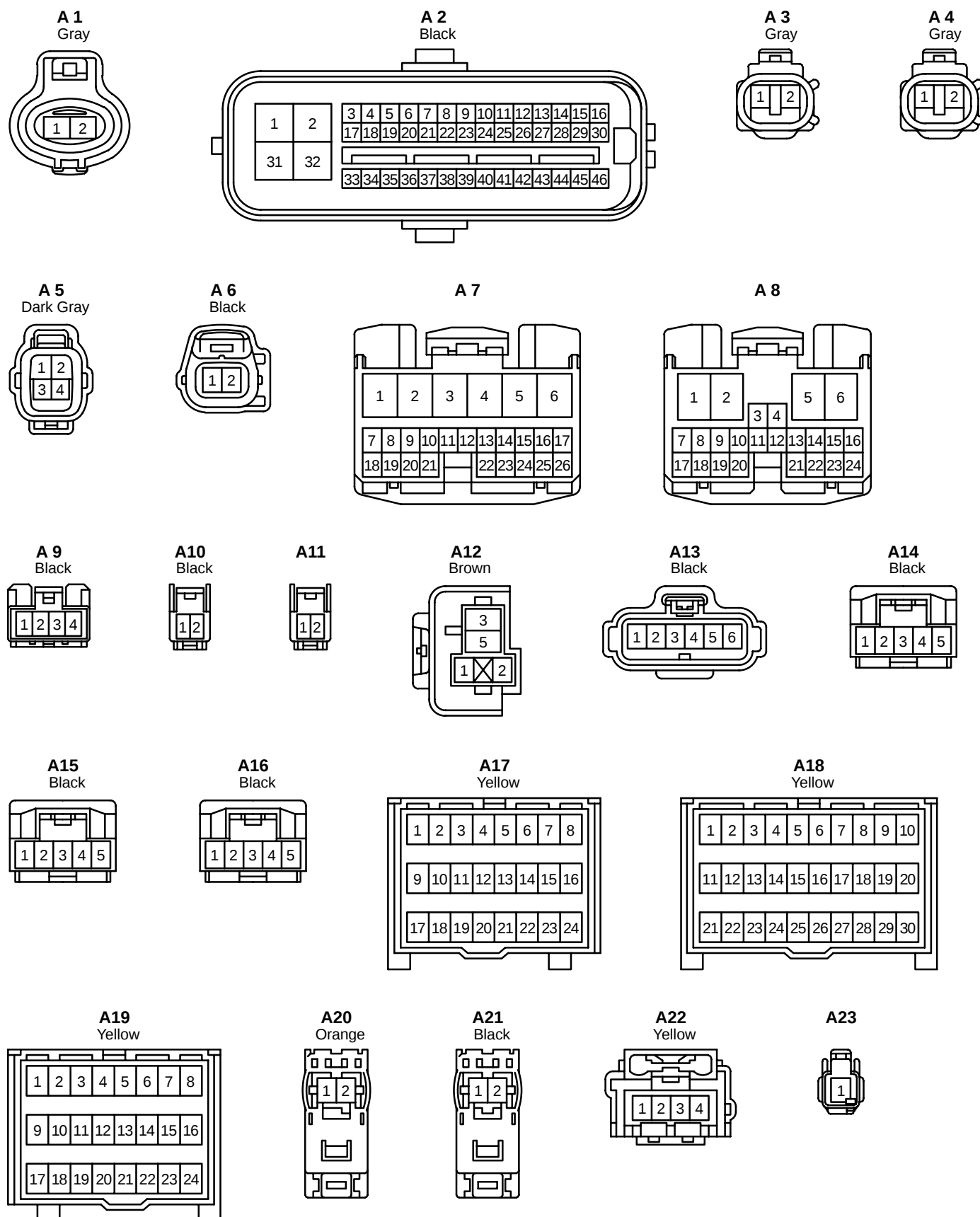


K CONNECTOR LIST



A24



A25
Black



A26
Black



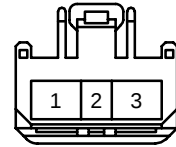
B 1
Black



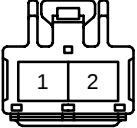
B 2
Black



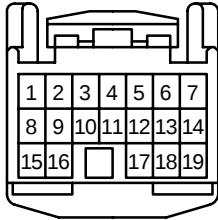
B 3
Black



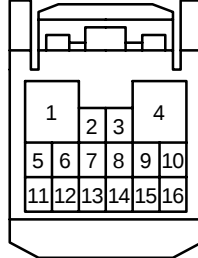
B 4
Black



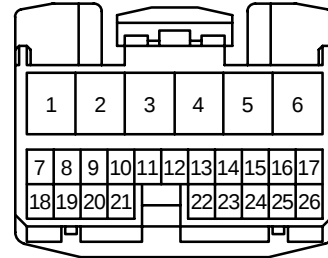
B 5



B 6



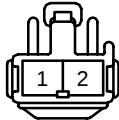
B 7



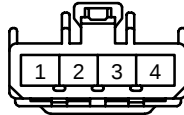
B 8
Black



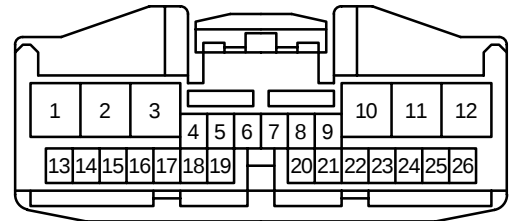
B 9



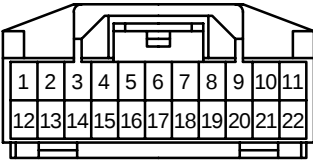
B10
Black



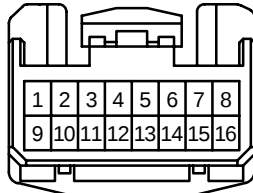
B11



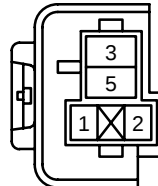
B12
Orange



B13



B14



B15



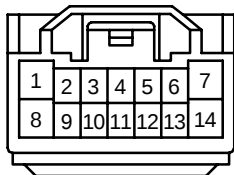
B16



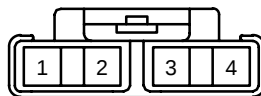
B17
Gray



B18



B19



C 1



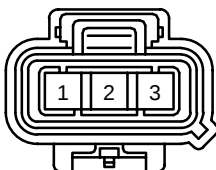
C 2
Black



C 3
Yellow



C 4
Orange



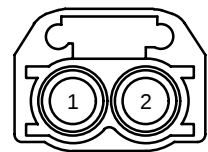
C 5
Gray



C 6
Gray



C 7
Black

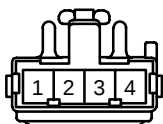


K CONNECTOR LIST

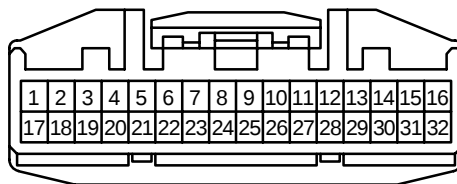
C 8



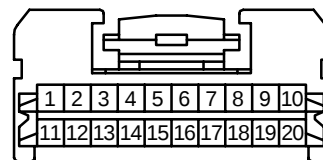
C 9
Black



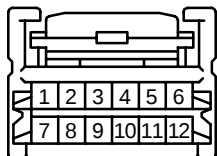
C10



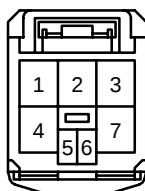
C11



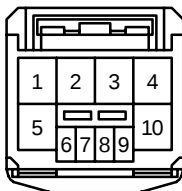
C12



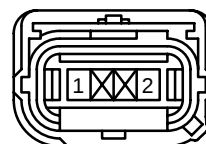
C13



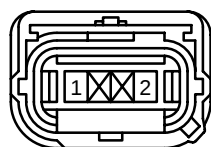
C14



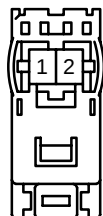
C15
Yellow



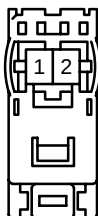
C16
Yellow



C17
Black



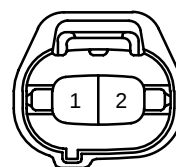
C18
Black



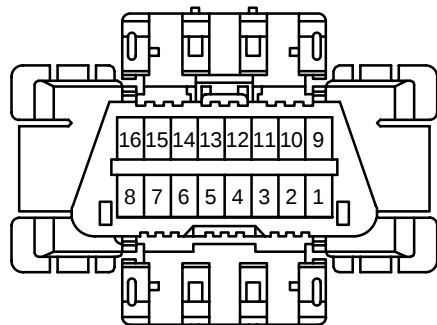
C19
Dark Gray



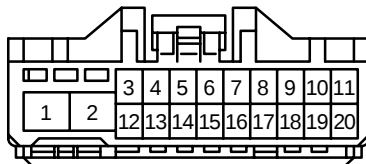
C20
Gray



D 1



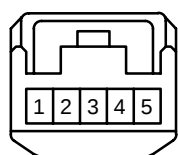
D 2



D 3
Black



D 4



D 5



D 6



D 7



D 8



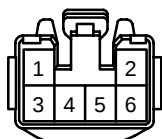
D 9



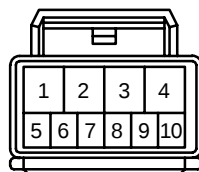
D10



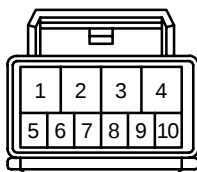
D11



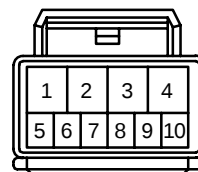
D12

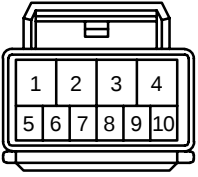
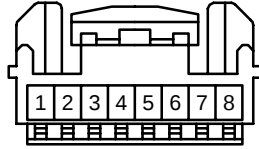
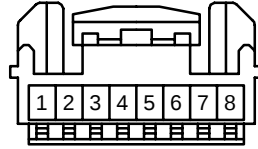
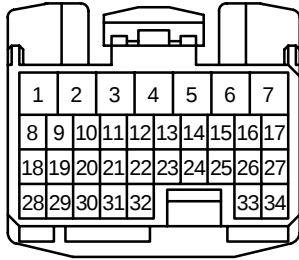
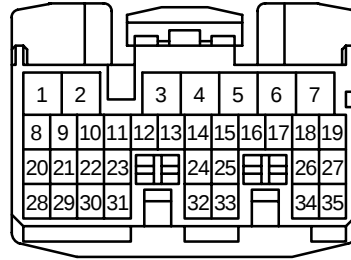
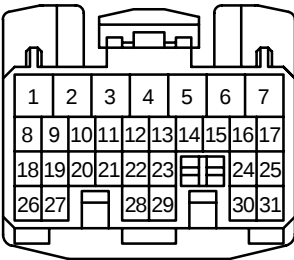
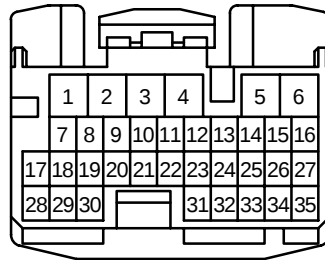
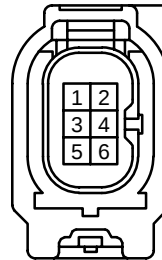
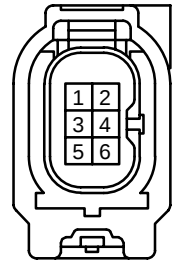
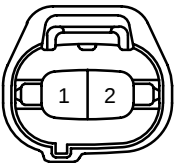
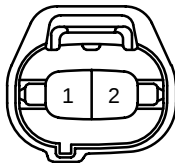
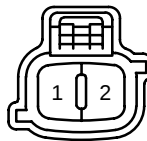
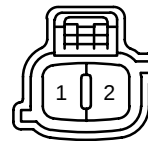
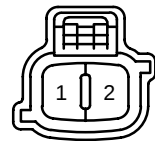
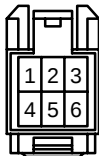
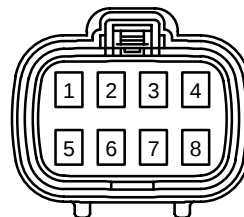
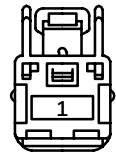


D13

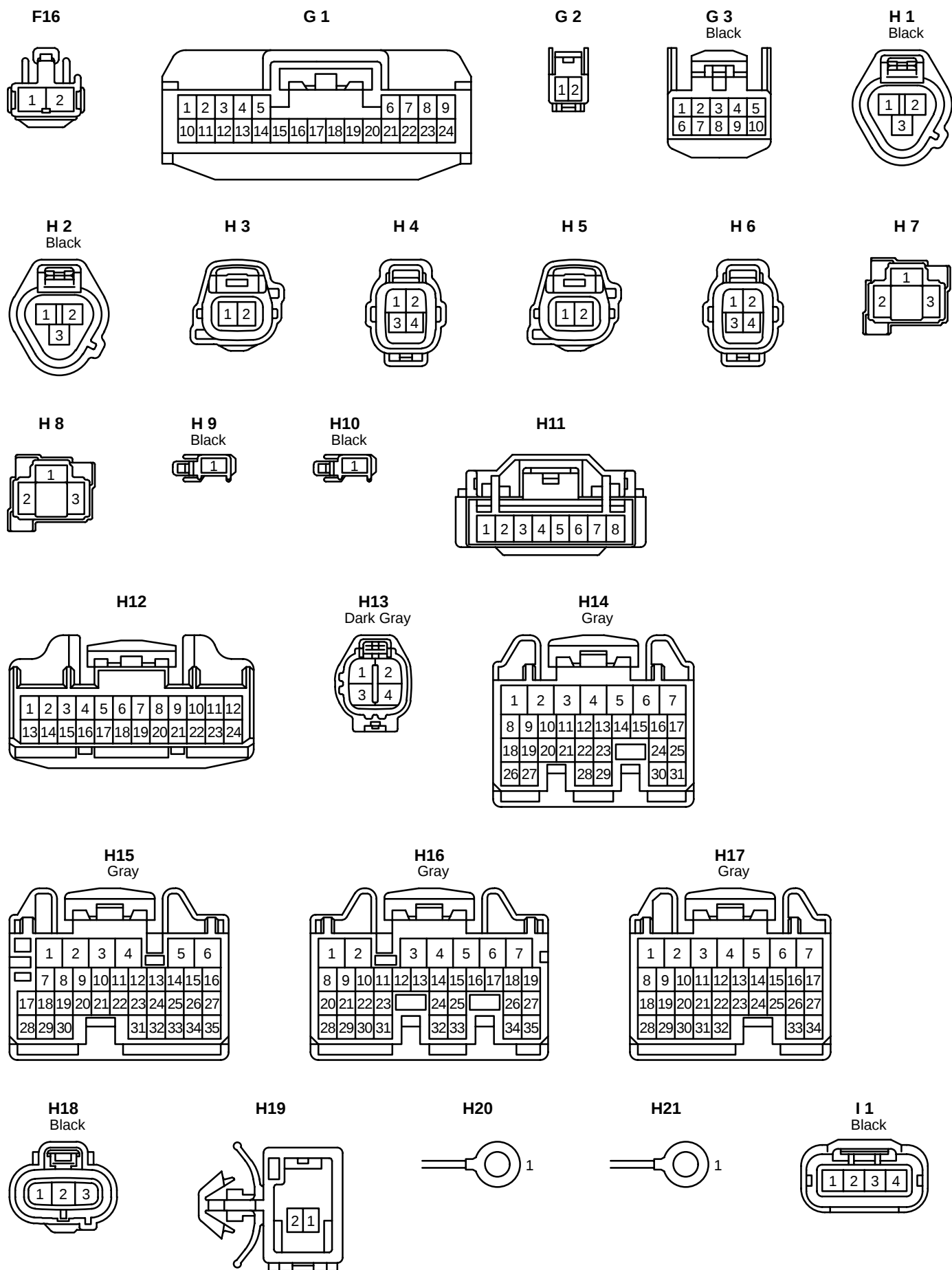


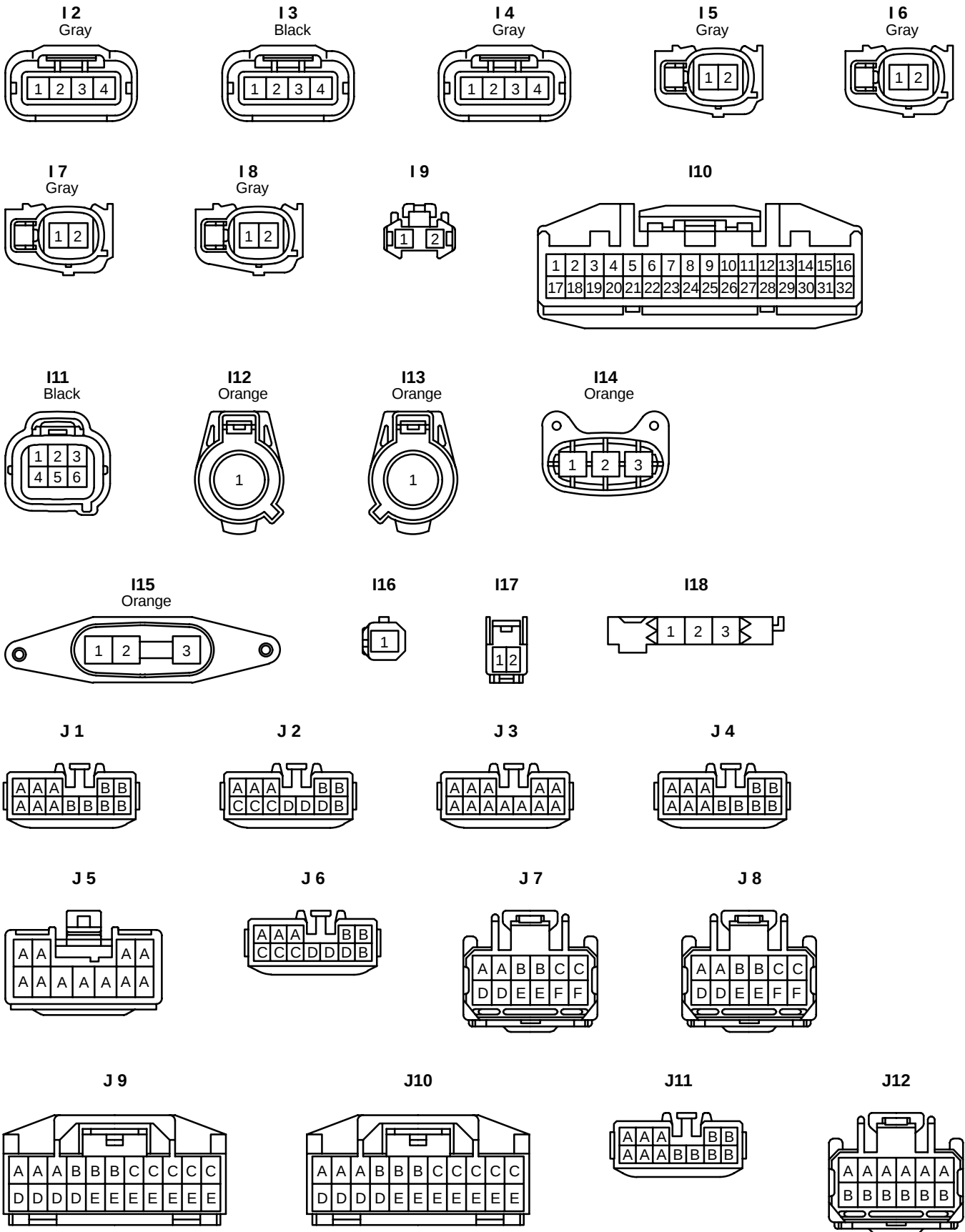
D14



D15**D16****D17****D18****E 1**
Dark Gray**E 3****E 4****E 5****E 6****E 7****E 8****E 9****E10****F 1**
Yellow**F 2**
Yellow**F 3**
Brown**F 4**
Brown**F 5**
Black**F 6**
Black**F 7**
Gray**F 8**
Gray**F 9**
Black**F10****F11****F12****F13****F14**
Gray**F15**

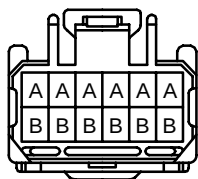
K CONNECTOR LIST



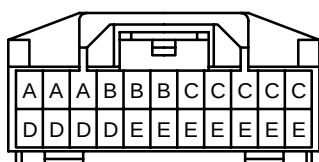


K CONNECTOR LIST

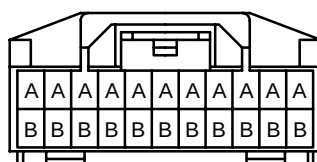
J13



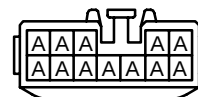
J14



J15



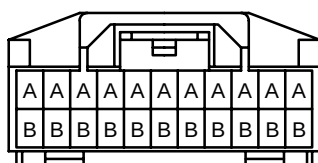
J16



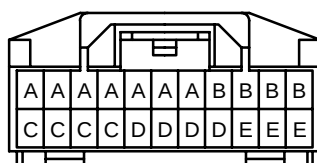
J17



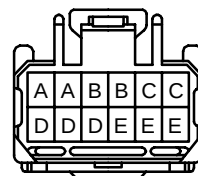
J18



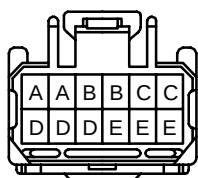
J19



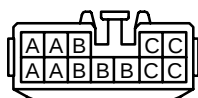
J20



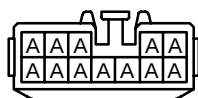
J21



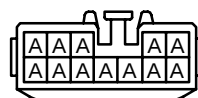
J22



J23



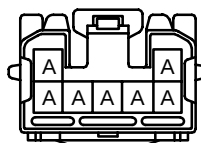
J24



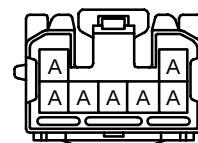
J25



J26



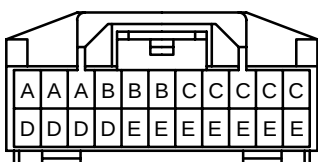
J27



J30



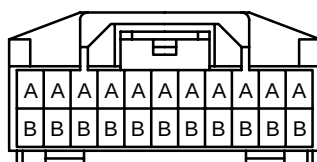
J31



J32



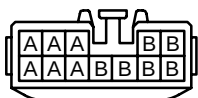
J33



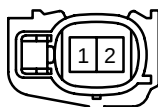
J34



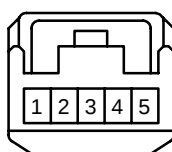
J35



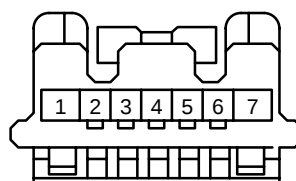
K 1
Black



K 2

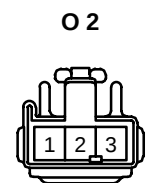
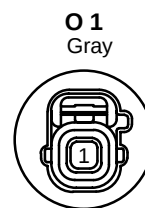
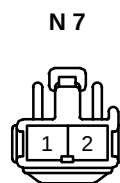
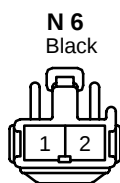
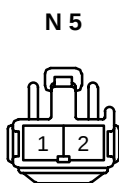
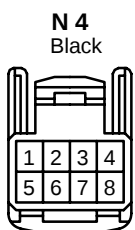
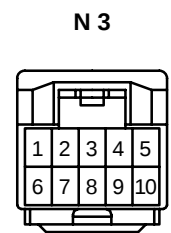
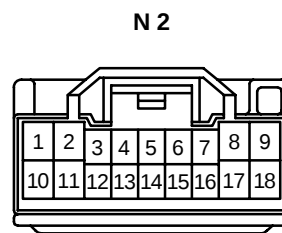
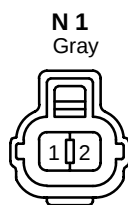
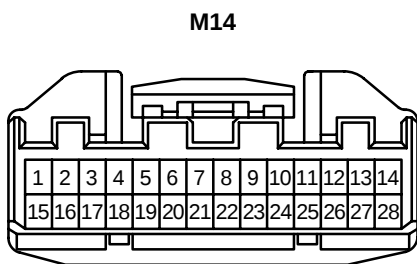
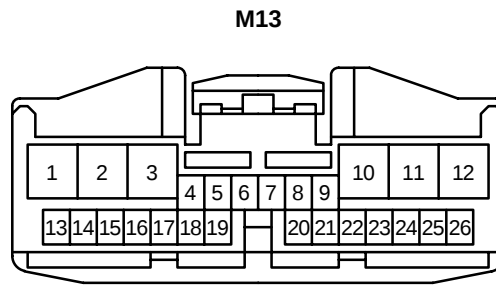
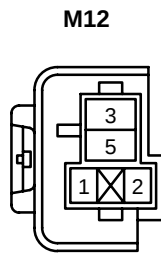
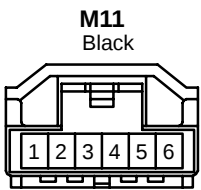
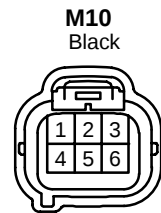
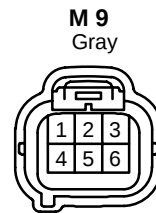
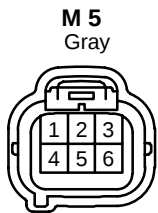
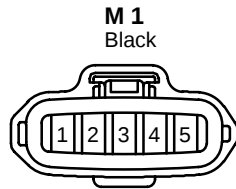
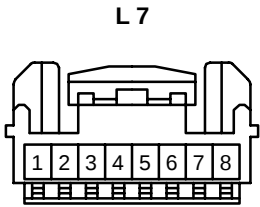
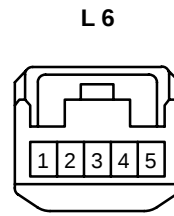
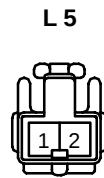
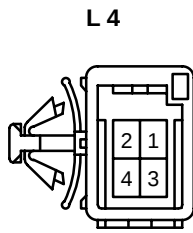
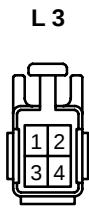


K 3
Black



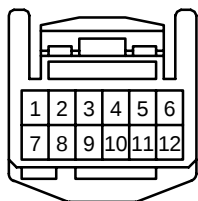
L 1
Gray



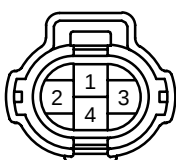


K CONNECTOR LIST

O 3



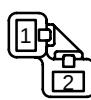
P 1
Dark Gray



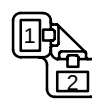
P 2



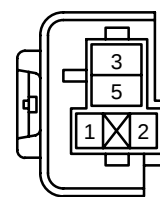
P 3



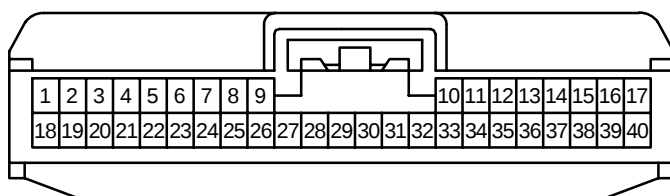
P 4



P 5



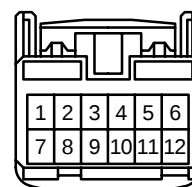
P 6



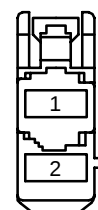
P 7
Gray



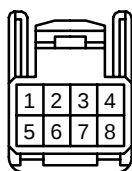
P 8



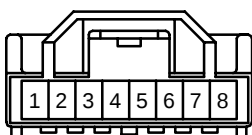
P 9



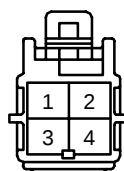
P 10



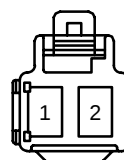
P 11
Black



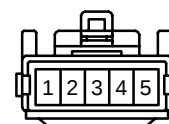
P 12



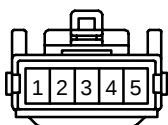
P 13



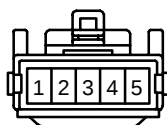
P 14



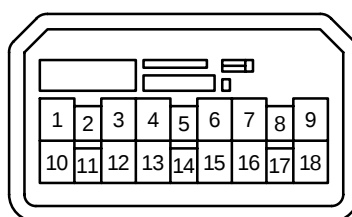
P 15



P 16



P 17



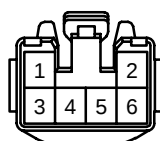
P 18
Black



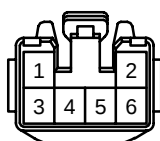
P 19
Black



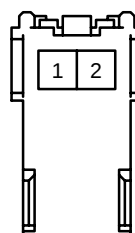
P 20
Black



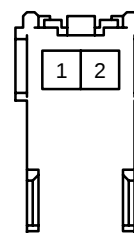
P 21
Black



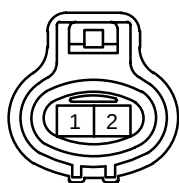
P 22
Yellow



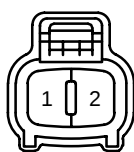
P 23
Yellow



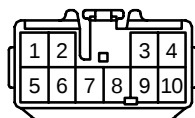
R 1
Gray



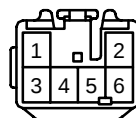
R 2
Black



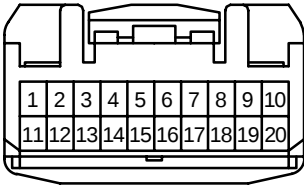
R 3



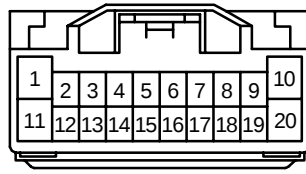
R 4



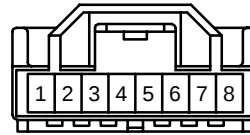
R 5



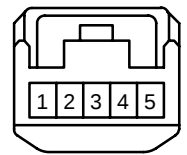
R 6



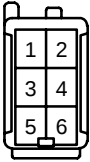
R 7
Black



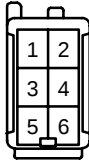
R 8



R 9



R10



R11



R12



R13



R14



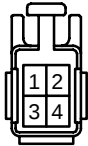
R15



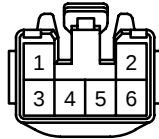
R16



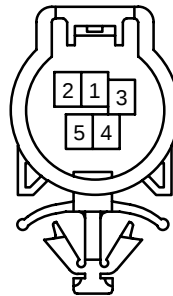
R17



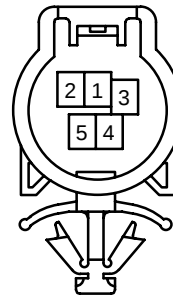
R18



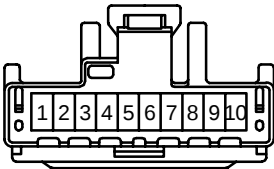
R19



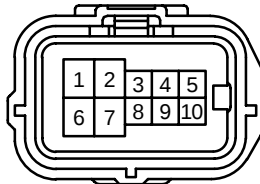
R20



R21



S 1
Black



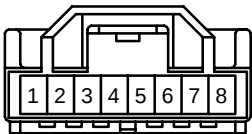
S 2
Gray



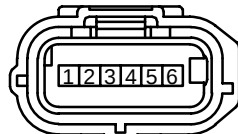
S 3
Gray



S 4



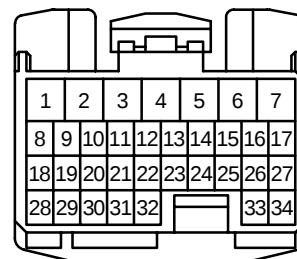
S 5
Black



S 6
Black

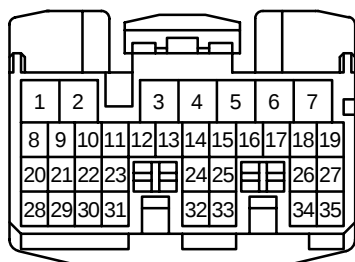


S 7

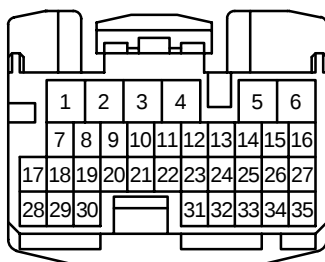


K CONNECTOR LIST

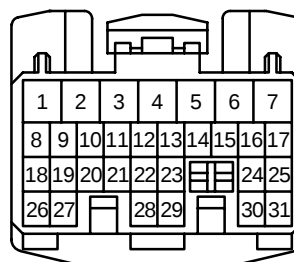
S 8



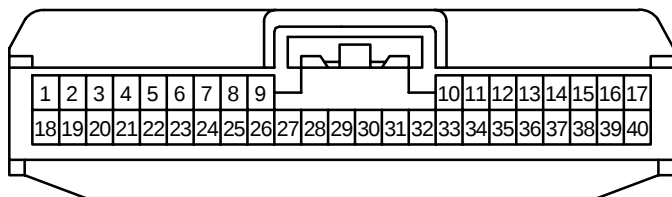
S 9



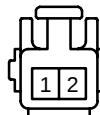
S10



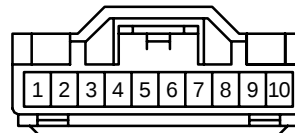
S11



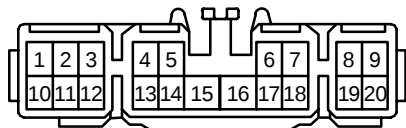
S12



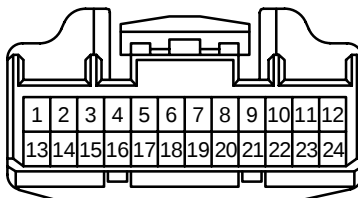
S13
Gray



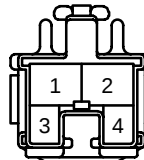
S14



S15



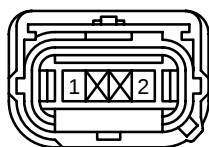
S16
Black



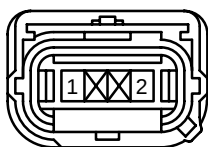
S17



S18
Yellow



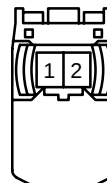
S19
Yellow



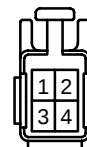
S20



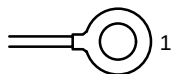
S21



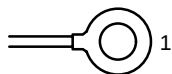
S22



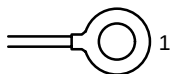
S23



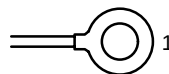
S24



S25



S26



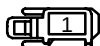
S27
Black



S28
Black



T 1
Black



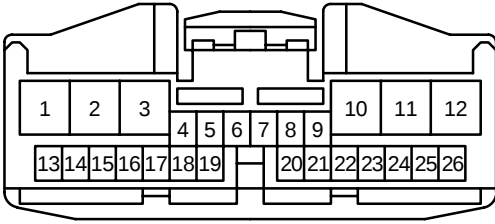
T 2
Gray



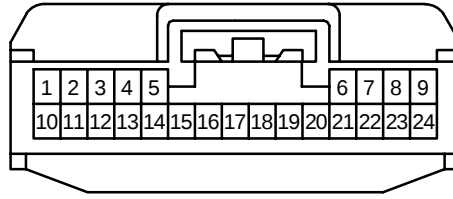
T 3
Black



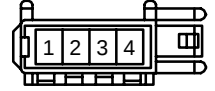
T 4



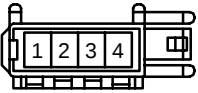
T 5



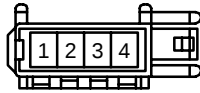
T 6



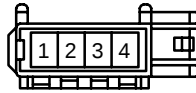
T 7



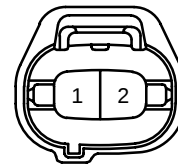
T 8



T 9



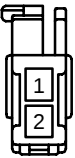
V 1
Black



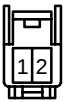
V 2



V 3



V 4



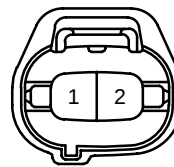
V 5



V 6
Black



V 7
Black



V 8
Blue



W 1
Black



W 3
Black



W 4
Gray



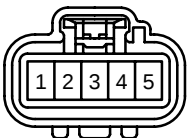
W 5



W 6
Black



Y 1
Black



L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number	Code	Part Name	Part Number
A 1	A/C Condenser Fan Motor	90980-10928	B19	Brake Actuator Resistor	82610-20080
A 2	ABS & BA & TRAC & VSC Actuator	90980-12297	C 1	Camshaft Position Sensor	90980-10947
A 3	ABS Speed Sensor Front LH	90980-11003	C 2	Camshaft Timing Oil Control Valve	90980-11162
A 4	ABS Speed Sensor Front RH		C 3	Circuit Breaker Sensor	90980-11898
A 5	Air Fuel Ratio Sensor (Bank 1 Sensor 1)	90980-10869	C 4	Compressor Assembly (Motor)	6189-1164
A 6	Ambient Temp. Sensor	90980-11070	C 5	Converter	90980-11034
A 7	A/C Control Assembly	90980-12150	C 6	Converter	90980-11963
A 8	A/C Control Assembly	90980-12149	C 7	Crankshaft Position Sensor	90980-12028
A 9	A/C Room Temp. Sensor	90980-11950	C 8	Center Speaker	90980-10860
A10	A/C Solar Sensor	90980-11918	C 9	Clock	90980-11013
A11	A/C Thermistor		C10	Combination Meter	90980-12153
A12	ACC Relay	82660-20340	C11	Combination SW	90980-12266
A13	Accel Position Sensor	90980-11858	C12	Combination SW	90980-12265
A14	Air Inlet Control Servo Motor	90980-11909	C13	Combination SW	90980-12358
A15	Air Mix Control Servo Motor		C14	Combination SW	90980-12359
A16	Air Vent Mode Control Servo Motor		C15	Curtain Shield Airbag Sensor LH	90980-12241
A17	Airbag Sensor Assembly	90980-12392	C16	Curtain Shield Airbag Sensor RH	
A18	Airbag Sensor Assembly	90980-12391	C17	Curtain Shield Airbag Squib LH	90980-12219
A19	Airbag Sensor Assembly	90980-12390	C18	Curtain Shield Airbag Squib RH	
A20	Airbag Squib (Front Passenger Airbag Assembly No.1)	90980-12224	C19	Coolant Heat Storage Tank Outlet Temp. Sensor	90980-11061
A21	Airbag Squib (Front Passenger Airbag Assembly No.2)	90980-12219	C20	Coolant Heat Storage Water Pump	90980-11156
A22	Airbag Squib (Steering Wheel Pad)	90980-12160	D 1	Data Link Connector 3	90980-11665
A23	Antenna Amplifier	90980-10871	D 2	Daytime Running Light Relay	90980-12034
A24	Automatic Light Control Sensor	90980-11107	D 3	Diode (Daytime Running Light)	90980-10962
A25	ABS Speed Sensor Rear LH	90980-11900	D 4	Door Control Receiver	90980-12366
A26	ABS Speed Sensor Rear RH		D 5	Door Courtesy Light Front LH	90980-11148
B 1	Brake Fluid Level Warning SW	90980-11207	D 6	Door Courtesy Light Front RH	
B 2	Blower Motor	90980-10214	D 7	Door Courtesy SW Front LH	90980-10871
B 3	Blower Motor Controller	90980-11667	D 8	Door Courtesy SW Front RH	
B 4	Blower Motor Controller	90980-11579	D 9	Door Courtesy SW Rear LH	
B 5	Body ECU	90980-12458	D10	Door Courtesy SW Rear RH	90980-10797
B 6	Body ECU	90980-12329	D11	Door Lock Control SW Front RH	
B 7	Body ECU	90980-12150	D12	Door Lock Motor Front LH	90980-12226
B 8	Brake Pedal Stroke Sensor	90980-11150		Door Unlock Detection SW Front LH	
B 9	Battery Blower Motor	90980-10916	D13	Door Lock Motor Front RH	
B10	Battery Blower Motor Controller	90980-11676		Door Unlock Detection SW Front RH	
B11	Battery ECU	90980-12203	D14	Door Lock Motor Rear LH	
B12	Battery ECU	90980-11915		Door Unlock Detection SW Rear LH	
B13	Battery ECU	90980-12155	D15	Door Lock Motor Rear RH	
B14	Battery Fan Relay	82660-20340		Door Unlock Detection SW Rear RH	
B15	Buckle SW Front LH	90980-11918	D16	Door Oscillator Front LH (w/ Sensor)	90980-12217
B16	Buckle SW Front RH	90980-10908	D17	Door Oscillator Front RH (w/ Sensor)	
B17	Brake Master Stroke Simulator Cylinder Assembly	90980-11003	D18	Diode (Rear Wiper)	90980-10962
B18	Brake Control Power Supply	82824-50190	E 1	Engine Coolant Temp. Sensor	90980-10735
			E 3	Engine Hood Courtesy SW	90980-11003

Note: Not all of the above part numbers of the connector are established for the supply.

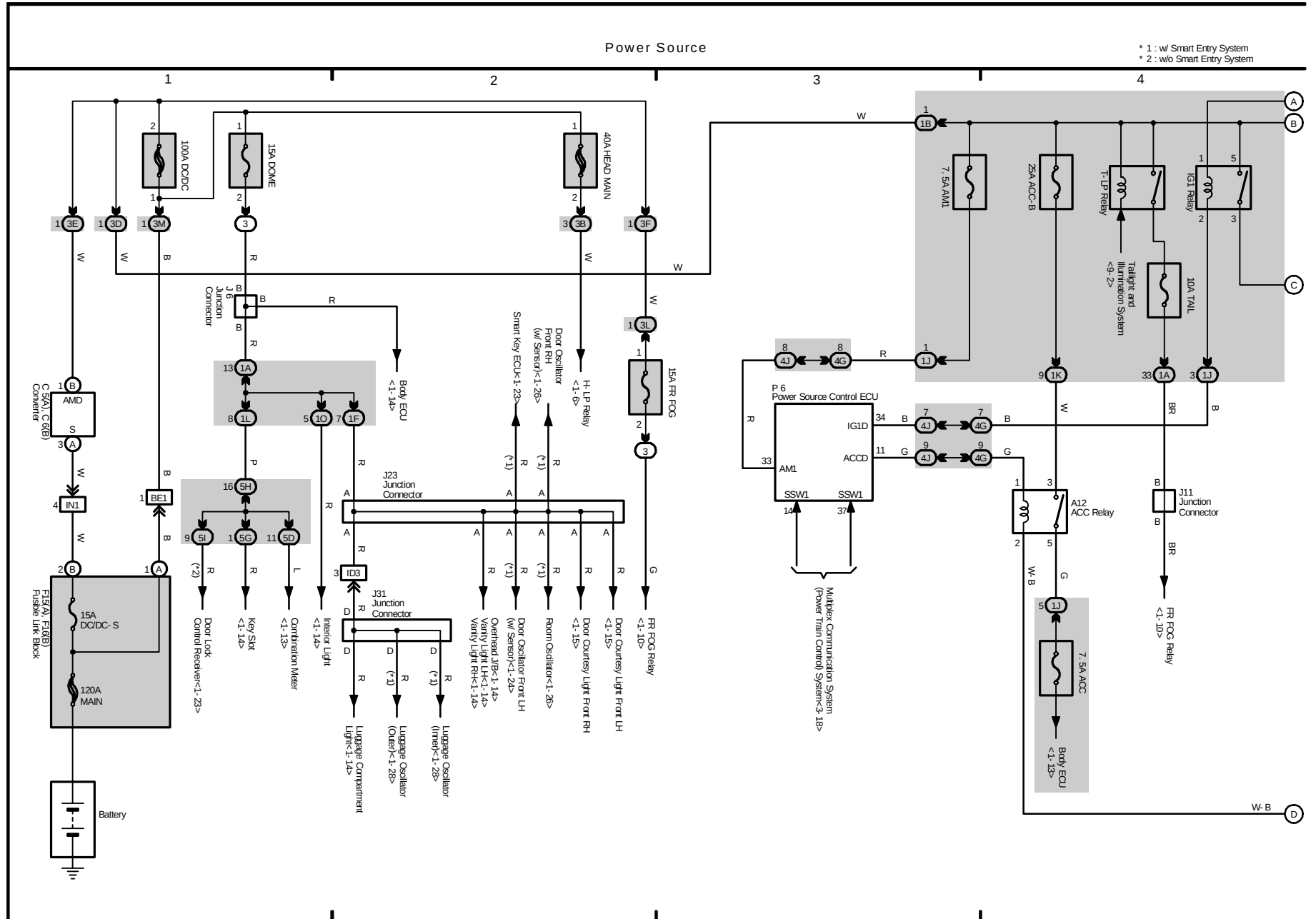
Code	Part Name	Part Number	Code	Part Name	Part Number
E 4	Engine Control Module	90980-12144	H17	Hybrid Vehicle Control ECU	90980-12430
E 5	Engine Control Module	90980-12145	H18	Height Control Sensor	90980-11860
E 6	Engine Control Module	90980-12142	H19	High Mounted Stop Light	90980-11967
E 7	Engine Control Module	90980-12146	H20	Hybrid Vehicle Battery	82675-47060
E 8	Electrical Key Antenna (Driver's Side)	90980-12382	H21	Hybrid Vehicle Battery	82675-47070
E 9	Electrical Key Antenna (Front Passenger's Side)		I 1	Ignition Coil and Igniter No.1	90980-11885
E10	Electrical Key Antenna (Luggage Compartment Door)	90980-10824	I 2	Ignition Coil and Igniter No.2	
			I 3	Ignition Coil and Igniter No.3	
F 1	Front Airbag Sensor LH	90980-11856	I 4	Ignition Coil and Igniter No.4	
F 2	Front Airbag Sensor RH		I 5	Injector No.1	90980-11875
F 3	Front Fog Light LH	90980-11096	I 6	Injector No.2	
F 4	Front Fog Light RH		I 7	Injector No.3	
F 5	Front Side Marker Light LH	90980-11156	I 8	Injector No.4	
F 6	Front Side Marker Light RH		I 9	Inverter	90980-11148
F 7	Front Turn Signal Light LH	90980-11019	I10	Inverter	90980-12153
F 8	Front Turn Signal Light RH		I11	Inverter	90980-10988
F 9	Front Washer Motor		I12	Inverter	90980-12465
F10	Front Wiper Motor	90980-11599	I13	Inverter	90980-12464
F11	Front Passenger Seat Belt Warning Light	90980-12012	I14	Inverter	90980-12434
F12	Front Door Speaker LH	90980-10935	I15	Inverter	90980-12433
F13	Front Door Speaker RH		I16	Inverter	90980-11147
F14	Fuel Pump	82824-47160	I17	Inter Lock SW	90980-11918
	Fuel Sender		I18	Interior Light	81366-68010
F15	Fusible Link Block	90980-11775	J 1	Junction Connector	90980-10803
F16	Fusible Link Block	90980-10916	J 2	Junction Connector	
G 1	Gateway ECU	90980-12404	J 3	Junction Connector	
G 2	Glove Box Light	90980-11918	J 4	Junction Connector	
G 3	Garage Door Opener	82824-47180	J 5	Junction Connector	90980-10830
	Inner Mirror		J 6	Junction Connector	90980-10803
H 1	Headlight Beam Level Control Actuator LH	90980-11016	J 7	Junction Connector	90980-11661
H 2	Headlight Beam Level Control Actuator RH		J 8	Junction Connector	
H 3	Headlight Assembly LH	90980-11255	J 9	Junction Connector	90980-11915
H 4	Headlight Assembly LH	90980-10869	J10	Junction Connector	
H 5	Headlight Assembly RH	90980-11255	J11	Junction Connector	90980-10803
H 6	Headlight Assembly RH	90980-10869	J12	Junction Connector	90980-11661
H 7	Headlight LH	90980-11314	J13	Junction Connector	
H 8	Headlight RH		J14	Junction Connector	90980-11915
H 9	Horn (High)	90980-10619	J15	Junction Connector	
H10	Horn (Low)		J16	Junction Connector	90980-10803
H11	Hazard SW	90980-12091	J17	Junction Connector	
	ODO/TRIP SW		J18	Junction Connector	90980-11915
H12	Headlight Beam Level Control ECU	90980-12200	J19	Junction Connector	
H13	Heated Oxygen Sensor (Bank 1 Sensor 2)	90980-11028	J20	Junction Connector	90980-11661
H14	Hybrid Vehicle Control ECU	90980-12431	J21	Junction Connector	
H15	Hybrid Vehicle Control ECU	90980-12429			
H16	Hybrid Vehicle Control ECU	90980-12428			

L PART NUMBER OF CONNECTORS

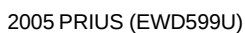
Code	Part Name	Part Number	Code	Part Name	Part Number
J22	Junction Connector	90980-10803	O 2	Option Connector (Glass Breakage Sensor)	90980-10908
J23	Junction Connector		O 3	Overhead J/B	90980-12183
J24	Junction Connector		P 1	Pressure SW	90980-10943
J25	Junction Connector		P 2	Parking Brake SW	90980-10871
J26	Junction Connector	90980-11529	P 3	Power Outlet No.1	90980-10760
J27	Junction Connector		P 4	Power Outlet No.2	
J30	Junction Connector	90980-10803	P 5	Power Outlet Relay	82660-20340
J31	Junction Connector	90980-11915	P 6	Power Source Control ECU	90980-12388
J32	Junction Connector	90980-10803	P 7	Power Steering ECU	90980-12300
J33	Junction Connector	90980-11915	P 8	Power Steering ECU	90980-12290
J34	Junction Connector	90980-10799	P 9	Power Steering Motor	90980-12299
J35	Junction Connector	90980-10803	P10	Power Steering Torque Sensor	90980-12221
K 1	Knock Sensor (Bank 1)	90980-11875	P11	Power SW	90980-11989
K 2	Key Slot	90980-12366	P12	PTC Heater	90980-11136
K 3	Key Slot	90980-12092	P13	PTC Heater	90980-10903
L 1	License Plate Light LH	90980-11148	P14	Power Window Control SW Front RH	90980-10789
L 2	License Plate Light RH		P15	Power Window Control SW Rear LH	
L 3	Luggage Compartment Courtesy SW	90980-10795	P16	Power Window Control SW Rear RH	
	Luggage Compartment Door Opener Motor		P17	Power Window Master SW	90980-12122
L 4	Luggage Compartment Door Lock SW	90980-12212	P18	Power Window Motor Front LH	90980-10797
	Luggage Compartment Door Opener SW		P19	Power Window Motor Front RH	
L 5	Luggage Compartment Light	90980-10860	P20	Power Window Motor Rear LH	
L 6	Luggage Oscillator (Inner)	90980-12366	P21	Power Window Motor Rear RH	90980-12253
L 7	Luggage Oscillator (Outer)	90980-12217	P22	Pretensioner LH	
M 1	Mass Air Flow Meter	90980-11317	P23	Pretensioner RH	
M 2	Motor Generator No.1	90980-12432	R 1	Radiator Fan Motor	90980-10928
M 3	Motor Generator No.1		R 2	Rear Washer Motor	90980-11051
M 4	Motor Generator No.1		R 3	Radio and Player	90980-10997
M 5	Motor Generator No.1	90980-11034	R 4	Radio and Player	90980-10996
M 6	Motor Generator No.2	90980-12432	R 5	Radio and Player	90980-12259
M 7	Motor Generator No.2		R 6	Radio and Player	90980-12038
M 8	Motor Generator No.2		R 7	Rheostat	90980-11989
M 9	Motor Generator No.2	90980-11034	R 8	Room Oscillator	90980-12366
M10	Motor Generator No.2		R 9	Rear Combination Light LH	90980-11011
M11	Main SW	90980-11986	R10	Rear Combination Light RH	
M12	Mirror Heater Relay	82660-20340	R11	Rear Door Speaker LH	90980-10935
M13	Multi-Display	90980-12203	R12	Rear Door Speaker RH	
M14	Multi-Display	90980-12410	R13	Rear Window Defogger	90980-10914
N 1	Noise Filter (Ignition)	90980-10843	R14	Rear Window Defogger	90980-10913
N 2	Navigation ECU	90980-11973	R15	Rear Window Defogger	90980-10914
N 3	Navigation ECU	90980-11923	R16	Rear Window Defogger	90980-10913
N 4	Navigation ECU	90980-12221	R17	Rear Wiper Motor	90980-10795
N 5	Noise Filter (High Mounted Stop Light)	90980-10916	R18	Rear Wiper Relay	90980-10797
N 6	Noise Filter (Rear Window Defogger)				
N 7	Noise Filter (Rear Window Defogger)				
O 1	Oil Pressure SW	90980-11363			

Note: Not all of the above part numbers of the connector are established for the supply.

Code	Part Name	Part Number	Code	Part Name	Part Number
R19	Mirror Heater LH	90980-12189	S25	System Main Relay	82675-28380
	Remote Control Mirror LH		S26	System Main Relay	
R20	Mirror Heater RH		S27	Short Connector (Water Pump)	90980-11162
	Remote Control Mirror RH		S28	Short Connector (Water Pump)	90980-11168
R21	Remote Control Mirror SW	90980-11657	T 1	Theft Deterrent Horn	90980-10619
S 1	Shift Control Actuator	90980-12446	T 2	Throttle Control Motor	90980-11162
S 2	Short Connector	90980-11002	T 3	Throttle Position Sensor	90980-10711
S 3	Short Connector	90980-11003	T 4	Transmission Control ECU	90980-12203
S 4	Shift Lever Position Sensor	90980-11989	T 5	Transponder Key Computer	90980-12404
S 5	Shift Lever Position Sensor	90980-12303	T 6	Tweeter Front LH	90980-12304
S 6	Skid Control Buzzer	90980-10906	T 7	Tweeter Front RH	
S 7	Skid Control ECU	90980-12144	T 8	Tweeter Rear LH	
S 8	Skid Control ECU	90980-12145	T 9	Tweeter Rear RH	
S 9	Skid Control ECU	90980-12146	V 1	VSV (EVAP)	90980-11156
S10	Skid Control ECU	90980-12142	V 2	Vanity Light LH	90980-10935
S11	Smart Key ECU	90980-12388	V 3	Vanity Light RH	
S12	Smart Key System Cancel SW	90980-10825	V 4	Vanity Light SW LH	90980-11918
S13	Steering Sensor	90980-12162	V 5	Vanity Light SW RH	
S14	Stereo Component Amplifier	90980-10821	V 6	Vapor Pressure Sensor	90980-11143
S15	Stereo Component Amplifier	90980-12200	V 7	VSV (Canister Closed Valve)	90980-11156
S16	Stop Light SW	90980-11118	V 8	VSV (Purge Flow Switching Valve)	90980-11859
S17	Seat Position Airbag Sensor	90980-10942	W 1	Water Pump Motor (A/C)	90980-10887
S18	Side Airbag Sensor LH	90980-12241	W 3	Water Pump Motor (Inverter)	90980-11162
S19	Side Airbag Sensor RH		W 4	Water Temp. SW	90980-11235
S20	Side Airbag Squib LH	90980-12452	W 5	Water Valve	90980-10988
S21	Side Airbag Squib RH		W 6	Wireless Door Lock Buzzer	90980-11142
S22	System Main Relay	90980-10795	Y 1	Yaw Rate Sensor	90980-11904
S23	System Main Relay	90980-09938			
S24	System Main Relay				

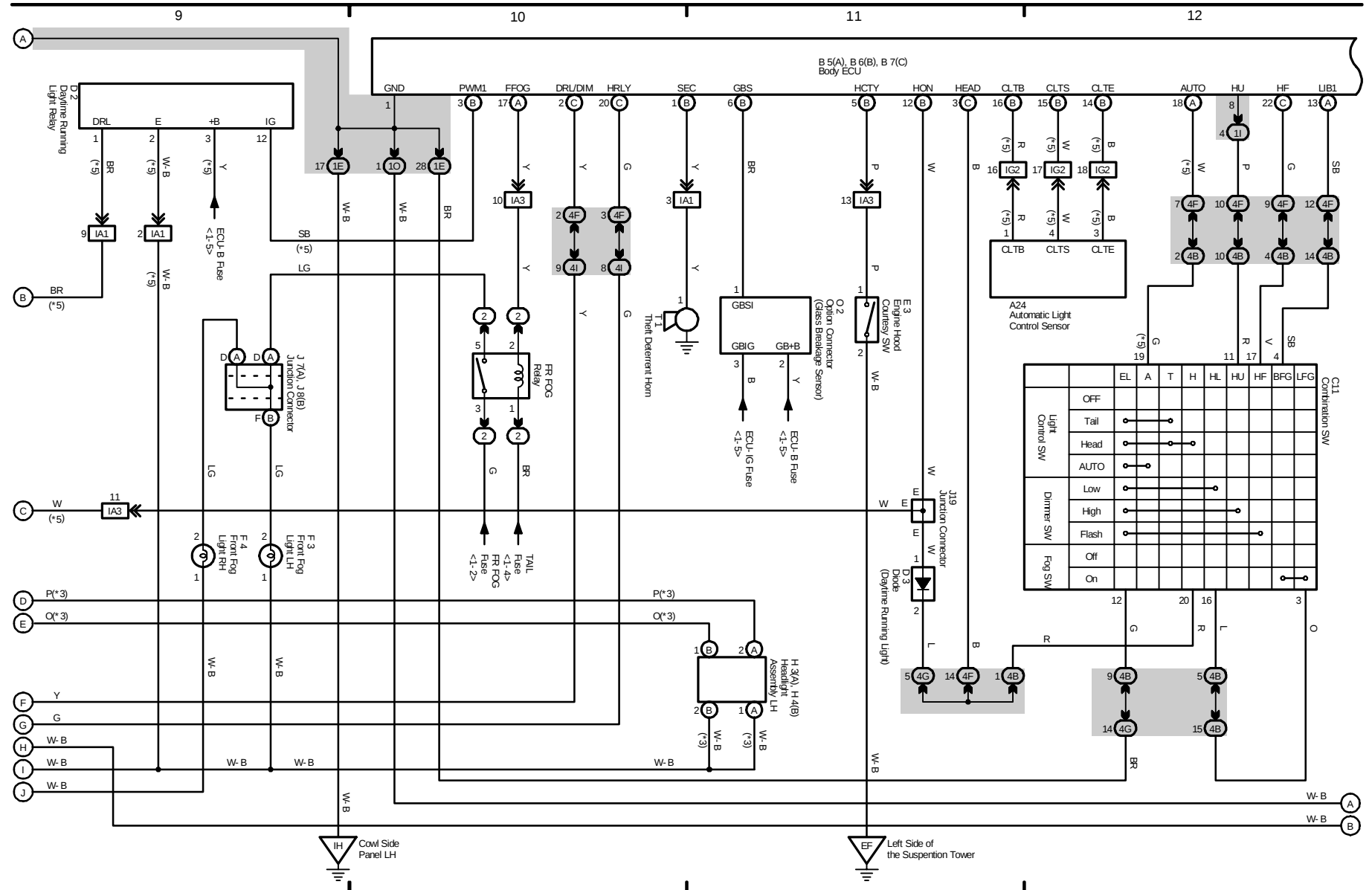


1 PRIUS (Cont' d)



Multiplex Communication System (Body Control)

* 3 : w/ HID
 * 5 : w/ Daytime Running Light

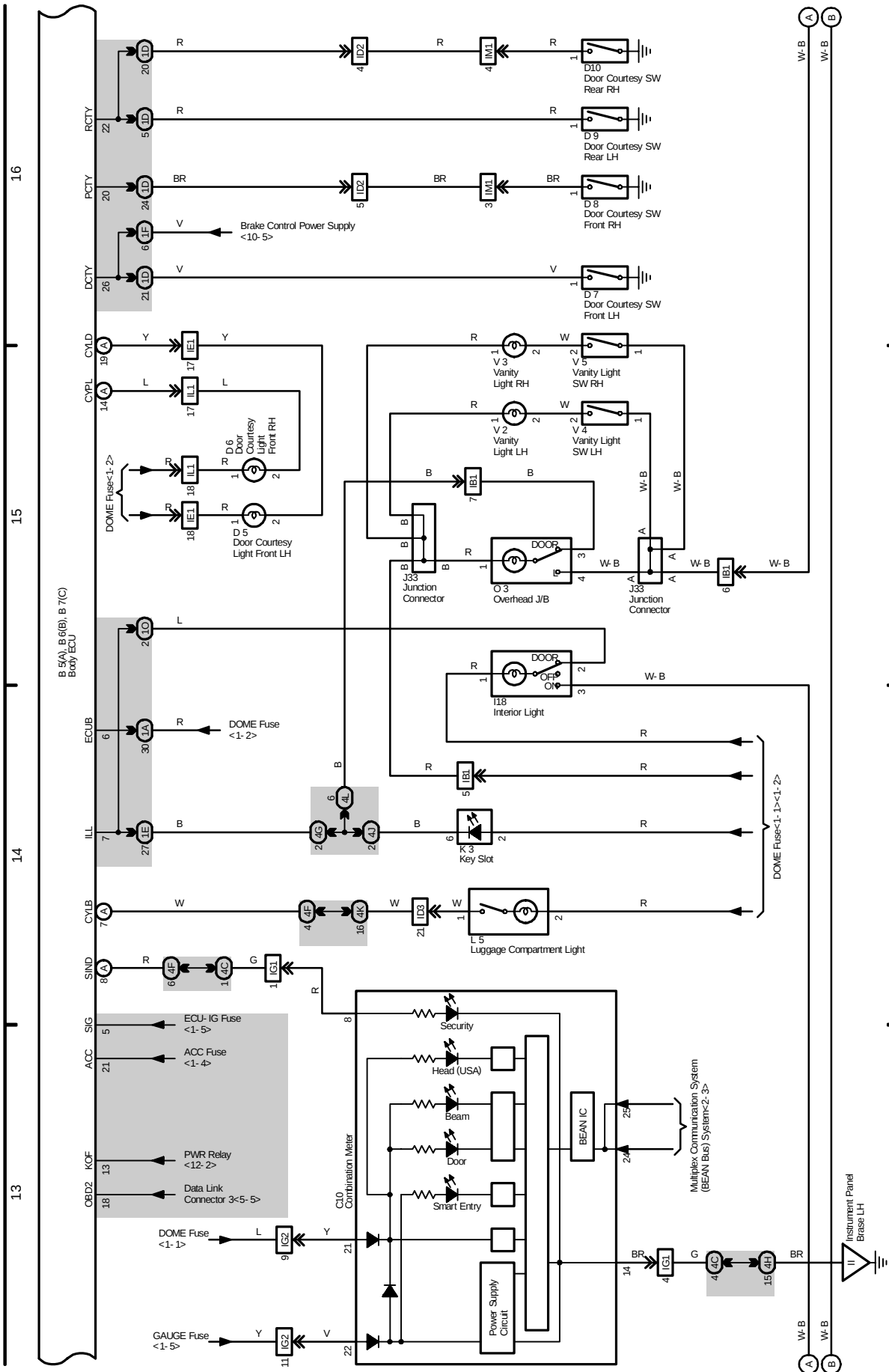


M OVERALL ELECTRICAL WIRING DIAGRAM

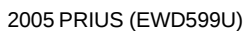
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1 PRIUS (Cont' d)

Multiplex Communication System (Body Control)



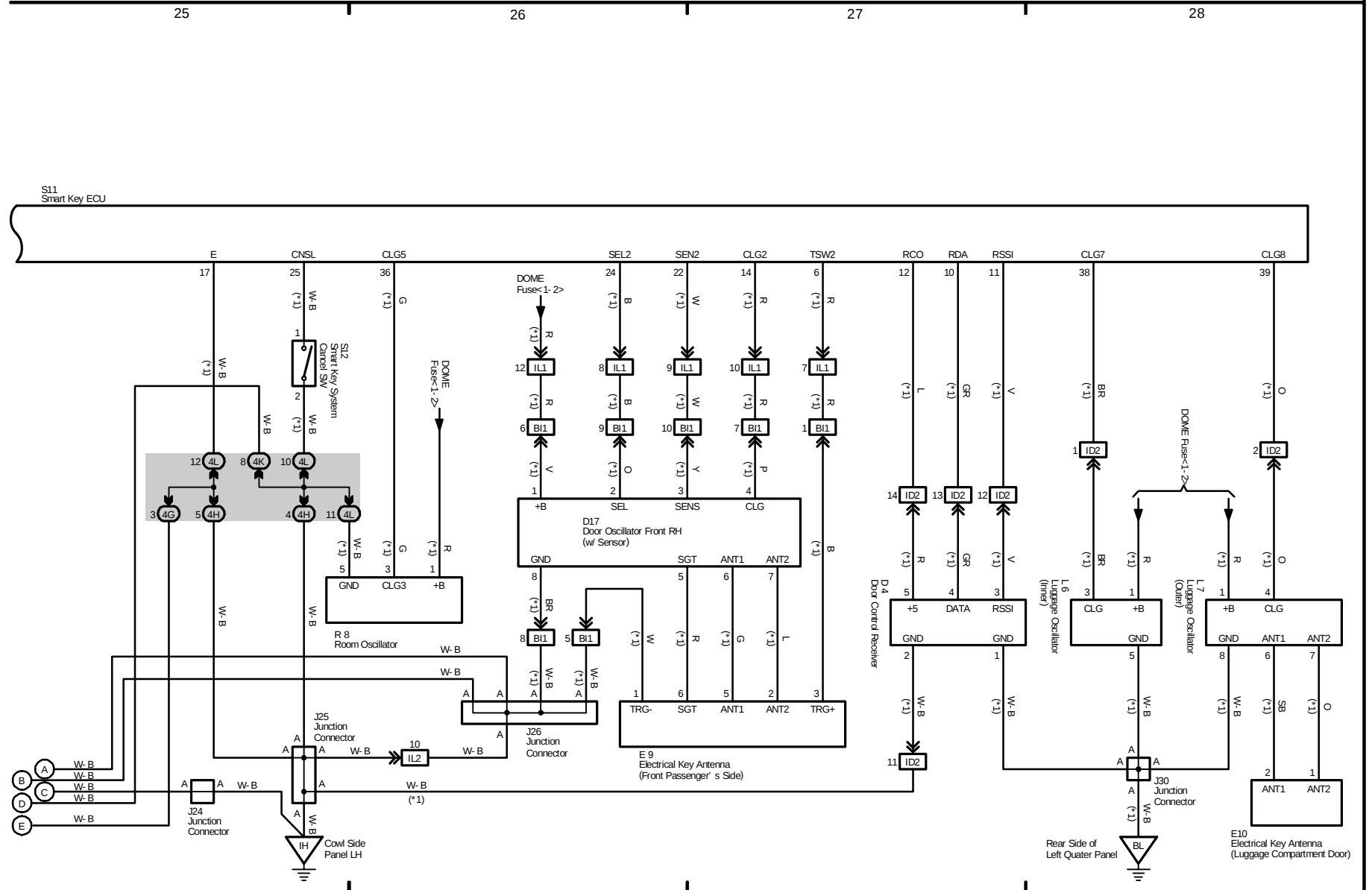
1 PRIUS (Cont' d)



1 PRIUS (Cont' d)

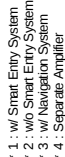
Multiplex Communication System (Body Control)

* 1 : w/ Smart Entry System



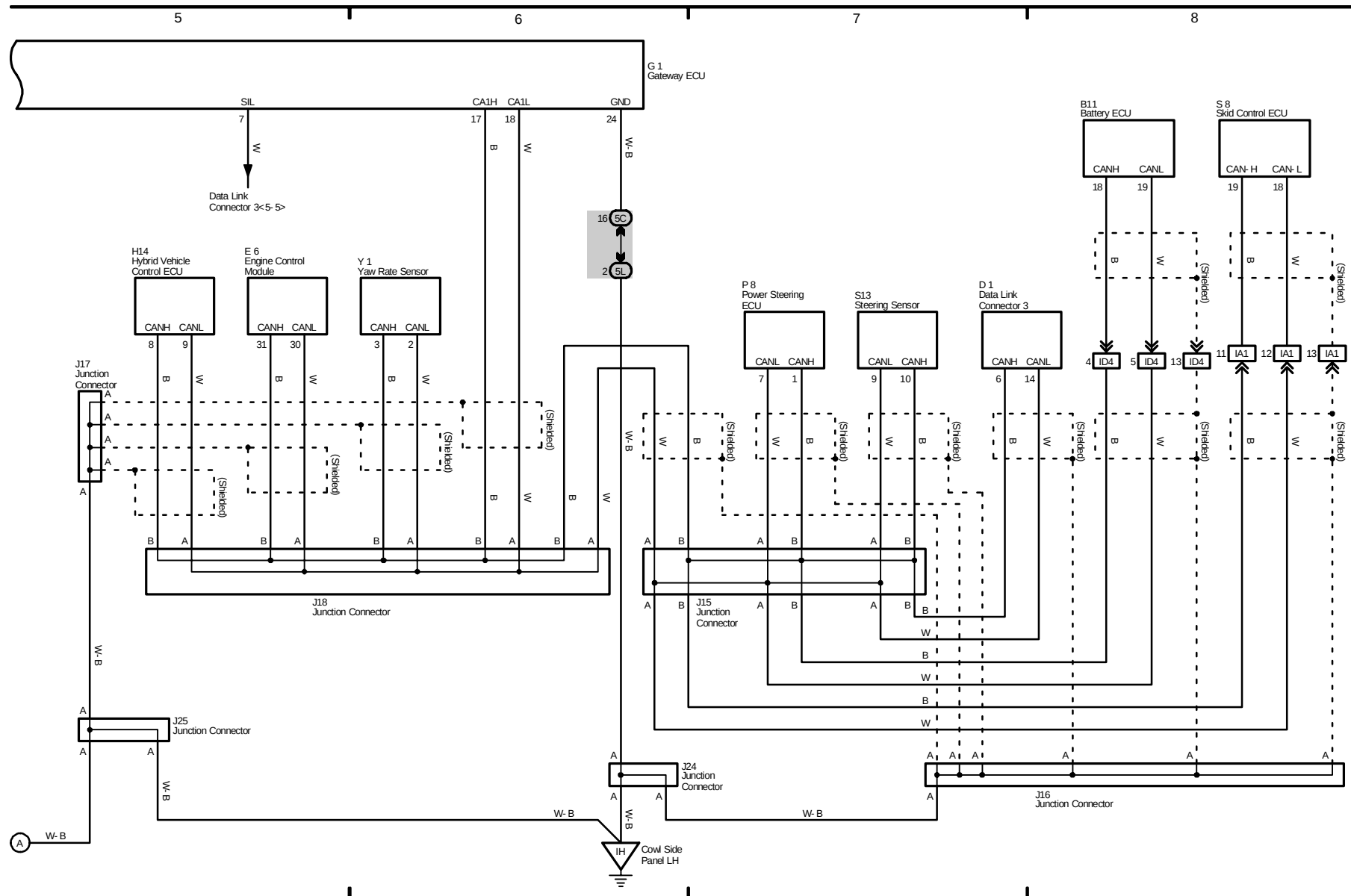
2005 PRIUS (EWD599U)

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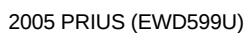


2 PRIUS (Cont' d)

Multiplex Communication System (CAN Bus)

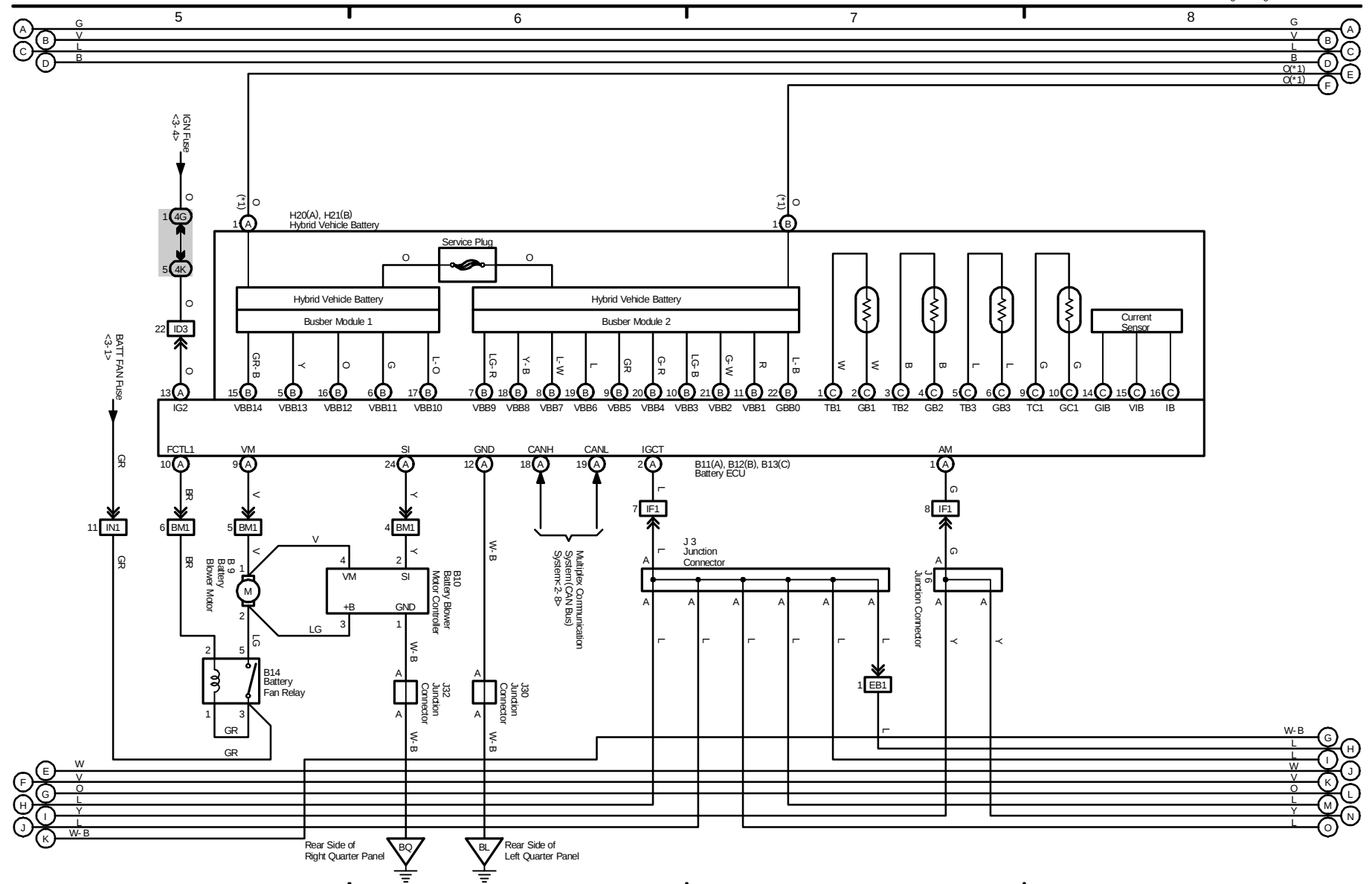


3 PRIUS



Multiplex Communication System (Power Train Control)

* 1 : High Voltage

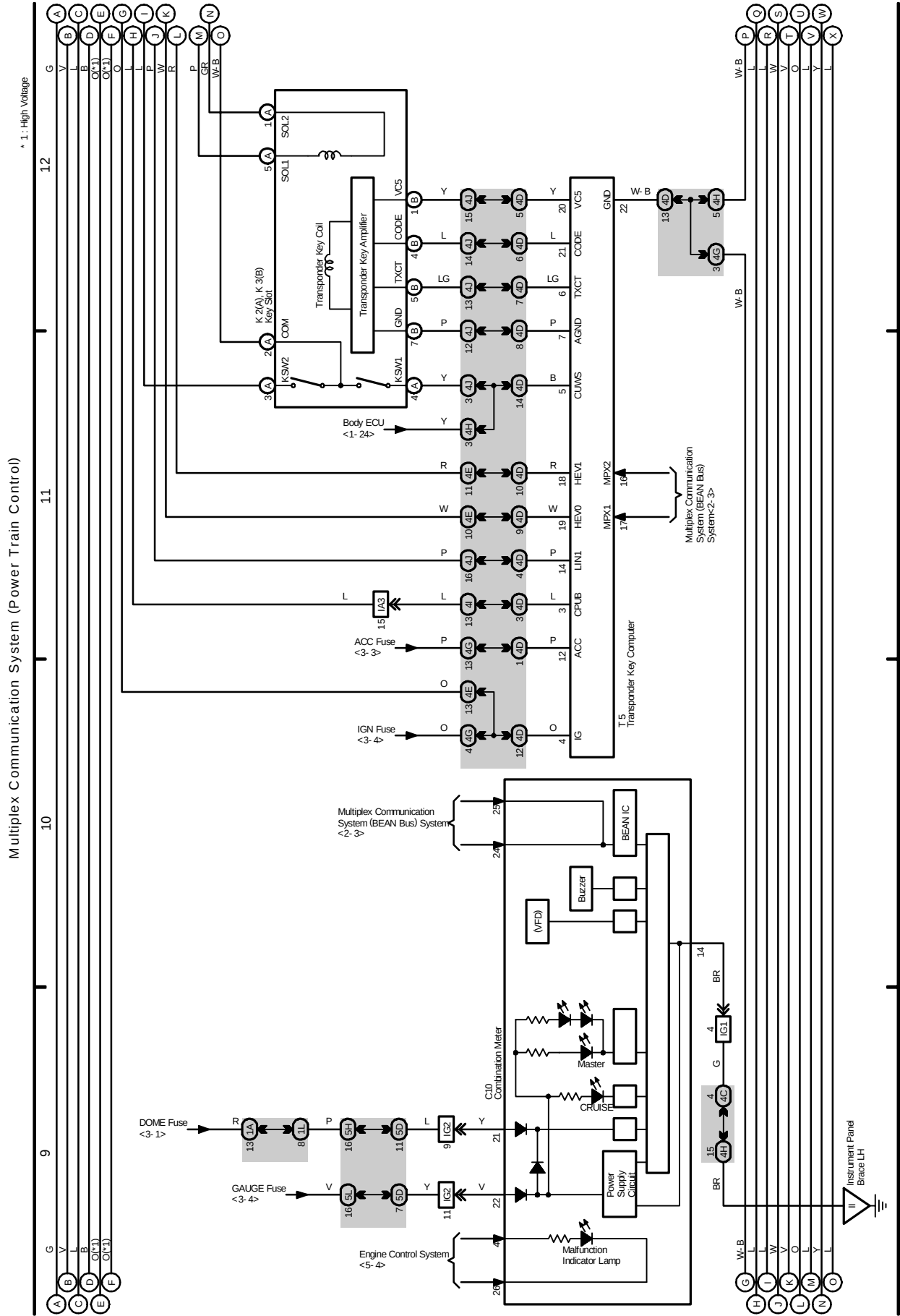


2005 PRIUS (EWD599U)

M OVERALL ELECTRICAL WIRING DIAGRAM

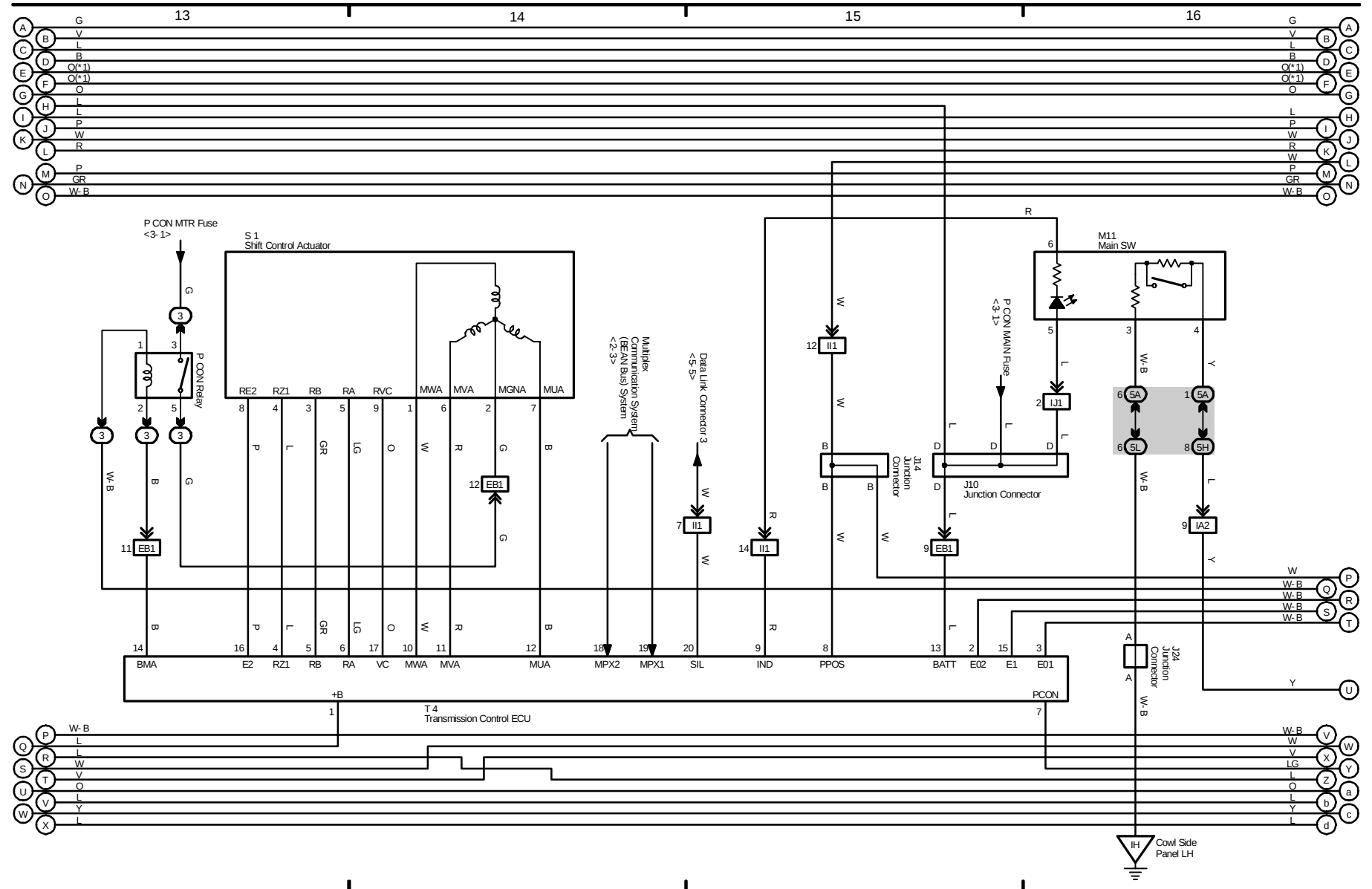
3 PRIUS (Cont' d)

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Multiplex Communication System (Power Train Control)

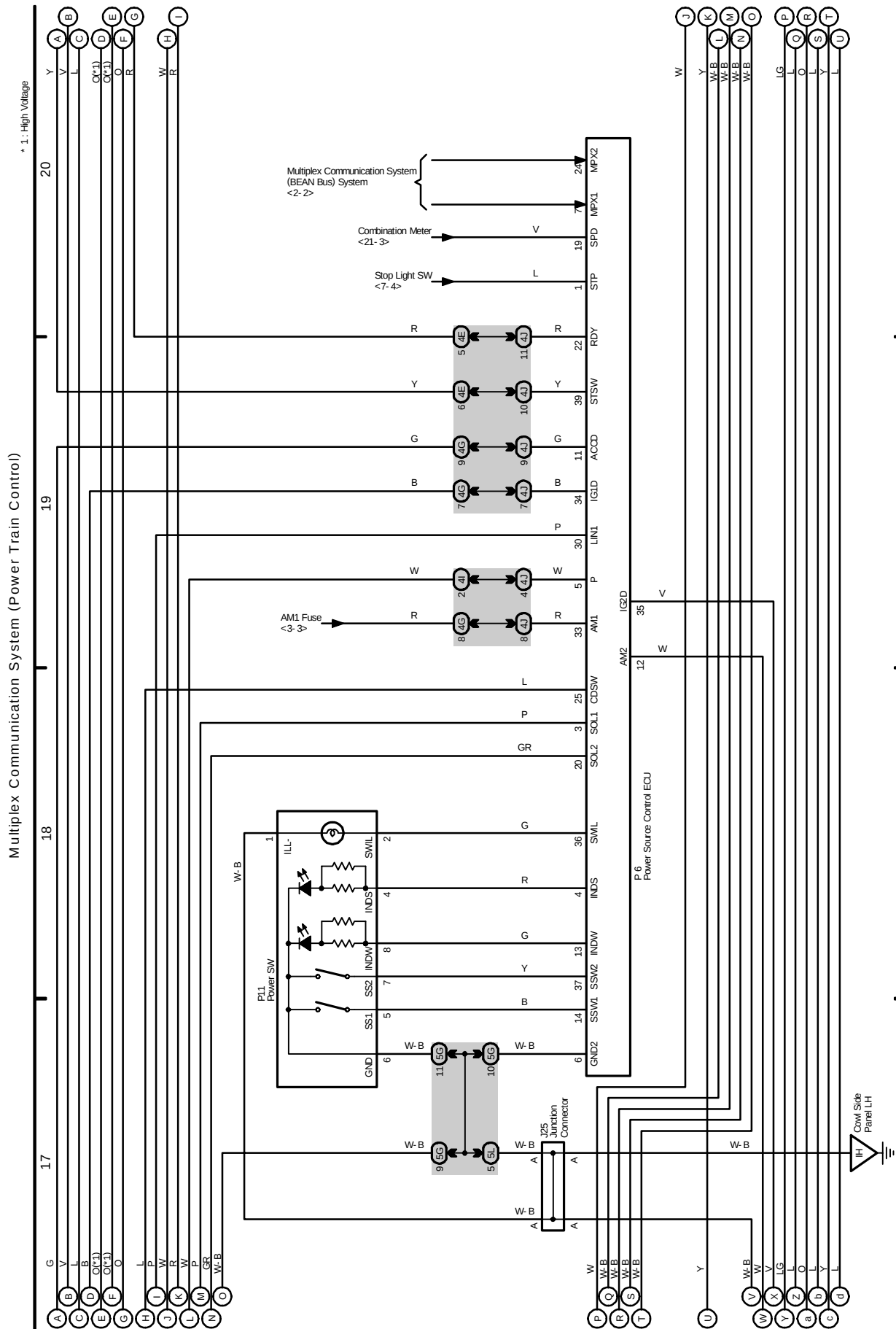
* 1 : High Voltage

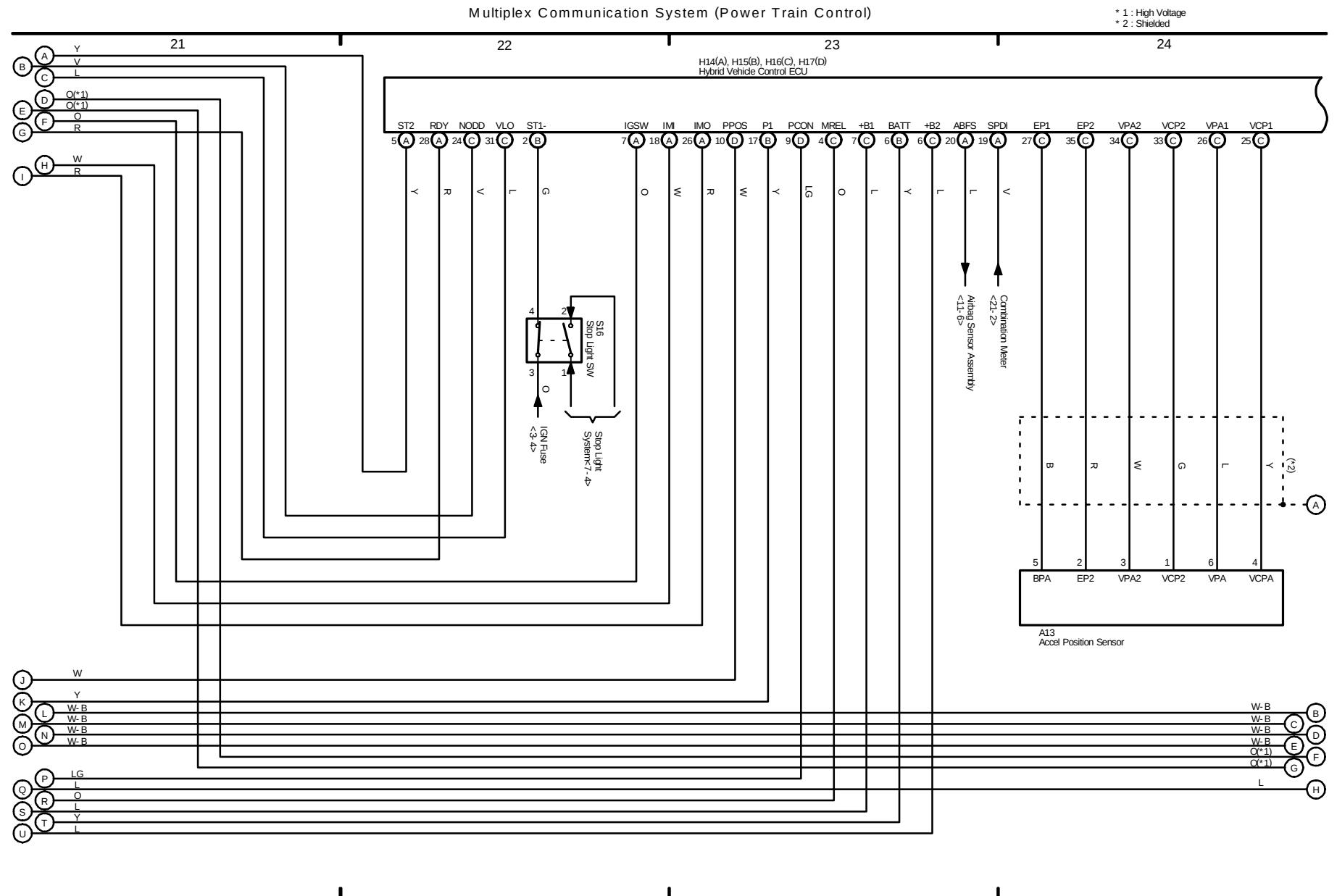


M OVERALL ELECTRICAL WIRING DIAGRAM

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3 PRIUS (Cont' d)





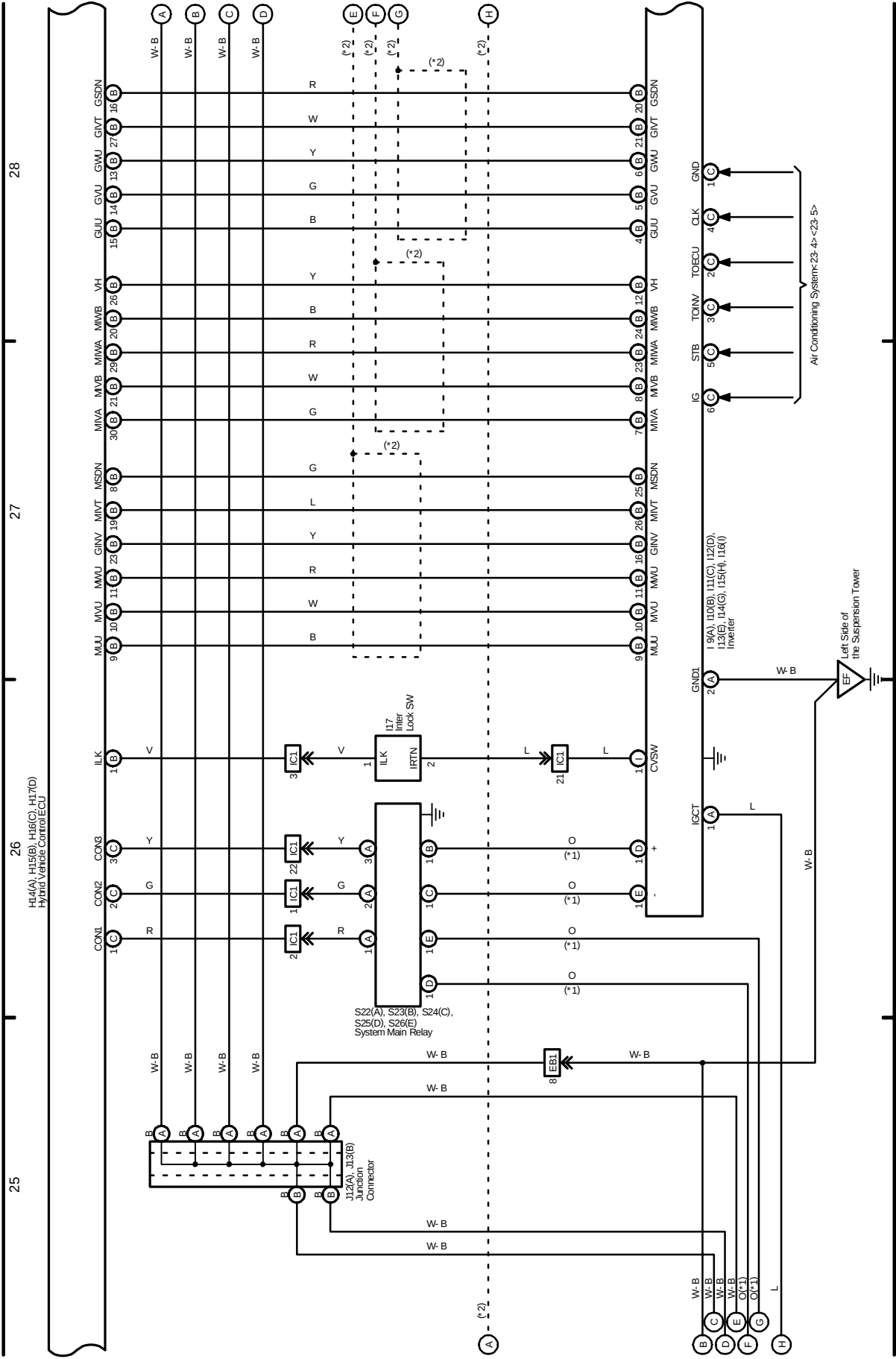
M OVERALL ELECTRICAL WIRING DIAGRAM

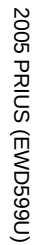
3 PRIUS (Cont' d)

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Multiplex Communication System (Power Train Control)

* 1.: High Voltage
* 2.: Shielded



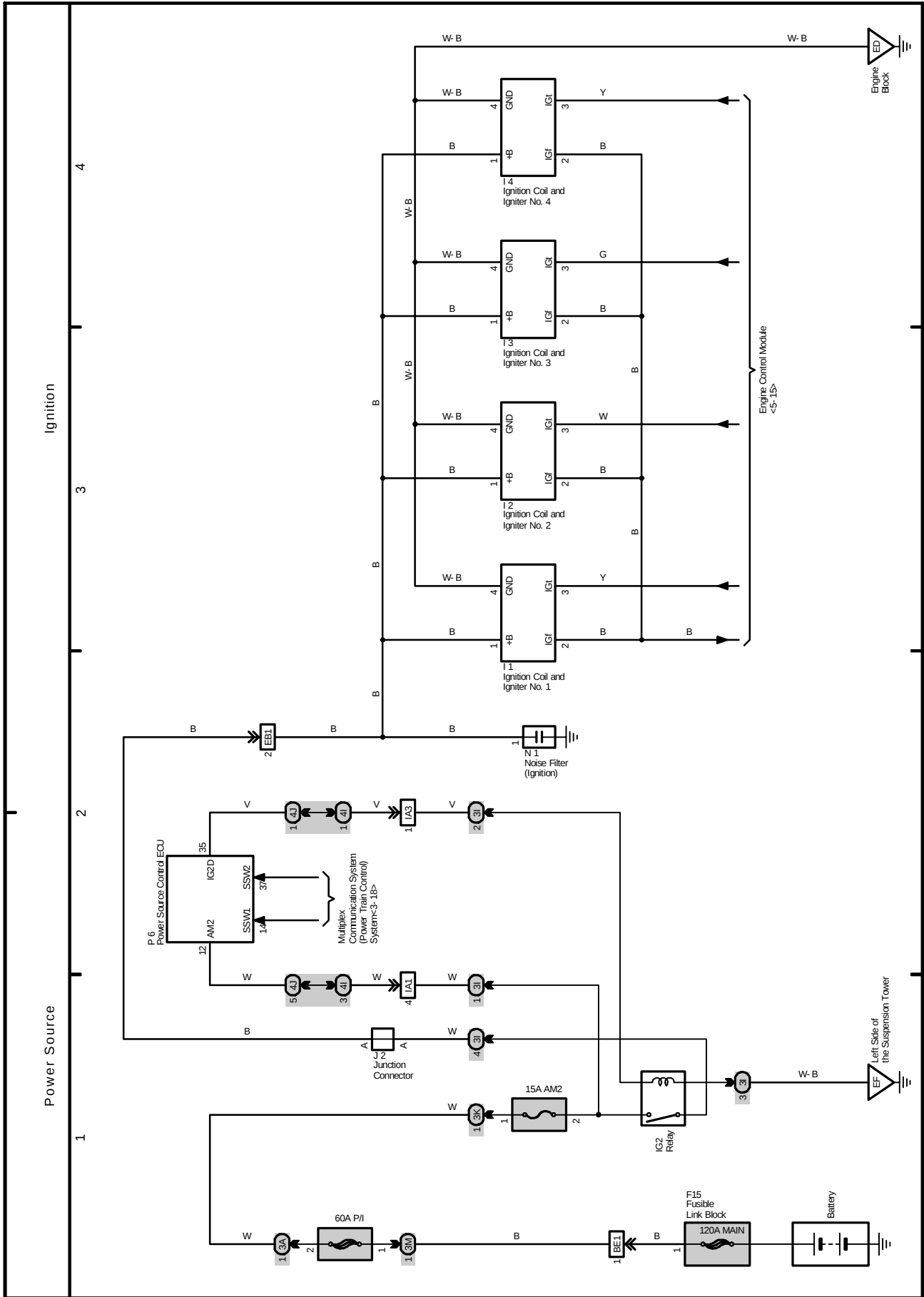


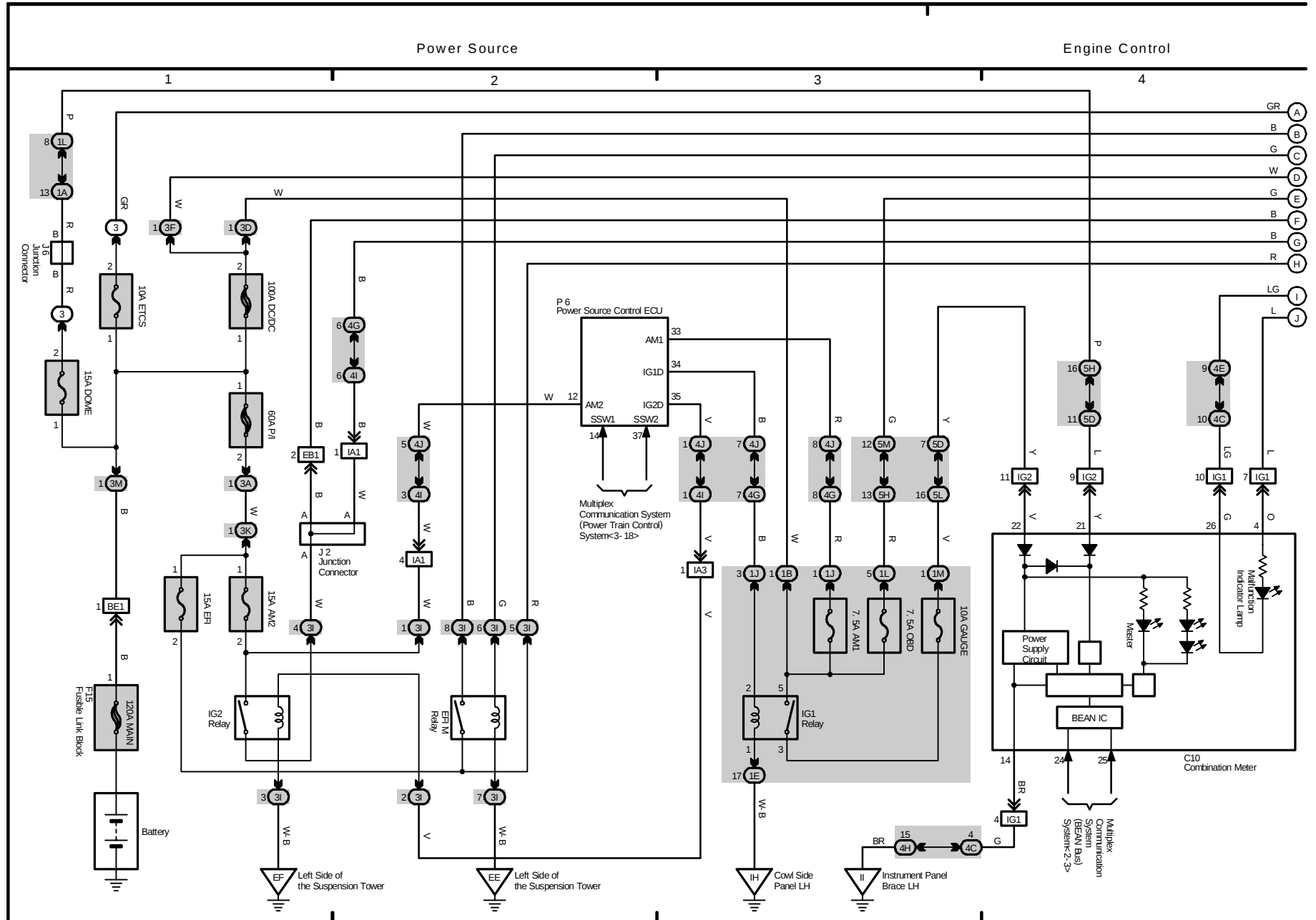
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M OVERALL ELECTRICAL WIRING DIAGRAM

4 PRIUS

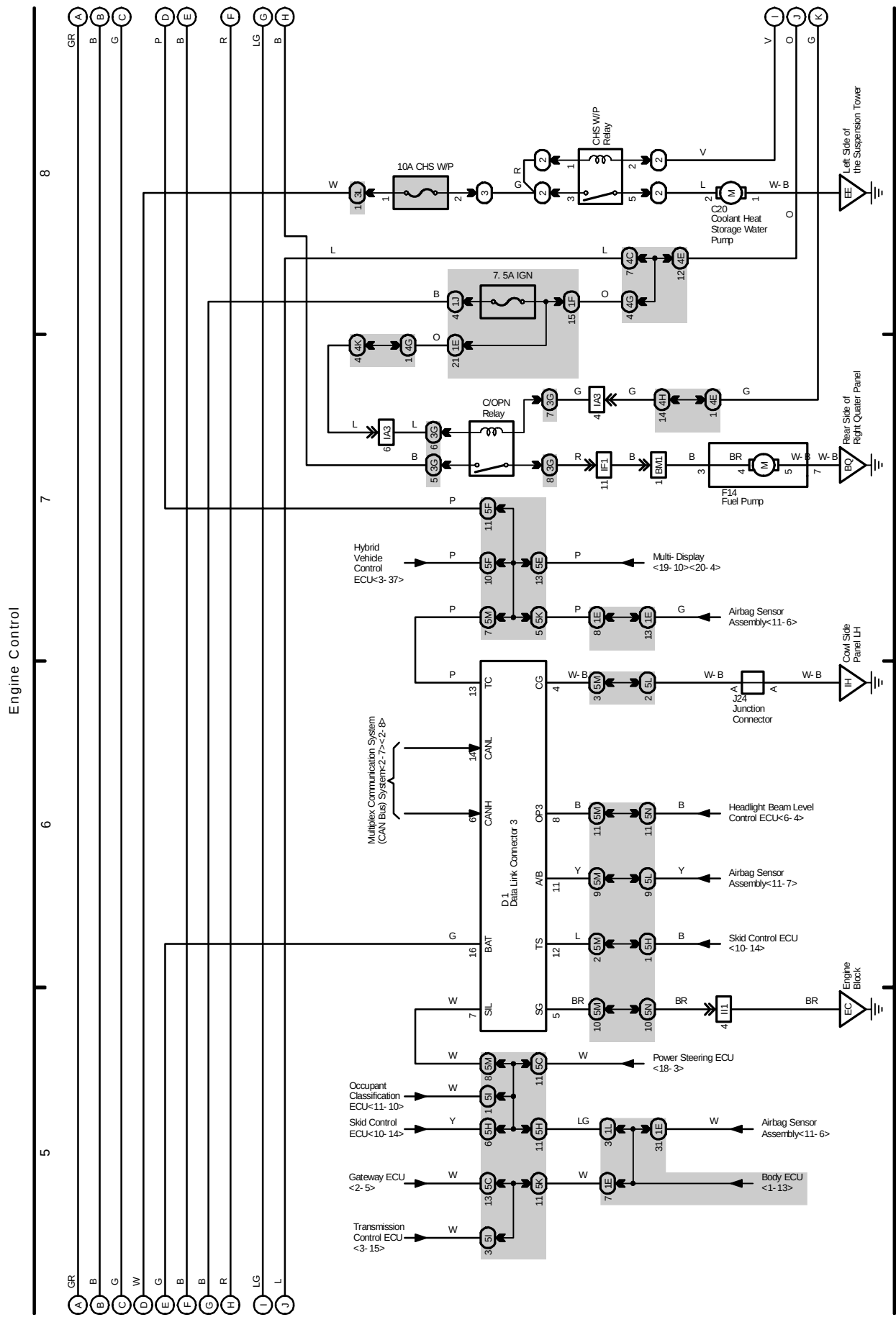


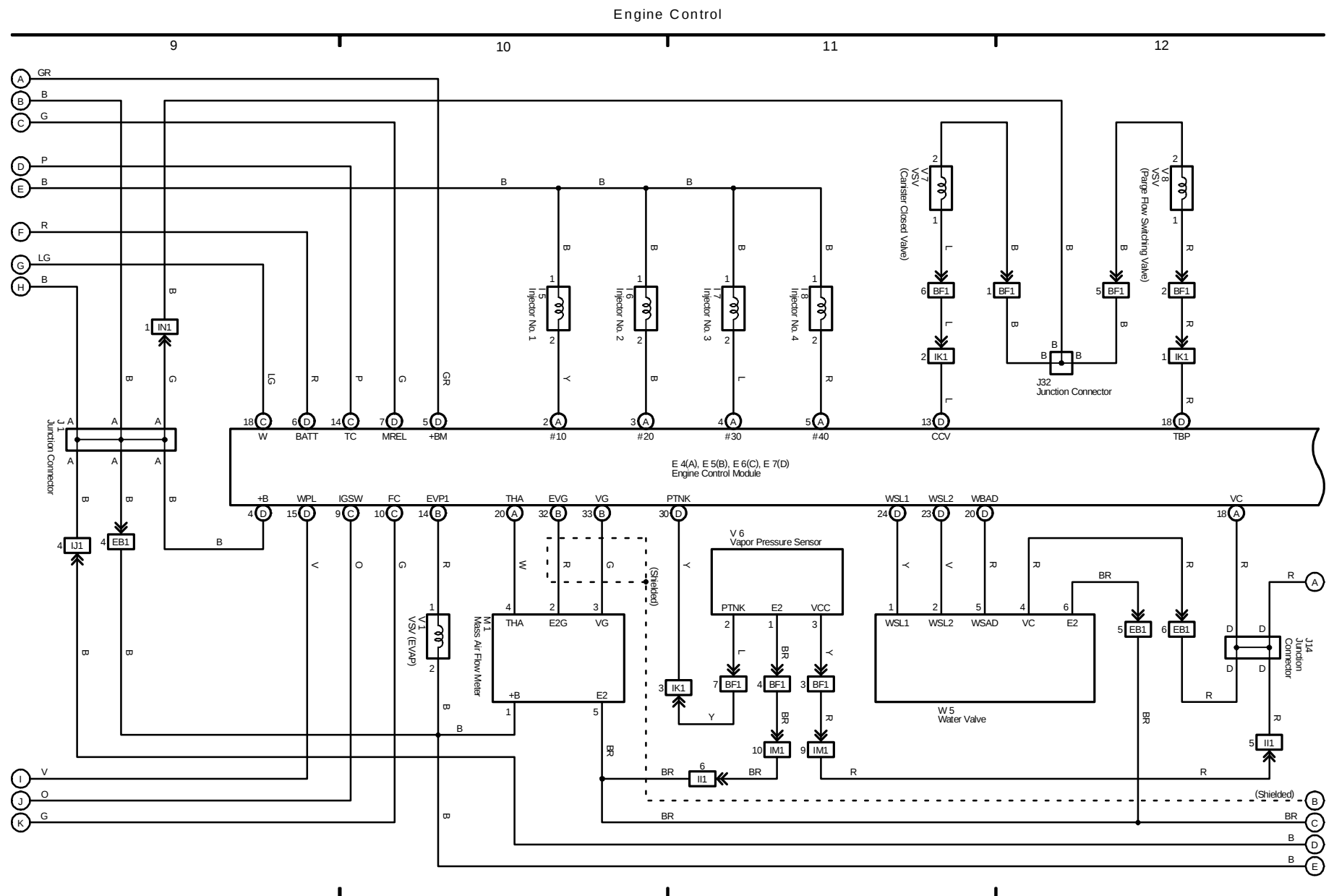


M OVERALL ELECTRICAL WIRING DIAGRAM

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5 PRIUS (Cont' d)

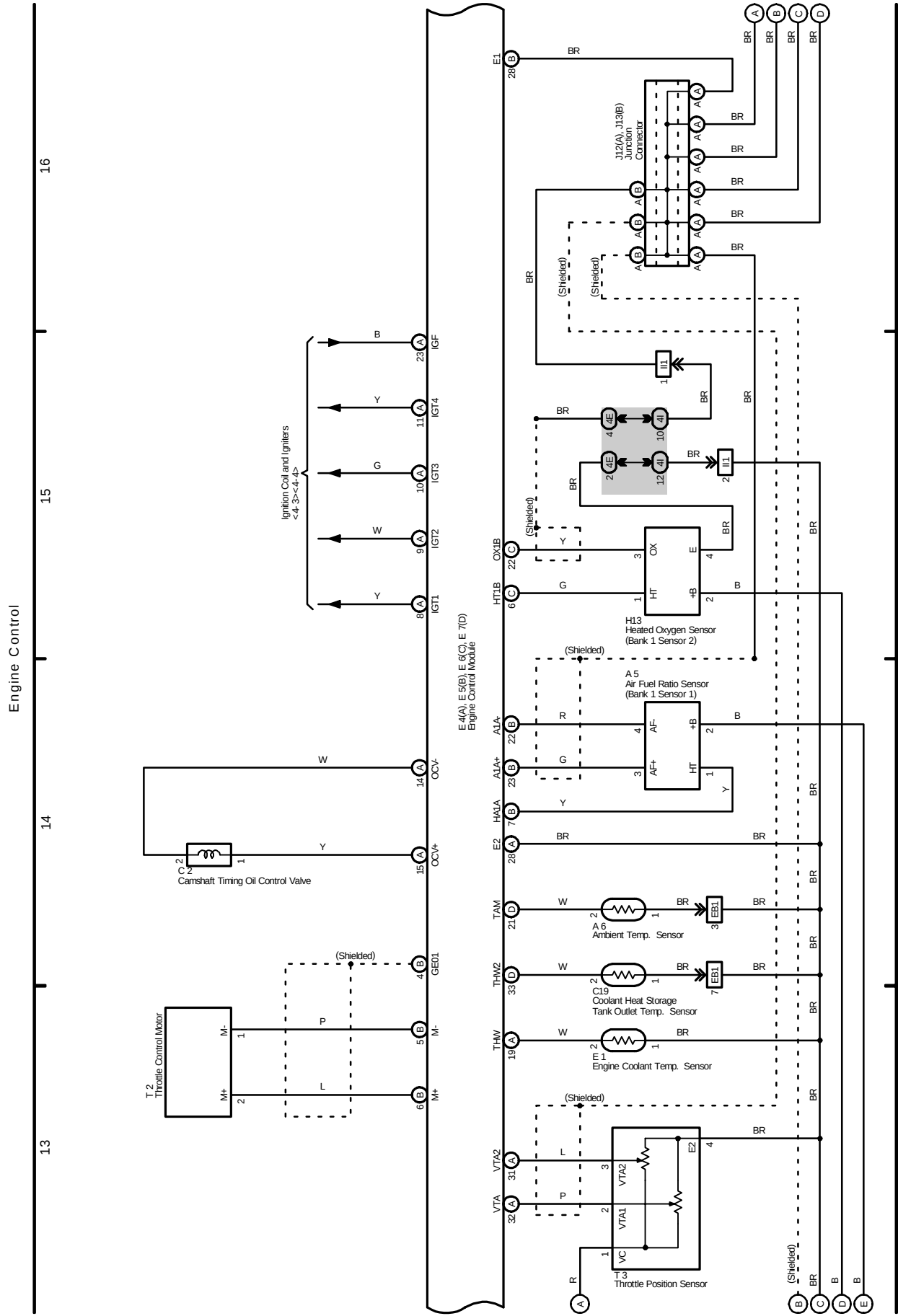




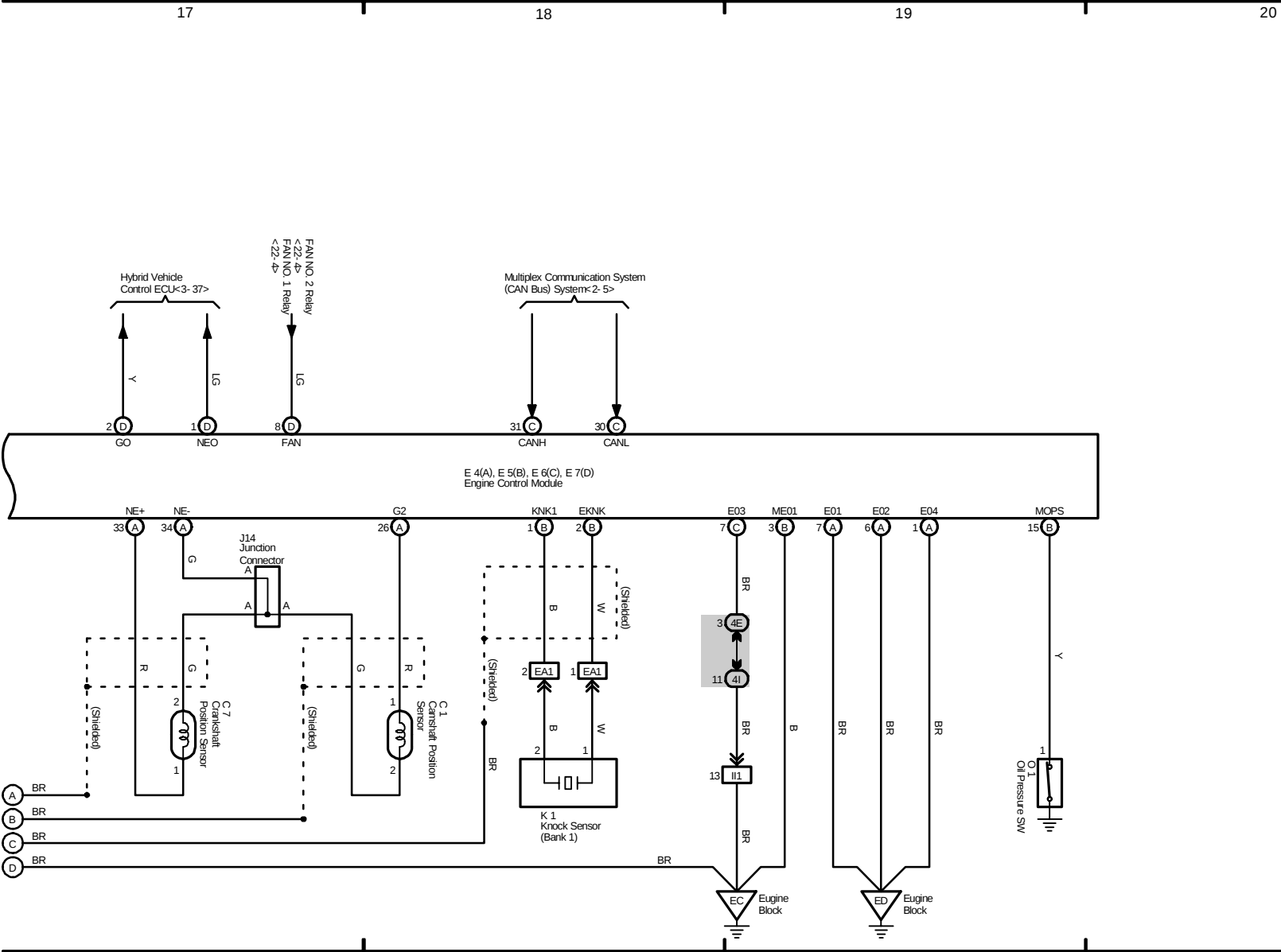
M OVERALL ELECTRICAL WIRING DIAGRAM

5 PRIUS (Cont' d)

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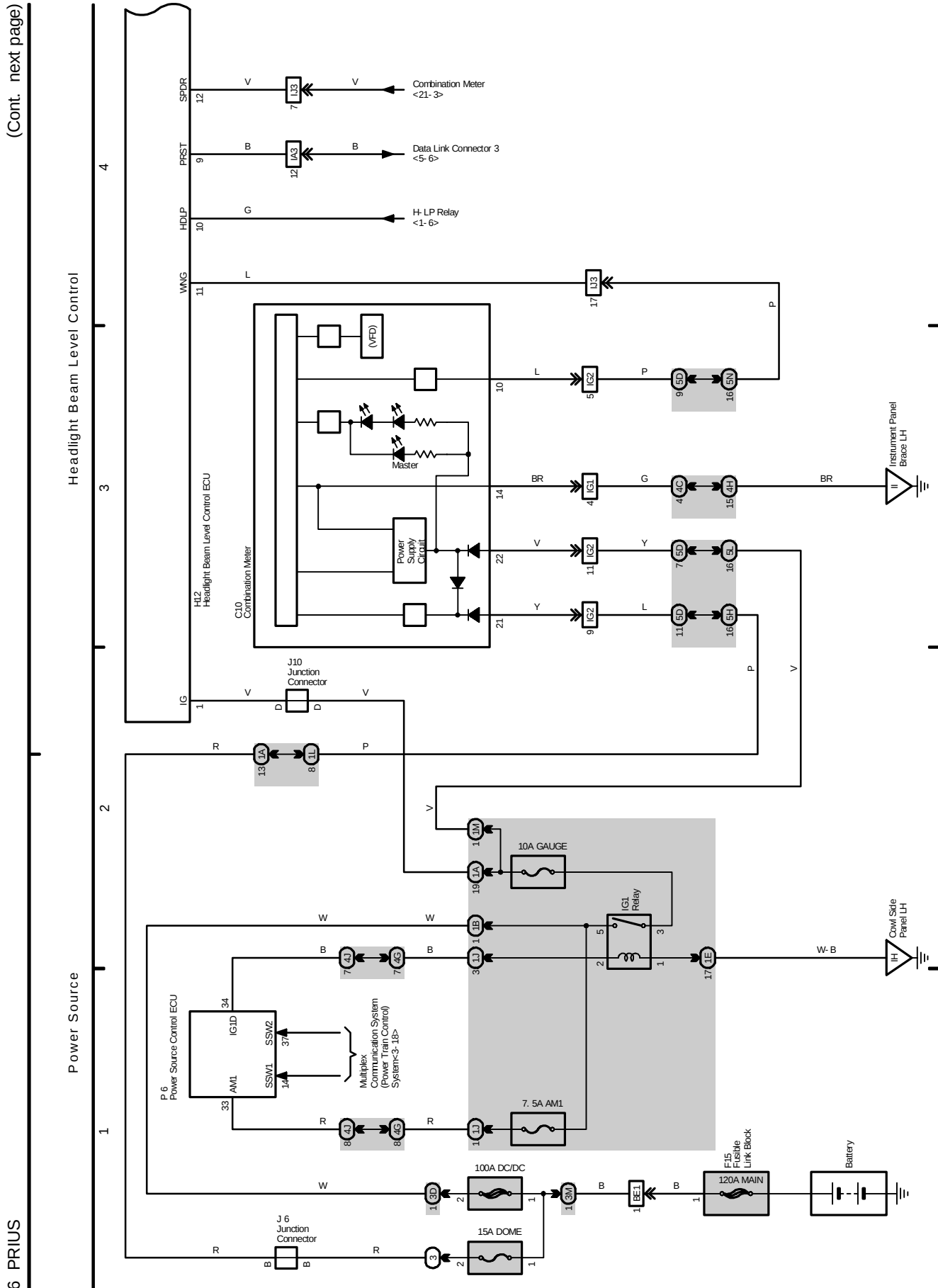


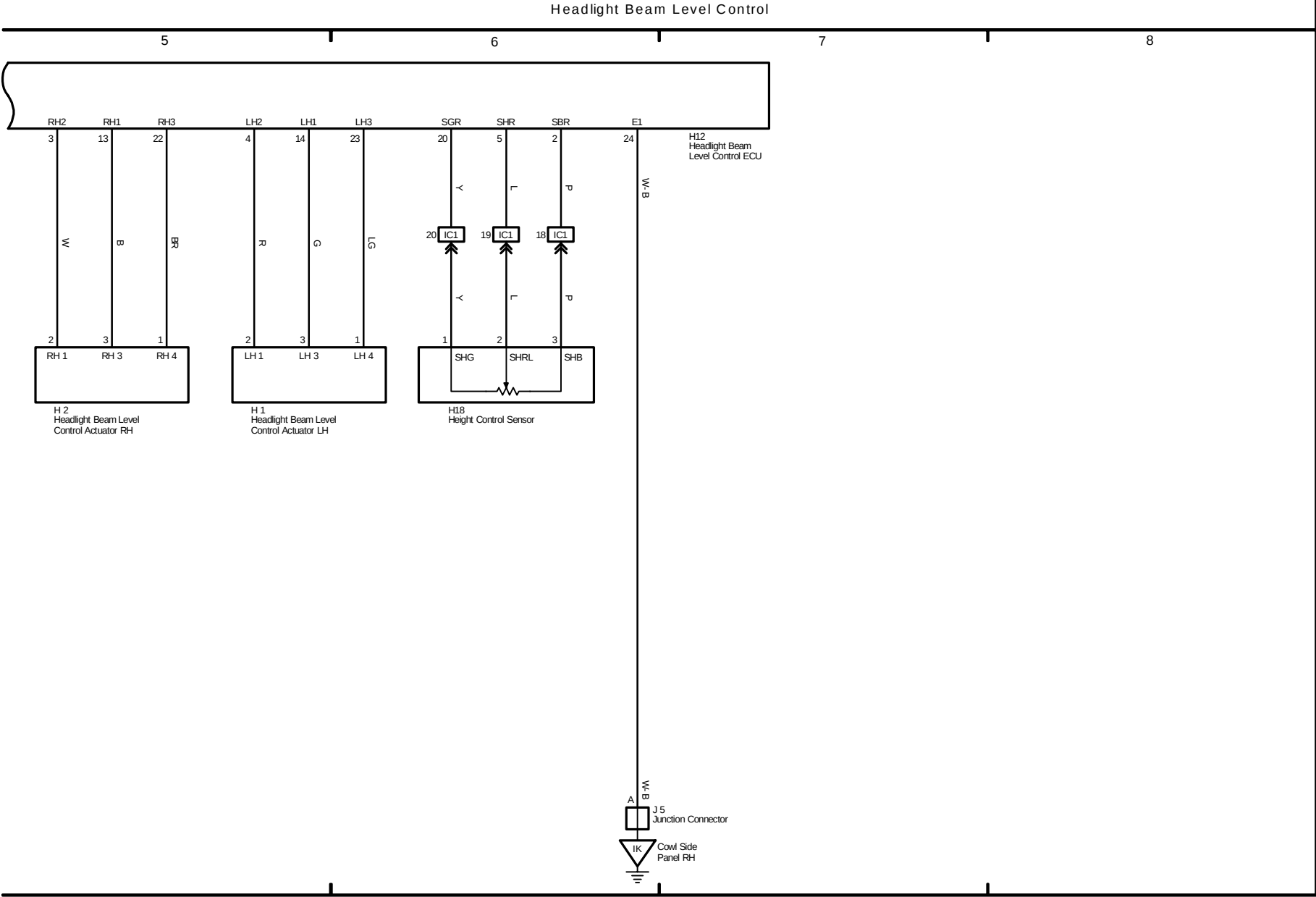
Engine Control



2005 PRIUS (EWD599U)

M OVERALL ELECTRICAL WIRING DIAGRAM

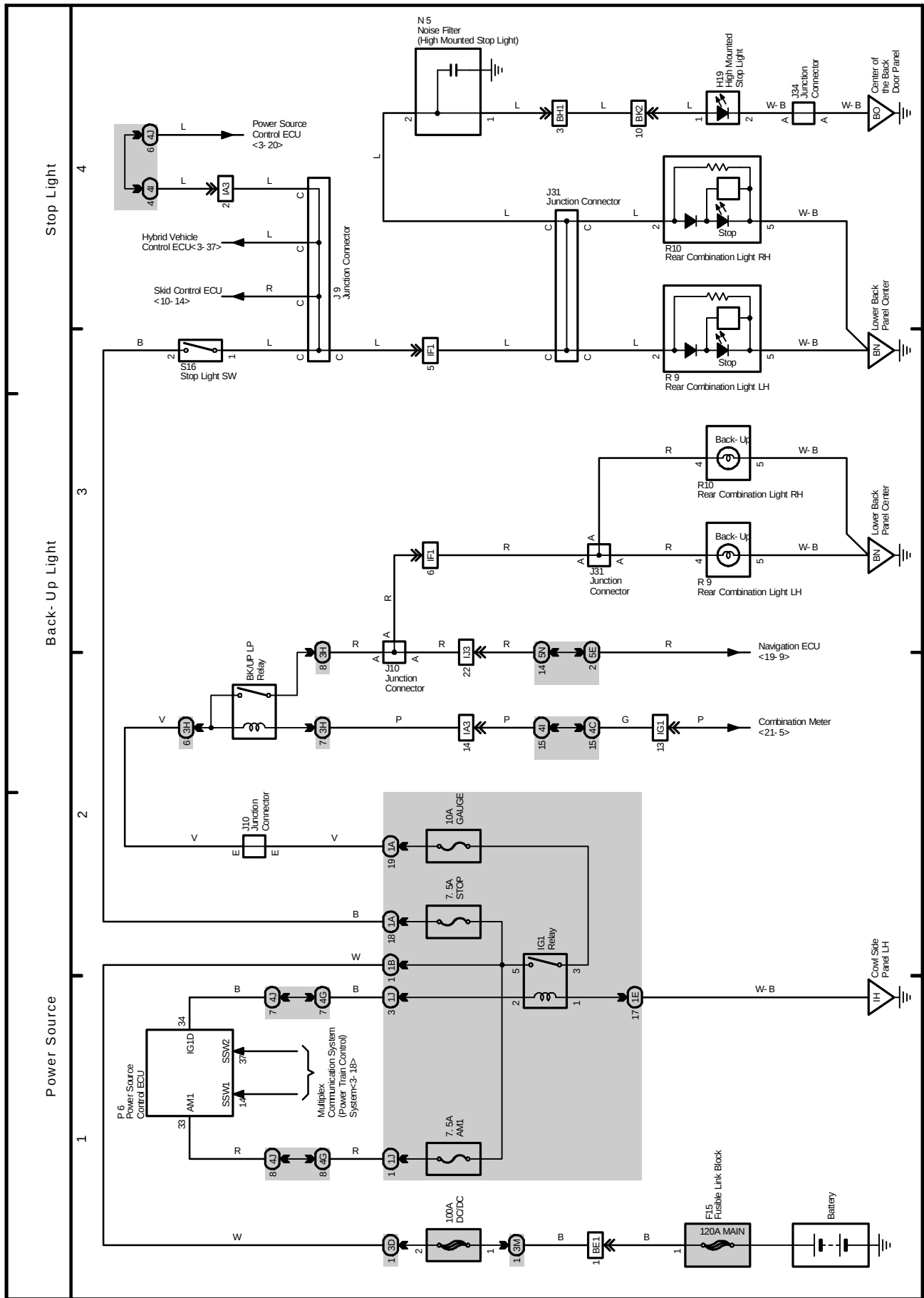


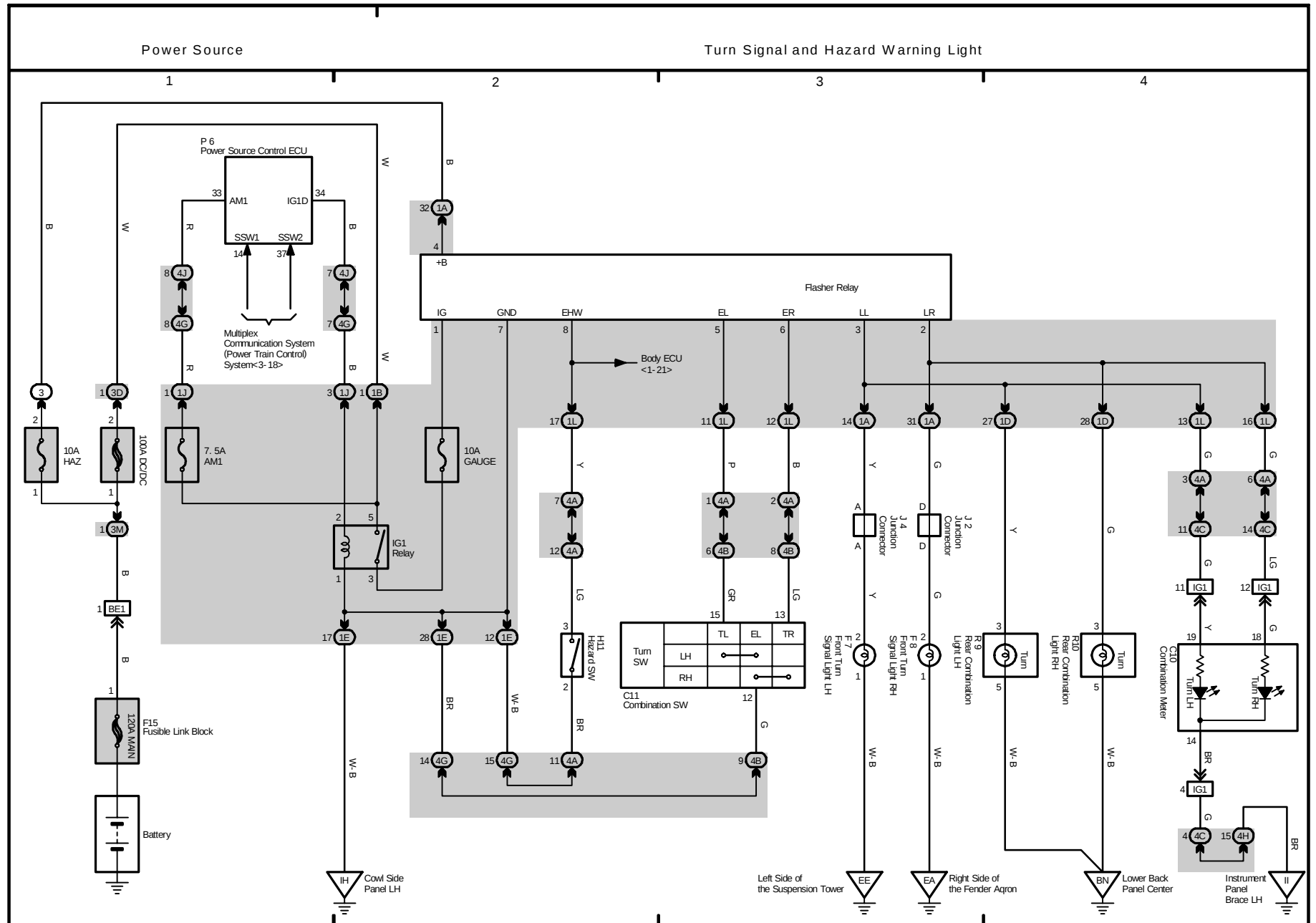


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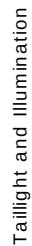
M OVERALL ELECTRICAL WIRING DIAGRAM

7 PRIUS



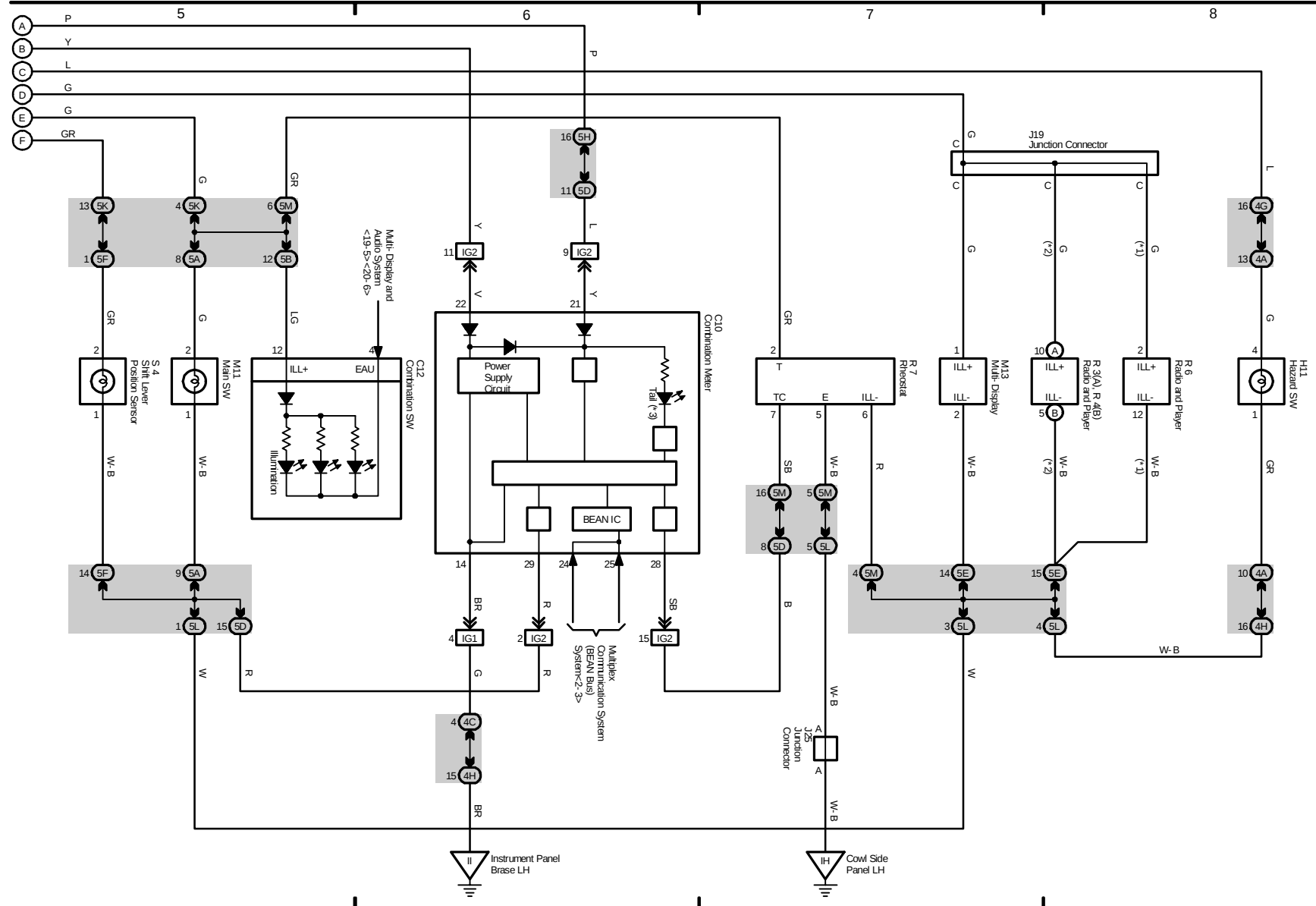


9 PRIUS



Taillight and Illumination

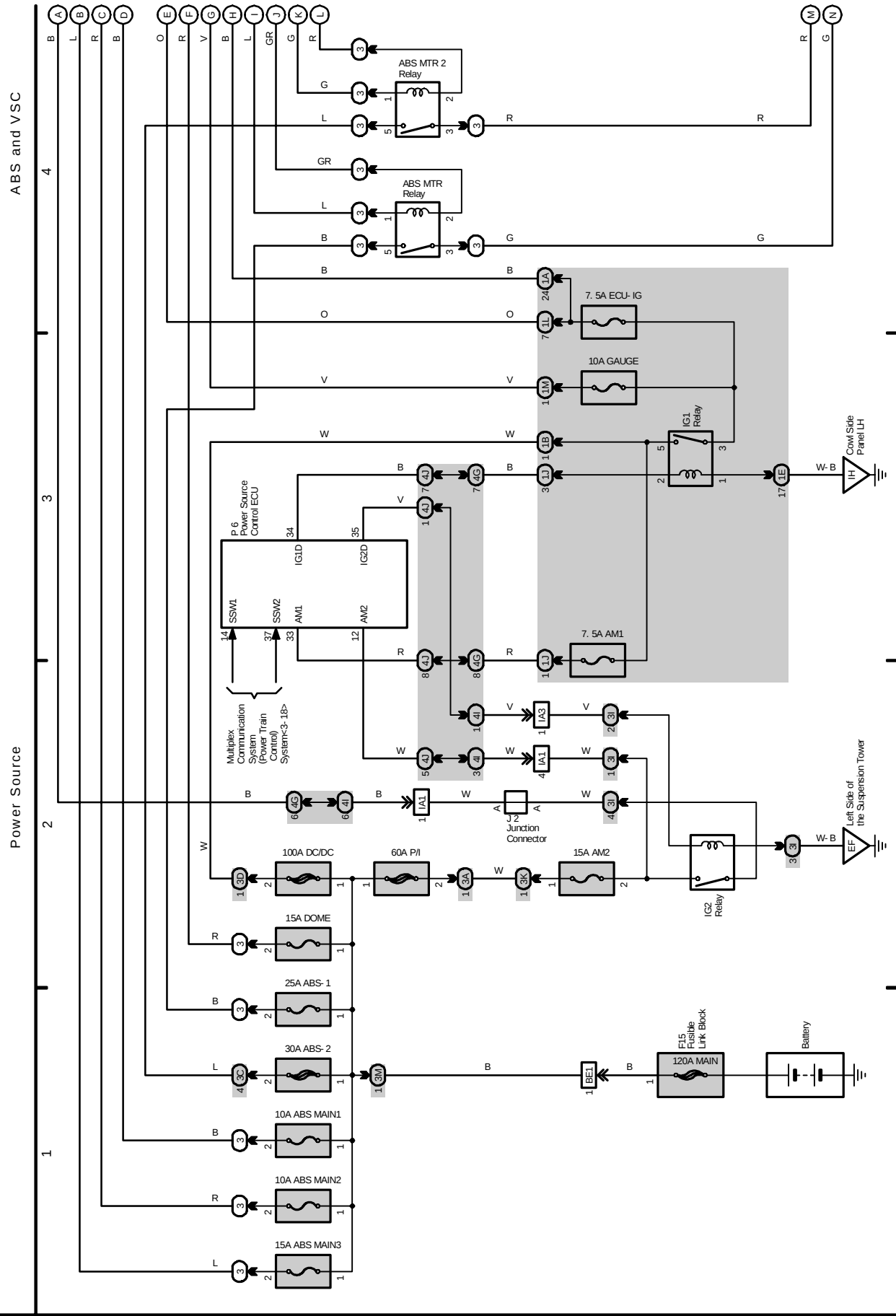
* 1 : Separate Amplifier
 * 2 : Built-in Amplifier
 * 3 : Canada



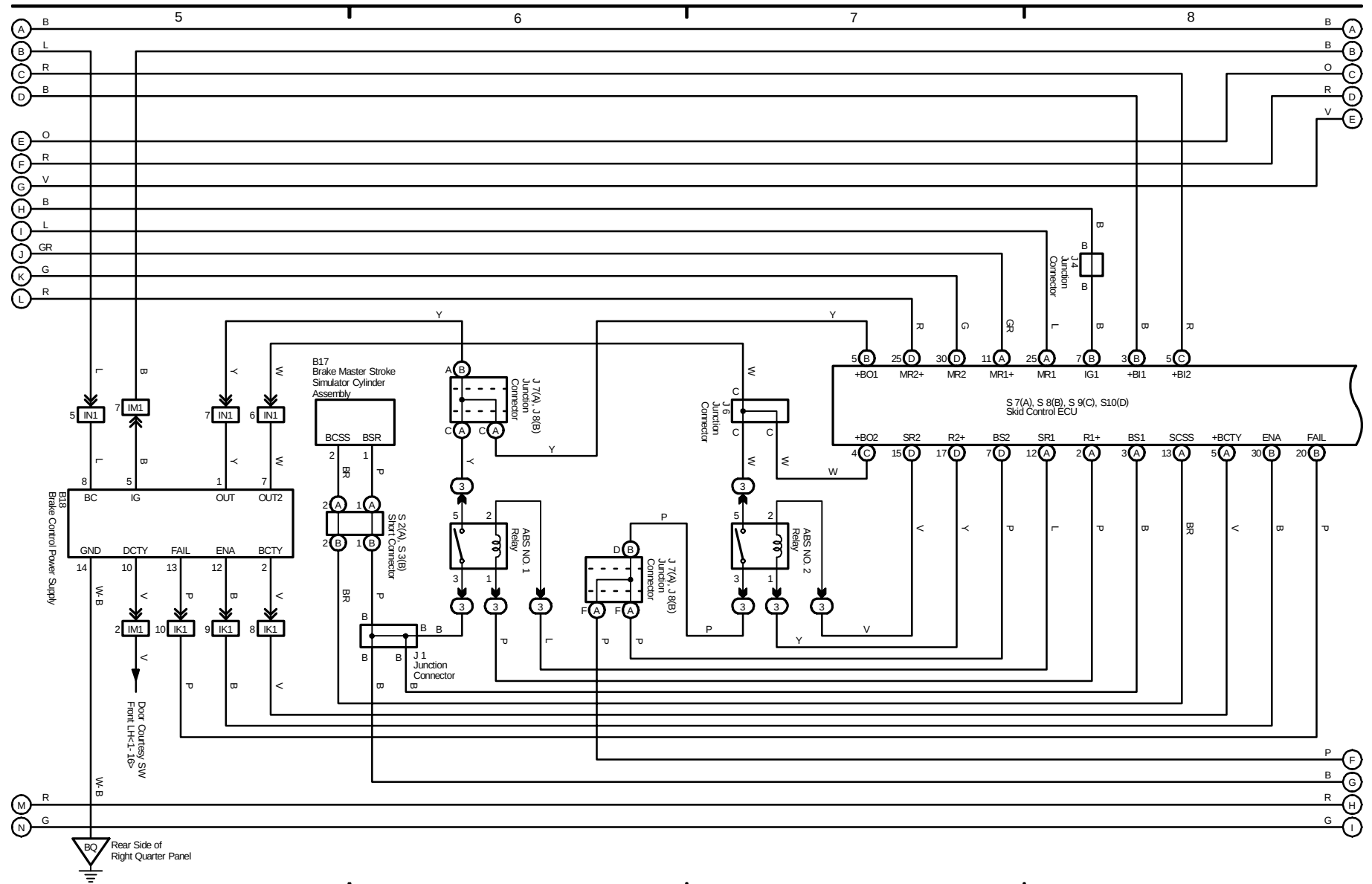
M OVERALL ELECTRICAL WIRING DIAGRAM

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10 PRIUS



ABS and VSC

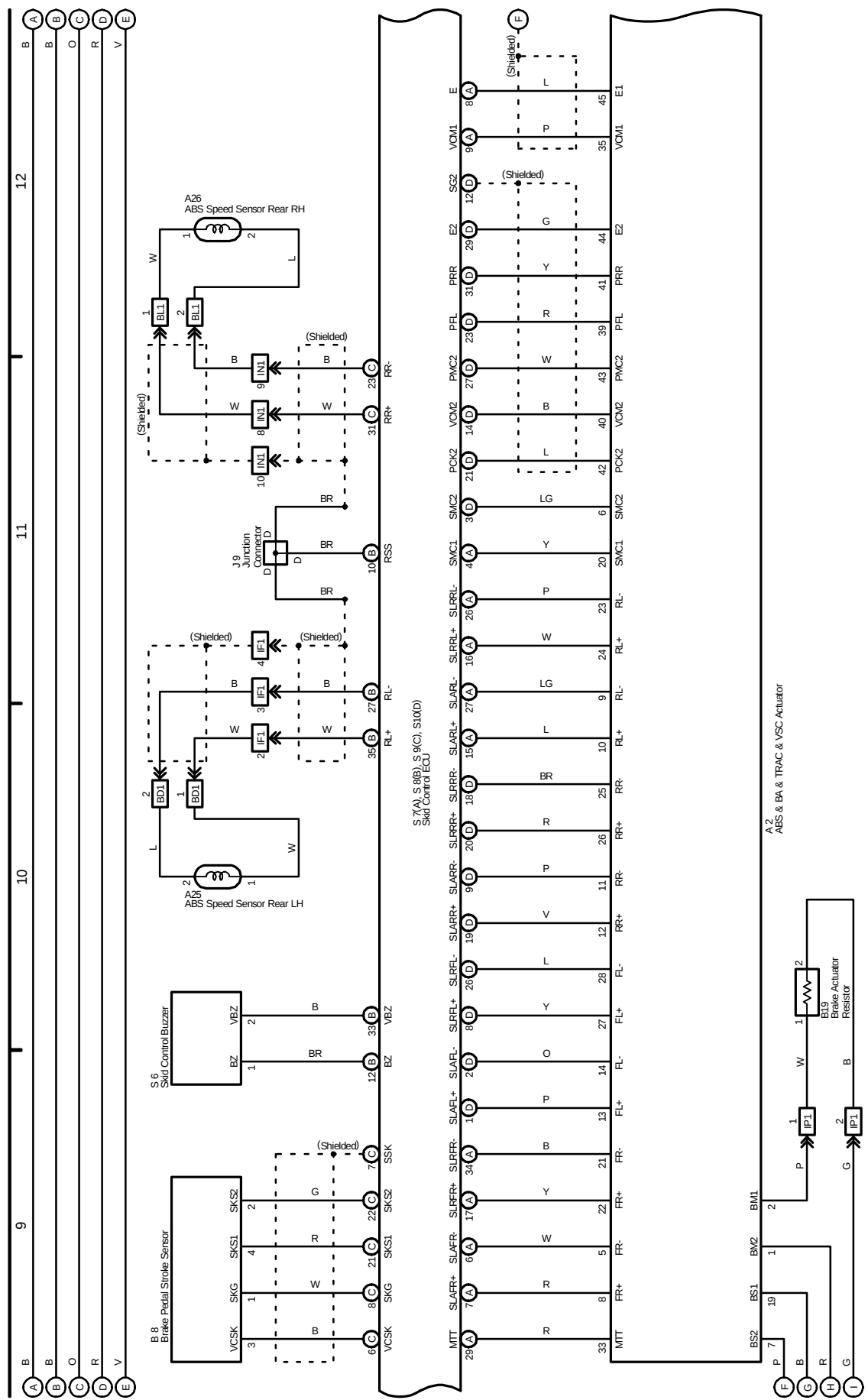


M OVERALL ELECTRICAL WIRING DIAGRAM

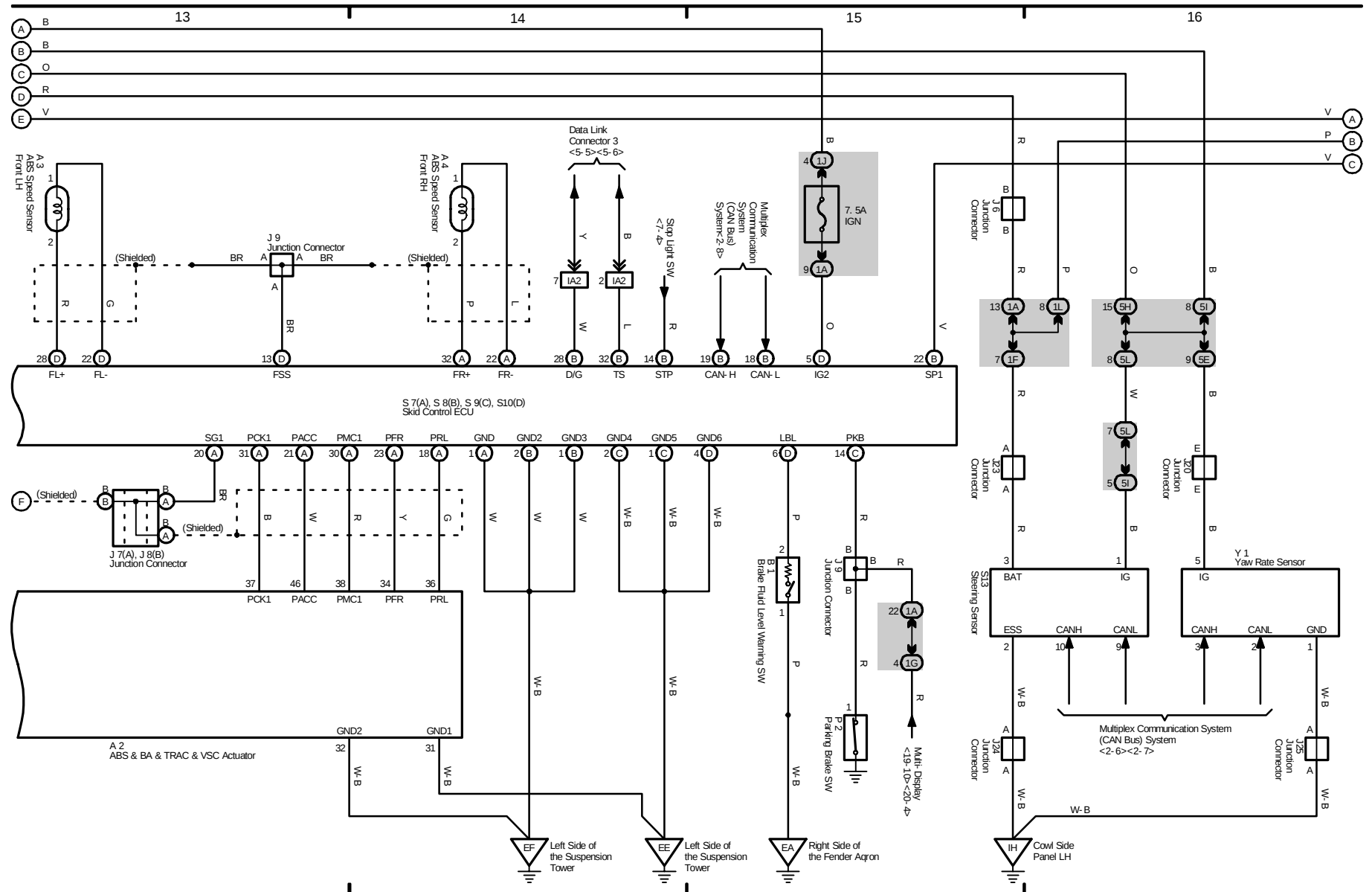
10 PRIUS (Cont' d)

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ABS and VSC



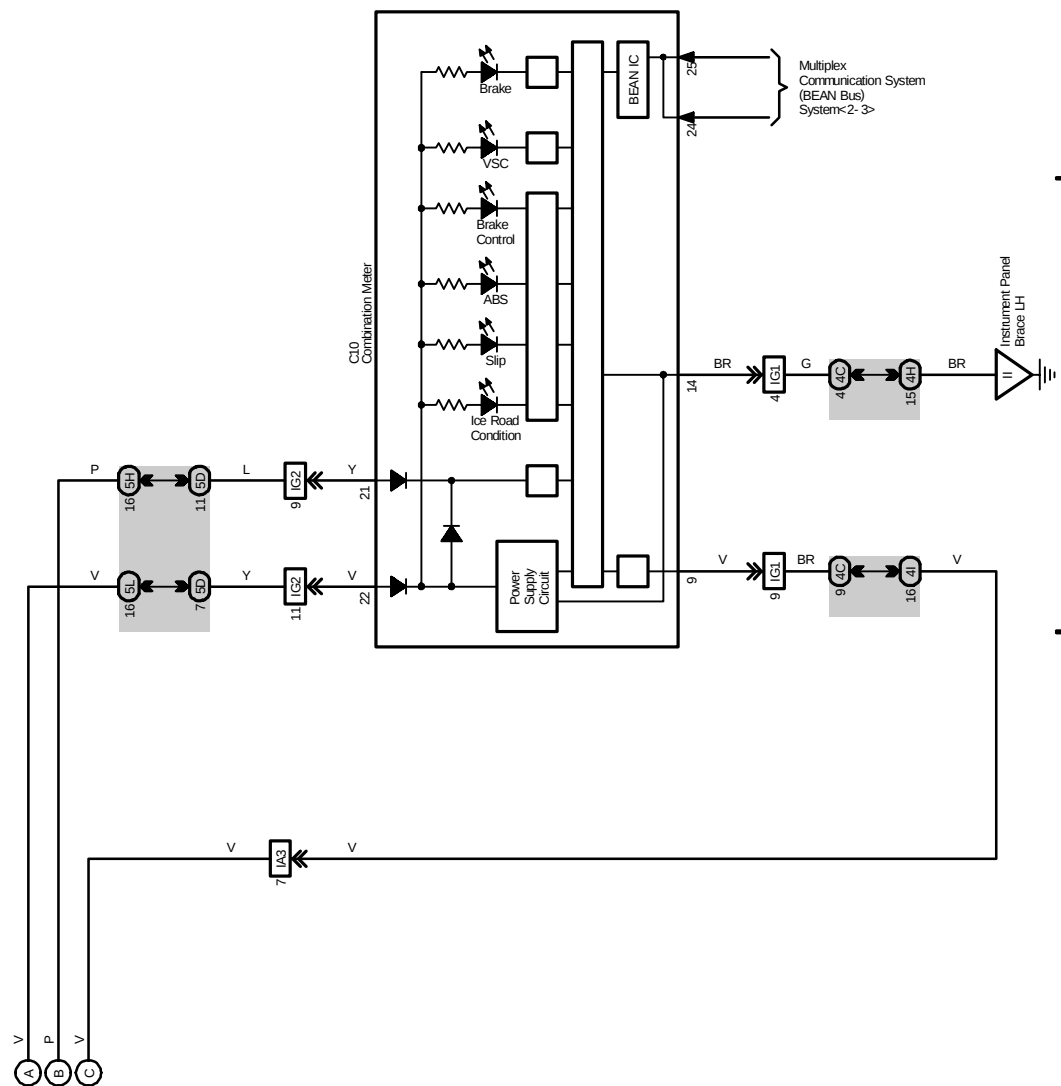
ABS and VSC



M OVERALL ELECTRICAL WIRING DIAGRAM

10 PRIUS (Cont' d)

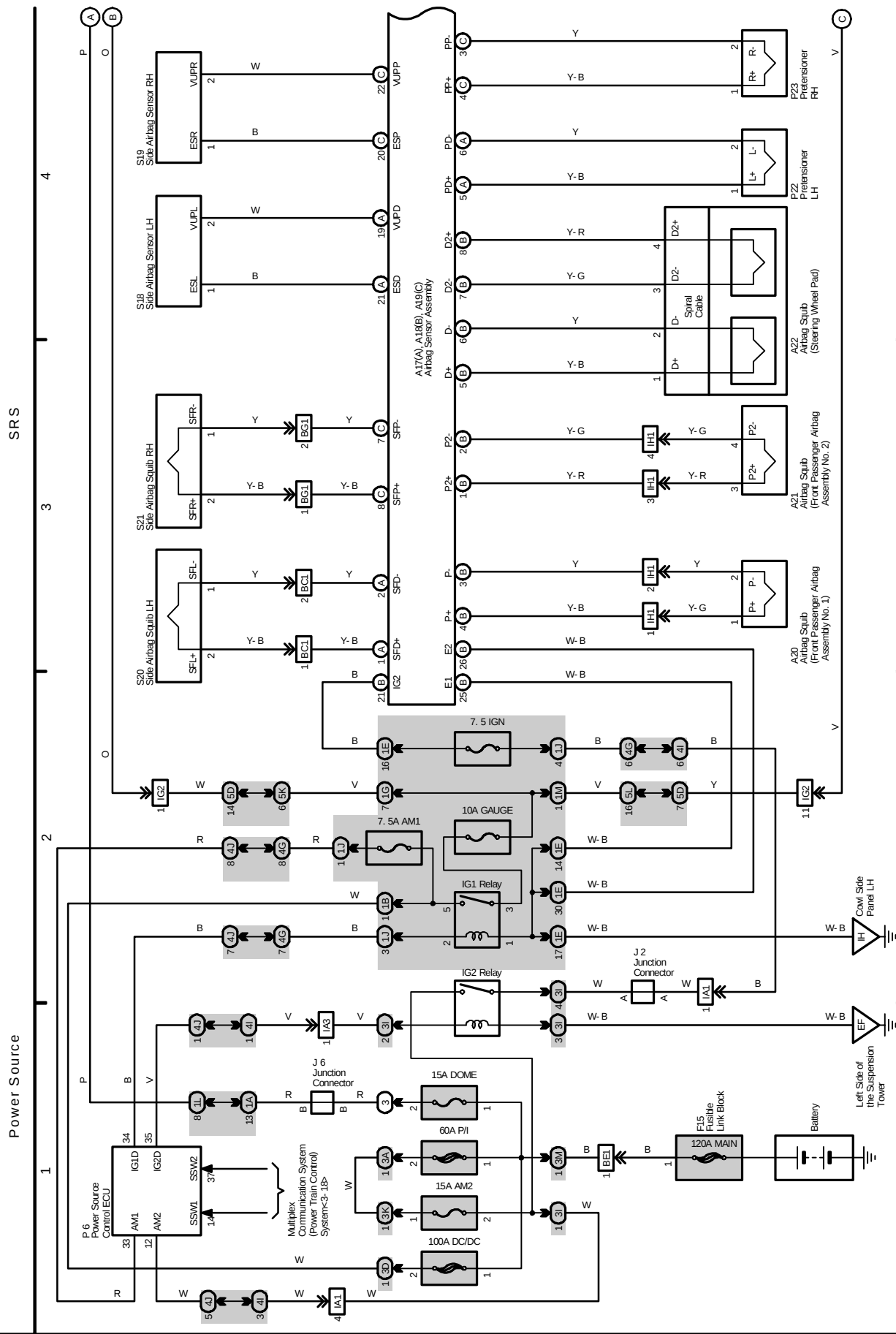
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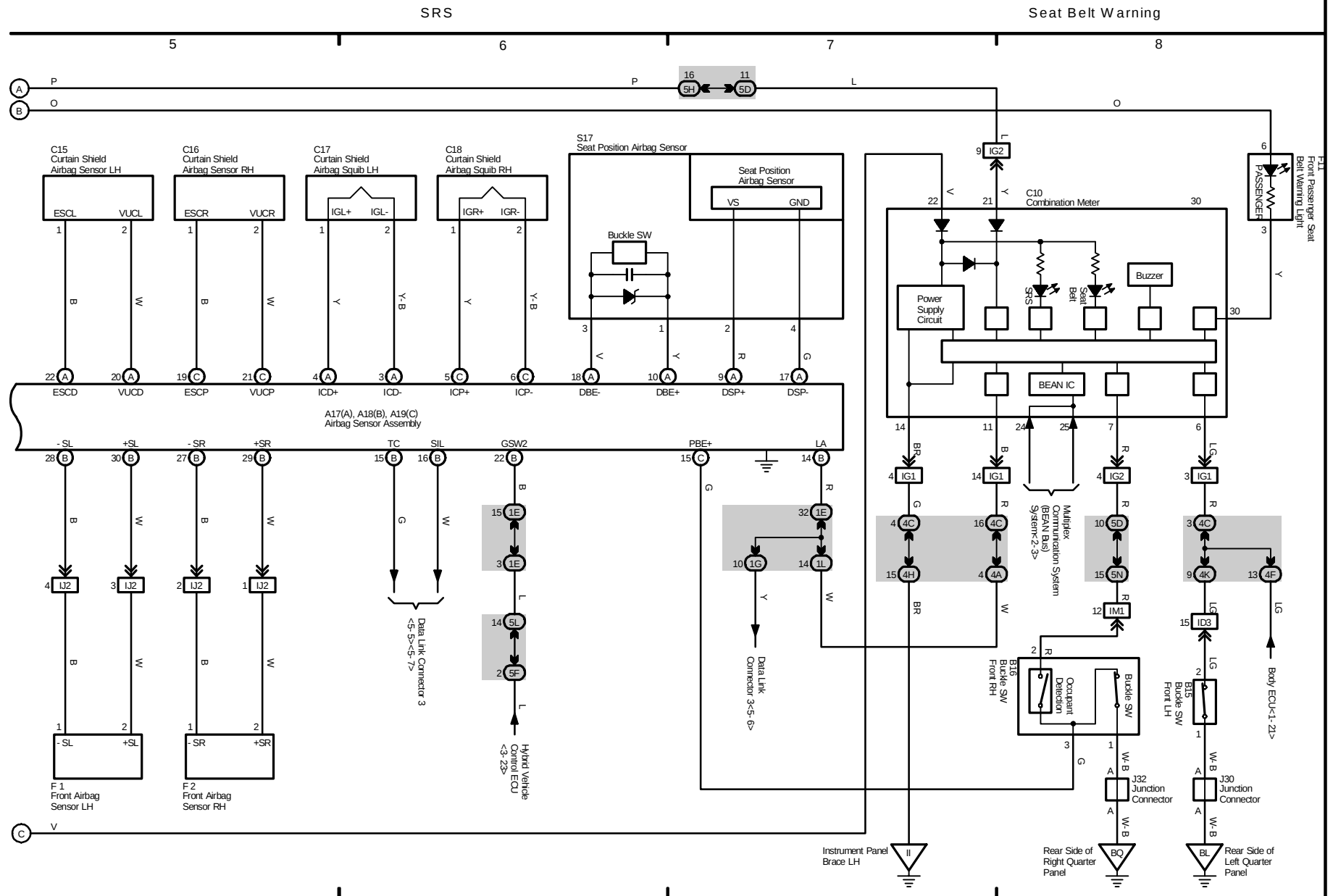
M OVERALL ELECTRICAL WIRING DIAGRAM

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11 PRIUS

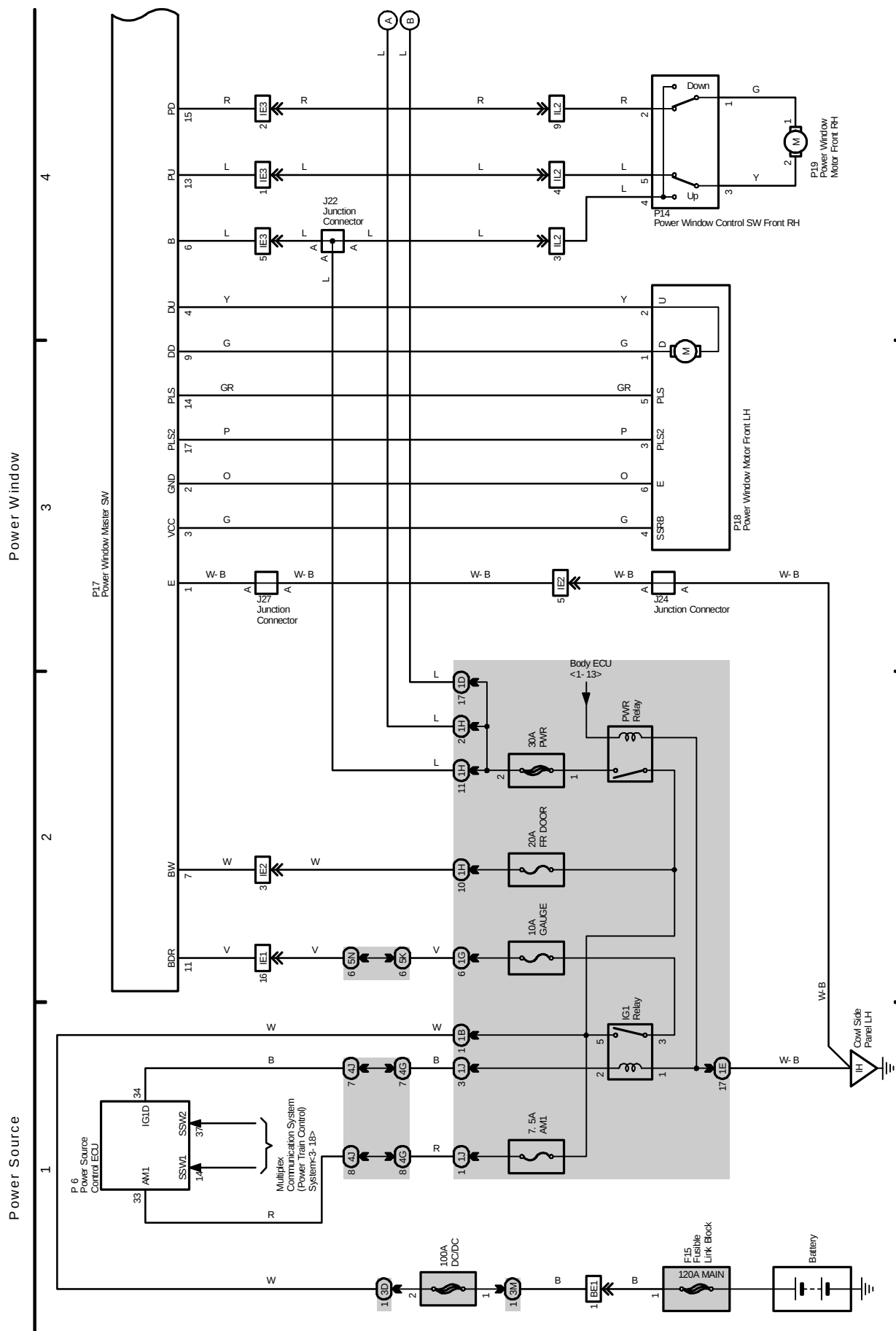


11 PRIUS (Cont' d)

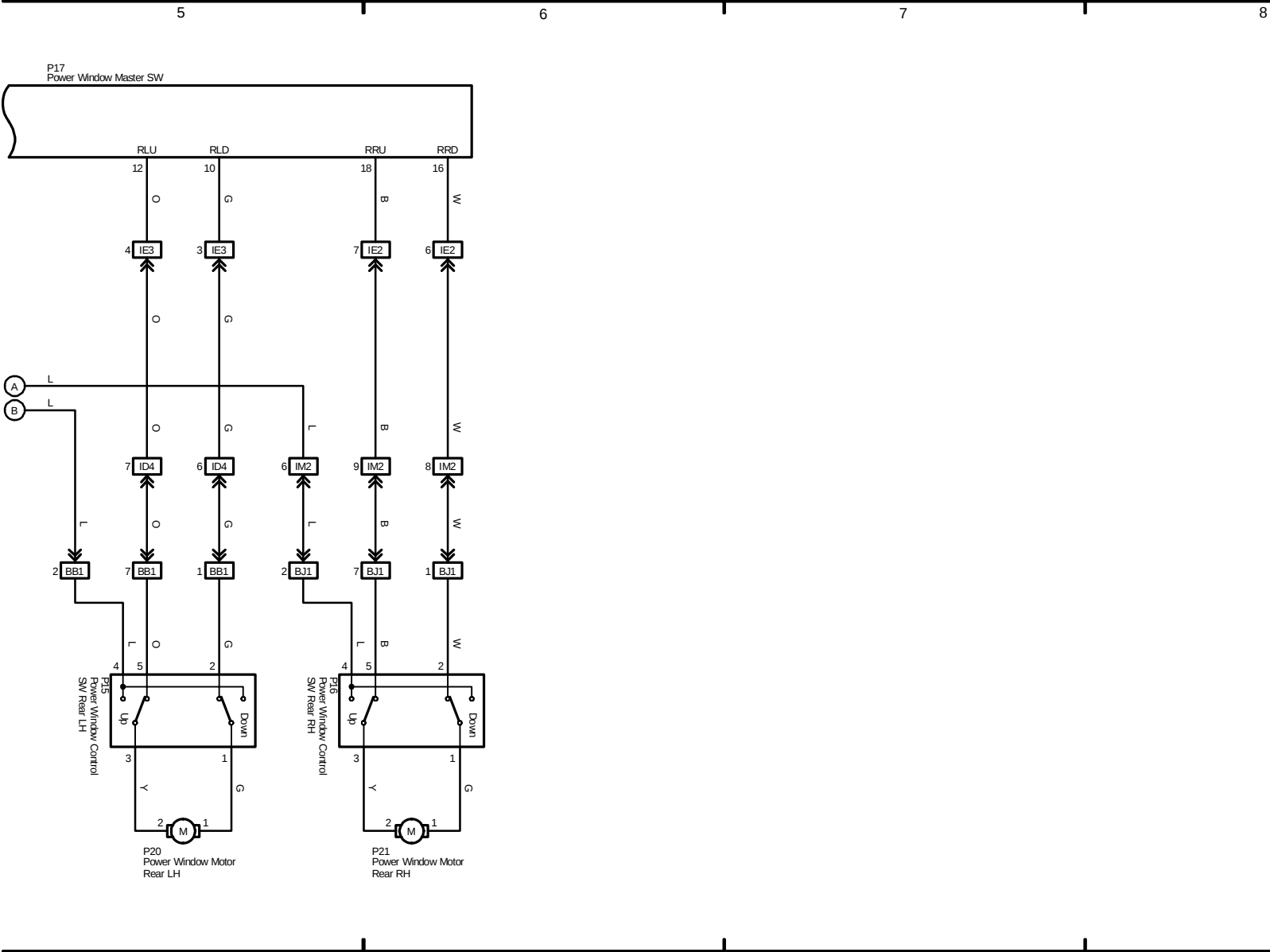


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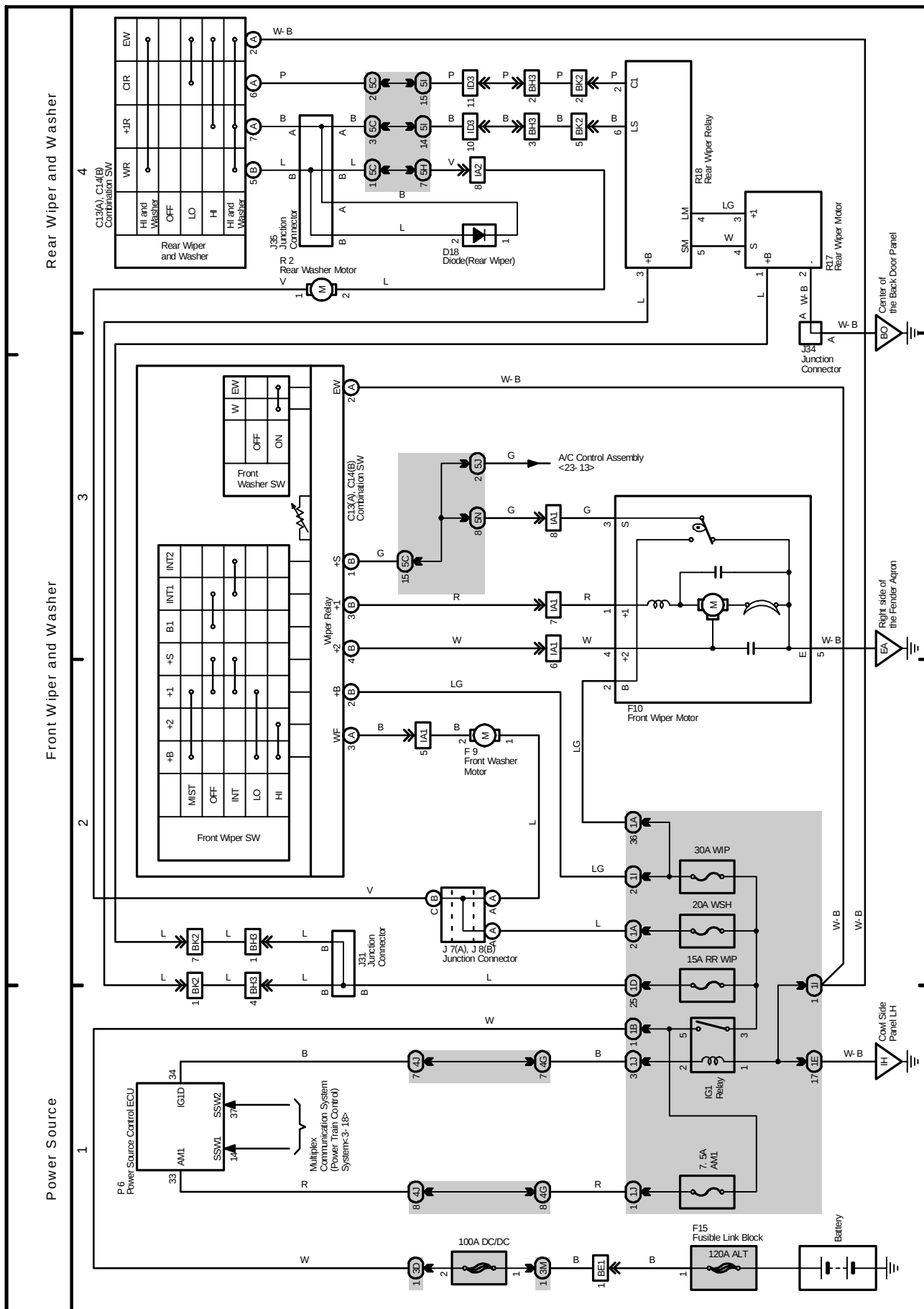
Power Window



2005 PRIUS (EWD599U)

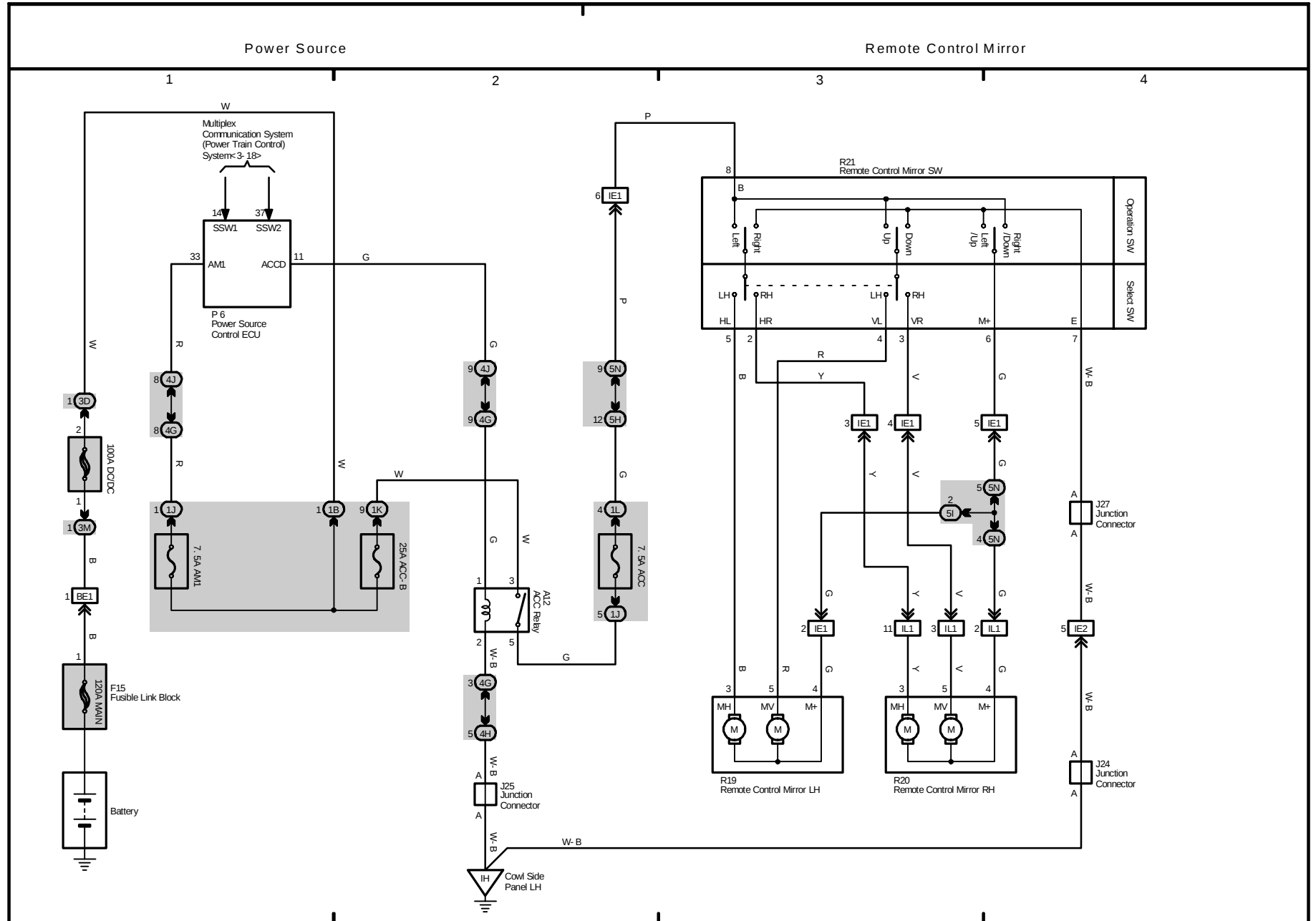
M OVERALL ELECTRICAL WIRING DIAGRAM

13 PRIUS



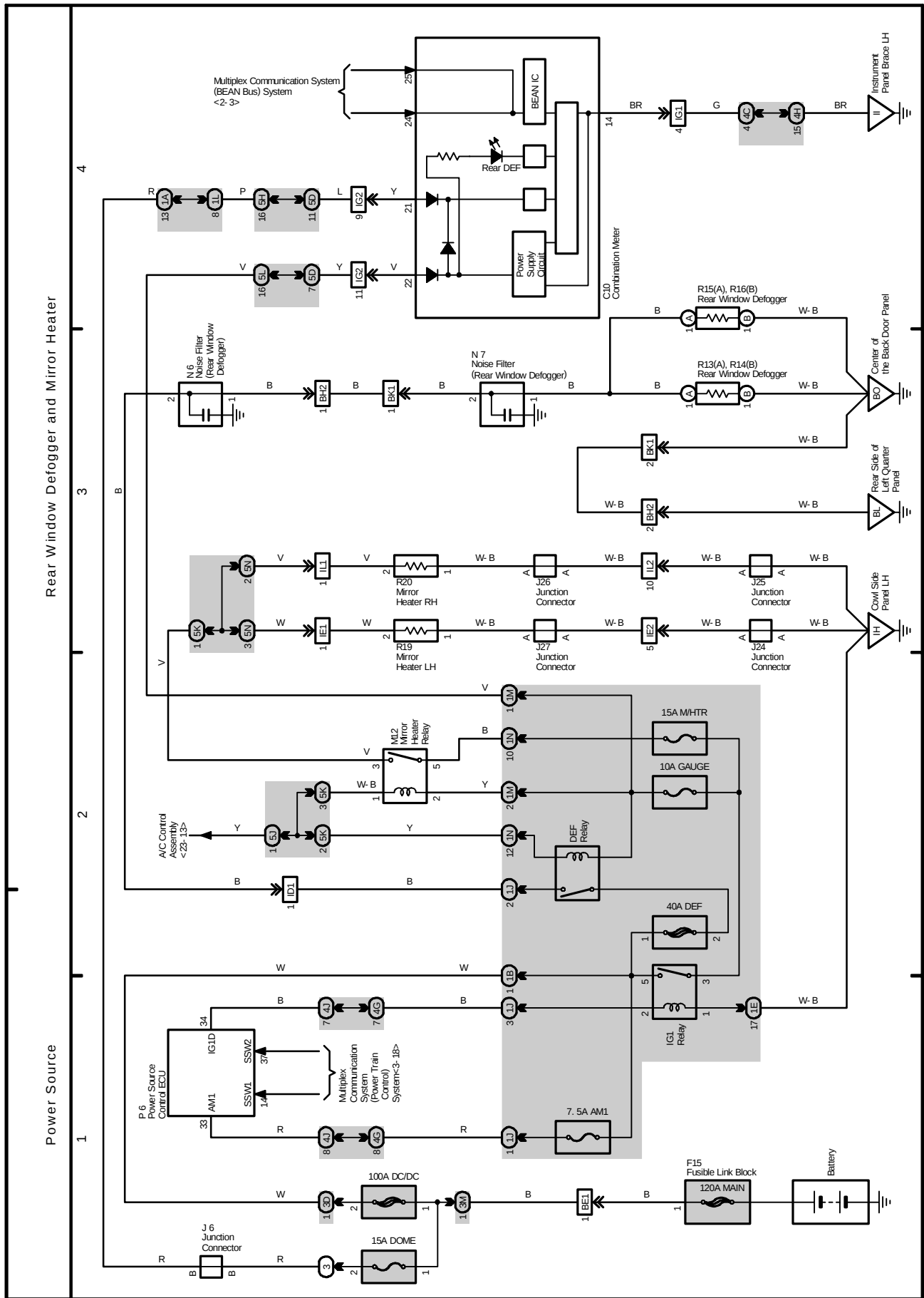
14 PRIUS

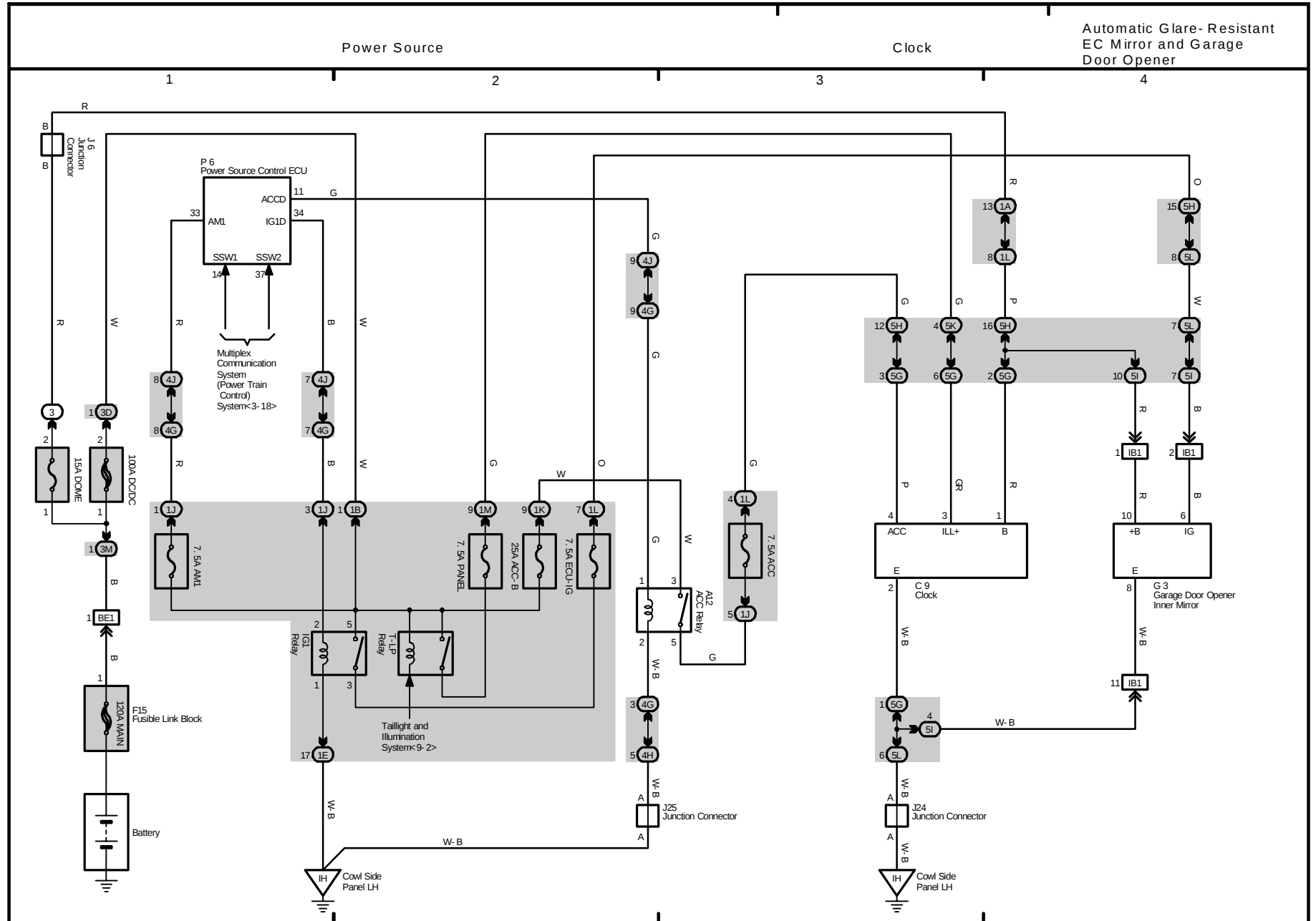
2005 PRIUS (EWD599U)



M OVERALL ELECTRICAL WIRING DIAGRAM

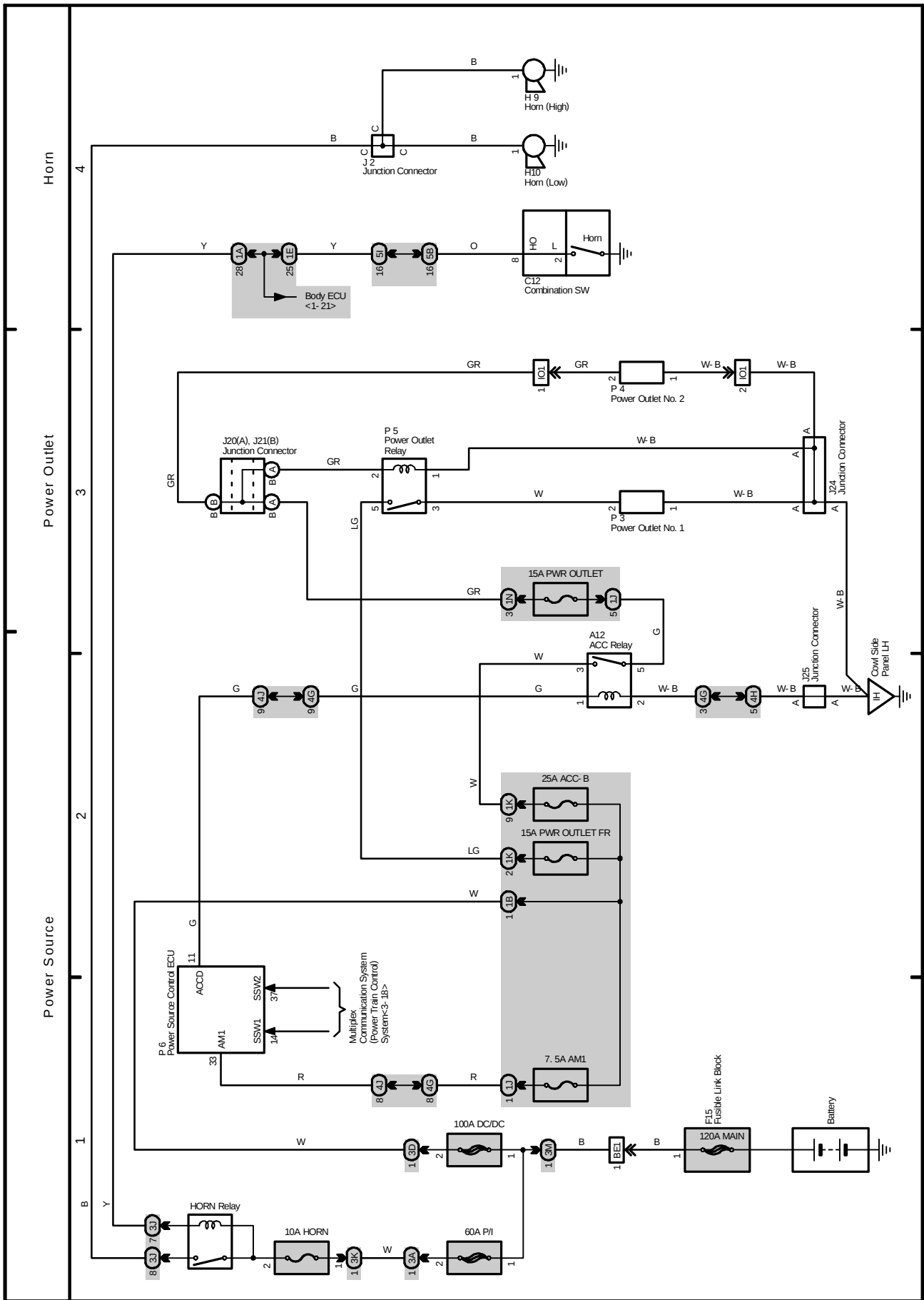
15 PRIUS

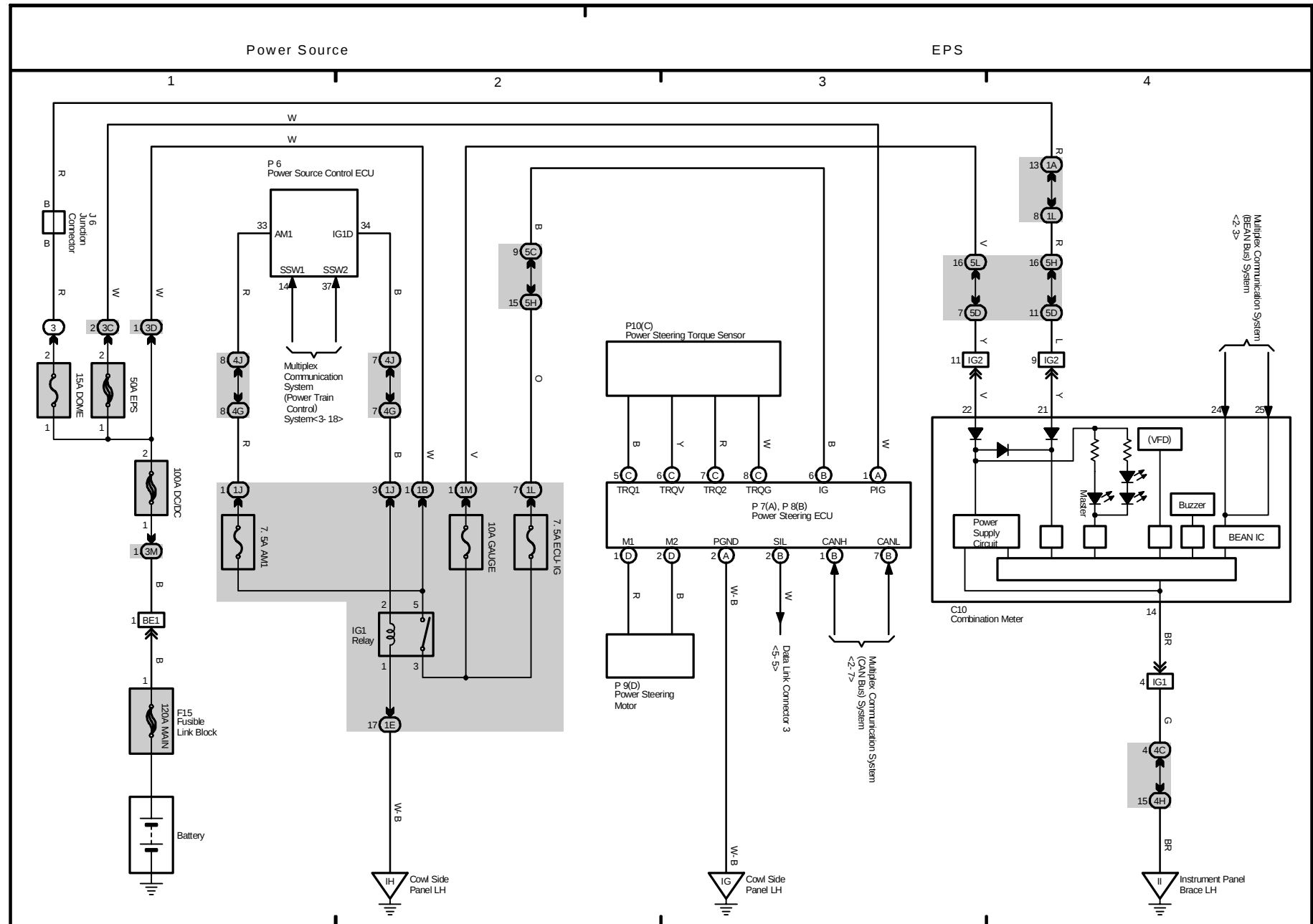




M OVERALL ELECTRICAL WIRING DIAGRAM

17 PRIUS





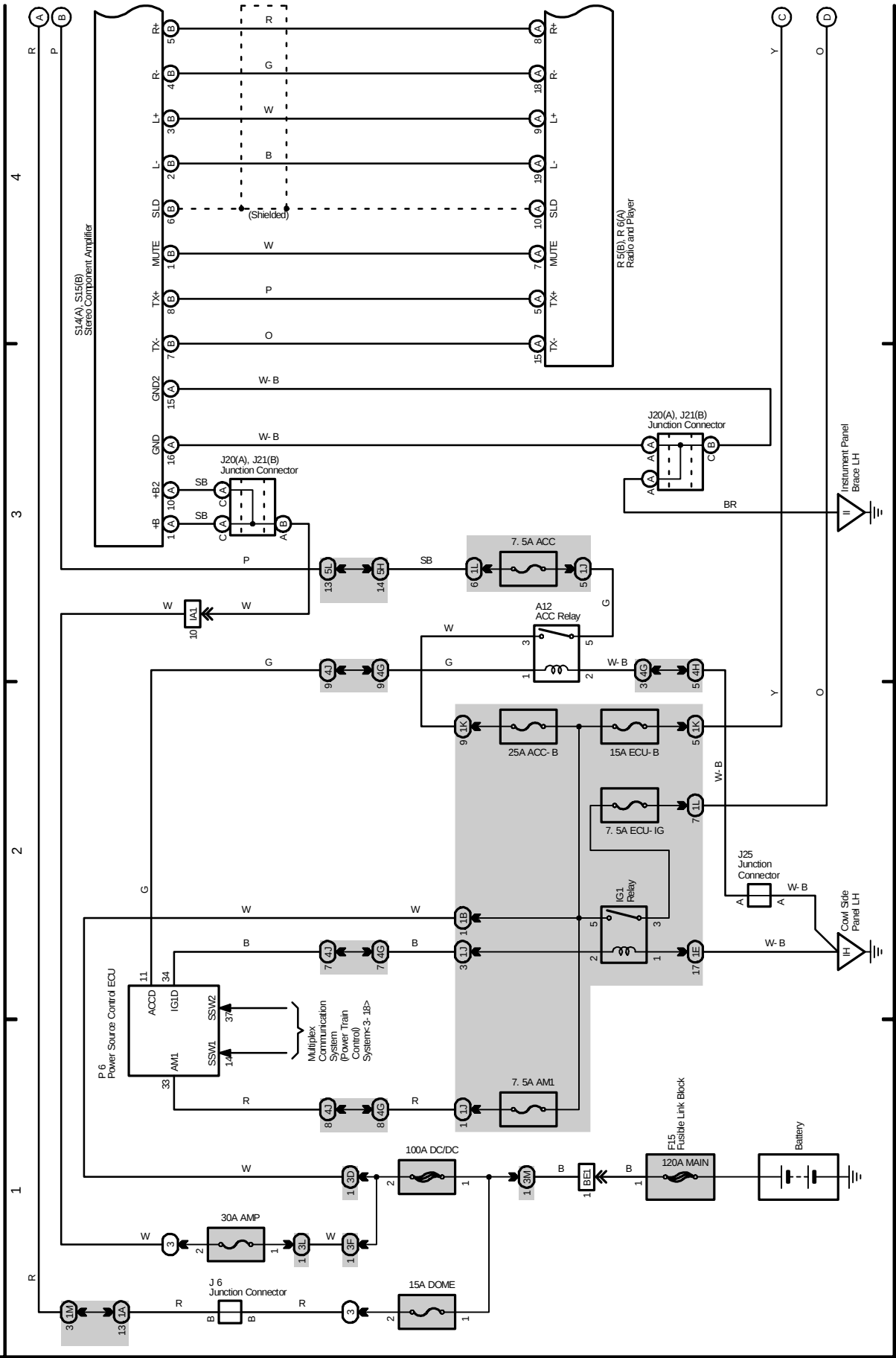
M OVERALL ELECTRICAL WIRING DIAGRAM

(Cont. next page)

19 PRIUS

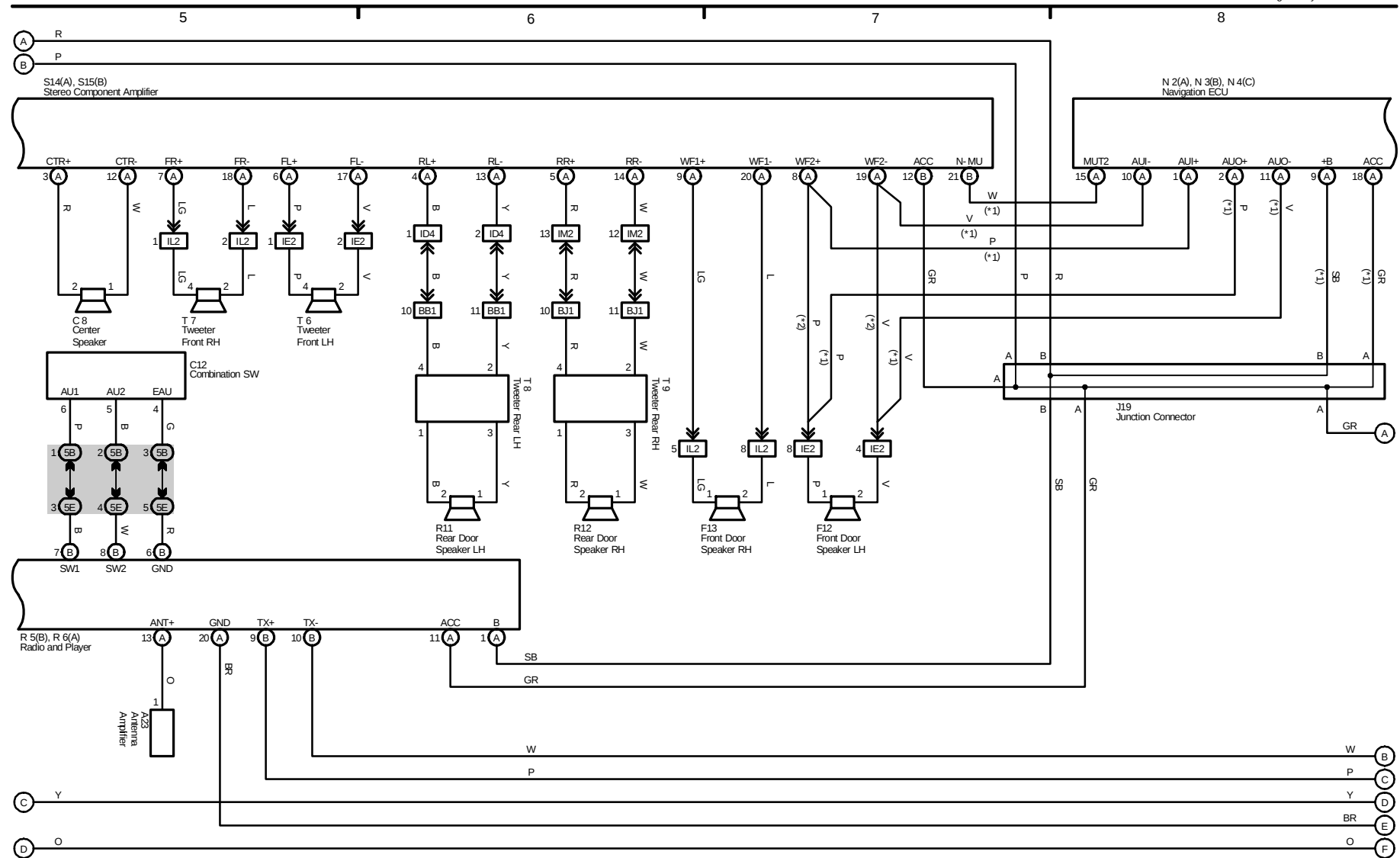
Multi-Display and Audio System
(Separate Amplifier)

Power Source



Multi-Display and Audio System (Separate Amplifier)

* 1 : w/ Navigation System
 * 2 : w/o Navigation System



2005 PRIUS (EWD599U)

19 PRIUS (Cont' d)



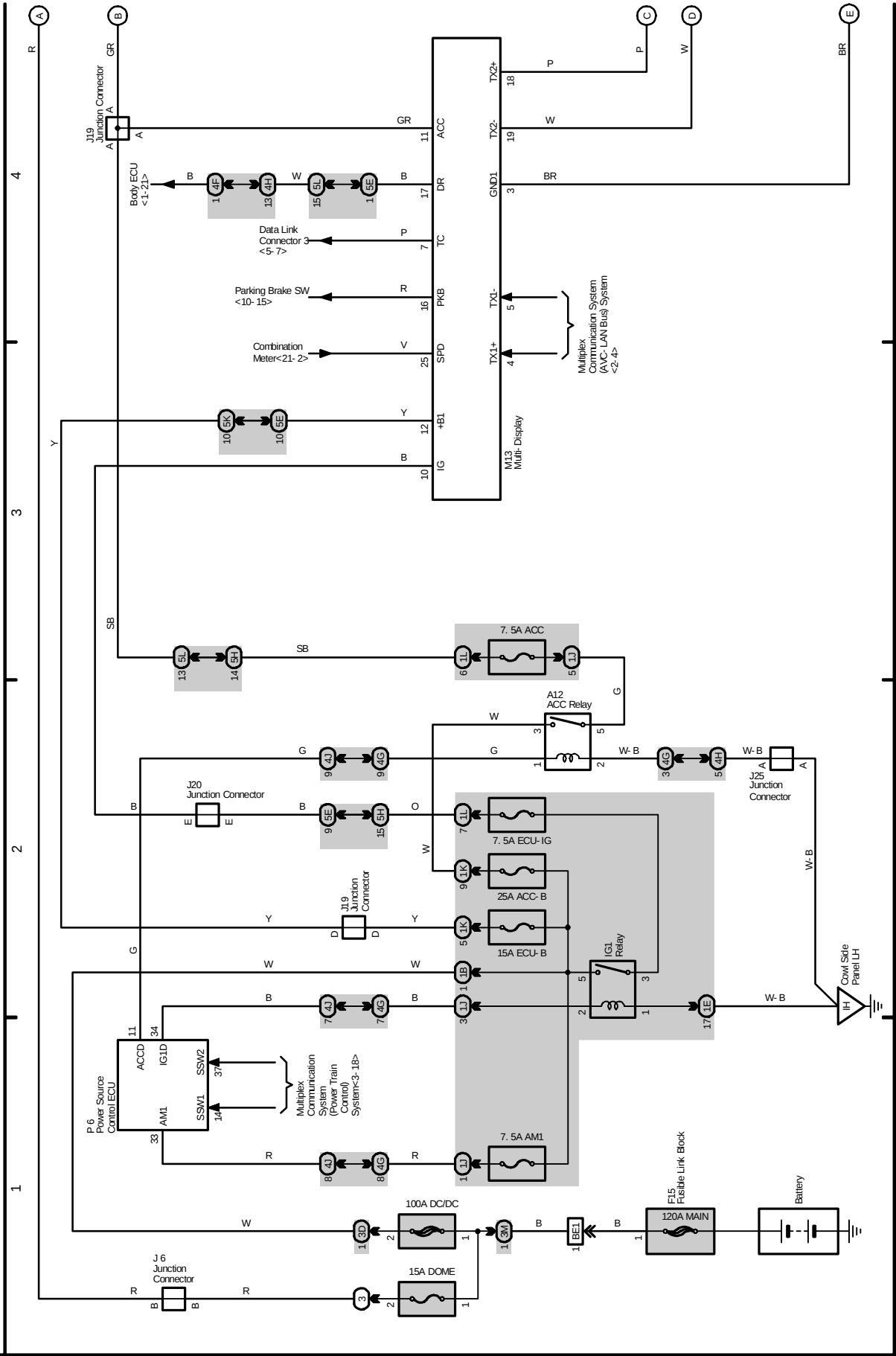
M OVERALL ELECTRICAL WIRING DIAGRAM

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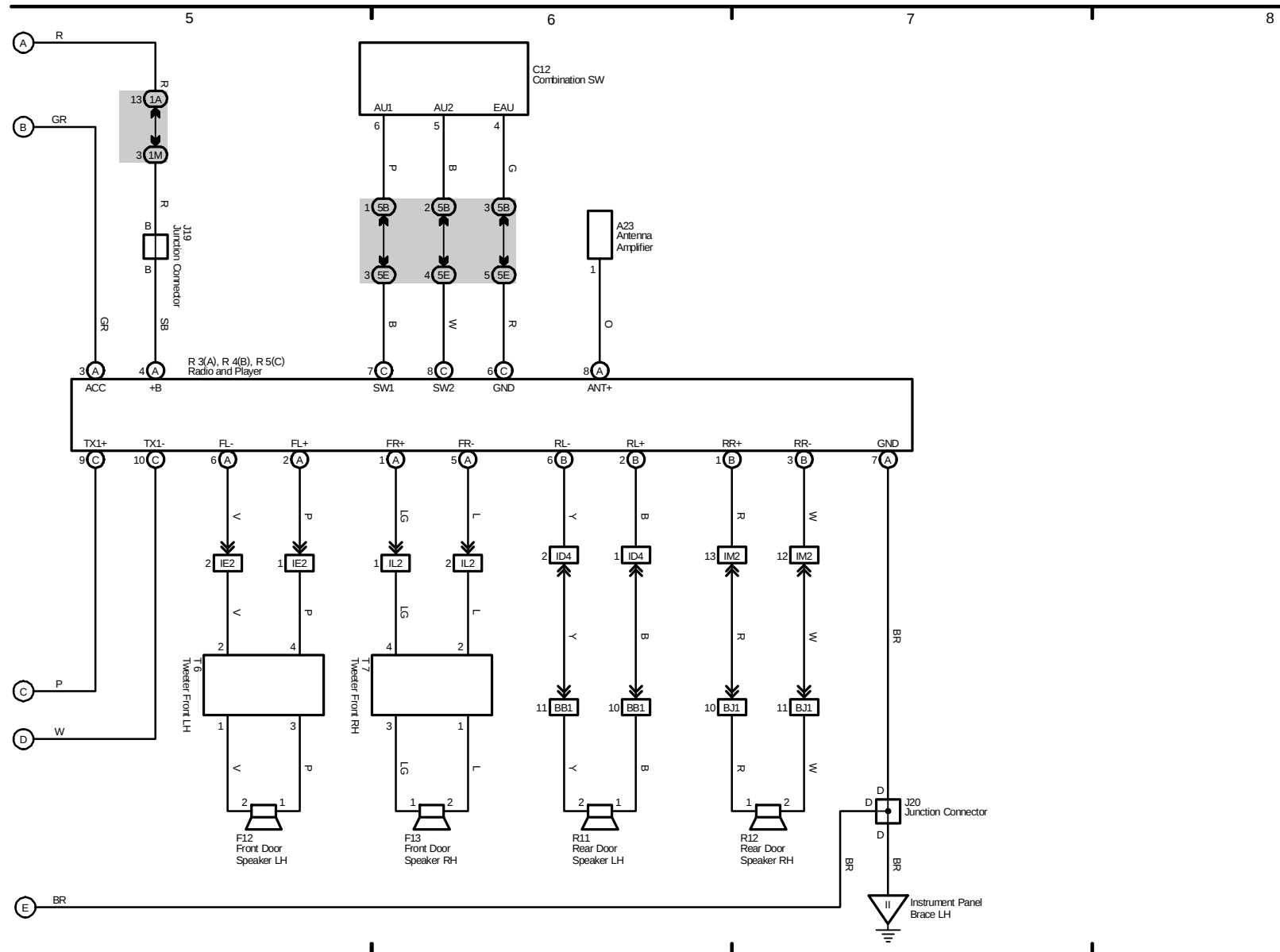
20 PRIUS

Multi-Display and Audio System
(Built-in Amplifier)

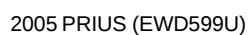
Power Source



Multi-Display and Audio System (Built-in Amplifier)

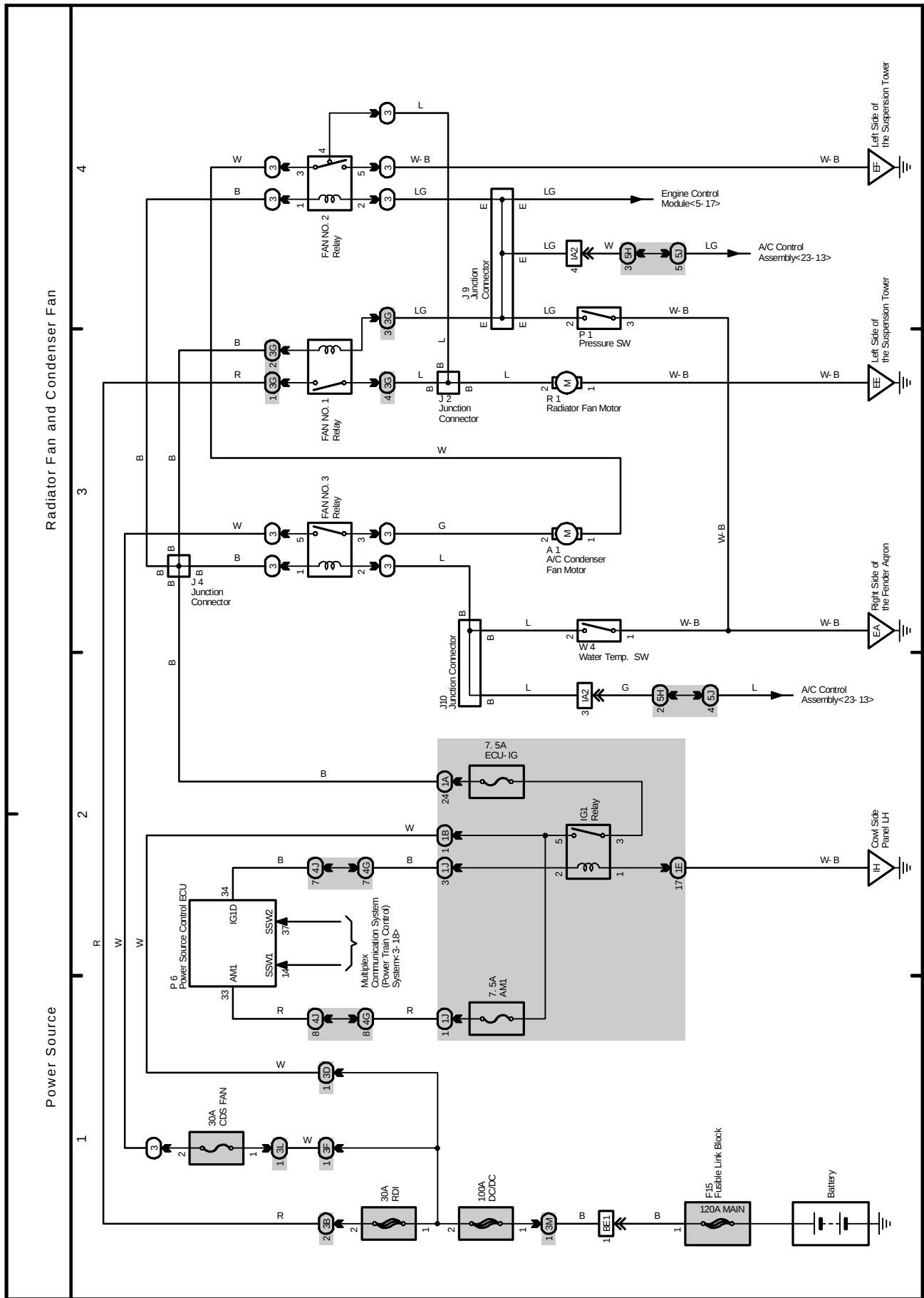


21 PRIUS

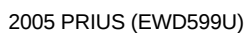


M OVERALL ELECTRICAL WIRING DIAGRAM

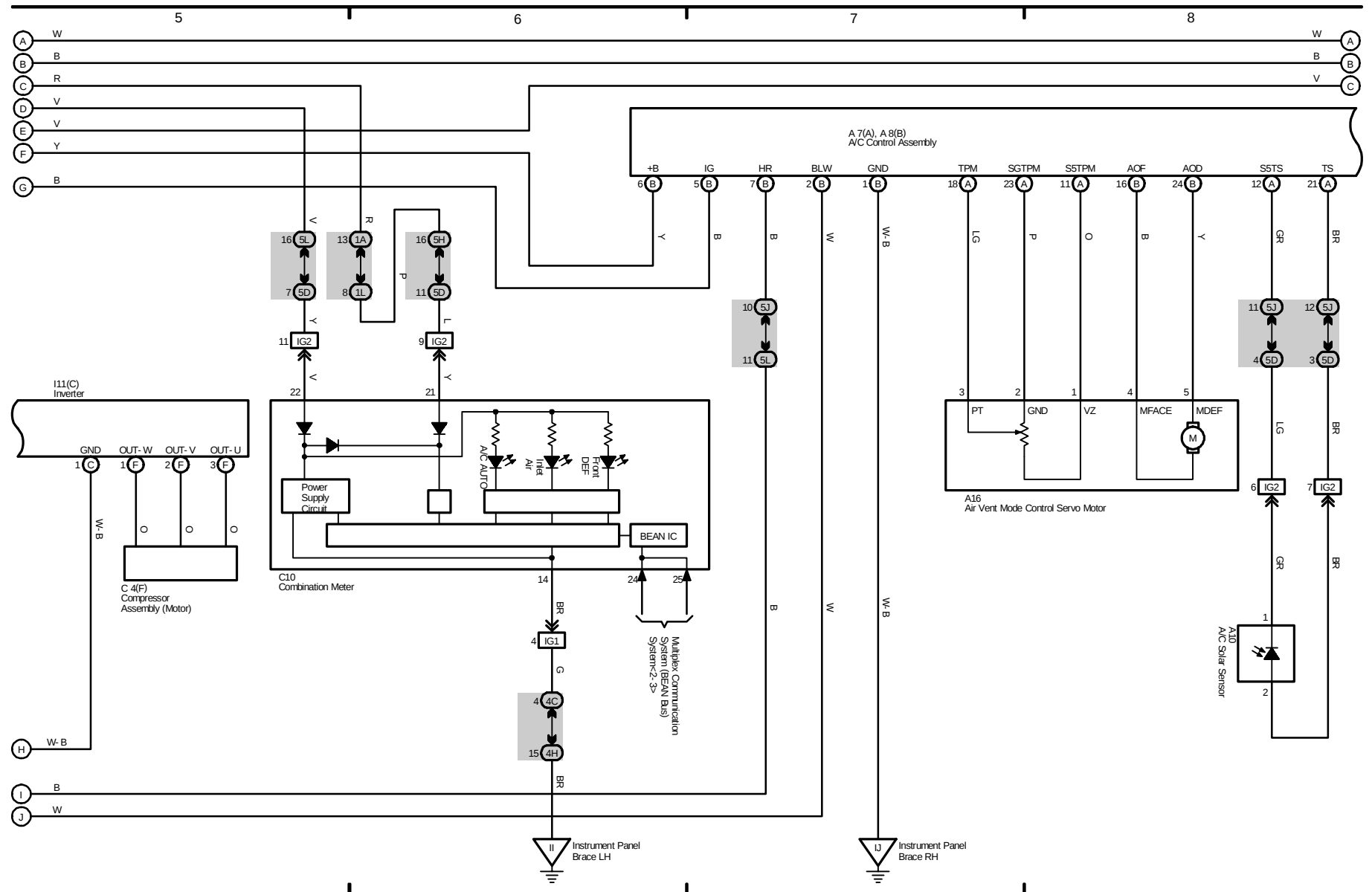
22 PRIUS



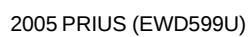
23 PRIUS

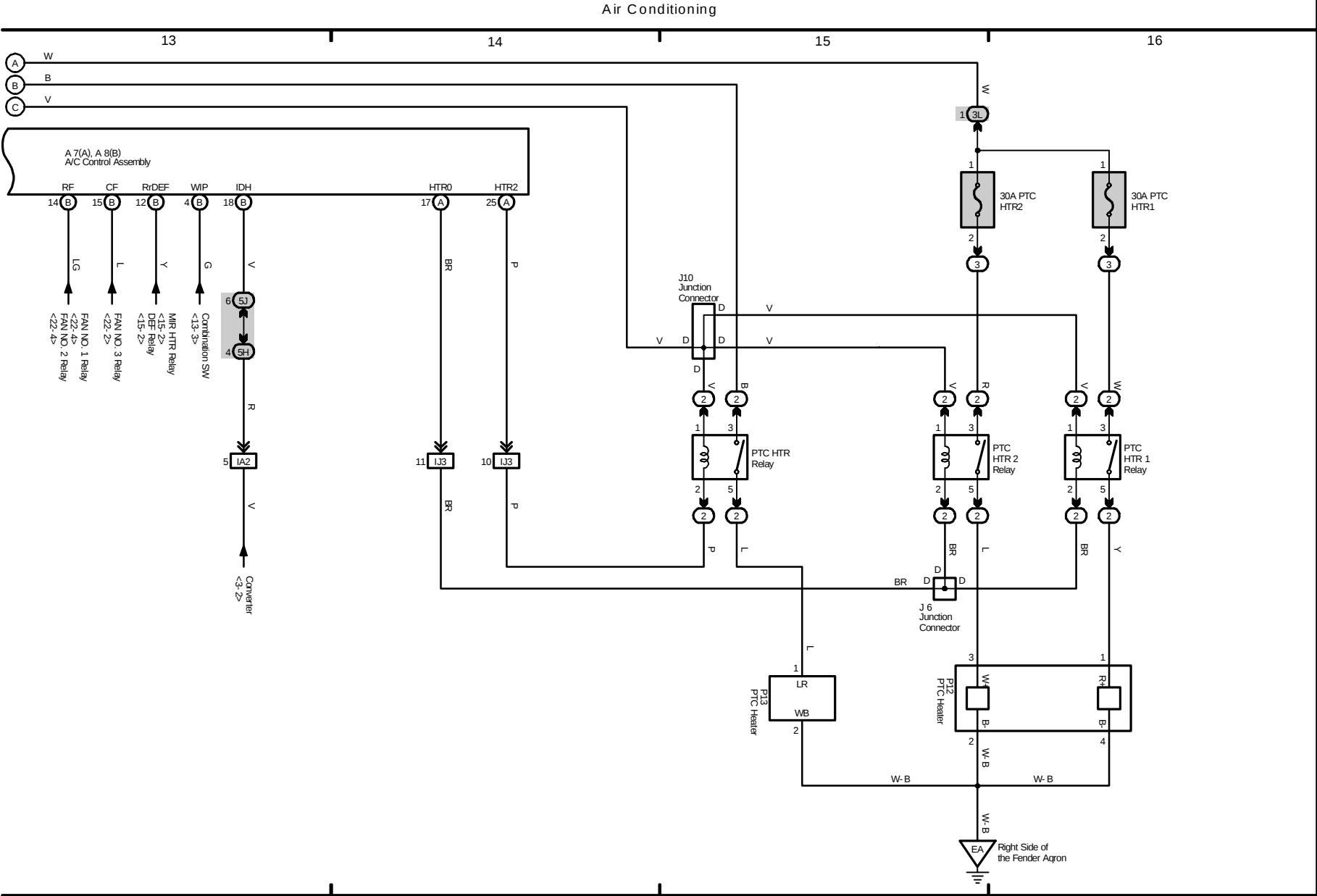


Air Conditioning



23 PRIUS (Cont' d)

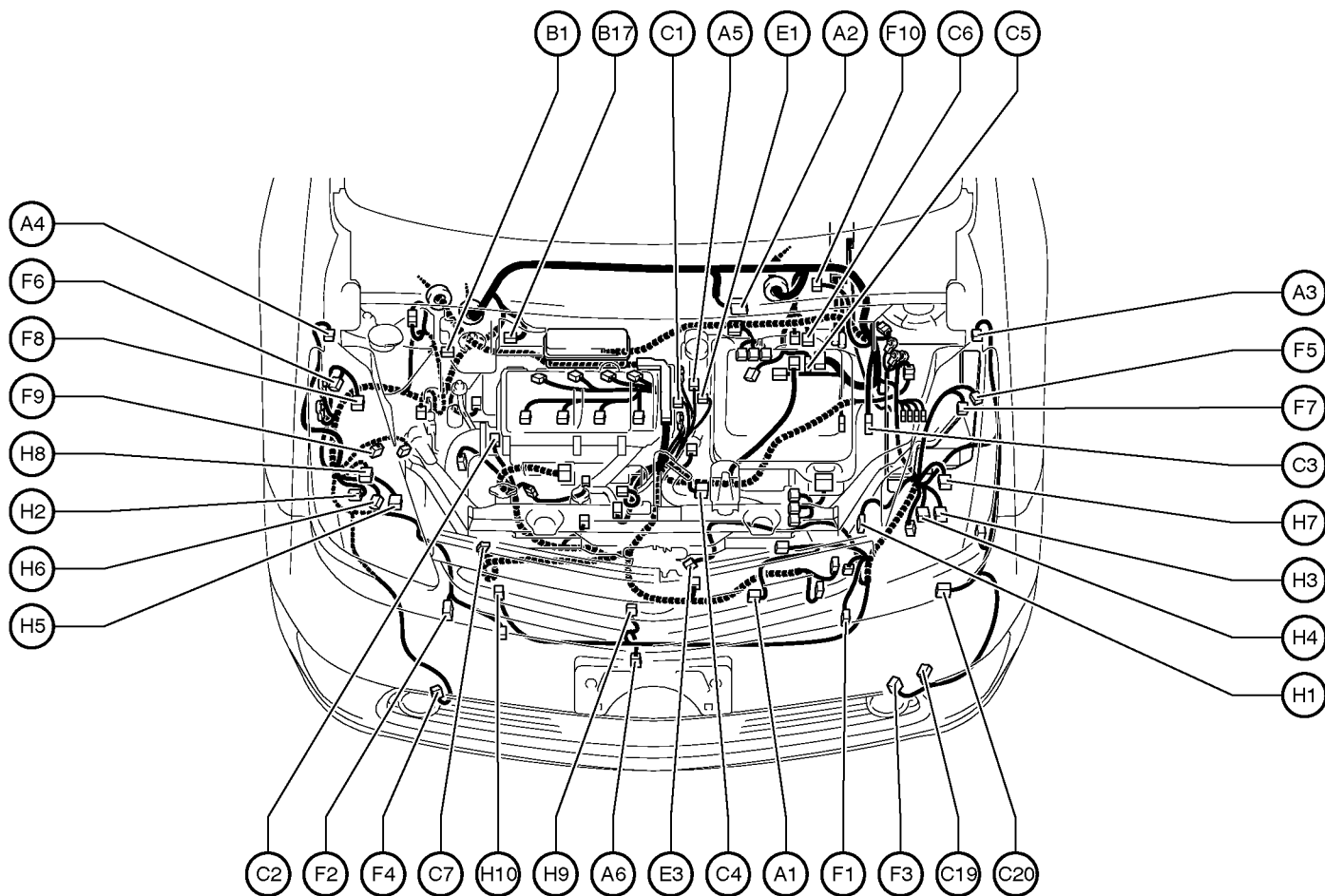




2005 PRIUS (EWD599U)

G ELECTRICAL WIRING ROUTING

Position of Parts in Engine Compartment



A 1 A/C Condenser Fan Motor
 A 2 ABS & BA & TRAC & VSC Actuator
 A 3 ABS Speed Sensor Front LH
 A 4 ABS Speed Sensor Front RH
 A 5 Air Fuel Ratio Sensor (Bank 1 Sensor 1)
 A 6 Ambient Temp. Sensor

B 1 Brake Fluid Level Warning SW
 B17 Brake Master Stroke Simulator Cylinder Assembly

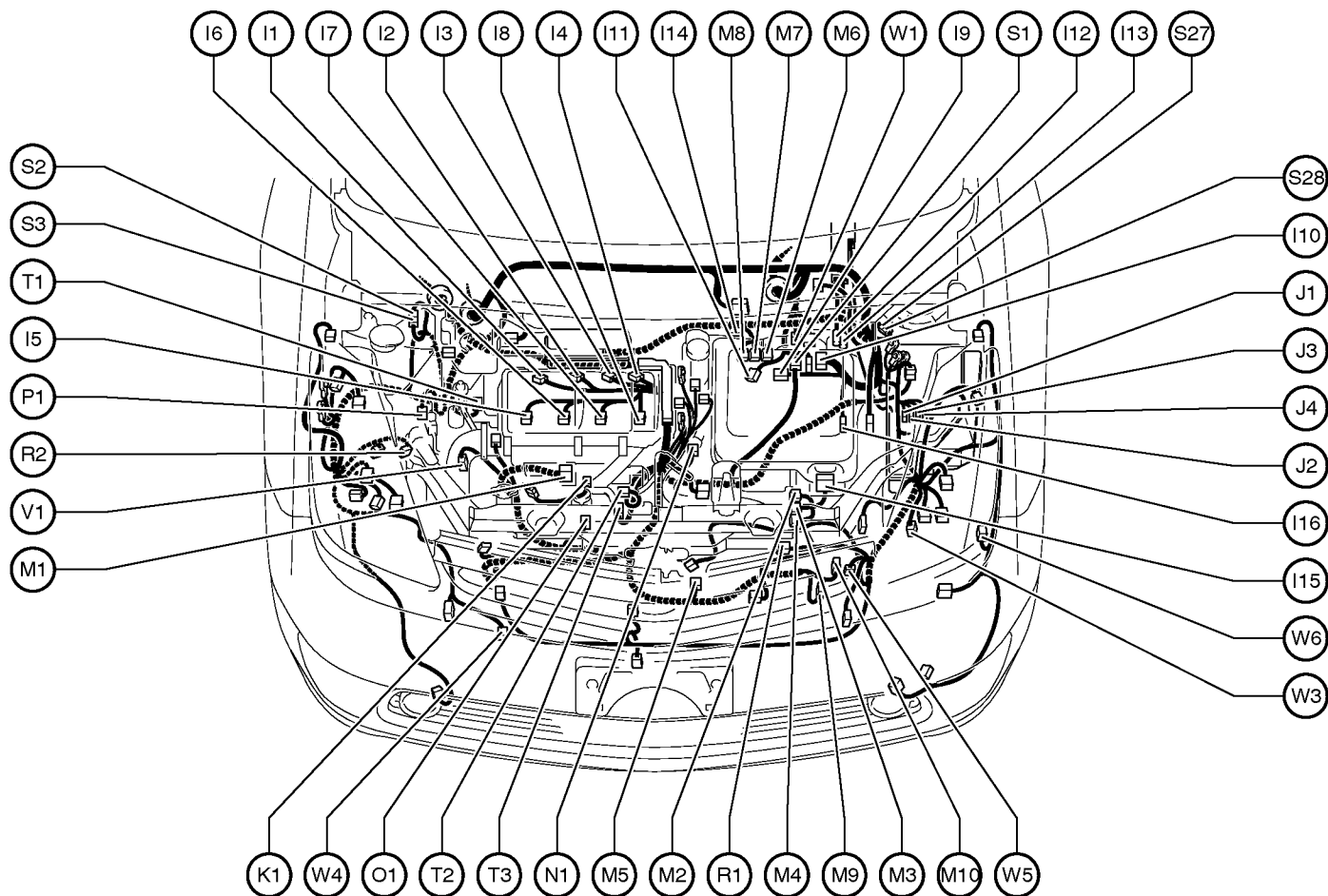
C 1 Camshaft Position Sensor
 C 2 Camshaft Timing Oil Control Valve
 C 3 Circuit Breaker Sensor
 C 4 Compressor Assembly (Motor)
 C 5 Converter
 C 6 Converter
 C 7 Crankshaft Position Sensor
 C19 Coolant Heat Storage Tank Outlet Temp. Sensor
 C20 Coolant Heat Storage Water Pump

E 1 Engine Coolant Temp. Sensor
 E 3 Engine Hood Courtesy SW

F 1 Front Airbag Sensor LH
 F 2 Front Airbag Sensor RH
 F 3 Front Fog Light LH
 F 4 Front Fog Light RH
 F 5 Front Side Marker Light LH
 F 6 Front Side Marker Light RH
 F 7 Front Turn Signal Light LH
 F 8 Front Turn Signal Light RH
 F 9 Front Washer Motor
 F10 Front Wiper Motor

H 1 Headlight Beam Level Control Actuator LH
 H 2 Headlight Beam Level Control Actuator RH
 H 3 Headlight Assembly LH
 H 4 Headlight Assembly LH
 H 5 Headlight Assembly RH
 H 6 Headlight Assembly RH
 H 7 Headlight LH
 H 8 Headlight RH
 H 9 Horn (High)
 H10 Horn (Low)

Position of Parts in Engine Compartment



I 1 Ignition Coil and Igniter No.1
 I 2 Ignition Coil and Igniter No.2
 I 3 Ignition Coil and Igniter No.3
 I 4 Ignition Coil and Igniter No.4
 I 5 Injector No.1
 I 6 Injector No.2
 I 7 Injector No.3
 I 8 Injector No.4
 I 9 Inverter
 I 10 Inverter
 I 11 Inverter
 I 12 Inverter
 I 13 Inverter
 I 14 Inverter
 I 15 Inverter
 I 16 Inverter

J 1 Junction Connector
 J 2 Junction Connector
 J 3 Junction Connector
 J 4 Junction Connector

K 1 Knock Sensor (Bank 1)

M 1 Mass Air Flow Meter
 M 2 Motor Generator No.1
 M 3 Motor Generator No.1
 M 4 Motor Generator No.1
 M 5 Motor Generator No.1
 M 6 Motor Generator No.2
 M 7 Motor Generator No.2

M 8 Motor Generator No.2
 M 9 Motor Generator No.2
 M10 Motor Generator No.2

N 1 Noise Filter (Ignition)

O 1 Oil Pressure SW

P 1 Pressure SW

R 1 Radiator Fan Motor

R 2 Rear Washer Motor

S 1 Shift Control Actuator

S 2 Short Connector

S 3 Short Connector

S27 Short Connector (Water Pump)

S28 Short Connector (Water Pump)

T 1 Theft Deterrent Horn

T 2 Throttle Control Motor

T 3 Throttle Position Sensor

V 1 VSV (EVAP)

W 1 Water Pump Motor (A/C)

W 3 Water Pump Motor (Inverter)

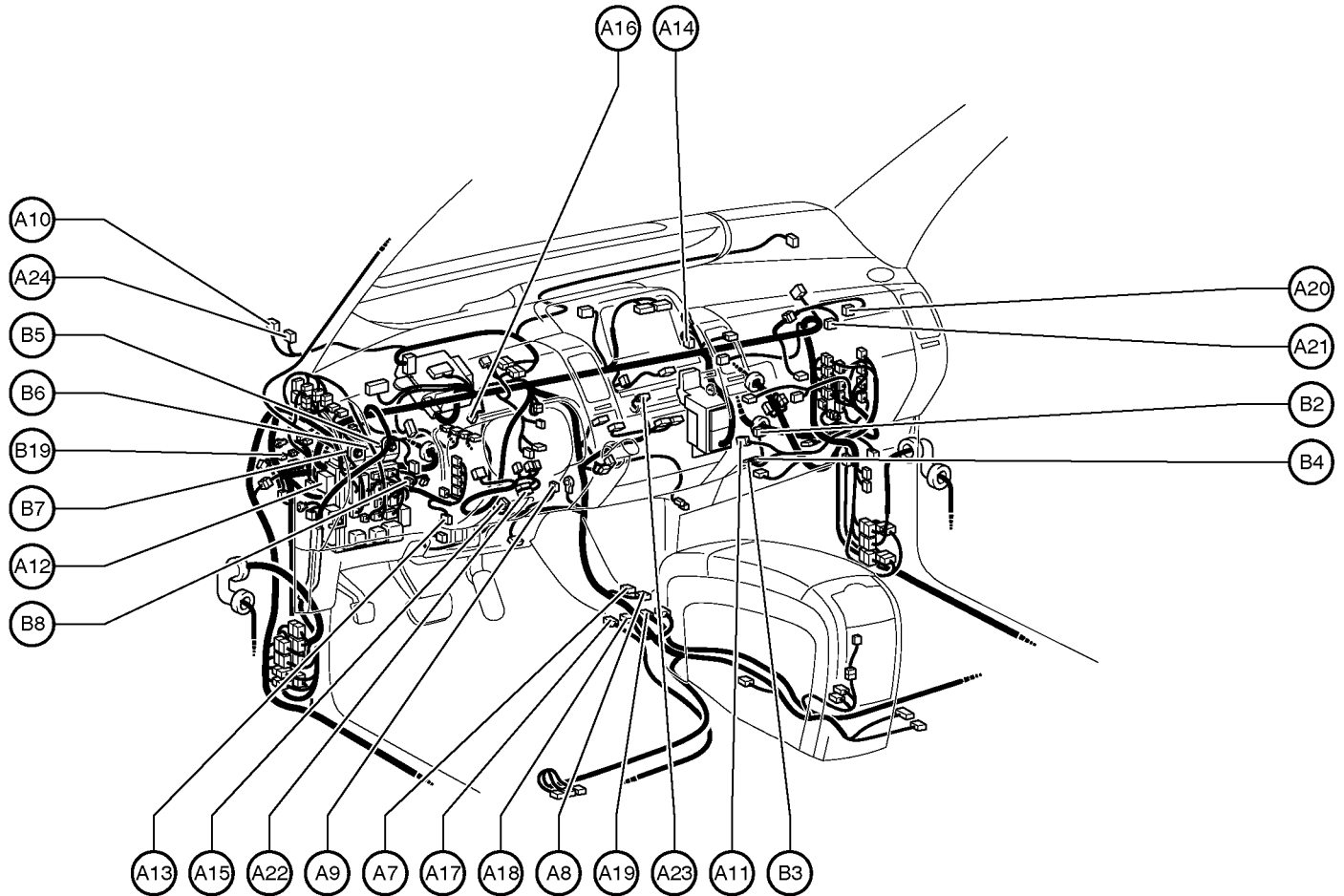
W 4 Water Temp. SW

W 5 Water Valve

W 6 Wireless Door Lock Buzzer

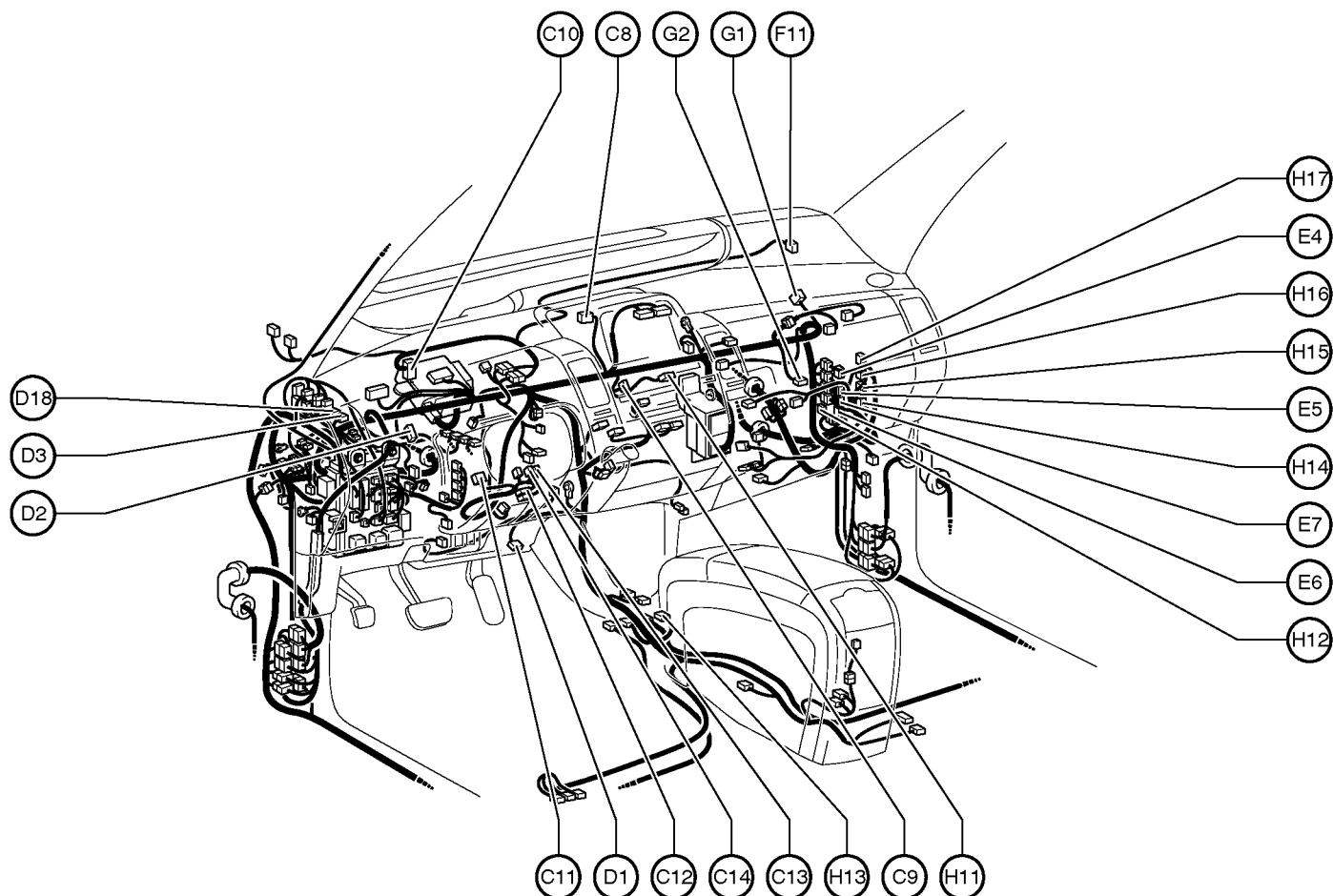
G ELECTRICAL WIRING ROUTING

Position of Parts in Instrument Panel



- | | |
|---|-------------------------------|
| A 7 A/C Control Assembly | B 2 Blower Motor |
| A 8 A/C Control Assembly | B 3 Blower Motor Controller |
| A 9 A/C Room Temp. Sensor | B 4 Blower Motor Controller |
| A10 A/C Solar Sensor | B 5 Body ECU |
| A11 A/C Thermistor | B 6 Body ECU |
| A12 ACC Relay | B 7 Body ECU |
| A13 Accel Position Sensor | B 8 Brake Pedal Stroke Sensor |
| A14 Air Inlet Control Servo Motor | B19 Brake Actuator Resistor |
| A15 Air Mix Control Servo Motor | |
| A16 Air Vent Mode Control Servo Motor | |
| A17 Airbag Sensor Assembly | |
| A18 Airbag Sensor Assembly | |
| A19 Airbag Sensor Assembly | |
| A20 Airbag Squib (Front Passenger Airbag Assembly No.1) | |
| A21 Airbag Squib (Front Passenger Airbag Assembly No.2) | |
| A22 Airbag Squib (Steering Wheel Pad) | |
| A23 Antenna Amplifier | |
| A24 Automatic Light Control Sensor | |

Position of Parts in Instrument Panel



C 8 Center Speaker
 C 9 Clock
 C10 Combination Meter
 C11 Combination SW
 C12 Combination SW
 C13 Combination SW
 C14 Combination SW

D 1 Data Link Connector 3
 D 2 Daytime Running Light Relay
 D 3 Diode (Daytime Running Light)
 D18 Diode (Rear Wiper)

E 4 Engine Control Module
 E 5 Engine Control Module
 E 6 Engine Control Module
 E 7 Engine Control Module

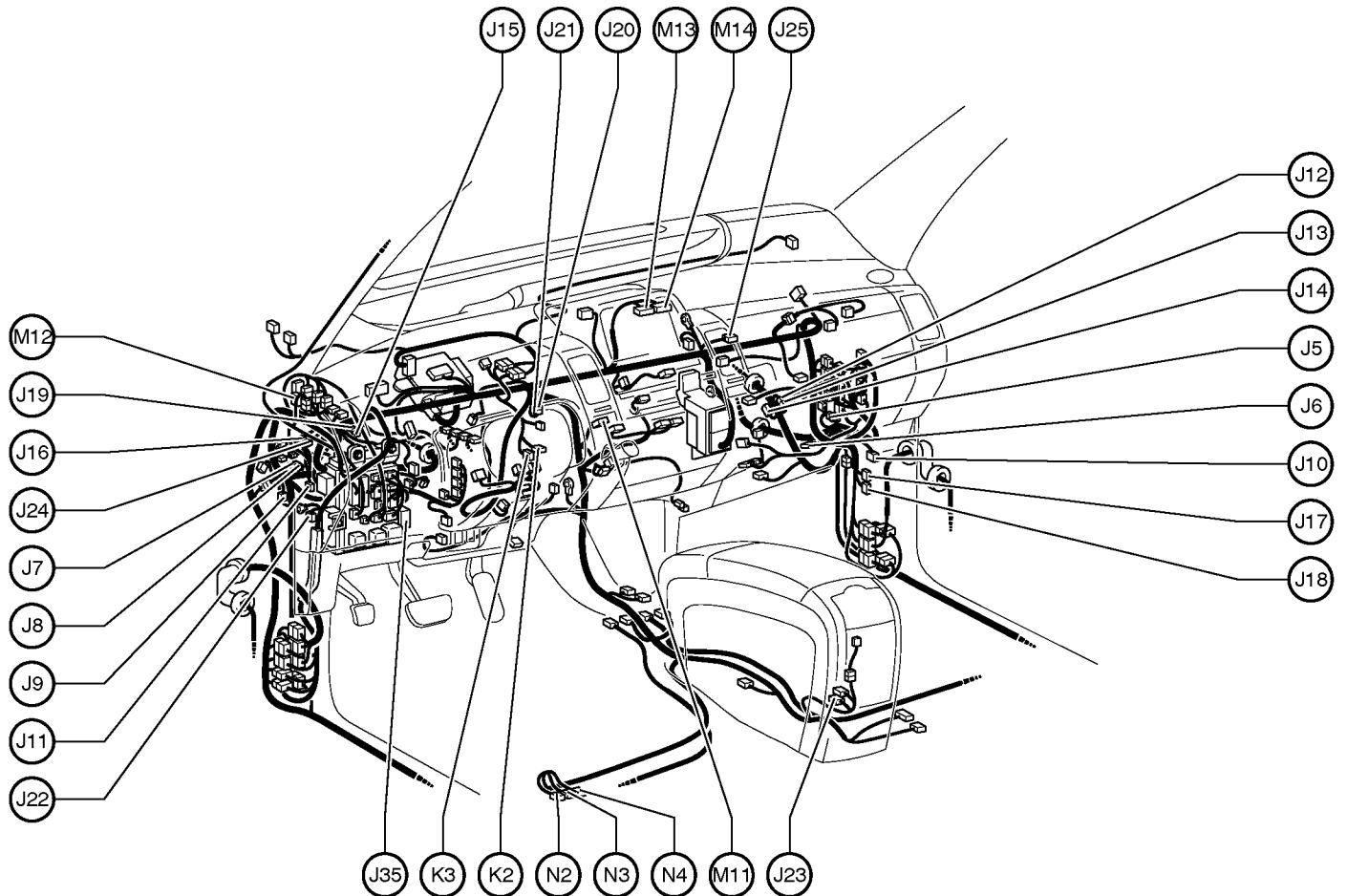
F 11 Front Passenger Seat Belt Warning Light

G 1 Gateway ECU
 G 2 Glove Box Light

H11 Hazard SW
 ODO/TRIP SW
 H12 Headlight Beam Level Control ECU
 H13 Heated Oxygen Sensor (Bank 1 Sensor 2)
 H14 Hybrid Vehicle Control ECU
 H15 Hybrid Vehicle Control ECU
 H16 Hybrid Vehicle Control ECU
 H17 Hybrid Vehicle Control ECU

G ELECTRICAL WIRING ROUTING

Position of Parts in Instrument Panel



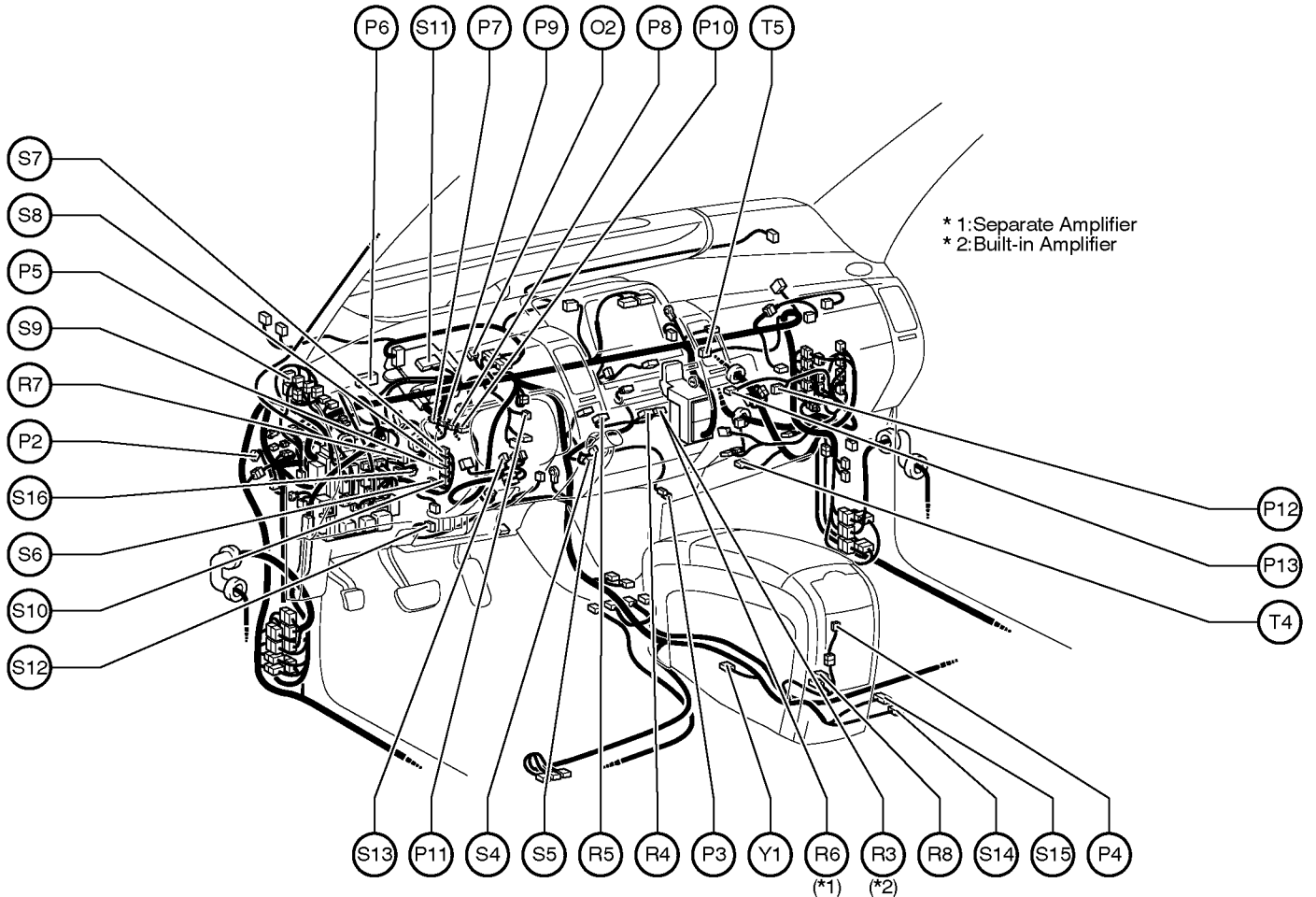
J 5 Junction Connector
 J 6 Junction Connector
 J 7 Junction Connector
 J 8 Junction Connector
 J 9 Junction Connector
 J 10 Junction Connector
 J 11 Junction Connector
 J 12 Junction Connector
 J 13 Junction Connector
 J 14 Junction Connector
 J 15 Junction Connector
 J 16 Junction Connector
 J 17 Junction Connector
 J 18 Junction Connector
 J 19 Junction Connector
 J 20 Junction Connector
 J 21 Junction Connector
 J 22 Junction Connector
 J 23 Junction Connector
 J 24 Junction Connector
 J 25 Junction Connector
 J 35 Junction Connector

K 2 Key Slot
 K 3 Key Slot

 M11 Main SW
 M12 Mirror Heater Relay
 M13 Multi-Display
 M14 Multi-Display

 N 2 Navigation ECU
 N 3 Navigation ECU
 N 4 Navigation ECU

Position of Parts in Instrument Panel



O 2 Option Connector (Glass Breakage Sensor)

P 2 Parking Brake SW
 P 3 Power Outlet No.1
 P 4 Power Outlet No.2
 P 5 Power Outlet Relay
 P 6 Power Source Control ECU
 P 7 Power Steering ECU
 P 8 Power Steering ECU
 P 9 Power Steering Motor
 P10 Power Steering Torque Sensor
 P11 Power SW
 P12 PTC Heater
 P13 PTC Heater

R 3 Radio and Player
 R 4 Radio and Player
 R 5 Radio and Player
 R 6 Radio and Player
 R 7 Rheostat
 R 8 Room Oscillator

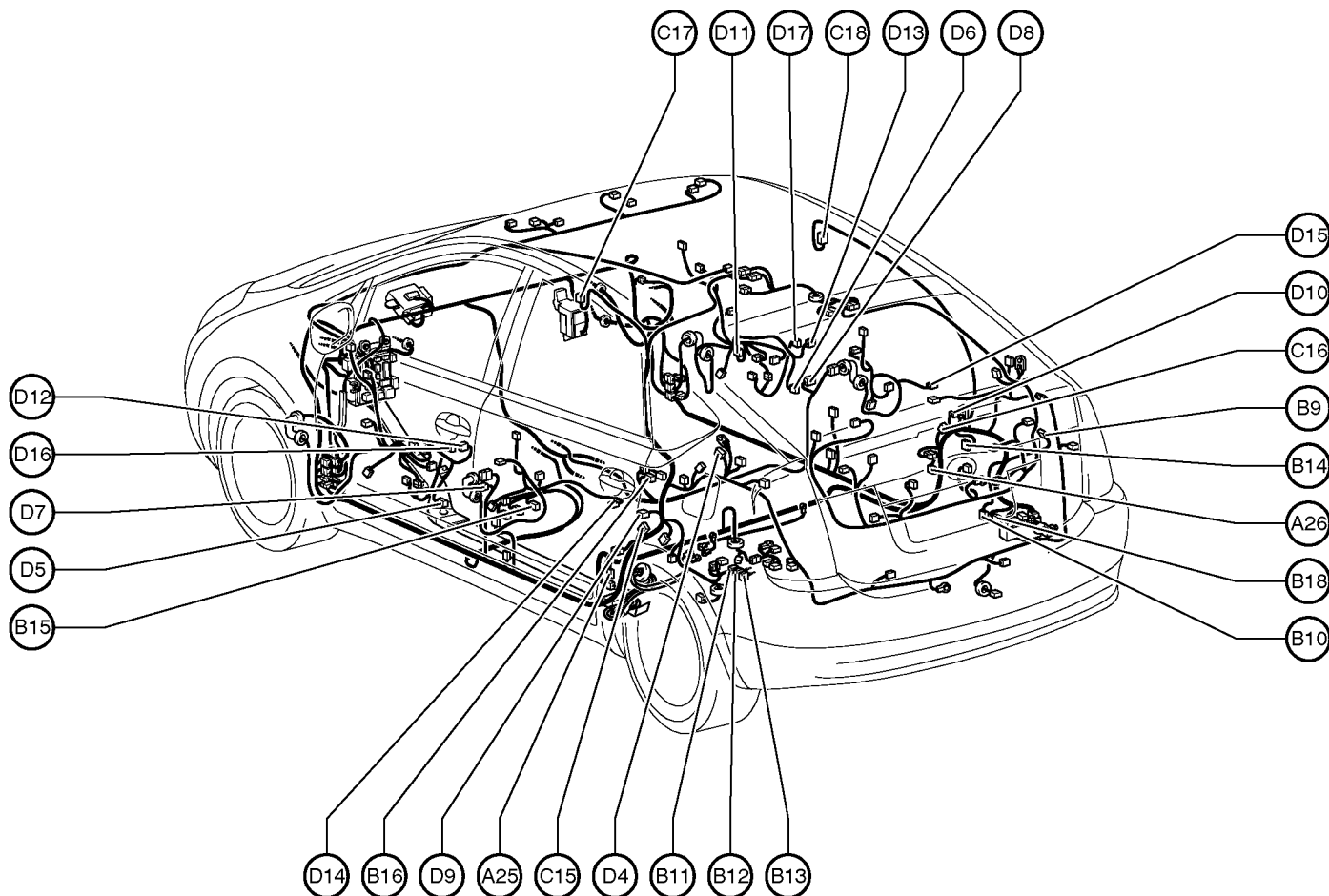
S 4 Shift Lever Position Sensor
 S 5 Shift Lever Position Sensor
 S 6 Skid Control Buzzer
 S 7 Skid Control ECU
 S 8 Skid Control ECU
 S 9 Skid Control ECU
 S10 Skid Control ECU
 S11 Smart Key ECU
 S12 Smart Key System Cancel SW
 S13 Steering Sensor
 S14 Stereo Component Amplifier
 S15 Stereo Component Amplifier
 S16 Stop Light SW

T 4 Transmission Control ECU
 T 5 Transponder Key Computer

Y 1 Yaw Rate Sensor

G ELECTRICAL WIRING ROUTING

Position of Parts in Body



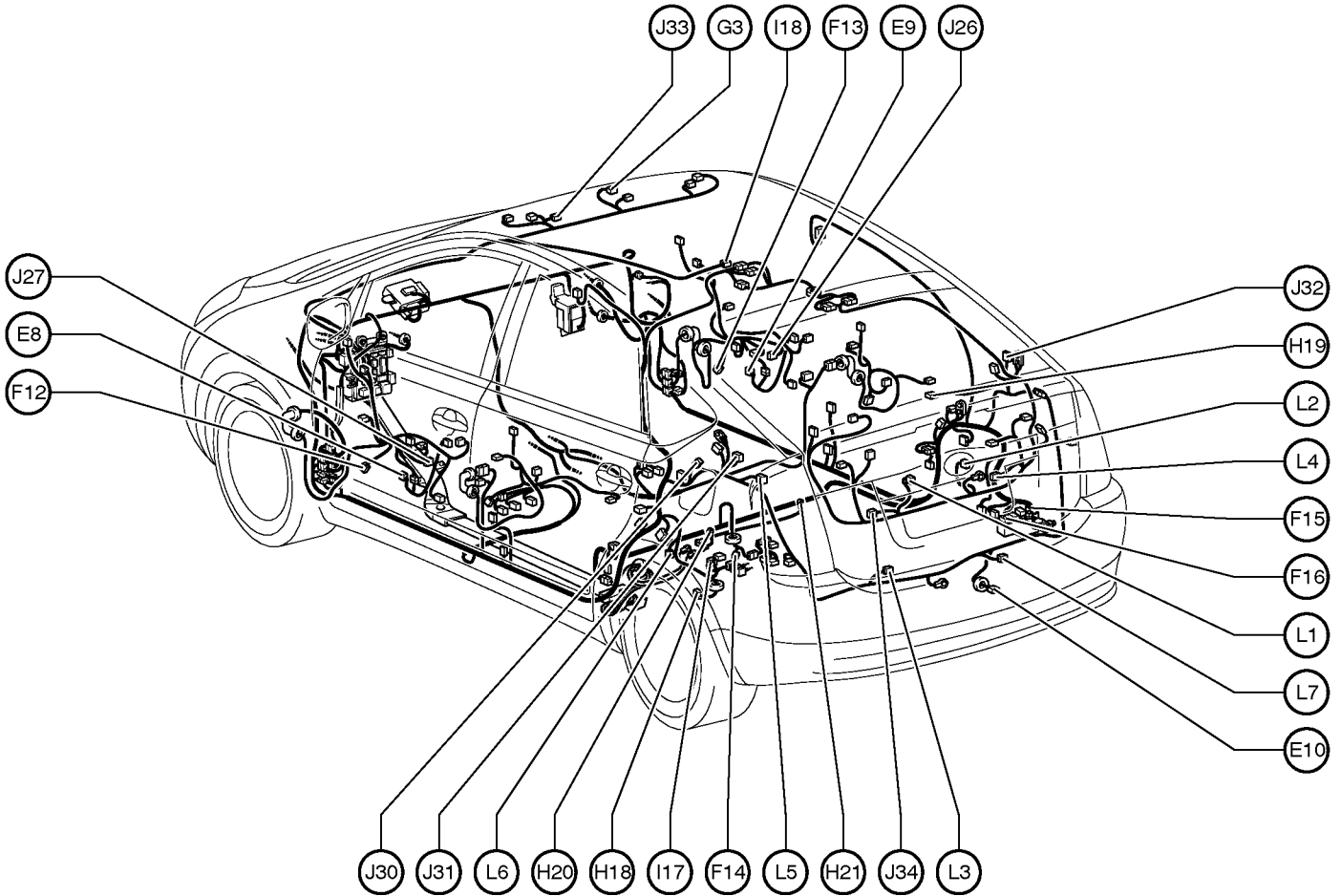
A25 ABS Speed Sensor Rear LH
A26 ABS Speed Sensor Rear RH

B 9 Battery Blower Motor
B10 Battery Blower Motor Controller
B11 Battery ECU
B12 Battery ECU
B13 Battery ECU
B14 Battery Fan Relay
B15 Buckle SW Front LH
B16 Buckle SW Front RH
B18 Brake Control Power Supply

C15 Curtain Shield Airbag Sensor LH
C16 Curtain Shield Airbag Sensor RH
C17 Curtain Shield Airbag Squib LH
C18 Curtain Shield Airbag Squib RH

D 4 Door Control Receiver
D 5 Door Courtesy Light Front LH
D 6 Door Courtesy Light Front RH
D 7 Door Courtesy SW Front LH
D 8 Door Courtesy SW Front RH
D 9 Door Courtesy SW Rear LH
D10 Door Courtesy SW Rear RH
D11 Door Lock Control SW Front RH
D12 Door Lock Motor Front LH
Door Unlock Detection SW Front LH
D13 Door Lock Motor Front RH
Door Unlock Detection SW Front RH
D14 Door Lock Motor Rear LH
Door Unlock Detection SW Rear LH
D15 Door Lock Motor Rear RH
Door Unlock Detection SW Rear RH
D16 Door Oscillator Front LH (w/ Sensor)
D17 Door Oscillator Front RH (w/ Sensor)

Position of Parts in Body



E 8 Electrical Key Antenna (Driver's Side)
 E 9 Electrical Key Antenna (Front Passenger's Side)
 E10 Electrical Key Antenna (Luggage Compartment Door)

F12 Front Door Speaker LH
 F13 Front Door Speaker RH
 F14 Fuel Pump
 Fuel Sender
 F15 Fusible Link Block
 F16 Fusible Link Block

G 3 Garage Door Opener
 Inner Mirror

H18 Height Control Sensor
 H19 High Mounted Stop Light
 H20 Hybrid Vehicle Battery
 H21 Hybrid Vehicle Battery

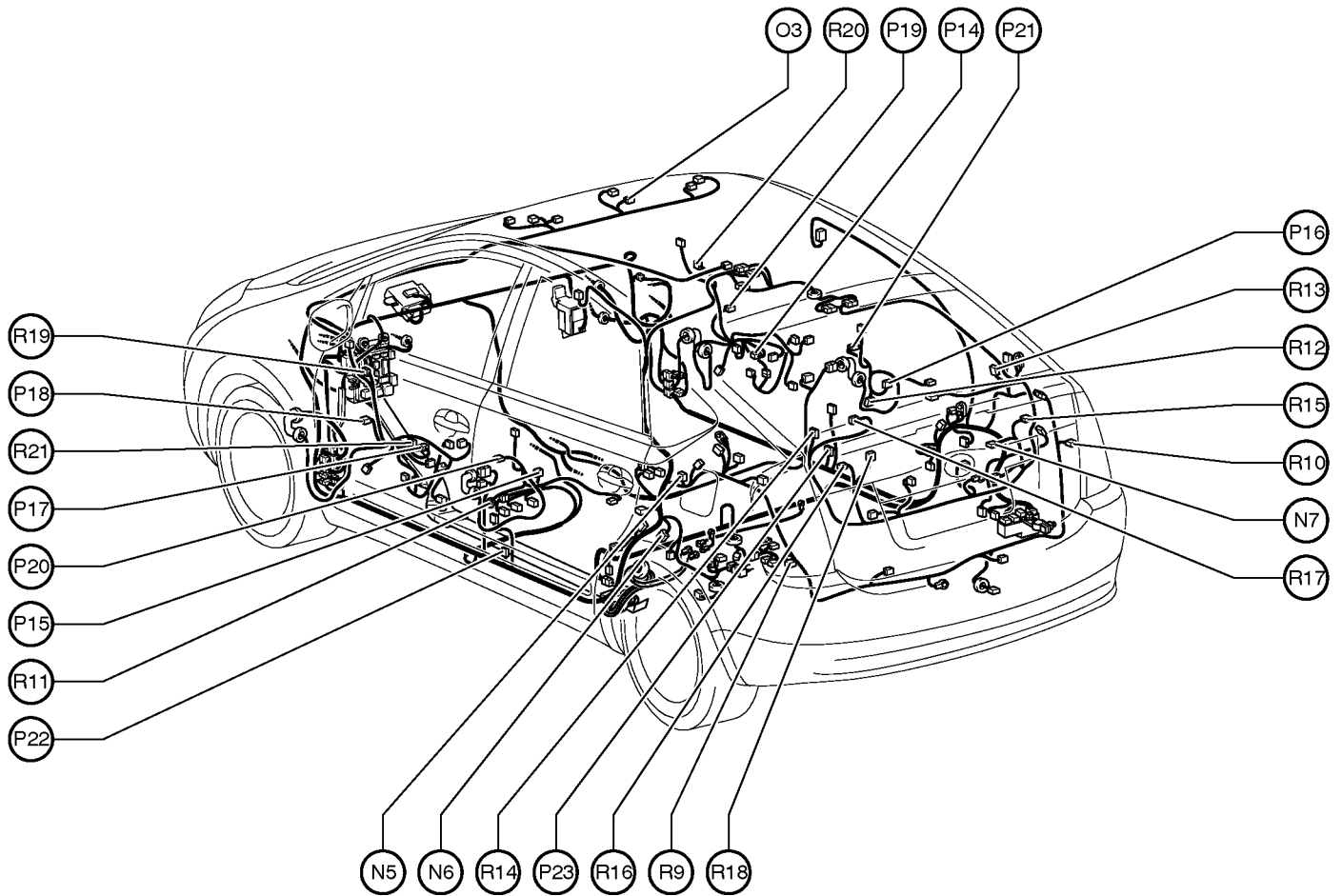
I 17 Inter Lock SW
 I 18 Interior Light

J 26 Junction Connector
 J 27 Junction Connector
 J 30 Junction Connector
 J 31 Junction Connector
 J 32 Junction Connector
 J 33 Junction Connector
 J 34 Junction Connector

L 1 License Plate Light LH
 L 2 License Plate Light RH
 L 3 Luggage Compartment Courtesy SW
 Luggage Compartment Door Opener Motor
 L 4 Luggage Compartment Door Lock SW
 Luggage Compartment Door Opener SW
 L 5 Luggage Compartment Light
 L 6 Luggage Oscillator (Inner)
 L 7 Luggage Oscillator (Outer)

G ELECTRICAL WIRING ROUTING

Position of Parts in Body



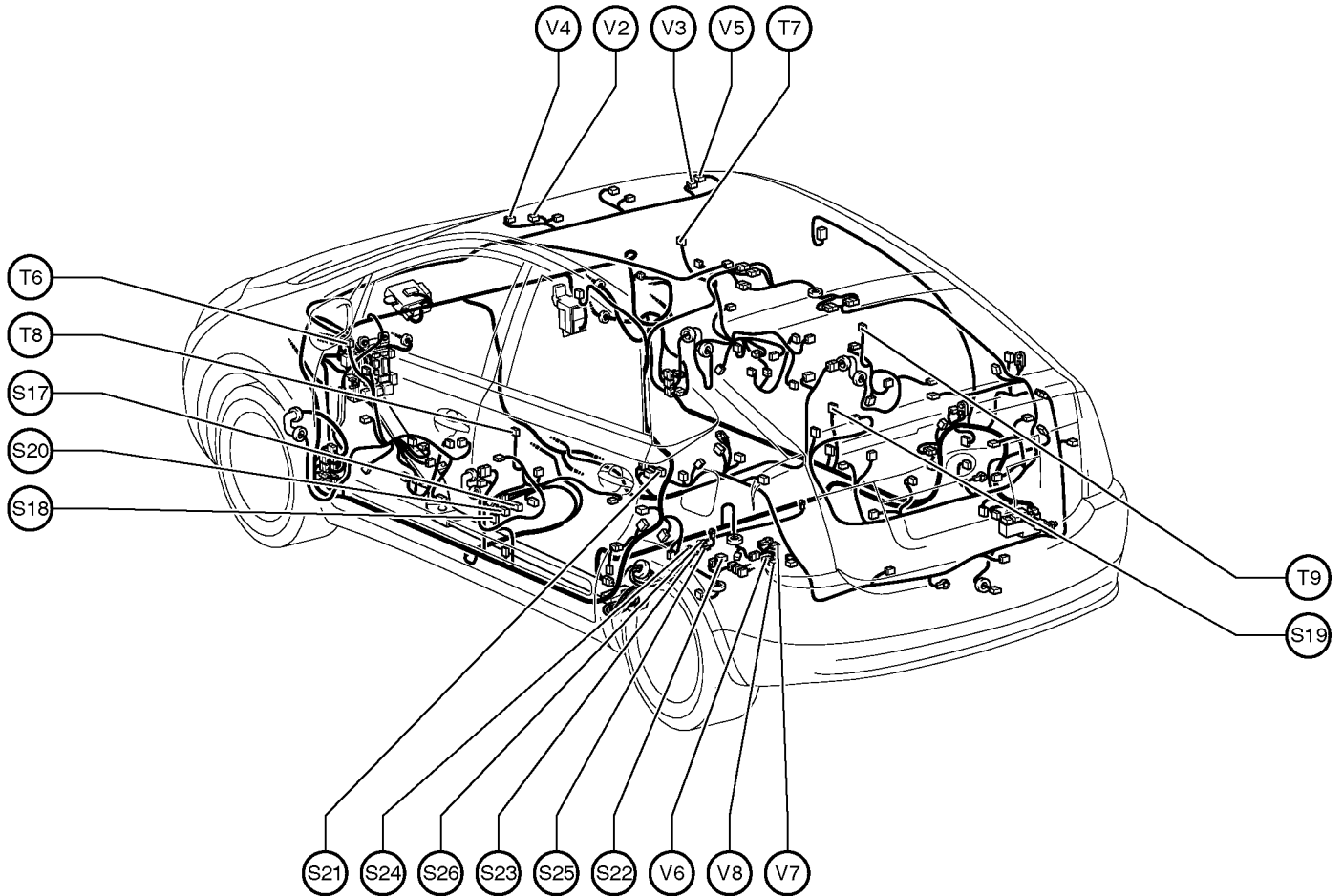
N 5 Noise Filter (High Mounted Stop Light)
 N 6 Noise Filter (Rear Window Defogger)
 N 7 Noise Filter (Rear Window Defogger)

O 3 Overhead J/B

P14 Power Window Control SW Front RH
 P15 Power Window Control SW Rear LH
 P16 Power Window Control SW Rear RH
 P17 Power Window Master SW
 P18 Power Window Motor Front LH
 P19 Power Window Motor Front RH
 P20 Power Window Motor Rear LH
 P21 Power Window Motor Rear RH
 P22 Pretensioner LH
 P23 Pretensioner RH

R 9 Rear Combination Light LH
 R10 Rear Combination Light RH
 R11 Rear Door Speaker LH
 R12 Rear Door Speaker RH
 R13 Rear Window Defogger
 R14 Rear Window Defogger
 R15 Rear Window Defogger
 R16 Rear Window Defogger
 R17 Rear Wiper Motor
 R18 Rear Wiper Relay
 R19 Mirror Heater LH
 Remote Control Mirror LH
 R20 Mirror Heater RH
 Remote Control Mirror RH
 R21 Remote Control Mirror SW

Position of Parts in Body



S17 Seat Position Airbag Sensor
 S18 Side Airbag Sensor LH
 S19 Side Airbag Sensor RH
 S20 Side Airbag Squib LH
 S21 Side Airbag Squib RH
 S22 System Main Relay
 S23 System Main Relay
 S24 System Main Relay
 S25 System Main Relay
 S26 System Main Relay

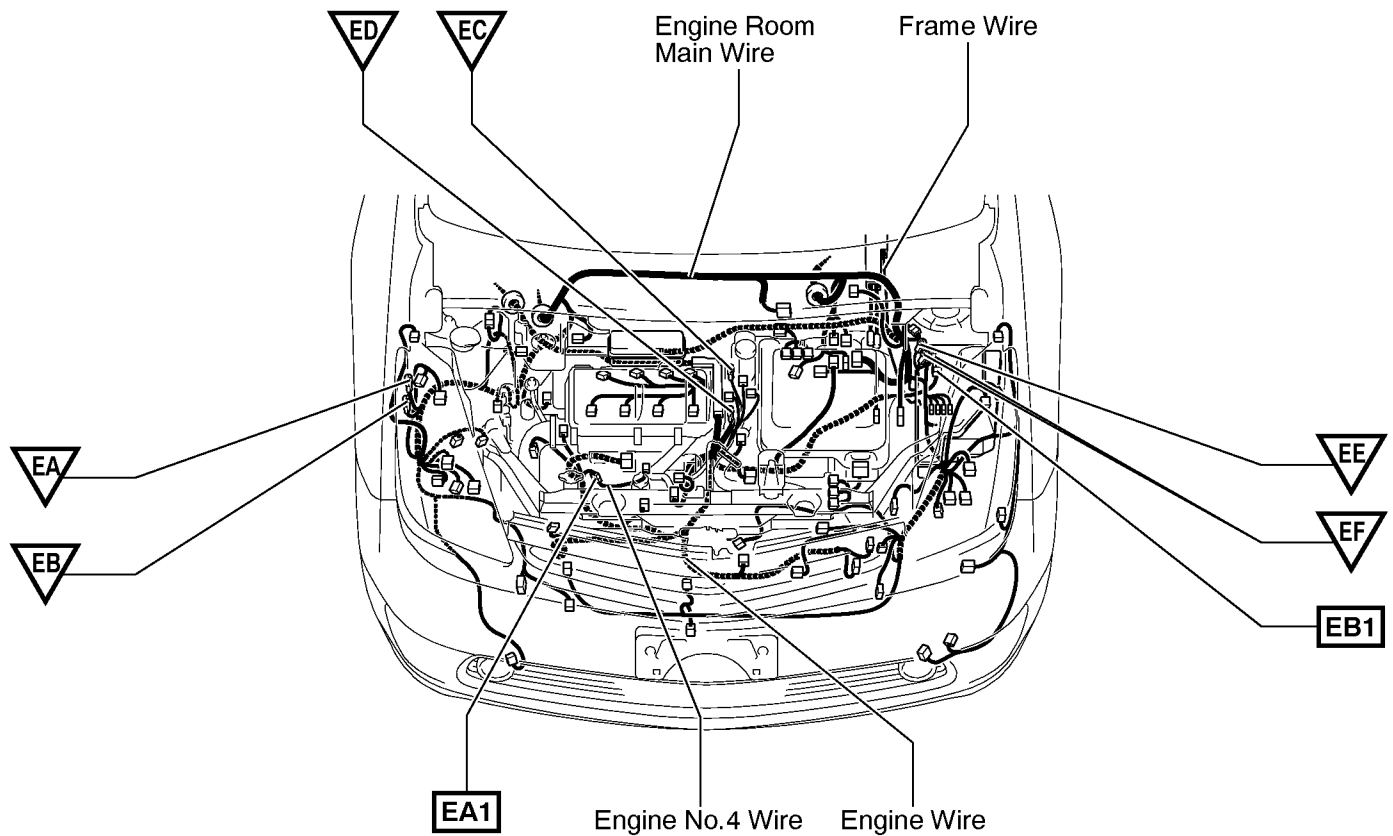
T 6 Tweeter Front LH
 T 7 Tweeter Front RH
 T 8 Tweeter Rear LH
 T 9 Tweeter Rear RH

V 2 Vanity Light LH
 V 3 Vanity Light RH
 V 4 Vanity Light SW LH
 V 5 Vanity Light SW RH
 V 6 Vapor Pressure Sensor
 V 7 VSV (Canister Closed Valve)
 V 8 VSV (Purge Flow Switching Valve)

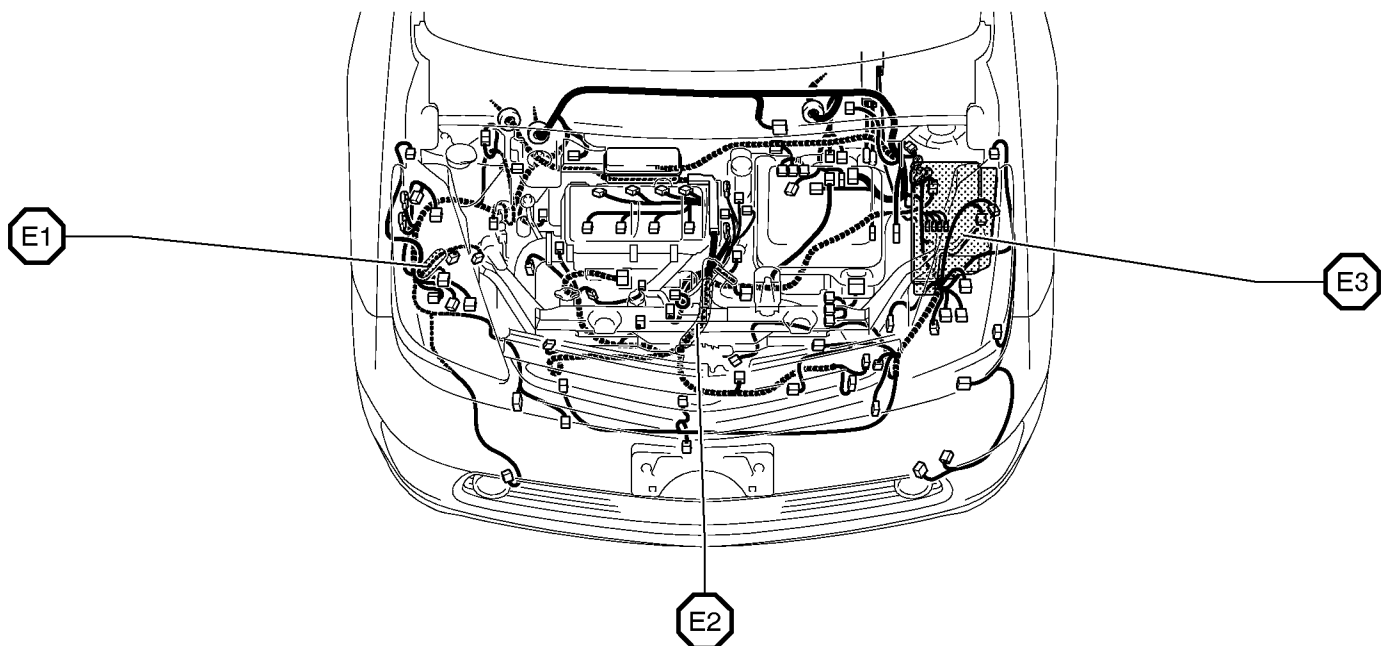
G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness

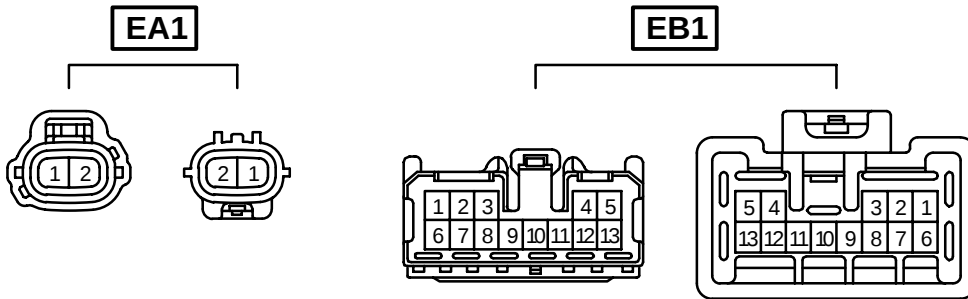
▽ : Location of Ground Points



○ : Location of Splice Points



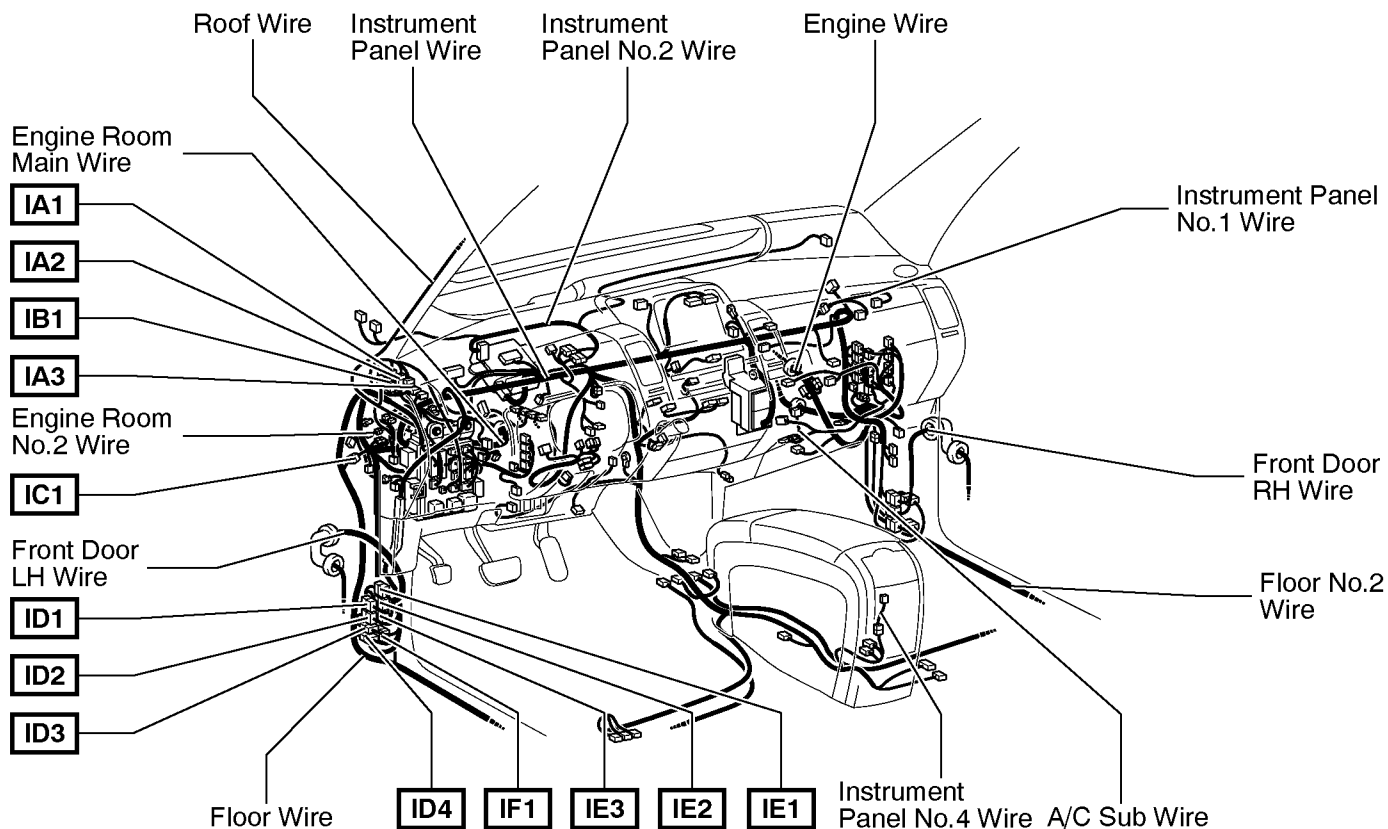
Connector Joining Wire Harness and Wire Harness



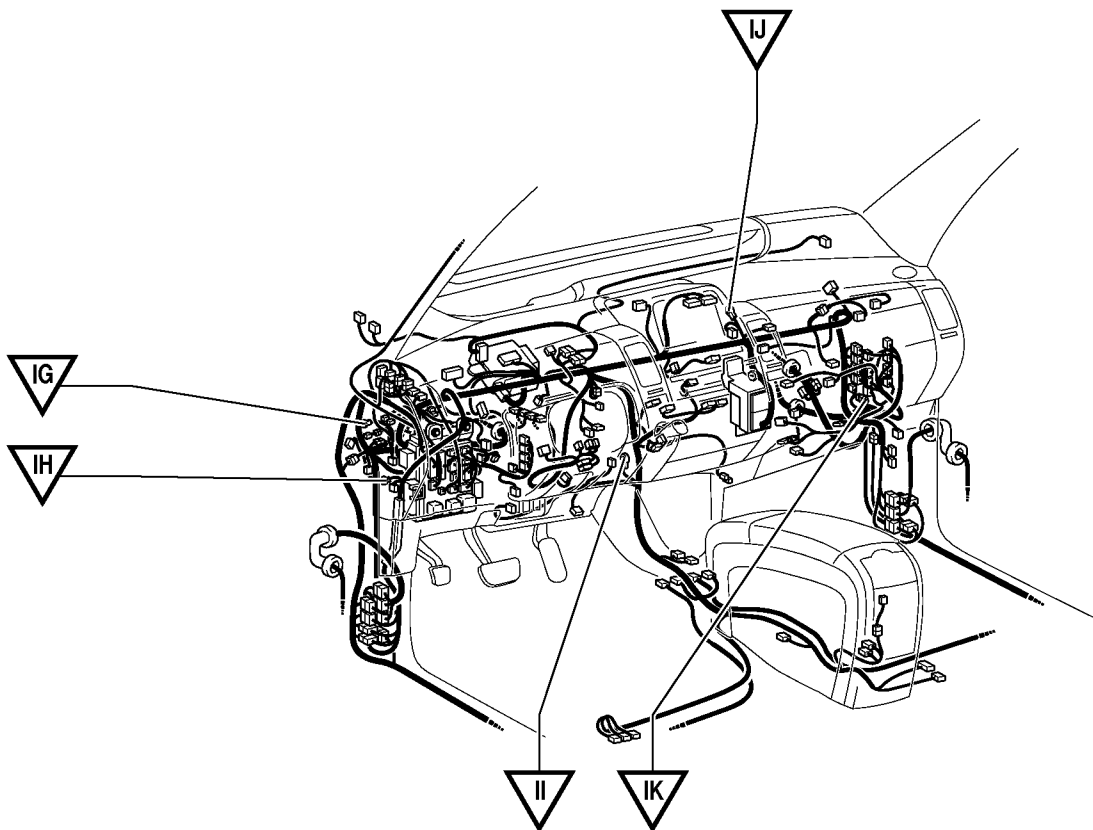
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine Wire and Engine No.4 Wire (Near the Radiator Fan)
EB1	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)

G ELECTRICAL WIRING ROUTING

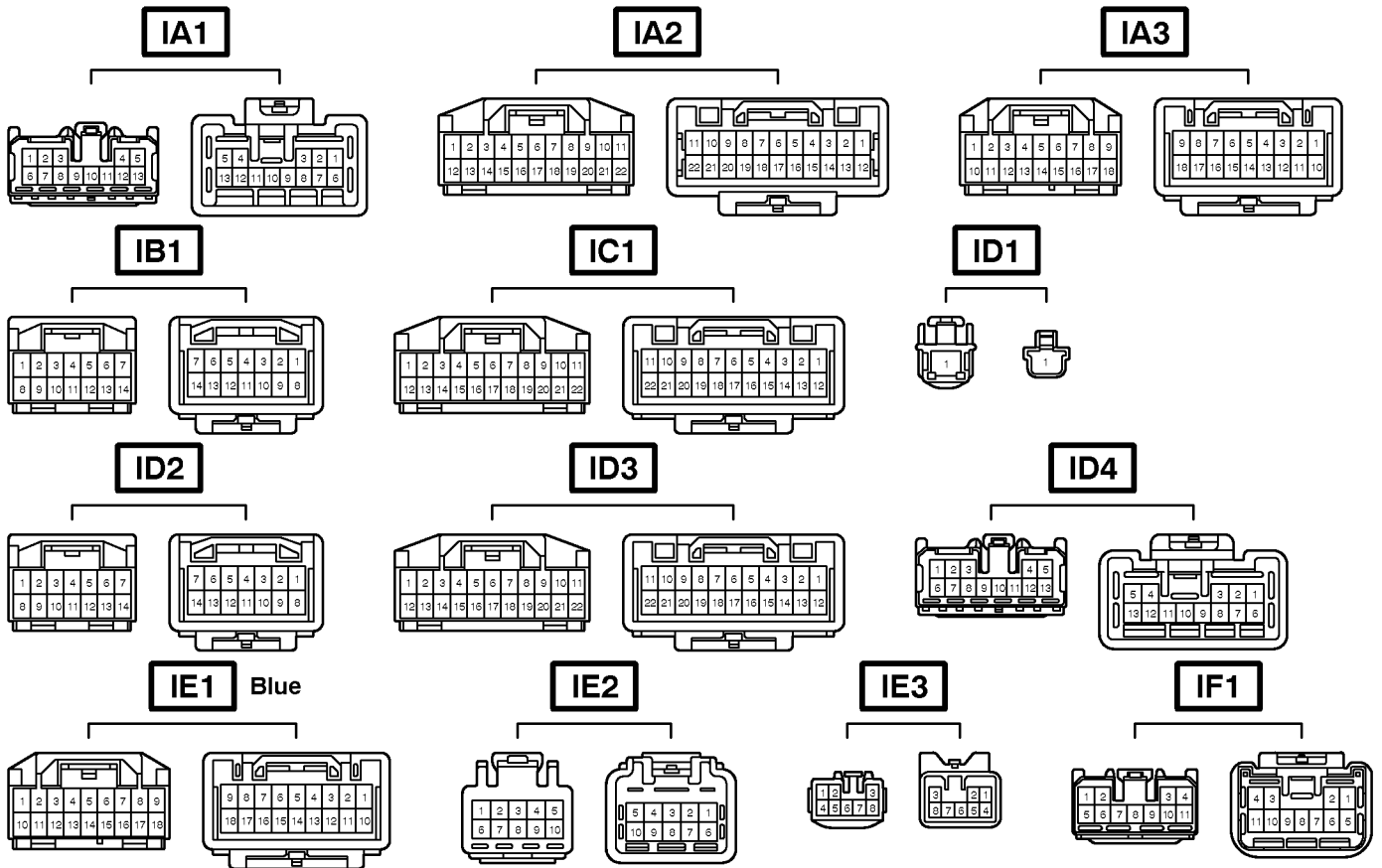
□ : Location of Connector Joining Wire Harness and Wire Harness



▽ : Location of Ground Points



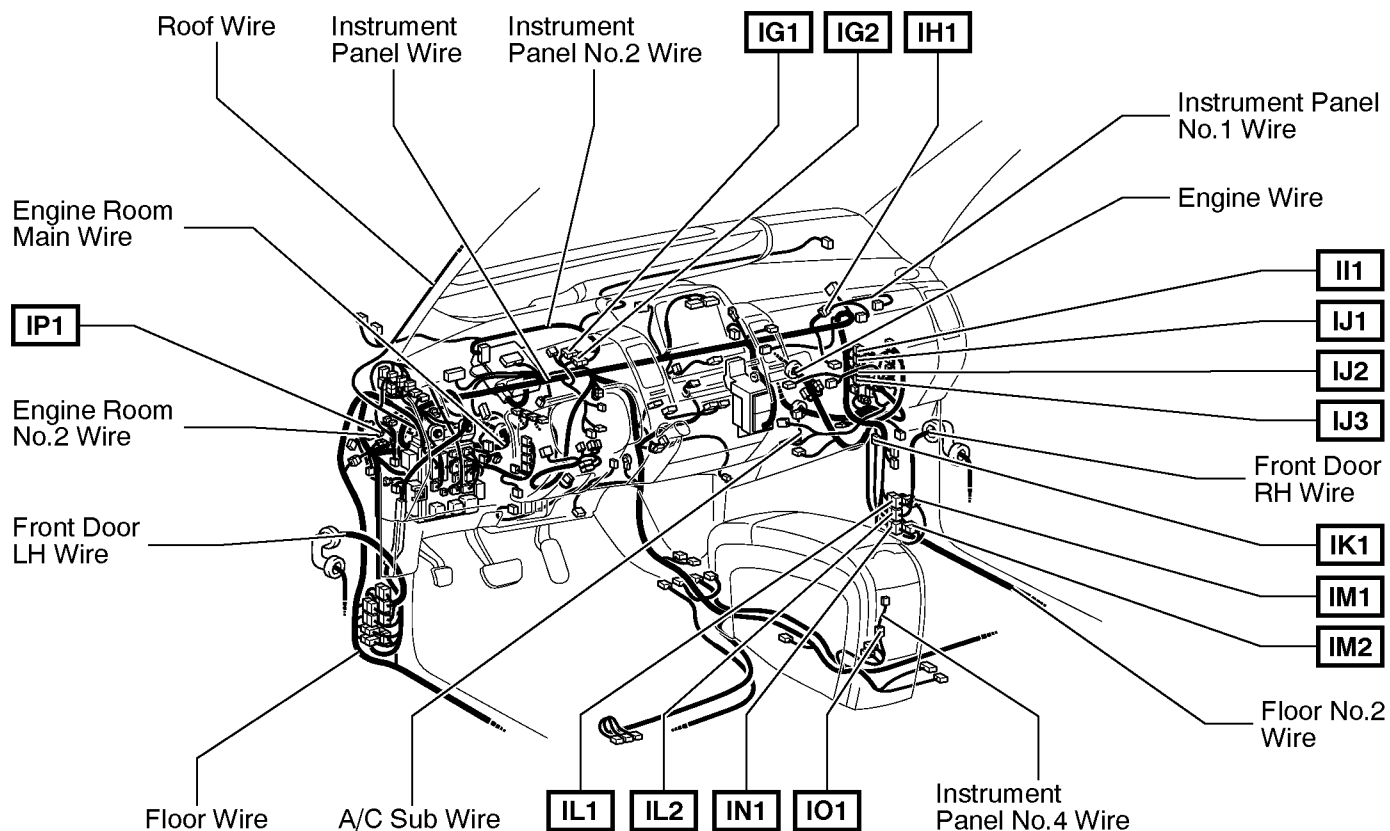
Connector Joining Wire Harness and Wire Harness



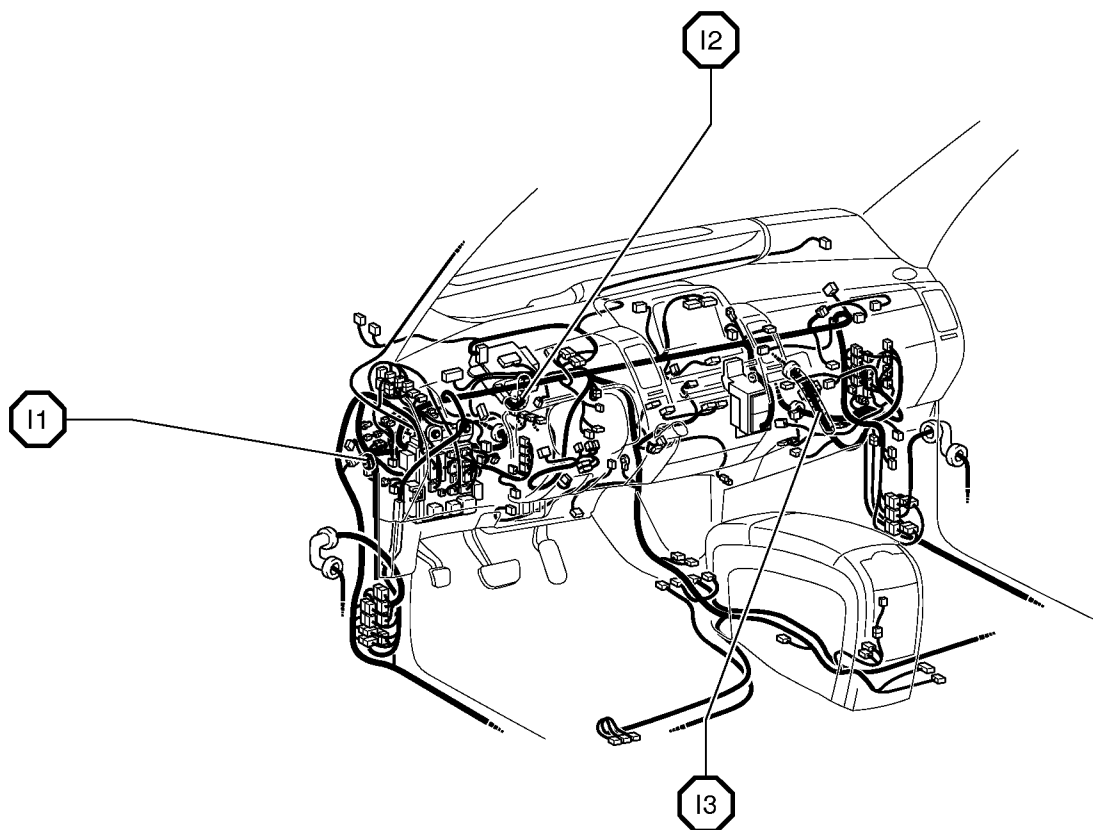
Code	Joining Wire Harness and Wire Harness (Connector Location)
IA1	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IA2	
IA3	
IB1	Roof Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IC1	Engine Room Main Wire and Floor Wire (Cowl Side Panel LH)
ID1	Instrument Panel Wire and Floor Wire (Left Kick Panel)
ID2	
ID3	
ID4	
IE1	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IE2	
IE3	
IF1	Floor Wire and Engine Room Main Wire (Left Kick Panel)

G ELECTRICAL WIRING ROUTING

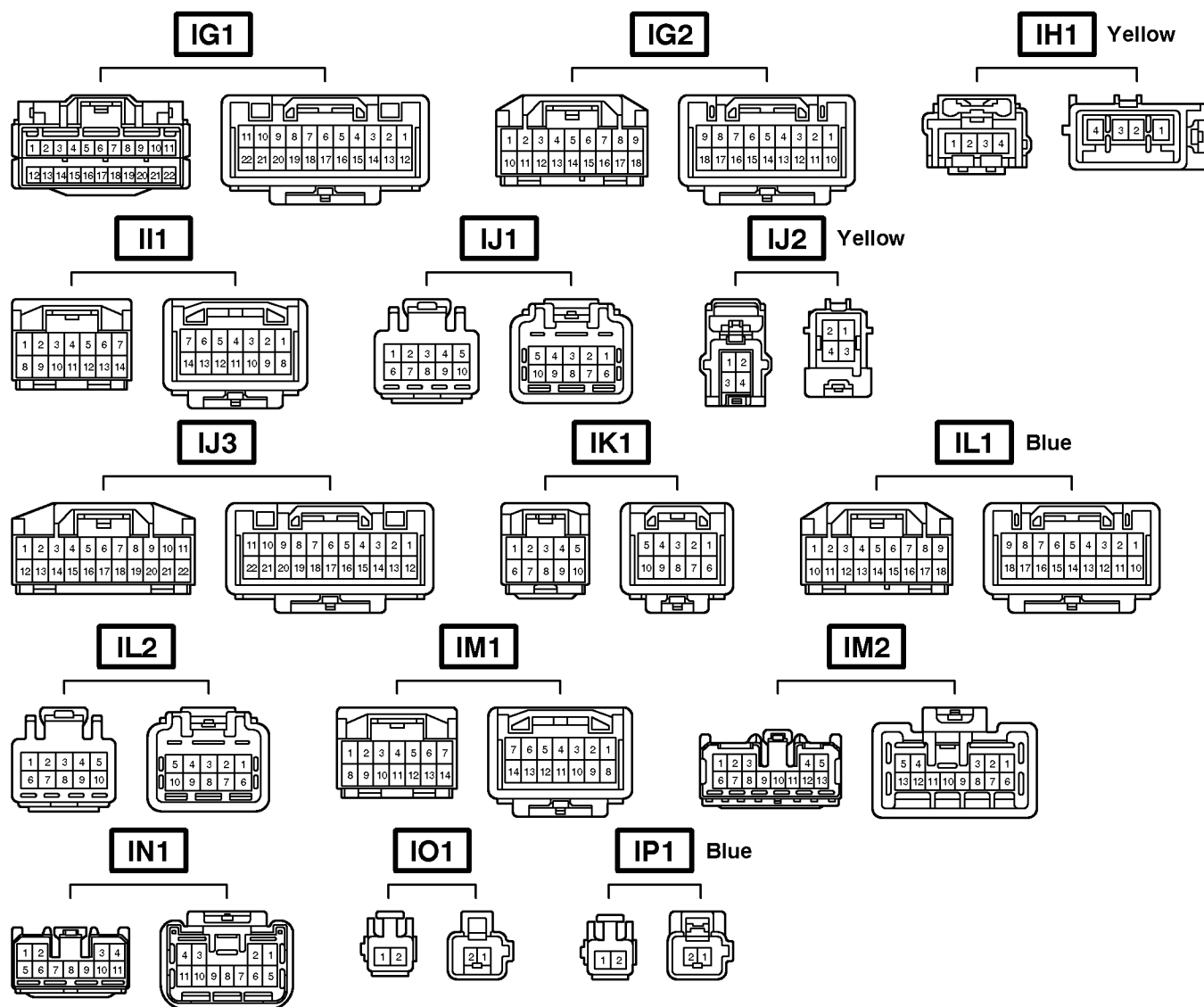
□ : Location of Connector Joining Wire Harness and Wire Harness



○ : Location of Splice Points



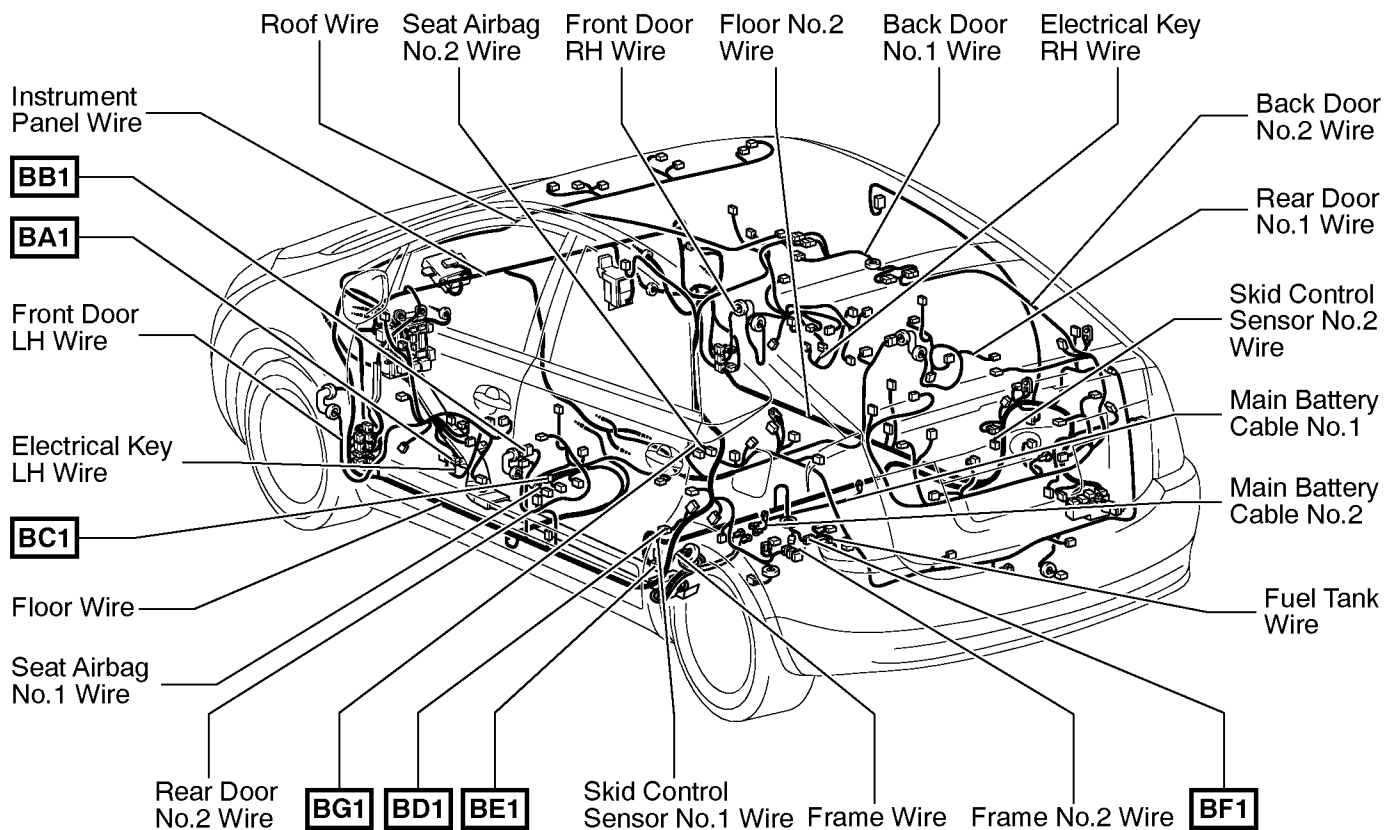
Connector Joining Wire Harness and Wire Harness



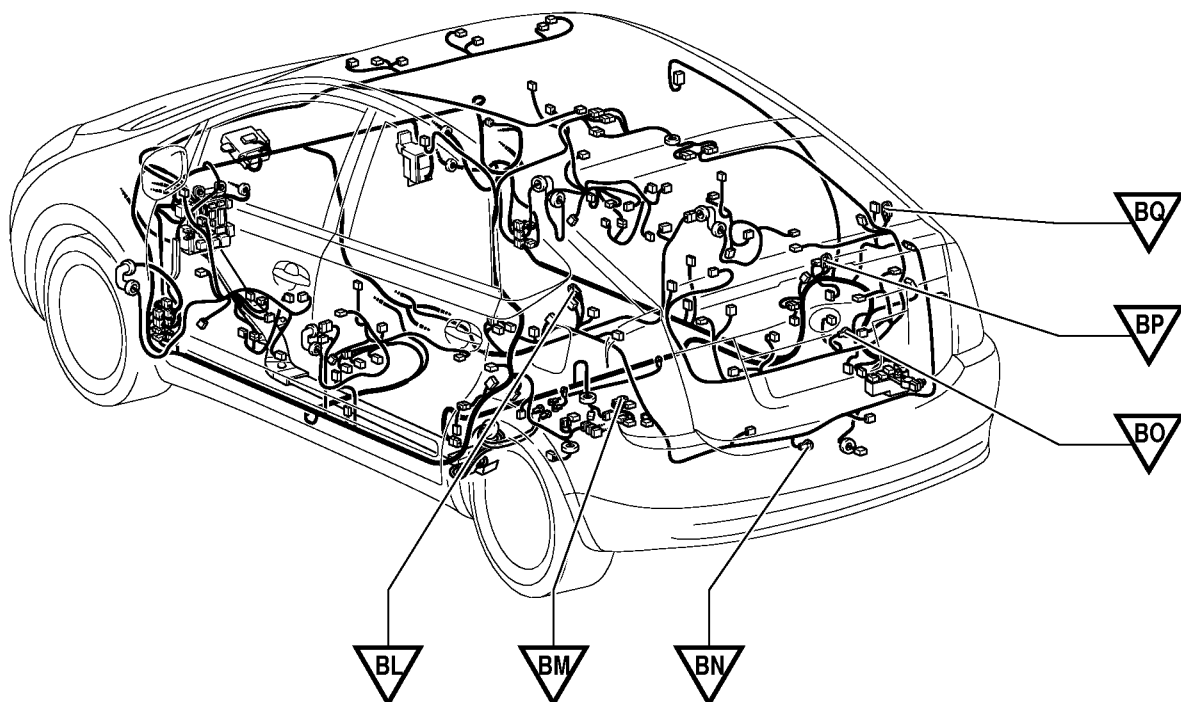
Code	Joining Wire Harness and Wire Harness (Connector Location)
IG1	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IG2	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IH1	Instrument Panel Wire and Instrument Panel No.1 Wire (Behind the Glove Box)
II1	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IJ1	Engine Room Main Wire and Instrument Panel Wire (Behind the Glove Box)
IJ2	Engine Room Main Wire and Instrument Panel Wire (Behind the Glove Box)
IJ3	Engine Room Main Wire and Instrument Panel Wire (Behind the Glove Box)
IK1	Engine Room Main Wire and Floor No.2 Wire (Cowl Side Panel RH)
IL1	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IL2	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM1	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IM2	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN1	Floor No.2 Wire and Engine Room Main Wire (Right Kick Panel)
IO1	Instrument Panel Wire and Instrument Panel No.4 Wire (Front Console Box LH)
IP1	Engine Room No.2 Wire and Engine Room Main Wire (Upper Parts of Front Body Pillar LH)

G ELECTRICAL WIRING ROUTING

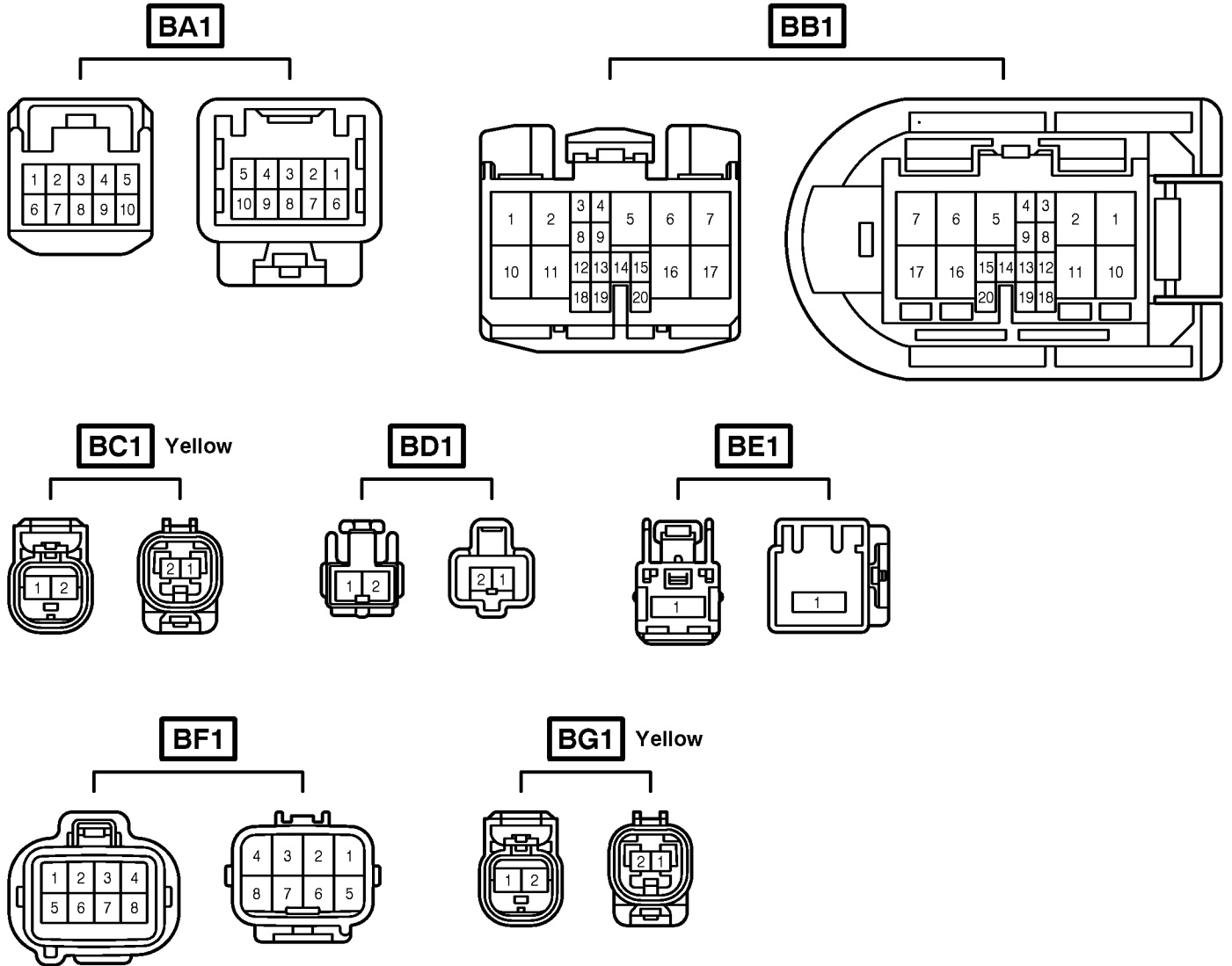
□ : Location of Connector Joining Wire Harness and Wire Harness



▽ : Location of Ground Points



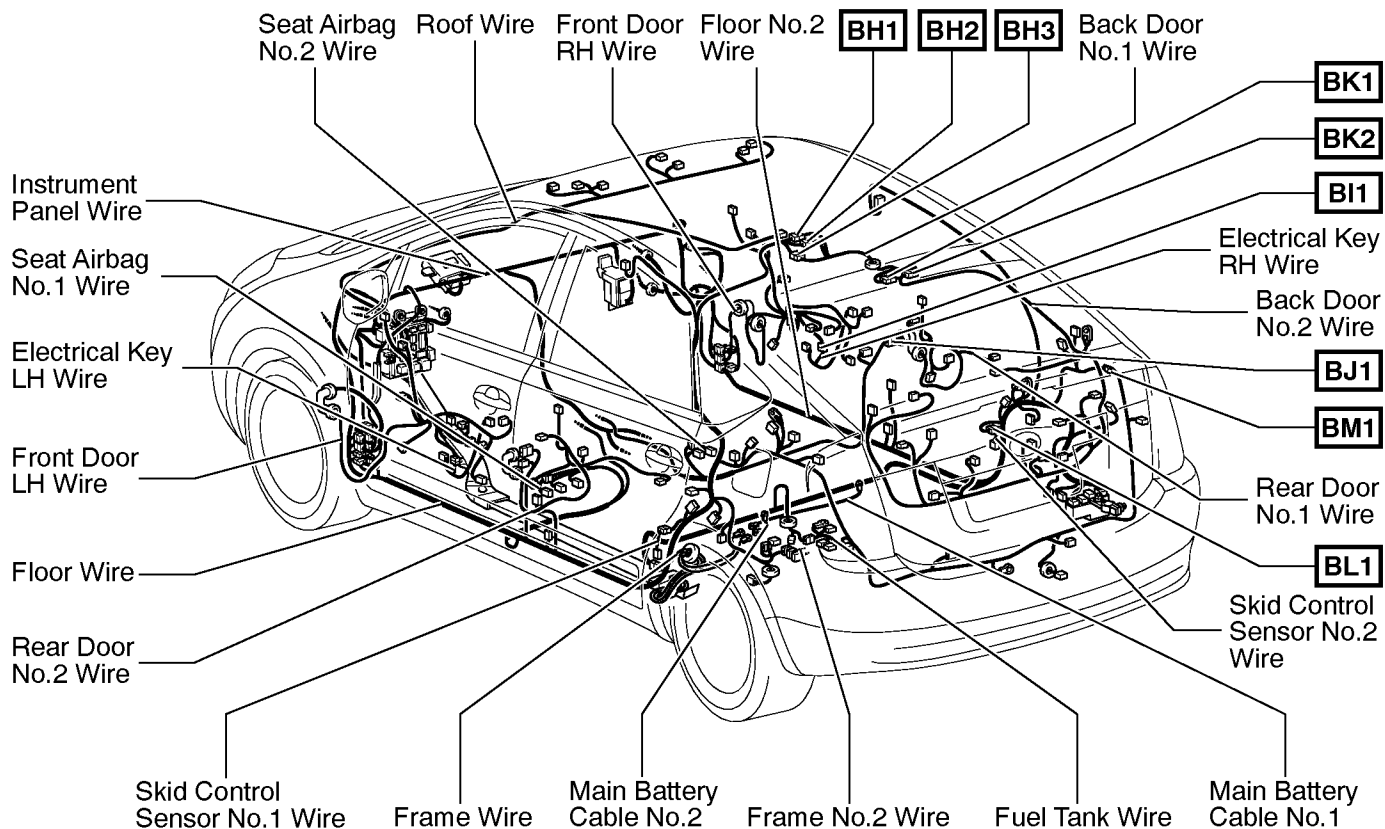
Connector Joining Wire Harness and Wire Harness



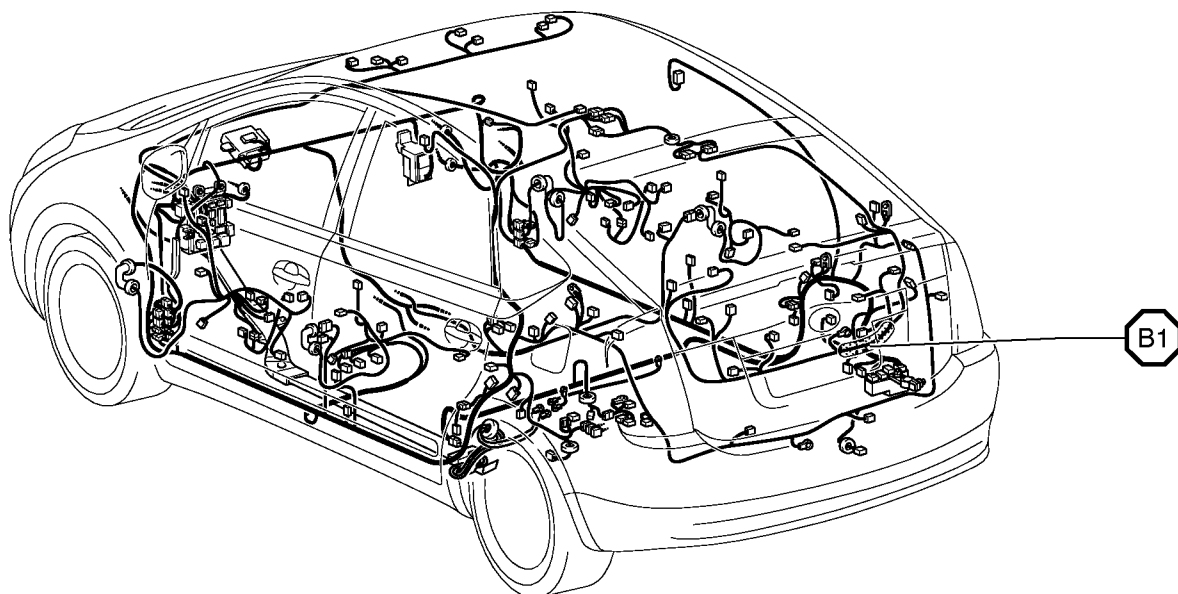
Code	Joining Wire Harness and Wire Harness (Connector Location)
BA1	Front Door LH Wire and Electrical Key LH Wire (Near the Front Door Outside Handle LH)
BB1	Rear Door No.2 Wire and Floor Wire (Left Center Pillar)
BC1	Floor Wire and Seat Airbag No.1 Wire (Under the Driver's Seat)
BD1	Skid Control Sensor No.1 Wire and Floor Wire (Front Side of Left Quarter Panel)
BE1	Frame Wire and Floor No.2 Wire (Front Side of Left Quarter Panel)
BF1	Floor No.2 Wire and Fuel Tank Wire (Near the Fuel Tank)
BG1	Floor No.2 Wire and Seat Airbag No.2 Wire (Under the Front Passenger's Seat)

G ELECTRICAL WIRING ROUTING

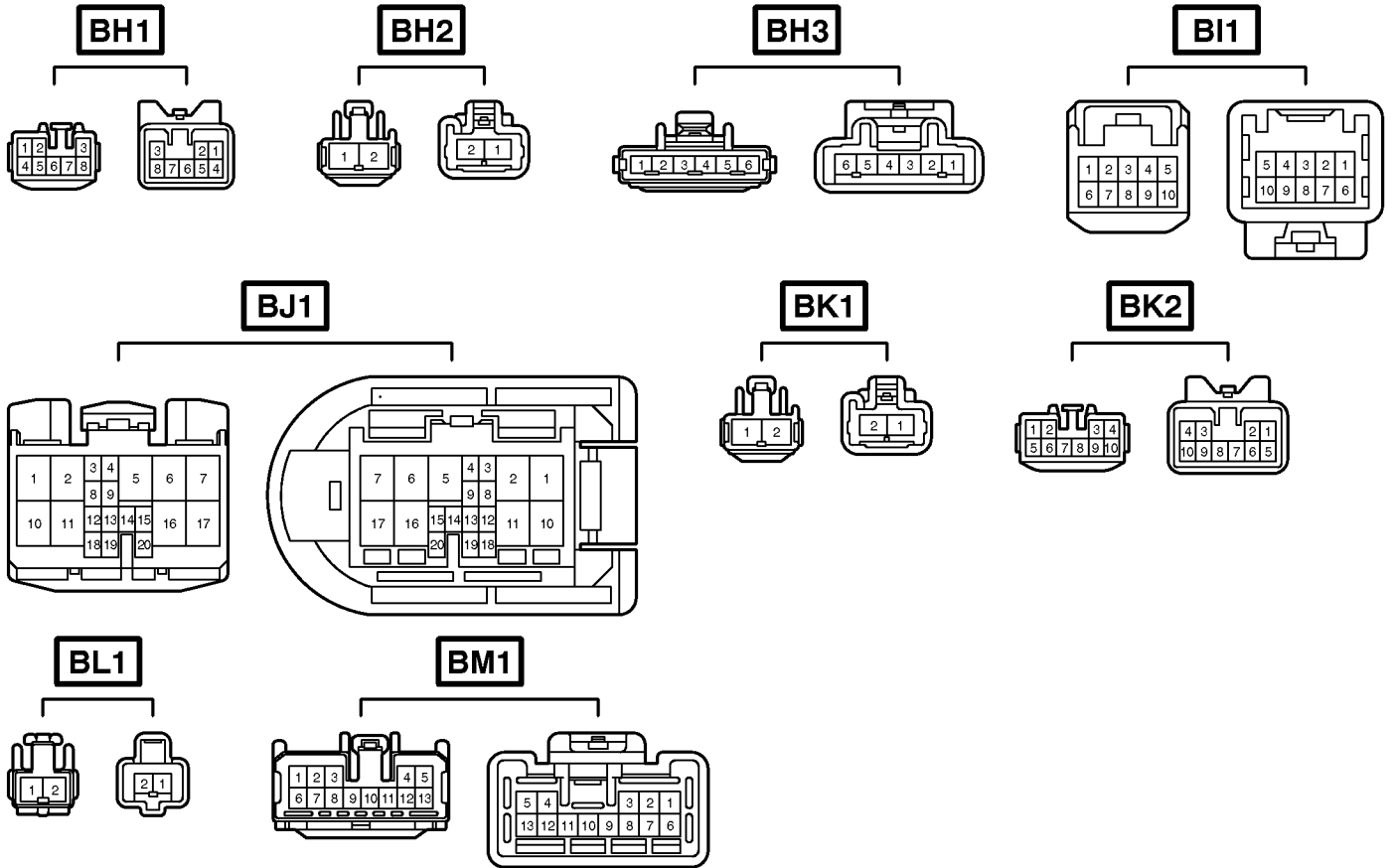
 : Location of Connector Joining Wire Harness and Wire Harness



 : Location of Splice Points



Connector Joining Wire Harness and Wire Harness



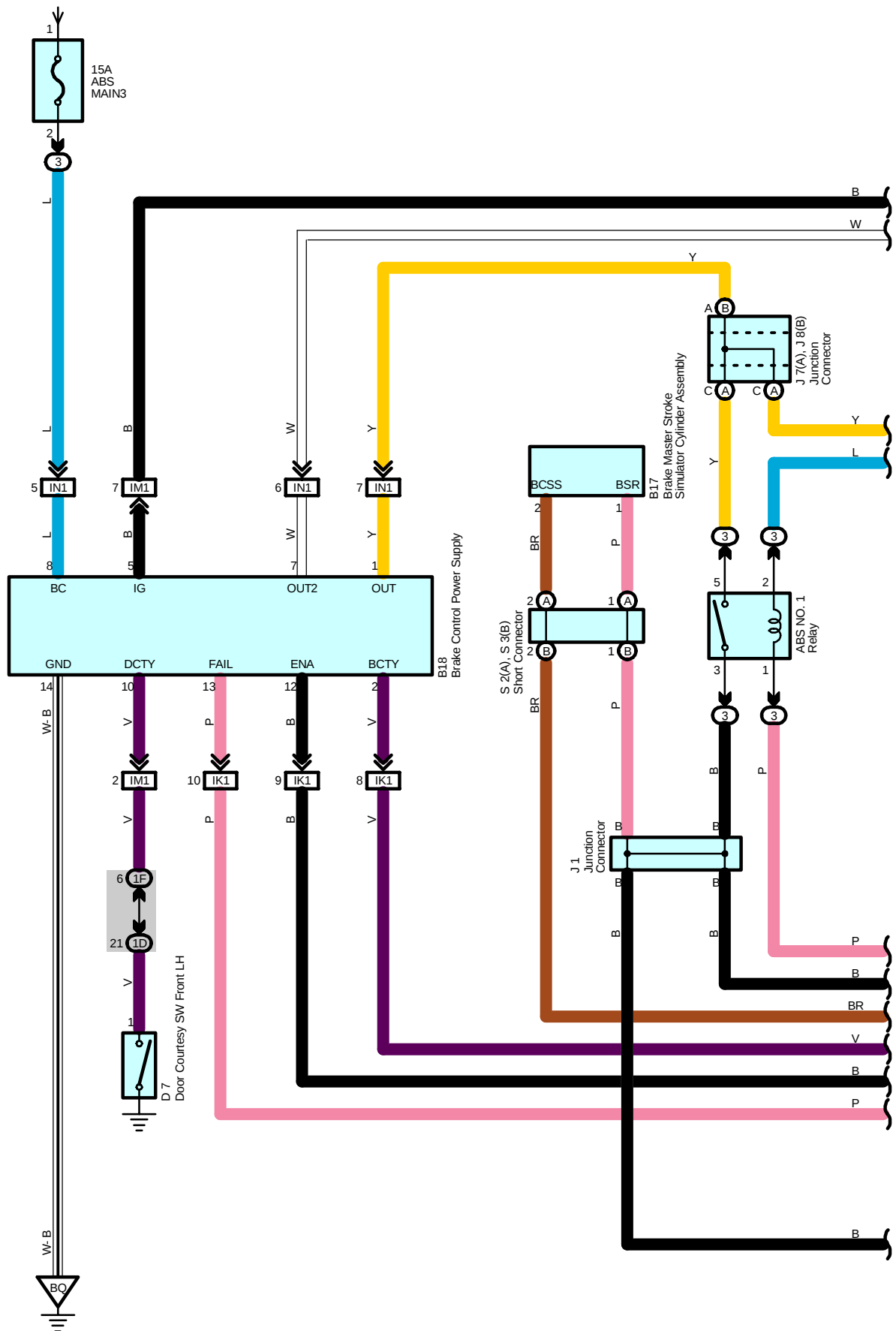
Code	Joining Wire Harness and Wire Harness (Connector Location)
BH1	Back Door No.1 Wire and Floor Wire (Rear Side of Roof Panel)
BH2	
BH3	
BI1	Front Door RH Wire and Electrical Key RH Wire (Near the Front Door Outside Handle RH)
BJ1	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)
BK1	Back Door No.1 Wire and Back Door No.2 Wire (Rear Side of Roof Panel)
BK2	
BL1	Skid Control Sensor No.2 Wire and Floor No.2 Wire (Front Side of Right Quarter Panel)
BM1	Floor No.2 Wire and Floor Wire (Rear Side of Right Quarter Panel)

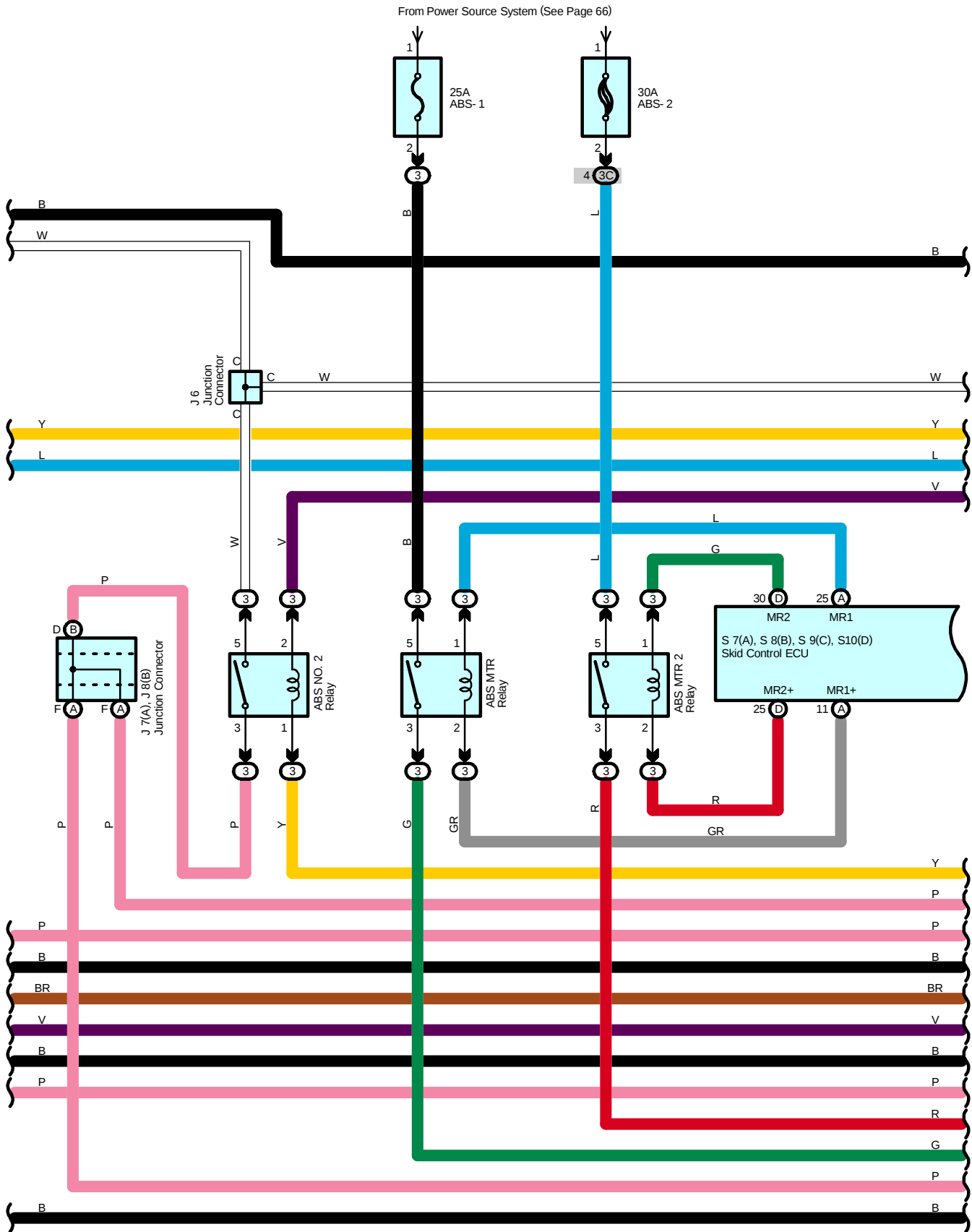
ABBREVIATIONS

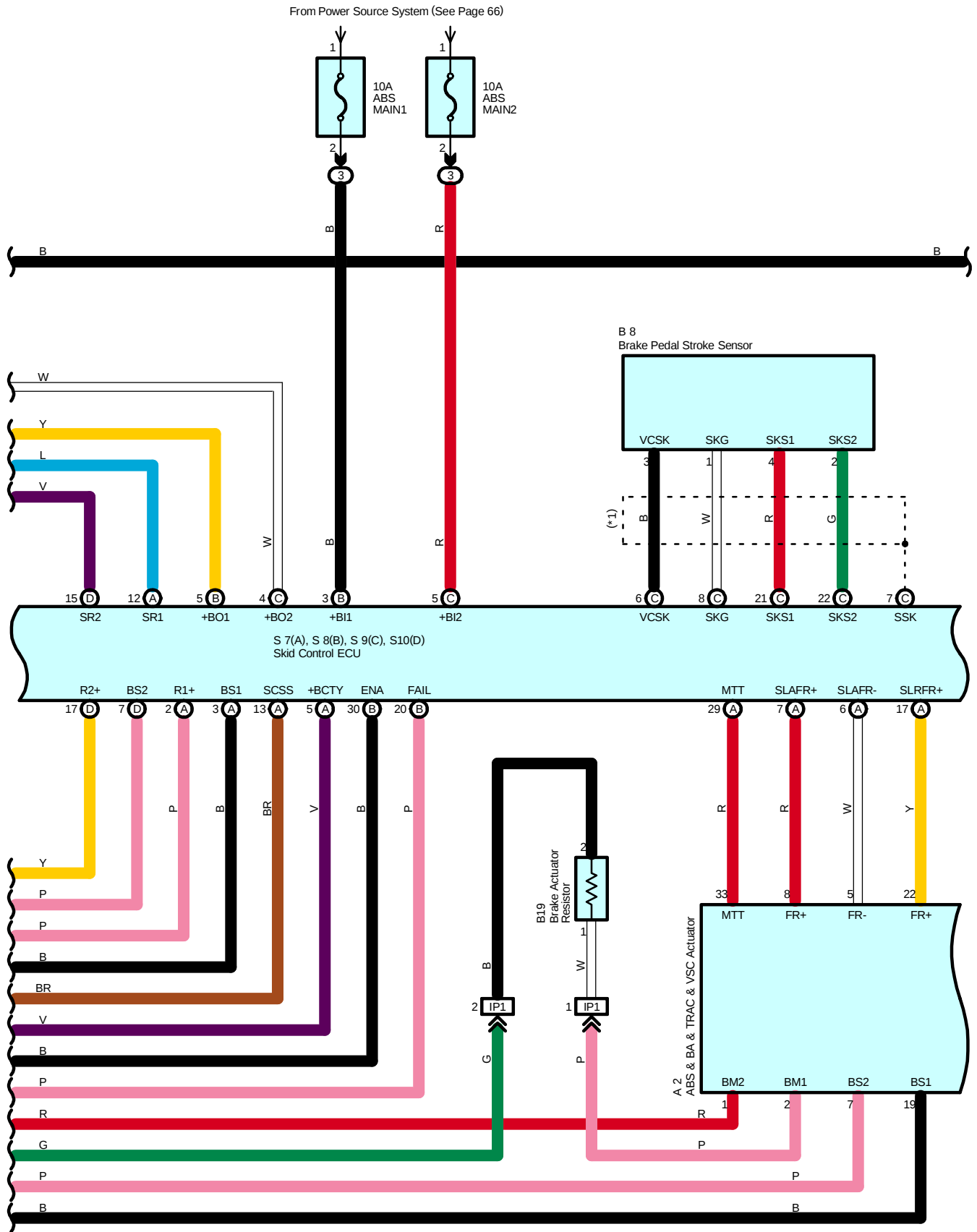
The following abbreviations are used in this manual.

A/C	=	Air Conditioning
ABS	=	Anti-Lock Brake System
BA	=	Brake Assist
BEAN	=	Body Electronics Area Network
CAN	=	Controller Area Network
CHS	=	Coolant Heat Storage System
DC	=	Direct Current
EC	=	Electrochromic
ECU	=	Electronic Control Unit
EPS	=	Electric Motor Power Steering
ESA	=	Electronic Spark Advance
EVAP	=	Evaporative Emission
HID	=	High Intensity Discharge
HV	=	Hybrid Vehicle
IC	=	Integrated Circuit
J/B	=	Junction Block
LH	=	Left-Hand
PTC	=	Positive Temperature Coefficient
R/B	=	Relay Block
RH	=	Right-Hand
SFI	=	Sequential Multiport Fuel Injection
SOC	=	State of Charge
SRS	=	Supplemental Restraint System
SW	=	Switch
TEMP.	=	Temperature
TRAC	=	Traction Control
VSC	=	Vehicle Stability Control
VSV	=	Vacuum Switching Valve
VVT-i	=	Variable Valve Timing-intelligent
w/	=	With
w/o	=	Without

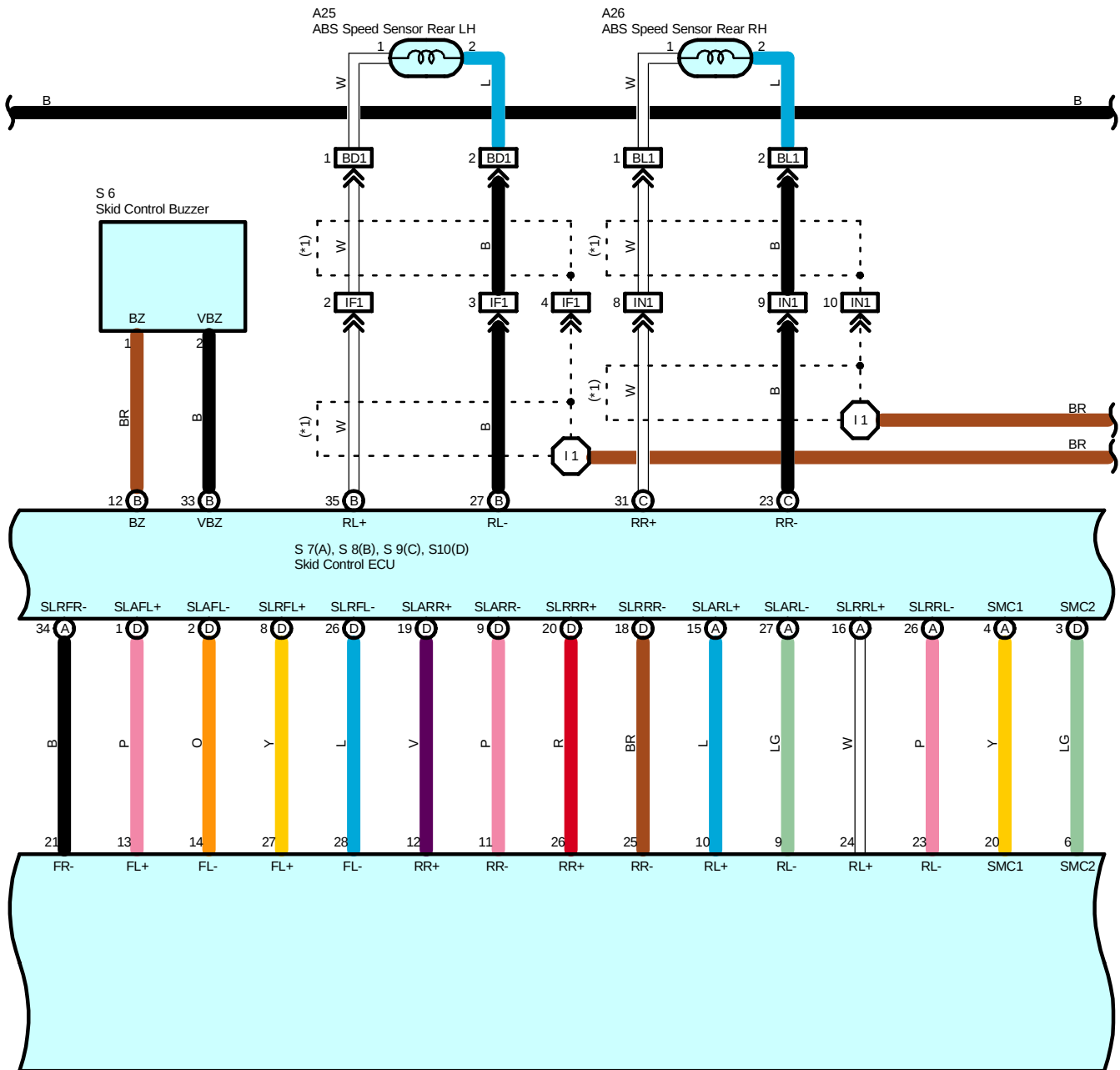
* The titles given inside the components are the names of the terminals (terminal codes) and are not treated as being abbreviations.



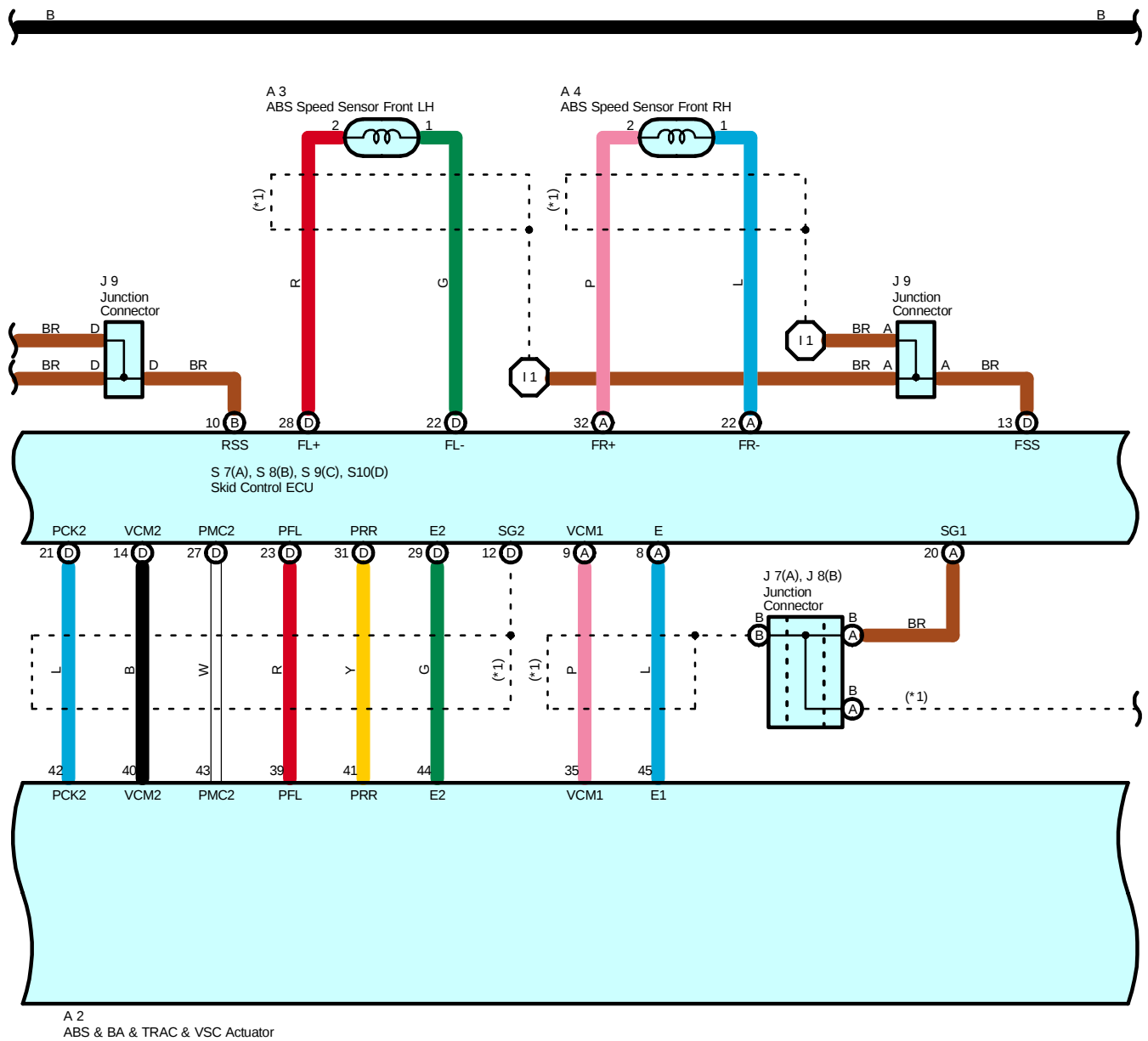


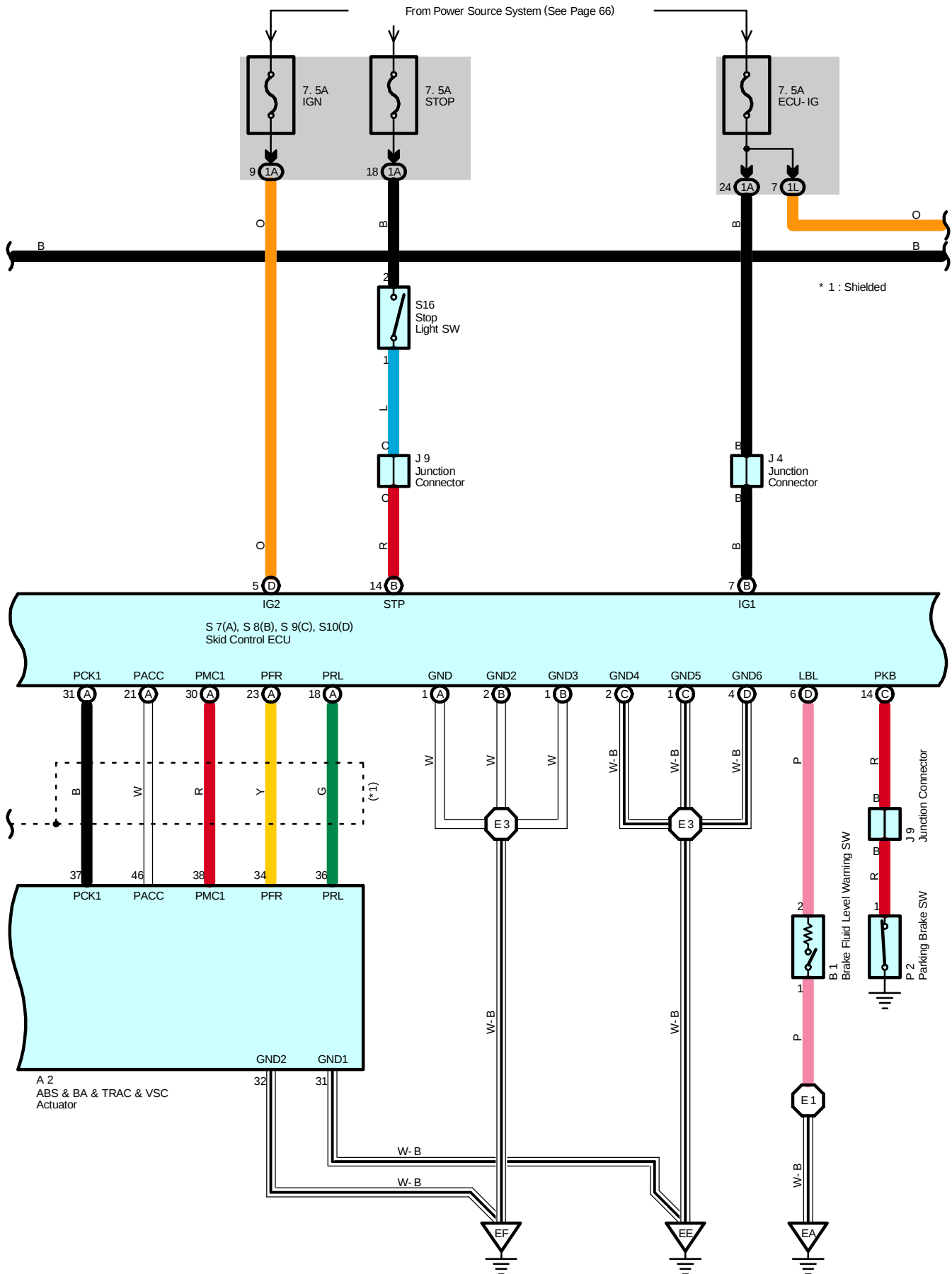


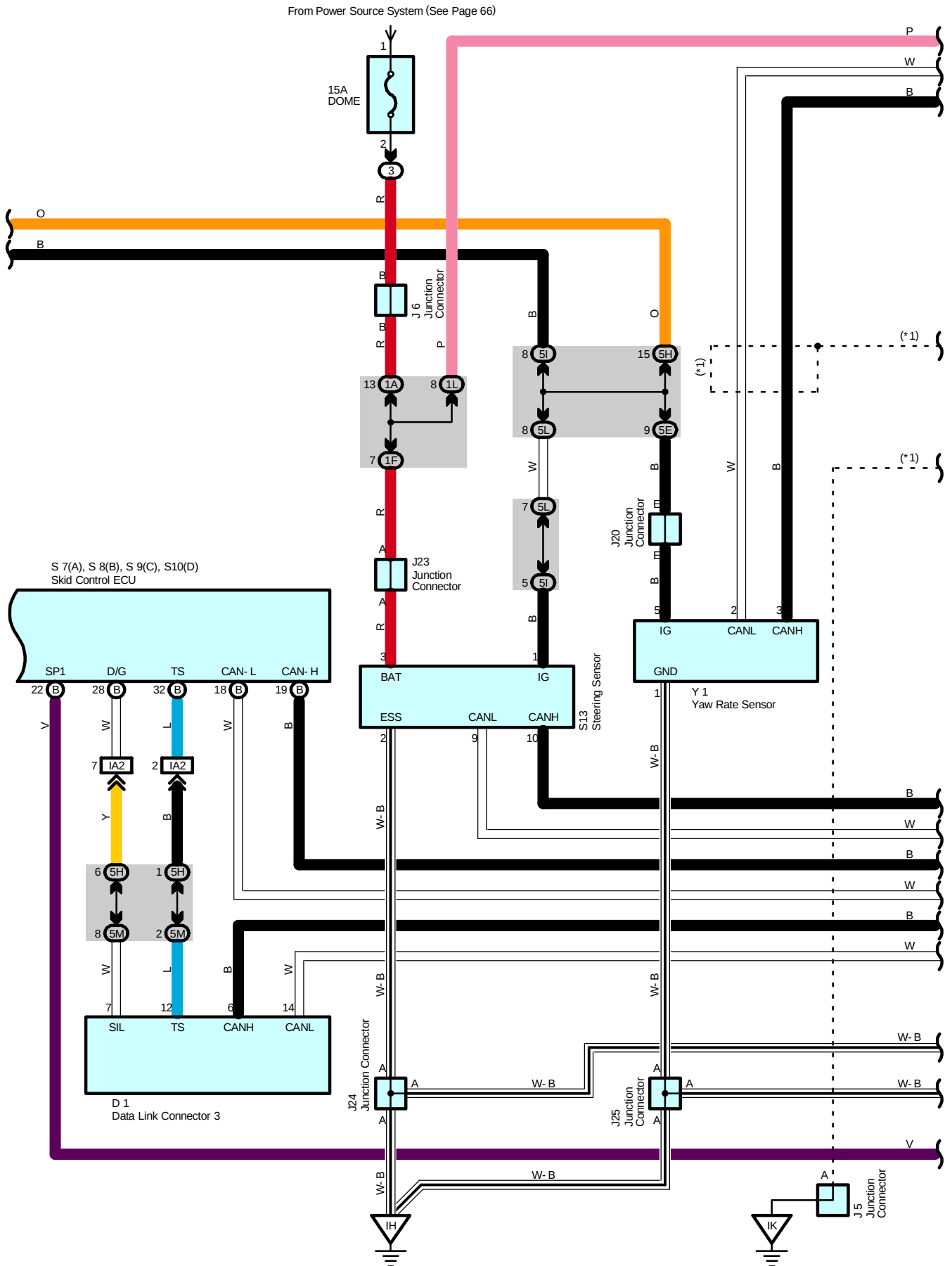
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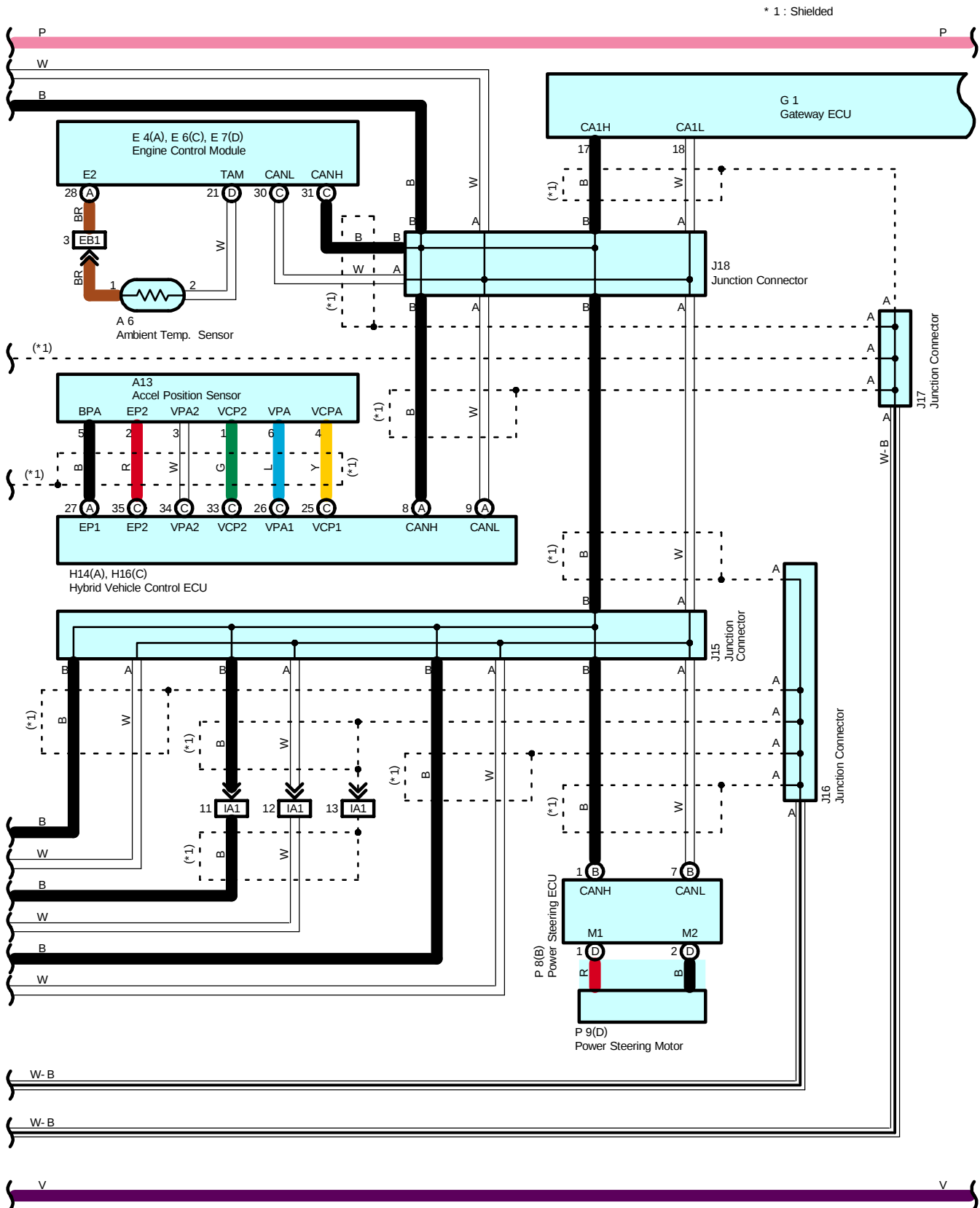


A 2
ABS & BA & TRAC & VSC Actuator

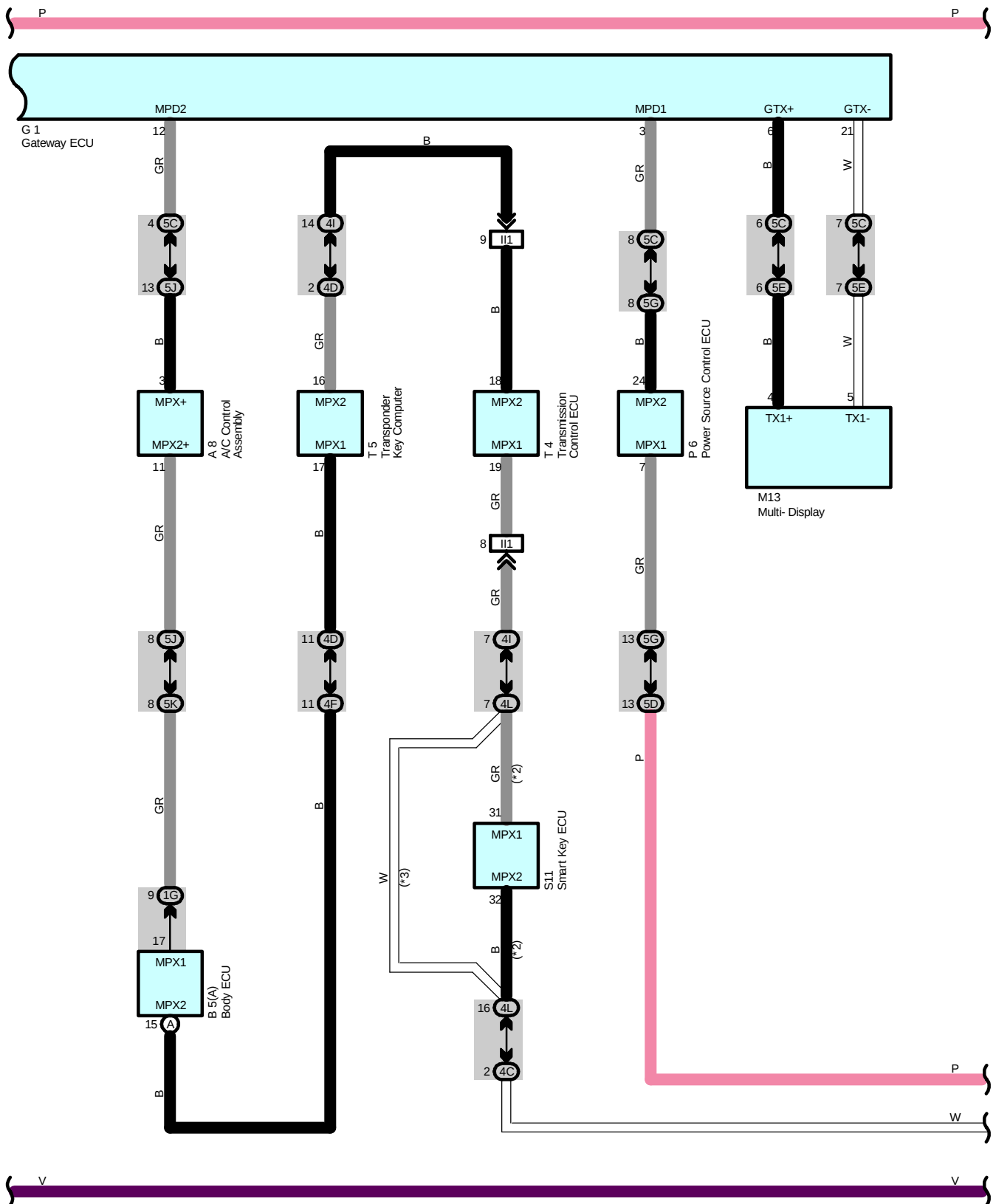








ABS and VSC



System Outline

1. ABS Operation

If the brake pedal is depressed suddenly, the ABS controls the hydraulic pressure of all the four wheel cylinders to automatically avoid wheel locking and to ensure the directional and steering stability of the vehicle. Under the situation, the skid control ECU controls the solenoids in the actuators, using the signals from the sensors to move the brake fluid to the reservoir in order to release the braking pressure applied to the wheel cylinder. If the skid control ECU detects that the fluid pressure in the wheel cylinder is insufficient, the ECU controls the solenoids in the actuators to increase the braking pressure.

2. Electronic Brake-Force Distribution

Skid control ECU distributes appropriate brake-force to front and rear wheels (Control of brake-force distribution to front and rear wheels) corresponding to the vehicle driving conditions. It also makes effective use of rear wheel brake-force to match loading condition and decelerating of the vehicle, resulting to reduce depressing of brake pedal and to ensure effective braking. In braking during making a turn, the ECU controls appropriate brake-force distribution to right and left wheels (Control of brake-force distribution to right and left wheels) to ensure stability and braking of the vehicle.

3. Brake Assist System

Skid control ECU recognizes emergency braking from detecting applying speed of brake pedal and brake travel, and controls braking effectiveness to supply strong brake-force for the emergency braking.

4. VSC Operation (w/ VSC)

Unexpected road conditions, emergency situation, and any other external factors may cause large under- or over-steering of the vehicle. If they occur, the VSC system automatically controls the driving power and wheel brakes to reduce the under- or over-steering.

To reduce large over-steering :

If the VSC system determines that the over-steering is large, it activates the brakes for the outer turning wheels depending on the degree of the over-steering to produce the moment toward the outside of the vehicle and reduce the over-steering.

To reduce large under-steering :

If the VSC system determines that the under-steering is large, it controls the driving power and activates the front wheel brakes and rear inner side wheel brake to reduce the under-steering.

If there is malfunction in the VSC system, the VSC indicator lights up to warn the driver.

5. Mutual System Control

Due to cooperative control with hybrid vehicle control ECU, skid control ECU controls hydraulic brake to collect much electrical energy by making the most use of regenerative brake.

Skid control ECU also improves stability of the vehicle, performing cooperative control with power steering ECU to give steering torque assistance, corresponding to driving conditions. (w/ VSC)

6. Electric Source Backup Function

Electric charge is stored in brake control power supply. If voltage of vehicle electricity is declined, electric charge is released to cover electric supply to the system.

7. Fail Safe Function

Skid control ECU monitors the system component parts electrically. In case there is abnormality in ECU, sensor signal and actuator, normal parts except parts with abnormality continue braking operation.

Even in case braking is shut off due to malfunction of oil pressure source, braking is secured as master cylinder pressure made by manpower works on wheel cylinder.

In case only regenerative brake is not effective due to abnormality in communication with hybrid vehicle control ECU, control will be changed to have oil pressure brake generate all the braking force

Service Hints

S7 (A), S8 (B), S9 (C), S10 (D) Skid Control ECU

(B) 3, (C) 5-Ground : Always approx. 12 volts

(B) 7, (D) 5-Ground : Approx. 12 volts with the power SW at IG ON position

(B)14-Ground : Approx. 12 volts with the brake pedal depressed

(A) 1, (B) 1, (B) 2, (C) 1, (C) 2, (D) 4-Ground : Always continuity

 : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A2		44		E7	D	47		M13		48	
A3		44		G1		47		P2		49	
A4		44		H14	A	47		P6		49	
A6		44		H16	C	47		P8	B	49	
A8		46		J1		45		P9	D	49	
A13		46		J4		45		S2	A	45	
A25		50		J5		48		S3	B	45	
A26		50		J6		48		S6		49	
B1		44		J7	A	48		S7	A	49	
B5	A	46		J8	B	48		S8	B	49	
B8		46		J9		48		S9	C	49	
B17		44		J15		48		S10	D	49	
B18		50		J16		48		S11		49	
B19		46		J17		48		S13		49	
C10		47		J18		48		S16		49	
D1		47		J20		48		T4		49	
D7		50		J23		48		T5		49	
E4	A	47		J24		48		Y1		49	
E6	C	47		J25		48					

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1D	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
1F	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1G		
1L	29	
1M		
3C	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
4C	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4D		
4F		
4H		
4I		
4L		
5C	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5D		
5E		
5G		
5H		
5I		
5J		
5K		
5L		
5M		

ABS and VSC

: Connector Joining Wire Harness and Wire Harness

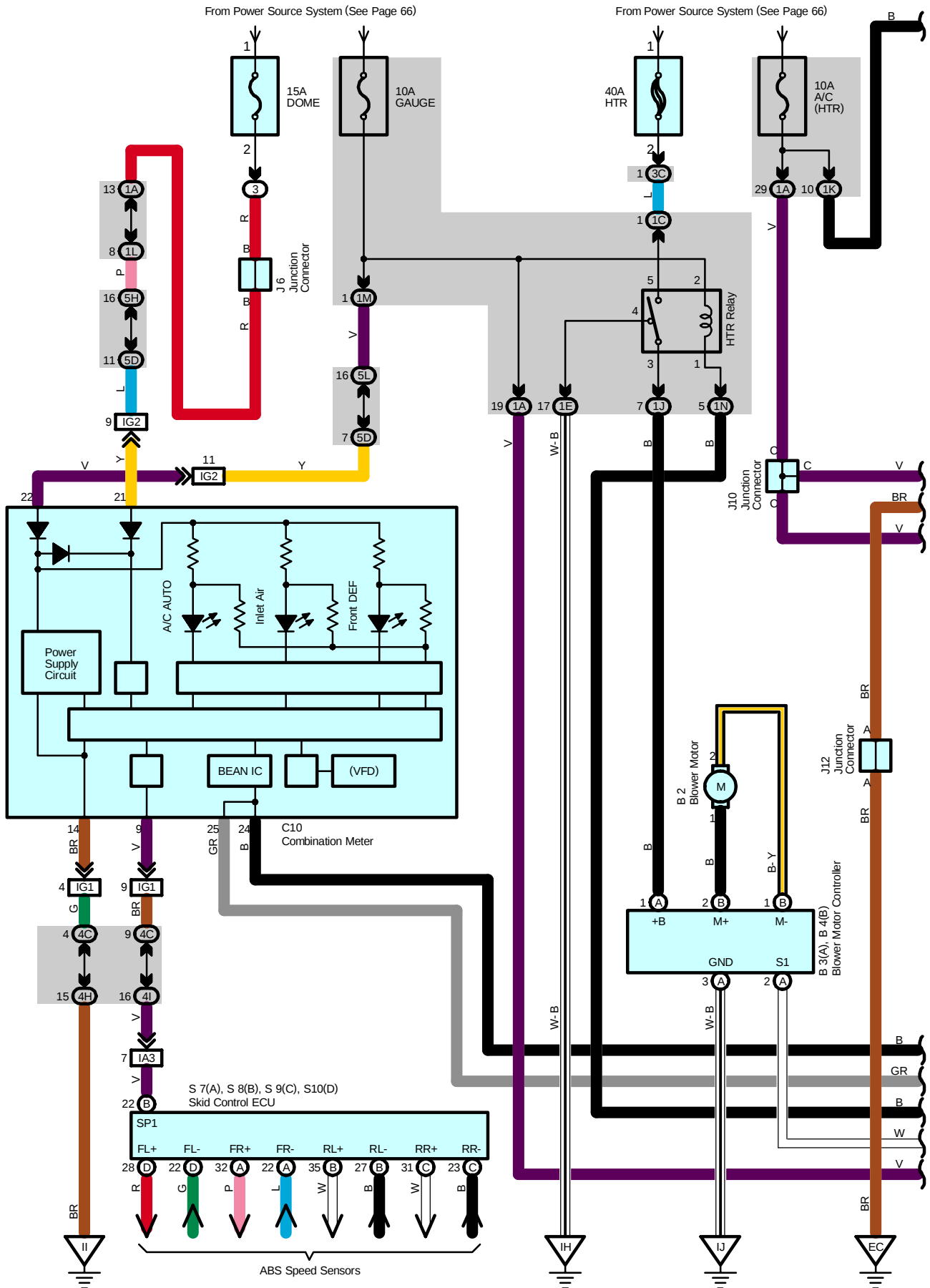
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	54	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA1	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IA2		
IF1	56	Floor Wire and Engine Room Main Wire (Left Kick Panel)
IG1	58	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IG2		
II1	58	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IK1	58	Engine Room Main Wire and Floor No.2 Wire (Cowl Side Panel RH)
IM1	58	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN1	58	Floor No.2 Wire and Engine Room Main Wire (Right Kick Panel)
IP1	58	Engine Room No.2 Wire and Engine Room Main Wire (Upper Parts of Front Body Pillar LH)
BD1	60	Skid Control Sensor No.1 Wire and Floor Wire (Front Side of Left Quarter Panel)
BL1	62	Skid Control Sensor No.2 Wire and Floor No.2 Wire (Front Side of Right Quarter Panel)

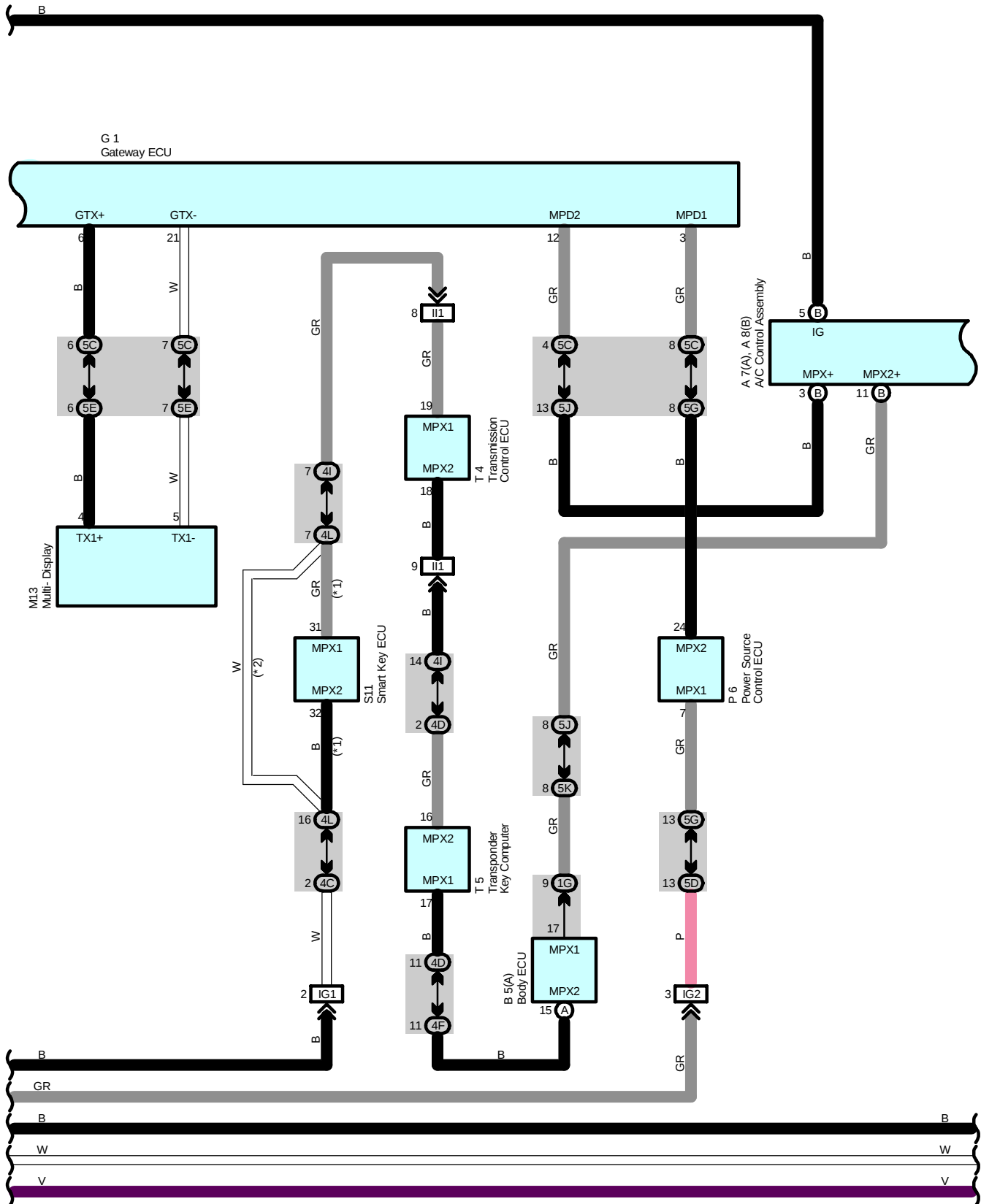
: Ground Points

Code	See Page	Ground Points Location
EA	54	Right Side of the Fender Apron
EE	54	Left Side of the Suspension Tower
EF		
IH	56	Cowl Side Panel LH
II	56	Instrument Panel Brace LH
IK	56	Cowl Side Panel RH
BQ	60	Rear Side of Right Quarter Panel

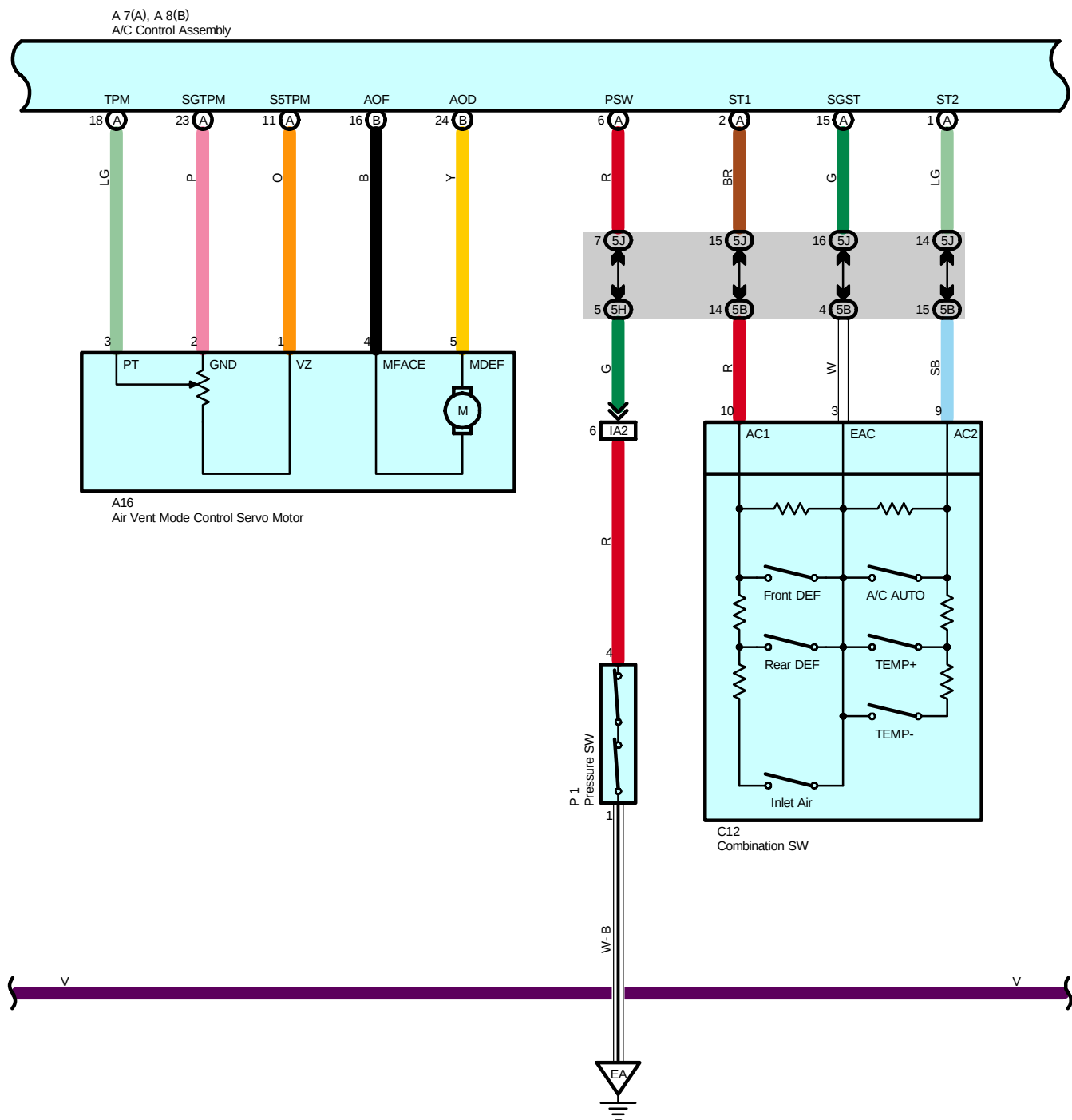
: Splice Points

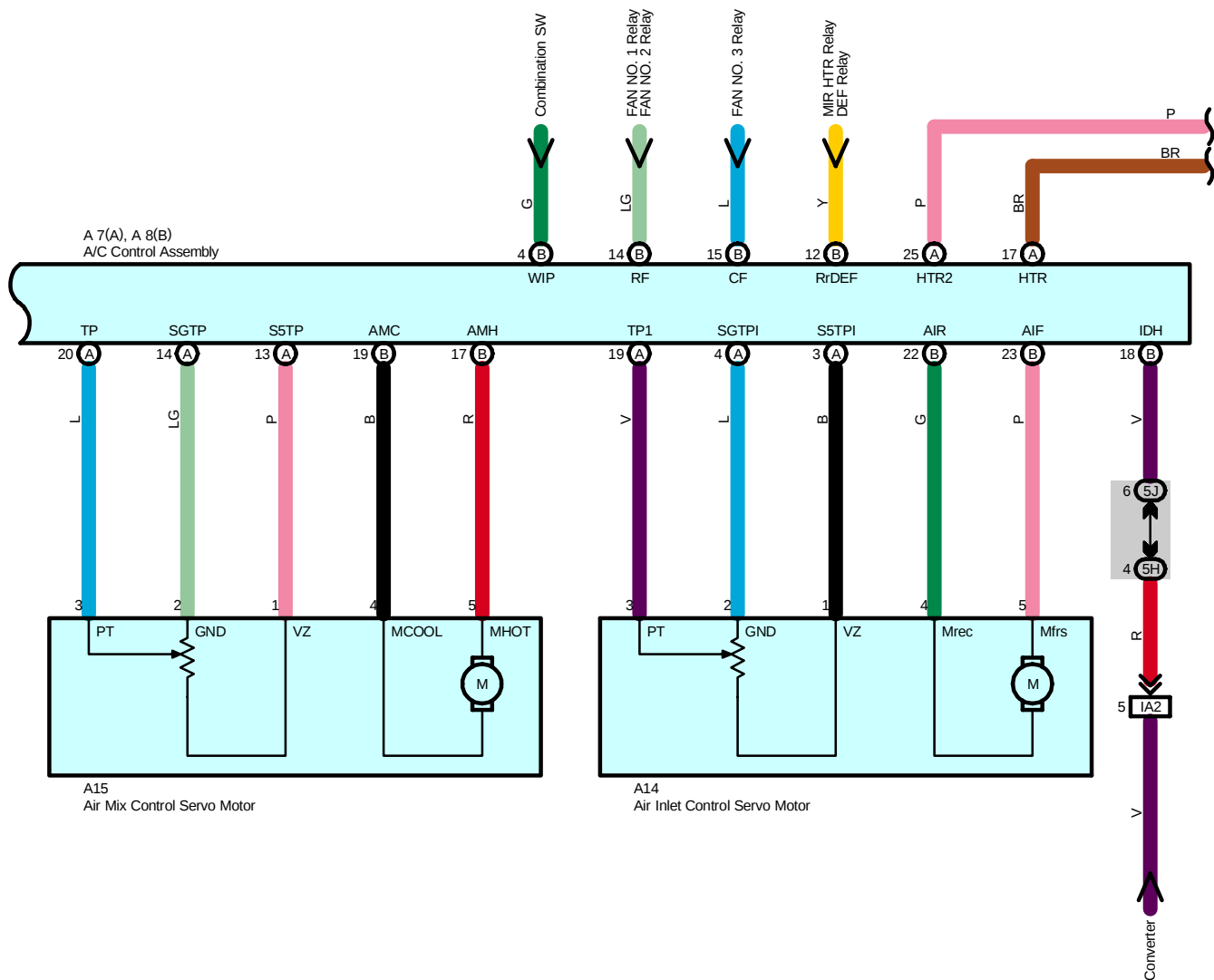
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	54	Engine Room Main Wire	I1	58	Instrument Panel Wire
E3					

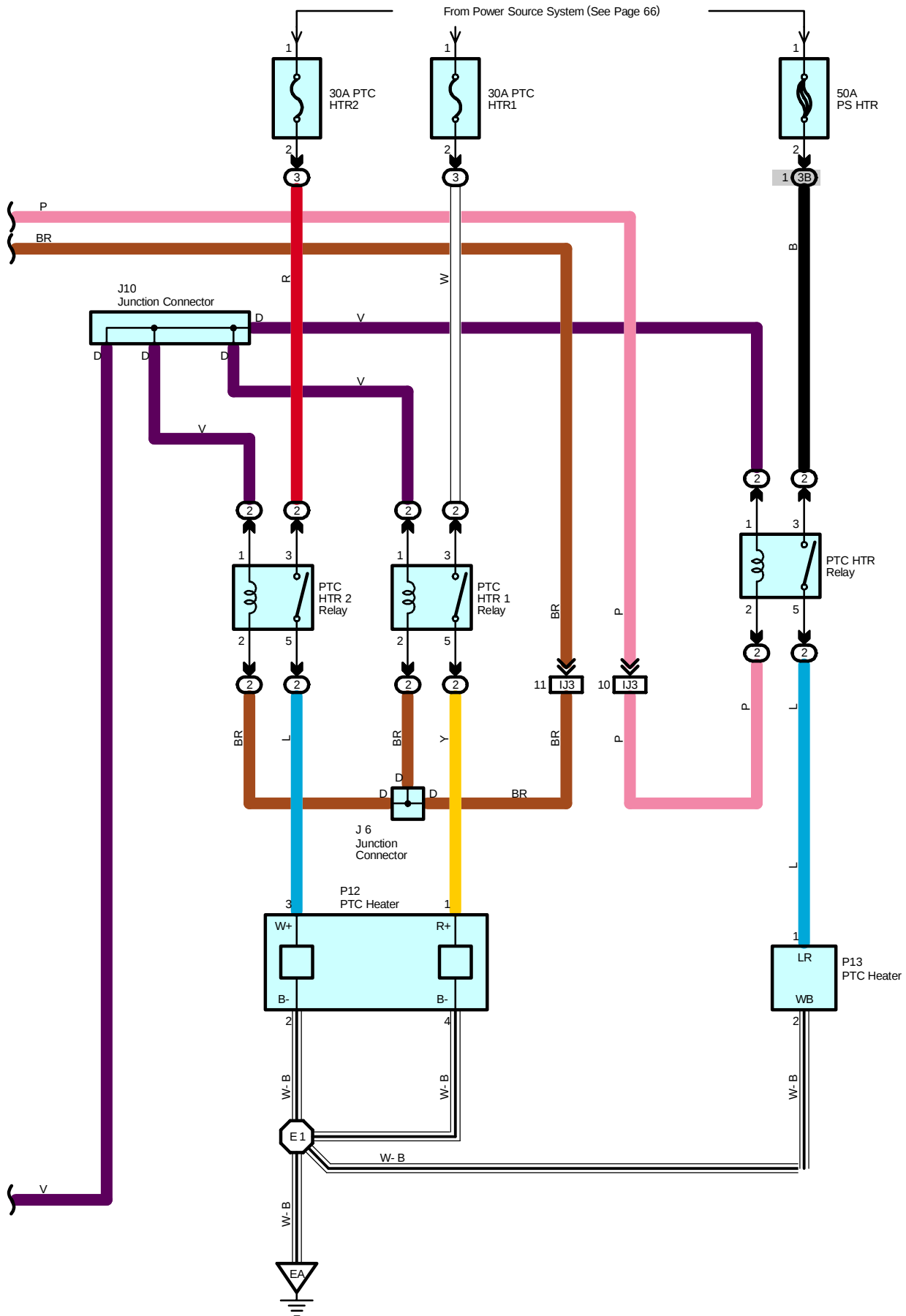












System Outline

Air conditioning system operates when SW of multi-display or that of steering wheel is turned on. Turning on the SW sends signal to A/C control assembly, running the air conditioning system.

1. Heater Blower Operation

Manual operation

When the blower speed is set to a certain level using the blower control SW, the A/C control assembly sends the signals to the blower control to control the blower motor speed.

Auto operation

When the auto SW is pushed, the A/C control assembly calculates necessary blower speed from setting of SWs and input of the sensors and sends the signals to the blower control to automatically control the blower motor speed.

2. Air Inlet Control Servo Motor Control

When the FRESH/RECIRC select SW is set to RECIRC, the air inlet control servo motor starts rotating to move the damper toward the RECIRC side. The damper position is detected by the TERMINAL TPI of the A/C control assembly. The motor continuously rotates until the damper reaches its stop position. When the FRESH/RECIRC select SW is set to FRESH, the air inlet control servo motor starts rotating to move the damper toward the FRESH side. The damper position is detected by the TERMINAL TPI of the A/C control assembly. The motor continuously rotates until the damper reaches its stop position.

In auto mode, A/C control assembly controls the damper to move to the best position for the conditions without operating the mode select SW.

3. Air Vent Mode Control Servo Motor Control

When the mode select SW is pushed, the ECU in the A/C control assembly activates the air vent mode control servo motor. The servo motor rotates to the position (FACE, BI-LEVEL, FOOT, FOOT/DEF, DEF) selected by using the mode select SW, and moves the damper.

In auto mode, A/C control assembly controls the damper to move to the best position for the conditions without operating the mode select SW.

4. Air Mix Control Servo Motor Control

Based on the set temperature by the temperature control SW, the ECU in the A/C control assembly sends a signal to the air mix control servo motor. This signal drives the motor to reach the temperature set by the temperature control SW, and moves the film damper.

5. Humidity Sensor Control

A/C control assembly detects humidity in passenger room when A/C is turned on, with humidity detecting function of A/C room temp. sensor and controls to dehumidify for comfortable condition

6. Air Conditioning Operation

A/C control assembly calculates target cooled temperature from information such as that of operating SWs, room temperature, humidity, ambient temperature and insolation to have target running speed of compressor assembly (Motor). The calculated control signal is sent to inverter to drive compressor assembly (Motor) (Electric motor) with control of inverter, resulting in operating A/C.

Service Hints

P1 Pressure SW

1-4 : Open with the refrigerant pressure at less than approx. 196 kpa (2.0 kgf/cm², 28.4 psi) or more than approx. 3140 kpa (32 kgf/cm², 455 psi)

A8 (B) A/C Control Assembly

(B) 6-Ground : Always approx. 12 volts

(B) 5-Ground : Approx. 12 volts with the power SW at IG ON position

(B) 1-Ground : Always continuity

Air Conditioning

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A6	44	E1	44	J19	48
A7	46	E4	47	J24	48
A8	46	E5	47	J25	48
A9	46	E6	47	M13	48
A10	46	E7	47	P1	45
A11	46	G1	47	P6	49
A14	46	H14	47	P12	49
A15	46	H15	47	P13	49
A16	46	H16	47	S7	49
B2	46	I11	45	S8	49
B3	46	J6	48	S9	49
B4	46	J10	48	S10	49
B5	46	J12	48	S11	49
C4	44	J14	48	T4	49
C7	44	J15	48	T5	49
C10	47	J16	48	W1	45
C12	47	J17	48		
D1	47	J18	48		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	27	Engine Room R/B No.2 (Right Side of Reserve Tank)
3	22	Engine Room R/B (Engine Compartment Left)

**: Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)	
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)	
1C			
1E			
1G	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)	
1J			
1K			
1L	29		
1M			
1N			
3B			
3C	23		Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3H	24		
4C	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)	
4D			
4F			
4H			
4I			
4L			
5B	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)	
5C			
5D			
5E			
5G			
5H			
5J			
5K			
5L			

**: Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	54	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA2	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IA3		
IG1	58	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IG2		
II1	58	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IJ3	58	Engine Room Main Wire and Instrument Panel Wire (Behind the Glove Box)

**: Ground Points**

Code	See Page	Ground Points Location
EA	54	Right Side of the Fender Apron
EC	54	Engine Block
EF	54	Left Side of the Suspension Tower
IH	56	Cowl Side Panel LH
II	56	Instrument Panel Brace LH
IJ	56	Instrument Panel Brace RH

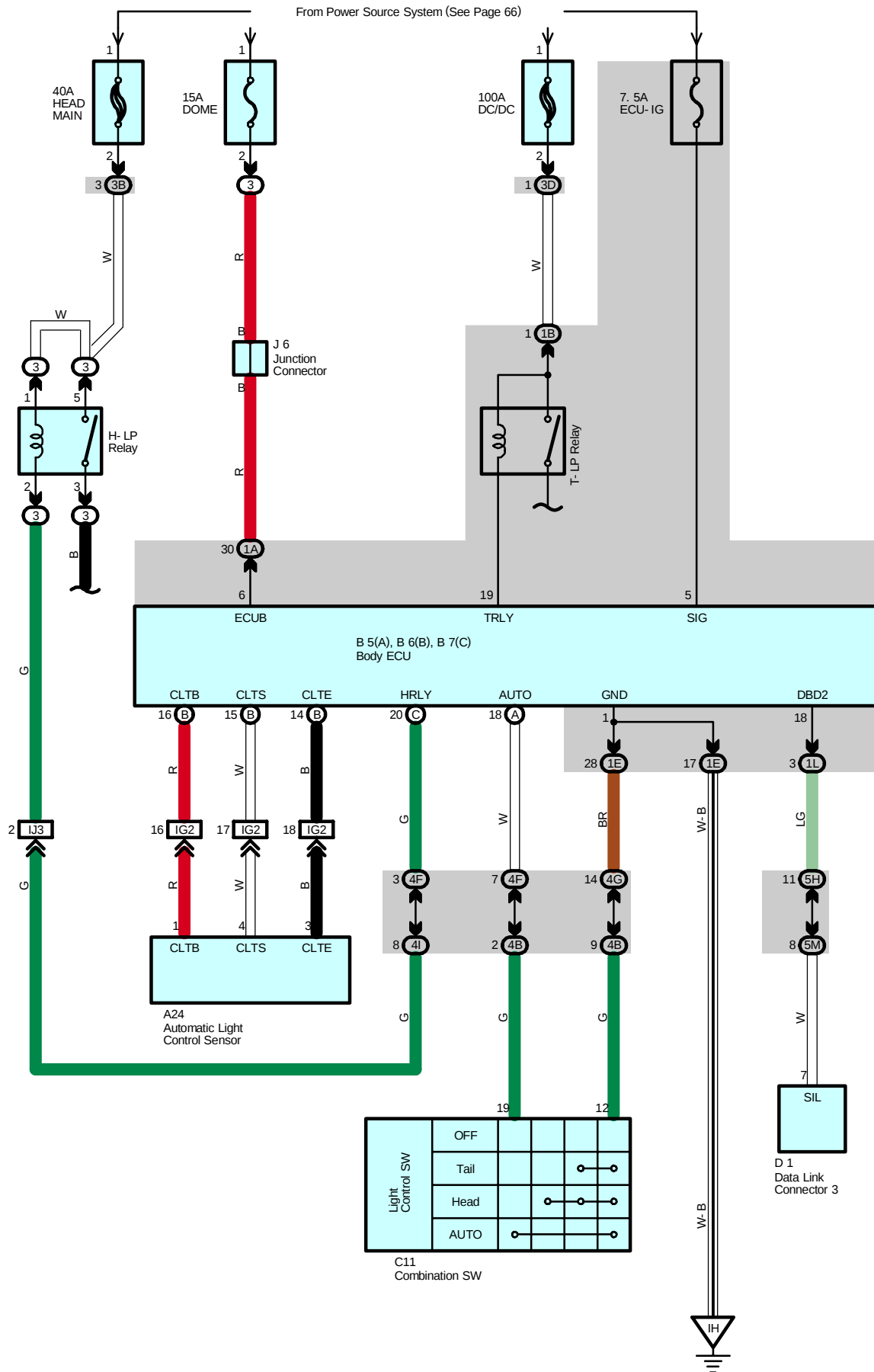
Air Conditioning



: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	54	Engine Room Main Wire	I3	58	Engine
E3					

Automatic Light Control



System Outline

The automatic light control system works when the light control SW is turned to AUTO. The automatic light control sensor detects the brightness around the vehicle. By this function, the system automatically turns on the taillight and headlight if the brightness is below the certain level and turns off the taillight and headlight when the surroundings become brighter than the certain level.

Service Hints

C11 Combination SW

19-12 : Continuity with the light control SW at AUTO position

Body ECU

5-Ground : Approx. 12 volts with the power SW at IG ON position

6-Ground : Always approx. 12 volts

1-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A24	46	B7 C	46	J6	48
B5 A	46	C11	47		
B6 B	46	D1	47		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1B		
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1L	29	
3B	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3D		
4B	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4F		
4G		
4I		
5H	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5M		

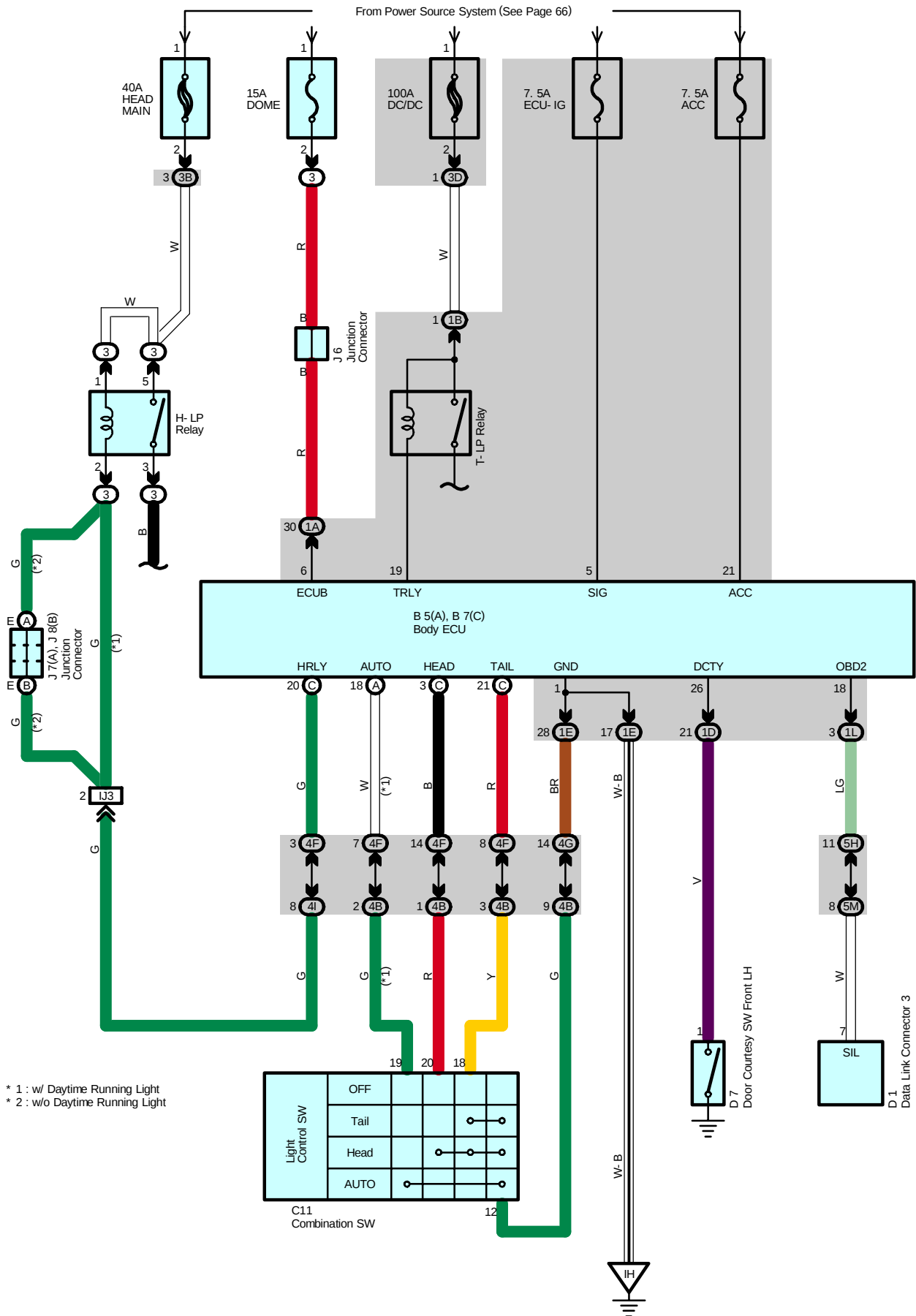
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG2	58	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IJ3	58	Engine Room Main Wire and Instrument Panel Wire (Behind the Glove Box)

: Ground Points

Code	See Page	Ground Points Location
IH	56	Cowl Side Panel LH

Light Auto Turn Off System



System Outline

"The light auto turn off system" automatically turns off the taillights or headlights when the driver's side door is opened, which prevents the lights from being left on.

If the power SW is pushed to OFF from IG ON with the headlights or taillights on, signal is input to the TERMINAL SIG of the body ECU. If the driver's side door is opened at that time, the signal from the door courtesy SW front LH is sent to the TERMINAL DCTY of the body ECU. The signal turns off the headlights, front fog lights or taillights.

Service Hints

Body ECU

6-Ground : Always approx. 12 volts

5-Ground : Approx. 12 volts with the power SW at IG ON position

1-Ground : Always continuity

: Parts Location

Code			See Page			Code			See Page		
B5	A		46			D1			47		
B7	C		46			D7			50		
C11			47			J6			48		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1B		
1D		
1E	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
1L	29	
3B	23	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3D		
4B		
4F	36	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
4G		
4I		
5H	40	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
5M		

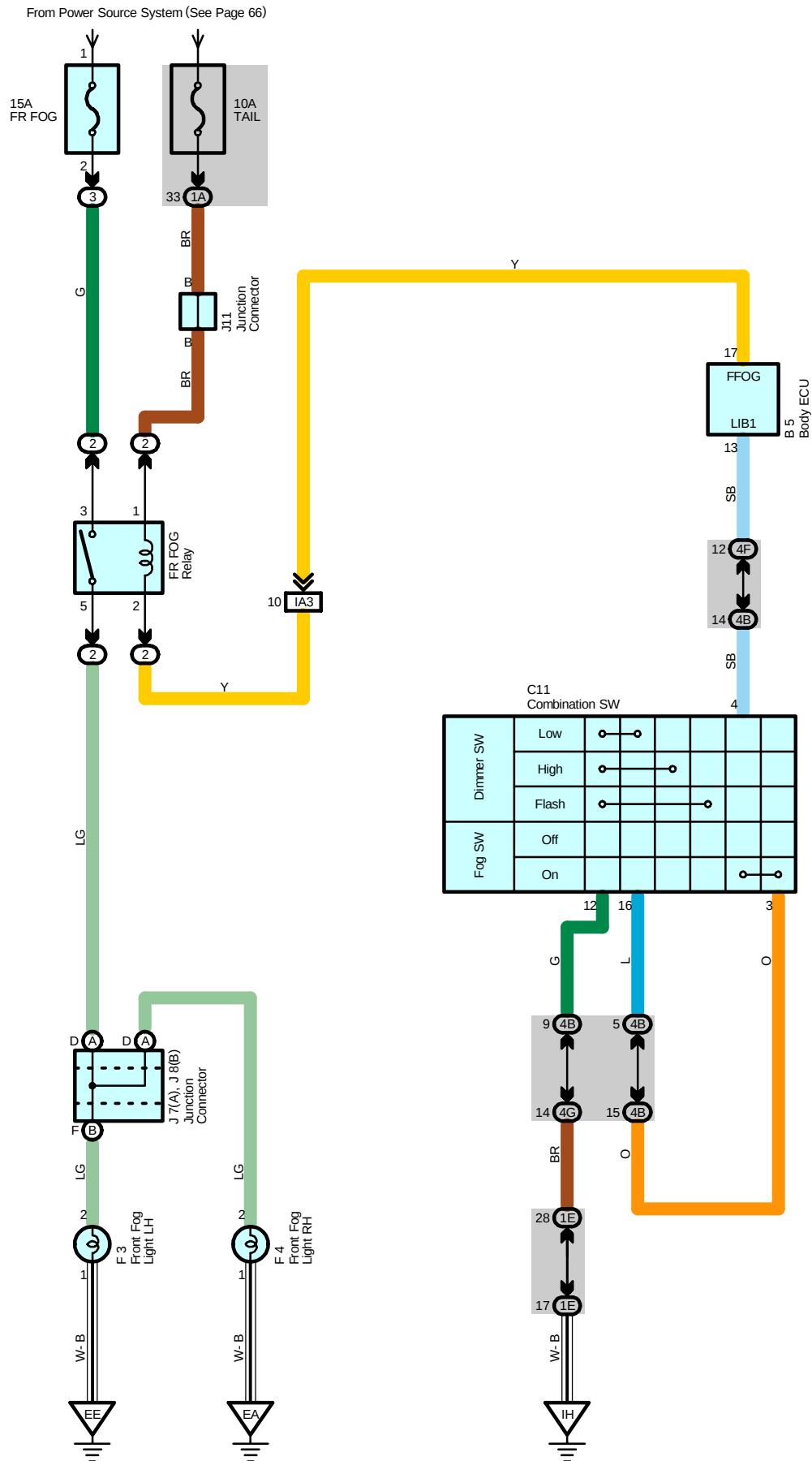
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IJ3	58	Engine Room Main Wire and Instrument Panel Wire (Behind the Glove Box)

: Ground Points

Code	See Page	Ground Points Location
IH	56	Cowl Side Panel LH

Front Fog Light



Service Hints

FR FOG Relay

3-5 : Closed with the light control SW at TAIL position, dimmer SW at LOW position and fog light SW at ON position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B5	46	F4	44	J11	48
C11	47	J7	A	48	
F3	44	J8	B	48	

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	27	Engine Room R/B No.2 (Right Side of Reserve Tank)
3	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
4B	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4F		
4G		

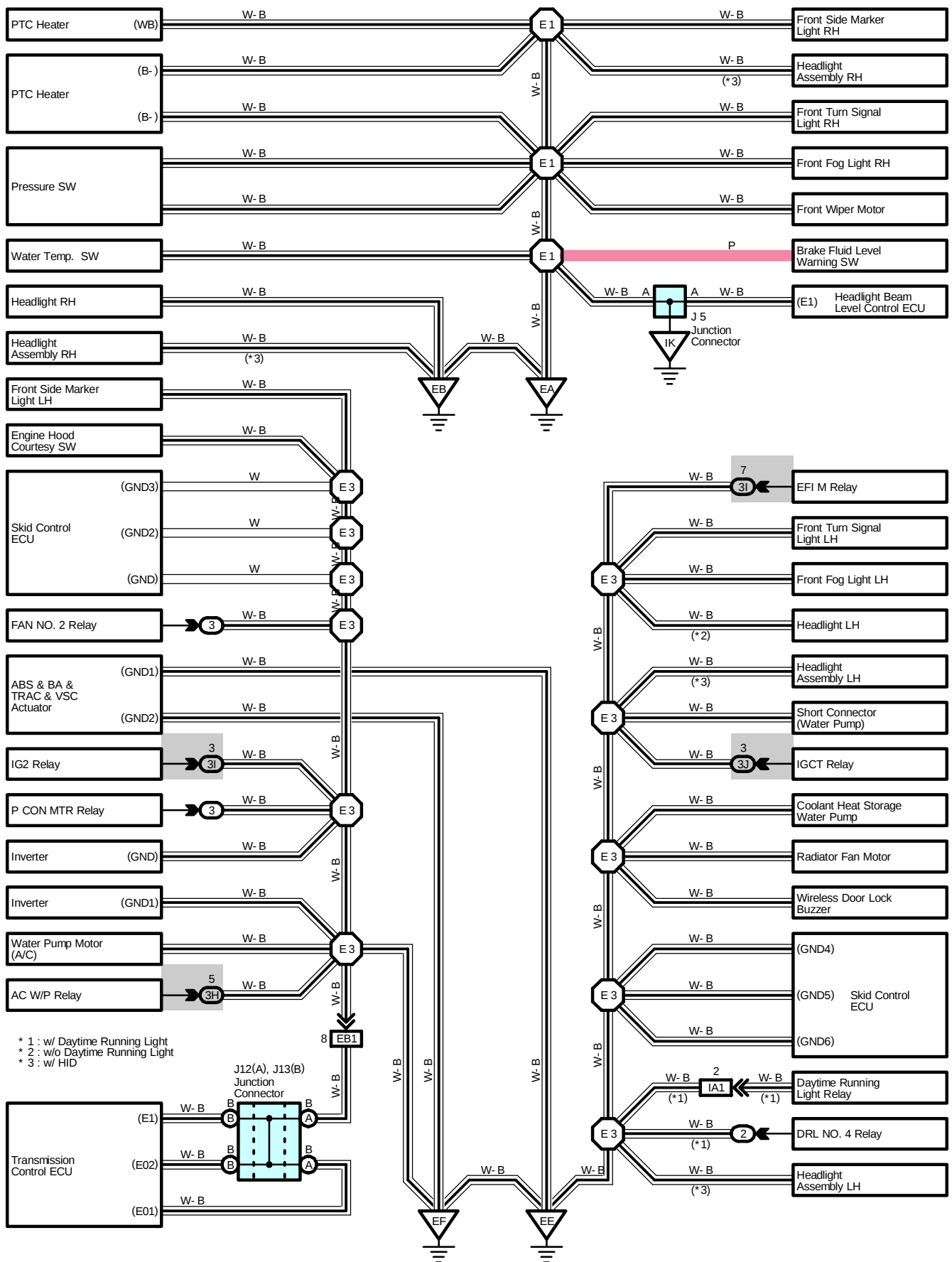
□ : Connector Joining Wire Harness and Wire Harness

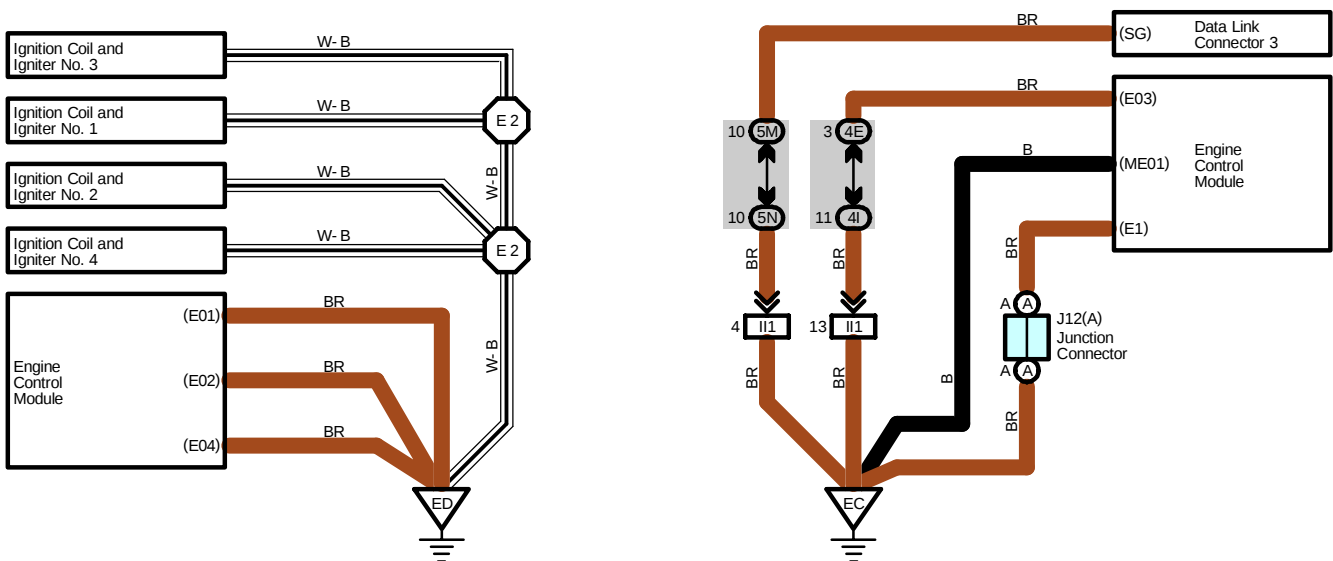
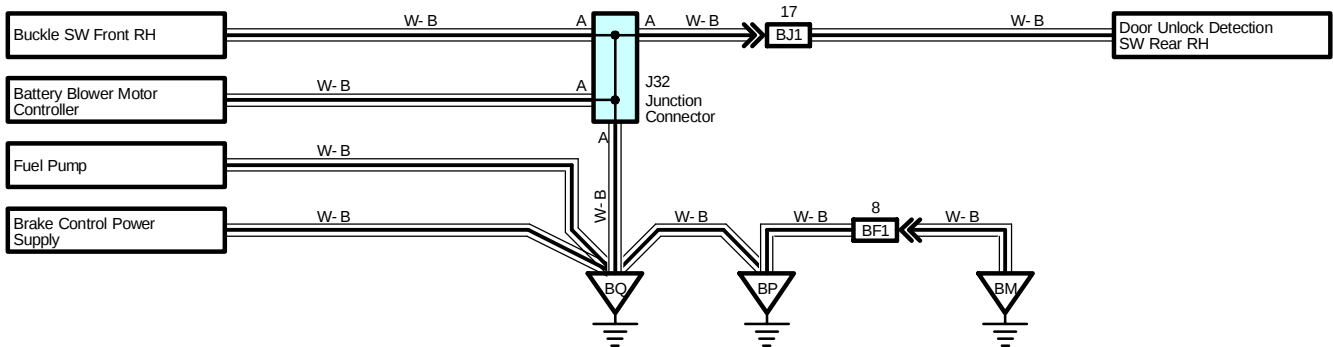
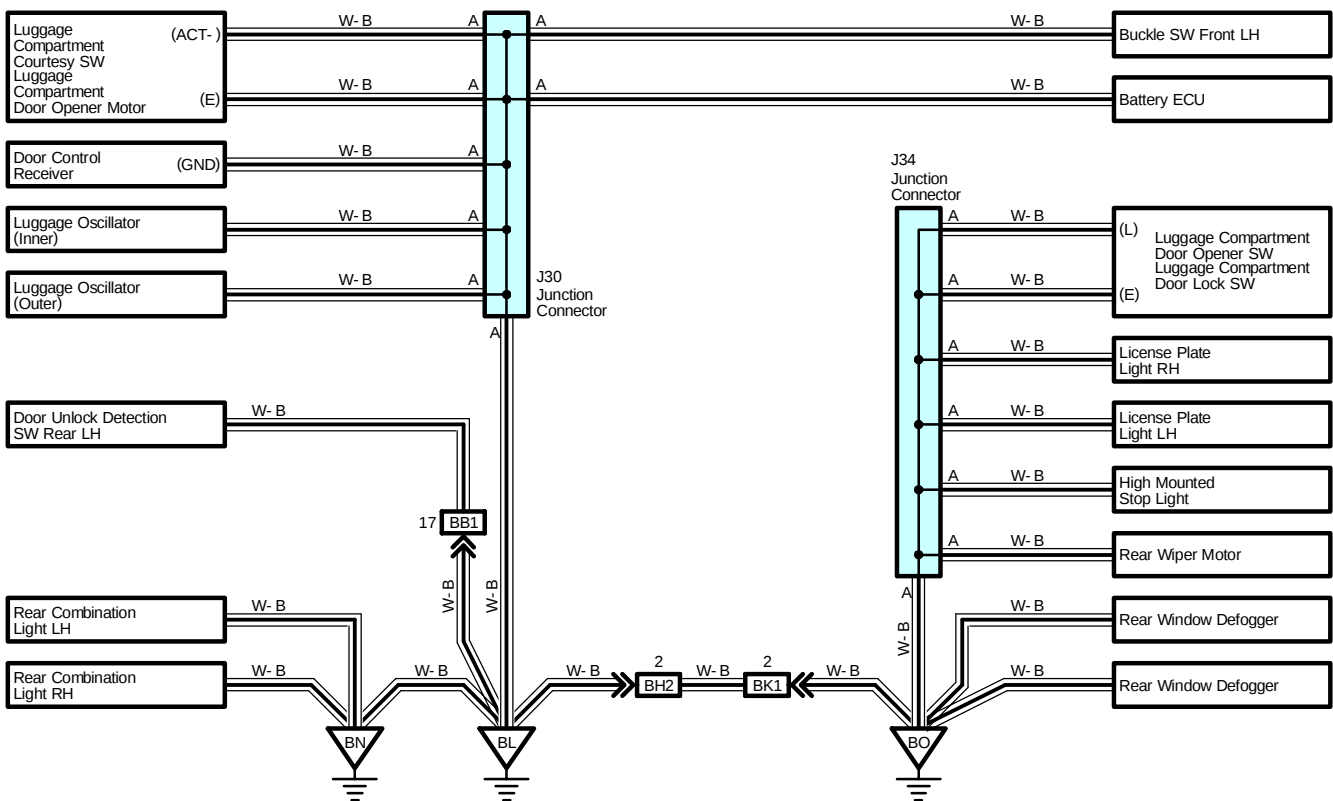
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA3	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)

▽ : Ground Points

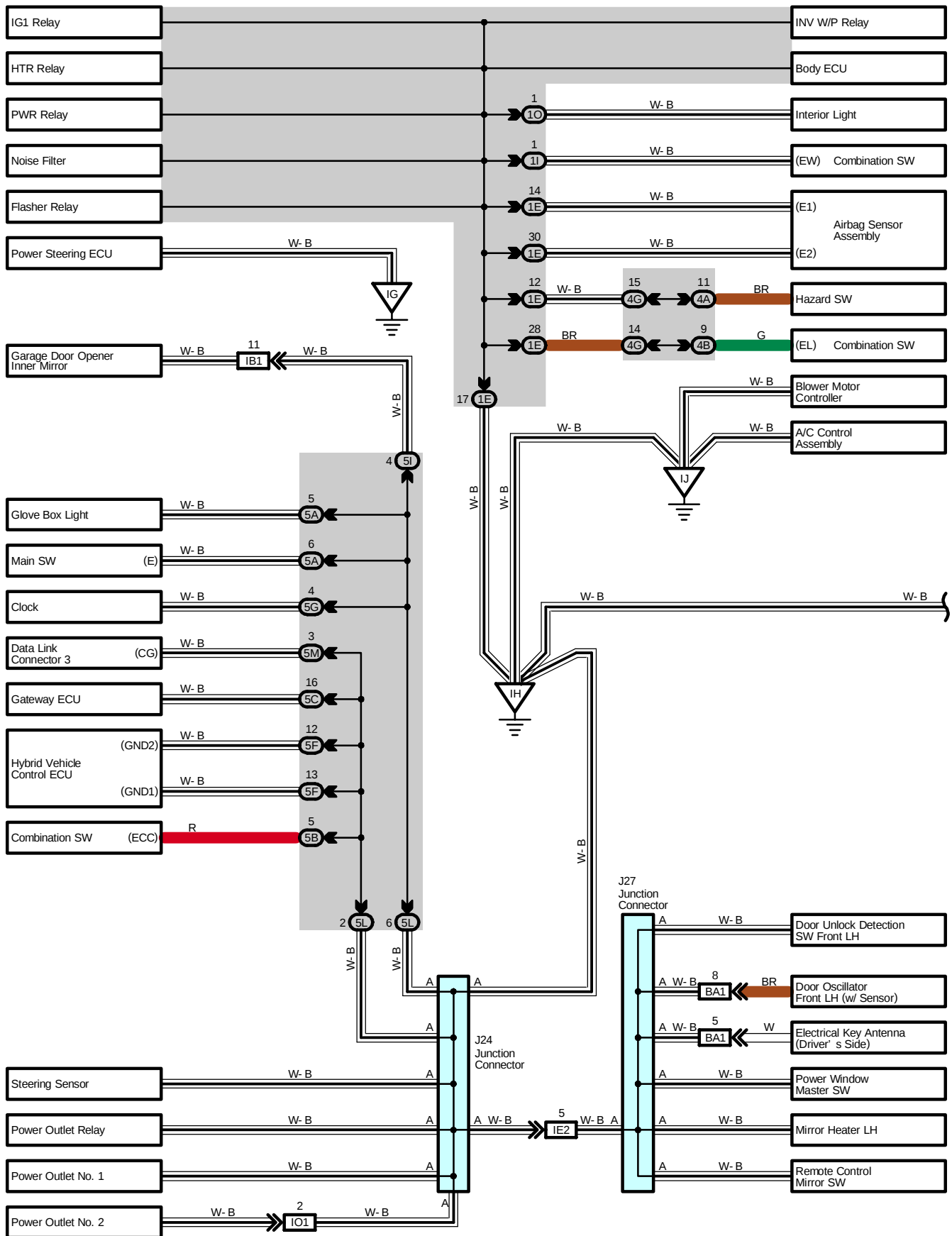
Code	See Page	Ground Points Location
EA	54	Right Side of the Fender Apron
EE	54	Left Side of the Suspension Tower
IH	56	Cowl Side Panel LH

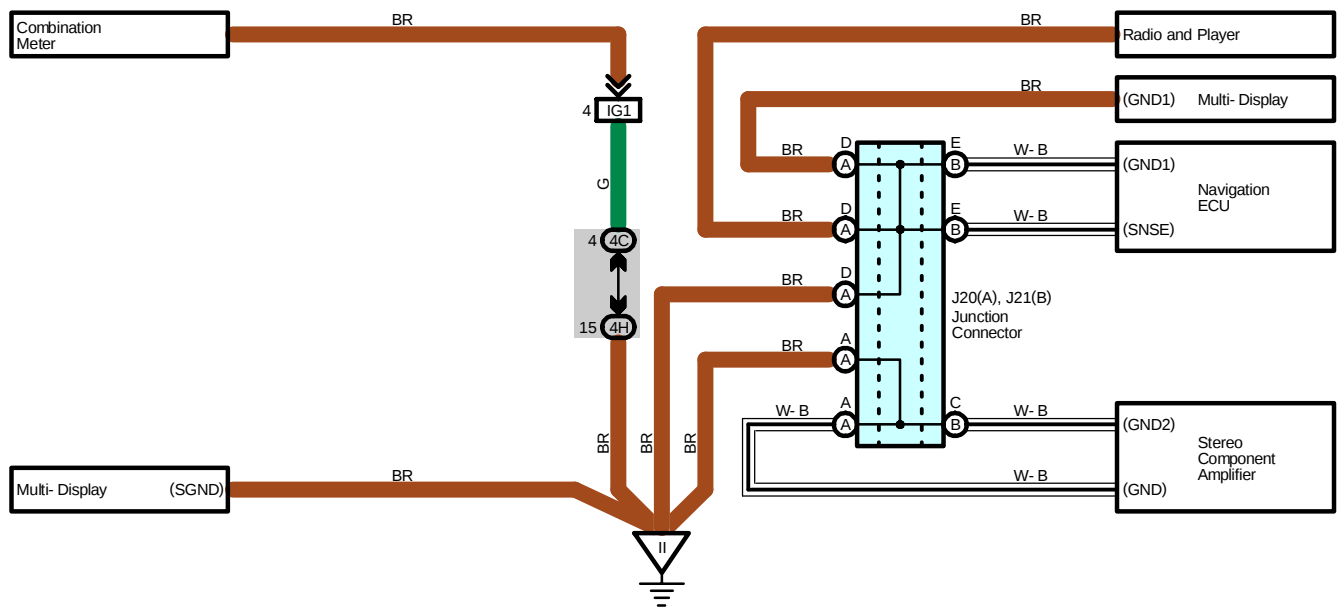
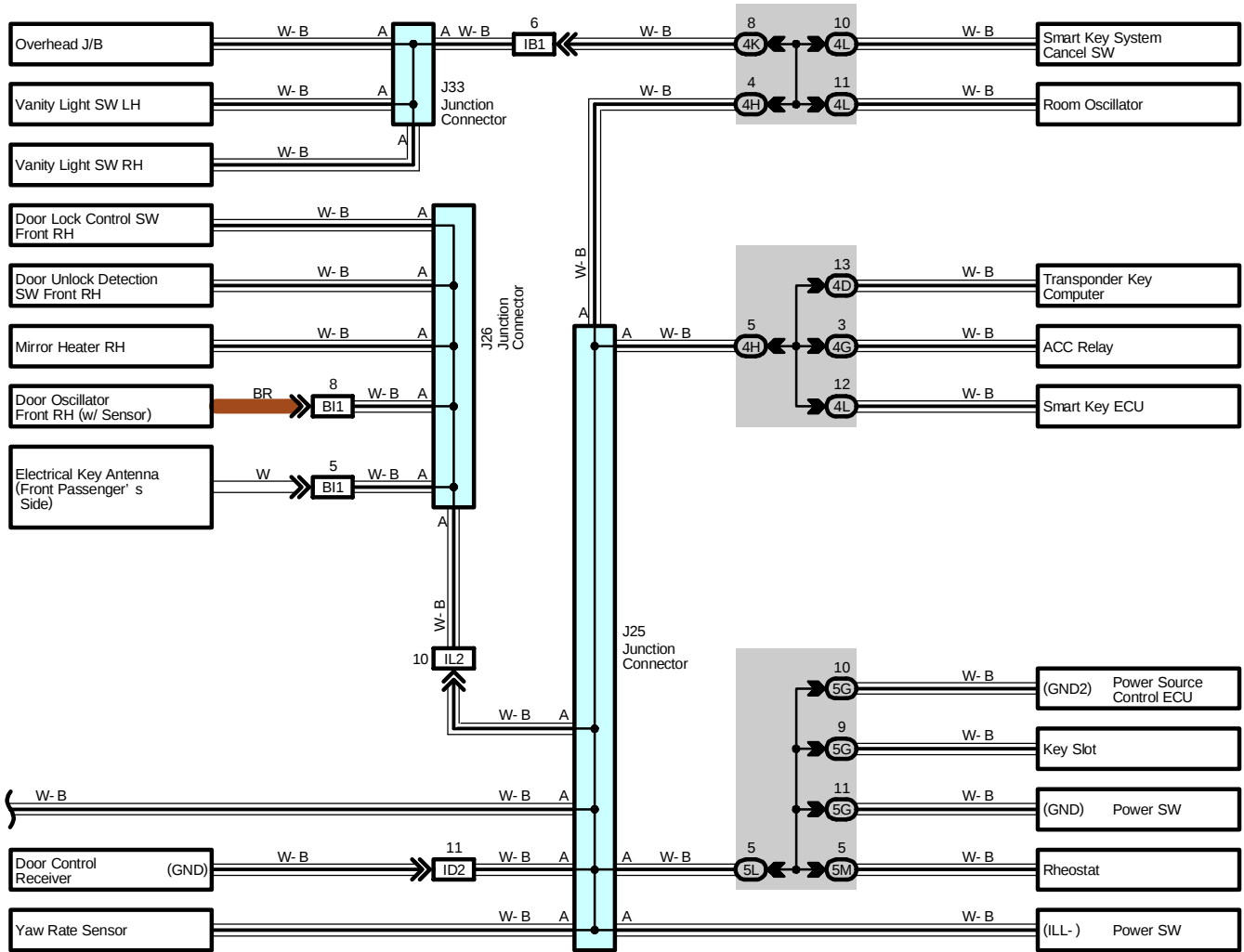
I GROUND POINT





I GROUND POINT





I GROUND POINT

: Parts Location

Code		See Page	Code		See Page	Code		See Page
J5		48	J24		48	J32		51
J12	A	48	J25		48	J33		51
J13	B	48	J26		51	J34		51
J20	A	48	J27		51			
J21	B	48	J30		51			

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	27	Engine Room R/B No.2 (Right Side of Reserve Tank)
3	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1I		
1O	28	Roof Wire and Driver Side J/B (Lower Finish Panel)
3H	24	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3I		
3J		
4A	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4B		
4C		
4D		
4E		
4G		
4H		
4I		
4K		
4L		
5A	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5B		
5C		
5F		
5G		
5I		
5L		
5M		
5N		

 : **Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	54	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA1	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IB1	56	Roof Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
ID2	56	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IE2	56	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IG1	58	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
II1	58	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2	58	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IO1	58	Instrument Panel Wire and Instrument Panel No.4 Wire (Front Console Box LH)
BA1	60	Front Door LH Wire and Electrical Key LH Wire (Near the Front Door Outside Handle LH)
BB1	60	Rear Door No.2 Wire and Floor Wire (Left Center Pillar)
BF1	60	Floor No.2 Wire and Fuel Tank Wire (Near the Fuel Tank)
BH2	62	Back Door No.1 Wire and Floor Wire (Rear Side of Roof Panel)
BI1	62	Front Door RH Wire and Electrical Key RH Wire (Near the Front Door Outside Handle RH)
BJ1	62	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)
BK1	62	Back Door No.1 Wire and Back Door No.2 Wire (Rear Side of Roof Panel)

 : **Ground Points**

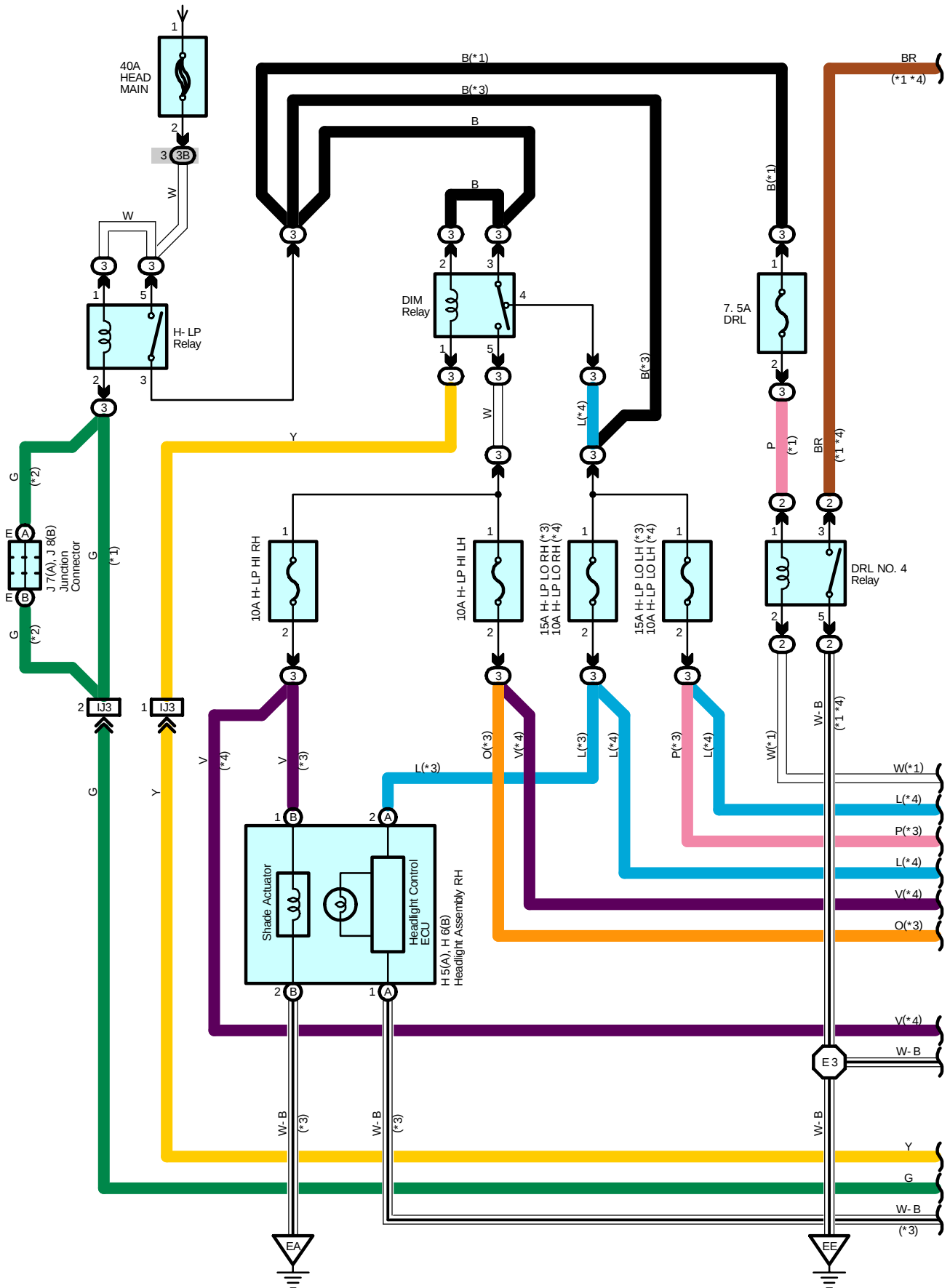
Code	See Page	Ground Points Location
EA	54	Right Side of the Fender Apron
EB		
EC	54	Engine Block
ED		
EE	54	Left Side of the Suspension Tower
EF		
IG	56	Cowl Side Panel LH
IH		
II	56	Instrument Panel Brace LH
IJ	56	Instrument Panel Brace RH
IK	56	Cowl Side Panel RH
BL	60	Rear Side of Left Quarter Panel
BM	60	Near the Fuel Tank
BN	60	Lower Back Panel Center
BO	60	Center of the Back Door Panel
BP	60	Front Side of Right Quarter Panel
BQ	60	Rear Side of Right Quarter Panel

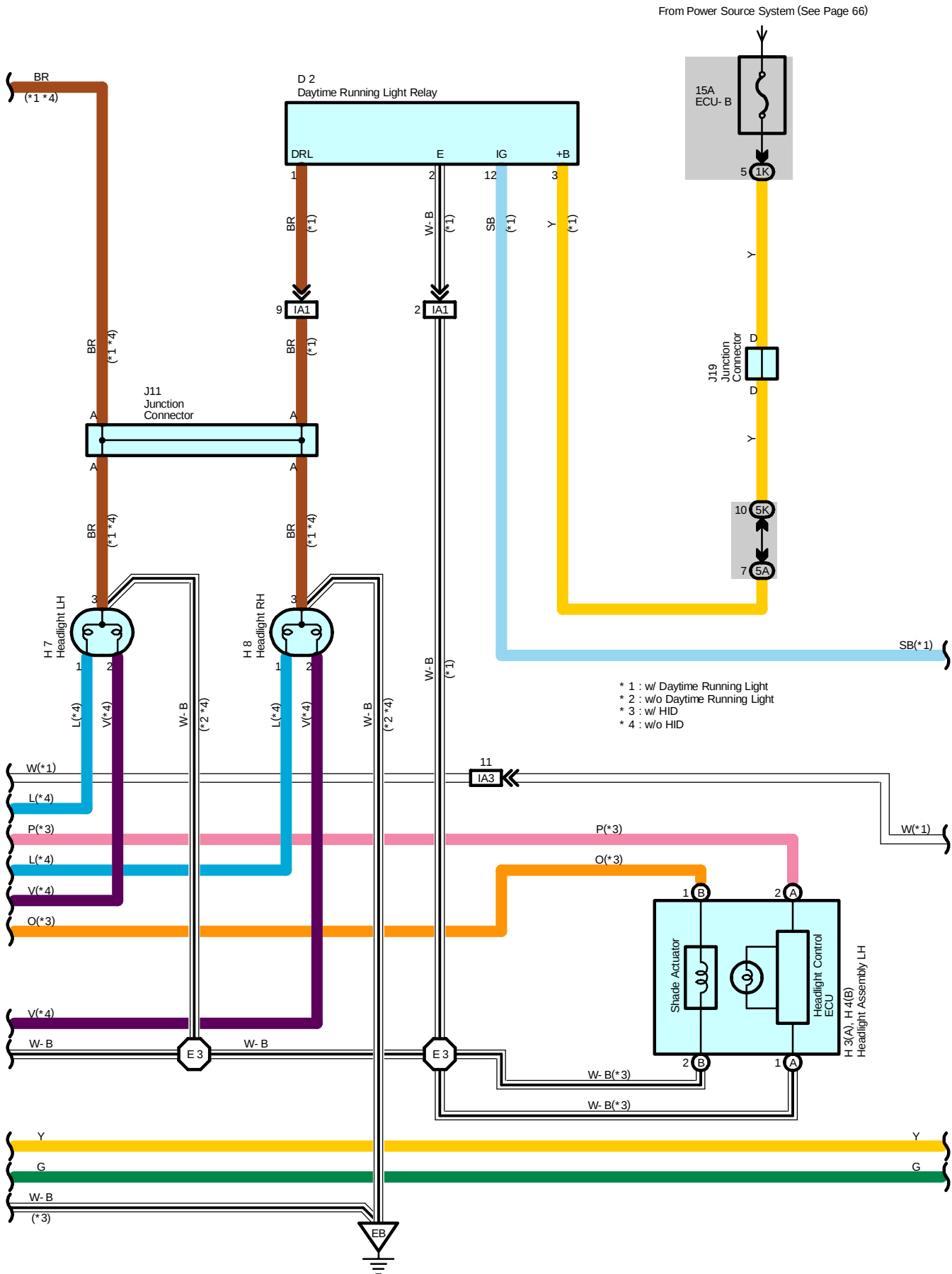
 : **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	54	Engine Room Main Wire	E3	54	Engine Room Main Wire
E2	54	Engine Wire			

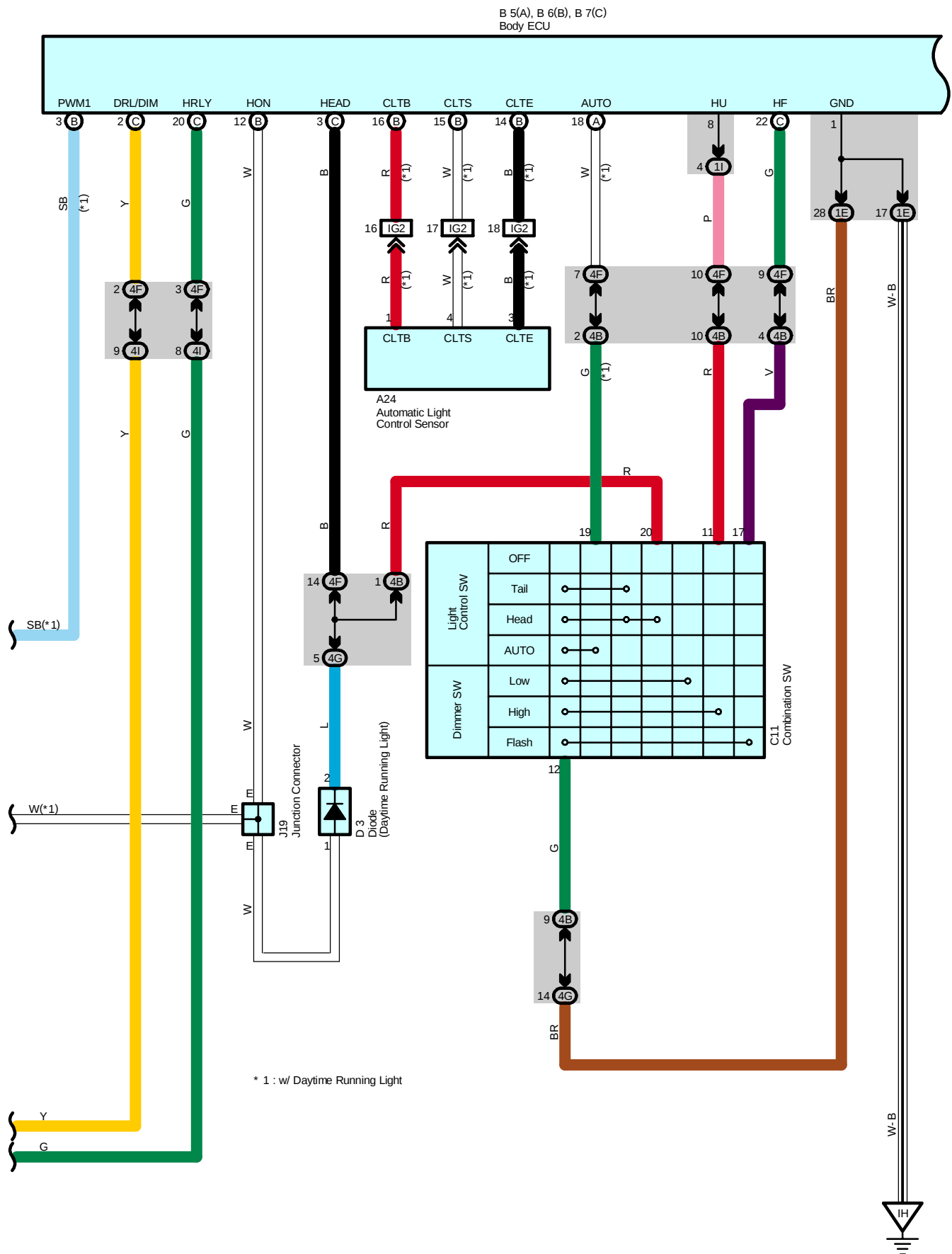
Headlight

From Power Source System (See Page 66)

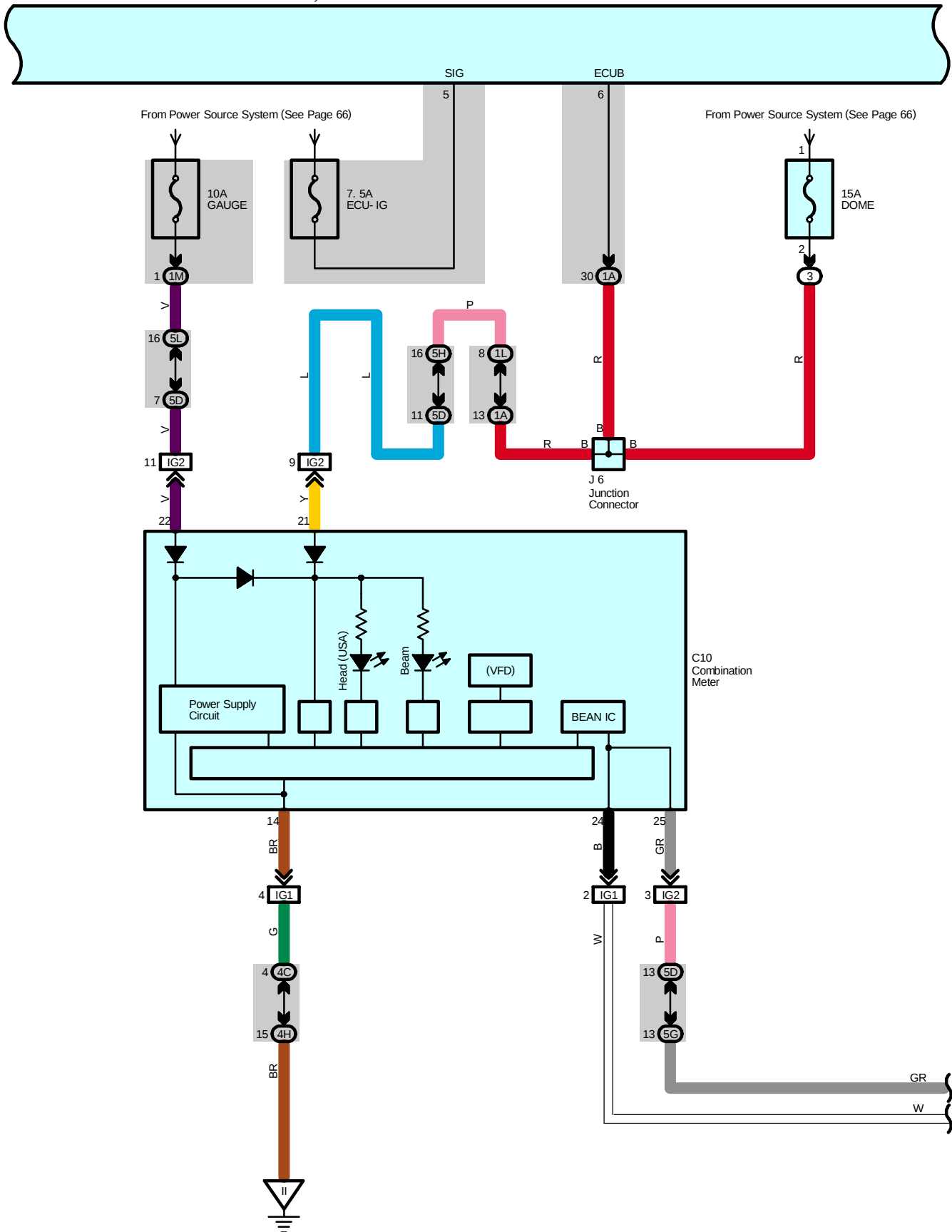




Headlight

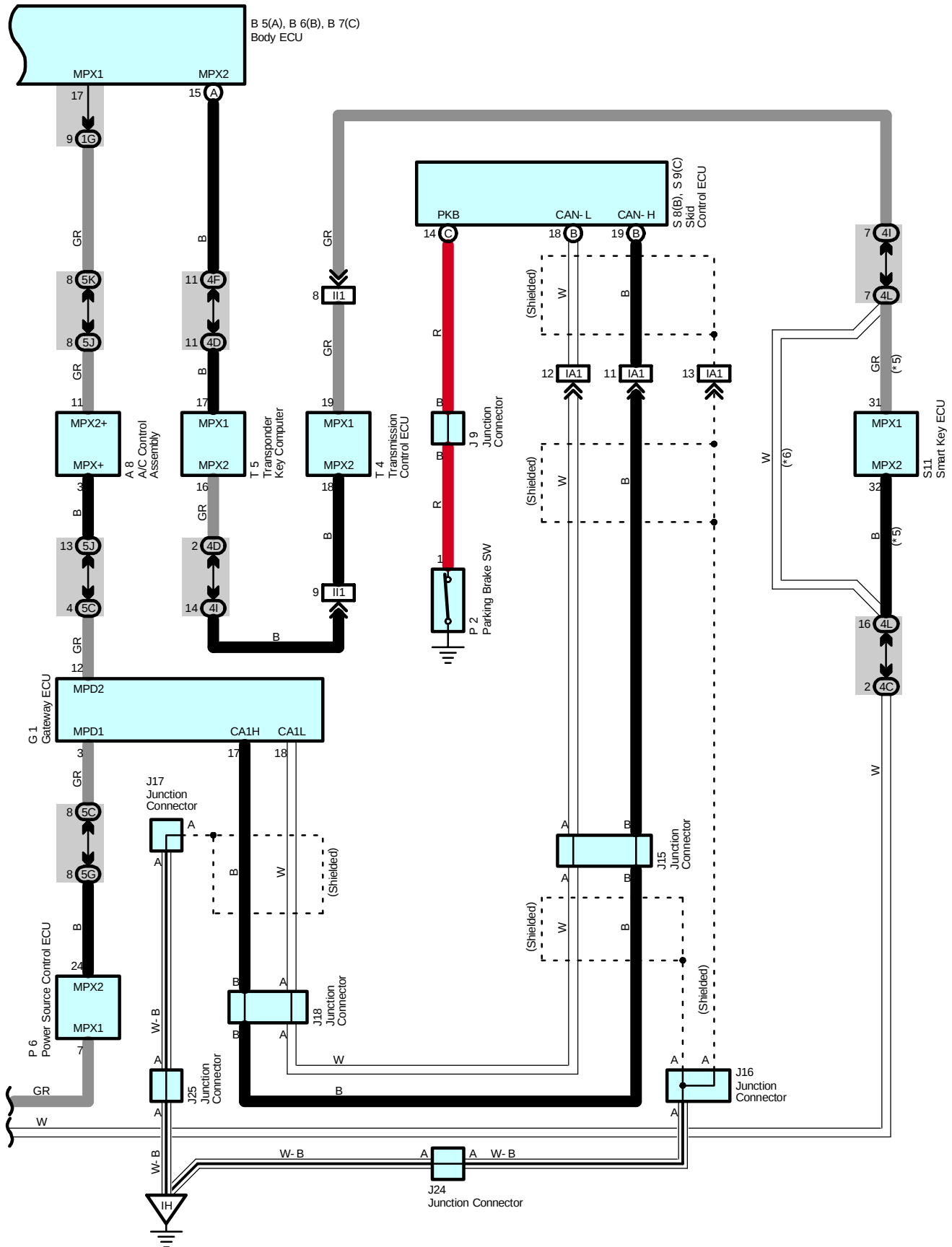


B 5(A), B 6(B), B 7(C)
Body ECU



Headlight

* 5 : w/ Smart Entry System
 * 6 : w/o Smart Entry System



System Outline

Daytime Running Light Function

When power SW is at IG ON position and the vehicle is ready to drive (READY lamp on the display in combination meter is on), releasing parking brake makes signal go into TERMINAL PKB of body ECU. In this condition, when light control SW is at Off/Tail/AUTO position (Headlight is not lit), body ECU sends daytime operation request from TERMINAL DRL/DIM to daytime running light relay. As a result, daytime running light relay duty-operations headlights (Dimmer than regular lighting)

Service Hints

C11 Combination SW

20-12 : Continuity with the light control SW at HEAD position

17-12 : Continuity with the dimmer SW at FLASH position

11-12 : Continuity with the dimmer SW at HIGH position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A8	46	H5	44	J18	48
A24	46	H6	44	J19	48
B5	46	H7	44	J24	48
B6	46	H8	44	J25	48
B7	46	J6	48	P2	49
C10	47	J7	48	P6	49
C11	47	J8	48	S8	49
D2	47	J9	48	S9	49
D3	47	J11	48	S11	49
G1	47	J15	48	T4	49
H3	44	J16	48	T5	49
H4	44	J17	48		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	27	Engine Room R/B No.2 (Right Side of Reserve Tank)
3	22	Engine Room R/B (Engine Compartment Left)

Headlight



: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1G		
1I		
1K		
1L		
1M	29	
3B	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
4B	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4C		
4D		
4F		
4G		
4H		
4I		
4L		
5A	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5C		
5D		
5G		
5H		
5J		
5K		
5L		



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IA3		
IG1	58	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IG2		
II1	58	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IJ3	58	Engine Room Main Wire and Instrument Panel Wire (Behind the Glove Box)



: Ground Points

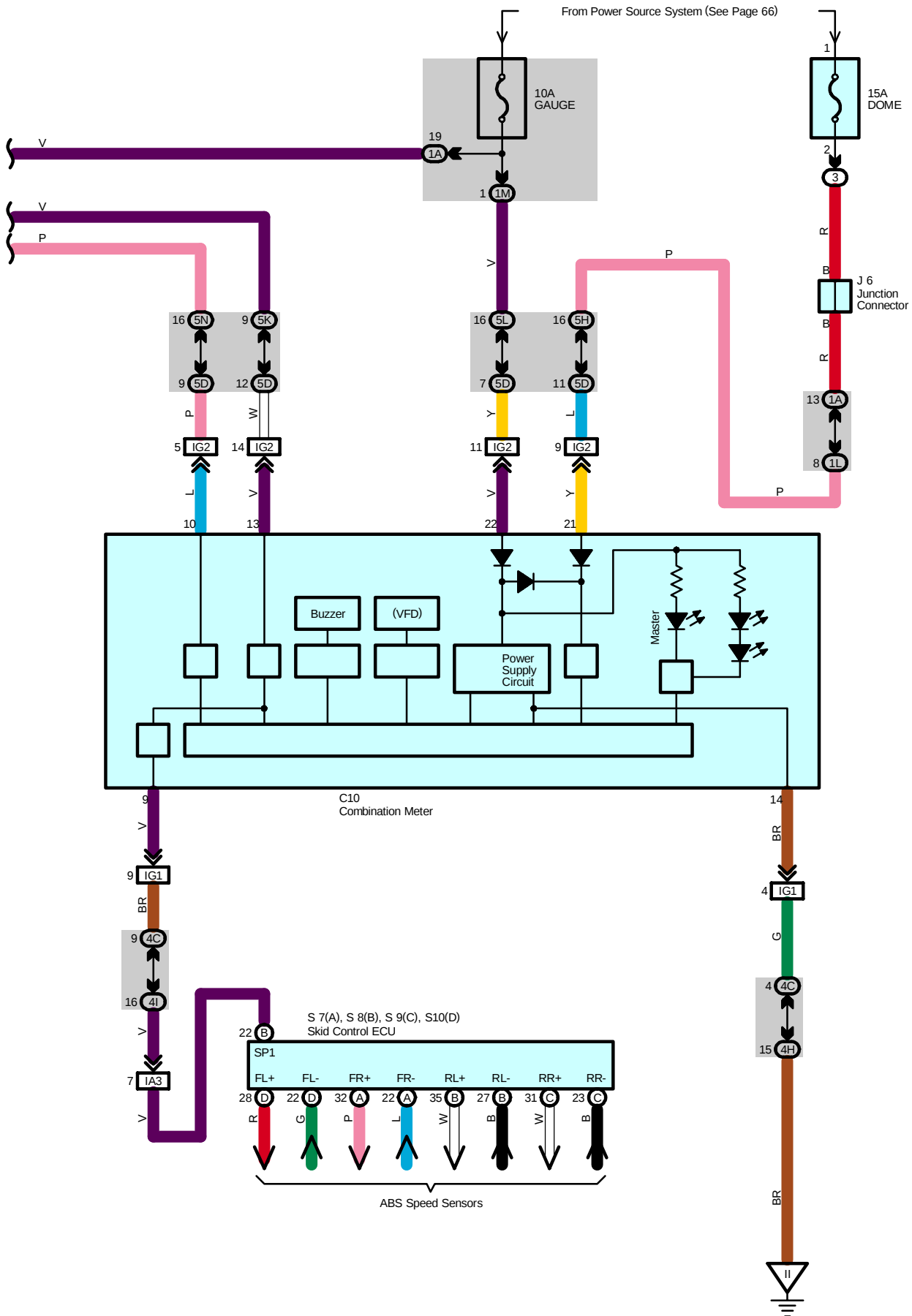
Code	See Page	Ground Points Location
EA	54	Right Side of the Fender Apron
EB		
EE	54	Left Side of the Suspension Tower
IH	56	Cowl Side Panel LH
II	56	Instrument Panel Brace LH



: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	54	Engine Room Main Wire			





Headlight Beam Level Control

System Outline

This system adjusts the illuminating angle from changes in the vehicle height and axle distance, based on the information of the vehicle height detected by the height sensors installed at the rear of the vehicle and on information of the vehicle speed and acceleration output from the VSC system which operates the reflector with the obtained illuminating angle through actuators in order to always keep the beam axis constant.

If an error occurs in this system, the headlight beam level control warning light in the combination meter lights up and warning buzzer goes on to warn the driver.

Service Hints

H12 Headlight Beam Level Control ECU

1-Ground : Approx. 12 volts with the power SW at IG ON position

24-Ground : Always continuity

10-Ground : Always Approx. 12 volts

C11 Combination SW

20-12 : Continuity with the light control SW at HEAD position

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B7	C	46	H12		47	J10		48
C10		47	H18		51	S7	A	49
C11		47	J5		48	S8	B	49
D1		47	J6		48	S9	C	49
H1		44	J7	A	48	S10	D	49
H2		44	J8	B	48			

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1F		
1G		
1L		
1M	29	
3B	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
4B	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4C		
4F		
4G		
4H		
4I		
5D	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5H		
5K		
5L		
5M		
5N		

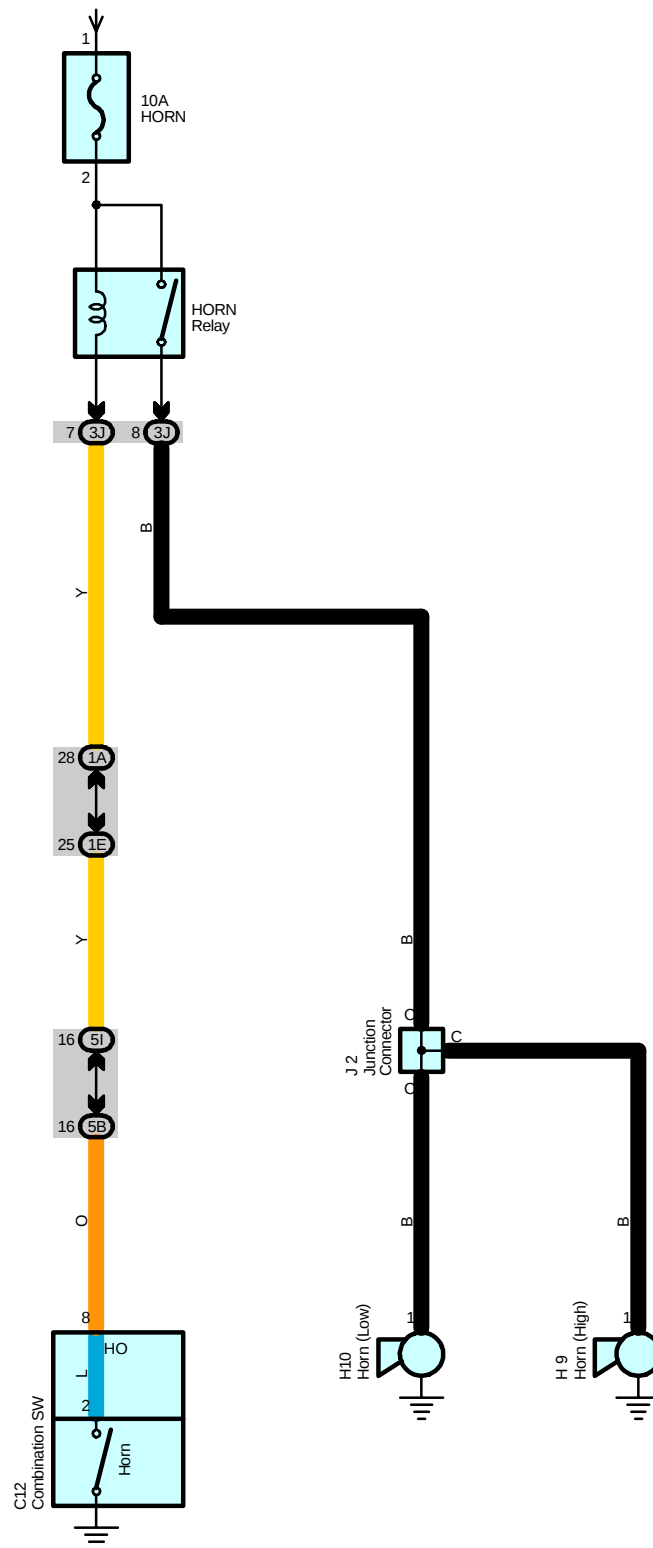
 : **Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA3	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IC1	56	Engine Room Main Wire and Floor Wire (Cowl Side Panel LH)
IG1	58	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IG2		
IJ3	58	Engine Room Main Wire and Instrument Panel Wire (Behind the Glove Box)

 : **Ground Points**

Code	See Page	Ground Points Location
IH	56	Cowl Side Panel LH
II	56	Instrument Panel Brace LH
IK	56	Cowl Side Panel RH

From Power Source System (See Page 66)



Service Hints

H9, H10 Horn (Low), (High)

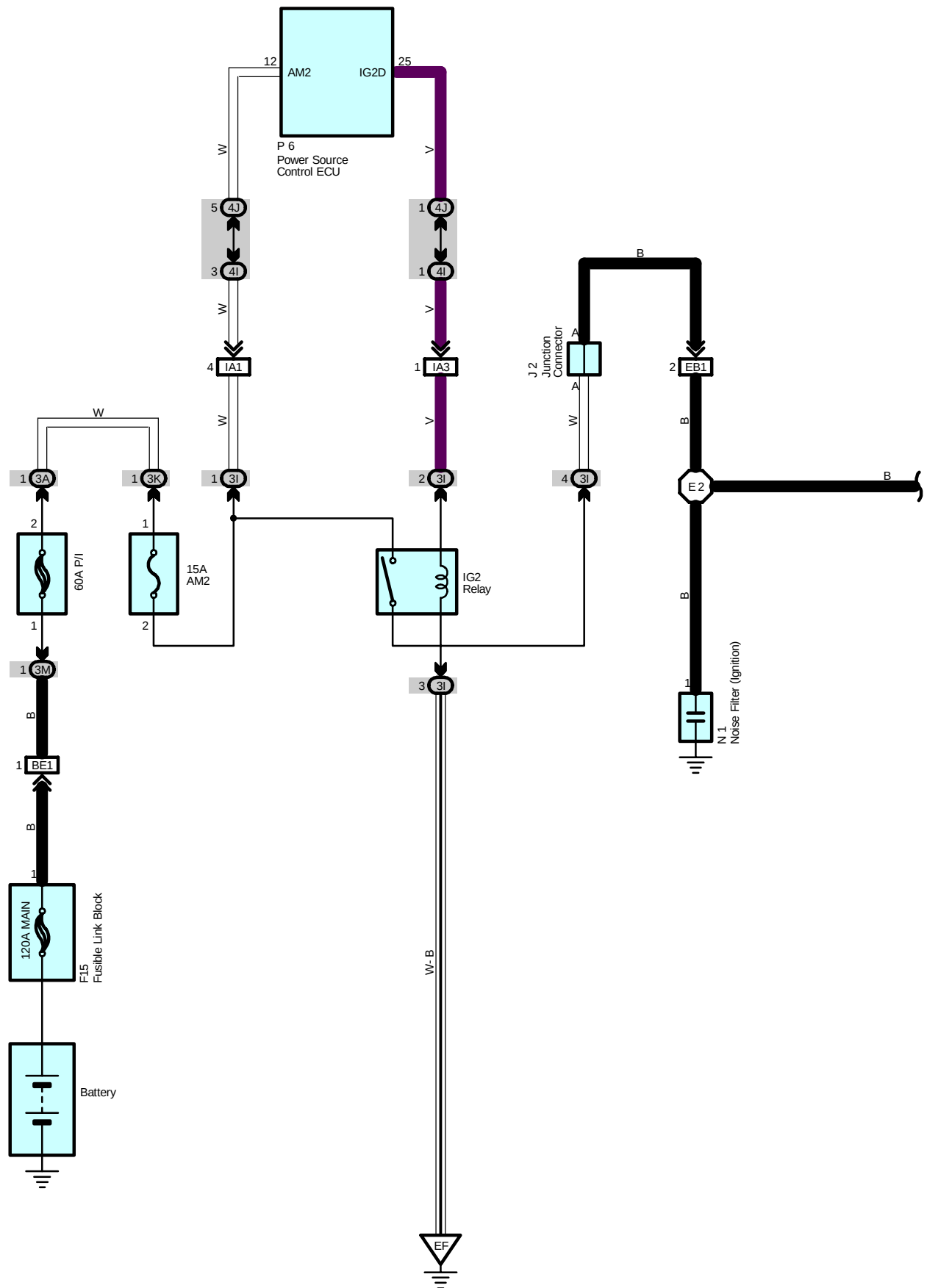
1-Ground : Approx. 12 volts with the horn SW on

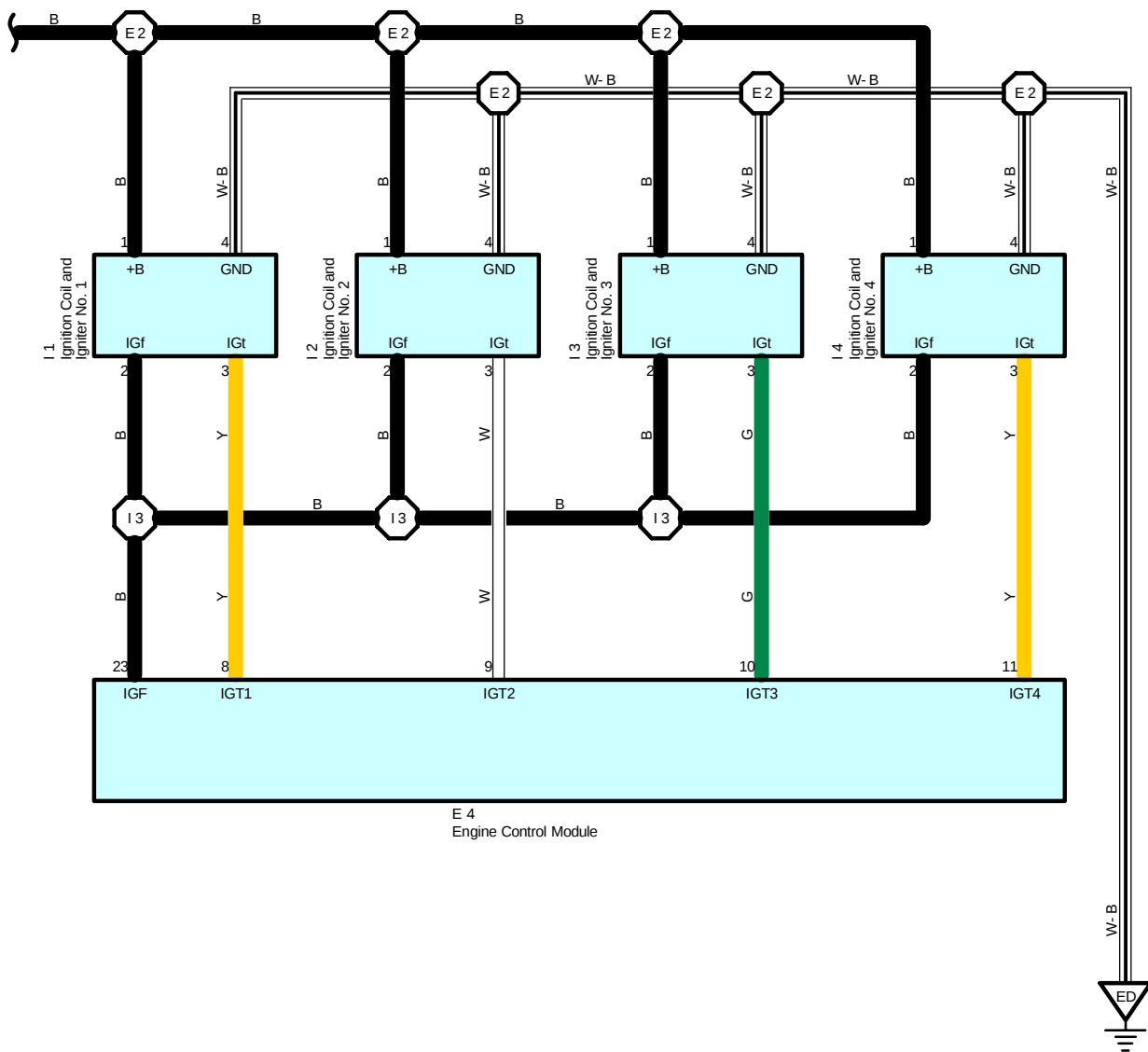
: Parts Location

Code	See Page	Code	See Page	Code	See Page
C12	47	H10	44		
H9	44	J2	45		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3J	24	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
5B	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5I		





Ignition

Service Hints

I1, I2, I3, I4 Ignition Coil and Igniter No.1, No.2, No.3, No.4

1-Ground : Approx. 12 volts with the power SW at IG ON position

4-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
E4	47	I2	45	J2	45
F15	51	I3	45	N1	45
I1	45	I4	45	P6	49

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
3A	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3I	24	
3K		
3M	23	Frame Wire and Engine Room J/B (Engine Compartment Left)
4I	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4J		

: Connector Joining Wire Harness and Wire Harness

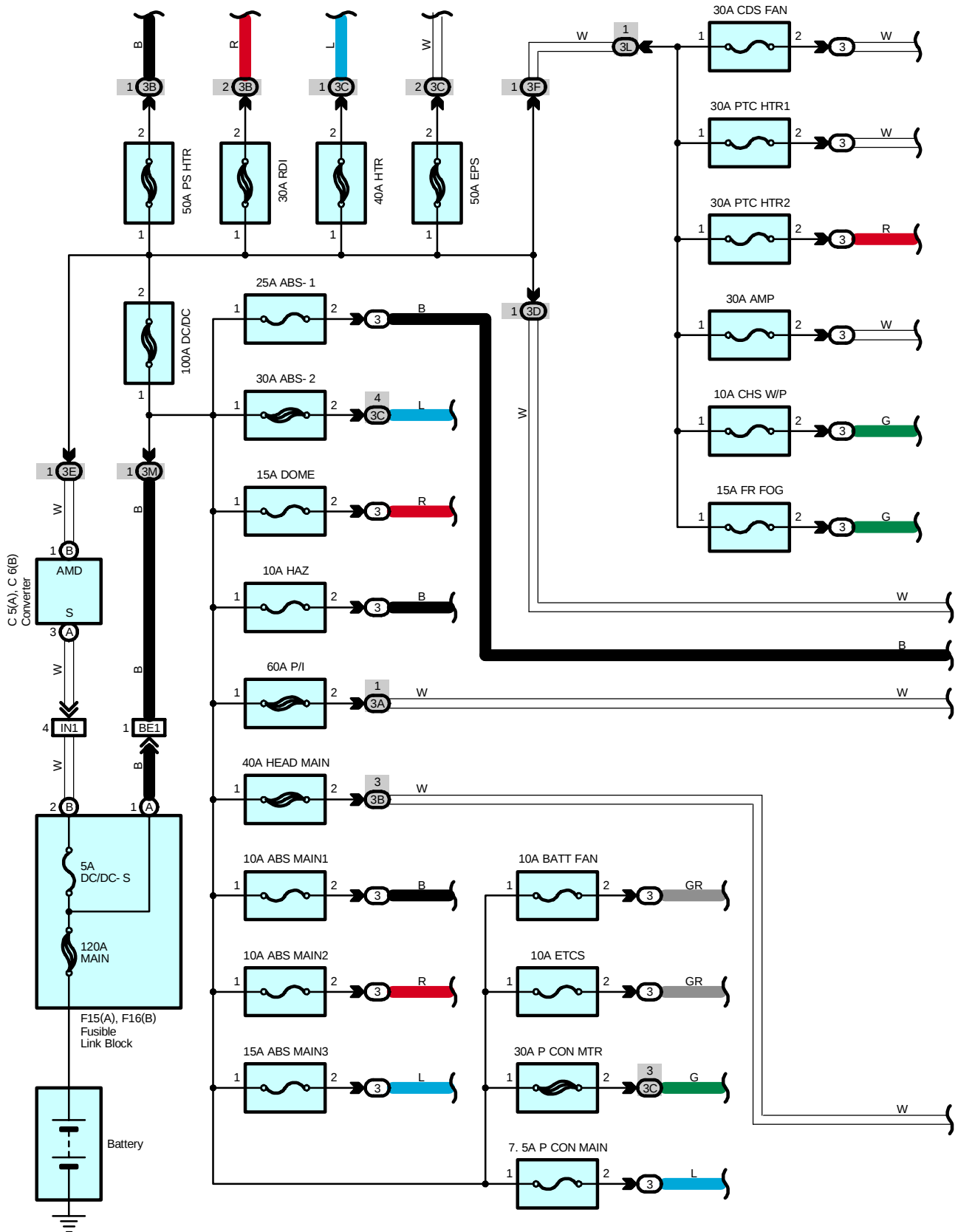
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	54	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA1	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IA3		
BE1	60	Frame Wire and Floor No.2 Wire (Front Side of Left Quarter Panel)

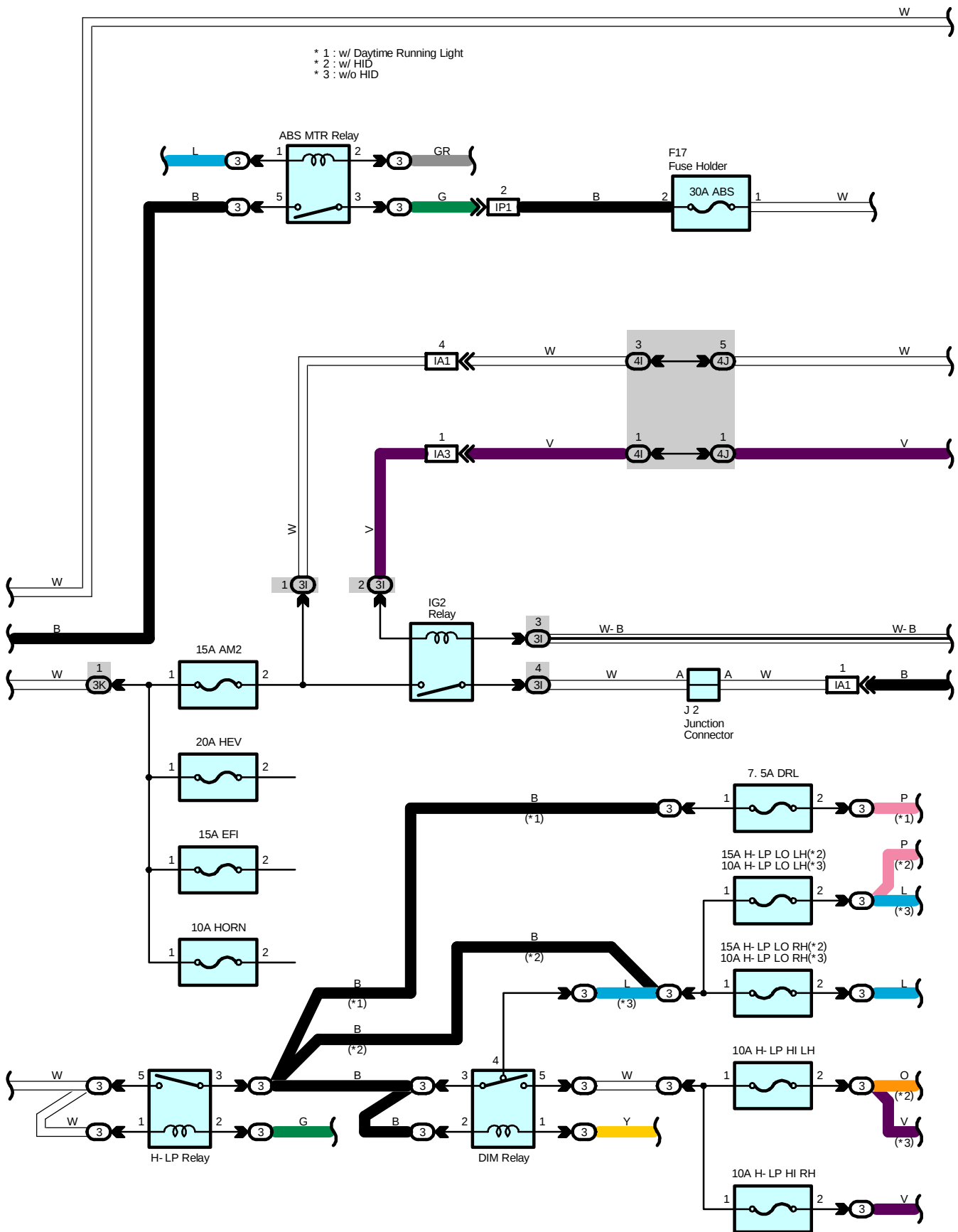
: Ground Points

Code	See Page	Ground Points Location
ED	54	Engine Block
EF	54	Left Side of the Suspension Tower

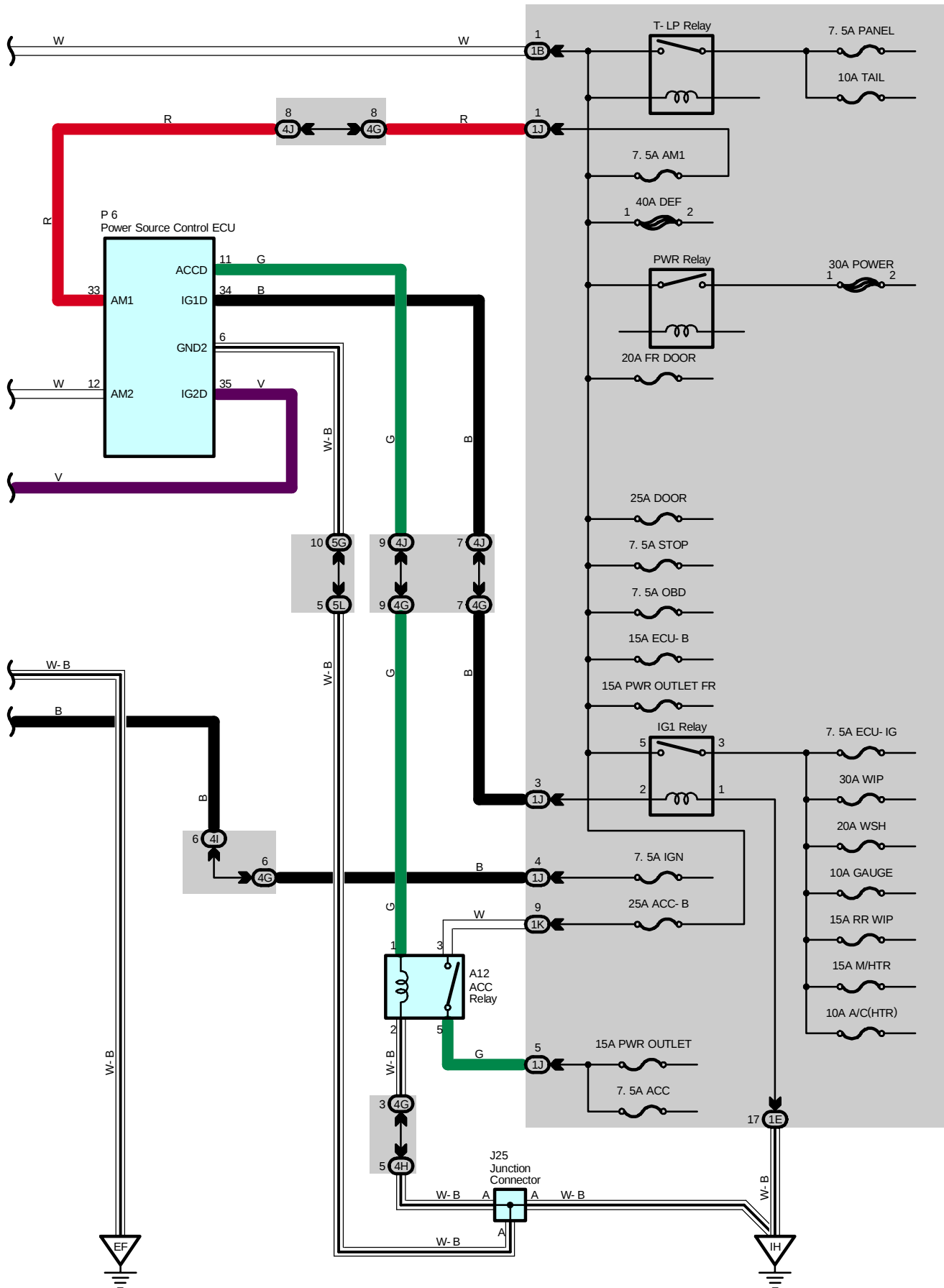
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	54	Engine Wire	I3	58	Engine Wire





Power Source



Service Hints

P6 Power Source Control ECU

- 12, 33-Ground : Always approx. 12 volts
- 34, 35-Ground : Approx. 12 volts with the power SW at IG ON position
- 11-Ground : Approx. 12 volts with the power SW at ACC ON position
- 6-Ground : Always continuity

○ : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A12		46		F15	A	51		J2		45	
C5	A	44		F16	B	51		J25		48	
C6	B	44		F17		47		P6		49	

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K	29	
3A	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3B		
3C		
3D		
3E		
3F		
3I	24	Frame Wire and Engine Room J/B (Engine Compartment Left)
3K		
3L	22	
3M	23	
4G	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4H		
4I		
4J		
5G	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5L		

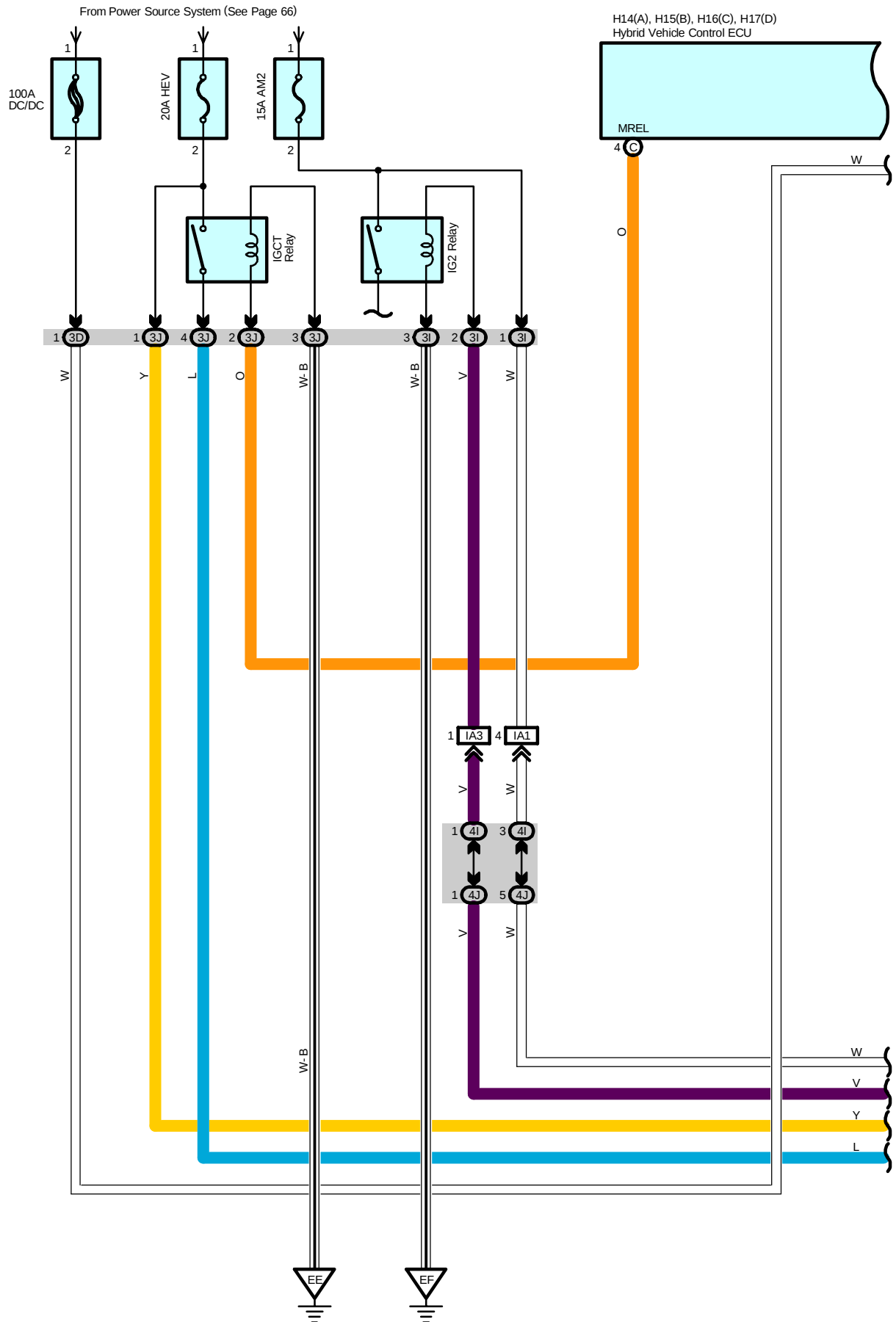
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IA3		
IN1	58	Floor No.2 Wire and Engine Room Main Wire (Right Kick Panel)
IP1	58	Engine Room No.2 Wire and Engine Room Main Wire (Upper Parts of Front Body Pillar LH)
BE1	60	Frame Wire and Floor No.2 Wire (Front Side of Left Quarter Panel)

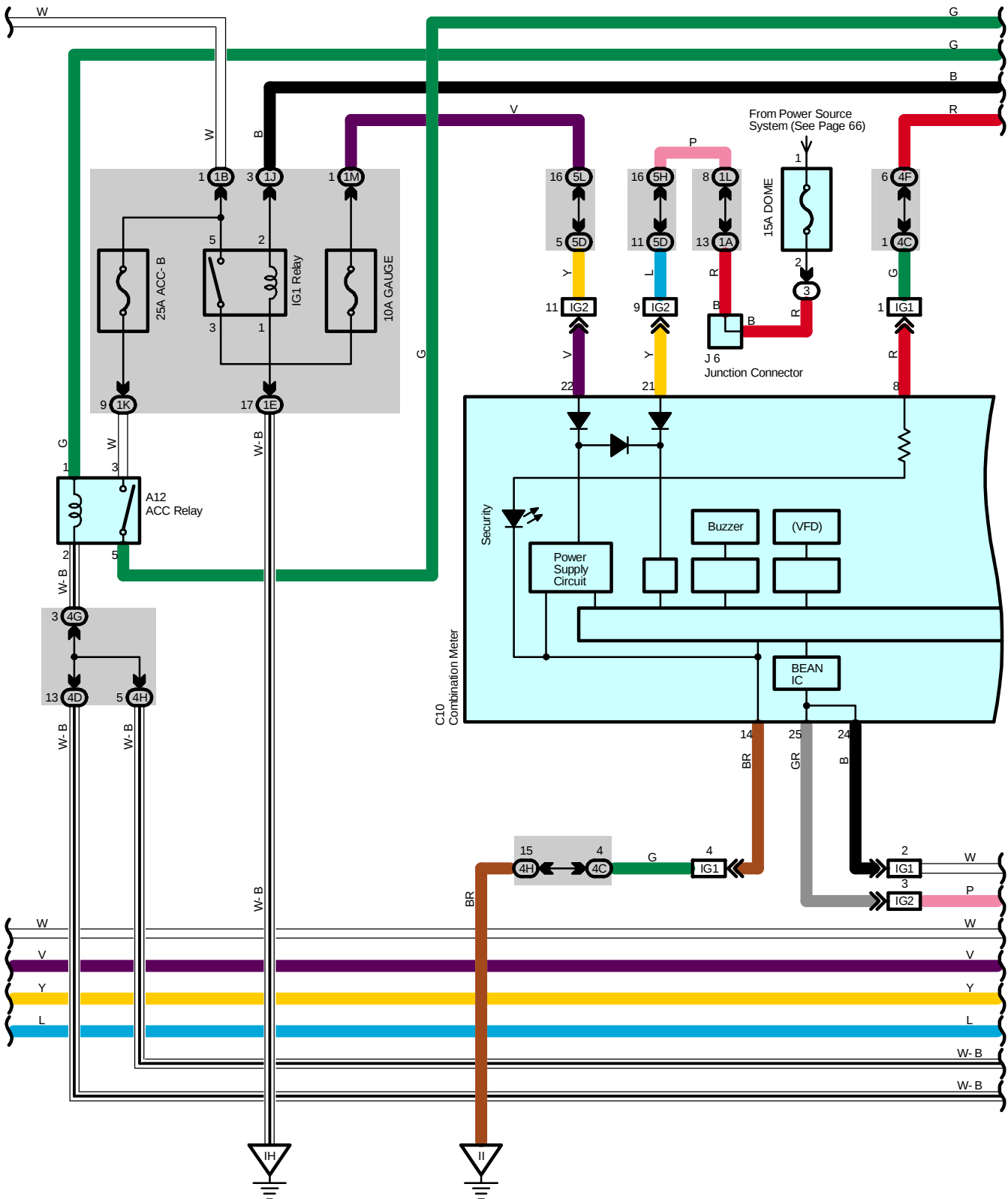
▽ : Ground Points

Code	See Page	Ground Points Location
EF	54	Left Side of the Suspension Tower
IH	56	Cowl Side Panel LH

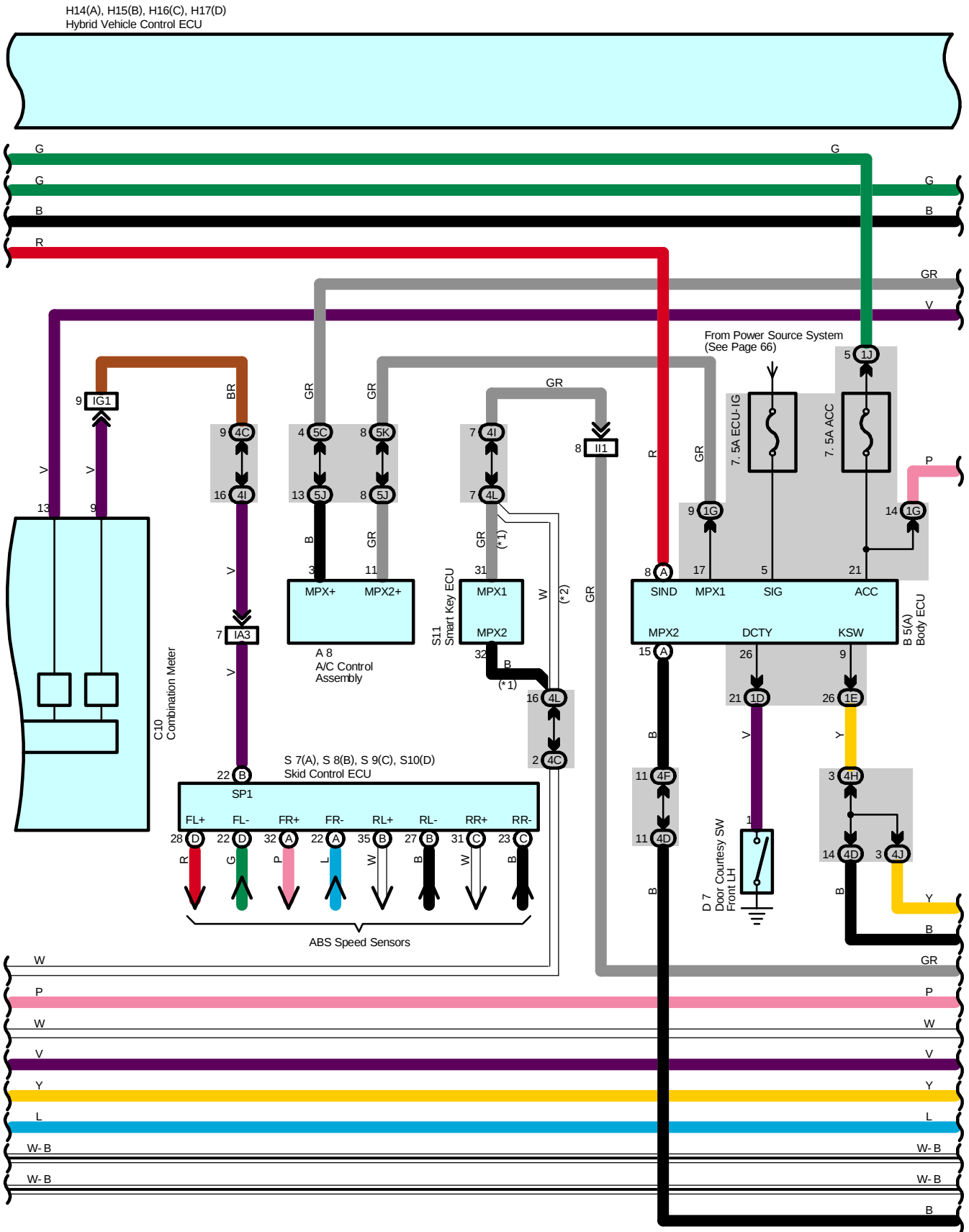
Push Button Start System and Hybrid Vehicle Immobilizer System



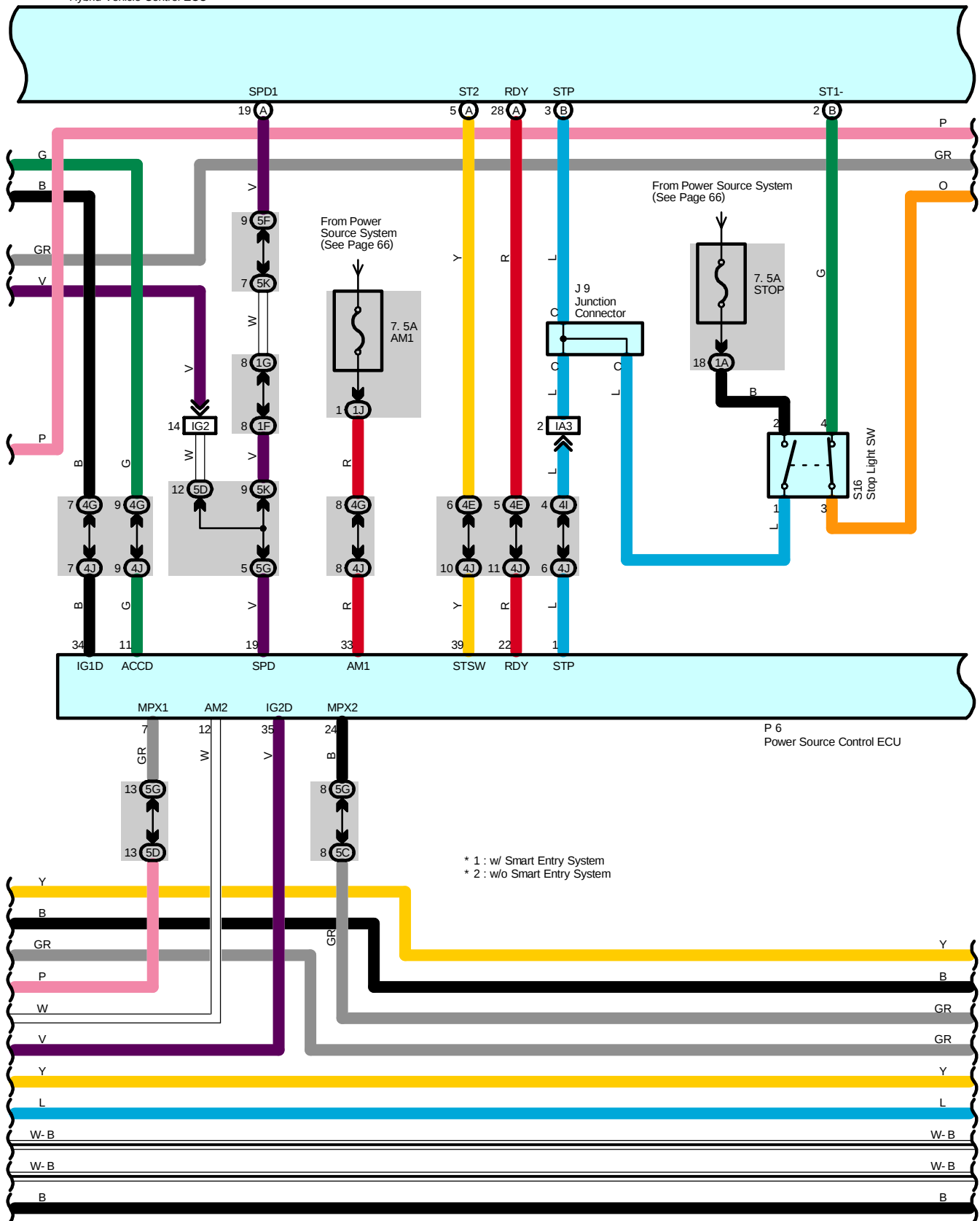
H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



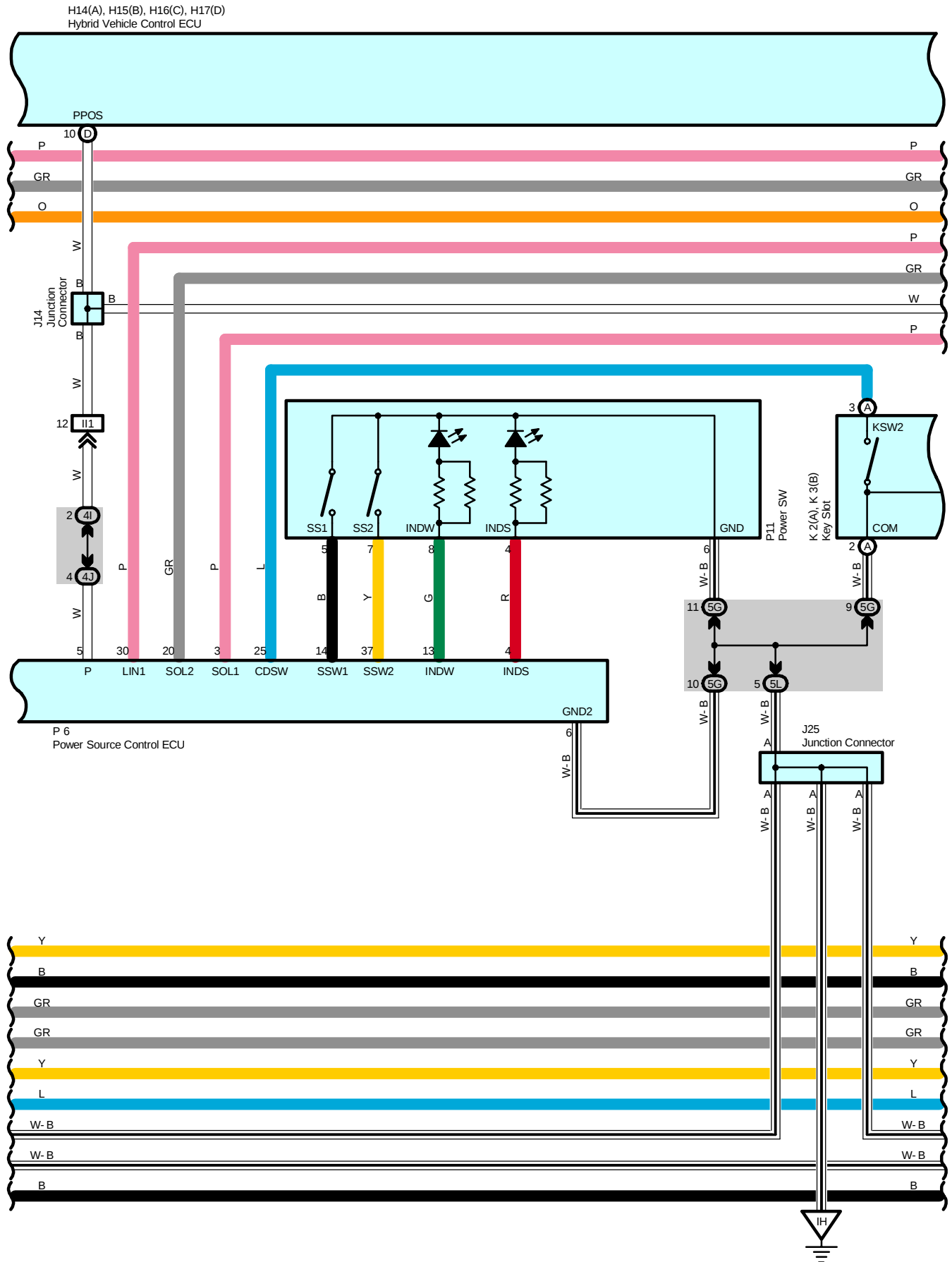
Push Button Start System and Hybrid Vehicle Immobilizer System



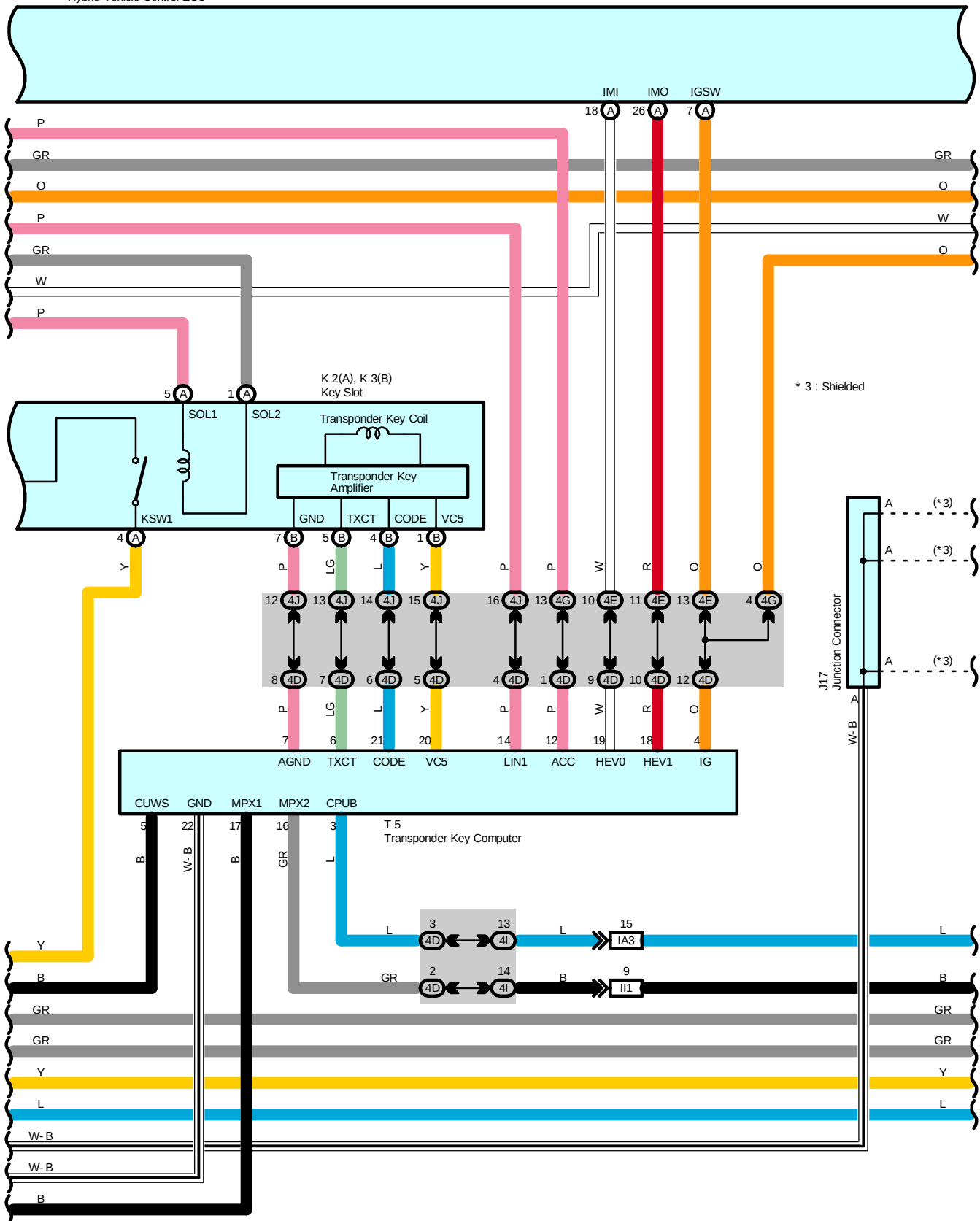
H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



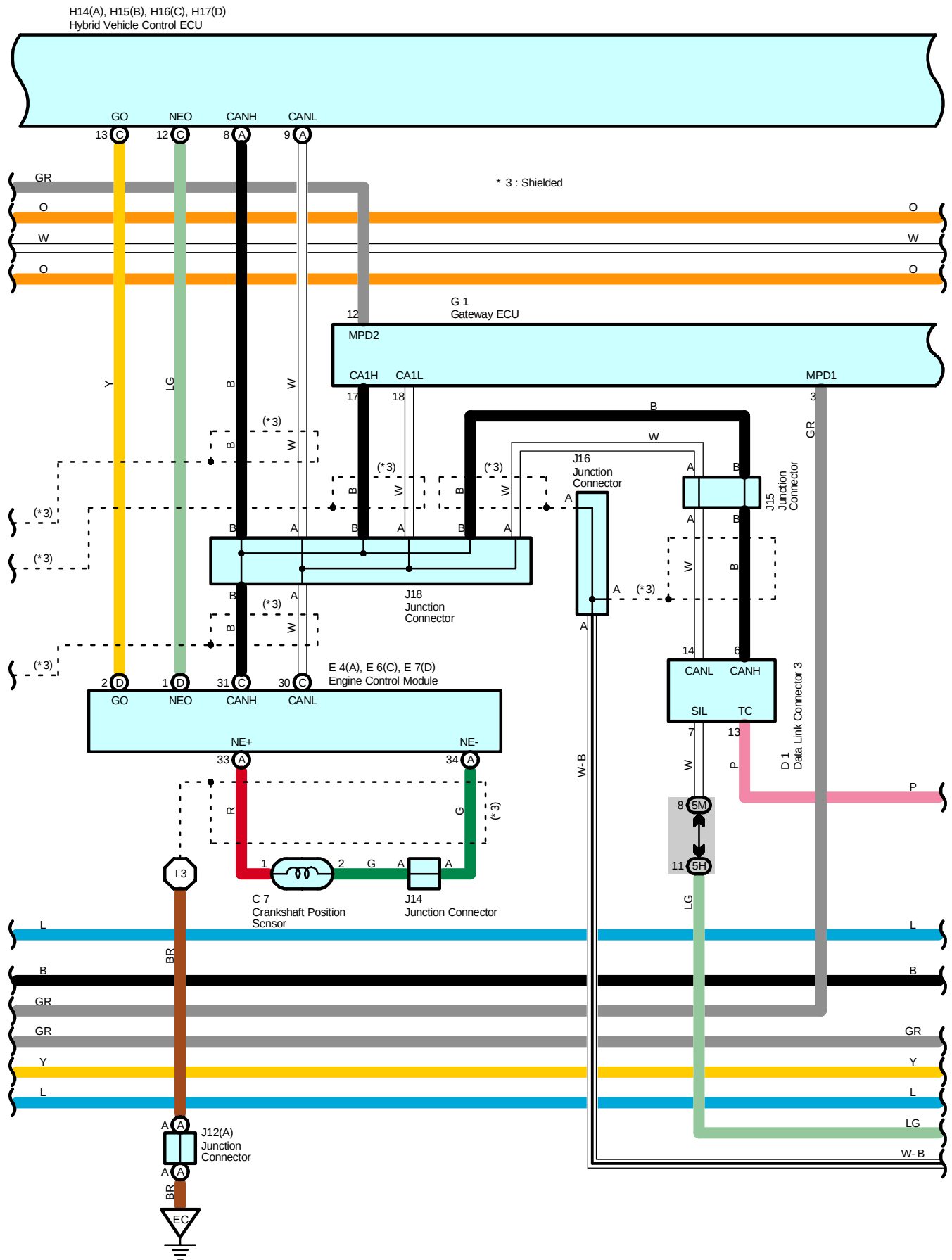
Push Button Start System and Hybrid Vehicle Immobilizer System



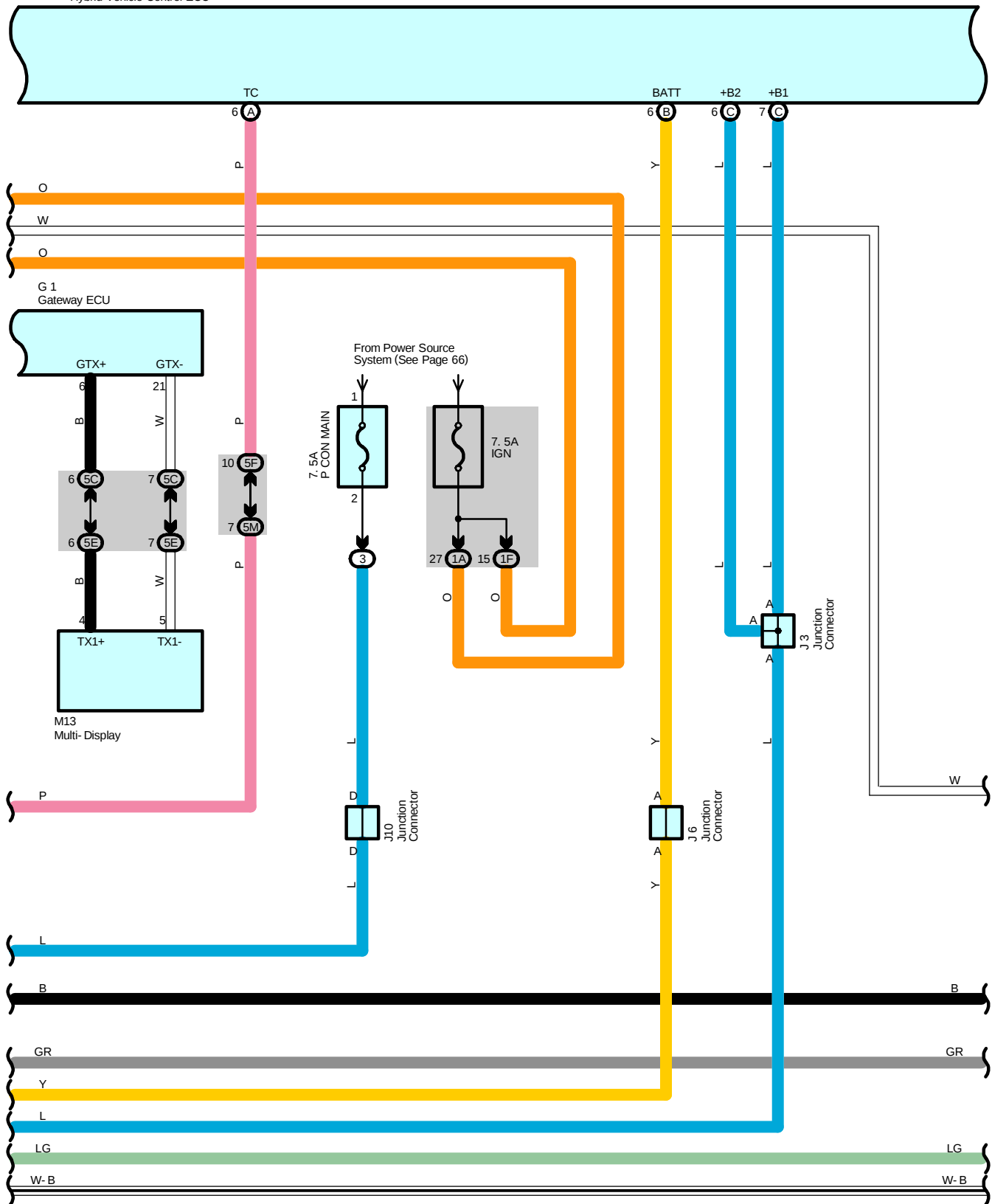
H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



Push Button Start System and Hybrid Vehicle Immobilizer System

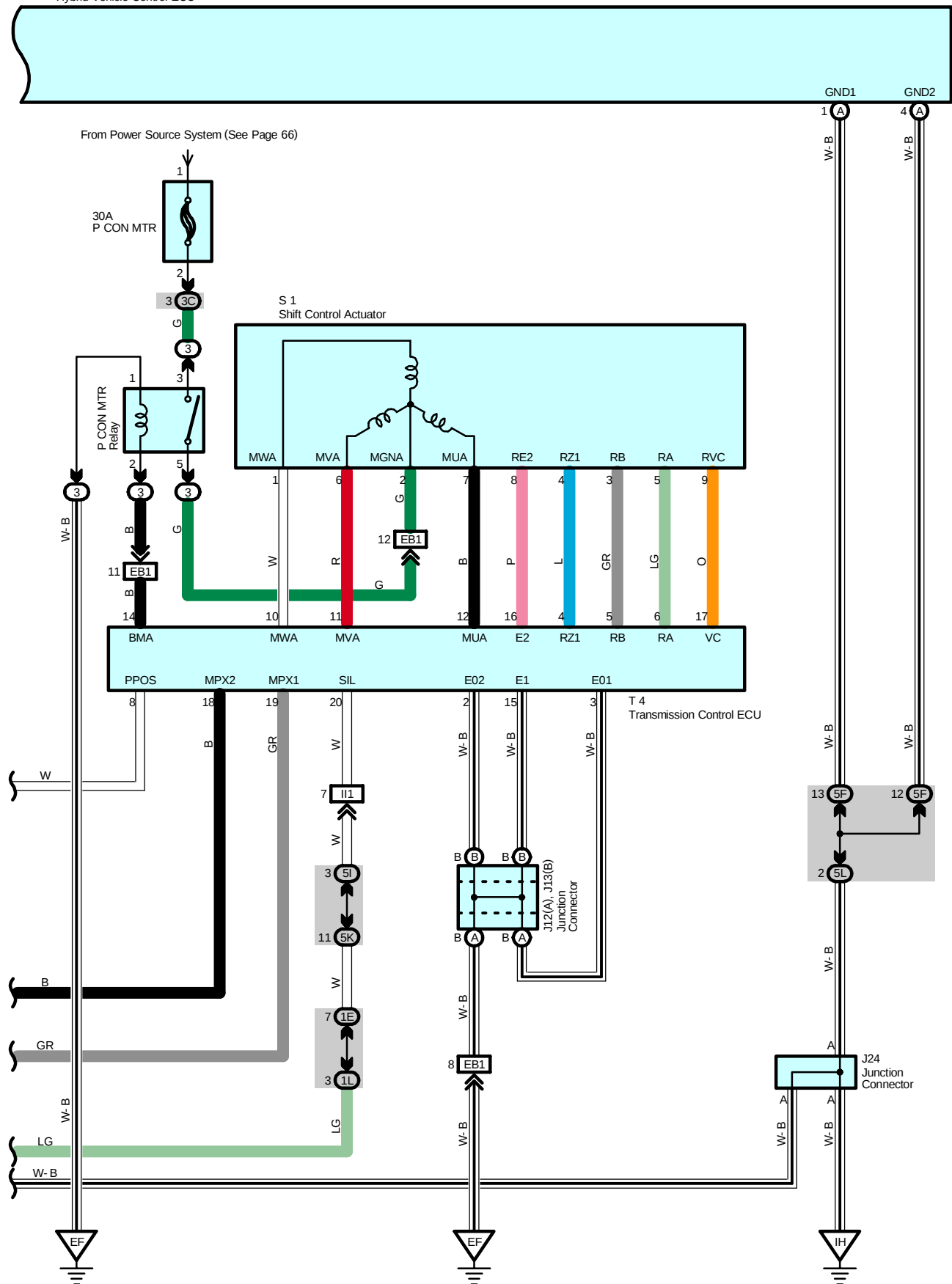


H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



Push Button Start System and Hybrid Vehicle Immobilizer System

H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



System Outline

This is the system to change power supply mode by pushing power SW and to start hybrid system by operating power SW and brake pedal simultaneously. It also has function to hold the electrical key in the key slot and not to release the key from it unless the power supply condition and shift range position are met. If there is abnormality in the system, amber portion of power SW blinks to warn the driver.

1. ACC ON Operation

When the electrical key turns on half-inserted SW and deep-inserted SW after inserting in the key slot, transponder key computer activates transponder key amplifier incorporated in key slot to identify ID. After the identification, if power SW is pushed without depressing brake pedal, power source control ECU starts. The ECU confirms that the brake pedal is not depressed from signal of stop light SW and also requests transponder key computer for ID identification result. If the ID identification is normal, power source control ECU turns on ACC relay and changes indicator of power SW to green lighting. In consequence, power supply is set to ACC ON condition.

2. IG ON Operation

If power SW is pushed without depressing brake pedal when ACC ON, power source control ECU confirms that the brake pedal is not depressed, and then turns on IG1 relay and IG2 relay as well as change indicator of power SW to amber lighting. Power supply is IG ON condition then.

3. Hybrid Start-Up Operation (READY)

When the electrical key turns on half-inserted SW and deep-inserted SW after inserting in the key slot, transponder key computer activates transponder key amplifier incorporated in key slot to identify ID. After the identification, if power SW is pushed with depressing brake pedal, power source control ECU starts. The ECU confirms that the brake pedal is depressed from signal of stop light SW and also requests transponder key computer for ID identification result. If the ID identification is normal, the ECU turns on ACC relay, IG1 relay and IG2 relay, and changes indicator of power SW to amber lighting. Power supply is IG ON condition then.

After that, power source control ECU sends start-up signal to hybrid vehicle control ECU. Hybrid vehicle control ECU and transponder key computer make communication for start-up permission. Hybrid vehicle control ECU controls to start-up hybrid system (READY).

At starting up hybrid system, power source control ECU controls to light off indicator of power SW.

4. Power Supply Off Operation

* When shift range is in P range

If power SW is pushed with power supply at READY condition while the vehicle is stationary, power source control ECU confirms that shift range is in P range, and then turns off ACC relay, IG1 relay and IG2 relay to put power supply in OFF condition. The ECU also controls to light off indicator of power SW.

If power SW is pushed with power supply at IG ON condition and without depressing brake pedal while the vehicle is stationary, power source control ECU confirms that shift range is in P range, and then turns off ACC relay, IG1 relay and IG2 relay to put power supply in OFF condition. The ECU also controls to light off indicator of power SW.

If electrical key is taken off from key slot with power supply at ACC ON condition while the vehicle is stationary, power source control ECU controls to put power supply in OFF condition automatically, which lights off indicator of power SW.

* When shift range is in other than P range

If power SW is pushed with power supply at IG ON (Including READY) condition while the vehicle is stationary, parking lock operation is carried out. After that, power source control ECU confirms that shift range is in P range and then turns off ACC relay, IG1 relay and IG2 relay to put power supply in OFF condition. The ECU controls to light off indicator of power SW.

5. Key Interlock Operation

Power source control ECU controls to hold the electrical key in the key slot and not to release the key from it unless the power supply condition and shift range position are met. Power supply condition and shift range position during the key interlock in operation are as follows;

- * At starting-up hybrid system
- * At power supply at IG ON
- * At power supply at ACC ON and shift range at other than P range

6. Emergency Stop Operation of Hybrid System

If power SW is kept pushed more than three seconds during driving, hybrid system stops and power supply is changed to ACC ON.

7. Power Supply Resuming Control

Power source control ECU always stores power supply condition (OFF, ACC ON, IG ON)

When power supply is resumed after shutting off power supply by disconnecting battery terminal, original power supply condition returns due to control of power source control ECU.

Push Button Start System and Hybrid Vehicle Immobilizer System

Service Hints

P6 Power Source Control ECU

- 12, 33-Ground : Always approx. 12 volts
- 34, 35-Ground : Approx. 12 volts with the power SW at IG ON position
- 11-Ground : Approx. 12 volts with the power SW at ACC ON or IG ON position
- 6-Ground : Always continuity
- 1-Ground : Approx. 12 volts with the brake pedal depressed

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A8	46	H17 D	47	K2 A	48
A12	46	J3	45	K3 B	48
B5 A	46	J6	48	M13	48
C7	44	J9	48	P6	49
C10	47	J10	48	P11	49
D1	47	J12 A	48	S1	45
D7	50	J13 B	48	S7 A	49
E4 A	47	J14	48	S8 B	49
E6 C	47	J15	48	S9 C	49
E7 D	47	J16	48	S10 D	49
G1	47	J17	48	S11	49
H14 A	47	J18	48	S16	49
H15 B	47	J24	48	T4	49
H16 C	47	J25	48	T5	49

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	22	Engine Room R/B (Engine Compartment Left)

**: Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1B		
1D	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1F		
1G		
1J		
1K	29	
1L		
1M		
3C	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3D		
3I	24	
3J		
4C	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4D		
4E		
4F		
4G		
4H		
4I		
4J		
4L		
5C	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5D		
5E		
5F		
5G		
5H		
5I		
5J		
5K		
5L		
5M		

**: Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	54	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA1	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IA3		
IG1	58	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IG2		
II1	58	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

**: Ground Points**

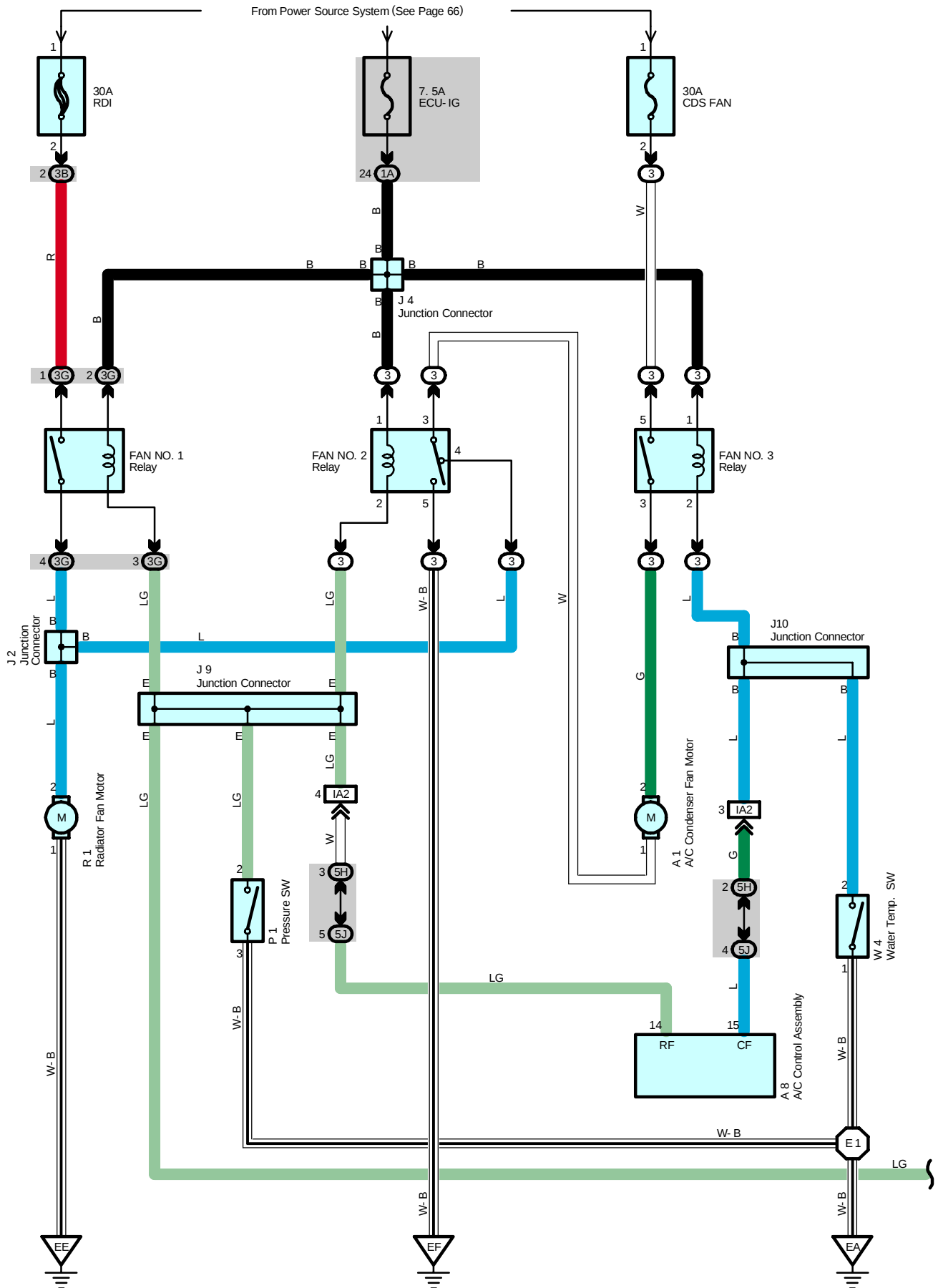
Code	See Page	Ground Points Location
EC	54	Engine Block
EE	54	Left Side of the Suspension Tower
EF		
IH	56	Cowl Side Panel LH
II	56	Instrument Panel Brace LH

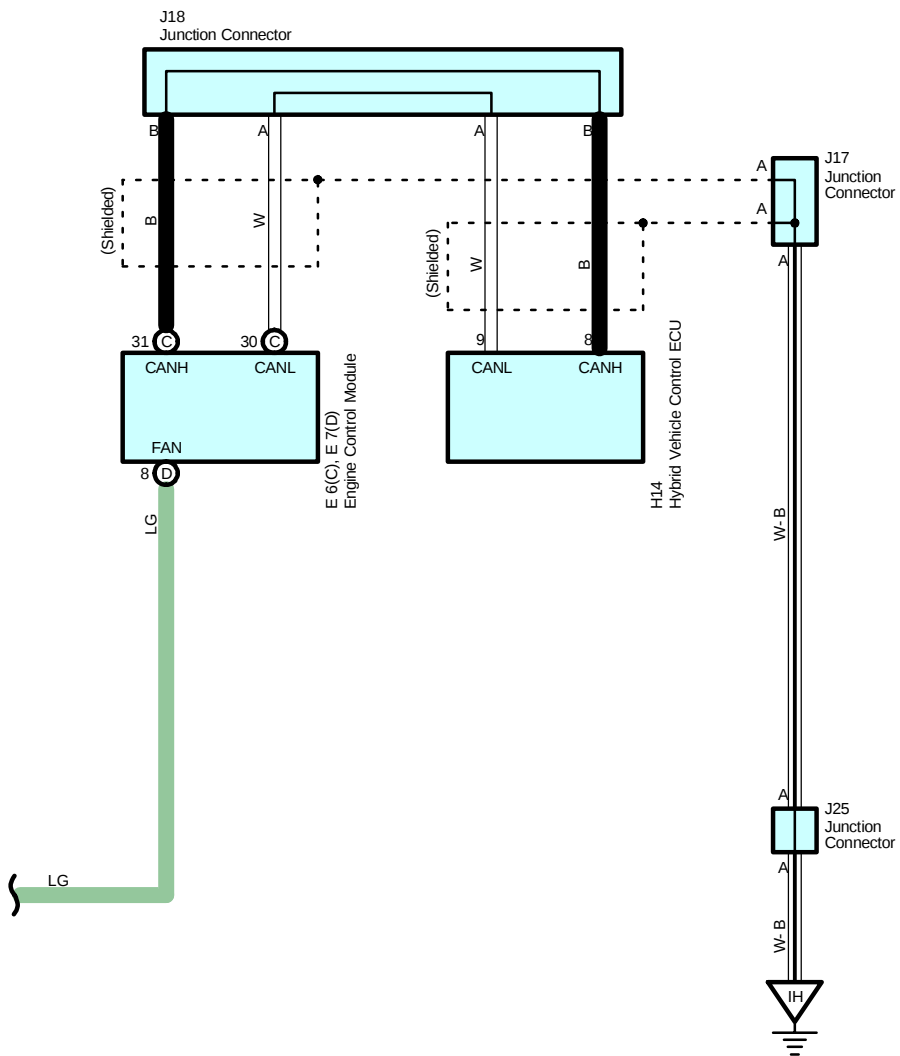
Push Button Start System and Hybrid Vehicle Immobilizer System

 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	58	Engine Wire			

Radiator Fan and Condenser Fan





Radiator Fan and Condenser Fan

System Outline

The radiator fan motor and A/C condenser fan motor operate according to the water temp. SW (Inverter), A/C single pressure SW, engine coolant temp. and the A/C system condition. The FAN NO.1 relay, FAN NO.2 relay, FAN NO.3 relay are turned on/off, to operate the fan motors at low speed (In series), or high speed (In parallel).

1. Low Speed operation

When the water temp. SW (Inverter) is on and/or A/C control assembly is in operation, the radiator fan motor and A/C condenser fan motor operate at low speed.

2. High Speed Operation

When the pressure SW (Single) is on, engine control module and/or A/C control assembly, the radiator fan motor operate and A/C condenser fan motor operates at high speed.

Service Hints

P1 Pressure SW

3-2 : Close above approx. 1520 kpa (15.5 kgf/cm². 220 psi)
Open below approx. 1230 kpa (12.5 kgf/cm². 178 psi)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	44	J2	45	J18	48
A8	46	J4	45	J25	48
E6	C 47	J9	48	P1	45
E7	D 47	J10	48	R1	45
H14	47	J17	48	W4	45

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
3B	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3G	24	
5H	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5J		

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)

▽ : Ground Points

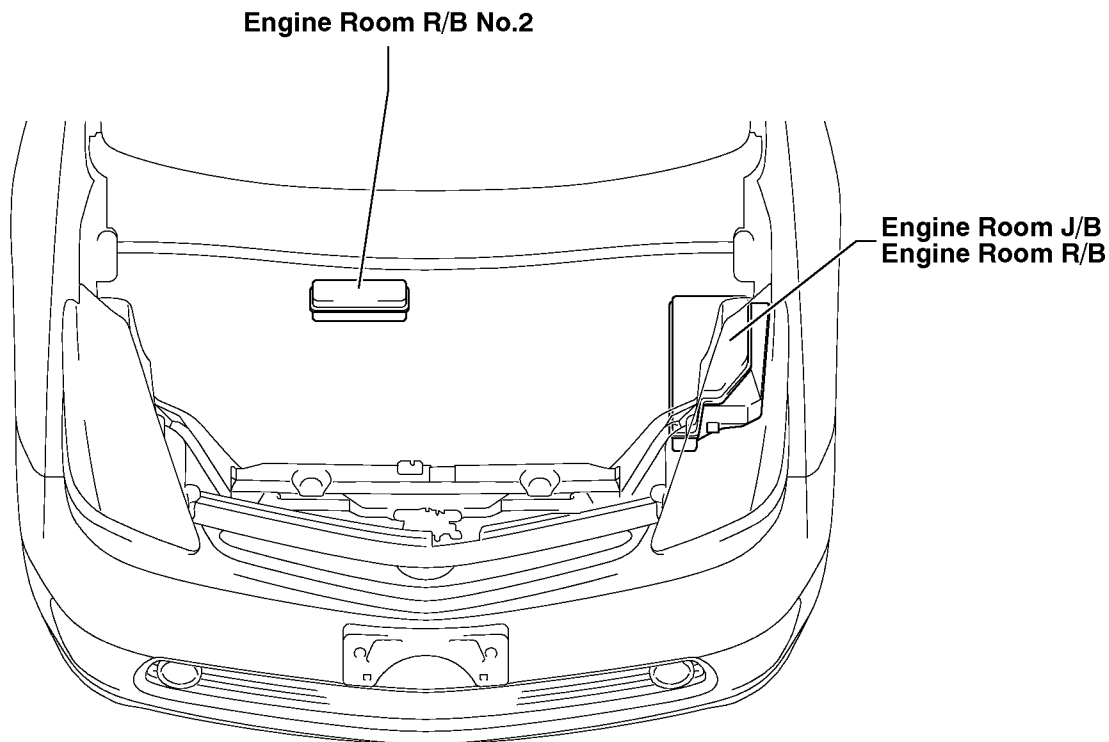
Code	See Page	Ground Points Location
EA	54	Right Side of the Fender Apron
EE	54	Left Side of the Suspension Tower
EF		
IH	56	Cowl Side Panel LH

○ : Splice Points

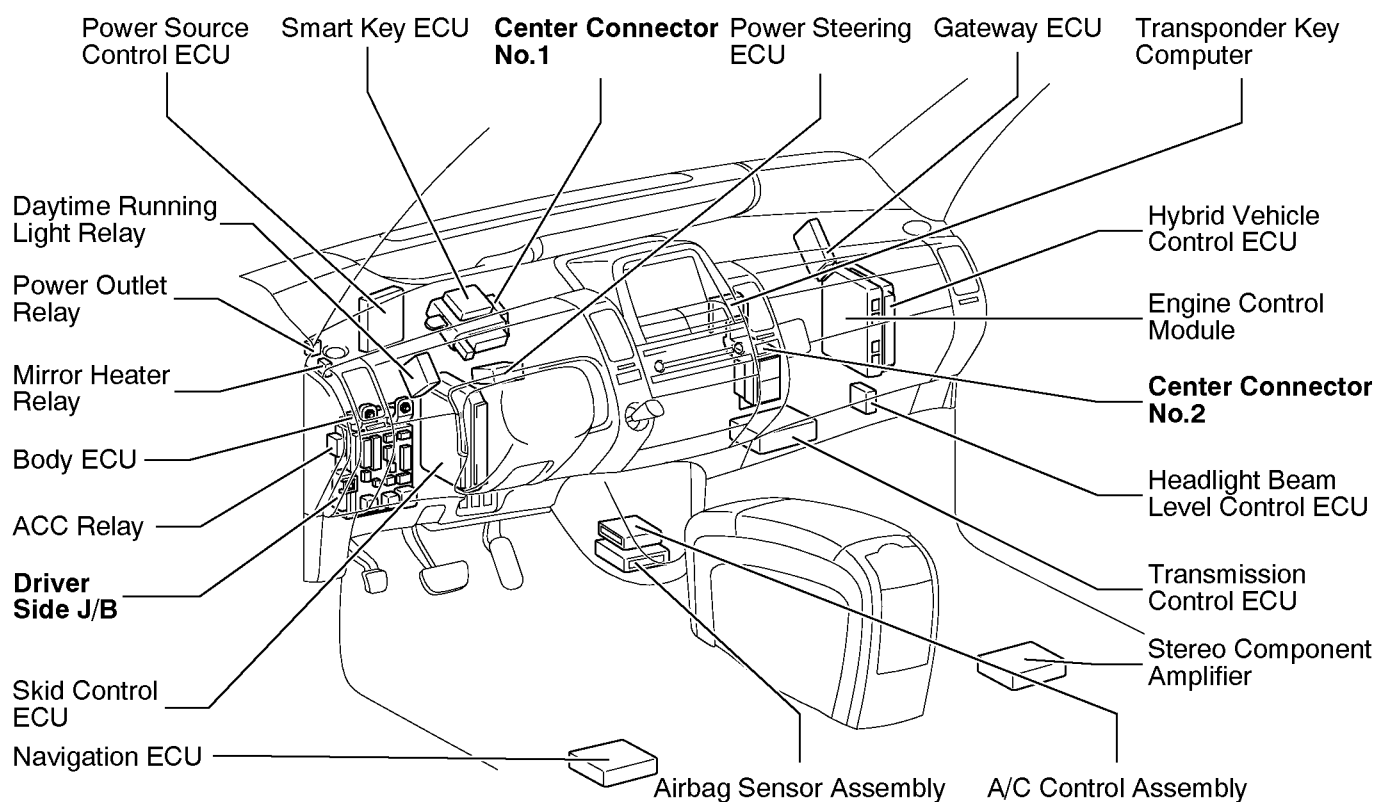
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	54	Engine Room Main Wire			

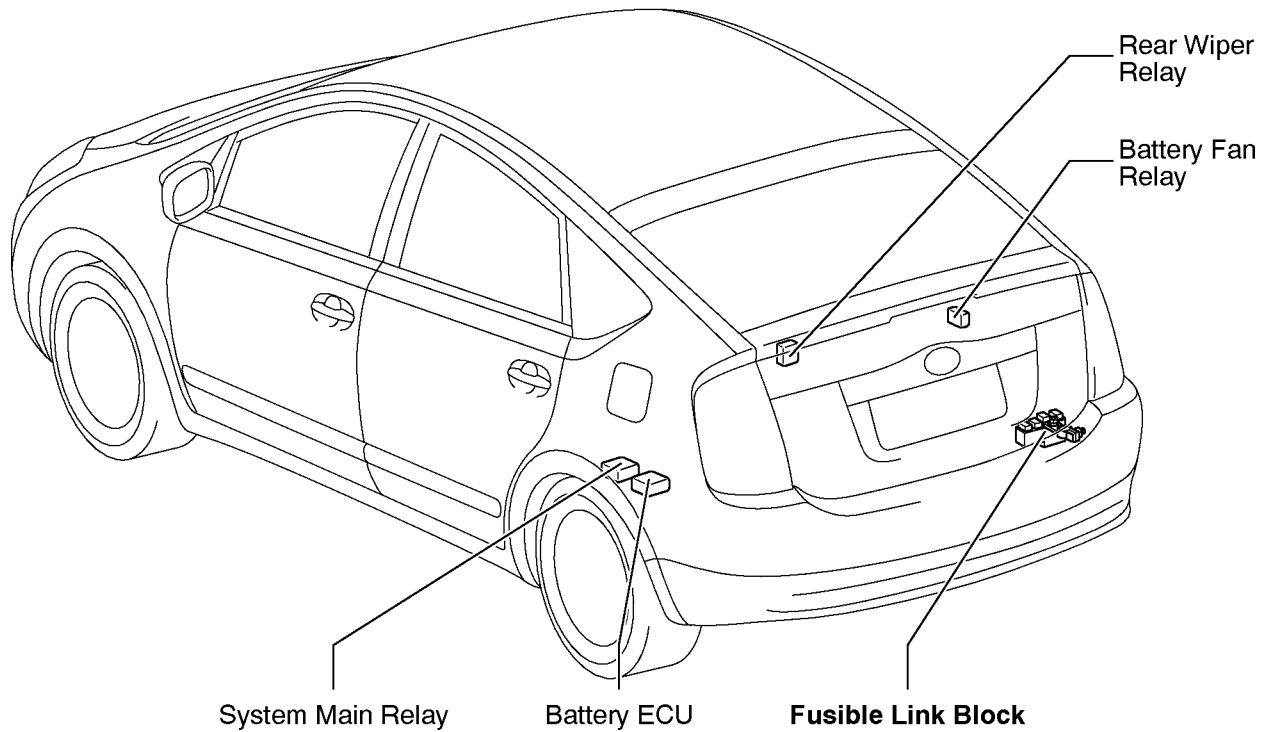
F RELAY LOCATIONS

[Engine Compartment]



[Instrument Panel]



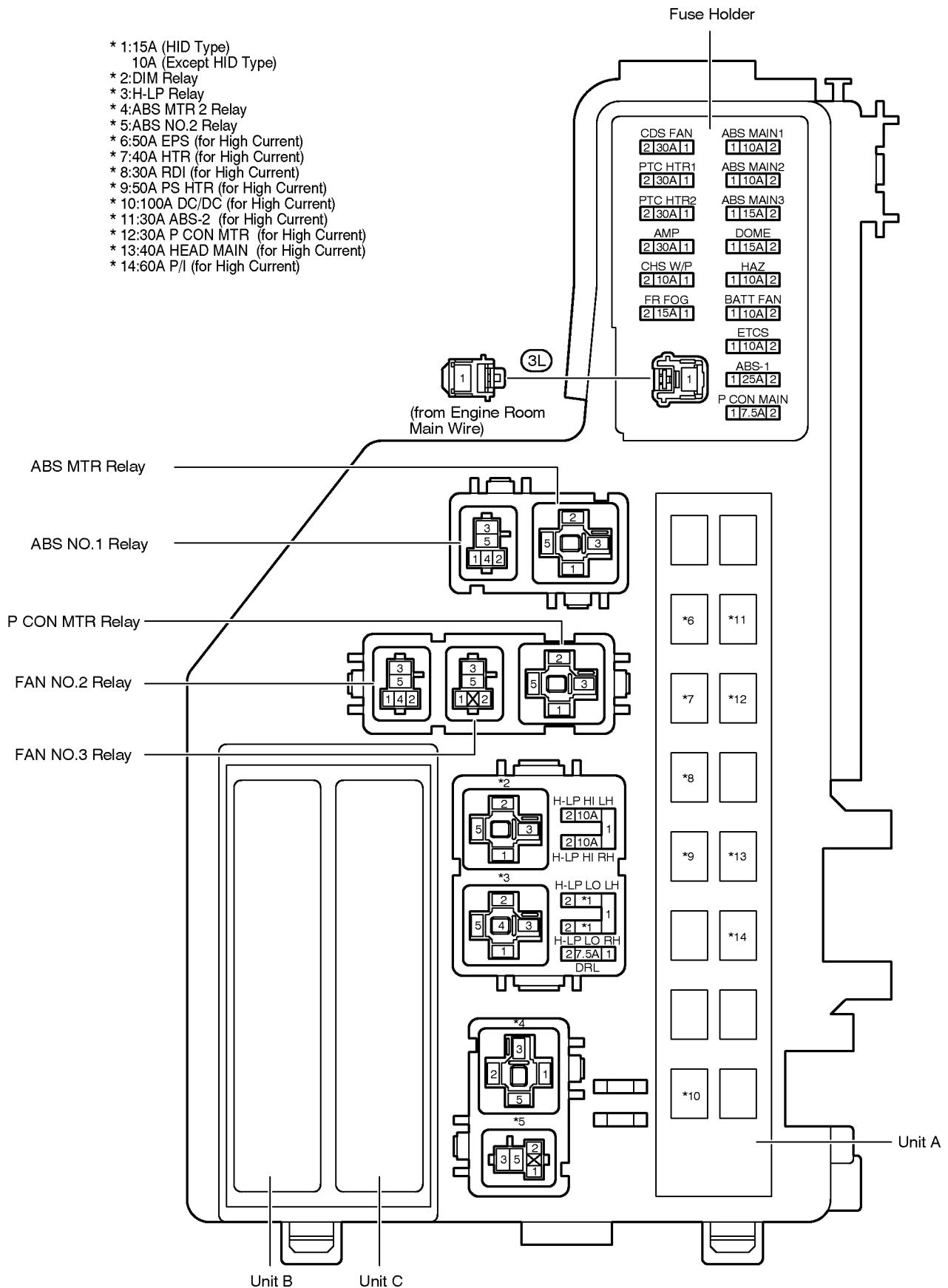
[Body]

F RELAY LOCATIONS

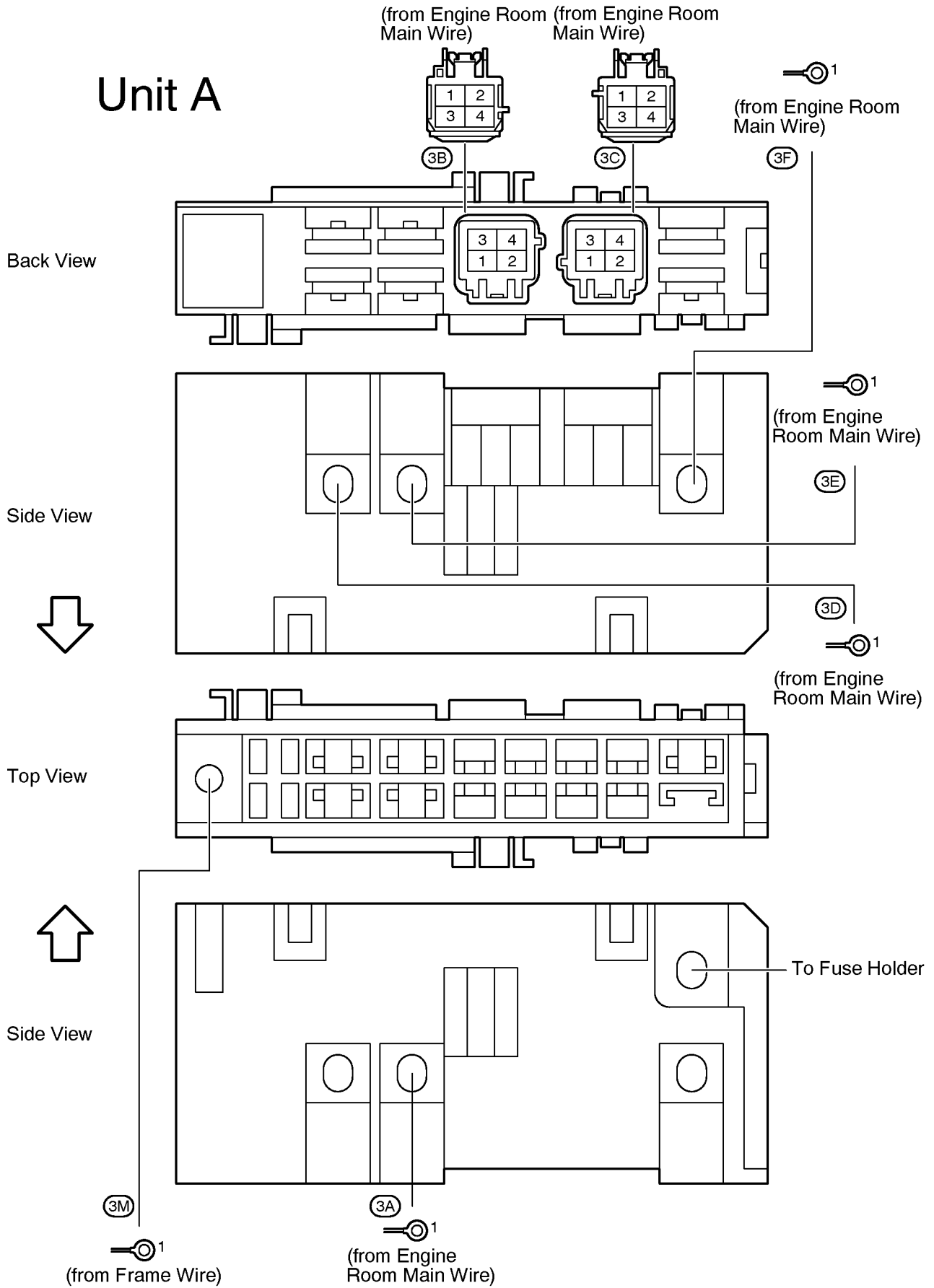
③ : Engine Room R/B

○ : Engine Room J/B

Engine Compartment Left (See Page 20)



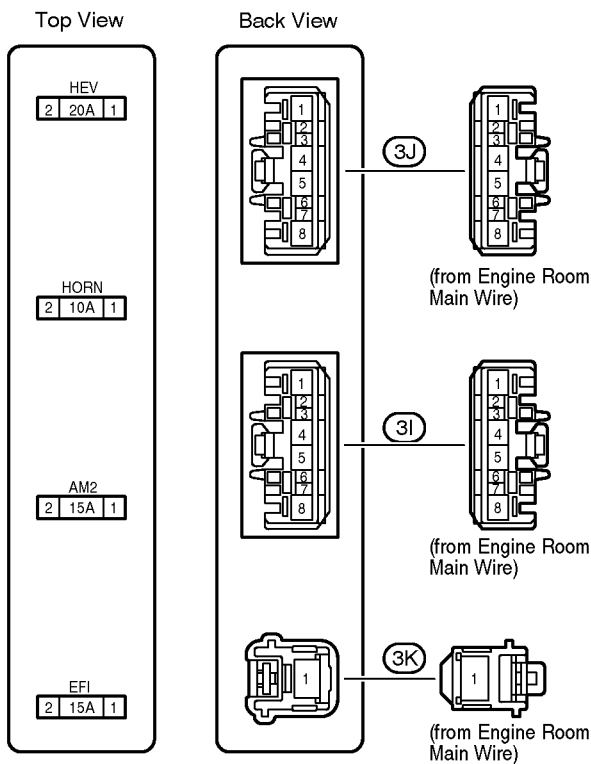
Unit A



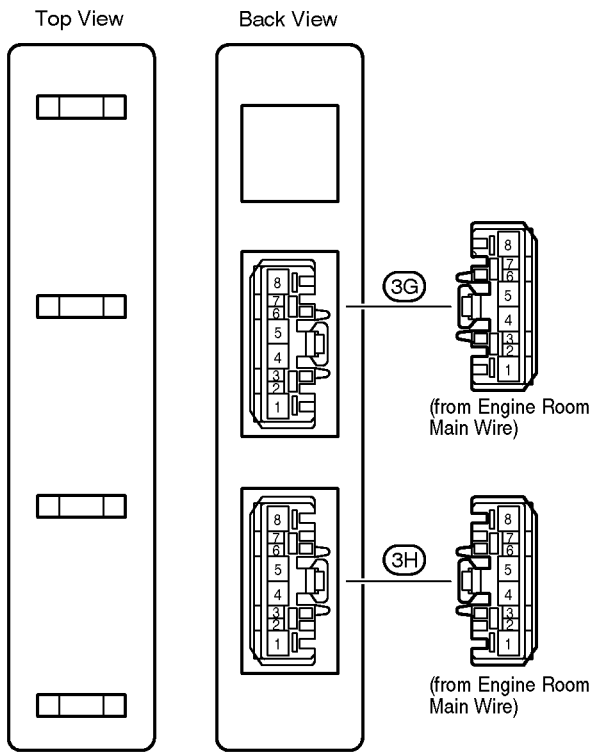
F RELAY LOCATIONS

③ : Engine Room R/B	Engine Compartment Left (See Page 20)
○ : Engine Room J/B	

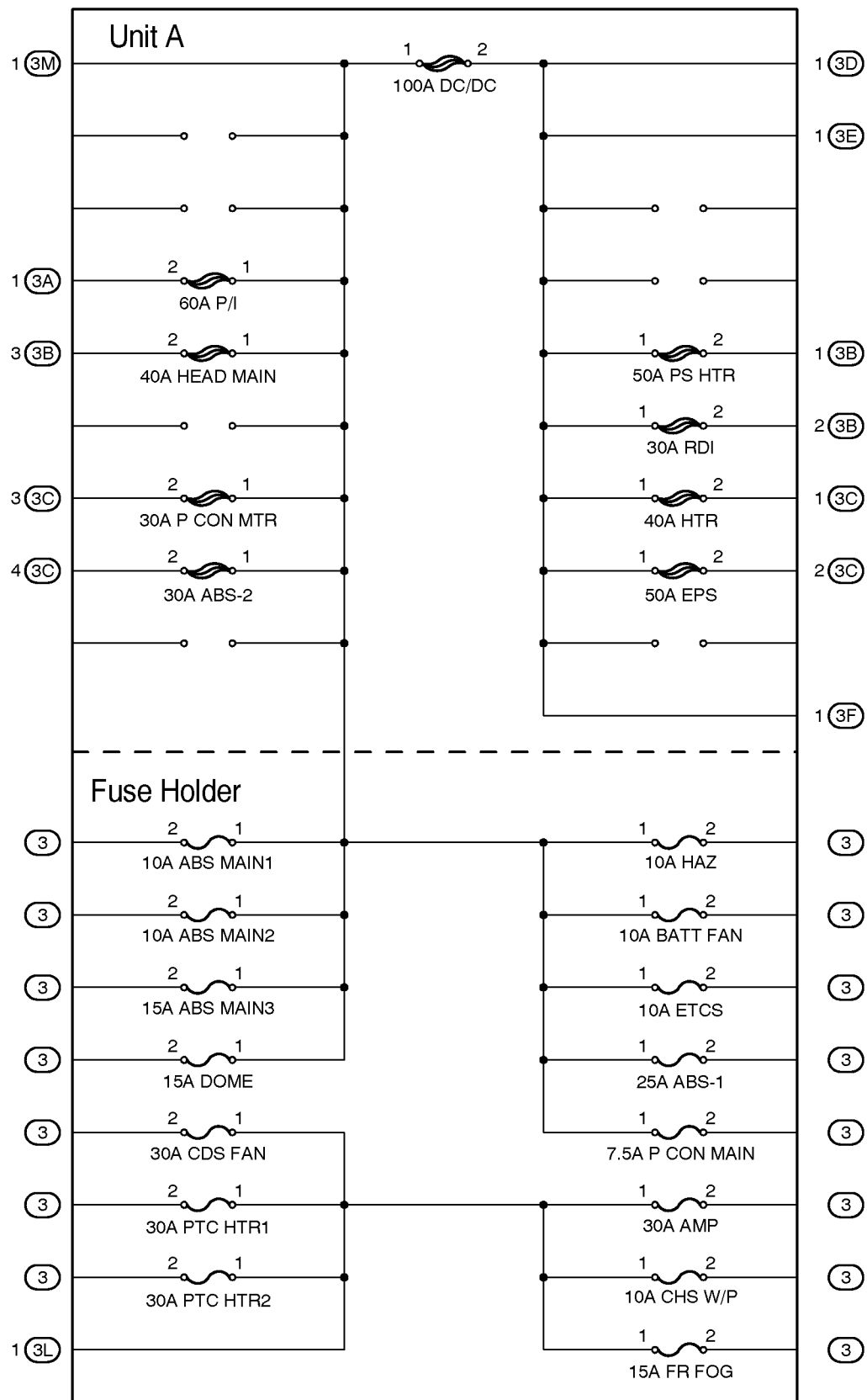
Unit B



Unit C

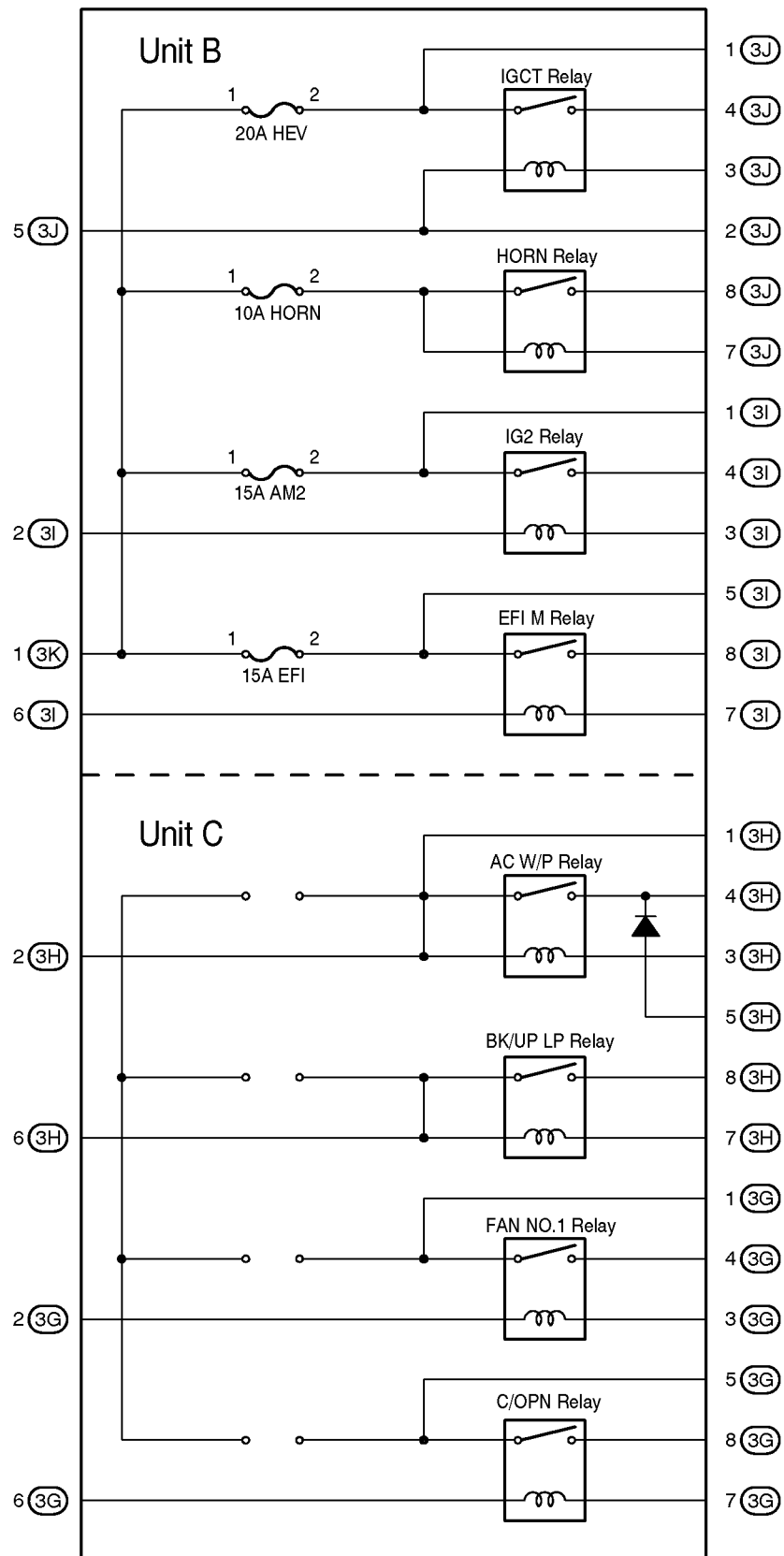


[Engine Room R/B and Engine Room J/B Inner Circuit]

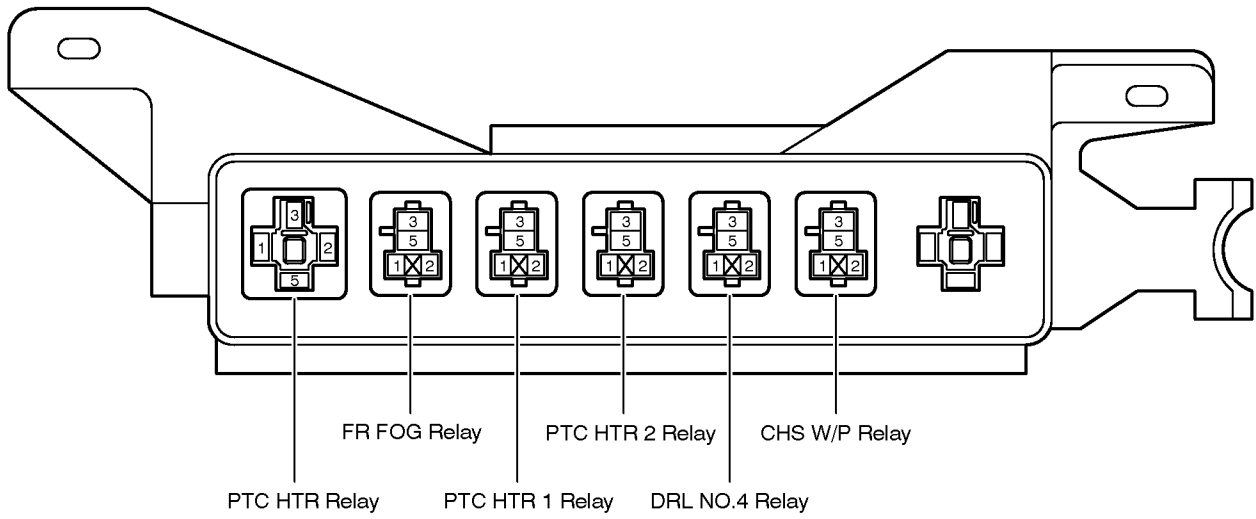


F RELAY LOCATIONS

[Engine Room R/B and Engine Room J/B Inner Circuit]

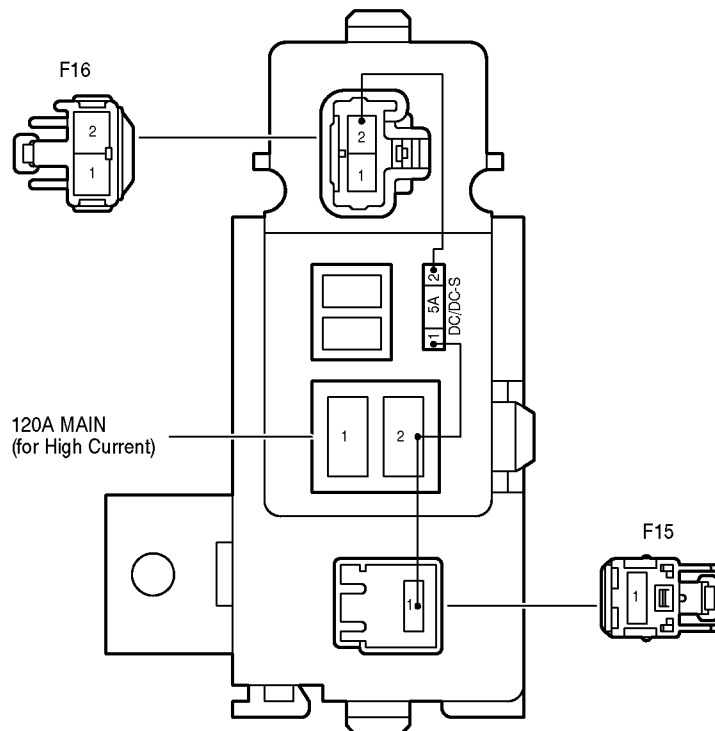


② : Engine Room R/B No.2 **Right Side of Reserve Tank (See Page 20)**



Fusible Link Block

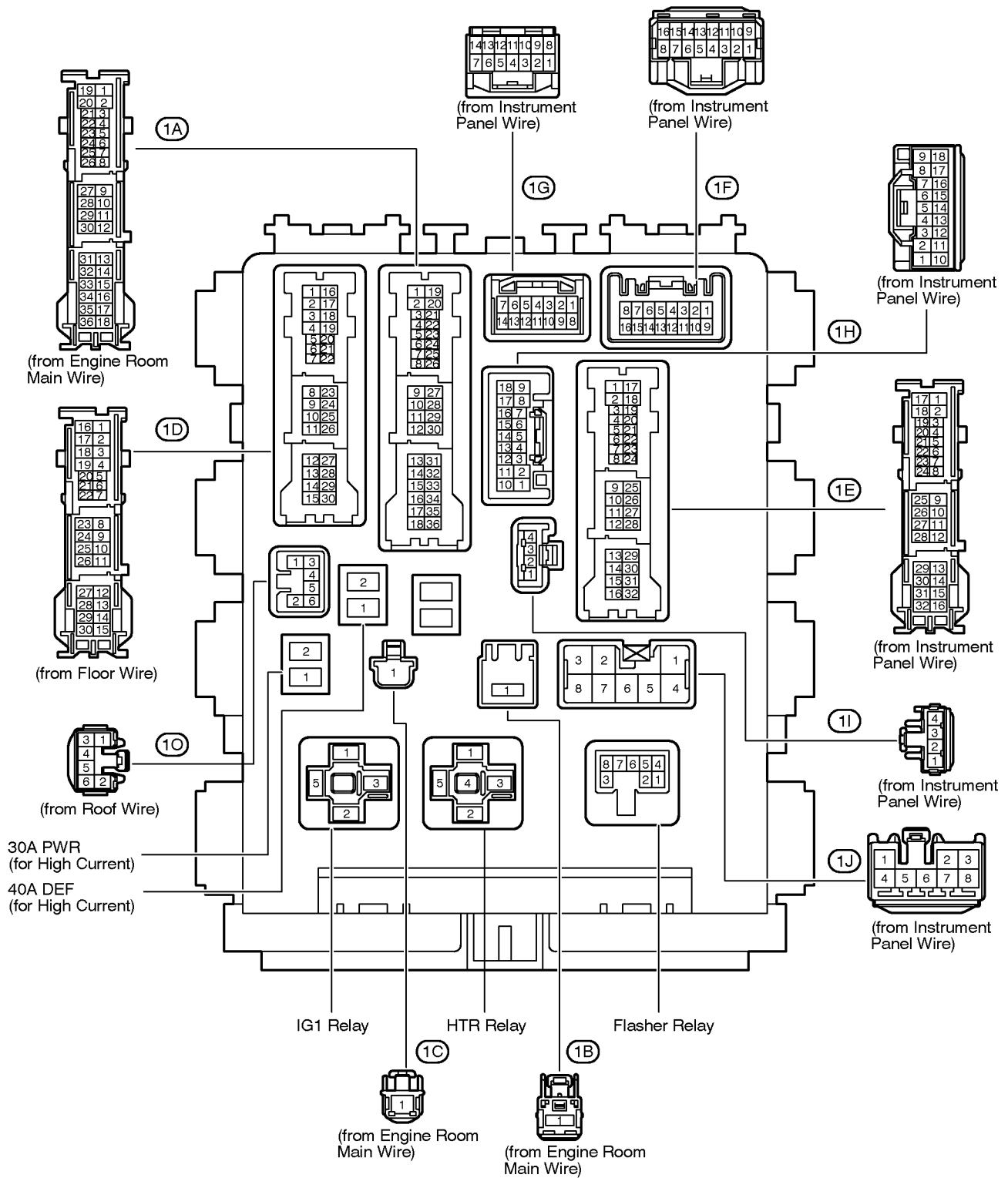
Luggage Room Right (See Page 21)

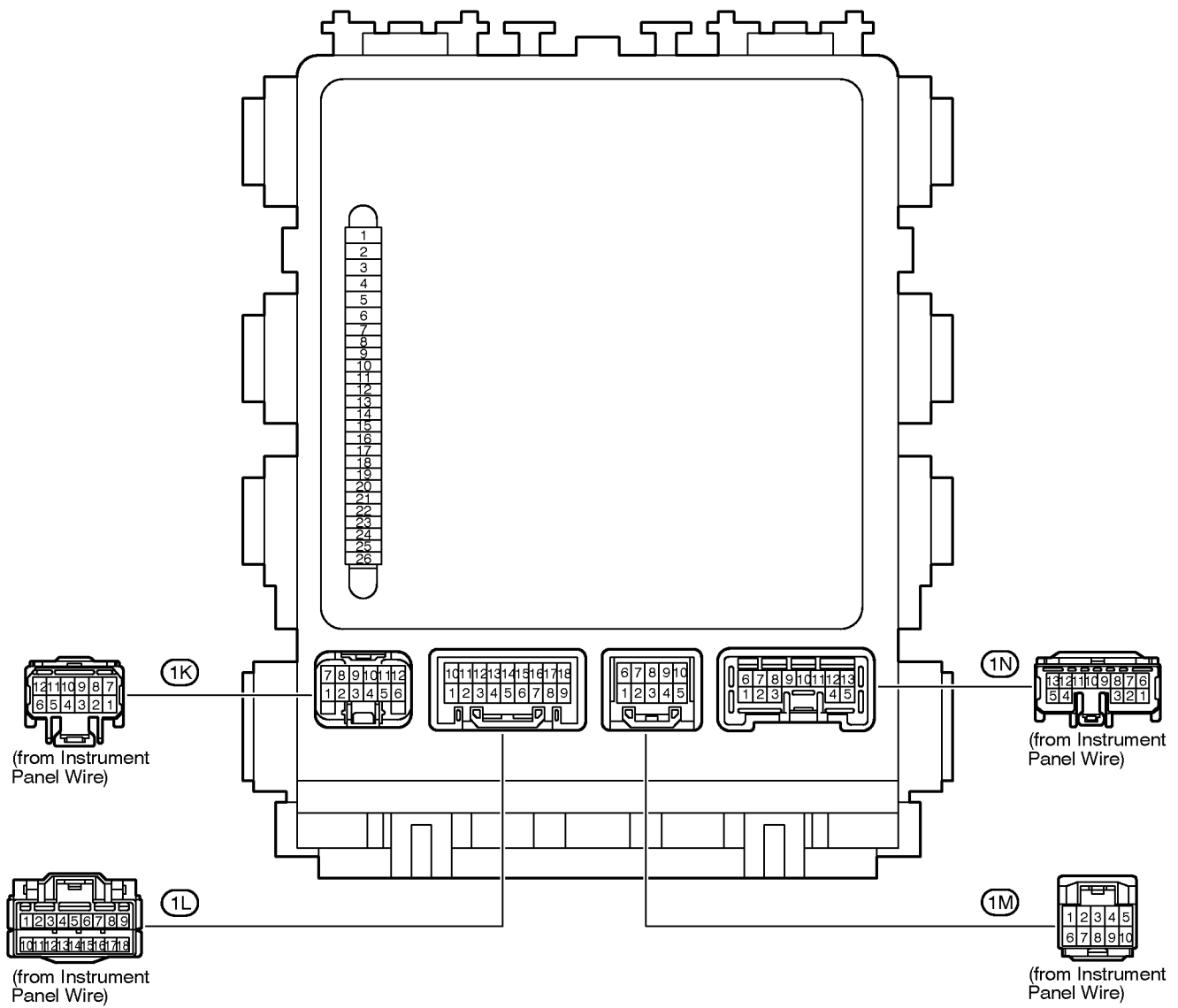


F RELAY LOCATIONS

○ : Driver Side J/B

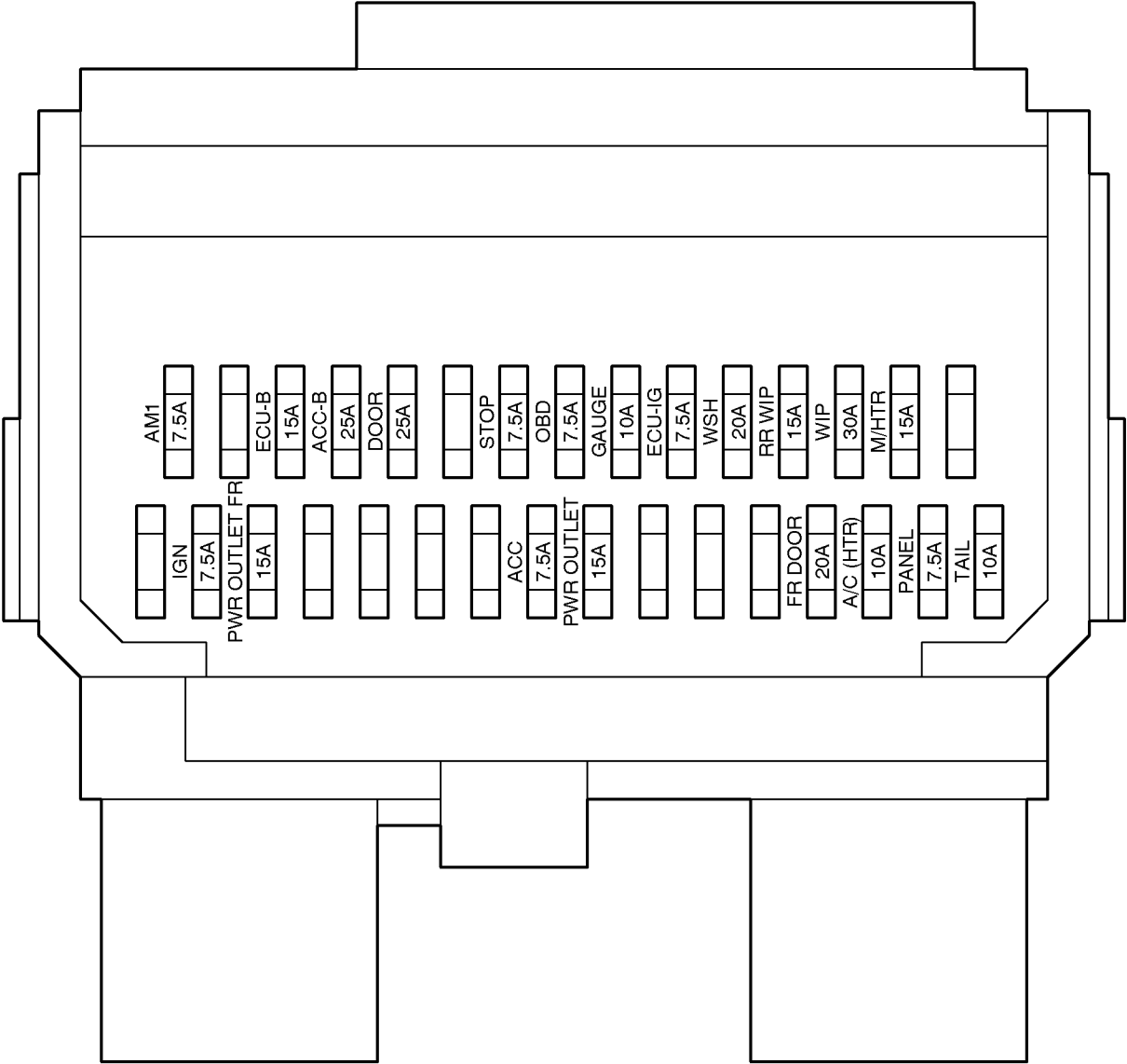
Lower Finish Panel (See Page 20)





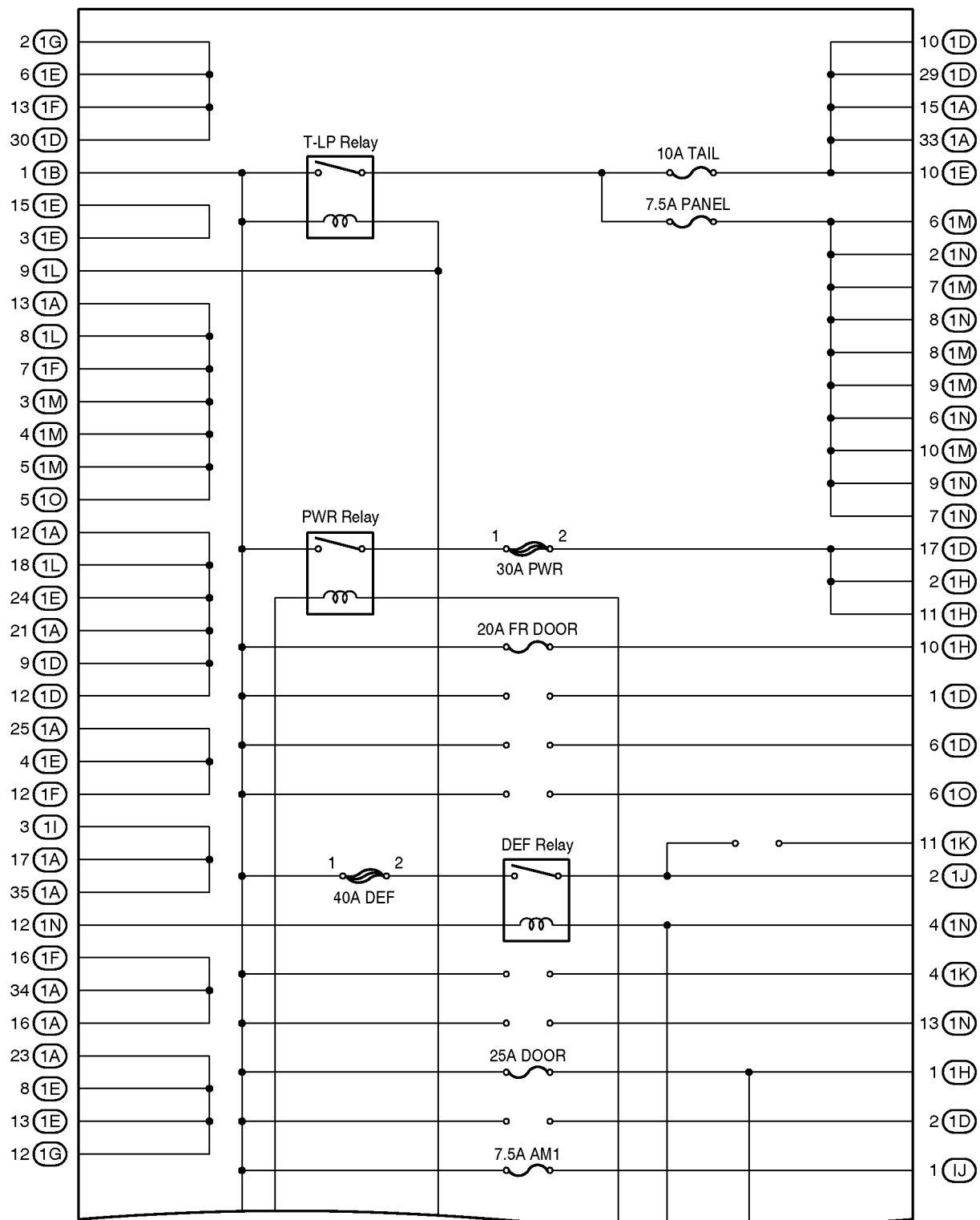
F RELAY LOCATIONS

 : Driver Side J/B	Lower Finish Panel (See Page 20)
---	----------------------------------



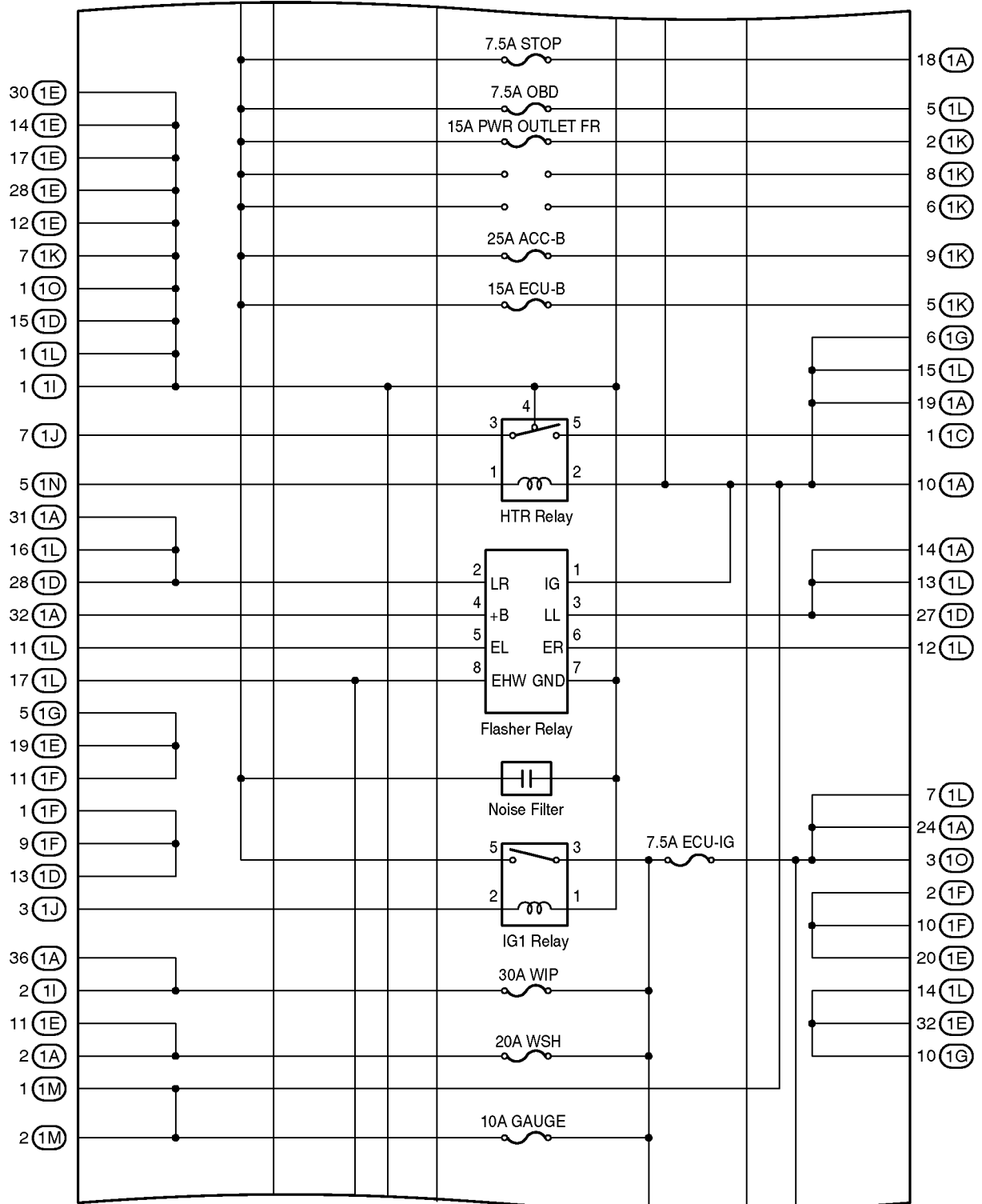
F RELAY LOCATIONS

[Driver Side J/B Inner Circuit]



(Cont. Next Page)

(Cont'd)

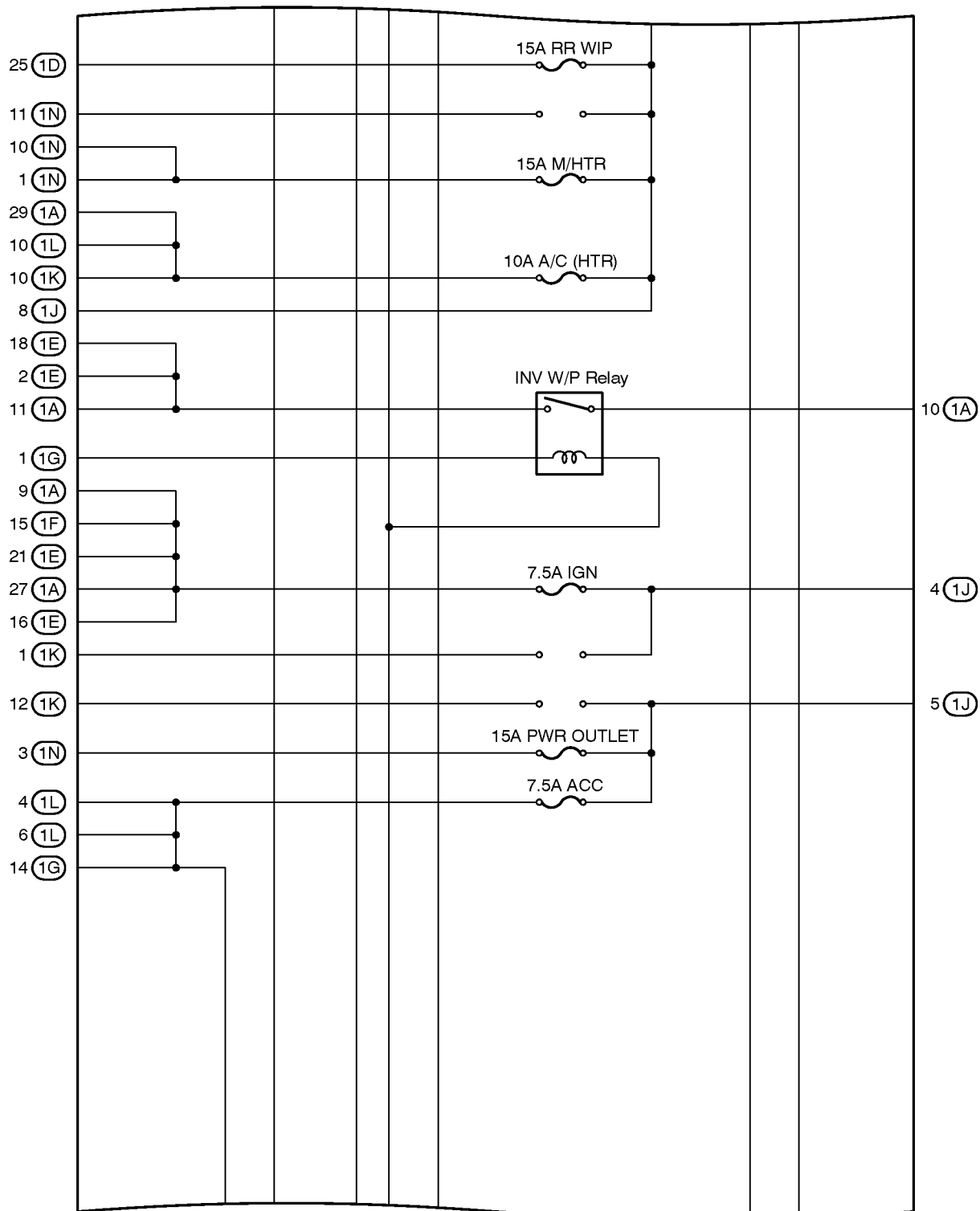


(Cont. Next Page)

F RELAY LOCATIONS

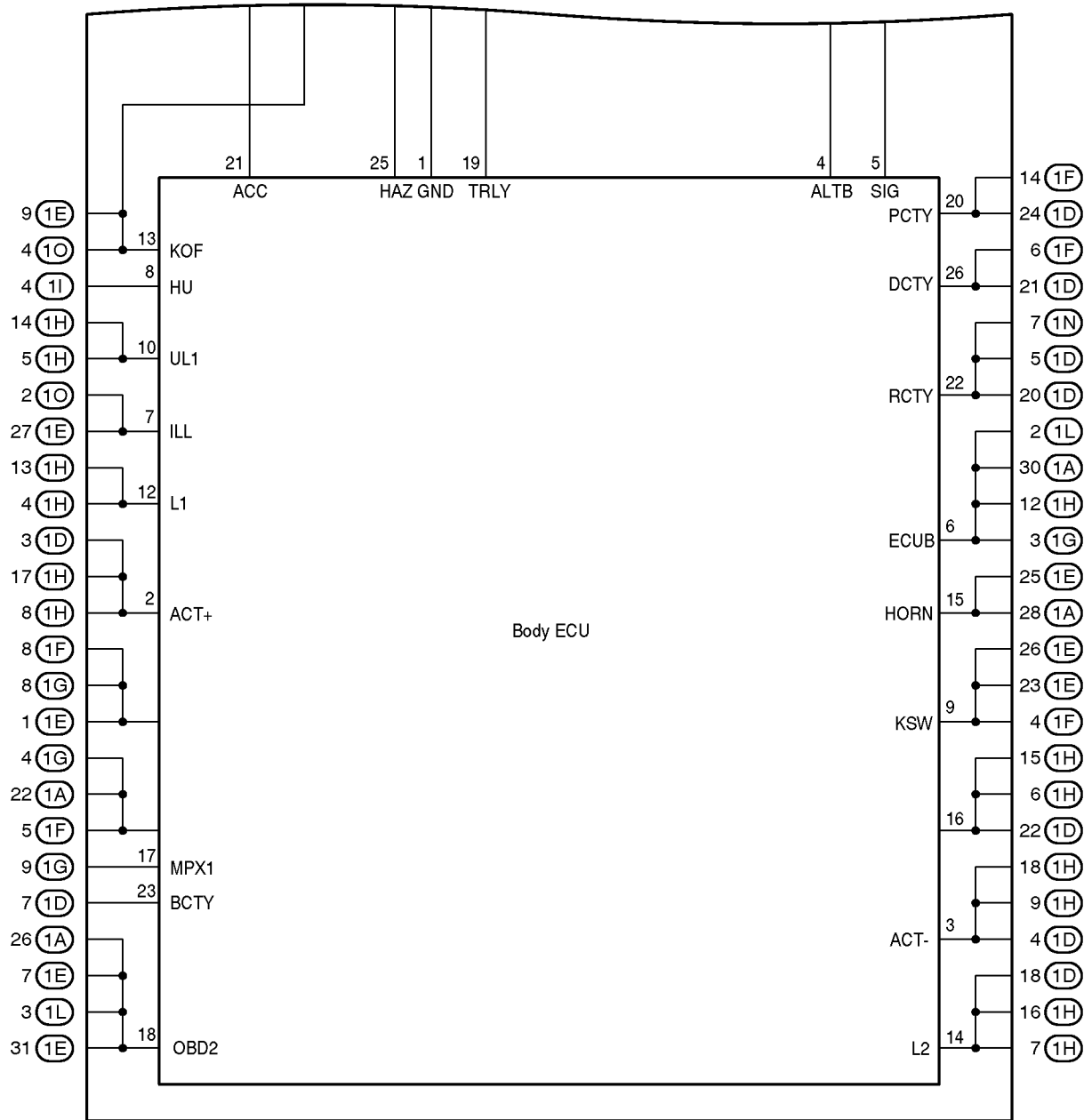
[Driver Side J/B Inner Circuit]

(Cont'd)



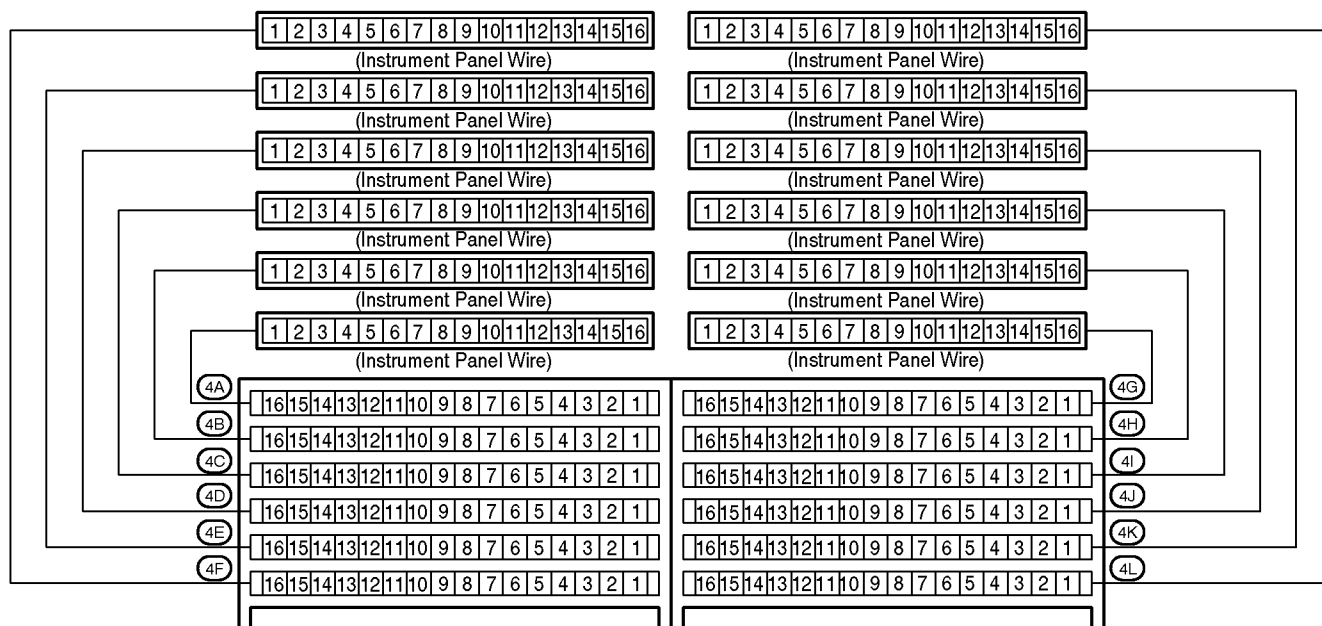
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(Cont'd)



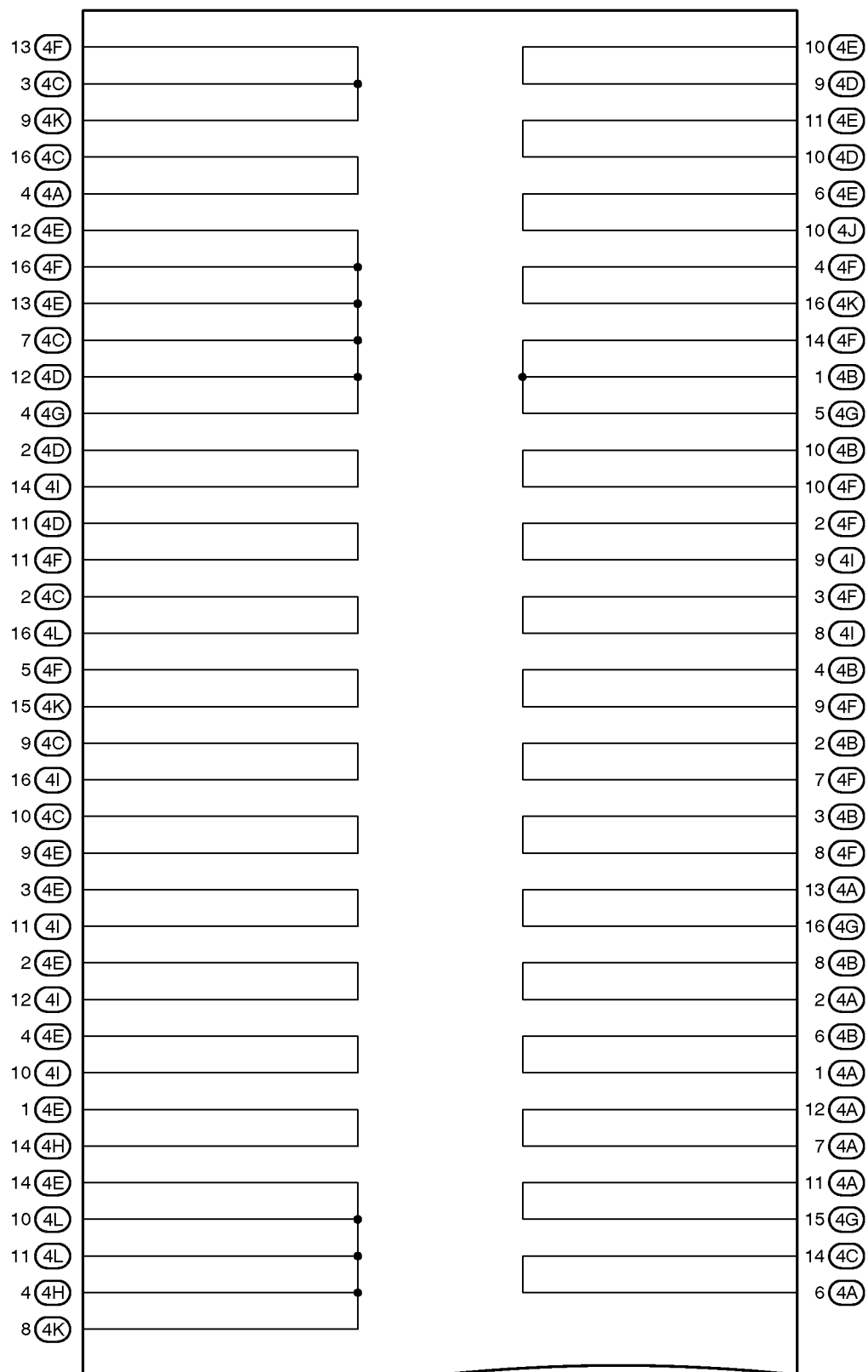
F RELAY LOCATIONS

 : Center Connector No.1 **Behind the Combination Meter (See Page 20)**



F RELAY LOCATIONS

[Center Connector No.1 Inner Circuit]



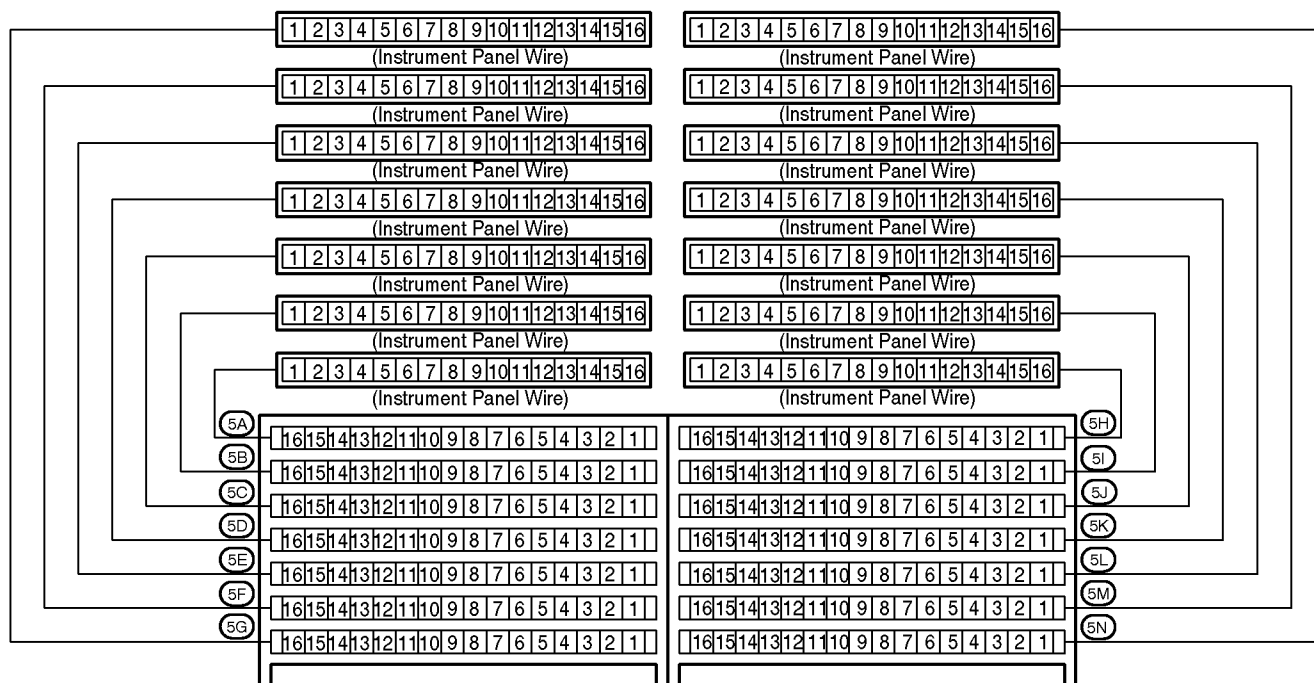
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(Cont'd)

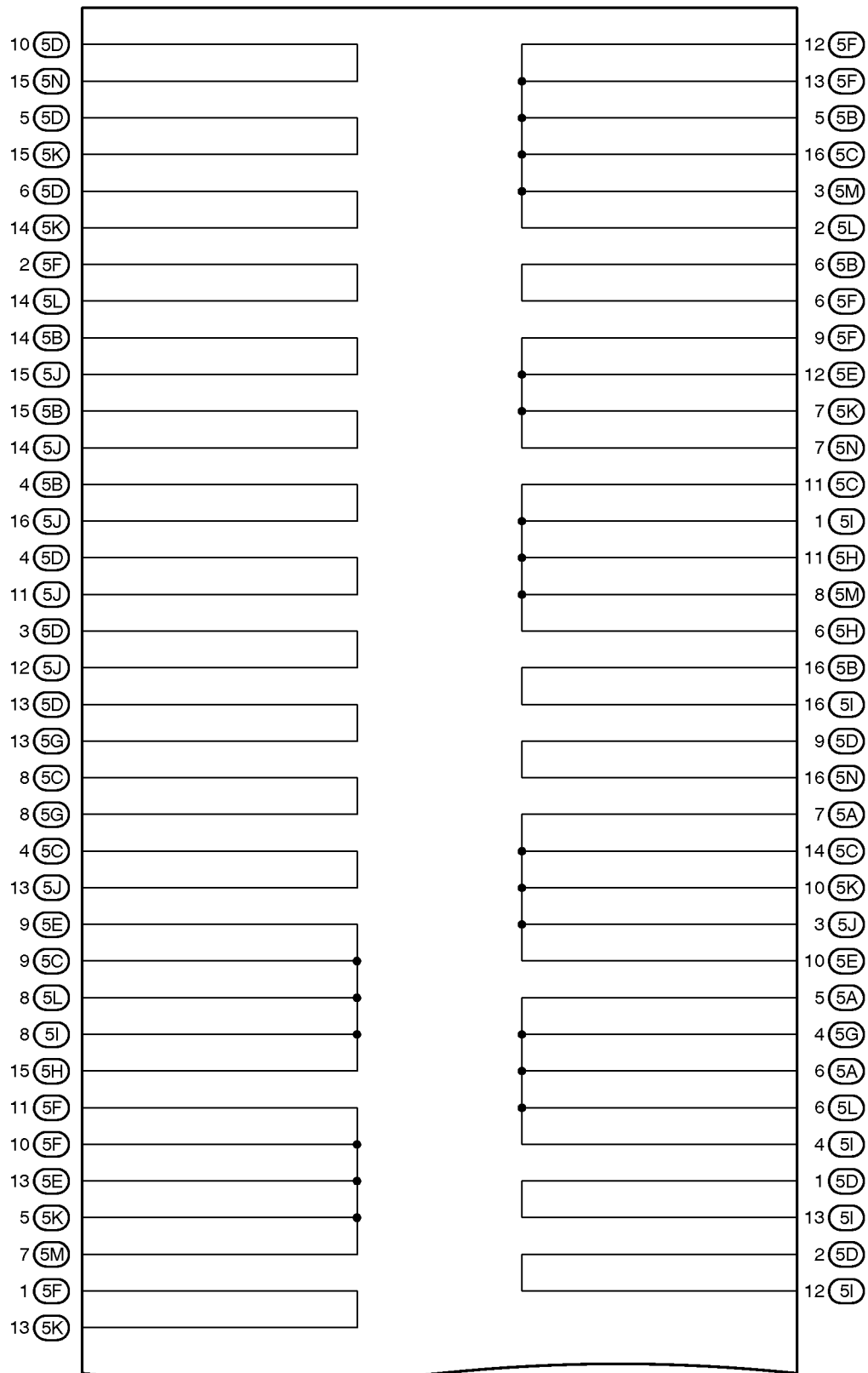
5 (4C)			11 (4C)
15 (4A)			3 (4A)
10 (4A)			15 (4C)
16 (4H)			15 (4I)
5 (4D)			5 (4B)
15 (4J)			15 (4B)
6 (4D)			14 (4B)
14 (4J)			12 (4F)
7 (4D)			4 (4C)
13 (4J)			15 (4H)
8 (4D)			8 (4C)
12 (4J)			14 (4A)
4 (4D)			6 (4C)
16 (4J)			16 (4A)
5 (4E)			9 (4B)
11 (4J)			14 (4G)
1 (4D)			6 (4L)
13 (4G)			2 (4J)
13 (4D)			2 (4G)
12 (4L)			9 (4J)
5 (4H)			9 (4G)
3 (4G)			8 (4J)
3 (4H)			8 (4G)
14 (4D)			7 (4J)
3 (4J)			7 (4G)
3 (4D)			5 (4J)
13 (4I)			3 (4I)
1 (4C)			6 (4I)
6 (4F)			6 (4G)
15 (4F)			1 (4J)
6 (4K)			3 (4K)
7 (4K)			1 (4I)
1 (4F)			4 (4J)
13 (4H)			2 (4I)
			6 (4J)
1 (4G)			4 (4I)
4 (4K)			7 (4I)
5 (4K)			7 (4L)

F RELAY LOCATIONS

 : Center Connector No.2 **Instrument Panel Brace RH (See Page 20)**



[Center Connector No.2 Inner Circuit]

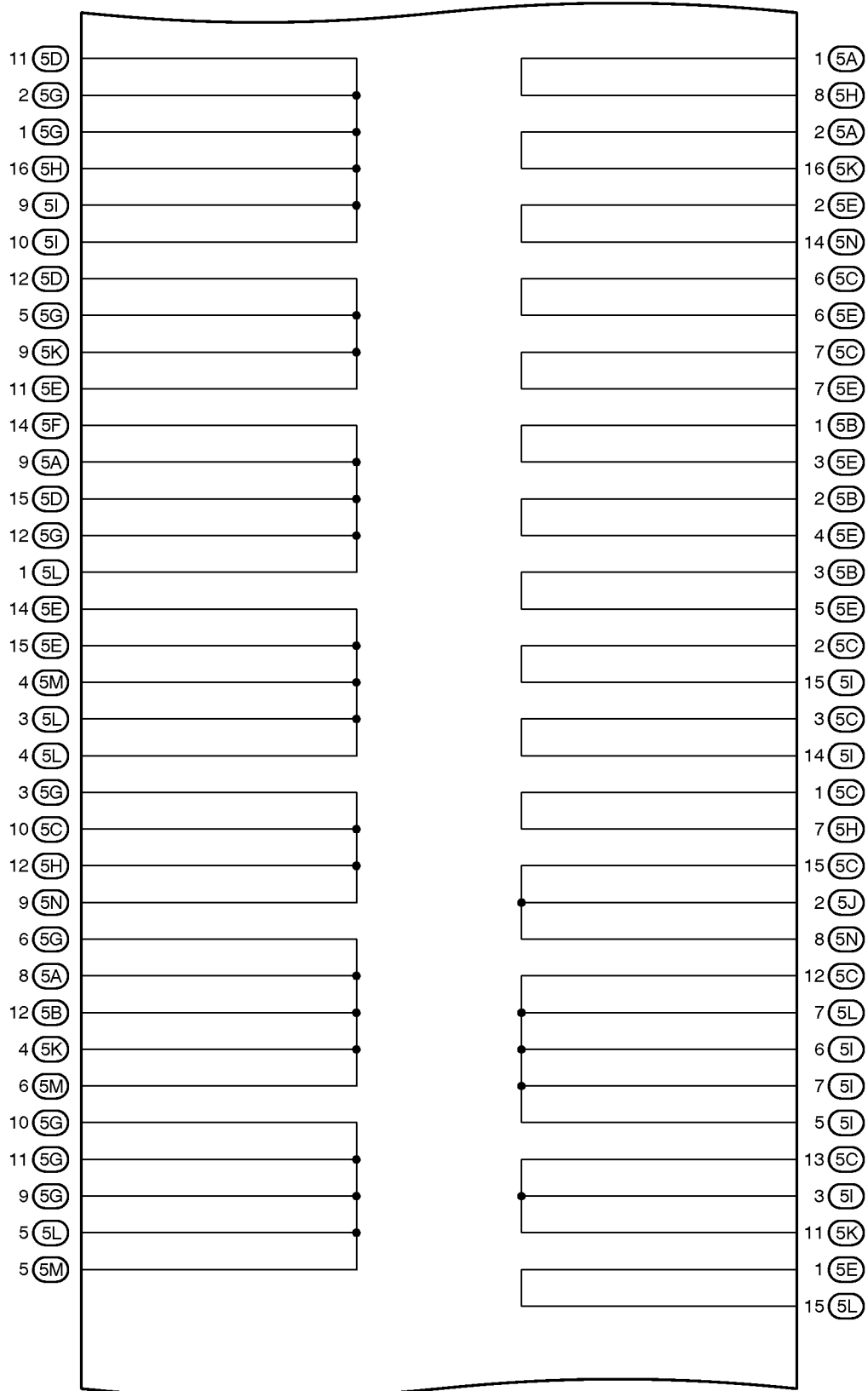


(Cont. Next Page)

F RELAY LOCATIONS

[Center Connector No.2 Inner Circuit]

(Cont'd)

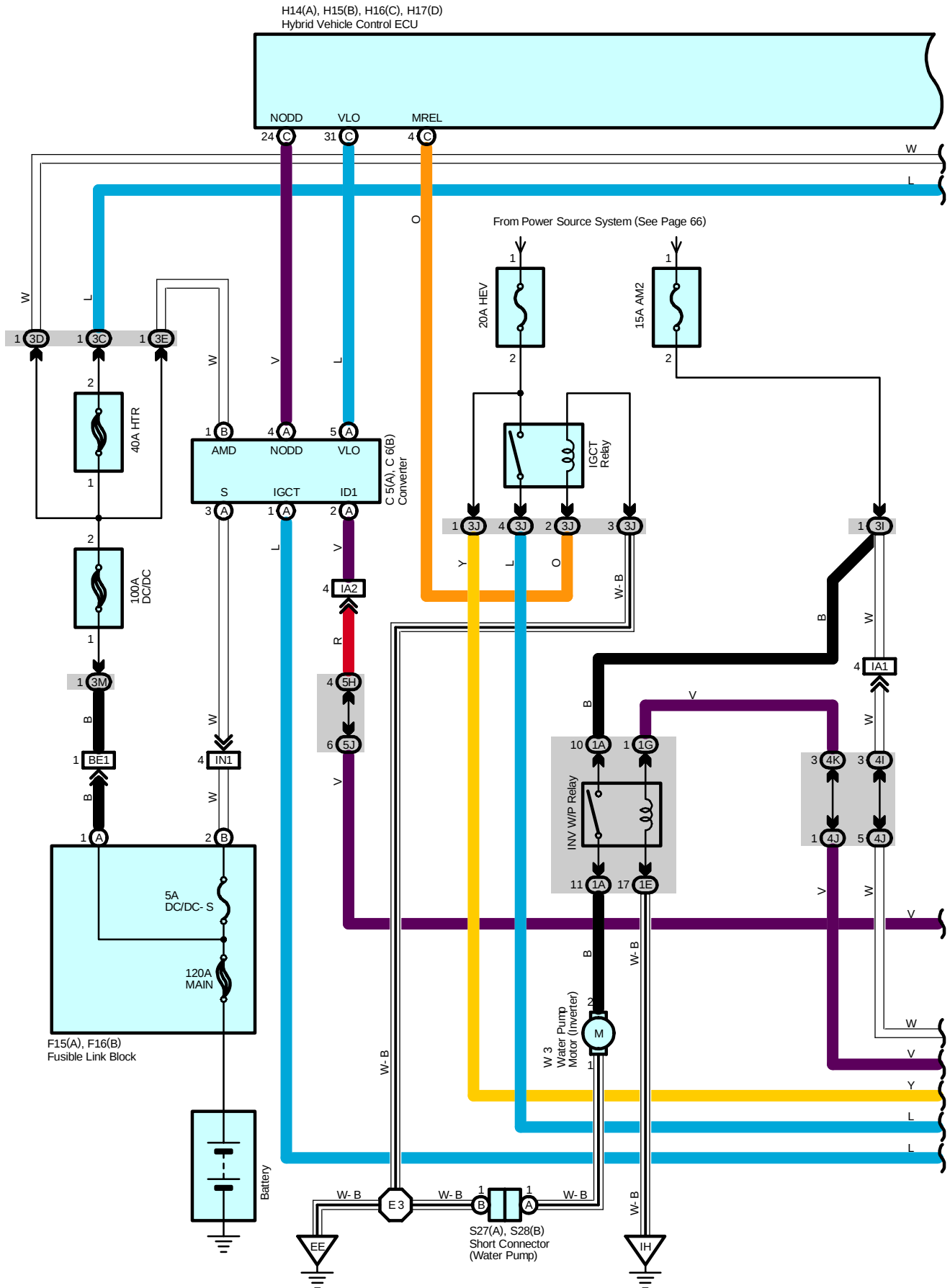


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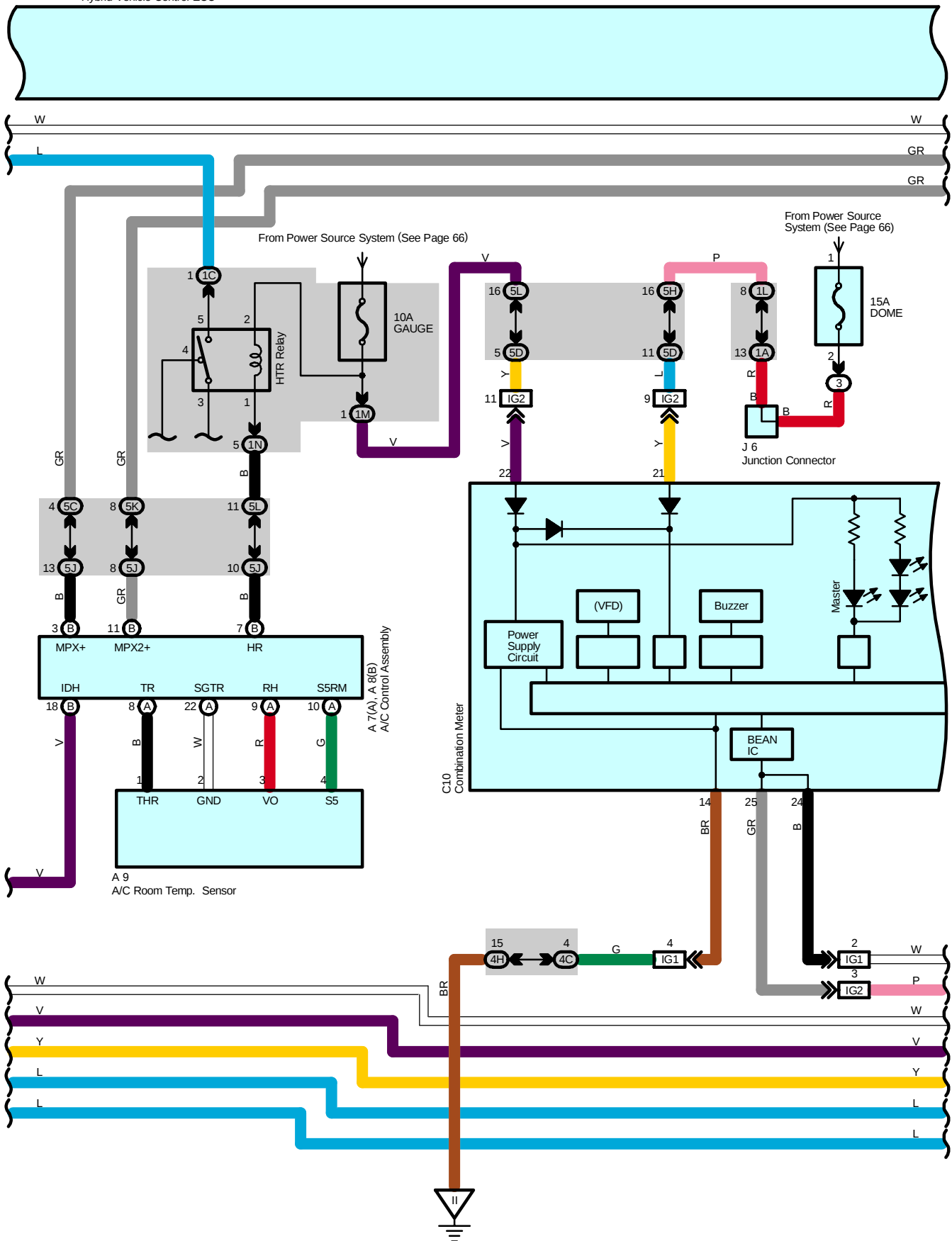
(Cont'd)

9 (5J)			10 (5M)
10 (5L)			10 (5N)
10 (5J)			11 (5M)
11 (5L)			11 (5N)
6 (5J)			6 (5N)
4 (5H)		•	6 (5K)
7 (5J)			14 (5D)
5 (5H)			14 (5H)
5 (5J)			13 (5L)
3 (5H)			1 (5J)
4 (5J)		•	2 (5K)
2 (5H)			3 (5K)
8 (5J)			1 (5K)
8 (5K)		•	3 (5N)
12 (5M)			2 (5N)
13 (5H)			2 (5I)
9 (5M)		•	5 (5N)
9 (5L)			4 (5N)
2 (5M)			7 (5D)
1 (5H)			16 (5L)
8 (5D)			
16 (5M)			

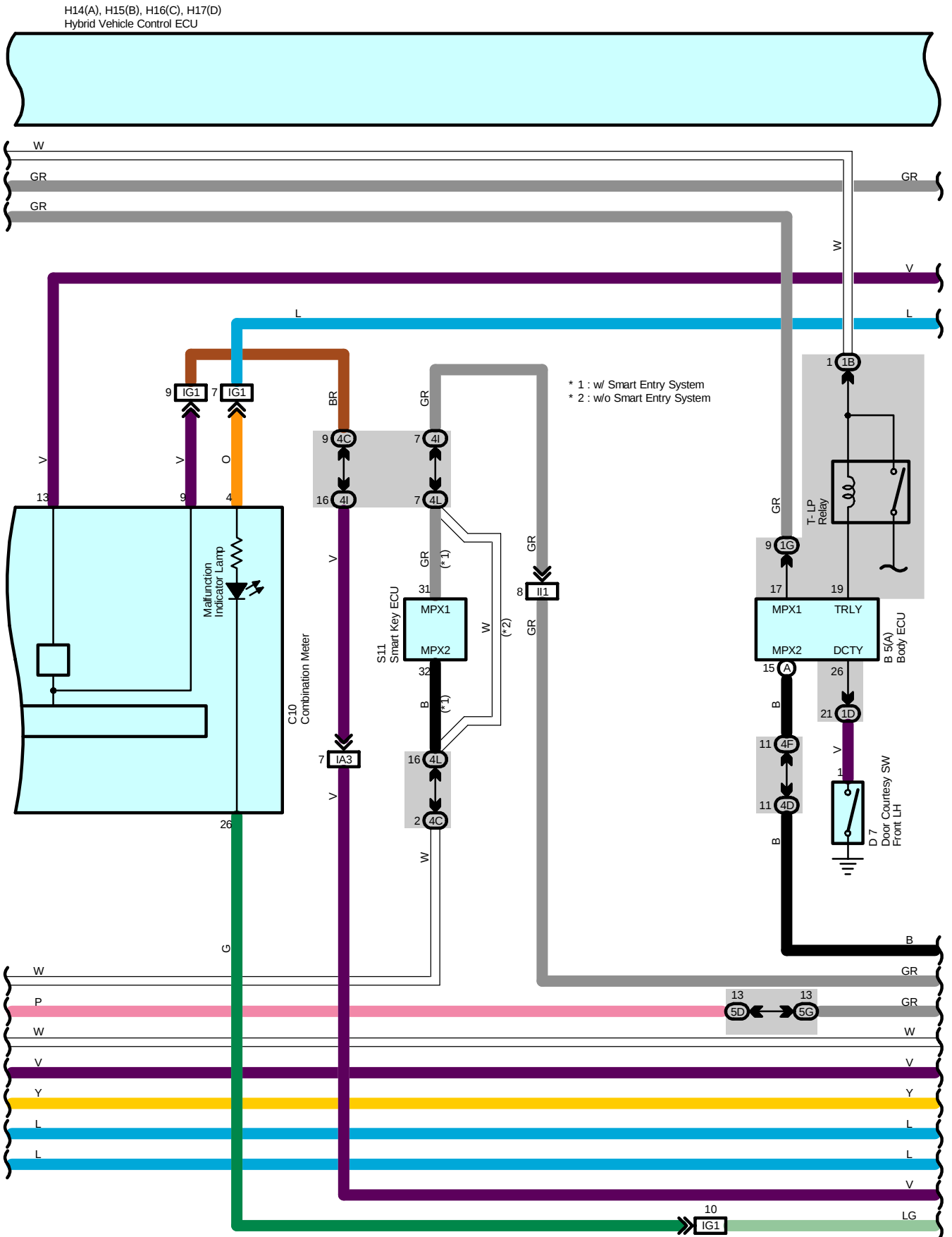
TOYOTA Hybrid System



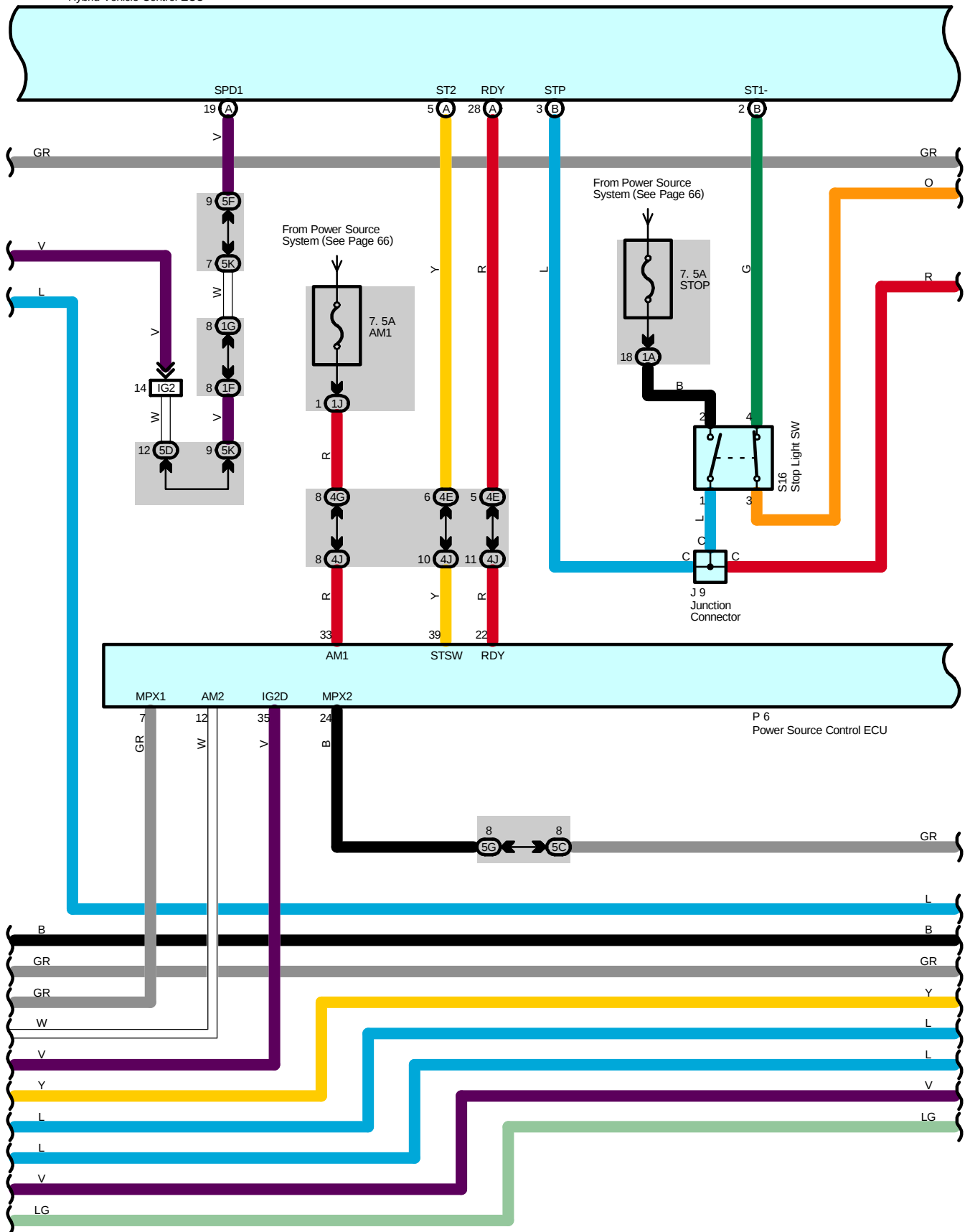
H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



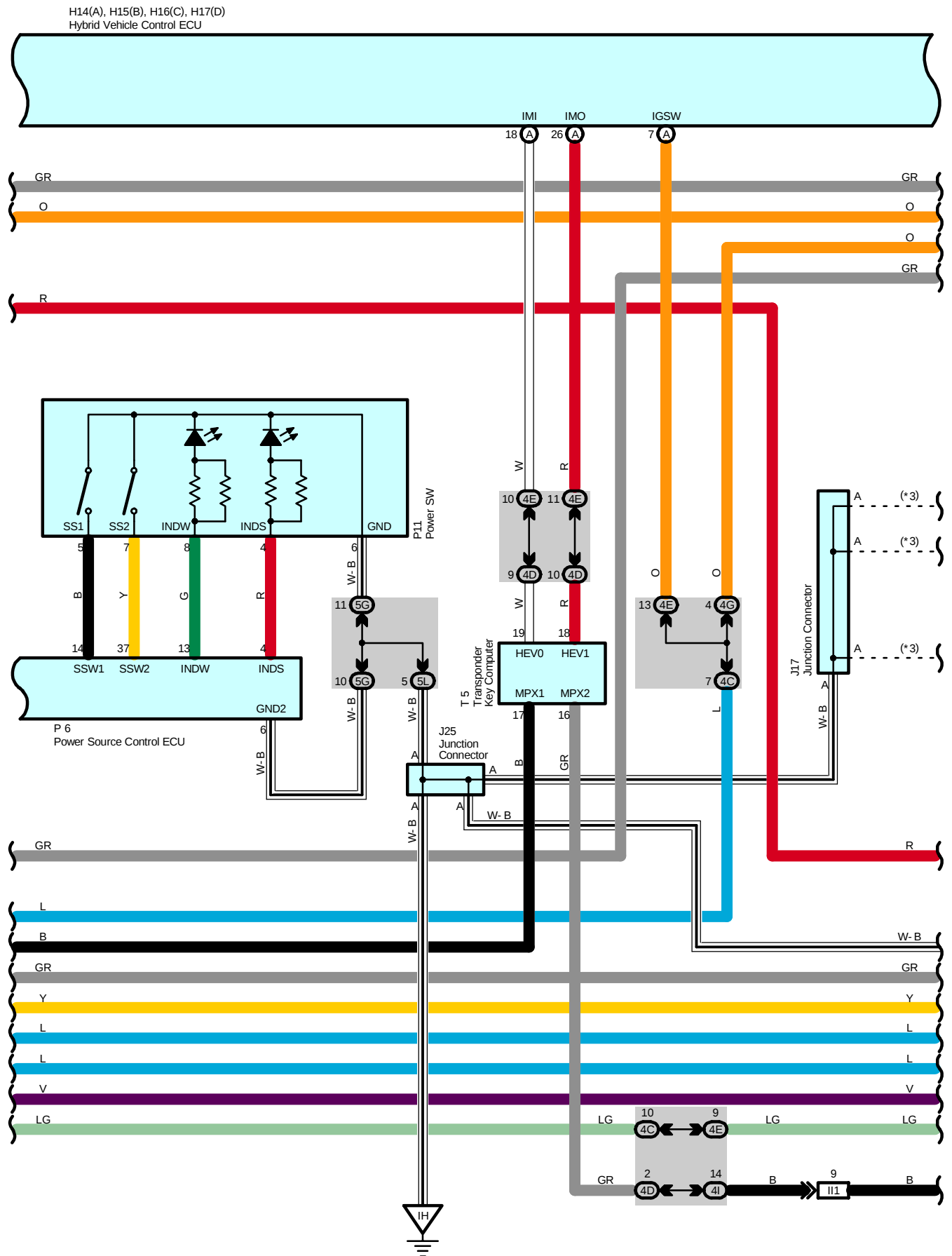
TOYOTA Hybrid System

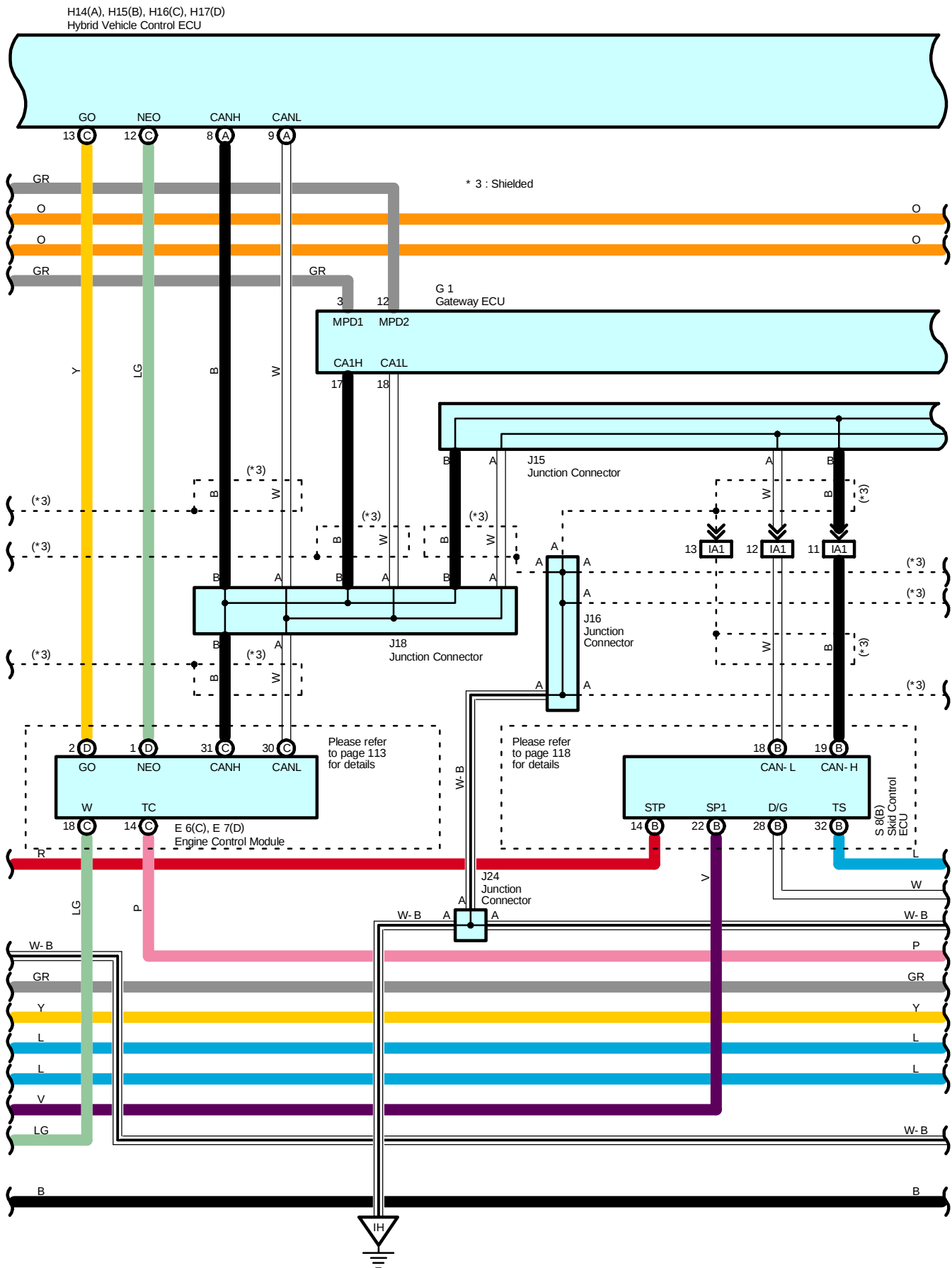


H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



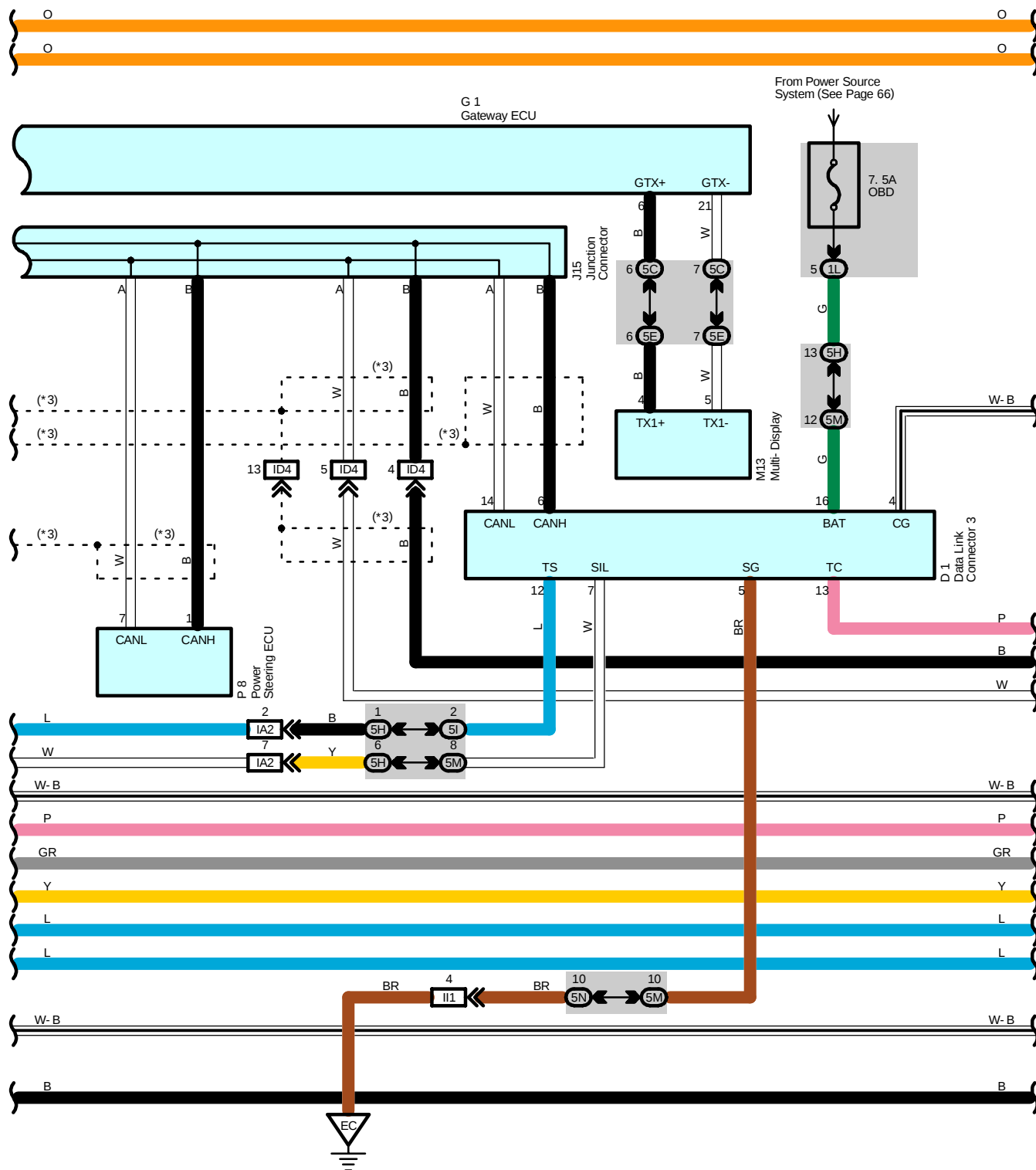
TOYOTA Hybrid System



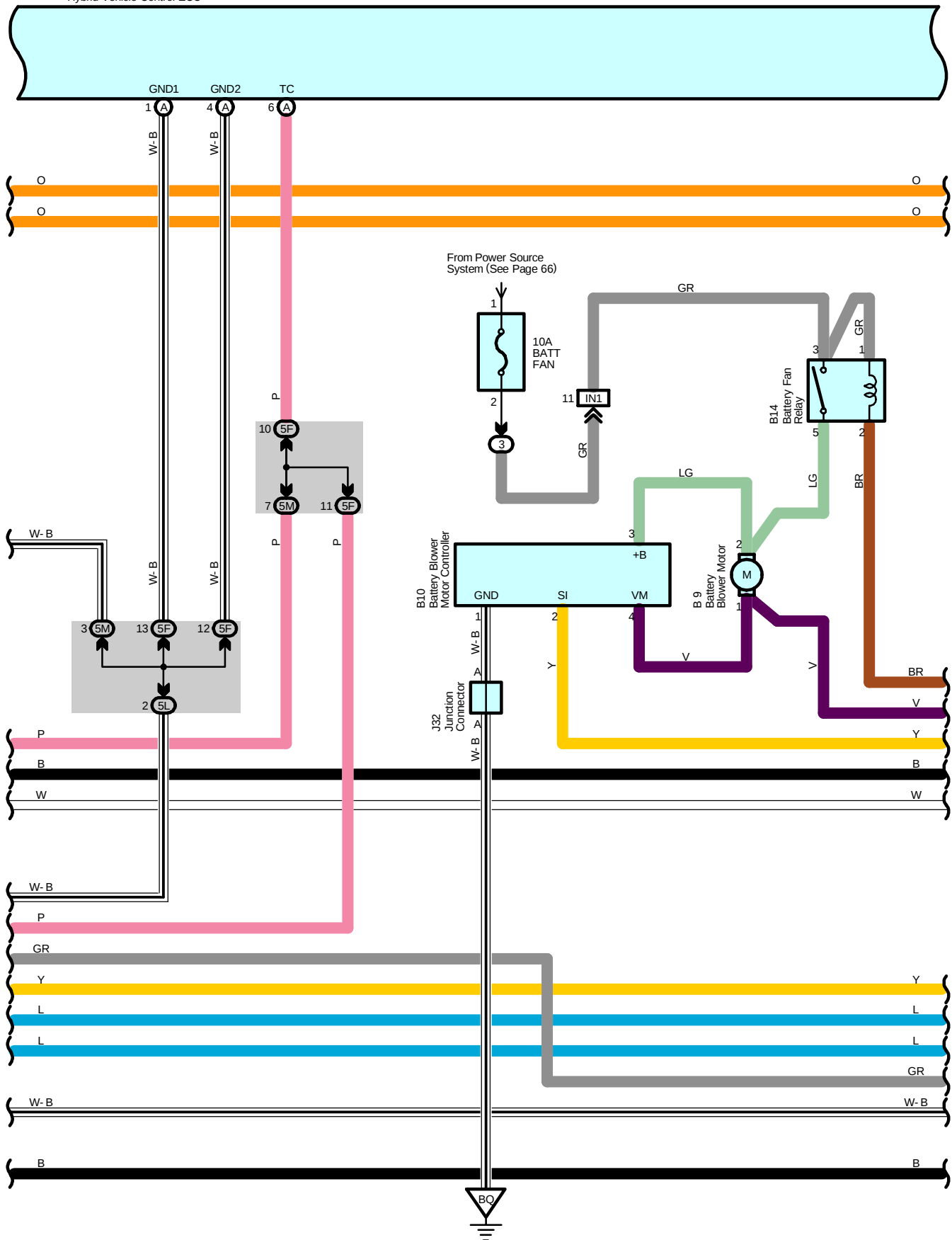


TOYOTA Hybrid System

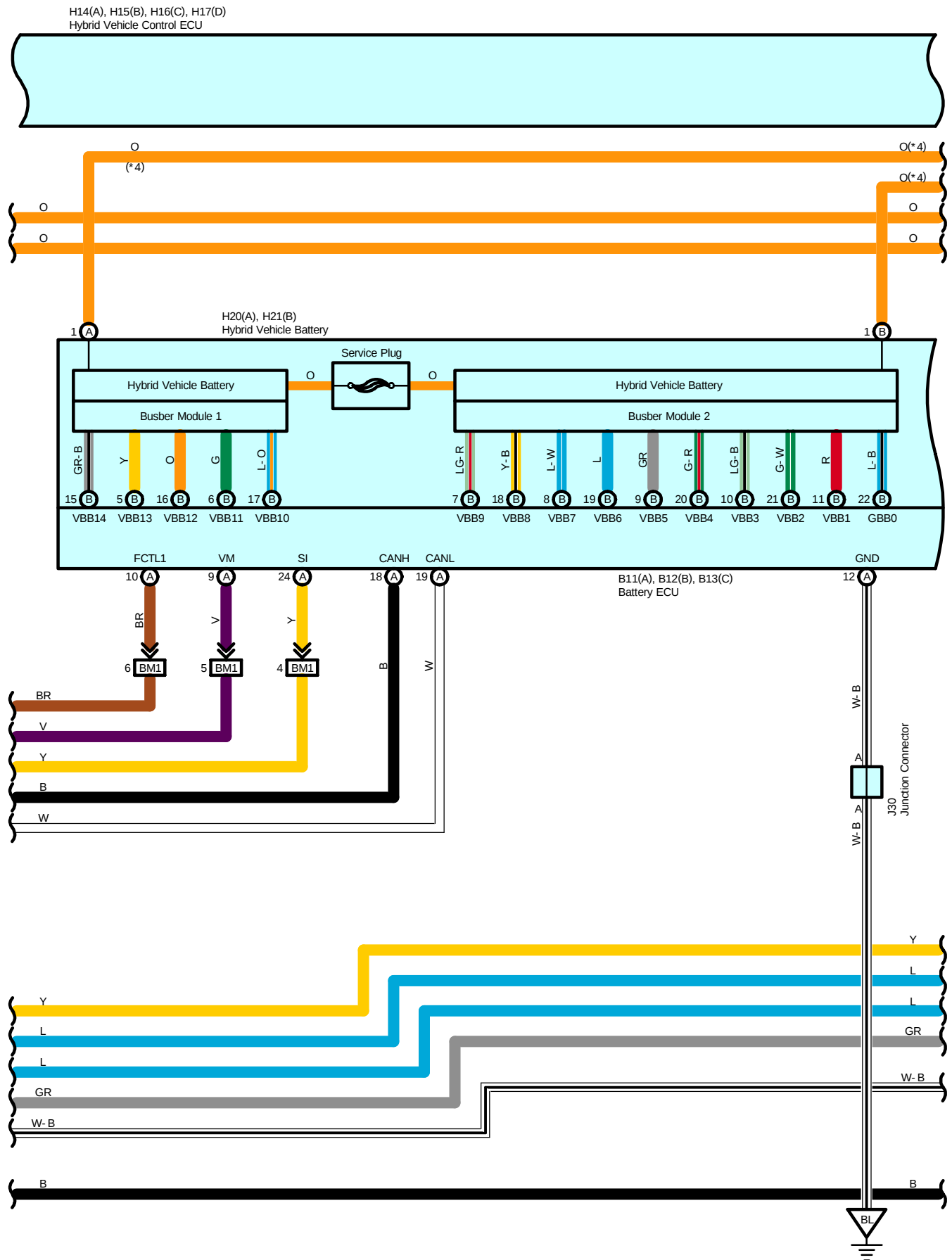
H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU

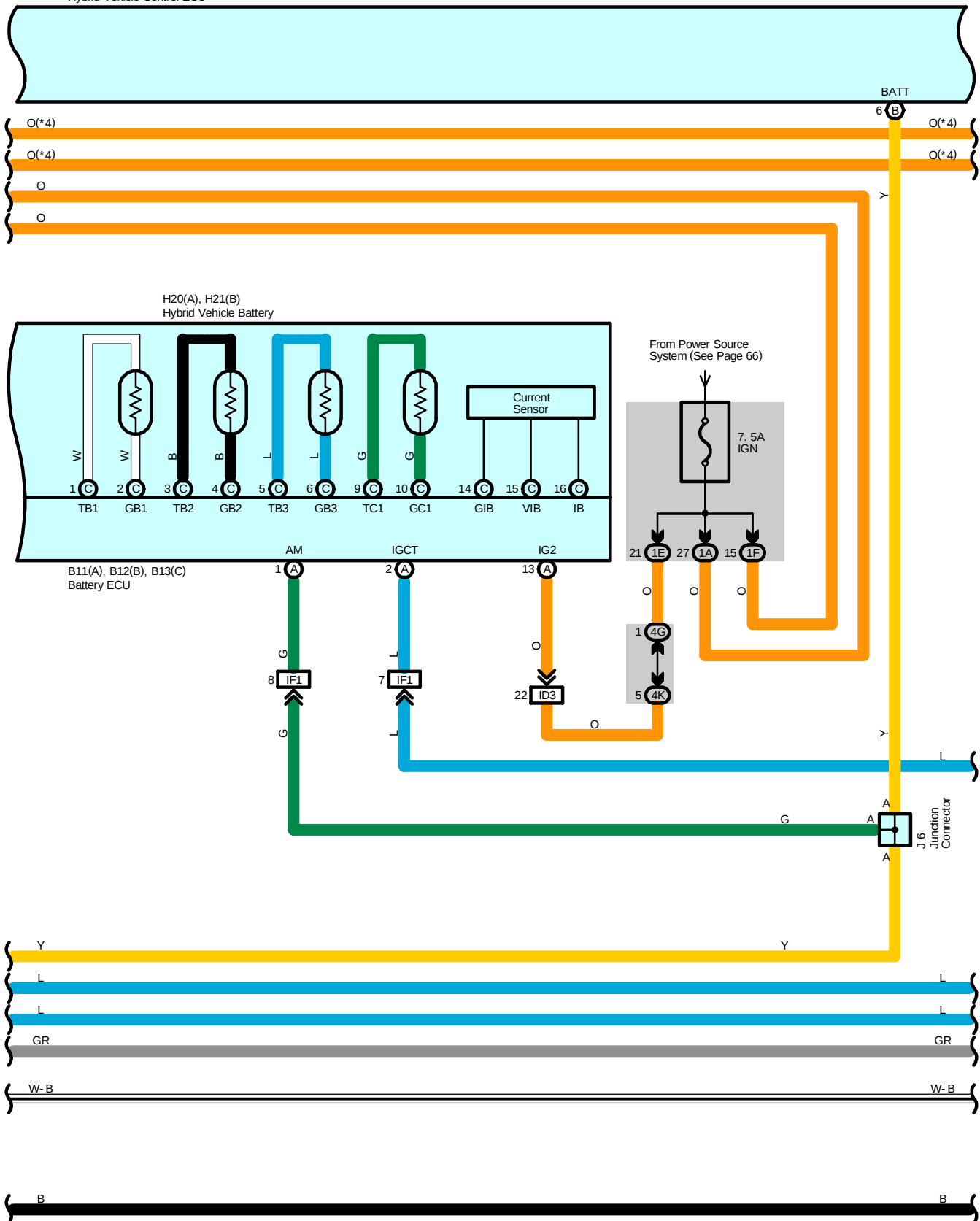


TOYOTA Hybrid System

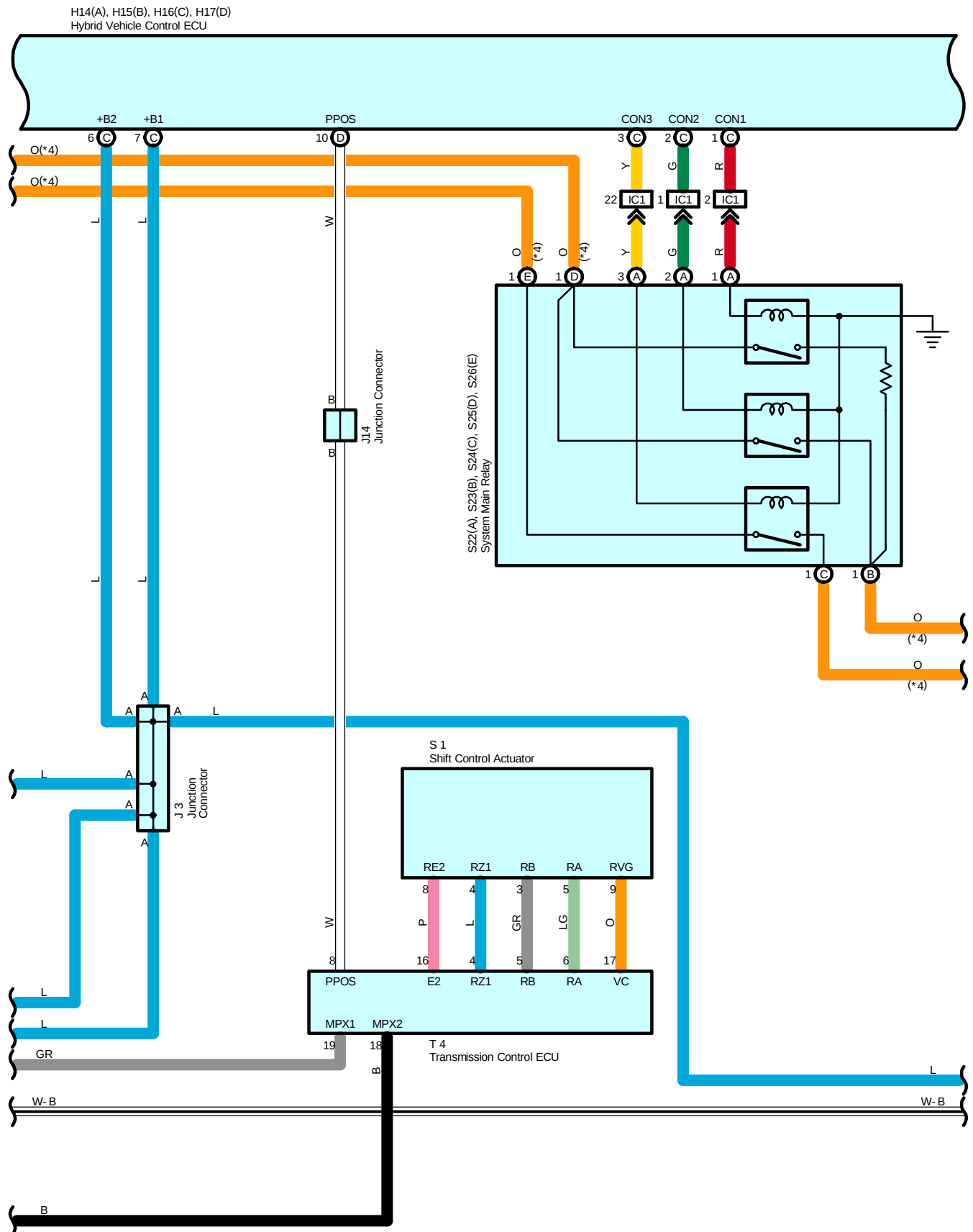


H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU

* 4 : High Voltage

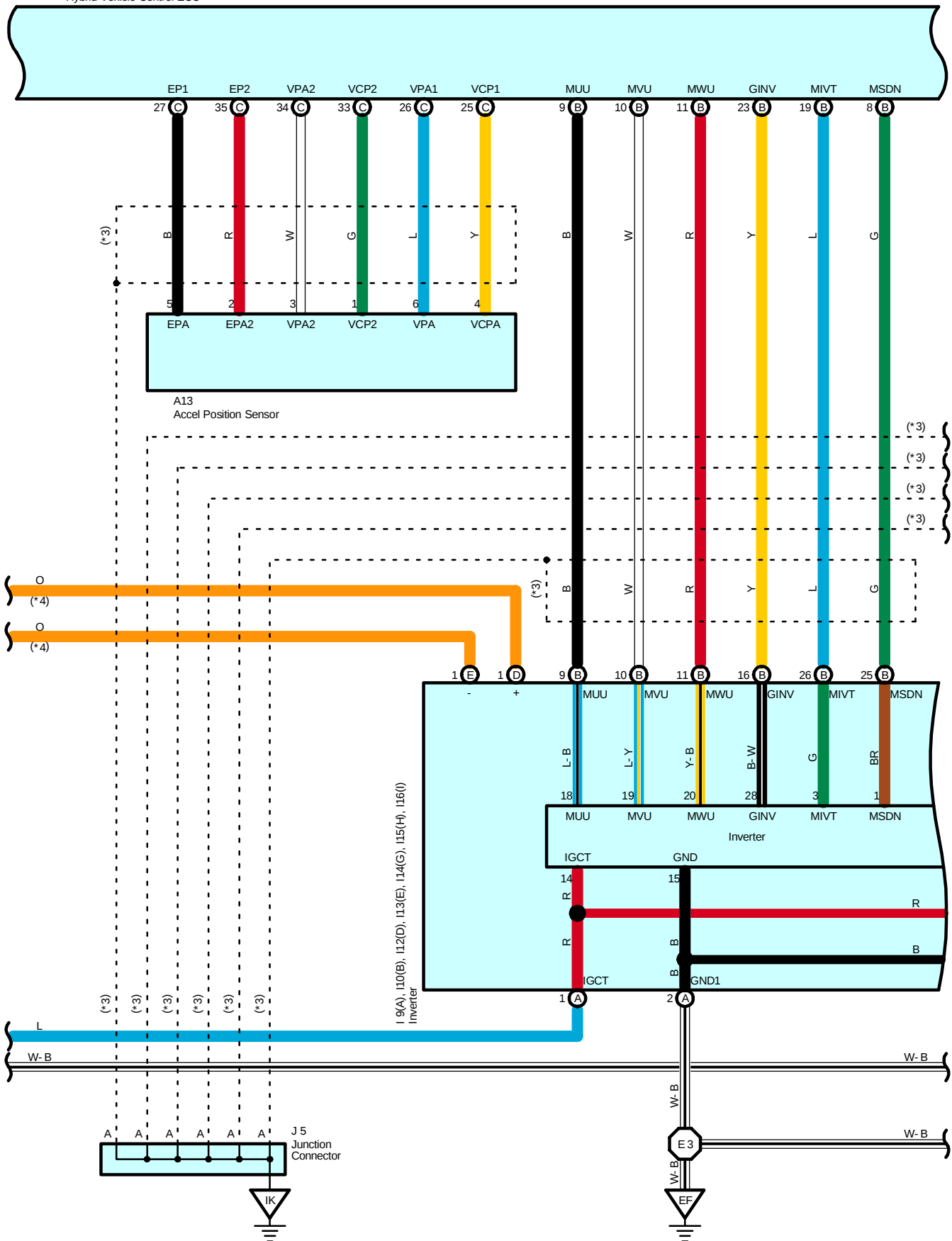


TOYOTA Hybrid System



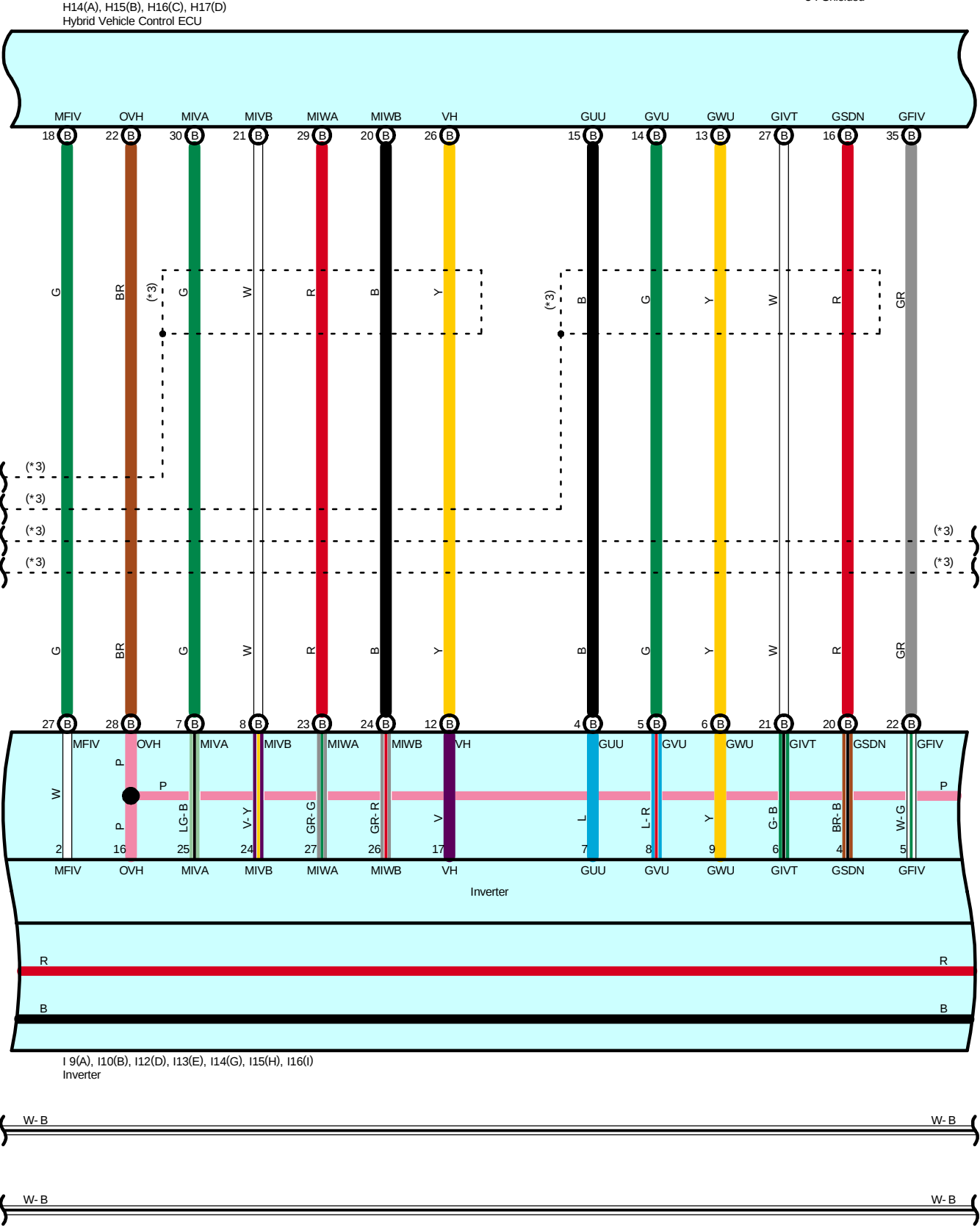
H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU

* 3 : Shielded
* 4 : High Voltage

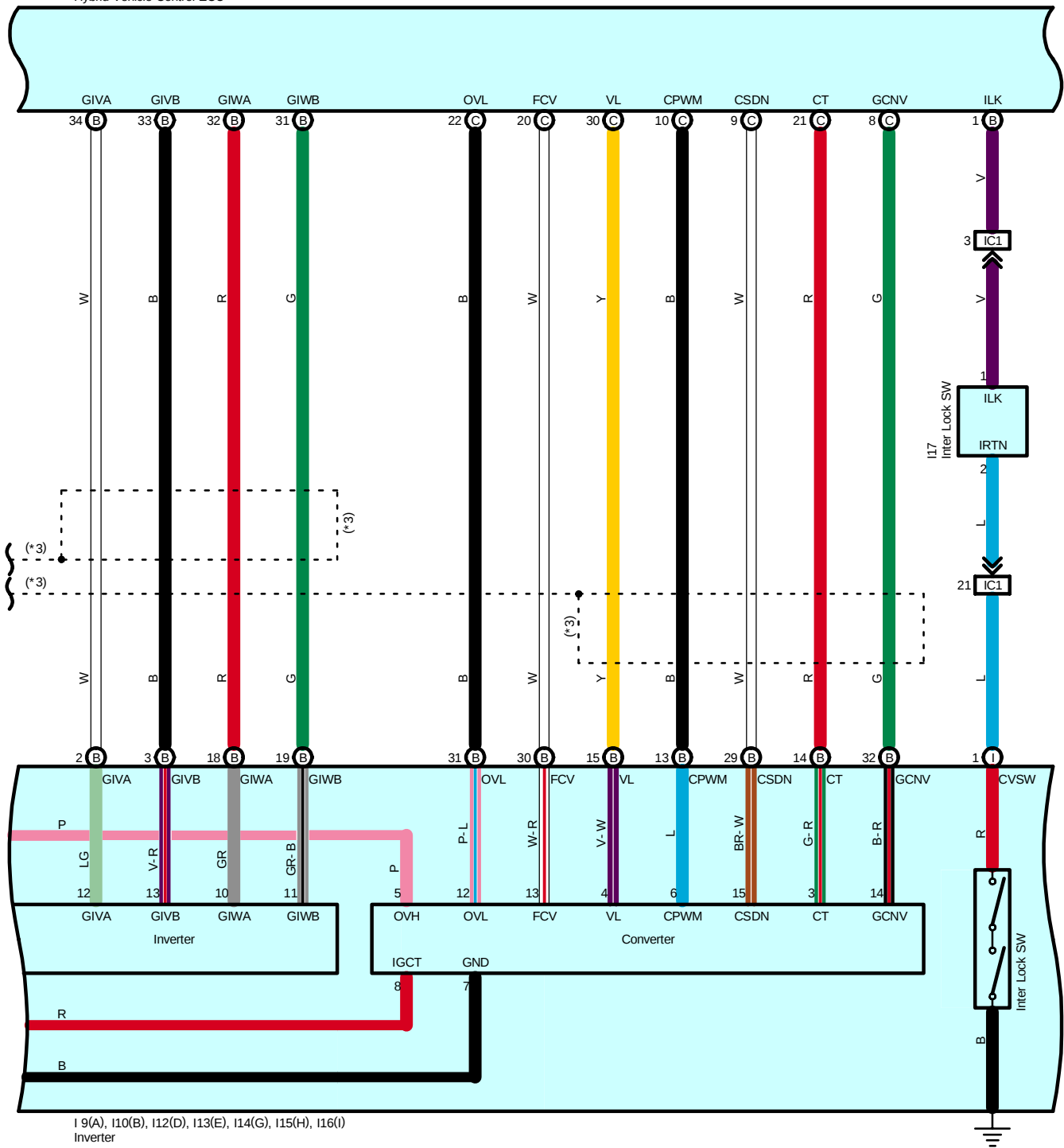


TOYOTA Hybrid System

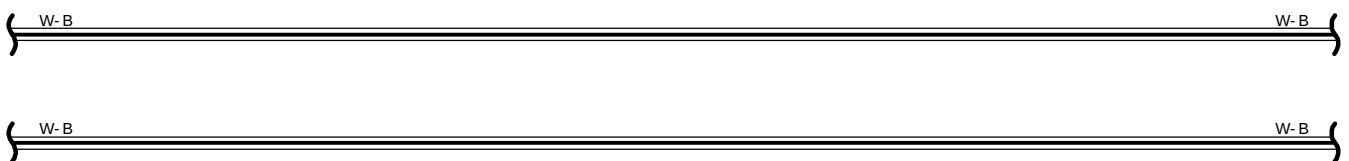
* 3 : Shielded



H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



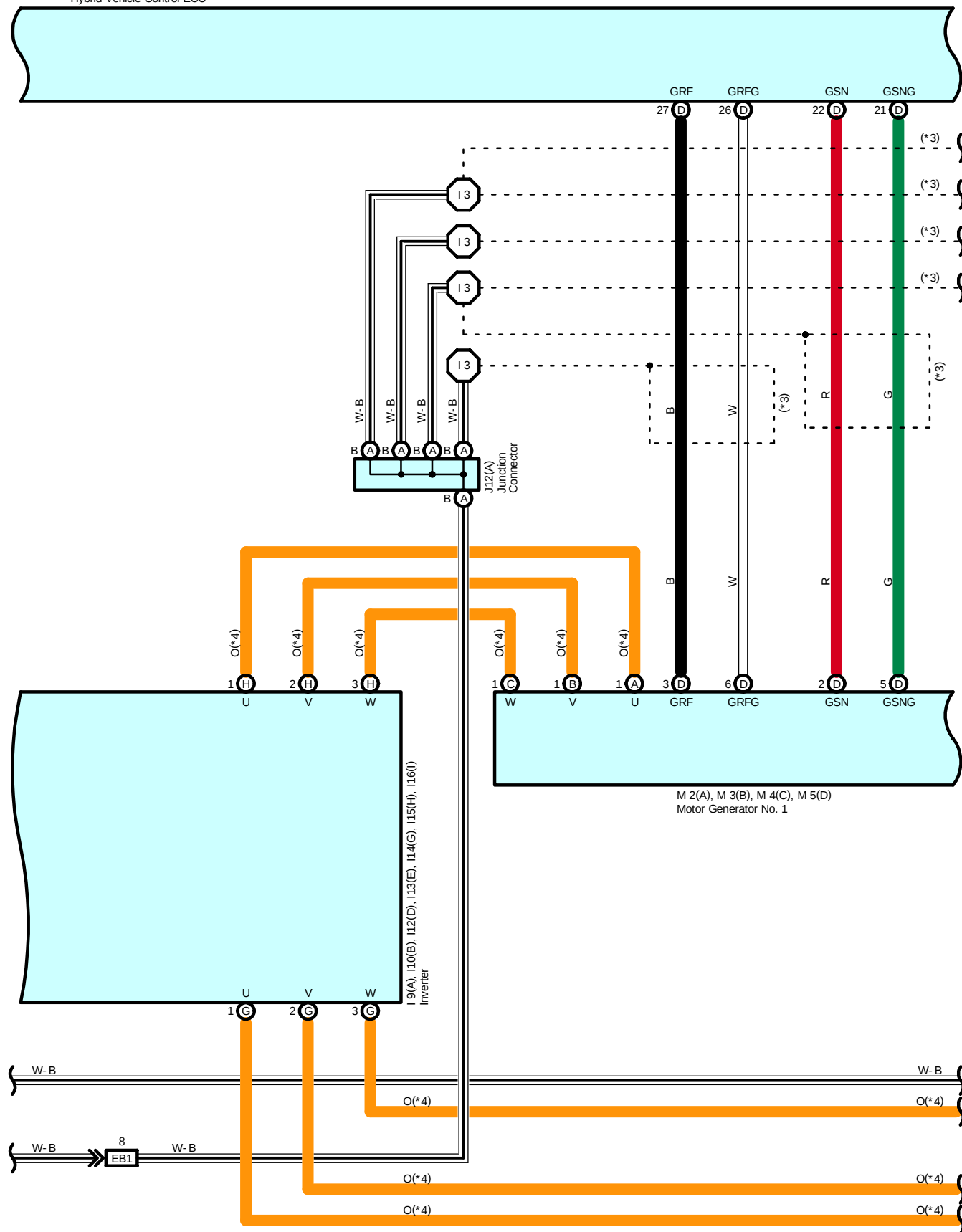
I 9(A), I10(B), I12(D), I13(E), I14(G), I15(H), I16(I)
Inverter



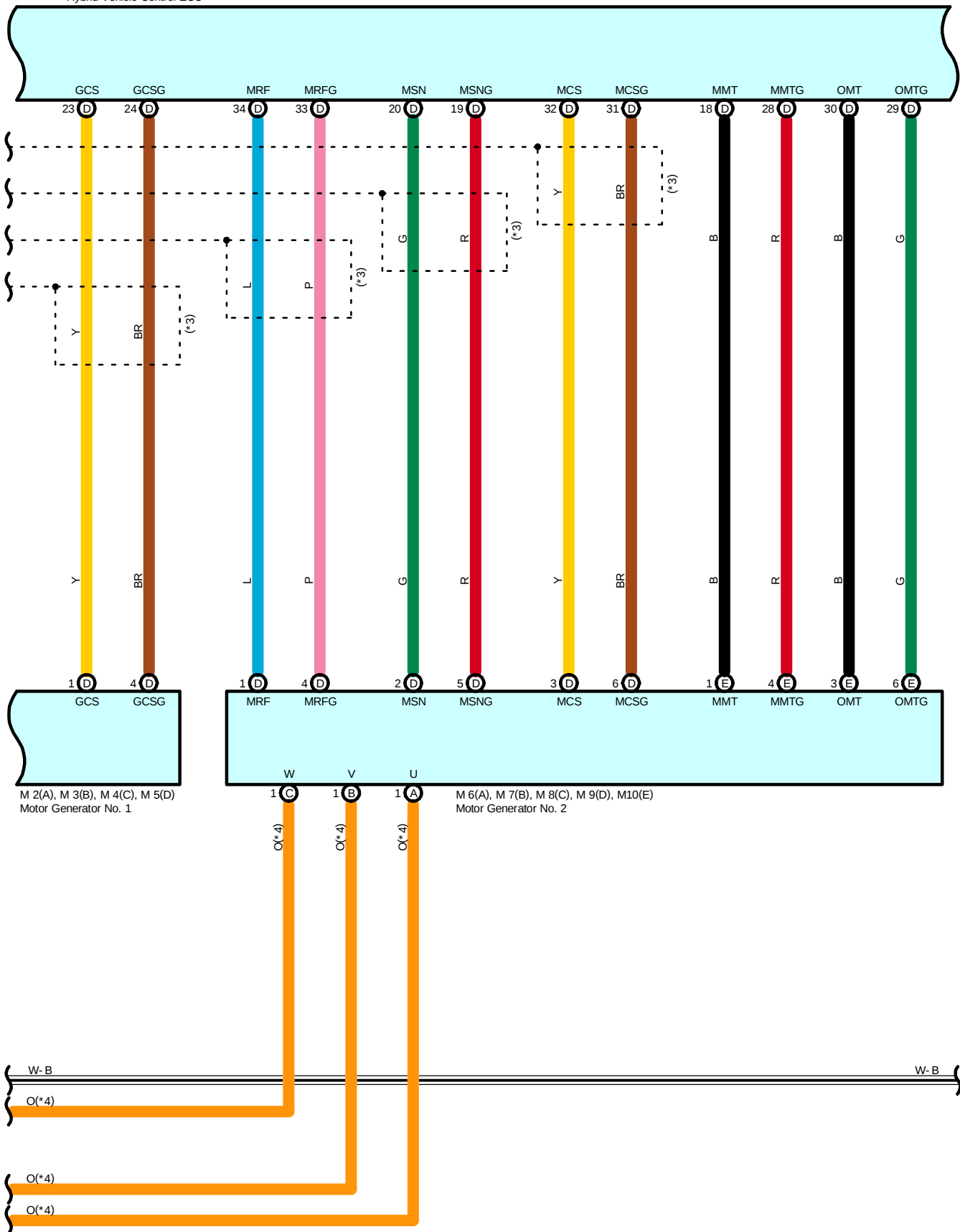
TOYOTA Hybrid System

H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU

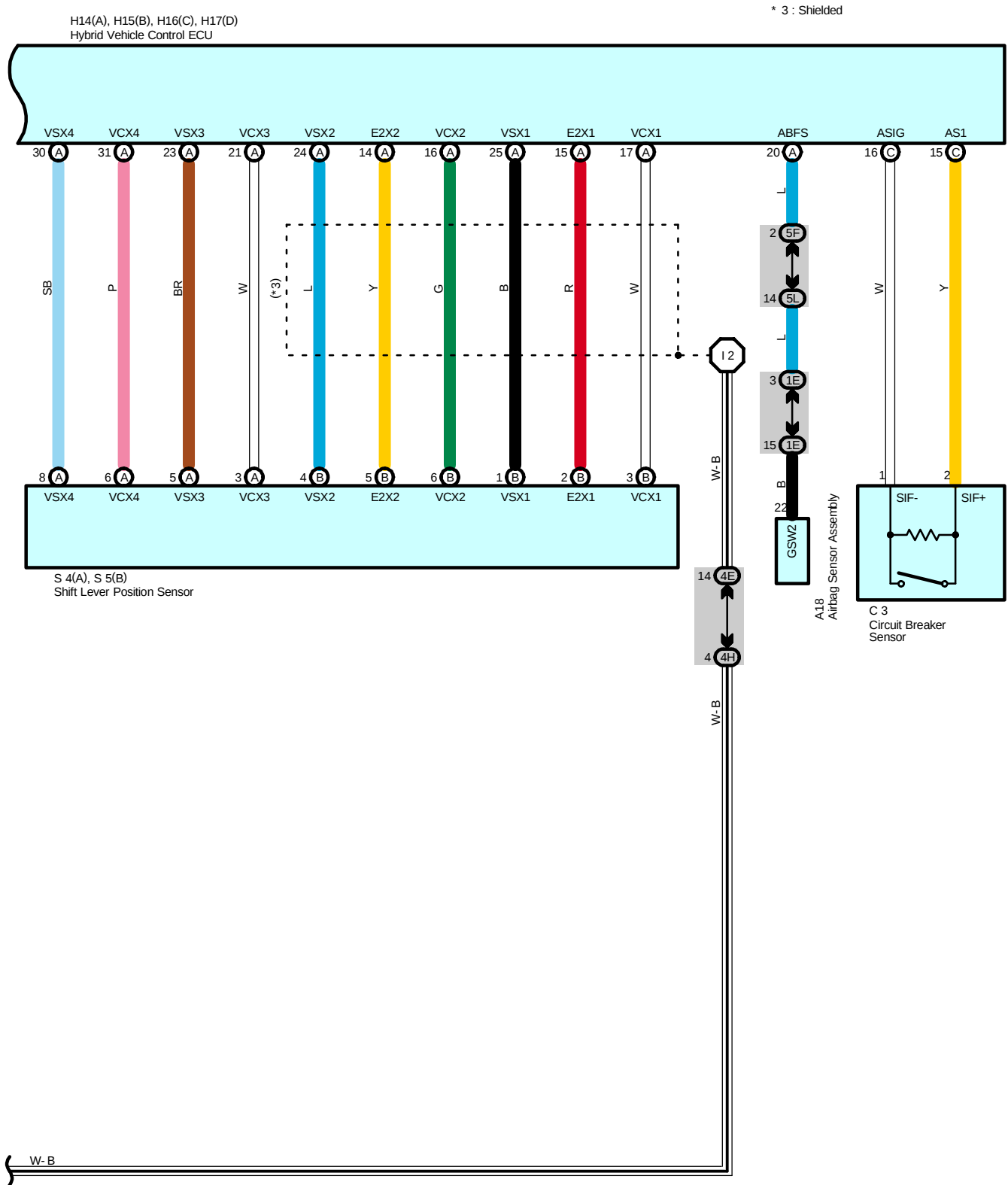
* 3 : Shielded
* 4 : High Voltage



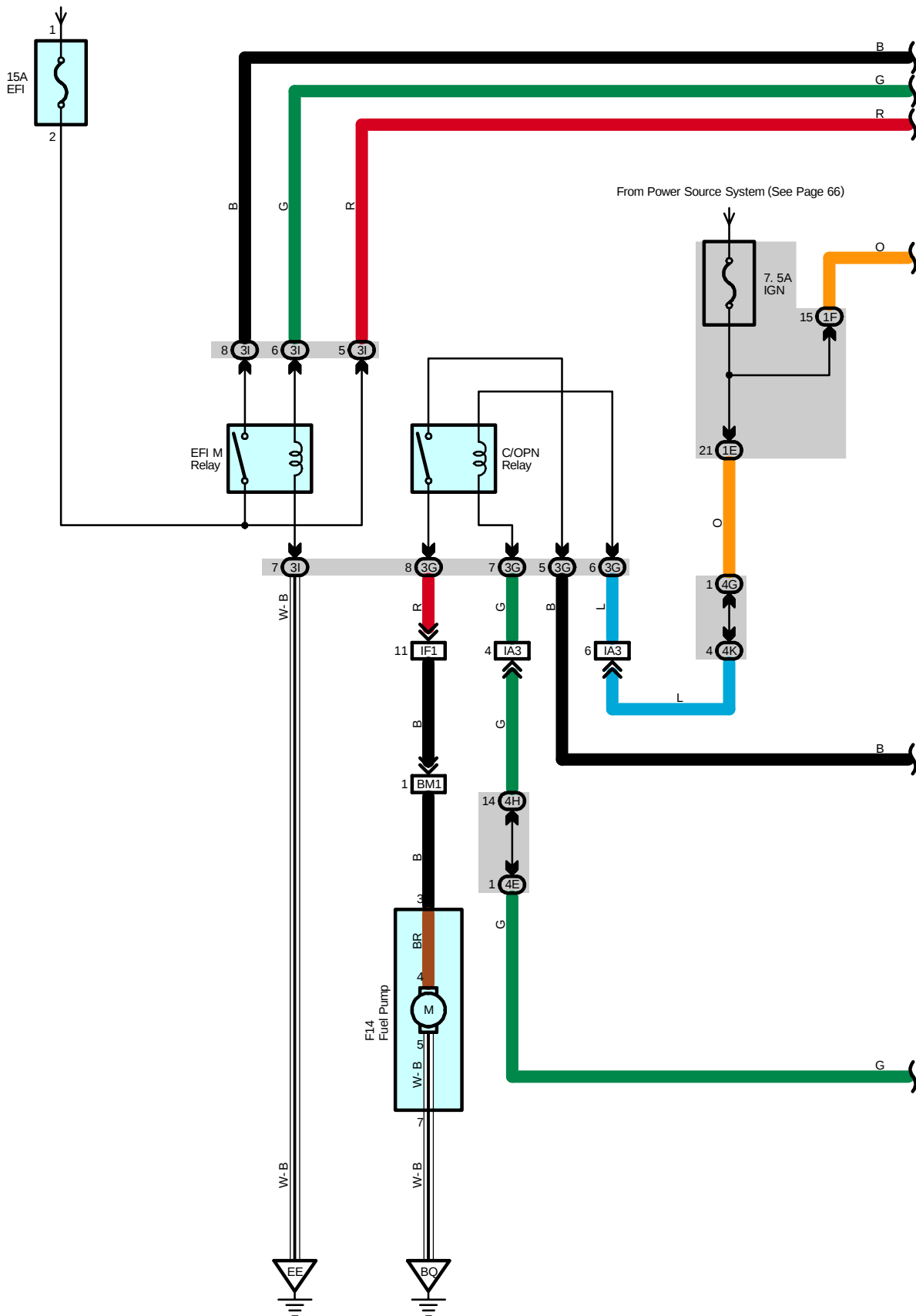
H14(A), H15(B), H16(C), H17(D)
Hybrid Vehicle Control ECU



TOYOTA Hybrid System

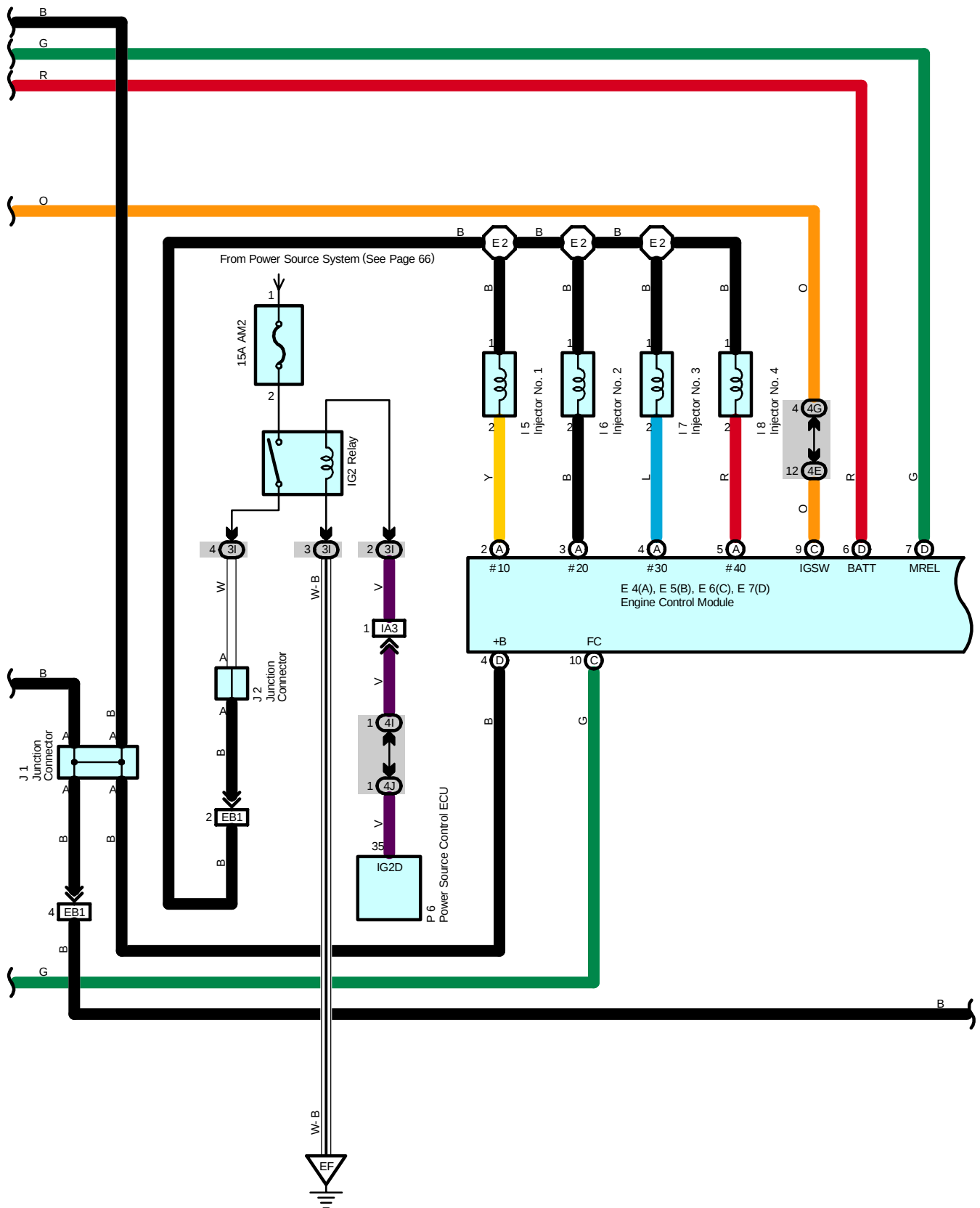


From Power Source System (See Page 66)



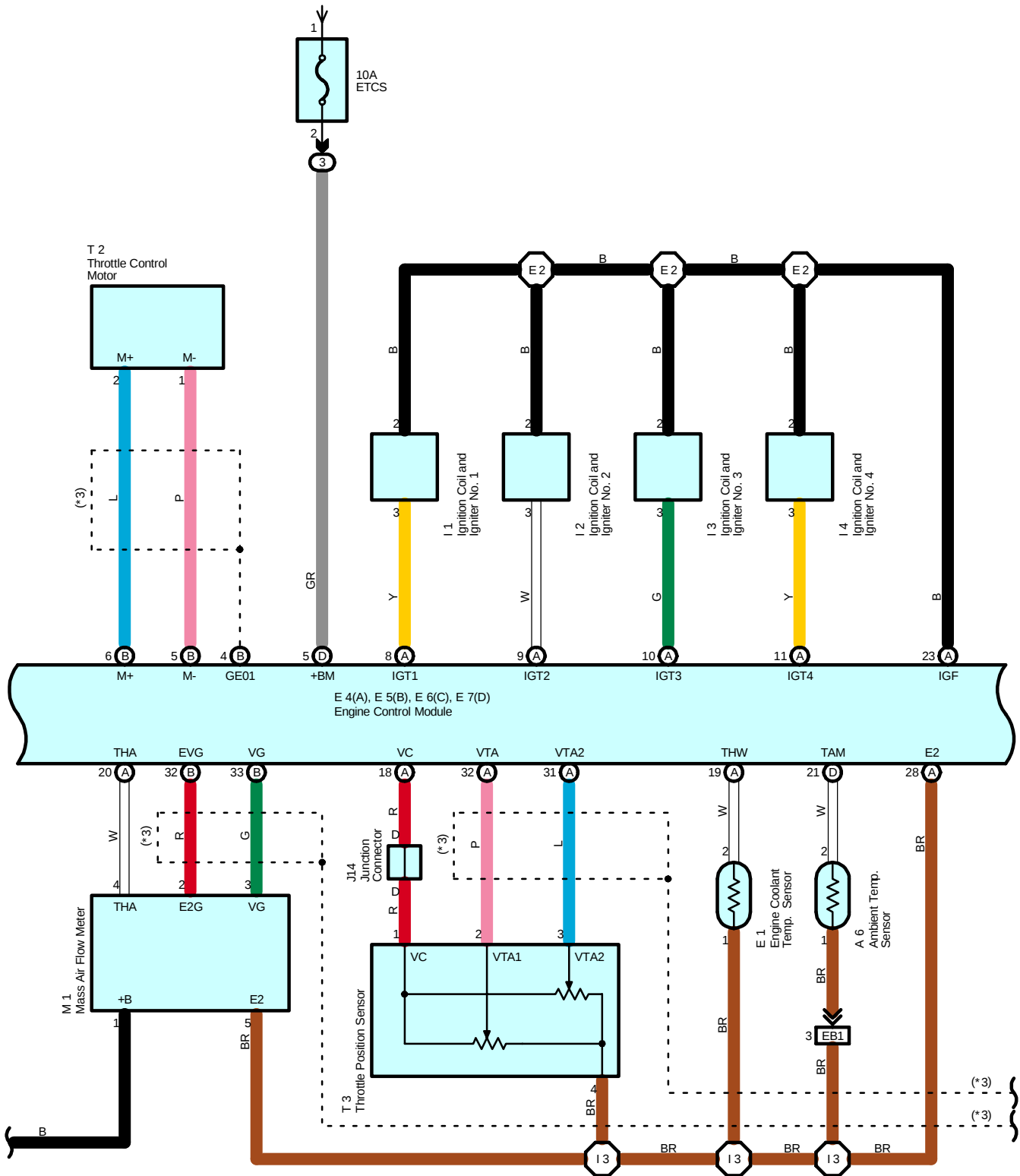
TOYOTA Hybrid System

[Details of Engine Control Module Section]



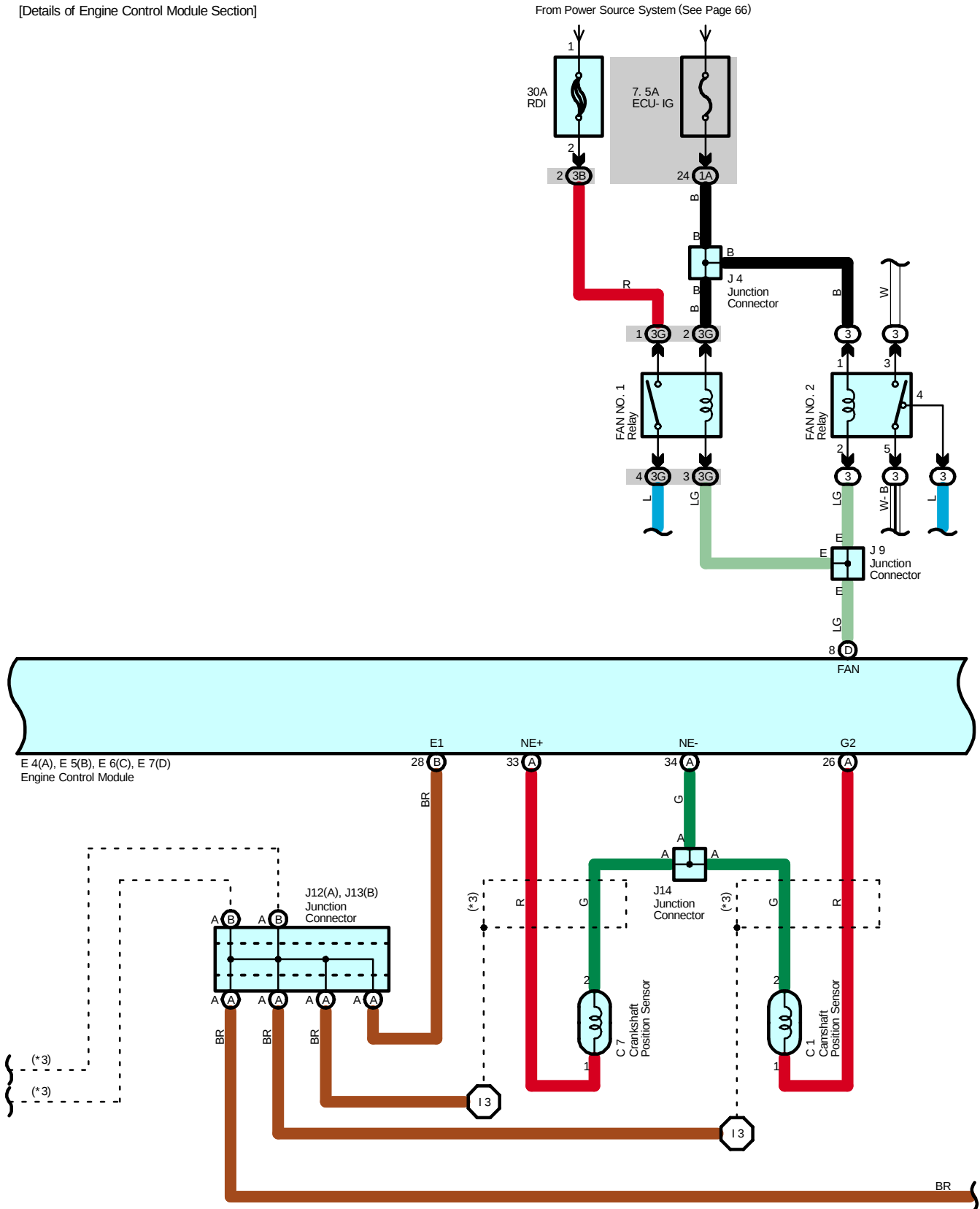
From Power Source System (See Page 66)

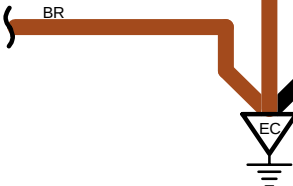
* 3 : Shielded



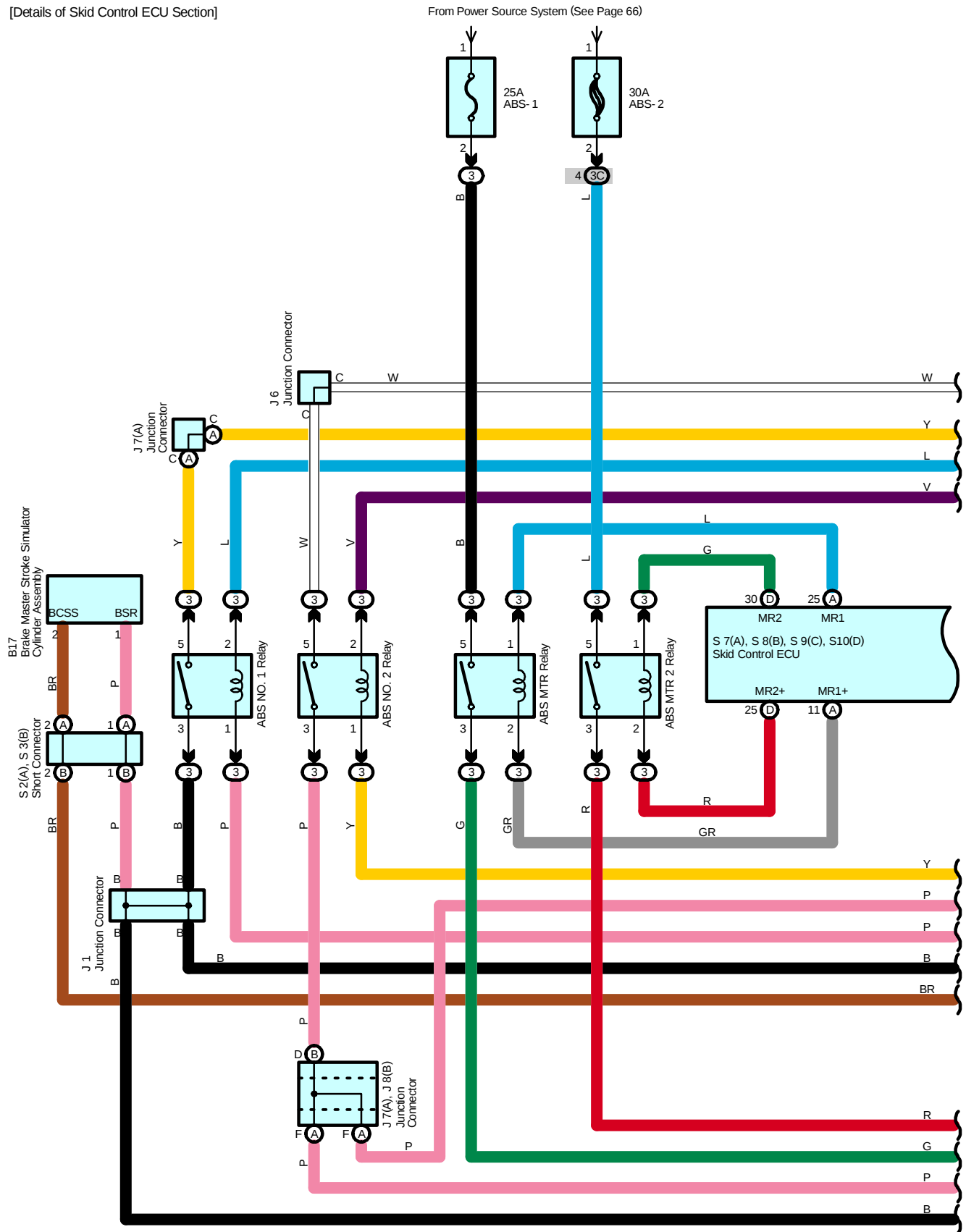
TOYOTA Hybrid System

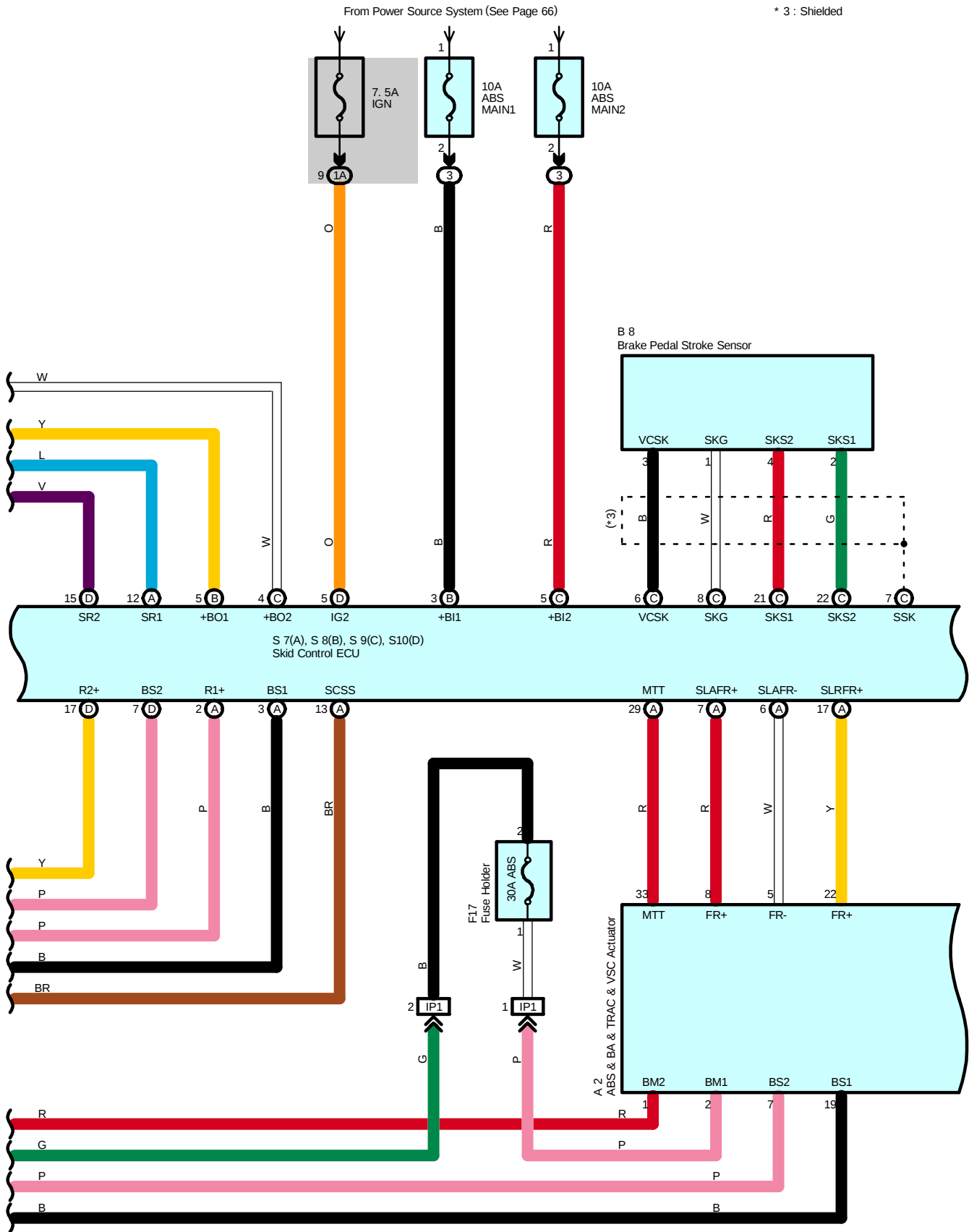
[Details of Engine Control Module Section]



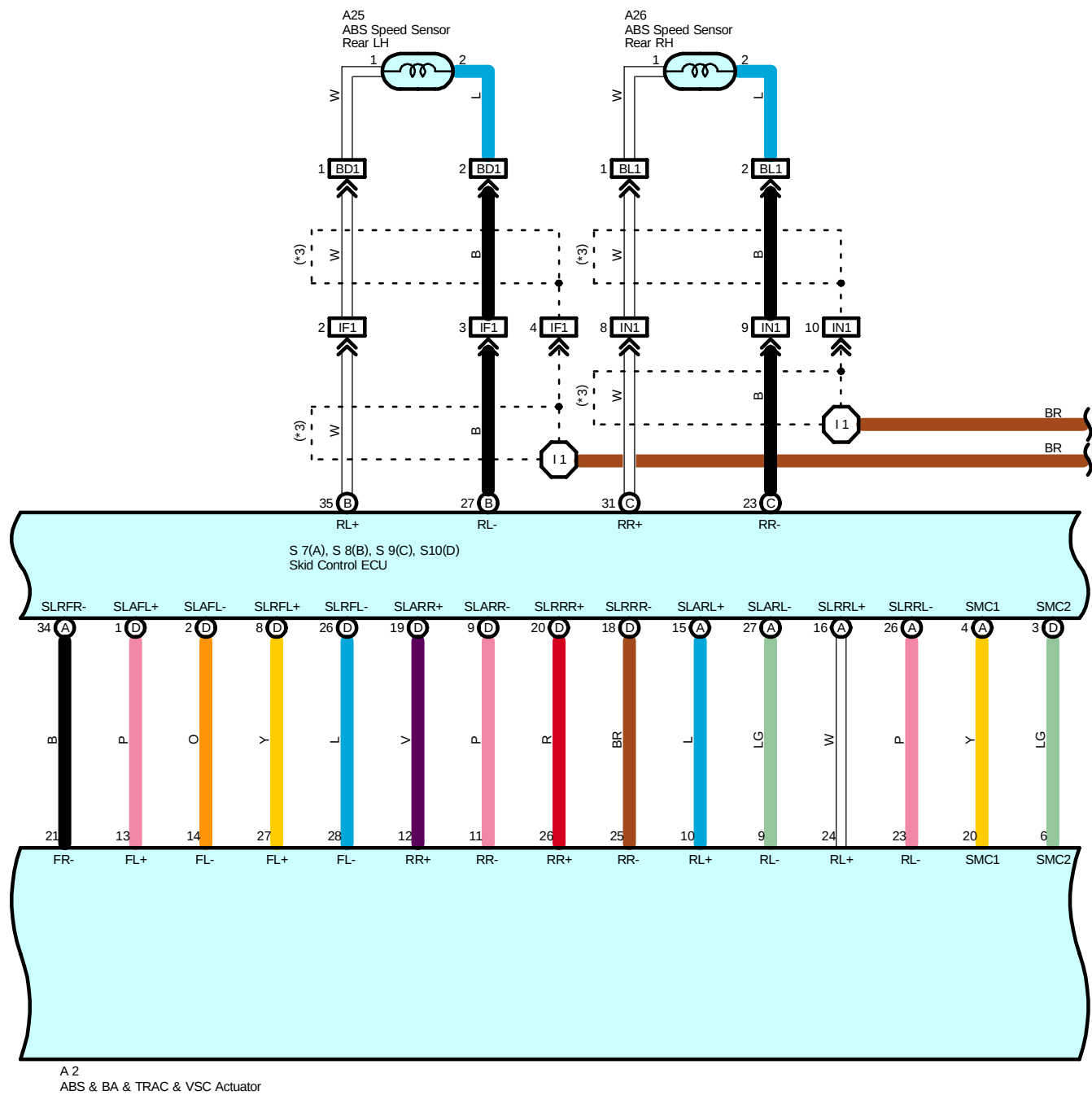


[Details of Skid Control ECU Section]

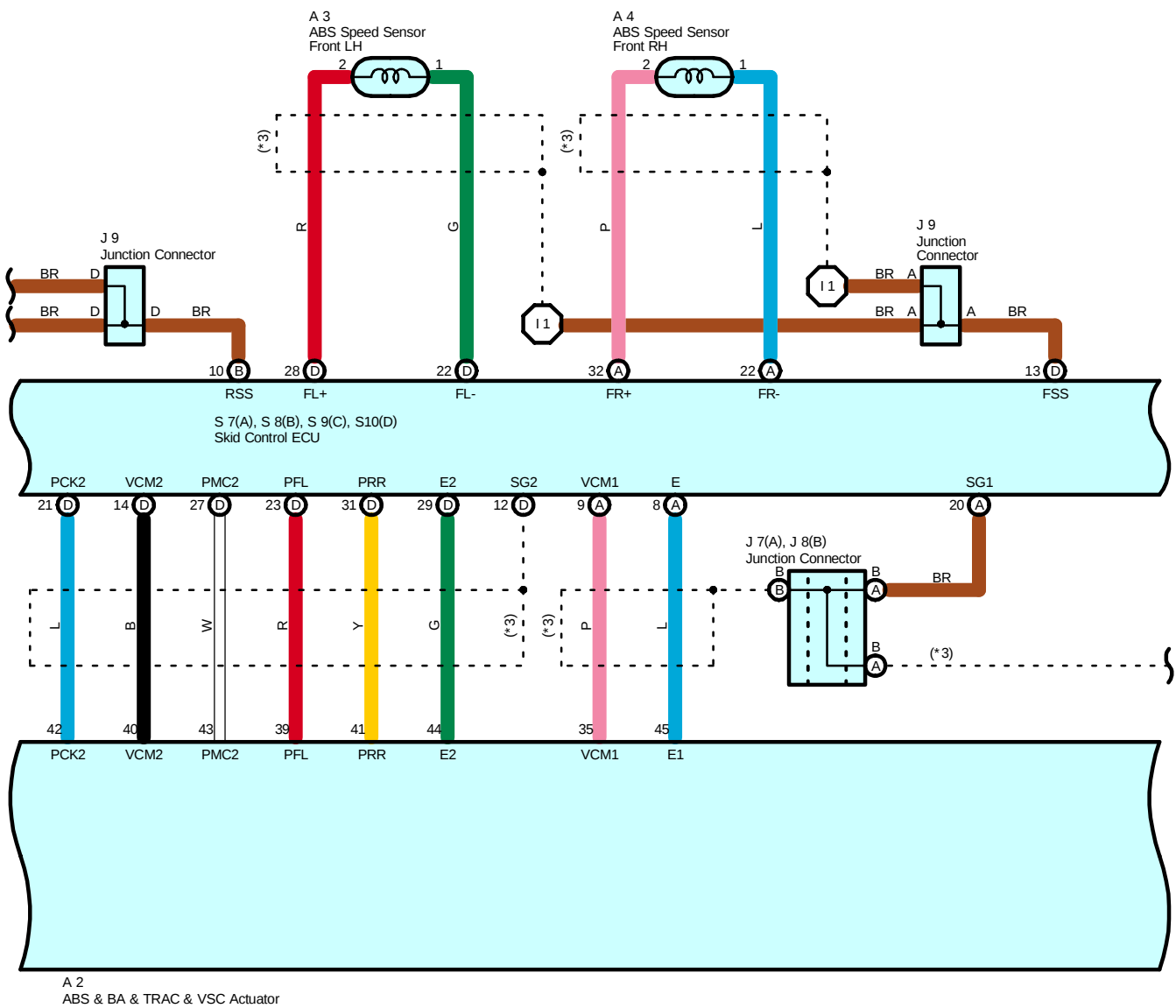




[Details of Skid Control ECU Section]



* 3 : Shielded

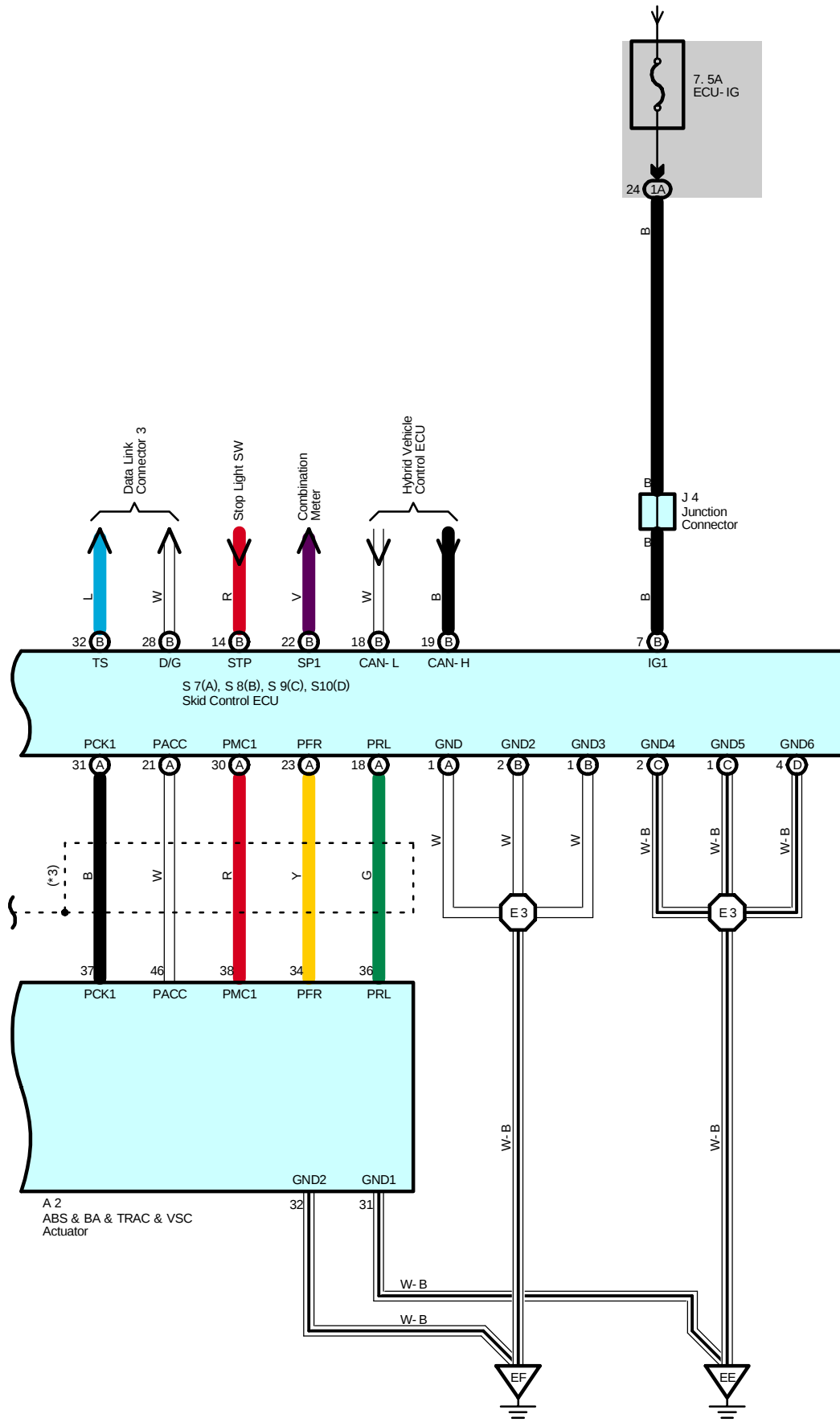


TOYOTA Hybrid System

[Details of Skid Control ECU Section]

From Power Source System (See Page 66)

* 3 : Shielded



System Outline

This system controls the following modes in order to achieve the most efficient operations to match the driving conditions.

1. Motor Generator Condition

- (1) Supply of electrical power from the HV battery to motor generator no.2 provides force to drive the wheels.
- (2) While the tires are driven by the engine via the planetary gears, motor generator no.1 activates to supply electricity via the planetary gears to motor generator no.2 to drive the wheels.
- (3) When the vehicle is decelerating, kinetic energy from the wheels is recovered into electrical energy and used to recharge the HV battery by motor generator no.2.

The hybrid vehicle control ECU switches between these modes (1, 2, 1+2, or 3) according to the driving conditions. However, when the state of charge of the HV battery is low, the HV battery is charged by the engine turning motor generator no.1.

2. Inverter

- * The inverter converts high-voltage direct current of HV battery to three-phase alternating current for driving motor generator no.1 and motor generator no.2.
- * The activation of the power transistors is controlled by the HV ECU. In addition, the inverter transmits necessary information for current control, such as the output amperage or voltage, to the HV ECU.
- * Along with motor generator no.1 and motor generator no.2, the inverter is cooled by the exclusive radiator of the coolant system that is separated from that of the engine.
- * In vehicle collision, circuit breaker sensor installed in the inverter outputs collision signal to stop the system.
- * Boost converter has been adopted in the inverter, which increases rated voltage output from HV battery of DC 201.6V to DC 500V. After increasing voltage, the inverter converts direct current to alternating current.

3. Converter

The power source for auxiliary equipment of the vehicle such as the lights, audio system, and the air conditioning system, as well as the ECUs, is based on a rated voltage of DC 12V system. Because the generator outputs at DC 201.6V, the converter is used to transform the voltage from rated voltage of DC 201.6V to DC 12V in order to recharge the auxiliary battery. The converter is installed on the underside of the inverter.

4. HV Battery

- * In Prius, the sealed nickel hydride (Ni-MH) battery has been adopted. This HV battery has high power density, lightweight and longevity to match characteristics of TOYOTA hybrid system. Because TOYOTA hybrid system controls charge/discharge to maintain charge/discharge control to maintain SOC (State of charge) at constant level while the vehicle is operating normally, it does not have to rely on the use of external recharges.
- * The HV battery, battery ECU, system main relay and the cooling fan are put in a signal case which is placed in the luggage compartment behind the rear seat to make more effective use of vehicle space.
- * A service plug that shuts off circuit is provided in the middle of the 28 modules (Rated battery capacity = 201.6V). Before servicing any portion of the high-voltage circuits, make sure to remove the service plug.
Please do not READY ON when you remove the service plug. There is a possibility that battery ECU breaks down.
- * To ensure the HV battery's performance, the battery ECU controls the operation of the cooling fan to avoid the heat that is generated in the HV battery during charging and discharging.

5. Regenerative System Operation

This system operates the motor as a generator to change the kinetic energy of the vehicle into the electricity when accel pedal is released or foot braking decelerates the vehicle speed, and store the electricity in the battery.

Service Hints

H14 (A), H15 (B), H16 (C) Hybrid Vehicle Control ECU

- (B) 6-Ground : Always approx. 12 volts
- (C) 6, (C) 7-Ground : Approx. 12 volts with the hybrid system at ON (READY) position
- (A) 7-Ground : Approx. 12 volts with the power SW at IG ON position
- (B) 3-Ground : Approx. 12 volts with the brake pedal depressed
- (A) 1, (A) 4-Ground : Always continuity

TOYOTA Hybrid System

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A2	44	H15	47	J30	51
A3	44	H16	47	J32	51
A4	44	H17	47	M1	45
A6	44	H20	51	M2	45
A7	46	H21	51	M3	45
A8	46	I1	45	M4	45
A9	46	I2	45	M5	45
A13	46	I3	45	M6	45
A18	46	I4	45	M7	45
A25	50	I5	45	M8	45
A26	50	I6	45	M9	45
B5	46	I7	45	M10	45
B8	46	I8	45	M13	48
B9	50	I9	45	P6	49
B10	50	I10	45	P8	49
B11	50	I12	45	P11	49
B12	50	I13	45	S1	45
B13	50	I14	45	S2	45
B14	50	I15	45	S3	45
B17	44	I16	45	S4	49
C1	44	I17	51	S5	49
C3	44	J1	45	S7	49
C5	44	J2	45	S8	49
C6	44	J3	45	S9	49
C7	44	J4	45	S10	49
C10	47	J5	48	S11	49
D1	47	J6	48	S16	49
D7	50	J7	48	S22	53
E1	44	J8	48	S23	53
E4	47	J9	48	S24	53
E5	47	J12	48	S25	53
E6	47	J13	48	S26	53
E7	47	J14	48	S27	45
F14	51	J15	48	S28	45
F15	51	J16	48	T2	45
F16	51	J17	48	T3	45
F17	47	J18	48	T4	49
G1	47	J24	48	T5	49
H14	47	J25	48	W3	45

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	22	Engine Room R/B (Engine Compartment Left)

**: Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1B		
1C		
1D	28	Floor Wire and Driver Side J/B (Lower Finish Panel)
1E	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1F		
1G		
1J		
1L	29	
1M		
1N		
3B	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3C		
3D		
3E		
3G	24	
3I		
3J		
3M	23	Frame Wire and Engine Room J/B (Engine Compartment Left)
4C	36	Instrument Panel Wire and Center Connector No.1 (Behind the Combination Meter)
4D		
4E		
4F		
4G		
4H		
4I		
4J		
4K		
4L		
5C	40	Instrument Panel Wire and Center Connector No.2 (Instrument Panel Brace RH)
5D		
5E		
5F		
5G		
5H		
5I		
5J		
5K		
5L		
5M		
5N		

TOYOTA Hybrid System

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	54	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA1	56	Engine Room Main Wire and Instrument Panel Wire (Upper Parts of Front Body Pillar LH)
IA2		
IA3		
IC1	56	Engine Room Main Wire and Floor Wire (Cowl Side Panel LH)
ID3	56	Instrument Panel Wire and Floor Wire (Left Kick Panel)
ID4		
IF1	56	Floor Wire and Engine Room Main Wire (Left Kick Panel)
IG1	58	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the Combination Meter)
IG2		
II1	58	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IN1	58	Floor No.2 Wire and Engine Room Main Wire (Right Kick Panel)
IP1	58	Engine Room No.2 Wire and Engine Room Main Wire (Upper Parts of Front Body Pillar LH)
BD1	60	Skid Control Sensor No.1 Wire and Floor Wire (Front Side of Left Quarter Panel)
BE1	60	Frame Wire and Floor No.2 Wire (Front Side of Left Quarter Panel)
BL1	62	Skid Control Sensor No.2 Wire and Floor No.2 Wire (Front Side of Right Quarter Panel)
BM1	62	Floor No.2 Wire and Floor Wire (Rear Side of Right Quarter Panel)

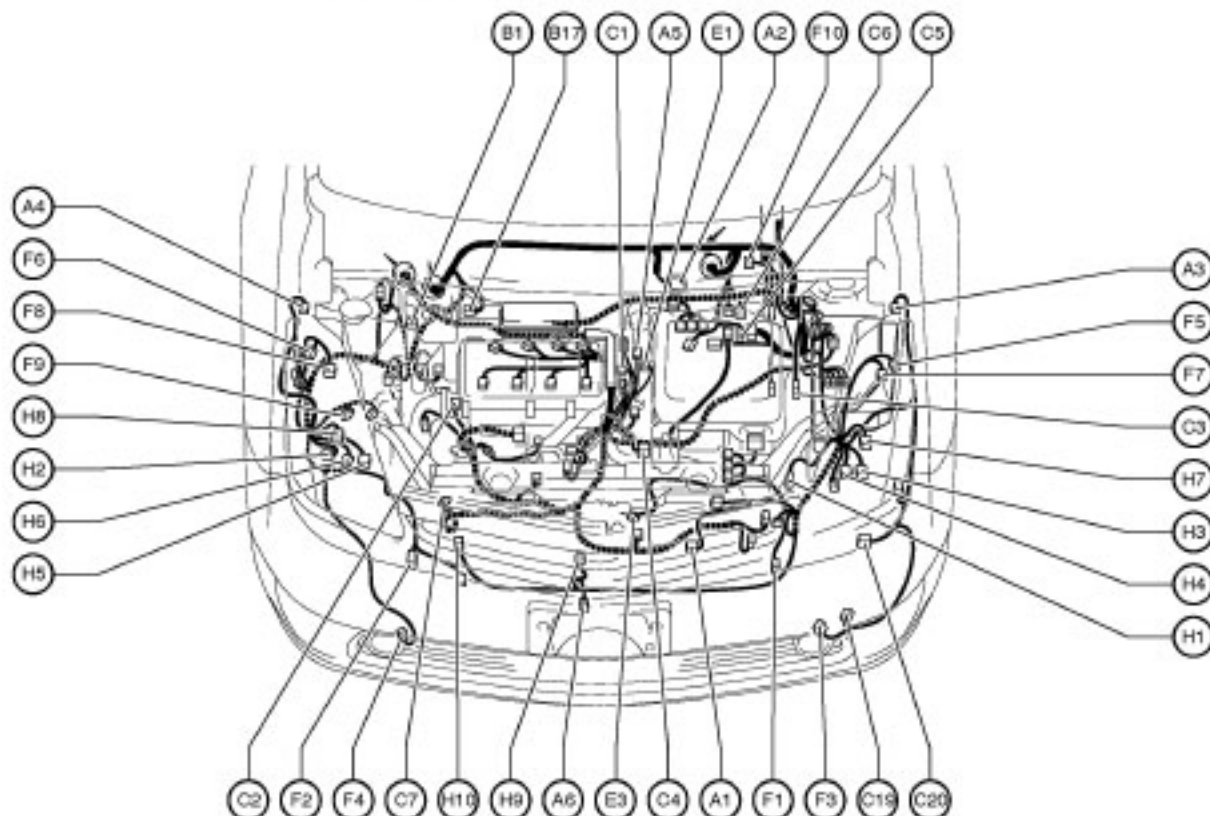
: Ground Points

Code	See Page	Ground Points Location
EC	54	Engine Block
ED		
EE	54	Left Side of the Suspension Tower
EF		
IH	56	Cowl Side Panel LH
II	56	Instrument Panel Brace LH
IK	56	Cowl Side Panel RH
BL	60	Rear Side of Left Quarter Panel
BQ	60	Rear Side of Right Quarter Panel

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	54	Engine Wire	I2	58	Instrument Panel Wire
E3	54	Engine Room Main Wire	I3	58	Engine Wire
I1	58	Instrument Panel Wire			

Position of Parts in Engine Compartment



- A 1 A/C Condenser Fan Motor
- A 2 ABS & BA & TRAC & VSC Actuator
- A 3 ABS Speed Sensor Front LH
- A 4 ABS Speed Sensor Front RH
- A 5 Air Fuel Ratio Sensor (Bank 1 Sensor 1)
- A 6 Ambient Temp. Sensor

- B 1 Brake Fluid Level Warning SW
- B17 Brake Master Stroke Simulator Cylinder Assembly

- C 1 Camshaft Position Sensor
- C 2 Camshaft Timing Oil Control Valve
- C 3 Circuit Breaker Sensor
- C 4 Compressor Assembly (Motor)
- C 5 Converter
- C 6 Converter
- C 7 Crankshaft Position Sensor
- C19 Coolant Heat Storage Tank Outlet Temp. Sensor
- C20 Coolant Heat Storage Water Pump

- E 1 Engine Coolant Temp. Sensor
- E 3 Engine Hood Courtesy SW

- F 1 Front Airbag Sensor LH
- F 2 Front Airbag Sensor RH
- F 3 Front Fog Light LH
- F 4 Front Fog Light RH
- F 5 Front Side Marker Light LH
- F 6 Front Side Marker Light RH
- F 7 Front Turn Signal Light LH
- F 8 Front Turn Signal Light RH
- F 9 Front Washer Motor
- F 10 Front Wiper Motor

- H 1 Headlight Beam Level Control Actuator LH
- H 2 Headlight Beam Level Control Actuator RH
- H 3 Headlight Assembly LH
- H 4 Headlight Assembly LH
- H 5 Headlight Assembly RH
- H 6 Headlight Assembly RH
- H 7 Headlight LH
- H 8 Headlight RH
- H 9 Horn (High)
- H10 Horn (Low)