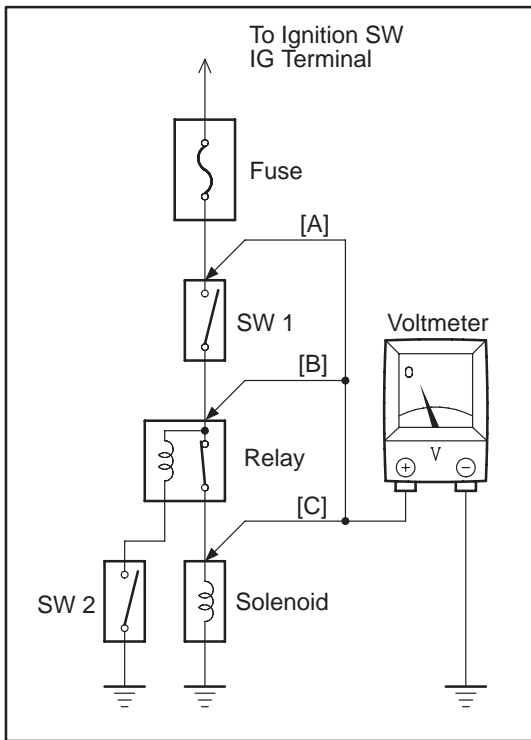


C TROUBLESHOOTING



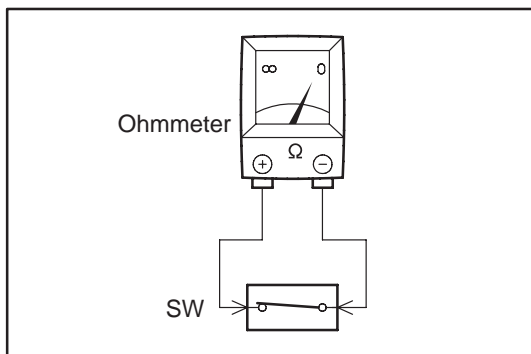
VOLTAGE CHECK

- (a) Establish conditions in which voltage is present at the check point.

Example:

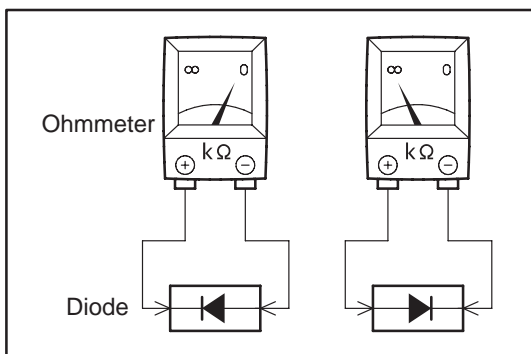
- [A] – Ignition SW on
- [B] – Ignition SW and SW 1 on
- [C] – Ignition SW, SW 1 and Relay on (SW 2 off)

- (b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal. This check can be done with a test light instead of a voltmeter.



CONTINUITY AND RESISTANCE CHECK

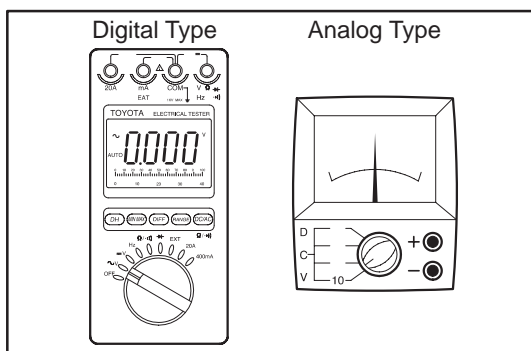
- (a) Disconnect the battery terminal or wire so there is no voltage between the check points.
- (b) Contact the two leads of an ohmmeter to each of the check points.



If the circuit has diodes, reverse the two leads and check again.

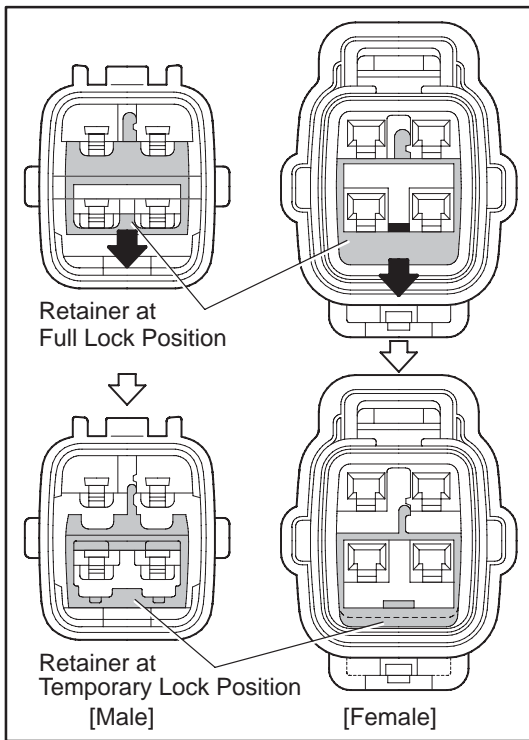
When contacting the negative lead to the diode positive side and the positive lead to the negative side, there should be continuity.

When contacting the two leads in reverse, there should be no continuity.

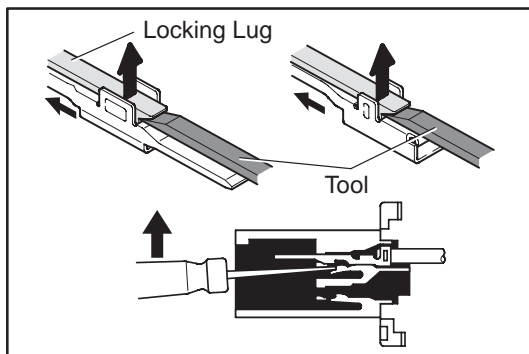


- (c) Use a volt/ohmmeter with high impedance (10 kΩ/V minimum) for troubleshooting of the electrical circuit.

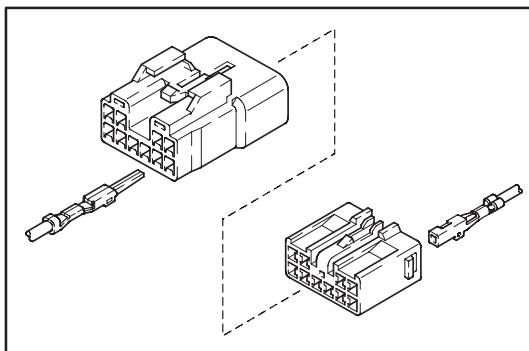
C TROUBLESHOOTING



Push the terminal retainer down to the temporary lock position.



(c) Release the locking lug from terminal and pull the terminal out from rear.

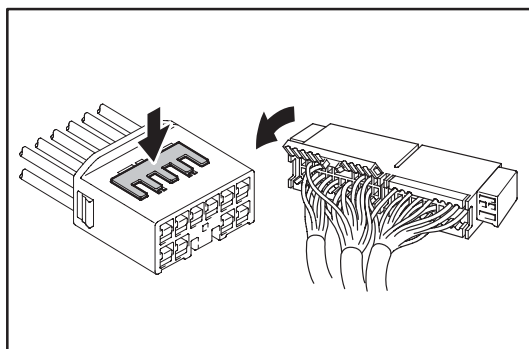


4. INSTALL TERMINAL TO CONNECTOR

(a) Insert the terminal.

HINT:

1. Make sure the terminal is positioned correctly.
2. Insert the terminal until the locking lug locks firmly.
3. Insert the terminal with terminal retainer in the temporary lock position.



(b) Push the secondary locking device or terminal retainer in to the full lock position.

5. CONNECT CONNECTOR

F RELAY LOCATIONS

Fusible Link Block	Engine Compartment Left (See Page 34) [Inside Engine Room J/B]
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(Double Cab)

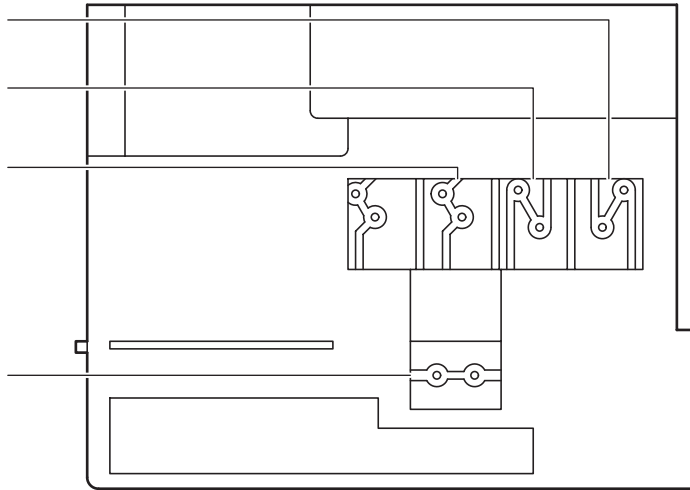
[Unit : B (Integrated FL)]

30A ABS NO.2
(for Medium Current)

40A DEFOG
(for Medium Current)

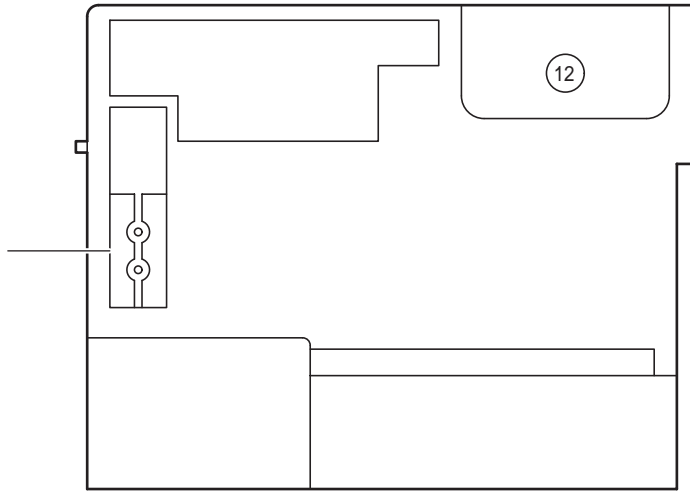
50A HEATER
(for High Current)

140A ALT
(for High Current)

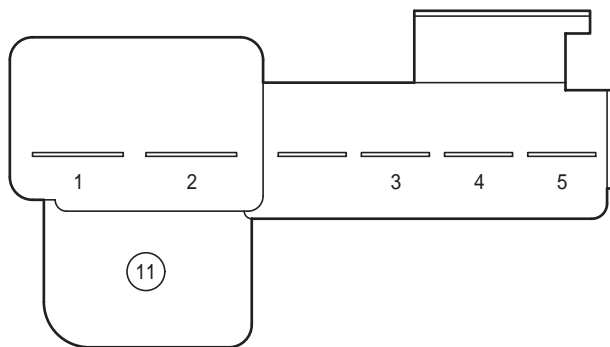


Side View

60A TOWING R/B
(for High Current)



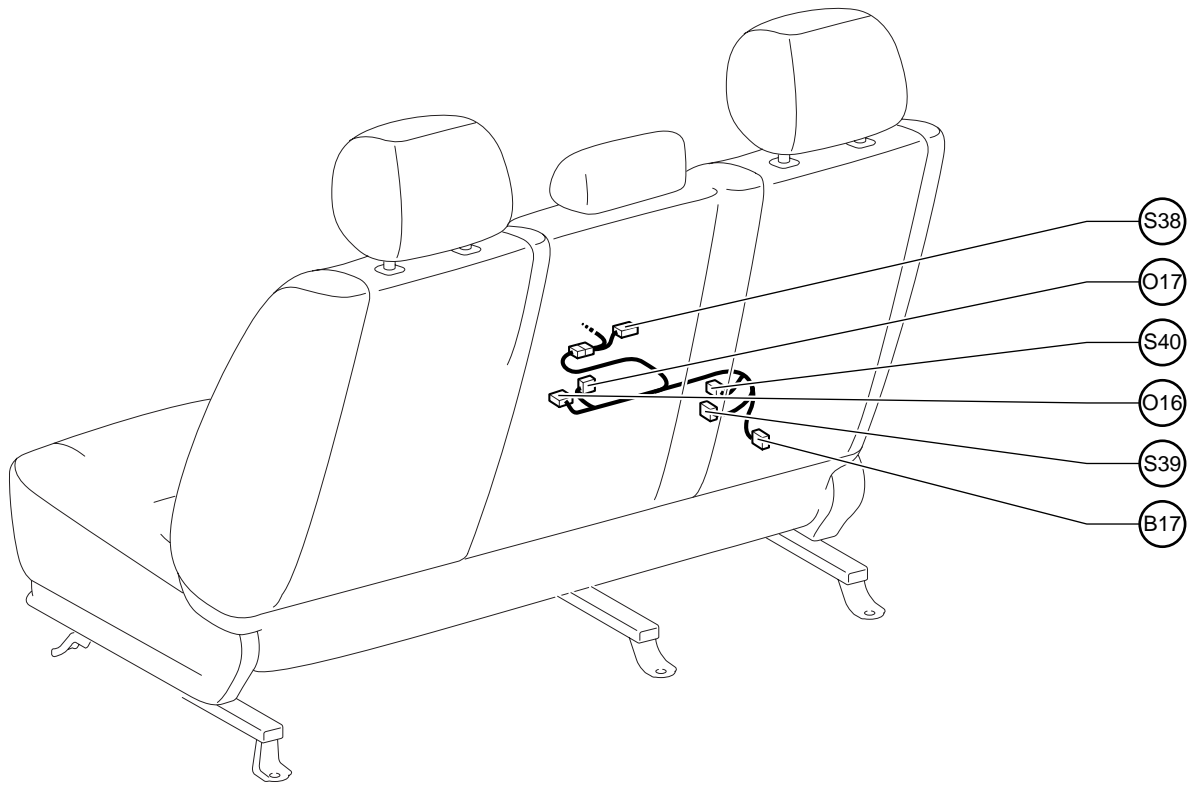
Side View



Back View

Position of Parts in Seat

[Double Cab : Separate Seat]



B17 Buckle SW RH

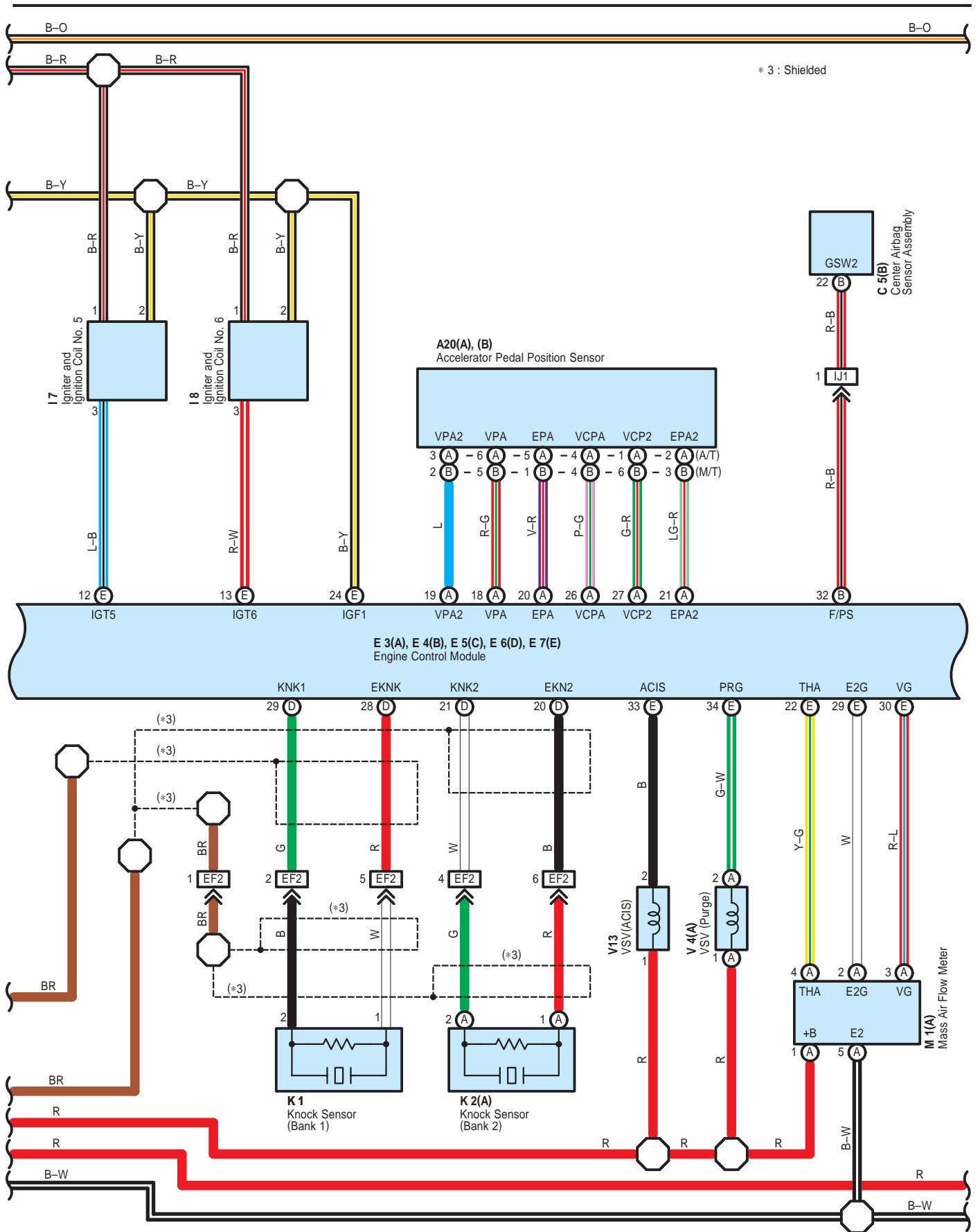
O16 Occupant Classification ECU

O17 Occupant Classification Sensor

S38 Side Airbag Squib RH

S39 Seat Belt Tension Sensor

S40 Seat Position Airbag Sensor (Front Passenger's Side)



System Outline

The electronically controlled transmission electrically controls the, throttle pressure, lock-up pressure, and accumulator pressure etc. through the solenoid valve.

The electronically controlled transmission is a system which precisely controls the gear shift timing and lock-up timing in response to the vehicle's driving conditions and the engine condition detected by various sensors. It makes smooth driving possible by shift selection of the gear which is the most appropriate to the driving conditions at that time, and by preventing downing, squat and gear shift shock when starting off.

1. Gear Shift Operation

When driving, the engine warm up condition is input as a control signal from the engine coolant temp. sensor to TERMINAL THW of the engine control module, and the vehicle speed is input to TERMINAL SP2+ of the engine control module from the vehicle speed sensor. 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 a 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. Lock-Up Operation

When the engine control module decides based on each signal that the lock-up condition has been met, the current flows through TERMINAL SLU+ of the engine control module to TERMINAL 5 of the electronically controlled transmission solenoid to TERMINAL 13 to TERMINAL SLU- of the engine control module to GROUND.

3. Stop Light SW Circuit

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

4. Overdrive Circuit

* O/D main SW on

When the O/D main SW is switched to ON position, a signal is input to TERMINAL ODMS of the engine control module, and enables shift change to the overdrive range, through the control of the engine control module.

* O/D main SW off

When the O/D main SW is switched to OFF position, a signal is input to TERMINAL ODMS of the engine control module, and prohibits shift change to the overdrive range through the control of the engine control module. When in the overdrive range already, shift down is made.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C11	A 60	J1	59 (1GR-FE)	J66	A 62
C12	B 60	J3	62	J67	B 62
D8	61	J8	62	O1	59 (1GR-FE)
E1	58 (1GR-FE)	J9	62	O4	62
E2	A 58 (1GR-FE)	J10	62	P1	59 (1GR-FE)
E3	A 61	J18	59 (1GR-FE)	S4	A 63
E4	B 61	J26	A 62	S31	63
E5	C 61	J27	B 62	T14	59 (1GR-FE)
E6	D 61	J28	A 62	V3	59 (1GR-FE)
E7	E 61	J29	B 62		

○ : Relay Blocks

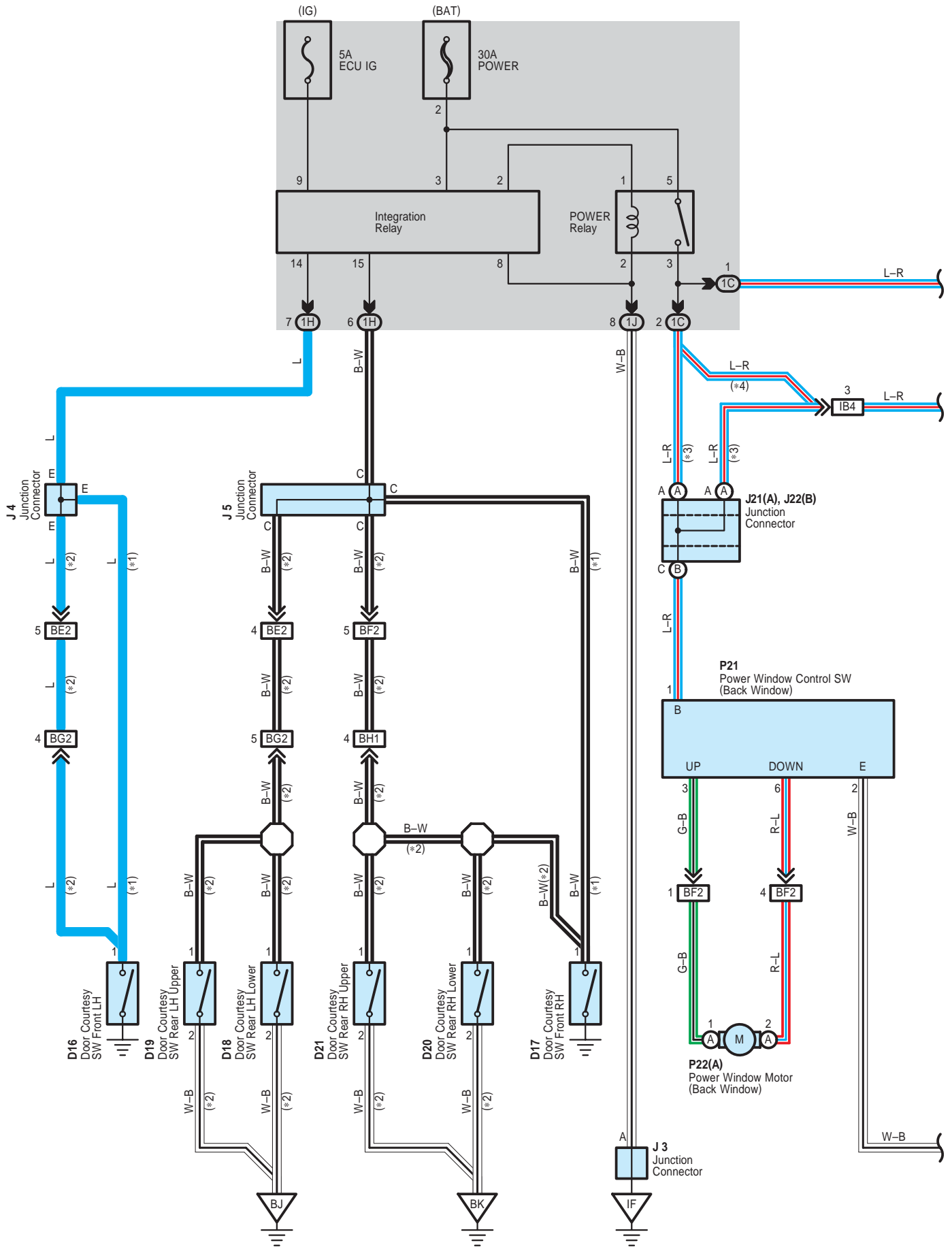
Code	See Page	Relay Blocks (Relay Block Location)
2	24	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

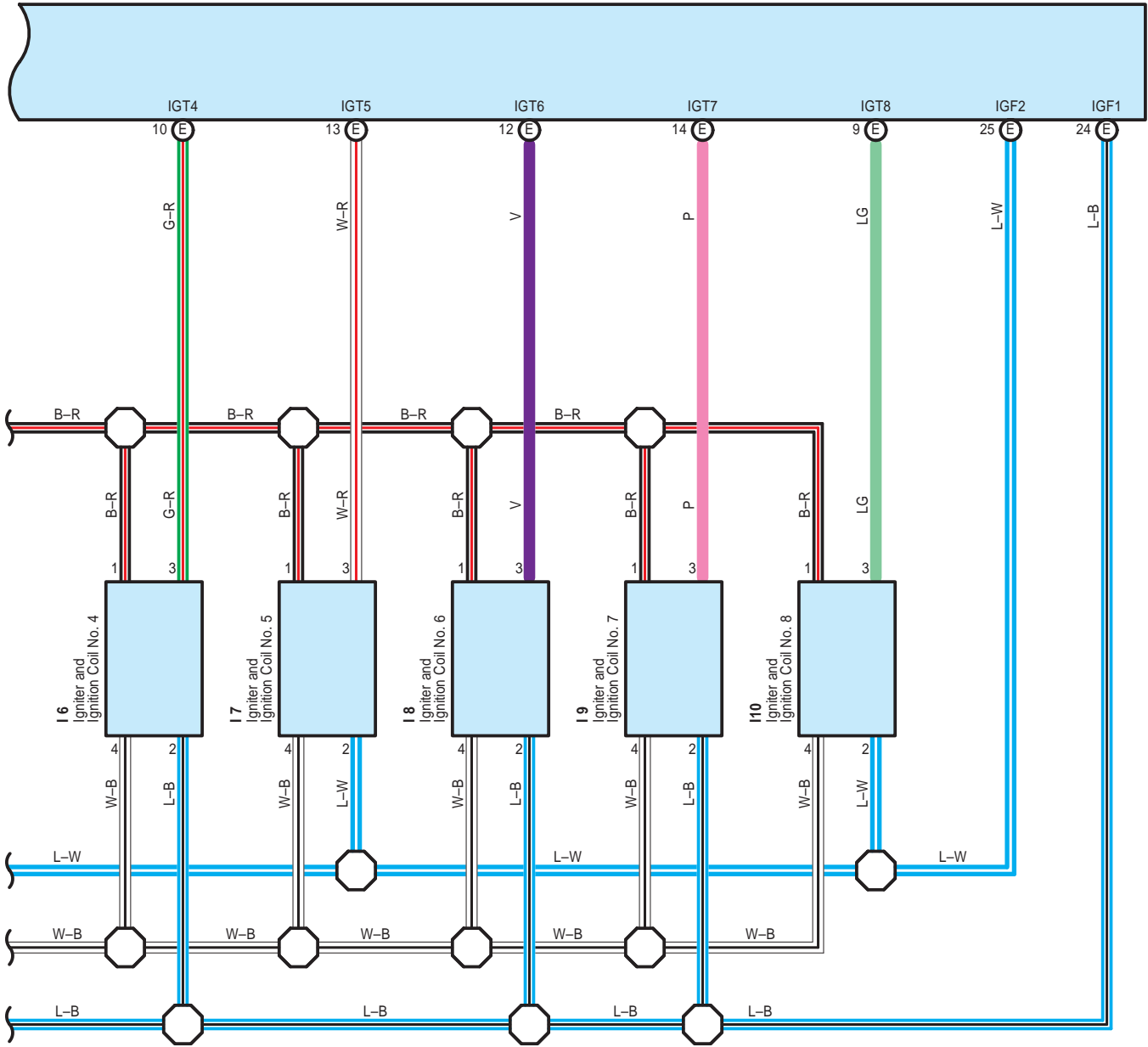
Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
	30 (*2)	
1G	26 (*1)	
	30 (*2)	

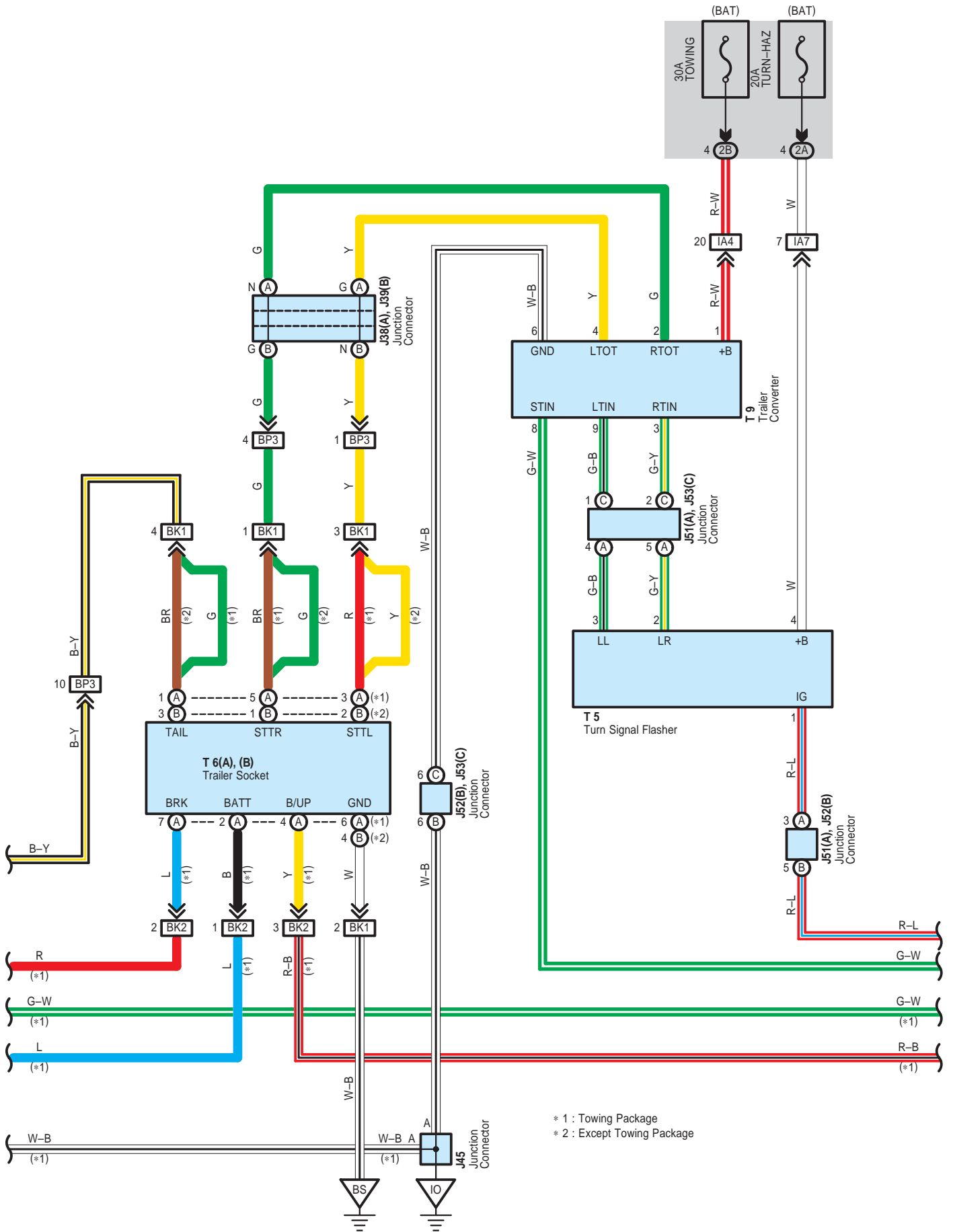
* 1 : w/o Daytime Running Light * 2 : w/ Daytime Running Light * 3 : Access Cab * 4 : Standard Cab * 5 : Access Cab Captain Seat
 * 6 : Access Cab Separate Seat * 7 : Standard Cab Bench Seat

Power Window (Access/Standard Cab)

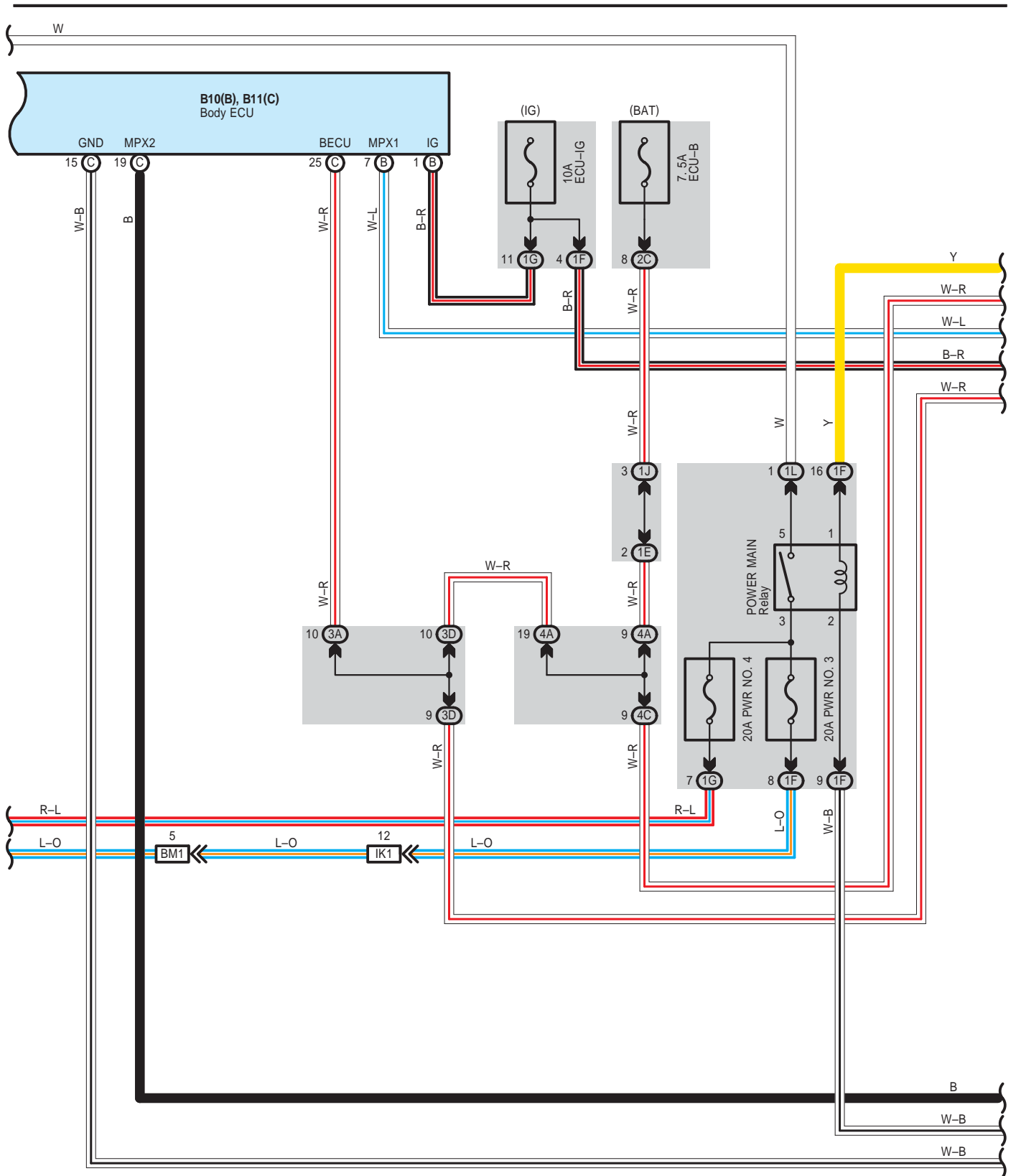


E 7(E)
Engine Control Module

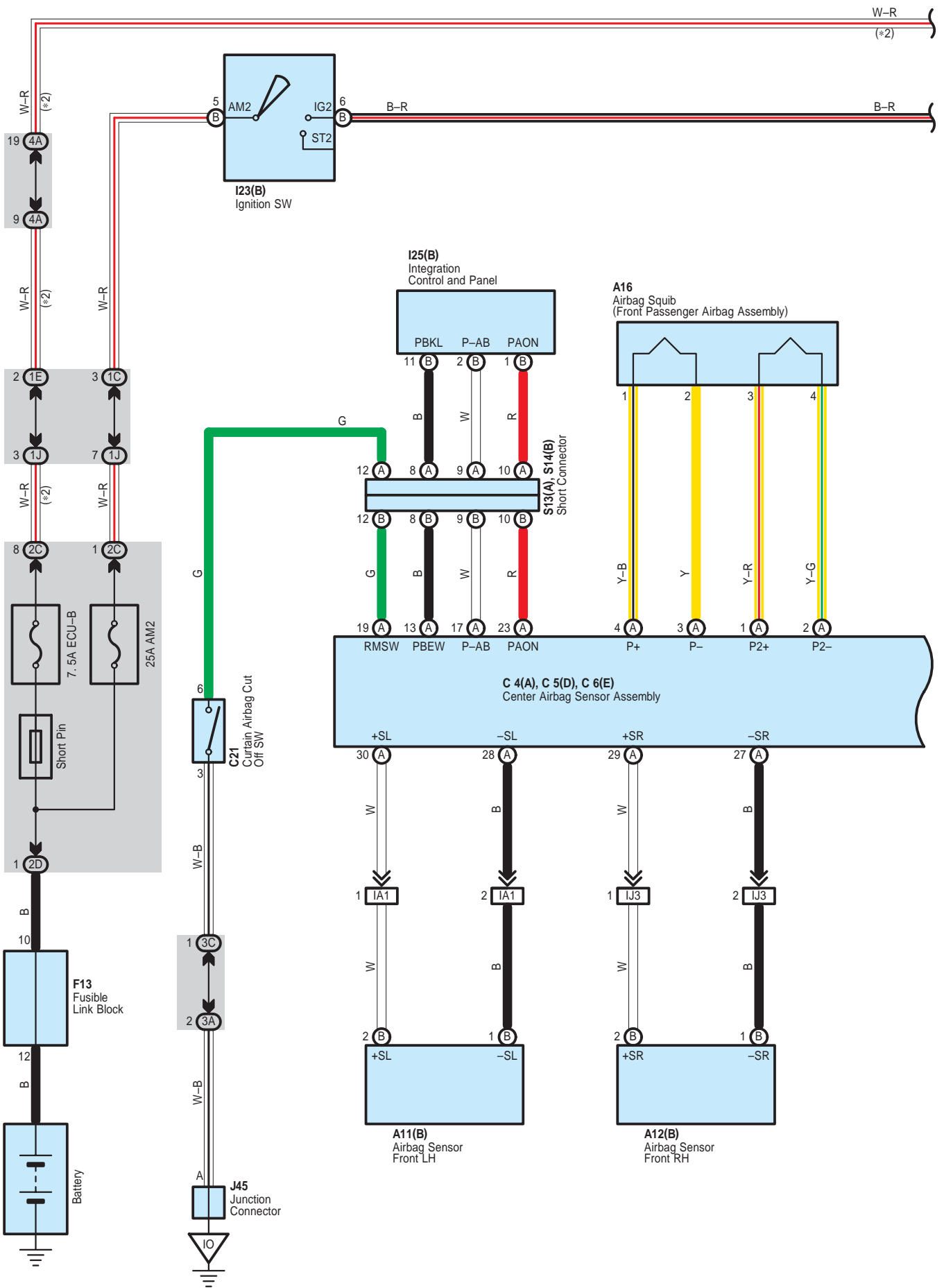




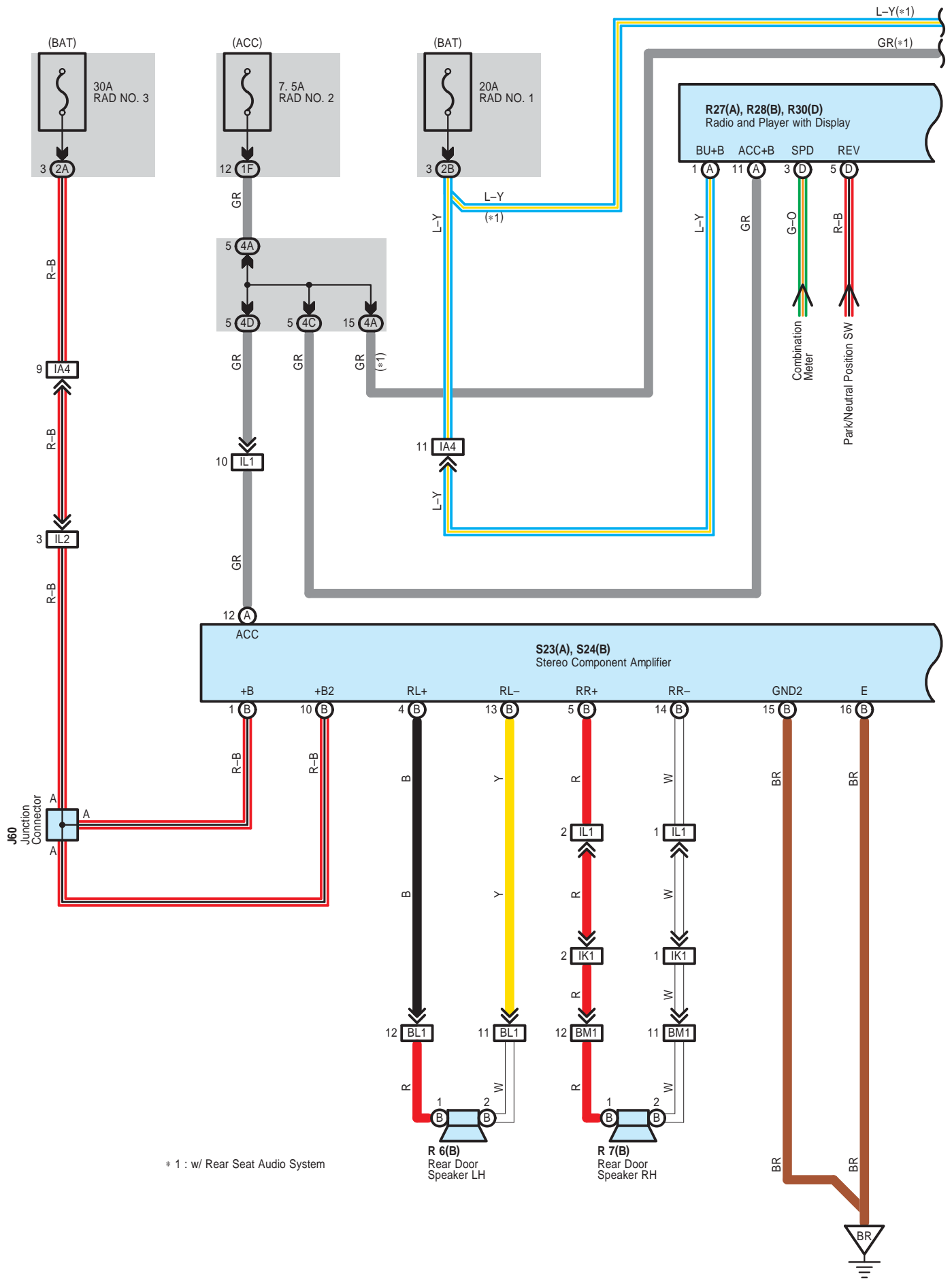
TOYOTA TUNDRA (EM00Q0U)



SRS (Double Cab)



Navigation and Audio System with 8 Speaker (Double Cab)



* 1 : w/ Rear Seat Audio System

J POWER SOURCE (Current Flow Chart)

[Access Cab, Standard Cab]

Fuse		System	Page
15A	ACC	Trailer Towing	182
		4WD	240
15A	STOP	ABS (w/ VSC), TRAC and VSC	208
		ABS (w/o VSC)	216
		Cruise Control (1GR-FE)	228
		Cruise Control (2UZ-FE)	224
		Electronically Controlled Transmission and A/T Indicator (1GR-FE)	200
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	194
		Engine Control (1GR-FE)	132
		Engine Control (2UZ-FE)	118
		Stop Light	176
		Trailer Towing	182
15A	TAIL	Center Cluster Integration Control System	188
		Engine Control (1GR-FE)	132
		Engine Control (2UZ-FE)	118
		Headlight (w/ Daytime Running Light)	150
		Illumination	166
		Light Auto Turn Off System (w/ Daytime Running Light)	178
		Light Auto Turn Off System (w/o Daytime Running Light)	180
		Taillight	162
		Trailer Towing	182
		TVIP and Wireless Door Lock Control	258
20A	WIP	Wiper and Washer (w/ INT TIME SW)	280
		Wiper and Washer (w/o INT TIME SW)	282
20A	4WD	4WD	240
30A	POWER	Door Lock Control (w/ Daytime Running Light)	246
		Door Lock Control (w/o Daytime Running Light)	252
		Power Seat	290
		Power Window	266
		TVIP and Wireless Door Lock Control	258

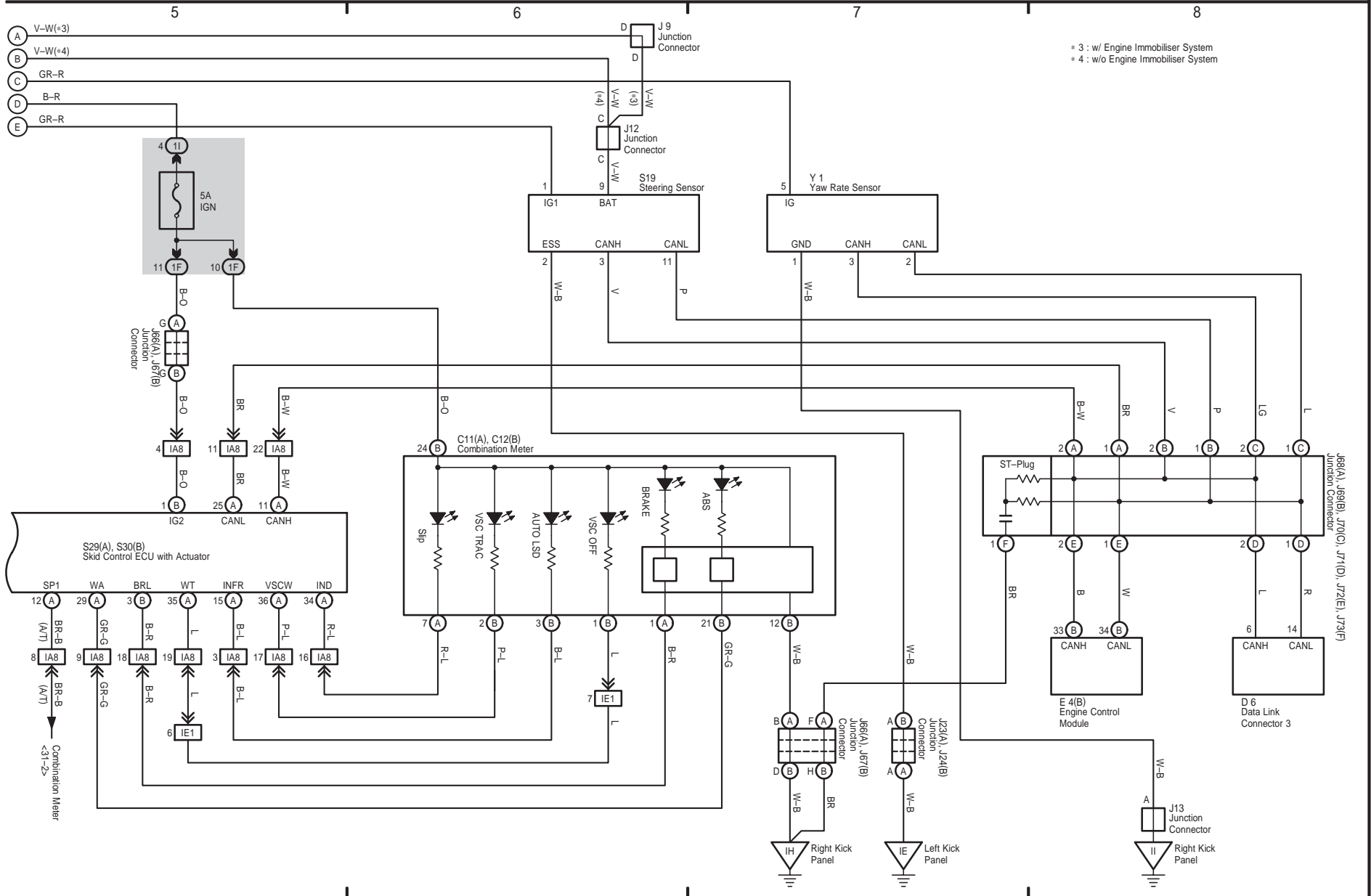
Engine Room R/B (See Page 24)

Fuse		System	Page
5A	ECU-B	ABS (w/ VSC), TRAC and VSC	208
		Engine Control (1GR-FE)	132
		Engine Control (2UZ-FE)	118
		Engine Immobiliser System	146
		SRS	233
		TVIP and Wireless Door Lock Control	258
7.5A	ALT-S	Charging	116
10A	A/C	Air Conditioning	308
		Center Cluster Integration Control System	188

* These are the page numbers of the first page on which the related system is shown.

ABS, TRAC and VSC

Multiplex Communication System (CAN)



* 3 : w/ Engine Immobiliser System
 * 4 : w/o Engine Immobiliser System

TOYOTA TUNDRA (EM00000U)

