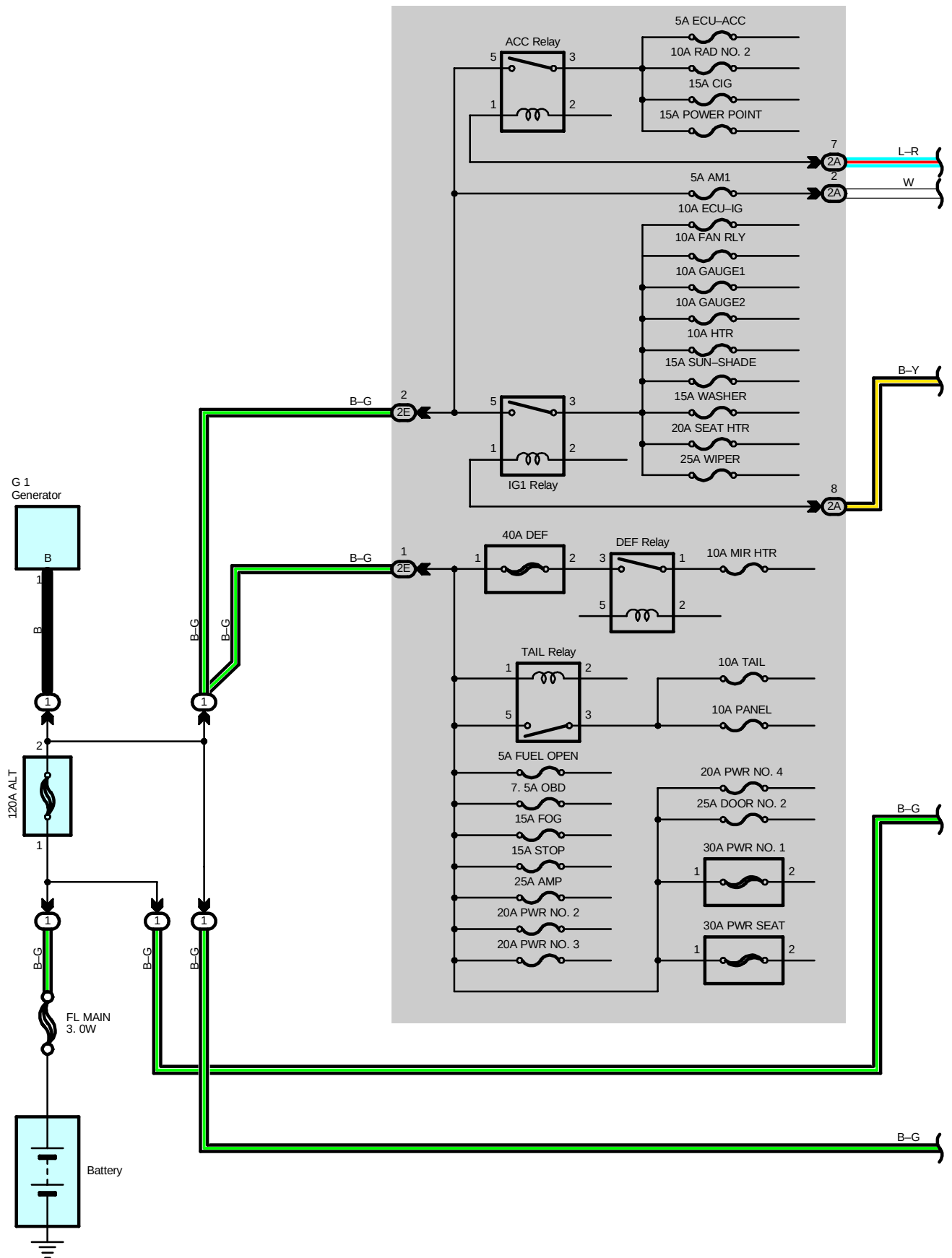
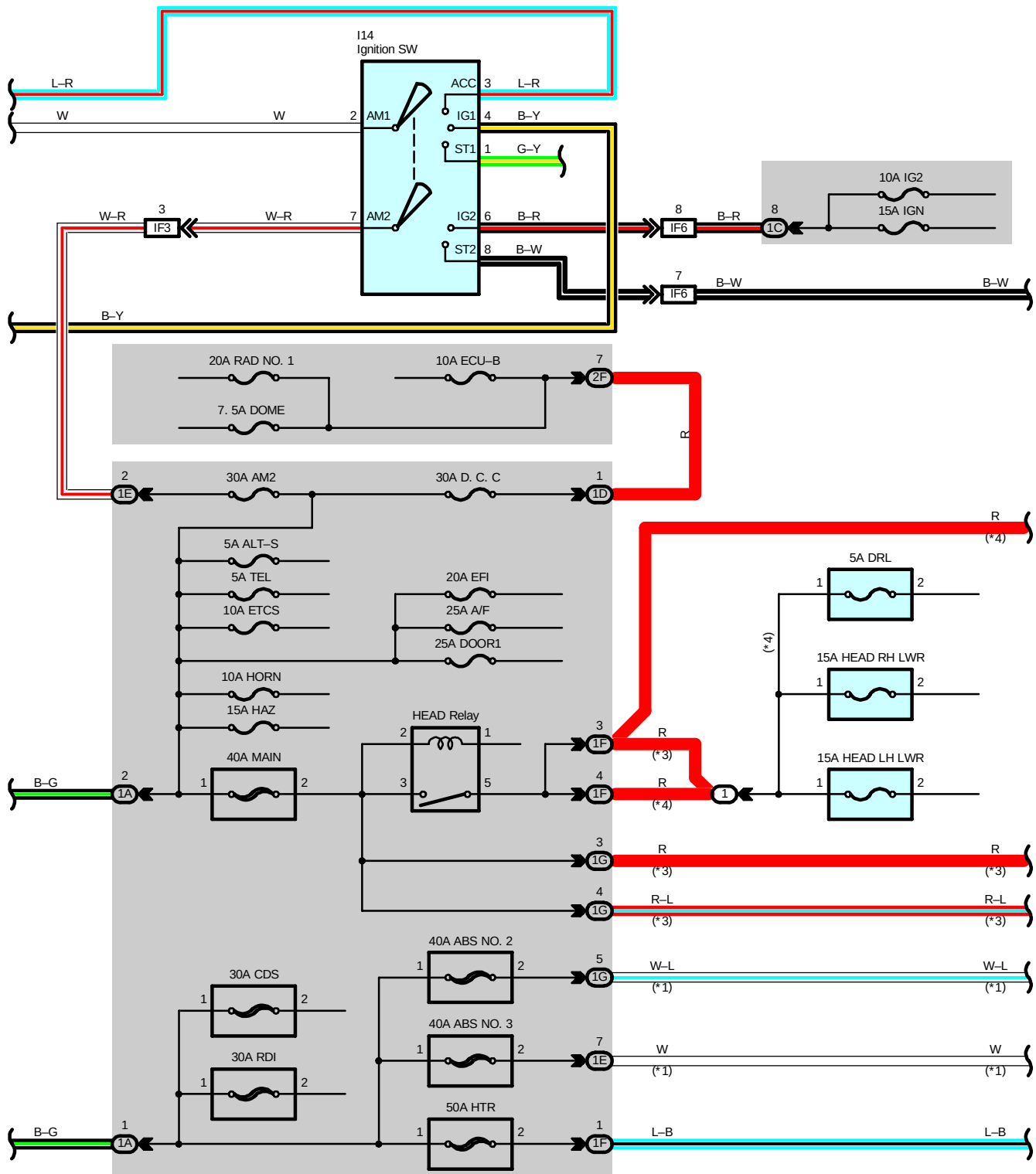


Power Source

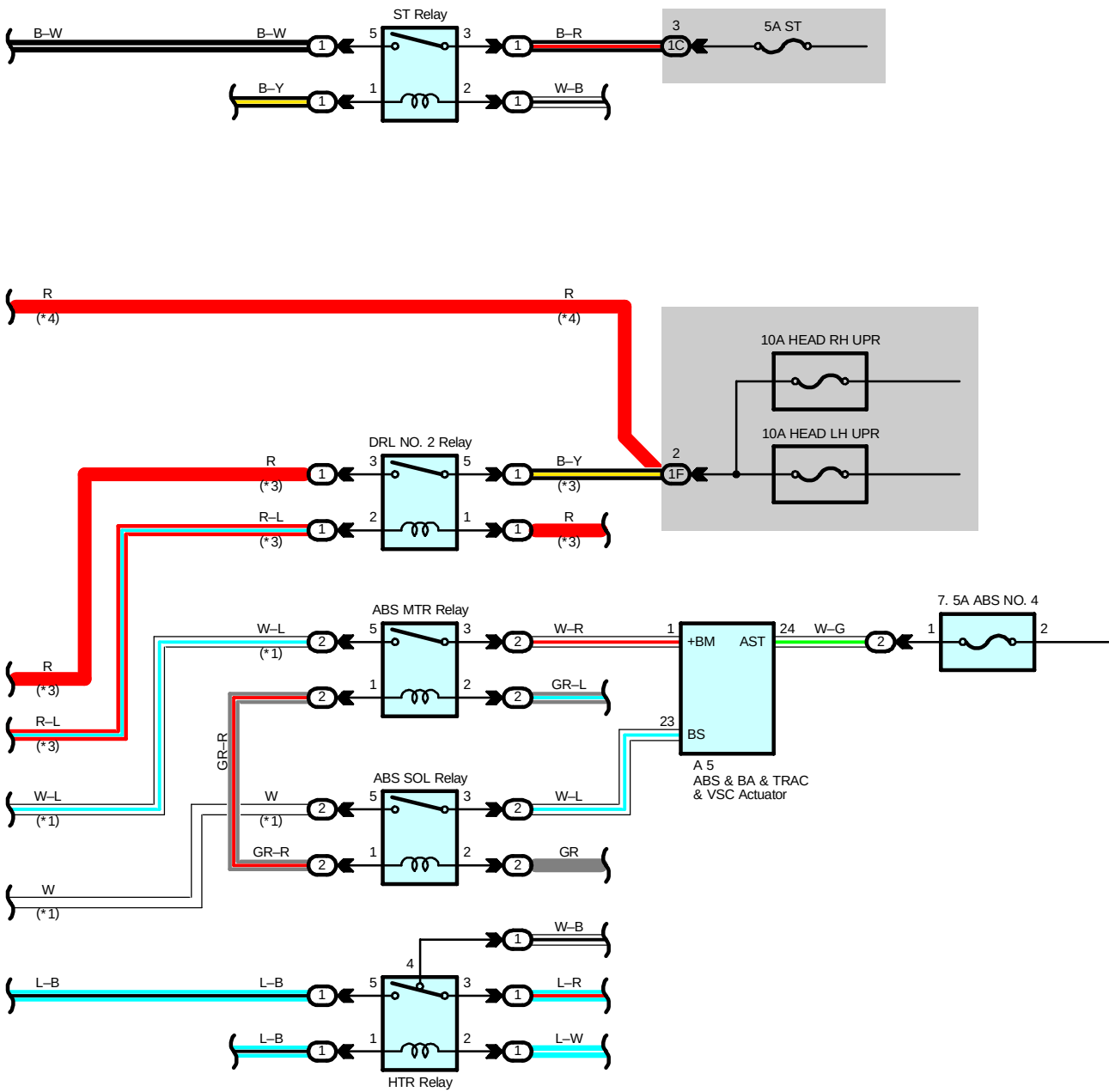


- * 1 : w/ VSC
- * 2 : w/o VSC
- * 3 : w/ Daytime Running Light
- * 4 : w/o Daytime Running Light



Power Source

- * 1 : w/ VSC
- * 3 : w/ Daytime Running Light
- * 4 : w/o Daytime Running Light



Service Hints

I14 Ignition SW

- 2-3 : Closed with the ignition SW at ACC or ON position
- 2-4 : Closed with the ignition SW at ON or ST position
- 2-1 : Closed with the ignition SW at ST position
- 7-6 : Closed with the ignition SW at ON or ST position
- 7-8 : Closed with the ignition SW at ST position

TAIL Relay

- 5-3 : Closed with the light control SW at HEAD or TAIL position

HEAD Relay (w/ Daytime Running Light)

- 5-3 : Closed with the light control SW at HEAD position or dimmer SW at FLASH position
- Closed with the engine running and parking brake released (Parking brake SW off)

HEAD Relay (w/o Daytime Running Light)

- 5-3 : Closed with the light control SW at HEAD position or dimmer SW at FLASH position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A5	36	G1	36	I14	39

: Relay Blocks

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

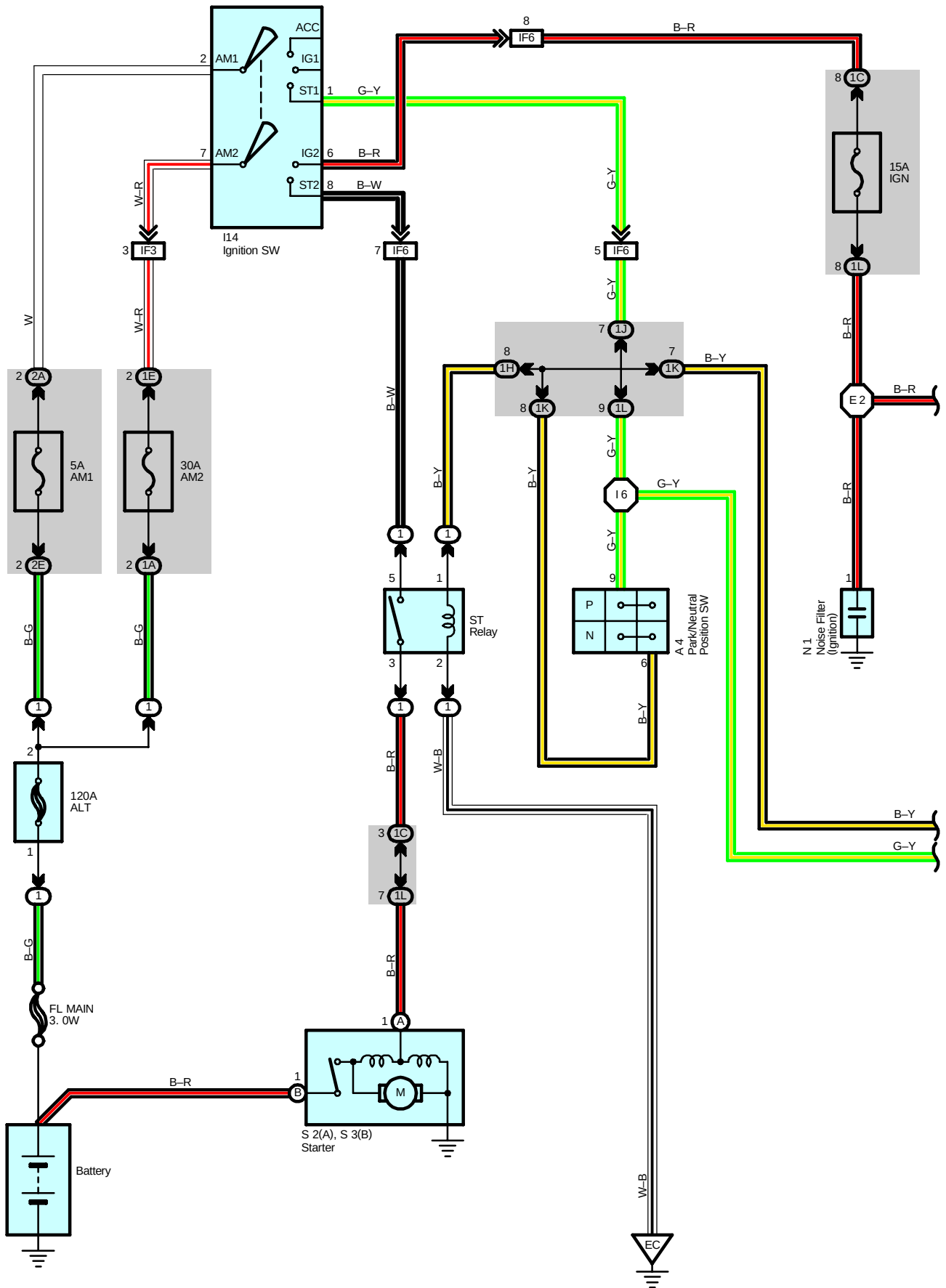
: Junction Block and Wire Harness Connector

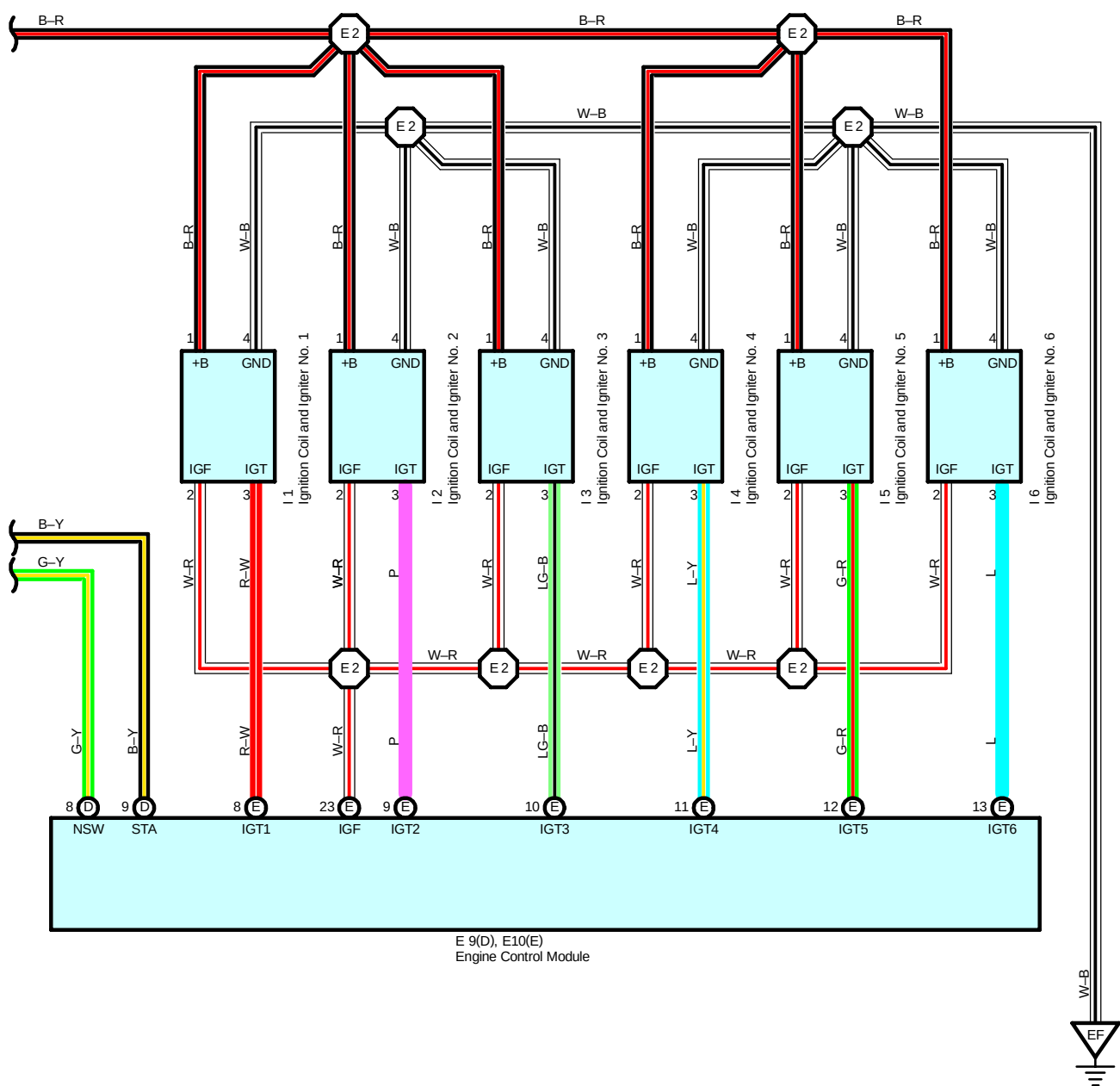
Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1D		
1E		
1F		
1G		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2F		

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF3	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		

Starting and Ignition





Starting and Ignition

Service Hints

I14 Ignition SW

- 2-1 : Closed with the ignition SW at ST position
- 7-6 : Closed with the ignition SW at ON or ST position
- 7-8 : Closed with the ignition SW at ST position

A4 Park/Neutral Position SW

- 9-6 : Closed with the A/T shift lever in P or N position

S2 (A), S3 (B) Starter

Point closed with the Park/Neutral position SW at P or N position and the ignition SW at ST position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	I3	37	N1	37
E9	D 38	I4	37	S2	A 37
E10	E 38	I5	37	S3	B 37
I1	37	I6	37		
I2	37	I14	39		

: 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)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

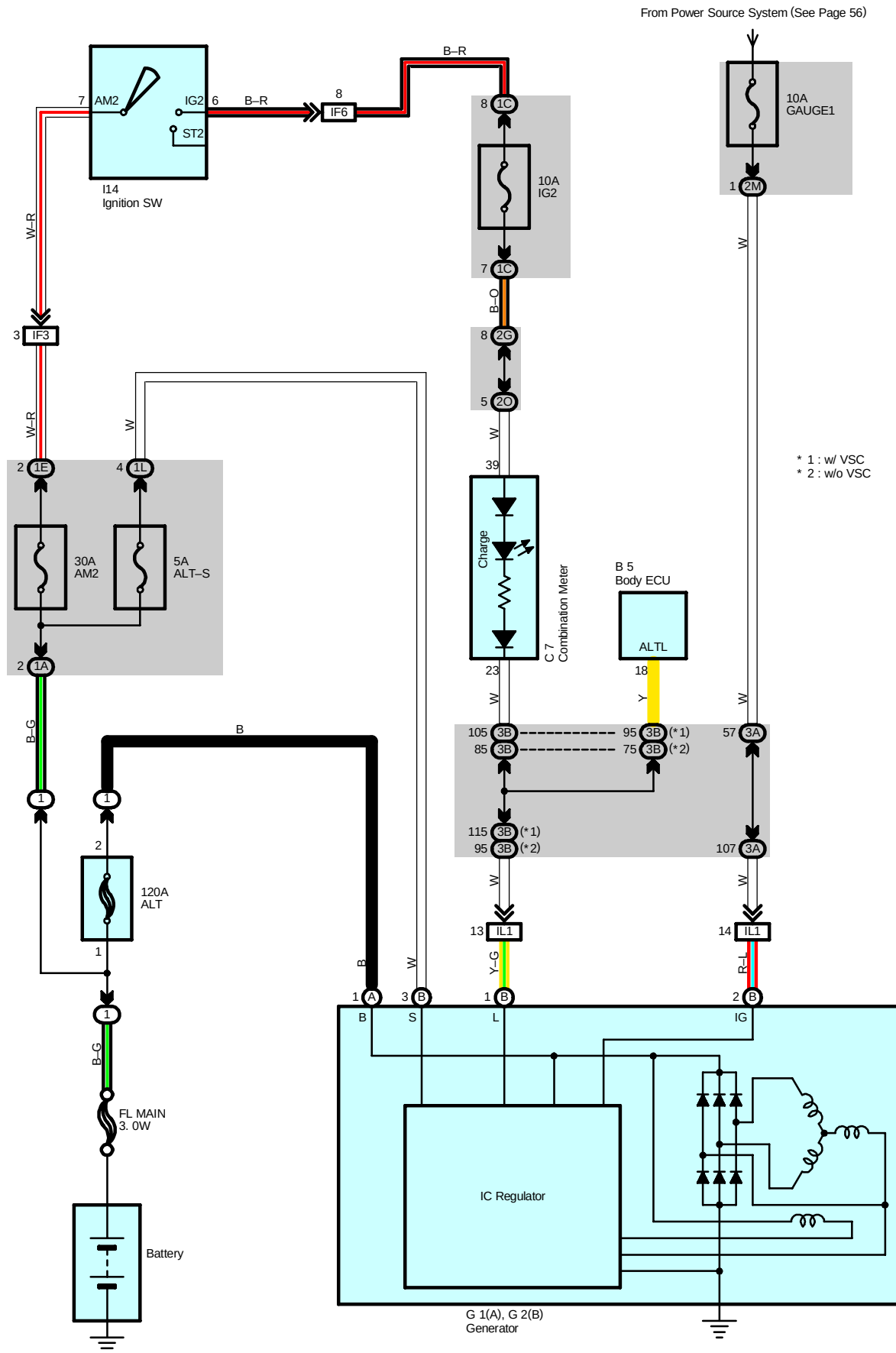
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF3	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		

: Ground Points

Code	See Page	Ground Points Location
EC	44	Left Fender
EF	44	Intake Side of Cylinder Block

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	44	Engine Wire	I6	48	Engine Wire



Service Hints

G2 (B) Generator

- (B) 3–Ground : 13.9–15.1 volts with the engine running at 2000 rpm and 25°C (77°F)
 13.5–14.3 volts with the engine running at 5000 rpm and 115°C (239°F)
 (B) 1–Ground : 0–4 volts with the ignition SW at ON position and the engine not running

: Parts Location

Code	See Page	Code		See Page	Code	See Page
B5	38	G1	A	36	I14	39
C7	38	G2	B	36		

: Relay Blocks

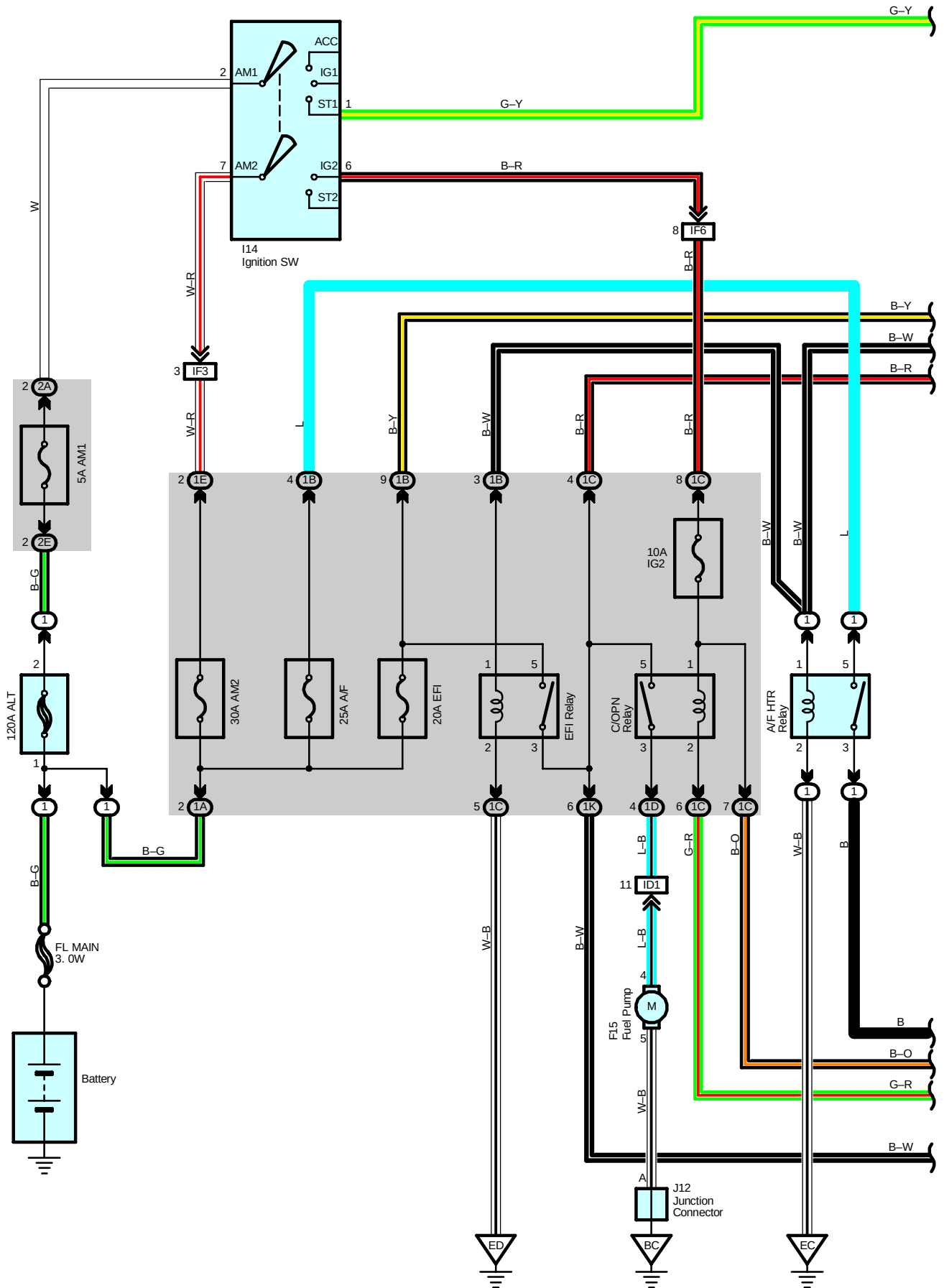
Code	See Page	Relay Blocks (Relay Block Location)
1	22	Engine Room R/B (Engine Compartment Left)

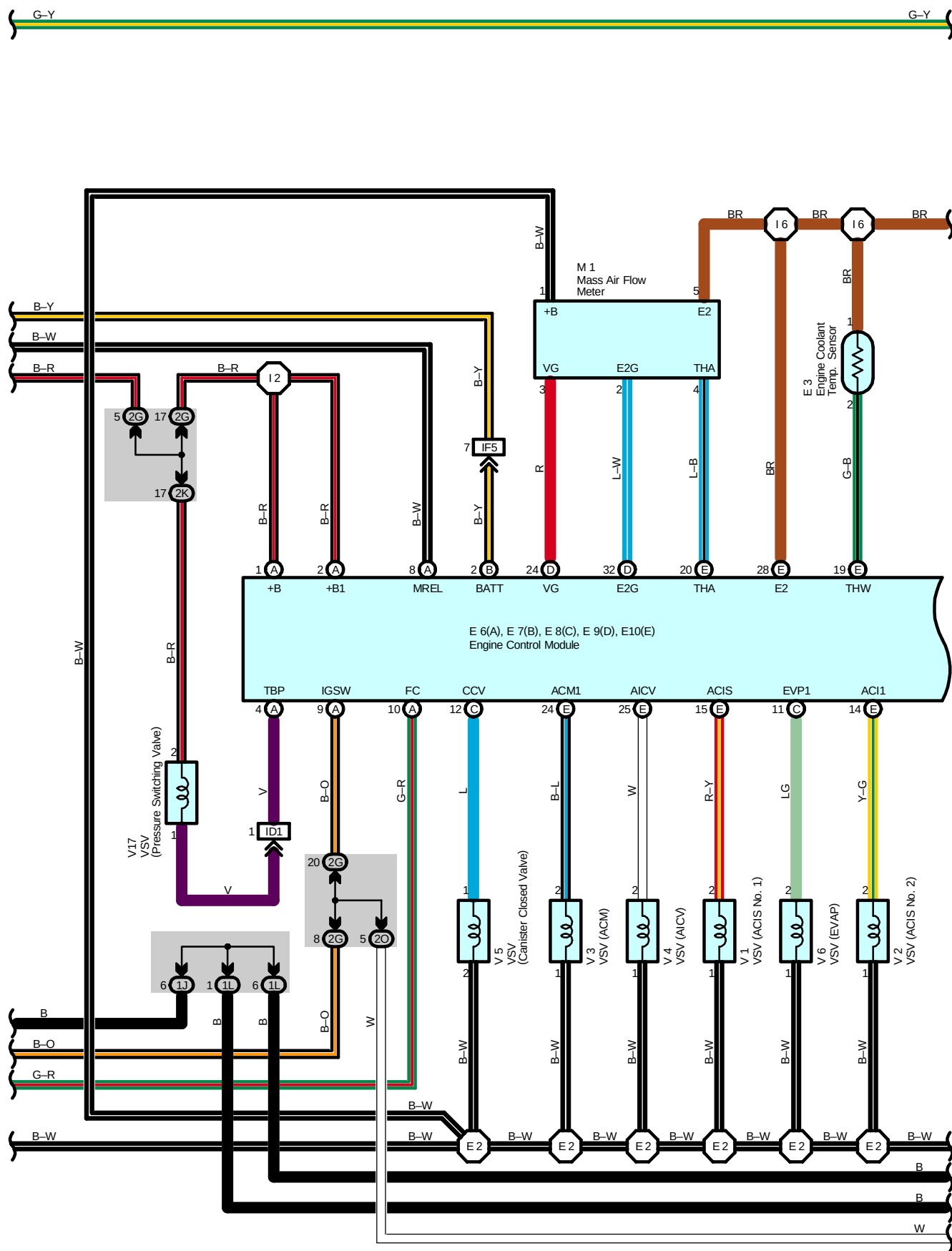
: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1L	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2O		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	

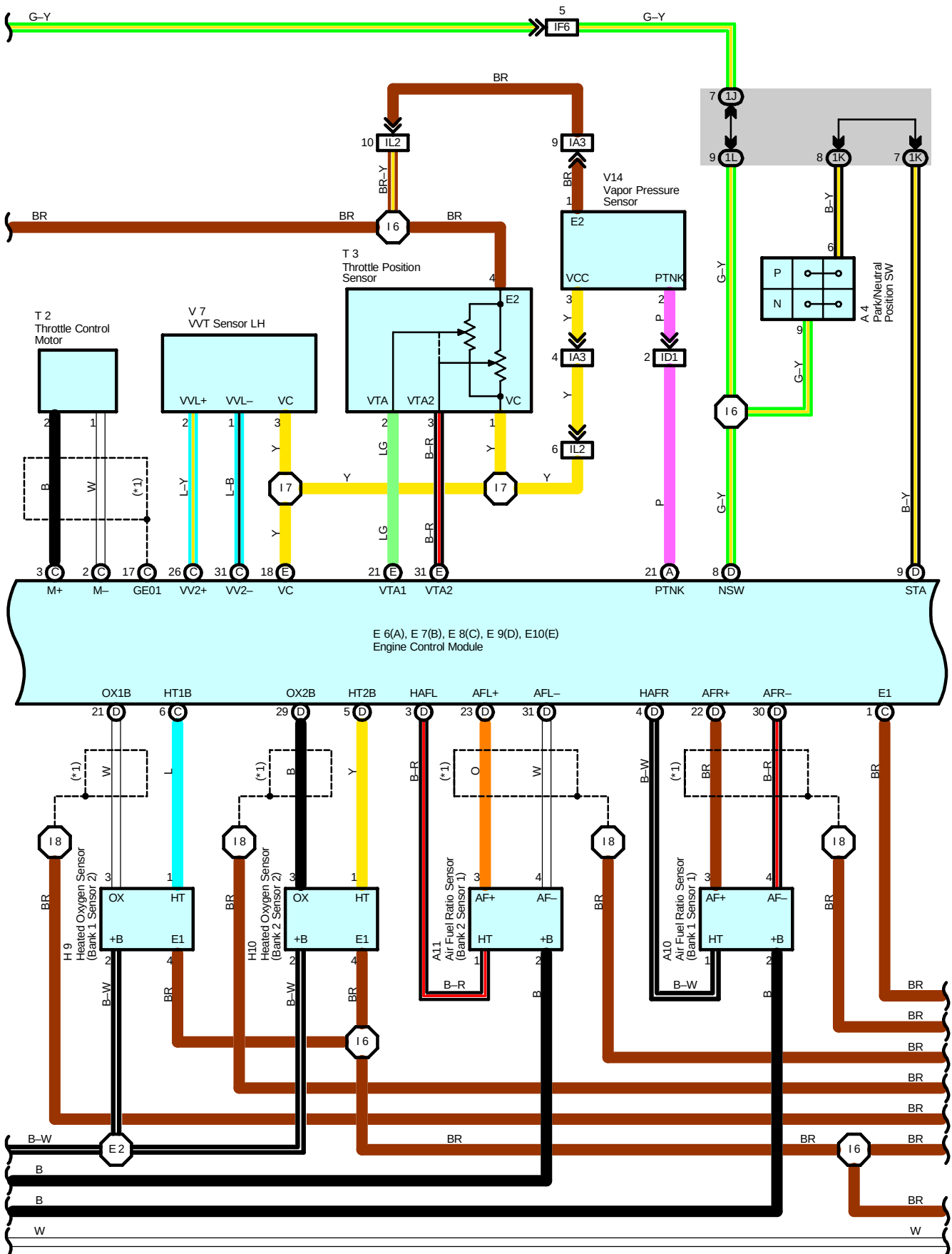
: Connector Joining Wire Harness and Wire Harness

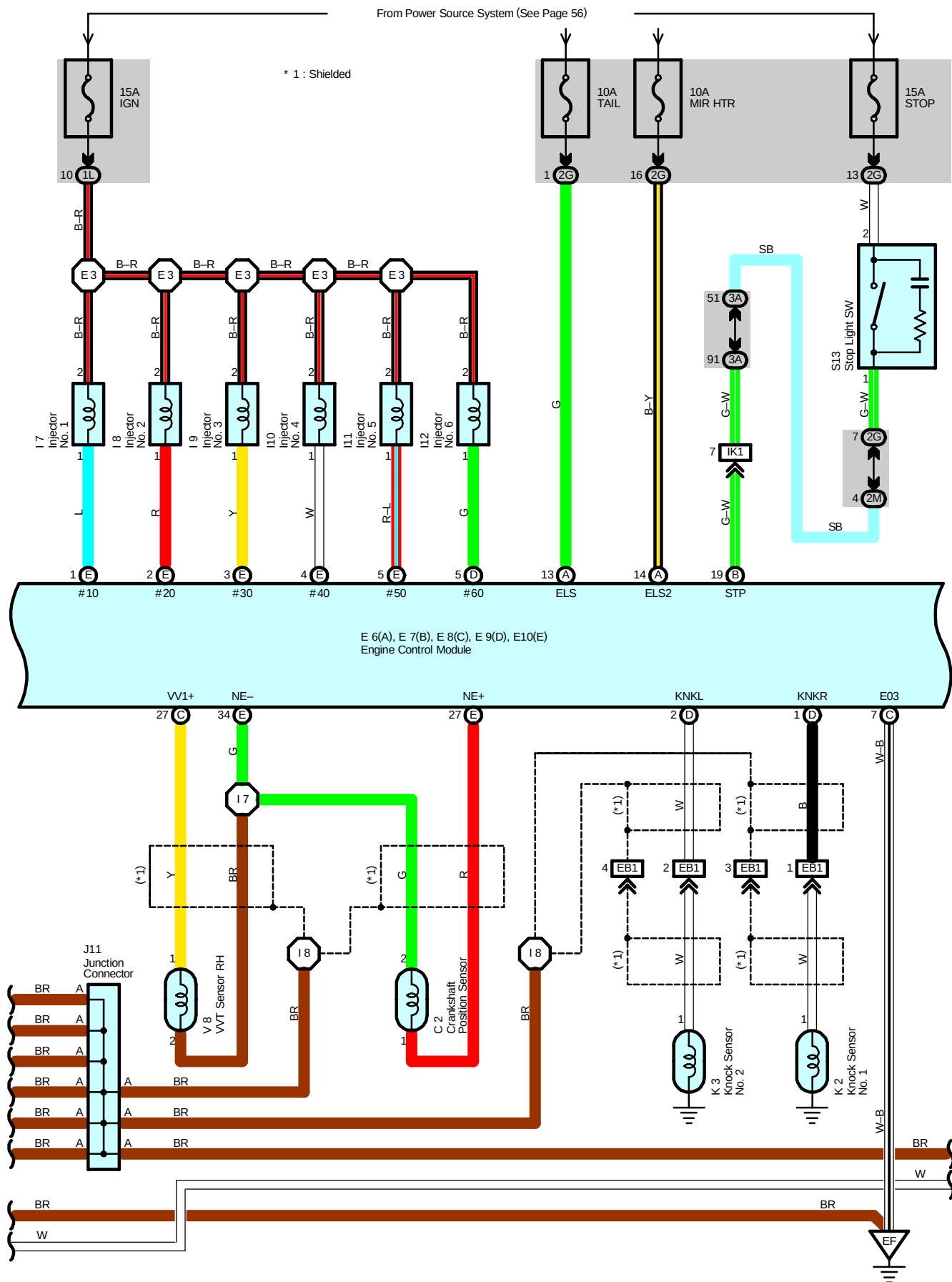
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF3	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)





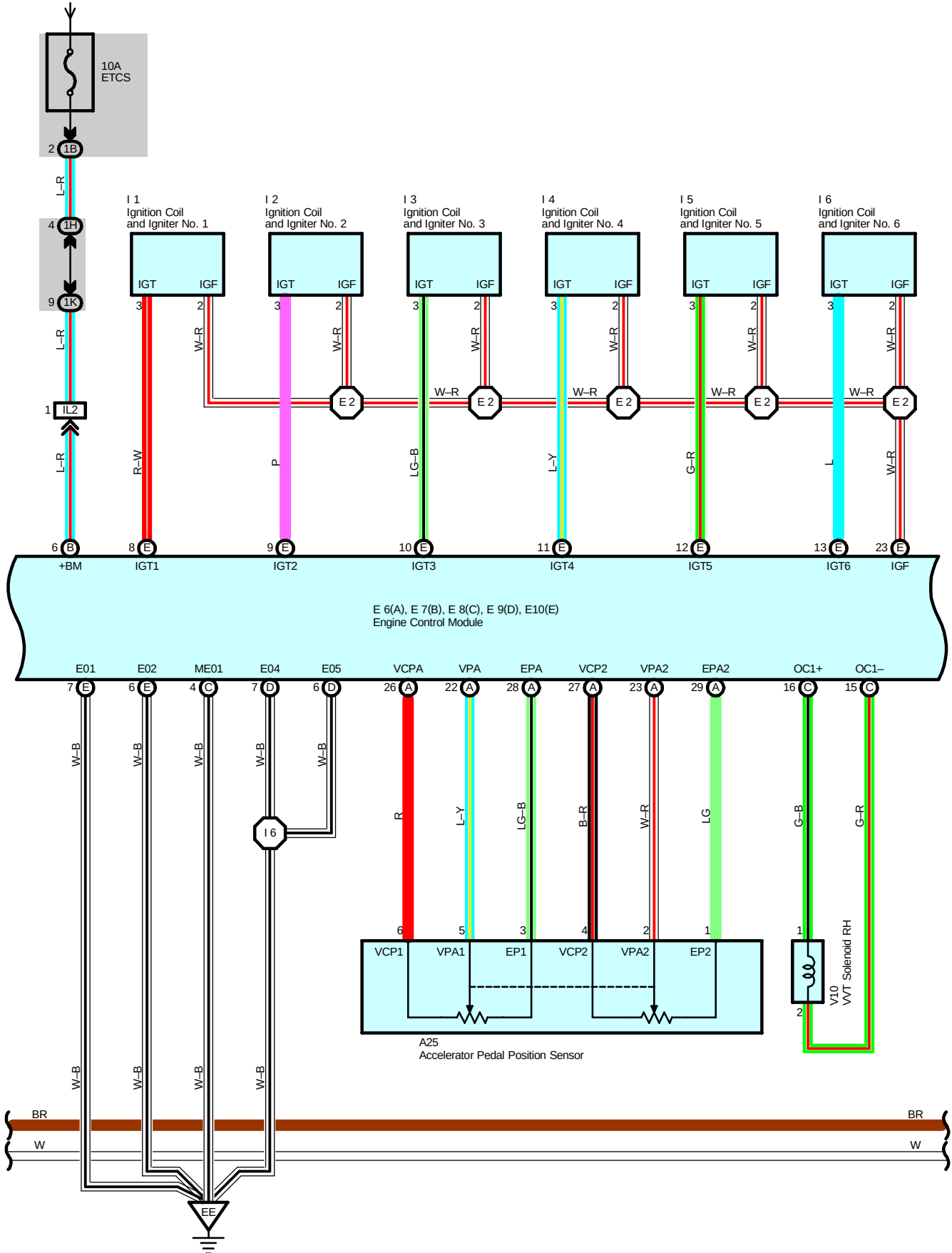
Engine Control



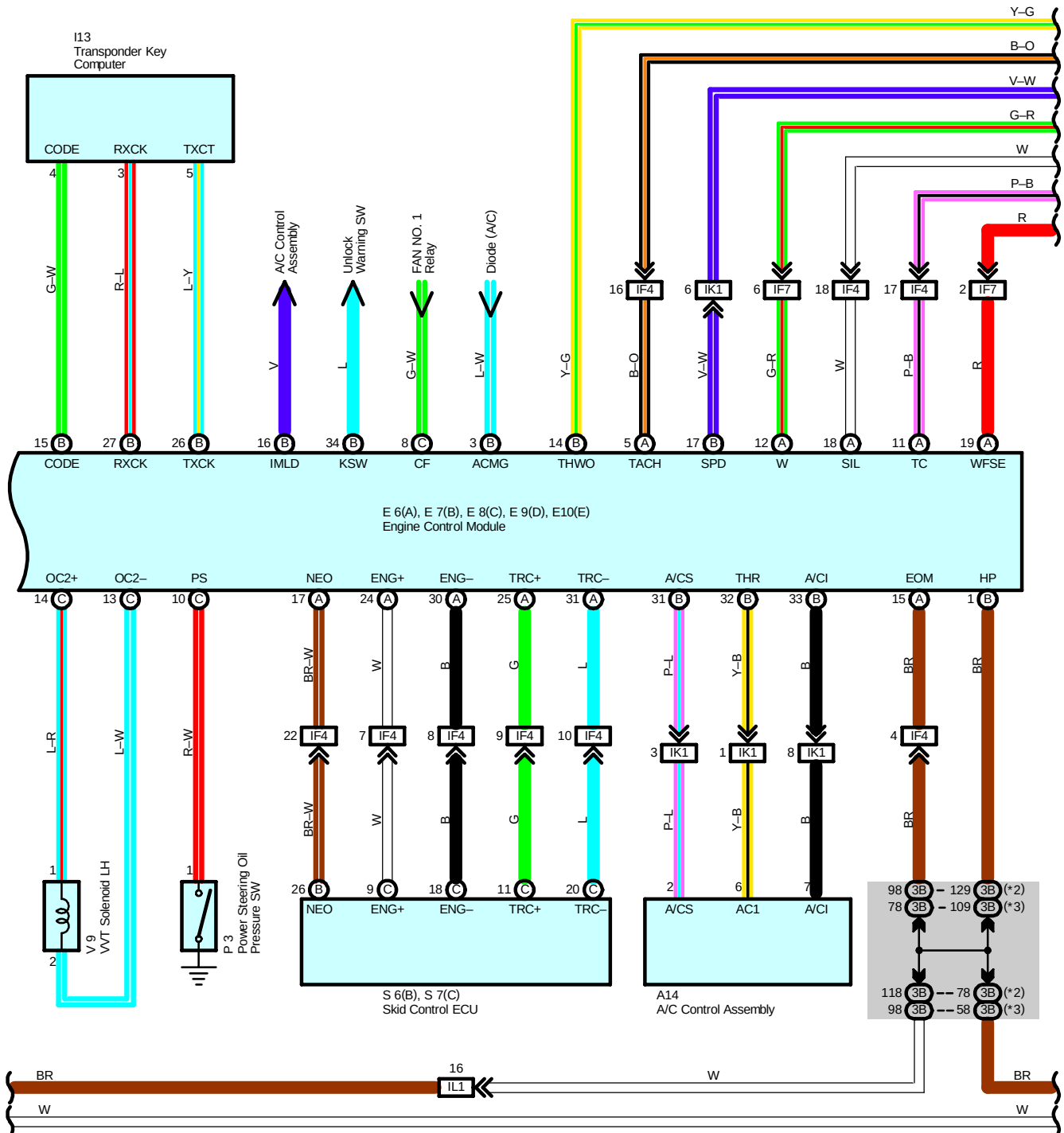


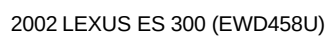
Engine Control

From Power Source System (See Page 56)



* 2 : w/ VSC
 * 3 : w/o VSC





System Outline

This system utilizes an engine control module and maintains overall control of the engine, transmission and so on. An outline of the engine control is explained here.

1. Input Signals

- (1) Engine coolant temp. signal circuit
The engine coolant temp. sensor detects the engine coolant temp. and has a built-in thermistor with a resistance which varies according to the water temp. is input into TERMINAL THW of the engine control module as a control signal.
- (2) Intake air temp. signal circuit
The intake air temp. sensor is installed in the mass air flow meter and detects the intake air temp., which is input as a control signal into TERMINAL THA of the engine control module.
- (3) Oxygen sensor signal circuit
The oxygen density in the exhaust gases is detected and input as a control signal into TERMINALS OX1B and OX2B of the engine control module. To maintain stable detection performance by the heated oxygen sensor, a heater is used for warming the sensor. The heater is also controlled by the engine control module (HT1B and HT2B).
- (4) RPM signal circuit
Camshaft position and crankshaft position are detected by the VVT sensor RH and crankshaft position sensor. The camshaft position is input as a control signal to TERMINAL VV1+ of the engine control module, and the engine RPM is input into TERMINAL NE+.
- (5) Throttle signal circuit
The throttle position sensor detects the throttle valve opening angle as a control signal, which is input into TERMINAL VTA1 of the engine control module.
- (6) Vehicle speed signal circuit
The vehicle speed sensor, detects the vehicle speed and input to ABS speed sensor of the skid control ECU (w/ VSC) or skid control ECU with actuator (w/o VSC), from skid control ECU to TERMINAL SPD of the engine control module, Via combinatio meter.
- (7) Park/Neutral position SW signal circuit
The Park/Neutral position SW detects whether the shift position is in neutral, parking or not, and inputs a control signal into TERMINAL NSW of the engine control module.
- (8) A/C SW signal circuit
The A/C control assembly inputs the A/C operations into TERMINAL A/CS of the engine control module as a control signal.
- (9) Battery signal circuit
Voltage is always supplies to TERMINAL BATT of the engine control module.
If you turn on the ignition SW, the current goes from TERMINAL MREL of the engine control module to the EFI relay and put on the relay, and the voltage related to the engine control module operation is supplied to TERMINAL +B of the engine control module through the EFI relay.
- (10) Intake air volume signal circuit
Intake air volume is detected by the mass air flow meter and a signal is input into TERMINAL VG of the engine control module as a control signal.
- (11) Starter signal circuit
To confirm whether the engine is cranking, the voltage applied to the starter motor during cranking is detected and the signal is input into TERMINAL STA of the engine control module as a control signal.
- (12) Engine knock signal circuit
Engine knocking is detected by the knock sensor No.1 and No.2, then the signals are input into TERMINALS KNKR and KNKL of the engine control module as a control signal.
- (13) Air fuel ratio signal circuit
The air fuel ratio is detected and input as a control signal into TERMINALS AFL+, AFR+ of the engine control module.

2. Control System

* SFI system

The SFI system monitors the engine condition through the signals, which are input from each sensor to engine control module. The best fuel injection volume is decided based on this data and the program memorized by the engine control module, and the control signal is output to TERMINALS #10, #20, #30, #40, #50 and #60 of the engine control module to operate the injector (Inject the fuel). The SFI system produces control of fuel injection operation by the engine control module in response to the driving conditions.

* ESA system

The ESA system monitors the engine condition through the signals, which are input to the engine control module from each sensor. The best ignition timing is decided according to this data and the memorized data in the engine control module, and the control signal is output to TERMINALS IGT1, IGT2, IGT3, IGT4, IGT5 and IGT6. This signal controls the igniter to provide the best ignition timing for the driving conditions.

* Heated oxygen sensor heater control system

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

The engine control module evaluates the signals from each sensor, current is output to TERMINALS HT1B and HT2B, controlling the heater.

* Air fuel ratio sensor heater control system

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

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

* ACIS

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

The engine control module judges the engine speed by the signals from each sensor and outputs current to the TERMINAL ACIS to control the VSV (ACIS No.1).

3. Diagnosis System

With the diagnosis system, when there is a malfunction in the engine control module signal system, the malfunctioning system is recorded in the memory.

4. Fail-Safe System

When a malfunction occurs in any systems, 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 data (Standard values) recorded in the engine control module memory or else stops the engine.

Service Hints

E3 Engine Coolant Temp. Sensor

- 1-2 : Approx. 15.04 k Ω (-20°C, -4°F)
- Approx. 5.74 k Ω (0°C, 32°F)
- Approx. 2.45 k Ω (20°C, 68°F)
- Approx. 1.15 k Ω (40°C, 104°F)
- Approx. 0.584 k Ω (60°C, 140°F)
- Approx. 0.318 k Ω (80°C, 176°F)

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

Voltage at engine control module wiring connector

- BATT-E1 : Always 9.0-14.0 volts
- +B-E1 : 9.0-14.0 volts (Ignition SW at ON position)
- VC-E2 : Always 4.5-5.5 volts (Ignition SW at ON position)
- VTA1-E2 : 0.3-0.8 volts (Ignition SW on and throttle valve fully closed)
- : 3.2-4.9 volts (Ignition SW on and throttle valve fully open)
- VG-E2G : 1.1-1.5 volts (Engine idling and A/C SW OFF position)
- THA-E2 : 0.5-3.4 volts (Engine idling and intake air temp. 20°C, 68°F)
- THW-E2 : 0.2-1.0 volts (Engine idling and engine coolant temp. 80°C, 176°F)
- IGF-E1 : 4.5-5.5 volts (Ignition SW at ON position)
- Pulse generation (Engine idling)
- VV1+-NE- : Pulse generation (Engine idling)
- NE+-NE- : Pulse generation (Engine idling)
- NSW-E1 : 9.0-14.0 volts (Ignition SW on and other shift position in P or N position)
- Below 3.0 volts (Ignition SW on and shift position in P or N position)
- SPD-E1 : Pulse generation (Ignition SW on and rotate driving wheel slowly)
- W-E1 : Below 3.0 volts
- ACIS-E01 : 9.0-14.0 volts (Ignition SW at ON position)
- STA-E1 : 6.0 volts or more (Engine cranking)
- ELS-E1 : 7.5-14.0 volts (Taillight SW at ON position)
- 0-1.5 volts (Taillight SW at OFF position)
- ELS2-E1 : 7.5-14.0 volts (Defogger SW at ON position)
- 0-1.5 volts (Defogger SW at OFF position)
- FC-E1 : 9.0-14.0 volts (Ignition SW at ON position)
- 0-3.0 volts (Engine idling)
- EVP1-E01 : 9.0-14.0 volts (Ignition SW at ON position)
- CF-E1 : 9.0-14.0 volts (Electric cooling fan is operating on high speed)
- 0-2.0 volts (Electric cooling fan is operating on low speed or off)
- TACH-E1 : Pulse generation (Engine idling)
- TBP-E1 : 9.0-14.0 volts (Ignition SW on and disconnect the vacuum hose from the vapor pressure sensor)
- PTNK-E1 : 3.0-3.6 volts (Ignition SW at ON position)
- 1.3-2.1 volts (Ignition SW on and apply vacuum 2.0 kpa (15.0 mmHg, 0.6 in.Hg))
- STP-E1 : 7.5-14.0 volts (Ignition SW on and brake pedal depressed)
- Below 1.5 volts (Ignition SW on and brake pedal released)
- SIL-E1 : Pulse generation (During transmission)
- KNKL, KNKR-E1 : Pulse generation (Engine idling)
- HT1B, HT2B-E03 : 9.0-14.0 volts (Ignition SW at ON position)
- 0-3.0 volts (Engine idling)
- OX1B, OX2B-E1 : Pulse generation (Maintain engine speed at 2500 rpm for two minutes after warning up)
- IGT1, IGT2, IGT3, IGT4, IGT5, IGT6-E1 : Pulse generation (Engine idling)
- #10, #20, #30, #40, #50, #60-E01 : 9.0-14.0 volts (Ignition SW at ON position)
- Pulse generation (Engine idling)

I7, I8, I9, I10, I11, I12 Injector

- 2-1 : Approx. 13.8 Ω

C/OPN Relay

- 3-5 : Closed with starter running

EFI Relay

- 3-5 : Closed with ignition SW at ON or ST position

Engine Control

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	I2	37	S6	B 39
A10	36	I3	37	S7	C 39
A11	36	I4	37	S13	39
A14	38	I5	37	T2	37
A25	38	I6	37	T3	37
C2	36	I7	37	V1	37
C7	A 38	I8	37	V2	37
C8	B 38	I9	37	V3	37
D2	38	I10	37	V4	37
E3	36	I11	37	V5	37
E6	A 38	I12	37	V6	37
E7	B 38	I13	39	V7	37
E8	C 38	I14	39	V8	37
E9	D 38	J11	39	V9	37
E10	E 38	J12	40	V10	37
F15	40	K2	37	V14	41
H9	36	K3	37	V17	41
H10	36	M1	37		
I1	37	P3	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)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1B		
1C		
1D		
1E		
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2K	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	44	Engine Wire and Sensor Wire (Left Bank of the Cylinder Head)
IA3	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
ID1	46	Engine Room Main Wire and Floor No.1 Wire (Left Side of Driver Side J/B)
IF3	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IF5		
IF6		
IF7		
IK1	48	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

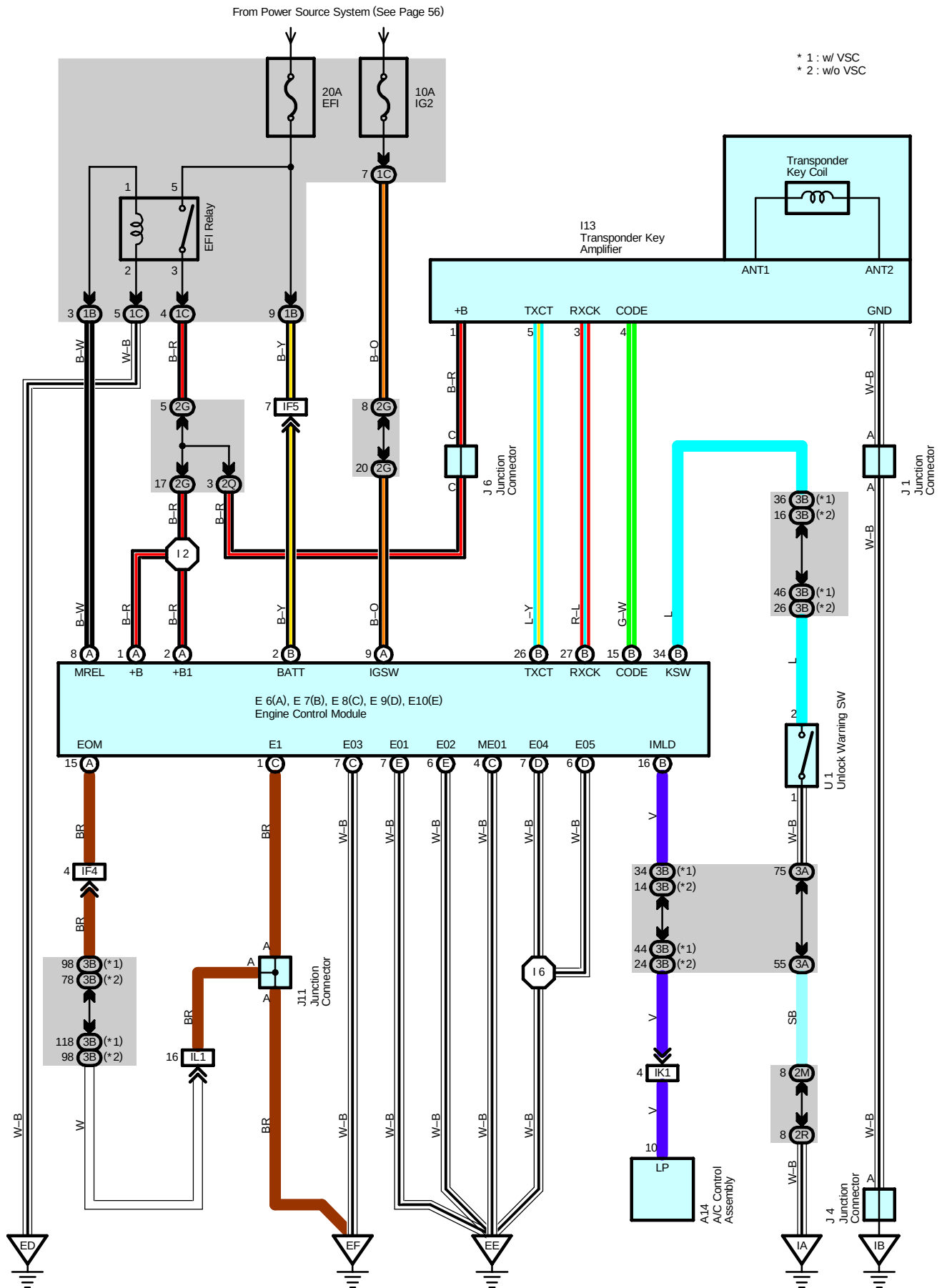
 : Ground Points

Code	See Page	Ground Points Location
EC	44	Left Fender
ED		
EE	44	Left Side of Cylinder Head
EF	44	Intake Side of Cylinder Block
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH
BC	50	Front Side of Rear Quarter Wheel House LH

 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	44	Engine Wire	I6	48	Engine Wire
E3			I7		
I2	48	Engine Room Main Wire	I8		

Engine Immobiliser System



Service Hints

E6 (A), E7 (B) Engine Control Module

BATT–Ground : Always approx. 12 volts

IGSW–Ground : Approx. 12 volts with ignition SW at ON or ST position

EOM–Ground : Always continuity

KSW–Ground : Continuity with the key in cylinder

: Parts Location

Code		See Page	Code		See Page	Code		See Page
A14		38	E9	D	38	J4	39	
E6	A	38	E10	E	38	J6	39	
E7	B	38	I13		39	J11	39	
E8	C	38	J1		39	U1	39	

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2Q		
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF4	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF5		
IK1	48	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

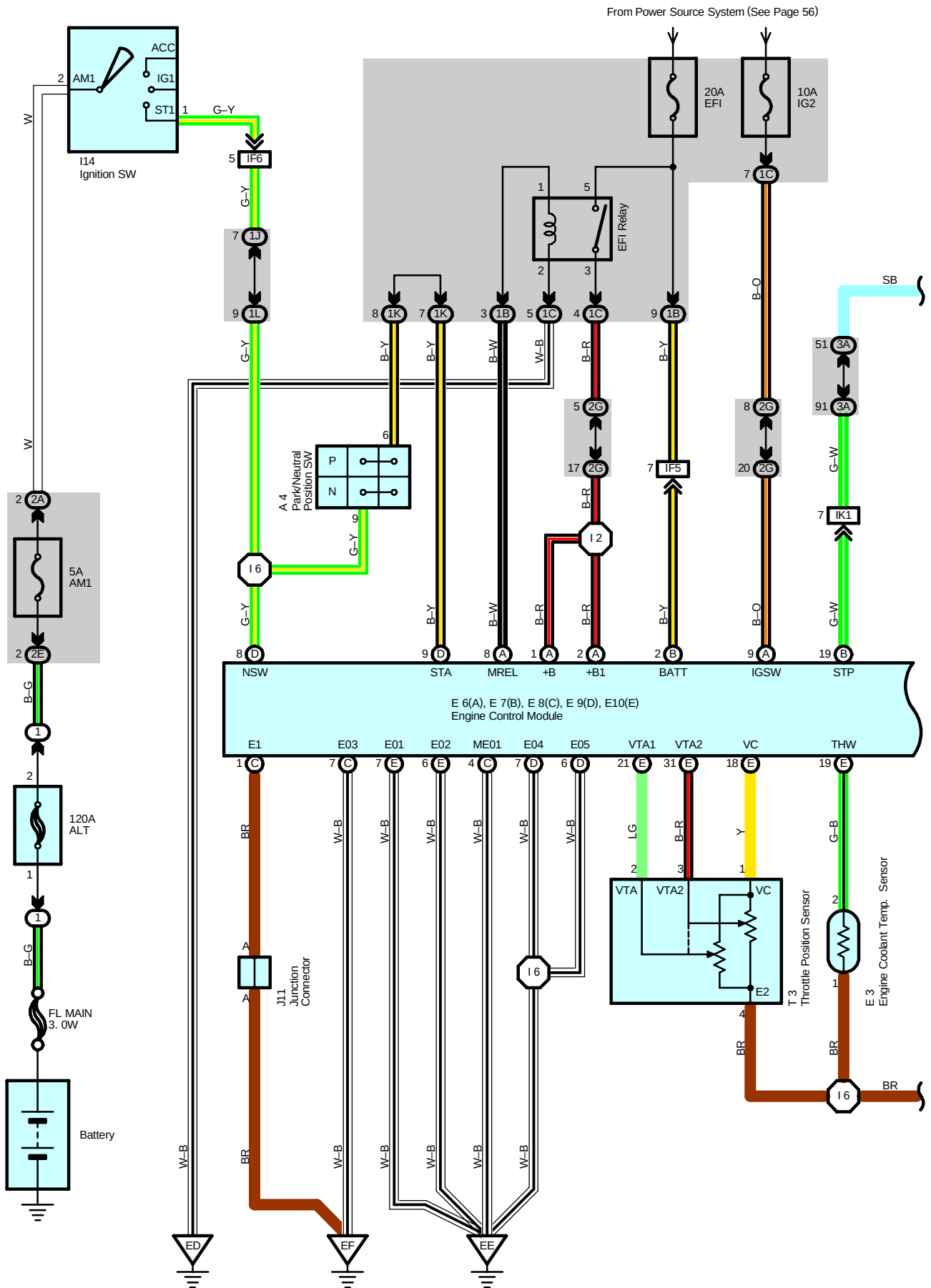
: Ground Points

Code	See Page	Ground Points Location
ED	44	Left Fender
EE	44	Left Side of Cylinder Head
EF	44	Intake Side of Cylinder Block
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH

: Splice Points

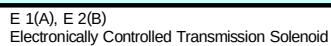
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I2	48	Engine Room Main Wire	I6	48	Engine Wire

Electronically Controlled Transmission and A/T Indicator

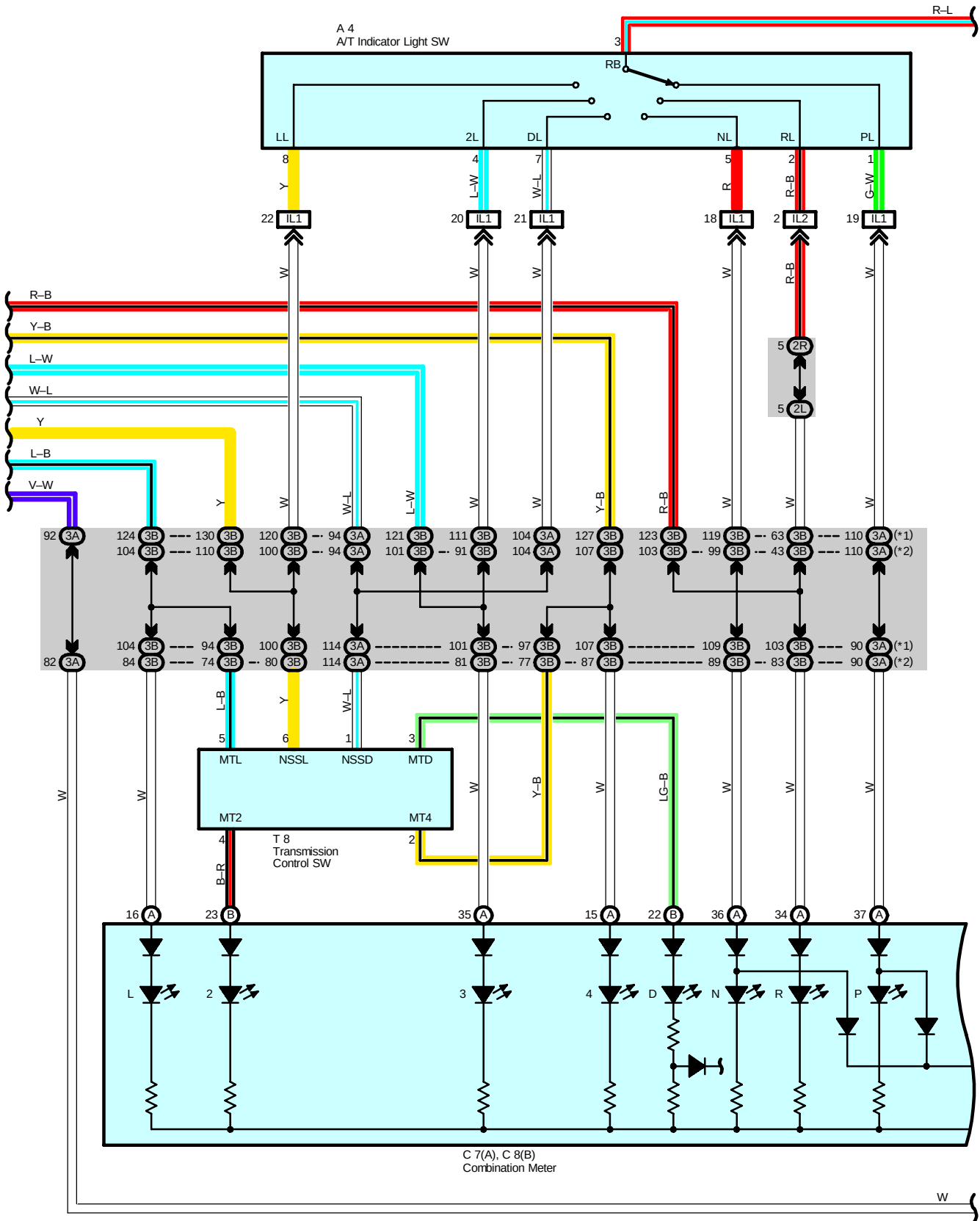


15A STOP

13 2G



Electronically Controlled Transmission and A/T Indicator



Electronically Controlled Transmission and A/T Indicator

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

1. Gear Shift Operation

When driving, the engine warm up condition is input as a signal to TERMINAL THW of the engine control module from the engine coolant temp. sensor and the vehicle speed signal 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 and VTA2 of the engine control module as throttle angle signal.

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

2. Lock-Up Operation

When each signal makes engine control module recognize that LOCK-UP condition is satisfied, the current flows from engine control module TERMINAL DSL to electronically controlled transmission solenoid TERMINAL DSL. At the same time, the current flows engine control module TERMINAL SL1+ to electroically controlled transmission solenoid TERMINAL SL1+ and from TERMINAL SL1- to engine control module TERMINAL SL1-. This works LOCK-UP solenoid to perform LOCK-UP operation.

3. Stop Light SW Circuit

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

Service Hints

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

L-E1 : 10.0-14.0 volts (Ignition SW on and shift lever at L position)

2-E1 : 10.0-14.0 volts (Ignition SW on and shift lever at 2 position)

R-E1 : 10.0-14.0 volts (Ignition SW on and shift lever at R position)

D-E1 : 10.0-14.0 volts (Ignition SW on and shift lever at D position)

THO-E2 : Below 1.0 volts (Ignition SW on and AFT temperature 110 °C (230 °F))

A4 A/T Indicator Light SW

3-1 : Closed with shift lever in P position

3-2 : Closed with shift lever in R position

3-5 : Closed with shift lever in N position

3-7 : Closed with shift lever in D position

3-8 : Closed with shift lever in L position

3-4 : Closed with shift lever in 2 position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	E6	A 38	S1	37
C1	36	E7	B 38	S13	39
C7	A 38	E8	C 38	T3	37
C8	B 38	E9	D 38	T4	37
E1	A 36	E10	E 38	T8	39
E2	B 36	I14	39		
E3	36	J11	39		

○ : 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)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
1L		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2B		
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF5	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		
IF7		
IK1	48	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

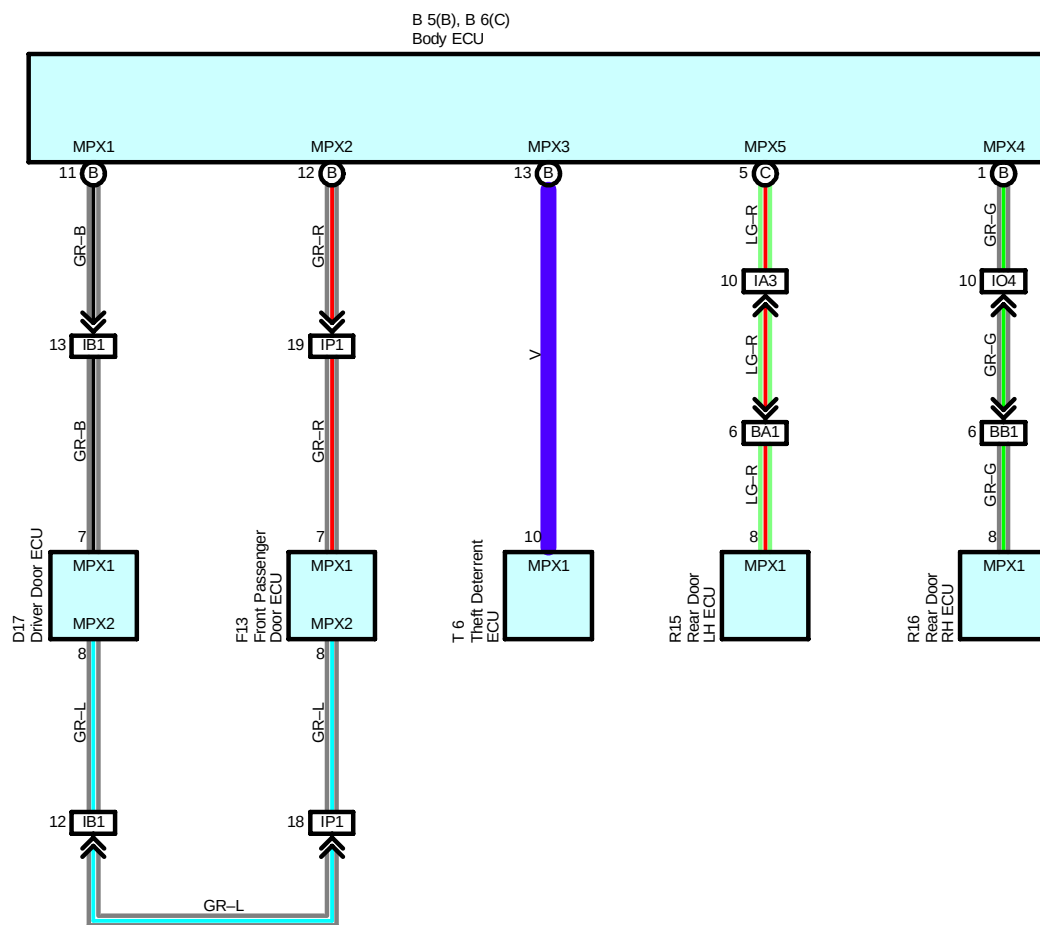
**: Ground Points**

Code	See Page	Ground Points Location
ED	44	Left Fender
EE	44	Left Side of Cylinder Head
EF	44	Intake Side of Cylinder Block
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH

**: Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I2	48	Engine Room Main Wire	I6	48	Engine Wire

Multiplex Communication System (Communication Bus)



System Outline

The multiplex communication system communicates among the body ECU, driver door ECU, front passenger door ECU, rear door LH ECU, rear door RH ECU and theft deterrent ECU and controls the following systems according to the signals from respective sensors or switches.

Multiplex Communication System Includes Following Systems

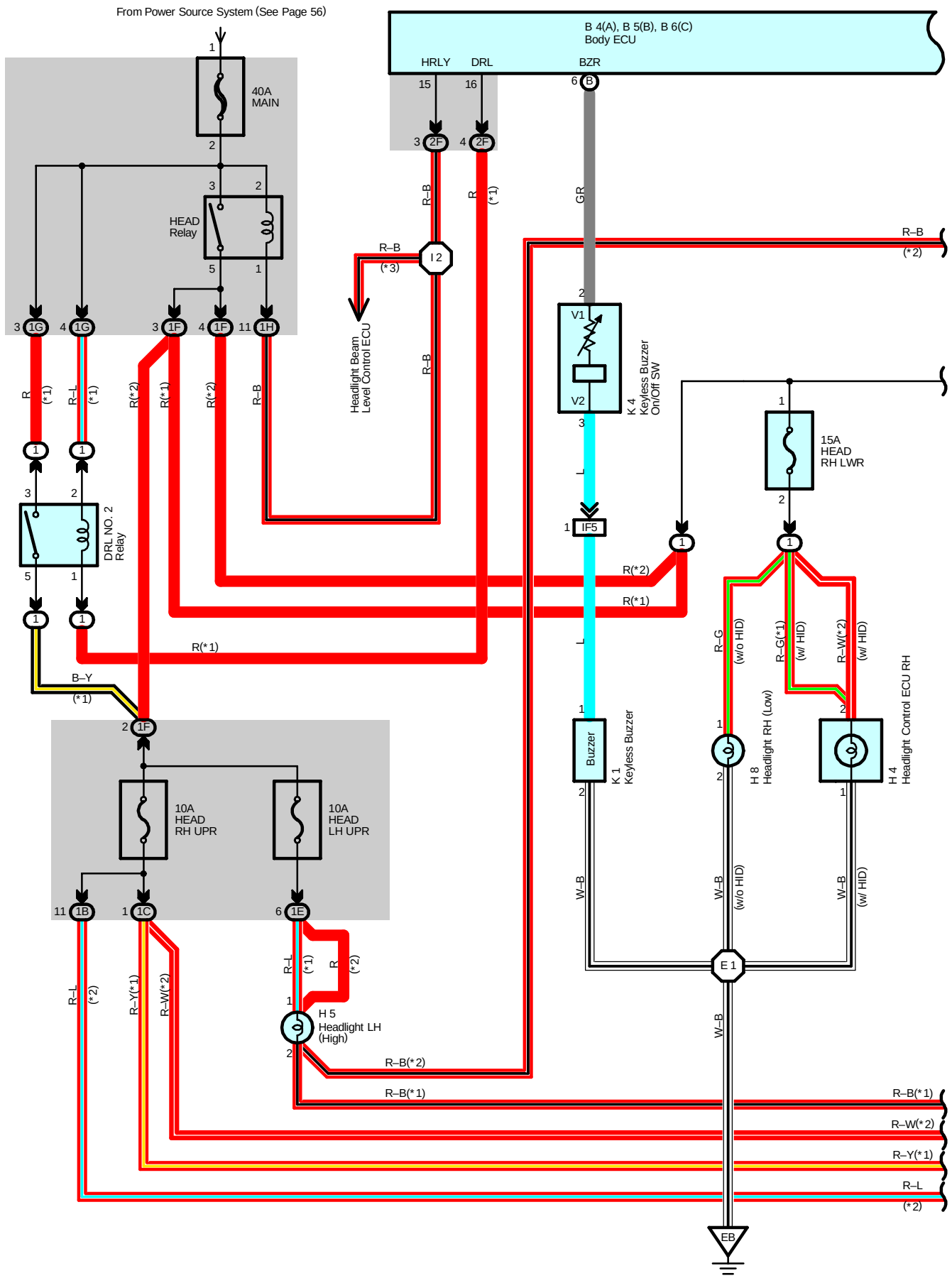
- * Automatic Light Control
- * Door Lock Control
- * Garage Door Opener
- * Headlight (w/ Daytime Running Light)
- * Headlight (w/o Daytime Running Light)
- * Interior Light
- * Key Reminder
- * Light Auto Turn Off
- * Luggage Compartment Door Opener
- * Moon Roof
- * Power Window
- * Theft Deterrent
- * Wireless Door Lock Control

○ : Parts Location

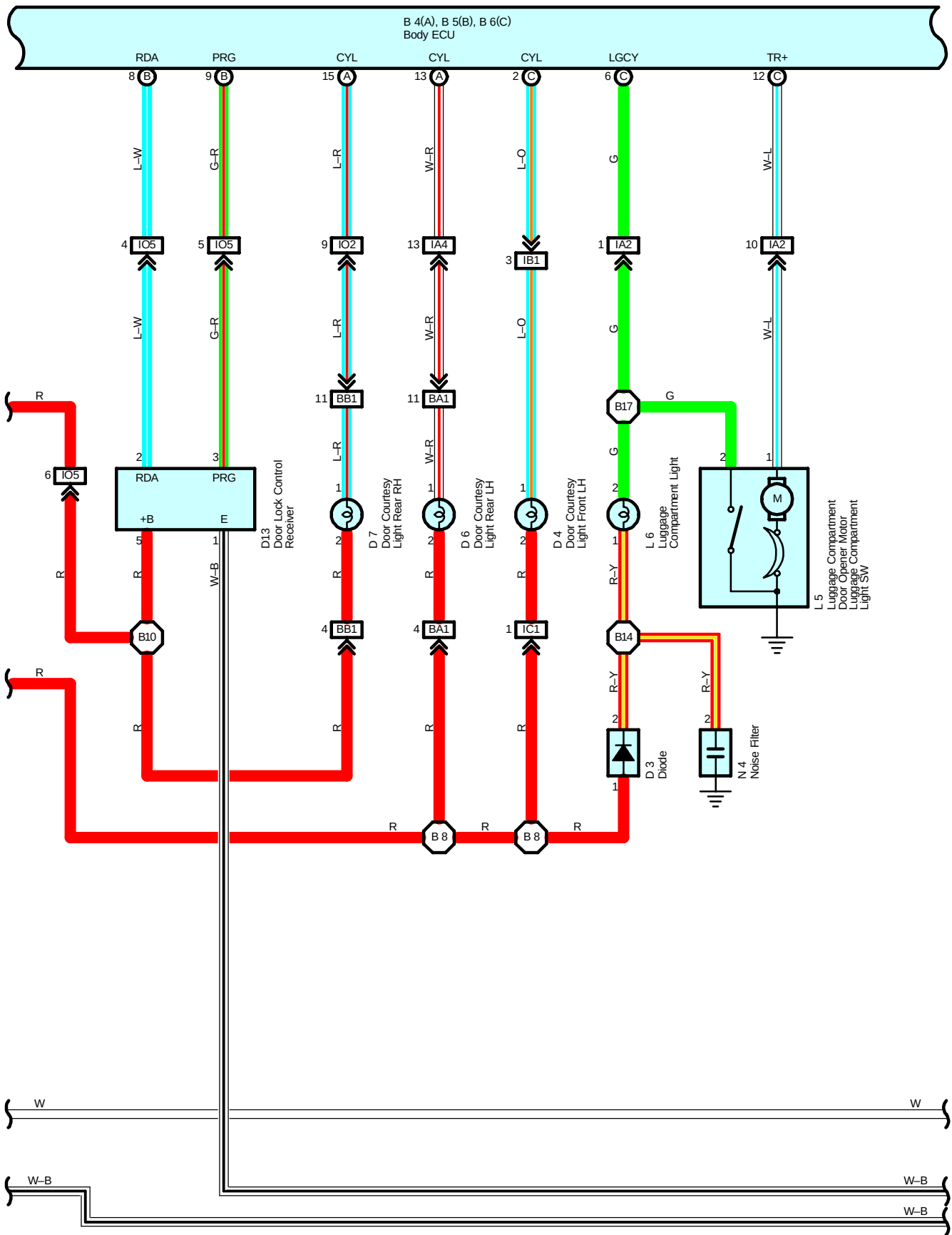
Code		See Page	Code		See Page	Code		See Page
B5	B	38	F13	40		T6	39	
B6	C	38	R15	41				
D17		40	R16	41				

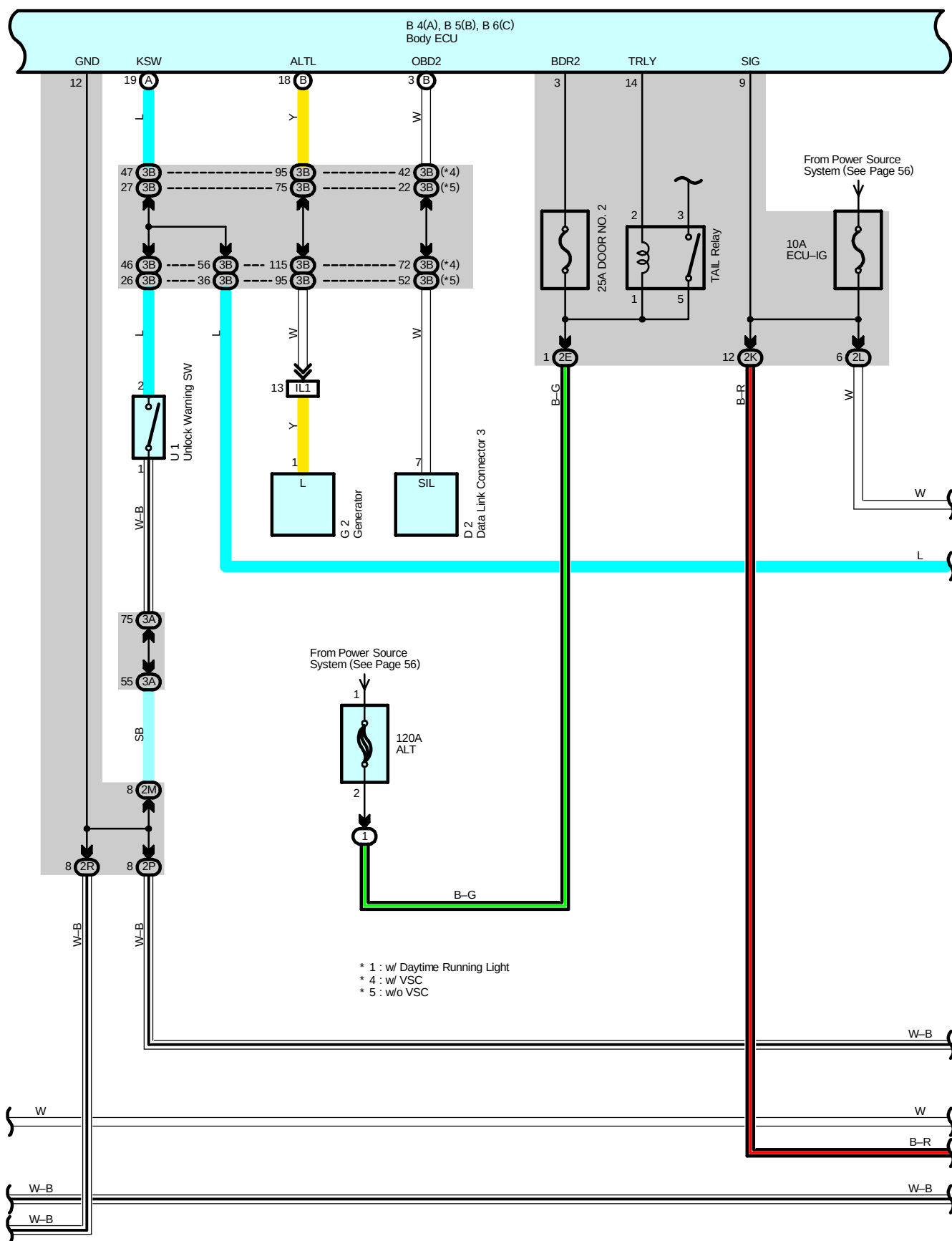
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA3	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)

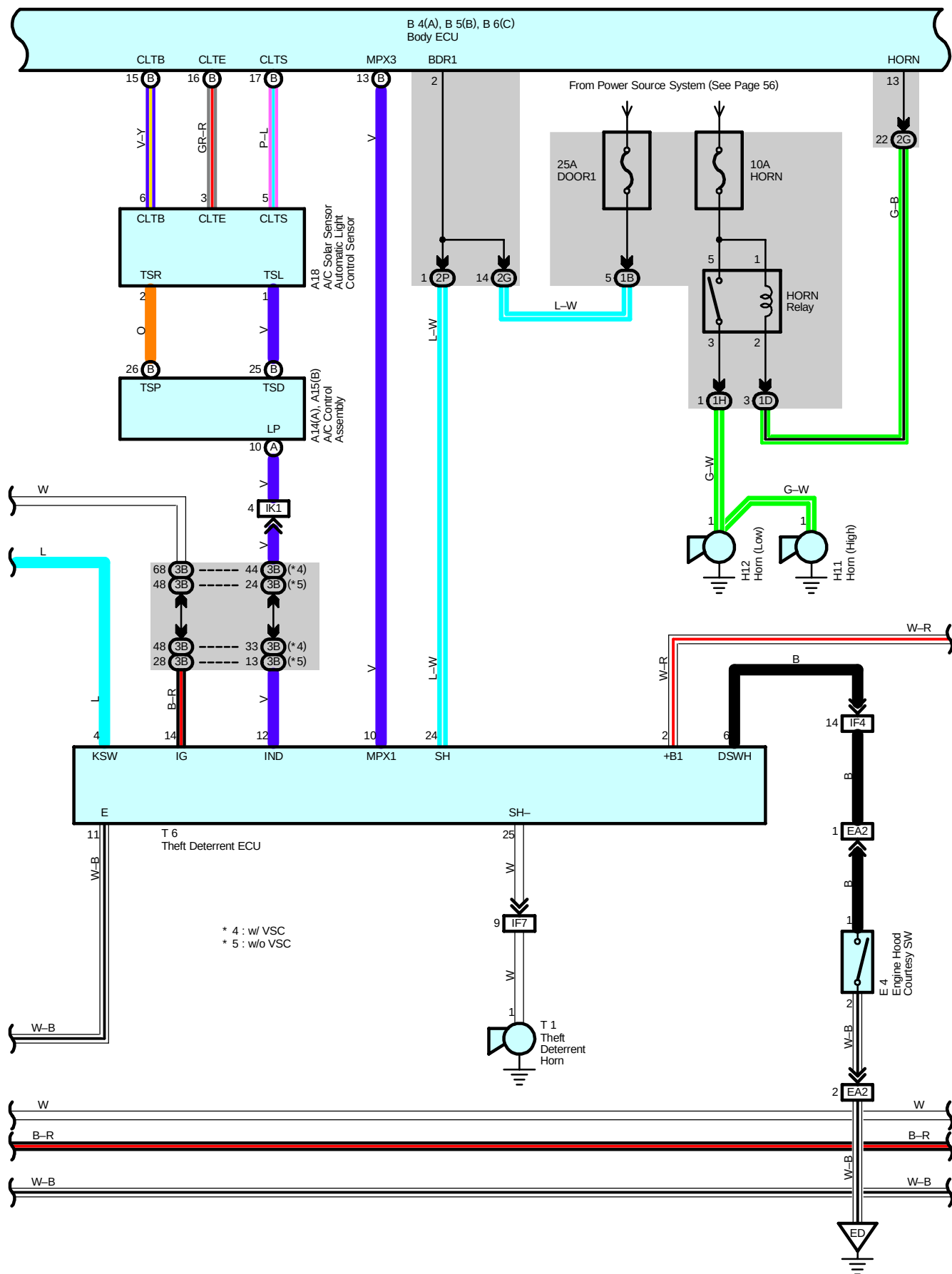


Multiplex Communication System

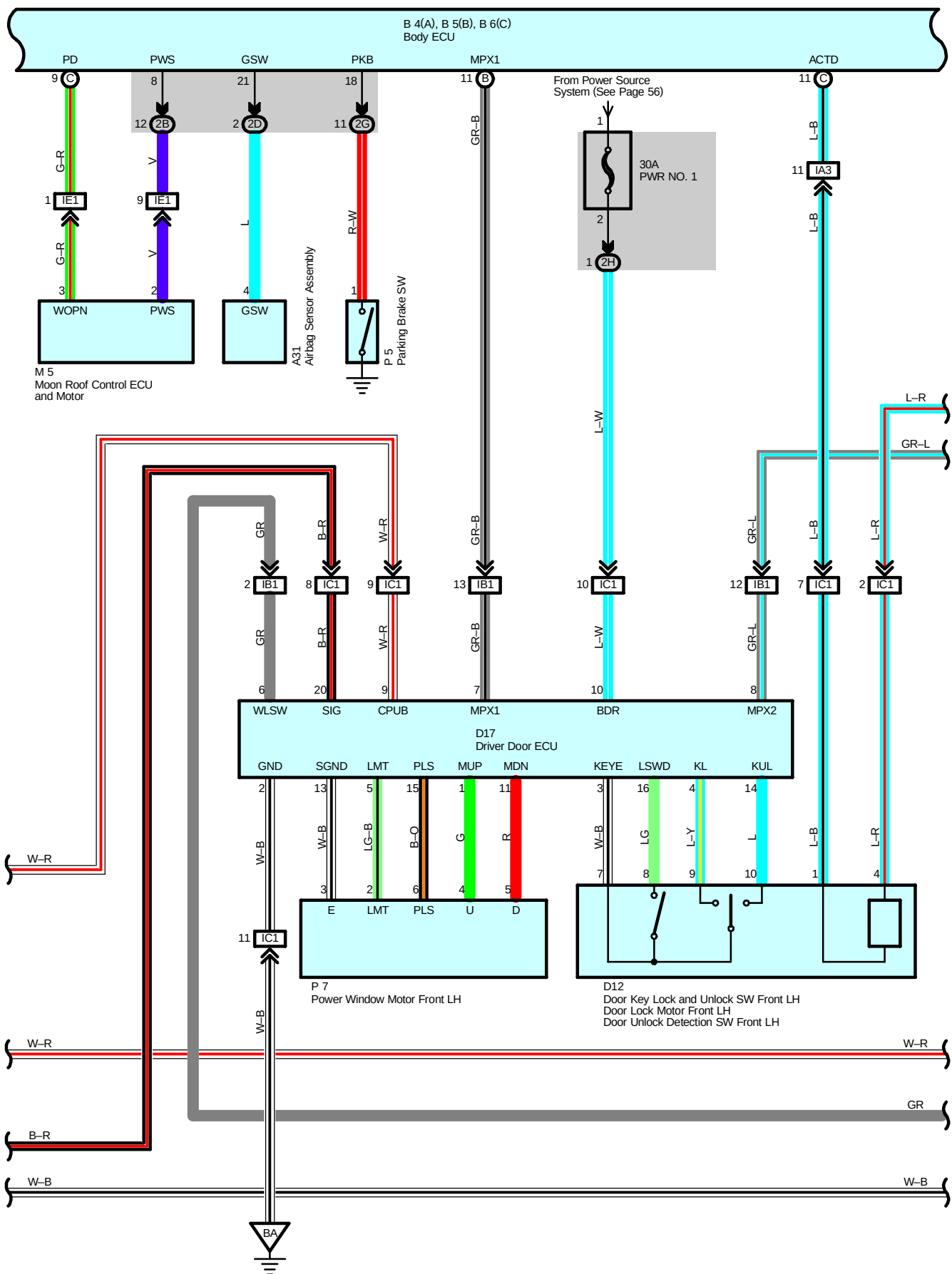


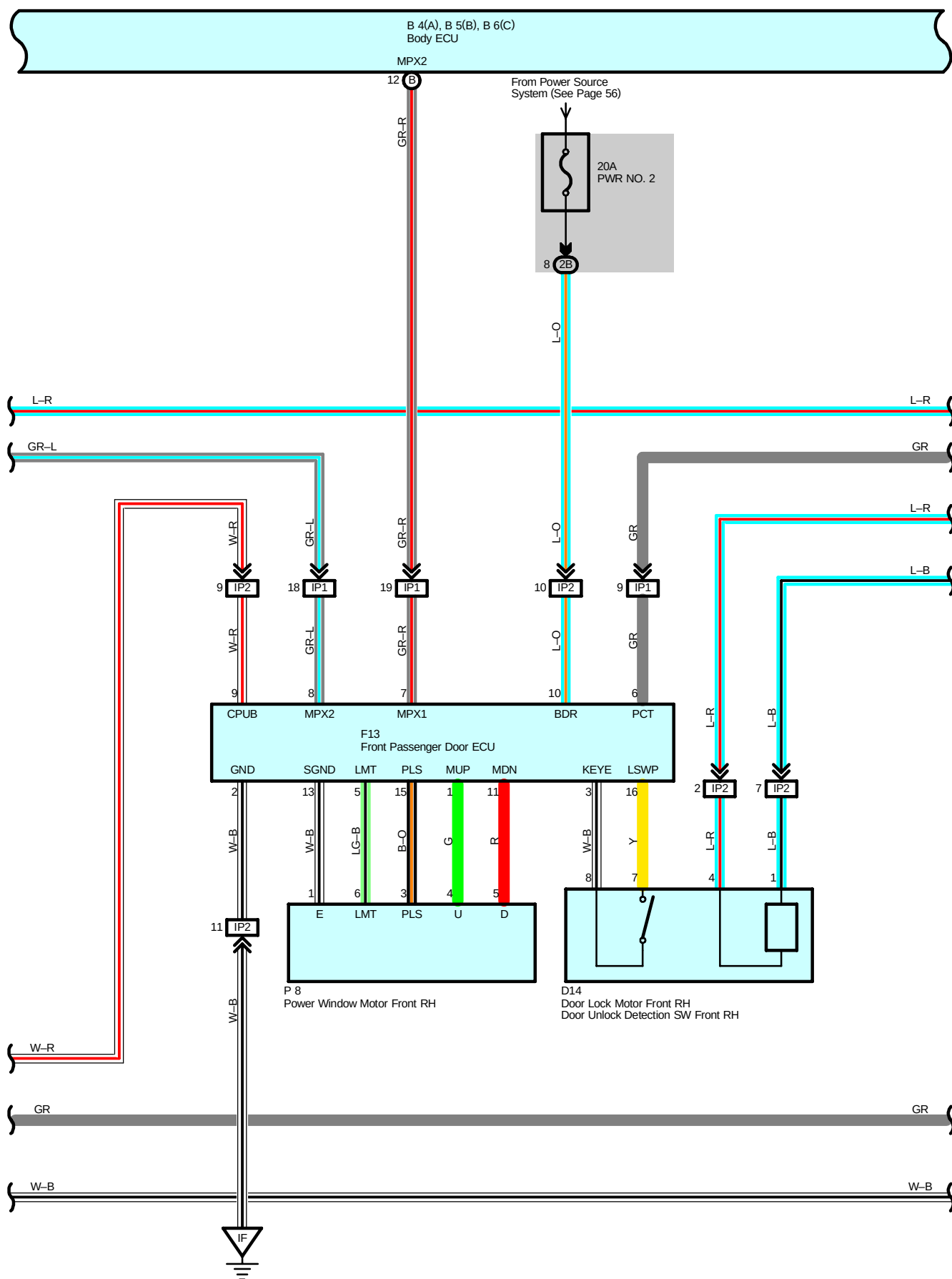


Multiplex Communication System

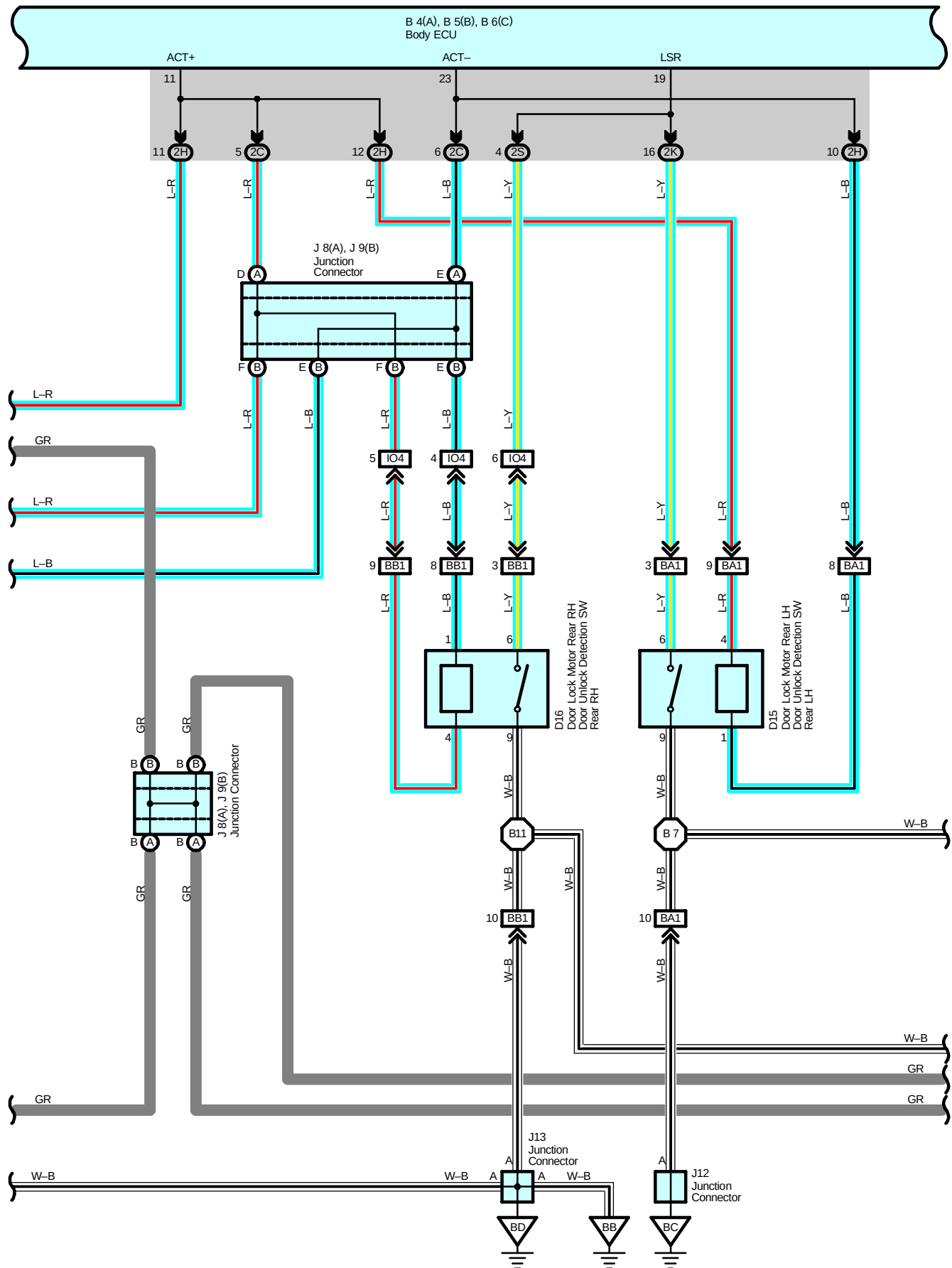


Multiplex Communication System





Multiplex Communication System



Multiplex Communication System

Service Hints

Body ECU

- 9–Ground : Approx. 12 volts with ignition SW at ON or ST position
- 12, 24–Ground : Always continuity
- 1, 2, 3–Ground : Always approx. 12 volts
- 10–Ground : Approx. 12 volts with ignition SW at ACC or ON position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	D17	40	J13	40
A14	A 38	D19	36	K1	37
A15	B 38	E4	36	K4	39
A18	38	F8	39	L1	39
A31	38	F9	39	L5	40
B4	A 38	F10	39	L6	40
B5	B 38	F13	40	M5	41
B6	C 38	G2	36	N4	41
C7	A 38	H3	36	O2	41
C8	B 38	H4	36	P5	39
C11	38	H5	36	P7	41
D2	38	H6	36	P8	41
D3	40	H7	36	P9	41
D4	40	H8	36	P10	41
D5	40	H11	36	R15	41
D6	40	H12	36	R16	41
D7	40	I13	39	T1	37
D8	40	I16	40	T6	39
D9	40	J1	39	T9	39
D10	40	J3	39	U1	39
D11	40	J4	39	V12	41
D12	40	J5	39	V13	41
D13	40	J6	39	V15	41
D14	40	J8	A 39	V16	41
D15	40	J9	B 39		
D16	40	J12	40		

○ : 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)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1D		
1E		
1F		
1G		
1H		
2A		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2C		
2D		
2E		
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2H	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2N		
2P		
2Q		
2R		
2S		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA2	44	Engine Room Main Wire and Engine Room No.2 Wire (Behind the Headlight LH)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IA3		
IA4		
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)
IF4	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF5		
IF7		
IK1	48	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IO2	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO4		
IO5		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)

Multiplex Communication System



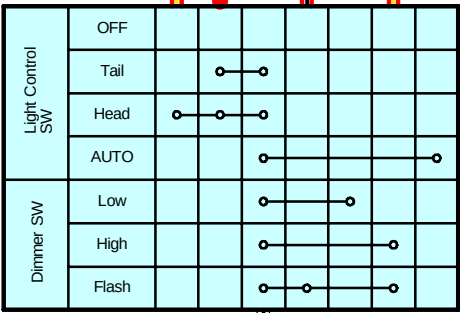
: Ground Points

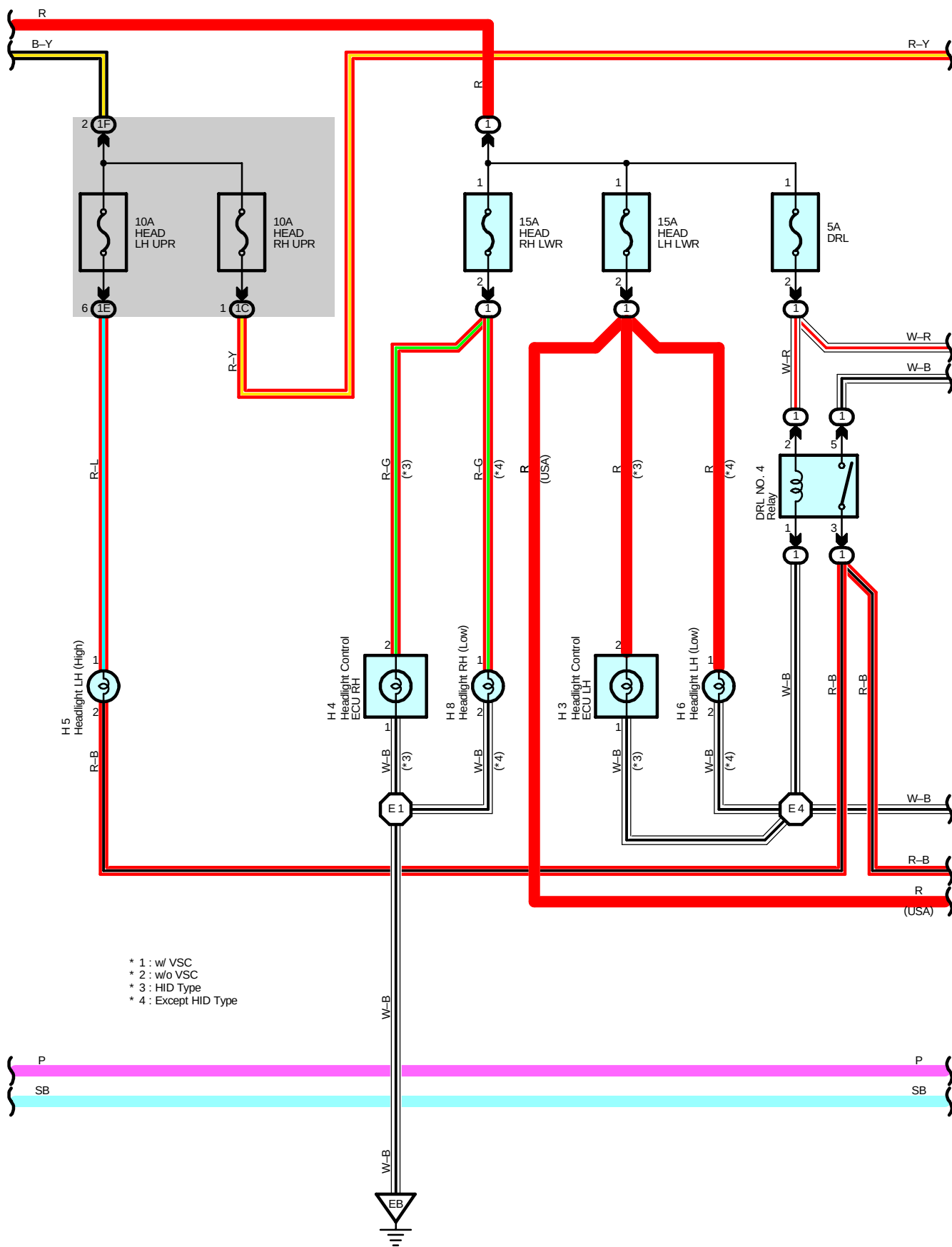
Code	See Page	Ground Points Location
EB	44	Right Fender
EC	44	Left Fender
ED		
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH
IF	46	Instrument Panel Reinforcement RH
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat
BC	50	Front Side of Rear Quarter Wheel House LH
BD	50	Front Side of Rear Quarter Wheel House RH



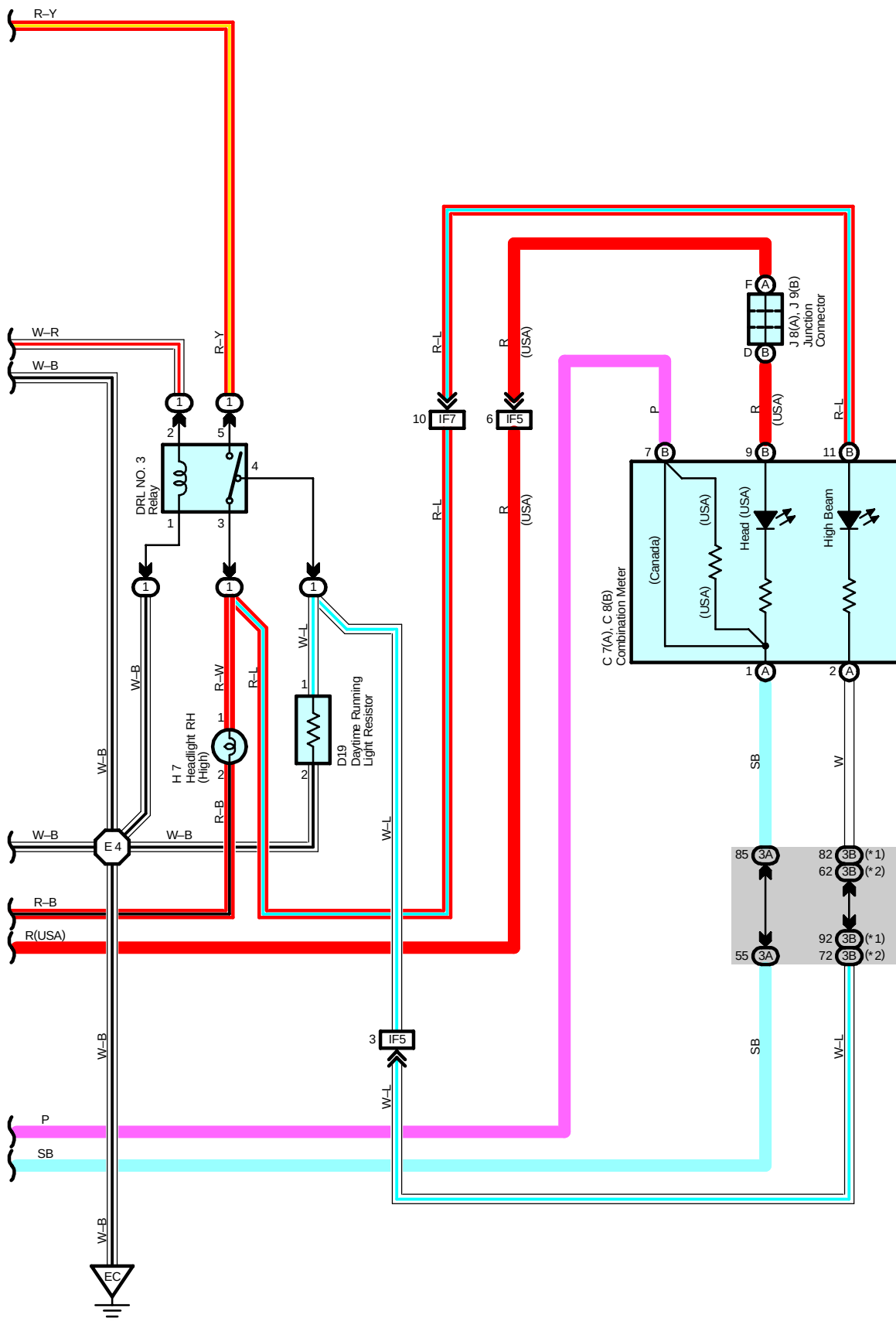
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44	Engine Room Main Wire	B7	50	Rear Door No.2 Wire
E4			B8	50	Floor No.1 Wire
I2			48	B10	50
B2	50	Roof Wire	B11	50	Rear Door No.1 Wire
B3			B14	50	Floor No.1 Wire
B6	50	Floor No.1 Wire	B17		





- * 1 : w/ VSC
- * 2 : w/o VSC



System Outline

Daytime Running Light Operation

When the engine is started, a signal from the generator is input into TERMINAL (B) 18 of the body ECU. At this time, if the parking brake pedal is depressed (Parking brake SW ON), the body ECU is not activated, and the daytime running light system does not operate.

When the parking brake pedal is released (Parking brake SW OFF), a signal is input into TERMINAL 18 of the body ECU. This activates the body ECU and the headlight turns on.

Service Hints

HEAD Relay

3-5 : Closed with the light control SW at HEAD position or dimmer SW at FLASH position

Closed with the engine running and the parking brake pedal depressed (Parking brake SW off)

B4 (A), B5 (B) Body ECU

1-Ground : Always approx. 12 volts

(B) 18-Ground : Approx. 12 volts with engine running

18-Ground : Continuity with parking brake pedal depressed

17-Ground : Continuity with the dimmer SW at HIGH or FLASH position

(A) 8-Ground : Continuity with the light control SW at TAIL or HEAD position

12, 24-Ground : Always continuity

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
B4	A	38	G2	36	H8	36
B5	B	38	H3	36	J4	39
C7	A	38	H4	36	J8	A 39
C8	B	38	H5	36	J9	B 39
C11		38	H6	36	P5 39	
D19		36	H7	36		

○ : 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)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1E		
1F		
1G		
1H		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

Headlight (w/ Daytime Running Light)



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF5	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF7		
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)



: Ground Points

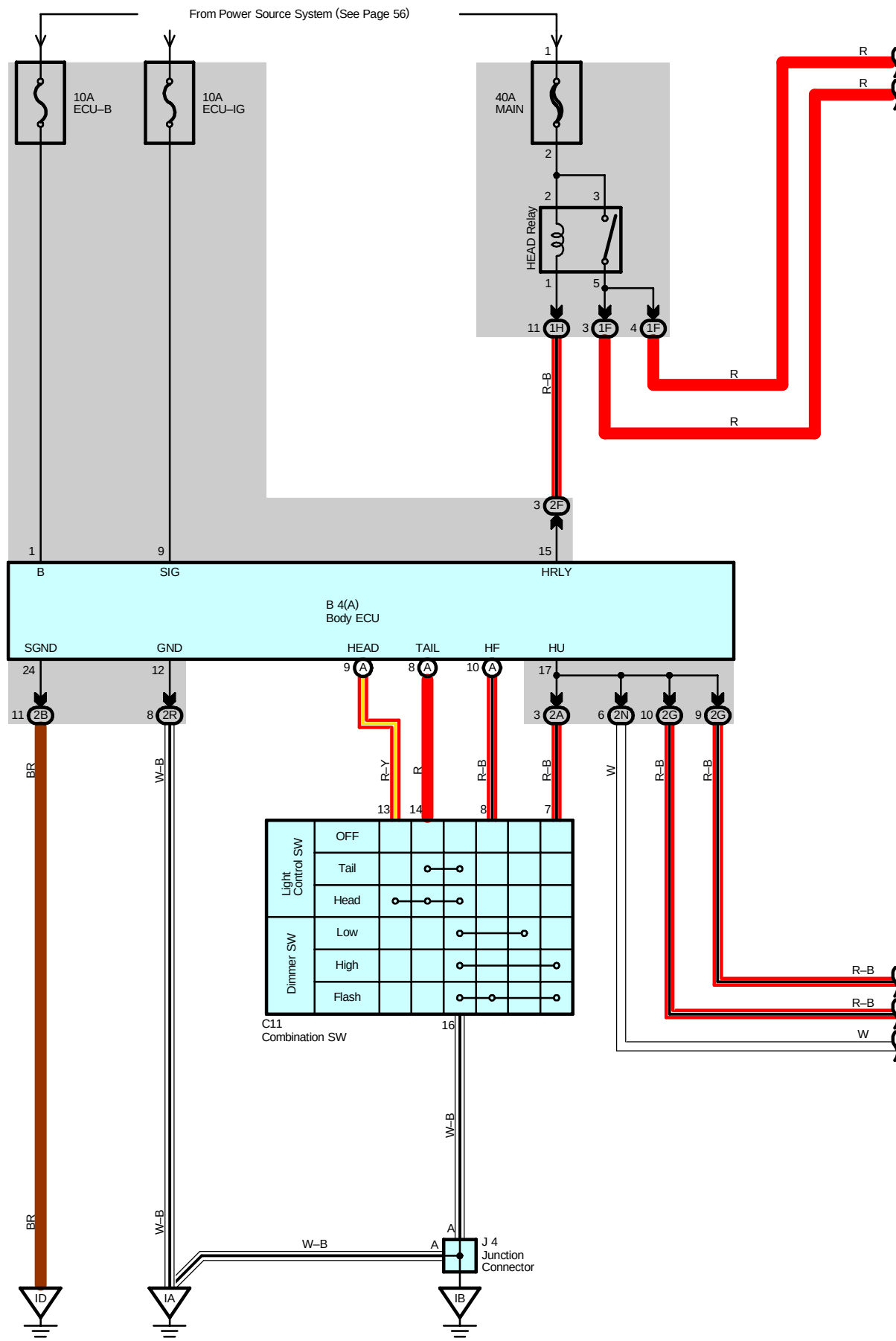
Code	See Page	Ground Points Location
EB	44	Right Fender
EC	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH

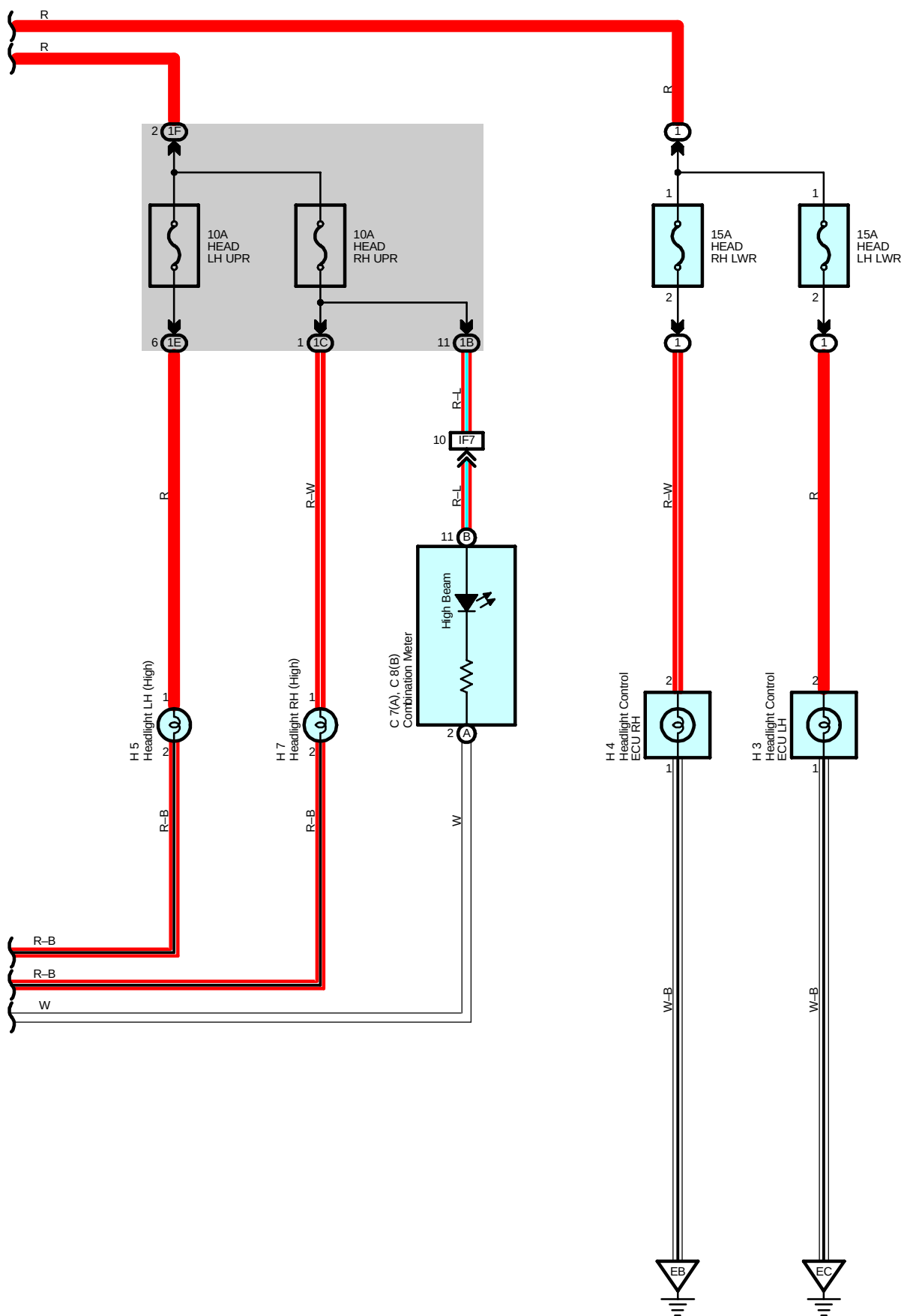


: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44	Engine Room Main Wire	E4	44	Engine Room Main Wire

Headlight (w/o Daytime Running Light)





Headlight (w/o Daytime Running Light)

Service Hints

Body ECU

- 9–Ground : Approx. 12 volts with ignition SW at ON or ST position
- 12, 24–Ground : Always continuity
- 1–Ground : Always approx. 12 volts

: Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	38	C11	38		H5	36	
C7	A	38	H3	36		H7	36	
C8	B	38	H4	36		J4	39	

: 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)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1F		
1H		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2B		
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2N	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		

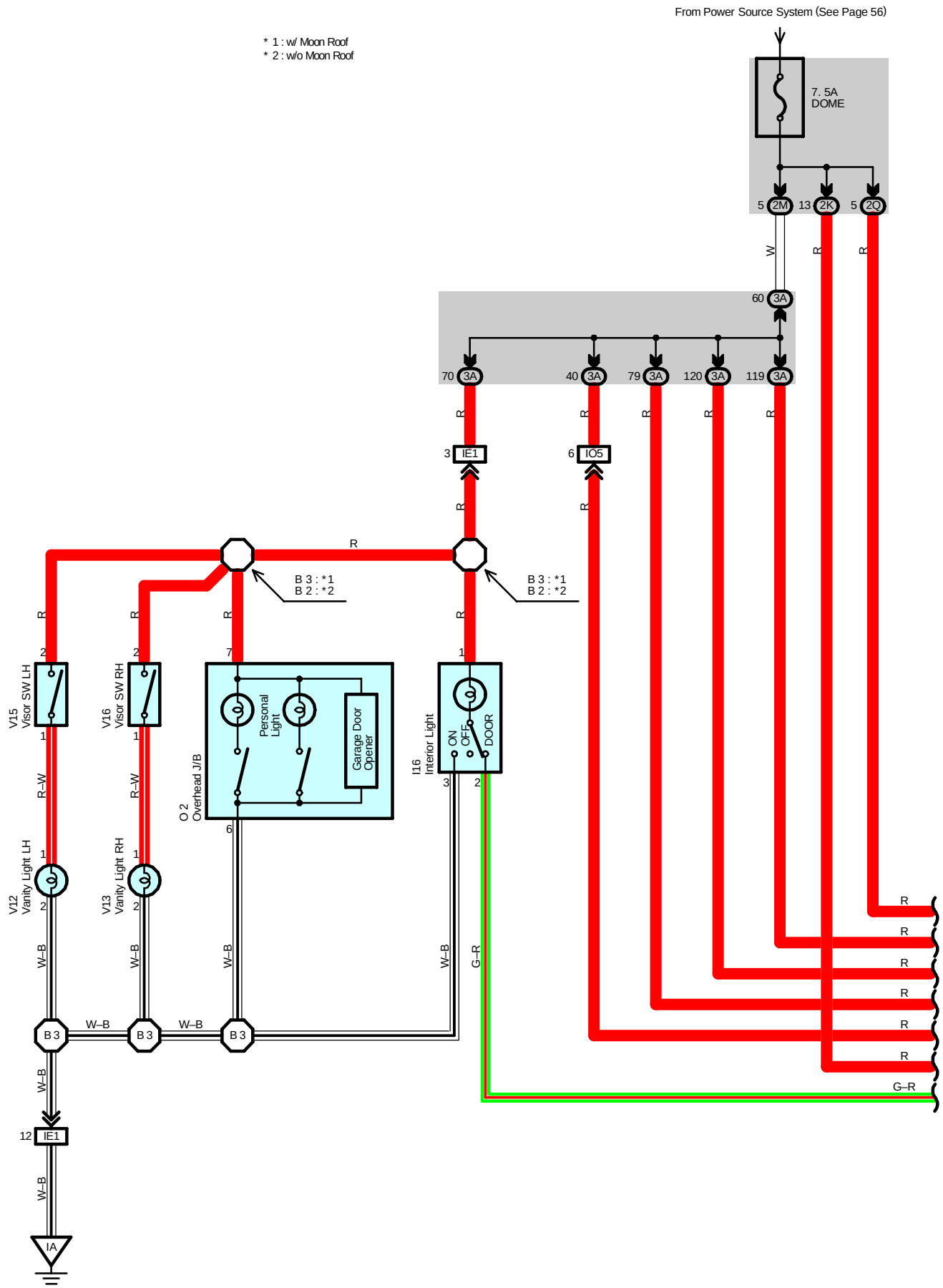
: Connector Joining Wire Harness and Wire Harness

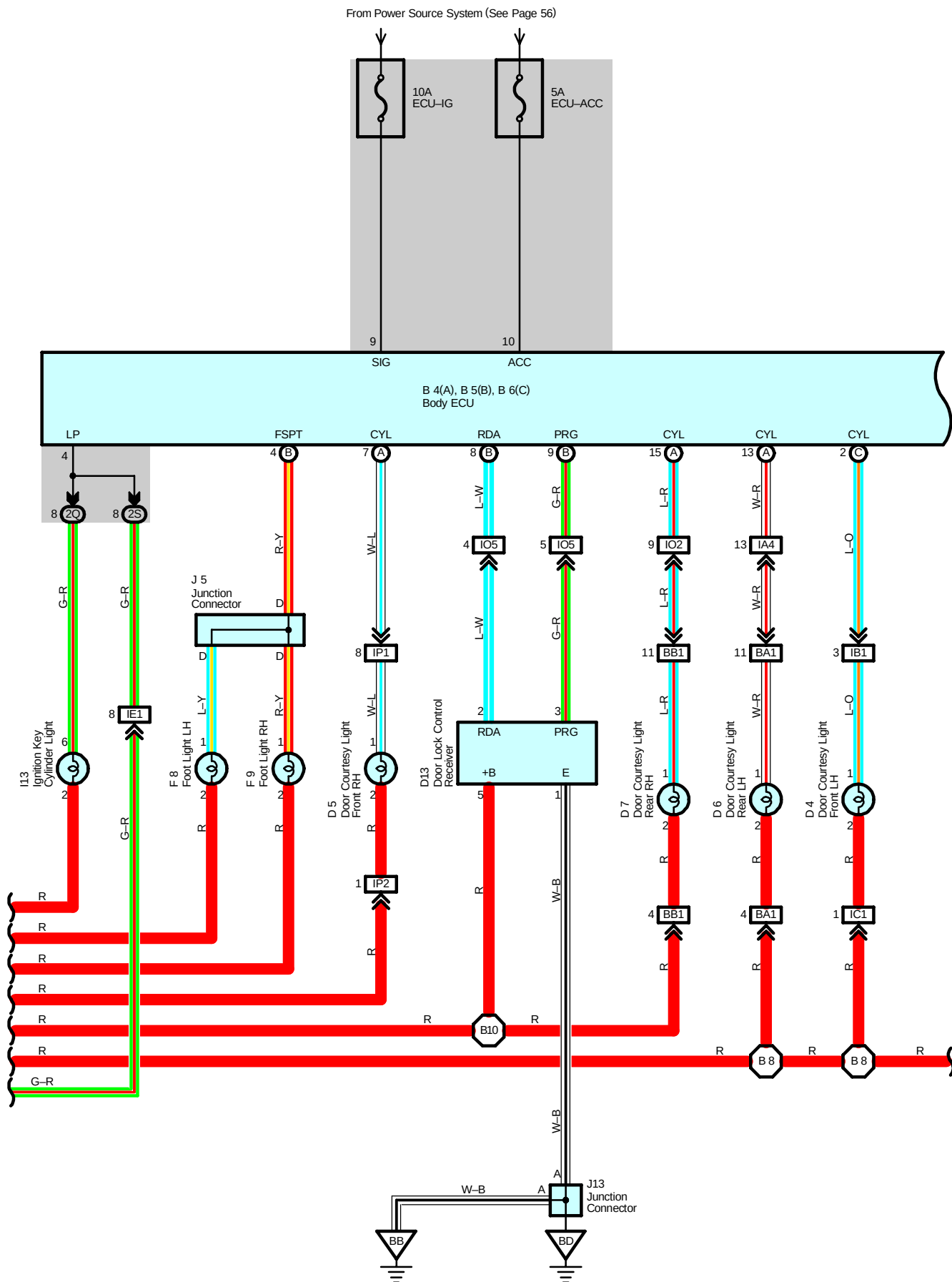
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF7	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

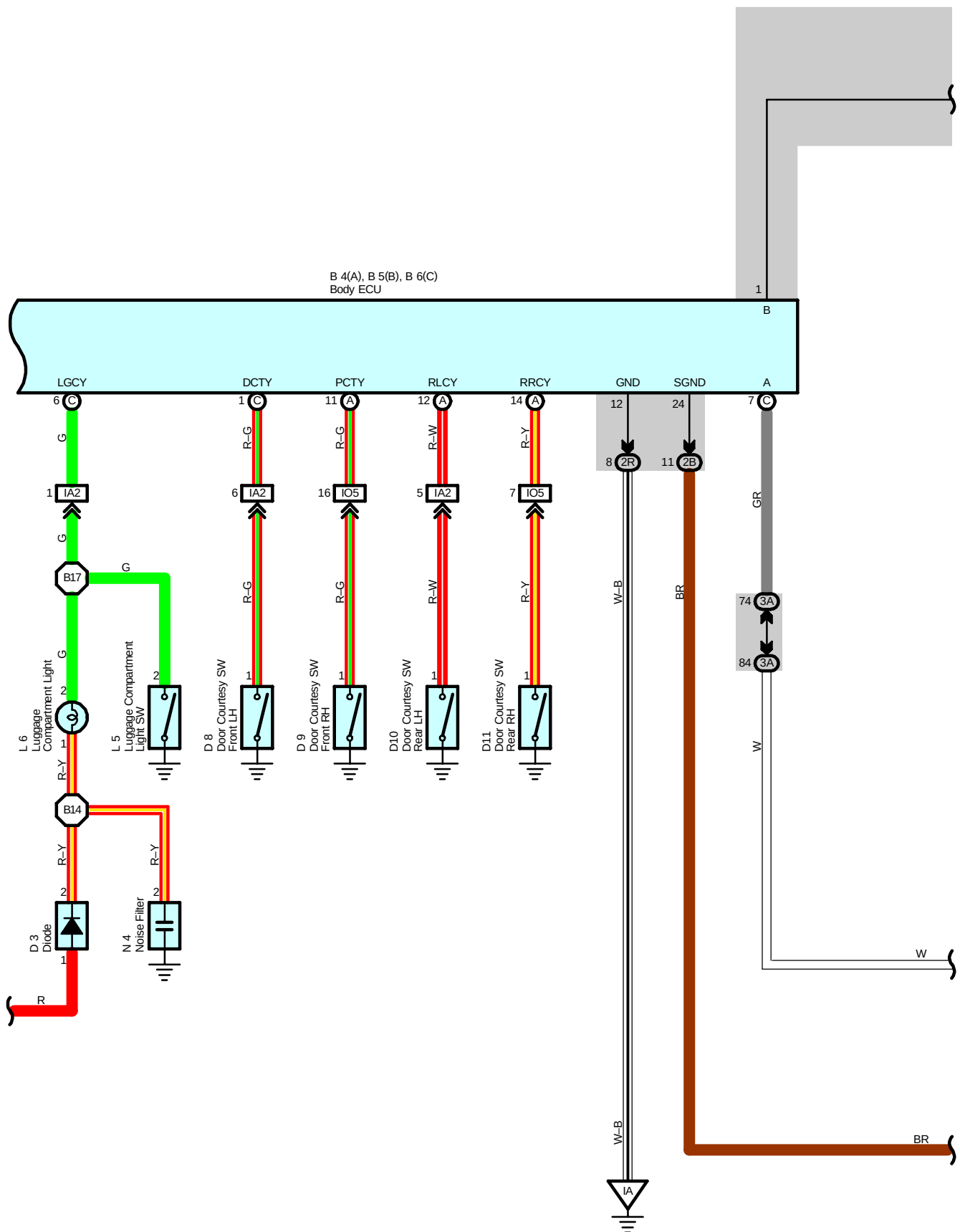
: Ground Points

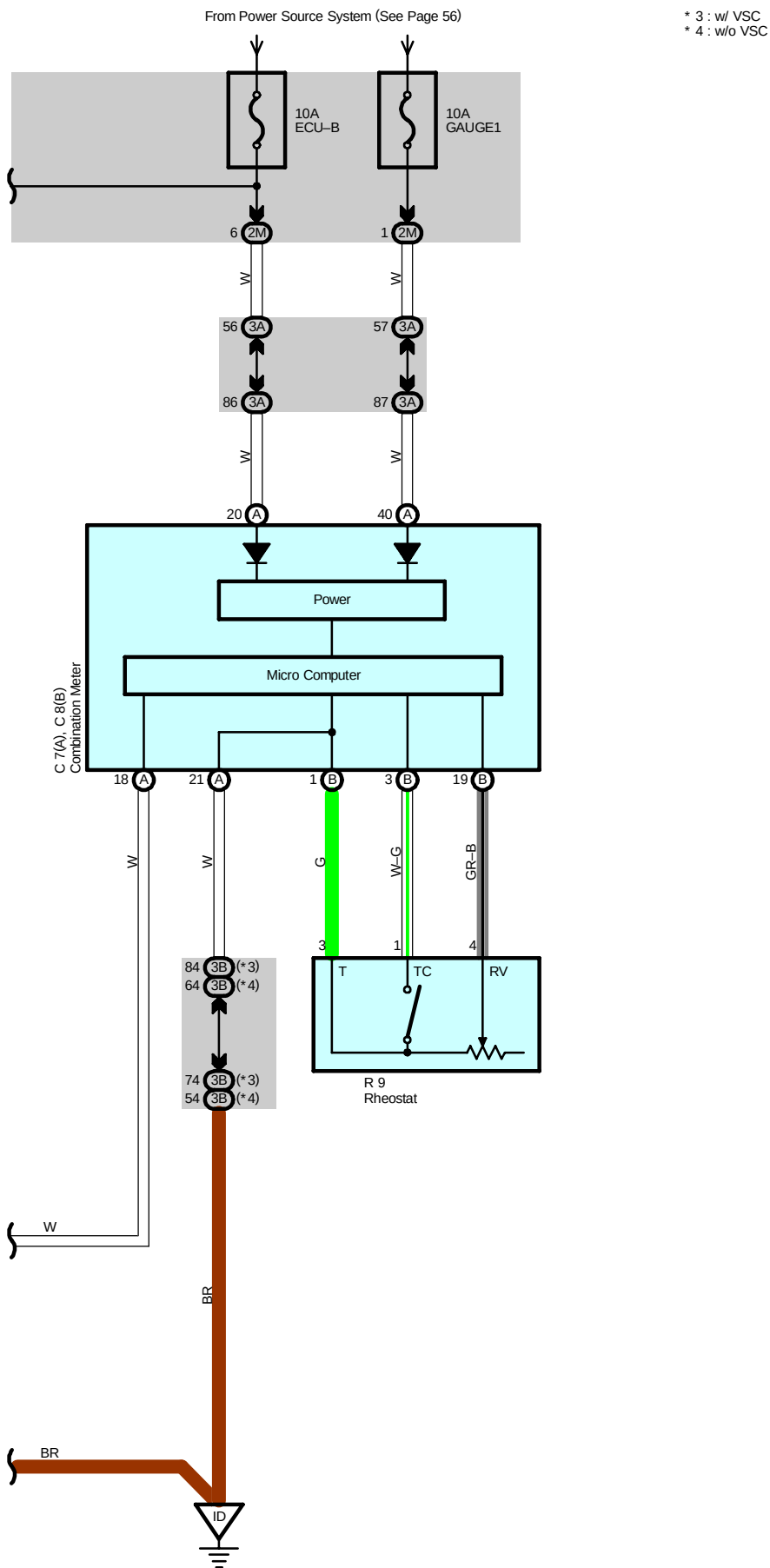
Code	See Page	Ground Points Location
EB	44	Right Fender
EC	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH

Interior Light









Interior Light

Service Hints

Body ECU

- 9-Ground : Approx. 12 volts with ignition SW at ON or ST position
- 12, 24-Ground : Always continuity
- 1-Ground : Always approx. 12 volts

D8, D9, D10, D11 Door Courtesy SW Front LH, RH, Rear LH, RH

- 1-Ground : Closed with each of the door

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B4	A 38	D8	40	J13	40
B5	B 38	D9	40	L5	40
B6	C 38	D10	40	L6	40
C7	A 38	D11	40	N4	41
C8	B 38	D13	40	O2	41
D3	40	F8	39	R9	39
D4	40	F9	39	V12	41
D5	40	I13	39	V13	41
D6	40	I16	40	V15	41
D7	40	J5	39	V16	41

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2Q		
2R		
2S		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IA4		
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)
IO2	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO5		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)

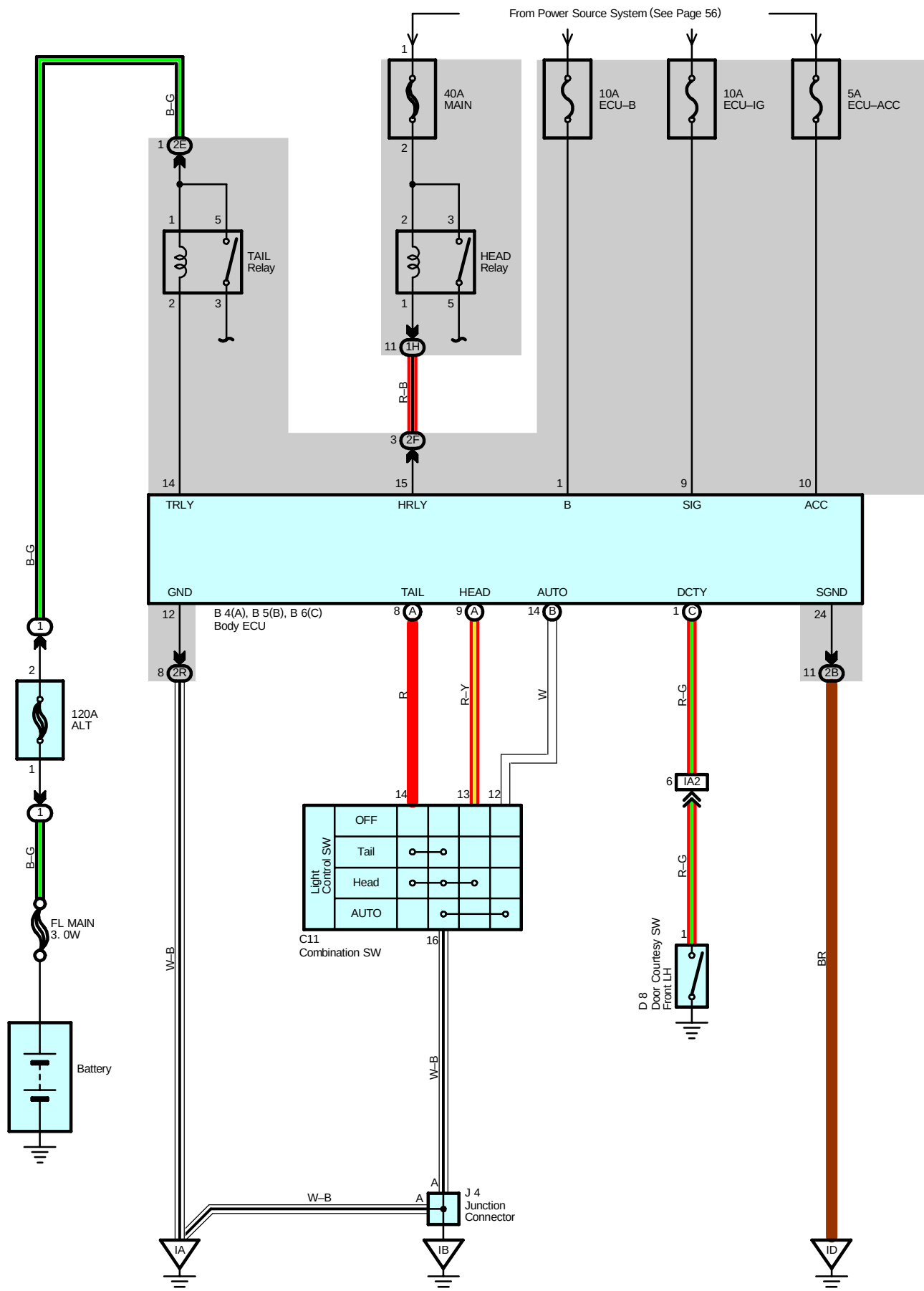
▽ : Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH
BB	50	Under the Front Passenger's Seat
BD	50	Front Side of Rear Quarter Wheel House RH



: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B2	50	Roof Wire	B10	50	Floor No.2 Wire
B3			B14	50	Floor No.1 Wire
B8	50	Floor No.1 Wire	B17		



System Outline

1. Normal Lighting Operation

<Turn taillight on>

With the light control SW turned to TAIL position, a signal is input into TERMINAL (A) 8 of the body ECU. Due to this signal, the current flowing to TERMINAL 14 of the ECU flows to TERMINAL (A) 8 to TERMINAL 14 of the light control SW to TERMINAL 16 to GROUND, and TAIL relay causes taillights to turn on.

<Turn headlight on>

With the light control SW turned to HEAD position, a signal is input into TERMINALS (A) 8 and (A) 9 of the body ECU. Due to this signal, the current flowing to TERMINAL 15 of the ECU flows to TERMINAL (A) 9 to TERMINAL 13 of the light control SW to TERMINAL 16 to GROUND in the headlight circuit, and causes taillight and HEAD relay to turn the lights on. The taillight circuit is same as above.

2. Light Auto Turn Off Operation

With light on and ignition SW turned off (Input signal goes to TERMINAL 9 of the ECU), when the driver's door is opened (Input signal goes to TERMINAL (C) 1 of the ECU), the body ECU operates and the current is cut off which flows from TERMINAL 14 of the ECU to TERMINAL (A) 8 In taillight circuit and from TERMINAL 15 to TERMINAL (A) 9 in headlight circuit.

As a result, all lights are turned off automatically.

Service Hints

TAIL Relay

5-3 : Closed with the light control SW at HEAD or TAIL position

HEAD Relay (w/ Daytime Running Light)

5-3 : Closed with the light control SW at HEAD position or dimmer SW at FLASH position

Closed with the engine running and parking brake released (Parking brake SW off)

HEAD Relay (w/o Daytime Running Light)

5-3 : Closed with the light control SW at HEAD position or dimmer SW at FLASH position

Body ECU

9-Ground : Approx. 12 volts with ignition SW at ON or ST position

12, 24-Ground : Always continuity

1-Ground : Always approx. 12 volts

D8 Door Courtesy SW Front LH

1-Ground : Closed with the driver door open

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
B4	A	38	B6	C	38	D8	40
B5	B	38	C11		38	J4	39

○ : 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)
1H	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)

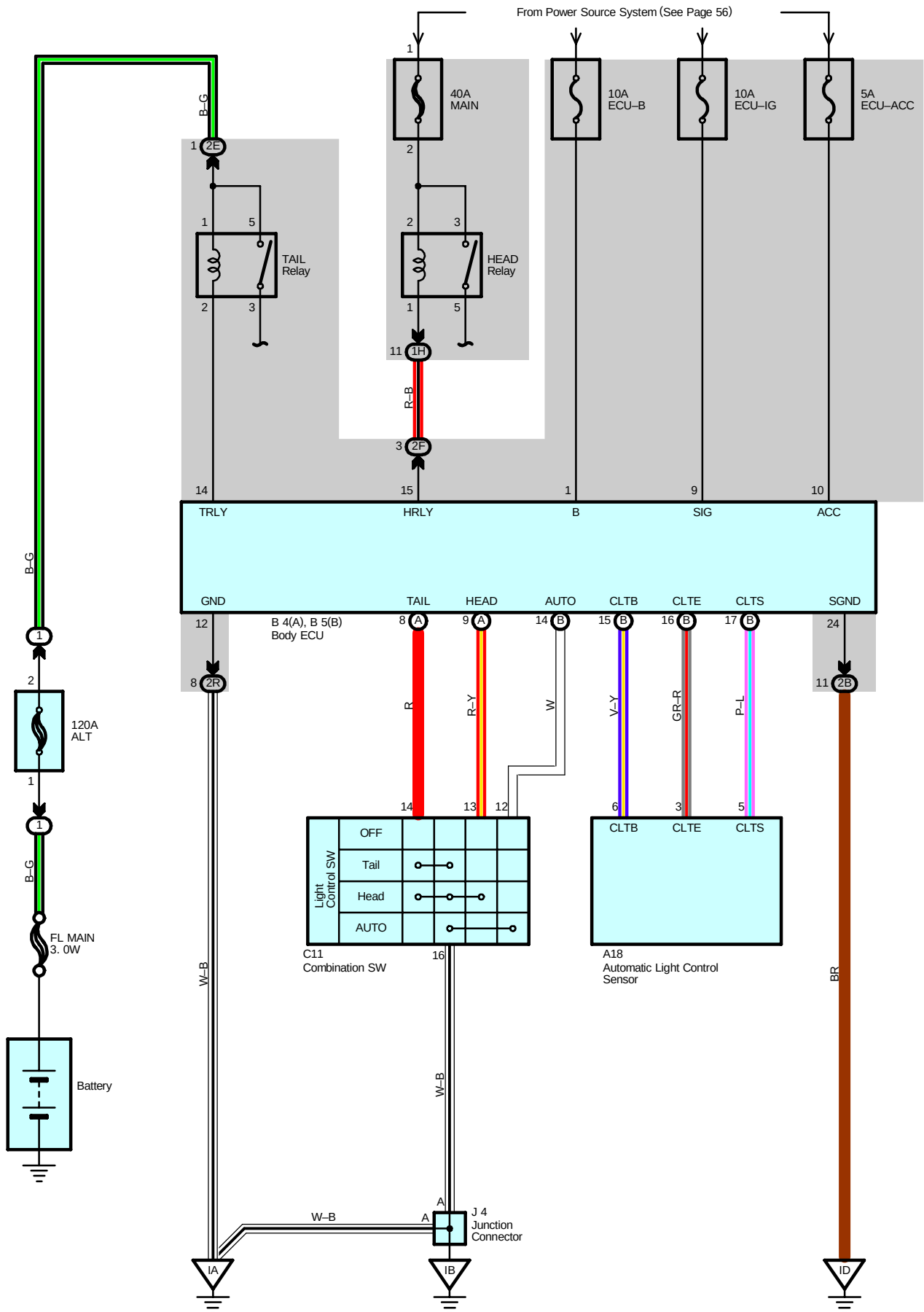
Light Auto Turn Off



: Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH

Automatic Light Control



System Outline

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

Service Hints

Body ECU

- 9–Ground : Approx. 12 volts with ignition SW at ON or ST position
- 12, 24–Ground : Always continuity
- 1–Ground : Always approx. 12 volts

D8 Door Courtesy SW Front LH

- 1–Ground : Driver's door open

: Parts Location

Code		See Page		Code		See Page		Code		See Page	
A18		38		B5	B	38		J4	39		
B4	A	38		C11		38					

: Relay Blocks

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

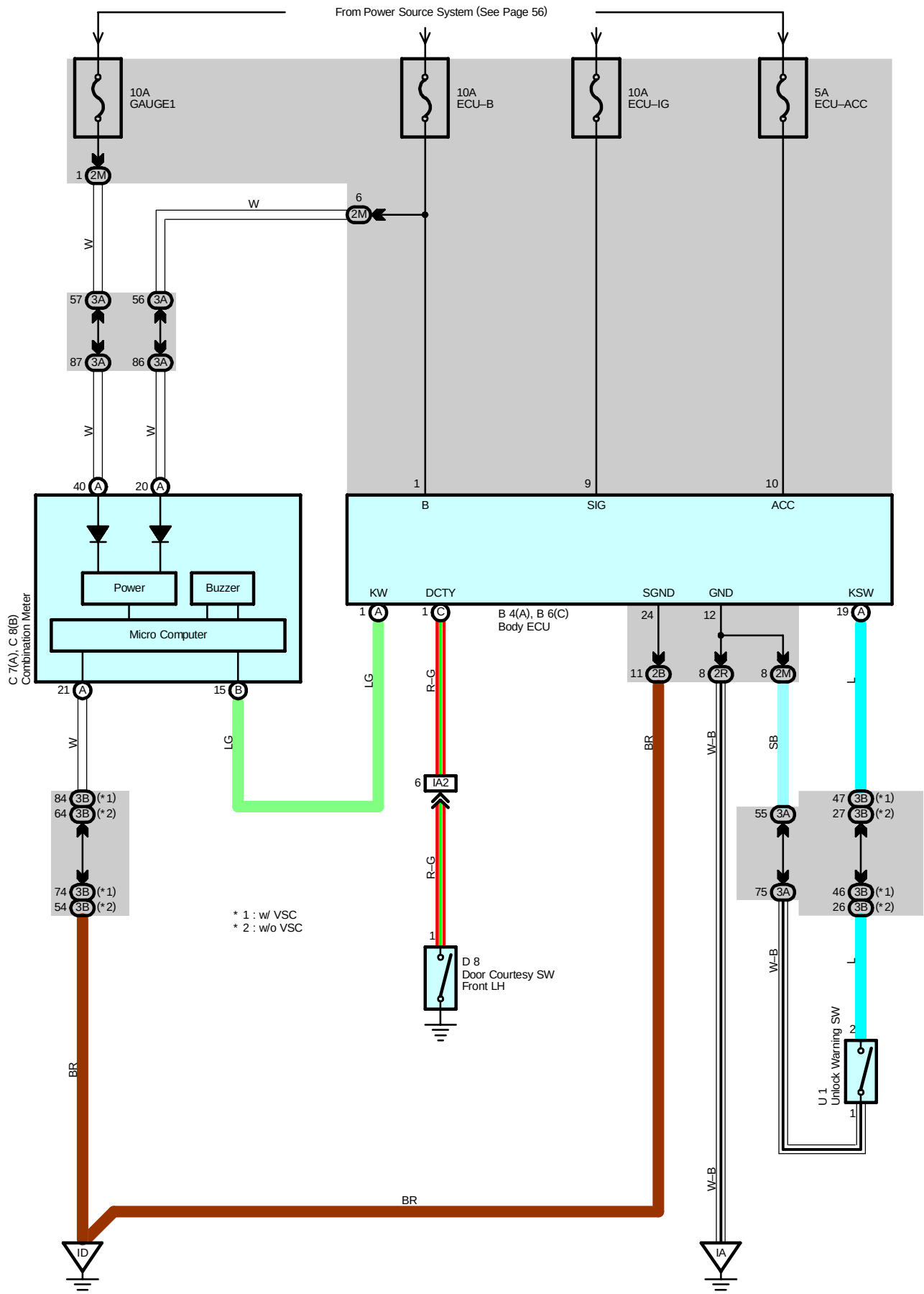
: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1H	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2F		
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH

Key Reminder



System Outline

Key Reminder System

With the ignition key inserted in the key cylinder (Unlock warning SW on), the ignition SW still off and driver's door open (Door courtesy SW on), when a signal is input to TERMINAL (C) 1 of the body ECU, the body ECU operates, current flows from TERMINAL (A) 1 of the ECU to TERMINAL (B) 15 of the combination meter to GROUND and key reminder buzzer sounds.

Service Hints

Body ECU

9-Ground : Approx. 12 volts with ignition SW at ON or ST position

12, 24-Ground : Always continuity

1-Ground : Always approx. 12 volts

D8 Door Courtesy SW Front LH

1-Ground : Closed with the driver door open

U1 Unlock Warning SW

1-2 : Closed with the ignition key in cylinder

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B4	A	38	C7	A	38
B6	C	38	C8	B	38
				D8	40
				U1	39

□ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M	29	
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

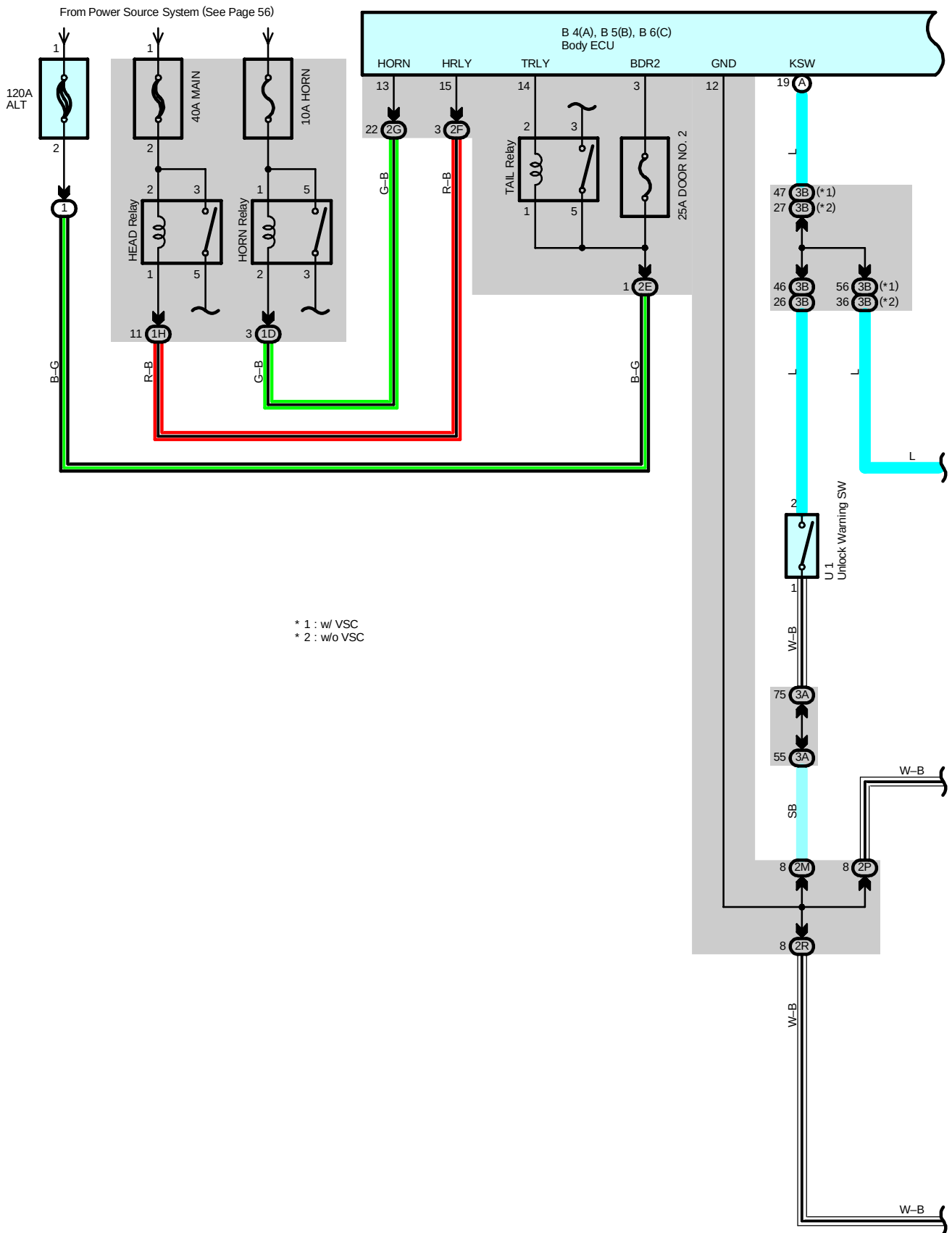
□ : Connector Joining Wire Harness and Wire Harness

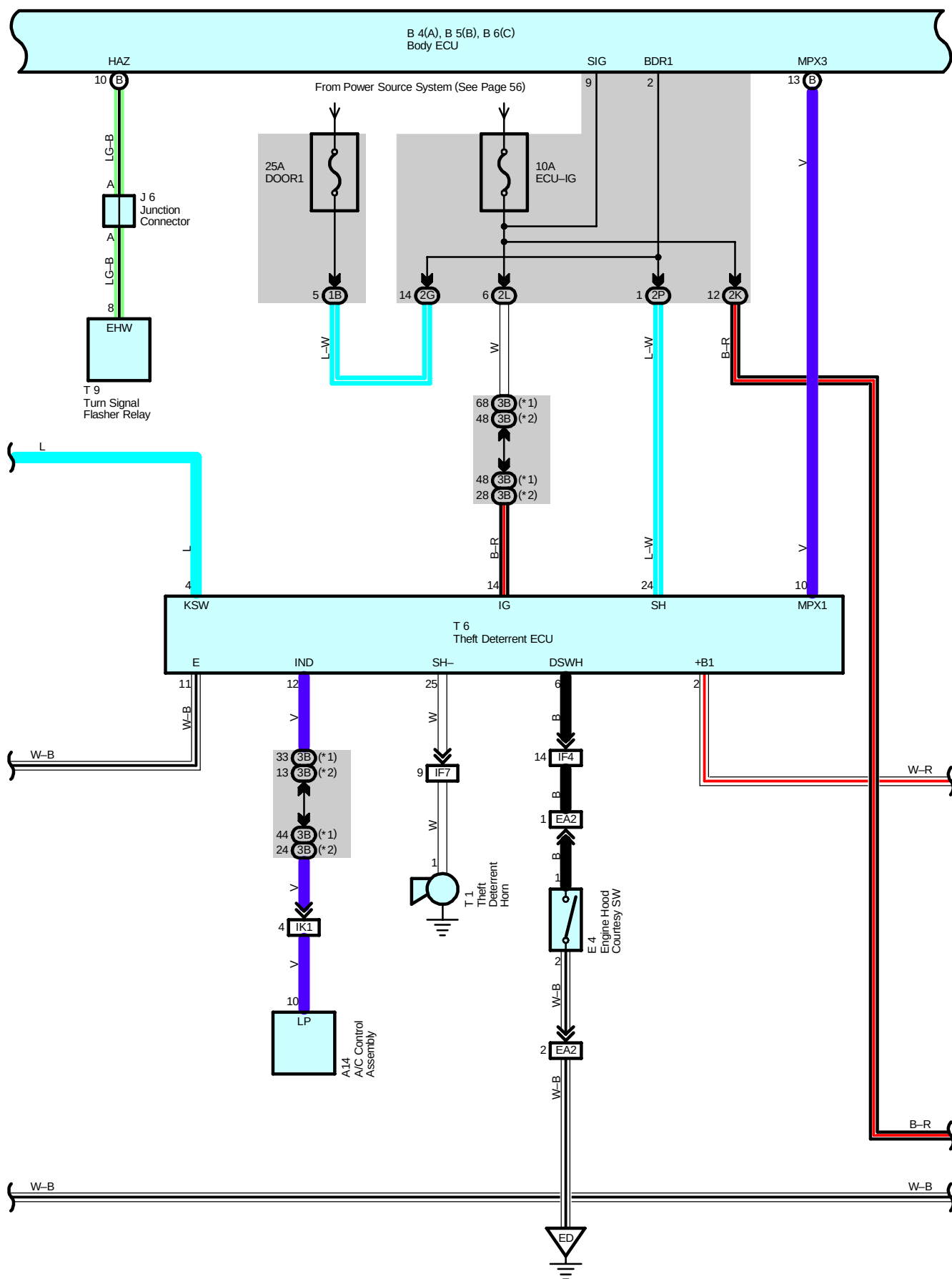
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)

▽ : Ground Points

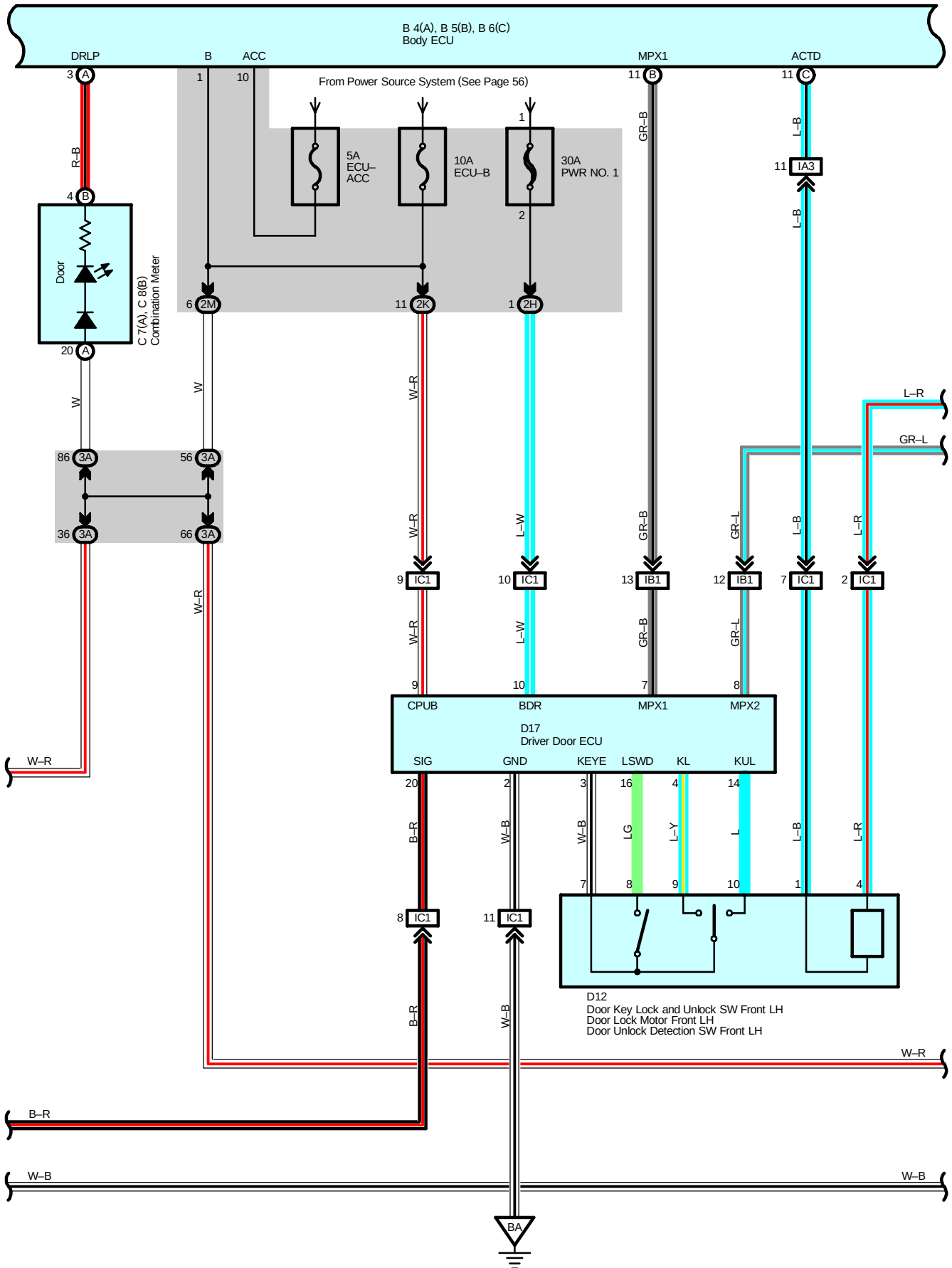
Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH

Theft Deterrent and Door Lock Control

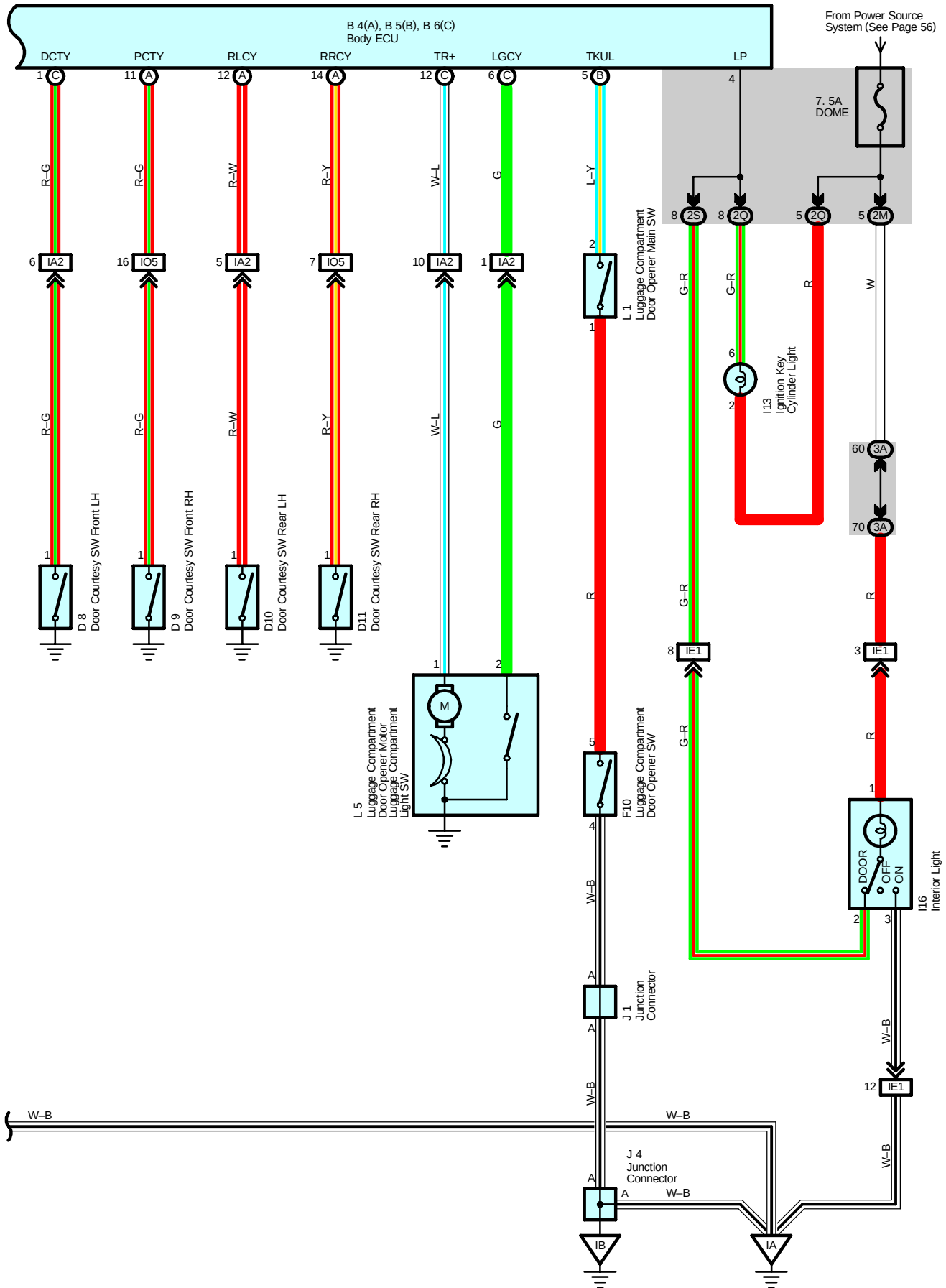




Theft Deterrent and Door Lock Control



Theft Deterrent and Door Lock Control



System Outline

1. Manual Unlock Operation

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

2. Manual Lock Operation

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

3. Door Key Unlock Operation

* Unlock operation from driver's side door

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

* Unlock operation from front passenger's side door

When the front passenger's side door is unlocked using the ignition key, all the other doors are unlocked, too.

Service Hints

Body ECU

1, 2, 3–Ground : Always approx. 12 volts

9–Ground : Approx. 12 volts with ignition SW at ON or ST position

10–Ground : Approx. 12 volts with ignition SW at ACC or ON position

12, 24–Ground : Always continuity

D17 Driver Door ECU

2–Ground : Always continuity

9, 10–Ground : Always approx. 12 volts

F13 Front Passenger Door ECU

2–Ground : Always continuity

9, 10–Ground : Always approx. 12 volts

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A14	38	D14	40	J6	39
B4	A 38	D15	40	J8	A 39
B5	B 38	D16	40	J9	B 39
B6	C 38	D17	40	J12	40
C7	A 38	E4	36	J13	40
C8	B 38	F10	39	L1	39
D8	40	F13	40	L5	40
D9	40	I13	39	T1	37
D10	40	I16	40	T6	39
D11	40	J1	39	T9	39
D12	40	J4	39	U1	39

○ : Relay Blocks

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

Theft Deterrent and Door Lock Control



: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1D		
1H		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2C		
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2F		
2G		
2H	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2P		
2Q		
2R		
2S		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	



: Connector Joining Wire Harness and Wire Harness

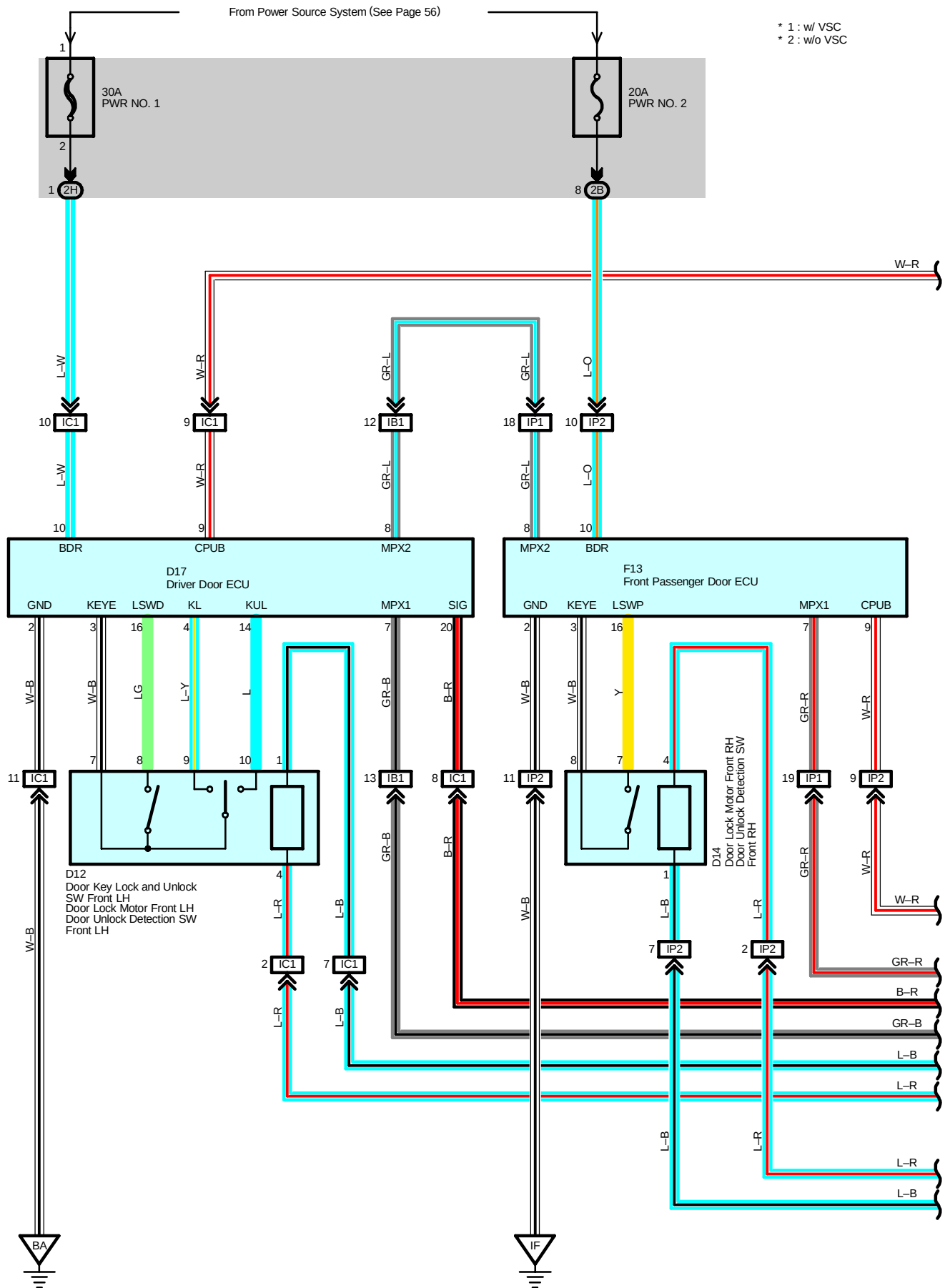
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA2	44	Engine Room Main Wire and Engine Room No.2 Wire (Behind the Headlight LH)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IA3		
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)
IF4	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF7		
IK1	48	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO5		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)



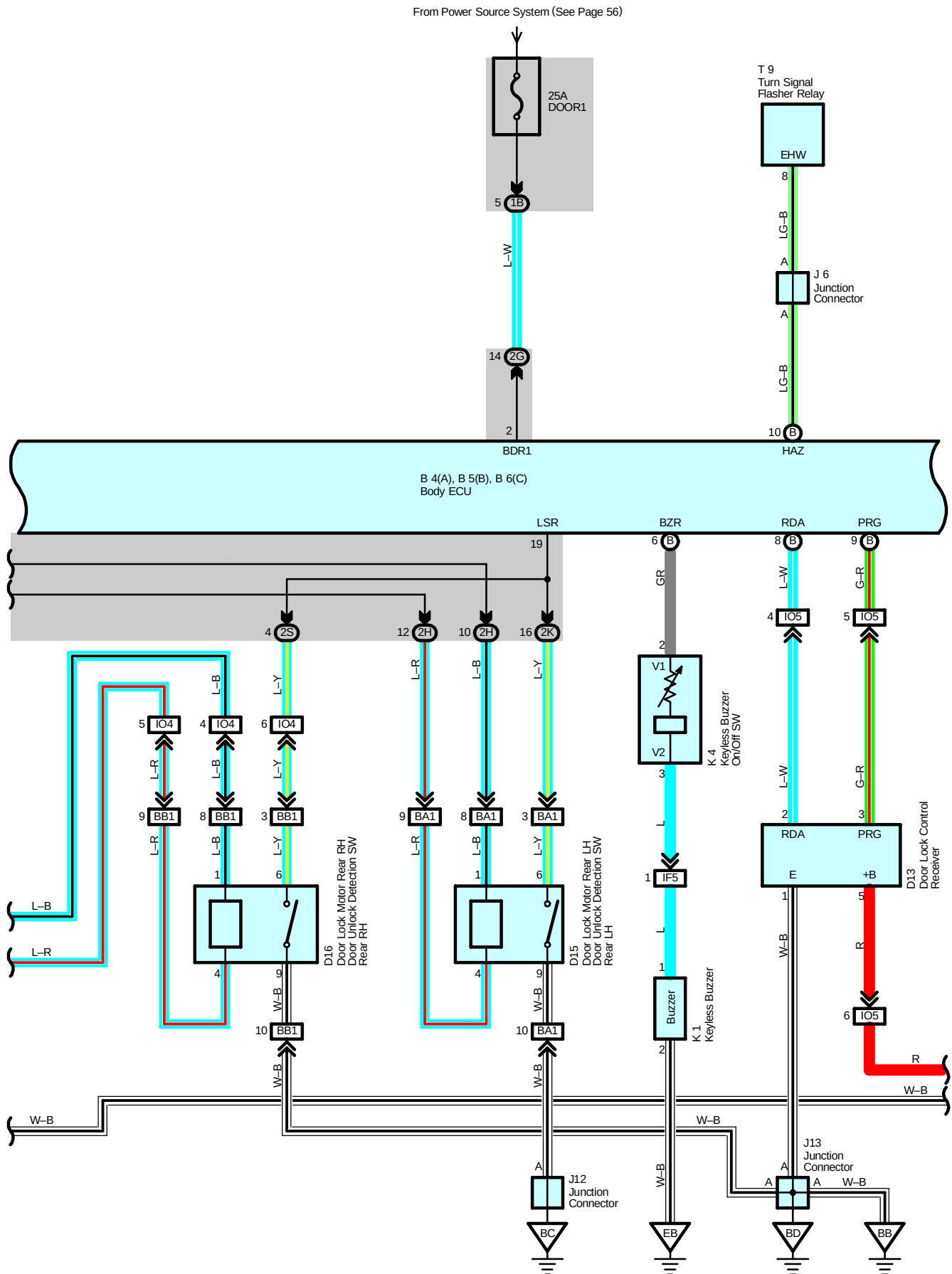
: Ground Points

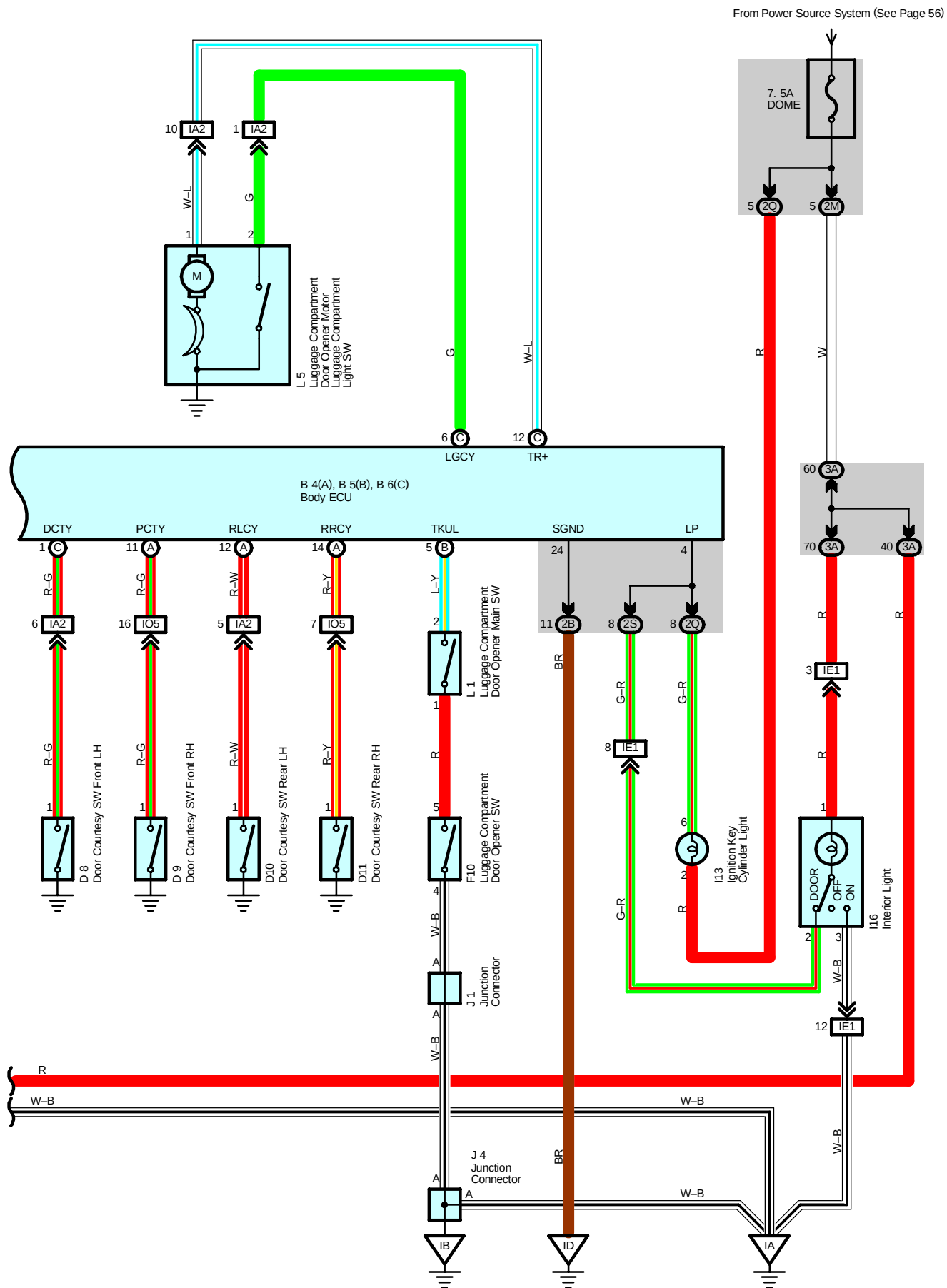
Code	See Page	Ground Points Location
ED	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH
IF	46	Instrument Panel Reinforcement RH
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat
BC	50	Front Side of Rear Quarter Wheel House LH
BD	50	Front Side of Rear Quarter Wheel House RH

Wireless Door Lock Control



Wireless Door Lock Control





Wireless Door Lock Control

System Outline

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

1. 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 lock control receiver receives the electrical waves from the transmitter, and sends a signal to the body ECU, causing it to operate.

As a result, the body ECU 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, turn signal light will flash once. If any door indicates that it is open after the unlock command, turn signal light will flash twice.

3. Buzzer Sound Function

If all doors indicate that they are locked after the lock command, the keyless buzzer goes on once. If any door indicates that it is open after the unlock command, the keyless buzzer goes on twice.

4. Illuminated Entry Function

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

5. 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.

6. 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.

7. Wireless Control Stop Function

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

8. Repeat Function

If the door lock or unlock condition does not change after wireless door lock or unlock operation, 2 seconds later, the body ECU sends current again to the door lock motor.

9. 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 and horn sounds and turn signal light, headlights and taillight 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.

Service Hints

D8, D9, D10, D11 Door Courtesy SW Front LH, RH, Rear LH, RH

1-Ground : Continuity with the door open

U1 Unlock Warning SW

2-1 : Continuity with the ignition key in the cylinder

D13 Door Lock Control Receiver

5-Ground : Always approx. 12 volts

1-Ground : Always continuity

 : Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	38	D14	40	J8	A	39	
B5	B	38	D15	40	J9	B	39	
B6	C	38	D16	40	J12		40	
C7	A	38	D17	40	J13		40	
C8	B	38	F10	39	K1		37	
D8		40	F13	40	K4		39	
D9		40	I13	39	L1		39	
D10		40	I16	40	L5		40	
D11		40	J1	39	T9		39	
D12		40	J4	39	U1		39	
D13		40	J6	39				

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2C		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2H	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2Q		
2R		
2S		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IA3		
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)
IF5	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO5		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)

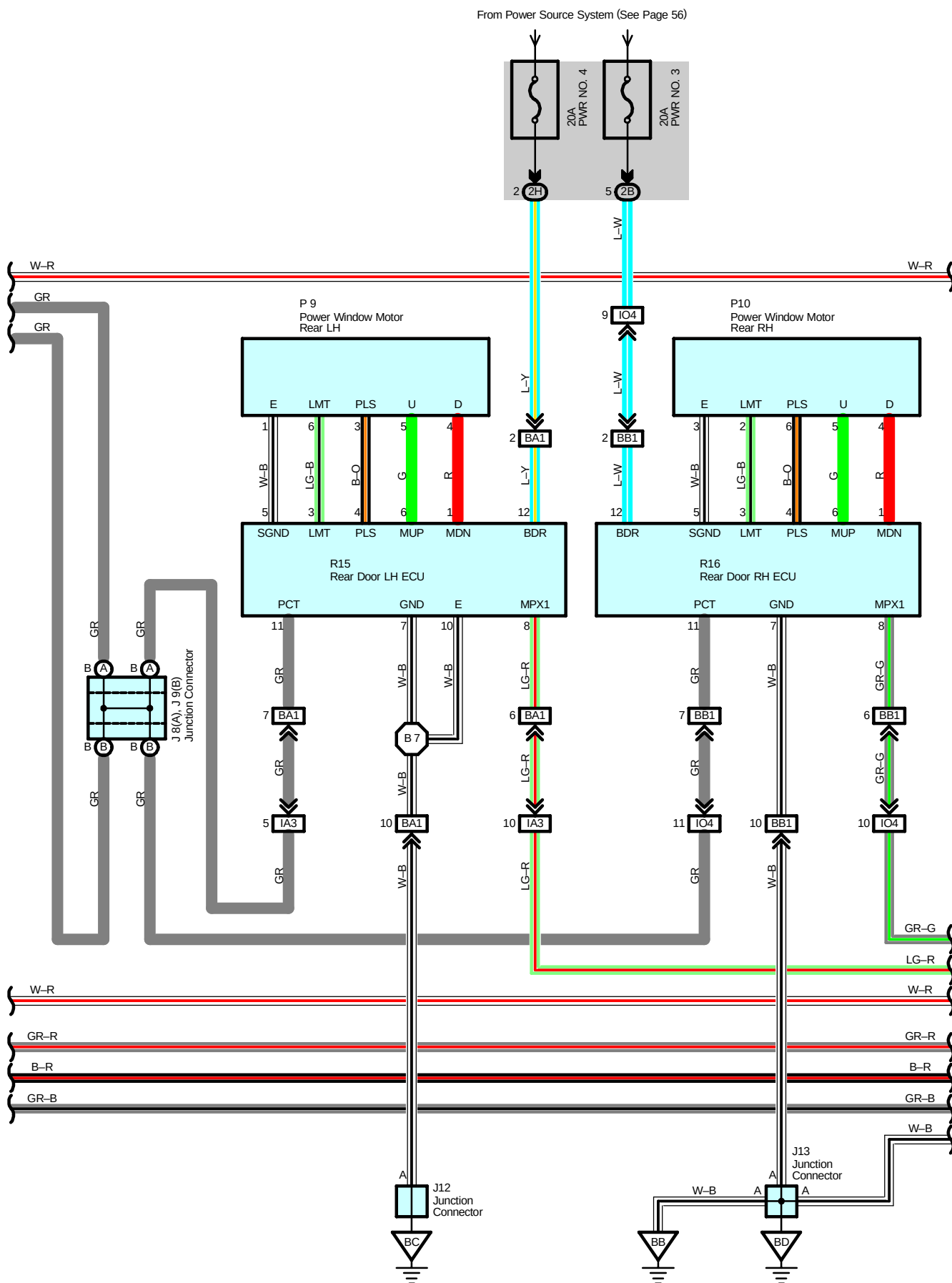
Wireless Door Lock Control



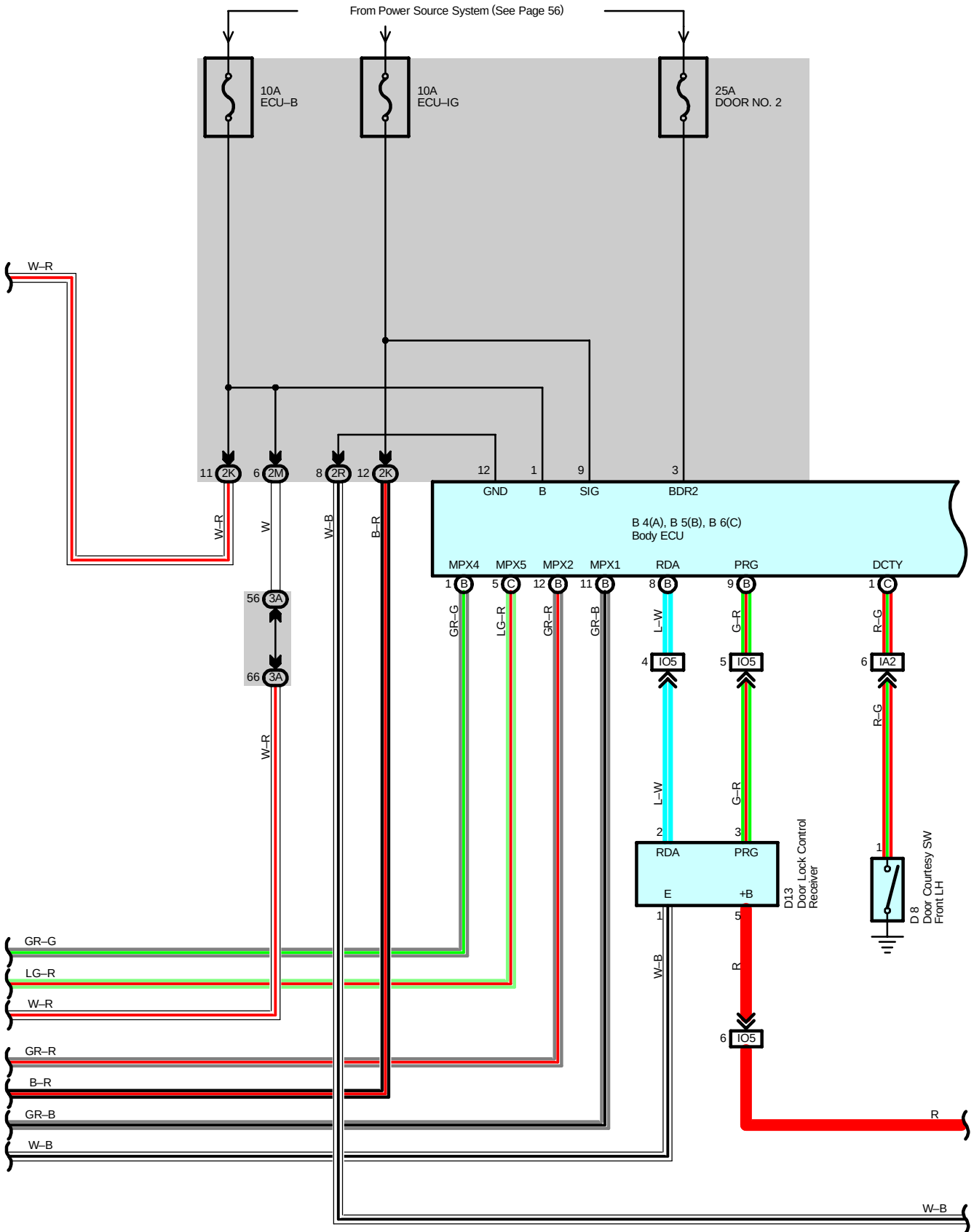
: Ground Points

Code	See Page	Ground Points Location
EB	44	Right Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH
IF	46	Instrument Panel Reinforcement RH
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat
BC	50	Front Side of Rear Quarter Wheel House LH
BD	50	Front Side of Rear Quarter Wheel House RH





Power Window



Power Window

System Outline

1. Manual Down or Up Operation

When the power window master SW (Driver's) is pushed one step, the motor rotates to open the window.

When the power window master SW (Driver's) is pulled up one step, the motor rotates in the opposite direction, to close the window.

All the other windows can be opened/closed as well, by the operation of the power window master SW or respective power window SW.

2. Auto Down or Up Operation

When the power window master SW (Driver's) is pushed two steps, the motor rotates to open the window automatically.

When the power window master SW (Driver's) is pulled up two steps, the motor rotates to close the window automatically.

3. Jam Protection Function

When any foreign object gets caught during power window UP operation, the motor rotates in the opposite direction to open the window.

Service Hints

Body ECU

1, 2, 3—Ground : Always approx. 12 volts

9—Ground : Approx. 12 volts with ignition SW at ON or ST position

12, 24—Ground : Always continuity

D17 Driver Door ECU

2—Ground : Always continuity

20—Ground : Approx. 12 volts with ignition SW at ON or ST position

9, 10—Ground : Always approx. 12 volts

F13 Front Passenger Door ECU

2—Ground : Always continuity

9, 10—Ground : Always approx. 12 volts

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
B4	A	38	D17		40	K4	39
B5	B	38	F13		40	P7	41
B6	C	38	I13		39	P8	41
D8		40	I16		40	P9	41
D9		40	J8	A	39	P10	41
D10		40	J9	B	39	R15	41
D11		40	J12		40	R16	41
D12		40	J13		40		
D13		40	K1		37		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2H	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2Q		
2R		
2S		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IA3		
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)
IF5	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO5		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)

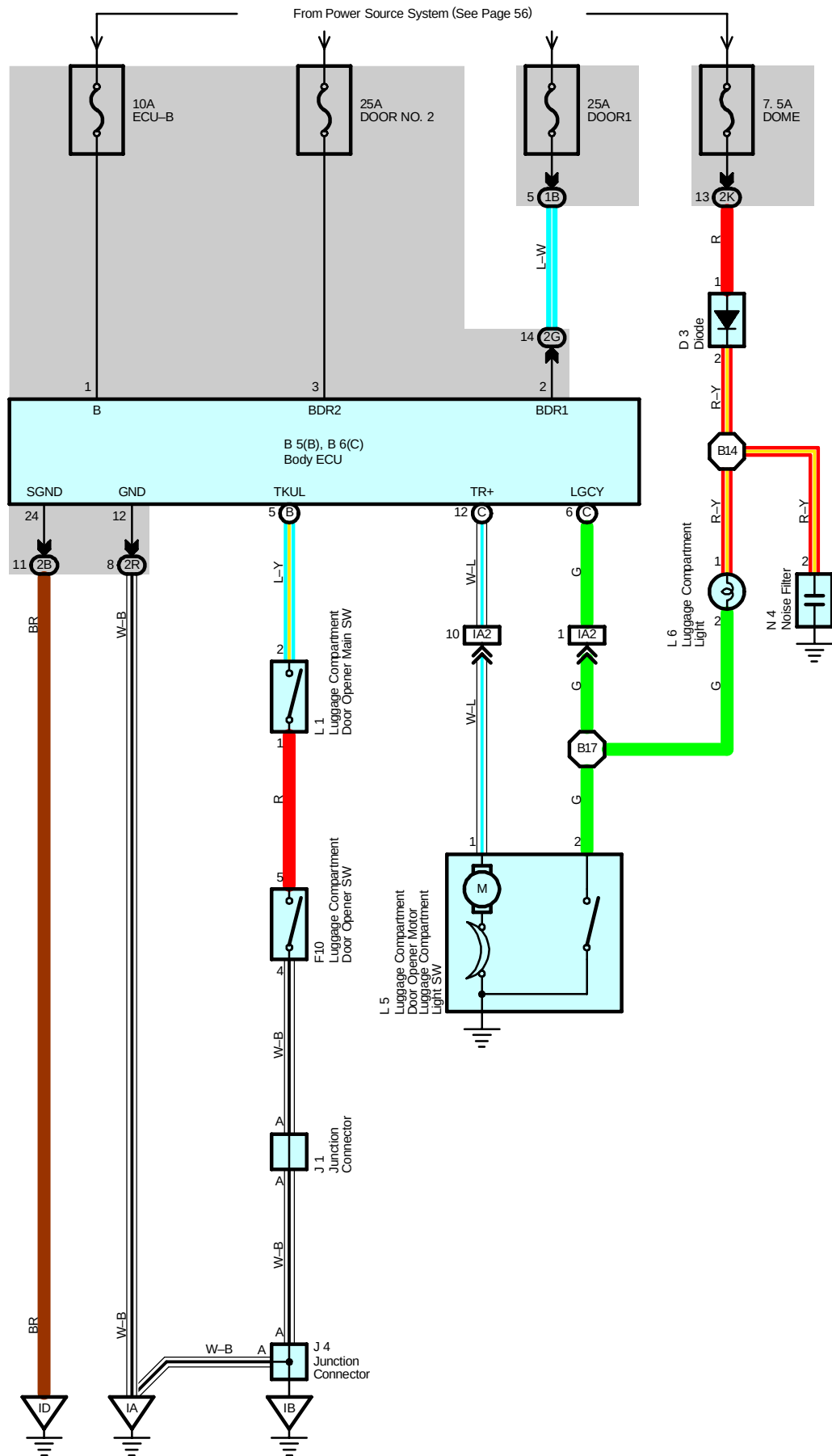
 : Ground Points

Code	See Page	Ground Points Location
EB	44	Right Fender
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH
IF	46	Instrument Panel Reinforcement RH
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat
BC	50	Front Side of Rear Quarter Wheel House LH
BD	50	Front Side of Rear Quarter Wheel House RH

 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B7	50	Rear Door No.2 Wire			

Luggage Compartment Door Opener



Service Hints

L5 Luggage Compartment Light SW

2–Ground : Closed with the luggage compartment door open

B6 (C) Body ECU

1, 2, 3–Ground : Always approx. 12 volts

(C) 6–Ground : Continuity with luggage compartment door open

12, 24–Ground : Always continuity

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
B5	B	38	J1	39	L6	40
B6	C	38	J4	39	N4	41
D3		40	L1	39		
F10		39	L5	40		

□ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)

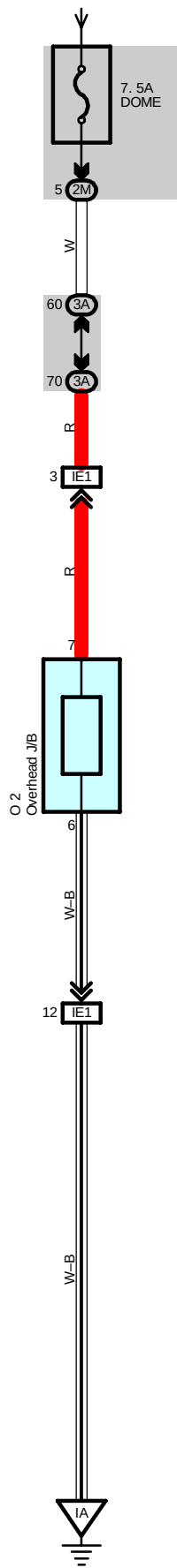
▽ : Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH

○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B14	50	Floor No.1 Wire	B17	50	Floor No.1 Wire

From Power Source System (See Page 56)



Service Hints

O2 Overhead J/B

7-Ground : Always approx. 12 volts

6-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
O2	41				

: Junction Block and Wire Harness Connector

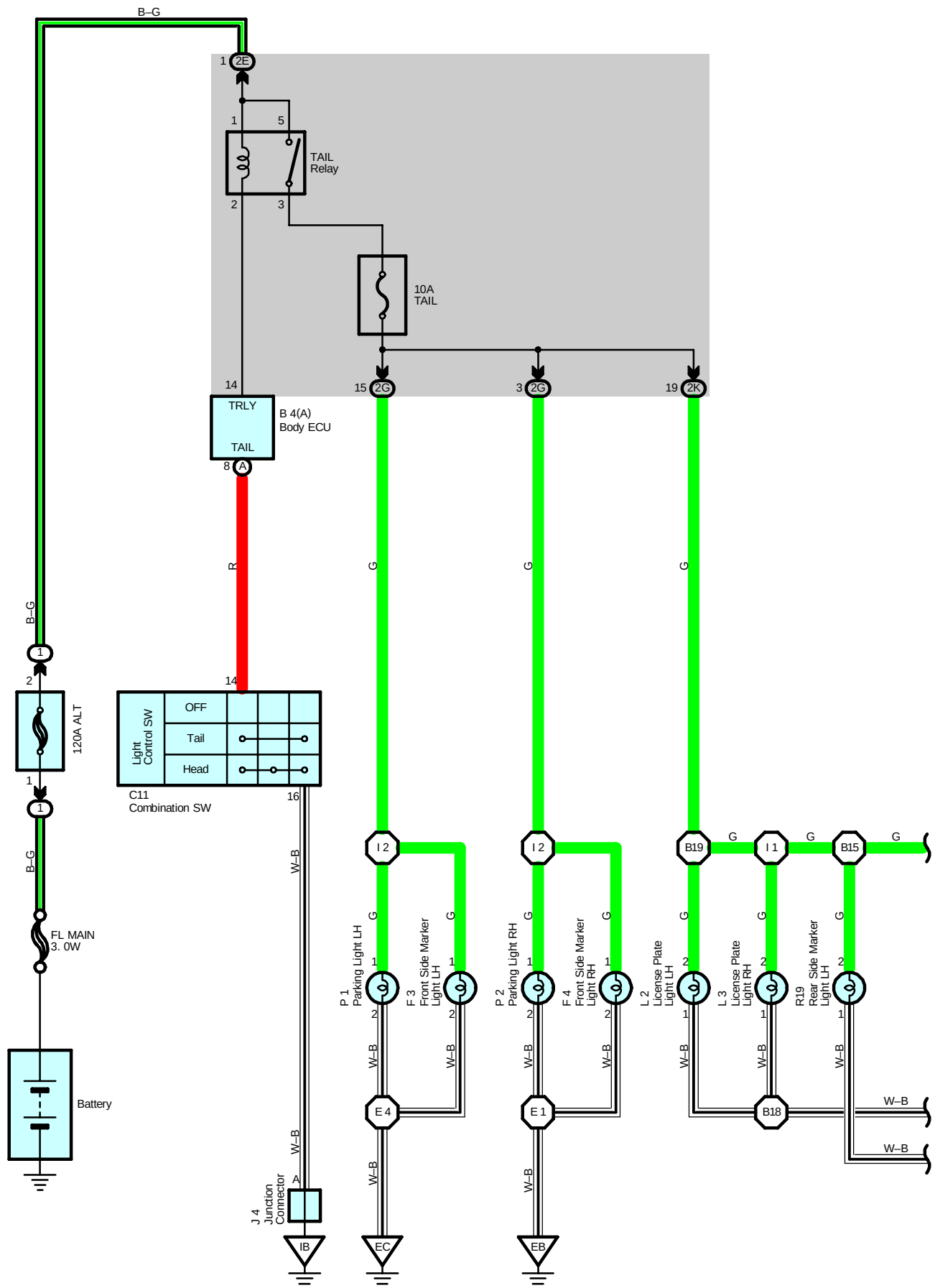
Code	See Page	Junction Block and Wire Harness (Connector Location)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	

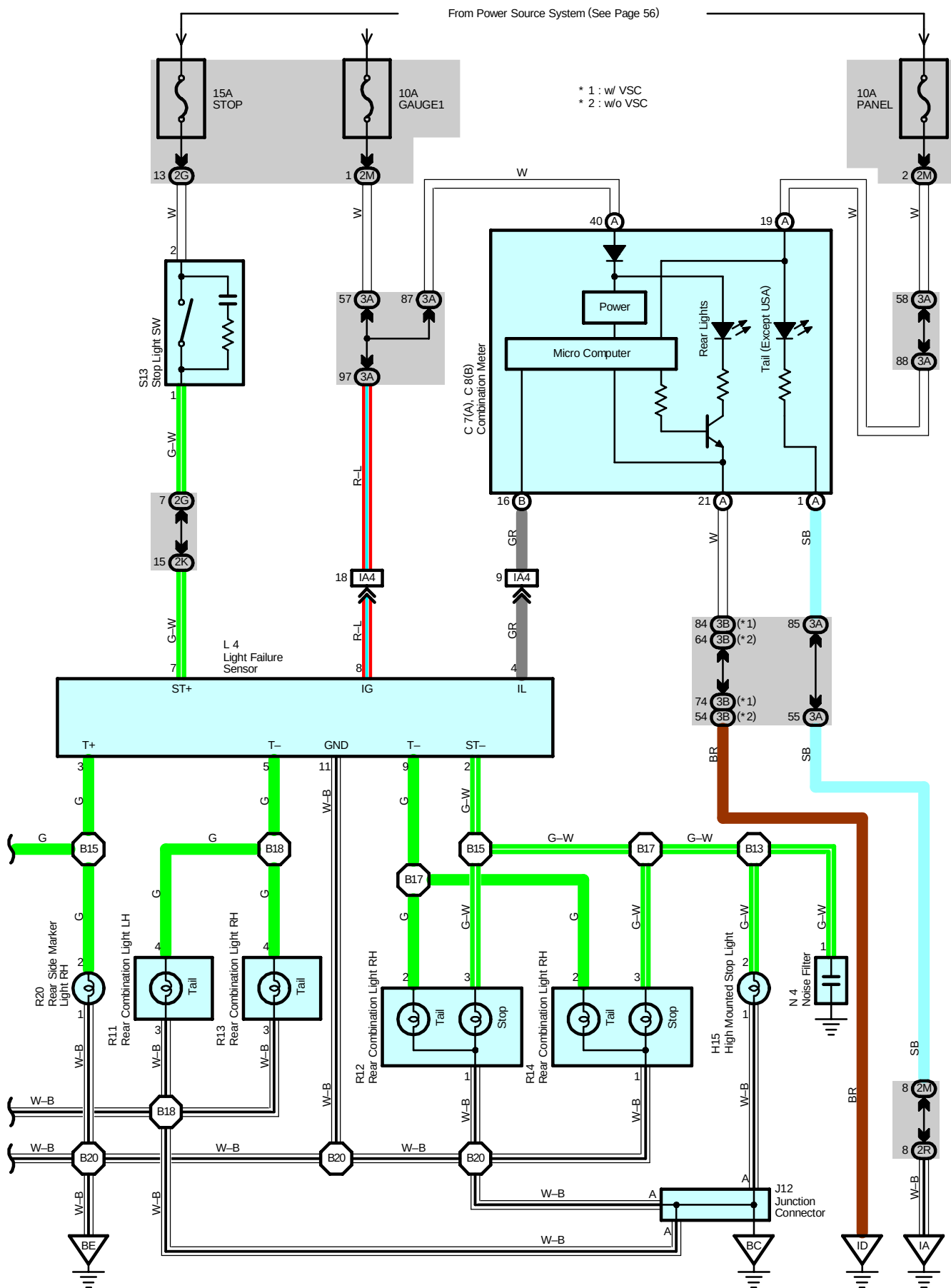
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)

: Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH





Taillight and Stop Light

System Outline

Taillight Disconnection Warning

If any of the taillights are disconnected when the light control SW is at TAIL or HEAD while the ignition SW is ON, the light failure sensor detects the voltage difference, and blinks the rear lights warning light to warn the driver.

Stop Light Disconnection Warning

If any of the stop lights are disconnected when the brake pedal is depressed while the ignition SW is ON, the light failure sensor detects the voltage difference, and blinks the rear lights warning light to warn the driver.

Service Hints

TAIL Relay

5-3 : Closed with the light control SW at TAIL or HEAD position

L4 Light Failure Sensor

7-Ground : Approx. 12 volts with stop light SW on

3-Ground : Approx. 12 volts with the light control SW at TAIL or HEAD position

8-Ground : Approx. 12 volts with the ignition SW at ON or ST position

11-Ground : Always continuity

S13 Stop Light SW

1-2 : Closed with brake pedal depressed

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B4	A 38	J12	40	R12	41
C7	A 38	L2	40	R13	41
C8	B 38	L3	40	R14	41
C11	38	L4	40	R19	41
F3	36	N4	41	R20	41
F4	36	P1	37	S13	39
H15	40	P2	37		
J4	39	R11	41		

○ : 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)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2K		
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

□ : Connector Joining Wire Harness and Wire Harness

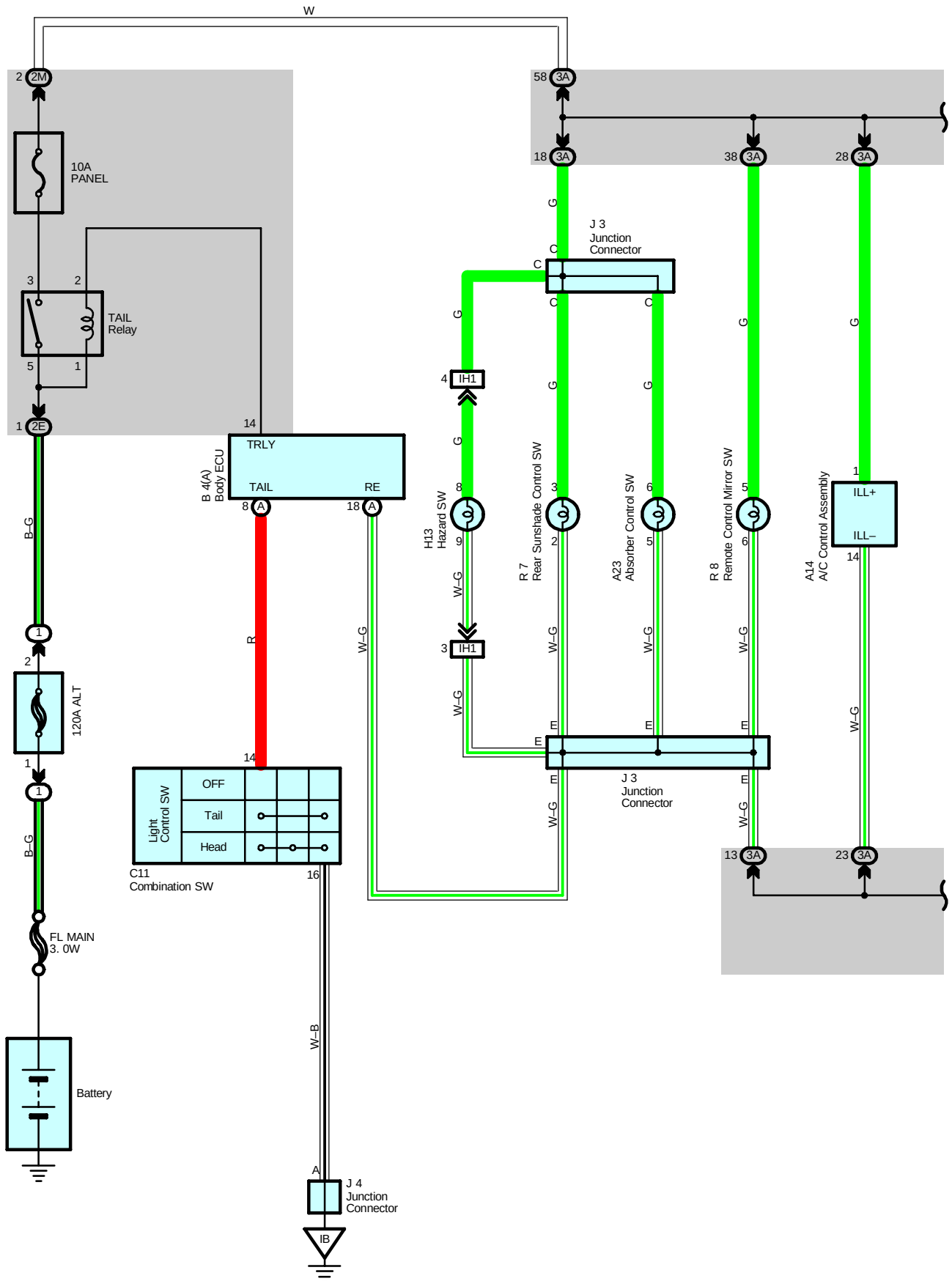
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)

**: Ground Points**

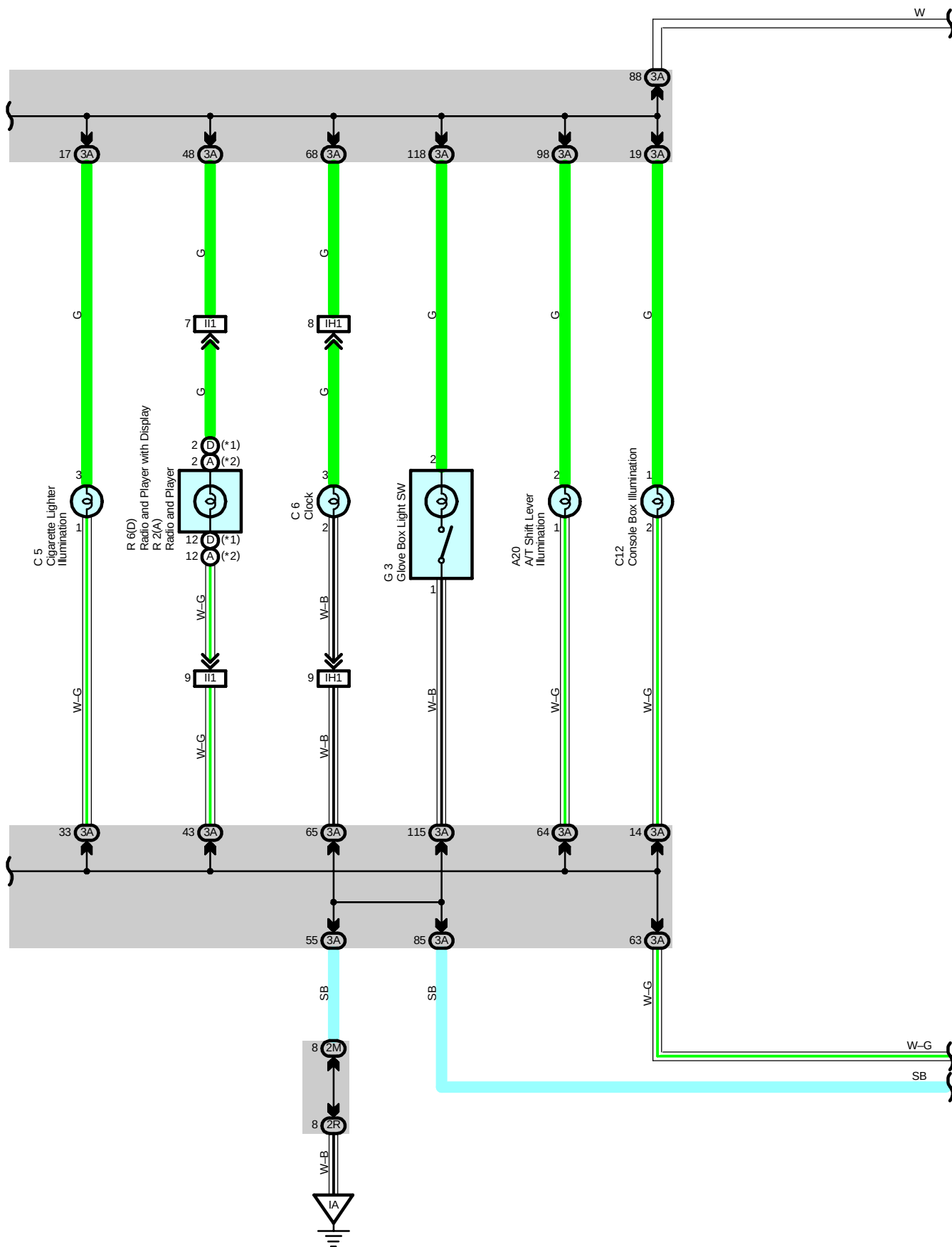
Code	See Page	Ground Points Location
EB	44	Right Fender
EC	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH
BC	50	Front Side of Rear Quarter Wheel House LH
BE	50	Lower Back Panel Center

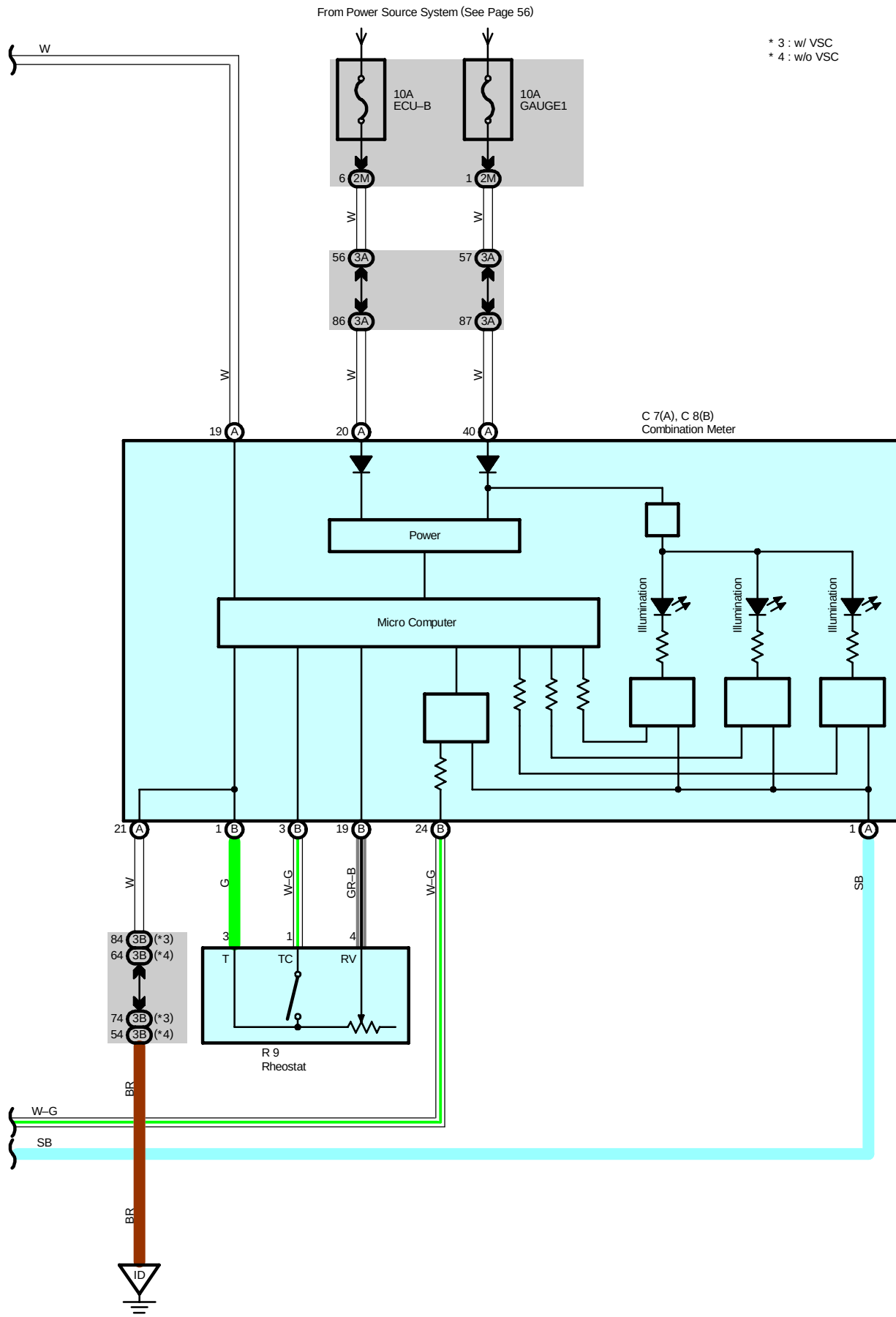
**: Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44	Engine Room Main Wire	B15	50	Floor No.1 Wire
E4			B17		
I1	48	Floor No.1 Wire	B18		
I2	48	Engine Room Main Wire	B19		
B13	50	Floor No.1 Wire	B20		



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





Service Hints

TAIL Relay

5-3 : Closed with the light control SW at TAIL or HEAD position

C11 Combination SW

14-16 : Closed with the light control SW at TAIL or HEAD position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A14	38	C8 B	38	R2 A	39
A20	38	C11	38	R6 D	39
A23	38	C12	38	R7	39
B4 A	38	G3	39	R8	39
C5	38	H13	39	R9	39
C6	38	J3	39		
C7 A	38	J4	39		

○ : 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)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC)	
	35 (w/o VSC)	

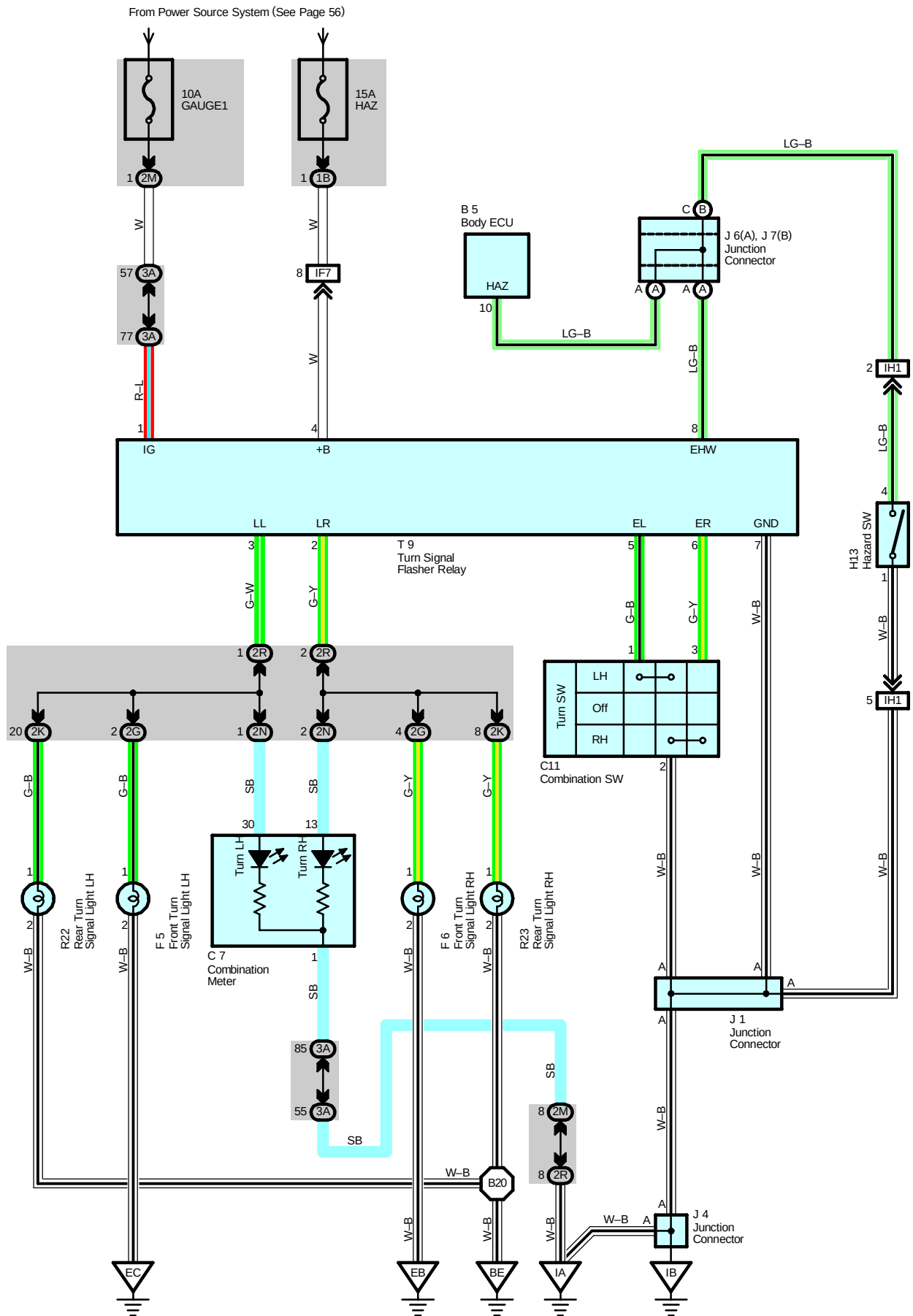
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IH1	48	Instrument Panel Wire and Instrument Panel No.4 Wire (Behind the A/C Control Assembly)
II1	48	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the A/C Control Assembly)

▽ : Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH

Turn Signal and Hazard Warning Light



Service Hints

T9 Turn Signal Flasher Relay

- 1-Ground : Approx. 12 volts with ignition SW at ON or ST position
- 4-Ground : Always approx. 12 volts
- 7-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
B5	38	H13	39	R22	41
C7	38	J1	39	R23	41
C11	38	J4	39	T9	39
F5	36	J6	A 39		
F6	36	J7	B 39		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2N		
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF7	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IH1	48	Instrument Panel Wire and Instrument Panel No.4 Wire (Behind the A/C Control Assembly)

: Ground Points

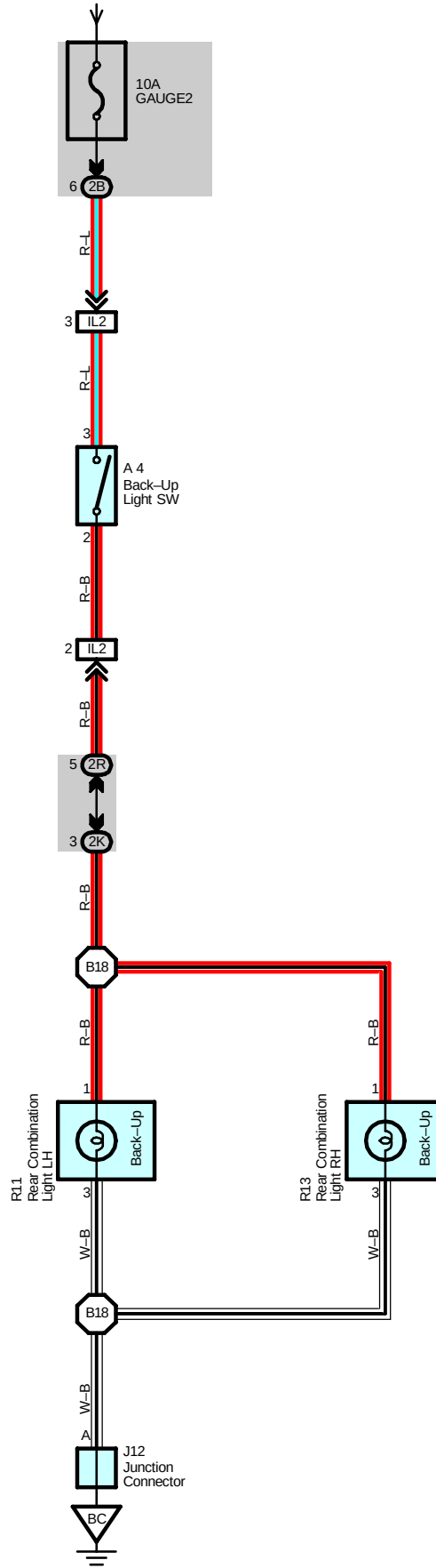
Code	See Page	Ground Points Location
EB	44	Right Fender
EC	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
BE	50	Lower Back Panel Center

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B20	50	Floor No.1 Wire			

Back-Up Light

From Power Source System (See Page 56)



Service Hints

A4 Back-Up Light SW

3-2 : Closed with the shift lever at R position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	R11	41		
J12	40	R13	41		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IL2	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

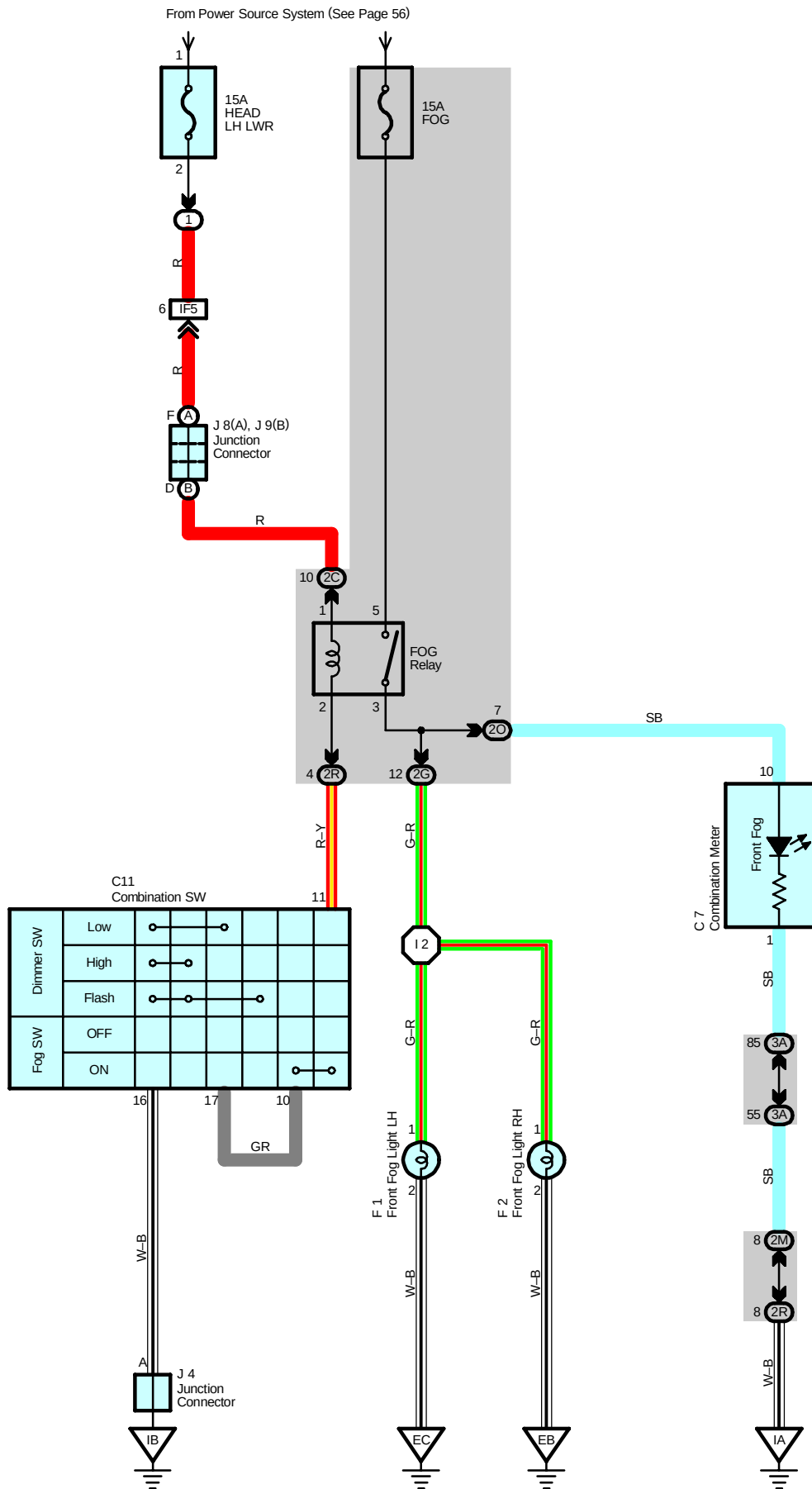
: Ground Points

Code	See Page	Ground Points Location
BC	50	Front Side of Rear Quarter Wheel House LH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B18	50	Floor No.1 Wire			

Fog Light



Service Hints

FOG Relay

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

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C7	38	F2	36	J9	B 39
C11	38	J4	39		
F1	36	J8	A 39		

: 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)
2C	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2O		
2R		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF5	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

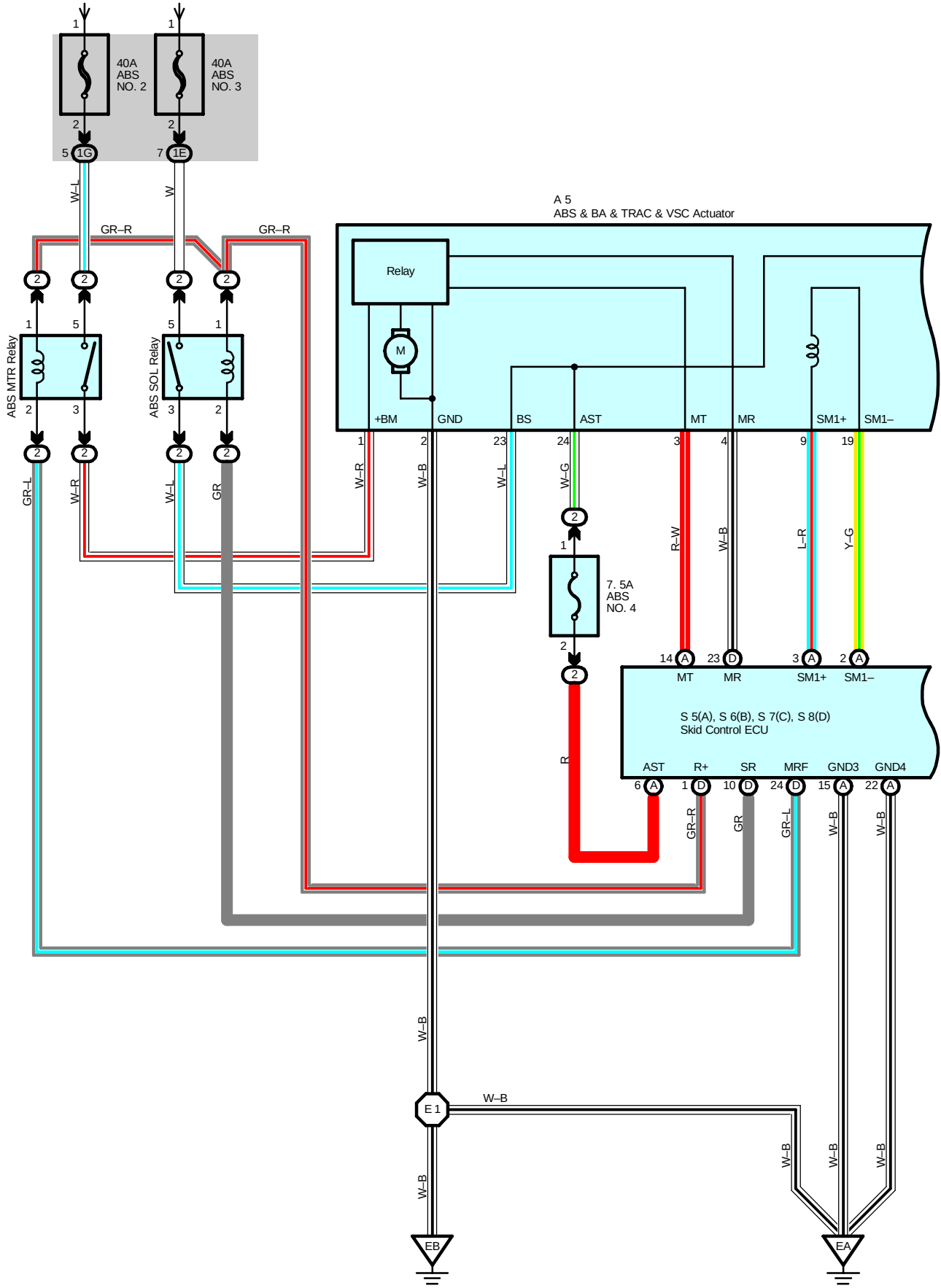
: Ground Points

Code	See Page	Ground Points Location
EB	44	Right Fender
EC	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH

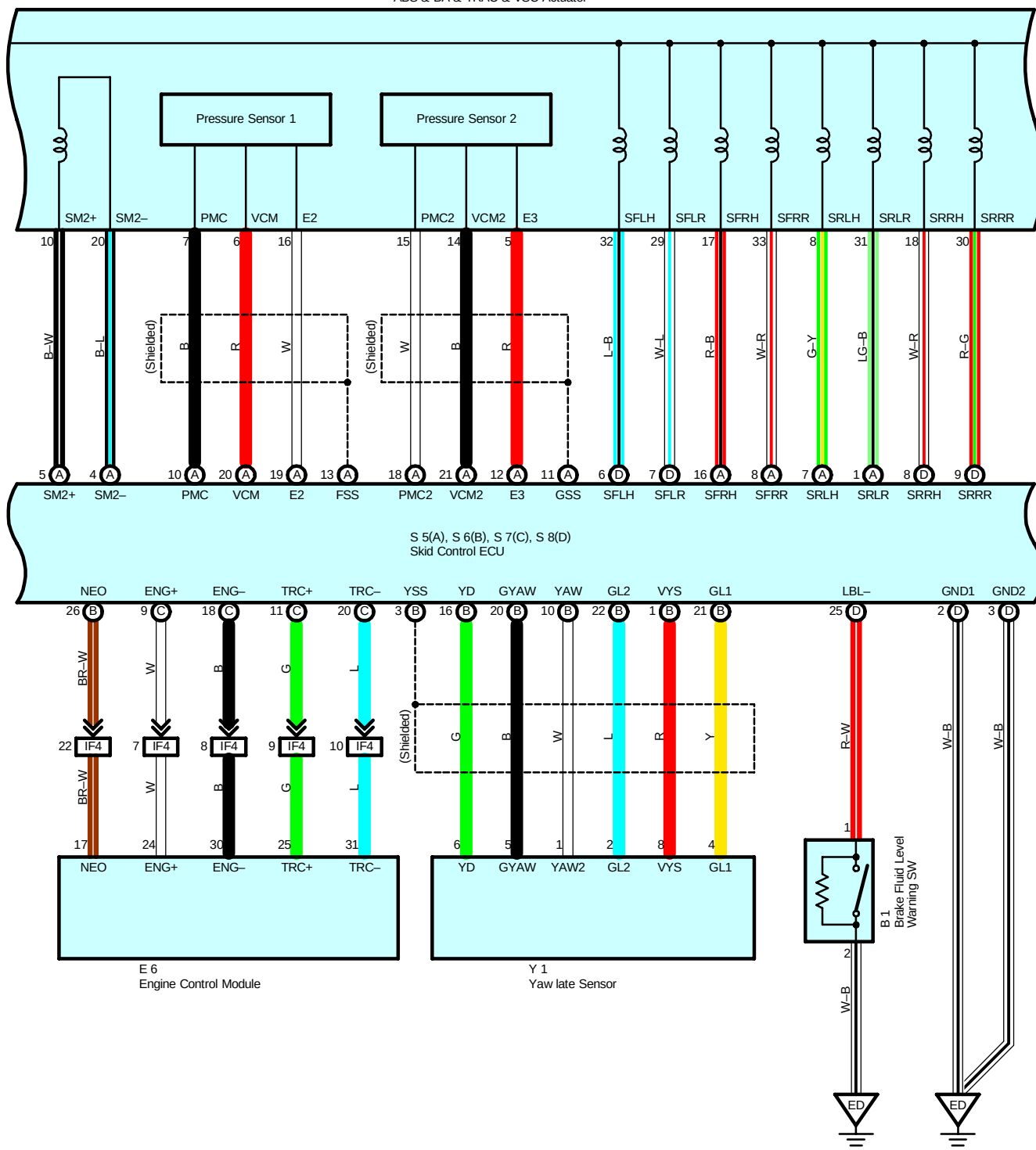
: Splice Points

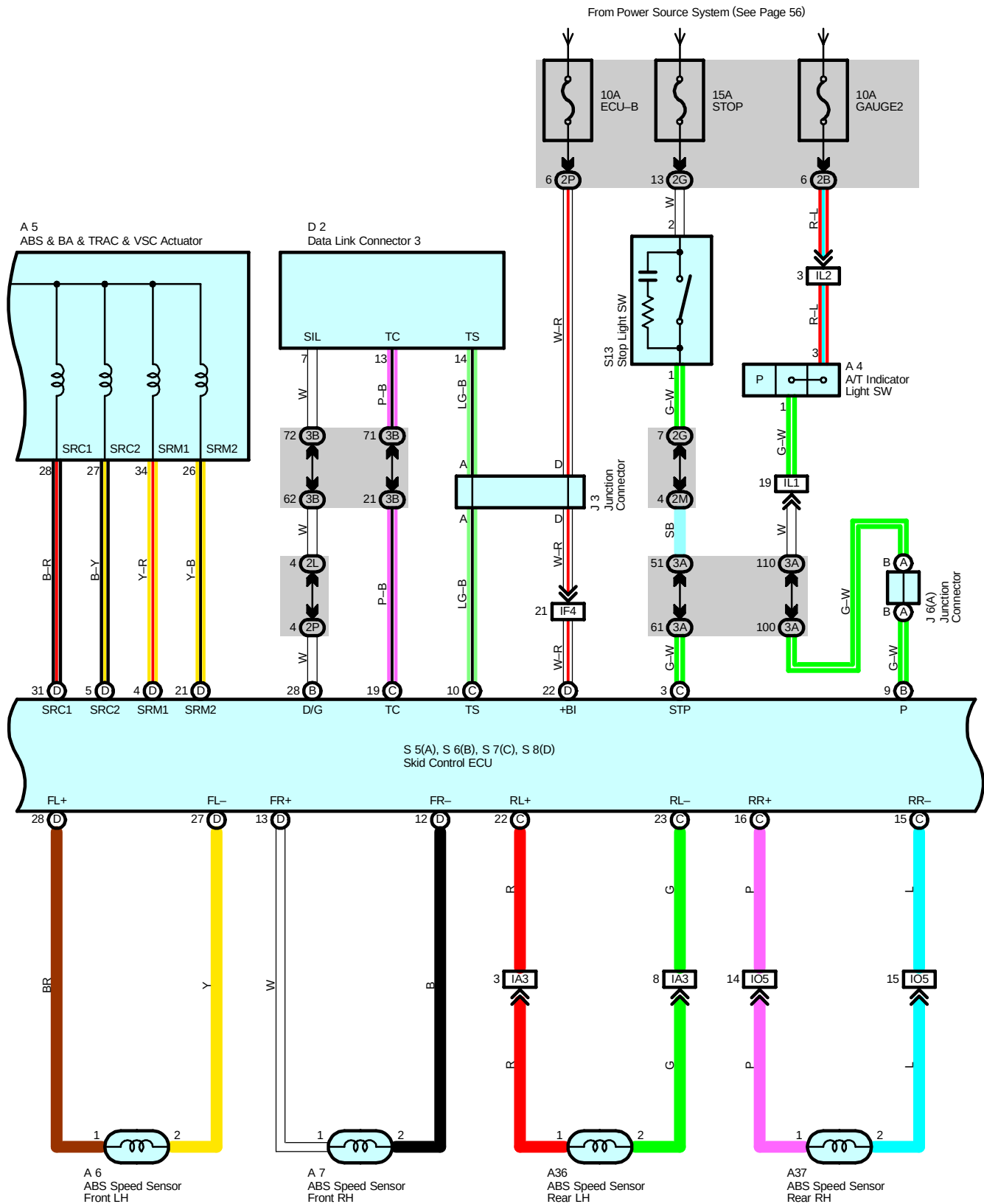
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I2	48	Engine Room Main Wire			

From Power Source System (See Page 56)



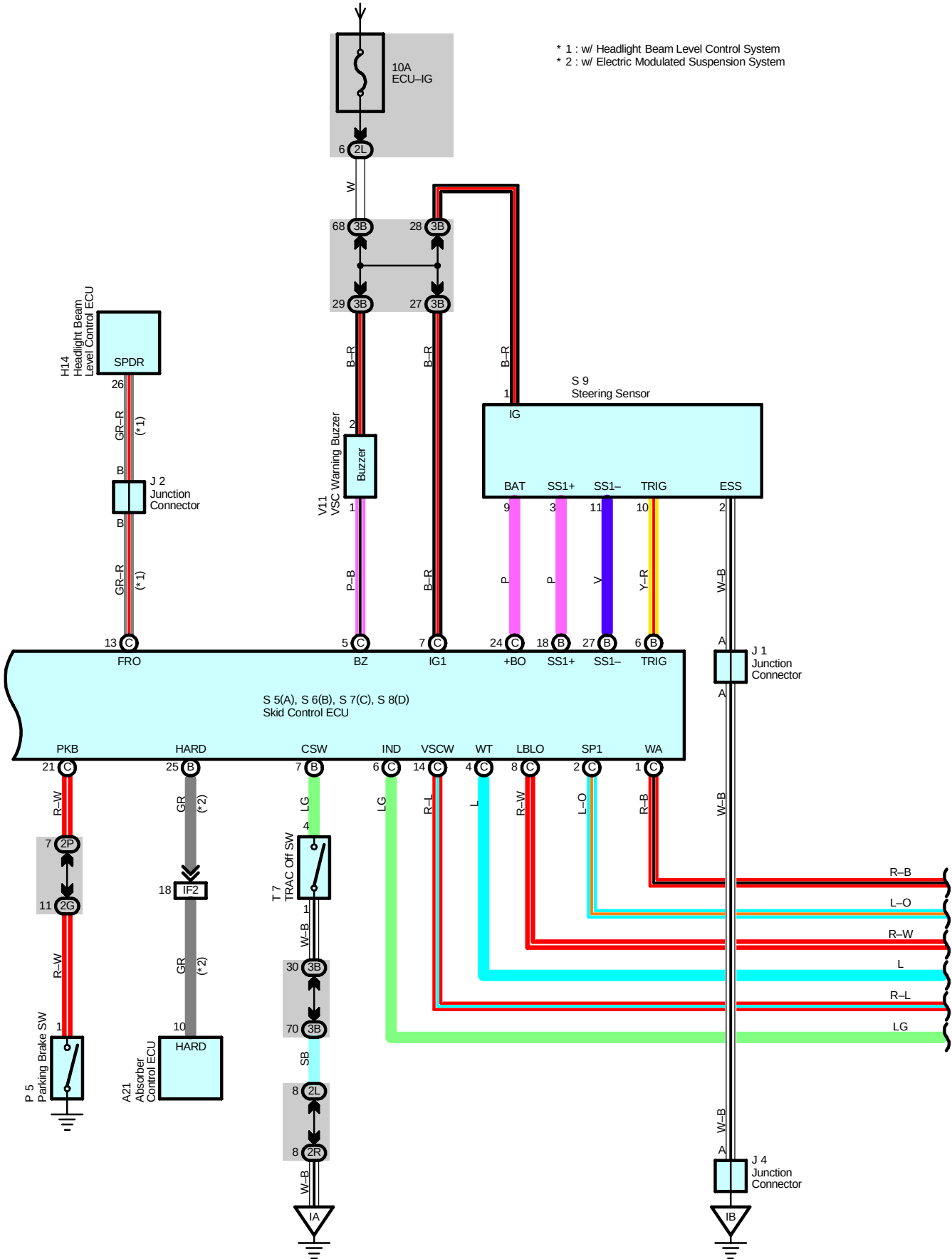
A 5
ABS & BA & TRAC & VSC Actuator

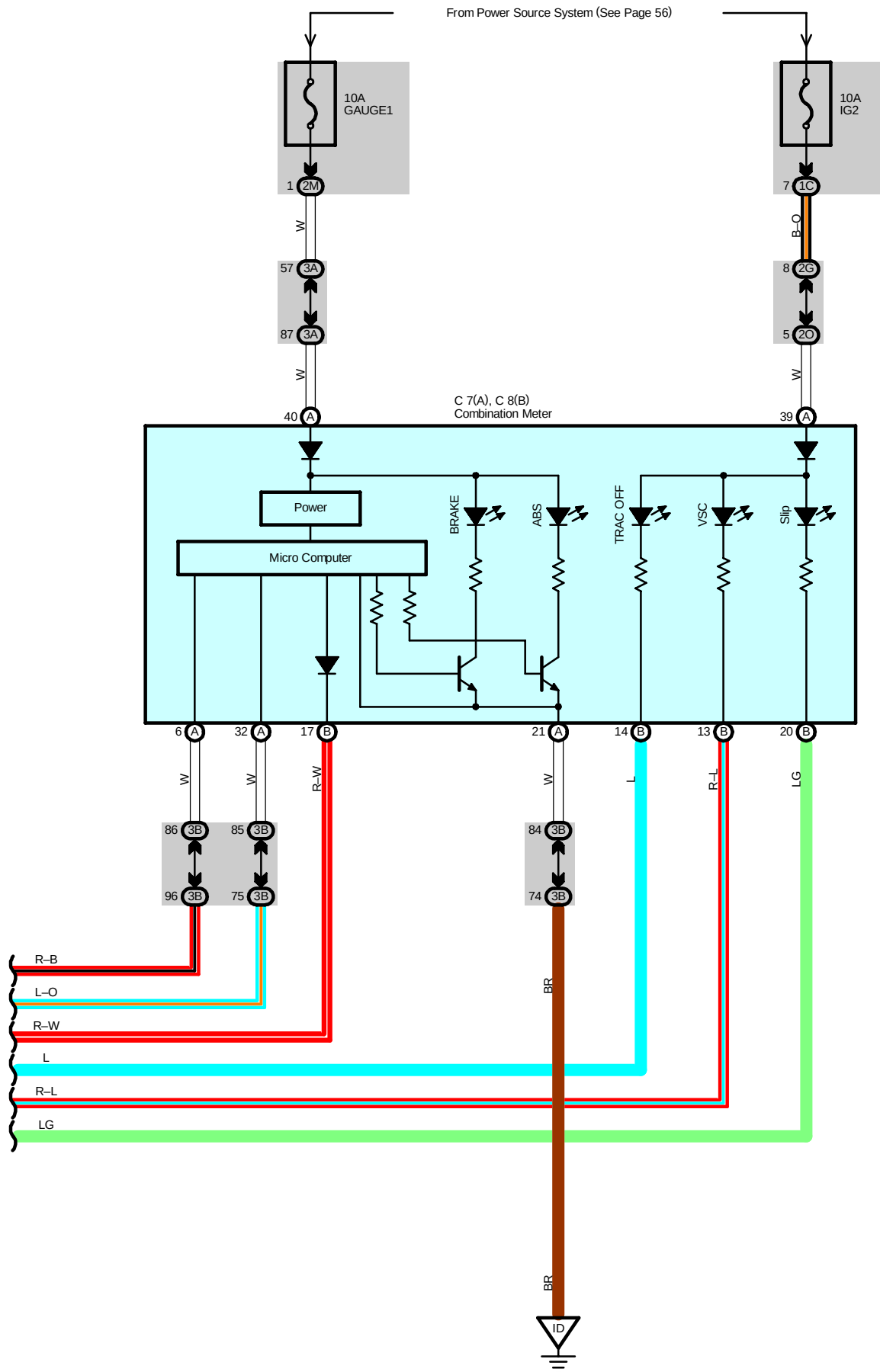




From Power Source System (See Page 56)

- * 1 : w/ Headlight Beam Level Control System
- * 2 : w/ Electric Modulated Suspension 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.

TRAC off SW

The traction control SW is used to stop the TRAC function. After the engine is started, the TRAC system is stopped (turned off) and the TRAC OFF indicator light lights up. When the TRAC 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 control SW.

VSC system cannot cut off by using TRAC off SW.

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 throttle control

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

Engine control and electronically controlled transmission control

The strong 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 throttle open request from the VSC system. As a result, the vehicle functions regardless of the ABS, TRAC, and VSC systems.

Service Hints

S5 (A), S7 (C), S8 (D) Skid Control ECU

(C) 7-Ground : Approx. 12 volts with ignition SW at ON or ST position

(D)22-Ground : Always approx. 12 volts

(A) 15, (A) 22, (D) 2, (D) 3-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	D2	38	S6	B 39
A5	36	E6	38	S7	C 39
A6	36	H14	39	S8	D 39
A7	36	J1	39	S9	39
A21	38	J2	39	S13	39
A36	40	J3	39	T7	39
A37	40	J4	39	V11	39
B1	36	J6	A 39	Y1	39
C7	A 38	P5	39		
C8	B 38	S5	A 39		

: Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	23	ABS R/B (Behind the Headlight LH)

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1E		
1G		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2P		
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

: Connector Joining Wire Harness and Wire Harness

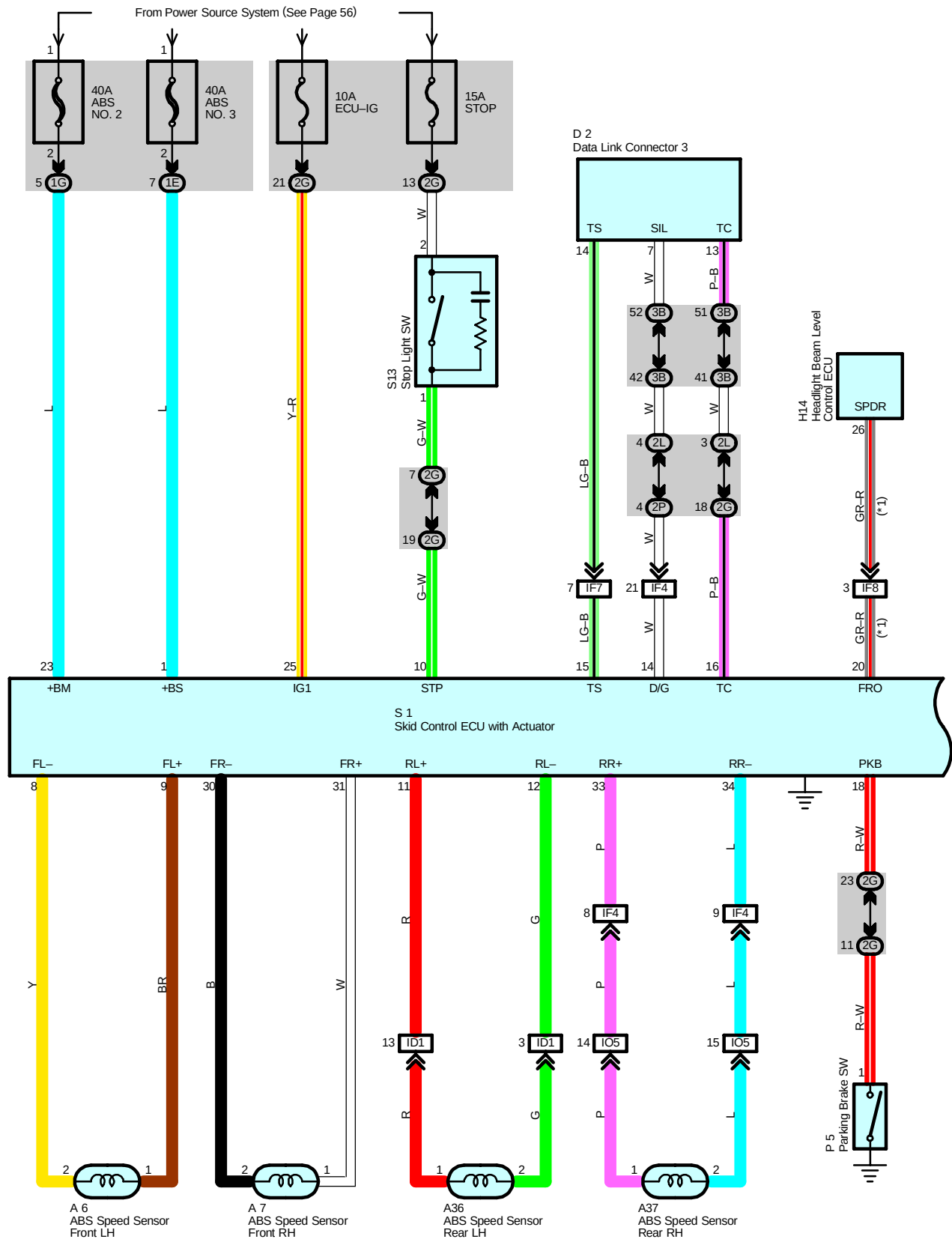
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA3	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IF2	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IO5	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

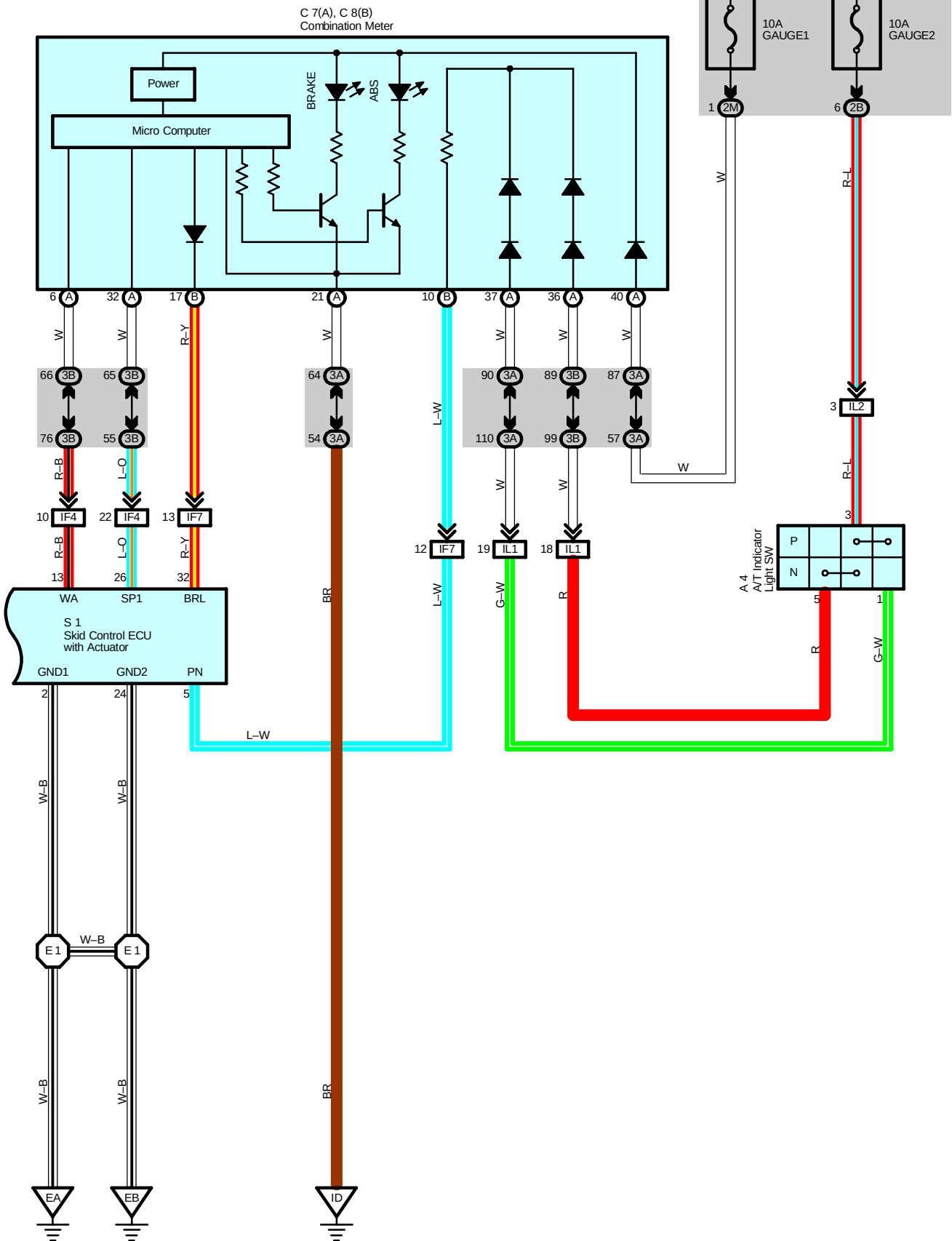
: Ground Points

Code	See Page	Ground Points Location
EA	44	Right Fender
EB		
ED	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44	Engine Room Main Wire			





System Outline

This system controls the respective brake fluid pressures acting on the disc brake cylinders of the right front wheel, left front wheel and rear wheels when the brakes are applied in a panic stop so that the wheels do not lock. This results in improved directional stability and steerability during panic braking.

1. Input Signals

(1) Speed sensor signal

The speed of the wheels is detected and input to TERMINALS 9, 11, 31 and 33 of the skid control ECU with actuator.

(2) Stop light SW signal

A signal is input to TERMINAL 10 of the skid control ECU with actuator when the brake pedal is depressed.

2. System Operation

During sudden braking the skid control ECU with actuator has signals input from each sensor, which controls the current to the solenoid inside the actuator and lets the hydraulic pressure acting on each wheel cylinder escape to the reservoir. The pump inside the actuator is also operating at this time and it returns the brake fluid from the reservoir to the master cylinder, thus preventing locking of the vehicle wheels.

If the skid control ECU with actuator judges that the hydraulic pressure acting on the wheel cylinder is insufficient, the current on the solenoid is controlled and the hydraulic pressure is increased. Holding of the hydraulic pressure is also controlled by the skid control ECU with actuator, by the same method as above. Pressure reduction, holding and increase are repeated to maintain vehicle stability and to improve steerability during sudden braking.

Service Hints

A6, A7 ABS Speed Sensor Front LH, RH

2-1 : Approx. 2.3 kΩ

A36, A37 ABS Speed Sensor Rear LH, RH

2-1 : Approx. 1.6 kΩ

S1 Skid Control ECU with Actuator

2, 24-Ground : Always continuity

25-Ground : Approx. 12 volts with the ignition SW at ON position

10-Ground : Approx. 12 volts with the brake pedal depressed

1, 23-Ground : Always approx. 12 volts

Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	A37	40	H14	39
A6	36	C7	38	P5	39
A7	36	C8	38	S1	37
A36	40	D2	38	S13	39

Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1G		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2P		
3A	35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	46	Engine Room Main Wire and Floor No.1 Wire (Left Side of Driver Side J/B)
IF4	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF7		
IF8		
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IO5	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

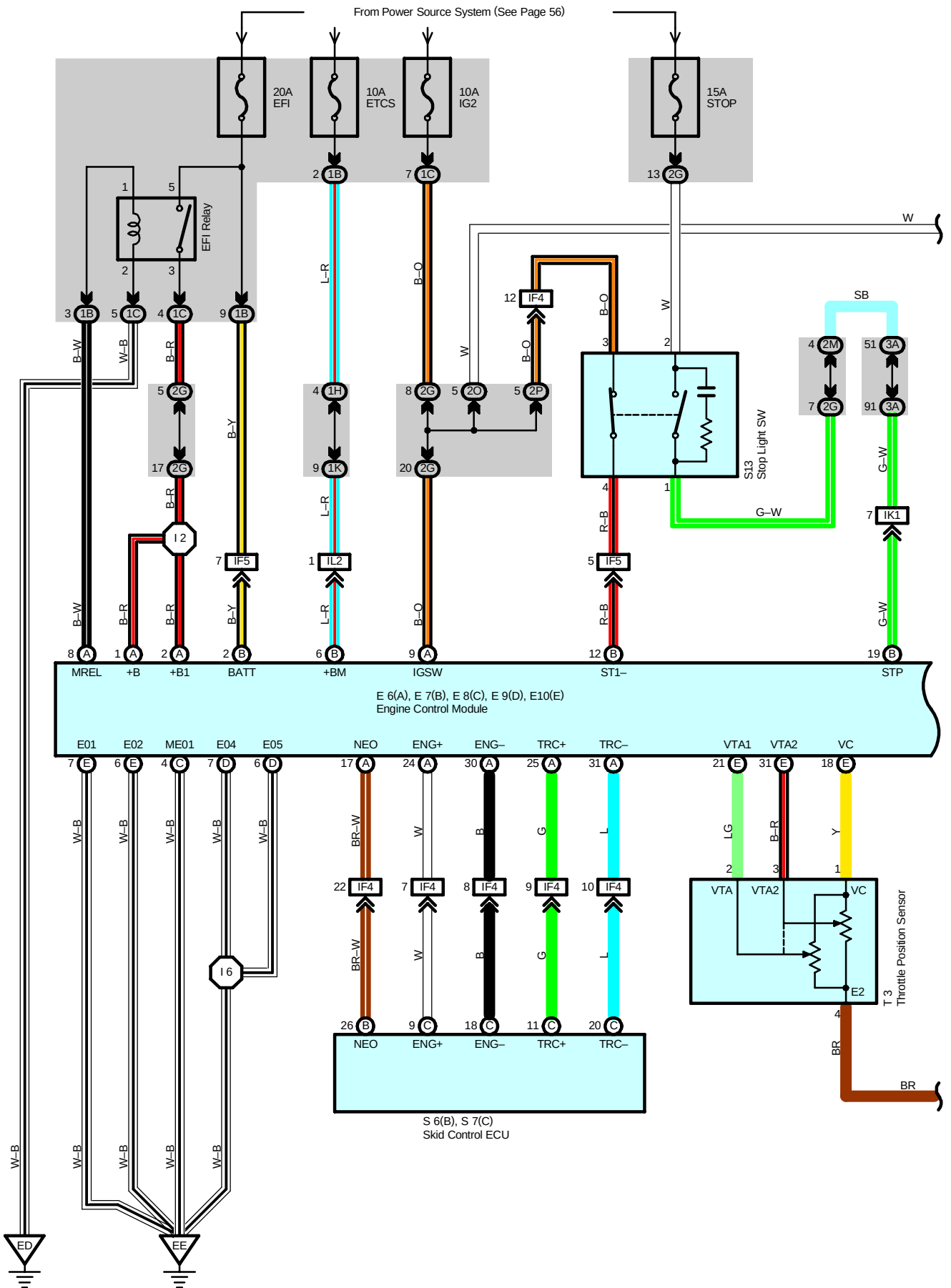
 : **Ground Points**

Code	See Page	Ground Points Location
EA	44	Right Fender
EB		
ID	46	Instrument Panel Brace RH

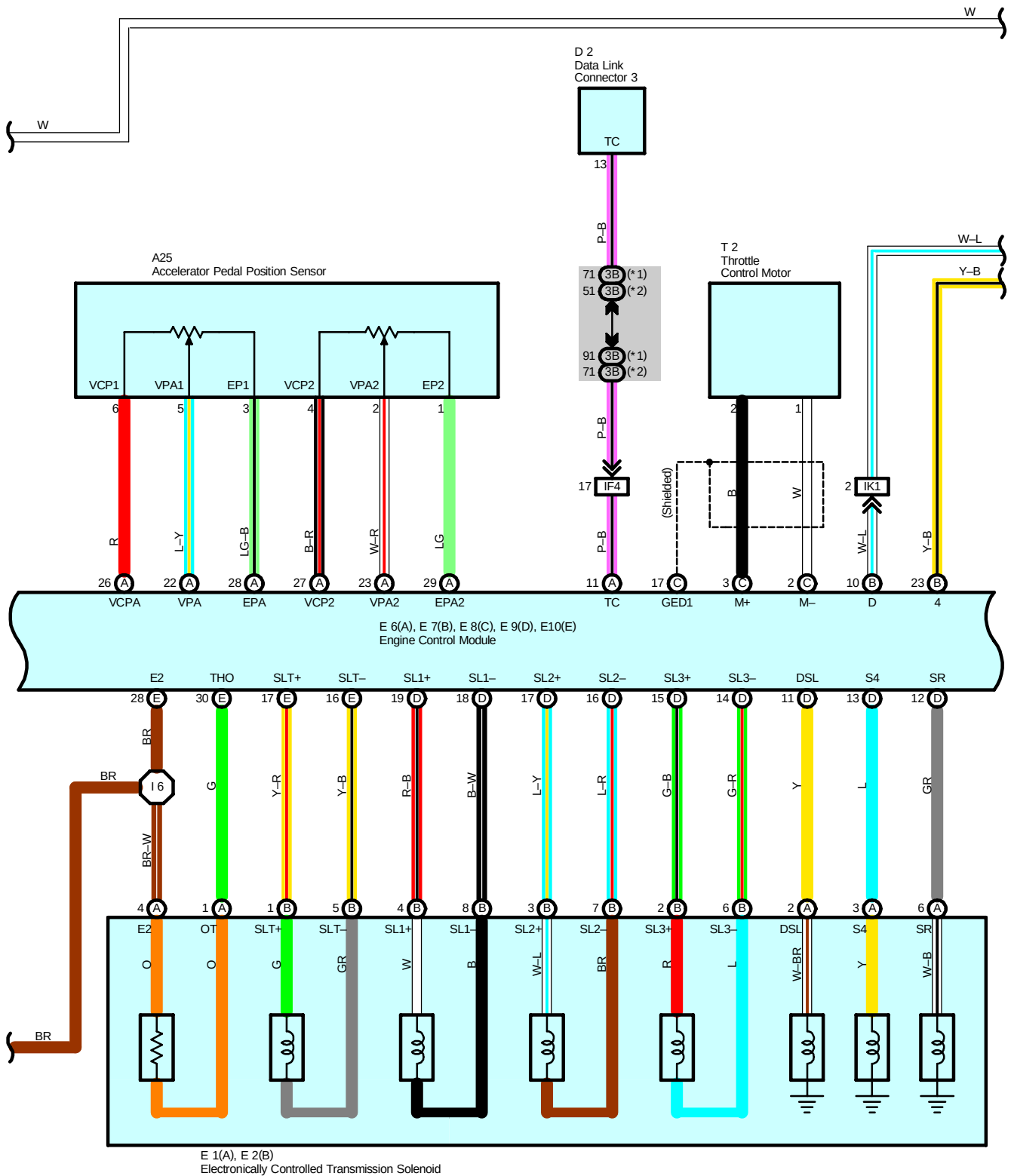
 : **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44	Engine Room Main Wire			

Cruise Control

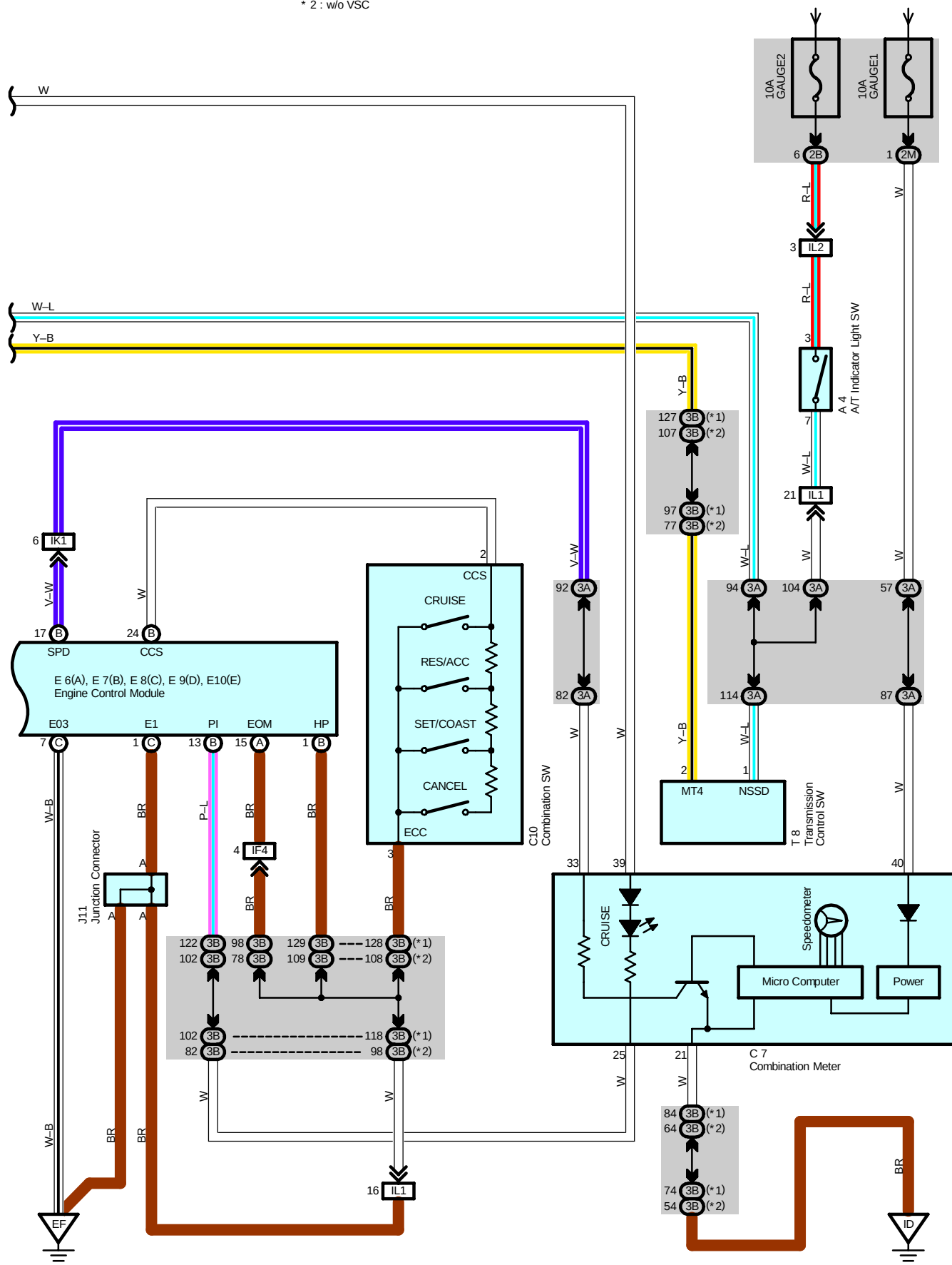


* 1 : w/ VSC
* 2 : w/o VSC



- * 1 : w/ VSC
- * 2 : w/o VSC

From Power Source System (See Page 56)



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

2. Set Speed Control

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

3. Coast Control

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

4. Accel Control

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

5. Resume Control

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

6. Manual Cancel Mechanism

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

- * The stop light SW is turned on.
- * The CANCEL SW is turned on.
- * The cruise control main SW is turned off.

7. Auto Cancel Function

If any of the following conditions is encountered, the cruise control is automatically cancelled.

- * The stop light SW wiring is faulty or short-circuited.
- * The vehicle speed signal is faulty.
- * The electronically controlled throttle malfunctions.

8. 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, if the vehicle speed exceeds the overdrive return speed (The set speed is minus 2 km/h, minus 1.2 mph) and it is decided that the slope is finished, the vehicle returns to the overdrive control mode again.

Service Hints

E6 (A), E7 (B), E8 (C), E9 (D), E10 (E) Engine Control Module

- (A) 9–Ground : Approx. 12 volts with ignition SW at ON or ST position
- (B) 2–Ground : Always approx. 12 volts
- (C)1, (C) 4, (C) 7, (D) 6, (D) 7, (E) 6, (E) 7–Ground : Always continuity
- (B)19–Ground : Approx. 12 volts with stop light SW at on
- (B)24–Ground : Continuity with cruise control main SW at on
 - Approx. 1540 Ω with CANCEL SW on in cruise control SW
 - Approx. 240 Ω with RES/ACC SW on in cruise control SW
 - Approx. 630 Ω with SET/COAST SW on in cruise control SW

C10 Combination SW

- 2–3 : Approx. 1540 Ω with CANCEL SW on
 - Approx. 240 Ω with RES/ACC SW on
 - Approx. 630 Ω with SET/COAST SW on

Cruise Control

: Parts Location

Code		See Page		Code		See Page		Code		See Page	
A4		36		E6	A	38		S7	C	39	
A25		38		E7	B	38		S13		39	
C7		38		E8	C	38		T2		37	
C10		38		E9	D	38		T3		37	
D2		38		E10	E	38		T8		39	
E1	A	36		J11		39					
E2	B	36		S6	B	39					

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1H		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2O		
2P		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF4	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF5		
IK1	48	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: Ground Points

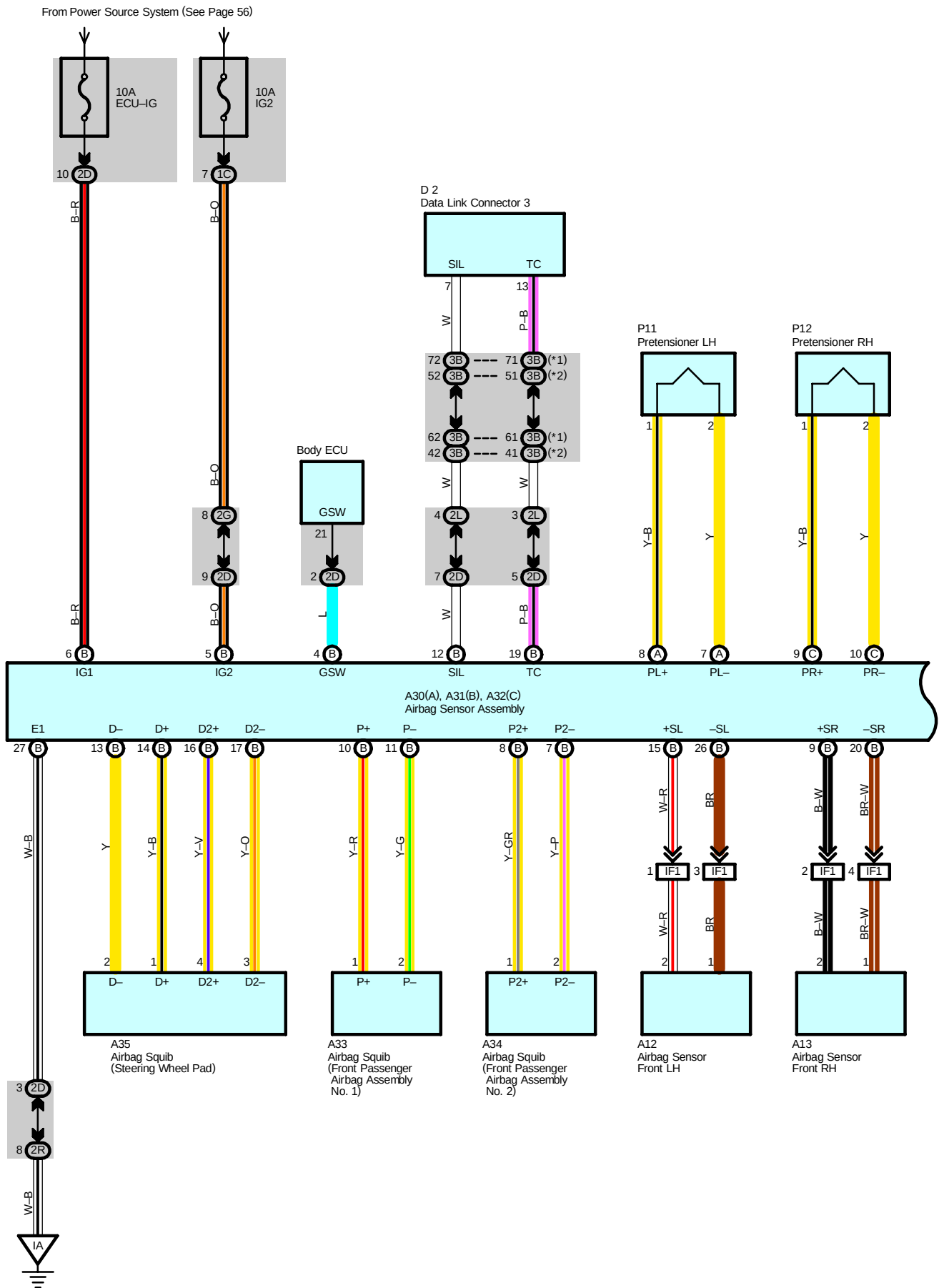
Code	See Page	Ground Points Location
ED	44	Left Fender
EE	44	Left Side of Cylinder Head
EF	44	Intake Side of Cylinder Block
ID	46	Instrument Panel Brace RH

: Splice Points

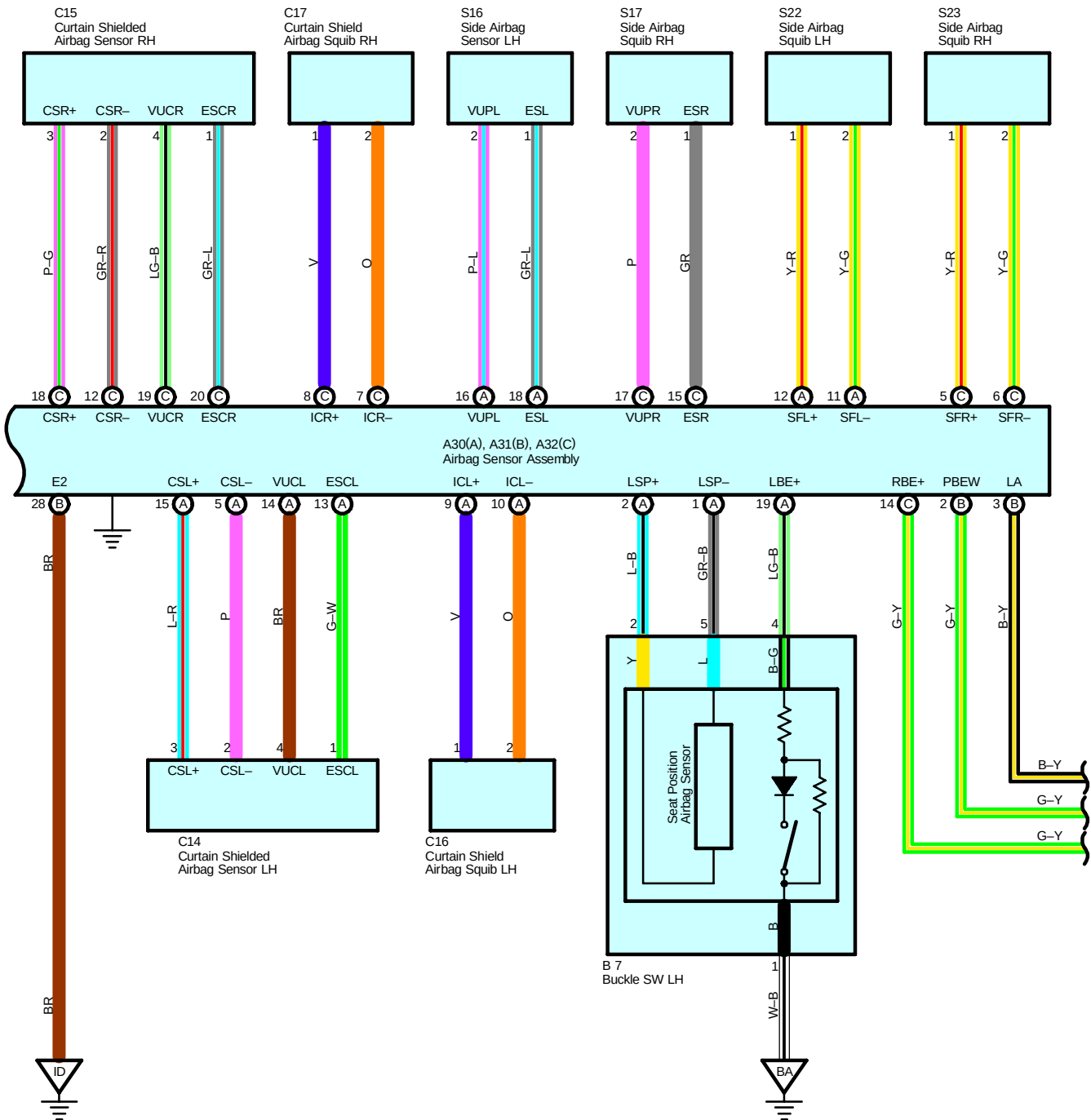
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I2	48	Engine Room Main Wire	I6	48	Engine Wire

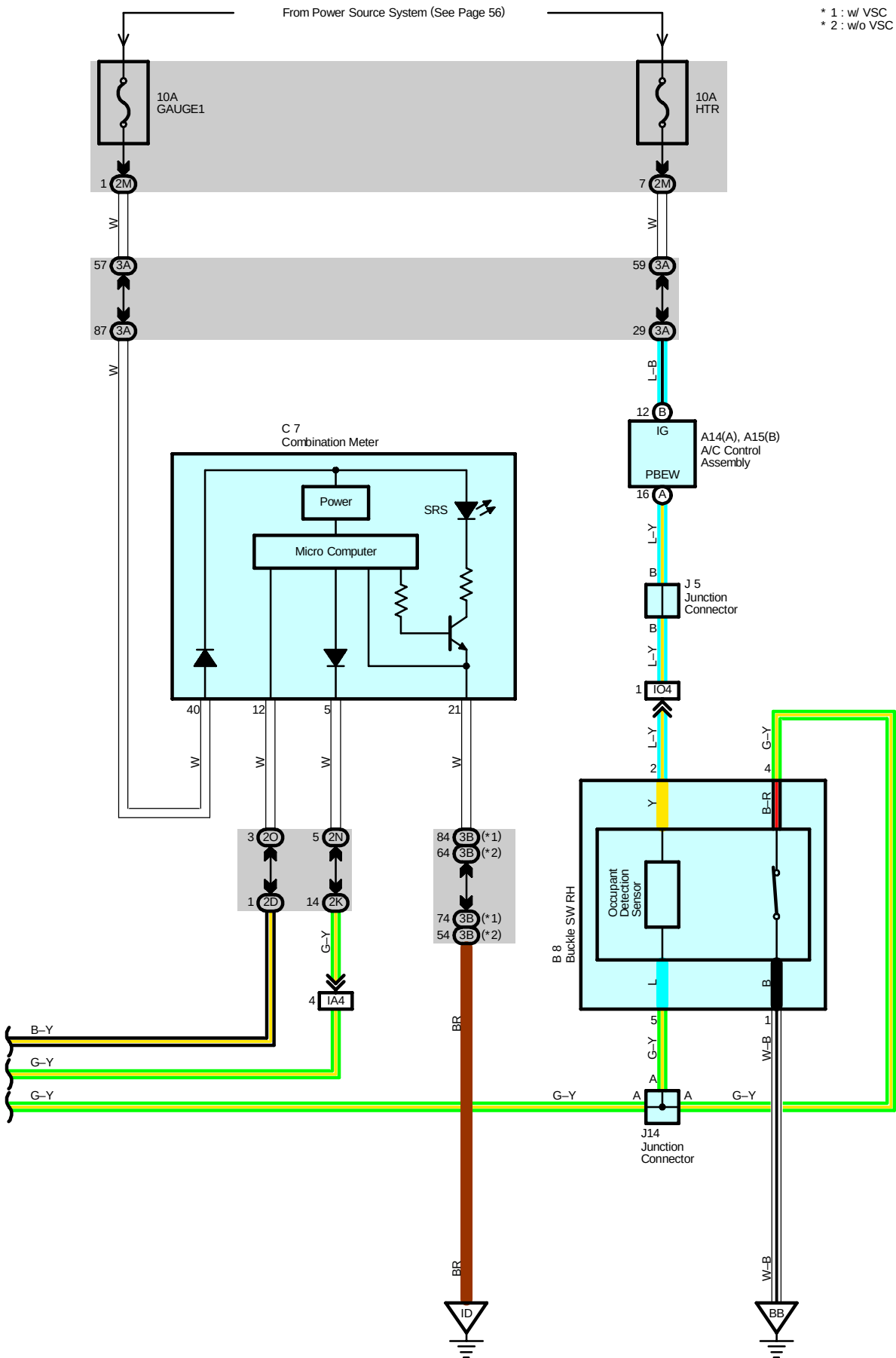
NOTICE: When inspecting or repairing the SRS, perform the operation in accordance with the following precautionary instructions and the procedure and precautions in the Repair Manual for the applicable model year.

- 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 after 90 seconds from when the ignition switch 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 be deployed.)
- When the negative (–) terminal cable is disconnected from the battery, the memory of the clock and audio system will be canceled. So before starting work, make a record of the contents memorized in the audio memory system. When work is finished, reset the audio systems as they were before and adjust the clock. This vehicle has power tilt and 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 the memory contents. So when the work is finished, it will be necessary to explain this fact to the customer, and ask the customer to adjust the features and reset the memory. To avoid erasing the memory in each memory system, never use a back-up power supply from outside the vehicle.
- Before repairs, remove the airbag sensor if shocks are likely to be applied to the sensor during repairs.
- Do not expose the steering wheel pad, front passenger airbag assembly, side airbag assembly, curtain shield airbag assembly, seat belt pretensioner, airbag sensor assembly or side airbag sensor assembly directly to hot air or flames.
- Even in cases of a minor collision where the SRS does not deploy, the steering wheel pad, front passenger airbag assembly, side airbag assembly, curtain shield airbag assembly, seat belt pretensioner, airbag sensor assembly and side airbag sensor assembly should be inspected.
- Never use SRS parts from another vehicle. When replacing parts, replace them with new parts.
- Never disassemble and repair the steering wheel pad, front passenger airbag assembly, side airbag assembly, curtain shield airbag assembly, seat belt pretensioner, airbag sensor assembly or side airbag sensor assembly in order to reuse it.
- If the steering wheel pad, front passenger airbag assembly, side airbag assembly, curtain shield airbag assembly, seat belt pretensioner, airbag sensor assembly or side airbag sensor assembly has been dropped, or if there are cracks, dents or other defects in the case, bracket or connector, replace them with new ones.
- Use a volt/ohmmeter with high impedance (10 k Ω /V minimum) for troubleshooting the system's electrical circuits.
- Information labels are attached to the periphery of the SRS components. Follow the instructions on the notices.
- After work on the SRS is completed, perform the SRS warning light check.
- If the vehicle is equipped with a mobile communication system, refer to the precaution in the IN section of the Repair Manual.



* 1 : w/ VSC
 * 2 : w/o VSC





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, the current from the ECU-IG fuse flows to TERMINAL (B) 6 of the airbag sensor assembly, and from the IG2 fuse to TERMINAL (B) 5 of the airbag sensor assembly.

If an accident occurs while driving, when the frontal impact exceeds a set level, the current from the ECU-IG or IG2 fuse flows to TERMINALS (B) 14, (B) 16, (B) 10, (B) 8, (A) 12, (C) 5, (A) 9, (C) 8, (A) 8 and (C) 9 of the airbag sensor assembly to the airbag squibs and the pretensioners to TERMINALS (B) 13, (B) 17, (B) 11, (B) 7, (A) 11, (C) 6, (A) 10, (C) 7, (A) 7 and (C) 10 of the airbag sensor assembly to TERMINAL (B) 27, (B) 28 or BODY GROUND to GROUND, so that current flows to the airbag squibs and the pretensioners and causes them to operate.

When the side impact also exceeds a set level, the current from the ECU-IG or IG2 fuse flows to TERMINALS (A) 12, (C) 5, (A) 9 and (C) 8 of the airbag sensor assembly to the side airbag squibs and the curtain shield airbag squibs TERMINALS (A) 11, (C) 6, (A) 10 and (C) 7 of the airbag sensor assembly to TERMINAL (B) 27, (B) 28 or BODY GROUND to GROUND, causing side airbag squibs and curtain shield 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 ease an impact on the head of the front and rear passengers and reduce risks of injury.

The pretensioners make sure of the seat belt restrainability.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A12	36	A35	38	J5	39
A13	36	B7	42	J14	40
A14	A 38	B8	42	P11	41
A15	B 38	C7	38	P12	41
A30	A 38	C14	40	S16	41
A31	B 38	C15	40	S17	41
A32	C 38	C16	40	S22	42
A33	38	C17	40	S23	42
A34	38	D2	38		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2D	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2N		
2O		
2R		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IF1	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)



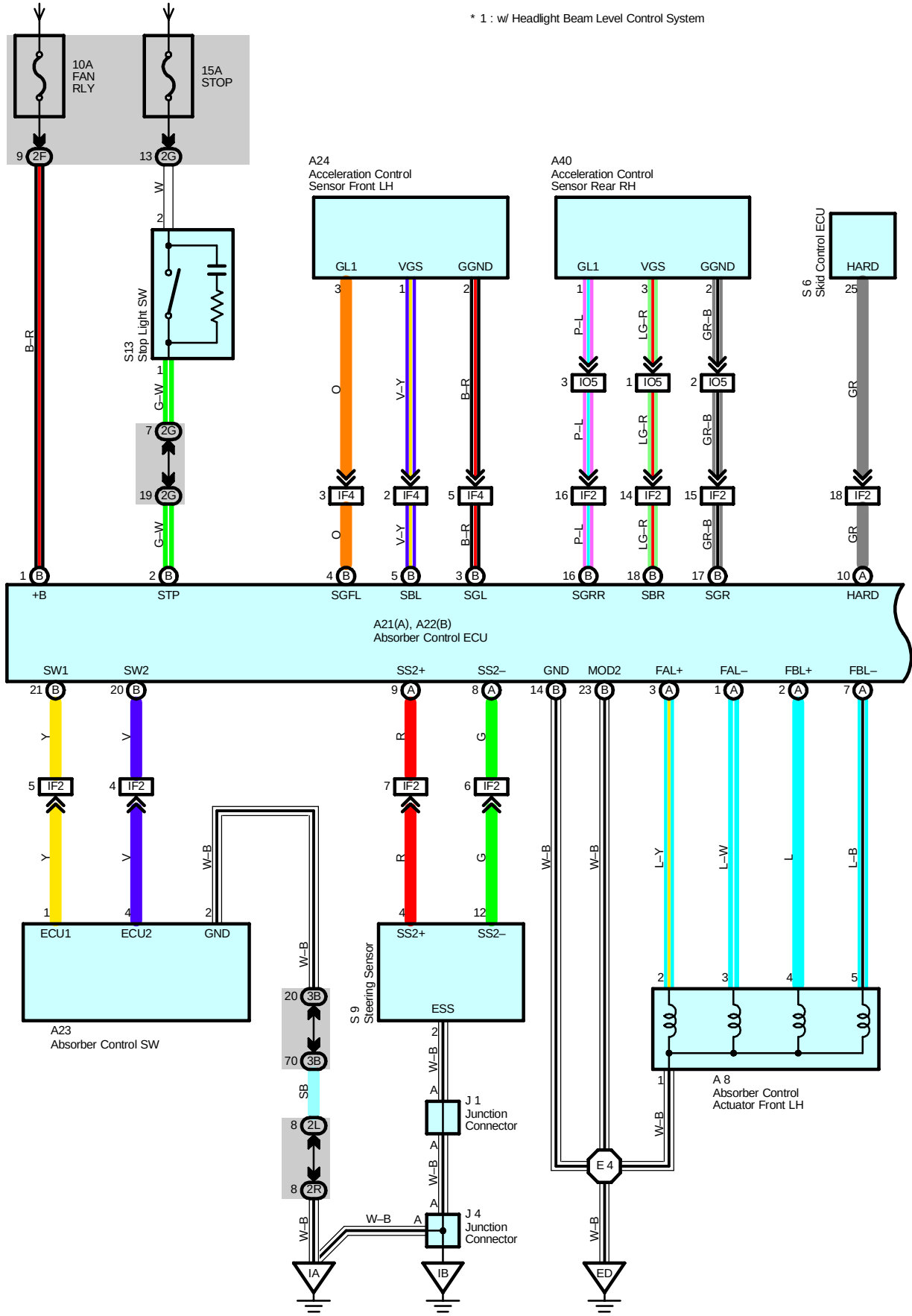
: Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat

Electric Modulated Suspension

From Power Source System (See Page 56)

* 1 : w/ Headlight Beam Level Control System



Electric Modulated Suspension

System Outline

Electric modulated suspension system is the damping force control system using several signals which restrains the vehicle movement (Such as rolling, diving, and squat) by a driver's operation together with restraining and absorbing the vehicle movement change and vibration against the unevenness of the road.

(1) Steering sensor signal

To input the rotation angle of the steering wheel into the TERMINALS SS2+ and SS2- of the absorber control ECU.

(2) Speed sensor signal

To detect the vehicle speed at ABS speed sensor front RH, rear RH, and input to the TERMINAL FRO of the absorber control ECU from skid control ECU.

(3) Stop light SW signal

To detect the signal of the brake in operation and input it into the TERMINAL STP of the absorber control ECU.

(4) Engine rotation signal

To detect the engine speed and input it into the TERMINAL TACH of the absorber control ECU.

(5) Absorber control SW signal

To detect the switch condition and input it into the TERMINALS SW1 and SW2 of the absorber control ECU.

Service Hints

A22 (B) Absorber Control ECU

(B) 1-Ground : Approx. 12 volts with ignition SW at ON or ST position

(B) 2-Ground : Approx. 12 volts with brake pedal depressed

(B) 14, (B) 23-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A8	36	A40	40	J4	39
A9	36	C7	38	J12	40
A21	A 38	D2	38	J13	40
A22	B 38	E6	38	S6	39
A23	38	H14	39	S9	39
A24	38	J1	39	S13	39
A38	40	J2	39		
A39	40	J3	39		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2G		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	46	Engine Room Main Wire and Floor No.1 Wire (Left Side of Driver Side J/B)
IF2	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IO5	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

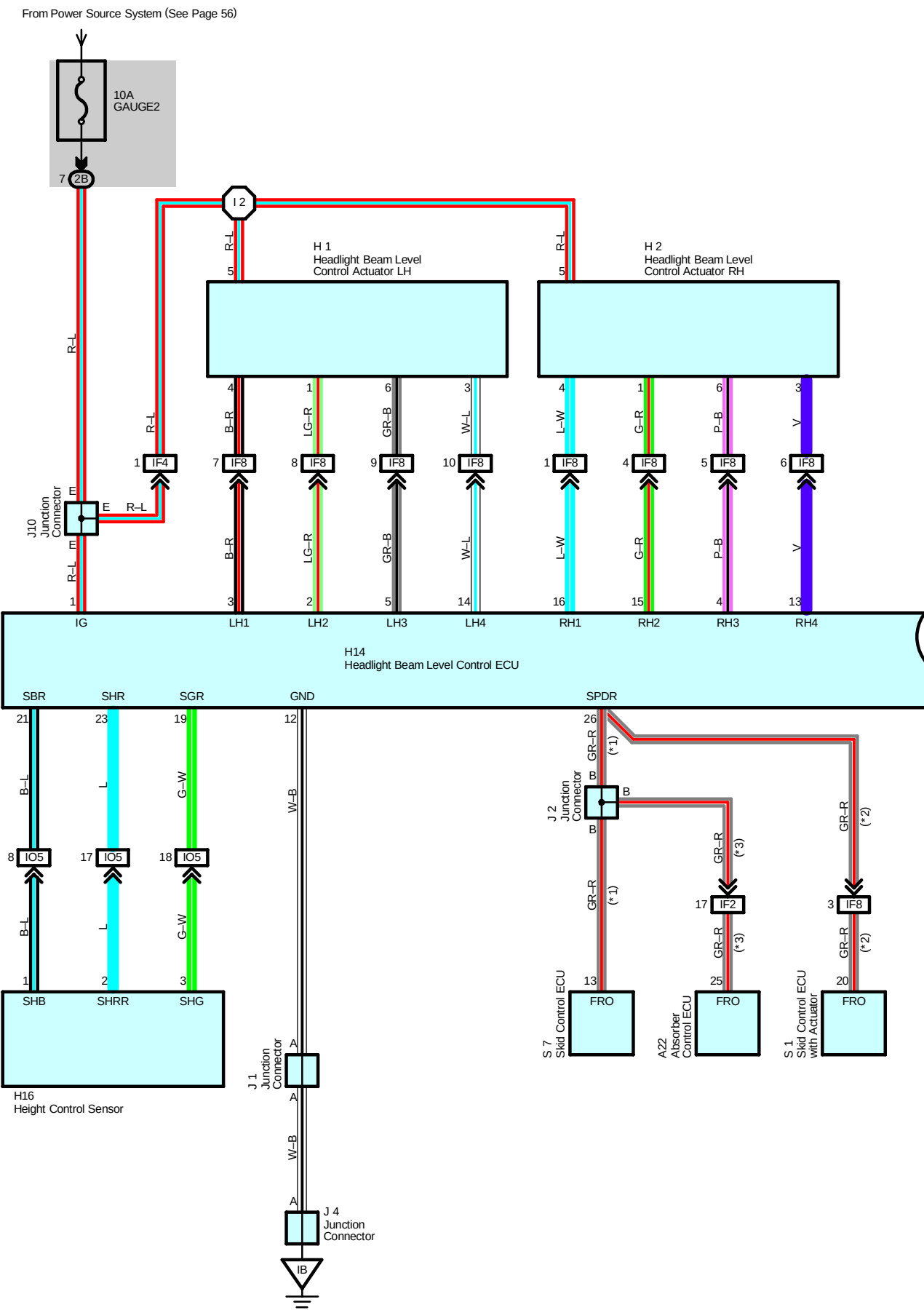
**: Ground Points**

Code	See Page	Ground Points Location
EB	44	Right Fender
ED	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH
ID	46	Instrument Panel Brace RH
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat
BC	50	Front Side of Rear Quarter Wheel House LH
BD	50	Front Side of Rear Quarter Wheel House RH

**: Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E4	44	Engine Room Main Wire	I2	48	Engine Room Main Wire

Headlight Beam Level Control



Headlight Beam Level Control

Service Hints

H14 Headlight Beam Level Control ECU

10–Ground : Always approx. 12 volts

1–Ground : Approx. 12 volts with ignition SW at ON or ST position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A22	38	H2	36	J5	39
B8	42	H14	39	J10	39
C7	A 38	H16	40	S1	37
C8	B 38	J1	39	S7	39
D2	38	J2	39		
H1	36	J4	39		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2O	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IF8		
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO5		

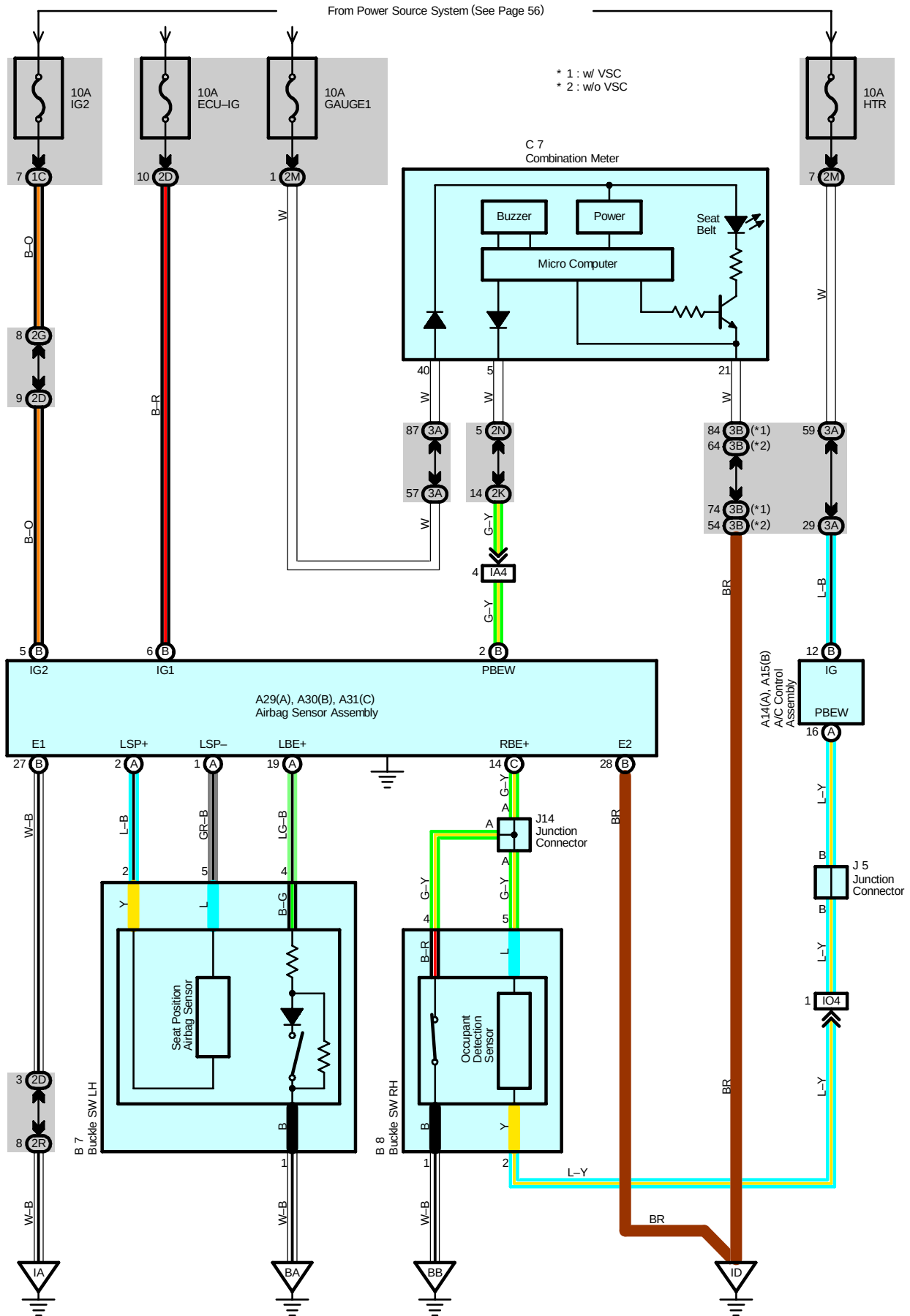
: Ground Points

Code	See Page	Ground Points Location
IB	46	Instrument Panel Brace LH
BB	50	Under the Front Passenger's Seat

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I2	48	Engine Room Main Wire			

Seat Belt Warning



System Outline

When the driver has not fastened the seat belt while the ignition SW is ON, the driver seat belt warning light blinks, and a warning buzzer comes on.

Also, in the front passenger seat, a sensor recognizes passenger, and when the passenger has not fastened the seat belt, the front passenger seat belt warning light blinks.

Service Hints

B7 Buckle SW LH

4-1 : Closed with driver's seat belt in use

B8 Buckle SW RH

2-1 : Closed with front passenger's seat belt in use

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A14	A	38	A31	C	38
A15	B	38	B7		42
A29	A	38	B8		42
A30	B	38	C7		38

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2D	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2N		
2R		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	

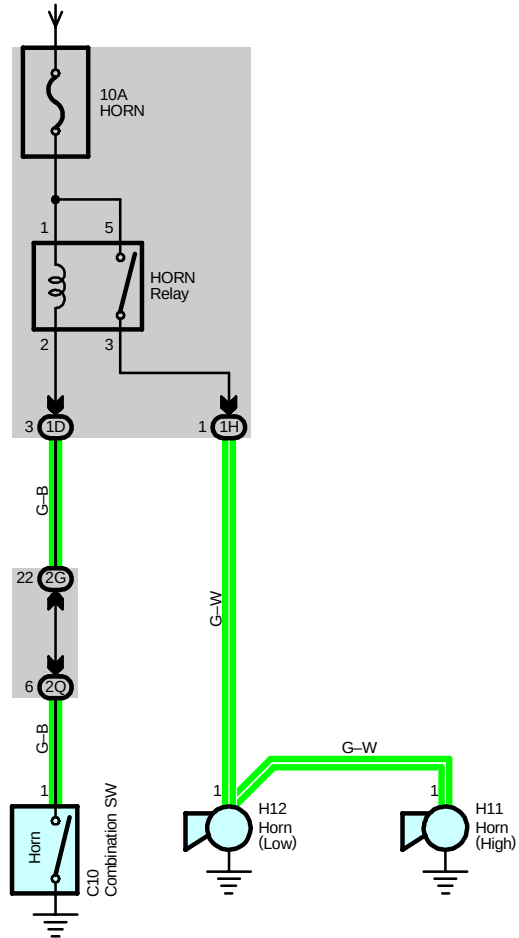
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat

From Power Source System (See Page 56)



Service Hints

HORN Relay

5-3 : Closed with the horn SW on

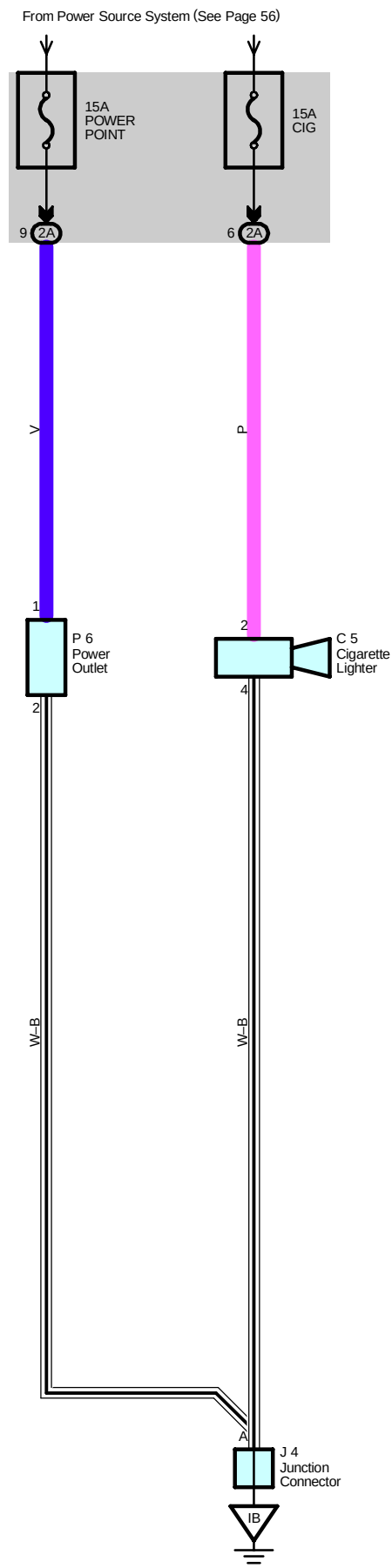
: Parts Location

Code	See Page	Code	See Page	Code	See Page
C10	38	H11	36	H12	36

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2Q	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

Cigarette Lighter and Power Outlet



Service Hints

C5 Cigarette Lighter

2-Ground : Approx. 12 volts with ignition SW at ACC or ON position

4-Ground : Always continuity

P6 Power Outlet

1-Ground : Approx. 12 volts with ignition SW at ACC or ON position

2-Ground : Always continuity

: Parts Location

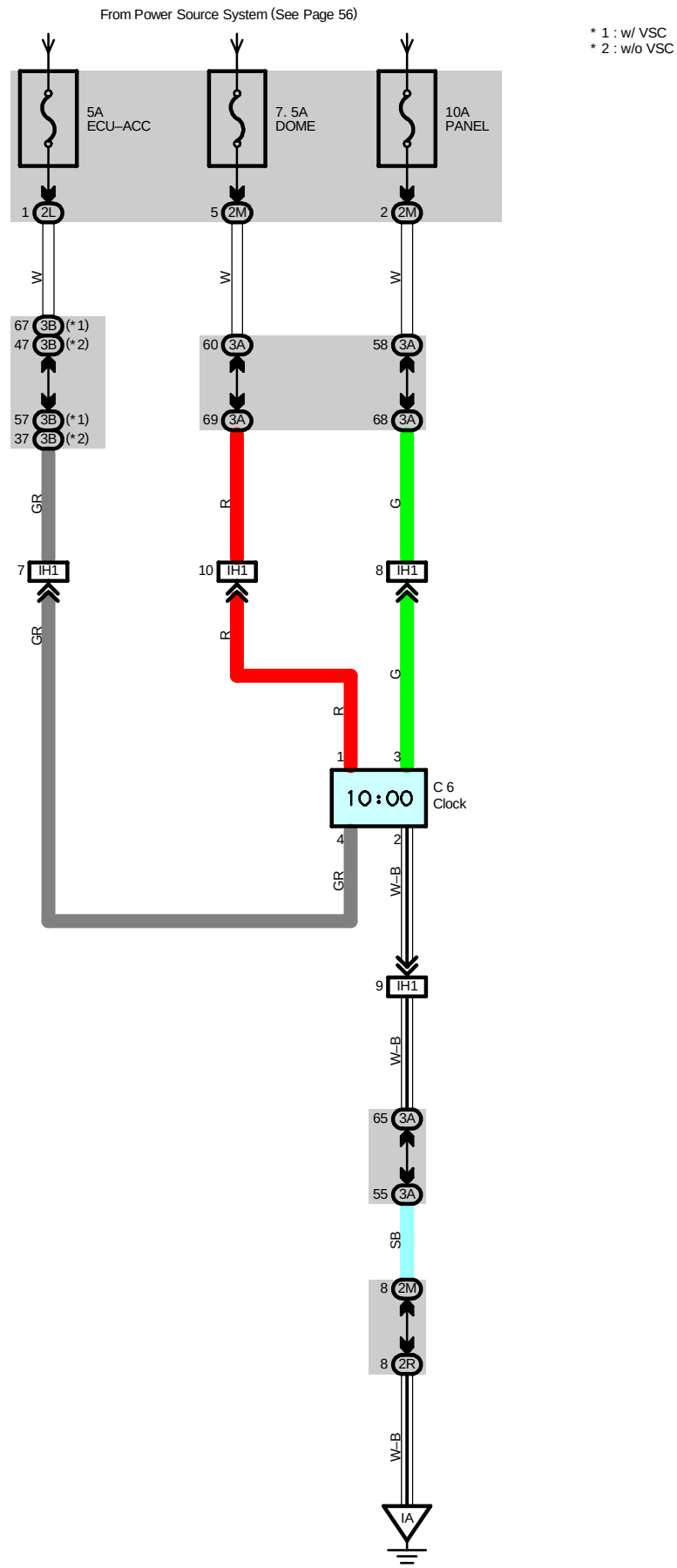
Code	See Page	Code	See Page	Code	See Page
C5	38	J4	39	P6	39

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Ground Points

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



Service Hints

C6 Clock

- 1-Ground : Always approx. 12 volts (Power for clock)
- 4-Ground : Approx. 12 volts with ignition SW at ACC or ON position (Power for indication)
- 2-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C6	38				

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2R		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	

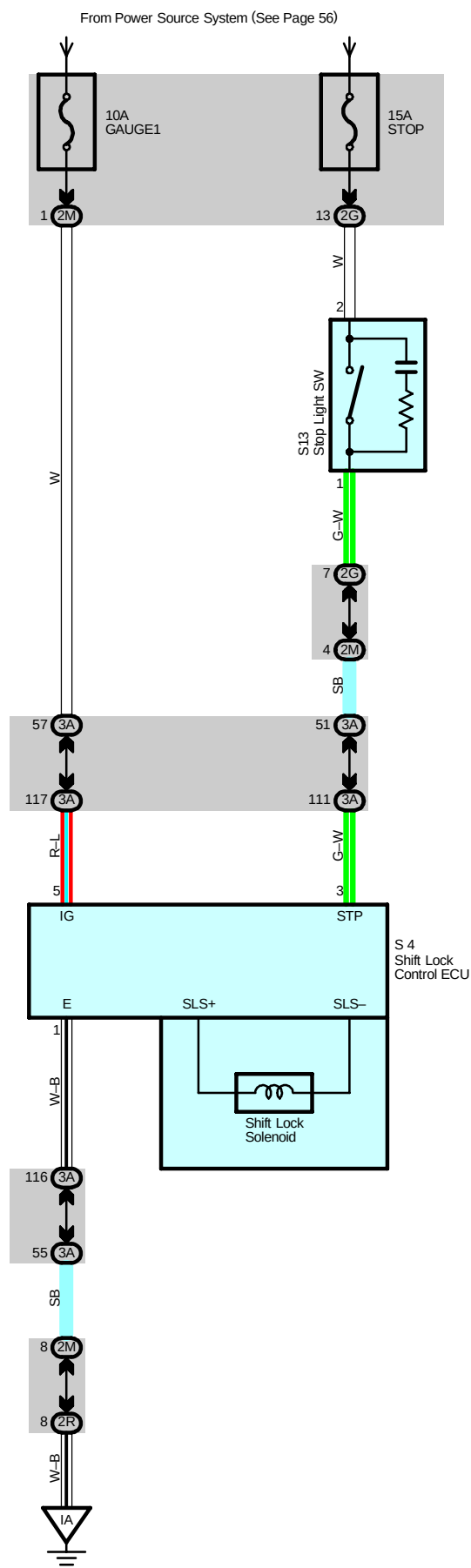
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IH1	48	Instrument Panel Wire and Instrument Panel No.4 Wire (Behind the A/C Control Assembly)

: Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH

Shift Lock



System Outline

Shift Lock Mechanism

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

Service Hints

S4 Shift Lock Control ECU

5-Ground : Approx. 12 volts with ignition SW at ON or ST position

1-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
S4	39	S13	39		

○ : Junction Block and Wire Harness Connector

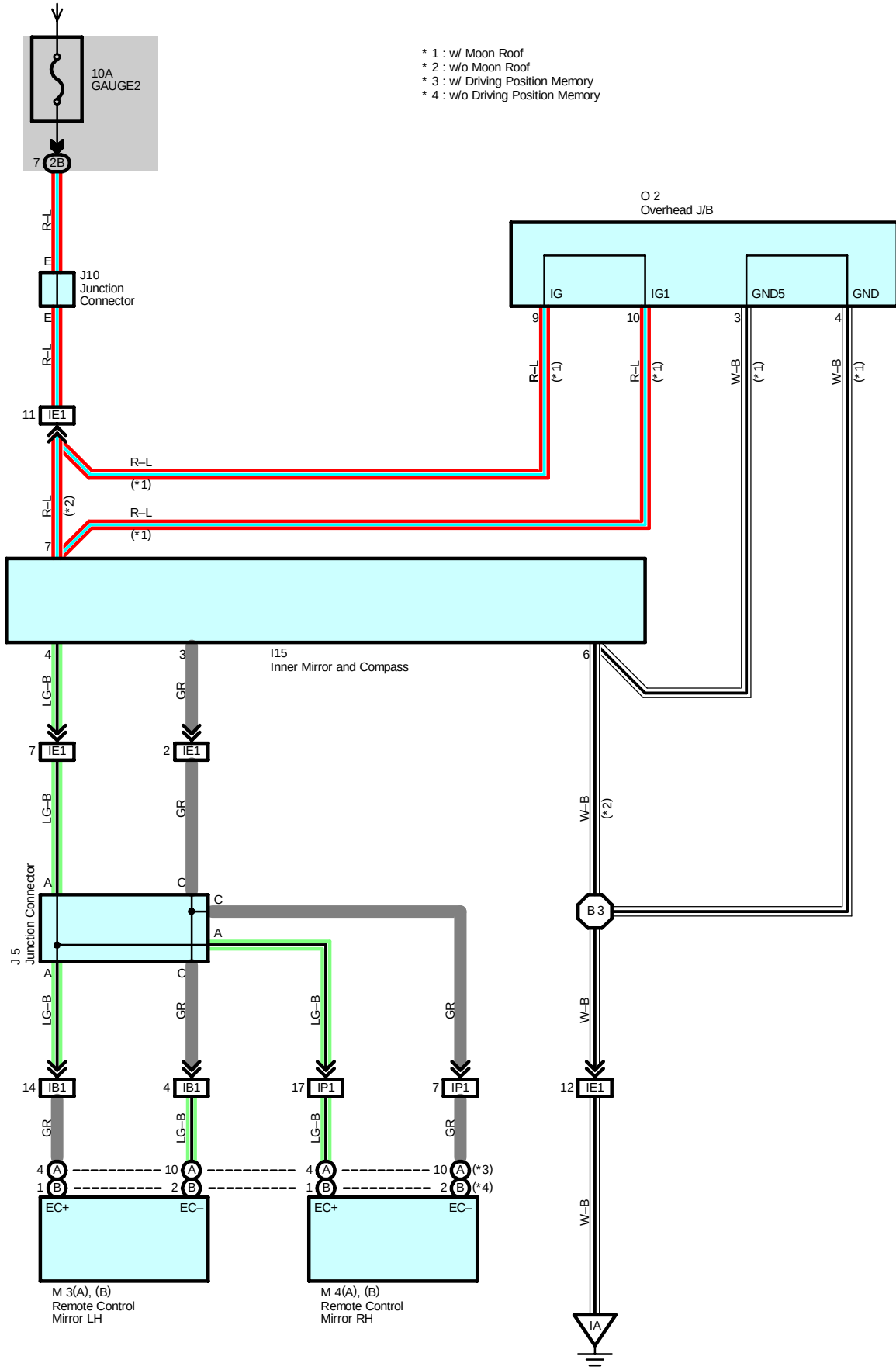
Code	See Page	Junction Block and Wire Harness (Connector Location)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	

▽ : Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH

Automatic Glare-Resistant EC Mirror and Compass

From Power Source System (See Page 56)



Service Hints

I15 Inner Mirror and Compass

7–Ground : Approx. 12 volts with ignition SW at ON or ST position

6–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
I15	40	M3	A	41	
J5	39		B	41	
J10	39	M4	A	41	

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

: Ground Points

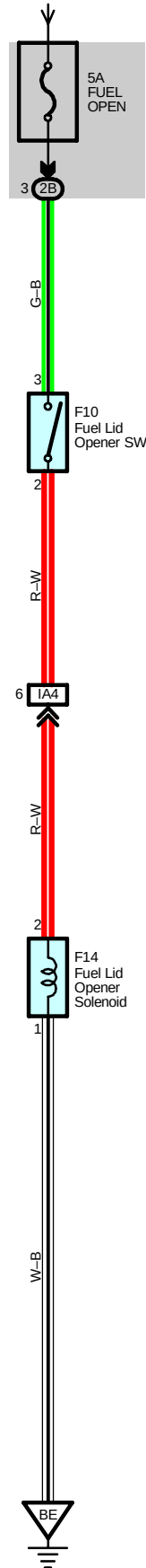
Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B3	50	Roof Wire			

Fuel Lid Opener

From Power Source System (See Page 56)



Service Hints

F10 Fuel Lid Opener SW

3-2 : Closed with fuel lid opener SW on

: Parts Location

Code	See Page	Code	See Page	Code	See Page
F10	39	F14	40		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

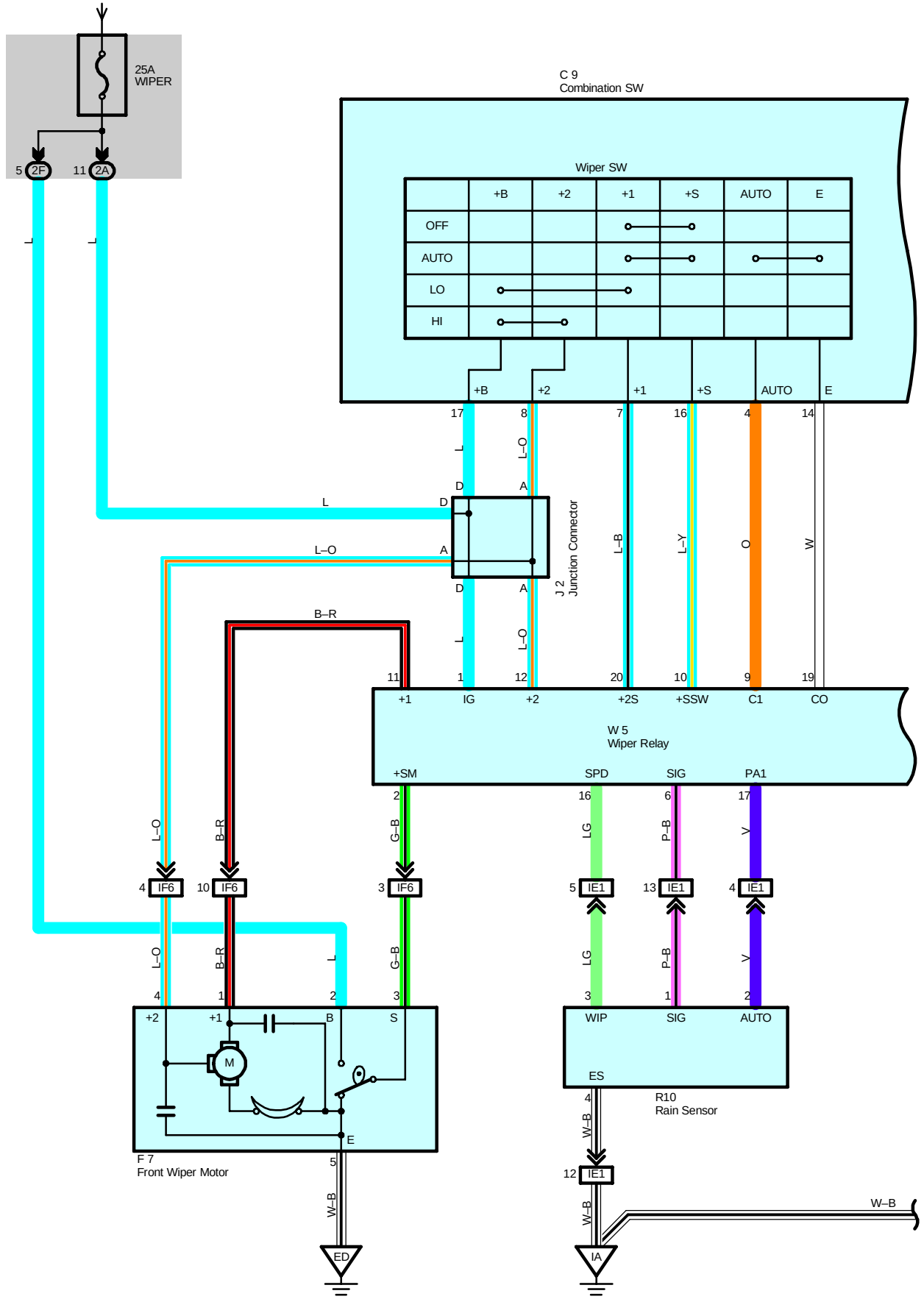
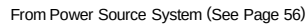
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)

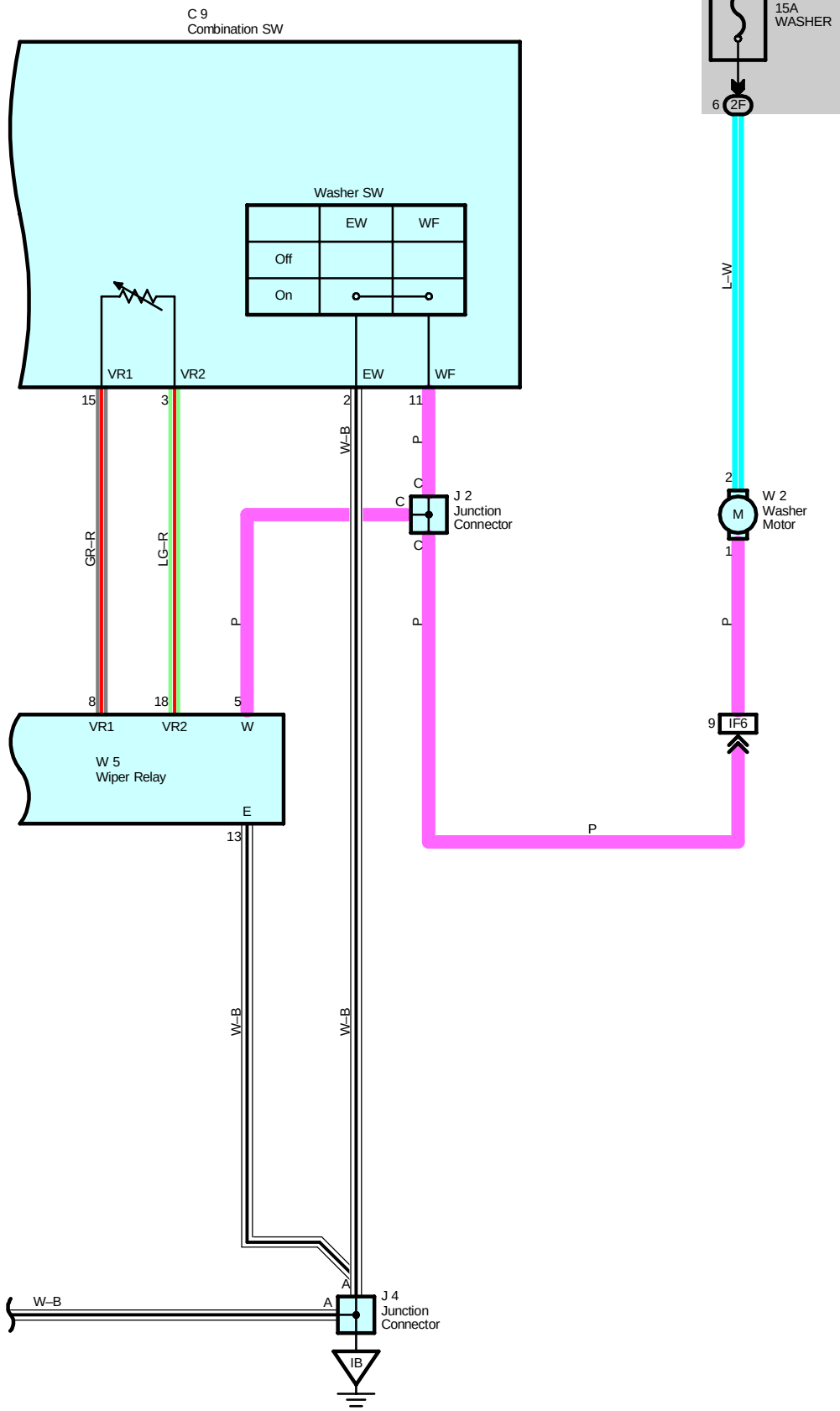
: Ground Points

Code	See Page	Ground Points Location
BE	50	Lower Back Panel Center

Wiper and Washer (w/ Auto Wiper System)



From Power Source System (See Page 56)



Wiper and Washer (w/ Auto Wiper System)

System Outline

Auto Wiper Operation

When the wiper SW is placed to AUTO position, the rain sensor detects the amount of rain on the front windshield, and a signal is output to the wiper controller. The wiper controller automatically controls the intermittent time and operates the wiper, in accordance with the signal.

Service Hints

W5 Wiper Relay

13–Ground : Always continuity

1–Ground : Approx. 12 volts with the ignition SW at ON or ST position

F7 Front Wiper Motor

2–3 : Closed unless the front wiper motor at STOP position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C9	38	J4	39	W5	39
F7	36	R10	41		
J2	39	W2	37		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

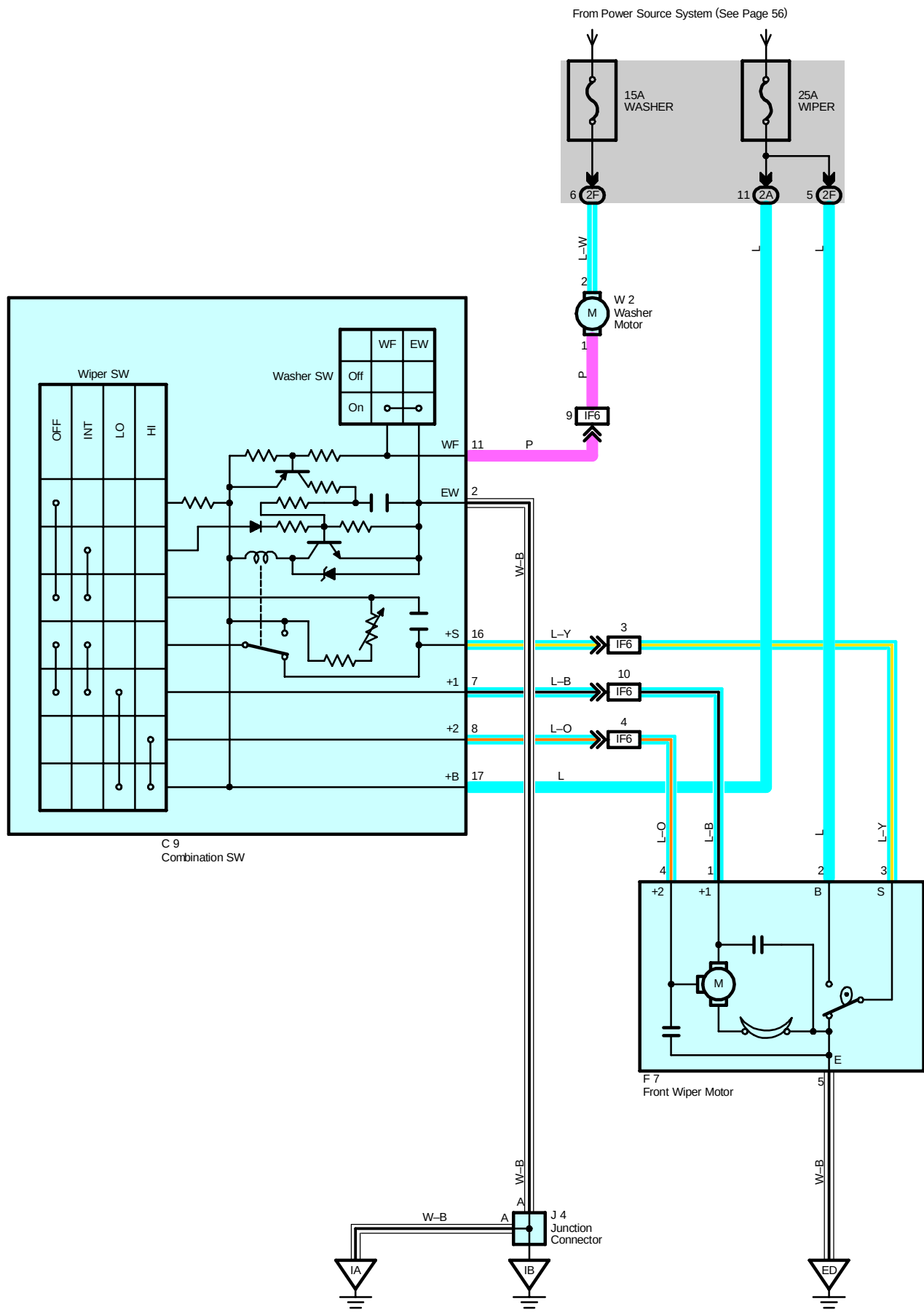
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)
IF6	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

▽ : Ground Points

Code	See Page	Ground Points Location
ED	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH

Wiper and Washer (w/o Auto Wiper System)



System Outline

With the ignition SW turned on, the current flows to TERMINAL 17 of the wiper and washer SW and TERMINAL 2 of the front wiper motor through the WIPER fuse. The current flows to TERMINAL 2 of the washer motor through the WASHER fuse.

1. Low Speed Position

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

2. High Speed Position

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

3. INT Position

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

4. Washer Continuous Operation

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

Service Hints

C9 Combination SW

2-Ground : Always continuity

17-Ground : Approx. 12 volts with the ignition SW at ON or ST position

7-Ground : Approx. 12 volts with the ignition SW on and the wiper and washer SW at LO position
Approx. 12 volts every approx. 1 to 10 seconds intermittently with the ignition SW on
and the wiper and washer SW at INT position

16-Ground : Approx. 12 volts with the ignition SW on and unless the front wiper motor at STOP position

8-Ground : Approx. 12 volts with the ignition SW on and the wiper and washer SW at HI position

F7 Front Wiper Motor

2-3 : Closed unless the front wiper motor at STOP position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C9	38	J4	39		
F7	36	W2	37		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

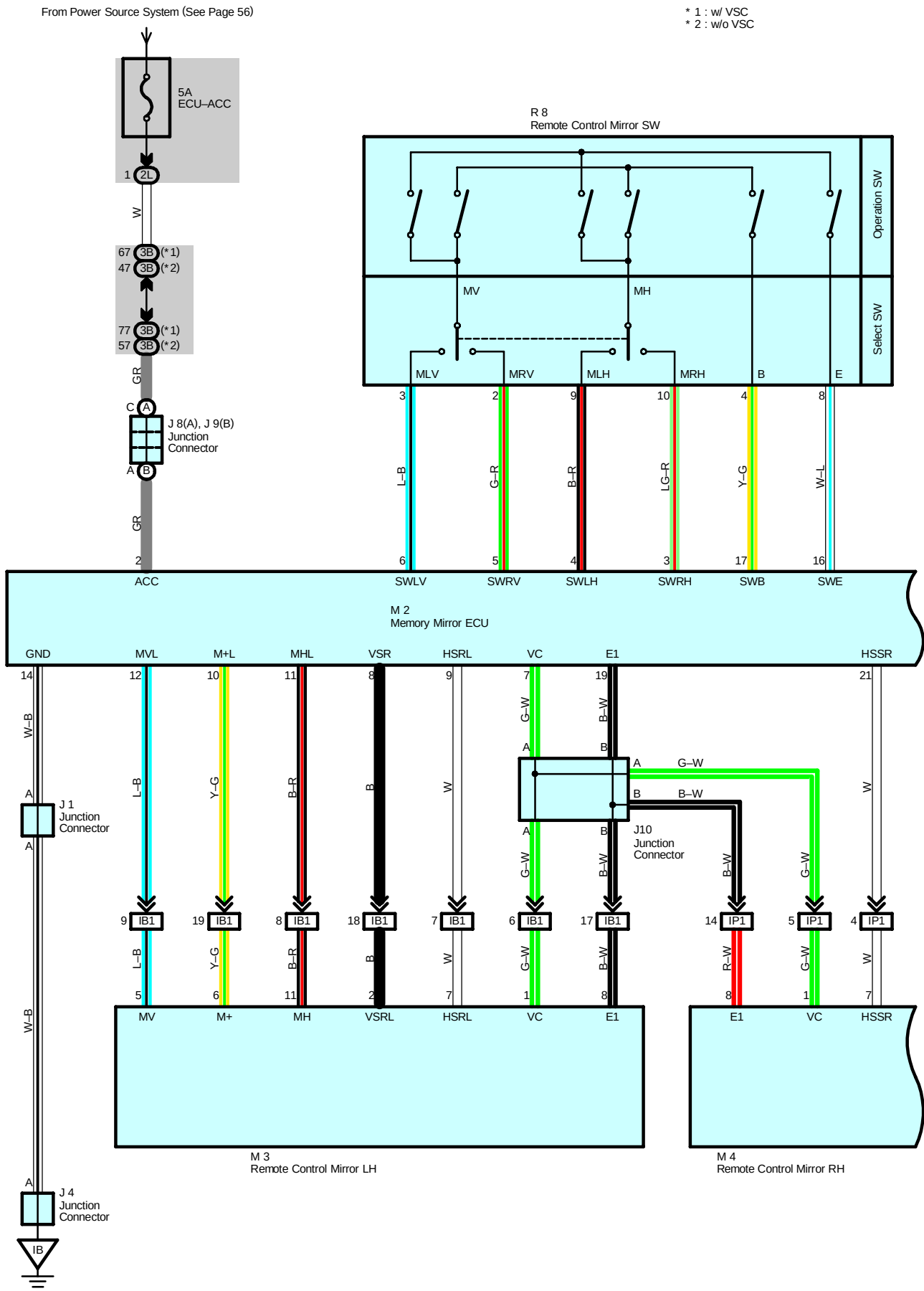
□ : Connector Joining Wire Harness and Wire Harness

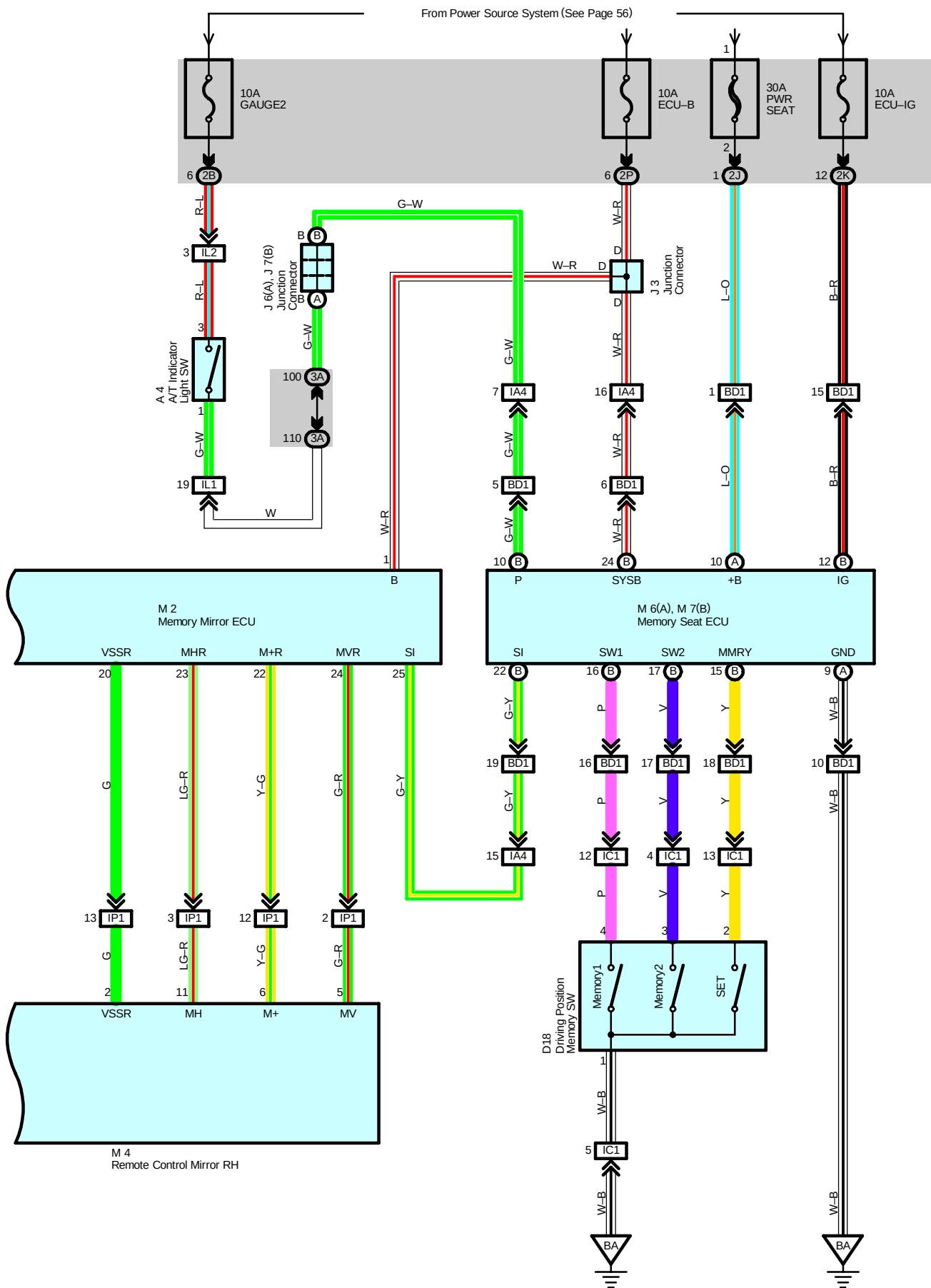
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF6	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

▽ : Ground Points

Code	See Page	Ground Points Location
ED	44	Left Fender
IA	46	Instrument Panel Reinforcement LH
IB	46	Instrument Panel Brace LH

Remote Control Mirror (w/ Driving Position Memory)





Remote Control Mirror (w/ Driving Position Memory)

System Outline

When the ignition SW is turned on, the outer mirrors can be operated. When the remote control mirror SW is operated, a signal is input to the memory mirror ECU, and the outer mirror can be adjusted to the desired position. In this system, the position sensor detects the number of rotations of each motor (Movement amount of each mirror) and inputs it to the memory mirror ECU. This makes it possible to store and recall the outer mirror position using the driving position memory SW. The outer mirror position is stored and recalled through communication control of the body ECU.

Service Hints

M2 Memory Mirror ECU

2-Ground : Approx. 12 volts with ignition SW at ACC or ON position

14-Ground : Always continuity

1-Ground : Always approx. 12 volts

○ : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A4		36		J7	B	39		M4		41	
D18		40		J8	A	39		M6	A	42	
J1		39		J9	B	39		M7	B	42	
J3		39		J10		39		R8		39	
J4		39		M2		39					
J6	A	39		M3		41					

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2J	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2P		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

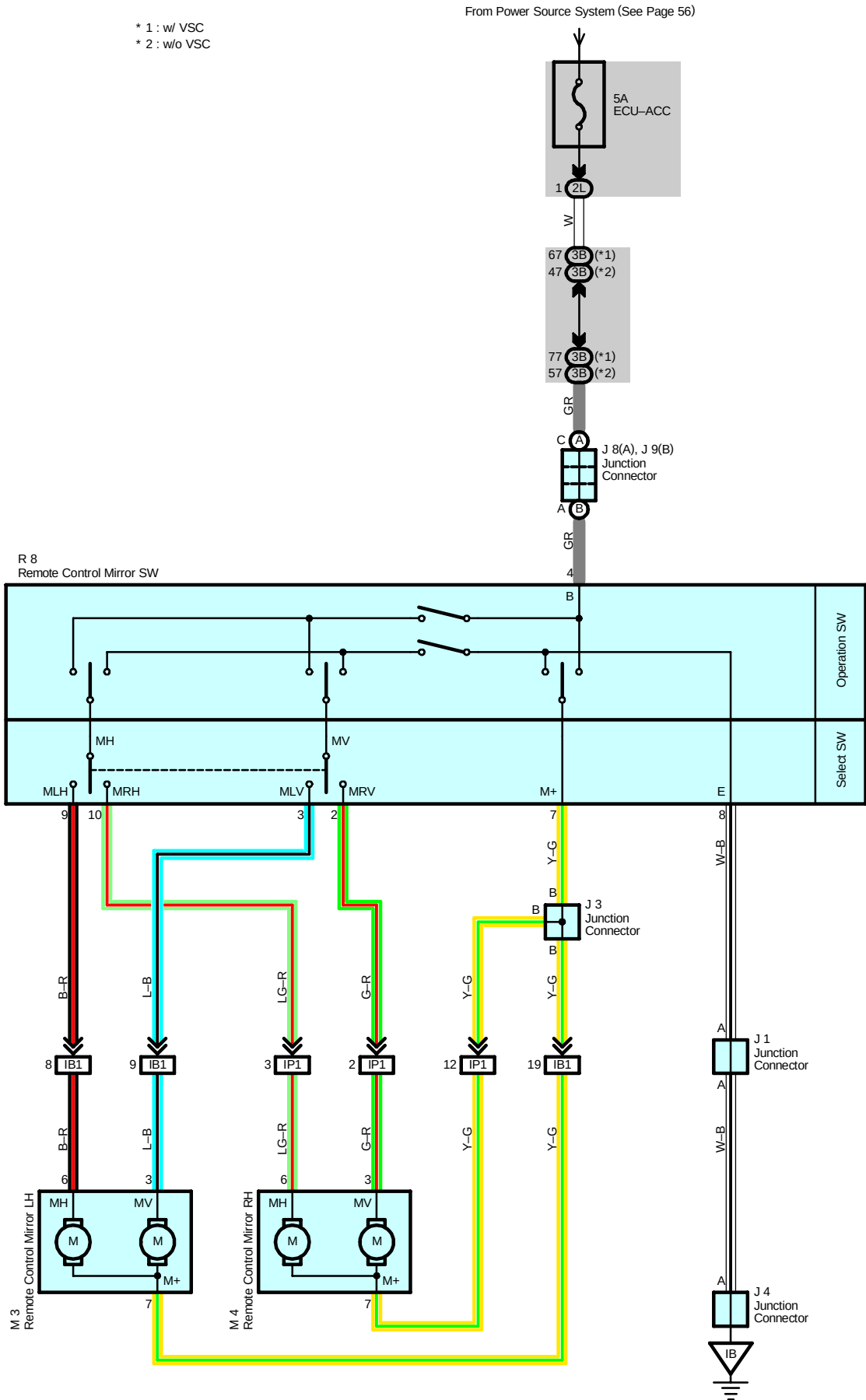
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BD1	52	Floor No.1 Wire and Front Seat LH Wire (Under the Driver's Seat)

▽ : Ground Points

Code	See Page	Ground Points Location
IB	46	Instrument Panel Brace LH
BA	50	Under the Driver's Seat

Remote Control Mirror (w/o Driving Position Memory)



Service Hints

R8 Remote Control Mirror SW

4-Ground : Approx. 12 volts with ignition SW at ACC or ON position

8-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
J1	39	J8	A	M4	41
J3	39	J9	B	R8	39
J4	39	M3	41		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3B	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)

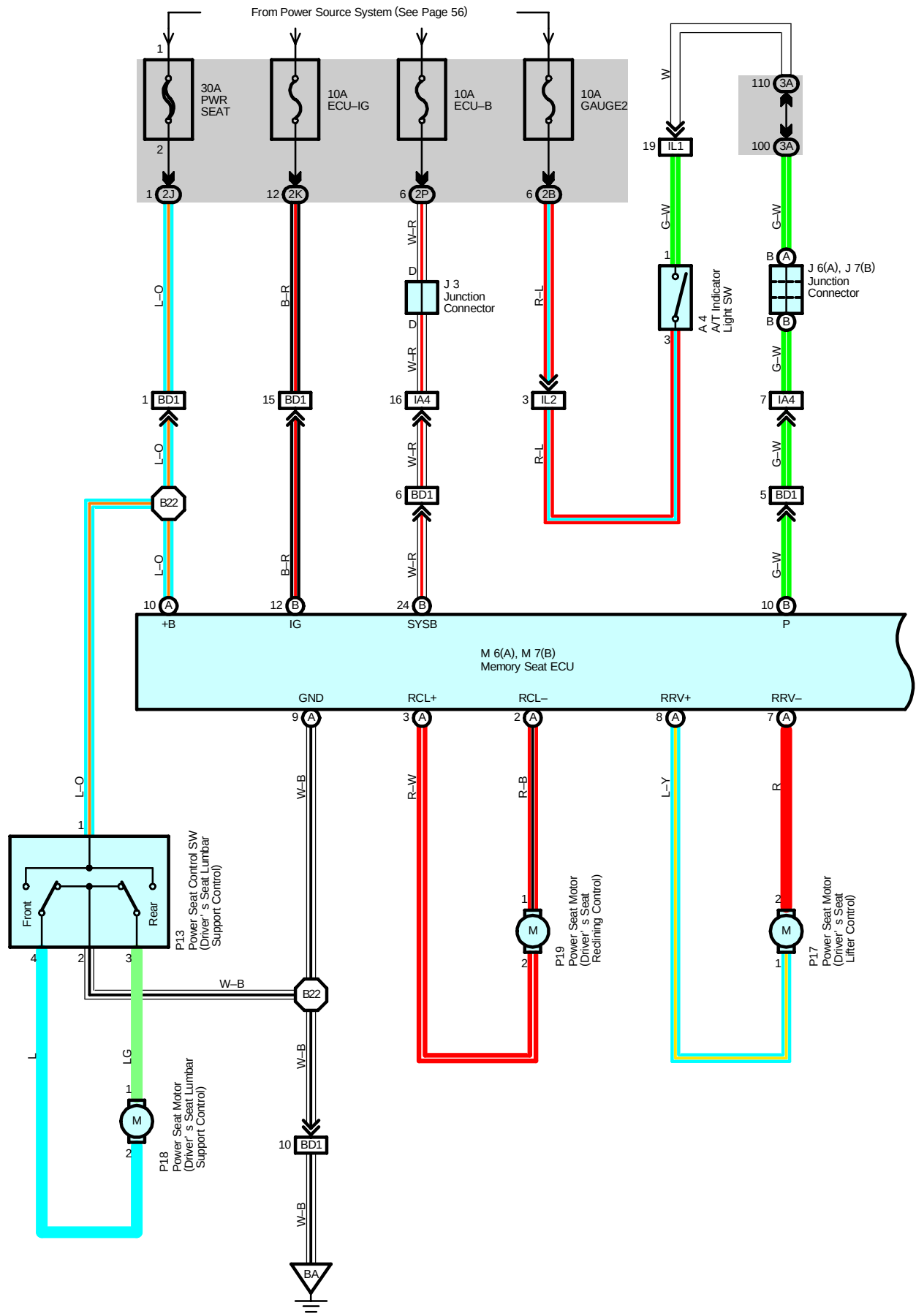
□ : Connector Joining Wire Harness and Wire Harness

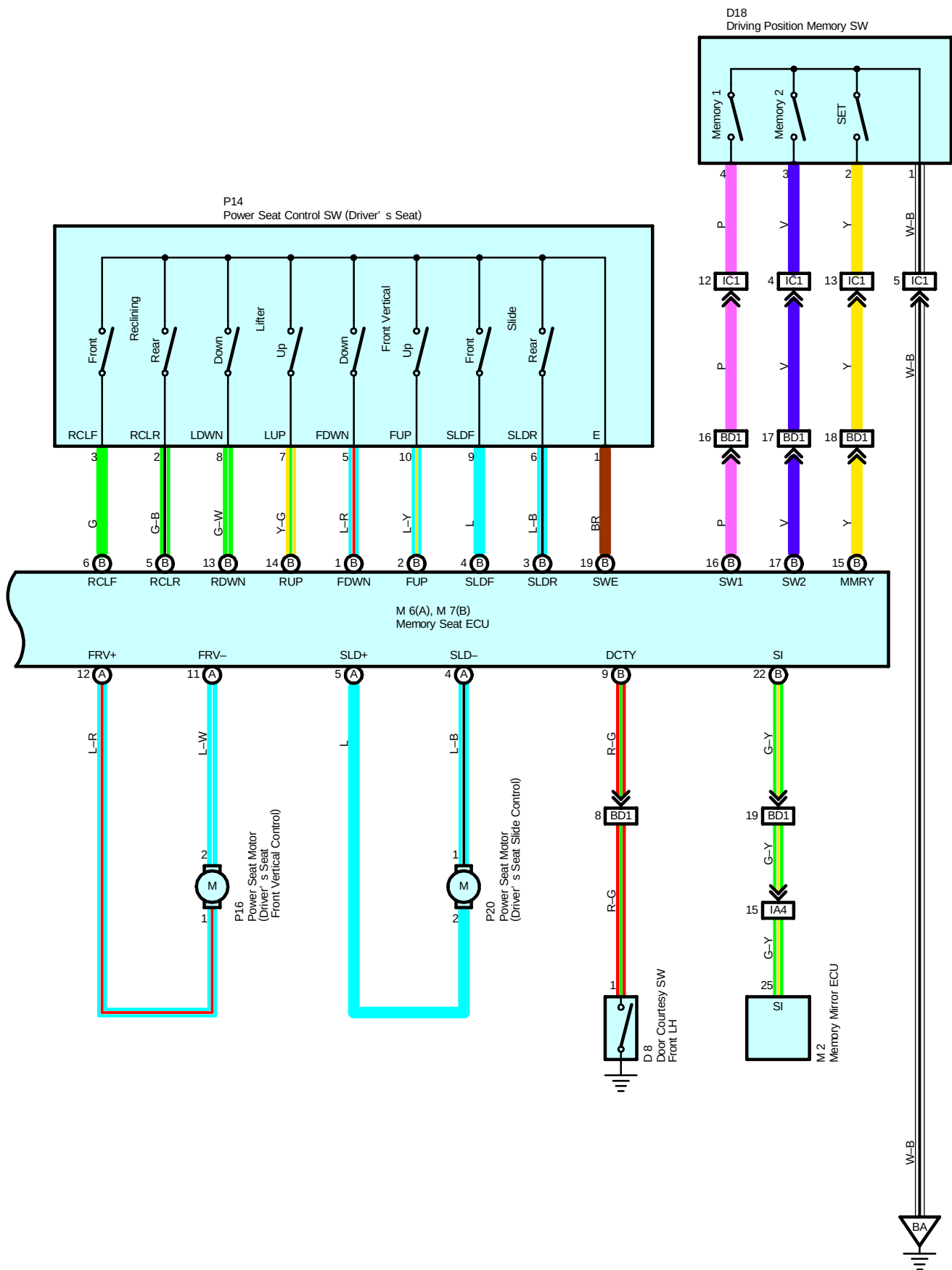
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

▽ : Ground Points

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

Power Seat (Driver's Seat w/ Driving Position Memory)





Power Seat (Driver's Seat w/ Driving Position Memory)

System Outline

Current is always applied from ECU-B fuse to TERMINAL SYSB of the memory seat ECU, from PWR SEAT fuse to TERMINAL +B of the memory seat ECU.

With the ignition SW turned on, current flows from ECU-IG fuse to TERMINAL IG of the memory seat ECU and from the GAUGE2 fuse to TERMINAL 3 of the A/T indicator light SW.

Power Seat Operation (Driver's Seat)

Current is always applied to TERMINAL SYSB and TERMINAL +B of the memory seat ECU so that memory seat ECU is always ready to operate.

When the power seat control SW is pushed to the "FRONT SLIDE position" side, a signal is input into TERMINAL SLDF of the memory seat ECU, the ECU operates and the current to TERMINAL +B of the memory seat ECU flows from TERMINAL SLD+ of the memory seat ECU to TERMINAL 2 of the power seat motor (Driver's seat slide control) to TERMINAL 1 to TERMINAL SLD- of the memory seat ECU to TERMINAL GND to GROUND, rotating the power seat motor so that the seat slides forward while the power seat control SW is being pressed.

To slide the driver's seat to the rear, pushing the power seat control SW to the "REAR SIDE position" side, inputs a signal to TERMINAL SLDR of the memory seat ECU. This causes the current flowing from the ECU to the motor to flow from TERMINAL SLD- of the memory seat ECU to TERMINAL 1 of the power seat motor (Driver's seat slide control) to TERMINAL 2 to TERMINAL SLD+ of the memory seat ECU, flowing the reverse to front slide operation and causing the motor to rotate in reverse, so that the driver's seat moves to the rear.

The movement to other positions occurs similarly, so only the flow of current to each motor is shown:

Front Vertical Control Up Operation

TERMINAL +B of the memory seat ECU to TERMINAL FRV+ to TERMINAL 1 of the power seat motor (Driver's seat front vertical control) to TERMINAL 2 to TERMINAL FRV- of the ECU to TERMINAL GND to GROUND.

Front Vertical Control Down Operation

TERMINAL +B of the memory seat ECU to TERMINAL FRV- to TERMINAL 2 of the power seat motor (Driver's seat front vertical control) to TERMINAL 1 to TERMINAL FRV+ of the ECU to TERMINAL GND to GROUND.

Lifter Control Up Operation

TERMINAL +B of the memory seat ECU to TERMINAL RRV+ to TERMINAL 1 of the power seat motor (Driver's seat lifter control) to TERMINAL 2 to TERMINAL RRV- of the ECU to TERMINAL GND to GROUND.

Lifter Control Down Operation

TERMINAL +B of the memory seat ECU to TERMINAL RRV- to TERMINAL 2 of the power seat motor (Driver's seat lifter control) to TERMINAL 1 to TERMINAL RRV+ of the ECU to TERMINAL GND to GROUND.

Reclining Control Front Operation

TERMINAL +B of the memory seat ECU to TERMINAL RCL+ to TERMINAL 2 of the power seat motor (Driver's seat reclining control) to TERMINAL 1 to TERMINAL RCL- of the ECU to TERMINAL GND to GROUND.

Reclining Control Rear Operation

TERMINAL +B of the memory seat ECU to TERMINAL RCL- to TERMINAL 1 of the power seat motor (Driver's seat reclining control) to TERMINAL 2 to TERMINAL RCL+ of the ECU to TERMINAL GND to GROUND.

Making it possible to perform memory and return functions for the seat position using the seat memory switch.

Service Hints

A4 A/T Indicator Light SW

3-1 : Closed with the shift lever at P position

M6 (A), M7 (B) Memory Seat ECU

(A)10-Ground : Always approx. 12 volts

(B)10-Ground : Approx. 12 volts with the ignition SW at ON position and the shift lever at P position

(A) 5-Ground : Approx. 12 volts with the driver's seat at front slide operation

(A) 4-Ground : Approx. 12 volts with the driver's seat at rear slide operation

(A)12-Ground : Approx. 12 volts with the driver's seat at front vertical up operation

(A)11-Ground : Approx. 12 volts with the driver's seat at front vertical down operation

(A) 8-Ground : Approx. 12 volts with the driver's seat at lifter up operation

(A) 7-Ground : Approx. 12 volts with the driver's seat at lifter down operation

(A) 3-Ground : Approx. 12 volts with the driver's seat at front reclining operation

(A) 2-Ground : Approx. 12 volts with the driver's seat at rear reclining operation

(A) 9-Ground : Always continuity

(B)24-Ground : Always approx. 12 volts

P14 Power Seat Control SW (Driver's Seat)

1-3 : Closed with the driver's seat at front reclining operation

1-2 : Closed with the driver's seat at rear reclining operation

1-9 : Closed with the driver's seat at front slide operation

1-6 : Closed with the driver's seat at rear slide operation

1-10 : Closed with the driver's seat at front vertical up operation

1-5 : Closed with the driver's seat at front vertical down operation

1-7 : Closed with the driver's seat at lifter up operation

1-8 : Closed with the driver's seat at lifter down operation

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	M2	39	P17	42
D8	40	M6	42	P18	42
D18	40	M7	42	P19	42
J3	39	P13	42	P20	42
J6	39	P14	42		
J7	39	P16	42		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2J	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		
2P	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
BD1	52	Floor No.1 Wire and Front Seat LH Wire (Under the Driver's Seat)

▽ : Ground Points

Code	See Page	Ground Points Location
BA	50	Under the Driver's Seat

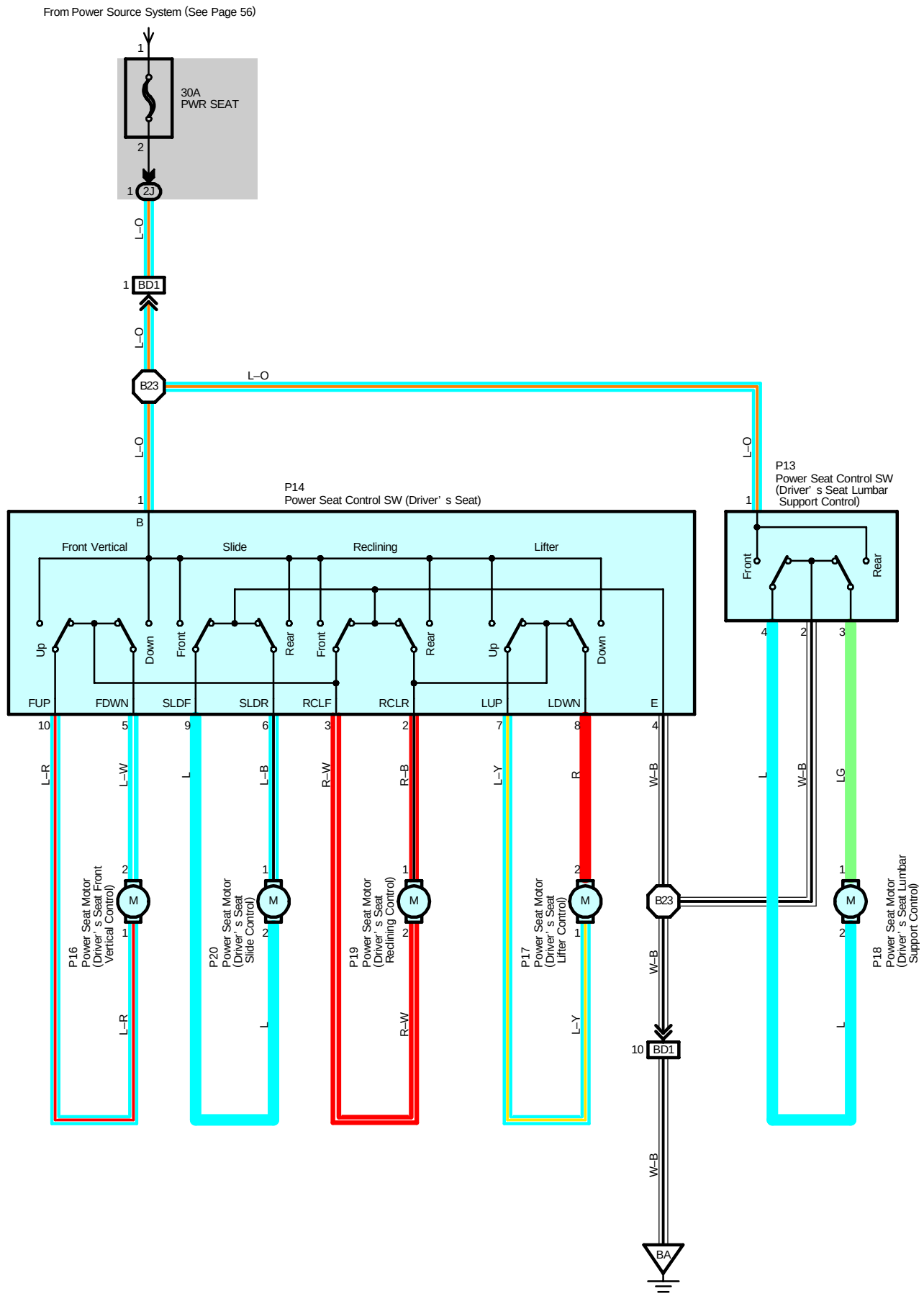
Power Seat (Driver's Seat w/ Driving Position Memory)



: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B22	52	Front Seat LH Wire			

Power Seat (Driver's Seat w/o Driving Position Memory)



Service Hints

P14 Power Seat Control SW (Driver's Seat)

1-Ground : Always approx. 12 volts

4-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
P13	42	P17	42	P20	42
P14	42	P18	42		
P16	42	P19	42		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2J	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
BD1	52	Floor No.1 Wire and Front Seat LH Wire (Under the Driver's Seat)

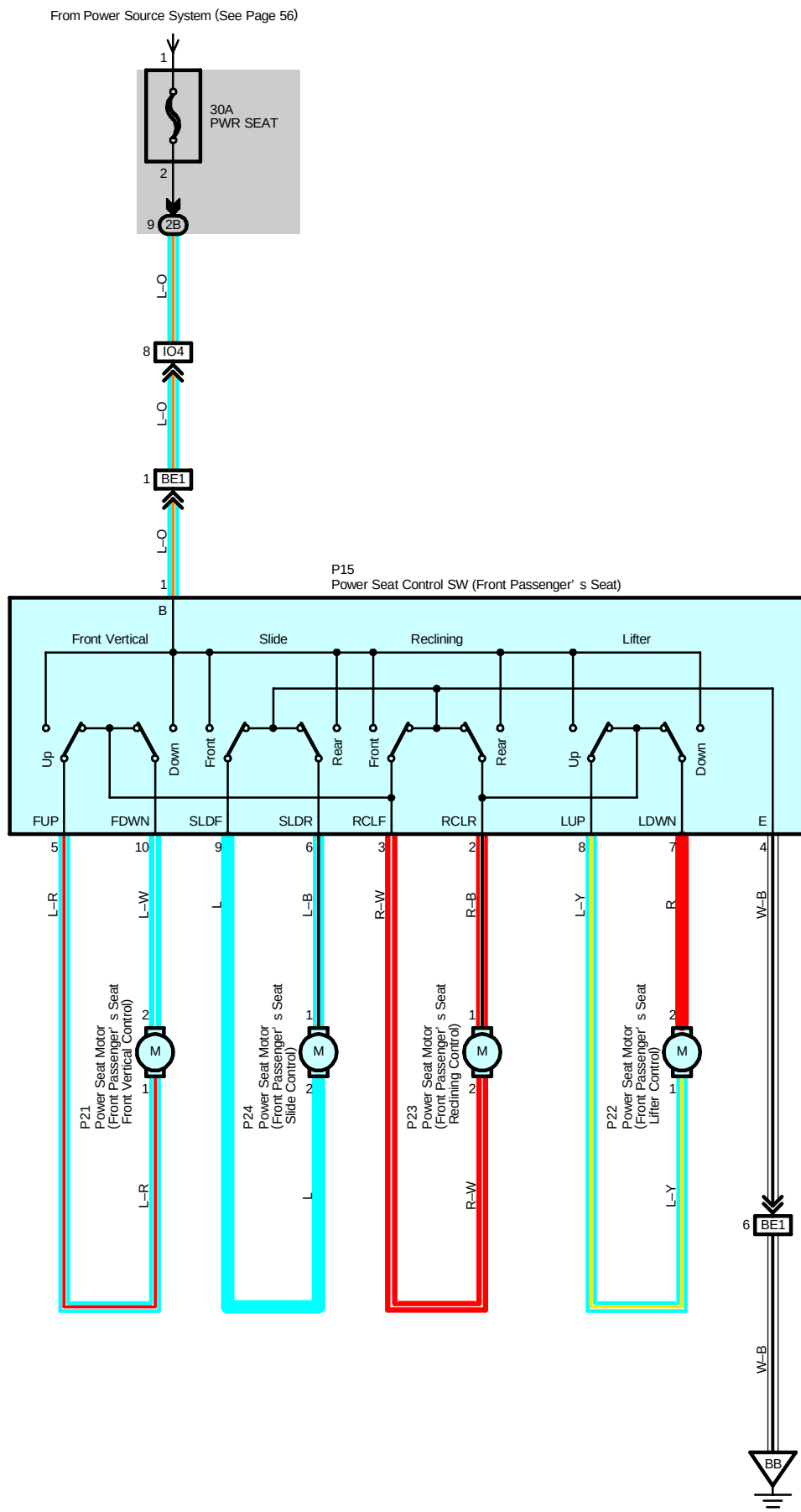
: Ground Points

Code	See Page	Ground Points Location
BA	50	Under the Driver's Seat

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B23	52	Front Seat LH Wire			

Power Seat (Front Passenger's Seat)



Service Hints

P15 Power Seat Control SW (Front Passenger's Seat)

1-Ground : Always approx. 12 volts

4-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
P15	42	P22	42	P24	42
P21	42	P23	42		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

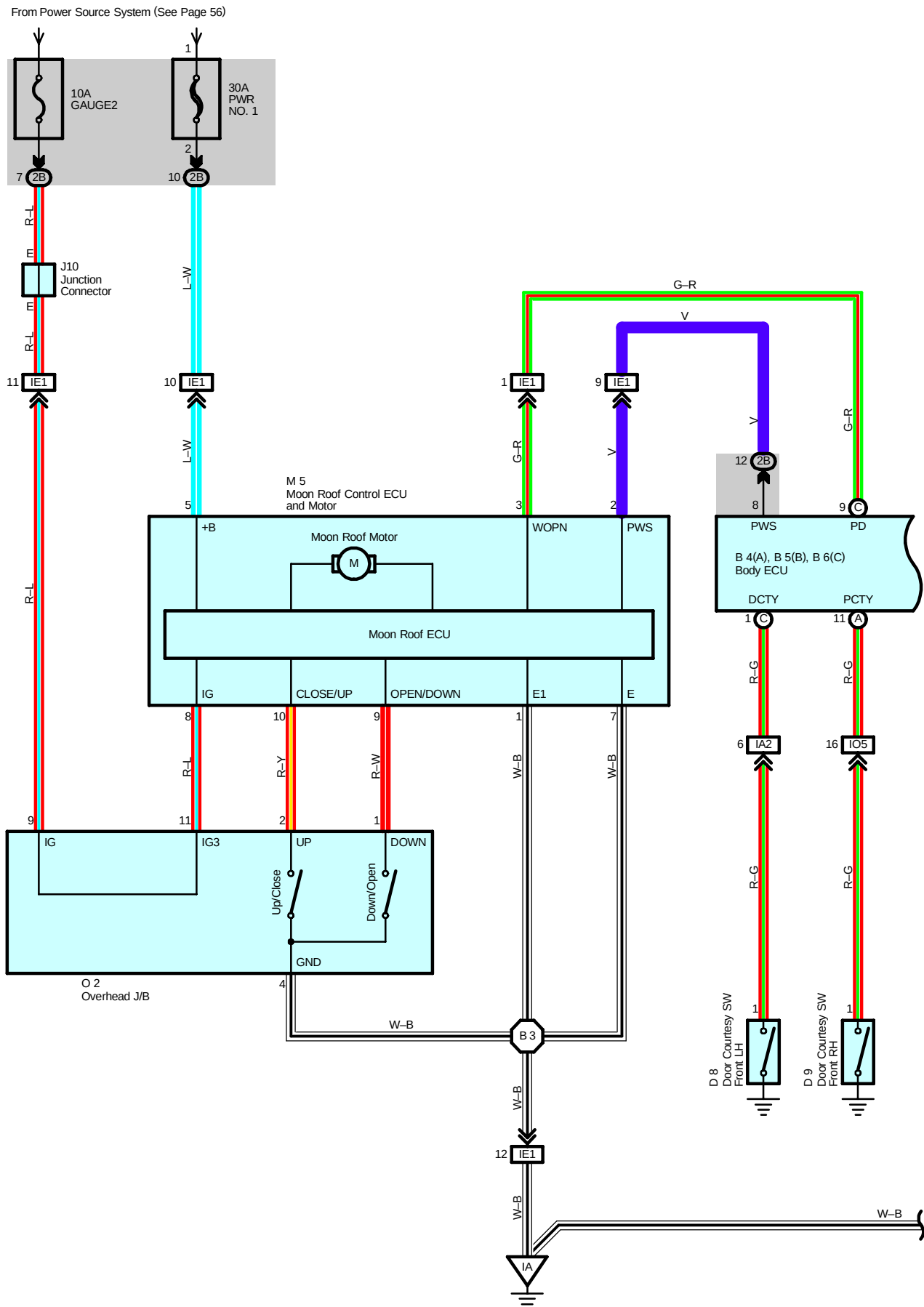
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BE1	52	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

: Ground Points

Code	See Page	Ground Points Location
BB	50	Under the Front Passenger's Seat

Moon Roof



Moon Roof

Service Hints

M5 Moon Roof Control ECU and Motor

5–Ground : Always approx. 12 volts

7–Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
B4	A 38	D11	40	K1	37
B5	B 38	D12	40	K4	39
B6	C 38	D13	40	M5	41
D8	40	D17	40	O2	41
D9	40	J10	39		
D10	40	J13	40		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M	29	
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IE1	46	Instrument Panel Wire and Roof Wire (Lower Part of Front Pillar LH)
IF5	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IO5	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

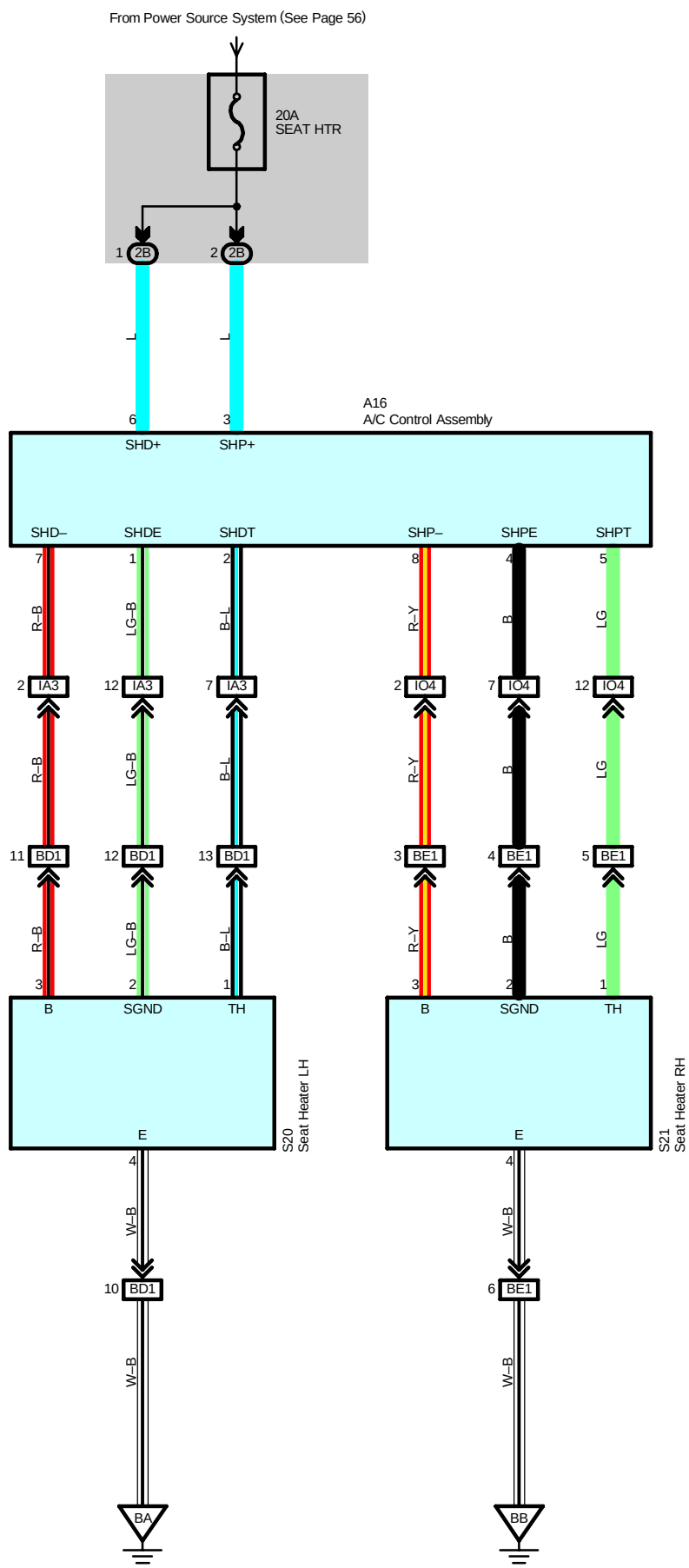
: Ground Points

Code	See Page	Ground Points Location
EB	44	Right Fender
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat
BD	50	Front Side of Rear Quarter Wheel House RH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B3	50	Roof Wire			

Seat Heater



Service Hints

A16 A/C Control Assembly

3, 6–Ground : Approx. 12 volts with ignition SW at ON or ST position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A16	38	S20	42	S21	42

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

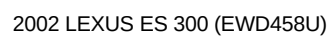
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA3	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BD1	52	Floor No.1 Wire and Front Seat LH Wire (Under the Driver's Seat)
BE1	52	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

: Ground Points

Code	See Page	Ground Points Location
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat

242



Service Hints

B7 Buckle SW LH

6-1 : Closed with driver seat belt in use

B8 Buckle SW RH

6-1 : Closed with front passenger seat belt in use

T16, T17 Tension Reducer Solenoid LH, RH

1-Ground : Approx. 12 volts with ignition SW at ON or ST position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B7	42	H14	39	T16	41
B8	42	J10	39	T17	41

□ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2H	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IO4	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO5		

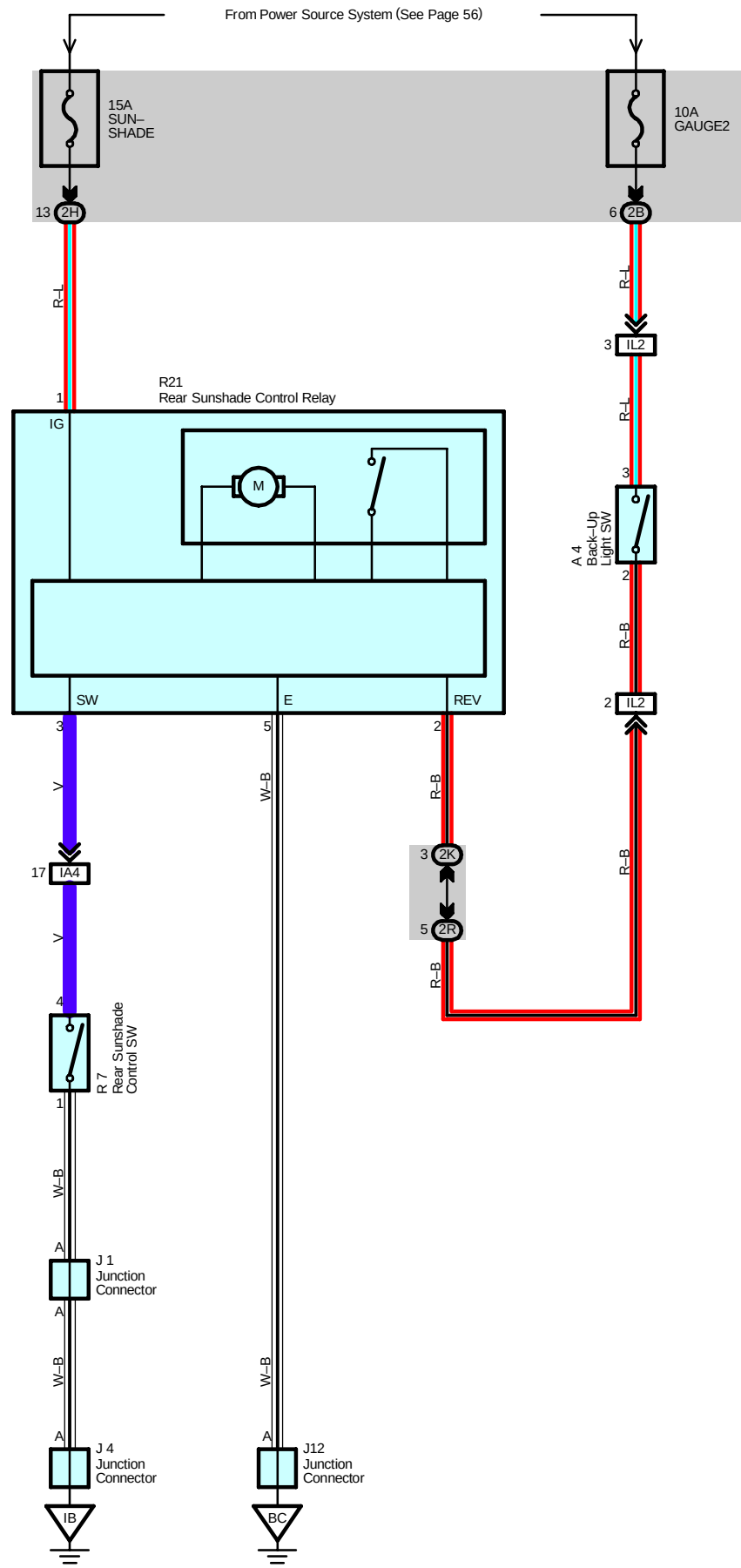
▽ : Ground Points

Code	See Page	Ground Points Location
BA	50	Under the Driver's Seat
BB	50	Under the Front Passenger's Seat

○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B9	50	Floor No.2 Wire			

Rear Sunshade



Service Hints

R21 Rear Sunshade Control Relay

- 1-Ground : Approx. 12 volts with ignition SW at ON or ST position
- 5-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36	J4	39	R7	39
J1	39	J12	40	R21	41

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2H	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

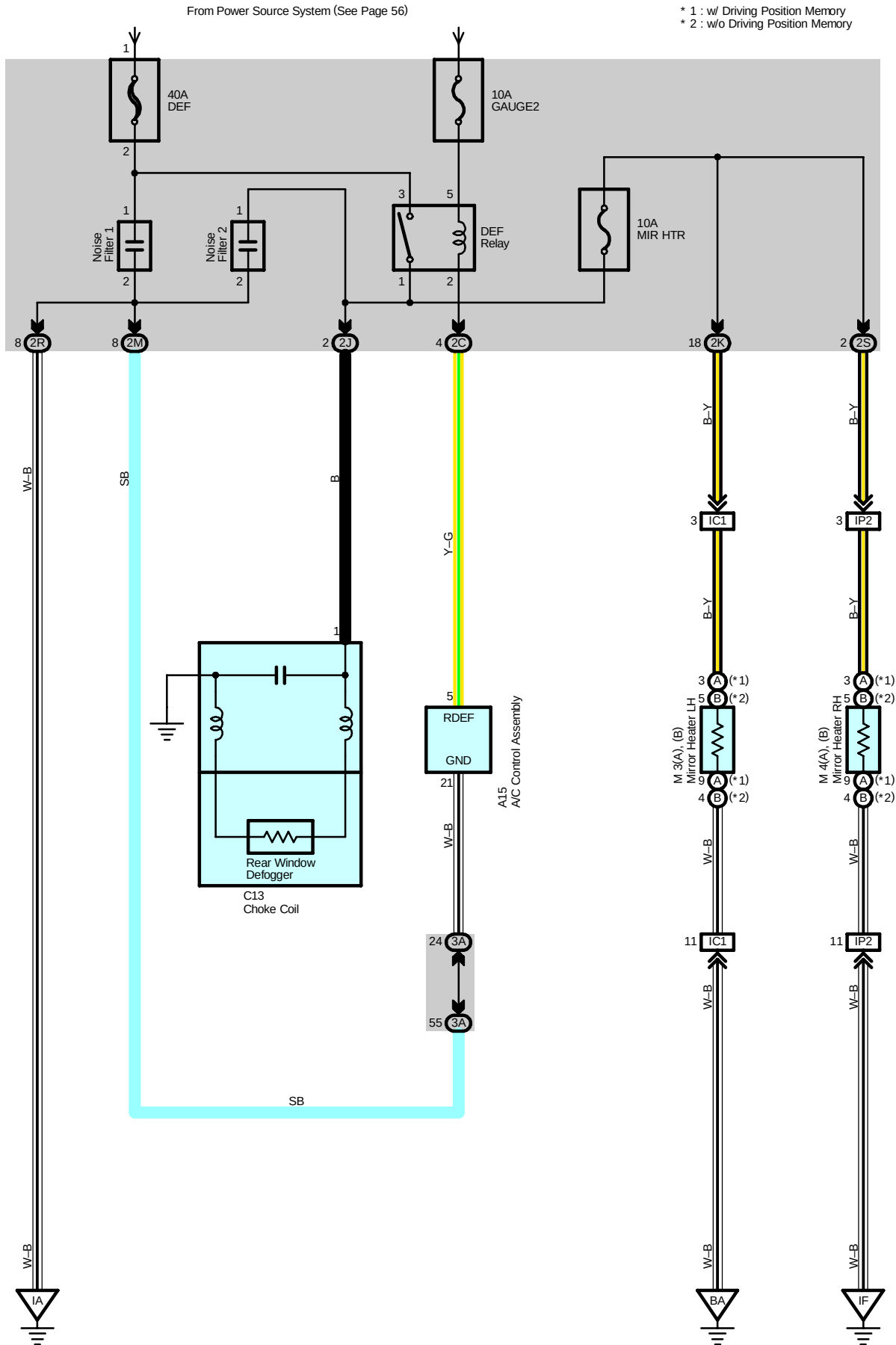
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IL2	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

▽ : Ground Points

Code	See Page	Ground Points Location
IB	46	Instrument Panel Brace LH
BC	50	Front Side of Rear Quarter Wheel House LH

Rear Window Defogger and Mirror Heater



Service Hints

DEF Relay

3-1 : Closed with the ignition SW at on and rear window defogger SW (A/C control assembly) on

M3 (A), (B) Mirror Heater LH

M4 (A), (B) Mirror Heater RH

(A) 3, (B) 5-Ground : Approx. 12 volts with the rear window defogger SW (A/C control assembly) on

(A) 9, (B) 4-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A15	38	M3	A 41	M4	A 41
C13	40		B 41		B 41

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2C	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2J	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
2S		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	

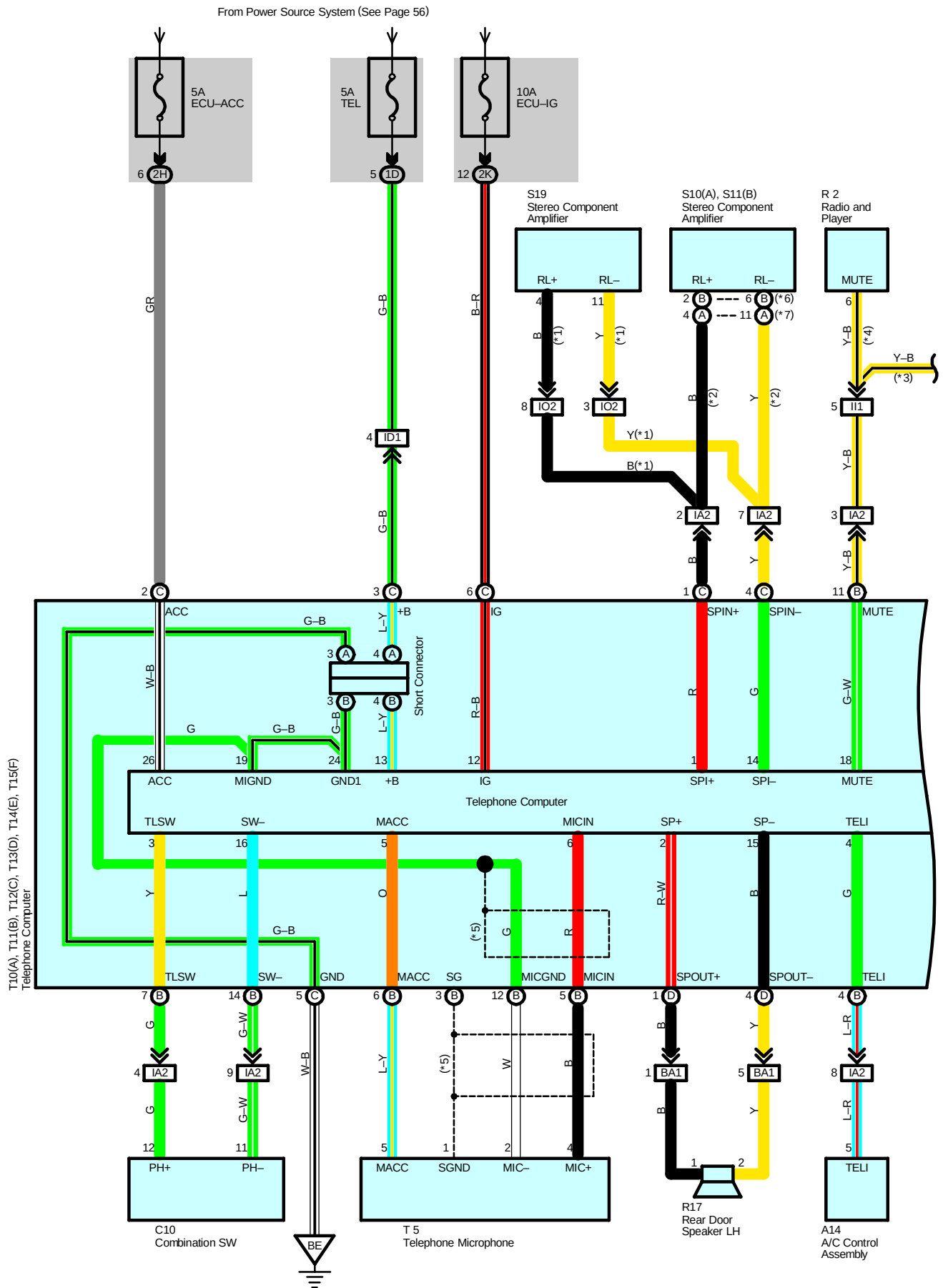
□ : Connector Joining Wire Harness and Wire Harness

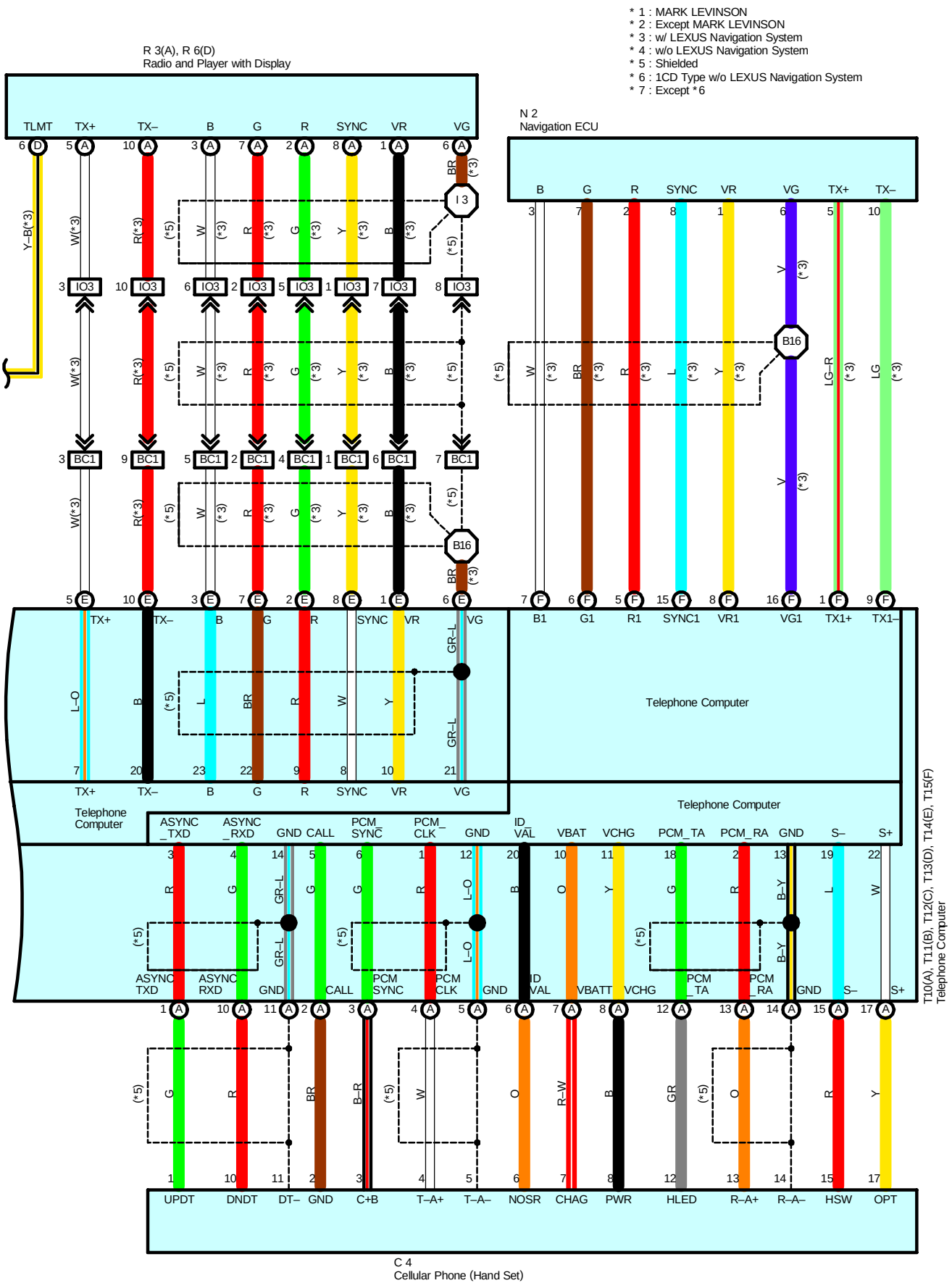
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	46	Front Door LH Wire and Floor No.1 Wire (Left Kick Panel)
IP2	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
IA	46	Instrument Panel Reinforcement LH
IF	46	Instrument Panel Reinforcement RH
BA	50	Under the Driver's Seat

Cellular Mobile Telephone





Cellular Mobile Telephone

Service Hints

T12 (C) Telephone Computer

- (C) 6—Ground : Approx. 12 volts with ignition SW at ON or ST position
- (C) 2—Ground : Approx. 12 volts with ignition SW at ON or ACC position
- (C) 3—Ground : Always approx. 12 volts
- (C) 5—Ground : Always continuity

○ : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A14		38		R6	D	39		T10	A	41	
C4		38		R17		41		T11	B	41	
C10		38		S10	A	39		T12	C	41	
N2		41		S11	B	39		T13	D	41	
R2		39		S19		41		T14	E	41	
R3	A	39		T5		39		T15	F	41	

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2H	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2K		

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
ID1	46	Engine Room Main Wire and Floor No.1 Wire (Left Side of Driver Side J/B)
II1	48	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the A/C Control Assembly)
IO2	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO3		
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BC1	50	Floor No.1 Wire and Floor No.2 Wire (Behind the Rear Passenger's Seat RH)

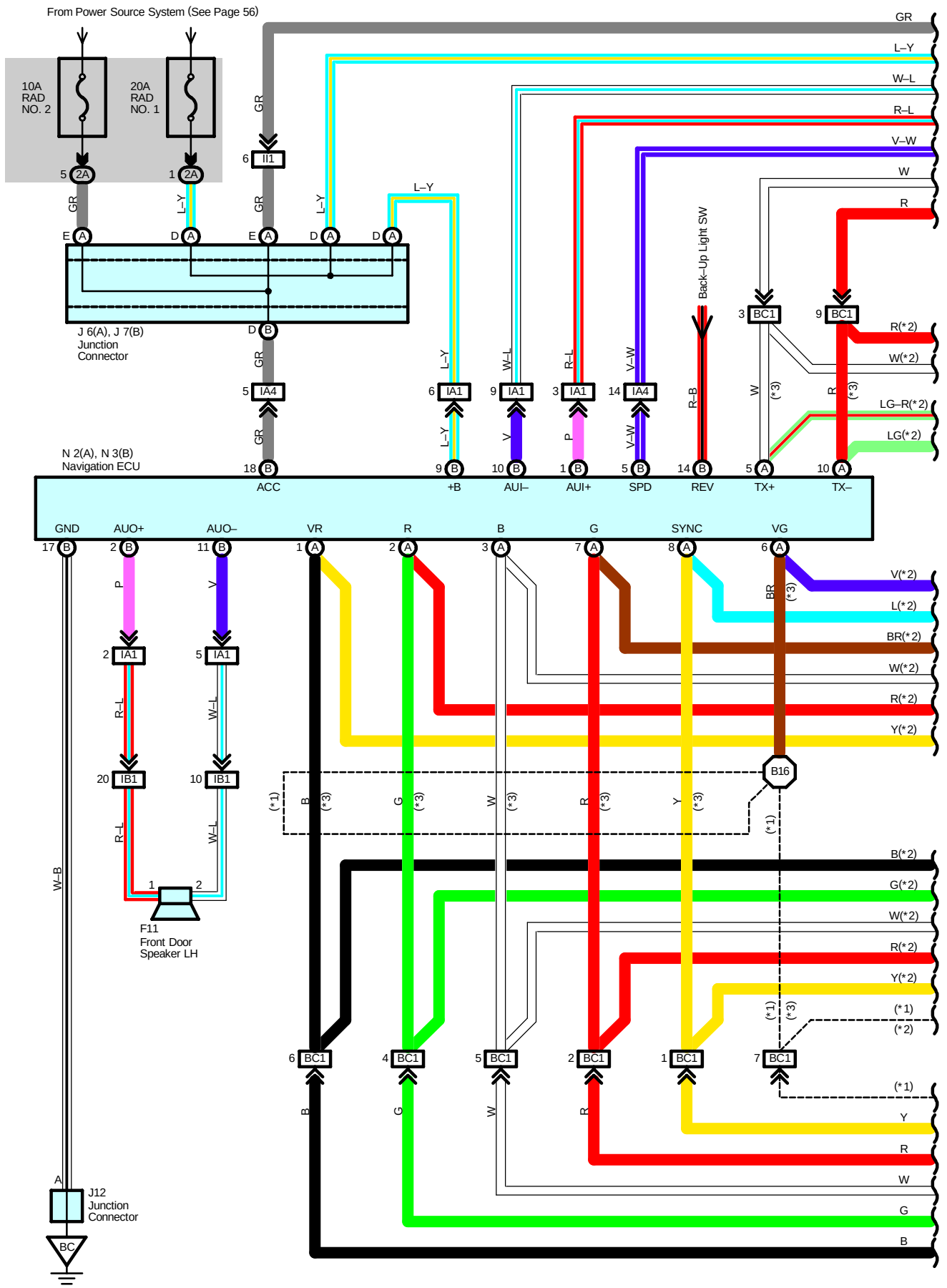
▽ : Ground Points

Code	See Page	Ground Points Location
BE	50	Lower Back Panel Center

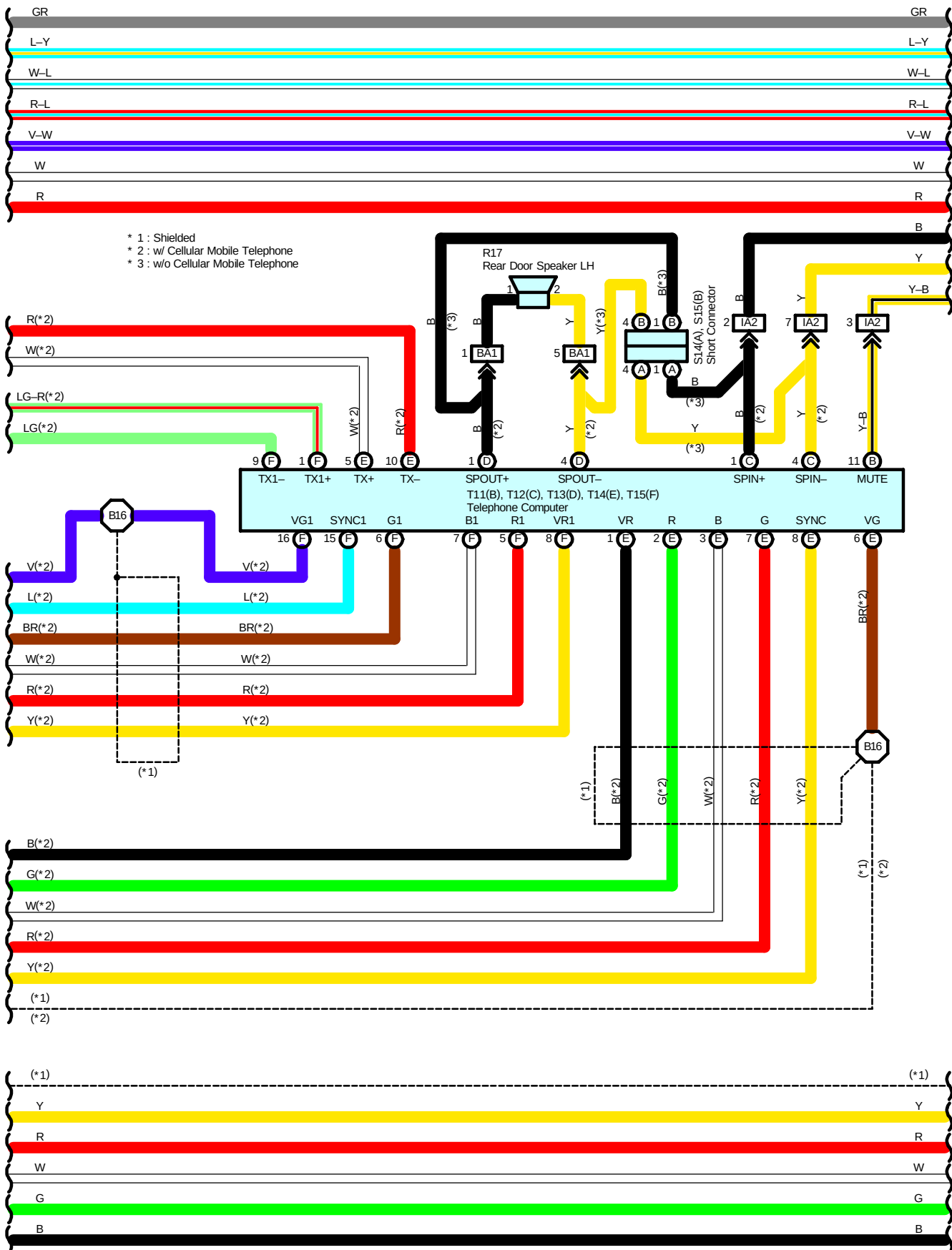
○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	48	Instrument Panel Wire	B16	50	Floor No.1 Wire

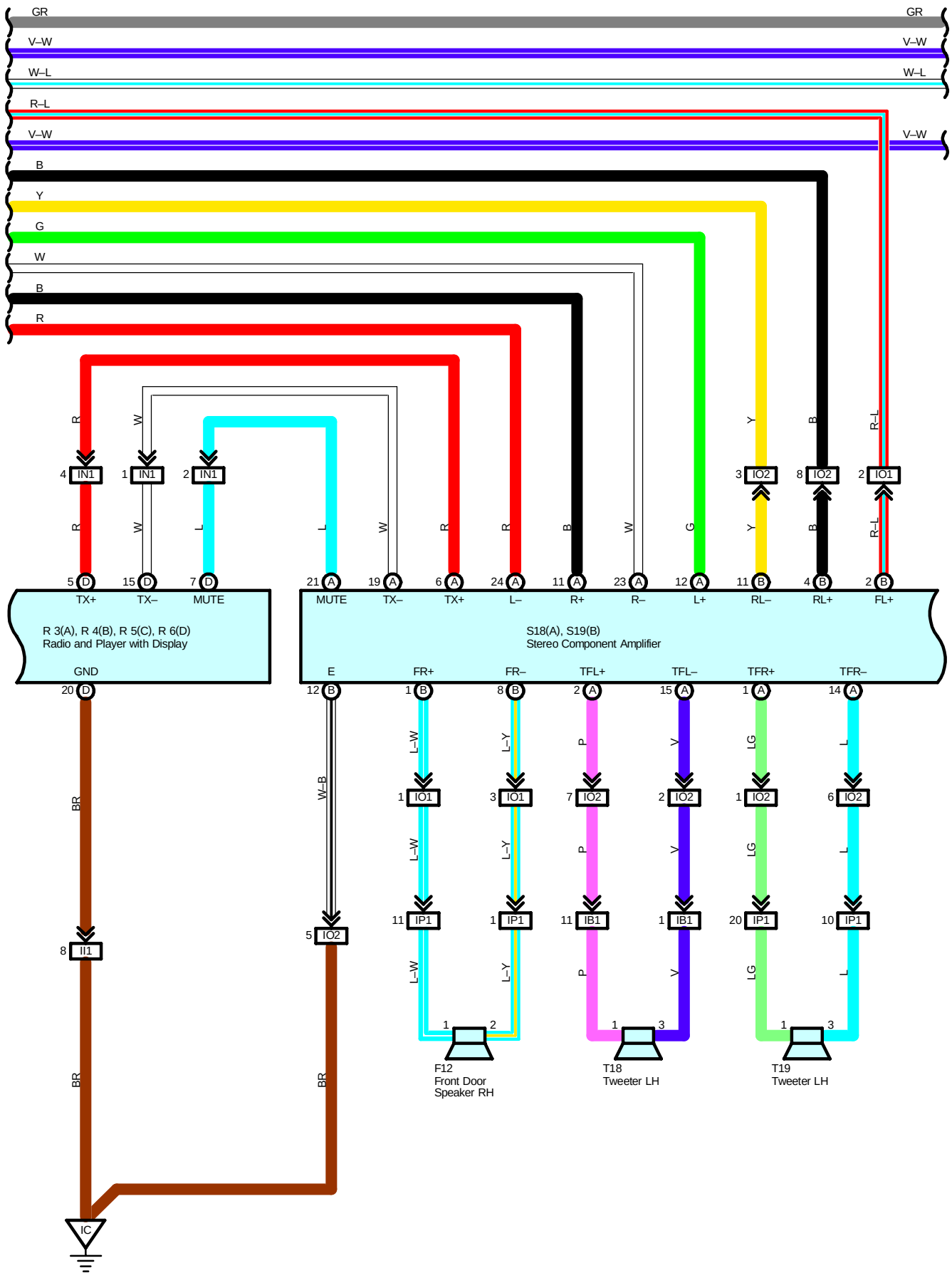
LEXUS Navigation System, Radio and Player (MARK LEVINSON w/ LEXUS Navigation System)



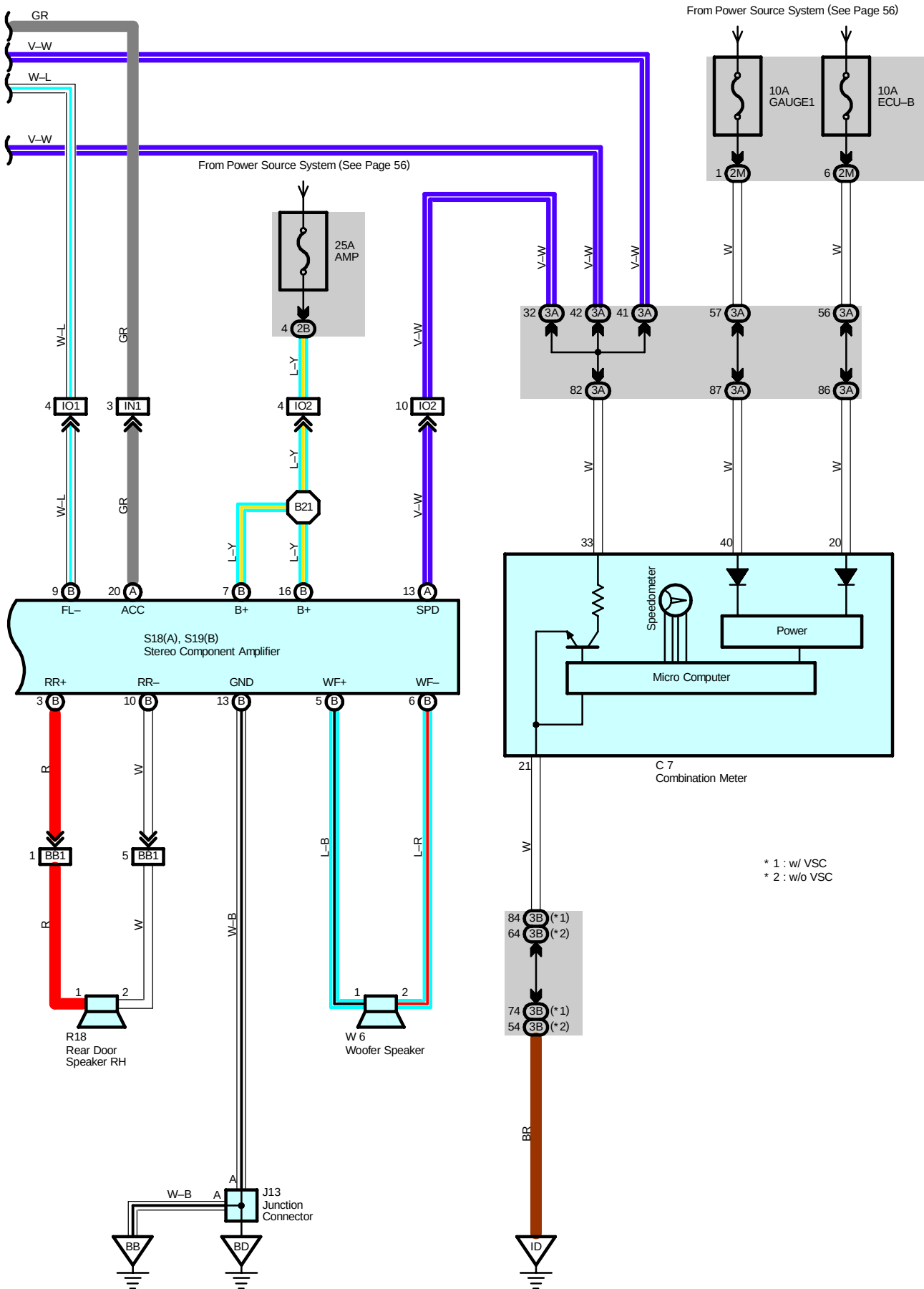
(MARK LEVINSON w/ LEXUS Navigation System)



(MARK LEVINSON w/ LEXUS Navigation System)



LEXUS Navigation System, Radio and Player



(MARK LEVINSON w/ LEXUS Navigation System)

Service Hints

R6 (D) Radio and Player with Display

- (D) 1–Ground : Always approx. 12 volts
 (D)11–Ground : Approx. 12 volts with ignition SW at ON or ACC position
 (D)20–Ground : Always continuity

N2 (A) Navigation ECU

- (A)18–Ground : Approx. 12 volts with ignition SW at ON or ACC position
 (A) 9–Ground : Always approx. 12 volts
 (A)17–Ground : Always continuity

S18 (A), S19 (B) Stereo Component Amplifier

- (B) 7, (B) 16–Ground : Always approx. 12 volts
 (A) 20–Ground : Approx. 12 volts with ignition SW at ON or ACC position
 (B)12, (B) 13–Ground: Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C3	38	R3	A 39	T11	B 41
C7	38	R4	B 39	T12	C 41
F11	40	R5	C 39	T13	D 41
F12	40	R6	D 39	T14	E 41
J6	A 39	R17	41	T15	F 41
J7	B 39	R18	41	T18	41
J12	40	S14	A 41	T19	41
J13	40	S15	B 41	W6	41
N2	A 41	S18	A 41		
N3	B 41	S19	B 41		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2B		
2M		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IA2		
IA4		
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
II1	48	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the A/C Control Assembly)
IN1	48	Instrument Panel No.2 Wire and Floor No.2 Wire (Right Kick Panel)
IO1	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO2		
IO3		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)
BC1	50	Floor No.1 Wire and Floor No.2 Wire (Behind the Rear Passenger's Seat RH)

LEXUS Navigation System, Radio and Player (MARK LEVINSON w/ LEXUS Navigation System)



: Ground Points

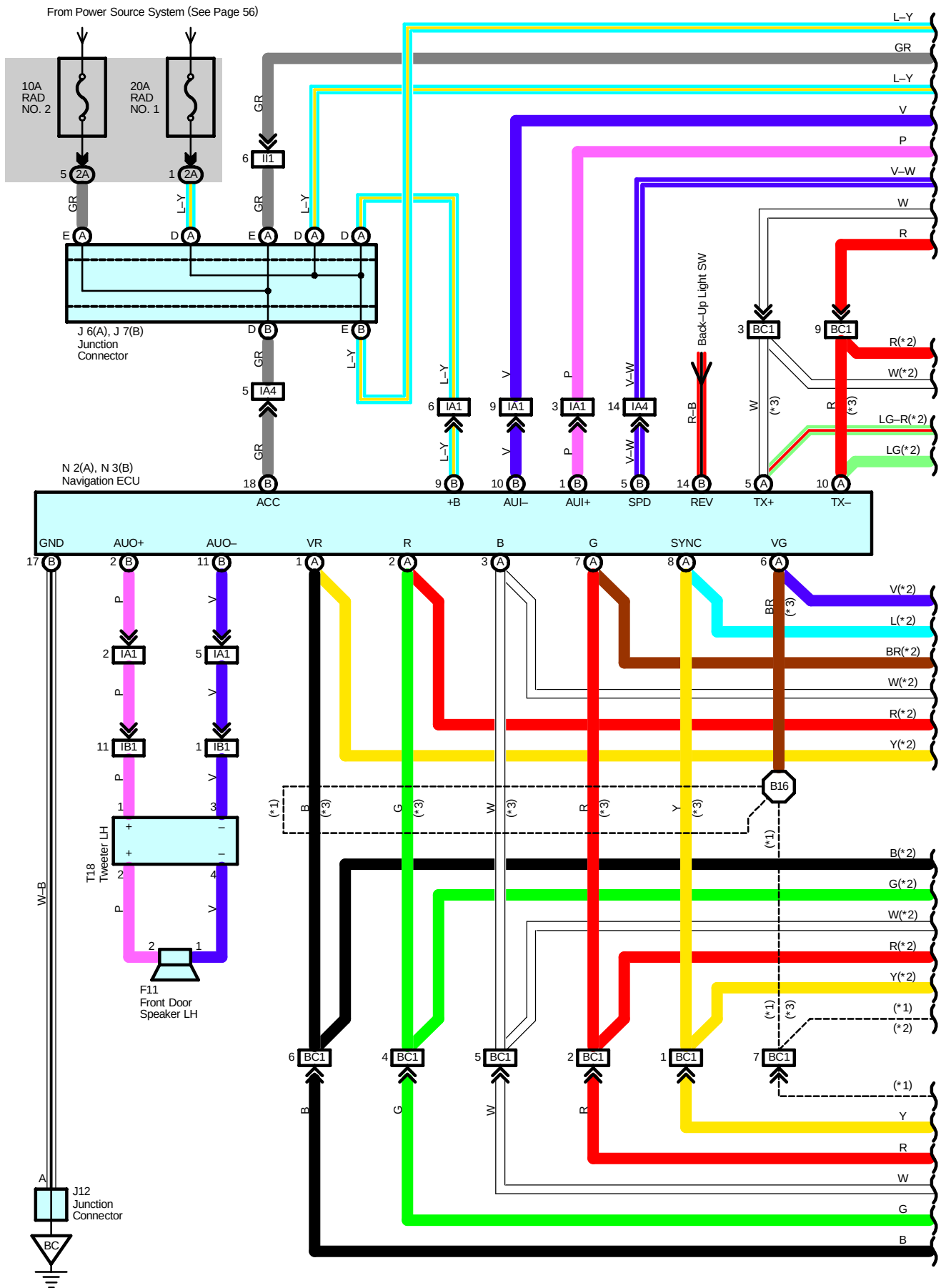
Code	See Page	Ground Points Location
IC	46	Instrument Panel Brace RH
ID		
BB	50	Under the Front Passenger's Seat
BC	50	Front Side of Rear Quarter Wheel House LH
BD	50	Front Side of Rear Quarter Wheel House RH



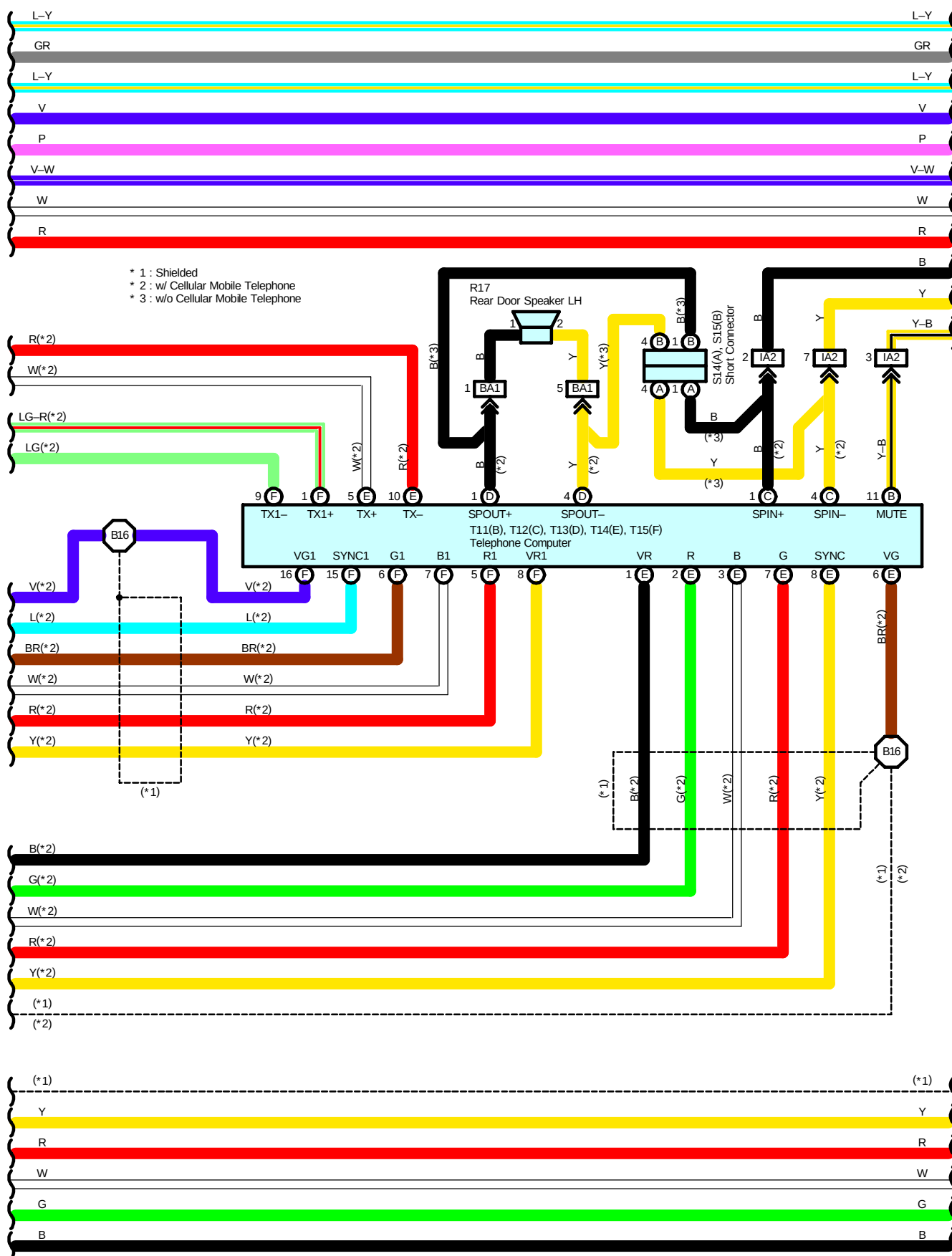
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	48	Instrument Panel Wire	B16	50	Floor No.1 Wire
I4	48	Instrument Panel No.3 Wire	B21	50	Floor No.2 Wire

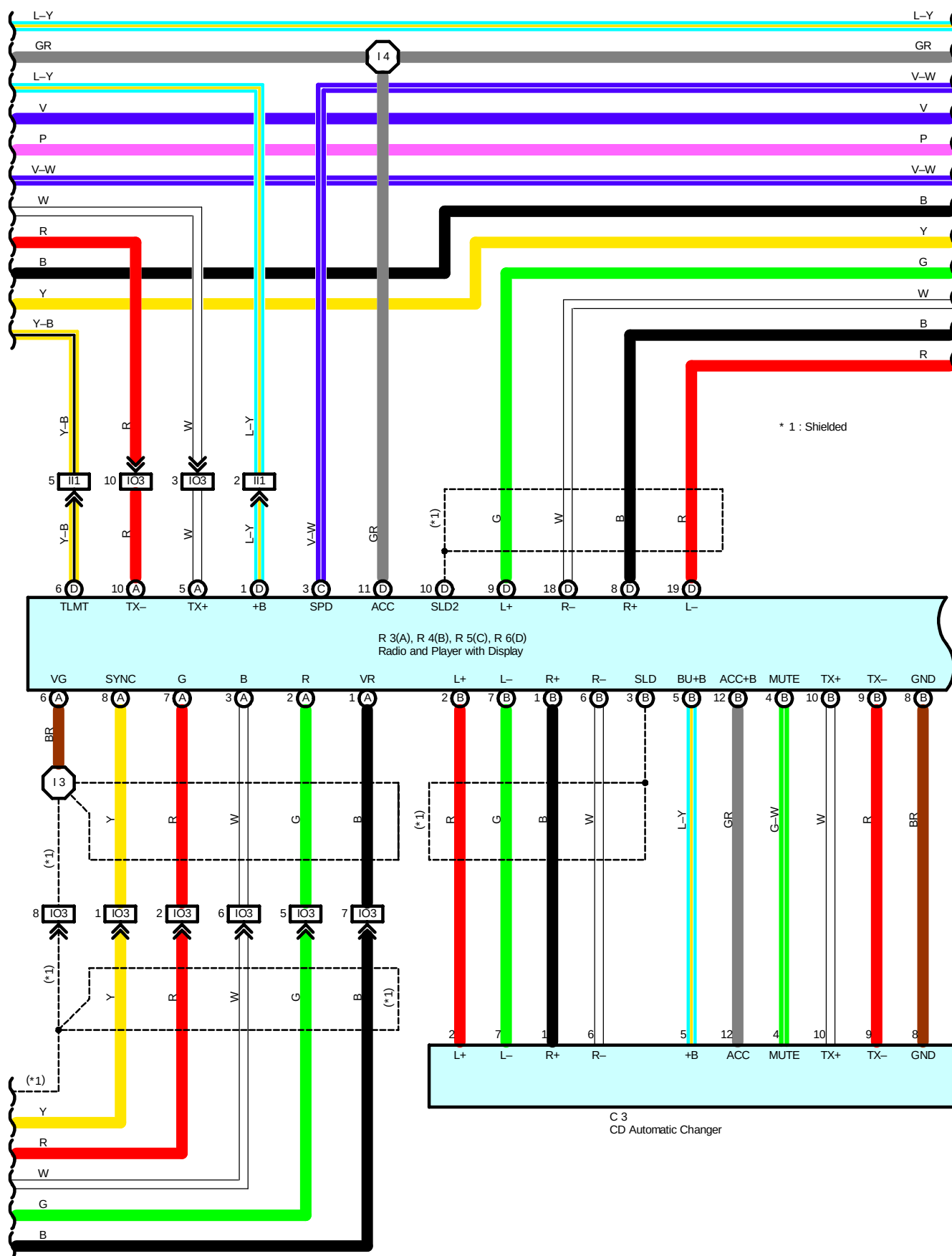
LEXUS Navigation System, Radio and Player (Except MARK LEVINSON w/ Navigation System)



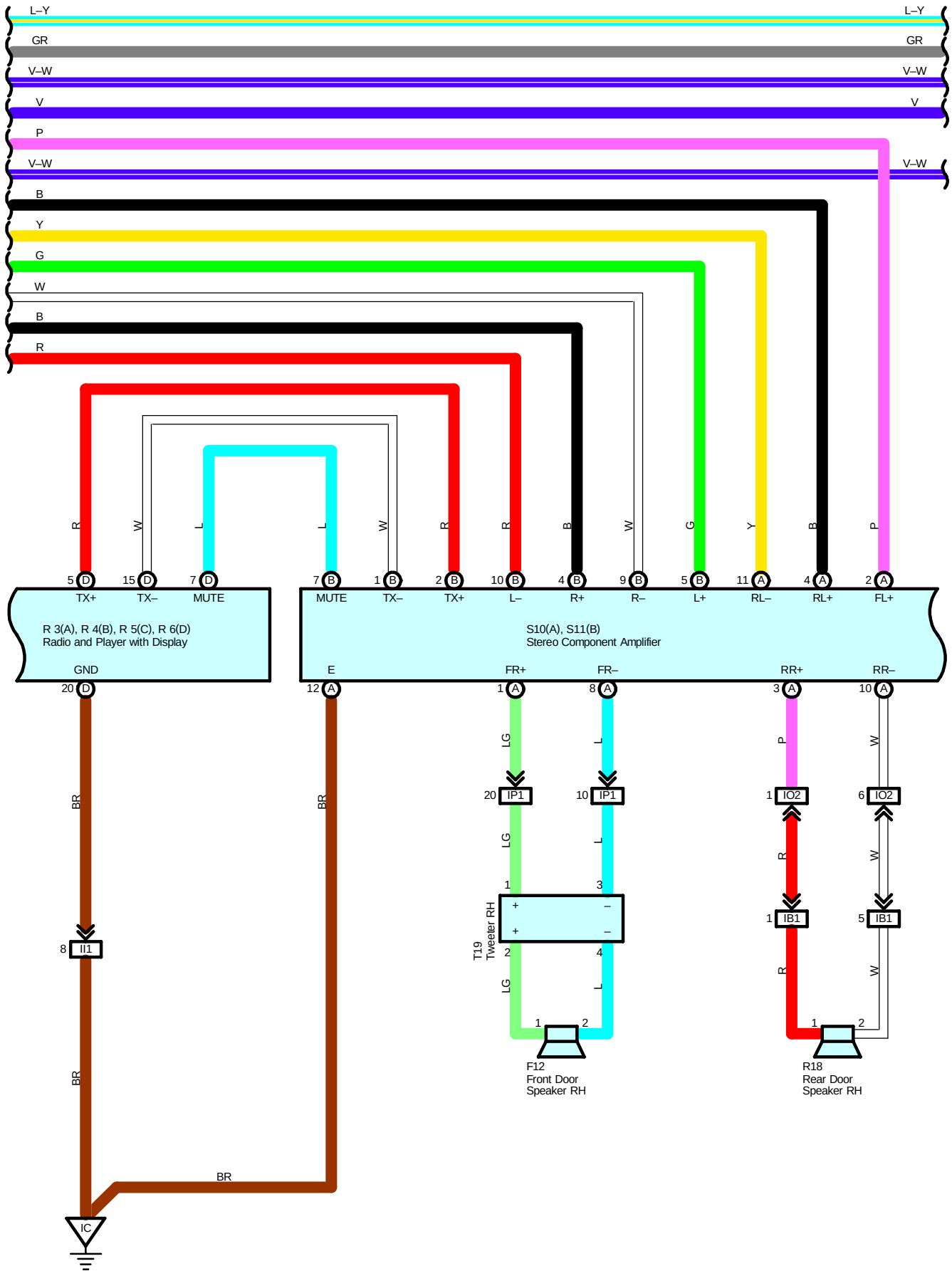
(Except MARK LEVINSON w/ Navigation System)



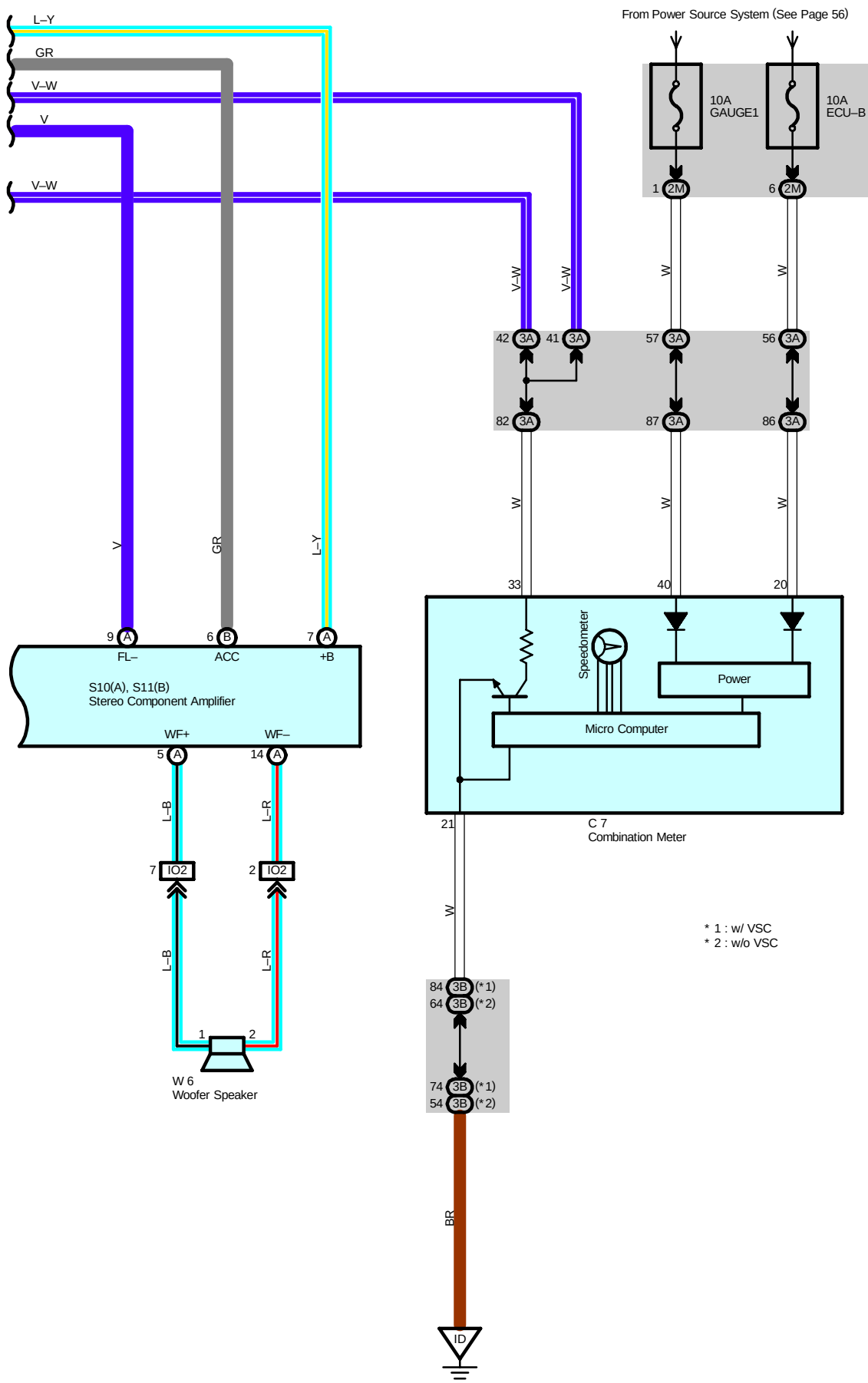
LEXUS Navigation System, Radio and Player



(Except MARK LEVINSON w/ Navigation System)



LEXUS Navigation System, Radio and Player



(Except MARK LEVINSON w/ Navigation System)

Service Hints

R6 (D) Radio and Player with Display

- (D) 1–Ground : Always approx. 12 volts
- (D)11–Ground : Approx. 12 volts with ignition SW at ON or ACC position
- (D)20–Ground : Always continuity

N2 (A) Navigation ECU

- (A)18–Ground : Approx. 12 volts with ignition SW at ON or ACC position
- (A) 9–Ground : Always approx. 12 volts
- (A)17–Ground : Always continuity

S10 (A), S11 (B) Stereo Component Amplifier

- (A) 7–Ground : Always approx. 12 volts
- (B) 6–Ground : Approx. 12 volts with ignition SW at ON or ACC position
- (A)12–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C3	38	R3	A 39	S15	B 41
C7	38	R4	B 39	T11	B 41
F11	40	R5	C 39	T12	C 41
F12	40	R6	D 39	T13	D 41
J6	A 39	R17	41	T14	E 41
J7	B 39	R18	41	T15	F 41
J12	40	S10	A 39	T18	41
N2	A 41	S11	B 39	T19	41
N3	B 41	S14	A 41	W6	41

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M	29	
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IA2		
IA4		
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
II1	48	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the A/C Control Assembly)
IO2	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO3		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BC1	50	Floor No.1 Wire and Floor No.2 Wire (Behind the Rear Passenger's Seat RH)

▽ : Ground Points

Code	See Page	Ground Points Location
IC	46	Instrument Panel Brace RH
ID		
BC	50	Front Side of Rear Quarter Wheel House LH

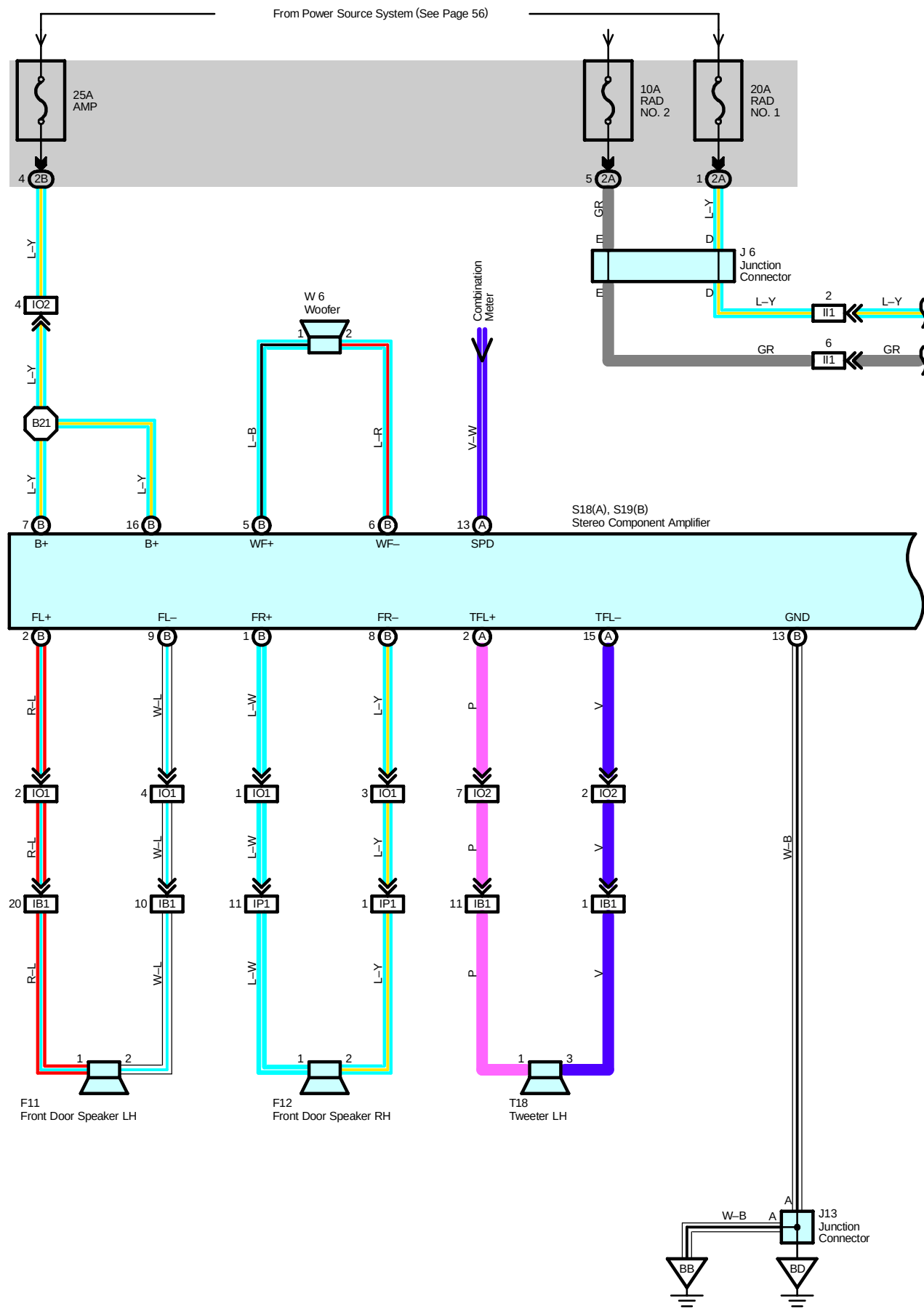
LEXUS Navigation System, Radio and Player (Except MARK LEVINSON w/ LEXUS Navigation System)



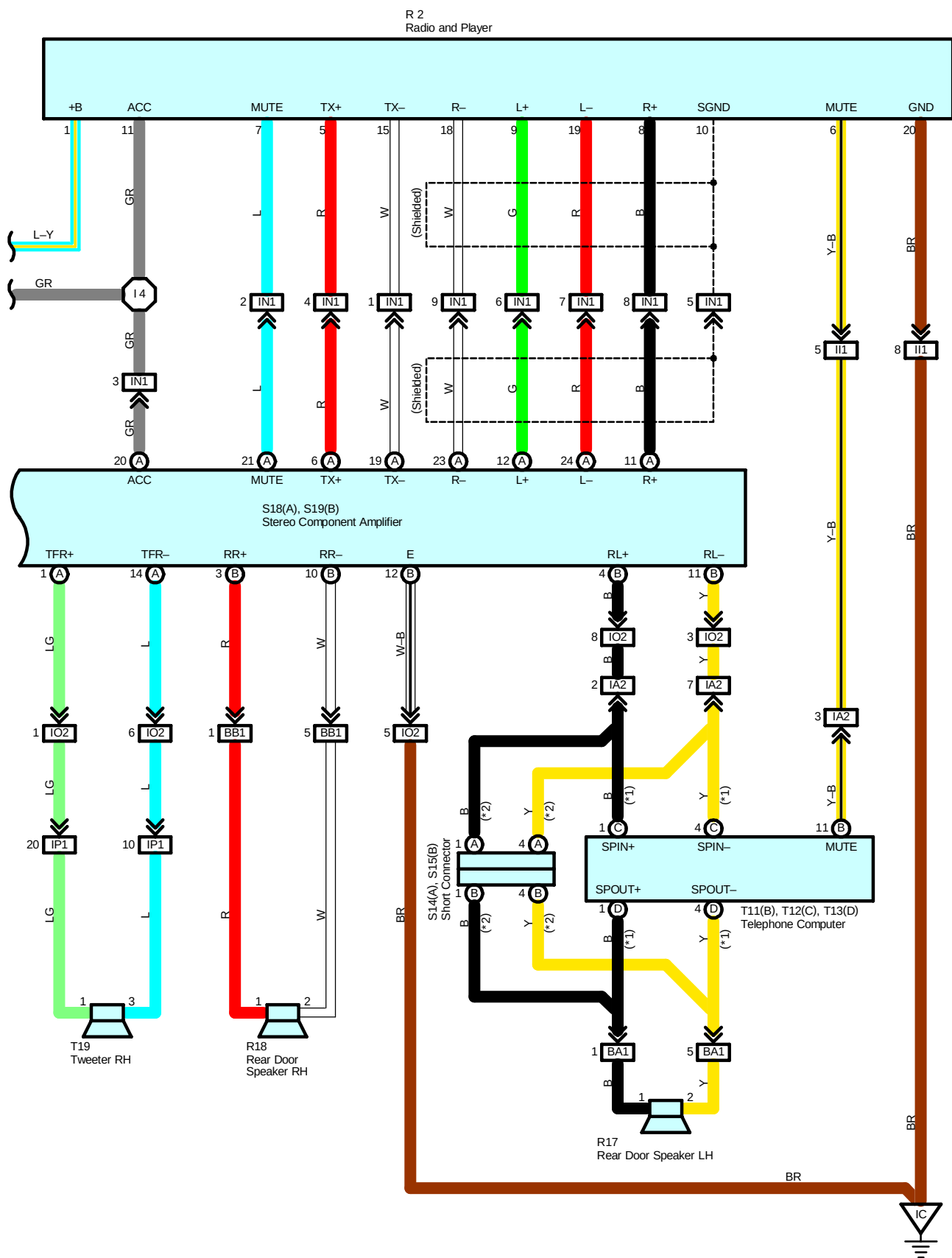
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	48	Instrument Panel Wire	B16	50	Floor No.1 Wire
I4	48	Instrument Panel No.3 Wire			

Radio and Player (MARK LEVINSON w/o Navigation System)



* 1 : w/ Cellular Mobile Telephone
 * 2 : w/o Cellular Mobile Telephone



Radio and Player (MARK LEVINSON w/o LEXUS Navigation System)

Service Hints

R2 Radio and Player

11–Ground : Approx. 12 volts with ignition SW at ACC or ON position

1–Ground : Always approx. 12 volts

20–Ground : Always continuity

S18 (A), S19 (B) Stereo Component Amplifier

(A) 20–Ground : Approx. 12 volts with ignition SW at ACC or ON position

(B) 7, (B) 16–Ground : Always approx. 12 volts

(B) 12, (B) 13–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
F11	40	R18	41	T12	C 41
F12	40	S14	A 41	T13	D 41
J6	39	S15	B 41	T18	41
J13	40	S18	A 41	T19	41
R2	39	S19	B 41	W6	41
R17	41	T11	B 41		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2B		

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
II1	48	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the A/C Control Assembly)
IN1	48	Instrument Panel No.2 Wire and Floor No.2 Wire (Right Kick Panel)
IO1	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO2		
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)

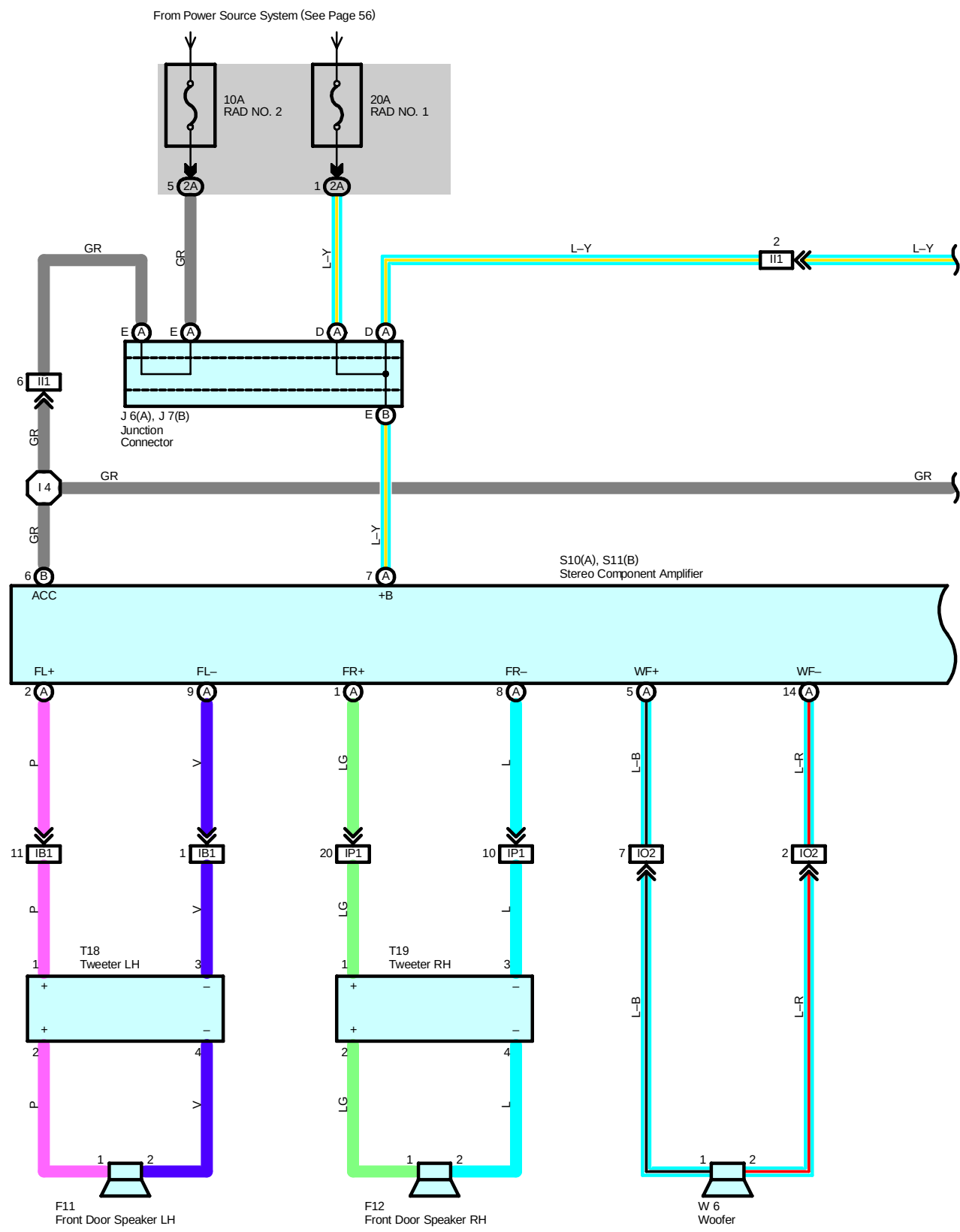
▽ : Ground Points

Code	See Page	Ground Points Location
IC	46	Instrument Panel Brace RH
BB	50	Under the Front Passenger's Seat
BD	50	Front Side of Rear Quarter Wheel House RH

○ : Splice Points

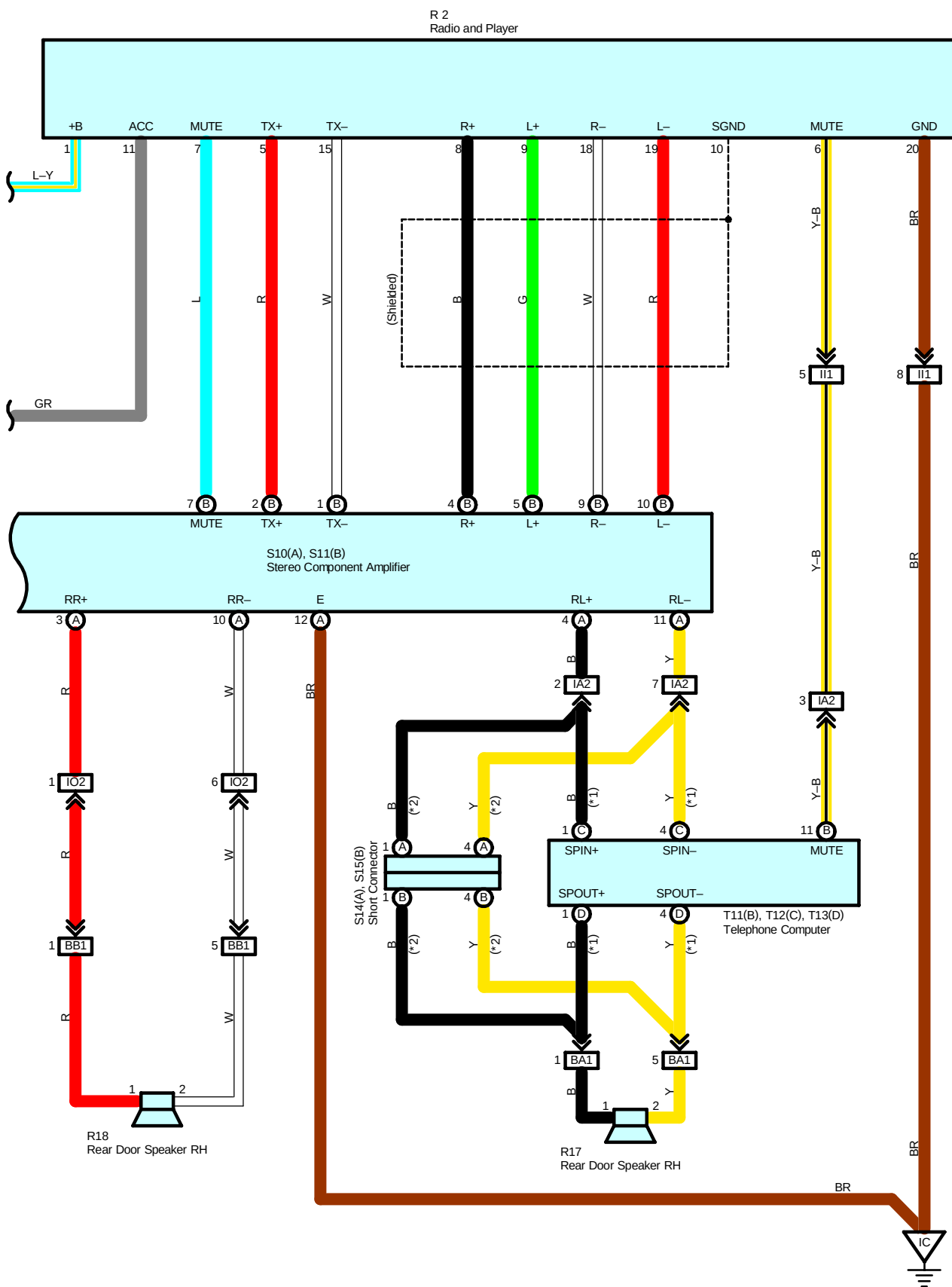
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I4	48	Instrument Panel No.3 Wire	B21	50	Floor No.2 Wire

Radio and Player



(6CD Type Except MARK LEVINSON w/o LEXUS Navigation System)

* 1 : w/ Cellular Mobile Telephone
 * 2 : w/o Cellular Mobile Telephone



Radio and Player (6CD Type Except MARK LEVINSON w/o LEXUS Navigation System)

Service Hints

R2 Radio and Player

11–Ground : Approx. 12 volts with ignition SW at ACC or ON position

1–Ground : Always approx. 12 volts

20–Ground : Always continuity

S10 (A), S11 (B) Stereo Component Amplifier

(B) 6–Ground : Approx. 12 volts with ignition SW at ACC or ON position

(A) 7–Ground : Always approx. 12 volts

(A)12–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
F11	40	R18	41	T12	C 41
F12	40	S10	A 39	T13	D 41
J6	A 39	S11	B 39	T18	41
J7	B 39	S14	A 41	T19	41
R2	39	S15	B 41	W6	41
R17	41	T11	B 41		

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
II1	48	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the A/C Control Assembly)
IO2	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)

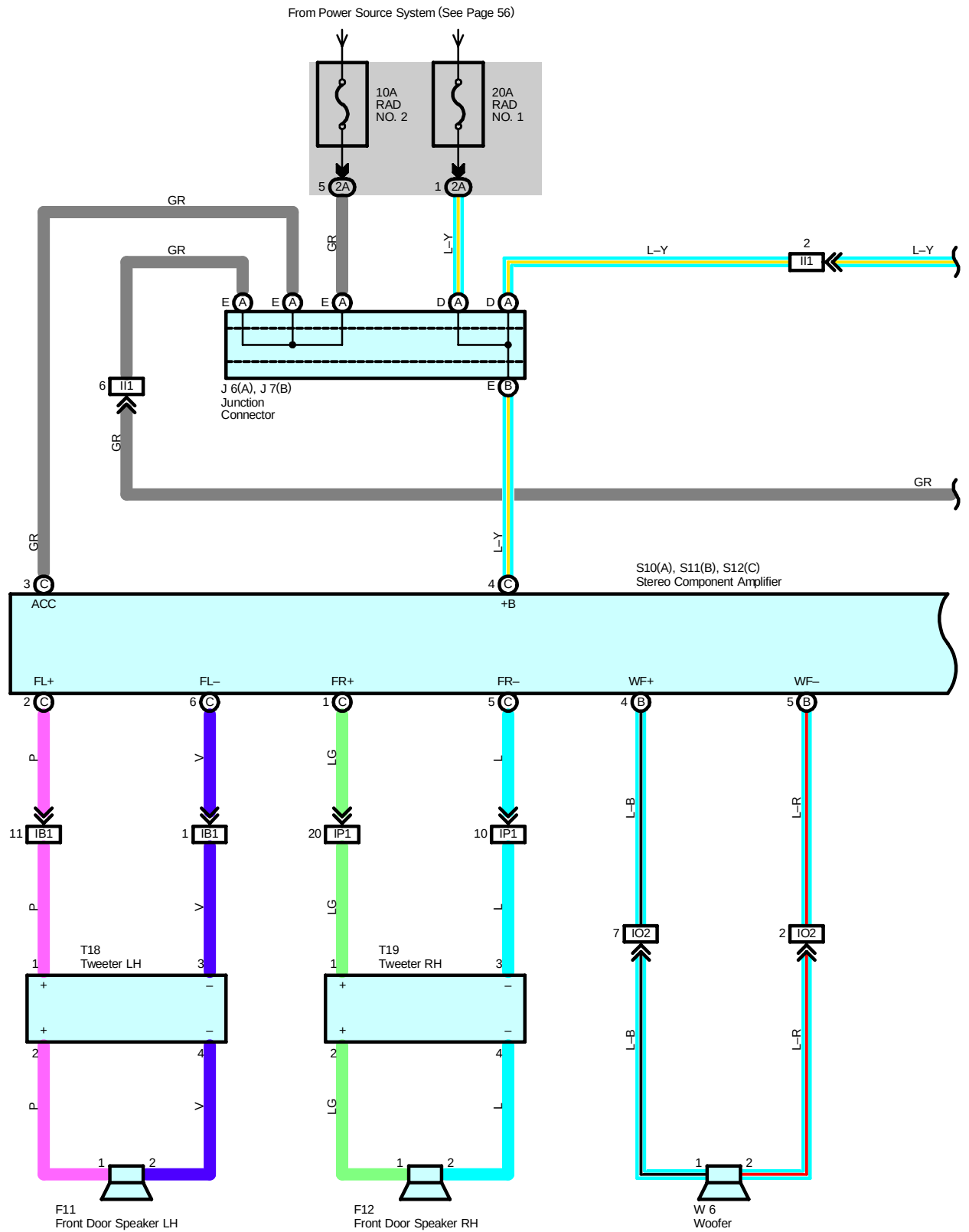
▽ : Ground Points

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

○ : Splice Points

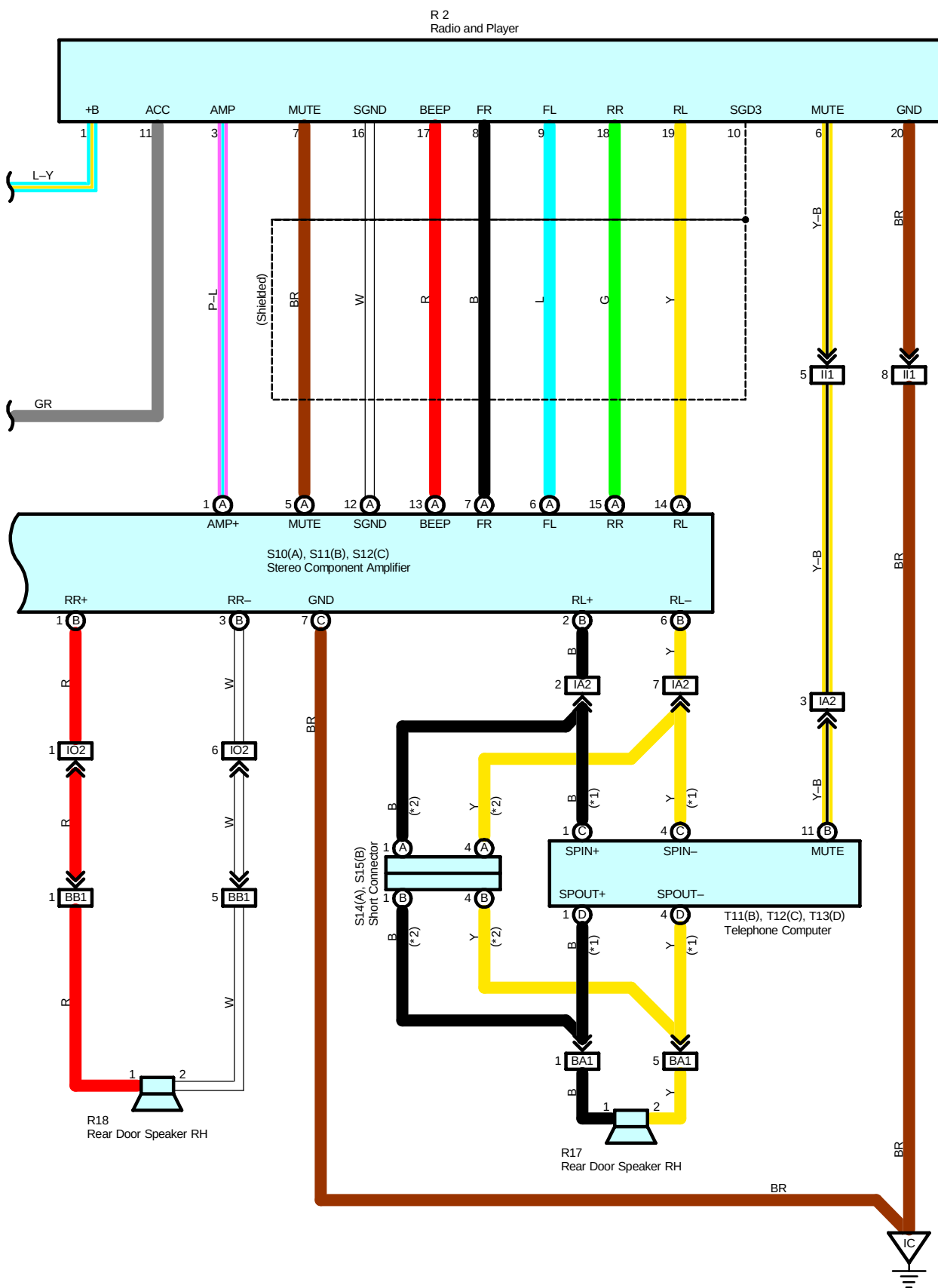
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I4	48	Instrument Panel No.3 Wire			

Radio and Player (1CD Type Except MARK LEVINSON w/o LEXUS Navigation System)



(1CD Type Except MARK LEVINSON w/o LEXUS Navigation System)

* 1 : w/ Cellular Mobile Telephone
 * 2 : w/o Cellular Mobile Telephone



Radio and Player (1CD Type Except MARK LEVINSON w/o LEXUS Navigation System)

Service Hints

R2 Radio and Player

11–Ground : Approx. 12 volts with ignition SW at ACC or ON position

1–Ground : Always approx. 12 volts

20–Ground : Always continuity

S12 (C) Stereo Component Amplifier

(C) 3–Ground : Approx. 12 volts with ignition SW at ACC or ON position

(C) 4–Ground : Always approx. 12 volts

(C) 7–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
F11	40	R18	41	T11	B 41
F12	40	S10	A 39	T12	C 41
J6	A 39	S11	B 39	T13	D 41
J7	B 39	S12	C 39	T18	41
R2	39	S14	A 41	T19	41
R17	41	S15	B 41	W6	41

○ : Junction Block and Wire Harness Connector

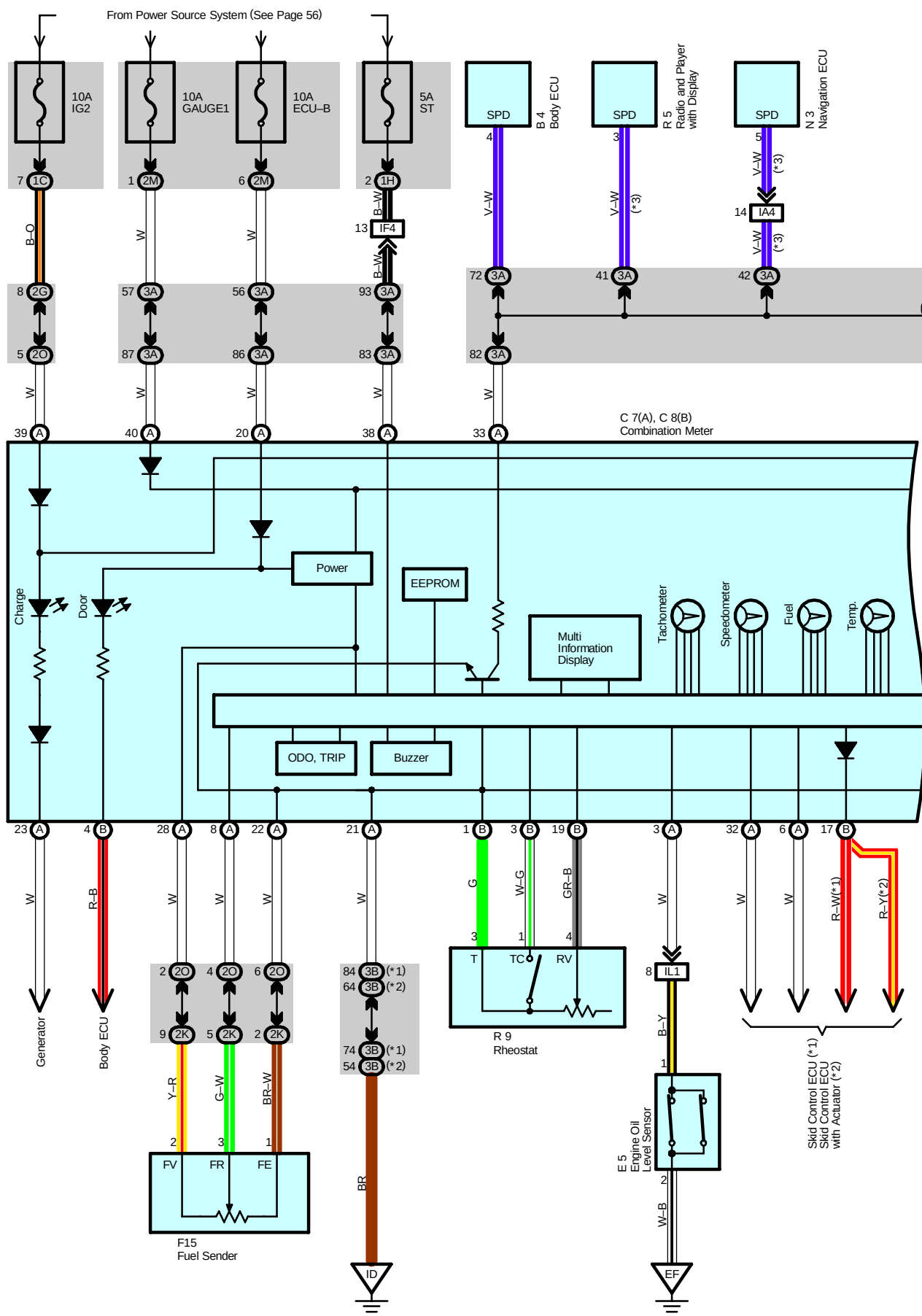
Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

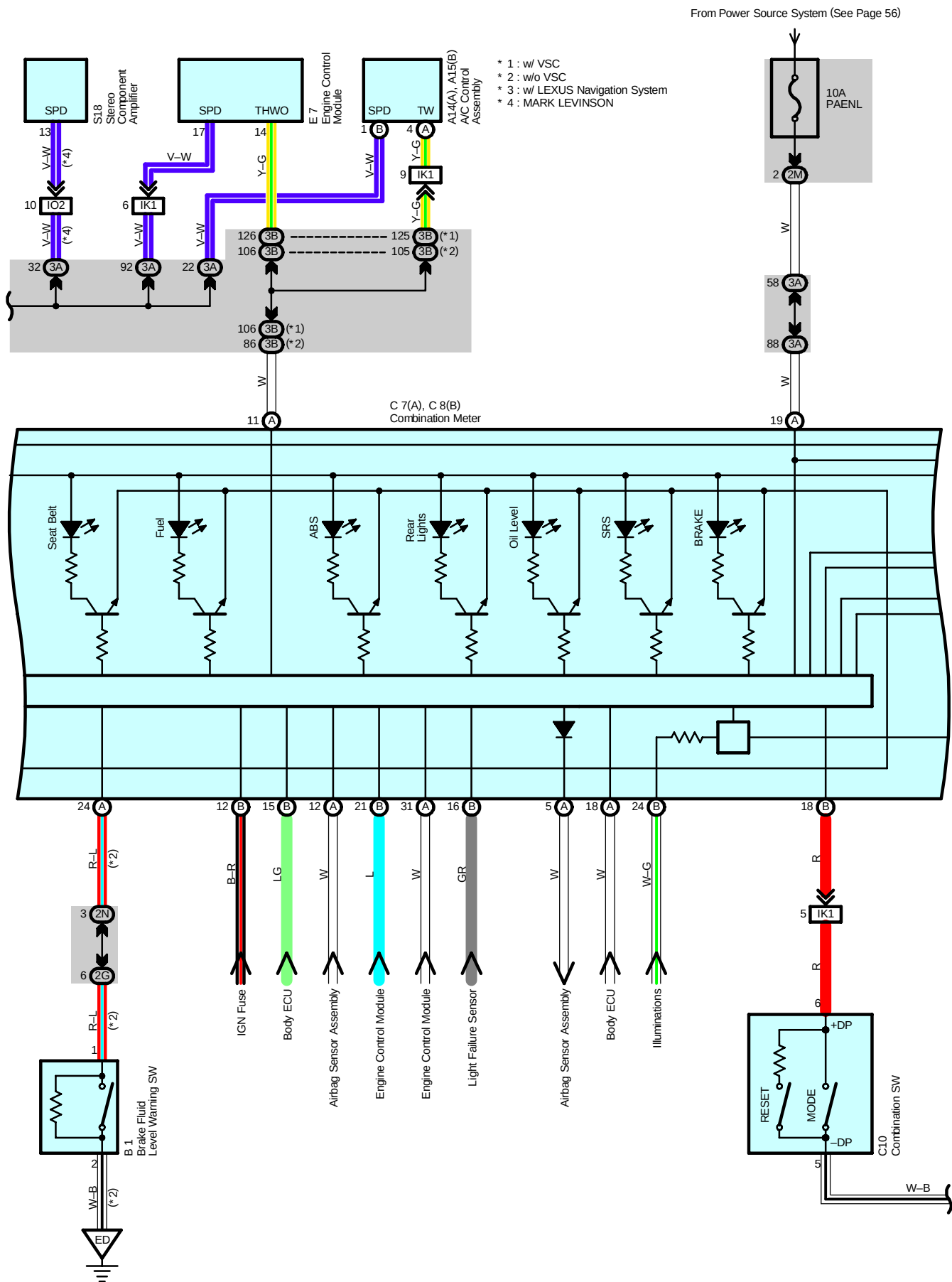
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IB1	46	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
II1	48	Instrument Panel Wire and Instrument Panel No.2 Wire (Behind the A/C Control Assembly)
IO2	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IP1	48	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	50	Rear Door No.2 Wire and Floor No.1 Wire (Left Center Pillar)
BB1	50	Rear Door No.1 Wire and Floor No.2 Wire (Right Center Pillar)

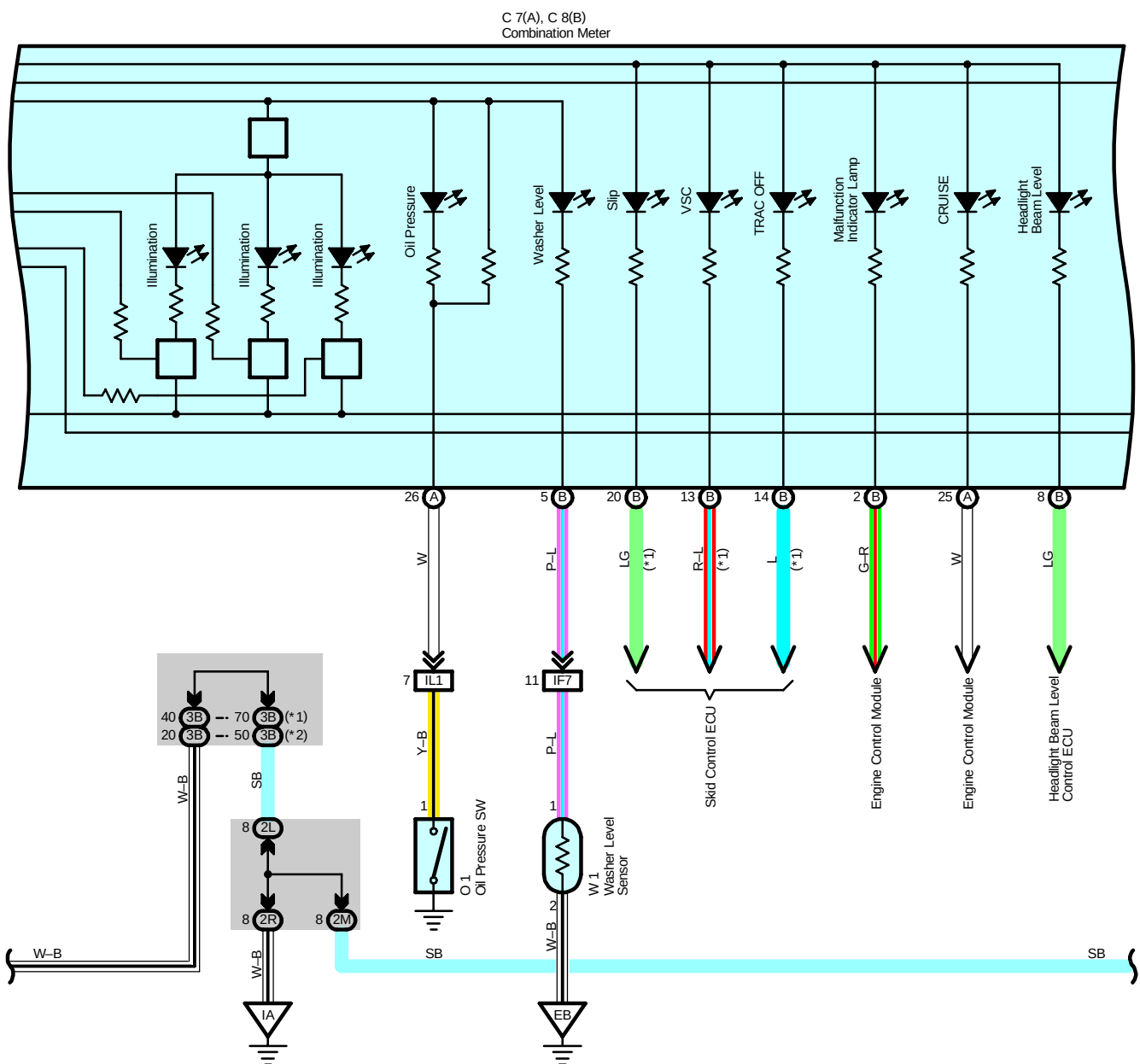
▽ : Ground Points

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





Combination Meter



- * 1 : w/ VSC
- * 2 : w/o VSC
- * 5 : w/ Daytime Running Light
- * 6 : w/o Daytime Running Light
- * 7 : Except USA



Combination Meter

Service Hints

B1 Brake Fluid Level Warning SW

1-2 : Closed with the float down

C7 (A) Combination Meter

(A)40-Ground : Approx. 12 volts with ignition SW at ON or ST position

(A)20-Ground : Always approx. 12 volts

(A) 1, (A) 2, (A) 21-Ground : Always continuity

(A)39-Ground : Approx. 12 volts with ignition SW at ON or ST position

O1 Oil Pressure SW

1-Ground : Continuity with the oil pressure above approx. 20 kpa (2.8 psi, 0.2 kgf/cm²)

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
A14	A	38	C10		38	N3	41
A15	B	38	E5		36	O1	37
B1		36	E7		38	R5	39
B4		38	F15		40	R9	39
C7	A	38	J8	A	39	S18	41
C8	B	38	J9	B	39	W1	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)
1C	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2K	28	Floor No.1 Wire and Driver Side J/B (Lower Finish Panel)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2N		
2O		
2R		
3A	34 (w/ VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
	35 (w/o VSC)	
3B	34 (w/ VSC)	
	35 (w/o VSC)	

□ : Connector Joining Wire Harness and Wire Harness

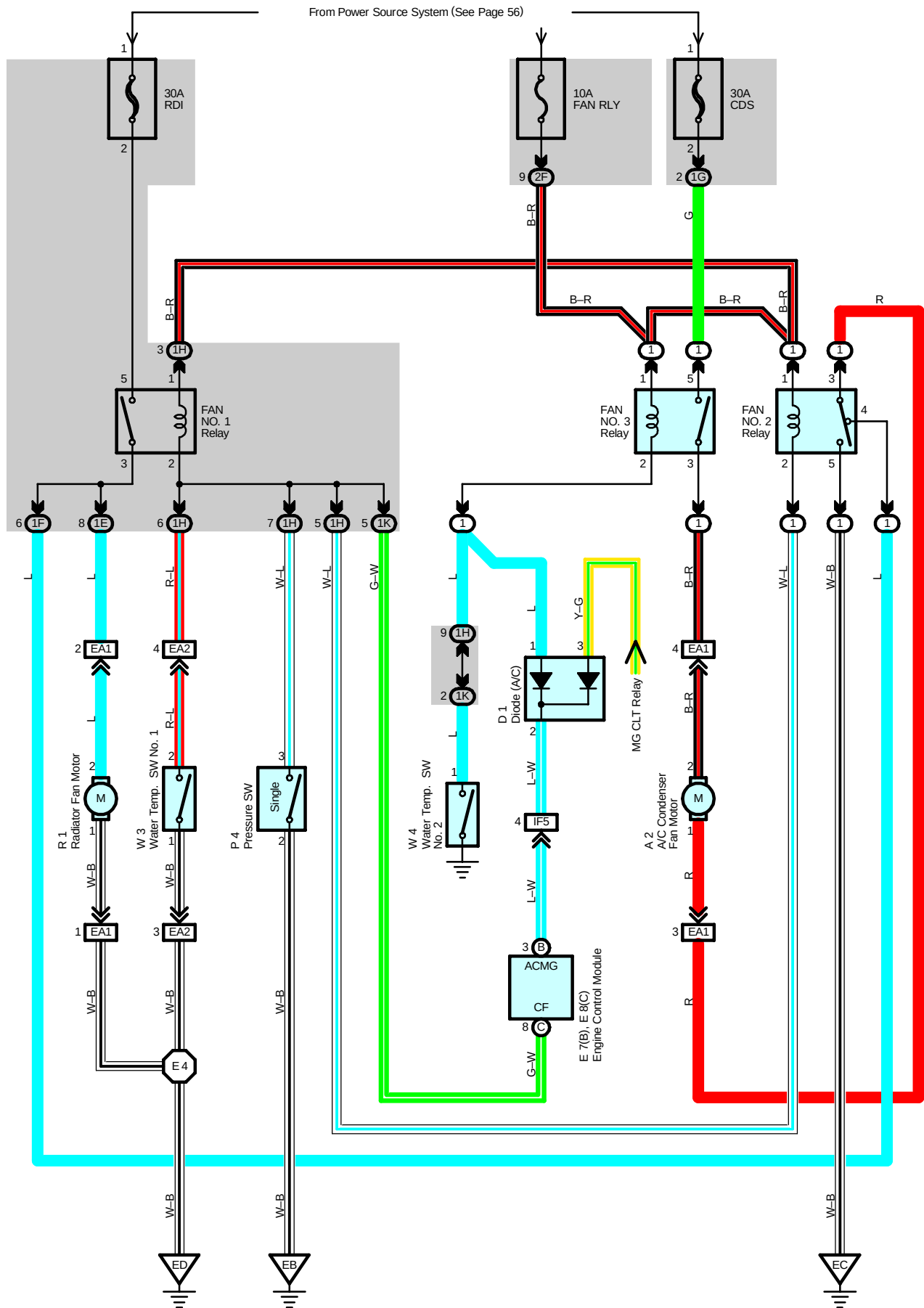
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IF4	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF5		
IF7		
IK1	48	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IO2	48	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)



: **Ground Points**

Code	See Page	Ground Points Location
EB	44	Right Fender
ED	44	Left Fender
EF	44	Intake Side of Cylinder Block
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH

Radiator Fan and Condenser Fan



System Outline

Fan Motor Operation

With the ignition SW turned on, the current through the FAN RLY fuse flows to the FAN NO.1 relay (Coil side), FAN NO.2 relay (Coil side) and FAN NO.3 relay (Coil side).

1. Low Speed Operation

Only when the A/C system is activated or the water temp. SW No.2 is turned on, the A/C condenser fan motor and the radiator fan motor rotates at low speed.

When the A/C system is activated, the current from FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the diode to TERMINAL 2 to TERMINAL (B) 3 of the engine control module causing the FAN NO.3 relay to turn on. As a result, the current through the CDS fuse flows to TERMINAL 5 of the FAN NO.3 relay to TERMINAL 3 to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 4 to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND. As this flowing in series for the motors, the motors rotate at low speed.

When the water temp. SW No.2 is turned on, the current from FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the water temp. SW No.2 to GROUND, causing the FAN NO.3 relay to turn on. As a result, the current through the CDS fuse flows the same route as above, rotating the motors at low speed.

2. High Speed Operation

With the pressure SW is turned on and/or the water temp. SW No.1 is turned on, the A/C condenser fan motor and the radiator fan motor rotate at high speed.

When the pressure SW is turned on, the current through the FAN RLY fuse flows to the FAN NO.1 and NO.2 relay (Coil side) to TERMINAL 3 of the pressure SW to TERMINAL 2 to GROUND, and the current through the FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the water temp. SW No.2 to GROUND. As a result, FAN NO.1, NO.2. and NO.3 relay is turned on. At the same time, the current from the RDI fuse flows to FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND, and the current from the CDS fuse flows to FAN NO.3 relay (Point side) to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to GROUND.

As the current flowing in parallel for motors as above, the motors rotate at high speed.

When the water temp. SW No.1 is turned on, the current through the FAN RLY fuse flows to the FAN NO.1 and NO.2 relay (Coil side) to TERMINAL 2 of the water temp. SW No.1 to TERMINAL 1 to GROUND, and the current through the FAN RLY fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the diode (A/C) to TERMINAL 2 to TERMINAL (B) 3 of the engine control module. As a result, FAN NO.1, NO.2 and NO.3 relay is turned on. At the same time, the current from the RDI fuse flows to FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND, and the current from the CDS fuse flows to FAN NO.3 relay (Point side) to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to GROUND.

As the current flowing in parallel for motors as above, the motors rotate at high speed.

Service Hints

P4 Pressure SW

3-2 : Closed above approx. 15.5 kgf/cm² (224 psi, 1520 kpa)

Open below approx. 12.5 kgf/cm² (181 psi, 1225 kpa)

W3 Water Temp. SW NO.1

2-1 : Continuity above approx. 95°C (203° F)

W4 Water Temp. SW NO.2

1-Ground : Continuity above approx. 90°C (194°F)

○ : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A2		36		E8	C	38		W3		37	
D1		36		P4		37		W4		37	
E7	B	38		R1		37					

○ : Relay Blocks

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

Radiator Fan and Condenser Fan



: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1F		
1G		
1H		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2F	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44	Engine Room Main Wire and Engine Room No.2 Wire (Behind the Headlight LH)
EA2		
IF5	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)



: Ground Points

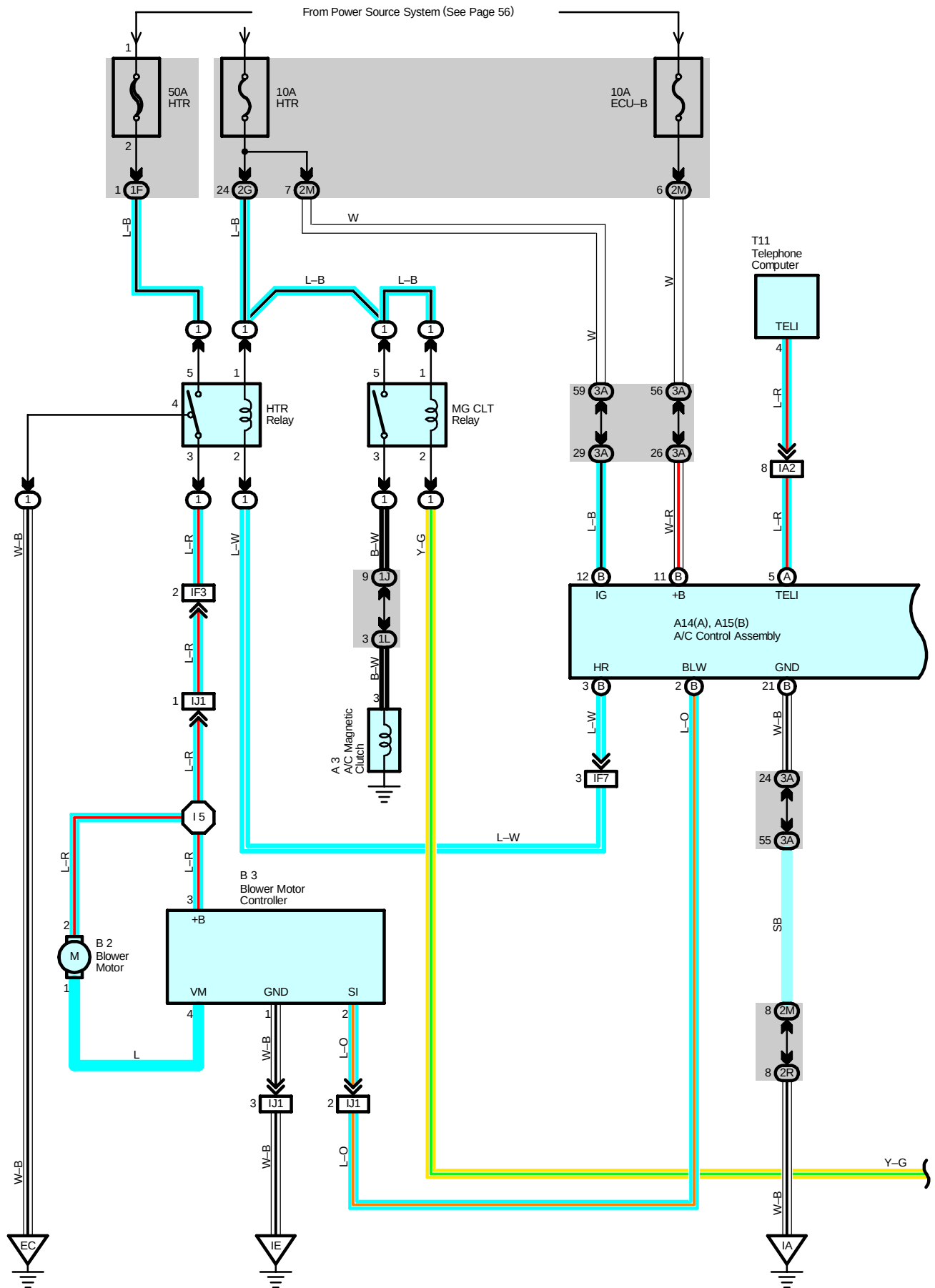
Code	See Page	Ground Points Location
EB	44	Right Fender
EC	44	Left Fender
ED		

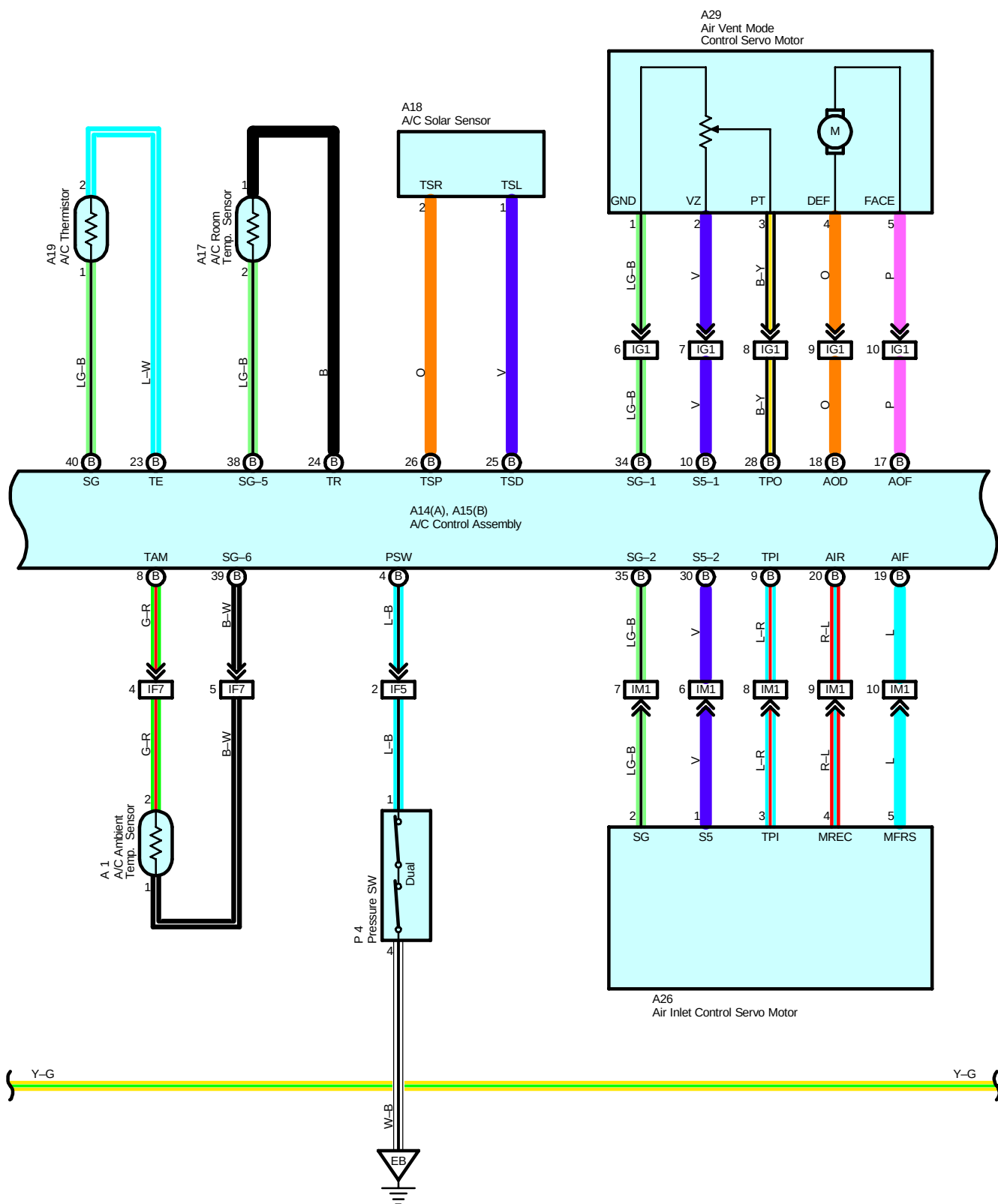


: Splice Points

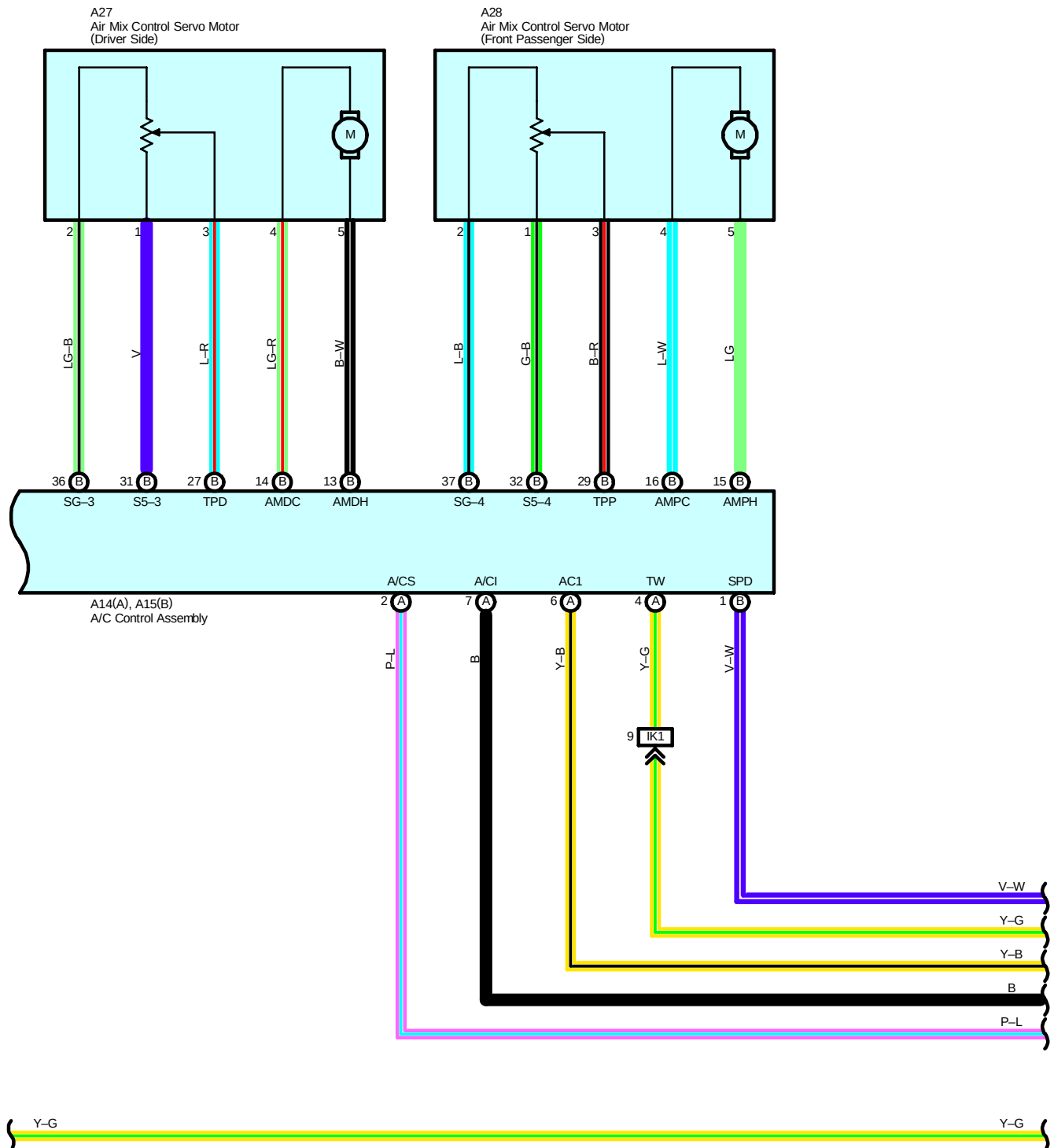
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E4	44	Engine Room Main Wire			

Air Conditioning



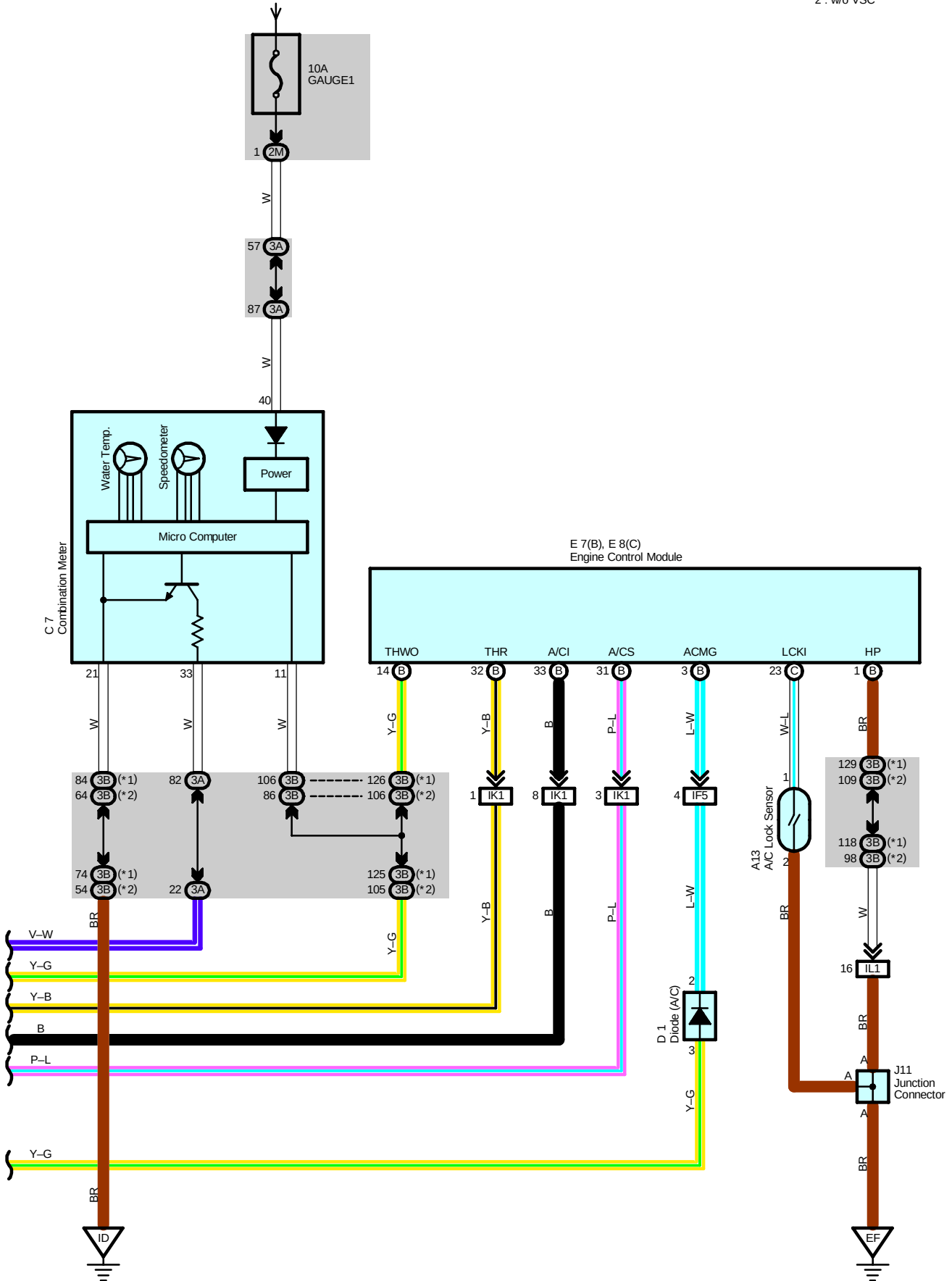


Air Conditioning



From Power Source System (See Page 56)

* 1 : w/ VSC
* 2 : w/o VSC



Air Conditioning

System Outline

1. Heater Blower Operation

Manual operation

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

Auto operation

When the auto SW is turned on, the A/C control assembly sends the signals from various sensors and temperature SW to the blower control to automatically control the blower motor speed.

2. Air Inlet Control Servo Motor Control

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

3. Air Vent Mode Control Servo Motor Control

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

4. Air Mix Control Servo Motor Control

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

5. Air Conditioning Operation

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

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

As a result, the ground circuit in A/C control assembly is closed and current flows from HTR (10A) fuse to TERMINAL 1 of the MG CLT relay to TERMINAL 2 to TERMINAL 3 of the diode (A/C) to TERMINAL 2 to TERMINAL ACMG of the engine control module to TERMINAL HP to GROUND, turning the MG CLT relay on, so that the magnetic clutch is on and the A/C compressor operates.

At the same time, the engine control module detects the magnetic clutch is on and the A/C compressor operates.

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

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

Service Hints

P4 Pressure SW

1-4 : Open with the refrigerant pressure at less than approx. 216 kpa (2.2 kgf/cm², 31 psi) or more than approx. 3138 kpa (32 kgf/cm², 455 psi)

A15 (B) A/C Control Assembly

+B-Ground : Always approx. 12 volts

IG-Ground : Approx. 12 volts with ignition SW at ON or ST position

AIF-Ground : Approx. 12 volts with FRESH SW on

AIR-Ground : Approx. 12 volts with RECIRC SW on

GND-Ground : Always continuity

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	36	A19	38	C7	38
A3	36	A26	38	D1	36
A13	36	A27	38	E7	B 38
A14	A 38	A28	38	E8	C 38
A15	B 38	A29	38	J11	39
A17	38	B2	38	P4	37
A18	38	B3	38	T11	41

 : 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)
1F	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1J		
1L	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34 (w/ VSC) 35 (w/o VSC)	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B	34 (w/ VSC) 35 (w/o VSC)	

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	46	Instrument Panel Wire and Floor No.1 Wire (Left Kick Panel)
IF3	46	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF5		
IF7		
IG1	48	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
IJ1	48	Instrument Panel Wire and Instrument Panel No.3 Wire (Left Side of A/C Unit)
IK1	48	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	48	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IM1	48	Instrument Panel Wire and Cowl No.2 Wire (Behind the Glove Box)

 : Ground Points

Code	See Page	Ground Points Location
EB	44	Right Fender
EC	44	Left Fender
EF	44	Intake Side of Cylinder Block
IA	46	Instrument Panel Reinforcement LH
ID	46	Instrument Panel Brace RH
IE	46	Instrument Panel Reinforcement RH

 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	48	Instrument Panel No.2 Wire			