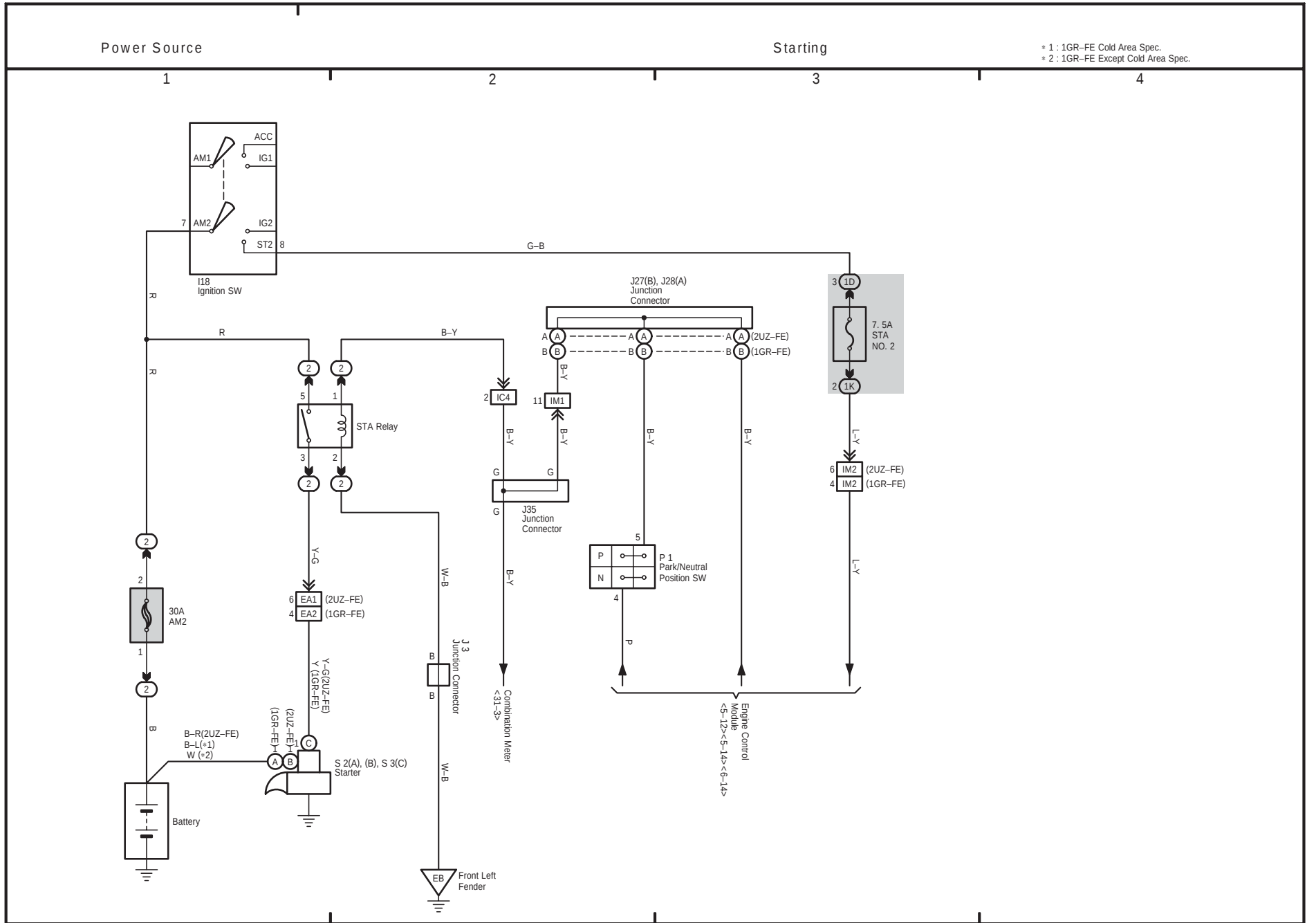


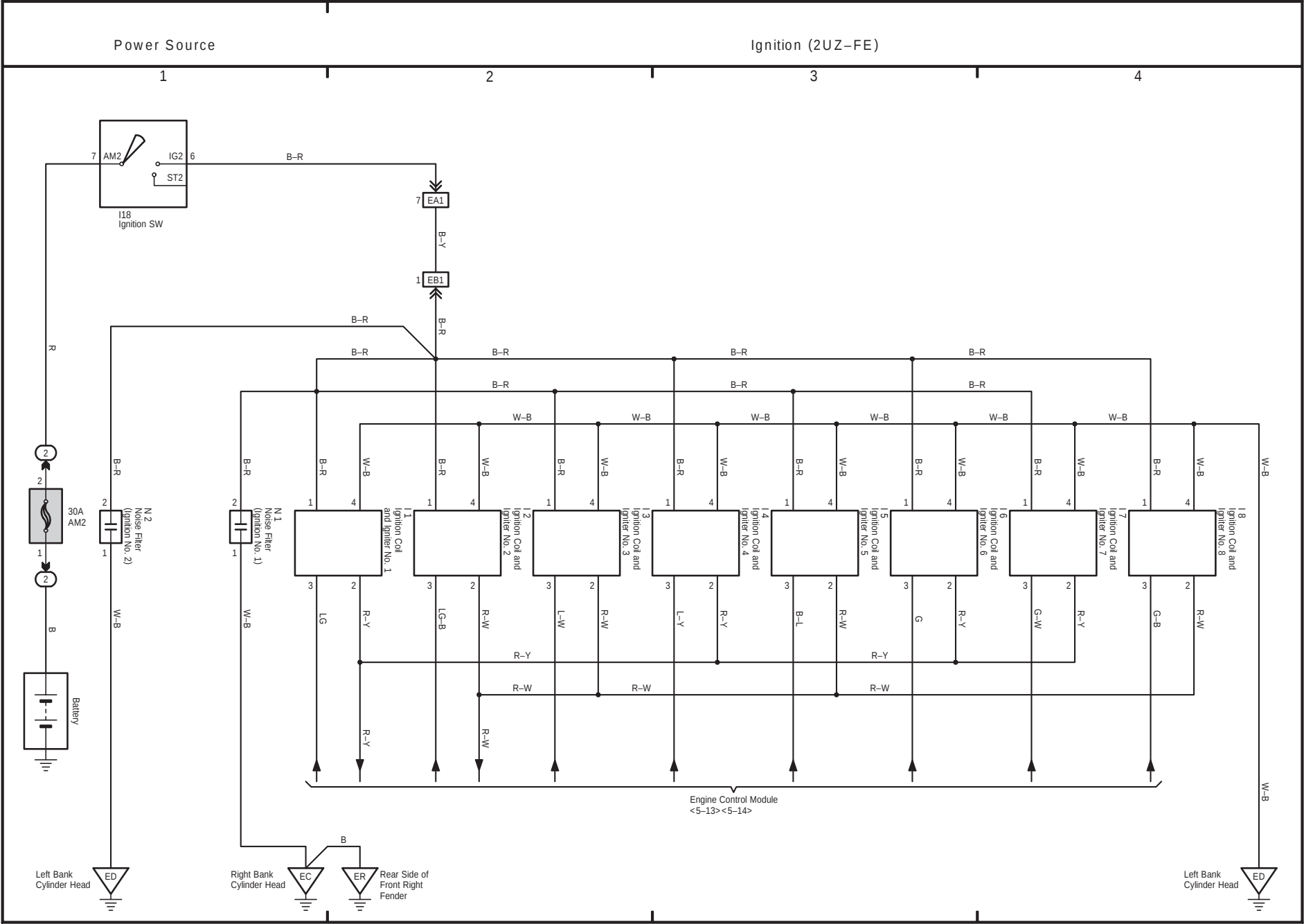
1 4RUNNER

4RUNNER (EM00T0U)

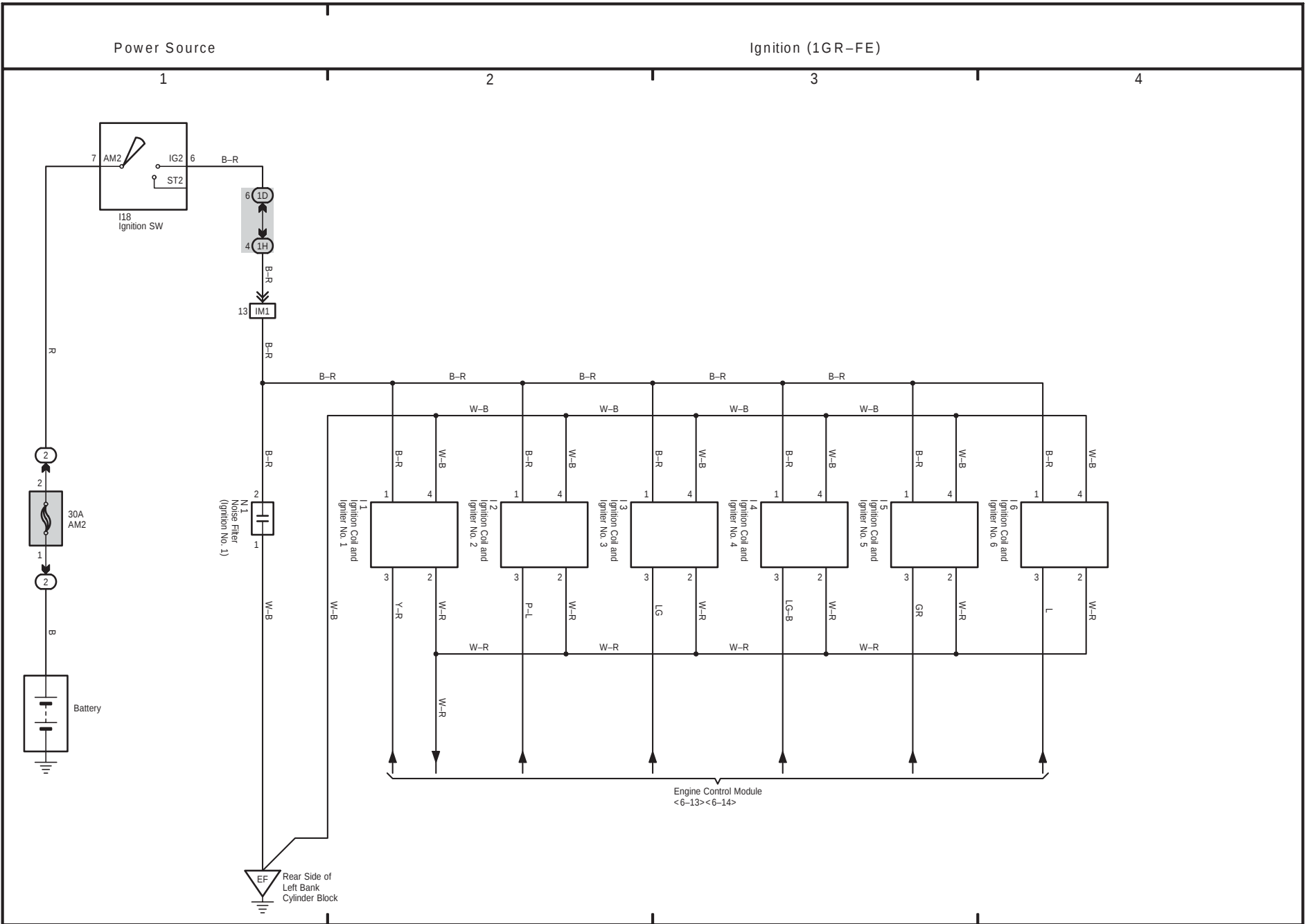
415



M OVERALL ELECTRICAL WIRING DIAGRAM



3 4RUNNER

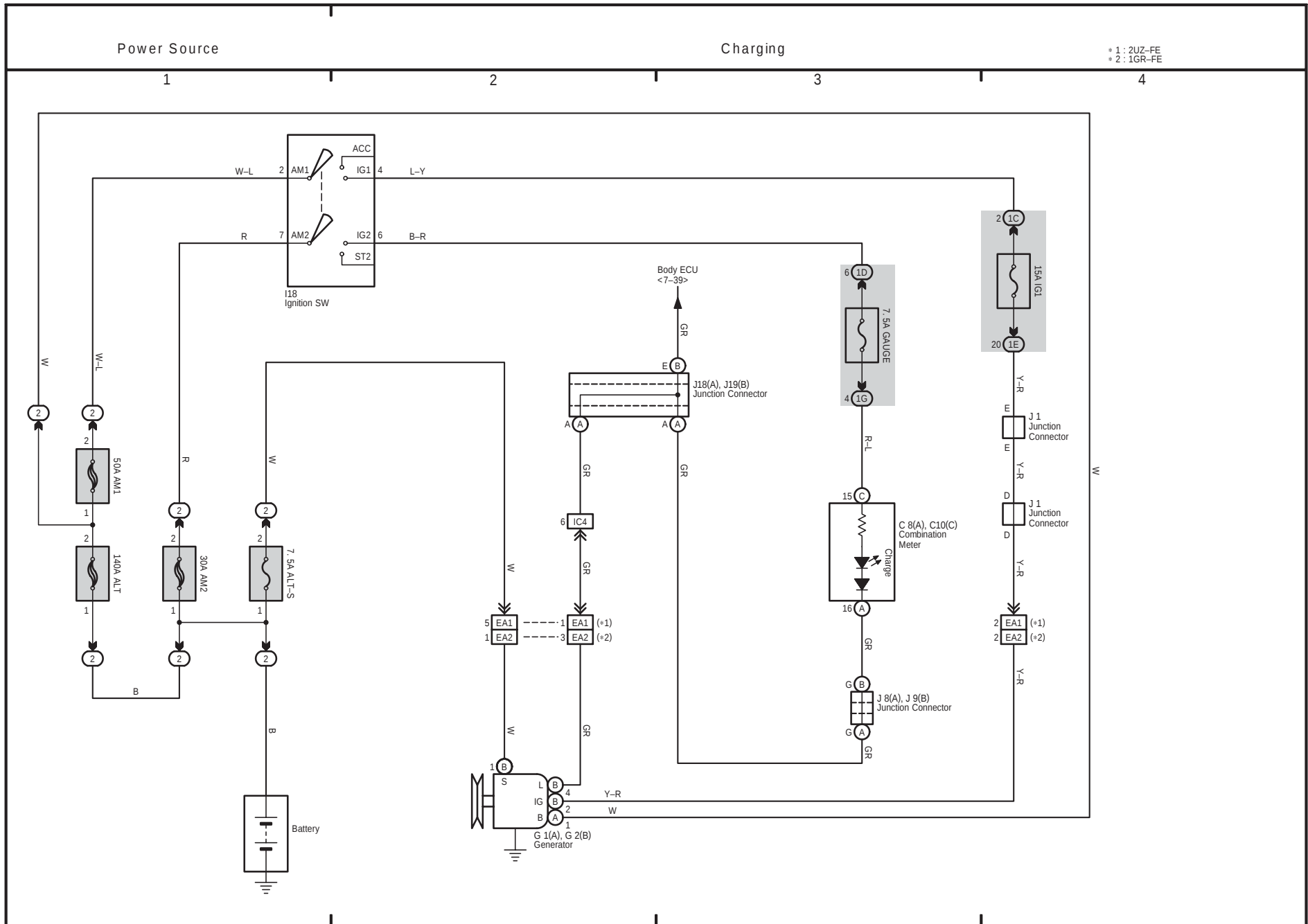


4RUNNER (EM00T0U)

4 4RUNNER

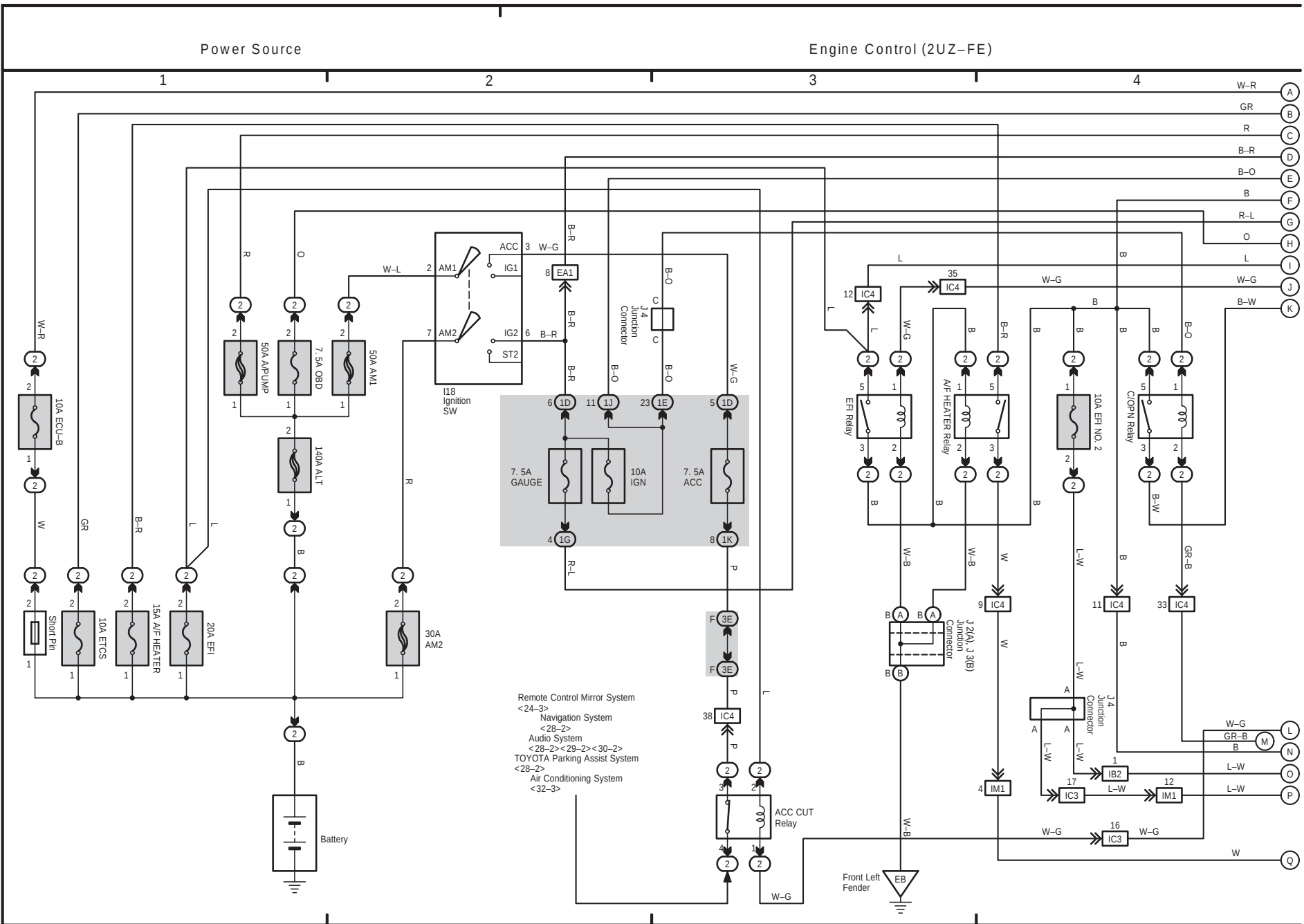
418

4RUNNER (EM00T0U)

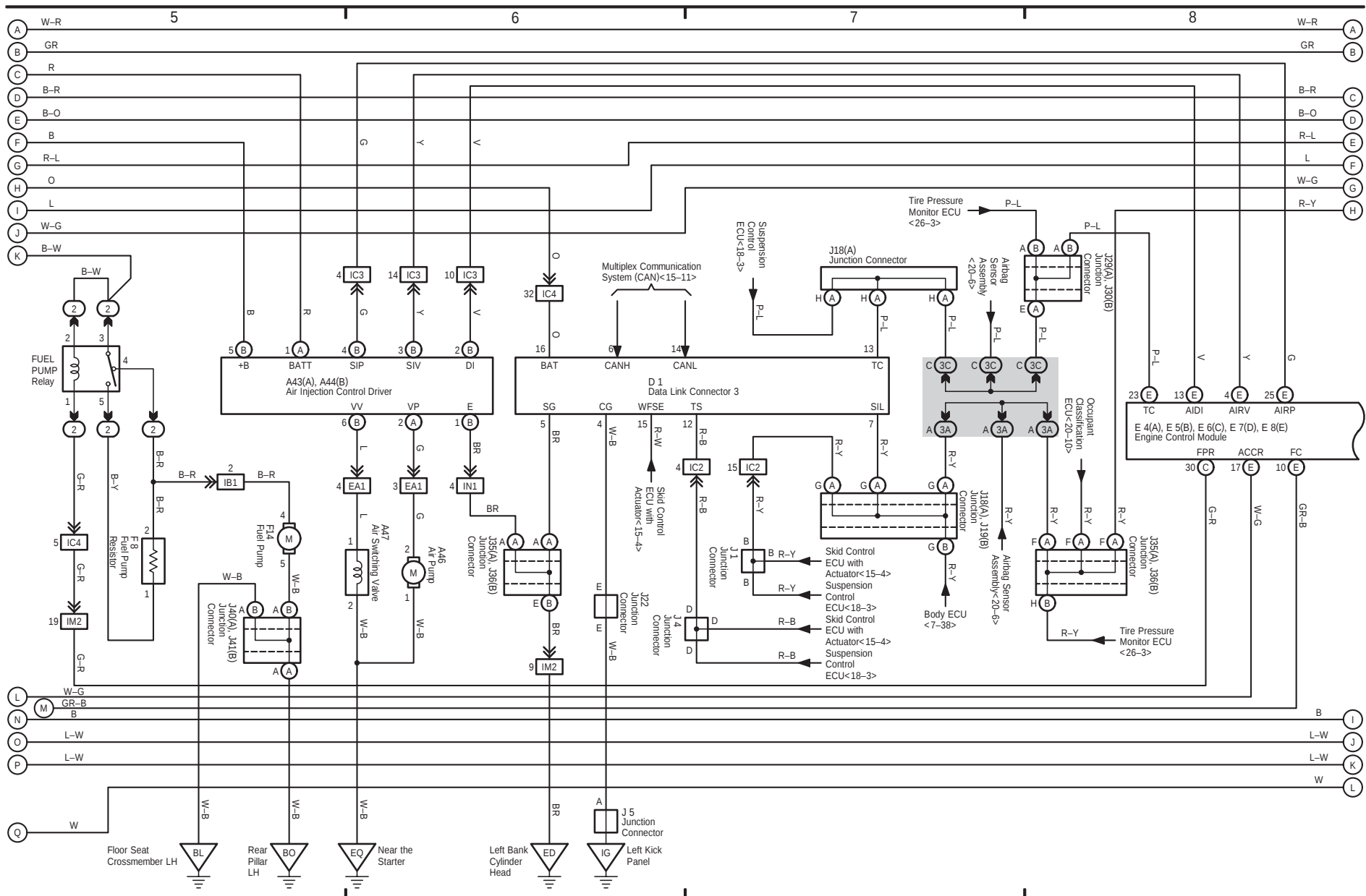


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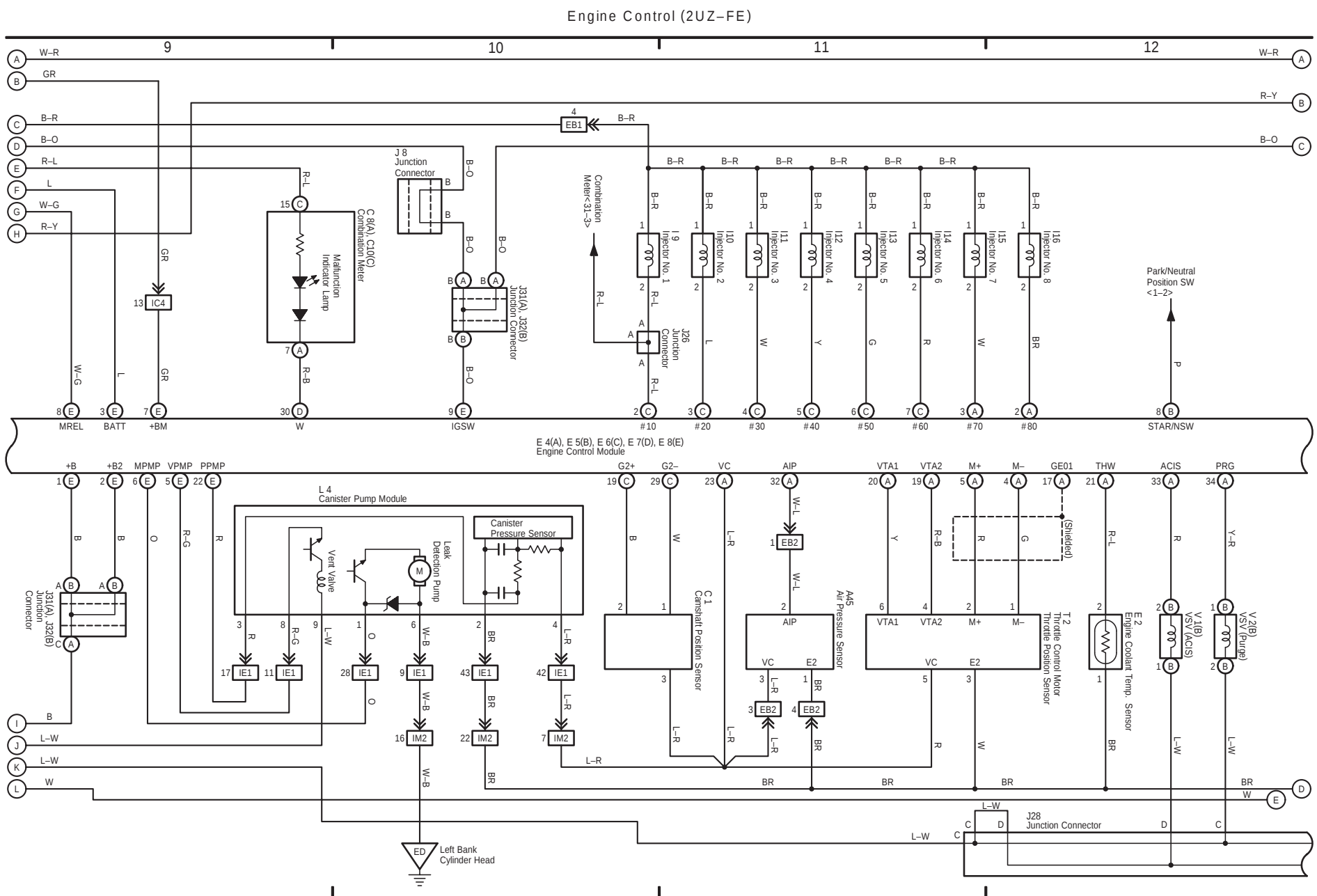
5 4RUNNER



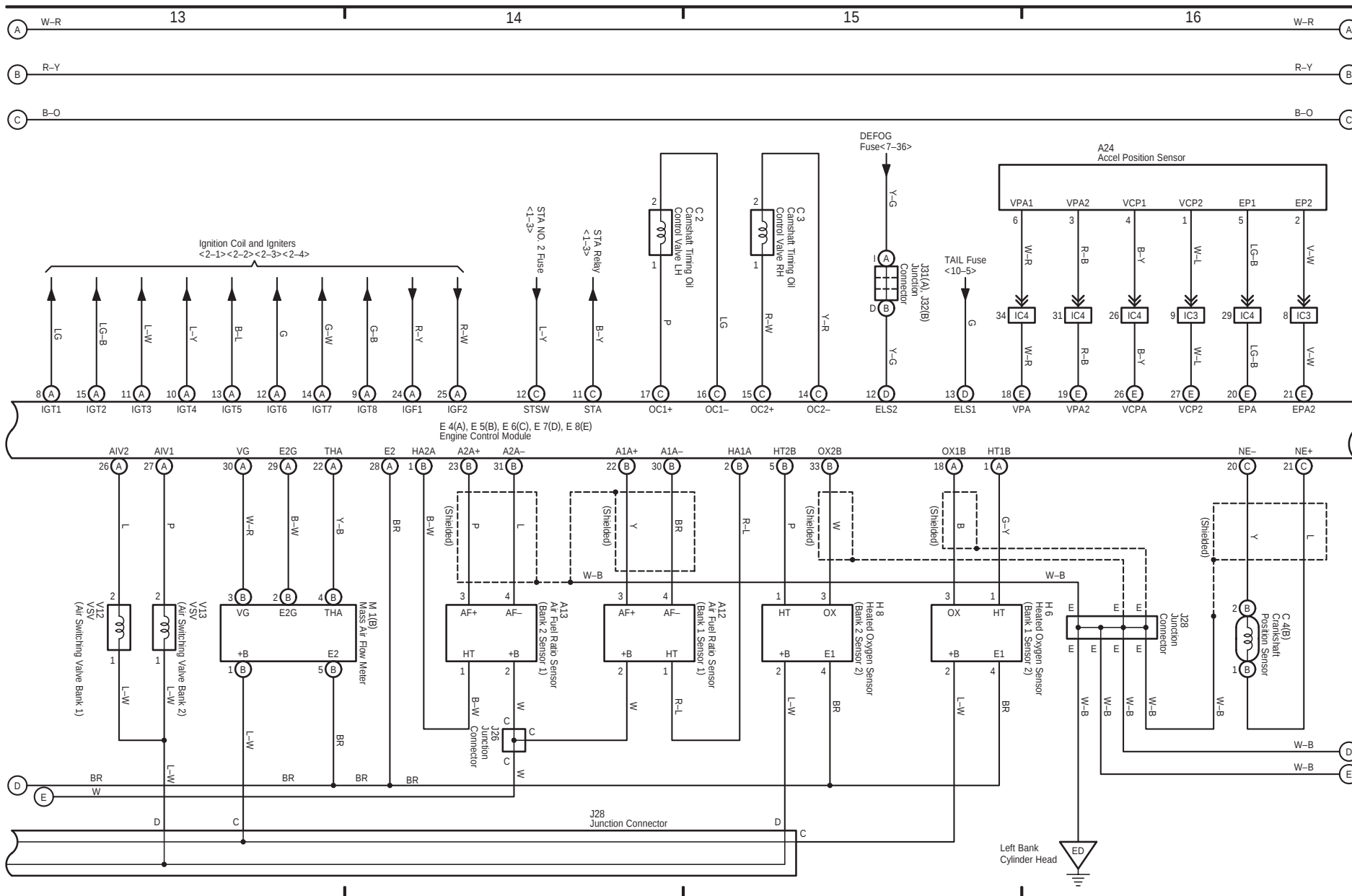
Engine Control (2UZ-FE)



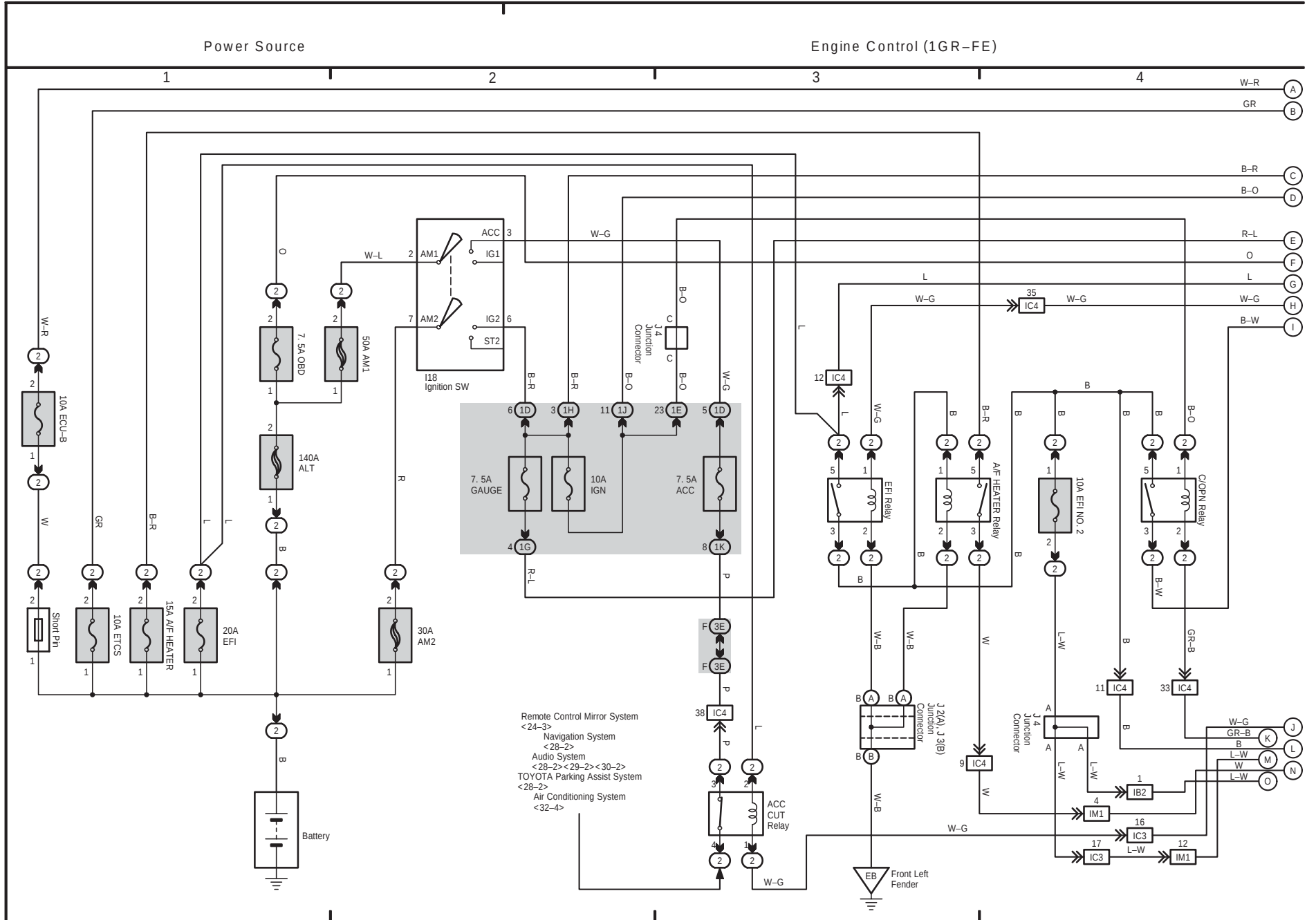
4RUNNER (EM00TOU)



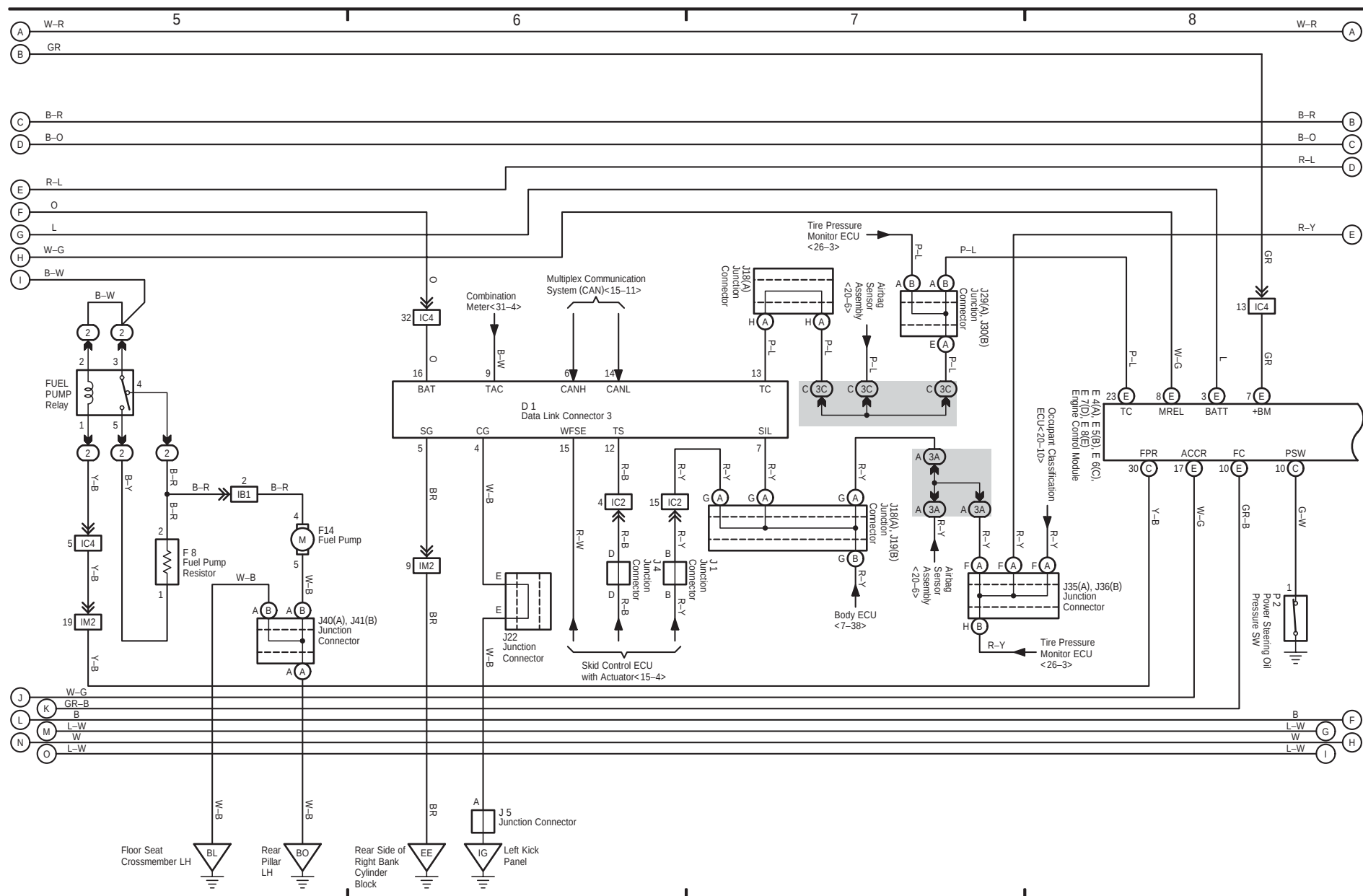
Engine Control (2UZ-FE)



4RUNNER (EM00T0U)

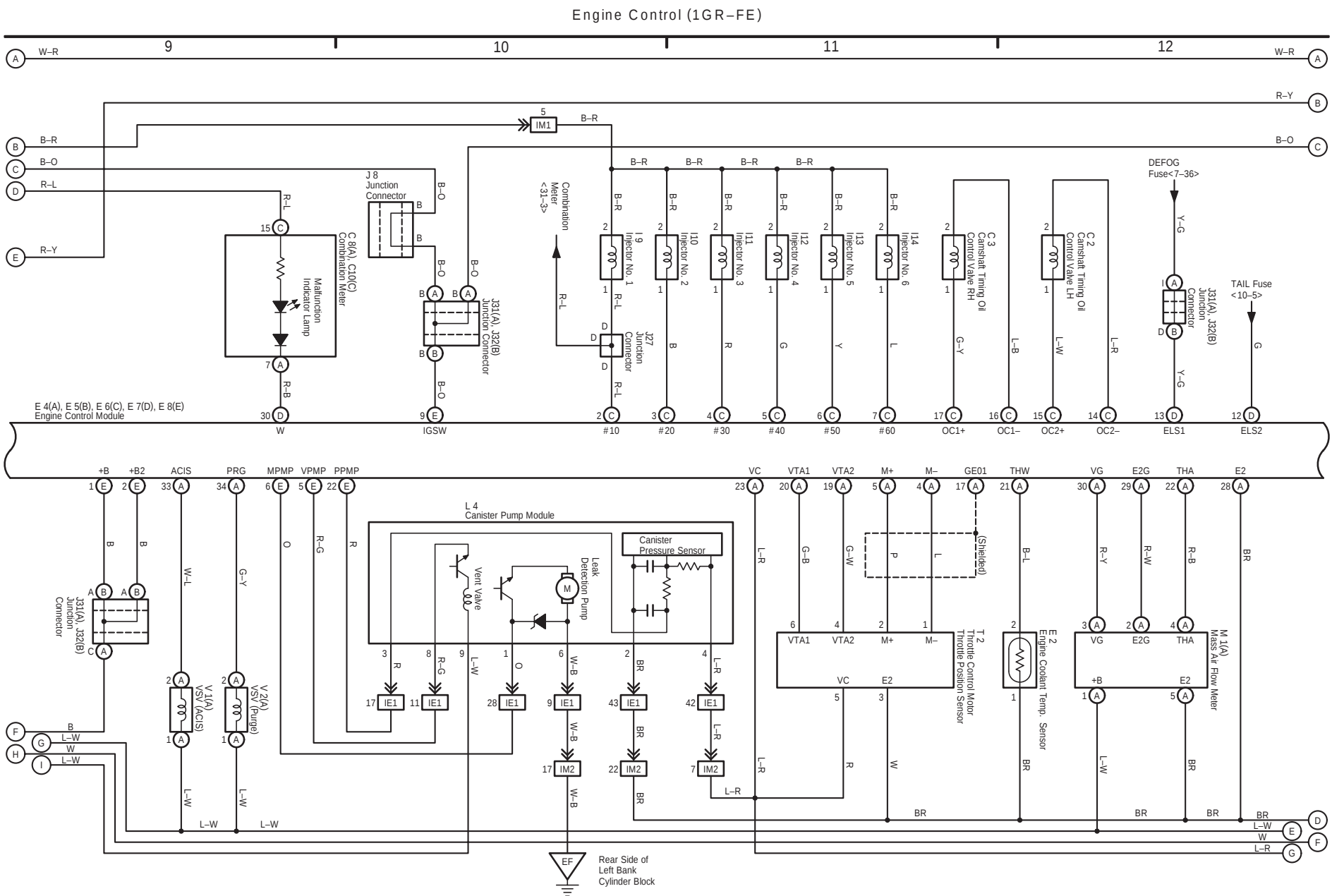


4RUNNER (EMOOTOU)



(Cont. next page)

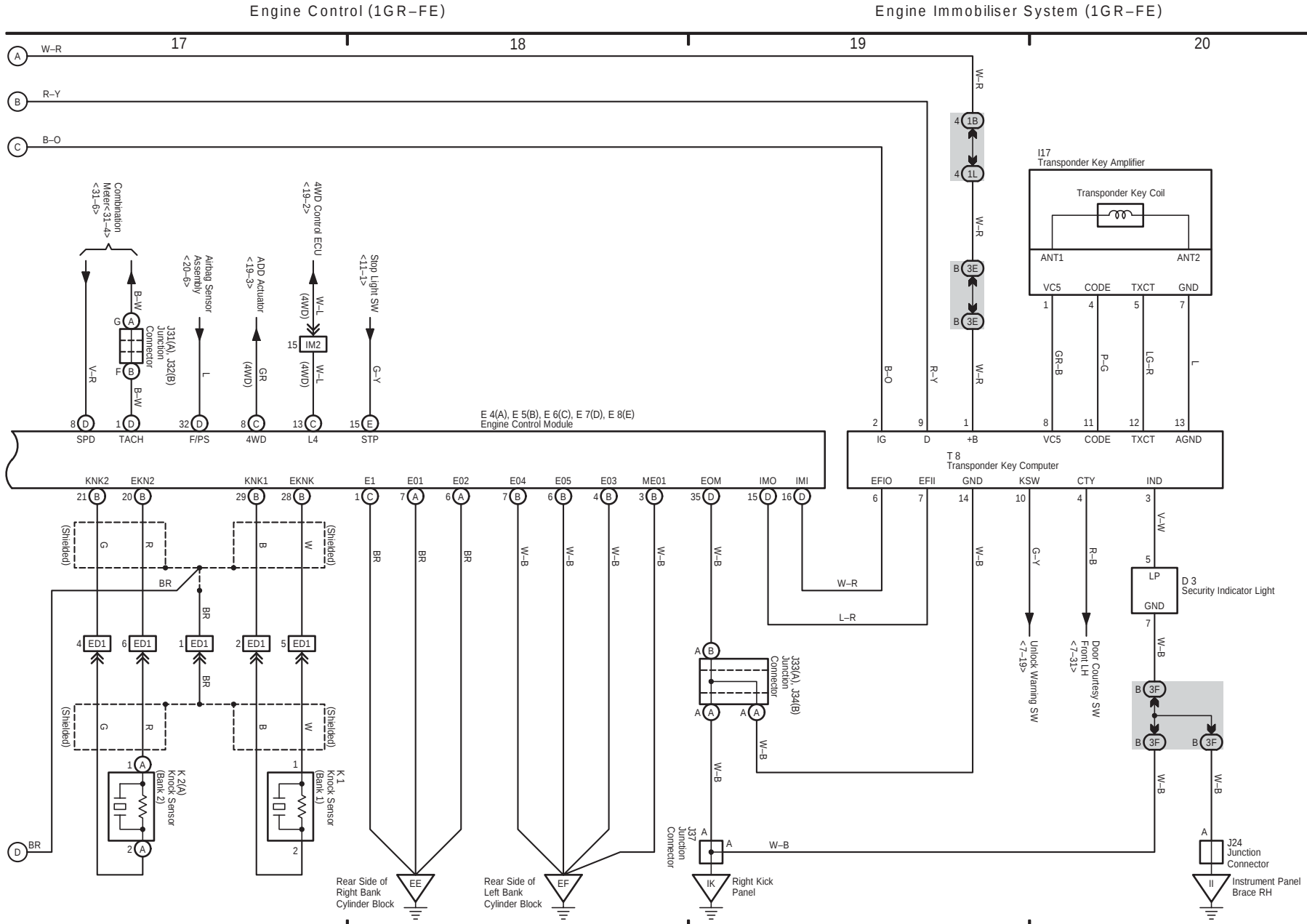
6 4RUNNER (Cont' d)



4RUNNER (EMOOTOU)

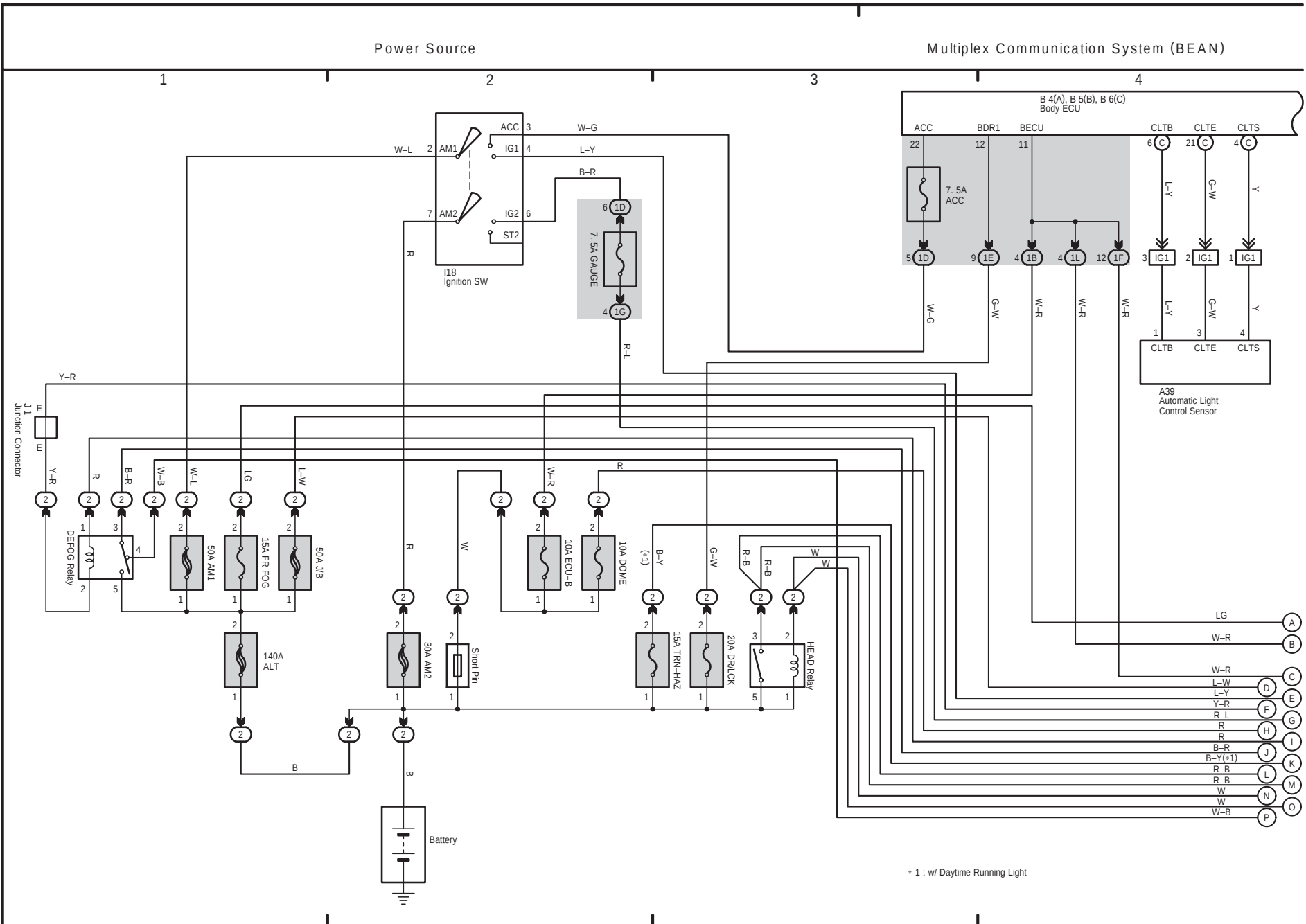


6 4RUNNER (Cont' d)



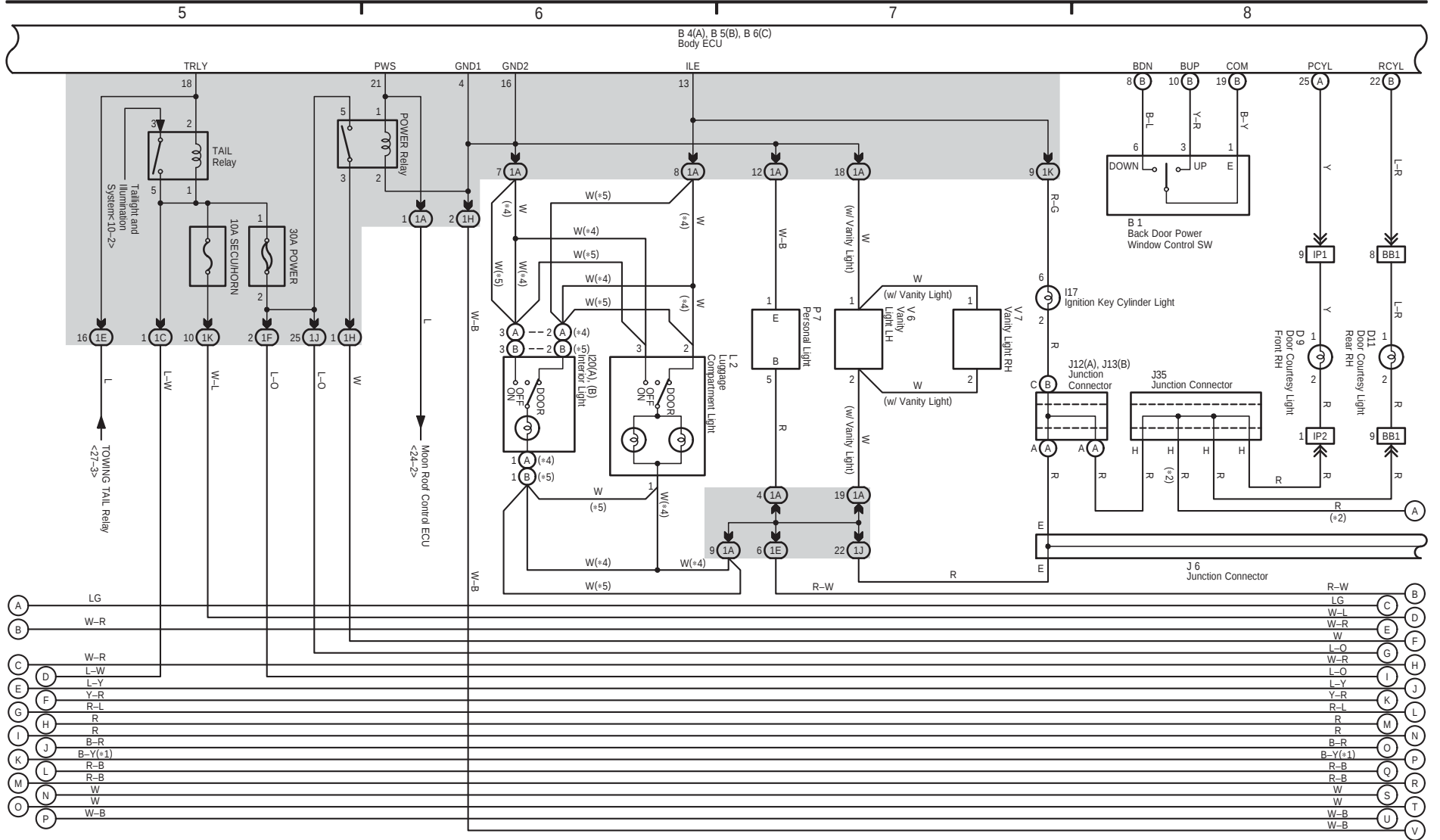
(Cont. next page)

7 4RUNNER



Multiplex Communication System (BEAN)

- * 1 : w/ Daytime Running Light
- * 2 : Limited
- * 3 : w/ Rear Seat Entertainment System
- * 4 : w/o Rear Seat Entertainment System

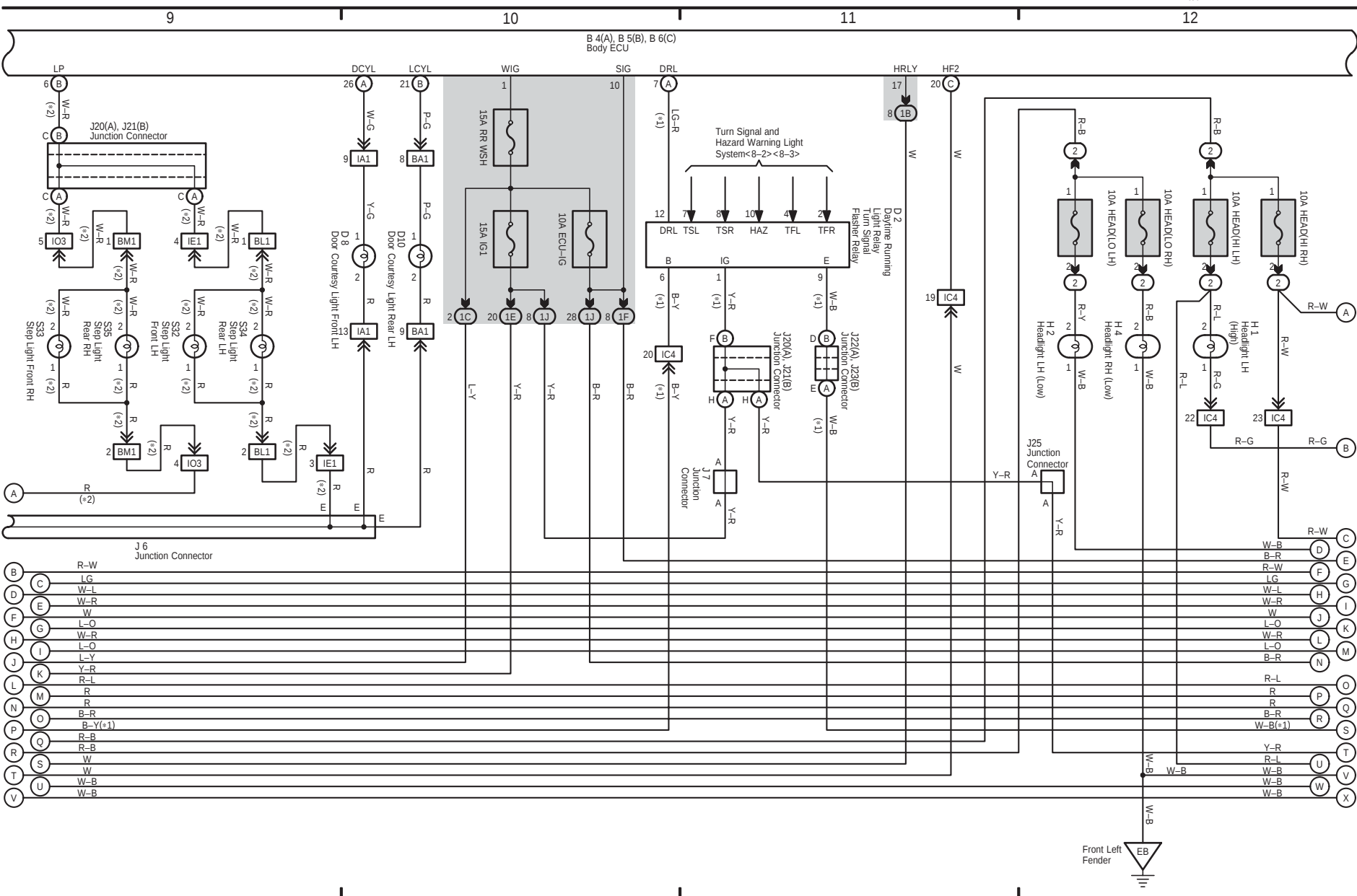


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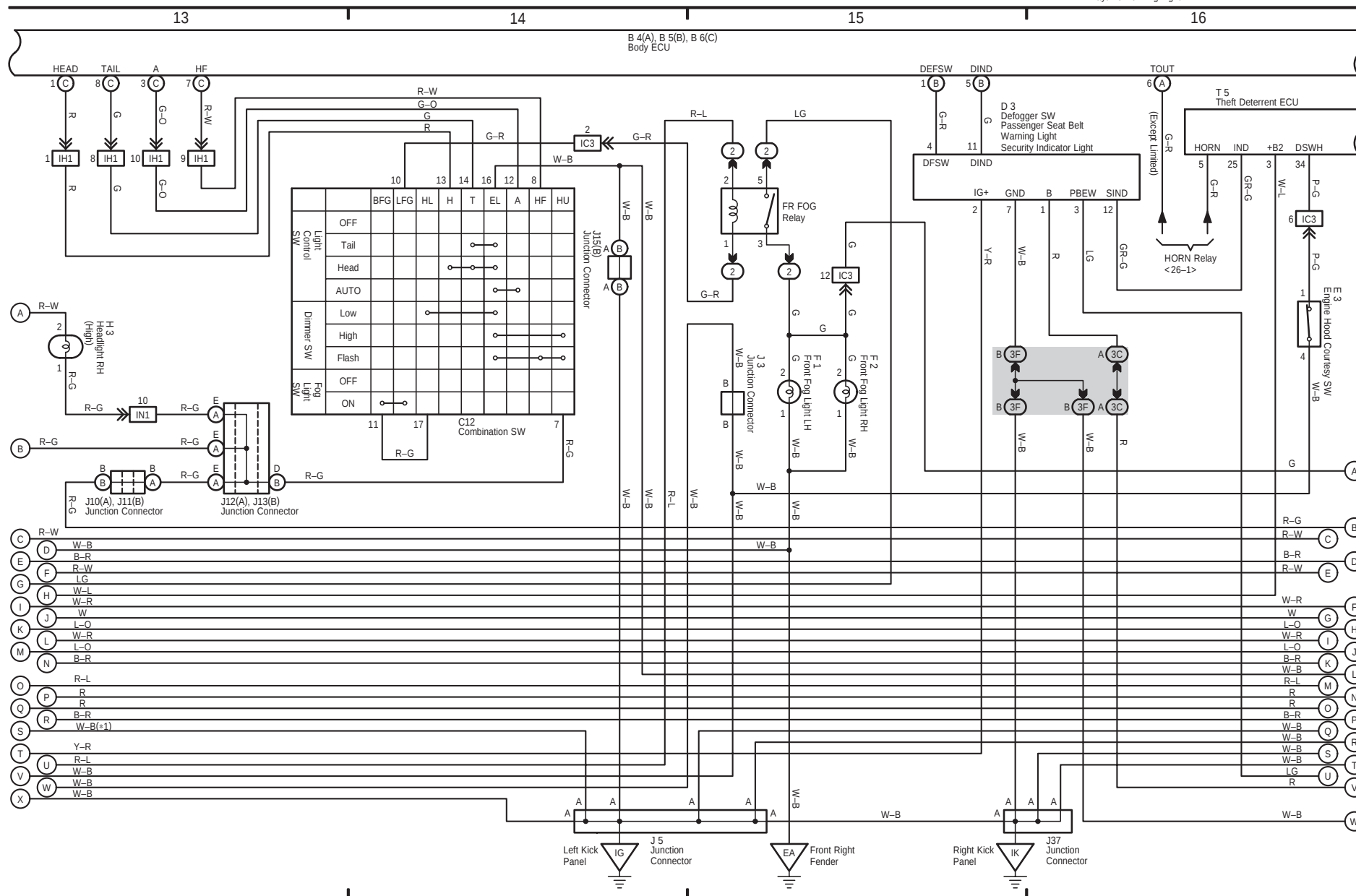
7 4RUNNER (Cont' d)

Multiplex Communication System (BEAN)

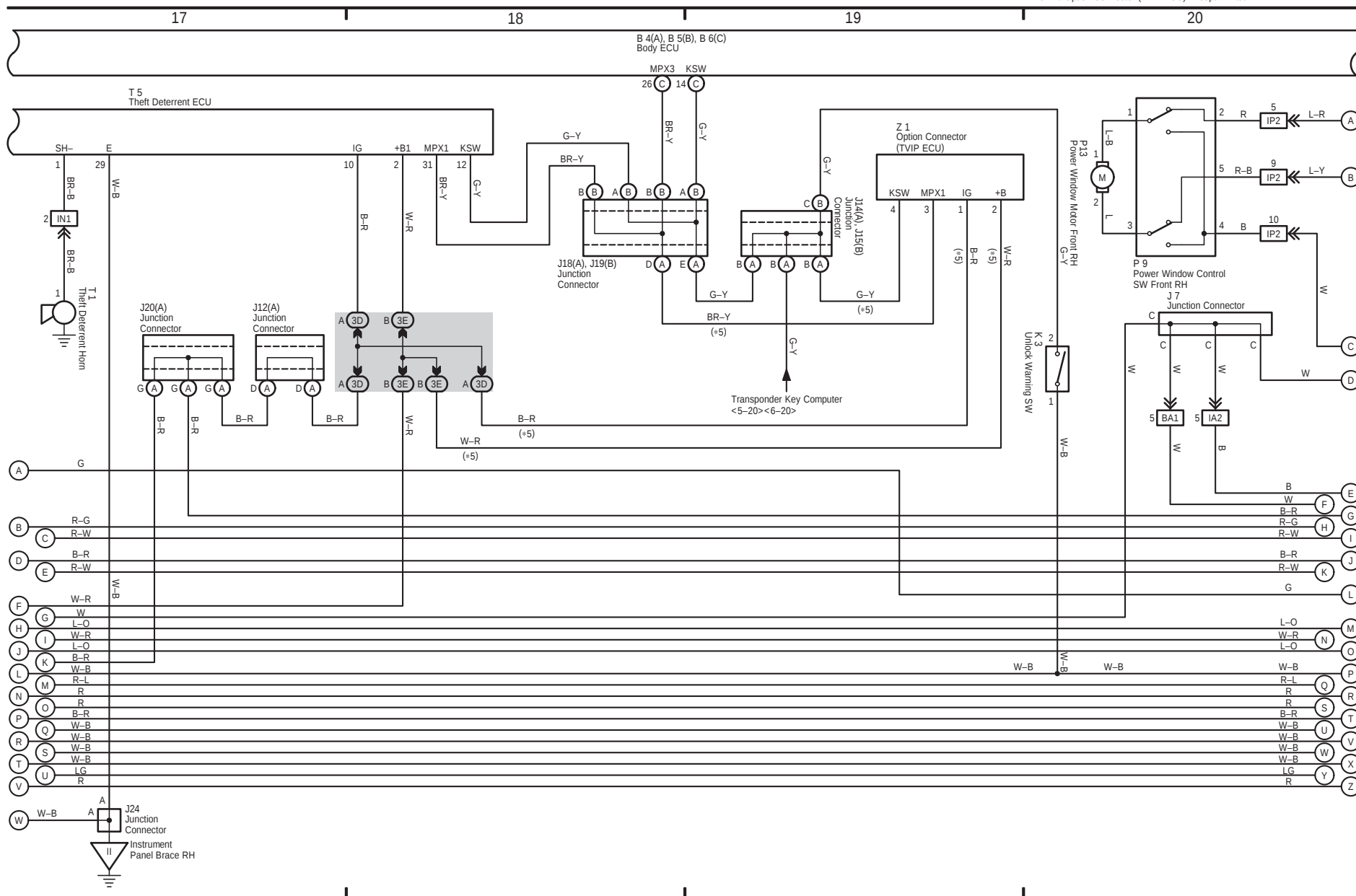
* 1 : w/ Daytime Running Light
* 2 : Limited



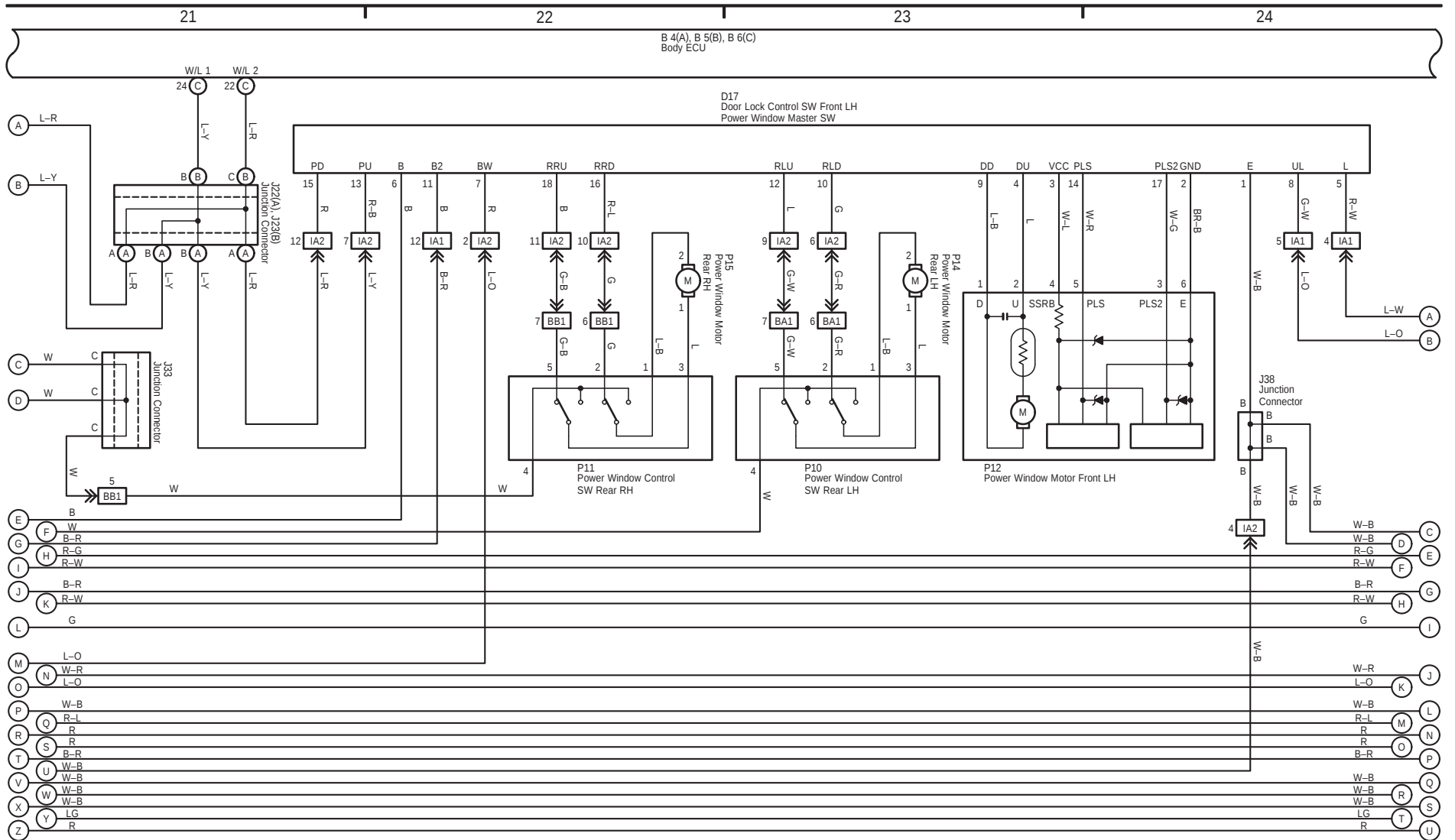
* 1 : Daytime Running Light



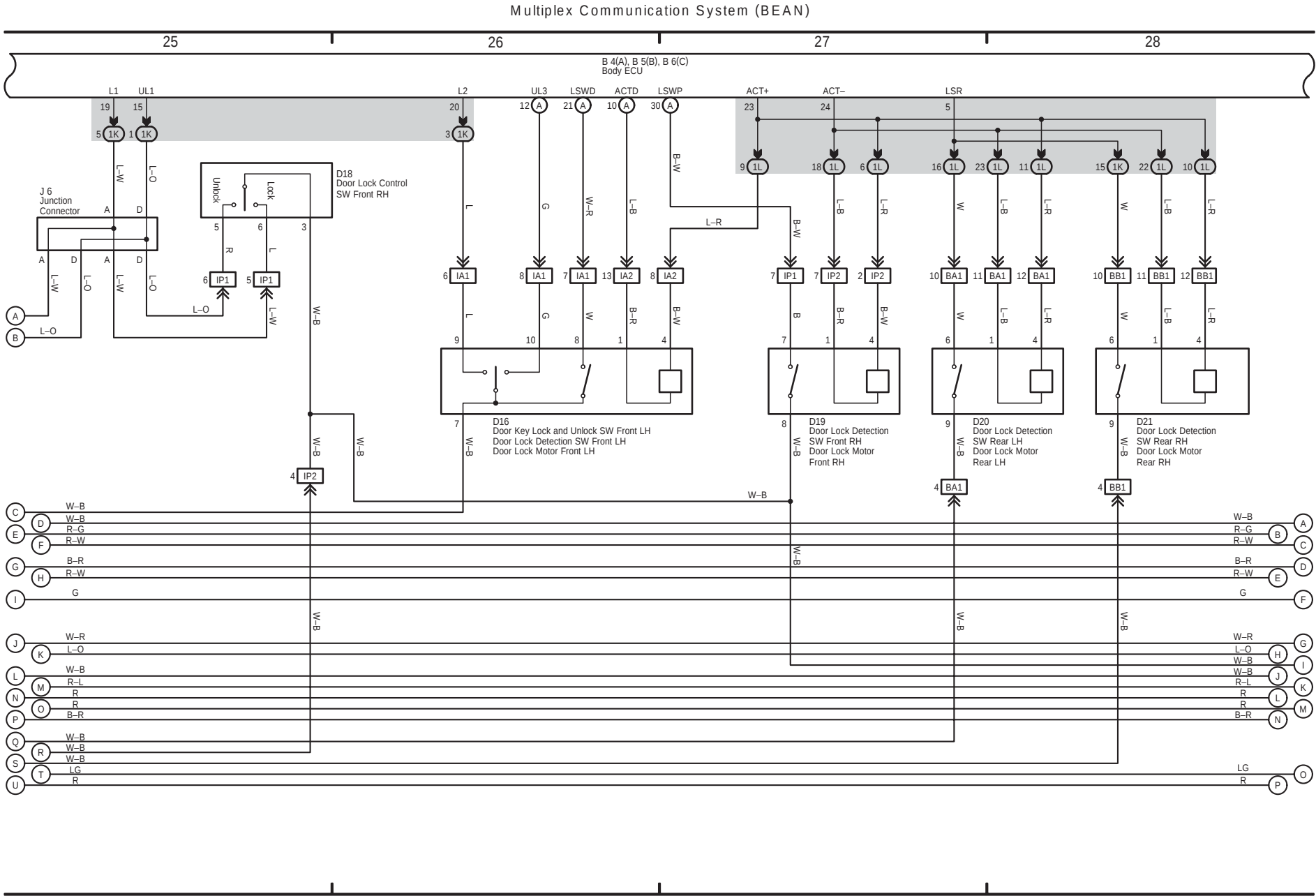
* 5 : w/ Option Connector (TVIP ECU) Except Limited



Multiplex Communication System (BEAN)

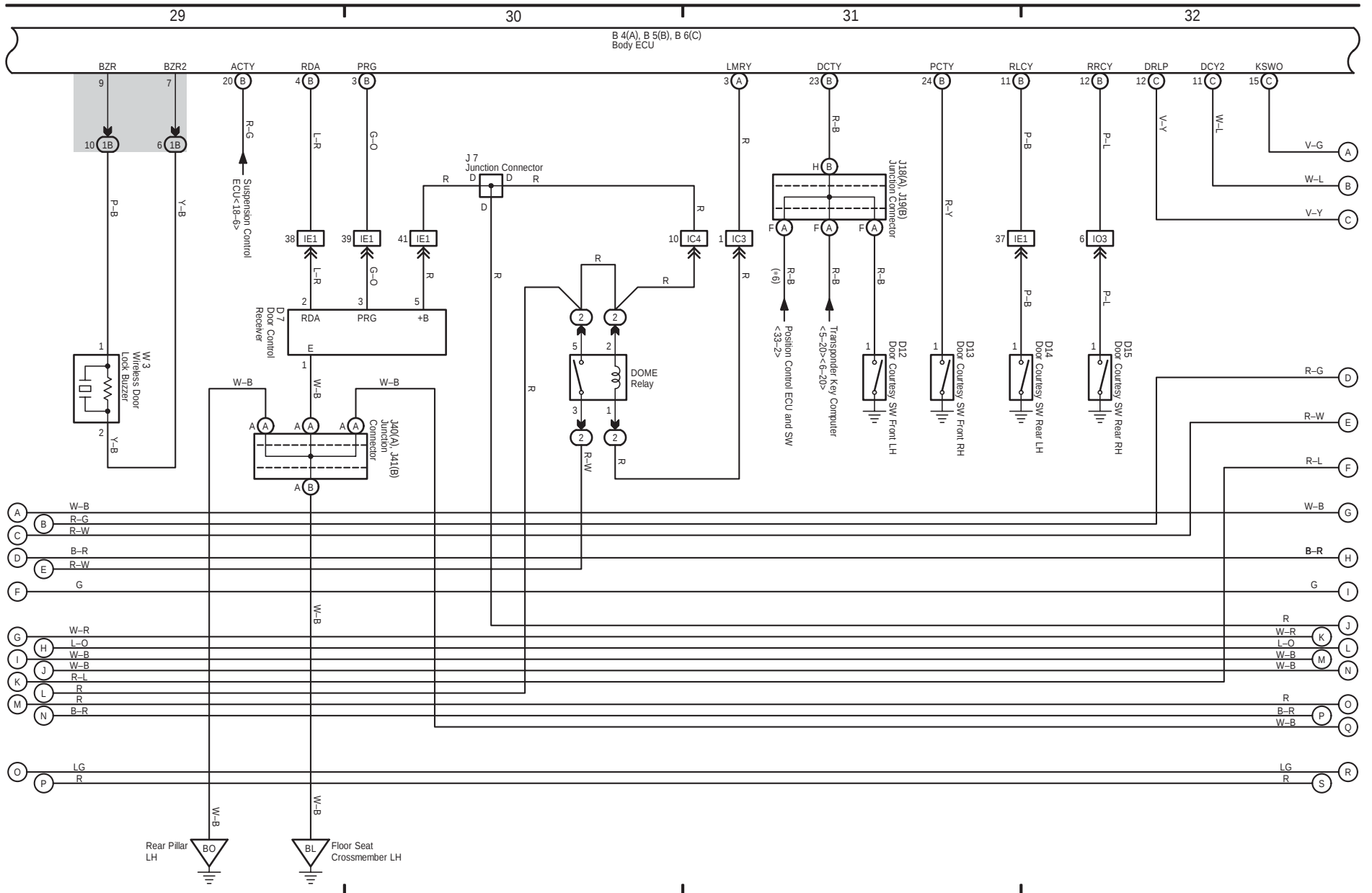


4RUNNER (EM00TOU)

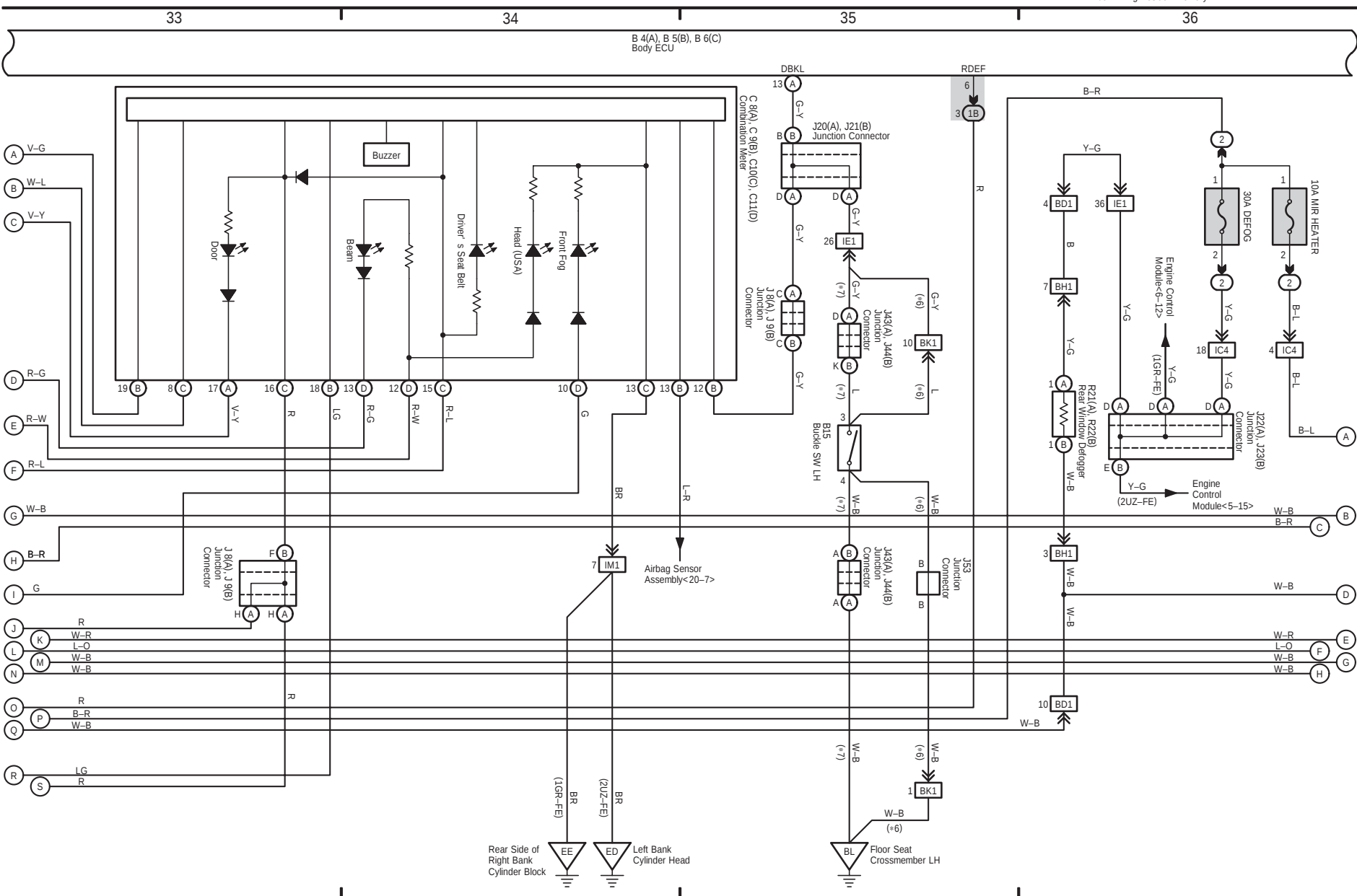


Multiplex Communication System (BEAN)

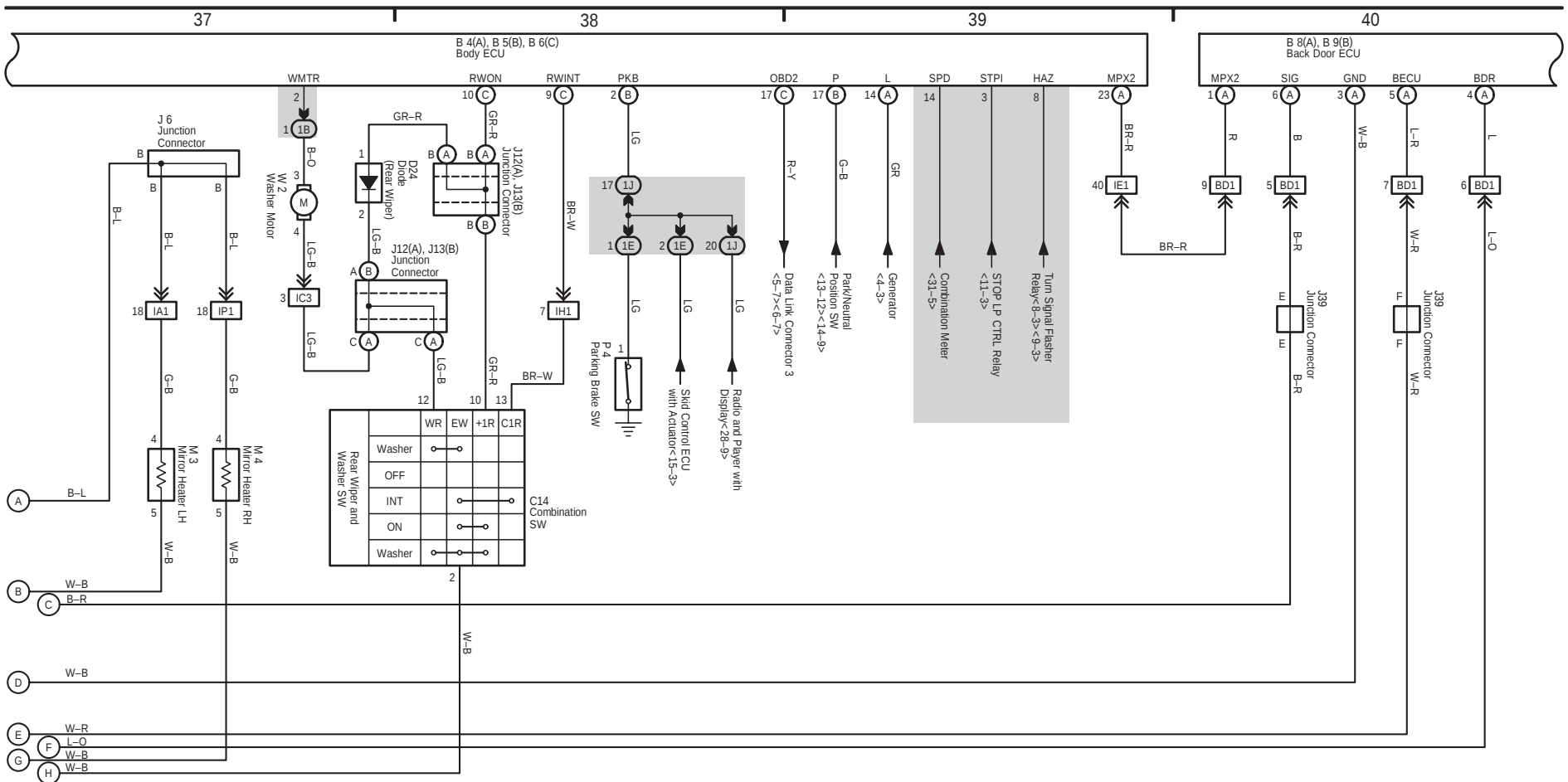
* 6 : w/ Driving Position Memory



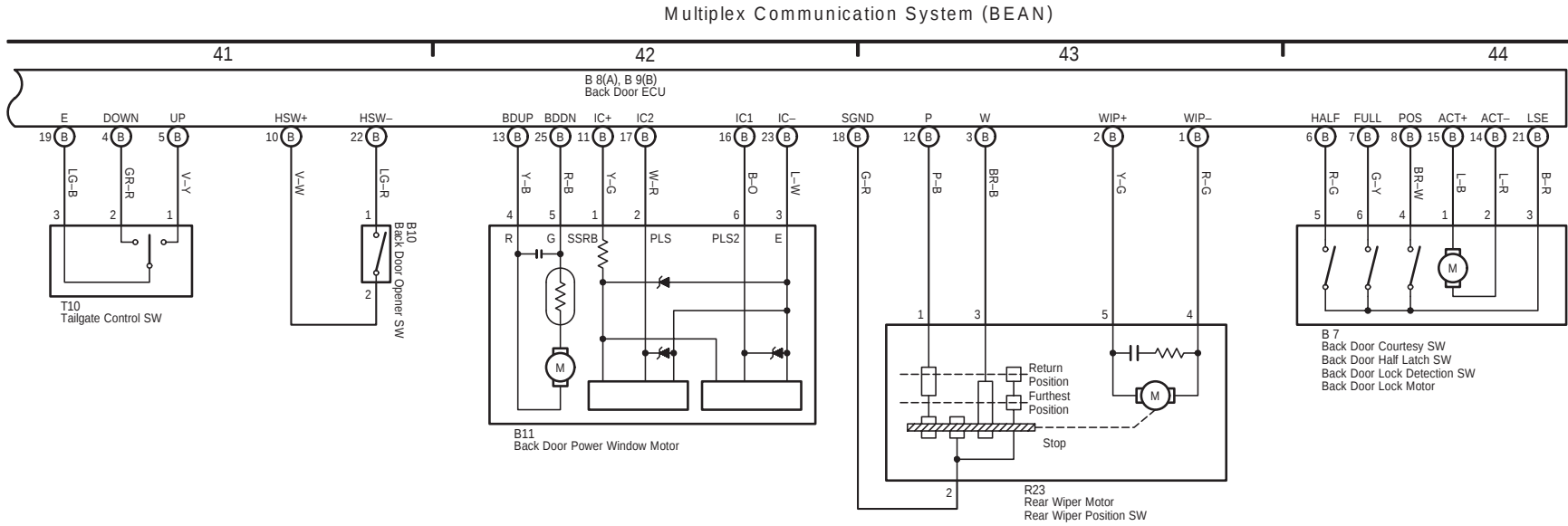
* 6 : w/ Driving Position Memory
* 7 : w/o Driving Position Memory



4RUNNER (EMOOTOU)



7 4RUNNER (Cont' d)



This wiring diagram illustrates the electrical system for the Power Source, Turn Signal and Hazard Warning Light (w/ Daytime Running Light). The diagram is organized into four main sections: 1. Power Source, 2. Turn Signal and Hazard Warning Light (w/ Daytime Running Light), 3. Turn Signal and Hazard Warning Light (w/ Daytime Running Light), and 4. Turn Signal and Hazard Warning Light (w/ Daytime Running Light).

Power Source: The system is powered by a Battery connected to a 15A TRN-HAZ fuse. The power flows through a 50A AM1 fuse and a 140A ALT fuse. The power source is connected to the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) via a 15A IG1 fuse and a 15A TRN-HAZ fuse.

Turn Signal and Hazard Warning Light (w/ Daytime Running Light): This section includes the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL). The Turn Signal and Hazard Warning Light (w/ Daytime Running Light) is controlled by the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL). The Daytime Running Light (DRL) is controlled by the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL).

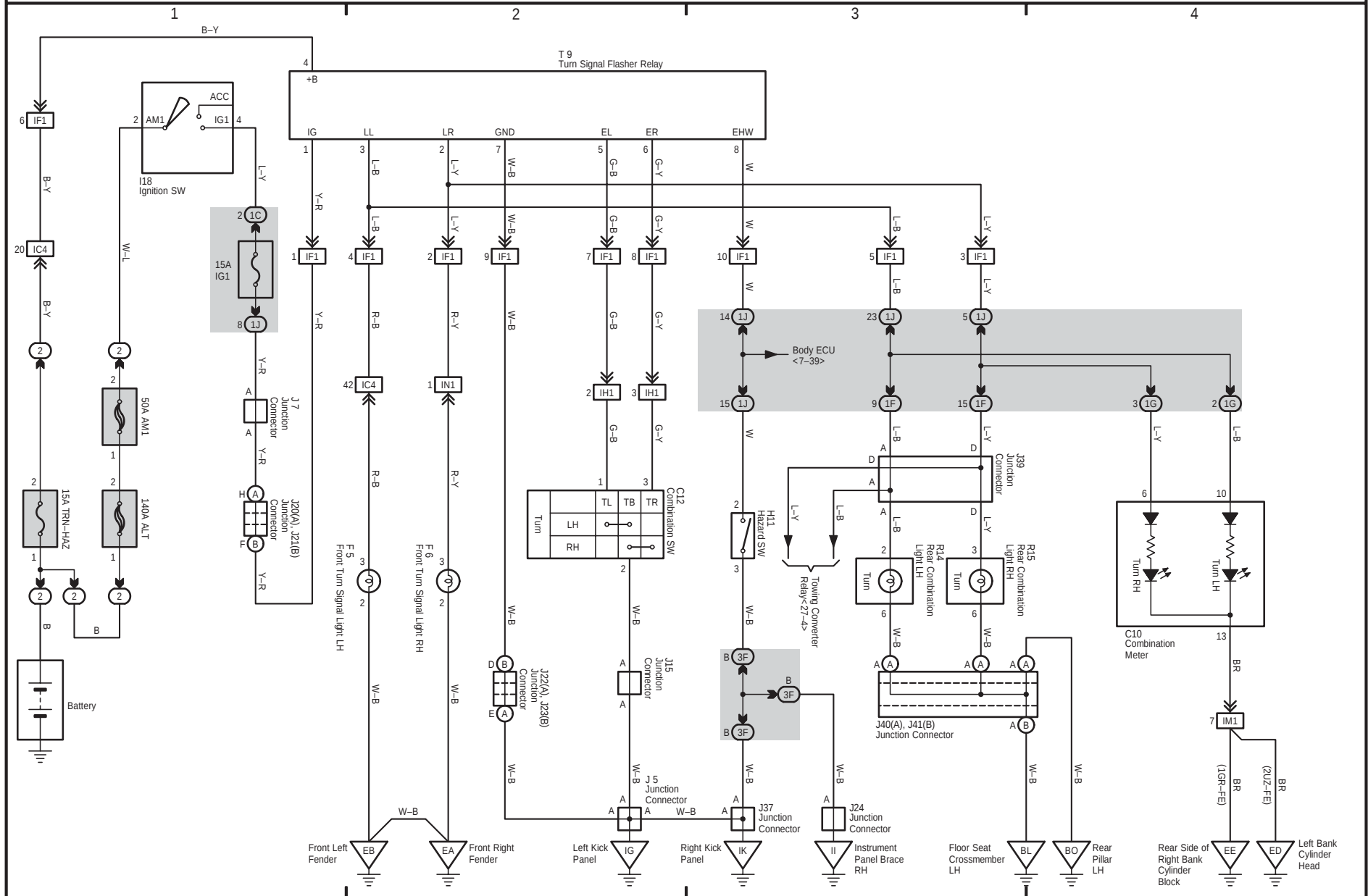
Turn Signal and Hazard Warning Light (w/ Daytime Running Light): This section includes the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL). The Turn Signal and Hazard Warning Light (w/ Daytime Running Light) is controlled by the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL). The Daytime Running Light (DRL) is controlled by the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL).

Turn Signal and Hazard Warning Light (w/ Daytime Running Light): This section includes the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL). The Turn Signal and Hazard Warning Light (w/ Daytime Running Light) is controlled by the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL). The Daytime Running Light (DRL) is controlled by the Turn Signal and Hazard Warning Light (w/ Daytime Running Light) and the Daytime Running Light (DRL).

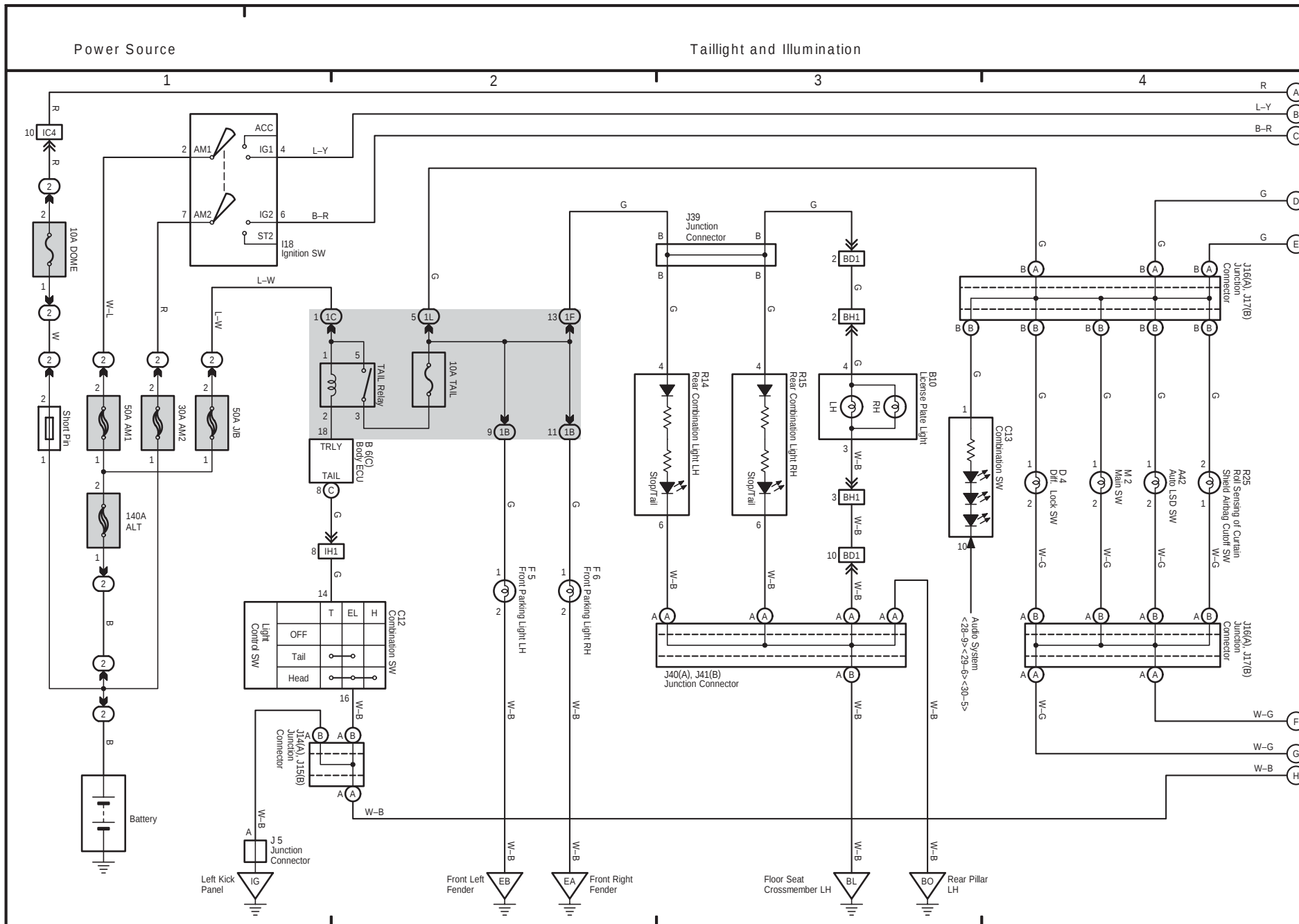
9 4RUNNER

Power Source

Turn Signal and Hazard Warning Light (w/o Daytime Running Light)



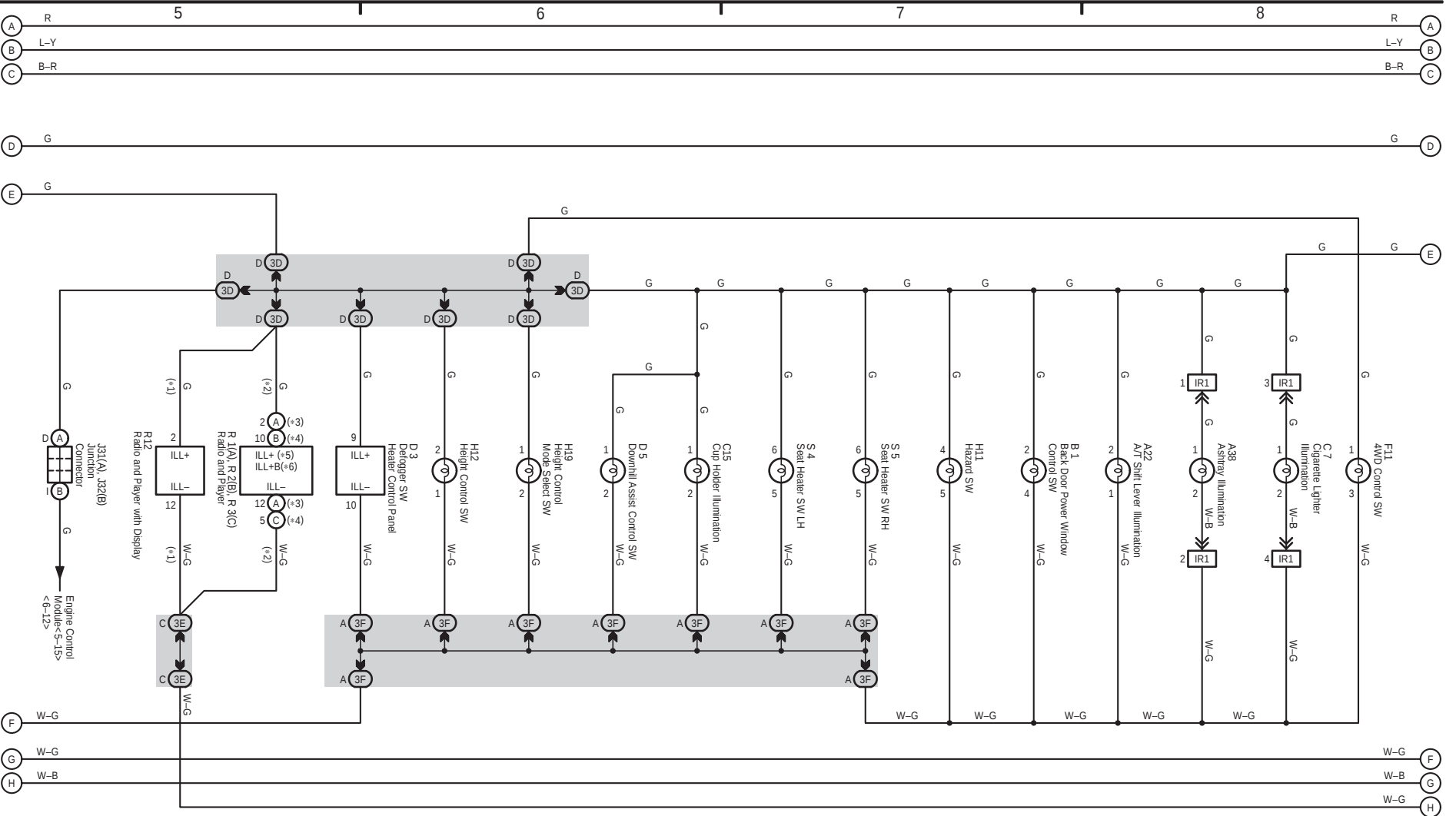
4RUNNER (EM00T0U)



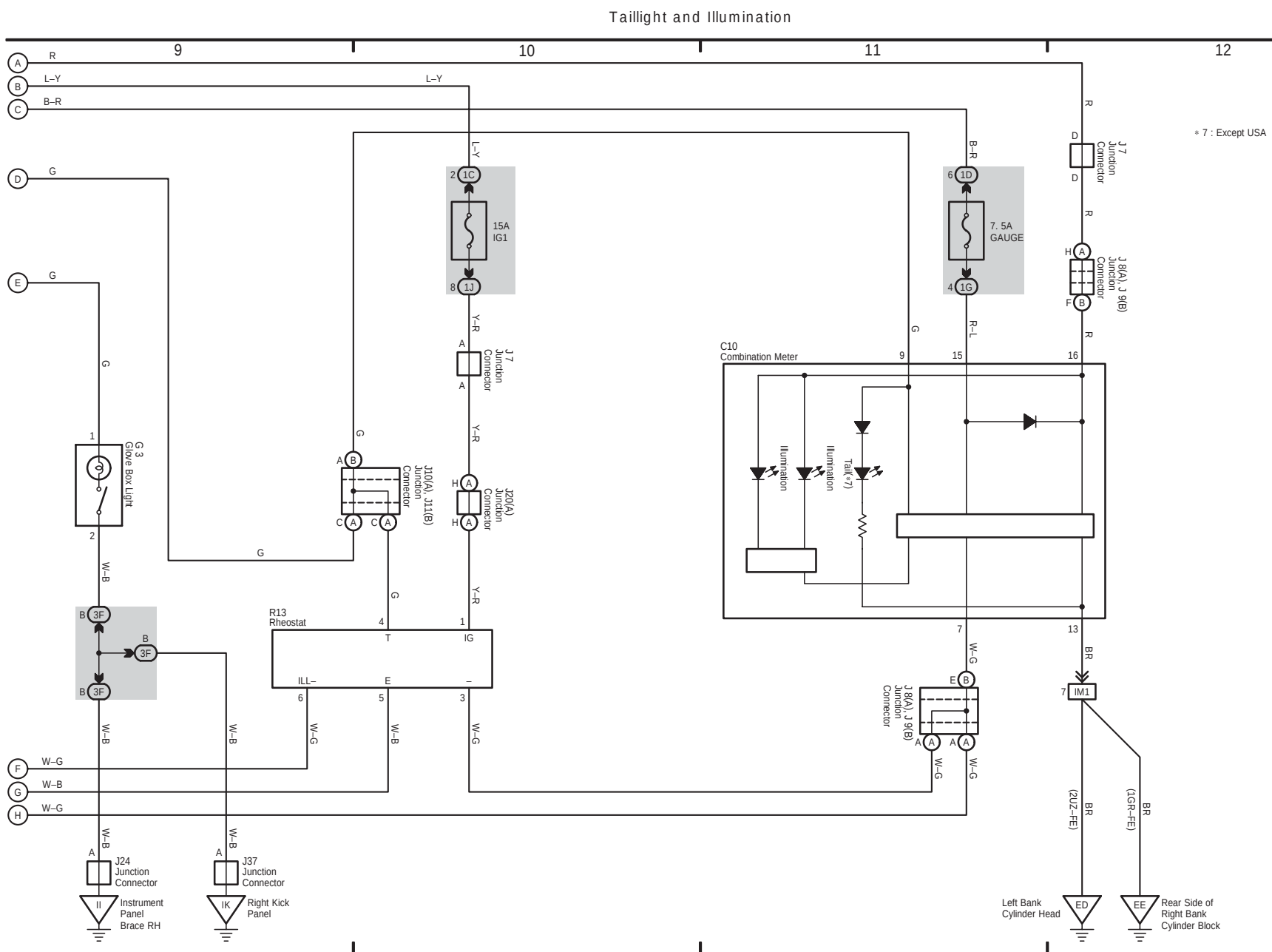
Taillight and Illumination

* 1 : w/ Navigation System
* 2 : w/o Navigation System
* 3 : Except 6 Speaker

* 4 : 6 Speaker
* 5 : w/ CD Changer
* 6 : w/o CD Changer



4RUNNER (EM00T0U)

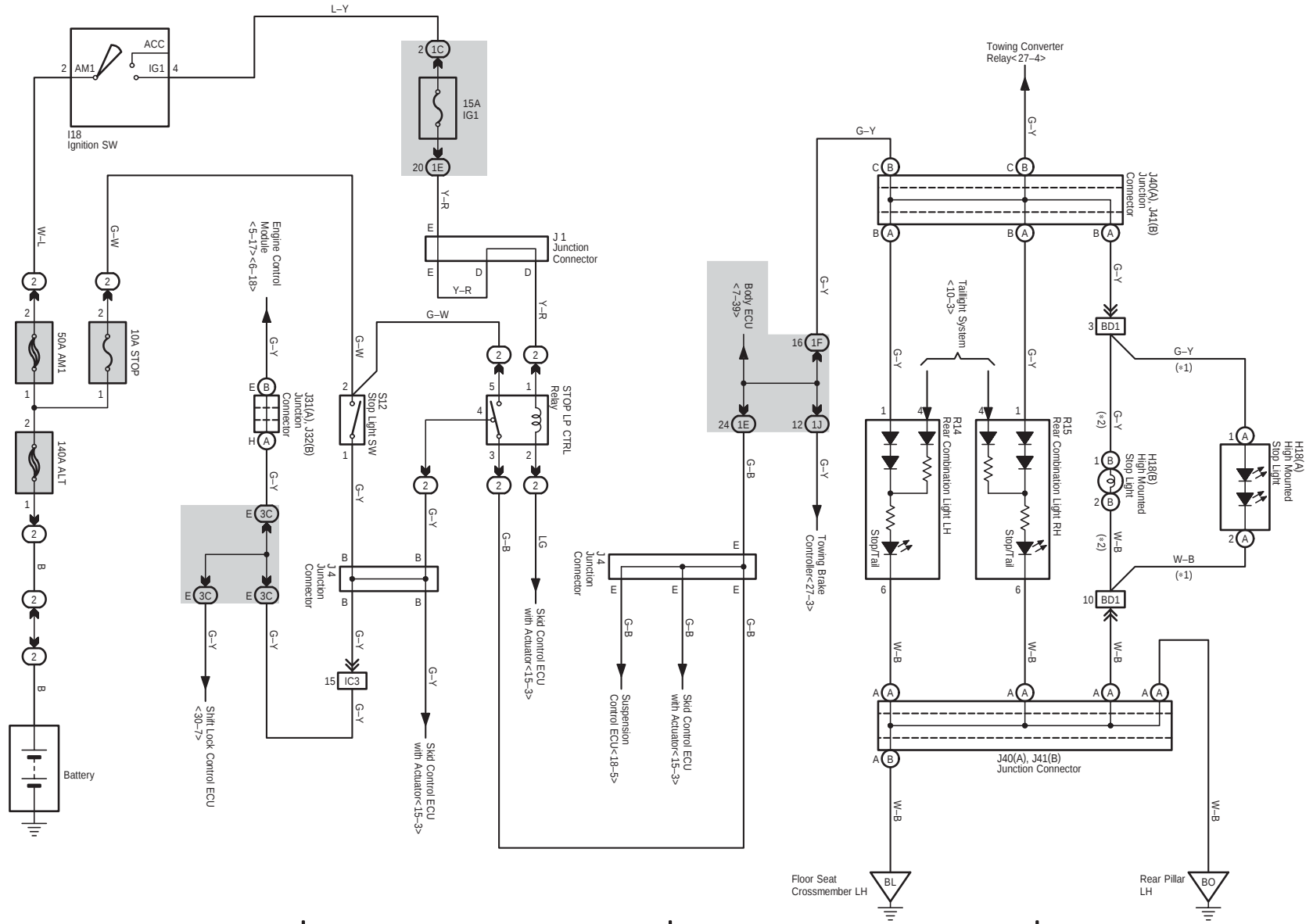


11 4RUNNER

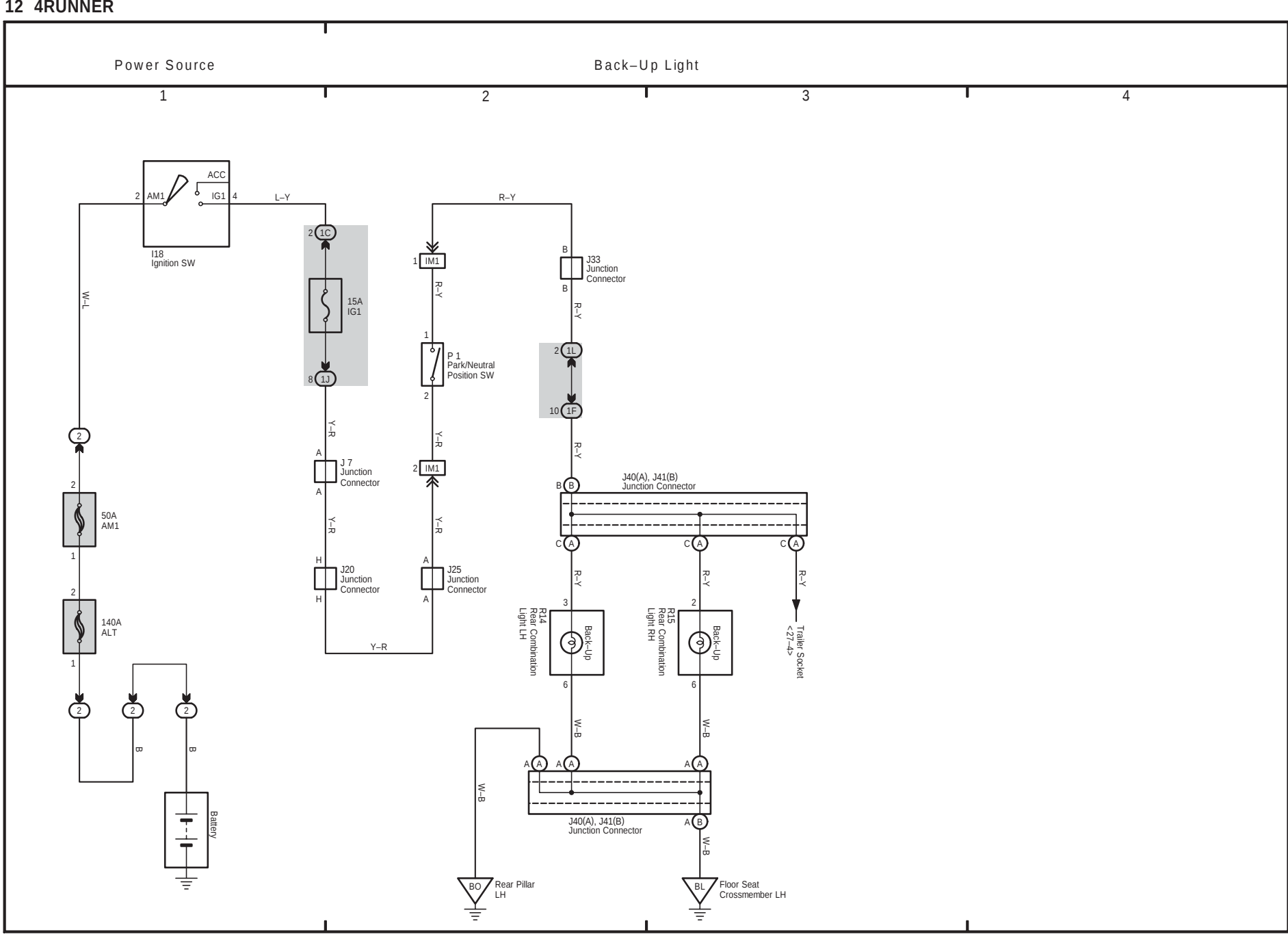
Power Source

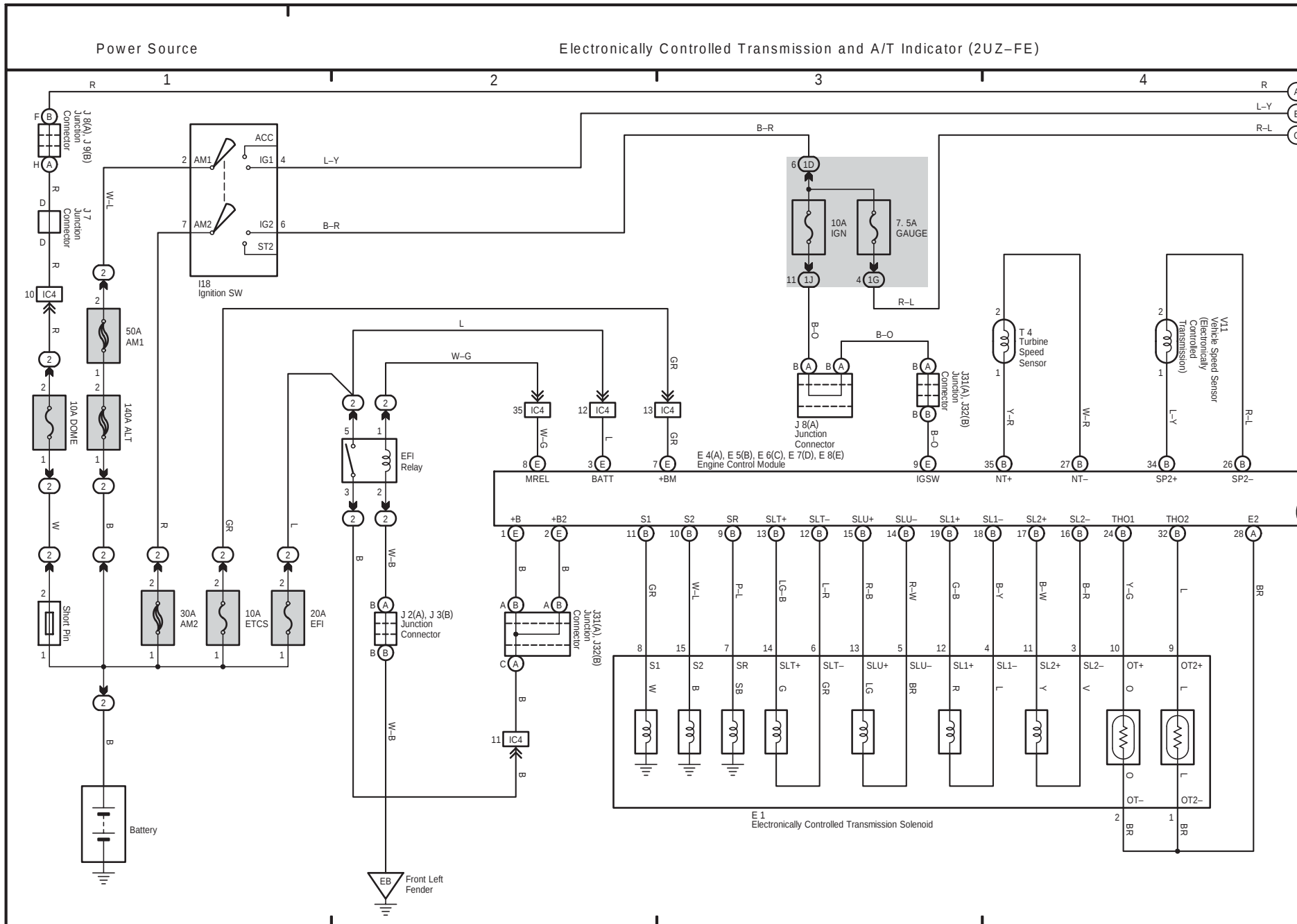
Stop Light

* 1 : w/ Rear Spoiler
* 2 : w/o Rear Spoiler

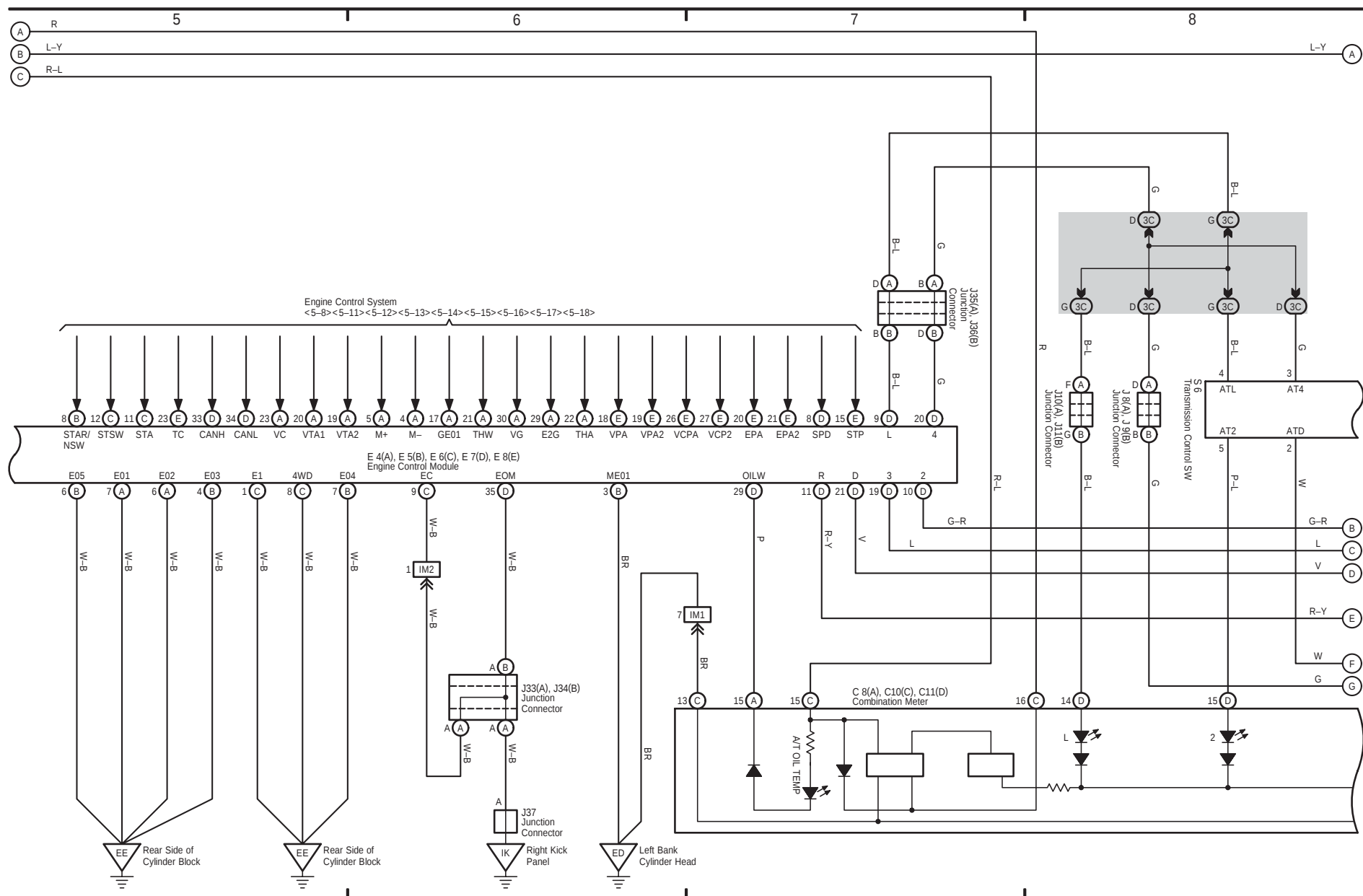


4RUNNER (EM00T0U)

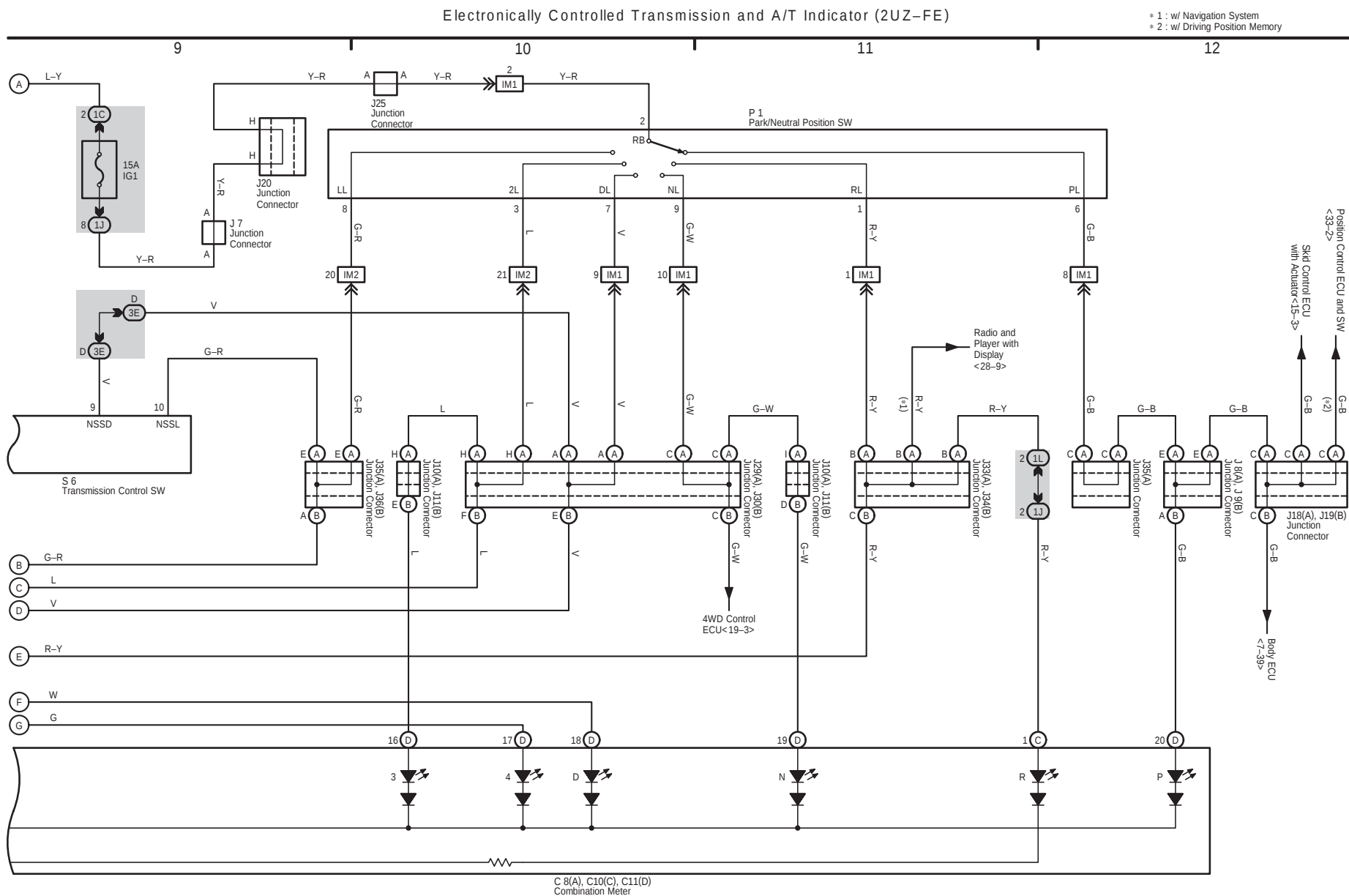


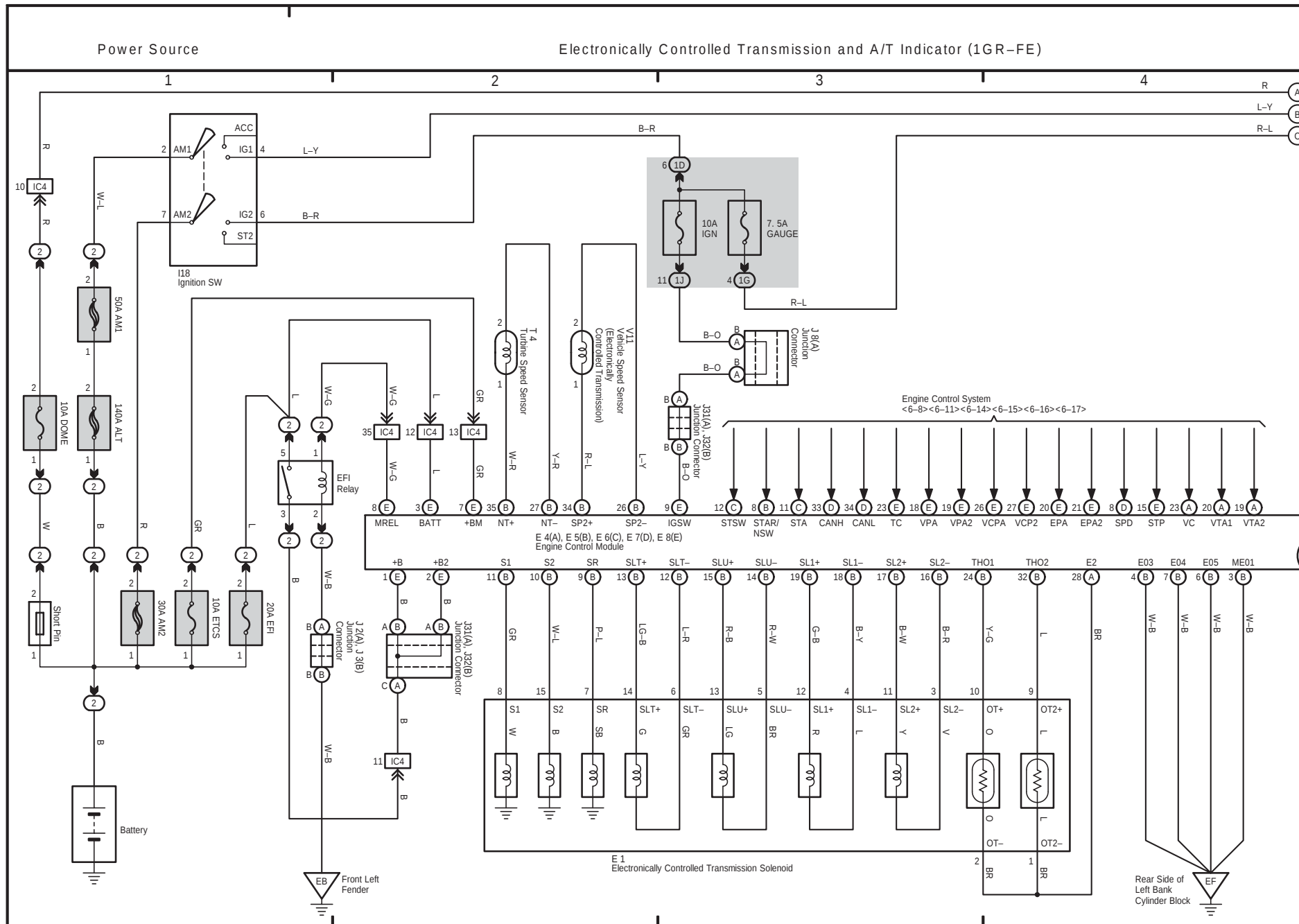


Engine Control System
<5-8><5-11><5-12><5-13><5-14><5-15><5-16><5-17><5-18>



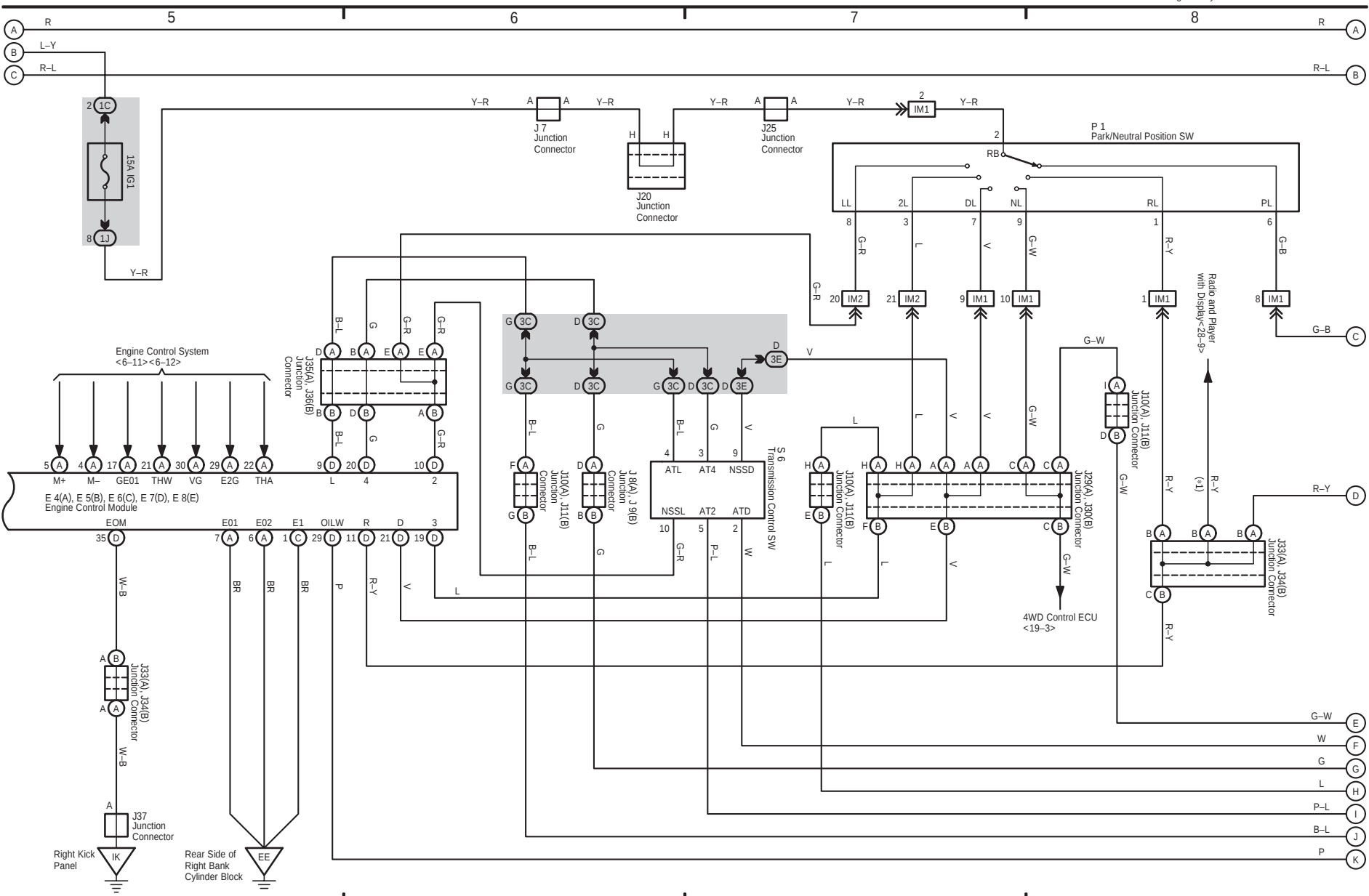
4RUNNER (EMOOTOU)





Electronically Controlled Transmission and A/T Indicator (1GR-FE)

* 1 : w/ Navigation System

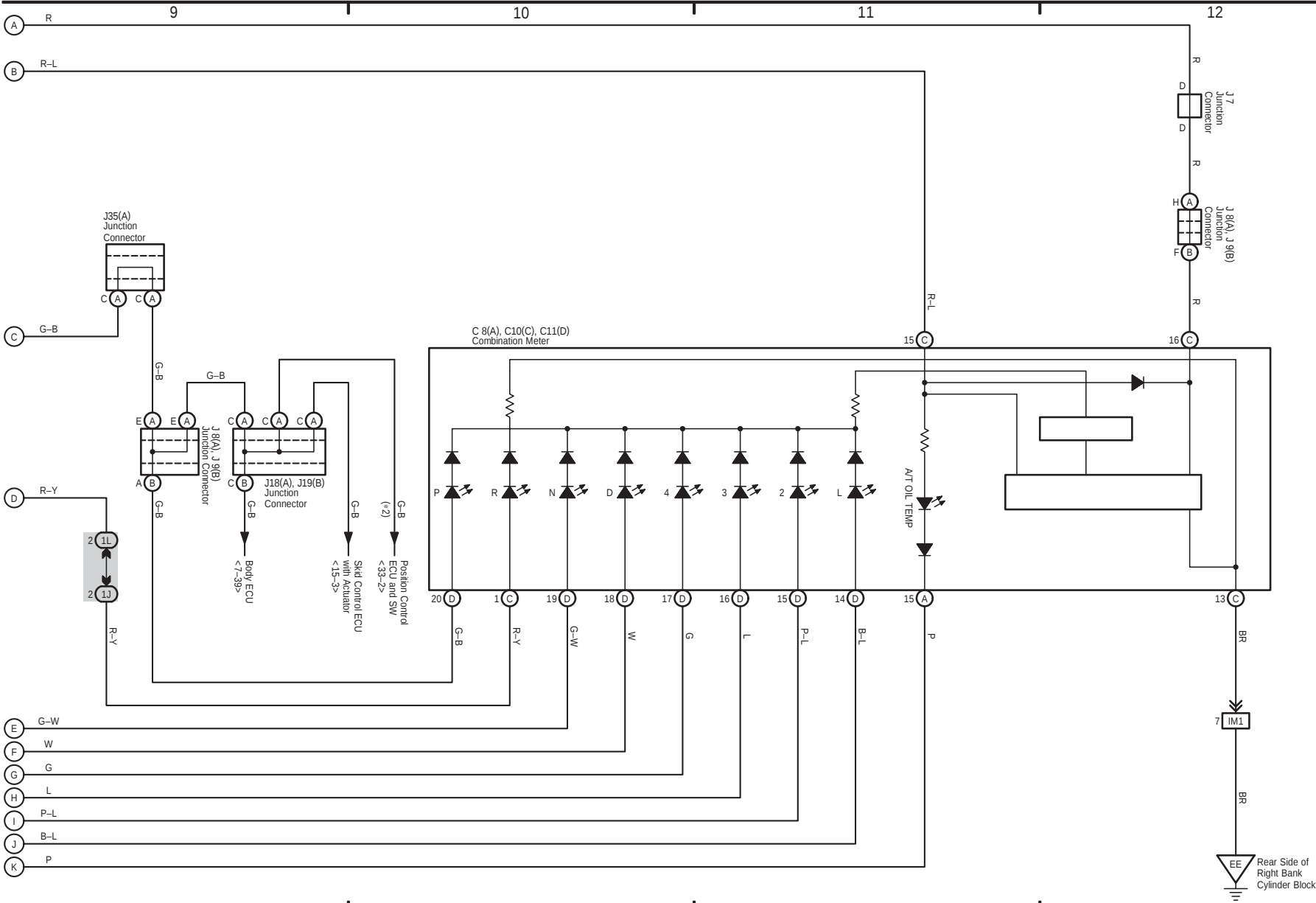


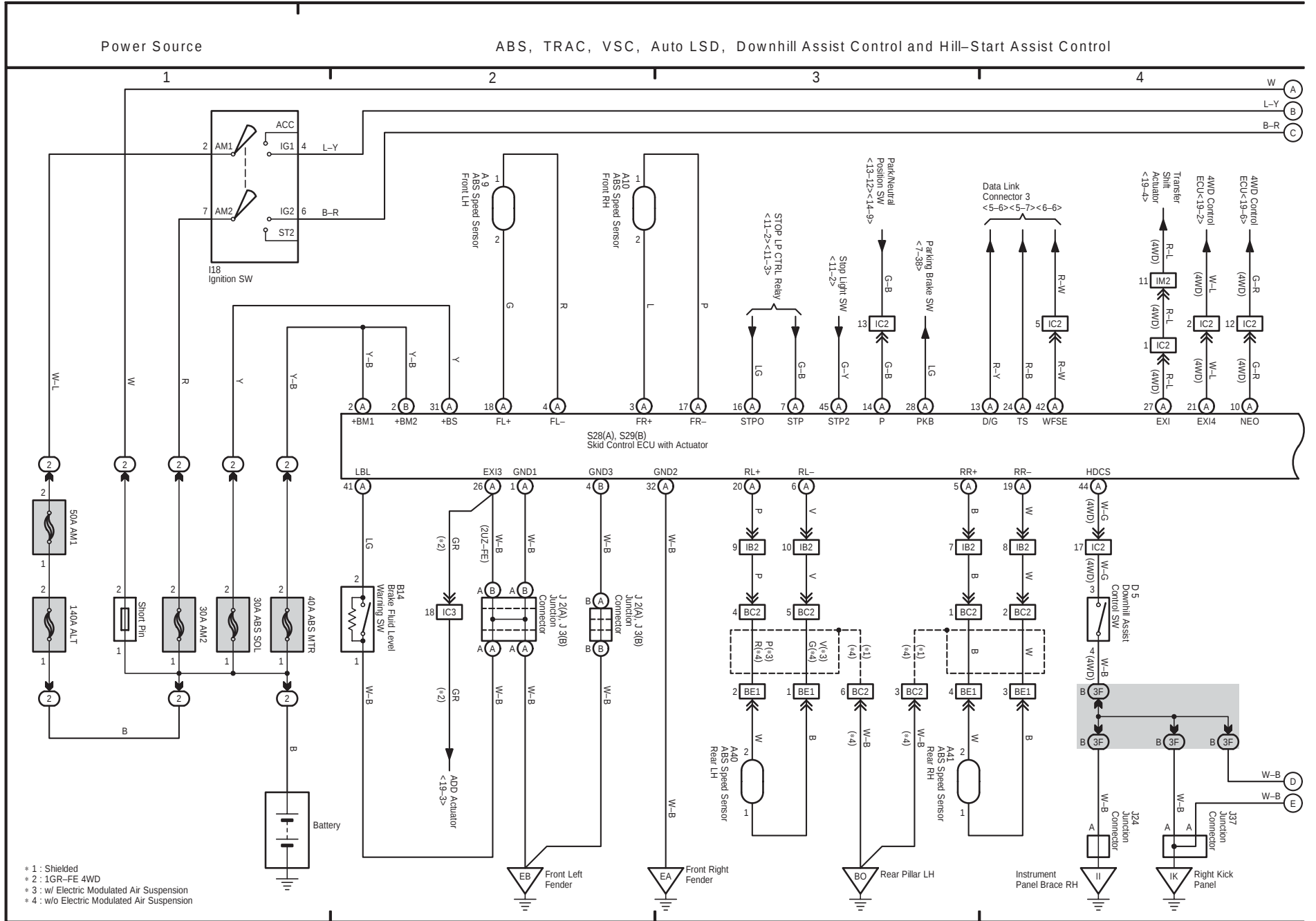
4RUNNER (EM00TOU)

14 4RUNNER (Cont' d)

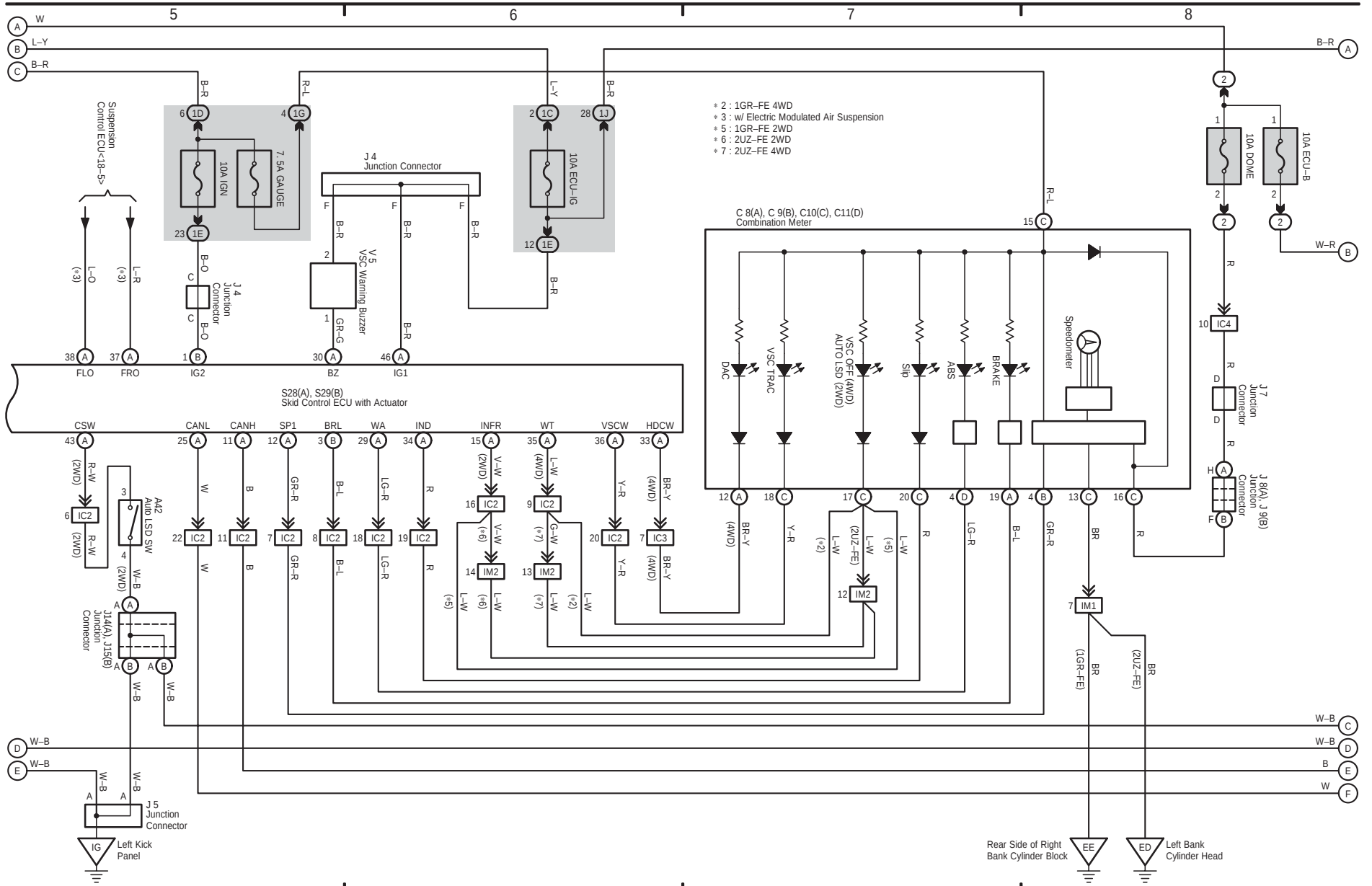
Electronically Controlled Transmission and A/T Indicator (1GR-FE)

* 2 : w/ Driving Position Memory

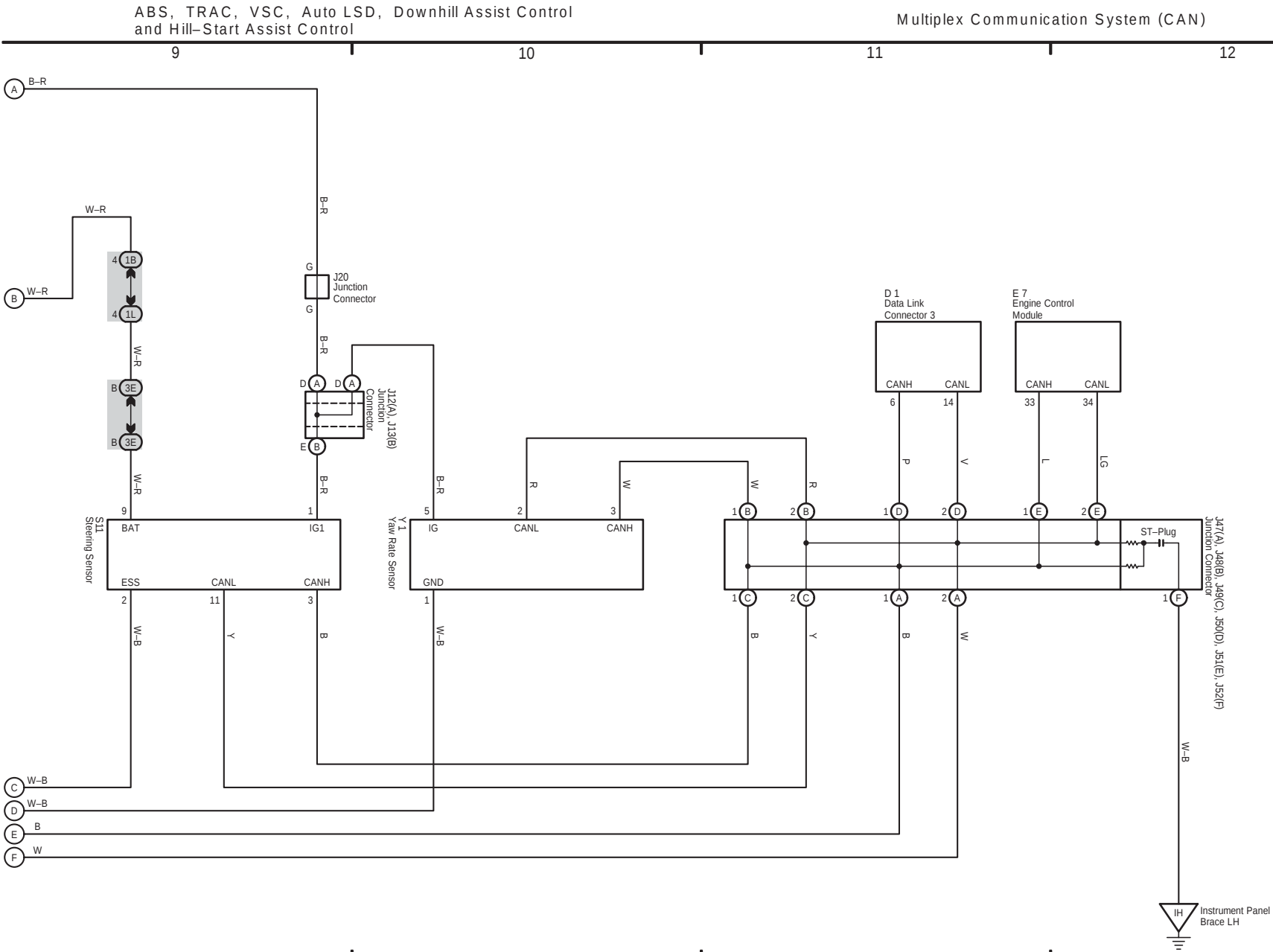


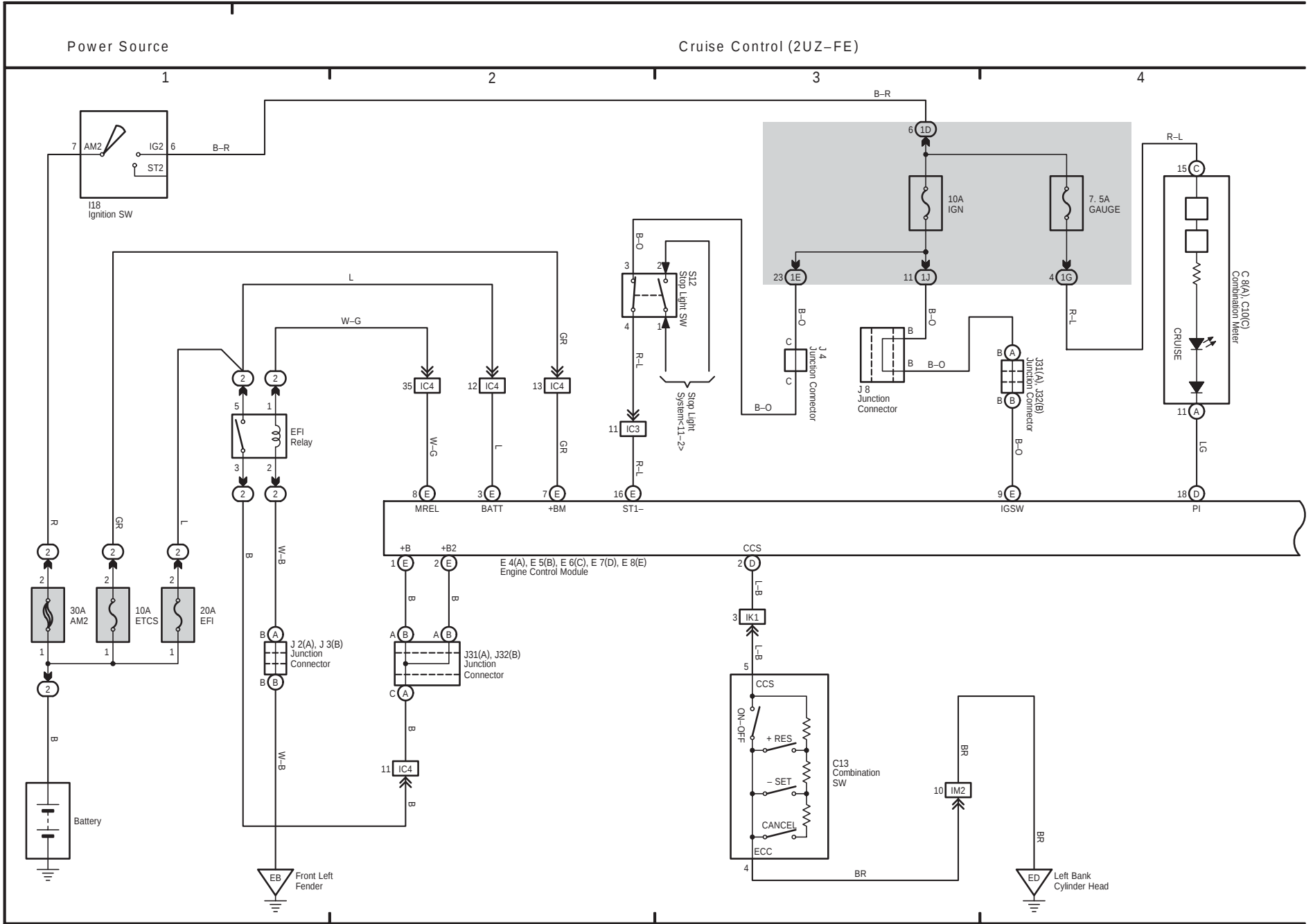


ABS, TRAC, VSC, Auto LSD, Downhill Assist Control and Hill-Start Assist Control



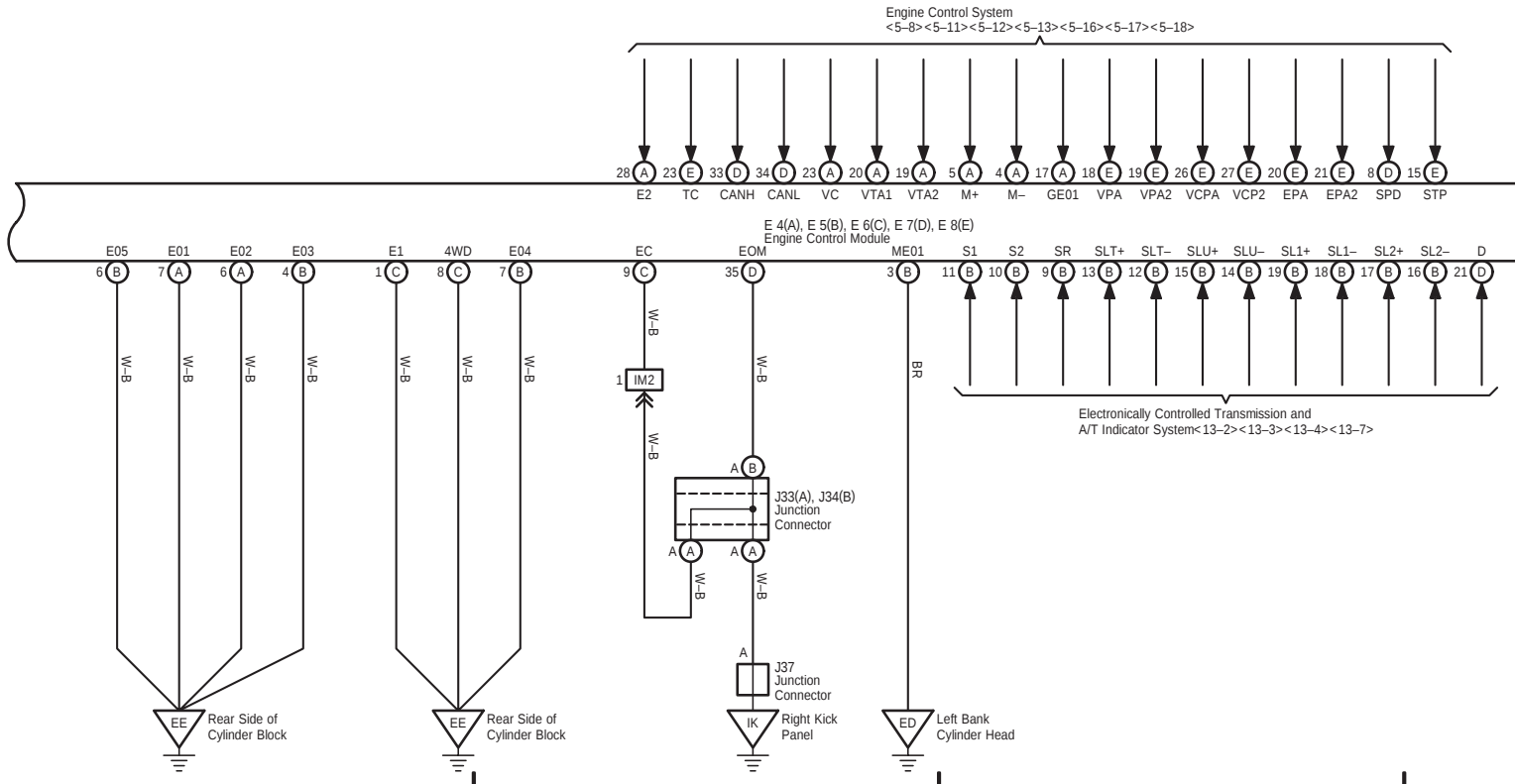
15 4RUNNER (Cont' d)

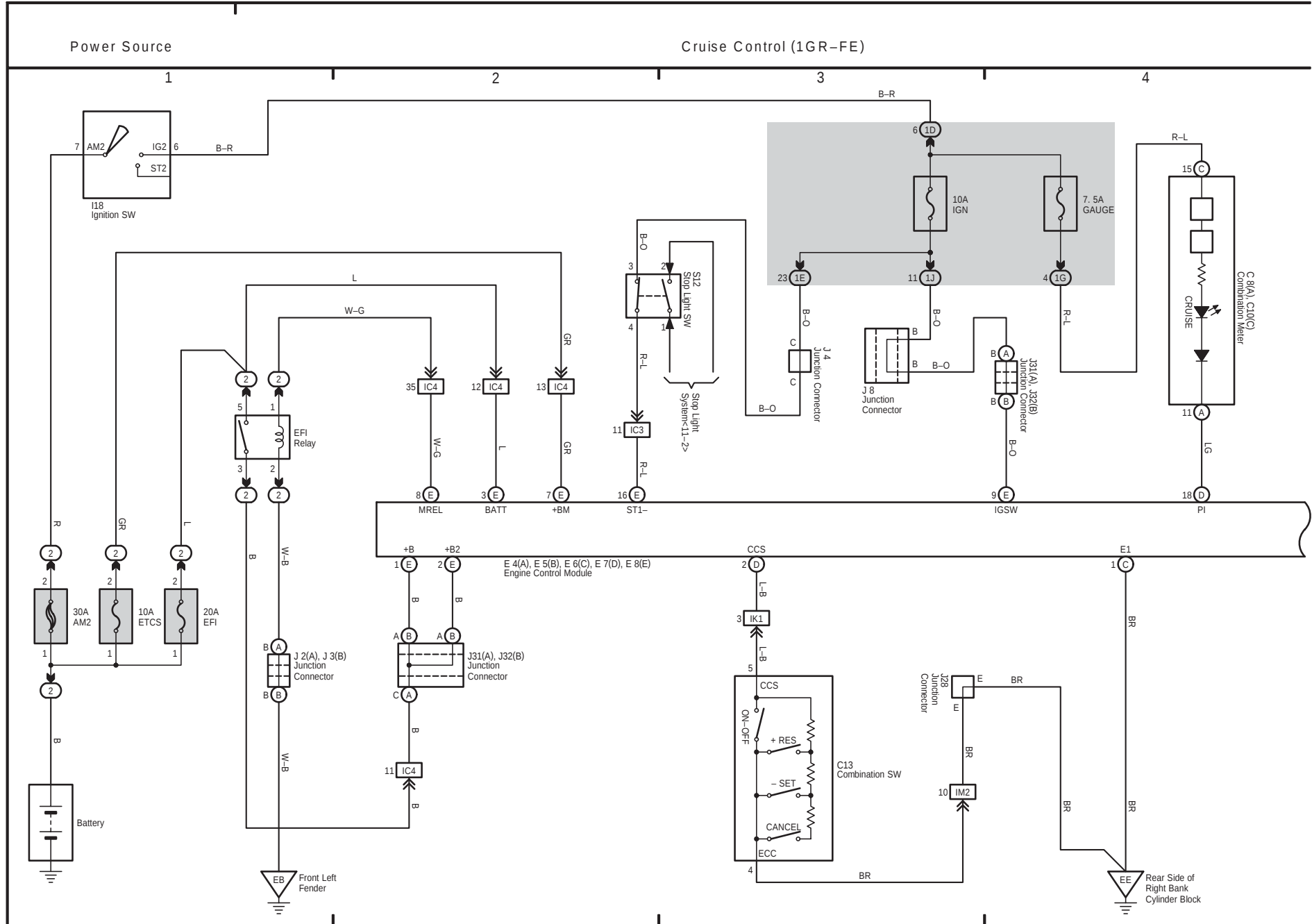




Cruise Control (2UZ-FE)

5 6 7 8

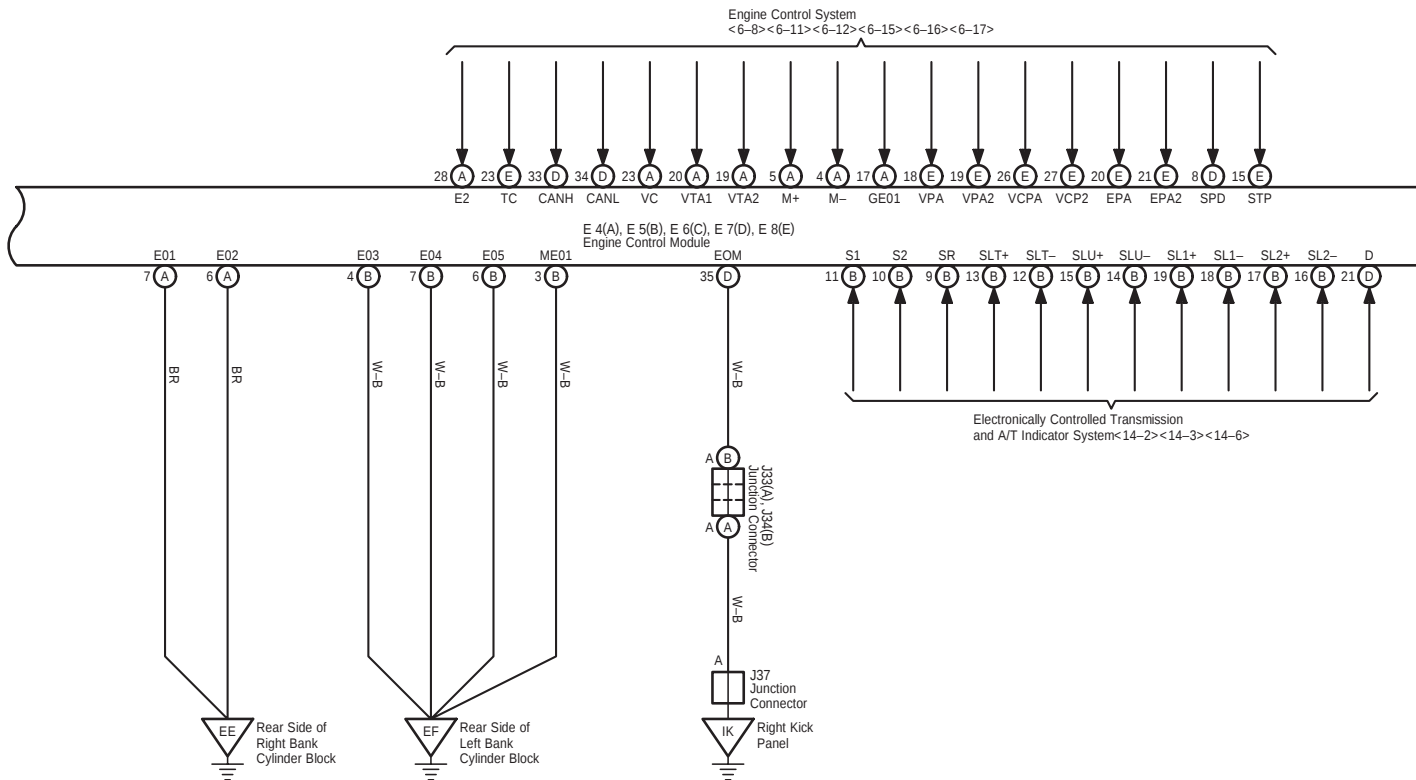


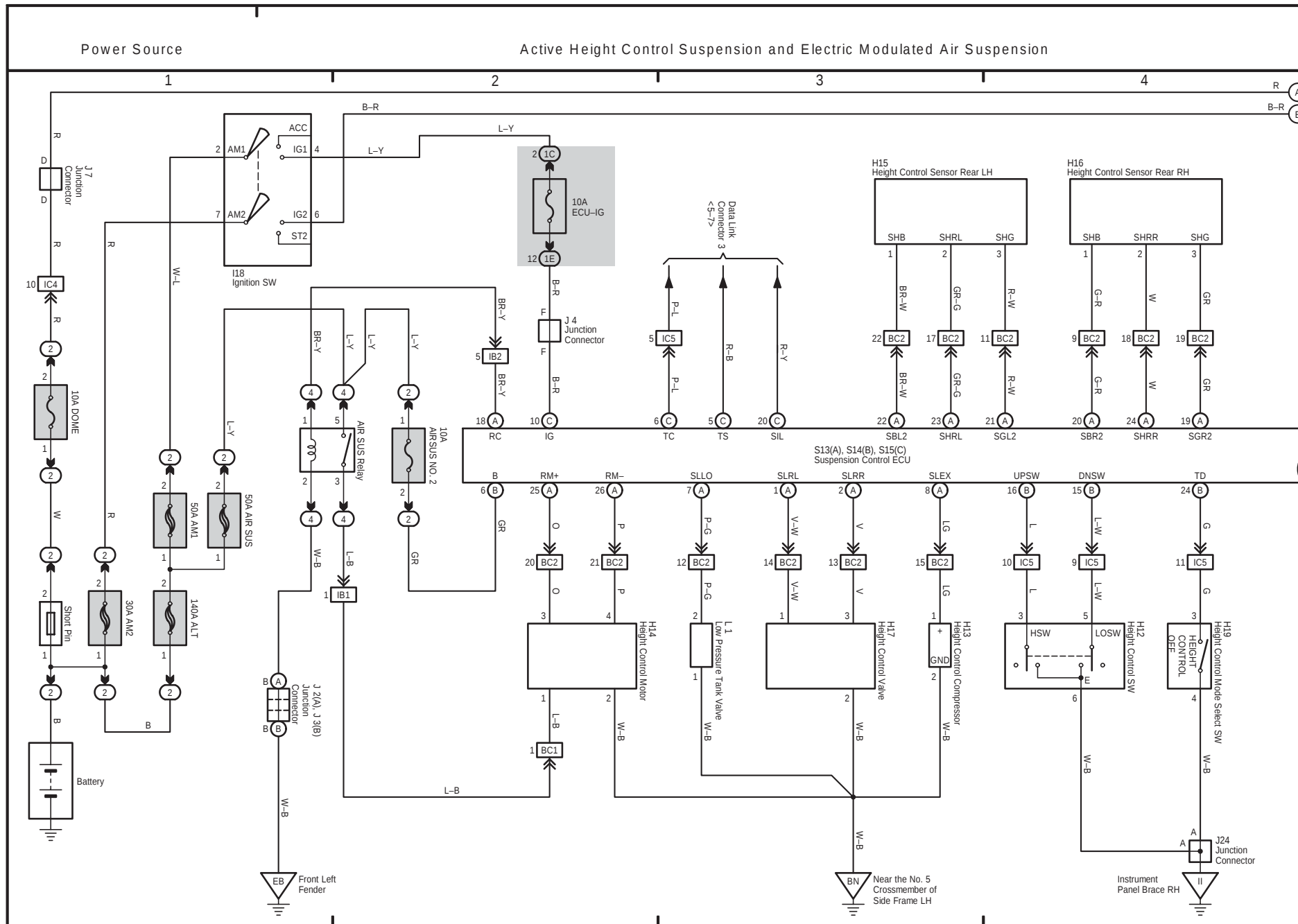


Cruise Control (1GR-FE)

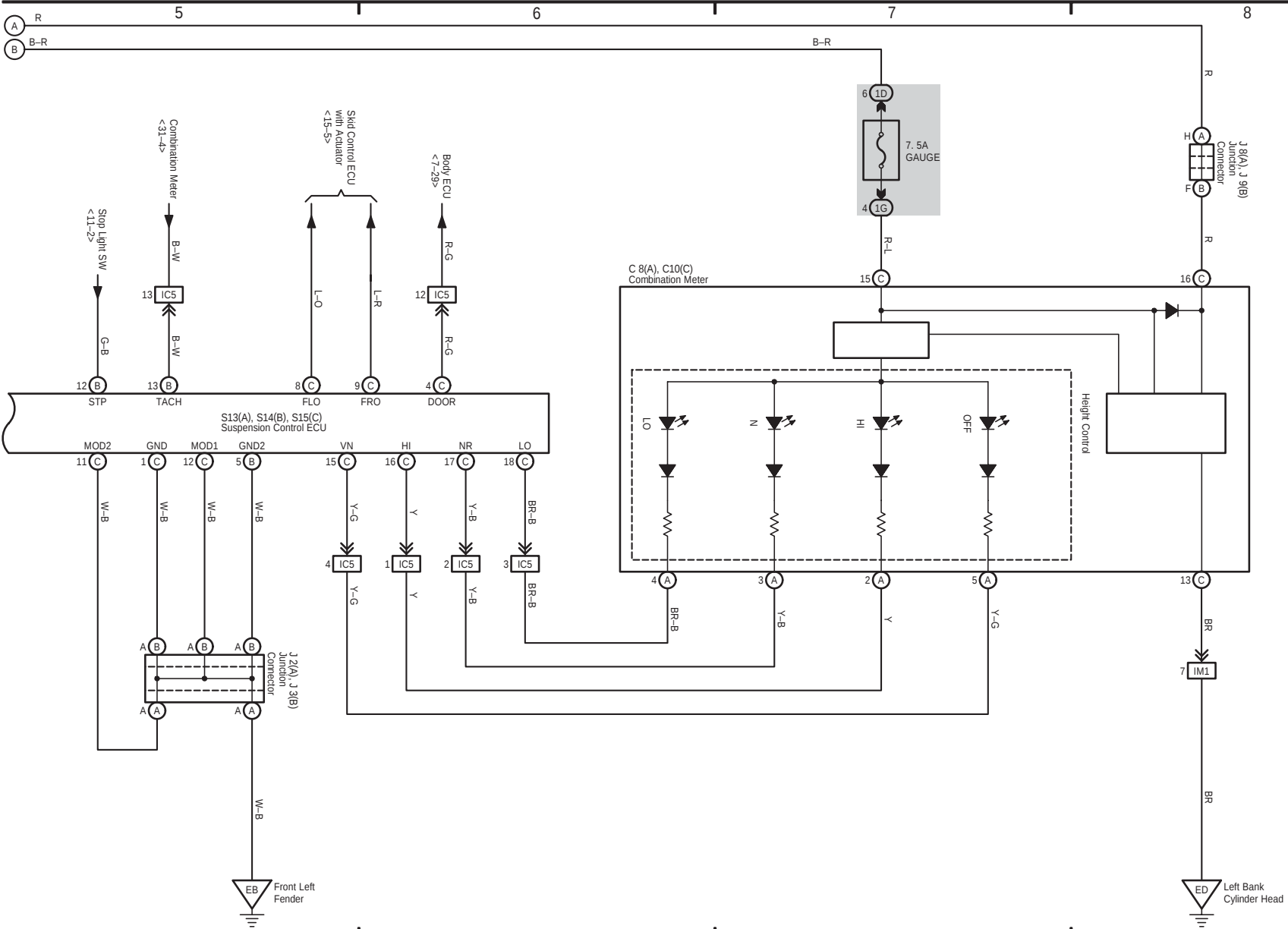
5 6 7 8

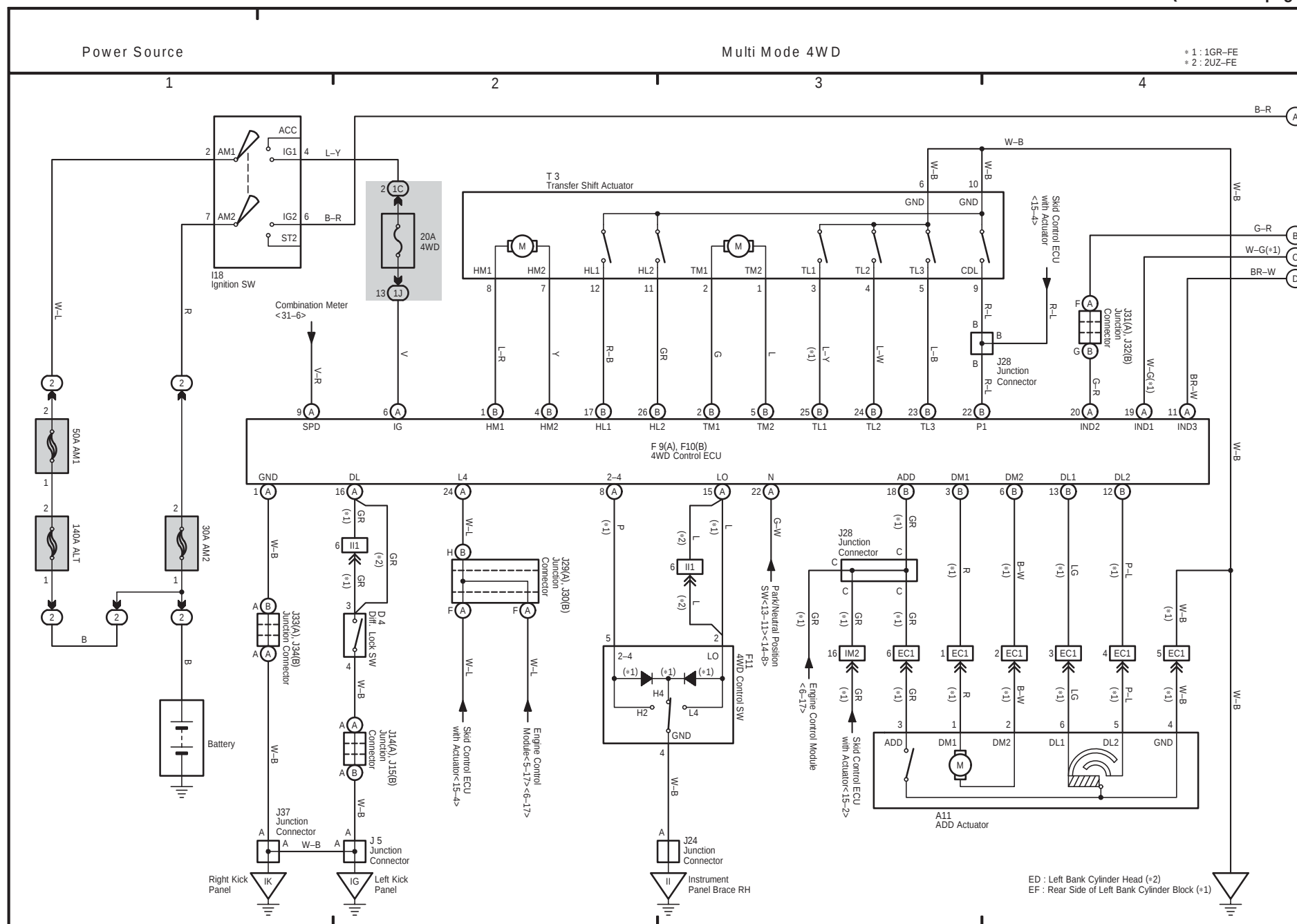
4RUNNER (EM00TOU)





Active Height Control Suspension and Electric Modulated Air Suspension

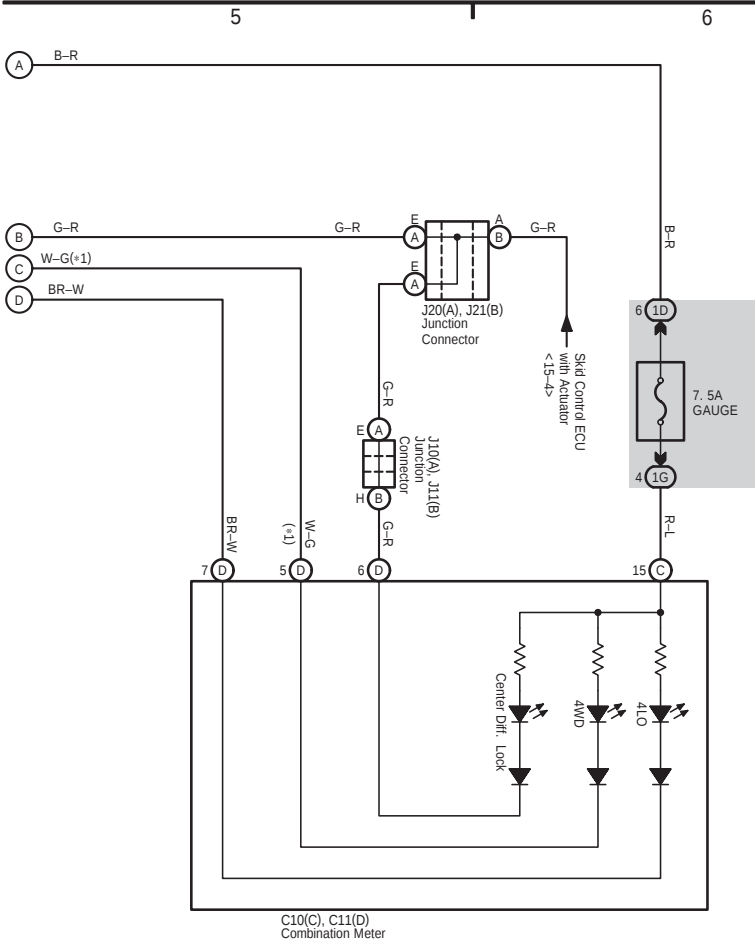




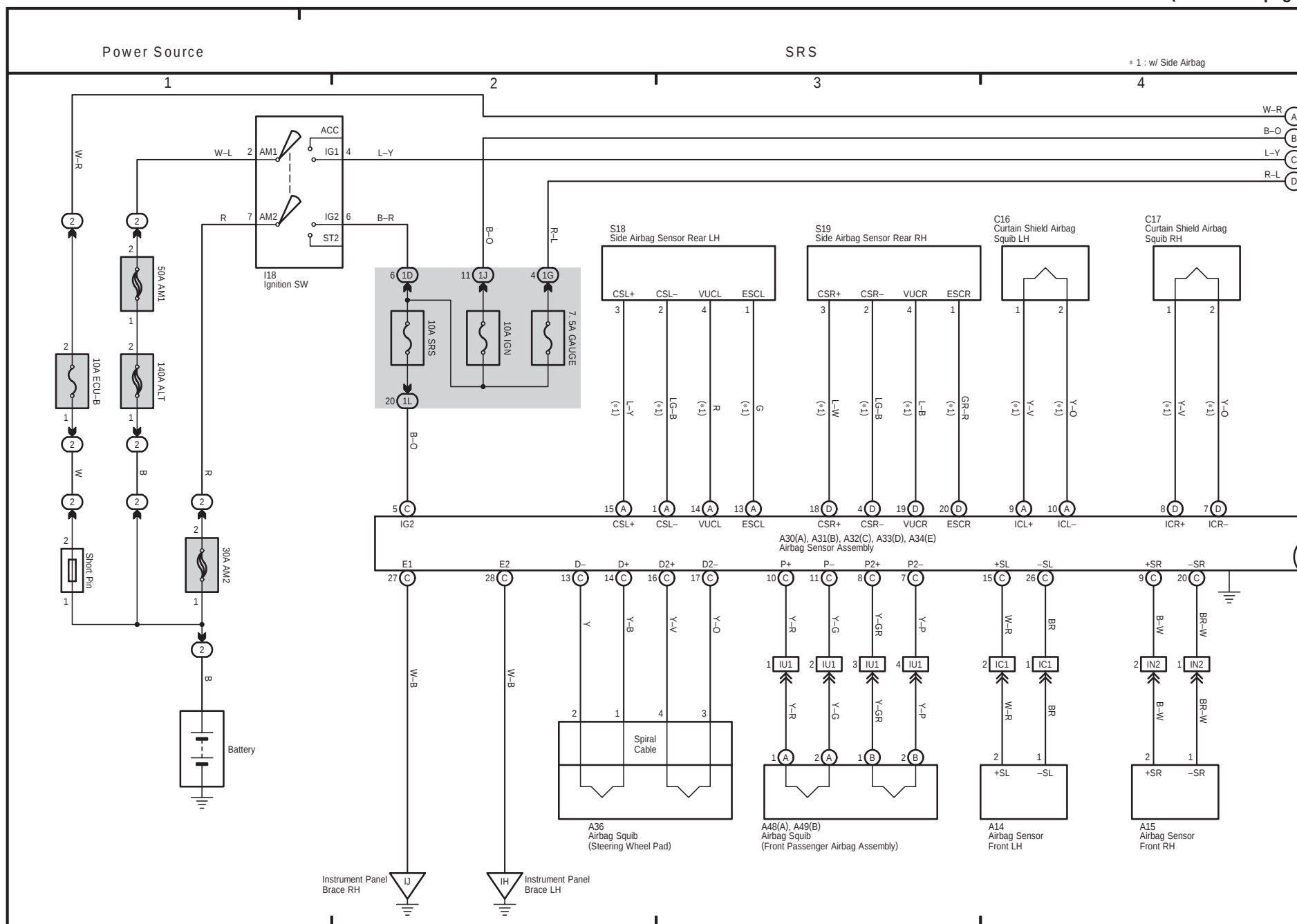
19 4RUNNER (Cont' d)

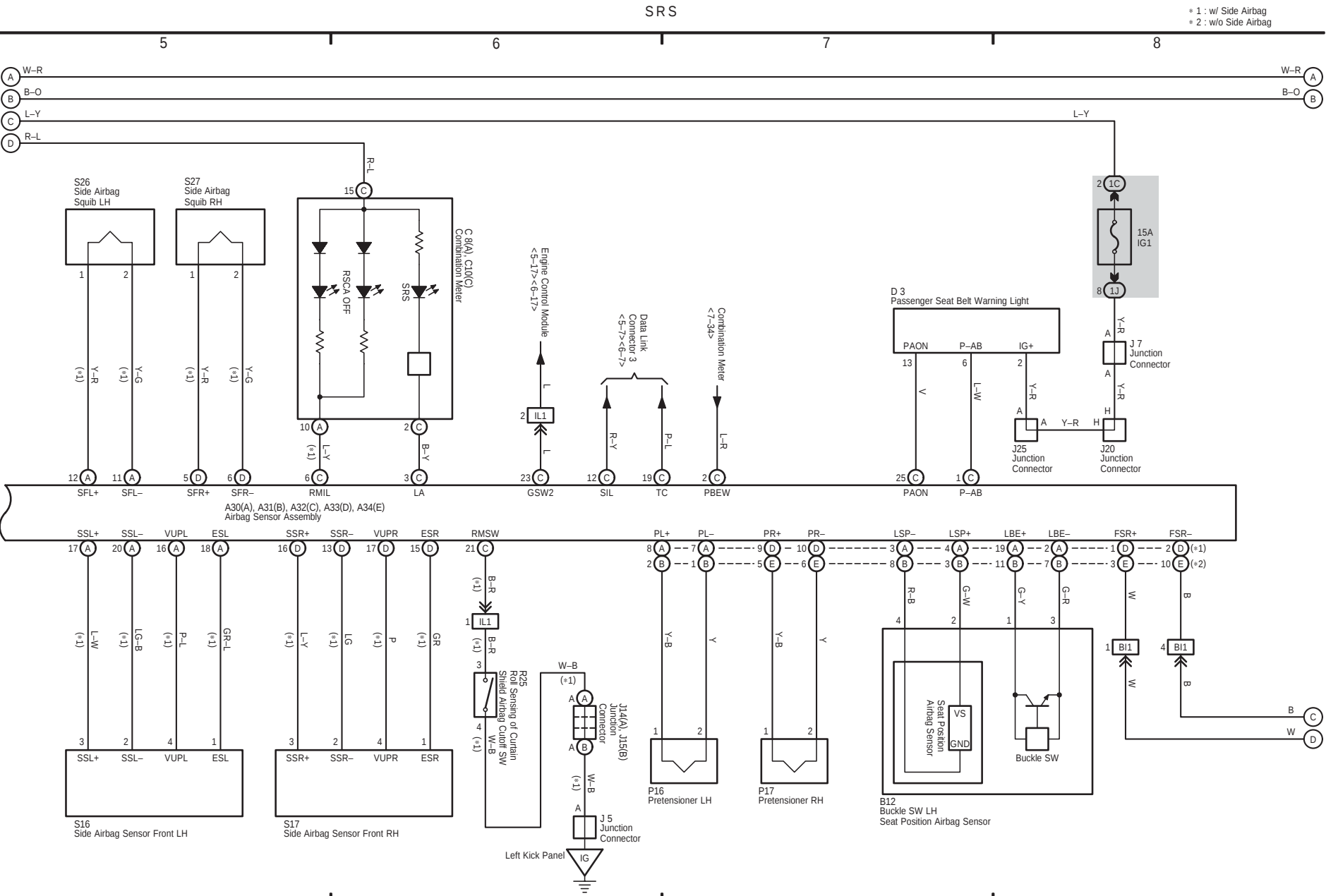
Multi Mode 4WD

* 1 : 1GR-FE

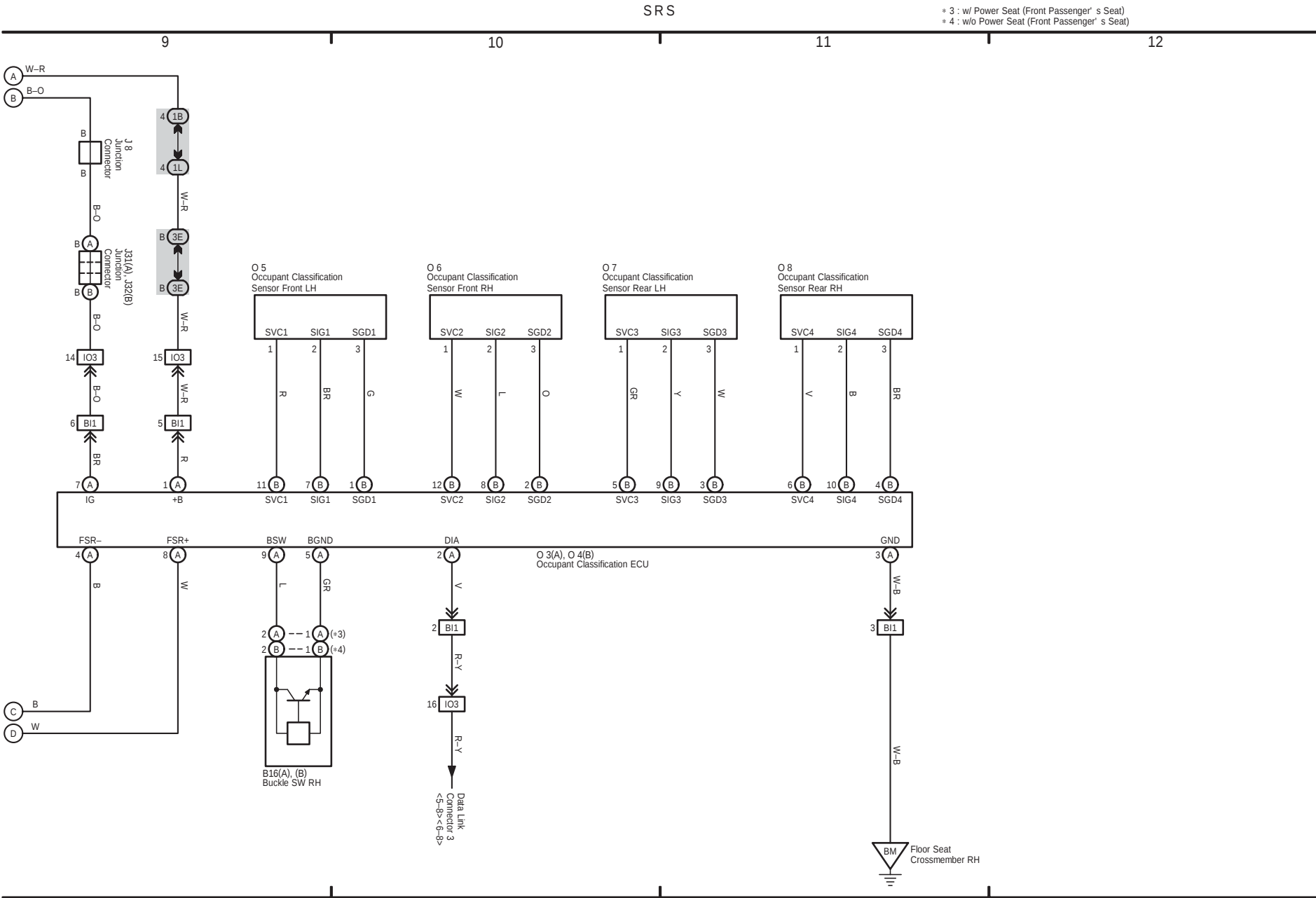


4RUNNER (EM00T0U)





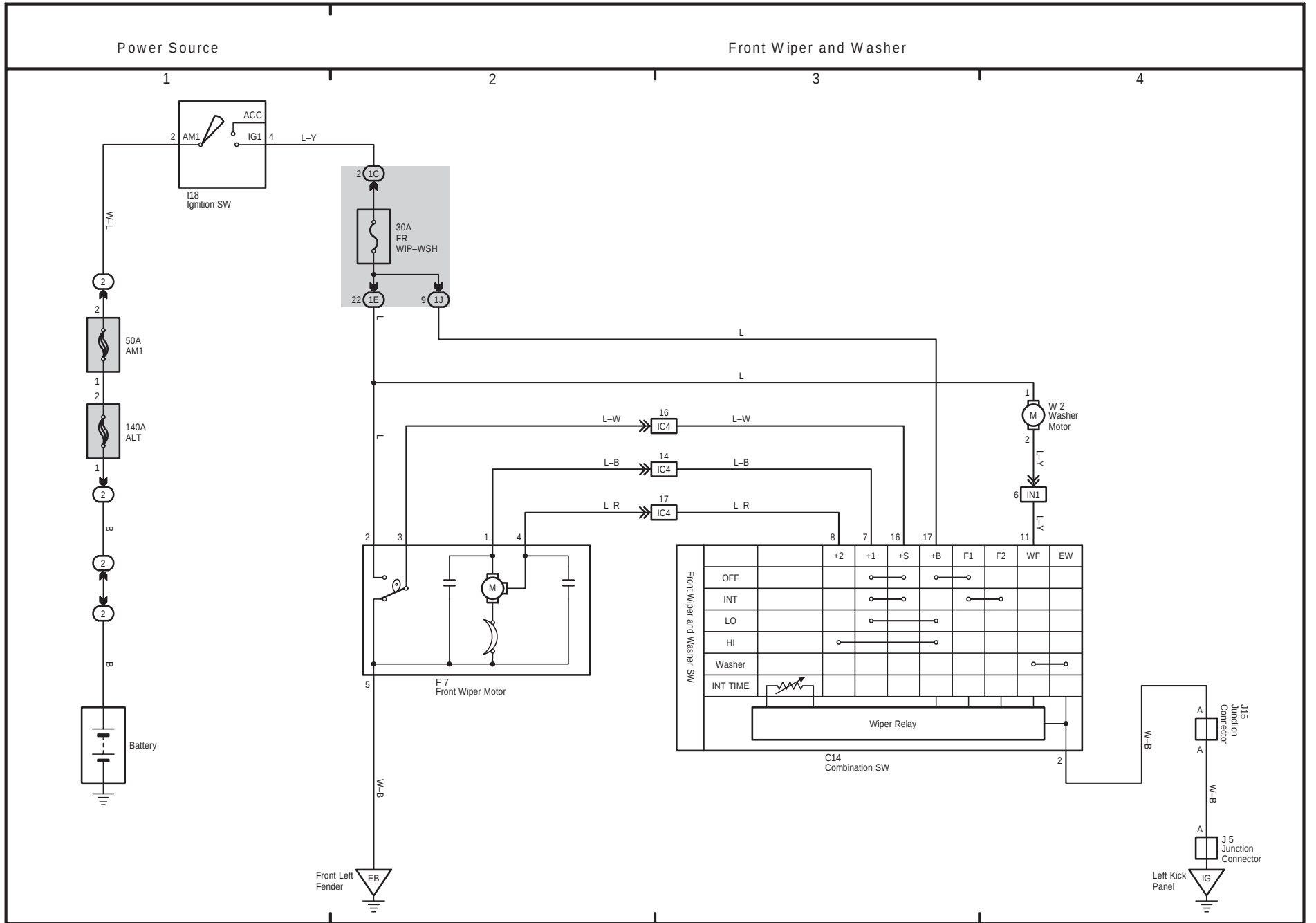
20 4RUNNER (Cont' d)

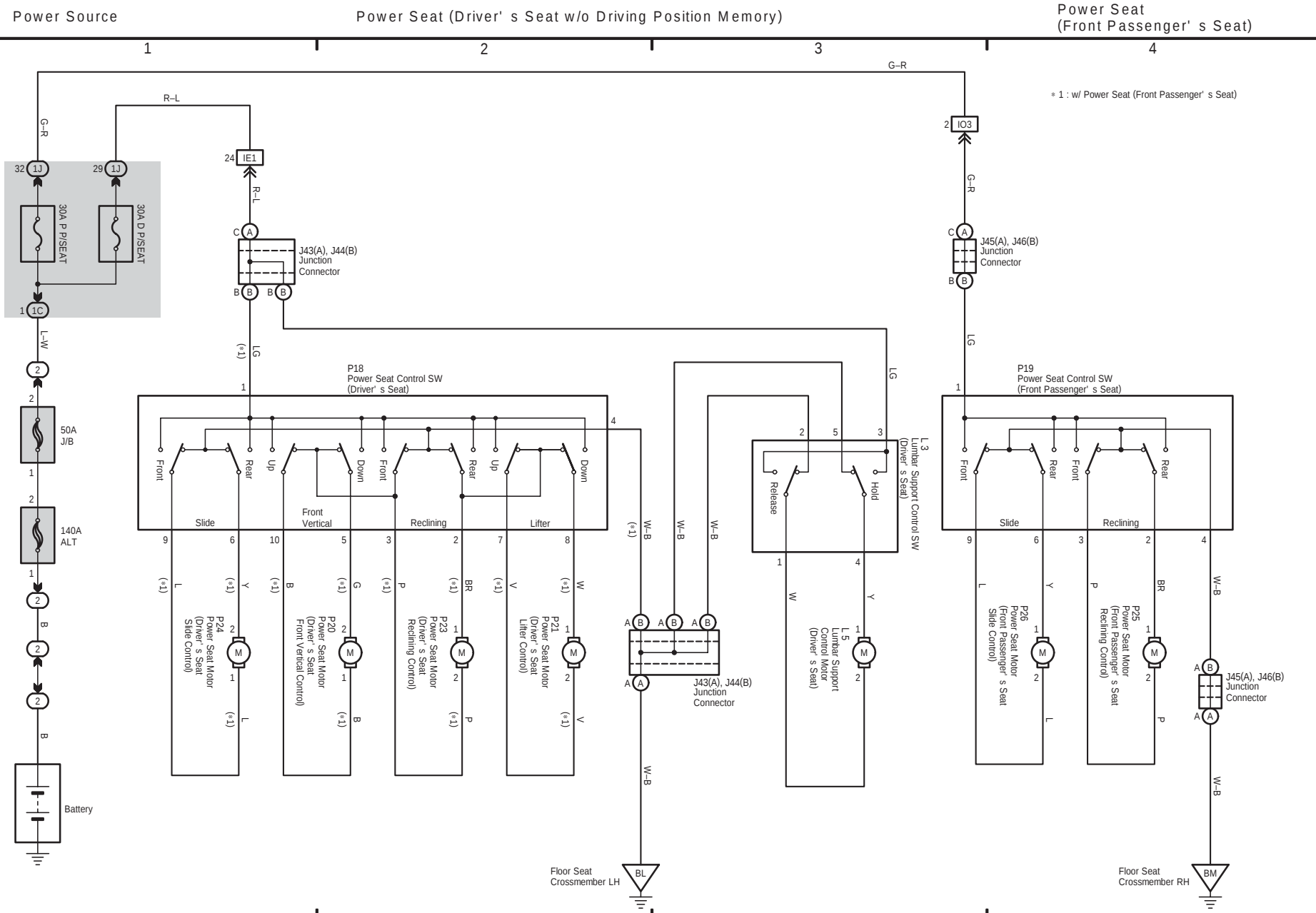


21 4RUNNER

4RUNNER (EM00T0U)

475

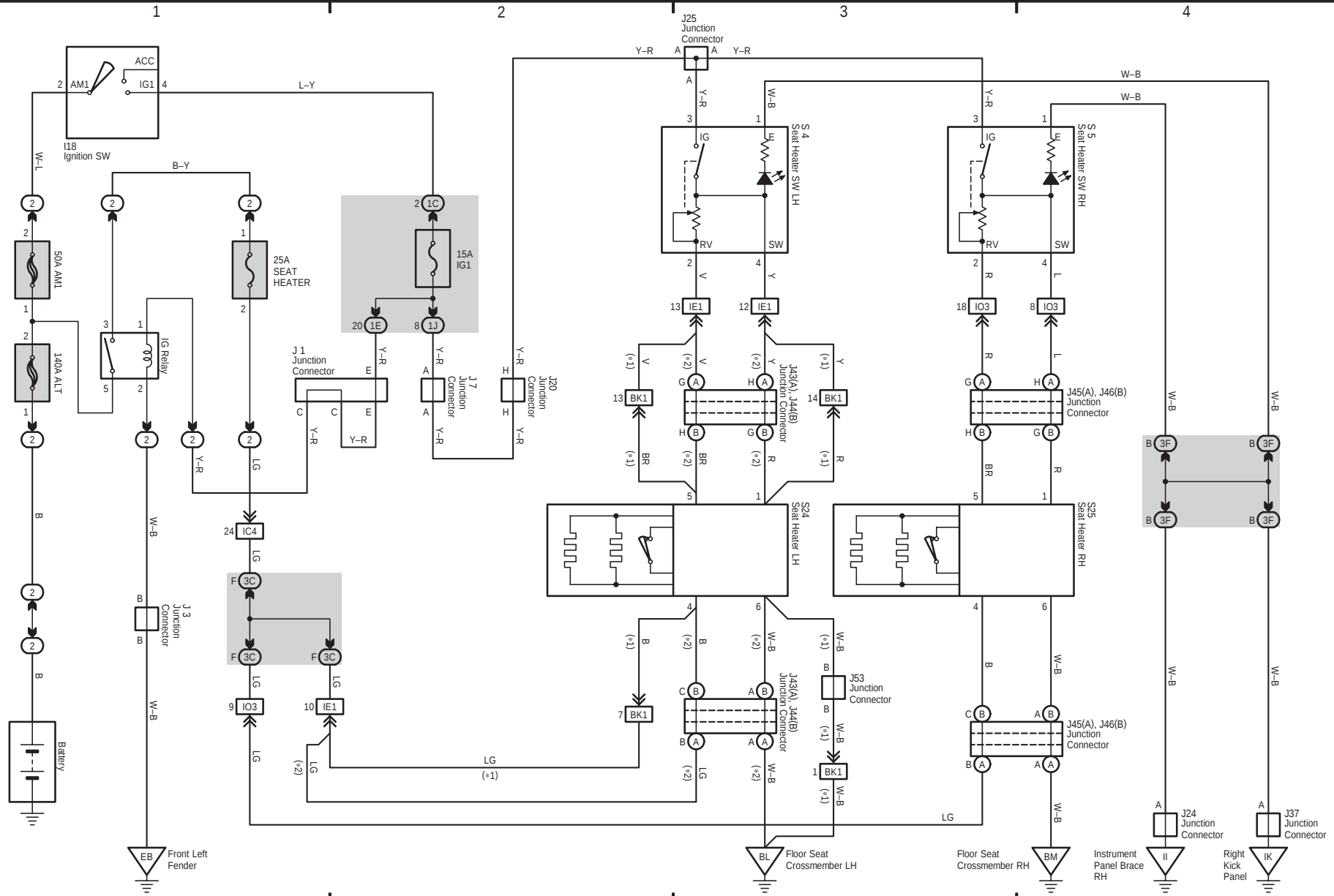




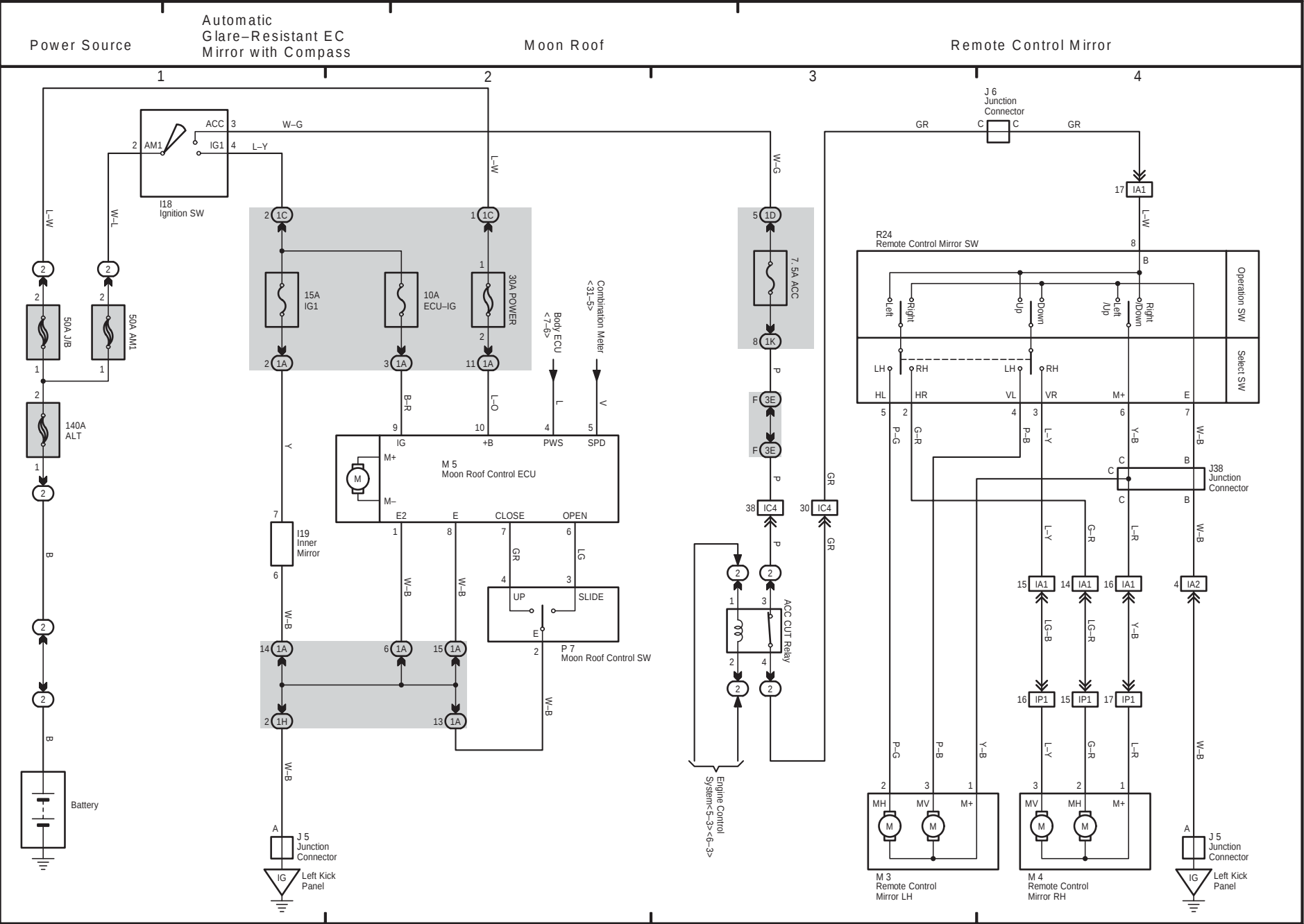
Power Source

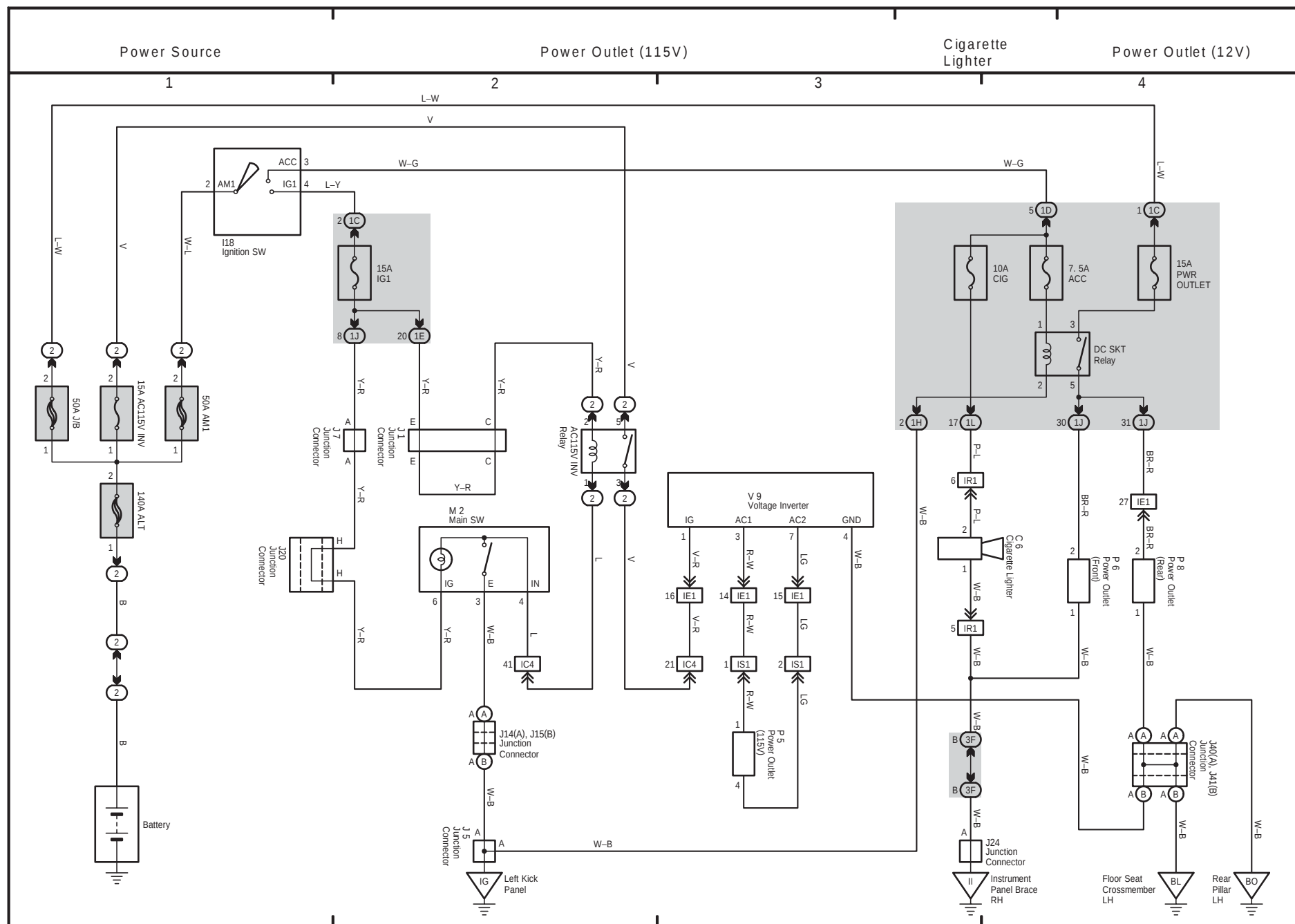
Seat Heater

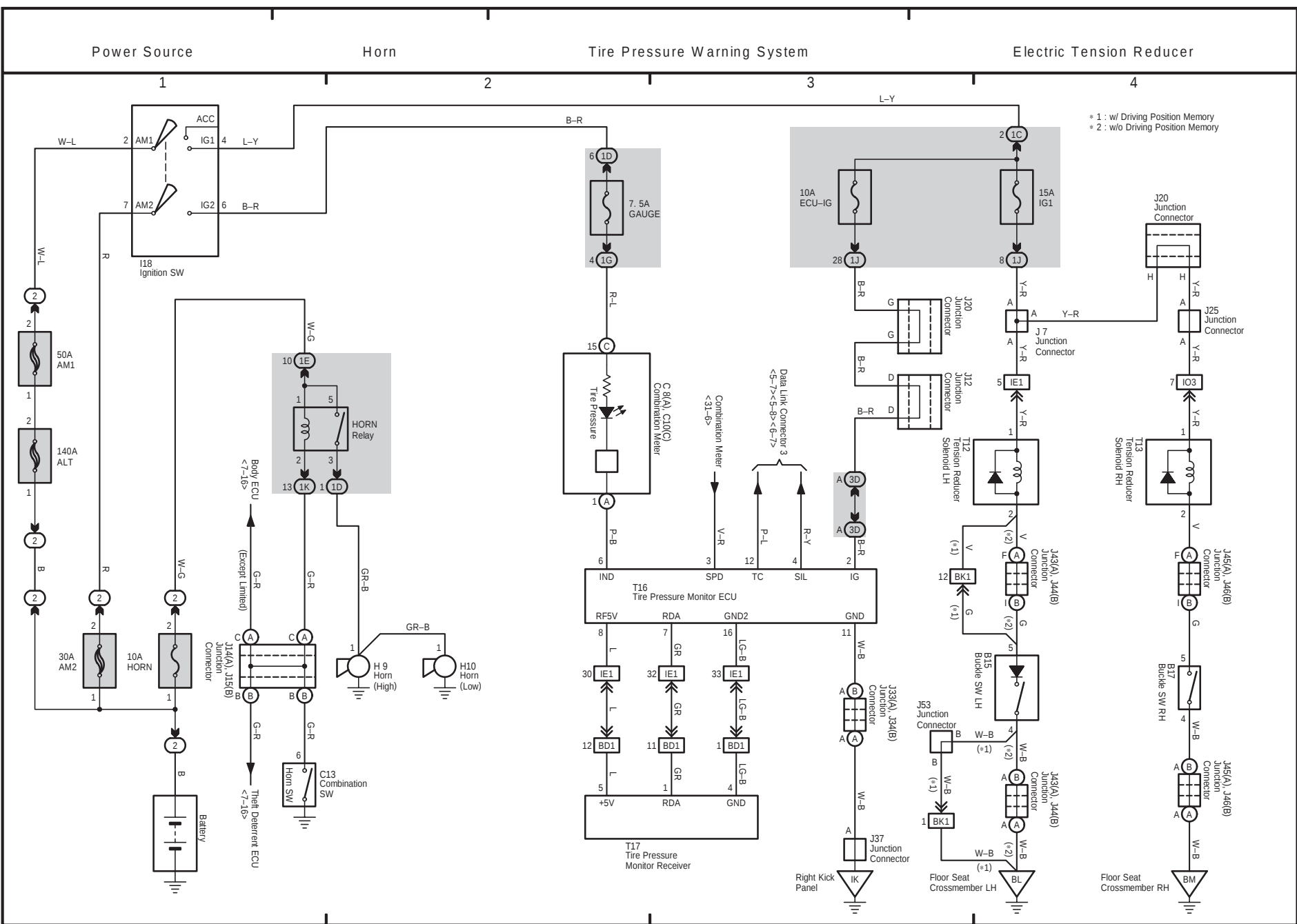
* 1 : w/ Driving Position Memory
 * 2 : w/o Driving Position Memory

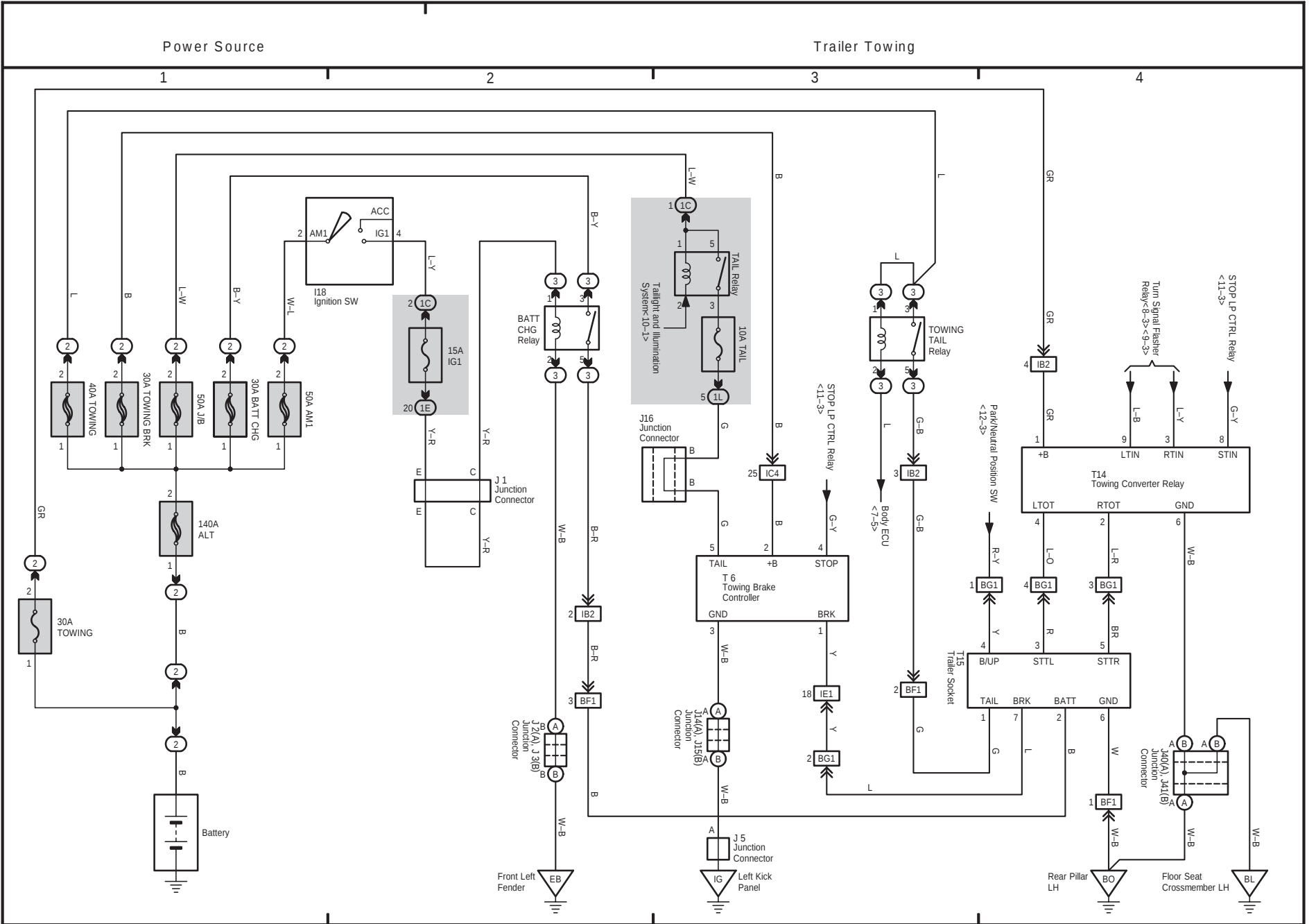


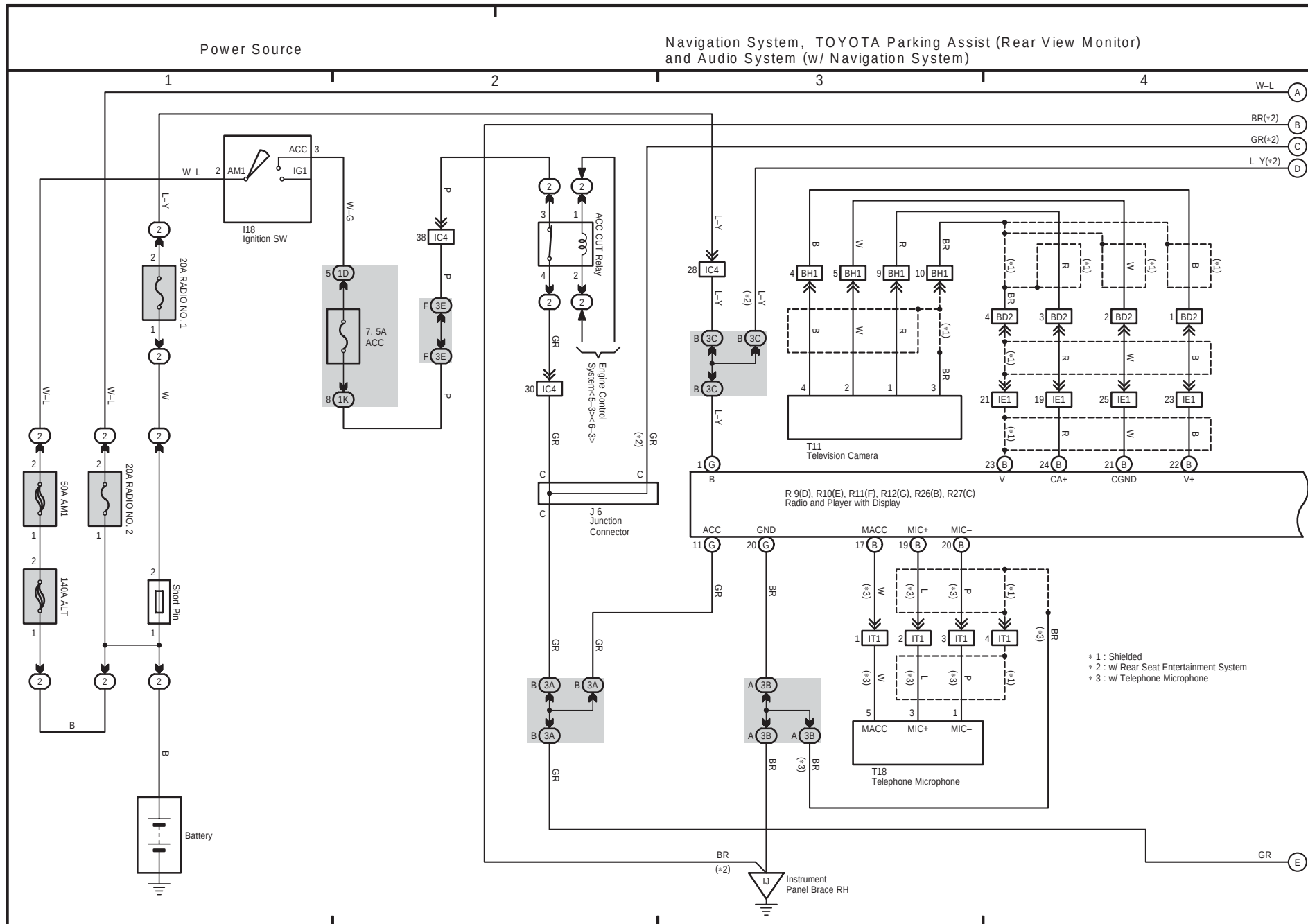
24 4RUNNER





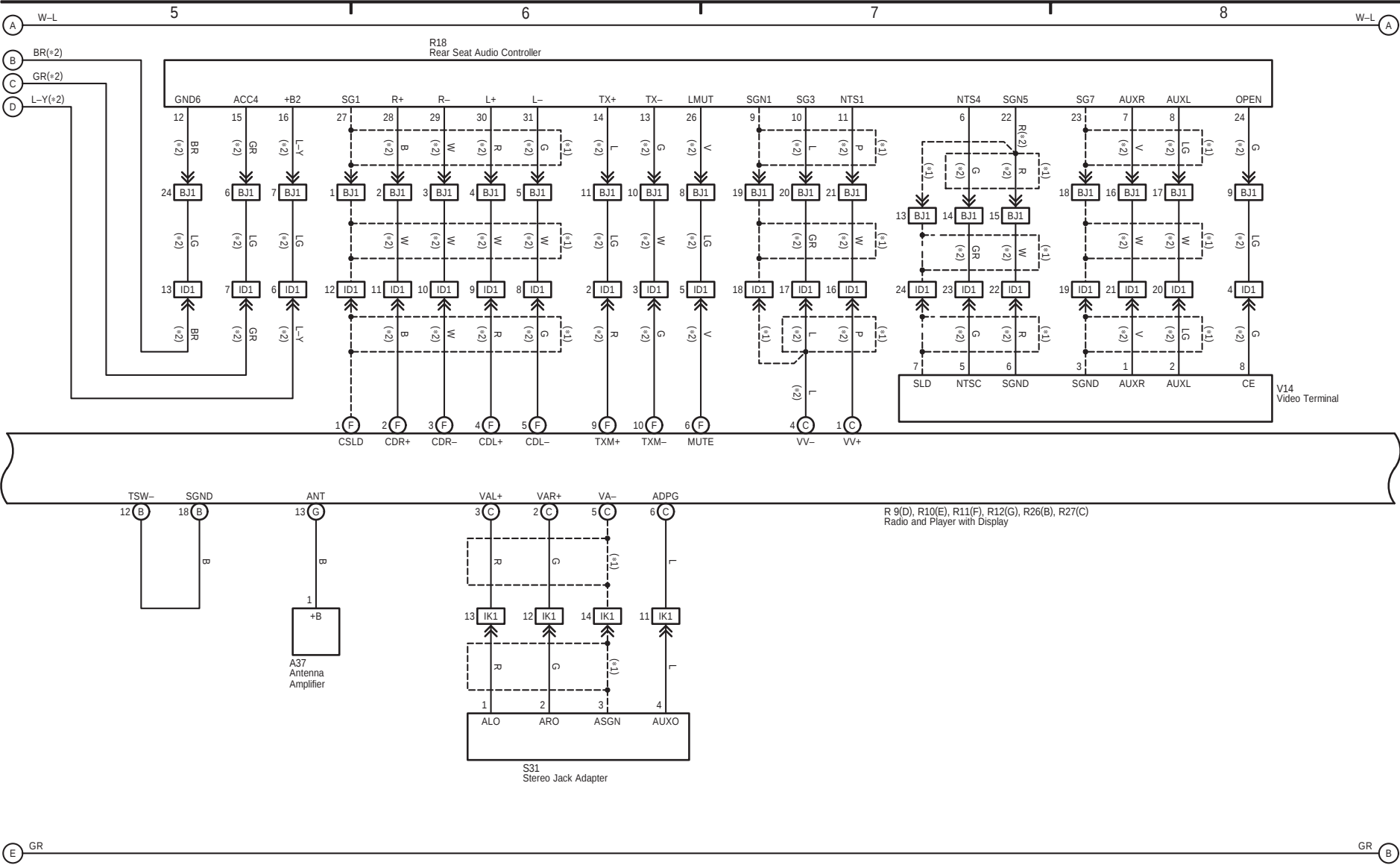






Navigation System, TOYOTA Parking Assist (Rear View Monitor)
and Audio System (w/ Navigation System)

* 1 : Shielded
* 2 : w/ Rear Seat Entertainment System

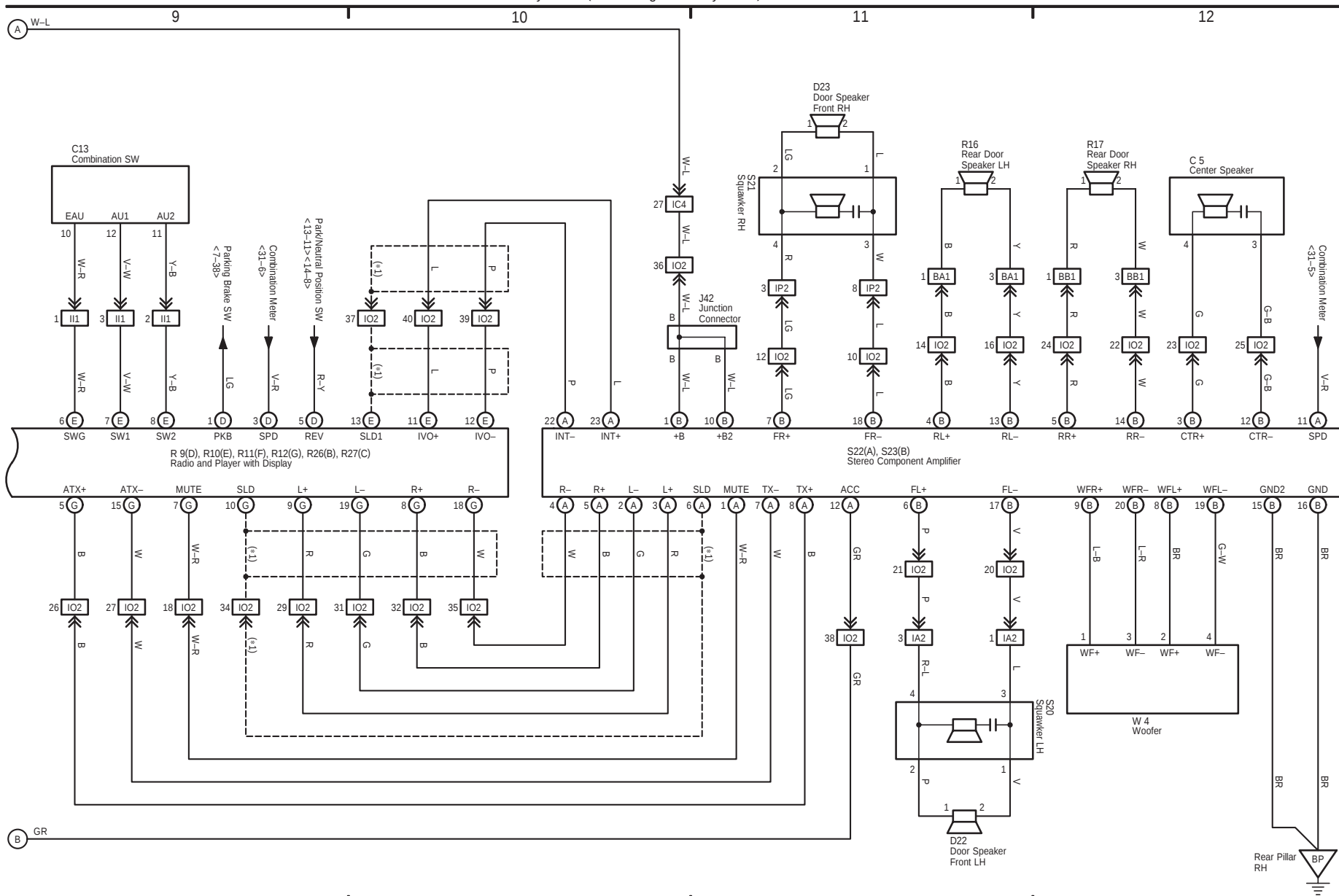


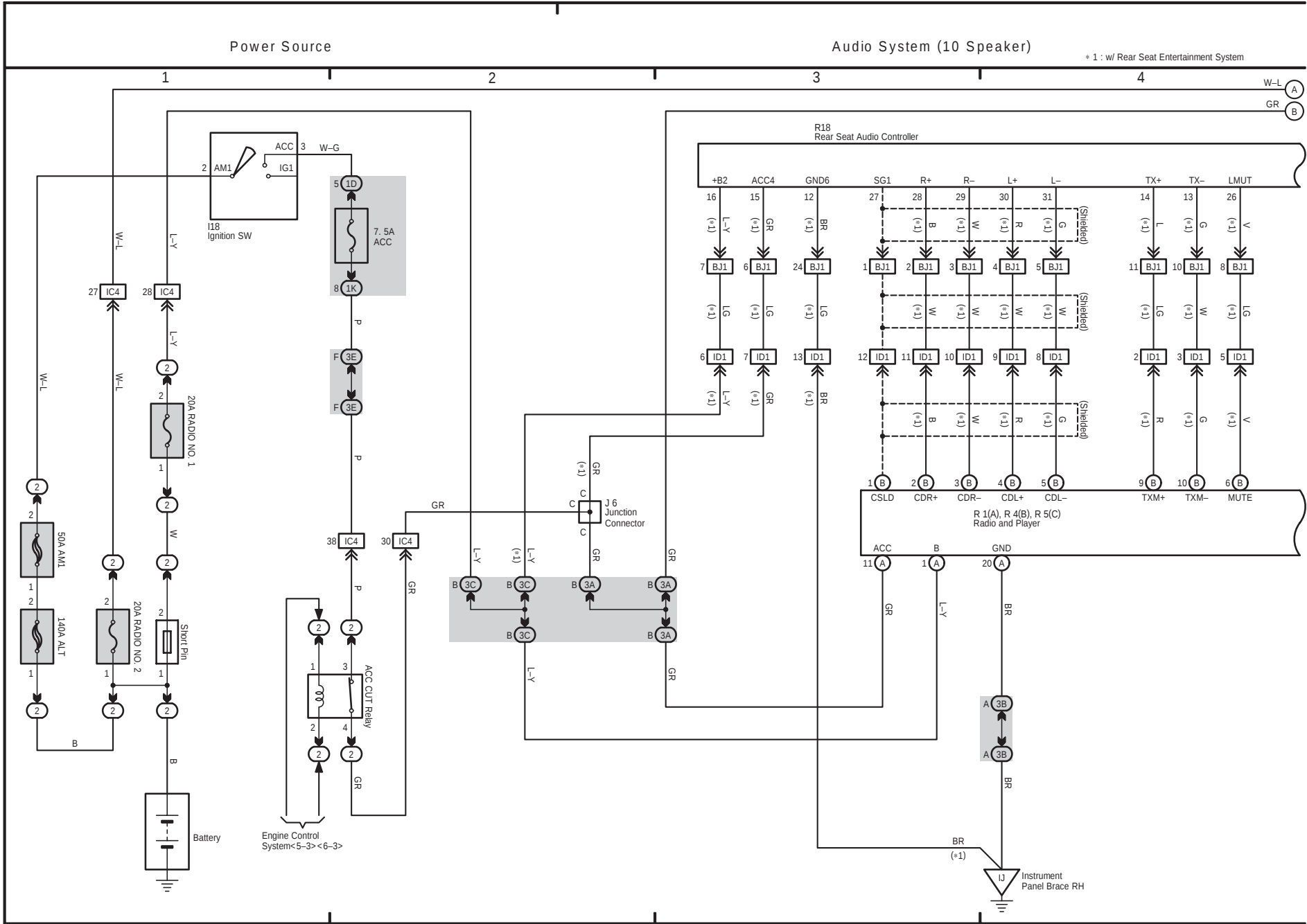
4RUNNER (EM00TOU)

28 4RUNNER (Cont' d)

Navigation System, TOYOTA Parking Assist (Rear View Monitor)
and Audio System (w/ Navigation System)

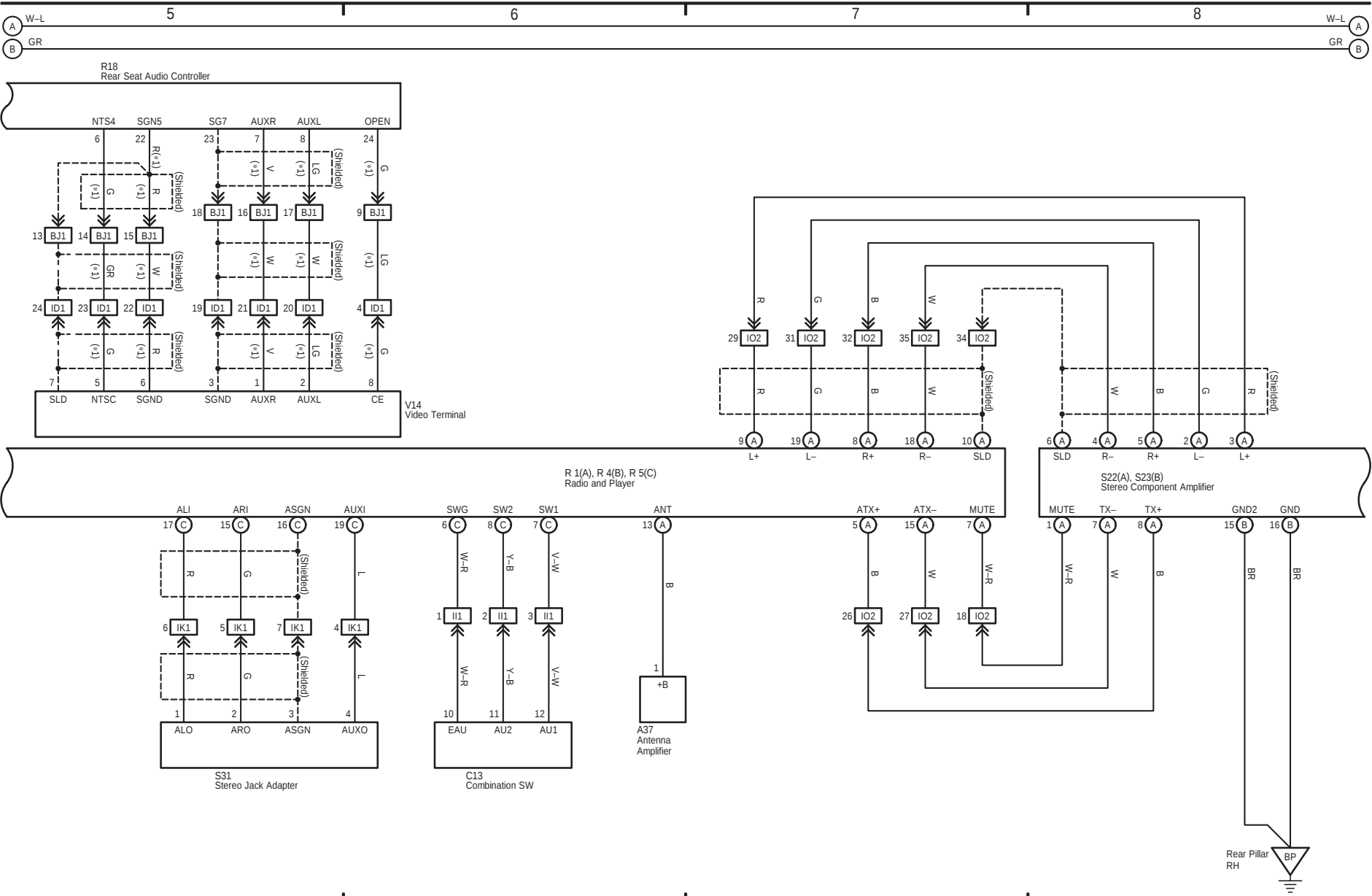
* 1 : Shielded





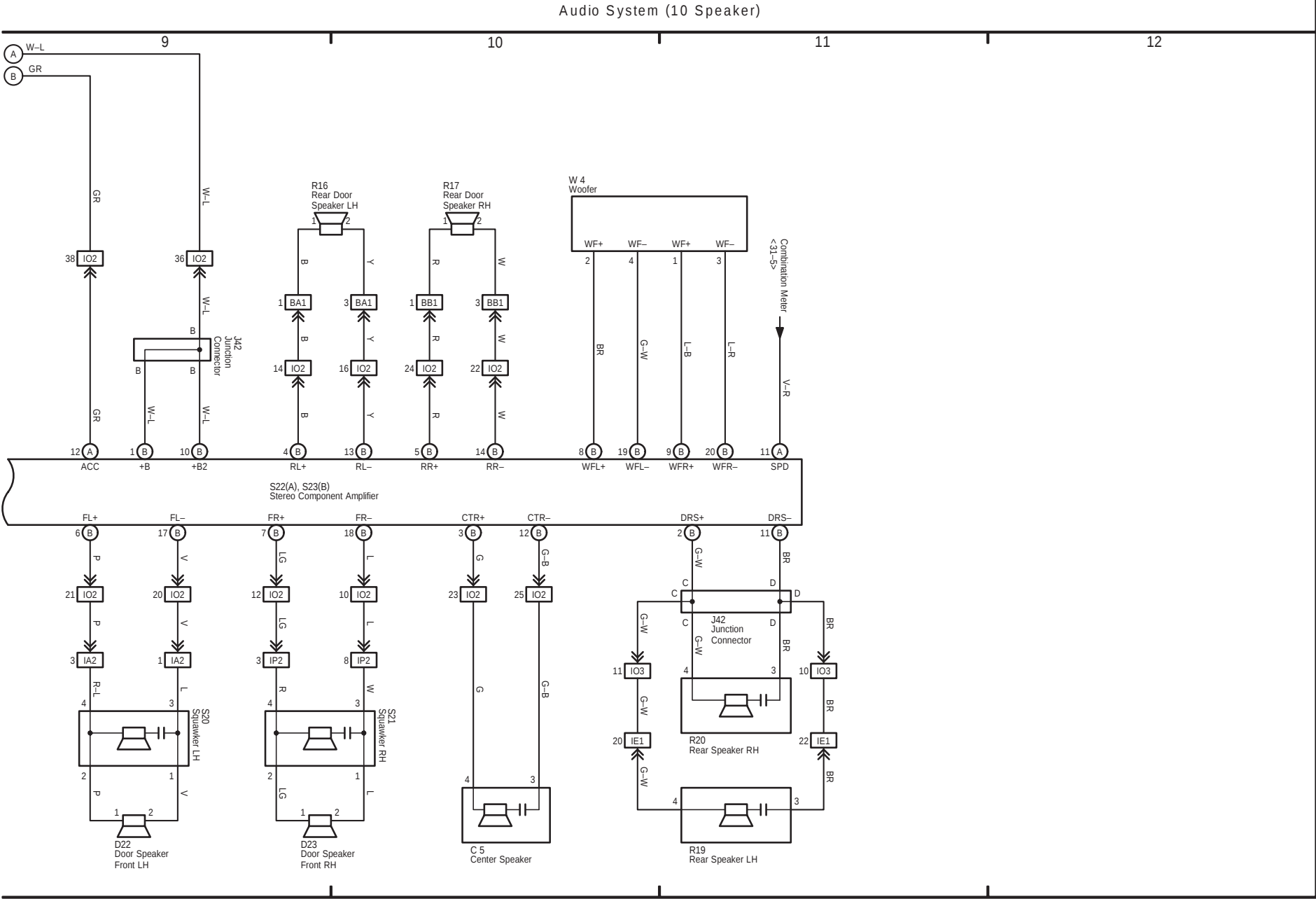
Audio System (10 Speaker)

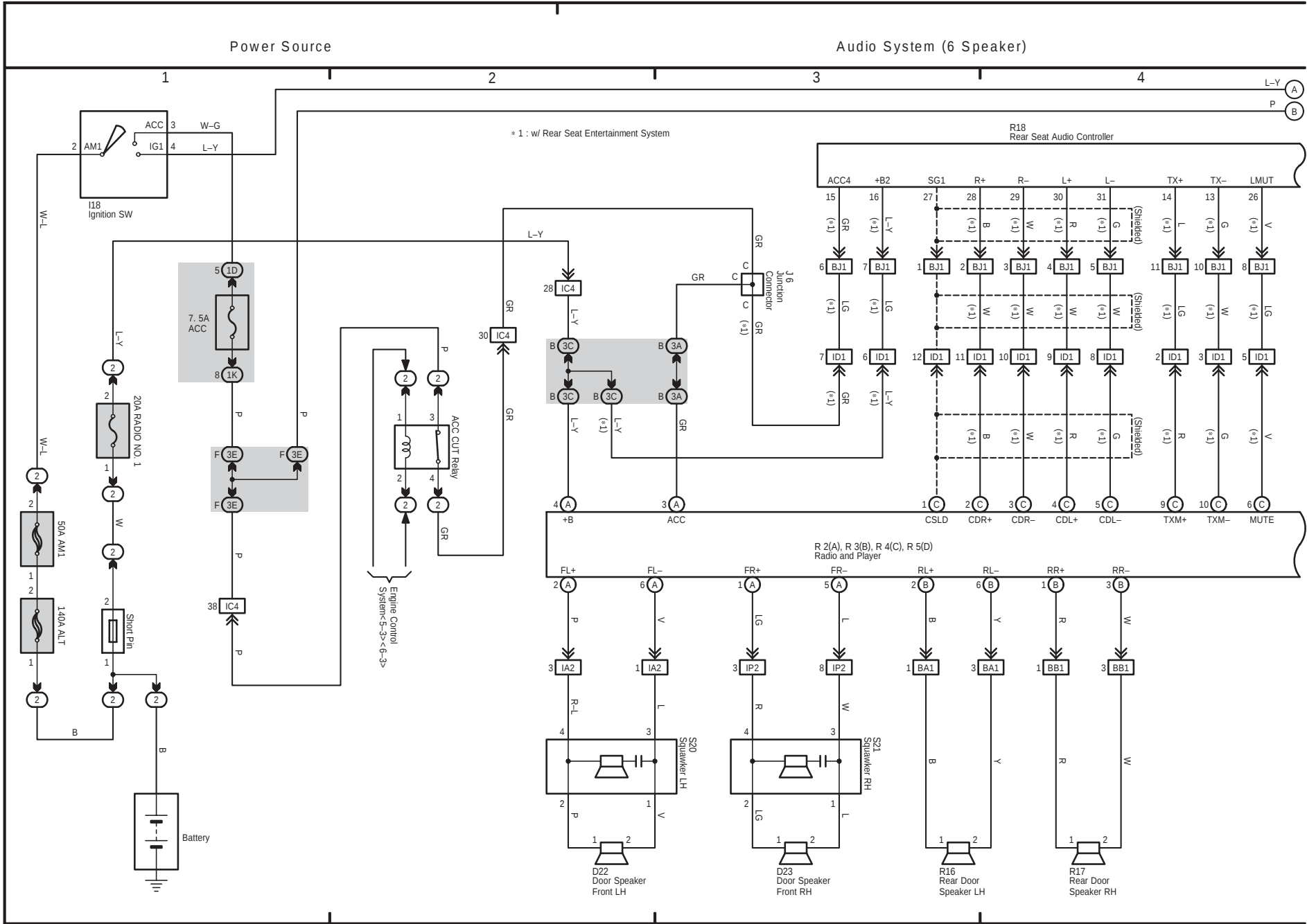
* 1 : w/ Rear Seat Entertainment System



4RUNNER (EM00TOU)

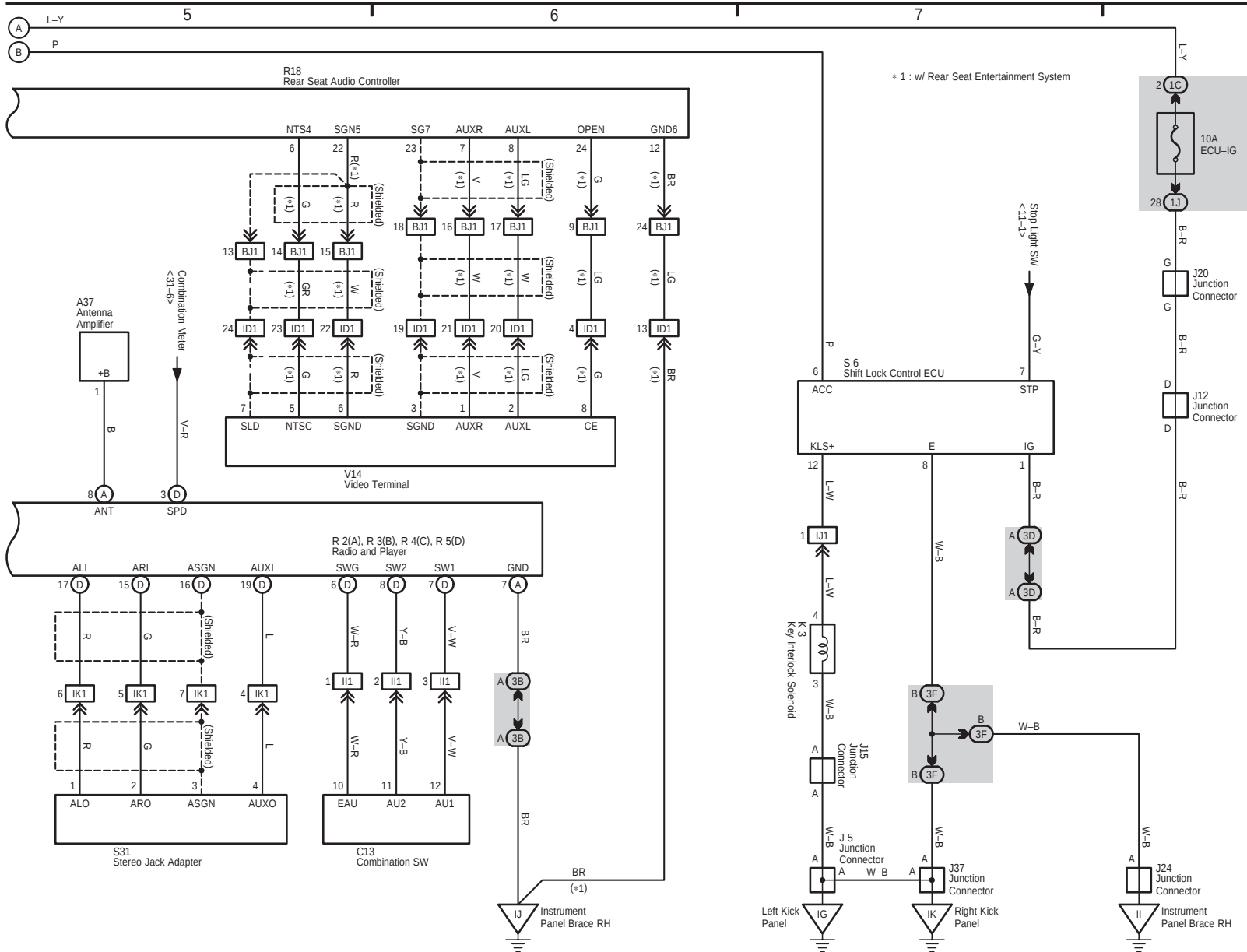
29 4RUNNER (Cont' d)





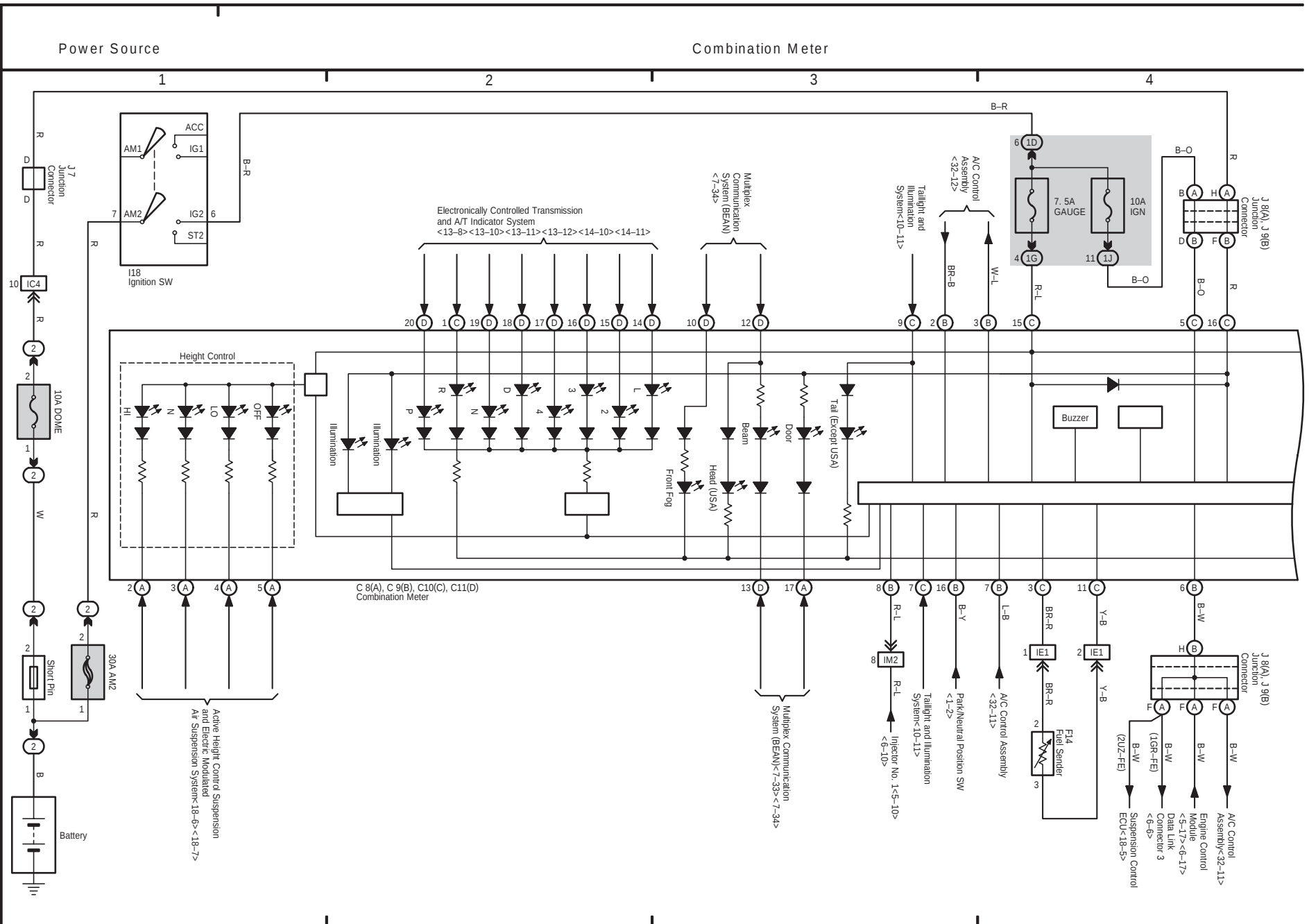
Audio System (6 Speaker)

Shift Lock

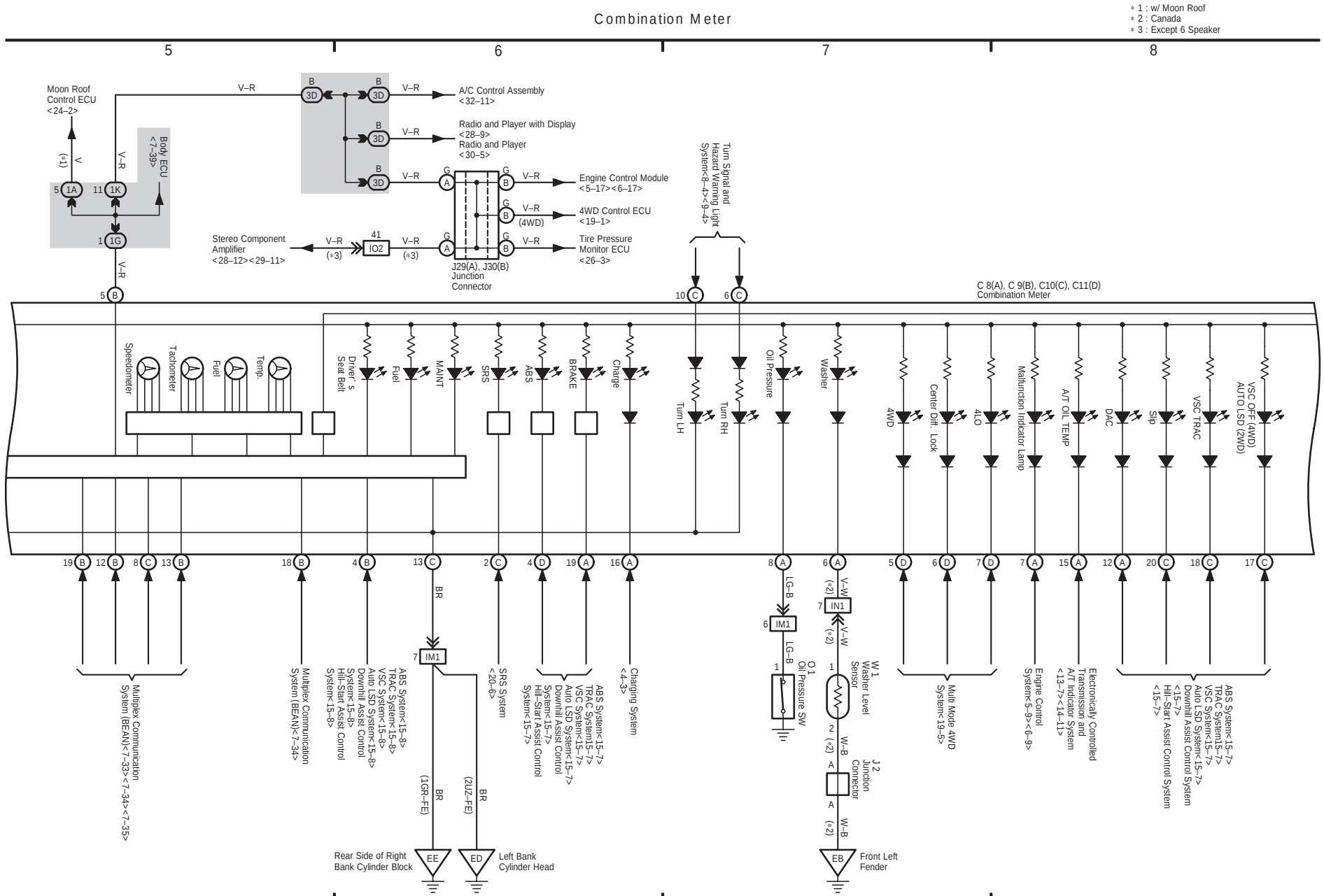


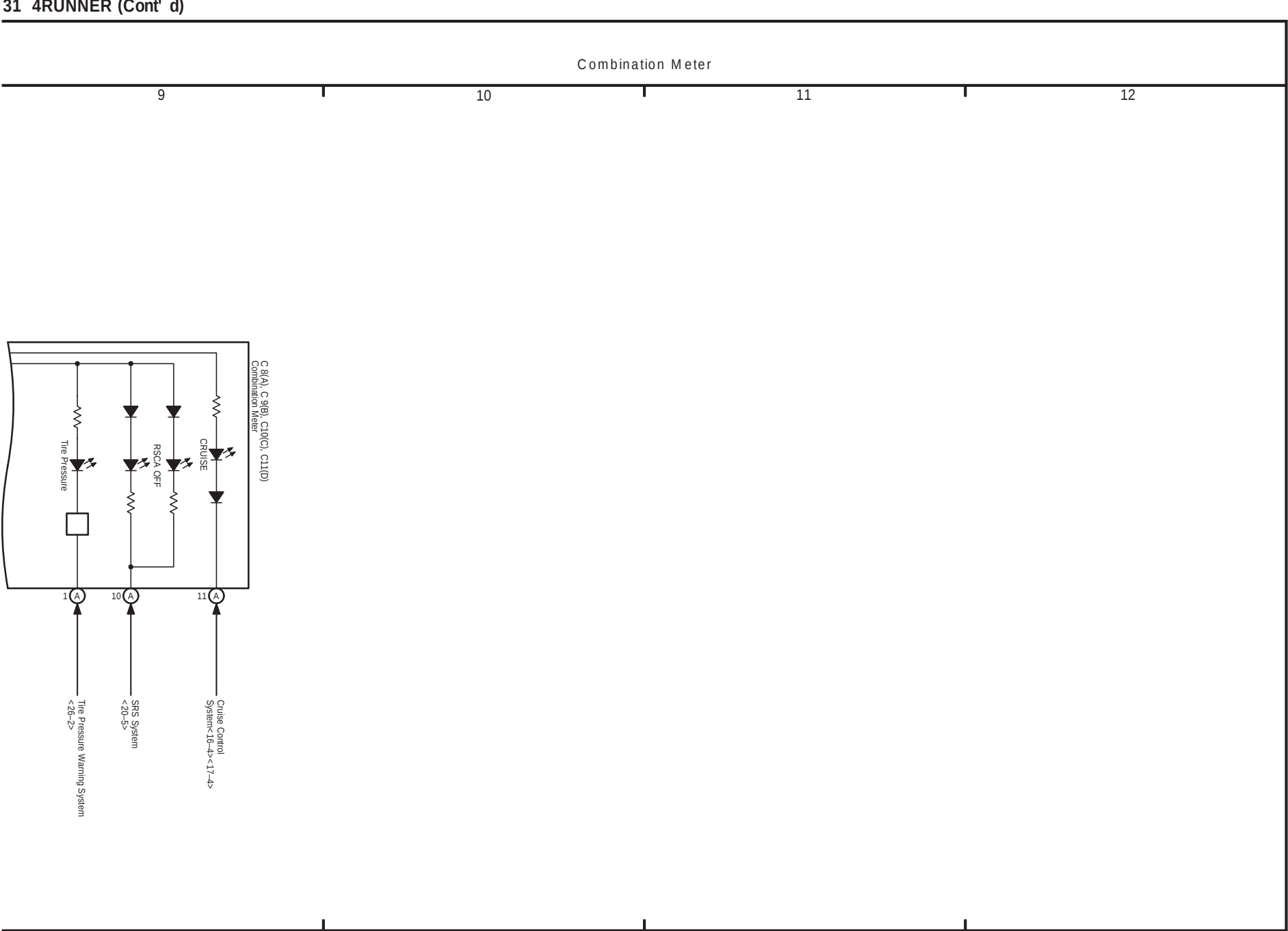
(Cont. next page)

31 4RUNNER

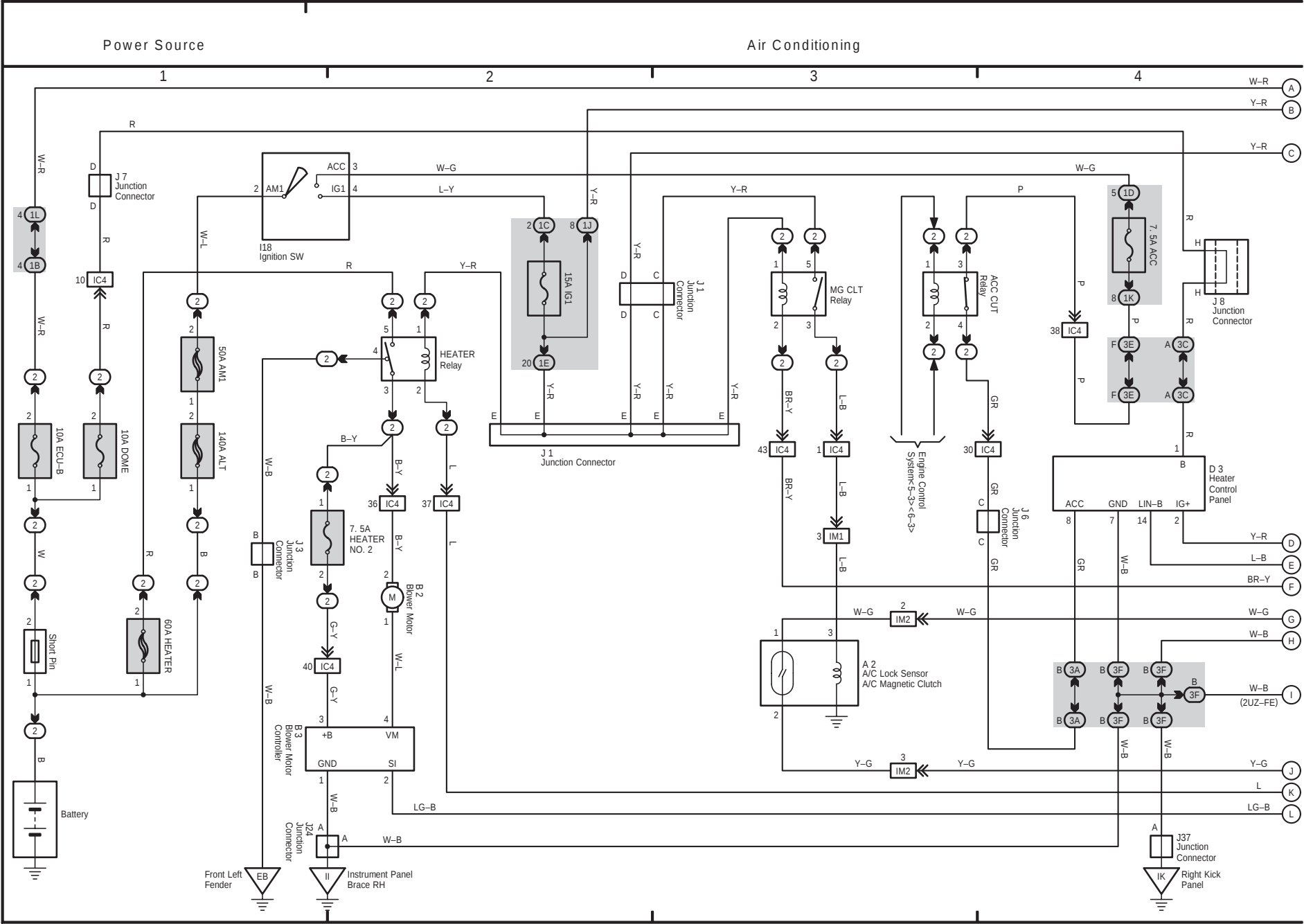


4RUNNER (EM00T0U)



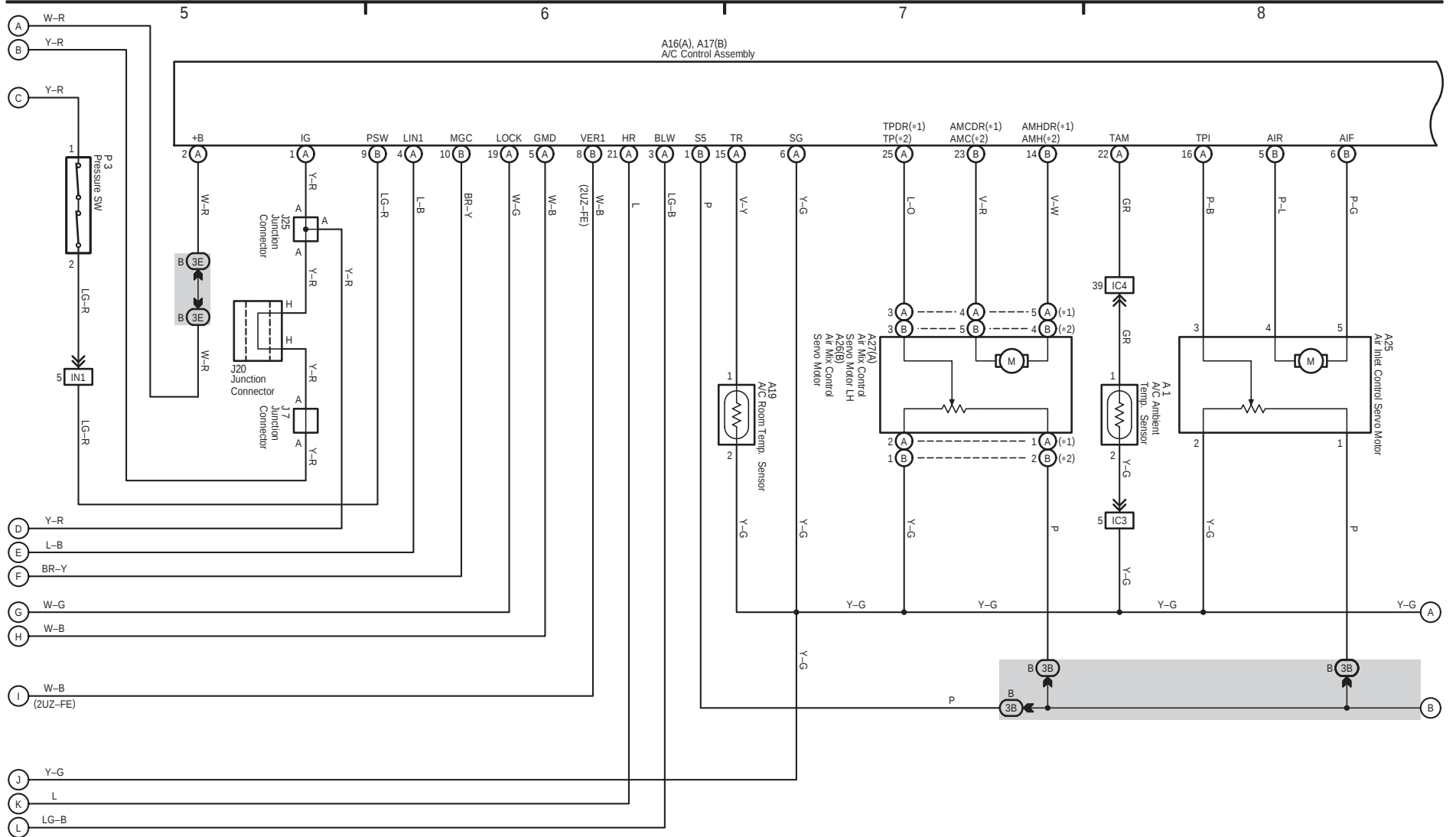


OVERALL ELECTRICAL WIRING DIAGRAM



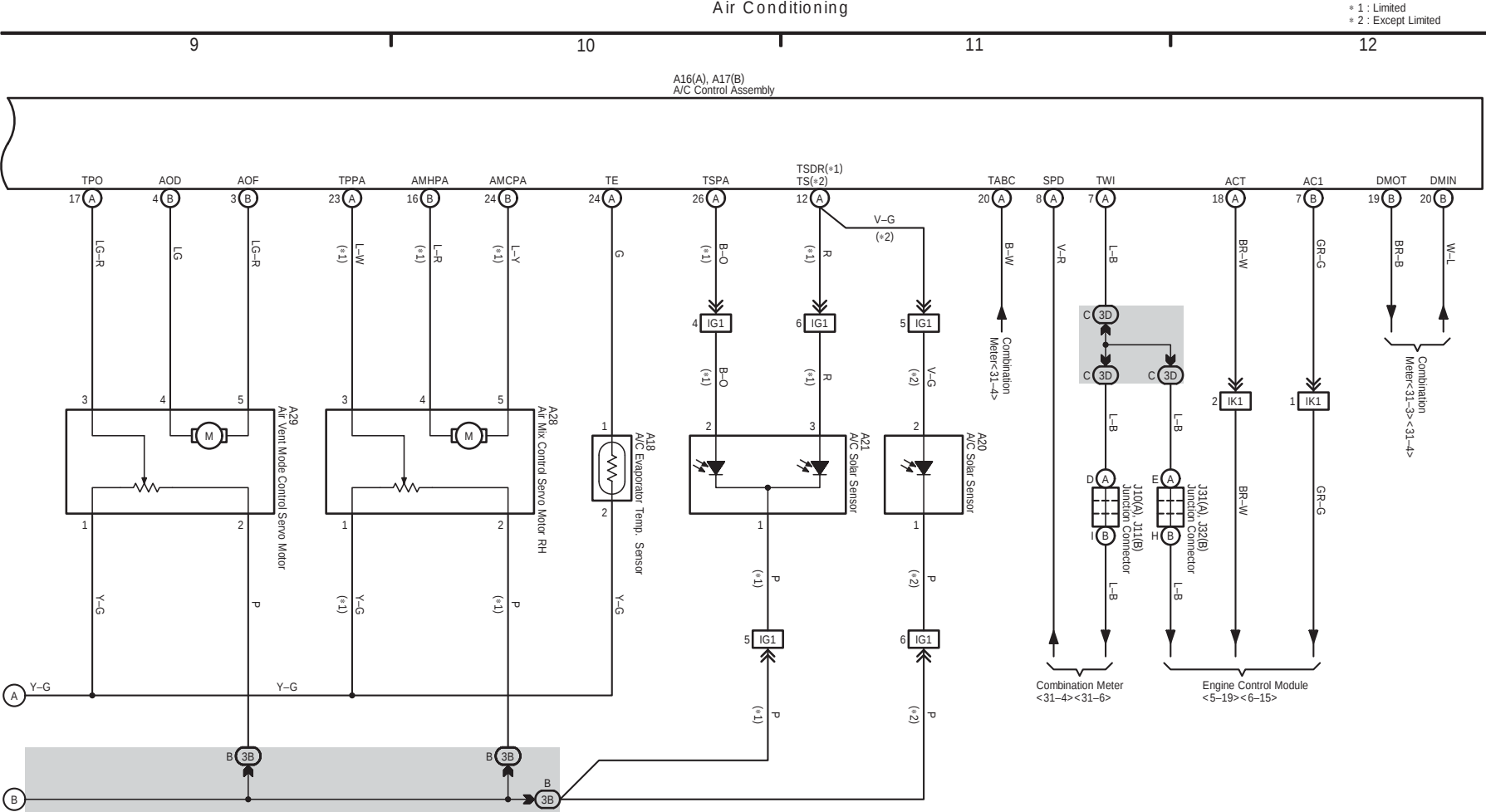
Air Conditioning

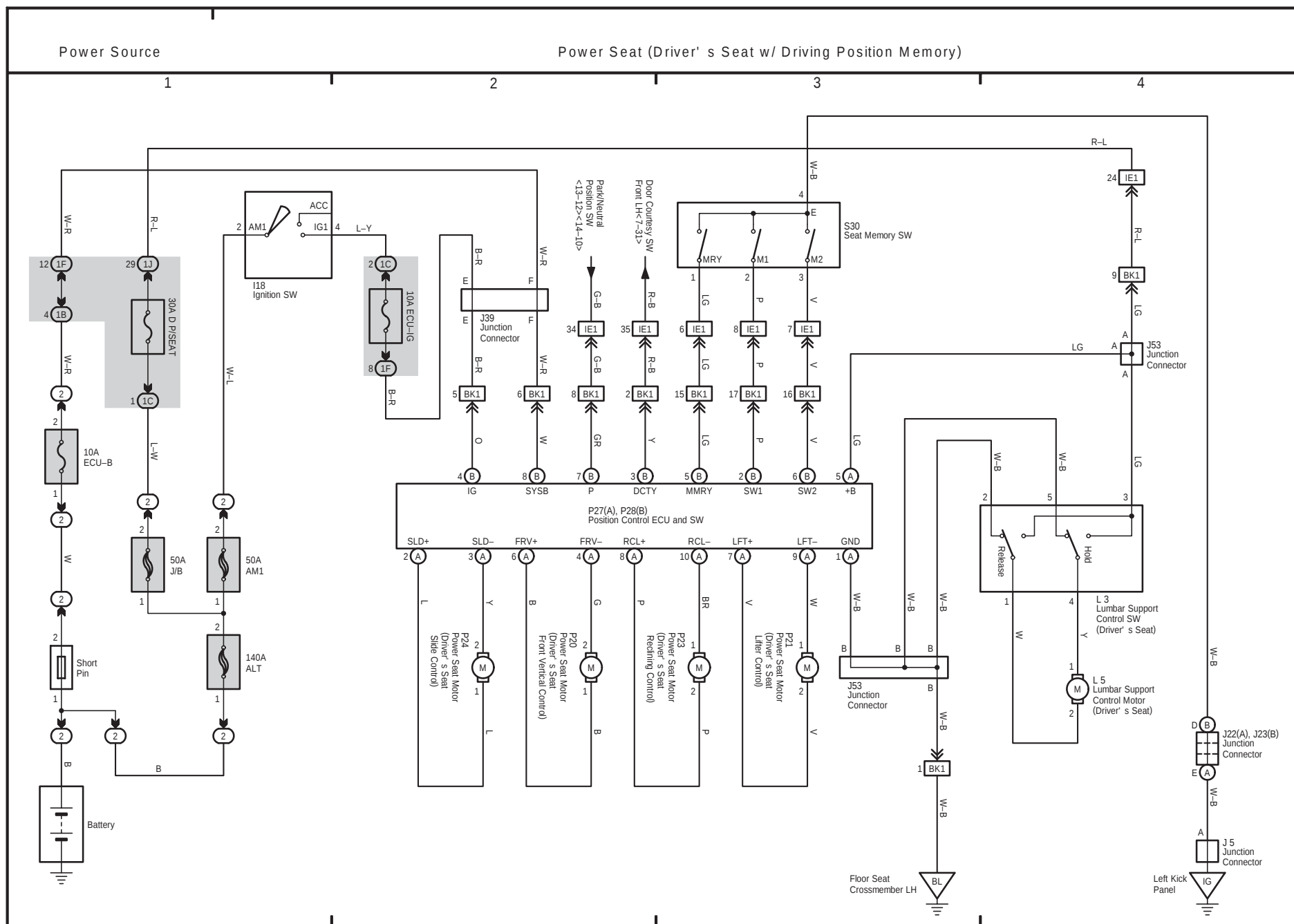
* 1 : Limited
* 2 : Except Limited



4RUNNER (EM00TOU)

* 1 : Limited
* 2 : Except Limited





2006 4RUNNER

ELECTRICAL WIRING DIAGRAM

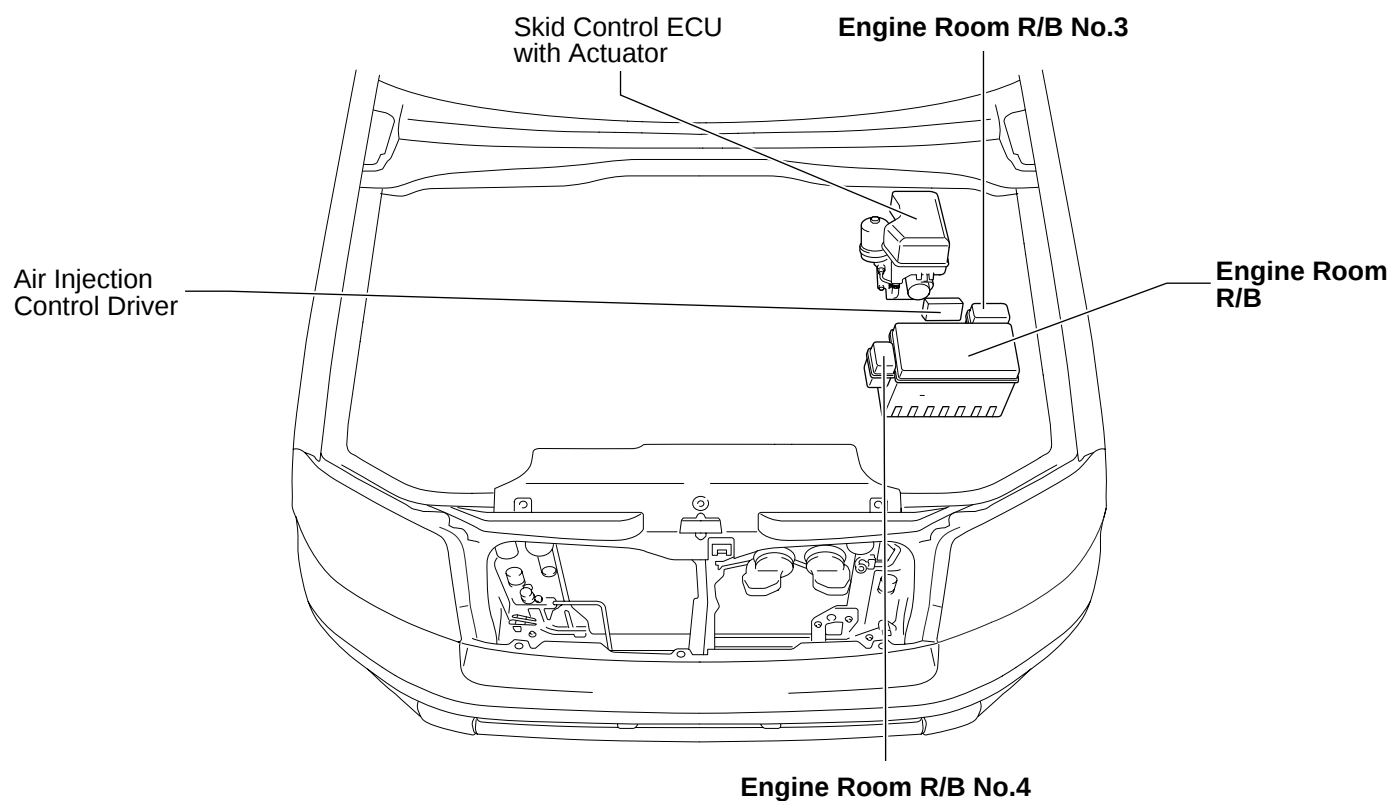
SYSTEM CIRCUITS

	Page
ABS	258
Active Height Control Suspension	268
Air Conditioning	358
Audio System (w/ Navigation System)	334
Audio System (10 Speaker)	342
Audio System (6 Speaker)	348
Auto LSD	258
Automatic Glare-Resistant EC Mirror with Compass	302
Automatic Light Control	140
Back-Up Light	174
Charging	68
Cigarette Lighter	296
Combination Meter	352
Cruise Control (1GR-FE)	252
Cruise Control (2UZ-FE)	246
Door Lock Control	202
Downhill Assist Control	258
Electric Modulated Air Suspension	268
Electric Tension Reducer	306
Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
Engine Control (1GR-FE)	84
Engine Control (2UZ-FE)	70
Engine Immobiliser System	98
Front Fog Light	136
Front Wiper and Washer	184
Garage Door Opener	182
Headlight	130
Hill-Start Assist Control	258
Horn	304
Ignition (1GR-FE)	64
Ignition (2UZ-FE)	60
Illumination	162
Interior Light	154
Key Reminder	176
Light Auto Turn Off System	142
Mirror Heater	330
Moon Roof	288
Multi Mode 4WD	274
Multiplex Communication System (BEAN)	104
Multiplex Communication System (BEAN Bus)	100
Multiplex Communication System (CAN Bus)	102
Navigation System	334
Power Outlet (115V)	300
Power Outlet (12V)	298
Power Seat (Driver's Seat w/ Driving Position Memory)	308
Power Seat (Driver's Seat w/o Driving Position Memory)	312

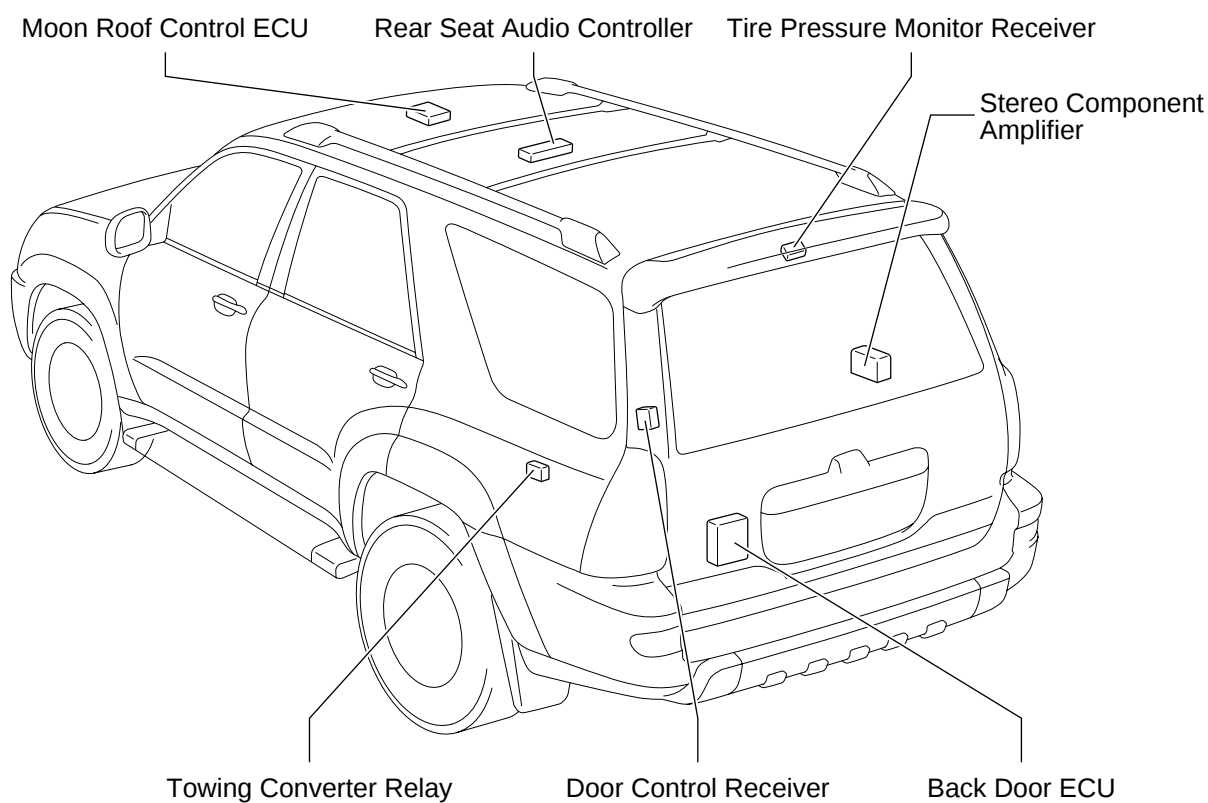
	Page
Power Seat (Front Passenger's Seat)	316
Power Source	54
Power Window	192
Rear Window Defogger	330
Rear Wiper and Washer	186
Remote Control Mirror	294
Seat Belt Warning	178
Seat Heater	318
Shift Lock	292
SRS	281
Starting	58
Stop Light	170
Taillight	162
Theft Deterrent	222
Tire Pressure Warning System	326
TOYOTA Parking Assist (Rear View Monitor)	334
TRAC	258
Trailer Towing	322
Turn Signal and Hazard Warning Light (w/ Daytime Running Light)	146
Turn Signal and Hazard Warning Light (w/o Daytime Running Light)	150
VSC	258
Wireless Door Lock Control	212

F RELAY LOCATIONS

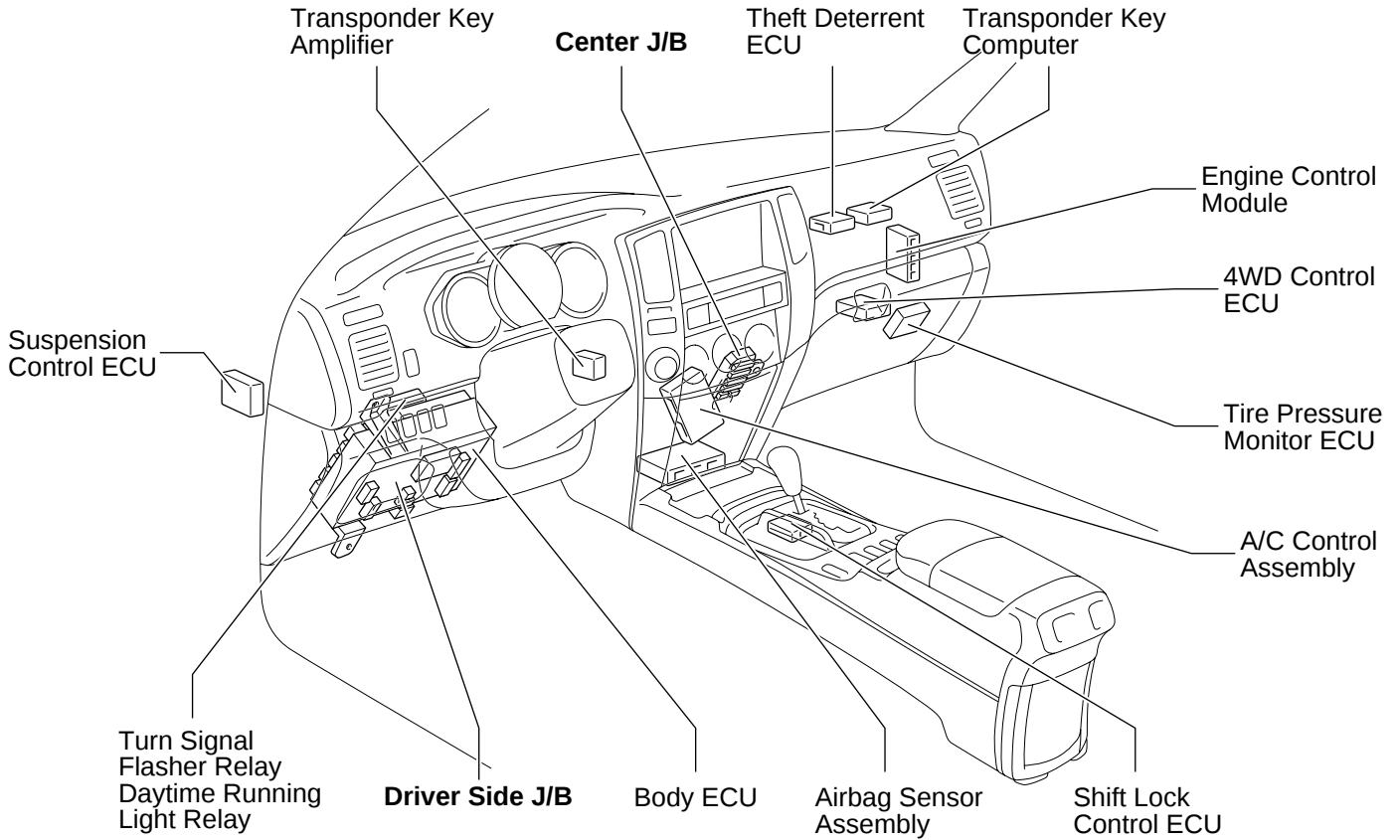
[Engine Compartment]



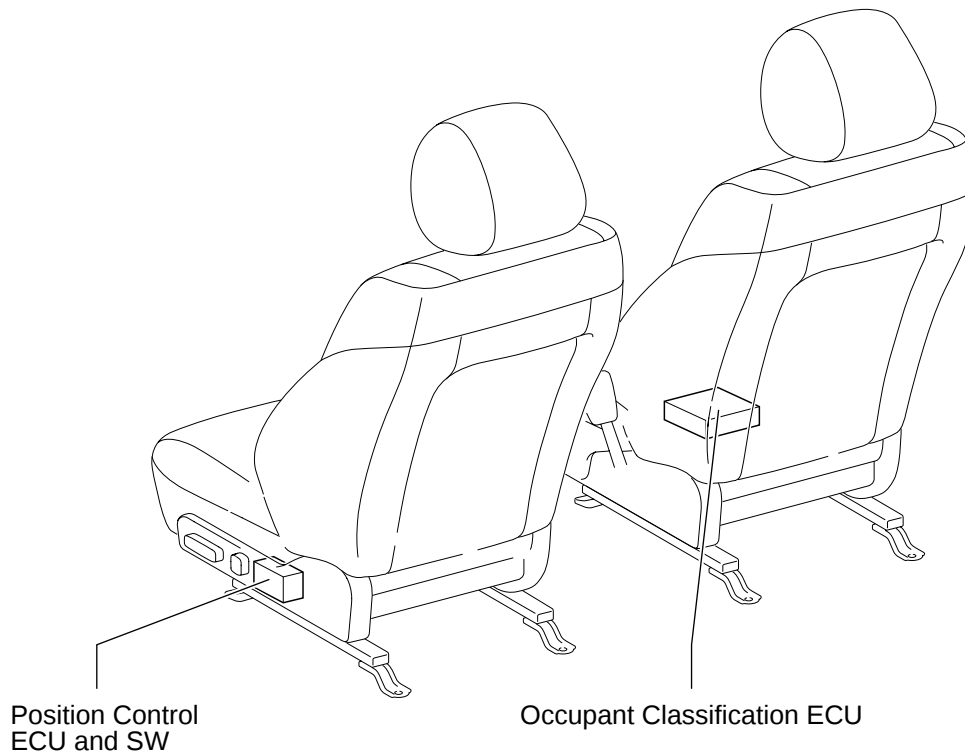
[Body]



[Instrument Panel]



[Seat]

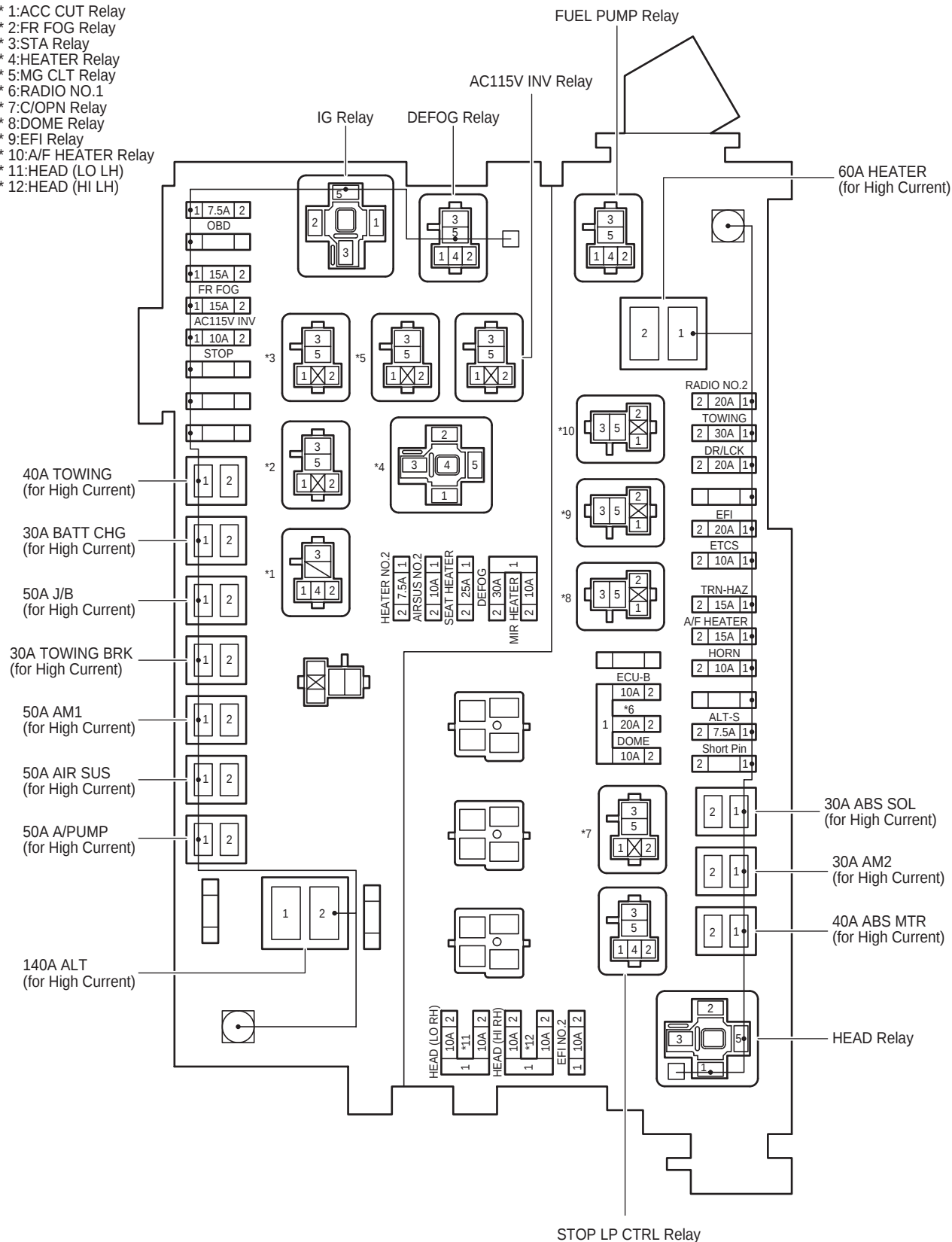


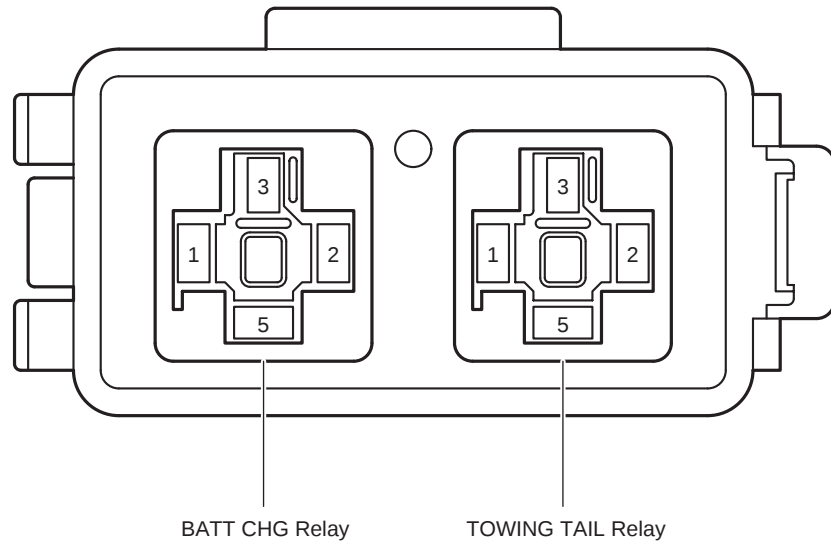
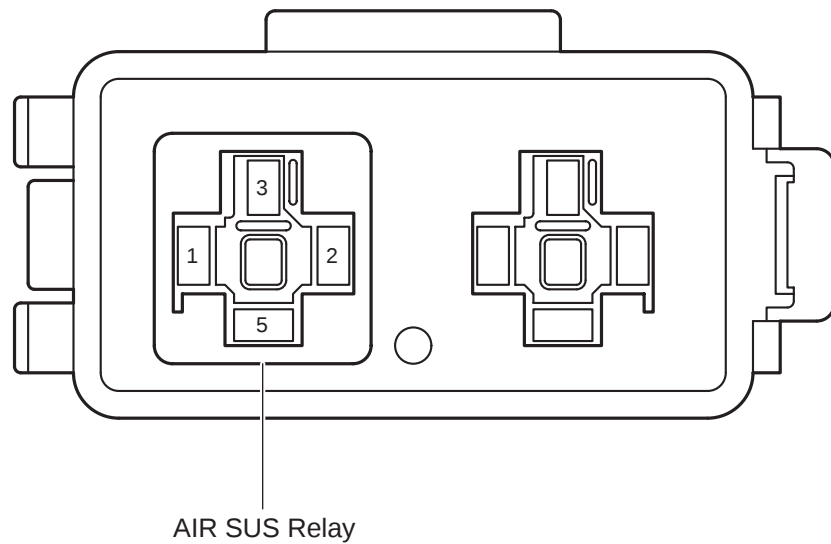
F RELAY LOCATIONS

② : Engine Room R/B

Engine Compartment Left (See Page 20)

- * 1:ACC CUT Relay
- * 2:FR FOG Relay
- * 3:STA Relay
- * 4:HEATER Relay
- * 5:MG CLT Relay
- * 6:RADIO NO.1
- * 7:C/OPN Relay
- * 8:DOME Relay
- * 9:EFI Relay
- * 10:A/F HEATER Relay
- * 11:HEAD (LO LH)
- * 12:HEAD (HI LH)

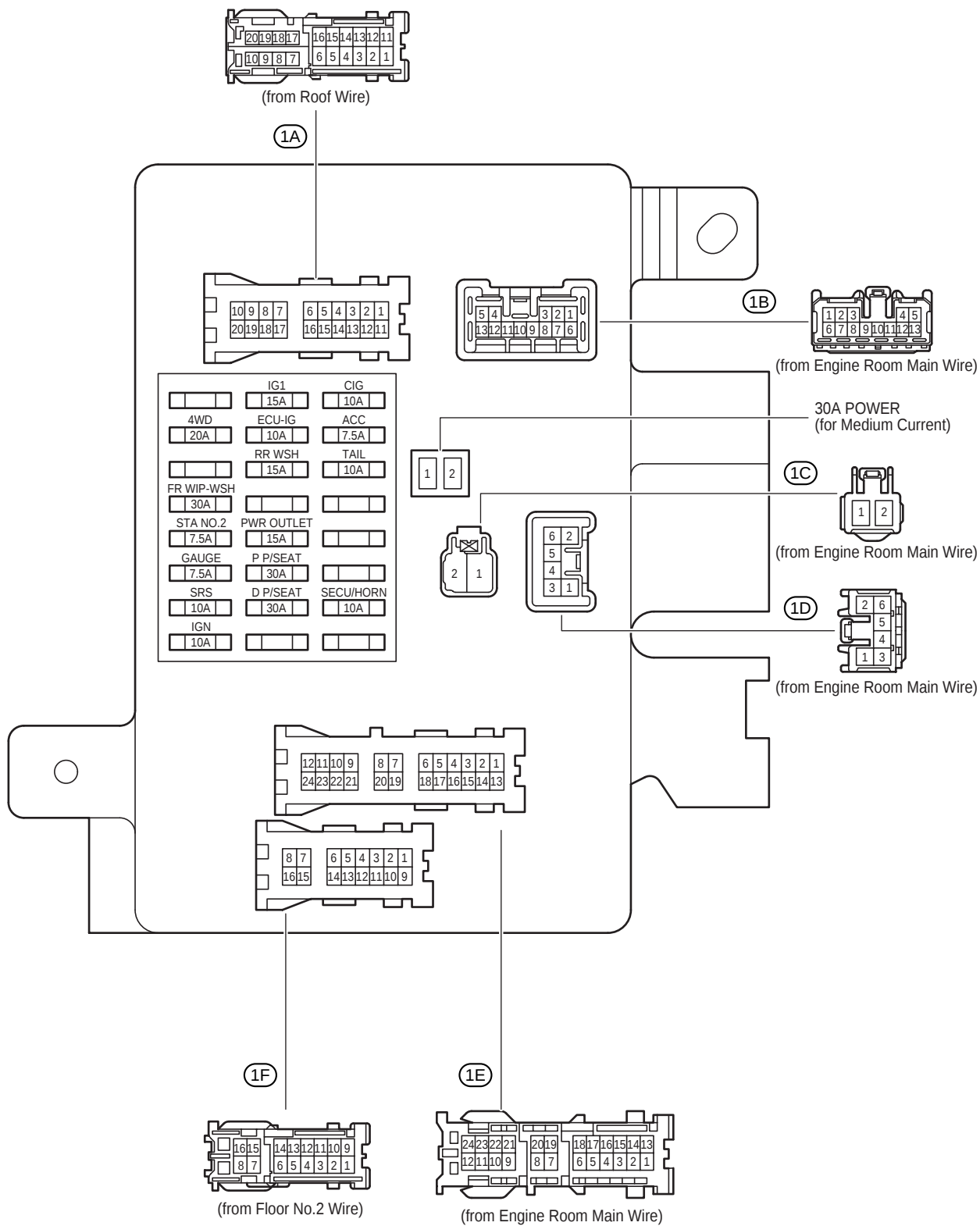


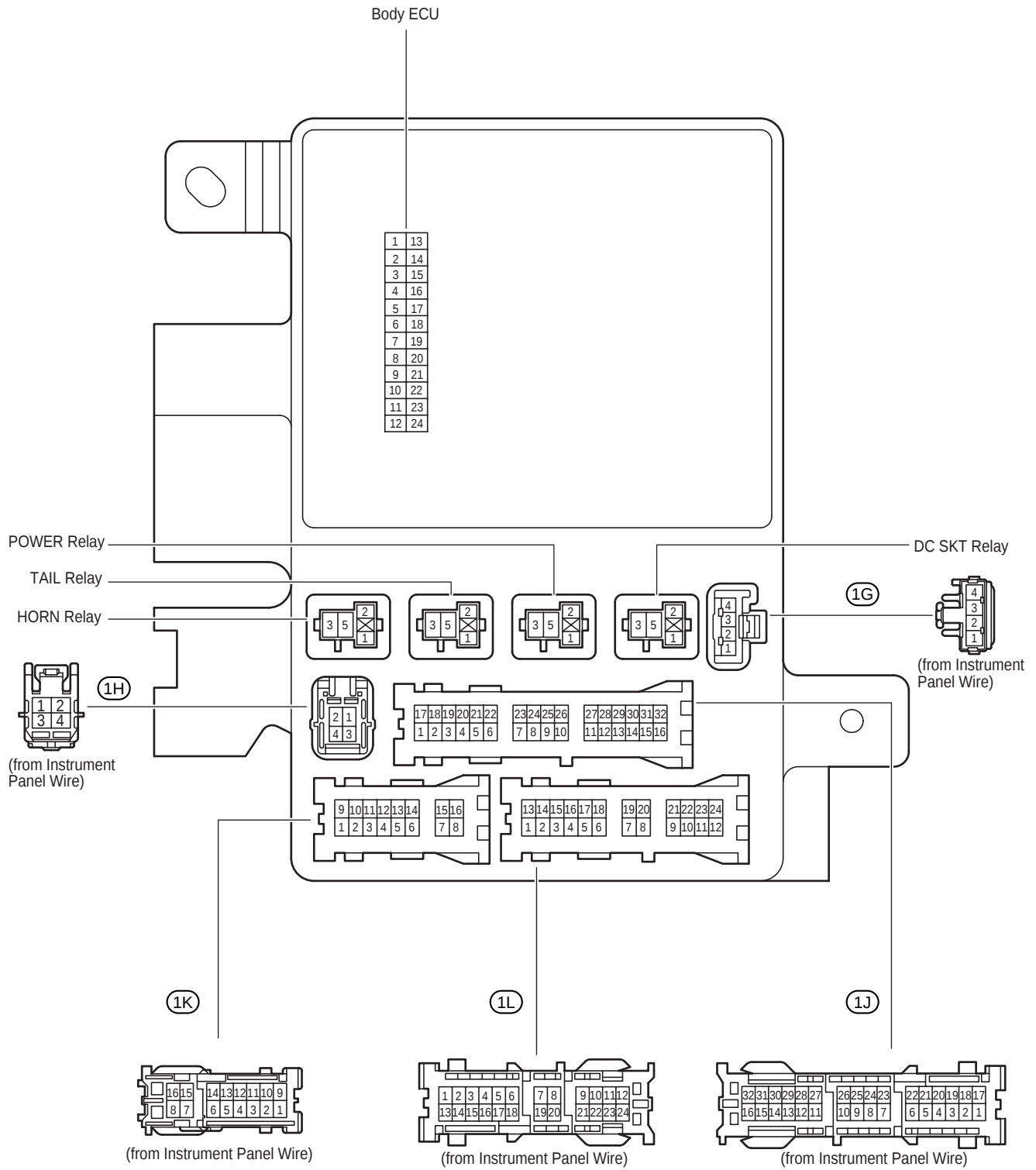
③ : Engine Room R/B No.3 Engine Compartment Left (See Page 20)**④ : Engine Room R/B No.4 Engine Compartment Left (See Page 20)**

F RELAY LOCATIONS

 : Driver Side J/B

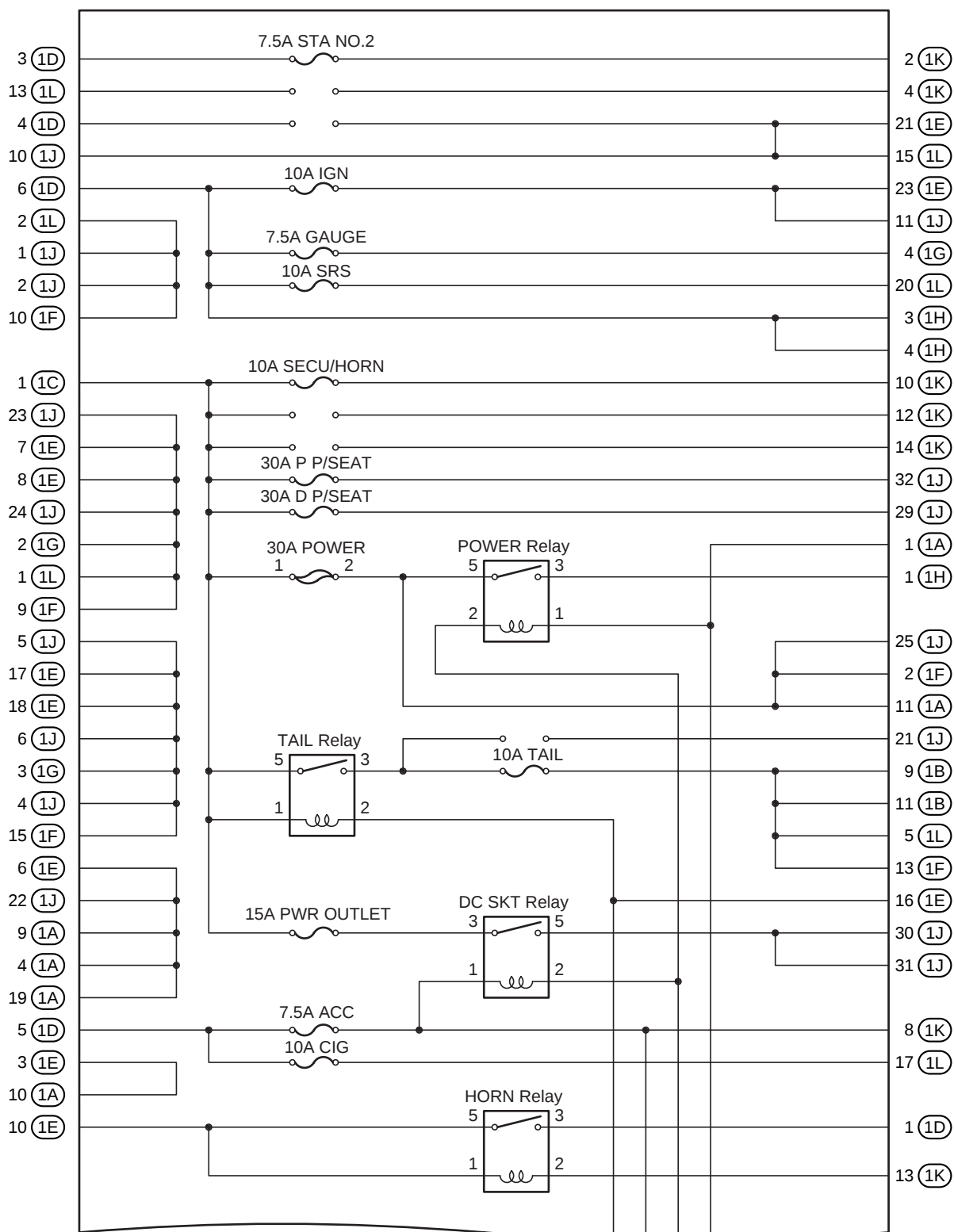
Lower Finish Panel (See Page 21)



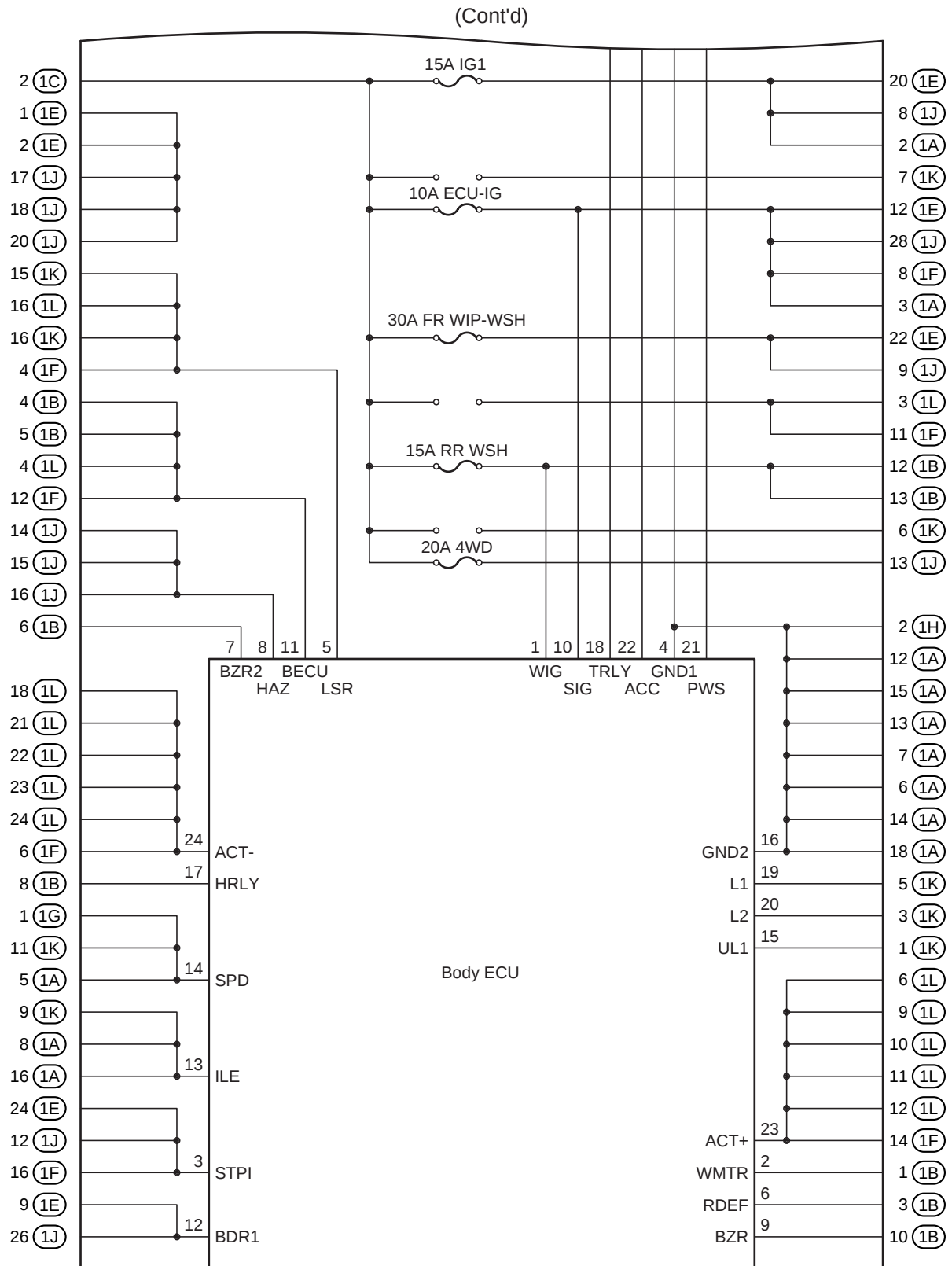


F RELAY LOCATIONS

[Driver Side J/B Inner Circuit]



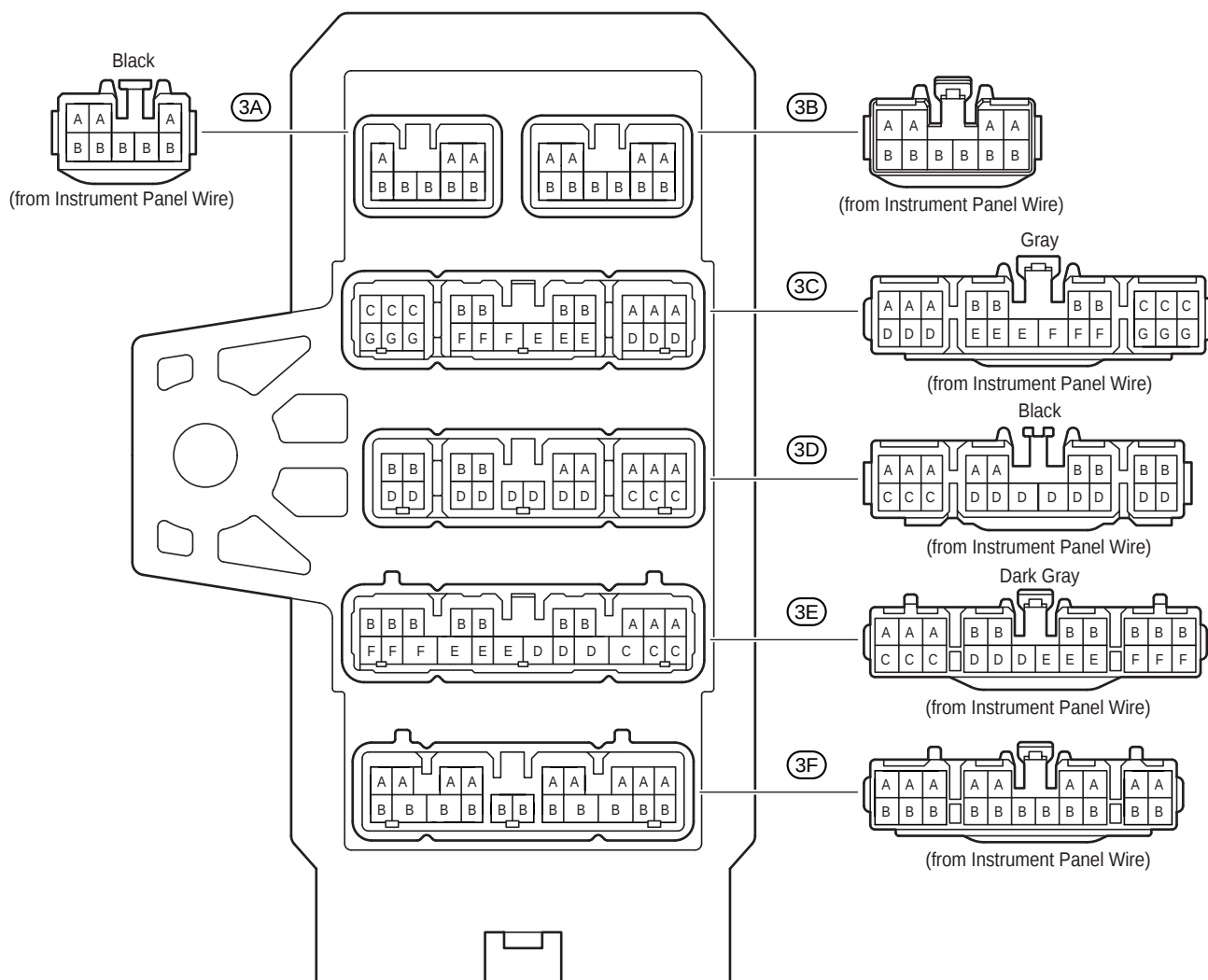
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F RELAY LOCATIONS

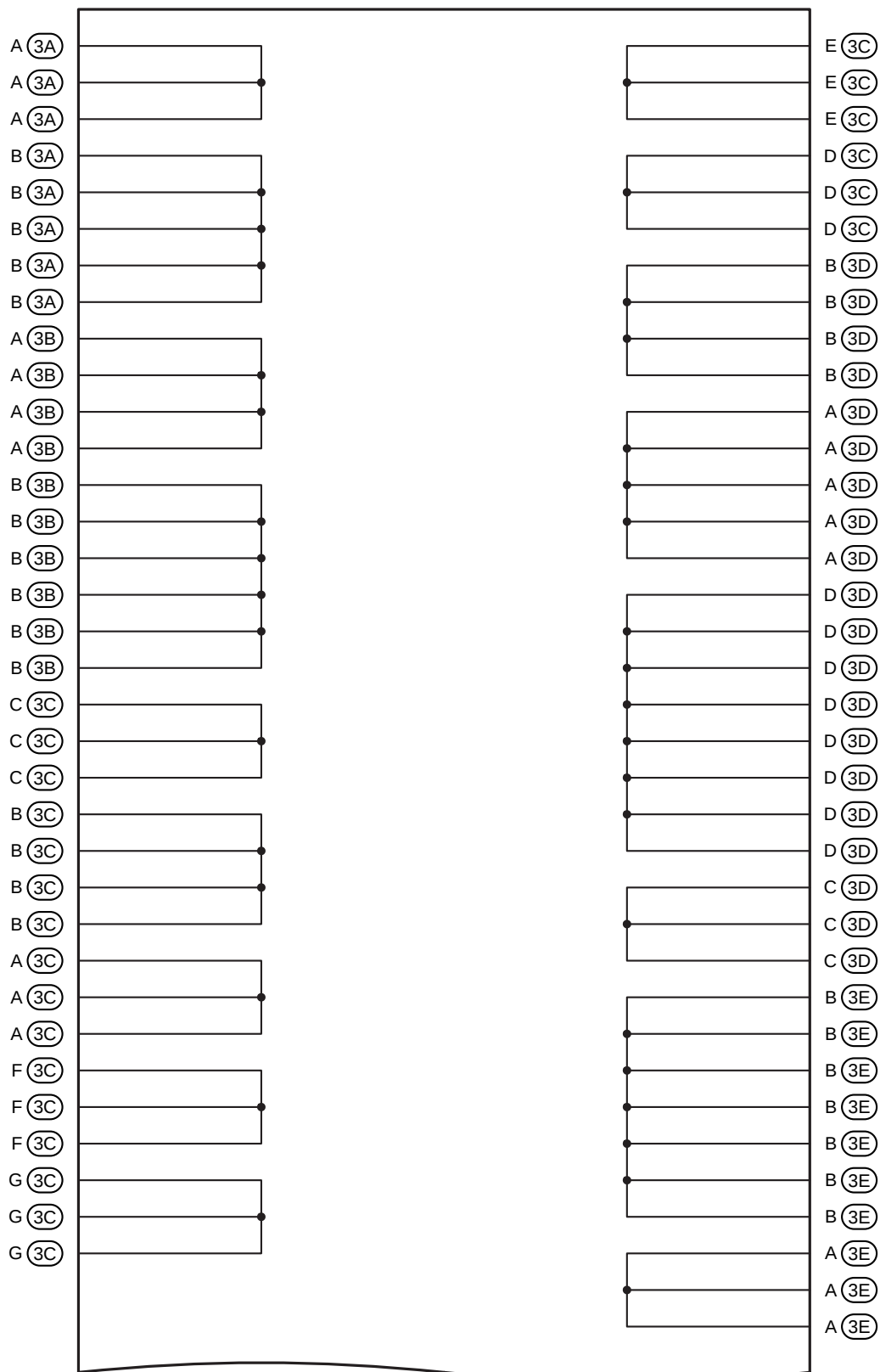
○ : Center J/B

Instrument Panel Brace RH (See Page 21)



F RELAY LOCATIONS

[Center J/B Inner Circuit]

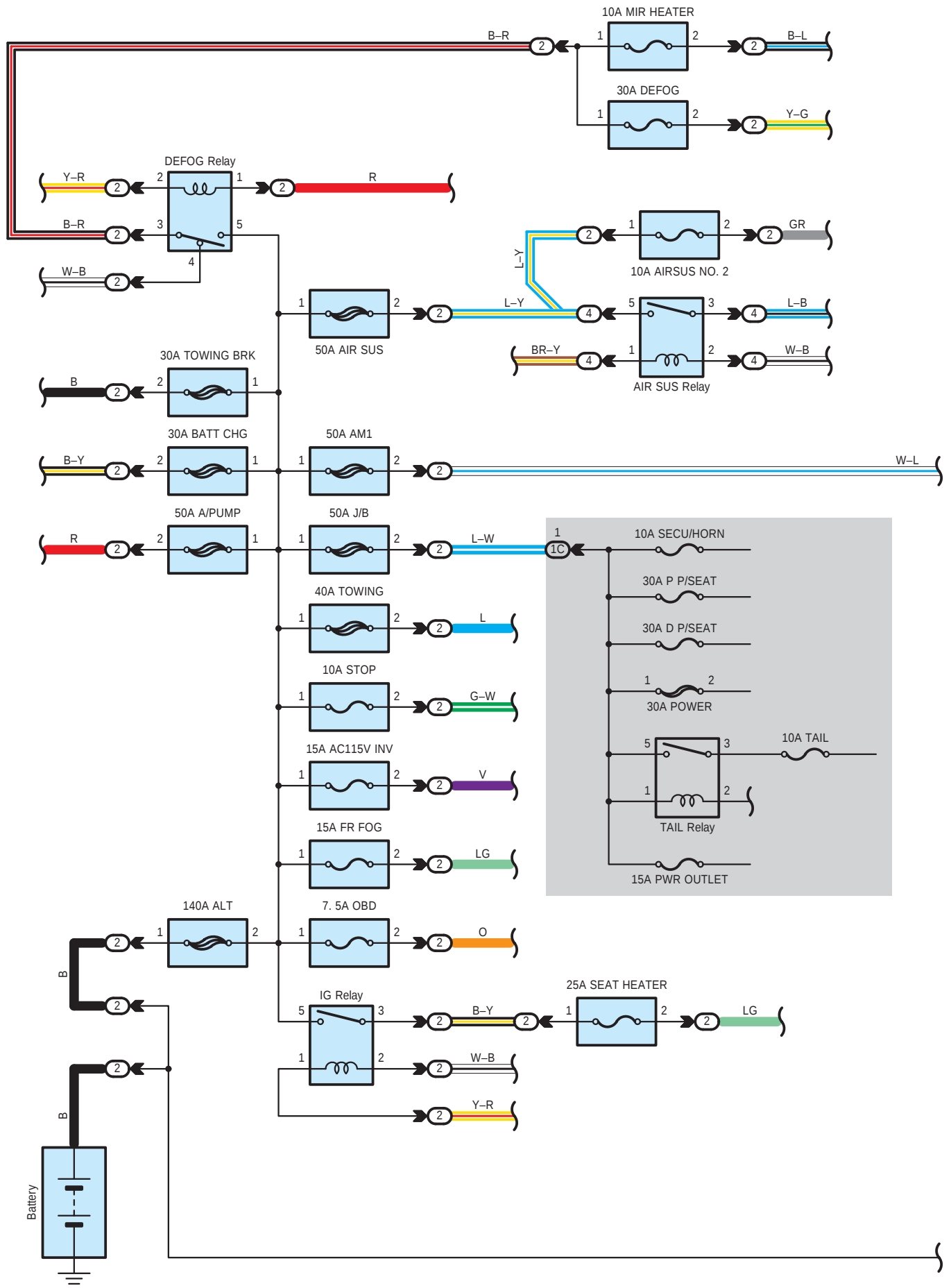


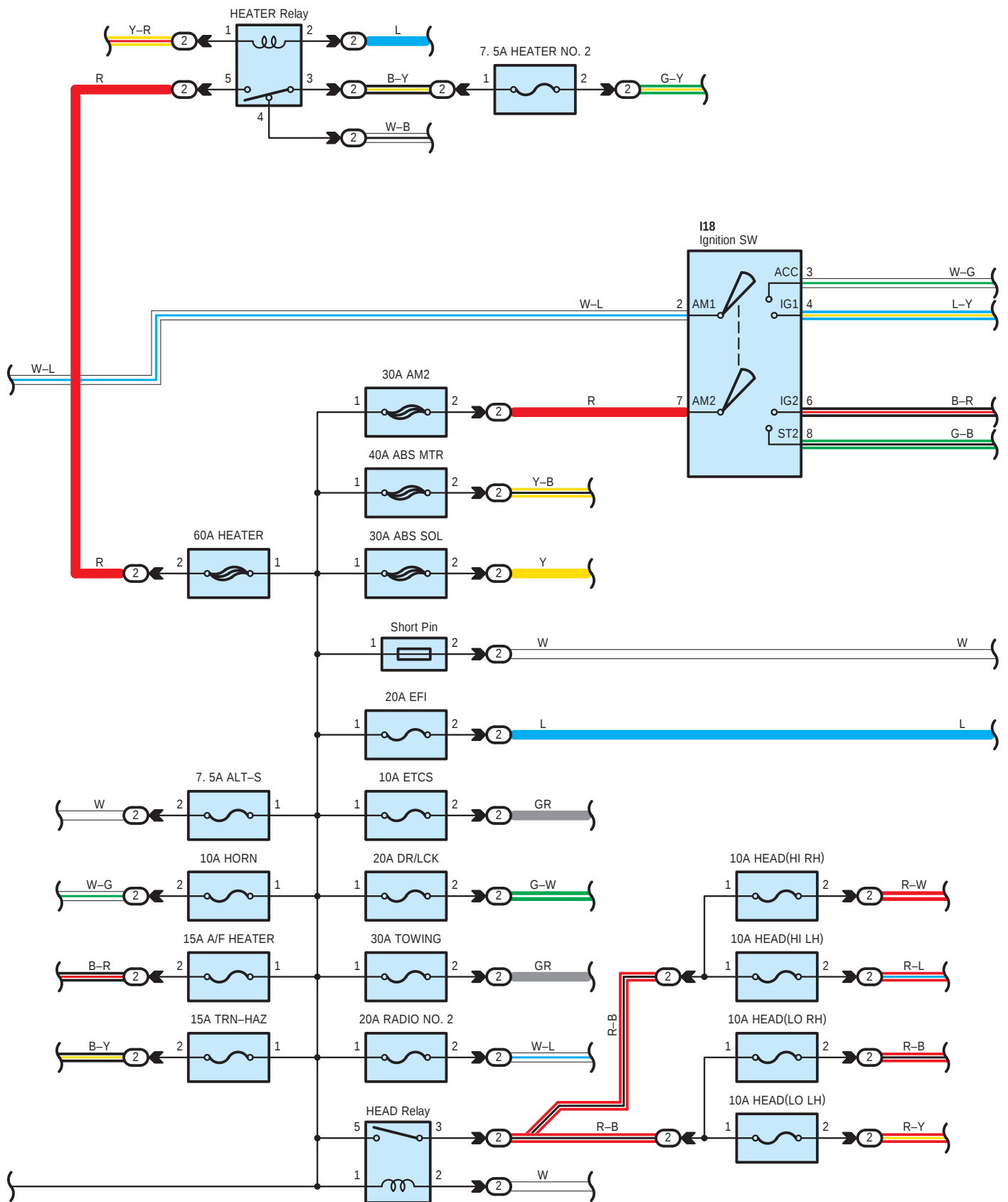
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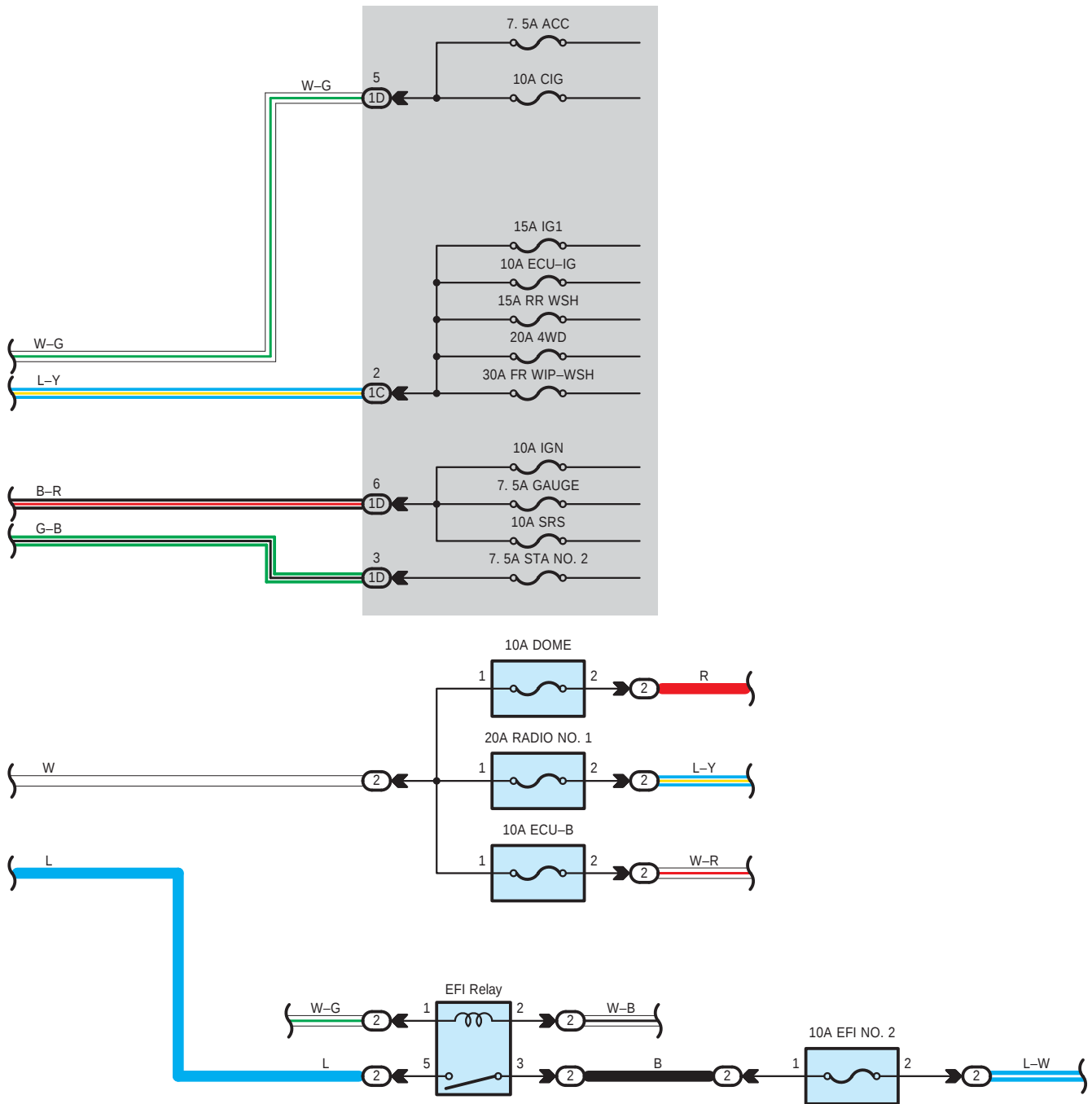
F (3E)	
F (3E)	
F (3E)	
E (3E)	
E (3E)	
E (3E)	
D (3E)	
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D (3E)	
C (3E)	
C (3E)	
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B (3F)	
B (3F)	

Power Source





Power Source



 : **Parts Location**

Code	See Page	Code	See Page	Code	See Page
I18	37				

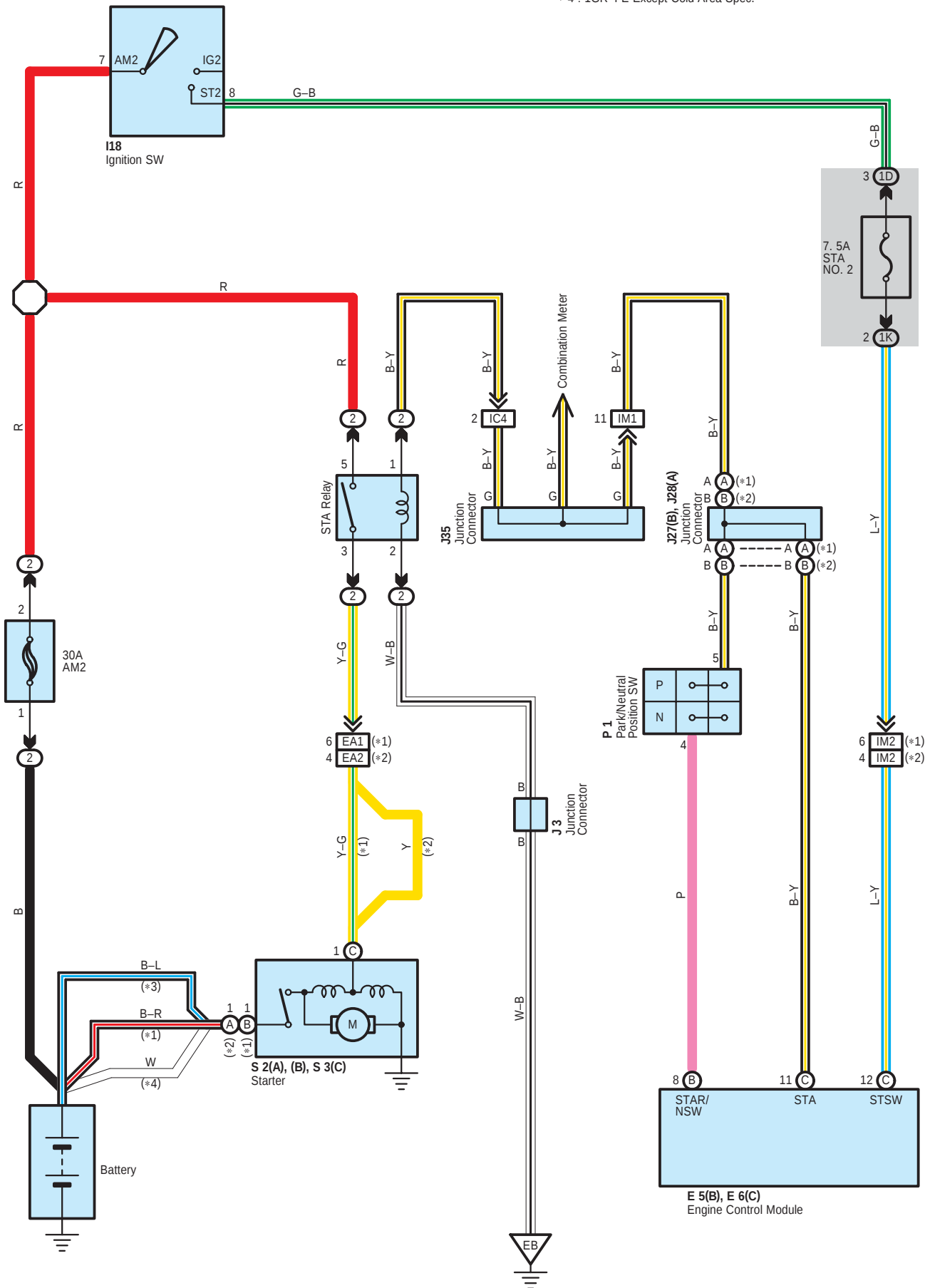
 : **Relay Blocks**

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)
4	23	Engine Room R/B No.4 (Engine Compartment Left)

 : **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1D		

- * 1 : 2UZ-FE
- * 2 : 1GR-FE
- * 3 : 1GR-FE Cold Area Spec.
- * 4 : 1GR-FE Except Cold Area Spec.



 : Parts Location

Code		See Page	Code		See Page	Code		See Page	
E5	B	37	J27	B	38	S2	A	35 (1GR–FE)	
E6	C	37	J28	A	38		B	33 (2UZ–FE)	
I18		37	J35		38	S3	C	33 (2UZ–FE)	
J3	33 (2UZ–FE)		P1	33 (2UZ–FE)					
	35 (1GR–FE)			35 (1GR–FE)					

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1K	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

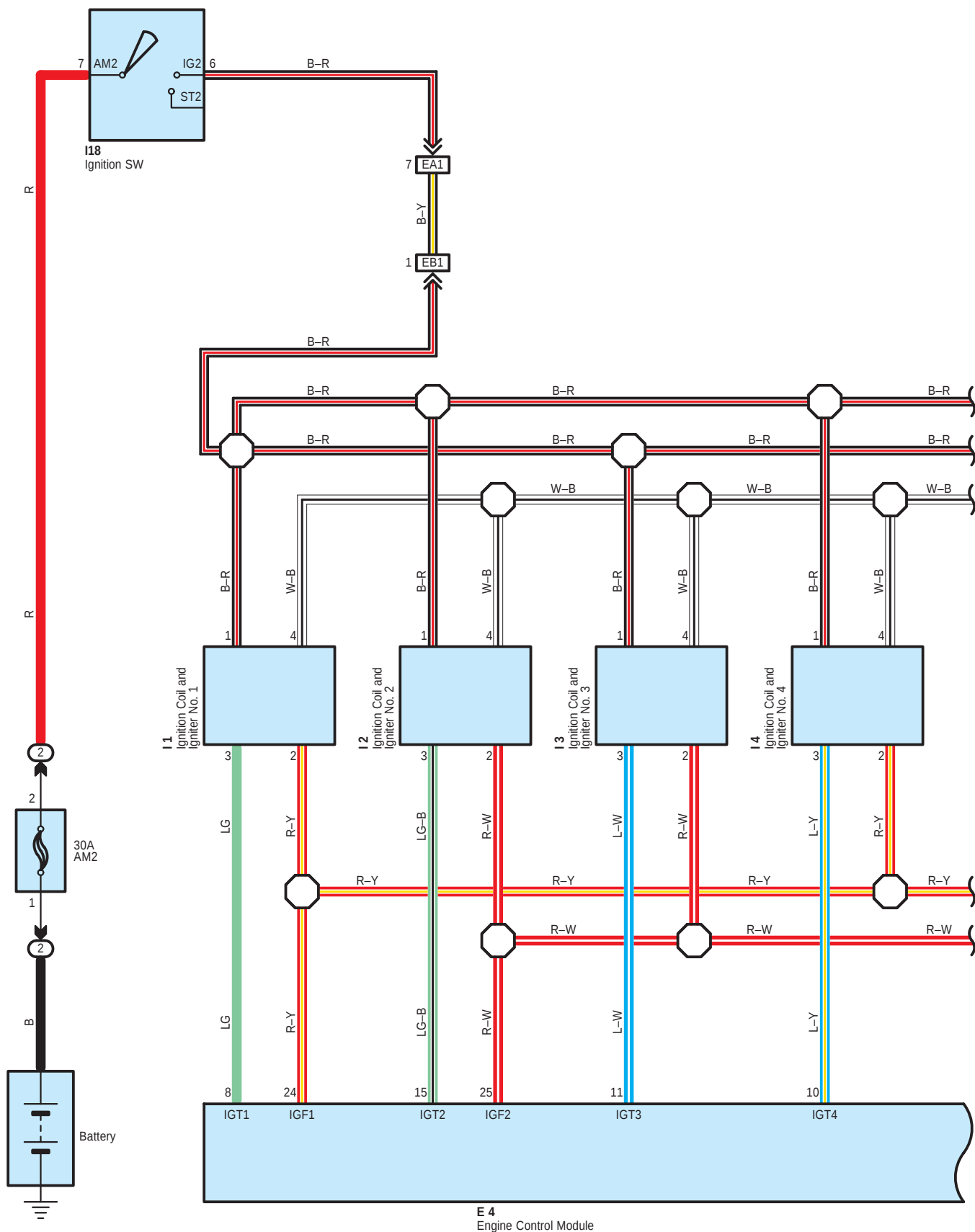
 : Connector Joining Wire Harness and Wire Harness

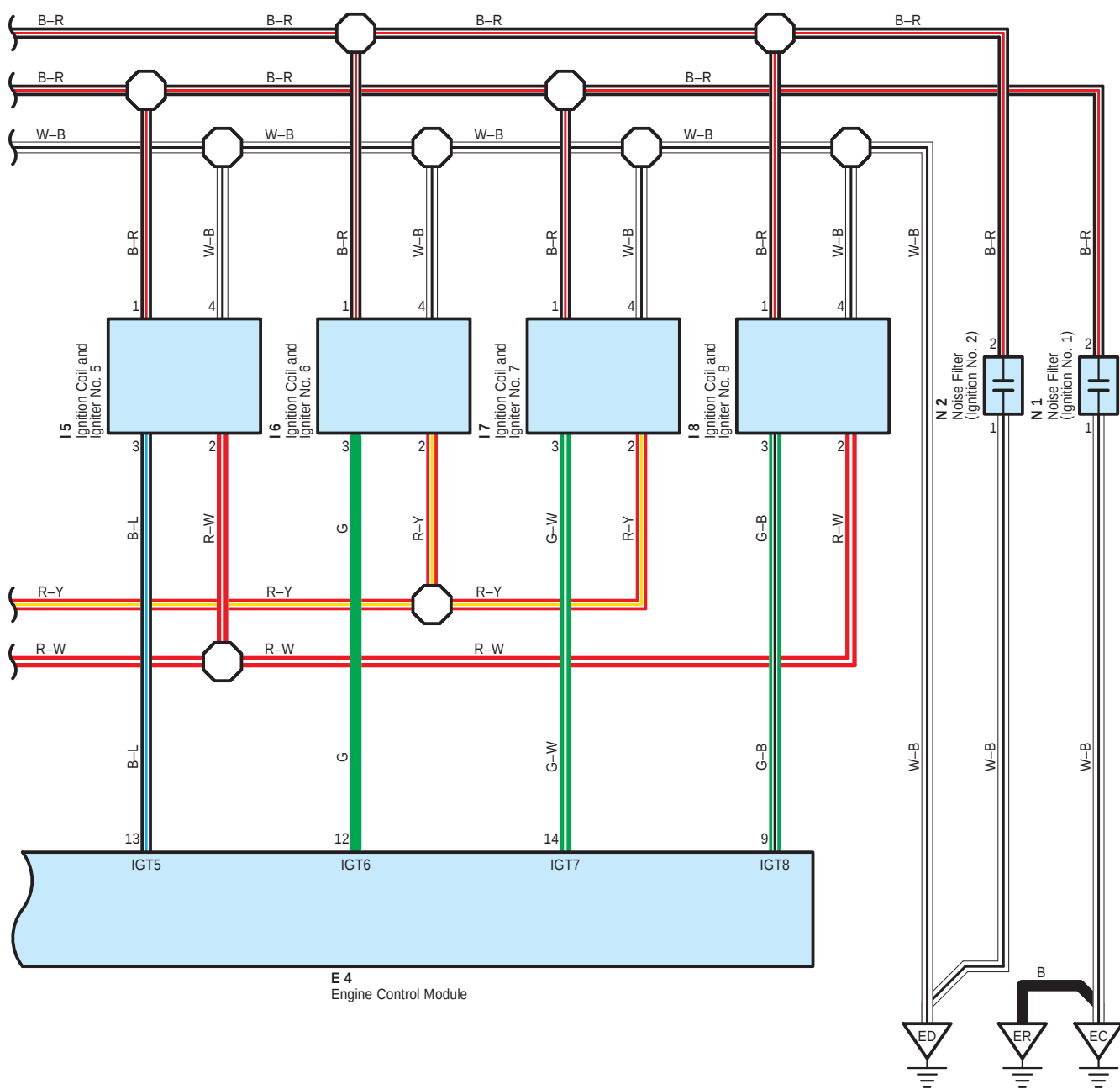
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EA2	45 (1GR-FE)	
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

 : Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	

Ignition for 2UZ-FE





Ignition for 2UZ-FE

: Parts Location

Code	See Page	Code	See Page	Code	See Page
E4	37	I4	33 (2UZ-FE)	I8	33 (2UZ-FE)
I1	33 (2UZ-FE)	I5	33 (2UZ-FE)	I18	37
I2	33 (2UZ-FE)	I6	33 (2UZ-FE)	N1	33 (2UZ-FE)
I3	33 (2UZ-FE)	I7	33 (2UZ-FE)	N2	33 (2UZ-FE)

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

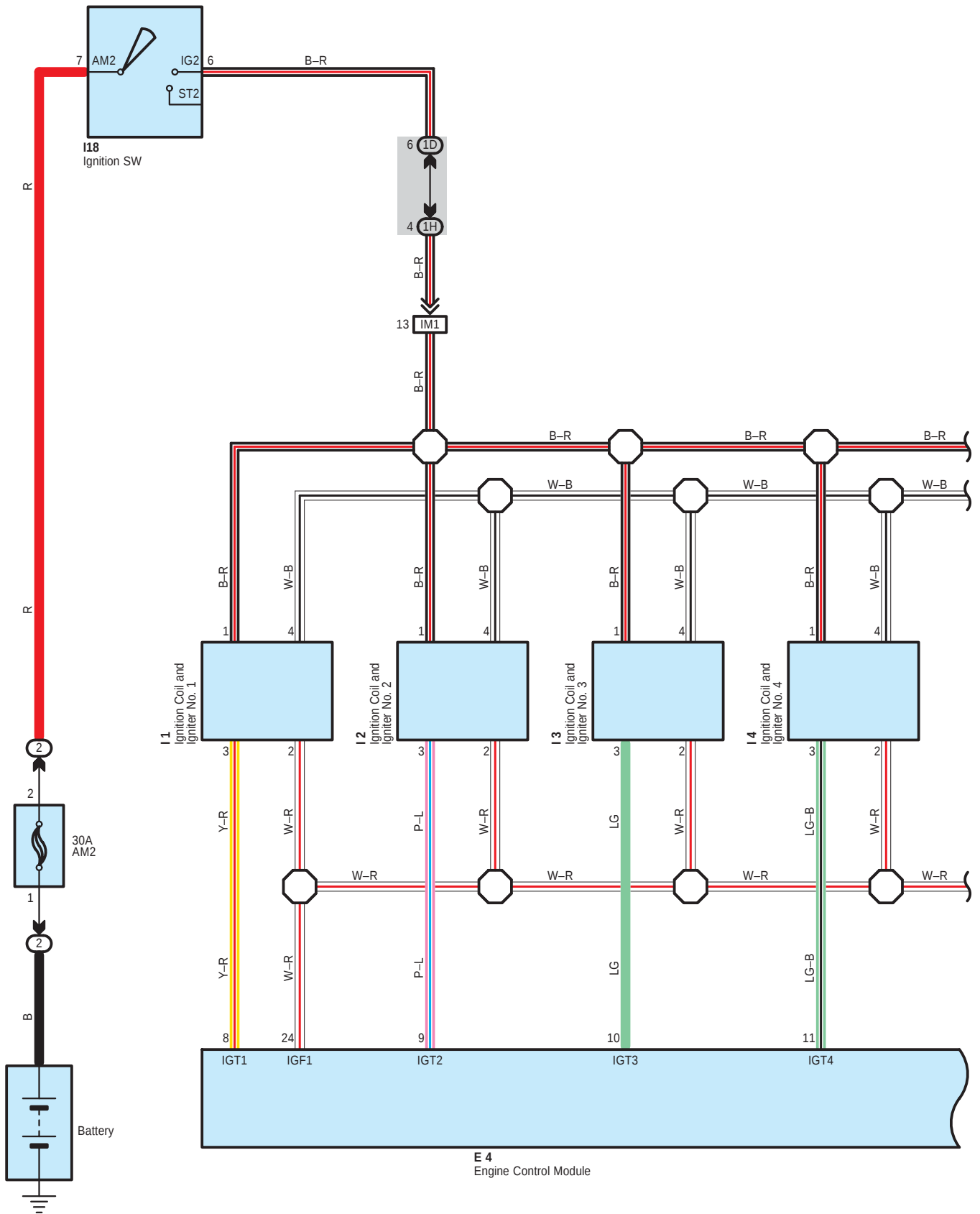
: Connector Joining Wire Harness and Wire Harness

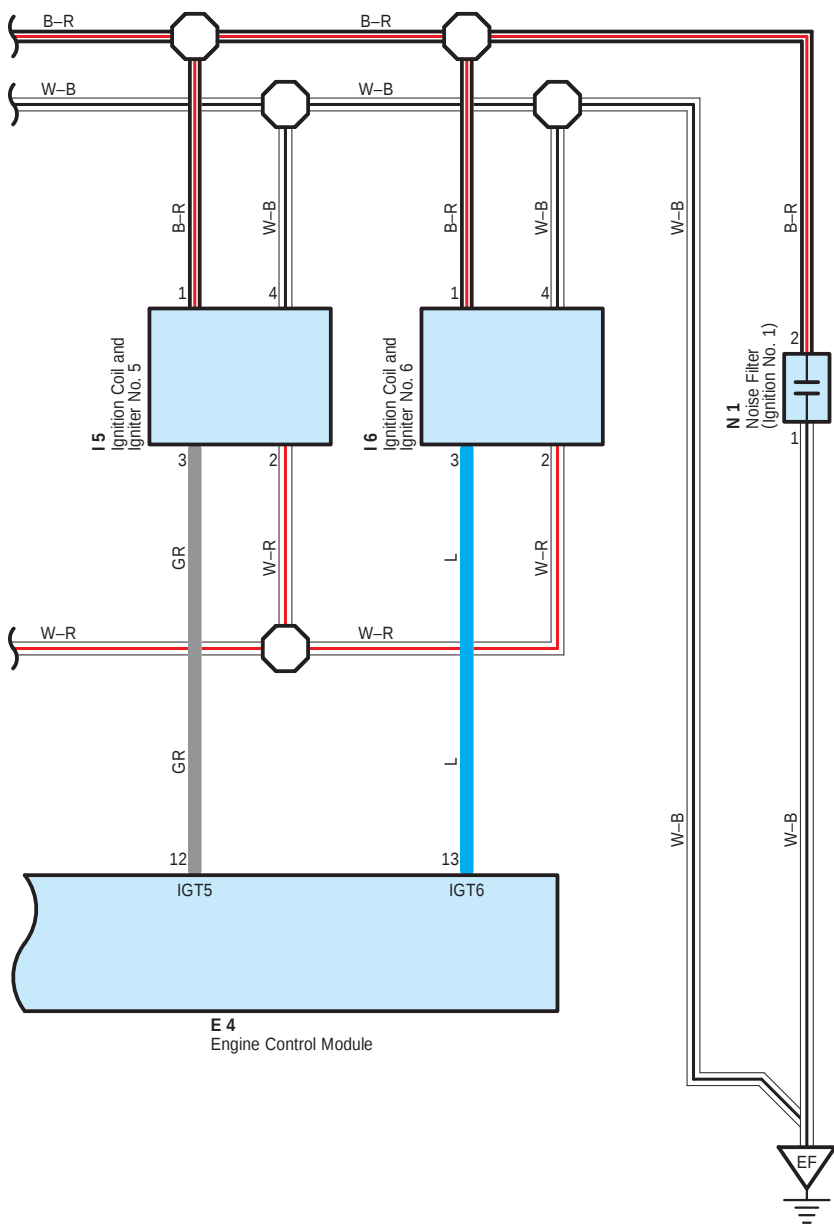
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EB1	44 (2UZ-FE)	Engine No.2 Wire and Engine Wire (Near the Starter)

: Ground Points

Code	See Page	Ground Points Location
EC	44 (2UZ-FE)	Right Bank Cylinder Head
ED	44 (2UZ-FE)	Left Bank Cylinder Head
ER	44 (2UZ-FE)	Rear Side of Front Right Fender

Ignition for 1GR-FE





Ignition for 1GR-FE

: Parts Location

Code	See Page	Code	See Page	Code	See Page
E4	37	I3	35 (1GR-FE)	I6	35 (1GR-FE)
I1	35 (1GR-FE)	I4	35 (1GR-FE)	I18	37
I2	35 (1GR-FE)	I5	35 (1GR-FE)	N1	35 (1GR-FE)

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

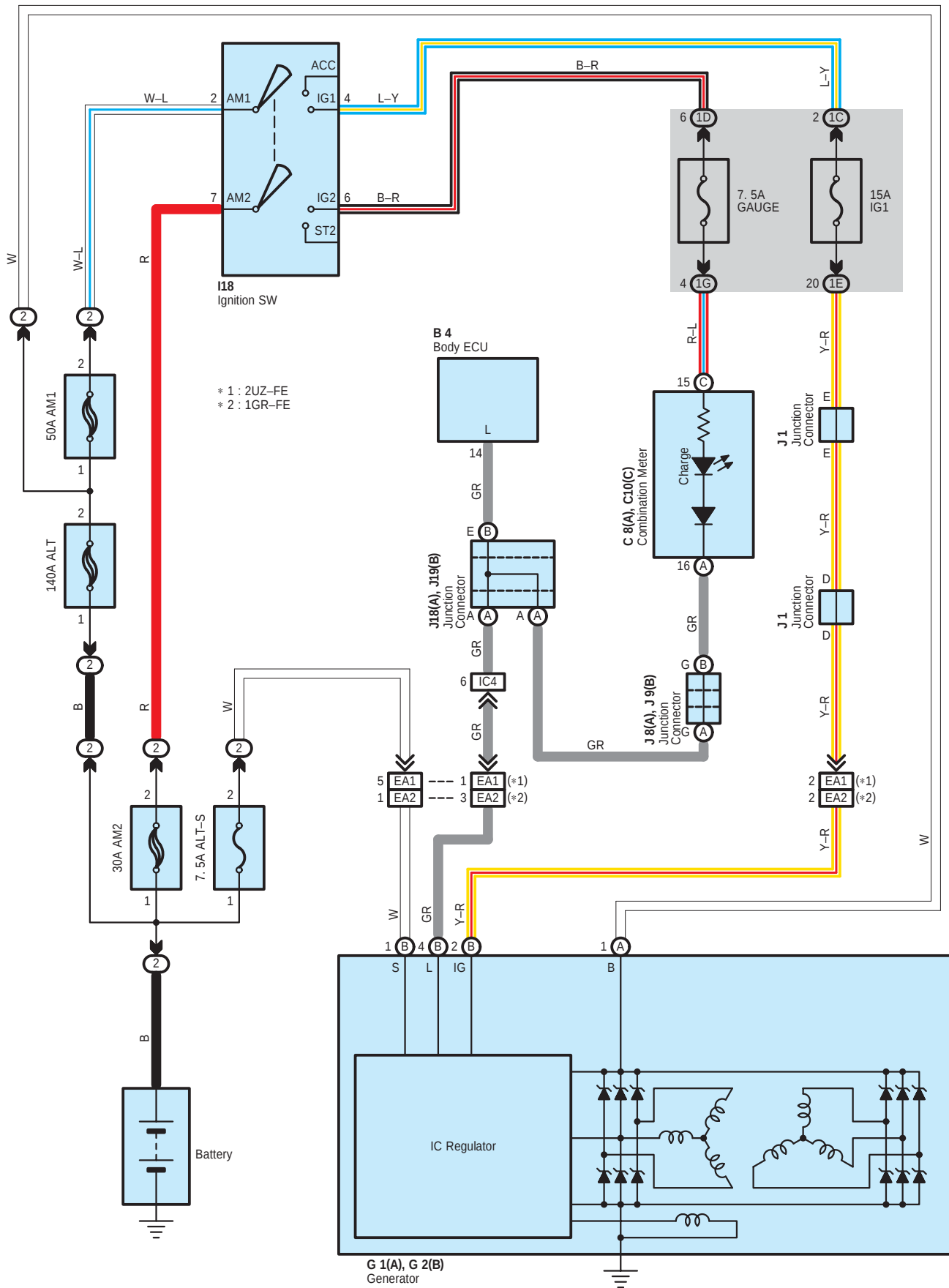
Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)

: Ground Points

Code	See Page	Ground Points Location
EF	45 (1GR-FE)	Rear Side of Left Bank Cylinder Block



☐ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B4		36	G2	B	32 (2UZ–FE)	J8	A	38
C8	A	37			34 (1GR–FE)	J9	B	38
C10	C	37	I18		37	J18	A	38
G1	A	32 (2UZ–FE)	J1		33 (2UZ–FE)	J19	B	38
		34 (1GR–FE)			35 (1GR–FE)			

☐ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

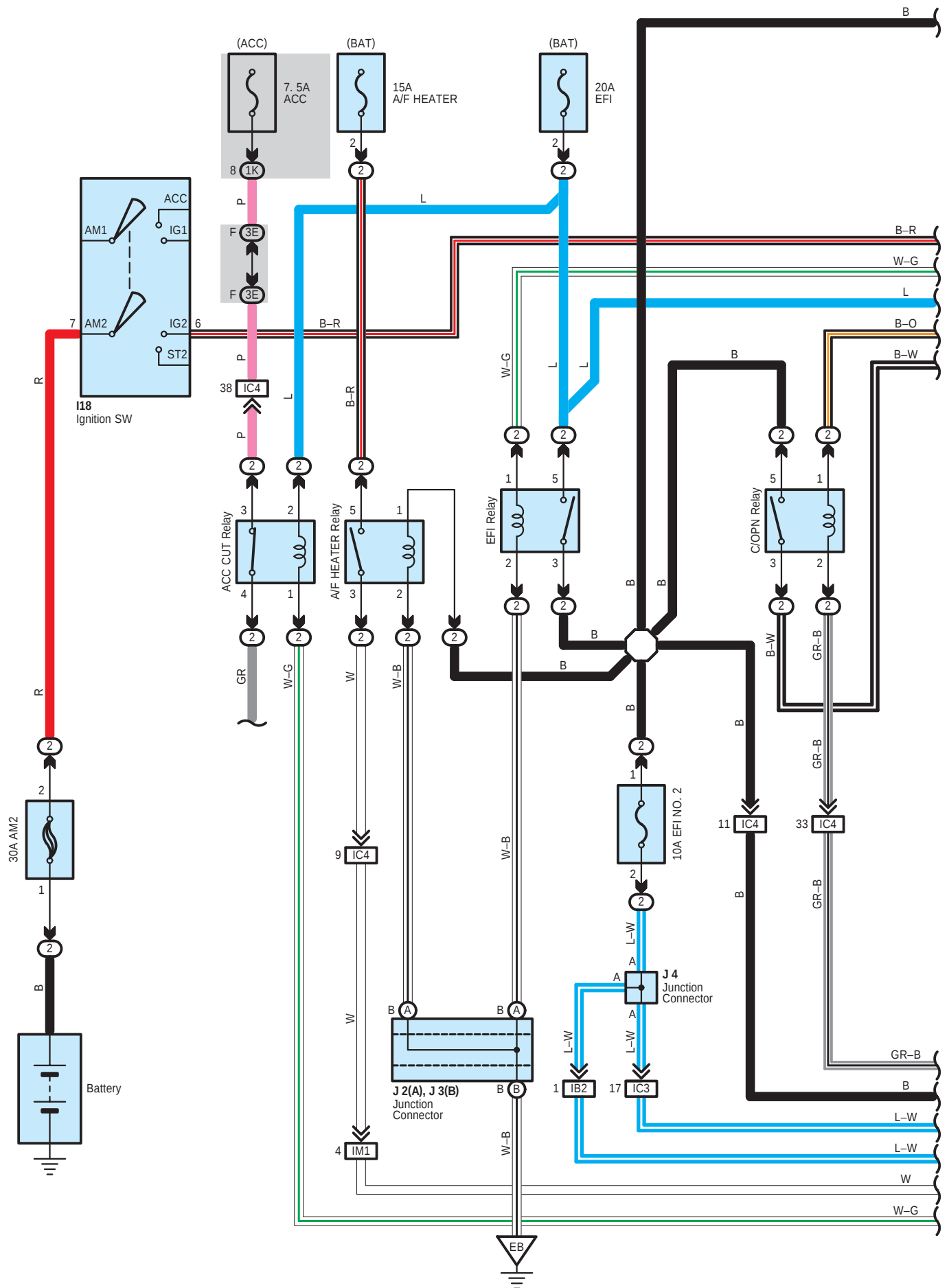
☐ : Junction Block and Wire Harness Connector

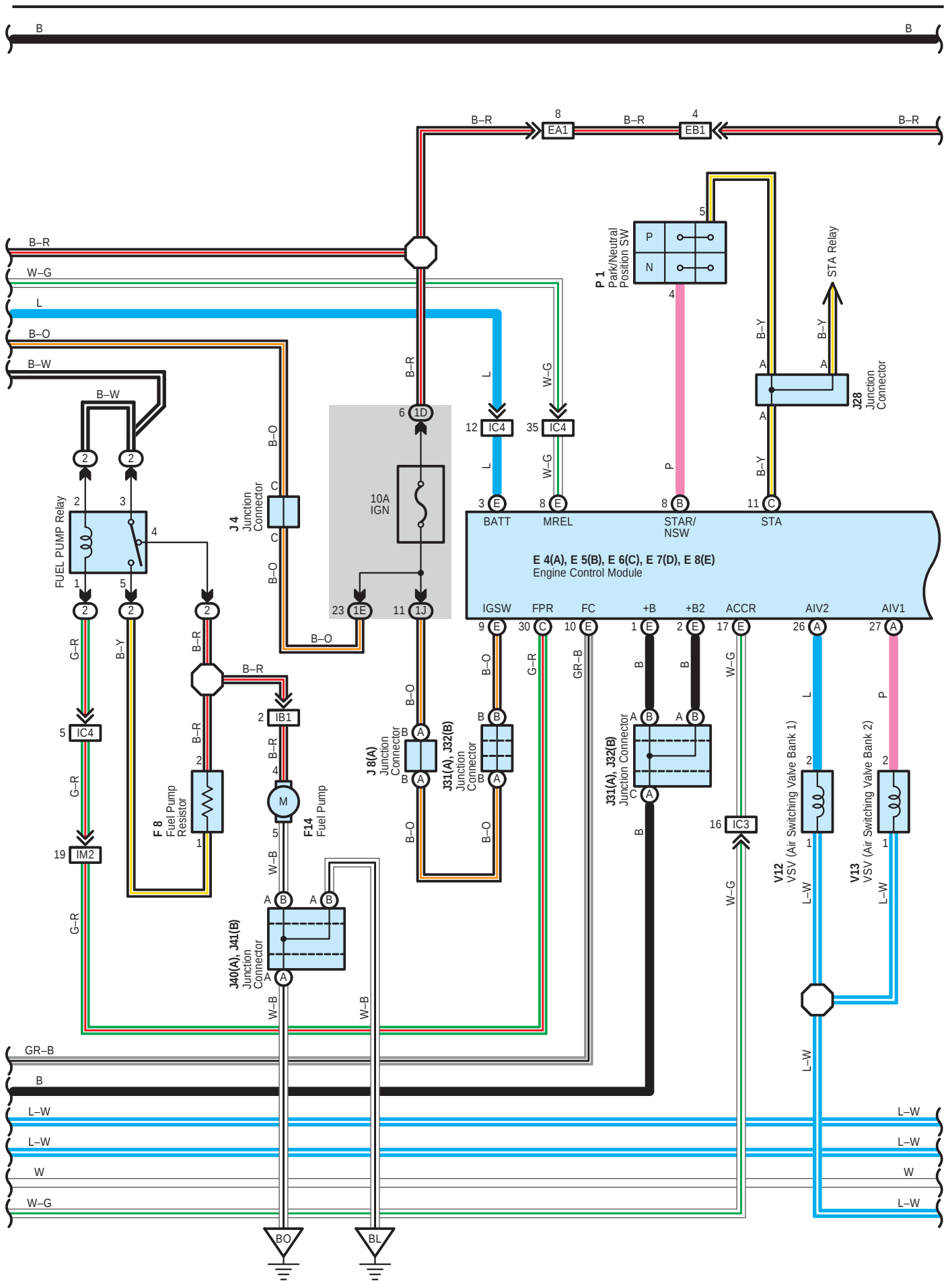
Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1D		
1E		
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

☐ : Connector Joining Wire Harness and Wire Harness

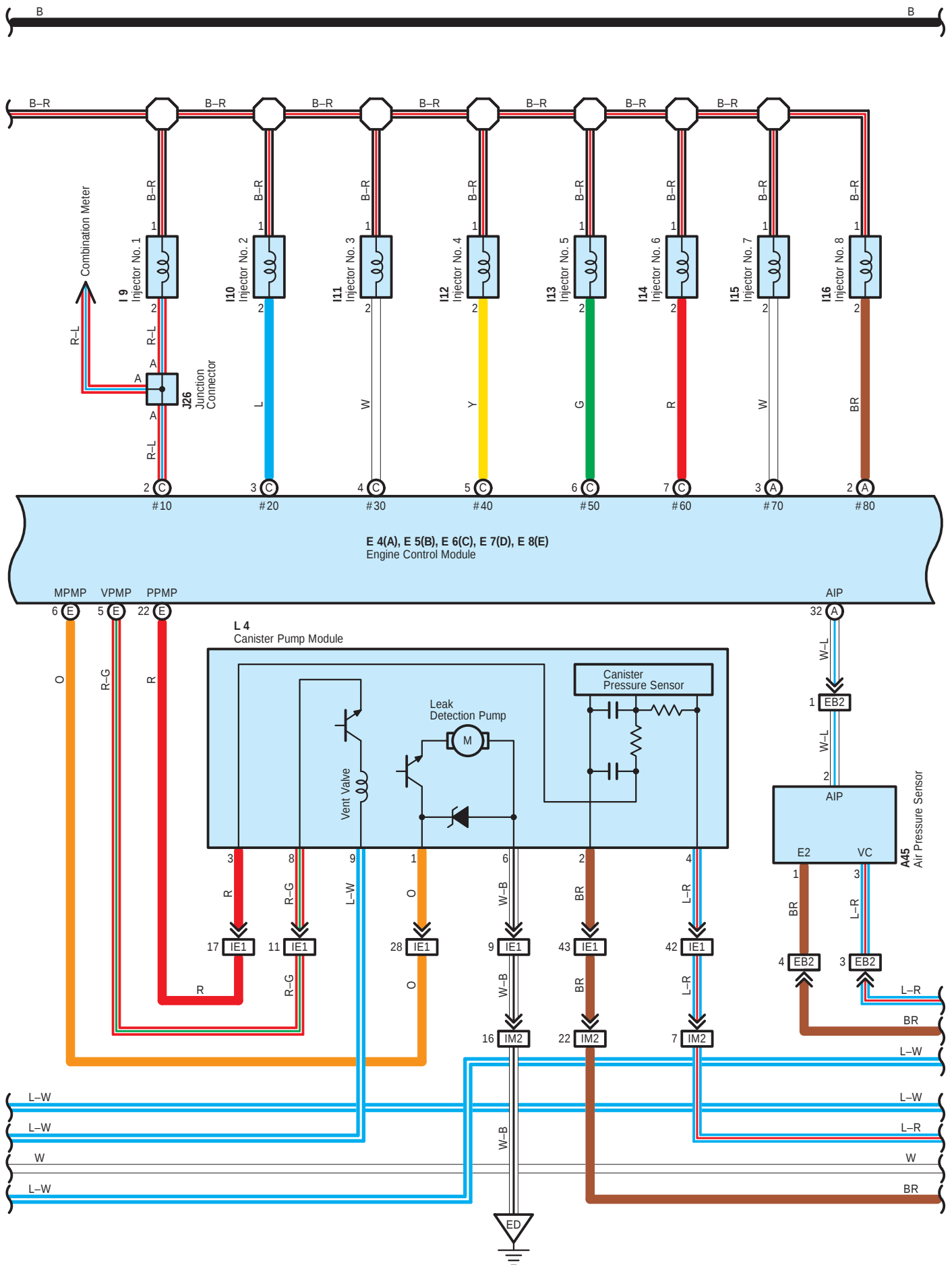
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EA2	45 (1GR-FE)	
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)

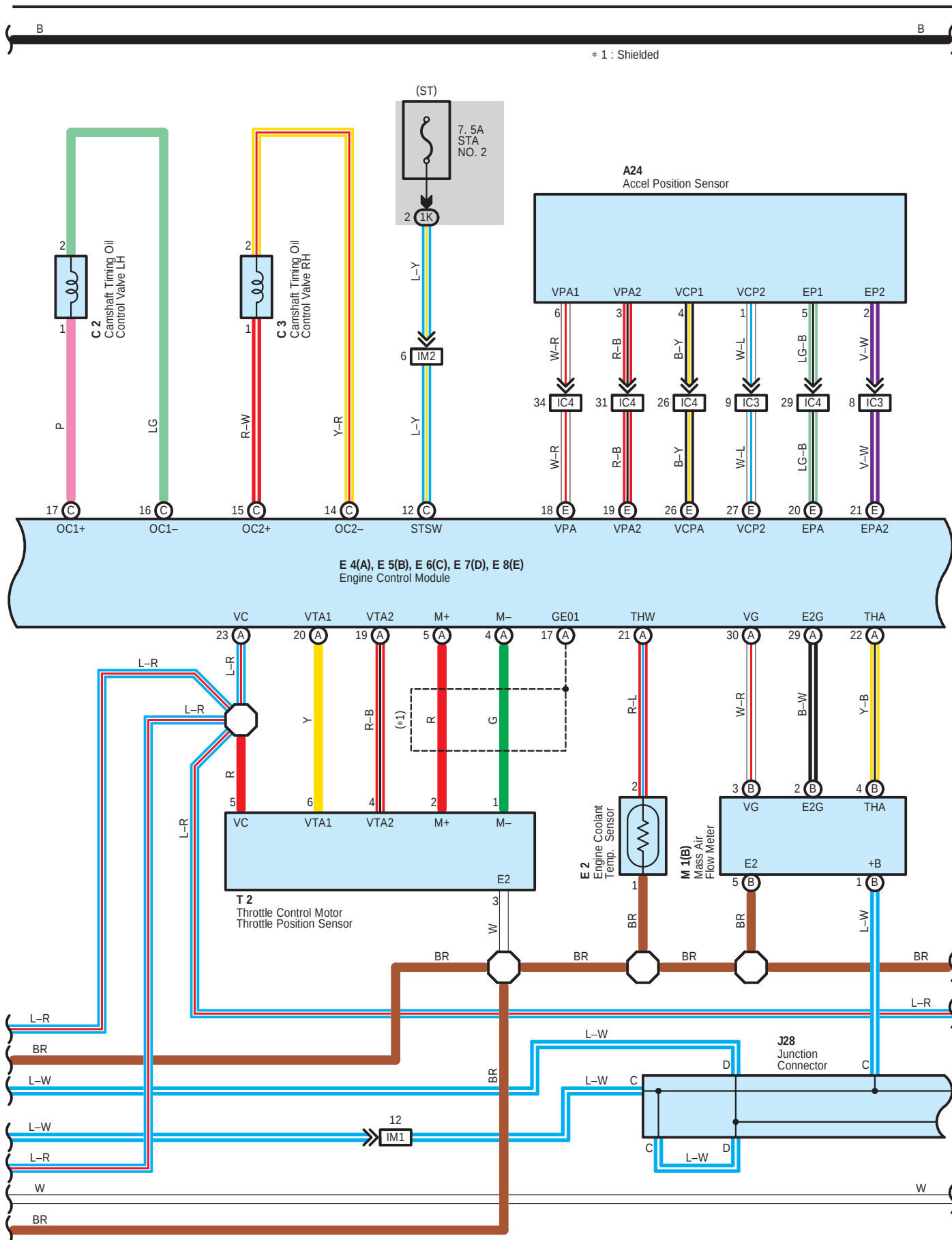
Engine Control for 2UZ-FE



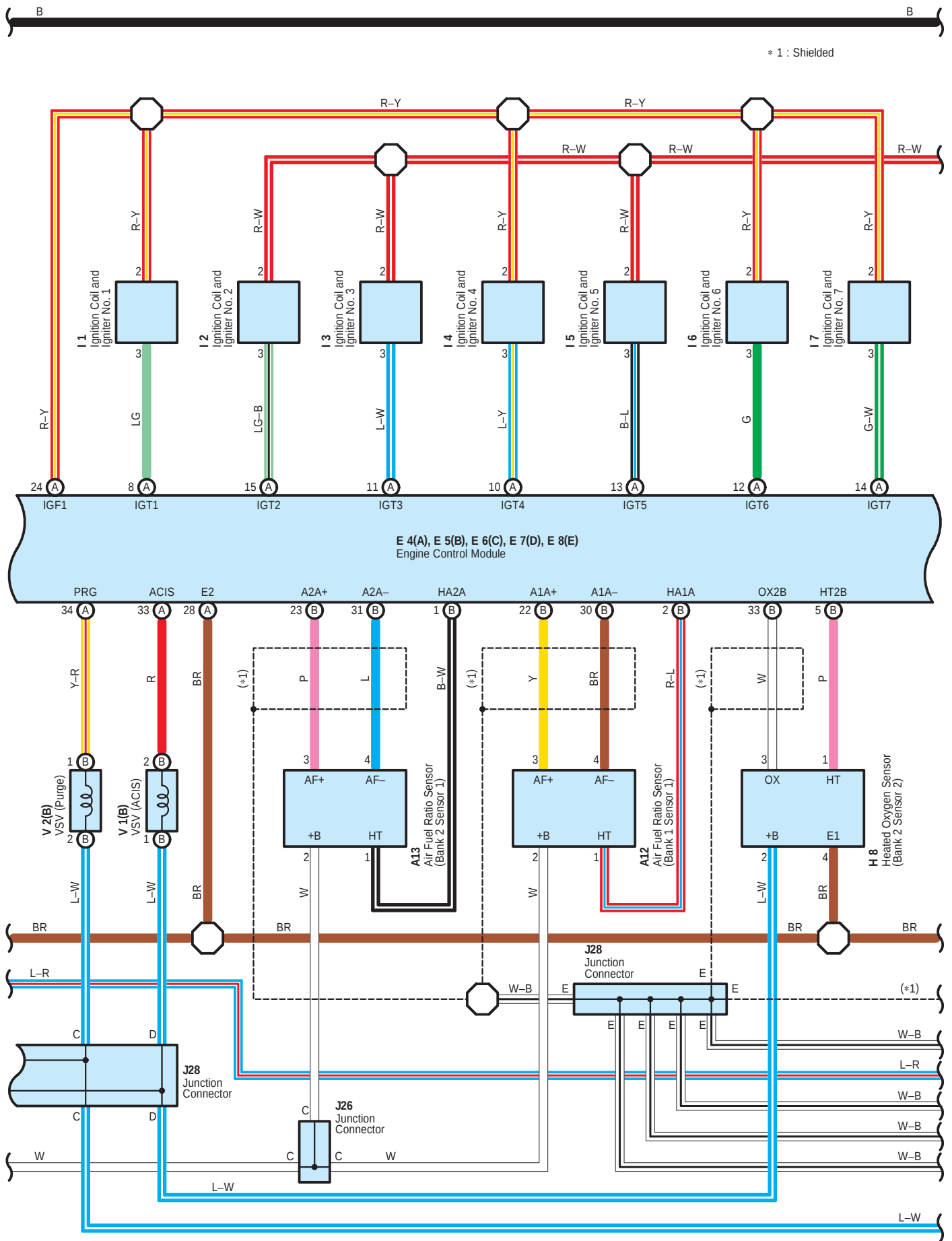


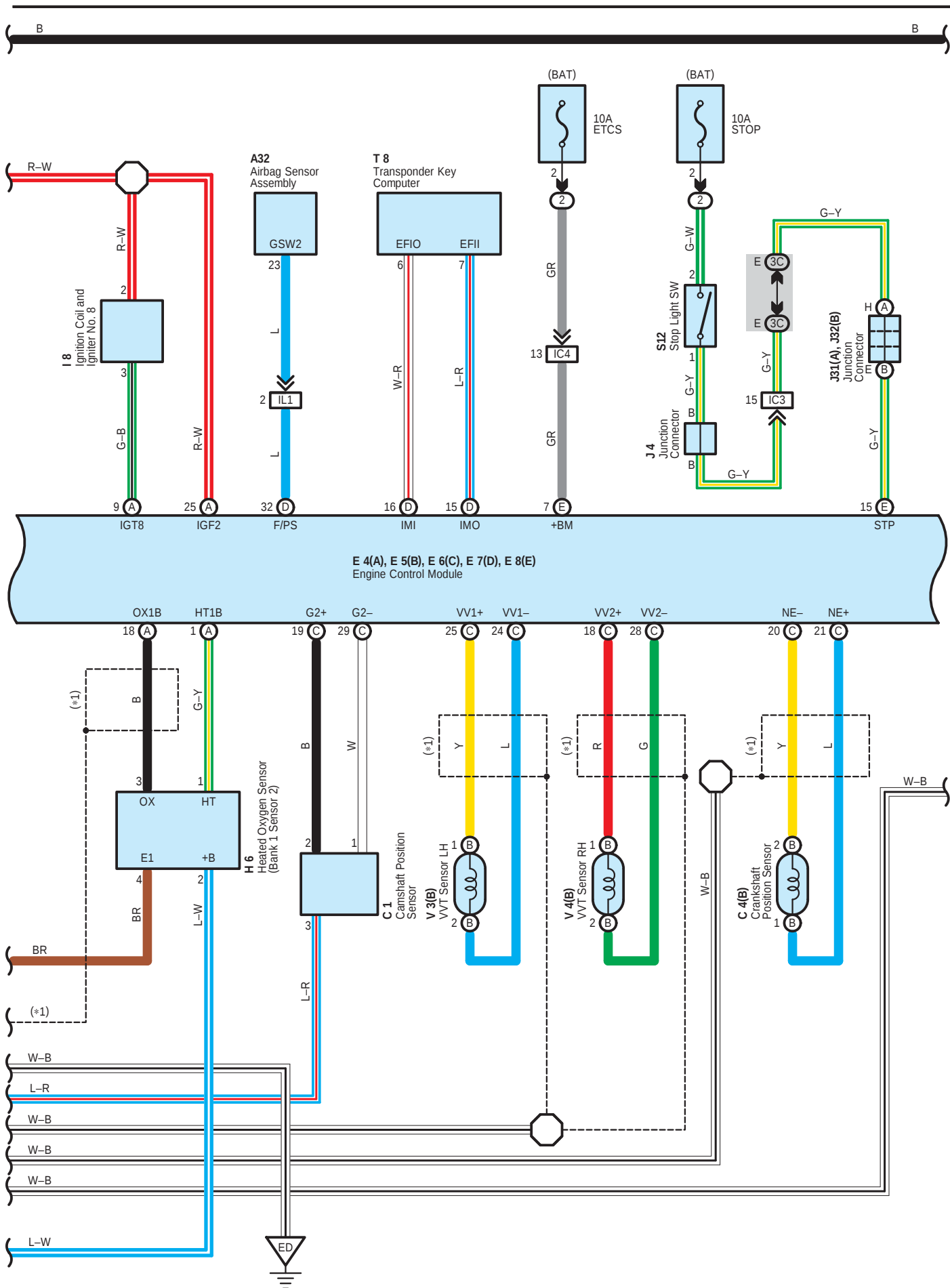
Engine Control for 2UZ-FE





Engine Control for 2UZ-FE





This diagram illustrates the electrical system for the 2002 Ford Focus 1.8L engine, centered around the Engine Control Module (ECM) and the A/C Control Assembly.

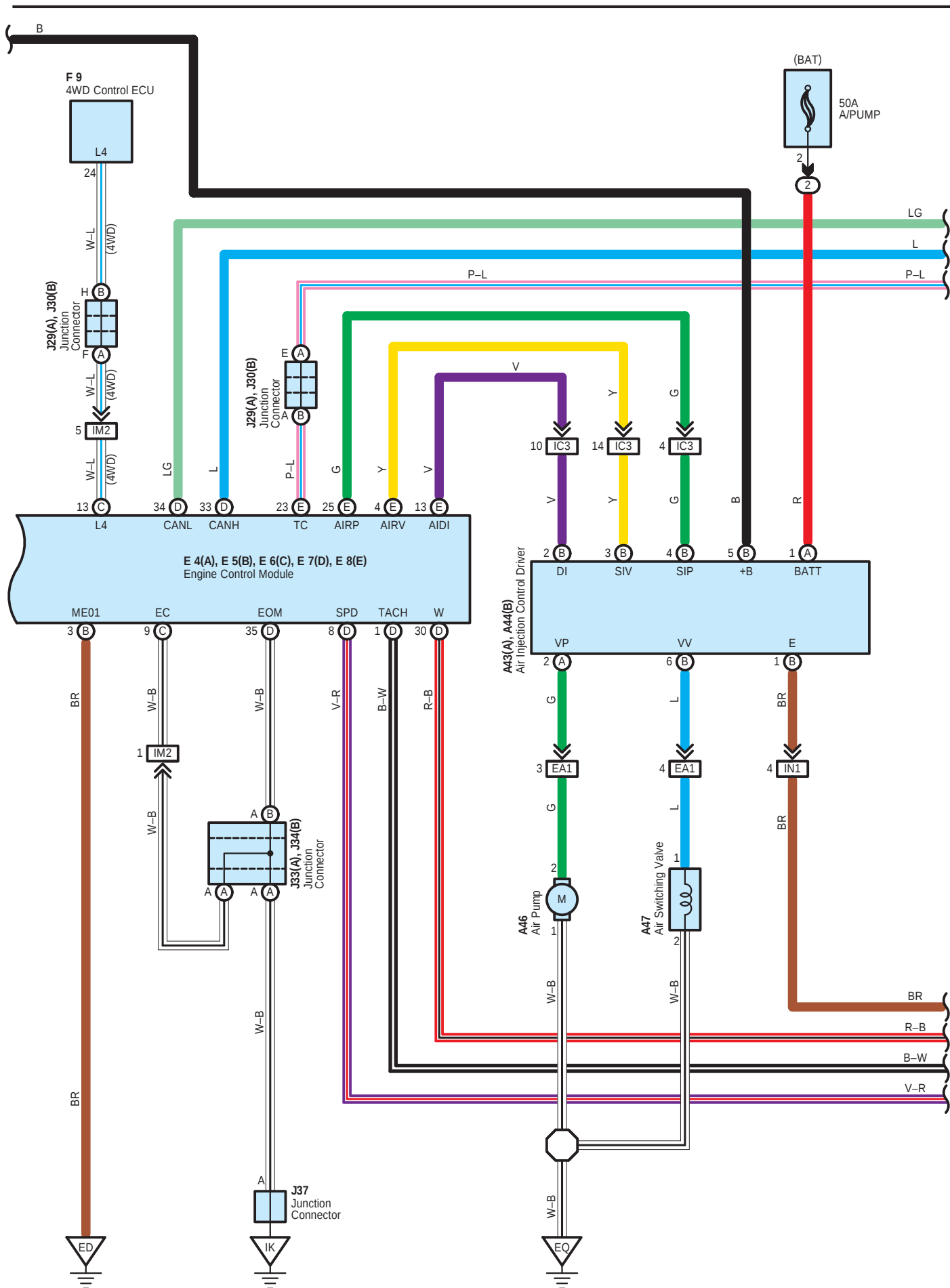
Engine Control Module (ECM): The ECM is shown with pins 4(A), 5(B), 6(C), 7(D), and 8(E). It controls various components including the Tail Relay, 10A Tail, 30A Defog, 140A ALT, and DEFOG Relay.

A/C Control Assembly: The A/C Control Assembly (A16(A), A17(B)) is connected to the ECM via pins 14(D), 25(D), 24(D), 8(C), 1(C), 7(A), 6(A), 4(B), 7(B), and 6(B). It controls the A/C system and is connected to the A/C Control Assembly (A16(A), A17(B)).

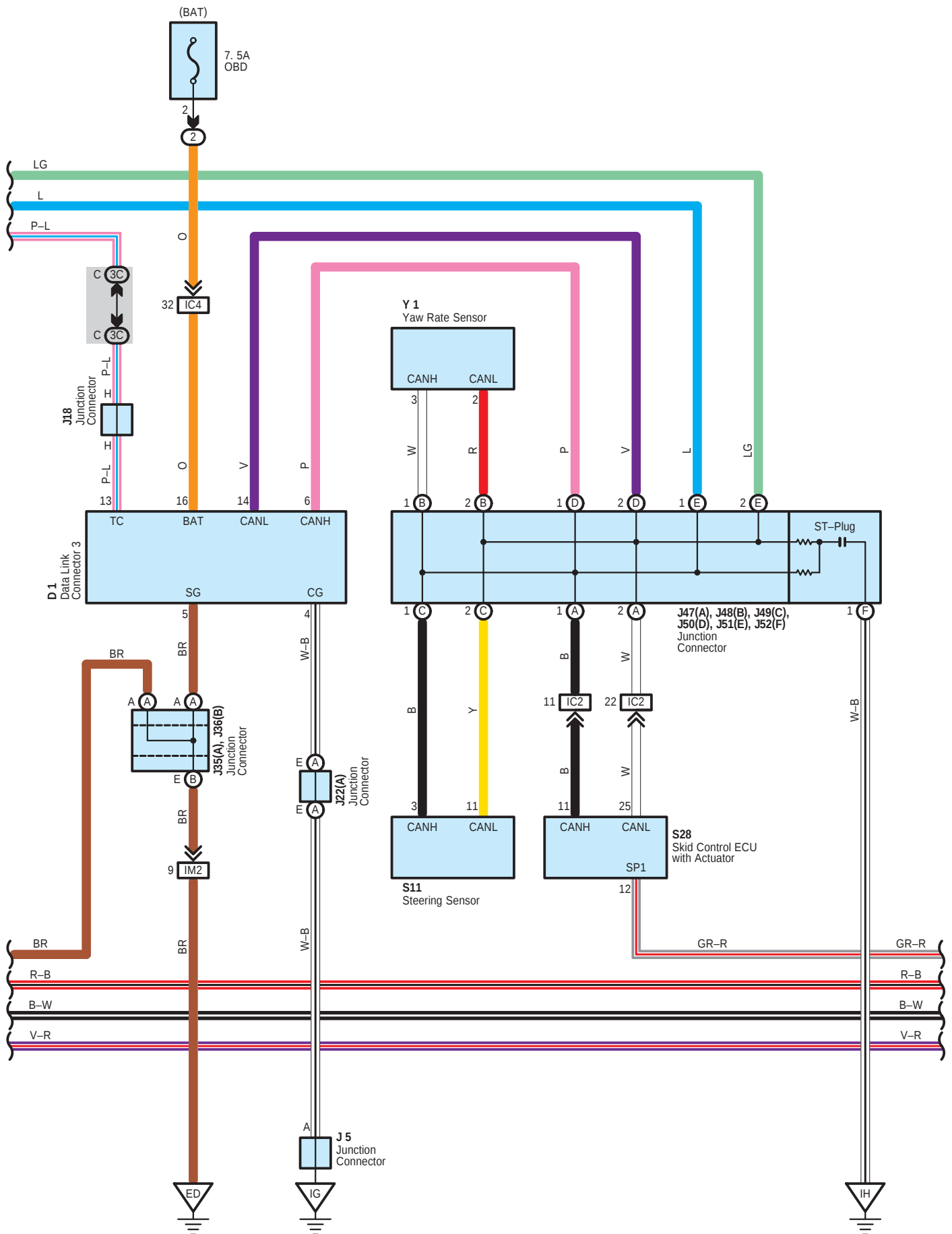
Sensors and Actuators: The diagram shows various sensors and actuators connected to the ECM and A/C Control Assembly, including:

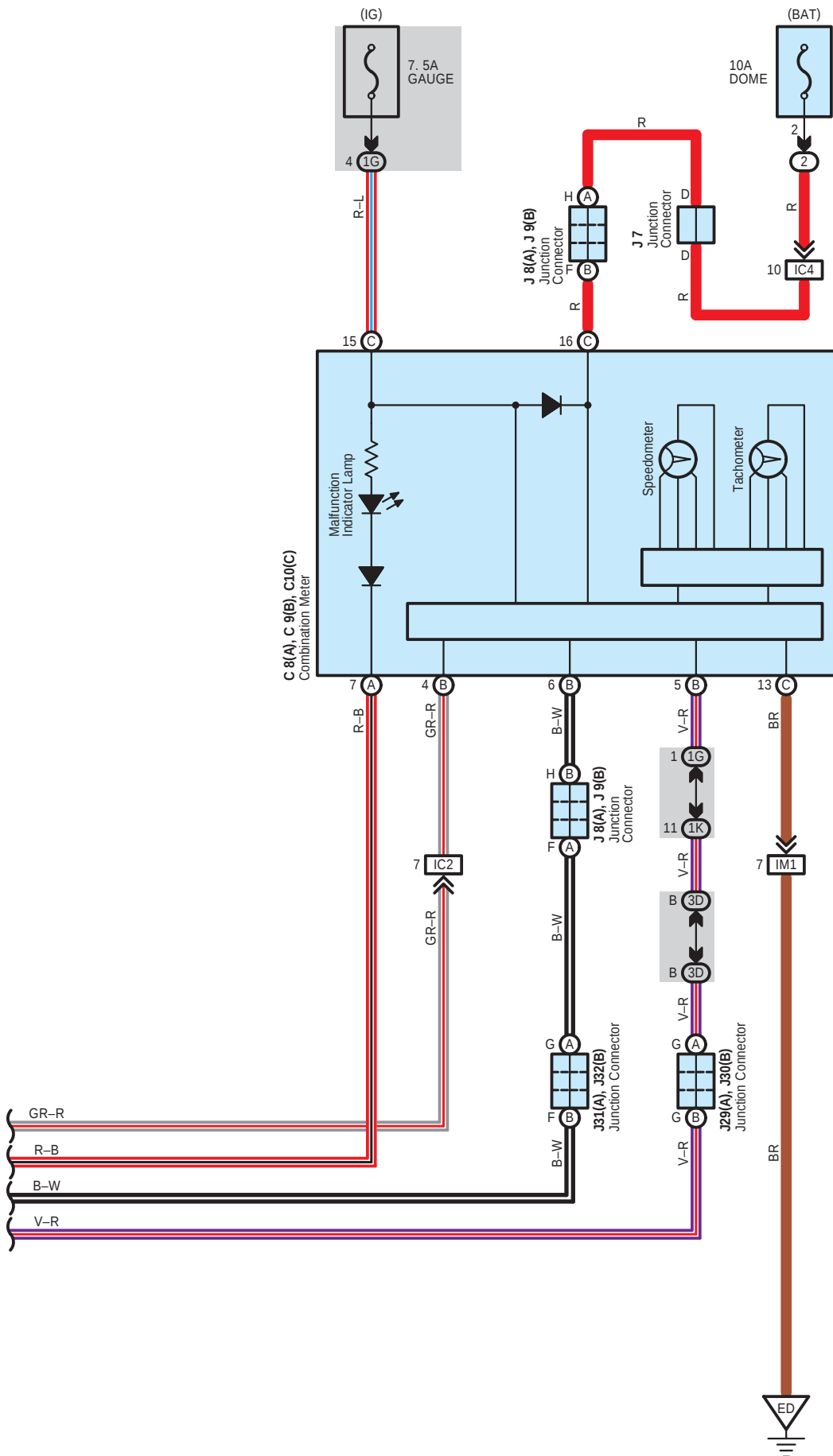
- Knock Sensors:** K 2(B) (Bank 2) and K 1 (Bank 1) are connected to the ECM via pins 21(B), 20(B), 29(B), and 28(B).
- Throttle Position Sensor (THW):** Connected to the ECM via pin 14(D).
- ACT (Air Flow Transducer):** Connected to the ECM via pin 25(D).
- AC1 (Air Conditioning Control):** Connected to the ECM via pin 24(D).
- 4WD (Four Wheel Drive):** Connected to the ECM via pin 8(C).
- E1, E01, E02, E03, E04, E05:** These pins are connected to the ECM and control various systems, including the 4WD system.

Wiring Details: The diagram includes detailed wiring for the 50A J/B, 10A TAIL, 30A DEFOG, 140A ALT, and DEFOG Relay. It also shows the connection of the ECM to the A/C Control Assembly and the various sensors and actuators.



Engine Control for 2UZ-FE





System Outline

The engine control system utilizes a microcomputer and maintains overall control of the engine, transmission etc. An outline of the engine control is given here.

1. Input Signals

(1) Engine coolant temp. signal circuit

The engine coolant temp. sensor detects the engine coolant temp. and has a built-in thermistor with a resistance which varies according to the engine coolant temp. The engine coolant temp. is input into TERMINAL THW of the engine control module as a control signal.

(2) Intake air temp. signal circuit

The intake air temp. sensor is installed in the mass air flow meter and detects the intake air temp., which is input as a control signal to TERMINAL THA of the engine control module.

(3) Oxygen sensor signal circuit

The oxygen density in the exhaust emission is detected and is input as a control signal from the heated oxygen sensors to TERMINALS OX1B and OX2B of the engine control module.

(4) RPM signal circuit

The camshaft position is detected by the camshaft position sensor and is input into TERMINAL G2+ of the engine control module as a control signal. Also, the engine RPM is detected by the crankshaft position sensor and the signal is input into TERMINAL NE+ of the engine control module.

(5) Throttle position sensor signal circuit

The throttle position sensor detects the throttle valve opening angle as a control signal, which is input into TERMINALS VTA1 and VTA2 of the engine control module.

(6) Vehicle speed circuit

The vehicle speed sensor detects the vehicle speed, and the signal is input into TERMINAL SPD of the engine control module via the combination meter, from TERMINAL SP1 of the skid control ECU with actuator.

(7) Battery signal circuit

Voltage is constantly applied to TERMINAL BATT of the engine control module. When the ignition SW is turned on, the voltage for engine control module start up power supply is applied through the EFI relay, to TERMINALS +B and +B2 of the engine control module. The current from the IGN fuse flows to TERMINAL IGSW of the engine control module, and voltage is constantly applied to TERMINAL +BM.

(8) Intake air volume signal circuit

The intake air volume is detected by the mass air flow meter, and is input as a control signal to TERMINAL VG of the engine control module.

(9) Stop light SW signal circuit

The stop light SW is used to detect whether the vehicle is braking or not, and the signal is input into TERMINAL STP of the engine control module as a control signal.

(10) Starter signal circuit

To confirm whether the engine is cranking, the voltage applied to the starter motor when the engine is cranking is detected, and is input into TERMINAL STA of the engine control module as a control signal.

(11) Engine knock signal circuit

Engine knocking is detected by the knock sensors, and is input into TERMINALS KNC1 and KNC2 of the engine control module as a control signal.

(12) A/C SW signal system

The operating voltage of the A/C magnetic clutch is detected and input in the form of a control signal to TERMINAL AC1 of the engine control module.

(13) Air fuel ratio signal system

The air fuel ratio is detected by air fuel ratio sensor and input as a control signal into TERMINALS A1A+ and A2A+ of engine control module.

2. Control System

* SFI system

The SFI system monitors the engine condition through the signals input from each sensors to the engine control module. The control signal is sent to the engine control module TERMINALS #10, #20, #30, #40, #50, #60, #70 and #80 to operate the injector (Fuel injection). The SFI system controls the fuel injection by the engine control module in response to the driving conditions.

* ESA system

The ESA system monitors the engine condition through the signals input from each sensors to the engine control module. The best ignition timing is decided according to this data and the data memorized in the engine control module. The control signal is output to TERMINALS IGT1, IGT2, IGT3, IGT4, IGT5, IGT6, IGT7 and IGT8, and these signals control the igniter to provide the best ignition timing.

* Heated oxygen sensor heater control system

The heated oxygen sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emission is low), and warms up the heated oxygen sensors to improve their detection performance. The engine control module evaluates the signals from each sensors, and outputs current to TERMINAL HT1B or HT2B to control the heater.

* Air fuel ratio sensor heater control system

The air fuel ratio sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emission is low), and warms up the air fuel ratio sensor to improve detection performance of the sensor.

The engine control module evaluates the signals from each sensor, current is output to TERMINALS HA1A and HA2A, controlling the heater.

* Fuel pump control system

The engine control module supplies current to TERMINAL FPR, and controls the operation speed of the fuel pump with the FUEL PUMP relay.

* ACIS

The ACIS includes a valve in the bulkhead separating the surge tank into two parts. This valve is opened and closed in accordance with the driving conditions to control the intake manifold length in two stages, for increased engine output in all ranges from low to high speeds.

* ETCS-i

The ETCS-i controls the engine output at its optimal level in accordance with the opening of the accelerator pedal, under all driving conditions.

* Engine start control system

The engine control module allows power to be supplied from the TERMINAL STAR/NSW to the STA relay via park/neutral position SW until complete combustion is confirmed by engine RPM after the detection of ignition SW ST signal by the TERMINAL STSW.

With this arrangement, engine can be started without holding the ignition key in the ST position. At the same time, the TERMINAL ACCR is controlled so that the engine control module turns off ACC CUT relay, shutting off power to the accessories.

* VVT-i

Controls the intake camshaft to an optimal valve timing in accordance with the engine condition.

* Air Injection System

It is the system to improve exhaust control performance by activating catalyst at early stage, which is realized when air is pressed and sent into the exhaust pipe forcibly by the air injection pump at starting engine in cold condition.

3. Diagnosis System

When there is a malfunction in the engine control module signal system, the malfunctioning system is recorded in the memory. The malfunctioning system can be found by reading the code displayed on the malfunction indicator lamp.

4. Fail-Safe System

When a malfunction has occurred in any system, there is a possibility of causing engine trouble due to continued control based on that system. In that case, the fail-safe system either controls the system using the data (Standard values) recorded in the engine control module memory, or else stops the engine.

Engine Control for 2UZ-FE

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A12	32 (2UZ-FE)	I3	33 (2UZ-FE)	J33	A 38
A13	32 (2UZ-FE)	I4	33 (2UZ-FE)	J34	B 38
A16	A 36	I5	33 (2UZ-FE)	J35	A 38
A17	B 36	I6	33 (2UZ-FE)	J36	B 38
A24	36	I7	33 (2UZ-FE)	J37	38
A32	36	I8	33 (2UZ-FE)	J40	A 40
A43	A 32 (2UZ-FE)	I9	33 (2UZ-FE)	J41	B 40
A44	B 32 (2UZ-FE)	I10	33 (2UZ-FE)	J47	A 38
A45	32 (2UZ-FE)	I11	33 (2UZ-FE)	J48	B 38
A46	32 (2UZ-FE)	I12	33 (2UZ-FE)	J49	C 38
A47	32 (2UZ-FE)	I13	33 (2UZ-FE)	J50	D 38
C1	32 (2UZ-FE)	I14	33 (2UZ-FE)	J51	E 38
C2	32 (2UZ-FE)	I15	33 (2UZ-FE)	J52	F 38
C3	32 (2UZ-FE)	I16	33 (2UZ-FE)	K1	33 (2UZ-FE)
C4	B 32 (2UZ-FE)	I18	37	K2	B 33 (2UZ-FE)
C8	A 37	J2	A 33 (2UZ-FE)	L4	40
C9	B 37	J3	B 33 (2UZ-FE)	M1	B 33 (2UZ-FE)
C10	C 37	J4	38	P1	33 (2UZ-FE)
D1	37	J5	38	S11	39
E2	32 (2UZ-FE)	J7	38	S12	39
E4	A 37	J8	A 38	S28	33 (2UZ-FE)
E5	B 37	J9	B 38	T2	33 (2UZ-FE)
E6	C 37	J16	38	T8	39
E7	D 37	J18	38	V1	B 33 (2UZ-FE)
E8	E 37	J22	A 38	V2	B 33 (2UZ-FE)
F8	32 (2UZ-FE)	J23	B 38	V3	B 33 (2UZ-FE)
F9	37	J26	38	V4	B 33 (2UZ-FE)
F14	40	J28	38	V12	33 (2UZ-FE)
H6	32 (2UZ-FE)	J29	A 38	V13	33 (2UZ-FE)
H8	32 (2UZ-FE)	J30	B 38	Y1	39
I1	33 (2UZ-FE)	J31	A 38		
I2	33 (2UZ-FE)	J32	B 38		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1D		
1E		
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3D		
3E		

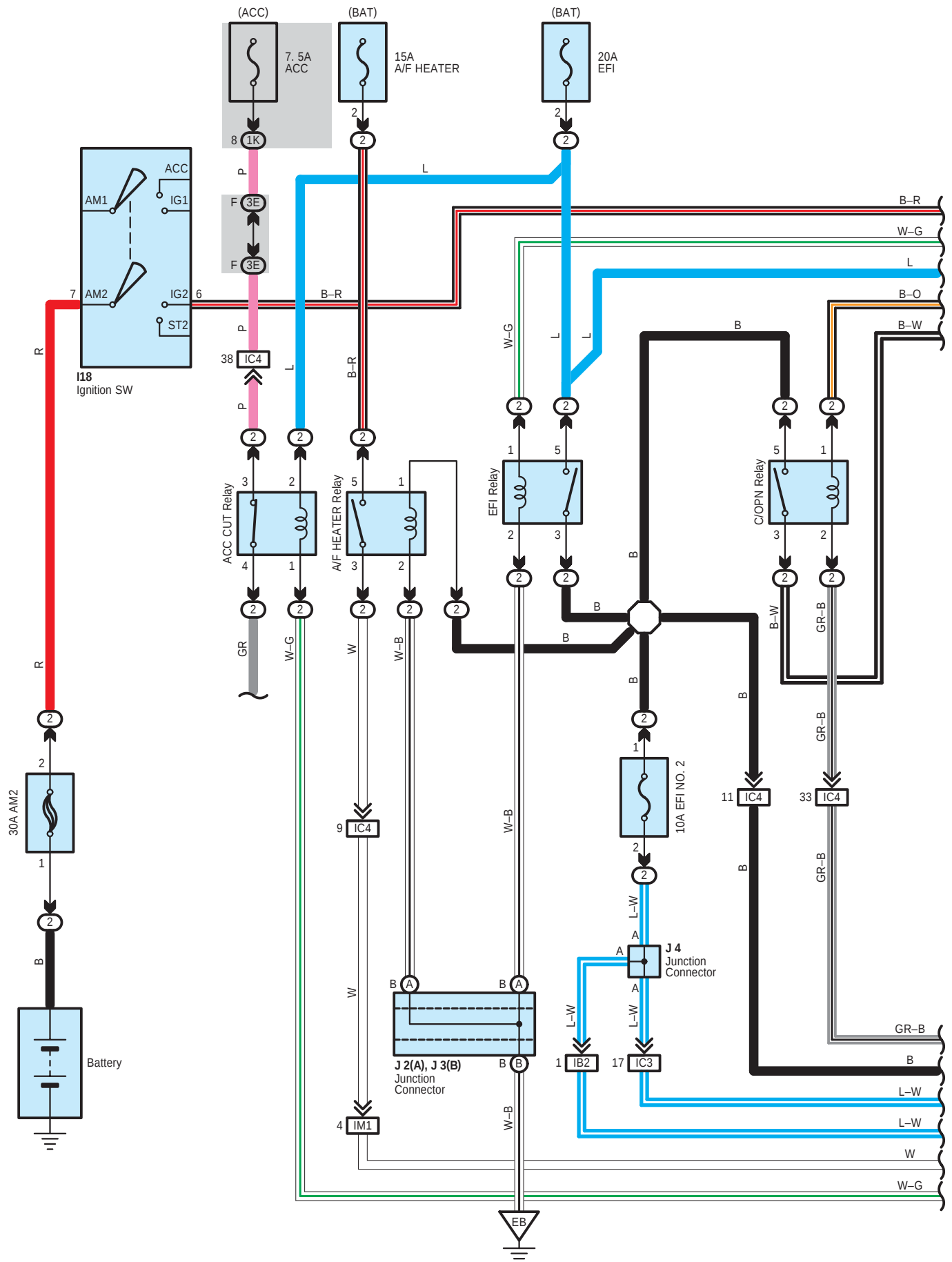
 : Connector Joining Wire Harness and Wire Harness

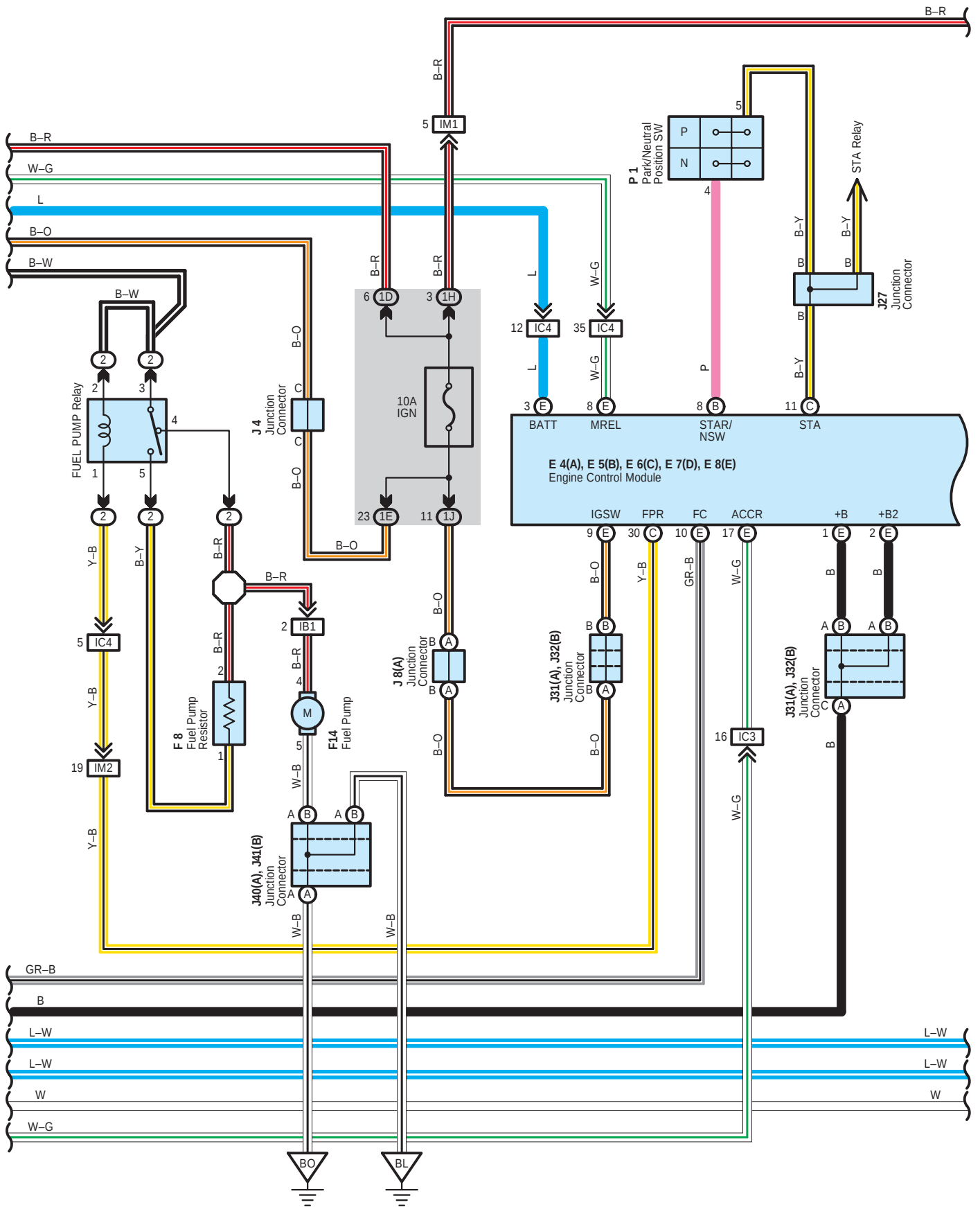
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EB1	44 (2UZ-FE)	Engine No.2 Wire and Engine Wire (Near the Starter)
EB2		
IB1	46	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IB2		
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IK1	47	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IL1	47	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

 : Ground Points

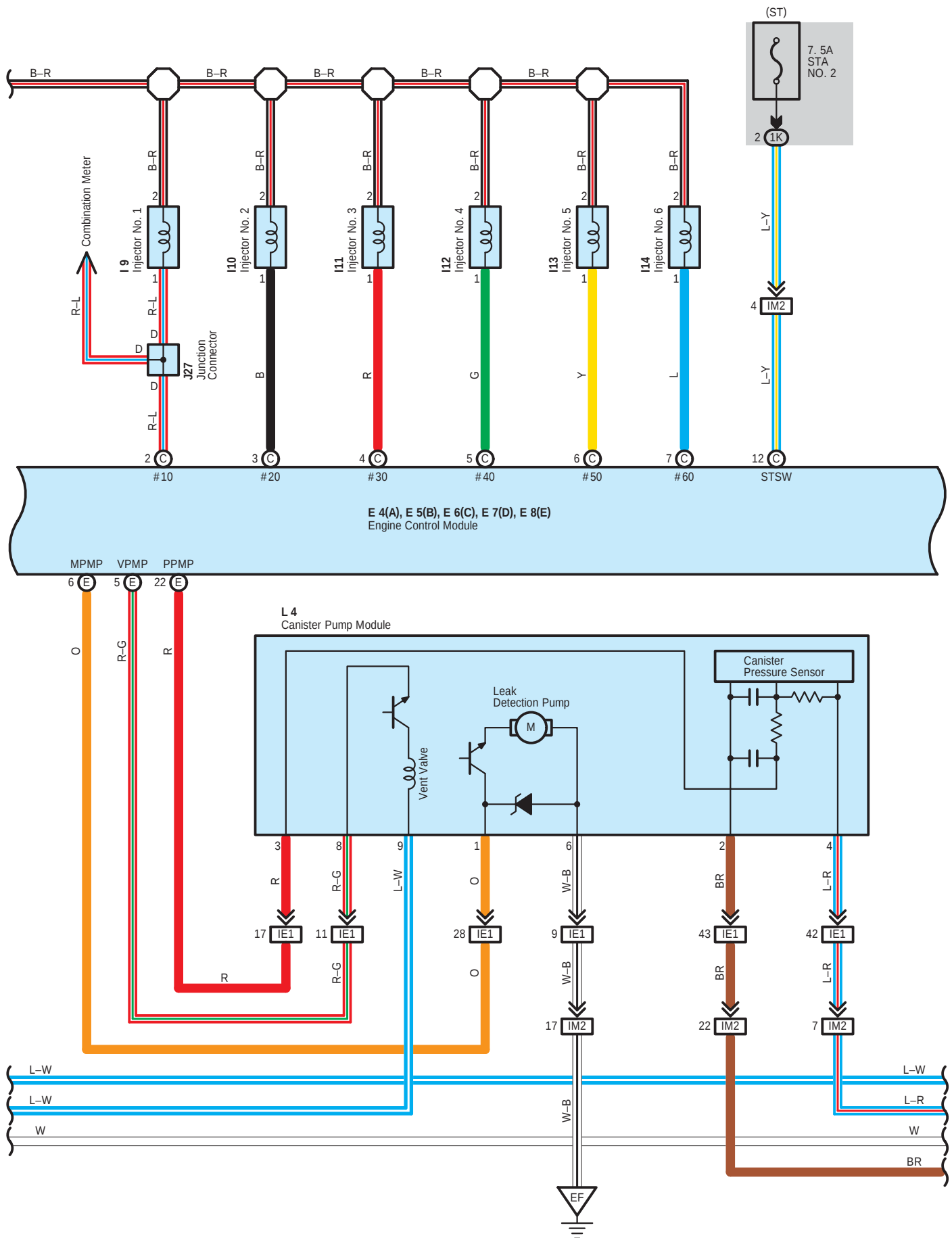
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
EQ	44 (2UZ-FE)	Near the Starter
IG	46	Left Kick Panel
IH	46	Instrument Panel Brace LH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Engine Control for 1GR-FE

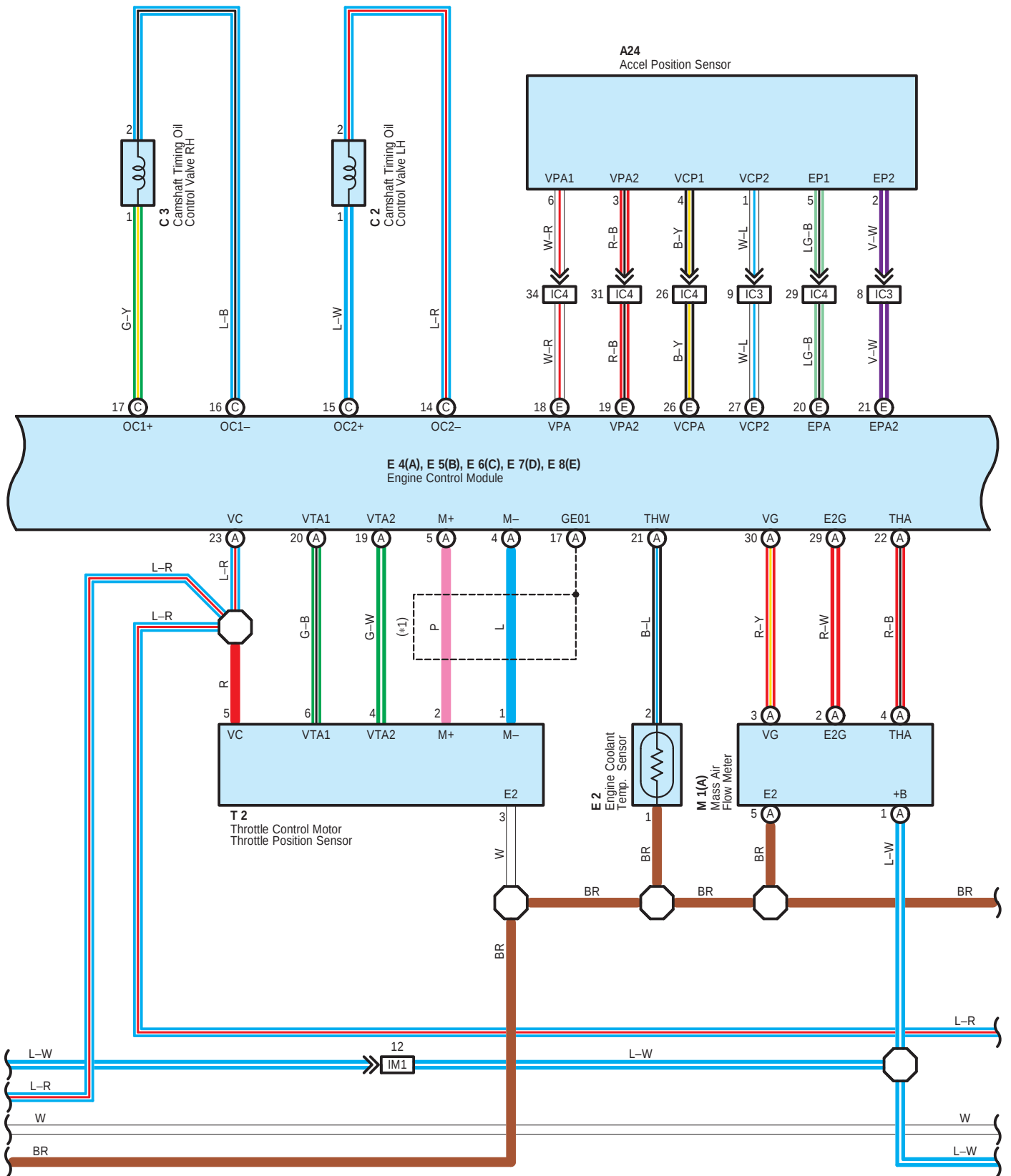




Engine Control for 1GR-FE

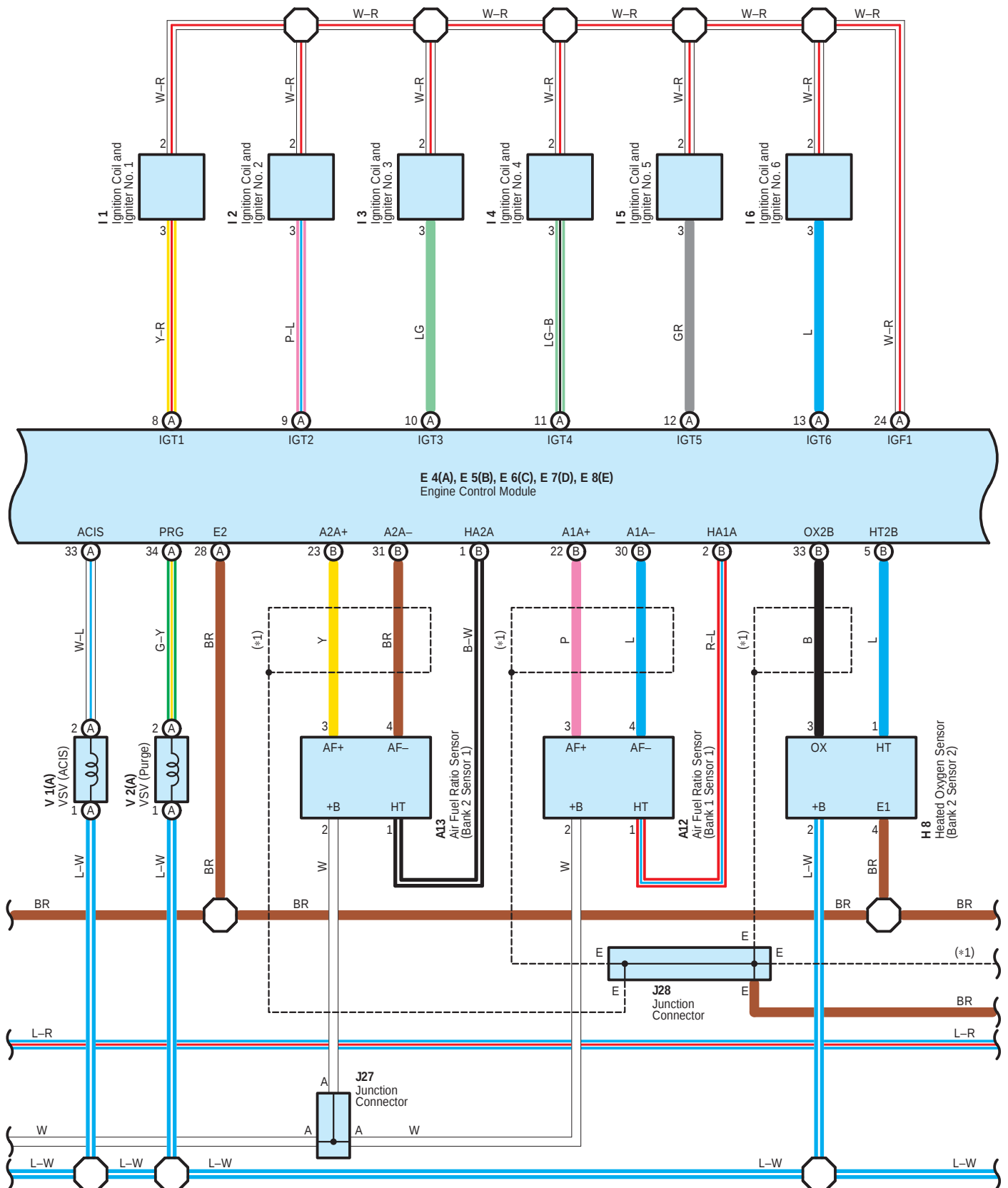


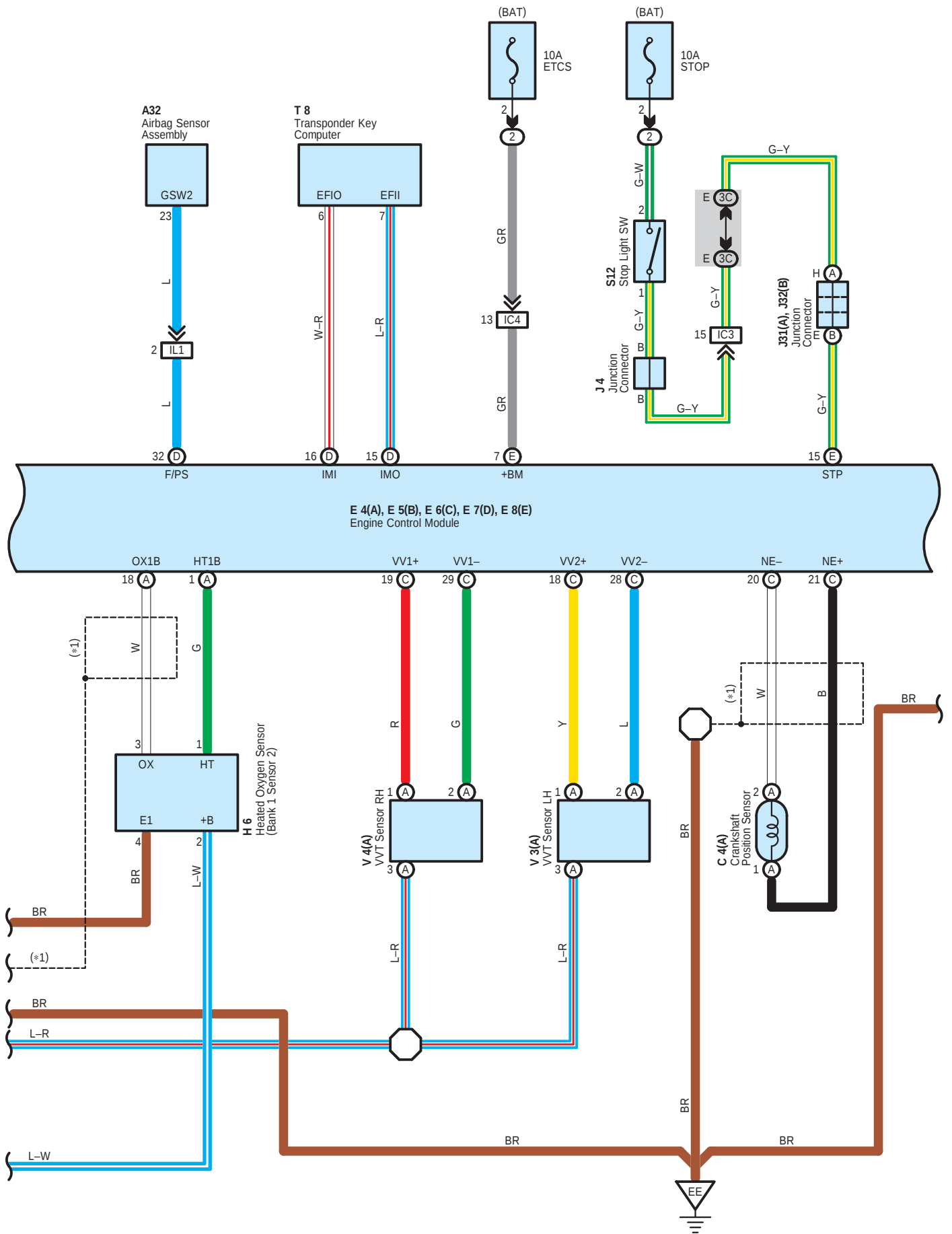
* 1 : Shielded



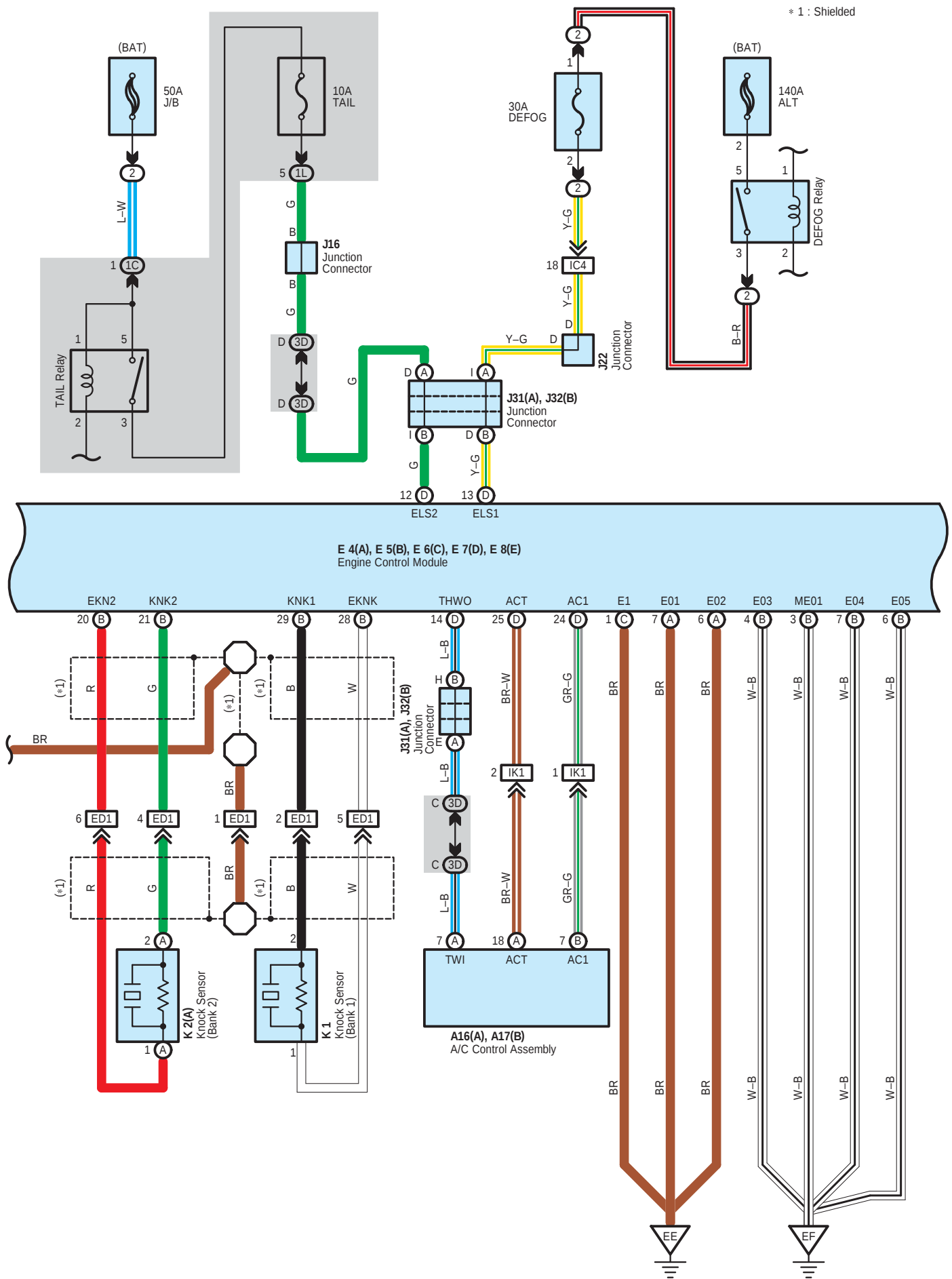
Engine Control for 1GR-FE

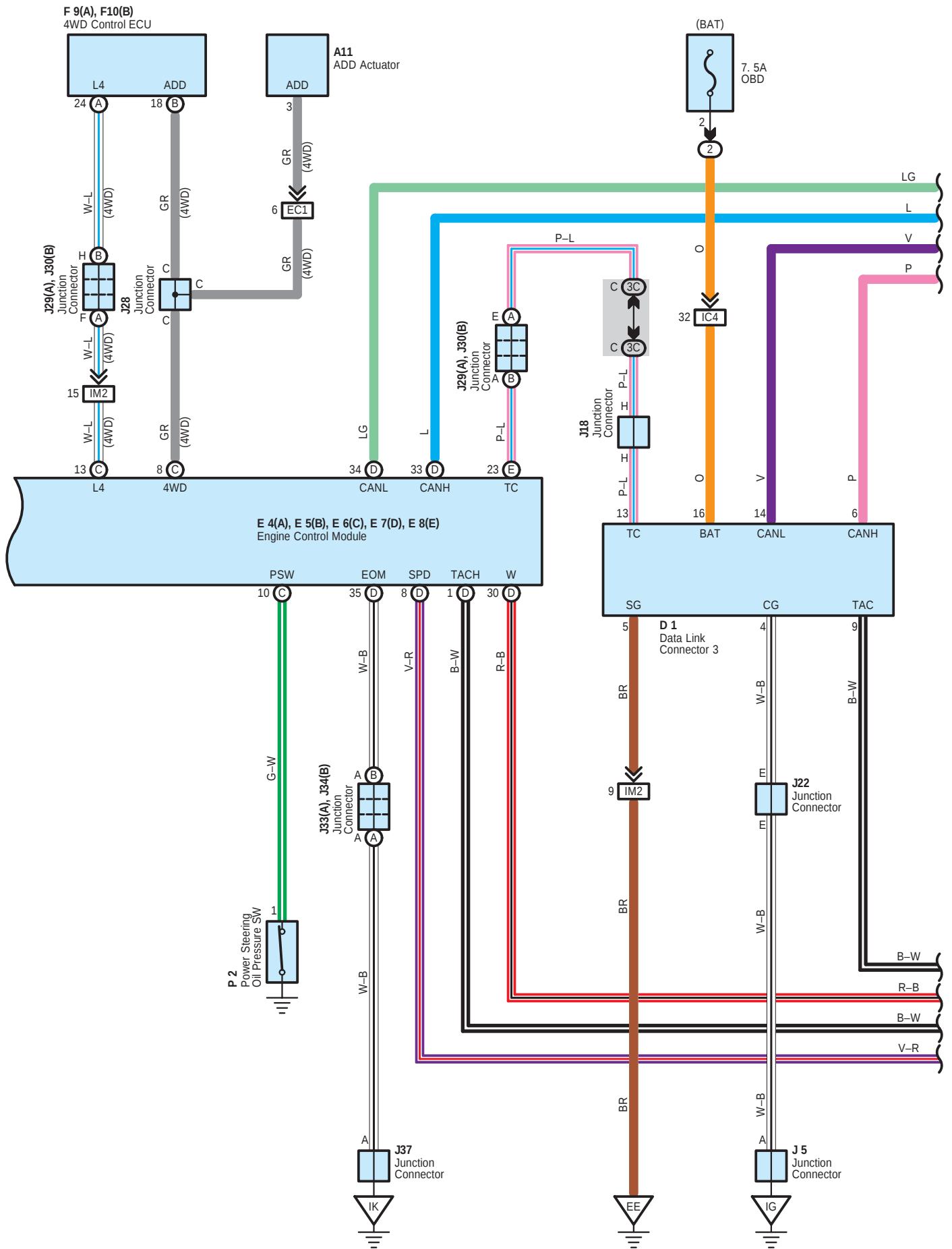
* 1 : Shielded



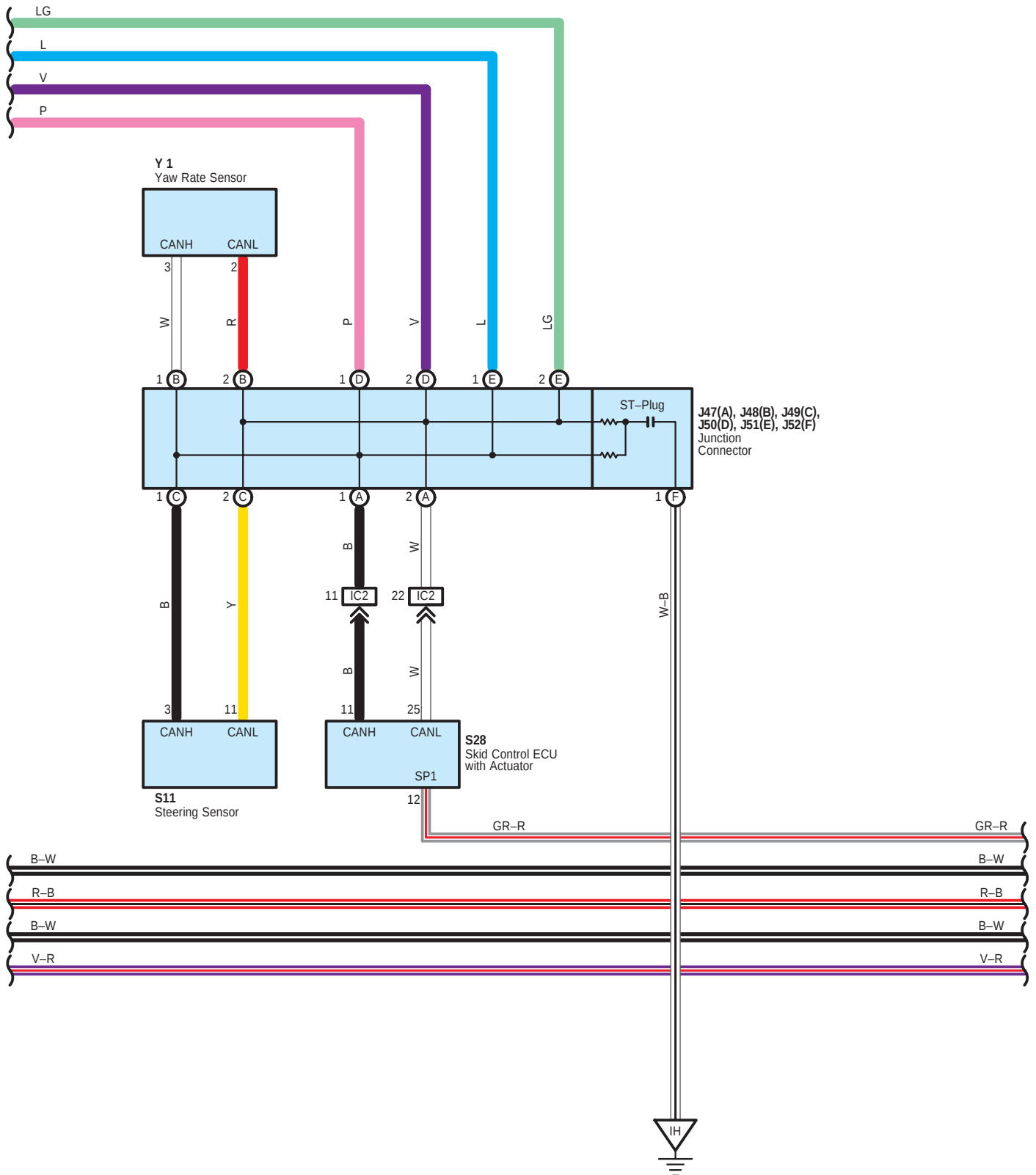


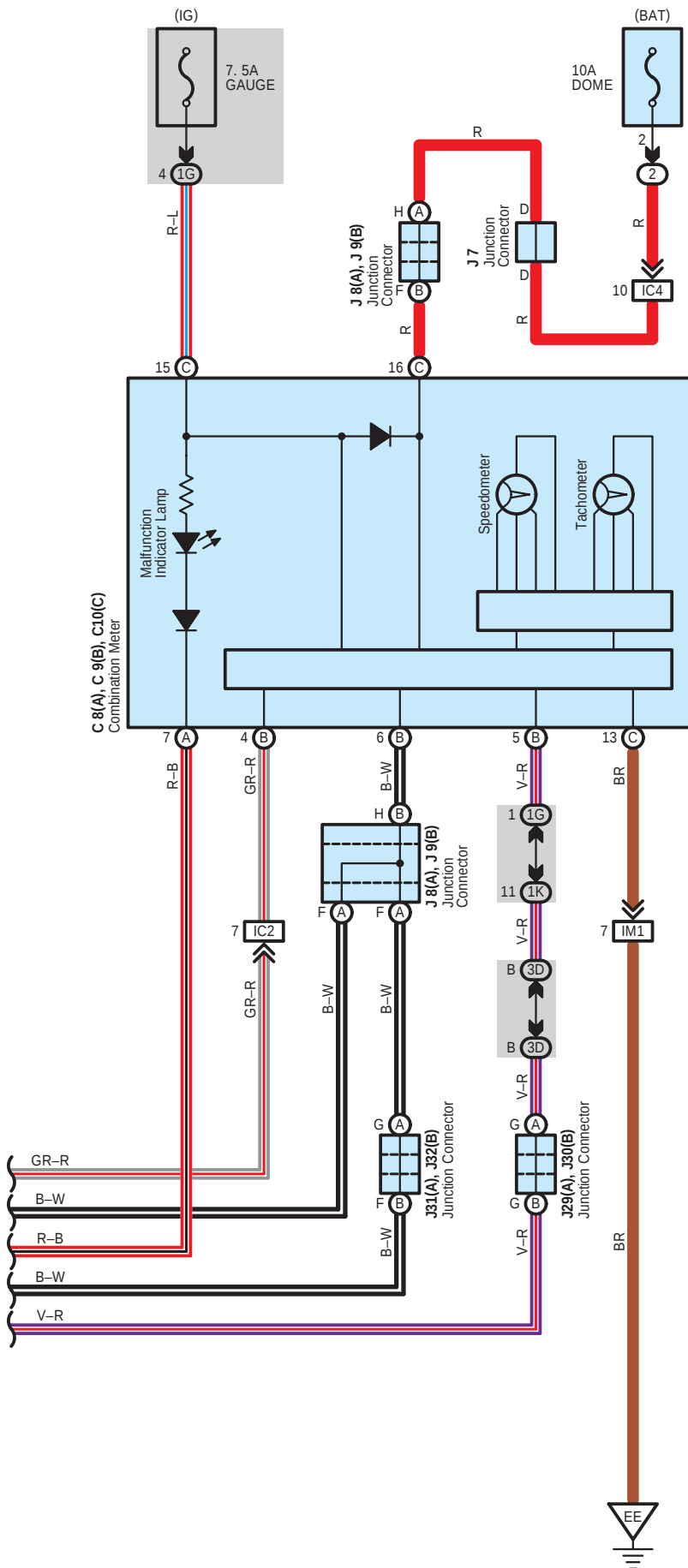
Engine Control for 1GR-FE





Engine Control for 1GR-FE





System Outline

The engine control system utilizes a microcomputer and maintains overall control of the engine, transmission etc. An outline of the engine control is given here.

1. Input Signals

(1) Engine coolant temp. signal circuit

The engine coolant temp. sensor detects the engine coolant temp. and has a built-in thermistor with a resistance which varies according to the engine coolant temp. The engine coolant temp. is input into TERMINAL THW of the engine control module as a control signal.

(2) Intake air temp. signal circuit

The intake air temp. sensor is installed in the mass air flow meter and detects the intake air temp., which is input as a control signal to TERMINAL THA of the engine control module.

(3) Oxygen sensor signal circuit

The oxygen density in the exhaust emission is detected and is input as a control signal from the heated oxygen sensors to TERMINALS OX1B and OX2B of the engine control module.

(4) RPM signal circuit

The camshaft position is detected by the VVT sensor LH and RH, and is input into TERMINALS VV1+ and VV2+ of the engine control module as a control signal. Also, the engine RPM is detected by the crankshaft position sensor and the signal is input into TERMINAL NE+ of the engine control module.

(5) Throttle position sensor signal circuit

The throttle position sensor detects the throttle valve opening angle as a control signal, which is input into TERMINALS VTA1 and VTA2 of the engine control module.

(6) Vehicle speed circuit

The vehicle speed sensor detects the vehicle speed, and the signal is input into TERMINAL SPD of the engine control module via the combination meter, from TERMINAL SP1 of the skid control ECU with actuator.

(7) Battery signal circuit

Voltage is constantly applied to TERMINAL BATT of the engine control module. When the ignition SW is turned on, the voltage for engine control module start up power supply is applied through the EFI relay, to TERMINALS +B and +B2 of the engine control module. The current from the IGN fuse flows to TERMINAL IGSW of the engine control module, and voltage is constantly applied to TERMINAL +BM.

(8) Intake air volume signal circuit

The intake air volume is detected by the mass air flow meter, and is input as a control signal to TERMINAL VG of the engine control module.

(9) Stop light SW signal circuit

The stop light SW is used to detect whether the vehicle is braking or not, and the signal is input into TERMINAL STP of the engine control module as a control signal.

(10) Starter signal circuit

To confirm whether the engine is cranking, the voltage applied to the starter motor when the engine is cranking is detected, and is input into TERMINAL STA of the engine control module as a control signal.

(11) Engine knock signal circuit

Engine knocking is detected by the knock sensors, and is input into TERMINALS KNK1 and KNK2 of the engine control module as a control signal.

(12) A/C SW signal system

The operating voltage of the A/C magnetic clutch is detected and input in the form of a control signal to TERMINAL AC1 of the engine control module.

(13) Air fuel ratio signal circuit

The air fuel ratio is detected and input as a control signal into TERMINALS A1A+ and A2A+ of the engine control module.

2. Control System

* SFI system

The SFI system monitors the engine condition through the signals input from each sensors to the engine control module. The control signal is sent to the engine control module TERMINALS #10, #20, #30, #40, #50 and #60 to operate the injector (Fuel injection). The SFI system controls the fuel injection by the engine control module in response to the driving conditions.

* ESA system

The ESA system monitors the engine condition through the signals input from each sensors to the engine control module. The best ignition timing is decided according to this data and the data memorized in the engine control module. The control signal is output to TERMINALS IGT1, IGT2, IGT3, IGT4, IGT5 and IGT6, and these signals control the igniter to provide the best ignition timing.

* Heated oxygen sensor heater control system

The heated oxygen sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emission is low), and warms up the heated oxygen sensors to improve their detection performance. The engine control module evaluates the signals from each sensors, and outputs current to TERMINAL HT1B or HT2B to control the heater.

* Air fuel ratio sensor heater control system

The air fuel ratio sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emission is low), and warms up the air fuel ratio sensor to improve detection performance of the sensor.

The engine control module evaluates the signals from each sensor, current is output to TERMINALS HA1A and HA2A, controlling the heater.

* Fuel pump control system

The engine control module supplies current to TERMINAL FPR, and controls the operation speed of the fuel pump with the FUEL PUMP relay.

* ACIS

The ACIS includes a valve in the bulkhead separating the surge tank into two parts. This valve is opened and closed in accordance with the driving conditions to control the intake manifold length in two stages, for increased engine output in all ranges from low to high speeds.

* ETCS-i

The ETCS-i controls the engine output at its optimal level in accordance with the opening of the accelerator pedal, under all driving conditions.

* Engine start control system

The engine control module allows power to be supplied from the TERMINAL STAR/NSW to the STA relay via park/neutral position SW until complete combustion is confirmed by engine RPM after the detection of ignition SW ST signal by the TERMINAL STSW.

With this arrangement, engine can be started without holding the ignition key in the ST position. At the same time, the TERMINAL ACCR is controlled so that the engine control module turns off ACC CUT relay, shutting off power to the accessories.

* VVT-i

Controls the intake camshaft to an optimal valve timing in accordance with the engine condition.

3. Diagnosis System

When there is a malfunction in the engine control module signal system, the malfunctioning system is recorded in the memory. The malfunctioning system can be found by reading the code displayed on the malfunction indicator lamp.

4. Fail-Safe System

When a malfunction has occurred in any system, there is a possibility of causing engine trouble due to continued control based on that system. In that case, the fail-safe system either controls the system using the data (Standard values) recorded in the engine control module memory, or else stops the engine.

Engine Control for 1GR-FE

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A11	34 (1GR-FE)	I3	35 (1GR-FE)	J34	B 38
A12	34 (1GR-FE)	I4	35 (1GR-FE)	J37	38
A13	34 (1GR-FE)	I5	35 (1GR-FE)	J40	A 40
A16	A 36	I6	35 (1GR-FE)	J41	B 40
A17	B 36	I9	35 (1GR-FE)	J47	A 38
A24	36	I10	35 (1GR-FE)	J48	B 38
A32	36	I11	35 (1GR-FE)	J49	C 38
C2	34 (1GR-FE)	I12	35 (1GR-FE)	J50	D 38
C3	34 (1GR-FE)	I13	35 (1GR-FE)	J51	E 38
C4	A 34 (1GR-FE)	I14	35 (1GR-FE)	J52	F 38
C8	A 37	I18	37	K1	35 (1GR-FE)
C9	B 37	J2	A 35 (1GR-FE)	K2	A 35 (1GR-FE)
C10	C 37	J3	B 35 (1GR-FE)	L4	40
D1	37	J4	38	M1	A 35 (1GR-FE)
E2	34 (1GR-FE)	J5	38	P1	35 (1GR-FE)
E4	A 37	J7	38	P2	35 (1GR-FE)
E5	B 37	J8	A 38	S11	39
E6	C 37	J9	B 38	S12	39
E7	D 37	J16	38	S28	35 (1GR-FE)
E8	E 37	J18	38	T2	35 (1GR-FE)
F8	34 (1GR-FE)	J22	38	T8	39
F9	A 37	J27	38	V1	A 35 (1GR-FE)
F10	B 37	J28	38	V2	A 35 (1GR-FE)
F14	40	J29	A 38	V3	A 35 (1GR-FE)
H6	34 (1GR-FE)	J30	B 38	V4	A 35 (1GR-FE)
H8	34 (1GR-FE)	J31	A 38	Y1	39
I1	35 (1GR-FE)	J32	B 38		
I2	35 (1GR-FE)	J33	A 38		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1D		
1E		
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1H		
1J		
1K		
1L		
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3D		
3E		

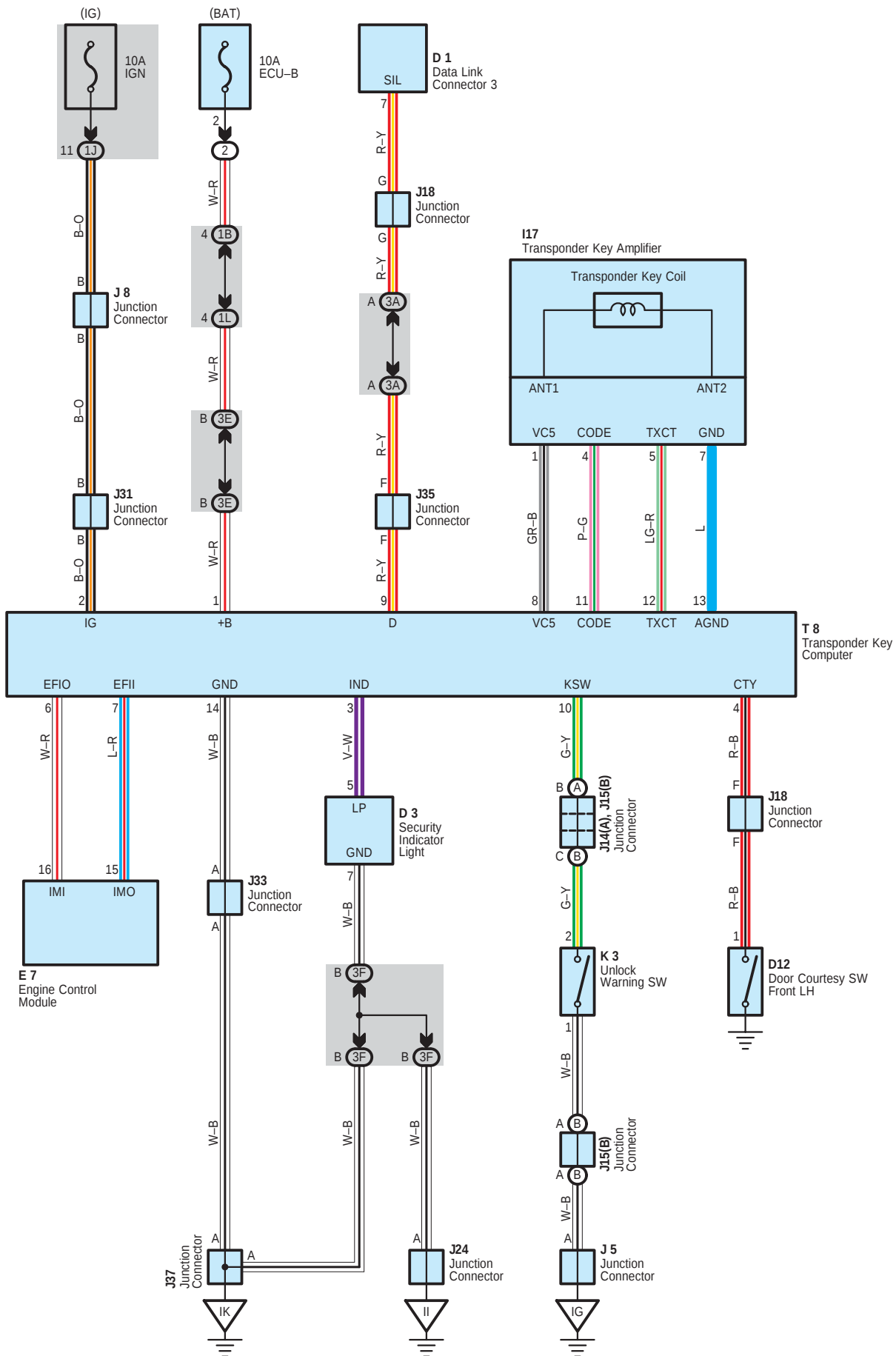
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	45 (1GR-FE)	Engine Wire and Differential Wire (Near the Front Differential)
ED1	45 (1GR-FE)	Engine Wire and Sensor Wire (Rear Side of Right Bank Cylinder Block)
IB1	46	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IB2		
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IK1	47	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IL1	47	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

 : Ground Points

Code	See Page	Ground Points Location
EB	45 (1GR-FE)	Front Left Fender
EE	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	45 (1GR-FE)	Rear Side of Left Bank Cylinder Block
IG	46	Left Kick Panel
IH	46	Instrument Panel Brace LH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Engine Immobiliser System



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
D1	37	J8	38	J33	38
D3	37	J14	A	J35	38
D12	40	J15	B	J37	38
E7	37	J18	38	K3	39
I17	37	J24	38	T8	39
J5	38	J31	38		

 : Relay Blocks

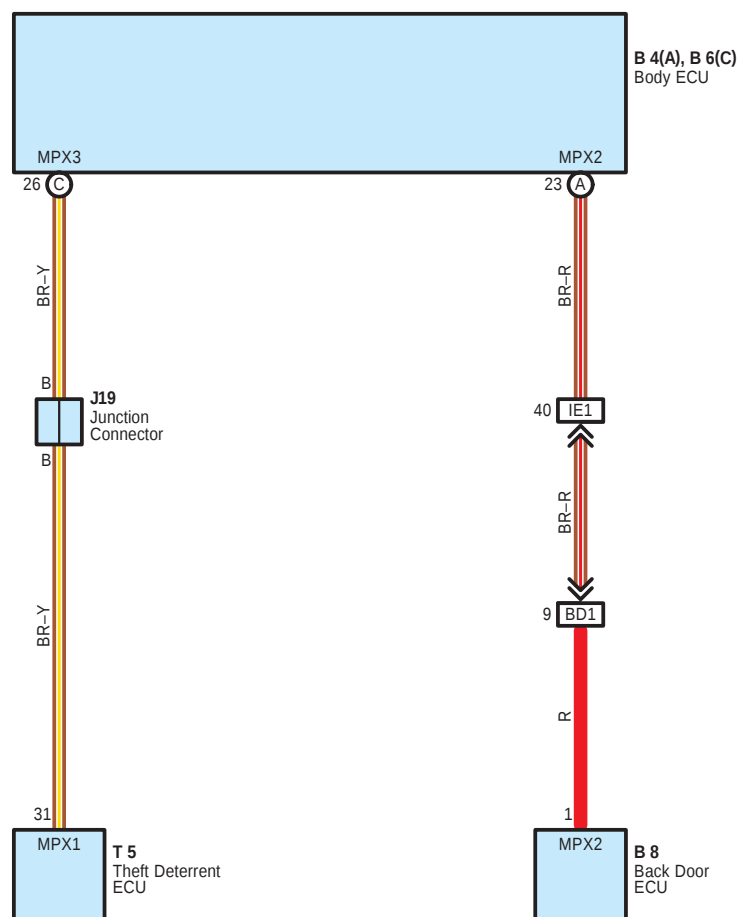
Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1L		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3E		
3F		

 : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel



Multiplex Communication System Includes Following Systems

- * Automatic Light Control
- * Door Lock Control
- * Front Fog Light
- * Garage Door Opener
- * Headlight
- * Interior Light
- * Key Reminder
- * Light Auto Turn Off System
- * Mirror Heater
- * Power Window
- * Rear Window Defogger
- * Rear Wiper and Washer
- * Seat Belt Warning
- * Theft Deterrent
- * Wireless Door Lock Control

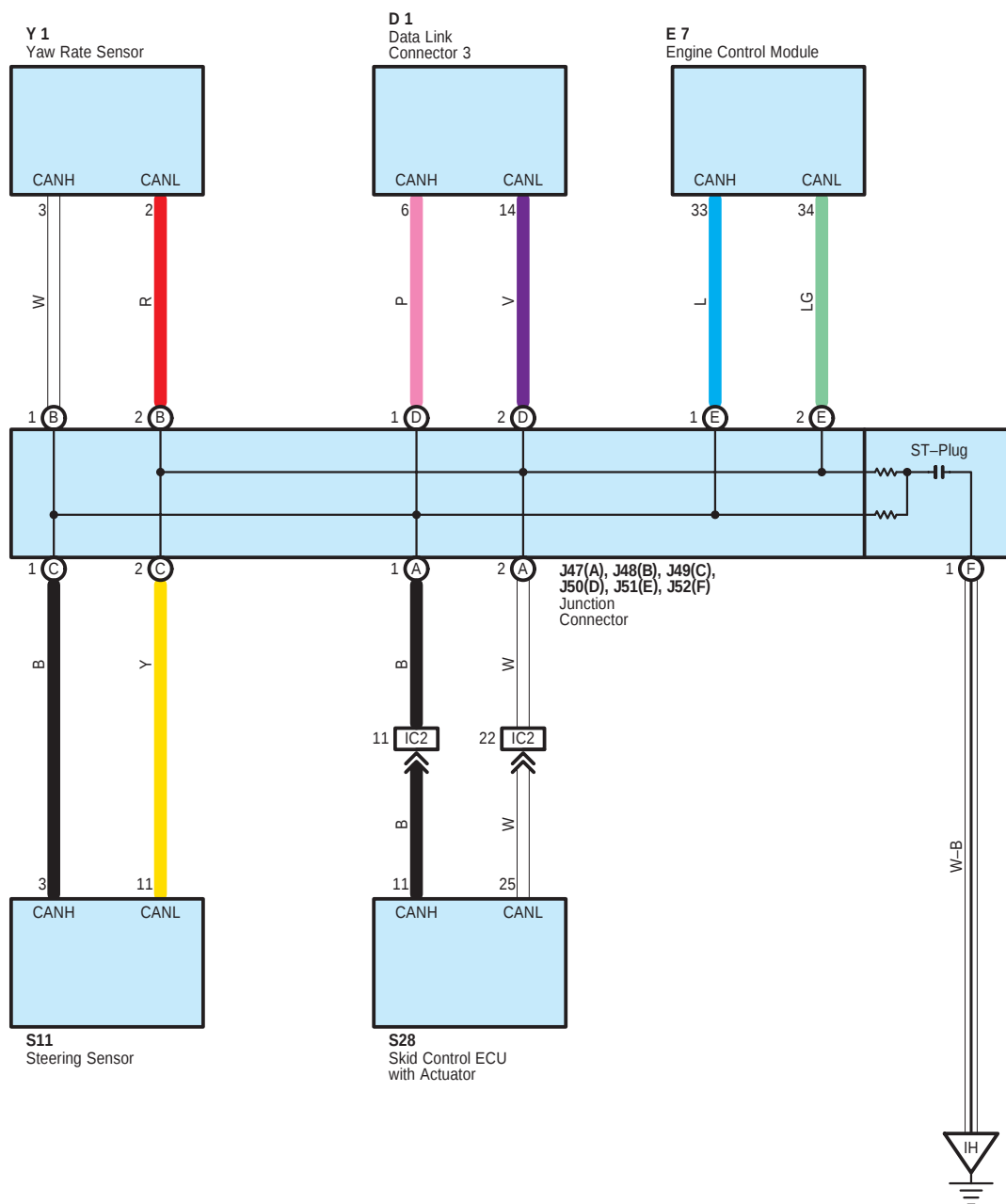
☐ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	B8	40		T5	39	
B6	C	36	J19	38				

☐ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

Multiplex Communication System – CAN Bus



System Outline

CAN has two lines as a pair which make communication with operating voltage. CAN has excellent data speed and error detecting capacity. It consists of vehicle control systems such as engine control module, data link connector 3, skid control ECU with actuator, steering sensor and yaw rate sensor.

This system is working for the following systems:

- * ABS
- * Auto LSD
- * Cruise Control
- * Downhill Assist Control
- * Electronically Controlled Transmission and A/T Indicator
- * Engine Control
- * Hill-Start Assist Control
- * TRAC
- * VSC

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
D1		37	J49	C	38	S11	39
E7		37	J50	D	38	S28	33 (2UZ–FE)
J47	A	38	J51	E	38		35 (1GR–FE)
J48	B	38	J52	F	38	Y1	39

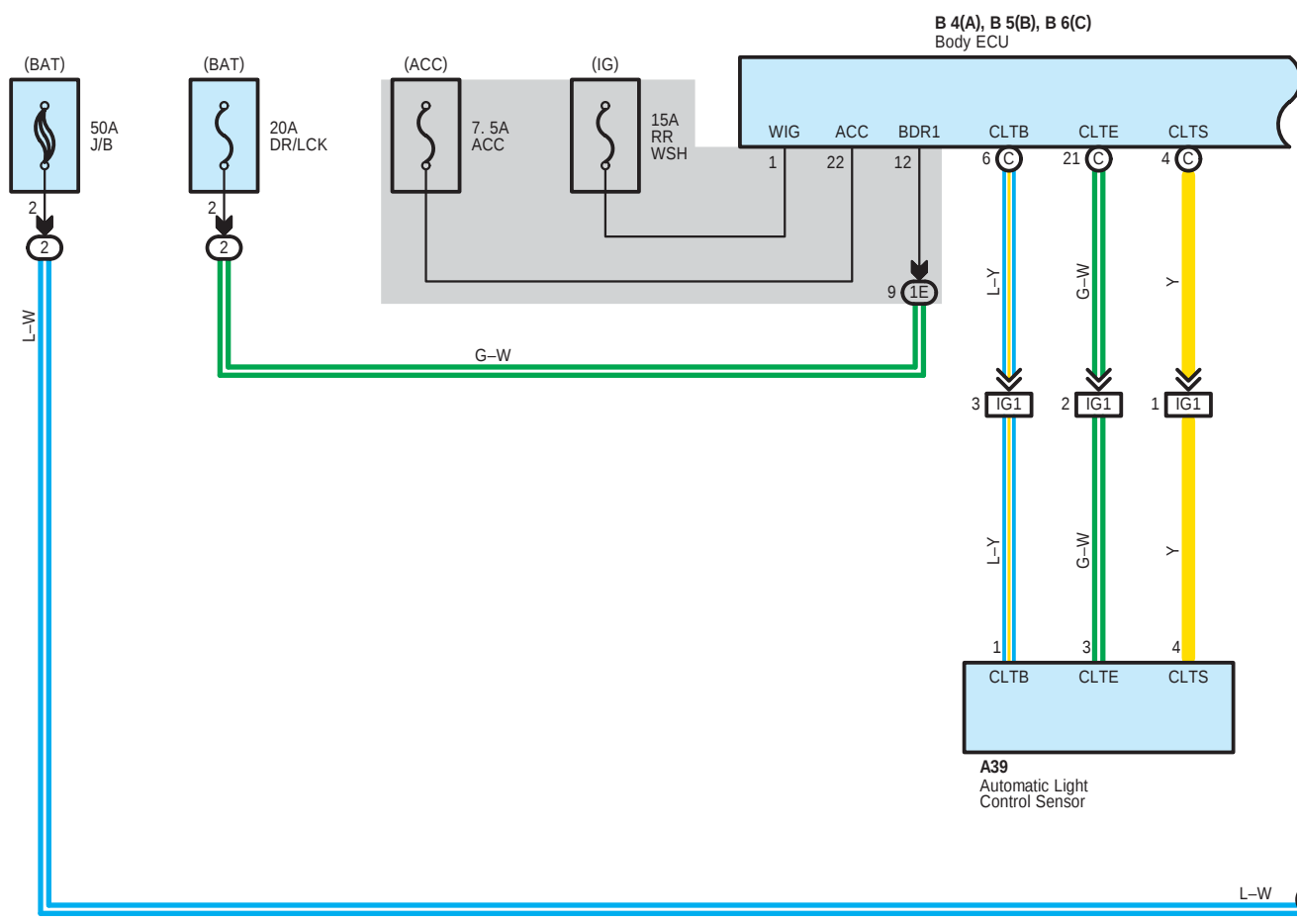
□ : Connector Joining Wire Harness and Wire Harness

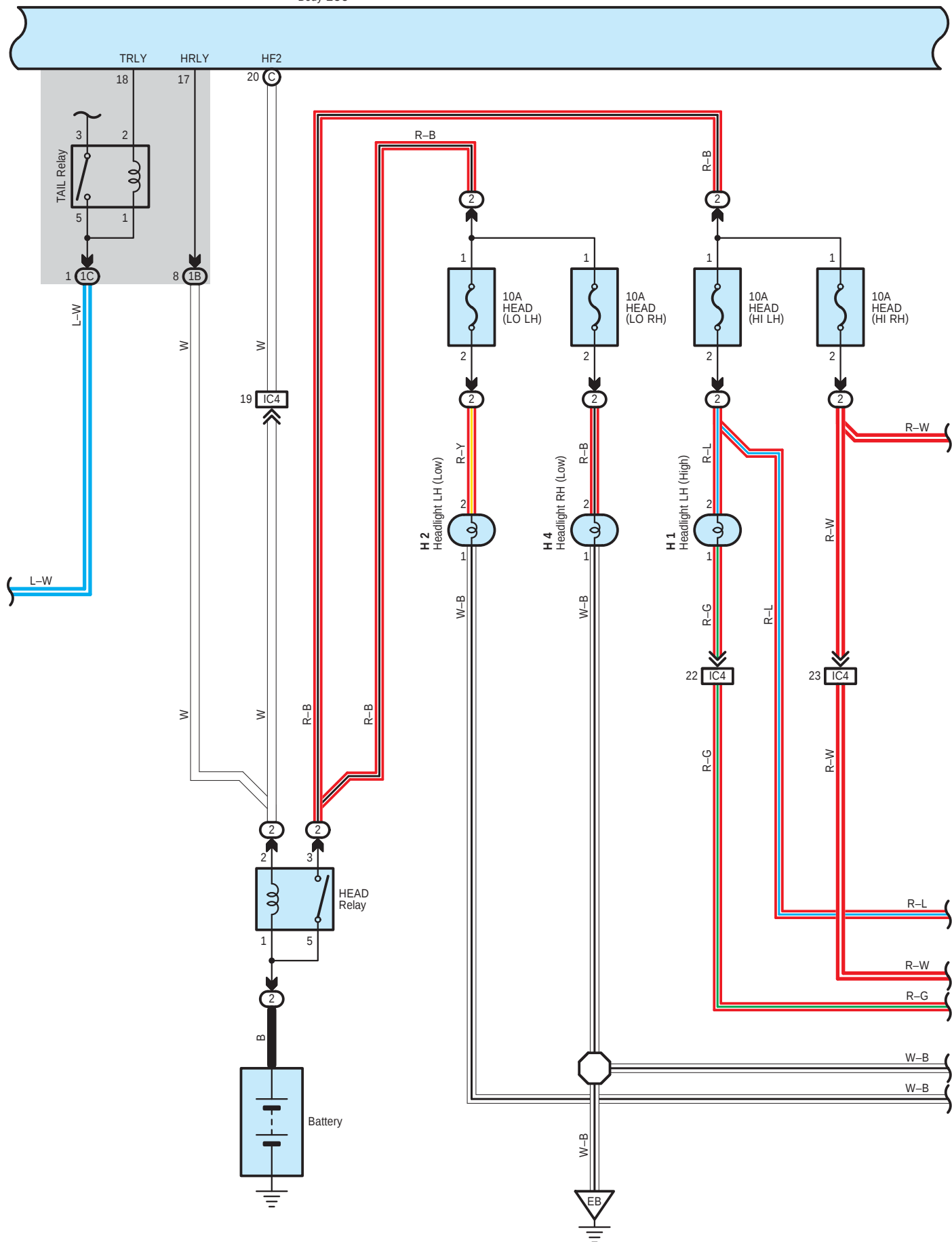
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
IH	46	Instrument Panel Brace LH

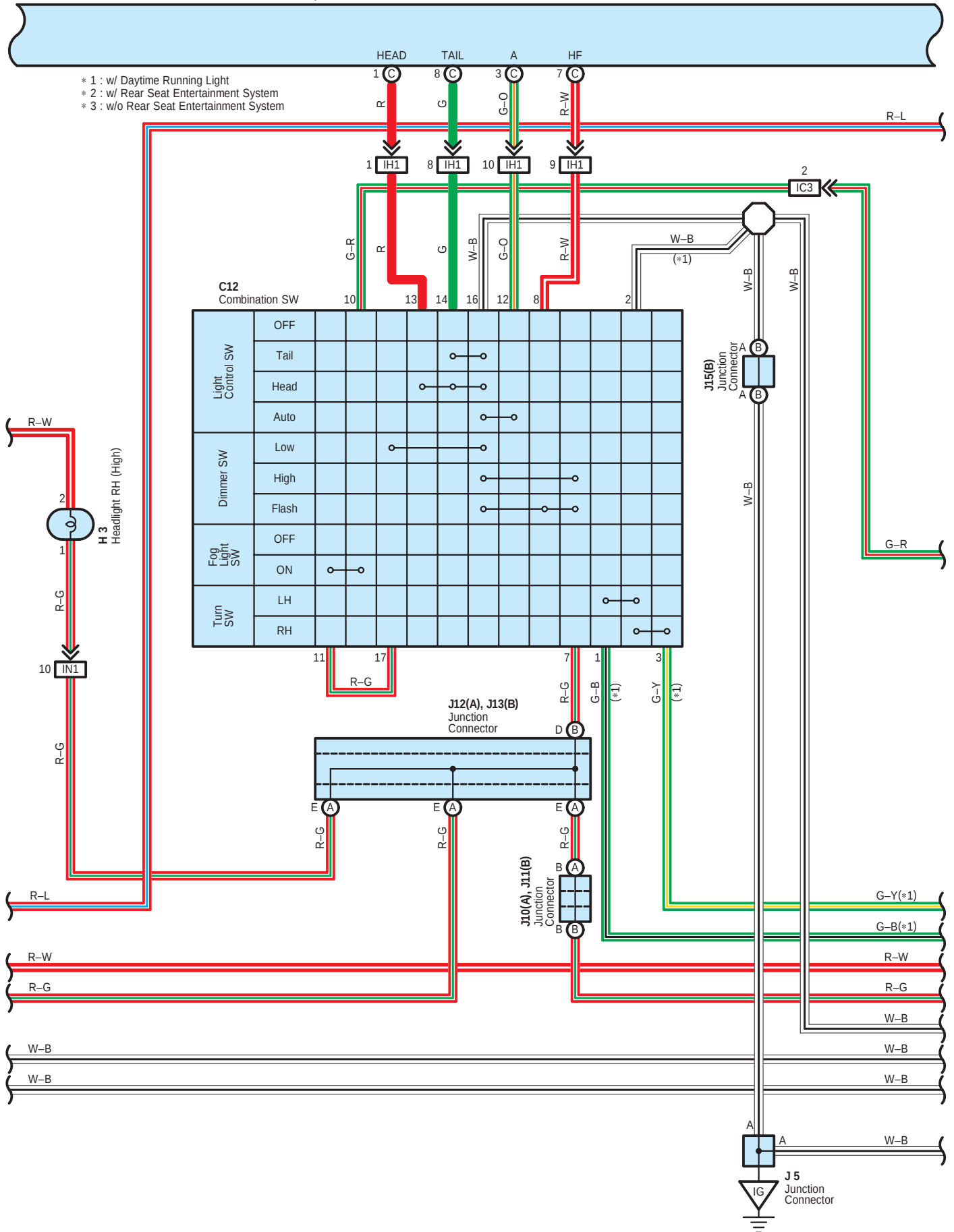
Multiplex Communication System – BEAN

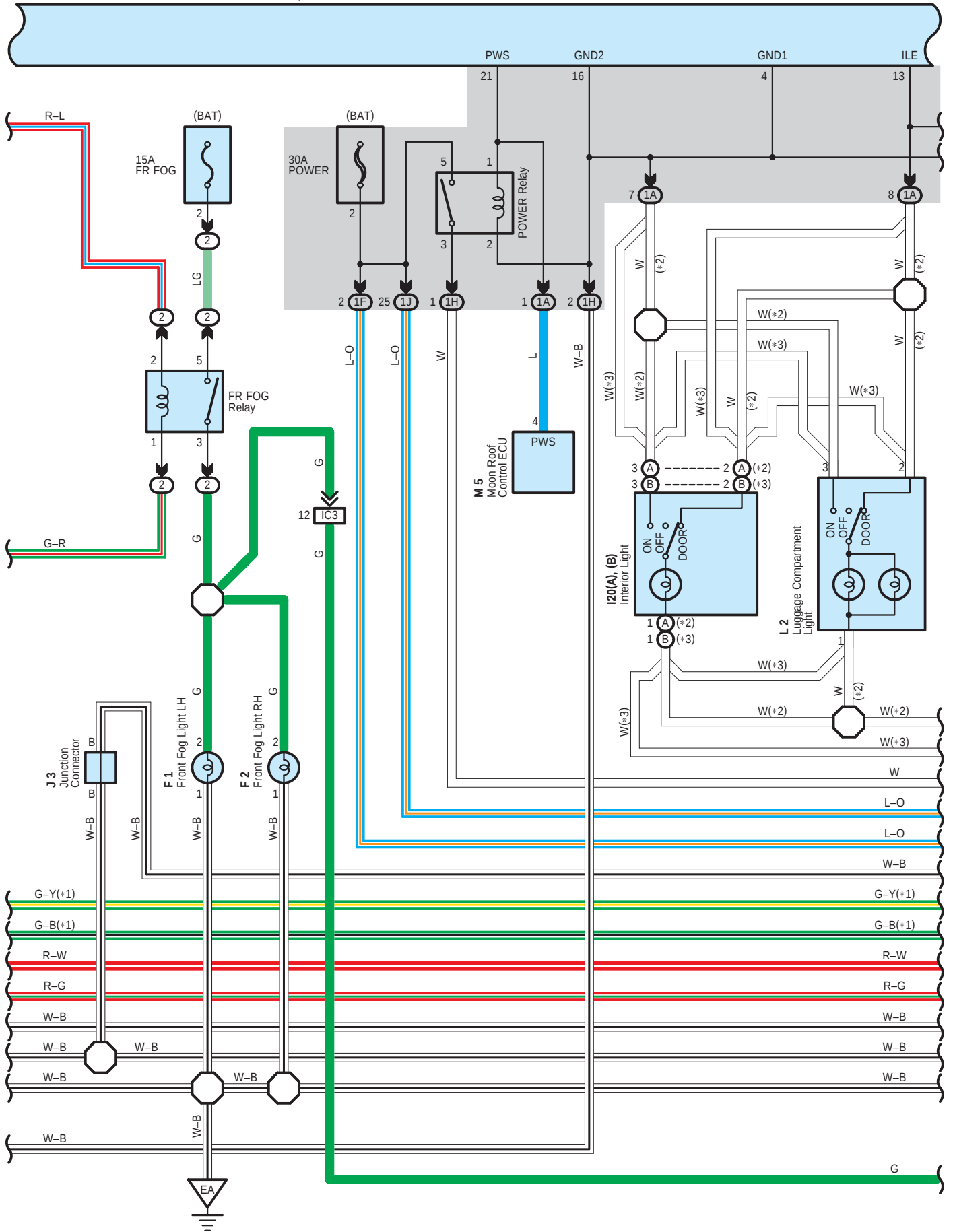




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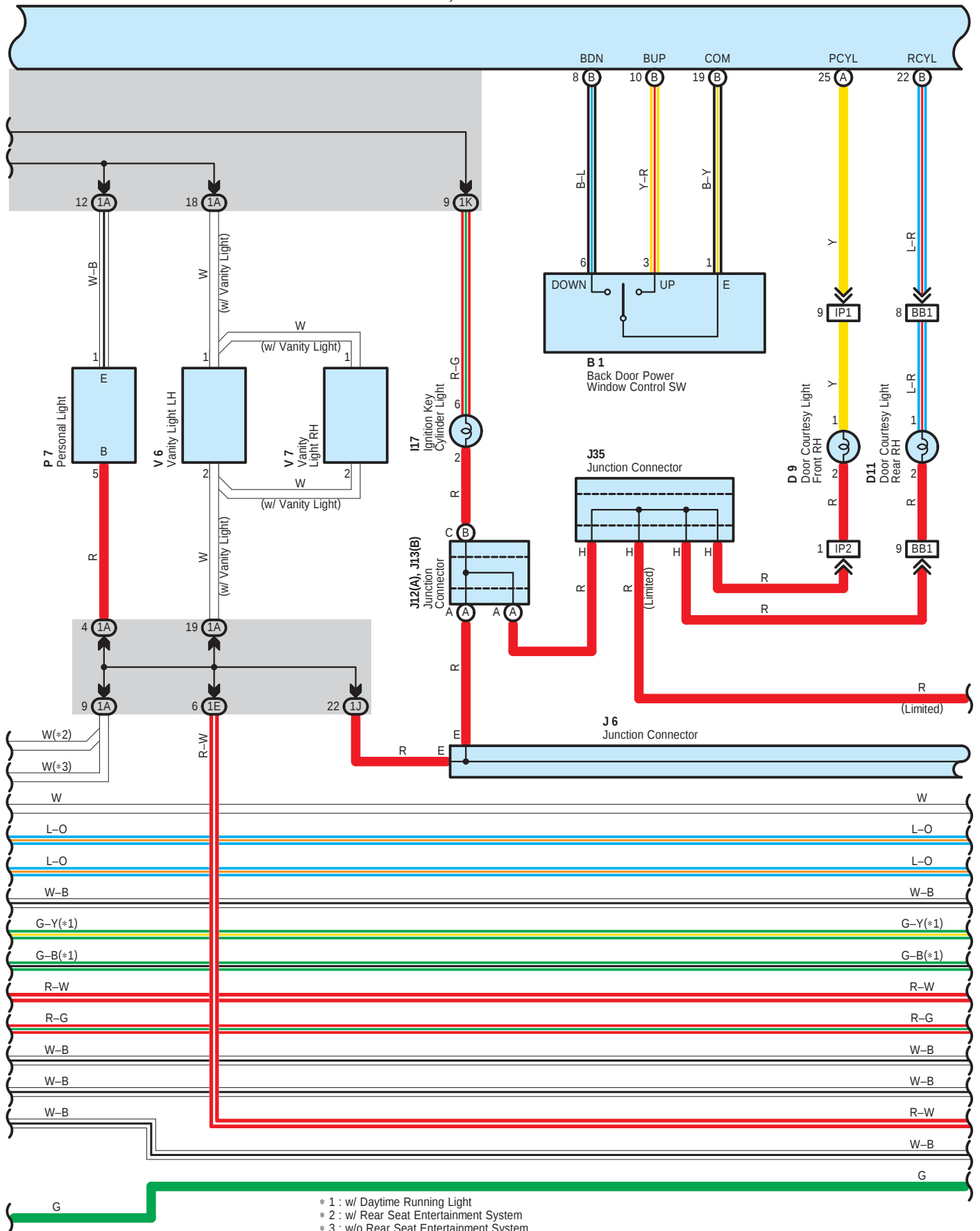
B 4(A), B 5(B), B 6(C)
Body ECU

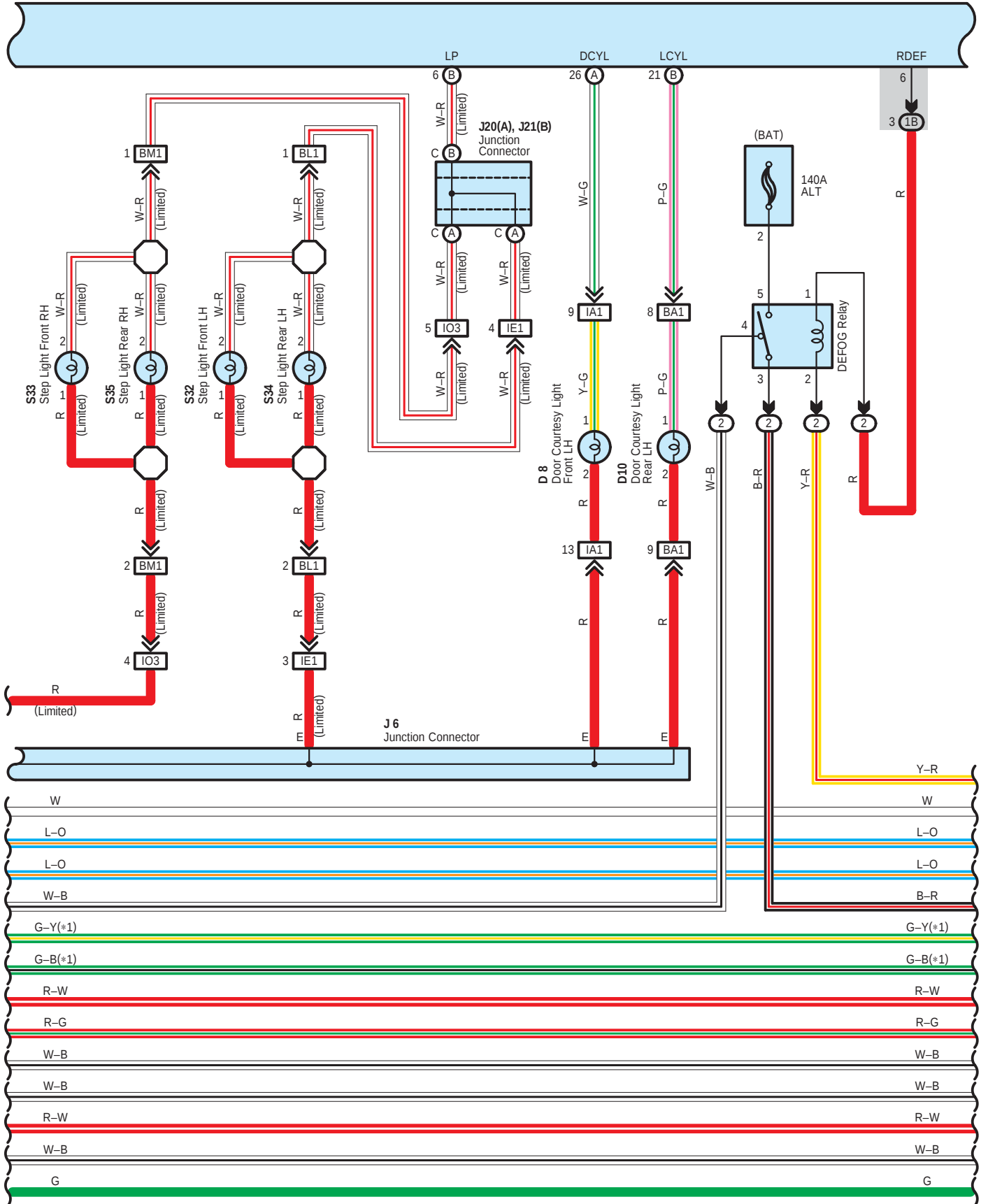




Multiplex Communication System – BEAN

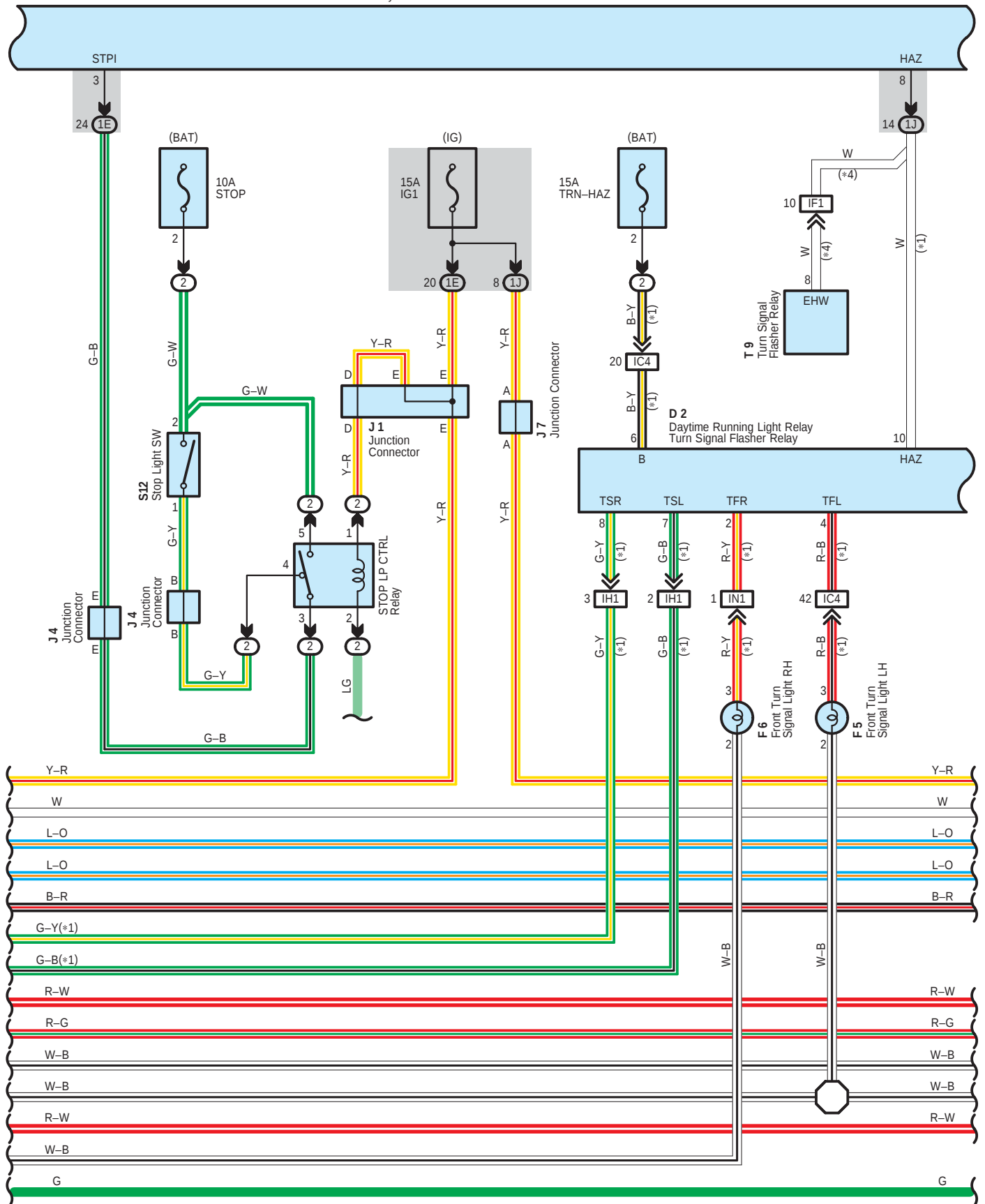
B 4(A), B 5(B), B 6(C)
Body ECU

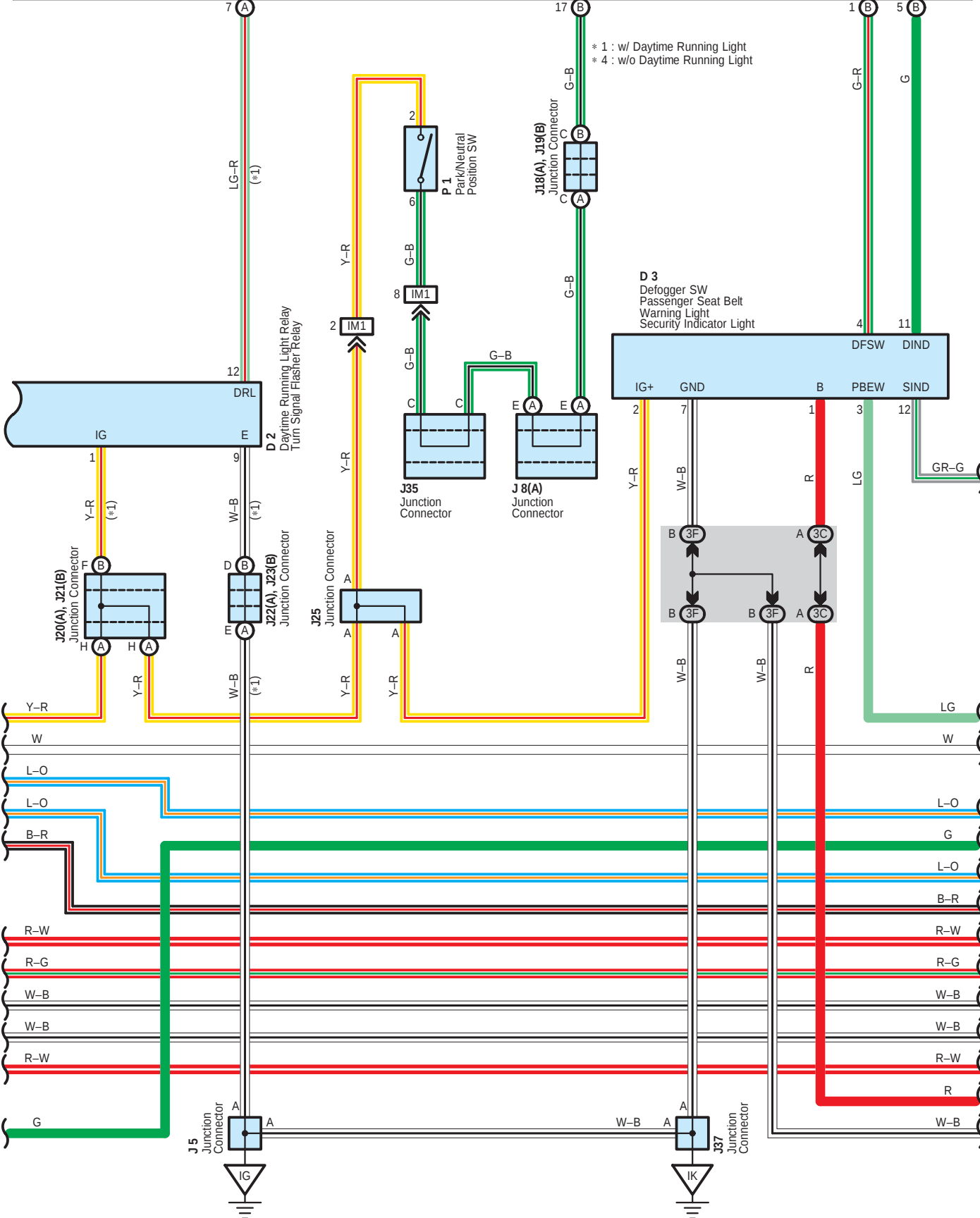




Multiplex Communication System – BEAN

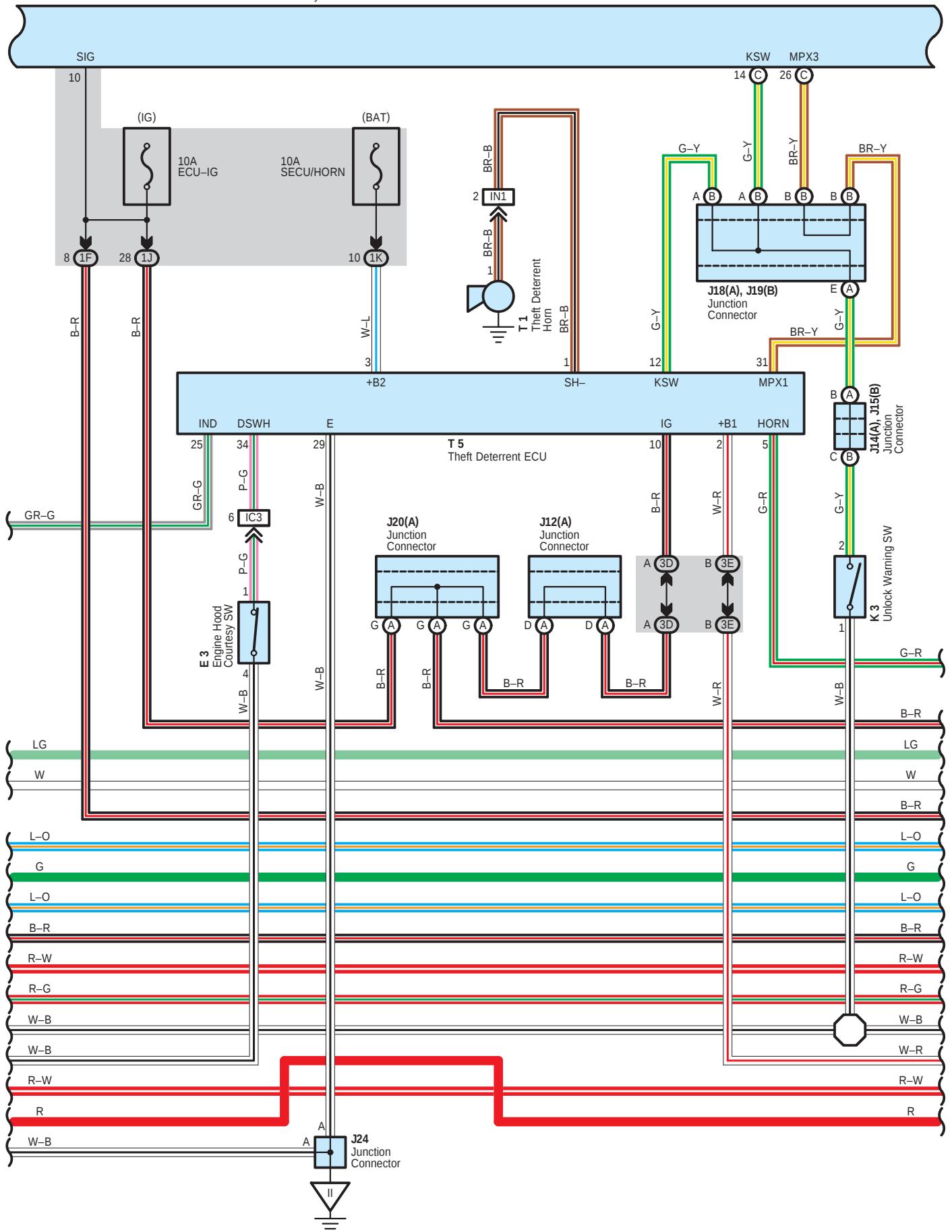
B 4(A), B 5(B), B 6(C)
Body ECU

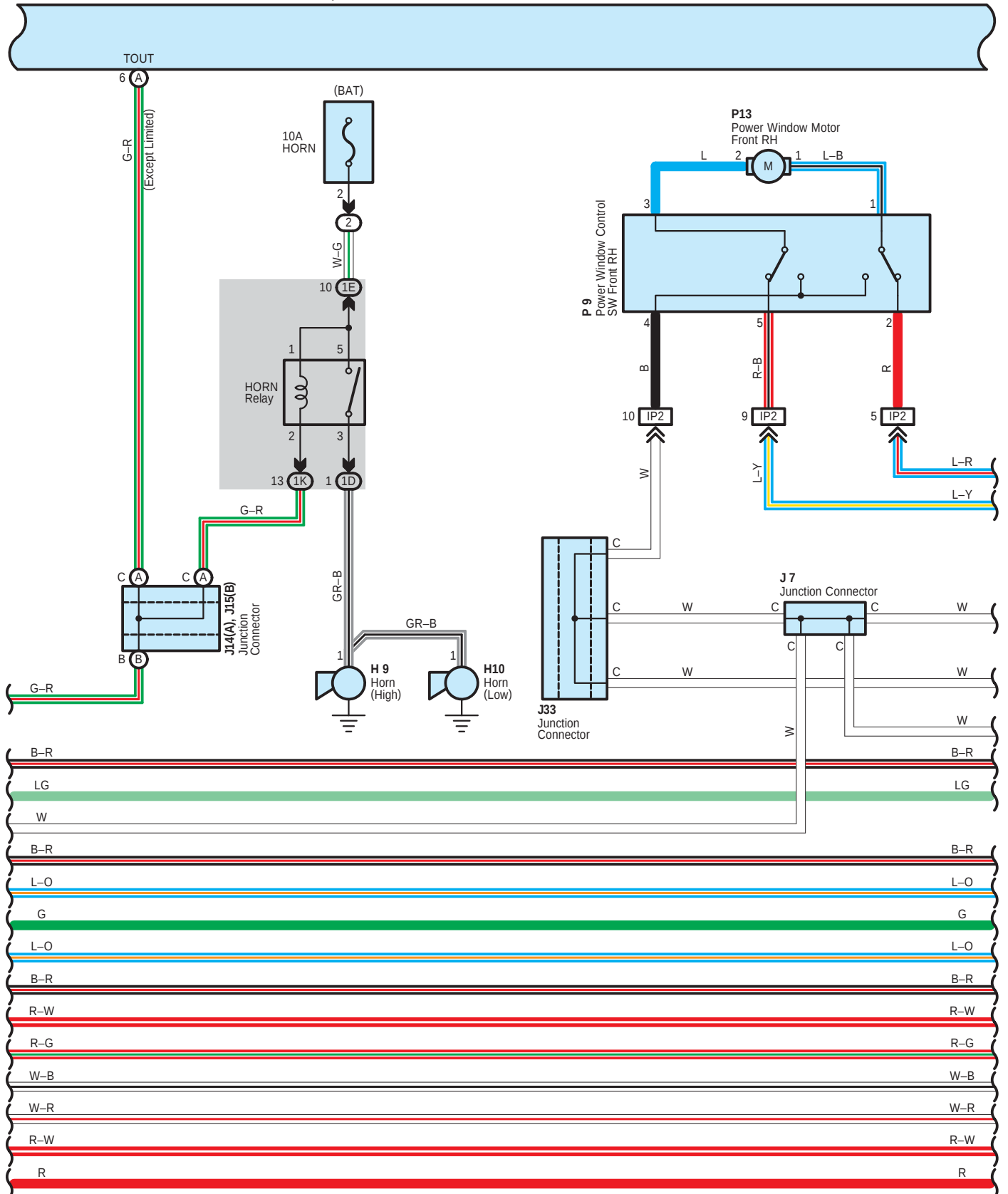




Multiplex Communication System – BEAN

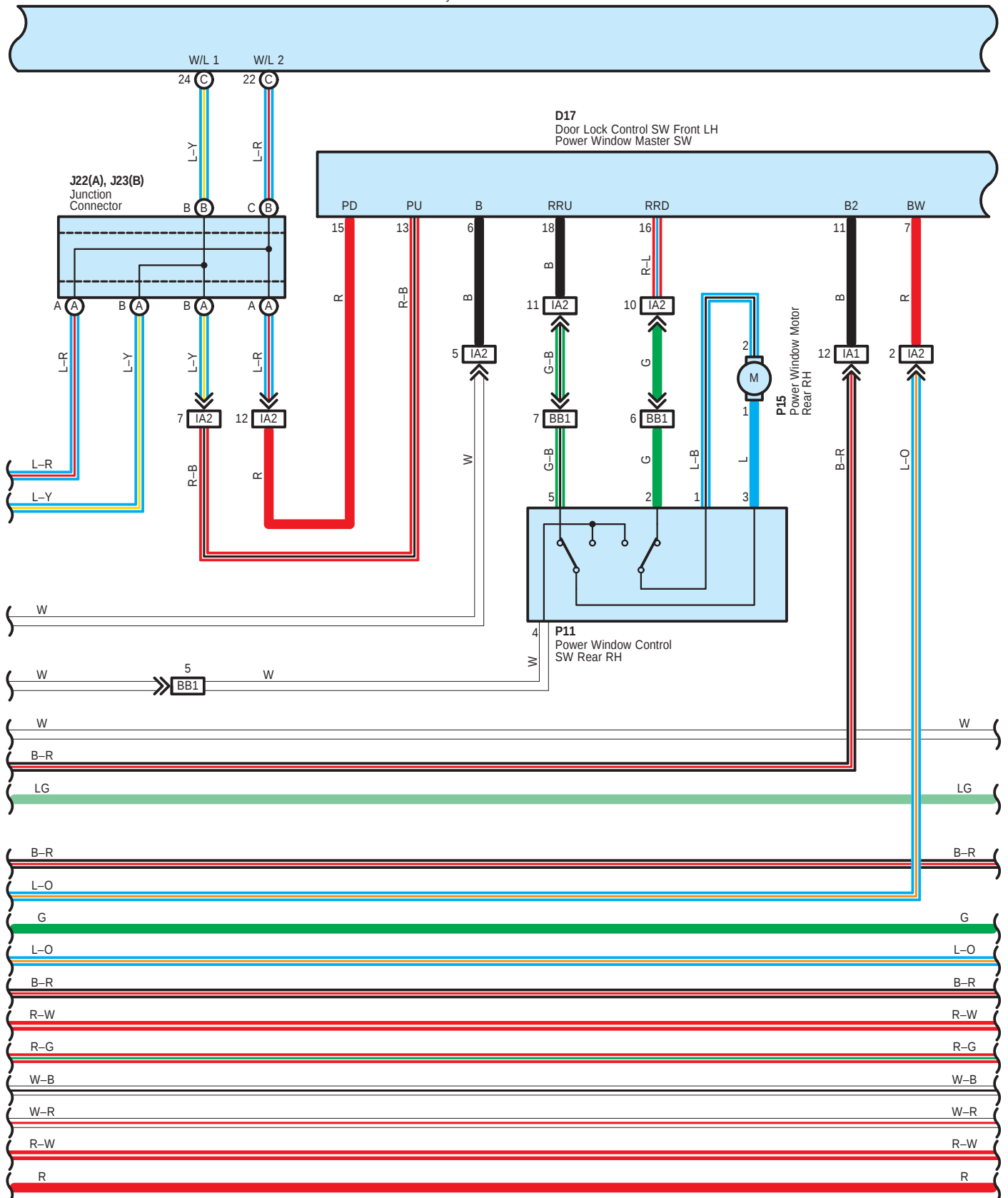
B 4(A), B 5(B), B 6(C)
Body ECU





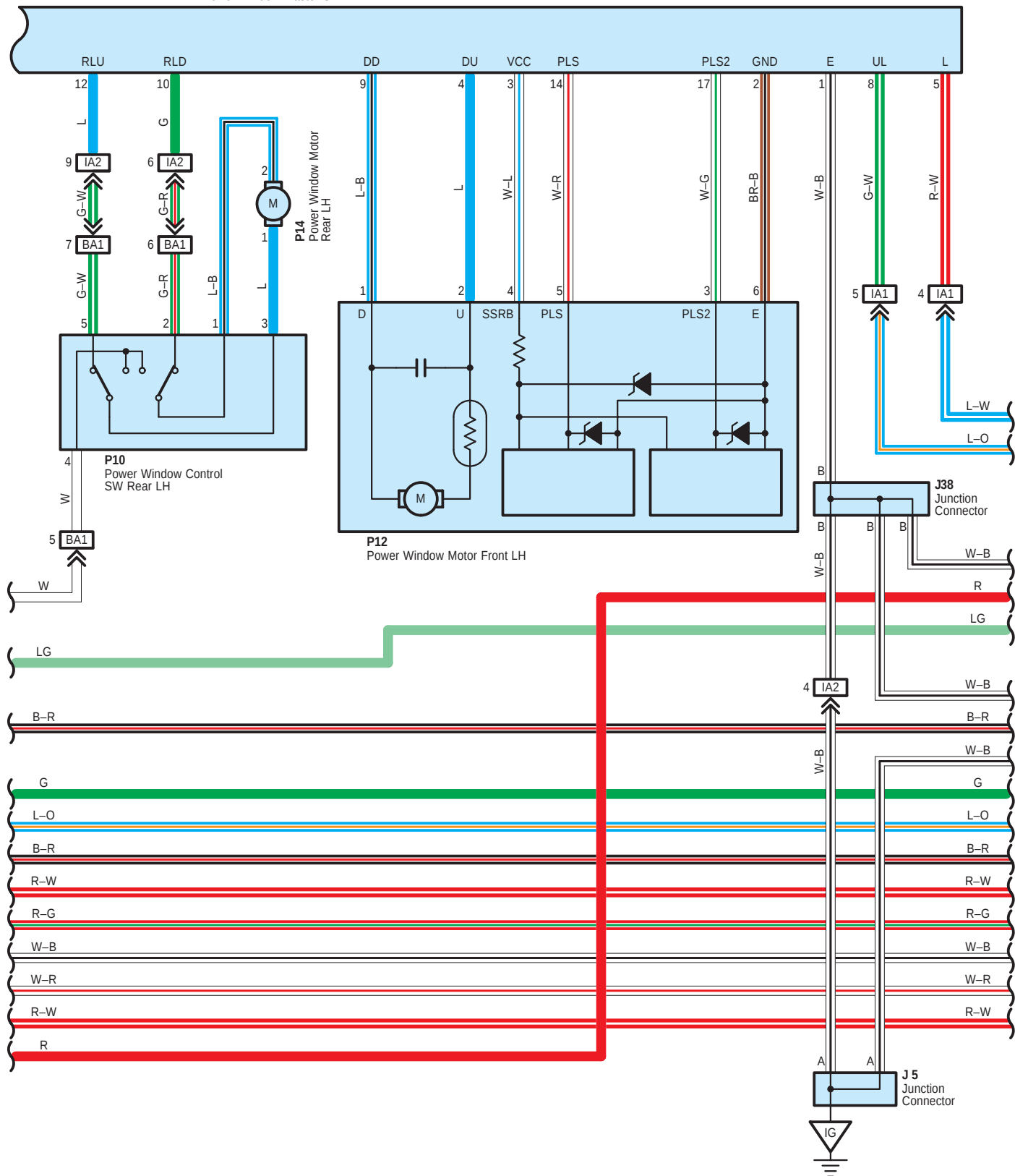
Multiplex Communication System – BEAN

B 4(A), B 5(B), B 6(C)
Body ECU



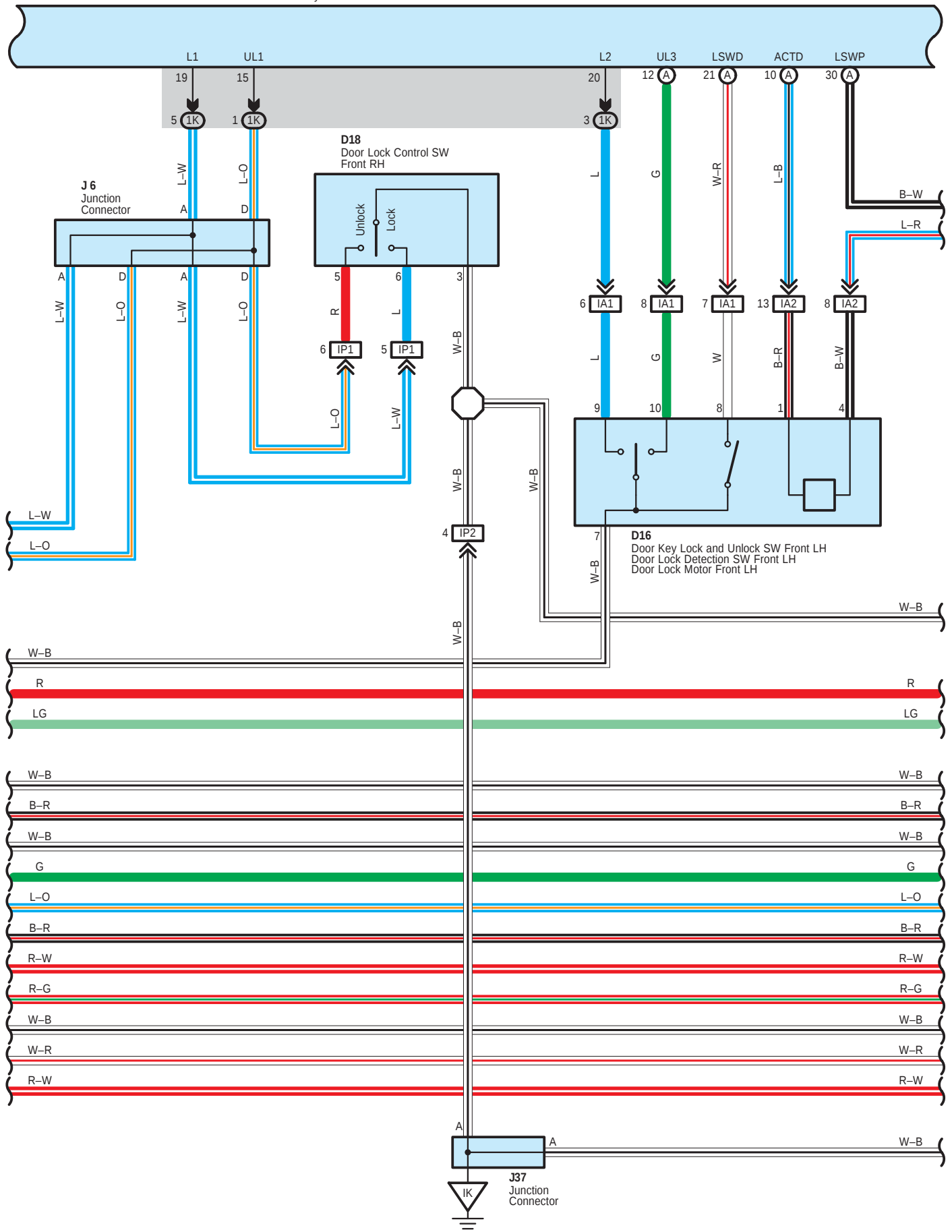
B 4(A), B 5(B), B 6(C)
Body ECU

D17
Door Lock Control SW Front LH
Power Window Master SW

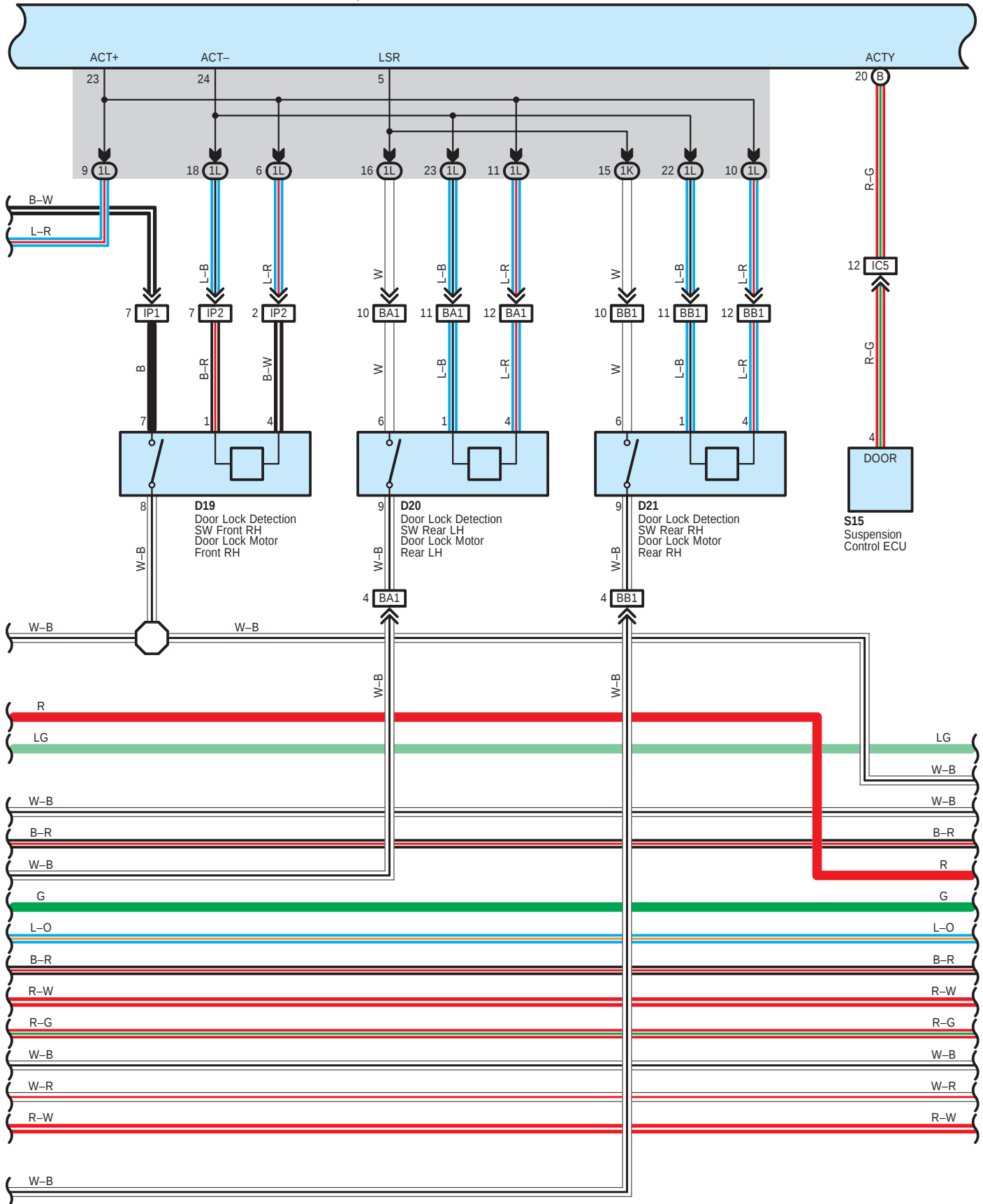


Multiplex Communication System – BEAN

B 4(A), B 5(B), B 6(C)
Body ECU

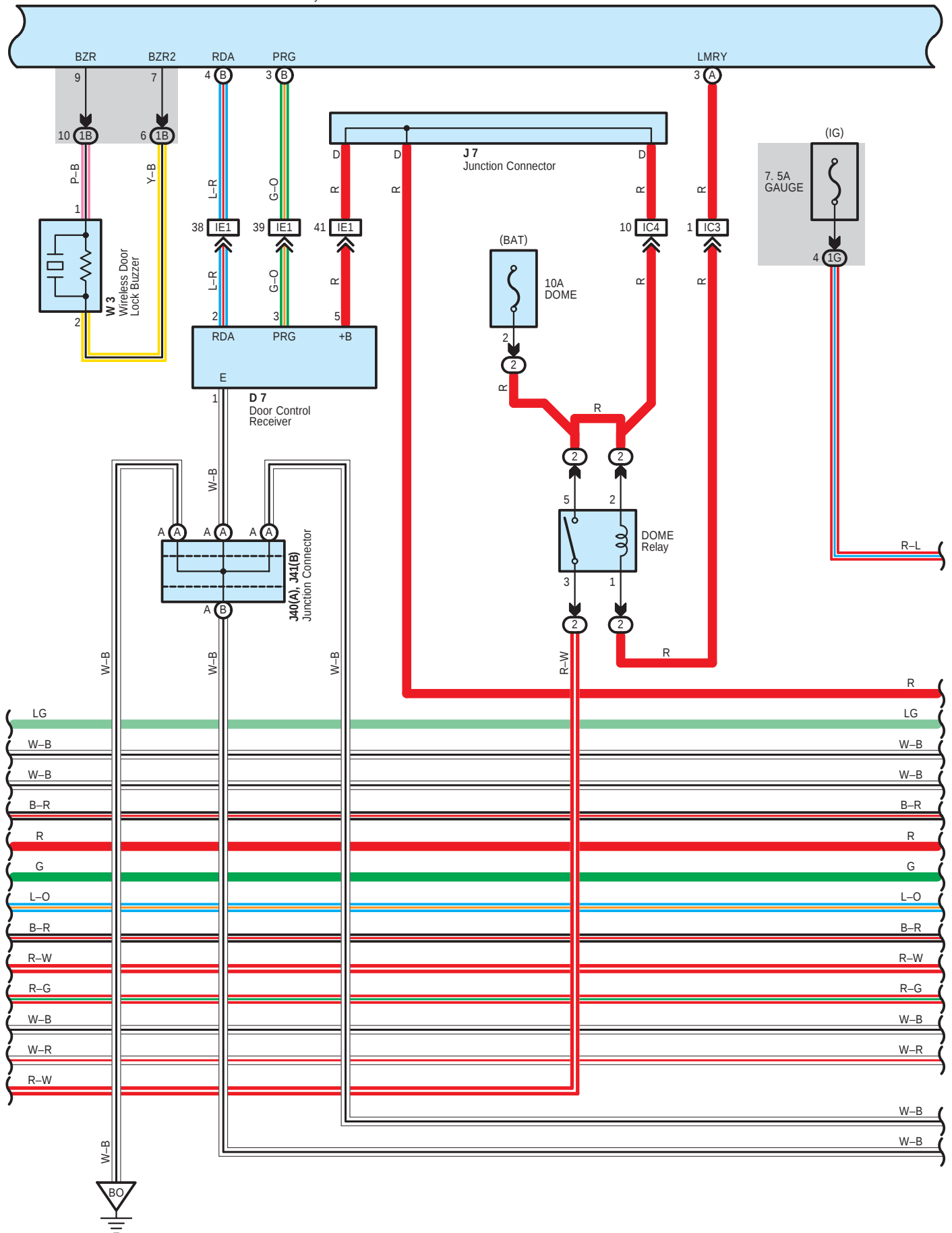


B 4(A), B 5(B), B 6(C)
Body ECU

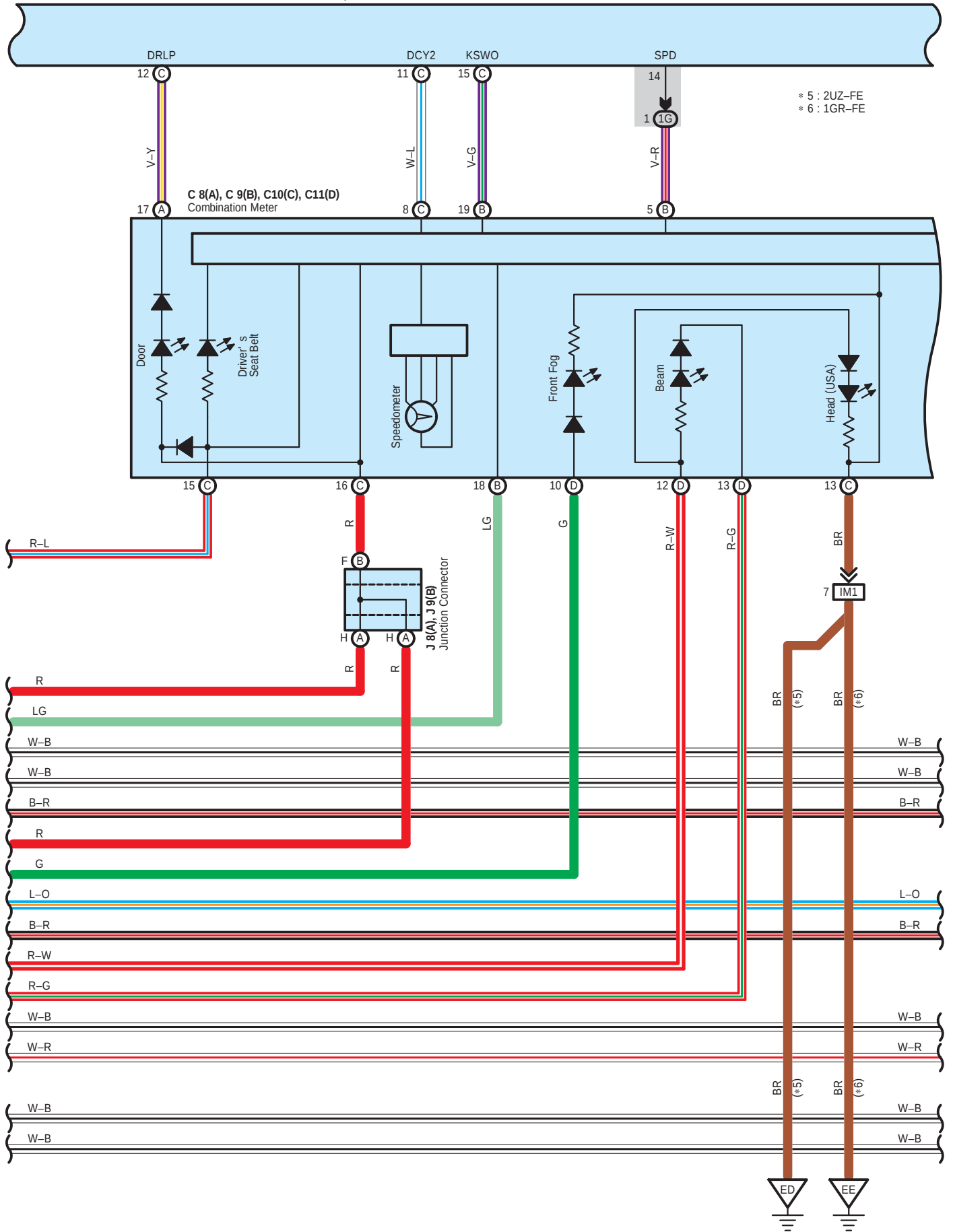


Multiplex Communication System – BEAN

B 4(A), B 5(B), B 6(C)
Body ECU



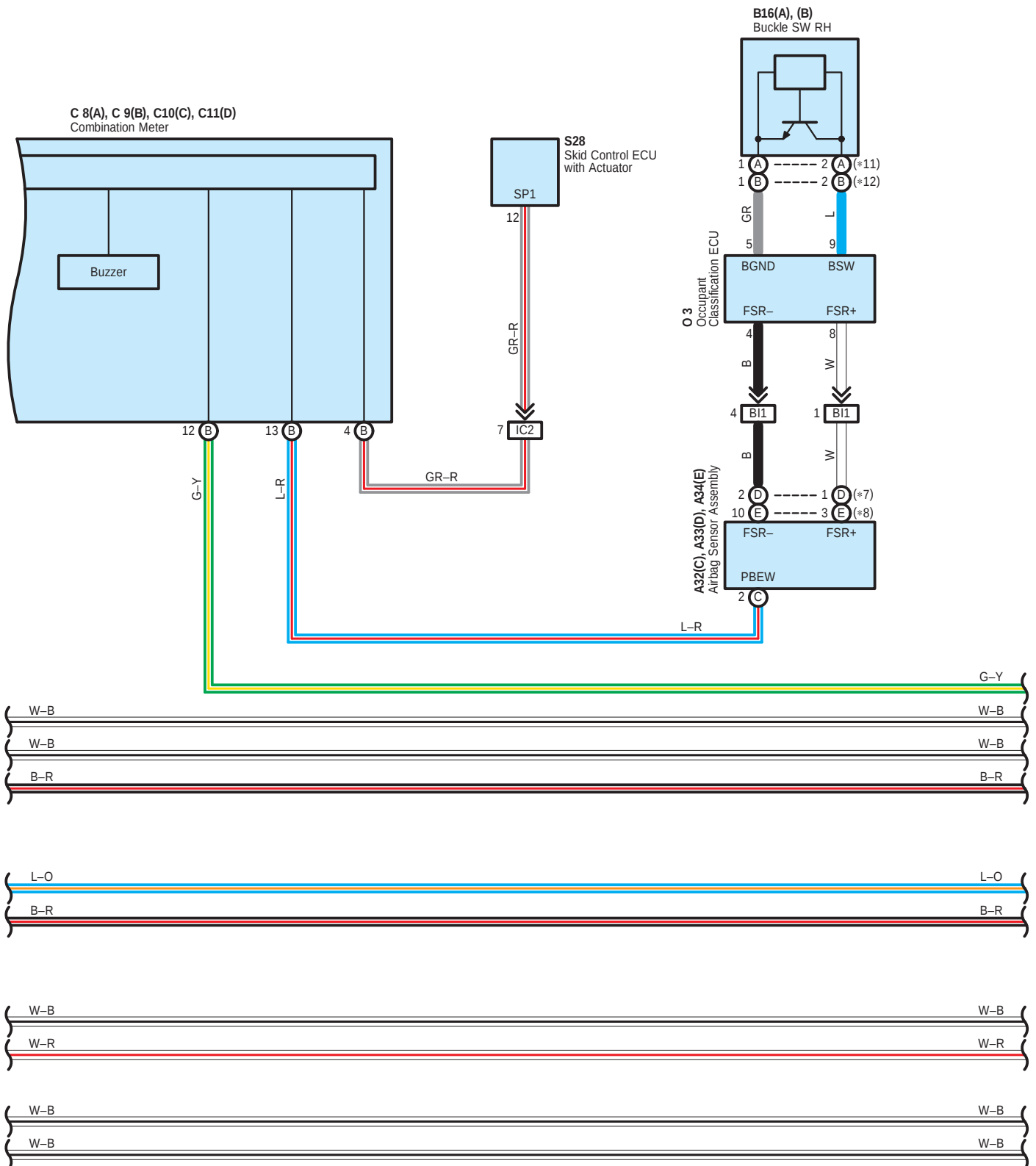
B 4(A), B 5(B), B 6(C)
Body ECU

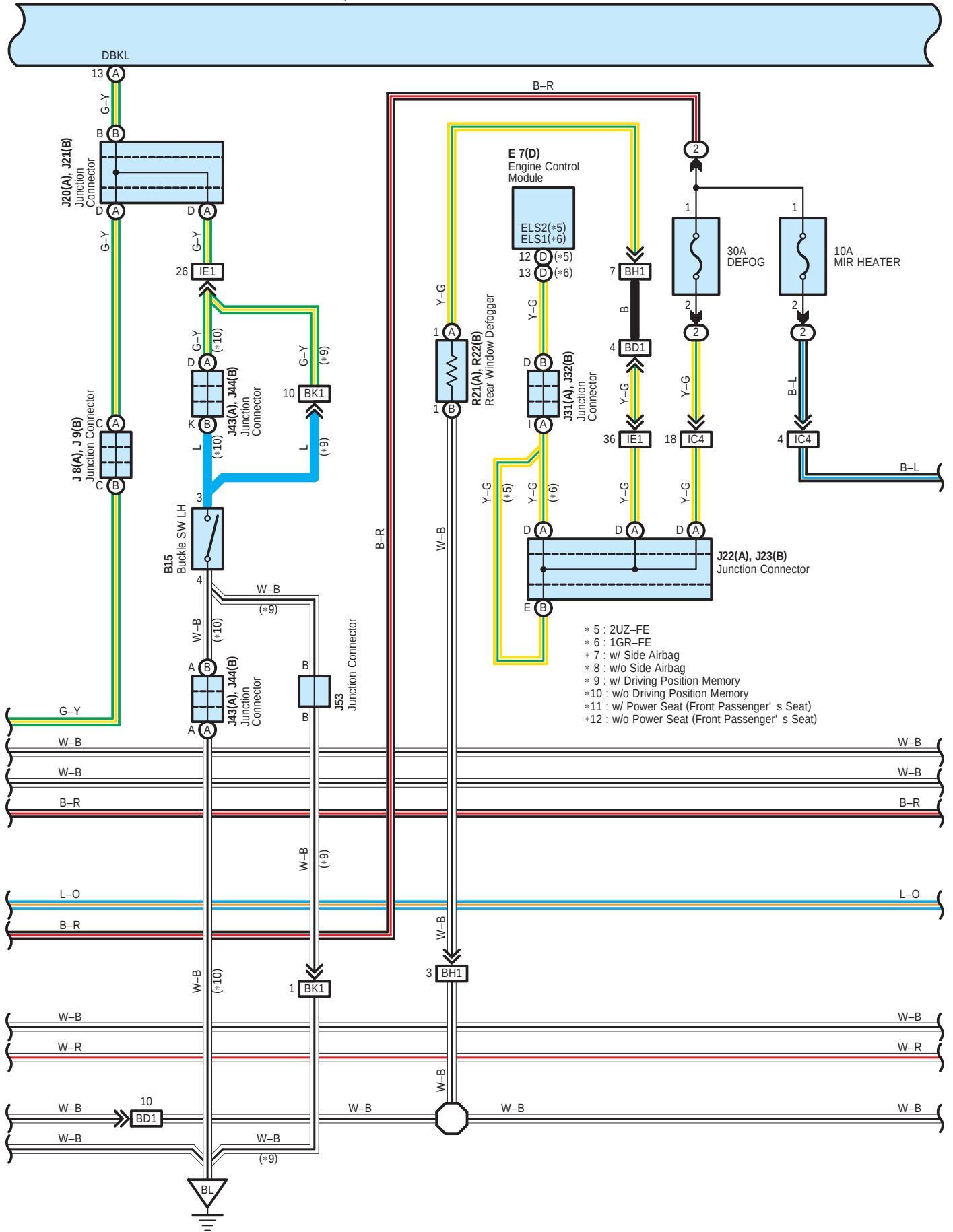


* 5 : 2UZ-FE
* 6 : 1GR-FE

Multiplex Communication System – BEAN

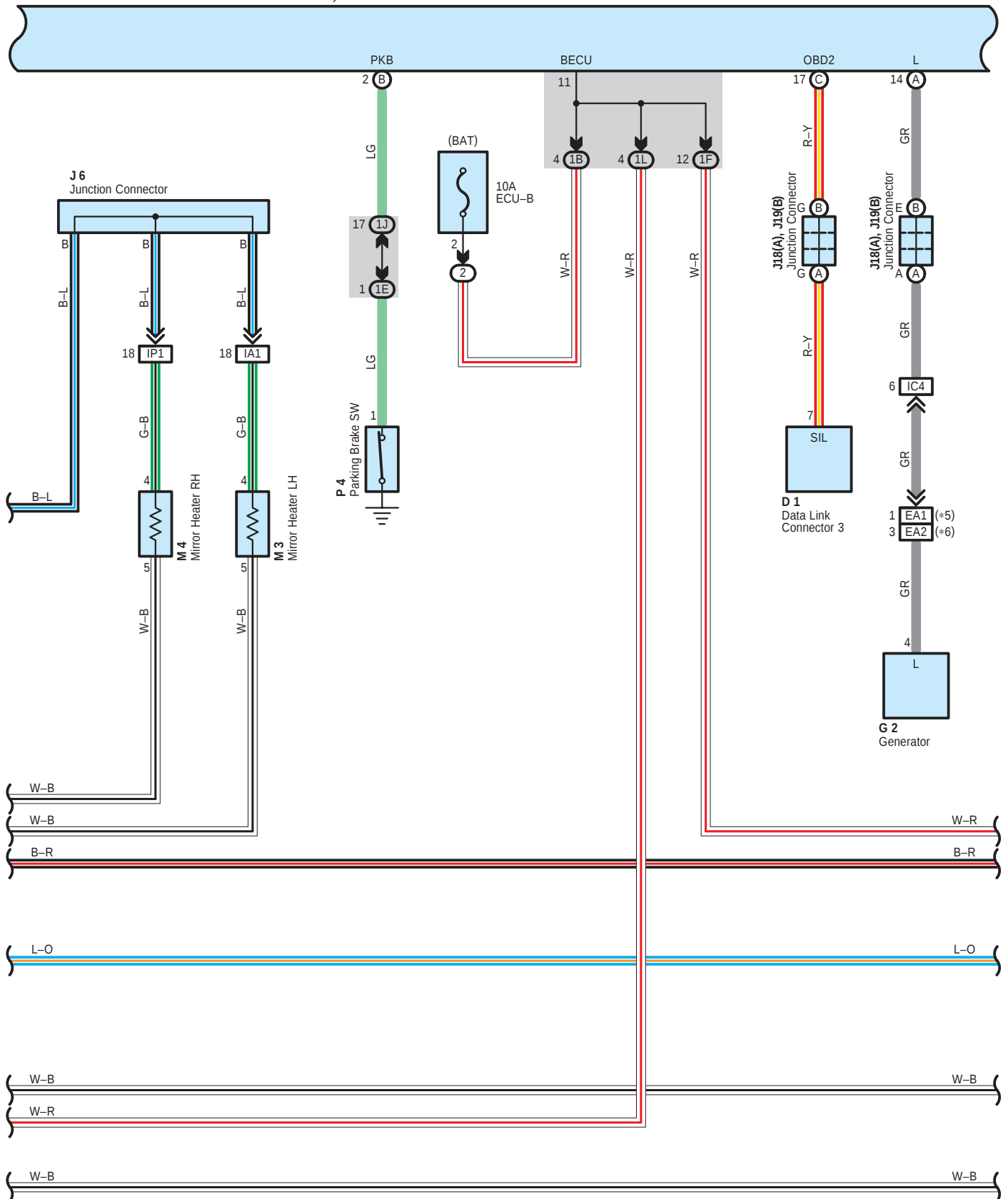
B 4(A), B 5(B), B 6(C)
Body ECU



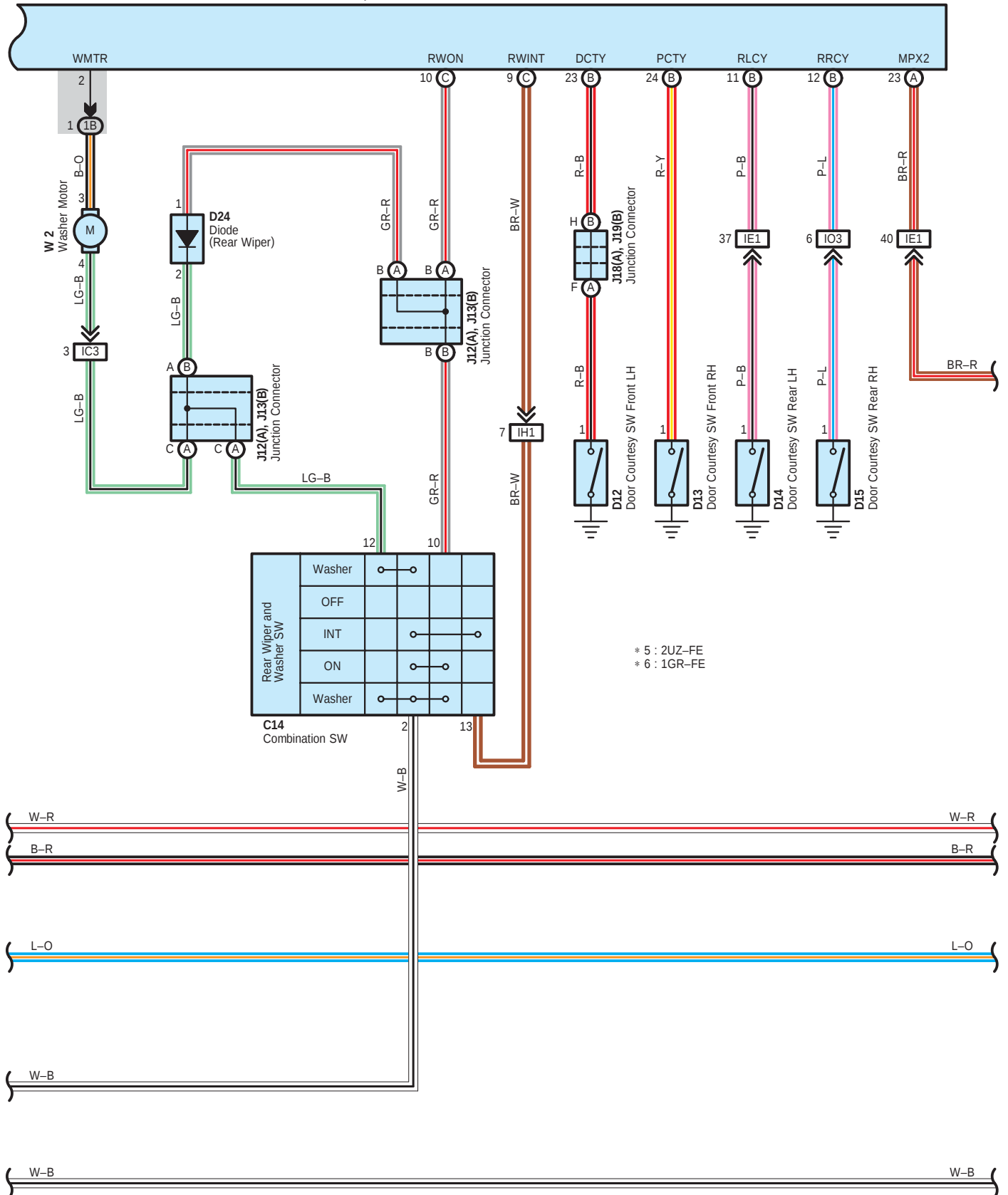


Multiplex Communication System – BEAN

B 4(A), B 5(B), B 6(C)
Body ECU

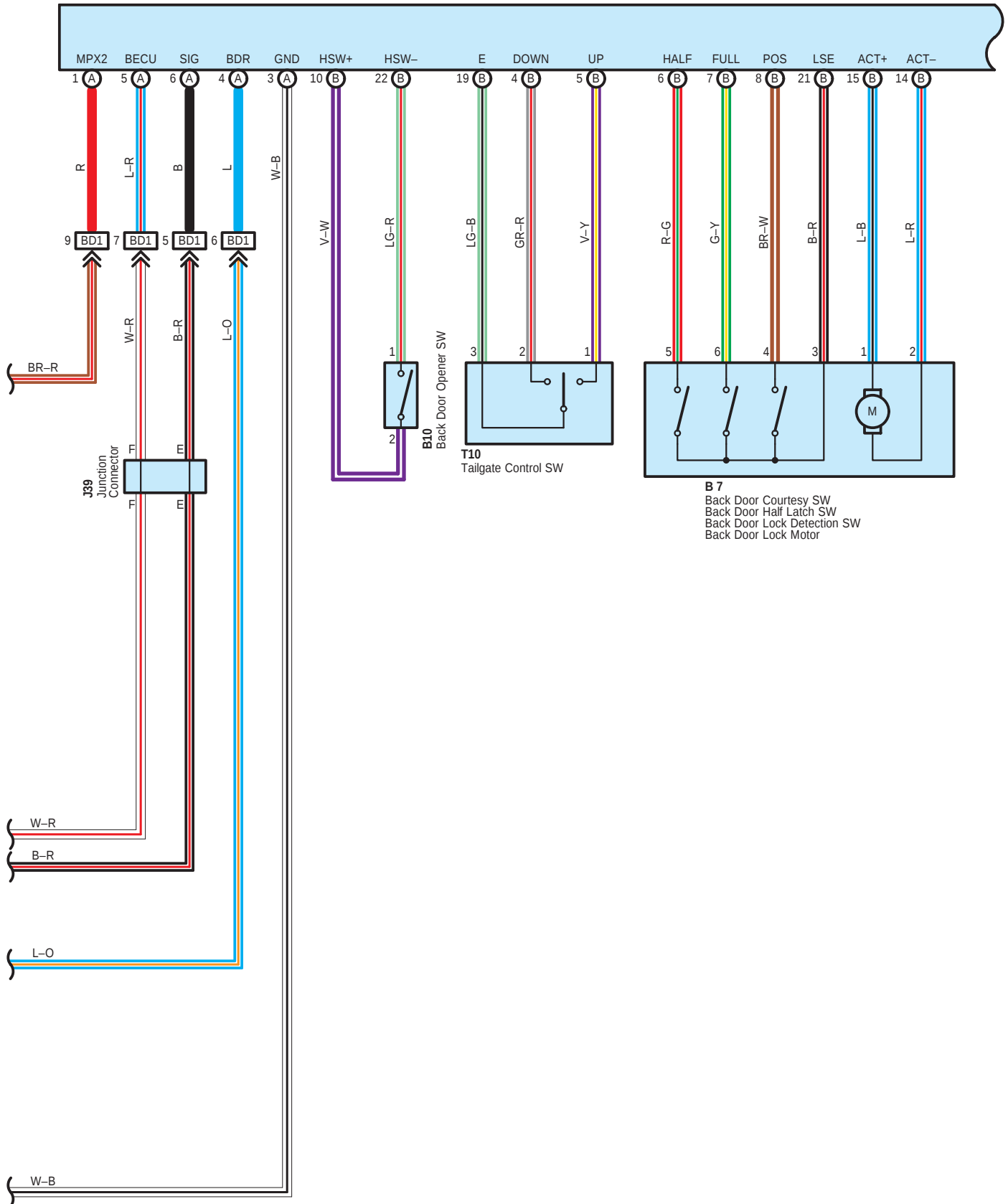


B 4(A), B 5(B), B 6(C)
Body ECU

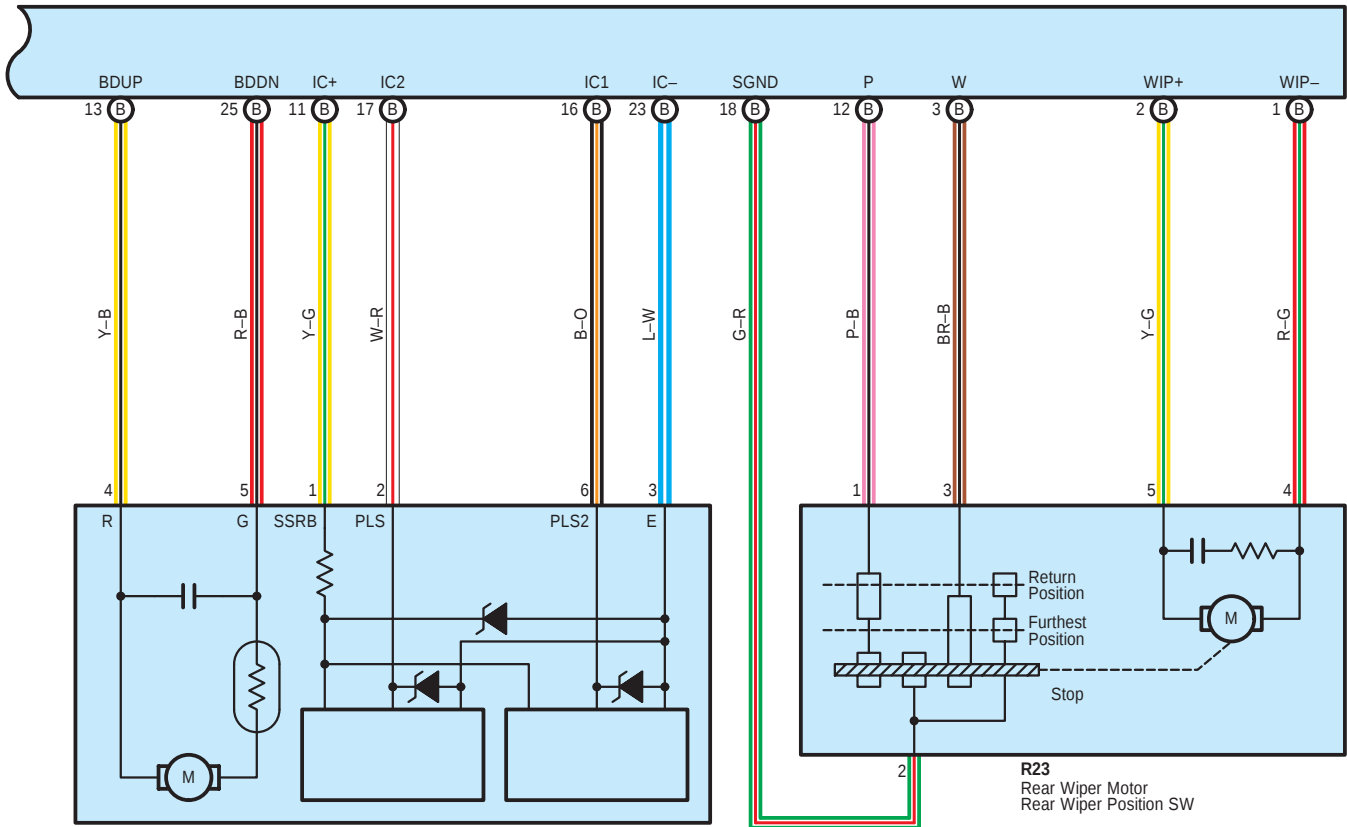


Multiplex Communication System – BEAN

B 8(A), B 9(B)
Back Door ECU



B 8(A), B 9(B)
Back Door ECU



B11
Back Door Power Window Motor

R23
Rear Wiper Motor
Rear Wiper Position SW

Multiplex Communication System – BEAN

System Outline

Communication Outline

Communication is made among the body, theft deterrent and back door ECUs.

When the ECU receives a signal from related switches, i.e., the rear wiper SW, the body ECU sends signals to the back door ECU, and moves rear wiper.

For details, please refer to the new car features and/or the repair manual.

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page	
A32	C	36	F2		34 (1GR-FE)	J37		38	
A33	D	36	F5		32 (2UZ-FE)	J38		40	
A34	E	36			34 (1GR-FE)	J39		40	
A39		36	F6		32 (2UZ-FE)	J40	A	40	
B1		36			34 (1GR-FE)	J41	B	40	
B4	A	36	G2		32 (2UZ-FE)	J43	A	42 (*1)	
B5	B	36			34 (1GR-FE)			43 (*2)	
B6	C	36	H1		32 (2UZ-FE)	J44	B	42 (*1)	
B7		40			34 (1GR-FE)			43 (*2)	
B8	A	40	H2		32 (2UZ-FE)	J53		42 (*1)	
B9	B	40			34 (1GR-FE)	K3		39	
B10		40	H3		32 (2UZ-FE)	L2		40	
B11		40			34 (1GR-FE)	M3		41	
B15		42 (*1)	H4		32 (2UZ-FE)	M4		41	
		43 (*2)			34 (1GR-FE)	M5		41	
B16	A	42 (*1)	H9		32 (2UZ-FE)	O3		42 (*1)	
		43 (*2)			34 (1GR-FE)			43 (*2)	
	B	42 (*1)	H10		32 (2UZ-FE)	P1		33 (2UZ-FE)	
		43 (*2)			34 (1GR-FE)			35 (1GR-FE)	
C8	A	37	I17		37	P4		39	
C9	B	37	I20		A	40	P7		41
C10	C	37			B	40	P9		41
C11	D	37	J1		33 (2UZ-FE)	P10		41	
C12		37			35 (1GR-FE)	P11		41	
C14		37	J3		33 (2UZ-FE)	P12		41	
D1		37			35 (1GR-FE)	P13		41	
D2		37	J4		38	P14		41	
D3		37	J5		38	P15		41	
D7		40	J6		38	R21	A	41	
D8		40	J7		38	R22	B	41	
D9		40	J8	A	38	R23		41	
D10		40	J9	B	38	S12		39	
D11		40	J10	A	38	S15		39	
D12		40	J11	B	38	S28		33 (2UZ-FE)	
D13		40	J12	A	38			35 (1GR-FE)	
D14		40	J13	B	38	S32		41	
D15		40	J14	A	38	S33		41	
D16		40	J15	B	38	S34		41	
D17		40	J18	A	38	S35		41	
D18		40	J19	B	38	T1		33 (2UZ-FE)	
D19		40	J20	A	38			35 (1GR-FE)	
D20		40	J21	B	38	T5		39	
D21		40	J22	A	38	T9		39	
D24		37	J23	B	38	T10		41	
E3		32 (2UZ-FE)	J24		38	V6		41	
		34 (1GR-FE)	J25		38	V7		41	
E7	D	37	J31	A	38	W2		33 (2UZ-FE)	
F1		32 (2UZ-FE)	J32	B	38			35 (1GR-FE)	
		34 (1GR-FE)	J33		38	W3		33 (2UZ-FE)	
F2		32 (2UZ-FE)	J35		38			35 (1GR-FE)	

* 1 : Power Seat * 2 : Manual Seat

Multiplex Communication System – BEAN

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1C		
1D		
1E		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1H		
1J		
1K		
1L	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3C		
3D		
3E		
3F		

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ–FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EA2	45 (1GR–FE)	
IA1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IC5		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	46	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IG1	46	Instrument Panel No.2 Wire and Instrument Panel Wire (Behind the Combination Meter)
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BH1	48	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)
BI1	50 (*1)	Floor Wire and Seat No.1 Wire (Under the Front RH Seat)
	51 (*2)	
BK1	50 (*1)	Floor No.2 Wire and Seat No.2 Wire (Under the Front LH Seat)
BL1	48	Floor No.2 Wire and Step Rear Floor LH Wire (Near the Side Step LH)
BM1	48	Floor Wire and Step Rear Floor RH Wire (Near the Side Step RH)

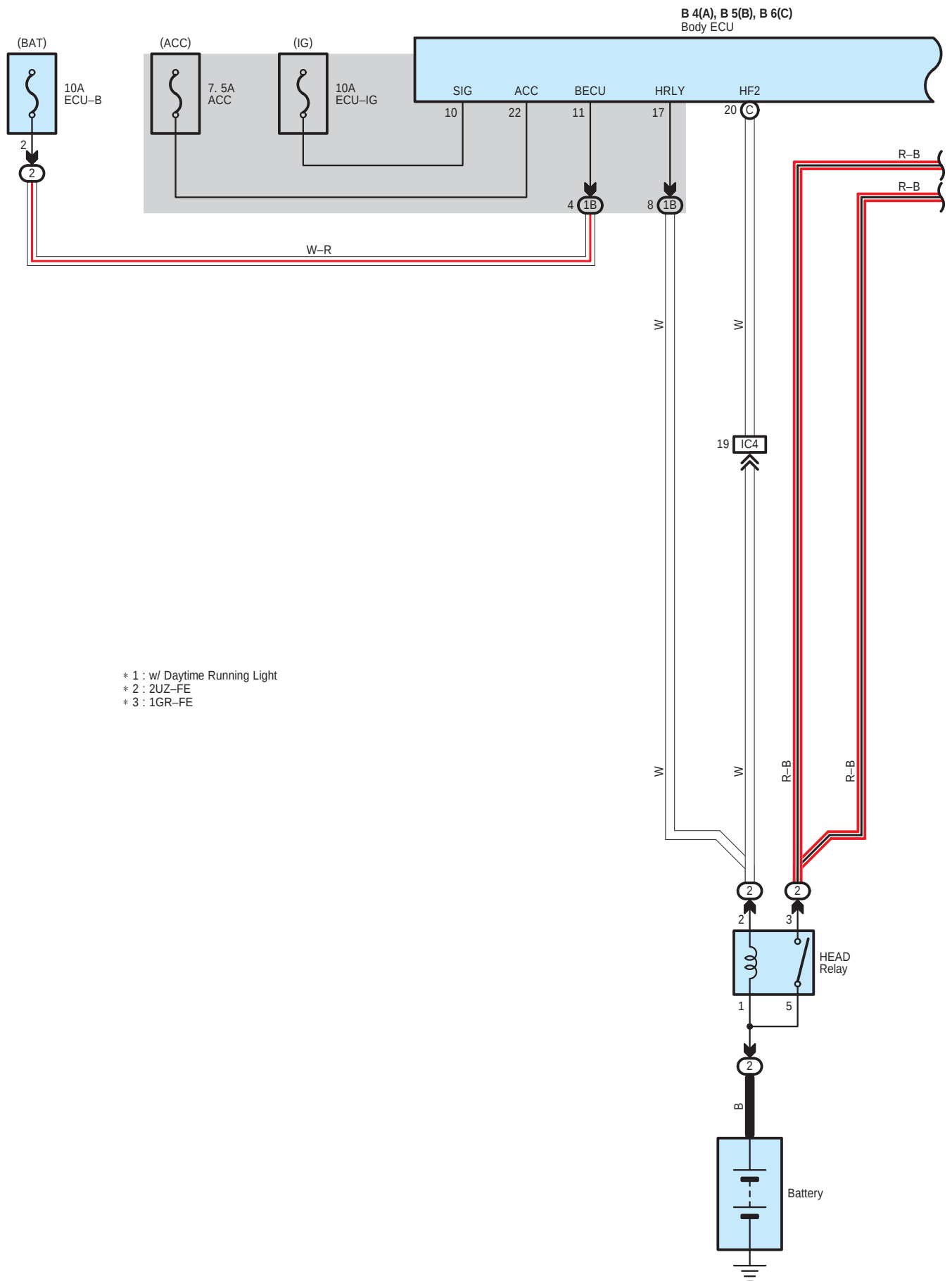
* 1 : Power Seat * 2 : Manual Seat

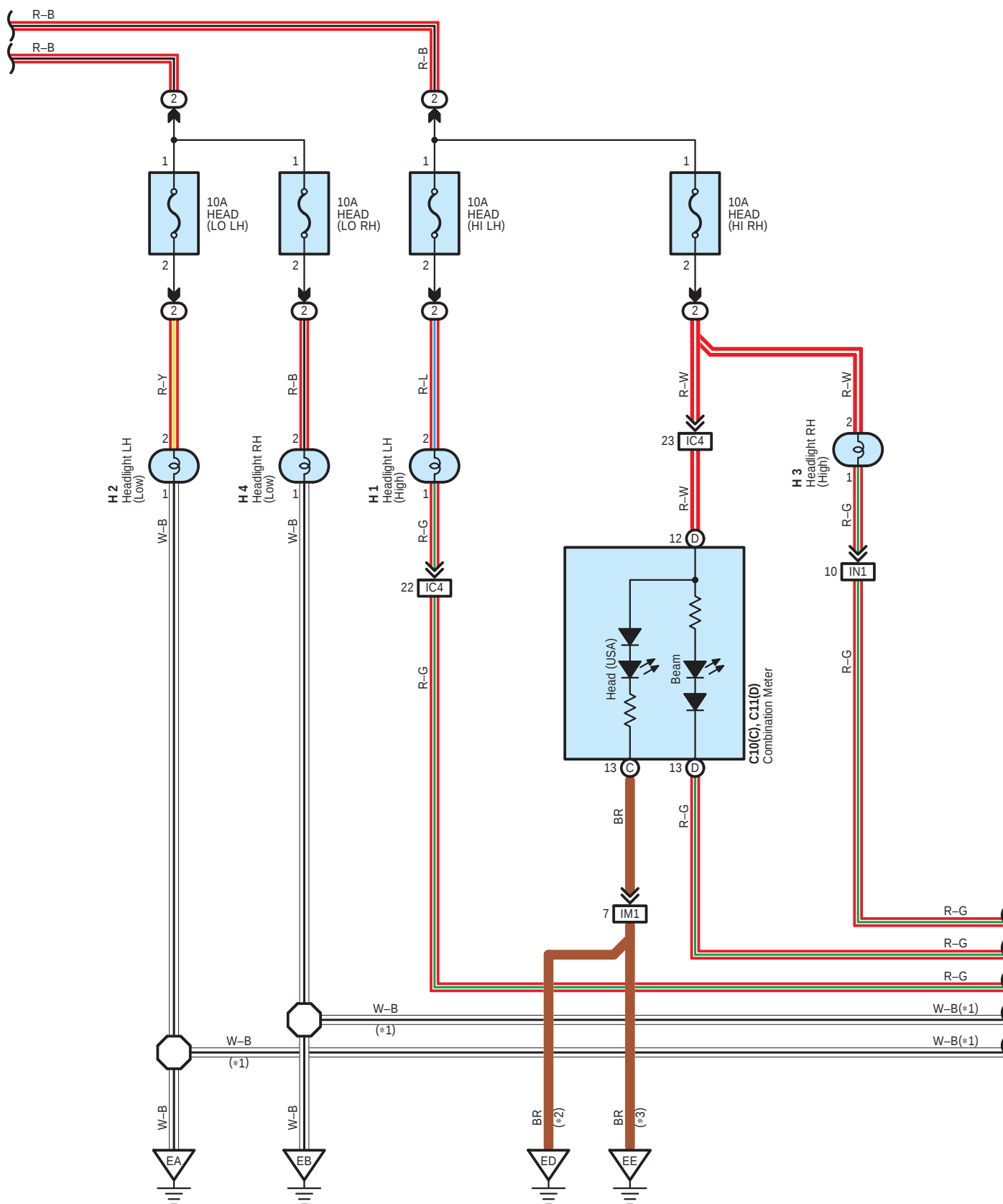


: Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	45 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

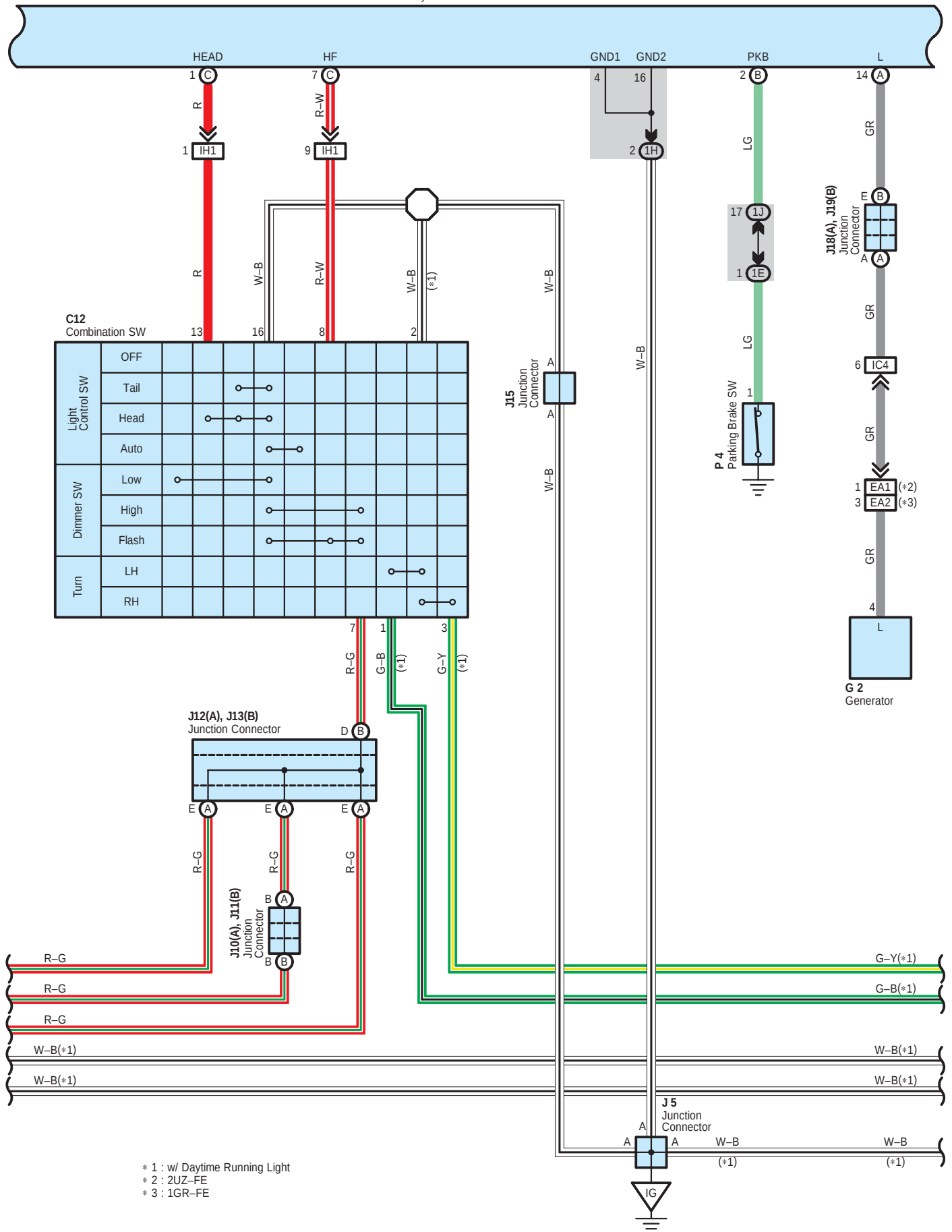
Headlight



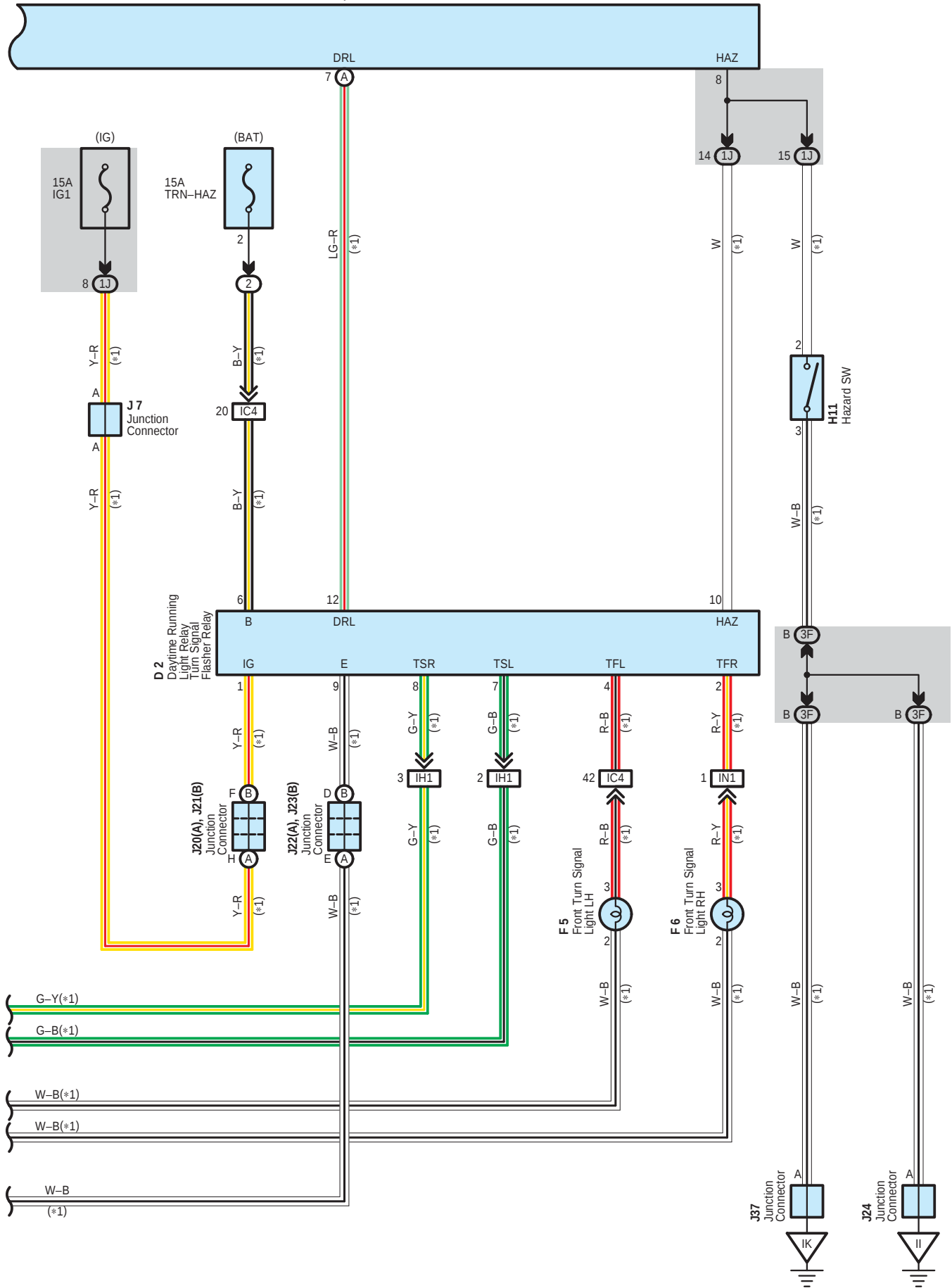


Headlight

B 4(A), B 5(B), B 6(C)
Body ECU



B 4(A), B 5(B), B 6(C)
Body ECU



System Outline

(w/ daytime running light)

* This system is designed to automatically activate the turn signal lights during the daytime to keep the car highly visible to other vehicles. This system is controlled by the body ECU.

This system makes use of the turn signal lights as daytime running lights.

For this reason, when the turn signal lights are operated, the daytime running lights function is interrupted momentarily, which, however, will be brought back into operation as soon as the interposed operation is over.

* This system is enabled when the conditions given below are met.

A) Ignition switch ON condition

B) Turn signal light switch OFF condition

C) Hazard light switch OFF condition

D) Light control switch OFF condition

E) Parking brake switch OFF condition (Parking brake out of operating condition)**

** : This system does not become active when the parking brake switch is ON. However, once the OFF signal of the parking brake switch is input into the body ECU, this system will become active thereafter, regardless of whether the parking brake switch is ON or OFF.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B4	A 36	H1	32 (2UZ-FE)	J12	A 38
B5	B 36		34 (1GR-FE)	J13	B 38
B6	C 36	H2	32 (2UZ-FE)	J15	38
C10	C 37		34 (1GR-FE)	J18	A 38
C11	D 37	H3	32 (2UZ-FE)	J19	B 38
C12	37		34 (1GR-FE)	J20	A 38
D2	37	H4	32 (2UZ-FE)	J21	B 38
F5	32 (2UZ-FE)		34 (1GR-FE)	J22	A 38
	34 (1GR-FE)	H11	37	J23	B 38
F6	32 (2UZ-FE)	J5	38	J24	38
	34 (1GR-FE)	J7	38	J37	38
G2	32 (2UZ-FE)	J10	A 38	P4	39
	34 (1GR-FE)	J11	B 38		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
3F	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

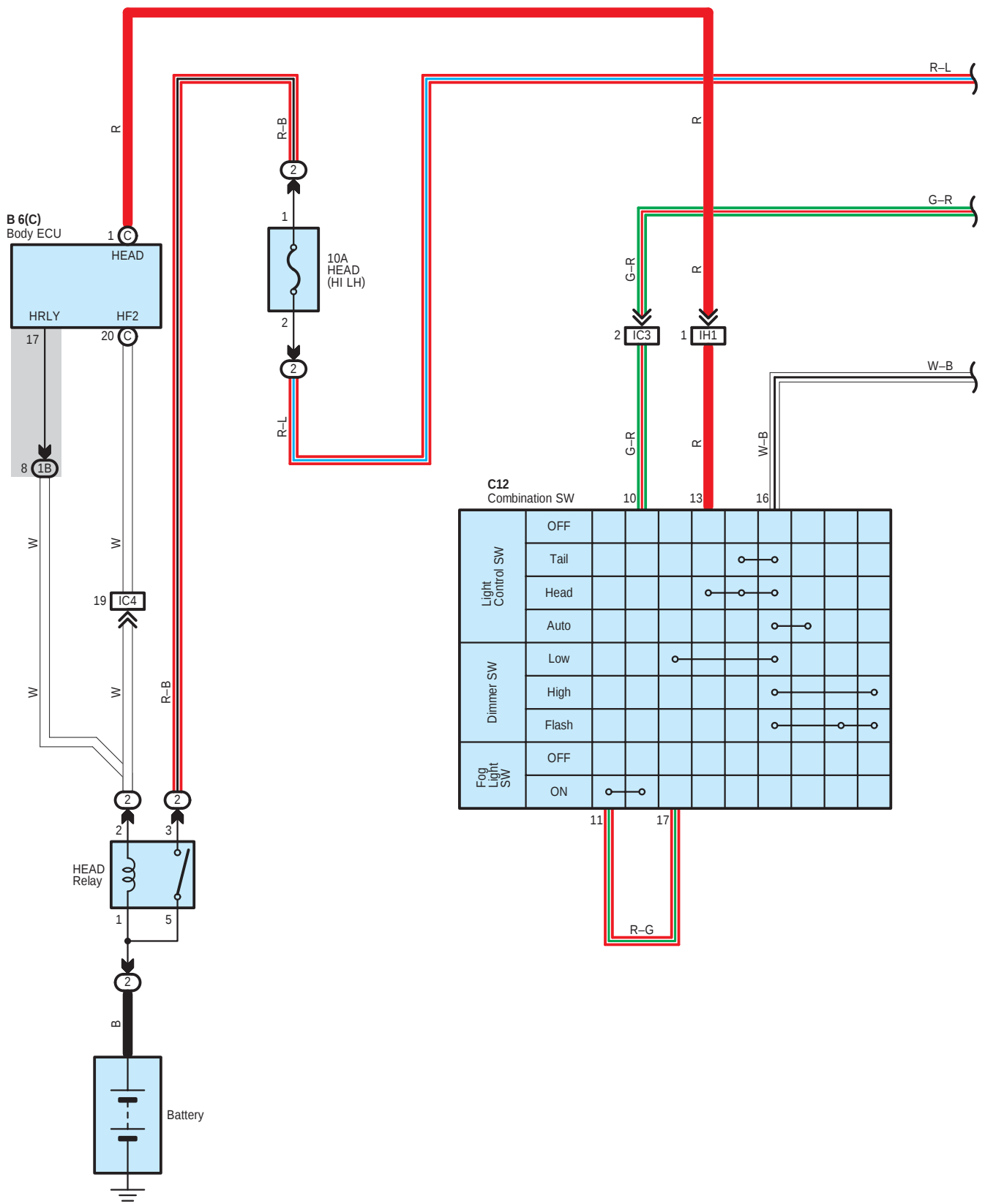
□ : Connector Joining Wire Harness and Wire Harness

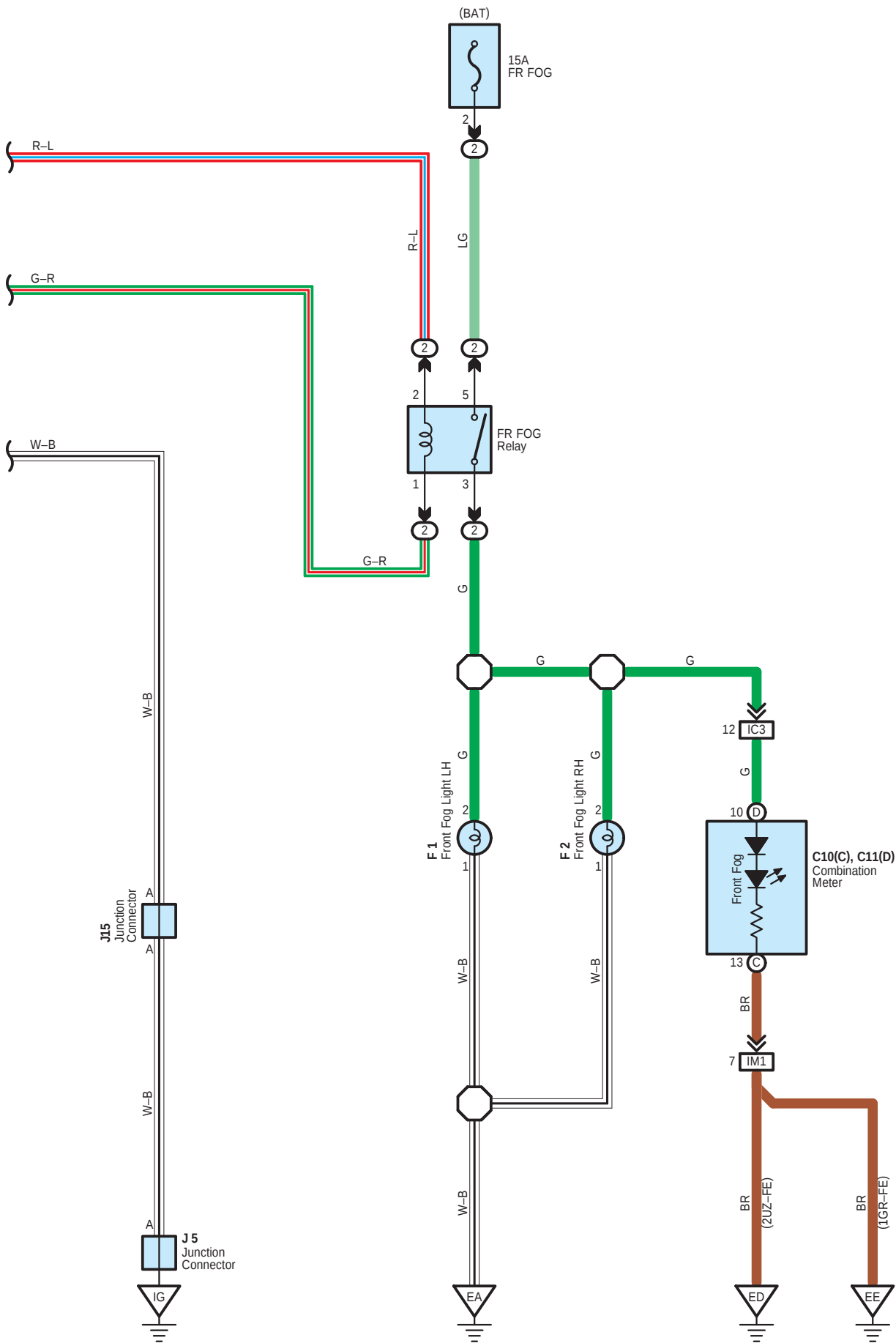
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EA2	45 (1GR-FE)	
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)



: Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	45 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel





Front Fog Light

: Parts Location

Code		See Page	Code	See Page	Code	See Page
B6	C	36	F1	32 (2UZ-FE)	J5	38
C10	C	37		34 (1GR-FE)	J15	38
C11	D	37	F2	32 (2UZ-FE)		
C12		37		34 (1GR-FE)		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

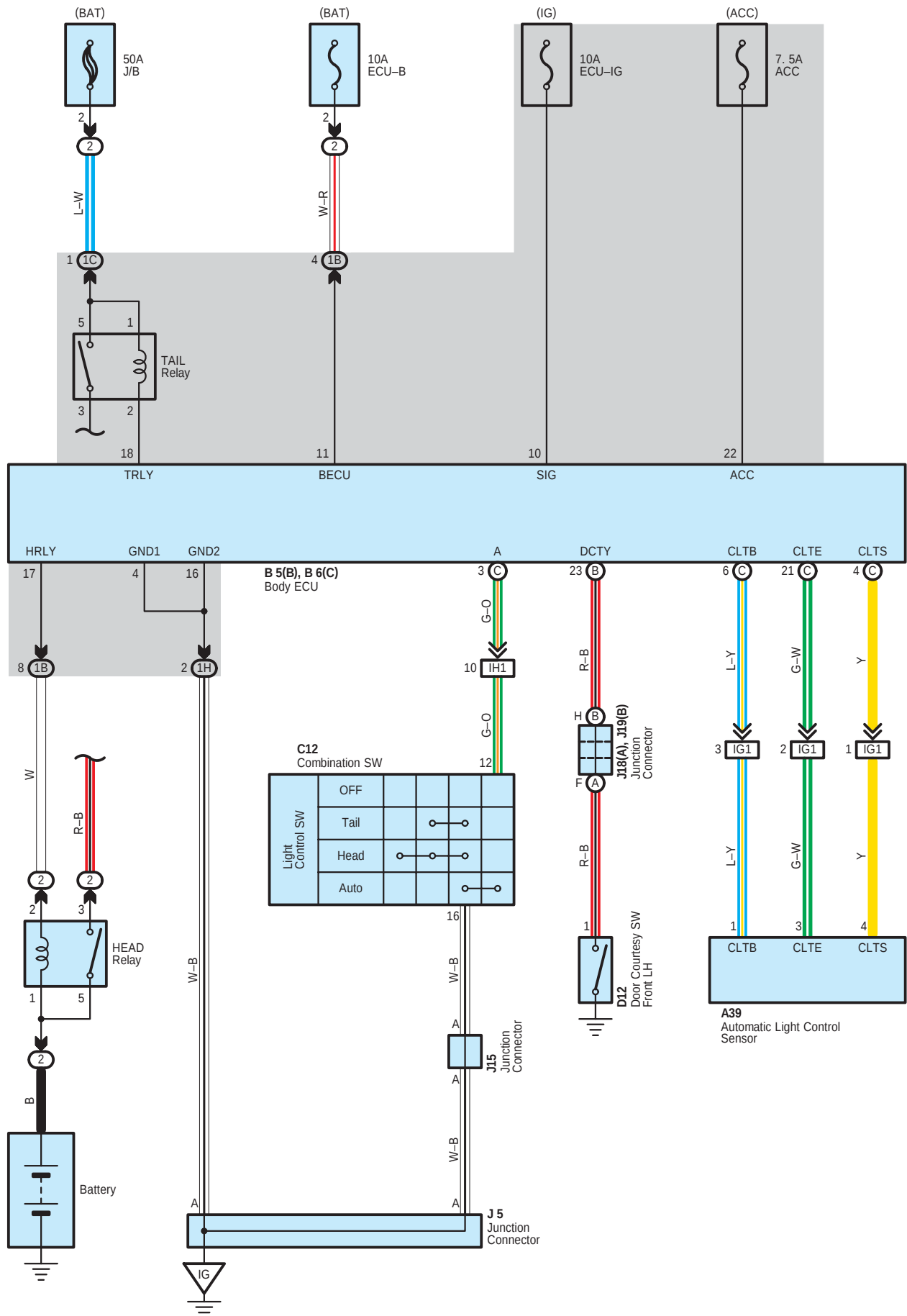
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)

: Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel

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 the taillight and headlight on if the brightness is below the regular level and turns the taillight and headlight off when the surroundings become brighter than the regular level.

: Parts Location

Code		See Page	Code		See Page	Code		See Page
A39		36	C12		37	J15		38
B5	B	36	D12		40	J18	A	38
B6	C	36	J5		38	J19	B	38

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1C		
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

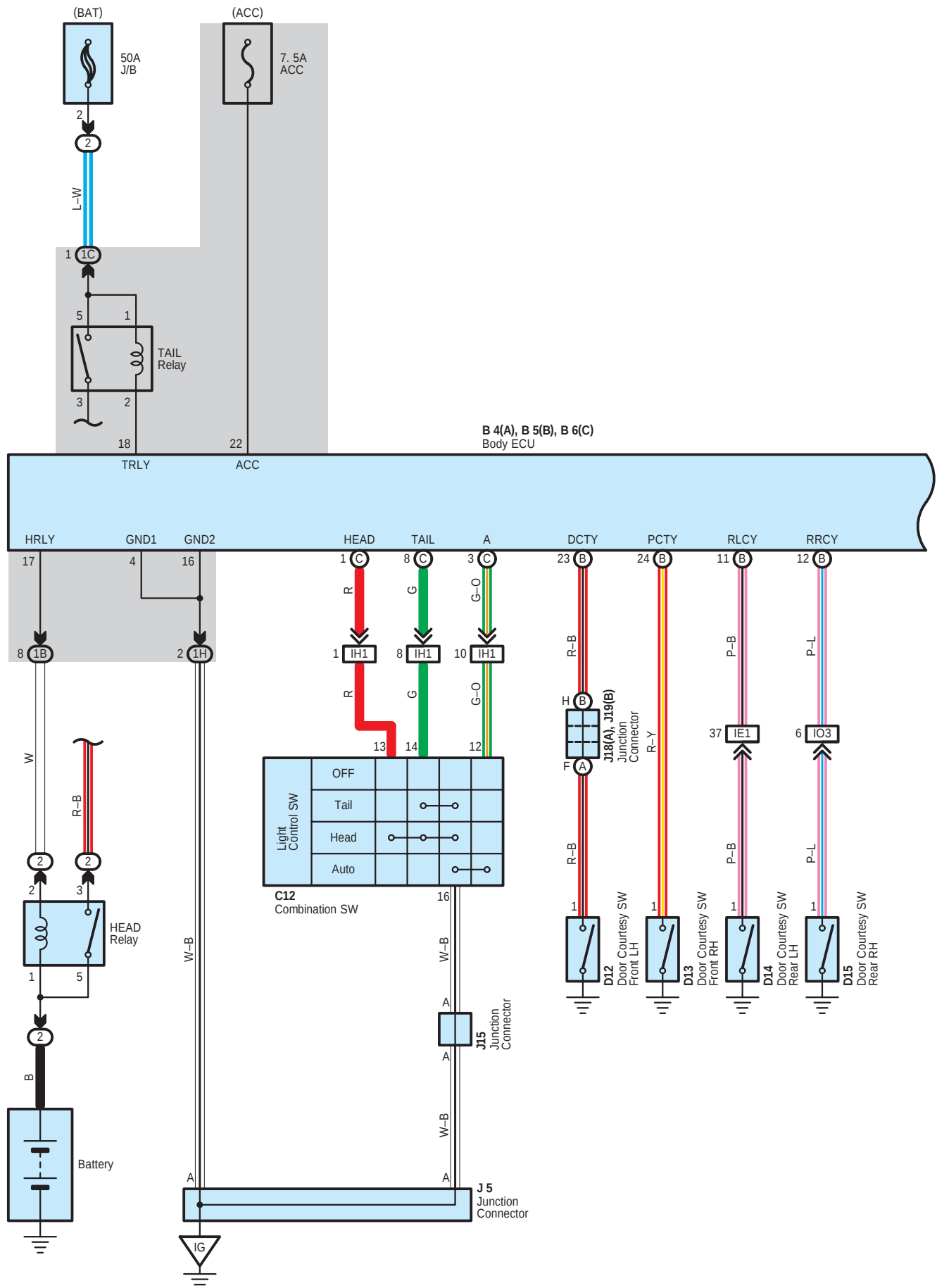
: Connector Joining Wire Harness and Wire Harness

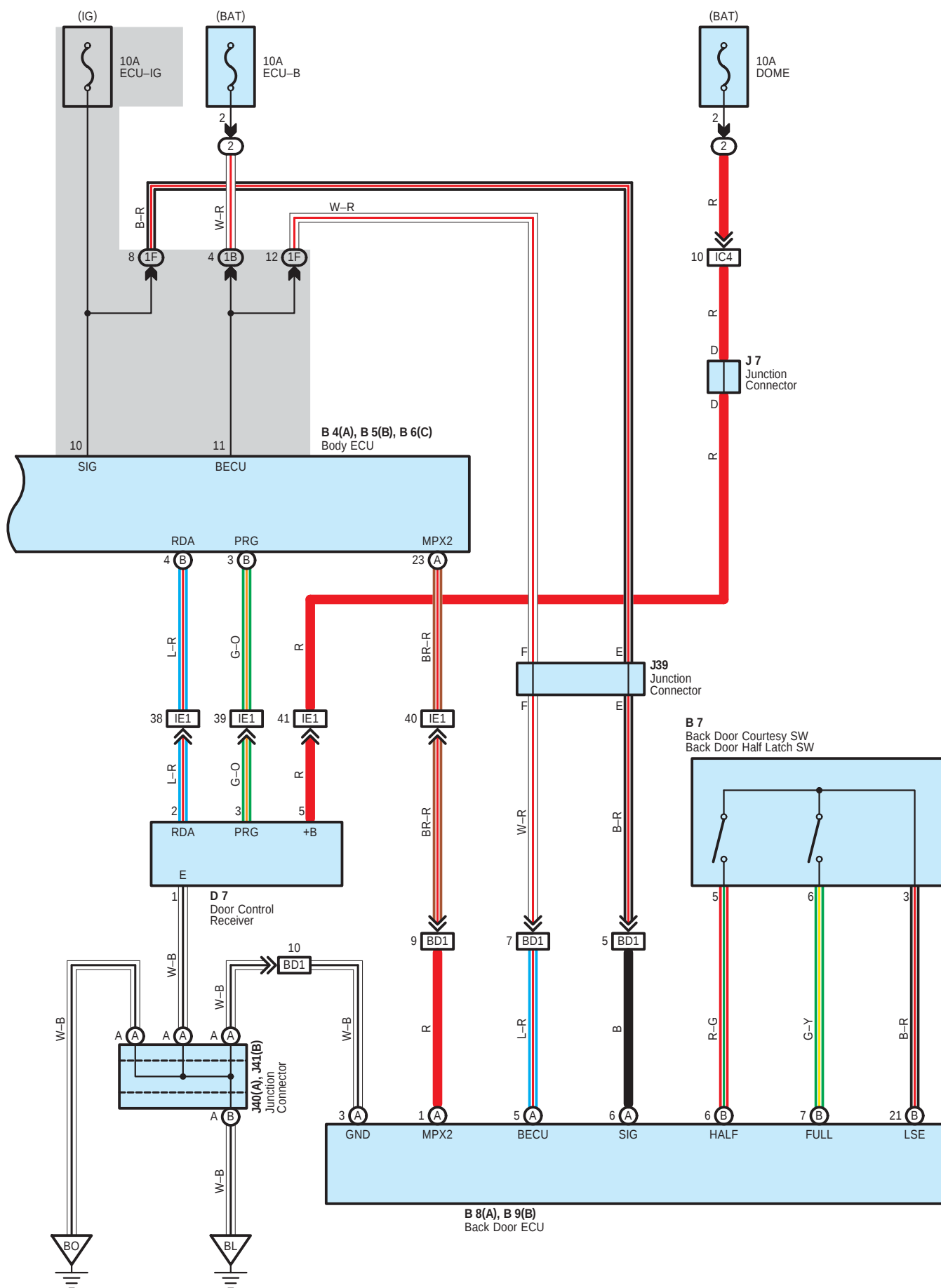
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	46	Instrument Panel No.2 Wire and Instrument Panel Wire (Behind the Combination Meter)
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)

: Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel

Light Auto Turn Off System





Light Auto Turn Off System

System Outline

When all doors are closed after opening some or all of them after the Ignition SW is turned from ON to OFF with the head and tail lamps ON, these lamps will remain ON for 30 seconds after the doors are closed and then go OUT automatically. Pressing the lock SW on a wireless controller twice in succession turns OFF the lamps instantly.

○ : Parts Location

Code		See Page	Code	See Page	Code		See Page
B4	A	36	D7	40	J15		38
B5	B	36	D12	40	J18	A	38
B6	C	36	D13	40	J19	B	38
B7		40	D14	40	J39		40
B8	A	40	D15	40	J40	A	40
B9	B	40	J5	38	J41	B	40
C12		37	J7	38			

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1C		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

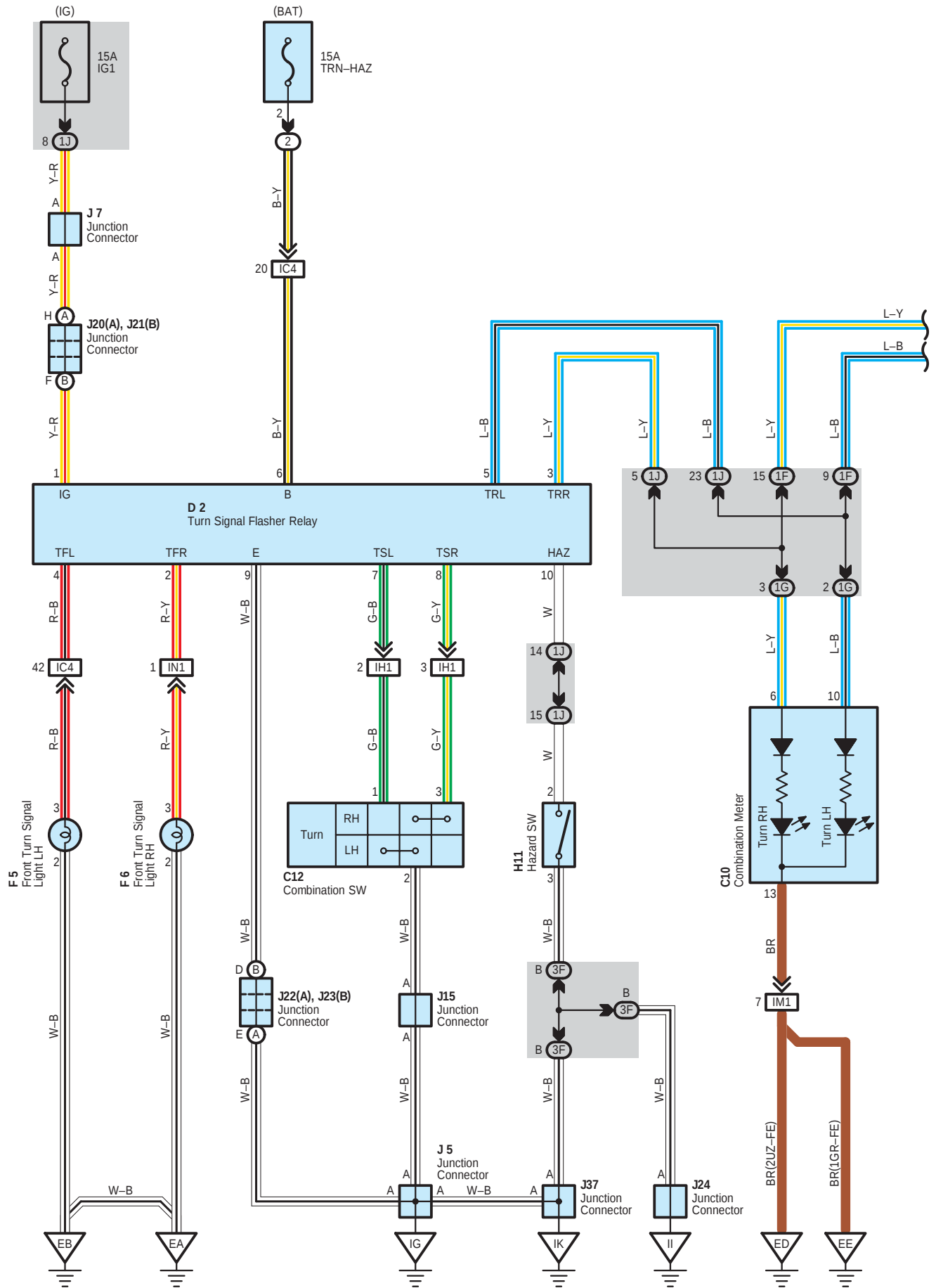
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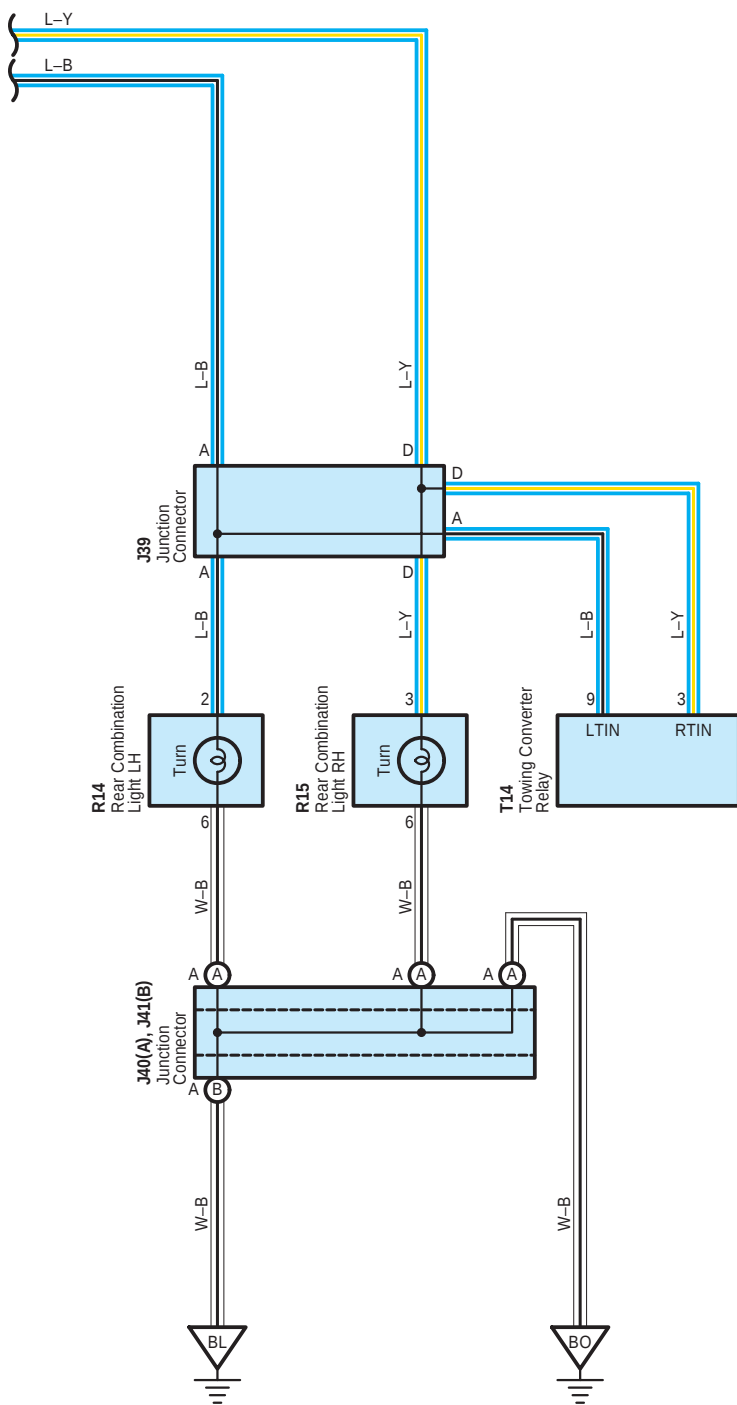
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

▽ : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Turn Signal and Hazard Warning Light with DRL





Turn Signal and Hazard Warning Light with DRL

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C10	37	J5	38	J37	38
C12	37	J7	38	J39	40
D2	37	J15	38	J40	A 40
F5	32 (2UZ-FE)	J20	A 38	J41	B 40
	34 (1GR-FE)	J21	B 38	R14	41
F6	32 (2UZ-FE)	J22	A 38	R15	41
	34 (1GR-FE)	J23	B 38	T14	41
H11	37	J24	38		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
3F	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

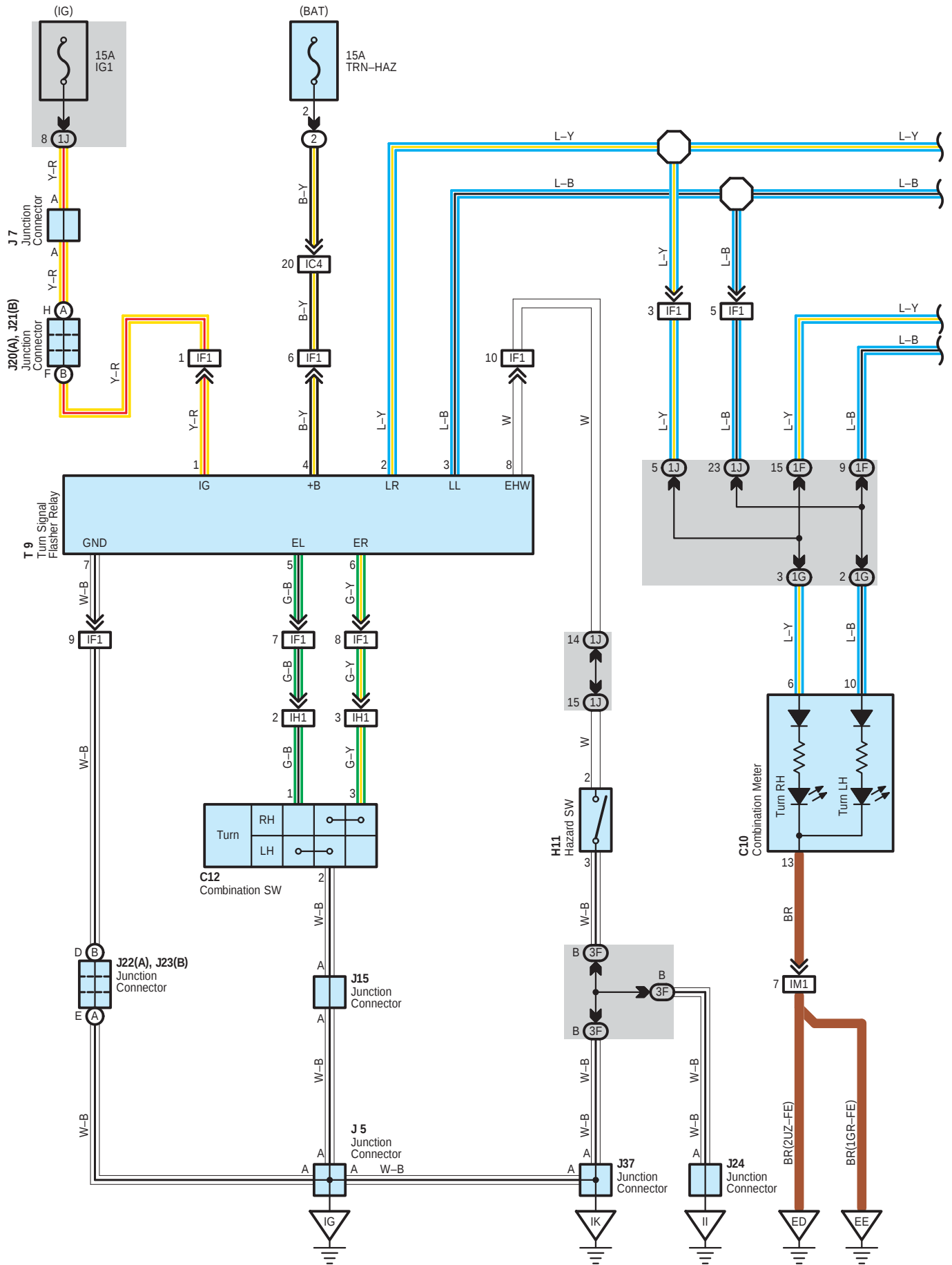
: Connector Joining Wire Harness and Wire Harness

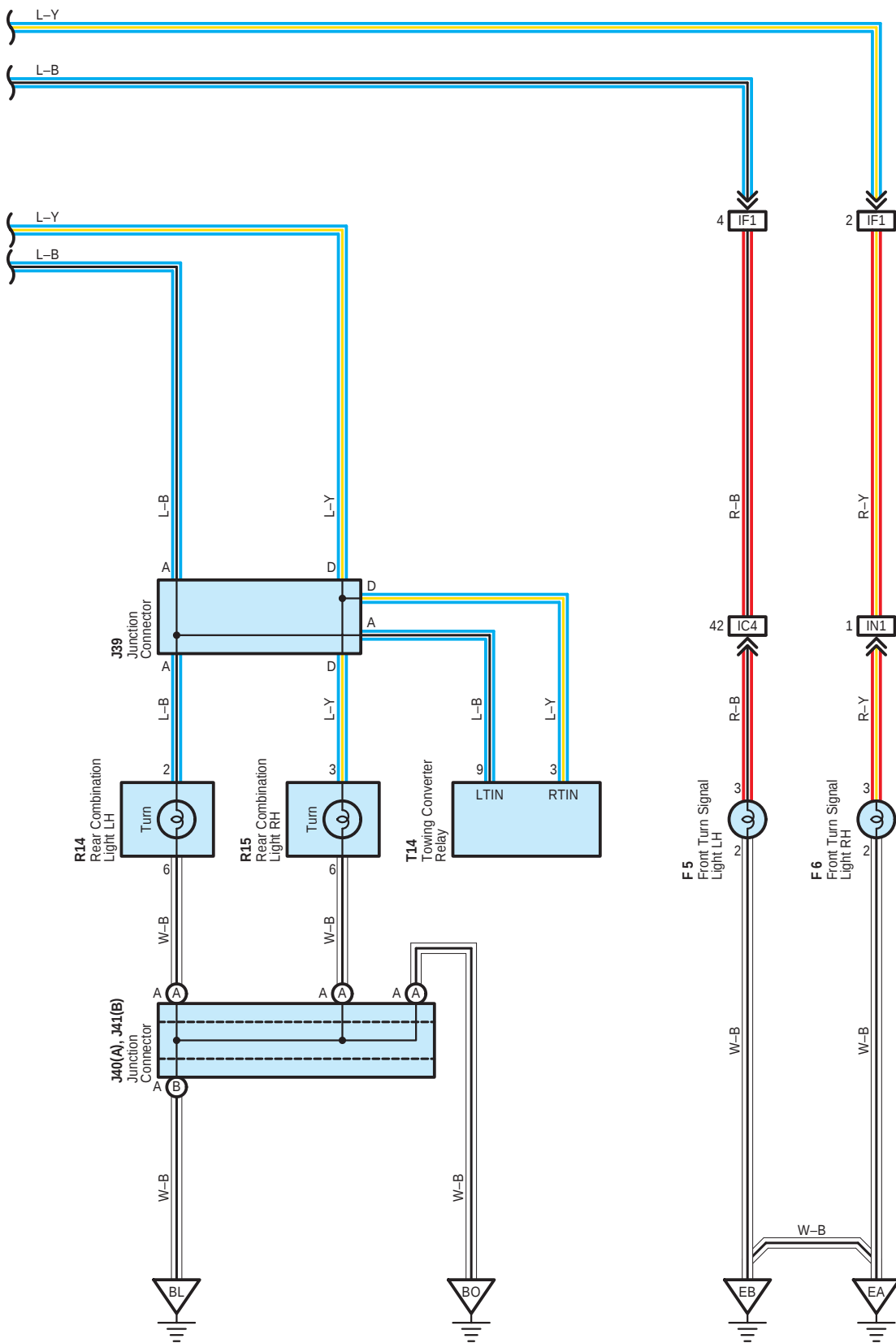
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	45 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Turn Signal and Hazard Warning Light without DRL





Turn Signal and Hazard Warning Light without DRL

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C10	37	J7	38	J39	40
C12	37	J15	38	J40	A 40
F5	32 (2UZ-FE)	J20	A 38	J41	B 40
	34 (1GR-FE)	J21	B 38	R14	41
F6	32 (2UZ-FE)	J22	A 38	R15	41
	34 (1GR-FE)	J23	B 38	T9	39
H11	37	J24	38	T14	41
J5	38	J37	38		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
3F	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

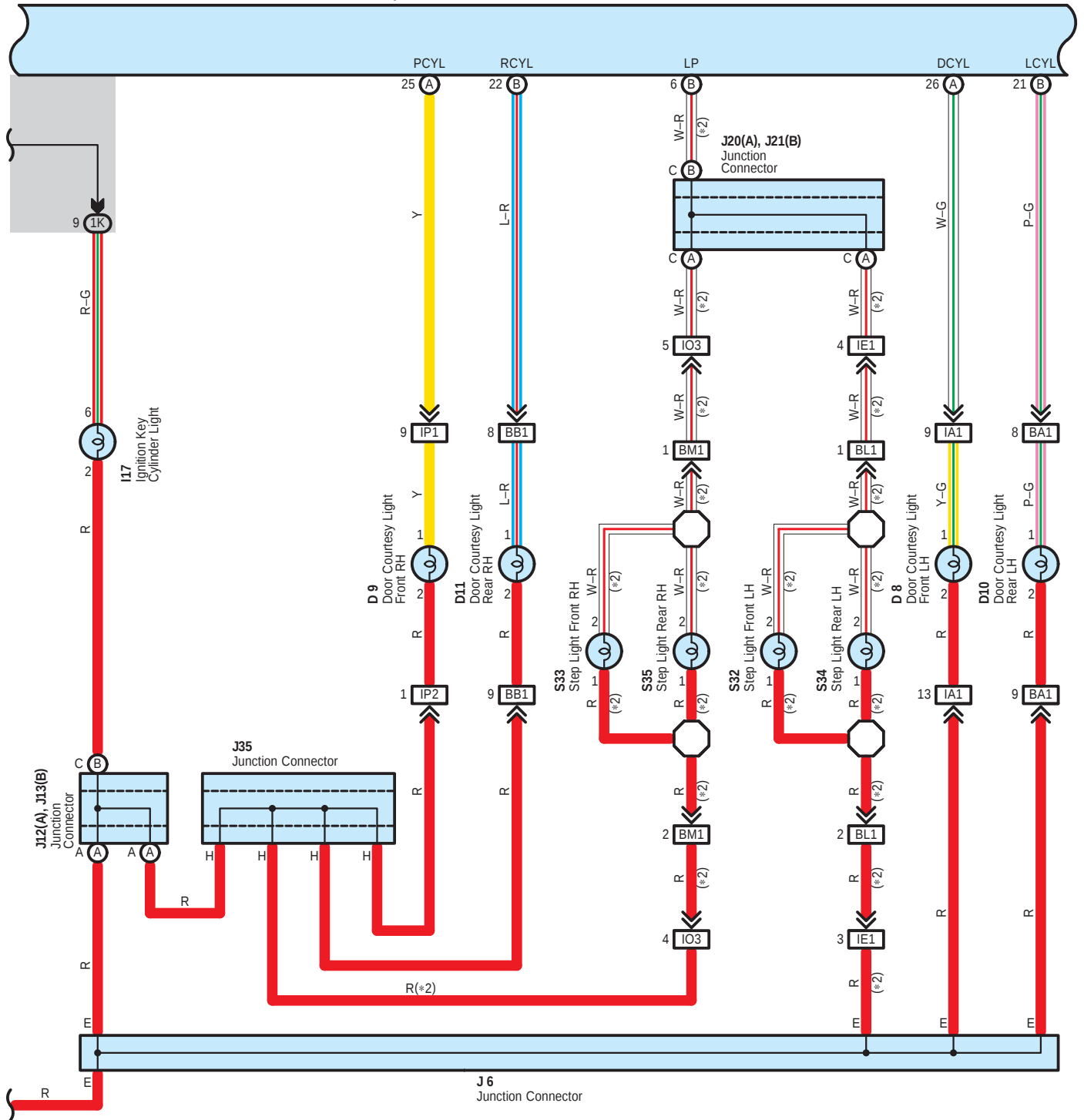
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IF1	46	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	45 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

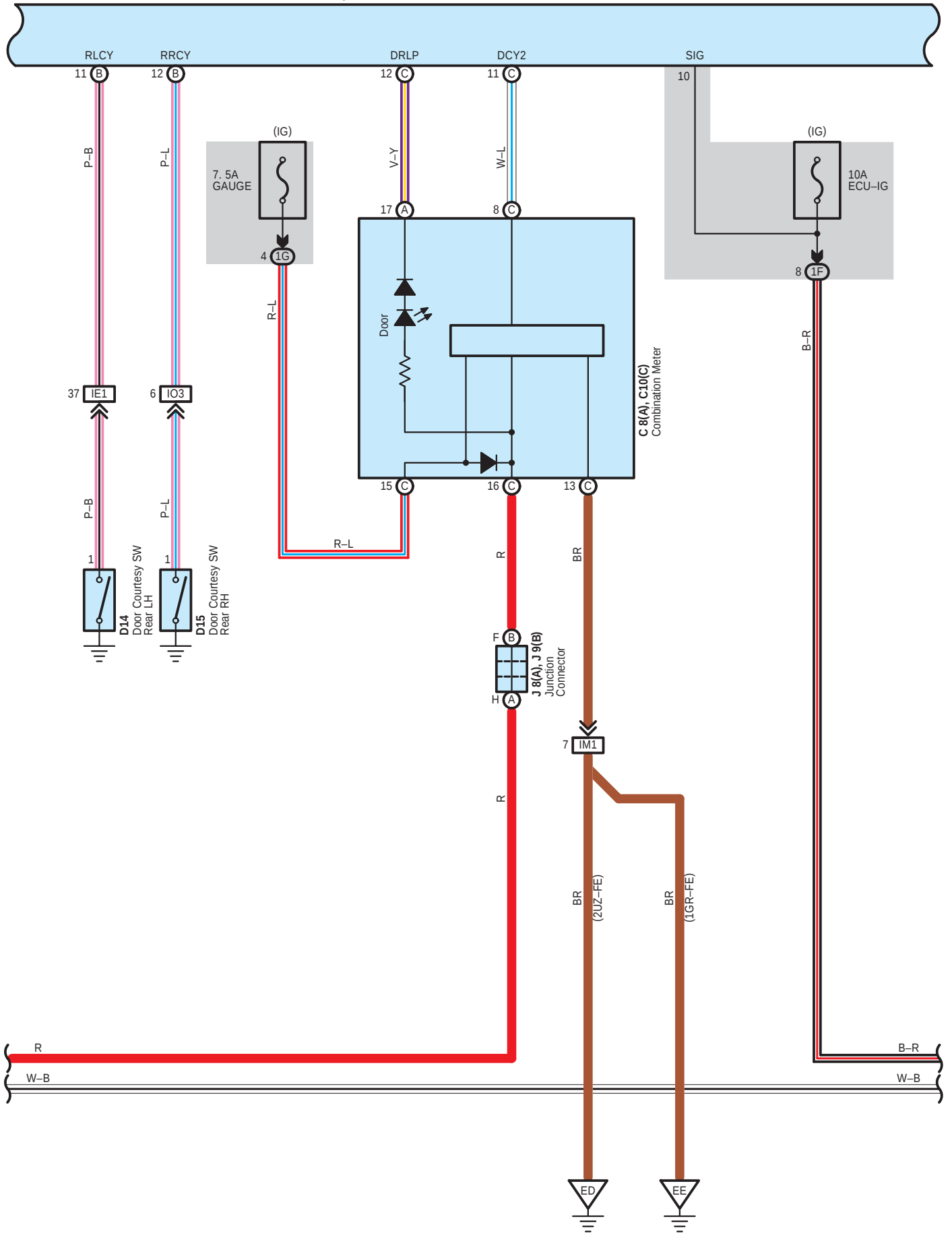
B 4(A), B 5(B), B 6(C)
Body ECU



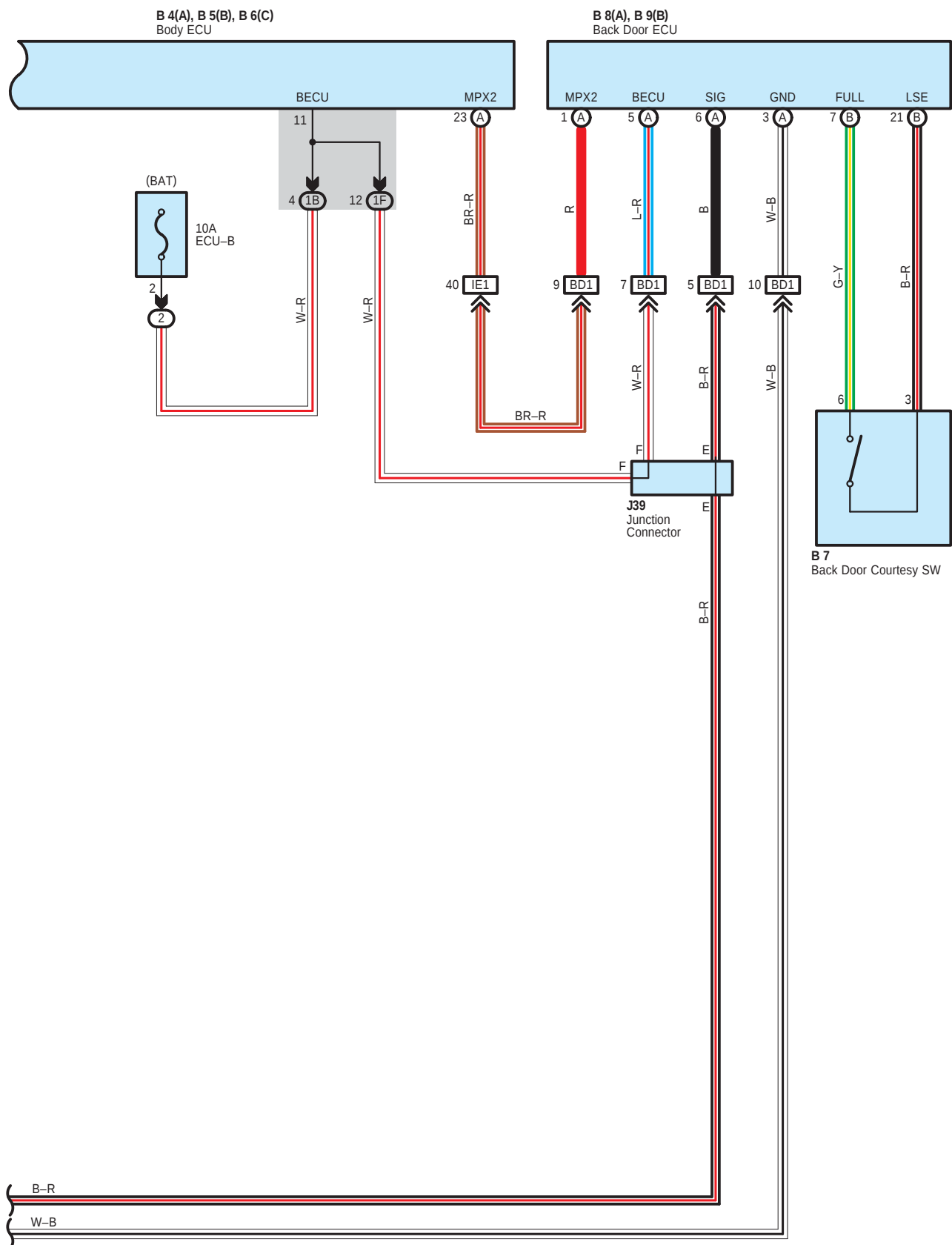
- * 1 : w/ Vanity Light
- * 2 : Limited
- * 3 : w/ Rear Seat Entertainment System
- * 4 : w/o Rear Seat Entertainment System



B 4(A), B 5(B), B 6(C)
Body ECU



Interior Light



System Outline

The interior light is controlled by the body ECU. This system has following features.

1. Normal Operation

- * When one of the doors opened, the interior light, luggage compartment light and open door warning light is turned on.
When the all doors are closed, the interior light, luggage compartment light and open door warning light is turned off.

2. Illuminated Entry System

- * When a door is unlocked through a key operation or transmitter operation, or if a door is opened or closed, the illuminated entry system turns ON the interior light and the ignition key illumination.
- * If the ignition switch is turned to the ACC or ON position or if all doors are locked during the 15 seconds in which these lights are ON, they will immediately turn OFF.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B4	A 36	D14	40	J21	B 38
B5	B 36	D15	40	J35	38
B6	C 36	I17	37	J39	40
B7	40	I20	A 40	J40	A 40
B8	A 40		B 40	J41	B 40
B9	B 40	J5	38	L2	40
C8	A 37	J6	38	P7	41
C10	C 37	J7	38	S32	41
D7	40	J8	A 38	S33	41
D8	40	J9	B 38	S34	41
D9	40	J12	A 38	S35	41
D10	40	J13	B 38	V6	41
D11	40	J18	A 38	V7	41
D12	40	J19	B 38		
D13	40	J20	A 38		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1H		
1J		
1K		

Interior Light

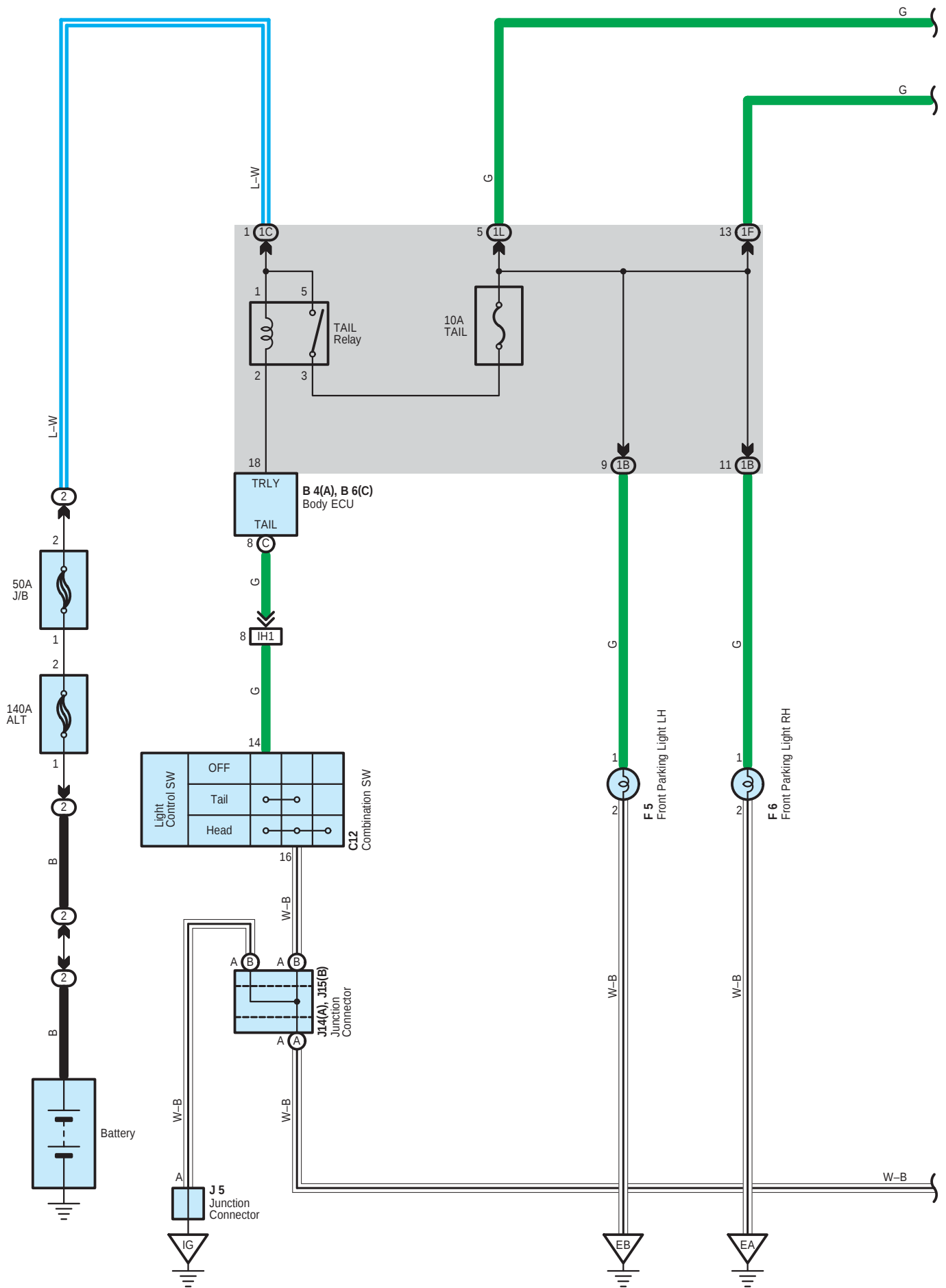
 : Connector Joining Wire Harness and Wire Harness

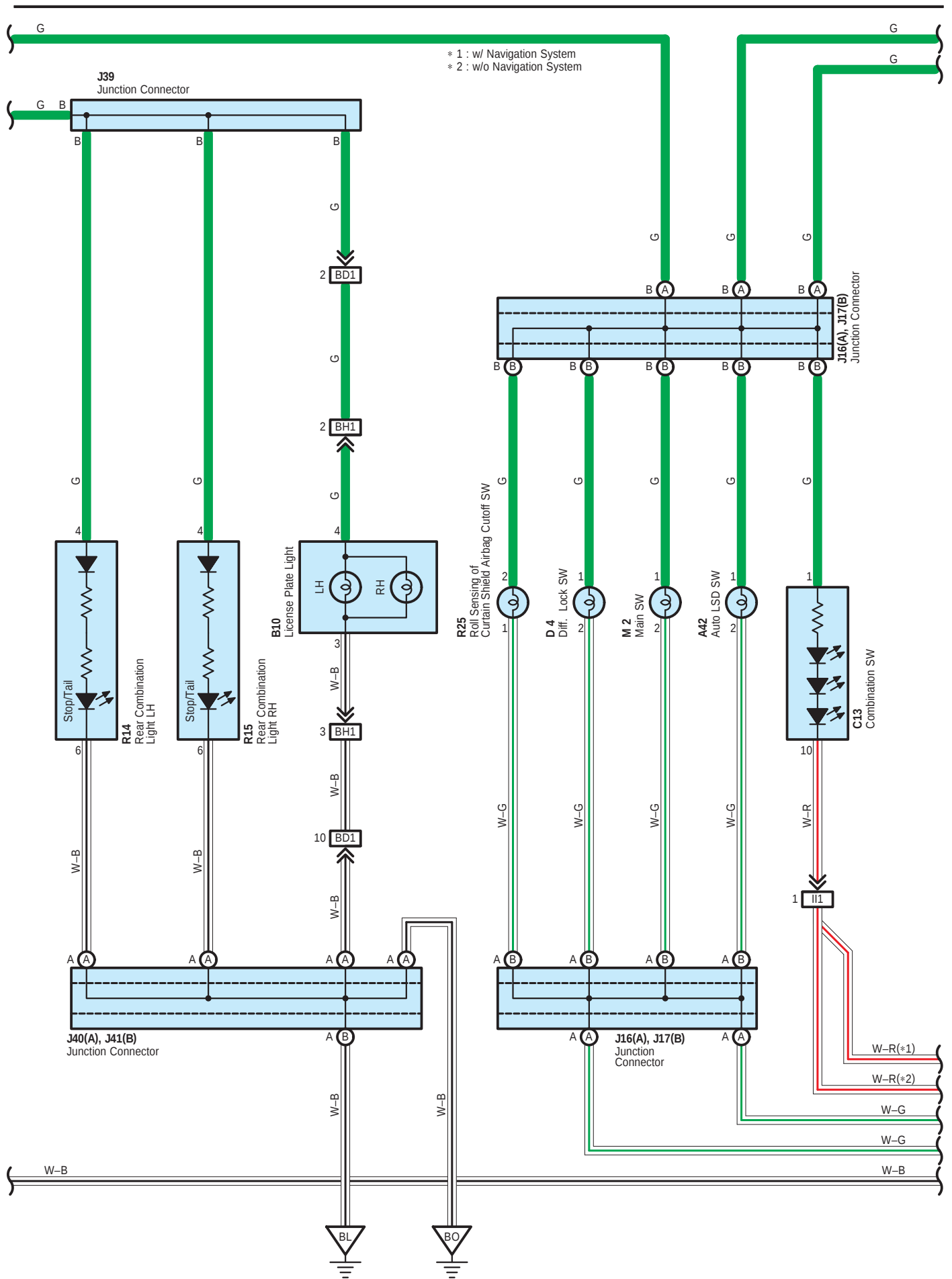
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC3	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BL1	48	Floor No.2 Wire and Step Rear Floor LH Wire (Near the Side Step LH)
BM1	48	Floor Wire and Step Rear Floor RH Wire (Near the Side Step RH)

 : Ground Points

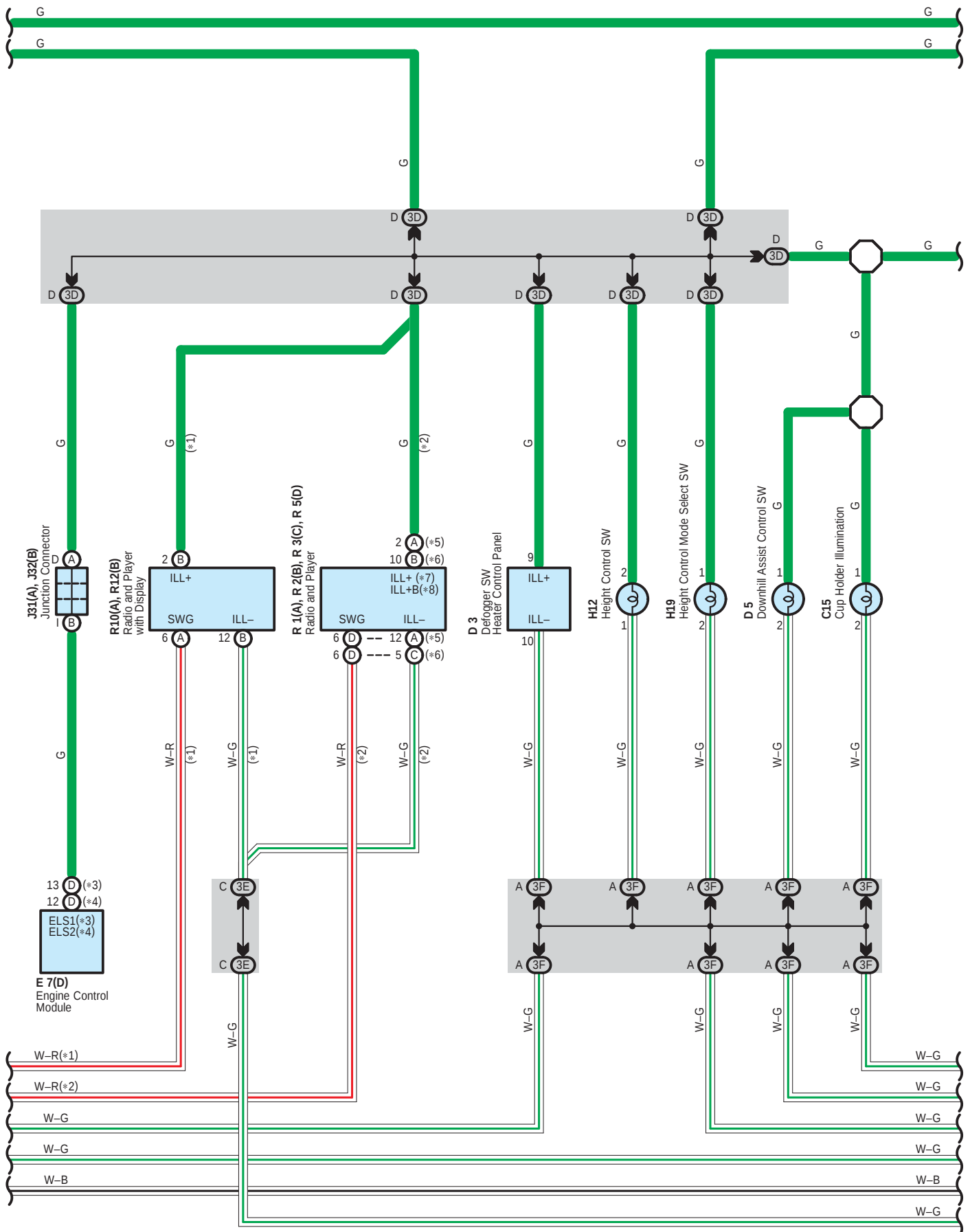
Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

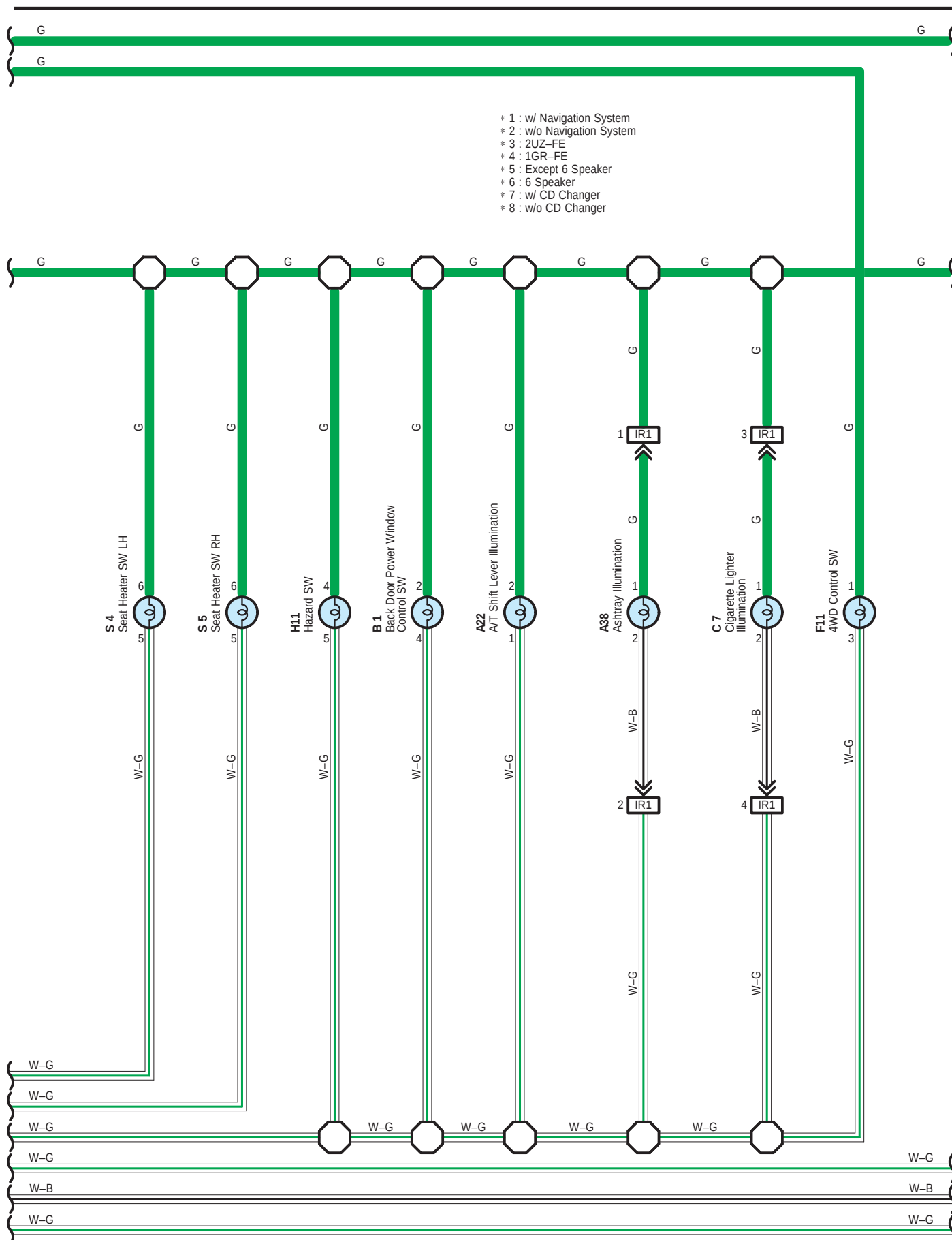
Taillight and Illumination



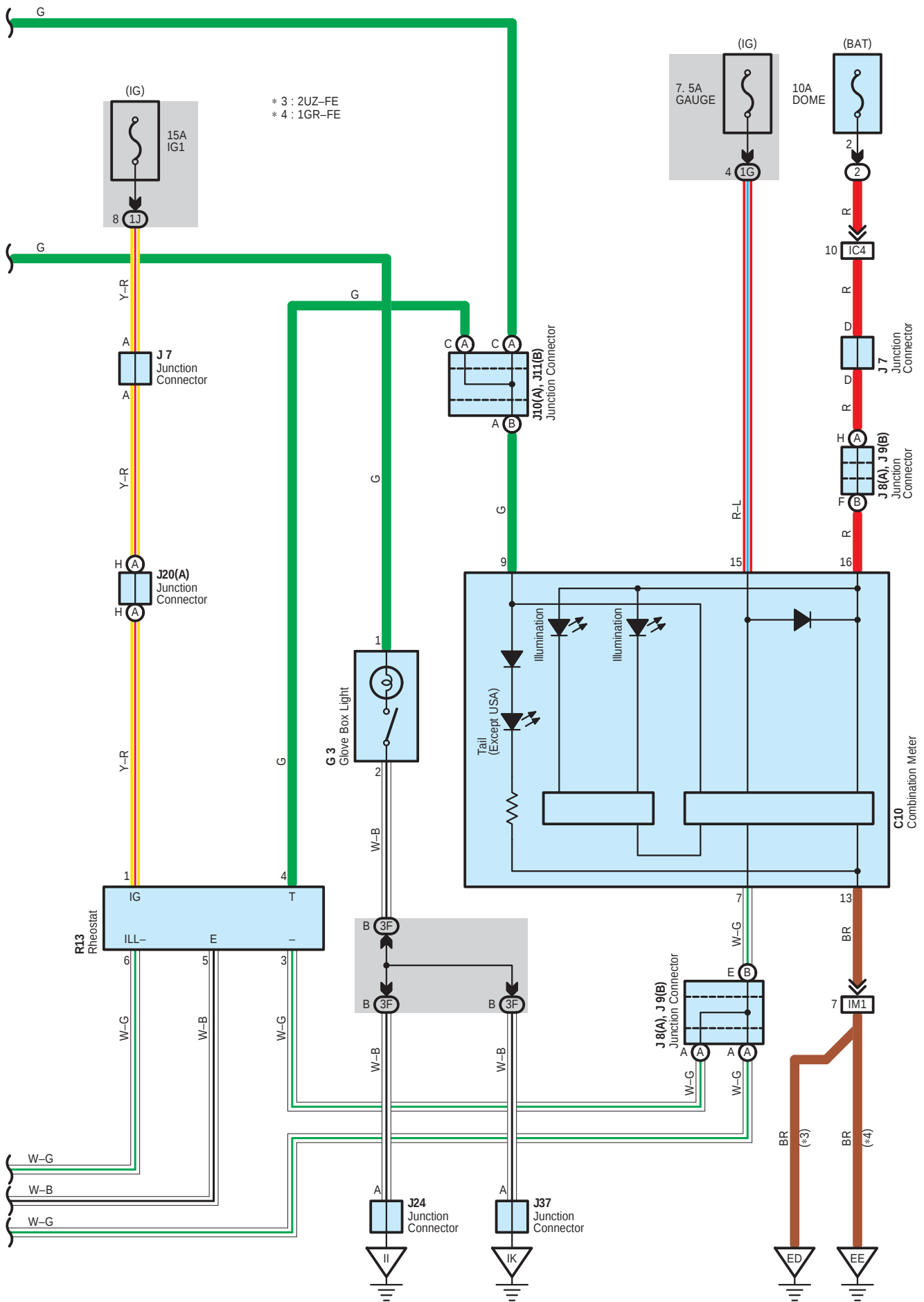


Taillight and Illumination





Taillight and Illumination



☐ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A22	36	F6	34 (1GR-FE)	J32	B 38
A38	36	F11	37	J37	38
A42	36	G3	37	J39	40
B1	36	H11	37	J40	A 40
B4	A 36	H12	37	J41	B 40
B6	C 36	H19	37	M2	39
B10	40	J5	38	R1	A 39
C7	37	J7	38	R2	B 39
C10	37	J8	A 38	R3	C 39
C12	37	J9	B 38	R5	D 39
C13	37	J10	A 38	R10	A 39
C15	37	J11	B 38	R12	B 39
D3	37	J14	A 38	R13	39
D4	37	J15	B 38	R14	41
D5	37	J16	A 38	R15	41
E7	D 37	J17	B 38	R25	39
F5	32 (2UZ-FE)	J20	A 38	S4	39
	34 (1GR-FE)	J24	38	S5	39
F6	32 (2UZ-FE)	J31	A 38		

☐ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1C		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1L		
3D	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3E		
3F		

☐ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
II1	46	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IR1	47	Instrument Panel Wire and Cigarette Lighter Wiring Assembly (Rear Console)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BH1	48	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)

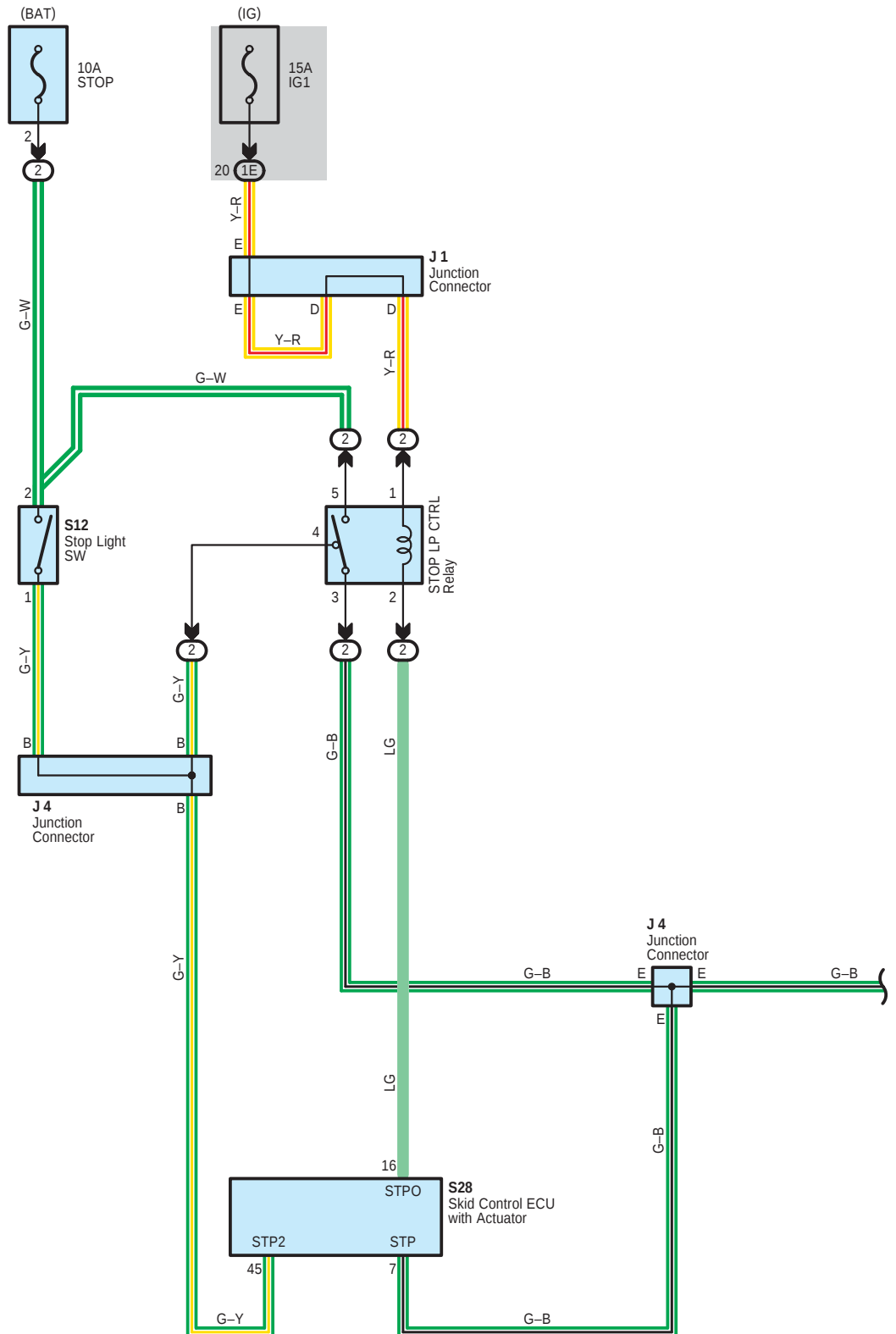
Taillight and Illumination



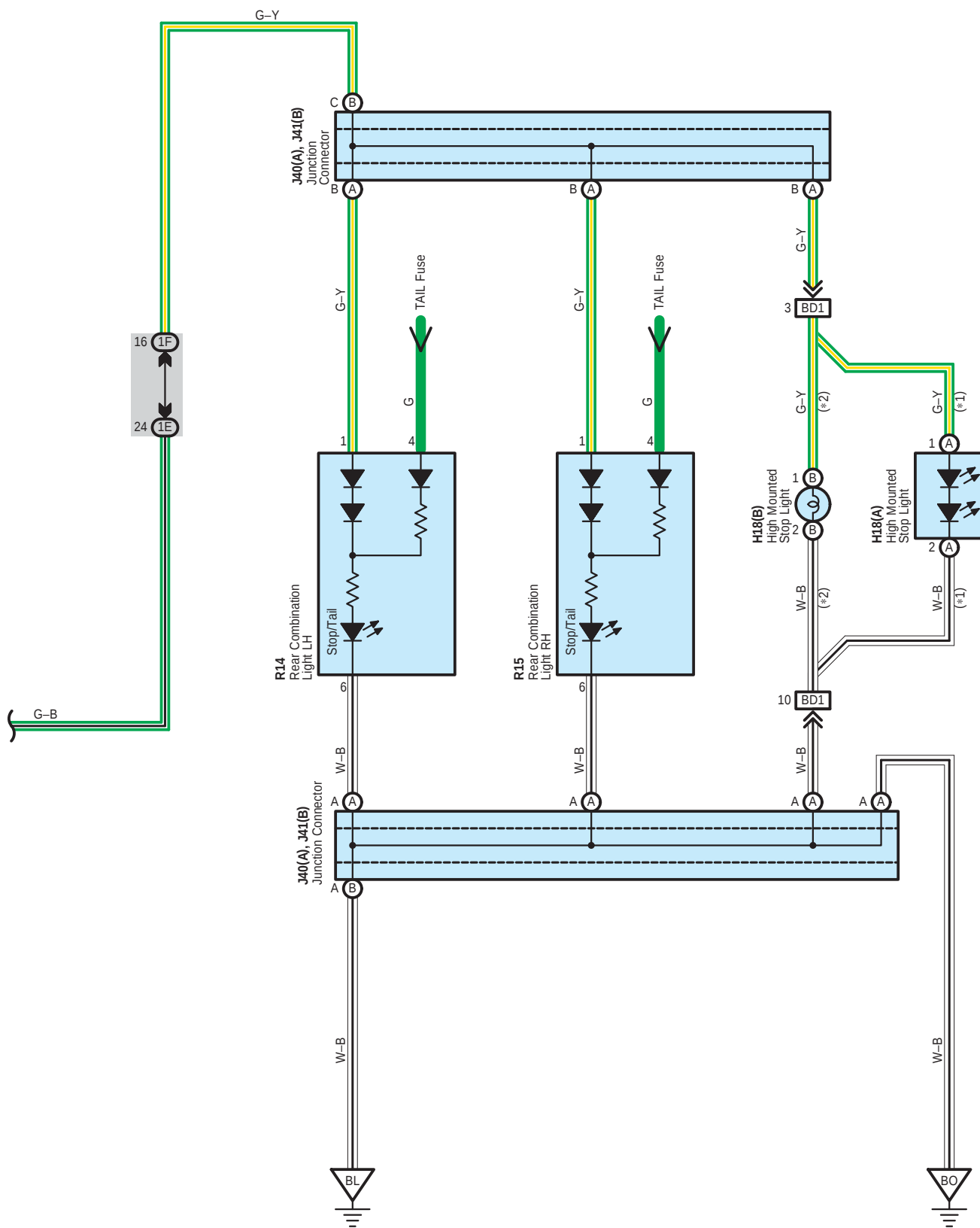
: Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	45 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Stop Light



- * 1 : w/ Rear Spoiler
- * 2 : w/o Rear Spoiler



Stop Light

: Parts Location

Code		See Page	Code		See Page	Code		See Page
H18	A	40	J4		38	R15		41
	B	40	J40	A	40	S12		39
J1		33 (2UZ-FE)	J41	B	40	S28	33 (2UZ-FE)	
		35 (1GR-FE)	R14		41		35 (1GR-FE)	

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

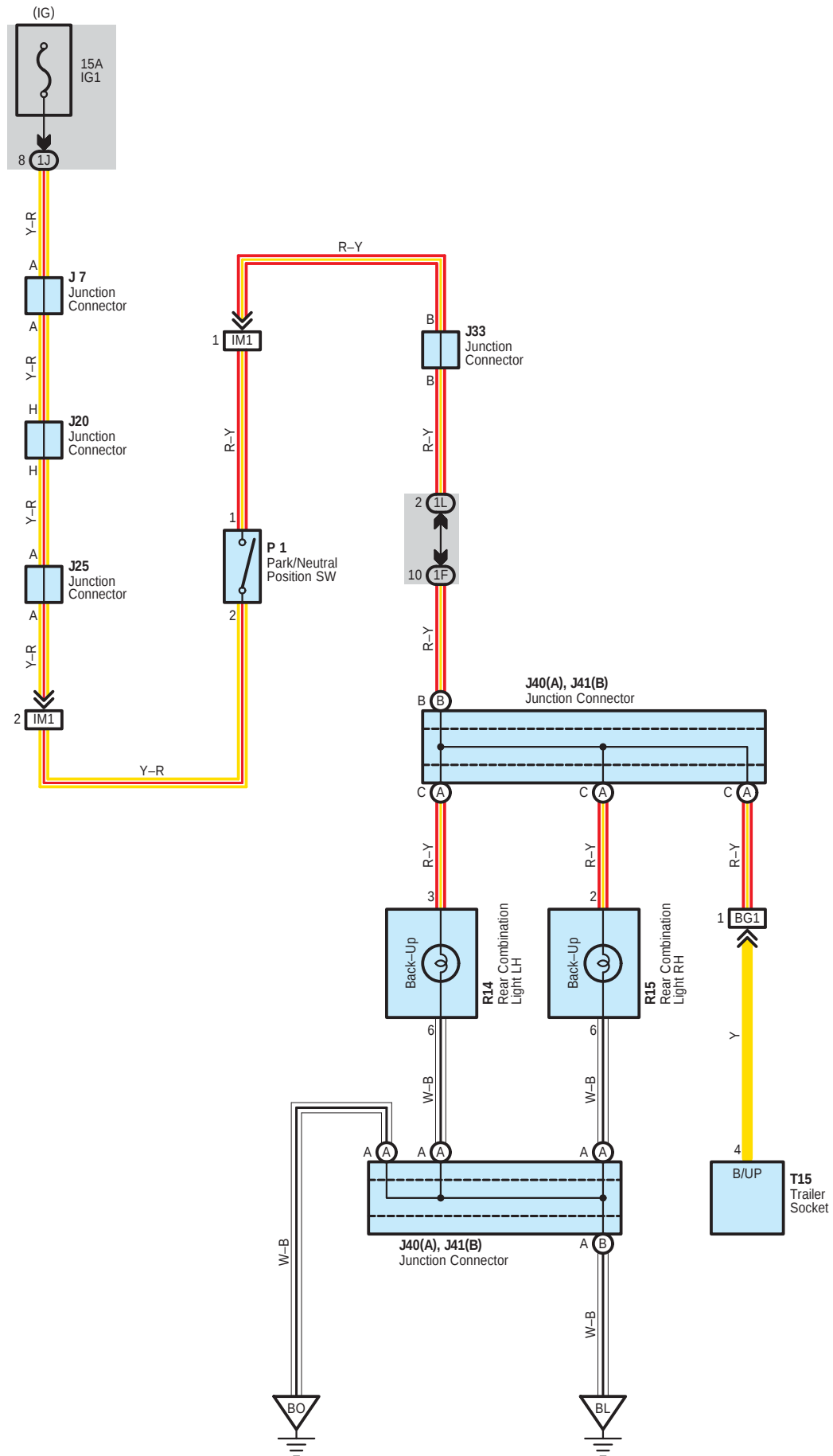
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

: Ground Points

Code	See Page	Ground Points Location
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Back-Up Light



 : Parts Location

Code	See Page	Code		See Page	Code	See Page
J7	38	J40	A	40	R14	41
J20	38	J41	B	40	R15	41
J25	38	P1		33 (2UZ-FE)	T15	41
J33	38			35 (1GR-FE)		

 : Junction Block and Wire Harness Connector

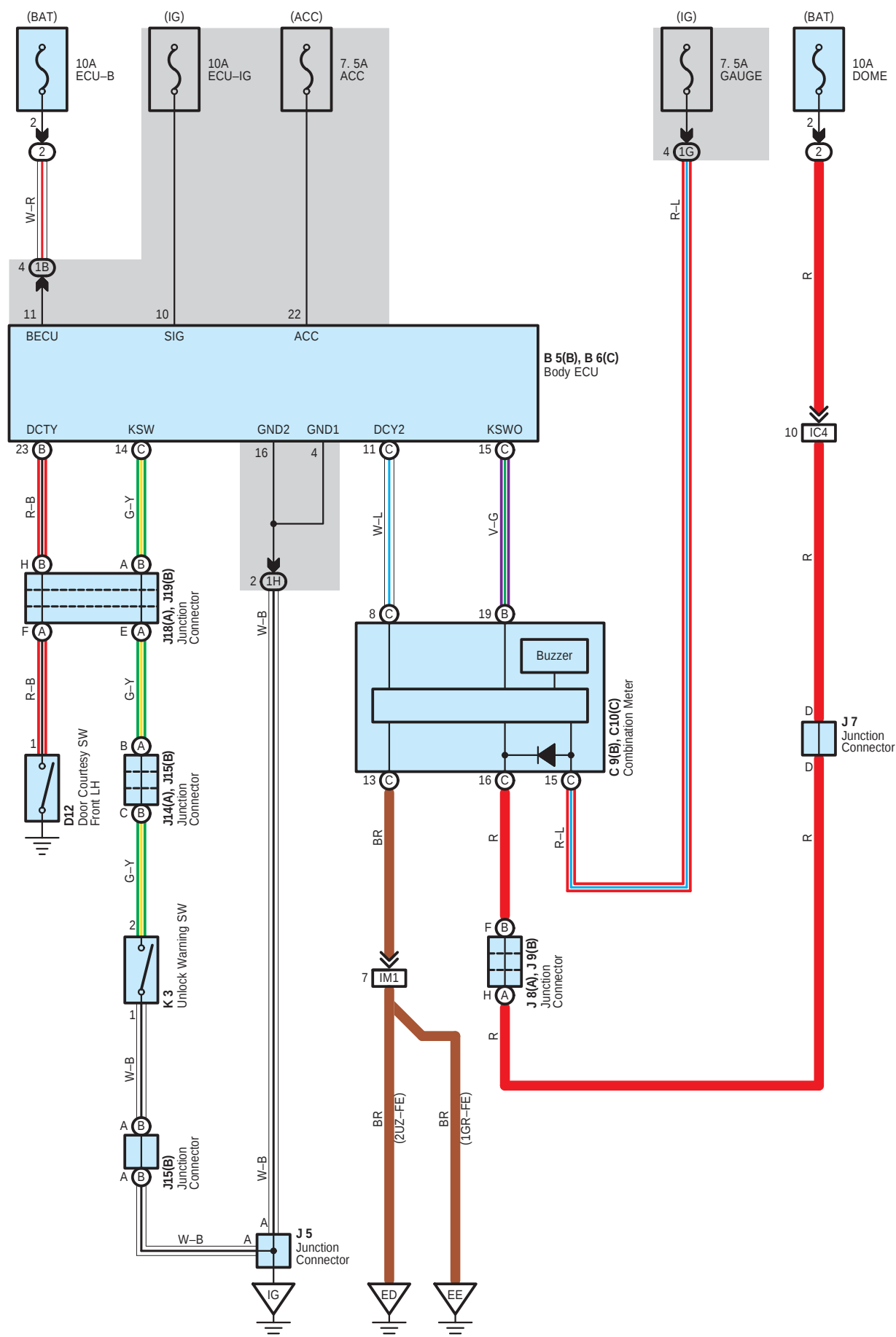
Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1L		

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
BG1	48	Floor No.2 Wire and Frame No.3 Wire (Rear Side of Side Frame LH)

 : Ground Points

Code	See Page	Ground Points Location
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH



System Outline

Key Reminder System

With the ignition key inserted in the key cylinder (Unlock warning SW on), the ignition SW still off and driver's door open (Door courtesy SW on), when a signal is input to TERMINAL (B) 23 of the body ECU, the body ECU operates, current flows from TERMINAL (C) 15 of the ECU to TERMINAL (B) 19 of the combination meter to GROUND and key reminder buzzer sounds.

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B5	B	36	J5		38	J15	B	38
B6	C	36	J7		38	J18	A	38
C9	B	37	J8	A	38	J19	B	38
C10	C	37	J9	B	38	K3		39
D12		40	J14	A	38			

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

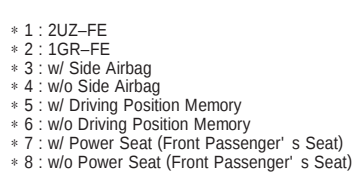
Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1H		

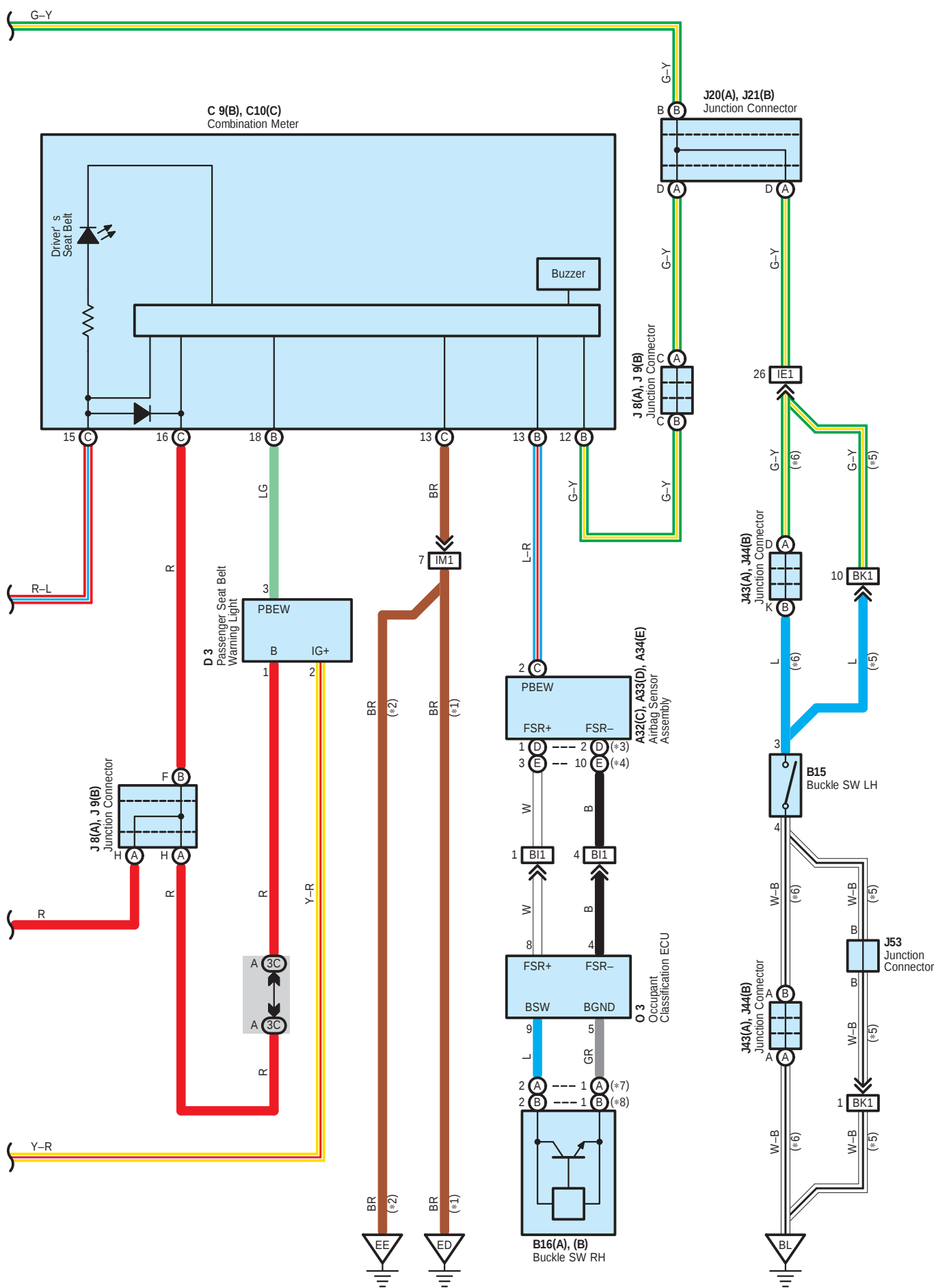
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)

▽ : Ground Points

Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel





Seat Belt Warning

System Outline

When the driver has not fastened the seat belt while the ignition SW is ON, the driver seat belt warning light blinks, and a warning buzzer comes on.
Also, in the front passenger seat, a sensor recognizes passenger, and when the passenger has not fastened the seat belt, the front passenger seat belt warning light blinks.

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
A32	C	36	B16	B	43 (*2)	J21	B	38
A33	D	36	C9	B	37	J25		38
A34	E	36	C10	C	37	J43	A	42 (*1)
B4	A	36	D3		37			43 (*2)
B15		42 (*1)	J5		38	J44	B	42 (*1)
		43 (*2)	J7		38			43 (*2)
B16	A	42 (*1)	J8	A	38	J53		42 (*1)
		43 (*2)	J9	B	38	O3	42 (*1)	
	B	42 (*1)	J20	A	38		43 (*2)	

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1H		
1J		
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

□ : Connector Joining Wire Harness and Wire Harness

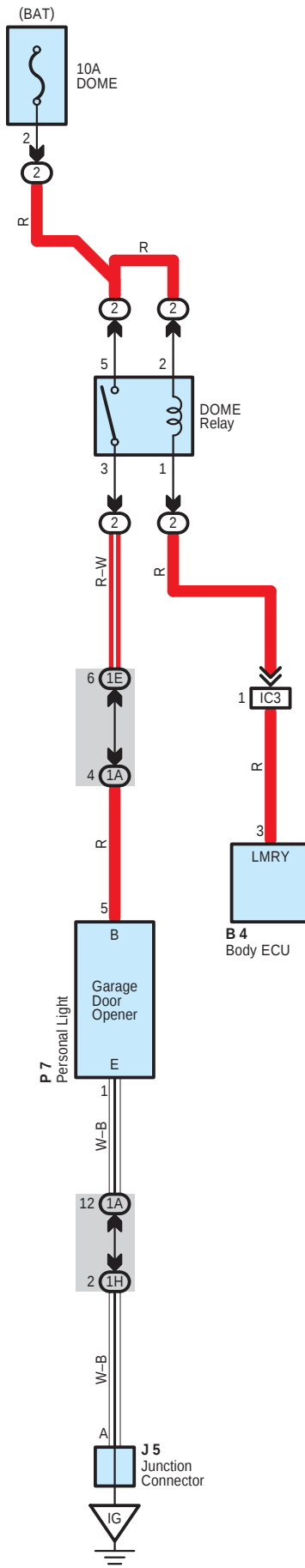
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
BI1	50 (*1)	Floor Wire and Seat No.1 Wire (Under the Front RH Seat)
	51 (*2)	
BK1	50 (*1)	Floor No.2 Wire and Seat No.2 Wire (Under the Front LH Seat)

▽ : Ground Points

Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
BL	48	Floor Seat Crossmember LH

* 1 : Power Seat * 2 : Manual Seat

Garage Door Opener



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
B4	36	J5	38	P7	41

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

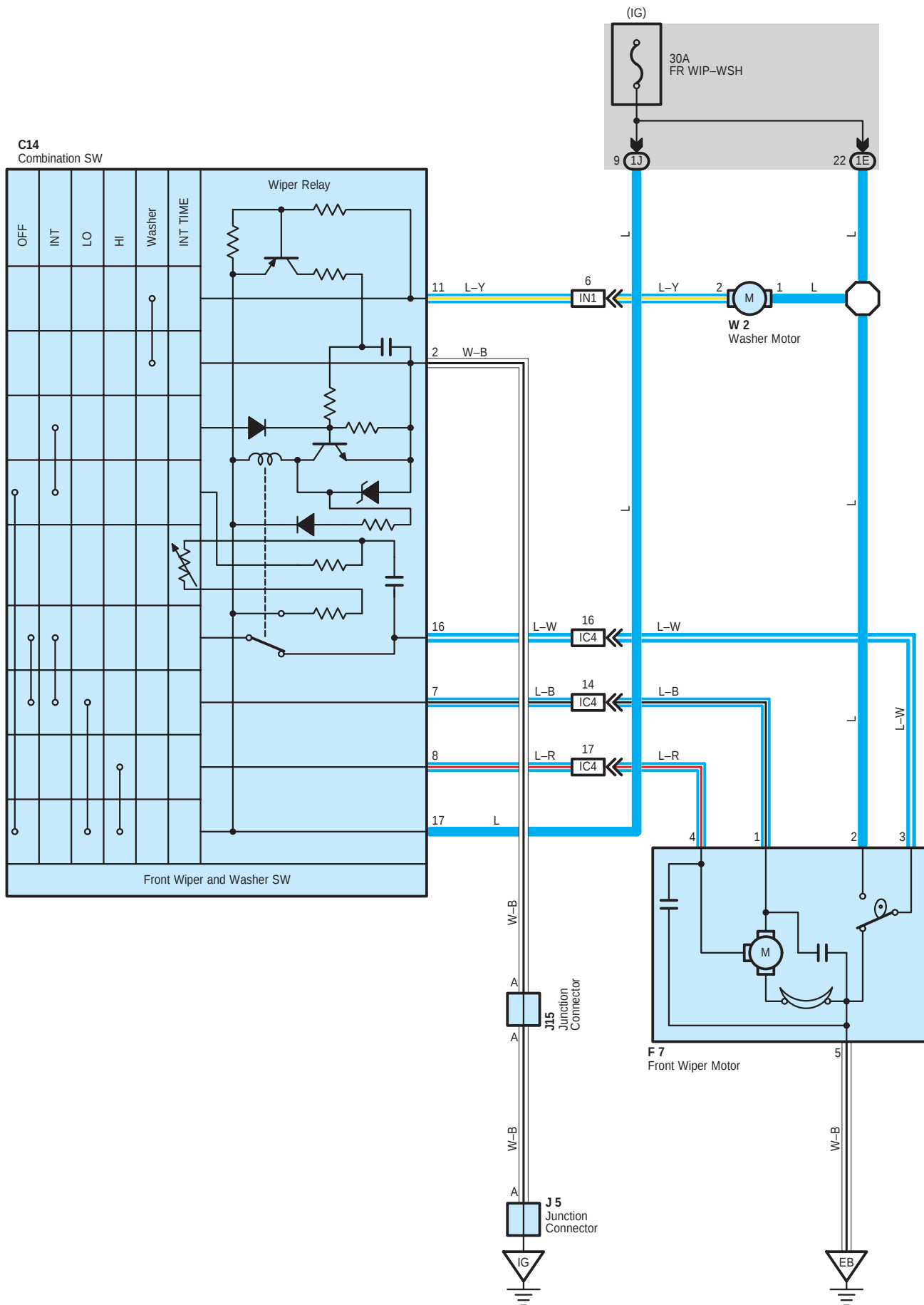
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)

 : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel

Front Wiper and Washer



System Outline

With the ignition SW turned on, the current flows to TERMINAL 17 of the wiper and washer SW, TERMINAL 1 of the washer motor and TERMINAL 2 of the front wiper motor through the FR WIP–WSH fuse.

1. Low Speed Position

With the wiper and washer SW turned to LO position, the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 1 of the front wiper motor to TERMINAL 5 to GROUND and causes the front wiper motor to run at low speed.

2. High Speed Position

With the wiper and washer SW turned to HI position, the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 8 to TERMINAL 4 of the front wiper motor to TERMINAL 5 to GROUND and causes the front wiper motor to run at high speed.

3. INT Position

With the wiper and washer SW turned to INT position, the wiper relay operates and current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 2 to GROUND. This activates the intermittent circuit and the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 1 of the front wiper motor to TERMINAL 5 to GROUND and the wiper operates. Intermittent operation is controlled by a condenser charge and discharge function in the relay.

4. Washer Interlocking Operation

With the wiper and washer SW pulled to washer position (Washer SW ON position), the current flows from the FR WIP–WSH fuse to TERMINAL 1 of the washer motor to TERMINAL 2 to TERMINAL 11 of the wiper and washer SW to TERMINAL 2 to GROUND and causes the washer motor to run and the window washer to spray. Simultaneously, current flows from the FR WIP–WSH fuse to TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 1 of the front wiper motor to TERMINAL 5 to GROUND, causing the wiper to function.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C14	37	J5	38	W2	35 (1GR–FE)
F7	32 (2UZ–FE)	J15	38		
	34 (1GR–FE)	W2	33 (2UZ–FE)		

○ : Junction Block and Wire Harness Connector

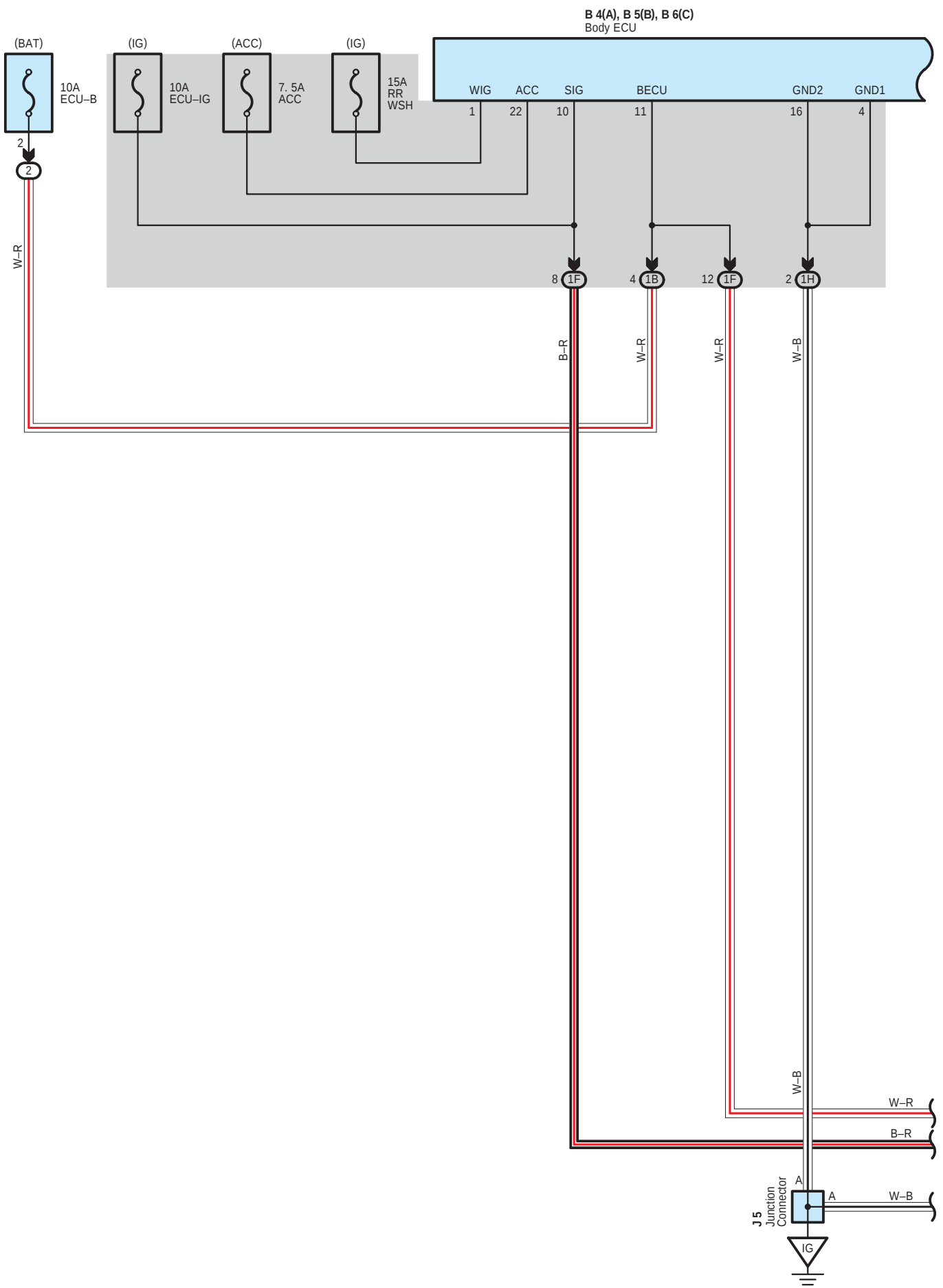
Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

□ : Connector Joining Wire Harness and Wire Harness

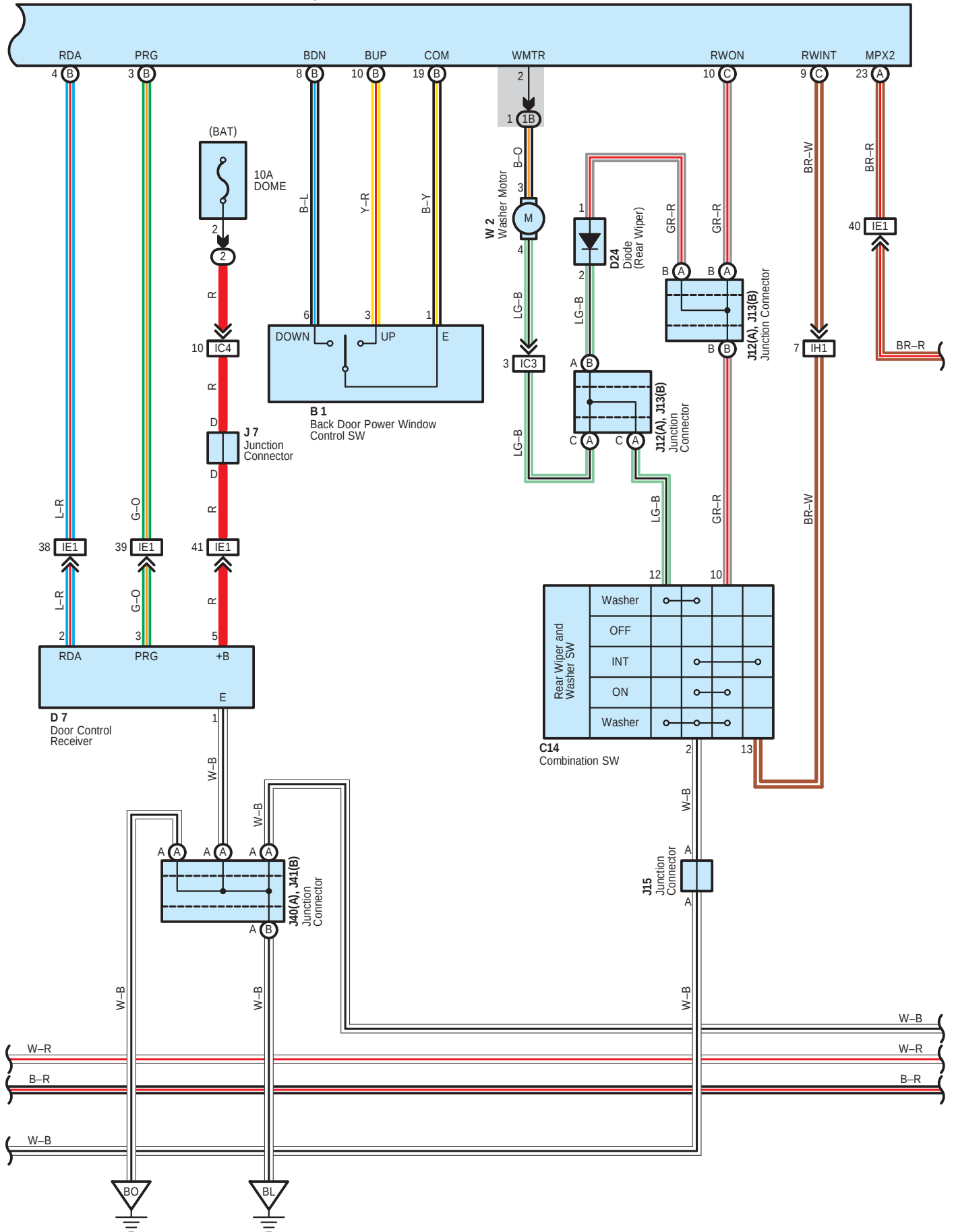
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ–FE)	Front Left Fender
	45 (1GR–FE)	
IG	46	Left Kick Panel

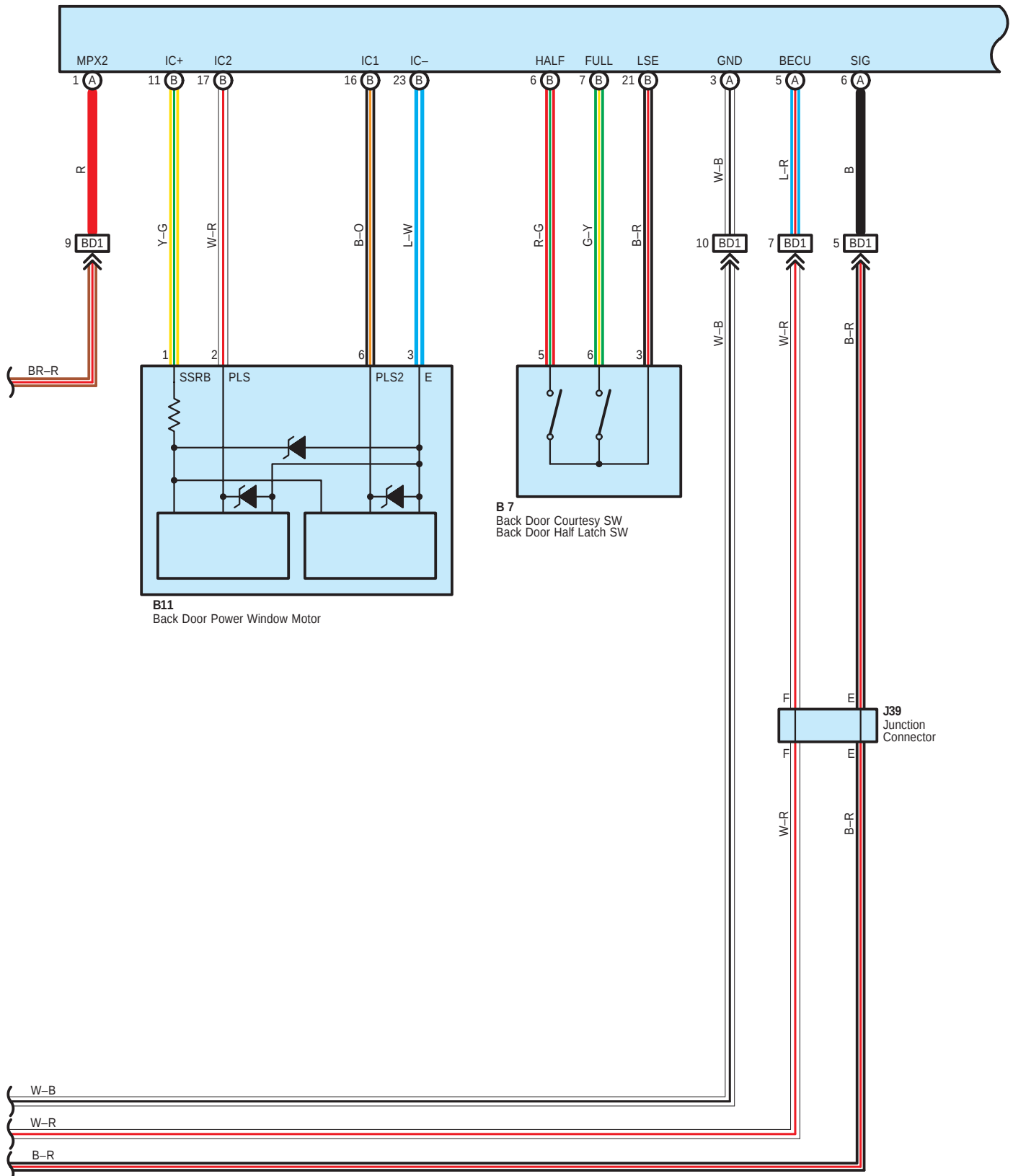


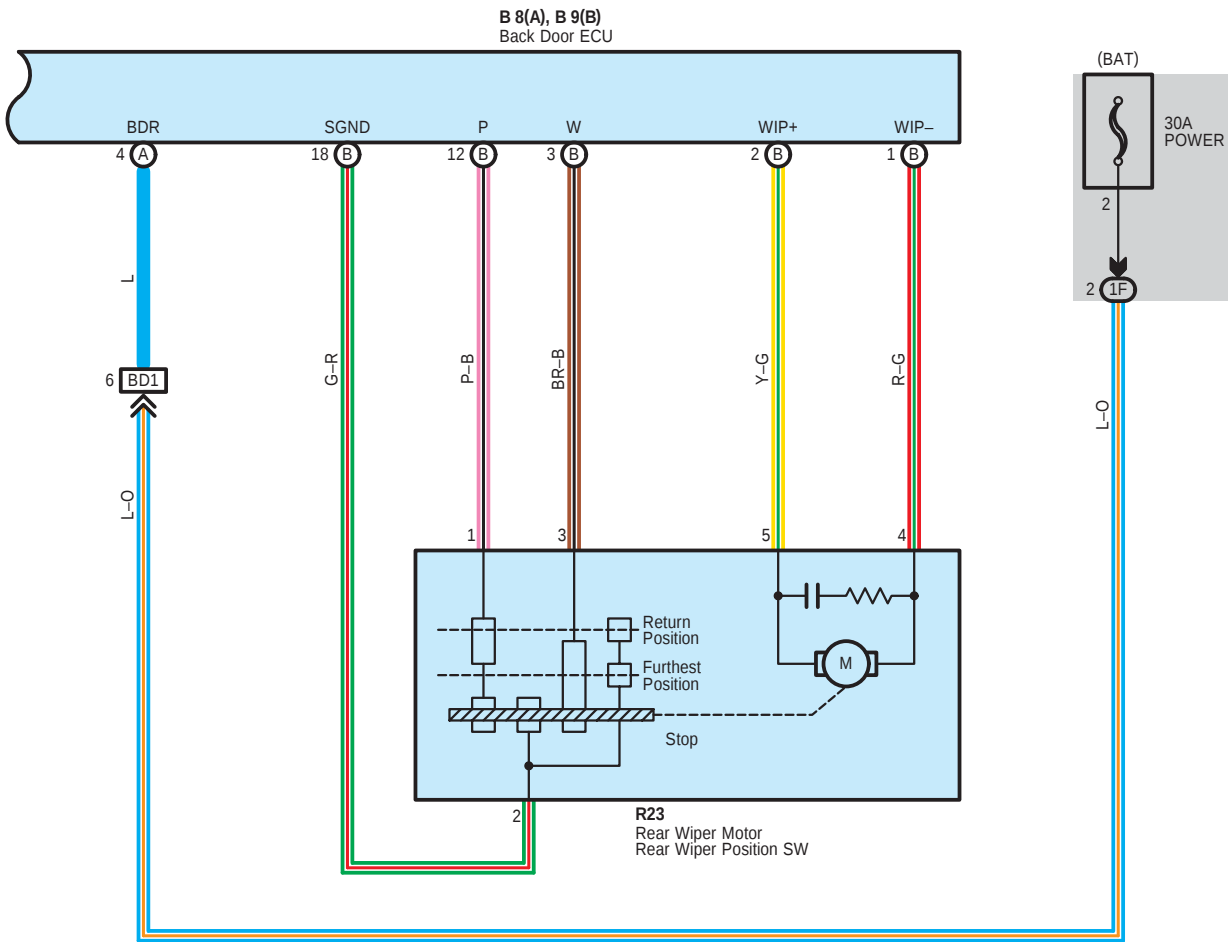
B 4(A), B 5(B), B 6(C)
Body ECU



Rear Wiper and Washer

B 8(A), B 9(B)
Back Door ECU





Rear Wiper and Washer

System Outline

* Rear wiper operation

The back door ECU initiates rear wiper intermittent or continuous operation according to rear wiper SW command from the body ECU. At this point, the position of the back door window is confirmed and, if it is not fully closed, the command will be neglected preventing the rear wiper from starting.

If the ignition SW is turned OFF while the rear wiper is operating, it comes to a stop but only after the wiper arm has returned to its initial position.

* Rear washer operation

Turning the rear washer SW ON, with the ignition SW ON and the back door window fully closed, initiates rear washer operation.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B1	36	C14	37	J39	40
B4	A 36	D7	40	J40	A 40
B5	B 36	D24	37	J41	B 40
B6	C 36	J5	38	R23	41
B7	40	J7	38	W2	33 (2UZ-FE)
B8	A 40	J12	A 38		35 (1GR-FE)
B9	B 40	J13	B 38		
B11	40	J15	38		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

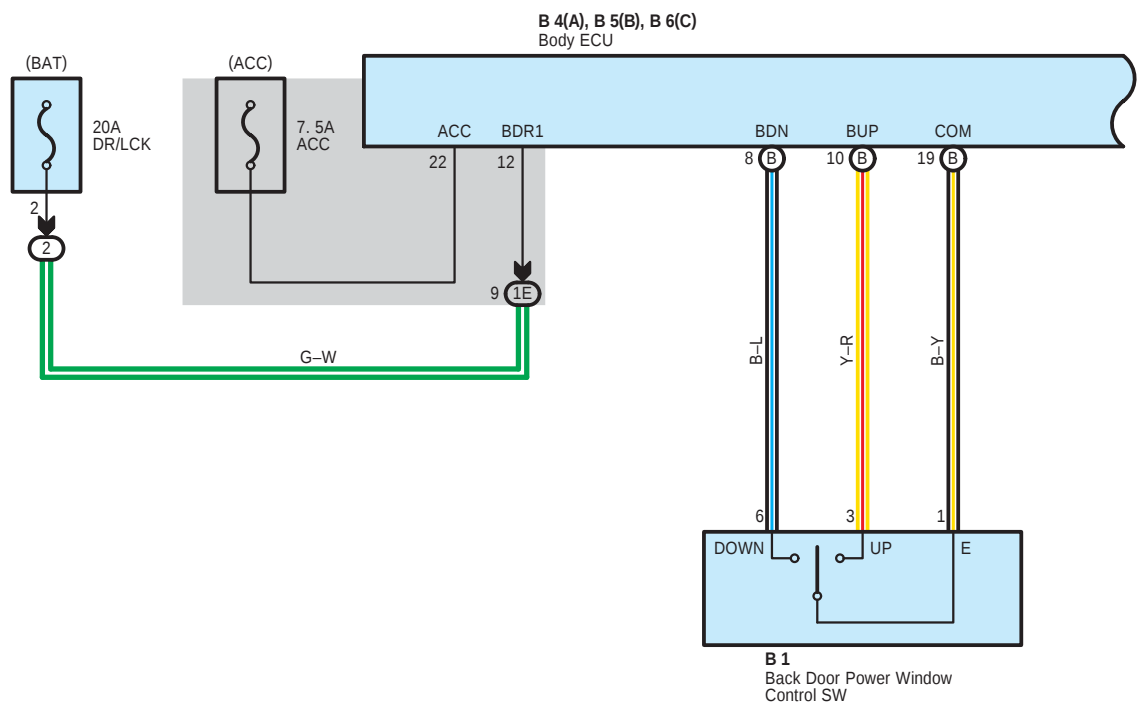
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IH1	46	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

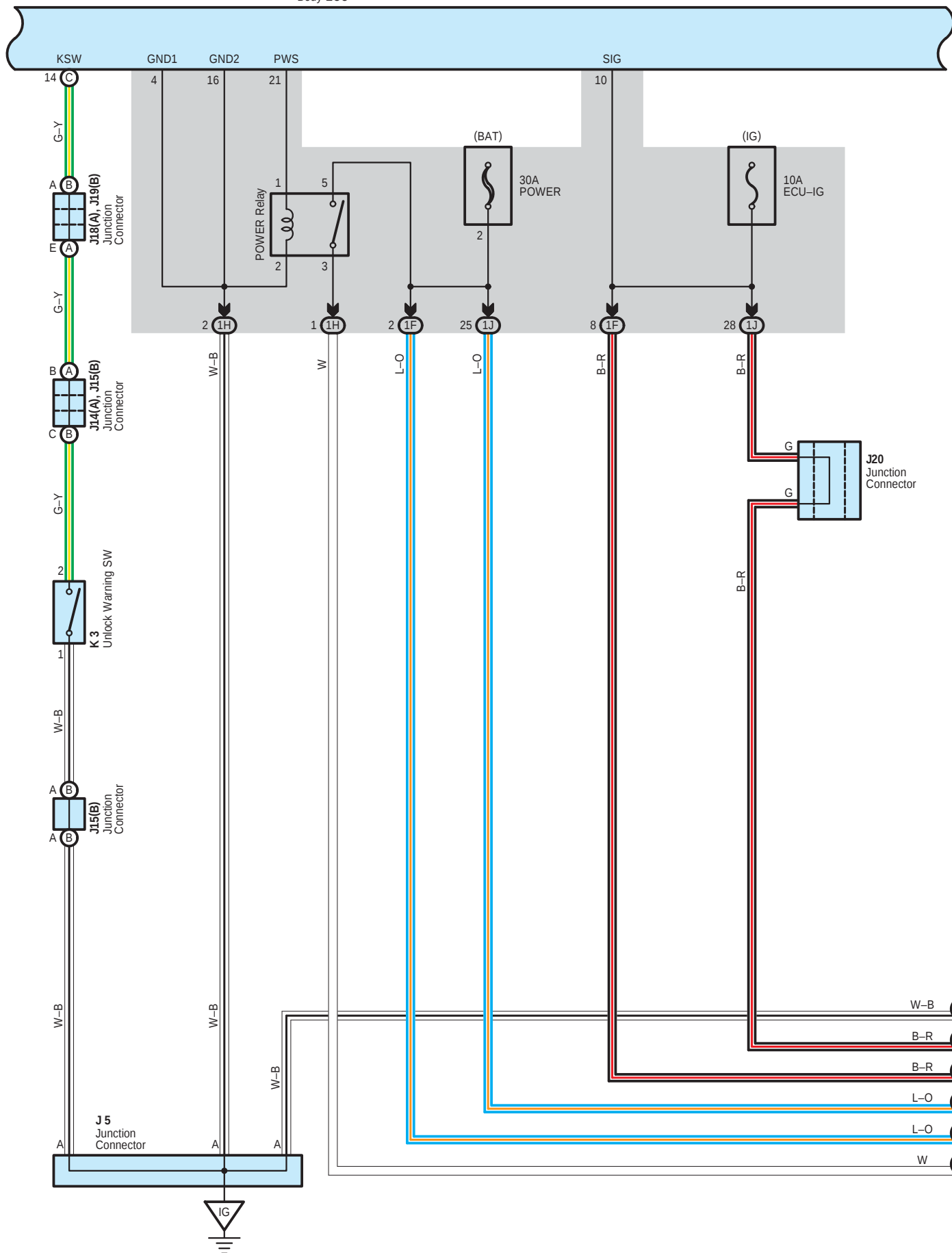
▽ : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Power Window

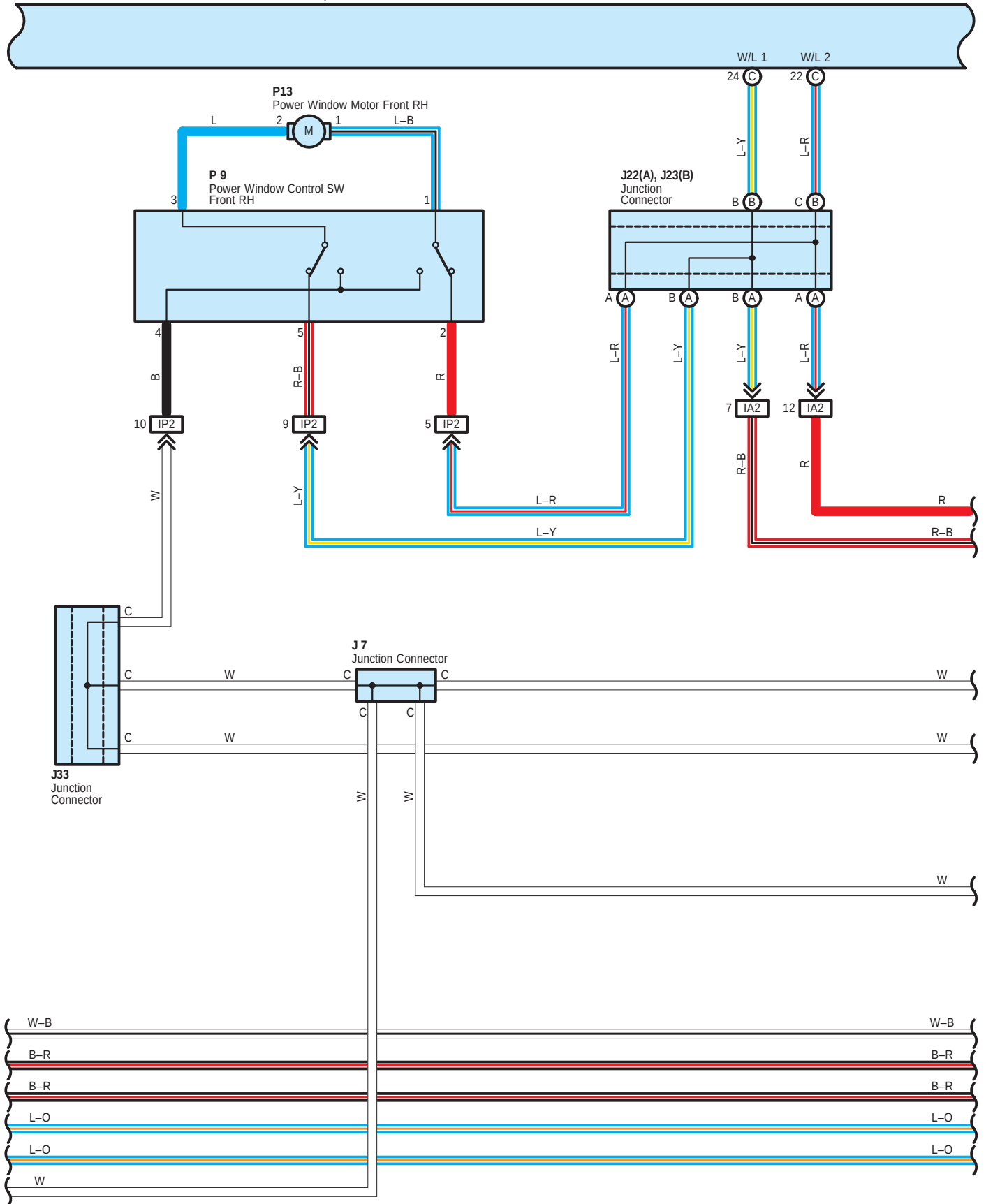


B 4(A), B 5(B), B 6(C)
Body ECU



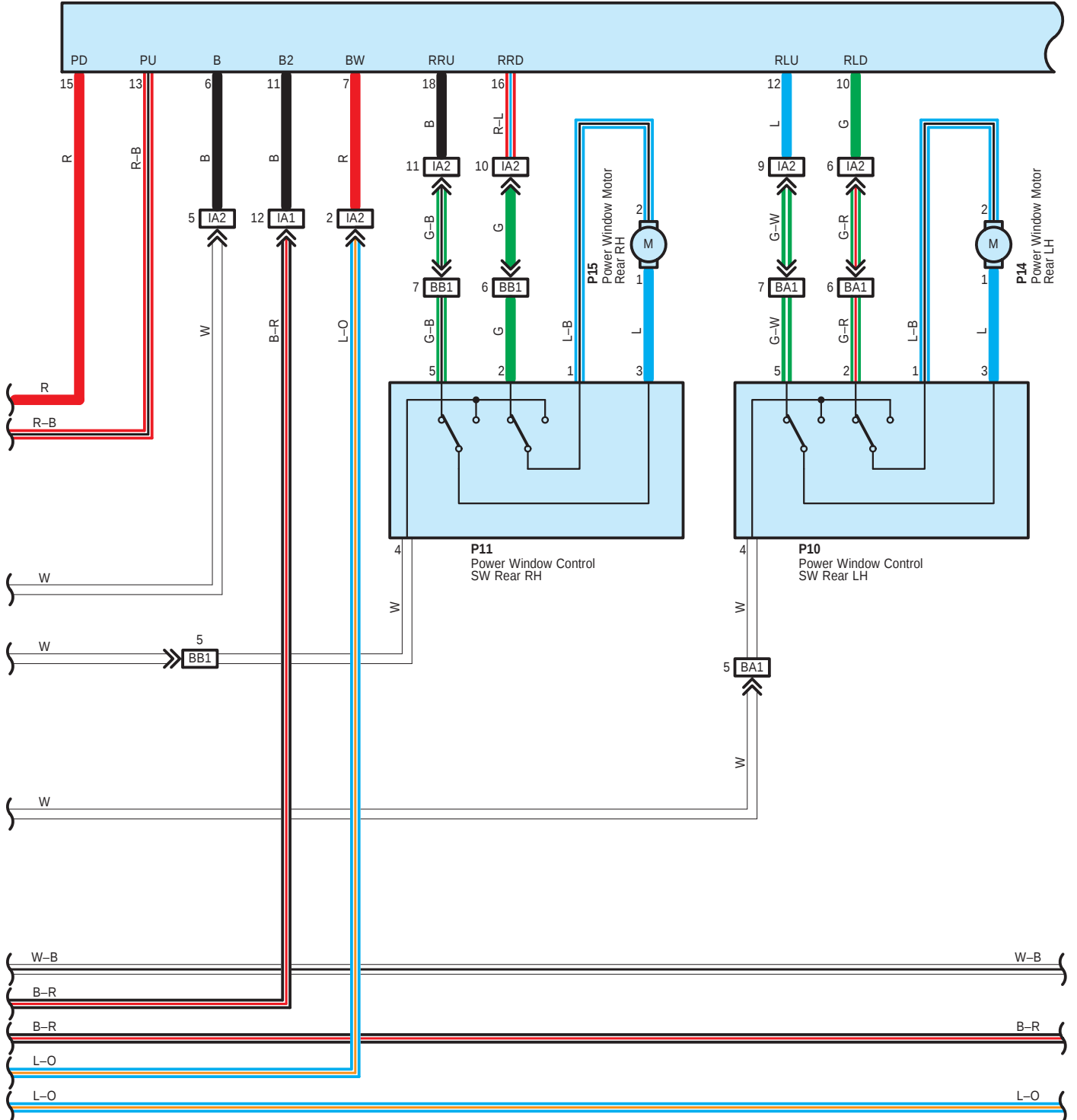
Power Window

B 4(A), B 5(B), B 6(C)
Body ECU



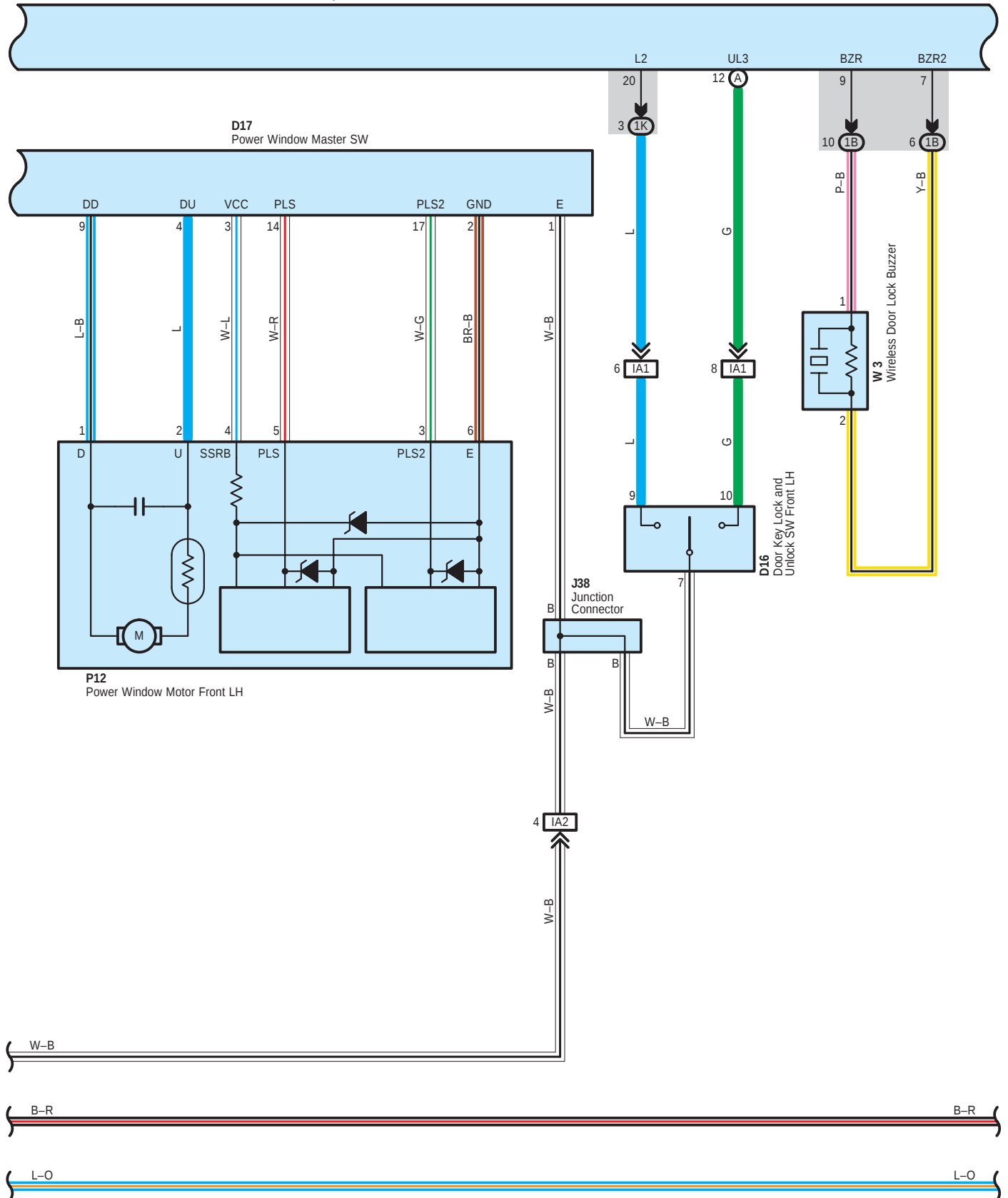
B 4(A), B 5(B), B 6(C)
Body ECU

D17
Power Window Master SW

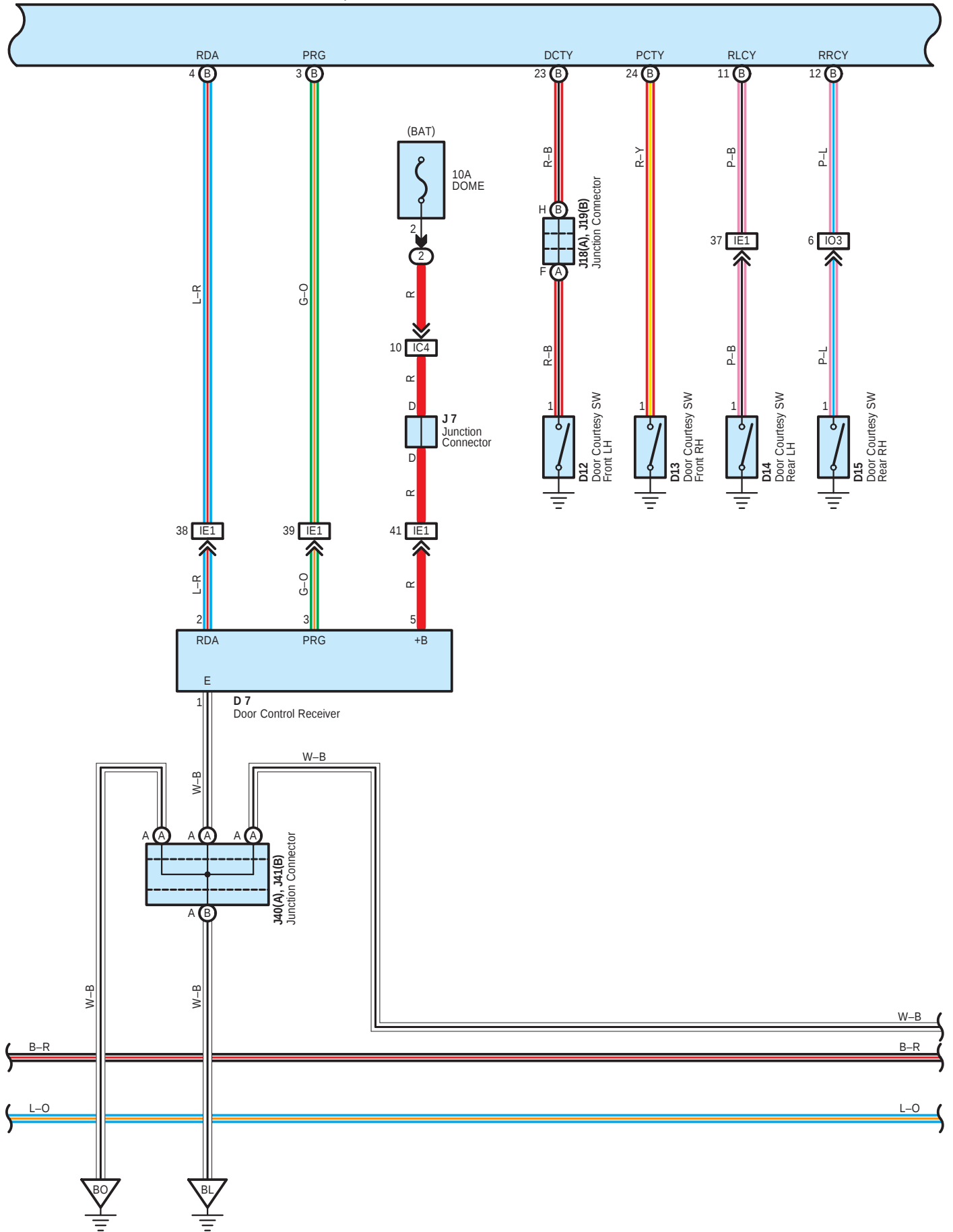


Power Window

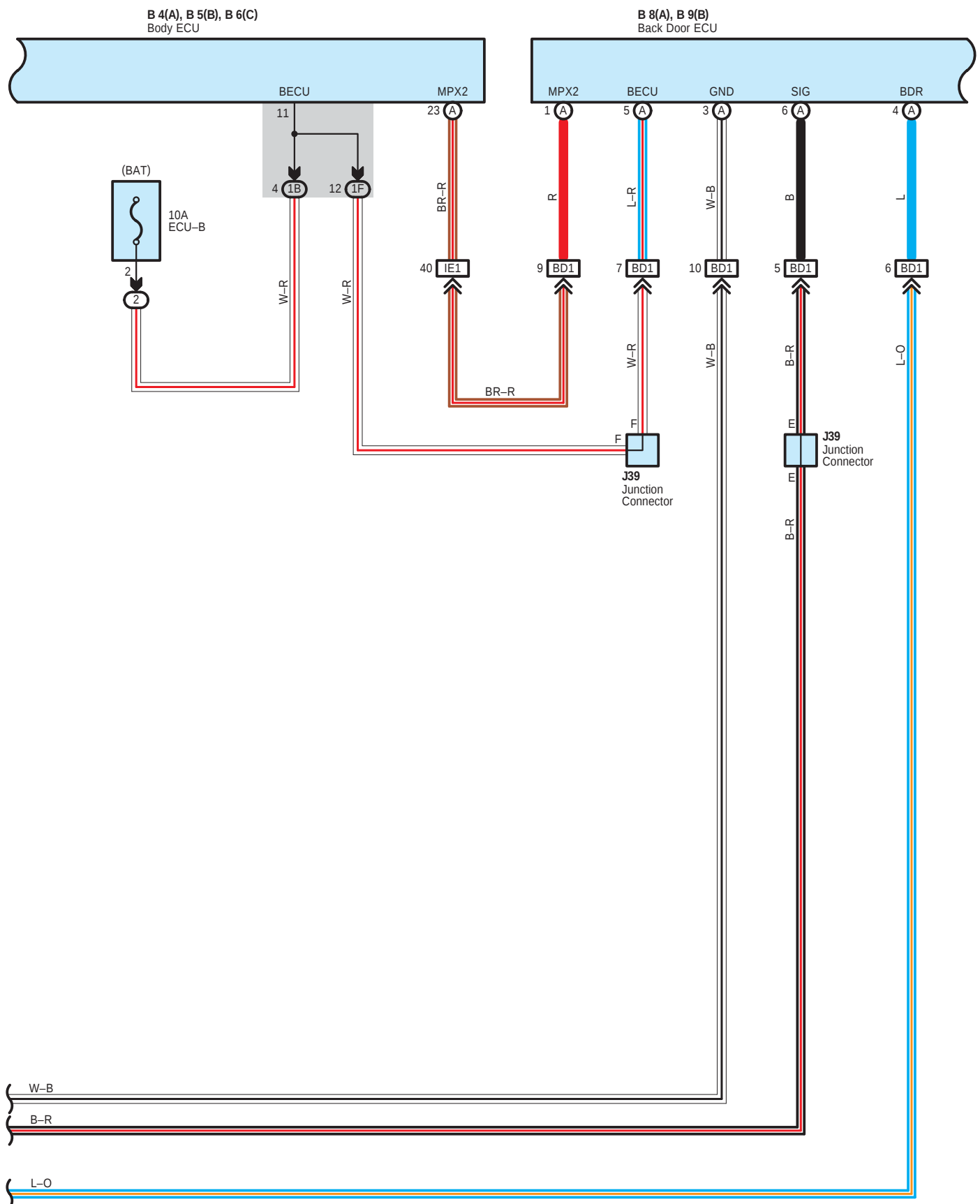
B 4(A), B 5(B), B 6(C)
Body ECU



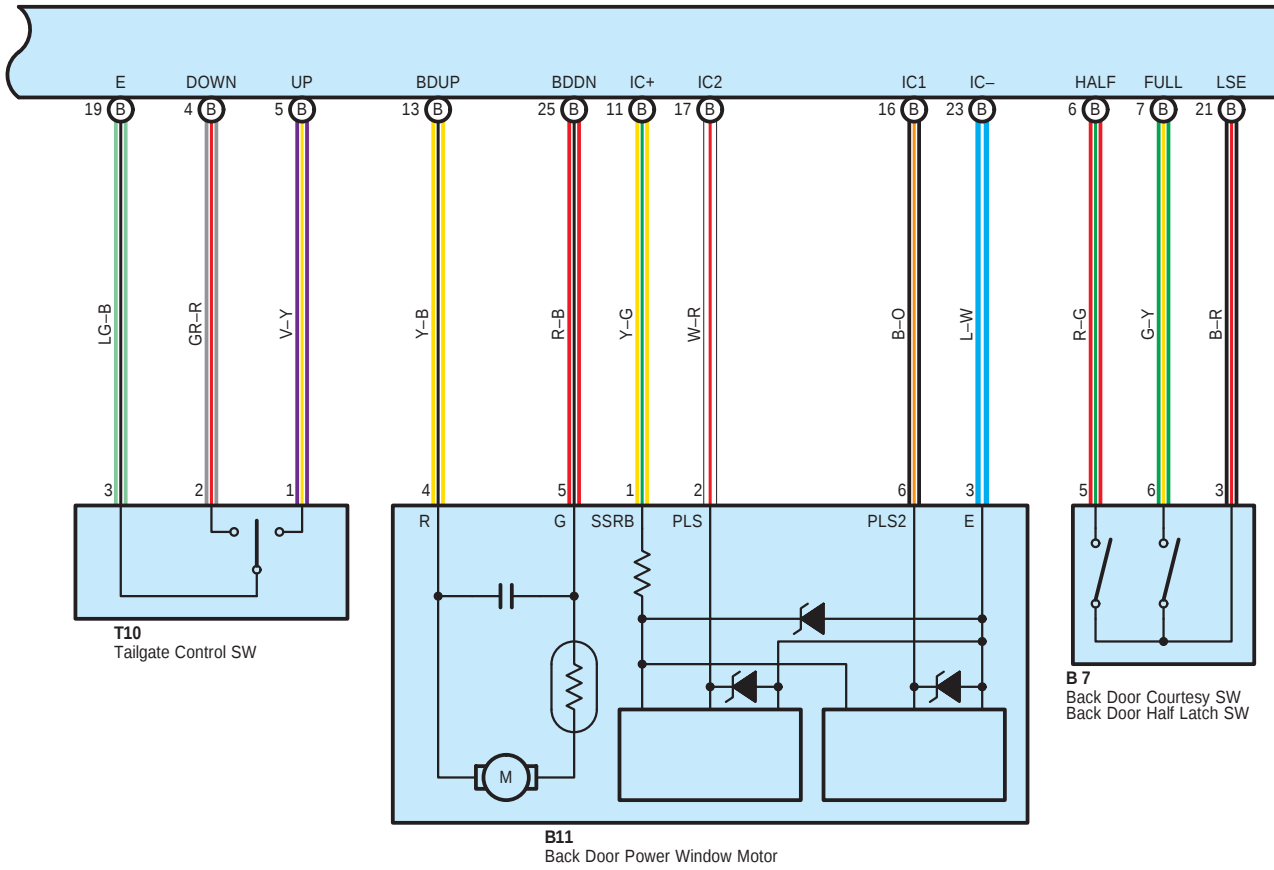
B 4(A), B 5(B), B 6(C)
Body ECU



Power Window



B 8(A), B 9(B)
Back Door ECU



Power Window

System Outline

* The power window system is controlled by the body ECU. This system has following features.

1. Manual Up and Down Function

This function causes the window to open or close while the power window switch is being pulled halfway up or pushed halfway down. The window stops as soon as the switch is released.

2. Front Doors One-Touch Auto Up and Down Function

The front doors one-touch auto up and down function enables the window of front doors to be fully opened or closed at a touch of the power window switch.

3. Jam Protection Function

A jam protection function automatically stops the power window and moves it downward if a foreign object gets jammed in the window during one-touch auto-up operation.

4. Remote Control Function

The up and down operations of the front passenger door window and the rear door windows can be controlled by operating the power window master switch.

5. Ker-Off Operation Function

Within about 45 seconds when turn OFF the ignition SW or open and shut the driver's seat door, this function enables the door window operation with the power window master switch and/or the manual operation at each passenger's seat door. (The driver's seat door includes the one-touch auto up and down operation as well)

6. Key-Linked Up and Down Function

A key-linked up and down function, which is linked to the driver door key cylinder operation, open or close the window of the all doors.

* When the battery terminal or fuse is disconnected, the glass position of all doors have to be reset to the initial positions, door by door, by the power window control switch in accordance with the following procedure:

- Reconnect the battery terminal or fuse.
- Turn ON the ignition switch.
- Lower the window of each door by the power window switch to open it halfway or more.
- Then move the window up by the power window switch to close it fully.
Do not release the switch for at least one second after the window is fully closed.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B1	36	D17	40	J41	B 40
B4	A 36	J5	38	K3	39
B5	B 36	J7	38	P9	41
B6	C 36	J14	A 38	P10	41
B7	40	J15	B 38	P11	41
B8	A 40	J18	A 38	P12	41
B9	B 40	J19	B 38	P13	41
B11	40	J20	38	P14	41
D7	40	J22	A 38	P15	41
D12	40	J23	B 38	T10	41
D13	40	J33	38	W3	33 (2UZ-FE)
D14	40	J38	40		35 (1GR-FE)
D15	40	J39	40		
D16	40	J40	A 40		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		



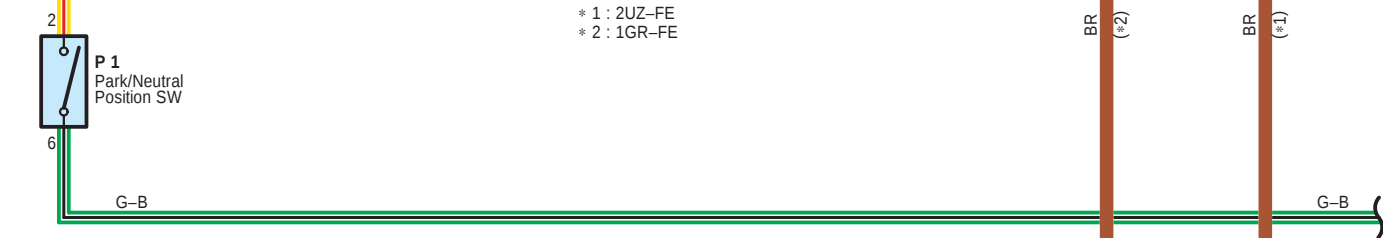
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP2	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

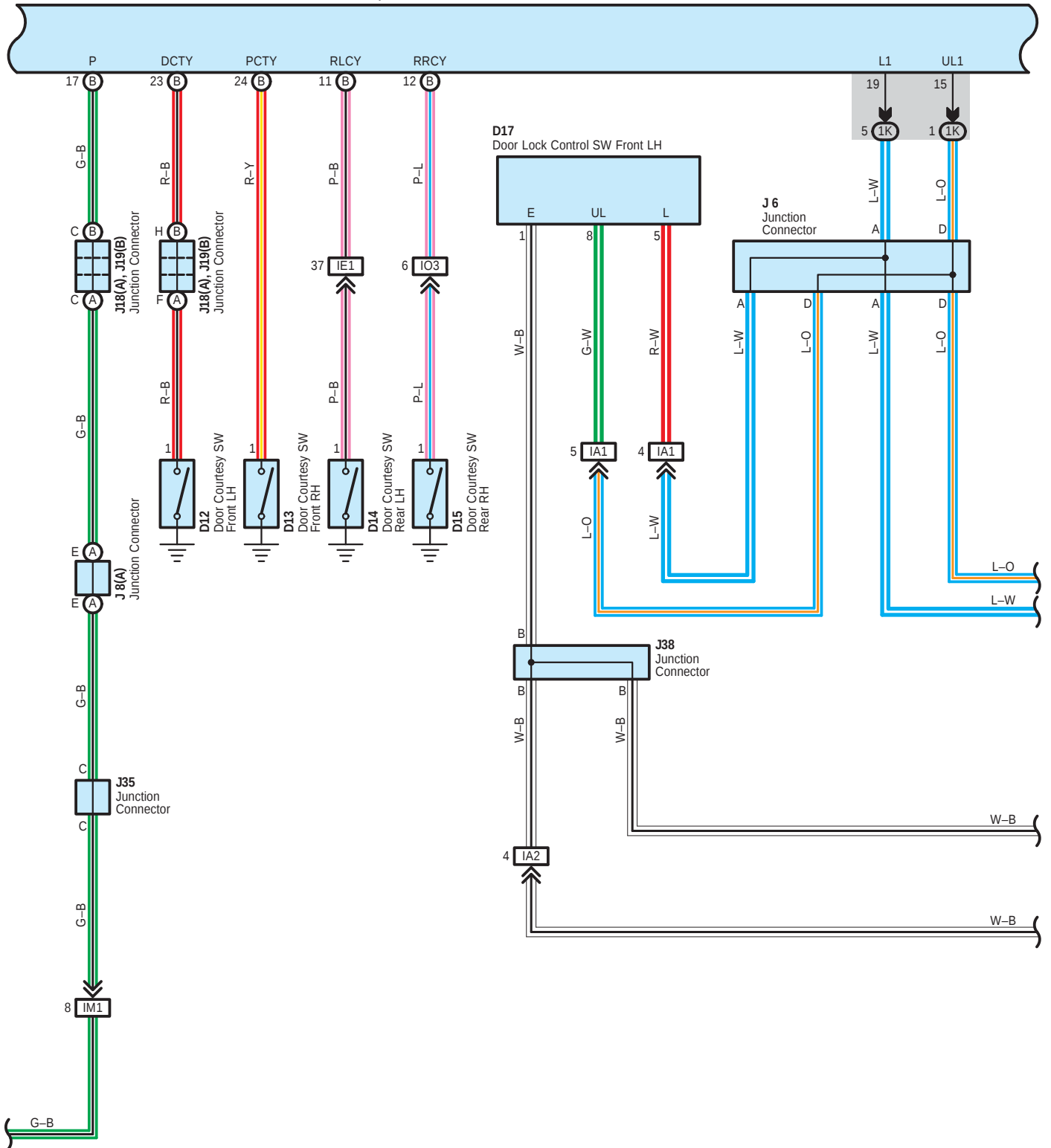


: Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

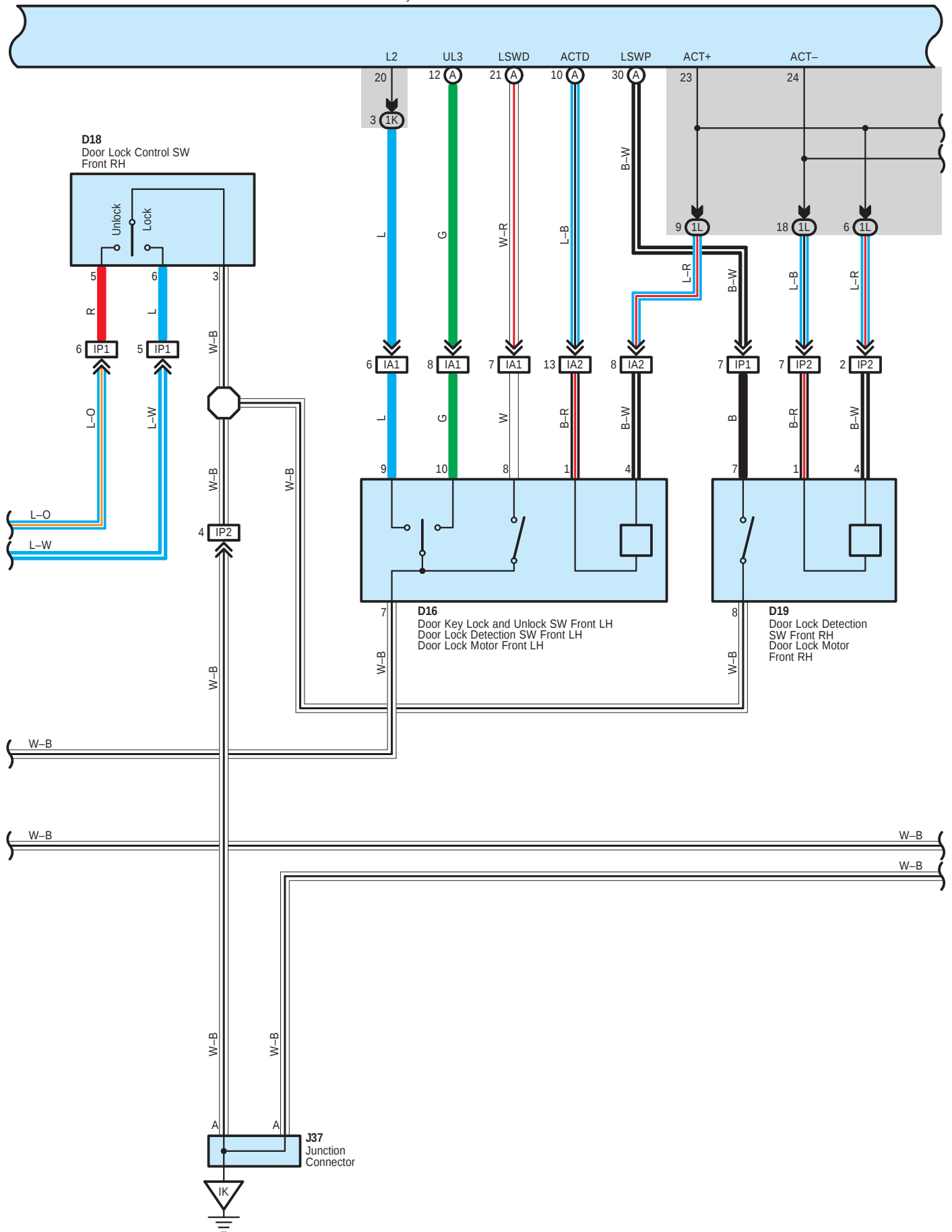


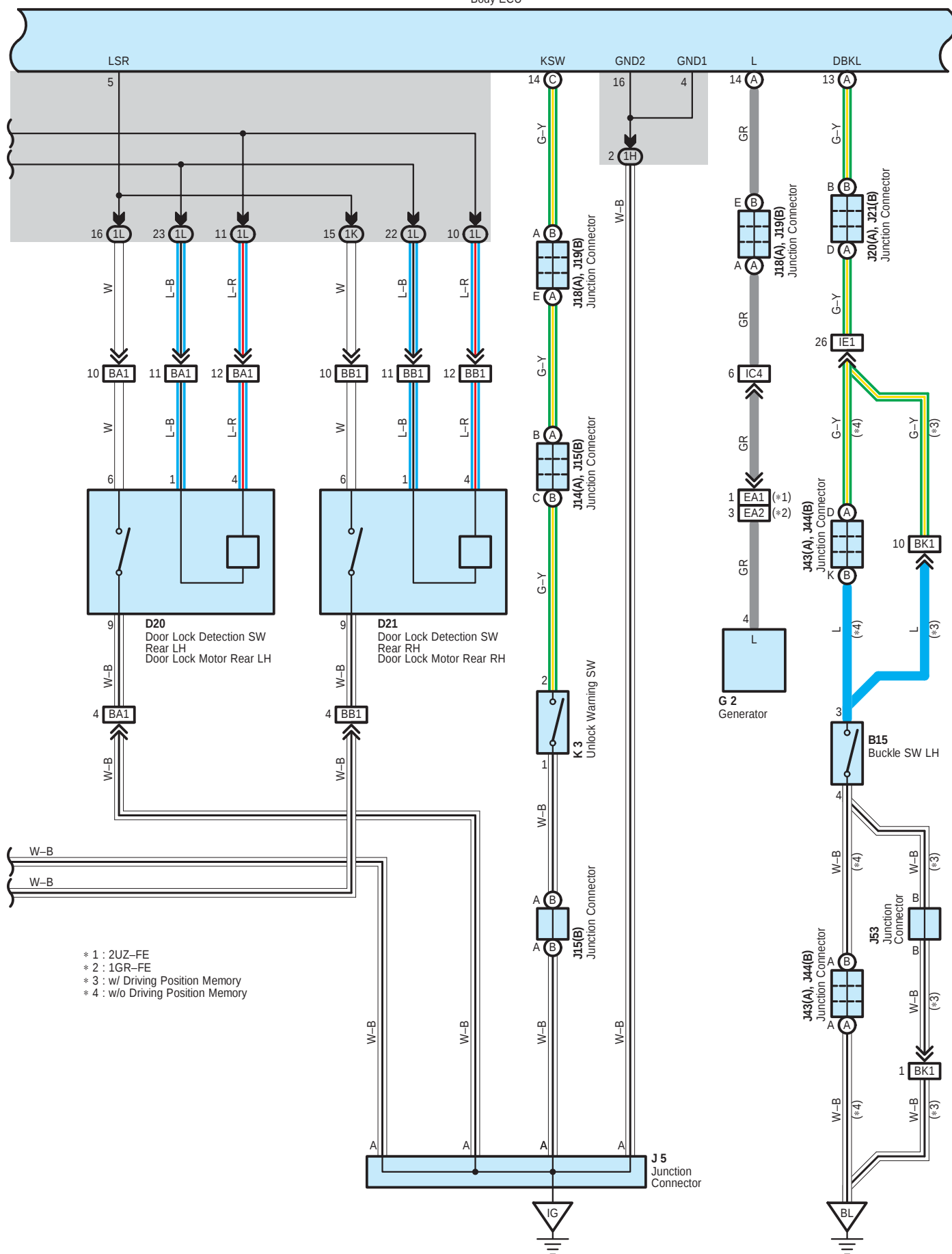
B 4(A), B 5(B), B 6(C)
Body ECU



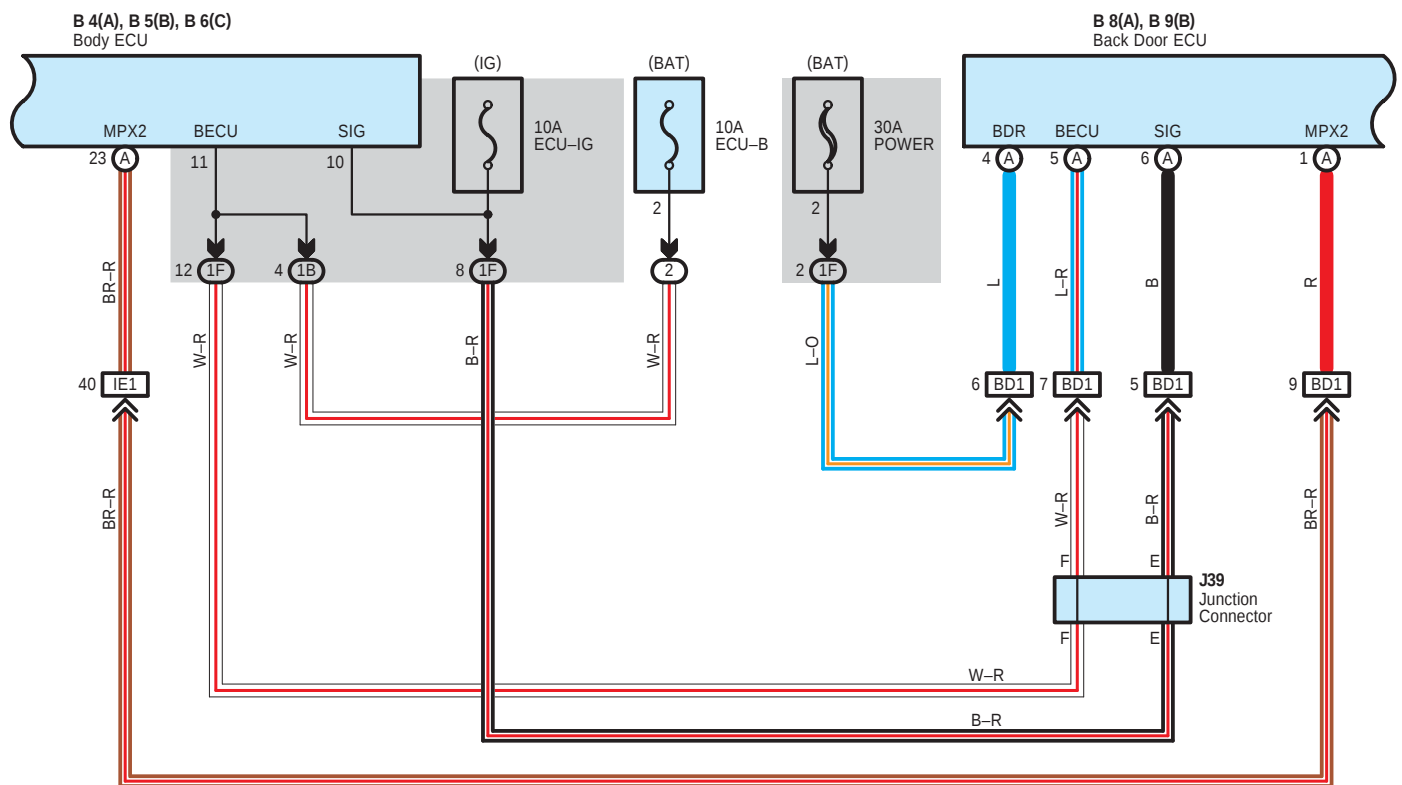
Door Lock Control

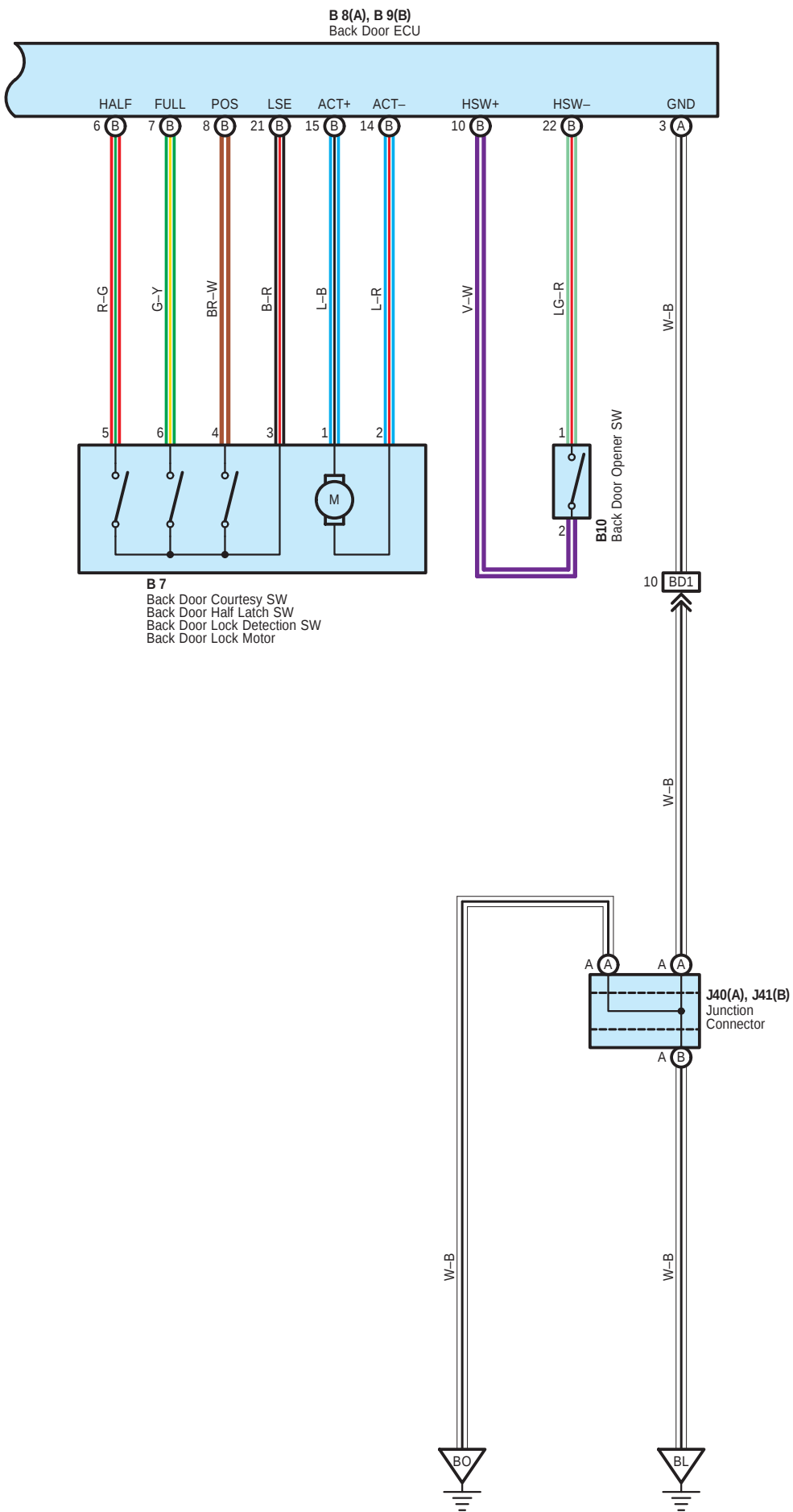
B 4(A), B 5(B), B 6(C)
Body ECU





Door Lock Control





Door Lock Control

System Outline

The door lock control is controlled through the various signal input into the body ECU through communication control of the body ECU etc.

1. Manual Unlock Operation

When the door lock control SW of the driver's or passenger's side door is pushed to UNLOCK, the door will unlock.

2. Manual Lock Operation

When the door lock control SW of the driver's or passenger's side door is pushed to LOCK, the door will lock.

3. Door Key Unlock Operation

* Unlock operation from driver's side door

When the driver's side door is unlocked once using the ignition key, only the driver's side door is unlocked. If this operation is repeated within 3 seconds, all the other doors are unlocked.

4. Ignition Key Reminder Operation

When the door lock operation is made using the door knob with the ignition key remained inserted in the key cylinder and the door open, unlock operation is automatically made. Additionally, if lock operation is made with the door lock control SW or door key lock and unlock SW, unlock operation is automatically made after the lock operation has been completed.

5. Shift-Lever-Interlocked Auto Lock Control

* Auto lock operation

The auto lock control automatically locks all the doors when the shift lever is put into other position than parking position with all the doors closed, the ignition switch ON, and the engine running.

* Auto unlocking operation

The auto lock control automatically unlocks all the doors when the shift lever is put into parking position from other position with the ignition switch ON during traveling at a speed not exceeding 16 km/h.

6. Vehicle-Speed-Interlocked Auto Lock Control

* Auto lock operation control

If any of the doors is not locked with the ignition switch ON and the engine running, the auto lock control automatically locks all the doors when the vehicle has gathered speed reaching or exceeding 20 km/h.

* Unlocking prevention feature

When the vehicle is traveling at a speed reaching or exceeding 20 km/h, the unlocking function is disabled.

* Auto lock repeat prevention feature

Once auto lock is activated, auto lock operation cannot not be repeated until a door is opened or the ignition switch is turned OFF with the vehicle traveling at a speed not exceeding 16 km/h.

7. Door-Open/Close-Interlocked Auto Unlocking

When the driver's side door is opened within 10 seconds after the ignition switch is turned OFF, all the doors are unlocked automatically.

* When the battery terminal or fuse is disconnected for some reason, resetting to the initial status is necessary using the door lock control SW front LH (Driver's seat master SW) in accordance with the following procedure:

(1) Reconnect the battery terminal or fuse.

(2) With the back door closed, operate the door lock control SW front LH (Driver's seat master SW) for locking and unlocking.

☐ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	D18	40		J35	38	
B5	B	36	D19	40		J37	38	
B6	C	36	D20	40		J38	40	
B7		40	D21	40		J39	40	
B8	A	40	G2	32 (2UZ-FE)		J40	A	40
B9	B	40		34 (1GR-FE)		J41	B	40
B10		40	J5	38		J43	A	42 (*1)
B15		42 (*1)	J6	38				43 (*2)
		43 (*2)	J7	38		J44	B	42 (*1)
C8	A	37	J8	A	38			43 (*2)
C9	B	37	J9	B	38	J53		42 (*1)
C10	C	37	J14	A	38	K3		39
D12		40	J15	B	38	P1		33 (2UZ-FE)
D13		40	J18	A	38			35 (1GR-FE)
D14		40	J19	B	38	S28		33 (2UZ-FE)
D15		40	J20	A	38			35 (1GR-FE)
D16		40	J21	B	38			
D17		40	J25		38			

☐ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1H		
1J		
1K		
1L		

☐ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EA2	45 (1GR-FE)	
IA1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BK1	50 (*1)	Floor No.2 Wire and Seat No.2 Wire (Under the Front LH Seat)

* 1 : Power Seat * 2 : Manual Seat

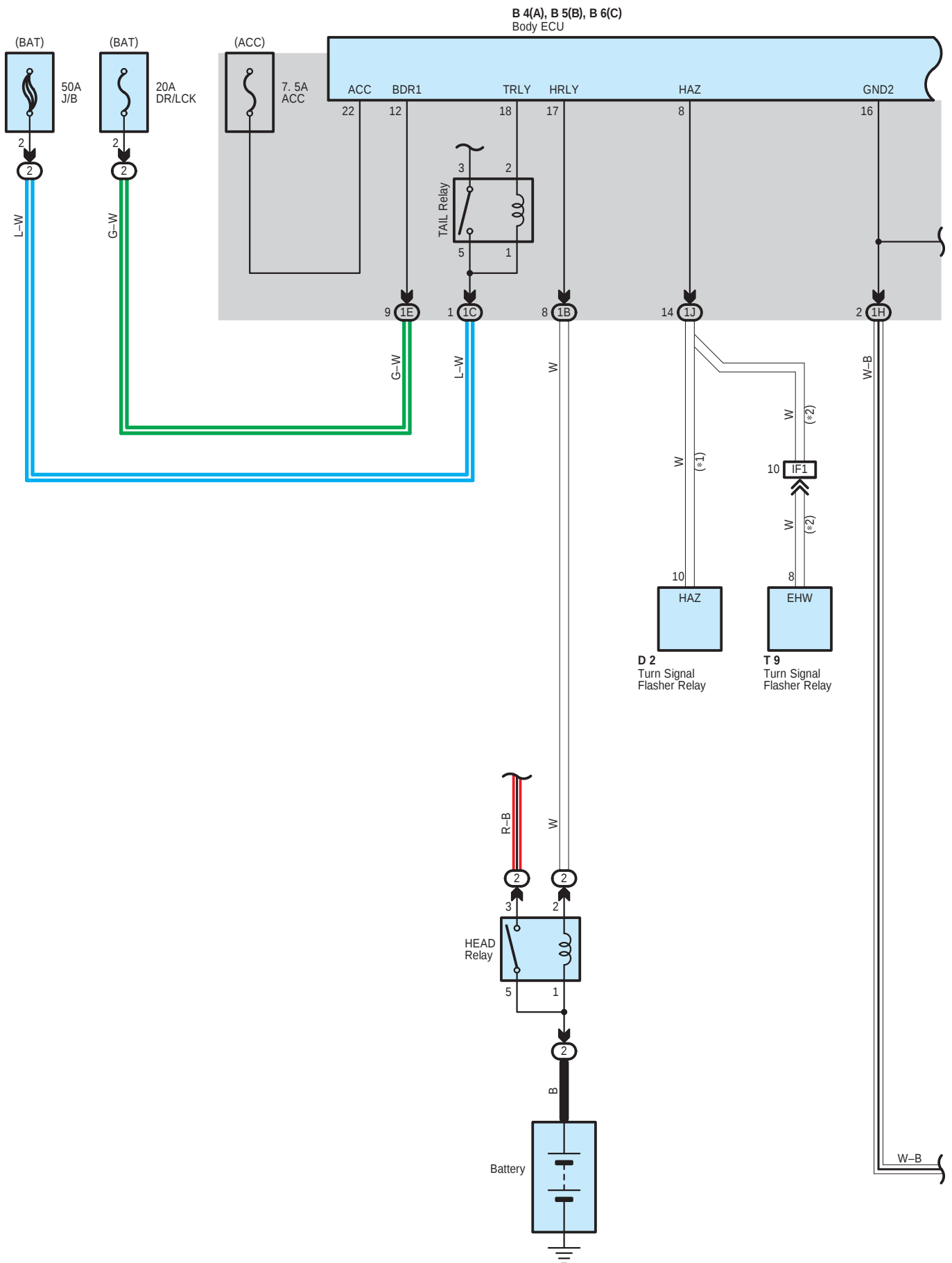
Door Lock Control

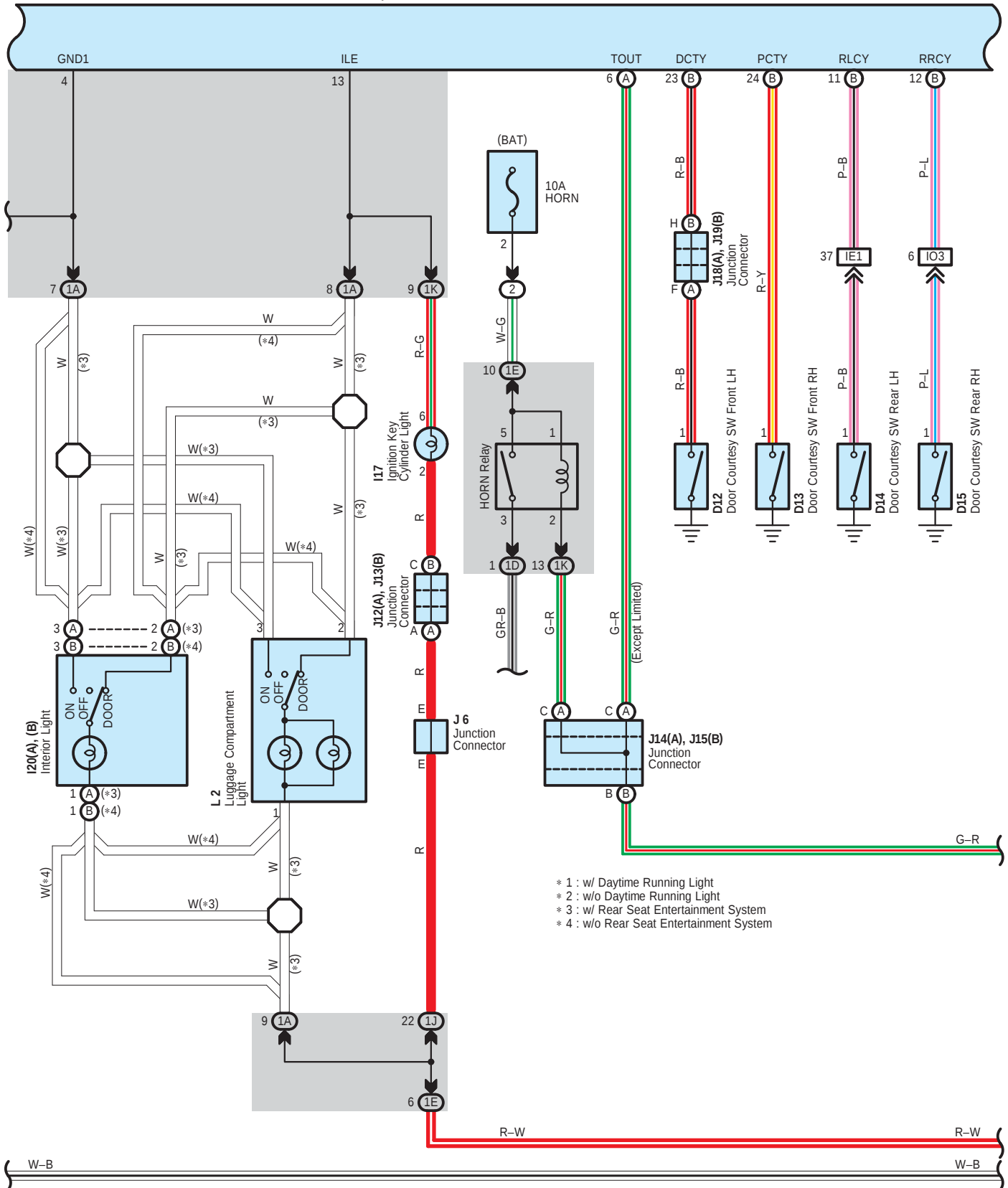


: Ground Points

Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

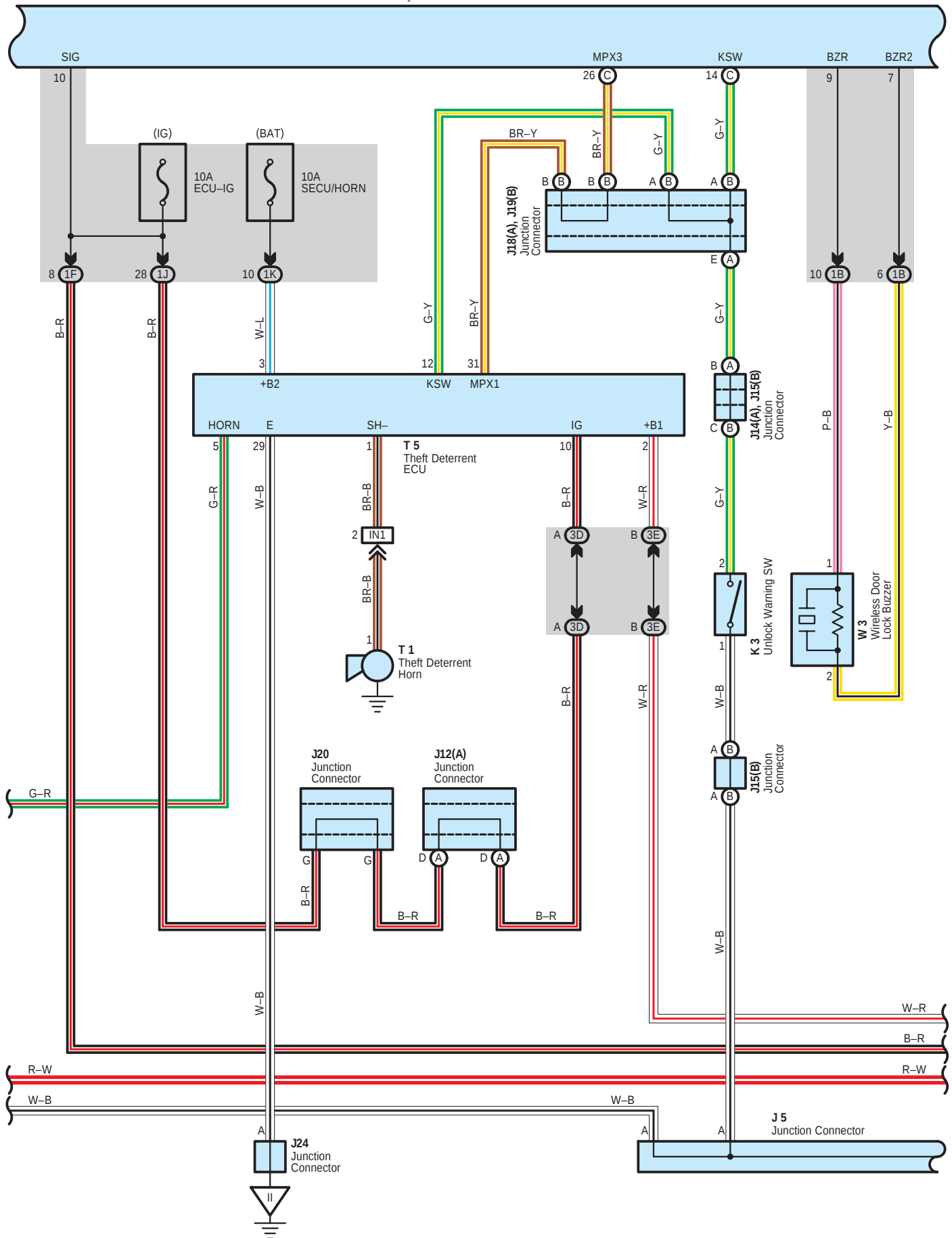
Wireless Door Lock Control

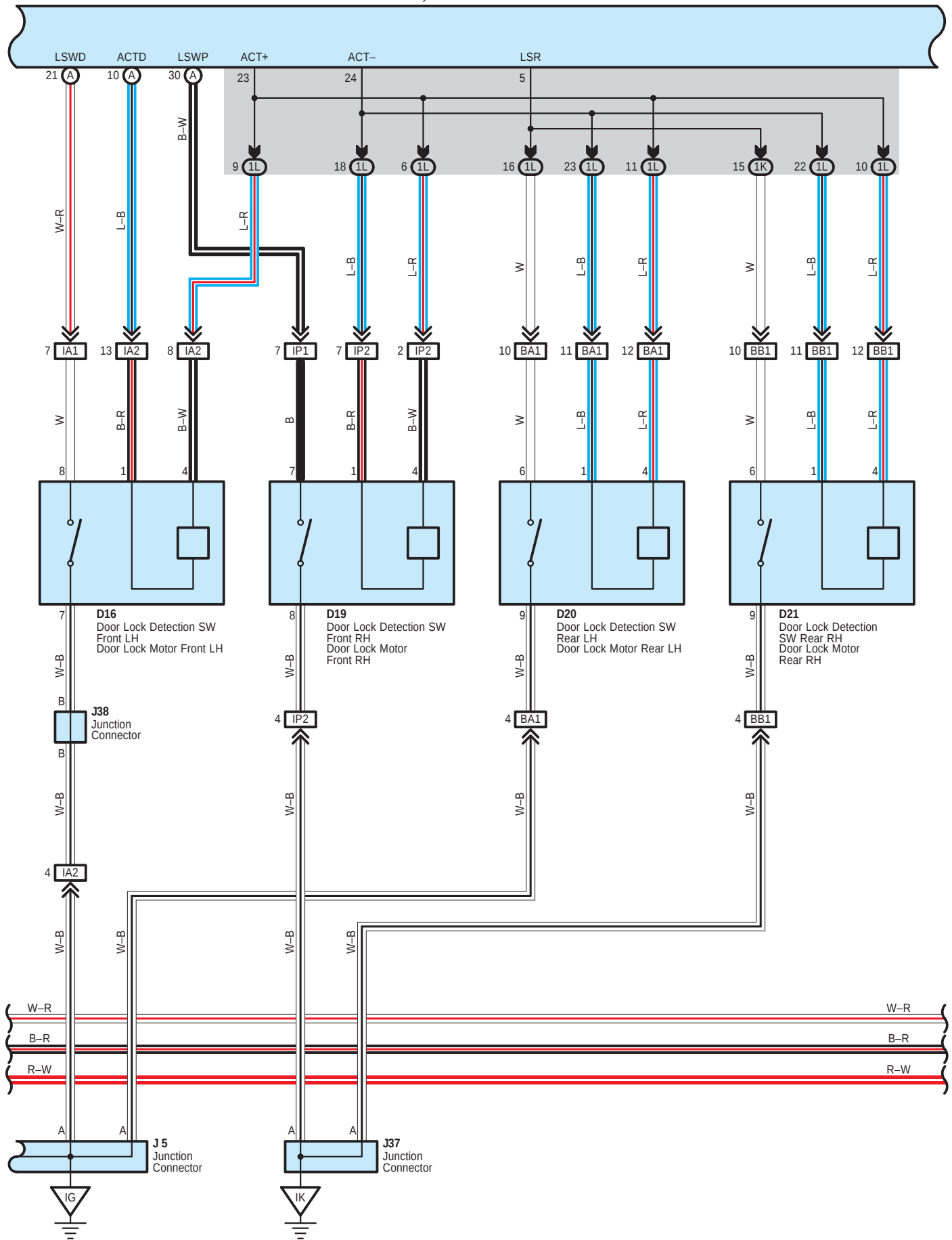




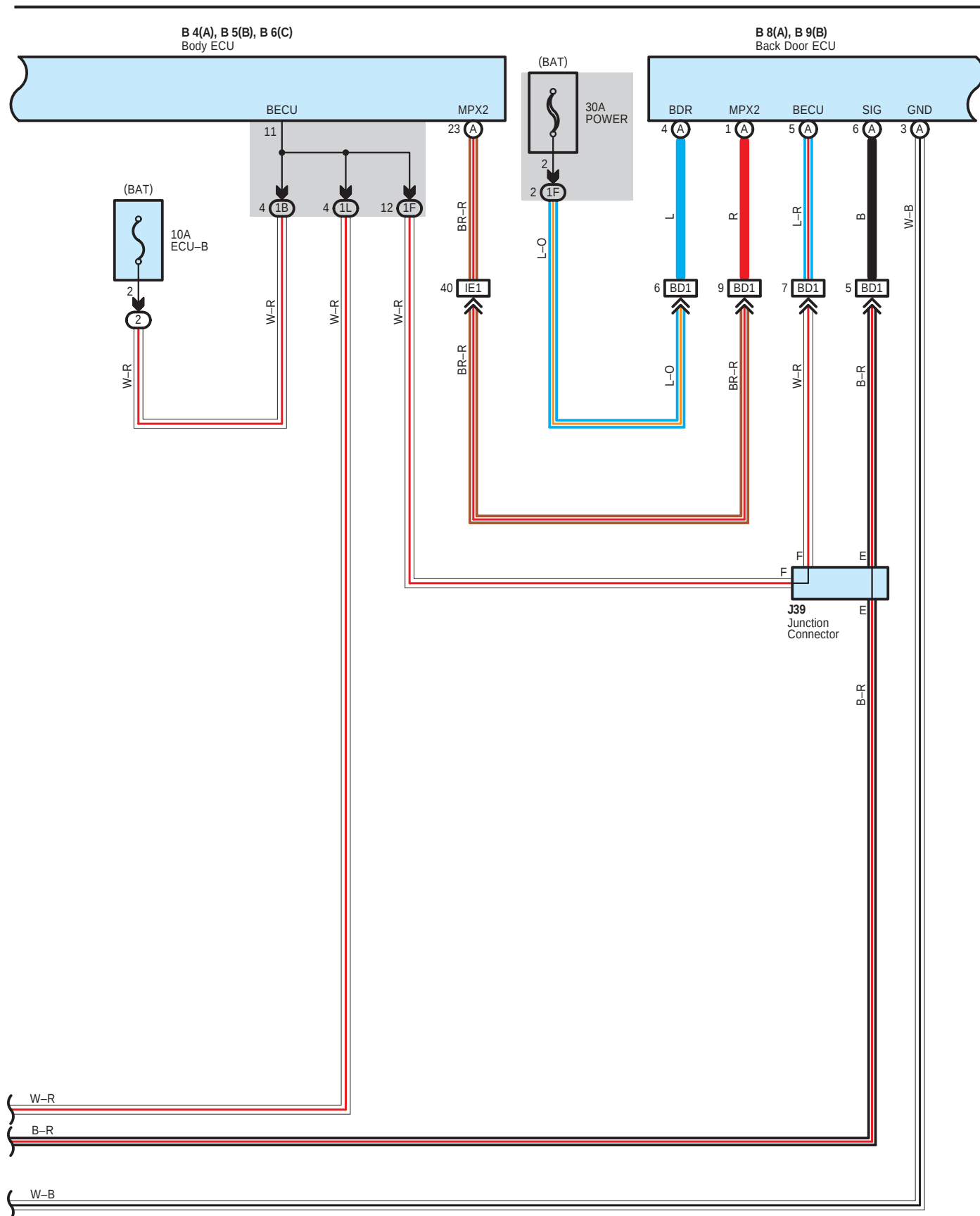
Wireless Door Lock Control

B 4(A), B 5(B), B 6(C)
Body ECU

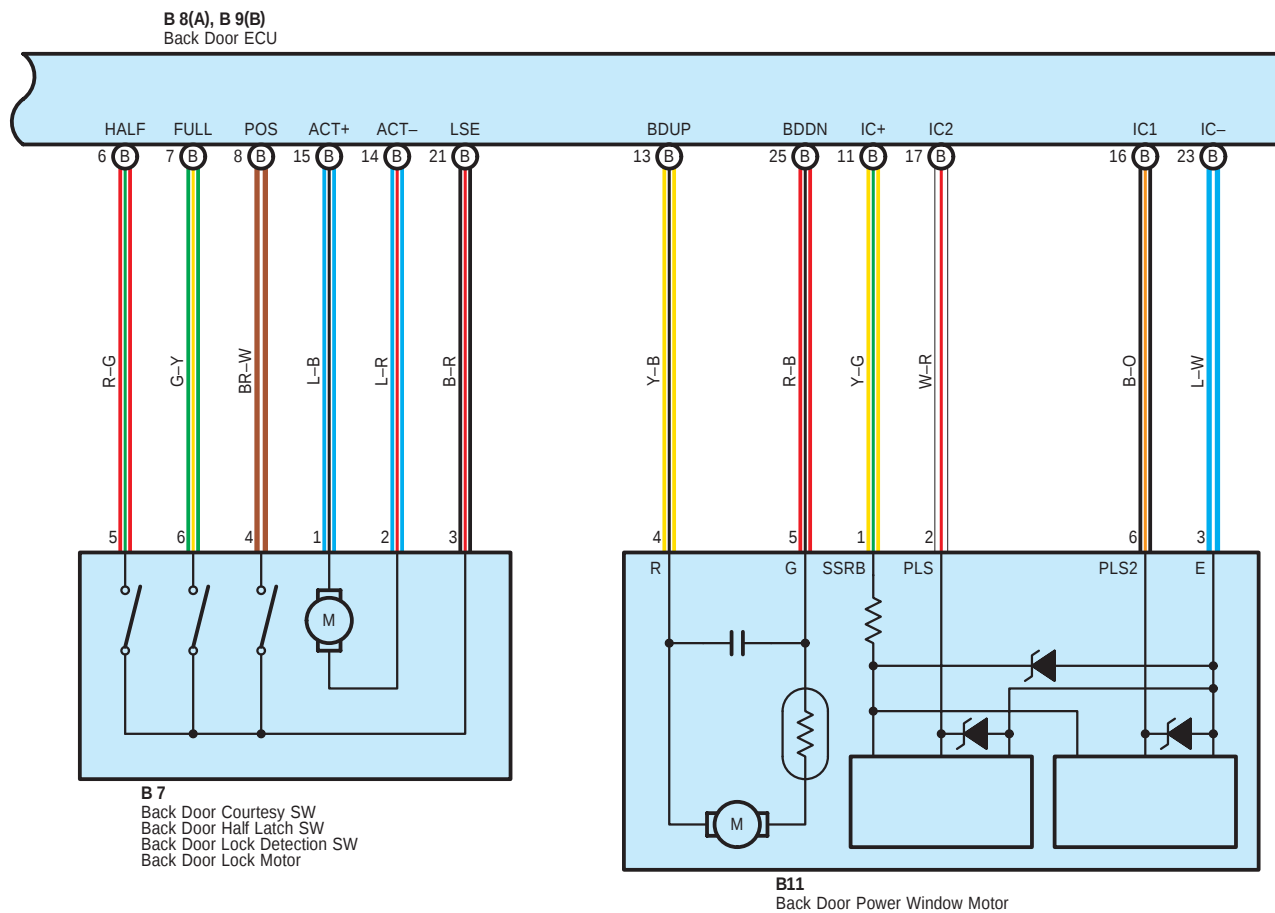








Wireless Door Lock Control



System Outline

Door lock control (Lock and unlock), back window control (Back window open) and panic control (Theft alarm and flash) is performed by remote control, without the ignition key inserted in the door key cylinder, using low-power electrical waves emitted by a transmitter.

1. Normal Operation

* Lock operation

When the lock SW on the transmitter is pressed, all the doors are locked.

* Unlock operation

When the unlock SW on the transmitter is pressed once, only the driver door is unlocked. When the unlock SW is pressed again within 3 seconds, all the doors are unlocked.

2. Auto Lock Function

When the door is not actually opened within 30 seconds after the door has been unlocked by the unlock SW on the transmitter, all the doors are automatically locked. If any of the following conditions are detected, the wireless door lock does not function.

* Any door is opened.

* The ignition key is inserted into the ignition SW.

* When the lock detection SW of all the doors are locked.

3. Wireless Door Lock Stop Function

If any of the following conditions are detected, the wireless door lock does not function.

Lock operation

* When any door is open (Door courtesy SW on)

* The ignition key is inserted into the ignition SW (Unlock warning SW on)

* Ignition SW is on

Unlock operation

* Ignition SW is on

4. Buzzer Sound Function

During lock operation, when the body ECU receives a lock signal from the door lock detection SW, the wireless door lock buzzer goes on once. During unlock operation, when the body ECU receives an unlock signal from the door lock detection SW, the wireless door lock buzzer goes on twice.

With any door open, when the body ECU receives a lock signal from the transmitter, the wireless door lock buzzer goes on for approx. 10 seconds. If the door is closed, or ignition SW is on, or if the unlock signal is received from the transmitter while the buzzer is on, the buzzer stops.

5. Visual Confirmation of Lock or Unlock

During lock operation, when the body ECU receives a lock signal from the door lock detection SW, the turn signal light is flashed once. During unlock operation, when the body ECU receives an unlock signal from the door lock detection SW, the turn signal light is flashed twice.

6. Remote Panic Operation

Panic will function when doors are locked or unlocked, open or closed. When the panic button (Transmitter) is pushed once, interior lights light up, and theft alarm and horn sounds and turn signal light, headlights and taillight flash. Then, the panic or the unlock button (Transmitter) is pushed once more, interior lights are turned off, sounding and flashing will stop. Panic will not function when ignition key is in ignition key cylinder.

7. Repeat Function

If the lock detection signal in response to the output signal is not received after the body ECU has output the lock signal, the lock signal is output again.

8. Buzzer Volume Control

The volume of the wireless door lock buzzer can be set among 5 steps by operating the transmitter, when the ignition SW is off, any door open, and the ignition key is not in the ignition key cylinder.

9. Back Window Control

When the ignition SW is off, the ignition key is not inserted into the ignition key cylinder, the back window can be opened by pressing the back window open SW of the transmitter for approximately 0.8 seconds. At that time, the wireless door lock buzzer beeps once.

10. Illuminated Entry Function

When the body ECU detects the unlock state after the unlock operation has been made, it turns on the lights, such as the ignition key cylinder light and interior light for approx. 15 sec. If all the doors are locked during this operation, lighting is cancelled and the lights immediately fade out.

Wireless Door Lock Control

: Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	D19	40	40	J19	B	38
B5	B	36	D20	40	40	J20		38
B6	C	36	D21	40	40	J24		38
B7		40	I17	37	37	J37		38
B8	A	40	I20	A	40	J38		40
B9	B	40		B	40	J39		40
B11		40	J5	38	38	J40	A	40
C8	A	37	J6	38	38	J41	B	40
C10	C	37	J7	38	38	K3		39
D2		37	J8	A	38	L2		40
D7		40	J9	B	38	T1		33 (2UZ-FE)
D12		40	J12	A	38			35 (1GR-FE)
D13		40	J13	B	38	T5		39
D14		40	J14	A	38	T9		39
D15		40	J15	B	38	W3		33 (2UZ-FE)
D16		40	J18	A	38			35 (1GR-FE)

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1C		
1D		
1E		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3D	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3E		

: Connector Joining Wire Harness and Wire Harness

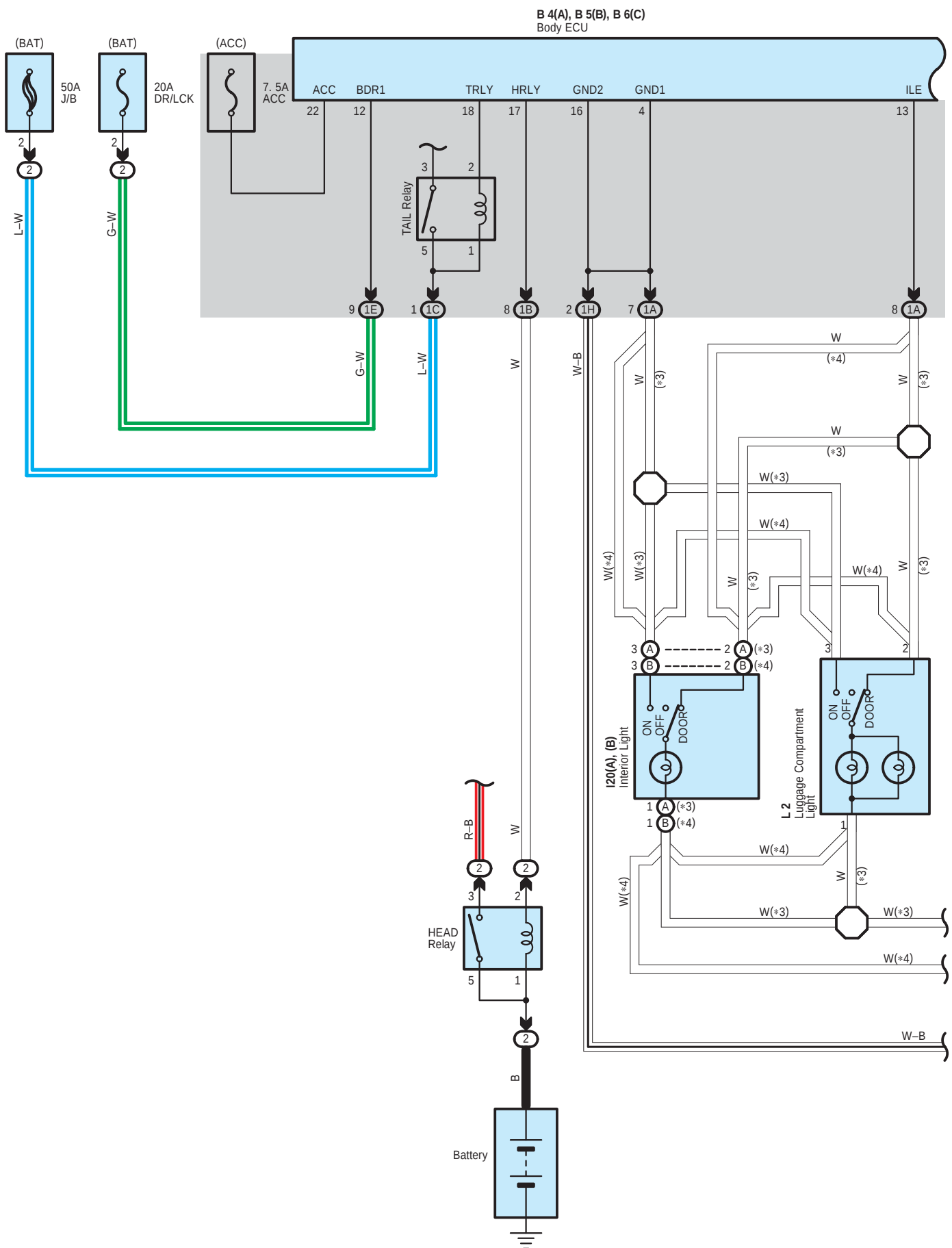
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC3	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	46	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)



: Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

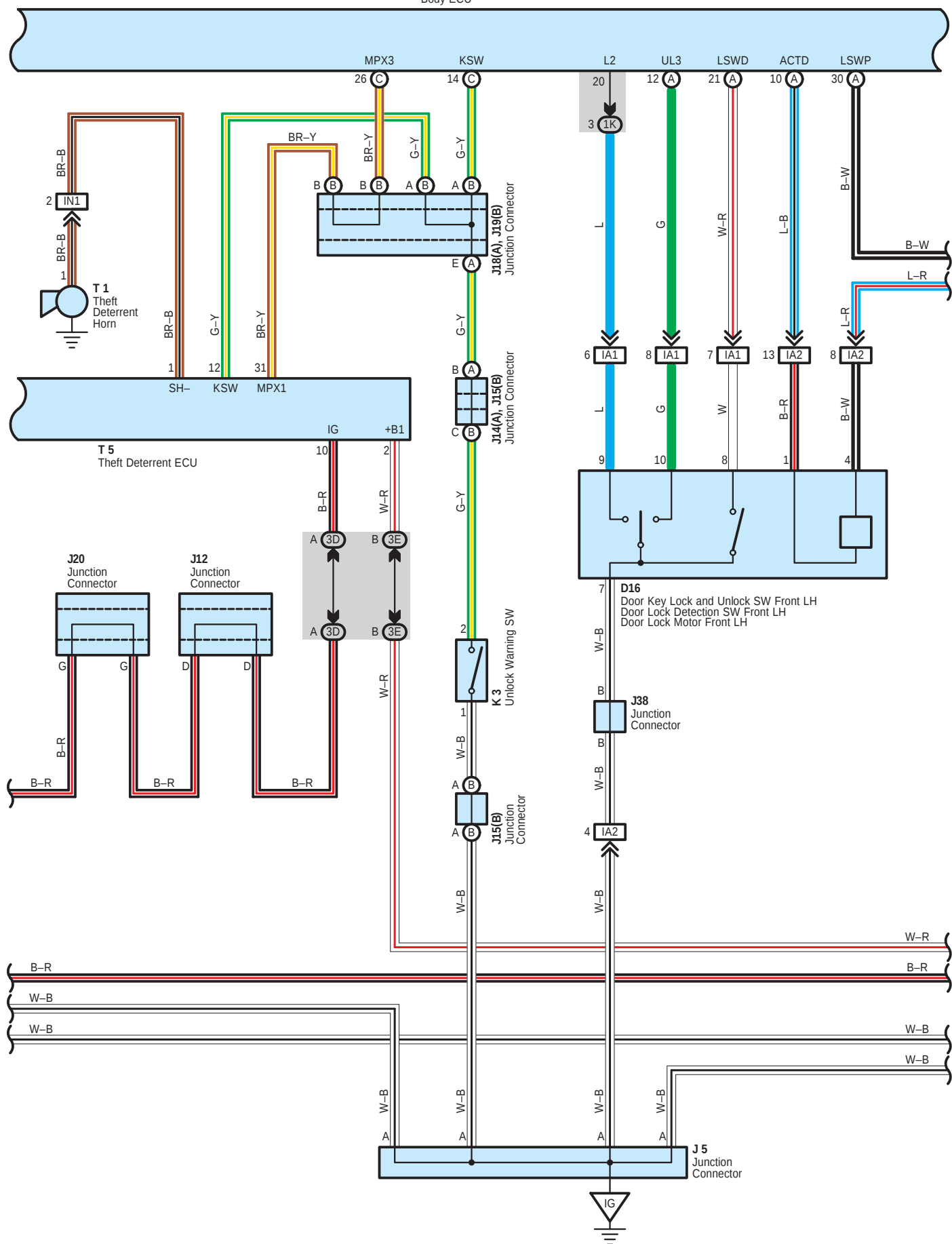
Theft Deterrent





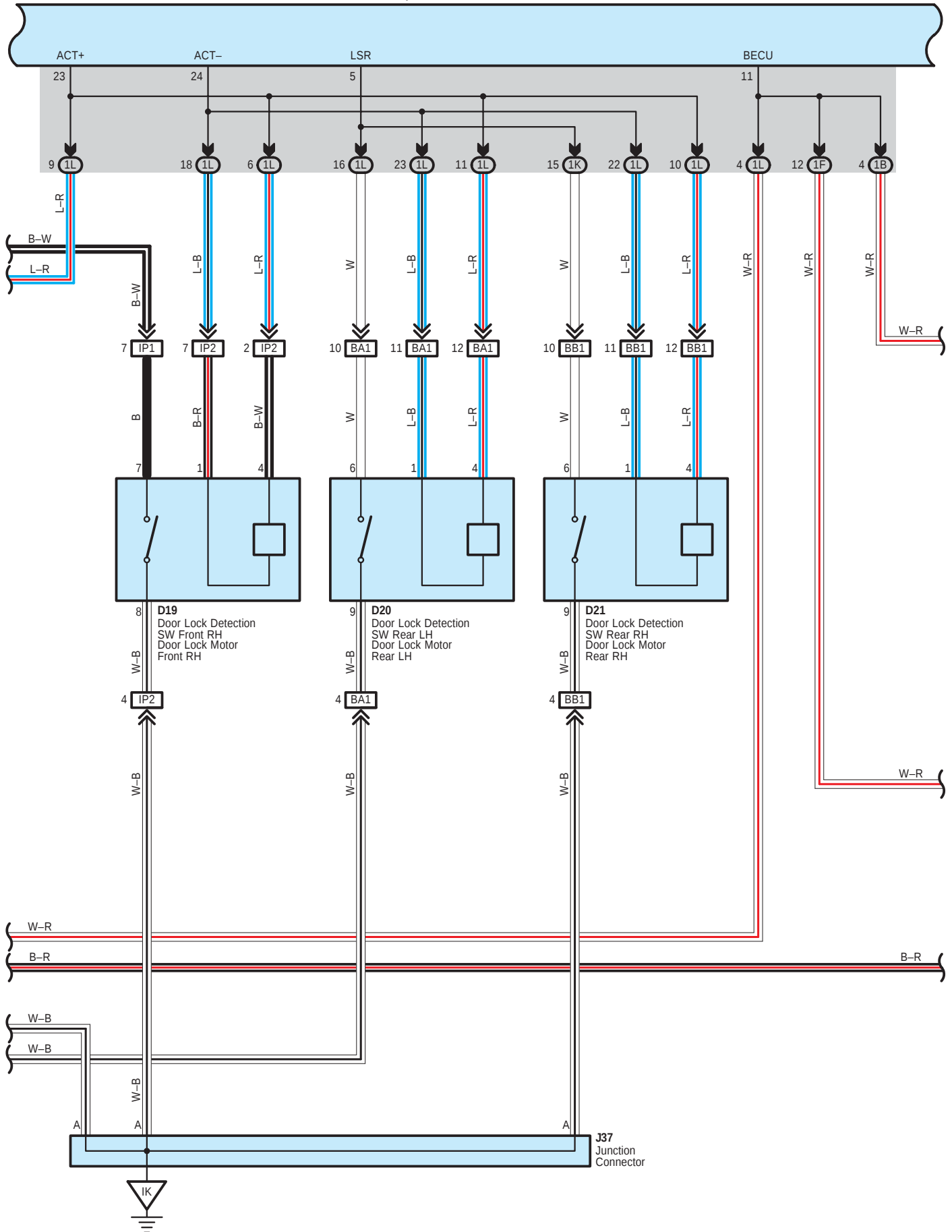


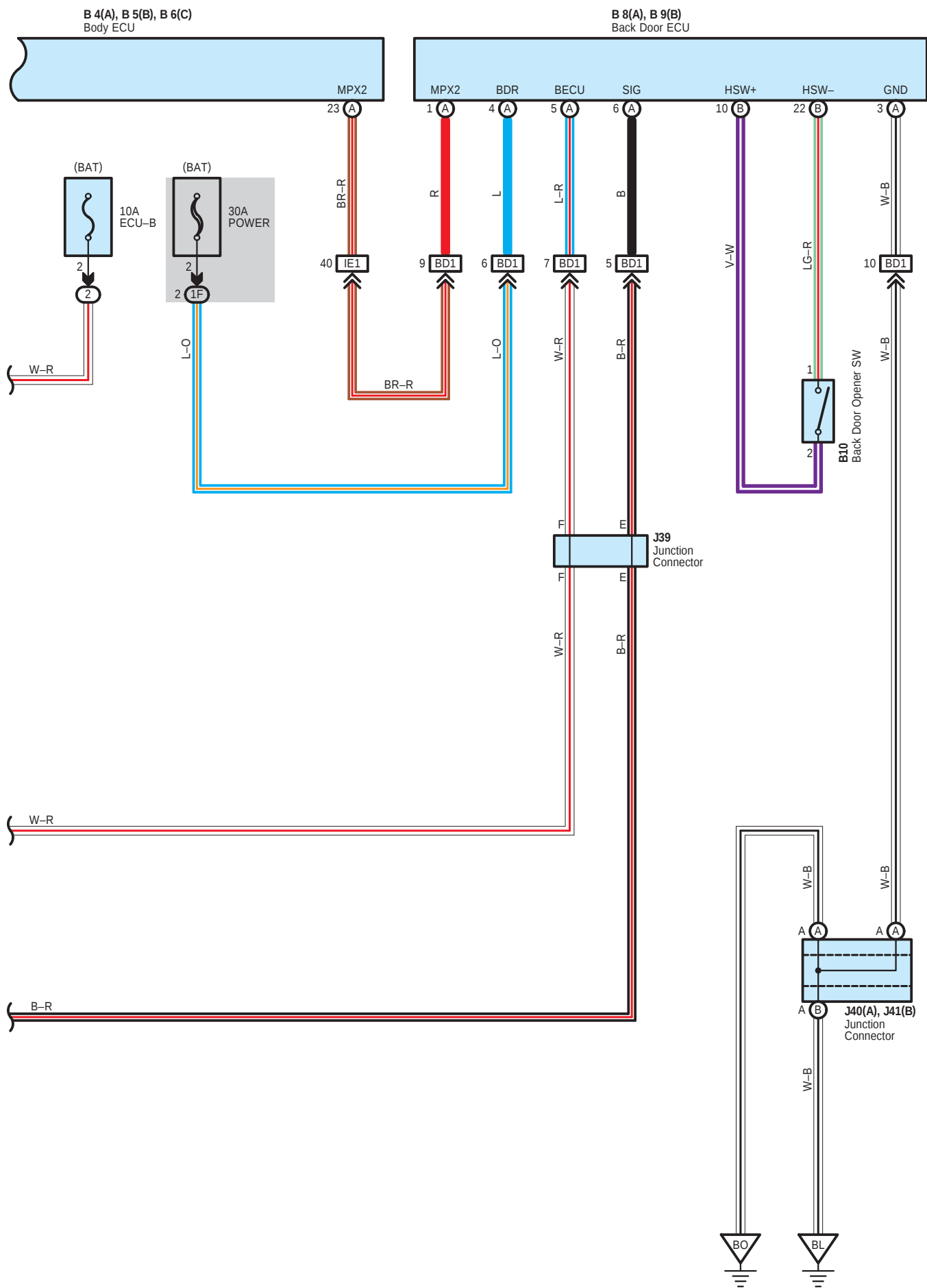
B 4(A), B 5(B), B 6(C)
Body ECU



Theft Deterrent

B 4(A), B 5(B), B 6(C)
Body ECU





Theft Deterrent

: Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	D19	40		J19	B	38
B5	B	36	D20	40		J20		38
B6	C	36	D21	40		J24		38
B8	A	40	E3	32 (2UZ-FE)		J37		38
B9	B	40		34 (1GR-FE)		J38		40
B10		40	I20	A	40	J39		40
C8	A	37		B	40	J40	A	40
C10	C	37	J5		38	J41	B	40
D2		37	J7		38	K3		39
D3		37	J8	A	38	L2		40
D12		40	J9	B	38	T1	33 (2UZ-FE)	
D13		40	J12		38		35 (1GR-FE)	
D14		40	J14	A	38	T5		39
D15		40	J15	B	38	T9		39
D16		40	J18	A	38			

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1C		
1D		
1E		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3D	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3E		
3F		

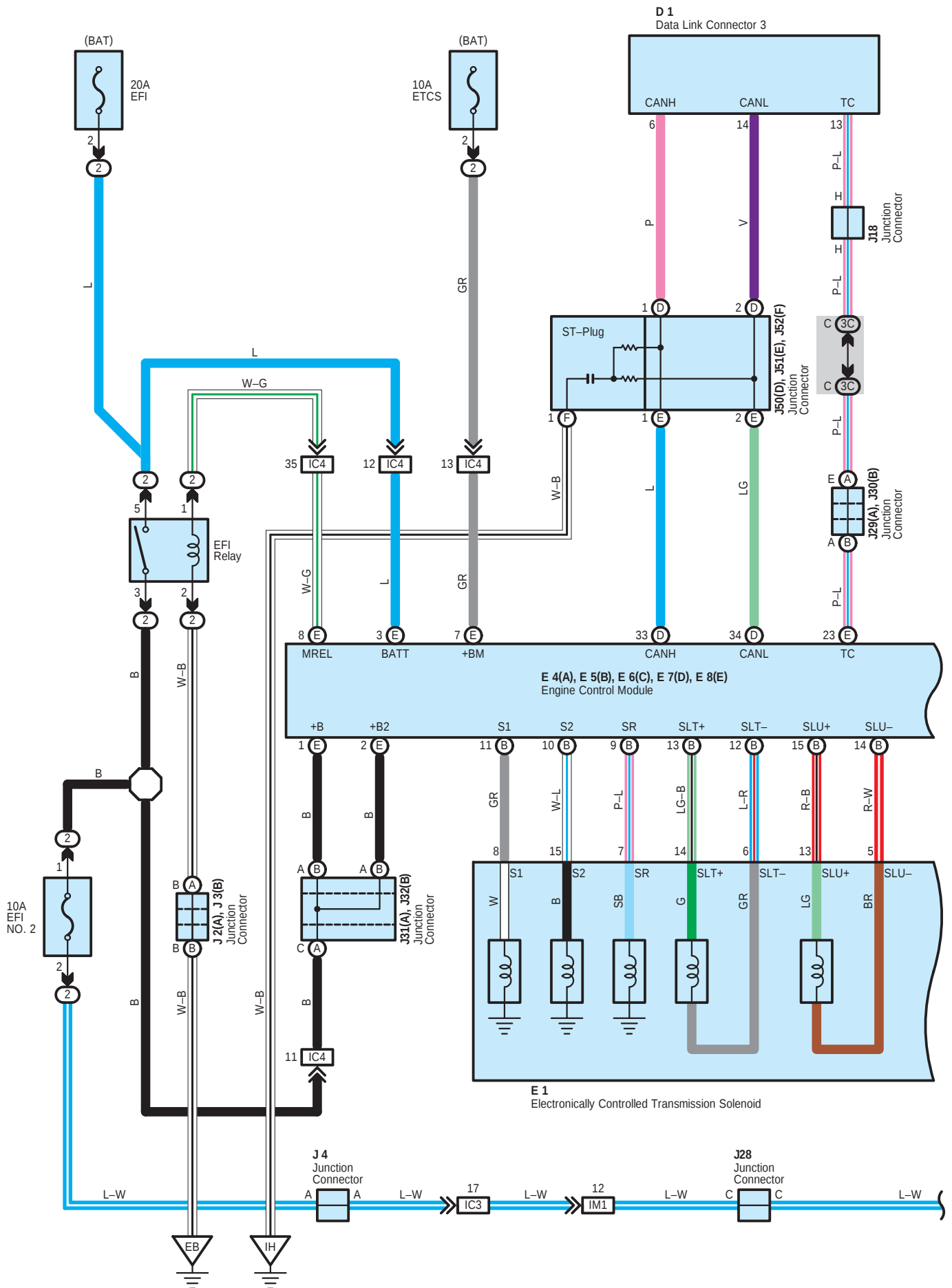
: Connector Joining Wire Harness and Wire Harness

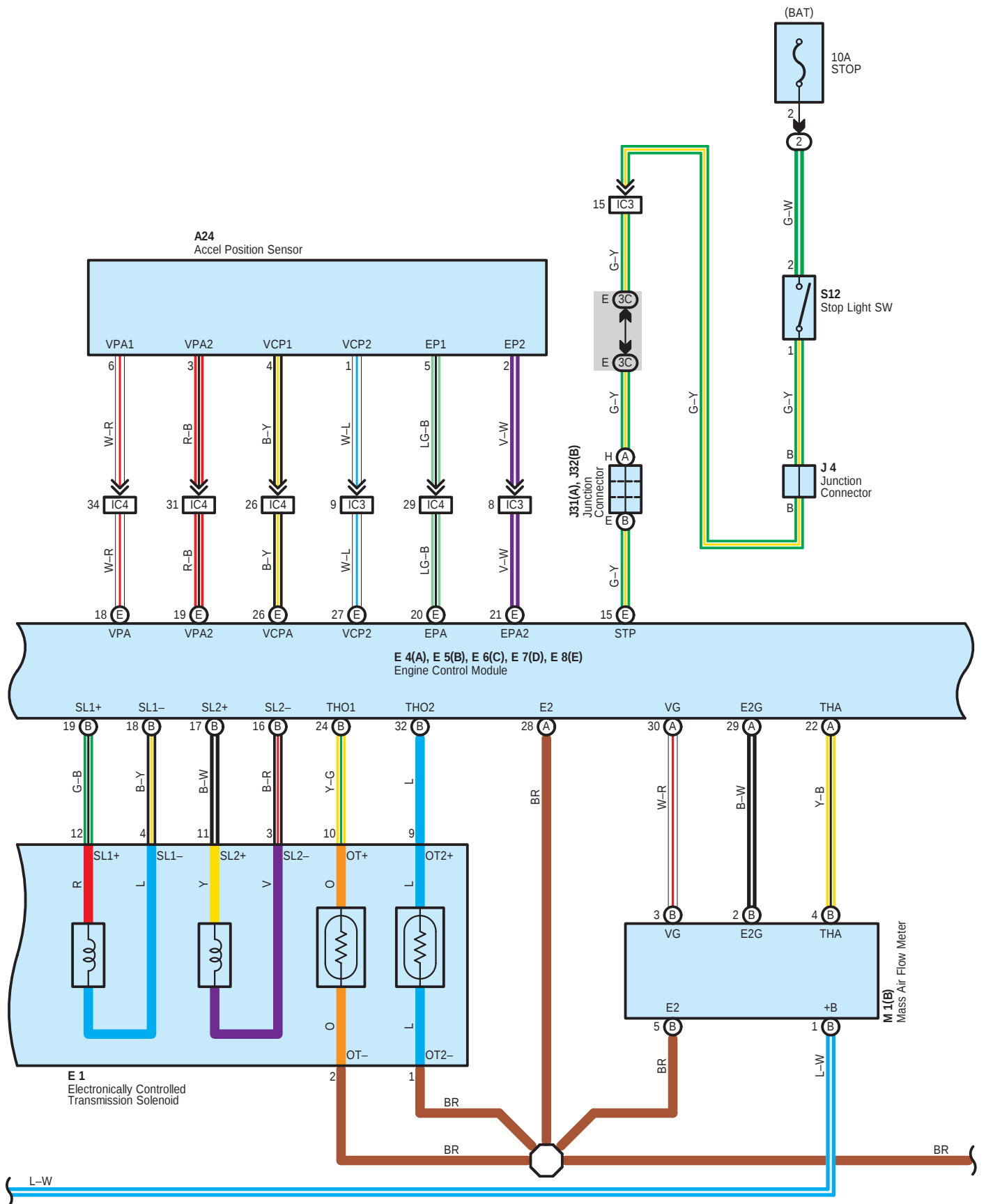
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC3	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	46	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)



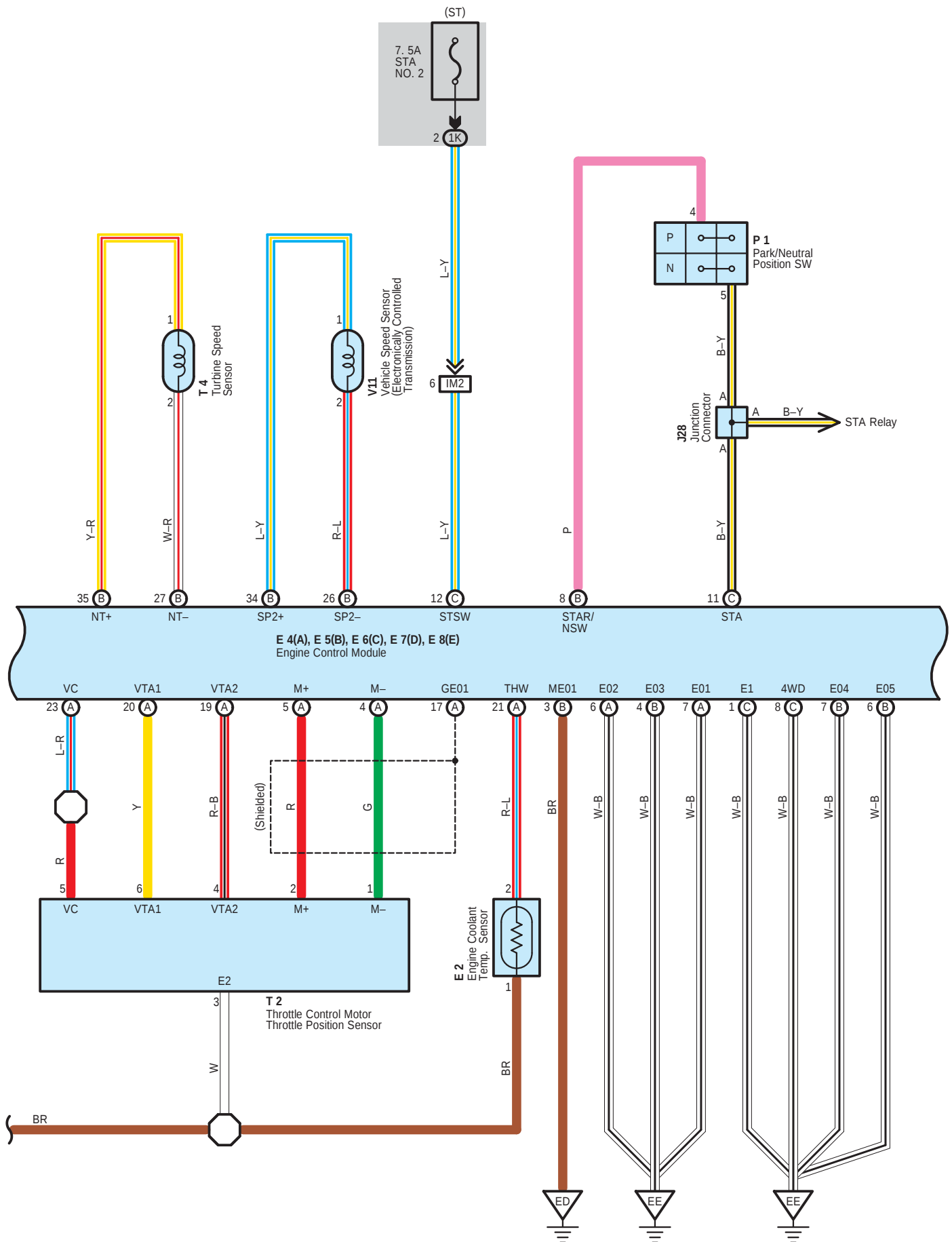
: Ground Points

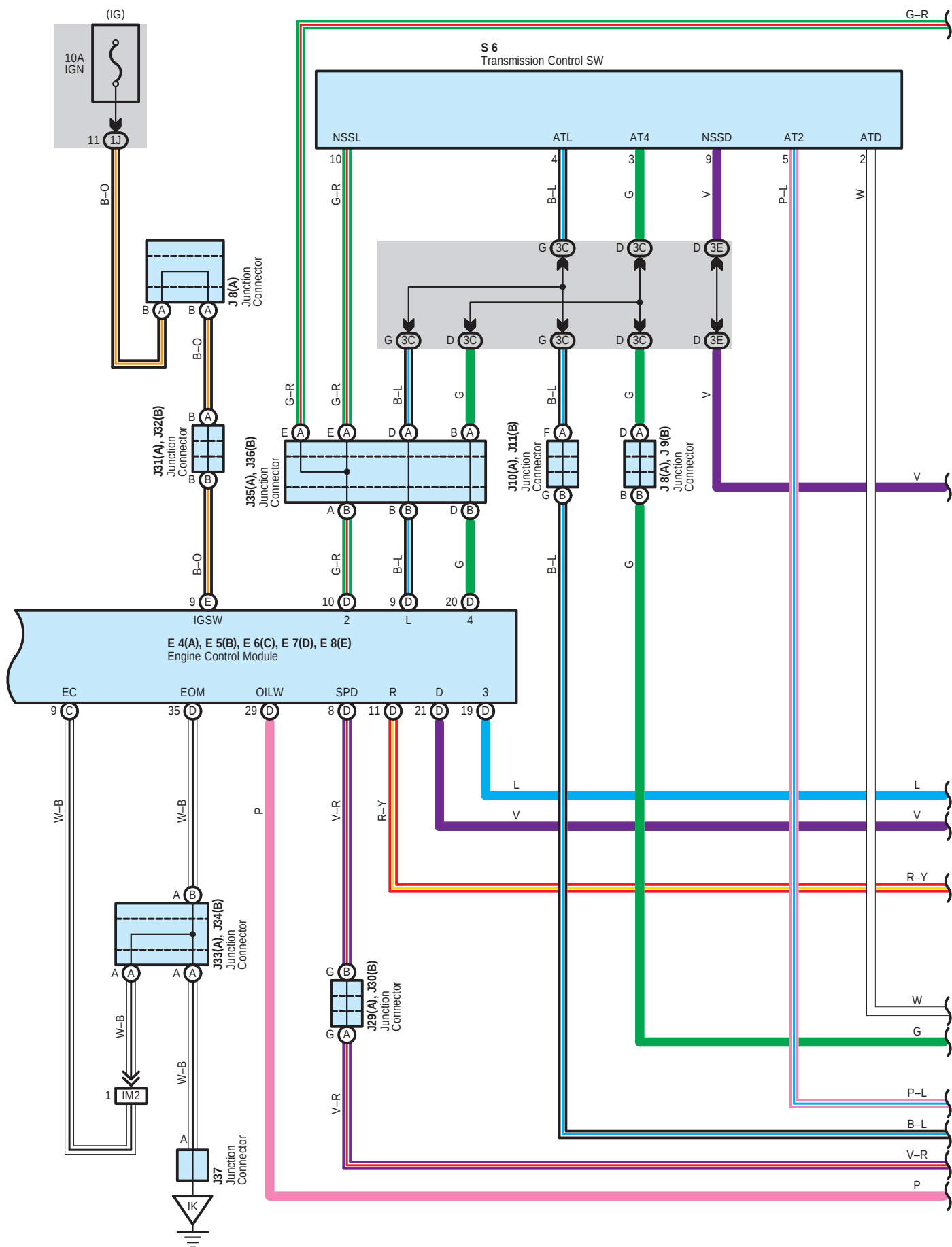
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

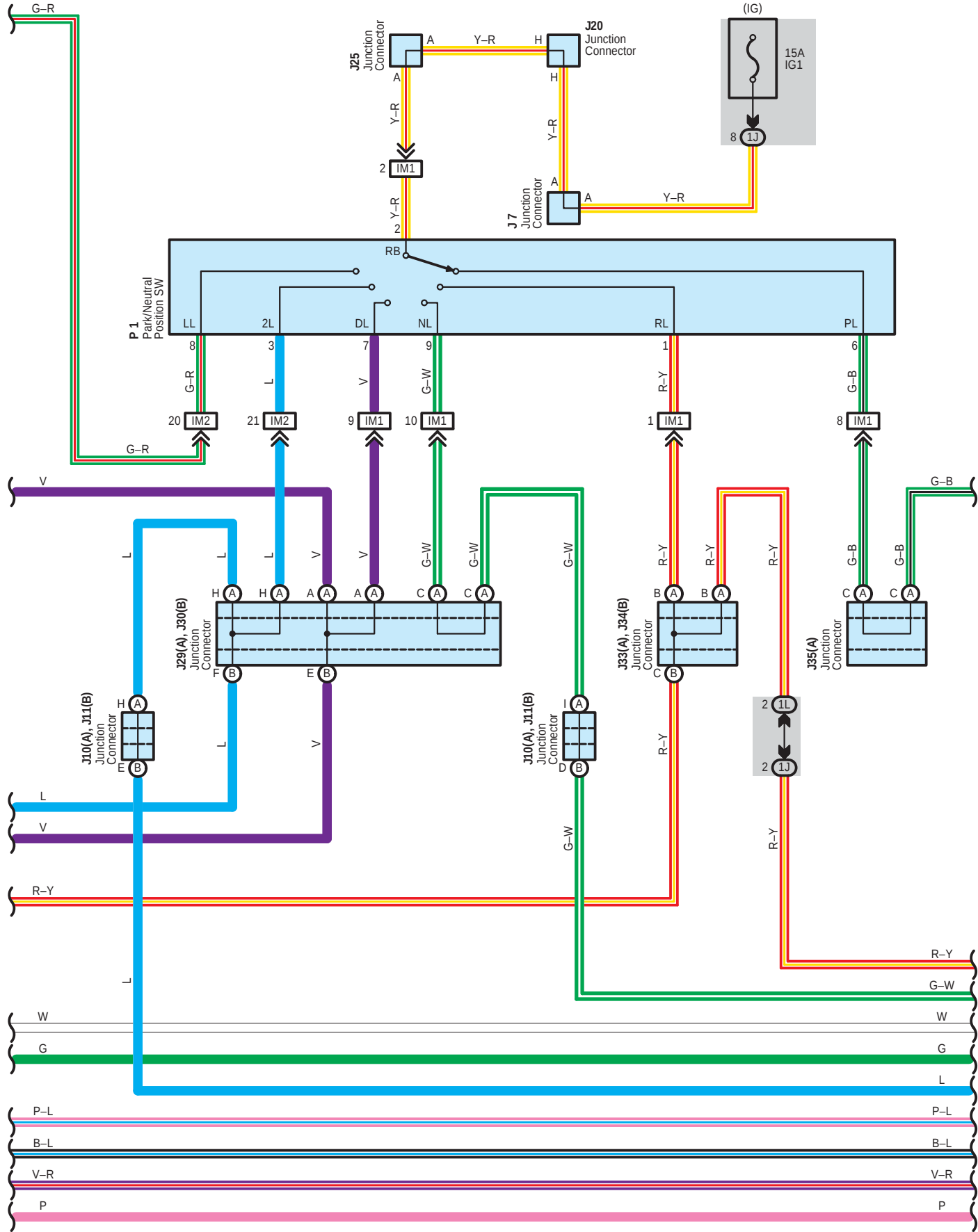


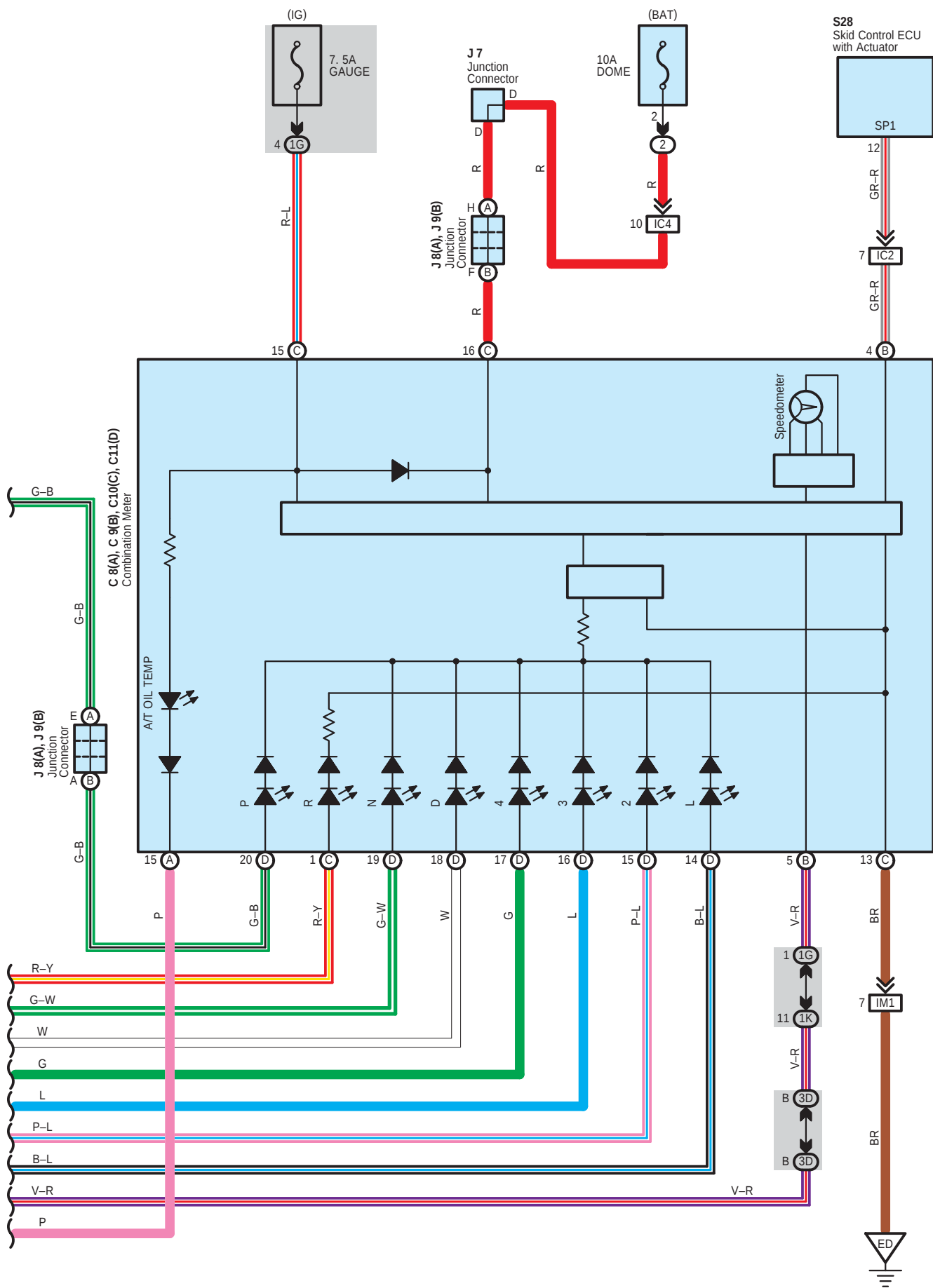


ECT and A/T Indicator for 2UZ-FE









System Outline

Previous automatic transmissions have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock-up hydraulic pressure. The electronically controlled transmission, however, electrically controls the line pressure, throttle pressure, lock-up pressure and accumulator pressure etc. through the solenoid valve. The electronically controlled transmission is a system which precisely controls gear shift timing and lock-up timing in response to the vehicle's driving conditions and the engine condition detected by various sensors. It makes smooth driving possible by shift selection for each gear which is the most appropriate to the driving conditions at that time, and by preventing downing, squat and gear shift shock when starting off.

1. Gear Shift Operation

When driving, the engine warm up condition is input as a signal to TERMINAL THW of the engine control module from the engine coolant temp. sensor and the vehicle speed signal from vehicle speed sensor is input to TERMINAL SP2+ of the engine control module. At the same time, the throttle valve opening signal from the throttle position sensor is input to TERMINALS VTA1 and VTA2 of the engine control module as throttle angle signal.

Based on these signals, the engine control module selects the best shift position for the driving conditions and sends current to the electronically controlled transmission solenoid.

2. Line Hydraulic Pressure Control

The engine control module adjusts the line hydraulic pressure to the optimal level by controlling TERMINAL SLT+ of the module according to the engine torque data. This realizes the smooth gear shifting.

3. High Response Gear Shifting Control

The engine control module performs the high response engine torque up control to control the ignition-timing lag as well as opening the electronic throttle when shifting down. By doing this, the gear shifting is performed in a short period of time. Moreover, the engine control module uses the orifice switching control, which optimizes the speed of applying and reducing the hydraulic pressure. And it realizes the fine shifting condition by applying and reducing hydraulic pressure slowly when the gear shifting shock is important and quickly when the high response is required.

4. Clutch Hydraulic Pressure Control

The engine control module controls the clutch operation in the optimal timing and with the best hydraulic pressure according to the engine torque data and the number of the clutch revolution

5. Lock-Up and Flexible Lock-Up Control

The engine control module carries out the lock-up control by controlling the TERMINAL SLU+ of the module according to the shift position, vehicle speed, throttle opening degree and running conditions. The engine control module also steadily keeps applying the lock-up clutch a delicate slippage to improve the transmission efficiency (Fuel efficiency) of the torque converter.

6. Stop Light SW Circuit

If the brake pedal is depressed (Stop light SW on) when driving in lock-up condition, a signal is input to TERMINAL STP of the engine control module. The engine control module operates and cuts the current to the solenoid to release lock-up.

7. AI-Shift Control

The engine control module judges whether the road is downslope or upslope by detecting the throttle opening degree or the vehicle's speed. Moreover it can expect the winding roads by detecting the turning condition of the vehicle. The engine control module keeps unnecessary shifting up from the fourth gear from operating and carries out the automatic shifting down to the third gear in order to control the vehicle running according to the road conditions. The engine control module also reads the driver's intention during driving from his (her) accelerating operation and the running conditions of the vehicle. As a result of that, ideal shifting patters for each driver are automatically selected without any switching operations.

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A24	36	J4	38	J34	B 38
C8	A 37	J7	38	J35	A 38
C9	B 37	J8	A 38	J36	B 38
C10	C 37	J9	B 38	J37	38
C11	D 37	J10	A 38	J50	D 38
D1	37	J11	B 38	J51	E 38
E1	32 (2UZ-FE)	J18	38	J52	F 38
E2	32 (2UZ-FE)	J20	38	M1	B 33 (2UZ-FE)
E4	A 37	J25	38	P1	33 (2UZ-FE)
E5	B 37	J28	38	S6	39
E6	C 37	J29	A 38	S12	39
E7	D 37	J30	B 38	S28	33 (2UZ-FE)
E8	E 37	J31	A 38	T2	33 (2UZ-FE)
J2	A 33 (2UZ-FE)	J32	B 38	T4	33 (2UZ-FE)
J3	B 33 (2UZ-FE)	J33	A 38	V11	33 (2UZ-FE)

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3D		
3E		

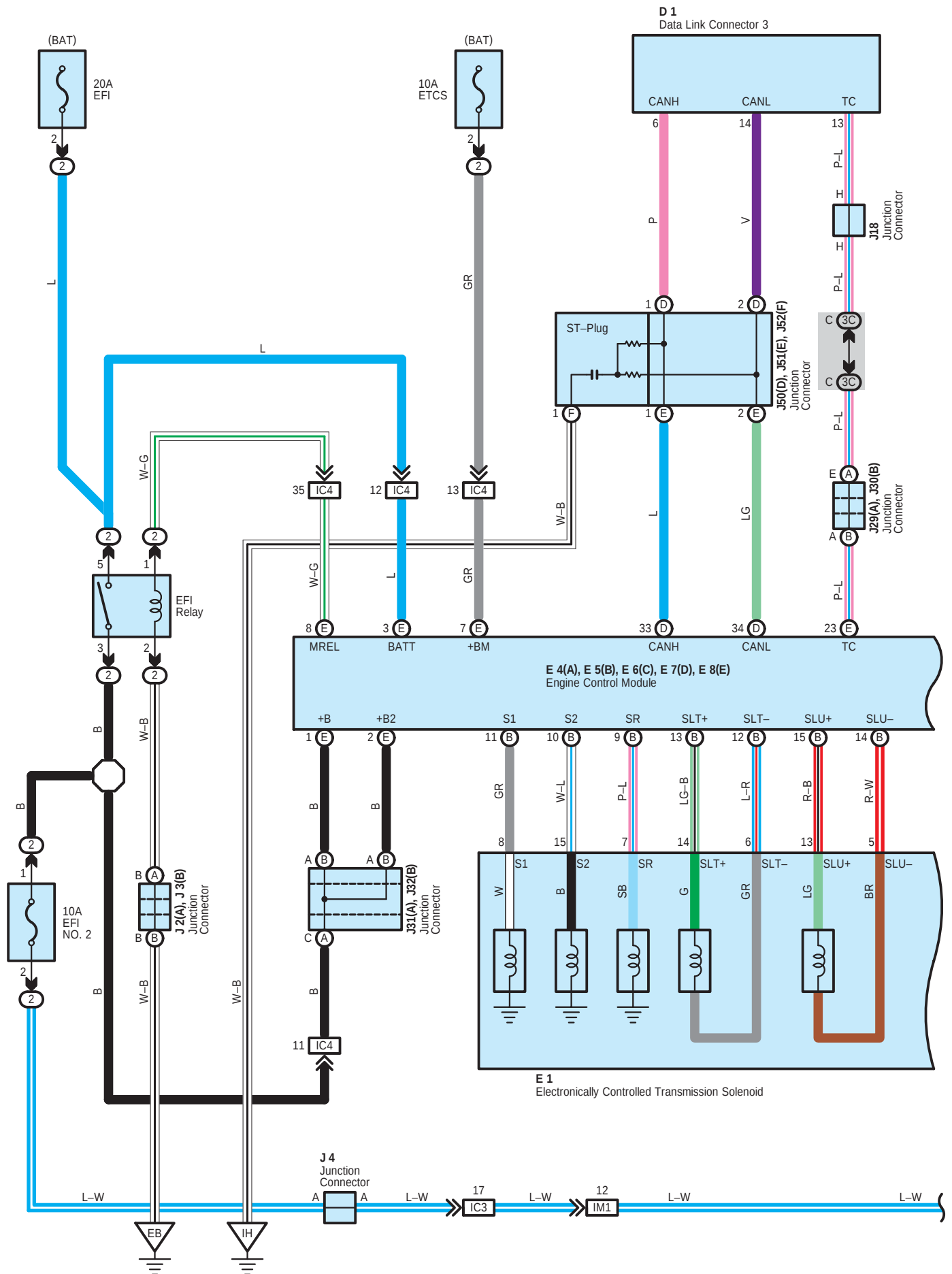
 : Connector Joining Wire Harness and Wire Harness

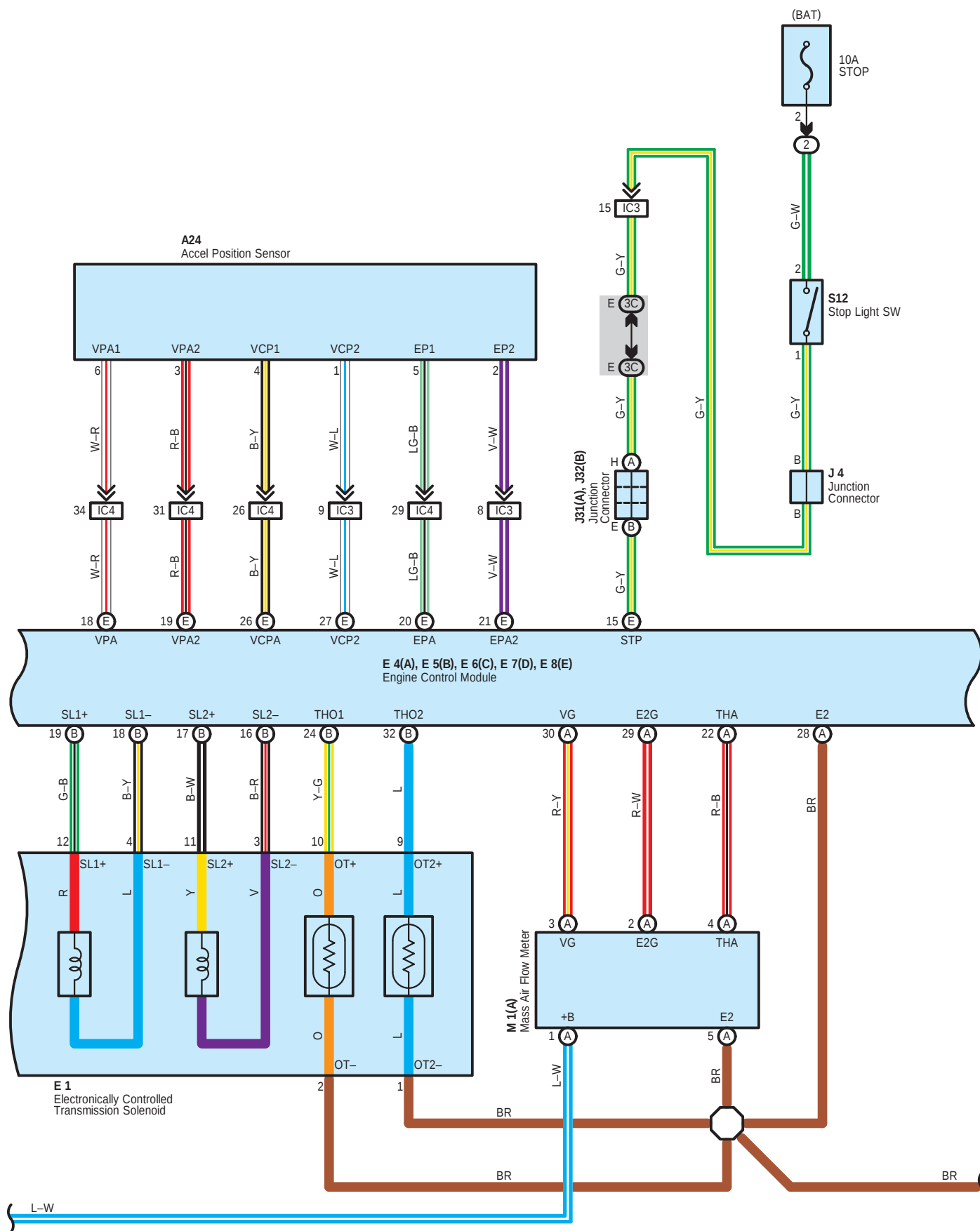
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

 : Ground Points

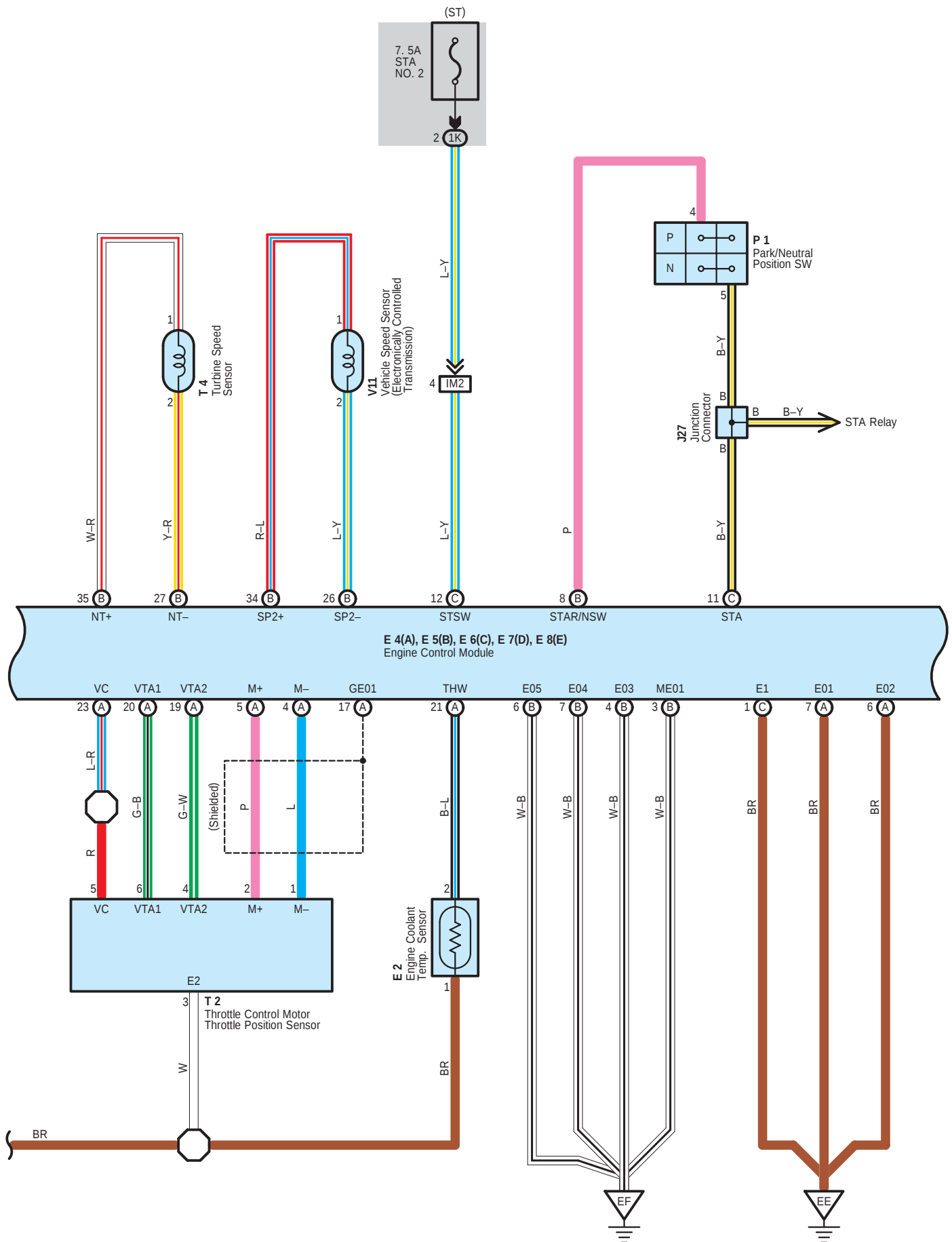
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
IH	46	Instrument Panel Brace LH
IK	46	Right Kick Panel

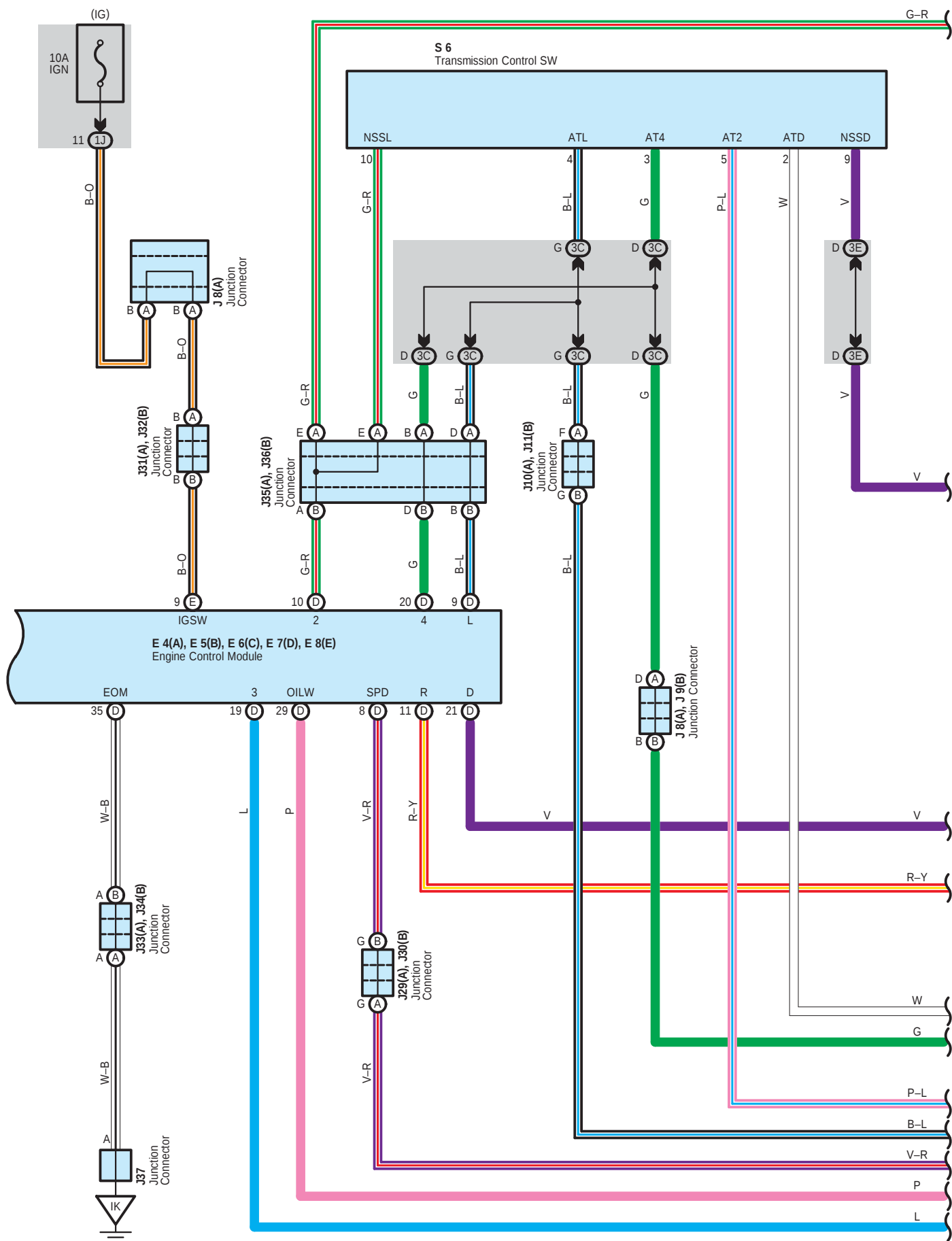
ECT and A/T Indicator for 1GR-FE





ECT and A/T Indicator for 1GR-FE







System Outline

Previous automatic transmissions have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock-up hydraulic pressure. The electronically controlled transmission, however, electrically controls the line pressure, throttle pressure, lock-up pressure and accumulator pressure etc. through the solenoid valve. The electronically controlled transmission is a system which precisely controls gear shift timing and lock-up timing in response to the vehicle's driving conditions and the engine condition detected by various sensors. It makes smooth driving possible by shift selection for each gear which is the most appropriate to the driving conditions at that time, and by preventing downing, squat and gear shift shock when starting off.

1. Gear Shift Operation

When driving, the engine warm up condition is input as a signal to TERMINAL THW of the engine control module from the engine coolant temp. sensor and the vehicle speed signal from vehicle speed sensor is input to TERMINAL SP2+ of the engine control module. At the same time, the throttle valve opening signal from the throttle position sensor is input to TERMINALS VTA1 and VTA2 of the engine control module as throttle angle signal.

Based on these signals, the engine control module selects the best shift position for the driving conditions and sends current to the electronically controlled transmission solenoid.

2. Line Hydraulic Pressure Control

The engine control module adjusts the line hydraulic pressure to the optimal level by controlling TERMINAL SLT+ of the module according to the engine torque data. This realizes the smooth gear shifting.

3. High Response Gear Shifting Control

The engine control module performs the high response engine torque up control to control the ignition-timing lag as well as opening the electronic throttle when shifting down. By doing this, the gear shifting is performed in a short period of time. Moreover, the engine control module uses the orifice switching control, which optimizes the speed of applying and reducing the hydraulic pressure. And it realizes the fine shifting condition by applying and reducing hydraulic pressure slowly when the gear shifting shock is important and quickly when the high response is required.

4. Clutch Hydraulic Pressure Control

The engine control module controls the clutch operation in the optimal timing and with the best hydraulic pressure according to the engine torque data and the number of the clutch revolution

5. Lock-Up and Flexible Lock-Up Control

The engine control module carries out the lock-up control by controlling the TERMINAL SLU+ of the module according to the shift position, vehicle speed, throttle opening degree and running conditions. The engine control module also steadily keeps applying the lock-up clutch a delicate slippage to improve the transmission efficiency (Fuel efficiency) of the torque converter.

6. Stop Light SW Circuit

If the brake pedal is depressed (Stop light SW on) when driving in lock-up condition, a signal is input to TERMINAL STP of the engine control module. The engine control module operates and cuts the current to the solenoid to release lock-up.

7. AI-Shift Control

The engine control module judges whether the road is downslope or upslope by detecting the throttle opening degree or the vehicle's speed. Moreover it can expect the winding roads by detecting the turning condition of the vehicle. The engine control module keeps unnecessary shifting up from the fourth gear from operating and carries out the automatic shifting down to the third gear in order to control the vehicle running according to the road conditions. The engine control module also reads the driver's intention during driving from his (her) accelerating operation and the running conditions of the vehicle. As a result of that, ideal shifting patters for each driver are automatically selected without any switching operations.

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A24	36	J4	38	J34	B 38
C8	A 37	J7	38	J35	A 38
C9	B 37	J8	A 38	J36	B 38
C10	C 37	J9	B 38	J37	38
C11	D 37	J10	A 38	J50	D 38
D1	37	J11	B 38	J51	E 38
E1	34 (1GR-FE)	J18	38	J52	F 38
E2	34 (1GR-FE)	J20	38	M1	A 35 (1GR-FE)
E4	A 37	J25	38	P1	35 (1GR-FE)
E5	B 37	J27	38	S6	39
E6	C 37	J29	A 38	S12	39
E7	D 37	J30	B 38	S28	35 (1GR-FE)
E8	E 37	J31	A 38	T2	35 (1GR-FE)
J2	A 35 (1GR-FE)	J32	B 38	T4	35 (1GR-FE)
J3	B 35 (1GR-FE)	J33	A 38	V11	35 (1GR-FE)

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3D		
3E		

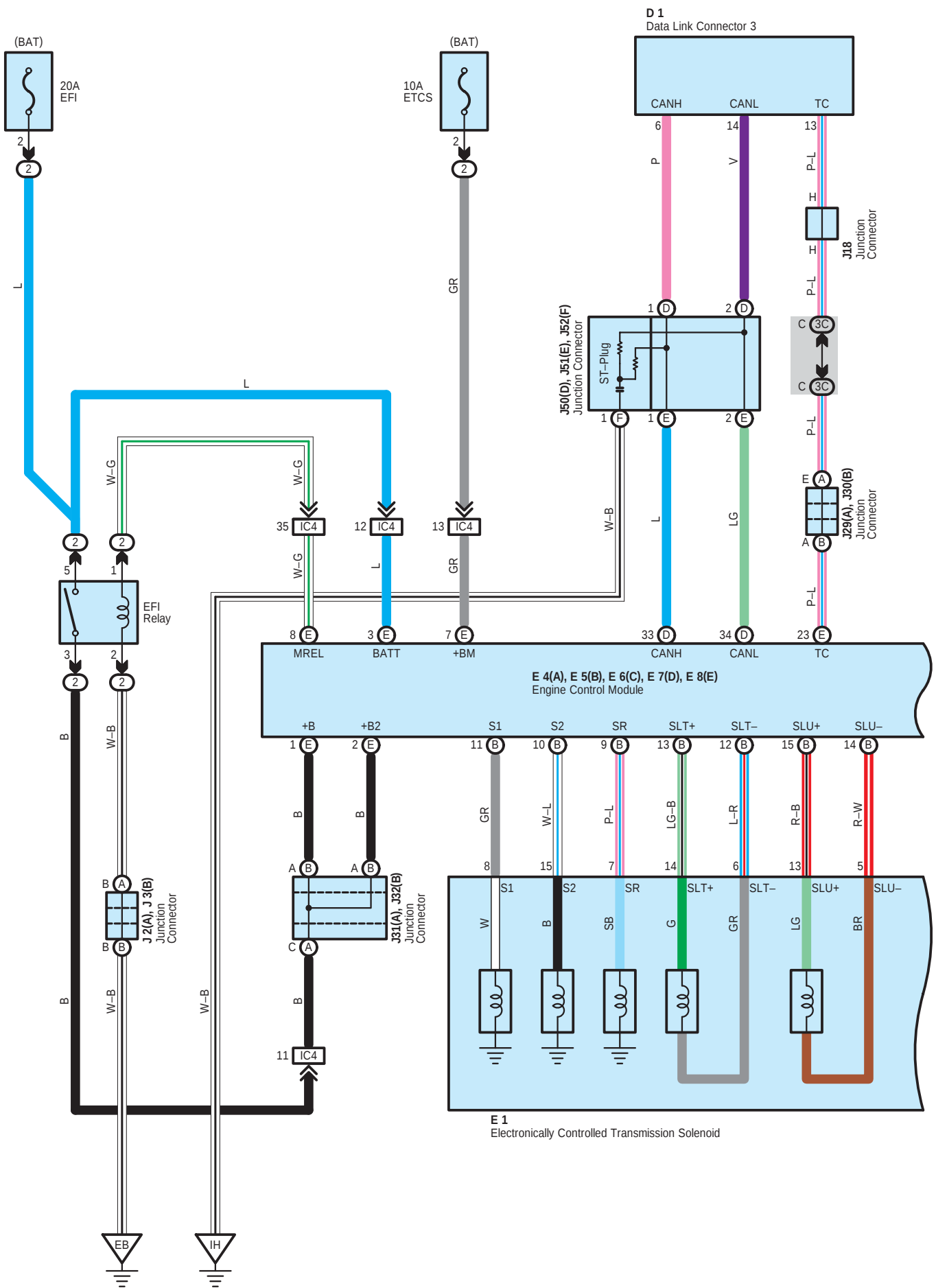
 : Connector Joining Wire Harness and Wire Harness

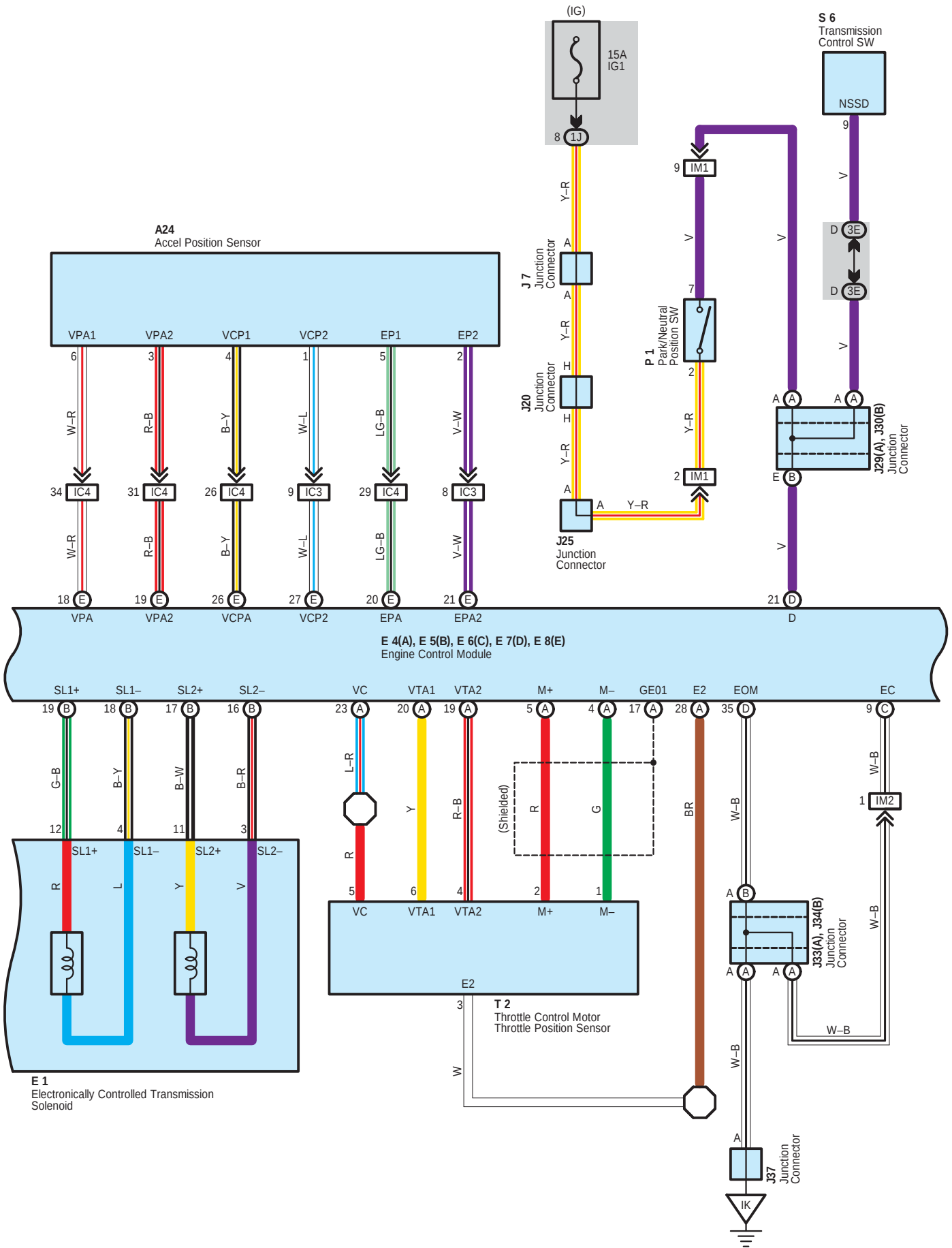
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

 : Ground Points

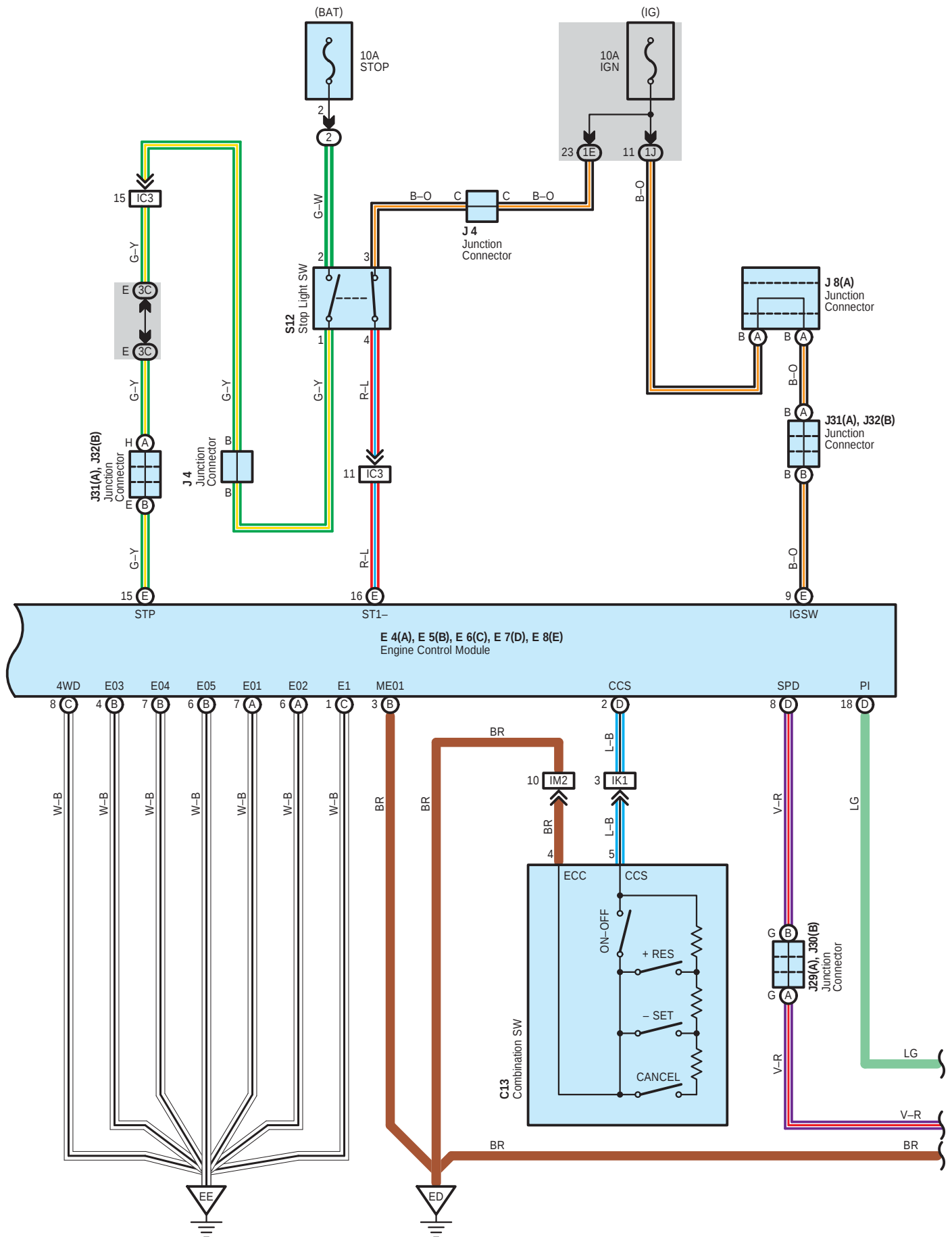
Code	See Page	Ground Points Location
EB	45 (1GR-FE)	Front Left Fender
EE	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	45 (1GR-FE)	Rear Side of Left Bank Cylinder Block
IH	46	Instrument Panel Brace LH
IK	46	Right Kick Panel

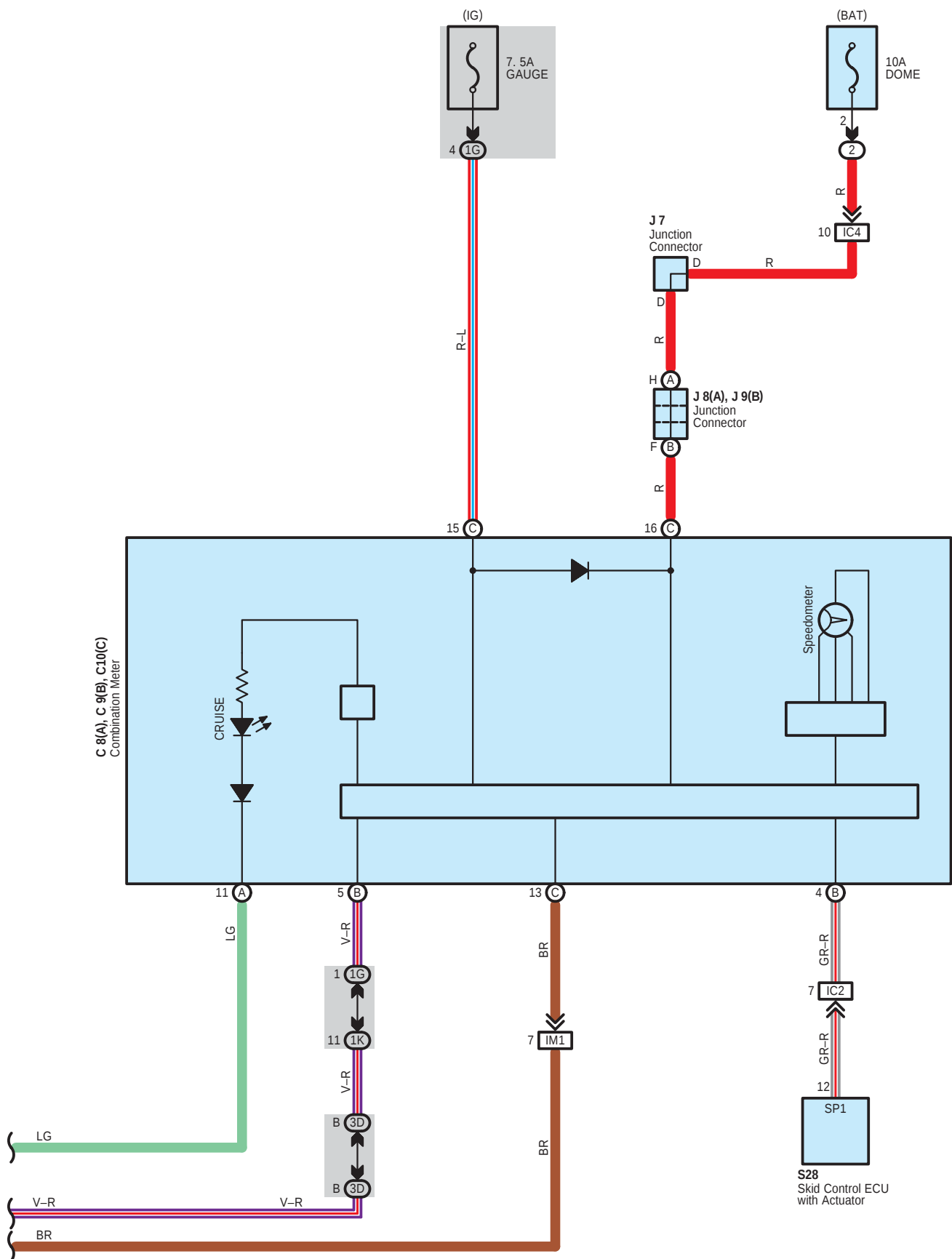
Cruise Control for 2UZ-FE





Cruise Control for 2UZ-FE





System Outline

The cruise control system is a constant vehicle speed controller in which control of the switch on the instrument panel makes it possible to automatically adjust the opening of the engine throttle valve without depressing of the accel pedal.

1. Set Operation

When the ON-OFF SW is turned on, the system starts preparations necessary for the cruise control and turns on the indicator light in the combination meter.

2. Set Speed Control

When the - SET SW is operated with the cruise control main SW turned on during travelling, the constant vehicle speed is controlled.

3. Coast Control

When the - SET SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to decelerate the vehicle. Every time the - SET SW is turned on instantaneously, the vehicle speed is decelerated approximately 1.5 km/h.

4. Accel Control

When the + RES SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to accelerate the vehicle. Every time the + RES SW is turned on instantaneously, the vehicle speed is accelerated approximately 1.5 km/h.

5. Resume Control

When the vehicle speed is above the low speed limit (Approximately 40 km/h, 25 mph) if the cruise control is cancelled, use of the + RES SW accelerates the vehicle to the speed level used before canceling the cruise control.

6. Manual Cancel Mechanism

If any of the following signals is input during cruise control travelling, the cruise control is cancelled.

- * The stop light SW is turned on.
- * The CANCEL SW is turned on.
- * The ON-OFF SW is turned off.
- * Gear is shifted from D position to other positions than D.

7. Auto Cancel Operation

* If any of the following conditions are detected, the set speed is erased and the control is canceled.

- (1) Disconnection and/or short in the stop light SW
 - (2) Malfunction in the vehicle speed signal
 - (3) Malfunction in the electronic throttle parts
 - (4) Malfunction in the stop light SW input circuit
 - (5) Malfunction in the cancel circuit
 - (6) The actual vehicle speed becomes -16 km/h slower than the set speed
- * If the following condition is detected, the set speed is kept and the control is canceled.
- (1) The actual vehicle speed becomes slower than the minimum speed limit.

8. Overdrive Control Function

Overdrive is sometimes cut off on gradients during cruise control driving. When end of climbing gradient is determined by throttle opening degree information after overdrive is canceled, control is reset to overdrive condition after overdrive resetting timer operation. Also, when overdrive is cut off during accelerator resuming control, control is reset to overdrive condition when accelerator resuming control is finished.

 : Parts Location

Code		See Page	Code		See Page	Code		See Page
A24		36	J2	A	33 (2UZ–FE)	J32	B	38
C8	A	37	J3	B	33 (2UZ–FE)	J33	A	38
C9	B	37	J4		38	J34	B	38
C10	C	37	J7		38	J37		38
C13		37	J8	A	38	J50	D	38
D1		37	J9	B	38	J51	E	38
E1		32 (2UZ–FE)	J18		38	J52	F	38
E4	A	37	J20		38	P1		33 (2UZ–FE)
E5	B	37	J25		38	S6		39
E6	C	37	J29	A	38	S12		39
E7	D	37	J30	B	38	S28		33 (2UZ–FE)
E8	E	37	J31	A	38	T2		33 (2UZ–FE)

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3D		
3E		

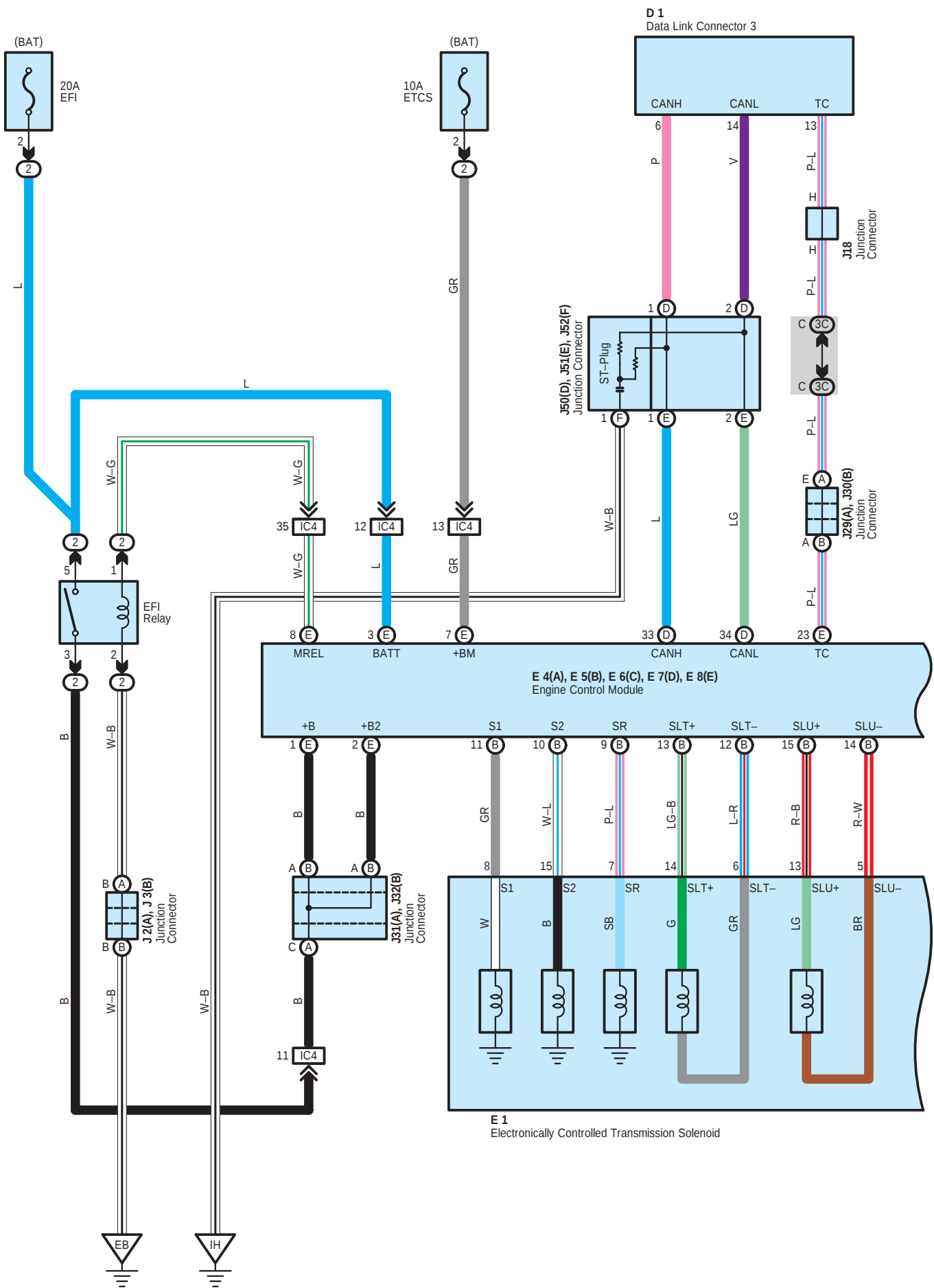
 : Connector Joining Wire Harness and Wire Harness

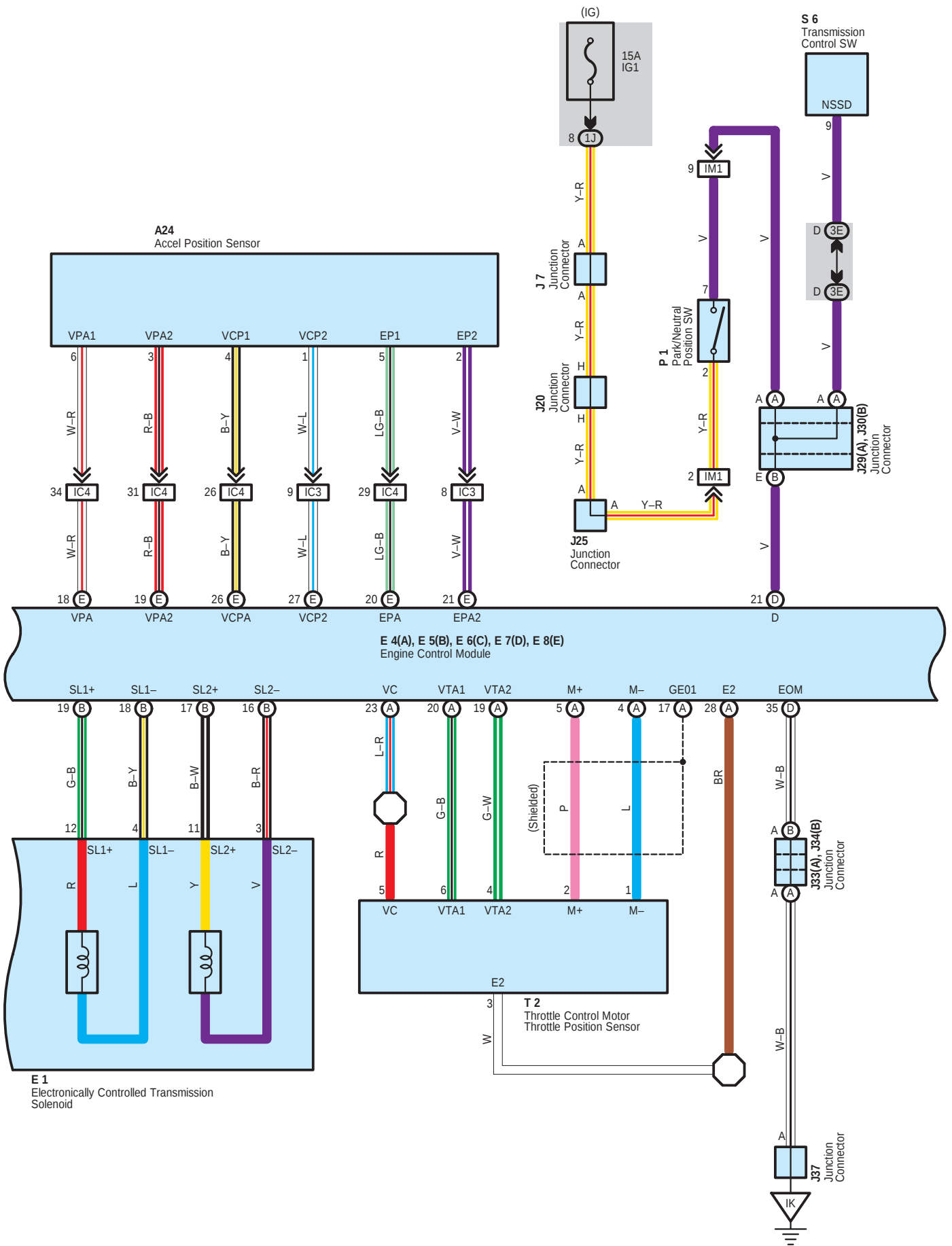
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IK1	47	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

 : Ground Points

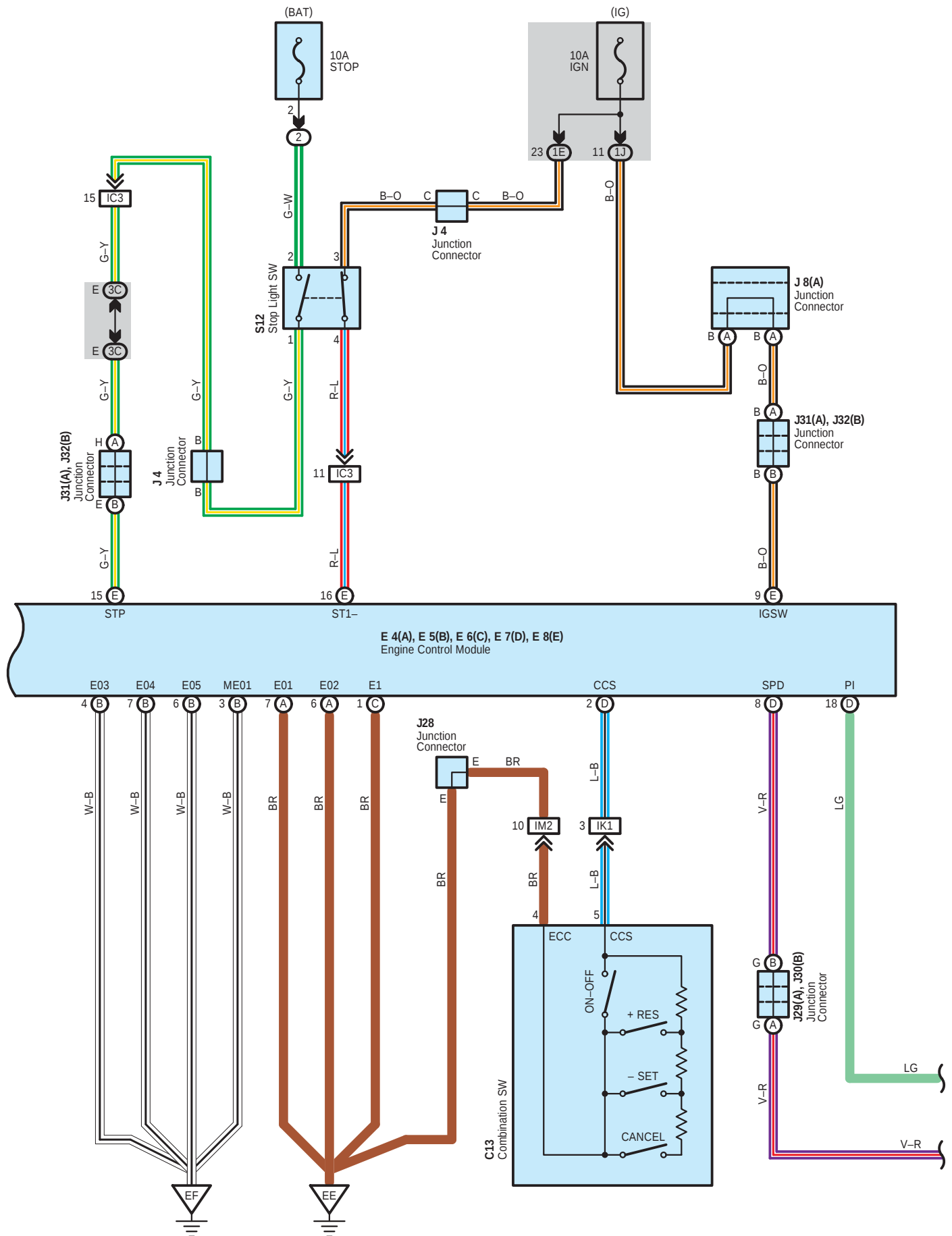
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
IH	46	Instrument Panel Brace LH
IK	46	Right Kick Panel

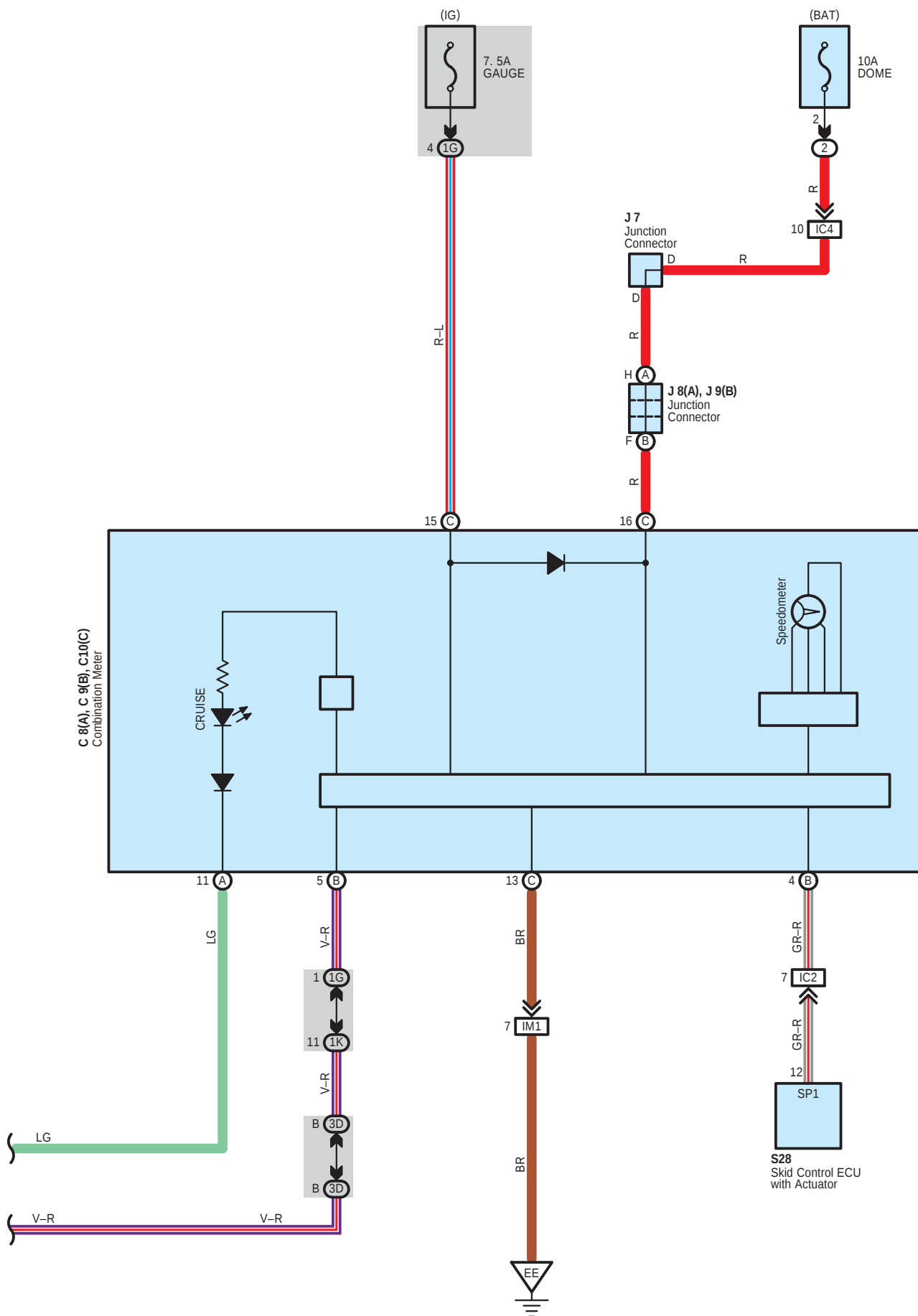
Cruise Control for 1GR-FE





Cruise Control for 1GR-FE





Cruise Control for 1GR-FE

System Outline

The cruise control system is a constant vehicle speed controller in which control of the switch on the instrument panel makes it possible to automatically adjust the opening of the engine throttle valve without depressing of the accel pedal.

1. Set Operation

When the ON-OFF SW is turned on, the system starts preparations necessary for the cruise control and turns on the indicator light in the combination meter.

2. Set Speed Control

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When the + RES SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to accelerate the vehicle. Every time the + RES SW is turned on instantaneously, the vehicle speed is accelerated approximately 1.5 km/h.

5. Resume Control

When the vehicle speed is above the low speed limit (Approximately 40 km/h, 25 mph) if the cruise control is cancelled, use of the + RES SW accelerates the vehicle to the speed level used before canceling the cruise control.

6. Manual Cancel Mechanism

If any of the following signals is input during cruise control travelling, the cruise control is cancelled.

- * The stop light SW is turned on.
- * The CANCEL SW is turned on.
- * The ON-OFF SW is turned off.
- * Gear is shifted from D position to other positions than D.

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- (1) Disconnection and/or short in the stop light SW
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 - (3) Malfunction in the electronic throttle parts
 - (4) Malfunction in the stop light SW input circuit
 - (5) Malfunction in the cancel circuit
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8. Overdrive Control Function

Overdrive is sometimes cut off on gradients during cruise control driving. When end of climbing gradient is determined by throttle opening degree information after overdrive is canceled, control is reset to overdrive condition after overdrive resetting timer operation. Also, when overdrive is cut off during accelerator resuming control, control is reset to overdrive condition when accelerator resuming control is finished.

 : Parts Location

Code		See Page	Code		See Page	Code		See Page
A24		36	J3	B	35 (1GR–FE)	J33	A	38
C8	A	37	J4		38	J34	B	38
C9	B	37	J7		38	J37		38
C10	C	37	J8	A	38	J50	D	38
C13		37	J9	B	38	J51	E	38
D1		37	J18		38	J52	F	38
E1		34 (1GR–FE)	J20		38	P1		35 (1GR–FE)
E4	A	37	J25		38	S6		39
E5	B	37	J28		38	S12		39
E6	C	37	J29	A	38	S28		35 (1GR–FE)
E7	D	37	J30	B	38	T2		35 (1GR–FE)
E8	E	37	J31	A	38			
J2	A	35 (1GR–FE)	J32	B	38			

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3D		
3E		

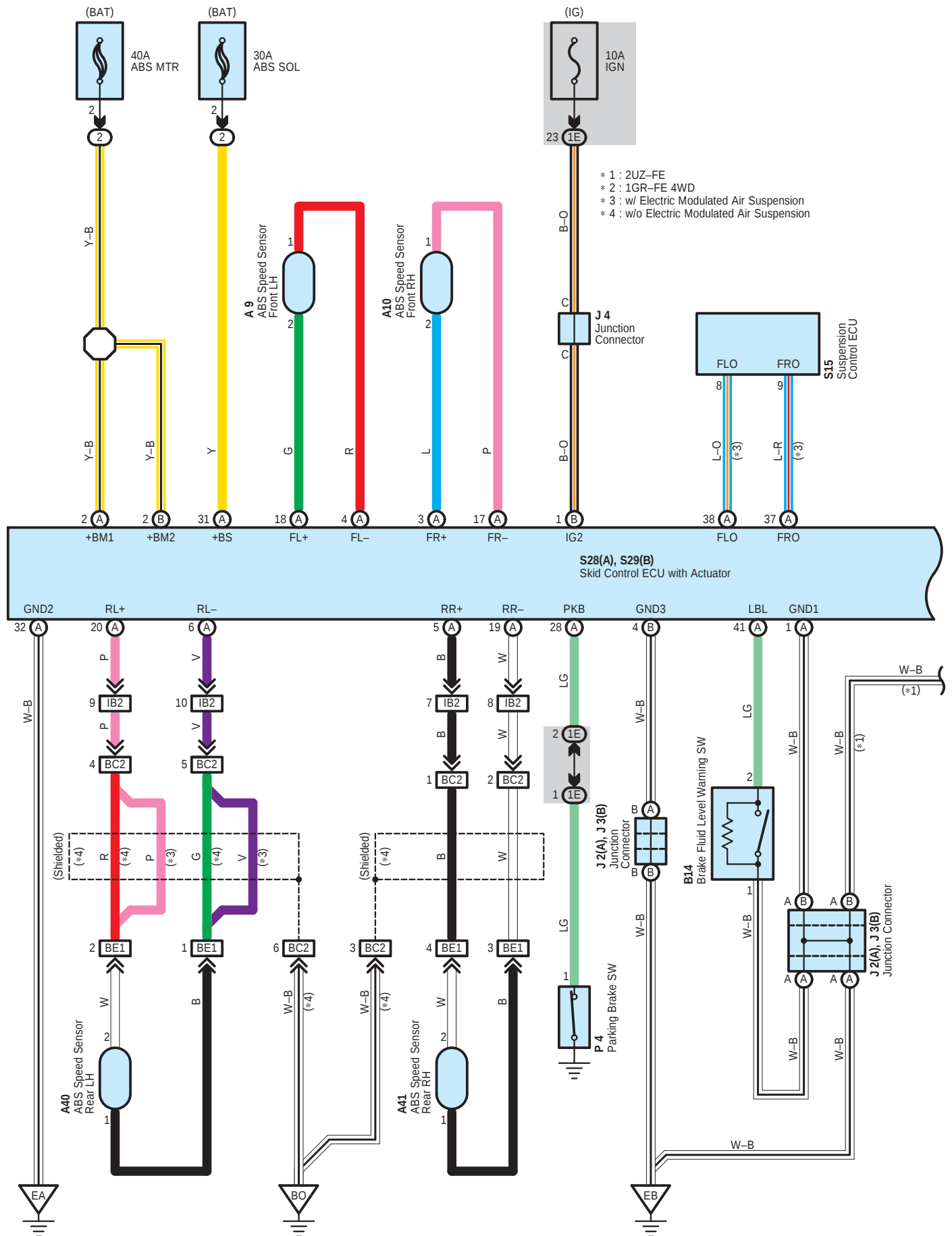
 : Connector Joining Wire Harness and Wire Harness

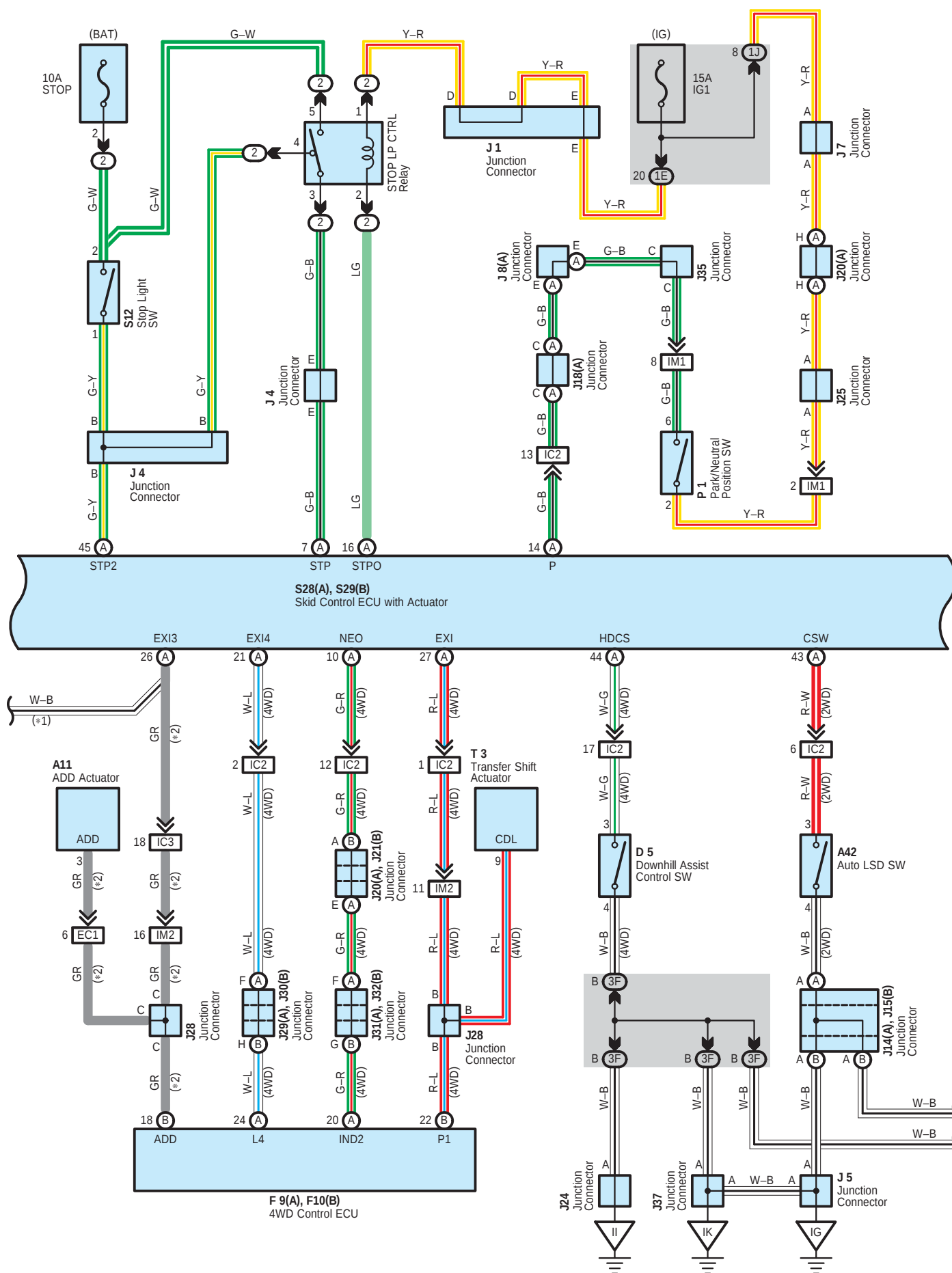
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IK1	47	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

 : Ground Points

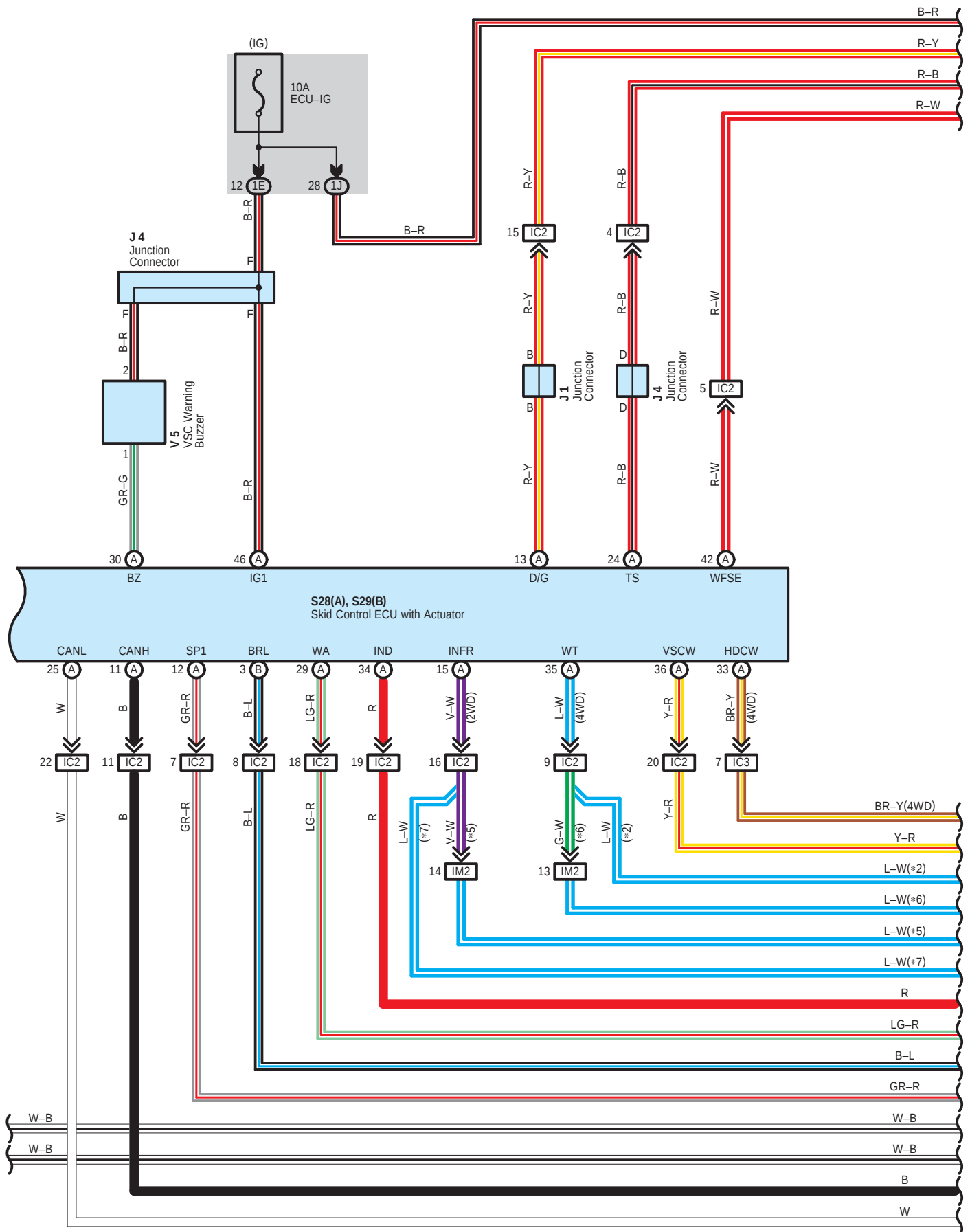
Code	See Page	Ground Points Location
EB	45 (1GR-FE)	Front Left Fender
EE	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	45 (1GR-FE)	Rear Side of Left Bank Cylinder Block
IH	46	Instrument Panel Brace LH
IK	46	Right Kick Panel

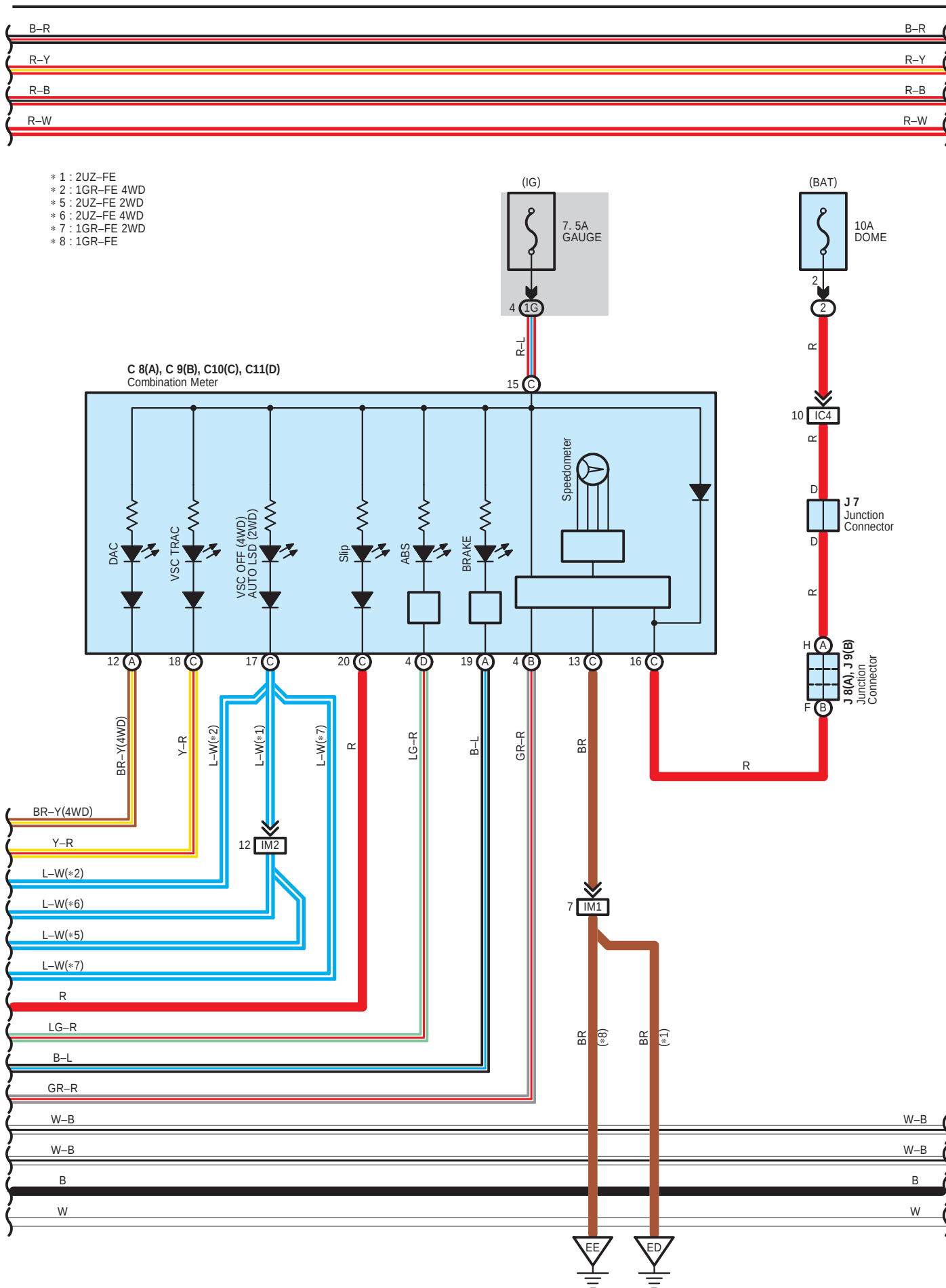
ABS, TRAC, VSC, Auto LSD, DAC and HAC



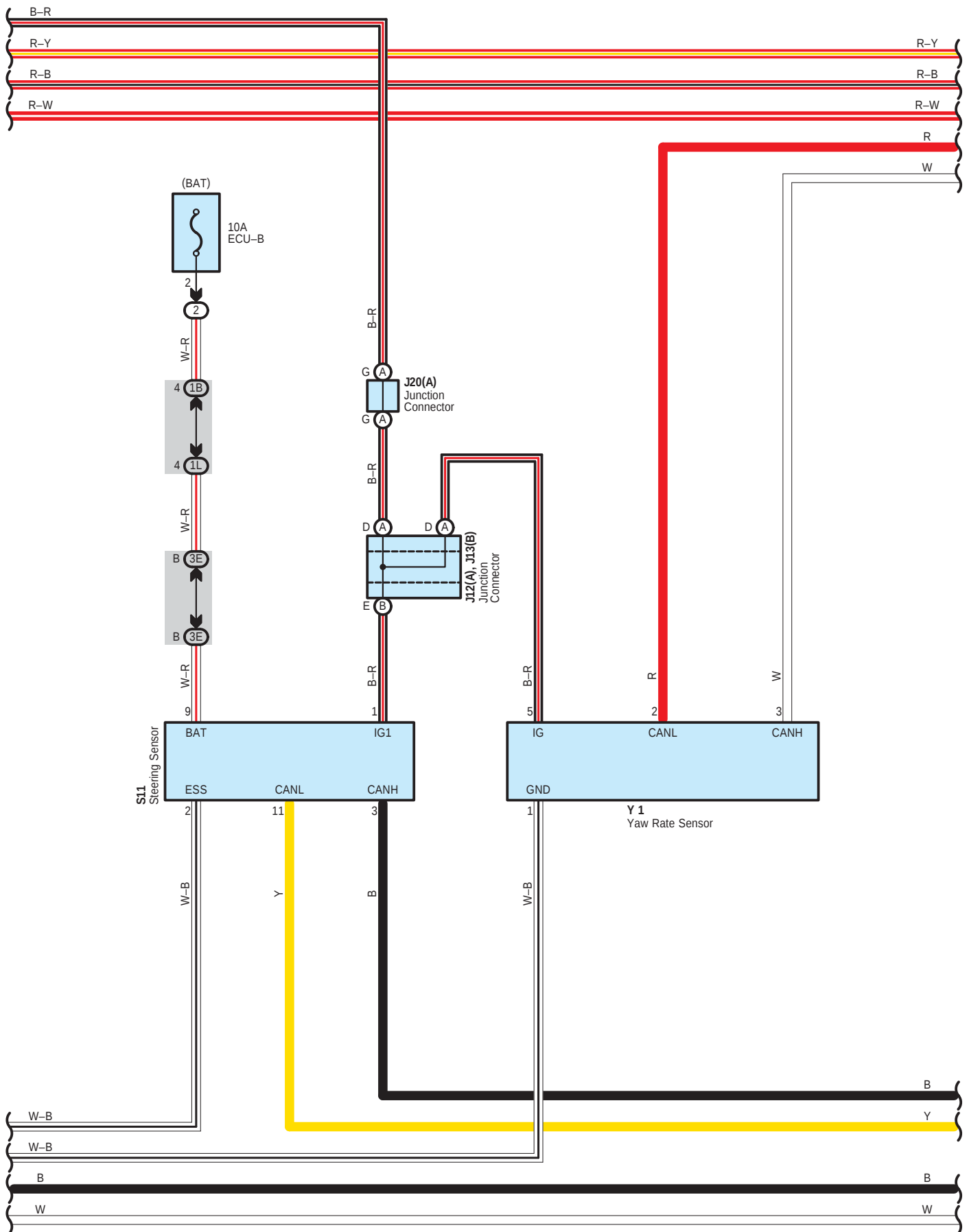


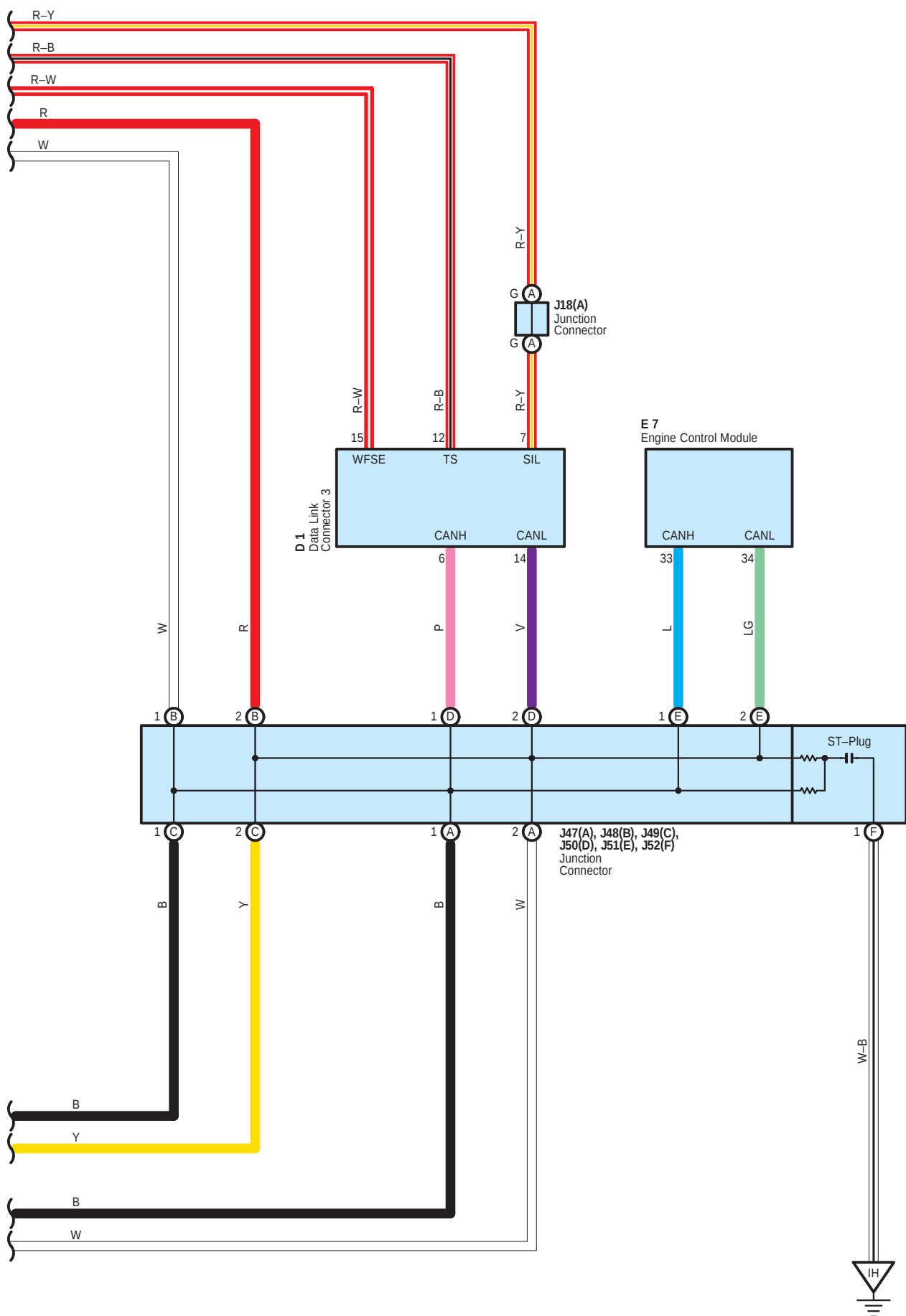
ABS, TRAC, VSC, Auto LSD, DAC and HAC





ABS, TRAC, VSC, Auto LSD, DAC and HAC





System Outline

1. Normal Operation

The VSC system helps prevent the vehicle from slipping sideways as a result of strong front wheel skid or strong rear wheel skid during cornering.

The followings are two possible circumstances in which the tires exceed their lateral grip limit. The VSC system is designed to help control the vehicle behavior by controlling the engine output and the brake at each wheel when the vehicle is under one of the conditions indicated below.

- * When the front wheels lose grip in relation to the rear wheels (Strong front wheel skid tendency).
- * When the rear wheels lose grip in relation to the front wheels (Strong rear wheel skid tendency).

2. Electronic Brake-Force Distribution

Skid control ECU with actuator 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 the loading condition and decelerating of the vehicle, resulting in reducing brake pedal depression and ensuring 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. Downhill Assist Control Operation

The downhill assist control operation controls braking action of each wheel to help prevent an out-of-balance posture of the vehicle when descending a steep hill or traveling at a speed exceeding the threshold of wheel gripping capability. When the downhill assist control is in operation, the brake system controls vehicle speed within the range of 5 to 7 km/h.

For the downhill assist control to be operative, all of the following conditions have to be met:

- * Downhill assist control switch = ON
- * Transfer L4 selected
- * Vehicle speed is 5 km/h or more, but less than 25 km/h.
- * Accelerator pedal OFF
- * Brake pedal OFF

4. Hill-Start Assist Control Operation

When starting on a steep hill for ascending, the hill-start assist control automatically puts the brake on momentarily when the driver switches from the brake pedal to the accelerator pedal, to help the driver start the vehicle safely and smoothly.

Please bear in mind, however, that it activates the brake system only for 3 seconds.

For the hill-start assist control to be operative all of the following conditions have to be met:

- * Shift position = D, 2, or L
- * No vehicle move due to wheel slip
- * Vehicle speed > 0 km/h

5. Active TRAC (4WD)

During rugged off-road driving, this function controls the engine output and the brake fluid pressure that is applied to the slipping wheel, and distributes the drive force that would have been lost through the slippage to the remaining wheels in order to achieve a LSD effect.

6. Auto LSD (2WD)

Auto LSD fulfills the function of LSD by using the system of TRAC. It helps ensures to recover from run-off condition and to take off on roads with much travel resistance such as sand.

 : Parts Location

Code		See Page	Code		See Page	Code		See Page
A9		32 (2UZ–FE)	J2	A	35 (1GR–FE)	J35		38
		34 (1GR–FE)	J3	B	33 (2UZ–FE)	J37		38
A10		32 (2UZ–FE)					35 (1GR–FE)	J47
		34 (1GR–FE)	J4		38	J48	B	38
A11		34 (1GR–FE)	J5		38	J49	C	38
A40		40	J7		38	J50	D	38
A41		40	J8	A	38	J51	E	38
A42		36	J9	B	38	J52	F	38
B14		32 (2UZ–FE)	J12	A	38	P1		33 (2UZ–FE)
		34 (1GR–FE)	J13	B	38			35 (1GR–FE)
C8	A	37	J14	A	38	P4		39
C9	B	37	J15	B	38	S11		39
C10	C	37	J18	A	38	S12		39
C11	D	37	J20	A	38	S15		39
D1		37	J21	B	38	S28	A	33 (2UZ–FE)
D5		37	J24		38			35 (1GR–FE)
E7		37	J25		38	S29	B	33 (2UZ–FE)
F9	A	37	J28		38			35 (1GR–FE)
F10	B	37	J29	A	38	T3		33 (2UZ–FE)
J1		33 (2UZ–FE)	J30	B	38			35 (1GR–FE)
		35 (1GR–FE)	J31	A	38	V5	39	
J2	A	33 (2UZ–FE)	J32	B	38	Y1		39

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1L		
3E	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3F		

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	45 (1GR-FE)	Engine Wire and Differential Wire (Near the Front Differential)
IB2	46	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
BC2	48	Frame Wire and Floor No.2 Wire (Under the Rear LH Seat)
BE1	48	Frame Wire and Skid Control Sensor Wire (Right Side of No.5 Crossmember)

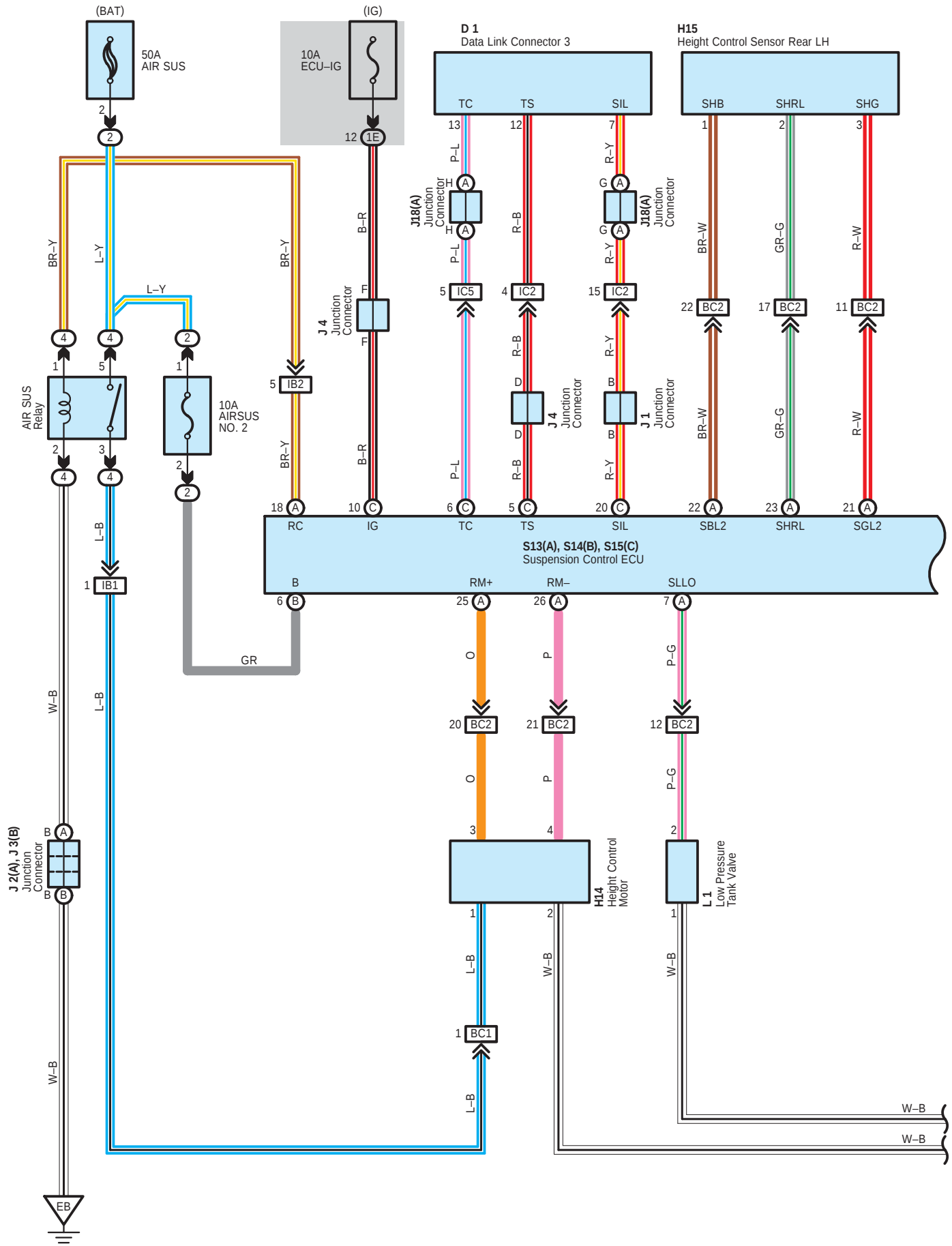
ABS, TRAC, VSC, Auto LSD, DAC and HAC

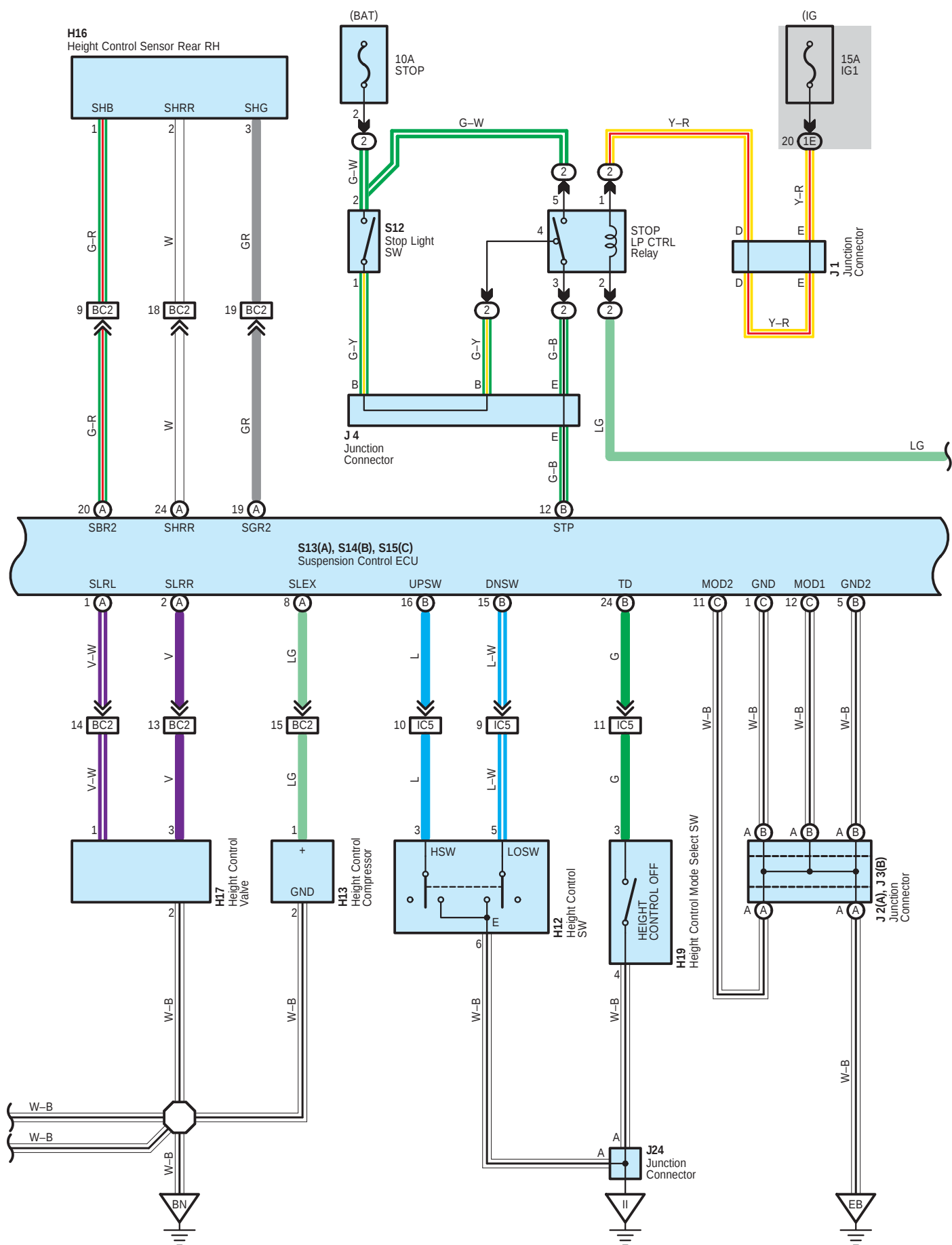


: Ground Points

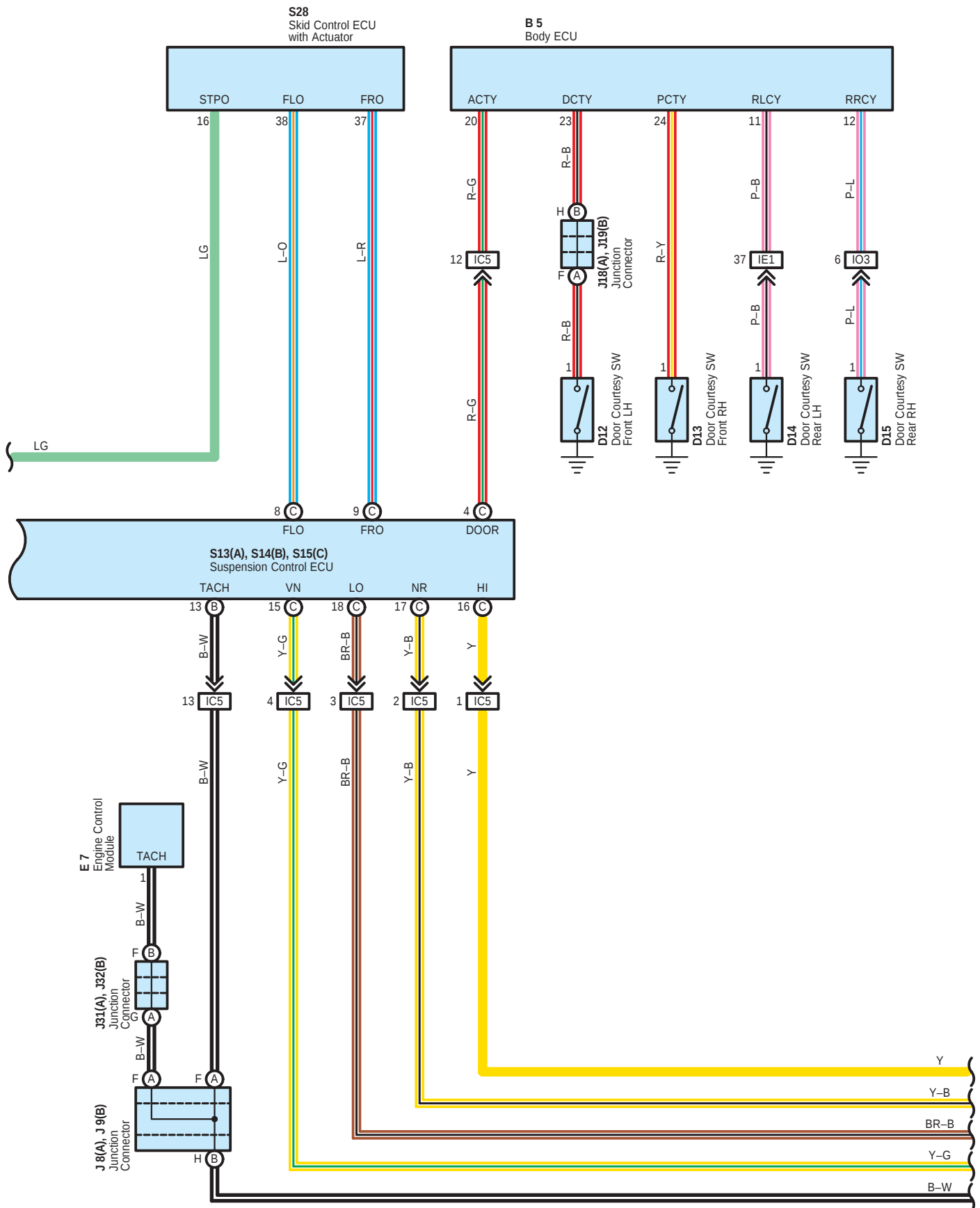
Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	45 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel
IH	46	Instrument Panel Brace LH
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BO	48	Rear Pillar LH

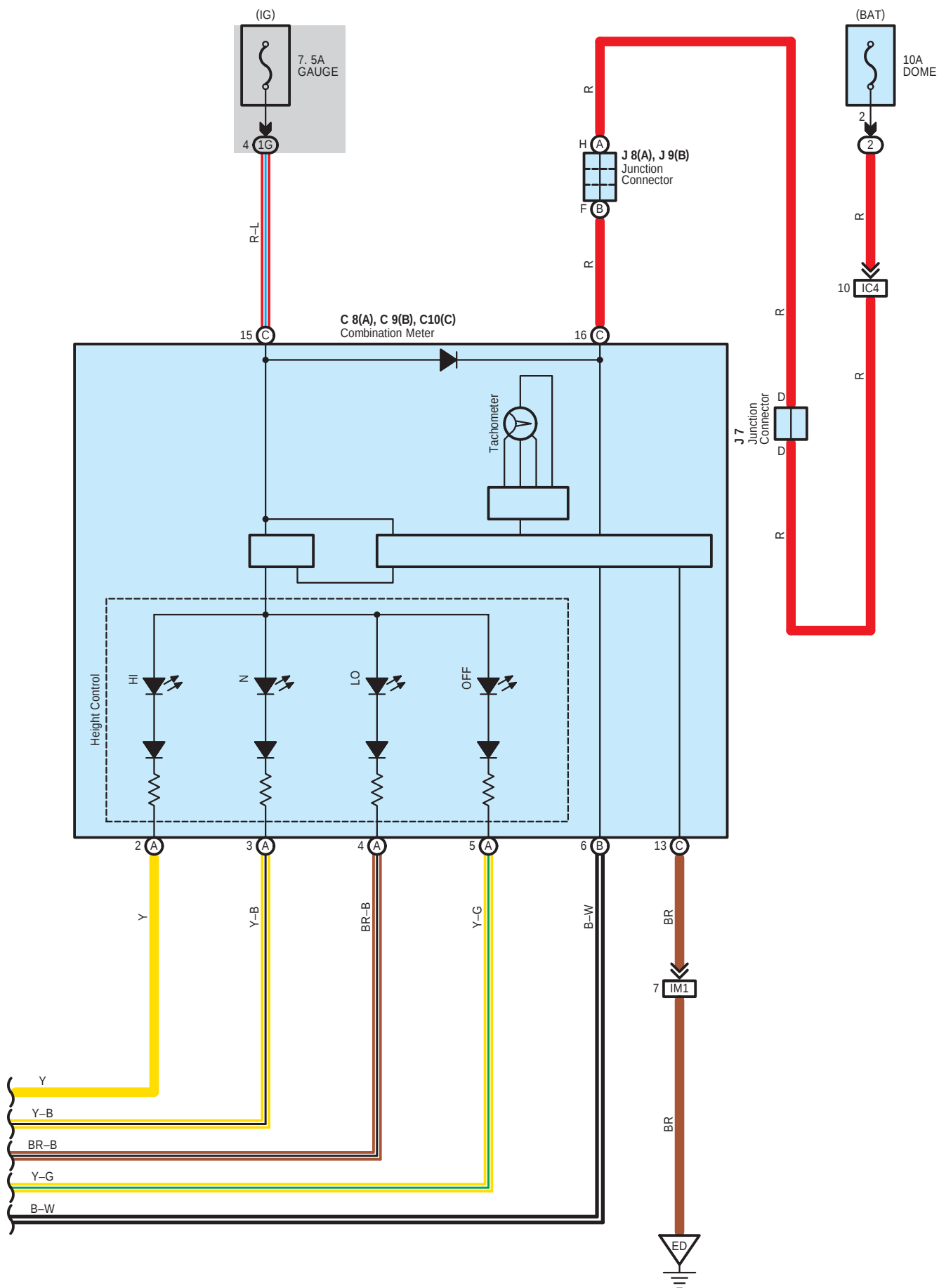
AHC and Electric Modulated Air Suspension





AHC and Electric Modulated Air Suspension





AHC and Electric Modulated Air Suspension

System Outline

- * The electric modulated suspension with height control is a system designed to maintain a constant vehicle height by means of an electro–pneumatic system in the rear suspension to cope with change in load such as passenger number and/or weight of cargo in the vehicle. With the three–height–control switch on the console, the driver can set the vehicle height from the three different height modes (High, normal and low): "High mode" for rough terrain and "Low mode" for passenger to get on/off, and for cargo to be loaded/unloaded.
- * This system has five basic controls as shown below:
- * Auto leveling control
This control maintains a constant rear vehicle height regardless of change in load such as passenger number and/or weight of cargo in the vehicle.
- * Vehicle height switchover control
This control switches the height mode to the mode selected with the height control switch.
 - * High mode (+ 40 mm / 1.6 in.)
 - * Low mode (– 20 mm / 0.8 in.)
- * Speed sensing control
Regardless of the initial setting of the vehicle height, "High mode" or "Low mode," this control automatically switches the vehicle height mode to the optimum "Normal mode" in the following conditions:
 - * When the vehicle speed reaches or exceeds 30 km/h with "High mode," or;
 - * When the vehicle speed reaches or exceeds 5 km/h with "Low mode."
- * Subsequent control after ignition switch off
After the ignition switch is turned OFF, this control lowers the rear vehicle height for passengers to get off, etc.
- * Height control OFF control
If the system is turned OFF with the vehicle height control switch, the vehicle can be jacked up or towed.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B5	36	H14	40	J18	A 38
C8	A 37	H15	40	J19	B 38
C9	B 37	H16	40	J24	38
C10	C 37	H17	40	J31	A 38
D1	37	H19	37	J32	B 38
D12	40	J1	33 (2UZ–FE)	L1	40
D13	40	J2	A 33 (2UZ–FE)	S12	39
D14	40	J3	B 33 (2UZ–FE)	S13	A 39
D15	40	J4	38	S14	B 39
E7	37	J7	38	S15	C 39
H12	37	J8	A 38	S28	33 (2UZ–FE)
H13	40	J9	B 38		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)
4	23	Engine Room R/B No.4 (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

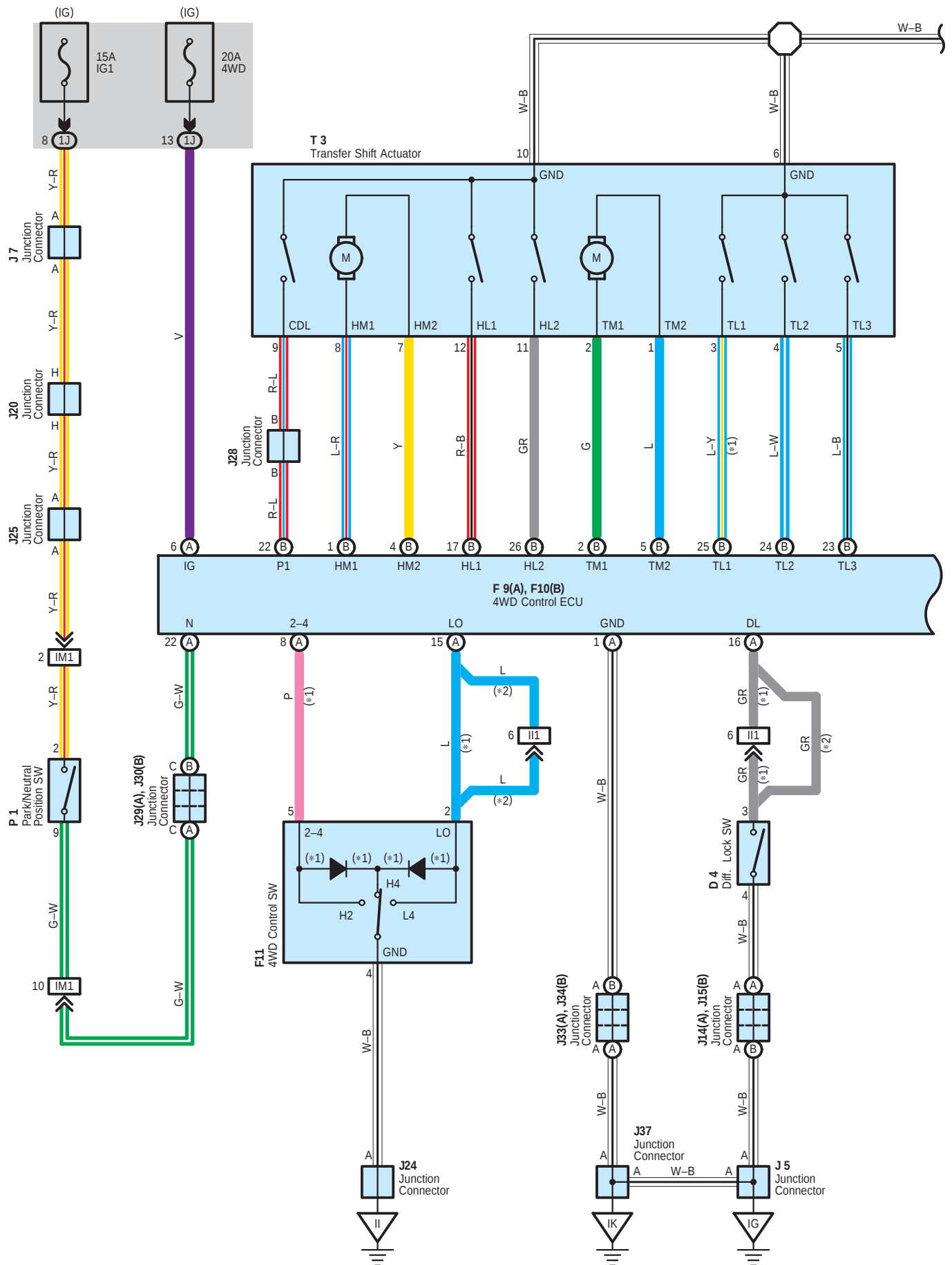
Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB1	46	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IB2		
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IC5		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
BC1	48	Frame Wire and Floor No.2 Wire (Under the Rear LH Seat)
BC2		

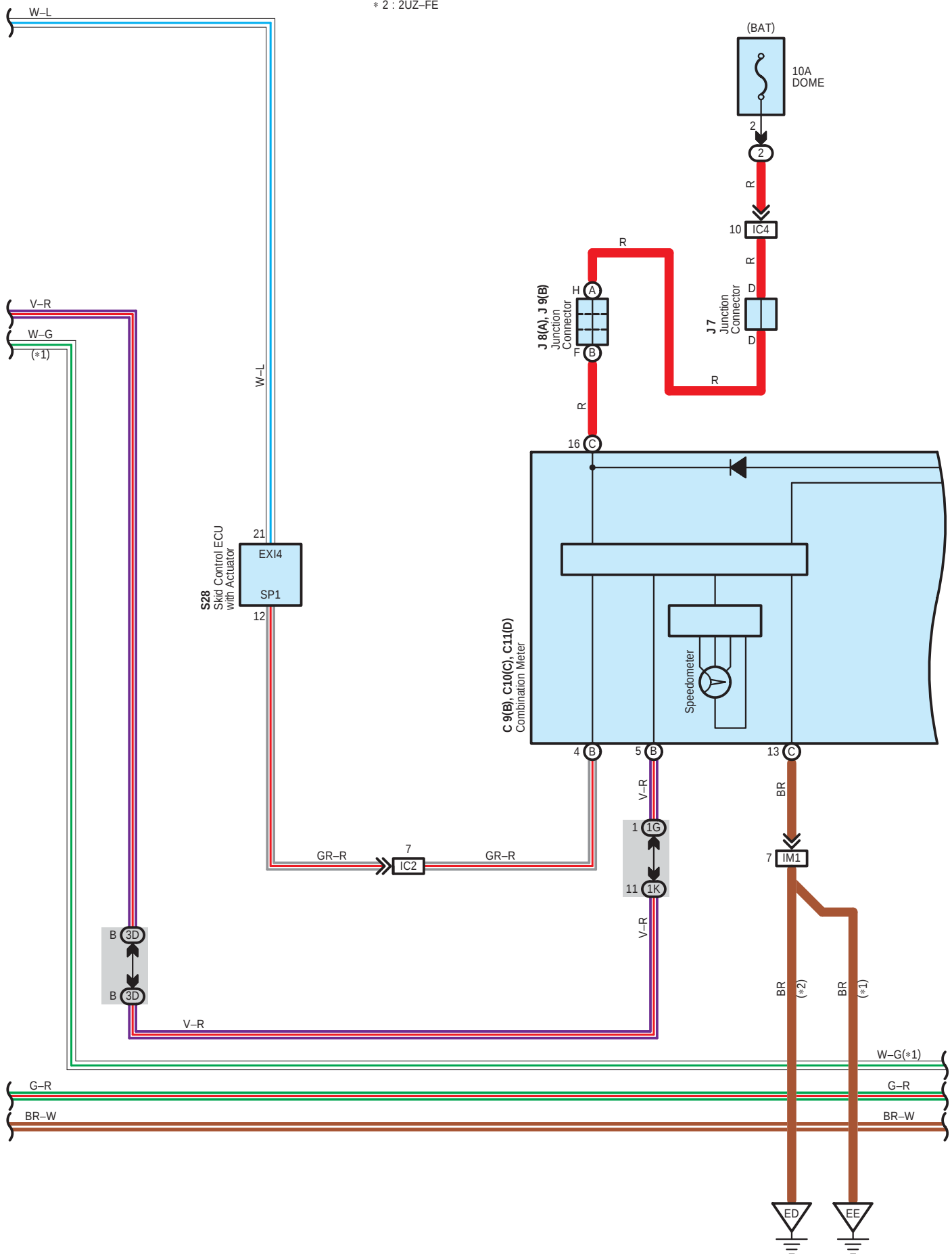
 : **Ground Points**

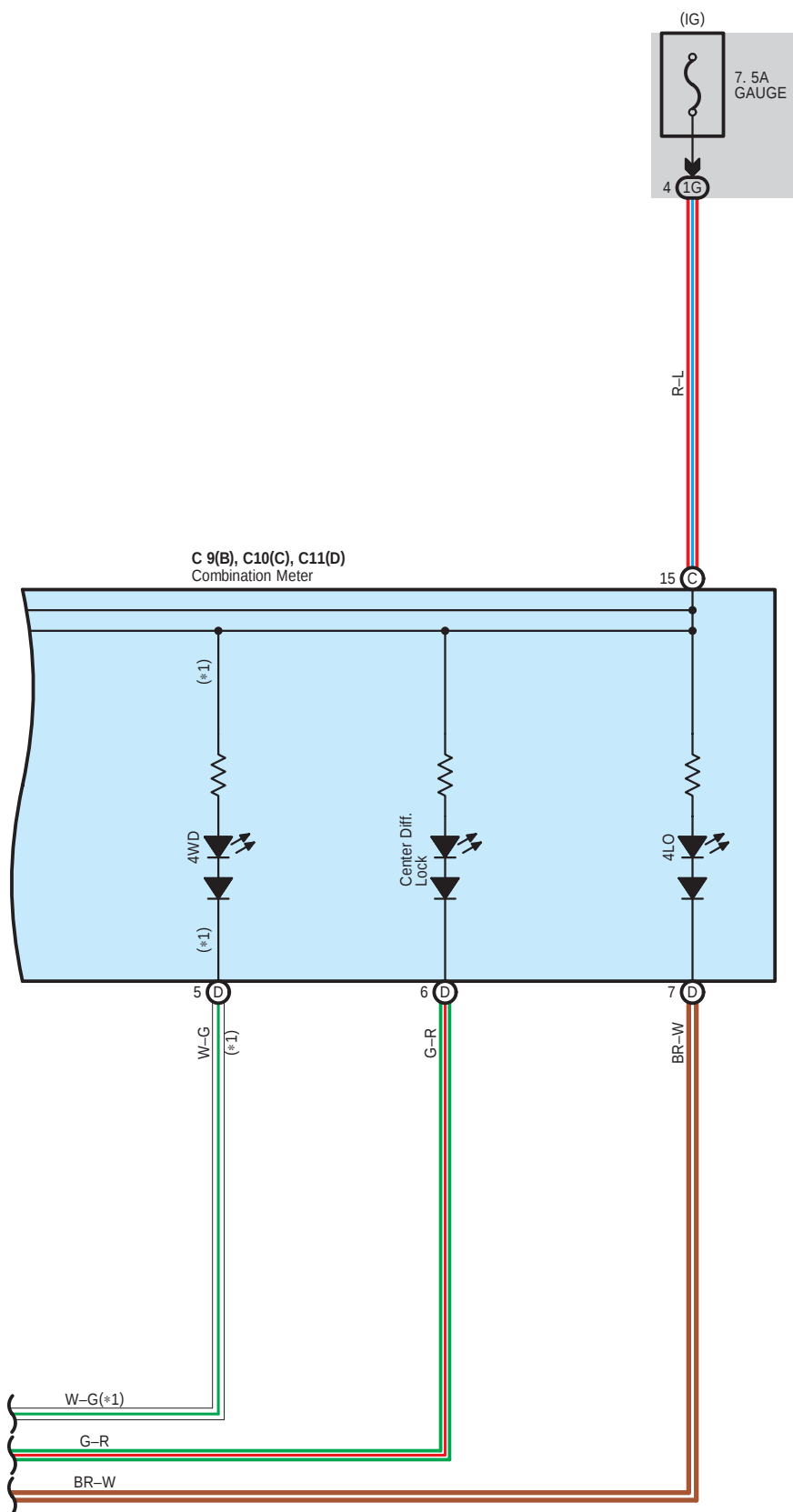
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
ED	44 (2UZ-FE)	Left Bank Cylinder Head
II	46	Instrument Panel Brace RH
BN	48	Near the No.5 Crossmember of Side Frame LH



Multi Mode 4WD

* 1 : 1GR-FE
* 2 : 2UZ-FE





System Outline

Depending on the transfer shift actuator status and ADD actuator (1GR-FE) status, the 4WD control ECU drives the transfer shift actuator and ADD actuator (1GR-FE) to electrically change the gear position selected by the driver according to vehicle speed signal and neutral start switch signal.

1. Shift Select Control

Shifting from H2 into H4 position (1GR-FE)

When the 4WD control switch is turned from H2 into H4, this signal is input into 4WD control ECU (TERMINAL 2-4). Then, the 4WD control ECU moves the 2-4 select motor (TERMINAL 2, TERMINAL 1) in the transfer shift actuator until the shift fork shaft shifts to the diff. free position, performing a shift into H4 position

Switching diff. lock ON when in H4 position.

When the diff. lock switch is turned ON with the 4WD control switch in H4 position, this signal is input into the 4WD control ECU (TERMINAL DL). Then, the 4WD control ECU drives the 2-4 select motor (TERMINAL 2, TERMINAL 1) in the transfer shift actuator until the shift fork shaft shifts to the diff. lock position, locking it in H4 position with the diff. lock.

Shifting from H4 into L4 position

When the 4WD control switch is turned from H4 into L4, this signal is input into 4WD control ECU (TERMINAL LO). Then, the 4WD control ECU drives the H-L select motor (TERMINAL 8, TERMINAL 7) in the transfer shift actuator, shifting the shift fork shaft, performing a shift into L4 position.

Switching diff. lock ON when in L4 position.

When the diff. lock switch is turned ON with the 4WD control switch in L4 position, this signal is input into the 4WD control ECU (TERMINAL DL). Then, the 4WD control ECU drives the 2-4 select motor (TERMINAL 2, TERMINAL 1) in the transfer shift actuator until the shift fork shaft shifts to the diff. lock position, locking it in L4 position with the diff. lock.

2. Function of Limit Switch

H4L limit switch (TERMINAL 12 and TERMINAL 11 of transfer shift actuator)

The H4L limit switch in the transfer shift actuator feeds back the current shift position status (H4 or L4) information, which is based on the ON/OFF combination of the two switches, to the 4WD control ECU.

4WD limit switch (TERMINAL 3 (1GR-FE), TERMINAL 4 and TERMINAL 5 of transfer shift actuator)

The 4WD limit switch in the transfer shift actuator feeds back the current shift position status (H2 or H4) (1GR-FE) and diff. lock or diff. free status information, which is based on the ON/OFF combination of the two (2UZ-FE) or three (1GR-FE) switches, to the 4WD control ECU.

ADD limit switch (TERMINAL 6 and TERMINAL 5 of ADD actuator) (1GR-FE)

The ADD limit switch in the ADD actuator feeds back the current front diff. lock or free status information, which is based on the ON/OFF combination of the two switches, to the 4WD control ECU.

3. Shift Limit Control

The 4WD control ECU interrupts the shift select control and gives the driver a warning by means of buzzer (Integrated into the ECU) sound and blinking indicator light on the combination meter when the following shift change conditions exist.

The warning, however, can be canceled when the 4WD control switch is canceled and the switch position is returned to the original position before the warning occurred.

- * Shift change (1GR-FE) from H2 into H4 with vehicle traveling at a speed reaching or exceeding 100 km/h (Buzzer sound and blinking 4WD and center diff. lock indicator lights)
- * Shift change from H4 into L4 with vehicle traveling at a speed reaching or exceeding 5 km/h but with the A/T shift position N range (Buzzer sound and blinking L4 indicator light)

4. ADD Actuator Control (1GR-FE)

When switching over between H2 (2WD) and H4 (4WD), the 4WD control ECU controls the way in which power is supplied to the ADD motor in the ADD actuator, as shown below, to run the ADD motor in normal or reverse direction, thereby changing the status of the front diff. from free to lock, or vice versa.

For locking front diff.	TERMINAL DM1	+B
	TERMINAL DM2	GROUND
For unlocking front diff.	TERMINAL DM1	GROUND
	TERMINAL DM2	+B

 : Parts Location

Code		See Page	Code		See Page	Code		See Page
A11		34 (1GR–FE)	J9	B	38	J32	B	38
C9	B	37	J10	A	38	J33	A	38
C10	C	37	J11	B	38	J34	B	38
C11	D	37	J14	A	38	J37		38
D4		37	J15	B	38	P1		33 (2UZ–FE)
E6		37	J20		38			35 (1GR–FE)
F9	A	37	J24		38	S28		33 (2UZ–FE)
F10	B	37	J25		38			35 (1GR–FE)
F11		37	J28		38	T3		33 (2UZ–FE)
J5		38	J29	A	38			35 (1GR–FE)
J7		38	J30	B	38			
J8	A	38	J31	A	38			

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
3D	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	45 (1GR-FE)	Engine Wire and Differential Wire (Near the Front Differential)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
II1	46	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

 : Ground Points

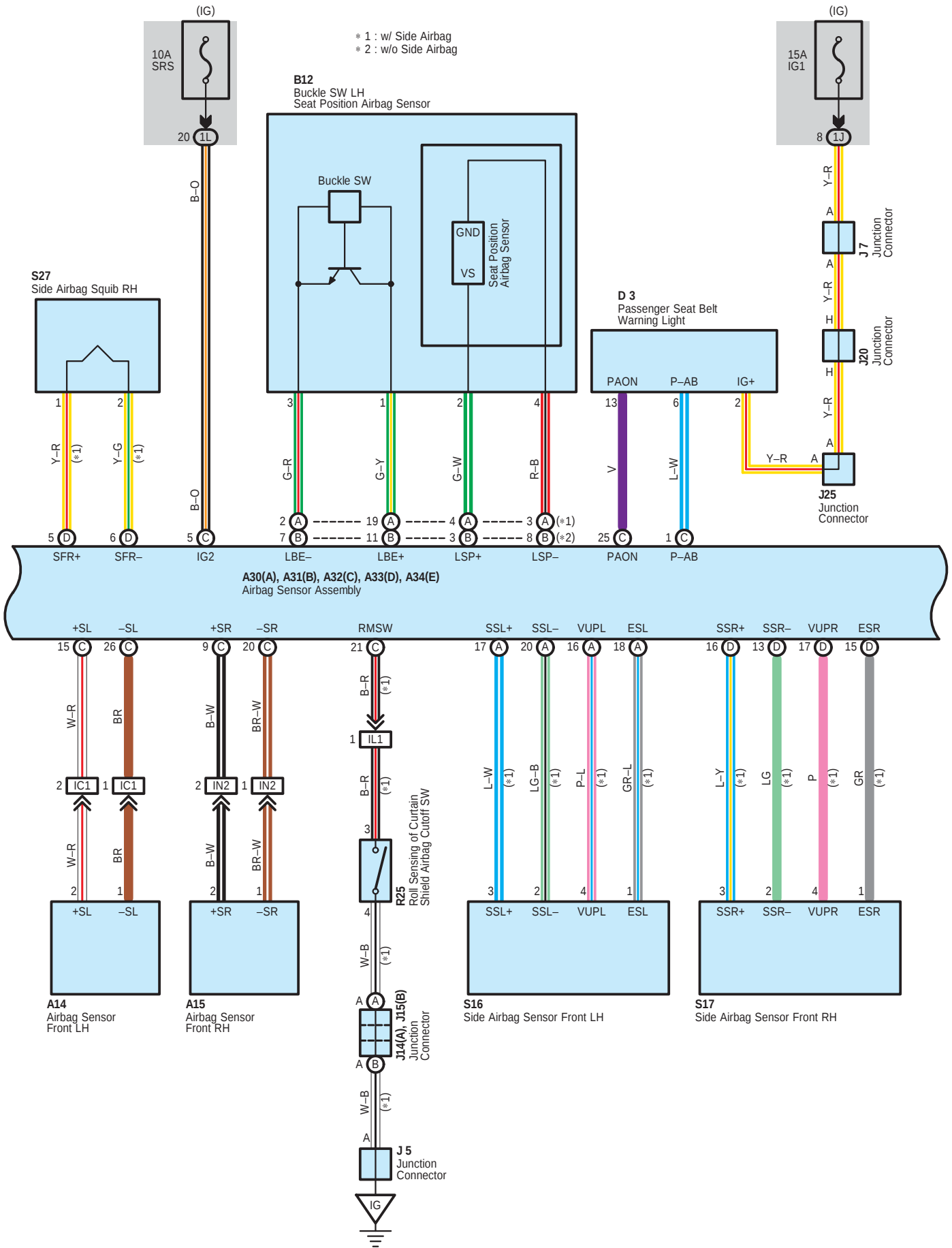
Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	45 (1GR-FE)	Rear Side of Left Bank Cylinder Block
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel

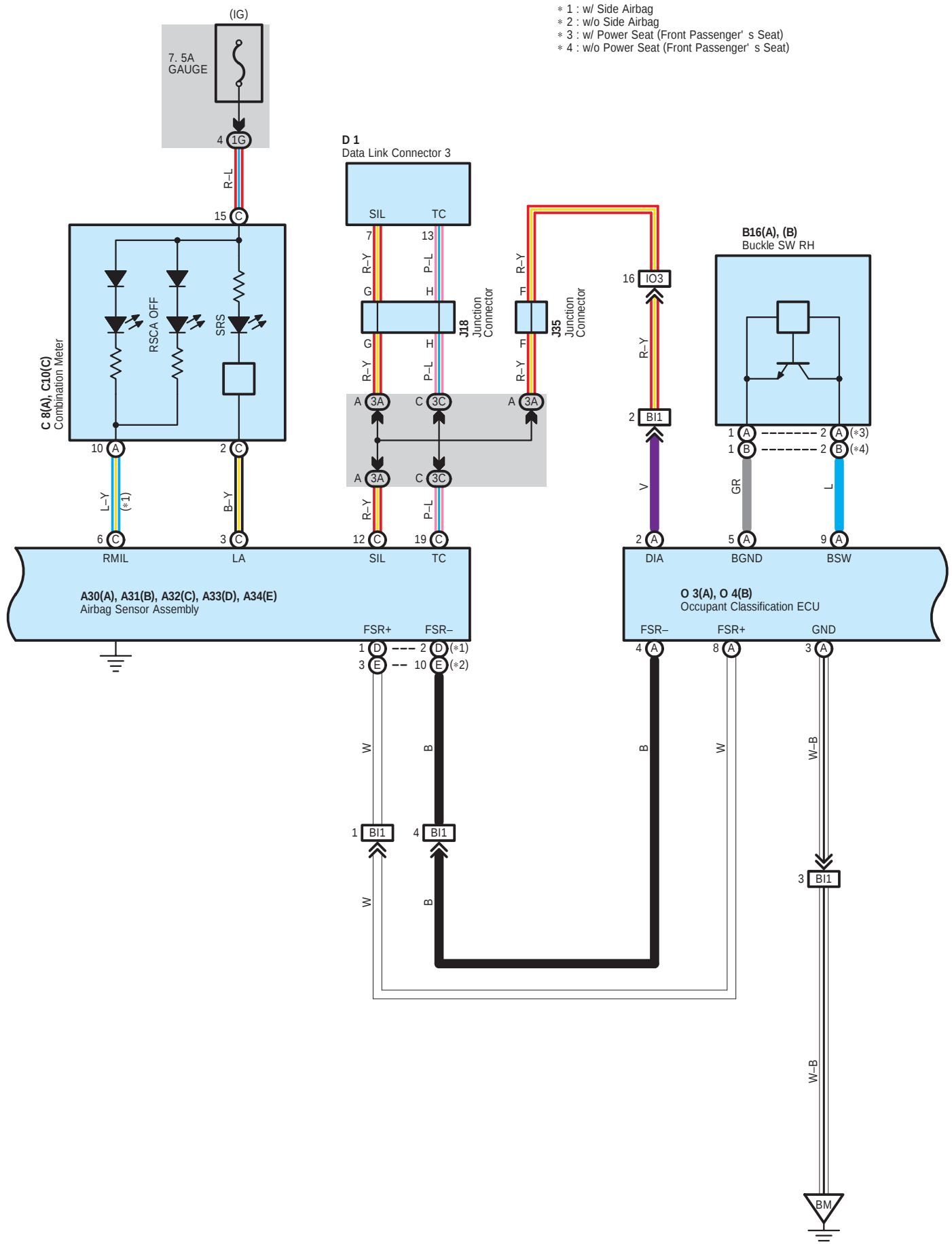
NOTICE: When inspecting or repairing the SRS, perform service in accordance with the following precautionary instructions and the procedure, and precautions in the Repair Manual applicable for the model year.

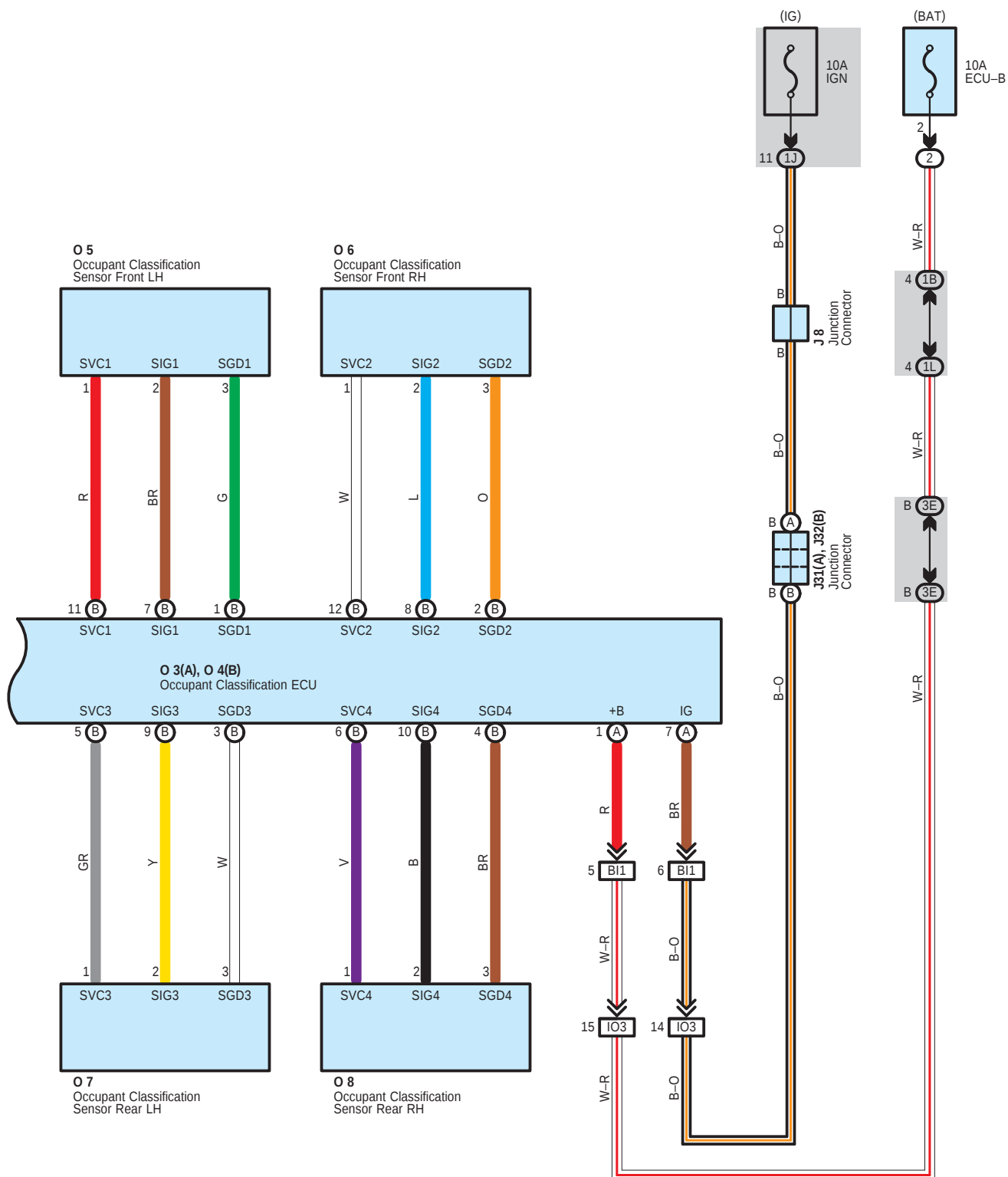
- Malfunction symptoms of the SRS are difficult to confirm, so the DTCs become the most important source of information when troubleshooting. When troubleshooting the SRS, always inspect the DTCs before disconnecting the battery.
- **Work must be started more than 90 seconds after the ignition SW is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.**
(The SRS is equipped with a back-up power source so that if work is started within 90 seconds from disconnecting the negative (-) terminal cable of the battery, the SRS may deploy.)
- When the negative (-) terminal cable is disconnected from the battery, the memory of the clock and audio system will be cleared. So before starting work, make a record of the contents in the audio memory system. When work is finished, reset the audio systems as they were before and adjust the clock. Some vehicles have power tilt steering, power telescopic steering, power seat and power outside rear view mirror which are all equipped with memory function. However, it is not possible to make a record of these memory contents. So when the work is finished, it will be necessary to explain it to your customer, and ask the customer to adjust the features and reset the memory. To avoid erasing the memory in each system, never use a back-up power supply from outside the vehicle.
- Before repair, remove the airbag sensor if shocks are likely to be applied to the sensor during repair.
- Do not expose the following parts directly to hot air or flame;
- Even in cases of a minor collision where the SRS does not deploy, the following parts should be inspected;
- Never use SRS parts from another vehicle. When replacing parts, replace with new parts.
- For the purpose of reuse, never disassemble and repair the following parts.
- If the following parts have been dropped, or have cracks, dents and other defects in their case, bracket, and connector, replace with new one.
- Use a volt/ohmmeter with high impedance (10 k Ω /V minimum) for troubleshooting electrical circuits of the system.
- Information labels are attached to the periphery of the SRS components. Follow the instructions of the notice.
- After work on the SRS is completed, check the SRS warning light.
- If the vehicle is equipped with a mobile communication system, refer to the precaution in the IN section of the Repair Manual.

- * Steering wheel pad
- * Front passenger airbag assembly
- * Side airbag assembly
- * Curtain shield airbag assembly
- * Seat belt pretensioner
- * Center airbag sensor assembly
- * Front airbag sensor assembly
- * Side airbag sensor assembly
- * Rear airbag sensor assembly









System Outline

- * The system reaches an ignition judgment to deploy the following device based on the signals received from the front airbag sensor and deceleration sensor.
 - Driver Airbag
 - Front Passenger Airbag
 - Seat Belt Pretensioner
- * The system reaches an ignition judgment to deploy the following device based on the signals received from the side airbag sensors.
 - Side Airbags
 - Curtain Shield Airbags
- * The dual-stage SRS airbag system has been used for the driver and front passenger airbags. This system controls the optimal airbag inflation by judging the extent of impact, seat position (driver seat), whether or not the seat belt is fastened (driver seat) and information from the front passenger occupant classification system.
- * The front passenger occupant classification system judges whether the front passenger seat is occupied by an adult or child (with child seat) or is unoccupied, according to the load applied to the front passenger seat and whether the seat belt is buckled. Based on the results, it restricts the deployment of the front passenger airbag, front passenger side airbag, and front passenger seat belt pretensioner. In addition, the system informs the driver of the result of the judgment through the use of the AIRBAG ON/OFF indicator lights.
- * A Roll Sensing Curtain Shield Airbag system has been adopted in order to deploy the curtain shield airbags and the pretensioners, in the event that the vehicle rolls over.
- * A Roll Sensing Curtain Shield Airbag cutoff SW is provided near the driver side to enable the driver to disable this system.
- * The airbag sensor assembly transmits a signal to the engine control module in order to stop the fuel pump when the airbag is deployed.

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
A14		32 (2UZ-FE)	C16		40	O5		42 (*1)
		34 (1GR-FE)	C17		40			43 (*2)
A15		32 (2UZ-FE)	D1		37	O6		42 (*1)
		34 (1GR-FE)	D3		37			43 (*2)
A30	A	36	E7		37	O7		42 (*1)
A31	B	36	J5		38			43 (*2)
A32	C	36	J7		38	O8		42 (*1)
A33	D	36	J8		38			43 (*2)
A34	E	36	J14	A	38	P16		41
A36		36	J15	B	38	P17		41
A48	A	36	J18		38	R25		39
A49	B	36	J20		38	S16		41
B12		42 (*1)	J25		38	S17		41
		43 (*2)	J31	A	38	S18		41
B16	A	42 (*1)	J32	B	38	S19		41
		43 (*2)	J35		38	S26		42 (*1)
	B	42 (*1)	O3	A	42 (*1)			43 (*2)
		43 (*2)			43 (*2)	S27		42 (*1)
C8	A	37	O4	B	42 (*1)			43 (*2)
C10	C	37			43 (*2)			

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

* 1 : Power Seat * 2 : Manual Seat



: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1L		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3C		
3E		



: Connector Joining Wire Harness and Wire Harness

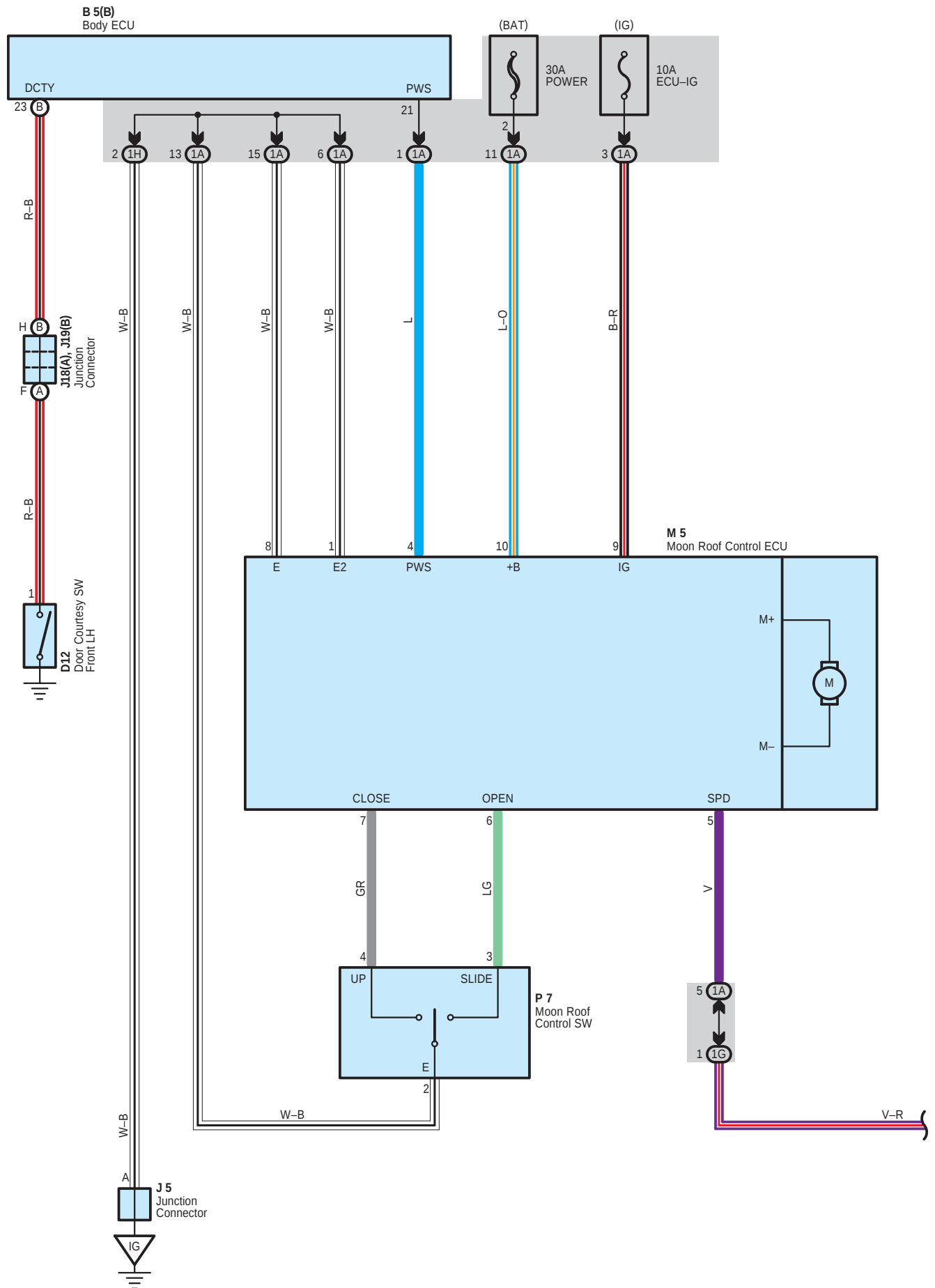
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IL1	47	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IN2	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IU1	47	Instrument Panel Wire and Instrument Panel Wire Assembly (Right Upper Side of the Glove Box)
BI1	50 (*1)	Floor Wire and Seat No.1 Wire (Under the Front RH Seat)
	51 (*2)	



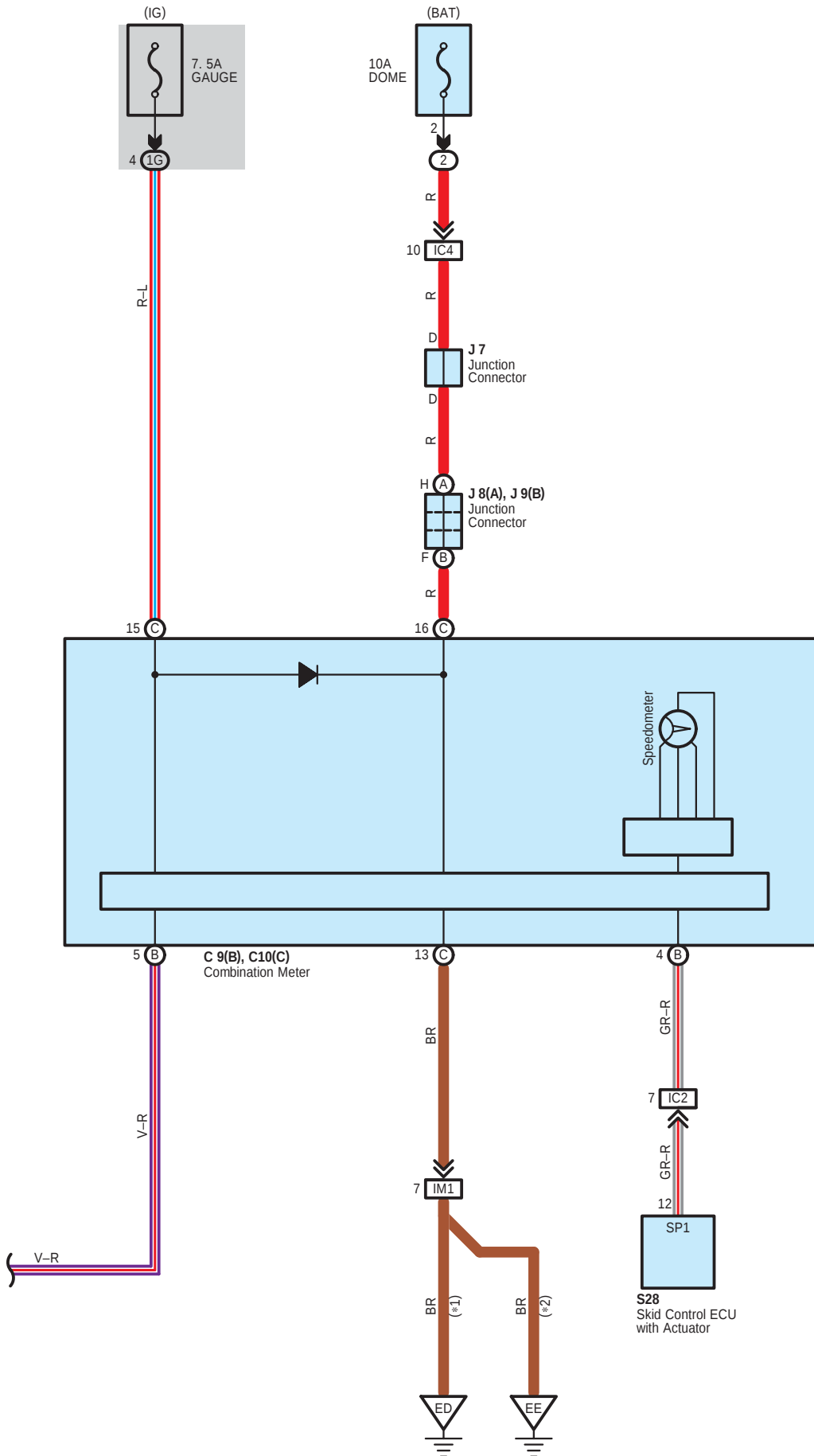
: Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
IH	46	Instrument Panel Brace LH
IJ	46	Instrument Panel Brace RH
BM	48	Floor Seat Crossmember RH

* 1 : Power Seat * 2 : Manual Seat



* 1 : 2UZ-FE
* 2 : 1GR-FE



Moon Roof

System Outline

Current is always applied from the POWER fuse to TERMINAL 10 of the moon roof control ECU. With the ignition SW turned on, the current flows to TERMINAL 9 of the moon roof control ECU.

1. Moon Roof Open/Close Operation

For moon roof operation, there are moon roof control switches: "Slide open/tilt down"; and "Slide close/tilt up." When a switch is pressed and held down for a certain period of time, one touch automatic operation takes place in accordance with the function of the switch.

2. Key-Off Operation

Roof remains operable – until about 45 seconds elapse after the ignition SW is turned from ON to OFF or until the driver's seat door is opened and closed, whichever first occurs.

However, if an overload reverse operation was going on at that time, the key-off operation continues until it comes to an end.

3. Overload Reverse Operation

The moon roof control ECU detects jamming of the moon roof by foreign material, if occurred, from abnormal motor speed signal and reverses the moon roof operation.

4. Deflector Control Function

When the roof is slid fully open, the moon roof control ECU automatically adjusts the height of deflector in accordance with the vehicle cruising speed.

* When the battery terminal or fuse is disconnected, the roof position has to be reset to its initial position by the moon roof control SW in accordance with the following procedure:

- (1) Reconnect the battery terminal or fuse.
 - (2) Turn ON the ignition switch.
 - (3) Operate the moon roof control SW to open the roof halfway or more.
 - (4) Then operate the moon roof control SW to fully close the roof.
- Do not release the switch for at least one second after the roof is fully closed.

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B5	B	36	J7		38	M5		41
C9	B	37	J8	A	38	P7		41
C10	C	37	J9	B	38	S28		33 (2UZ-FE)
D12		40	J18	A	38			35 (1GR-FE)
J5		38	J19	B	38			

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1H		

□ : Connector Joining Wire Harness and Wire Harness

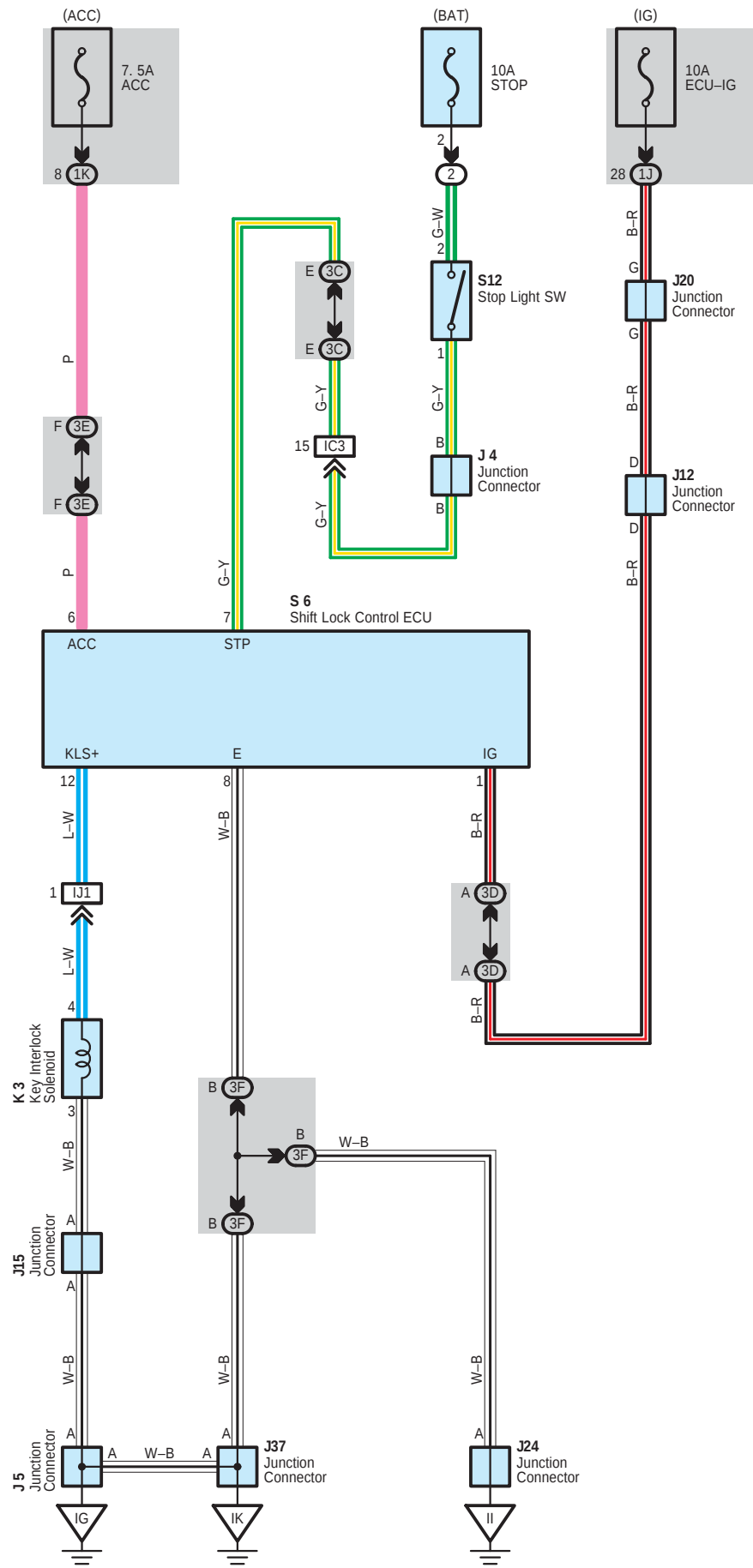
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)



: Ground Points

Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IG	46	Left Kick Panel

Shift Lock



System Outline

When the ignition SW is turned to ACC position the current from the ACC fuse flows to TERMINAL 6 of the shift lock control ECU. When the ignition SW is turned to ON position, the current from the ECU-IG fuse flows to TERMINAL 1 of the shift lock control ECU.

1. Shift Lock Mechanism

If the brake pedal is depressed with the ignition SW set at ON (The stop light SW is on), the shift lock control ECU is activated, allowing the driver to change the shift lever to a position other than the P position.

2. Key Interlock Mechanism

With the ignition SW at ON or ACC position, when the shift lever is put in P position, the current flowing from TERMINAL 12 of the shift lock control ECU to key interlock solenoid is cut off. This causes the key interlock solenoid to turn off (Lock lever disengages from LOCK position) and the ignition key can be turned from ACC to LOCK position.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
J4	38	J20	38	S6	39
J5	38	J24	38	S12	39
J12	38	J37	38		
J15	38	K3	39		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1K		
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3D		
3E		
3F		

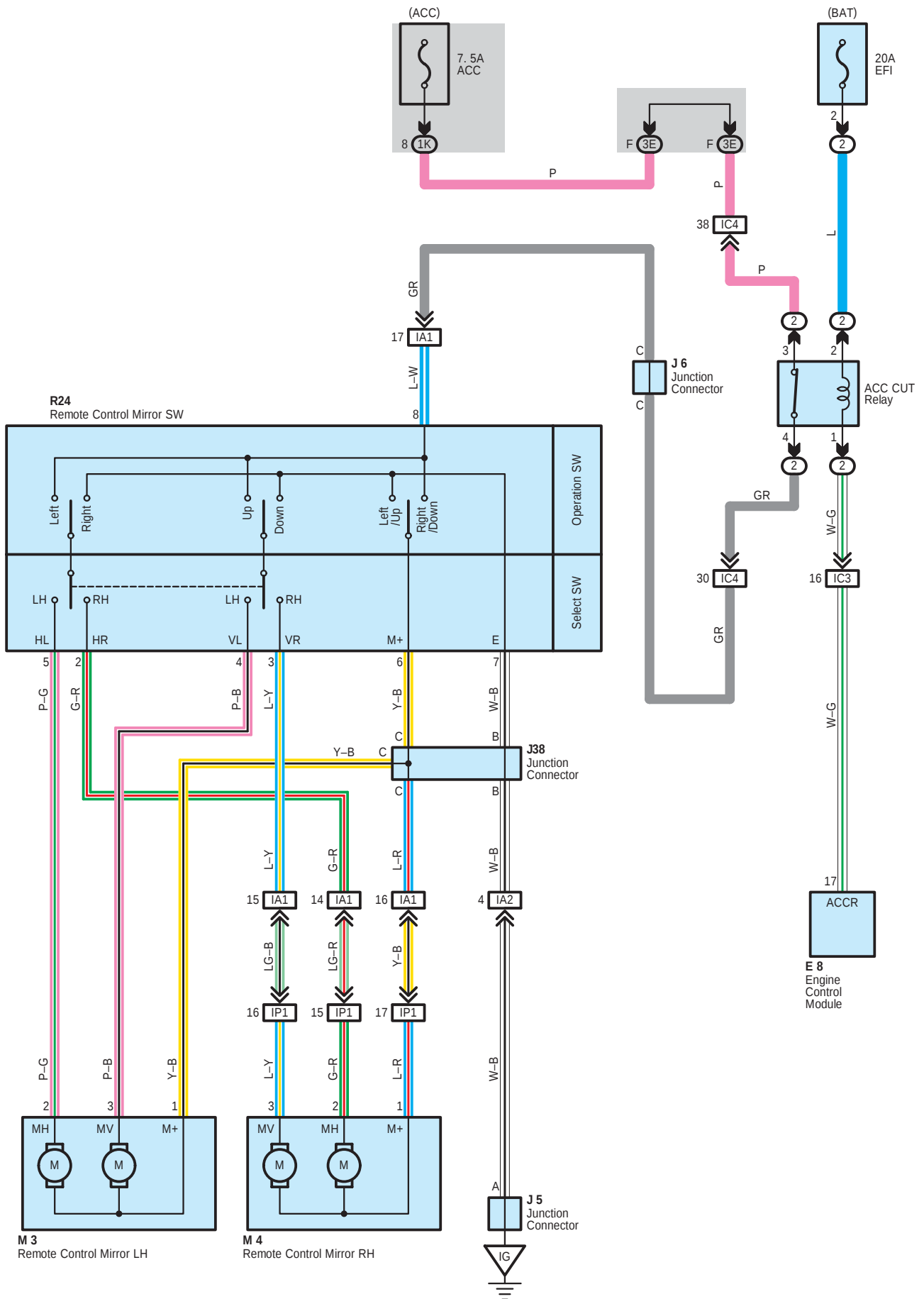
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IJ1	47	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace RH)

▽ : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel

Remote Control Mirror



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
E8	37	J38	40	R24	41
J5	38	M3	41		
J6	38	M4	41		

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

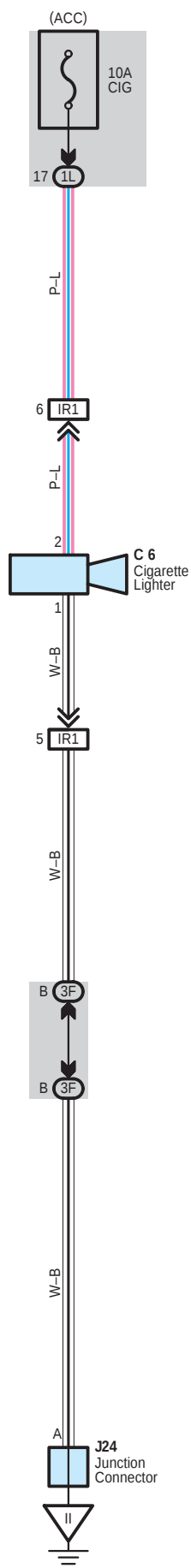
Code	See Page	Junction Block and Wire Harness (Connector Location)
1K	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3E	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC3	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IP1	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

 : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
C6	37	J24	38		

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1L	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3F	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

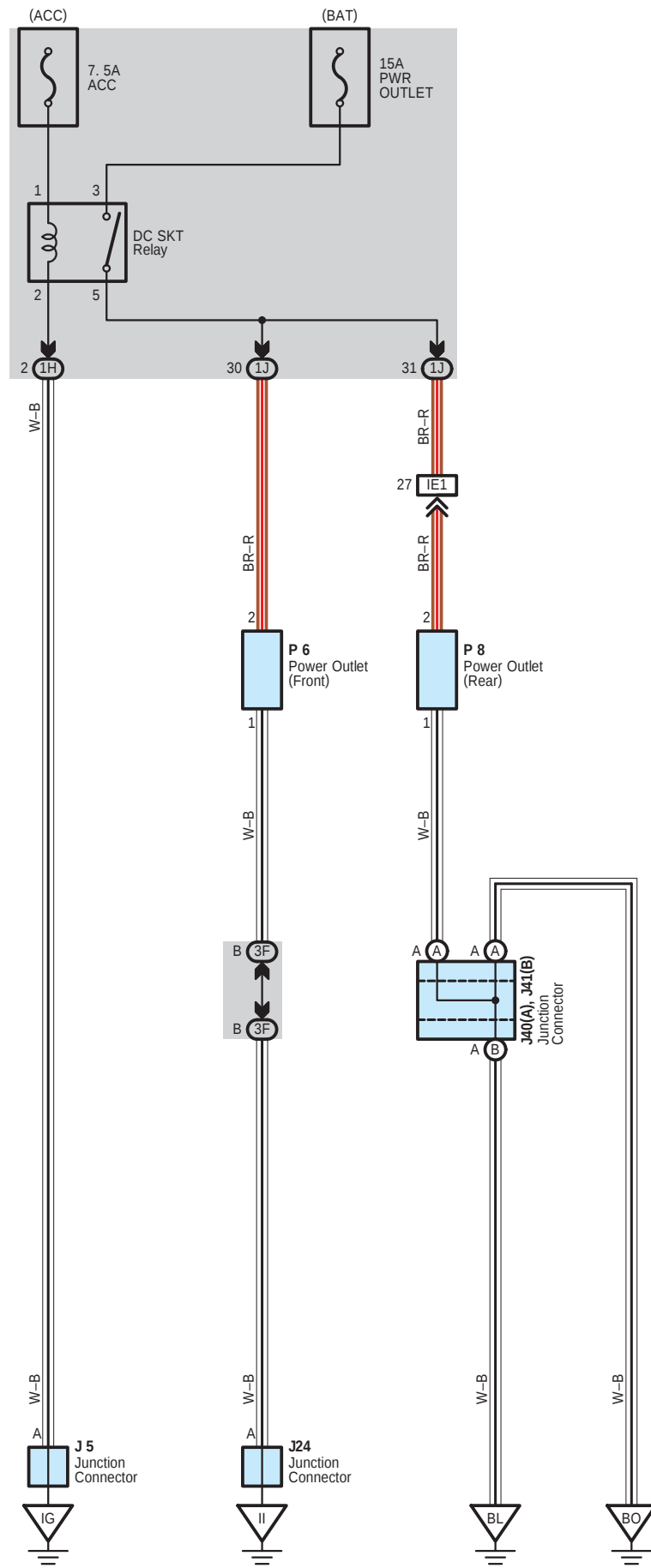
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IR1	47	Instrument Panel Wire and Cigarette Lighter Wiring Assembly (Rear Console)

 : Ground Points

Code	See Page	Ground Points Location
II	46	Instrument Panel Brace RH

Power Outlet for 12V



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
J5	38	J40	A 40	P6	39
J24	38	J41	B 40	P8	41

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
3F	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

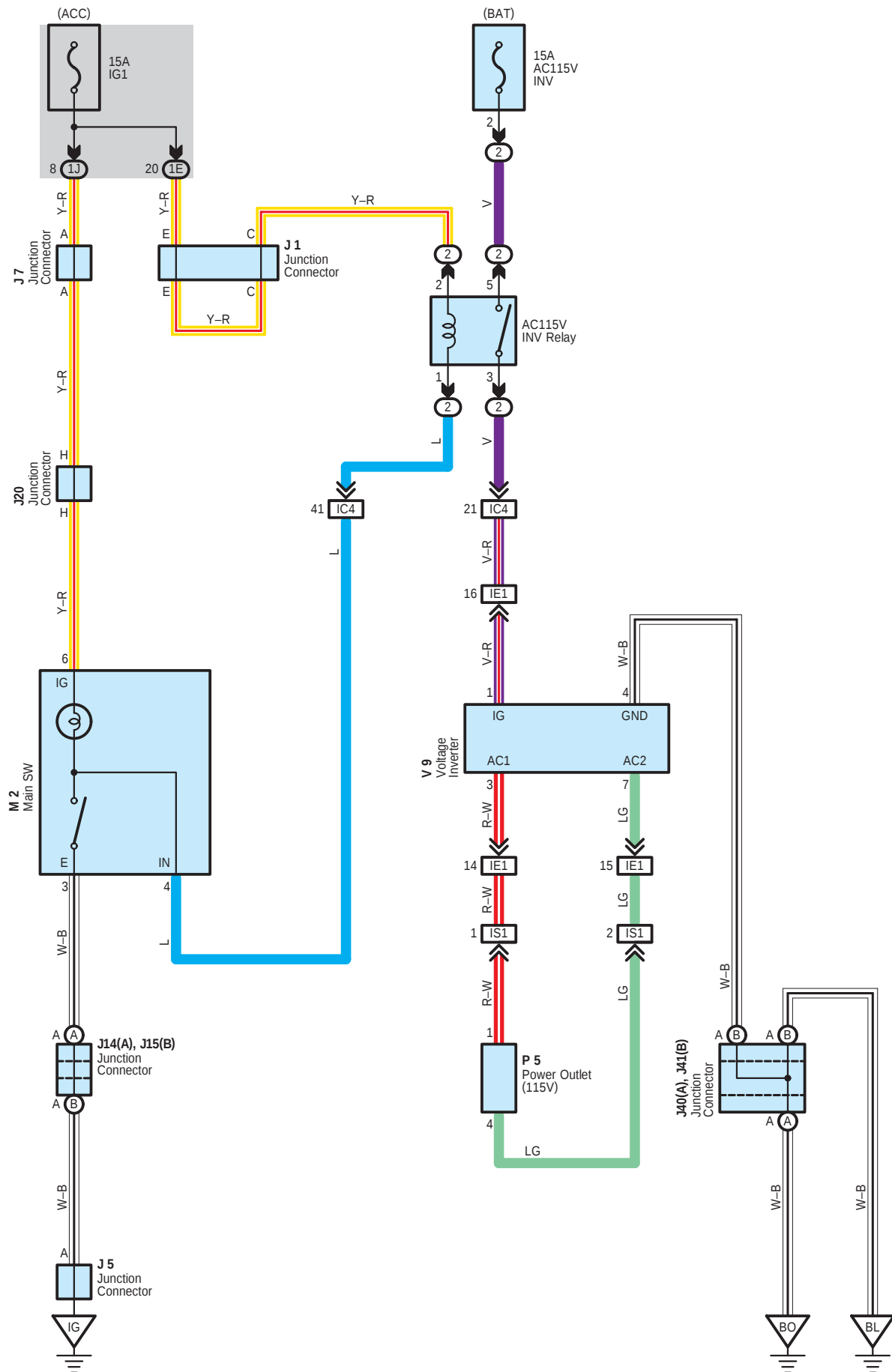
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)

 : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Power Outlet for 115V



 : Parts Location

Code	See Page	Code		See Page	Code		See Page
J1	33 (2UZ-FE)	J14	A	38	J41	B	40
	35 (1GR-FE)	J15	B	38	M2		39
J5	38	J20		38	P5		39
J7	38	J40	A	40	V9		41

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

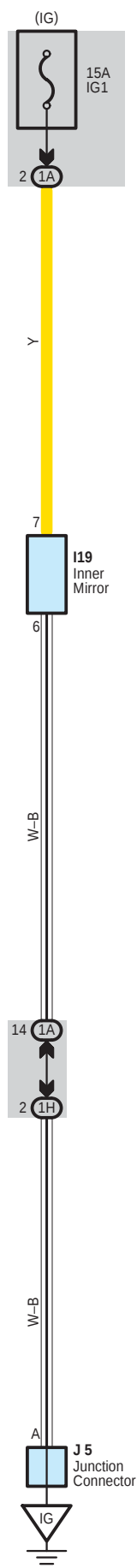
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IS1	47	Instrument Panel Wire and Console Box Wire (Rear Console)

 : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Automatic Glare-Resistant EC Mirror with Compass



 : Parts Location

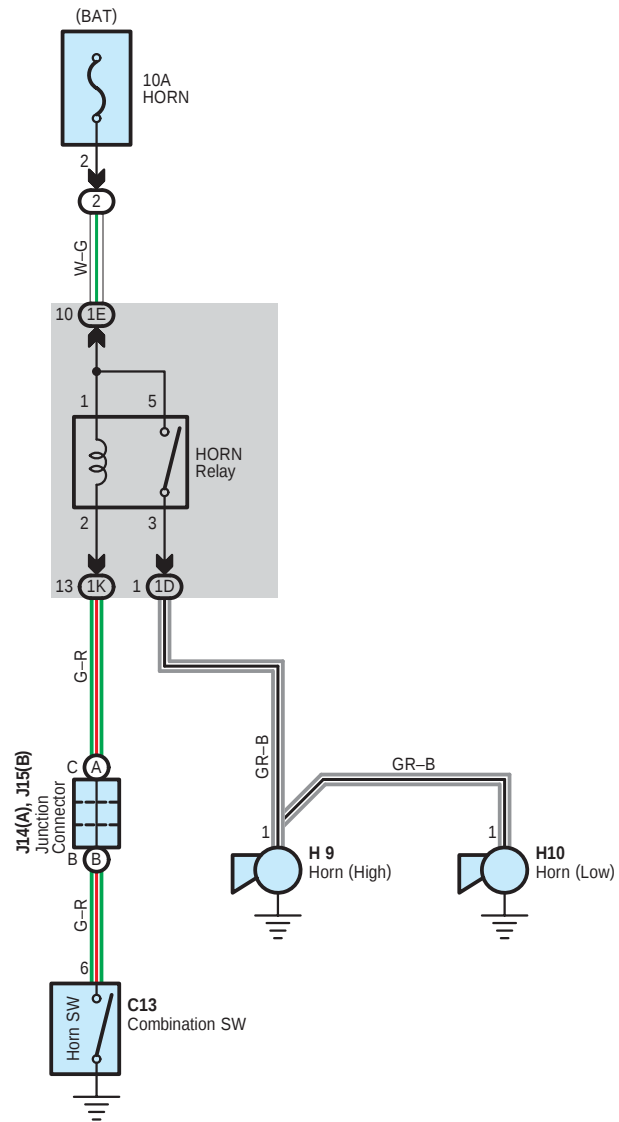
Code	See Page	Code	See Page	Code	See Page
I19	40	J5	38		

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

 : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
C13	37	H10	32 (2UZ-FE)	J15	B
H9	32 (2UZ-FE)		34 (1GR-FE)		
	34 (1GR-FE)	J14	A	38	

 : Relay Blocks

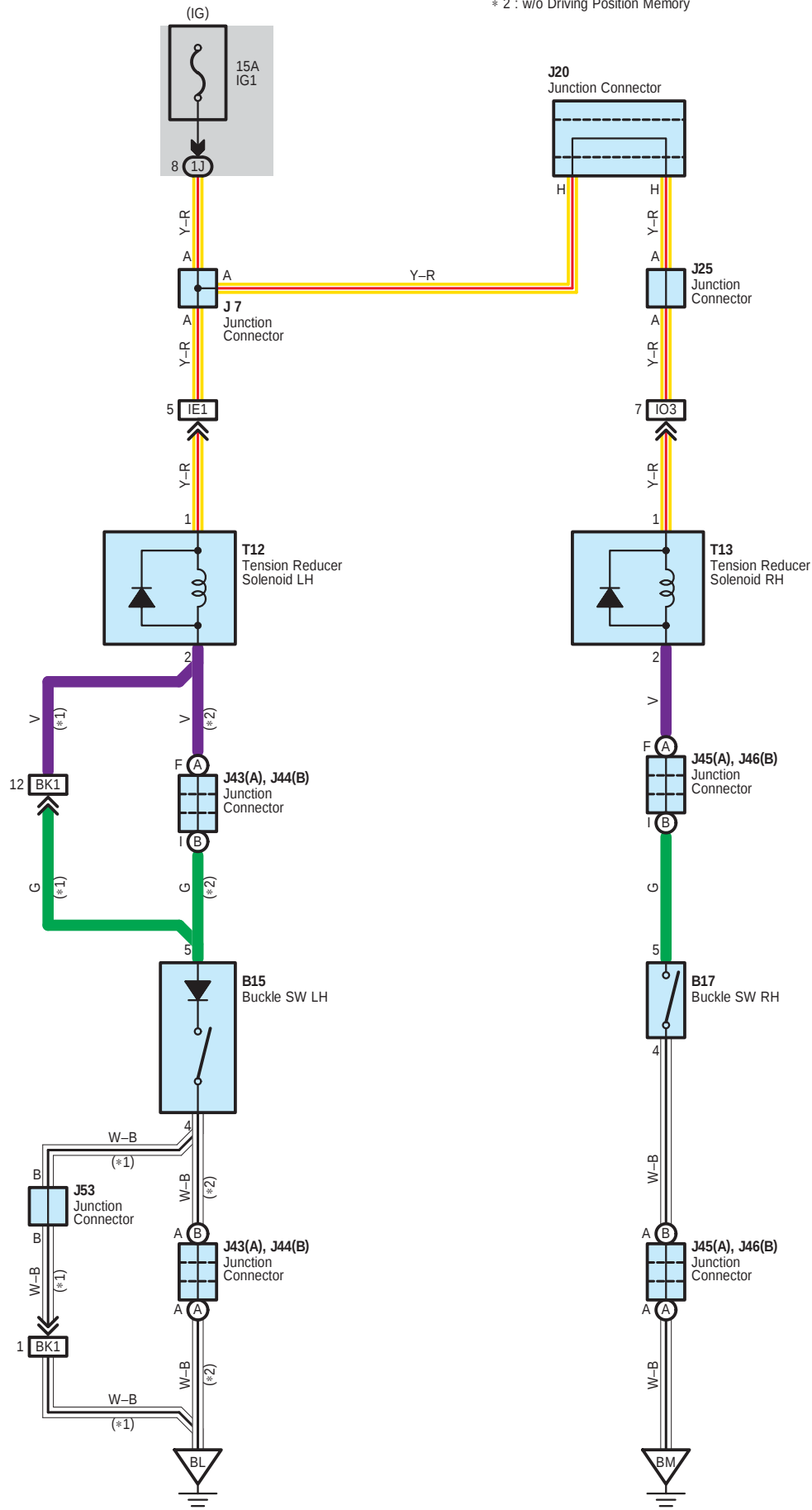
Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1K	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

Electric Tension Reducer

* 1 : w/ Driving Position Memory
 * 2 : w/o Driving Position Memory



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
B15	42 (*1)	J25		38	J45 A 43 (*2)
	43 (*2)	J43	A	42 (*1)	J46 B 42 (*1)
B17	42 (*1)			43 (*2)	43 (*2)
	43 (*2)	J44	B	42 (*1)	J53 42 (*1)
J7	38			43 (*2)	T12 41
J20	38	J45	A	42 (*1)	T13 41

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

 : Connector Joining Wire Harness and Wire Harness

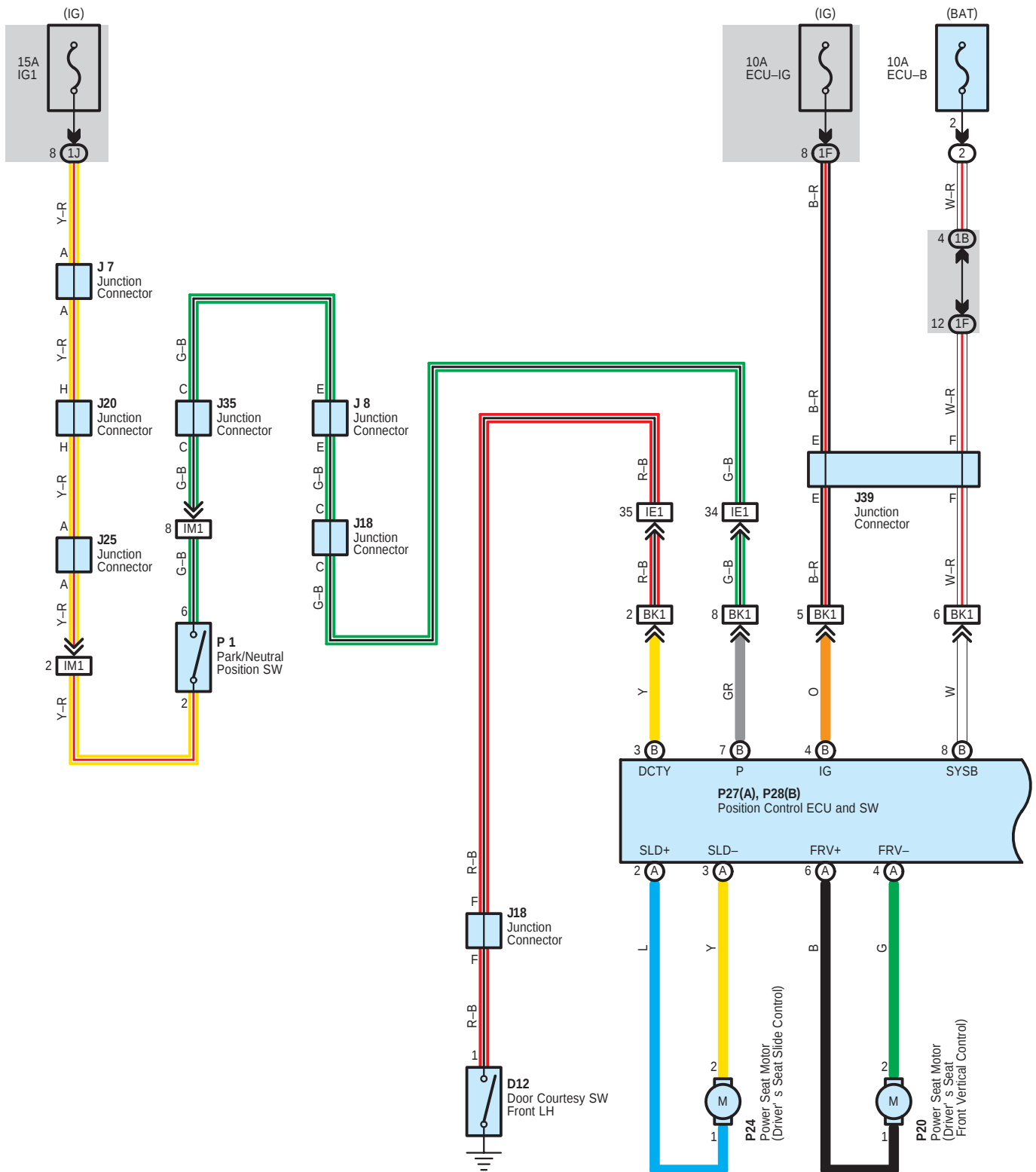
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
BK1	50 (*1)	Floor No.2 Wire and Seat No.2 Wire (Under the Front LH Seat)

 : Ground Points

Code	See Page	Ground Points Location
BL	48	Floor Seat Crossmember LH
BM	48	Floor Seat Crossmember RH

* 1 : Power Seat * 2 : Manual Seat

Power Seat for Driver's Seat with Memory





Power Seat for Driver's Seat with Memory

System Outline

- * In the power seat system, the position control ECU and SW receives the operation signal from the power seat control switch via infrared communication to operate each power seat motor and adjust the seat position.
- * In the event that malfunction occurs during infrared communication, this system has a fail-safe function to only slide or recline the seat.
- * This system has the following function:
 - * Manual slide operation
 - * Manual reclining control
 - * Manual front vertical control
 - * Manual rear vertical operation
 - * Driving position memory function

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
D12	40	J35	38	P20	42 (*1)
J5	38	J39	40	P21	42 (*1)
J7	38	J53	42 (*1)	P23	42 (*1)
J8	38	L3	42 (*1)	P24	42 (*1)
J18	38		43 (*2)	P27	A 42 (*1)
J20	38	L5	42 (*1)	P28	B 42 (*1)
J22	A 38		43 (*2)	S30	39
J23	B 38	P1	33 (2UZ-FE)		
J25	38		35 (1GR-FE)		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

□ : Connector Joining Wire Harness and Wire Harness

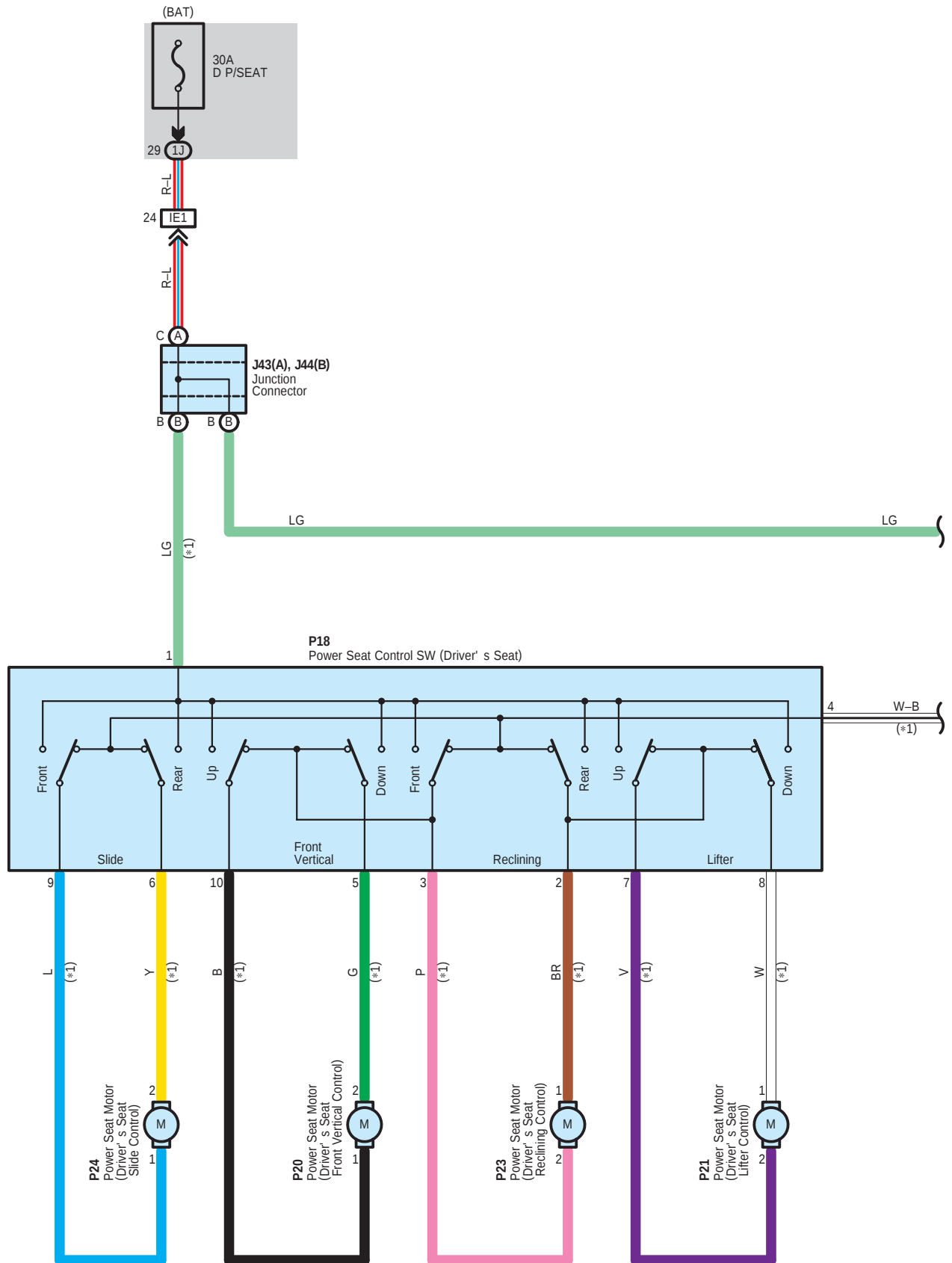
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
BK1	50 (*1)	Floor No.2 Wire and Seat No.2 Wire (Under the Front LH Seat)

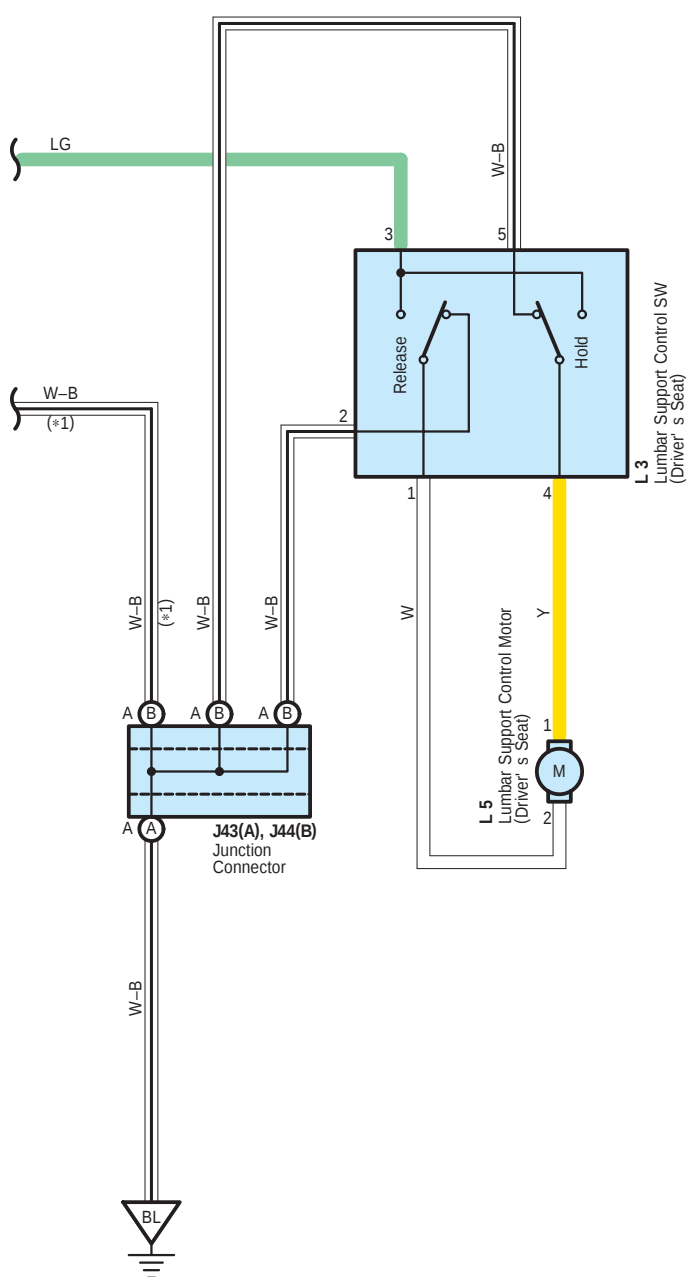
▽ : Ground Points

Code	See Page	Ground Points Location
IG	46	Left Kick Panel
BL	48	Floor Seat Crossmember LH

* 1 : Power Seat * 2 : Manual Seat

Power Seat for Driver's Seat without Memory





Power Seat for Driver's Seat without Memory

: Parts Location

Code		See Page	Code	See Page	Code	See Page
J43	A	42 (*1)	L3	43 (*2)	P21	42 (*1)
		43 (*2)	L5	42 (*1)	P23	42 (*1)
J44	B	42 (*1)		43 (*2)	P24	42 (*1)
		43 (*2)	P18	42 (*1)		
L3		42 (*1)	P20	42 (*1)		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

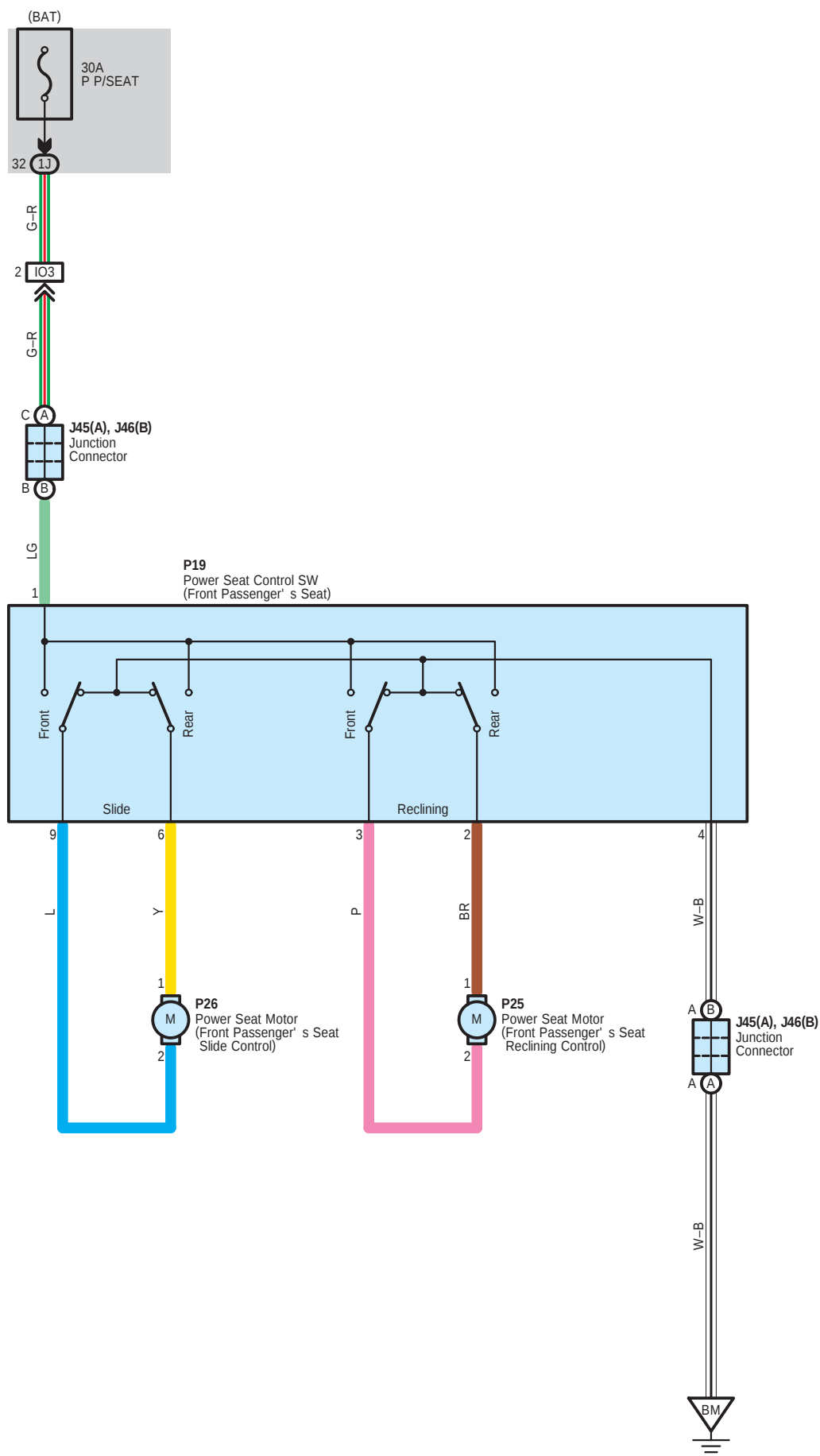
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
BL	48	Floor Seat Crossmember LH

* 1 : Power Seat * 2 : Manual Seat

Power Seat for Front Passenger's Seat



 : Parts Location

Code		See Page	Code		See Page	Code	See Page
J45	A	42 (*1)	J46	B	43 (*2)	P26	42 (*1)
		43 (*2)			P19		
J46	B	42 (*1)		P25	42 (*1)		

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

 : Connector Joining Wire Harness and Wire Harness

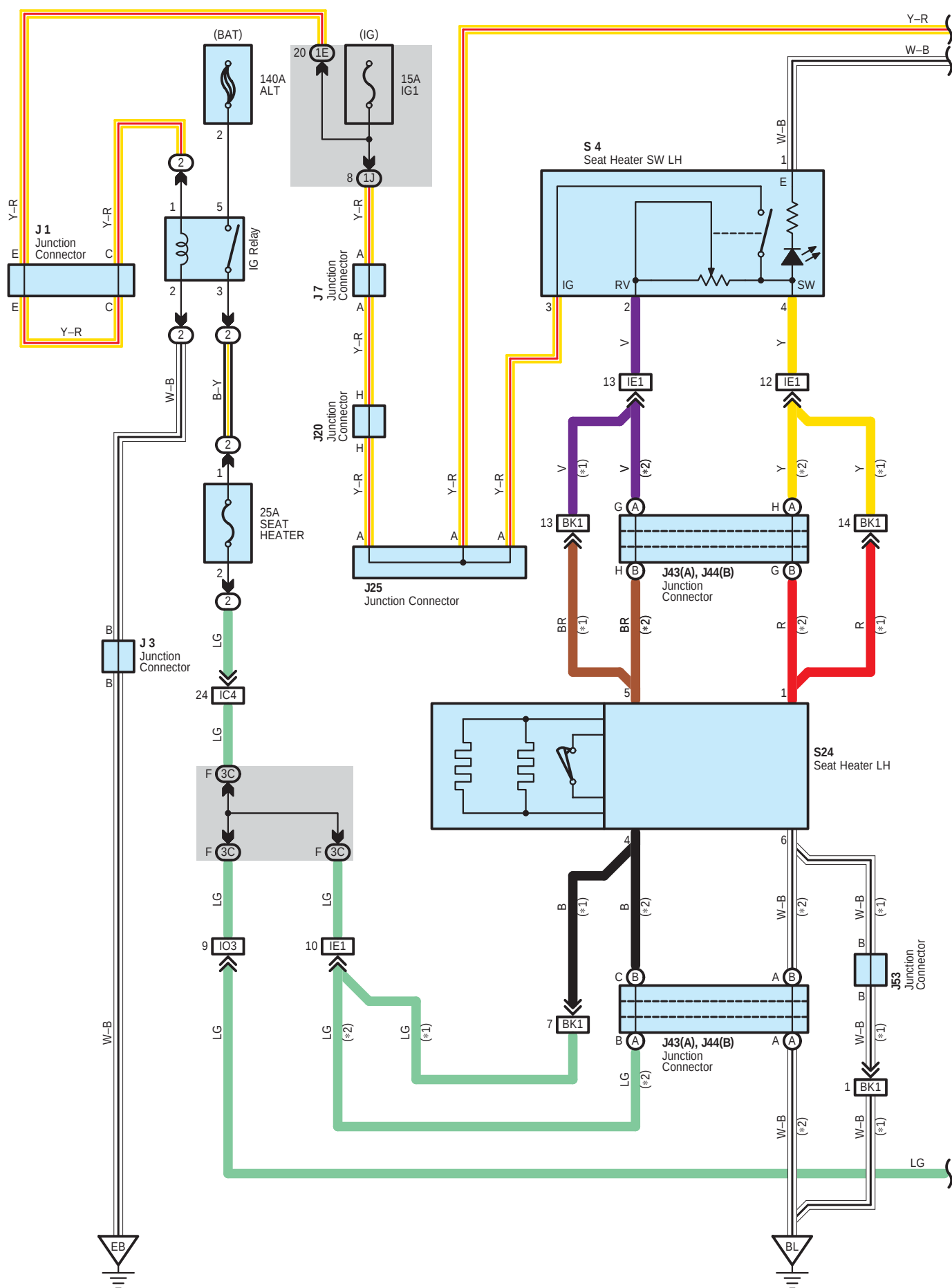
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)

 : Ground Points

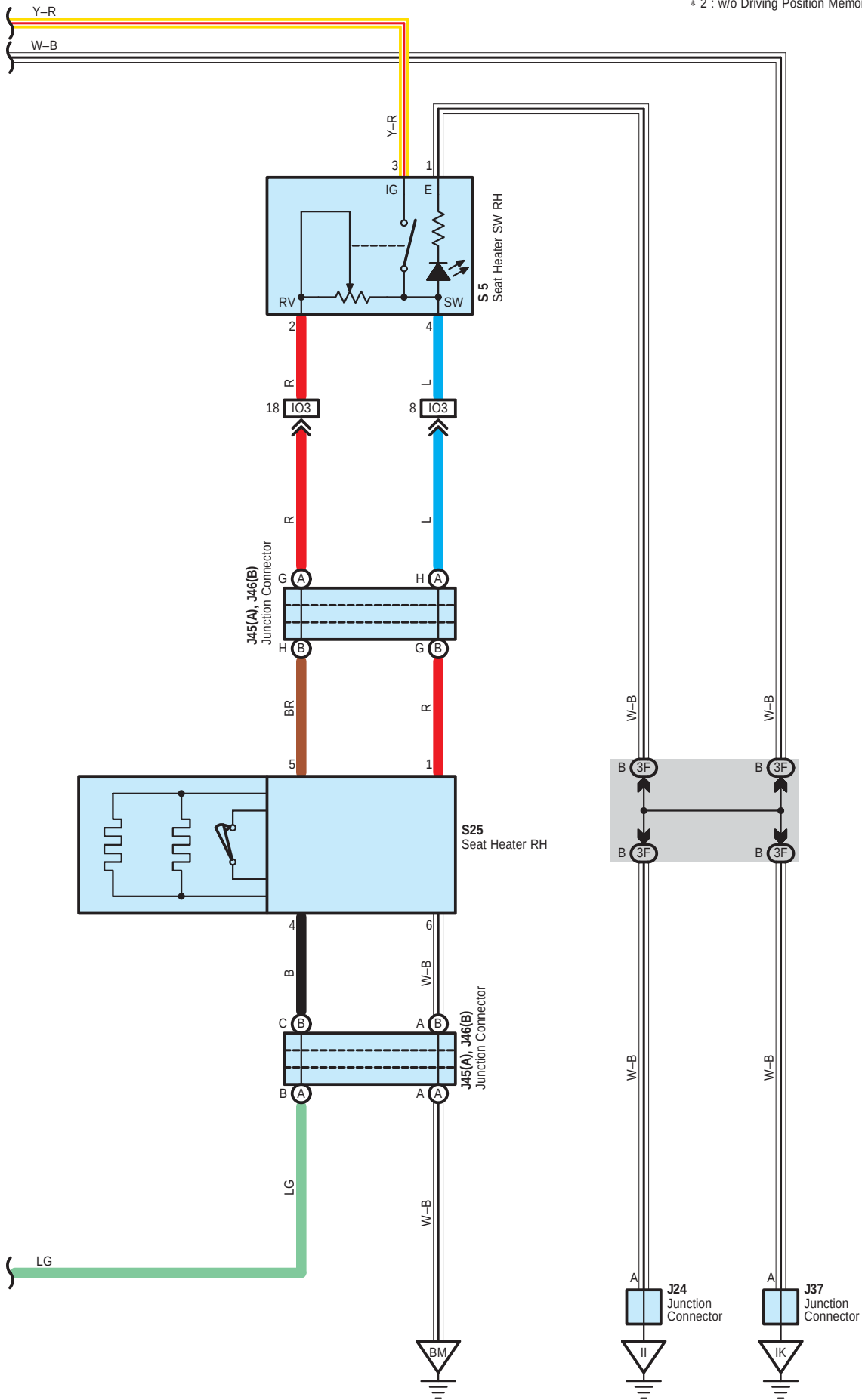
Code	See Page	Ground Points Location
BM	48	Floor Seat Crossmember RH

* 1 : Power Seat * 2 : Manual Seat

Seat Heater



* 1 : w/ Driving Position Memory
 * 2 : w/o Driving Position Memory



Seat Heater

: Parts Location

Code	See Page	Code		See Page	Code		See Page
J1	33 (2UZ–FE)	J37		38	J46	B	43 (*2)
	35 (1GR–FE)	J43	A	42 (*1)	J53		42 (*1)
J3	33 (2UZ–FE)			43 (*2)	S4		39
	35 (1GR–FE)	J44	B	42 (*1)	S5		39
J7	38			43 (*2)	S24		42 (*1)
J20	38	J45	A	42 (*1)	S25		42 (*1)
J24	38			43 (*2)			
J25	38	J46	B	42 (*1)			

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3F		

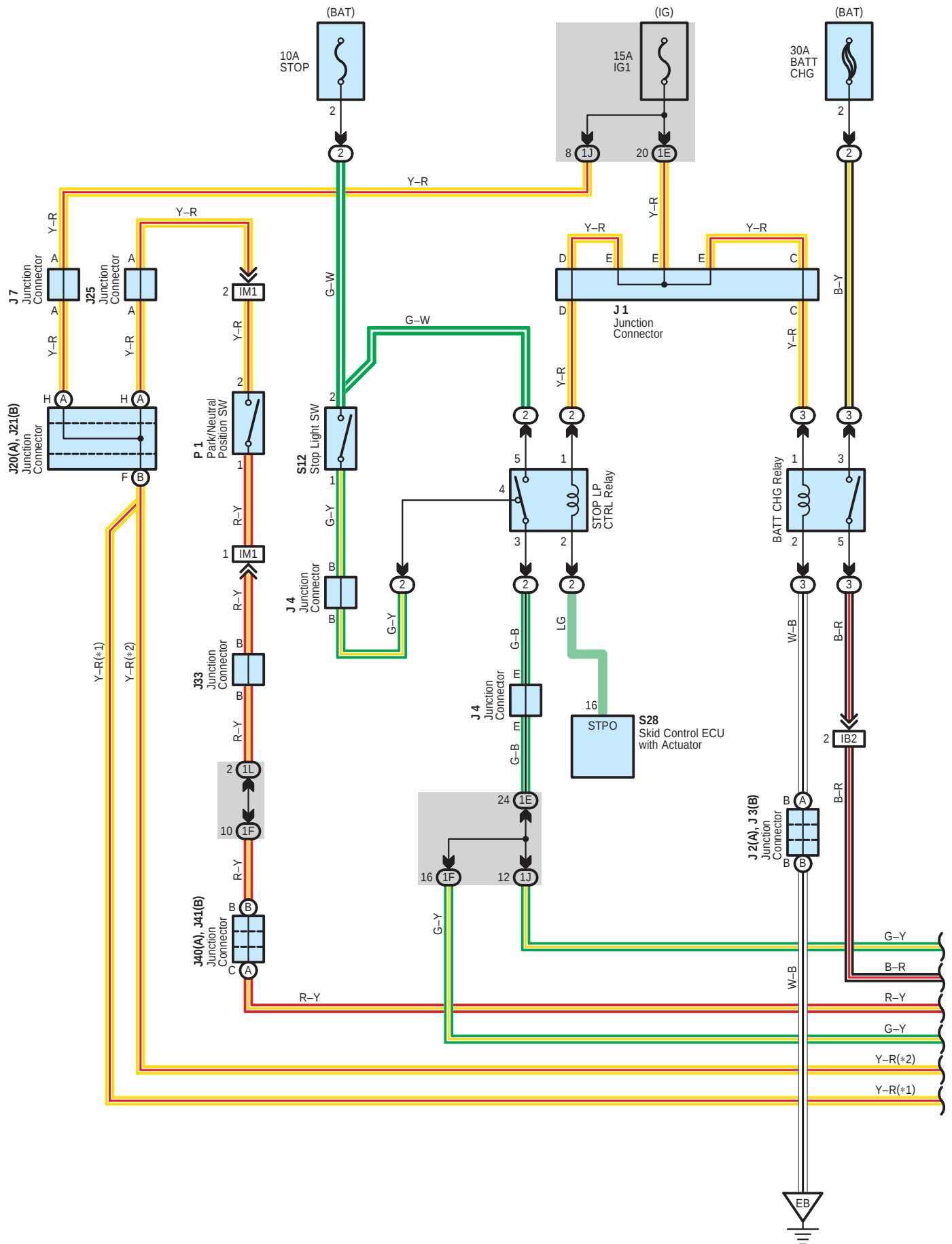
: Connector Joining Wire Harness and Wire Harness

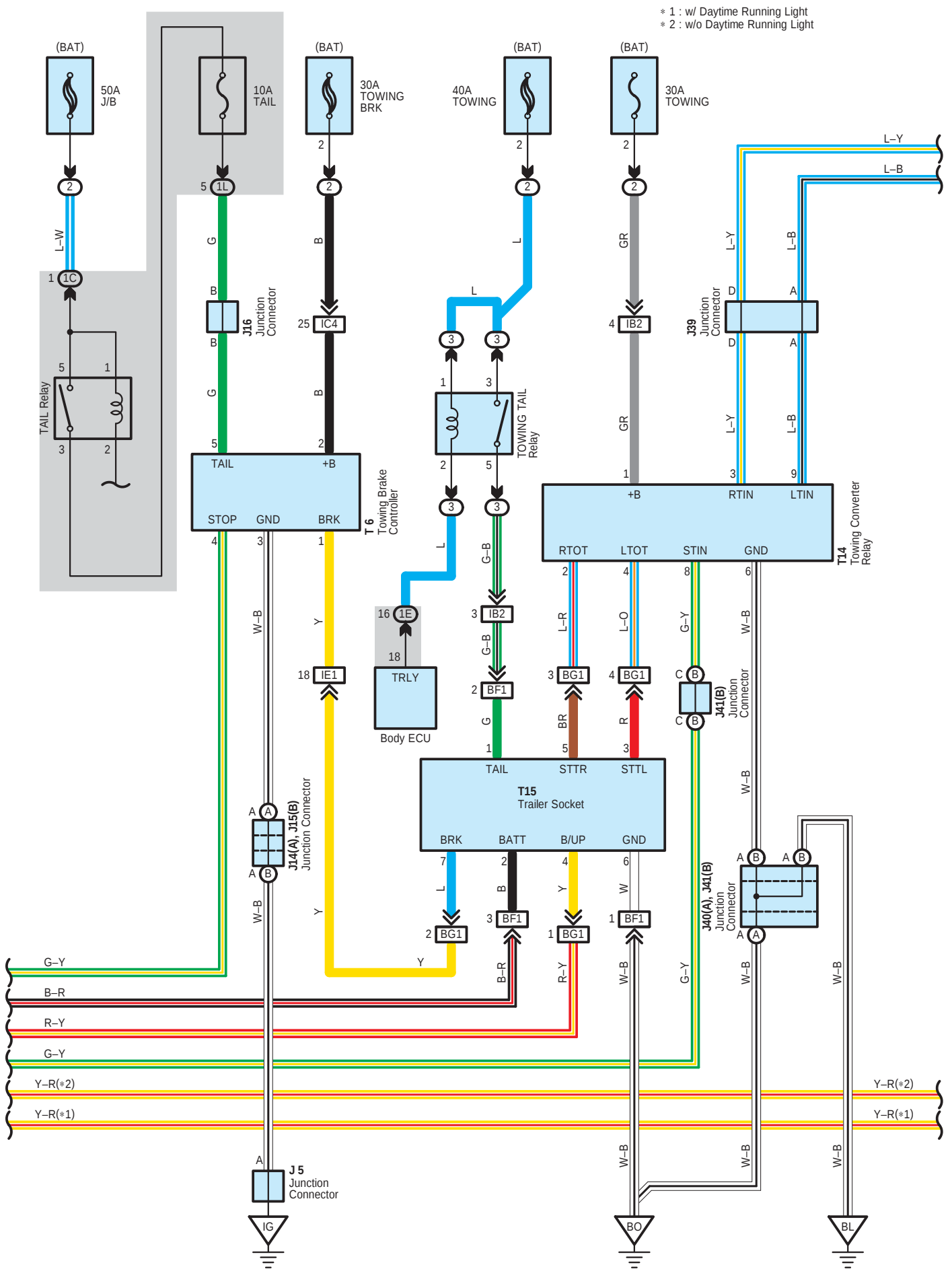
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IO3	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
BK1	50 (*1)	Floor No.2 Wire and Seat No.2 Wire (Under the Front LH Seat)

: Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BM	48	Floor Seat Crossmember RH

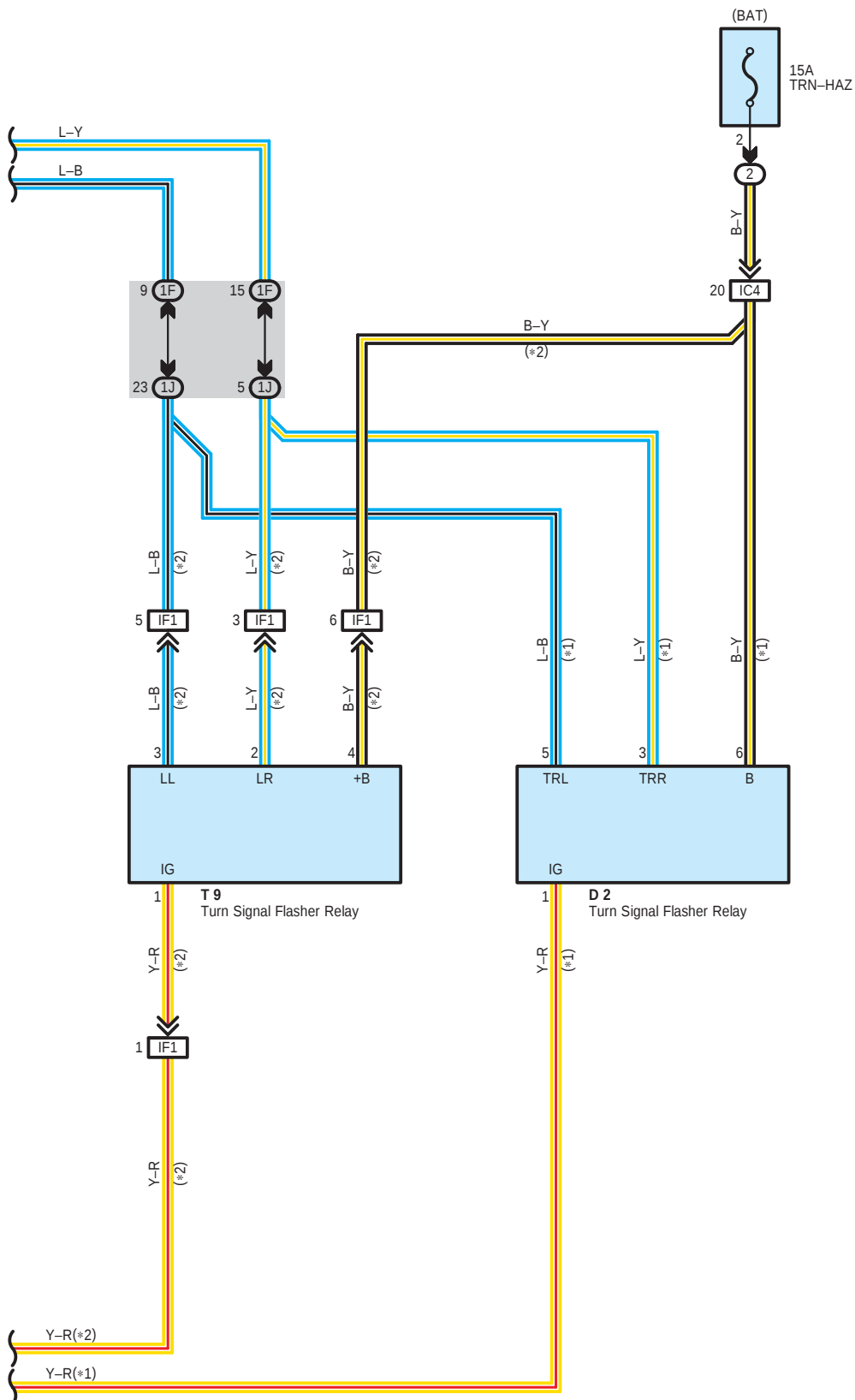
* 1 : Power Seat * 2 : Manual Seat





Trailer Towing

- * 1 : w/ Daytime Running Light
- * 2 : w/o Daytime Running Light



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
D2	37	J14	A	38	
J1	33 (2UZ-FE)	J15	B	38	P1
	35 (1GR-FE)	J16		38	33 (2UZ-FE)
J2	A	J20	A	38	S12
		J21	B	38	39
J3	B	J25		38	S28
		J33		38	33 (2UZ-FE)
J4	38	J39		40	35 (1GR-FE)
J5	38	J40	A	40	T6
J7	38	J41	B	40	T9
					T14
					T15
					41
					41

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)
3	23	Engine Room R/B No.3 (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1L		

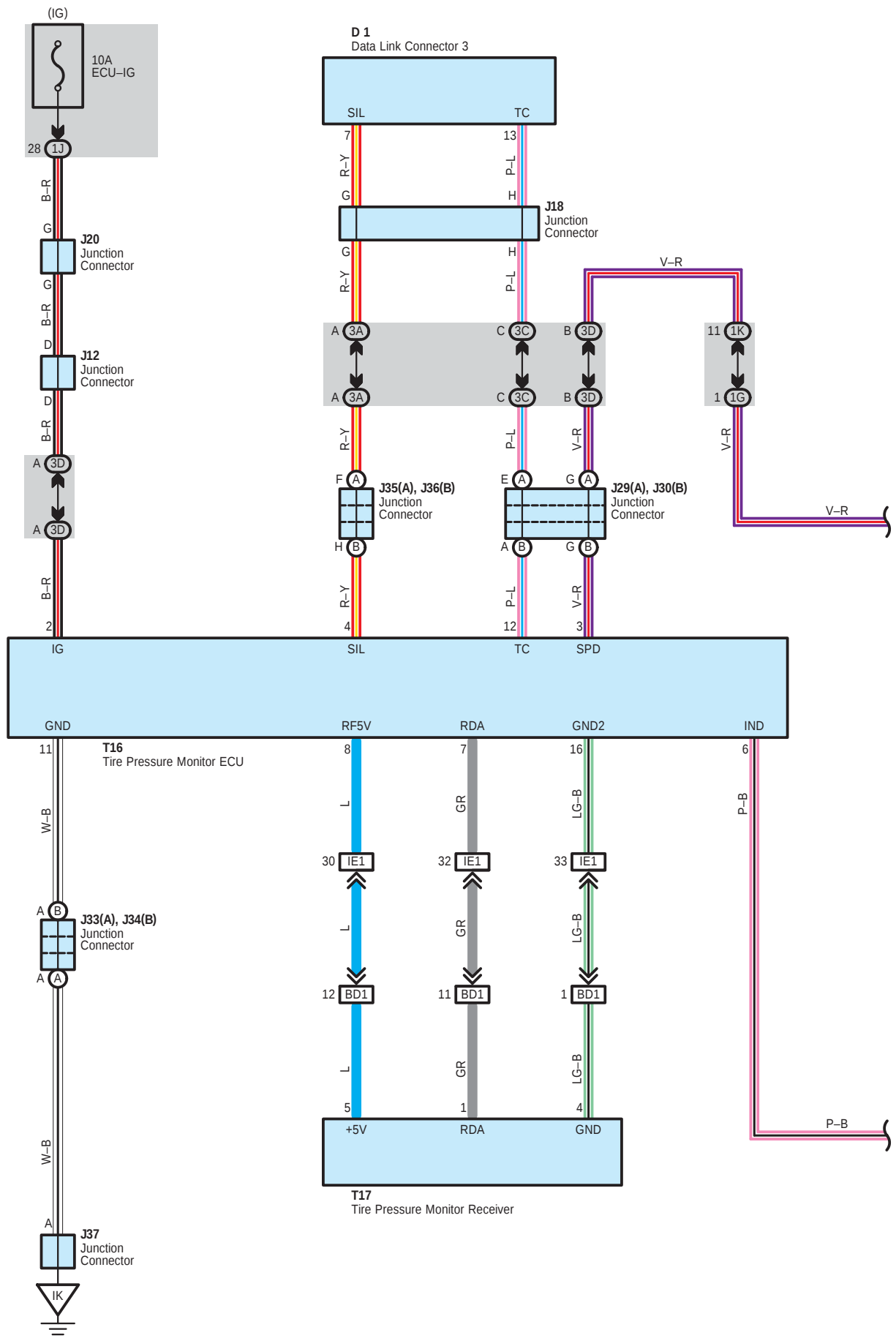
 : Connector Joining Wire Harness and Wire Harness

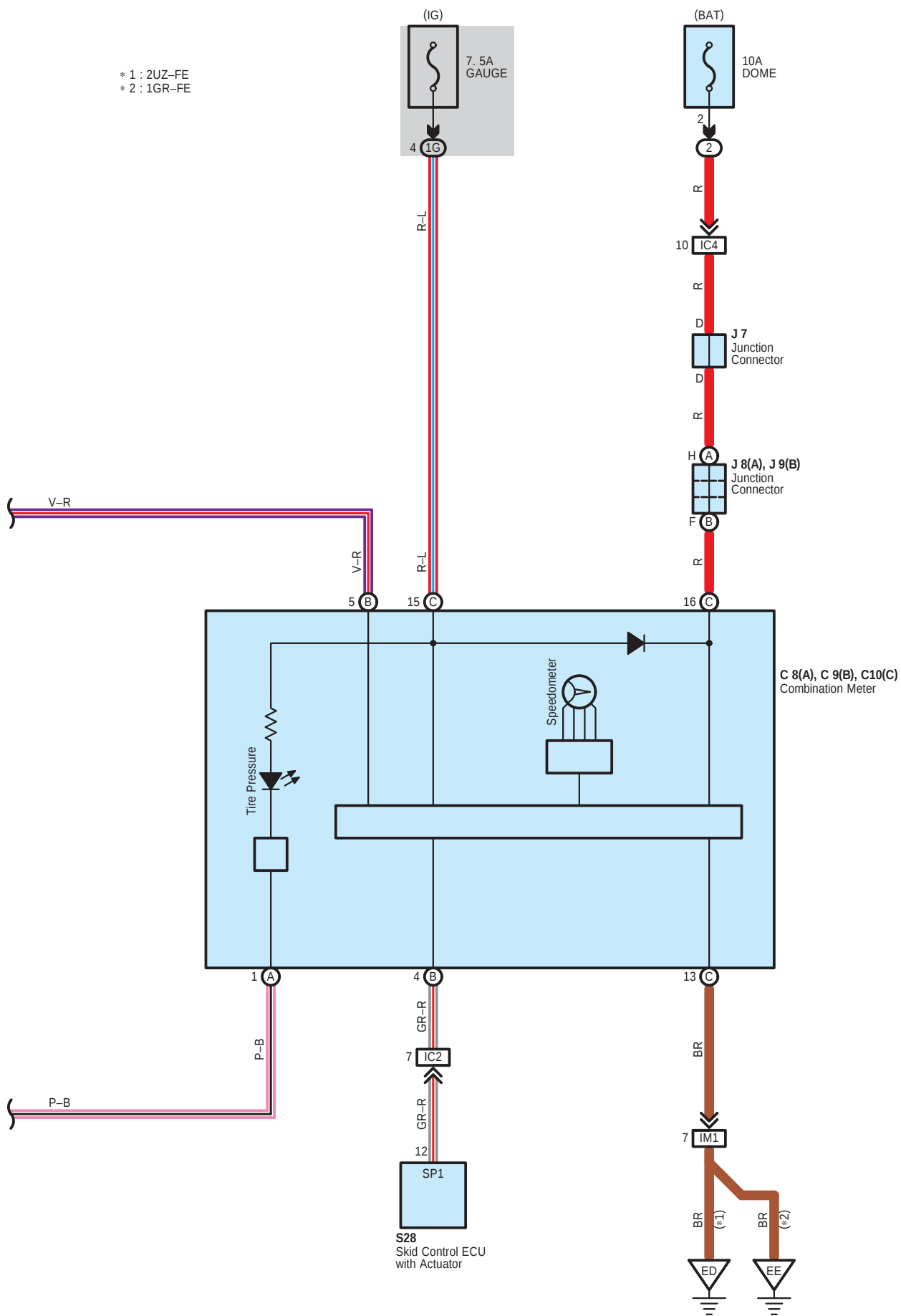
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB2	46	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	46	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
BF1	48	Frame No.3 Wire and Floor No.2 Wire (Rear Side of Side Frame LH)
BG1	48	Floor No.2 Wire and Frame No.3 Wire (Rear Side of Side Frame LH)

 : Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
IG	46	Left Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Tire Pressure Warning System





Tire Pressure Warning System

System Outline

The air pressure sensor installed in the tire wheel detects the tire air pressure and transmits signals to the vehicle side receiver. When the detected tire air pressure is below a specified level, the warning light in the combination meter comes on to inform the driver.

Warnings when the tire pressure is low

* When the tire air pressure is below a specified level, the warning light in the combination meter comes on.

: Parts Location

Code		See Page	Code		See Page	Code		See Page
C8	A	37	J12	38		J35	A	38
C9	B	37	J18	38		J36	B	38
C10	C	37	J20	38		J37		38
D1		37	J29	A	38	S28		33 (2UZ-FE)
J7		38	J30	B	38			35 (1GR-FE)
J8	A	38	J33	A	38	T16		39
J9	B	38	J34	B	38	T17		41

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3C		
3D		

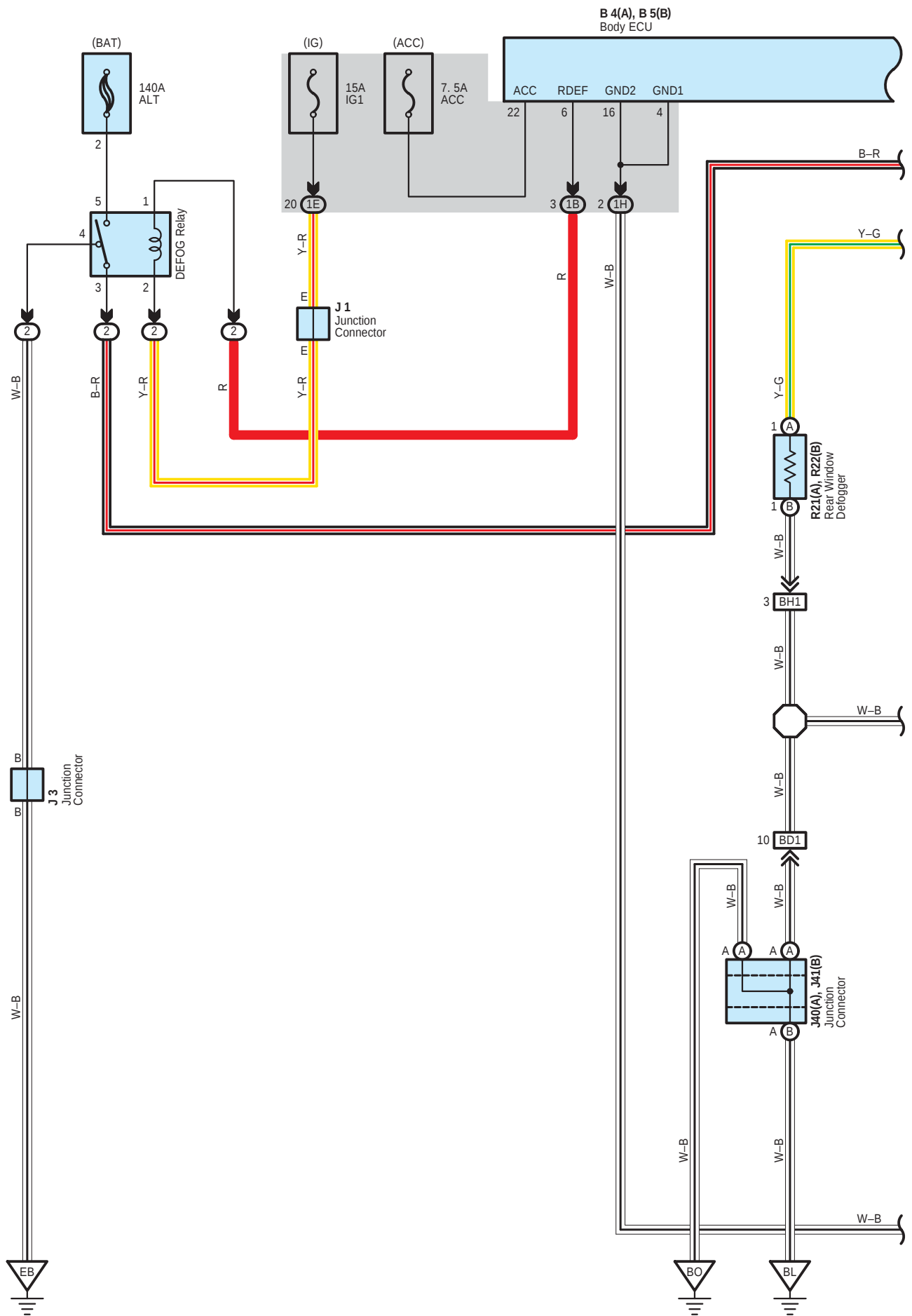
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

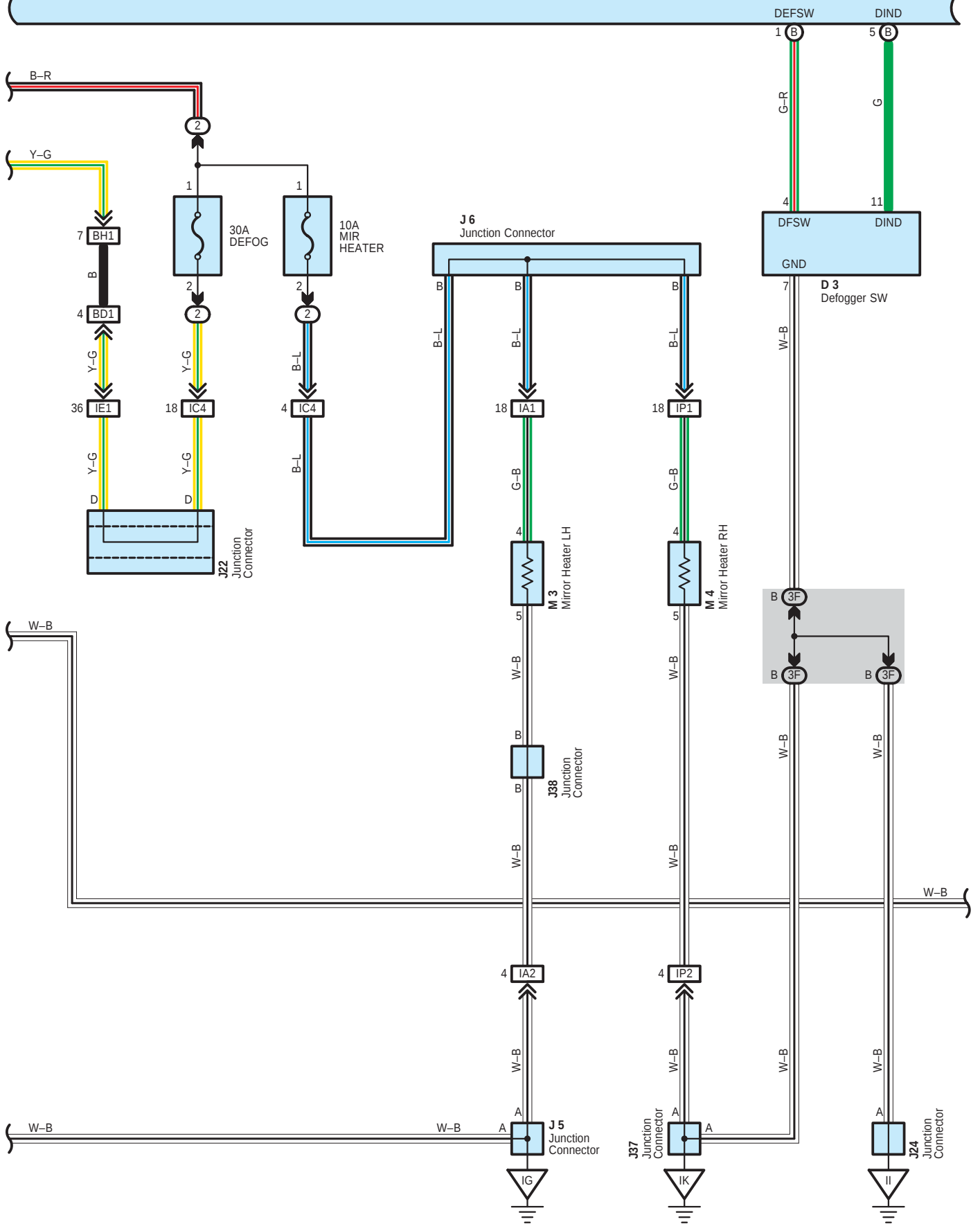
: Ground Points

Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IK	46	Right Kick Panel

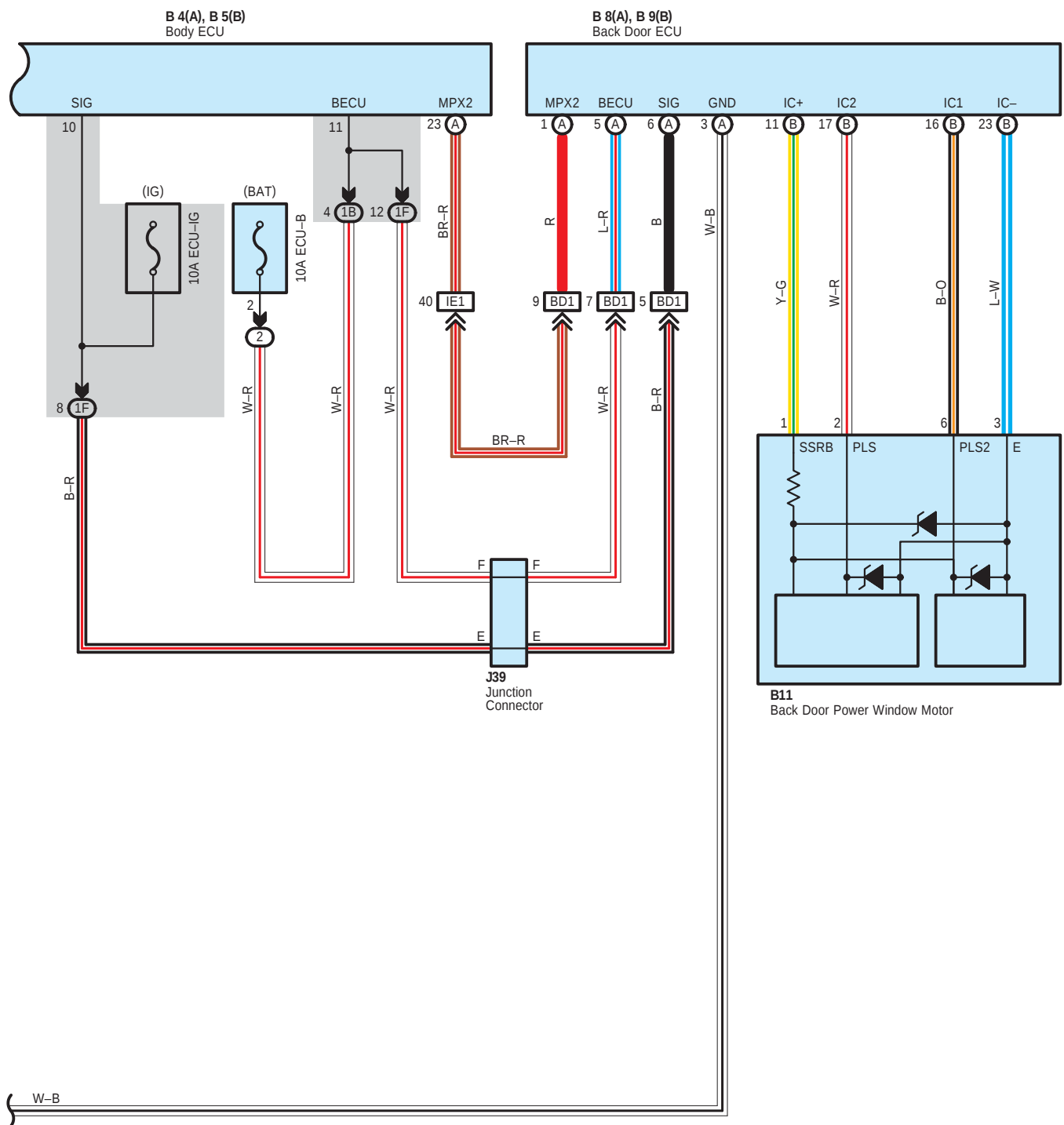
Rear Window Defogger and Mirror Heater



B 4(A), B 5(B)
Body ECU



Rear Window Defogger and Mirror Heater



System Outline

- * Start control
Turning the rear window defogger SW ON, with the ignition SW ON and the back door window fully closed, initiates operation of the rear window defogger and illuminates the indicator lamp for 15 minutes.
- * Stop control
When any one of the following conditions exists, rear window defogger operation comes to a stop and the indicator lamp goes out.
 - * The ignition SW is turned from the ON position to either the ACC or OFF position.
 - * The rear window defogger SW is pressed ON again when rear window defogger operation is already under way.
 - * The back door window is open.

○ : Parts Location

Code		See Page	Code	See Page	Code		See Page
B4	A	36	J3	33 (2UZ–FE)	J39		40
B5	B	36		35 (1GR–FE)	J40	A	40
B8	A	40	J5	38	J41	B	40
B9	B	40	J6	38	M3		41
B11		40	J22	38	M4		41
D3		37	J24	38	R21	A	41
J1		33 (2UZ–FE)	J37	38	R22	B	41
		35 (1GR–FE)	J38	40			

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3F	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

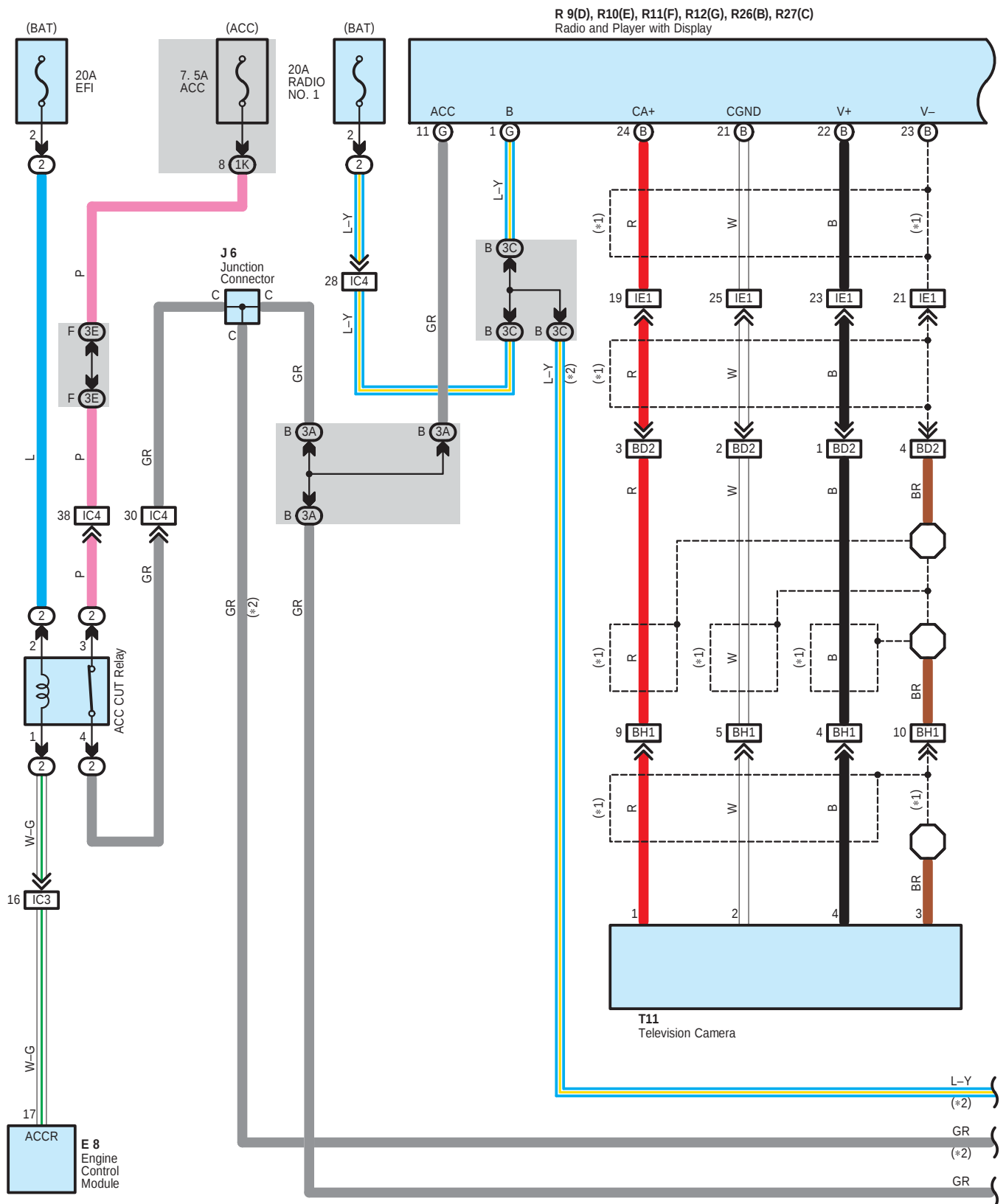
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC4	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IP1	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BD1	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BH1	48	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)

▽ : Ground Points

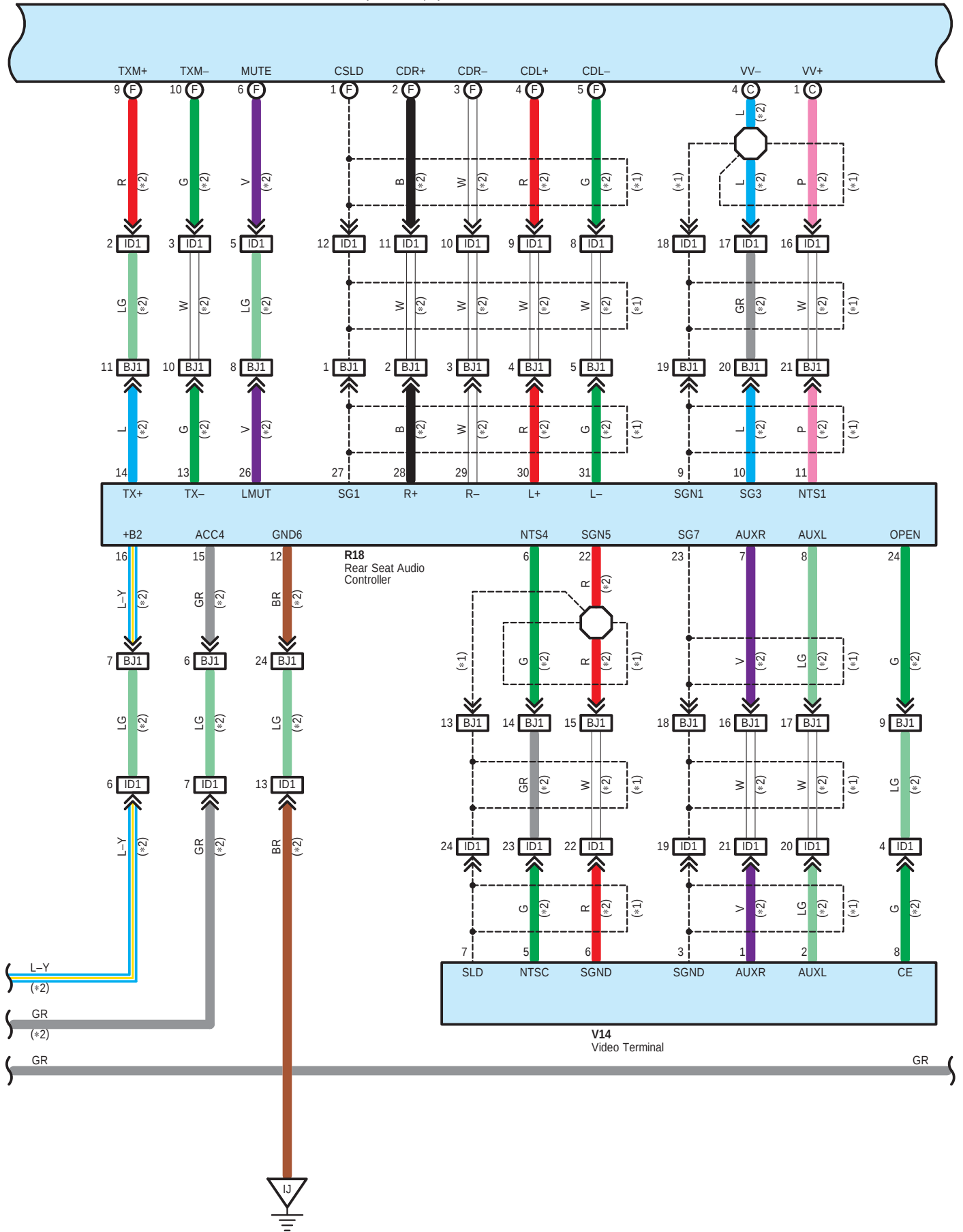
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
IG	46	Left Kick Panel
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel
BL	48	Floor Seat Crossmember LH
BO	48	Rear Pillar LH

Navigation, Parking Assist and Audio System



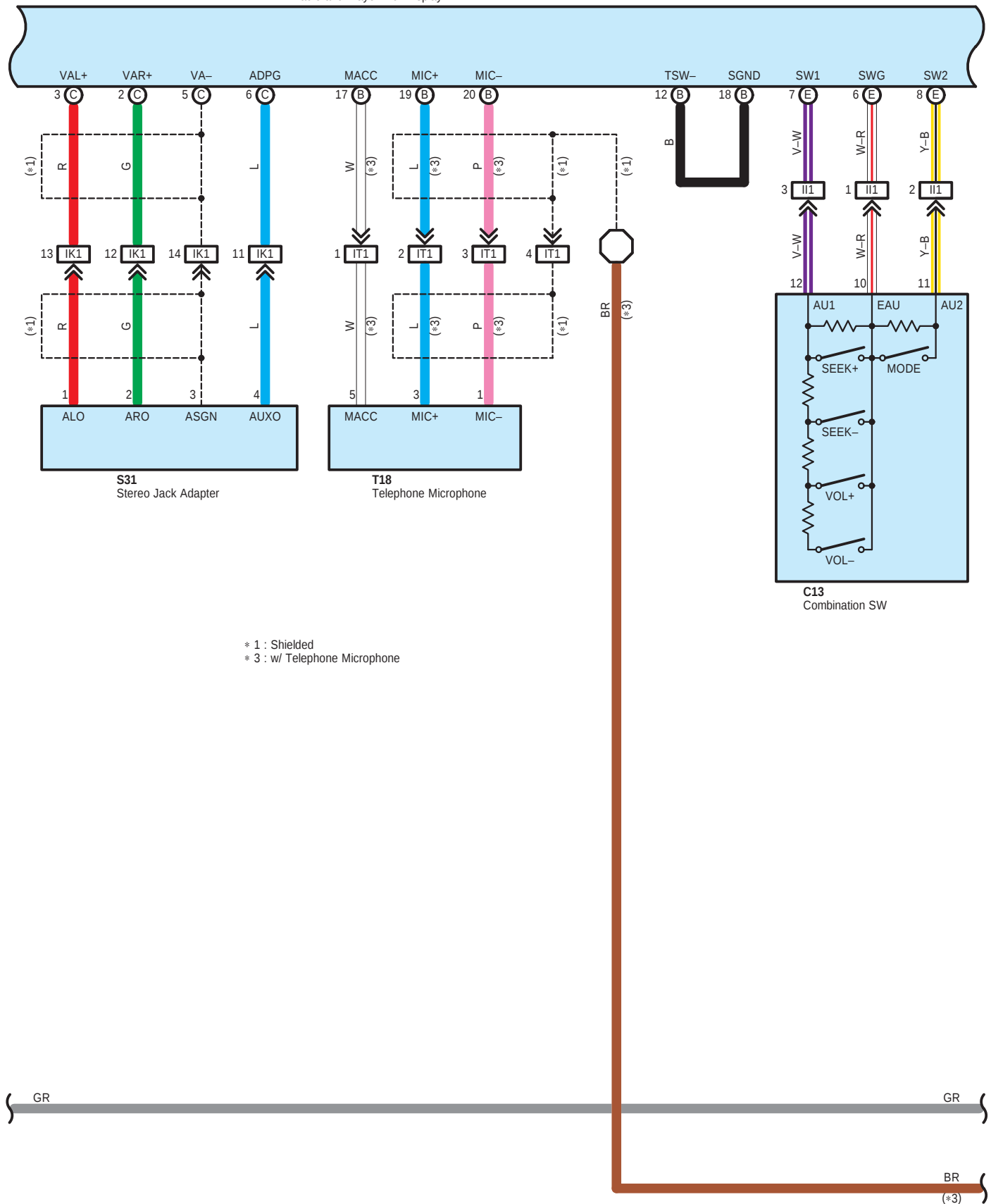
R 9(D), R10(E), R11(F), R12(G), R26(B), R27(C)
Radio and Player with Display

* 1 : Shielded
* 2 : w/ Rear Seat Entertainment System

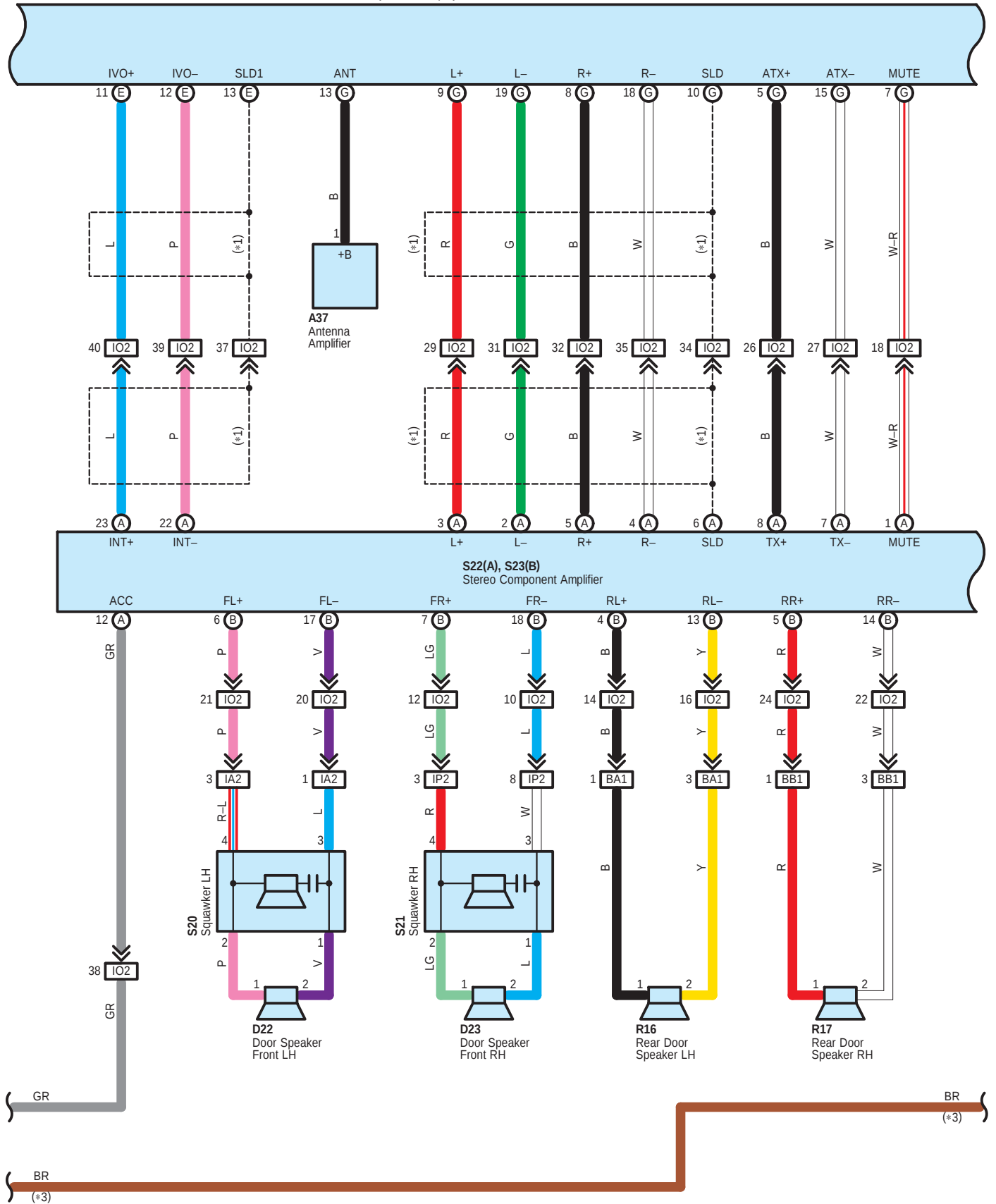


Navigation, Parking Assist and Audio System

R 9(D), R10(E), R11(F), R12(G), R26(B), R27(C)
Radio and Player with Display

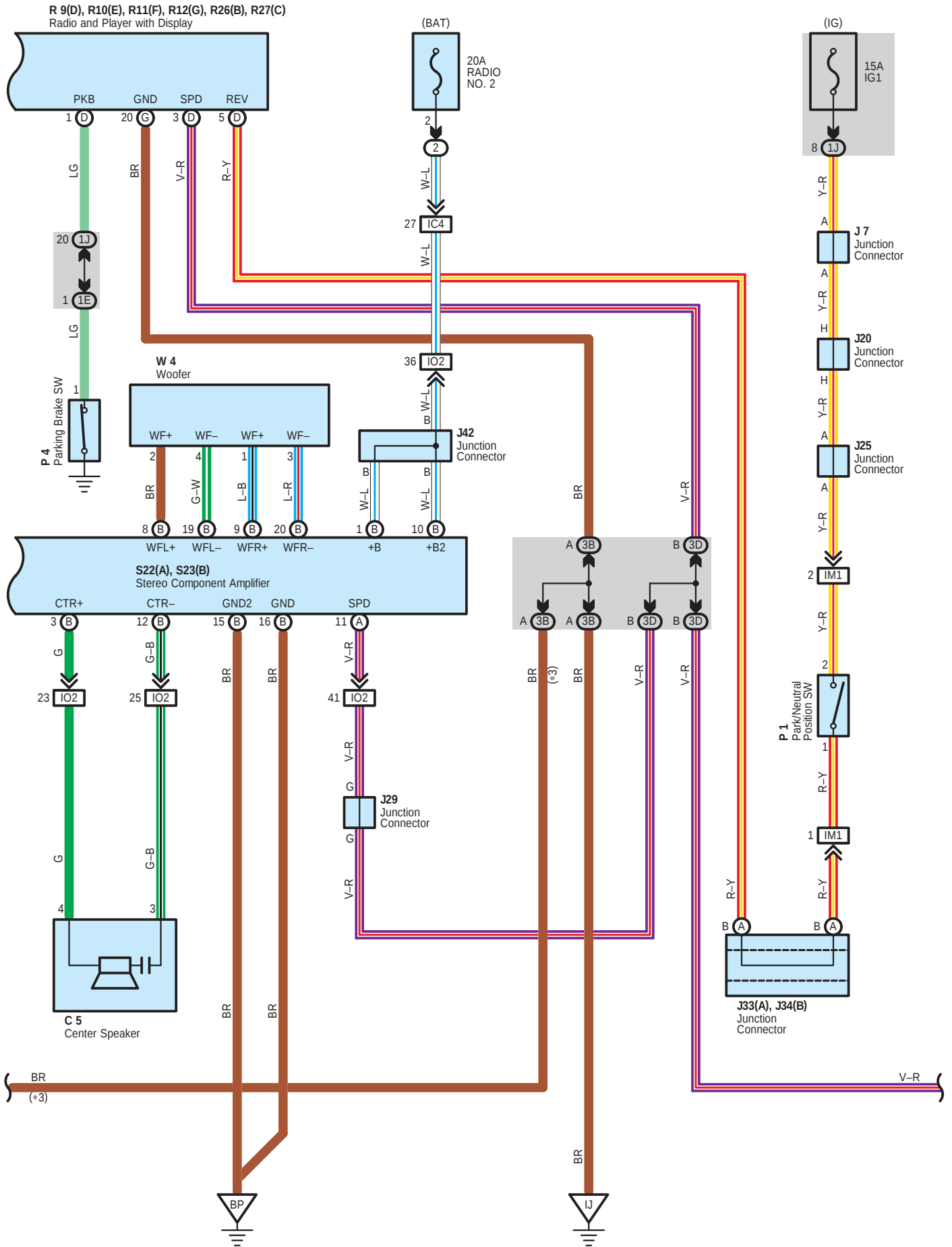


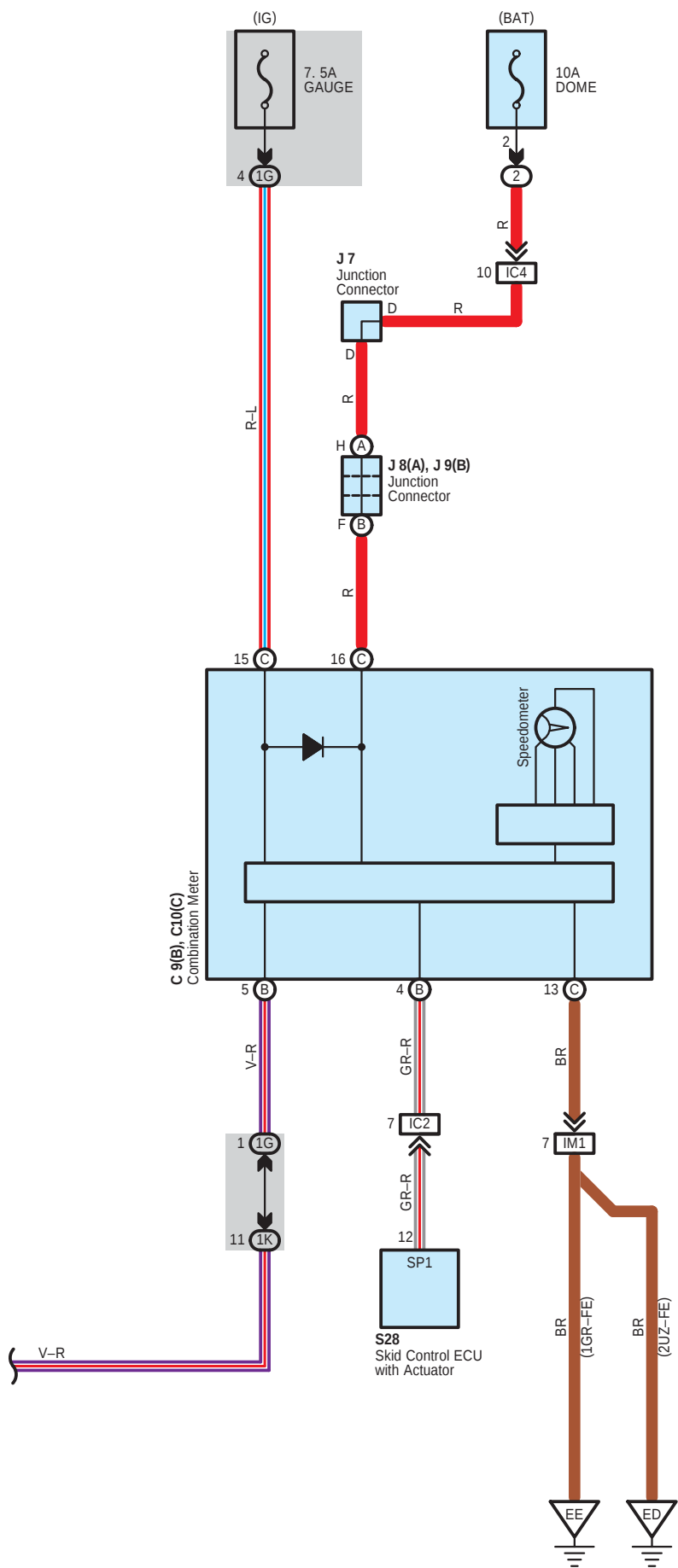
R 9(D), R10(E), R11(F), R12(G), R26(B), R27(C)
Radio and Player with Display



Navigation, Parking Assist and Audio System

* 3 : w/ Telephone Microphone





Navigation, Parking Assist and Audio System

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A37	36	J29	38	R26	B 39
C5	37	J33	A 38	R27	C 39
C9	B 37	J34	B 38	S20	41
C10	C 37	J42	40	S21	41
C13	37	P1	33 (2UZ-FE)	S22	A 41
D22	40		35 (1GR-FE)	S23	B 41
D23	40	P4	39	S28	33 (2UZ-FE)
E8	37	R9	D 39		35 (1GR-FE)
J6	38	R10	E 39	S31	39
J7	38	R11	F 39	T11	41
J8	A 38	R12	G 39	T18	41
J9	B 38	R16	41	V14	39
J20	38	R17	41	W4	41
J25	38	R18	41		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3B		
3C		
3D		
3E		

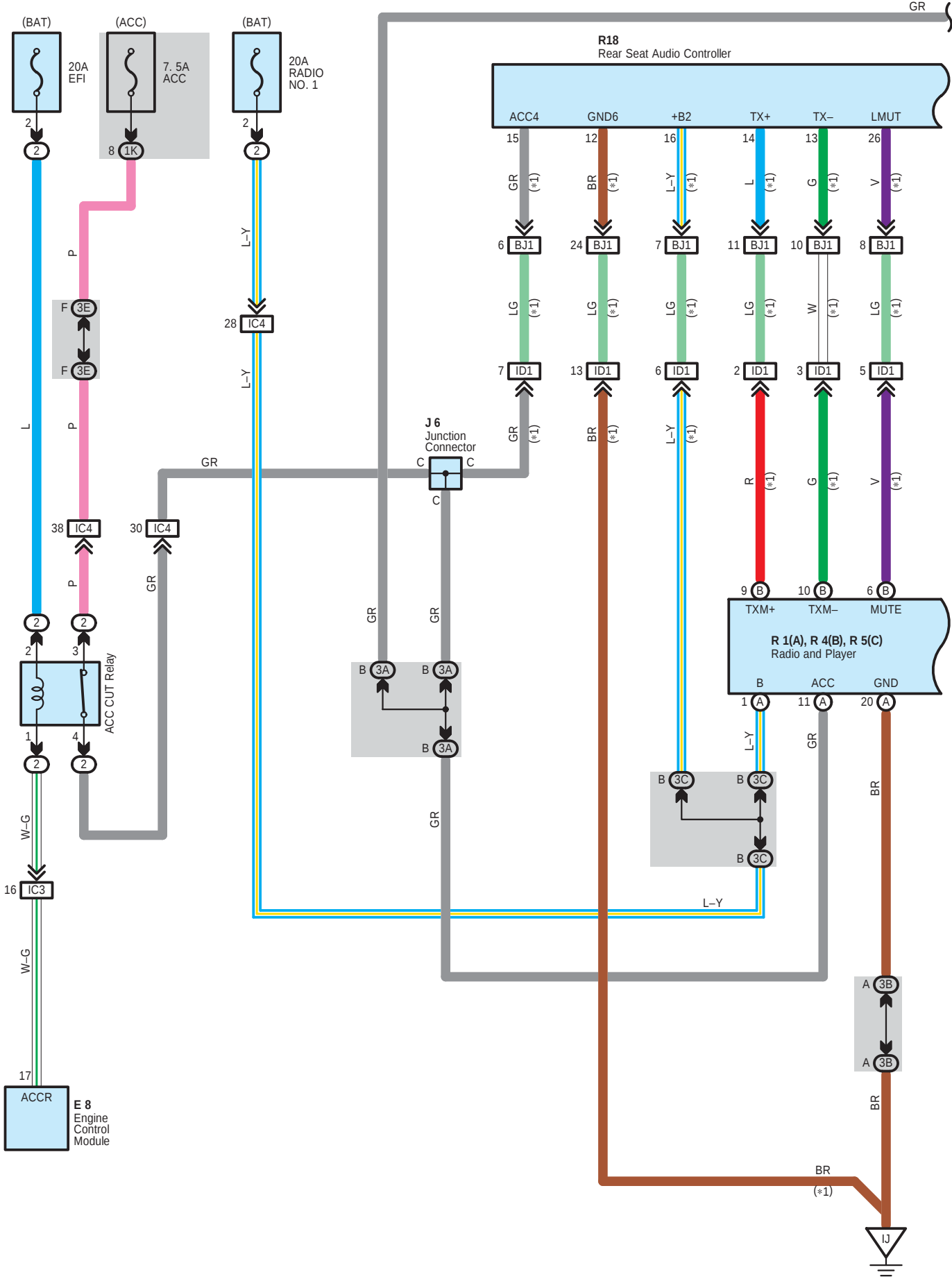
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
ID1	46	Radio Installation Wiring Sub Assembly and Instrument Panel Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
II1	46	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IK1	47	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO2	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP2	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IT1	47	Roof Wire and Instrument Panel Wire (Left Kick Panel)
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD2	48	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BH1	48	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)
BJ1	48	Radio Installation Wiring Sub Assembly and Radio Installation Wiring Sub Assembly (Center of Roof)

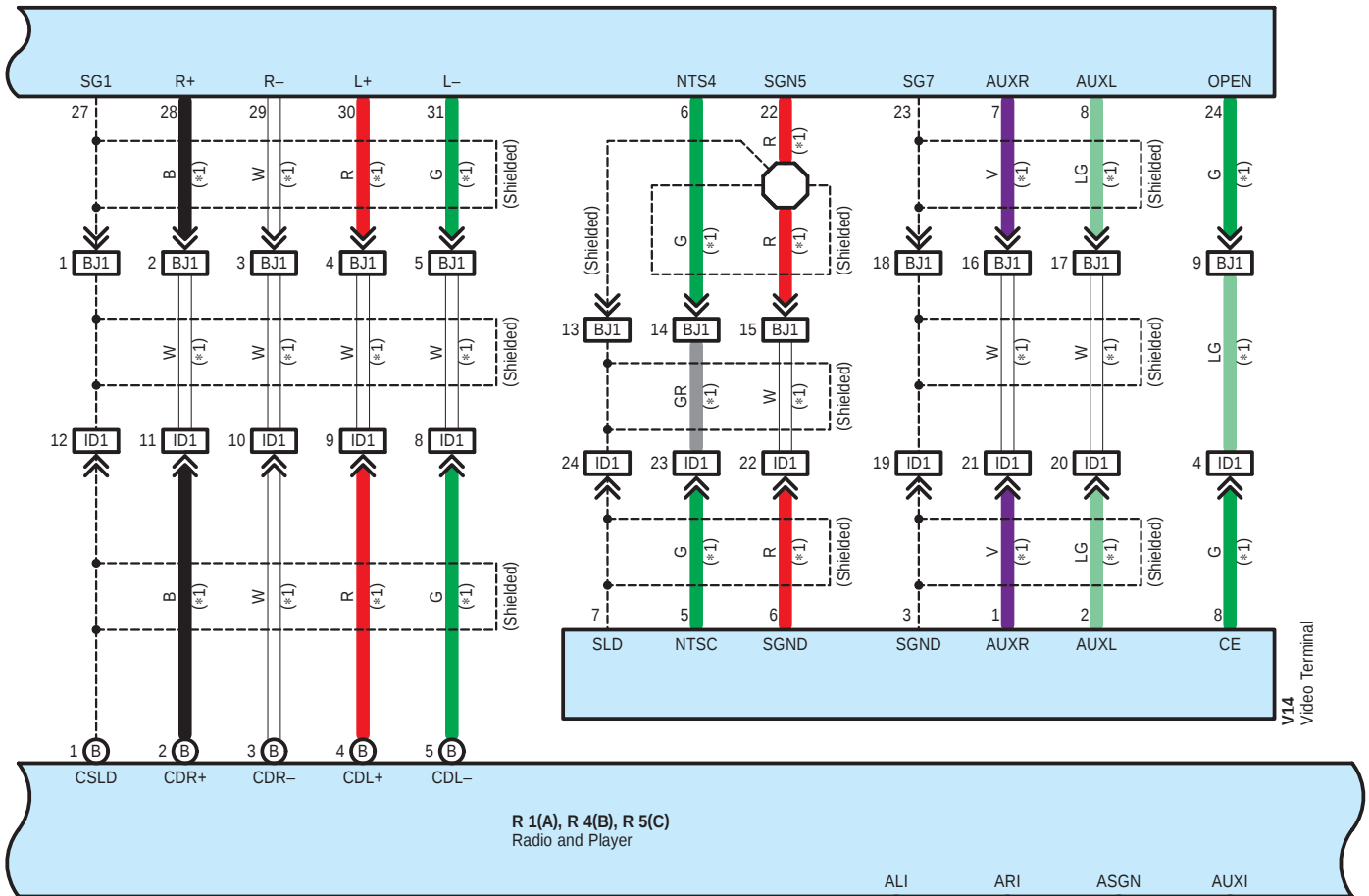


: Ground Points

Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IJ	46	Instrument Panel Brace RH
BP	48	Rear Pillar RH

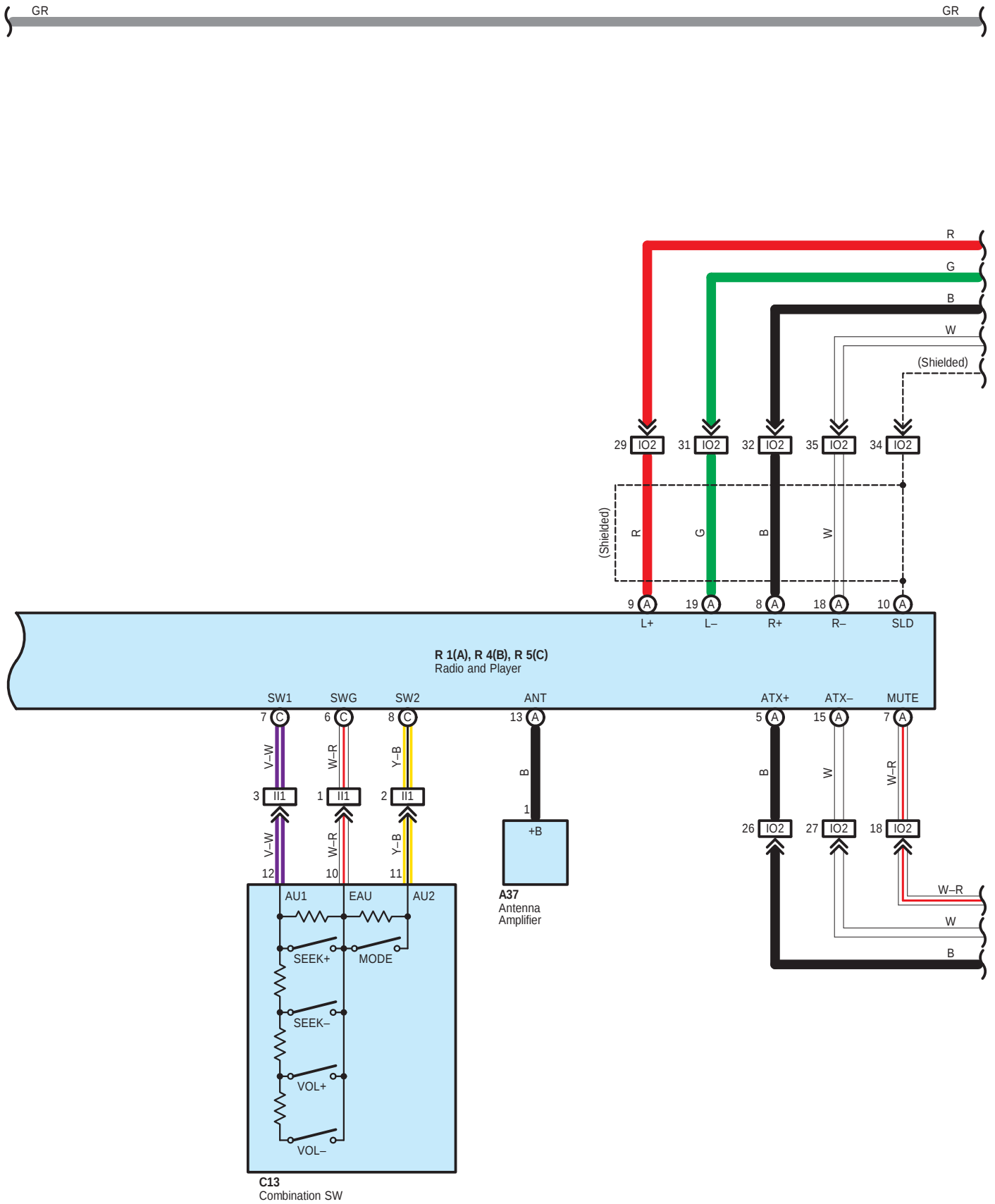


R18
Rear Seat Audio Controller

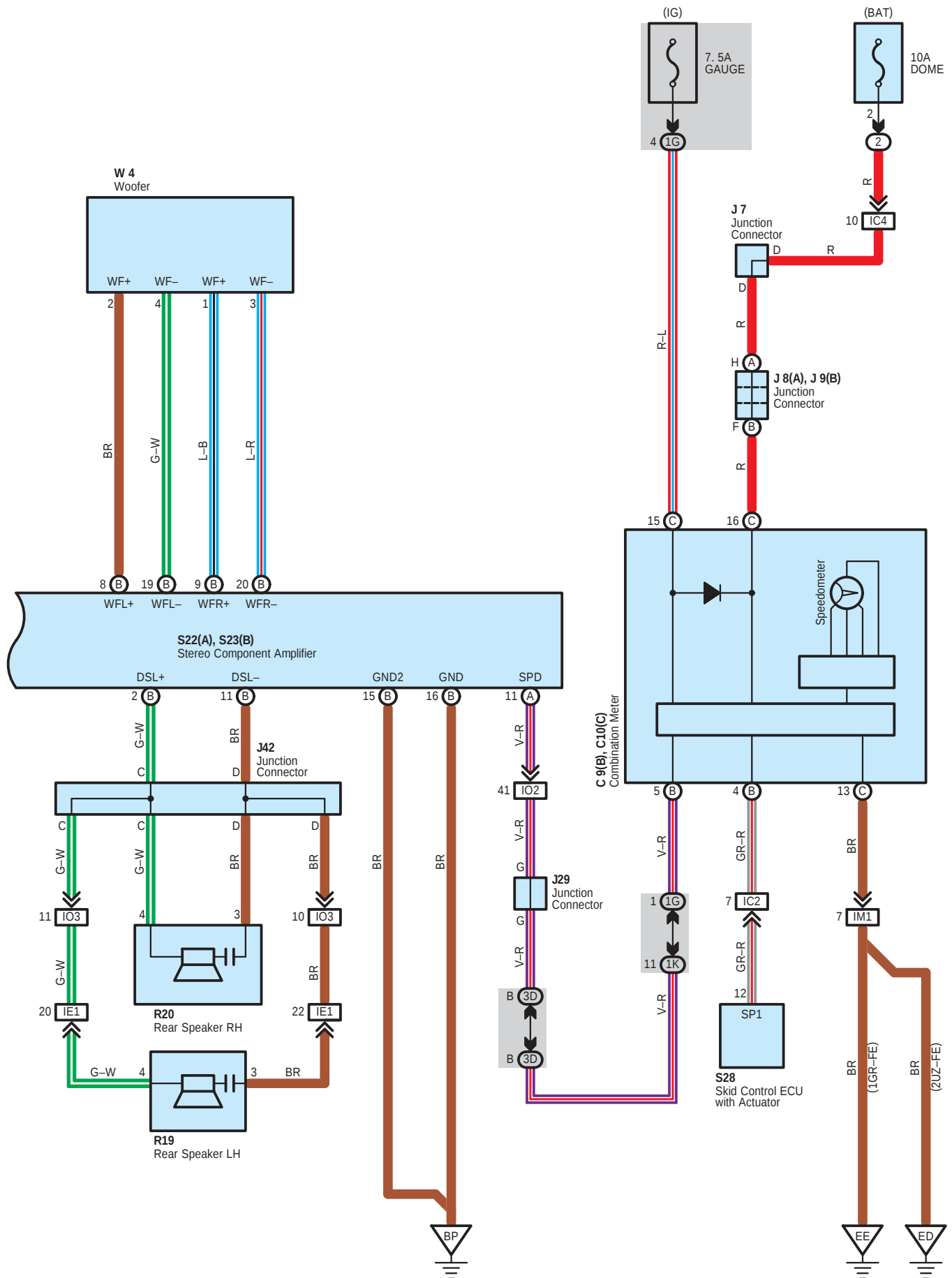


S31
Stereo Jack Adapter

Audio System with 10 Speaker



Audio System with 10 Speaker



 : Parts Location

Code		See Page	Code		See Page	Code		See Page
A37		36	J9	B	38	S20		41
C5		37	J29		38	S21		41
C9	B	37	J42		40	S22	A	41
C10	C	37	R1	A	39	S23	B	41
C13		37	R4	B	39	S28		33 (2UZ–FE)
D22		40	R5	C	39			35 (1GR–FE)
D23		40	R16		41	S31		39
E8		37	R17		41	V14		39
J6		38	R18		41	W4		41
J7		38	R19		41			
J8	A	38	R20		41			

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1K		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3B		
3C		
3D		
3E		

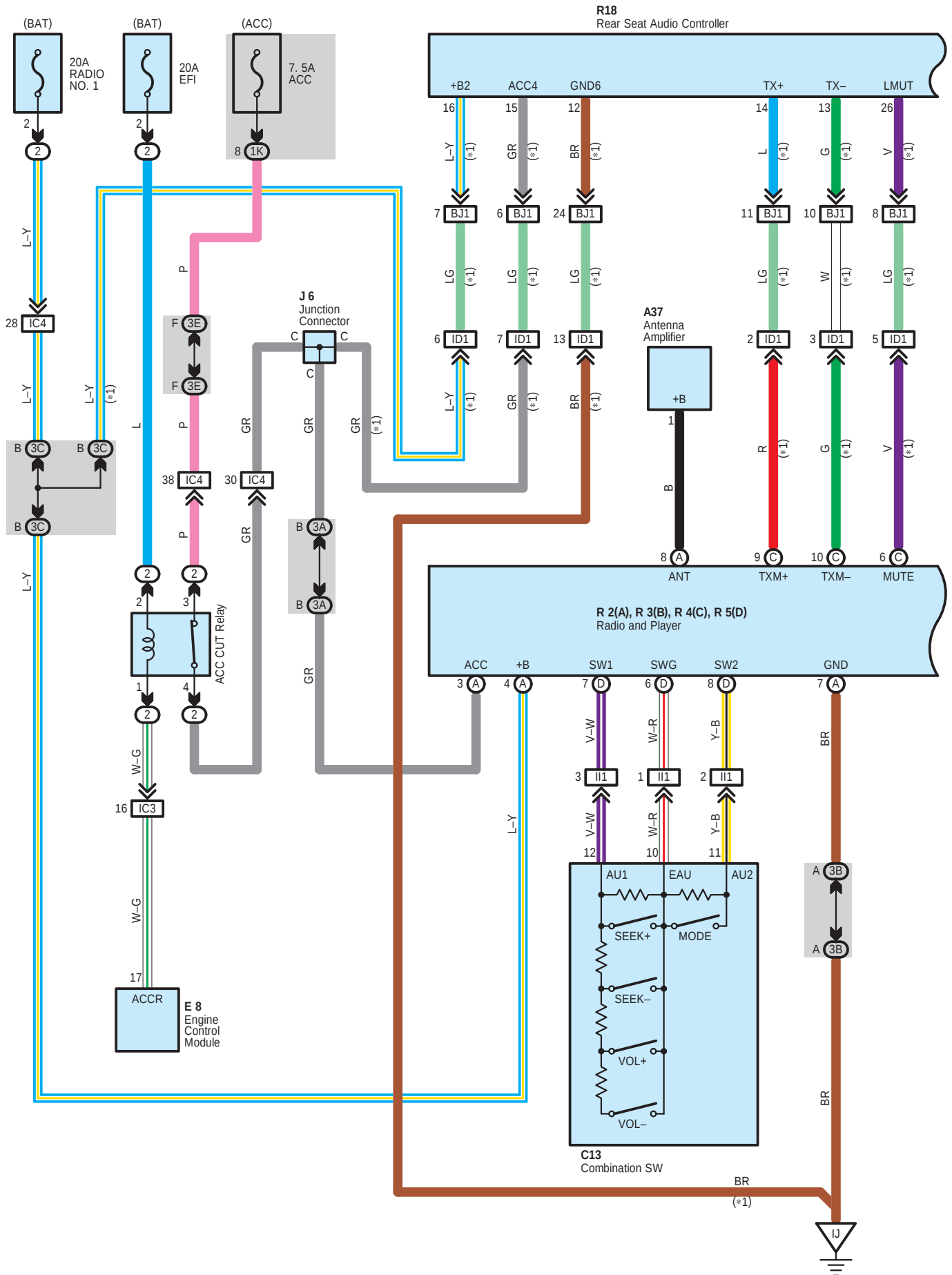
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
ID1	46	Radio Installation Wiring Sub Assembly and Instrument Panel Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
II1	46	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IK1	47	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO2	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IO3		
IP2	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BJ1	48	Radio Installation Wiring Sub Assembly and Radio Installation Wiring Sub Assembly (Center of Roof)

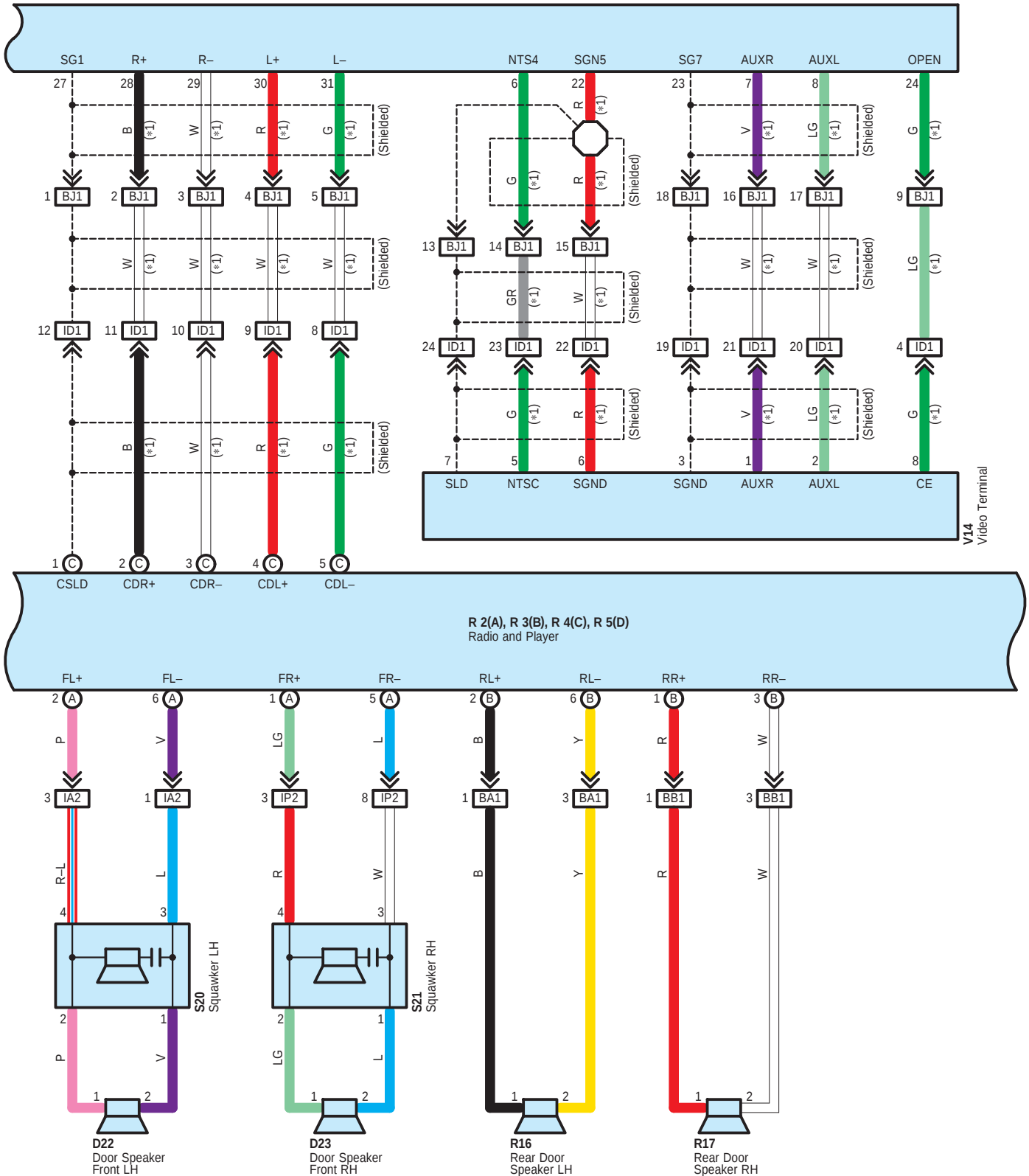
 : Ground Points

Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IJ	46	Instrument Panel Brace RH
BP	48	Rear Pillar RH

Audio System with 6 Speaker



R18
Rear Seat Audio Controller



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A37	36	J7	38	R17	41
C9	B	J8	A	R18	41
C10	C	J9	B	S20	41
C13	37	R2	A	S21	41
D22	40	R3	B	S28	33 (2UZ-FE)
D23	40	R4	C		35 (1GR-FE)
E8	37	R5	D	S31	39
J6	38	R16	41	V14	39

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1K		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3B		
3C		
3D		
3E		

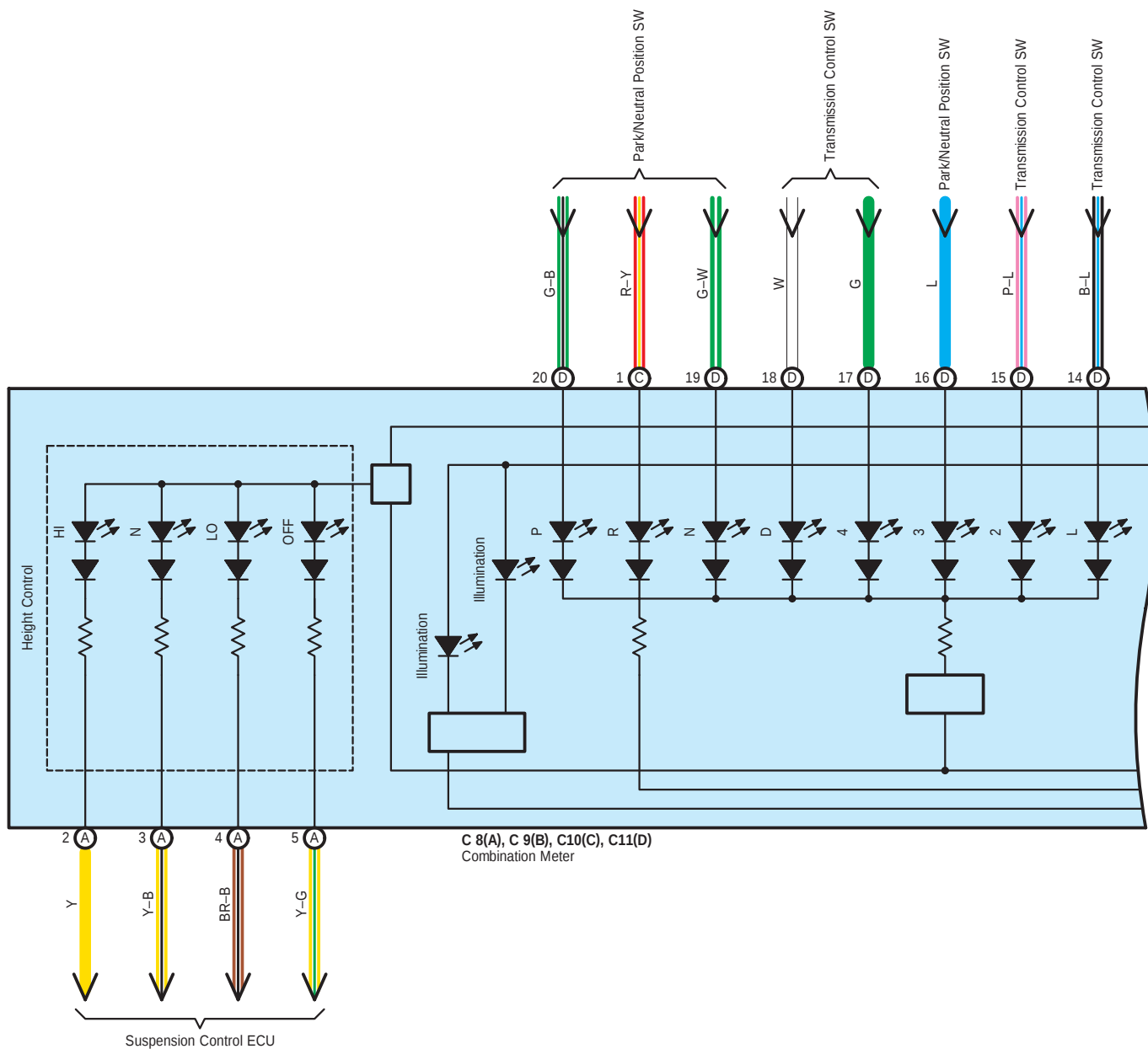
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
ID1	46	Radio Installation Wiring Sub Assembly and Instrument Panel Wire (Left Kick Panel)
II1	46	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IK1	47	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IP2	47	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	48	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	48	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BJ1	48	Radio Installation Wiring Sub Assembly and Radio Installation Wiring Sub Assembly (Center of Roof)

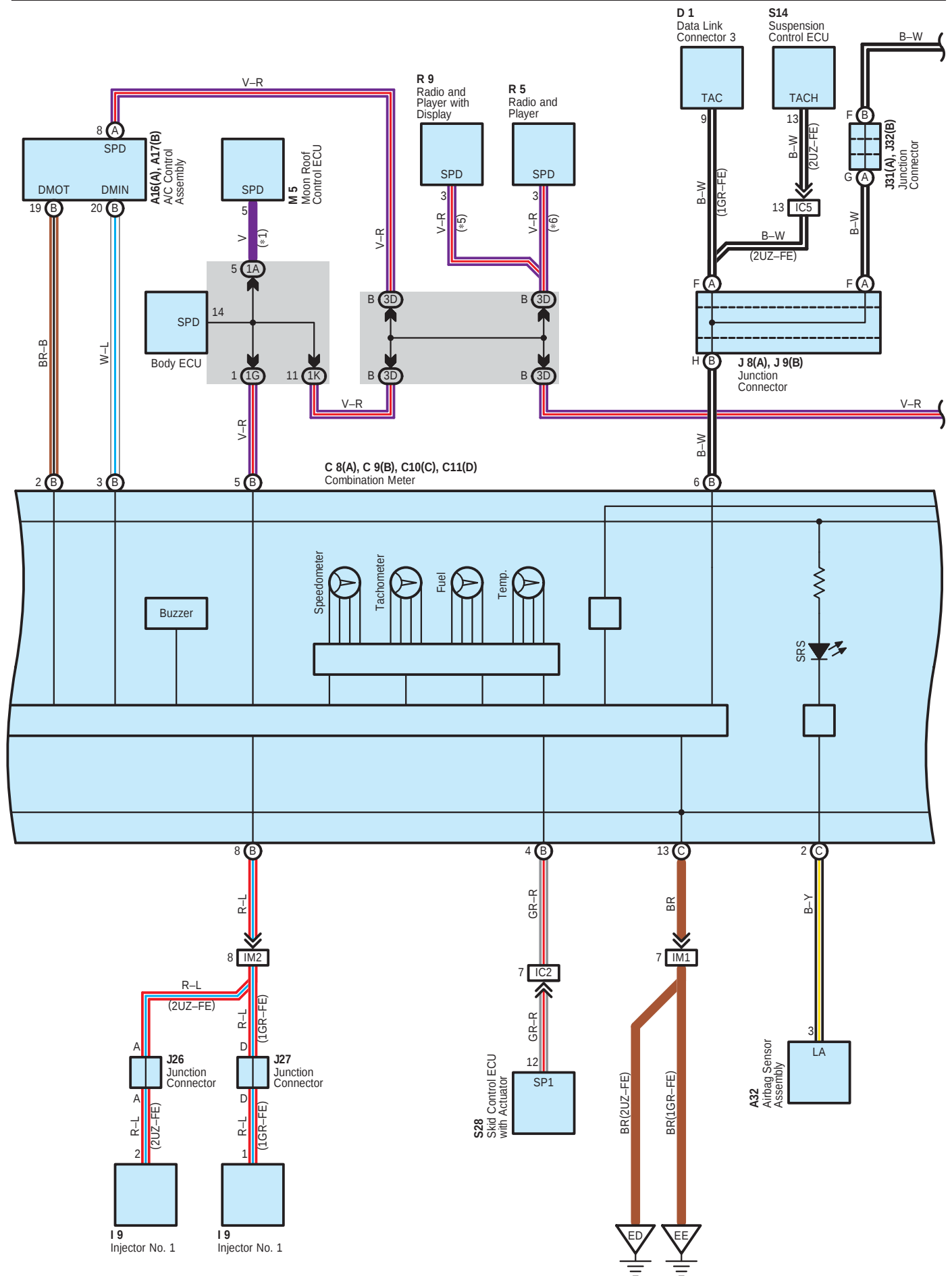
 : Ground Points

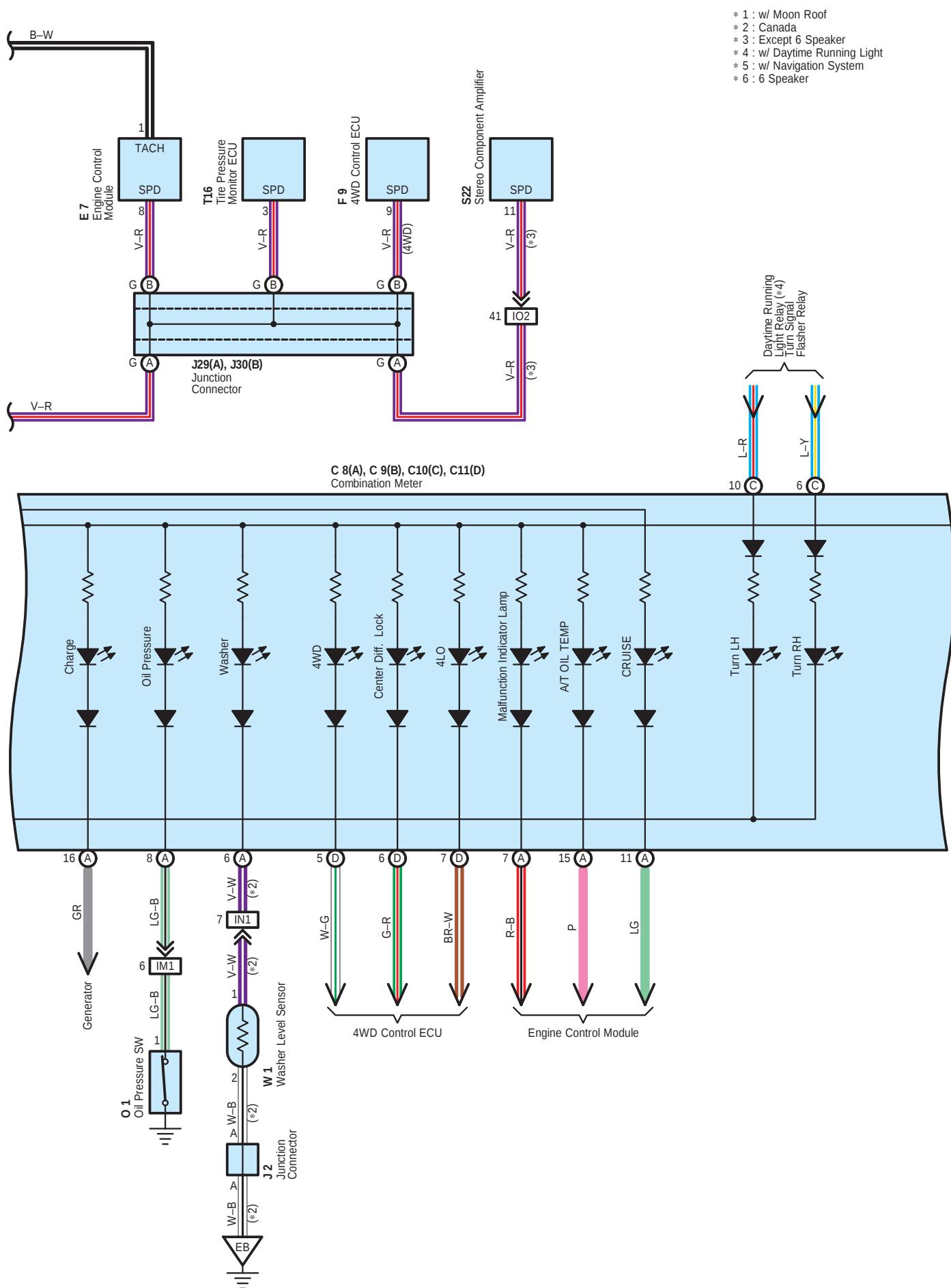
Code	See Page	Ground Points Location
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
IJ	46	Instrument Panel Brace RH

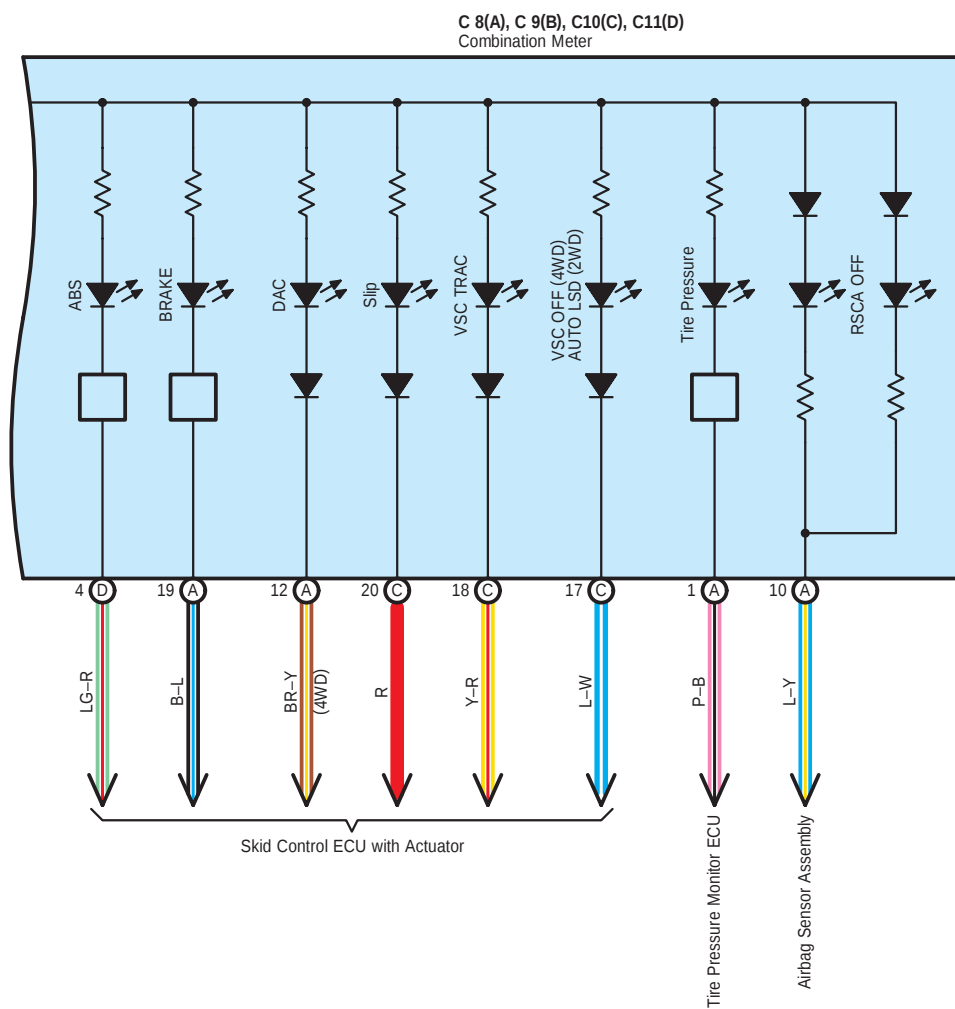
Combination Meter



Combination Meter







 : Parts Location

Code		See Page	Code		See Page	Code		See Page
A16	A	36	J2		33 (2UZ-FE)	J32	B	38
A17	B	36			35 (1GR-FE)	M5		41
A32		36	J7		38	O1		33 (2UZ-FE)
C8	A	37	J8	A	38			35 (1GR-FE)
C9	B	37	J9	B	38	R5		39
C10	C	37	J10	A	38	R9		39
C11	D	37	J11	B	38	S14		39
D1		37	J16		38	S22		41
E7		37	J26		38	S28		33 (2UZ-FE)
F9		37	J27		38			35 (1GR-FE)
F14		40	J29	A	38	T16		39
I9		33 (2UZ-FE)	J30	B	38	W1		33 (2UZ-FE)
		35 (1GR-FE)	J31	A	38			35 (1GR-FE)

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

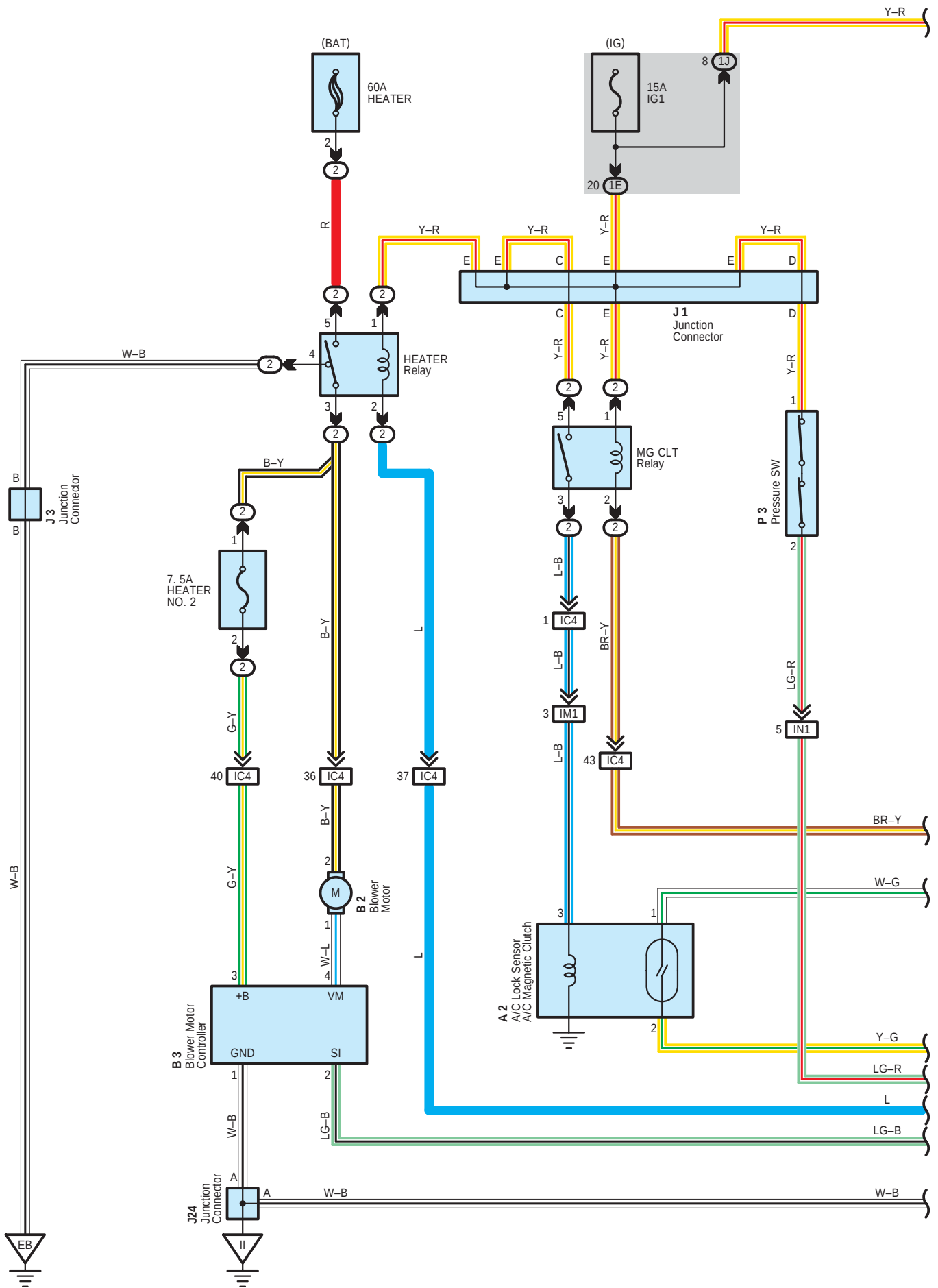
Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1C	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3D	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

 : Connector Joining Wire Harness and Wire Harness

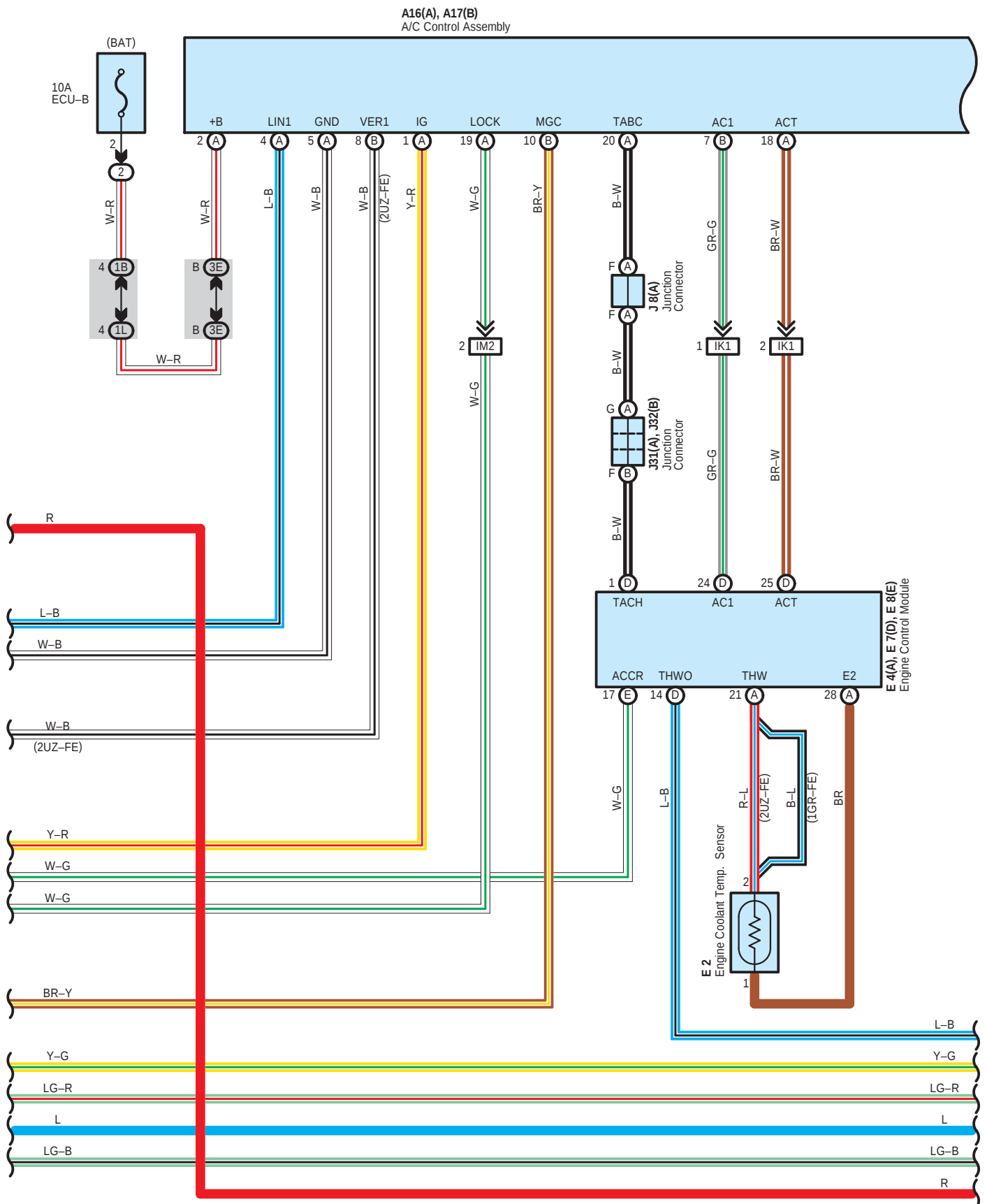
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IC5		
IE1	46	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO2	47	Instrument Panel Wire and Floor Wire (Right Kick Panel)

 : Ground Points

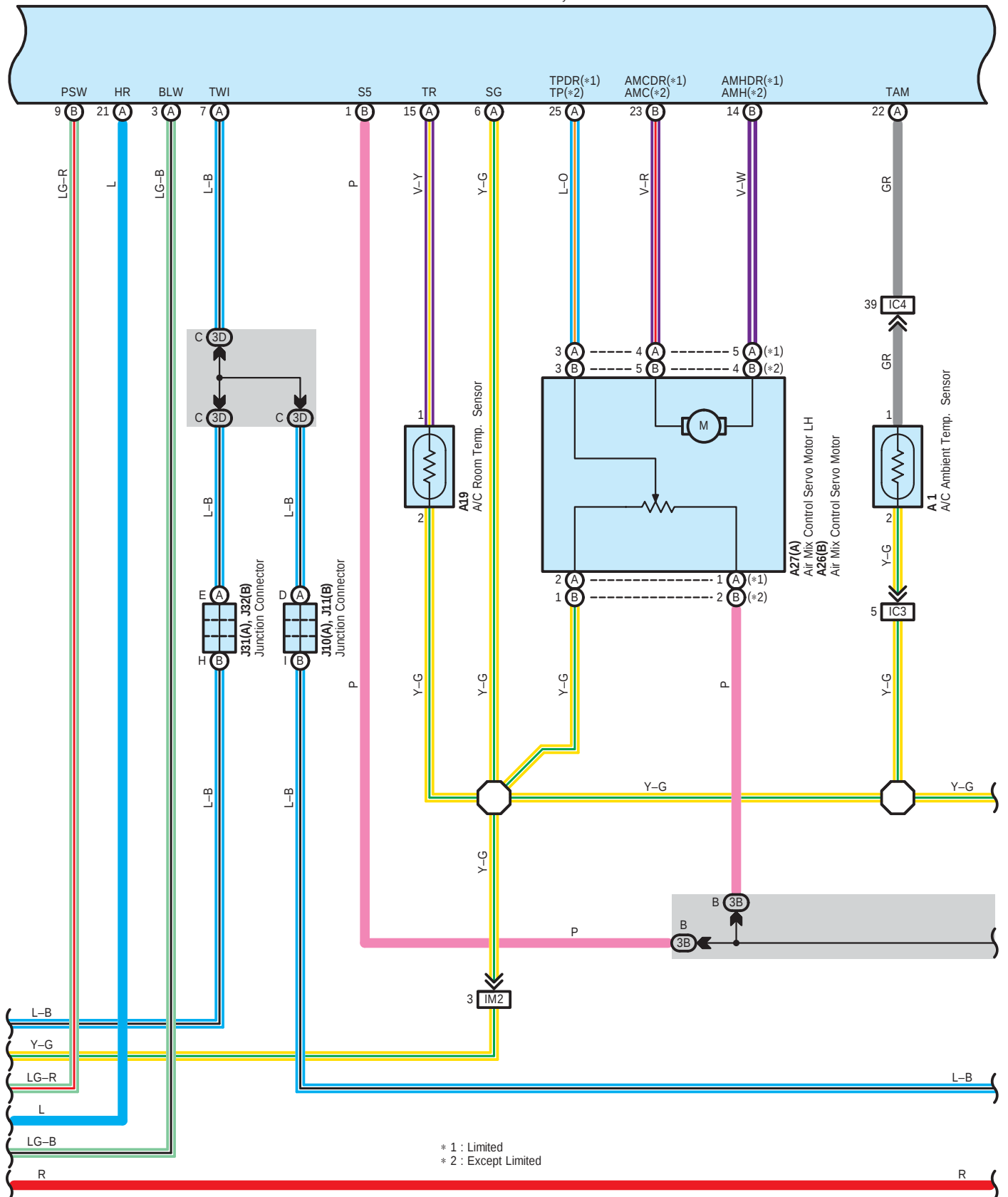
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block



Air Conditioning

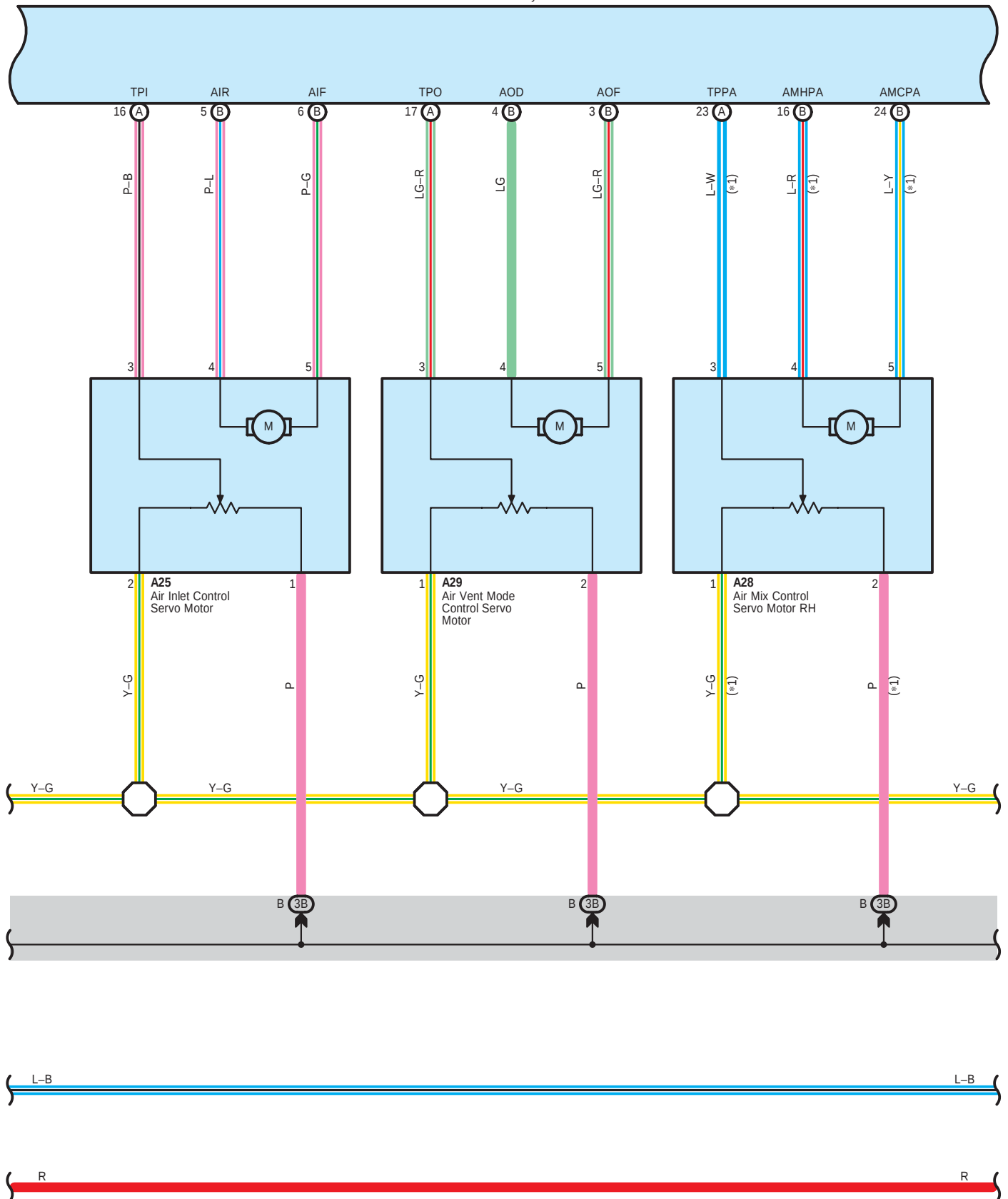


A16(A), A17(B)
A/C Control Assembly

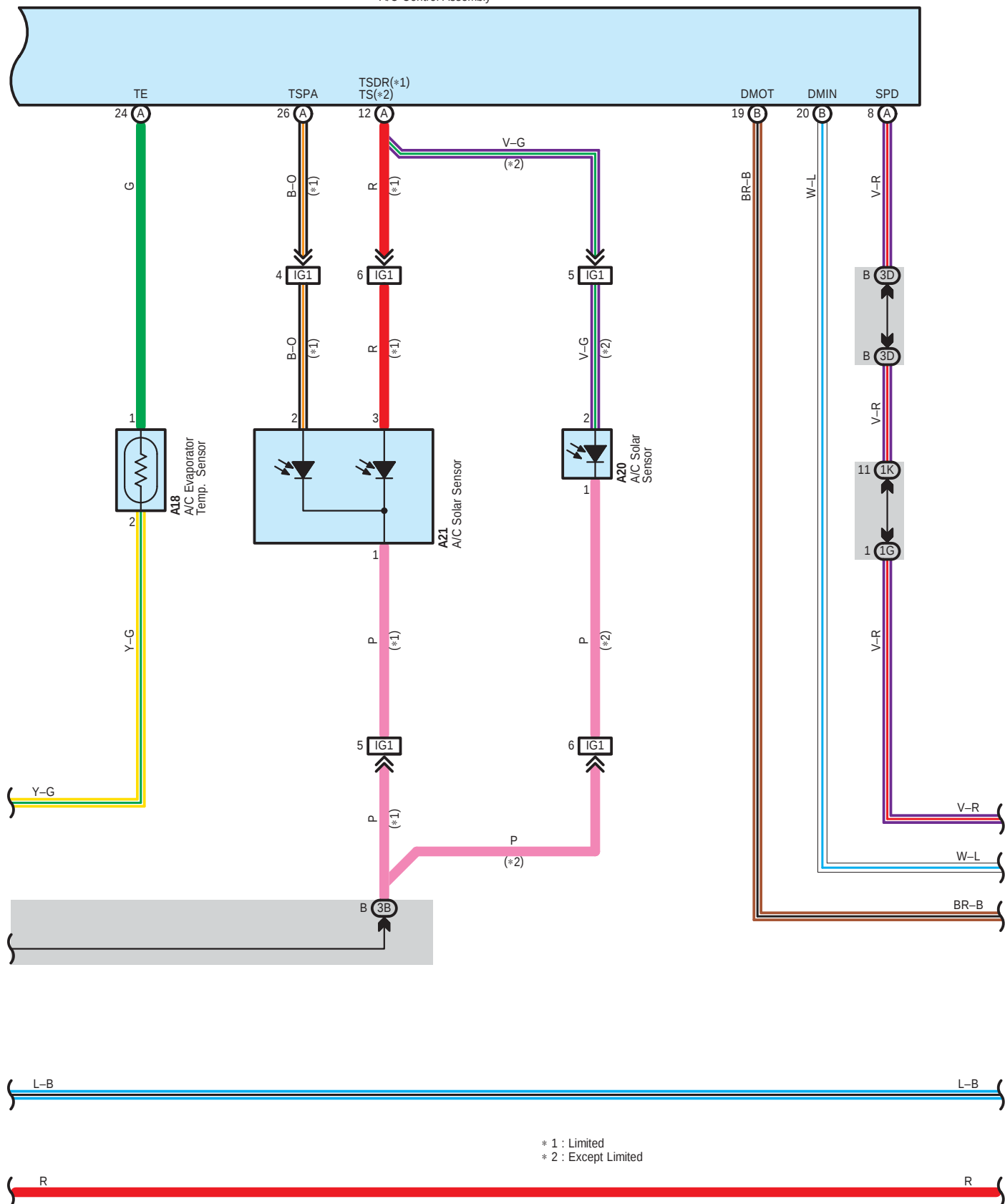


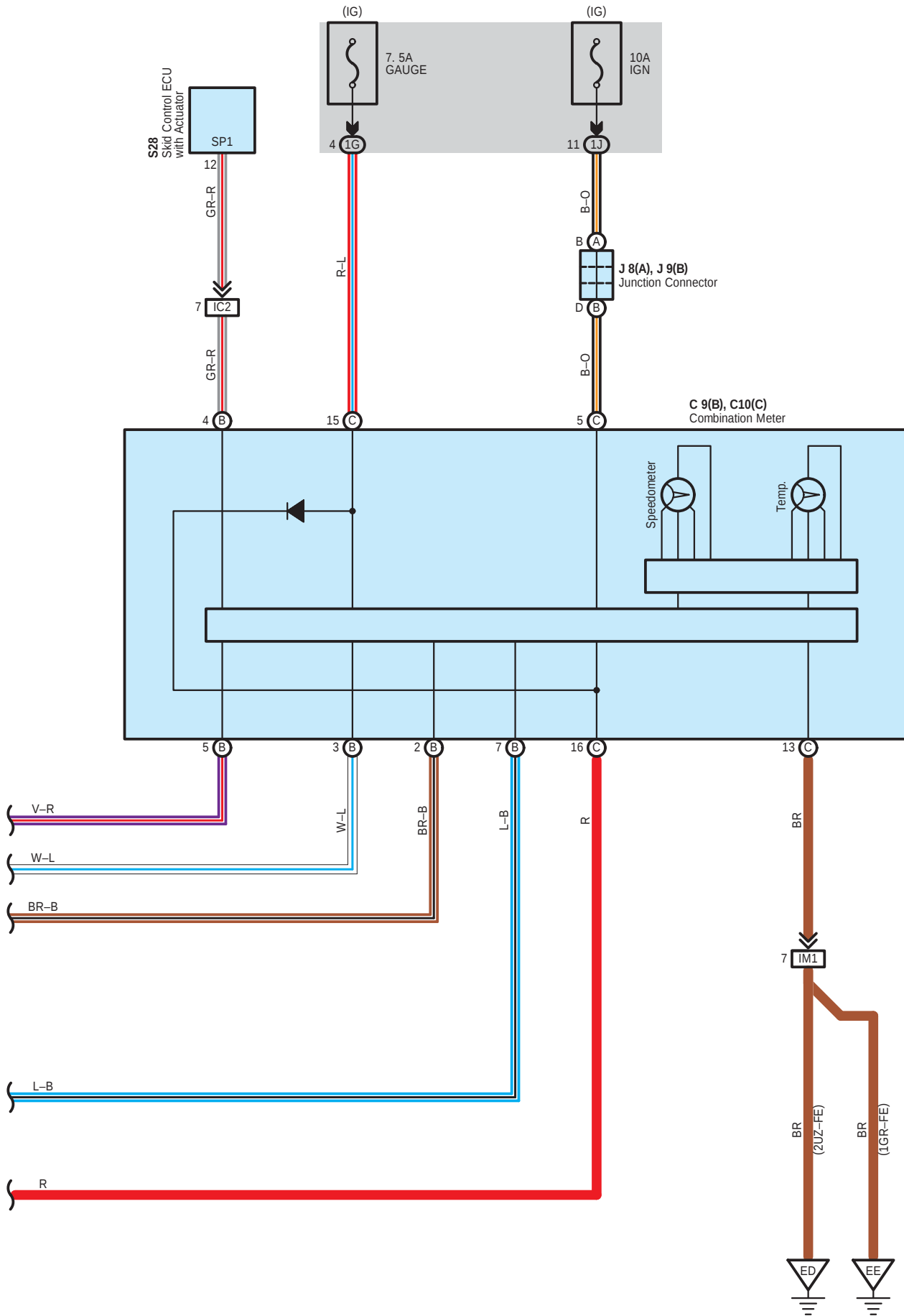
Air Conditioning

A16(A), A17(B)
A/C Control Assembly



A16(A), A17(B)
A/C Control Assembly





System Outline

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 sends the signals from various sensors and temperature SW 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 motor in the air inlet control servo motor starts rotating to move the damper toward the RECIRC side. Since the damper position is detected by the TERMINAL TPI of the A/C control assembly, the motor is continuously rotated until the damper reaches its stop position. When the FRESH/RECIRC select SW is set to FRESH, the motor in the air inlet control servo motor starts rotating to move the damper toward the FRESH side. Since the damper position is detected by the TERMINAL TPI of the A/C control assembly, the motor is continuously rotated until the damper reaches its stop position.

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. This causes the servo motor to rotate to the position (FACE, BI-LEVEL, FOOT, FOOT/DEF, DEF) selected using the mode select SW, and moves the damper.

4. Air Mix Control Servo Motor Control (Limited)

When the temperature control SW on the driver's side is pressed, the ECU in the A/C control assembly sends a signal to the air mix control servo motor on the driver's side. This signal drives the motor to reach the temperature set by the temperature control SW on the driver's side, and moves the damper. Passenger's side is operated as same as the driver's side.

5. Air Mix Control Servo Motor Control (Except Limited)

When the temperature control SW is pressed, 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.

6. Air Conditioning Operation

The A/C control assembly receives various signals, I.E., the engine RPM from the engine control module, out side air temperature signal from the A/C ambient temp. sensor and coolant temperature from the engine control module, etc.

When the engine is started and the A/C SW (A/C control assembly) is on, a signal is input to the A/C control assembly.

As a result, turning the MG CLT relay on, so that the magnetic clutch is on and the A/C compressor operates.

If the A/C control assembly detects the following conditions, it stops the air conditioning:

- * Evaporator outlet air is too low.
- * There is a marked difference between the compressor speed and the engine speed.
- * The refrigerant pressure is abnormally high or abnormally low.
- * The engine speed is too low.
- * Rapid acceleration occurs.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	32 (2UZ-FE)	B2	36	J7	38
	34 (1GR-FE)	B3	36	J8	A 38
A2	32 (2UZ-FE)	C9	B 37	J9	B 38
	34 (1GR-FE)	C10	C 37	J10	A 38
A16	A 36	D3	37	J11	B 38
A17	B 36	E2	32 (2UZ-FE)	J20	38
A18	36		34 (1GR-FE)	J24	38
A19	36	E4	A 37	J25	38
A20	36	E7	D 37	J31	A 38
A21	36	E8	E 37	J32	B 38
A25	36	J1	33 (2UZ-FE)	J37	38
A26	B 36		35 (1GR-FE)	P3	33 (2UZ-FE)
A27	A 36	J3	33 (2UZ-FE)		35 (1GR-FE)
A28	36		35 (1GR-FE)	S28	33 (2UZ-FE)
A29	36	J6	38		35 (1GR-FE)

Air Conditioning

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	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	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1E		
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3B		
3C		
3D		
3E		
3F		

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	46	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IG1	46	Instrument Panel No.2 Wire and Instrument Panel Wire (Behind the Combination Meter)
IK1	47	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IM1	47	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
IN1	47	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	45 (1GR-FE)	
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Cylinder Block
	45 (1GR-FE)	Rear Side of Right Bank Cylinder Block
II	46	Instrument Panel Brace RH
IK	46	Right Kick Panel

