



# راهنمای سیستم های الکتریکی MVM X33



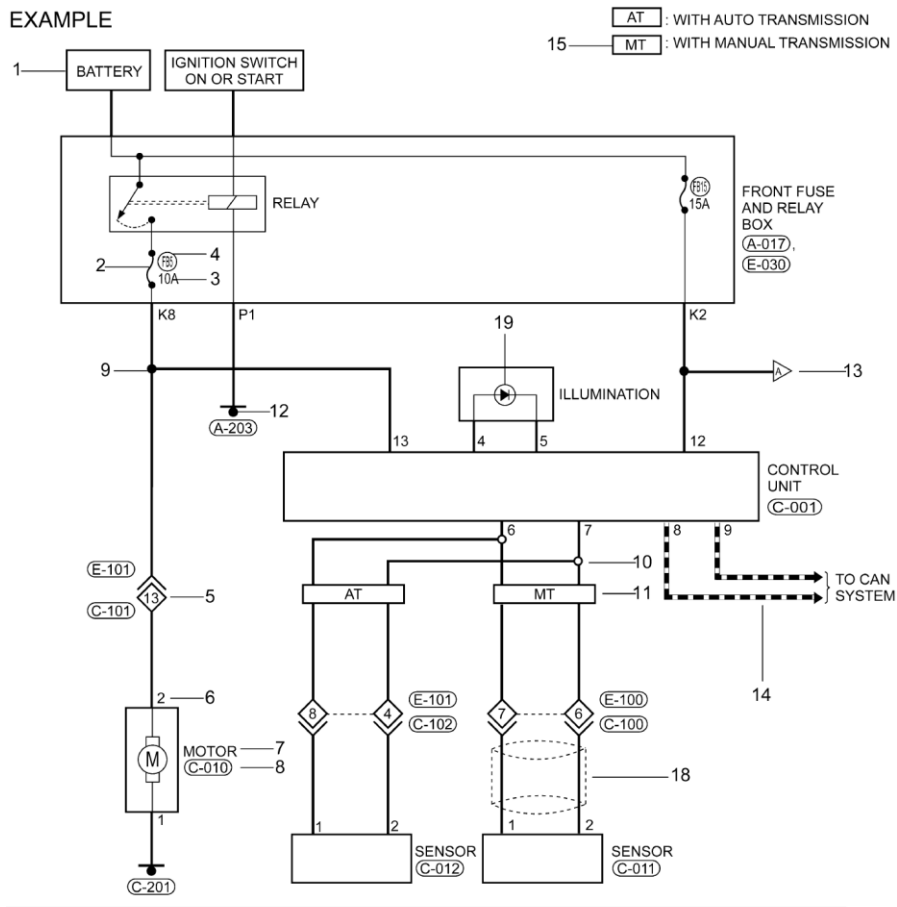
کد: ELC-23-02



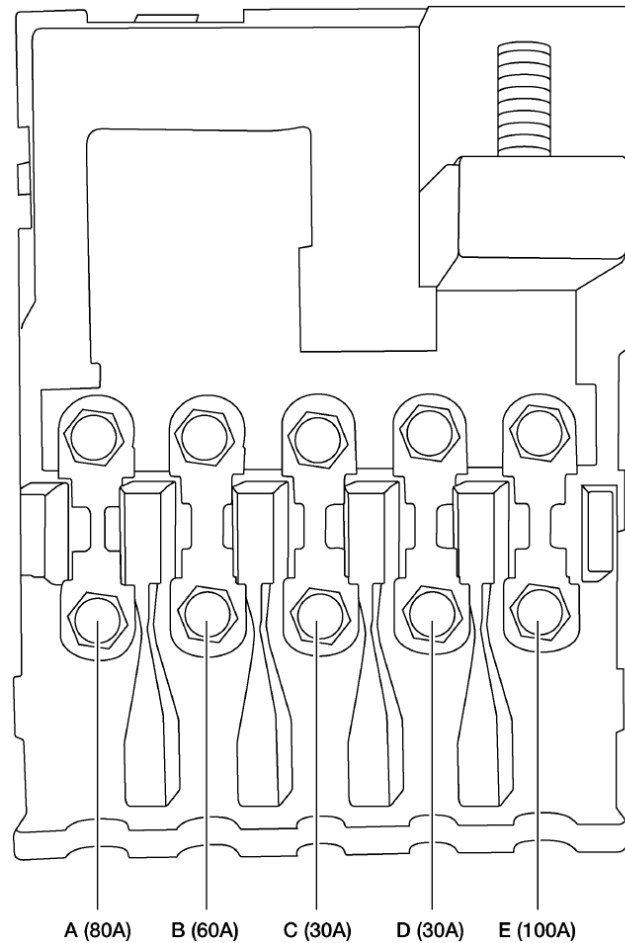
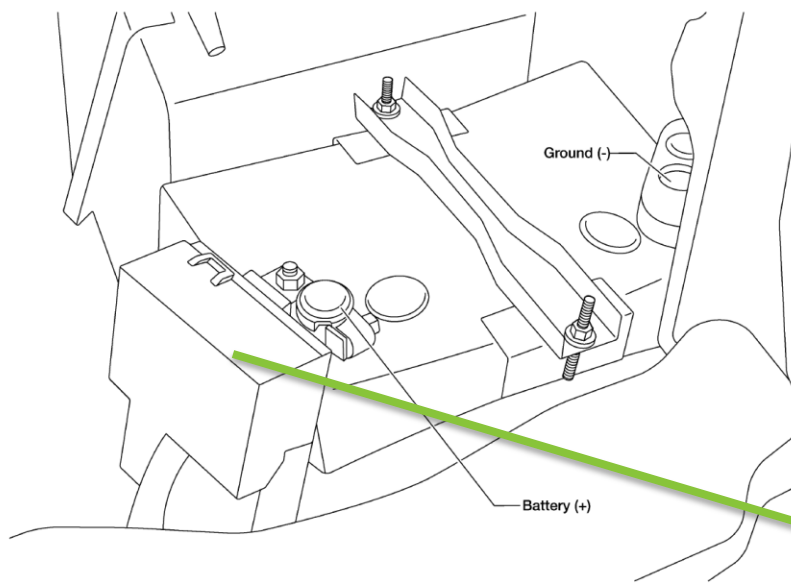
فنی و مهندسی خدمات پس از فروش



EXAMPLE



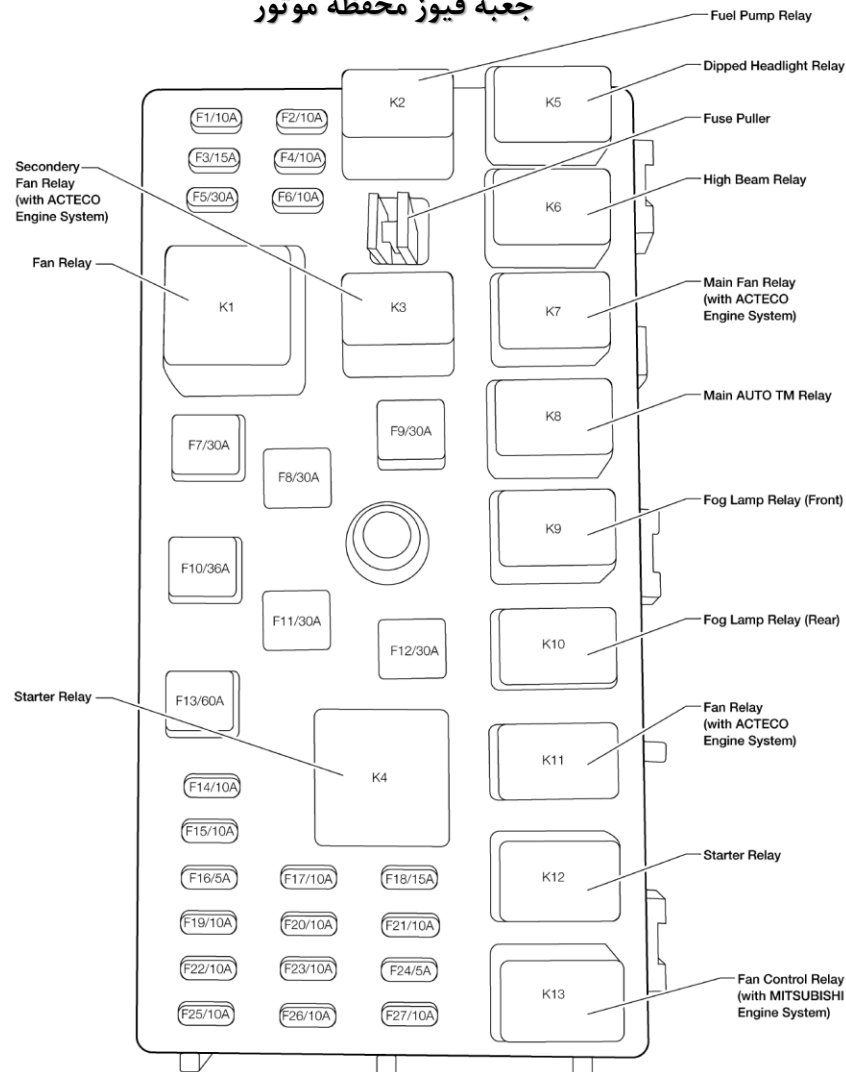
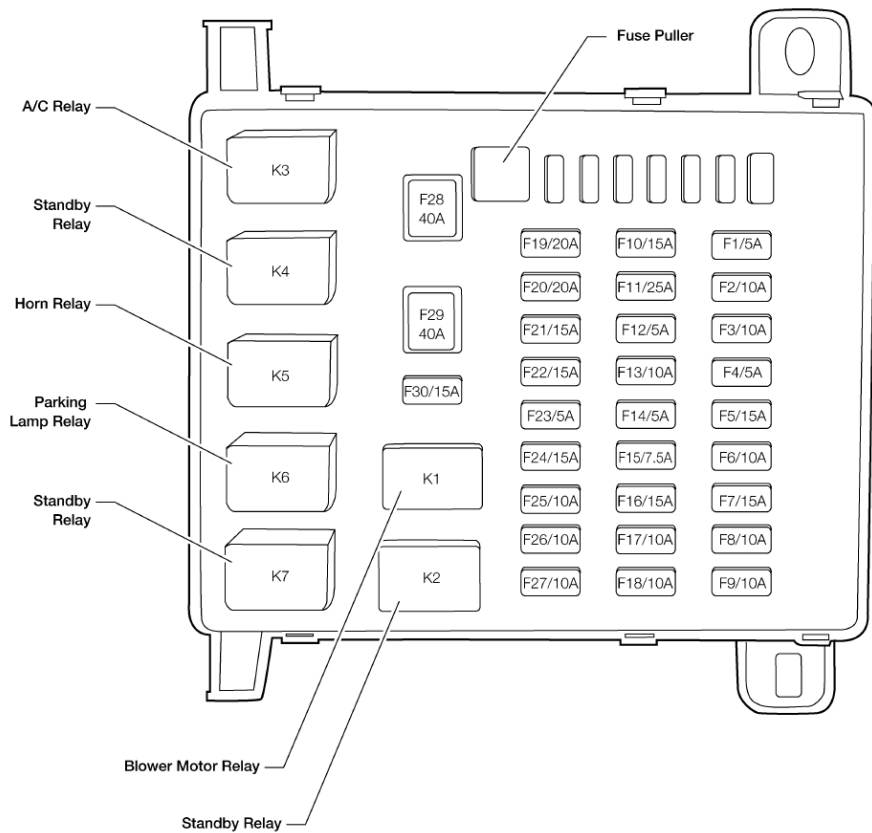
NUMBER	ITEM	DESCRIPTION
1	Power source	This represents the condition when the system receives battery positive voltage.
2	Fuse	The single line represents that this is a fuse.
3	Current rating	This represents the current rating of the fuse.
4	Fuse location	This represents the location of the fuse in the Power Fuse Box or Front Fuse and Relay Box.
5	Connectors	This represents connector E-101 is female and connector C-101 is male.
6	Terminal number	This represents the terminal number of a connector.
7	Component name	This represents the name of a component.
8	Connector number	This represents the connector number. The letter represents which harness the connector is located in.
9	Splice	The shaded circle represents that the splice is always on the vehicle.
10	Optional splice	The open circle represents that the splice is optional depending on vehicle application.
11	Option abbreviation	This represents that the circuit is optional depending on vehicle application.
12	Ground (GND)	This represents the ground connection. (See Ground Distribution in Section 16 Wiring). Ground connector number has no view face.
13	Page crossing	This arrow represents that the circuit continues to an adjacent page. The "A" corresponds with the "A" on the adjoining page of the electrical schematic.
14	Data link	This represents that the system branches to another system identified by cell data code.
15	Option description	This represents a description of the option abbreviation used on the page.
16	Connector views	This represents the connector information. This component side is described by the connector symbols.
17	Connector color	This shows a code for the color of the connector: B = Black W = White R = Red G = Green L = Blue Y = Yellow BR = Brown O = Orange GR = Gray
18	Shielded line	The line enclosed by broken line circle represents shielded wire.
19	Light-emitting diodes	As an illumination tool, in the circuit and instrument cluster.





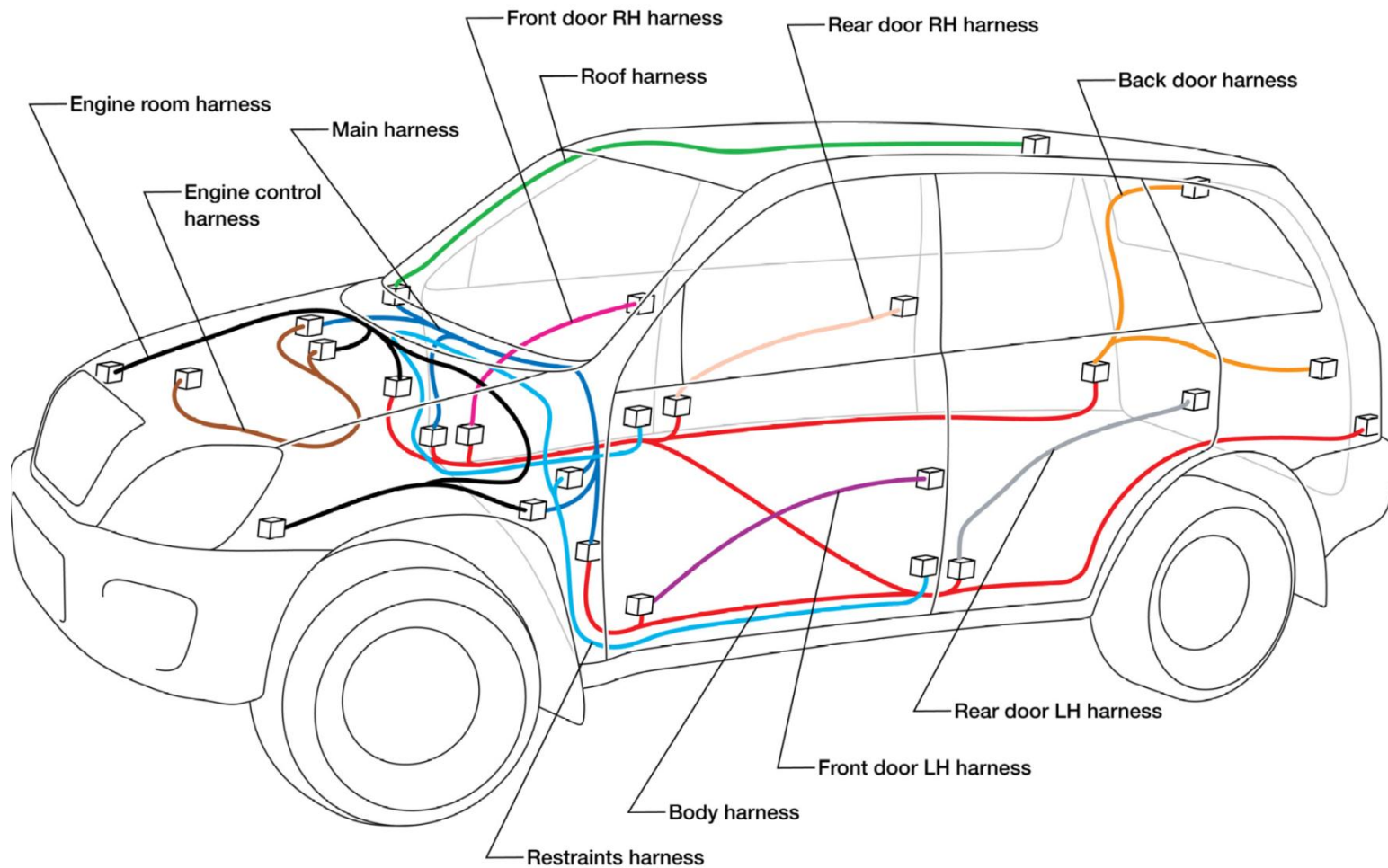
جعبه فیوز محفظه موتور

جعبه فیوز اتاق

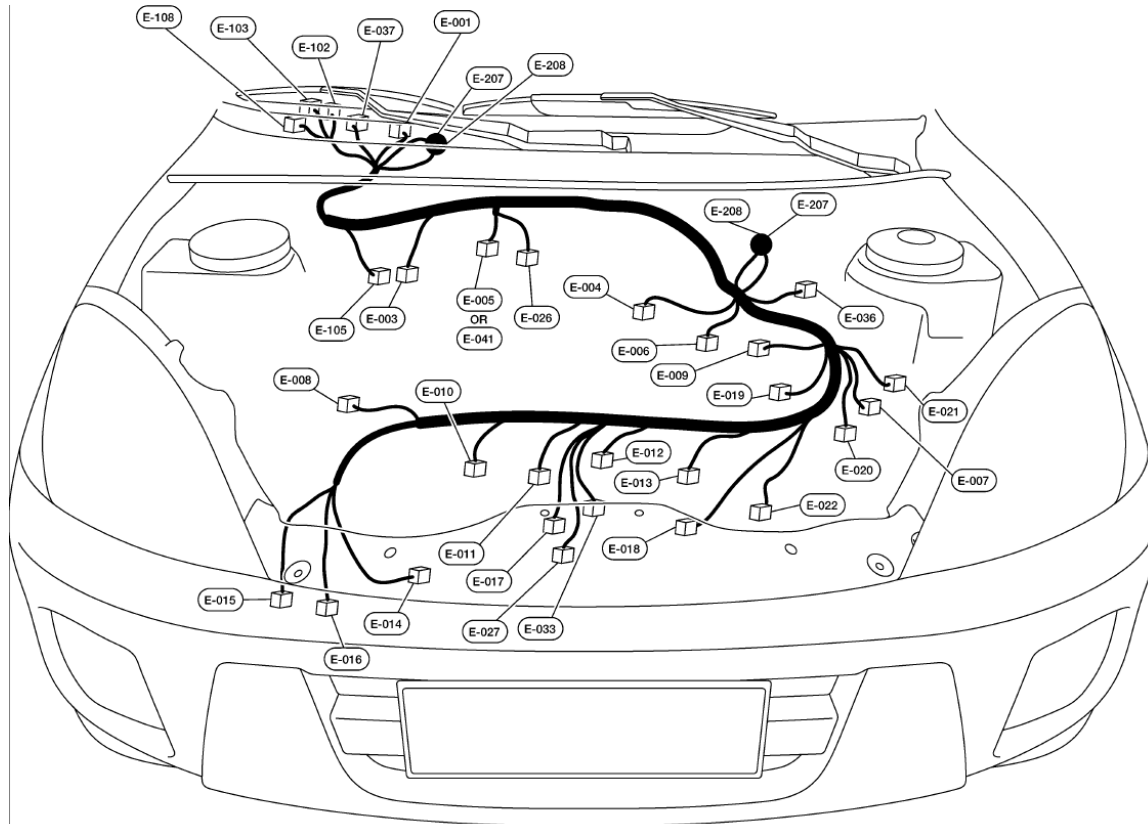




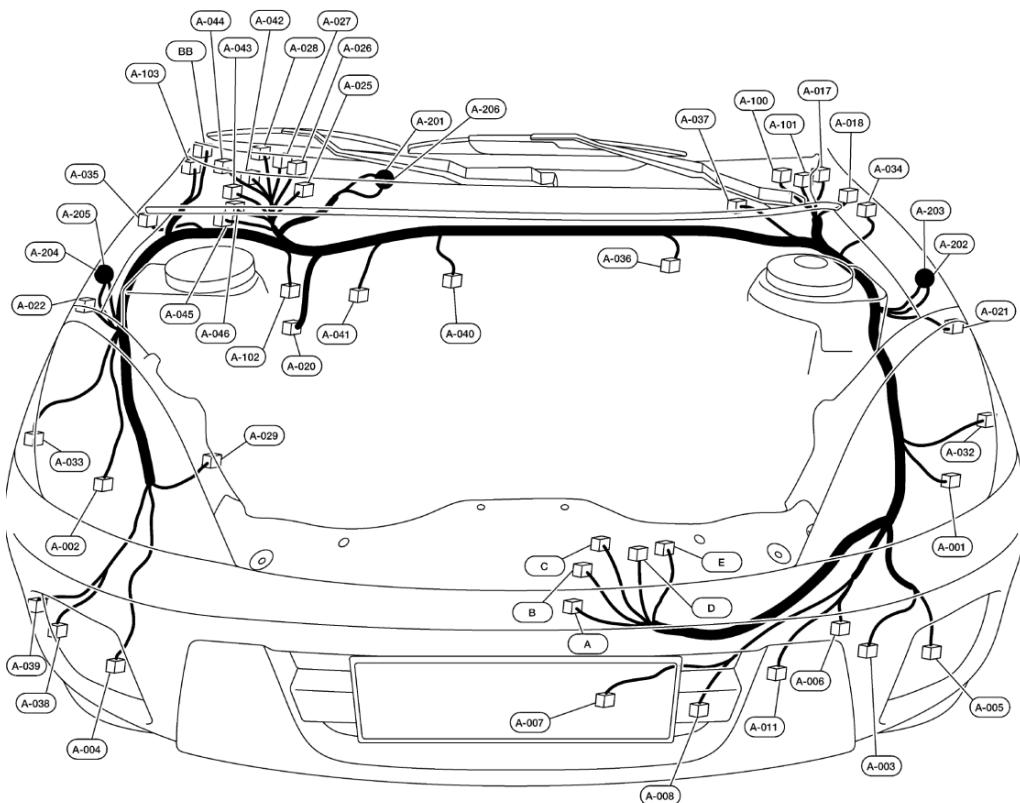
### ACTECO 2.0L ENGINE SYSTEM



### ACTECO 1.6L 1.8L ENGINE SYSTEM

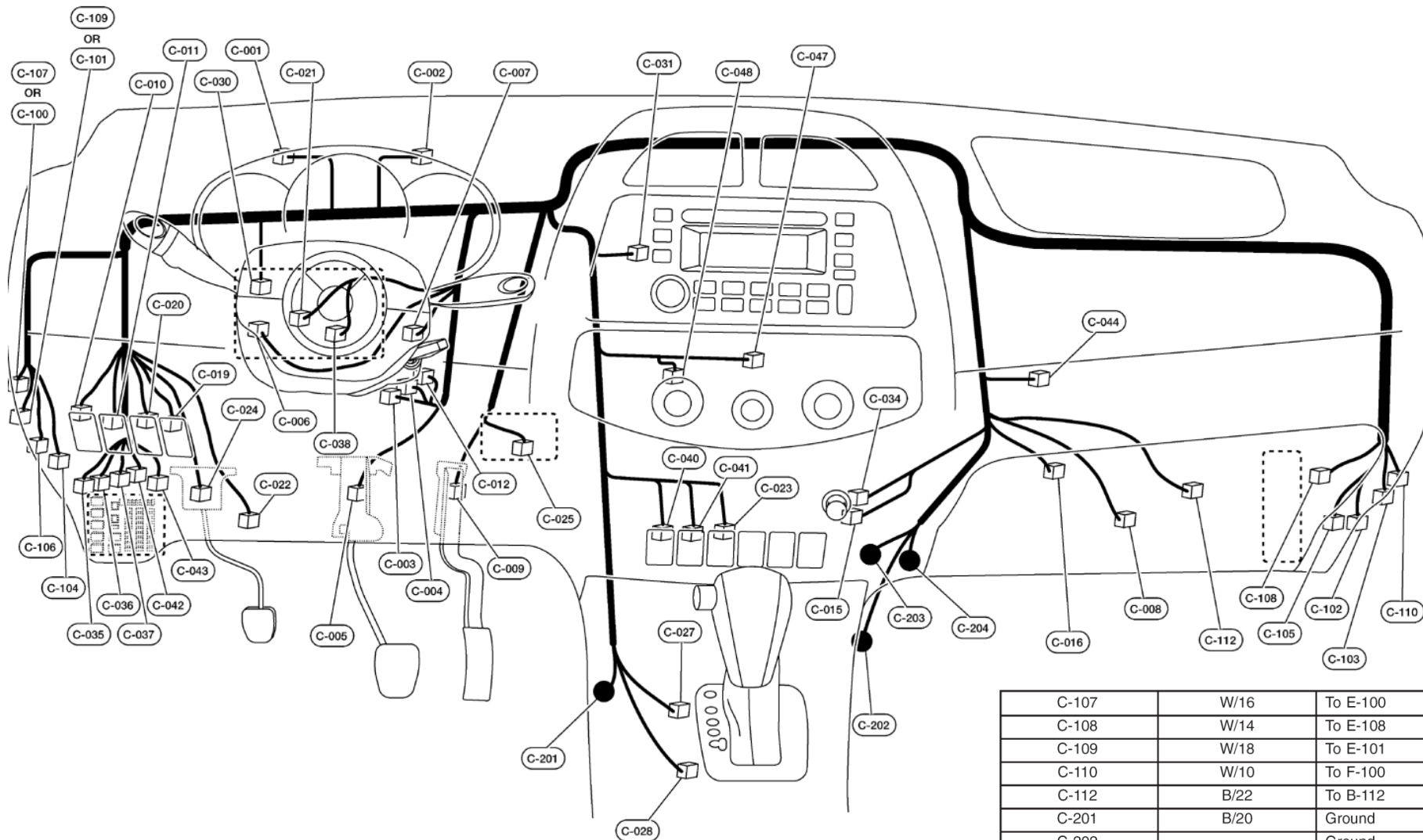


E-001	B/81	ECM
E-003	B/4	A/C Pressure Switch
E-004	W-O/4	Upstream Oxygen Sensor
E-005	W-O/4	Downstream Oxygen Sensor (With EOBD)
E-006	B/3	Crankshaft Position Sensor
E-007	B/3	Camshaft Position Sensor
E-008	B/3	Generator
E-009	B/5	Air Flow Sensor
E-010	B/2	Fuel Injector No.1
E-011	B/2	Fuel Injector No.2
E-012	B/2	Fuel Injector No.3
E-013	B/2	Fuel Injector No.4
E-014	B/1	Power Steering Switch
E-015	B/2	A/C Compressor
E-016	B/1	Oil Pressure Switch
E-017	B/3	Knock Sensor
E-018	B/1	Starter Motor
E-019	B/2	Engine Coolant Temperature Sensor
E-020	B/4	Ignition Coil
E-022	B/2	Canister Control Valve
E-026	B/2	Siren
E-027	B/6	Electronic Throttle Control Actuator
E-033	B/4	Manifold Absolute Pressure Sensor
E-036	GR/56	TCM (Transmission Control Module)
E-037	GR/33	A/T Assembly
E-041	B/4	Downstream Oxygen Sensor (Without EOBD)
E-043	B/2	Fluid Cooler Flow Control Solenoid Valve
E-102	W/14	To C-102
E-103	B/14	To C-103
E-105	B/16	To A-102
E-108	B/2	To C-108
E-207	-	Ground
E-208	-	Ground



A-102	B/16	To E-105
A-103	W/18	To B-106
A-201	-	Ground
A-202	-	Ground
A-203	-	Ground
A-204	-	Ground
A-205	-	Ground
A-206	-	Ground

A	/1	Power Fuse Box
B	/1	Power Fuse Box
C	/1	Power Fuse Box
D	/1	Power Fuse Box
E	/1	Power Fuse Box
A-001	B/10	Front Combination Lamp LH
A-002	B/10	Front Combination Lamp RH
A-003	B/2	Front Fog Lamp LH
A-004	B/2	Front Fog Lamp RH
A-005	GR/1	Horn 1
A-006	GR/2	Horn 2
A-007	B/2	Main Fan Motor
A-008	B/2	Secondary Fan Motor
A-011	GR/3	Cooling Fan Control Module
A-017	W/14	Body Fuse And Relay Box (H)
A-018	B/1	Body Fuse And Relay Box (C)
A-020	B/25	ABS Hydraulic Control Module
A-021	B/2	Front Wheel Speed Sensor LH
A-022	B/2	Front Wheel Speed Sensor RH
A-023	B/2	A/C Compressor
A-024	B/1	Power Steering Switch
A-025	W/16	Front Fuse And Relay Box (A)
A-026	W/8	Front Fuse And Relay Box (B)
A-027	W/14	Front Fuse And Relay Box (C)
A-028	B/1	Front Fuse And Relay Box (D)
A-029	B/3	Accelerator Sensor
A-032	B/2	Turn Signal Lamp LH
A-033	B/2	Turn Signal Lamp RH
A-034	B/2	Side Turn Signal Lamp LH
A-035	B/2	Side Turn Signal Lamp RH
A-036	GR/2	Brake Fluid Level Switch
A-037	GR/5	Front Wiper Motor
A-038	W/2	Front Washer Motor
A-039	B/2	Rear Washer Motor
A-040	B/2	Siren
A-041	B/1	A/C Pressure Switch
A-042	B/1	Front Fuse And Relay Box (E)
A-043	W/4	Front Fuse And Relay Box (F)
A-044	W/20	Front Fuse And Relay Box (G)
A-045	B/10	Front Fuse And Relay Box (H)
A-046	B/2	Front Fuse And Relay Box (I)
BB	B/1	BCM (Body Control Module) (Battery)
A-100	W/18	To C-100
A-101	W/18	To C-101

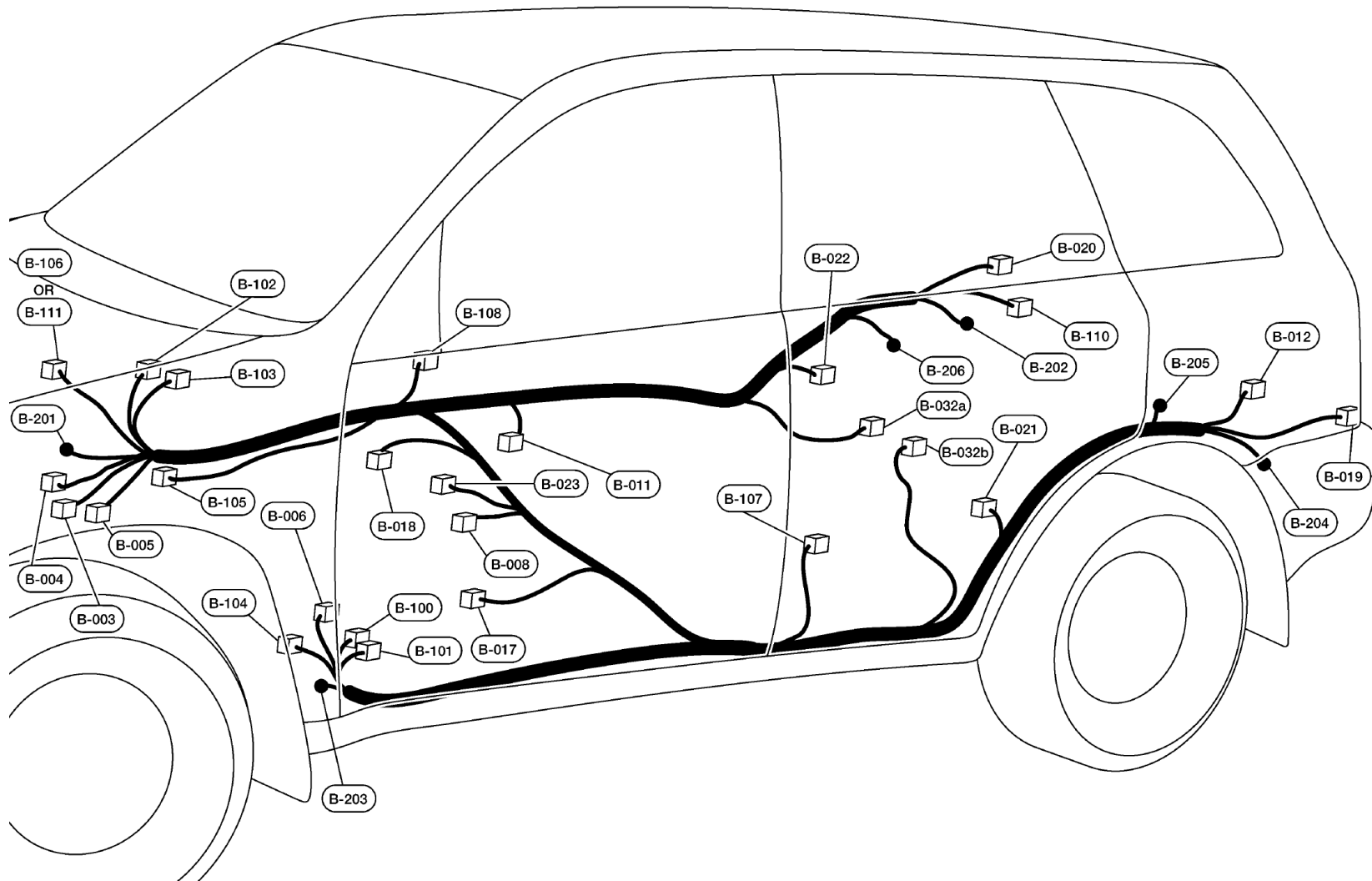


C-107	W/16	To E-100
C-108	W/14	To E-108
C-109	W/18	To E-101
C-110	W/10	To F-100
C-112	B/22	To B-112
C-201	B/20	Ground
C-202	-	Ground
C-203	-	Ground
C-204	-	Ground



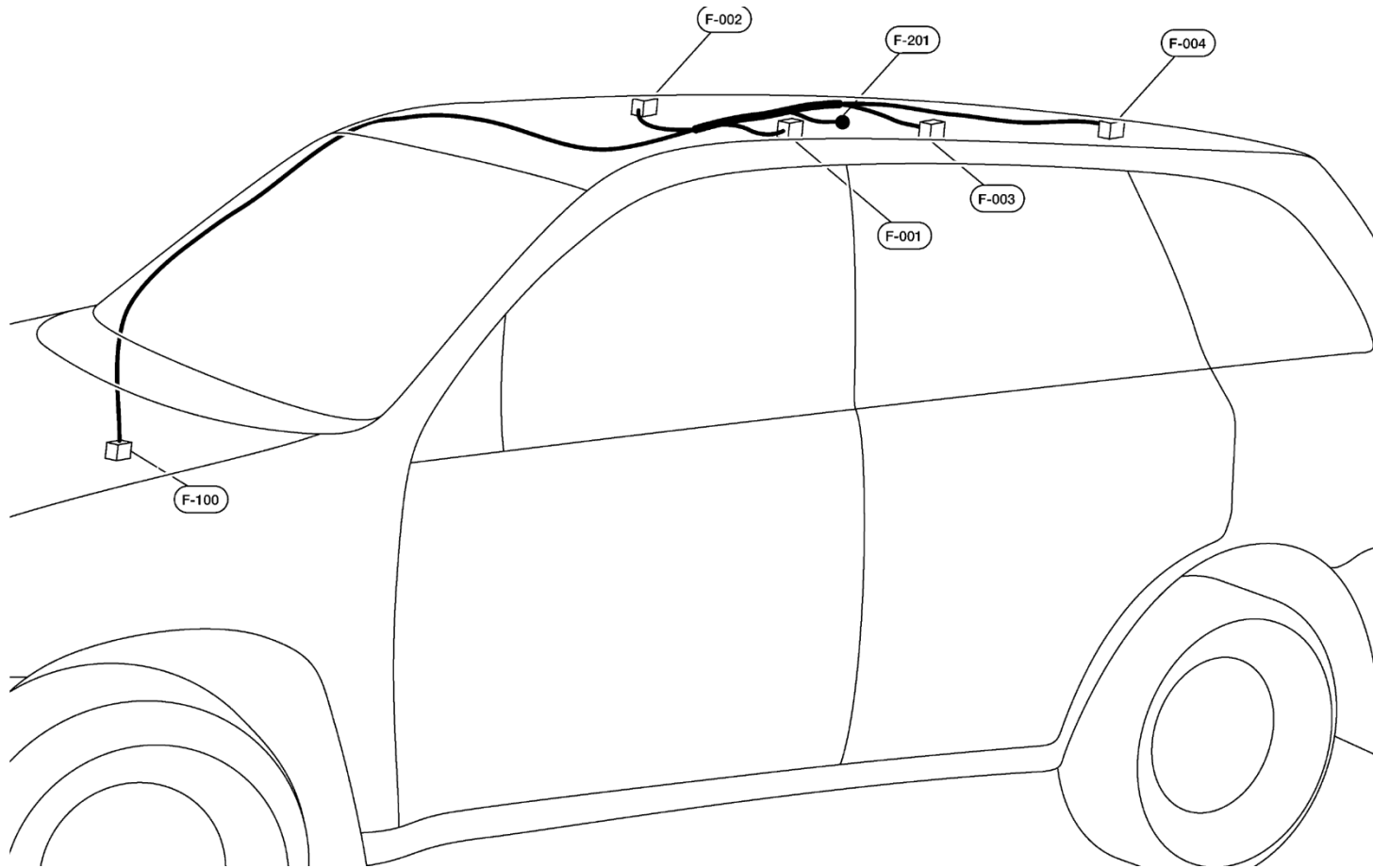


C-001	L/32	Instrument Cluster
C-002	G/32	Instrument Cluster
C-003	W/4	Key Switch
C-004	W/2	Key Hole Lamp
C-005	Y/4	Brake Switch
C-006	W/13	Multi-Function Switch
C-007	B/10	Wiper And Washer Switch
C-008	W/2	Blower Motor
C-009	B/6	Accelerator Pedal Position Sensor
C-010	W/6	Front Fog Lamp Switch
C-011	Y/6	Rear Fog Lamp Switch
C-012	W/6	Ignition Switch
C-015	W/3	Console Power Outlet (For Cigarette Lighter)
C-016	W/4	Speed Resistor
C-019	B/6	Dimmer Control Switch
C-020	GR/6	Headlamp Aiming Switch
C-021	W/4	Cruise/Audio Combination Switch
C-022	G/16	Data Link Connector
C-023	GR/2	Security Lamp
C-024	B/2	Clutch Pedal Switch
C-025	B/8	Immobilizer Control Module
C-027	BR/6	Shifter Selector
C-028	L/10	Winter Mode/Shifter Selector Register
C-030	L/32	CAN Converter
C-031	B/16	Audio
C-034	W/2	Console Power Outlet (Illumination)
C-035	W/8	Body Fuse And Relay Box (A)
C-036	W/20	Body Fuse And Relay Box (B)
C-037	B/2	Body Fuse And Relay Box (D)
C-038	W/1	Horn Switch
C-040	L/6	Heated Seat Switch LH
C-041	G/6	Heated Seat Switch RH
C-042	W/4	Body Fuse And Relay Box (E)
C-043	W/16	Body Fuse And Relay Box (F)
C-044	B/5	Recirculation Door Actuator
C-047	B/16	HVAC Control Panel
C-048	W/8	Blower Switch
C-100	W/16	To A-100
C-101	W/18	To A-101
C-102	W/14	To E-102
C-103	W/14	To E-103
C-104	W/22	To B-104
C-105	W/22	To B-105
C-106	W/6	To J-100





B-003	GR/15	BCM (Body Control Module)
B-004	B/12	BCM (Body Control Module)
B-005	B/8	BCM (Body Control Module)
B-006	B/10	Body Fuse And Relay Box (G)
B-008	W/1	Parking Brake Switch
B-011	B/4	Downstream Oxygen Sensor (With MITSUBISHI 2.4L Engine System)
B-012	W/2	Rear Power Outlet LH
B-017	L/6	Driver Seat Assembly
B-018	L/6	Heated Seat RH
B-019	W/6	Rear Combination Lamp LH
B-020	W/6	Rear Combination Lamp RH
B-021	W/2	Rear Wheel Speed Sensor LH
B-022	W/2	Rear Wheel Speed Sensor RH
B-023	B/3	Decelerator Sensor
B-032a	B/4	Fuel Level Sensor And Fuel Pump (With ACTECO Engine System)
B-032b	B/4	Fuel Level Sensor And Fuel Pump (With MITSUBISHI 2.4L Engine System)
B-100	W/18	To D-100
B-101	W/14	To D-101
B-102	W/14	To G-100
B-103	W/10	To G-101
B-104	W/22	To C-104
B-105	W/22	To C-105
B-106	W/18	To A-103
B-107	W/14	To I-100
B-108	W/14	To H-100
B-110	W/14	To L-100
B-111	W/18	To E-104
B-201	-	Ground
B-202	-	Ground
B-203	-	Ground
B-204	-	Ground
B-205	-	Ground (With MITSUBISHI 2.4L Engine System)
B-206	-	Ground (With ACTECO Engine System)



F-001	W/6	Sunroof Control Unit
F-002	W/6	Front Courtesy/Dome Lamp Assembly
F-003	W/2	Mid Courtesy/Dome Lamp Assembly
F-004	W/2	Rear Room Assembly
F-100	W/10	To C-110
F-201	-	Ground

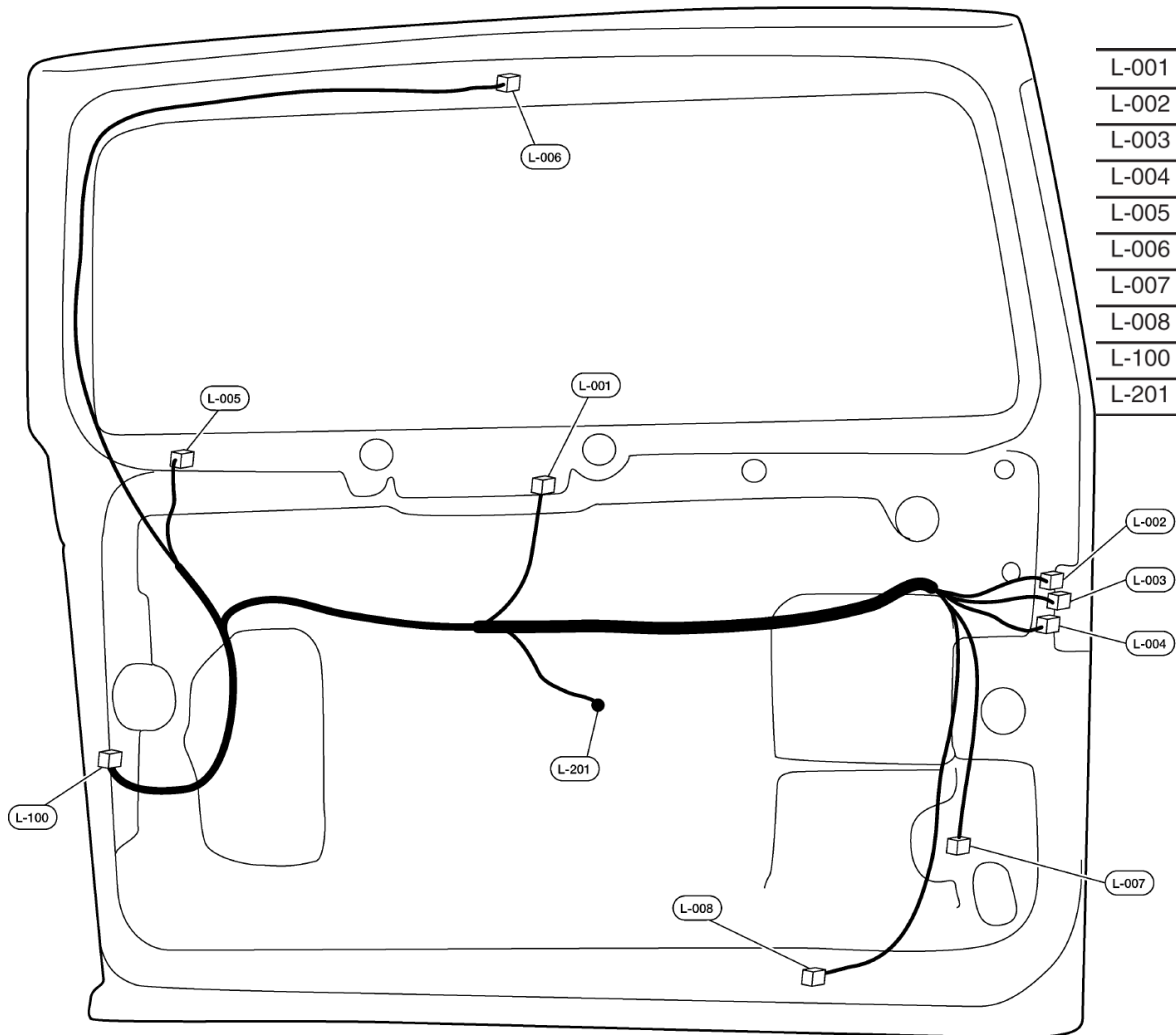


دسته سیم درب پشتی

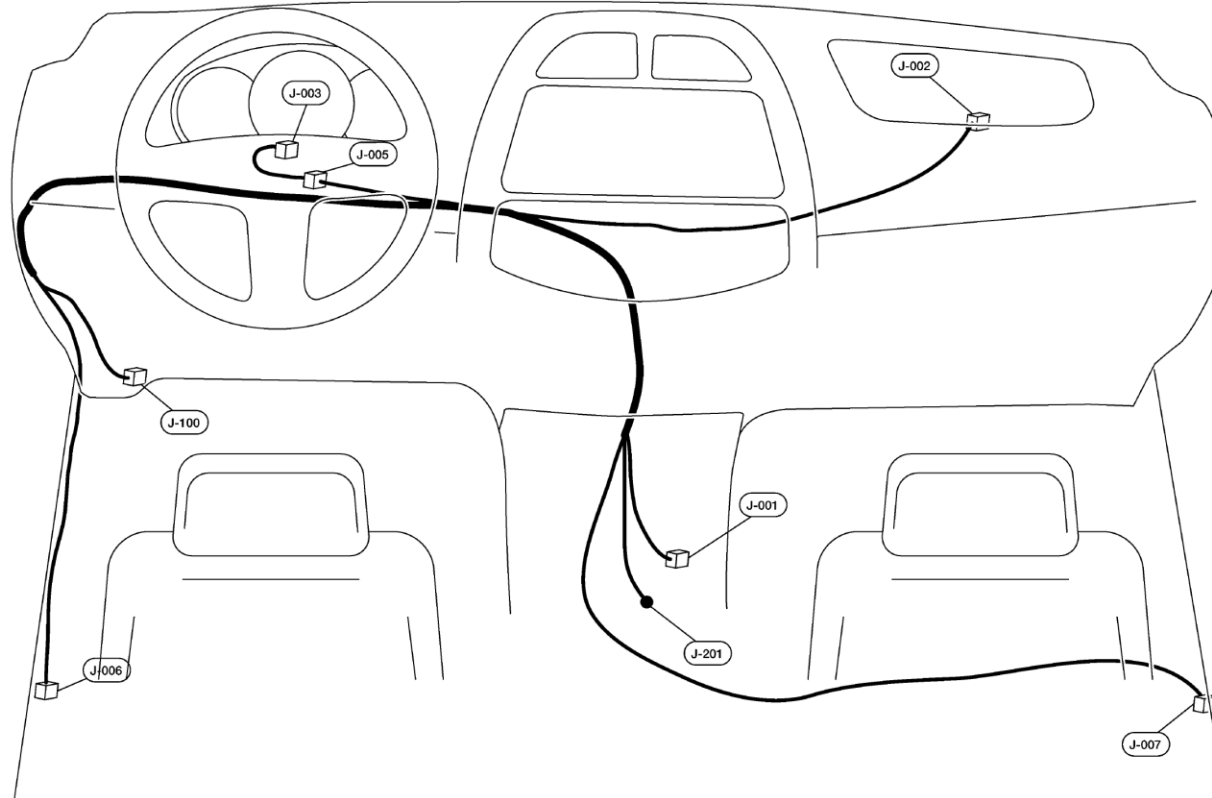
اداره فنی و مهندسی



مدیران خودرو



L-001	W/2	Rear Wiper Motor
L-002	B/2	Back Door Lock Assembly
L-003	GR/4	Back Door Lock Assembly
L-004	GR/4	Back Door Lock Assembly
L-005	B1	Rear Window Defogger
L-006	W/2	High Mounted Stop Lamp
L-007	B/2	Rear Fog Lamp
L-008	W/2	License Plate Lamp
L-100	W/14	To B-110
L-201	-	Ground



J-001	W/25	Restraints Control Module
J-002	G/2	Front Passenger Airbag
J-003	G/2	Driver Airbag
J-005	B/2	Spiral Cable
J-006	W/2	Driver Seatbelt Pre-Tensioner
J-007	G/2	Passenger Seatbelt Pre-Tensioner
J-100	W/6	To C-106
J-201	-	Ground



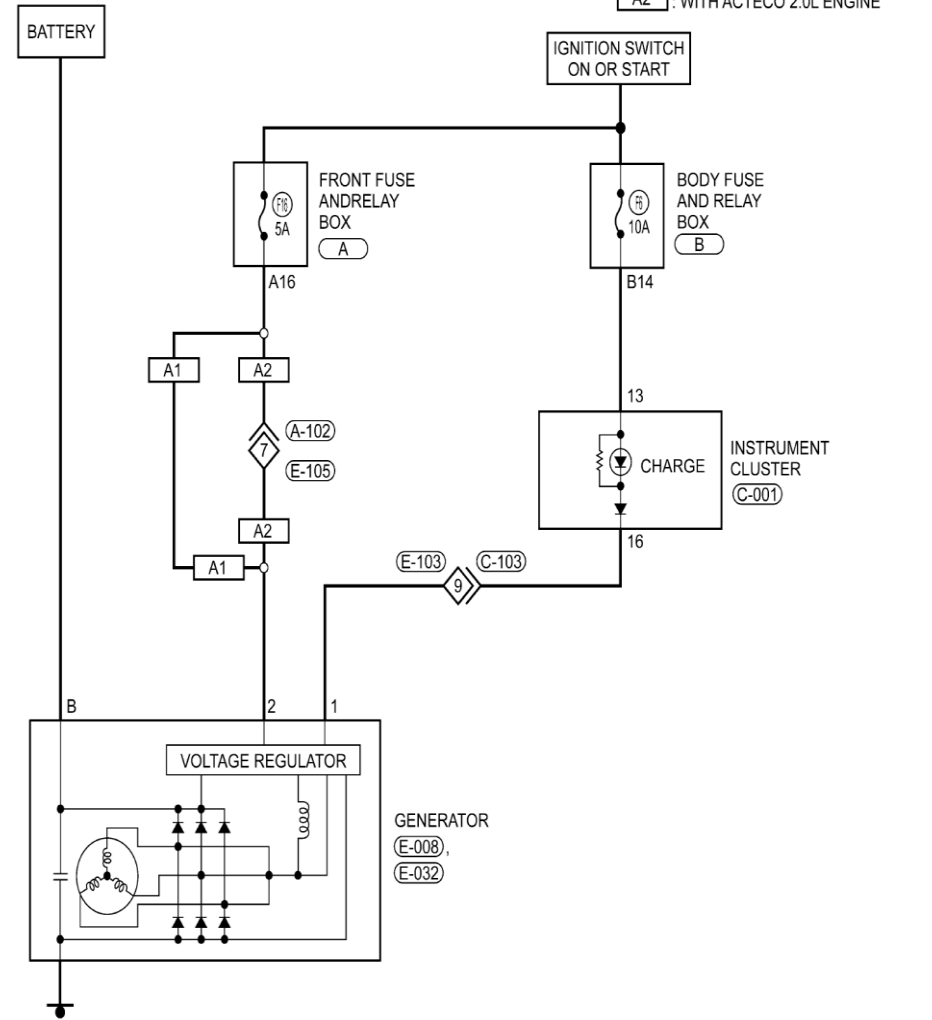
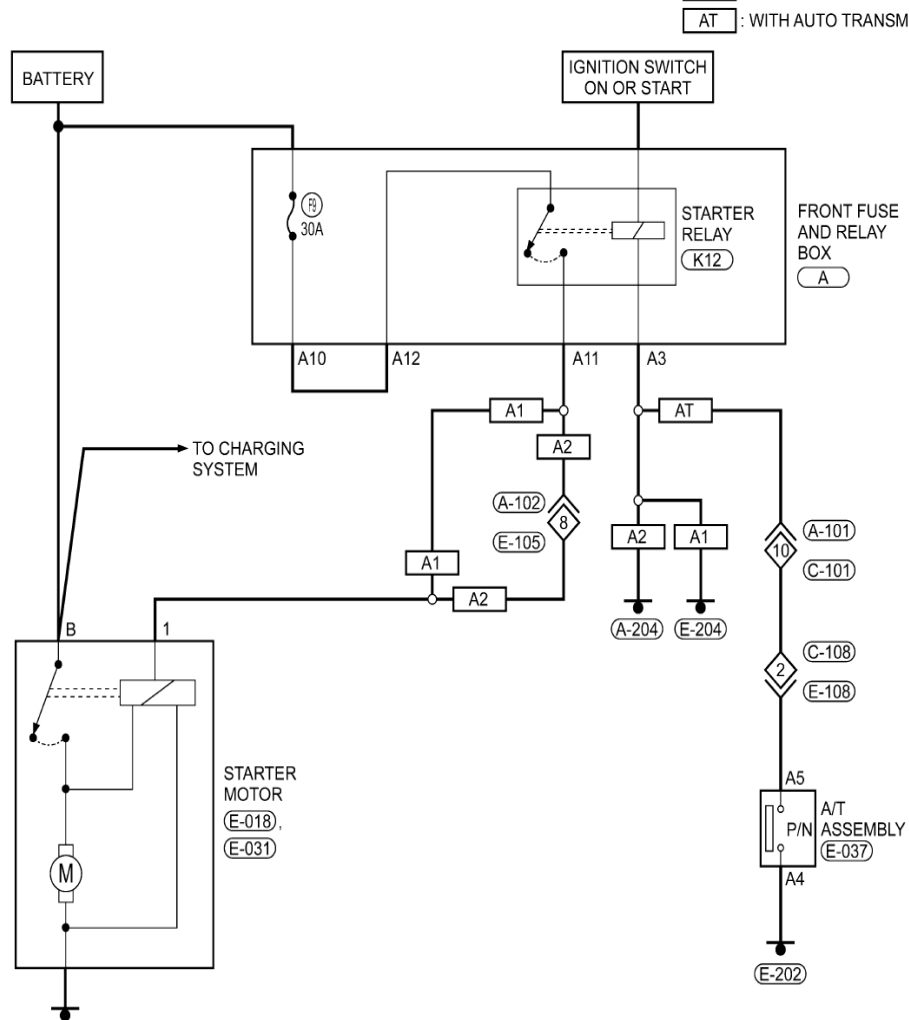
### مدار سیستم استارت شارژ دینام

اداره فنی و مهندسی



- A1 : WITH ACTECO 1.6 - 1.8L ENGINE
- A2 : WITH ACTECO 2.0L ENGINE
- AT : WITH AUTO TRANSMISSION

- A1 : WITH ACTECO 1.6 - 1.8L ENGINE
- A2 : WITH ACTECO 2.0L ENGINE

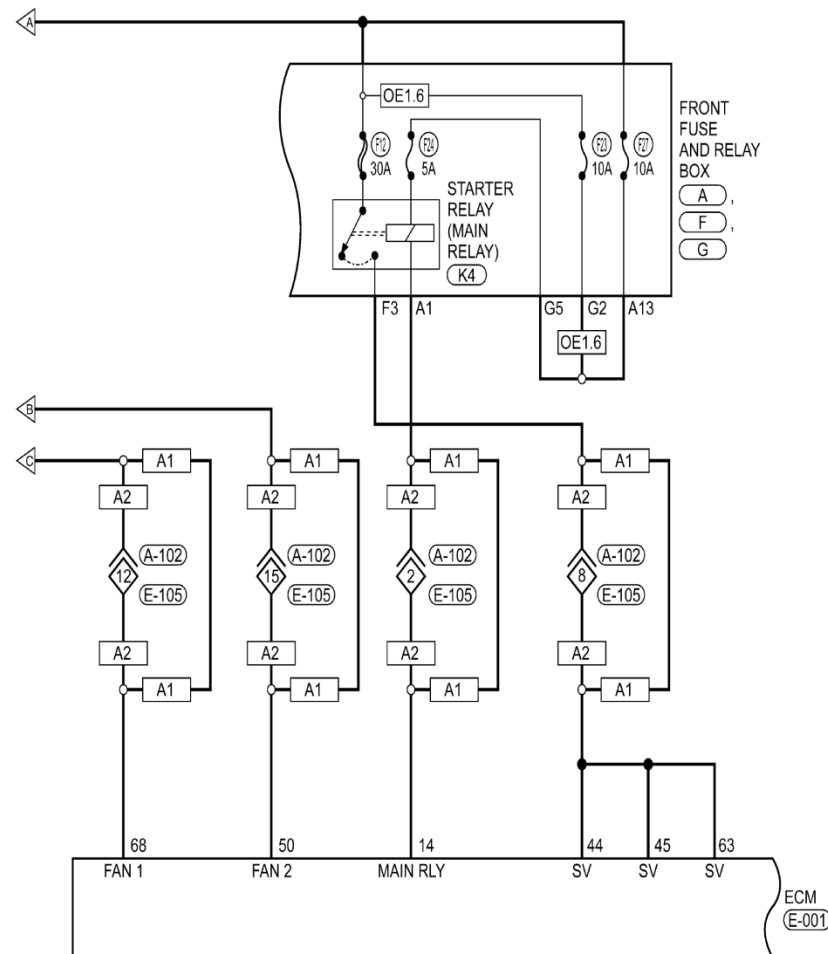
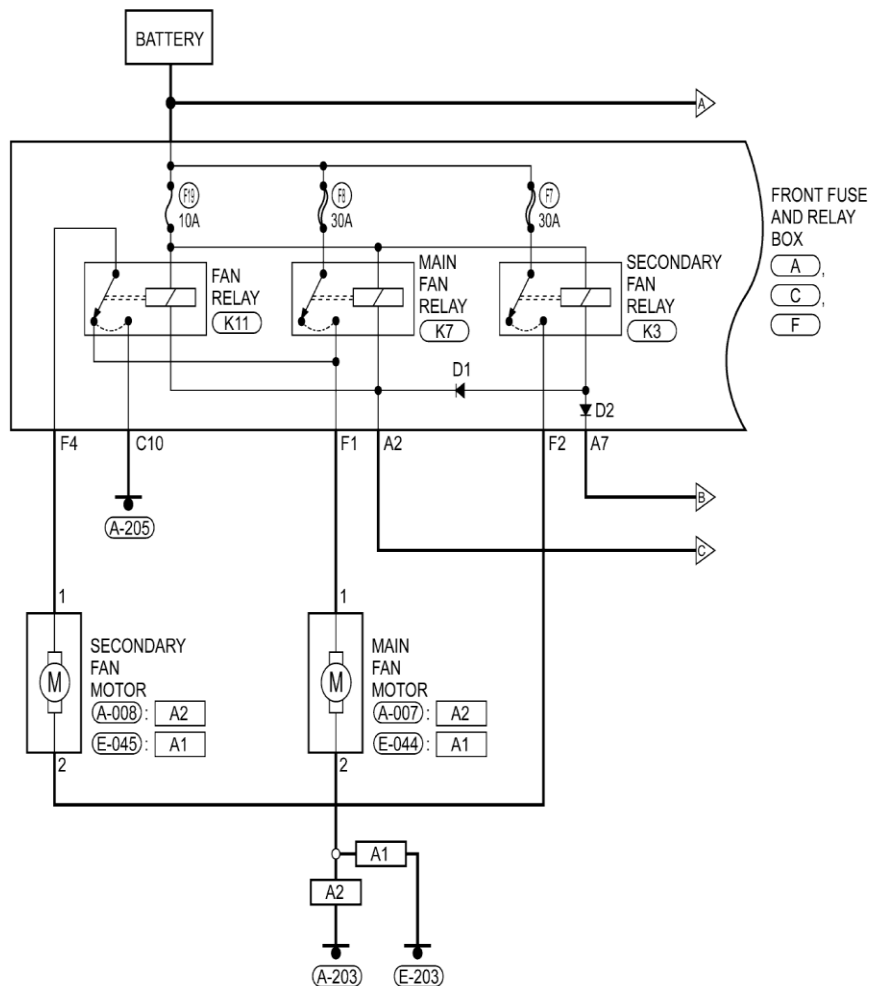




COOLING SYSTEM - WITH ACTECO ENGINE SYSTEM

- A1 : WITH ACTECO 1.6L - 1.8L ENGINE SYSTEM
- A2 : WITH ACTECO 2.0L ENGINE SYSTEM

- A1 : WITH ACTECO 1.6L - 1.8L ENGINE SYSTEM
- A2 : WITH ACTECO 2.0L ENGINE SYSTEM
- OE1.6 : WITH 1.6L ENGINE SYSTEM WITHOUT EOBD





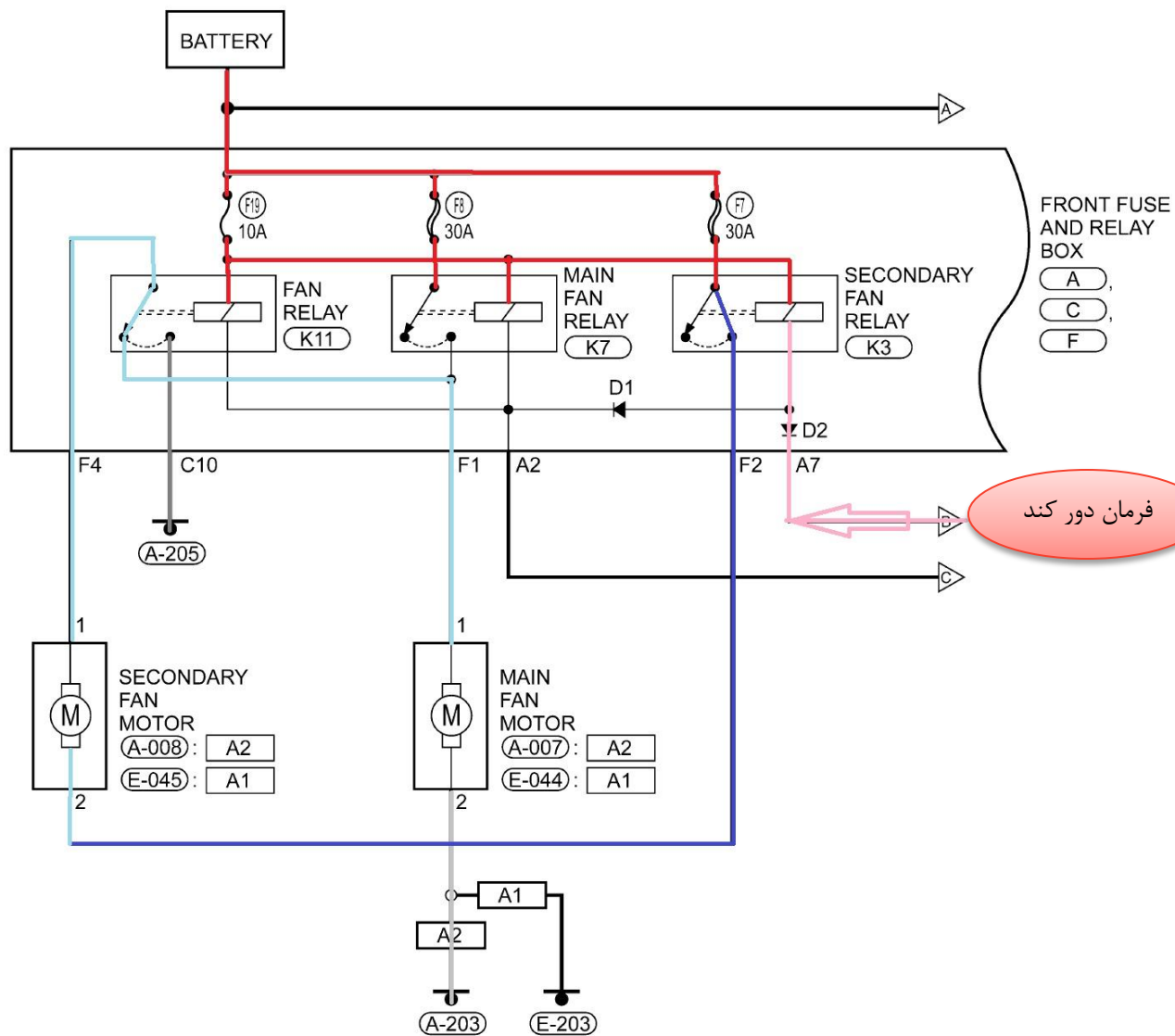


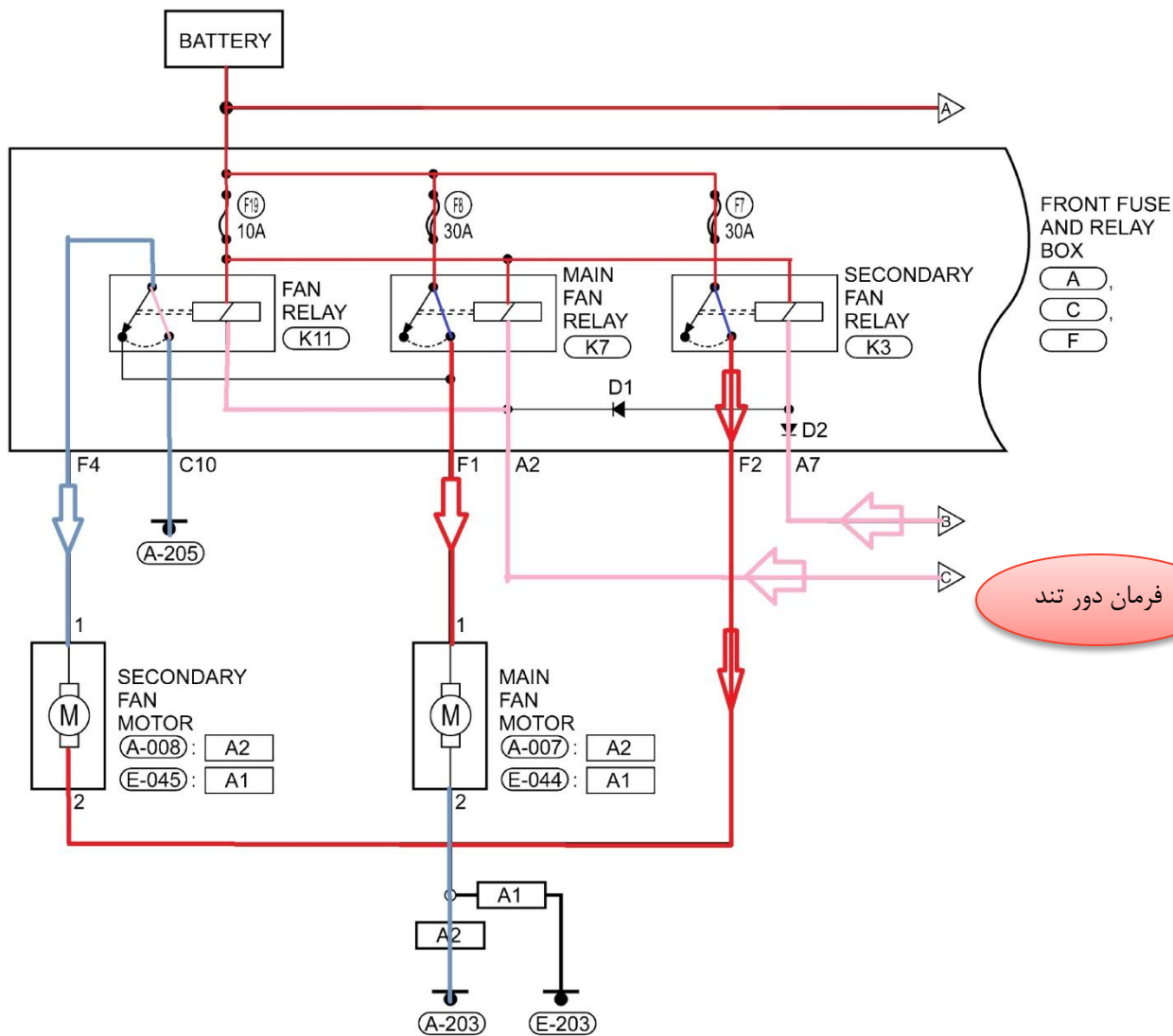
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اداره فنی و مهندسی

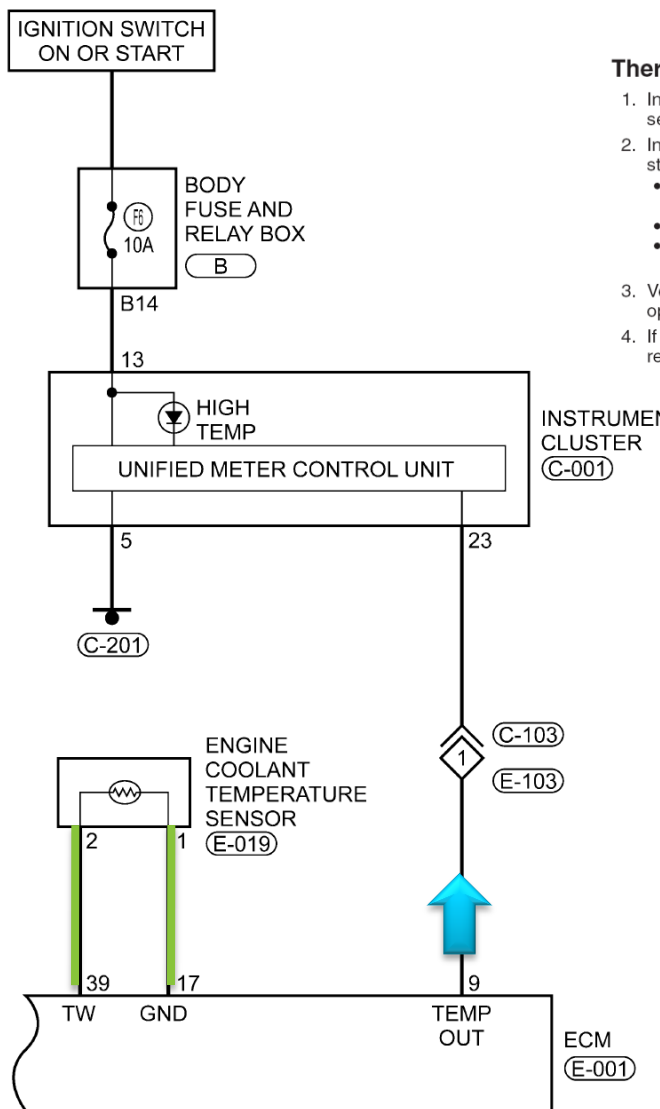


مدیران خودرو



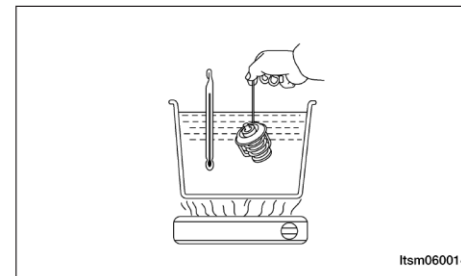


فرمان دور تند



### Thermostat Inspection

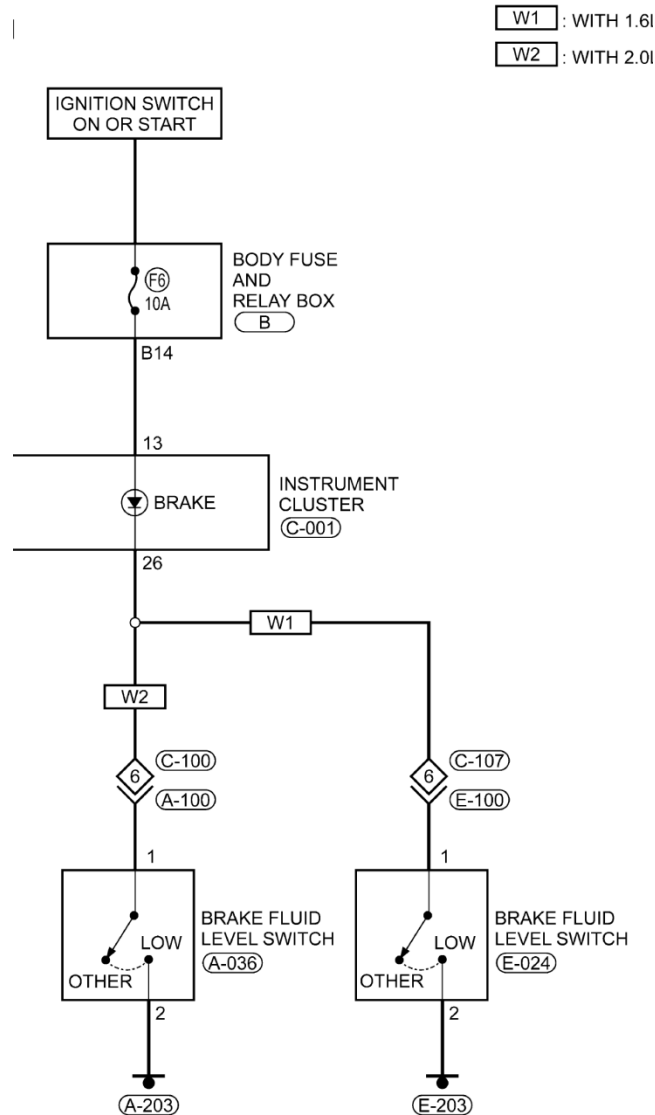
1. Inspect the sealing surface of the thermostat (the seat should be tight at room temperature).
2. Inspect the opening temperature and maximum stroke of the thermostat.
  - Opening temperature of the thermostat is 87° ± 2°C
  - Maximum stroke of the thermostat is 8 mm
  - Full opening temperature of the thermostat is 104°C
3. Verify the thermostat closes 5°C lower than the opening temperature.
4. If the thermostat fails any of the inspection steps, replace the thermostat.





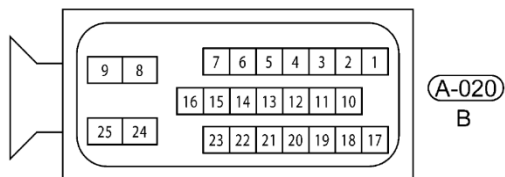
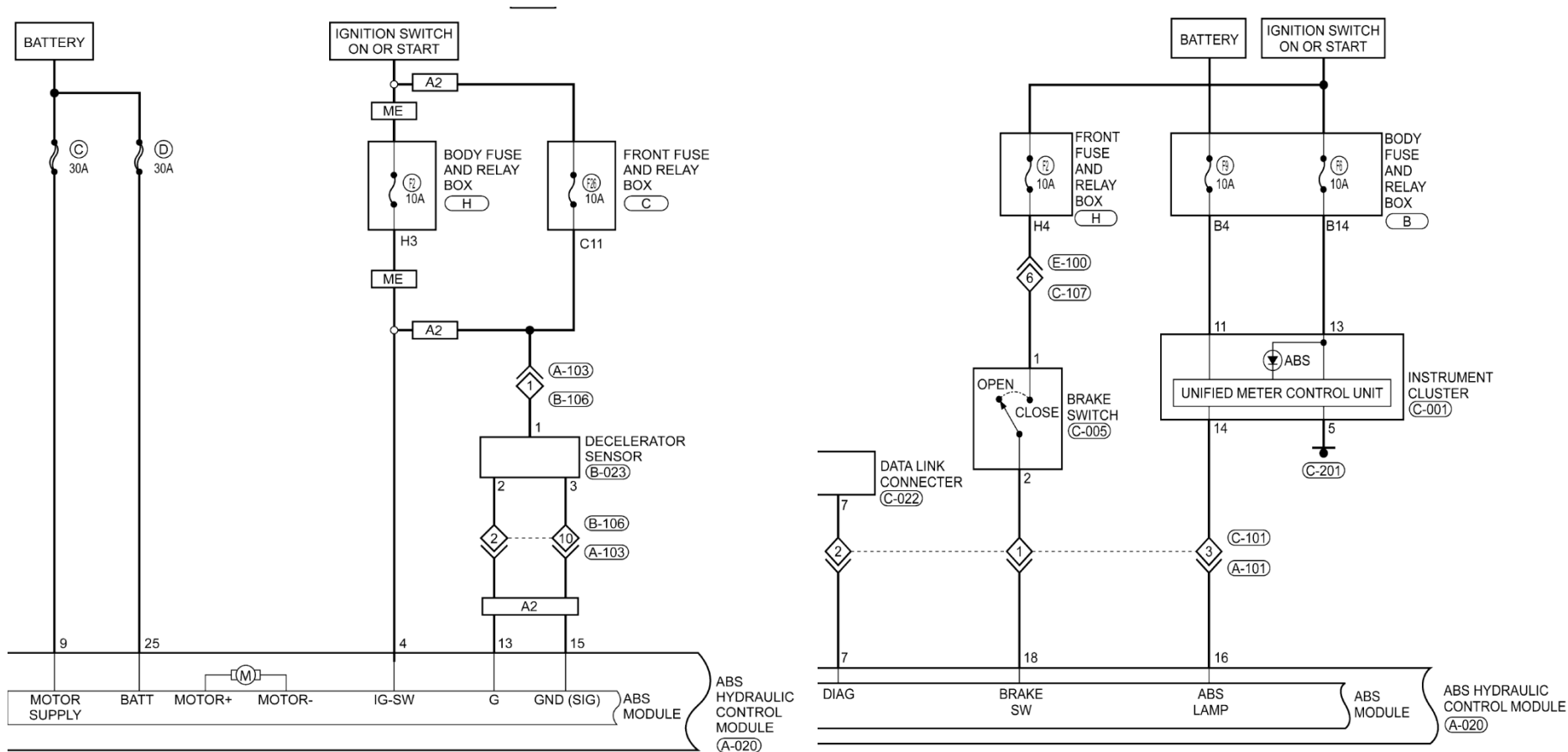
### هشدار سطح روغن ترمز

اداره فنی و مهندسی



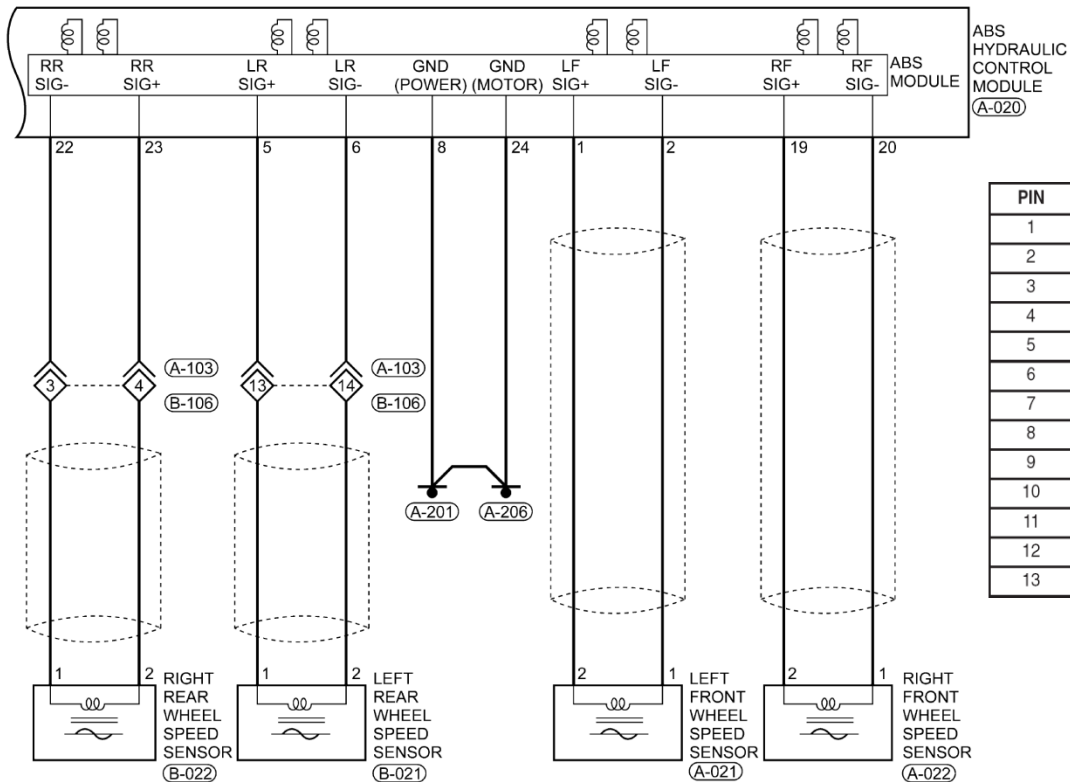


# مدار ABS

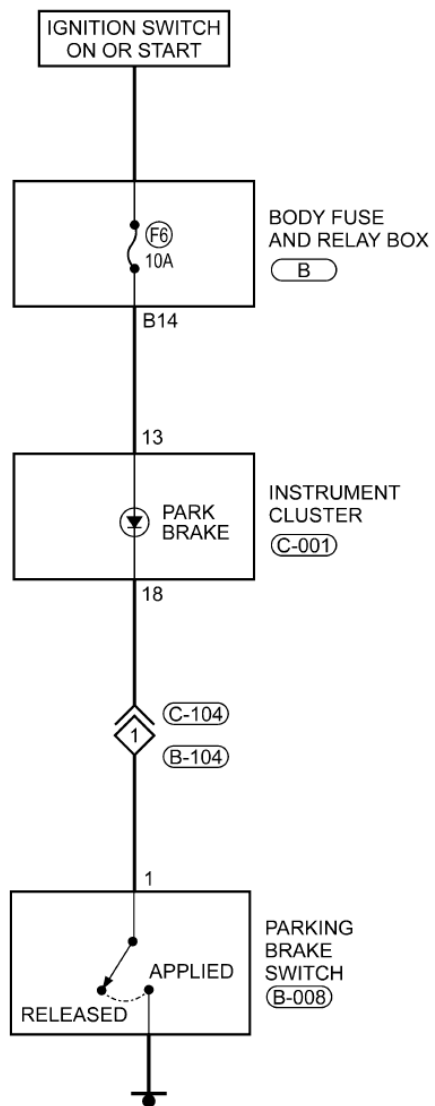


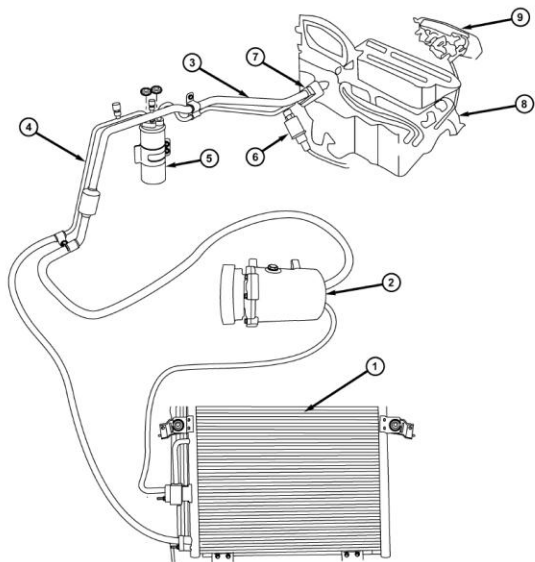


# ABS



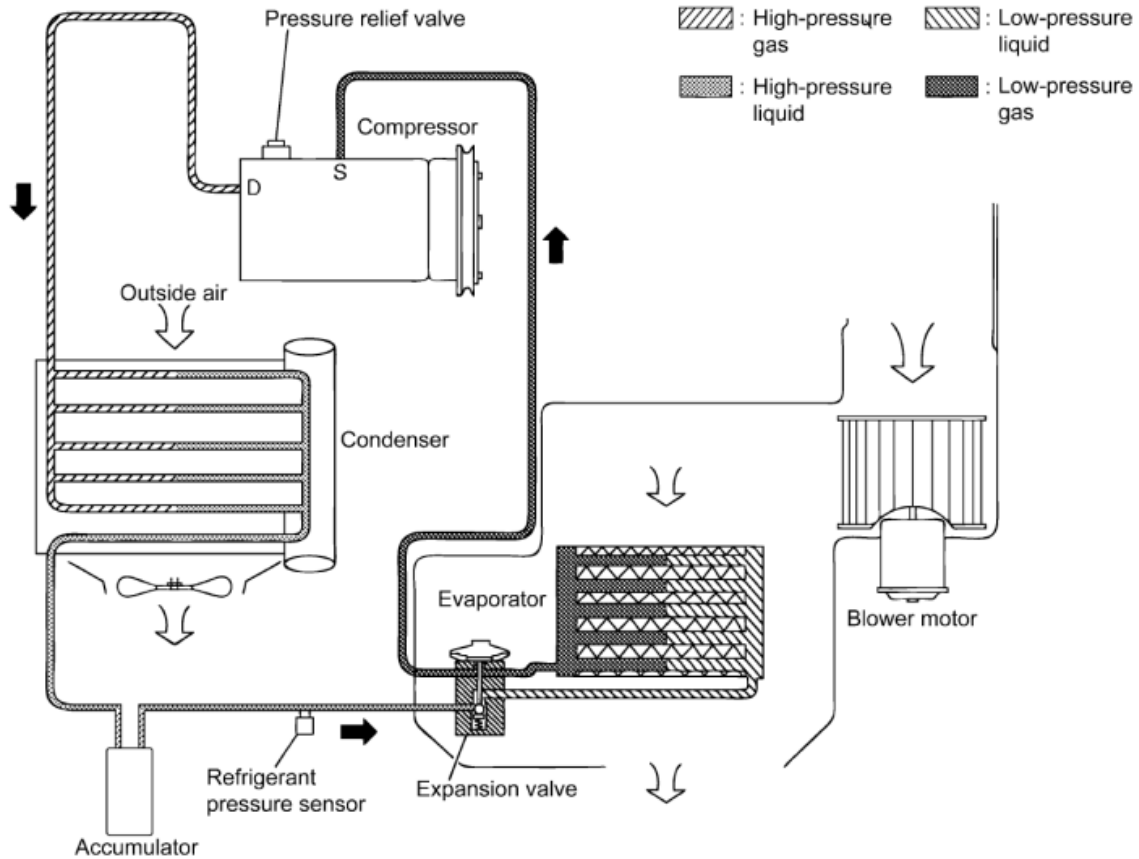
PIN	CIRCUIT IDENTIFICATION	PIN	CIRCUIT IDENTIFICATION
1	Front Wheel Speed Sensor LH +	14	-
2	Front Wheel Speed Sensor LH -	15	Decelerator Sensor (GND)
3	-	16	ABS Lamp
4	Ignition Switch	17	-
5	Rear Wheel Speed Sensor LH +	18	Brake Switch
6	Rear Wheel Speed Sensor LH -	19	Front Wheel Speed Sensor RH +
7	Diagnostic Link K	20	Front Wheel Speed Sensor RH -
8	GND (Power)	21	-
9	Continuous Supply Voltage (Motor)	22	Rear Wheel Speed Sensor RH +
10	-	23	Rear Wheel Speed Sensor RH -
11	-	24	GND (Motor)
12	-	25	Continuous Supply Voltage
13	Decelerator Sensor (G)	-	-



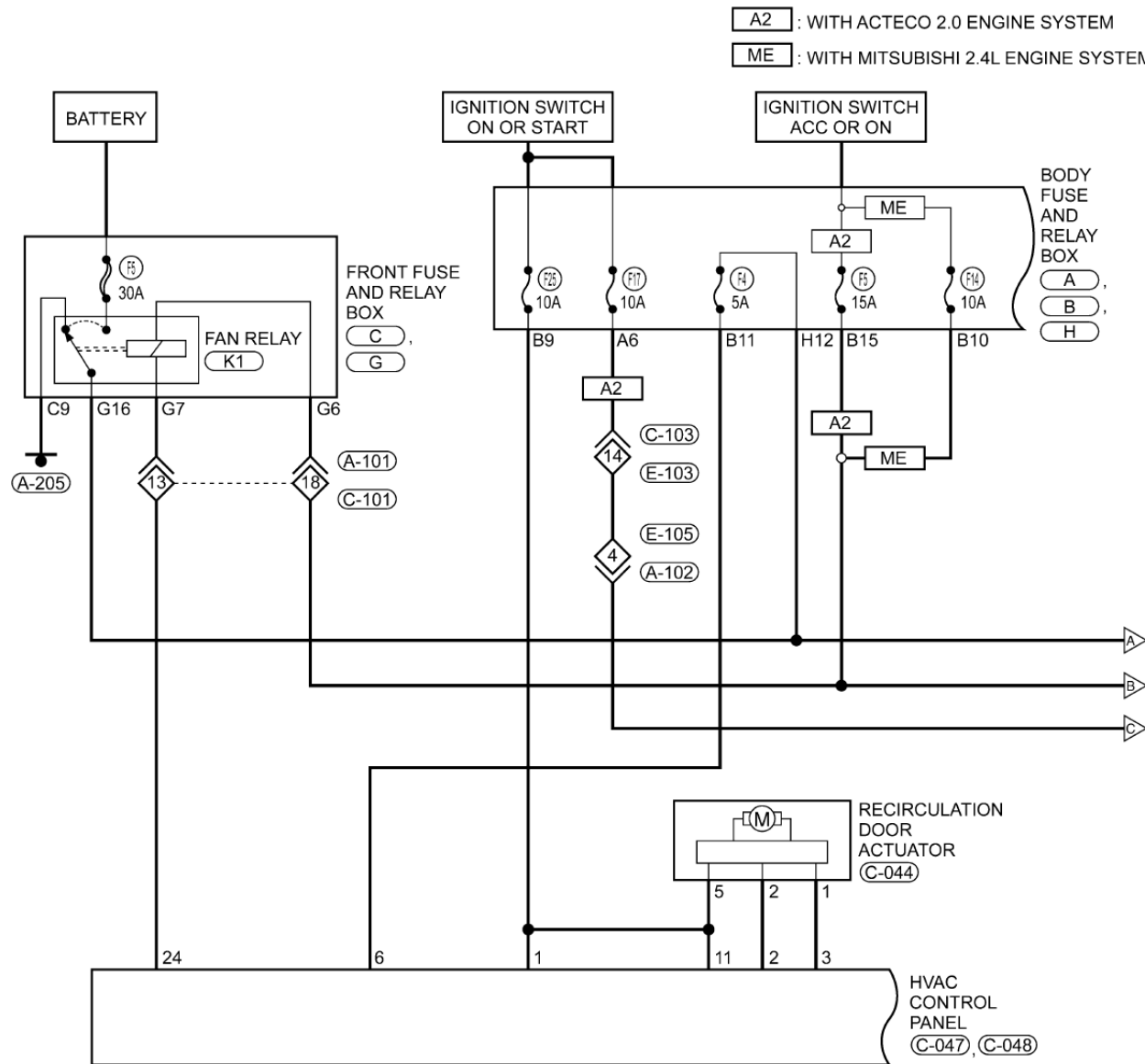


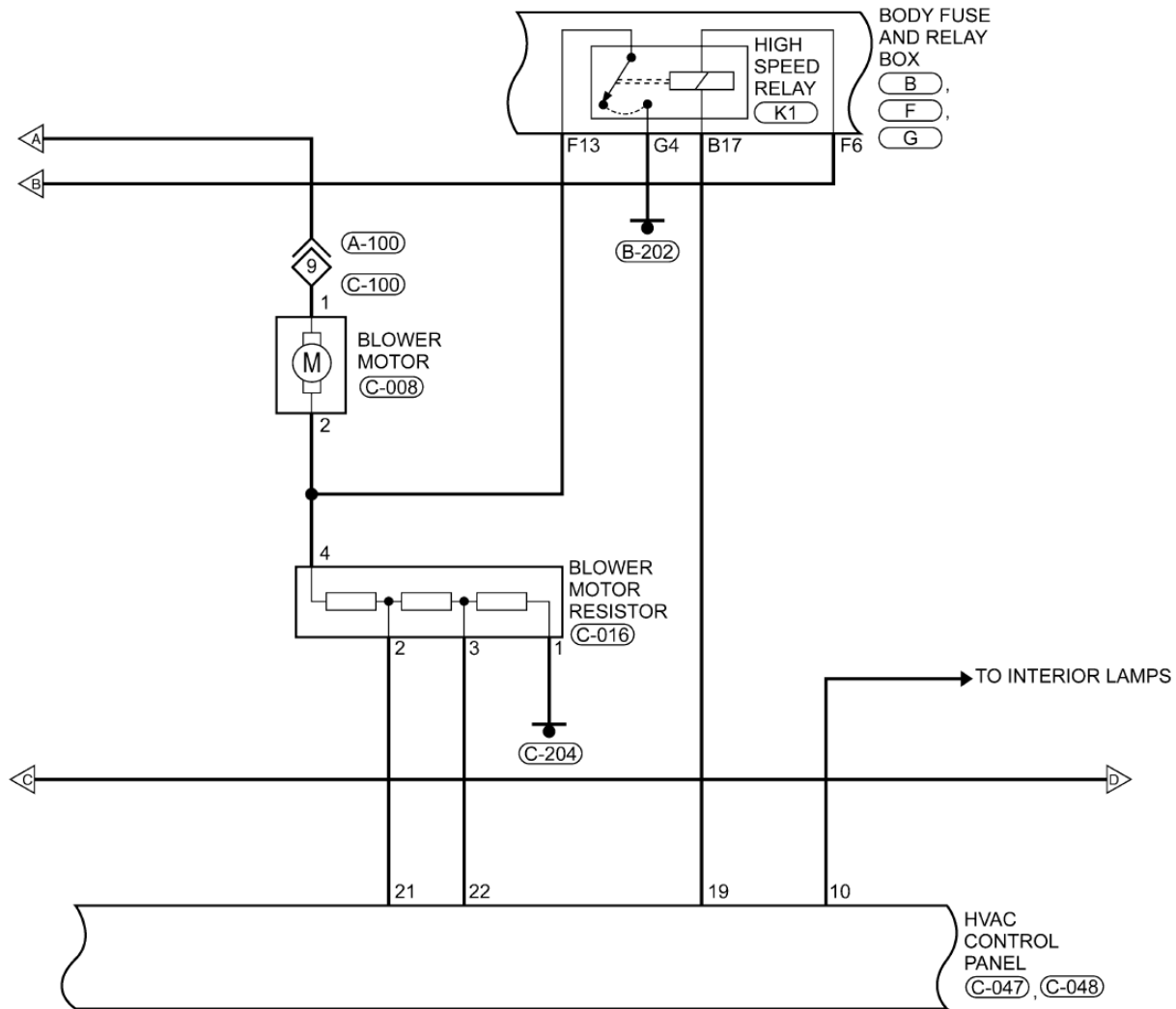
- 1 - Condenser
- 2 - Compressor
- 3 - Suction Line
- 4 - Liquid Line
- 5 - Accumulator

- 6 - Refrigerant Pressure Sensor
- 7 - Expansion Valve
- 8 - HVAC Housing
- 9 - HVAC Control Panel



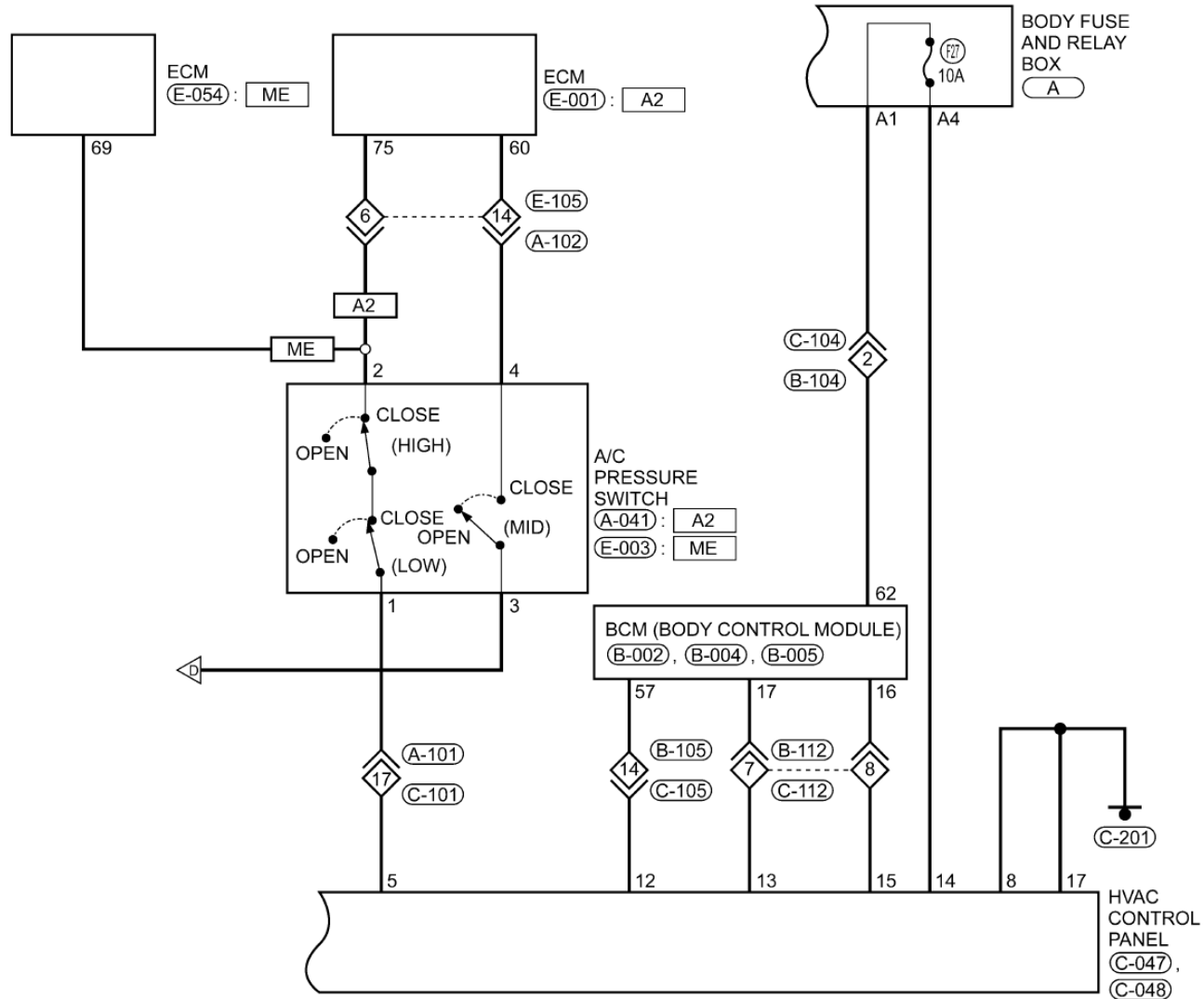


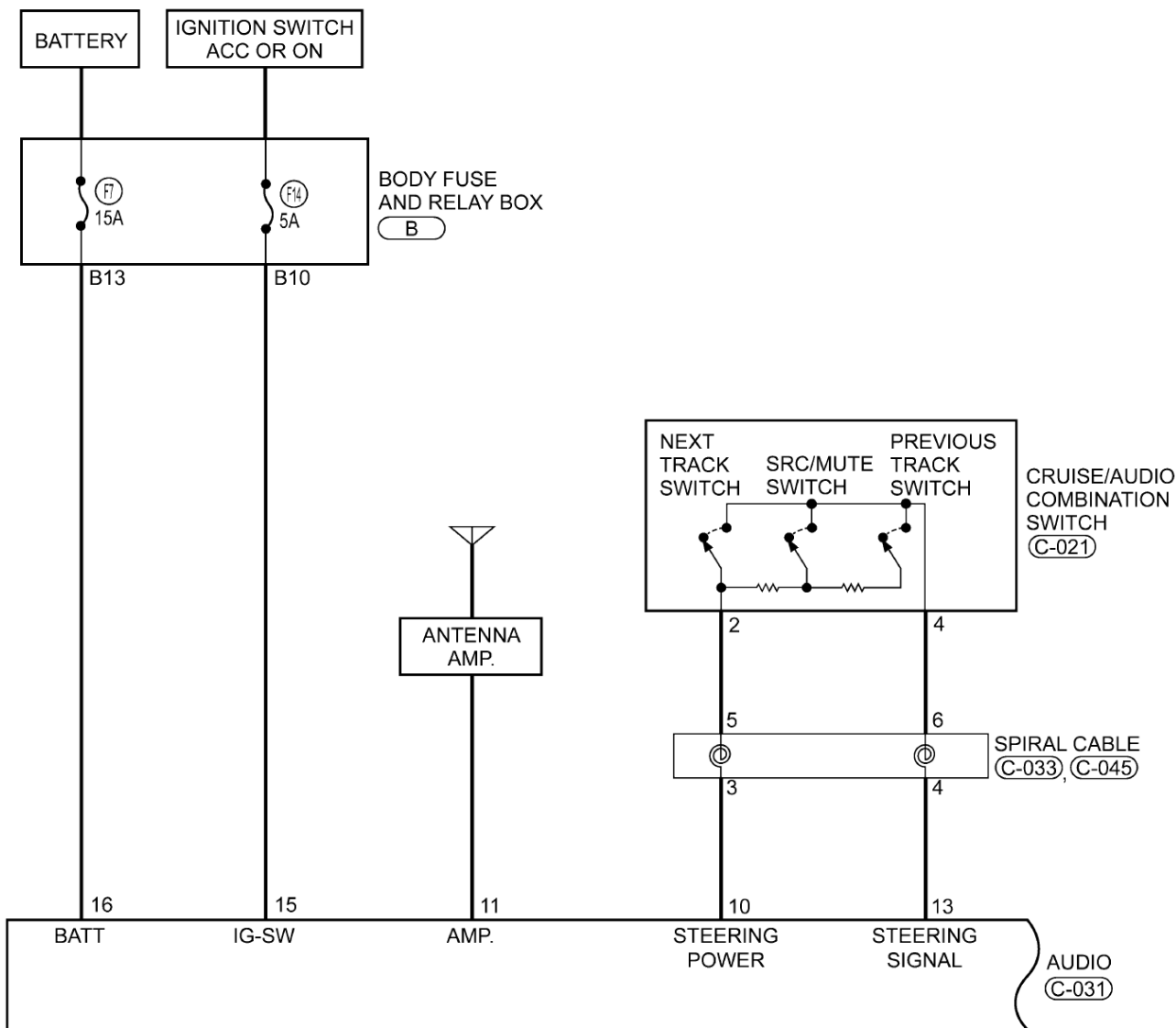






A2 : WITH ACTECO 2.0 ENGINE SYSTEM  
 ME : WITH MITSUBISHI 2.4L ENGINE SYSTEM

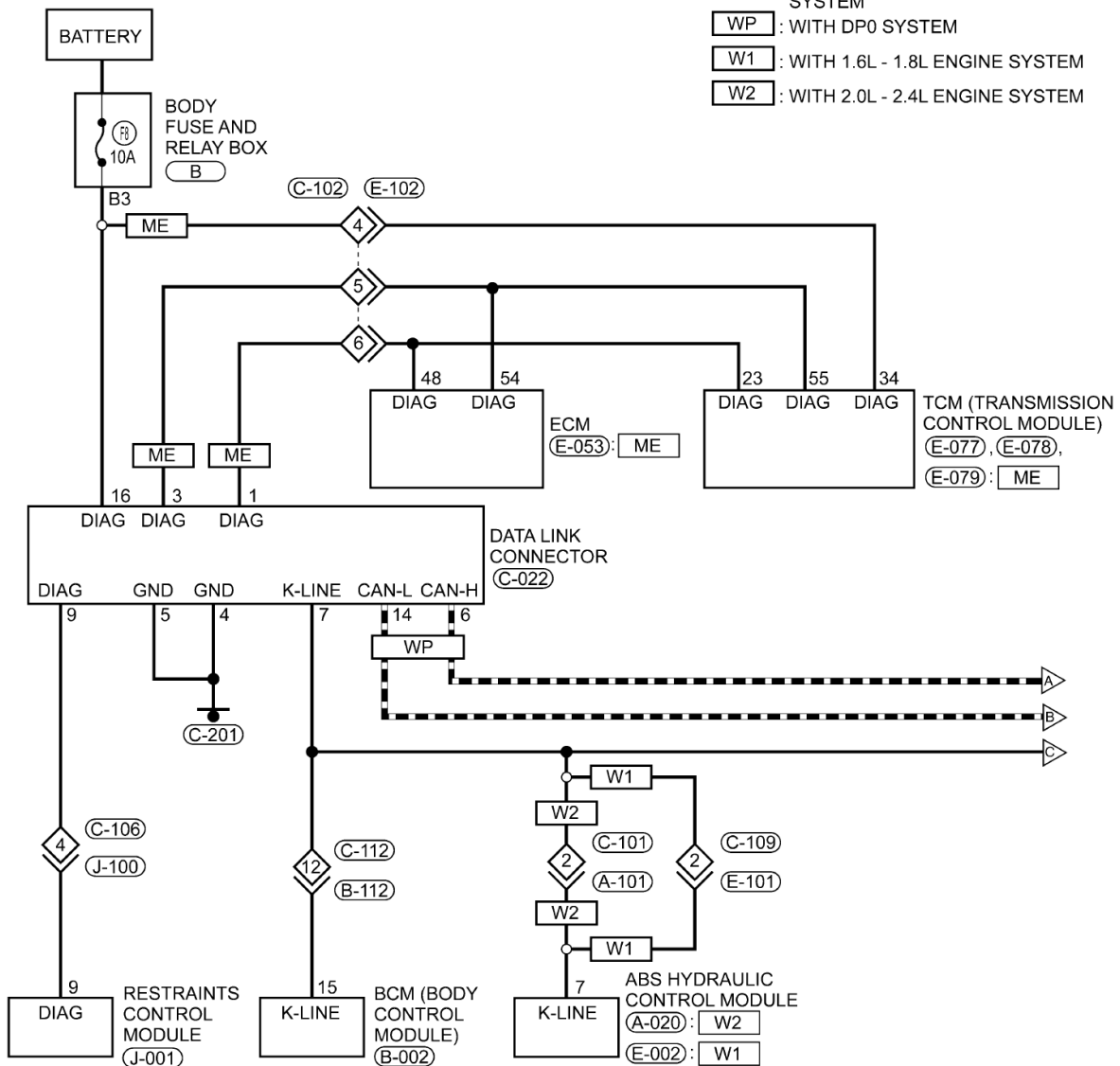






N SYSTEM

- ME : WITH MITSUBISHI 2.4L ENGINE SYSTEM
- WP : WITH DP0 SYSTEM
- W1 : WITH 1.6L - 1.8L ENGINE SYSTEM
- W2 : WITH 2.0L - 2.4L ENGINE SYSTEM

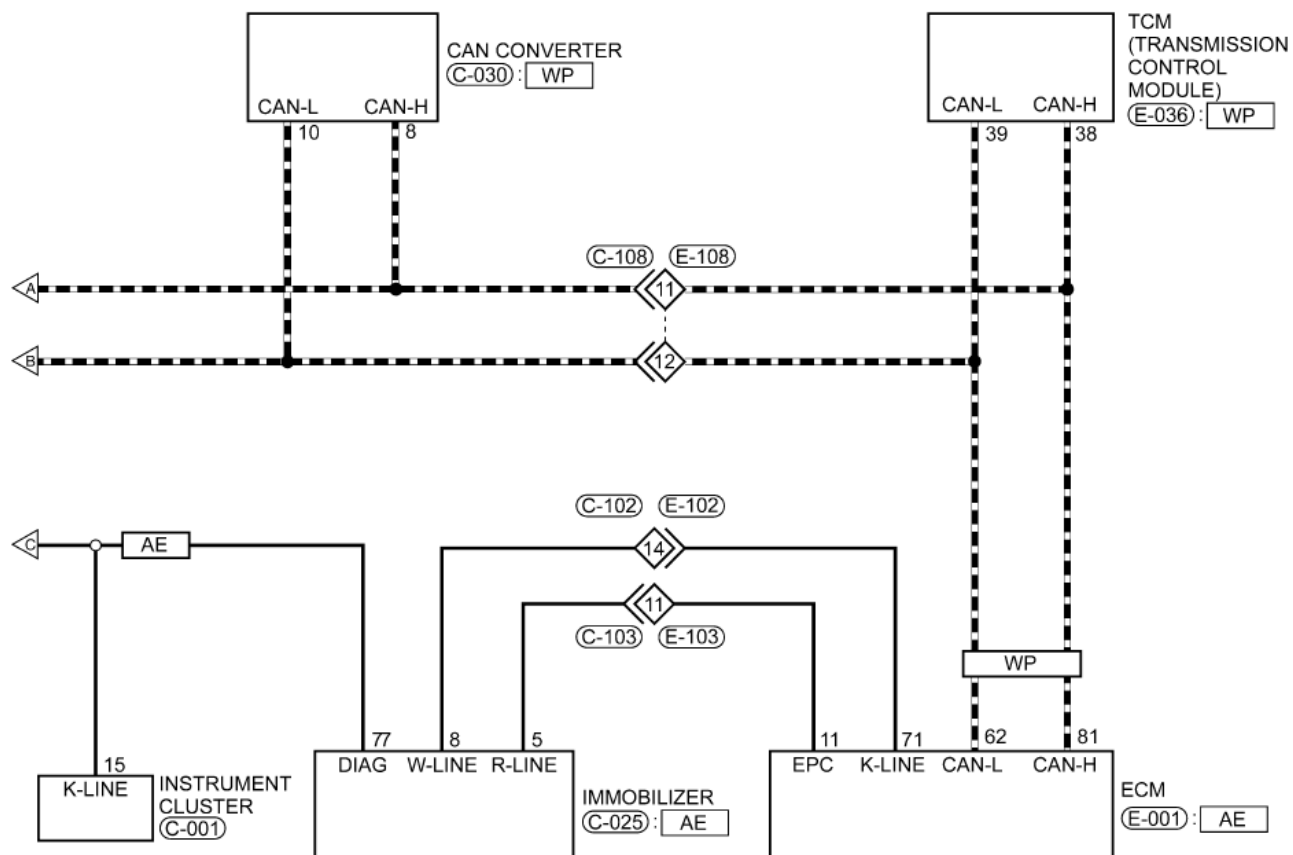


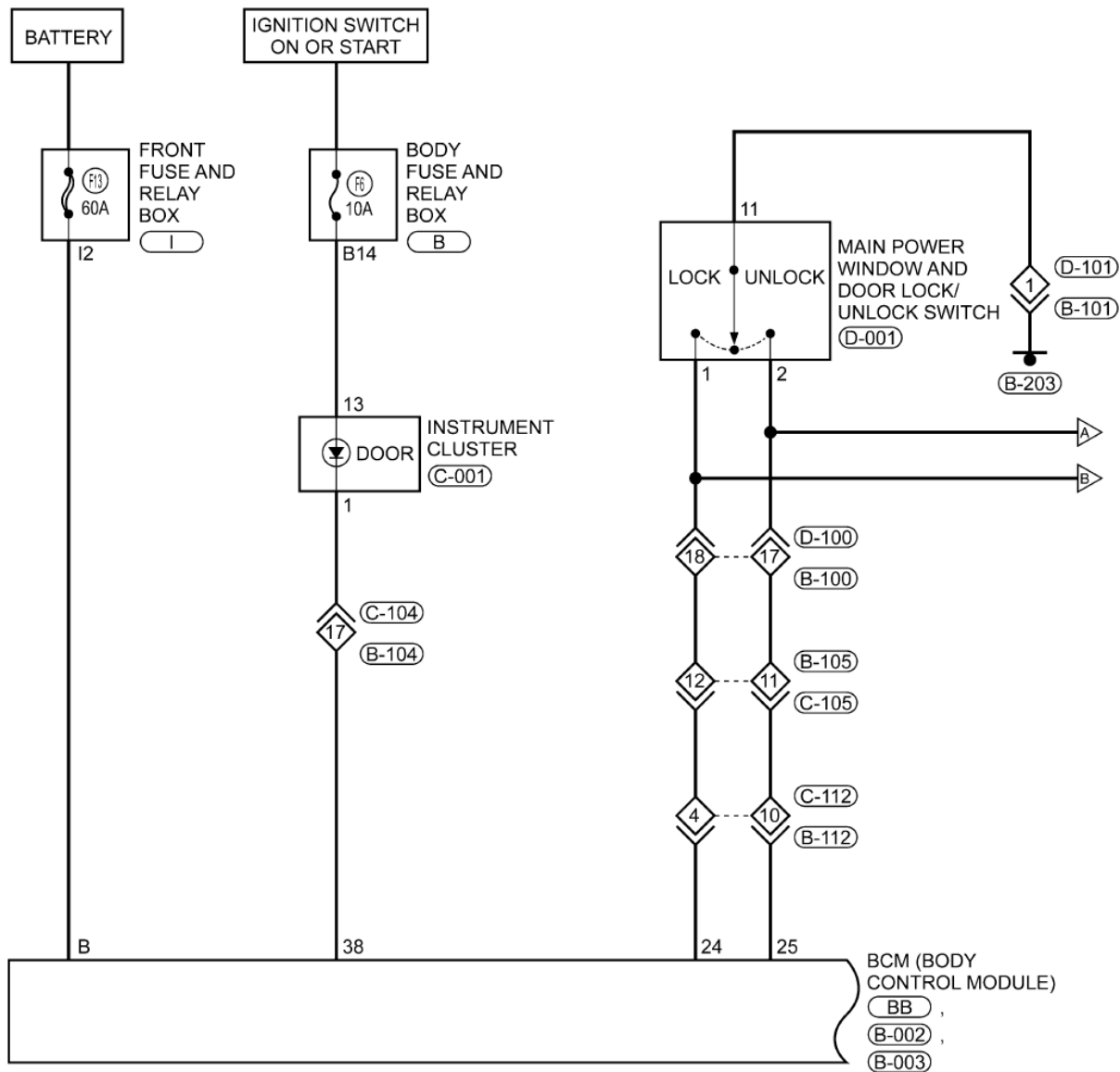


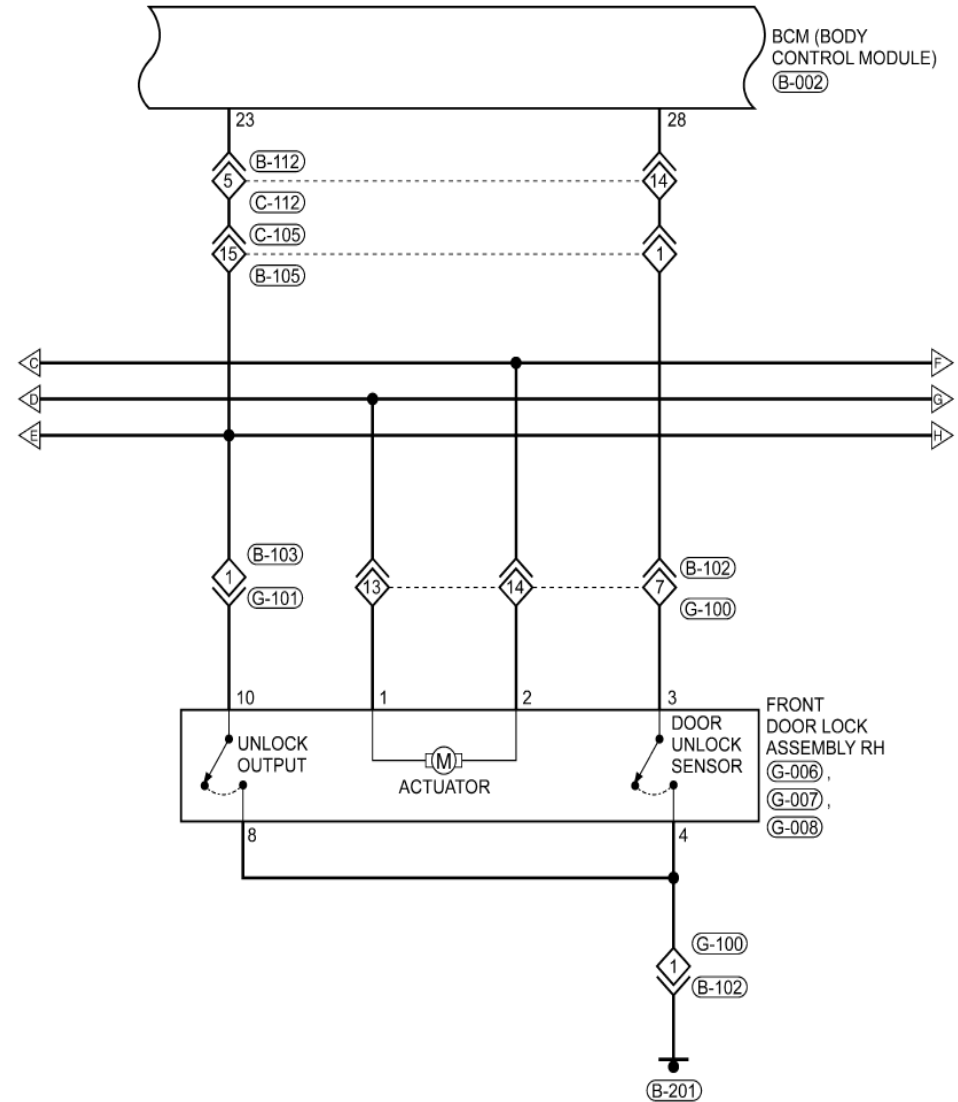
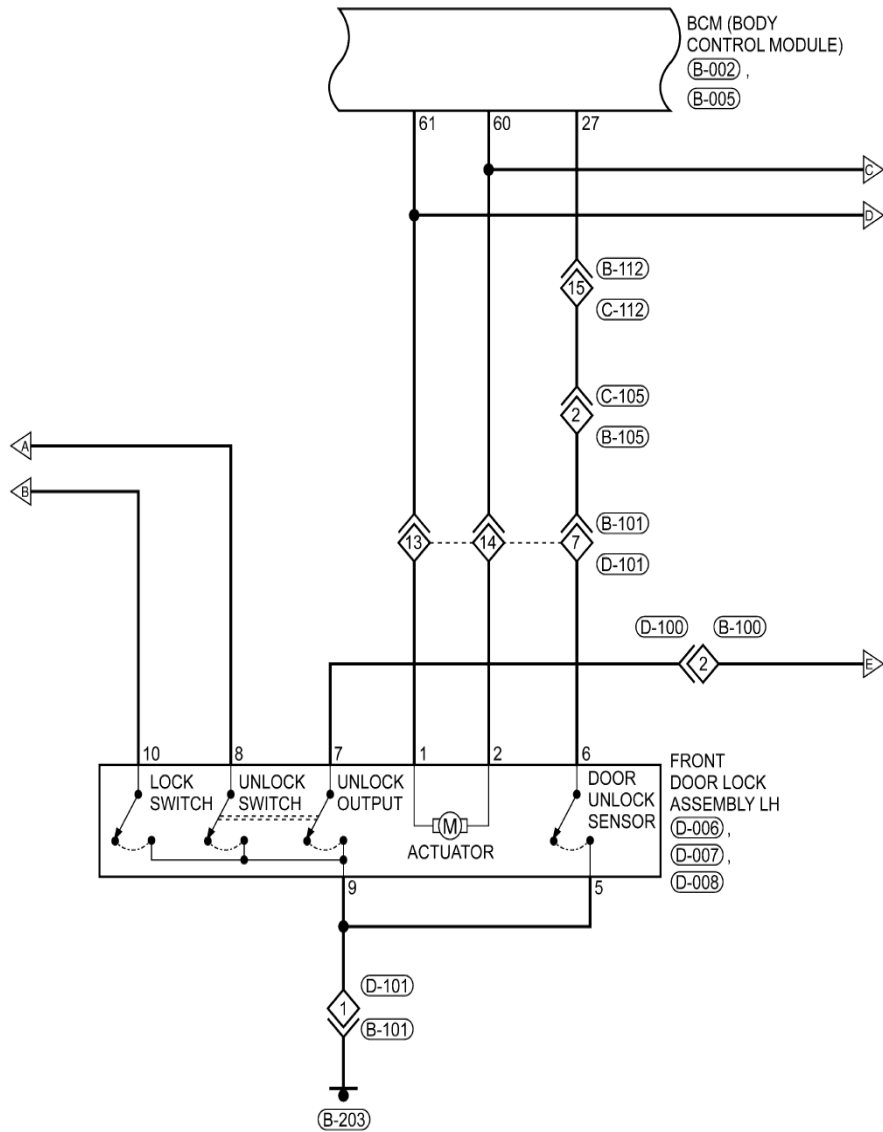
شبکه



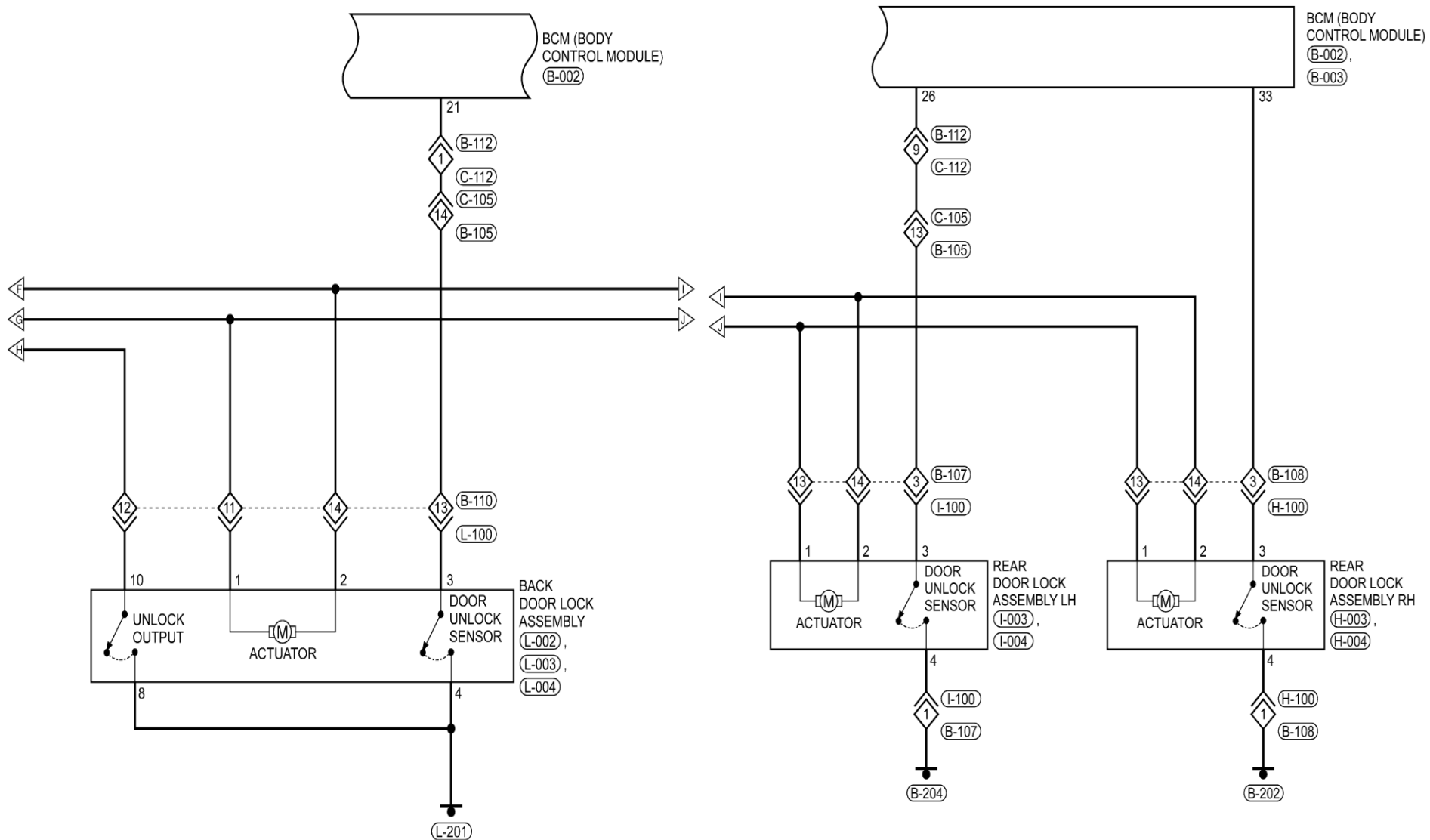
AE : WITH ACTECO ENGINE SYSTEM  
 WP : WITH DP0 SYSTEM













# BCM

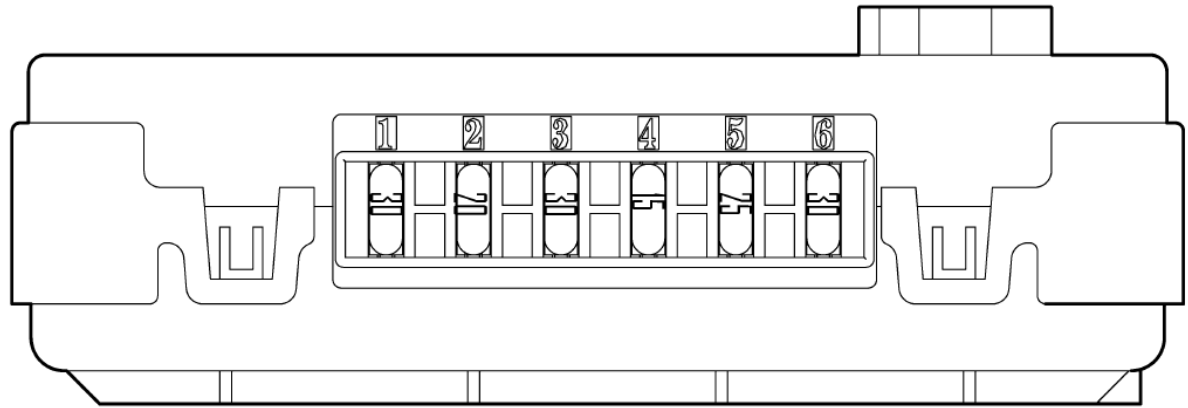


The following components are inputs to the BCM:

- Key switch
- Rear defroster switch
- Hazard lamp switch
- Power window switches
- Power door lock switches
- Seat belt switch
- Vehicle speed
- Door ajar switches
- Turn signal switch

The following components are outputs from the BCM:

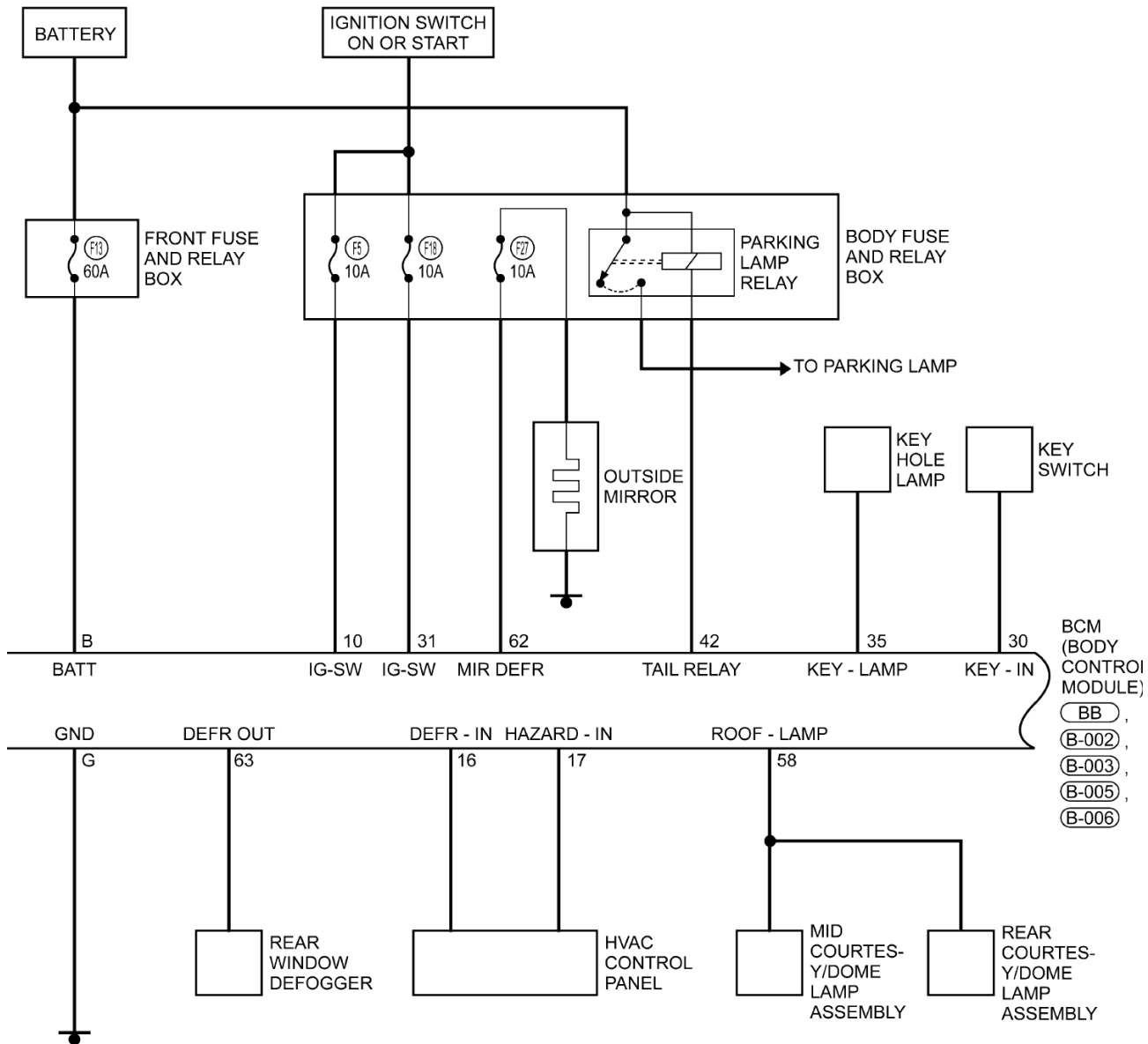
- Key lamp
- Stop lamp relay
- Rear defroster grid
- Courtesy lamps
- Power window motor
- Power door lock motor
- Turn signal lamps



FUSE NO.	AMPERAGE RATING	FUNCTION
1	30 A	Front Fog
2	20 A	CNT Lock
3	30 A	Spare
4	15 A	Spare
5	25 A	Spare
6	30 A	Front WIN



# BCM

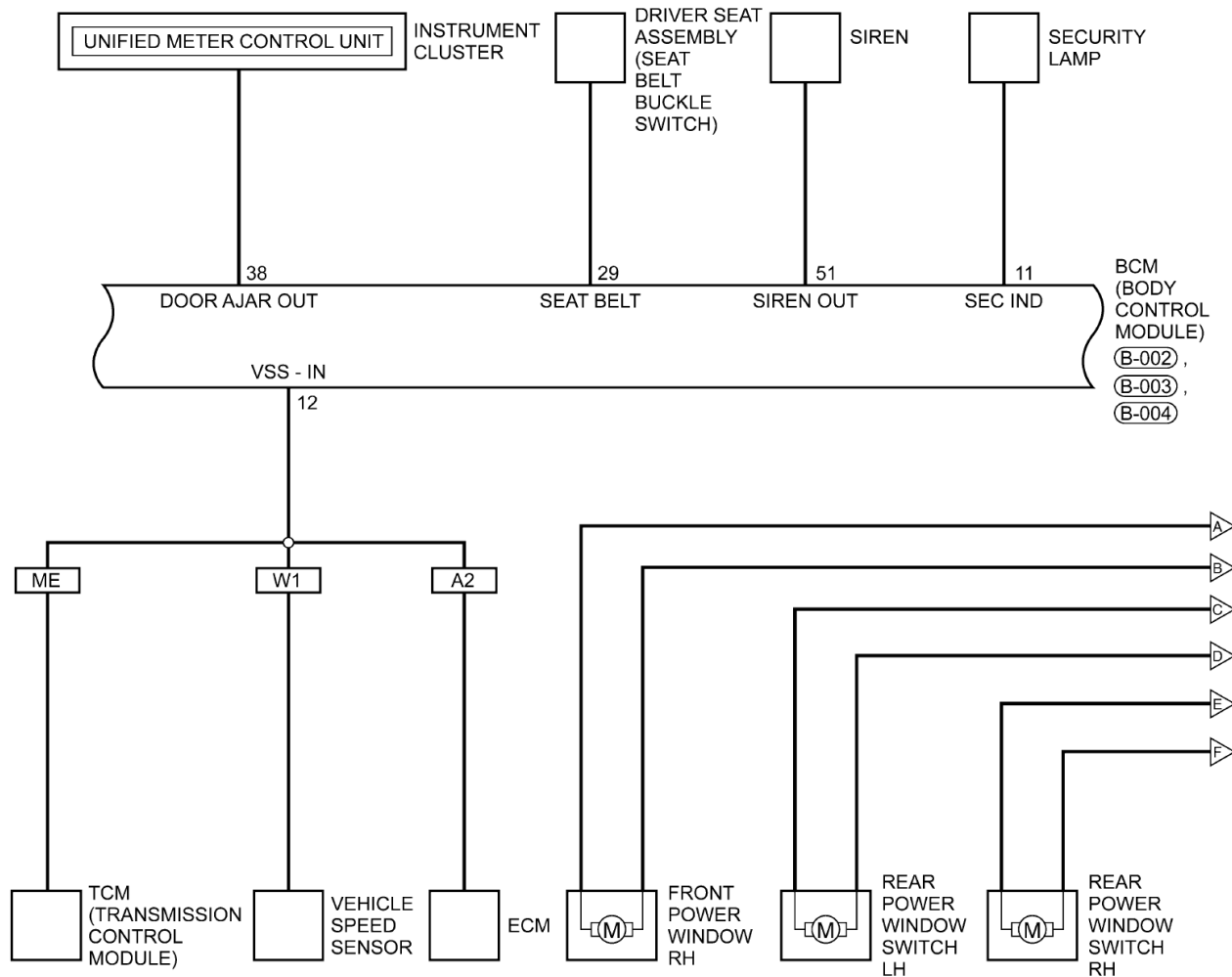




# BCM

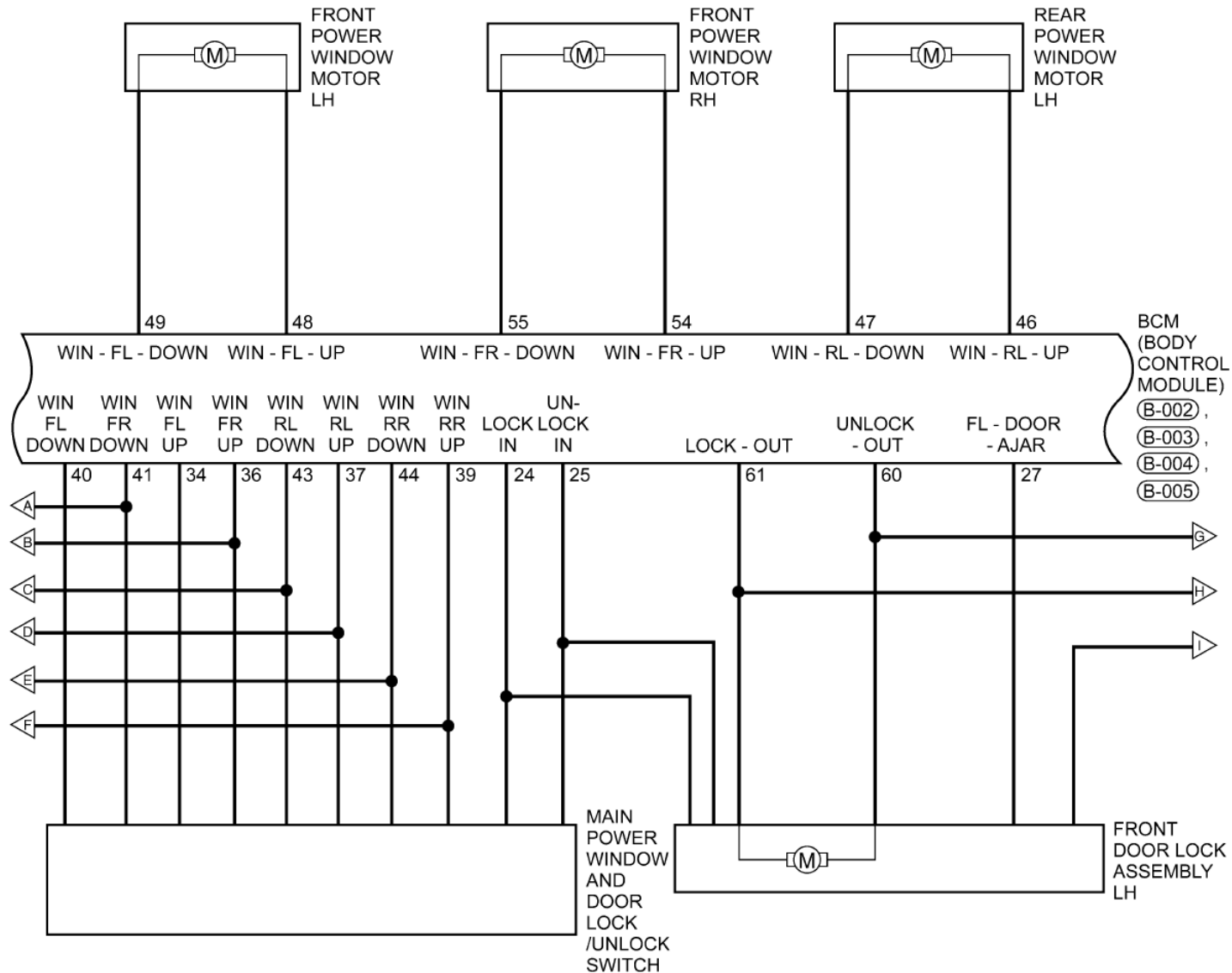


- A2 : WITH ACTECO 2.0L ENGINE SYSTEM
- ME : WITH MITSUBISHI 2.4L ENGINE SYSTEM
- W1 : WITH 1.6L - 1.8L ENGINE SYSTEM



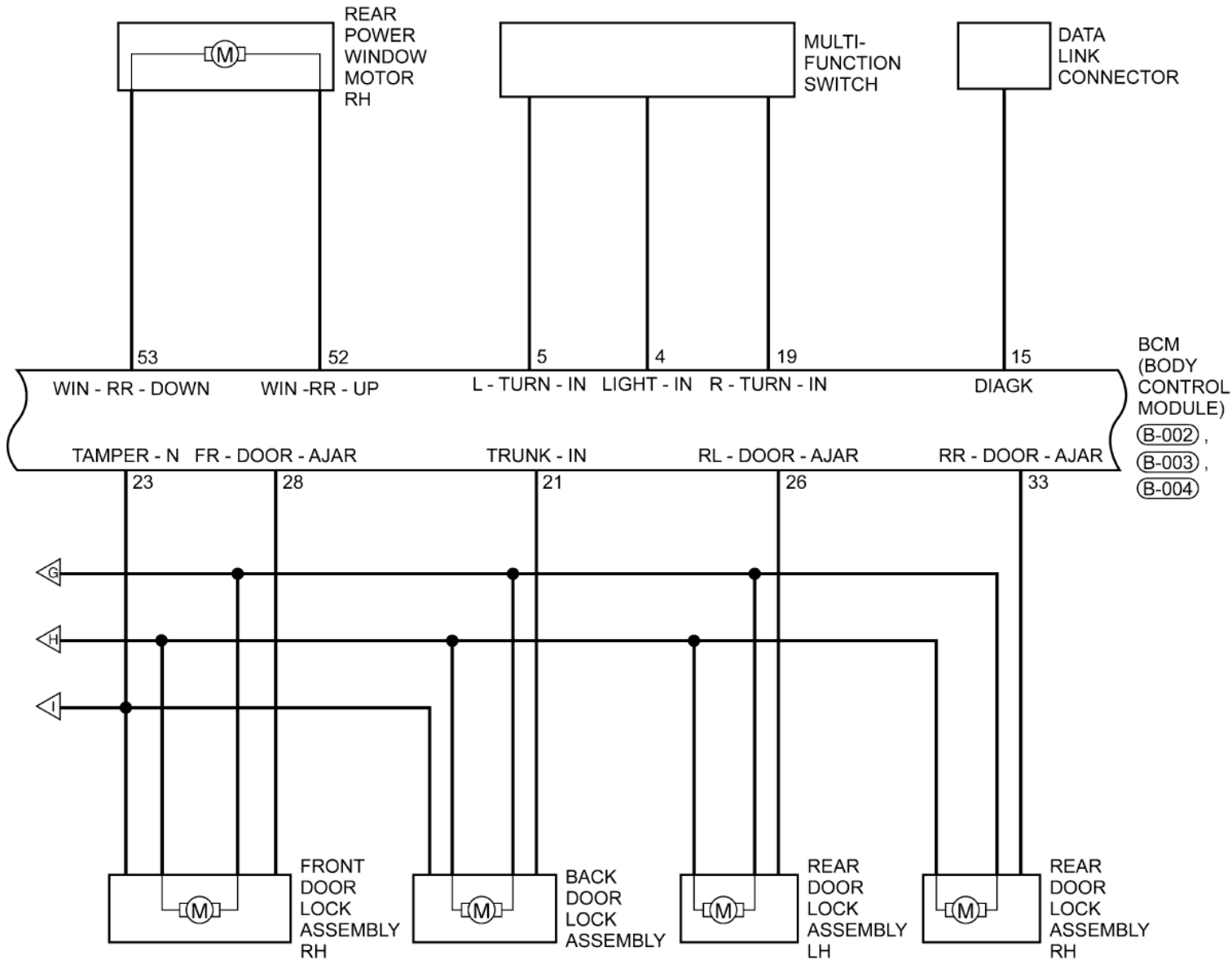


# BCM



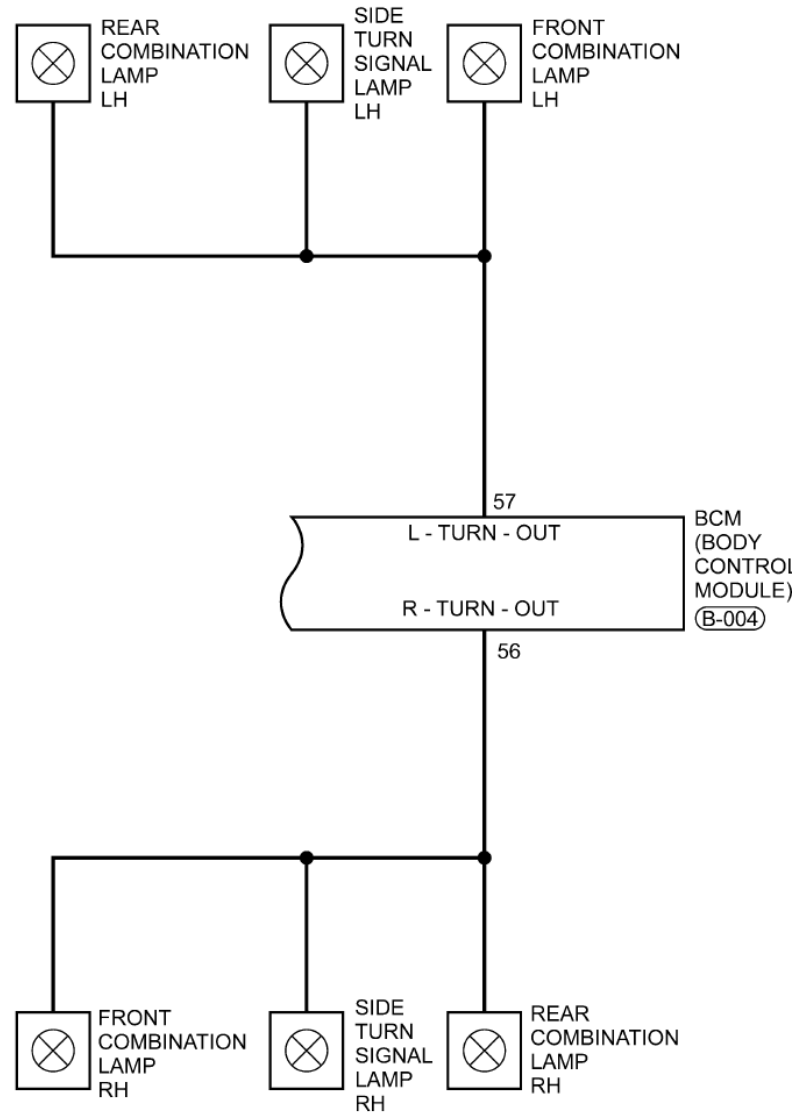


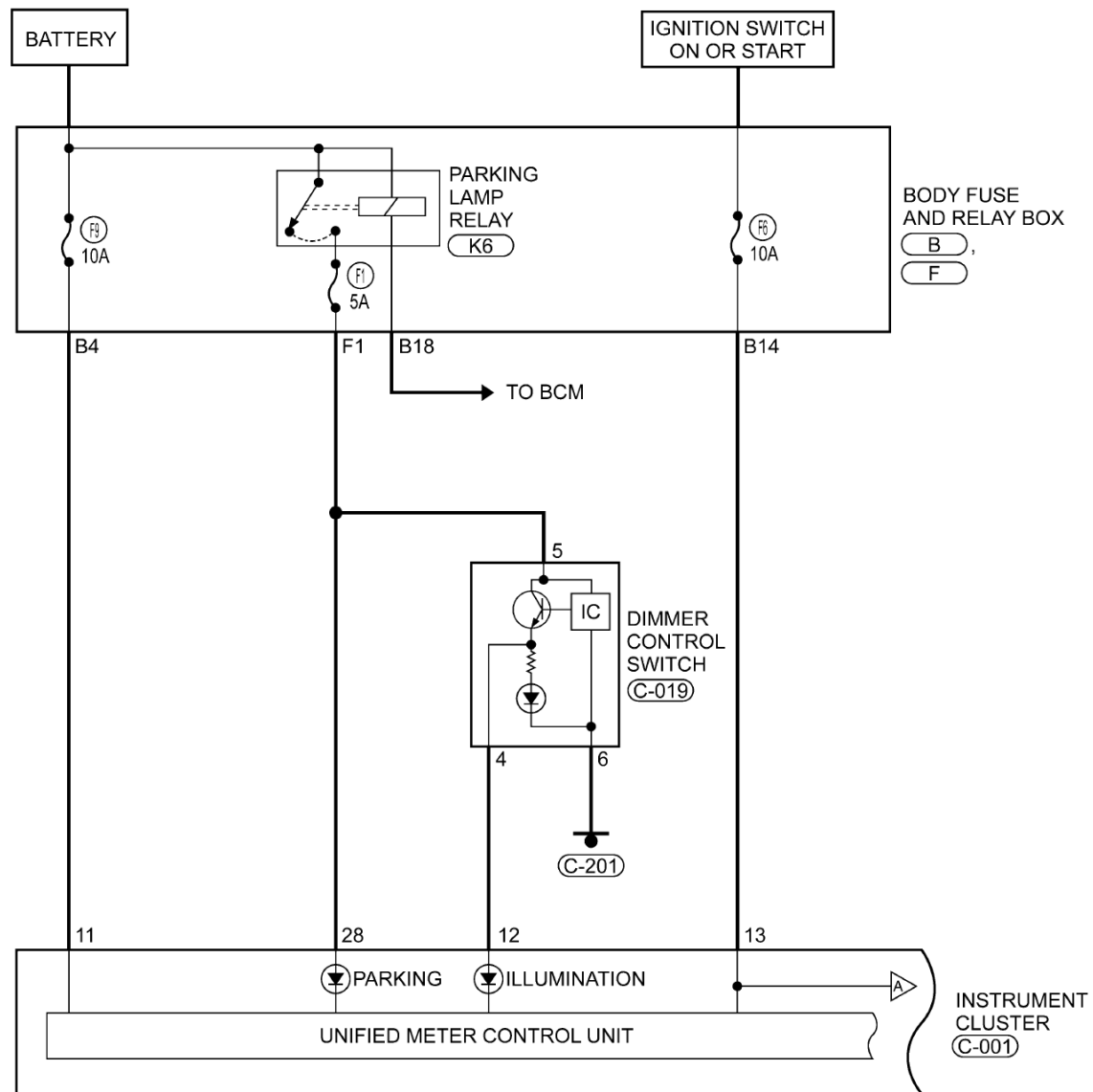
# BCM



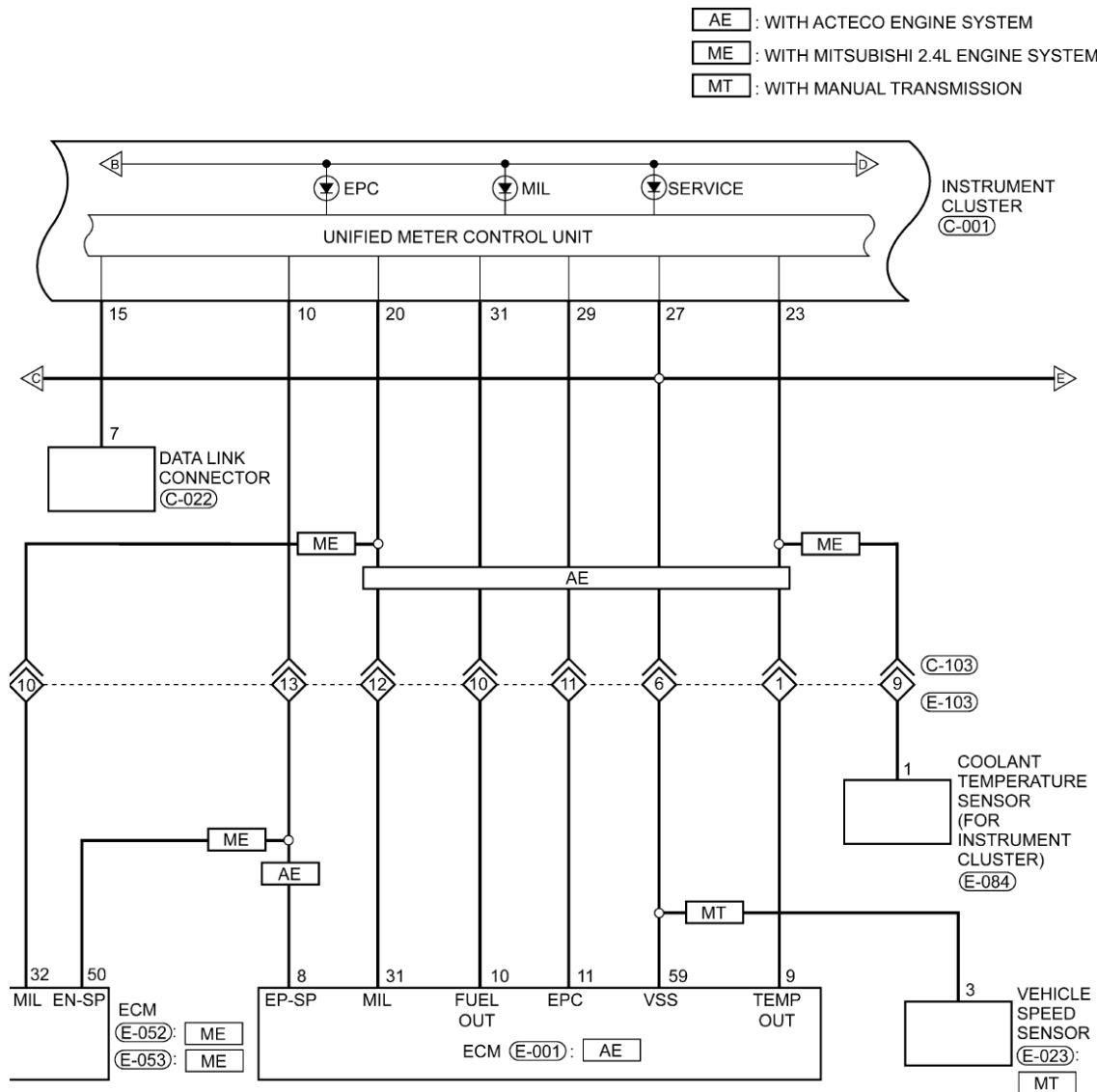


# BCM





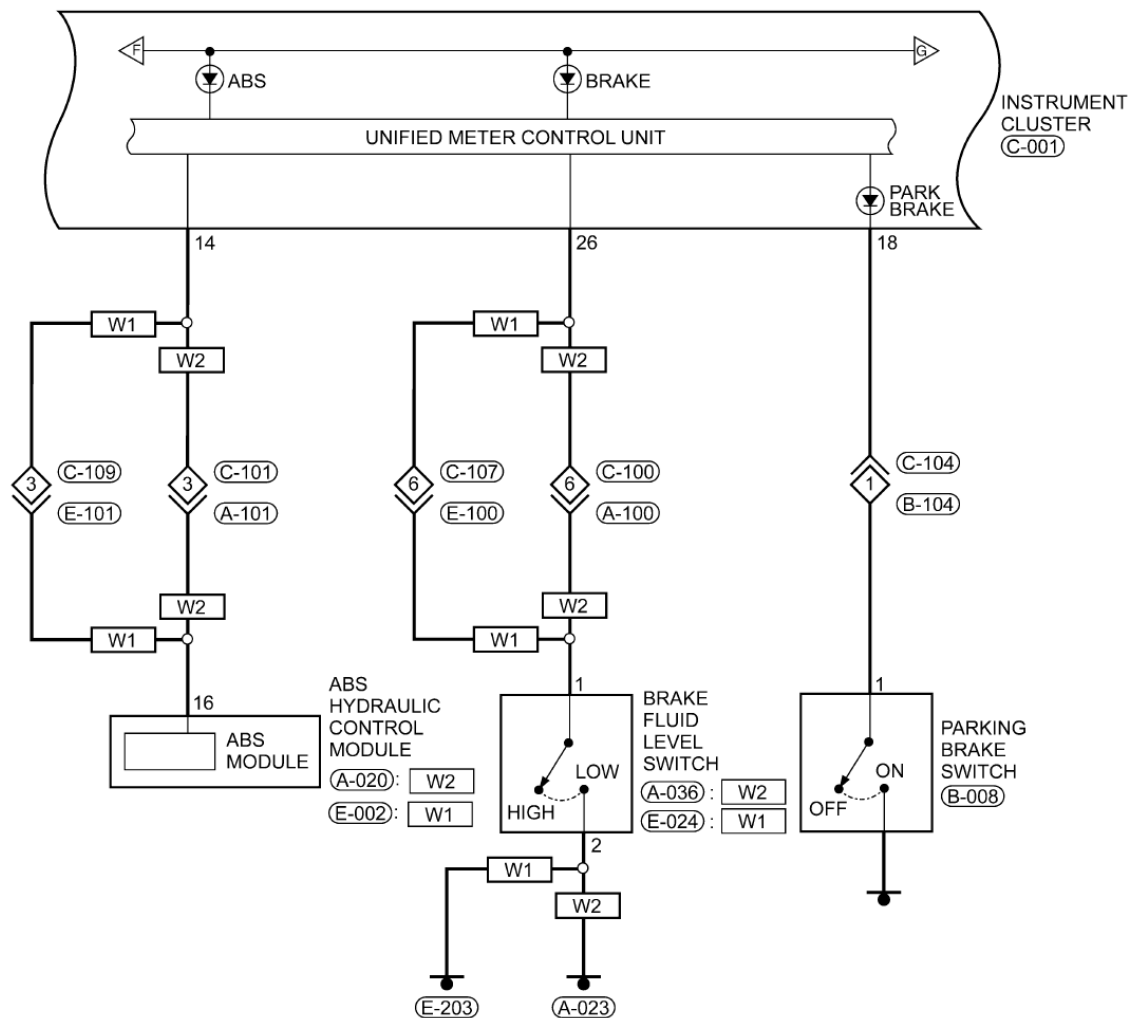






W1 : WITH 1.6L - 1.8L ENGINE SYSTEM

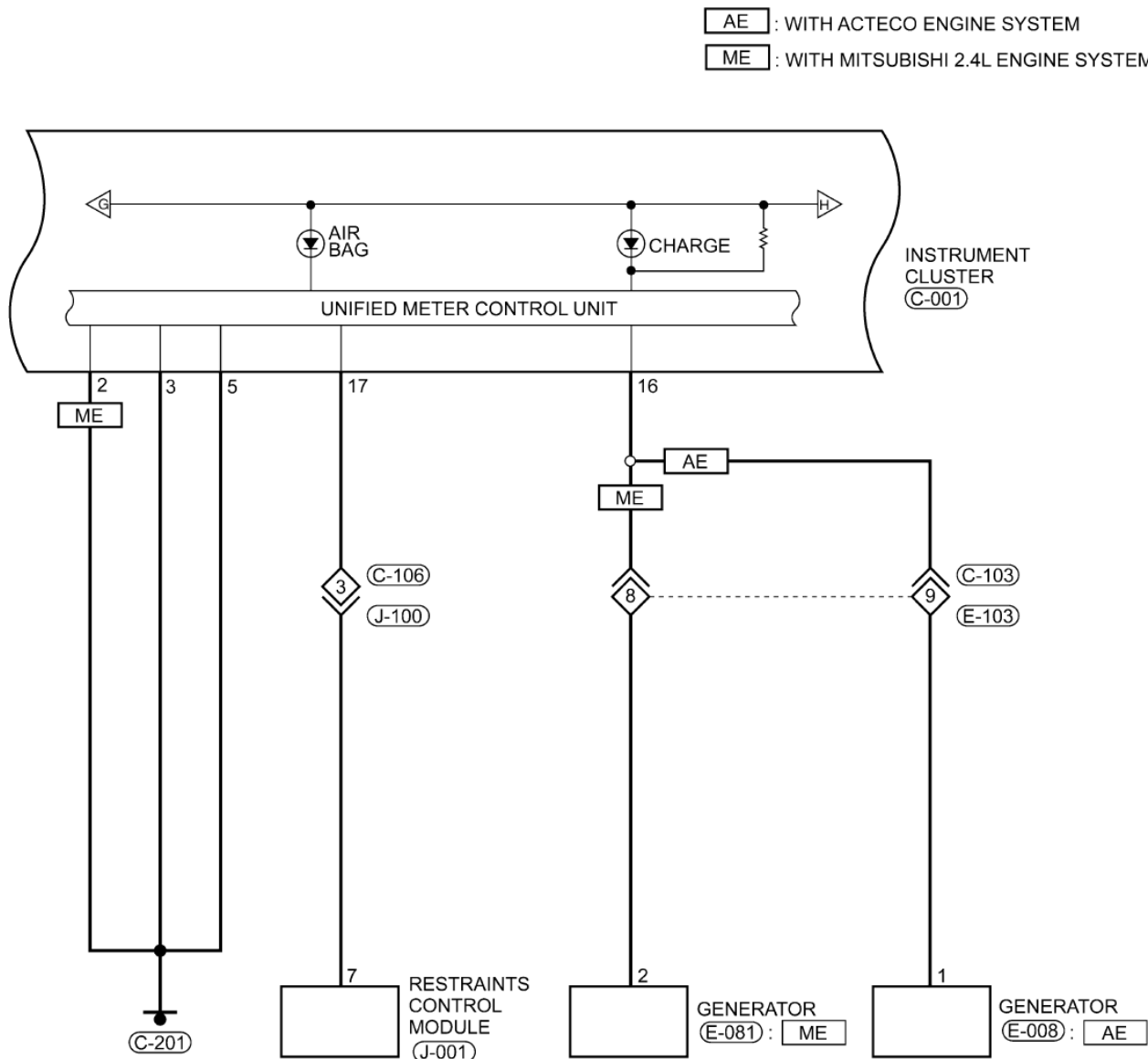
W2 : WITH 2.0L - 2.4L ENGINE SYSTEM





AE : WITH ACTECO ENGINE SYSTEM

ME : WITH MITSUBISHI 2.4L ENGINE SYSTEM





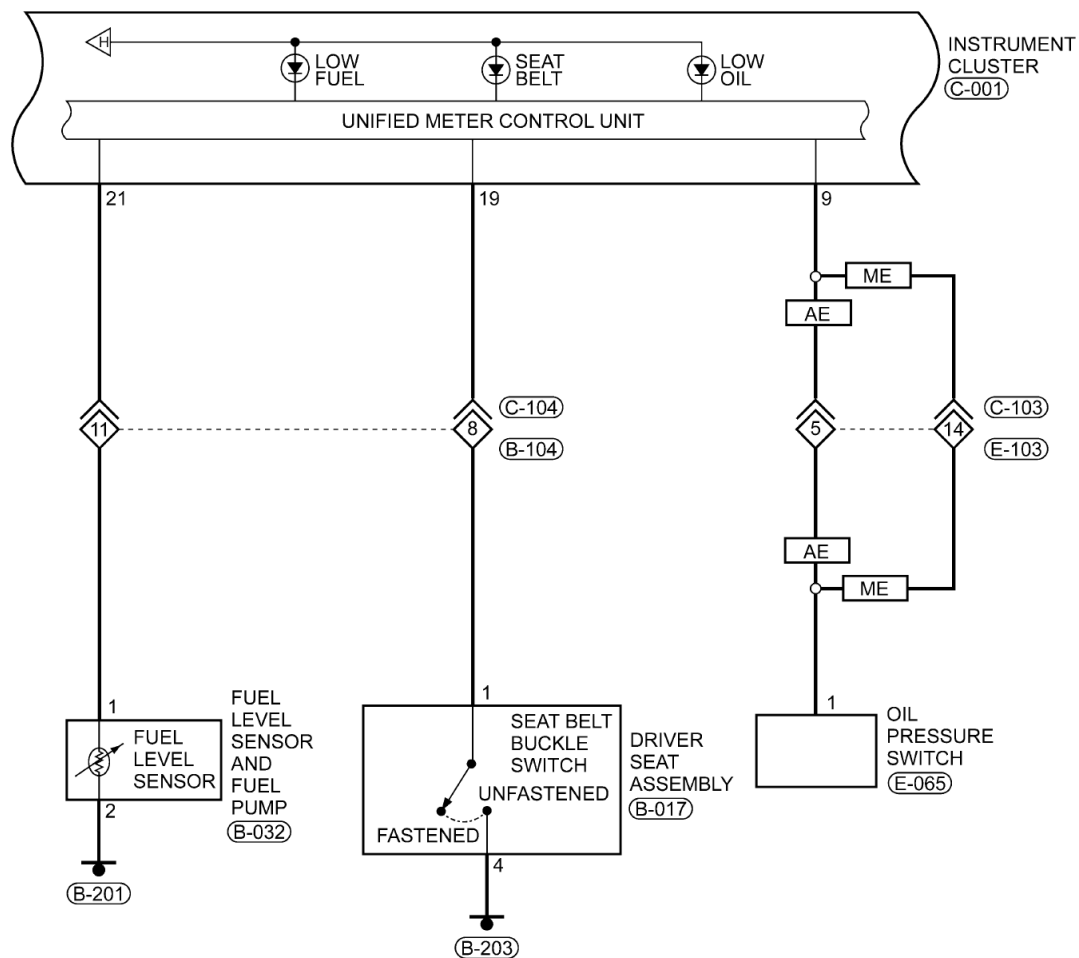
### Clearing Service Monitor Lamp

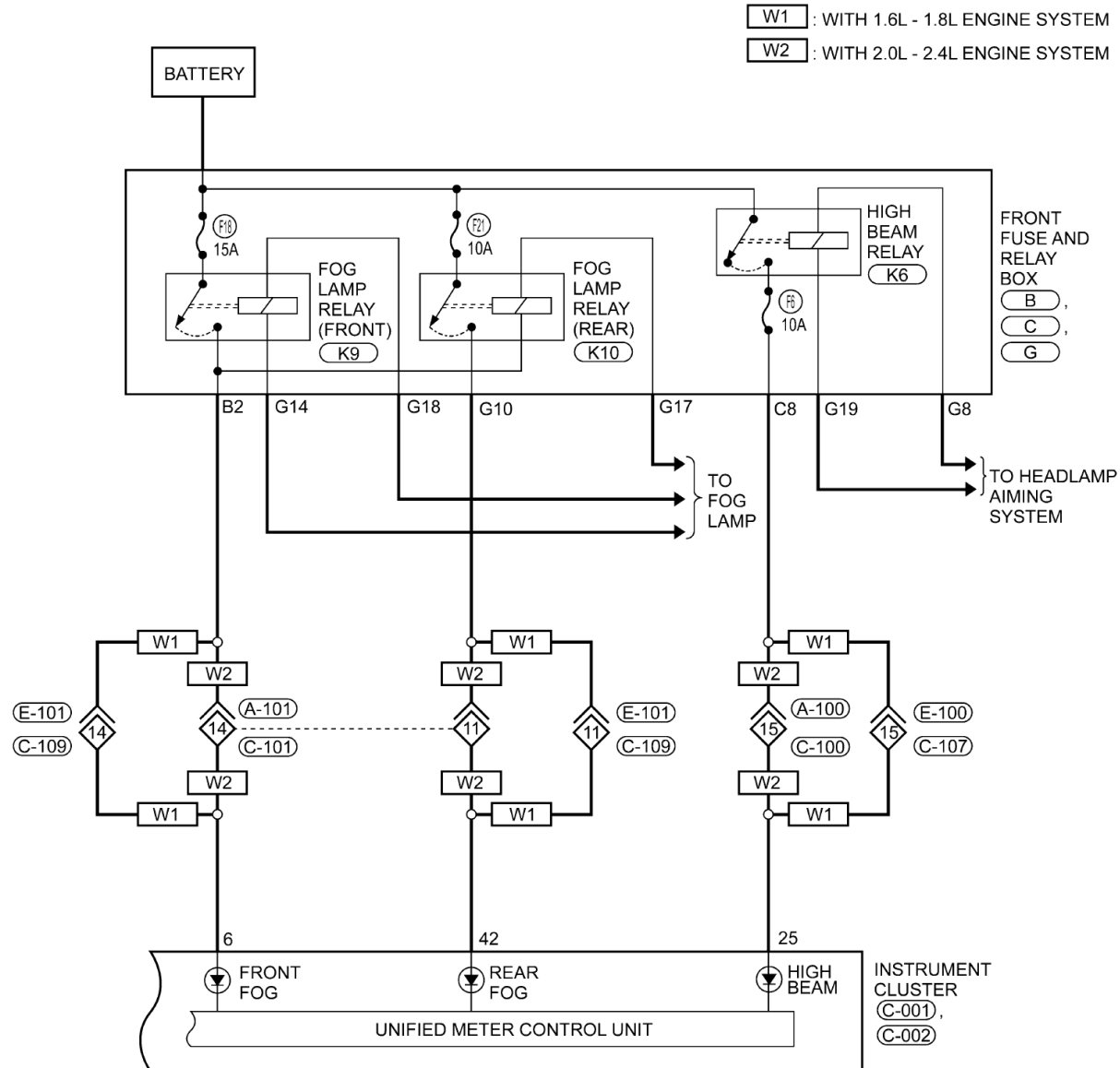
Perform the following to clear the service monitor lamp:

1. Turn the ignition switch off.
2. Press down and hold the Mode switch.
3. Turn the ignition switch on.
4. Release the Mode switch.
5. Press the Mode switch and the Clock switch simultaneously within 30 seconds and hold less than 2 seconds to clear the mileage maintenance identification.

AE : WITH ACTECO ENGINE SYSTEM

ME : WITH MITSUBISHI 2.4L ENGINE SYSTEM







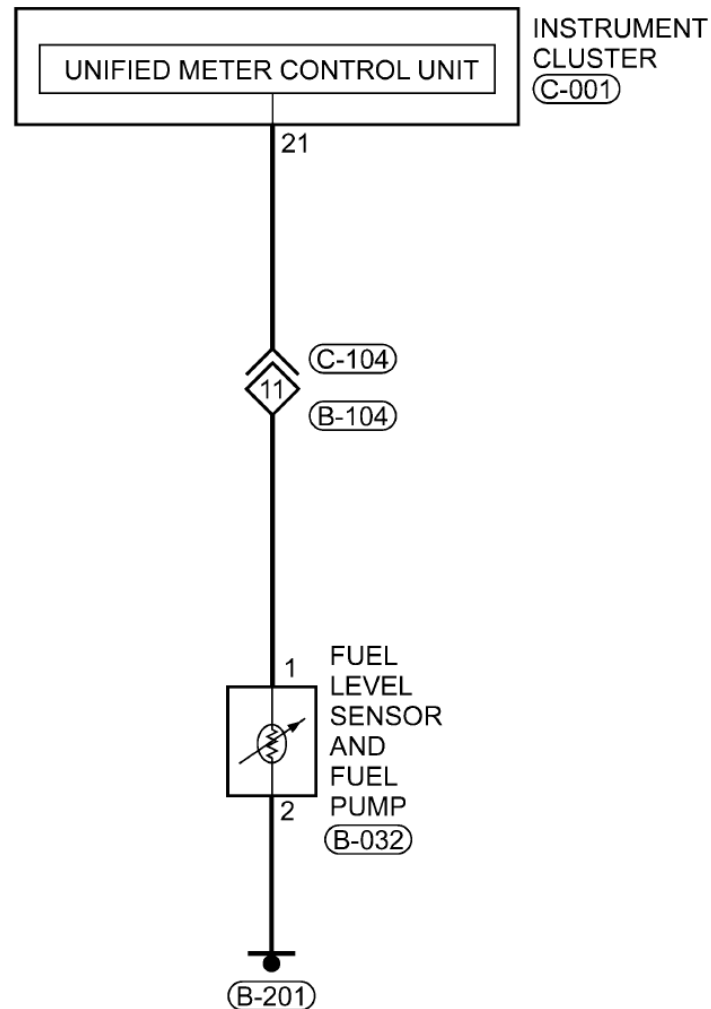
PIN	CIRCUIT IDENTIFICATION
1	Door Lamp
2	N/A (With ACTECO Engine)
	GND (With MITSUBISHI Engine)
3	GND (Power)
4	PWM Gear Mode
5	GND (Sensor)
6	Front Fog Lamp
7	—
8	Cruise Lamp
9	Low Oil Pressure Lamp
10	Speed Input
11	Continuous Supply Voltage
12	Illumination Lamp
13	Ignition Switch
14	ABS Lamp
15	Diagnostic Link K
16	Charge Lamp
17	Airbag Lamp
18	Parking Brake Lamp
19	Seatbelt Lamp
20	MIL Lamp
21	Low Fuel Level Lamp
22	Left Turn Lamp
23	Coolant Temperature Input
24	Right Turn Lamp
25	High Beam Lamp
26	Low Brake Fluid Level Lamp
27	Vehicle Speed Input
28	Parking Lamp
29	EPC Lamp

PIN	CIRCUIT IDENTIFICATION
33	N/A (With ACTECO Engine)
	P (With MITSUBISHI Engine)
34	N/A (With ACTECO Engine)
	R (With MITSUBISHI Engine)
35	N/A (With ACTECO Engine)
	N (With MITSUBISHI Engine)
36	N/A (With ACTECO Engine)
	Auto Mode (With MITSUBISHI Engine)
37	N/A (With ACTECO Engine)
	4 (With MITSUBISHI Engine)
38	N/A (With ACTECO Engine)
	3 (With MITSUBISHI Engine)
39	N/A (With ACTECO Engine)
	2 (With MITSUBISHI Engine)
40	N/A (With ACTECO Engine)
	1 (With MITSUBISHI Engine)
41	—
42	Rear Fog Lamp
43	—
44	—
45	—
46	—
47	Sport Mode (With ACTECO Engine)
	N/A (With MITSUBISHI Engine)
48	Winter Mode (With ACTECO Engine)
	N/A (With MITSUBISHI Engine)
49	TCM Failure (With ACTECO Engine)
	N/A (With MITSUBISHI Engine)
50	—
51	—
52	—
53	—
54	—
55	—
56	—
57	—
58	—
59	—
60	—
61	—

PIN	CIRCUIT IDENTIFICATION	PIN	CIRCUIT IDENTIFICATION
30	—	62	—
31	Fuel Consumption Input	63	—
32	—	64	—



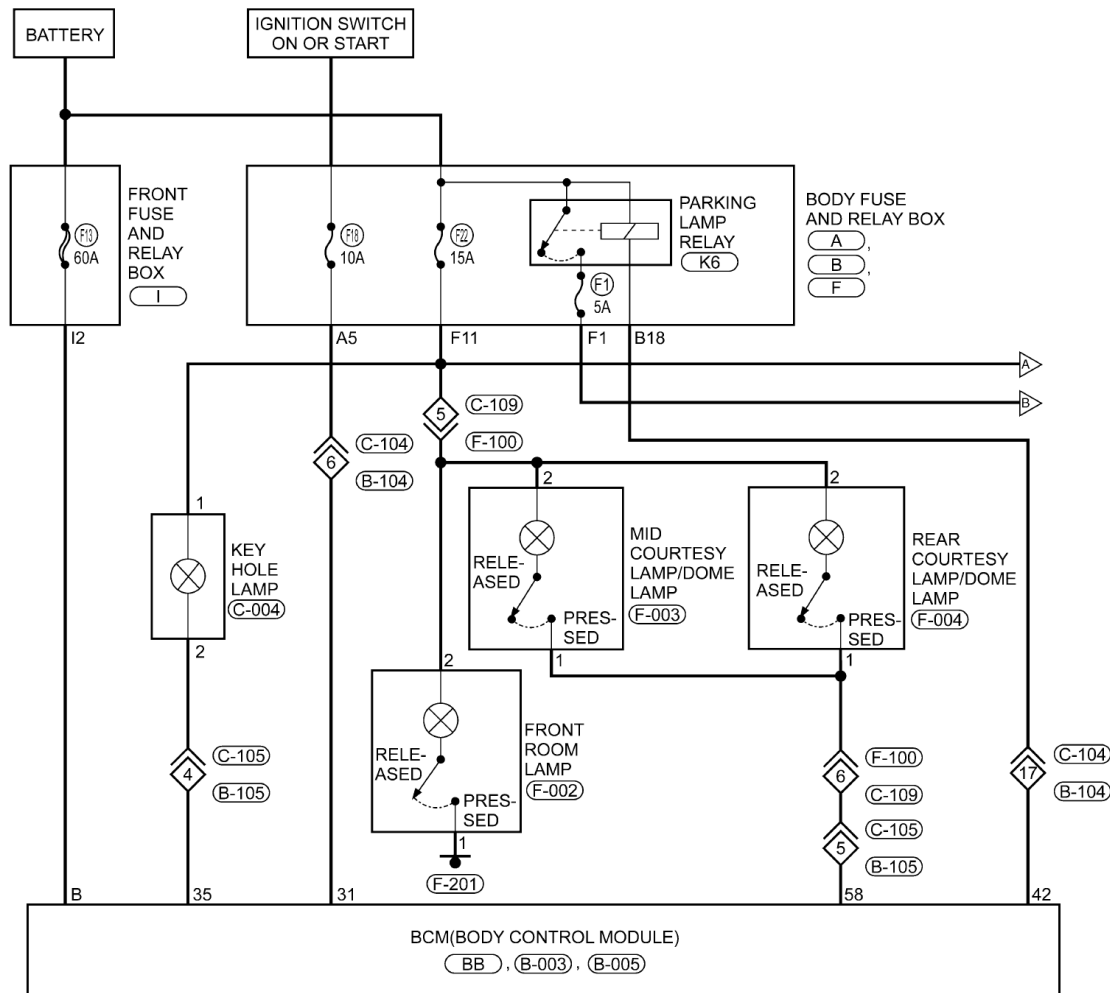
FUEL GAUGE POINTER POSITION	TANK (LITERS)	SENDER RESISTANCE (OHM)	POINTER TOLERANCE
EMPTY	5	283	±3 °
RESERVE	11	189	±3 °
1/4	16.5	137	±3 °
1/2	28	89	±3 °
3/4	39.5	62	±3 °
FULL	51	40	±3 °





# Operation

The key hole lamp and front/middle/rear courtesy lamps are controlled by the BCM. Front step lamps are controlled by the door lock switch. When the door is open, the front step lamp will light up automatically. Other lamps are controlled by the lighting and turn signal switch.

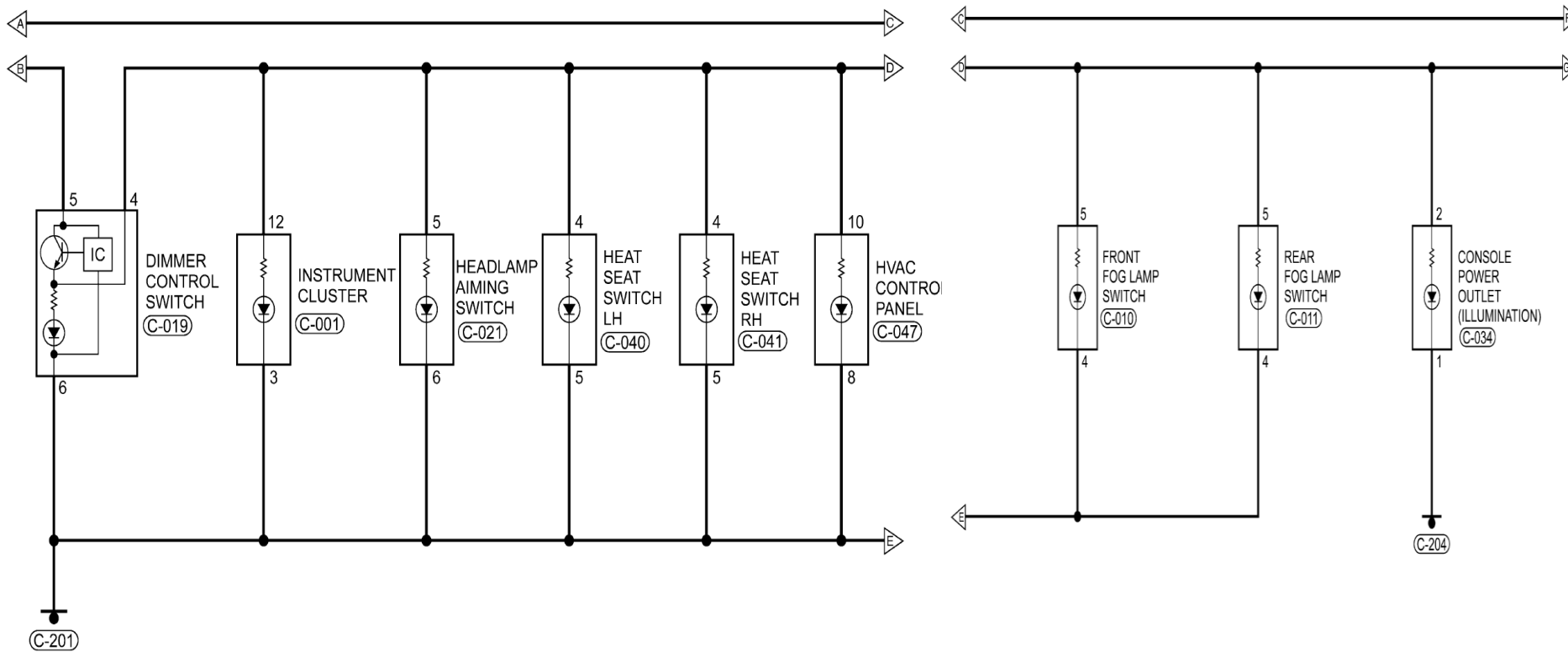






### تنظیم نور پشت آمپر و کلیدها

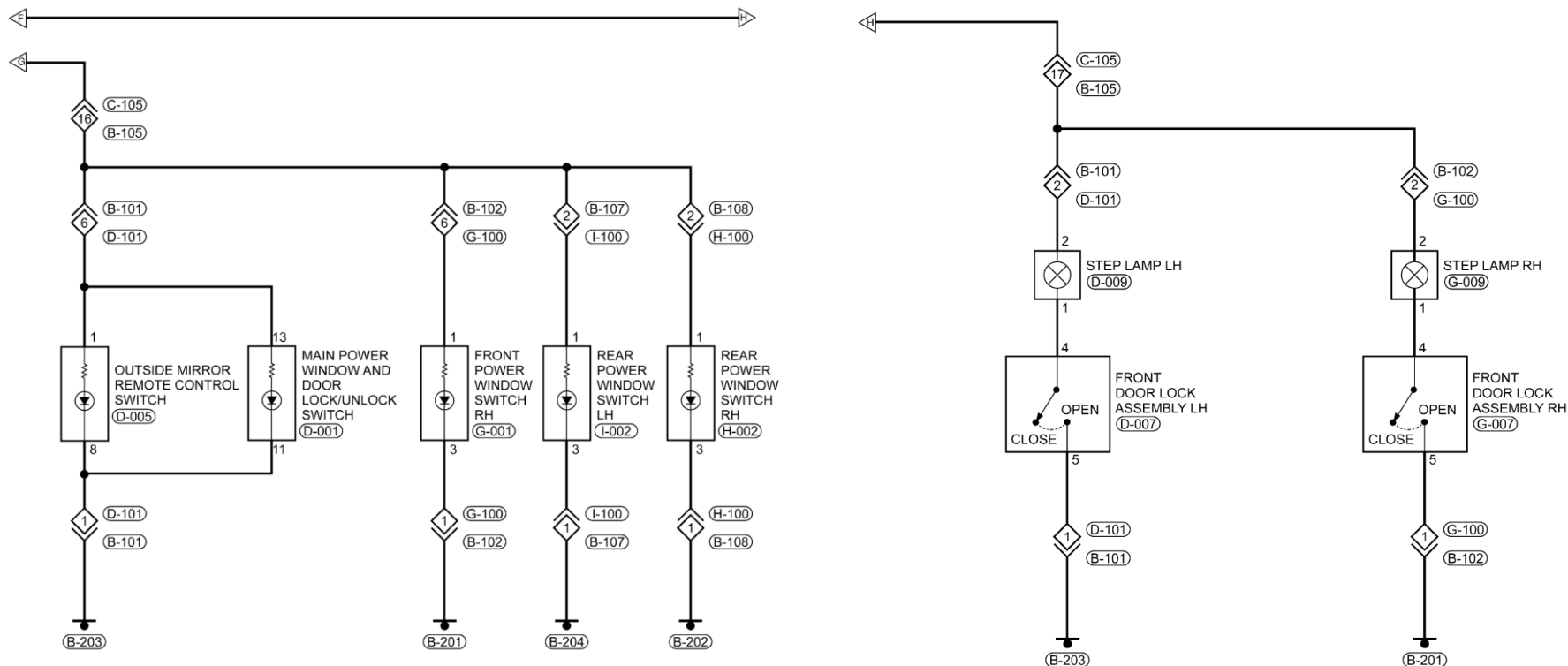
اداره فنی و مهندسی





### تنظیم نور پشت آمپر و کلیدها

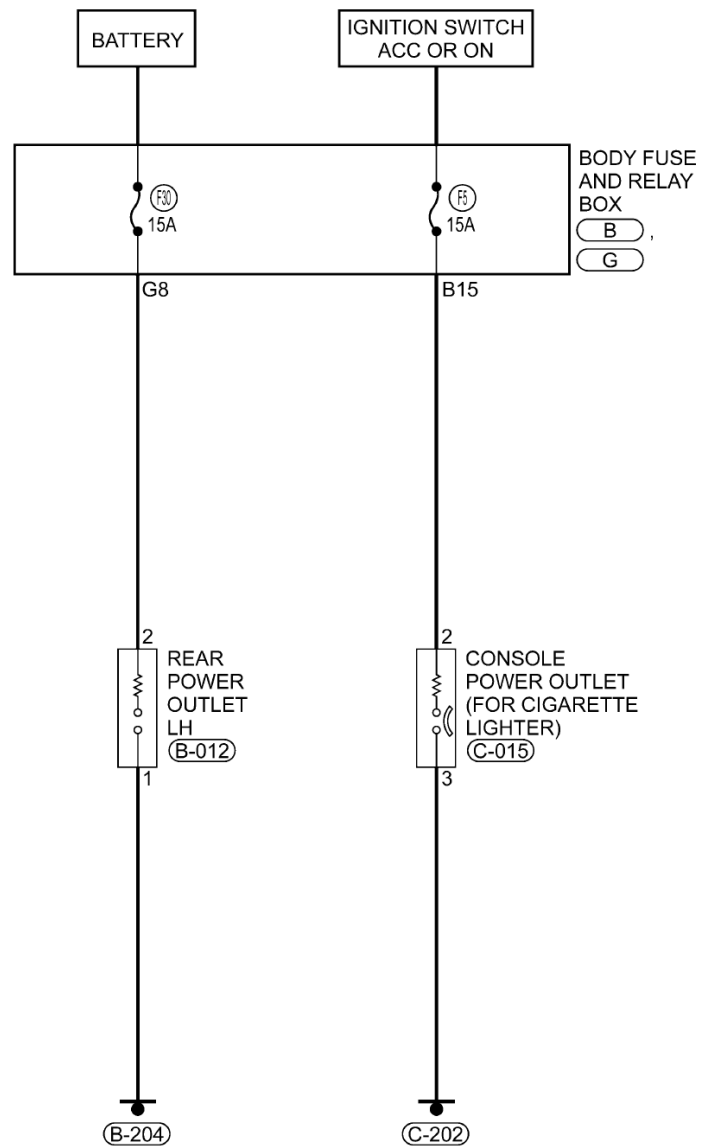
اداره فنی و مهندسی

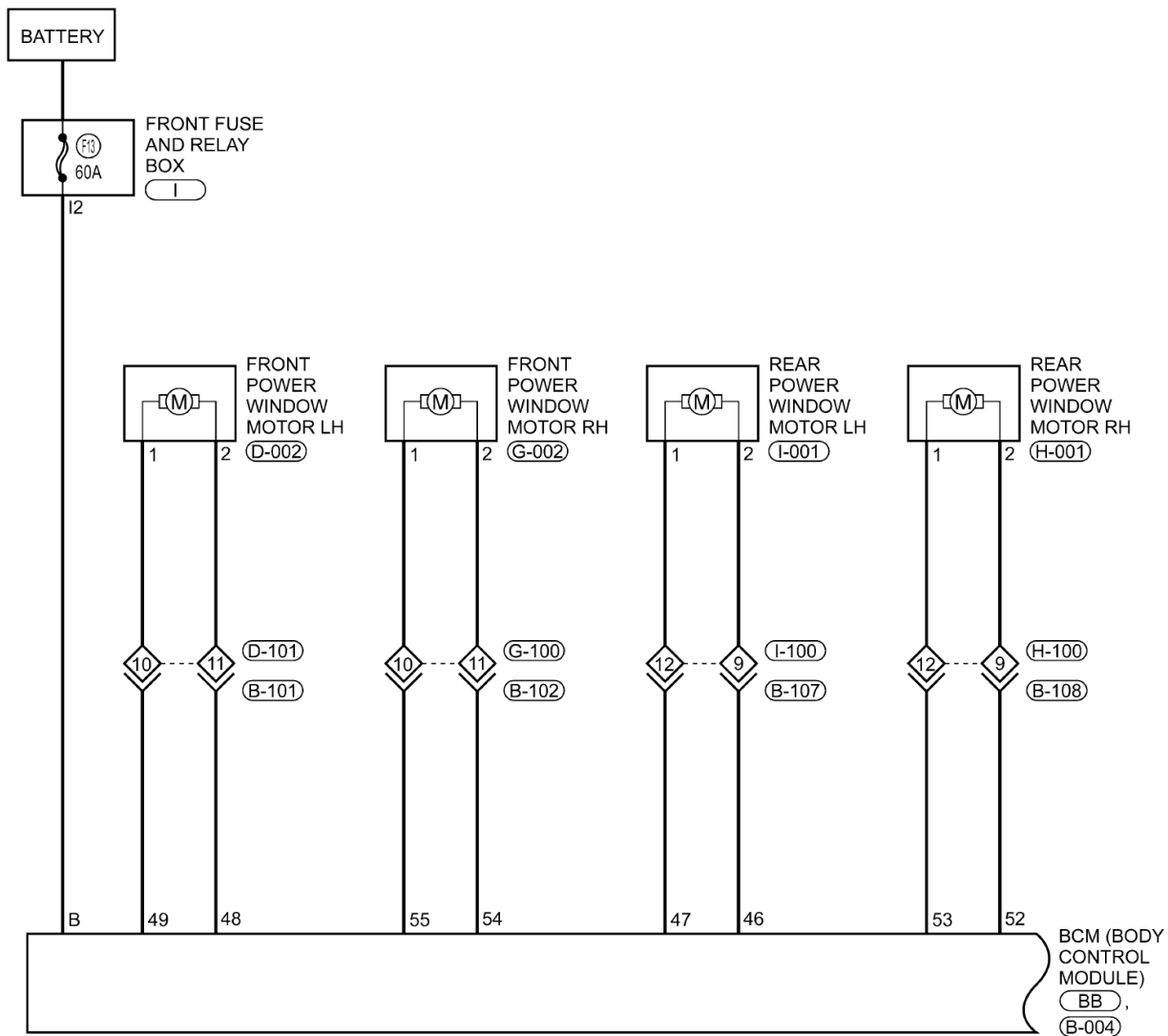


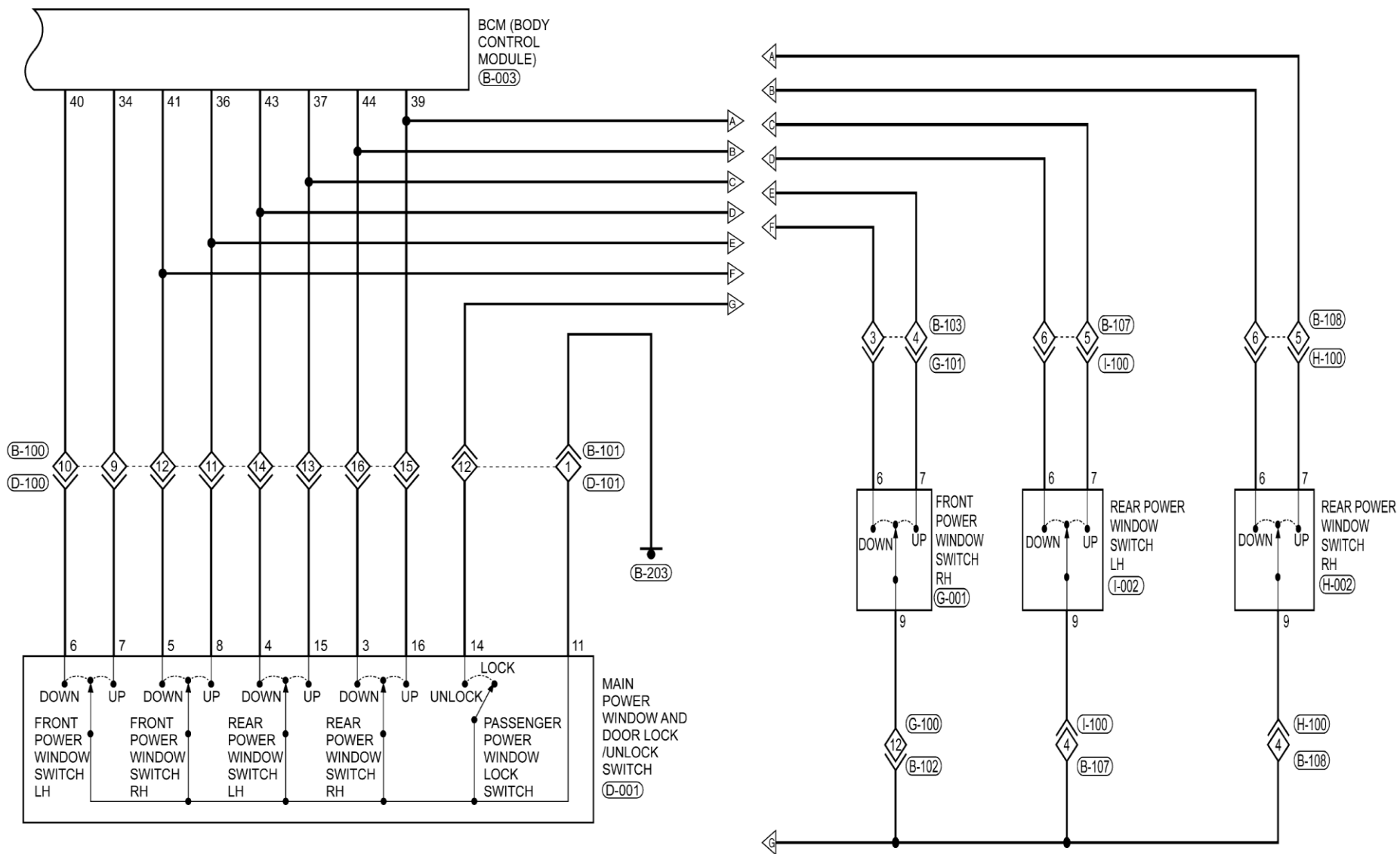


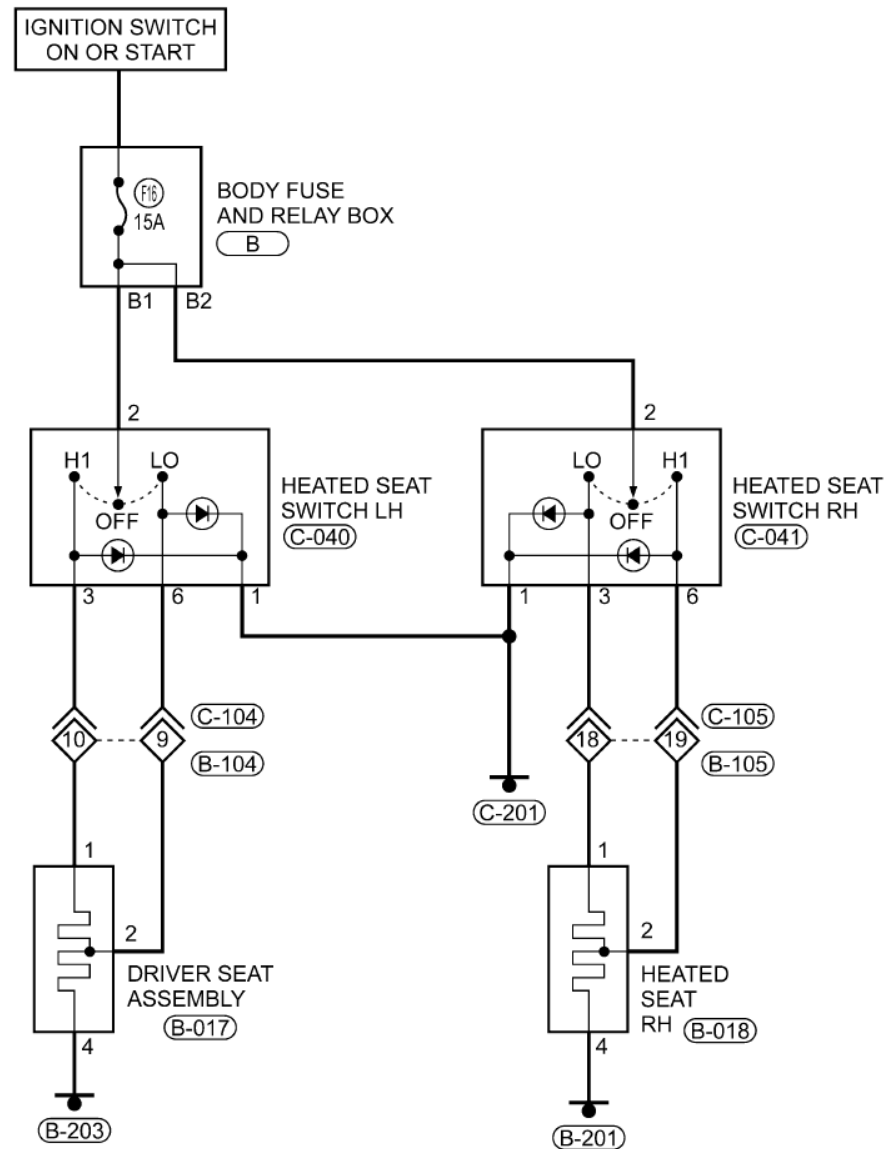
فندک

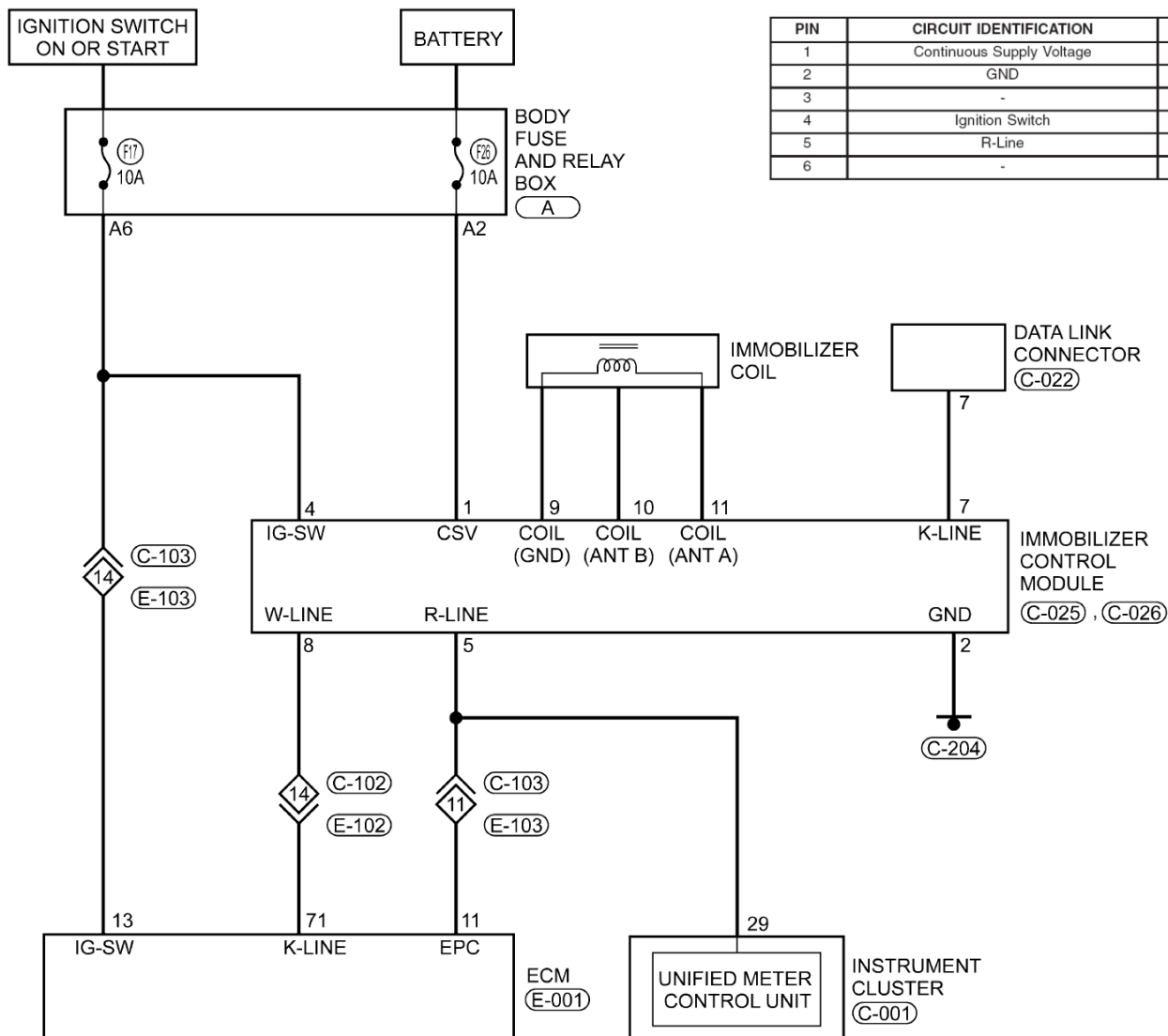
اداره فنی و مهندسی











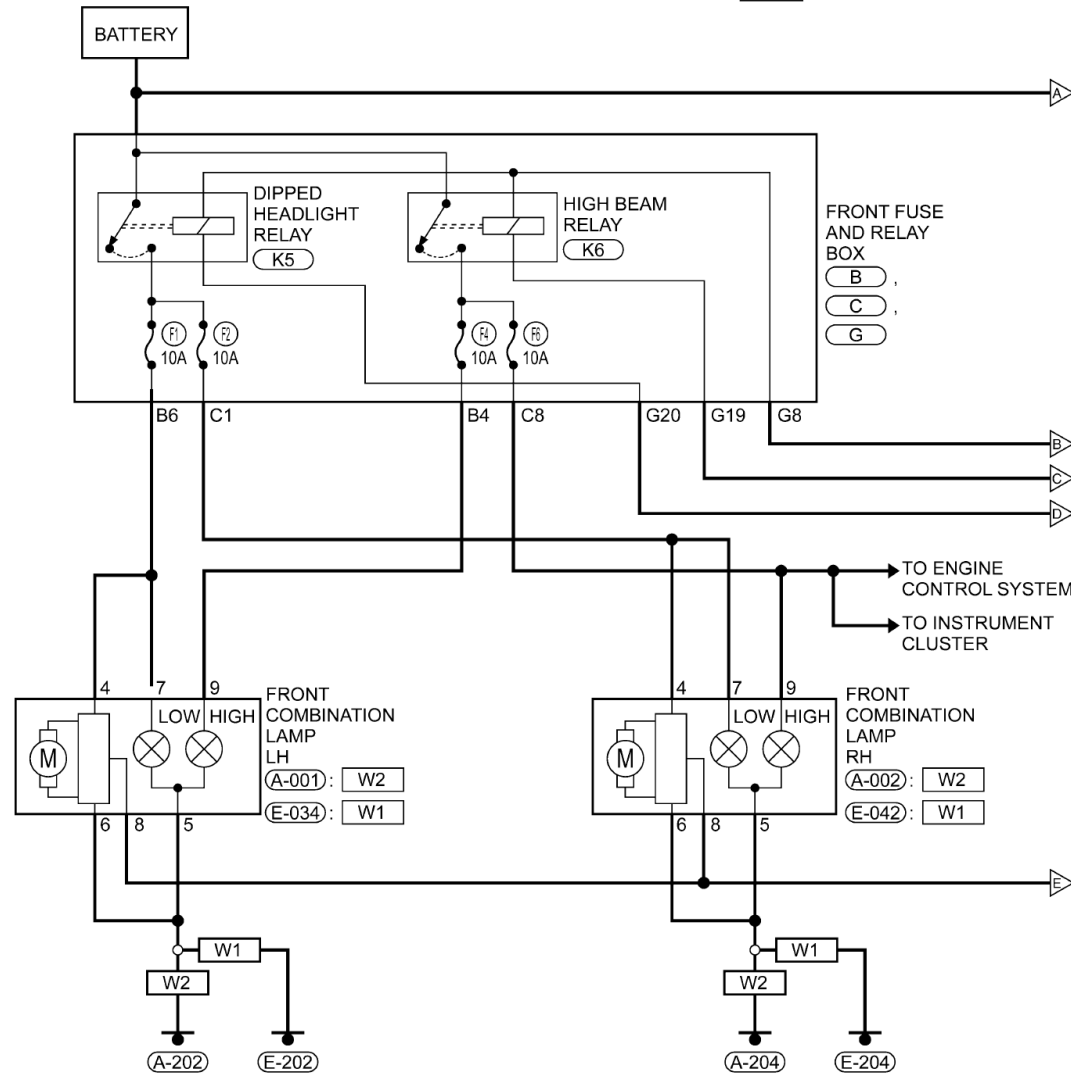
PIN	CIRCUIT IDENTIFICATION	PIN	CIRCUIT IDENTIFICATION
1	Continuous Supply Voltage	7	Diagnostic Link K
2	GND	8	W-Line
3	-	9	Coil (GND)
4	Ignition Switch	10	Coil (ANT B)
5	R-Line	11	Coil (ANT A)
6	-	-	-



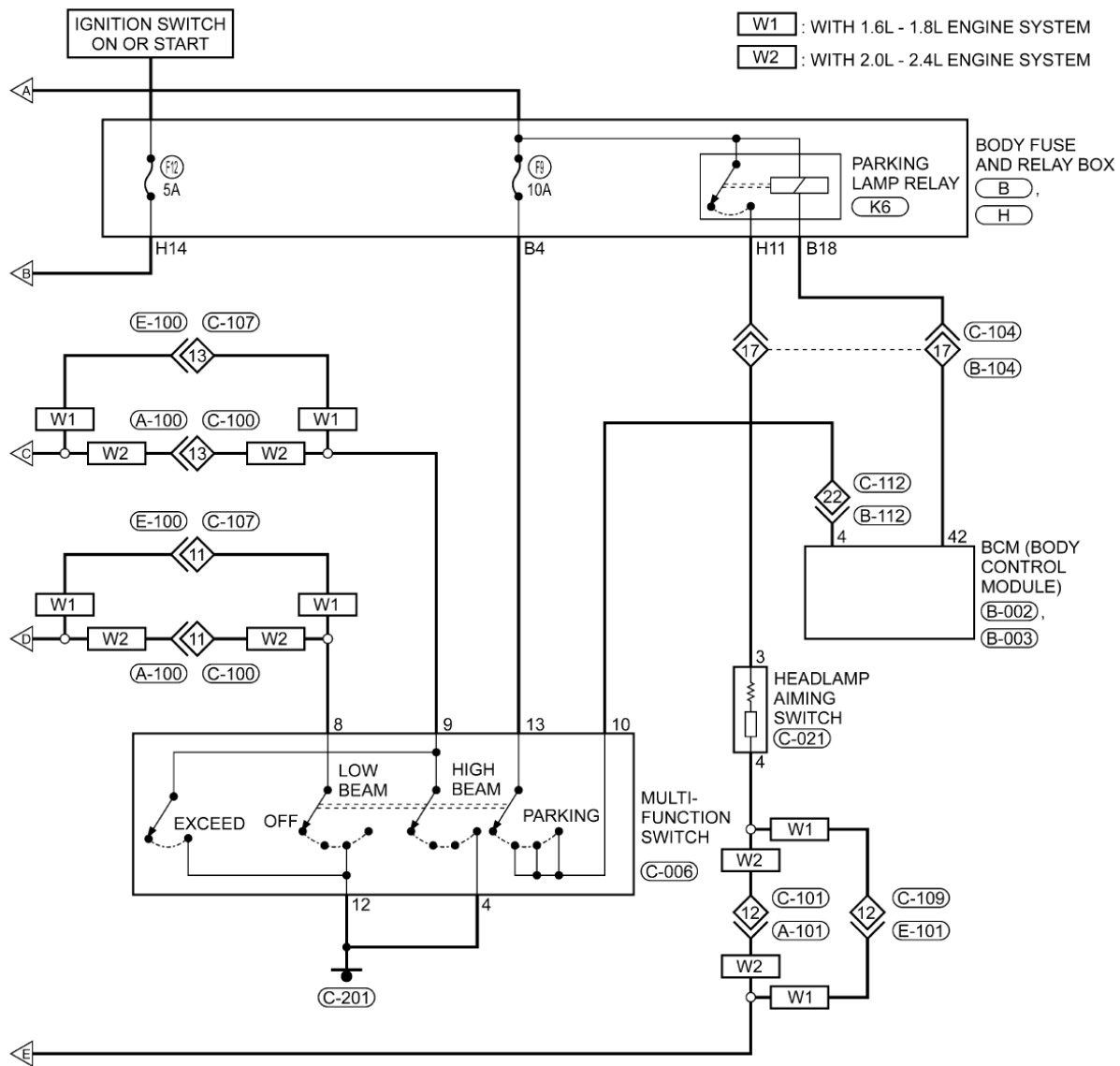
### HEADLAMP AIMING SYSTEM

W1 : WITH 1.6L - 1.8L ENGINE SYSTEM

W2 : WITH 2.0L - 2.4L ENGINE SYSTEM



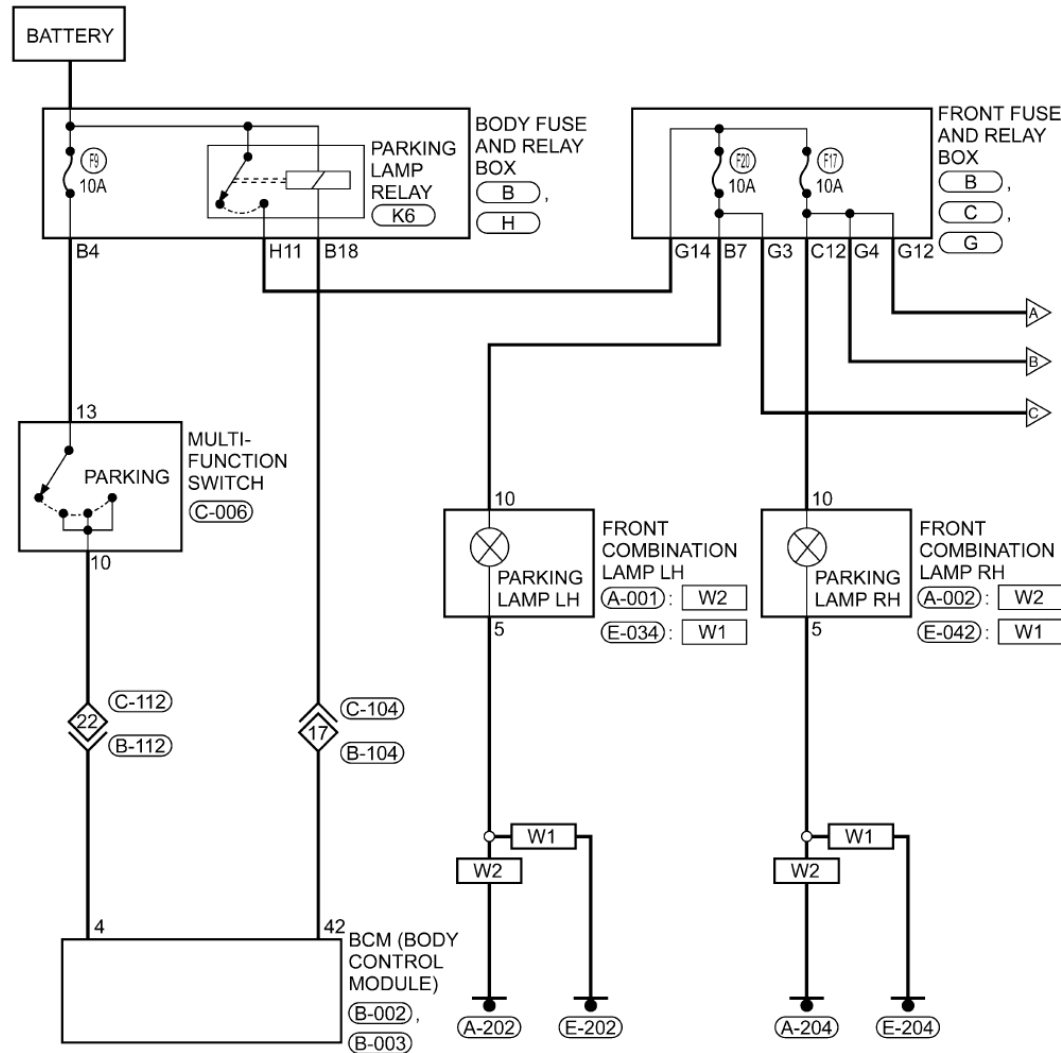


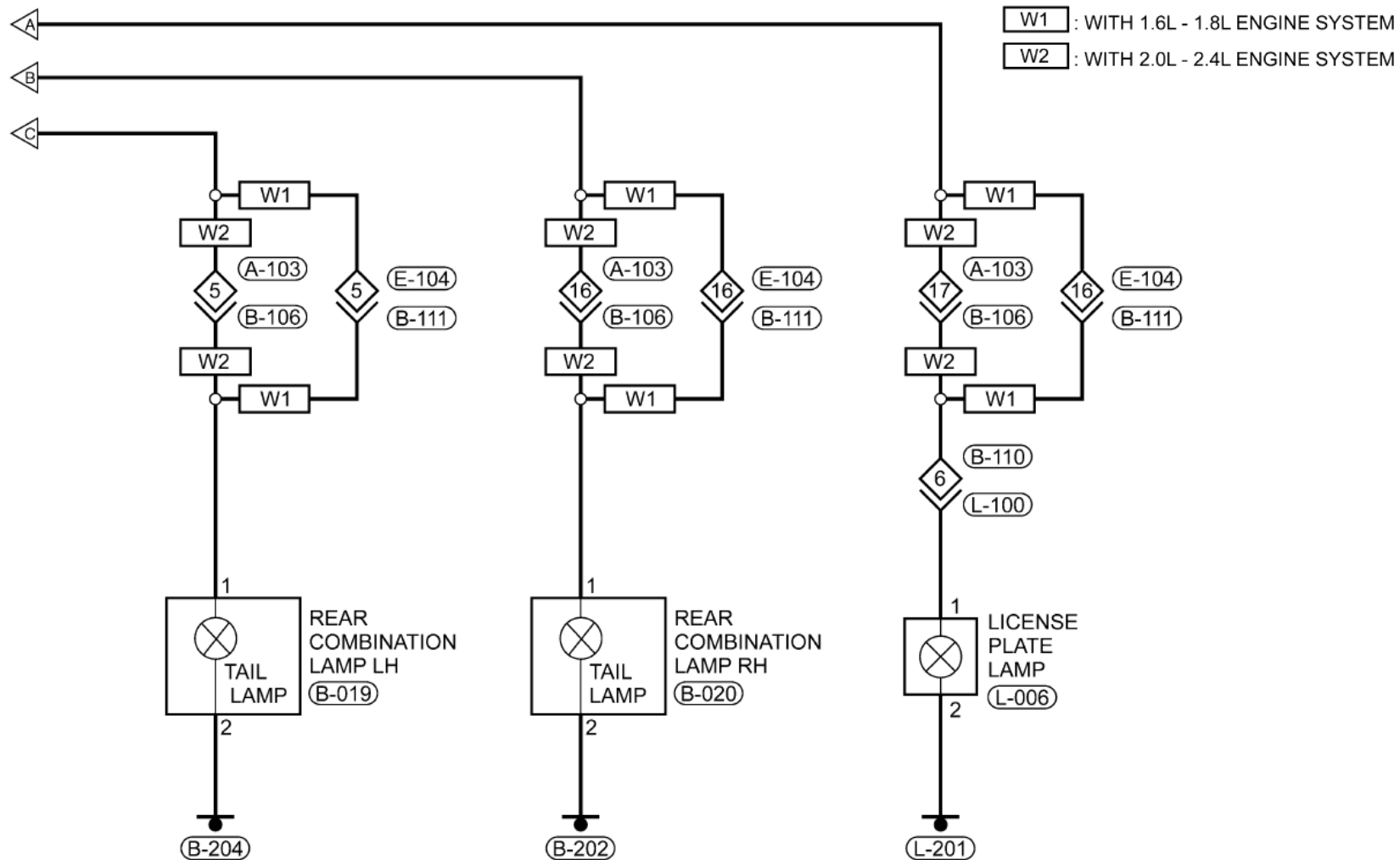




PARKING, LICENSE PLATE AND TAIL LAMPS

W1 : WITH 1.6L - 1.8L ENGINE SYSTEM  
 W2 : WITH 2.0L - 2.4L ENGINE SYSTEM



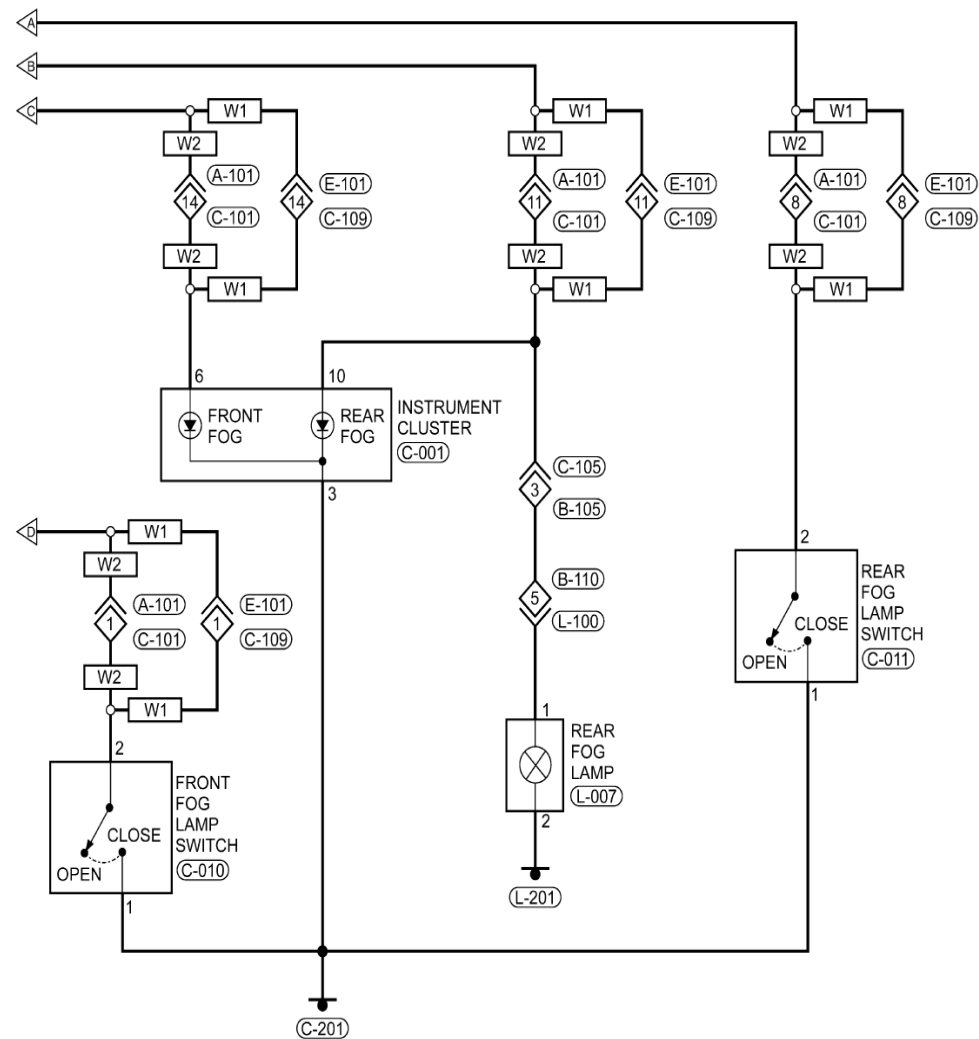
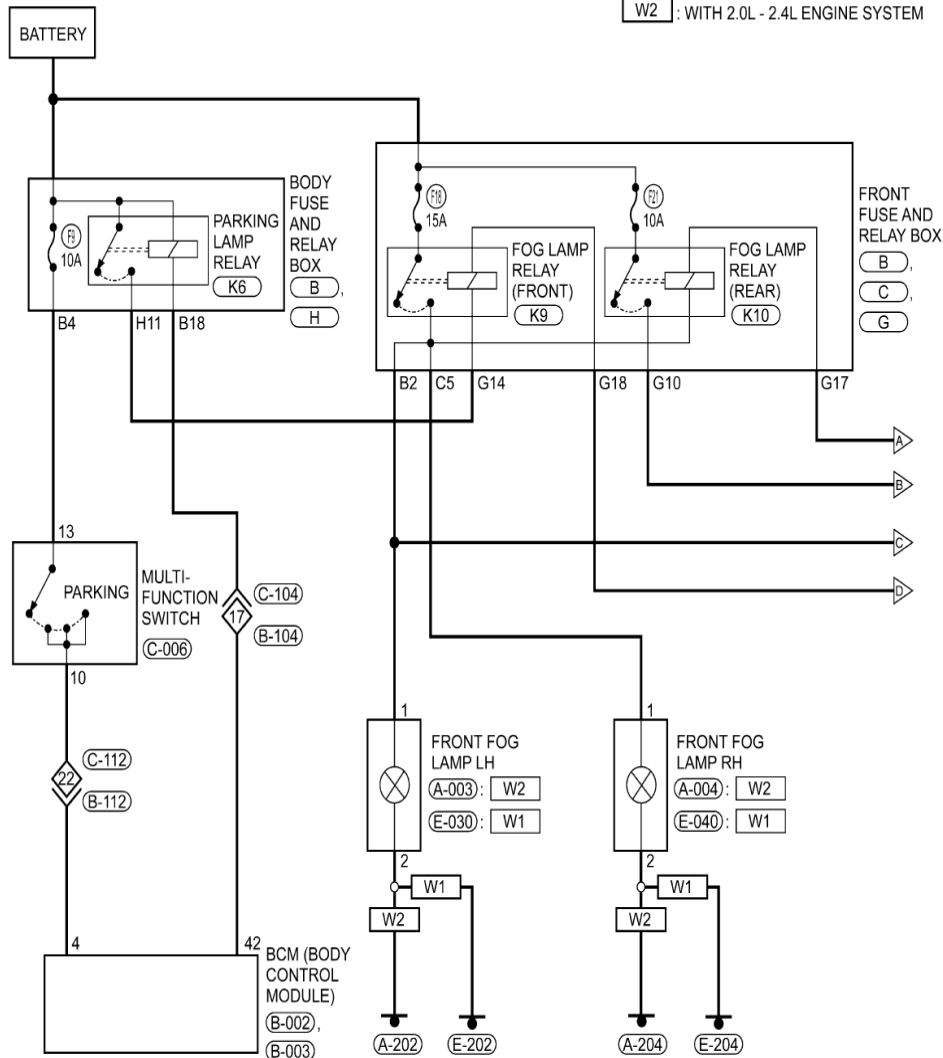


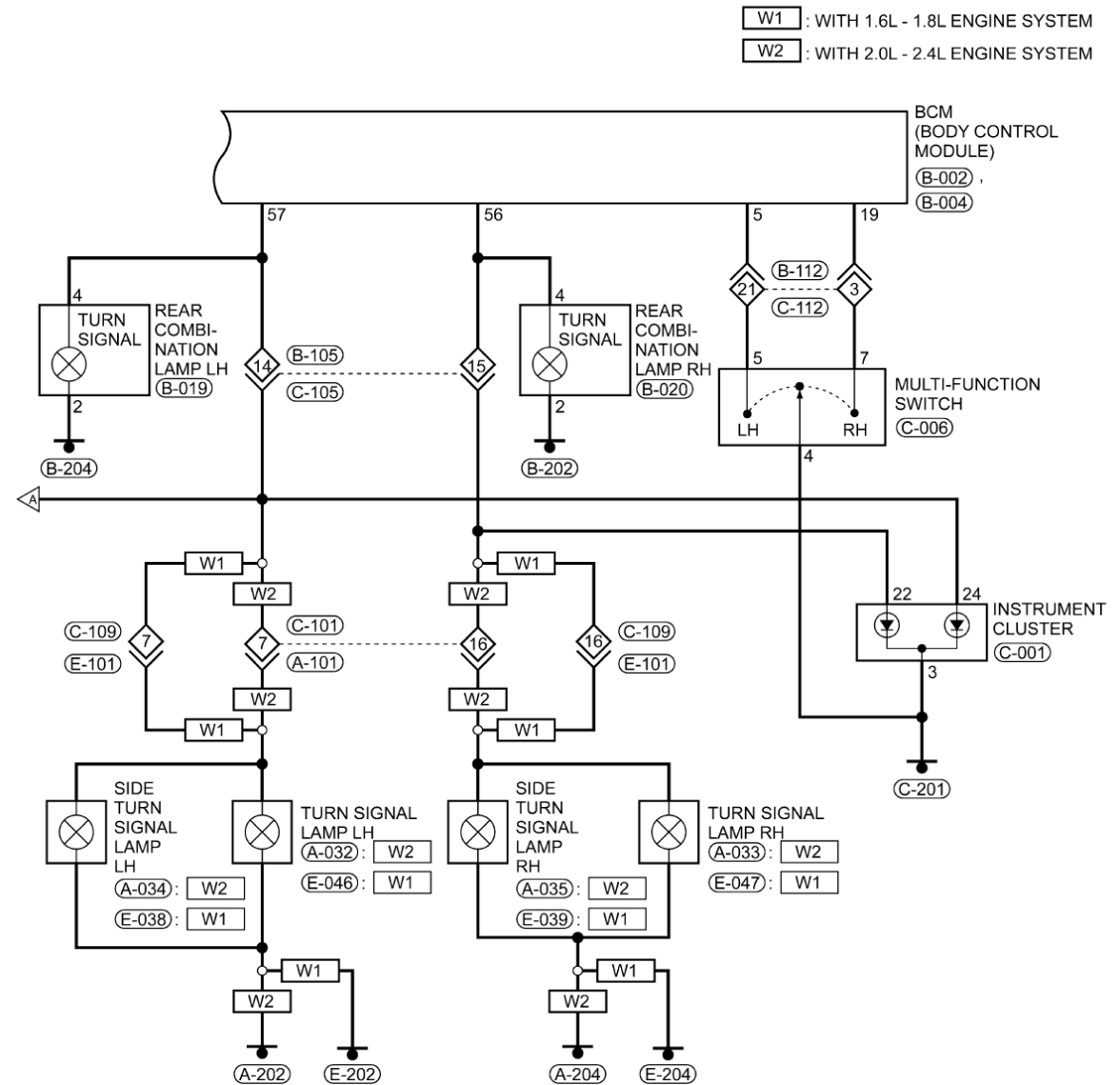
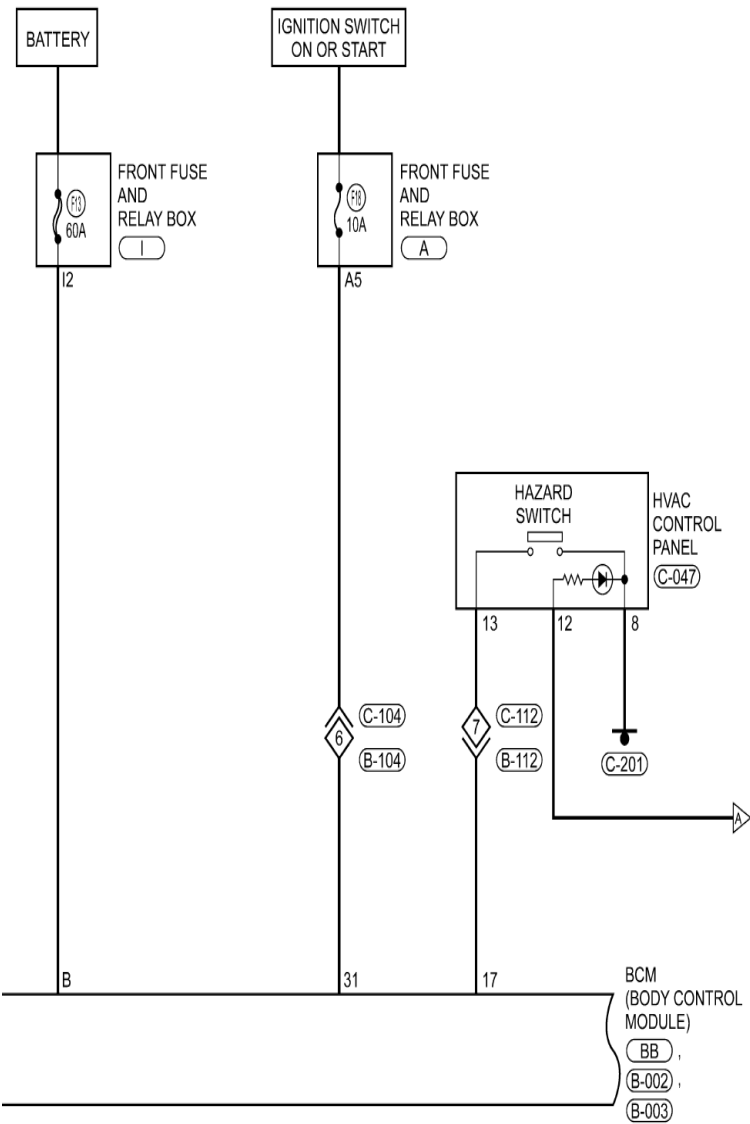


FOG LAMP

W1 : WITH 1.6L - 1.8L ENGINE SYSTEM  
W2 : WITH 2.0L - 2.4L ENGINE SYSTEM

W1 : WITH 1.6L - 1.8L ENGINE SYSTEM  
W2 : WITH 2.0L - 2.4L ENGINE SYSTEM



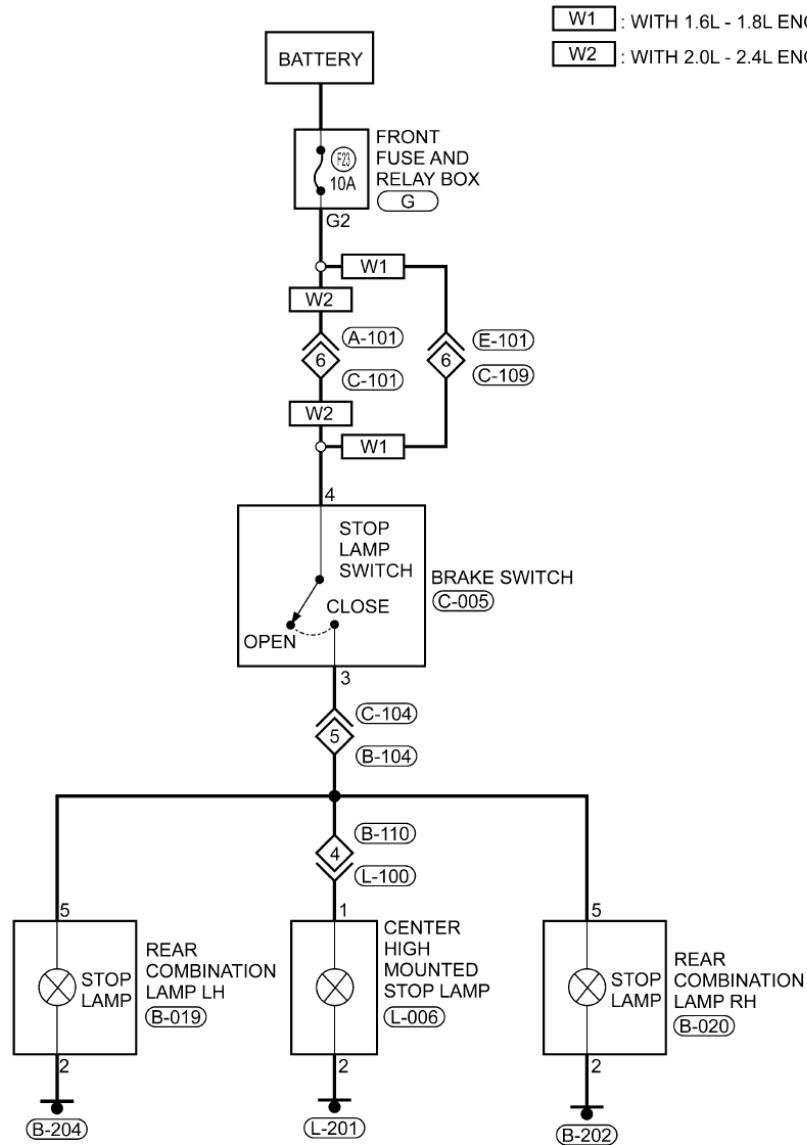




### چراغ ترمز

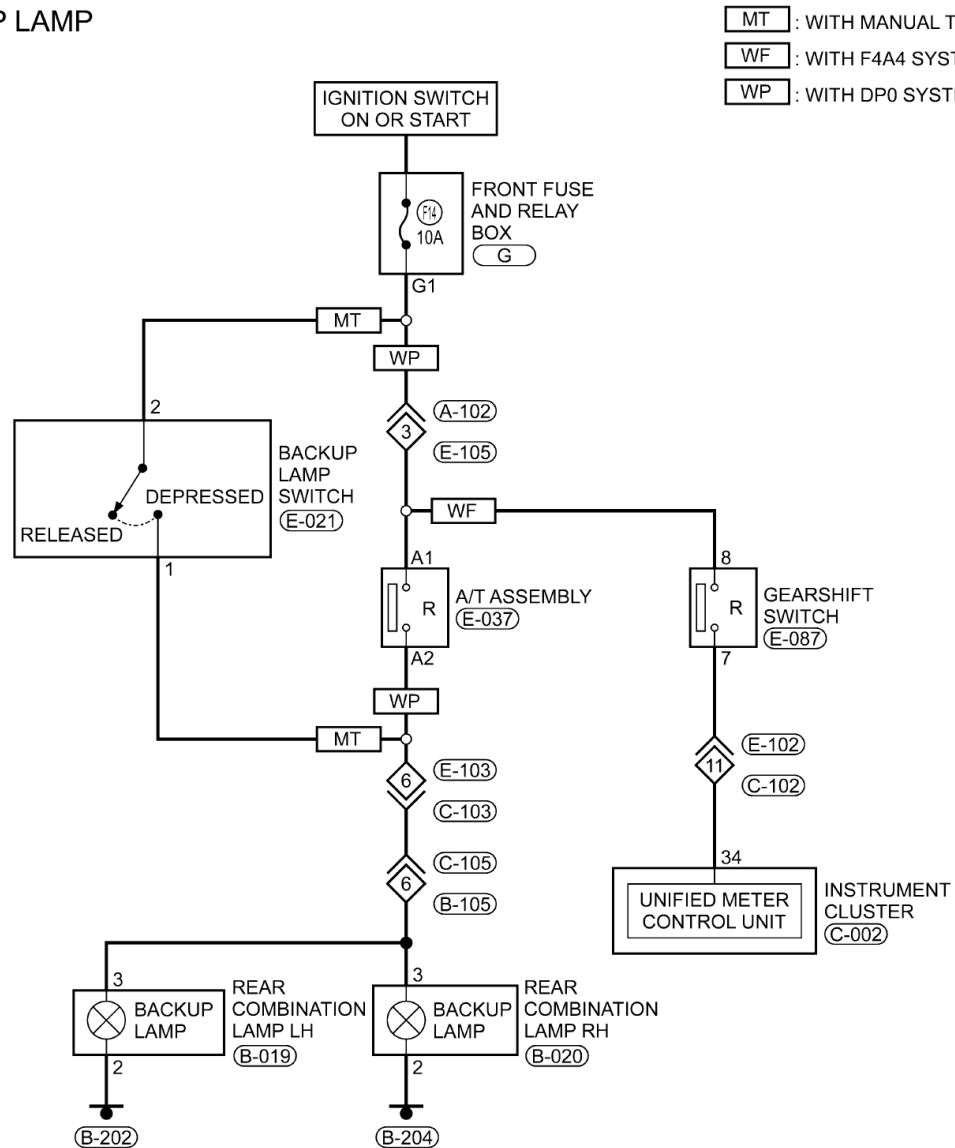


W1 : WITH 1.6L - 1.8L ENGINE SYSTEM  
 W2 : WITH 2.0L - 2.4L ENGINE SYSTEM





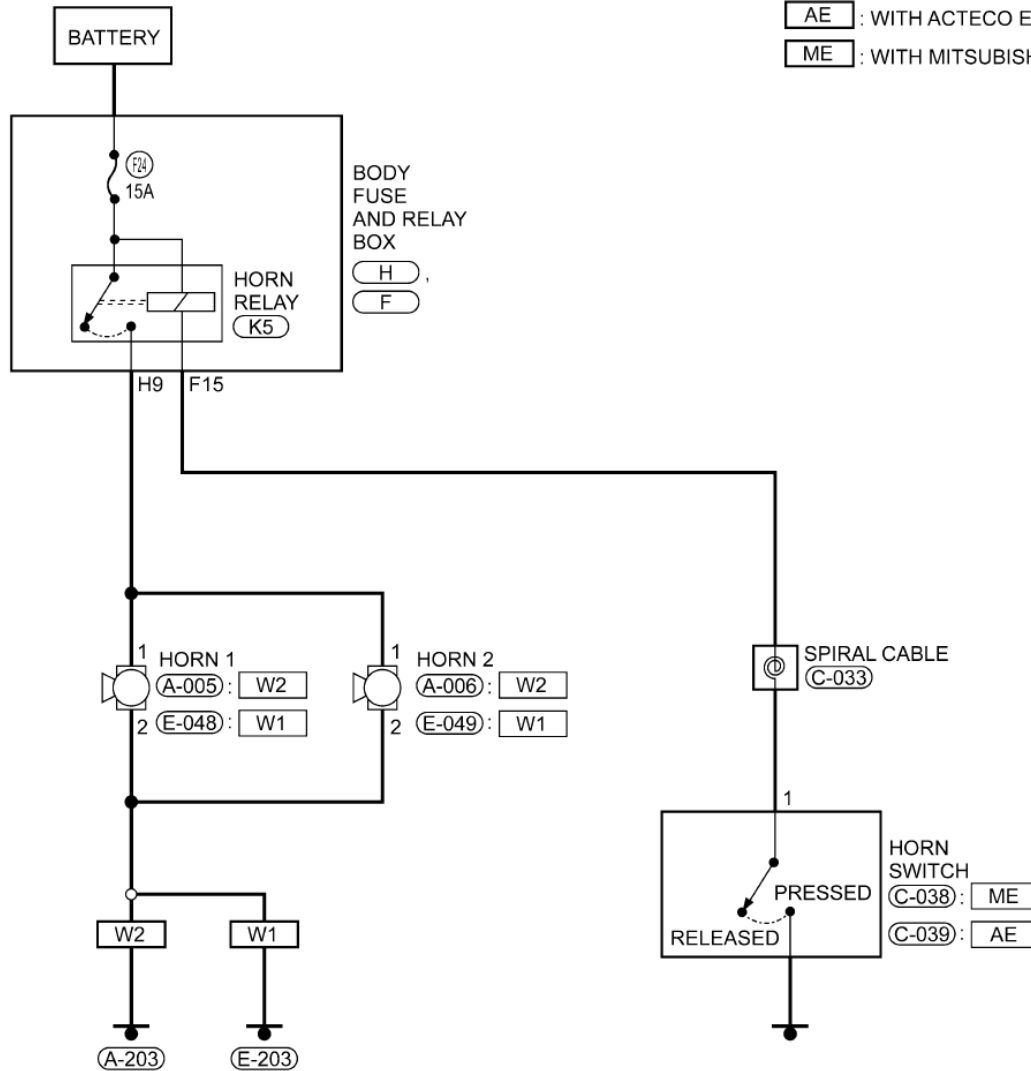
REAR LAMP



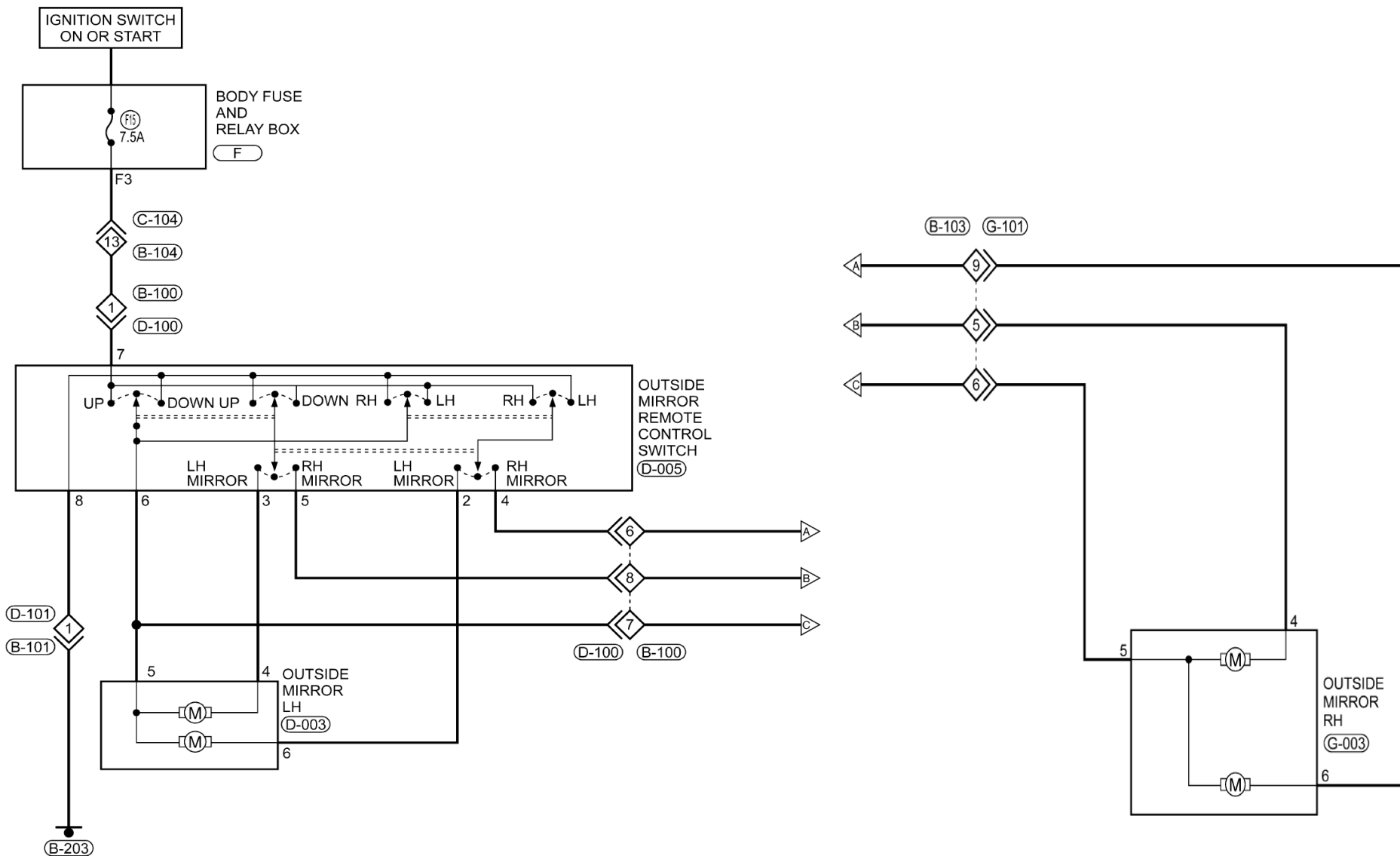


# HORN

- W1 : WITH 1.6L - 1.8L ENGINE SYSTEM
- W2 : WITH 2.0L - 2.4L ENGINE SYSTEM
- AE : WITH ACTECO ENGINE SYSTEM
- ME : WITH MITSUBISHI 2.4L ENGINE SYSTEM









### گرمکن آینه های جانبی

اداره فنی و مهندسی

