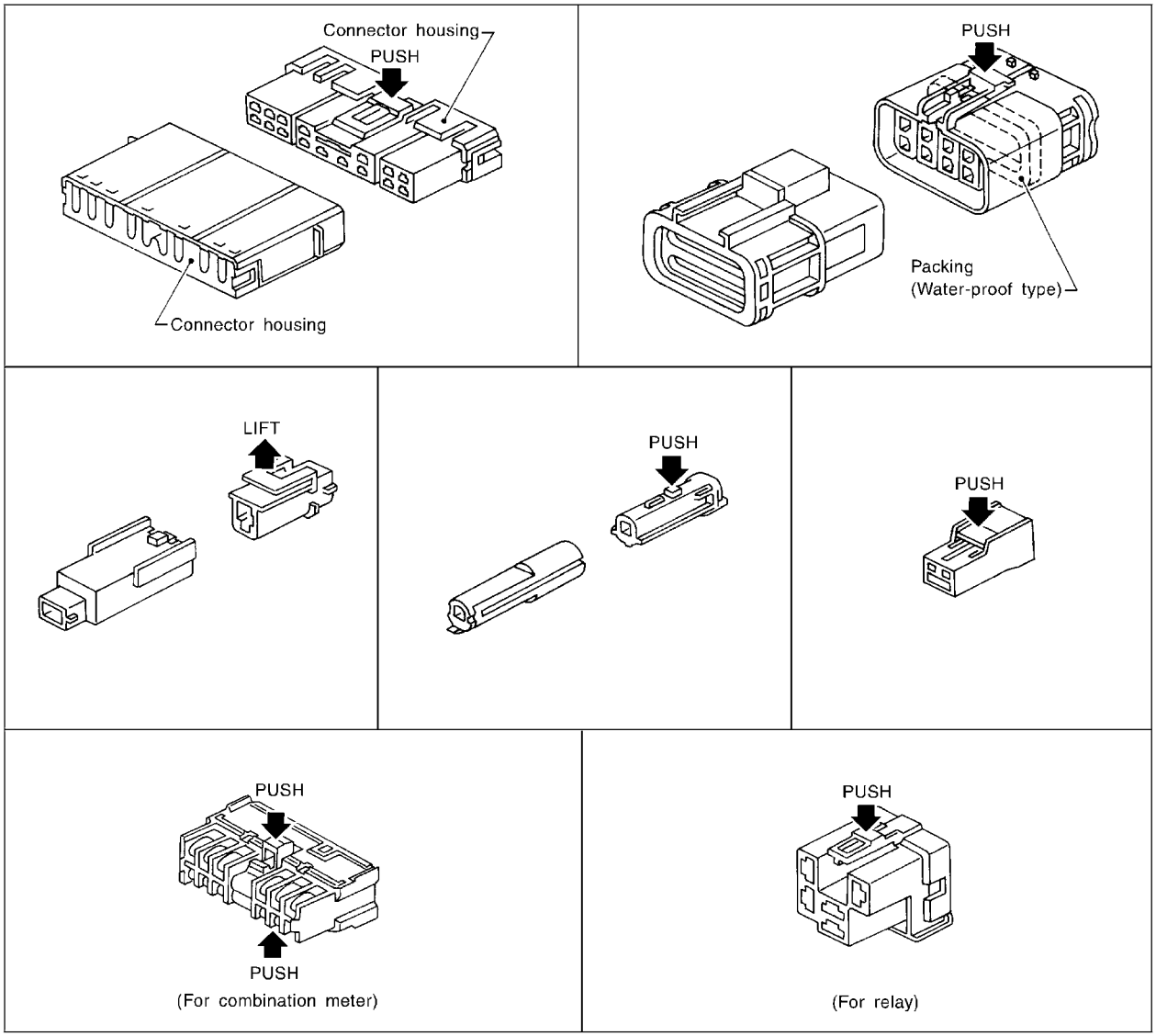
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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

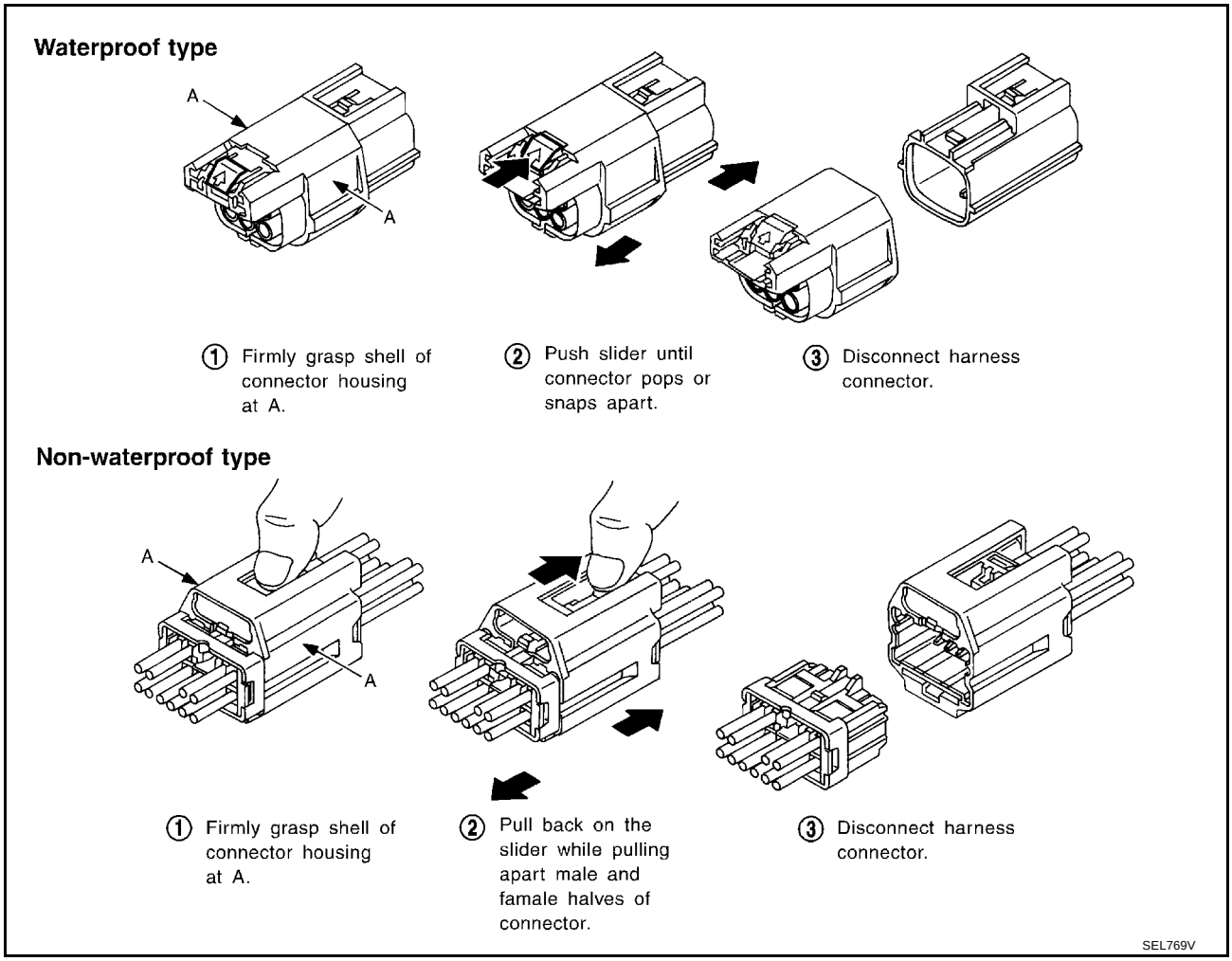
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

- 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]



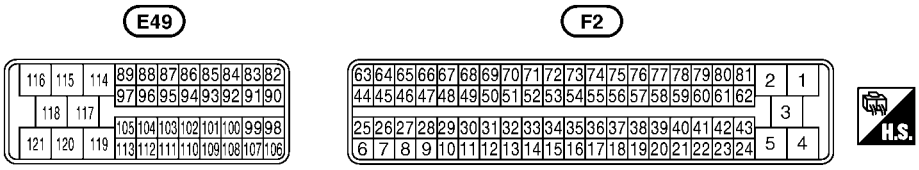
ELECTRICAL UNITS

PFP:00011

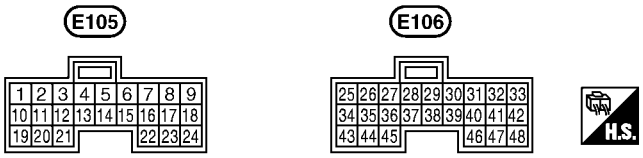
Terminal Arrangement

EKS0079F

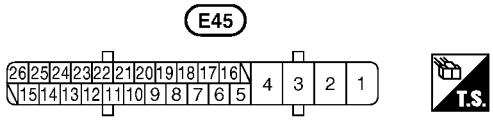
ECM



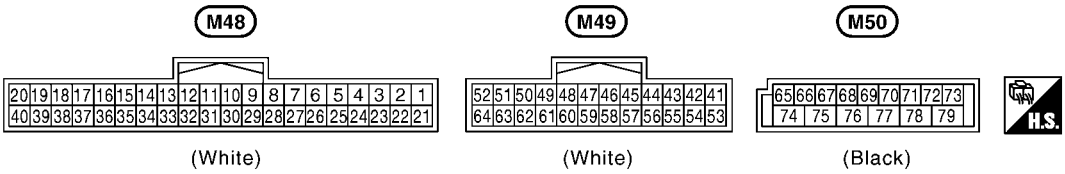
TCM (TRANSMISSION CONTROL MODULE)



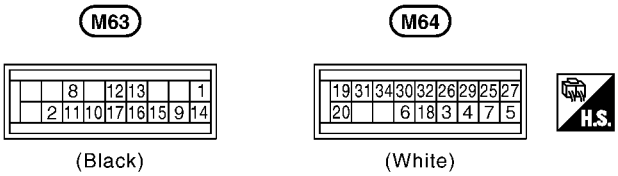
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



BCM (BODY CONTROL MODULE)



A/C AUTO AMP.



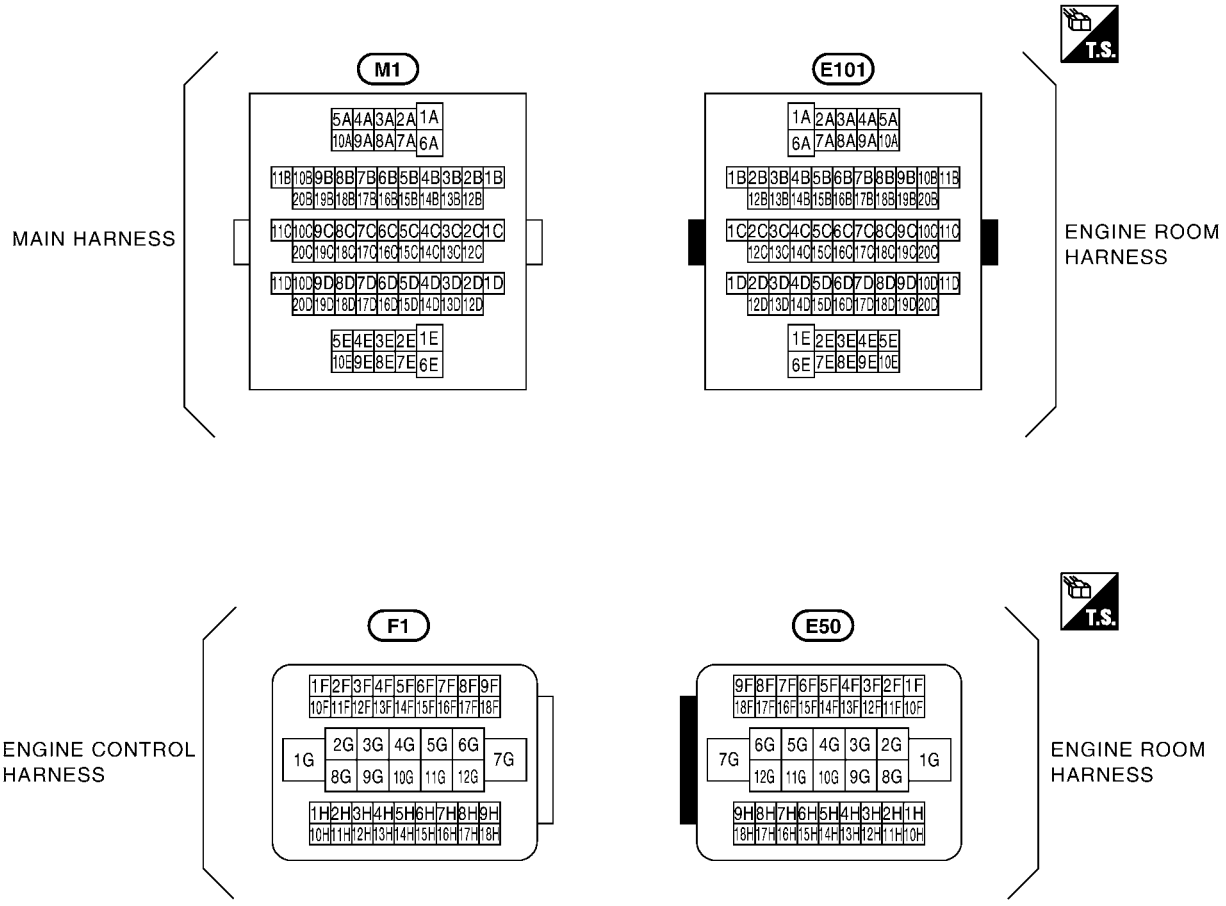
MKWA1364E

SMJ (SUPER MULTIPLE JUNCTION)

PFP:B4341

Terminal Arrangement

EKS007XZ



MKWA1361E

STANDARDIZED RELAY

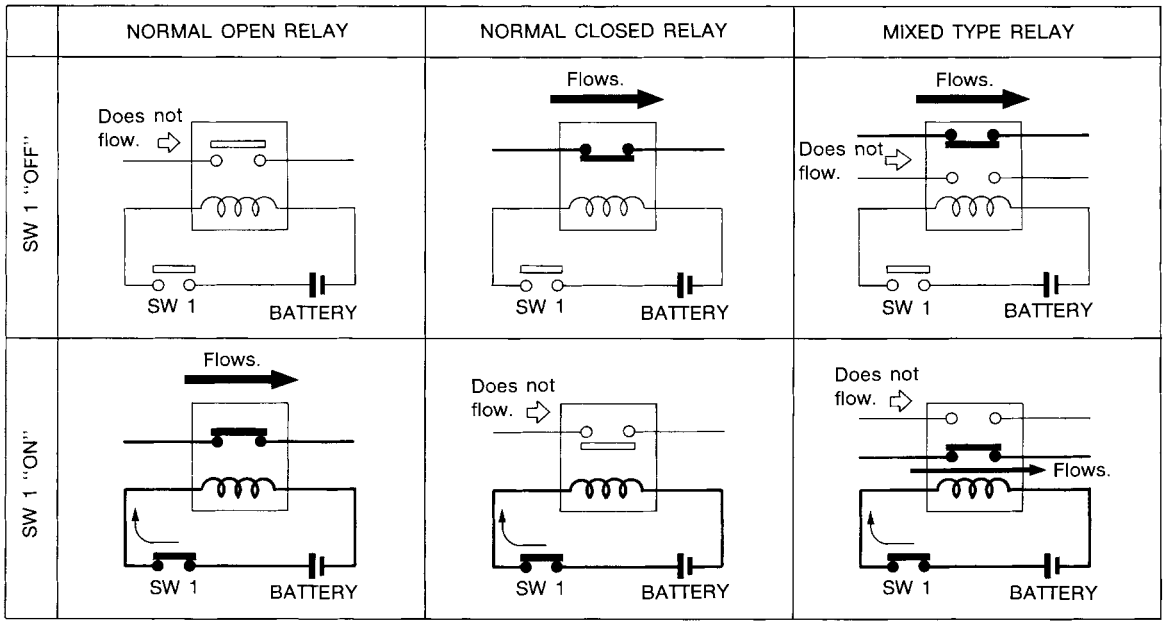
PFP:00011

Description

EKS0079G

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

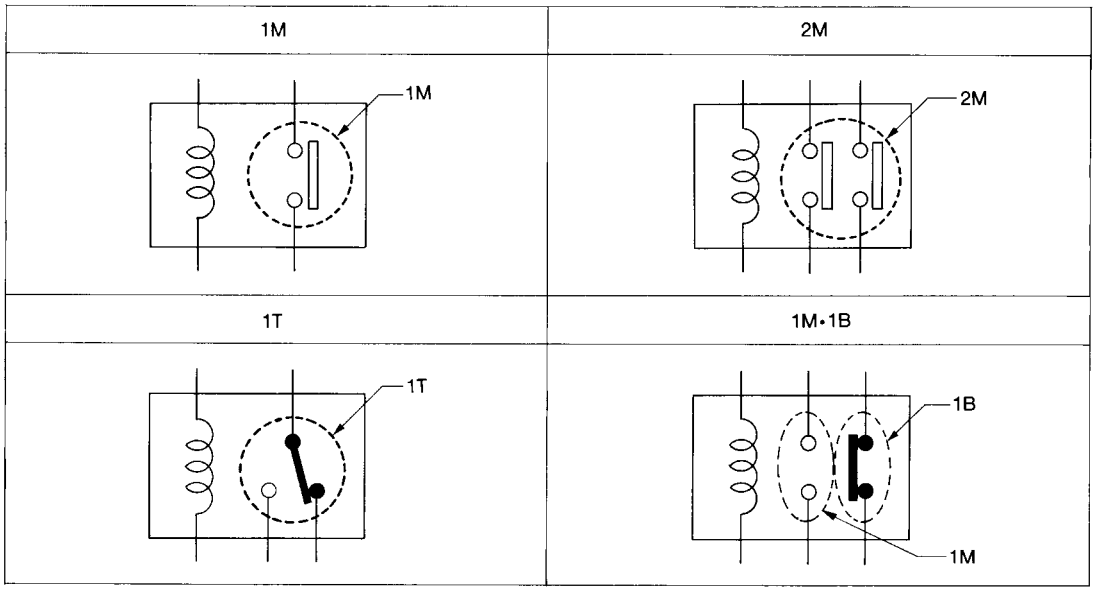
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



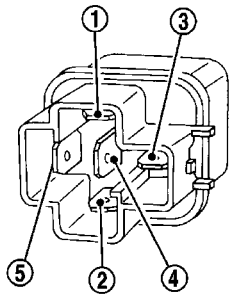
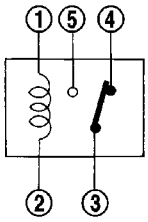
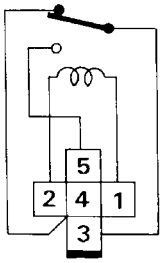
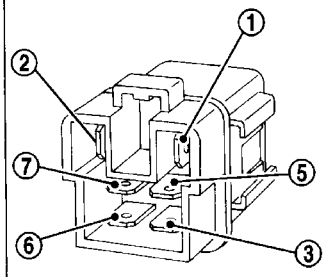
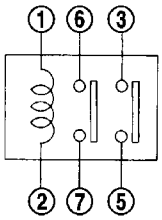
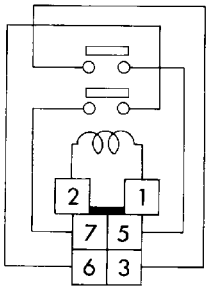
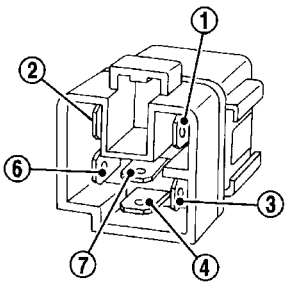
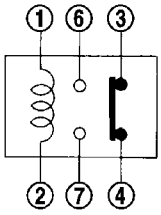
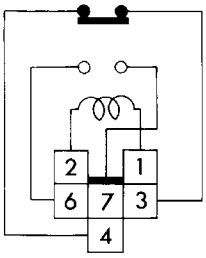
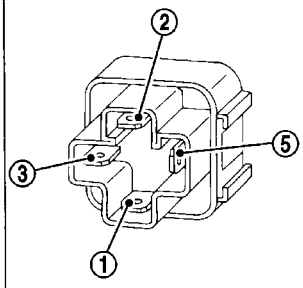
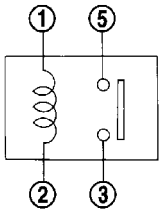
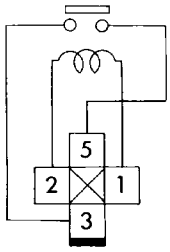
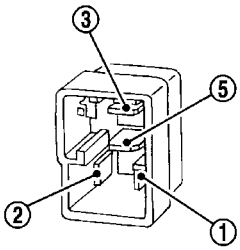
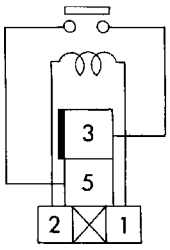
SEL881H

TYPE OF STANDARDIZED RELAYS

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



SEL882H

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.

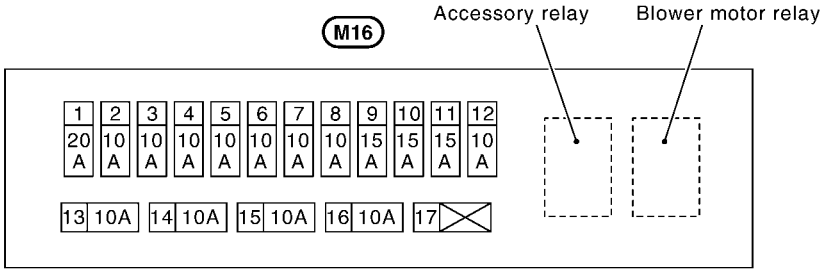
SEL188W

FUSE BLOCK - JUNCTION BOX (J/B)

PFP:24350

Terminal Arrangement

EKS0079H



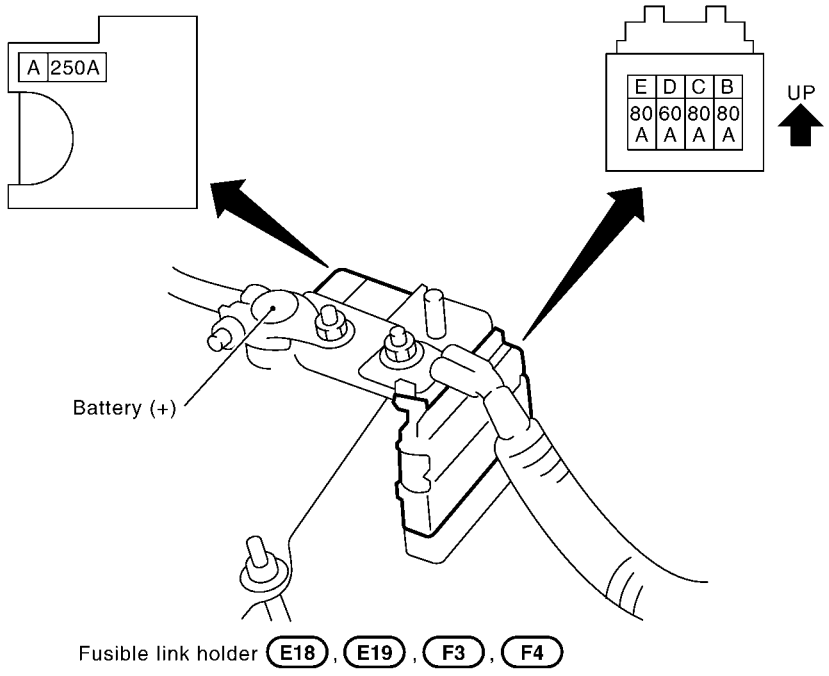
MKWA1362E

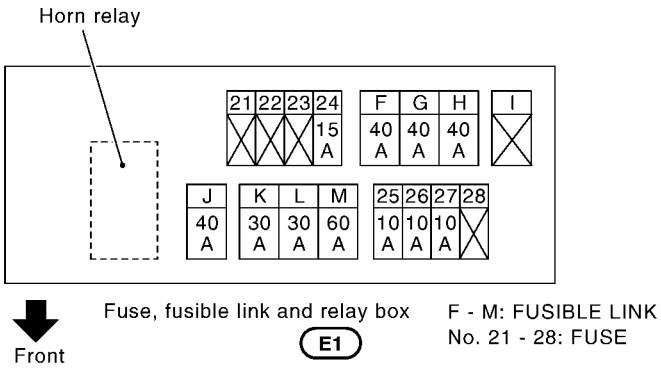
FUSE AND FUSIBLE LINK BOX

PFP:24381

Terminal Arrangement

EKS0079I





MKWA1363E