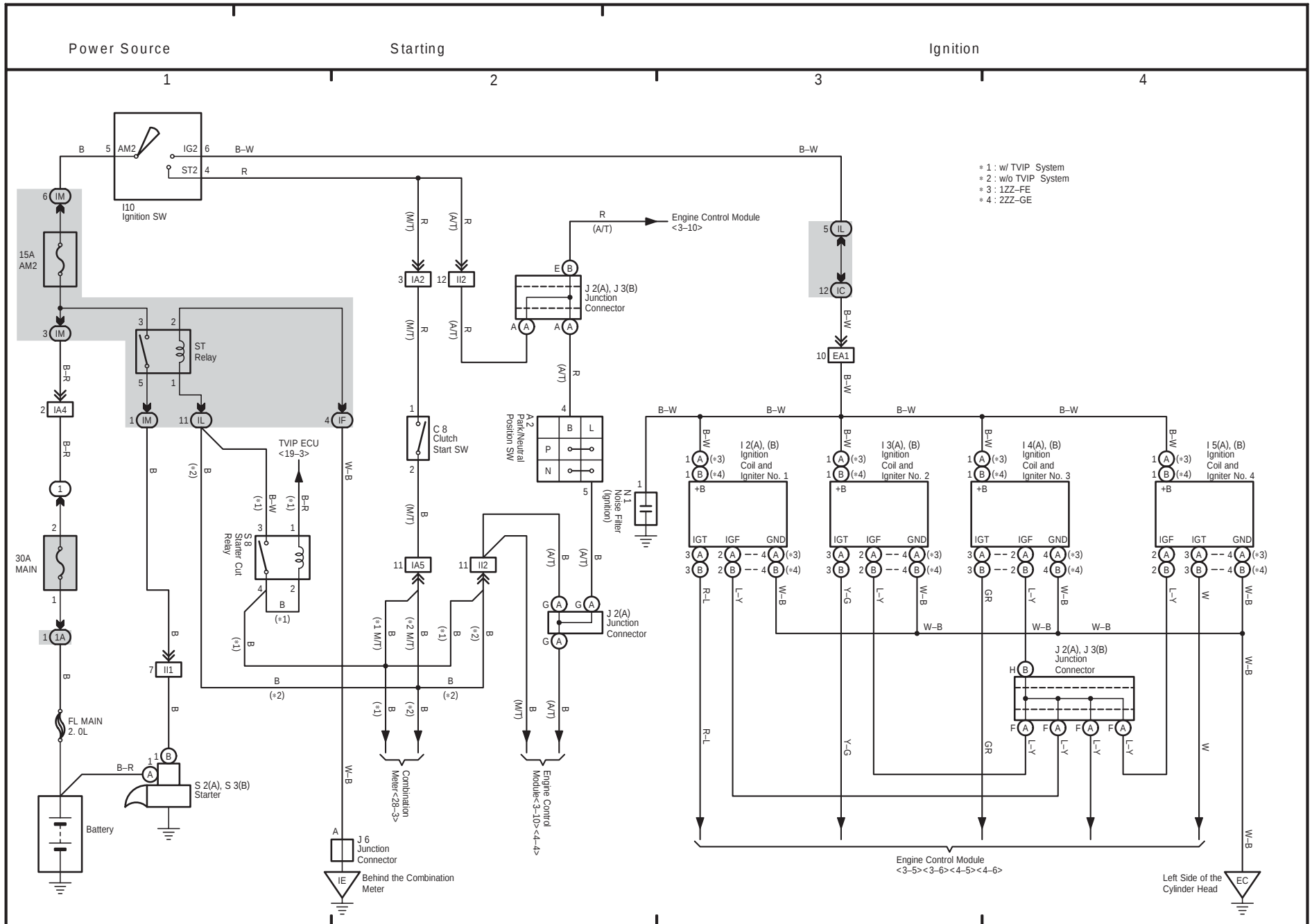


1 COROLLA

COROLLA (EM00H0U)

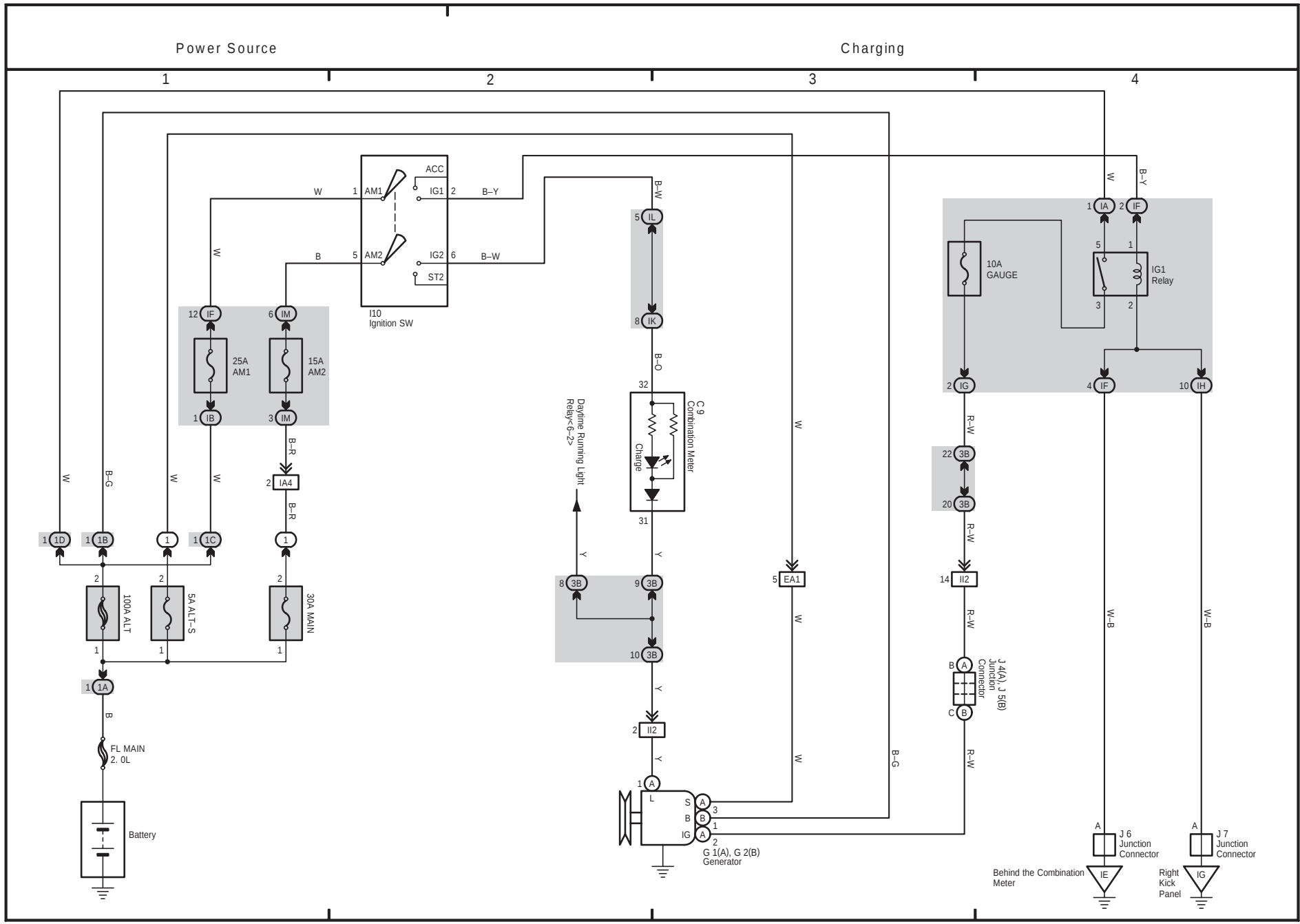
251



2 COROLLA

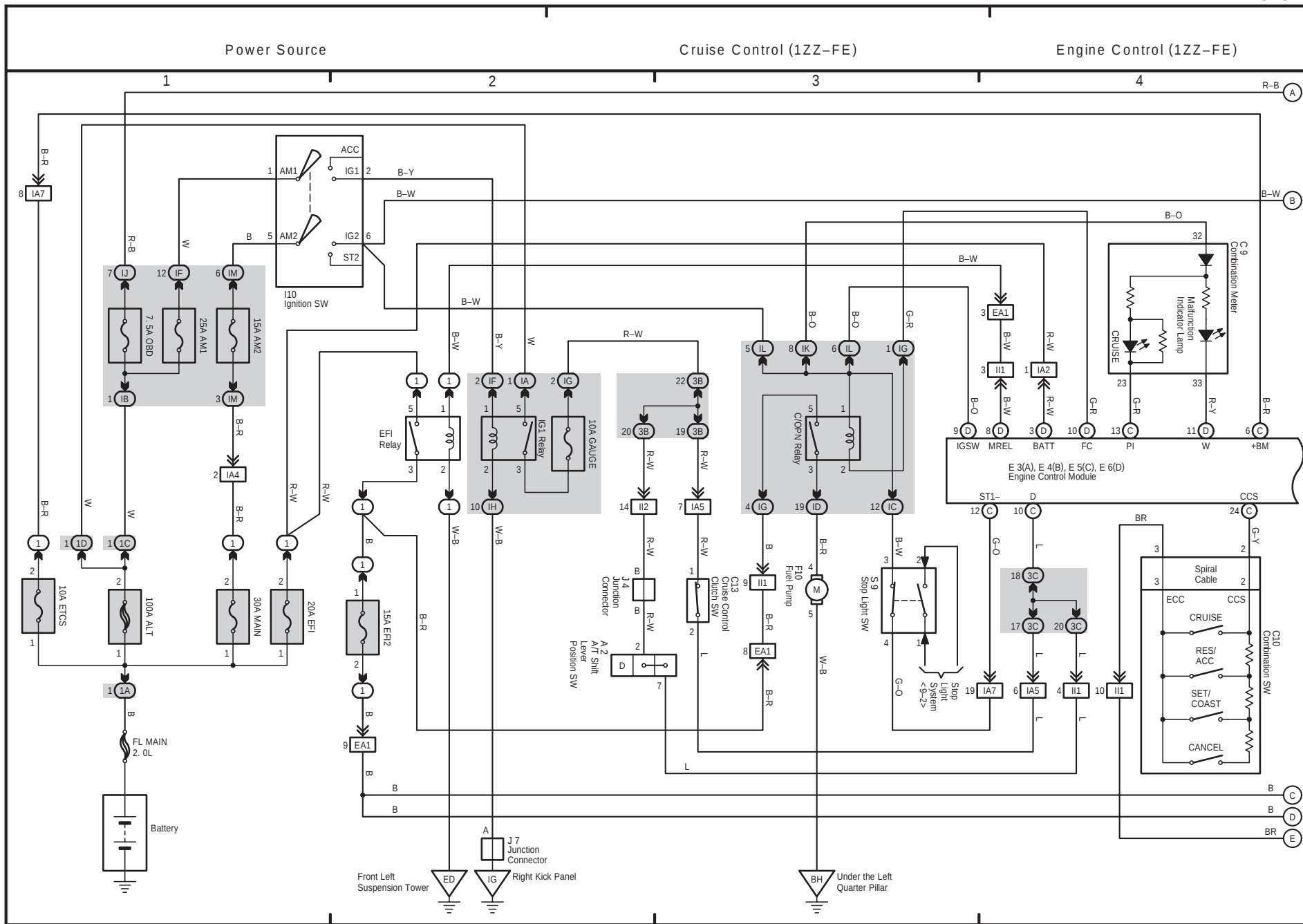
252

COROLLA (EM00H0U)

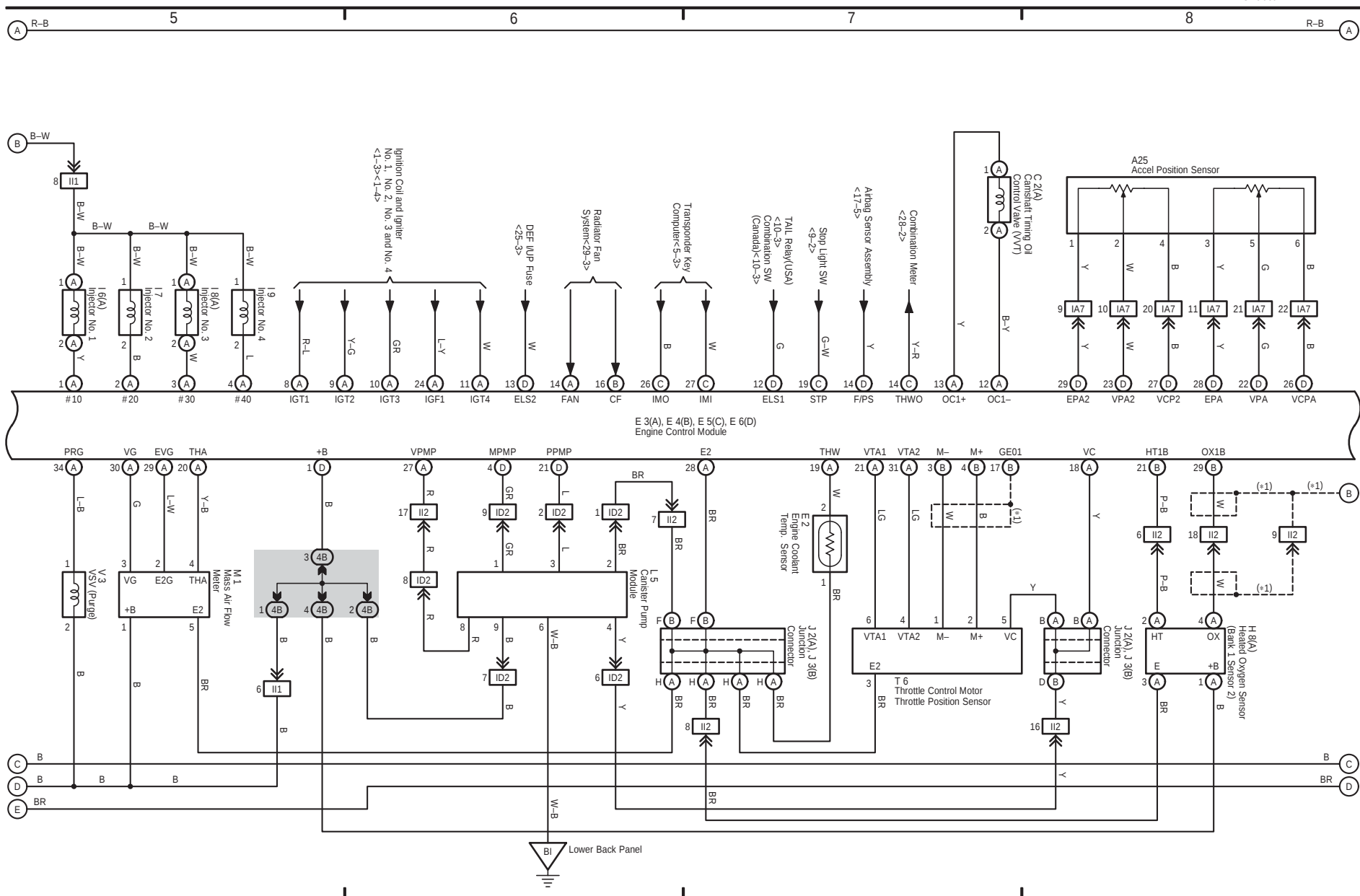


3 COROLLA

COROLLA (EM00H0U)

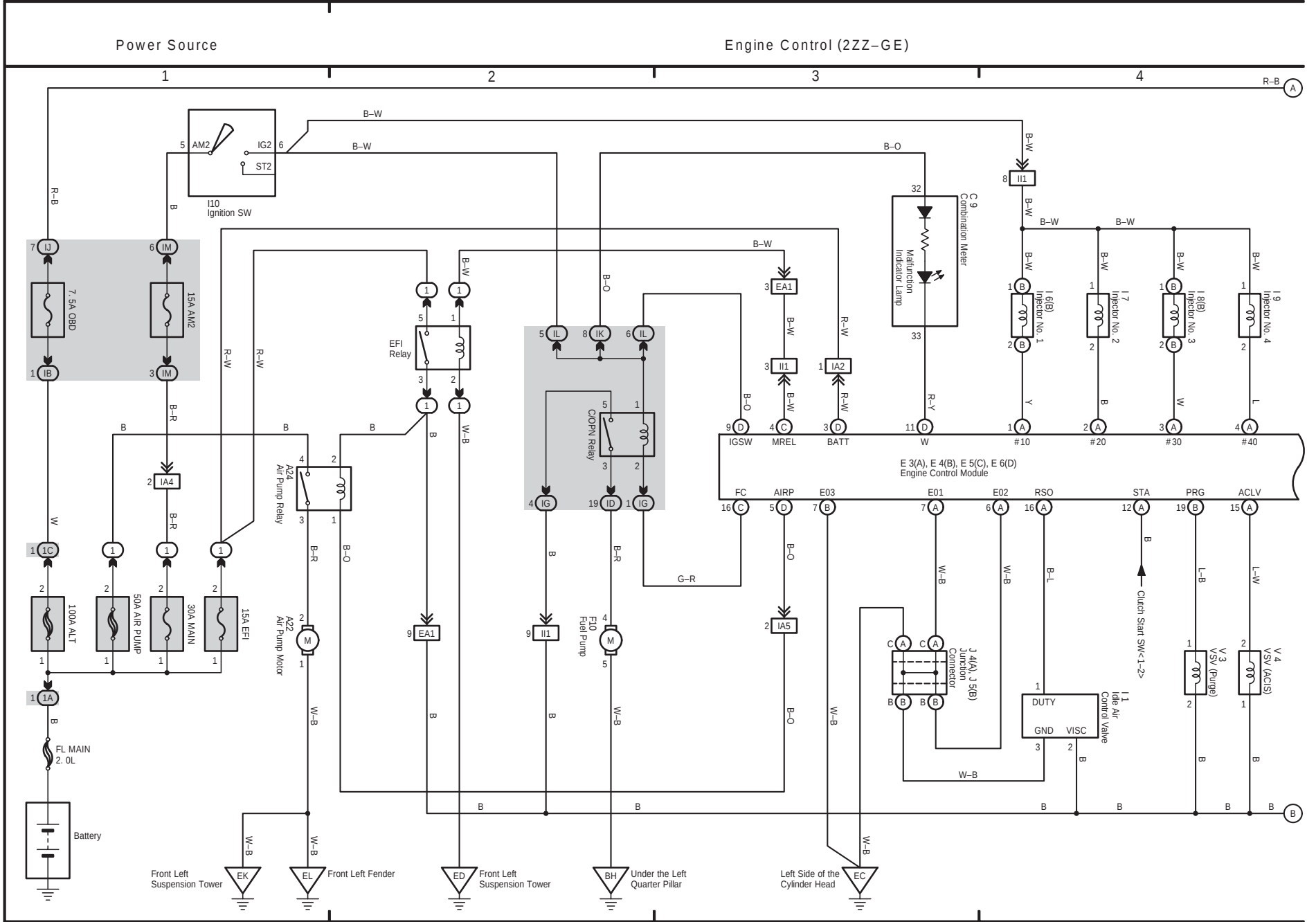


COROLLA (EM00H0U)



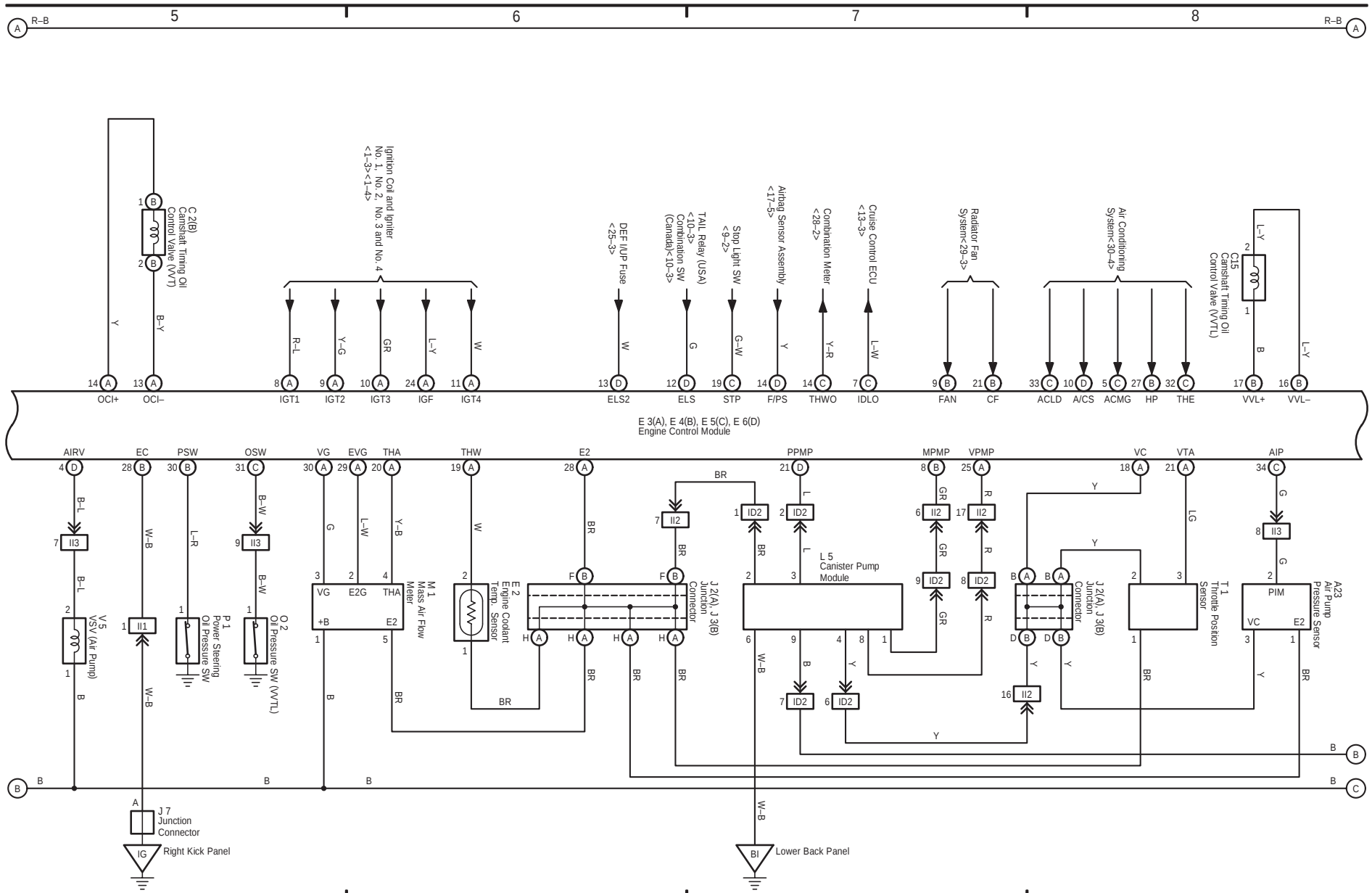


4 COROLLA

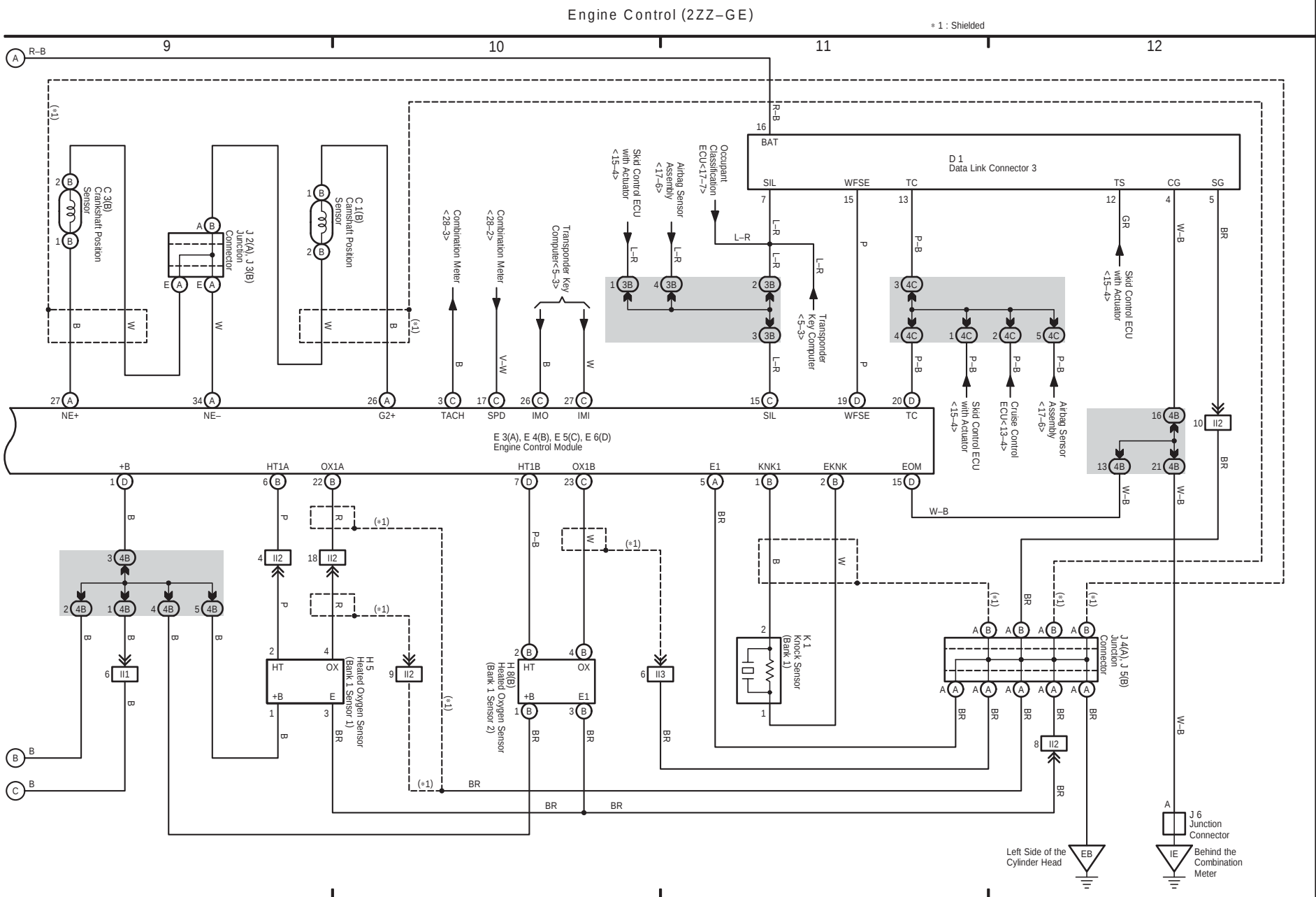


COROLLA(EM00H0U)

COROLLA (EM00H0U)



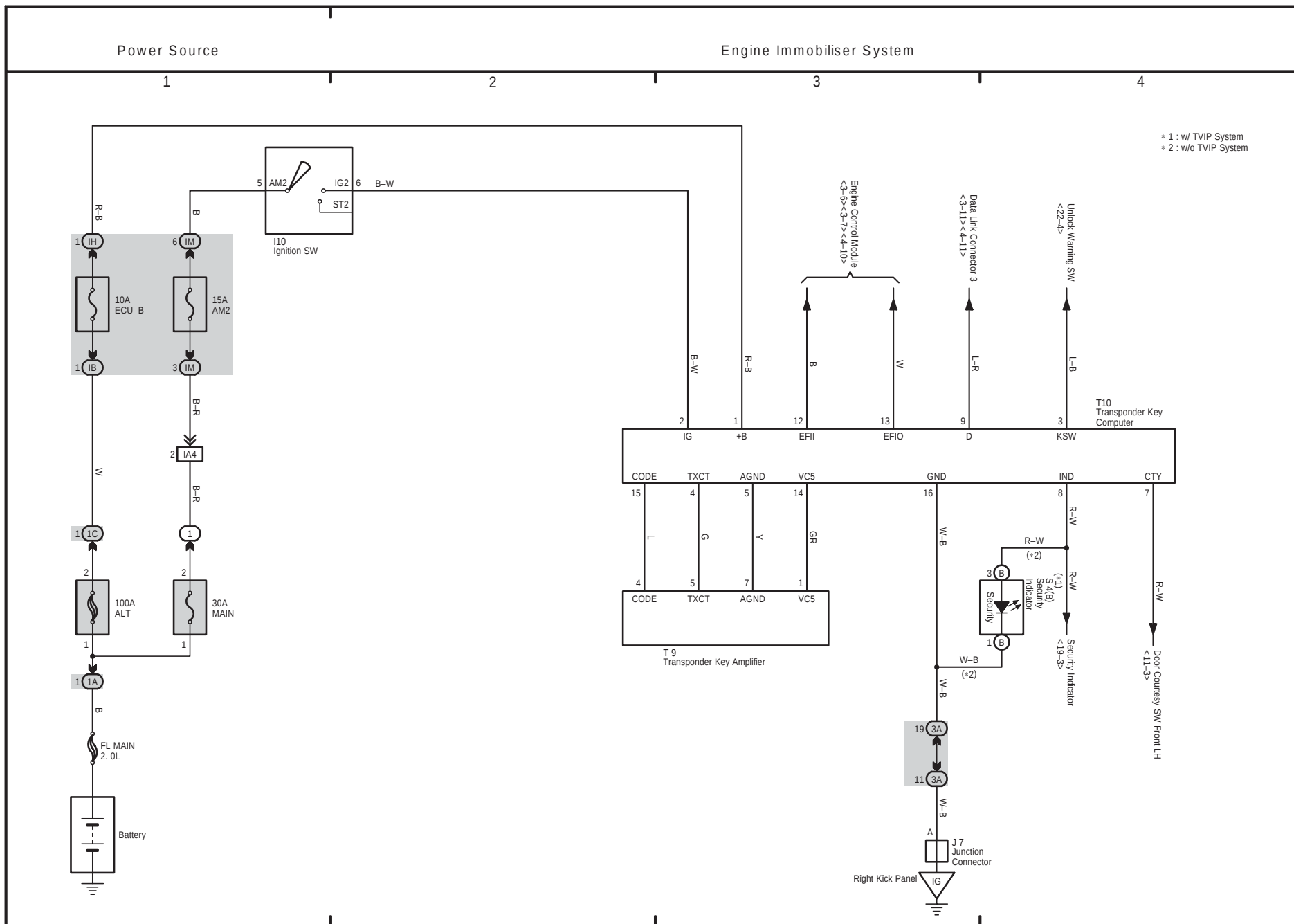
4 COROLLA (Cont' d)

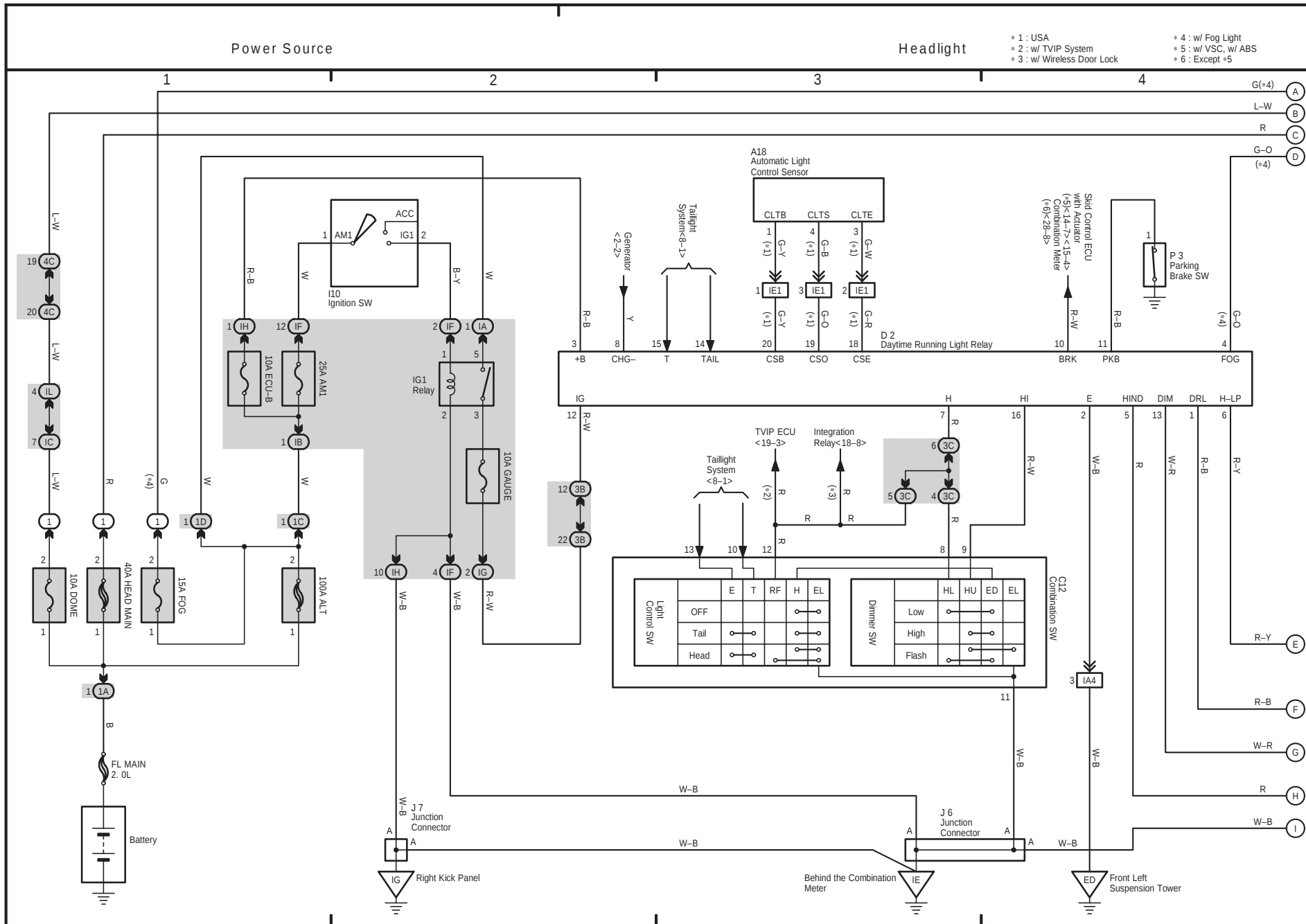


5 COROLLA

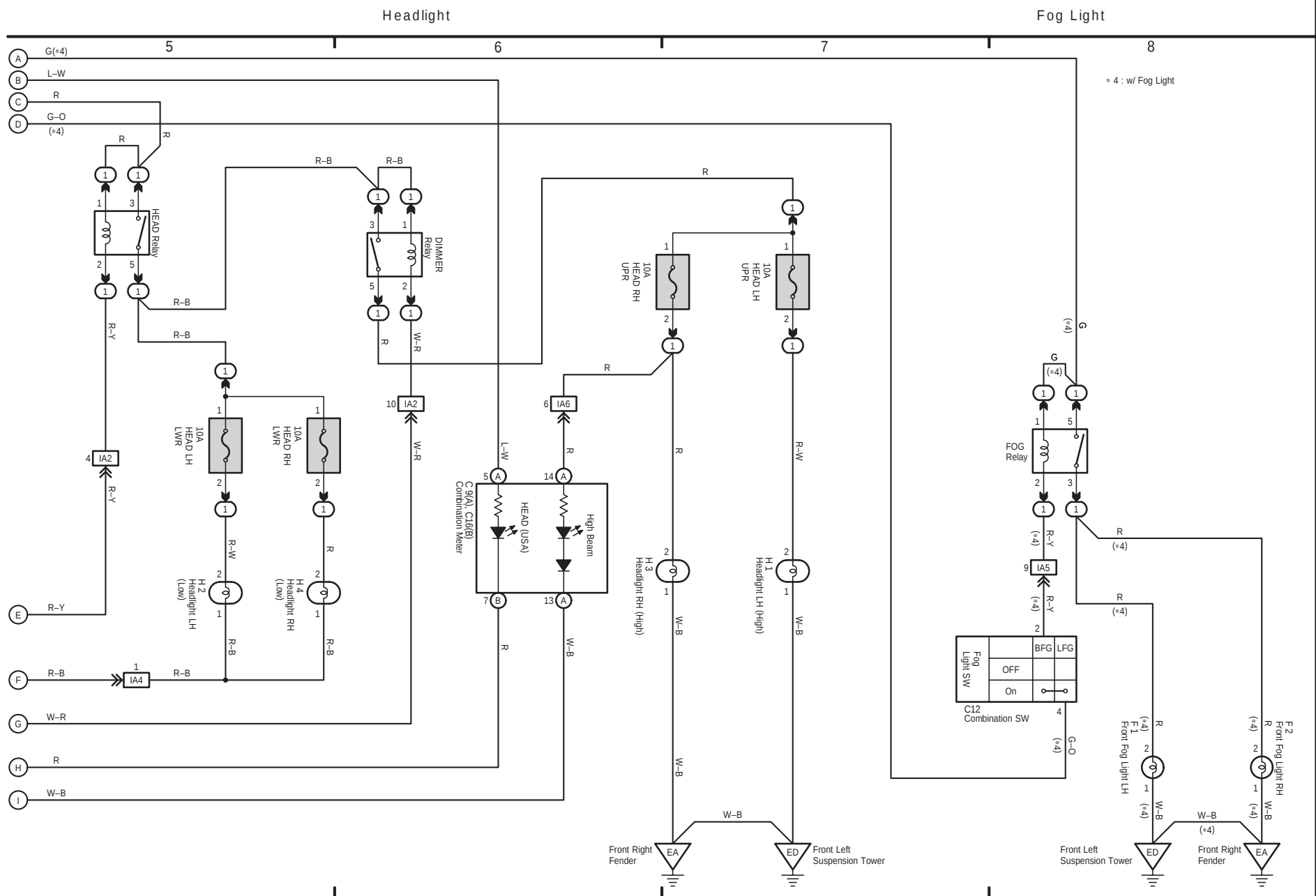
COROLLA (EM00H0U)

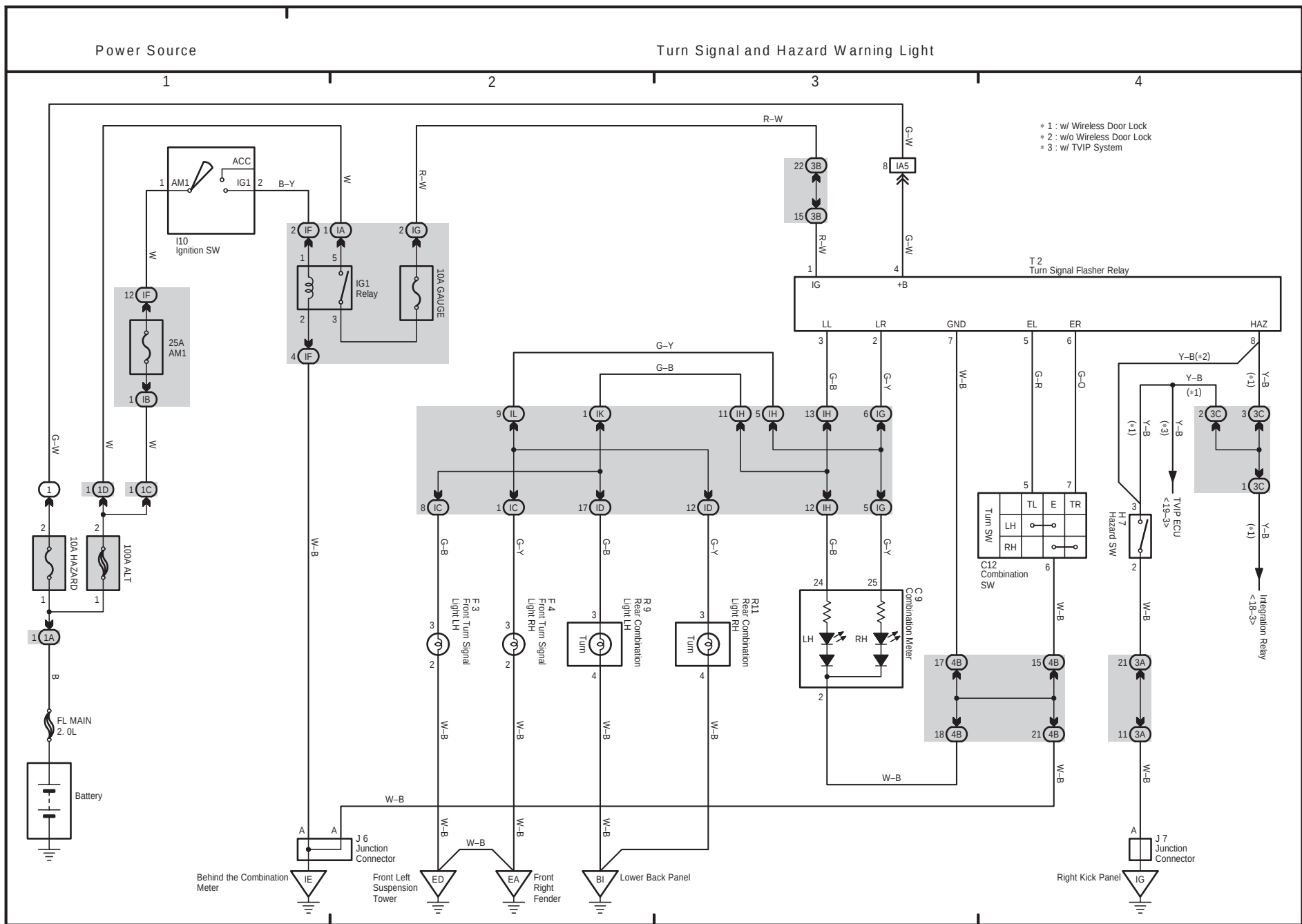
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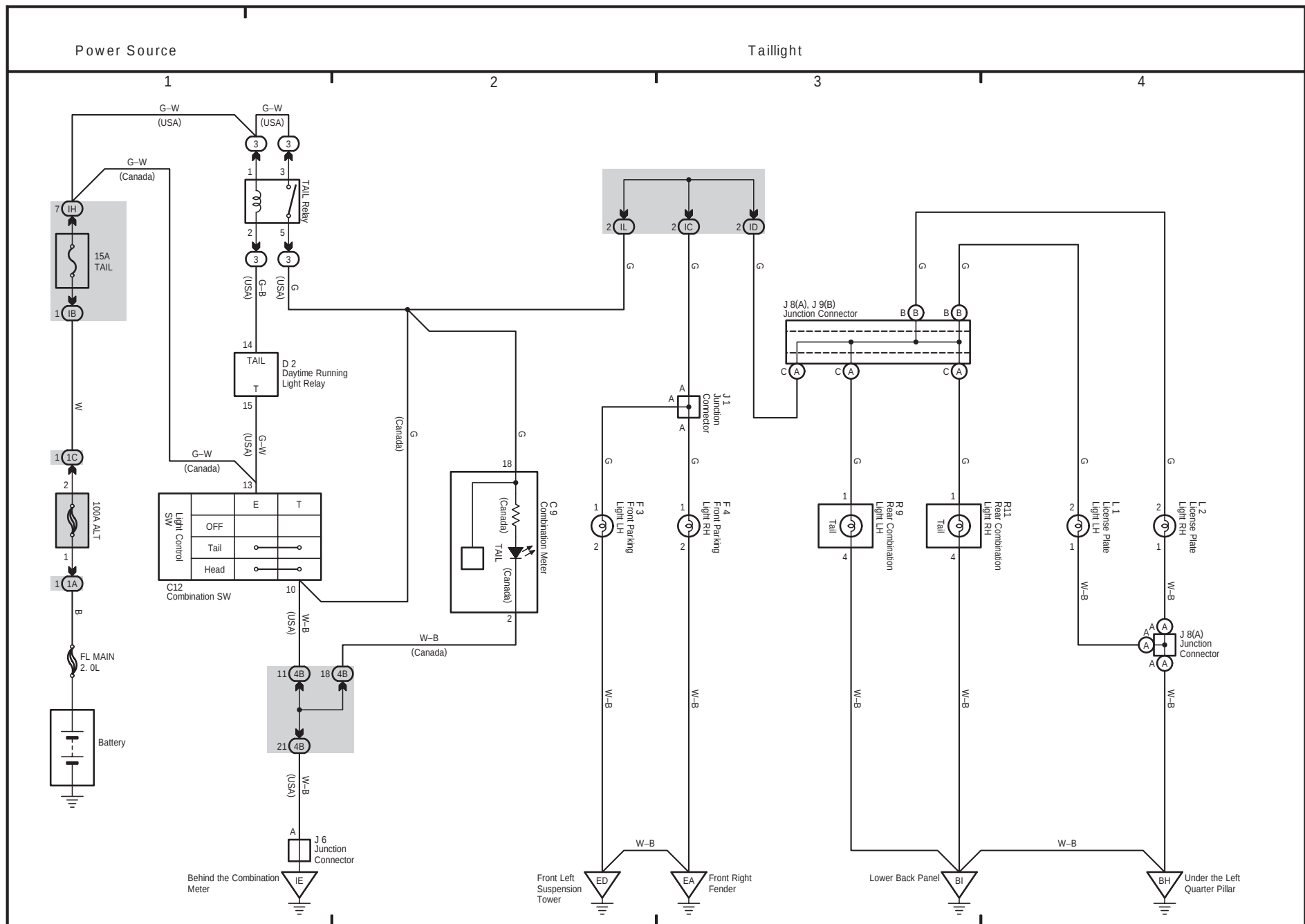




261







20 COROLLA

Power Source

Stop Light

* 1 : w/ VSC, w/ ABS

The diagram illustrates the electrical circuit for the Stop Light system in a 2010 Toyota Corolla. It is divided into four main sections: Power Source, Stop Light, Stop Light, and Stop Light.

Power Source: The circuit starts with the Battery, connected to the FL MAIN 2.0L fuse. The power then flows through a 100A ALT fuse and a 15A STOP fuse. The circuit is labeled with R-W (Right Wire) and W (Wire).

Stop Light: The Stop Light Switch (S 9) is connected to the 15A STOP fuse. The switch has two terminals: 1 (G-W) and 2 (R-W). The G-W terminal is connected to the Stop Light LH (R 9) and Stop Light RH (R 11) through a junction connector (J 8(A), J 9(B)). The R-W terminal is connected to the Stop Light LH (R 9) and Stop Light RH (R 11) through a junction connector (J 8(A), J 9(B)).

Stop Light: The Stop Light LH (R 9) and Stop Light RH (R 11) are connected to the Stop Light system. The Stop Light LH (R 9) is connected to the Stop Light RH (R 11) through a junction connector (J 8(A), J 9(B)).

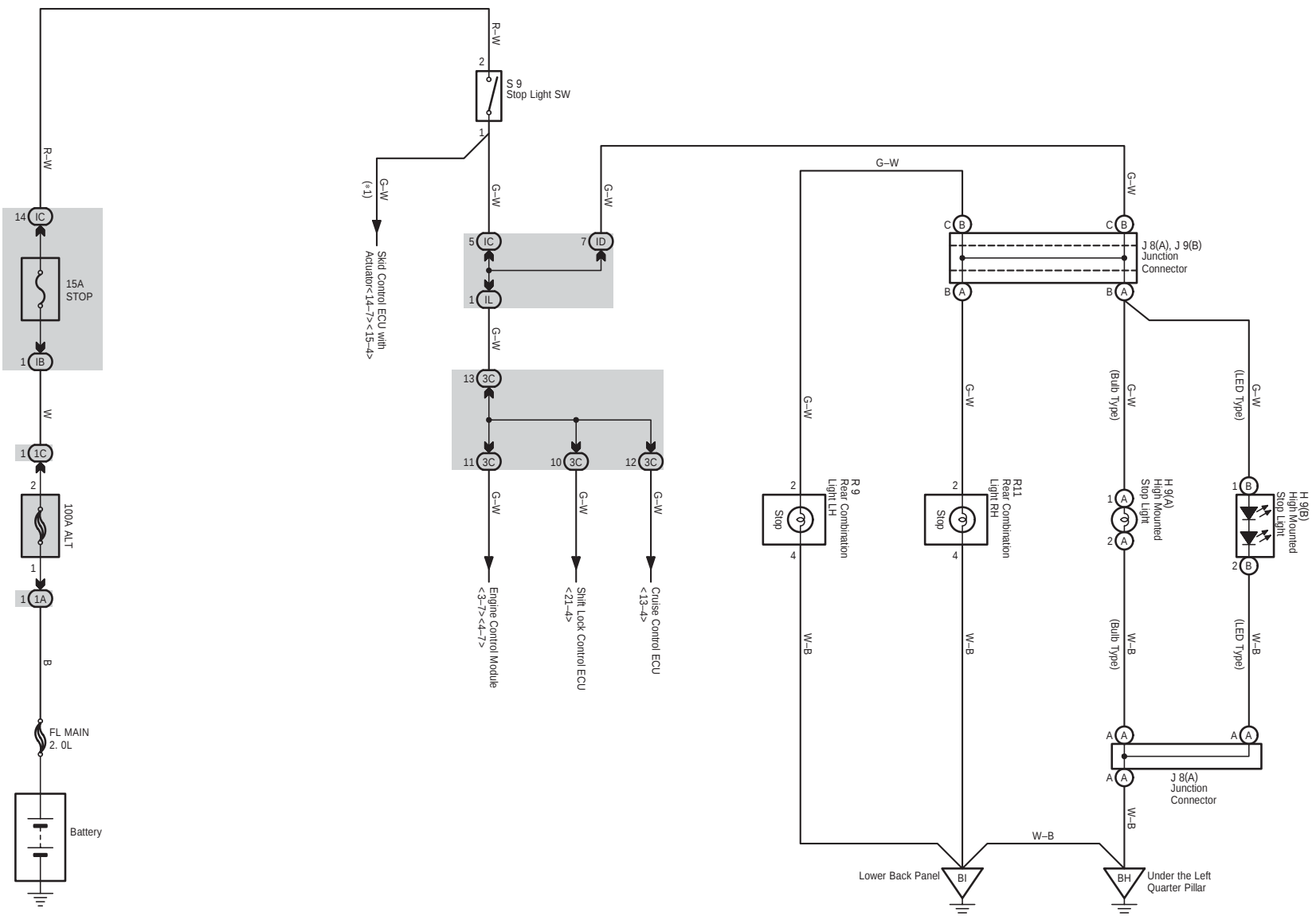
Stop Light: The High Mounted Stop Light (H 9(B)) is connected to the Stop Light system. The H 9(B) is connected to the Stop Light system through a junction connector (J 8(A), J 9(B)).

Other Components: The diagram also shows the connection to the Engine Control Module (ECU) and the Shift Lock Control ECU. The ECU is connected to the Stop Light system through a junction connector (J 8(A), J 9(B)). The Shift Lock Control ECU is connected to the Stop Light system through a junction connector (J 8(A), J 9(B)).

Legend: The diagram includes a legend for the components: R-W (Right Wire), W (Wire), G-W (Ground Wire), and W-B (Wire to Battery).

Note: * 1 : w/ VSC, w/ ABS

* 1 : w/ VSC, w/ ABS

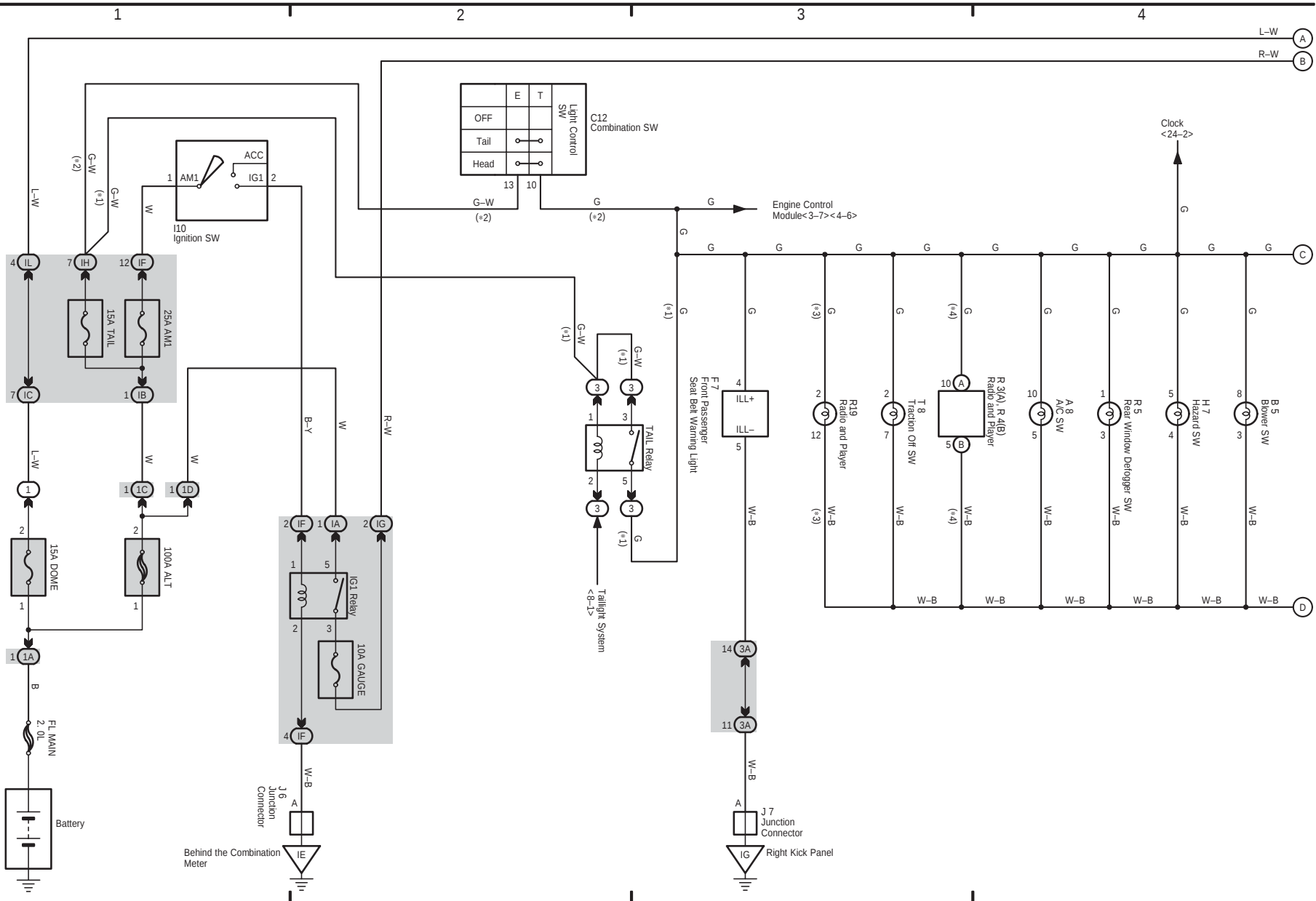


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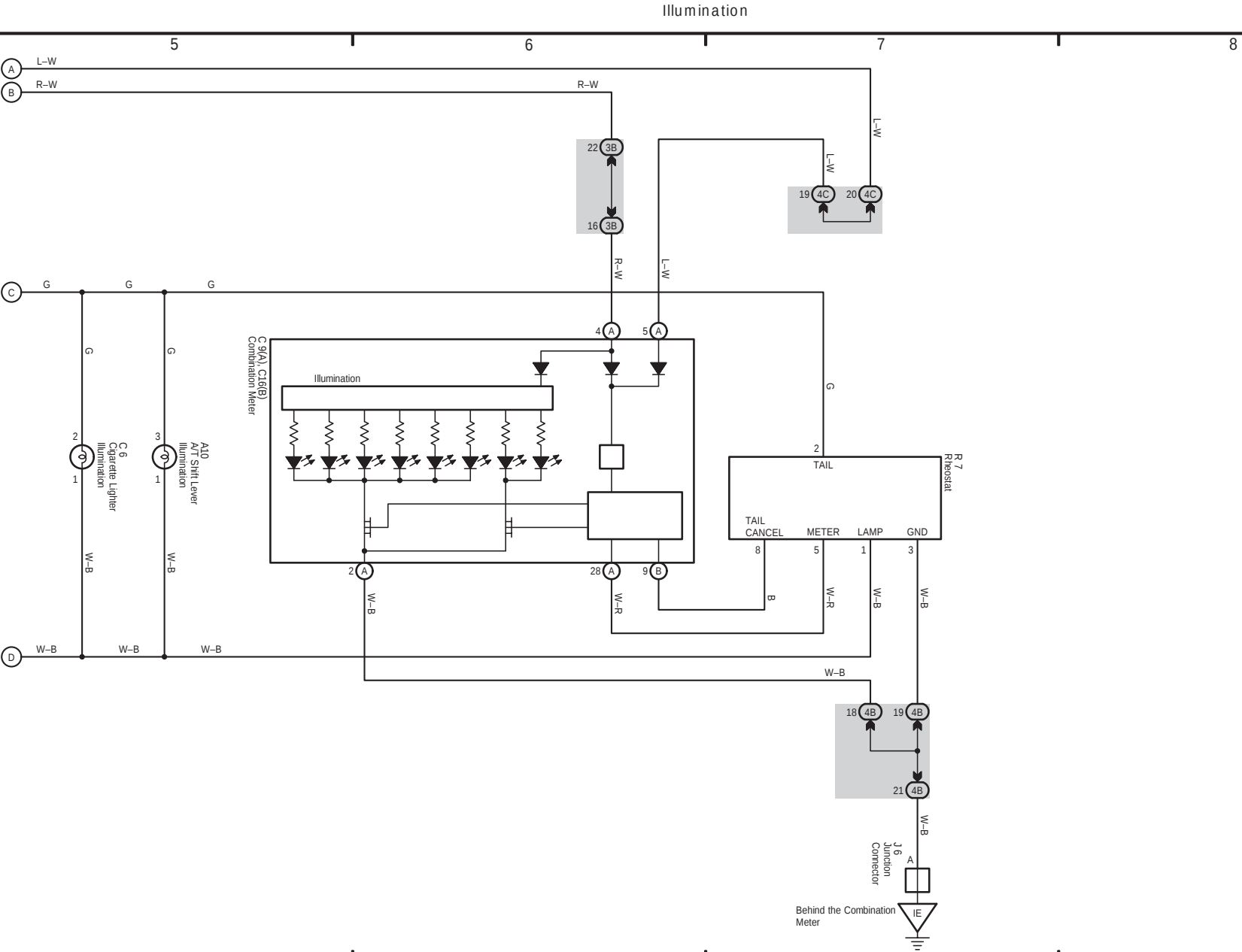
- * 1 : USA
- * 2 : Canada
- * 3 : w/ Stereo Component Amplifier
- * 4 : w/o Stereo Component Amplifier

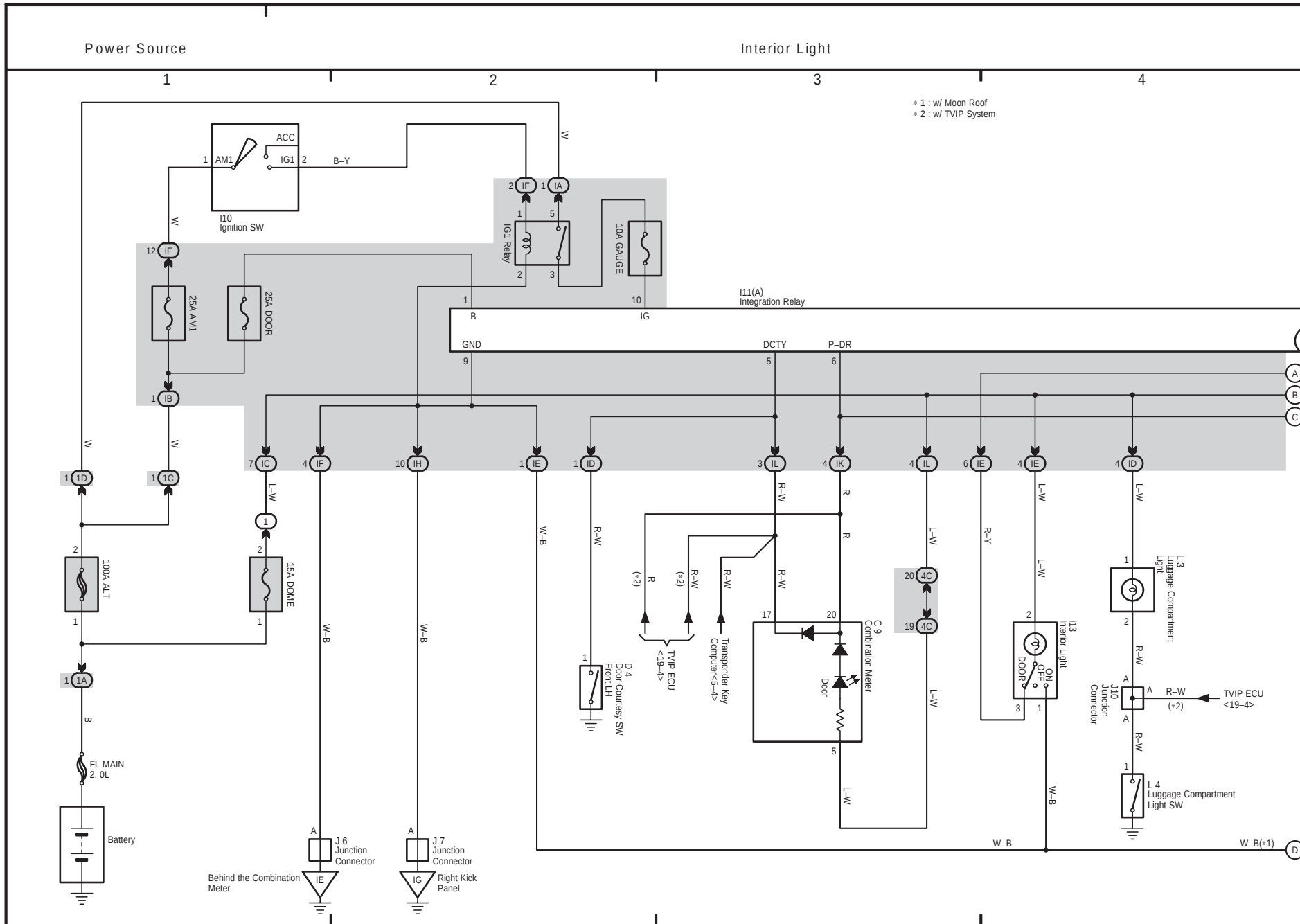
Power Source

Illumination

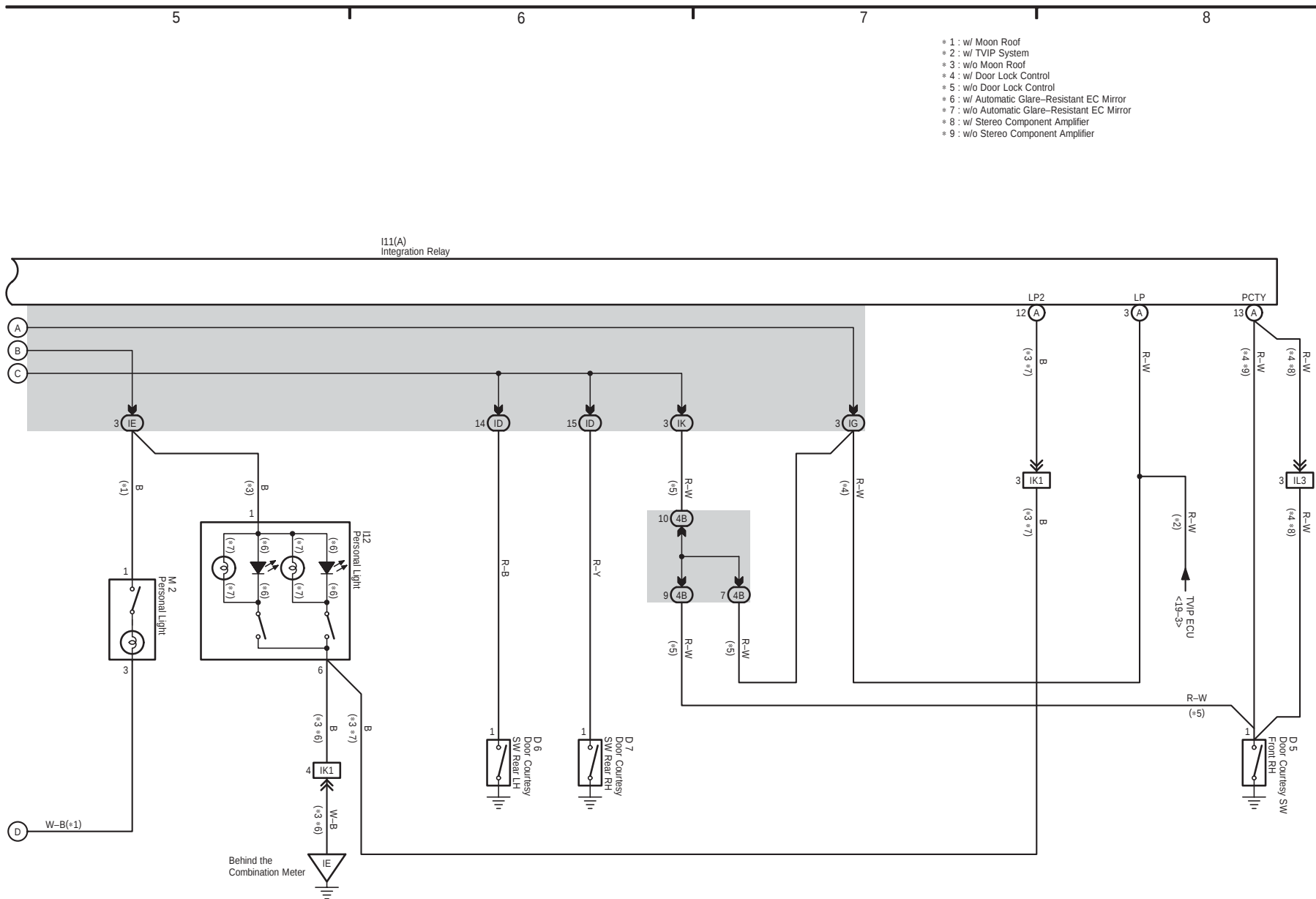


COROLLA (EM00H0U)





Interior Light



- * 1: w/ Moon Roof
- * 2: w/ TVIP System
- * 3: w/o Moon Roof
- * 4: w/ Door Lock Control
- * 5: w/o Door Lock Control
- * 6: w/ Automatic Glare-Resistant EC Mirror
- * 7: w/o Automatic Glare-Resistant EC Mirror
- * 8: w/ Stereo Component Amplifier
- * 9: w/ Stereo Component Amplifier

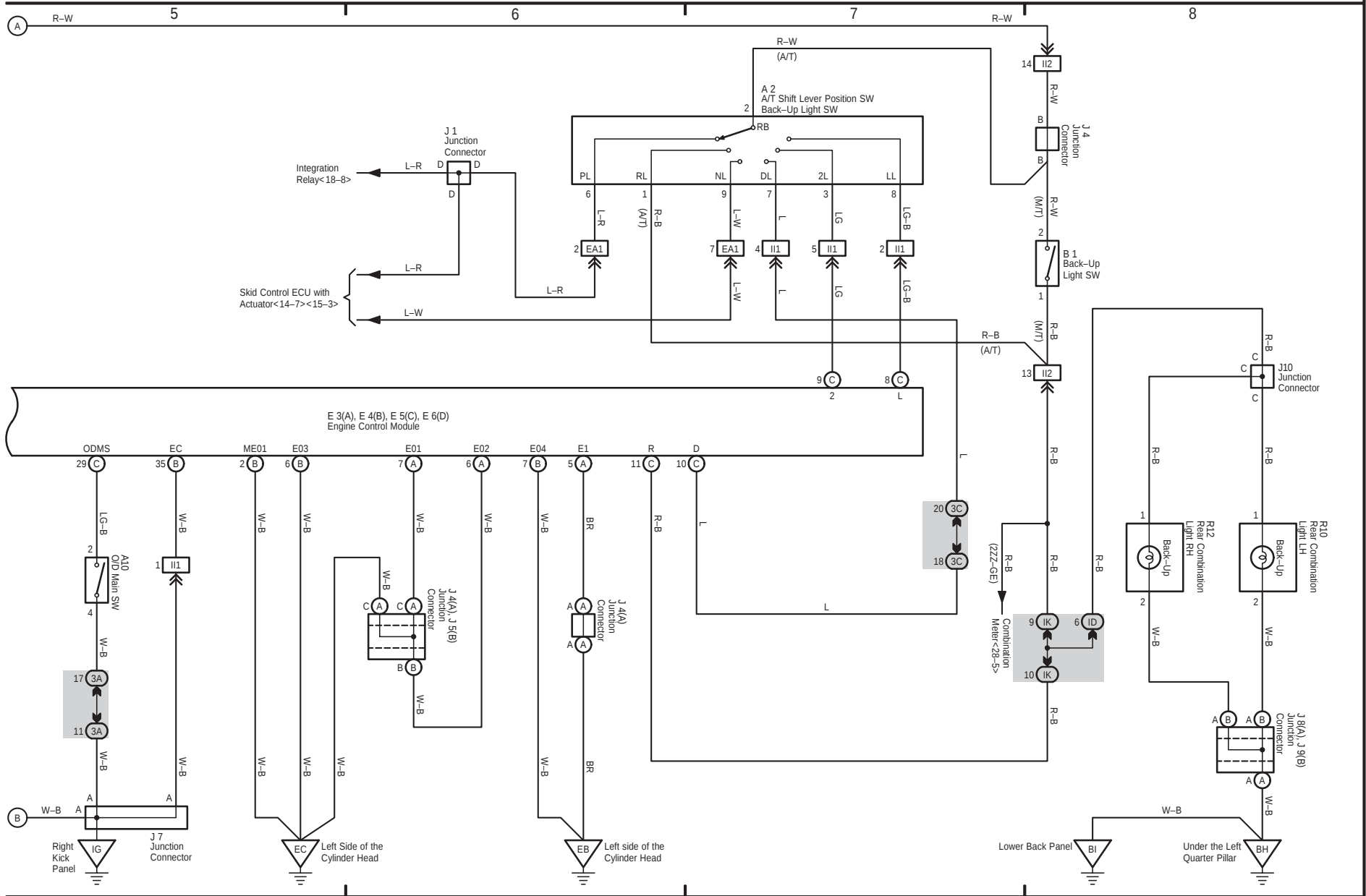
COROLLA (EM00H0U)

Power Source

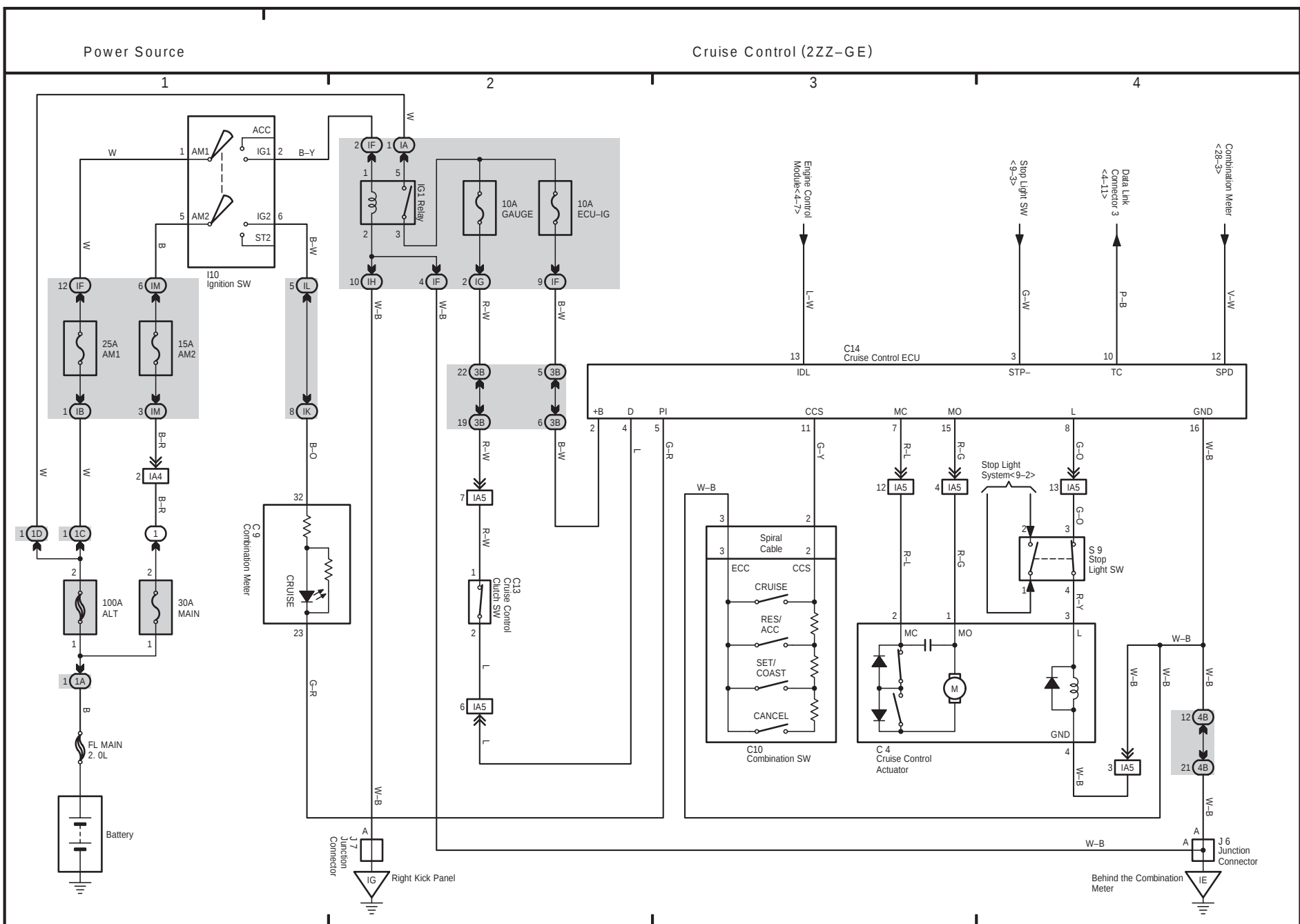
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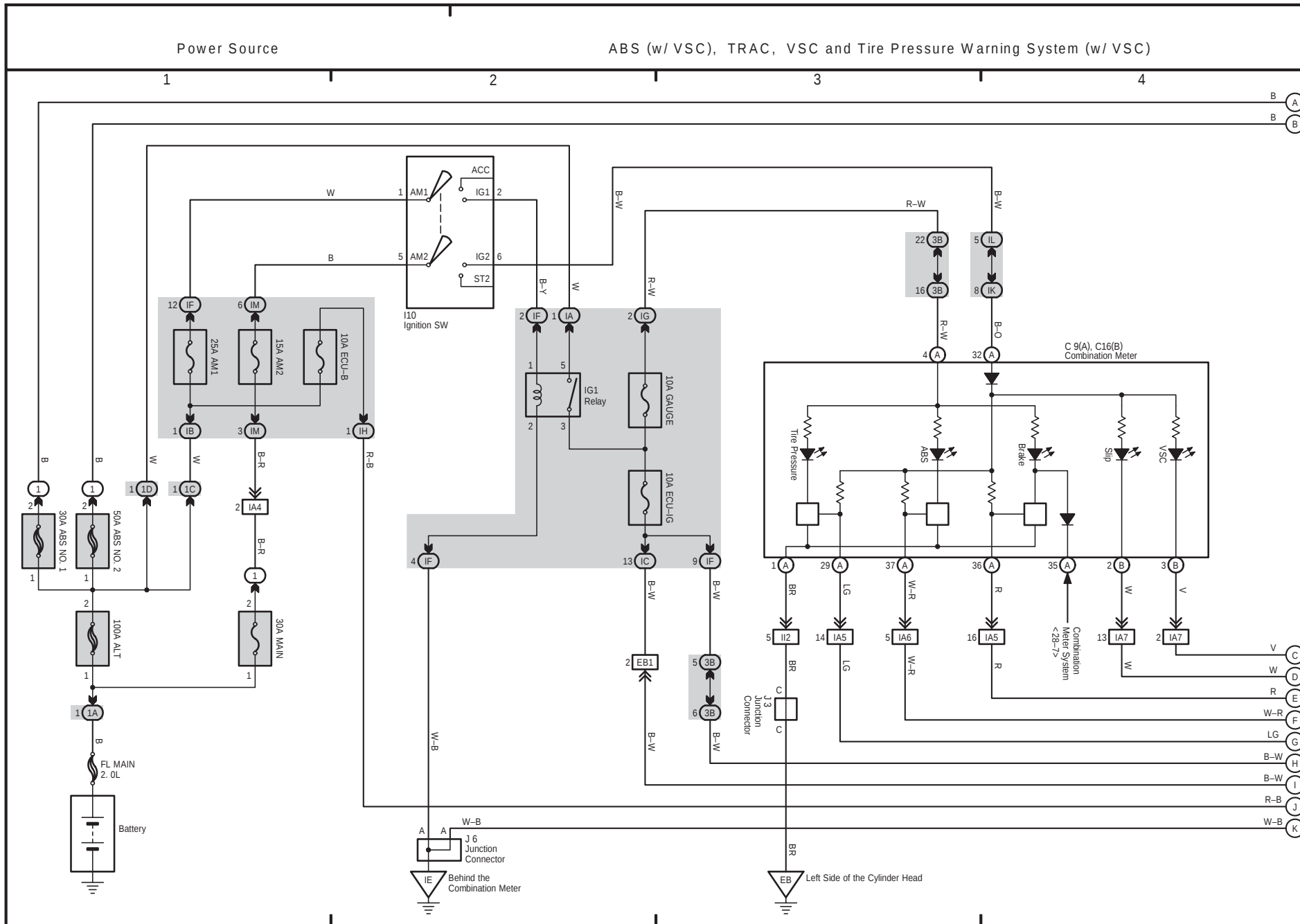
Electronically Controlled Transmission

Back-Up Light



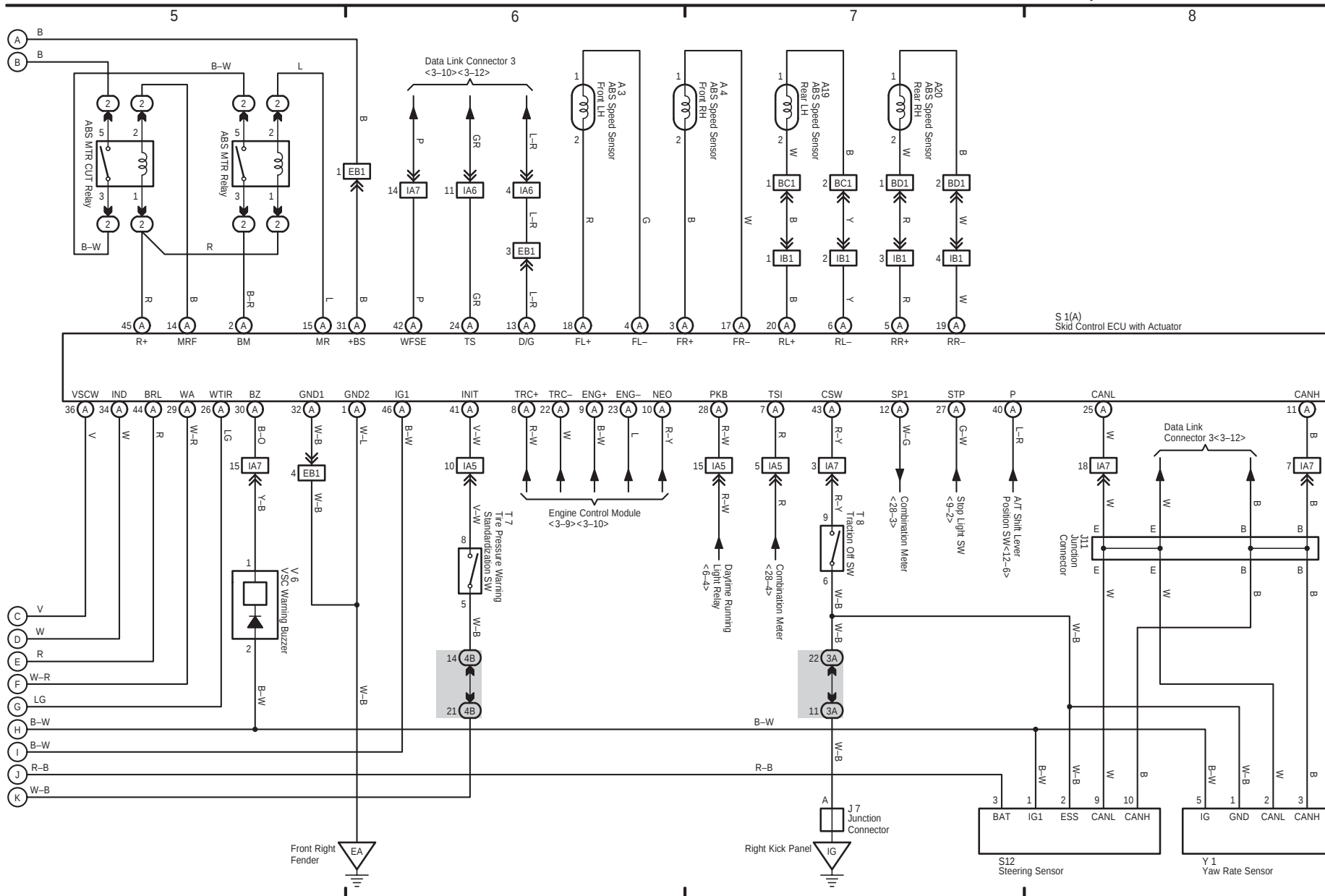
13 COROLLA

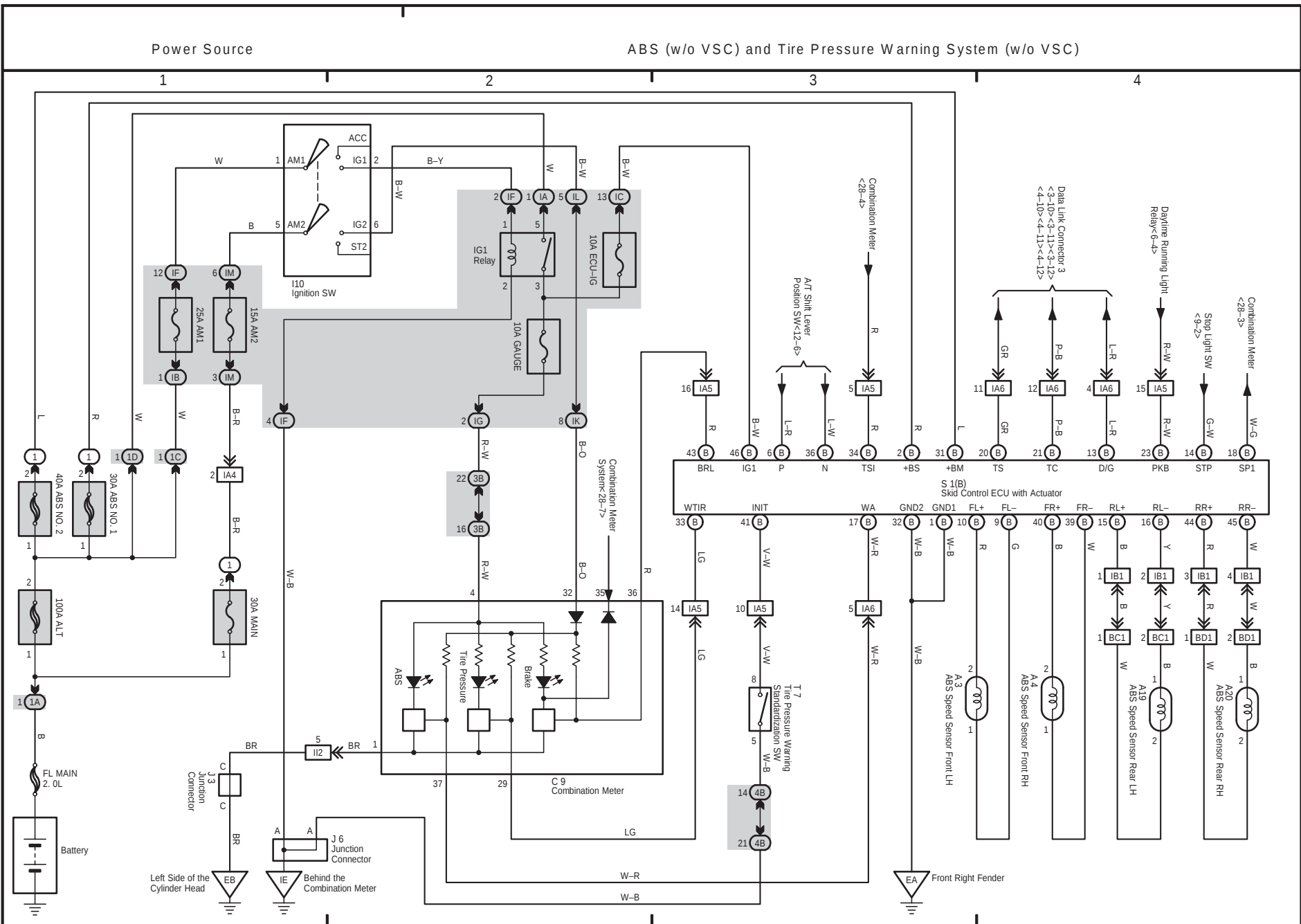


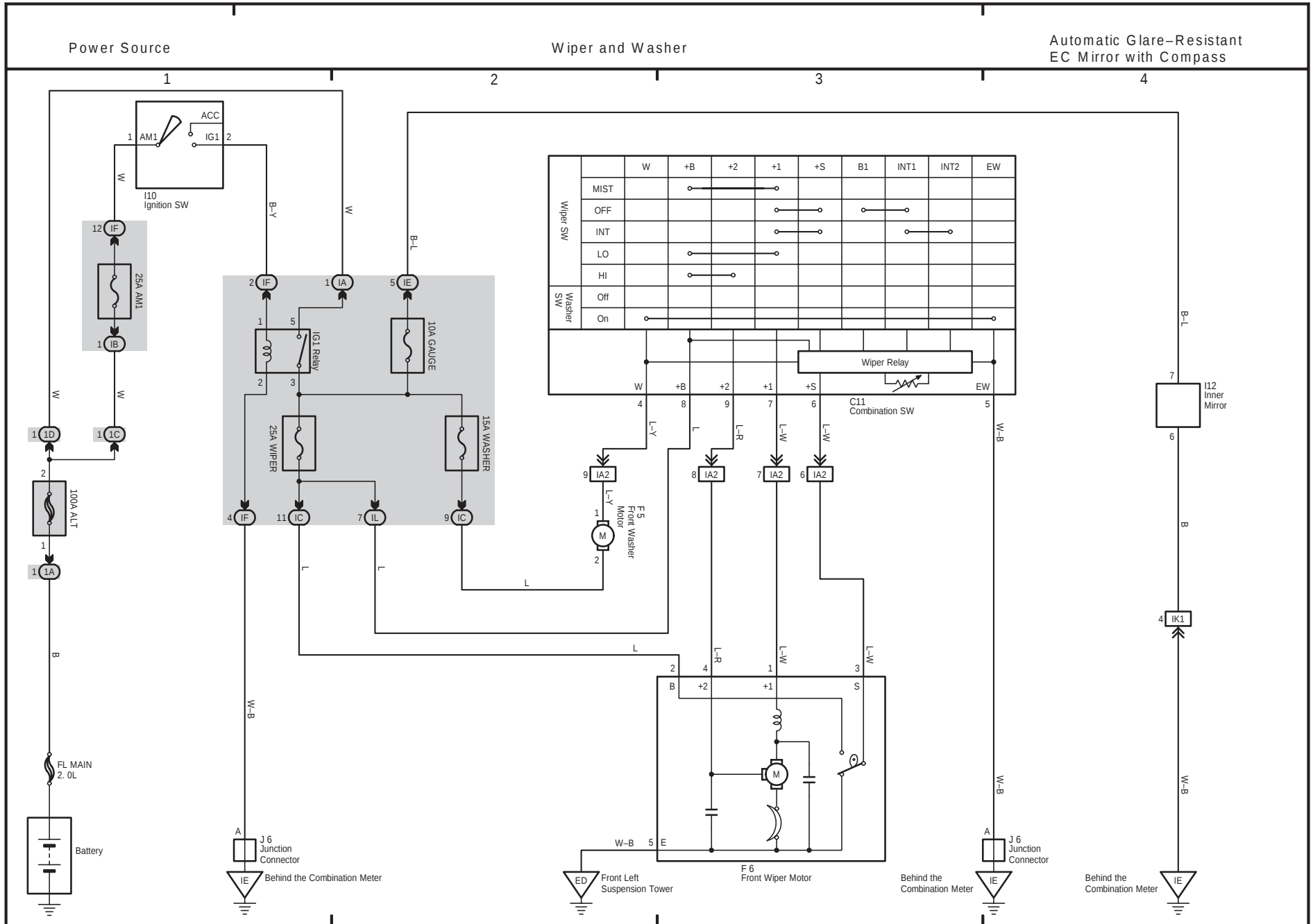


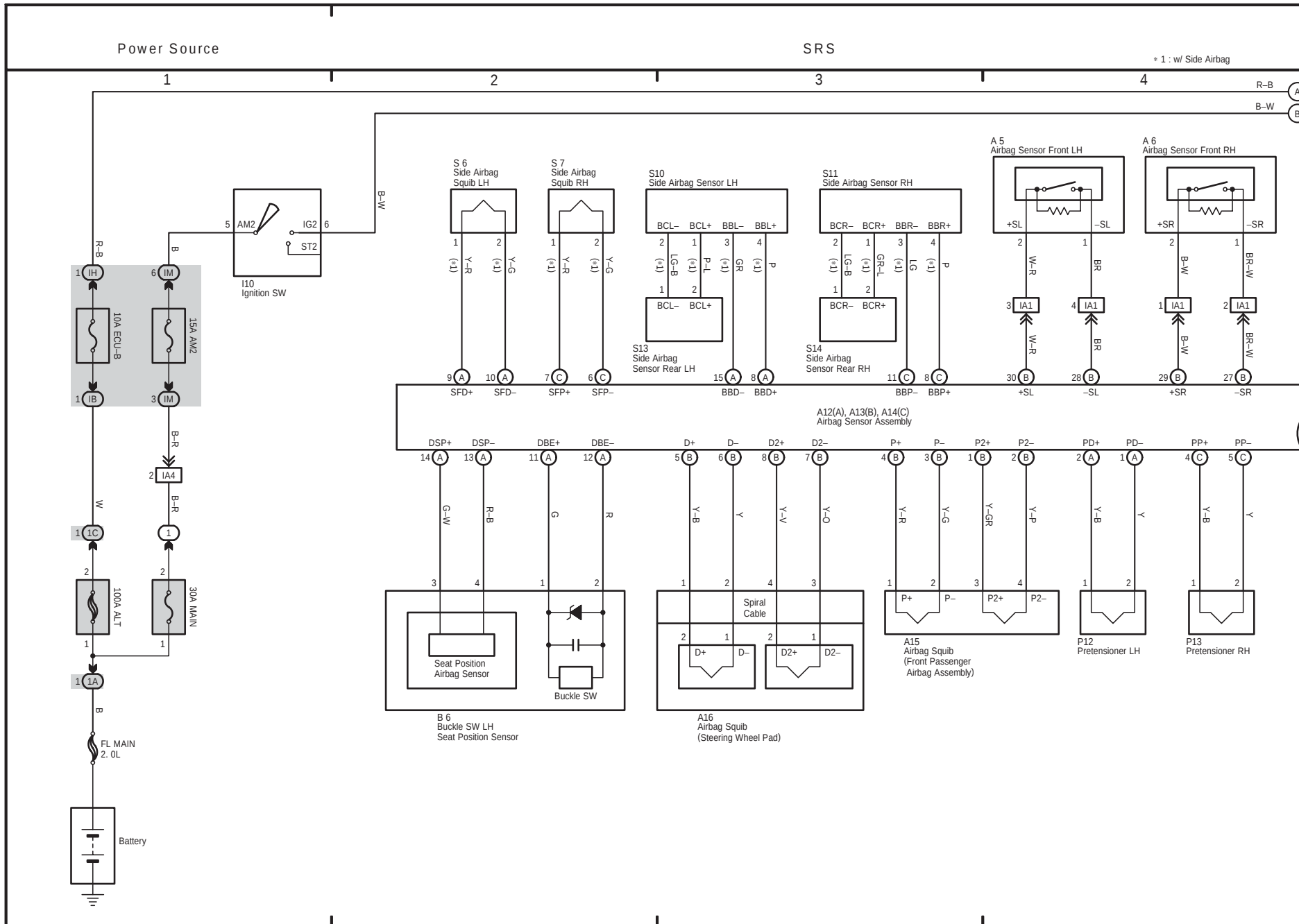
ABS (w/ VSC), TRAC, VSC and Tire Pressure Warning System (w/ VSC)

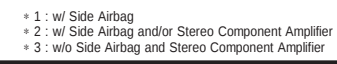
Multiplex Communication System (CAN)











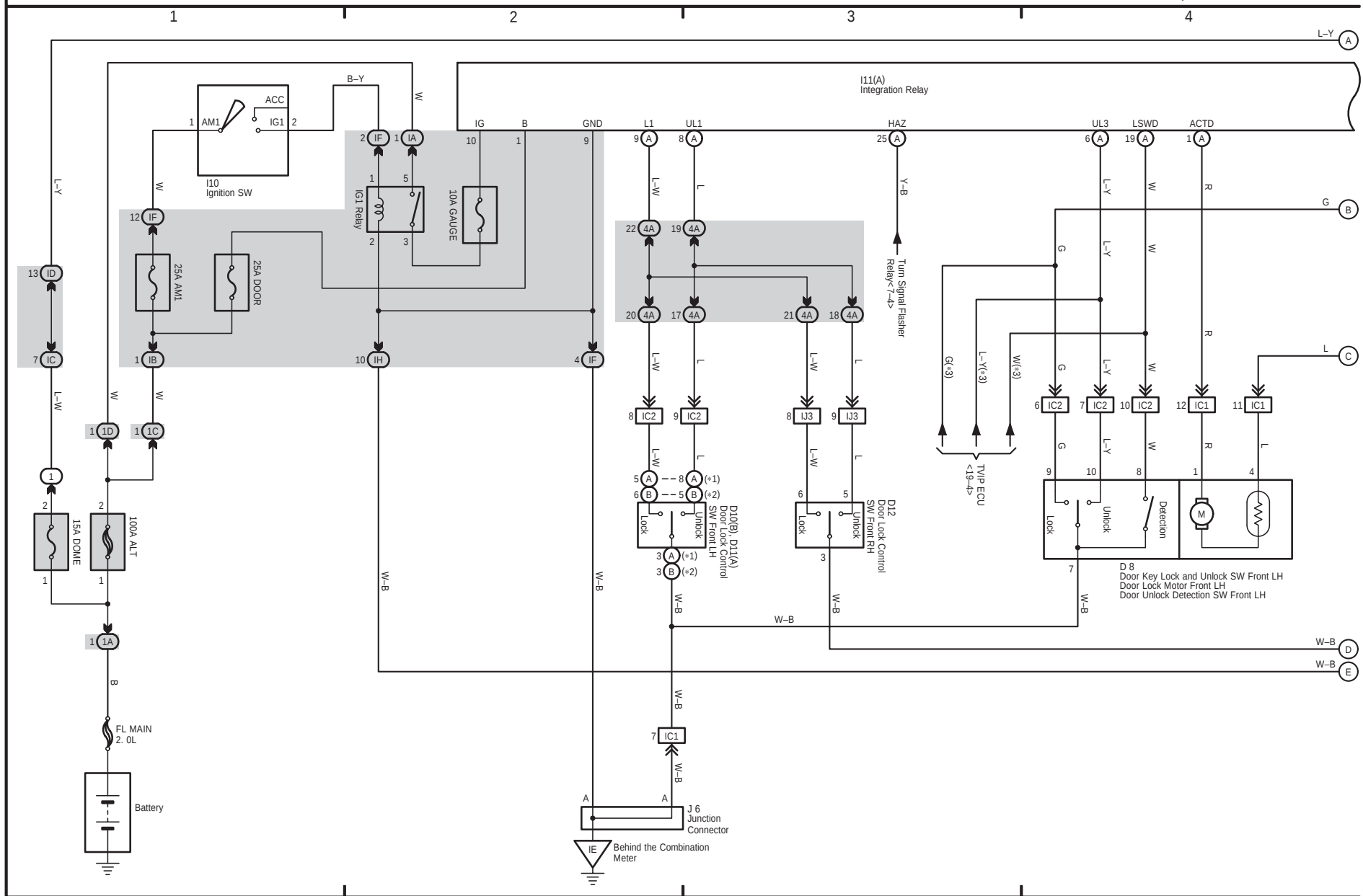
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18 COROLLA

Power Source

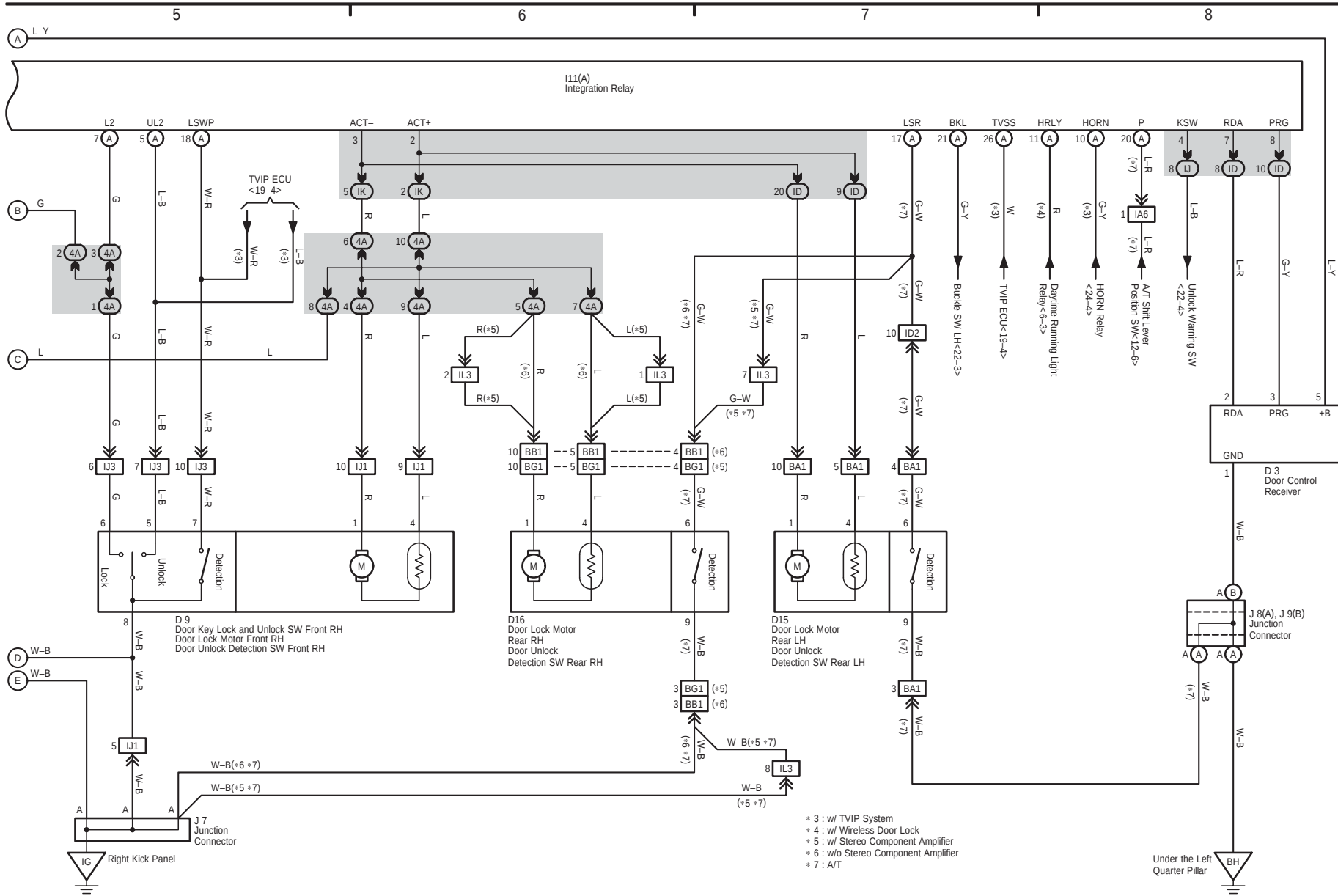
Door Lock Control

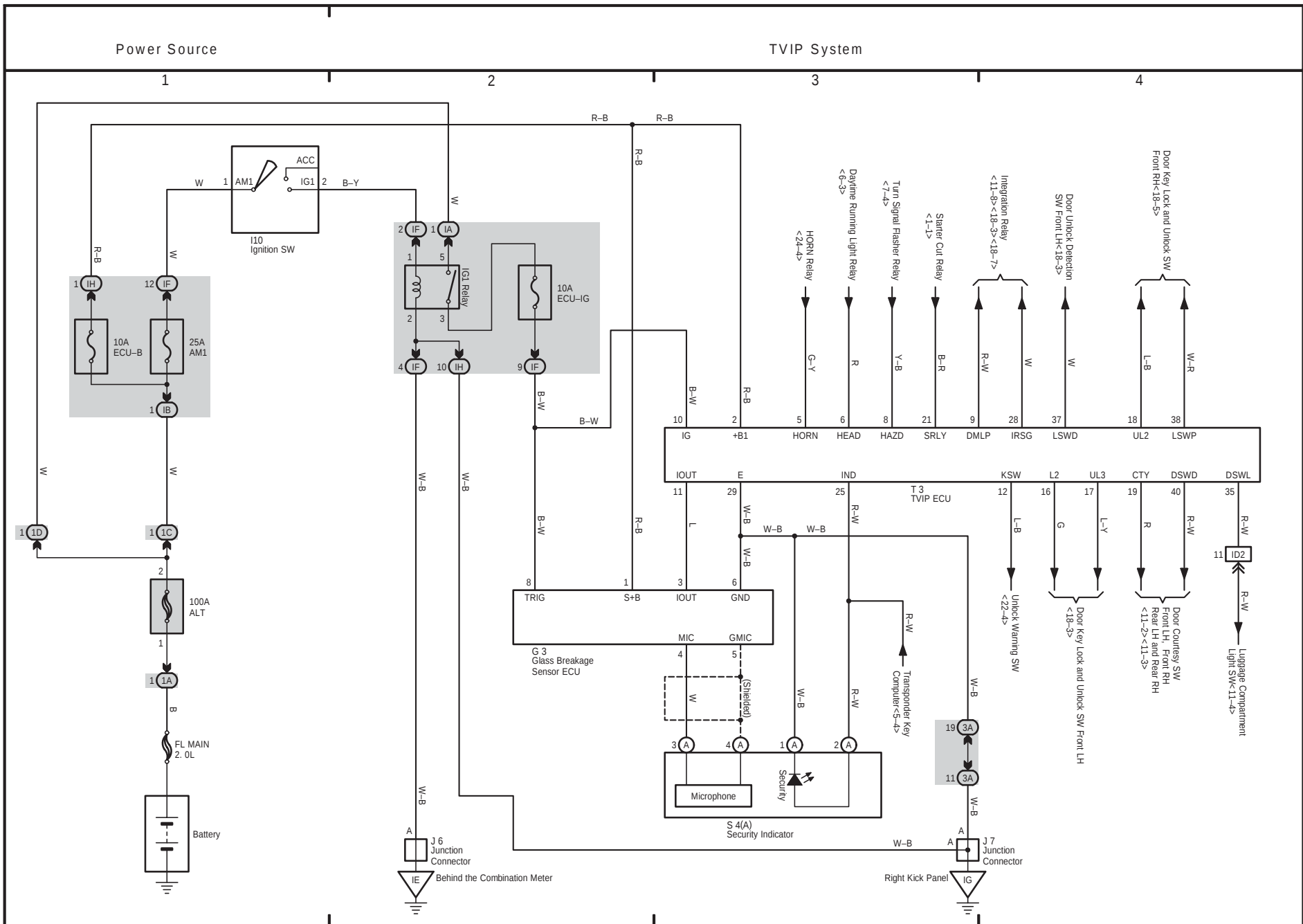
- * 1 : w/ Power Window
- * 2 : w/o Power Window
- * 3 : w/ TVIP System



Door Lock Control

Wireless Door Lock Control



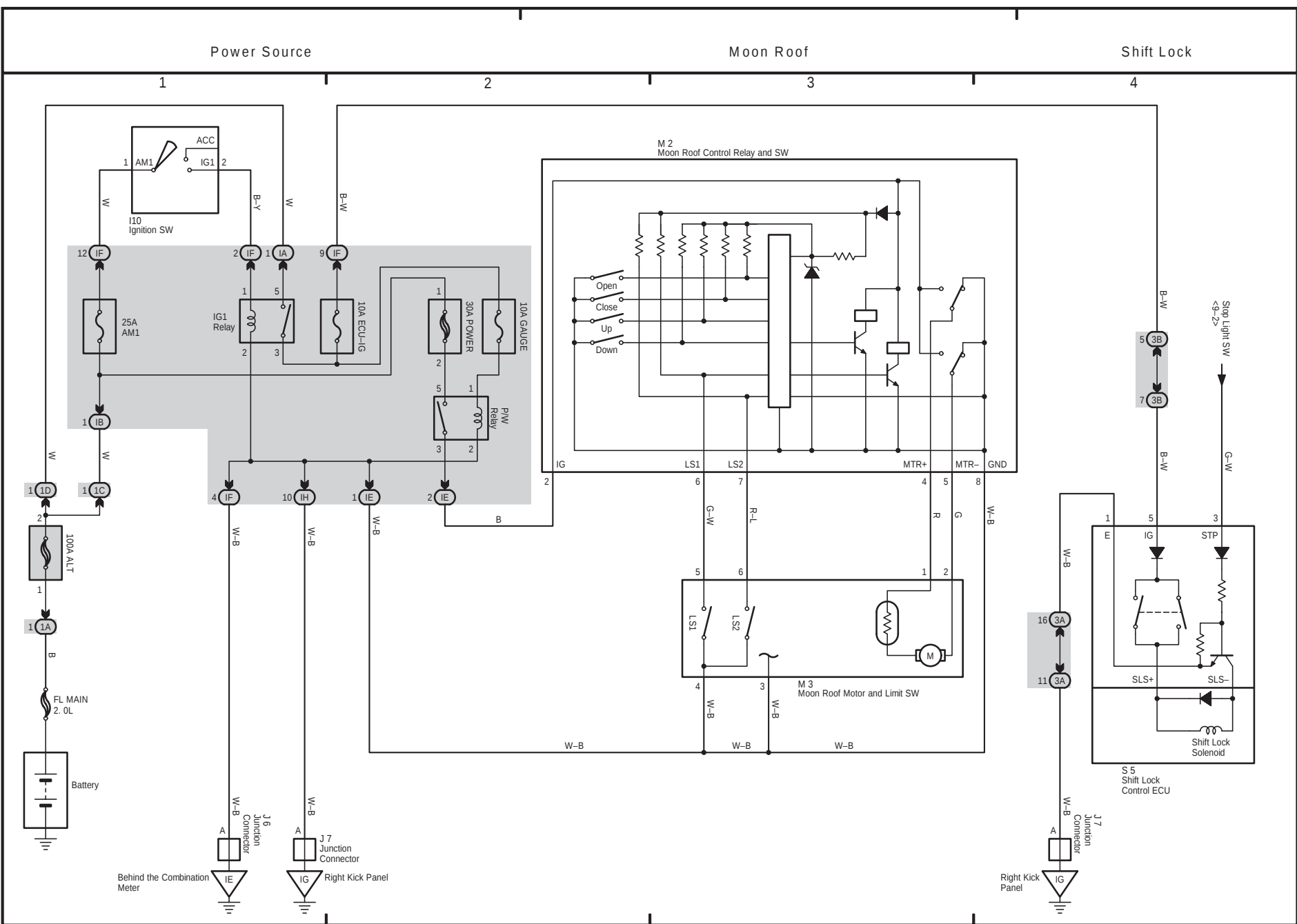




21 COROLLA

284

COROLLA (EM00H0U)

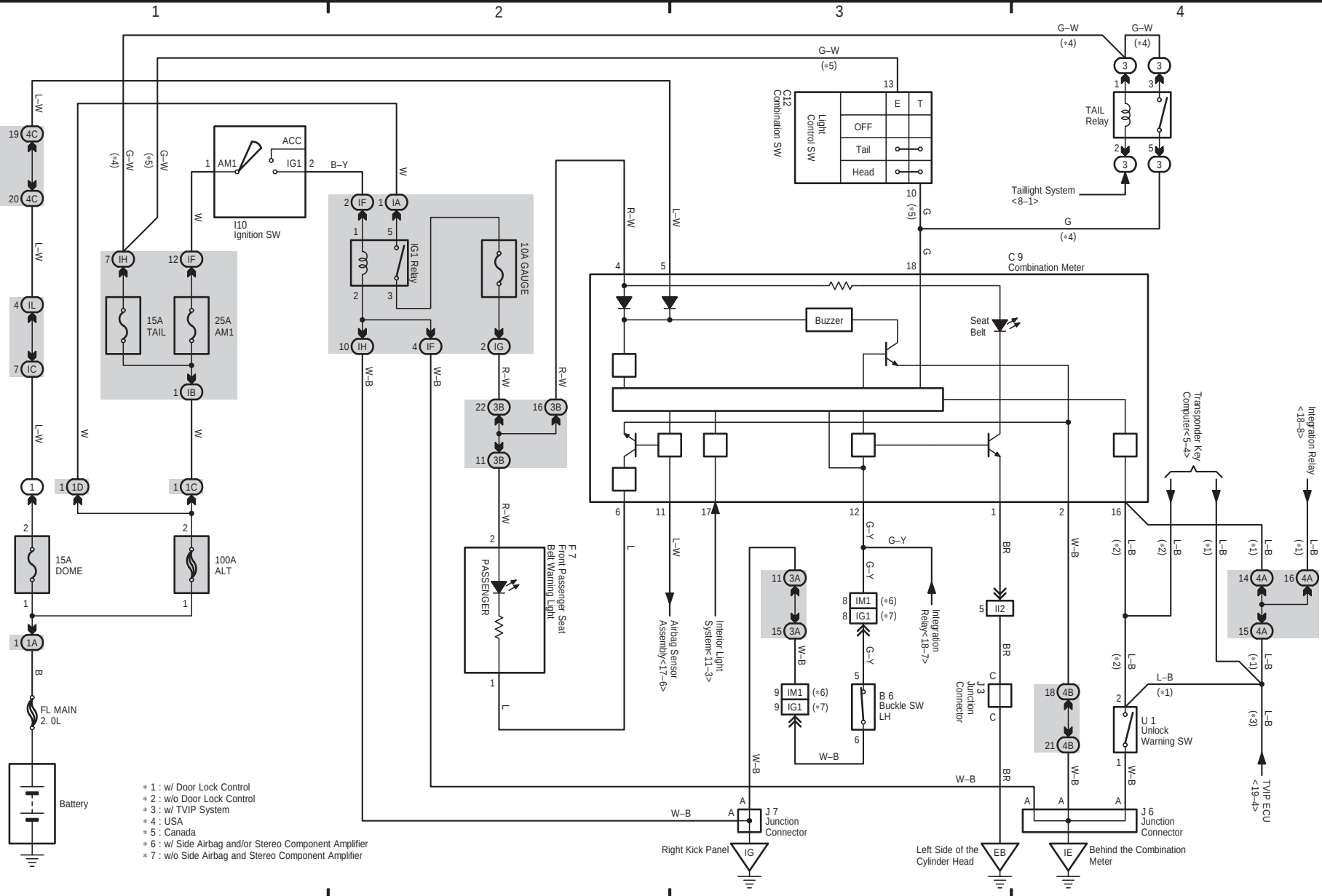


Power Source

Seat Belt Warning

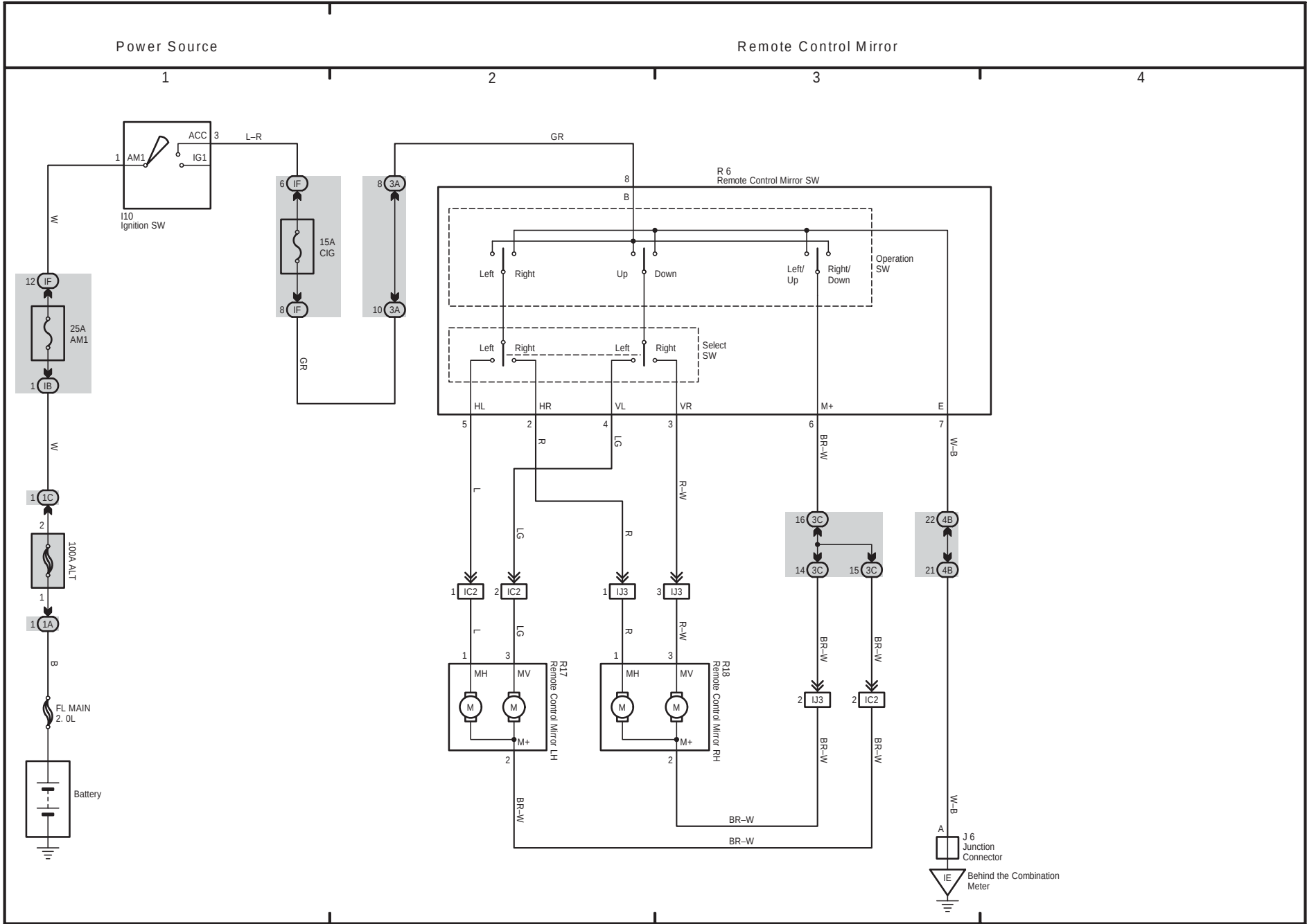
Light
Reminder

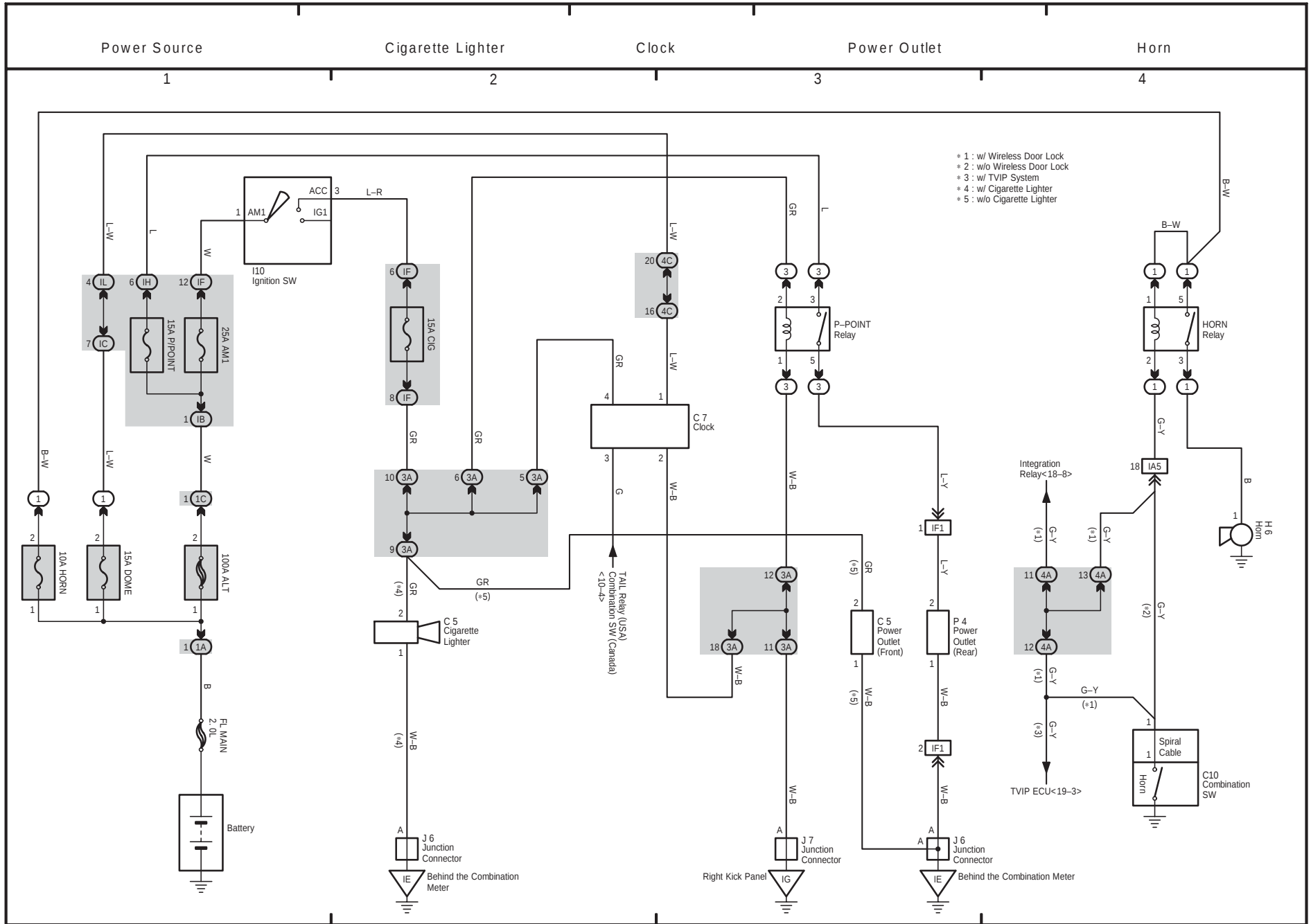
Key Reminder



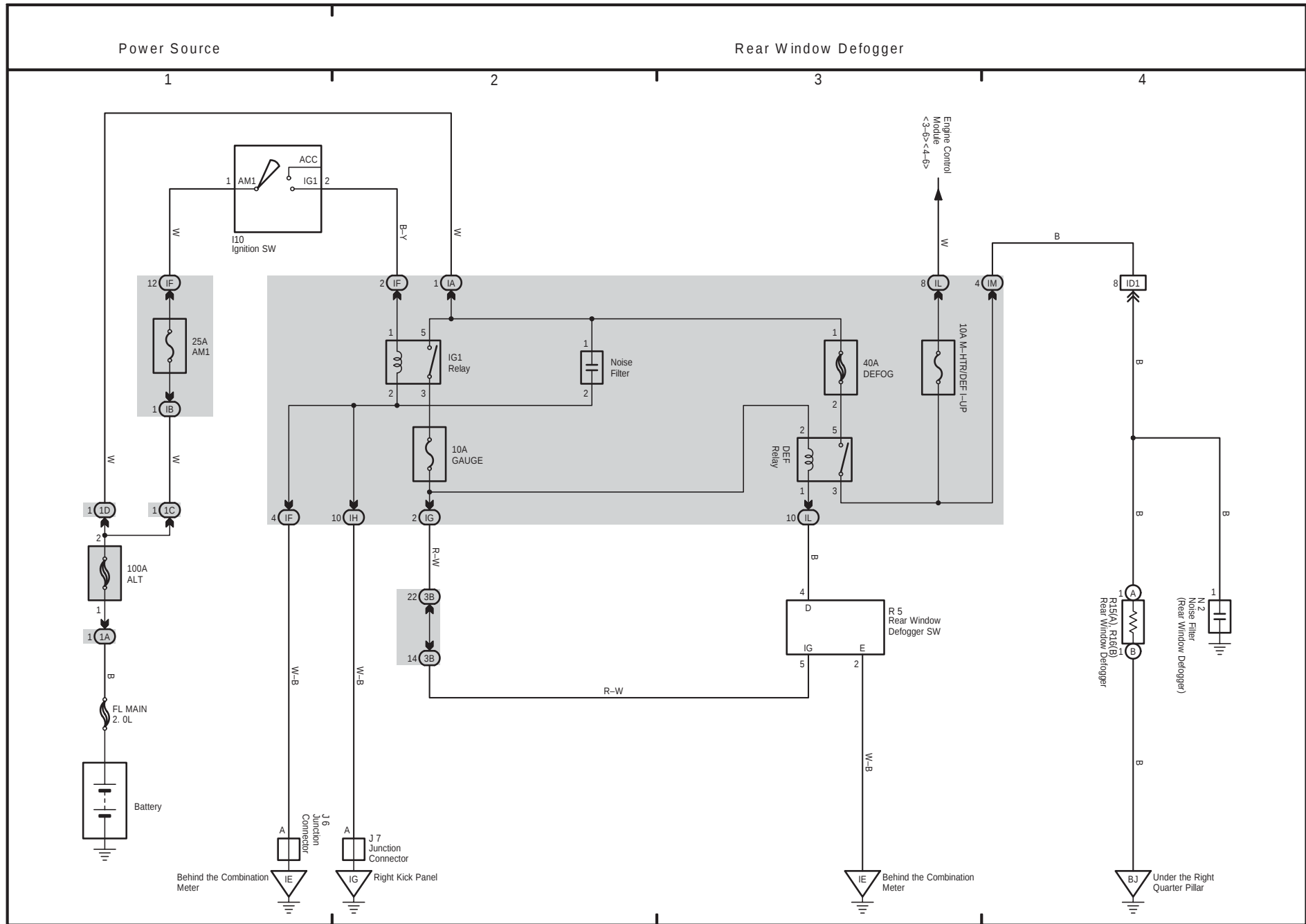
23 COROLLA

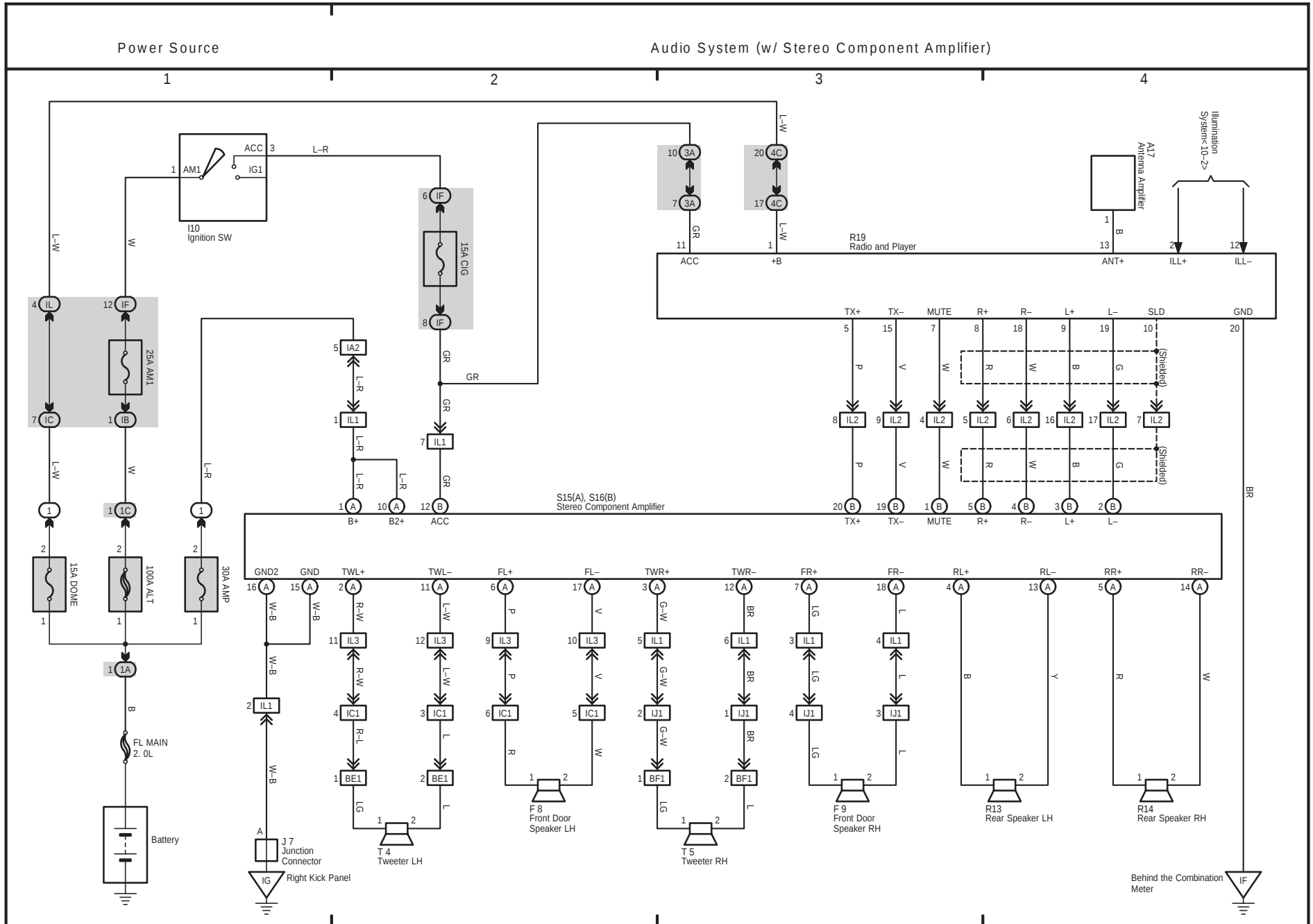
M OVERALL ELECTRICAL WIRING DIAGRAM



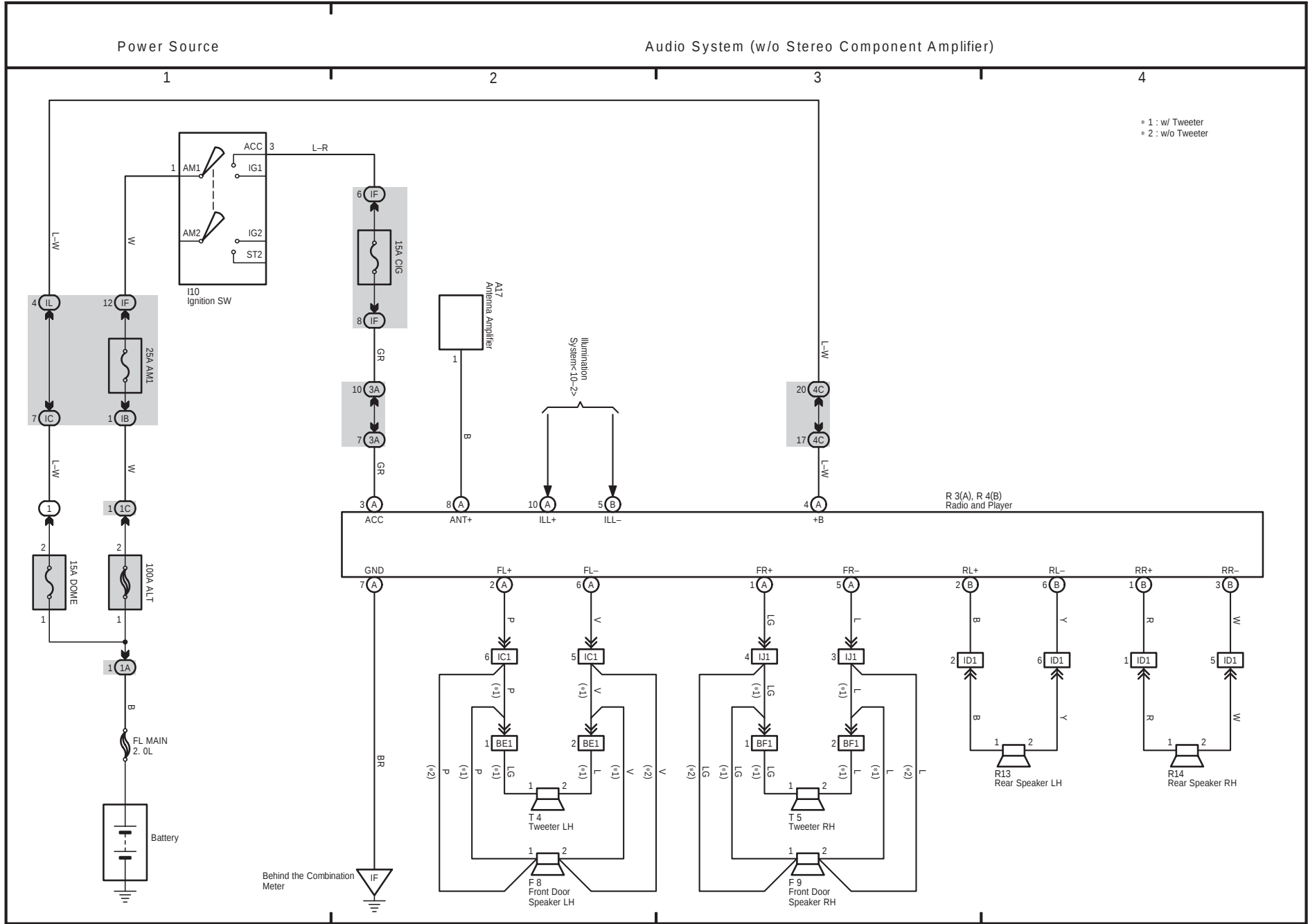


25 COROLLA



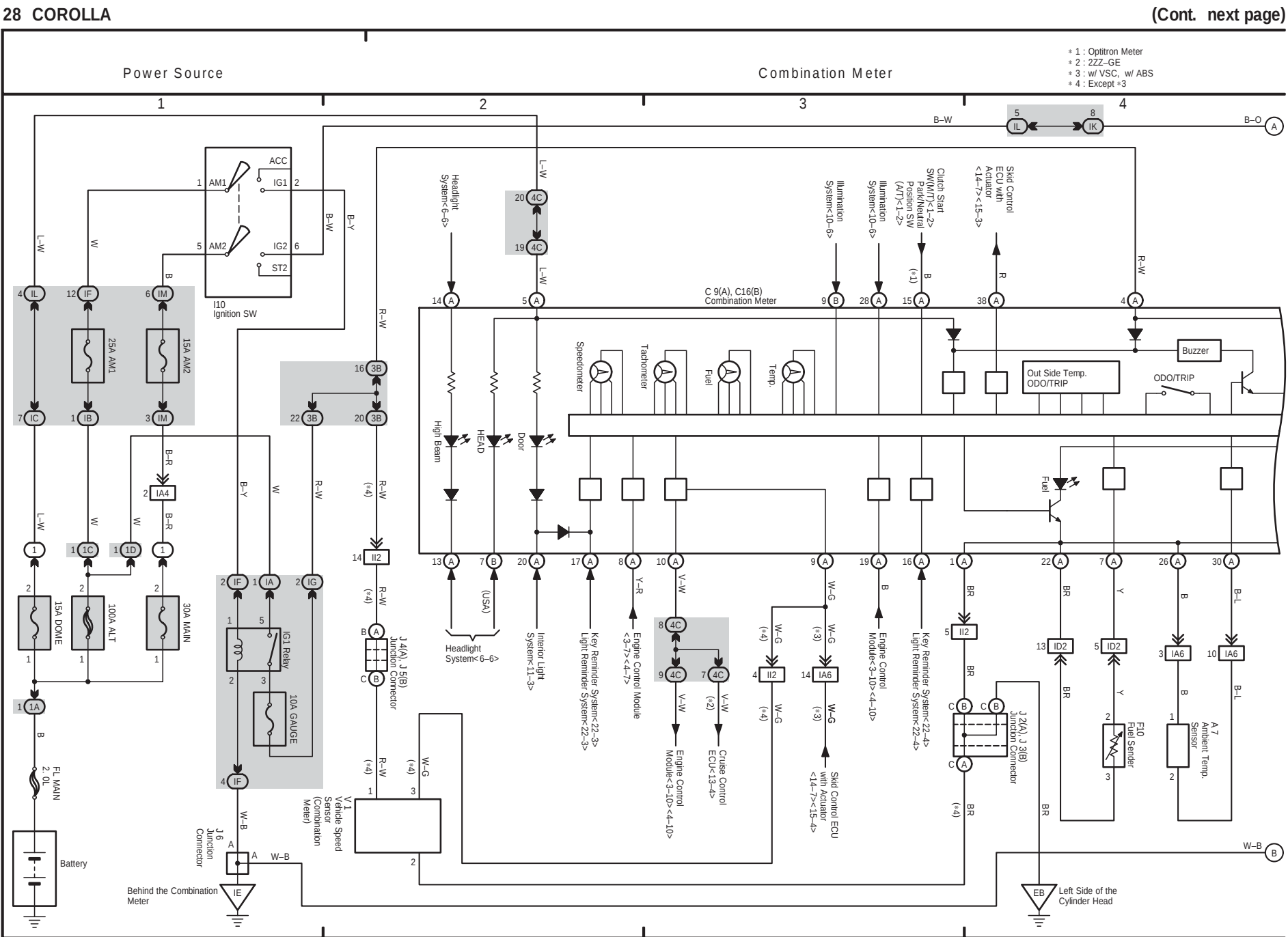


27 COROLLA

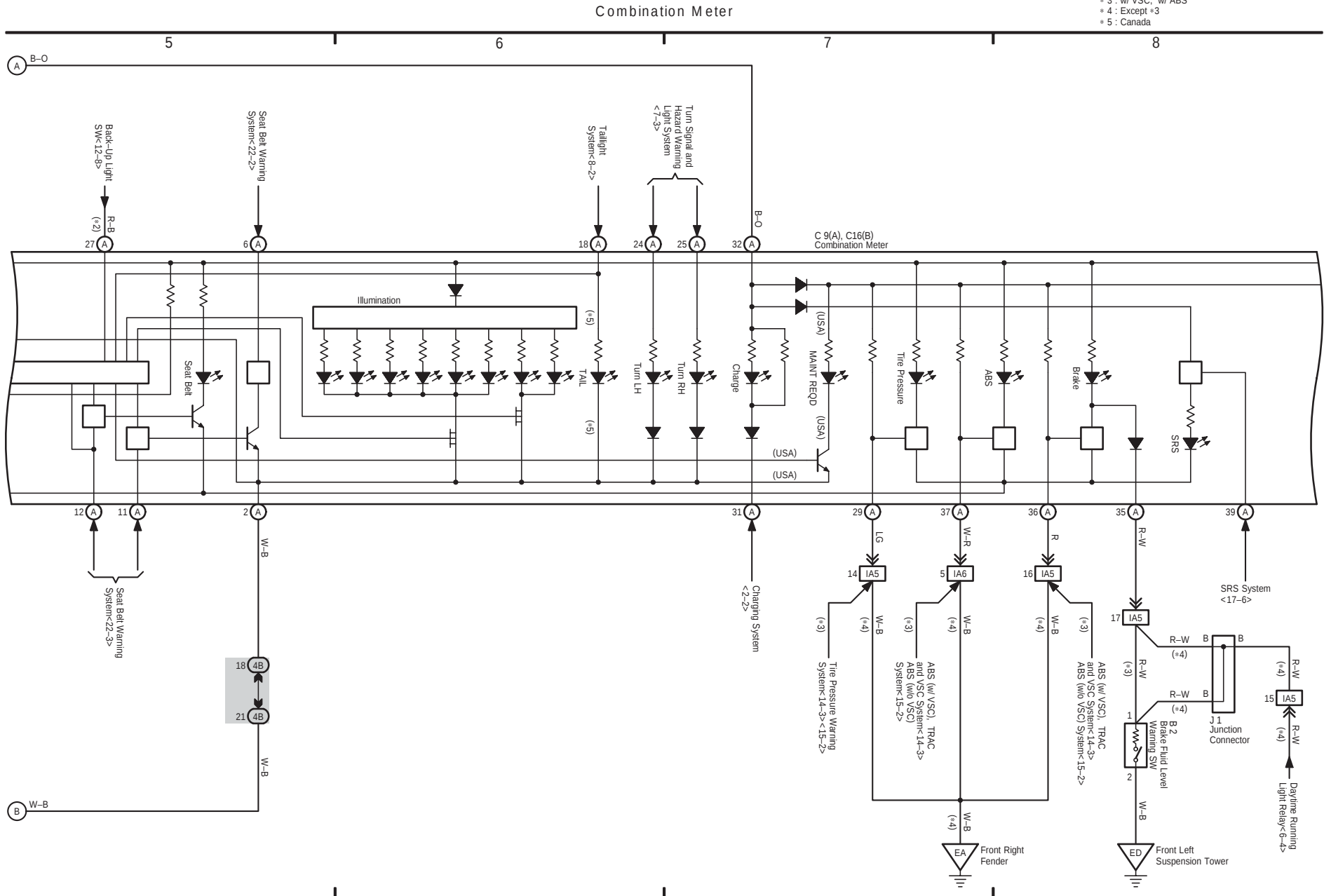


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- * 1 : Optitron Meter
- * 2 : 2ZZ-GE
- * 3 : w/ VSC, w/ ABS
- * 4 : Except *3

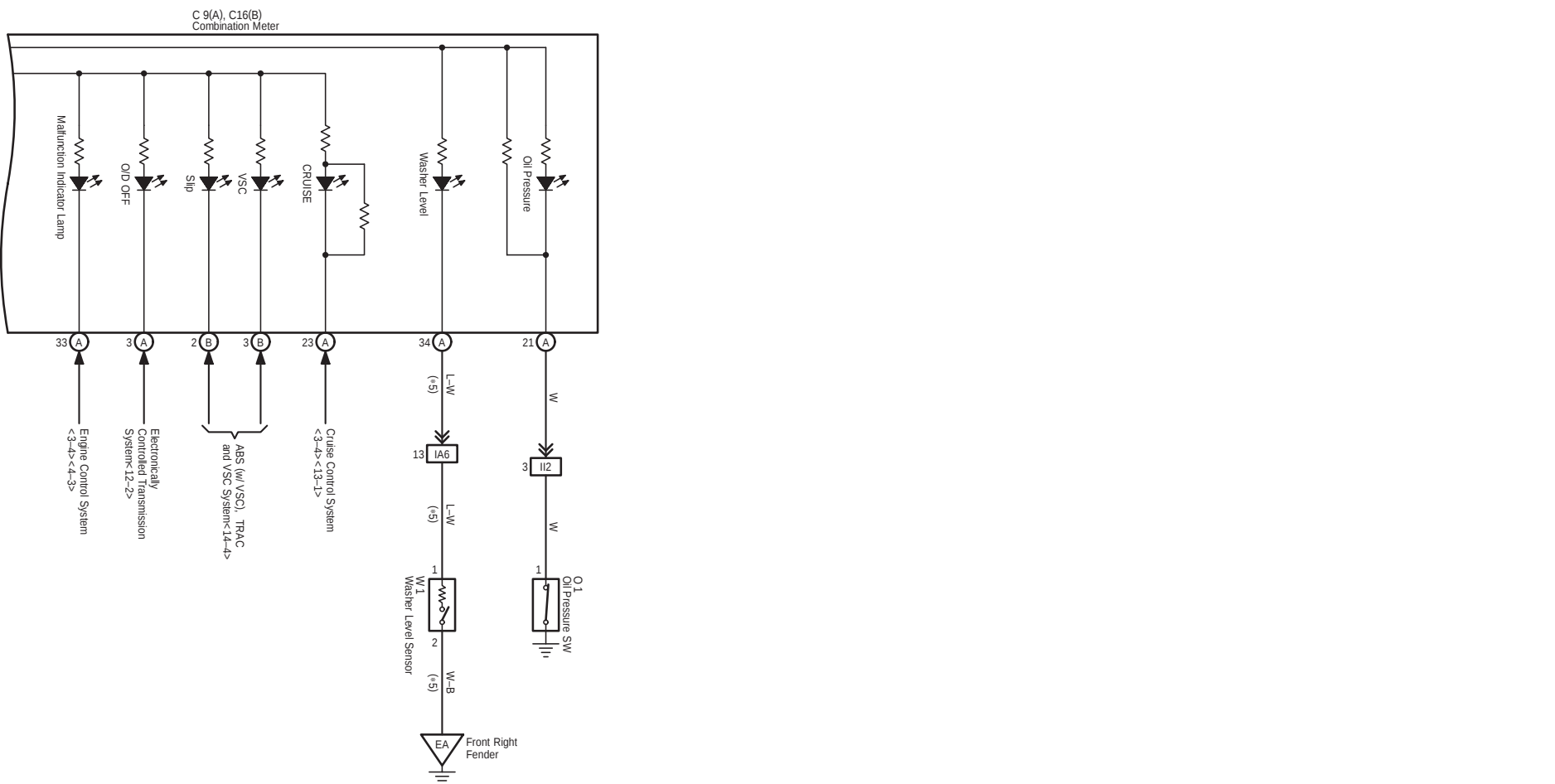


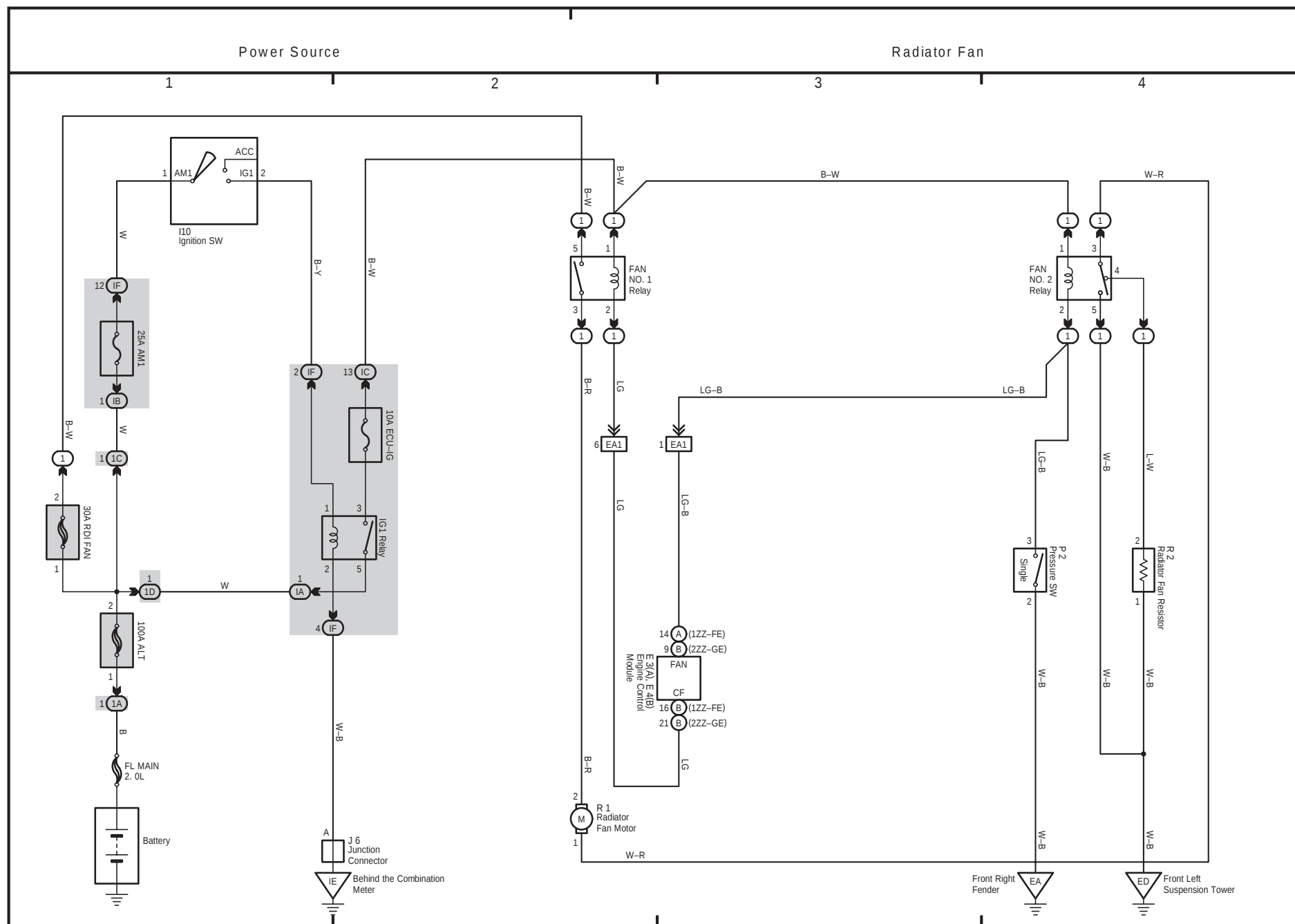
- * 2 : 2ZZ-GE
- * 3 : w/ VSC, w/ ABS
- * 4 : Except *3
- * 5 : Canada

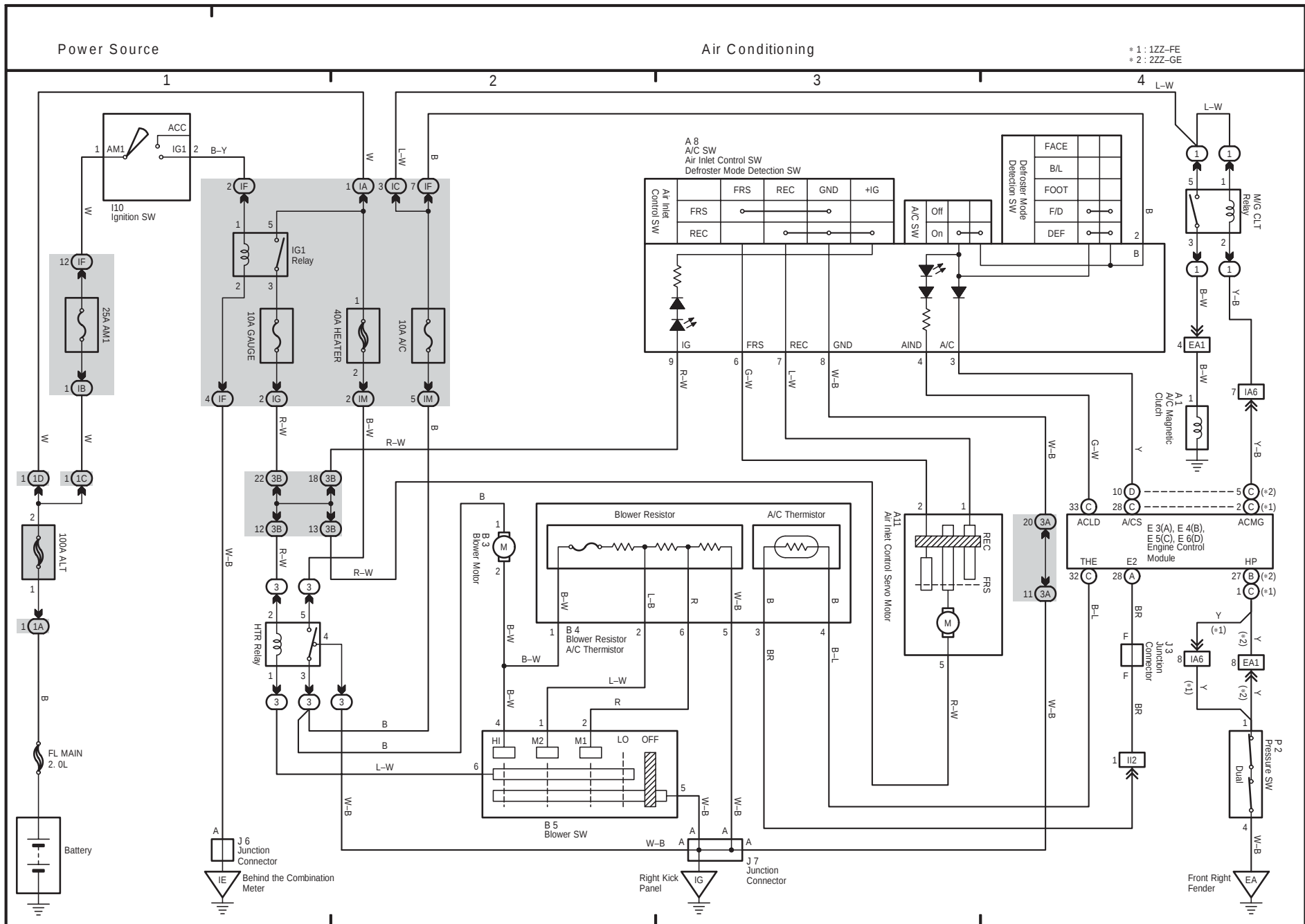


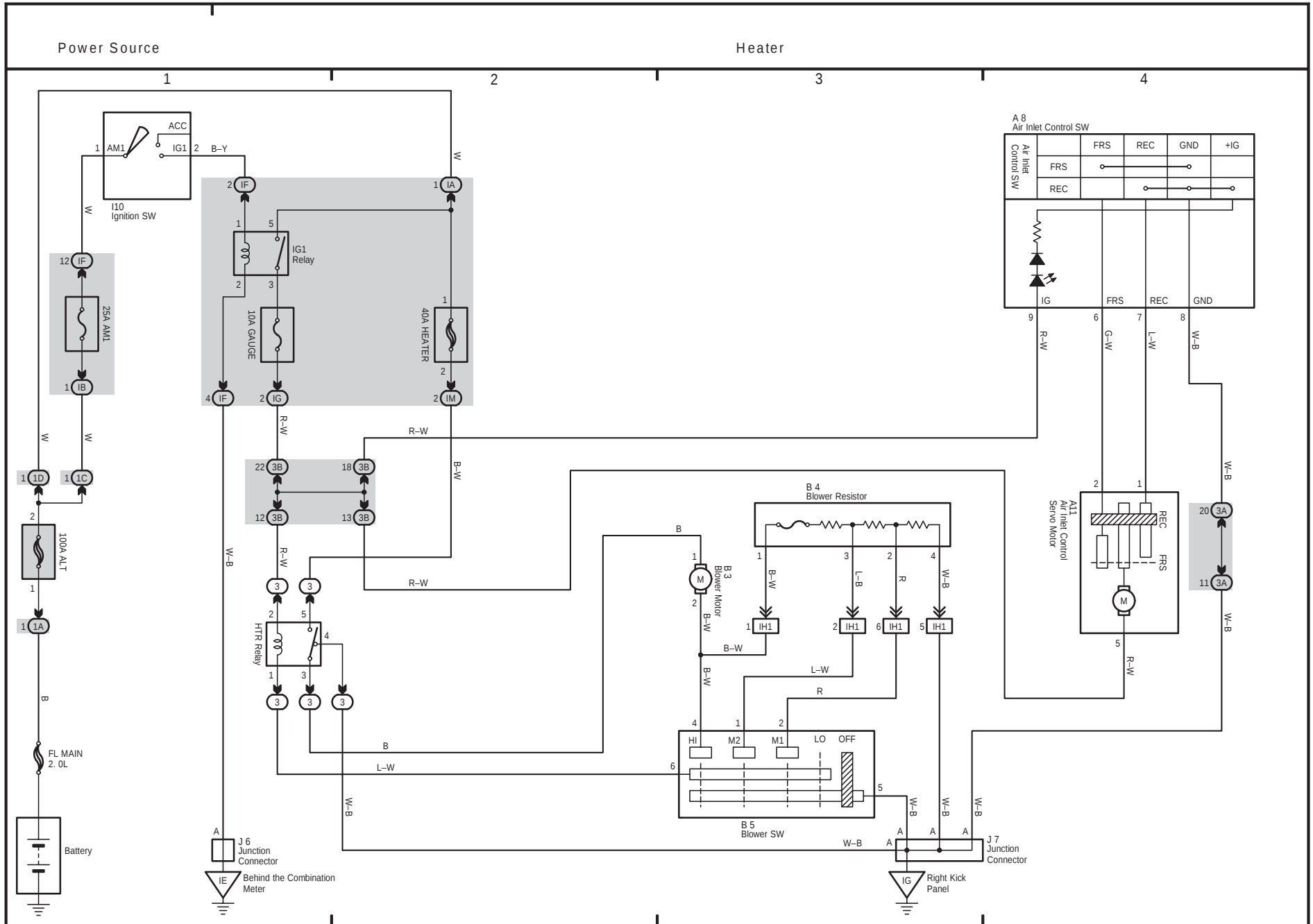
Timeline of the study:

- 2010: Study design and protocol development
- 2010: Pilot study
- 2011: Main study
- 2011: Data analysis
- 2012: Publication









2006 COROLLA

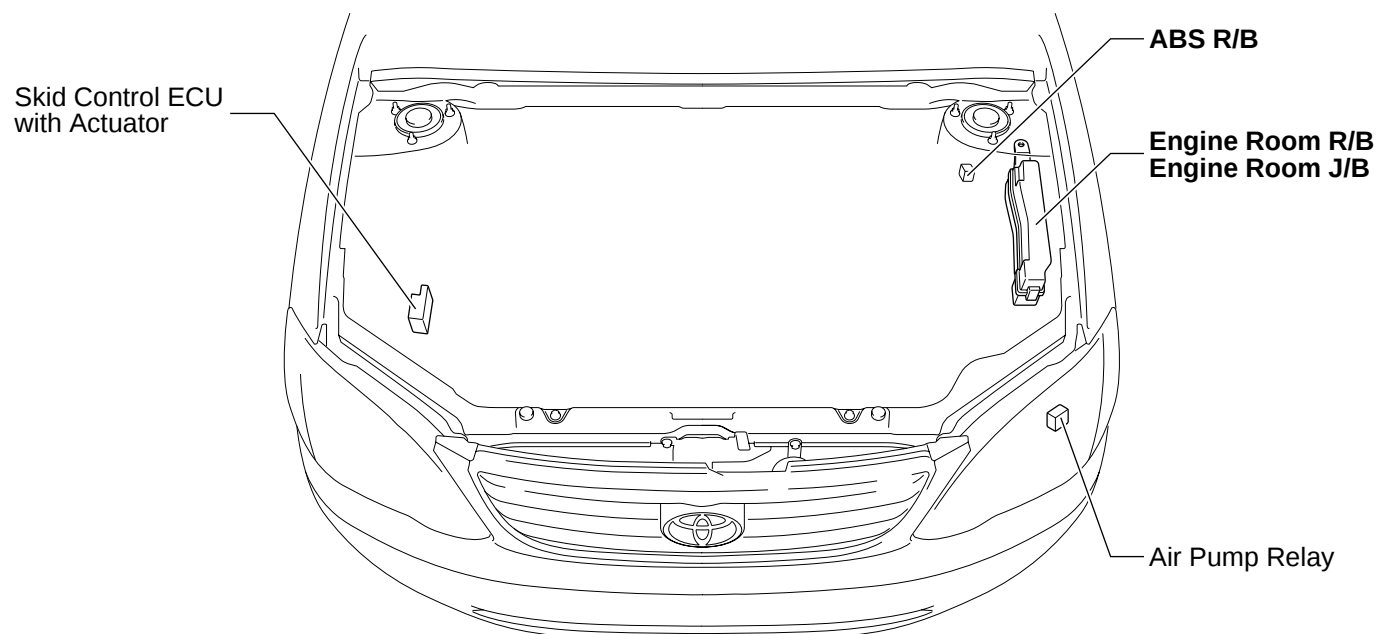
ELECTRICAL WIRING DIAGRAM

SYSTEM CIRCUITS

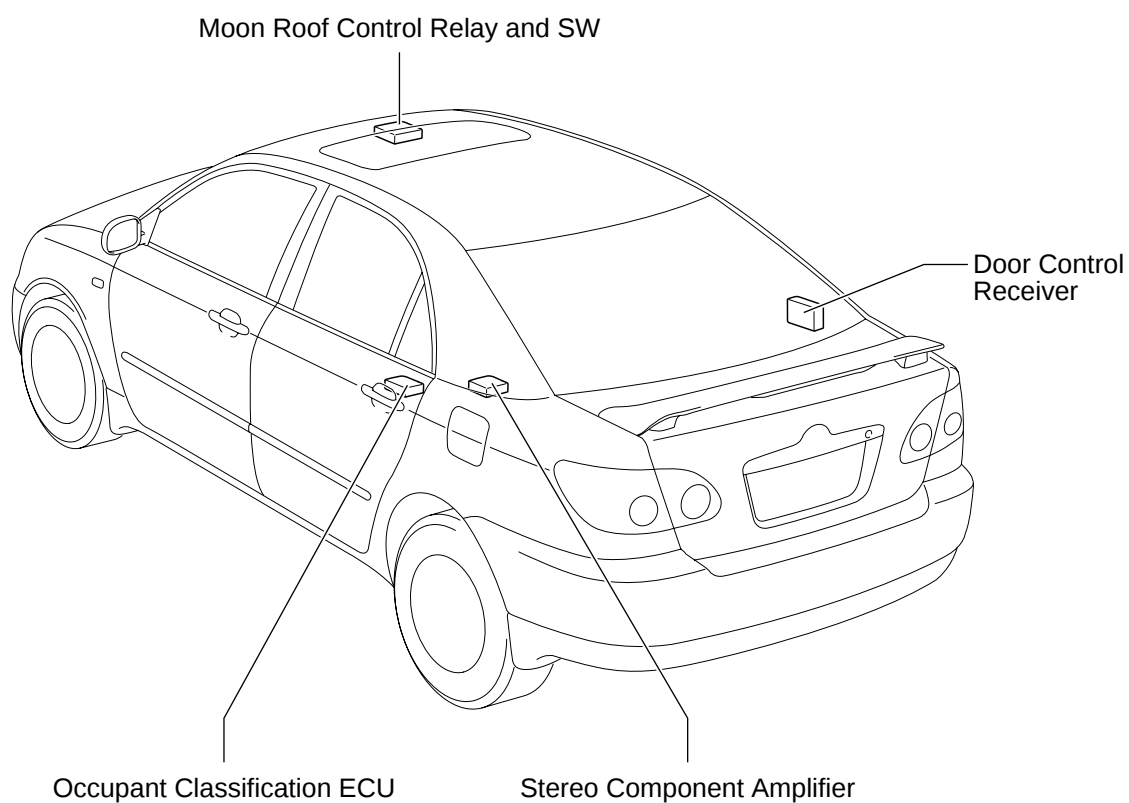
	Page
ABS (w/ VSC)	166
ABS (w/o VSC)	176
Air Conditioning	214
Audio System (w/ Stereo Component Amplifier)	198
Audio System (w/o Stereo Component Amplifier)	202
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Electronically Controlled Transmission	150
Engine Control (1ZZ-FE)	60
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TRAC	166
Turn Signal and Hazard Warning Light	92
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VSC	166
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Wireless Door Lock Control	136

F RELAY LOCATIONS

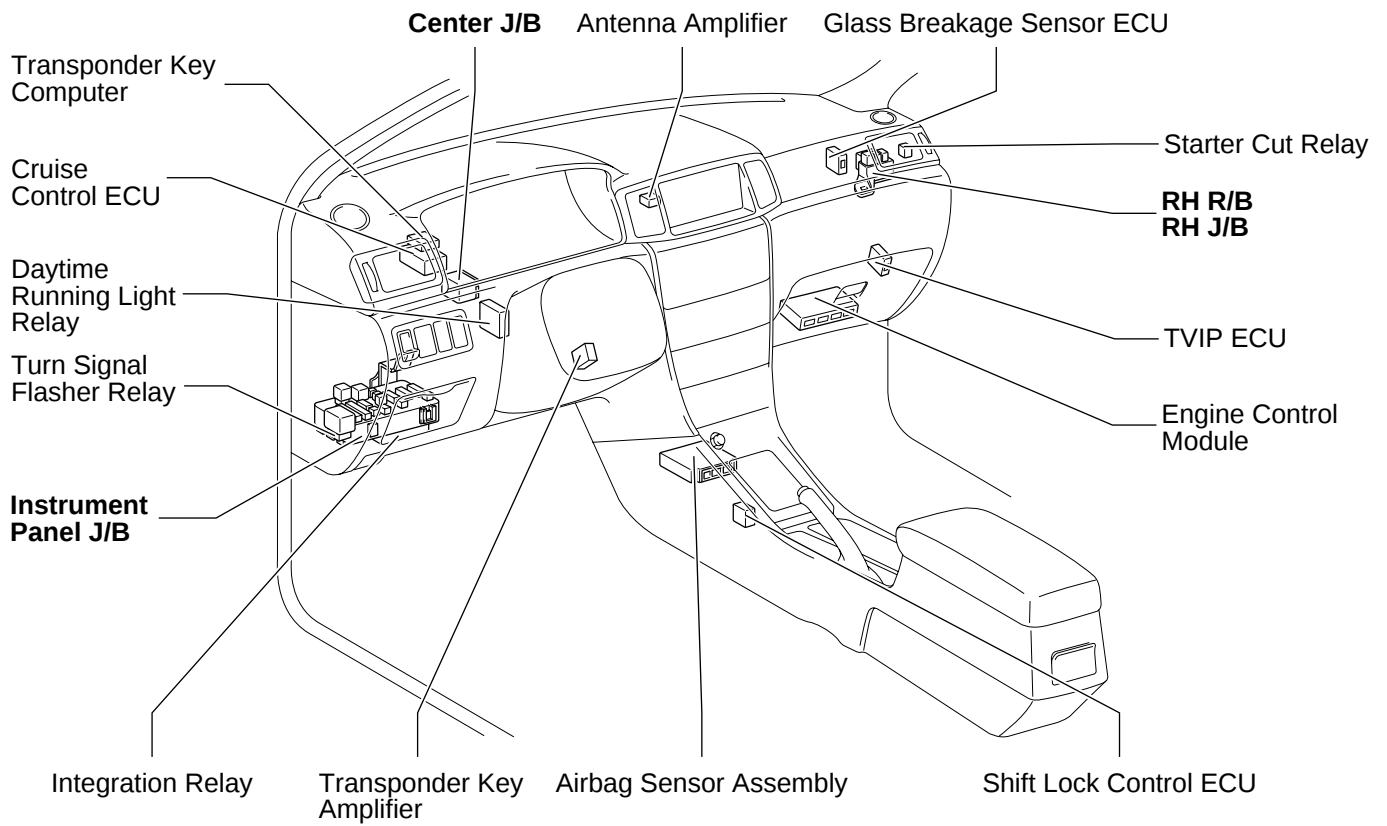
[Engine Compartment]



[Body]

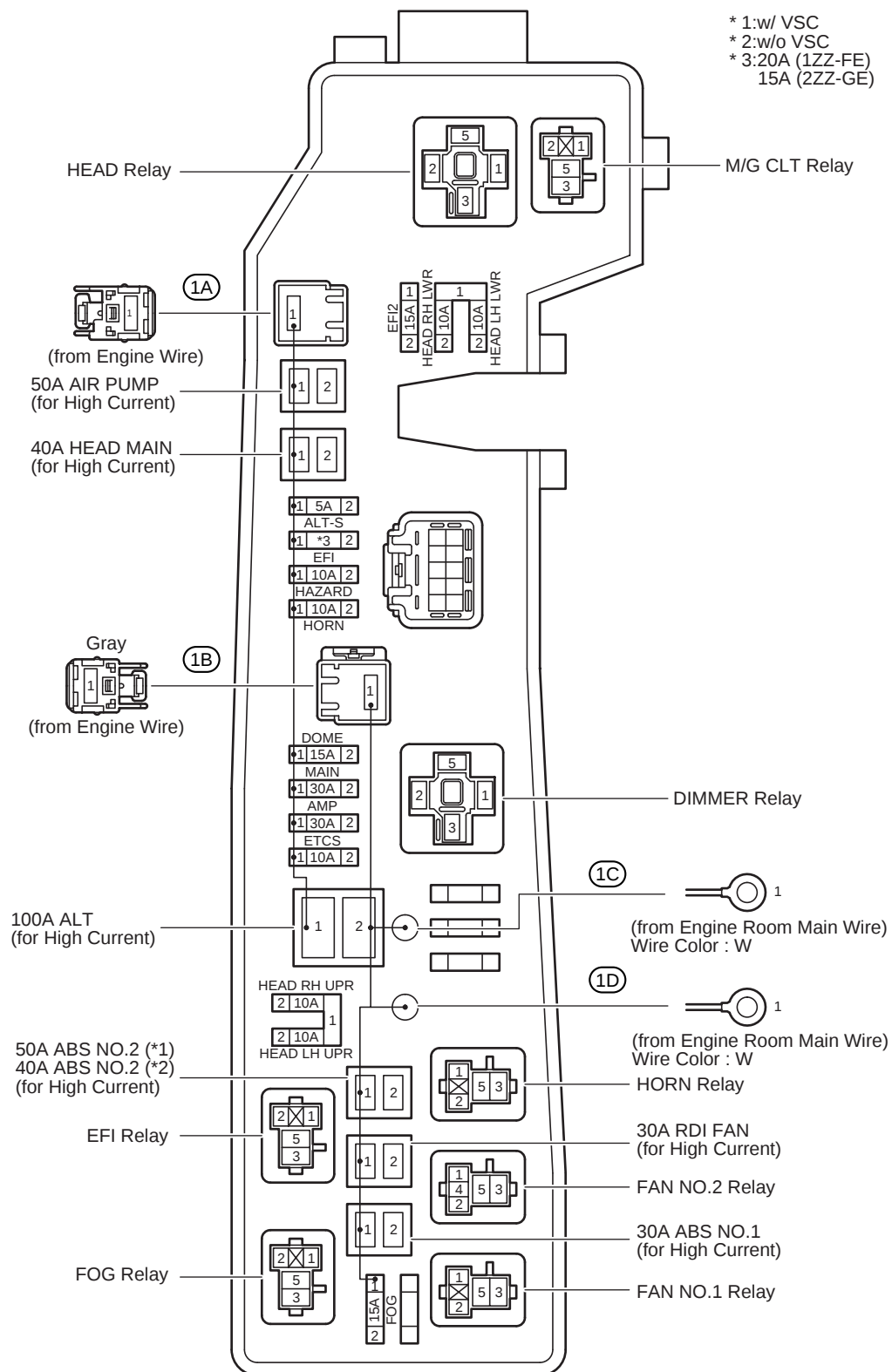


[Instrument Panel]



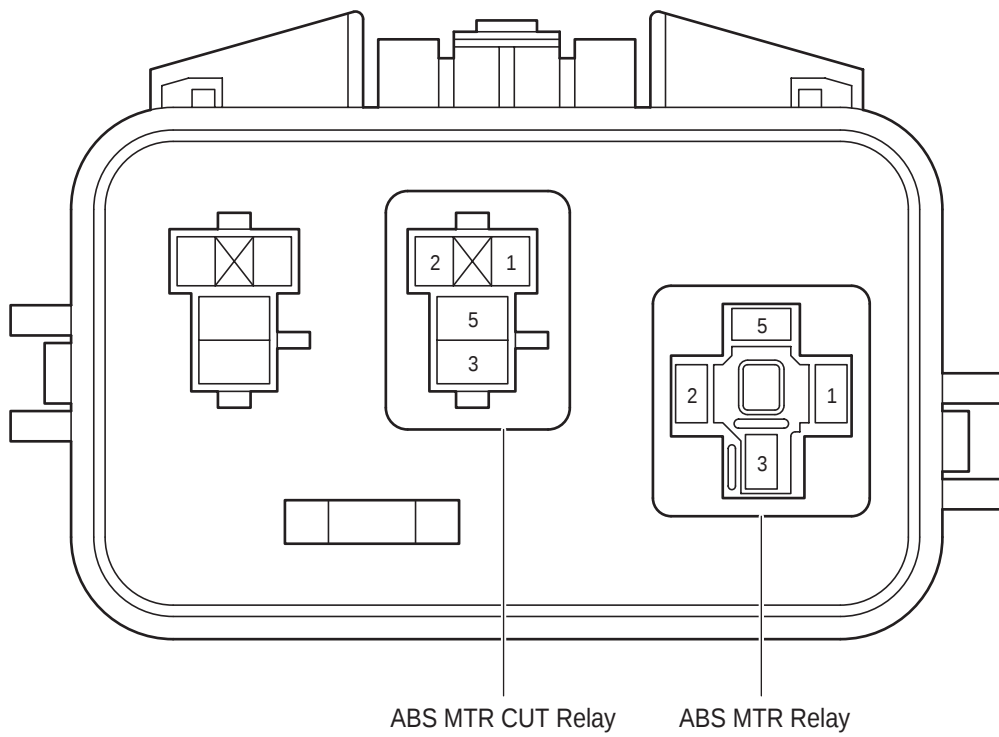
F RELAY LOCATIONS

① : Engine Room R/B	Engine Compartment Left (See Page 20)
○ : Engine Room J/B	



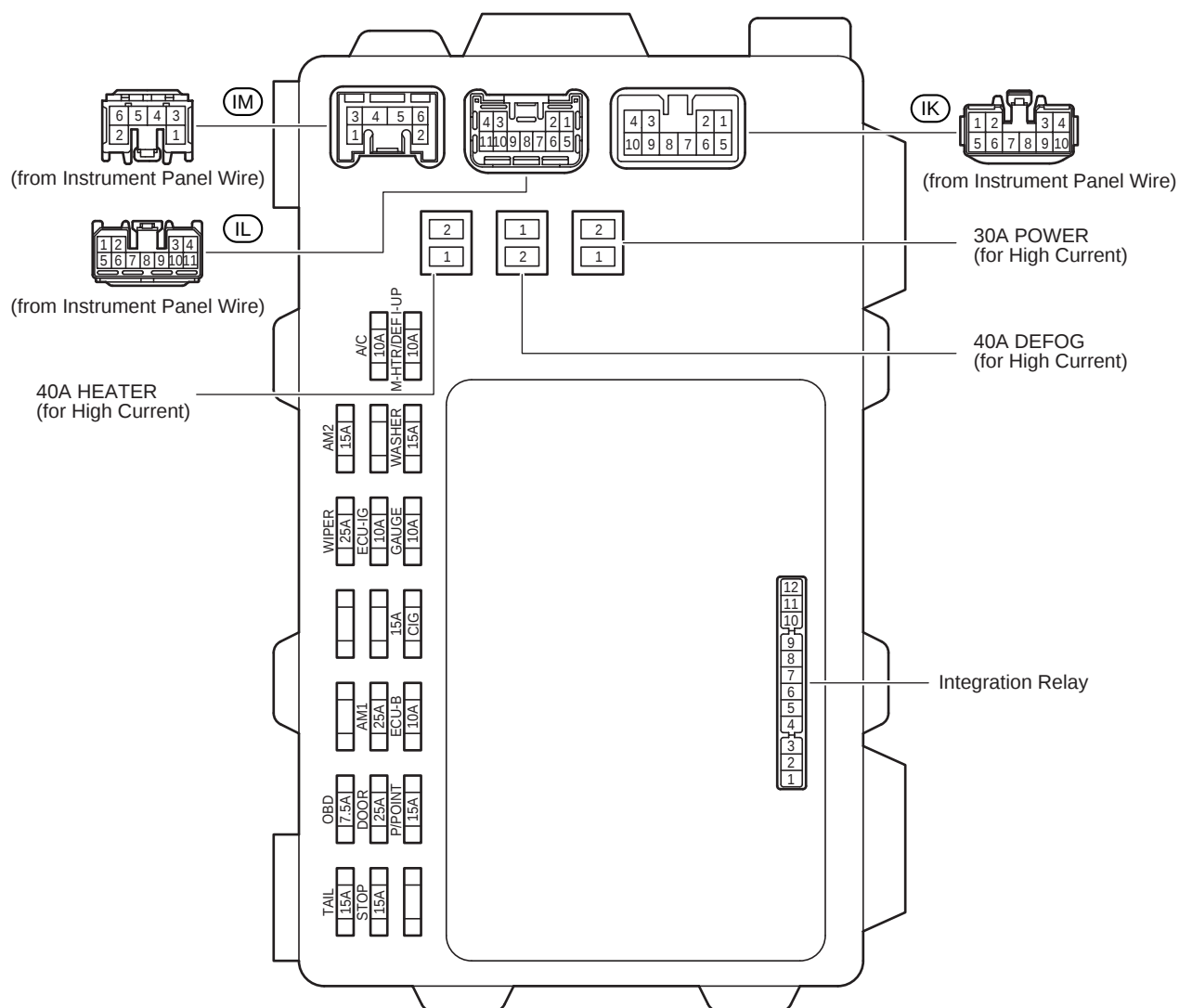
② : ABS R/B

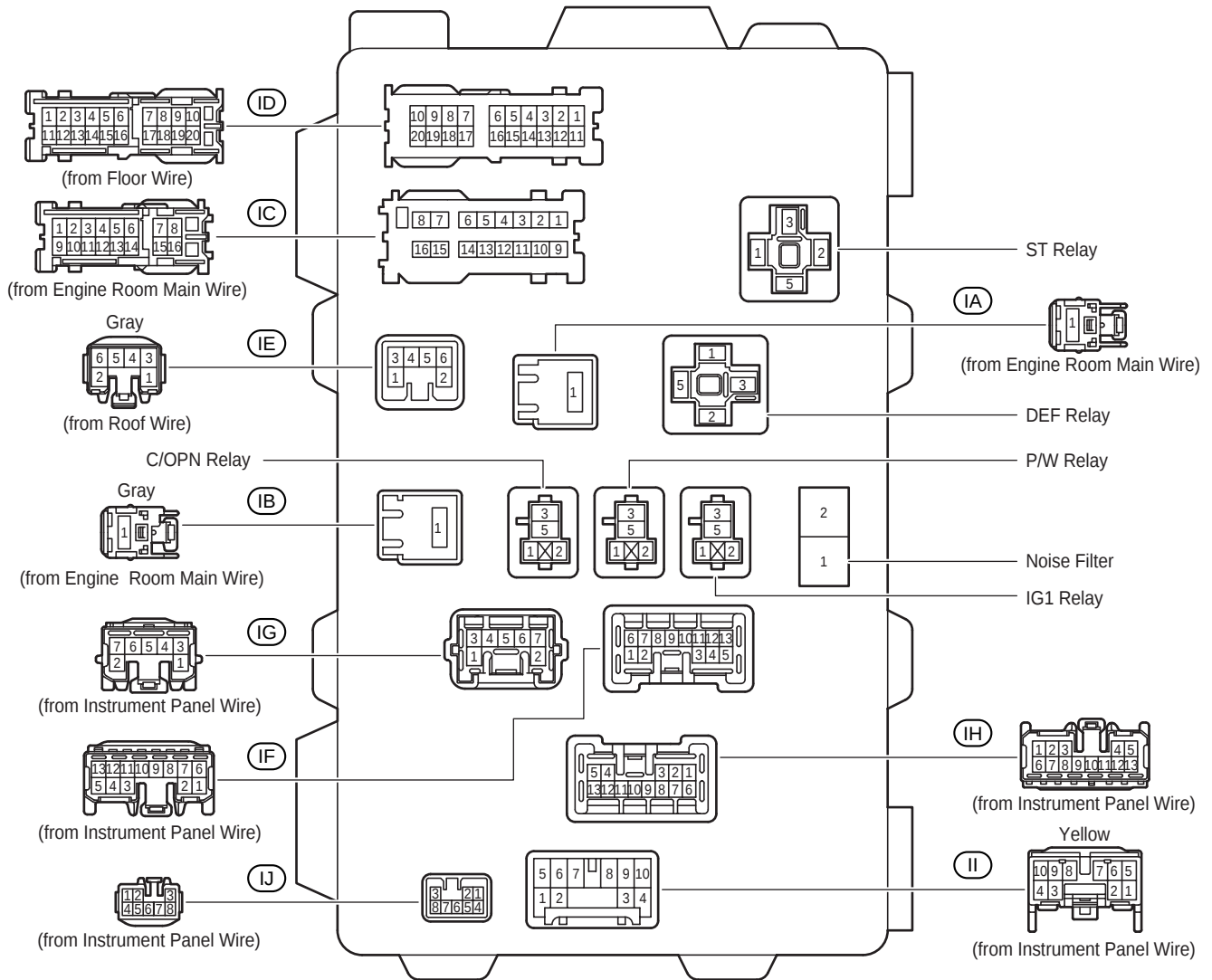
Engine Compartment Left (See Page 20)



F RELAY LOCATIONS

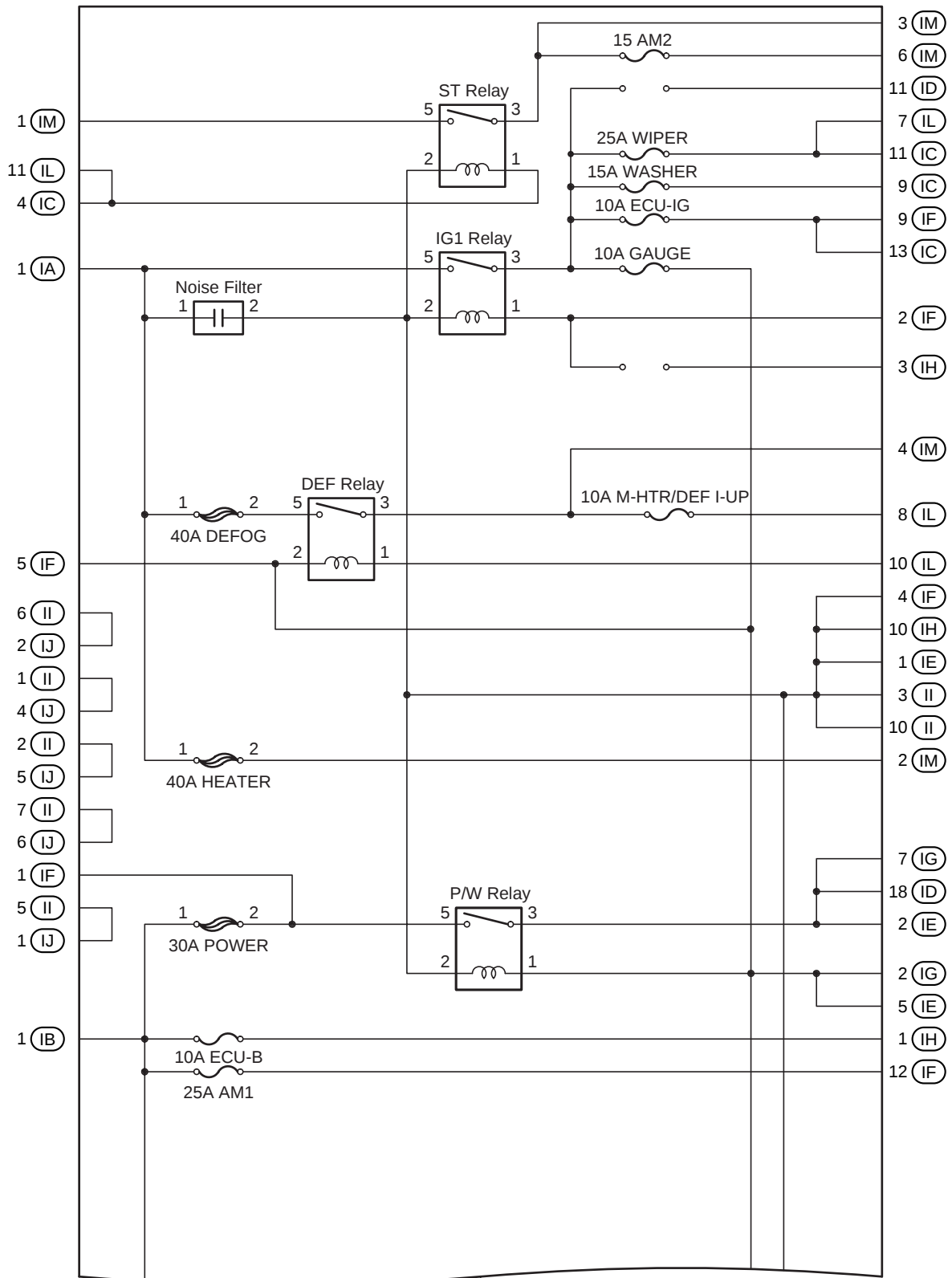
 : Instrument Panel J/B	Lower Finish Panel (See Page 21)
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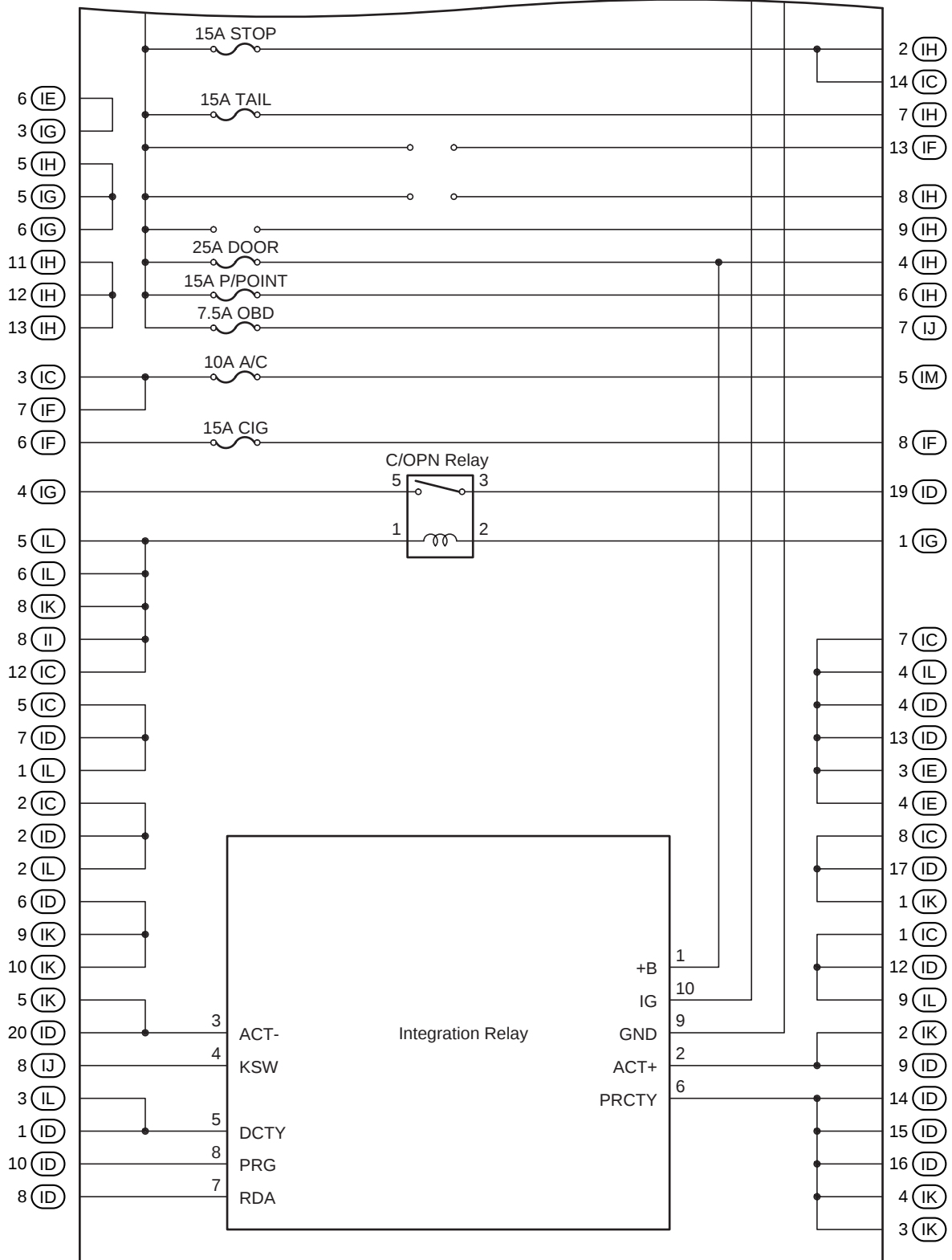
F RELAY LOCATIONS

[Instrument Panel J/B Inner Circuit]



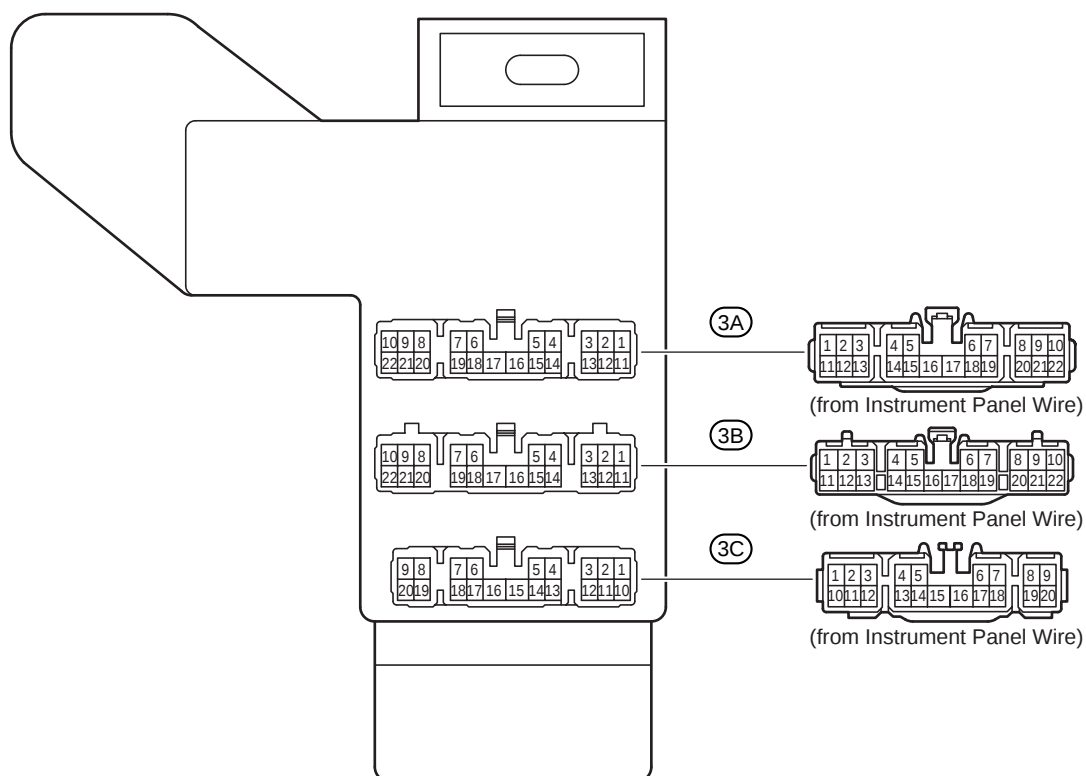
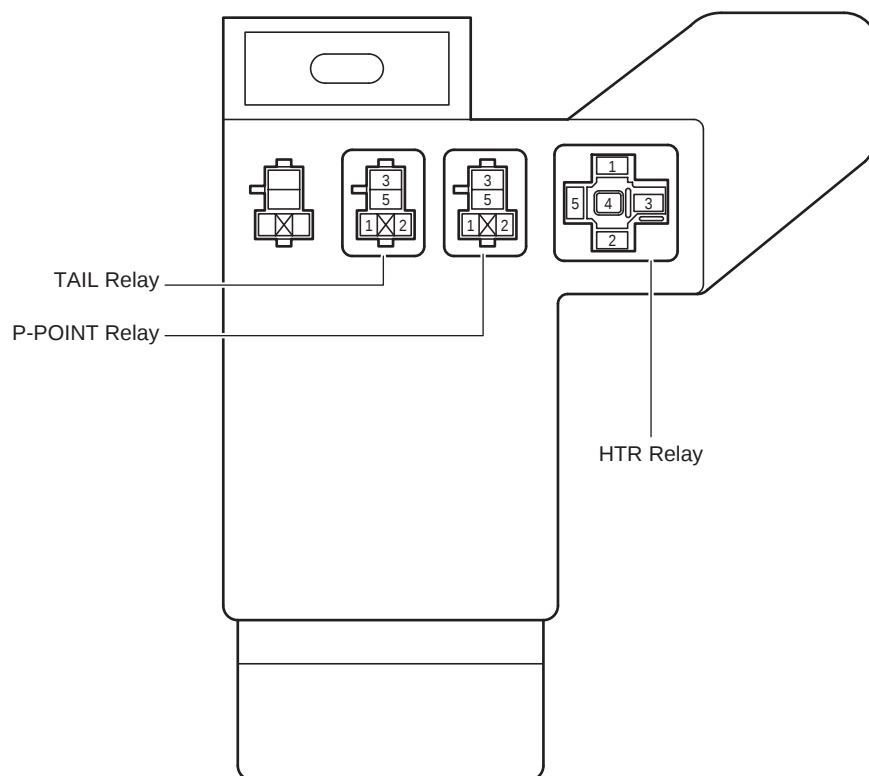
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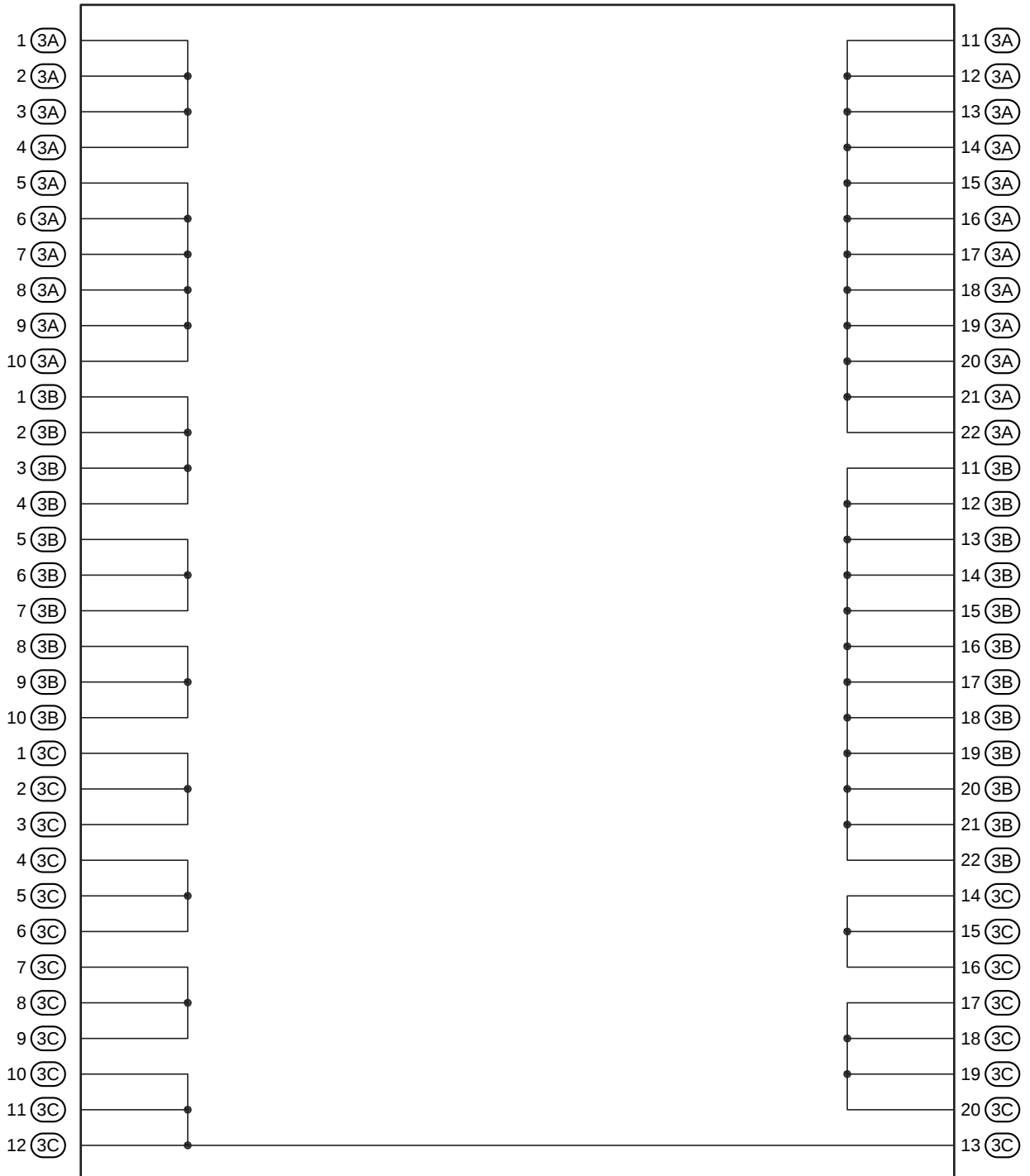
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F RELAY LOCATIONS

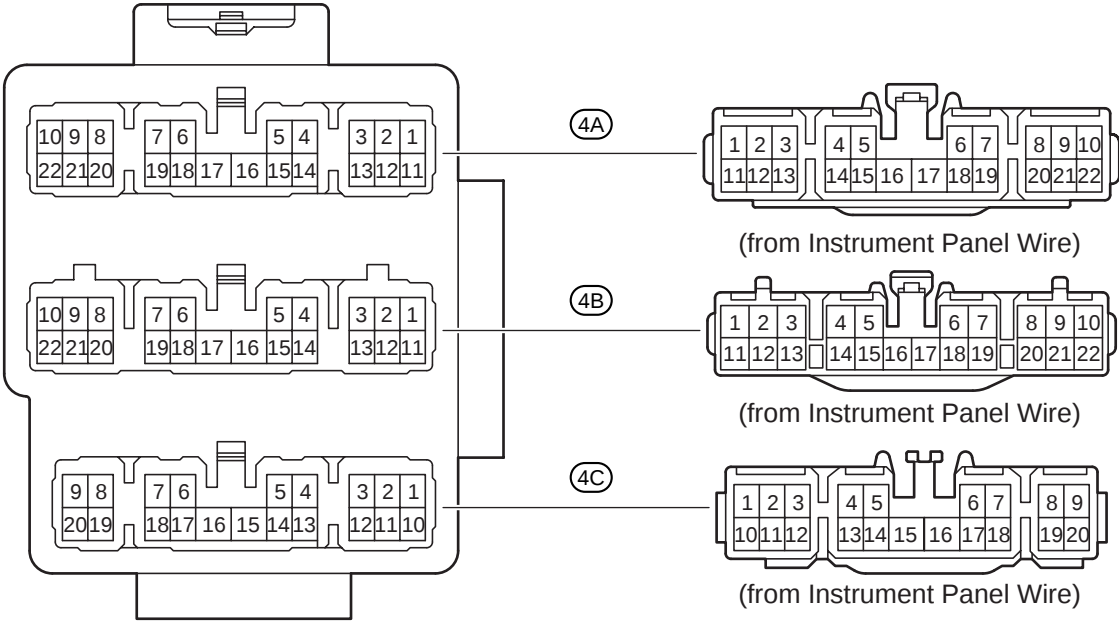
③ : RH R/B	Right Side of the Instrument Panel Reinforcement (See Page 21)
○ : RH J/B	

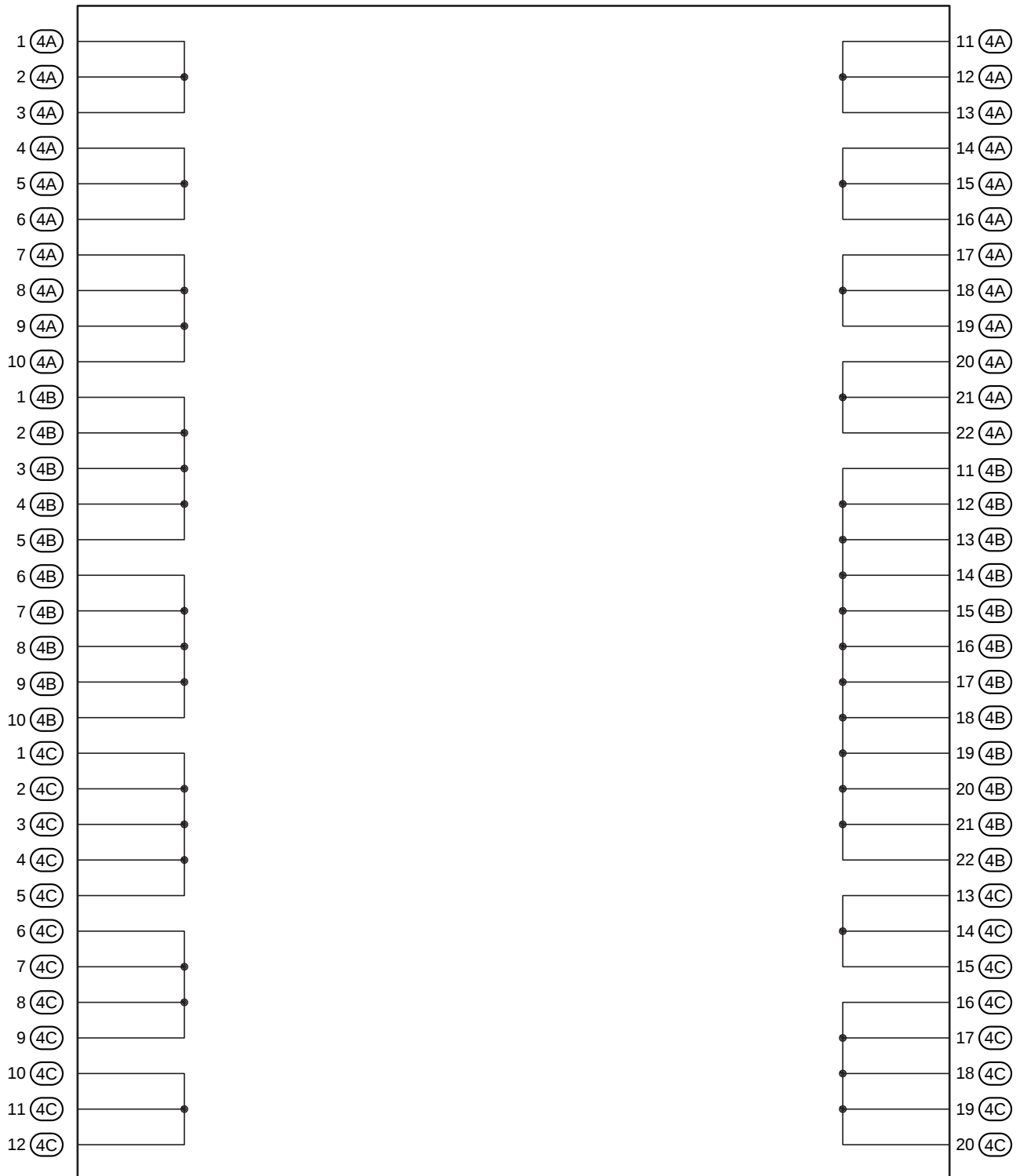


[RH J/B Inner Circuit]

F RELAY LOCATIONS

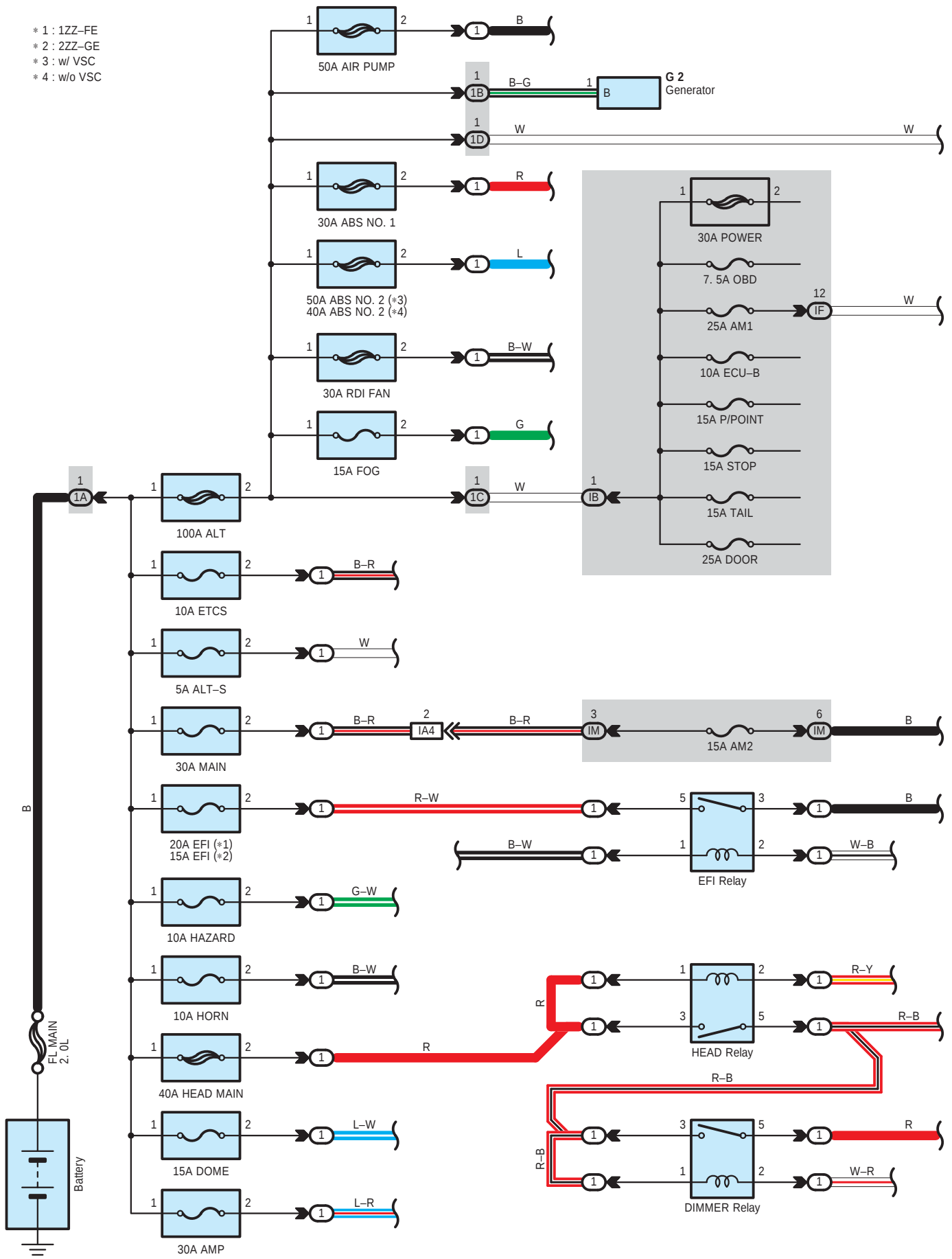
 : Center J/B	Behind the Combination Meter (See Page 21)
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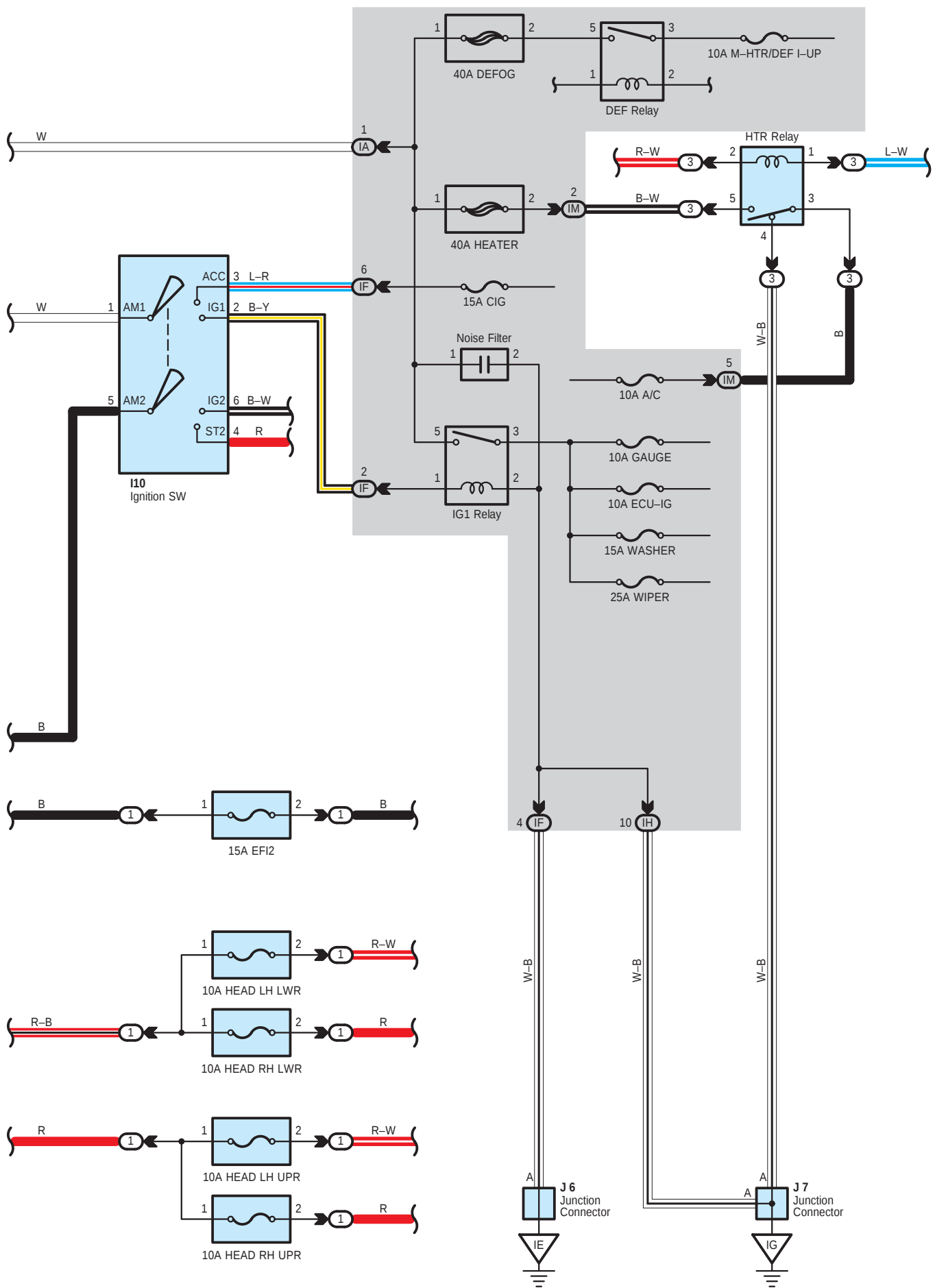


[Center J/B Inner Circuit]

Power Source

- * 1 : 1ZZ-FE
- * 2 : 2ZZ-GE
- * 3 : w/ VSC
- * 4 : w/o VSC





Power Source

: Parts Location

Code	See Page	Code	See Page	Code	See Page
G2	32 (1ZZ-FE)	I10	37	J7	37
	34 (2ZZ-GE)	J6	37		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IA	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IB		
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
IM	24	
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
1B		
1C	22	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1D		

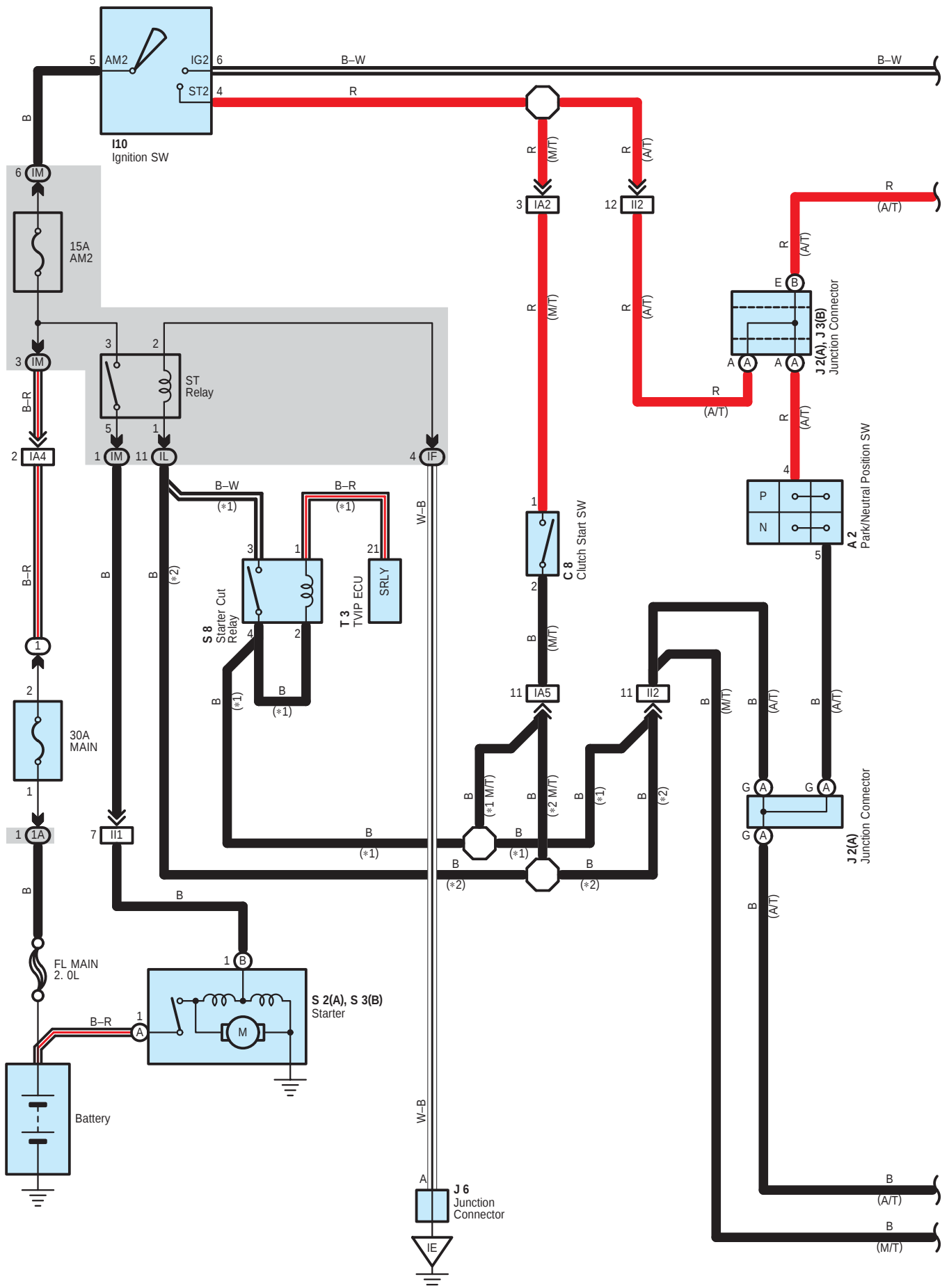
: Connector Joining Wire Harness and Wire Harness

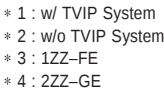
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)

: Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel

Starting and Ignition





Starting and Ignition

: Parts Location

Code		See Page		Code		See Page		Code		See Page	
A2		32 (1ZZ-FE)		I4	A	33 (1ZZ-FE)		J6		37	
C8		36				N1	35 (2ZZ-GE)		33 (1ZZ-FE)		
E3	A	36			B		33 (1ZZ-FE)		35 (2ZZ-GE)		
I2	A	33 (1ZZ-FE)				35 (2ZZ-GE)	S2	A	33 (1ZZ-FE)		
		35 (2ZZ-GE)		35 (2ZZ-GE)							
	B	33 (1ZZ-FE)		35 (2ZZ-GE)	S3	B	33 (1ZZ-FE)				
		35 (2ZZ-GE)					35 (2ZZ-GE)				
I3	A	33 (1ZZ-FE)		I5	A	33 (1ZZ-FE)		S8	37		
		35 (2ZZ-GE)				35 (2ZZ-GE)			37		
			I10		37		T3		37		
	B	33 (1ZZ-FE)		J2	A	37					
		35 (2ZZ-GE)		J3	B	37					

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

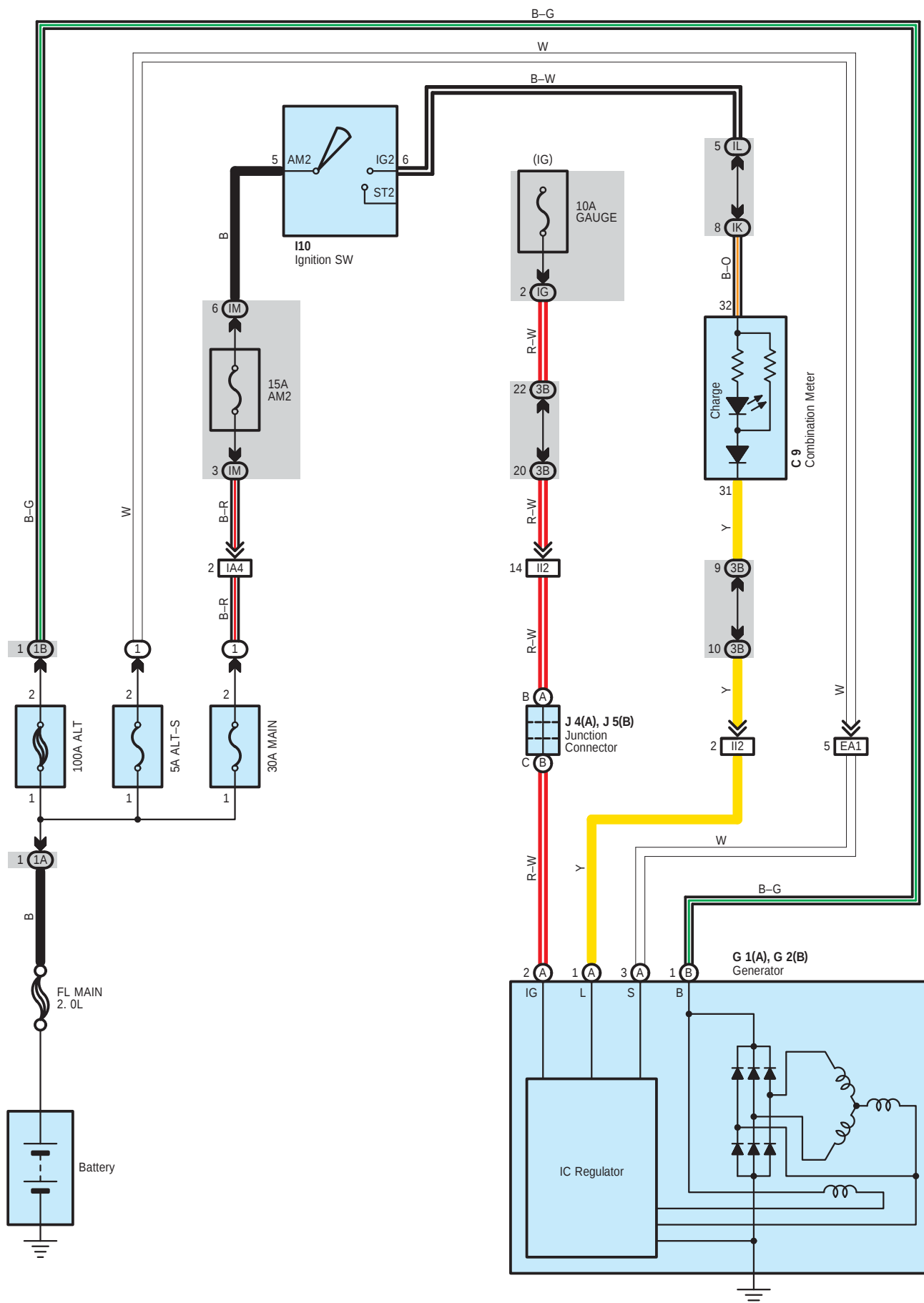
Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IL	24	
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA4		
IA5		
II1	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
II2		

: Ground Points

Code	See Page	Ground Points Location
EC	42 (1ZZ-FE)	Left Side of the Cylinder Head
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter



☐ : Parts Location

Code		See Page		Code		See Page		Code		See Page	
C9		36		G2	B	32 (1ZZ-FE)		J4	A	37	
G1	A	32 (1ZZ-FE)				34 (2ZZ-GE)		J5	B	37	
		34 (2ZZ-GE)		I10		37					

☐ : Relay Blocks

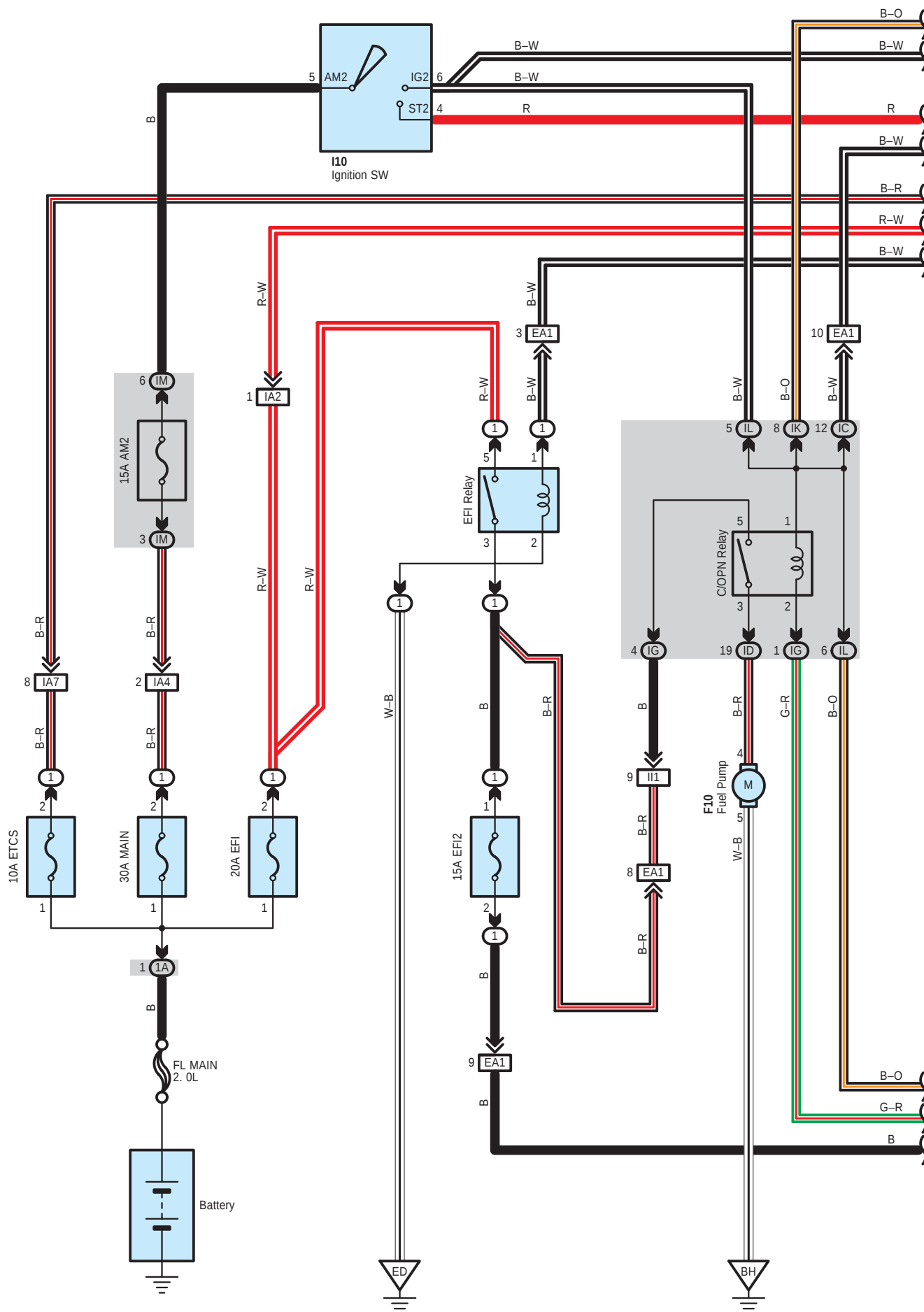
Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

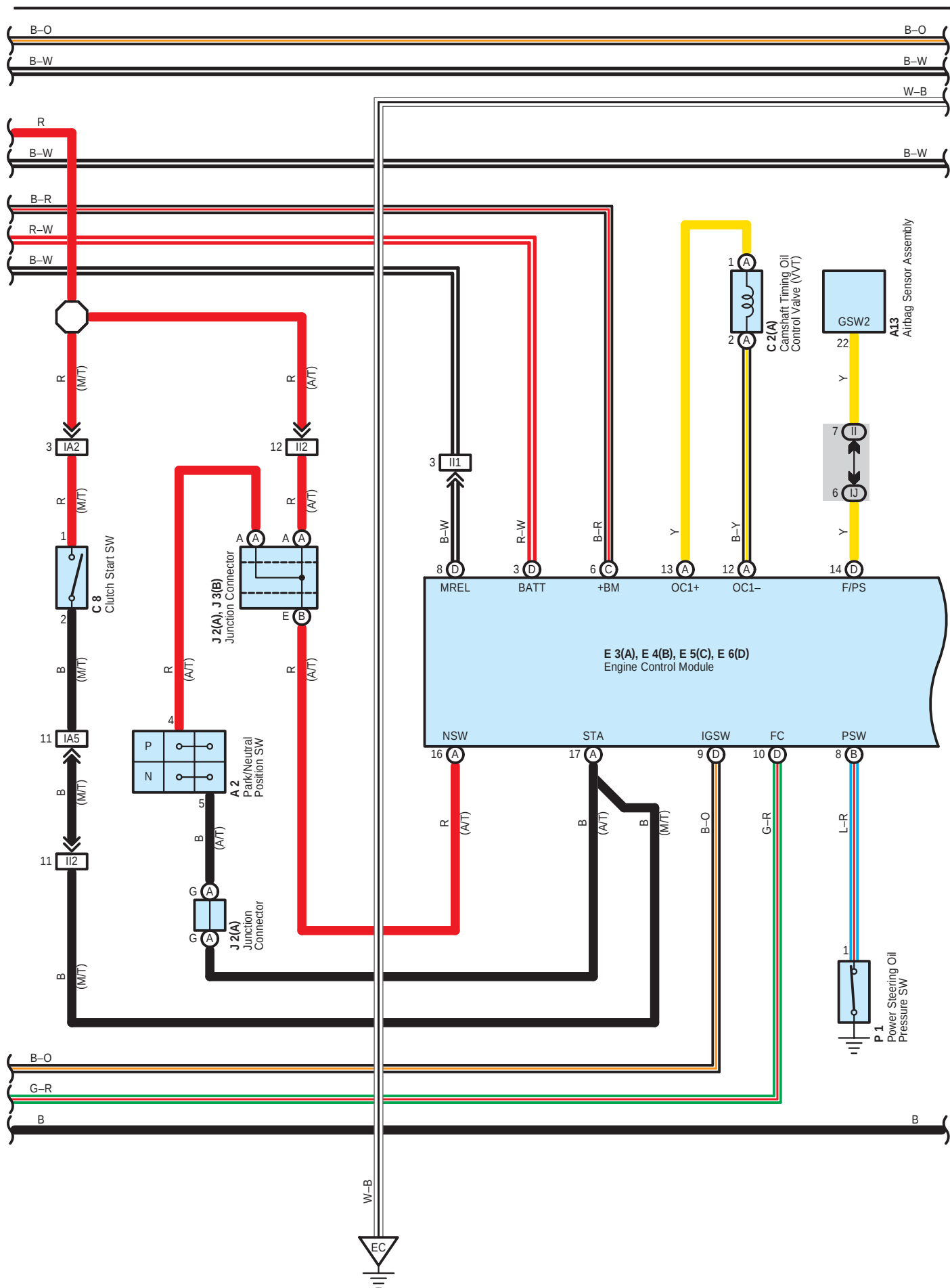
☐ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IK	24	
IL		
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
1B		
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)

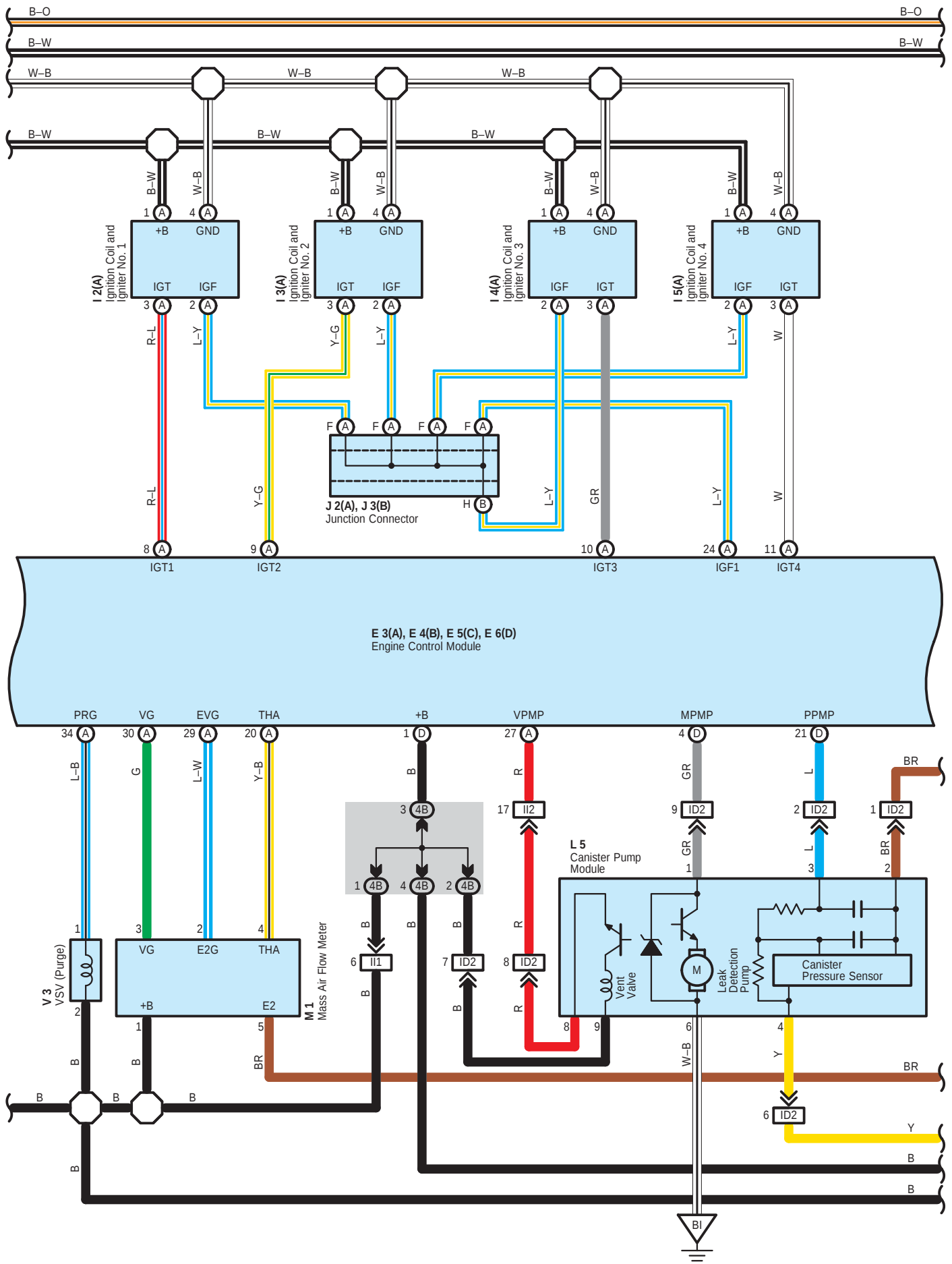
☐ : Connector Joining Wire Harness and Wire Harness

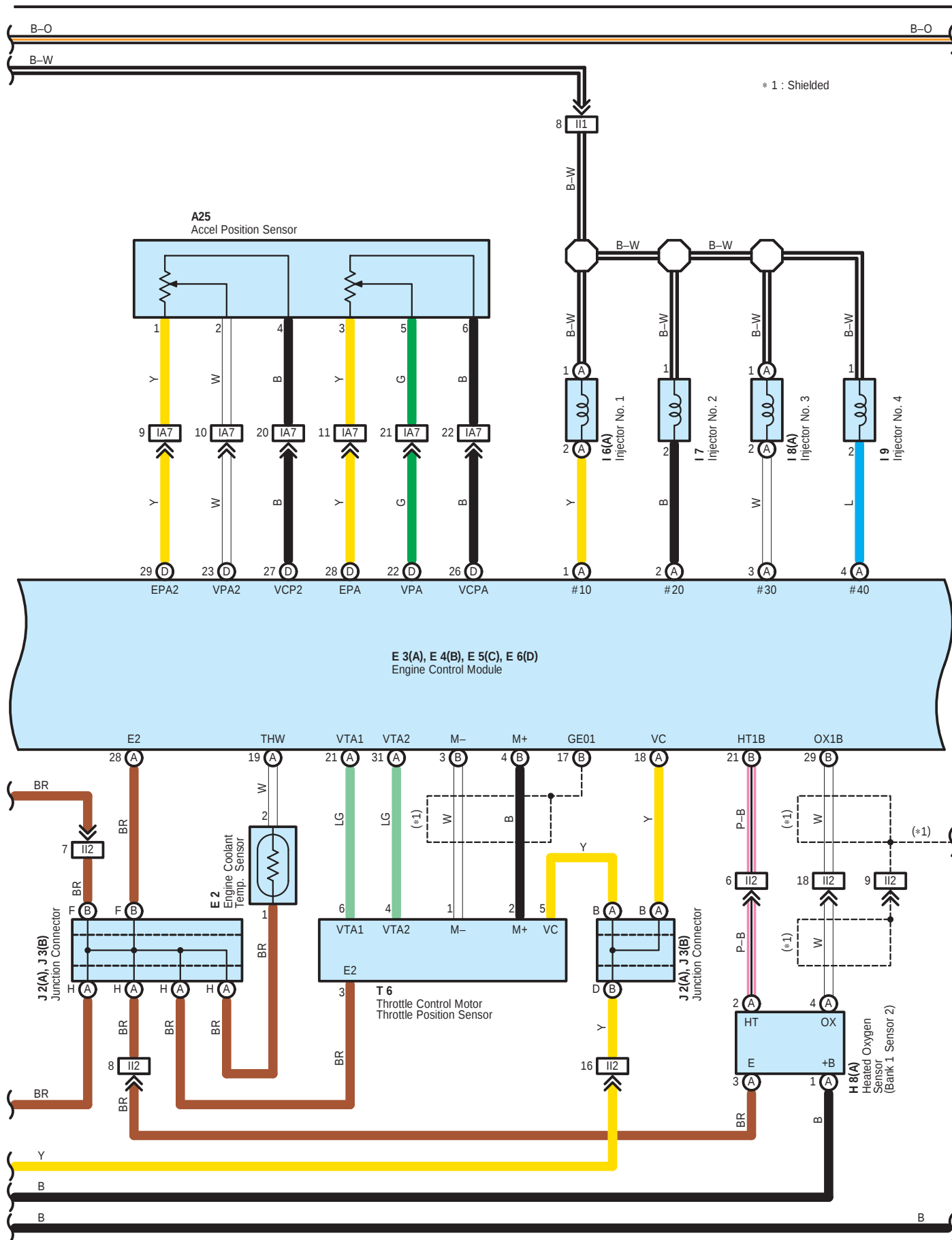
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	
IA4	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)





Engine Control for 1ZZ-FE

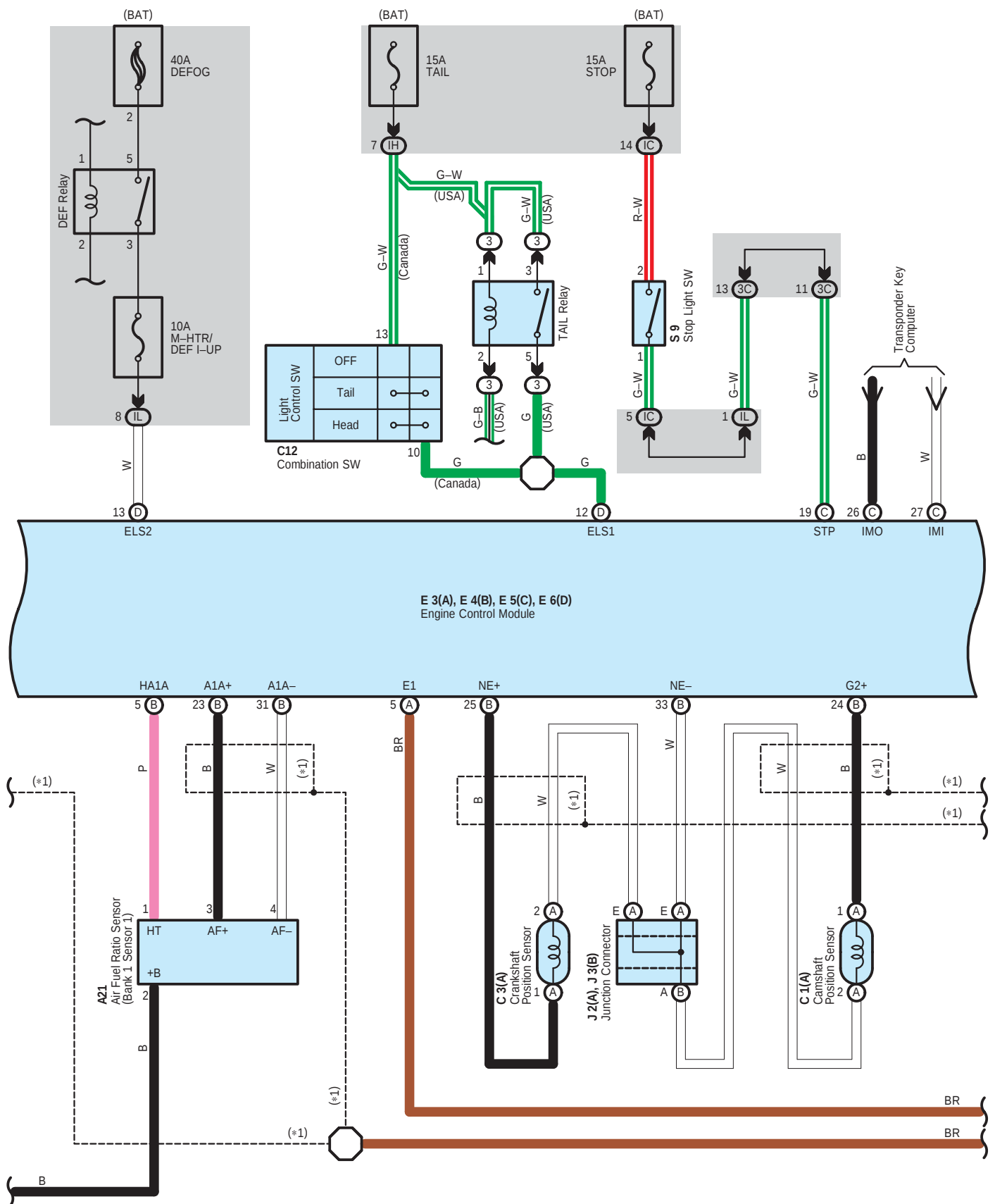


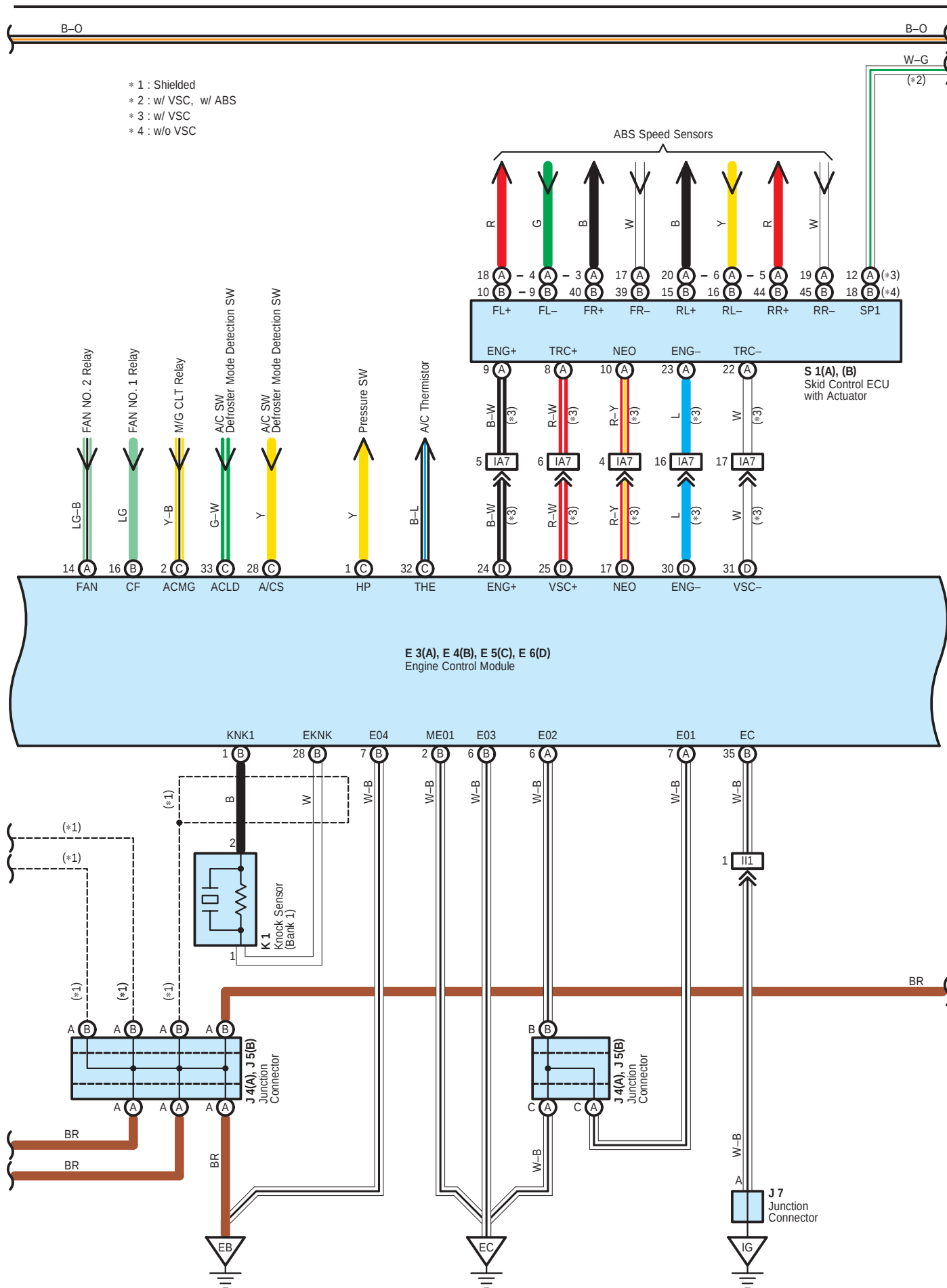


Engine Control for 1ZZ-FE

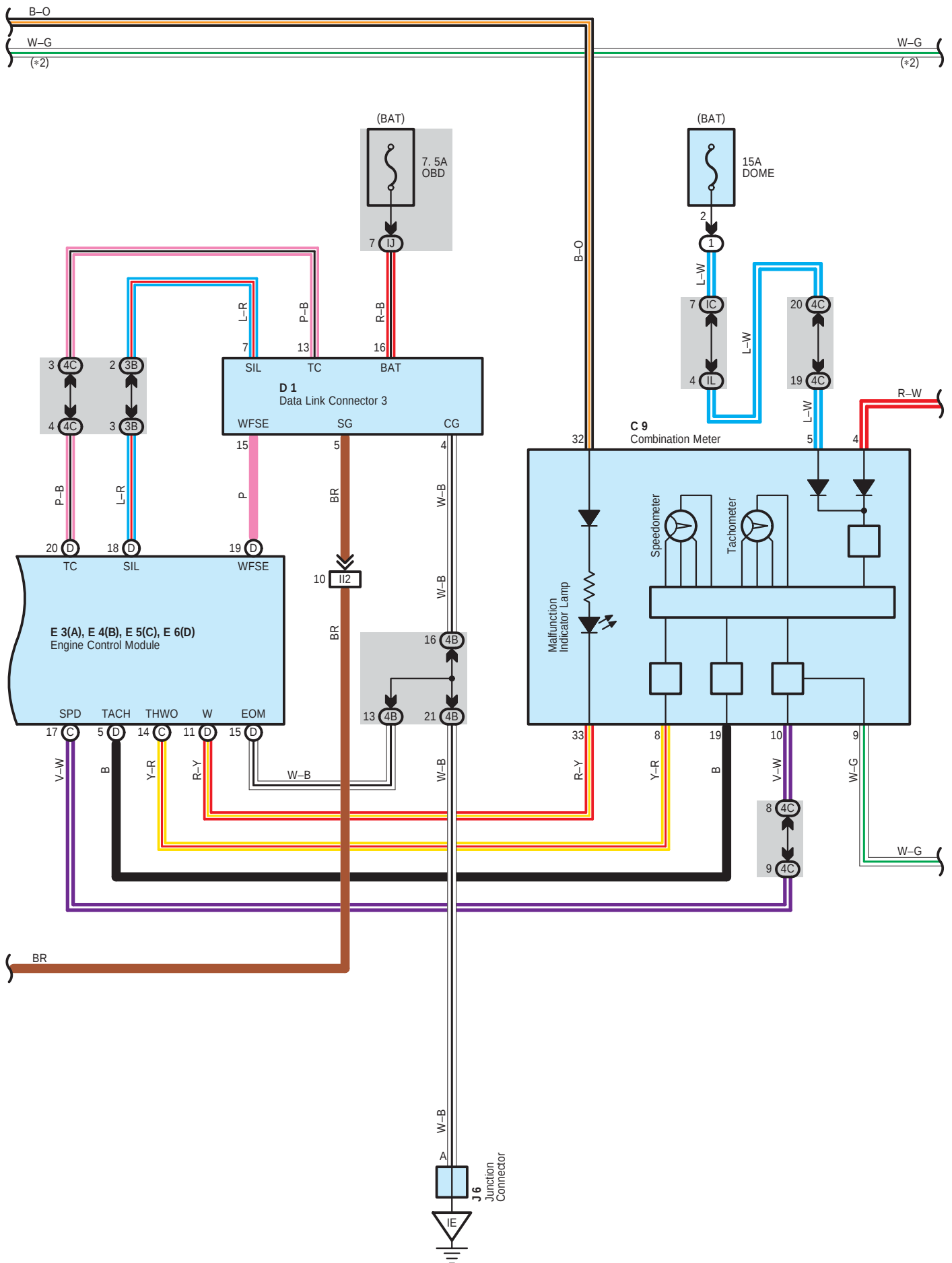
B-O

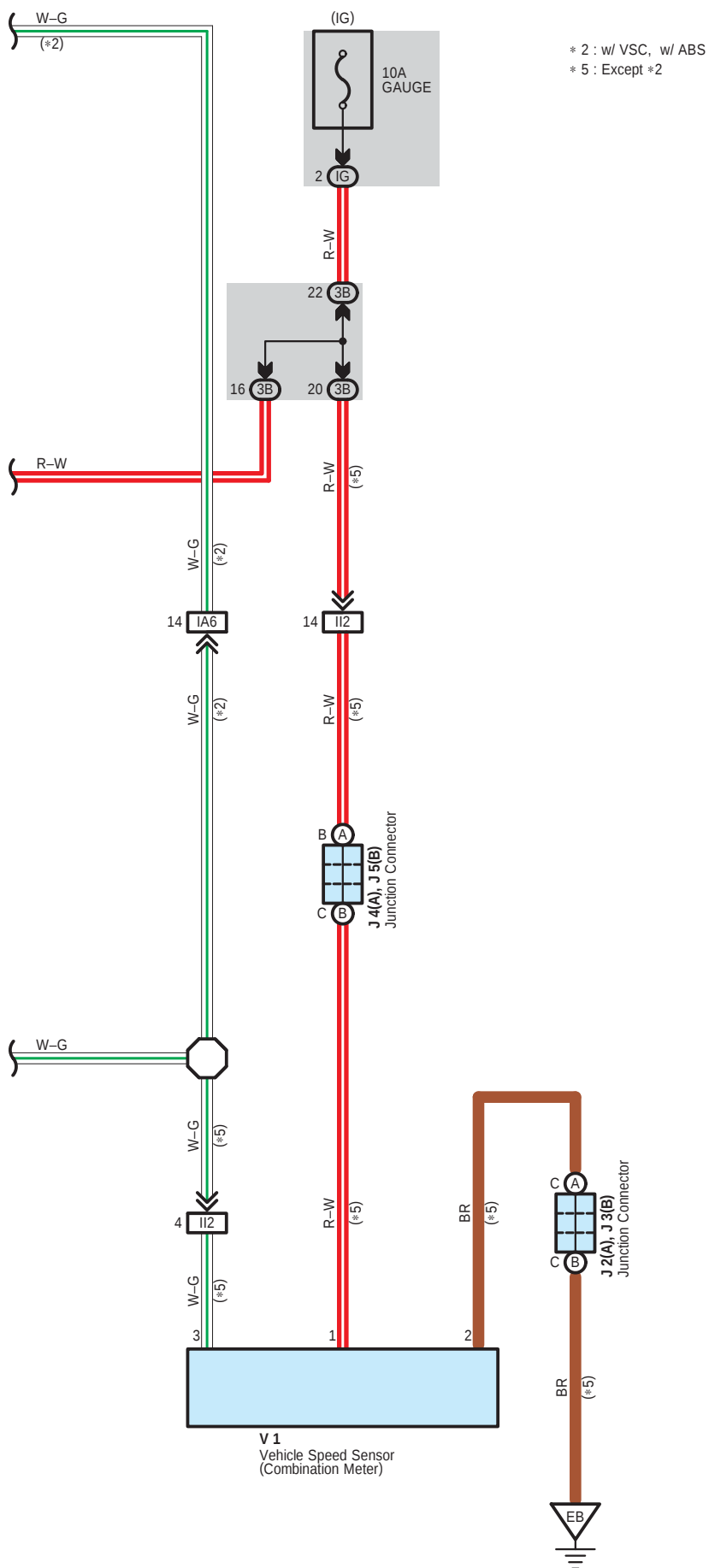
B-O





Engine Control for 1ZZ-FE





System Outline

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

1. Input Signals

(1) Engine coolant temp. signal system

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. Thus the engine coolant temp. is input as a control signal to TERMINAL THW of the engine control module.

(2) Intake air temp. signal system

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) Power steering oil pressure signal system

Power steering oil pressure is detected by the power steering oil pressure SW and is input as a control signal to TERMINAL PSW of the engine control module.

(4) RPM signal system

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

(5) Throttle signal system

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

(6) Vehicle speed signal system

The vehicle speed is detected by the ABS speed sensor and the signal is input to TERMINAL SPD of the engine control module via the comb. meter and the skid control ECU with actuator. (w/ VSC, w/ ABS)

The vehicle speed is detected by the vehicle speed sensor installed in the transaxle and the signal is input to TERMINAL SPD of the engine control module via the comb. meter. (w/o VSC, w/o ABS)

(7) NSW signal system (A/T)

The Park/Neutral position SW detects whether the shift position is in neutral or not, and inputs a control signal to TERMINAL NSW of the engine control module.

(8) A/C SW signal system

The operating voltage of the A/C SW is detected and is input as a control signal to TERMINAL A/CS of the engine control module.

(9) Battery signal system

Voltage is constantly applied to TERMINAL BATT of the engine control module. When the ignition SW is turned to on, voltage for engine control module operation is applied via the EFI relay to TERMINAL +B of the engine control module.

(10) Intake air volume signal system

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.

(11) STA signal system

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

(12) Oxygen sensor signal system

The oxygen density in the exhaust gases is detected and is input as a control signal into TERMINAL OX1B of the engine control module. To maintain stable detection performance by the oxygen sensor, a heater is used for warming the sensor. The heater is also controlled by the engine control module (HT1B).

(13) Air fuel ratio signal circuit

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

(14) Engine knock signal system

Engine knocking is detected by the knock sensor and input as a control signal to TERMINAL KNK1 of the engine control module.

(15) Electrical load signal system

When systems which cause a high electrical load such as the rear window defogger, taillight are turned on, a signal is input to TERMINALS ELS and ELS2 as a control signal.

2. Control System

* SFI system

The SFI system monitors the engine conditions through the signals, which are input from each sensor to the engine control module. Based on this data and the program memorized in the engine control module, the most appropriate fuel injection timing is decided and current is output to TERMINALS #10, #20, #30 and #40 of the engine control module, operating the injectors (to inject fuel). This is the system which finely controls the fuel injection in response to the driving conditions, through the engine control module.

* ESA system

The ESA system monitors the engine conditions using the signals, which are input to the engine control module from each sensor. Based on this data and the program memorized in the engine control module, the most appropriate ignition timing is decided and current is output to TERMINALS IGT1, IGT2, IGT3 and IGT4 of the engine control module. This output controls the ignition coil and igniter No. 1, No. 2, No. 3 and No. 4 to produce the most appropriate ignition timing for the driving conditions.

* Knock control system

Knock control system controls the gate based on the engine rotation speed and detects knocking by the peak value of the knock sensor output during the gate open period, and then controls it to the most suitable ignition timing in proportion to the driving condition.

* Evapopurge control system

This system leads the vapor stuck to the canister to the surge tank in order not to agitate the air fuel by adjusting the fuel injection volume.

The signal at this time will be output from TERMINAL PRG of the engine control module to VSV (Purge).

3. Diagnosis System

With the diagnosis system, when there is a malfunctioning in the engine control module signal system, the malfunction system is recorded in the memory. The malfunctioning system can be found by reading the display (Code) of the malfunction indicator lamp.

4. Fail-Safe System

When a malfunction occurs in any system, if there is a possibility of engine trouble being caused by continued control based on the signals from that system, the fail-safe system either controls the system by using the data (Standard values) recorded in the engine control module memory or else stops the engine.

○ : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A2		32 (1ZZ–FE)		E6	D	36		J4	A	37	
A13		36		F10		38 (*1)		J5	B	37	
A21		32 (1ZZ–FE)				40 (*2)		J6		37	
A25		36		H8	A	37		J7		37	
C1	A	32 (1ZZ–FE)		I2	A	33 (1ZZ–FE)		K1		33 (1ZZ–FE)	
C2	A	32 (1ZZ–FE)		I3	A	33 (1ZZ–FE)		L5		38 (*1)	
C3	A	32 (1ZZ–FE)		I4	A	33 (1ZZ–FE)				40 (*2)	
C8		36		I5	A	33 (1ZZ–FE)		M1		33 (1ZZ–FE)	
C9		36		I6	A	33 (1ZZ–FE)		P1		33 (1ZZ–FE)	
C12		36		I7		33 (1ZZ–FE)		S1		A	33 (1ZZ–FE)
D1		36		I8	A	33 (1ZZ–FE)				B	33 (1ZZ–FE)
E2		32 (1ZZ–FE)		I9		33 (1ZZ–FE)		S9		37	
E3	A	36		I10		37		T6		33 (1ZZ–FE)	
E4	B	36		J2	A	37		V1		33 (1ZZ–FE)	
E5	C	36		J3	B	37		V3		33 (1ZZ–FE)	

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier

Engine Control for 1ZZ-FE



: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
II		
IJ		
IK		
IL	24	
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3C		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA4		
IA5		
IA6		
IA7		
ID2	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)
II1	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
II2		

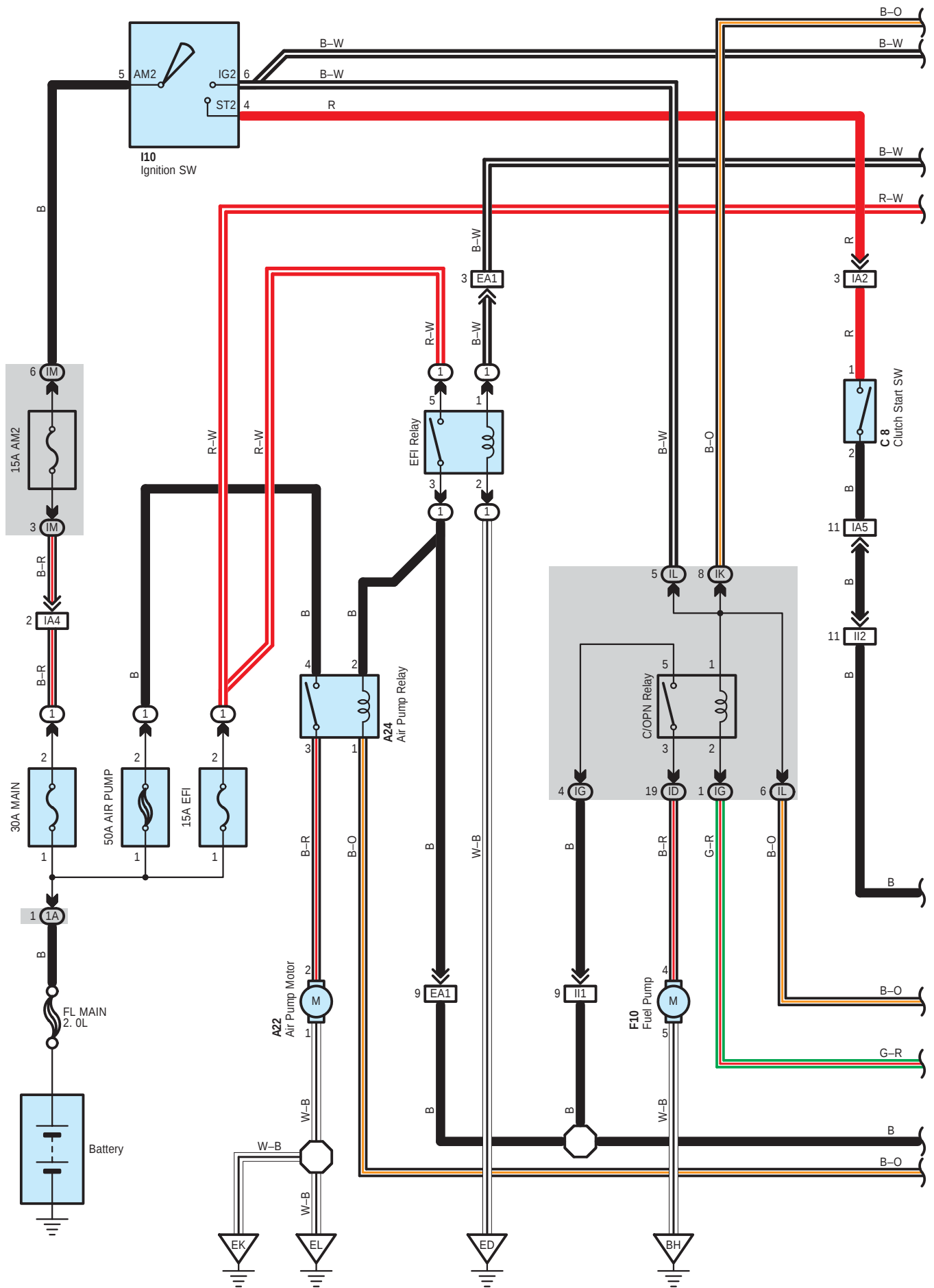


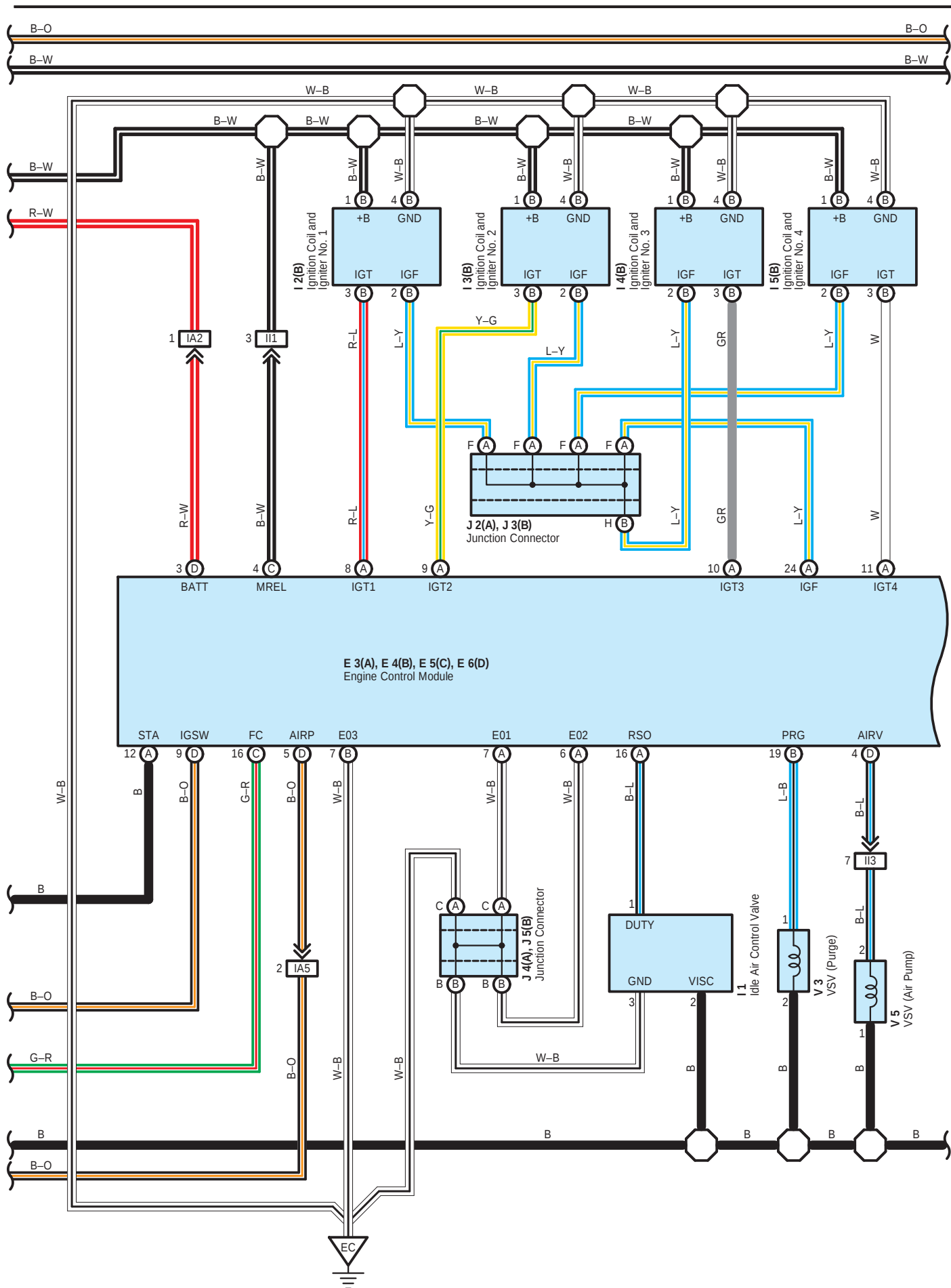
: Ground Points

Code	See Page	Ground Points Location
EB	42 (1ZZ-FE)	Left Side of the Cylinder Head
EC		
ED	42 (1ZZ-FE)	Front Left Suspension Tower
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel
BH	46 (*1)	Under the Left Quarter Pillar
	47 (*2)	
BI	46 (*1)	Lower Back Panel
	47 (*2)	

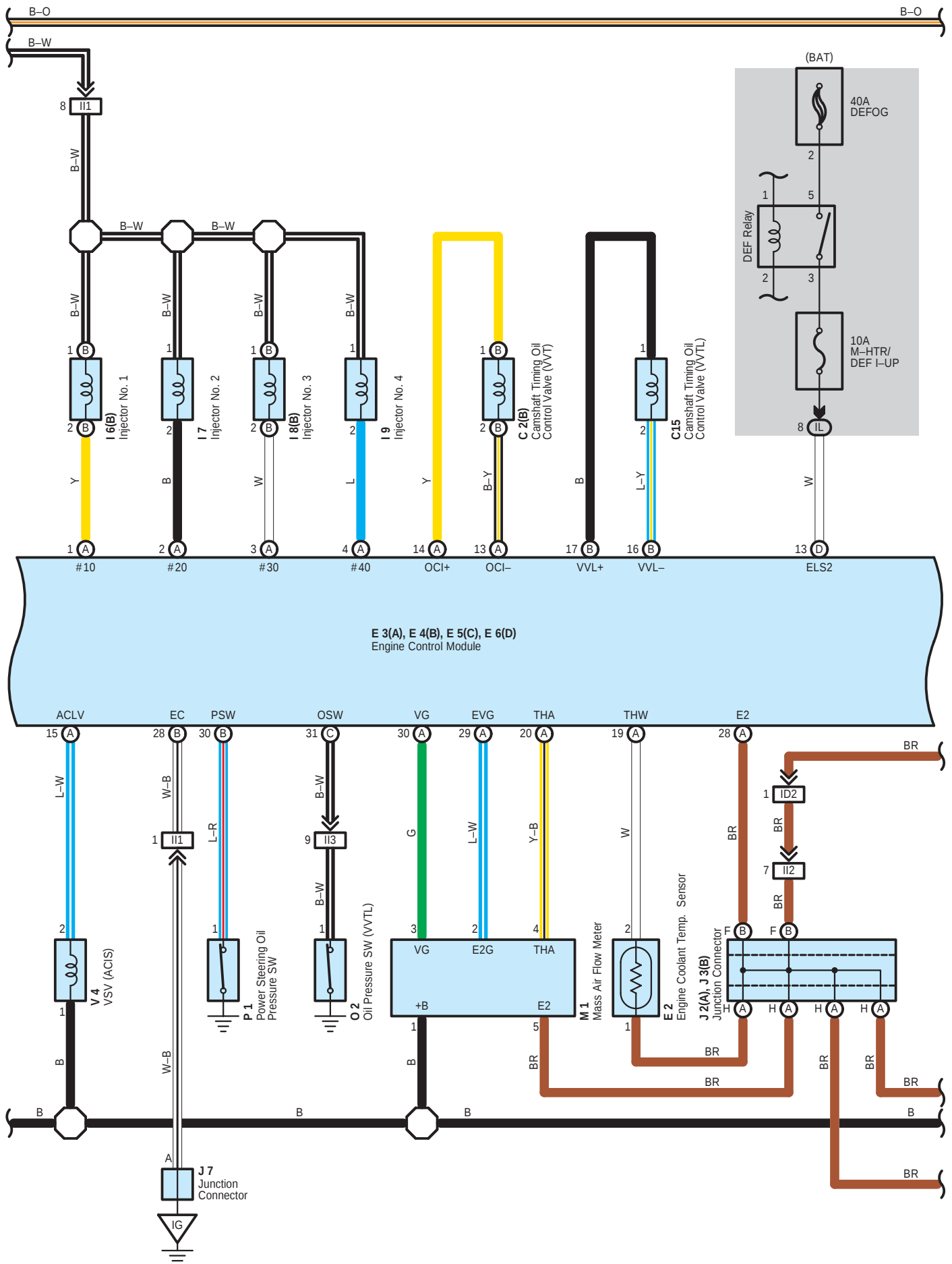
* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

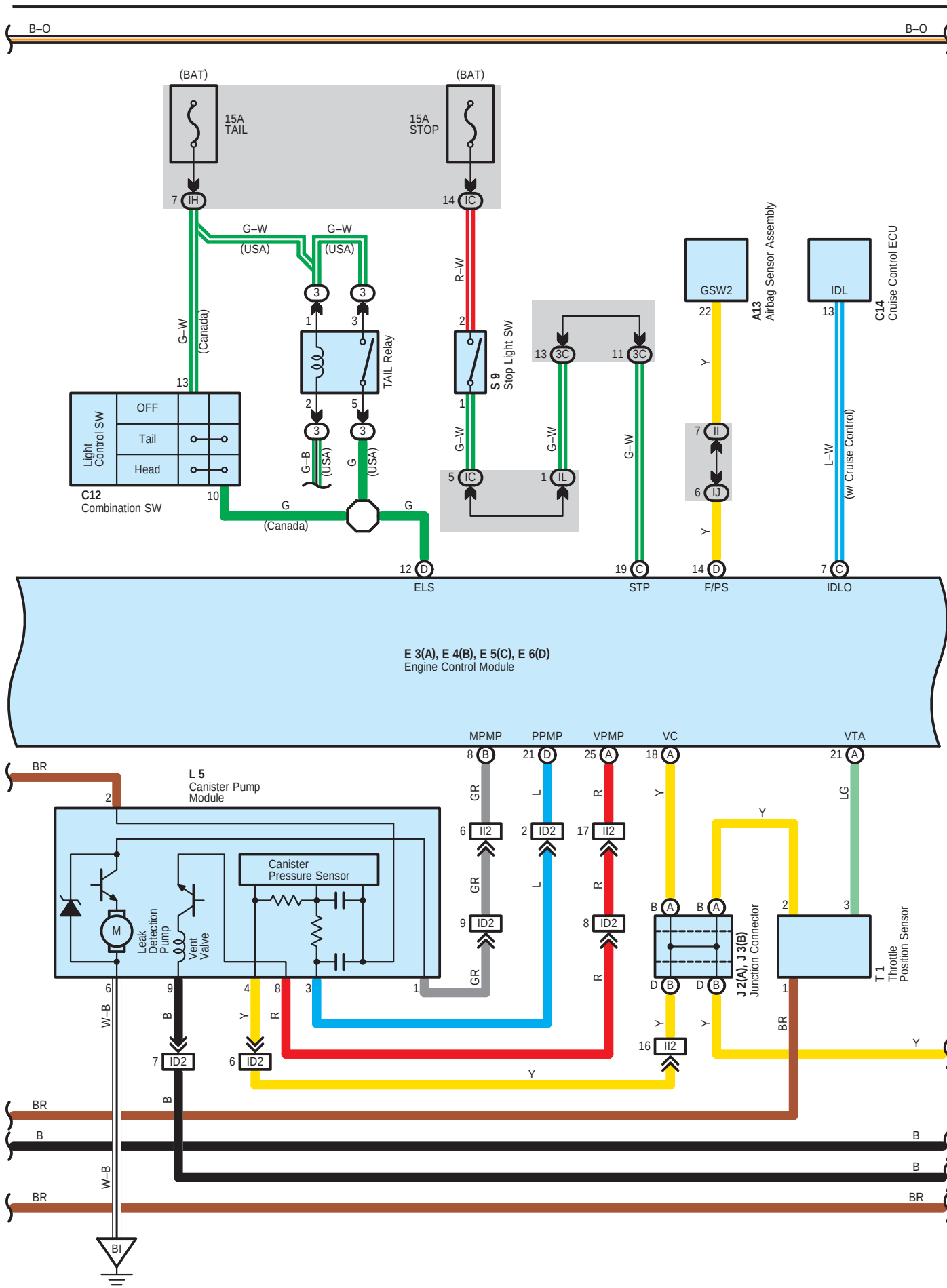
Engine Control for 2ZZ-GE





Engine Control for 2ZZ-GE



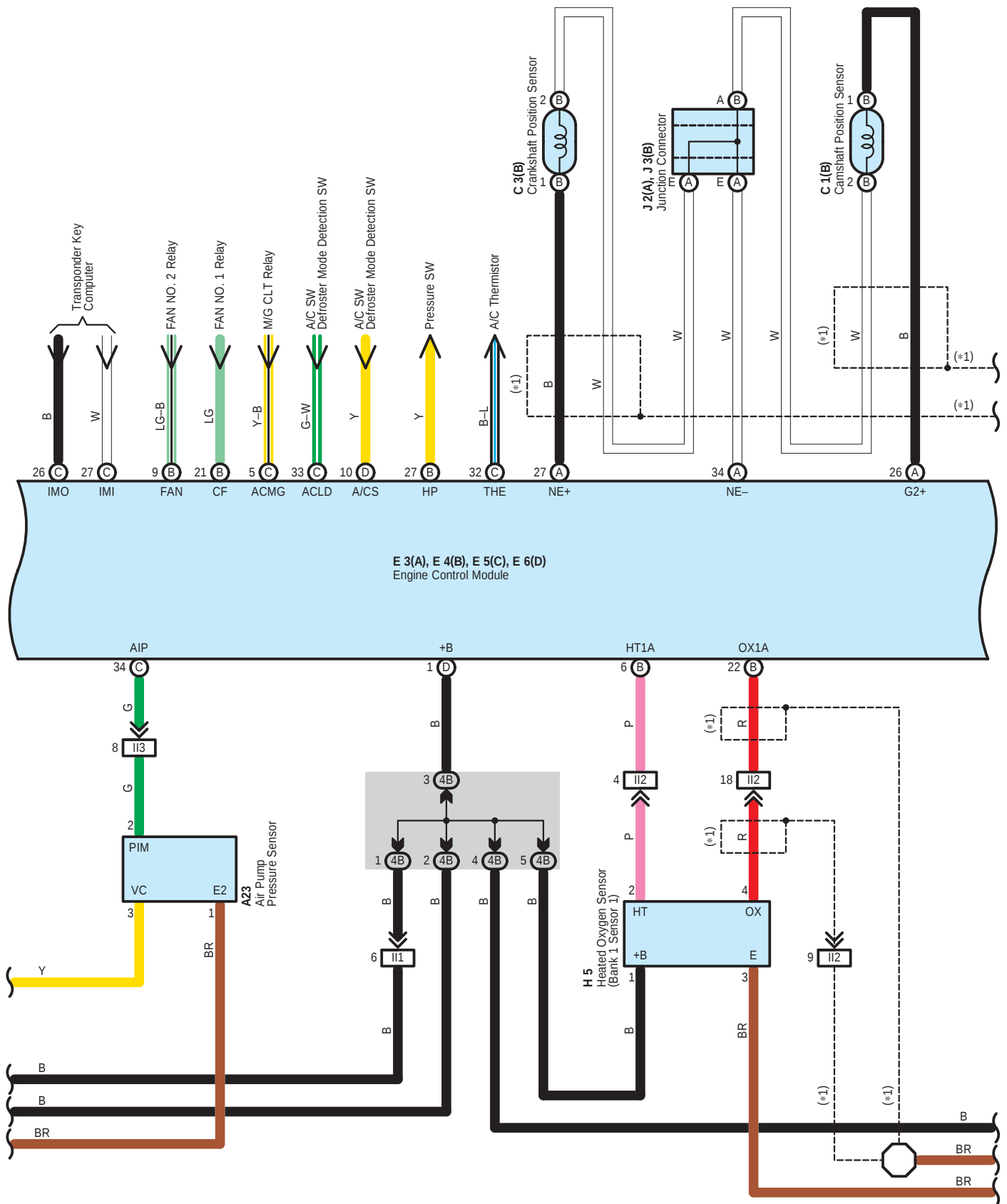


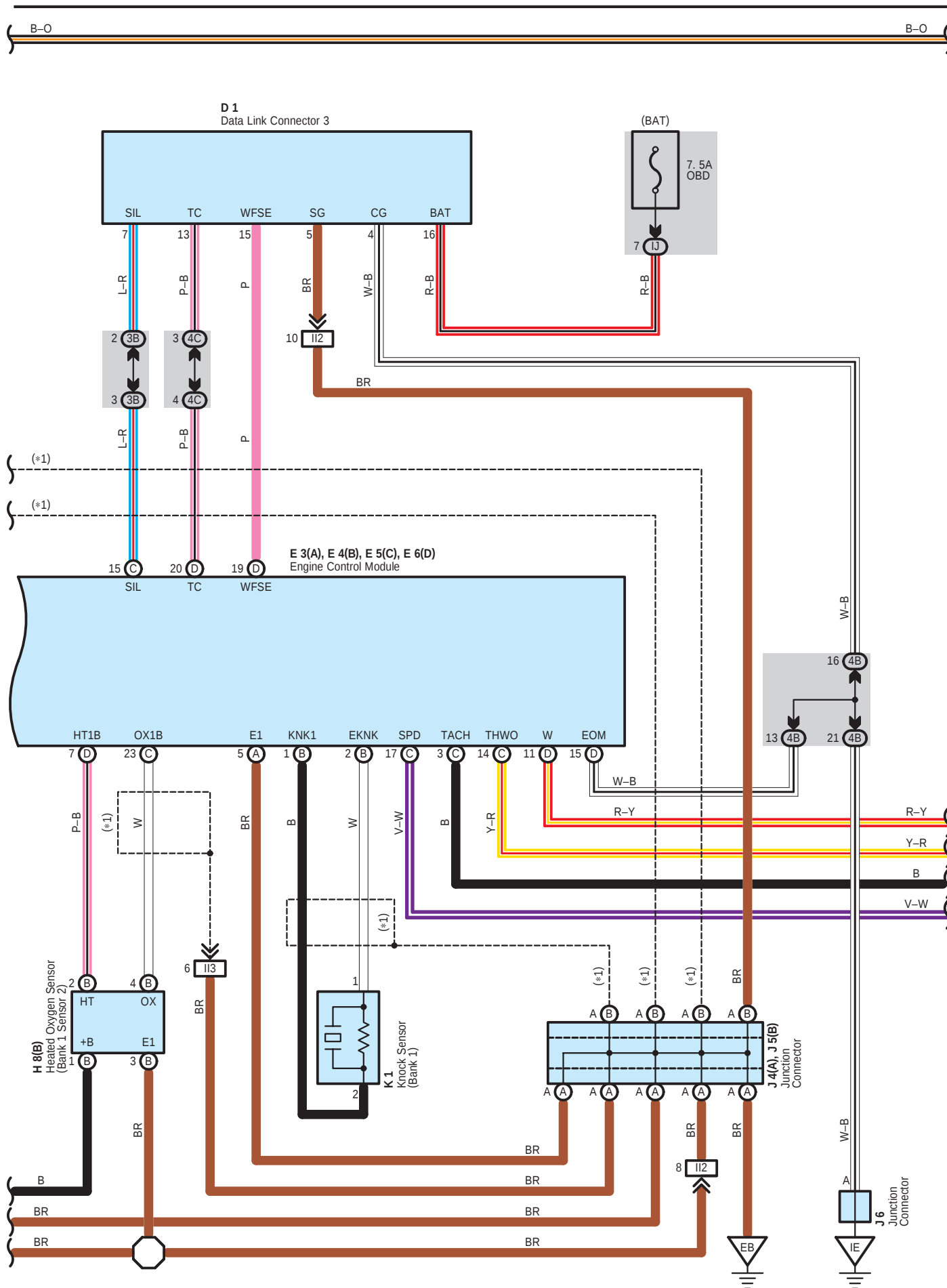
Engine Control for 2ZZ-GE

B-O

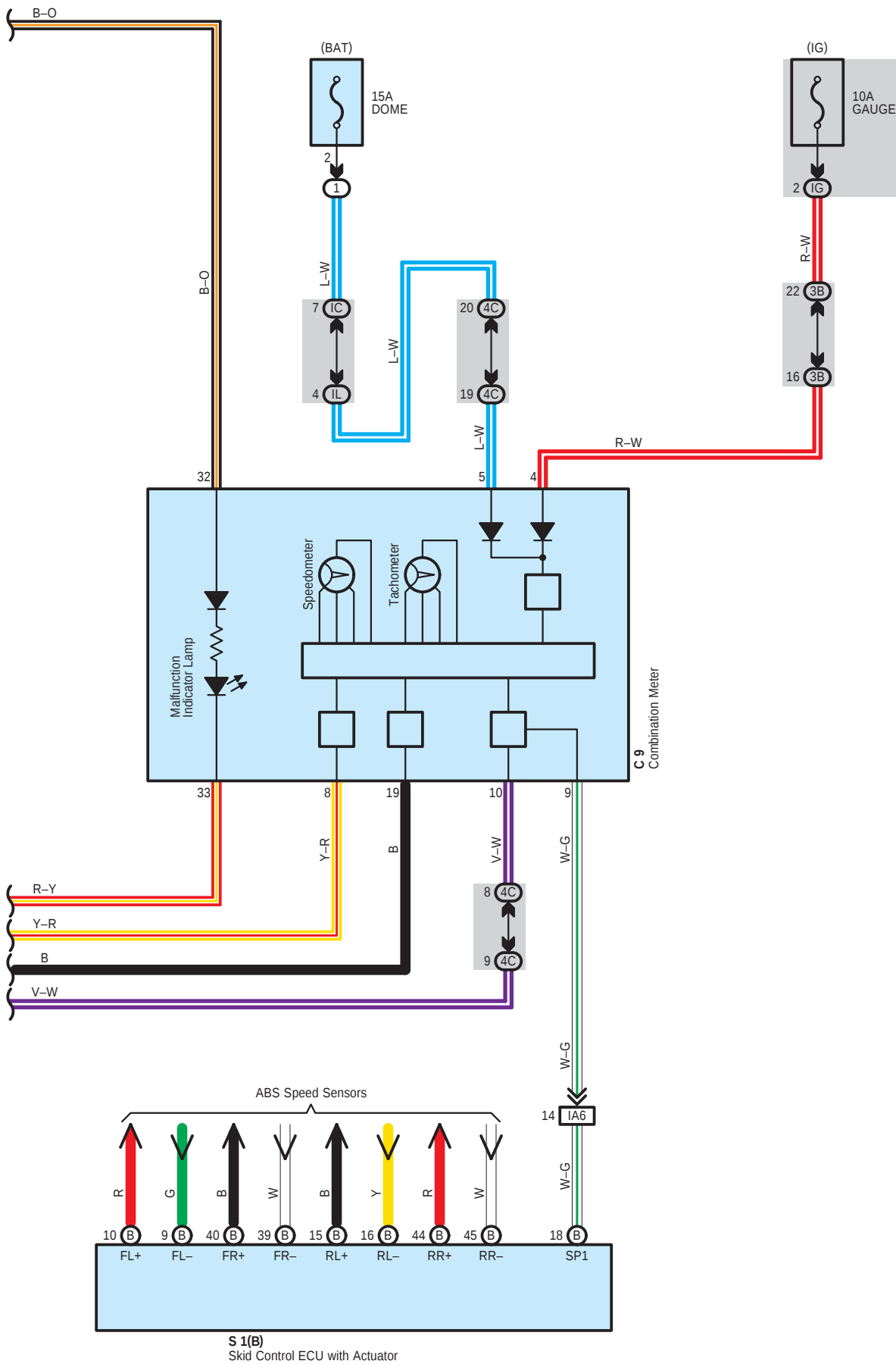
B-O

* 1 : Shielded





Engine Control for 2ZZ-GE



System Outline

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

1. Input Signals

- (1) Engine coolant temp. signal system
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. Thus the engine coolant temp. is input as a control signal to TERMINAL THW of the engine control module.
- (2) Intake air temp. signal system
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) Power steering oil pressure signal system
Power steering oil pressure is detected by the power steering oil pressure SW and is input as a control signal to TERMINAL PSW of the engine control module.
- (4) RPM signal system
Camshaft position and crankshaft position are detected by the camshaft position sensor and crankshaft position sensor. Camshaft position is input as a control signal to TERMINAL G2+ of the engine control module, and engine RPM is input into TERMINAL NE+.
- (5) Throttle signal system
The throttle position sensor detects the throttle valve opening angle, which is input as a control signal to TERMINAL VTA of the engine control module.
- (6) Vehicle speed signal system
The vehicle speed is detected by the ABS speed sensor and the signal is input to TERMINAL SPD of the engine control module via the comb. meter and the skid control ECU with actuator. (w/ ABS)
The vehicle speed is detected by the vehicle speed sensor installed in the transaxle and the signal is input to TERMINAL SPD of the engine control module via the comb. meter. (w/o ABS)
- (7) A/C SW signal system
The operating voltage of the A/C SW is detected and is input as a control signal to TERMINAL A/CS of the engine control module.
- (8) Battery signal system
Voltage is constantly applied to TERMINAL BATT of the engine control module. When the ignition SW is turned to on, voltage for engine control module operation is applied via the EFI relay to TERMINAL +B of the engine control module.
- (9) Intake air volume signal system
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.
- (10) STA signal system
To confirm that the engine is cranking, the voltage applied to the starter motor during cranking is detected and is input as a control signal to TERMINAL STA of the engine control module.
- (11) Oxygen sensor signal system
The oxygen density in the exhaust gases is detected and is input as a control signal into TERMINALS OX1A and OX1B of the engine control module. To maintain stable detection performance by the oxygen sensor, a heater is used for warming the sensor. The heater is also controlled by the engine control module (HT1A and HT1B).
- (12) Engine knock signal system
Engine knocking is detected by the knock sensor and input as a control signal to TERMINAL KNK1 of the engine control module.
- (13) Electrical load signal system
When systems which cause a high electrical load such as the rear window defogger, taillight are turned on, a signal is input to TERMINALS ELS and ELS2 as a control signal.

Engine Control for 2ZZ-GE

2. Control System

* SFI system

The SFI system monitors the engine conditions through the signals, which are input from each sensor to the engine control module. Based on this data and the program memorized in the engine control module, the most appropriate fuel injection timing is decided and current is output to TERMINALS #10, #20, #30 and #40 of the engine control module, operating the injectors (to inject fuel). This is the system which finely controls the fuel injection in response to the driving conditions, through the engine control module.

* ESA system

The ESA system monitors the engine conditions using the signals, which are input to the engine control module from each sensor. Based on this data and the program memorized in the engine control module, the most appropriate ignition timing is decided and current is output to TERMINALS IGT1, IGT2, IGT3 and IGT4 of the engine control module. This output controls the ignition coil and igniter No. 1, No. 2, No. 3 and No. 4 to produce the most appropriate ignition timing for the driving conditions.

* IAC system

The IAC system increases the RPM and provides idle stability for fast idle-up when the engine is cold, and when the idle speed has dropped due to electrical load and so on. The engine control module evaluates the signals from each sensor, and outputs current to TERMINAL RSO to control the idle air control valve.

* Knock control system

Knock control system controls the gate based on the engine rotation speed and detects knocking by the peak value of the knock sensor output during the gate open period, and then controls it to the most suitable ignition timing in proportion to the driving condition.

* Evapopurge control system

This system leads the vapor stuck to the canister to the surge tank in order not to agitate the air fuel by adjusting the fuel injection volume.

The signal at this time will be output from TERMINAL PRG of the engine control module to VSV (Purge).

3. Diagnosis System

With the diagnosis system, when there is a malfunctioning in the engine control module signal system, the malfunction system is recorded in the memory. The malfunctioning system can be found by reading the display (Code) of the malfunction indicator lamp.

4. Fail-Safe System

When a malfunction occurs in any system, if there is a possibility of engine trouble being caused by continued control based on the signals from that system, the fail-safe system either controls the system by using the data (Standard values) recorded in the engine control module memory or else stops the engine.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A13	36	E6	D	J4	A
A22	34 (2ZZ-GE)	F10	38 (*1)	J5	B
A23	34 (2ZZ-GE)			J6	37
A24	34 (2ZZ-GE)	H5	37	J7	37
C1	B	H8	B	K1	35 (2ZZ-GE)
C2	B	I1	35 (2ZZ-GE)	L5	38 (*1)
C3	B				40 (*2)
C8	36	I3	B	M1	35 (2ZZ-GE)
C9	36	I4	B	O2	35 (2ZZ-GE)
C12	36	I5	B	P1	35 (2ZZ-GE)
C14	36	I6	B	S1	B
C15	34 (2ZZ-GE)	I7	35 (2ZZ-GE)	S9	37
D1	36	I8	B	T1	35 (2ZZ-GE)
E2	34 (2ZZ-GE)	I9	35 (2ZZ-GE)	V3	35 (2ZZ-GE)
E3	A	I10	37	V4	35 (2ZZ-GE)
E4	B	J2	A	V5	35 (2ZZ-GE)
E5	C	J3	B		

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
II		
IJ		
IK	24	
IL		
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3C		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	43 (2ZZ-GE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA4		
IA5		
IA6		
ID2	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)
II1	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
II2		
II3		

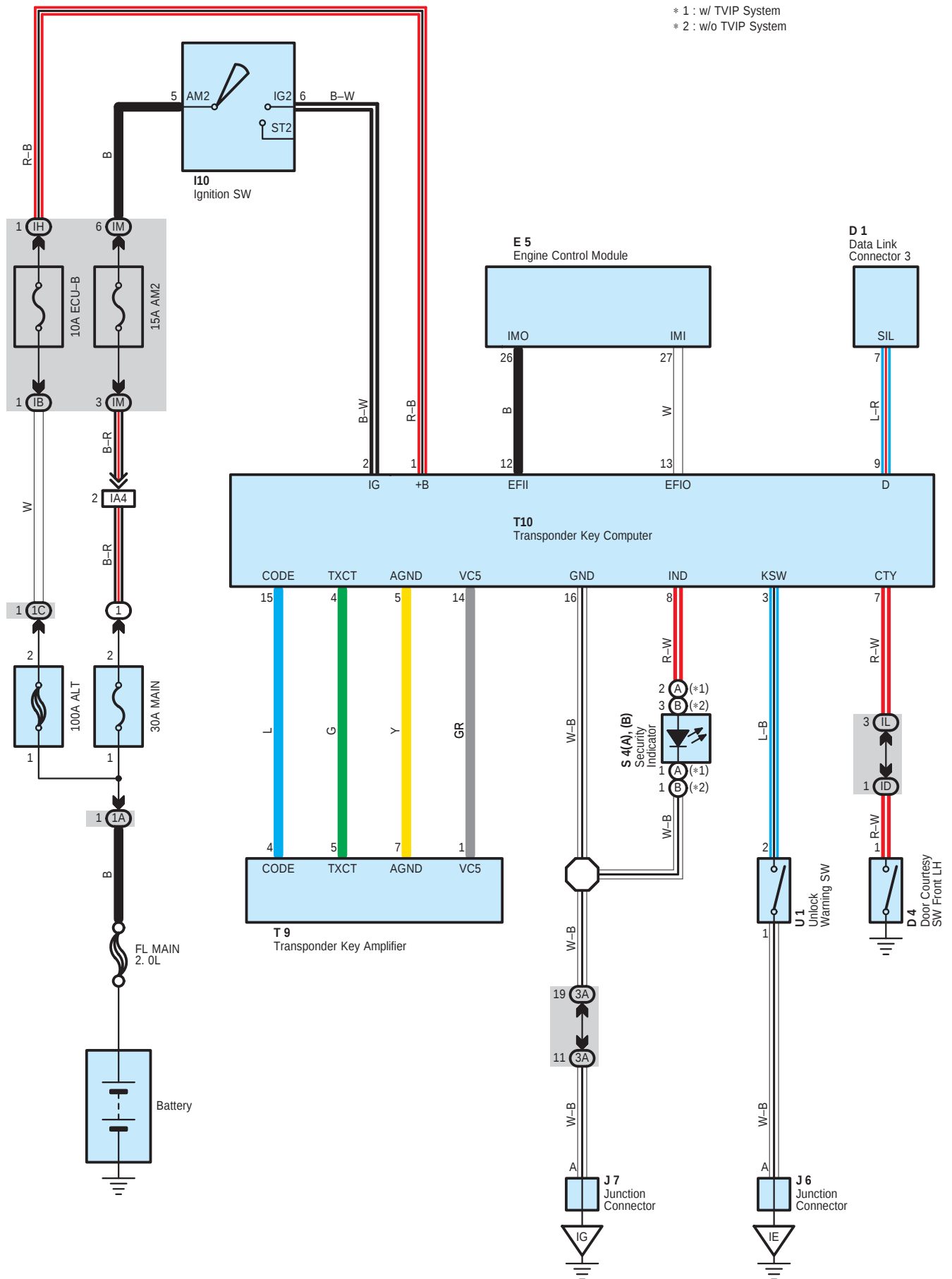
 : Ground Points

Code	See Page	Ground Points Location
EB	43 (2ZZ-GE)	Left Side of the Cylinder Head
EC		
ED	43 (2ZZ-GE)	Front Left Suspension Tower
EK	43 (2ZZ-GE)	Front Left Fender
EL	43 (2ZZ-GE)	Front Left Suspension Tower
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel
BH	46 (*1)	Under the Left Quarter Pillar
	47 (*2)	
BI	46 (*1)	Lower Back Panel
	47 (*2)	

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier

Engine Immobiliser System



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
D1	36	I10	37	S4	B 37
D4	38 (*1)	J6	37	T9	37
	40 (*2)	J7	37	T10	37
E5	36	S4	A 37	U1	37

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IB	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IH	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IL	24	
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
1C	22	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)

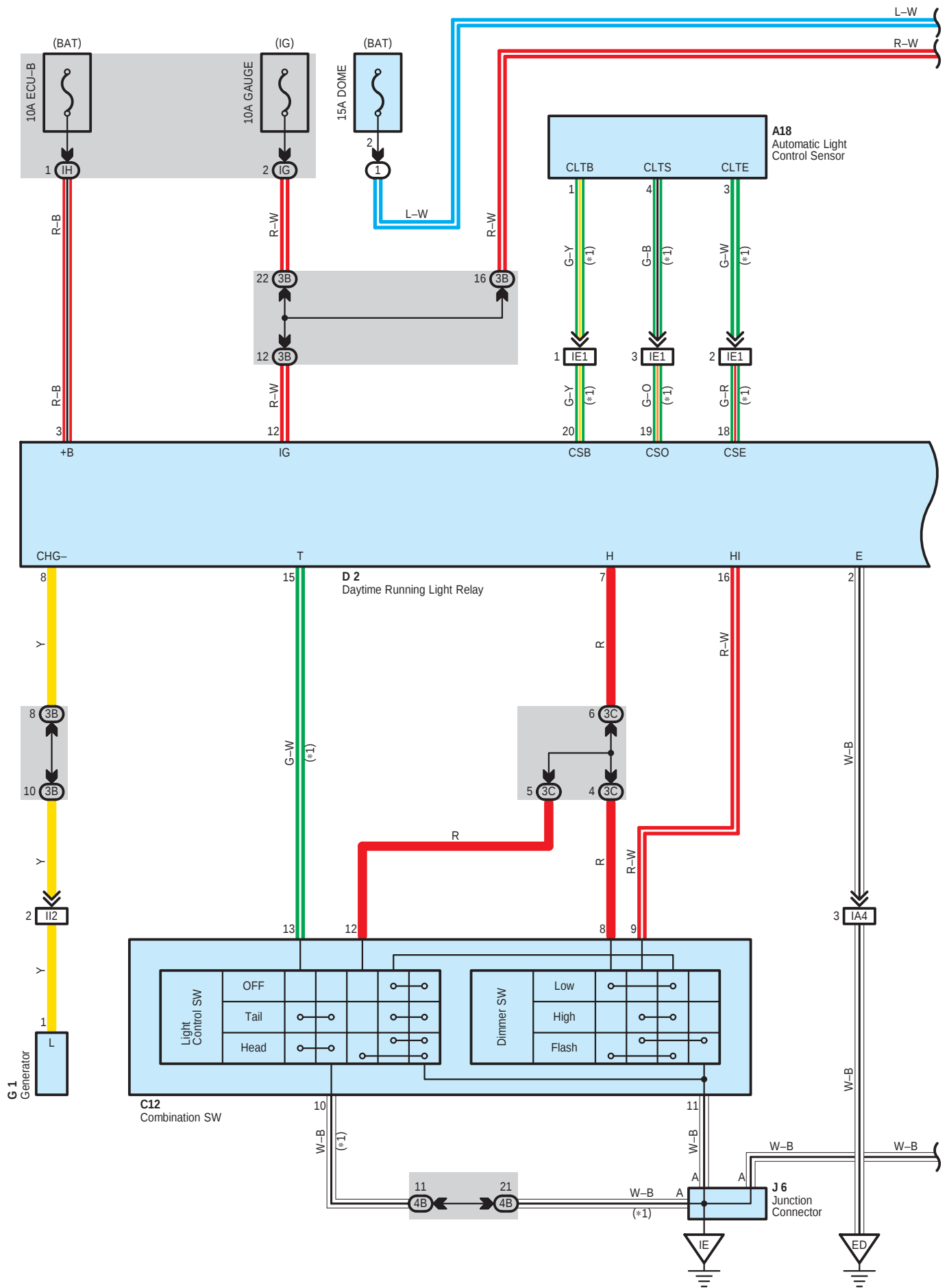
 : Ground Points

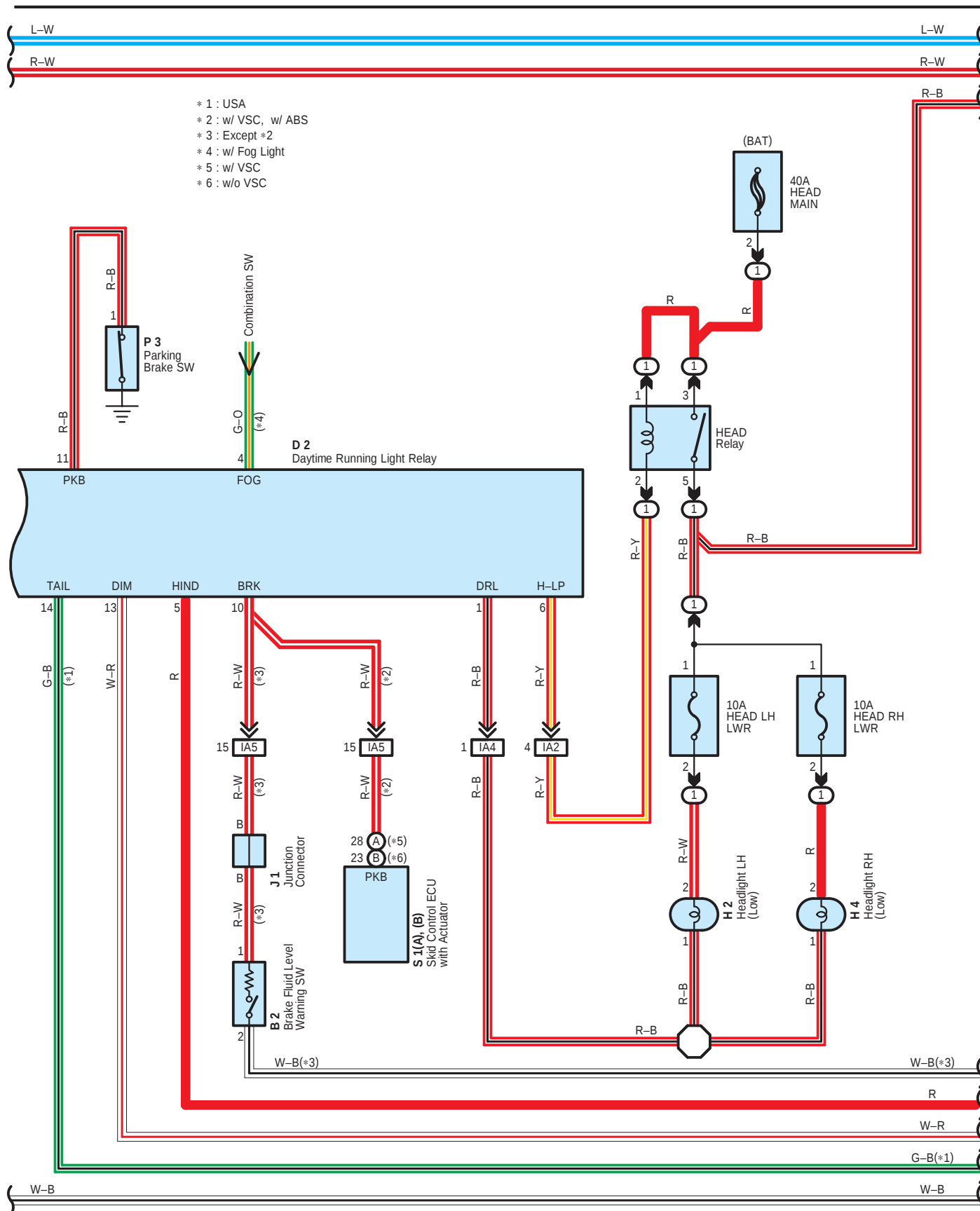
Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

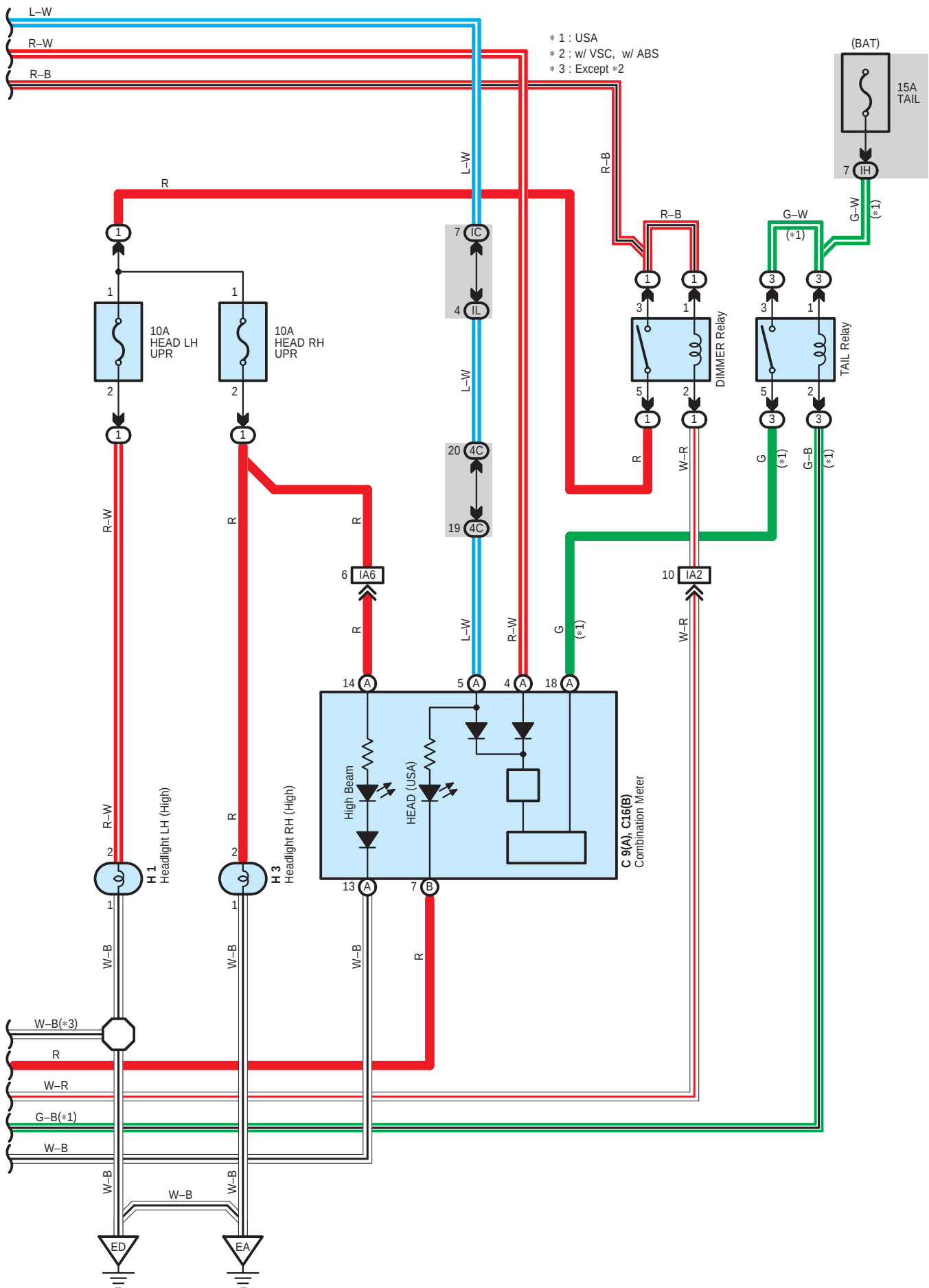
* 2 : w/o Side Airbag and Stereo Component Amplifier

Headlight





Headlight



System Outline

The current is always flowing from the HEAD MAIN fuse to HEAD relay (Coil side) to TERMINAL 6 of the daytime running light relay, from ECU-B fuse to TERMINAL 3 of the daytime running light relay and from the TAIL fuse to TAIL relay (Coil side) to TERMINAL 14 of the daytime running light relay (USA).

When the ignition SW is turned on, the current flowing through the GAUGE fuse flows to TERMINAL 12 of the daytime running light relay.

1. Daytime Running Light Operation

When the engine is started, voltage generated at TERMINAL L of the generator is applied to TERMINAL 8 of the daytime running light relay. If the parking brake lever is pulled up (Parking brake SW on) at this time, the relay is not activated so the daytime running light system does not operate. If the parking brake lever is then released (Parking brake SW off), a signal is input to TERMINAL 11 of the relay.

This activates the daytime running light relay and the HEAD relay is turned to on, so the current flows from the HEAD MAIN fuse to the HEAD relay (Point side) to HEAD LH LWR, HEAD RH LWR fuses to TERMINAL 2 of the headlights to TERMINAL 1 to TERMINAL 1 of the daytime running light relay to TERMINAL 2 to GROUND, causing the headlights to light up (Headlights light up dimmer than normal brightness.). Once the daytime running light system operates and the headlights light up, the headlights remain on even if the parking brake lever is pulled up (Parking brake SW on).

If the engine stalls and the ignition SW remains on, the headlights remain light up even through current is no longer output from TERMINAL L of the generator. If the ignition SW is then turned off, the headlights go off.

If the engine is started with the parking brake lever released (Parking brake SW off), the daytime running light system operates and headlights light up when the engine starts.

2. Headlight Operation

When the light control SW is switched to HEAD position and the dimmer SW is set to LOW position, causing the daytime running light relay and the HEAD relay to turn on, so the current flows from the HEAD MAIN fuse to HEAD relay (Coil side) to TERMINAL 6 of the daytime running light relay to TERMINAL 7 to TERMINAL 12 of the light control SW to TERMINAL 11 to GROUND. The current to HEAD relay (Point side) then flows to HEAD LH LWR, HEAD RH LWR fuses to TERMINAL 2 of the headlights (Low) to TERMINAL 1 to TERMINAL 1 of the daytime running light relay to TERMINAL 2 to GROUND, causing the headlights to light up at normal intensity and HEAD indicator light to light up.

When the light control SW is switched to HEAD position and the dimmer SW is set to HIGH position, the signal from the dimmer SW is input to the daytime running light relay. This activates the daytime running light relay and the HEAD relay is turned on, so the current flows from the HEAD MAIN fuse to HEAD relay (Point side) to TERMINAL 1 of the DIMMER relay to TERMINAL 2 to TERMINAL 13 of the daytime running light relay, activating the DIMMER relay. This causes current to flow from TERMINAL 3 of the DIMMER relay to TERMINAL 5 to HEAD LH UPR, HEAD RH-UPR fuses to TERMINAL 2 of the headlights (High) to TERMINAL 1 to GROUND, causing the headlights to light up at high beam and the high beam indicator light to light up and HEAD indicator light to light up.

When the dimmer SW is switched to FLASH position, the signal from the dimmer SW is input to the daytime running light relay. This activates the daytime running light relay and the HEAD relay is turned on, so the current flows from the HEAD MAIN fuse to HEAD relay (Point side) to TERMINAL 1 of the DIMMER relay to TERMINAL 2 to TERMINAL 13 of the daytime running light relay, activating the DIMMER relay, and also flows from the HEAD LH UPR, HEAD RH UPR fuses to TERMINAL 2 of the headlights to TERMINAL 1 to GROUND, causing the headlights to light up at high beam and the high beam indicator light to light up.

3. Automatic Light Control Operation (USA)

When the daytime running light is operating and the automatic control sensor detects a decrease in the ambient light, the automatic light control operation starts. At the same time, daytime running light relay is activated, so current flows from the TAIL fuse to the TAIL relay (Coil side) to TERMINAL 14 of the daytime running light relay, and the HEAD MAIN fuse to the HEAD relay (Coil side) to TERMINAL 6 of the daytime running light relay, activating both the TAIL relay and the HEAD relay, so that the taillights and headlights light up.

When the automatic light control sensor detects an increase in the ambient light, the ignition SW is turned to off, the light control SW is turned to HEAD position, and the automatic light control operation stops.

Headlight

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
A18		36	H1	32 (1ZZ–FE)	J1	35 (2ZZ–GE)
B2		32 (1ZZ–FE)		34 (2ZZ–GE)	J6	37
		34 (2ZZ–GE)	H2	32 (1ZZ–FE)	P3	37
C9	A	36		34 (2ZZ–GE)	S1	A
C12		36	32 (1ZZ–FE)	35 (2ZZ–GE)		
C16	B	36	34 (2ZZ–GE)	B		33 (1ZZ–FE)
D2		36	32 (1ZZ–FE)			35 (2ZZ–GE)
G1		32 (1ZZ–FE)	H4	34 (2ZZ–GE)		
		34 (2ZZ–GE)		J1	33 (1ZZ–FE)	

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
IL	24	
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3C		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

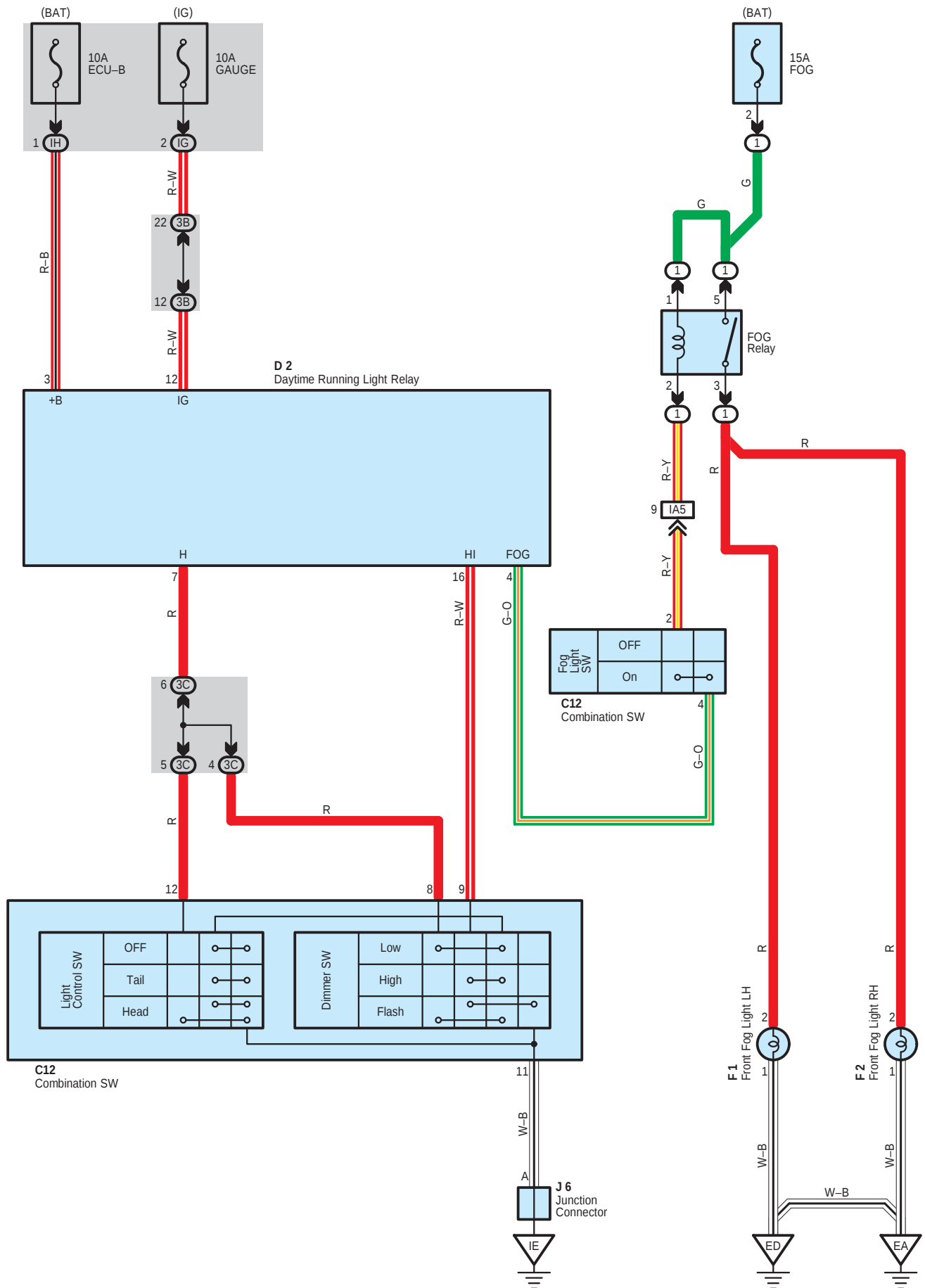
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA4		
IA5		
IA6		
IE1	45	Instrument Panel Wire and Instrument Panel No.4 Wire (Behind the Combination Meter)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)

▽ : Ground Points

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter

Fog Light



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
C12	36	F1	34 (2ZZ-GE)	J6	37
D2	36	F2	32 (1ZZ-FE)		
F1	32 (1ZZ-FE)		34 (2ZZ-GE)		

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3C		

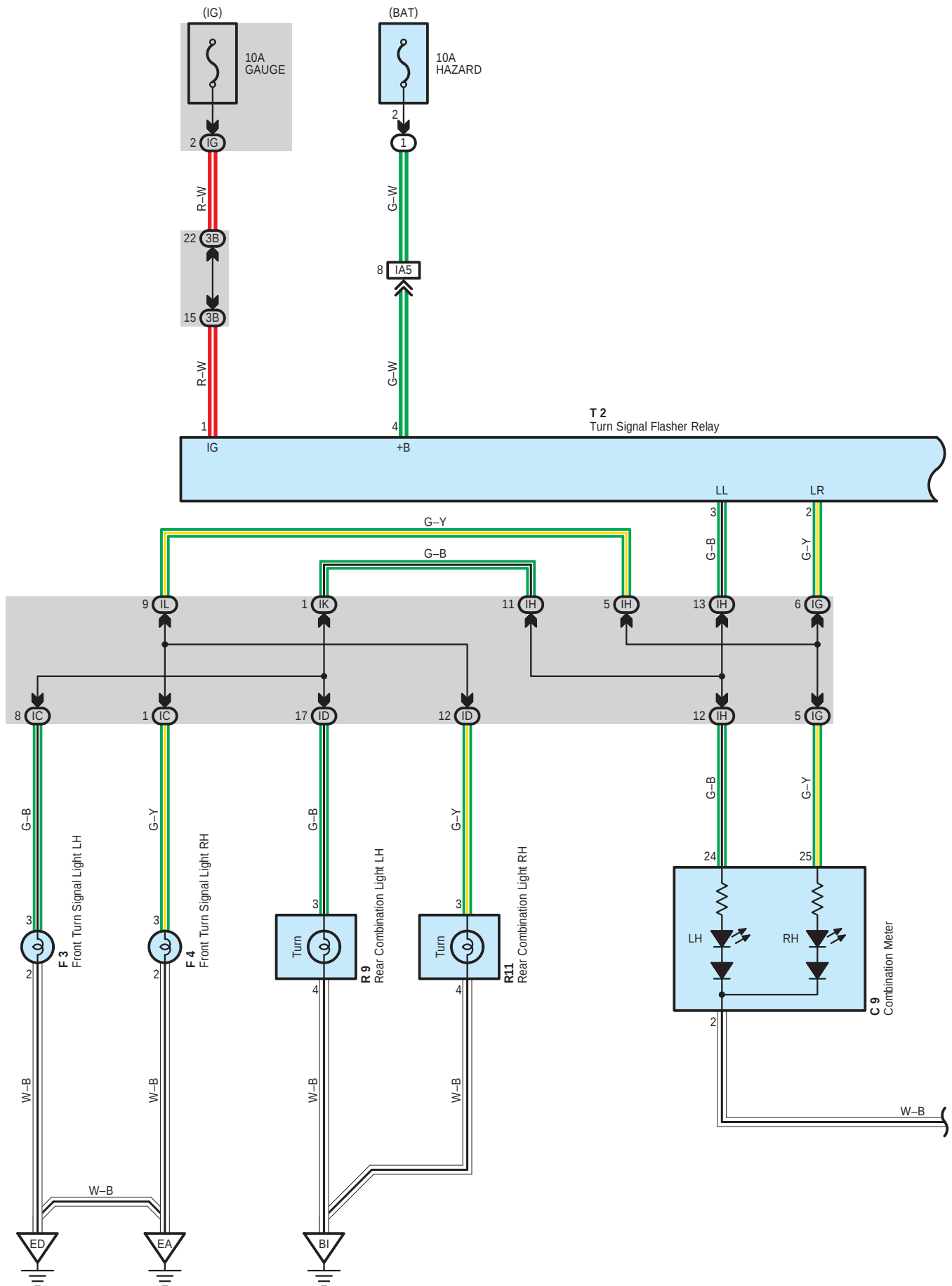
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA5	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)

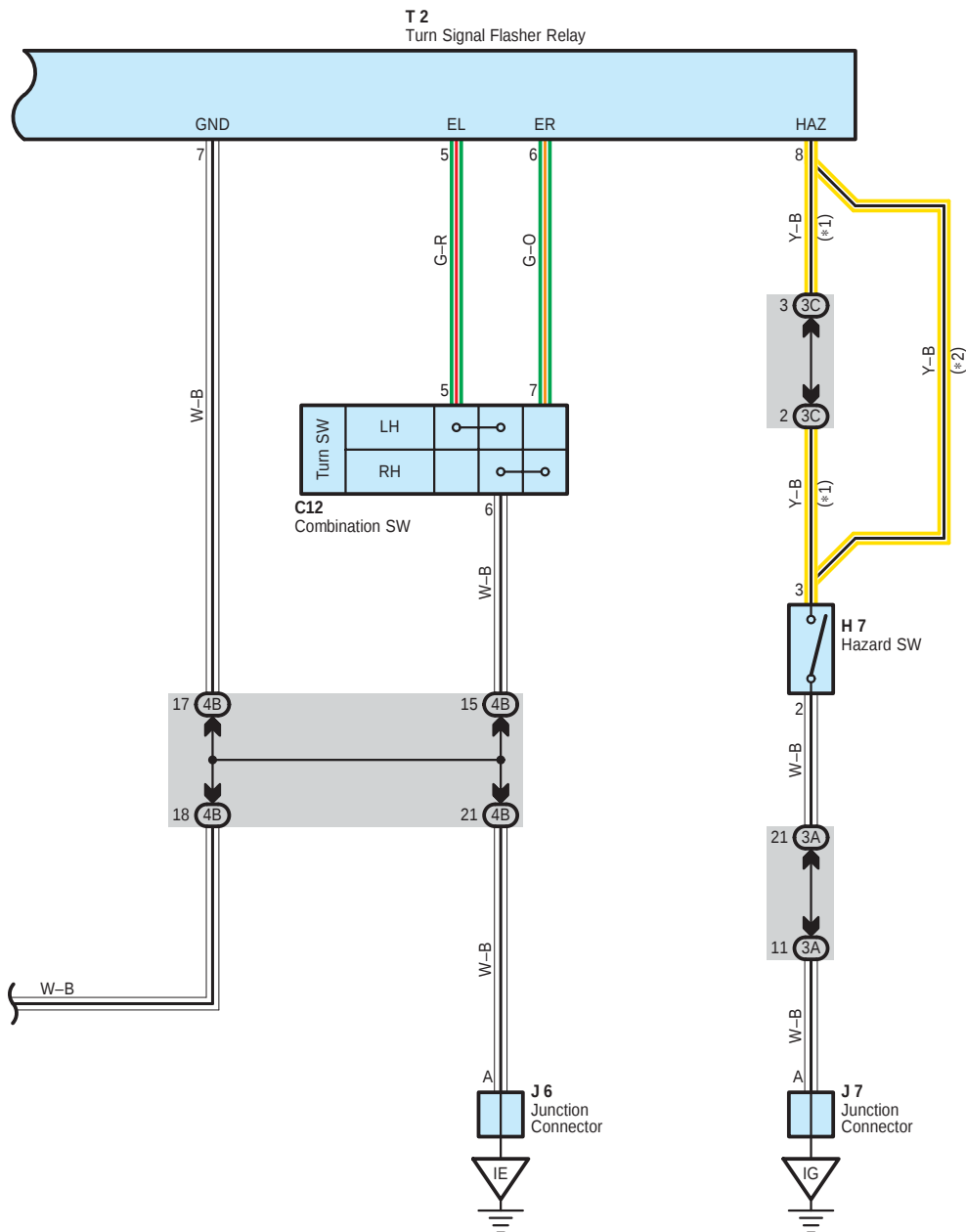
 : Ground Points

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter

Turn Signal and Hazard Warning Light



- * 1 : w/ Wireless Door Lock
- * 2 : w/o Wireless Door Lock



Turn Signal and Hazard Warning Light

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C9	36	F4	34 (2ZZ-GE)	R9	41 (*2)
C12	36	H7	37	R11	39 (*1)
F3	32 (1ZZ-FE)	J6	37		41 (*2)
	34 (2ZZ-GE)	J7	37	T2	37
F4	32 (1ZZ-FE)	R9	39 (*1)		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
IK		
IL		
3A	24	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		
3C		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

: Connector Joining Wire Harness and Wire Harness

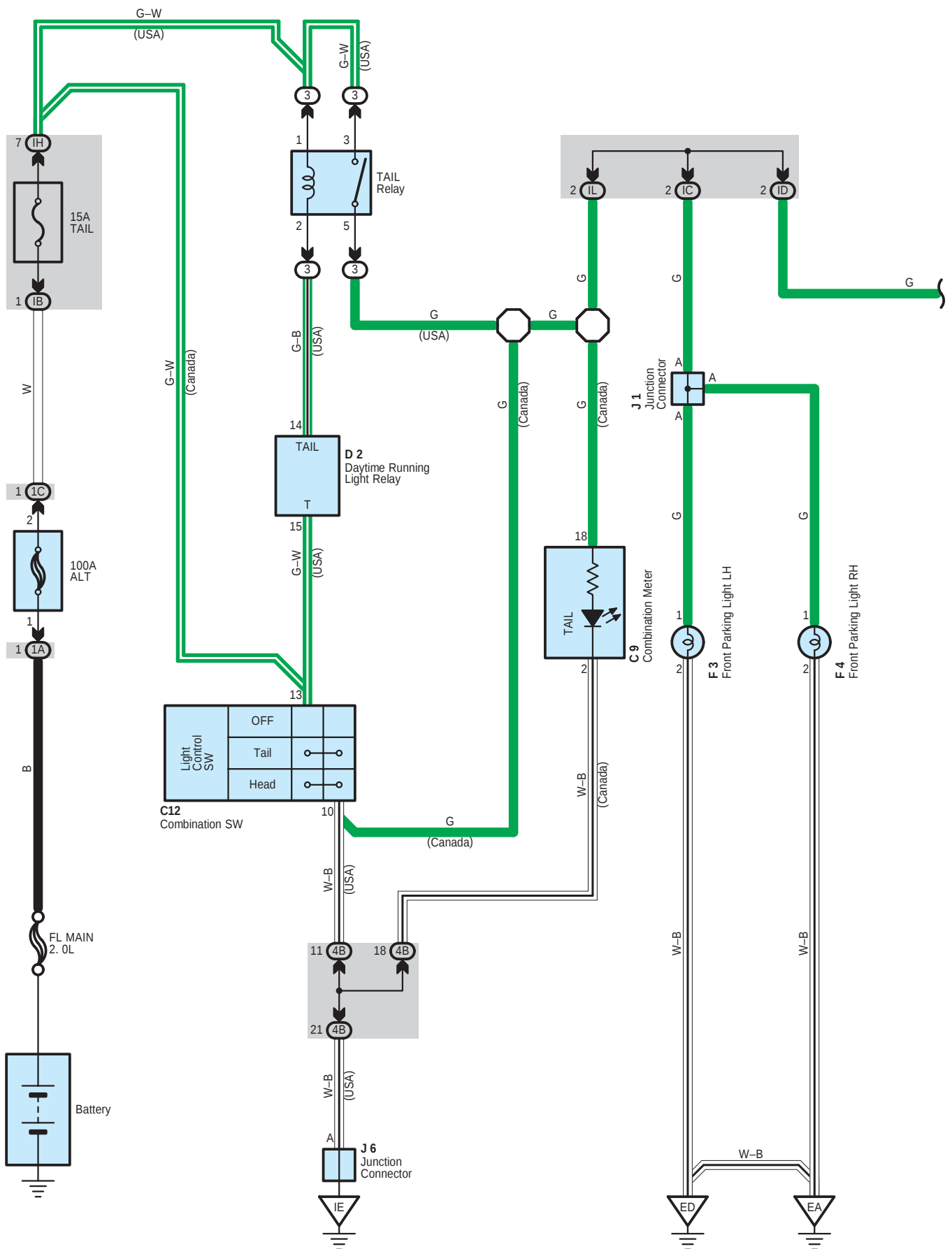
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA5	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)

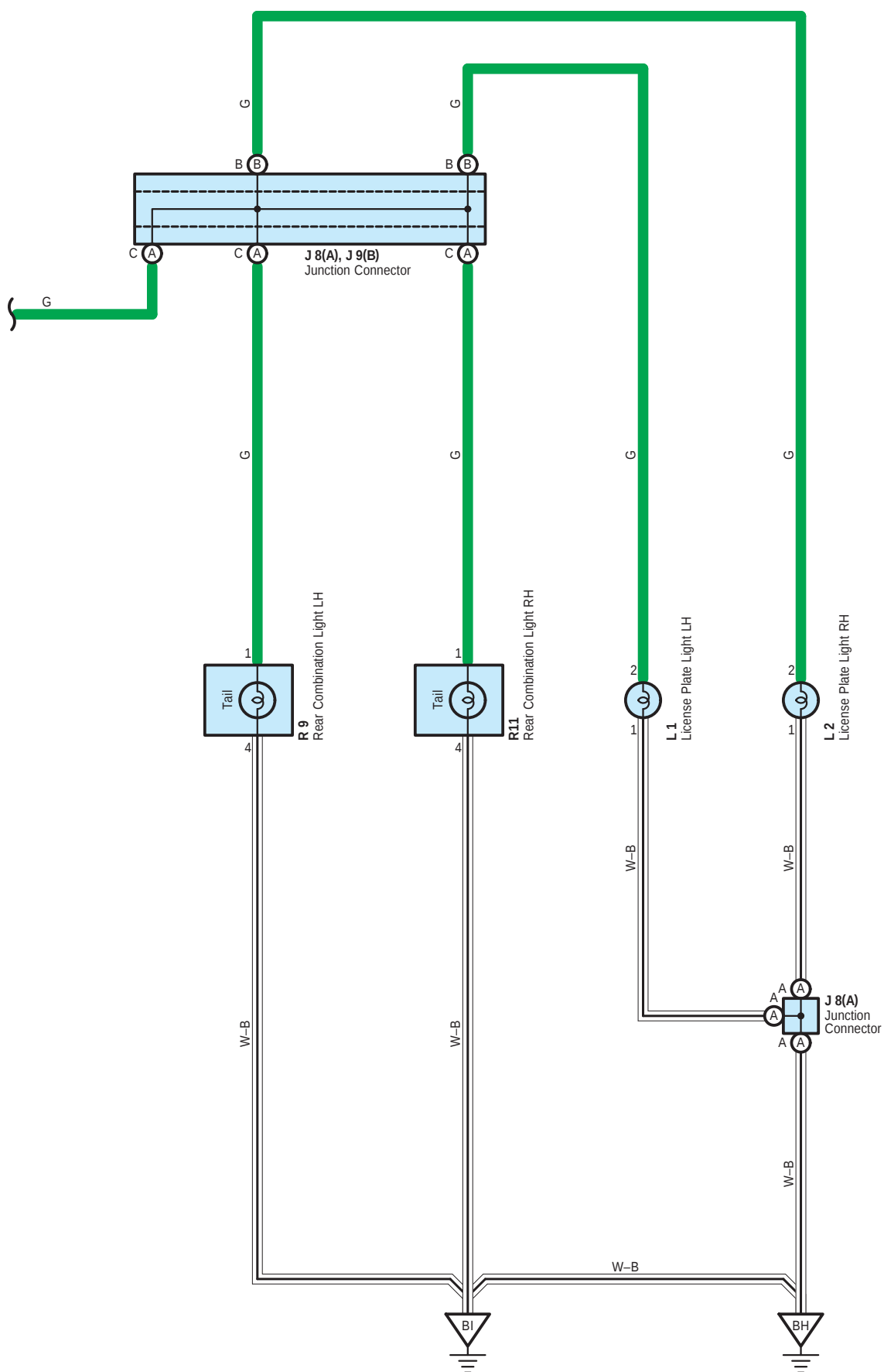
: Ground Points

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel
BI	46 (*1)	Lower Back Panel
	47 (*2)	

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

Taillight





○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C9	36	J1	35 (2ZZ-GE)	L2	38 (*1)
C12	36	J6	37		40 (*2)
D2	36	J8	A	R9	39 (*1)
F3	32 (1ZZ-FE)				41 (*2)
	34 (2ZZ-GE)	J9	B	R11	39 (*1)
F4	32 (1ZZ-FE)				41 (*2)
	34 (2ZZ-GE)	L1			
J1	33 (1ZZ-FE)				

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

○ : Junction Block and Wire Harness Connector

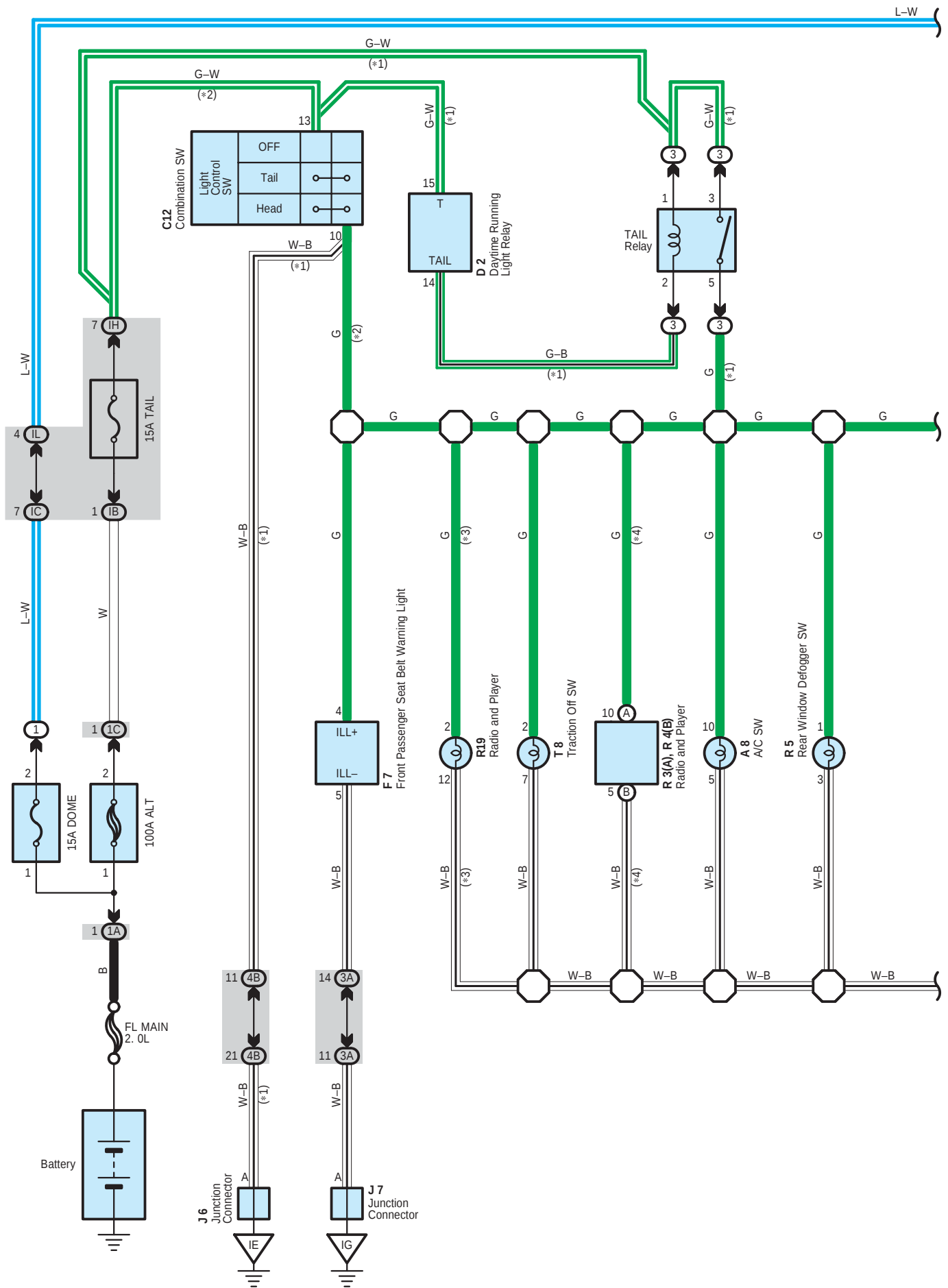
Code	See Page	Junction Block and Wire Harness (Connector Location)
IB	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IC		
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IH	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IL	24	
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
1C	22	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

▽ : Ground Points

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter
BH	46 (*1)	Under the Left Quarter Pillar
	47 (*2)	
BI	46 (*1)	Lower Back Panel
	47 (*2)	

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

Illumination



Illumination

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A8	36	D2	36	R4	B 37
A10	36	E6	36	R5	37
B5	36	F7	37	R7	37
C6	36	H7	37	R19	37
C9	A 36	J6	37	T8	37
C12	36	J7	37		
C16	B 36	R3	A 37		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

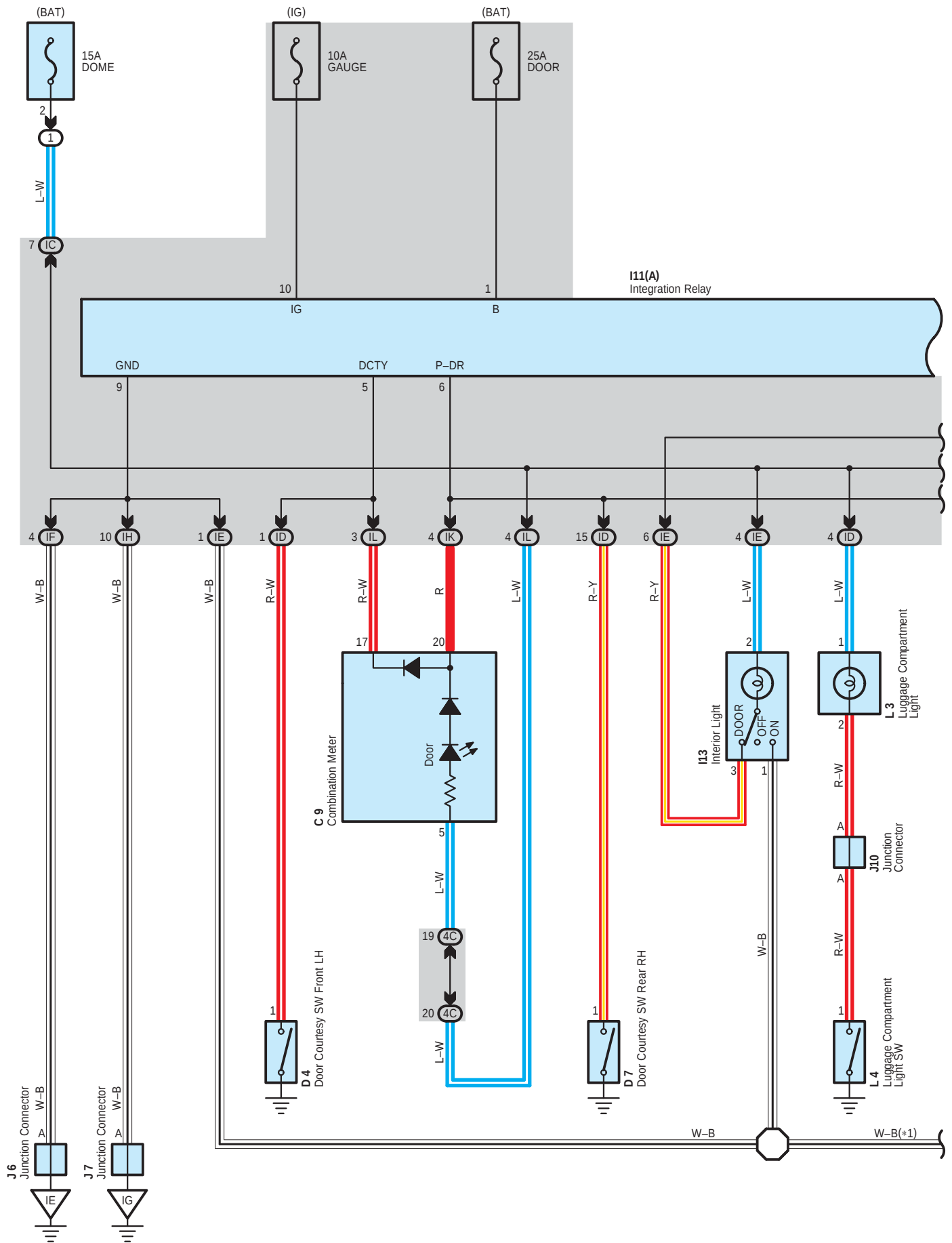
: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IB	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IC		
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
IL	24	
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
1C	22	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

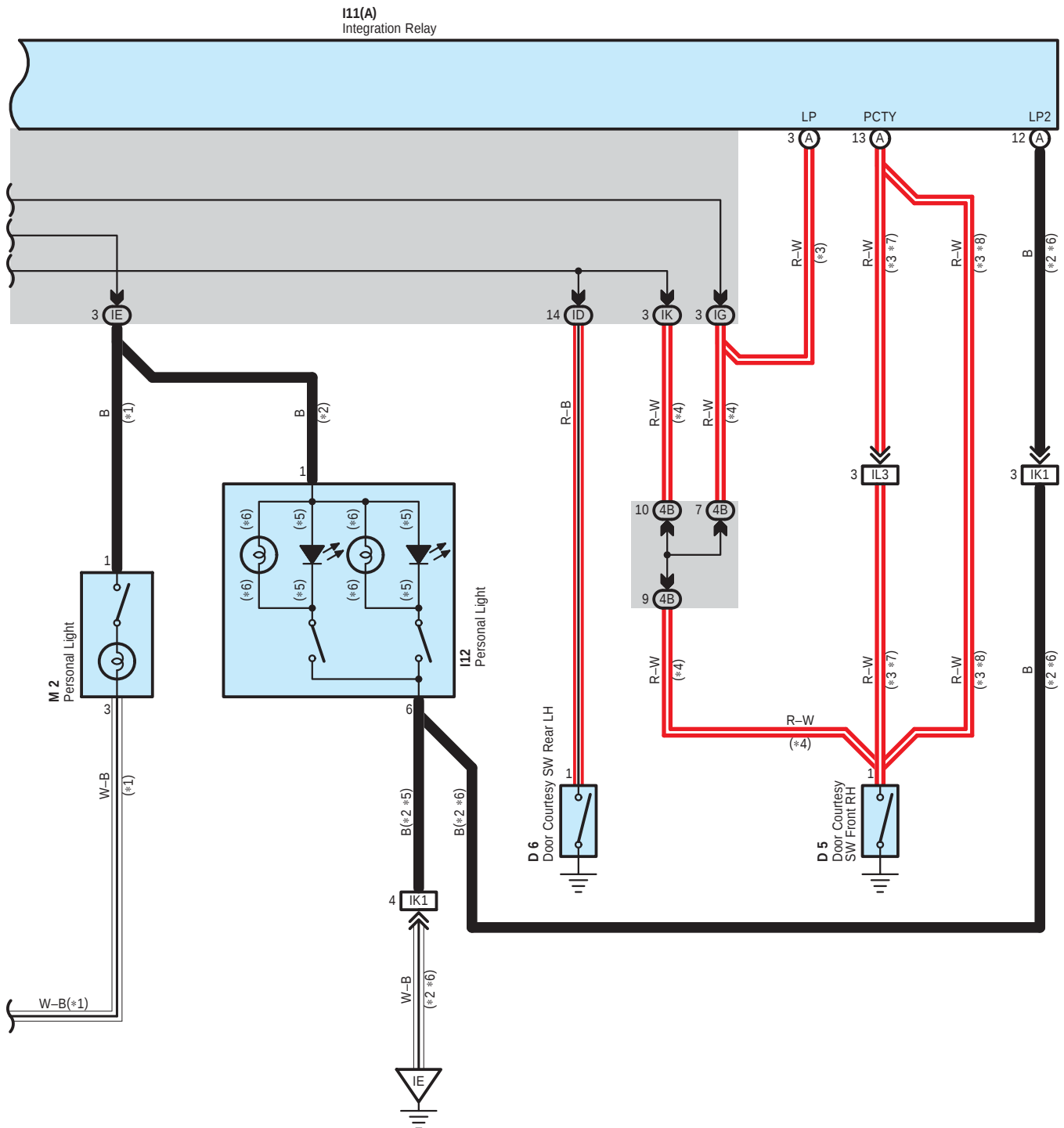
: Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel

Interior Light



- * 1 : w/ Moon Roof
- * 2 : w/o Moon Roof
- * 3 : w/ Door Lock Control
- * 4 : w/o Door Lock Control
- * 5 : w/ Automatic Glare-Resistant EC Mirror
- * 6 : w/o Automatic Glare-Resistant EC Mirror
- * 7 : w/ Stereo Component Amplifier
- * 8 : w/o Stereo Component Amplifier



Interior Light

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C9	36	D7	40 (*2)	J10	38 (*1)
D4	38 (*1)	I11	A 37		40 (*2)
	40 (*2)	I12	38 (*1)	L3	38 (*1)
D5	38 (*1)		40 (*2)		40 (*2)
	40 (*2)	I13	38 (*1)	L4	38 (*1)
D6	38 (*1)		40 (*2)		40 (*2)
	40 (*2)	J6	37	M2	39 (*1)
D7	38 (*1)	J7	37		41 (*2)

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IE	25	Roof Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IH		
IK		
IL	24	
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

: Connector Joining Wire Harness and Wire Harness

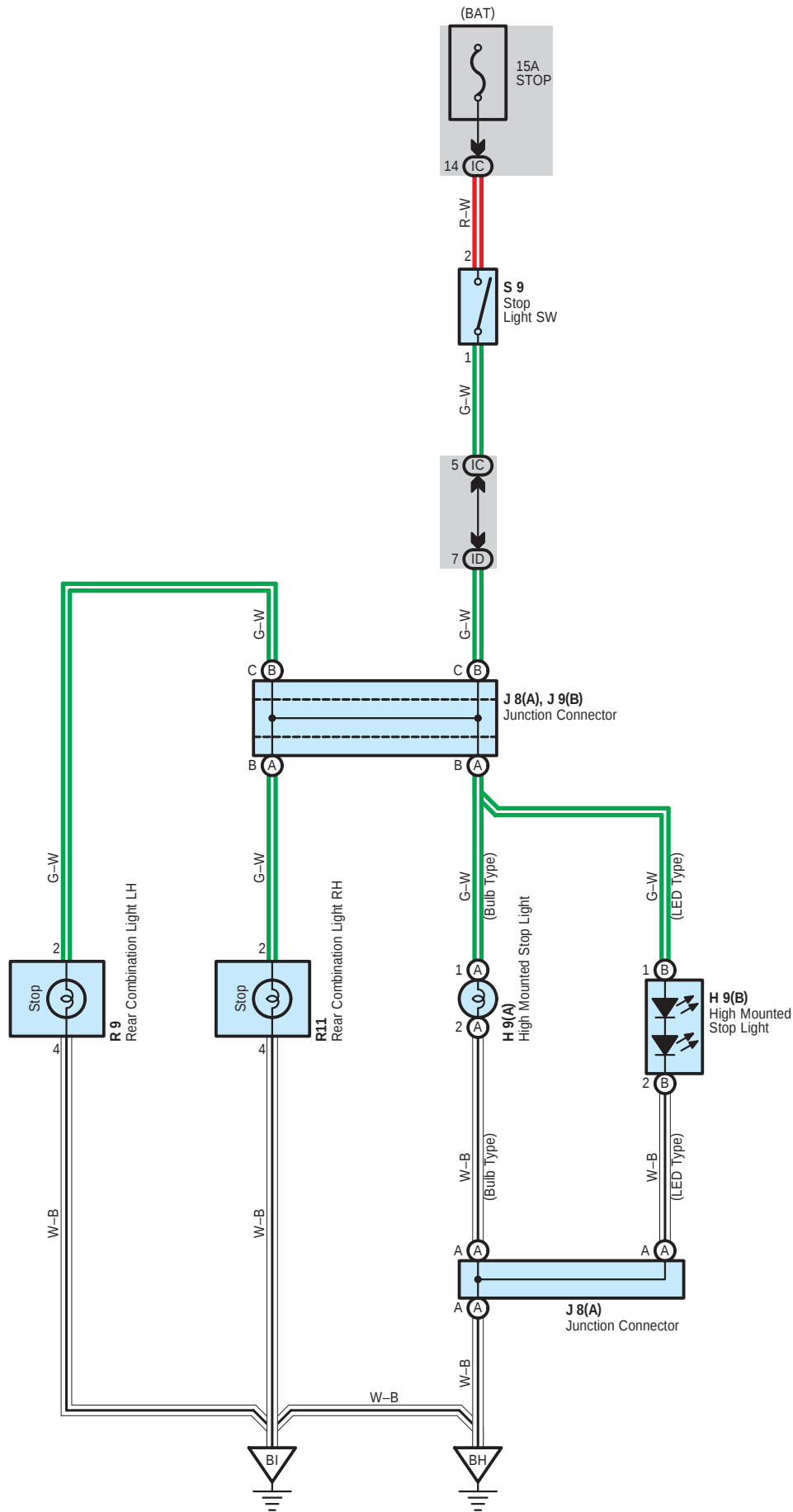
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IK1	45	Roof Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IL3	45	Floor Wire and Instrument Panel Wire (Right Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

Stop Light



 : Parts Location

Code		See Page	Code		See Page	Code	See Page
H9	A	38 (*1)	J8	A	40 (*2)	R11	39 (*1)
		40 (*2)	J9	B	38 (*1)		41 (*2)
	B	38 (*1)			40 (*2)	S9	37
		40 (*2)	R9		39 (*1)		
J8	A	38 (*1)			41 (*2)		

 : Junction Block and Wire Harness Connector

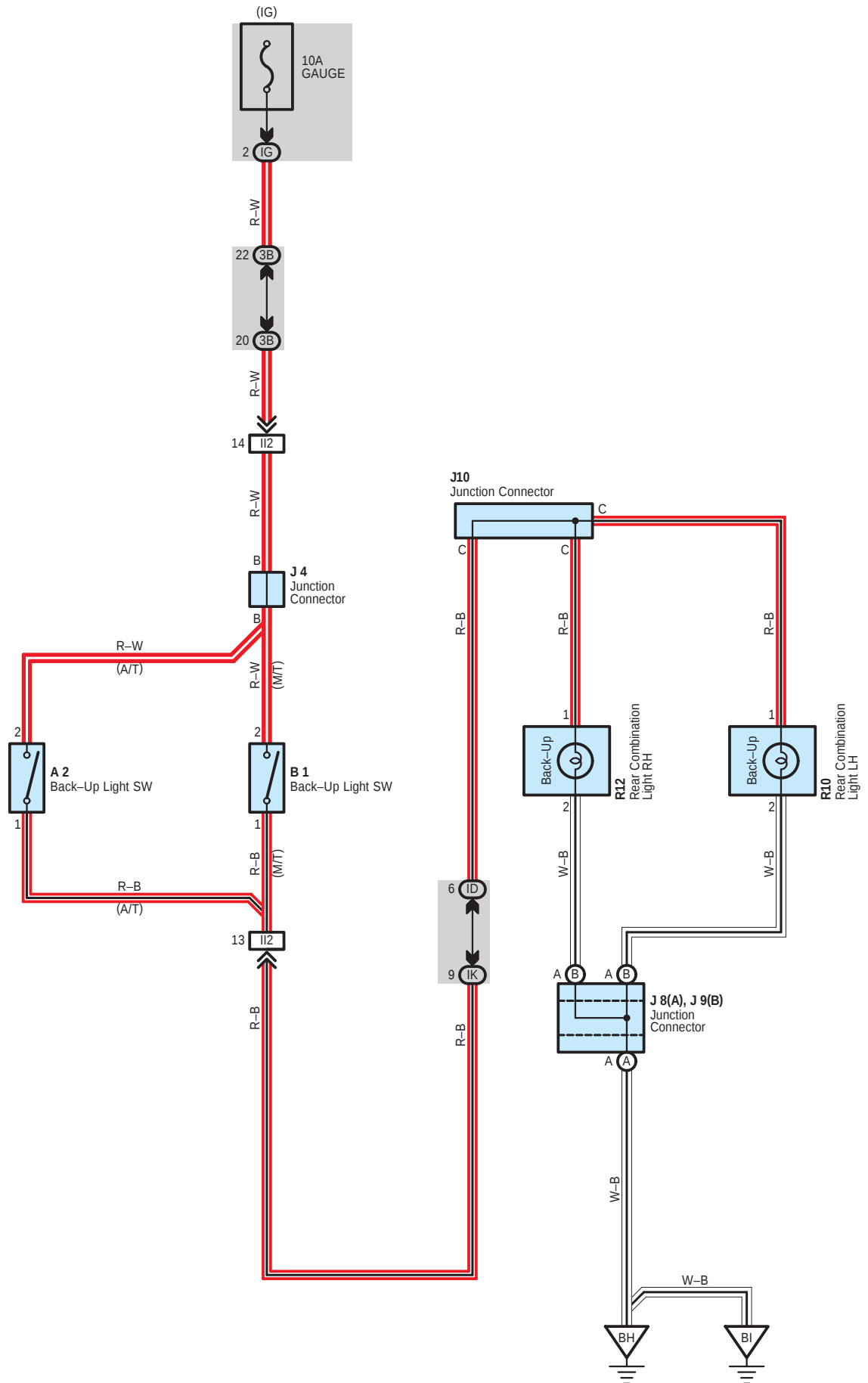
Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)

 : Ground Points

Code	See Page	Ground Points Location
BH	46 (*1)	Under the Left Quarter Pillar
	47 (*2)	
BI	46 (*1)	Lower Back Panel
	47 (*2)	

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

Back-Up Light



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A2	32 (1ZZ-FE)	J8	A	40 (*2)	
B1	32 (1ZZ-FE)	J9	B	38 (*1)	R10
	34 (2ZZ-GE)			40 (*2)	41 (*2)
J4	37	J10		38 (*1)	R12
J8	A			40 (*2)	39 (*1)
	38 (*1)				41 (*2)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IK	24	
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)

 : Connector Joining Wire Harness and Wire Harness

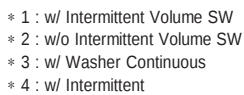
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)

 : Ground Points

Code	See Page	Ground Points Location
BH	46 (*1)	Under the Left Quarter Pillar
	47 (*2)	
BI	46 (*1)	Lower Back Panel
	47 (*2)	

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier



System Outline

With the ignition SW turned on, the current flows to TERMINAL 8 of the wiper and washer SW, TERMINAL 2 of the front wiper motor through the WIPER fuse, and the current flows to TERMINAL 2 of the washer motor through the WASHER fuse.

1. Low Speed Position

With wiper SW turned to LO position, the current flows from TERMINAL 8 of the front wiper and washer SW to TERMINAL 7 to TERMINAL 1 of the front wiper motor to TERMINAL 5 to GROUND and causes to the front wiper motor to run at low speed.

2. High Speed Position

With wiper SW turned to HI position, the current flows from TERMINAL 8 of the front wiper and washer SW to TERMINAL 9 to TERMINAL 4 of the front wiper motor to TERMINAL 5 to GROUND and causes to the wiper motor to run at high speed.

3. INT Position

With wiper SW turned to INT position, the relay operates and the current which is connected by relay function flows from TERMINAL 8 of the front wiper and washer SW to TERMINAL 5 to GROUND. This flow of current operates the intermittent circuit and the current flows from TERMINAL 8 of the front wiper and washer SW to TERMINAL 7 to TERMINAL 1 of the front wiper motor to TERMINAL 5 to GROUND and the functions.

The intermittent operation is controlled by the charge/discharge function of the condenser installed in the relay, and the intermittent time is controlled by a time control SW (w/ intermittent volume SW) to change the charging time of the condenser.

4. MIST Position

With wiper SW turned to MIST position, the current flows from TERMINAL 8 of the front wiper and washer SW to TERMINAL 7 to TERMINAL 1 of the front wiper motor to TERMINAL 5 to GROUND and causes to the front wiper motor to run at low speed.

5. Washer Continuous Operation

With the washer SW turned to on, the current flows from TERMINAL 2 of the washer motor to TERMINAL 1 to TERMINAL 4 of the front wiper and washer SW to TERMINAL 5 to GROUND and causes to the washer motor to run, and the window washer jet operates. This causes the current to flow to washer continuous operation circuit in TERMINAL 8 of the front wiper and washer SW to TERMINAL 7 to TERMINAL 1 of the front wiper motor to TERMINAL 5 to GROUND and the washer operates continuously.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C11	36	F5	34 (2ZZ-GE)	F6	34 (2ZZ-GE)
F5	32 (1ZZ-FE)	F6	32 (1ZZ-FE)	J6	37

□ : Junction Block and Wire Harness Connector

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

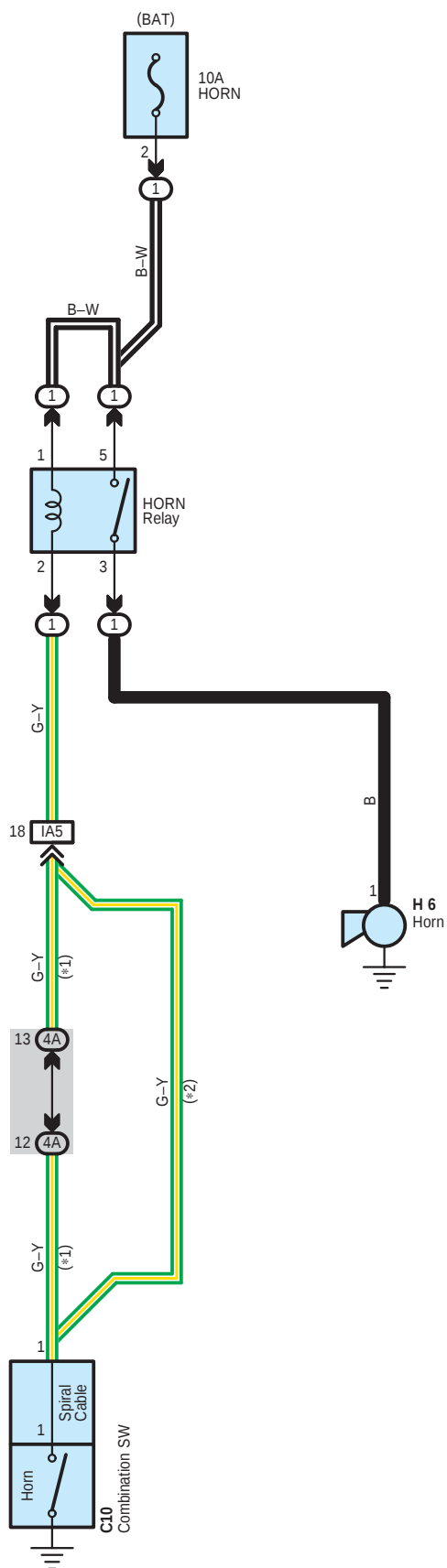
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)

▽ : Ground Points

Code	See Page	Ground Points Location
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter

* 1 : w/ Wireless Door Lock
 * 2 : w/o Wireless Door Lock



 : **Parts Location**

Code	See Page	Code	See Page	Code	See Page
C10	36	H6	32 (1ZZ-FE)	H6	34 (2ZZ-GE)

 : **Relay Blocks**

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

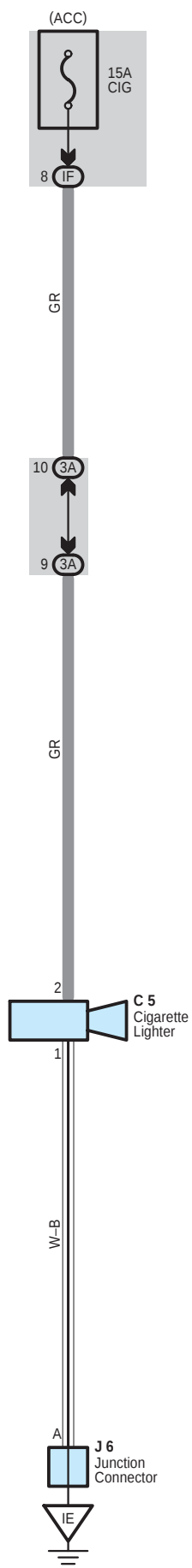
 : **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
4A	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA5	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)

Cigarette Lighter



 : Parts Location

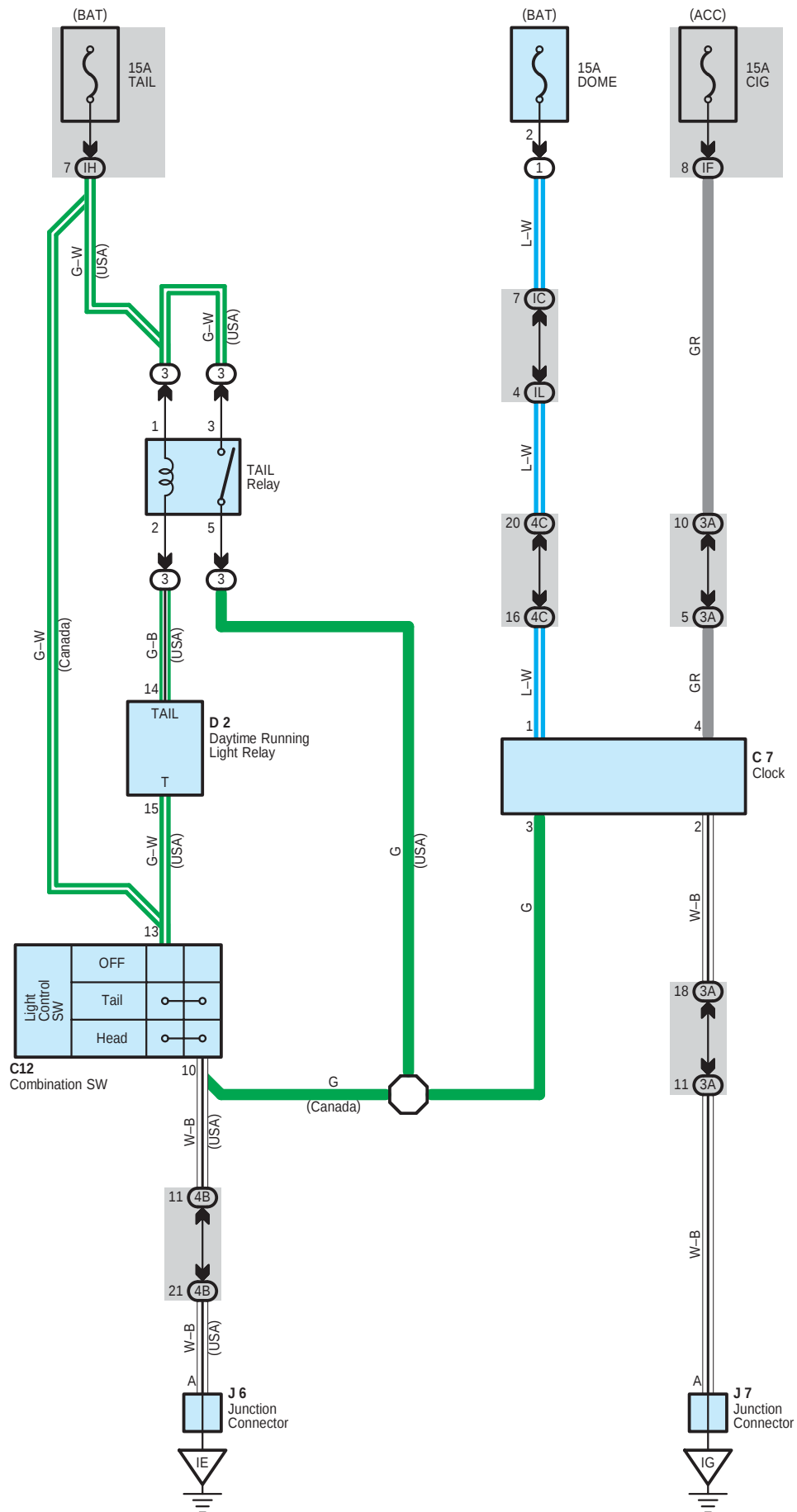
Code	See Page	Code	See Page	Code	See Page
C5	36	J6	37		

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)

 : Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
C7	36	D2	36	J7	37
C12	36	J6	37		

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

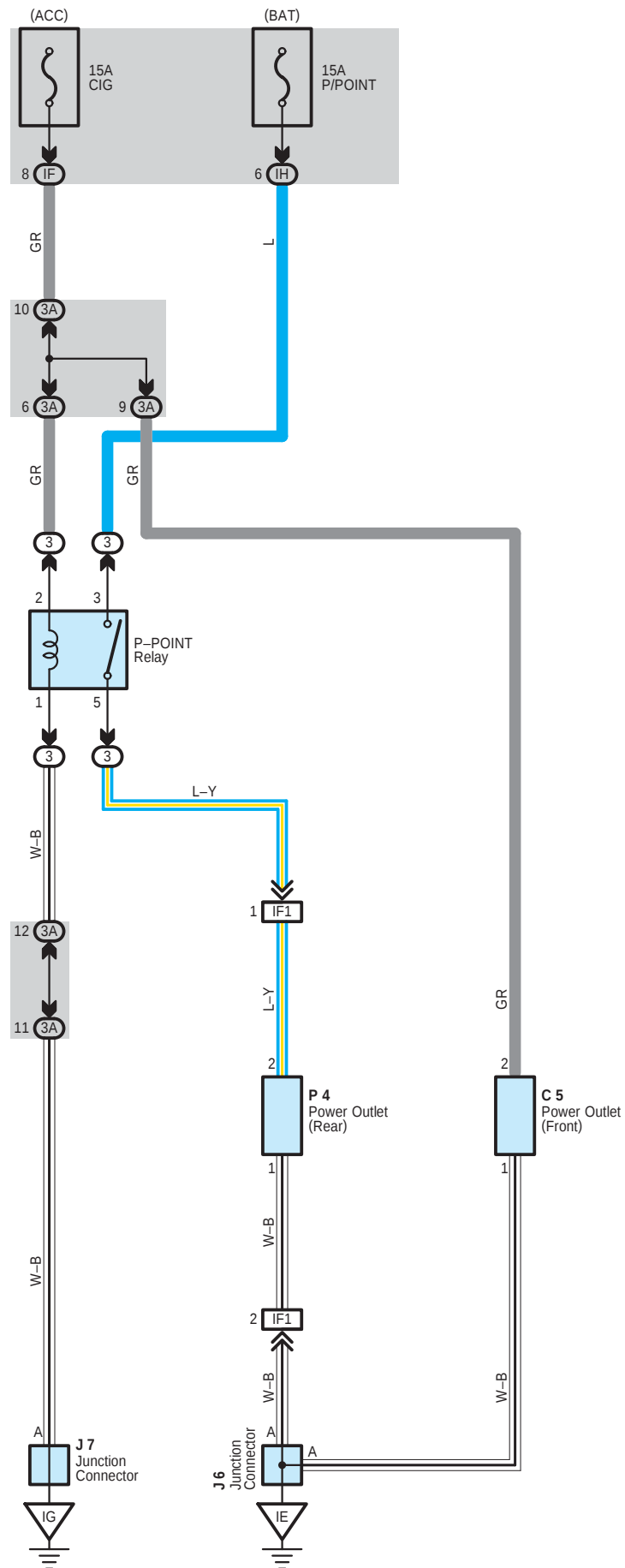
 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
IL	24	
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

 : Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel

Power Outlet



 : **Parts Location**

Code	See Page	Code	See Page	Code	See Page
C5	36	J7	37		
J6	37	P4	37		

 : **Relay Blocks**

Code	See Page	Relay Blocks (Relay Block Location)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

 : **Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)

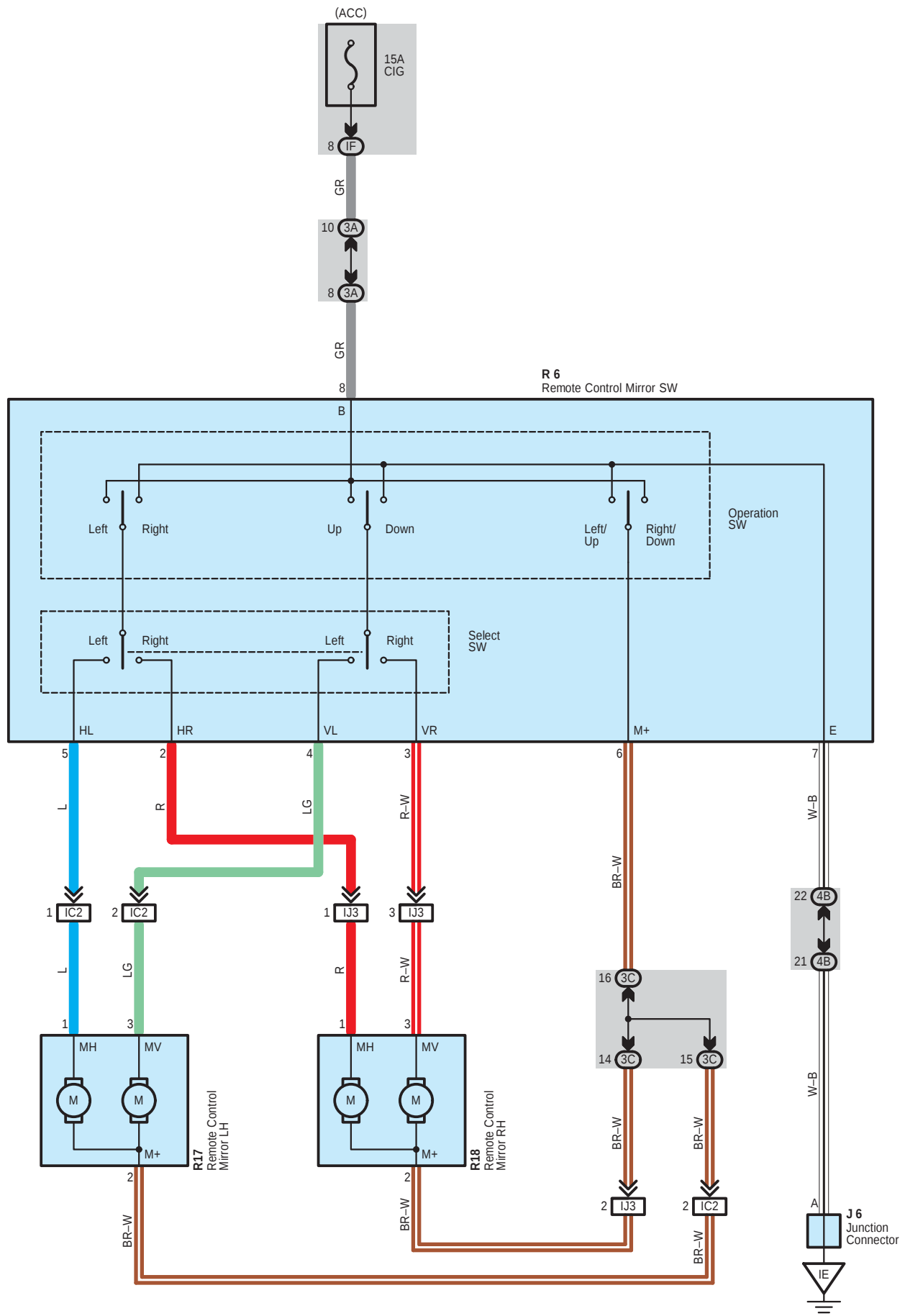
 : **Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	45	Console Box Wire and Instrument Panel Wire (Under the Instrument Panel Center)

 : **Ground Points**

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel

Remote Control Mirror



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
J6	37	R17	39 (*1)	R18	39 (*1)
R6	37		41 (*2)		41 (*2)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3C		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

 : Connector Joining Wire Harness and Wire Harness

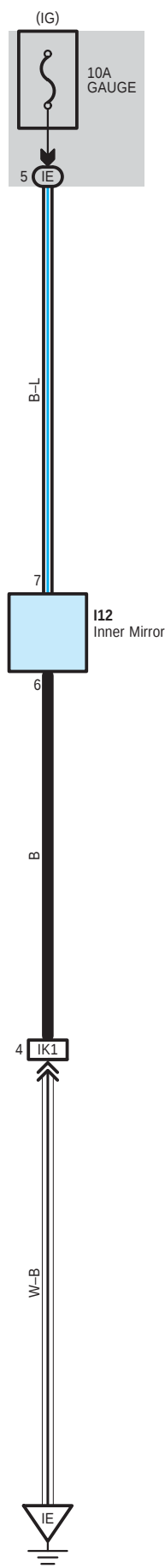
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	44	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IJ3	45	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

 : Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

Automatic Glare-Resistant EC Mirror with Compass



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
I12	38 (*1)	I12	40 (*2)		

 : Junction Block and Wire Harness Connector

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

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IK1	45	Roof Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)

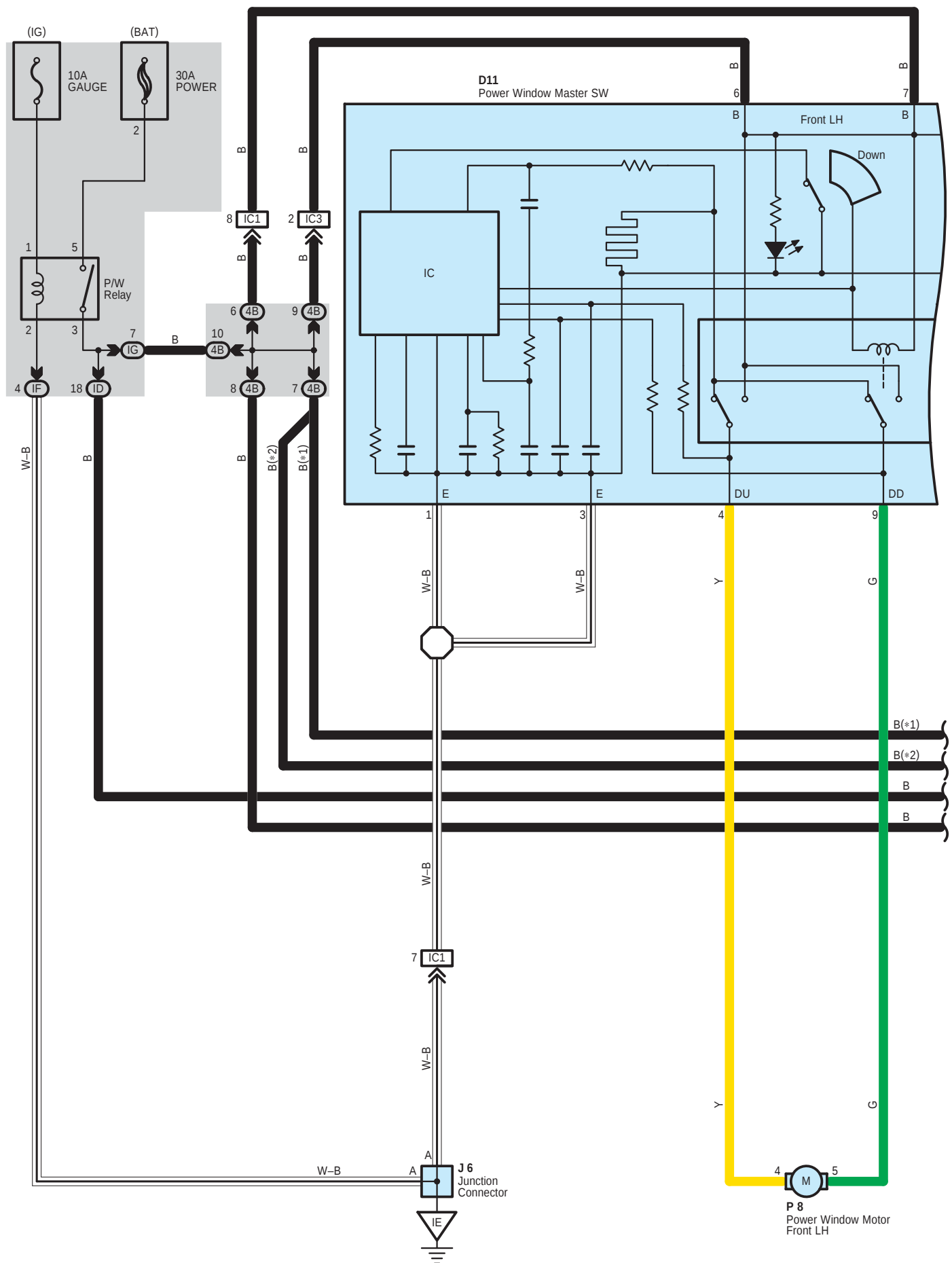
 : Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

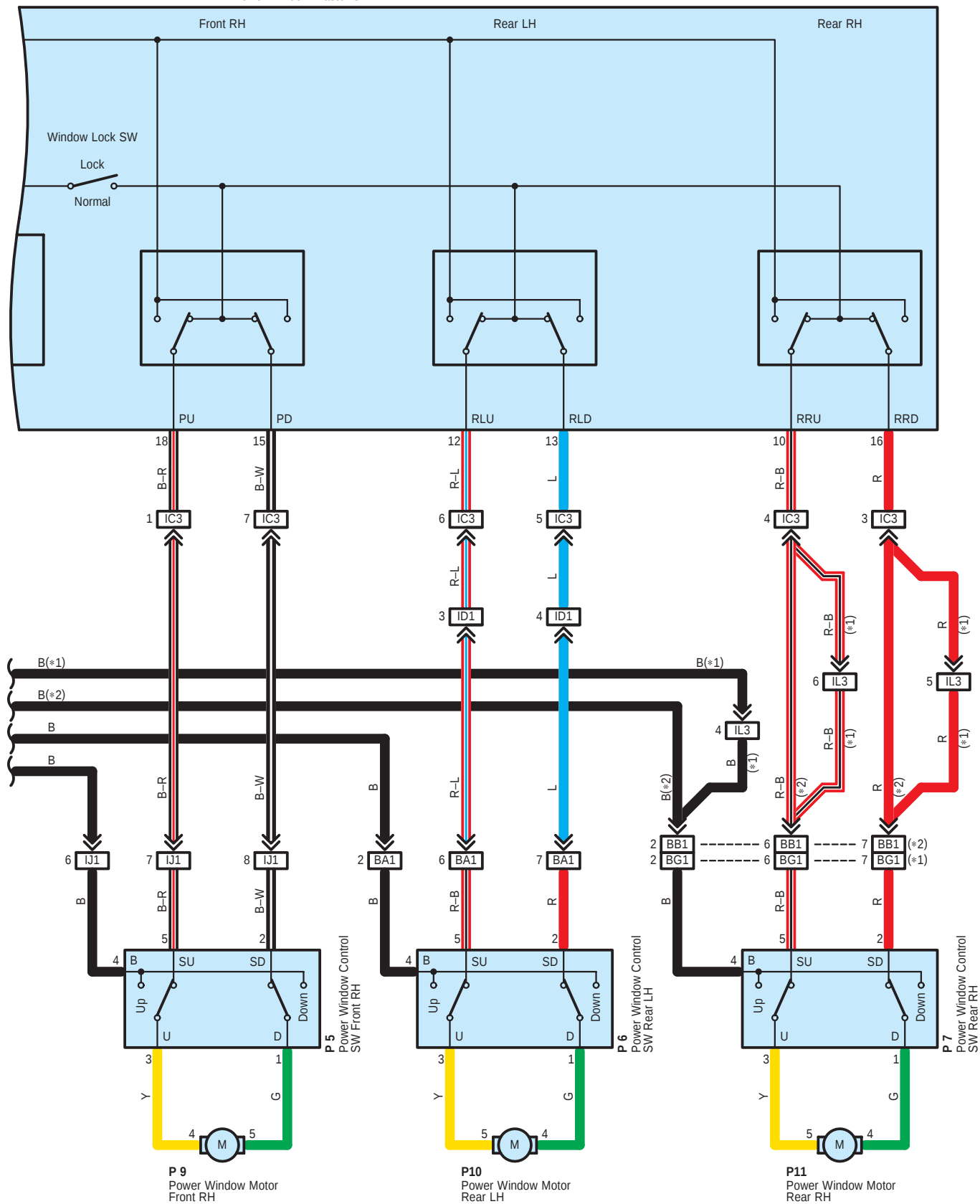
* 2 : w/o Side Airbag and Stereo Component Amplifier

Power Window



* 1 : w/ Stereo Component Amplifier
 * 2 : w/o Stereo Component Amplifier

D11
 Power Window Master SW



Power Window

System Outline

When the ignition SW is turned on, the current flows through the GAUGE fuse to TERMINAL 1 of the P/W relay to TERMINAL 2 to GROUND. This activates the relay and the current flows through the POWER fuse to TERMINAL 5 of the relay to TERMINAL 3 to TERMINAL B of the power window master SW, TERMINAL 4 of the power window control SW.

1. Manual Operation (Driver's Window)

With the ignition SW turned on and with the power window master SW (Front LH) in Up position, the current flowing to TERMINAL B of the power window master SW flows to TERMINAL DU of the master SW to TERMINAL 4 of the power window motor to TERMINAL 5 to TERMINAL DD of the master SW to TERMINAL E to GROUND and rotates the power window motor in the up direction. The window ascends only while the SW is being pulled. In down operation, the flows of current from TERMINAL B of the power window master SW to TERMINAL DD to TERMINAL 5 of the motor to TERMINAL 4 to TERMINAL DU of the master SW to TERMINAL E to GROUND, flowing in the opposite direction to manual up operation and rotating the motor in reverse, thus opening the window.

2. Auto Down Operation (Driver's Window)

When the front LH window control SW in the power window master SW is pushed strongly on the down side, current flows from TERMINAL B of the master SW to TERMINAL DD to TERMINAL 5 of the power window motor to TERMINAL 4 to TERMINAL DU of the master SW to TERMINAL E to GROUND. Because the hold circuit inside the master SW keeps the relay on the down side activated, the power window motor continues operating even if the power window master SW is released. When the driver's window is fully opened, the hold circuit turns off and the relay on the down side turns off, and auto down operation is completed.

3. Stopping of Auto Down Operation (Driver's Window)

When the master SW (Front LH) is pulled to the up side during auto down operation, a ground circuit opens in the master SW and current does not flow from TERMINAL DU of the master SW to TERMINAL E, so the motor stops, causing auto down operation to stop. If the master SW is pulled continuously, the motor rotates in the up direction in manual up operation.

4. Manual Operation (Front RH Window)

With the power window control SW (Front RH) pulled to the up side, current flowing from TERMINAL 4 of the power window control SW flows to TERMINAL 3 to TERMINAL 4 of the power window motor to TERMINAL 5 to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL PD of the master SW to TERMINAL E to GROUND and rotates the power window motor (Front RH) in the up direction. Up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, and the motor rotates in reverse. When the window lock SW is pushed to the lock side, the ground circuit to the passenger's window becomes open. As a result, even if Open/Close operation of the passenger's window is attempted, the current from TERMINAL E of the power window master SW is not grounded and the motor does not rotate, so the passenger's window can not be operated and window lock occurs.

5. Manual Operation (Rear LH, Rear RH Window)

With the power window control SW (Rear LH, rear RH) pulled to the up side, current flowing from TERMINAL 4 of the power window control SW flows to TERMINAL 3 to TERMINAL 5 of the power window motor to TERMINAL 4 to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL RLD, RRD of the master SW to TERMINAL E to GROUND and rotates the power window motor (Rear LH, rear RH) in the up direction. Up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, and the motor rotates in reverse. When the window lock SW is pushed to the lock side, the ground circuit to the passenger's window becomes open. As a result, even if Open/Close operation of the passenger's window is attempted, the current from TERMINAL E of the power window master SW is not grounded and the motor does not rotate, so the passenger's window can not be operated and window lock occurs.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
D11	38 (*1)	P6	41 (*2)	P9	41 (*2)
	40 (*2)	P7	39 (*1)	P10	39 (*1)
J6	37		41 (*2)		41 (*2)
P5	39 (*1)	P8	39 (*1)	P11	39 (*1)
	41 (*2)		41 (*2)		41 (*2)
P6	39 (*1)	P9	39 (*1)		

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier

**: Junction Block and Wire Harness Connector**

Code	See Page	Junction Block and Wire Harness (Connector Location)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	44	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC3		
ID1	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IJ1	45	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IL3	45	Floor Wire and Instrument Panel Wire (Right Kick Panel)
BA1	46 (*1)	Rear Door LH Wire and Floor Wire (Left Center Pillar)
	47 (*2)	
BB1	46 (*1)	Rear Door RH Wire and Instrument Panel Wire (Right Center Pillar)
	47 (*2)	
BG1	46 (*1)	Rear Door RH Wire and Floor Wire (Right Center Pillar)

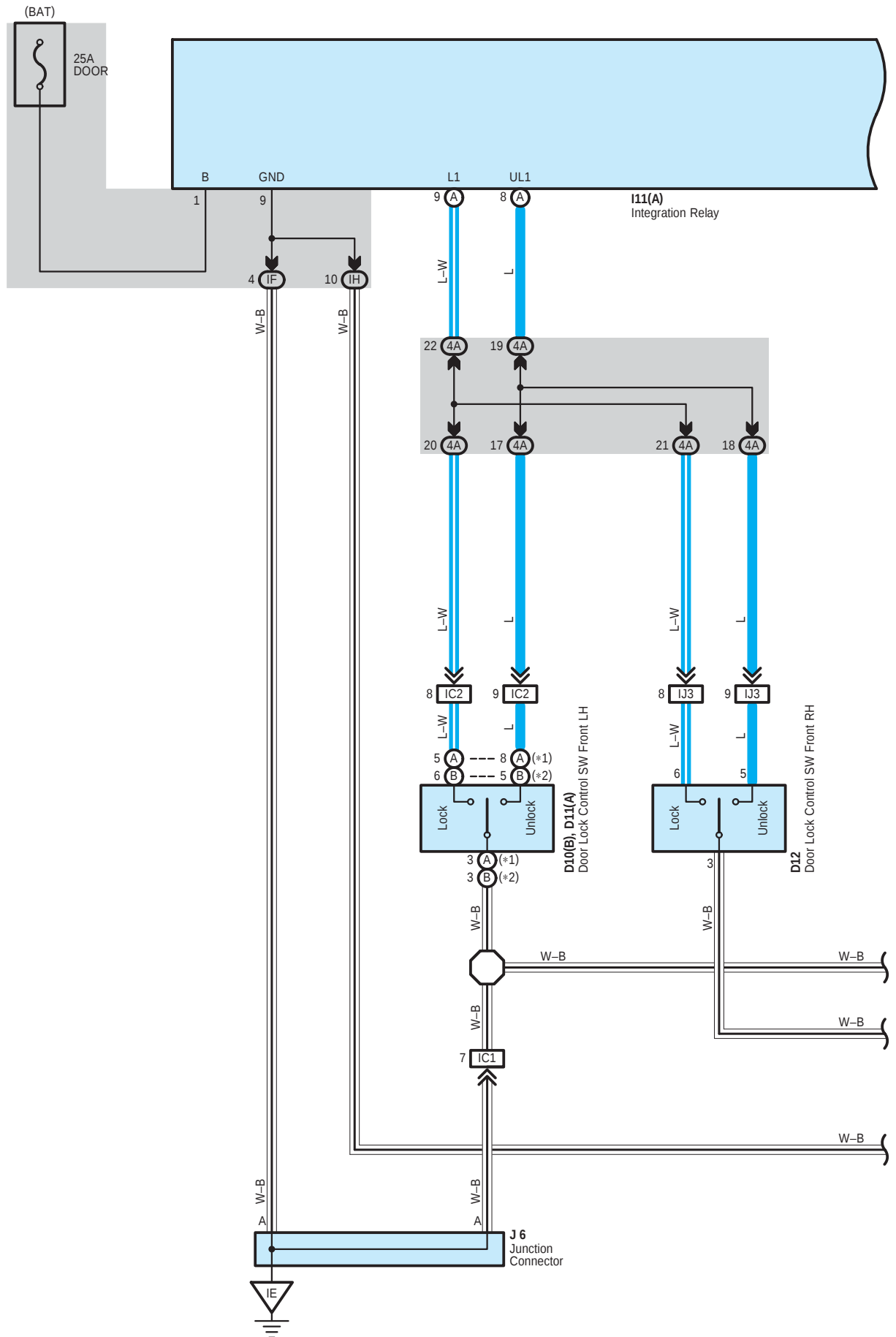
**: Ground Points**

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter

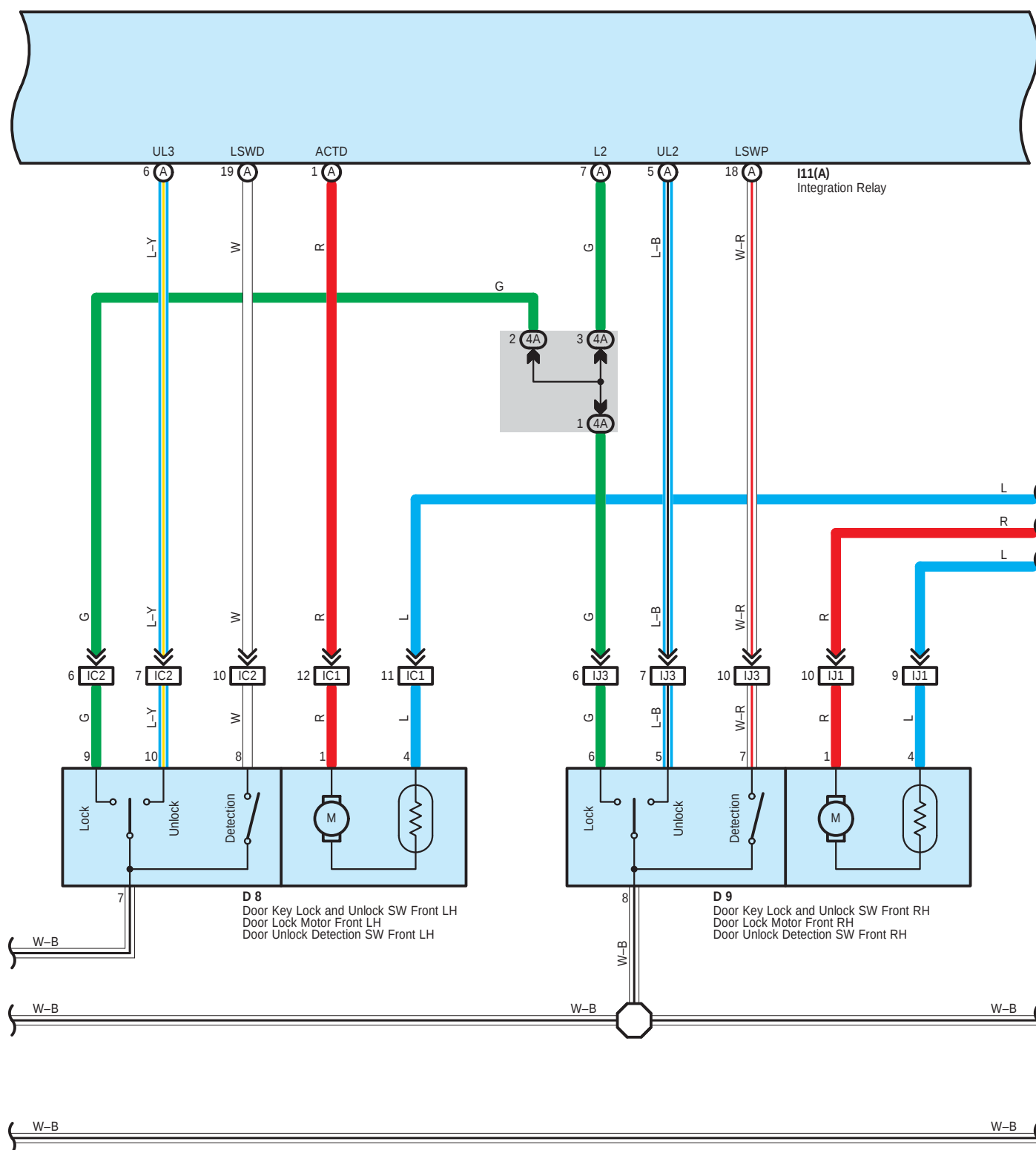
* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier

Door Lock Control

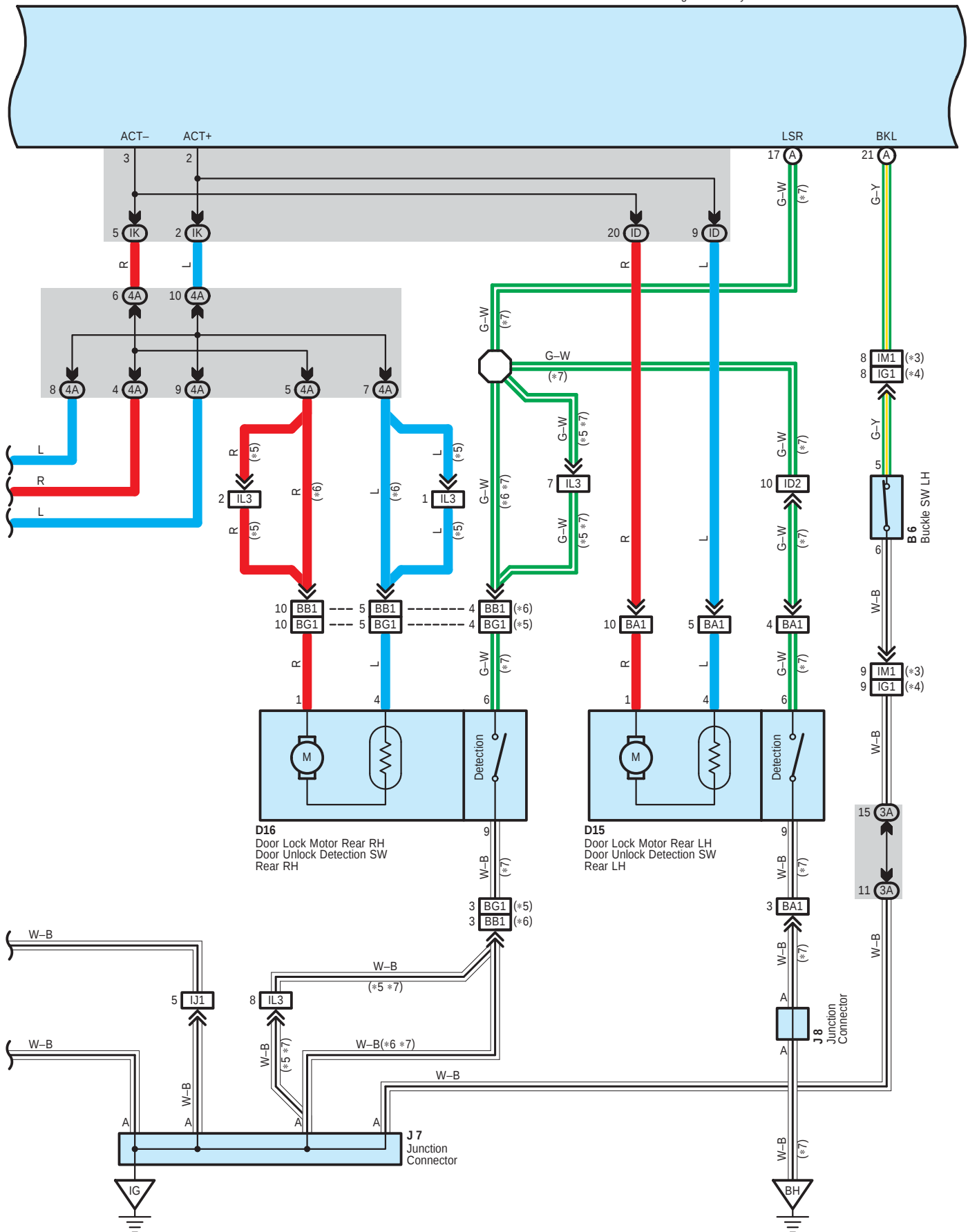


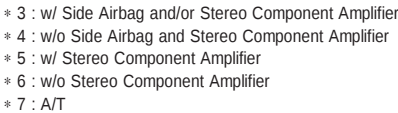
* 1 : w/ Power Window
 * 2 : w/o Power Window



Door Lock Control

111(A)
Integration Relay





Door Lock Control

System Outline

The current always flows to TERMINAL 1 of the integration relay through the DOOR fuse.

1. Manual Lock Operation

When the door lock control SW or door key lock and unlock SW are operated to LOCK position, a lock signal is input to TERMINAL (A) 9 or (A) 7 of the integration relay and causes the relay to function. The current flows from TERMINAL 1 of the relay to TERMINAL 2 to the door lock motors to TERMINALS (A) 1 and 3 of the relay to TERMINAL 9 to GROUND and the door lock motors locks the door.

2. Manual Unlock Operation

When the door lock control SW or door key lock and unlock SW are operated to UNLOCK position, an unlock signal is input to TERMINAL (A) 8, (A) 6 or (A) 5 of the integration relay and causes the relay to function. The current flows from TERMINAL 1 of the relay to TERMINALS (A) 1 and 3 to the door lock motors to TERMINAL 2 of the relay to TERMINAL 9 to GROUND and the door lock motors unlocks the door.

3. Double Operation Unlock Operation

When the door key lock and unlock SW LH is turned to the unlock side, only the driver's door is unlocked. By turning the door key lock and unlock SW LH to the unlock side, a signal is input to TERMINAL (A) 6 of the relay, and if the signal is input again within 3 seconds by turning the SW to the unlock side again, current flows from TERMINAL 3 of the integration relay to the door lock motors to TERMINAL 2 of the relay to TERMINAL 9 to GROUND, causing the door lock motors to operate and unlock the doors.

4. Ignition Key Reminder Operation

- * Operating door lock knob (Operation of door lock motors)

With the ignition key in the cylinder (Unlock warning SW on), when the door is opened and locked using door lock knob (Door lock motor), the door is locked once but each door is unlocked soon by the function of the relay. As a result, the current flows from TERMINAL 1 of the integration relay to TERMINALS (A) 1 and 3 to the door lock motors to TERMINAL 2 of the relay to TERMINAL 9 to GROUND and unlocks all the doors.

- * Operating door lock control SW or door key lock and unlock SW

With the ignition key in the cylinder (Unlock warning SW on), when the door is opened and locked using door lock control SW or key SW, the door is locked once but each door is unlocked by the function of SW contained in motors, and the signal is input to TERMINAL (A) 19 of the relay. According to this input signal, the current flows from TERMINAL 1 of the relay to TERMINALS (A) 1 and 3 to the door lock motors to TERMINAL 2 of the relay to TERMINAL 9 to GROUND and unlocks all the doors.

- * In case of key less lock

With the ignition the key in the cylinder (Unlock warning SW on), when the unlock function is disturbed, for example pushing the door lock knob etc., the door holds on lock condition. After closing the door after, door courtesy SW inputs the signal into TERMINAL 5 or 6 or (A) 13 of the integration relay. By this input signal, the relay works and current flows from TERMINAL 1 of the relay to TERMINALS (A) 1 and 3 to the door lock motors to TERMINAL 2 of the relay to TERMINAL 9 to GROUND and unlocks all the doors.

5. Shift-Linked Door Lock

It is a user-friendly function to control door lock according to shift position of automatic transmission (A/T) vehicle. There are three full functions as follows;

- * Shift-linked auto door lock

It locks all the doors when shift lever is shifted from P position to other positions under the ignition SW ON condition.

- * Shift-linked auto door unlock

It unlocks all the doors when shift lever is shifted from other positions than P position to P position under the ignition SW ON condition.

- * Ignition-SW-linked auto door unlock

It unlocks all the doors when the ignition SW is turned OFF.

6. Door-Key-Linked Door Lock Prohibition Control

It prohibits central door-key-linked door lock or door unlock operation only when the driver's seat belt is fastened under the ignition SW ON condition.

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A2	32 (1ZZ-FE)	D8	40 (*2)	D16	40 (*2)
B6	38 (*1)	D9	38 (*1)	I11	A
	40 (*2)		40 (*2)	J1	37
D4	38 (*1)	D10	B	J4	33 (1ZZ-FE)
	40 (*2)				35 (2ZZ-GE)
D5	38 (*1)	D11	A	J6	37
	40 (*2)			J7	37
D6	38 (*1)	D12		J8	38 (*1)
	40 (*2)				40 (*2)
D7	38 (*1)	D15		U1	37
	40 (*2)				
D8	38 (*1)	D16	38 (*1)		

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IH		
IJ		
IK	24	
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		
4A	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	
IA6	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IC1	44	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC2		
ID2	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IG1	45	Instrument Panel Wire and Instrument Panel No.3 Wire (Front Side of the Parking Brake Lever)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
IJ1	45	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IJ3		
IL3	45	Floor Wire and Instrument Panel Wire (Right Kick Panel)
IM1	45	Instrument Panel Wire and Floor Wire (Front Side of the Parking Brake Lever)
BA1	46 (*1)	Rear Door LH Wire and Floor Wire (Left Center Pillar)
	47 (*2)	
BB1	46 (*1)	Rear Door RH Wire and Instrument Panel Wire (Right Center Pillar)
	47 (*2)	
BG1	46 (*1)	Rear Door RH Wire and Floor Wire (Right Center Pillar)

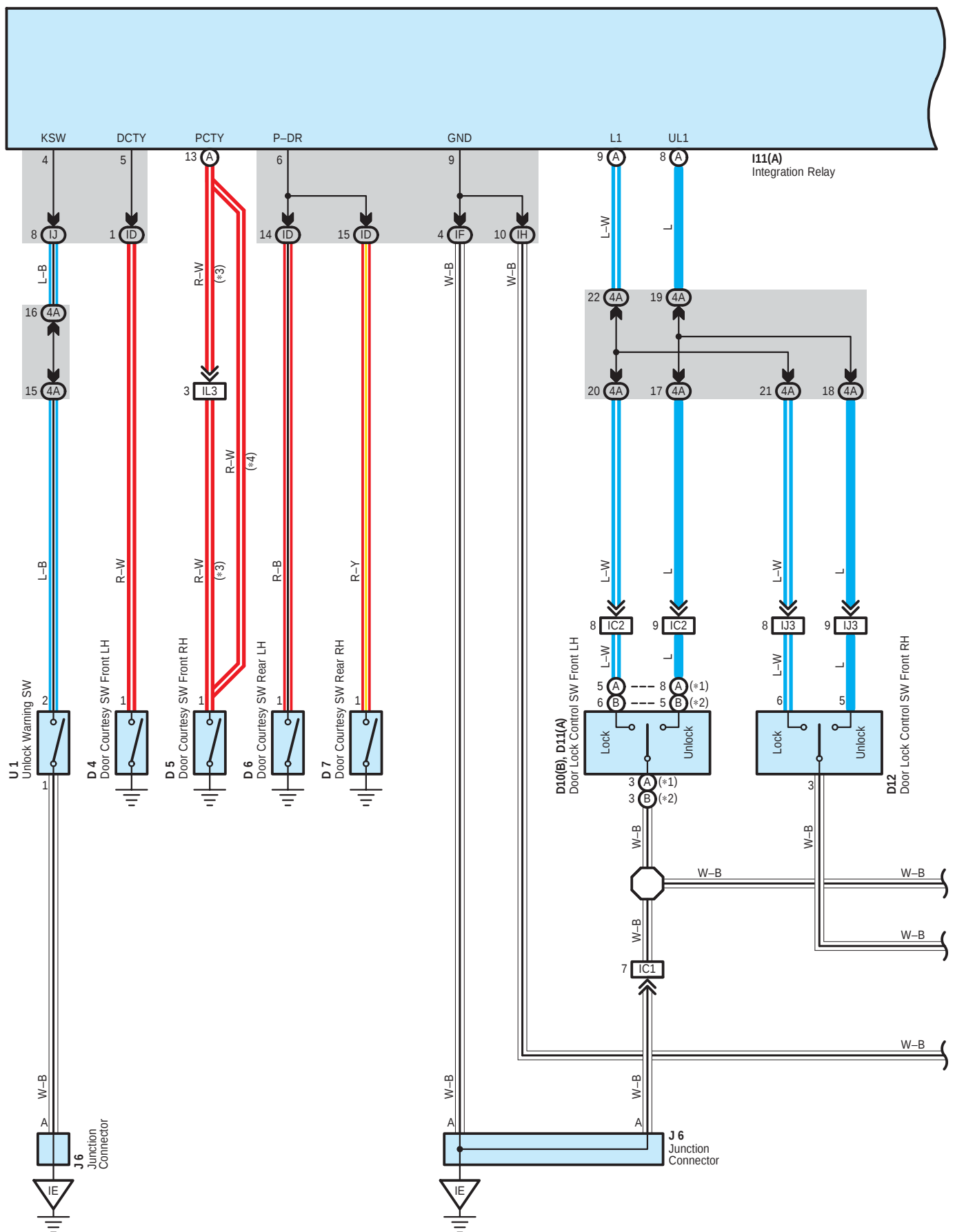
 : Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel
BH	46 (*1)	Under the Left Quarter Pillar
	47 (*2)	

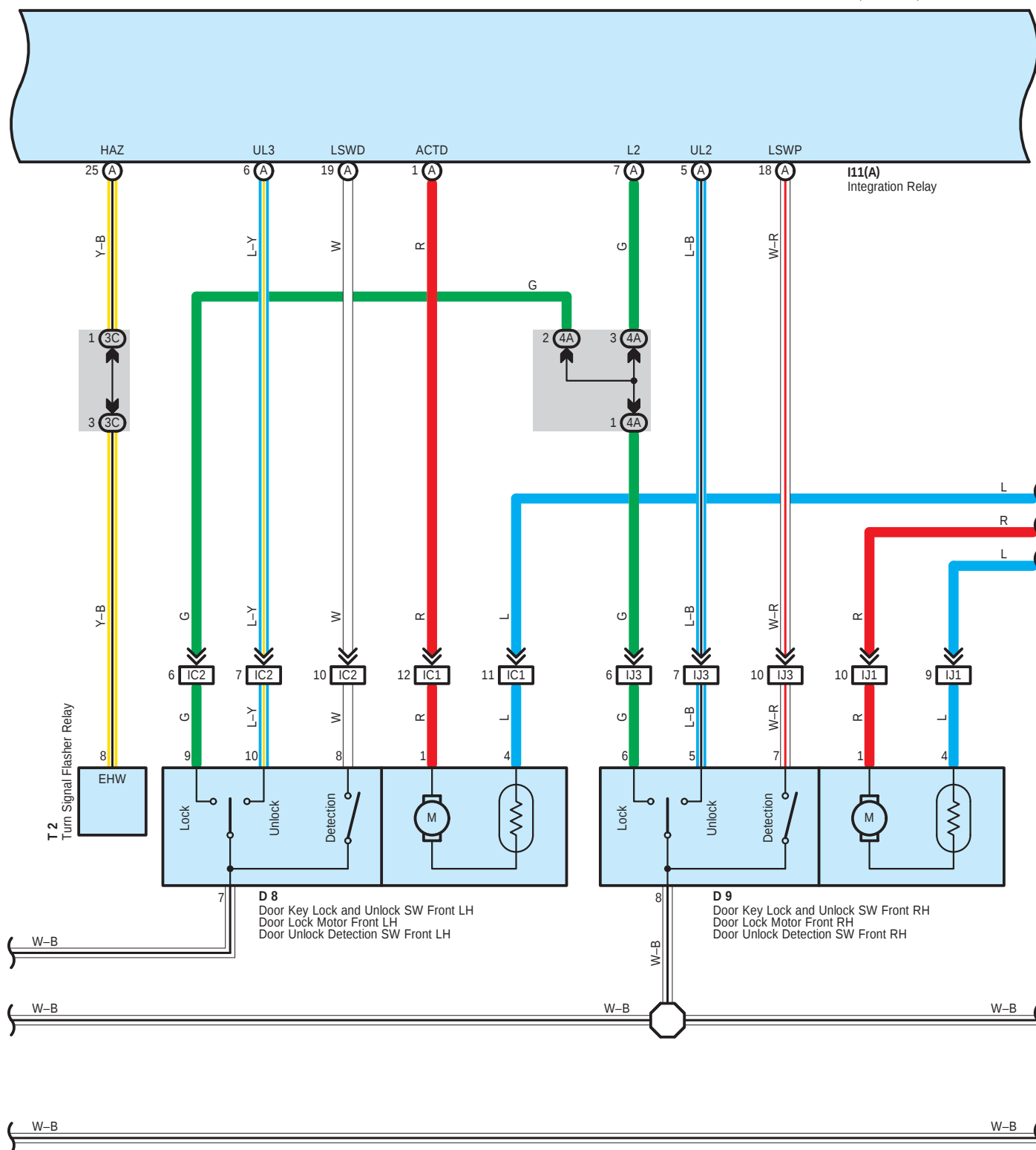
* 1 : w/ Side Airbag and/or Stereo Component Amplifier

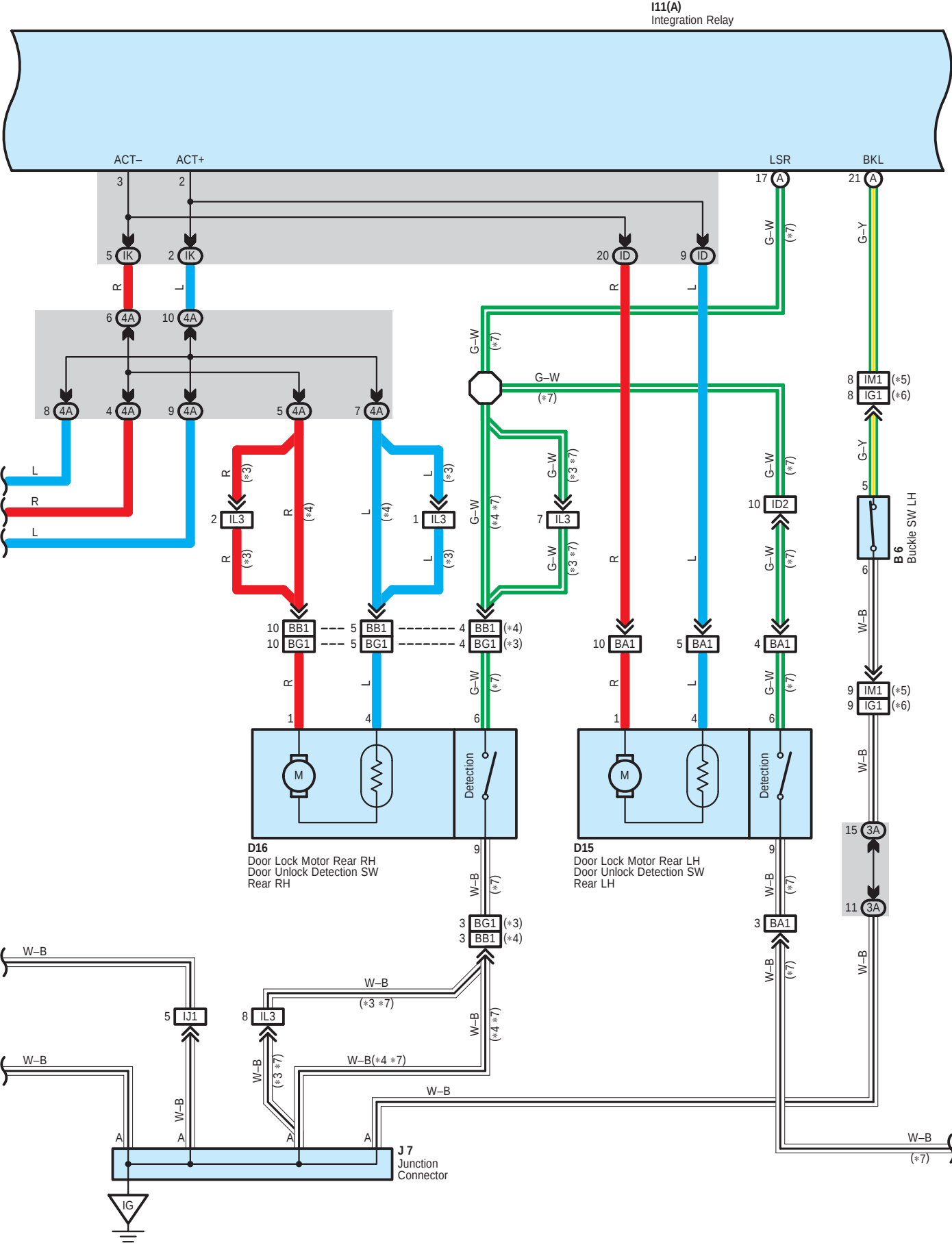
* 2 : w/o Side Airbag and Stereo Component Amplifier

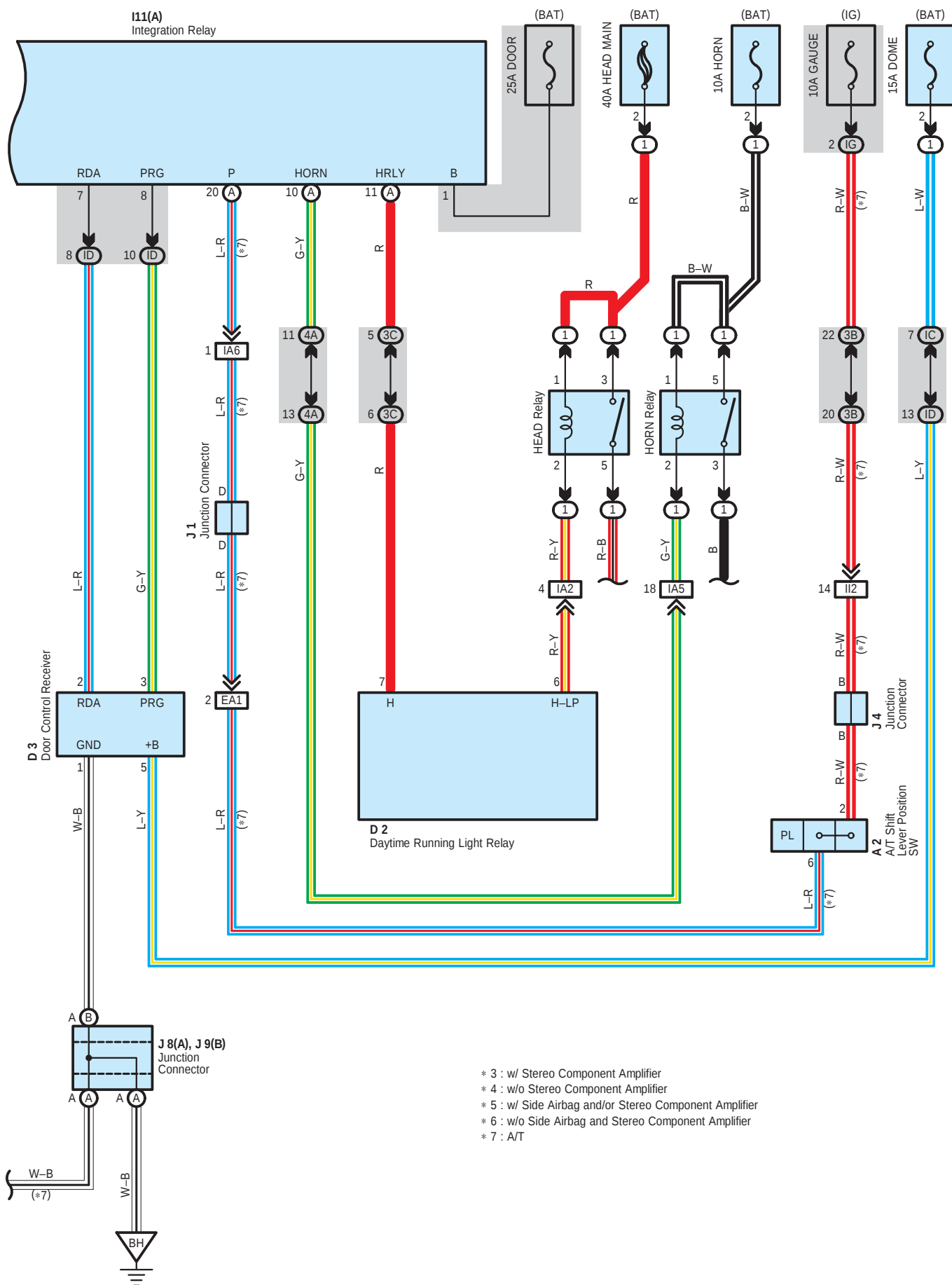
Wireless Door Lock Control



- * 1 : w/ Power Window
- * 2 : w/o Power Window
- * 3 : w/ Stereo Component Amplifier
- * 4 : w/o Stereo Component Amplifier







- * 3 : w/ Stereo Component Amplifier
- * 4 : w/o Stereo Component Amplifier
- * 5 : w/ Side Airbag and/or Stereo Component Amplifier
- * 6 : w/o Side Airbag and Stereo Component Amplifier
- * 7 : A/T

Wireless Door Lock Control

System Outline

Door lock control (Lock and unlock) and panic control (TVIP 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. Wireless Door Lock or Unlock Normal Operation

With the ignition key not inserted into the ignition key cylinder (Unlock warning SW off) and all the doors completely closed, when the lock or unlock button (Transmitter) is pushed, the door control receiver receives the electrical waves from the transmitter, and sends a signal to the integration relay causing it to operate.

As a result, the integration relay judges whether the door is locked or unlocked based on the signal from the door lock motor and door unlock detection SW, and sends a signal to switch the condition from lock to unlock or vice versa, causing the door lock motor to operate.

2. Visual Confirmation of Lock or Unlock

If all doors indicate that they are locked after the lock command, parking lights and taillights will flash once. If any door indicates that it is open after the unlock command, parking lights and taillights will flash twice.

3. Wireless Door Unlock Operation

Pushing the unlock button (Transmitter) once, driver's door is unlocked. Furthermore, pushing the button again within 3 seconds, the other doors are unlocked.

4. Automatic Lock Operation

With the ignition key not inserted into the ignition key cylinder (Unlock warning SW off) and all the doors completely closed, after pushing the button (Transmitter) to unlock all the doors, if a door is not opened within 30 seconds, all the doors will be automatically relocked.

5. Wireless Control Stop Function

If a door is open (Door courtesy SW on), a signal is input from the door courtesy SW to the integration relay stopping wireless door lock or unlock.

If the ignition key is in the ignition key cylinder (Unlock warning SW on), the unlock warning SW inputs a signal to the integration relay stopping wireless door lock or unlock.

6. Repeat Function

In case an appropriate lock detection signal is not received after outputting a lock signal when pushing the lock button (Transmitter), 1 seconds later, the integration relay output the lock signal again.

7. Remote Panic Operation

Panic will function when doors are locked or unlocked, open or closed. When the panic button (Transmitter) is pushed once, theft alarm sounds and headlights and taillights flash. Then, the panic or the unlock button (Transmitter) is pushed once more, sounding and flashing will stop. Panic will not function when ignition key is in ignition key cylinder.

○ : Parts Location

Code	See Page	Code		See Page	Code		See Page
A2	32 (1ZZ–FE)	D8		38 (*1)	I11	A	37
B6	38 (*1)			40 (*2)	J1		33 (1ZZ–FE)
	40 (*2)	D9		38 (*1)			35 (2ZZ–GE)
D2	36					40 (*2)	J4
D3	38 (*1)	D10	B	38 (*1)	J6		37
	40 (*2)			40 (*2)	J7		37
D4	38 (*1)	D11	A	38 (*1)	J8	A	38 (*1)
	40 (*2)			40 (*2)			40 (*2)
D5	38 (*1)	D12		38 (*1)	J9	B	38 (*1)
	40 (*2)			40 (*2)			40 (*2)
D6	38 (*1)	D15		38 (*1)	T2		37
	40 (*2)			40 (*2)	U1		37
D7	38 (*1)	D16		38 (*1)			
	40 (*2)			40 (*2)			

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier



: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IH		
IJ		
IK	24	
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		
3C		
4A	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA5		
IA6		
IC1	44	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC2		
ID2	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IG1	45	Instrument Panel Wire and Instrument Panel No.3 Wire (Front Side of the Parking Brake Lever)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
IJ1	45	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IJ3		
IL3	45	Floor Wire and Instrument Panel Wire (Right Kick Panel)
IM1	45	Instrument Panel Wire and Floor Wire (Front Side of the Parking Brake Lever)
BA1	46 (*1)	Rear Door LH Wire and Floor Wire (Left Center Pillar)
	47 (*2)	
BB1	46 (*1)	Rear Door RH Wire and Instrument Panel Wire (Right Center Pillar)
	47 (*2)	
BG1	46 (*1)	Rear Door RH Wire and Floor Wire (Right Center Pillar)

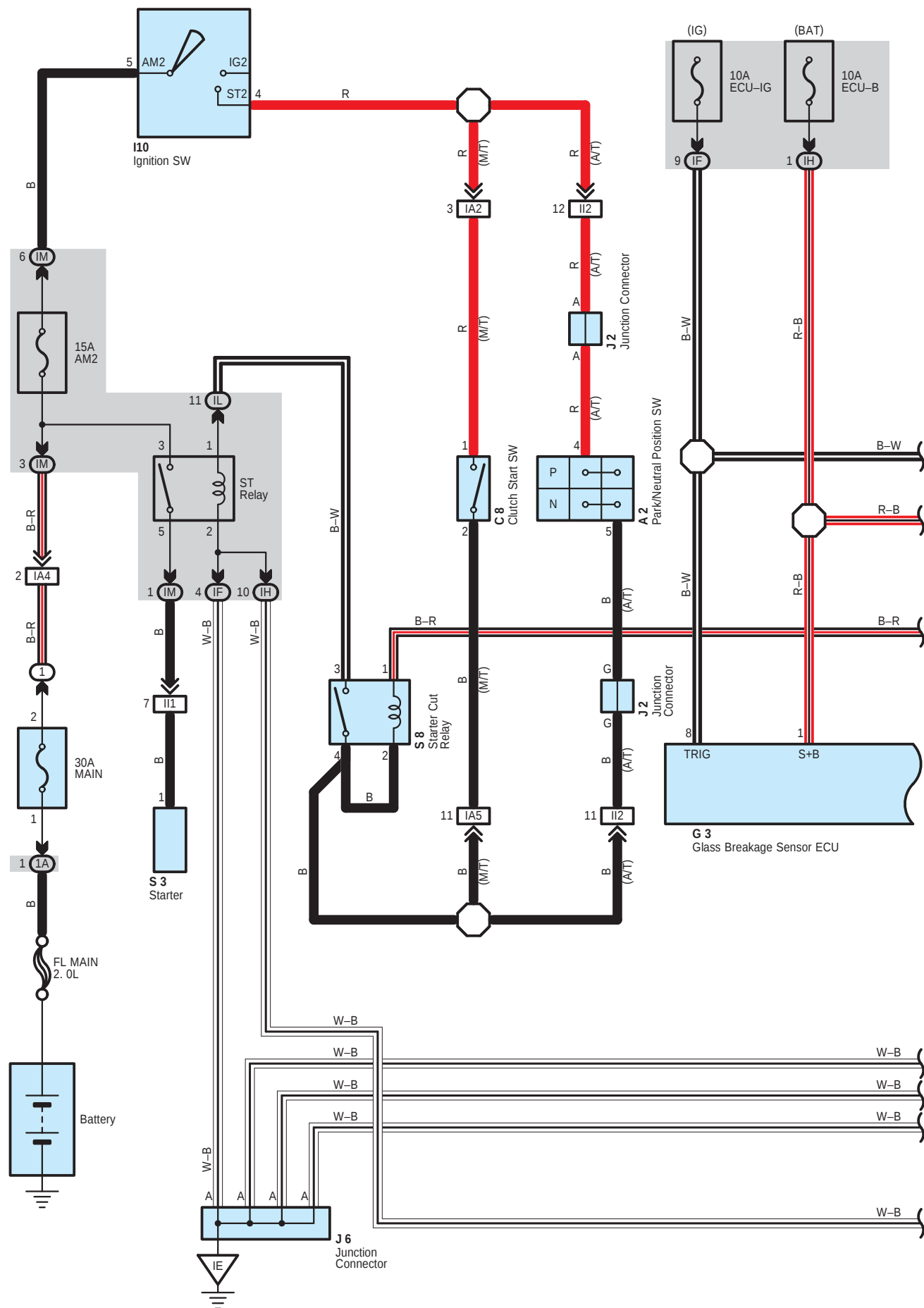


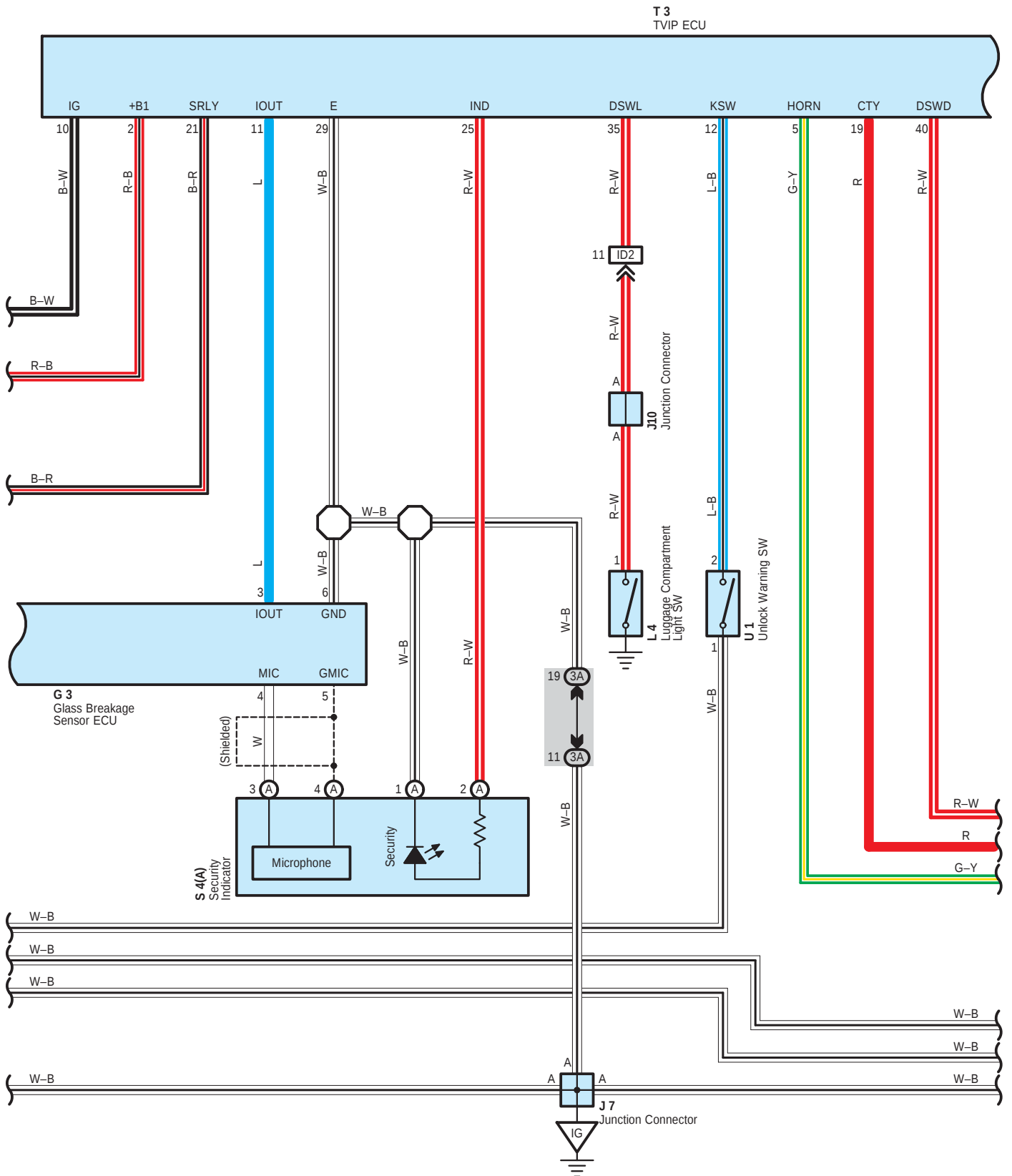
: Ground Points

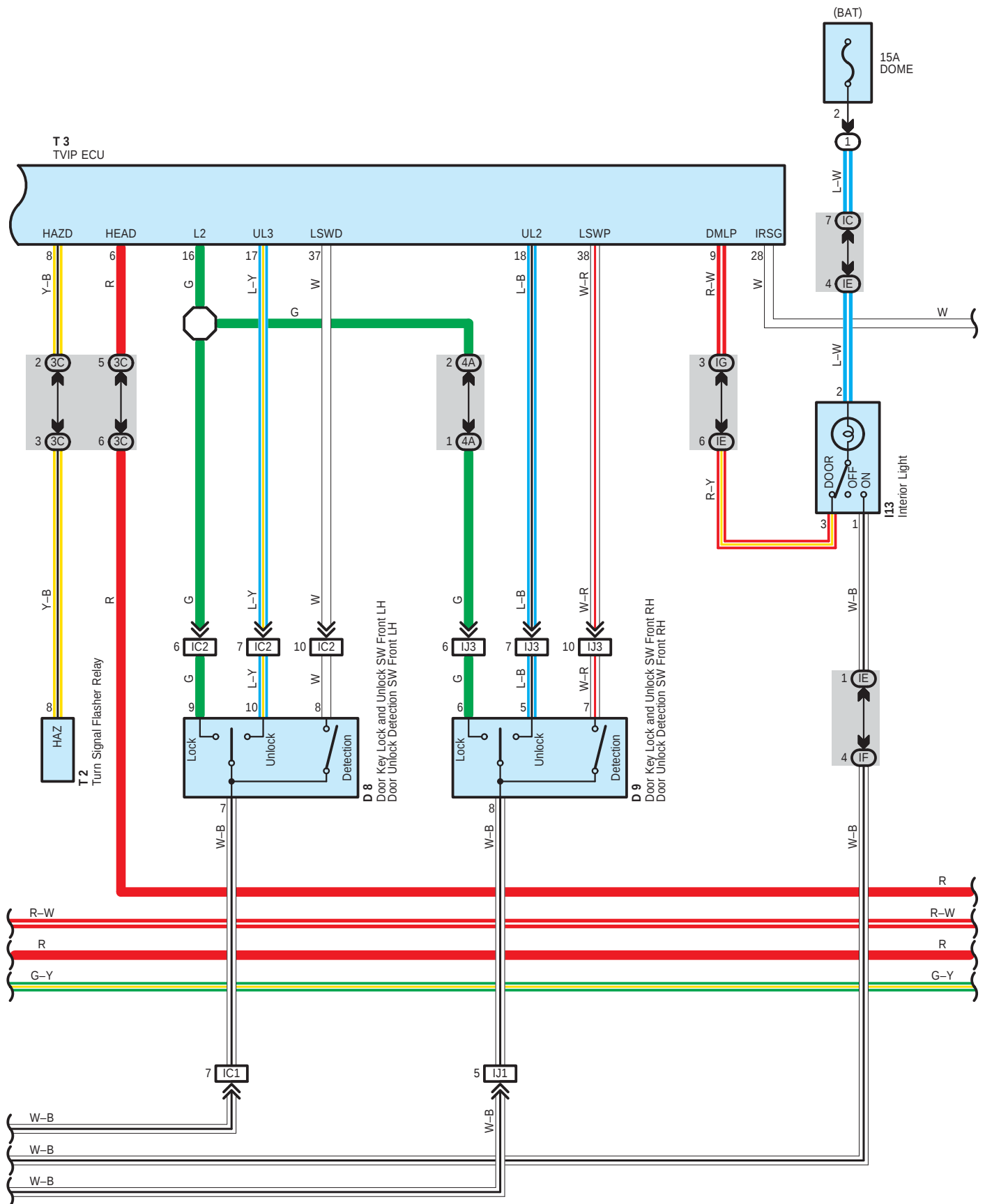
Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel
BH	46 (*1)	Under the Left Quarter Pillar
	47 (*2)	

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

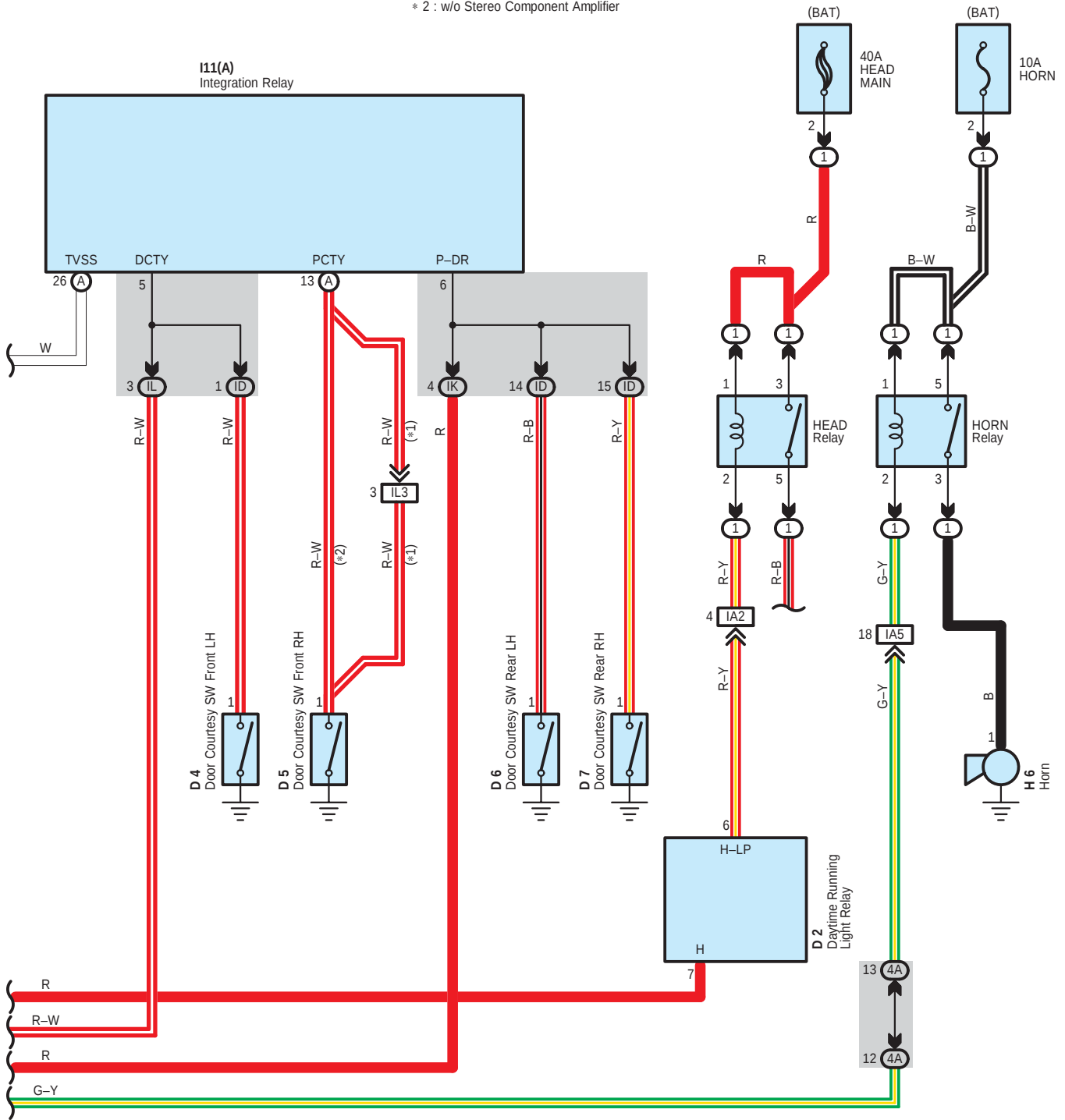
* 2 : w/o Side Airbag and Stereo Component Amplifier







- * 1 : w/ Stereo Component Amplifier
- * 2 : w/o Stereo Component Amplifier



TVIP System

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A2	32 (1ZZ-FE)	D8	40 (*2)	J7	37
C8	36	D9	38 (*1)	J10	38 (*1)
D2	36		40 (*2)		40 (*2)
D4	38 (*1)	G3	37	L4	38 (*1)
	40 (*2)	H6	32 (1ZZ-FE)		40 (*2)
D5	38 (*1)		34 (2ZZ-GE)	S3	33 (1ZZ-FE)
	40 (*2)	I10	37		35 (2ZZ-GE)
D6	38 (*1)	I11	A	S4	A
	40 (*2)	I13	38 (*1)	S8	37
D7	38 (*1)		40 (*2)	T2	37
	40 (*2)	J2	37	T3	37
D8	38 (*1)	J6	37	U1	37

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IE	25	Roof Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IH		
IK		
IL	24	
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3C		
4A	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA4		
IA5		
IC1	44	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC2		
ID2	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)
II1	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
II2		
IJ1	45	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IJ3		
IL3	45	Floor Wire and Instrument Panel Wire (Right Kick Panel)

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier



: Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel



System Outline

The moon roof can be operated when the ignition SW is turned to ON position.

1. Slide Open Operation

The moon roof fully opens automatically by pressing the slide open button of the moon roof control SW once. If the moon roof control switch is pressed again when the moon roof is operating, the movement of the moon roof stops.

The operation of slide open is not worked when the moon roof at tilt up position.

2. Slide Close Operation

If you keep pressing the slide close button of the moon roof control SW when the moon roof is open, the moon roof closes half and stops the operation once. If you keep pressing the slide close once again, the moon roof fully closes.

3. Tilt Up Operation

If you press the tilt up button of the moon roof control SW, the moon roof is tilted up. However, the moon roof is not tilted up when it is open

4. Tilt Down Operation

If you press the tilt down button when the tilt up of the moon roof control SW is pressed, the moon roof is tilted down.

: Parts Location

Code	See Page	Code	See Page	Code	See Page
J6	37	M2	39 (*1)	M3	39 (*1)
J7	37		41 (*2)		41 (*2)

: Junction Block and Wire Harness Connector

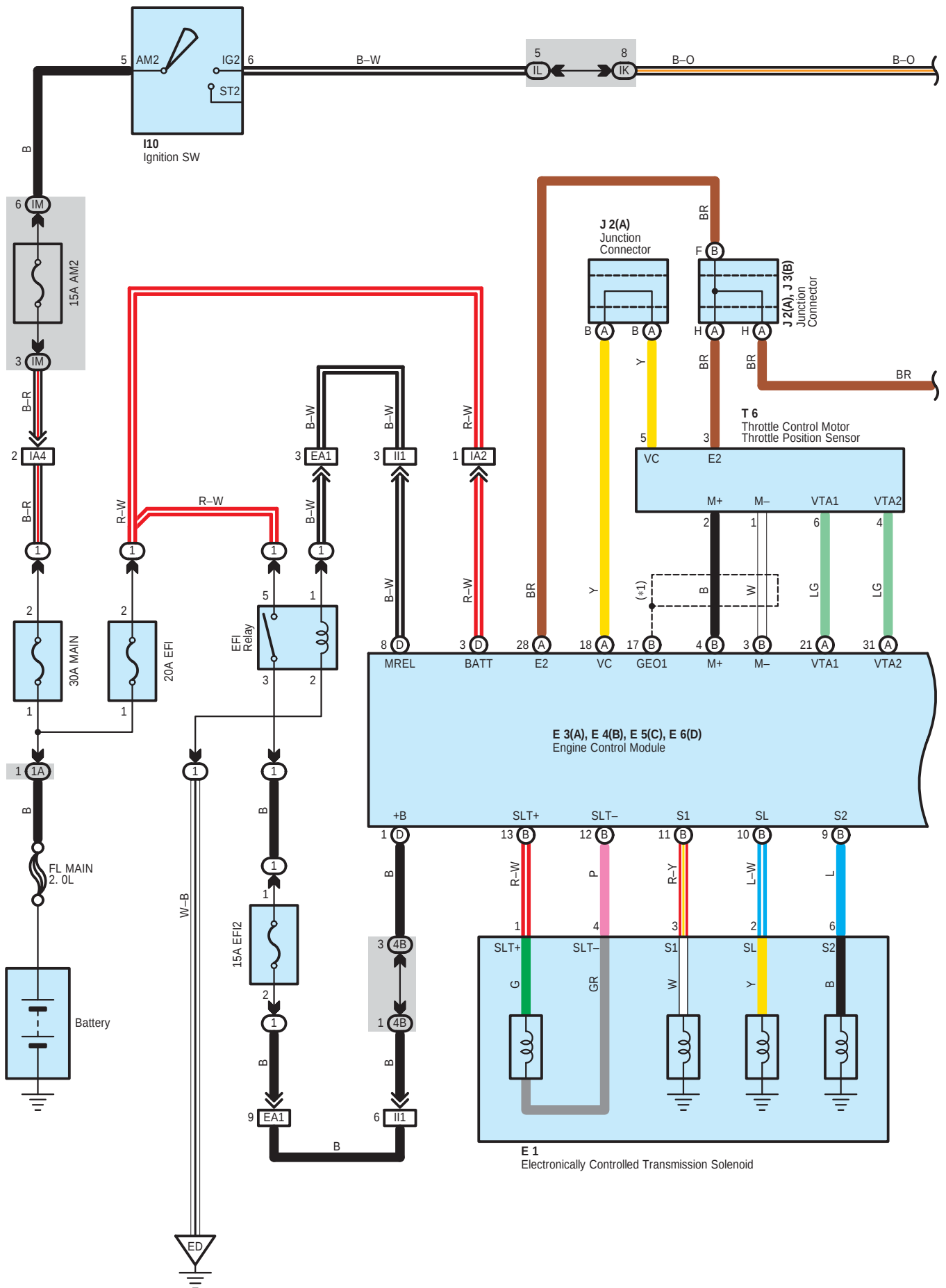
Code	See Page	Junction Block and Wire Harness (Connector Location)
IE	25	Roof Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		

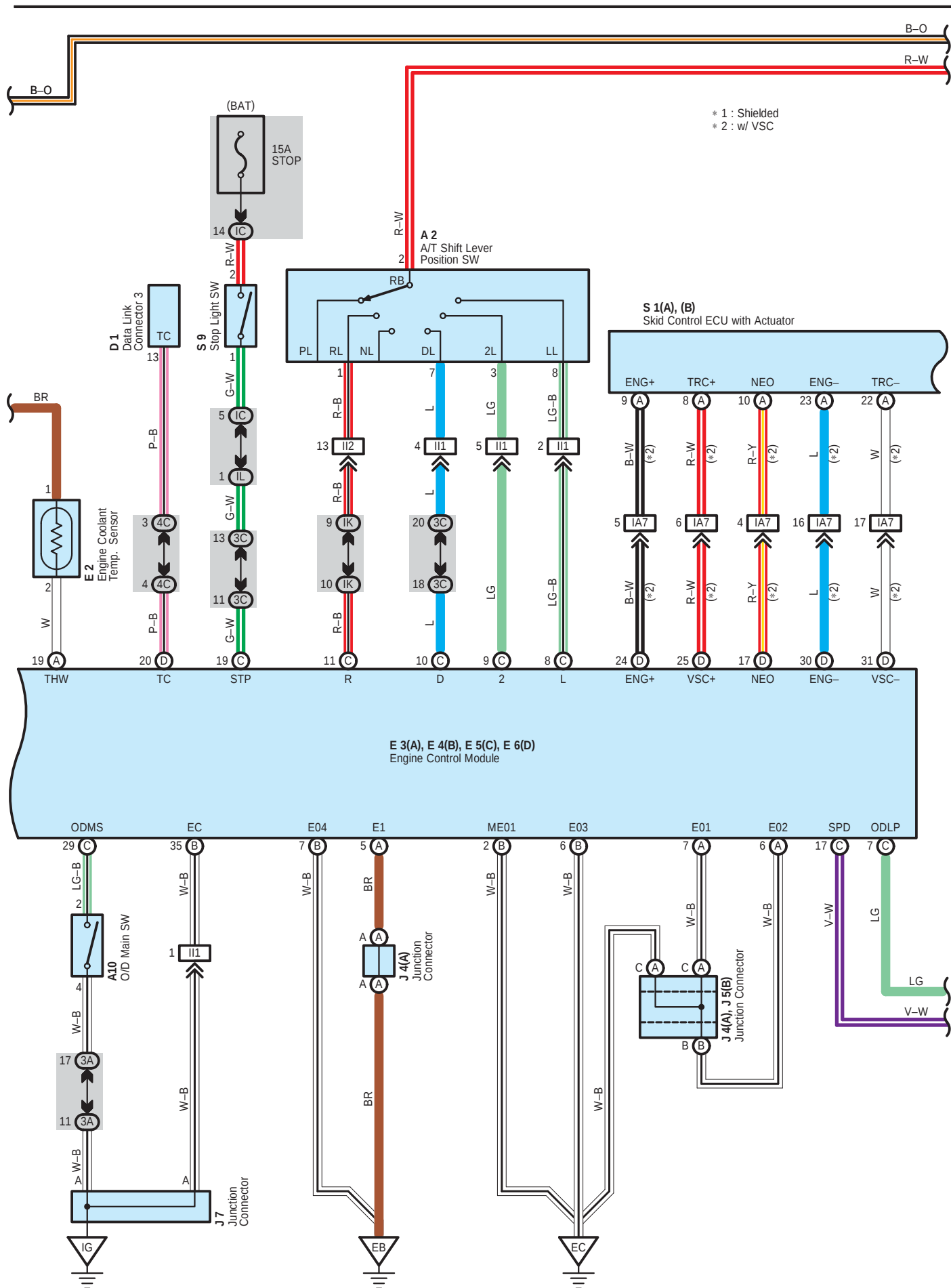
: Ground Points

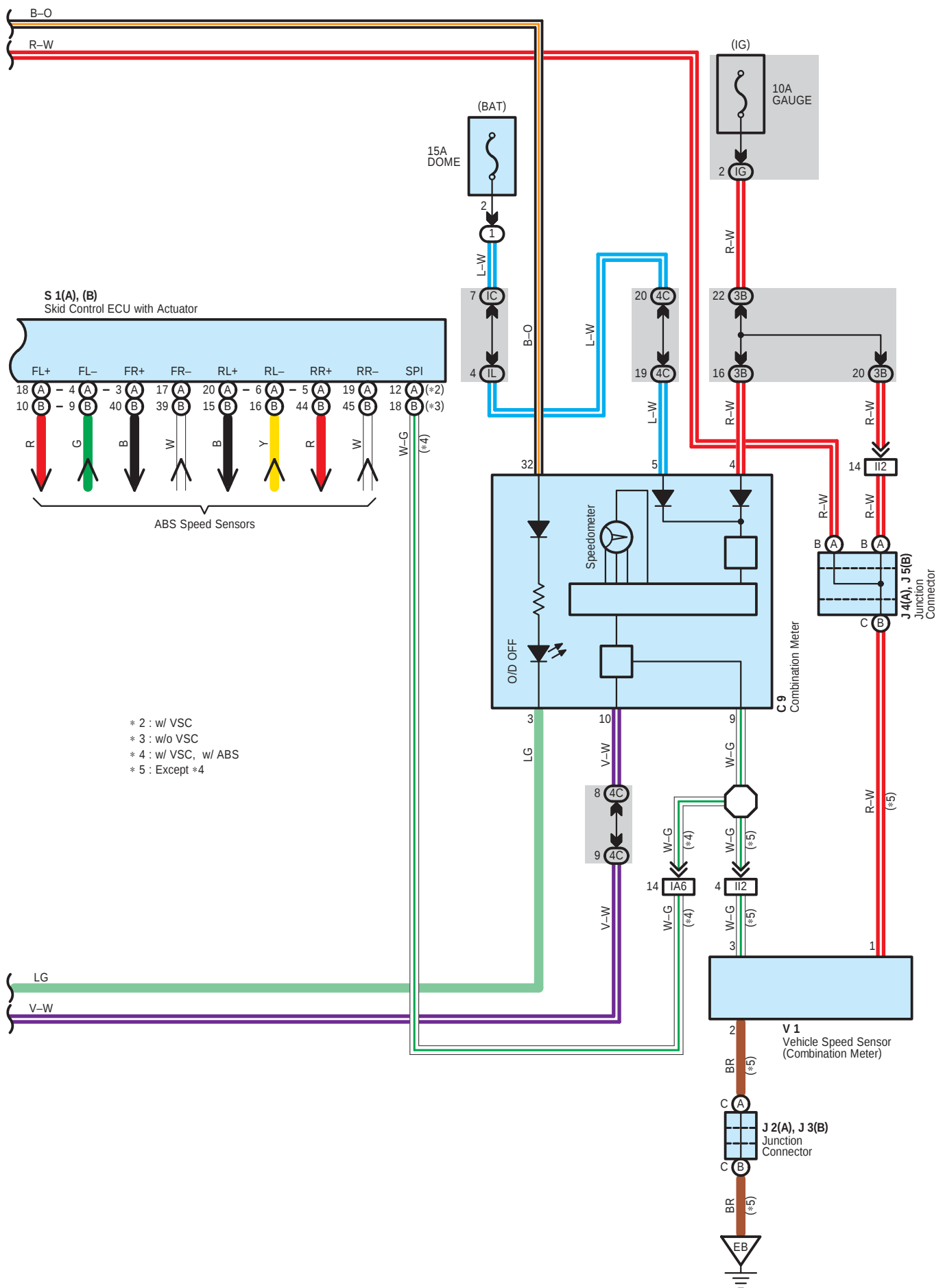
Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier







System Outline

Previous automatic transaxle have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock-up hydraulic pressure. The electronically controlled transmission, however, controls the line pressure and lock-up pressure etc. electrically, through the solenoid valve. The engine control module controls each solenoid valve based on the input signals from each sensor, which makes smooth driving possible by shift selection for each gear that is most appropriate to the driving conditions at that time.

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 is input to TERMINAL SPD of the engine control module. At the same time, the throttle valve opening signal from the throttle position sensor is input to TERMINALS VTA1, 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. 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 continuity to the lock-up solenoid is cut.

3. Overdrive Circuit

* Overdrive on

When the engine is turned on from ignition off, the engine control module turns the O/D on. When the O/D main SW is pushed while the O/D is off, a signal is input into TERMINAL ODMS of the engine control module, and the O/D is turned on by the engine control module. In this case, the engine control module controls the gear shift according to the vehicle's driving condition, using the O/D range. At this time, the O/D off indicator light is off.

* Overdrive off

When the O/D main SW is pushed while the O/D is on, a signal is input into TERMINAL ODMS of the engine control module, and the O/D is turned off. At this time, the current flows through the O/D off indicator light to TERMINAL ODLP of the engine control module. As a result, the O/D off indicator light turns on, and the engine control module controls the gear shift according to the vehicle's driving condition, without using the O/D range.

○ : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A2		32 (1ZZ–FE)		E4	B	36		J7		37	
A10		36		E5	C	36		S1	A	33 (1ZZ–FE)	
C9		36		E6	D	36				35 (2ZZ–GE)	
D1		36		I10		37			B	33 (1ZZ–FE)	
E1		32 (1ZZ–FE)		J2	A	37				35 (2ZZ–GE)	
E2		32 (1ZZ–FE)		J3	B	37			S9		37
		34 (2ZZ–GE)		J4	A	37		T6		33 (1ZZ–FE)	
E3	A	36		J5	B	37		V1		33 (1ZZ–FE)	

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IK	24	
IL		
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		
3C		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

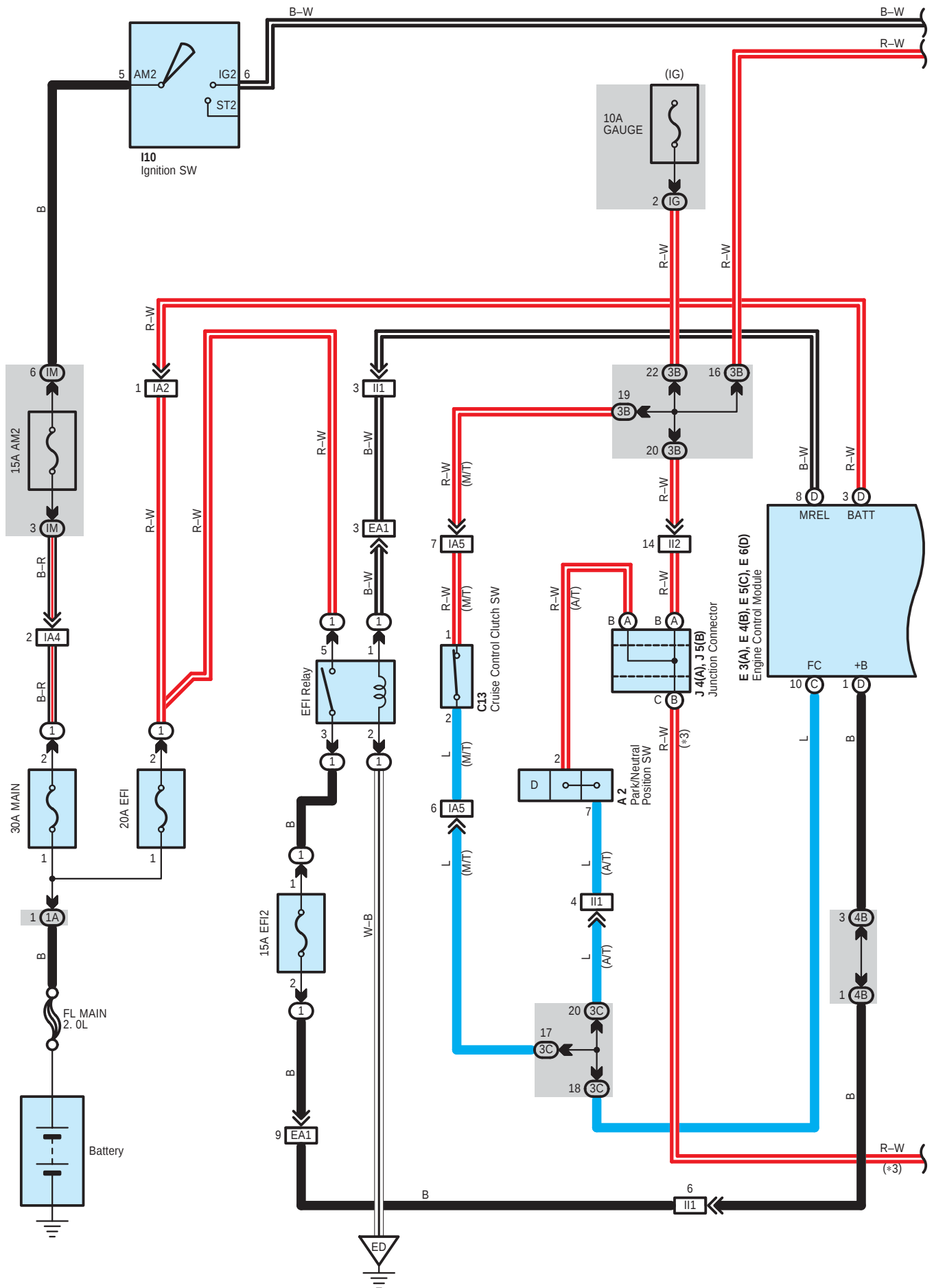
 : Connector Joining Wire Harness and Wire Harness

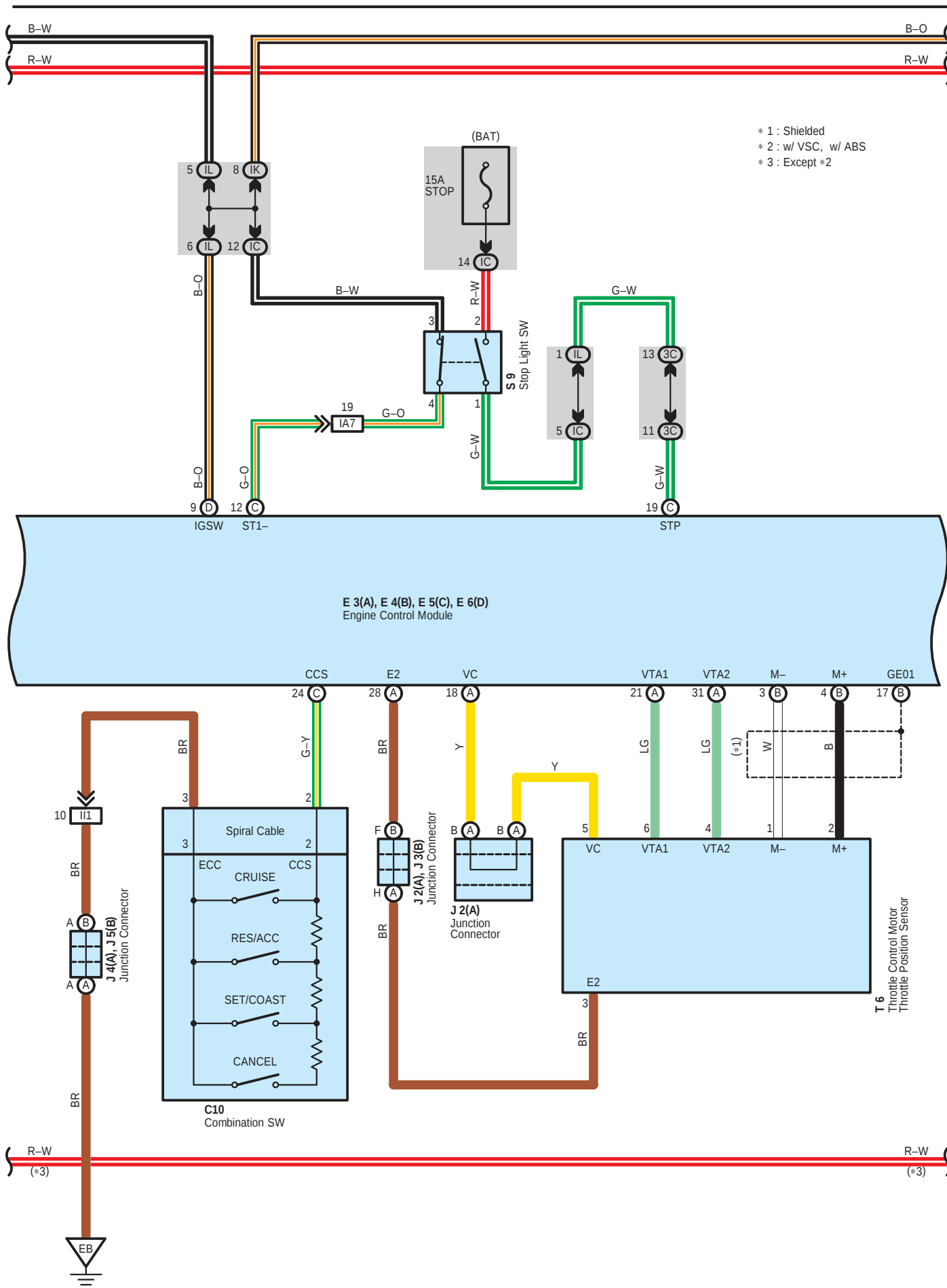
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA4		
IA6		
IA7		
II1	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
II2		

 : Ground Points

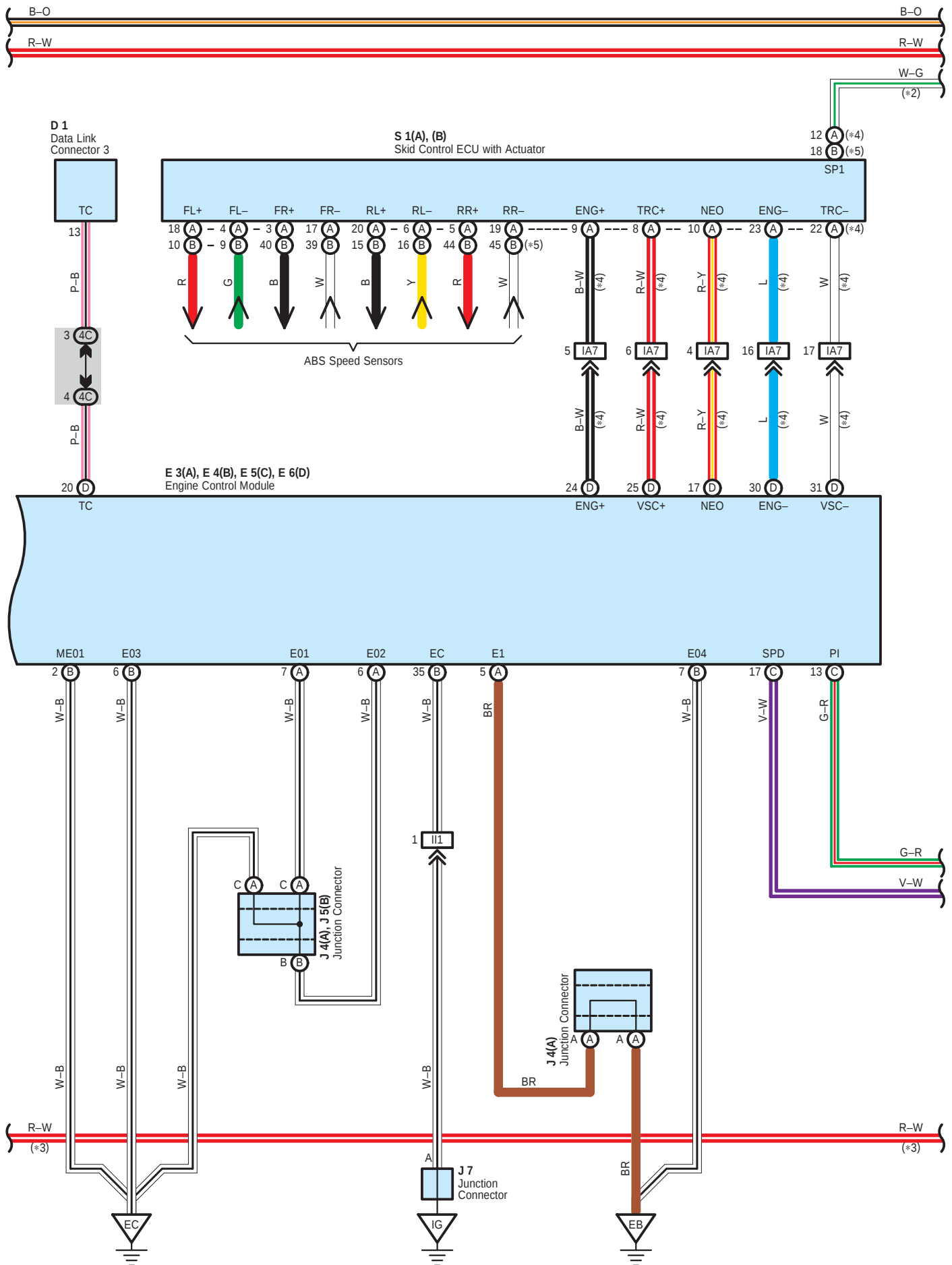
Code	See Page	Ground Points Location
EB	42 (1ZZ-FE)	Left Side of the Cylinder Head
	43 (2ZZ-GE)	
EC	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Right Kick Panel
	43 (2ZZ-GE)	
IG	44	

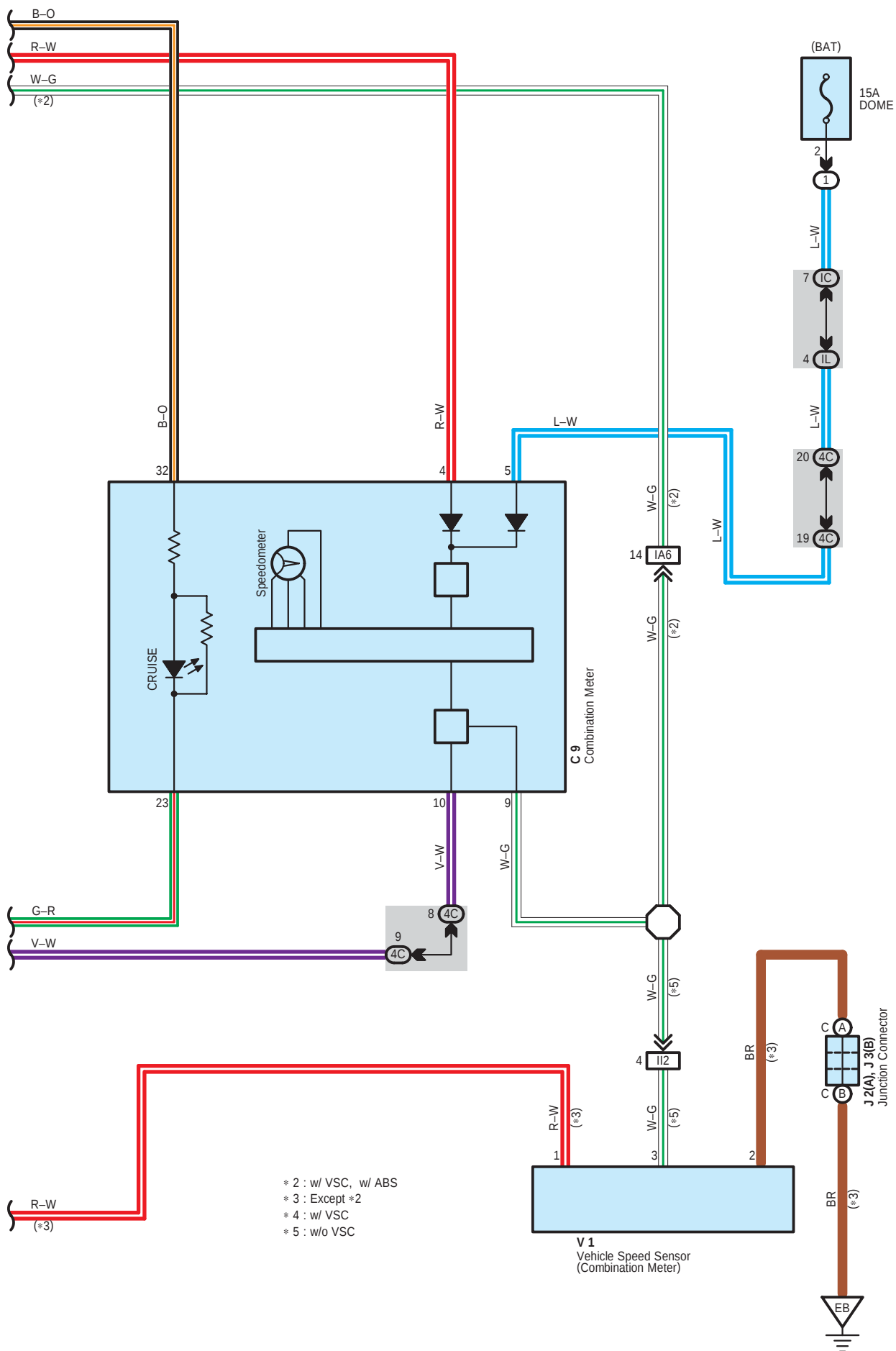
Cruise Control for 1ZZ-FE





Cruise Control for 1ZZ-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 CRUISE SW is turned on and the SET SW is pushed with the vehicle speed within the set limit (Approx. 40 km/h, 25 mph to 200 km/h, 124 mph), a signal is input to TERMINAL CCS of the engine control module, and the vehicle speed at the time the SET SW is released is memorized in the ECU as the set speed.

2. Set Speed Control

During cruise control driving, the ECU compares the set speed memorized in the ECU with the actual vehicle speed input into TERMINAL SPD of the engine control module from the combination meter, and controls the throttle control motor to maintain the set speed.

When the actual speed is lower than the set speed, the ECU causes the current to the throttle control motor to flow from TERMINAL M+ of the engine control module to TERMINAL 2 of the throttle control motor to TERMINAL 1 to TERMINAL M- of the engine control module. As a result, the motor in the throttle control motor is rotated to open the throttle valve to increase the vehicle speed. When the actual driving speed is higher than the set speed, the current to the throttle control motor flows from TERMINAL M- of the ECU to TERMINAL 1 of the throttle control motor to TERMINAL 2 to TERMINAL M+ of the engine control module.

This causes the motor in the throttle control motor to rotate to close the throttle valve to decrease the vehicle speed.

3. Coast Control

During cruise control driving, while the COAST SW is on, the throttle control motor is rotated to close the throttle valve and decrease the driving speed. The vehicle speed when the COAST SW is turned off is memorized, and the vehicle continues at the new set speed.

4. Accel Control

During cruise control driving, while the ACC SW is turned on, the throttle control motor is rotated to open the throttle valve and increase the driving speed.

The vehicle speed when the ACC SW is turned off is memorized and the vehicle continues at the new set speed.

5. Resume Control

If the vehicle speed is approximately 40 km/h (25 mph) or above after canceling the set speed with the CANCEL SW, pushing the RES SW will cause the vehicle to resume the speed set before the cancellation.

6. Manual Cancel Mechanism

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

- * Depressing the clutch pedal (Cruise control clutch SW off). "Signal is not input to TERMINAL FC of the ECU"
- * Placing the shift lever to positions except "D" position (Park/Neutral position SW except "D" position) (A/T), depressing the brake pedal (Stop light SW on) (M/T). "Signal input to TERMINAL STP of the ECU"
- * Pushing the CANCEL SW (CANCEL SW on). "Signal input to TERMINAL CCS of the ECU"
- * Pushing the CRUISE SW off "signal input to TERMINAL CCS of the ECU".

7. Tap-Up Control Function

When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be increased 1.6 km/h (1 mph) each time by operating the RES/ACC SW quickly within 0.5 seconds.

8. Tap-Down Control Function

When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be lowered 1.6 km/h (1 mph) each time by operating the SET COAST SW quickly within 0.5 seconds.

9. Auto Cancel Function

A) If any of the following operating conditions occurs during cruise control operation, the set speed is erased and the cruise control is released, (CRUISE SW turns off).

When this occurs, the ignition SW must be turned off once before the CRUISE SW will turn on.

- * When abnormality is found in the stop light SW input circuit.
- * When abnormality is found in the cancel circuit.

B) If any of the following operating conditions occurs during cruise control operation, the set speed is erased and the cruise control is released. (CRUISE SW turn off).

When this occurs, the cancel state is cleared as the CRUISE SW will turn on again.

- * When abnormality is found in electronic throttle parts.
- * Open circuit in the stop light SW.
- * Momentary interruption of vehicle speed signal.
- * Short circuit in the stop light SW.

C) If any of the following conditions occurs during cruise control operation, the set speed is erased and the cruise control is released. (The power to the magnetic clutch is cut off until the SET SW is "ON" again.)

- * When power to the cruise control system is momentarily cut off.

10. Overdrive Control Function

The overdrive control may be cancelled if the vehicle travels on the slope during cruise control travelling. After the overdrive control has been cancelled it is decided that the slope is finished, the vehicle returns to the overdrive control mode again.

: Parts Location

Code		See Page	Code		See Page	Code		See Page
A2		32 (1ZZ-FE)	E5	C	36	J7		37
C9		36	E6	D	36	S1	A	33 (1ZZ-FE)
C10		36	I10		37		B	33 (1ZZ-FE)
C13		36	J2	A	37	S9		37
D1		36	J3	B	37	T6		33 (1ZZ-FE)
E3	A	36	J4	A	37	V1		33 (1ZZ-FE)
E4	B	36	J5	B	37			

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IK	24	
IL		
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3C		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

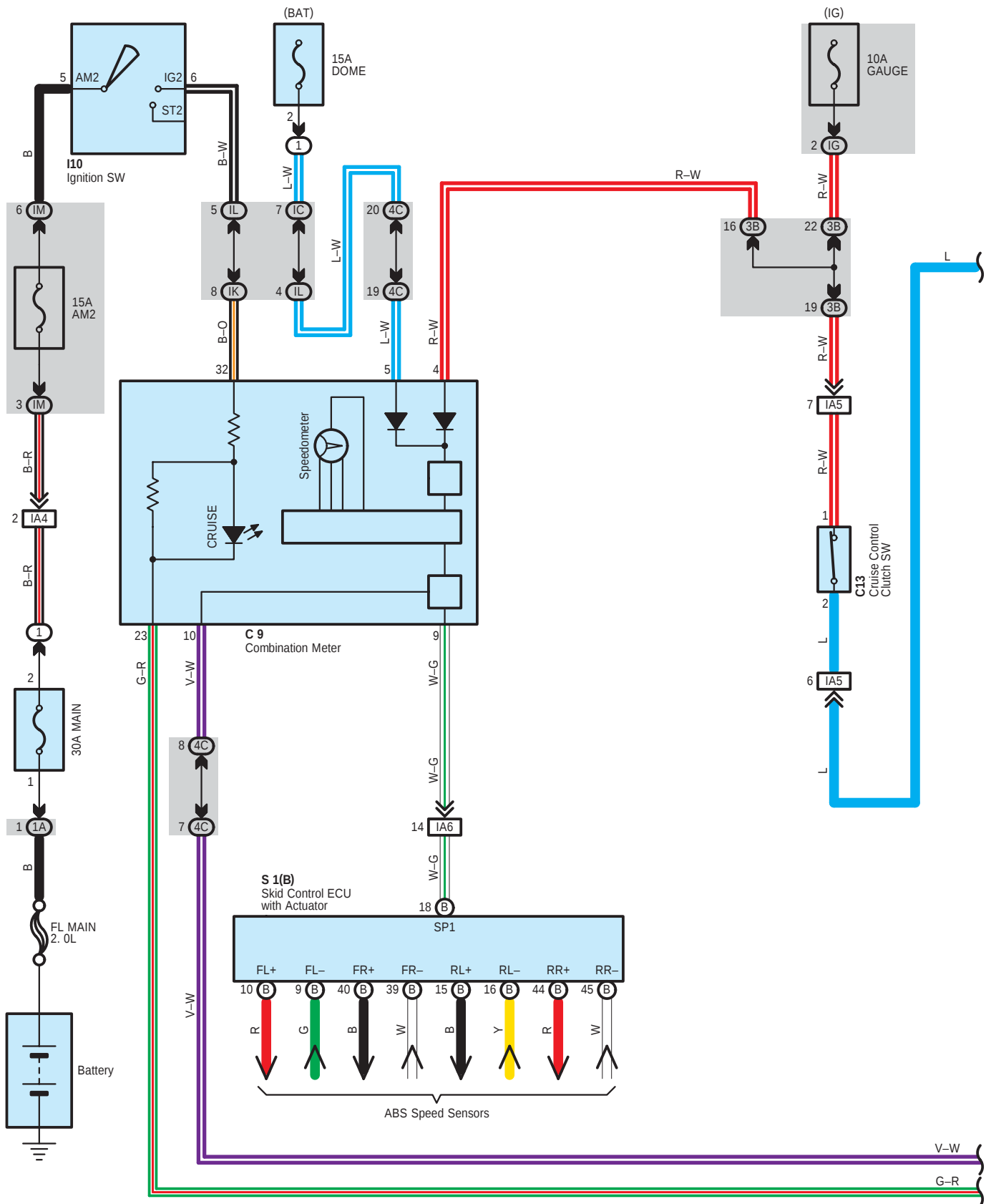
: Connector Joining Wire Harness and Wire Harness

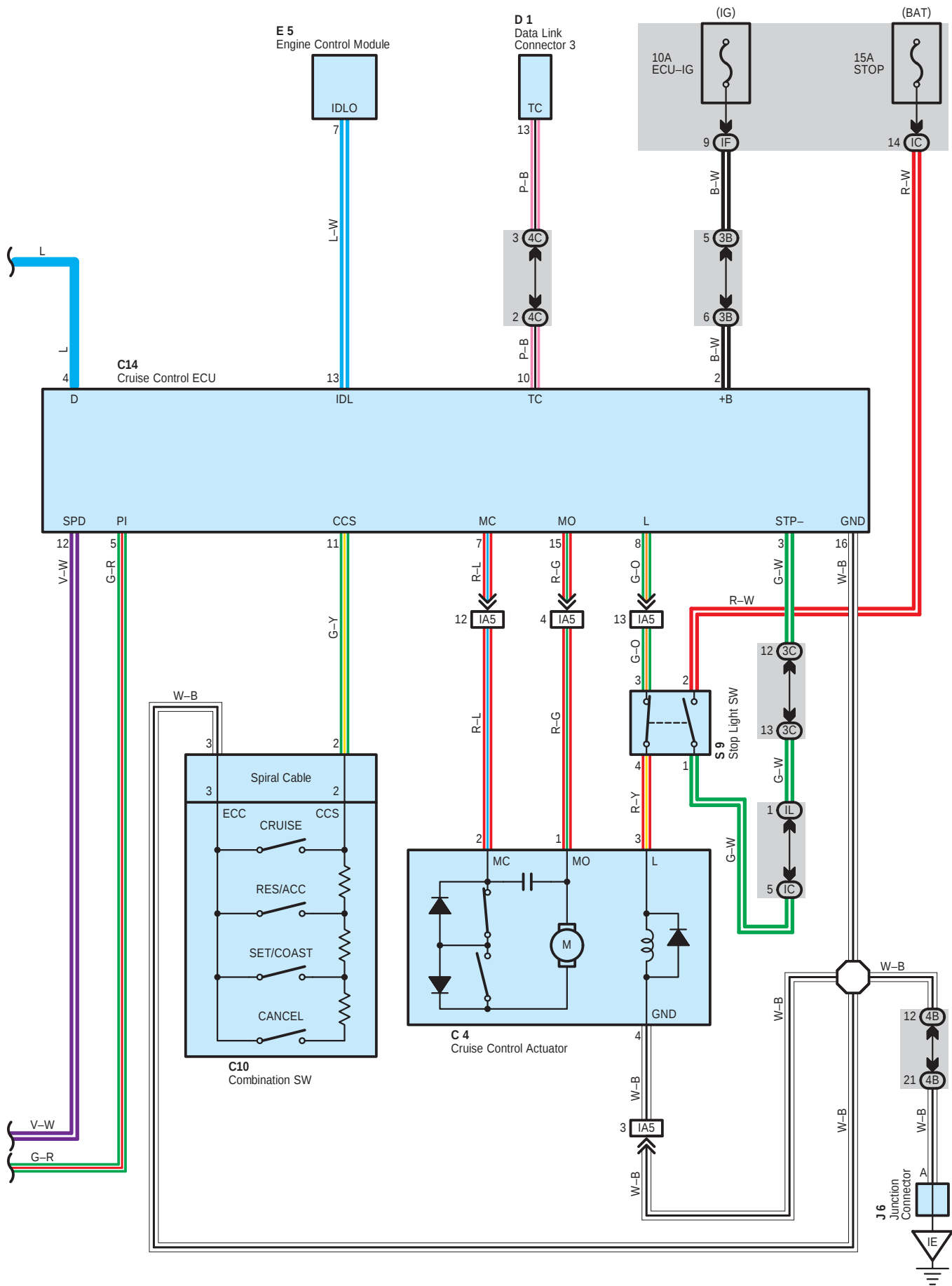
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA4		
IA5		
IA6		
IA7		
II1	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
II2		

: Ground Points

Code	See Page	Ground Points Location
EB	42 (1ZZ-FE)	Left Side of the Cylinder Head
EC		
ED	42 (1ZZ-FE)	Front Left Suspension Tower
IG	44	Right Kick Panel

Cruise Control for 2ZZ-GE





System Outline

The current is applied at all times through the STOP fuse to TERMINAL 2 of the stop light SW.

With the ignition SW turned on, the current flows through the MAIN fuse to AM2 fuse to ignition SW (IG2) to TERMINAL 32 of the combination meter and the current through the ECU-IG fuse flows to TERMINAL 2 of the cruise control ECU.

When the ignition SW is on and the CRUISE SW is turned on, a signal is input from TERMINAL 2 of the cruise control SW to TERMINAL 11 of the cruise control ECU. As a result, the cruise control ECU functions and the current flows from the ECU-IG fuse to TERMINAL 2 of the cruise control ECU to TERMINAL 16 of the cruise control ECU to GROUND, and the cruise control system is in a condition ready for operation.

At the same time, the current flows through the MAIN fuse to AM2 fuse to ignition SW (IG2) to TERMINAL 32 of the cruise indicator light to TERMINAL 23 to TERMINAL 5 of the cruise control ECU to TERMINAL 16 to GROUND, causing the cruise indicator light to light up, indicating that cruise control is ready for operation.

1. Set Operation

When the CRUISE SW is turned on and the SET SW is pushed with the vehicle speed within the set limit (Approx. 40 km/h, 25 mph to 200 km/h, 124 mph), a signal is input to TERMINAL 11 of the cruise control ECU, and the vehicle speed at the time the SET SW is released is memorized in the ECU as the set speed.

2. Set Speed Control

During cruise control driving, the ECU compares the set speed memorized in the ECU with the actual vehicle speed input into TERMINAL 12 of the cruise control ECU from the combination meter, and controls the cruise control actuator to maintain the set speed.

When the actual speed is lower than the set speed, the ECU causes the current to the cruise control actuator to flow from TERMINAL 15 of the cruise control ECU to TERMINAL 1 of the cruise control actuator to TERMINAL 2 to TERMINAL 7 of the cruise control ECU. As a result, the motor in the cruise control actuator is rotated to open the throttle valve and the throttle cable is pulled to increase the vehicle speed. When the actual driving speed is higher than the set speed, the current to the cruise control actuator flows from TERMINAL 7 of the ECU to TERMINAL 2 of the cruise control actuator to TERMINAL 1 to TERMINAL 15 of the cruise control ECU.

This causes the motor in the cruise control actuator to rotate to close the throttle valve and return the throttle cable to decrease the vehicle speed.

3. Coast Control

During cruise control driving, while the COAST SW is on, the cruise control actuator returns the throttle cable to close the throttle valve and decrease the driving speed. The vehicle speed when the COAST SW is turned off is memorized, and the vehicle continues at the new set speed.

4. Accel Control

During cruise control driving, while the ACC SW is turned on, the cruise control actuator pulls the throttle cable to open the throttle valve and increase the driving speed.

The vehicle speed when the ACC SW is turned off is memorized and the vehicle continues at the new set speed.

5. Resume Control

If the vehicle speed is approximately 40 km/h (25 mph) or above after canceling the set speed with the CANCEL SW, pushing the RES SW will cause the vehicle to resume the speed set before the cancellation.

6. Manual Cancel Mechanism

If any of the following operations occurs during cruise control operation, the magnetic clutch of the actuator turns off and the motor rotates to close the throttle valve and the cruise control is released.

- * Depressing the clutch pedal (Cruise control clutch SW off). "Signal is not input to TERMINAL 4 of the ECU"
- * Depressing the brake pedal (Stop light SW on). "Signal input to TERMINAL 3 of the ECU"
- * Pushing the CANCEL SW (CANCEL SW on). "Signal input to TERMINAL 1 of the ECU"
- * Pushing the CRUISE SW off "signal input to TERMINAL 1 of the ECU".

7. Tap-Up Control Function

When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be increased 1.6 km/h (1 mph) each time by operating the RES/ACC SW quickly within 0.5 seconds.

8. Tap-Down Control Function

When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be lowered 1.6 km/h (1 mph) each time by operating the SET COAST SW quickly within 0.5 seconds.

9. Auto Cancel Function

A) If any of the following operating conditions occurs during cruise control operation, the set speed is erased, current flow to the magnetic clutch is stopped and the cruise control is released, (CRUISE SW turns off).

When this occurs, the ignition SW must be turned off once before the CRUISE SW will turn on.

- * When abnormality is found in the stop light SW input circuit.

- * When abnormality is found in the cancel circuit.

B) If any of the following operating conditions occurs during cruise control operation, the set speed is erased, current flow to the magnetic clutch is stopped and the cruise control is released. (CRUISE SW turn off).

When this occurs, the cancel state is cleared as the CRUISE SW will turn on again.

- * Over current to transistor driving the motor or the magnetic clutch.

- * Open circuit in the stop light SW.

- * Momentary interruption of vehicle speed signal.

- * Short circuit in the stop light SW.

C) If any of the following conditions occurs during cruise control operation, the set speed is erased and the cruise control is released. (The power to the magnetic clutch is cut off until the SET SW is "ON" again.)

- * When power to the cruise control system is momentarily cut off.

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C4	34 (2ZZ-GE)	C14	36	J6	37
C9	36	D1	36	S1 B	35 (2ZZ-GE)
C10	36	E5	36	S9	37
C13	36	I10	37		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IK	24	
IL		
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3C		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

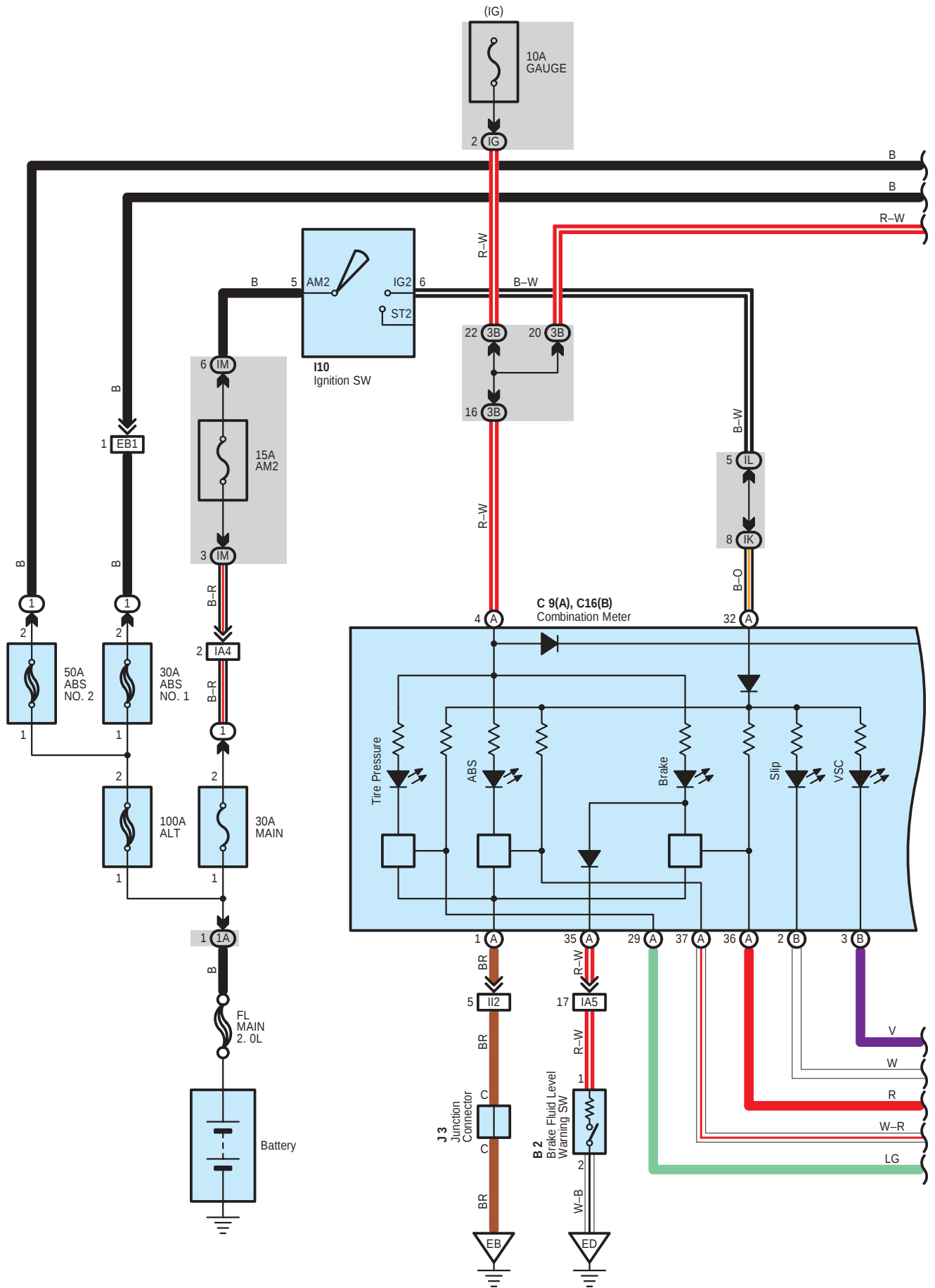
: Connector Joining Wire Harness and Wire Harness

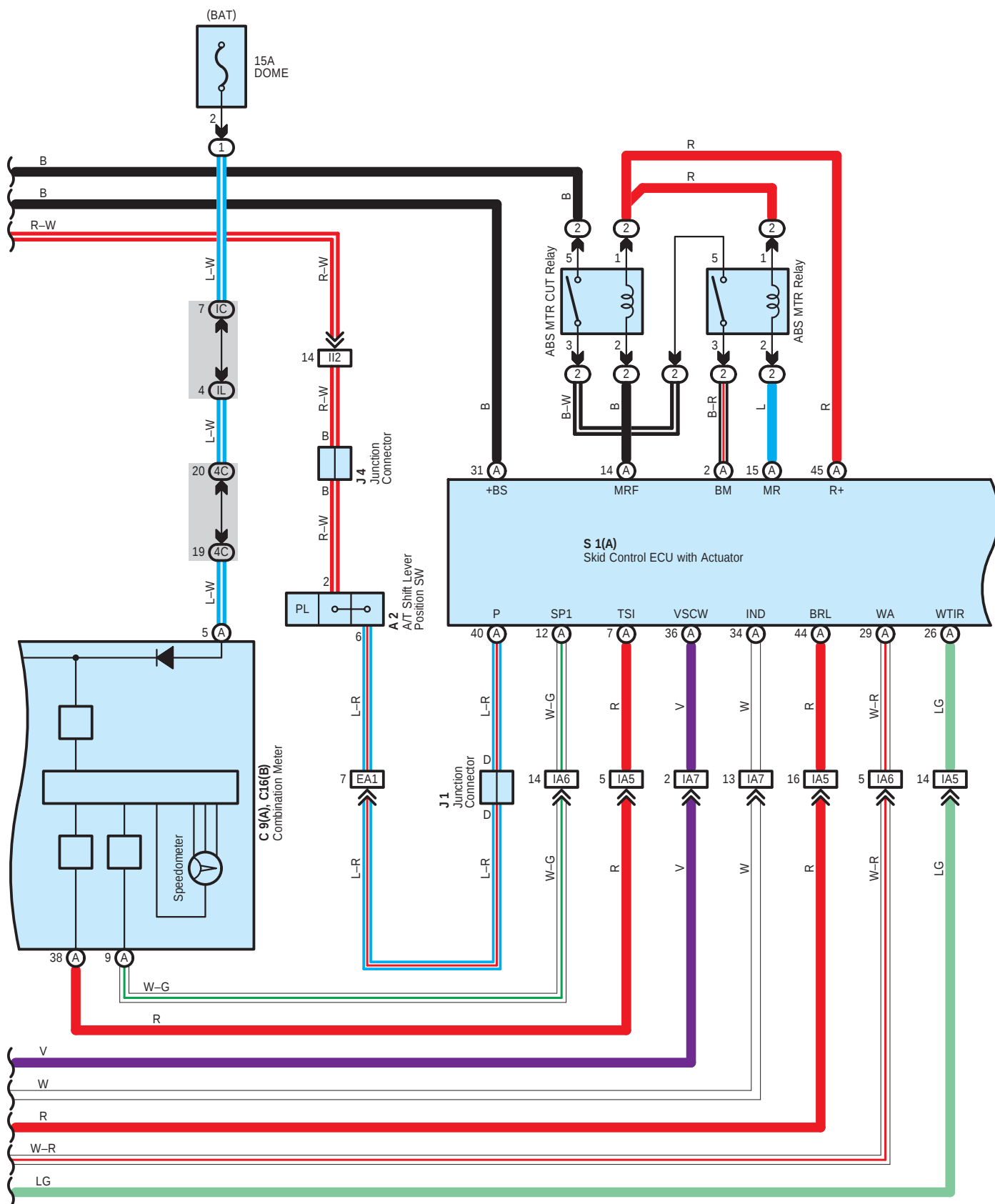
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA5		
IA6		

: Ground Points

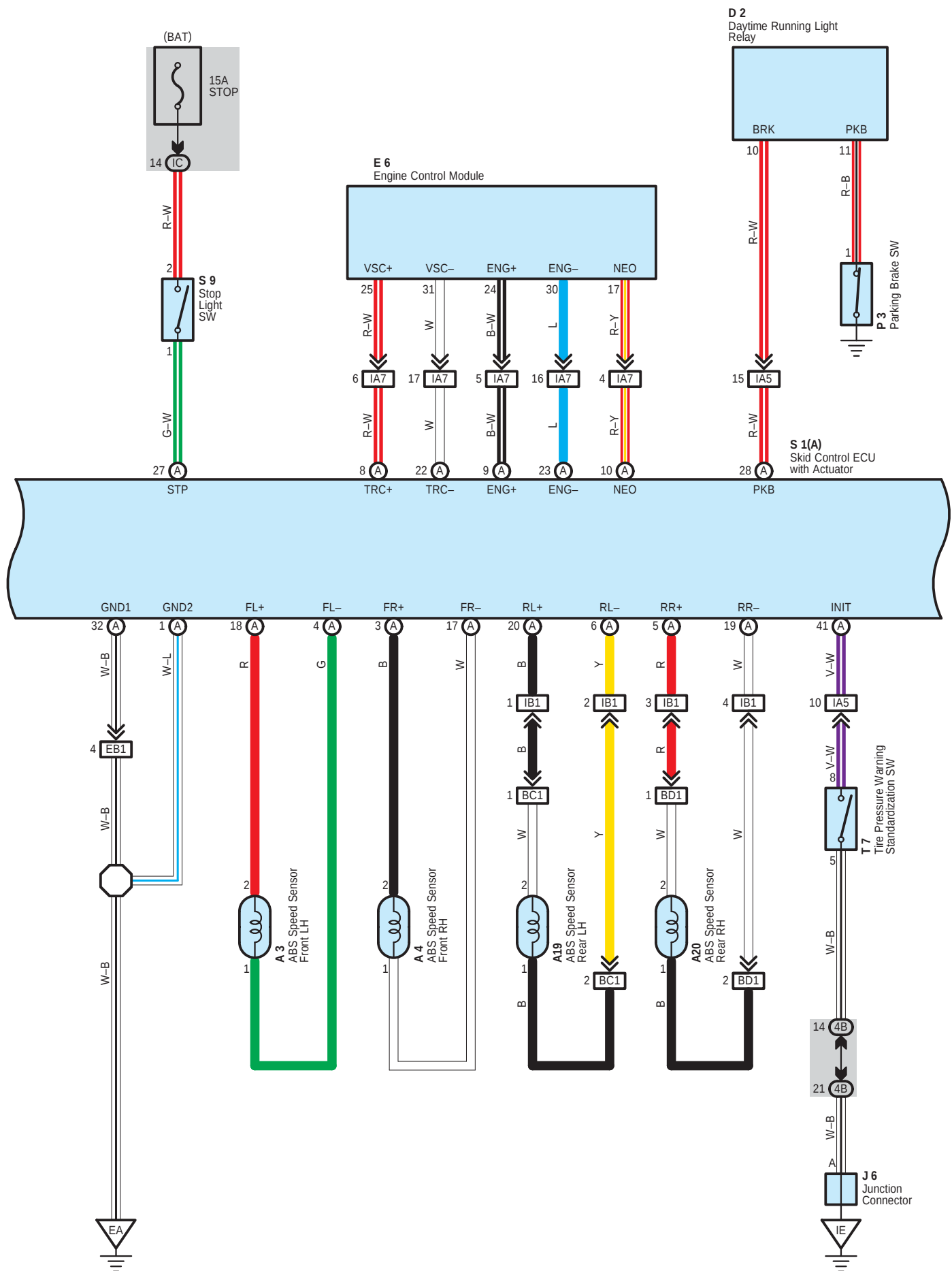
Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter

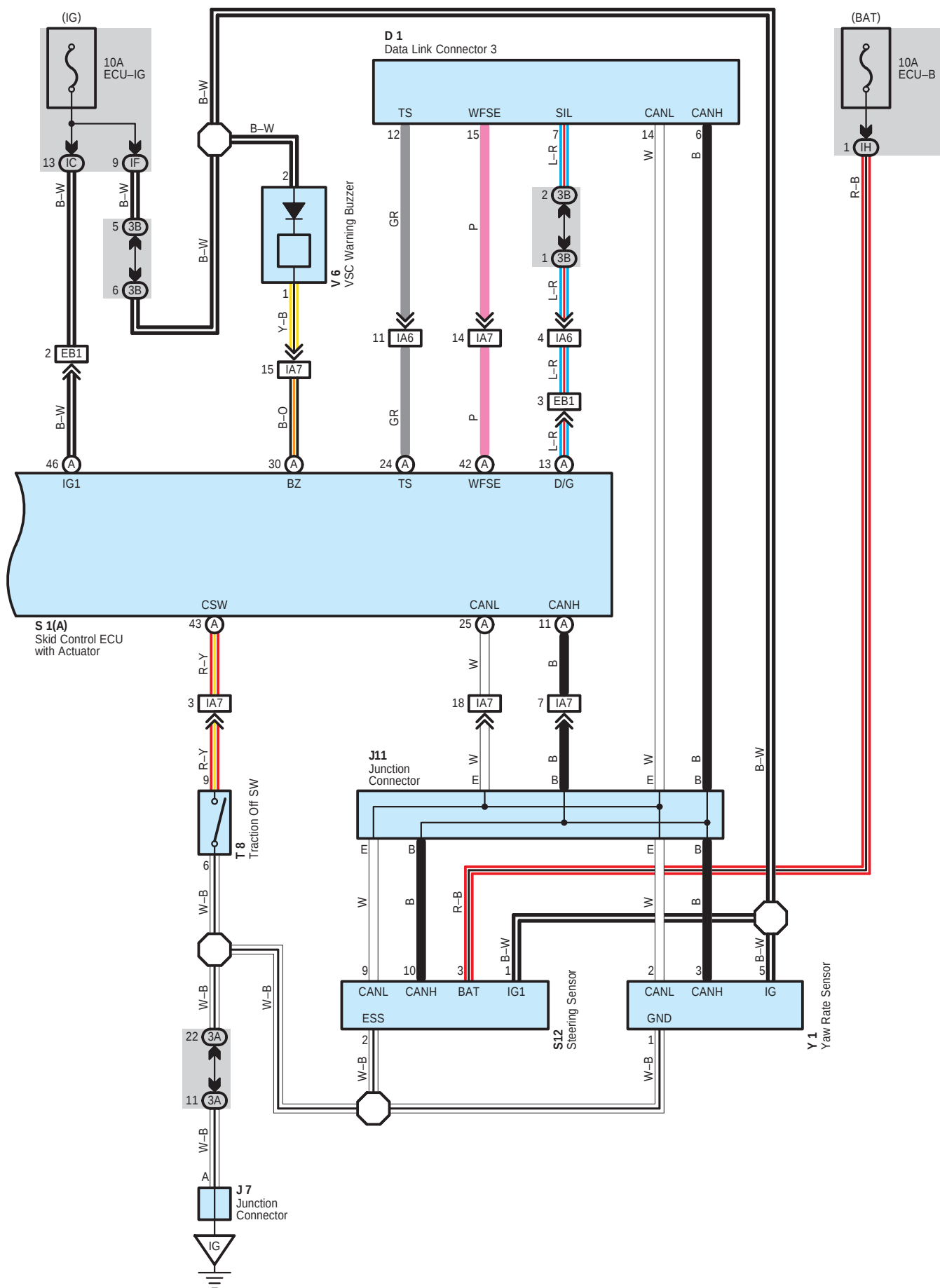
ABS, TRAC, VSC and Tire Pressure Warning System





ABS, TRAC, VSC and Tire Pressure Warning System





System Outline

1. ABS Operation

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

2. Traction Control Operation

The traction control system controls the engine torque, the hydraulic pressure of the driving wheel cylinders, slipping of the wheels which may occur at start or acceleration of the vehicle, to ensure an optimal driving power and vehicle stability corresponding to the road conditions.

3. VSC Operation

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

To reduce large over-steering :

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

To reduce large under-steering :

If the VSC system determines that the under-steering is large, it controls the engine power and activates the rear wheel brakes to reduce the under-steering.

Traction off SW

The traction off SW is used to stop the TRAC function. After the engine is started, the TRAC system is stopped (Turned off) and the traction off indicator light lights up. When the traction off SW is pressed again, the TRAC system enters the stand-by mode. If the engine is stopped and restarted, the TRAC system enters the stand-by mode regardless of the traction off SW.

VSC indicator light

If an error occurs in the VSC system, the VSC indicator lights up to warn the driver.

4. Mutual System Control

To efficiently operate the VSC system at its optimal level, the VSC system and other control systems are mutually controlled while the VSC system is being operated.

Engine fuel injecting control

The engine power does not interfere with the VSC brake control by controlling the opening of the fuel injecting and reducing the engine output.

Engine control and electronically controlled transmission control

The strong engine braking force does not interfere with the braking force control of the VSC system by turning off the accel. and reducing changes in the driving torque at shift-down.

VSC system operation indication

The slip indicator light flashes and the buzzer sounds intermittently to warn the driver that the current road is slippery, while the VSC system is being operated.

5. Fail Safe Function

If an error occurs in the skid control ECU, sensor signals, and/or actuators, the skid control ECU inhibits the brake actuator control and inputs the error signal to the engine control module. According to the error signal, the brake actuator turns off the solenoid and the engine control module rejects any electronically controlled fuel injection request from the VSC system. As a result, the vehicle functions without the ABS, TRC, and VSC systems.

 : Parts Location

Code	See Page	Code		See Page	Code		See Page
A2	32 (1ZZ-FE)	C9	A	36	J7		37
A3	32 (1ZZ-FE)	C16	B	36	J11		37
	34 (2ZZ-GE)	D1		36	P3		37
A4	32 (1ZZ-FE)	D2		36	S1	A	33 (1ZZ-FE)
	34 (2ZZ-GE)	E6		36			35 (2ZZ-GE)
A19	38 (*1)	I10		37	S9		37
	40 (*2)	J1		33 (1ZZ-FE)	S12		37
38 (*1)	35 (2ZZ-GE)			T7		37	
A20	40 (*2)	J3		37	T8		37
B2	32 (1ZZ-FE)	J4		37	V6		37
	34 (2ZZ-GE)	J6		37	Y1		37

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
2	23	ABS R/B (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IH		
IK		
IL	24	
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	
EB1	42 (1ZZ-FE)	Engine Room Main Wire and Engine Room Main Wire (Front Right Fender)
IA4	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA5		
IA6		
IA7		
IB1	44	Engine Room Main Wire and Floor Wire (Cowl Side Panel LH)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
BC1	46 (*1)	Skid Control Sensor Wire LH and Floor Wire (Quarter Wheel House LH)
	47 (*2)	
BD1	46 (*1)	Skid Control Sensor Wire RH and Floor Wire (Quarter Wheel House RH)
	47 (*2)	

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

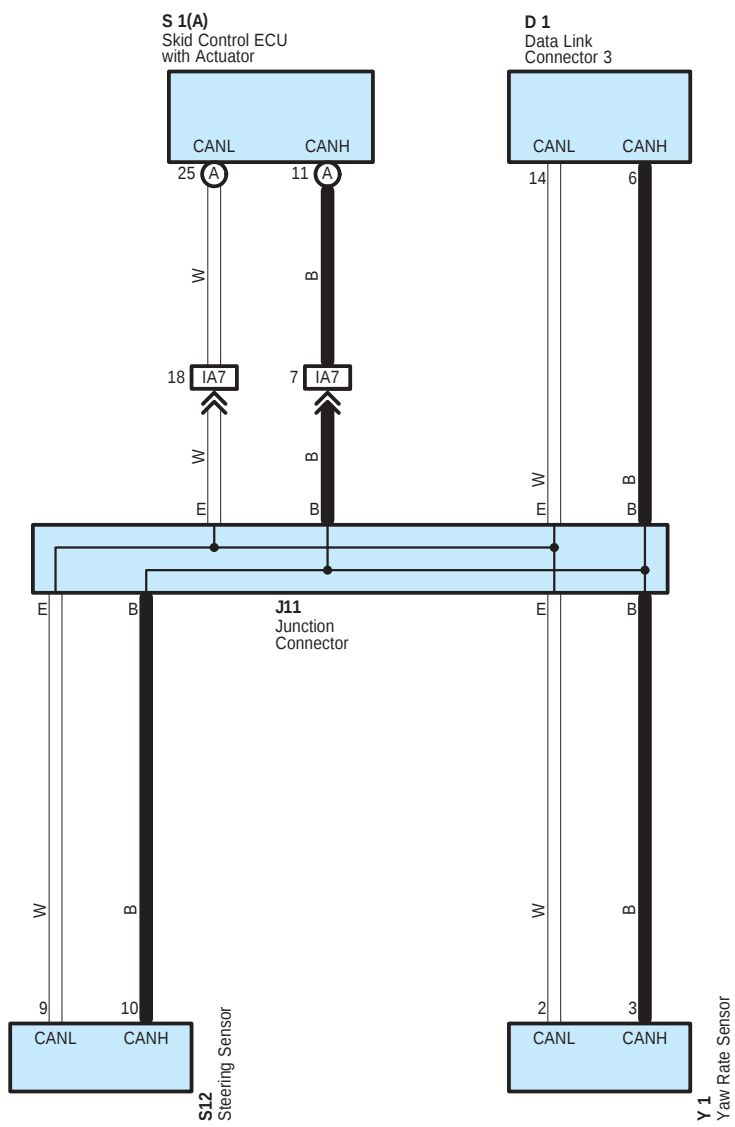
* 2 : w/o Side Airbag and Stereo Component Amplifier

ABS, TRAC, VSC and Tire Pressure Warning System



: Ground Points

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
EB	42 (1ZZ-FE)	Left Side of the Cylinder Head
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel



System Outline

Multiplex communication system (CAN) uses a serial communication protocol and communicates with a differential voltage. In this network system, TERMINALS CANH and CANL are used for communication between the ECUs and sensors, and excellent data communication speed and communication error detecting facility are provided.

This system is working for the following systems:

- * ABS (w/ VSC)
- * TRAC
- * VSC

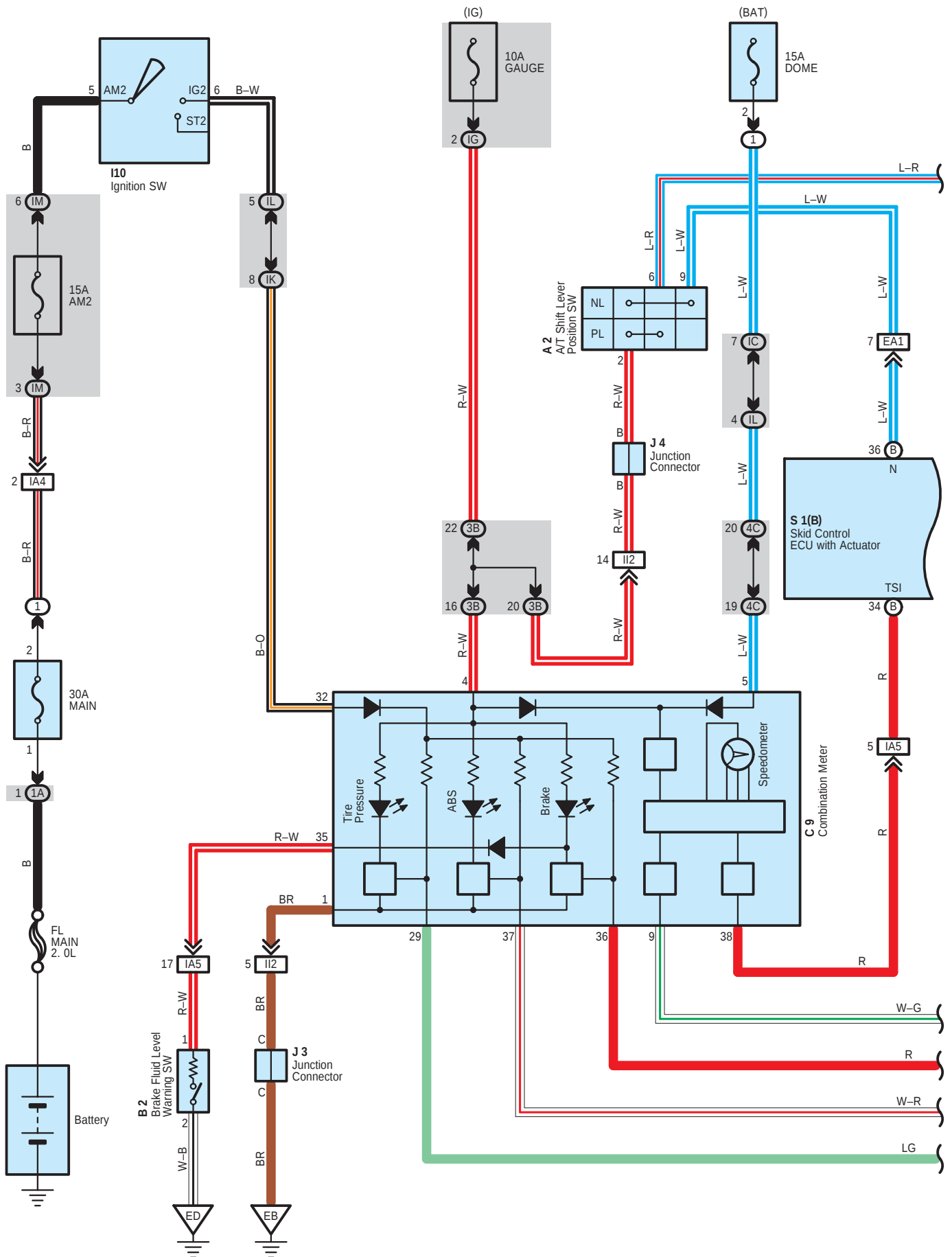
○ : Parts Location

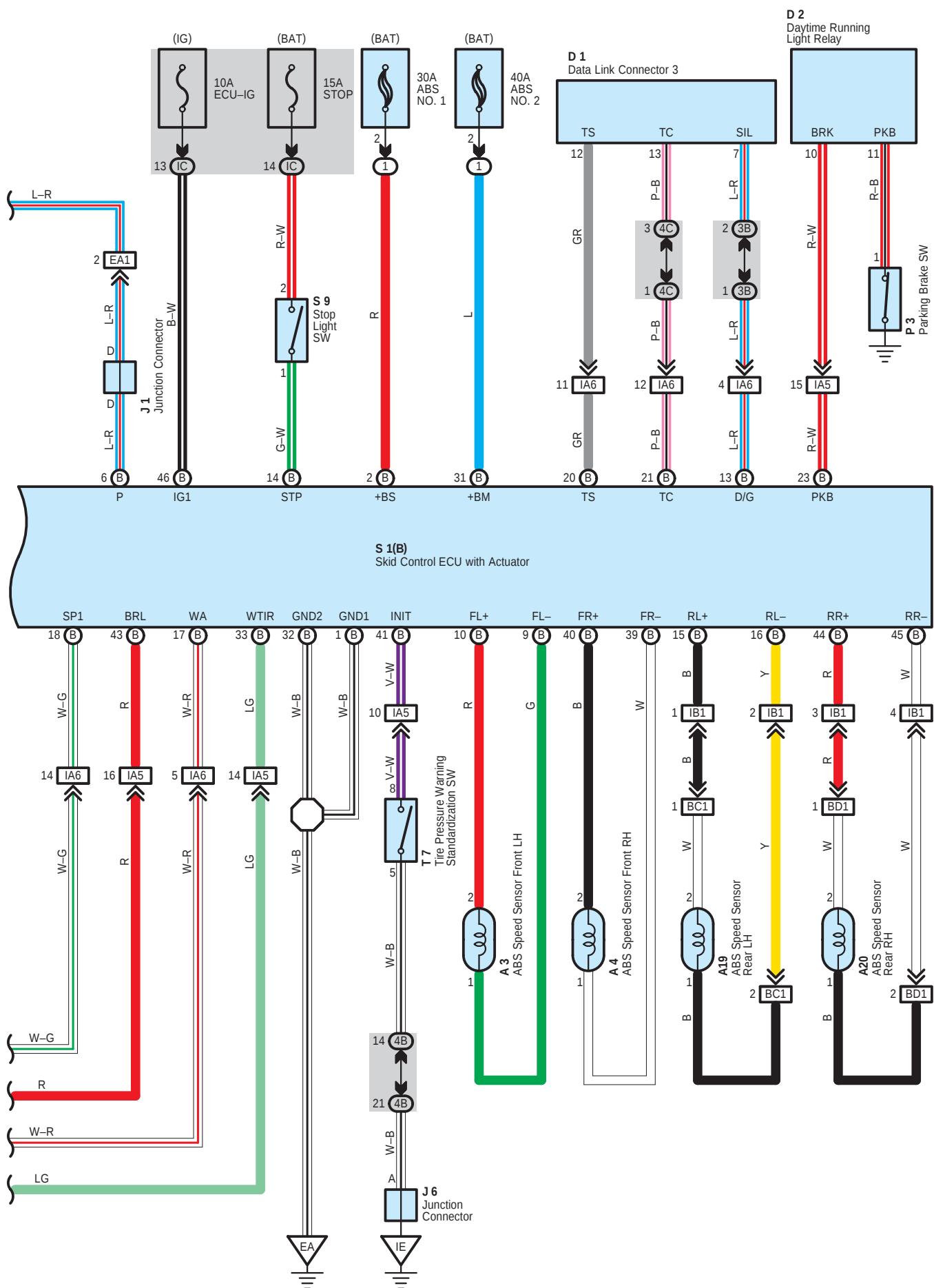
Code	See Page	Code		See Page	Code	See Page
D1	36	S1	A	33 (1ZZ-FE)	S12	37
J11	37			35 (2ZZ-GE)	Y1	37

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA7	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)

ABS and Tire Pressure Warning System without VSC





ABS and Tire Pressure Warning System without VSC

System Outline

ABS is a brake system designed to improve the operating ability and securing the stability of the vehicle by preventing the lock-up of the vehicle by controlling the wheel cylinder pressure of all the four wheels at the time of sudden braking.

1. Input Signals

(1) Speed sensor signal

The speed of the wheels is detected and input to TERMINALS FL+, FR+, RL+, and RR+ of the skid control ECU and actuator.

(2) Stop light SW signal

A signal is input to TERMINAL STP of the skid control ECU with actuator when brake pedal is depressed.

2. System Operation

When the wheels are locked-up, the solenoid inside the actuator is controlled by the signal from the skid control ECU with actuator, and the brake fluid in the wheel cylinder will flow through the reservoir and reduce the hydraulic pressure.

While the ABS is in operation, as the skid control ECU with actuator always outputs the operation signal to the pump inside the actuator, and the brake fluid stored inside the reservoir will be sucked up by the pump inside the actuator and returned to the master cylinder.

When the hydraulic pressure of the wheel cylinder is decompressed or increased until the necessary hydraulic pressure, the solenoid inside the actuator is controlled by the control signal from the skid control ECU with actuator and as a result, hydraulic pressure of the wheel cylinder will be closed at both the master cylinder and reservoir sides routes, and the hydraulic pressure of the wheel cylinder will be in the hold condition.

If increase of the hydraulic pressure volume of the wheel cylinder becomes necessary, the control signals from the skid control ECU with actuator control the solenoid inside the actuator, to resume to the normal condition. Thus the brake fluid of the master cylinder will be sent to the wheel cylinder and will increase the hydraulic pressure of the wheel cylinder. At this time, in the case that the brake fluid is left in the reservoir, it will be sucked up by the pump inside the actuator and will be sent to the wheel cylinder.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A2	32 (1ZZ-FE)	B2	32 (1ZZ-FE)	J4	37
A3	32 (1ZZ-FE)		34 (2ZZ-GE)	J6	37
	34 (2ZZ-GE)	C9	36	P3	37
A4	32 (1ZZ-FE)	D1	36	S1	B
	34 (2ZZ-GE)	D2	36		
A19	38 (*1)	I10	37	S9	37
	40 (*2)	J1	33 (1ZZ-FE)	T7	37
A20	38 (*1)		35 (2ZZ-GE)		
	40 (*2)	J3	37		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IK	24	
IL		
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	
IA4	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA5		
IA6		
IB1	44	Engine Room Main Wire and Floor Wire (Cowl Side Panel LH)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
BC1	46 (*1)	Skid Control Sensor Wire LH and Floor Wire (Quarter Wheel House LH)
	47 (*2)	
BD1	46 (*1)	Skid Control Sensor Wire RH and Floor Wire (Quarter Wheel House RH)
	47 (*2)	

 : Ground Points

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
EB	42 (1ZZ-FE)	Left Side of the Cylinder Head
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter

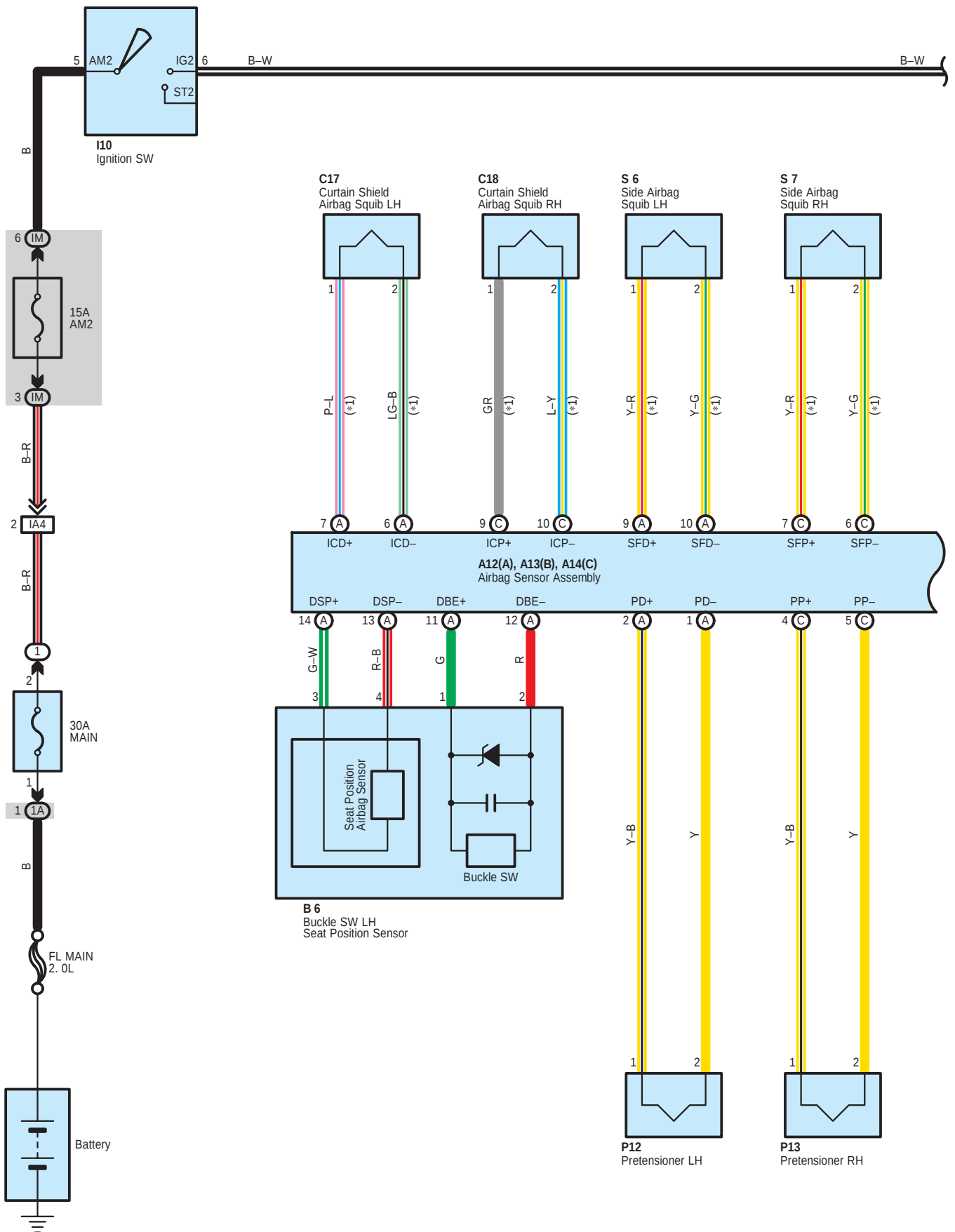
* 1 : w/ Side Airbag and/or Stereo Component Amplifier

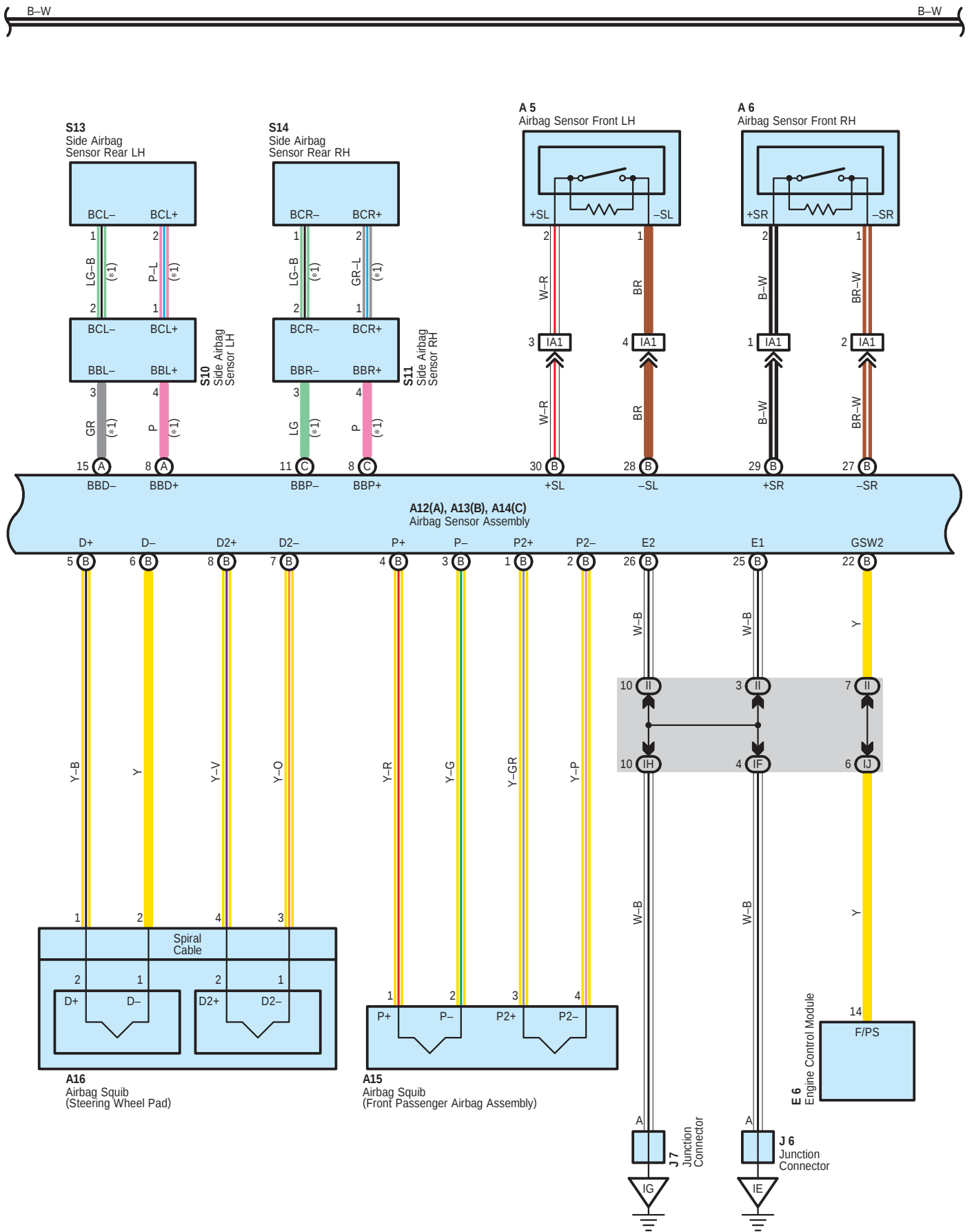
* 2 : w/o Side Airbag and Stereo Component Amplifier

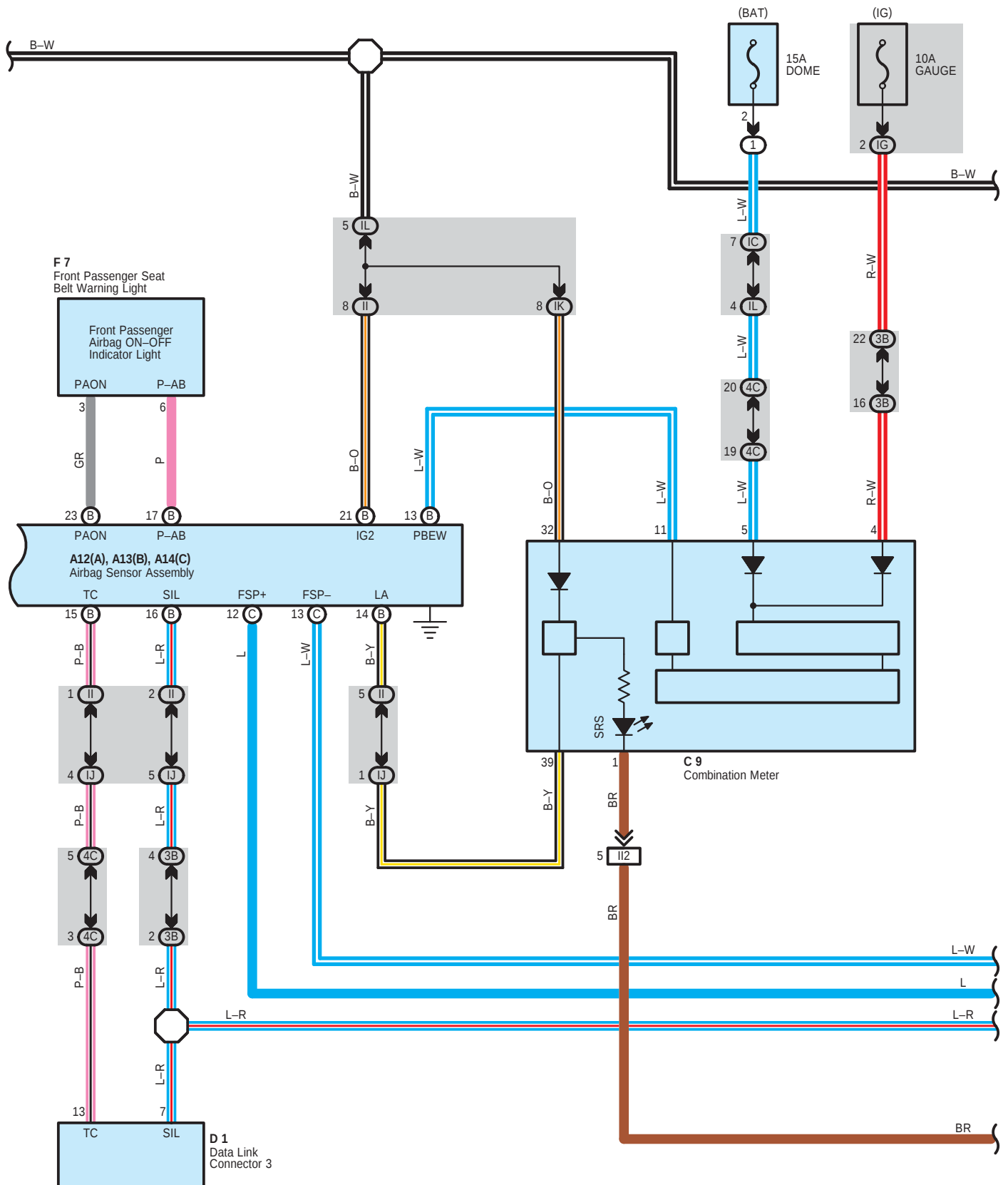
NOTICE: When inspecting or repairing the SRS, perform service in accordance with the following precautionary instructions and the procedure, and precautions in the Repair Manual applicable for the model year.

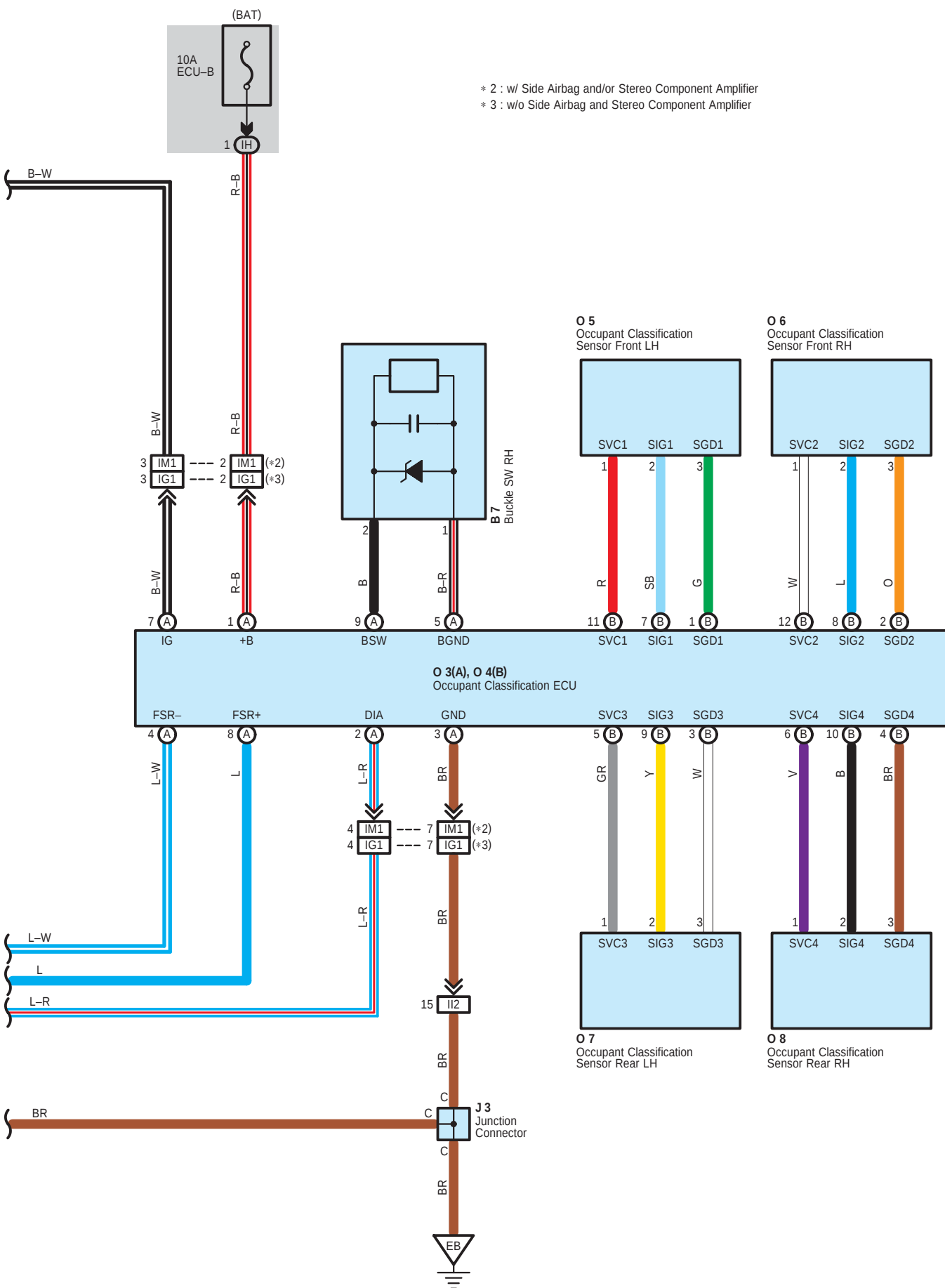
- Malfunction symptoms of the SRS are difficult to confirm, so the DTCs become the most important source of information when troubleshooting. When troubleshooting the SRS, always inspect the DTCs before disconnecting the battery.
- **Work must be started more than 90 seconds after the ignition SW is 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 SRS is a driver and front passenger protection device which has a supplemental role to the seat belts.

When the ignition SW is turned to ON, current from the MAIN fuse flows to AM2 fuse to ignition SW (IG2) to TERMINAL (B) 21 of the airbag sensor assembly.

If an accident occurs while driving, when the frontal impact exceeds a set level, the current from the TERMINAL (B) 21 of the airbag sensor assembly flows to TERMINALS (B) 5, (B) 8, (B) 4, (B) 1, (A) 2 and (C) 4 of the airbag sensor assembly to the airbag squibs and the pretensioners to TERMINALS (B) 6, (B) 7, (B) 3, (B) 2, (A) 1 and (C) 5 of the airbag sensor assembly to TERMINAL (B) 25, (B) 26 or BODY GROUND to GROUND, so that the current flows to the front airbag squibs and the pretensioners, and causes them to operate.

When the side impact also exceeds a set level, the current from the TERMINAL (B) 21 of the airbag sensor assembly flows to TERMINALS (A) 9, (C) 7, (A) 7, (C) 9 of the airbag sensor assembly to the side airbag squibs and curtain shield airbag squibs to TERMINALS (A) 10, (C) 6, (A) 6, (C) 10 of the airbag sensor assembly to TERMINAL (B) 25, (B) 26 or BODY GROUND to GROUND, causing side airbag squibs to operate.

The airbag stored inside the steering wheel pad is instantaneously expanded to soften the shock to the driver.

The airbag stored inside the passenger's instrument panel is instantaneously expanded to soften the shock to the front passenger.

Side airbags are instantaneously expanded to soften the shock of side to the driver and front passenger.

The curtain shield airbag can reduce impact on the head of the front and rear passengers and reduce risk of injury.

The pretensioners make sure of the seat belt restrainability.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A5	32 (1ZZ-FE)	C18	38 (*1)	O6	41 (*2)
	34 (2ZZ-GE)	D1	36	O7	39 (*1)
A6	32 (1ZZ-FE)	E6	36		41 (*2)
	34 (2ZZ-GE)	F7	37	O8	39 (*1)
A12 A	36	I10	37		41 (*2)
A13 B	36	J3	37	P12	39 (*1)
A14 C	36	J6	37		41 (*2)
A15	36	J7	37	P13	39 (*1)
A16	36	O3 A	39 (*1)		41 (*2)
B6	38 (*1)		41 (*2)	S6	39 (*1)
	40 (*2)	O4 B	39 (*1)	S7	39 (*1)
B7	38 (*1)		41 (*2)	S10	39 (*1)
	40 (*2)	O5	39 (*1)	S11	39 (*1)
C9	36		41 (*2)	S13	39 (*1)
C17	38 (*1)	O6	39 (*1)	S14	39 (*1)

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IH		
II		
IJ		
IK	24	
IL		
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
4C	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

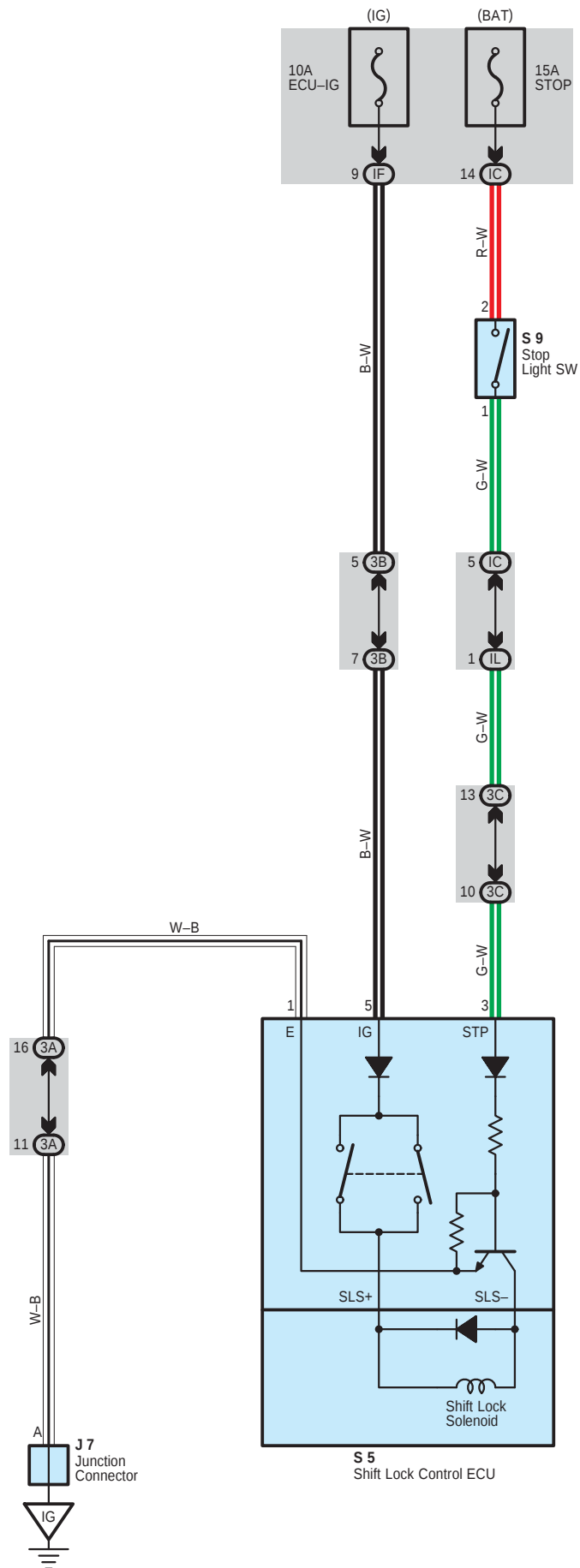
* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA4		
IG1	45	Instrument Panel Wire and Instrument Panel No.3 Wire (Front Side of the Parking Brake Lever)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
IM1	45	Instrument Panel Wire and Floor Wire (Front Side of the Parking Brake Lever)

 : **Ground Points**

Code	See Page	Ground Points Location
EB	42 (1ZZ-FE)	Left Side of the Cylinder Head
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel



System Outline

When the ignition SW is turned to ON position, the current from the ECU-IG fuse flows to TERMINAL 5 of the shift lock control ECU.

Shift Lock Mechanism

With the ignition SW at ON position, when a signal that the brake pedal is depressed (Stop light SW on) and a signal that the shift lever is put in P position is input to the ECU, the ECU operates and the current flows from TERMINAL 5 of the ECU to TERMINAL SLS+ of the shift lock solenoid to TERMINAL SLS- to TERMINAL 1 of the ECU to GROUND. This causes the shift lock solenoid to turn on (Plate stopper disengages) and the shift lever can shift into position other than P.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
J7	37	S5	37	S9	37

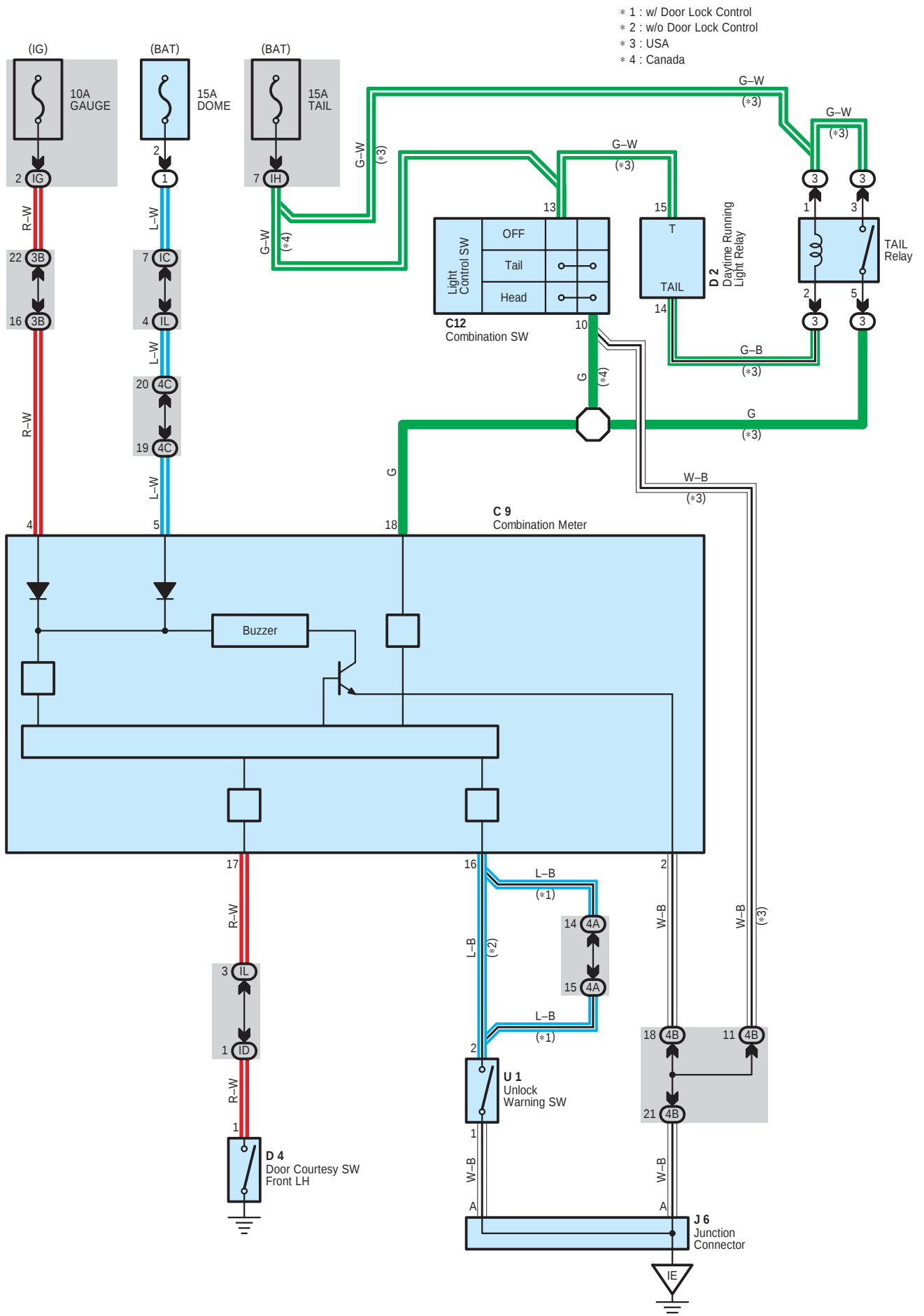
○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IL	24	
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		
3C		

▽ : Ground Points

Code	See Page	Ground Points Location
IG	44	Right Kick Panel

Light Reminder and Key Reminder



System Outline

The current is applied at all times to TERMINAL 5 of the combination meter through the DOME fuse. When the ignition SW is turned to ON position, the current flows to TERMINAL 4 of the combination meter through the GAUGE fuse. When the light control SW is turned to TAIL or HEAD position, current is applied to TERMINAL 18 of the combination meter through the TAIL fuse via the TAIL relay (USA) or the light control SW (Canada).

1. Light Reminder System

When the light control SW is in TAIL or HEAD position, the ignition SW turned to OFF from ON position, and the driver's door opened (Door courtesy SW on), the current flows to TERMINAL 4 of the combination meter stops. As a result, the combination meter is activated and current flows from TERMINAL 5 of the combination meter to TERMINAL 2 to GROUND, the buzzer in the combination meter goes on to remind the light is lighting up.

2. Key Reminder System

When the driver door is opened with the ignition SW off and ignition key remaining in the key cylinder (Unlock warning SW on), a signal is input from the unlock warning SW to TERMINAL 16 of the combination meter, and from the door courtesy SW front LH to TERMINAL 17 of the combination meter. As a result, the buzzer in the combination meter goes on and warns the driver that the key is remaining in the key cylinder.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C9	36	D4	38 (*1)	U1	37
C12	36		40 (*2)		
D2	36	J6	37		

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
ID	25	Floor Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IH		
IL	24	
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
4A	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4B		
4C		

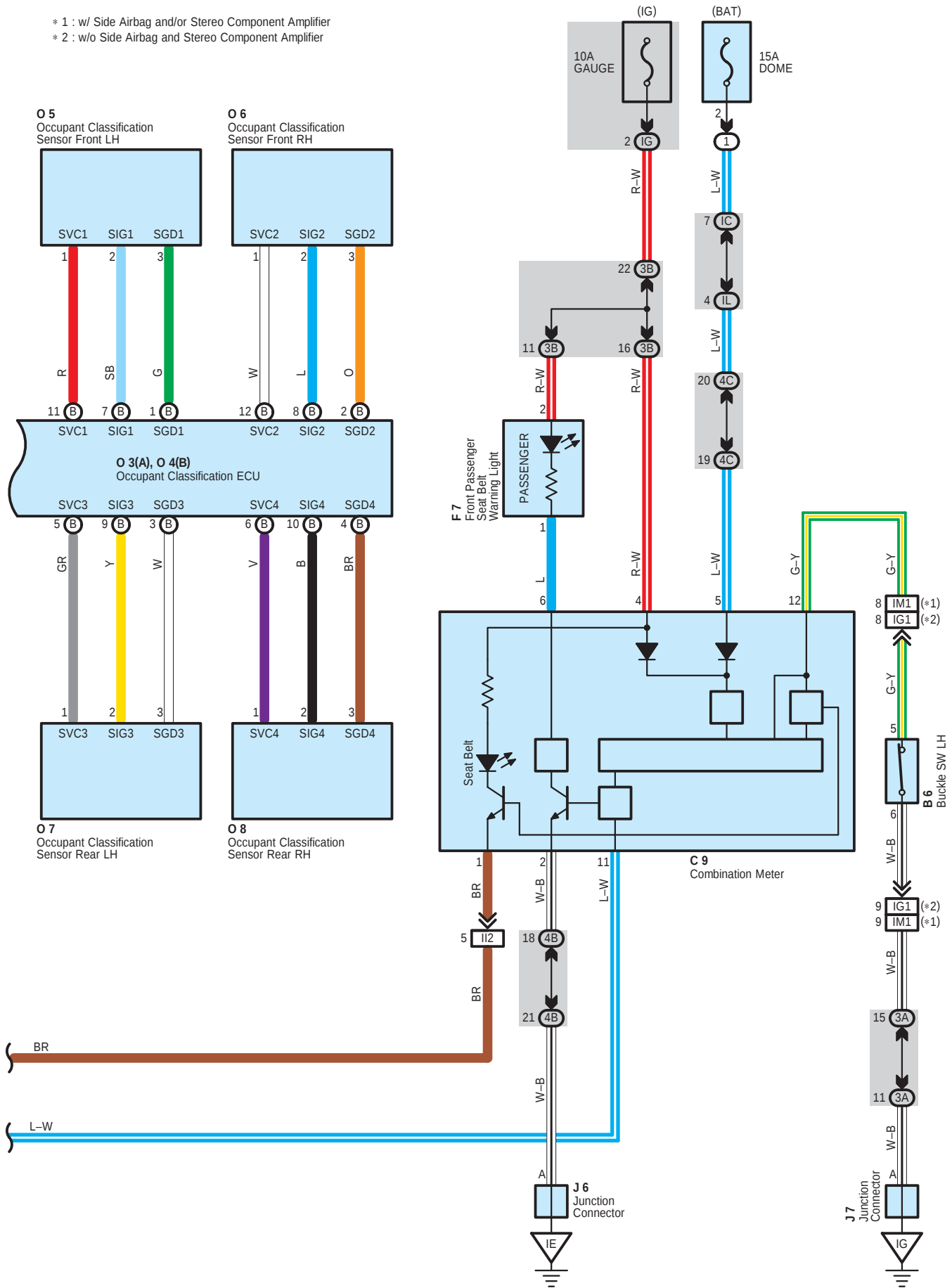
▽ : Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter

* 1 : w/ Side Airbag and/or Stereo Component Amplifier

* 2 : w/o Side Airbag and Stereo Component Amplifier

- * 1 : w/ Side Airbag and/or Stereo Component Amplifier
 * 2 : w/o Side Airbag and Stereo Component Amplifier



Seat Belt Warning

System Outline

Current is always applied from the DOME fuse to TERMINAL 5 of the combination meter. When the ignition SW is turned to ON position, the current from the GAUGE fuse flows to TERMINAL 4 of the combination meter and flows TERMINAL 1 of the front passenger seat belt warning light.

Seat Belt Warning System

When the ignition SW turned on, a signal is input to the combination meter. To determine whether the driver has fastened the seat belt, a signal is input from the buckle SW LH to TERMINAL 12 of the combination meter. When the seat belt is not fastened, the seat belt warning light in the combination meter blinks, and emits a warning sound.

In addition, the front passenger is recognized by a sensor (Occupant detection sensor) is installed in the front passenger seat, and determines whether the seat belt is fastened. When not fastened, the signals from the occupant detection sensor is input to TERMINAL 11 of the combination meter, and the front passenger seat belt warning light blinks.

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
A13	B	36	I10		37	O5	41 (*2)
A14	C	36	J3		37	O6	39 (*1)
B6		38 (*1)	J6		37		41 (*2)
		40 (*2)	J7		37	O7	39 (*1)
B7		38 (*1)	O3	A	39 (*1)		41 (*2)
		40 (*2)			41 (*2)	O8	39 (*1)
C9	36	O4	B	39 (*1)	41 (*2)		
D1	36			41 (*2)			
F7	37	O5		39 (*1)			

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IH		
II		
IJ		
IL	24	
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

□ : Connector Joining Wire Harness and Wire Harness

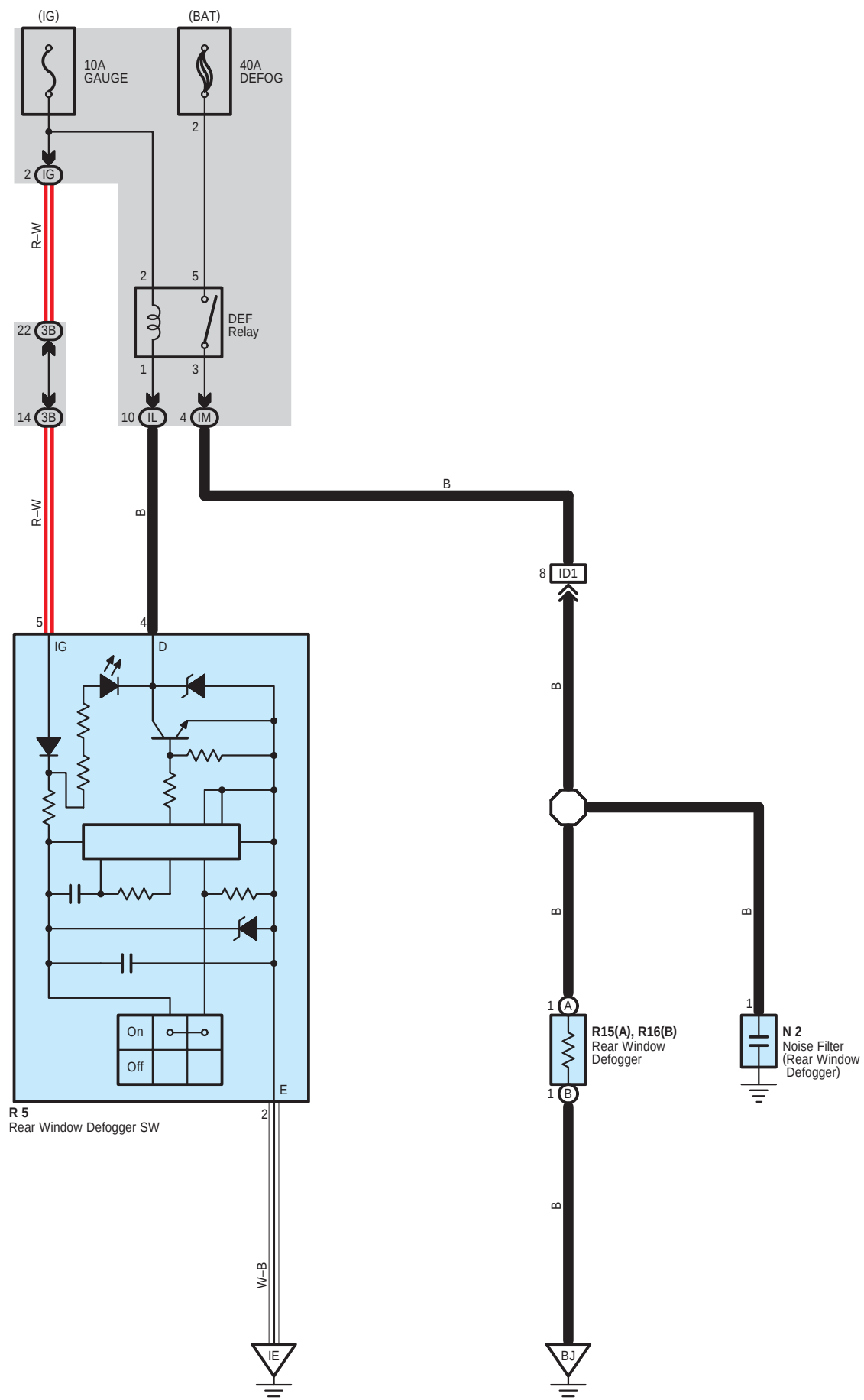
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IG1	45	Instrument Panel Wire and Instrument Panel No.3 Wire (Front Side of the Parking Brake Lever)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)
IM1	45	Instrument Panel Wire and Floor Wire (Front Side of the Parking Brake Lever)

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier



: **Ground Points**

Code	See Page	Ground Points Location
EB	42 (1ZZ-FE)	Left Side of the Cylinder Head
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter
IG	44	Right Kick Panel



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
N2	39 (*1)	R15	A	39 (*1)	R16 B 41 (*2)
	41 (*2)			41 (*2)	
R5	37	R16	B	39 (*1)	

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IL	24	
IM		
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)

 : Connector Joining Wire Harness and Wire Harness

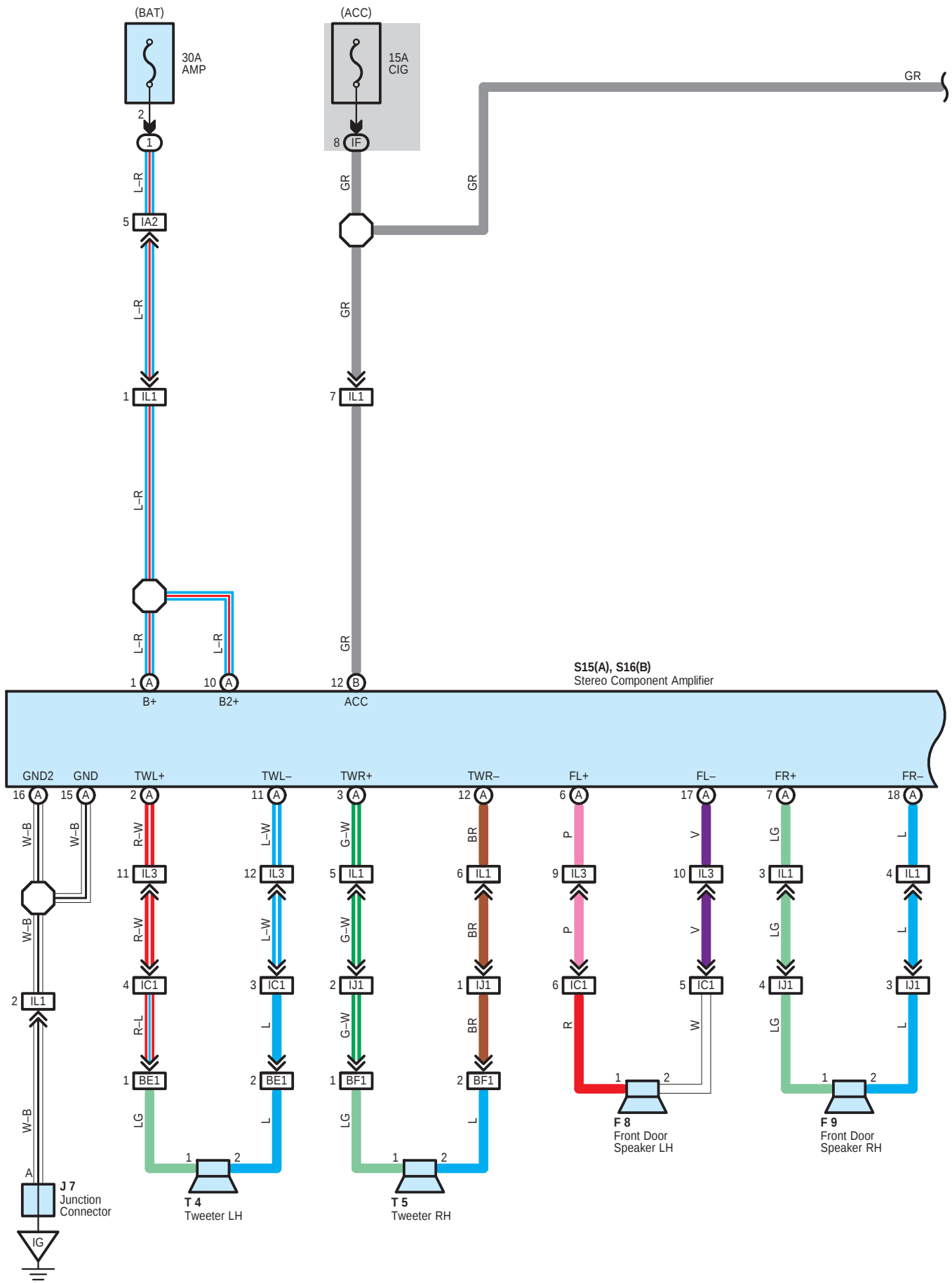
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)

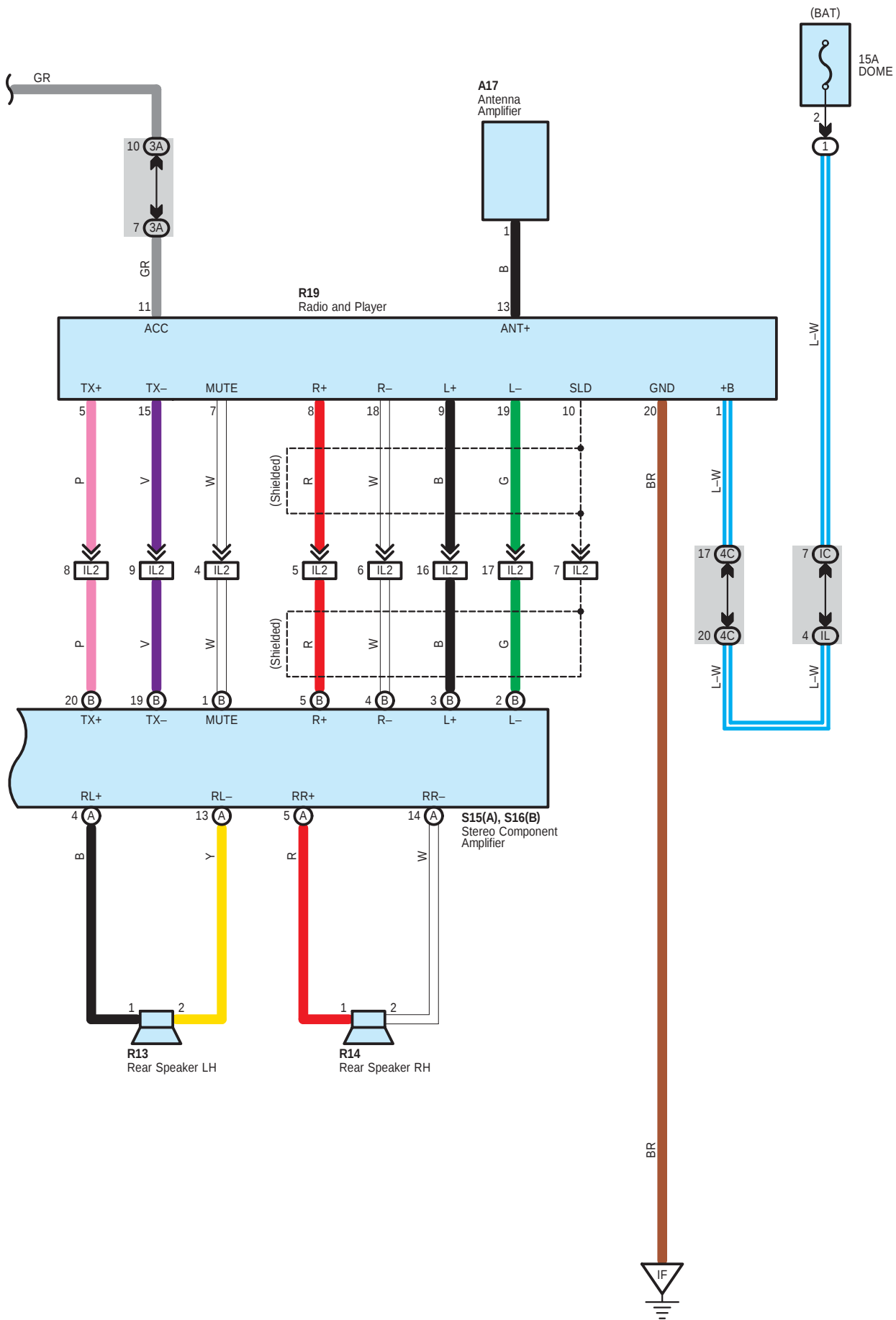
 : Ground Points

Code	See Page	Ground Points Location
IE	44	Behind the Combination Meter
BJ	46 (*1)	Under the Right Quarter Pillar
	47 (*2)	

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

Audio System with Stereo Component Amplifier





Audio System with Stereo Component Amplifier

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A17	36	R13	39 (*1)	S16	B
F8	38 (*1)		41 (*2)	T4	39 (*1)
	40 (*2)	R14	39 (*1)		41 (*2)
F9	38 (*1)		41 (*2)	T5	39 (*1)
	40 (*2)	R19	37		41 (*2)
J7	37	S15	A		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IL	24	
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
4C	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IC1	44	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IJ1	45	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IL1	45	Floor Wire and Instrument Panel Wire (Right Kick Panel)
IL2		
IL3		
BE1	46 (*1)	Speaker Tweeter LH Wire and Front Door LH Wire (Inside of the Front Door LH)
	47 (*2)	
BF1	46 (*1)	Speaker Tweeter RH Wire and Front Door RH Wire (Inside of the Front Door RH)
	47 (*2)	

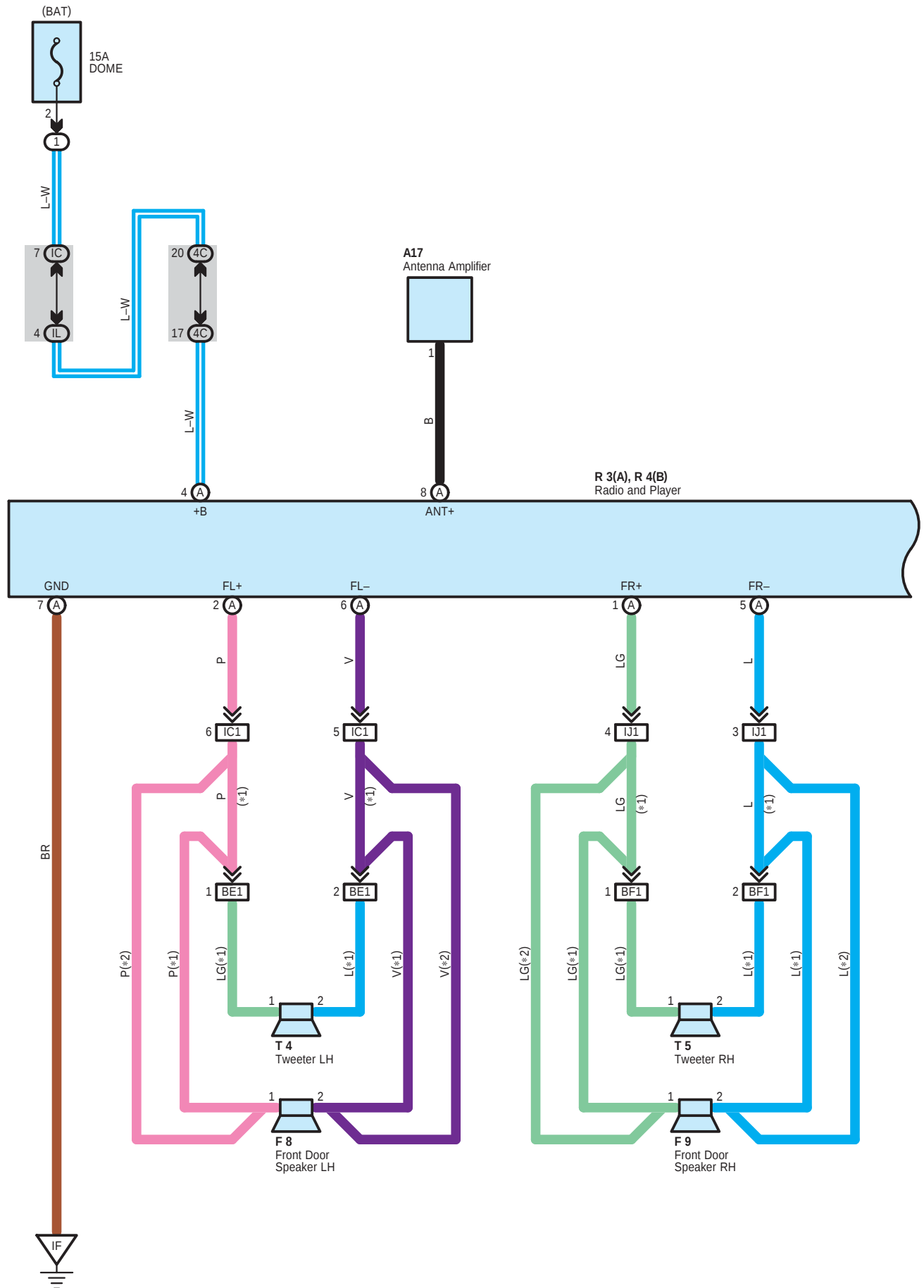
: Ground Points

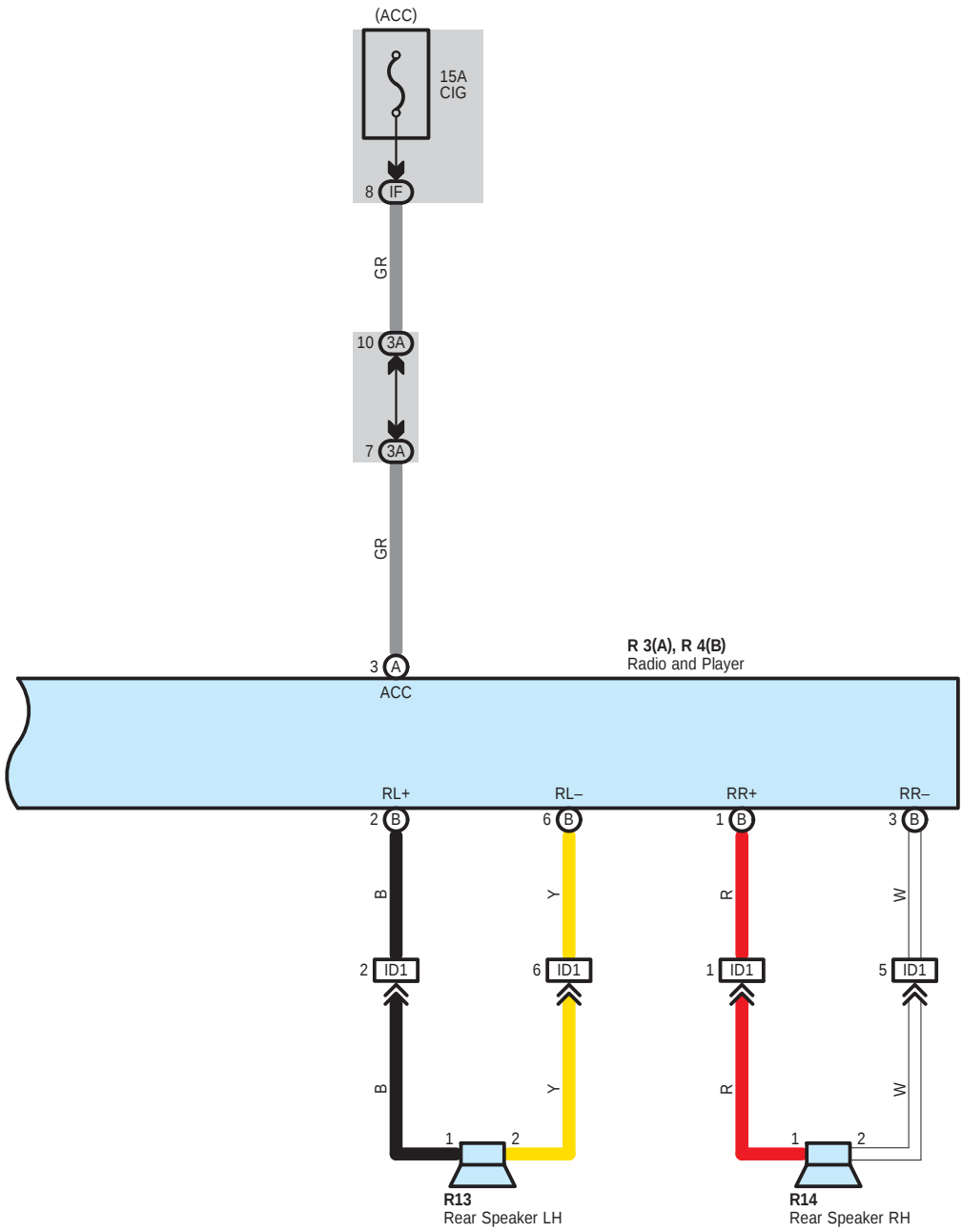
Code	See Page	Ground Points Location
IF	44	Behind the Combination Meter
IG	44	Right Kick Panel

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

Audio System without Stereo Component Amplifier

* 1 : w/ Tweeter
* 2 : w/o Tweeter





Audio System without Stereo Component Amplifier

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A17	36	R3	A	37	R14
F8	38 (*1)	R4	B	37	T4
	40 (*2)	R13	39 (*1)	41 (*2)	
F9	38 (*1)		41 (*2)	39 (*1)	T5
	40 (*2)	R14	39 (*1)	41 (*2)	

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IL	24	
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
4C	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)

: Connector Joining Wire Harness and Wire Harness

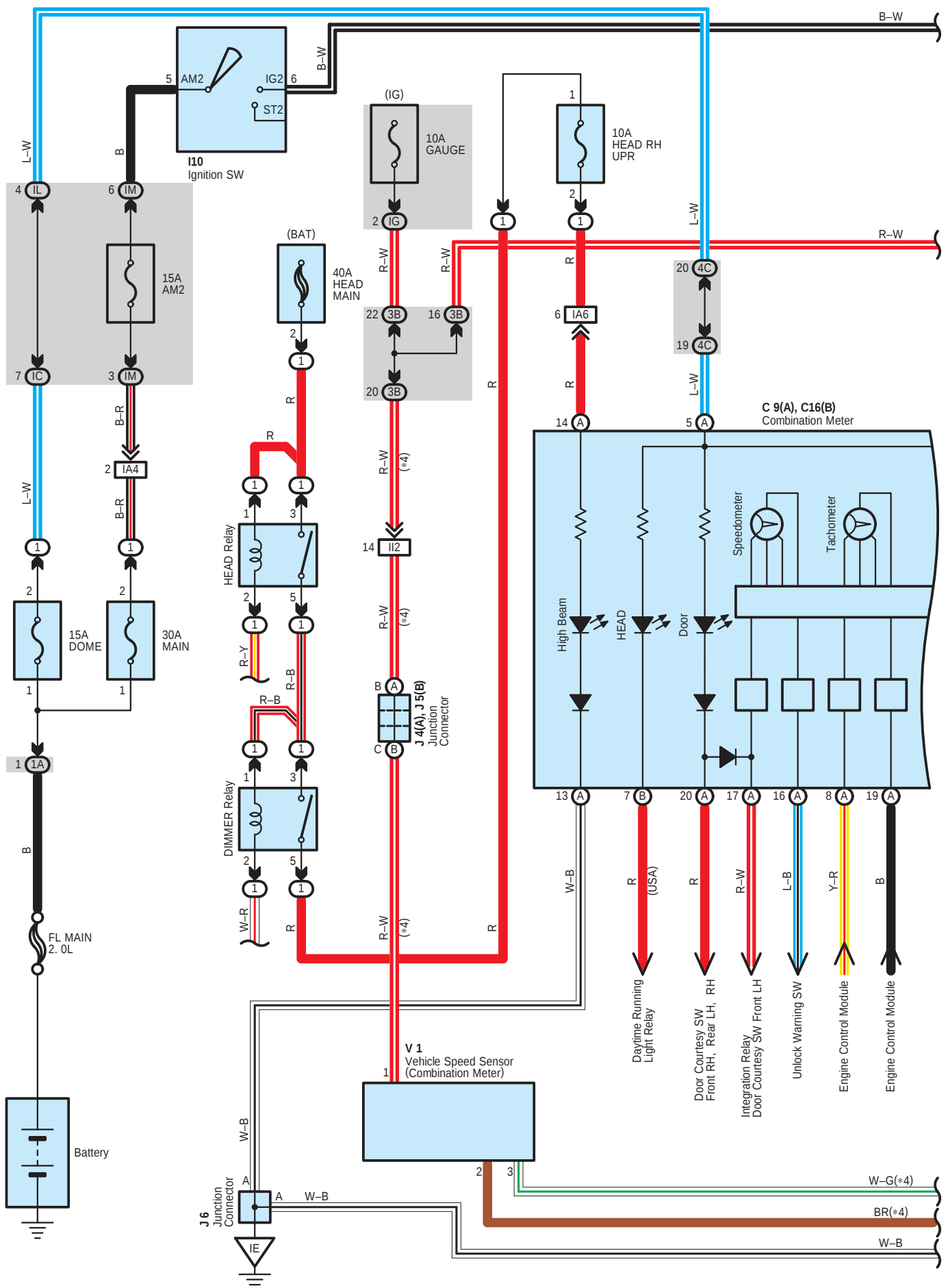
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	44	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
ID1	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IJ1	45	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BE1	46 (*1)	Speaker Tweeter LH Wire and Front Door LH Wire (Inside of the Front Door LH)
	47 (*2)	
BF1	46 (*1)	Speaker Tweeter RH Wire and Front Door RH Wire (Inside of the Front Door RH)
	47 (*2)	

: Ground Points

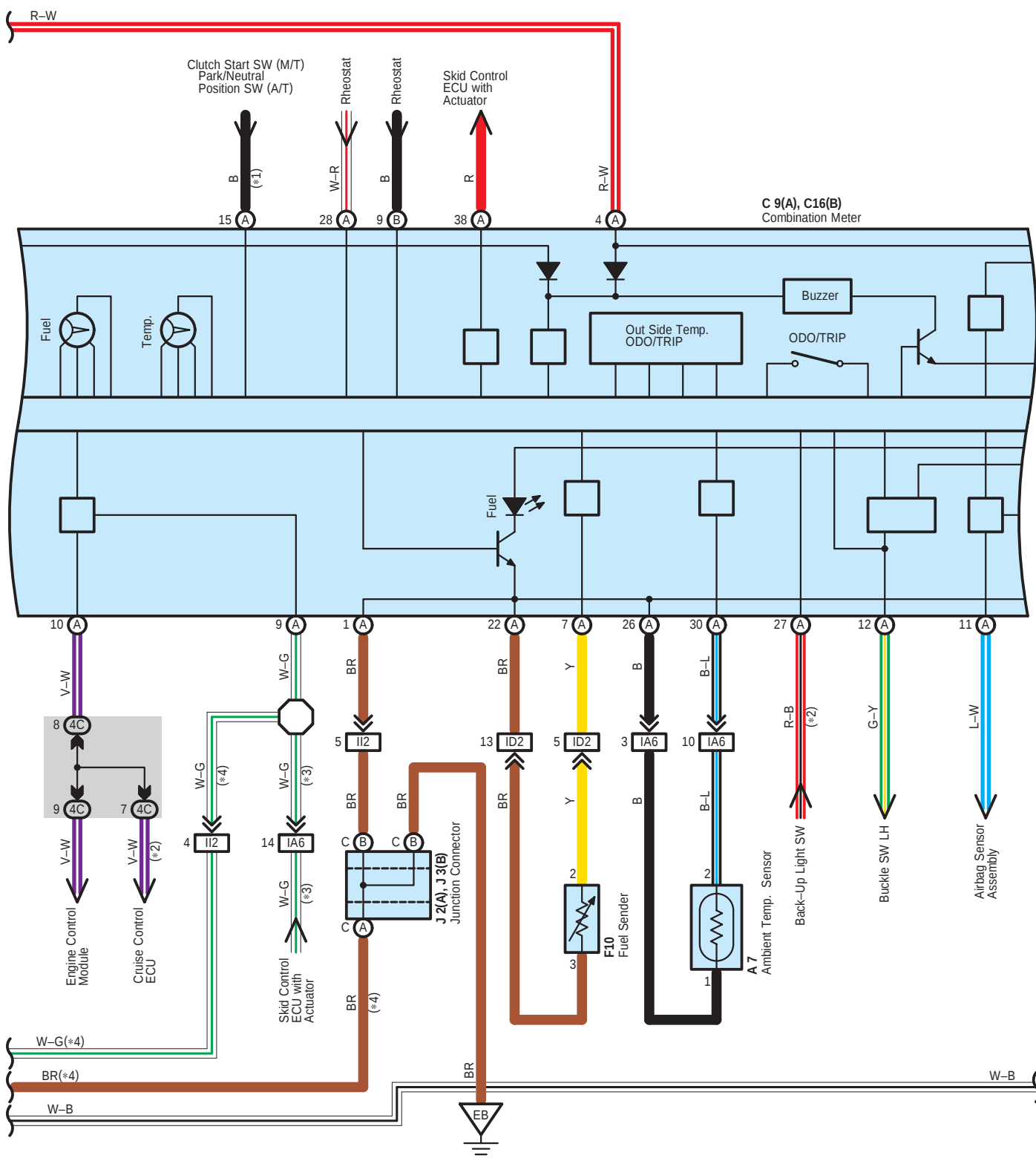
Code	See Page	Ground Points Location
IF	44	Behind the Combination Meter

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

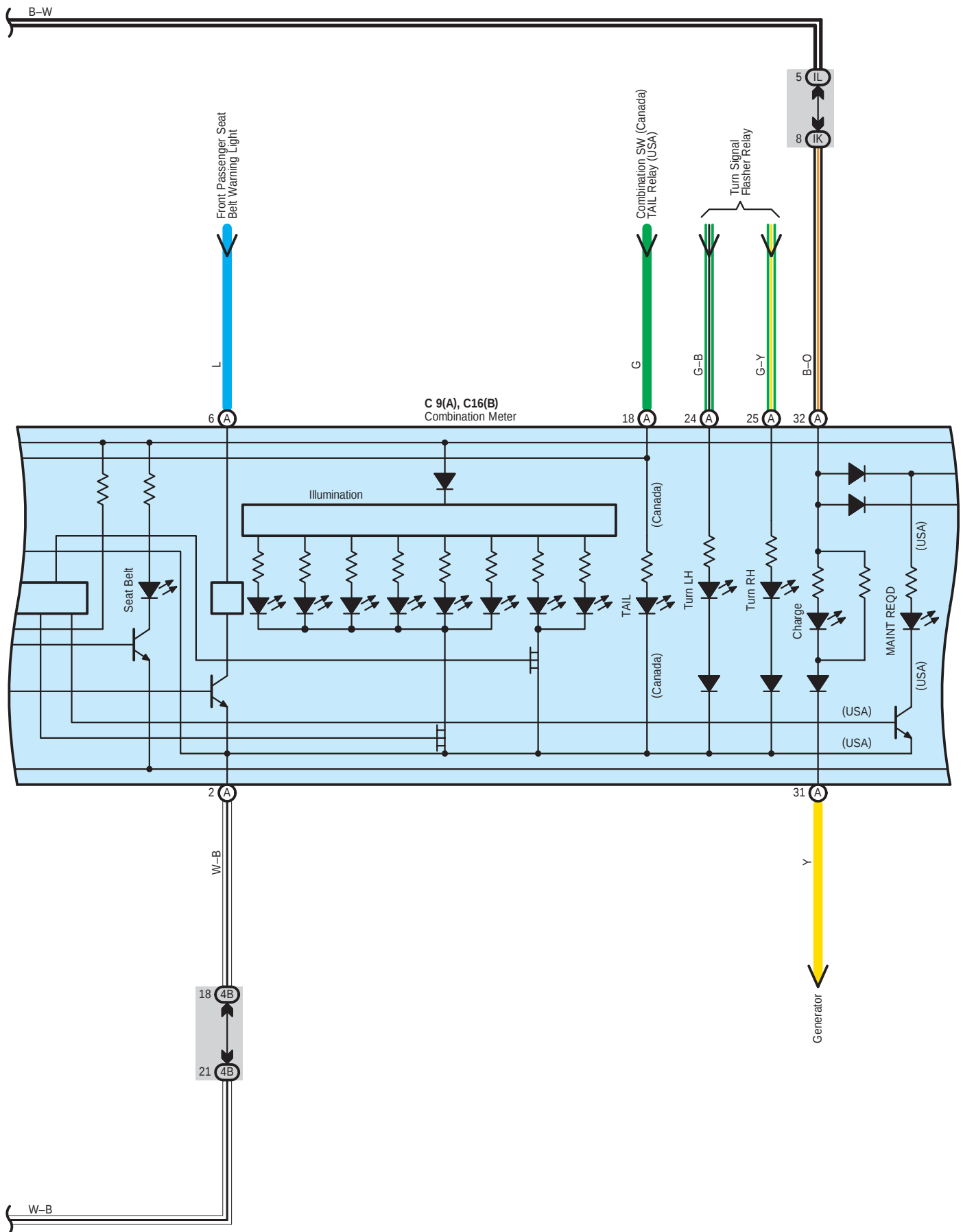
Combination Meter



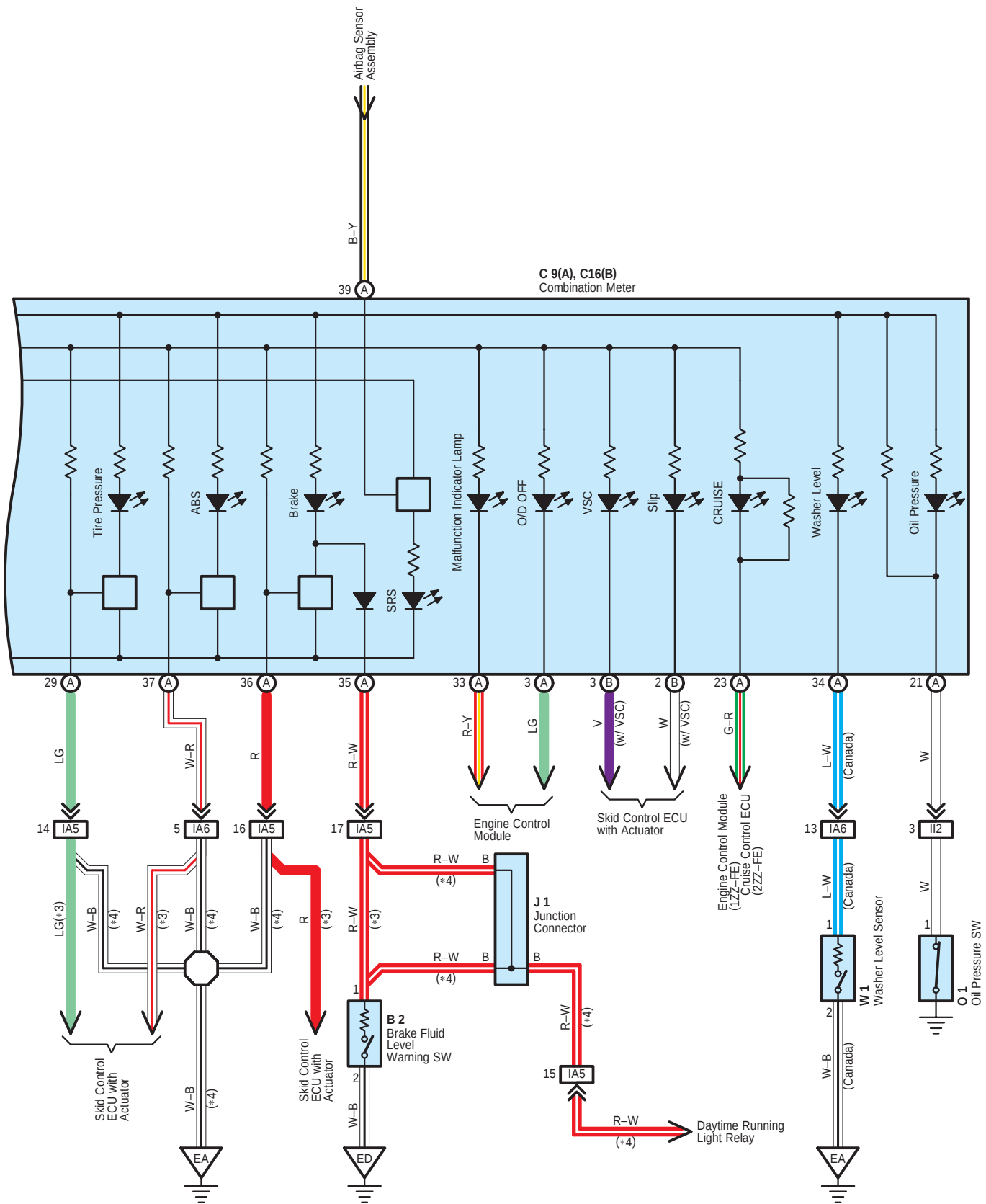
- * 1 : Optitron Meter
- * 2 : 2ZZ-GE
- * 3 : w/ VSC, w/ ABS
- * 4 : Except *3



Combination Meter



* 3 : w/ VSC, w/ ABS
 * 4 : Except *3



Combination Meter

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A7	32 (1ZZ-FE)	F10	40 (*2)	J5	B
	34 (2ZZ-GE)	I10	37	J6	37
B2	32 (1ZZ-FE)	J1	33 (1ZZ-FE)	O1	33 (1ZZ-FE)
	34 (2ZZ-GE)		35 (2ZZ-GE)		35 (2ZZ-GE)
C9	A	J2	A	V1	33 (1ZZ-FE)
C16	B	J3	B	W1	33 (1ZZ-FE)
F10	38 (*1)	J4	A		35 (2ZZ-GE)

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IK	24	
IL		
IM		
1A	22	Engine Wire and Engine Room J/B (Engine Compartment Left)
3B	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
4B	30	Instrument Panel Wire and Center J/B (Behind the Combination Meter)
4C		

: Connector Joining Wire Harness and Wire Harness

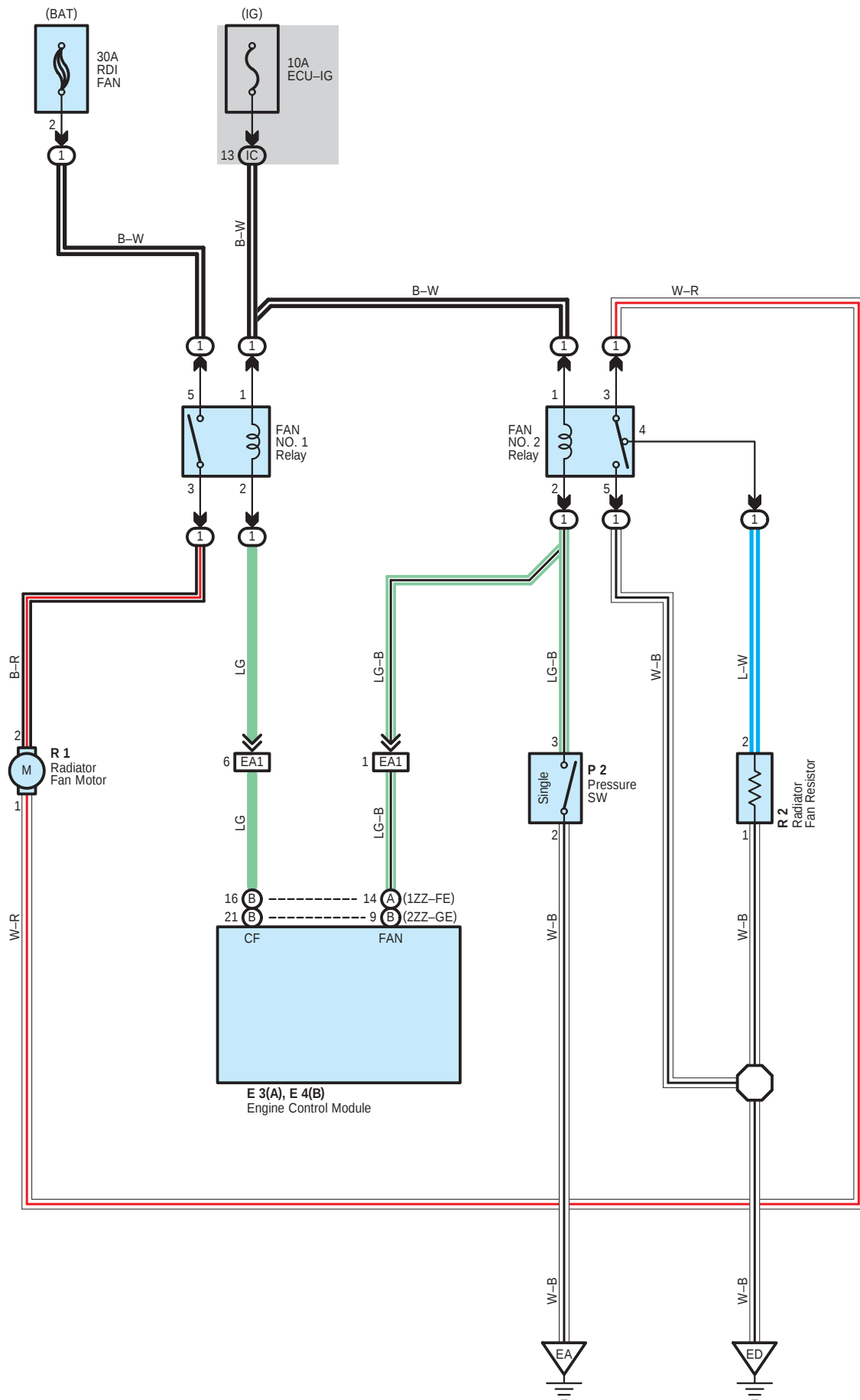
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
IA5		
IA6		
ID2	44	Instrument Panel Wire and Floor Wire (Left Kick Panel)
I12	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)

: Ground Points

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
EB	42 (1ZZ-FE)	Left Side of the Cylinder Head
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	
IE	44	Behind the Combination Meter

* 1 : w/ Side Airbag and/or Stereo Component Amplifier * 2 : w/o Side Airbag and Stereo Component Amplifier

Radiator Fan



System Outline

The current is applied at all times through the RDI FAN fuse to TERMINAL 5 of the FAN NO.1 relay. When the ignition SW is turned on, the current flows through the ECU-IG fuse to FAN NO.1 relay (Coil side) to TERMINAL CF of the engine control module. At the same time as this current flow, the current from ECU-IG fuse flows to the FAN NO.2 relay (Coil side) to TERMINAL 3 of the pressure SW.

1. Low Speed Operation

When the A/C system is operating, the FAN NO.1 relay is turned on. As a result, the current flows from the RDI FAN fuse to FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 4 to TERMINAL 2 of the radiator fan resistor to TERMINAL 1 to GROUND, and the radiator fan motor rotates at low speed.

2. High Speed Operation

When the pressure SW is on or engine control module operated, the FAN NO.1 and NO.2 relay is turned on. As a result, the current flows from the RDI FAN fuse to FAN NO.1 relay (Point side) to radiator fan motor to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to GROUND, and the radiator fan motor rotates at high speed.

: Parts Location

Code		See Page	Code		See Page	Code		See Page
E3	A	36	P2	35 (2ZZ-GE)	R1	R2	33 (1ZZ-FE)	
E4	B	36	R1	33 (1ZZ-FE)			35 (2ZZ-GE)	
P2		33 (1ZZ-FE)		35 (2ZZ-GE)				

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)

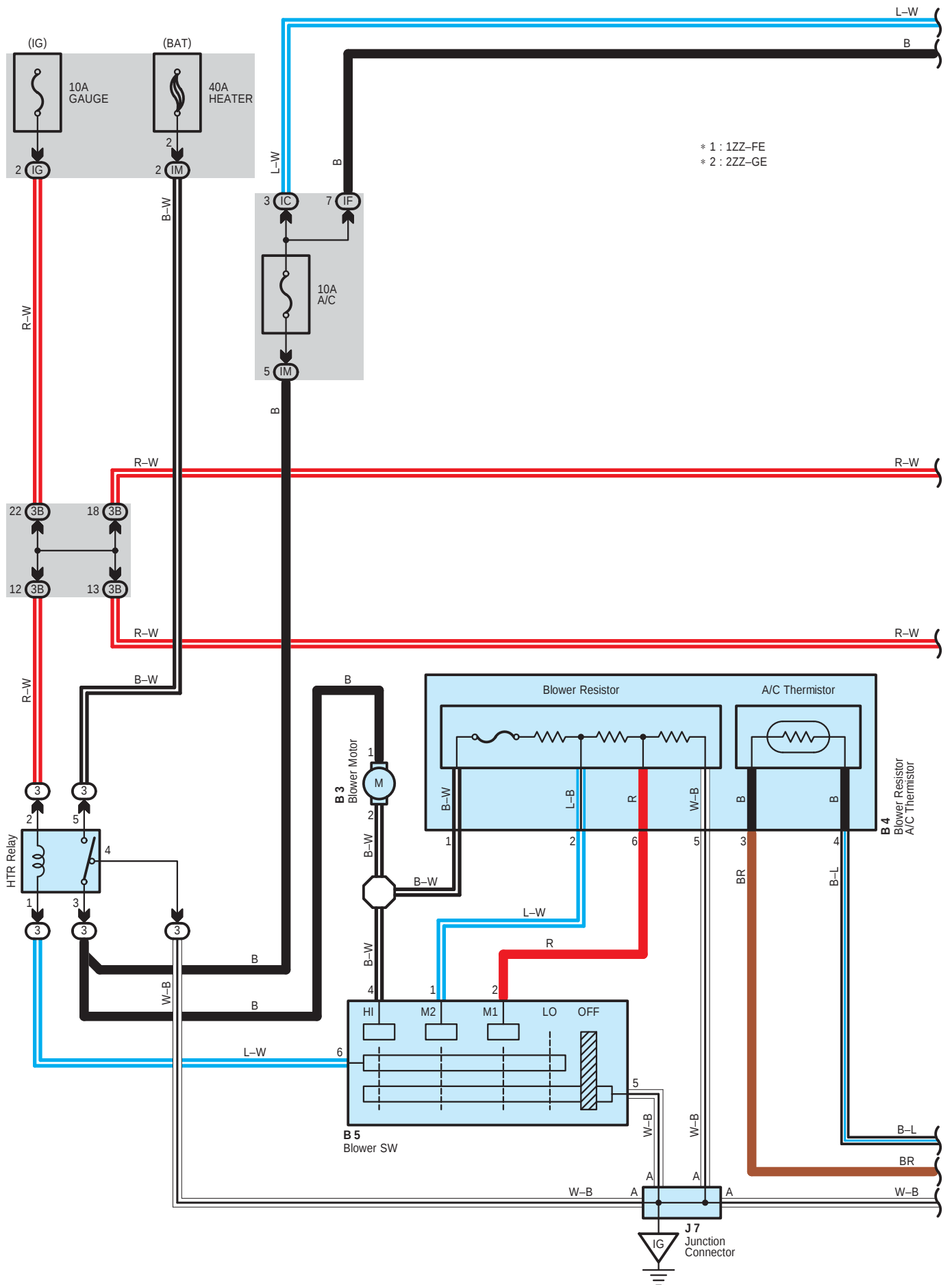
: Connector Joining Wire Harness and Wire Harness

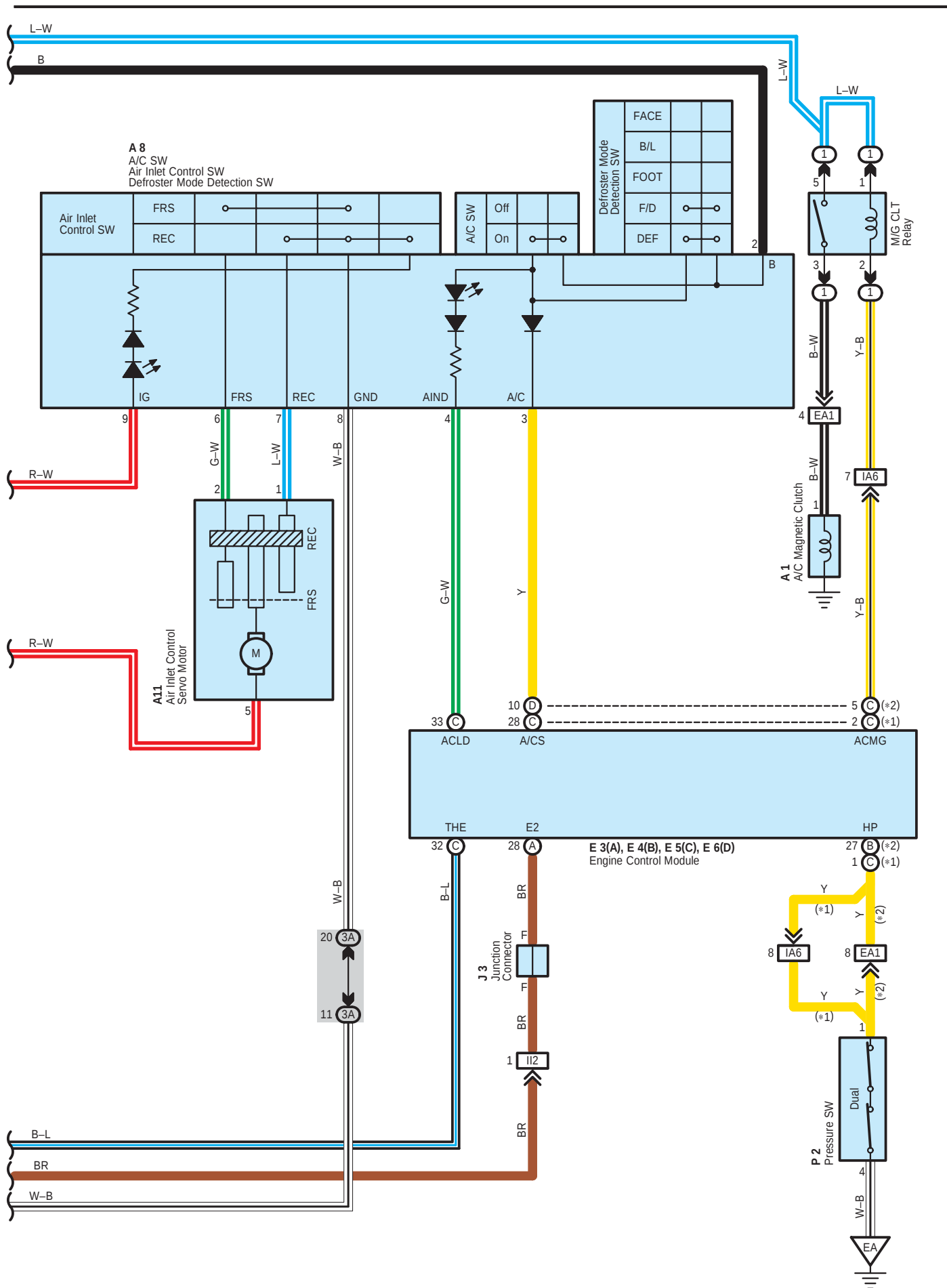
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	

: Ground Points

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
ED	42 (1ZZ-FE)	Front Left Suspension Tower
	43 (2ZZ-GE)	

Air Conditioning





System Outline

Current is applied at all times through the HEATER fuse to TERMINAL 5 of the HTR relay. When the ignition SW is turned on, the current flows through the GAUGE fuse to TERMINAL 2 of the HTR relay to TERMINAL 1 to TERMINAL 6 of the blower SW.

1. Heater Blower Motor Operation

* Low speed operation

When the blower SW is moved to LO position, the current flows to TERMINAL 6 of the blower SW to TERMINAL 5 to GROUND, causing the HTR relay to turn on. This causes the current flows from the HEATER fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to the blower motor to the blower resistor to GROUND, rotating the blower motor at low speed.

* Medium speed operation (Operation at M1, M2)

When the blower SW is moved to M1 position, the current flows to TERMINAL 6 of the blower SW to TERMINAL 5 to GROUND, causing the HTR relay to turn on. This causes the current flows from the HEATER fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to the blower motor to the blower resistor to TERMINAL 2 of the blower SW to TERMINAL 5 to GROUND. At this time, the blower resistance of the blower resistor is smaller than at low speed, so the blower motor rotates at medium low speed.

When the blower SW is moved to M2 position, the current flows through the HTR relay to the blower motor to the blower resistor to TERMINAL 1 of the blower SW to TERMINAL 5 to GROUND. At this time, resistance of the blower resistor is smaller than at M1 position, so the blower motor rotates at medium high speed.

* High speed operation

When the blower SW is moved to HI position, the current flows to TERMINAL 6 of the blower SW to TERMINAL 5 to GROUND, causing the HTR relay to turn on.

This causes the current flows from the HEATER fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to the blower motor to TERMINAL 4 of the blower SW to TERMINAL 5 to GROUND, rotating the blower motor at high speed.

2. Air Conditioning Operation

When the blower SW is set on, the current flows from the HEATER fuse to the HTR relay (Point side) to the A/C fuse to the TERMINAL 2 of the A/C SW. If the A/C SW is turned on, at this time a signal is input into the engine control module. This activates the engine control module and M/G CLT relay. So that current flows from the A/C fuse to M/G CLT relay (Point side) to A/C magnetic clutch. Causing the compressor to operate.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	32 (1ZZ-FE)	B4	36	E6	D 36
	34 (2ZZ-GE)	B5	36	J3	37
A8	36	E3	A 36	J7	37
A11	36	E4	B 36	P2	33 (1ZZ-FE)
B3	36	E5	C 36		35 (2ZZ-GE)

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

○ : Junction Block and Wire Harness Connector

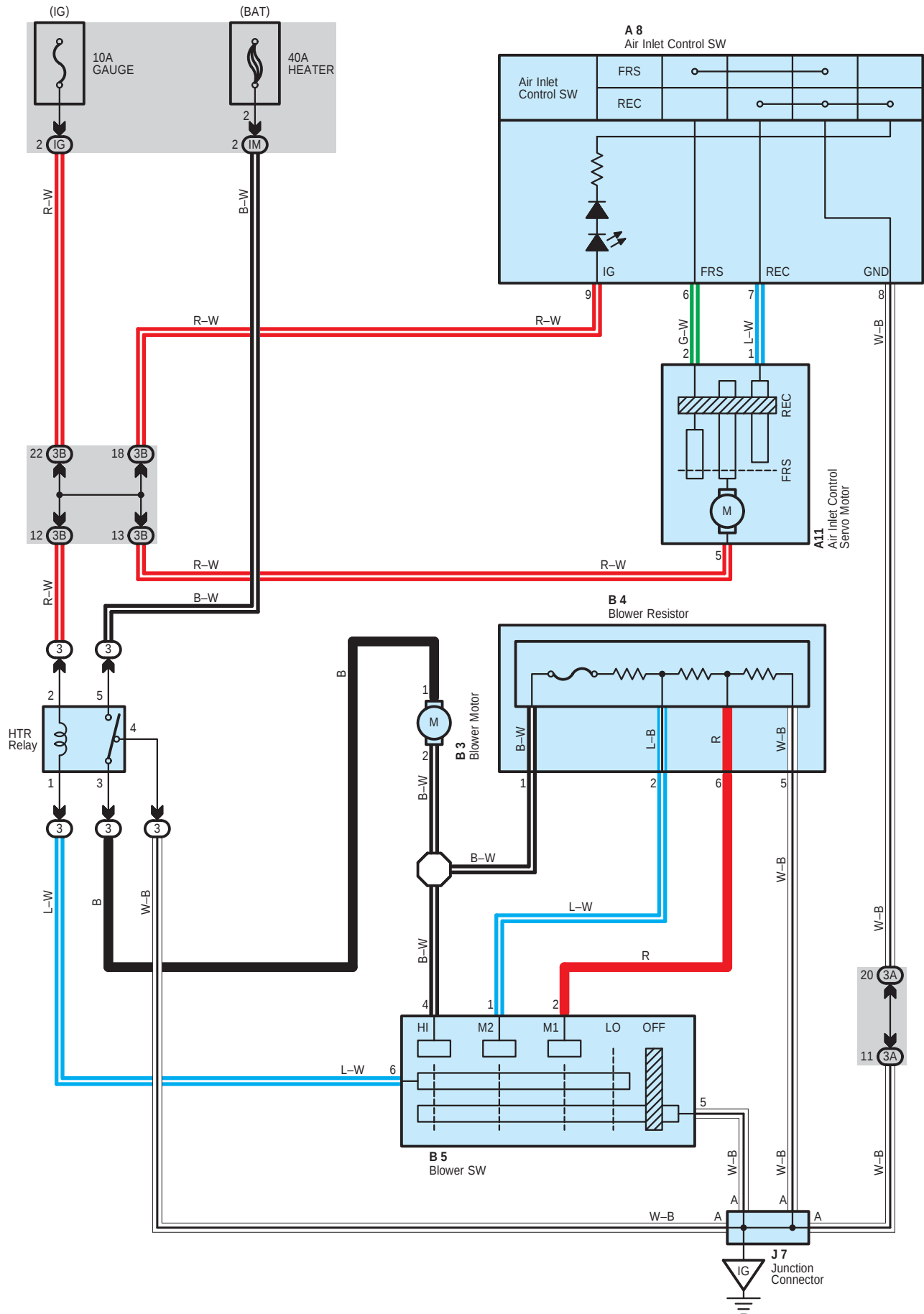
Code	See Page	Junction Block and Wire Harness (Connector Location)
IC	25	Engine Room Main Wire and Instrument Panel J/B (Lower Finish Panel)
IF	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IG		
IM		
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	42 (1ZZ-FE)	Engine Wire and Engine Room Main Wire (Inside of the Engine Room R/B)
	43 (2ZZ-GE)	
IA6	44	Engine Room Main Wire and Instrument Panel Wire (Left Side of the Instrument Panel Reinforcement)
II2	45	Engine Wire and Instrument Panel Wire (Blower Unit RH)

 : **Ground Points**

Code	See Page	Ground Points Location
EA	42 (1ZZ-FE)	Front Right Fender
	43 (2ZZ-GE)	
IG	44	Right Kick Panel



 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A8	36	B3	36	B5	36
A11	36	B4	36	J7	37

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
3	28	RH R/B (Right Side of the Instrument Panel Reinforcement)

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IG	25	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
IM	24	
3A	28	Instrument Panel Wire and RH J/B (Right Side of the Instrument Panel Reinforcement)
3B		

 : Ground Points

Code	See Page	Ground Points Location
IG	44	Right Kick Panel