

SECTION **PG**

POWER SUPPLY, GROUND & CIRCUIT ELEMENTS

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POWER SUPPLY ROUTING CIRCUIT

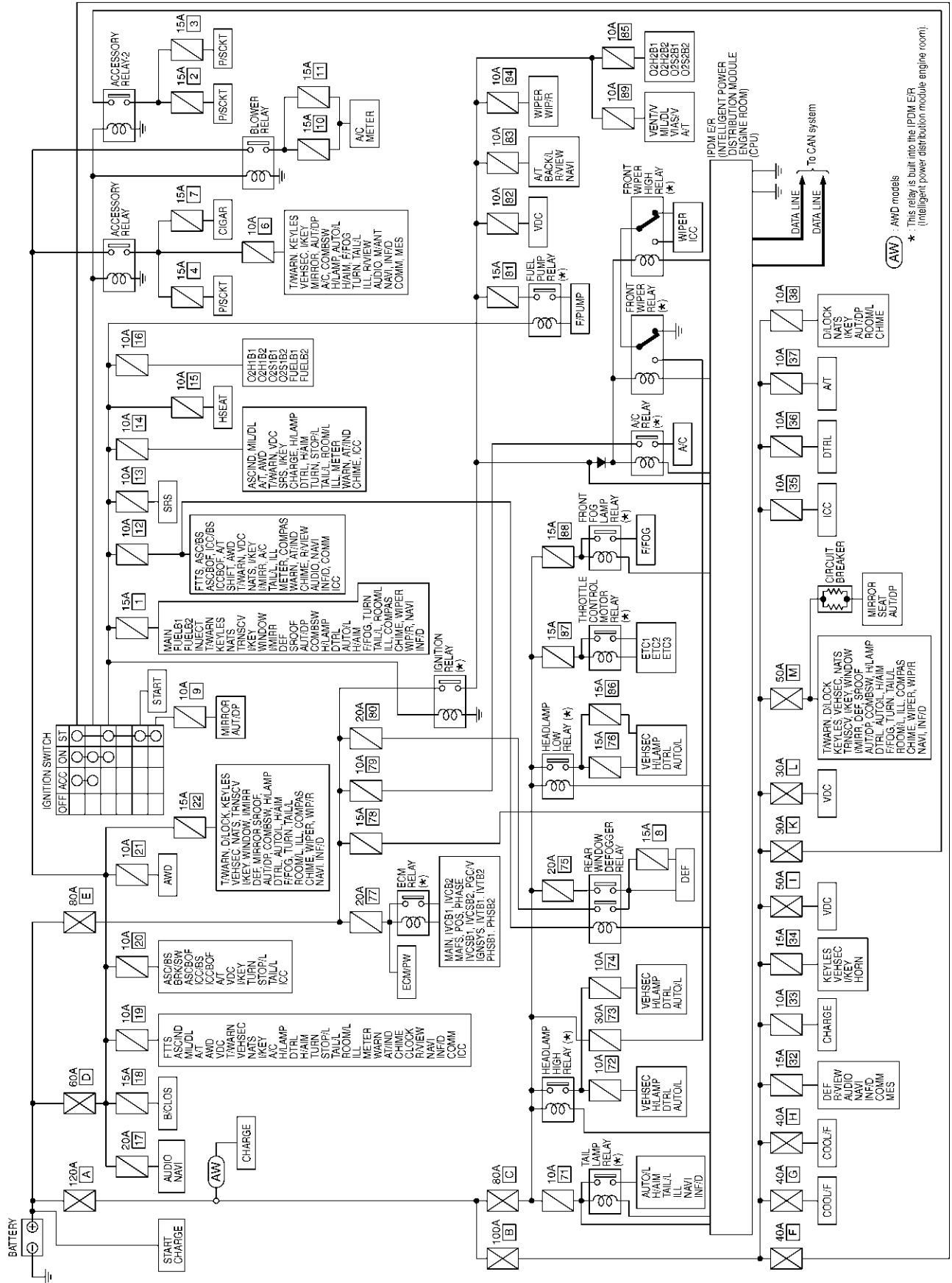
POWER SUPPLY ROUTING CIRCUIT

PPF:24110

Schematic

AKS007VU

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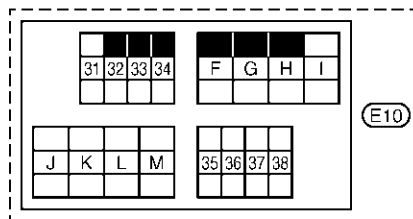
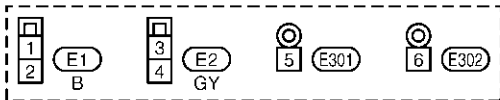
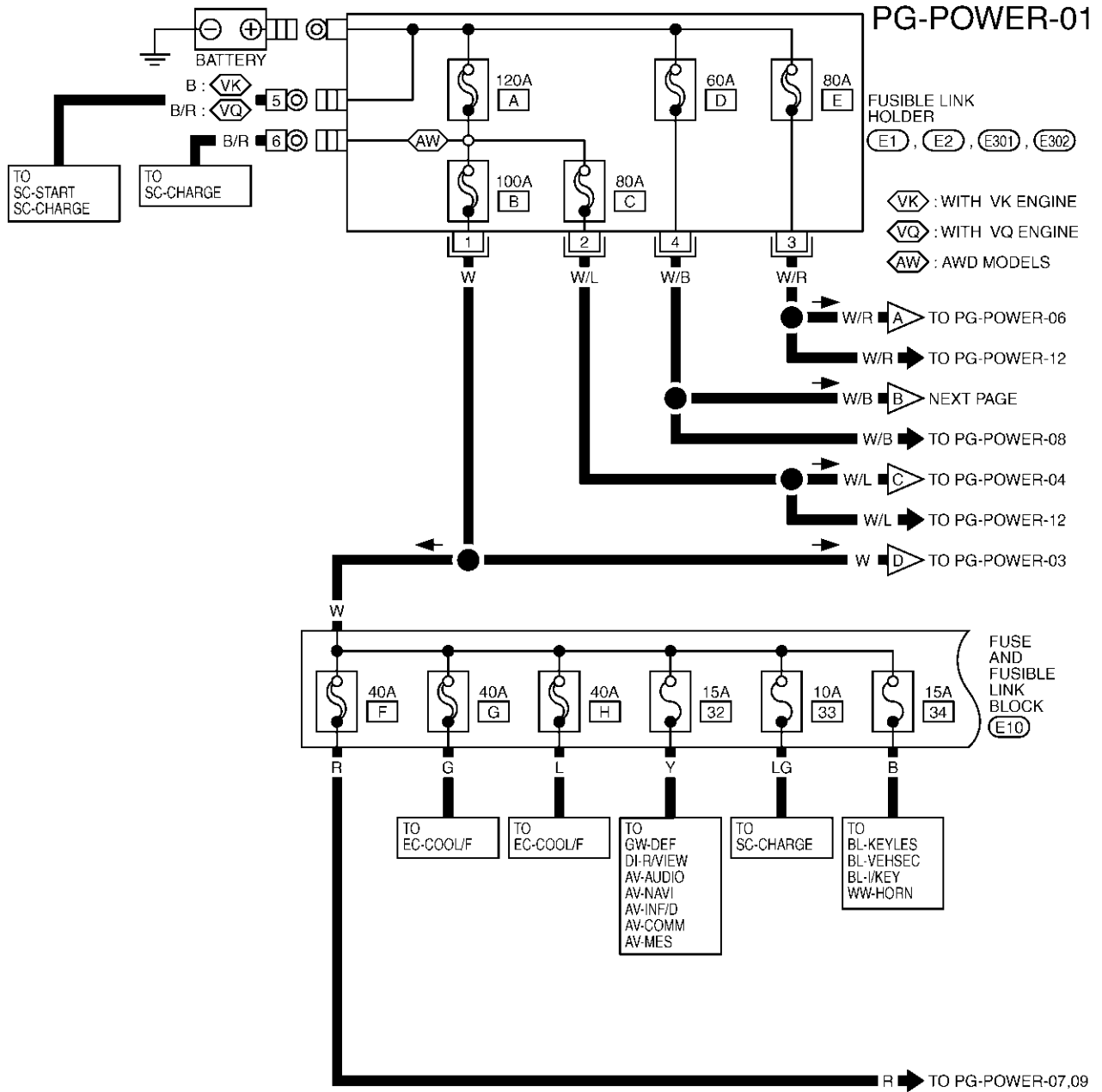
TKWM0707E

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POWER SUPPLY ROUTING CIRCUIT

AKS007VV

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

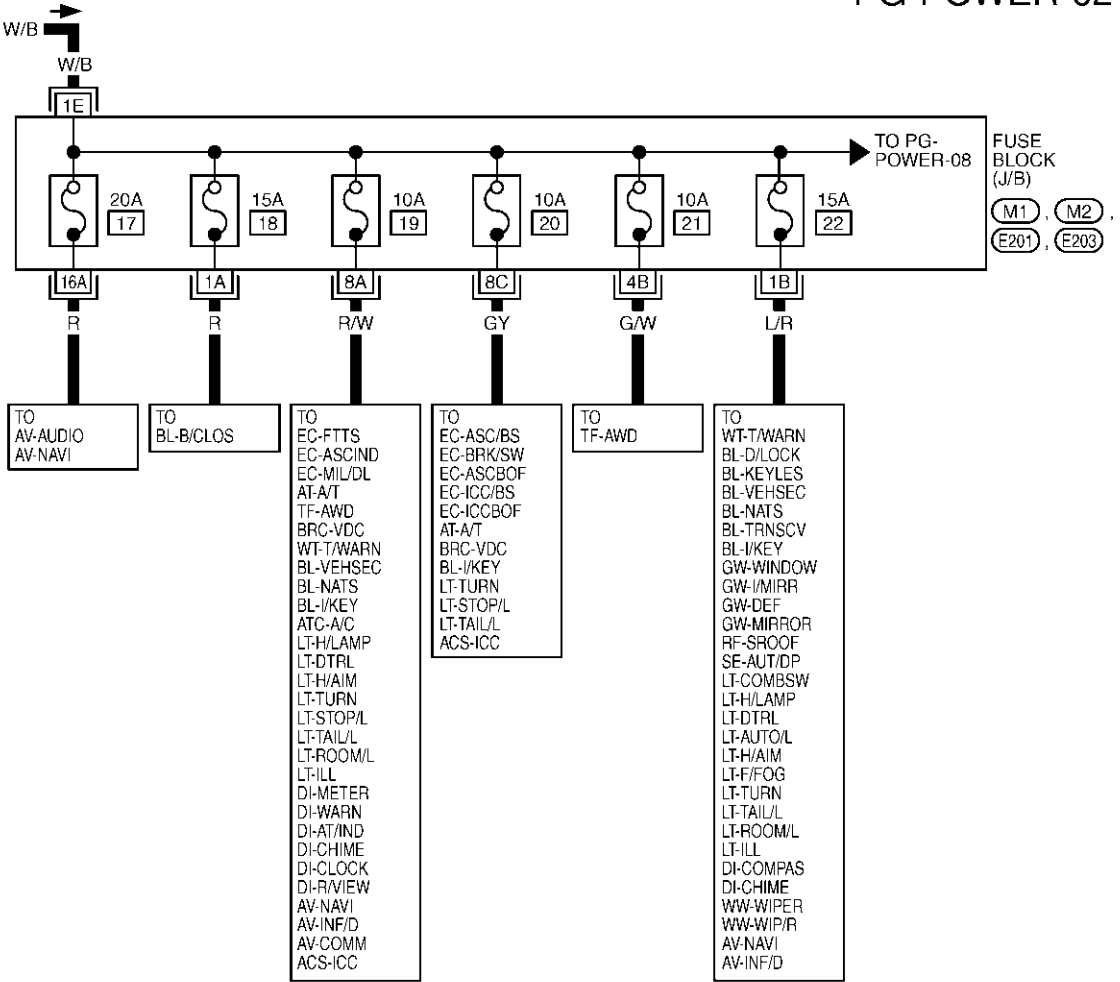


TKWM0708E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-02

PRE-
CEDING
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REFER TO THE FOLLOWING.

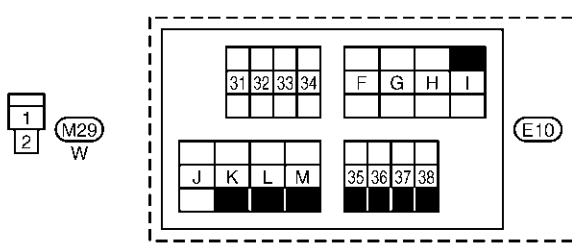
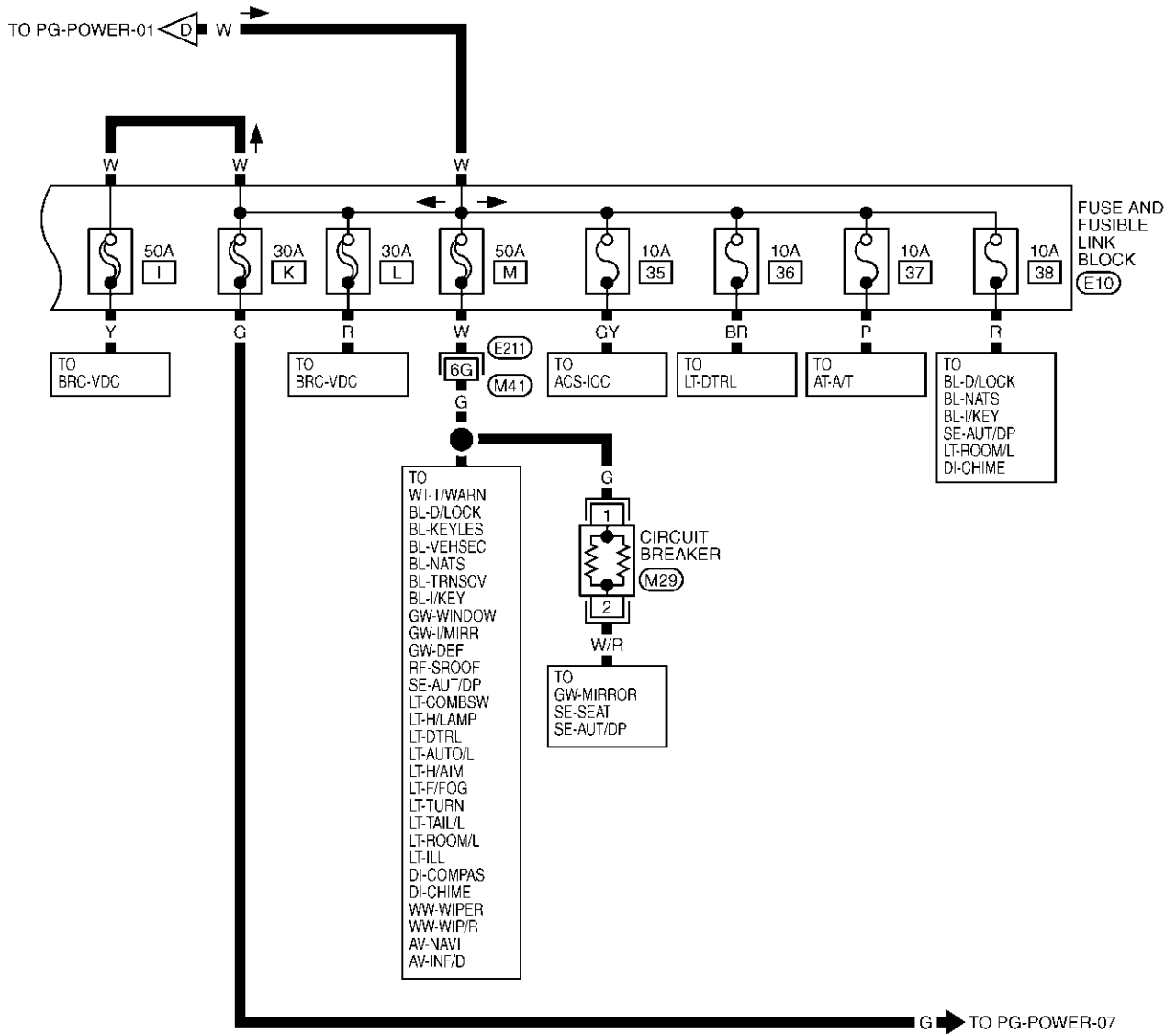
M1, M2, E201, E203
-FUSE BLOCK-JUNCTION
BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWM0709E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-03

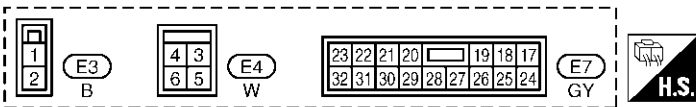
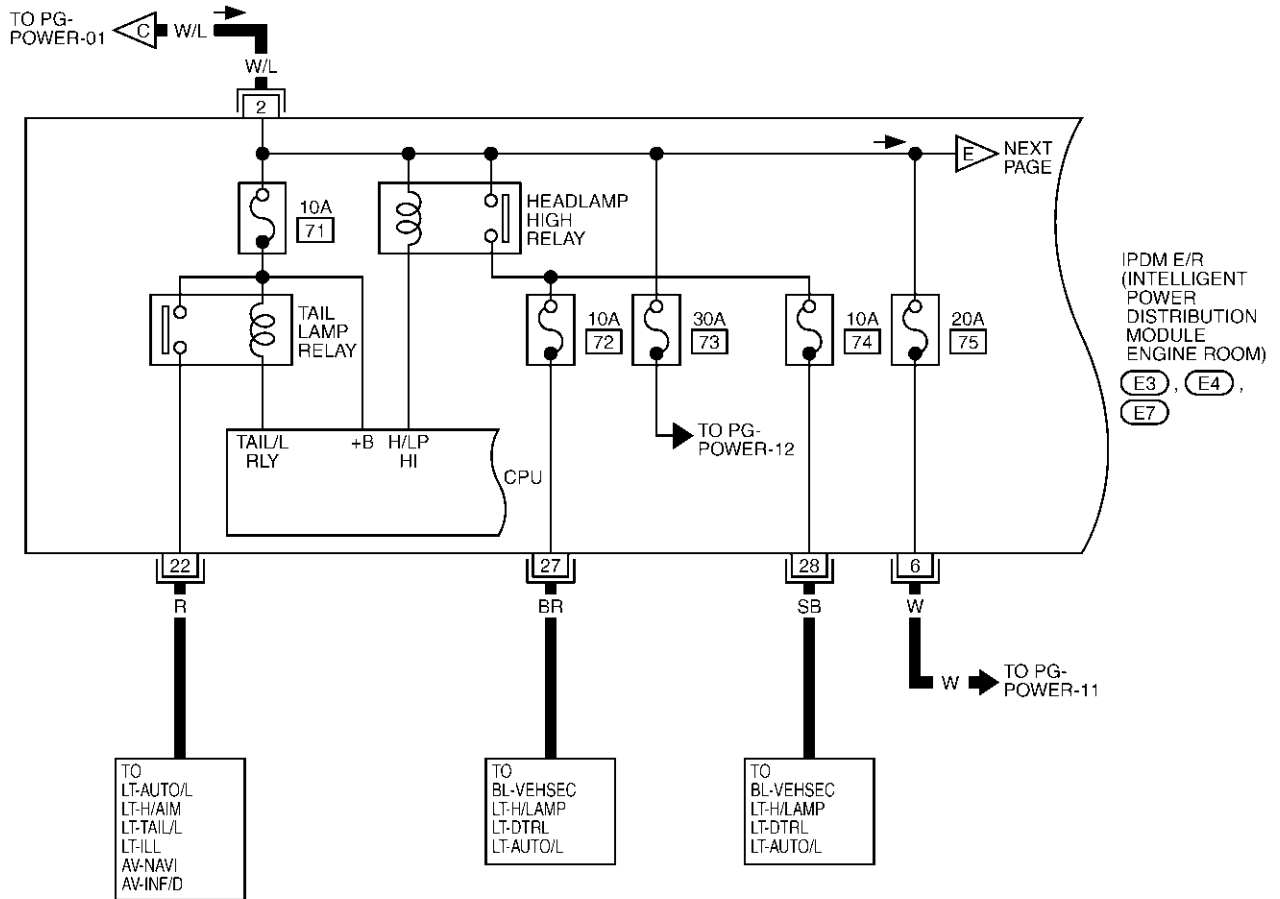


REFER TO THE FOLLOWING.
 (E21) -SUPER MULTIPLE
 JUNCTION (SMJ)

TKWM0710E

POWER SUPPLY ROUTING CIRCUIT

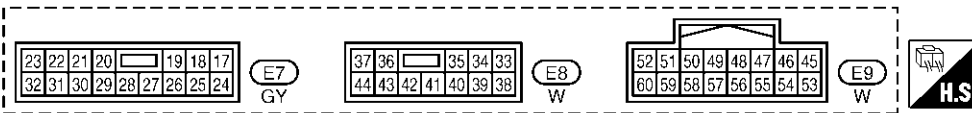
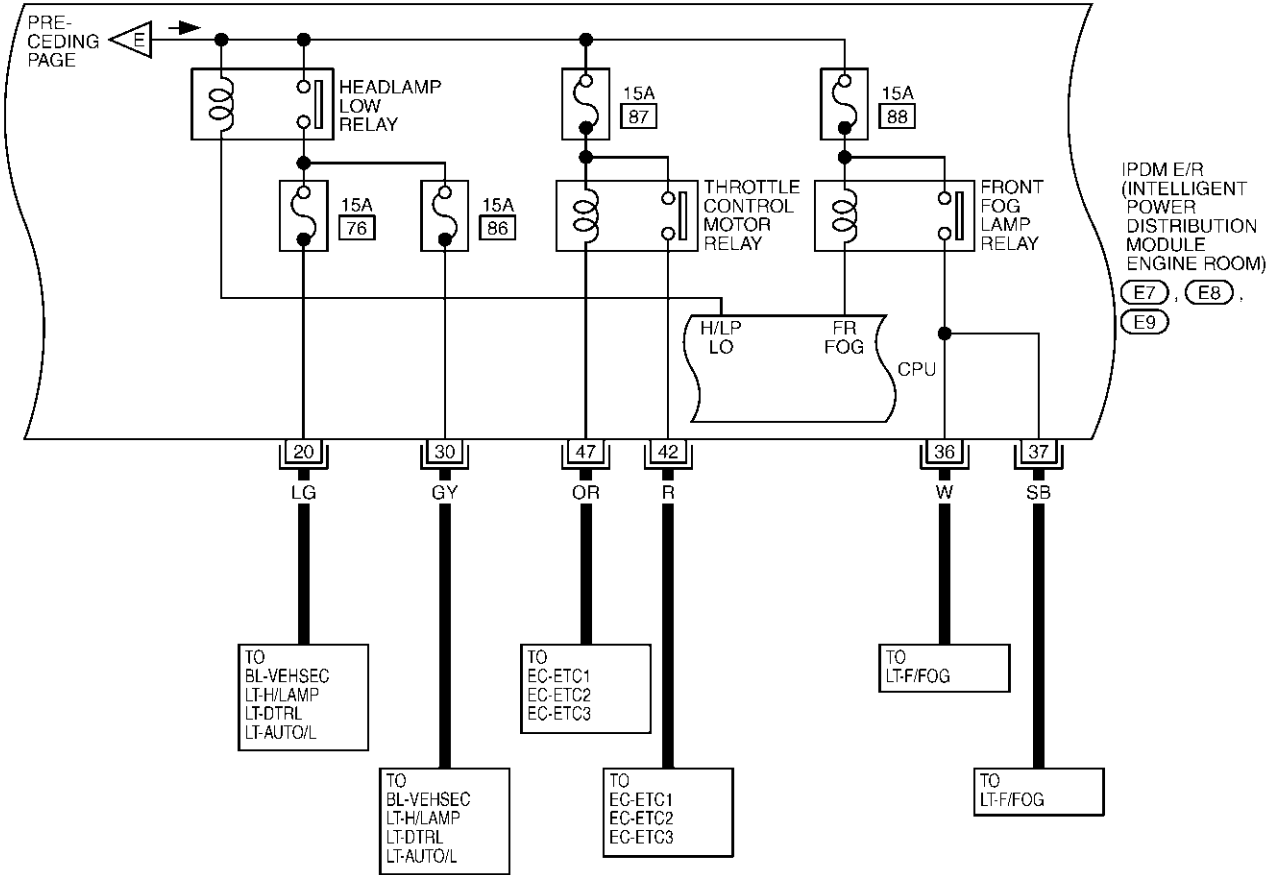
PG-POWER-04



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POWER SUPPLY ROUTING CIRCUIT

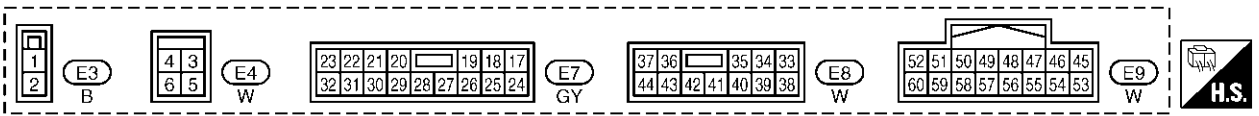
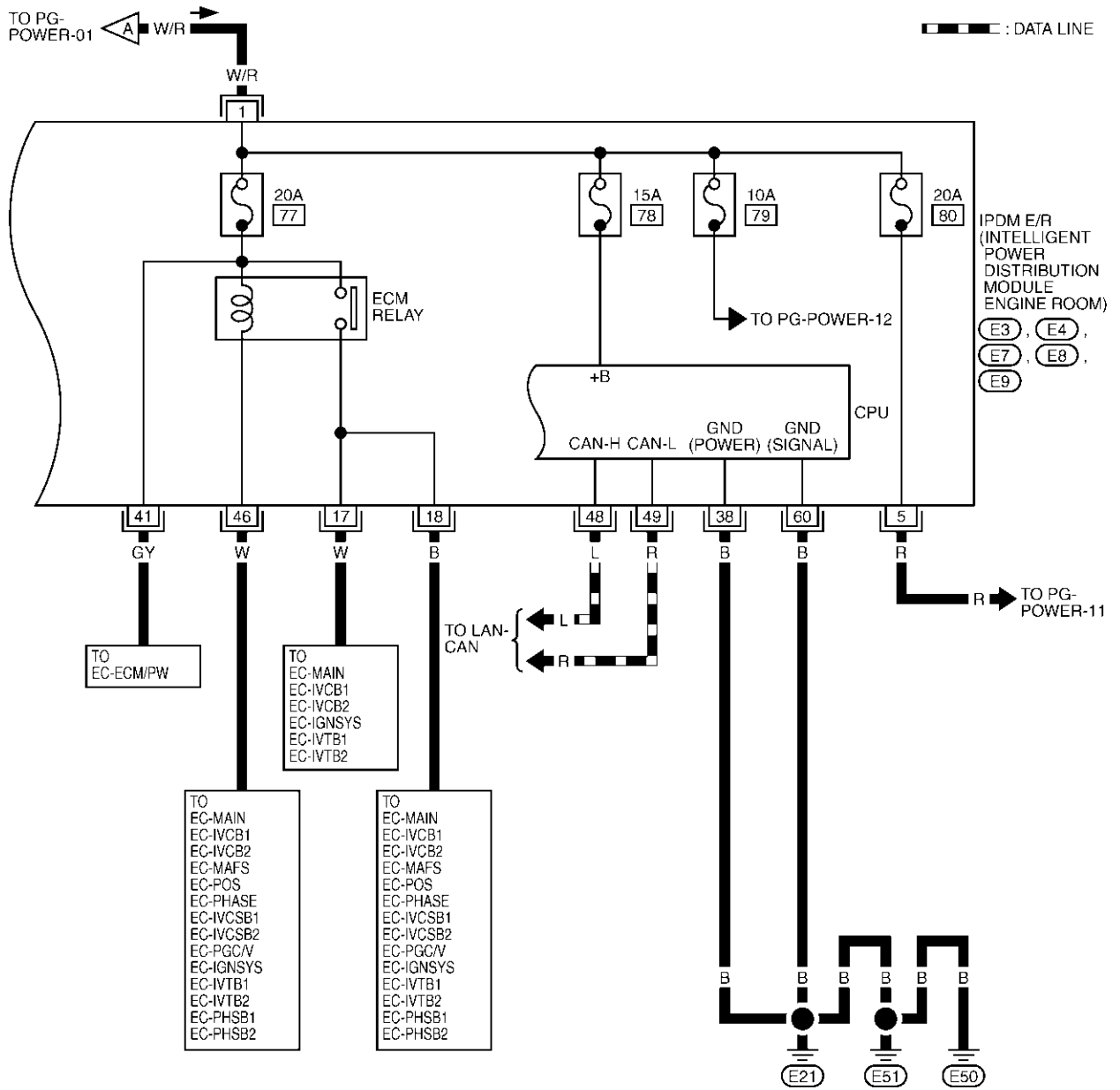
PG-POWER-05



TKWM0712E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-06

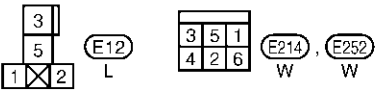
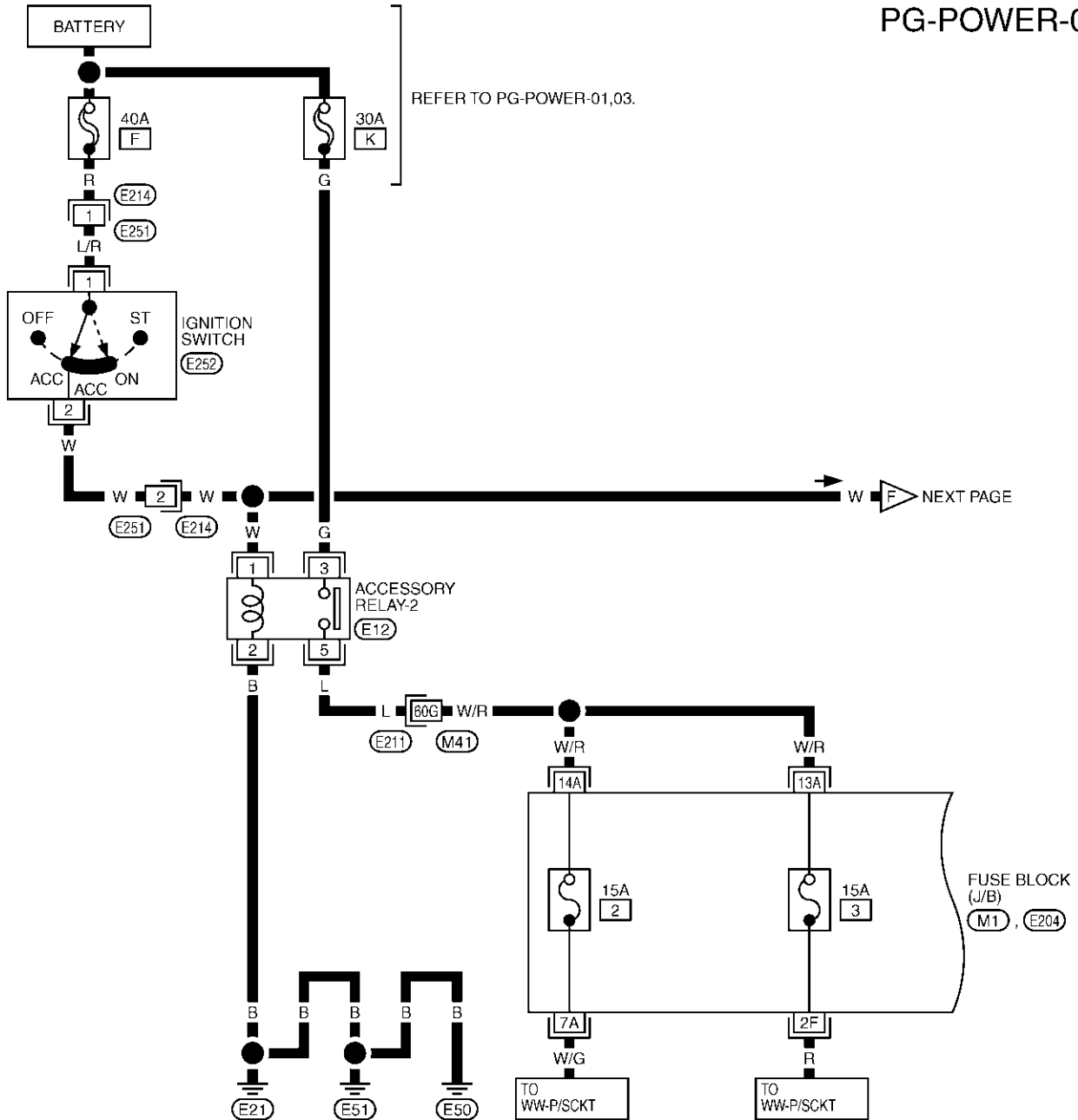


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POWER SUPPLY ROUTING CIRCUIT

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

PG-POWER-07



REFER TO THE FOLLOWING.

(E211) - SUPER MULTIPLE JUNCTION (SMJ)

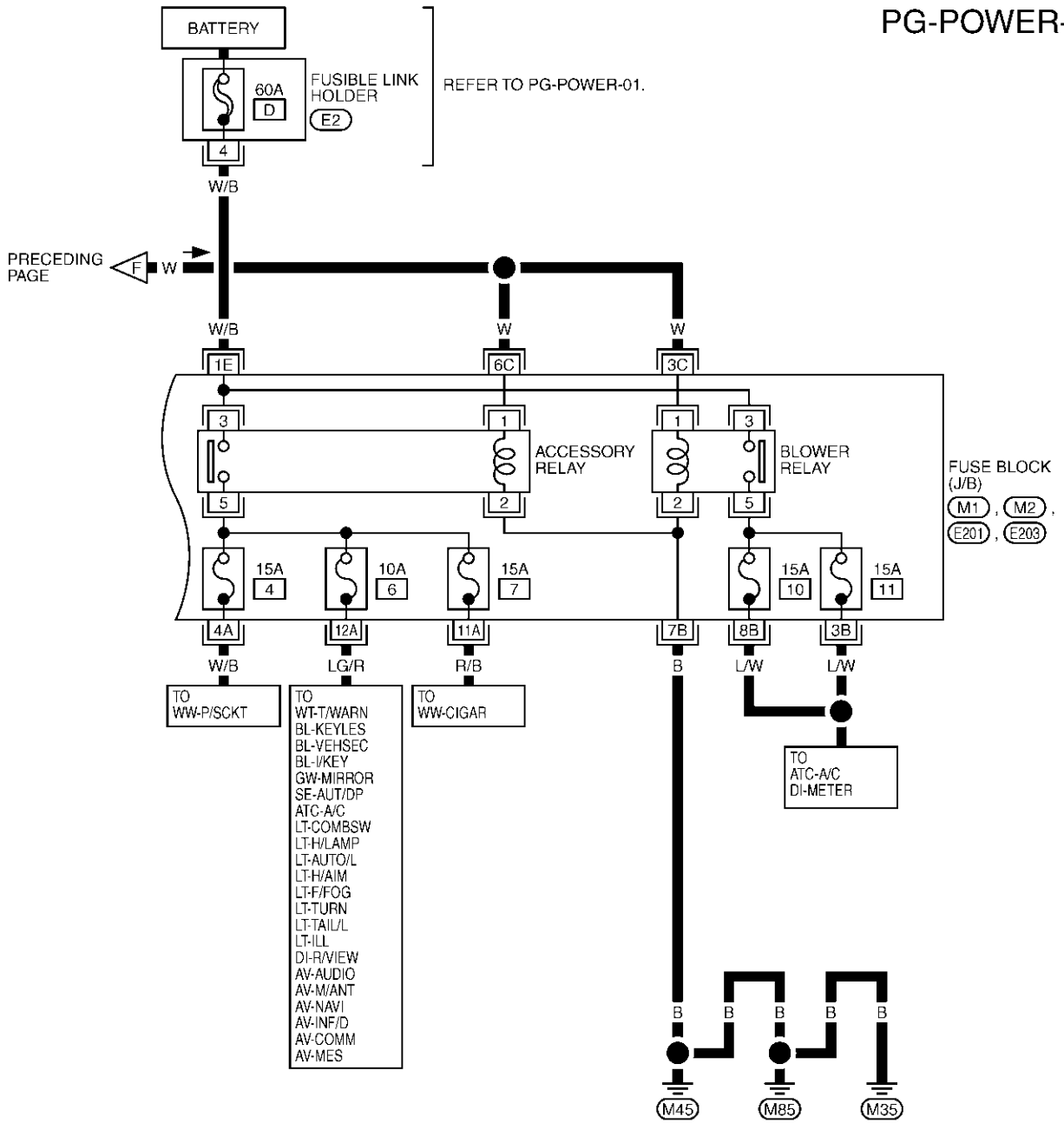
(M1), (E204) - FUSE BLOCK-JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWM0714E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-08



REFER TO THE FOLLOWING.

M1, M2, E201, E203

FUSE BLOCK-JUNCTION BOX (J/B)

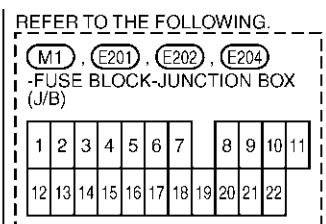
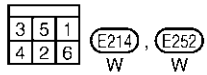
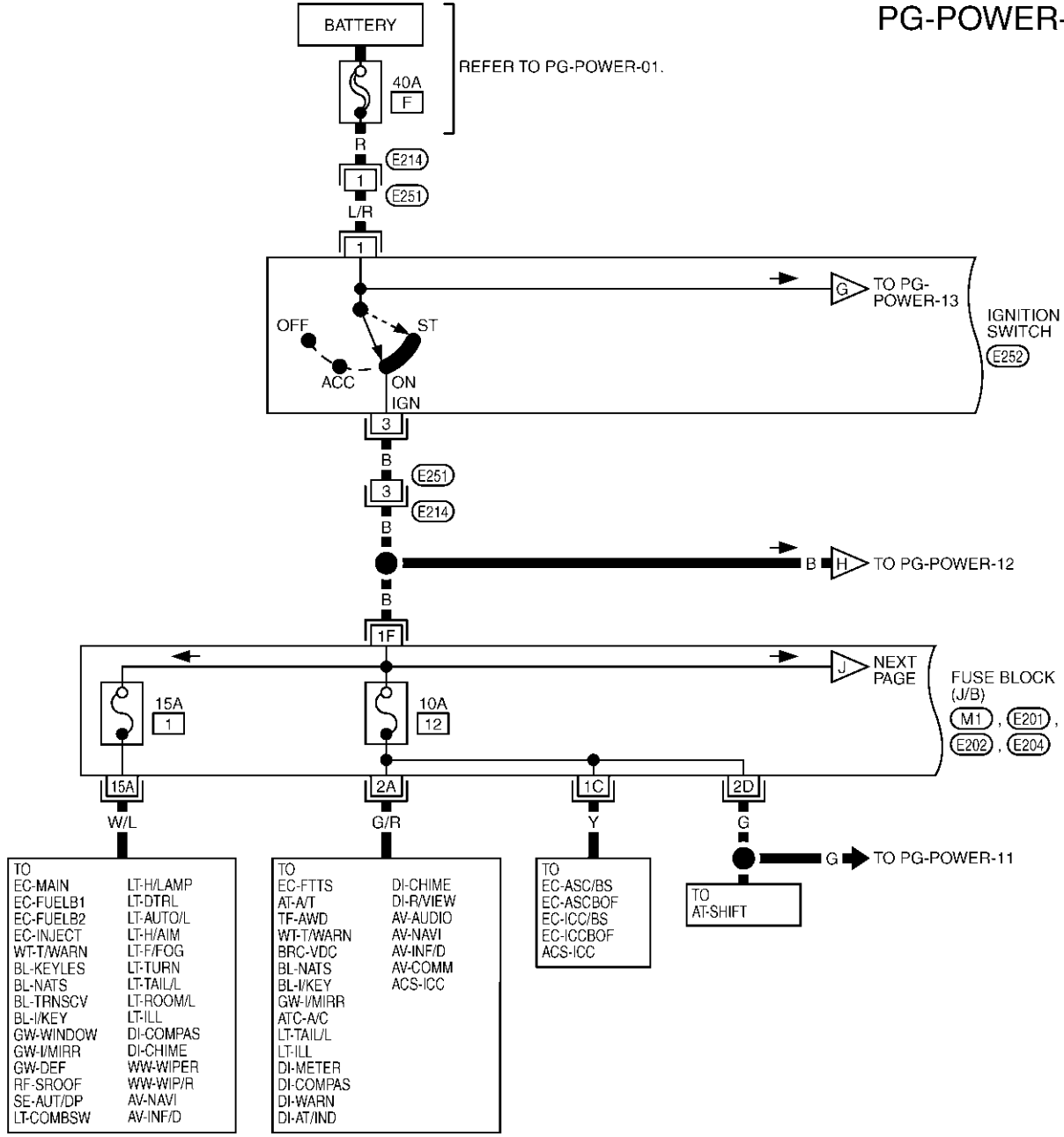
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWM0715E

POWER SUPPLY ROUTING CIRCUIT

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

PG-POWER-09

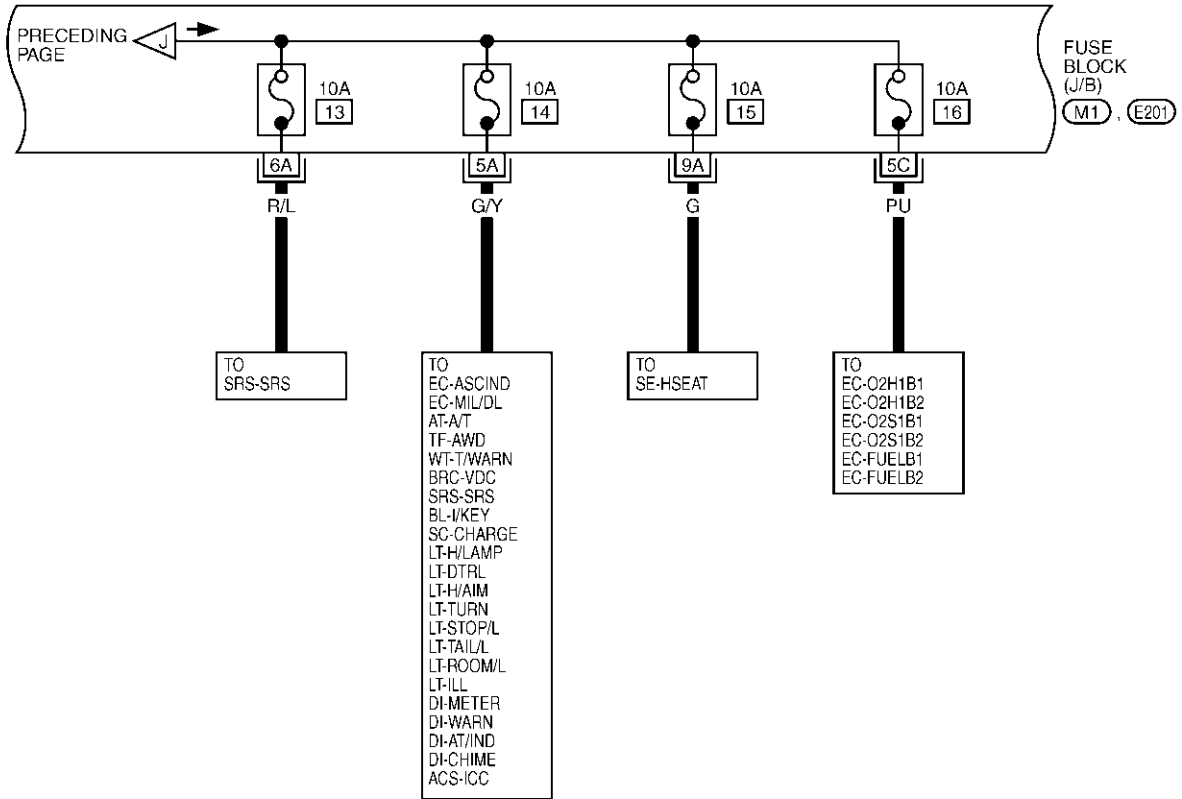


TKWM0716E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-10

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REFER TO THE FOLLOWING.

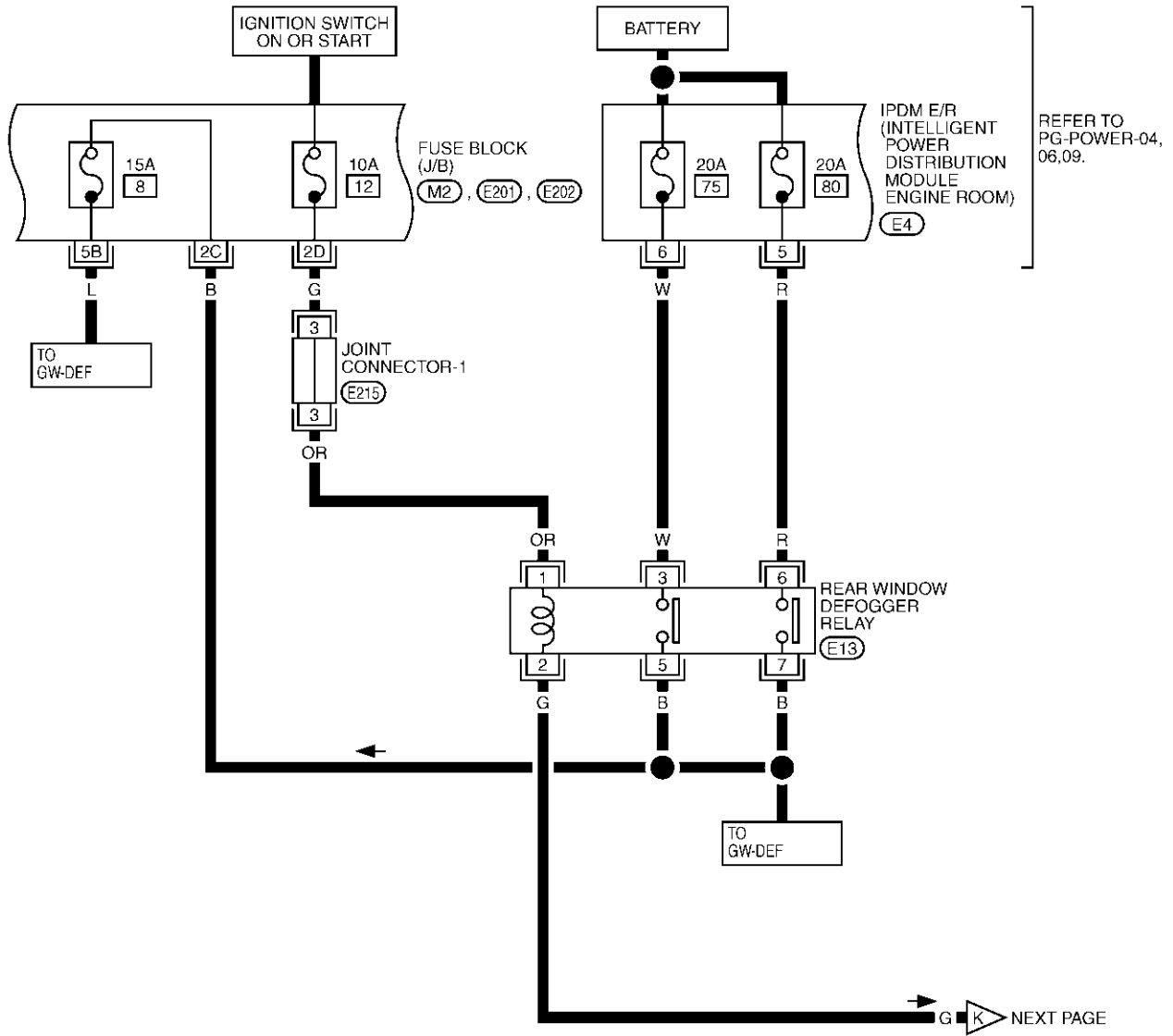
(M1) (E201) - FUSE BLOCK - JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWM0717E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-11



E4
W



E13
BR



E215
BR

REFER TO THE FOLLOWING.

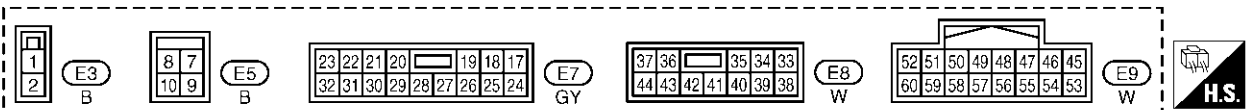
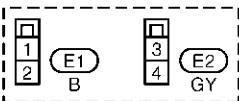
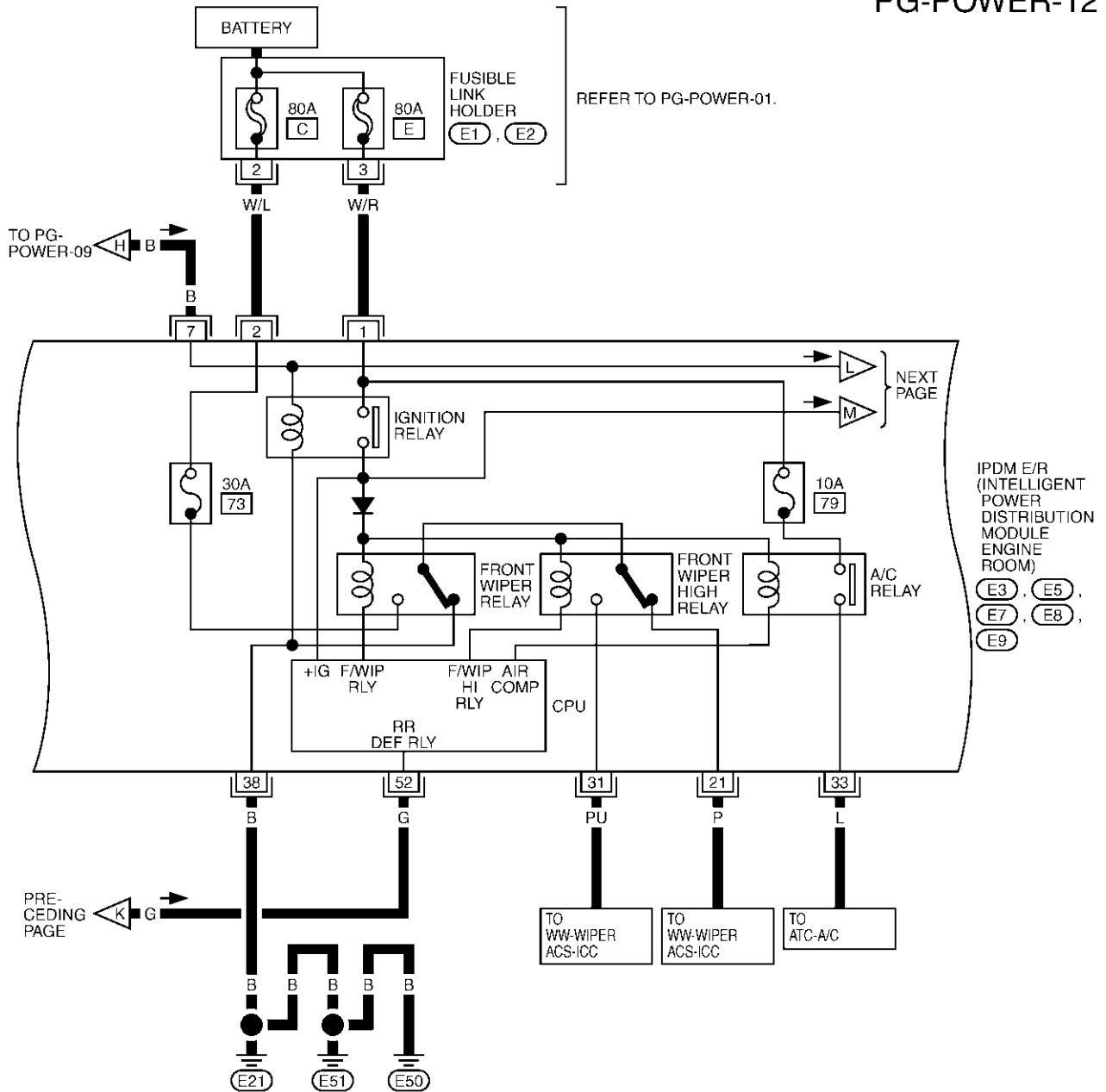
(M2), (E201), (E202) - FUSE BLOCK-JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22

TKWH0385E

POWER SUPPLY ROUTING CIRCUIT

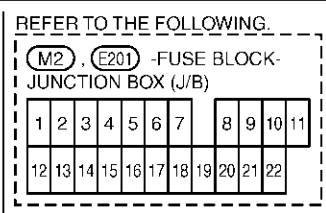
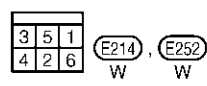
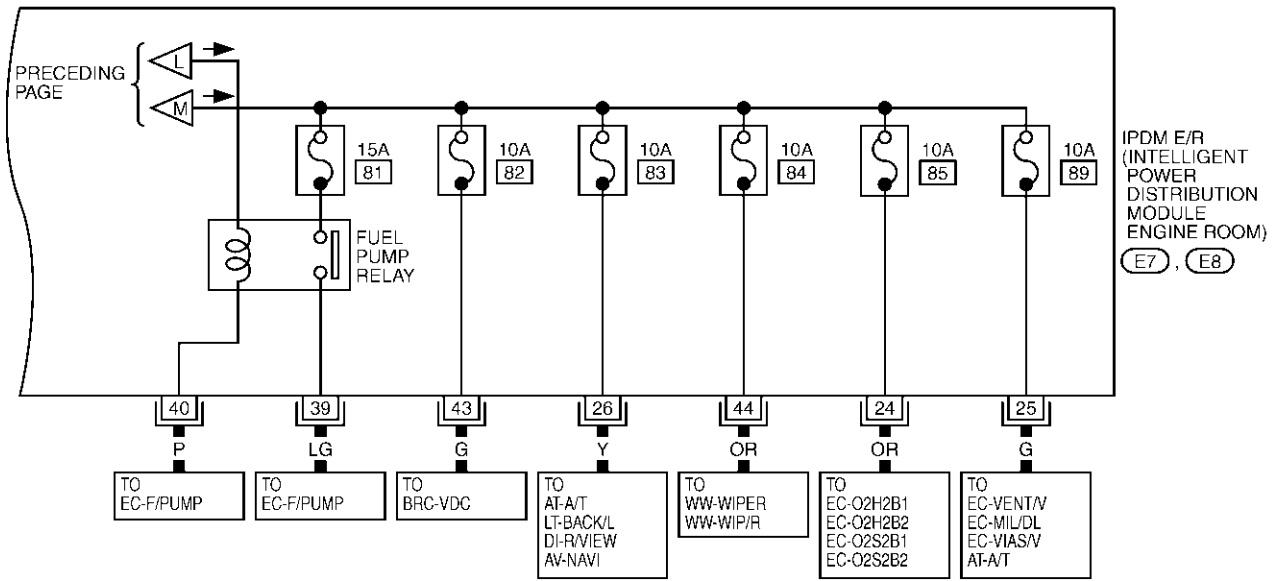
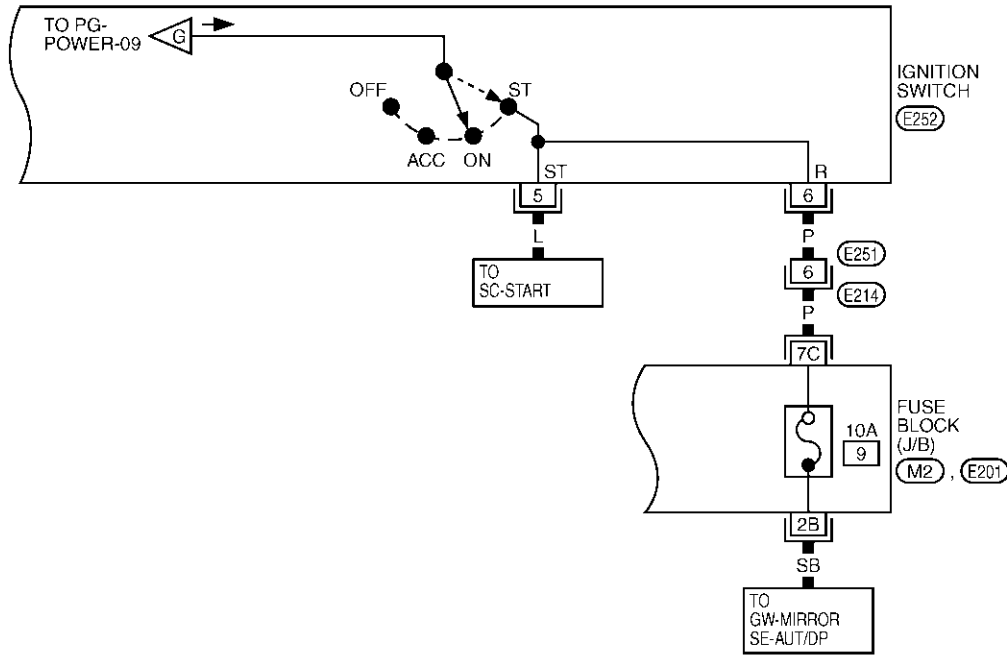
PG-POWER-12



TKWM0719E

POWER SUPPLY ROUTING CIRCUIT

PG-POWER-13

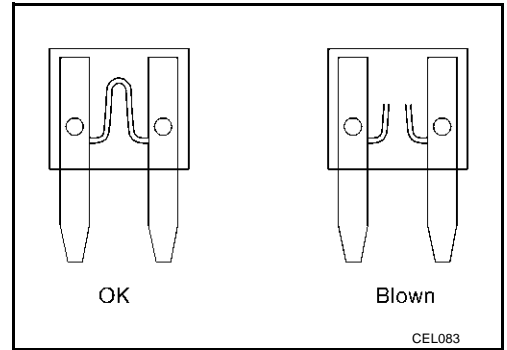


TKWM0720E

POWER SUPPLY ROUTING CIRCUIT

Fuse

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

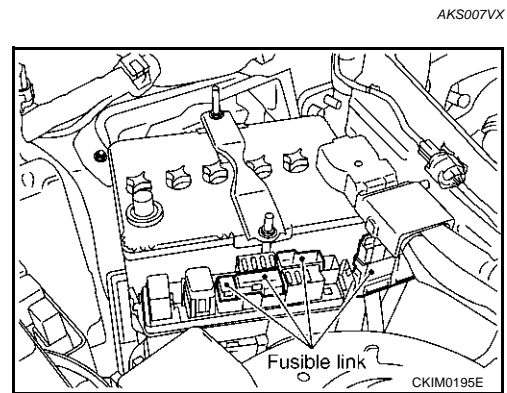


Fusible Link

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

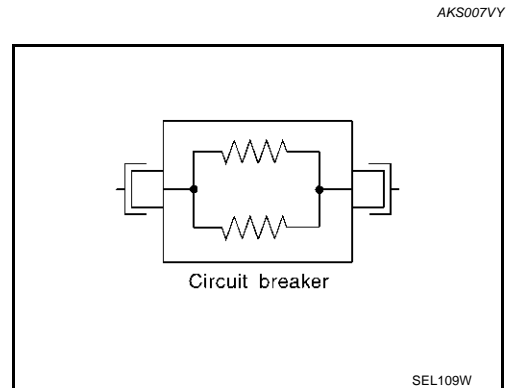
CAUTION:

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



Circuit Breaker

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



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

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

PFP:284B7

System Description

AKS005S9

- IPDM E/R (Intelligent Power Distribution Module Engine Room) integrates the relay box and fuse block which were originally placed in engine room. It controls integrated relay via IPDM E/R control circuit.
- IPDM E/R-integrated control circuit performs ON-OFF operation of relay, CAN communication control, oil pressure switch signal, hood switch signal reception, etc.
- It controls operation of each electrical part via ECM, BCM and CAN communication lines.

CAUTION:

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

SYSTEMS CONTROLLED BY IPDM E/R

1. Lamp control
Using CAN communication line, it receives signal from BCM and controls the following lamps:
 - Headlamps (Hi, Lo)
 - Parking lamps
 - Tail lamps
 - Front fog lamps
2. Wiper control
Using CAN communication line, it receives signals from BCM and controls the front wipers.
3. Rear window defogger relay control
Using CAN communication line, it receives signals from BCM and controls the rear window defogger relay.
4. A/C compressor control
Using CAN communication line, it receives signals from ECM and controls the A/C relay.
5. Cooling fan control
Using CAN communication line, it receives signals from ECM and controls cooling fan relay.
6. Horn control
Using CAN communication line, it receives signals from BCM and controls horn relay.

CAN COMMUNICATION LINE CONTROL

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

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

Controlled system	Fail-safe mode
Headlamp	<ul style="list-style-type: none">● With the ignition switch ON, the headlamp (low) is ON.● With the ignition switch OFF, the headlamp (low) is OFF.
Tail and parking lamps	<ul style="list-style-type: none">● With the ignition switch ON, the tail and parking lamps is ON.● With the ignition switch OFF, the tail and parking lamps is OFF.
Cooling fan	<ul style="list-style-type: none">● 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 relay OFF
A/C compressor	A/C compressor OFF
Front fog lamps	Front fog lamp relay OFF

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

IPDM E/R STATUS CONTROL

In order to save power, IPDM E/R switches status by itself based on each operating condition.

1. CAN communication status
 - CAN communication is normally performed with other control units.
 - Individual unit control by IPDM E/R is normally performed.
 - When sleep request signal is received from BCM, mode is switched to sleep waiting status.
2. Sleep waiting status
 - Process to stop CAN communication is activated.
 - All systems controlled by IPDM E/R are stopped. When 1 seconds have elapsed after CAN communication with other control units is stopped, mode switches to sleep status.
3. Sleep status
 - IPDM E/R operates in low current-consumption mode.
 - CAN communication is stopped.
 - When a change in CAN communication line is detected, mode switches to CAN communication status.
 - When a change hood switch or ignition switch signal is detected, mode switches to CAN communication status.

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

CAN Communication System Description

AKS005SA

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

CAN Communication Unit

AKS0080F

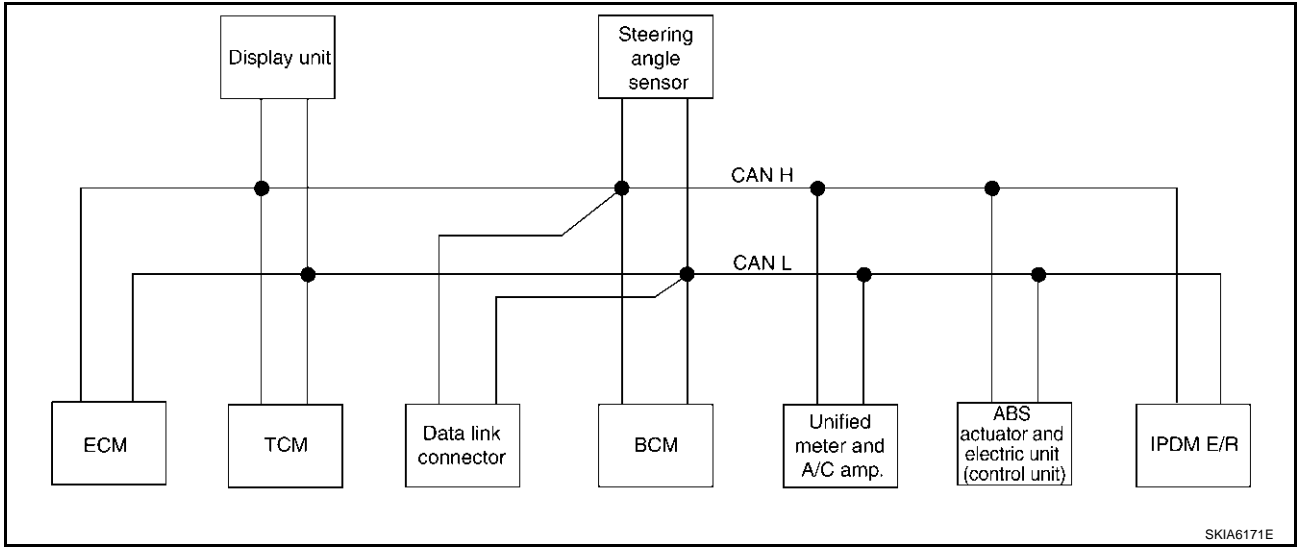
Body type	Wagon					
Axle	2WD			AWD		
Engine	VQ35DE			VQ35DE/VK45DE		
Transmission	A/T					
Brake control	VDC					
Navigation system			×			×
Low tire pressure warning system			×			×
ICC system			×			×
Intelligent Key system			×			×
Automatic drive positioner		×	×		×	×
CAN communication unit						
ECM	×	×	×	×	×	×
TCM	×	×	×	×	×	×
Display unit	×	×		×	×	
Display control unit			×			×
Low tire pressure warning control unit			×			×
AWD control unit				×	×	×
ICC unit			×			×
Intelligent Key unit			×			×
Data link connector	×	×	×	×	×	×
BCM	×	×	×	×	×	×
Steering angle sensor	×	×	×	×	×	×
Unified meter and A/C amp.	×	×	×	×	×	×
ICC sensor			×			×
ABS actuator and electric unit (control unit)	×	×	×	×	×	×
Driver seat control unit		×	×		×	×
IPDM E/R	×	×	×	×	×	×
CAN communication type	PG-21. "TYPE 1/TYPE2"		PG-24. "TYPE 3"	PG-27. "TYPE 4/TYPE5"		PG-30. "TYPE 6"

×: Applicable

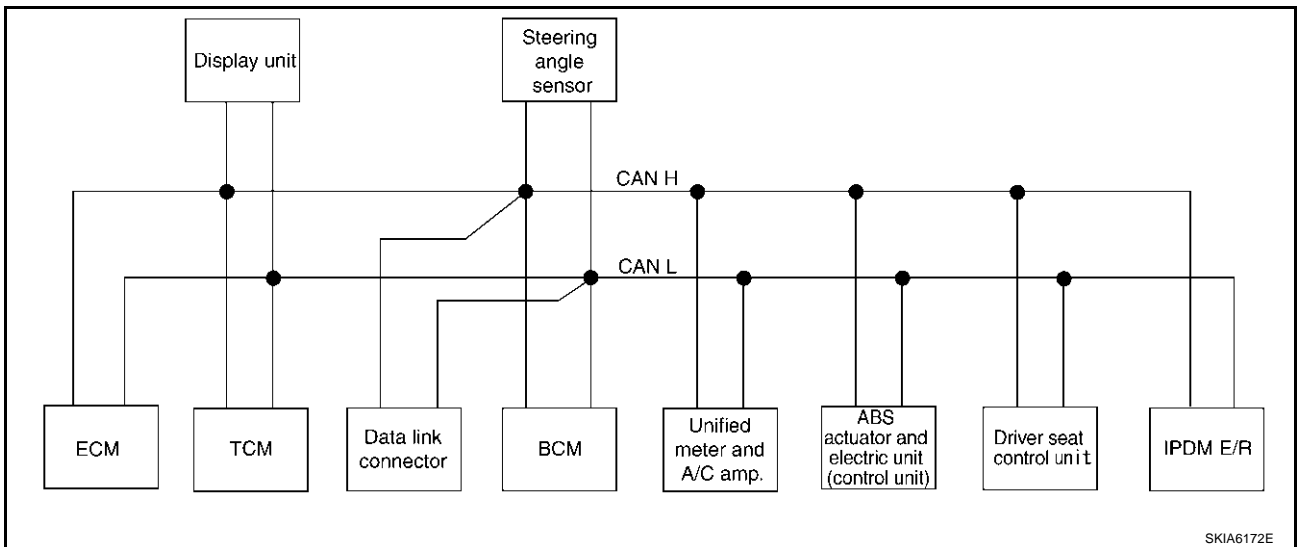
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

TYPE 1/TYPE2 System Diagram

- Type1



- Type2



Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Display unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Engine speed signal	T	R	R			R	R		
Engine status signal	T			R					
Engine coolant temperature signal	T	R				R			
A/T self-diagnosis signal	R	T							
Accelerator pedal position signal	T	R					R		
Closed throttle position signal	T	R							
Wide open throttle position signal	T	R							

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

Signals	ECM	TCM	Display unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Battery voltage signal	T	R							
Key switch signal				T				R	
Ignition switch signal				T				R	R
P range signal		T					R	R	
Stop lamp switch signal		R				T			
ABS operation signal	R						T		
TCS operation signal	R						T		
VDC operation signal	R						T		
Fuel consumption monitor signal	T		R			R			
Input shaft revolution signal	R	T							
Output shaft revolution signal	R	T							
A/C switch signal	R			T					
A/C compressor request signal	T								R
A/C relay status signal	R								T
A/C compressor feedback signal	T					R			
Blower fan motor switch signal	R			T					
A/C control signal			T			R			
			R			T			
Cooling fan speed request signal	T								R
Cooling fan speed signal	R								T
Position light request signal			R	T		R			R
Low beam request signal				T					R
Low beam status signal	R								T
High beam request signal				T		R			R
High beam status signal	R								T
Front fog light request signal				T					R
Day time running light request signal				T		R			
Turn LED burnout status signal				R		T			
Vehicle speed signal						R	T		
	R	R	R	R		T		R	
Sleep wake up signal				T		R		R	R
Door switch signal			R	T		R		R	R
Turn indicator signal				T		R			
Key fob ID signal				T				R	
Key fob door unlock signal				T				R	
Oil pressure switch signal				R					T
				T		R			
Buzzer output signal				T		R			
Fuel level sensor signal	R					T			
Fuel level low warning signal			R			T			

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

Signals	ECM	TCM	Display unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
ASCD operation signal	T	R							
ASCD OD cancel request	T	R							
Front wiper request signal				T					R
Front wiper stop position signal				R					T
Rear window defogger switch signal				T					R
Rear window defogger control signal	R		R	R					T
Hood switch signal				R					T
Theft warning horn request signal				T					R
Horn chirp signal				T					R
Steering angle sensor signal					T		R		
ABS warning lamp signal						R	T		
VDC OFF indicator lamp signal						R	T		
SLIP indicator lamp signal						R	T		
Brake warning lamp signal						R	T		
System setting signal			T	R				R	
A/T CHECK indicator lamp signal		T				R			
A/T position indicator lamp signal		T				R			
A/T shift schedule change demand signal		R					T		
Manual mode signal		R				T			
Not manual mode signal		R				T			
Manual mode shift up signal		R				T			
Manual mode shift down signal		R				T			
Manual mode indicator signal		T				R			
Distance to empty signal			R			T			
Hand brake switch				R		T			

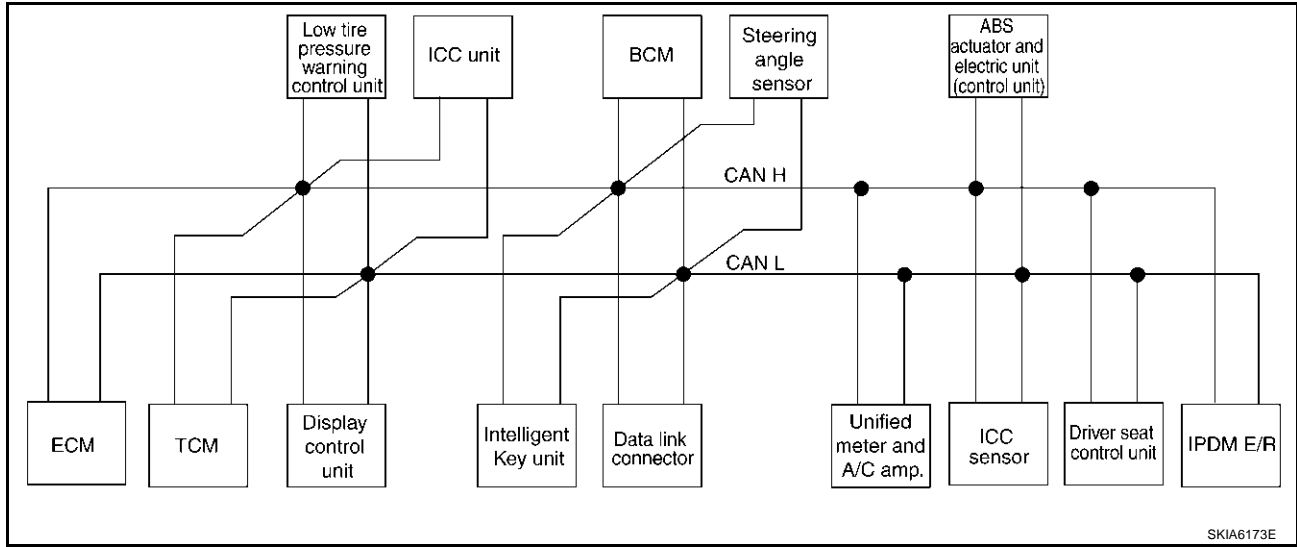
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

TYPE 3

System Diagram

- Type3



Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Engine speed signal	T	R	R		R				R		R		
Engine status signal	T						R						
Engine coolant temperature signal	T	R			R				R				
A/T self-diagnosis signal	R	T											
Accelerator pedal position signal	T	R			R						R		
Closed throttle position signal	T	R			R								
Wide open throttle position signal	T	R											
Battery voltage signal	T	R											
Key switch signal							T					R	
Ignition switch signal							T					R	R
P range signal		T			R						R	R	
Stop lamp switch signal		R							T				
ABS operation signal	R				R						T		
TCS operation signal	R				R						T		
VDC operation signal	R				R						T		
Fuel consumption monitor signal	T		R						R				

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

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Input shaft revolution signal	R	T			R								
Output shaft revolution signal	R	T			R								
A/C switch signal	R						T						
A/C compressor request signal	T												R
A/C relay status signal	R												T
A/C compressor feedback signal	T								R				
Blower fan motor switch signal	R						T						
A/C control signal			T						R				
			R						T				
Cooling fan speed signal	R												T
Position light request signal	R						T		R				R
Low beam request signal							T						R
Low beam status signal	R												T
High beam request signal							T		R				R
High beam status signal	R												T
Front fog light request signal							T						R
Day time running light request signal							T		R				
Turn LED burnout status signal							R		T				
Vehicle speed signal					R				R		T		
	R	R	R	R		R	R		T	R		R	
Sleep wake up signal							T		R			R	R
						T	R						
Door switch signal			R			R	T		R			R	R
Turn indicator signal							T		R				
Key fob ID signal							T					R	
Key fob door unlock signal							T					R	
Oil pressure switch signal							R						T
							T		R				
Buzzer output signal							T		R				
						T			R				
					T				R				

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

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Fuel level sensor signal	R								T				
Fuel level low warning signal			R						T				
ICC operation signal	R				T								
Front wiper request signal					R		T						R
Front wiper stop position signal							R						T
Rear window defogger switch signal							T						R
Rear window defogger control signal	R		R				R						T
Hood switch signal							R						T
Theft warning horn request signal							T						R
Horn chirp signal							T						R
Steering angle sensor signal								T			R		
Tire pressure signal				T					R				
Tire pressure data signal			R	T									
ABS warning lamp signal					R				R		T		
VDC OFF indicator lamp signal					R				R		T		
SLIP indicator lamp signal									R		T		
Brake warning lamp signal									R		T		
System setting signal			T			R						R	
Distance to empty signal			R						T				
Hand brake switch signal							R		T				
Door lock/unlock request signal						T	R						
Door lock/unlock status signal						R	T						
Starter permission signal						T	R						
Back door open request signal						T	R						
Power window open request signal						T	R						
Alarm request signal						T	R						
Key warning signal						T			R				
ICC sensor signal					R					T			
ICC warning lamp signal					T				R				

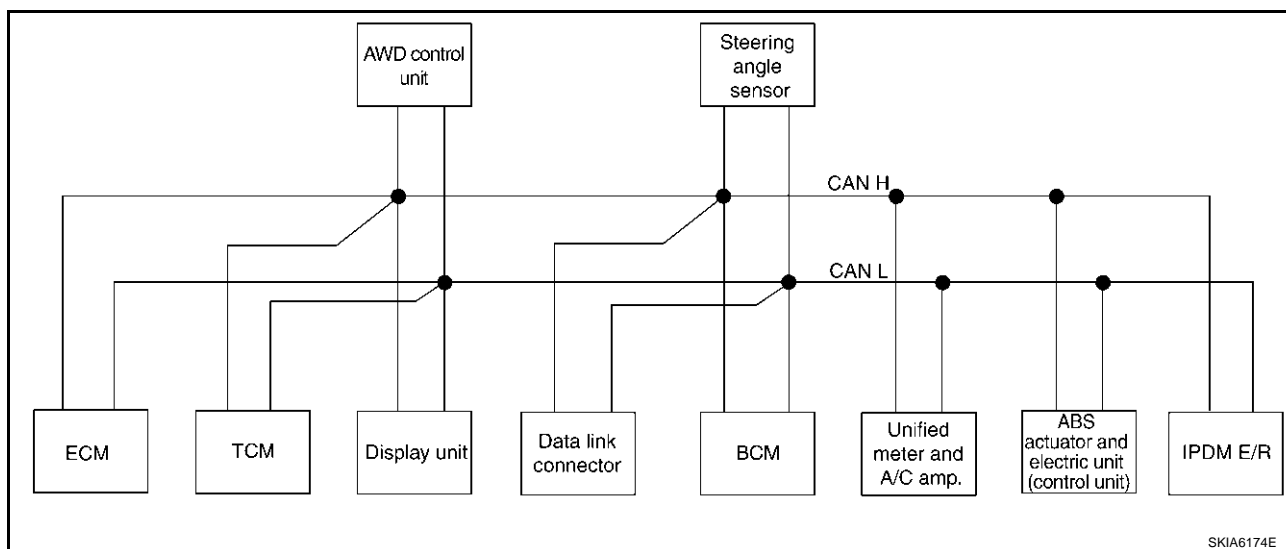
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
ICC system display signal					T				R				
Current gear position signal		T			R						R		
Steering switch signal	T				R								
ASCD operation signal	T	R											
ASCD OD cancel request	T	R											
ICC OD cancel request	R	R			T								
A/T CHECK indicator lamp signal		T							R				
A/T position indicator lamp signal		T							R				
A/T shift schedule change demand signal		R									T		
Manual mode signal		R							T				
Not manual mode signal		R							T				
Manual mode shift up signal		R							T				
Manual mode shift down signal		R							T				
Manual mode indicator signal		T			R				R				
Ignition knob switch signal						T	R						

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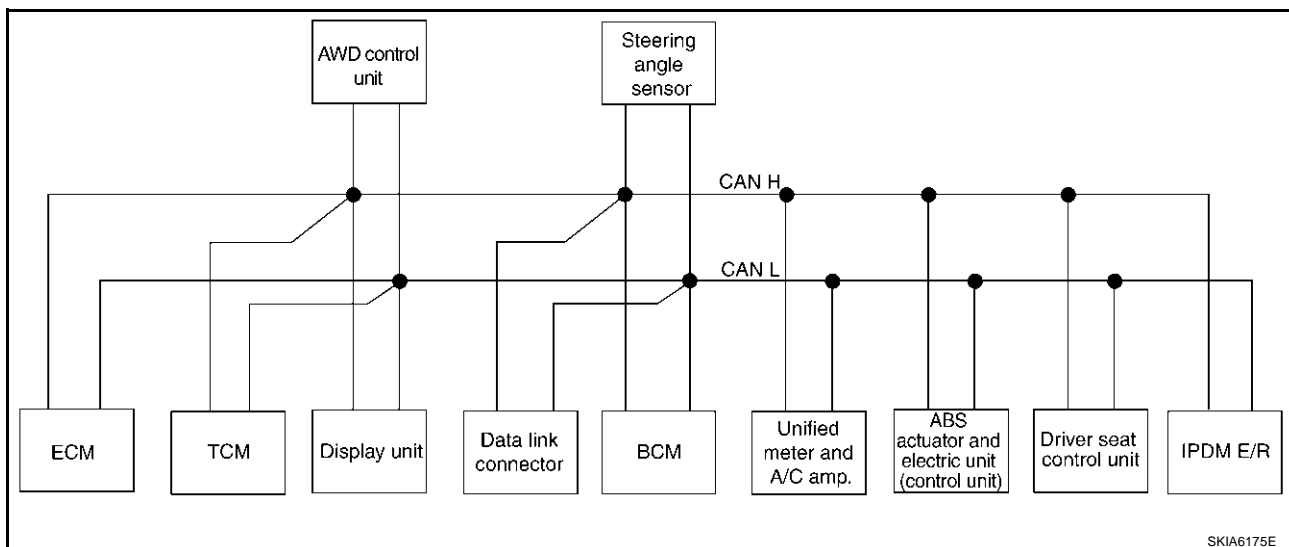
TYPE 4/TYP5 System Diagram

- Type4



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

● Type5



SKIA6175E

Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Display unit	AWD control unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
A/T self-diagnosis signal	R	T								
ABS operation signal	R			R				T		
TCS operation signal	R							T		
VDC operation signal	R			R				T		
Stop lamp switch signal		R		R			T			
Battery voltage signal	T	R								
Key switch signal					T				R	
Ignition switch signal					T				R	R
P range signal		T						R	R	
Closed throttle position signal	T	R								
Wide open throttle position signal	T	R								
Engine speed signal	T	R	R	R			R	R		
Engine status signal	T				R					
Engine coolant temperature signal	T	R					R			
Accelerator pedal position signal	T	R		R				R		
Fuel consumption monitor signal	T		R				R			
Input shaft revolution signal	R	T								
Output shaft revolution signal	R	T								
A/C switch signal	R				T					
A/C compressor request signal	T									R
A/C relay status signal	R									T
A/C compressor feedback signal	T						R			

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

Signals	ECM	TCM	Display unit	AWD control unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
Blower fan motor switch signal	R				T					
A/C control signal			T				R			
			R				T			
Cooling fan speed signal	R									T
Position light request signal			R		T		R			R
Low beam request signal					T					R
Low beam status signal	R									T
High beam request signal					T		R			R
High beam status signal	R									T
Front fog light request signal					T					R
Day time running light request signal					T		R			
Turn LED burnout status signal					R		T			
Vehicle speed signal							R	T		
	R	R	R		R		T		R	
Sleep wake up signal					T		R		R	R
Door switch signal			R		T		R		R	R
Turn indicator signal					T		R			
Key fob ID signal					T				R	
Key fob door unlock signal					T				R	
Oil pressure switch signal					R					T
					T		R			
Buzzer output signal					T		R			
Fuel level sensor signal	R						T			
Fuel level low warning signal			R				T			
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		R		R					T
Hood switch signal					R					T
Theft warning horn request signal					T					R
Horn chirp signal					T					R
Steering angle sensor signal						T		R		
ABS warning lamp signal							R	T		
VDC OFF indicator lamp signal							R	T		
SLIP indicator lamp signal							R	T		
Brake warning lamp signal							R	T		
System setting signal			T		R				R	
AWD warning lamp signal				T			R			

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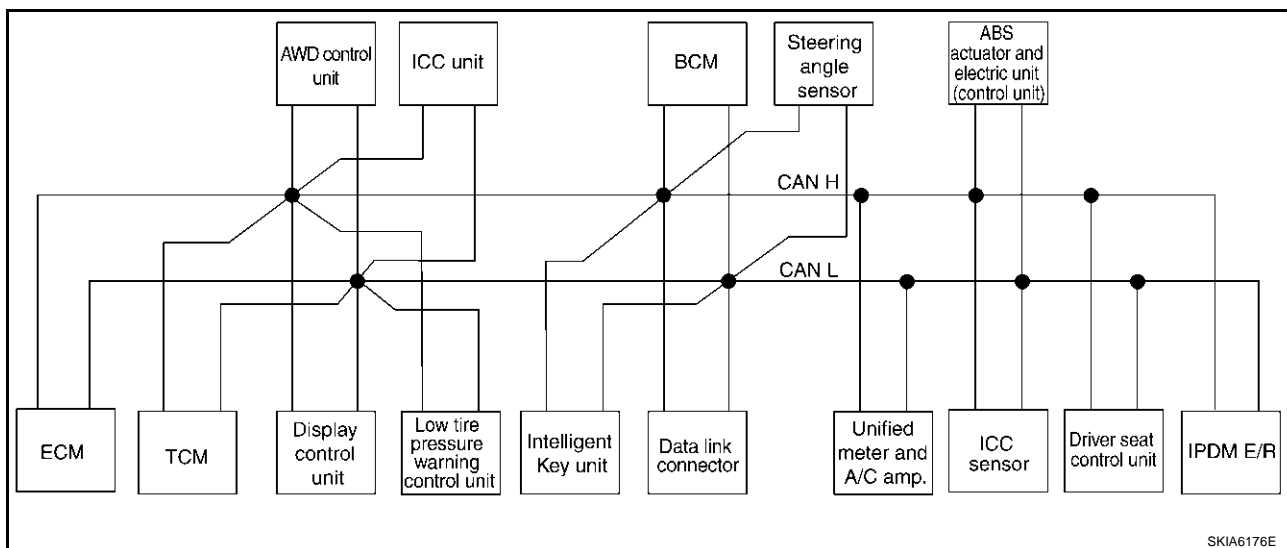
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Signals	ECM	TCM	Display unit	AWD control unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
AWD lock indicator lamp signal				T			R			
Distance to empty signal			R				T			
Hand brake switch signal				R	R		T			
ASCD operation signal	T	R								
ASCD OD cancel request	T	R								
A/T CHECK indicator lamp signal		T					R			
A/T position indicator lamp signal		T					R			
A/T shift schedule change demand signal		R						T		
Manual mode signal		R					T			
Not manual mode signal		R					T			
Manual mode shift up signal		R					T			
Manual mode shift down signal		R					T			
Manual mode indicator signal		T					R			

TYPE 6

System Diagram

- Type6



SKIA6176E

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

Input/output Signal Chart

T: Transmit R: Receive

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	AWD control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPD M E/R
A/T self-diagnosis signal	R	T												
ABS operation signal	R				R	R						T		
TCS operation signal	R					R						T		
VDC operation signal	R				R	R					R	T		
Stop lamp switch signal		R			R					T				
Battery voltage signal	T	R												
Key switch signal								T					R	
Ignition switch signal								T					R	R
P range signal		T				R						R	R	
Closed throttle position signal	T	R				R								
Wide open throttle position signal	T	R												
Engine speed signal	T	R	R		R	R				R		R		
Engine status signal	T							R						
Engine coolant temperature signal	T	R				R				R				
Accelerator pedal position signal	T	R			R	R						R		
Fuel consumption monitor signal	T		R							R				
A/T self-diagnosis signal	R	T												
Input shaft revolution signal	R	T				R								
Output shaft revolution signal	R	T				R								
A/C switch signal	R							T						
A/C compressor request signal	T													R
A/C relay status signal	R													T
A/C compressor feedback signal	T									R				
Blower fan motor switch signal	R							T						
A/C control signal			T							R				
			R							T				
Cooling fan speed signal	R													T
Position light request signal			R					T		R				R
Low beam request signal								T						R
Low beam status signal	R													T
High beam request signal								T		R				R

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

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	AWD control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPDM E/R
High beam status signal	R													T
Front fog light request signal								T						R
Day time running light request signal								T		R				
Turn LED burnout status signal								R		T				
Vehicle speed signal						R				R		T		
	R	R	R	R			R	R		T	R		R	
Sleep wake up signal								T		R			R	R
							T	R						
Door switch signal			R				R	T		R			R	R
Key fob ID signal								T					R	
Key fob door unlock signal								T					R	
Oil pressure switch signal								R						T
								T		R				
Buzzer output signal							T			R				
						T				R				
Fuel level sensor signal	R									T				
Fuel level low warning signal			R							T				
ICC operation signal	R					T								
Front wiper request signal						R		T						R
Front wiper stop position signal								R						T
Rear window defogger switch signal								T						R
Rear window defogger control signal	R		R					R						T
Hood switch signal								R						T
Theft warning horn request signal								T						R
Horn chirp signal								T						R
Steering angle sensor signal									T			R		
Tire pressure signal				T						R				
Tire pressure data signal			R	T										
ABS warning lamp signal						R				R		T		
VDC OFF indicator lamp signal						R				R		T		
SLIP indicator lamp signal										R		T		

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

Signals	ECM	TCM	Display control unit	Low tire pressure warning control unit	AWD control unit	ICC unit	Intelligent Key unit	BCM	Steering angle sensor	Unified meter and A/C amp.	ICC sensor	ABS actuator and electric unit (control unit)	Driver seat control unit	IPD M E/R
Brake warning lamp signal										R		T		
System setting signal			T				R						R	
AWD warning lamp signal					T					R				
AWD lock indicator lamp signal					T					R				
Distance to empty signal			R							T				
Hand brake switch signal					R			R		T				
Door lock/unlock request signal							T	R						
Door lock/unlock status signal							R	T						
Starter permission signal							T	R						
Back door open request signal							T	R						
Power window open request signal							T	R						
Alarm request signal							T	R						
Key warning signal							T			R				
ICC sensor signal						R					T			
ICC warning lamp signal						T				R				
ICC system display signal						T				R				
Current gear position signal		T				R						R		
Steering switch signal	T					R								
ASCD operation signal	T	R												
ASCD OD cancel request	T	R												
ICC OD cancel request	R	R				T								
A/T CHECK indicator lamp signal		T								R				
A/T position indicator lamp signal		T								R				
A/T shift schedule change demand signal		R										T		
Manual mode signal		R								T				
Not manual mode signal		R								T				
Manual mode shift up signal		R								T				
Manual mode shift down signal		R								T				
Manual mode indicator signal		T								R				
Ignition knob switch signal							T	R						

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

Function of Detecting Ignition Relay Malfunction

AKS005SB

- When contact point of integrated ignition relay is stuck and cannot be turned OFF, IPDM E/R turns ON tail and parking lamps for 10 minutes to indicate IPDM E/R malfunction.
- When a state of ignition relay having built-in does not agree with a state of Ignition switch signal input by a CAN communication from BCM, IPDM E/R lets tail lamp relay operate.

Ignition switch signal	Ignition relay status	Tail lamp relay
ON	ON	—
OFF	OFF	—
ON	OFF	—
OFF	ON	ON (10 minutes)

NOTE:

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

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

CONSULT-II

AKS005SC

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

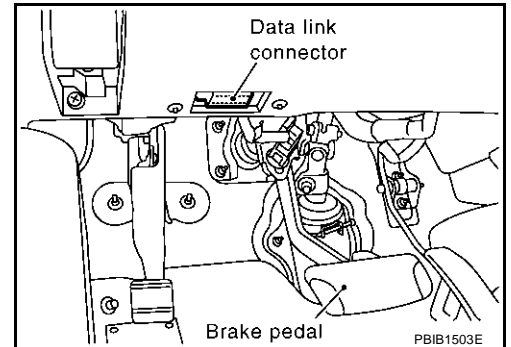
Inspection Item, Diagnosis Mode	Description
SELF-DIAG RESULTS	The IPDM E/R performs diagnosis of the CAN communication and self-diagnosis.
DATA MONITOR	The input/output data of the IPDM E/R is displayed in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication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

CONSULT-II INSPECTION PROCEDURE

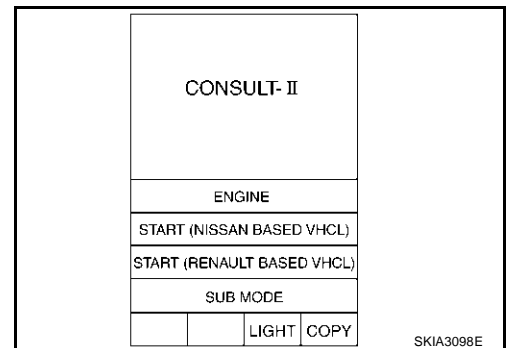
CAUTION:

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

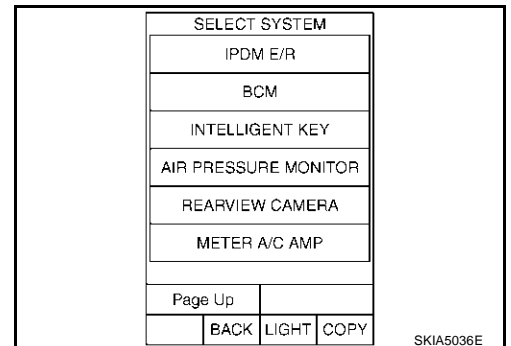
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.



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

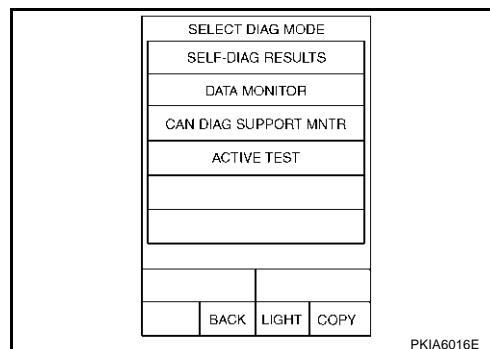


3. Touch "IPDM E/R" on "SELECT SYSTEM" screen.
 - If "IPDM E/R" is not displayed, print "SELECT SYSTEM" screen, then refer to LAN-4, "Precautions When Using CONSULT-II".



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

- Select the desired part to be diagnosed on the “SELECT DIAG MODE” screen.



SELF-DIAG RESULTS

Operation Procedure

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

Display Item List

Display Items	CONSULT-II display code	Malfunction detecting condition	TIME		Possible causes
			CRNT	PAST	
NO DTC IS DETECTED.FURTHER TESTING MAY BE REQUIRED.	-	-	-	-	-
CAN COMM CIRC	U1000	<ul style="list-style-type: none"> If CAN communication reception/transmission data has a malfunction, or if any of the control units malfunction, data reception/transmission cannot be confirmed. When the data in CAN communication is not received before the specified time 	×	×	Any of or several items below have errors. <ul style="list-style-type: none"> TRANSMIT DIAG ECM BCM/SEC

NOTE:

The details for display of the period are as follows:

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

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

DATA MONITOR

Operation Procedure

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

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

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

All Items, Main Items, Select Item Menu

Item name	CONSULT-II screen display	Display or unit	Monitor item selection			Description
			ALL SIGNALS	MAIN SIGNALS	SELECT FROM MENU	
Motor fan request	MOTOR FAN REQ	1/2/3/4	×	×	×	Signal status input from ECM
Compressor request	AC COMP REQ	ON/OFF	×	×	×	Signal status input from ECM
Tail & clear request	TAIL&CLR REQ	ON/OFF	×	×	×	Signal status input from BCM
H/L LO request	HL LO REQ	ON/OFF	×	×	×	Signal status input from BCM
H/L HI request	HL HI REQ	ON/OFF	×	×	×	Signal status input from BCM
FR fog request	FR FOG REQ	ON/OFF	×	×	×	Signal status input from BCM
FR wiper request	FR WIP REQ	STOP/1LO/LO/HI	×	×	×	Signal status input from BCM
Wiper auto stop	WIP AUTO STOP	ACT P/STOP P	×	×	×	Output status of IPDM E/R
Wiper protection	WIP PROT	OFF/LS/HS/Block	×	×	×	Control status of IPDM E/R
Starter request	ST RLY REQ	ON/OFF	×		×	Status of input signal ^{NOTE}
Ignition relay status	IGN RLY	ON/OFF	×	×	×	Ignition relay status monitored with IPDM E/R
Rear window defogger request	RR DEF REQ	ON/OFF	×	×	×	Signal status input from BCM
Oil pressure switch	OIL P SW	OPEN/CLOSE	×		×	Signal status input in IPDM E/R
Hood switch	HOOD SW	ON/OFF	×		×	Input signal status
Theft warning horn request	THFT HRN REQ	ON/OFF	×		×	Signal status input from BCM
Horn chirp	HORN CHIRP	ON/OFF	×		×	Output status of IPDM E/R
Cornering lamp request ^{NOTE}	CRNRNG LMP REQ	OFF/LEFT/RIGHT	×		×	Signal status input from BCM

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

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".

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

4. Touch "STOP" while testing to stop the operation.

Test item	CONSULT-II screen display	Description
Tail lamp output	TAIL LAMP	With a certain ON-OFF operation, the tail lamp relay can be 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 (1,2,3,4), the cooling fan can be operated.
Lamp (HI, LO,FOG) output	LAMPS	With a certain operation (OFF, HI ON, LO ON, FOG ON), the lamp relay (Lo, Hi, Fog) can be operated.
Cornering lamp output	CORNERING LAMP ^{NOTE}	—
Horn output	HORN	With a certain ON-OFF operation, the horn relay can be operated.

NOTE:

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

Auto Active Test DESCRIPTION

- In auto active test mode, operation inspection can be performed when IPDM E/R sends a drive signal to the following systems:
 - Rear window defogger
 - Front wipers
 - Tail and parking lamps
 - Front fog lamps
 - Headlamps (Hi, Lo)
 - A/C compressor (magnetic clutch)
 - Cooling fan

OPERATION PROCEDURE

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

NOTE:

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

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

NOTE:

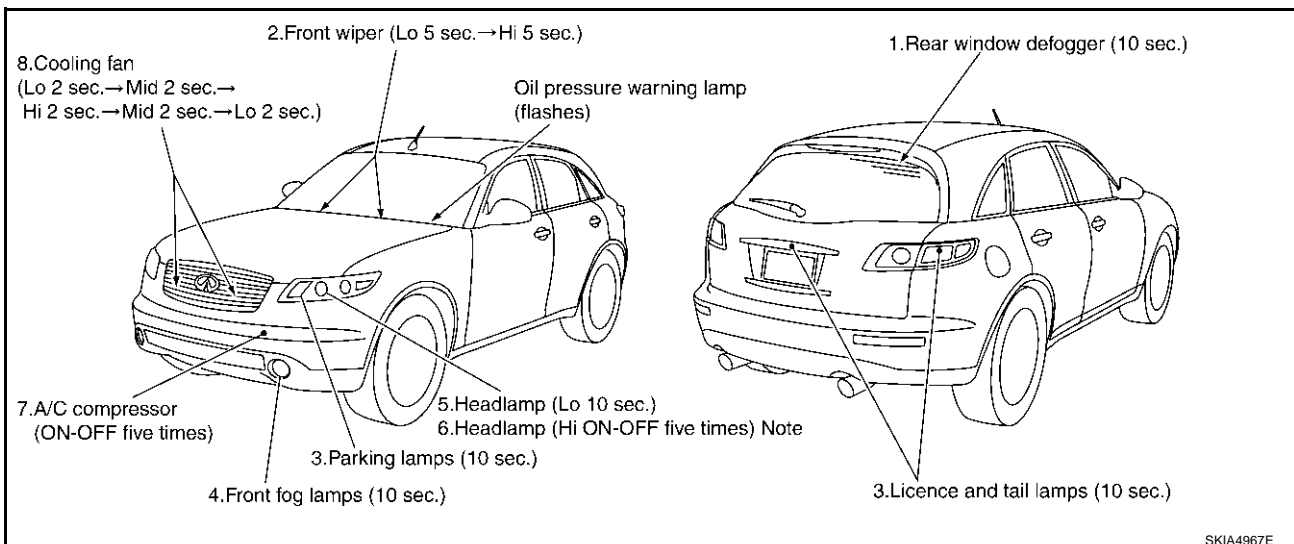
When auto active test mode has to be cancelled halfway, turn ignition switch OFF.

CAUTION:

Be sure to inspect **BL-53. "Check Door Switch"** when the auto active test cannot be performed.

INSPECTION IN AUTO ACTIVE TEST MODE

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



NOTE:

Turns ON-OFF the solenoid to switch Hi/Lo. In this case, the bulb does not illuminate.

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

Concept of Auto Active Test

- IPDM E/R actuates auto active test mode when it receives door switch signal from BCM via CAN communication line. Therefore, when auto active test mode is activated successfully, CAN communication between IPDM E/R and BCM is normal.
- If any of 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

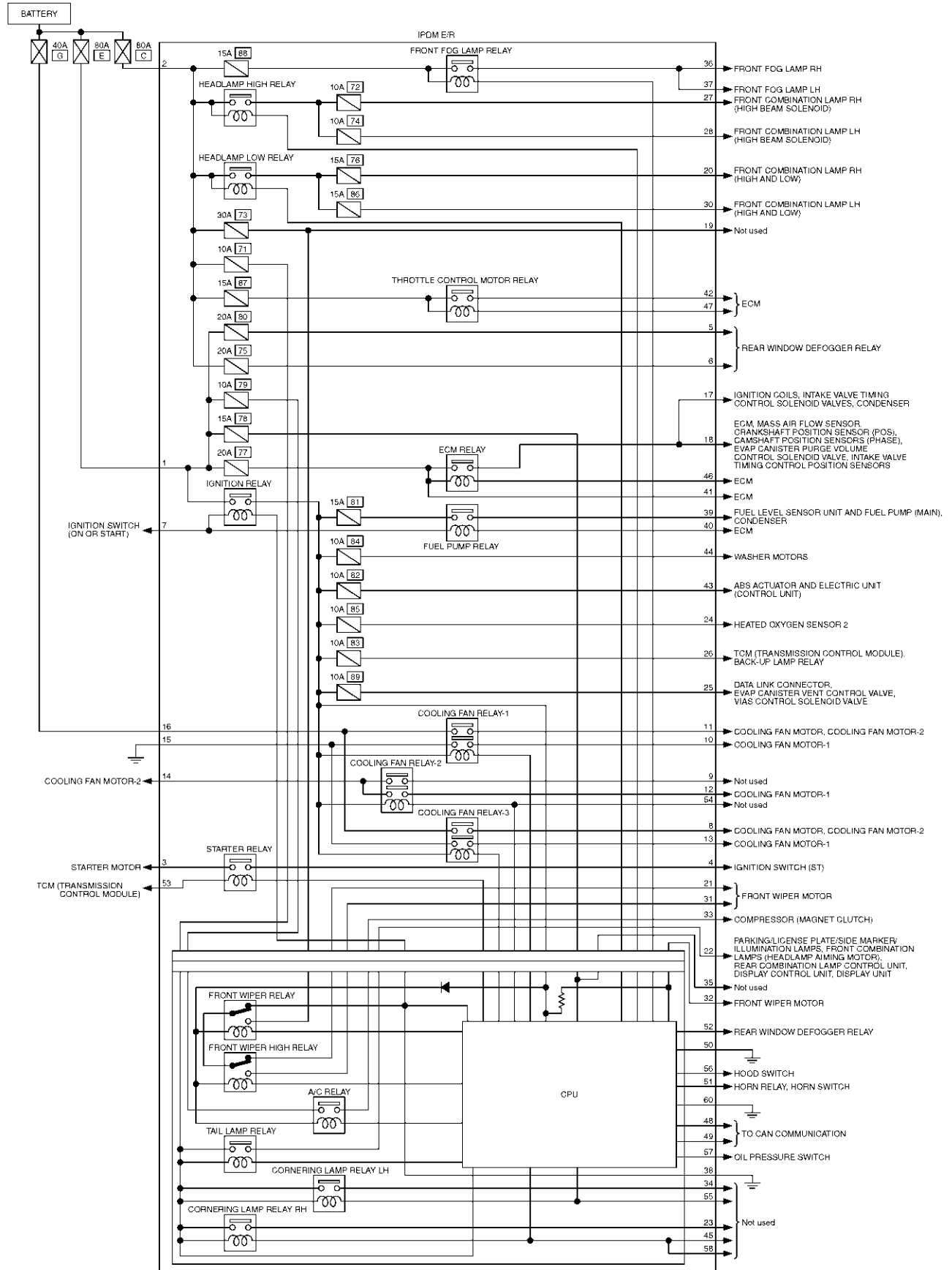
Symptom	Inspection contents	Possible cause	
Any of front wipers, tail and parking lamps, front fog lamps, and head lamps (Hi, Lo) do not operate.	Perform auto active test. Does system in question operate?	YES	● BCM signal input system
		NO	<ul style="list-style-type: none"> ● Lamp/wiper motor malfunction ● Lamp/wiper motor ground circuit malfunction ● Harness/connector malfunction between IPDM E/R and system in question ● IPDM E/R (integrated relay) malfunction
Rear window defogger does not operate.	Perform auto active test. Does rear window defogger operate?	YES	● BCM signal input circuit
		NO	<ul style="list-style-type: none"> ● Rear window defogger relay circuit ● Open circuit of rear window defogger ● IPDM E/R malfunction
A/C compressor does not operate.	Perform auto active test. Does magnetic clutch operate?	YES	<ul style="list-style-type: none"> ● BCM signal input circuit ● CAN communication signal between BCM and ECM. ● CAN communication signal between ECM and IPDM E/R
		NO	<ul style="list-style-type: none"> ● Magnetic clutch malfunction ● Harness/connector malfunction between IPDM E/R and magnetic clutch ● IPDM E/R (integrated relay) malfunction
Cooling fan does not operate.	Perform auto active test. Does cooling fan operate?	YES	<ul style="list-style-type: none"> ● ECM signal input circuit ● CAN communication signal between ECM and IPDM E/R
		NO	<ul style="list-style-type: none"> ● Cooling fan motor malfunction ● Harness/connector malfunction between IPDM E/R and cooling fan motor ● IPDM E/R (integrated relay) malfunction
Oil pressure warning lamp does not operate.	Perform auto active test. Does oil pressure warning lamp blink?	YES	<ul style="list-style-type: none"> ● Harness/connector malfunction between IPDM E/R and oil pressure switch ● Oil pressure switch malfunction ● IPDM E/R malfunction
		NO	<ul style="list-style-type: none"> ● CAN communication signal between BCM and Unified Meter and A/C Amp ● Combination meter

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

Schematic

AKS005SE

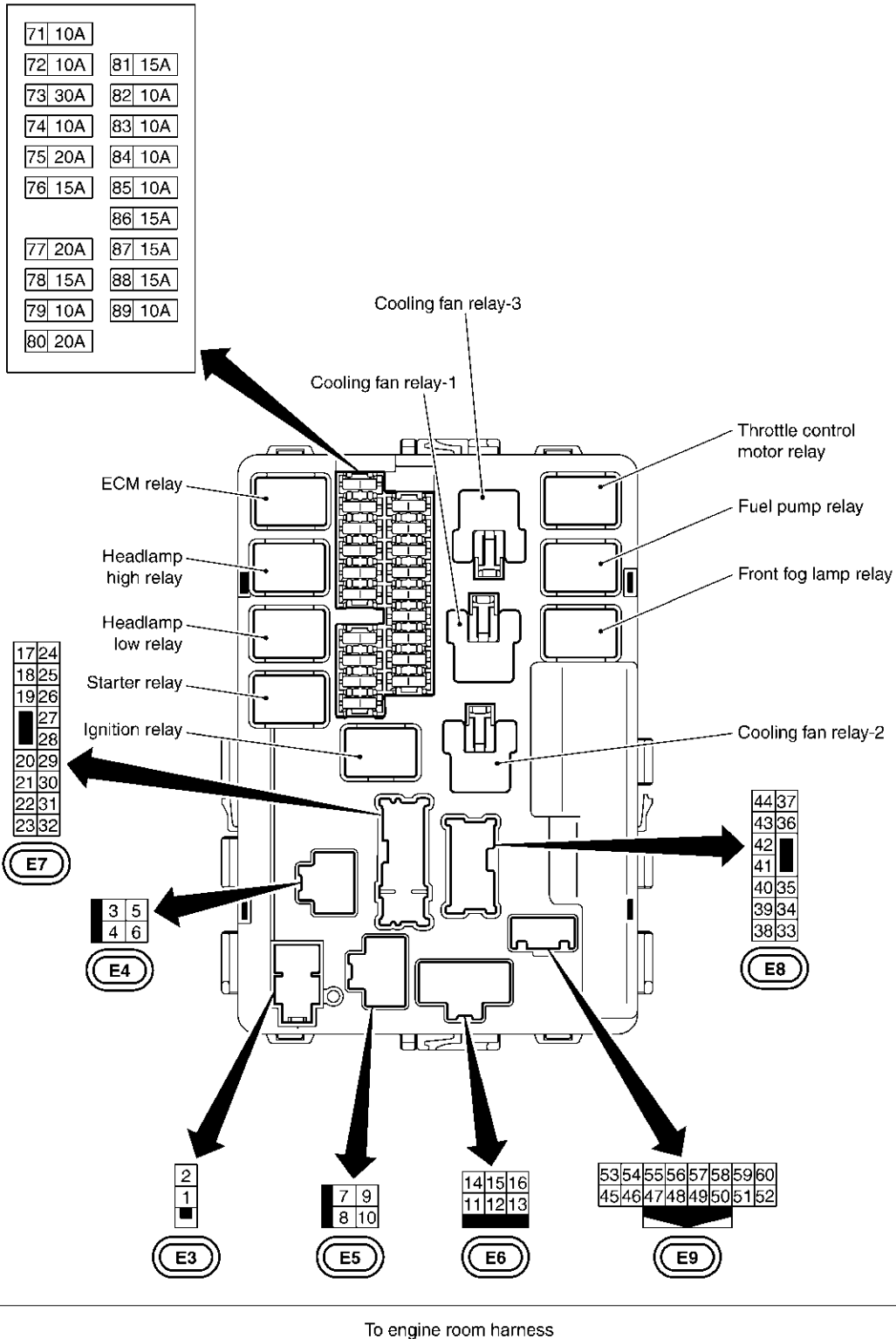
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TKWM0829E

IPDM E/R Terminal Arrangement

AKS005SF



CKIM0237E

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

IPDM E/R Power/Ground Circuit Inspection

AKS007NW

1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse, fusible link No.
1, 2, 16	Battery power	F/L-C, F/L-E, F/L-G, Fuse No. 82, 90

OK or NG

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

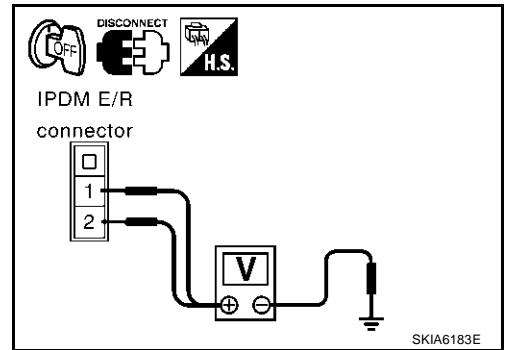
2. CHECK POWER SUPPLY CIRCUIT

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

Battery voltage should exist

OK or NG

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



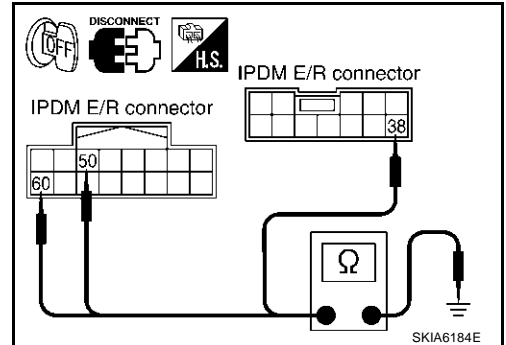
3. CHECK GROUND CIRCUIT

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

Continuity should exist

OK or NG

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



Inspection With CONSULT-II (Self-Diagnosis)

AKS005SG

CAUTION:

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

1. CHECK SELF DIAGNOSTIC RESULT

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

CONSULT-II display	CONSULT-II display code	TIME		Details of diagnosis result
		CRNT	PAST	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	-	-	-	No malfunction
CAN COMM CIRC	U1000	×	×	Any of or several items below have errors. <ul style="list-style-type: none"> ● TRANSMIT DIAG ● ECM ● BCM/SEC

NOTE:

The Details for Display of the Period Are as Follows:

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

Contents displayed

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

CAN COMM CIRC>>After print-out of the monitor items, refer to [LAN-4, "Precautions When Using CONSULT-II"](#) .

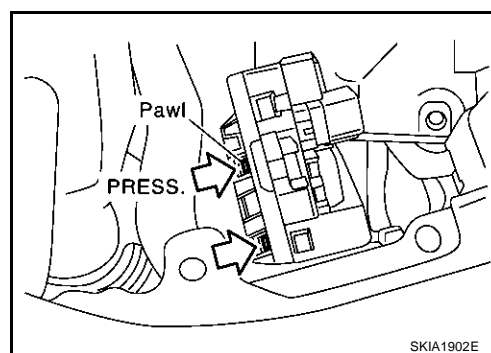
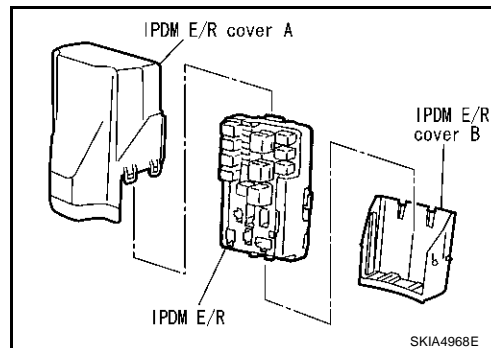
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Removal and Installation of IPDM E/R

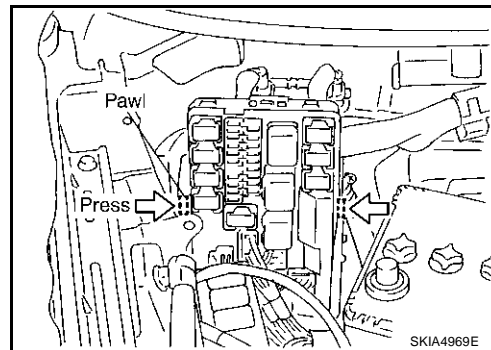
AKS005SM

REMOVAL

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



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



INSTALLATION

Install in the reverse order of removal.

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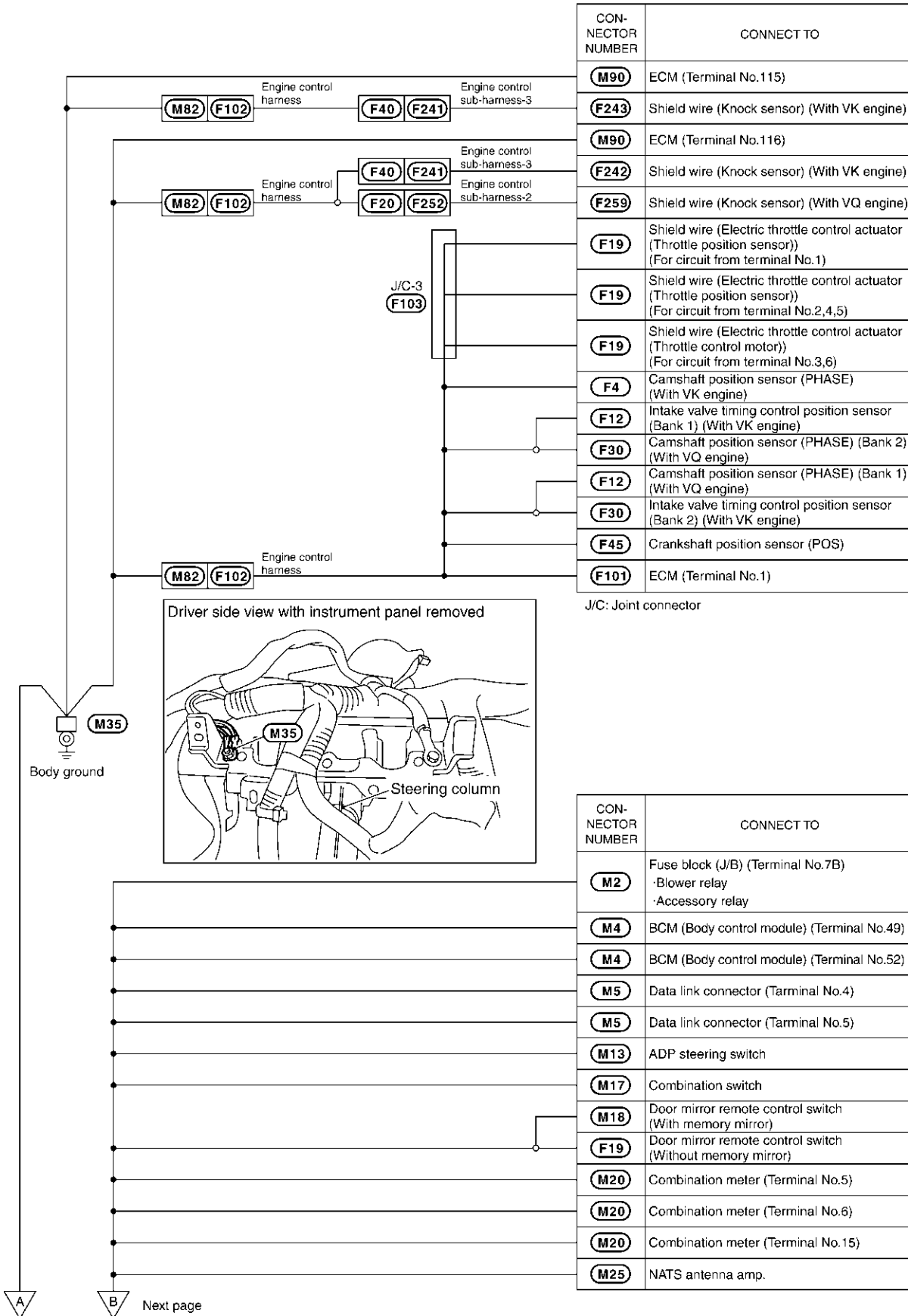
GROUND

GROUND

PF0:00011

Ground Distribution MAIN HARNESS

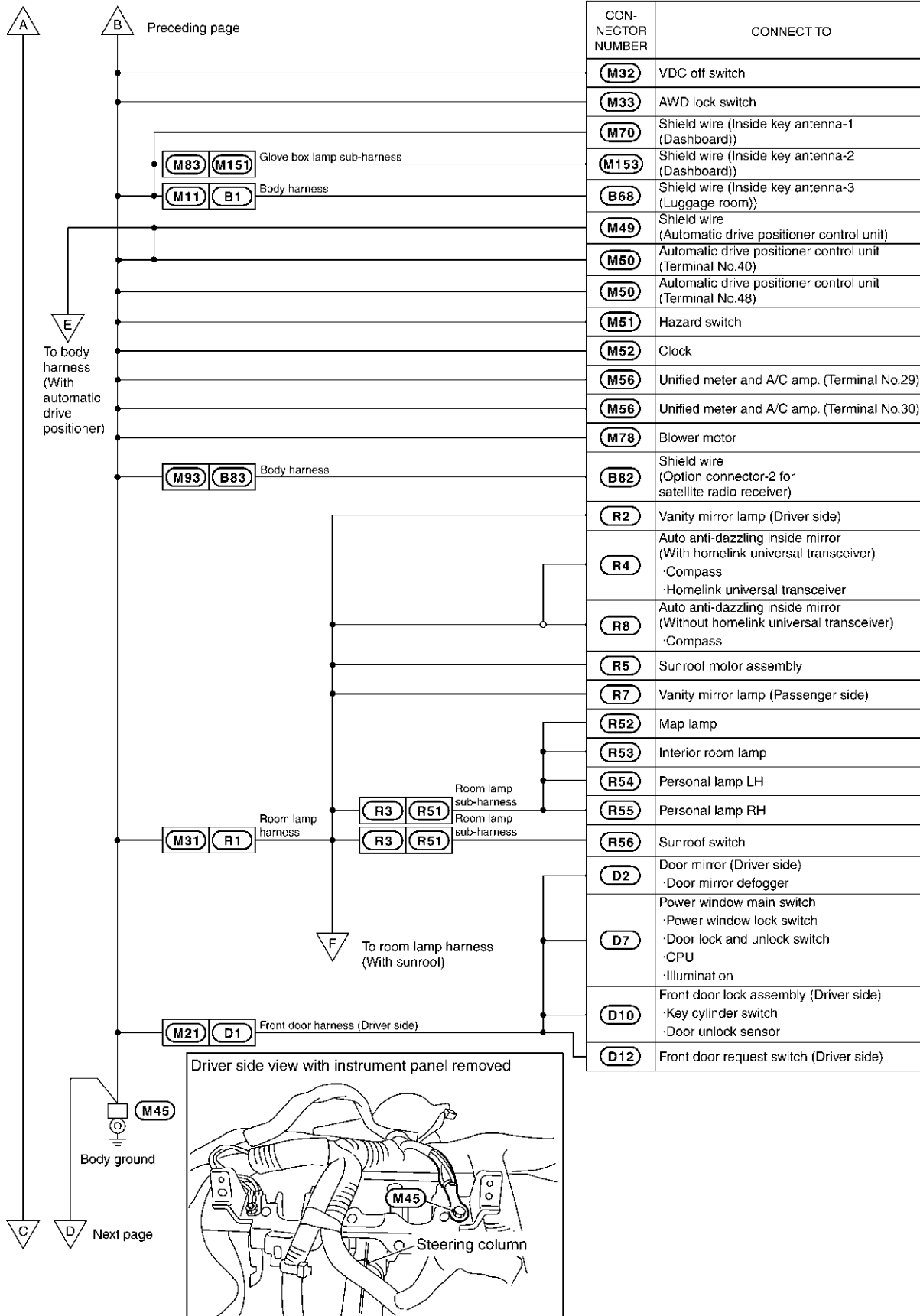
AKS007VZ



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B Next page

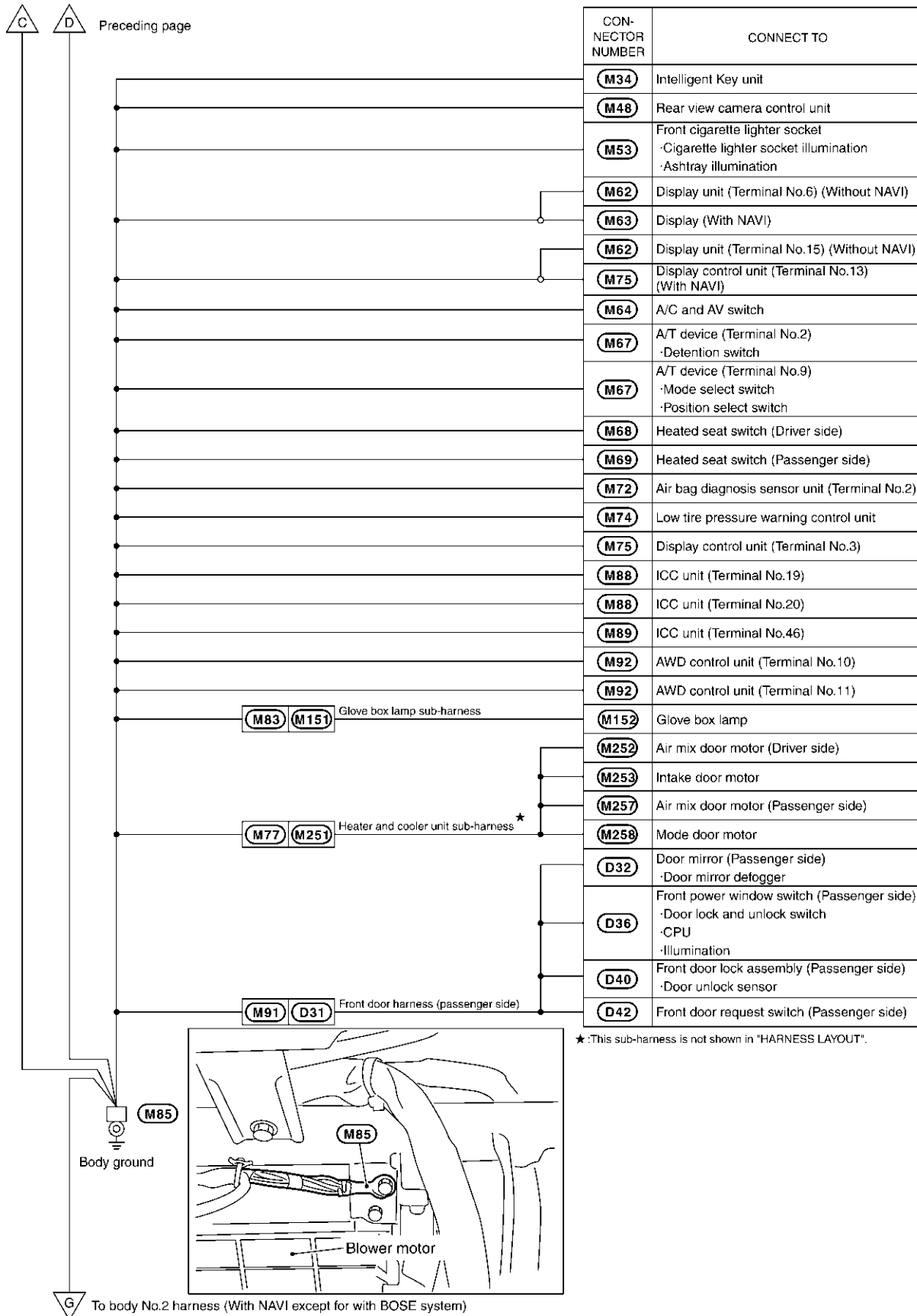
CKIM0197E

GROUND



CKIM0198E

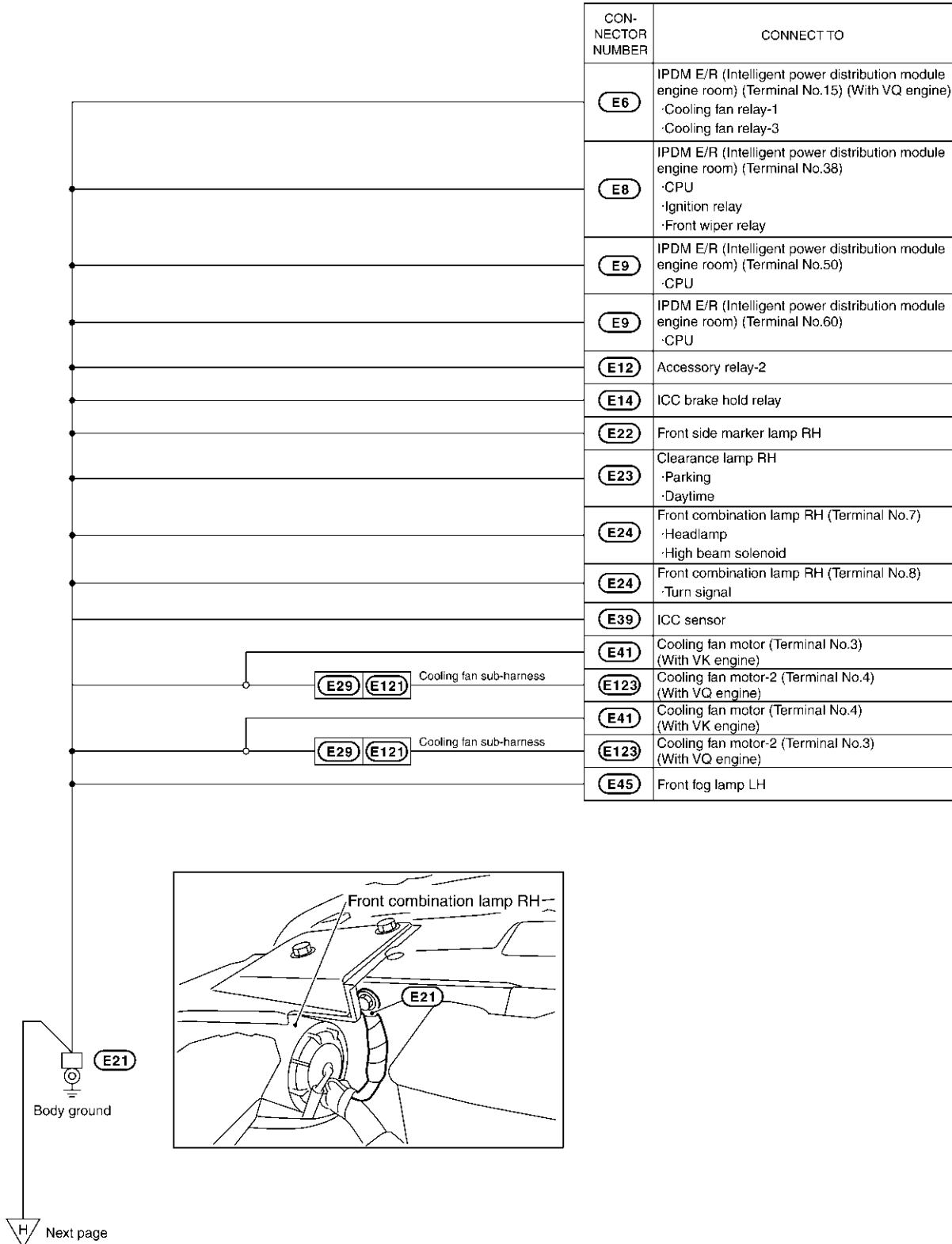
GROUND



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GROUND

ENGINE ROOM HARNESS

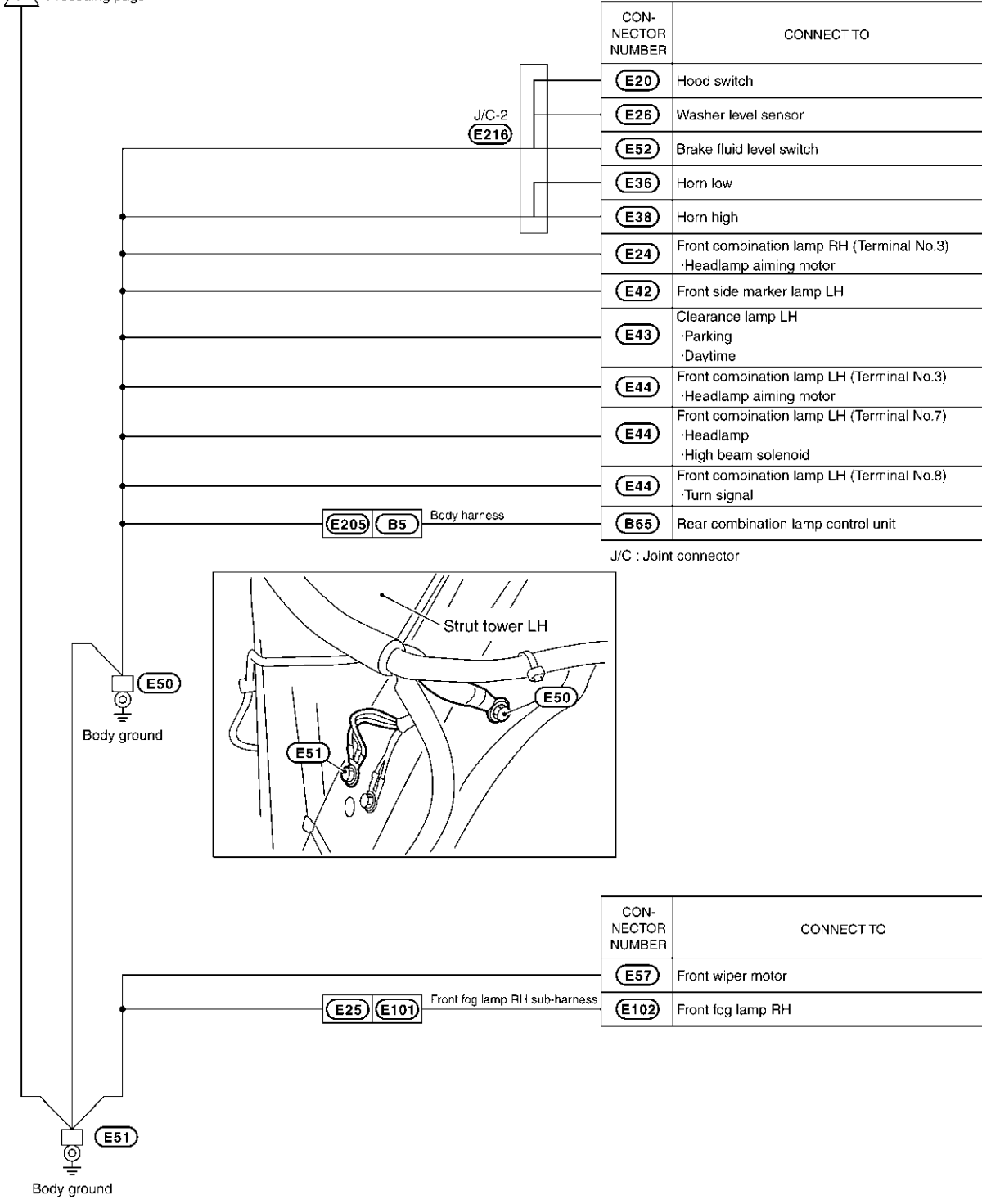


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CKIM0200E

GROUND

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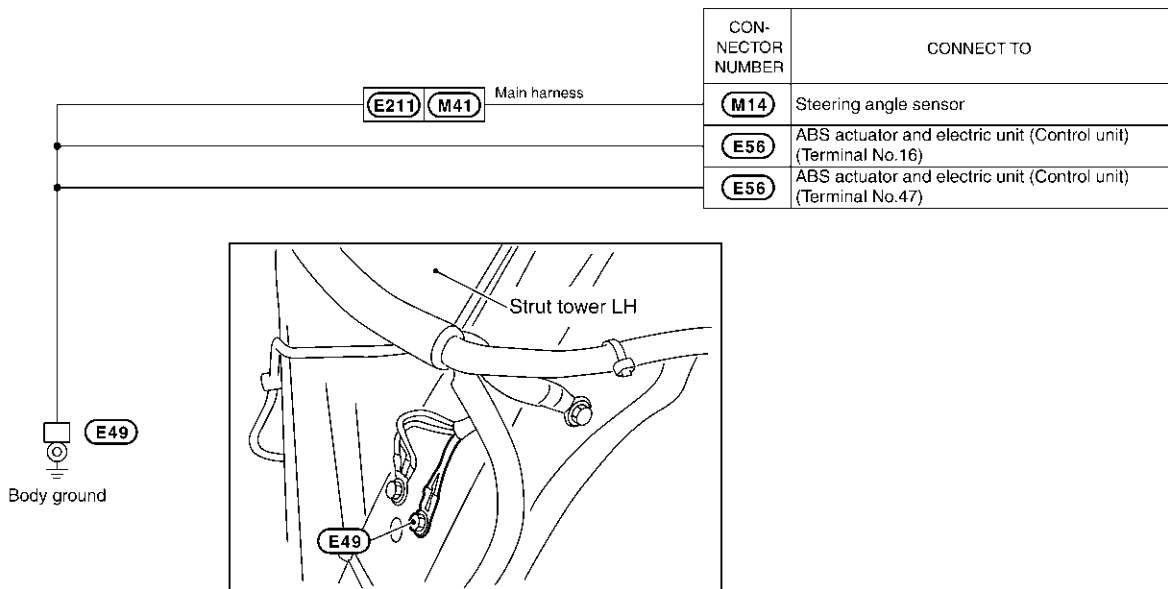
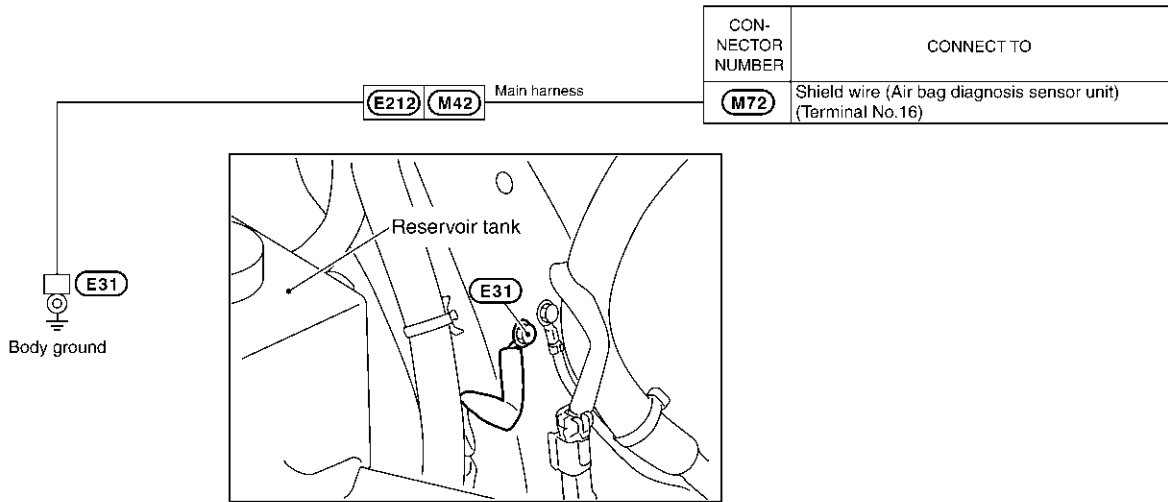
CON-NECTOR NUMBER	CONNECT TO
E20	Hood switch
E26	Washer level sensor
E52	Brake fluid level switch
E36	Horn low
E38	Horn high
E24	Front combination lamp RH (Terminal No.3) ·Headlamp aiming motor
E42	Front side marker lamp LH
E43	Clearance lamp LH ·Parking ·Daytime
E44	Front combination lamp LH (Terminal No.3) ·Headlamp aiming motor
E44	Front combination lamp LH (Terminal No.7) ·Headlamp ·High beam solenoid
E44	Front combination lamp LH (Terminal No.8) ·Turn signal
B65	Rear combination lamp control unit

J/C : Joint connector

CON-NECTOR NUMBER	CONNECT TO
E57	Front wiper motor
E102	Front fog lamp RH

CKIM0201E

GROUND



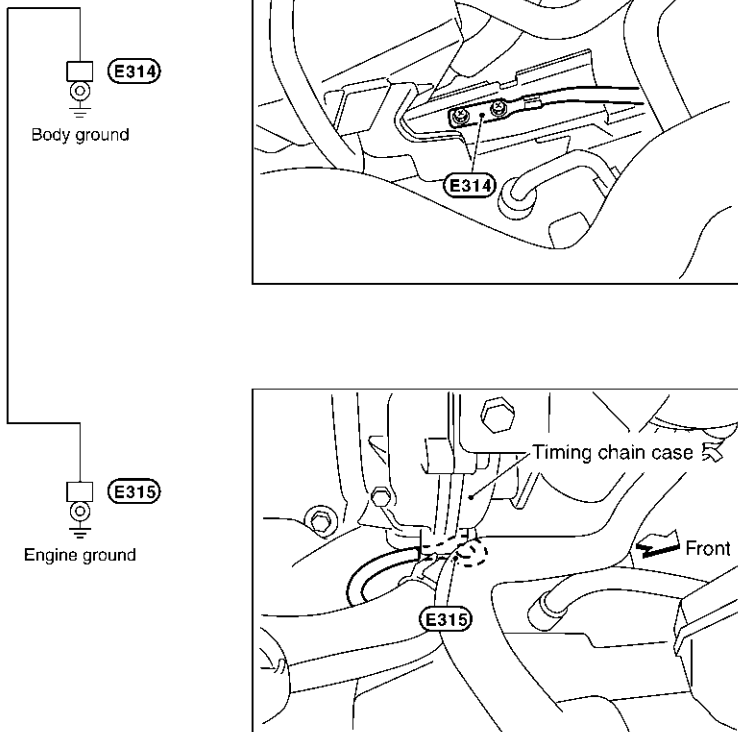
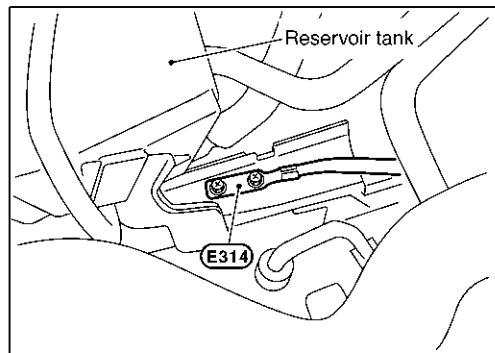
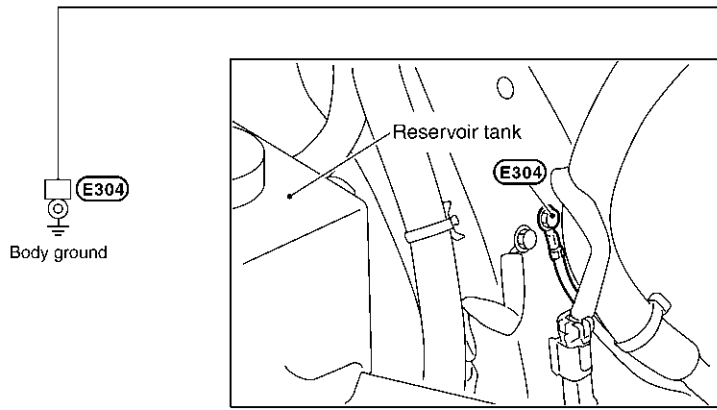
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CKIM0202E

GROUND

ENGINE HARNESS/VK ENGINE MODELS

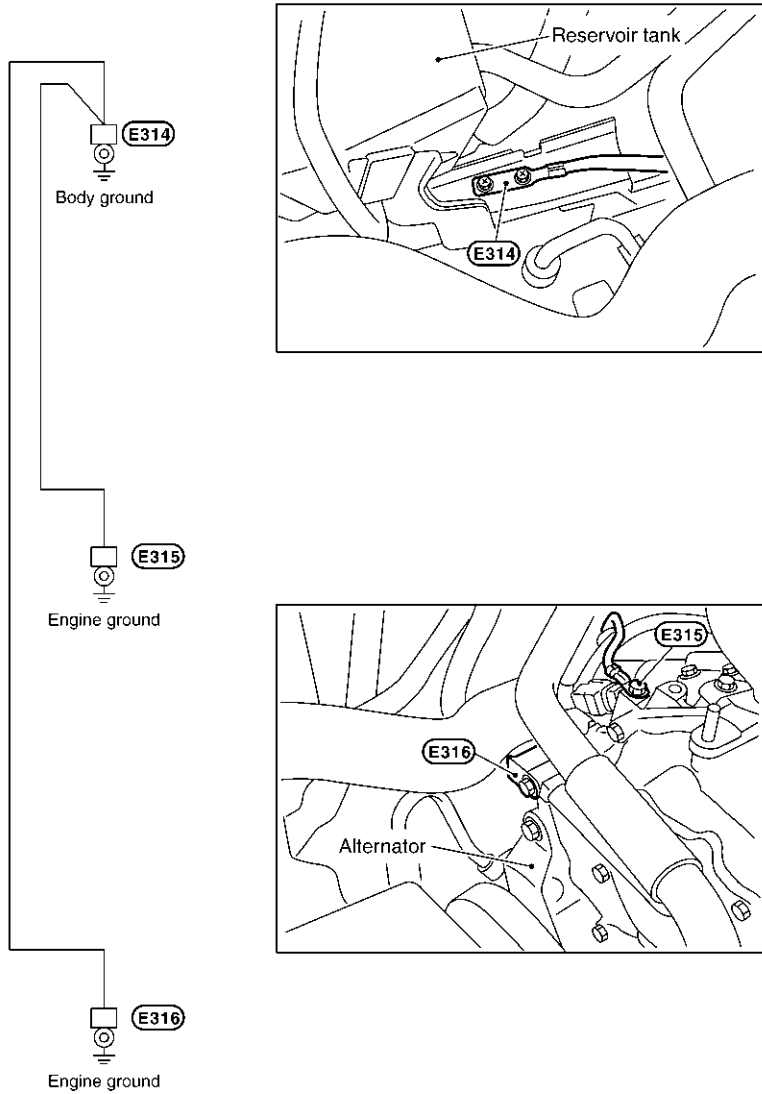
CON-NECTOR NUMBER	CONNECT TO
E309	Alternator



CKIM0203E

GROUND

ENGINE HARNESS/VQ ENGINE MODELS

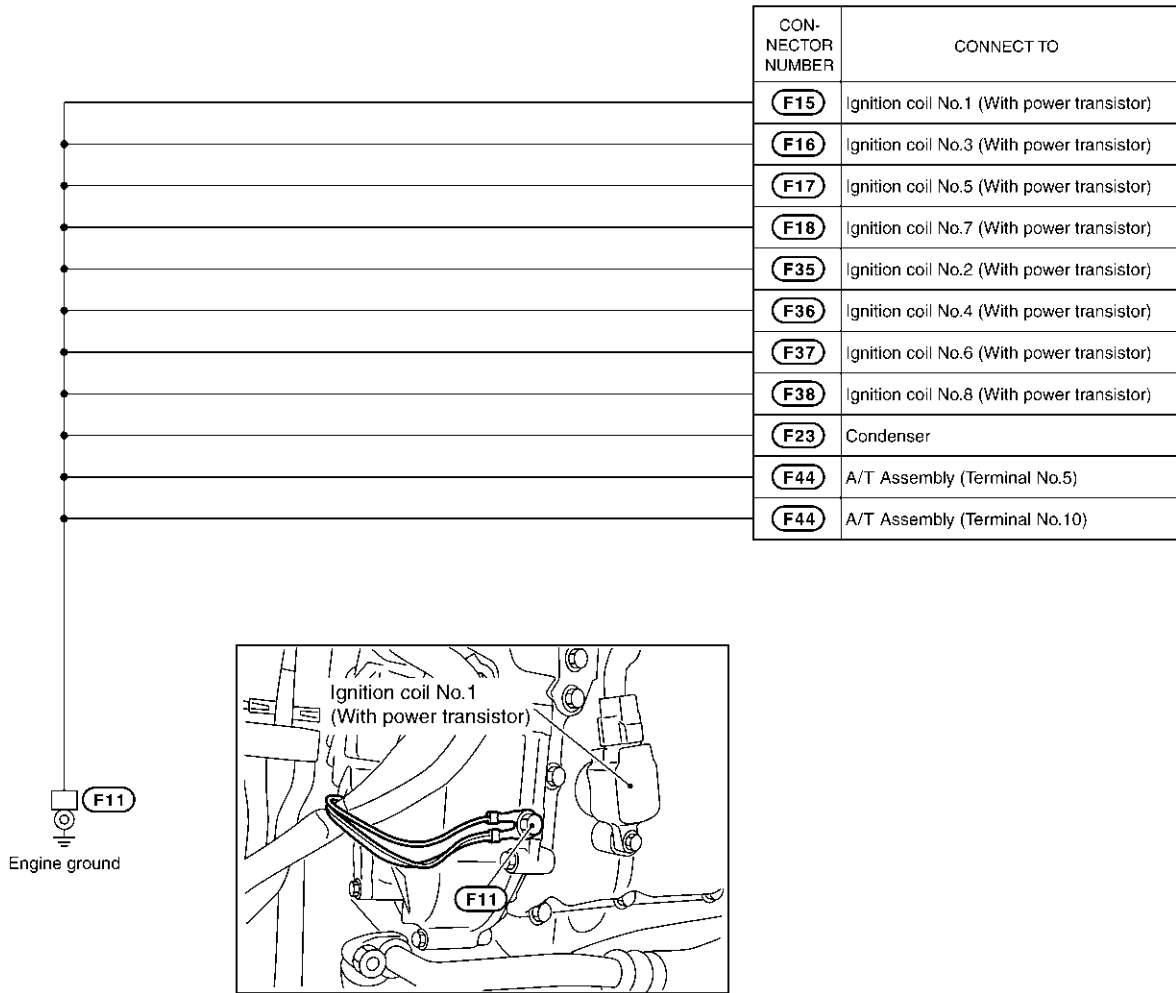


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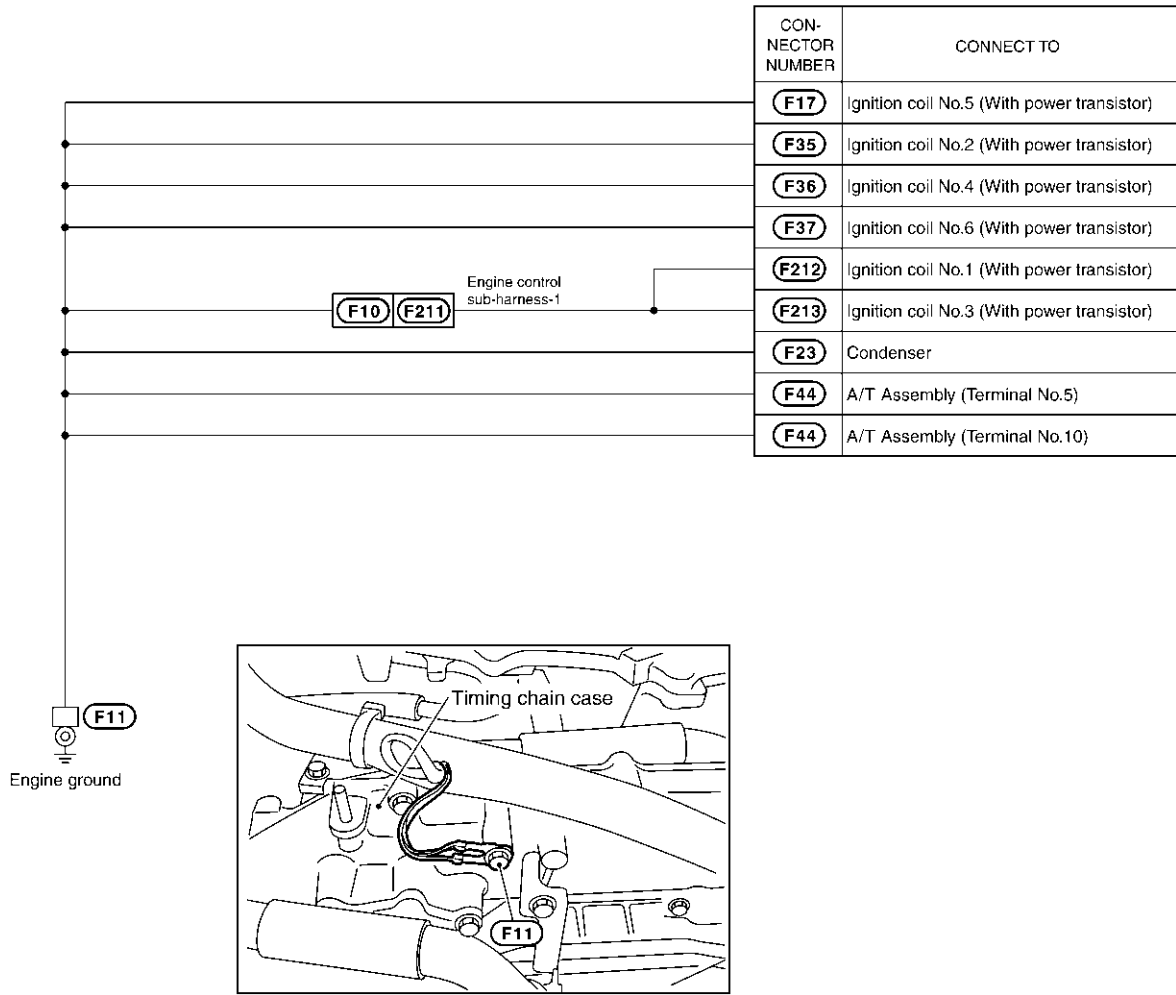
ENGINE CONTROL HARNESS/VK ENGINE MODELS



CKIM0205E

GROUND

ENGINE CONTROL HARNESS/VQ ENGINE MODELS

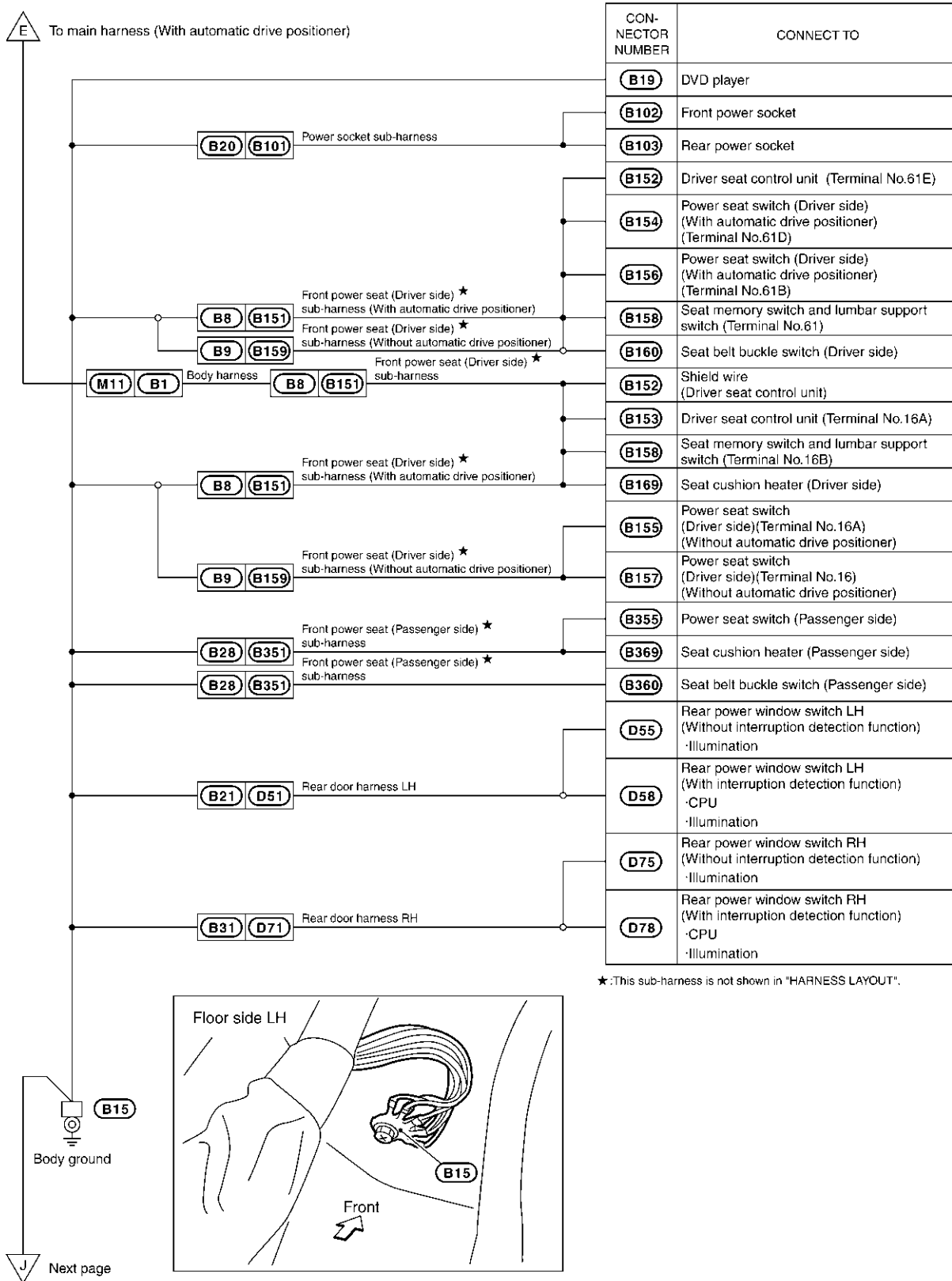


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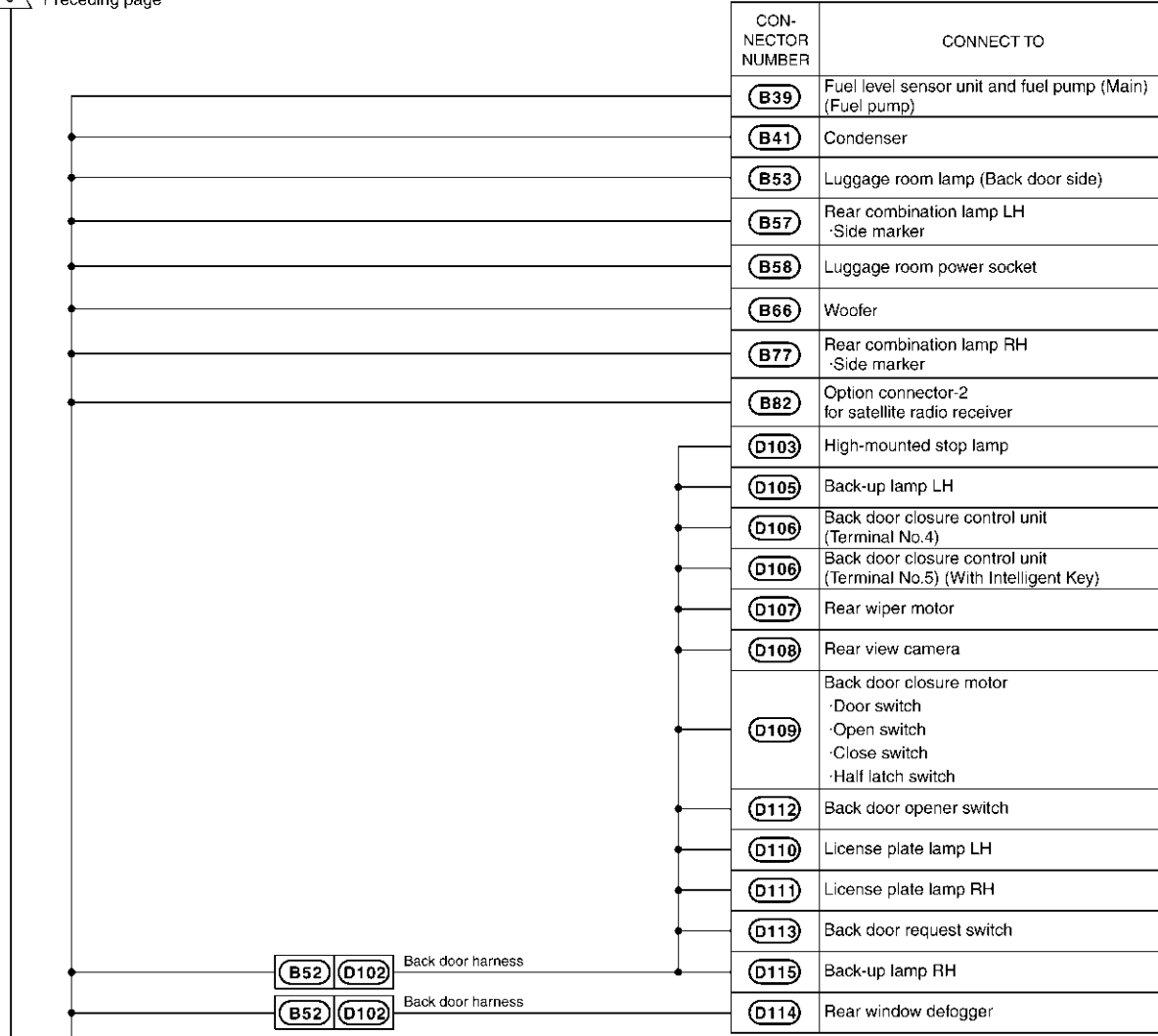
BODY HARNESS



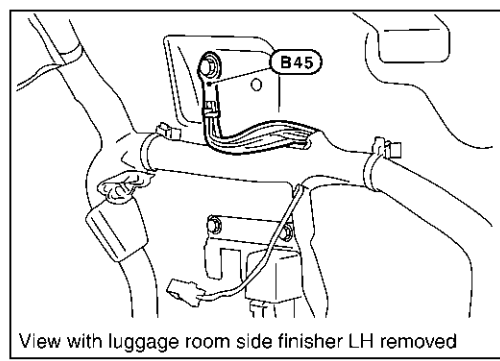
CKIM0207E

GROUND

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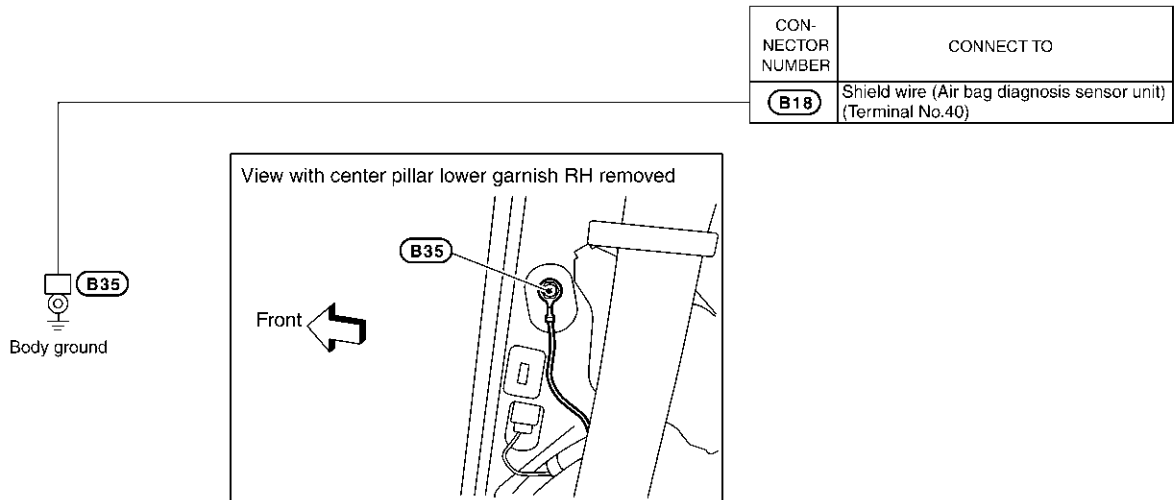
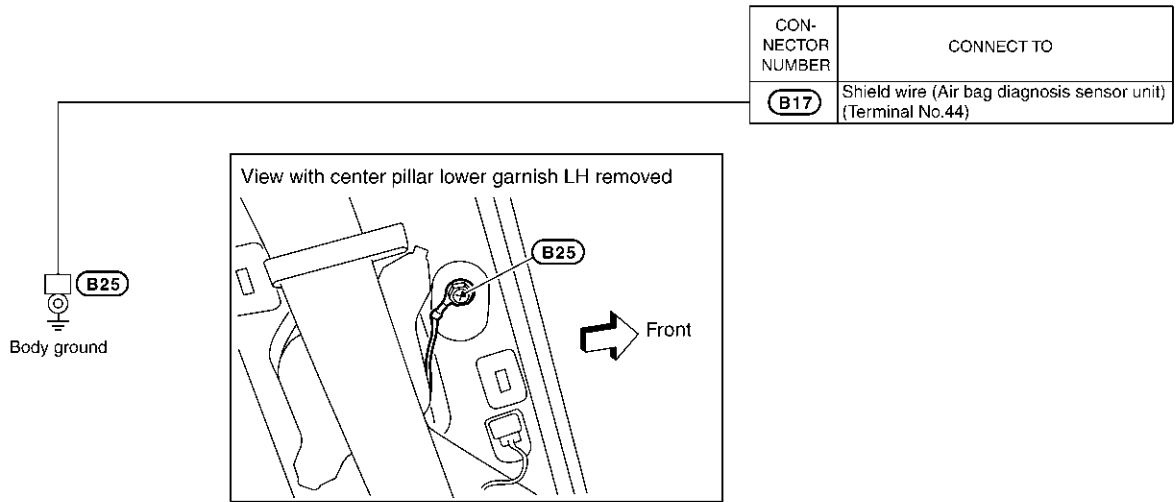
Body ground



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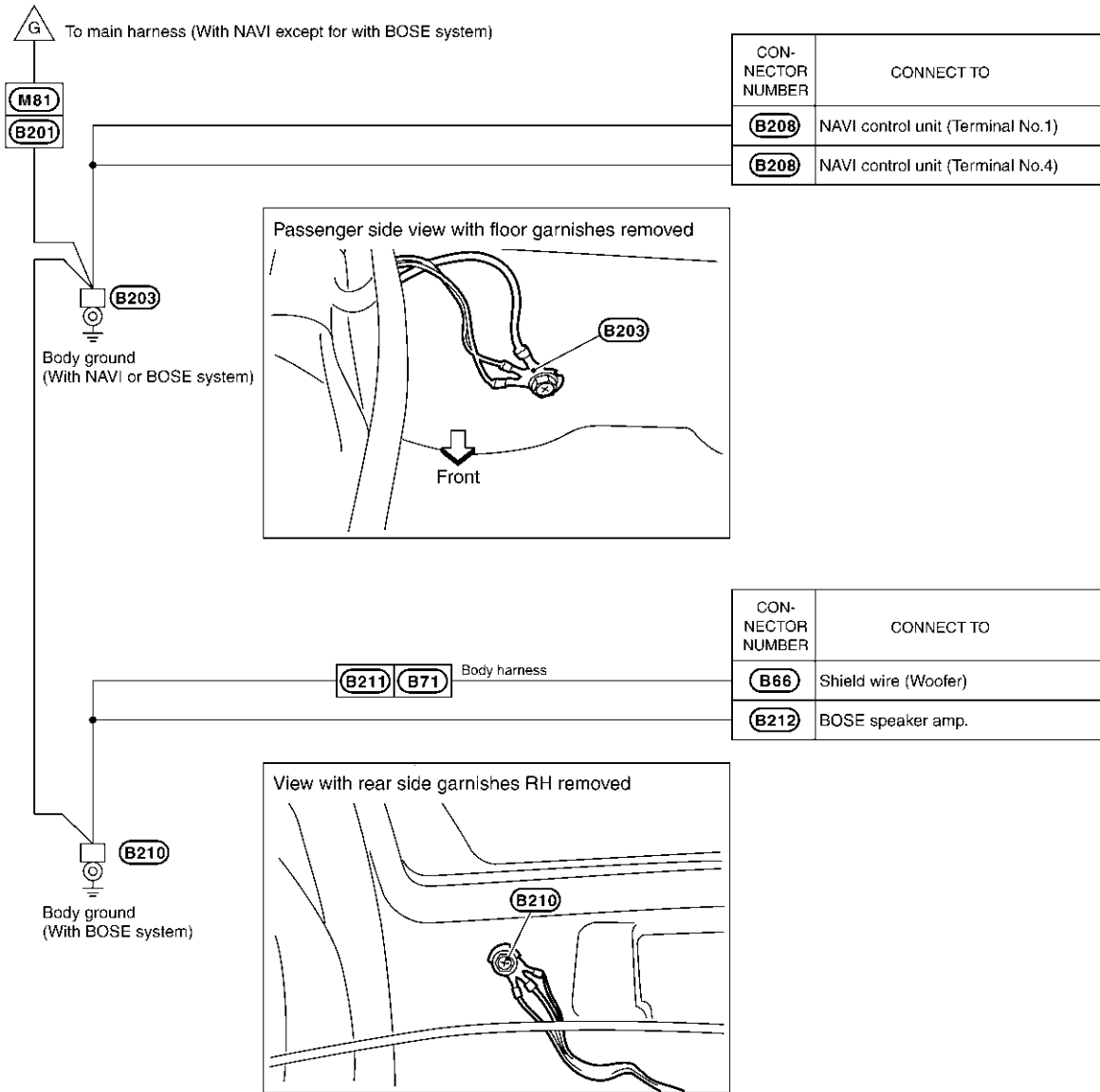
GROUND



CKIM0209E

GROUND

BODY NO.2 HARNESS

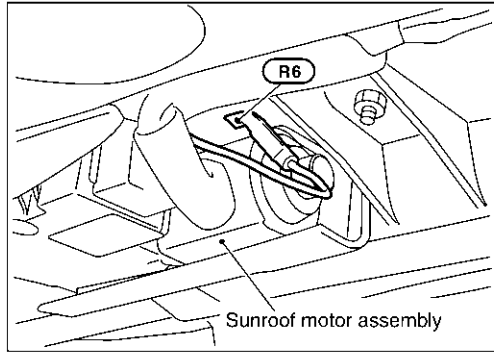
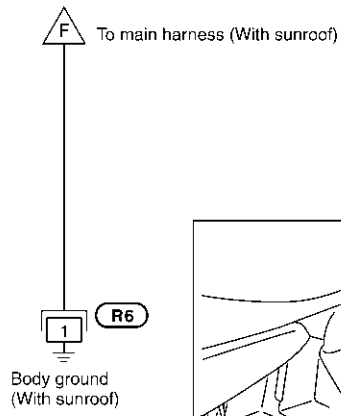


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CKIM0210E

GROUND

ROOM LAMP HARNESS



CKIM0211E

HARNESS

HARNESS

PFP:00011

Harness Layout

AKS007W0

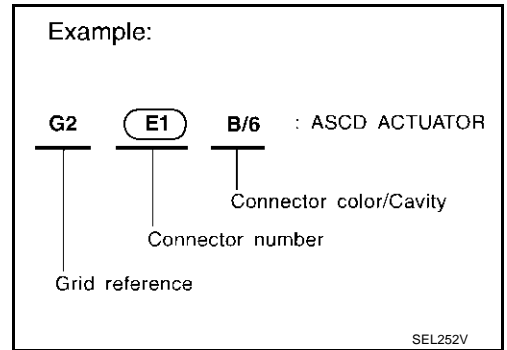
HOW TO READ HARNESS LAYOUT

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

- Main Harness
- Engine Room Harness (Engine Compartment)
- Engine Control Harness
- Body Harness

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
<ul style="list-style-type: none"> • Cavity: Less than 4 • Relay connector 				
<ul style="list-style-type: none"> • Cavity: From 5 to 8 				
<ul style="list-style-type: none"> • Cavity: More than 9 				
<ul style="list-style-type: none"> • Ground terminal etc. 	—			

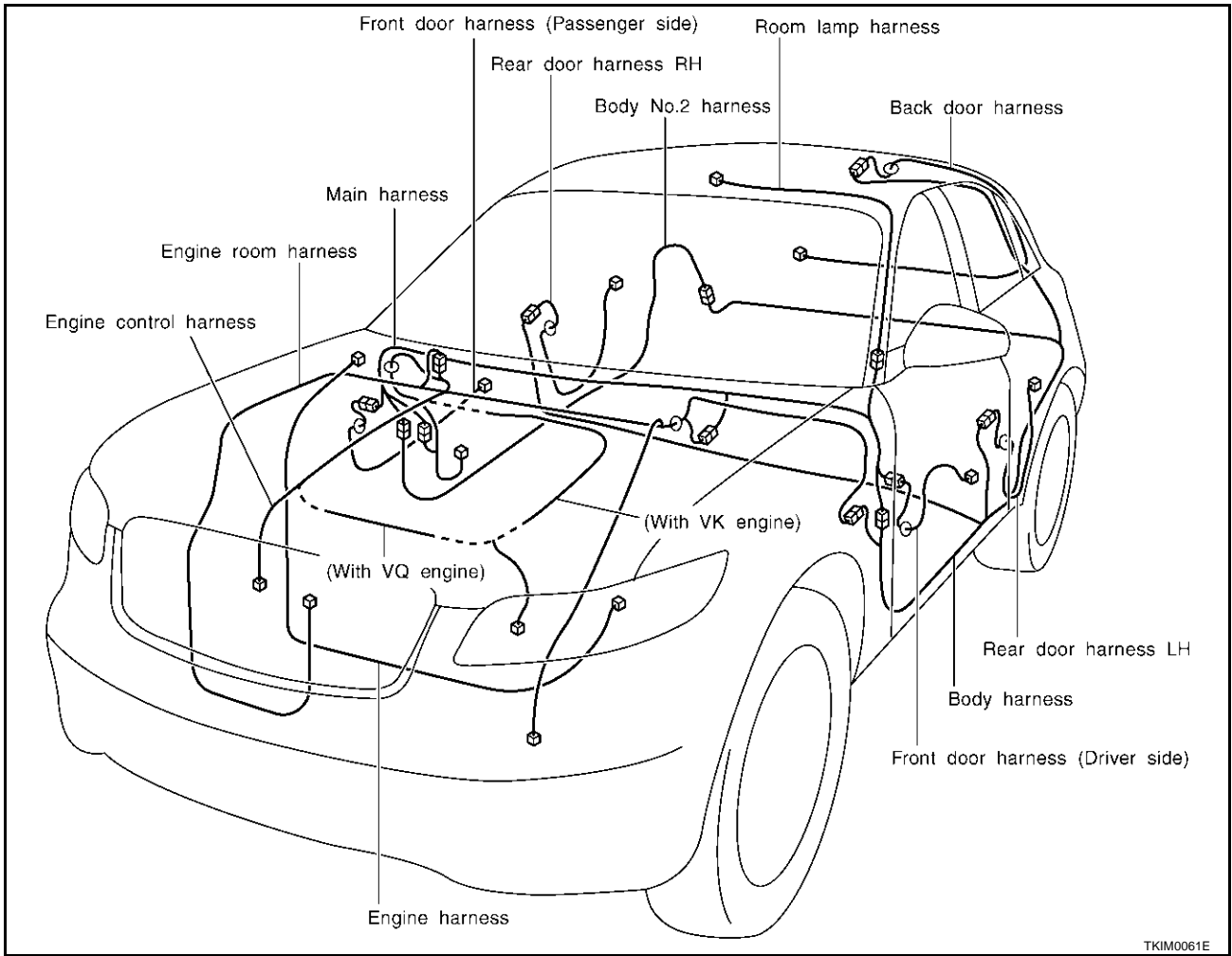
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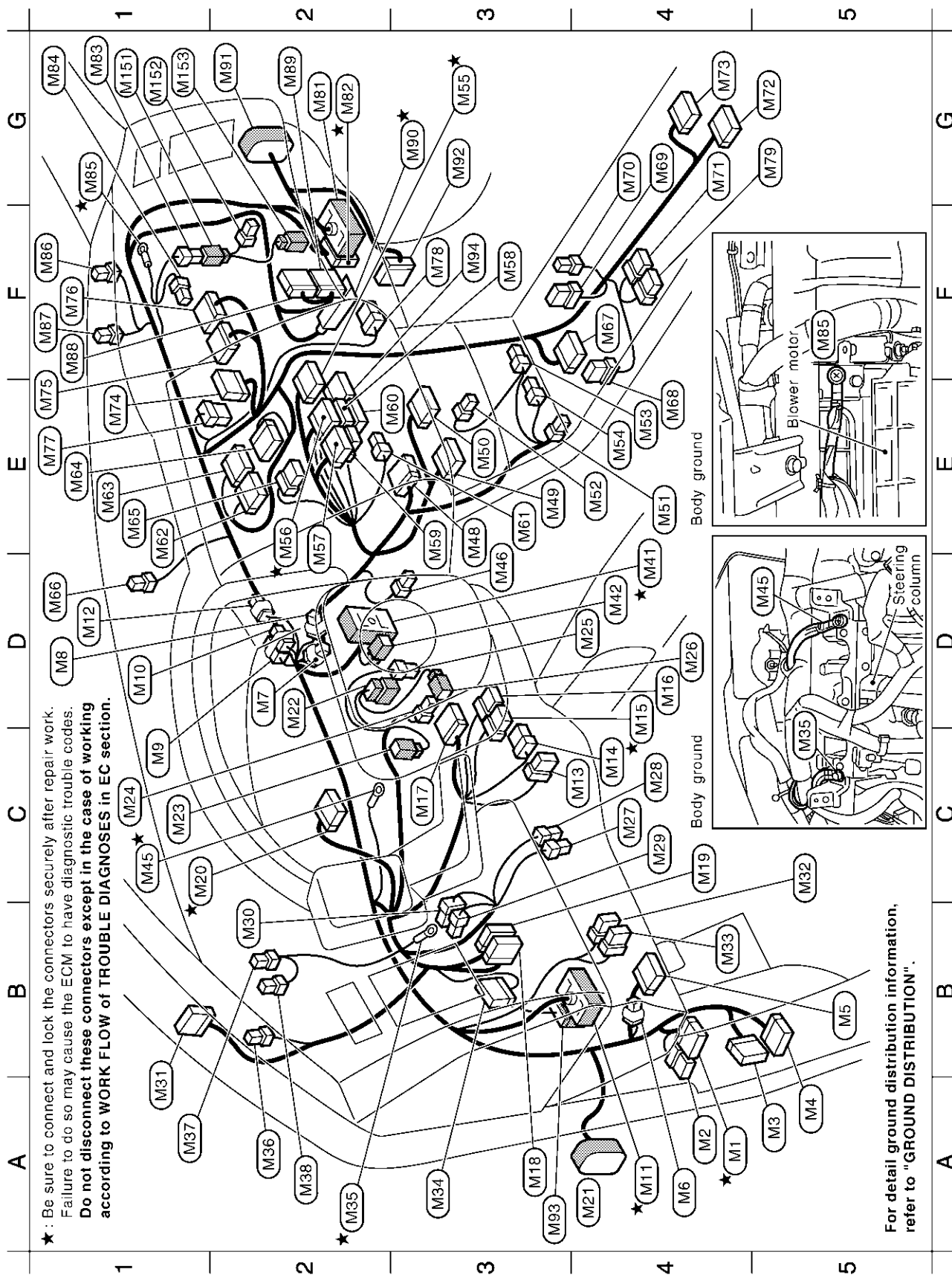
HARNESS

OUTLINE



HARNESS

MAIN HARNESS



★: 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 section.

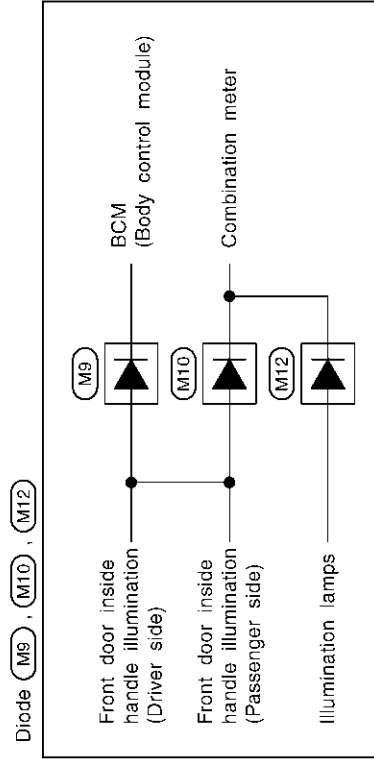
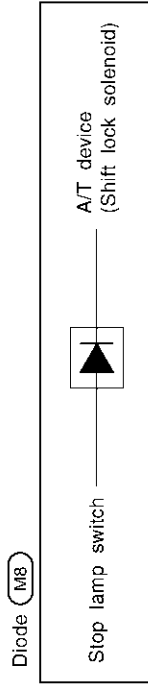
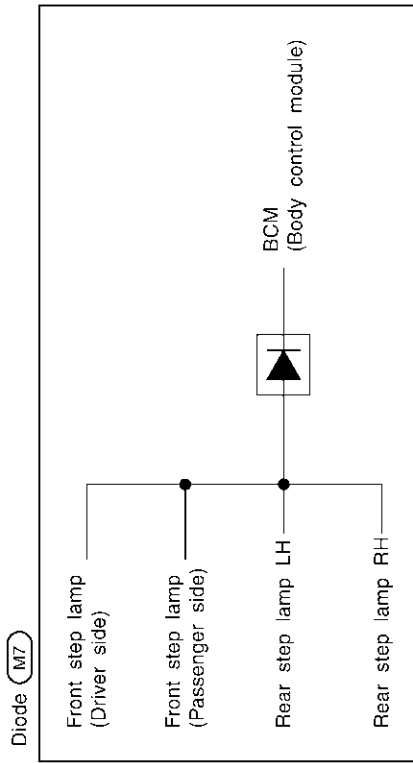
For detail ground distribution information,
 refer to "GROUND DISTRIBUTION".

TKIM0062E

HARNESSES

A4	★	(M1)	W/16	:	Fuse block (J/B)		C1	★	(M45)	—	:	Body ground
A4		(M2)	W/8	:	Fuse block (J/B)		D3		(M46)	W/2	:	In vehicle sensor
A5		(M3)	W/40	:	BCM (Body control module)		E3		(M48)	W/16	:	Rear view camera control unit
A5		(M4)	B/15	:	BCM (Body control module)		E3		(M49)	W/32	:	Automatic drive positioner control unit
B5		(M5)	W/16	:	Data link connector		E3		(M50)	W/16	:	Automatic drive positioner control unit
A4		(M6)	W/2	:	Low fire pressure warning check switch		E4		(M51)	W/4	:	Hazard switch
D2		(M7)	W/2	:	Diode		E4		(M52)	W/4	:	Clock
D1		(M8)	W/2	:	Diode		E4		(M53)	W/3	:	Front cigarette lighter socket
C1		(M9)	W/2	:	Diode		E4		(M54)	BR/2	:	A/T device (Illumination)
D1		(M10)	W/2	:	Diode		G3	★	(M55)	GY/20	:	Unified meter and A/C amp.
A4	★	(M11)	SMJ	:	To (B1)		E2	★	(M56)	GY/16	:	Unified meter and A/C amp.
D1		(M12)	W/2	:	Diode		E2		(M57)	W/24	:	Unified meter and A/C amp.
C4		(M13)	GY/6	:	ADP steering switch		F3		(M58)	W/10	:	Audio unit
C4		(M14)	W/8	:	Steering angle sensor		E3		(M59)	W/6	:	Audio unit
D4	★	(M15)	GY/8	:	Combination switch (Spiral cable)		E3		(M60)	W/16	:	Audio unit
D4		(M16)	Y/6	:	Combination switch (Spiral cable)		E3		(M61)	BR/2	:	Antenna amp.
C3		(M17)	W/16	:	Combination switch		E1		(M62)	W/24	:	Display unit (Without NAVI)
A3		(M18)	W/12	:	Door mirror remote control switch (With automatic drive positioner)		E1		(M63)	W/24	:	Display (With NAVI)
C4		(M19)	W/10	:	Door mirror remote control switch (Without automatic drive positioner)		E1		(M64)	W/16	:	A/C and AV switch
C1	★	(M20)	W/24	:	Combination meter		E1		(M65)	BR/8	:	Audio unit
A4		(M21)	SMJ	:	To (D1)		D1		(M66)	BR/2	:	Instrument speaker center
D2		(M22)	GY/6	:	Key switch and ignition knob switch (With Intelligent Key)		F4		(M67)	W/10	:	A/T device
C1		(M23)	BR/2	:	Key switch (Without Intelligent Key)		E4		(M68)	W/6	:	Heated seat switch (Driver side)
C1		(M24)	W/2	:	Ignition key hole illumination		G4		(M69)	BR/6	:	Heated seat switch (Passenger side)
D4		(M25)	W/4	:	NATS antenna amp.		G4		(M70)	W/2	:	Inside key antenna-1 (Dashboard)
D4		(M26)	W/4	:	Steering lock unit		G4		(M71)	B/6	:	Yaw rate / Side / Decel G sensor (AWD models)
C4		(M27)	W/4	:	Tilt motor and telescopic motor		G5		(M72)	Y/28	:	Air bag diagnosis sensor unit
C4		(M28)	W/4	:	Tilt sensor and telescopic sensor		G4		(M73)	-/16	:	DVD player
C4		(M29)	W/2	:	Circuit breaker		E1		(M74)	W/24	:	Low fire pressure warning control unit
B2		(M30)	B/5	:	Passenger side select unlock relay		E1		(M75)	W/24	:	Display control unit (With NAVI)
A1		(M31)	W/10	:	To (R1)		F1		(M76)	W/32	:	Display control unit (With NAVI)
C5		(M32)	GY/6	:	VDC off switch		E1		(M77)	W/6	:	Heater and cooling unit (Via sub-harness)
B4		(M33)	W/6	:	AWD lock switch		F3		(M78)	W/6	:	Blower motor
A3		(M34)	W/40	:	Intelligent Key unit		G5		(M79)	B/6	:	Yaw rate / Side G sensor (2WD models)
A2	★	(M35)	—	:	Body ground		G2	★	(M81)	SMJ	:	To (E201)
A2		(M36)	BR/2	:	Instrument speaker LH		G2	★	(M82)	SMJ	:	To (F102)
A1		(M37)	W/3	:	Optical sensor							
A2		(M38)	BR/2	:	Security indicator lamp							
D4	★	(M41)	SMJ	:	To (E211)							
D4		(M42)	Y/4	:	To (E212)							

★ : 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 section.



G1	(M83)	W/4	:	To (M151)
G1	(M84)	Y/4	:	Front passenger air bag module
G1	(M85)	—	:	Body ground
F1	(M86)	BR/2	:	Instrument speaker RH
F1	(M87)	B/2	:	Sunload sensor
F1	(M88)	W/24	:	ICC unit
G2	(M89)	GY/24	:	ICC unit
G3	(M90)	SMJ	:	ECM
G2	(M91)	SMJ	:	To (D31)
G3	(M92)	W/16	:	AWD control unit
A3	(M93)	W/12	:	To (B83)
F3	(M94)	W/12	:	Option connector-1 for audio unit

Glove box lamp sub-harness

G1	(M151)	W/4	:	To (M83)
G1	(M152)	W/2	:	Glove box lamp
G1	(M153)	W/2	:	Inside key antenna-2 (Dashboard)

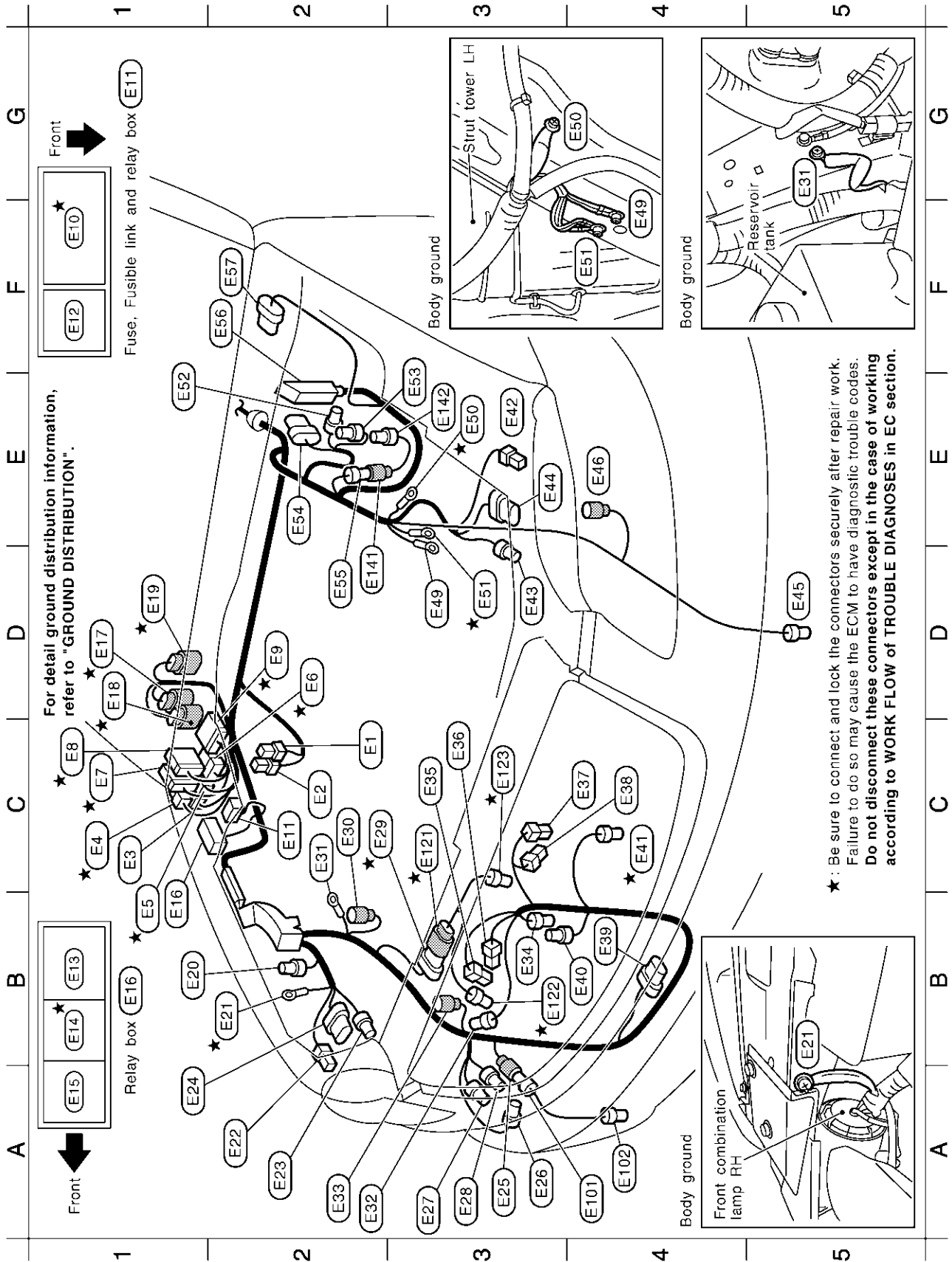
★ : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

TKIM0064E

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HARNESS

ENGINE ROOM HARNESS Engine Compartment



TKIM0065E

Engine room harness

C2	(E1)	B/2	: Fusible link holder
C2	(E2)	GY/2	: Fusible link holder
C1	(E3)	B/2	: IPDM E/R (Intelligent power distribution module engine room)
C1	(E4)	W/4	: IPDM E/R (Intelligent power distribution module engine room)
D2	(E5)	B/4	: IPDM E/R (Intelligent power distribution module engine room)
D2	(E6)	W/6	: IPDM E/R (Intelligent power distribution module engine room)
C1	(E7)	GY/16	: IPDM E/R (Intelligent power distribution module engine room)
C1	(E8)	W/12	: IPDM E/R (Intelligent power distribution module engine room)
D2	(E9)	W/16	: IPDM E/R (Intelligent power distribution module engine room)
F1	(E10)	—	: Fuse and fusible link block
C2	(E11)	—	: Fuse, fusible link and relay box
F1	(E12)	L/4	: Accessory relay-2
B1	(E13)	BR/6	: Rear window defogger relay
B1	(E14)	GY/6	: ICC brake hold relay
A1	(E15)	L/4	: Daytime light relay
C1	(E16)	—	: Relay box
D1	(E17)	GY/6	: To (E47) (With VK engine)
D1	(E18)	GY/9	: To (E48) (With VQ engine)
D1	(E19)	B/8	: To (E49)
B1	(E20)	GY/2	: Hood switch
B2	(E21)	—	: Body ground
A2	(E22)	B/2	: Front side marker lamp RH
A2	(E23)	GY/3	: Clearance lamp RH
A1	(E24)	B/8	: Front combination lamp RH
A3	(E25)	B/2	: To (E101)
A3	(E26)	GY/2	: Washer level sensor
A3	(E27)	BR/2	: Rear washer motor
A3	(E28)	GY/2	: Front washer motor
C2	(E29)	B/8	: To (E121) (With VQ engine)
C2	(E30)	GY/1	: To (E303)
C2	(E31)	—	: Body ground
A2	(E32)	B/3	: Refrigerant pressure sensor
A2	(E33)	GY/2	: Front wheel sensor RH
B3	(E34)	B/2	: Ambient sensor
C3	(E35)	B/1	: Horn low
C3	(E36)	B/1	: Horn low
C4	(E37)	B/1	: Horn high
C4	(E38)	B/1	: Horn high

B4	(E39)	GY/6	: ICC sensor
B4	(E40)	Y/2	: Crash zone sensor
C4	(E41)	GY/4	: Cooling fan motor (With VK engine)
E3	(E42)	B/2	: Front side marker lamp LH
D3	(E43)	GY/3	: Clearance lamp LH
E3	(E44)	B/8	: Front combination lamp LH
D5	(E45)	BR/2	: Front fog lamp LH
E4	(E46)	GY/2	: Front wheel sensor LH
D3	(E49)	—	: Body ground
E3	(E50)	—	: Body ground
D3	(E51)	—	: Body ground
E1	(E52)	GY/2	: Brake fluid level switch
E2	(E53)	B/3	: Pressure sensor
E2	(E54)	GY/6	: Brake booster
D2	(E55)	BR/3	: To (E141)
F2	(E56)	SMJ	: ABS actuator and electric unit (Control unit)
F2	(E57)	GY/6	: Front wiper motor

Front fog lamp RH sub-harness

A4	(E101)	B/2	: To (E25)
A4	(E102)	BR/2	: Front fog lamp RH

Cooling fan sub-harness (With VQ engine)

C3	(E121)	DGY/8	: To (E29)
B3	(E122)	GY/4	: Cooling fan motor-1
C3	(E123)	GY/4	: Cooling fan motor-2

ICC sub-harness

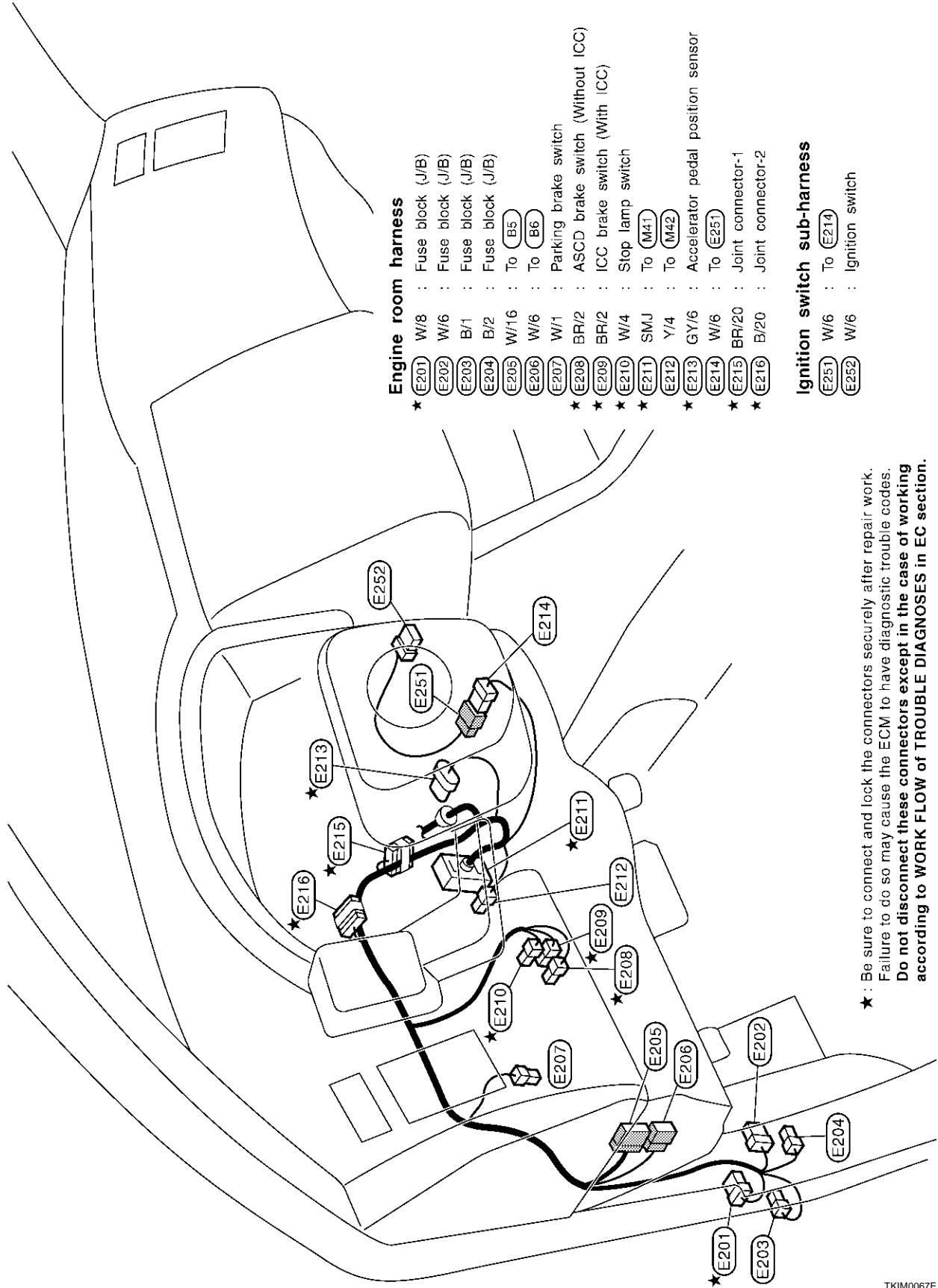
D2	(E141)	BR/3	: To (E55)
E3	(E142)	B/3	: Brake pressure sensor

★ : 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 section.

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HARNESS

Passenger Compartment



Engine room harness

- ★ E201 W/8 : Fuse block (J/B)
- E202 W/6 : Fuse block (J/B)
- E203 B/1 : Fuse block (J/B)
- E204 B/2 : Fuse block (J/B)
- E205 W/16 : To B5
- E206 W/6 : To B6
- E207 W/1 : Parking brake switch
- ★ E208 BR/2 : ASCD brake switch (Without ICC)
- ★ E209 BR/2 : ICC brake switch (With ICC)
- ★ E210 W/4 : Stop lamp switch
- ★ E211 SMJ : To M41
- E212 Y/4 : To M42
- ★ E213 GY/6 : Accelerator pedal position sensor
- E214 W/6 : To E251
- ★ E215 BR/20 : Joint connector-1
- ★ E216 B/20 : Joint connector-2

Ignition switch sub-harness

- E251 W/6 : To E214
- E252 W/6 : Ignition switch

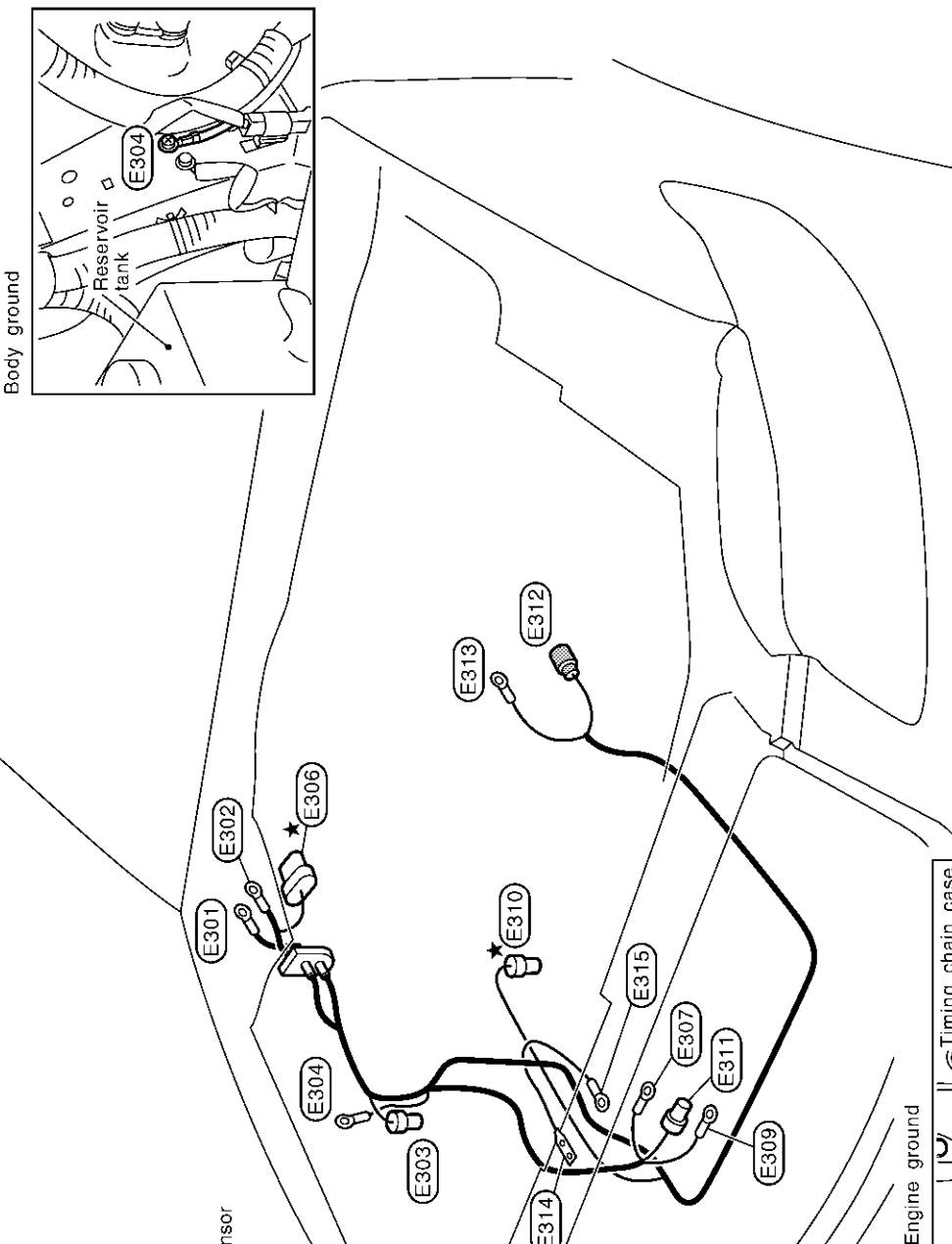
★ : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

TKIM0067E

HARNESSES

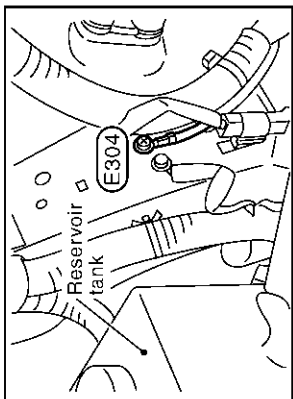
ENGINE HARNESS/VK ENGINE MODELS

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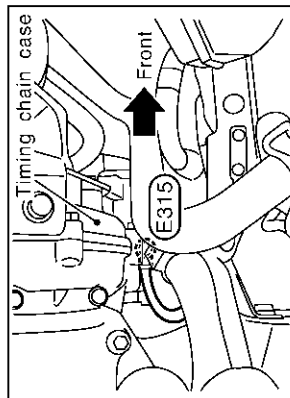


- (E301) : Fusible link holder
- (E302) : Fusible link holder
- (E303) GY/1 : To (E30)
- (E304) : Body ground
- (E306) GY/6 : To (F46)
- (E307) : Alternator (B)
- (E309) : Alternator (E)
- (E310) B/3 : Power steering pressure sensor
- (E311) GY/2 : Alternator (S,L)
- (E312) GY/1 : Starter motor
- (E313) : Starter motor
- (E314) : Body ground
- (E315) : Engine ground

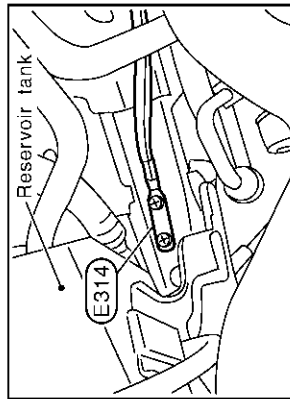
Body ground



Engine ground



Body ground



For detail ground distribution information, refer to "GROUND DISTRIBUTION".

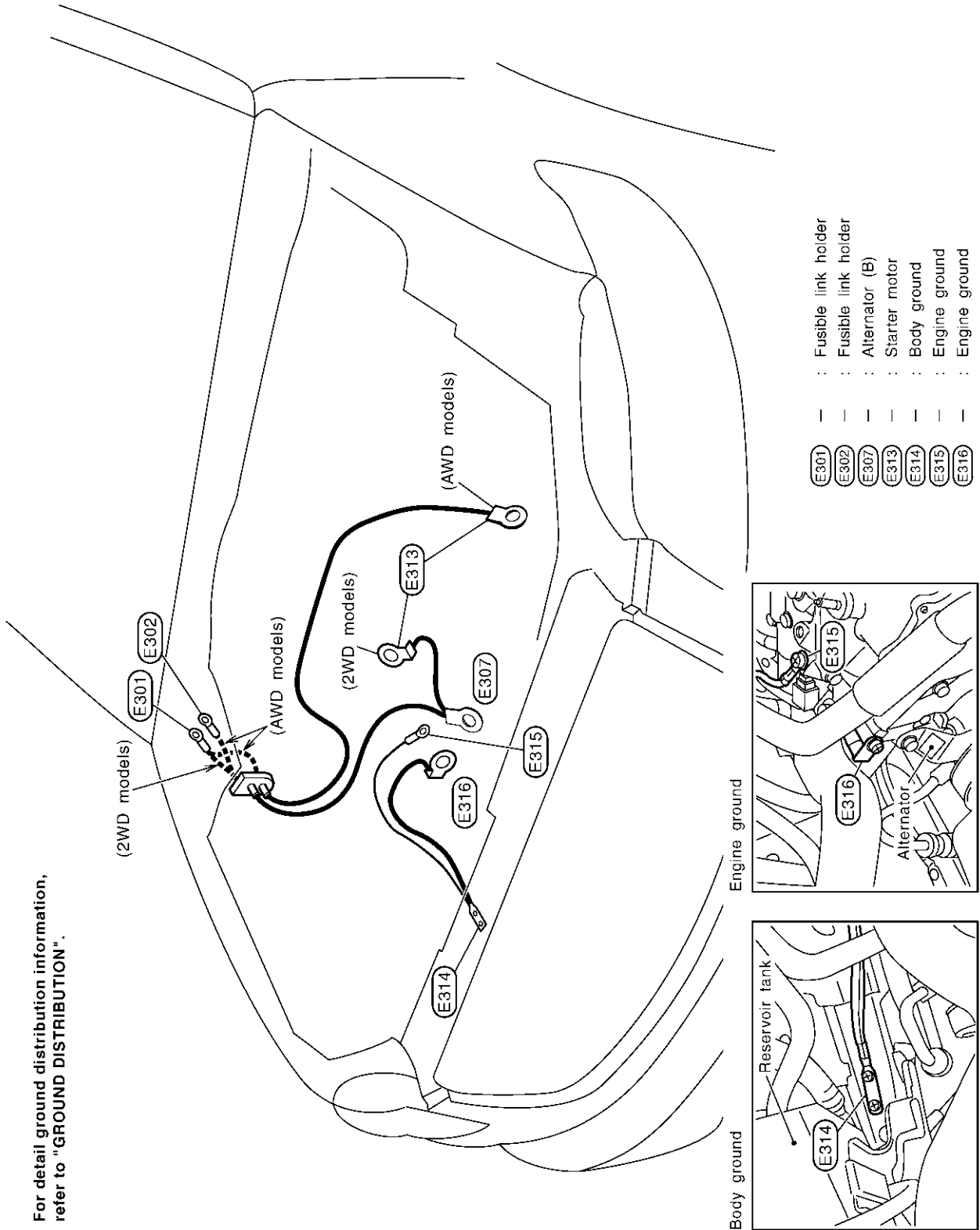
★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

TKIM0068E

HARNESS

ENGINE HARNESS/VQ ENGINE MODELS

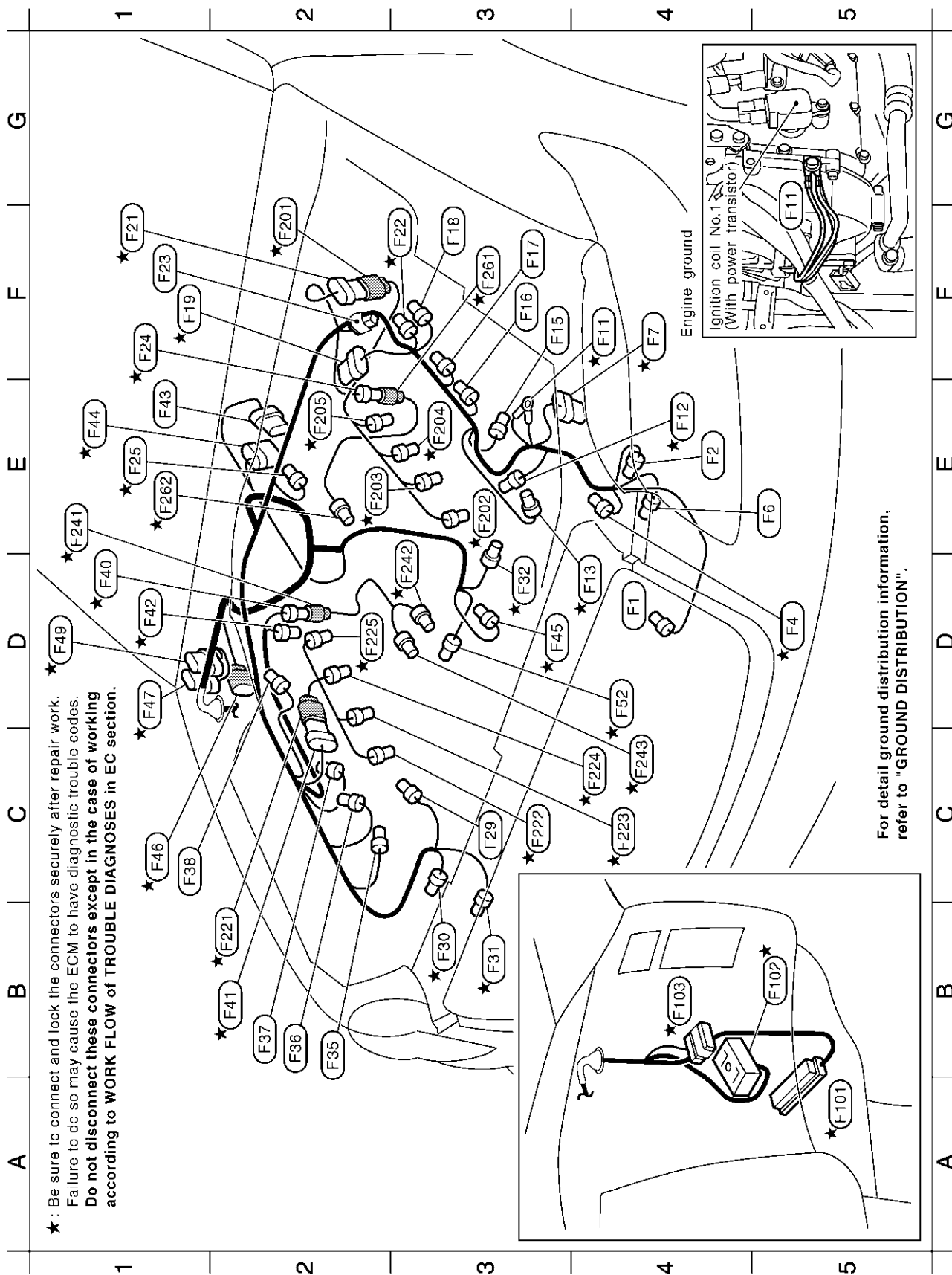
For detail ground distribution information, refer to "GROUND DISTRIBUTION".



TKIM0069E

HARNESS

ENGINE CONTROL HARNESS/VK ENGINE MODELS



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

For detail ground distribution information,
 refer to "GROUND DISTRIBUTION".

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PG

TKIM0070E

Engine control harness

D4	(F1)	GY/1	: Oil pressure switch
E4	(F2)	B/1	: Compressor (Magnet clutch)
D5	(F4)	B/3	: Camshaft position sensor (PHASE)
E5	(F6)	B/2	: Compressor (ECV solenoid valve)
F4	(F7)	GY/5	: Mass air flow sensor
F4	(F11)	—	: Engine ground
E4	(F12)	B/3	: Intake valve timing control position sensor (Bank 1)
D4	(F13)	LG/2	: Intake valve timing control solenoid valve (Bank 1)
F3	(F15)	GY/3	: Ignition coil No.1 (With power transistor)
F3	(F16)	GY/3	: Ignition coil No.3 (With power transistor)
F3	(F17)	GY/3	: Ignition coil No.5 (With power transistor)
F3	(F18)	GY/3	: Ignition coil No.7 (With power transistor)
F1	(F19)	DGY/6	: Electric throttle control actuator
F1	(F21)	DGY/6	: To (F201)
F3	(F22)	GY/4	: Heated oxygen sensor 1 (Bank 1)
F1	(F23)	W/2	: Condenser
F1	(F24)	B/2	: To (F261)
E1	(F25)	LG/2	: EVAP canister purge volume control solenoid valve
C3	(F29)	B/2	: VIAS control solenoid valve
B3	(F30)	B/3	: Intake valve timing control position sensor (Bank 2)
B3	(F31)	LG/2	: Intake valve timing control solenoid valve (Bank 2)
D3	(F32)	GY/4	: Heated oxygen sensor 2 (Bank 1)
B2	(F35)	GY/3	: Ignition coil No.2 (With power transistor)
B2	(F36)	GY/3	: Ignition coil No.4 (With power transistor)
B2	(F37)	GY/3	: Ignition coil No.6 (With power transistor)
C1	(F38)	GY/3	: Ignition coil No.8 (With power transistor)
D1	(F40)	B/4	: To (F241)
B2	(F41)	DGY/6	: To (F221)
D1	(F42)	GY/4	: Heated oxygen sensor 1 (Bank 2)
E1	(F43)	B/8	: Transfer assembly
E1	(F44)	DGY/10	: AVT assembly
D3	(F45)	B/3	: Crankshaft position sensor (POS)
C1	(F46)	GY/6	: To (E306)
D1	(F47)	GY/6	: To (E17)

D1	(F49)	B/8	: To (E19)
D4	(F52)	B/4	: Heated oxygen sensor 2 (Bank 2)
A5	(F101)	SMJ	: ECM
B5	(F102)	SMJ	: To (M82)
B4	(F103)	GY/10	: Joint connector-3

Engine control sub-harness-1

F2	(F201)	G/6	: To (F21)
E3	(F202)	GY/2	: Injector No.1
E2	(F203)	GY/2	: Injector No.3
E3	(F204)	GY/2	: Injector No.5
E2	(F205)	GY/2	: Injector No.7

Engine control sub-harness-2

B2	(F221)	G/6	: To (F41)
C3	(F222)	GY/2	: Injector No.2
C4	(F223)	GY/2	: Injector No.4
C4	(F224)	GY/2	: Injector No.6
D2	(F225)	GY/2	: Injector No.8

Engine control sub-harness-3

E1	(F241)	B/4	: To (F40)
D3	(F242)	L/2	: Knock sensor (Bank 1)
C4	(F243)	L/2	: Knock sensor (Bank 2)

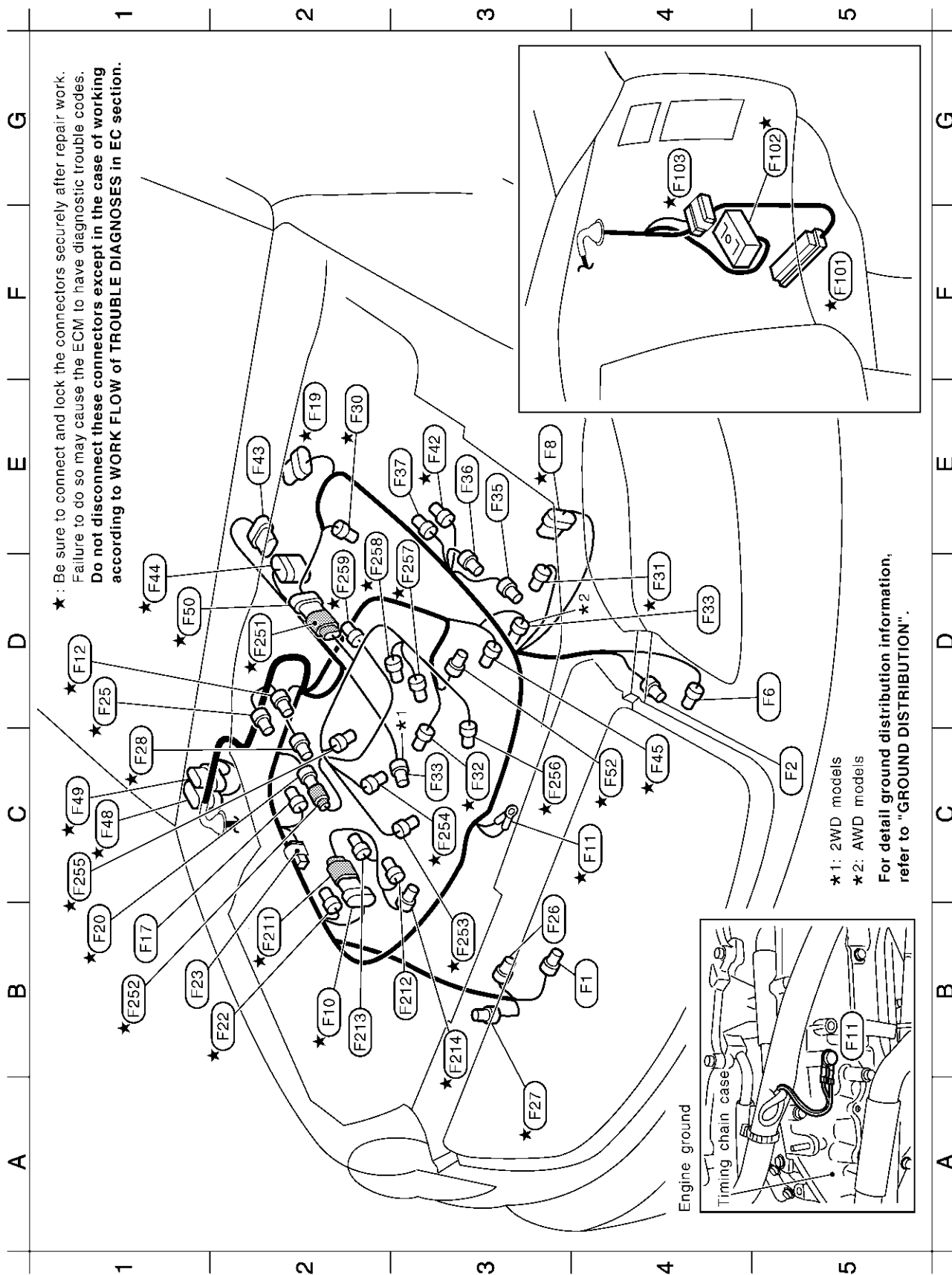
Engine control sub-harness-4

F3	(F261)	SB/2	: To (F24)
E1	(F262)	GY/2	: Engine coolant temperature 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 section.

HARNESS

ENGINE CONTROL HARNESS/VQ ENGINE MODELS



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Engine control harness

B4	(F1)	GY/1	: Oil pressure switch
C5	(F2)	B/1	: Compressor (Magnet clutch)
D5	(F6)	B/2	: Compressor (ECV solenoid valve)
E3	(F8)	B/6	: Mass air flow sensor
B2	(F10)	B/6	: To (F21)
C4	(F11)	—	: Engine ground
D1	(F12)	GY/3	: Camshaft position sensor (PHASE) (Bank 1)
B1	(F17)	GY/3	: Ignition coil No.5 (With power transistor)
E2	(F19)	DGY/6	: Electric throttle control actuator
B1	(F20)	B/2	: To (F252)
B2	(F22)	GY/4	: Heated oxygen sensor 1 (Bank 1)
B1	(F23)	W/2	: Condenser
D1	(F25)	LG/2	: EVAP canister purge volume control solenoid valve
B3	(F26)	GY/2	: Alternator
A3	(F27)	B/3	: Power steering pressure sensor
C1	(F28)	GY/2	: Engine coolant temperature sensor
E2	(F30)	B/3	: Camshaft position sensor (PHASE) (Bank 2)
D4	(F31)	LG/2	: Intake valve timing control solenoid valve (Bank 2)
C3	(F32)	B/4	: Heated oxygen sensor 2 (Bank 1)
C3,D4	(F33)	GY/1	: Starter motor
E3	(F35)	GY/3	: Ignition coil No.2 (With power transistor)
E3	(F36)	GY/3	: Ignition coil No.4 (With power transistor)
E3	(F37)	GY/3	: Ignition coil No.6 (With power transistor)
E3	(F42)	GY/4	: Heated oxygen sensor 1 (Bank 2)
E2	(F43)	B/8	: Transfer assembly
D1	(F44)	DGY/10	: A/T assembly
C4	(F45)	B/3	: Crankshaft position sensor (POS)
C1	(F48)	GY/9	: To (E18)
C1	(F49)	B/8	: To (E19)
D1	(F50)	G/8	: To (F251)
C4	(F52)	GY/4	: Heated oxygen sensor 2 (Bank 2)
F5	(F101)	SMJ	: ECM
G5	(F102)	SMJ	: To (M82)
G4	(F103)	GY/10	: Joint connector-3

Engine control sub-harness-1

B2	(F211)	L/6	: To (F10)
B3	(F212)	GY/3	: Ignition coil No.1 (With power transistor)
B2	(F213)	GY/3	: Ignition coil No.3 (With power transistor)
B3	(F214)	G/2	: Intake valve timing control solenoid valve (Bank 1)

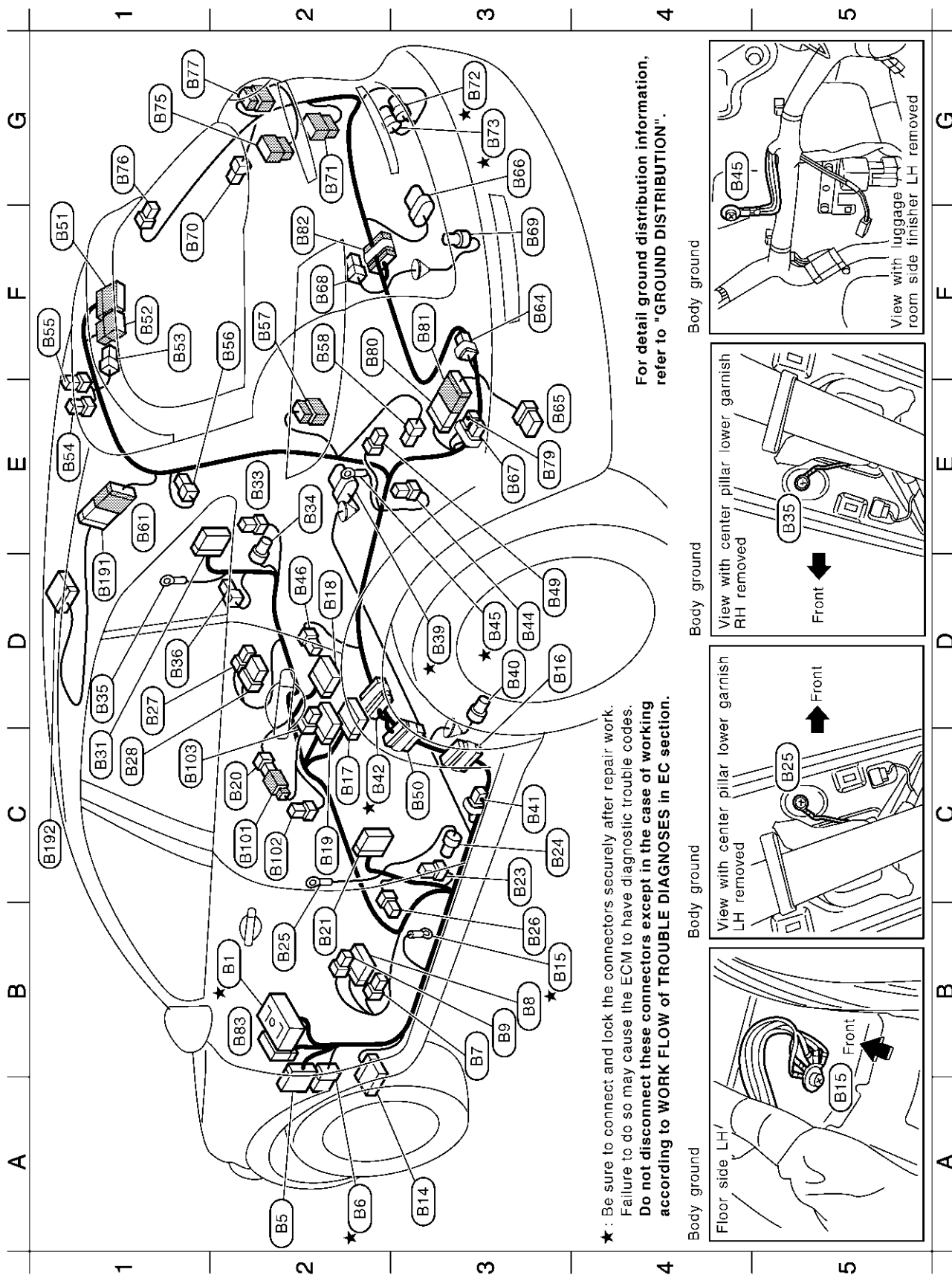
Engine control sub-harness-2

D2	(F251)	G/8	: To (F50)
B1	(F252)	SB/2	: To (F20)
B3	(F253)	GY/2	: Injector No.1
C3	(F254)	GY/2	: Injector No.3
C1	(F255)	GY/2	: Injector No.5
C3	(F256)	GY/2	: Injector No.2
D3	(F257)	GY/2	: Injector No.4
D2	(F258)	GY/2	: Injector No.6
D2	(F259)	L/2	: Knock 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 section.

HARNESS

BODY HARNESS



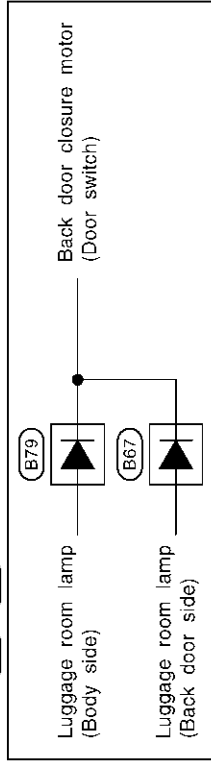
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Body harness

B2	★	B1	SMJ	: To	(MT1)
A2		B5	W/16	: To	(E205)
A2	★	B6	W/6	: To	(E206)
B3		B7	Y/2	: Front LH side air bag module	
B3		B8	W/16	: Front power seat (Driver side) (With automatic drive positioner)	
B3		B9	W/4	: Front power seat (Driver side) (Without automatic drive positioner)	
A3		B14	W/15	: BCM (Body control module)	
B3	★	B15	—	: Body ground	
D3		B16	OR/20	: Joint connector-4	
C2		B17	Y/12	: Air bag diagnosis sensor unit	
D2		B18	Y/12	: Air bag diagnosis sensor unit	
C2		B19	-/16	: DVD player	
C2		B20	W/3	: To (B101)	
B2		B21	W/18	: To (B51)	
C3		B23	Y/2	: Front LH seat belt pre-tensioner	
C3		B24	Y/2	: LH side air bag (Satellite) sensor	
B2		B25	—	: Body ground	
B3		B26	W/3	: Front door switch (Driver side)	
D1		B27	Y/2	: Front RH side air bag module	
C1		B28	W/6	: Front power seat (Passenger side)	
C1		B31	W/18	: To (D71)	
E2		B33	Y/2	: Front RH seat belt pre-tensioner	
E2		B34	Y/2	: RH side air bag (Satellite) sensor	
D1		B35	—	: Body ground	
D1		B36	W/3	: Front door switch (Passenger side)	
D3	★	B39	GY/5	: Fuel level sensor unit and fuel pump (Main)	
D3		B40	GY/2	: Fuel level sensor unit (Sub)	
C3		B41	W/2	: Condenser	
C2	★	B42	OR/20	: Joint connector-5	
D3		B44	W/4	: Back-up lamp relay	
D3	★	B45	—	: Body ground	
D2		B46	W/3	: Rear door switch LH	
D3		B49	W/3	: Luggage room lamp (Body side)	
C3		B50	Bi/20	: Joint connector-6	
F1		B51	W/16	: To (D101)	
F1		B52	W/6	: To (D102)	
F1		B53	W/3	: Luggage room lamp (Back door side)	
E1		B54	OR/2	: LH side curtain air bag module	
F1		B55	Y/2	: RH side curtain air bag module	
F2		B56	BR/2	: Tweeter LH	
F2		B57	W/4	: Rear combination lamp LH	

F2		B58	Bi/2	: Luggage room power socket
E1		B61	W/16	: To (B191) (With DVD player)
F3		B64	GY/1	: Not used
E3		B65	W/12	: Rear combination lamp control unit
G3		B66	B/8	: Woofer
E3		B67	W/2	: Diode
F2		B68	BR/2	: Inside key antenna-3 (Luggage room)
F3		B69	SB/4	: Rear wheel sensor
F1		B70	W/4	: Fuel lid lock actuator
G2		B71	W/12	: To (B211)
G3	★	B72	Bi/2	: EVAP canister vent control valve
G3	★	B73	GY/3	: EVAP control system pressure sensor
G1		B75	BR/2	: To (B215)
G1		B76	BR/2	: Tweeter RH
G1		B77	W/4	: Rear combination lamp RH
E3		B79	W/2	: Diode
F2		B80	W/12	: To (B81)
F3		B81	W/12	: To (B80)
F2		B82	W/12	: Option connector-2 for satellite radio receiver
B2		B83	W/12	: To (M93)

Diode (B67), (B79)



Power socket sub-harness

C2		B101	W/3	: To (B20)
C2		B102	Bi/2	: Front power socket
C1		B103	Bi/2	: Rear power socket

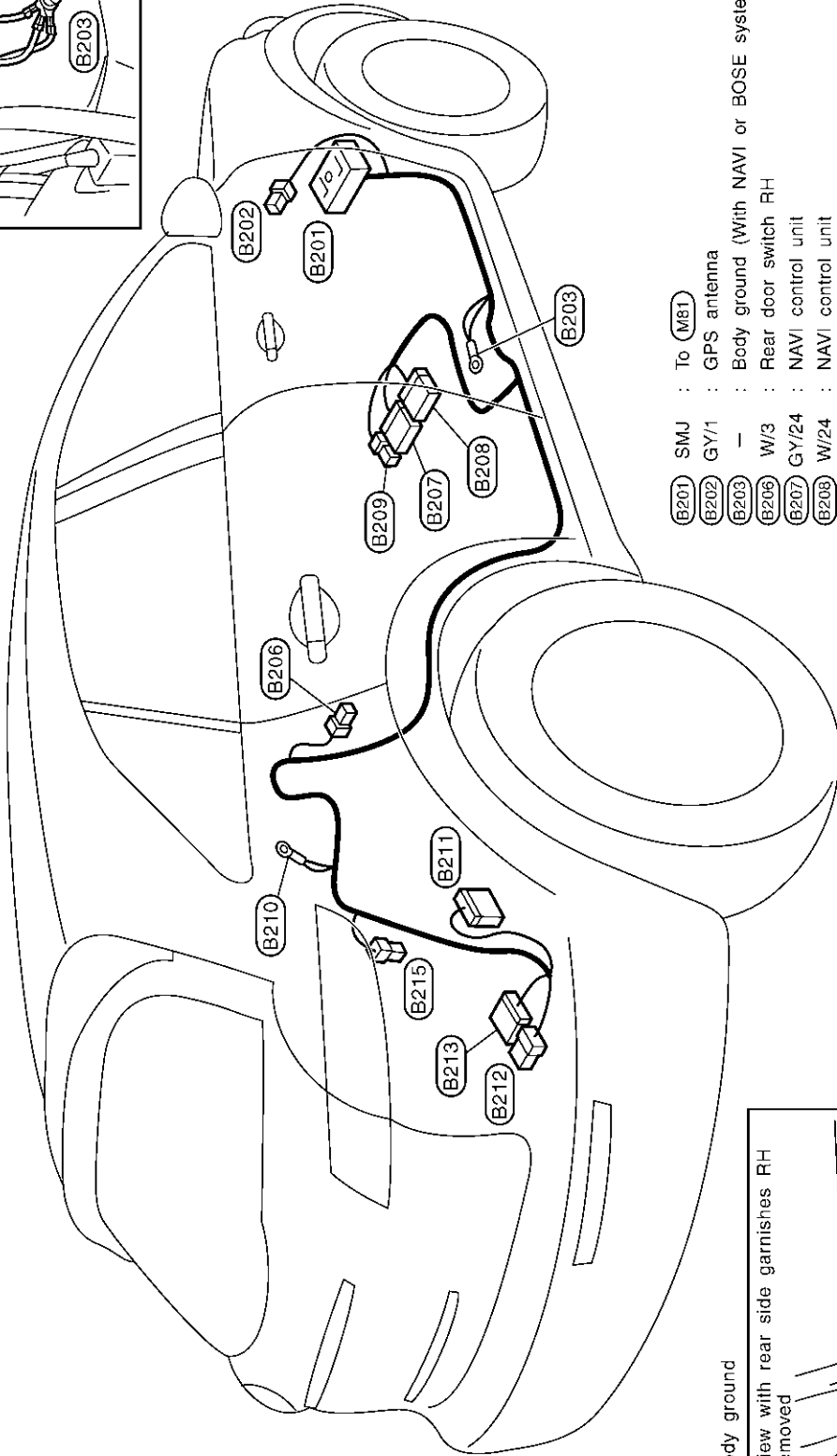
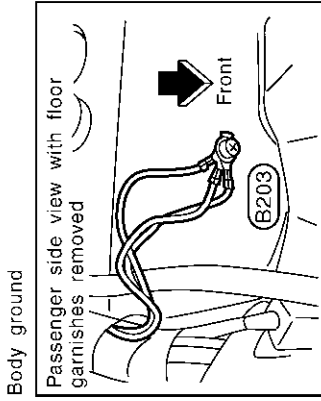
DVD display sub-harness (With DVD player)

D1		B191	W/16	: To (B61)
C1		B192	-/16	: DVD display

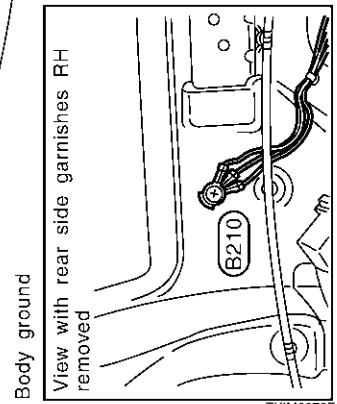
★ : Be sure to connect and lock the connectors securely after repair work.
 Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

HARNESS

BODY NO.2 HARNESS



- | | | | | |
|--------|-------|---|--|-------|
| (B201) | SMJ | : | To | (M81) |
| (B202) | GY/1 | : | GPS antenna | |
| (B203) | — | : | Body ground (With NAVI or BOSE system) | |
| (B206) | W/3 | : | Rear door switch RH | |
| (B207) | GY/24 | : | NAVI control unit | |
| (B208) | W/24 | : | NAVI control unit | |
| (B209) | GY/1 | : | NAVI control unit | |
| (B210) | — | : | Body ground (With BOSE system) | |
| (B211) | W/12 | : | To | (B71) |
| (B212) | GY/8 | : | BOSE speaker amp. | |
| (B213) | B/24 | : | BOSE speaker amp. | |
| (B215) | BR/2 | : | To | (B75) |

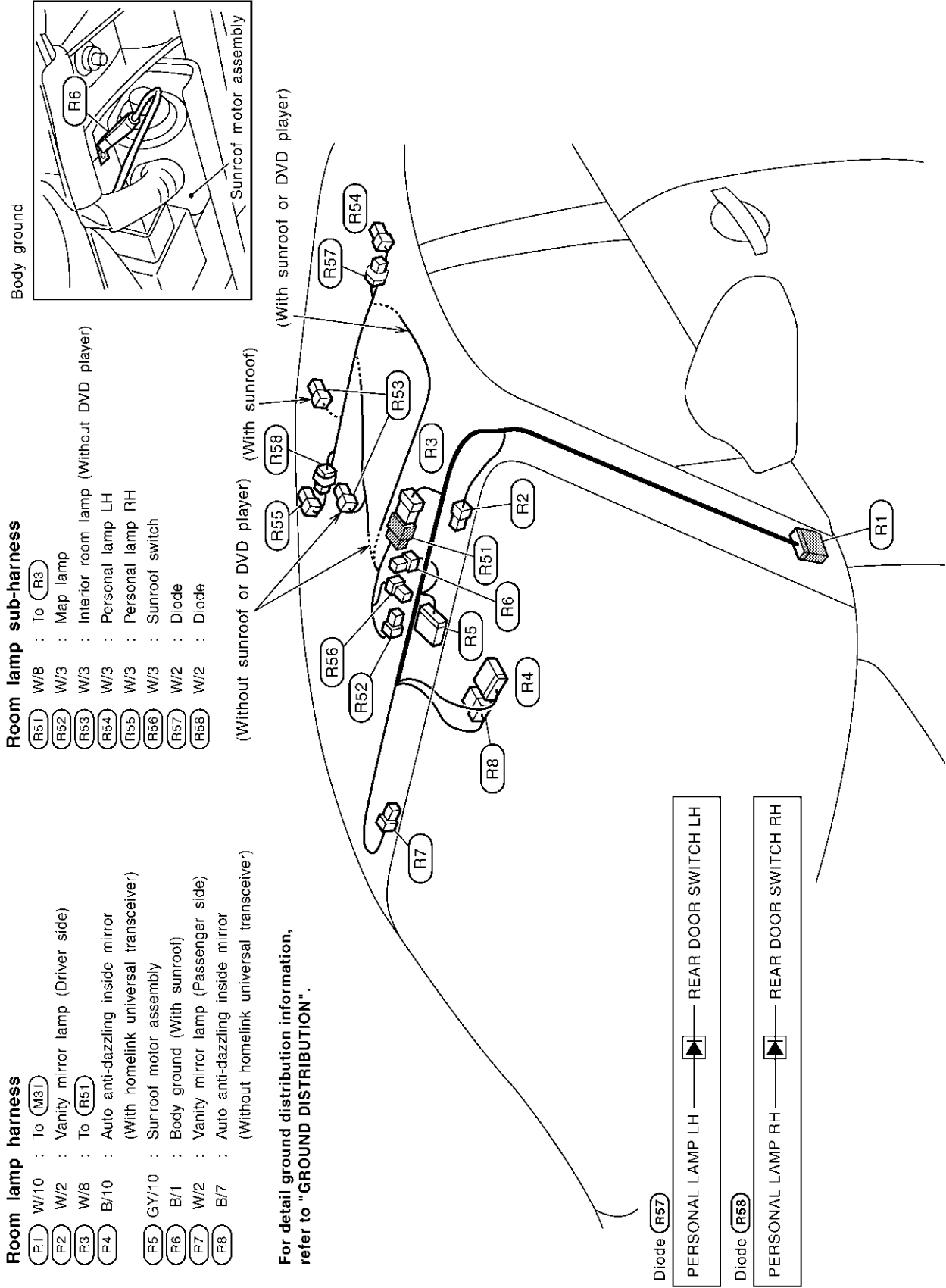


For detail ground distribution information, refer to "GROUND DISTRIBUTION".

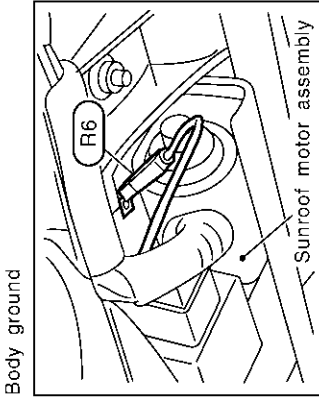
TKIM0076E

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ROOM LAMP HARNESS



- Room lamp harness**
- R1 : To (M31)
 - R2 : Vanity mirror lamp (Driver side)
 - R3 : To (R51)
 - R4 : Auto anti-dazzling inside mirror (With homelink universal transceiver)
 - R5 : Sunroof motor assembly
 - R6 : Body ground (With sunroof)
 - R7 : Vanity mirror lamp (Passenger side)
 - R8 : Auto anti-dazzling inside mirror (Without homelink universal transceiver)
- Room lamp sub-harness**
- R51 : To (R3)
 - R52 : Map lamp
 - R53 : Interior room lamp (Without DVD player)
 - R54 : Personal lamp LH
 - R55 : Personal lamp RH
 - R56 : Sunroof switch
 - R57 : Diode
 - R58 : Diode

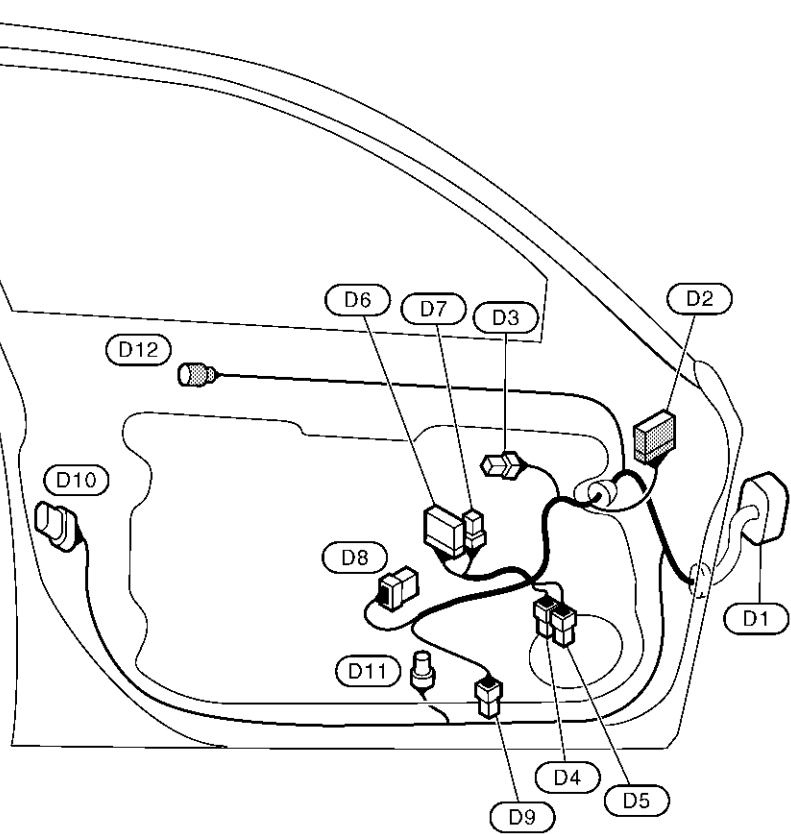


HARNESS

FRONT DOOR HARNESS

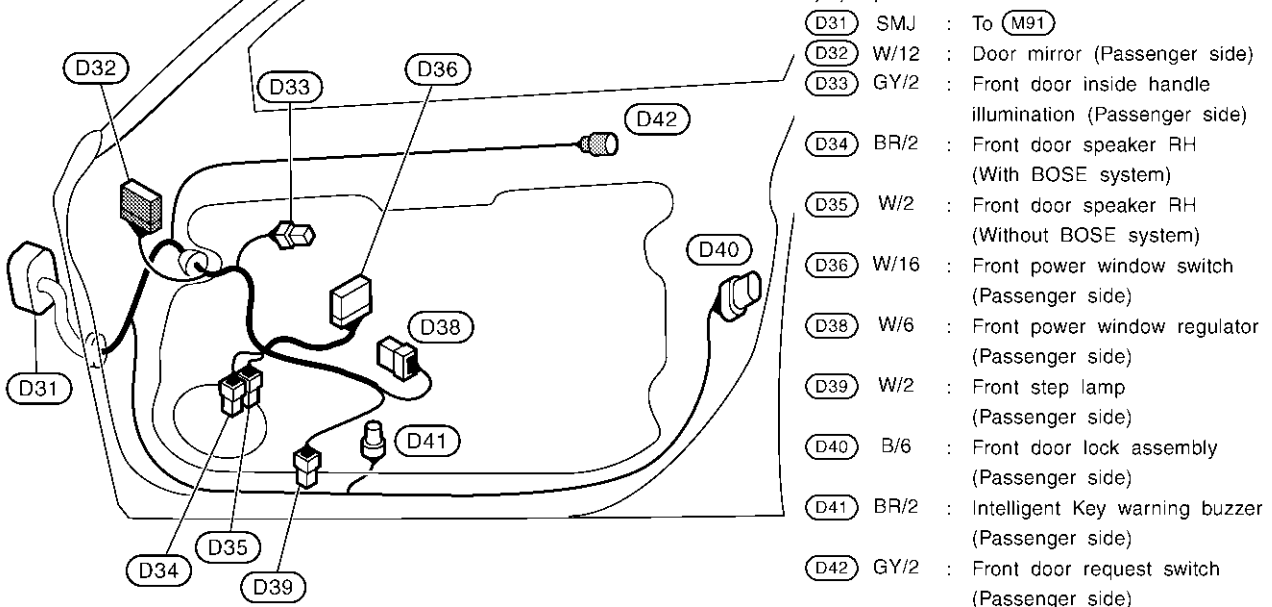
LH Side

- (D1) SMJ : To (M21)
- (D2) W/12 : Door mirror (Driver side)
- (D3) GY/2 : Front door inside handle illumination (Driver side)
- (D4) BR/2 : Front door speaker LH (With BOSE system)
- (D5) W/2 : Front door speaker LH (Without BOSE system)
- (D6) W/16 : Power window main switch
- (D7) W/3 : Power window main switch
- (D8) W/6 : Front power window regulator (Driver side)
- (D9) W/2 : Front step lamp (Driver side)
- (D10) B/6 : Front door lock assembly (Driver side)
- (D11) BR/2 : Intelligent Key warning buzzer (Driver side)
- (D12) GY/2 : Front door request switch (Driver side)



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RH Side



- (D31) SMJ : To (M91)
- (D32) W/12 : Door mirror (Passenger side)
- (D33) GY/2 : Front door inside handle illumination (Passenger side)
- (D34) BR/2 : Front door speaker RH (With BOSE system)
- (D35) W/2 : Front door speaker RH (Without BOSE system)
- (D36) W/16 : Front power window switch (Passenger side)
- (D38) W/6 : Front power window regulator (Passenger side)
- (D39) W/2 : Front step lamp (Passenger side)
- (D40) B/6 : Front door lock assembly (Passenger side)
- (D41) BR/2 : Intelligent Key warning buzzer (Passenger side)
- (D42) GY/2 : Front door request switch (Passenger side)

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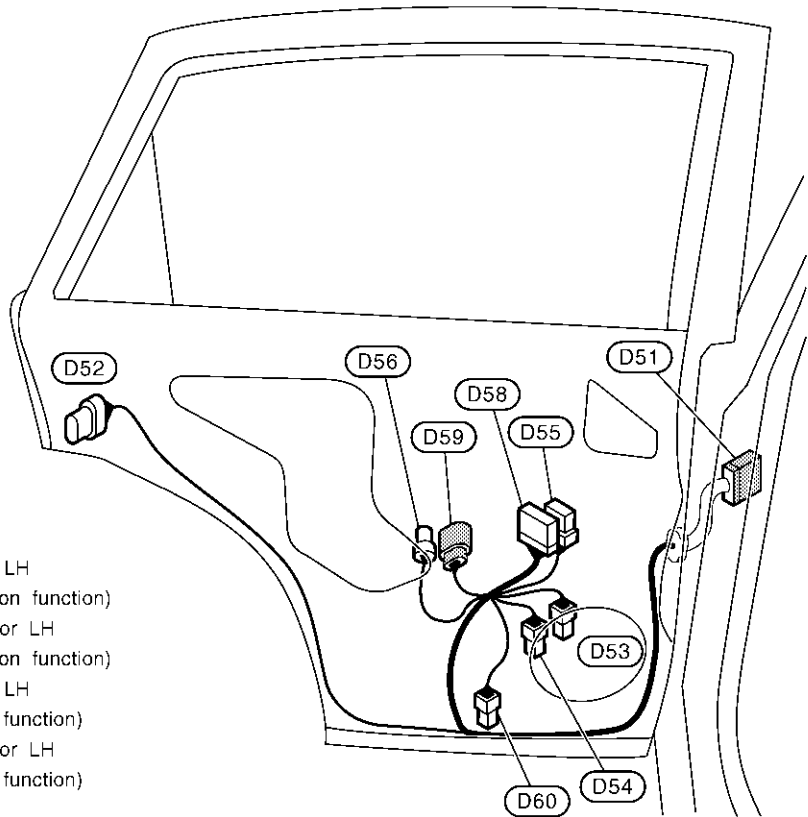
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HARNESS

REAR DOOR HARNESS

LH Side

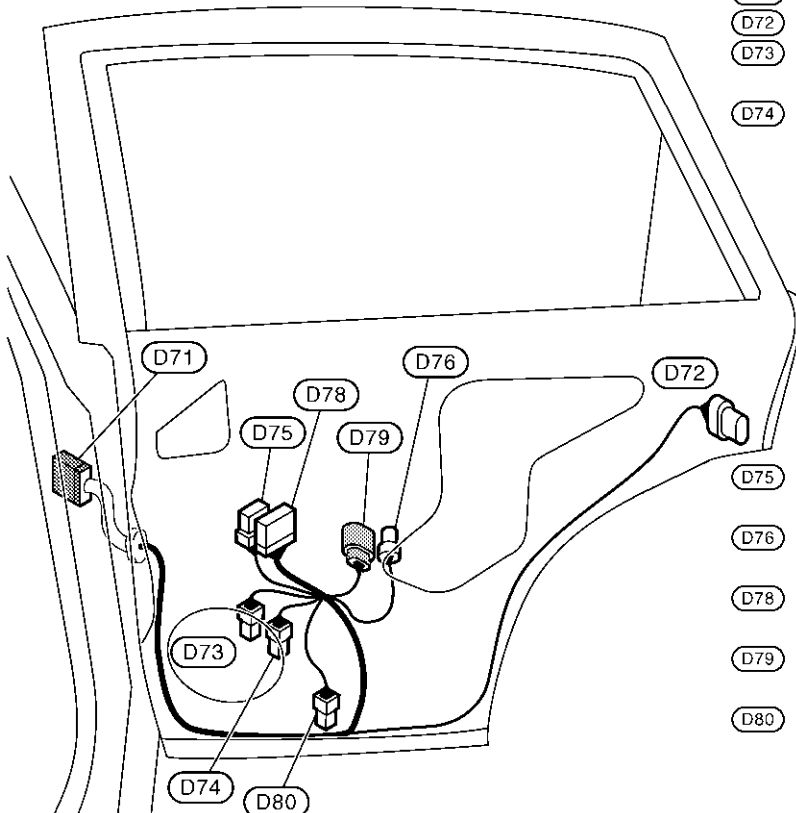
- (D51) W/18 : To (B21)
- (D52) B/6 : Rear door lock actuator LH
- (D53) BR/2 : Rear door speaker LH
(With BOSE system)
- (D54) W/2 : Rear door speaker LH
(Without BOSE system)
- (D55) W/8 : Rear power window switch LH
(Without interruption detection function)
- (D56) BR2 : Rear power window regulator LH
(Without interruption detection function)
- (D58) W/16 : Rear power window switch LH
(With interruption detection function)
- (D59) GY/6 : Rear power window regulator LH
(With interruption detection function)
- (D60) W/2 : Rear step lamp LH



TKIM0080E

RH Side

- (D71) W/18 : To (B31)
- (D72) B/6 : Rear door lock actuator RH
- (D73) BR/2 : Rear door speaker RH
(With BOSE system)
- (D74) W/2 : Rear door speaker RH
(Without BOSE system)



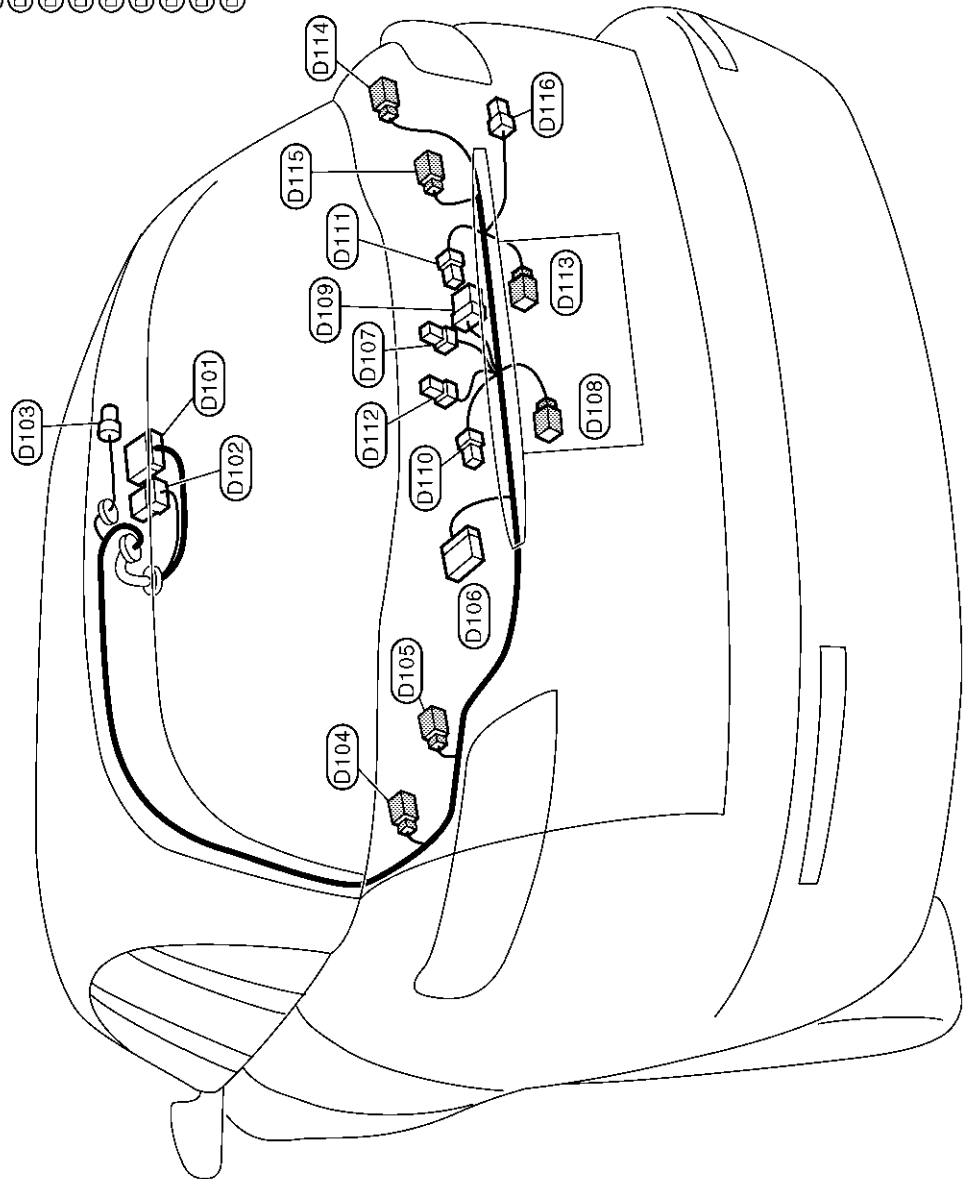
- (D75) W/8 : Rear power window switch RH
(Without interruption detection function)
- (D76) BR2 : Rear power window regulator RH
(Without interruption detection function)
- (D78) W/16 : Rear power window switch RH
(With interruption detection function)
- (D79) GY/6 : Rear power window regulator RH
(With interruption detection function)
- (D80) W/2 : Rear step lamp RH

TKIM0081E

HARNESS

BACK DOOR HARNESS

D101	W/16	:	To	B51
D102	W/6	:	To	B52
D103	GY/2	:	High-mounted stop lamp	
D104	GY/1	:	Rear window defogger (+)	
D105	W/2	:	Back-up lamp LH	
D106	W/10	:	Back door closure control unit	
D107	W/4	:	Rear wiper motor	
D108	W/4	:	Rear view camera	
D109	W/8	:	Back door closure motor	
D110	W/2	:	License plate lamp LH	
D111	W/2	:	License plate lamp RH	
D112	W/2	:	Back door opener switch	
D113	BR/2	:	Back door request switch	
D114	GY/1	:	Rear window defogger (-)	
D115	W/2	:	Back-up lamp RH	
D116	BR/2	:	Outside key antenna (Back door)	



TKIM0082E

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HARNESS

Wiring Diagram Codes (Cell Codes)

AKS007X0

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

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

Code	Section	Wiring Diagram Name
A/C	ATC	Air Conditioner
A/T	AT	A/T
APPS1	EC	Accelerator Pedal Position Sensor
APPS2	EC	Accelerator Pedal Position Sensor
APPS3	EC	Accelerator Pedal Position Sensor
ASC/BS	EC	Automatic Speed Control Device (ASCD) Brake Switch
ASC/SW	EC	Automatic Speed Control Device (ASCD) Steering Switch
ASCBOF	EC	Automatic Speed Control Device (ASCD) Brake Switch
ASCIND	EC	Automatic Speed Control Device (ASCD) Indicator
AT/IND	DI	A/T Indicator Lamp
AUDIO	AV	Audio
AUT/DP	SE	Automatic Drive Positioner
AUTO/L	LT	Automatic Light System
AWD	TF	AWD Control System
B/CLOS	BL	Back Door Closure System
BACK/L	LT	Back-Up Lamp
BRK/SW	EC	Brake Switch
CAN	EC	CAN Communication Line
CAN	LAN	CAN System
CHARGE	SC	Charging System
CHIME	DI	Warning Chime
CIGAR	WW	Cigarette Lighter
CLOCK	DI	Clock
COMBSW	LT	Combination Switch
COMM	AV	Audio Visual Communication Line
COMPASS	DI	Compass
COOL/F	EC	Cooling Fan Control
D/LOCK	BL	Power Door Lock
DEF	GW	Rear Window Defogger
DTRL	LT	Headlamp - With Daytime Light System
ECM/PW	EC	ECM Power Supply For Back-Up
ECTS	EC	Engine Coolant Temperature Sensor
ETC1	EC	Electrical Throttle Control Function
ETC2	EC	Electrical Throttle Control Motor Relay
ETC3	EC	Electrical Throttle Control Motor
F/FOG	LT	Front Fog Lamp
F/PUMP	EC	Fuel Pump
FTTS	EC	Fuel Tank Temperature Sensor
FUELB1	EC	Fuel Injection System Function (Bank 1)
FUELB2	EC	Fuel Injection System Function (Bank 2)
H/AIM	LT	Headlamp Aiming Control System

HARNESSES

Code	Section	Wiring Diagram Name
H/LAMP	LT	Headlamp
HORN	WW	Horn
HSEAT	SE	Heated Seat
I/KEY	BL	Intelligent Key System
I/MIRR	GW	Inside Mirror (Auto Anti-Dazzling Mirror)
IATS	EC	Intake Air Temperature Sensor
ICC	ACS	Intelligent Cruise Control System
ICC/BS	EC	ICC Brake Switch
ICC/SW	EC	ICC Steering Switch
ICCBOF	EC	ICC Brake Switch
IGNSYS	EC	Ignition System
ILL	LT	Illumination
INF/D	AV	Vehicle Information and Integrated Switch System
INJECT	EC	Injector
IVCB1	EC	Intake Valve Timing Control Solenoid Valve Bank 1
IVCB2	EC	Intake Valve Timing Control Solenoid Valve Bank 2
IVCSB1	EC	Intake Valve Timing Control Position Sensor Bank 1
IVCSB2	EC	Intake Valve Timing Control Position Sensor Bank 2
IVTB1	EC	Intake Valve Timing Control System (Bank 1)
IVTB2	EC	Intake Valve Timing Control System (Bank 2)
KEYLES	BL	Remote Keyless Entry System
KS	EC	Knock Sensor
M/ANT	AV	Manual Antenna
MAFS	EC	Mass Air Flow Sensor
MAIN	EC	Main Power Supply And Ground Circuit
MES	AV	Mobile Entertainment System
METER	DI	Speedometer, Tachometer, Temp., And Fuel Gauges
MIL/DL	EC	Mil&Data Link Connectors
MIRROR	GW	Power Door Mirror
NATS	BL	Nissan Anti - Theft System
NAVI	AV	Navigation System
O2H1B1	EC	Heated Oxygen Sensor 1 Heater Bank 1
O2H1B2	EC	Heated Oxygen Sensor 1 Heater Bank 2
O2H2B1	EC	Rear Heated Oxygen Sensor 2 Heater Bank 1
O2H2B2	EC	Rear Heated Oxygen Sensor 2 Heater Bank 2
O2S1B1	EC	Heated Oxygen Sensor 1 Bank 1
O2S1B2	EC	Heated Oxygen Sensor 1 Bank 2
O2S2B1	EC	Rear Heated Oxygen Sensor 2 Bank 1
O2S2B2	EC	Rear Heated Oxygen Sensor 2 Bank 2
P/SCKT	WW	Power Socket
PGC/V	EC	Evap Canister Purge Volume Control Solenoid Valve
PHASE	EC	Camshaft Position Sensor (PHASE)
PHSB1	EC	Camshaft Position Sensor (PHASE) (Bank1)
PHSB2	EC	Camshaft Position Sensor (PHASE) (Bank2)

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HARNESS

Code	Section	Wiring Diagram Name
PNP/SW	EC	Park / Neutral Position Switch
POS	EC	Crankshaft Position Sensor (CKPS) (POS)
POWER	PG	Power Supply Routing
PRE/SE	EC	Evap Control System Pressure Sensor
PS/SEN	EC	Power Steering Pressure Sensor
R/VIEW	DI	Rear View Camera Control System
ROOM/L	LT	Interior Room Lamp
RP/SEN	EC	Refrigerant Pressure Sensor
SEAT	SE	Power Seat
SEN/PW	EC	Sensor Power Supply
SHIFT	AT	A/T Shift Lock System
SROOF	RF	Sunroof
SRS	SRS	Supplemental Restraint System
START	SC	Starting System
STOP/L	LT	Stop Lamp
T/WARN	WT	Low Tire Pressure Warning System
TAIL/L	LT	Parking, License and Tail Lamps
TPS1	EC	Throttle Position Sensor (Sensor 1)
TPS2	EC	Throttle Position Sensor (Sensor 2)
TPS3	EC	Throttle Position Sensor
TRNSCV	BL	Homelink Universal Transceiver
TURN	LT	Turn Signal and Hazard Warning Lamp
VDC	BRC	Vehicle Dynamics Control System
VEHSEC	BL	Vehicle Security System
VENT/V	EC	Evap Canister Vent Control Valve
VIAS/V	EC	VIAS Control Solenoid Valve
WARN	DI	Warning Lamps
WINDOW	GW	Power Window
WIP/R	WW	Rear Wiper and Washer
WIPER	WW	Front Wiper and Washer

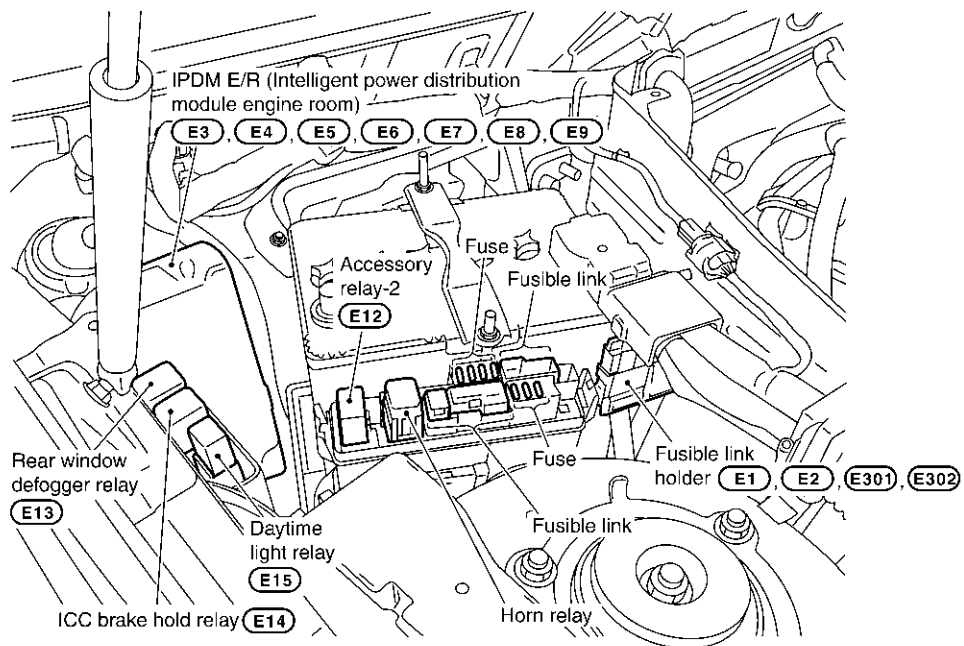
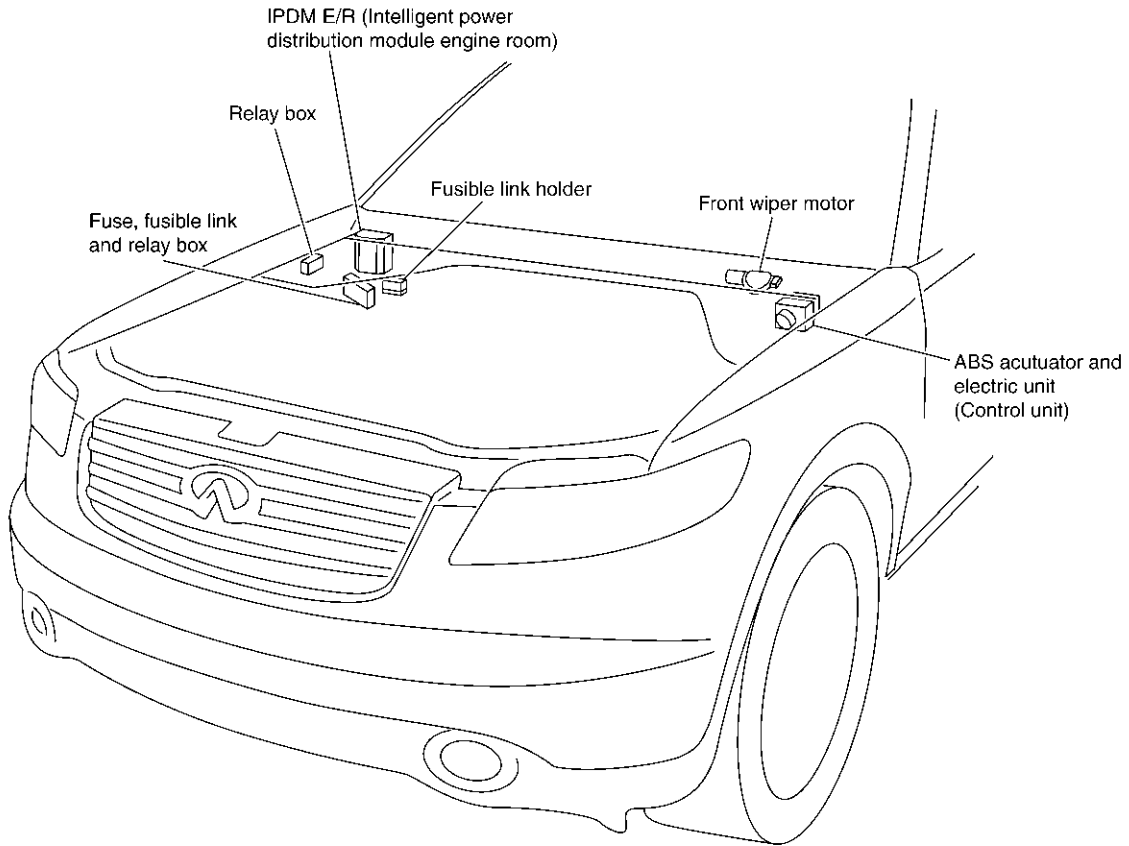
ELECTRICAL UNITS LOCATION

ELECTRICAL UNITS LOCATION

PPF:25230

Electrical Units Location ENGINE COMPARTMENT

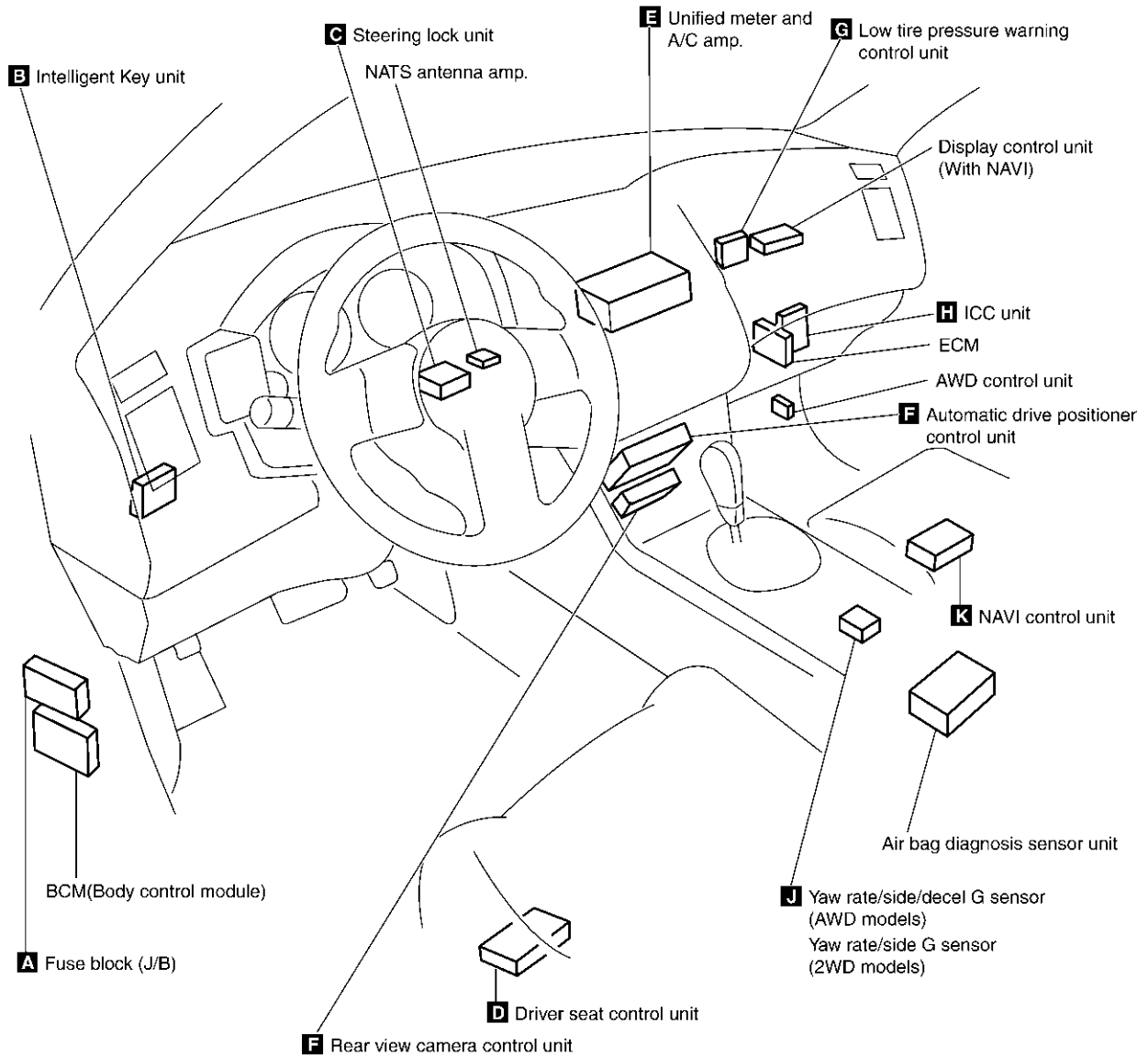
AKS007W2



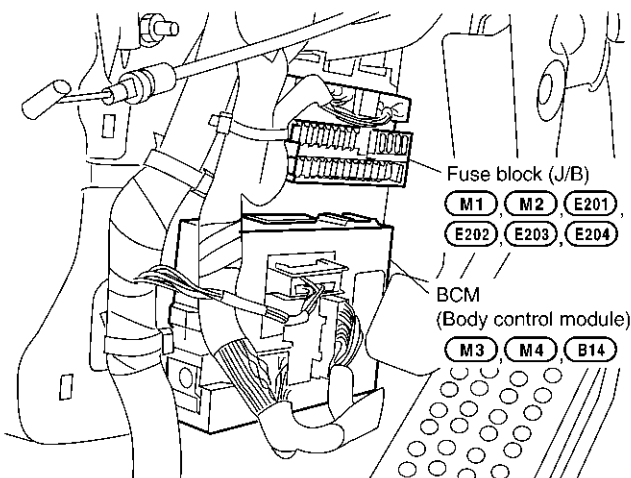
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ELECTRICAL UNITS LOCATION

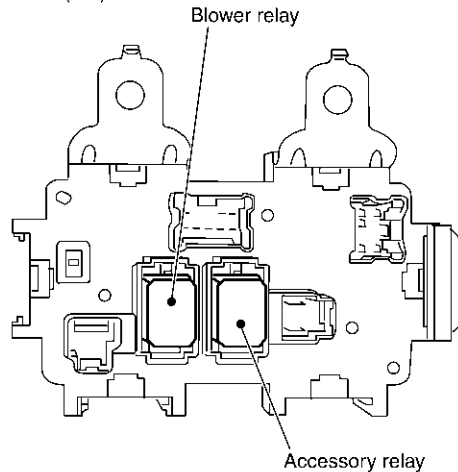
PASSENGER COMPARTMENT



A Behind dash side lower finisher LH



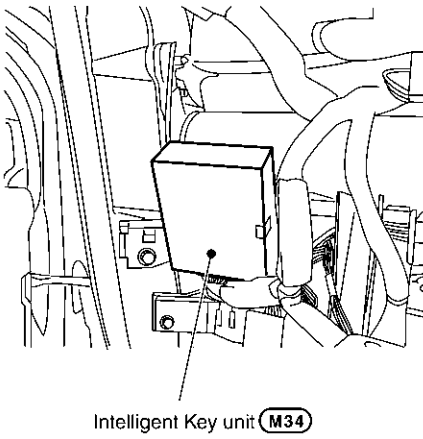
Fuse block (J/B) rear view



CKIM0213E

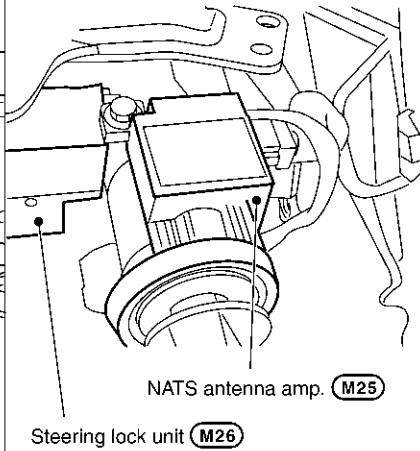
ELECTRICAL UNITS LOCATION

B Driver side view with lower instrument panel removed



Intelligent Key unit (M34)

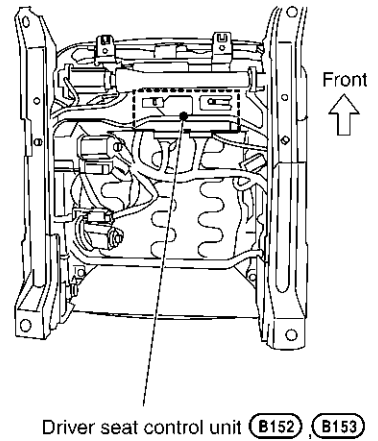
C Driver side view with cluster lid A removed



NATS antenna amp. (M25)

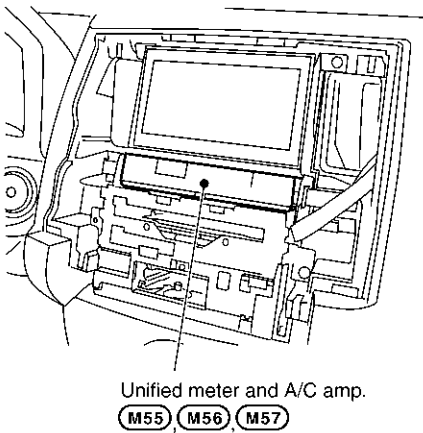
Steering lock unit (M26)

D Under driver seat



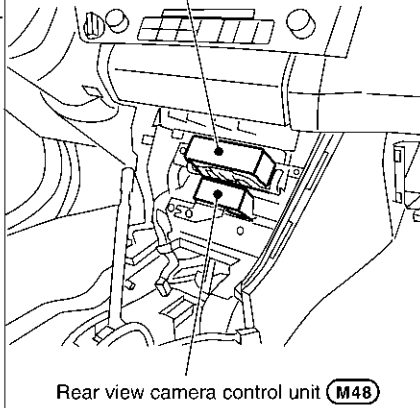
Driver seat control unit (B152, B153)

E View with cluster lid C removed



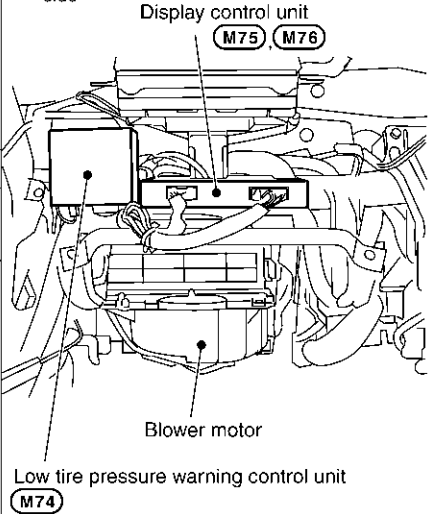
Unified meter and A/C amp.
(M55, M56, M57)

F View with instrument panel center removed
Automatic drive positioner control unit
(M49, M50)



Rear view camera control unit (M48)

G Behind lower instrument panel on passenger side

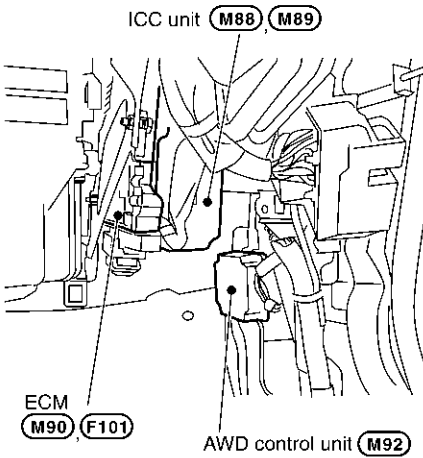


Display control unit
(M75, M76)

Blower motor

Low tire pressure warning control unit
(M74)

H Behind lower instrument panel on passenger side

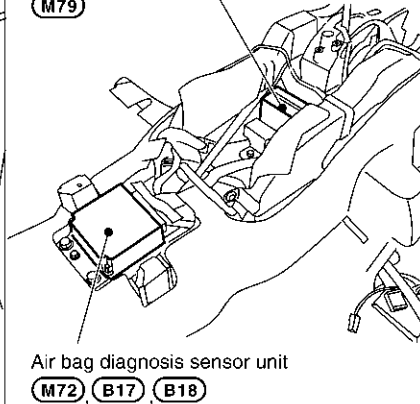


ICC unit (M88, M89)

ECM
(M90, F101)

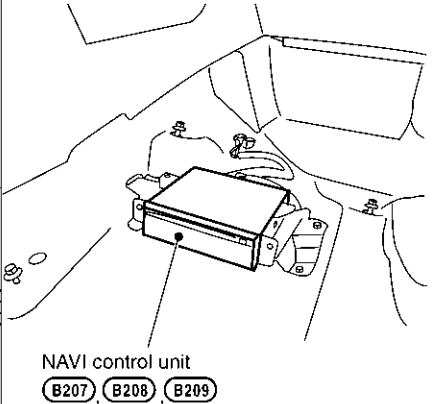
AWD control unit (M92)

J View with floor console box removed
Yaw rate/side/decel G sensor(AWD models)
(M71)
Yaw rate/side G sensor(2WD models)
(M79)



Air bag diagnosis sensor unit
(M72, B17, B18)

K View with passenger seat removed



NAVI control unit
(B207, B208, B209)

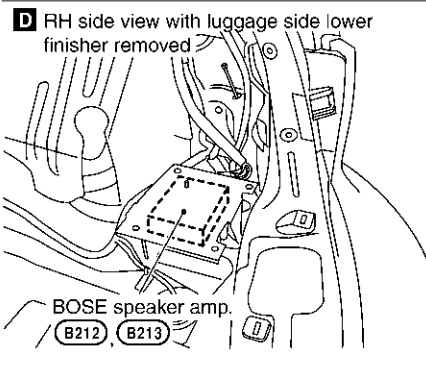
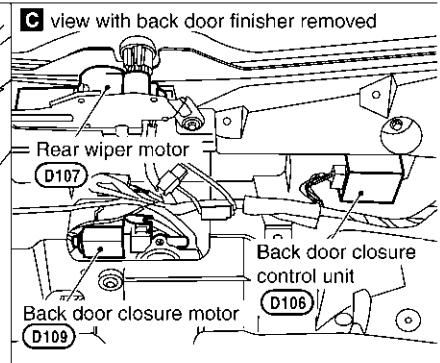
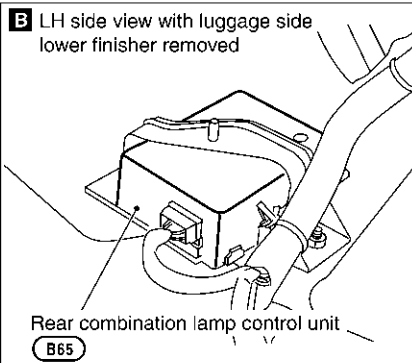
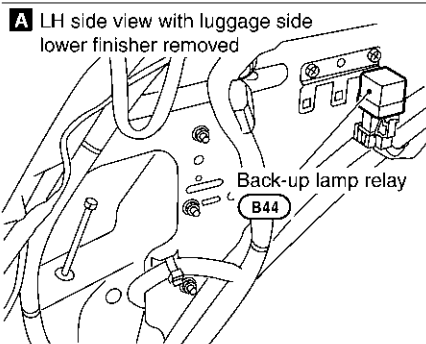
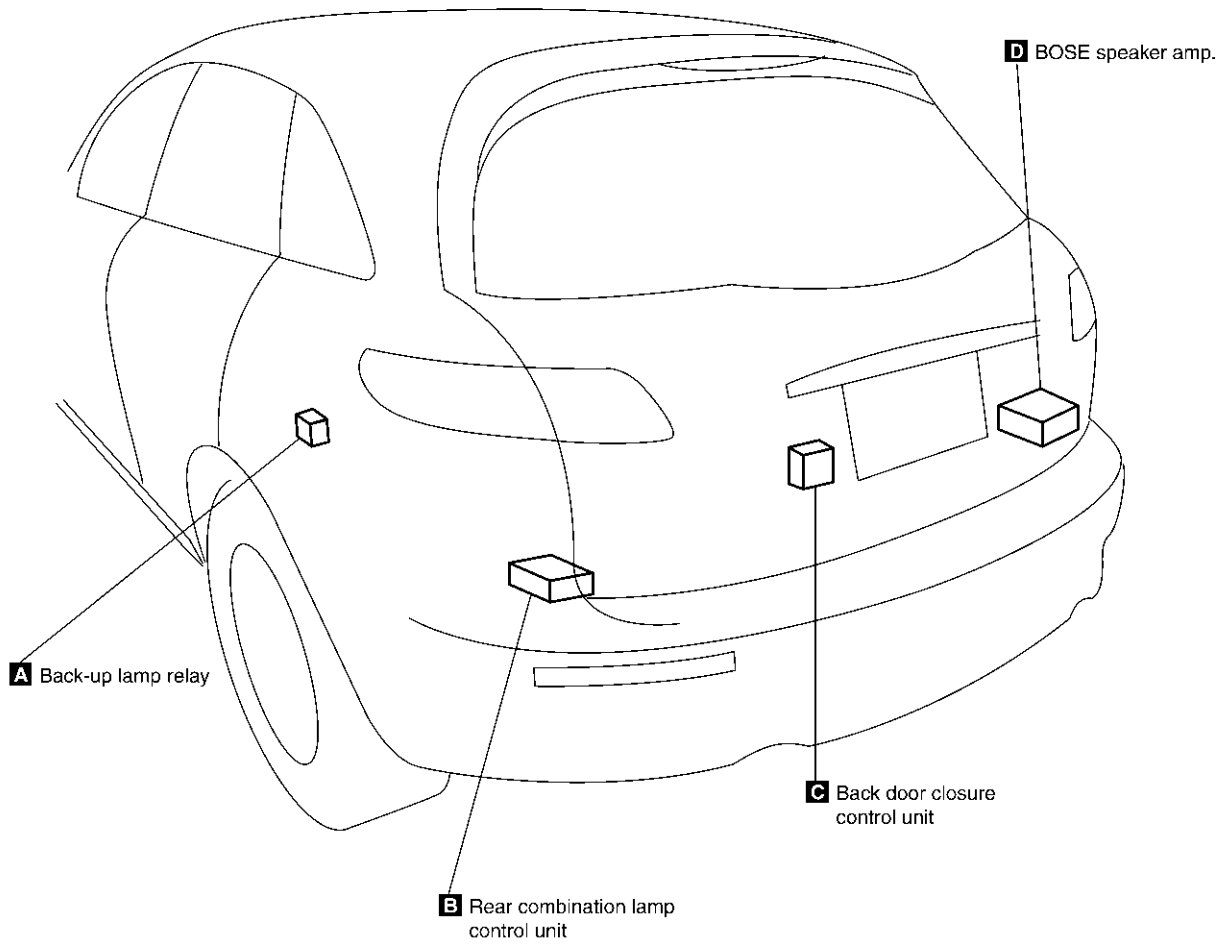
CKIM0214E

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ELECTRICAL UNITS LOCATION

LUGGAGE COMPARTMENT



CKIM0215E

HARNESS CONNECTOR

HARNESS CONNECTOR

PFP:00011

Description

HARNESS CONNECTOR (TAB-LOCKING TYPE)

AKS007W3

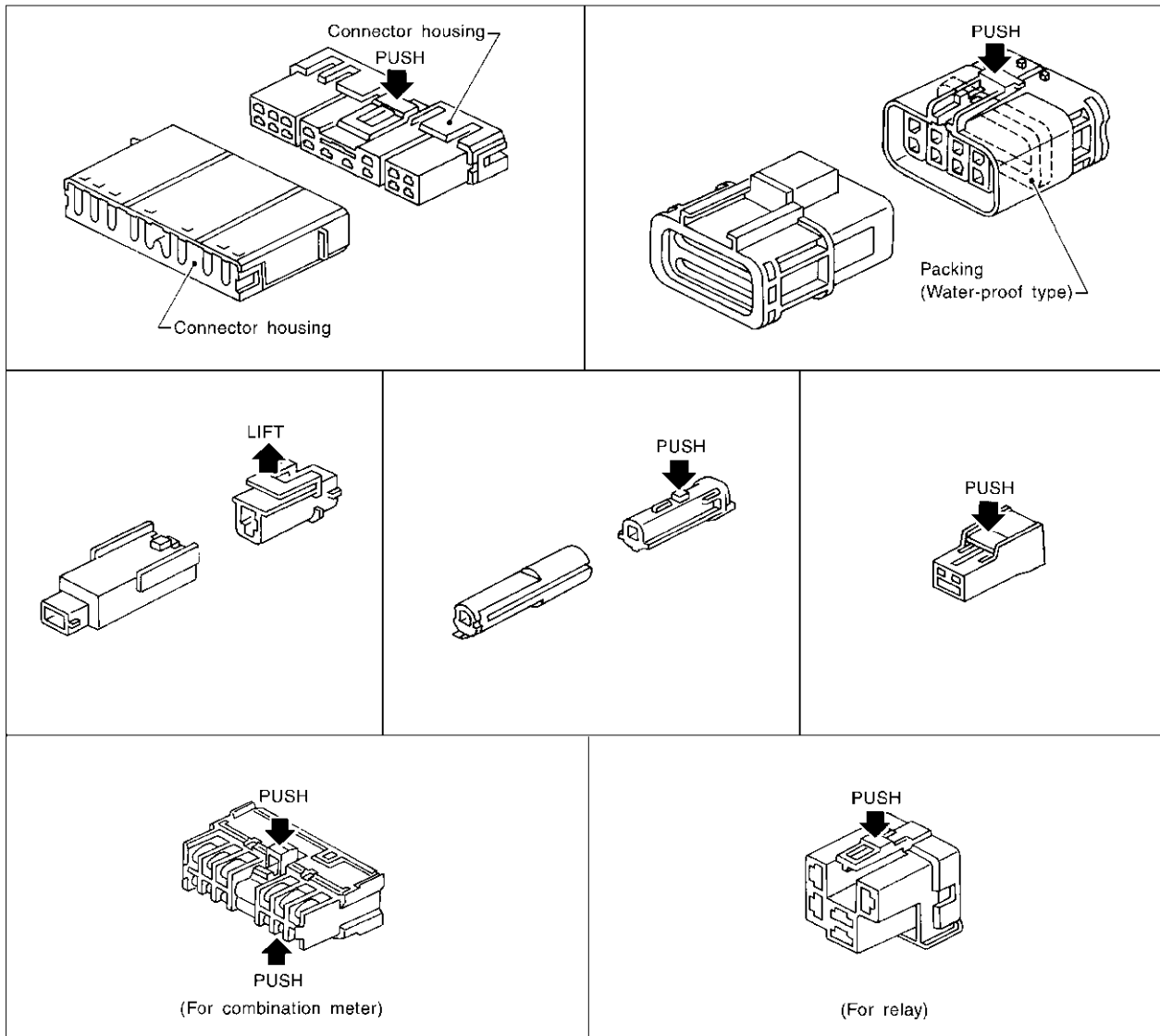
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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]



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SEL769DA

HARNESS CONNECTOR

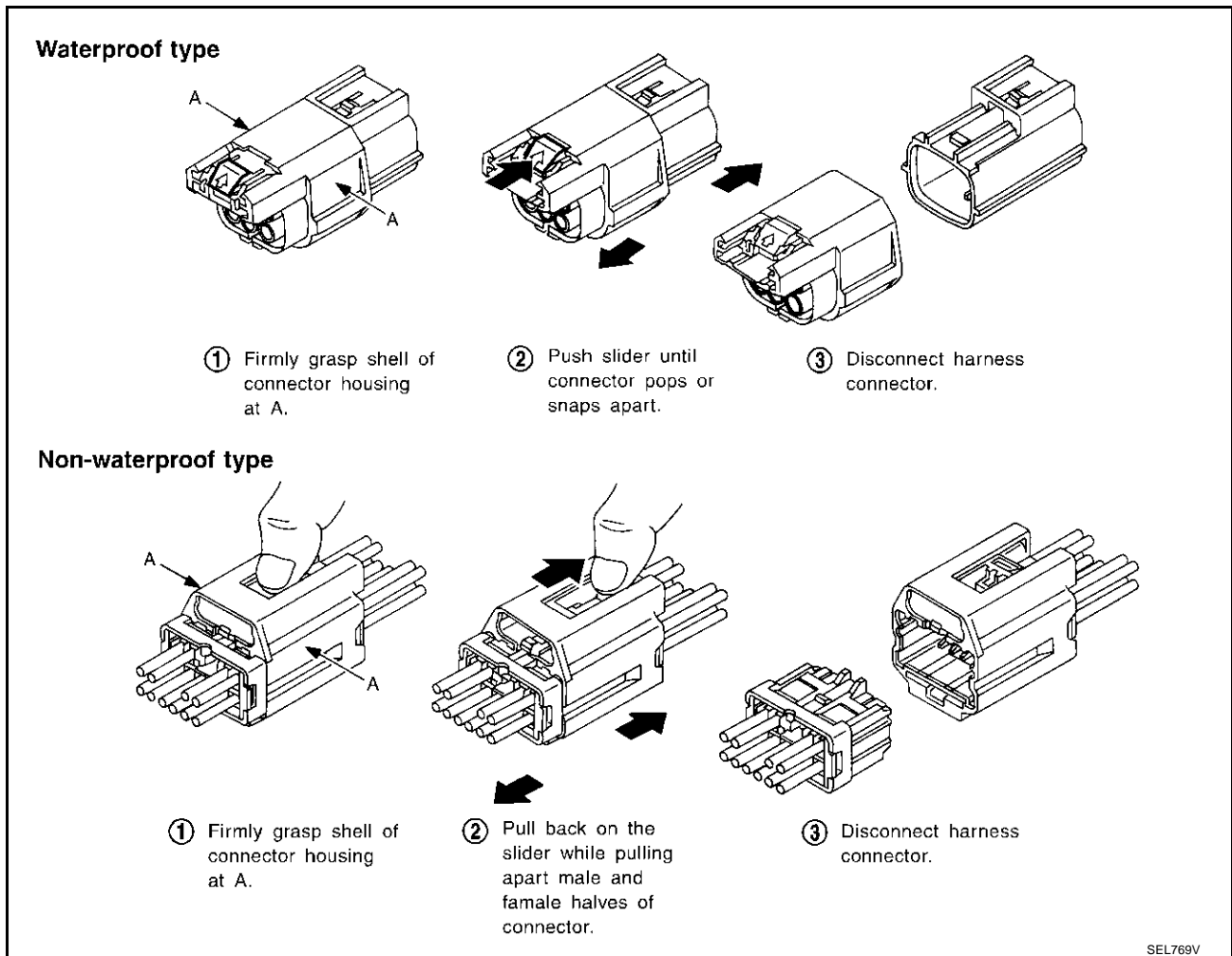
HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

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

CAUTION:

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

[Example]



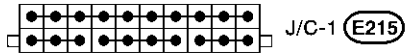
JOINT CONNECTOR (J/C)

PFP:B4341

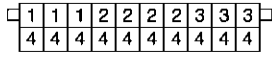
JOINT CONNECTOR (J/C)

Terminal Arrangement

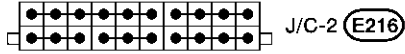
AKS007W4



J/C-1 (E215)



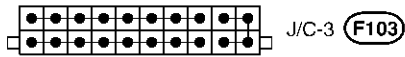
(Brown)



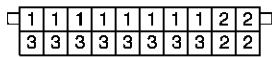
J/C-2 (E216)



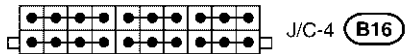
(Black)



J/C-3 (F103)



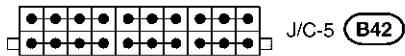
(Gray)



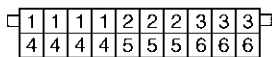
J/C-4 (B16)



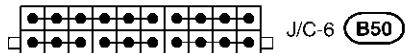
(Orange)



J/C-5 (B42)



(Orange)



J/C-6 (B50)



(Black)

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CKIM0216E

ELECTRICAL UNITS

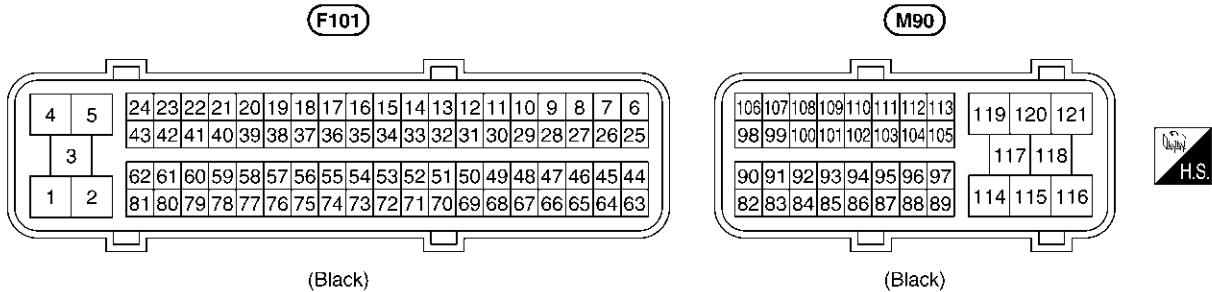
ELECTRICAL UNITS

PFP:00011

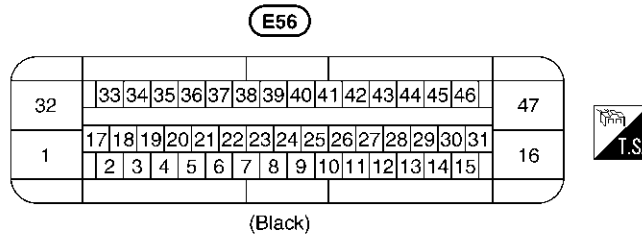
Terminal Arrangement

AKS007W5

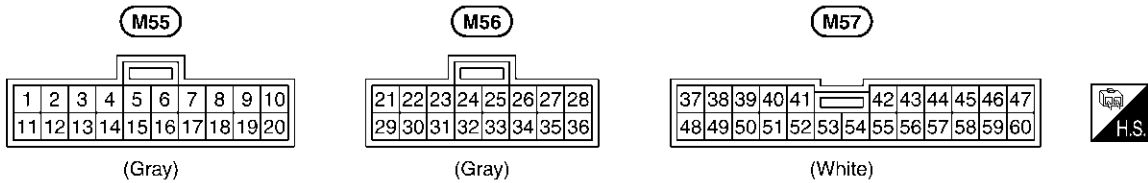
ECM



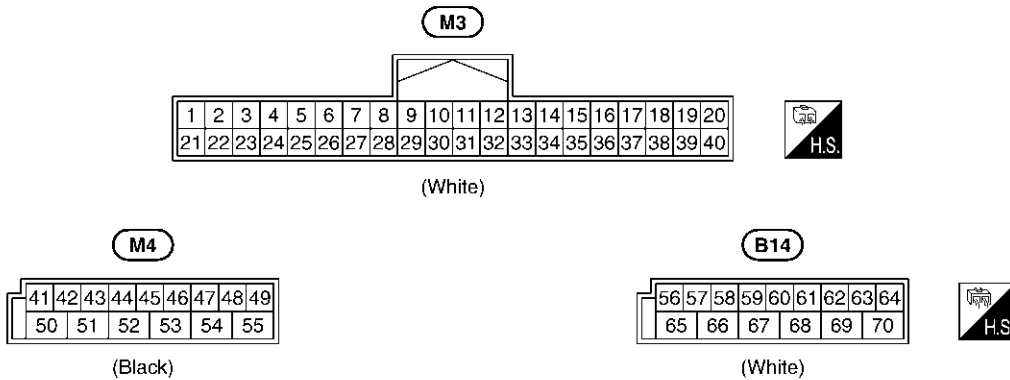
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)



UNIFIED METER AND A/C AMP.



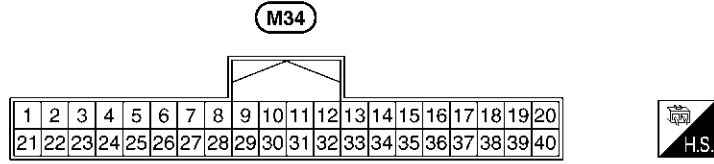
BCM (BODY CONTROL MODULE)



CKIM0217E

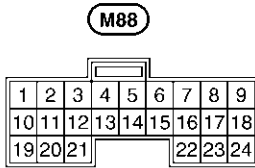
ELECTRICAL UNITS

INTELLIGENT KEY UNIT

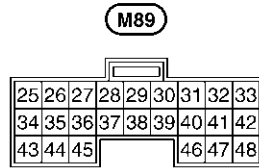


(White)

ICC UNIT



(White)



(Gray)



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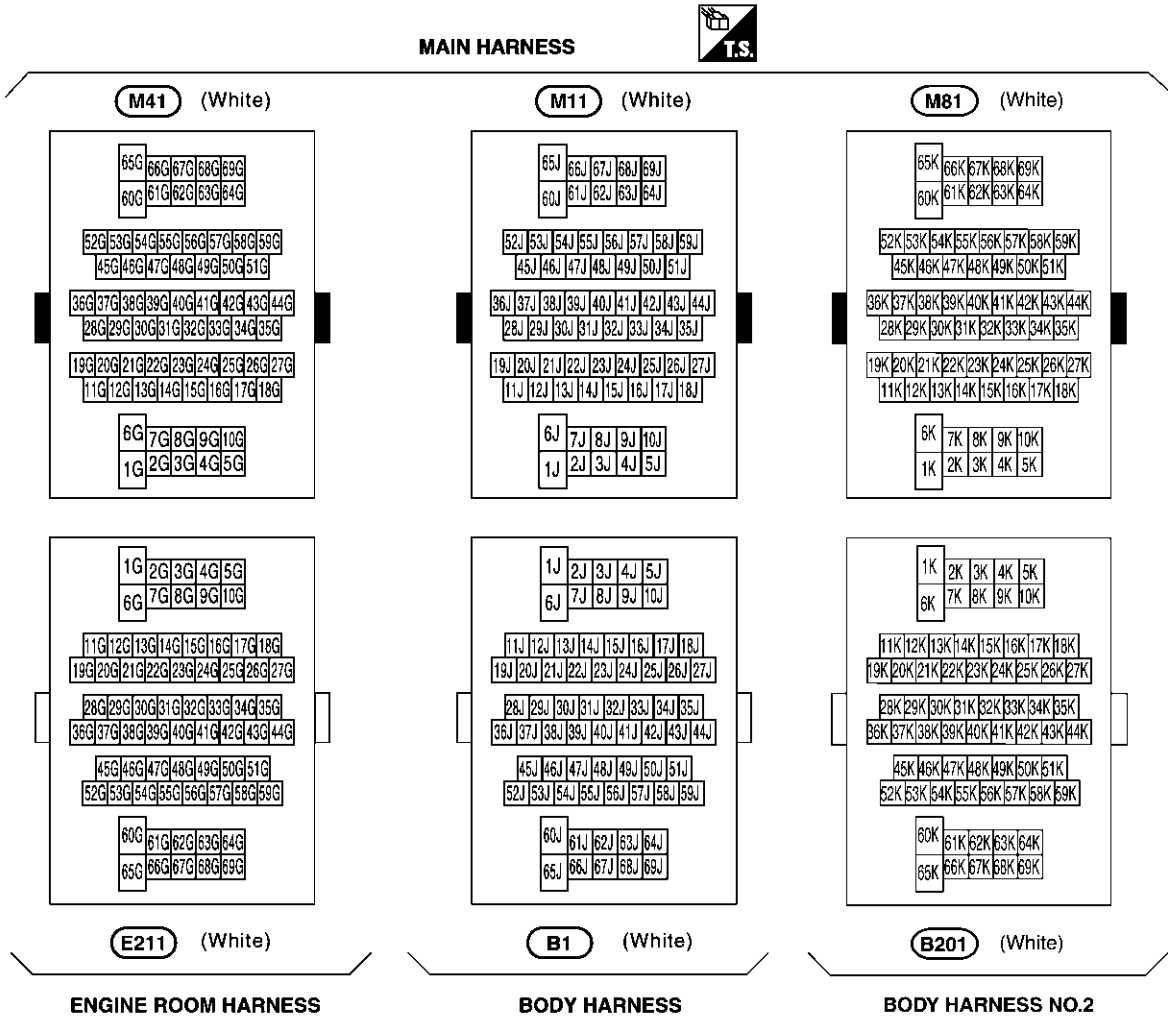
SMJ (SUPER MULTIPLE JUNCTION)

PFP:B4341

AKS007W6

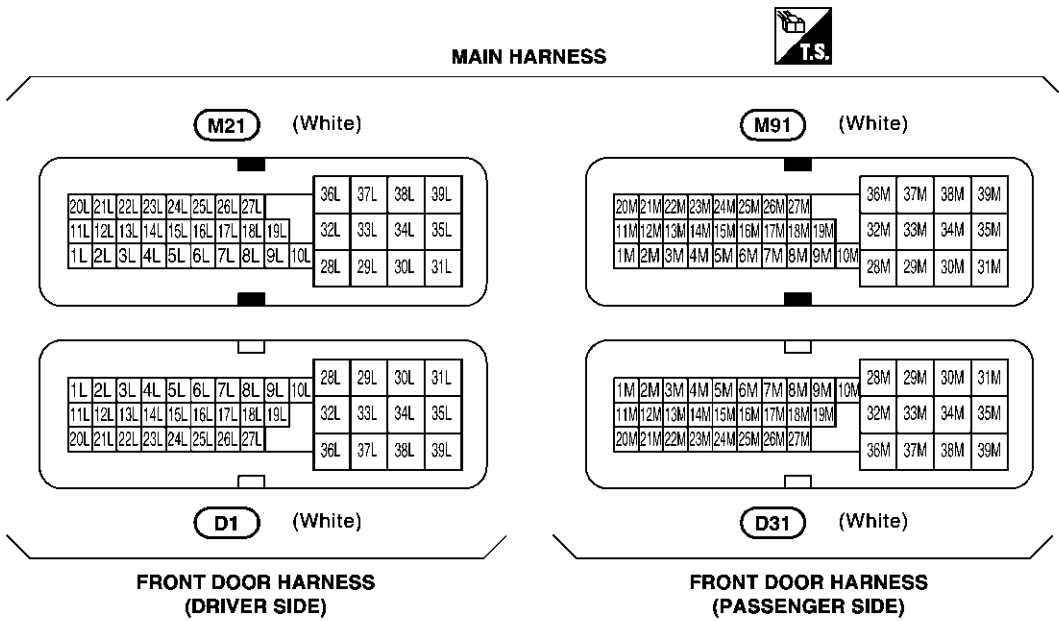
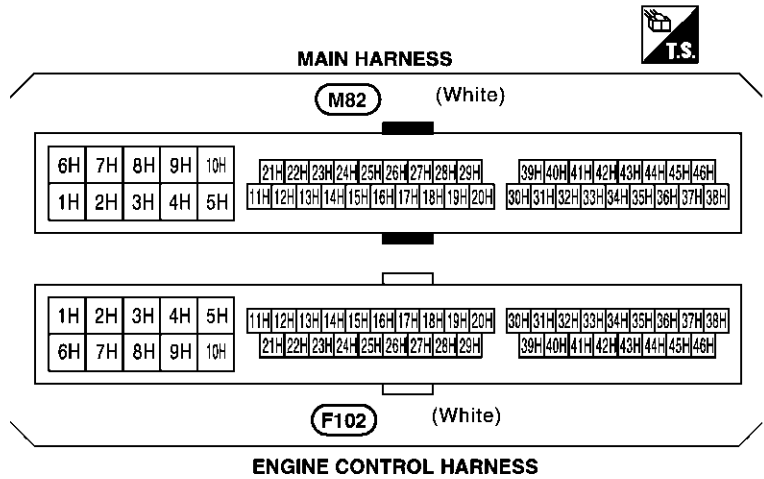
SMJ (SUPER MULTIPLE JUNCTION)

Terminal Arrangement



CKIM0219E

SMJ (SUPER MULTIPLE JUNCTION)



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STANDARDIZED RELAY

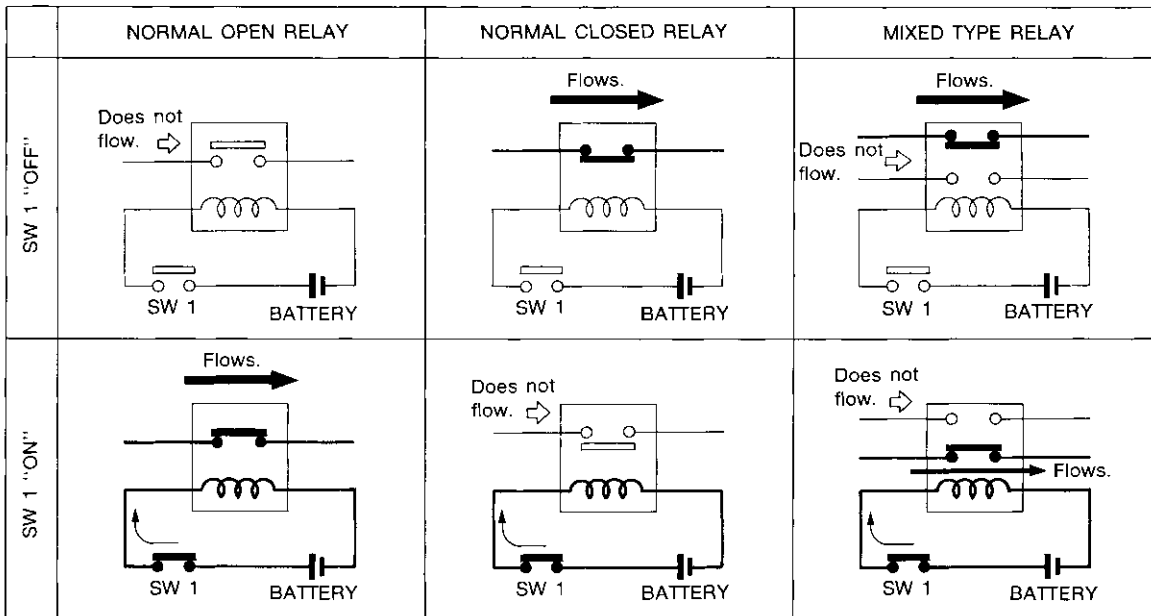
PFP:00011

AKS007W7

STANDARDIZED RELAY

Description NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

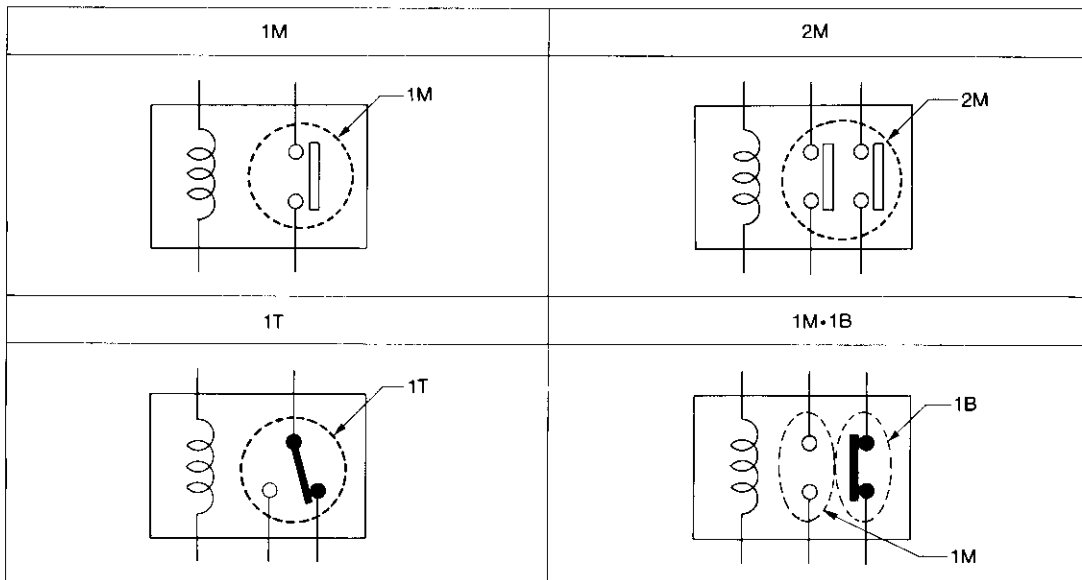
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.



SEL881H

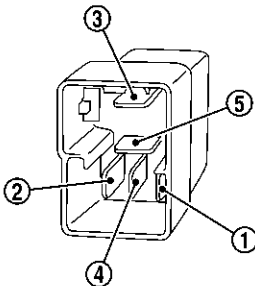
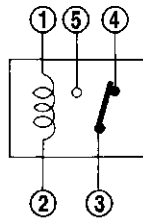
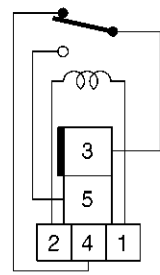
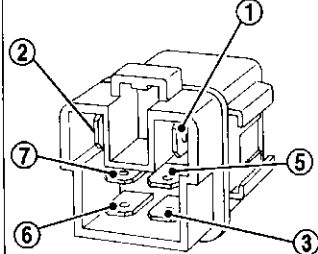
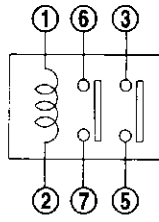
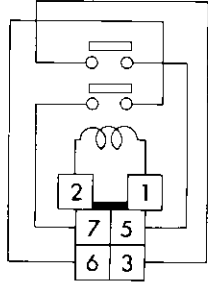
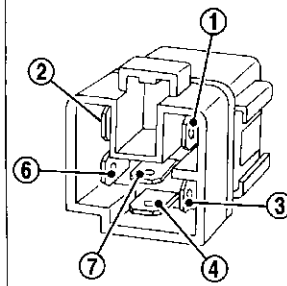
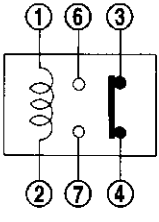
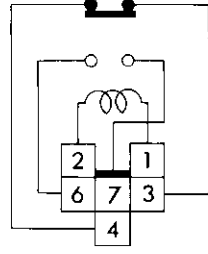
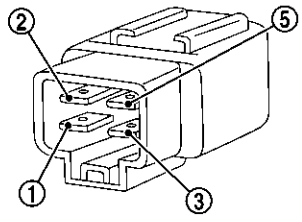
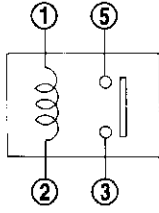
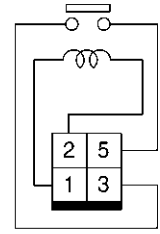
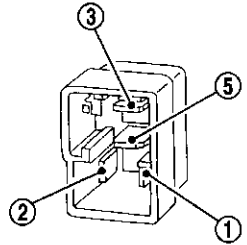
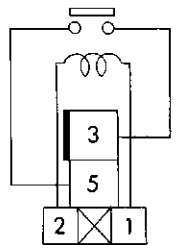
TYPE OF STANDARDIZED RELAYS

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



SEL882H

STANDARDIZED RELAY

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

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

CKIM0221E

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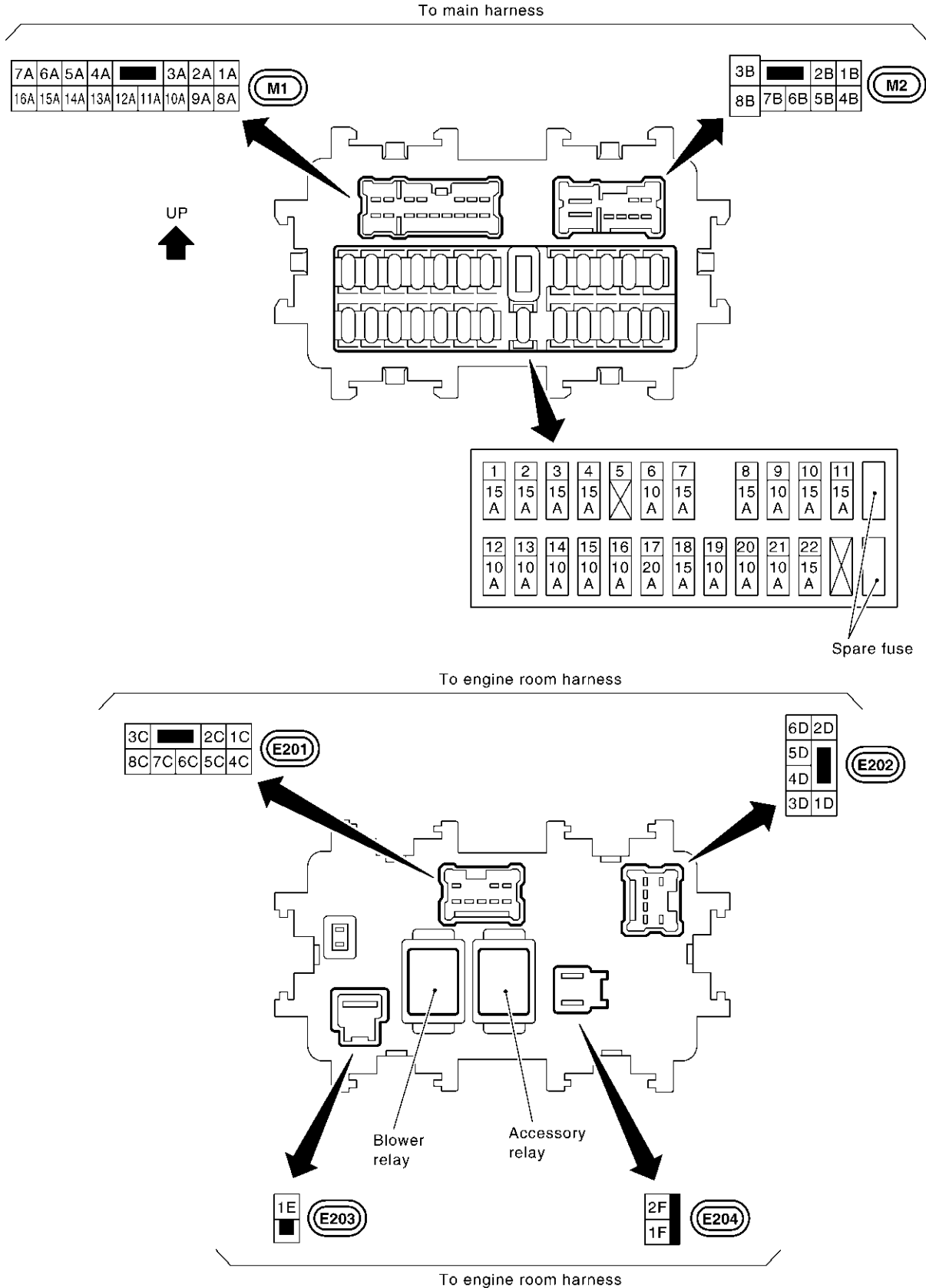
FUSE BLOCK - JUNCTION BOX (J/B)

FUSE BLOCK - JUNCTION BOX (J/B)

PFP:24350

Terminal Arrangement

AKS007WB



CKIM0222E

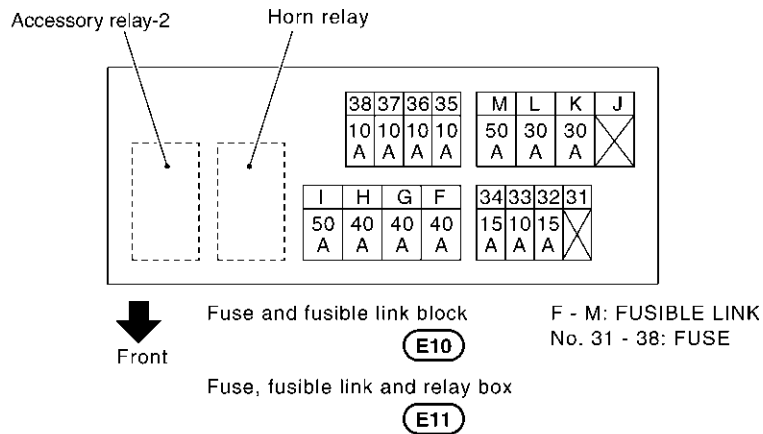
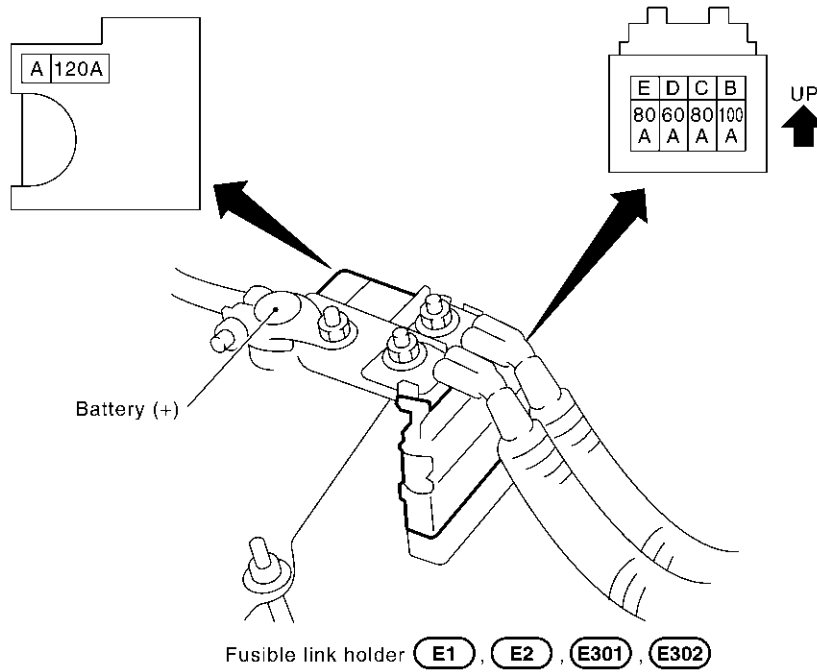
FUSE, FUSIBLE LINK AND RELAY BOX

FUSE, FUSIBLE LINK AND RELAY BOX

PPF:24382

Terminal Arrangement

AKS007W9



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FUSE, FUSIBLE LINK AND RELAY BOX
