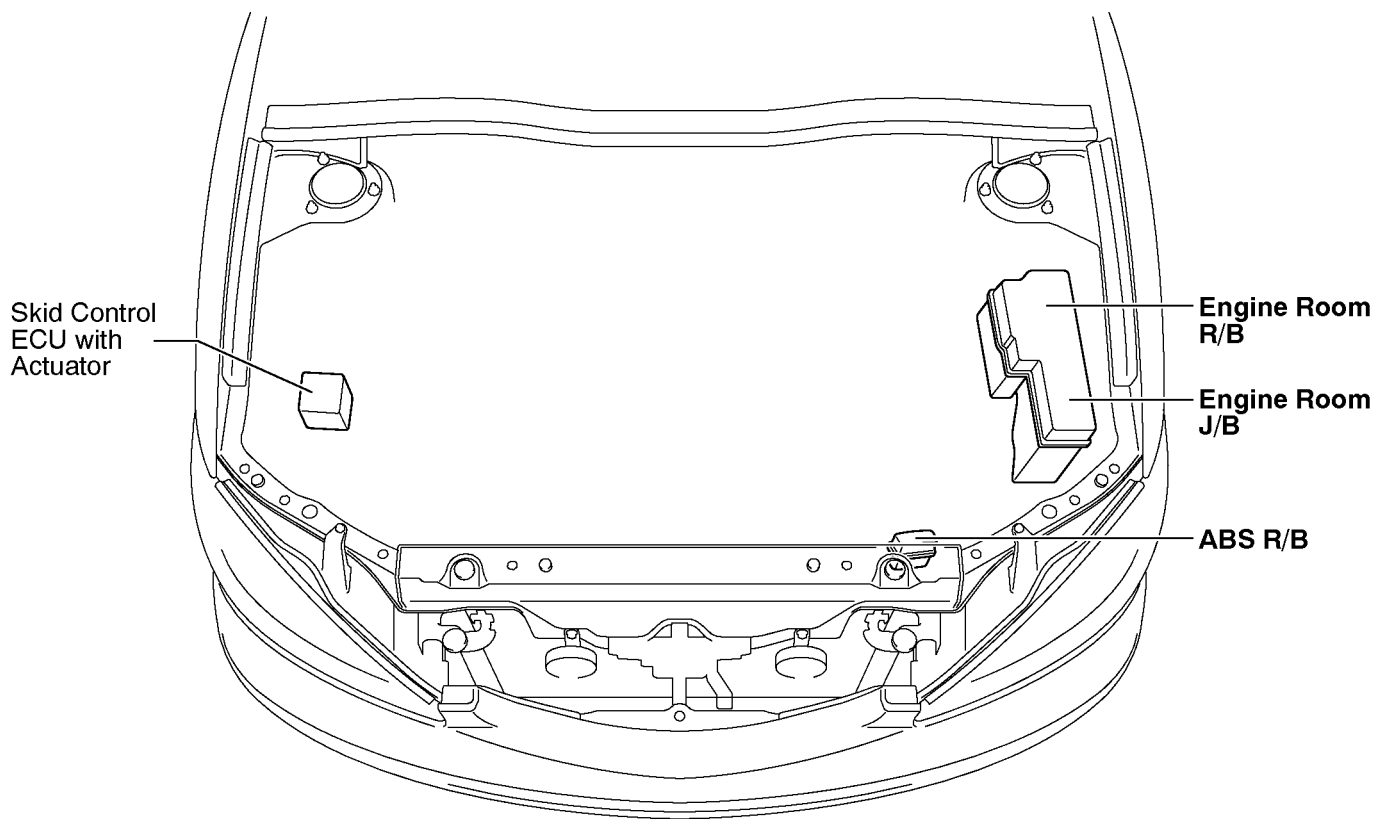
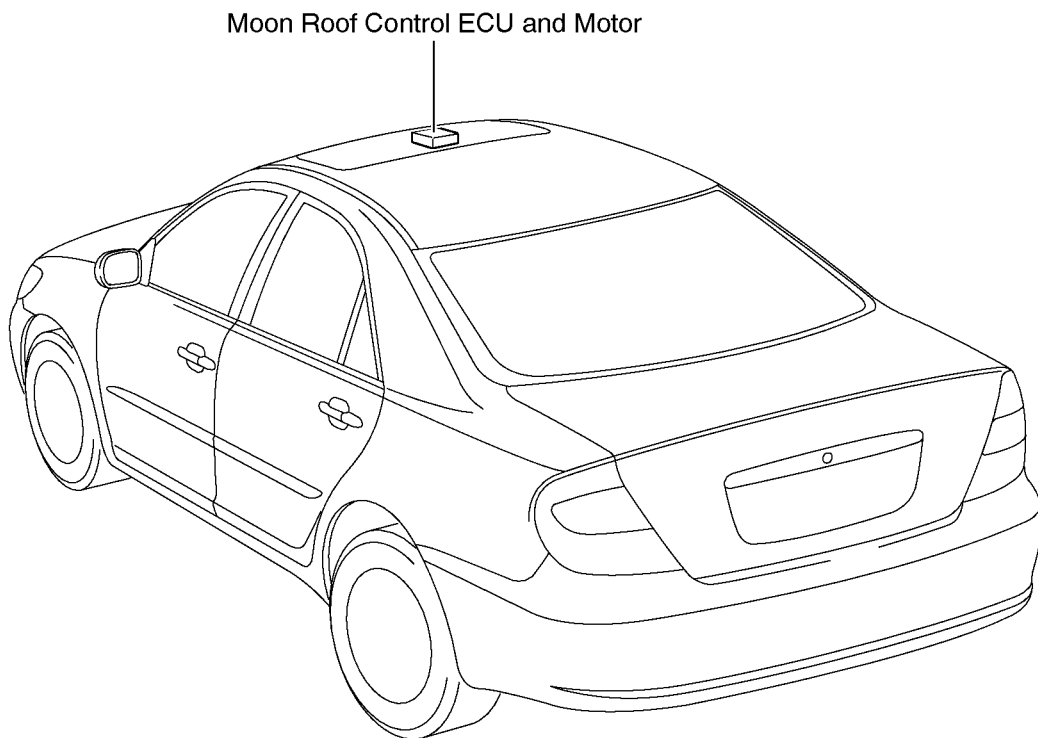


F RELAY LOCATIONS

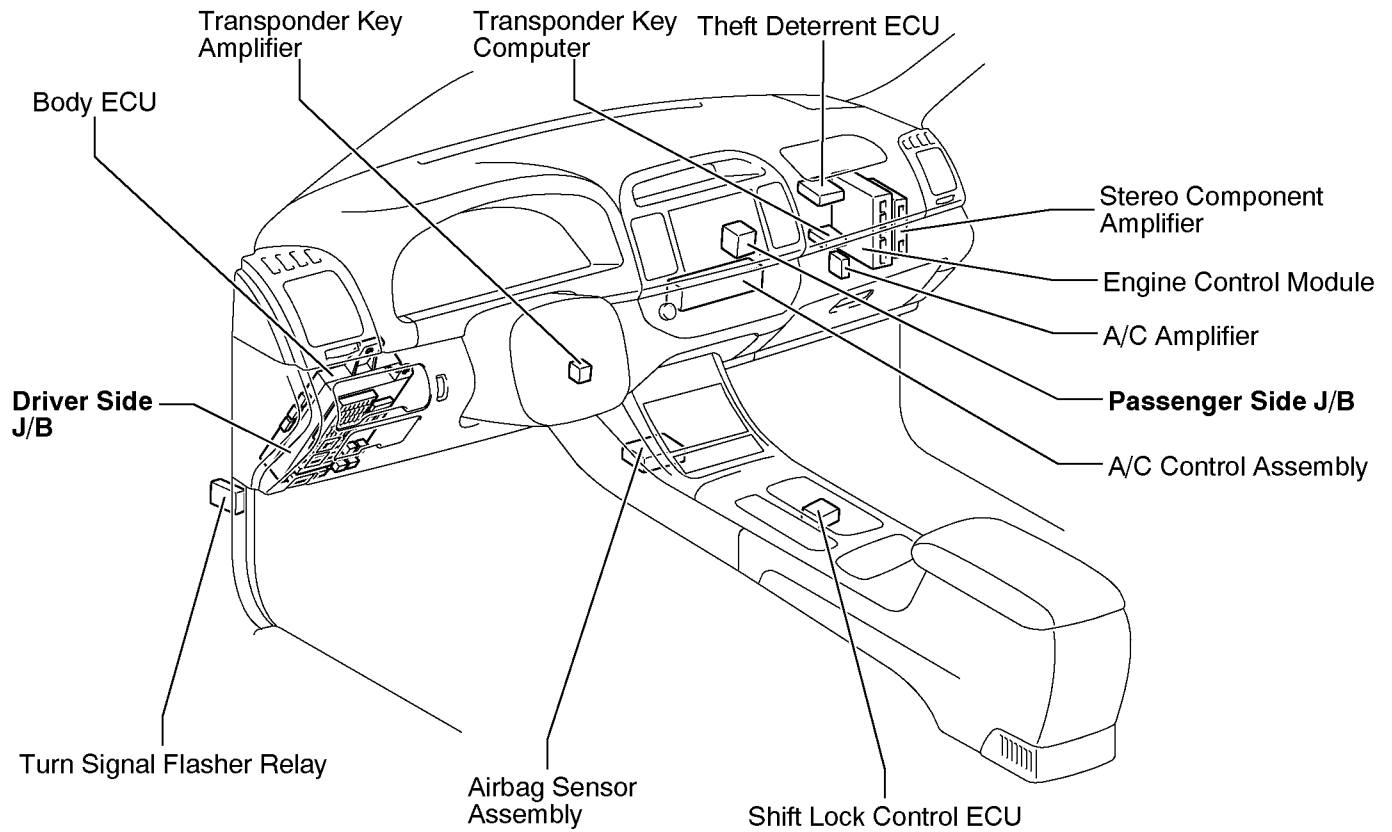
[Engine Compartment]



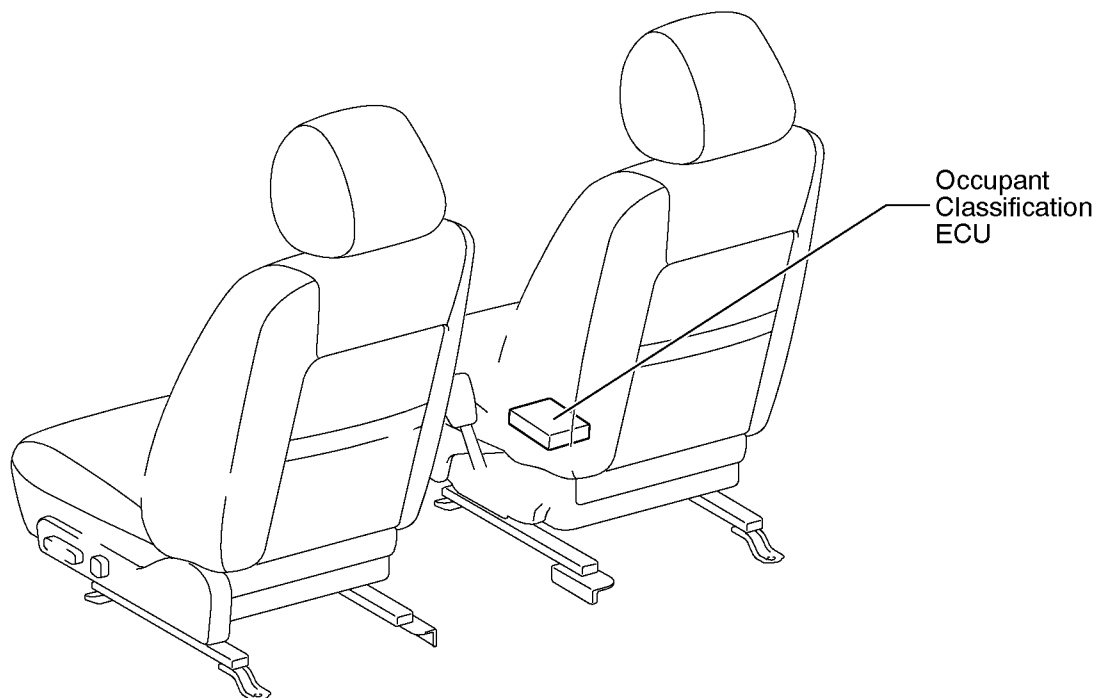
[Body]



[Instrument Panel]



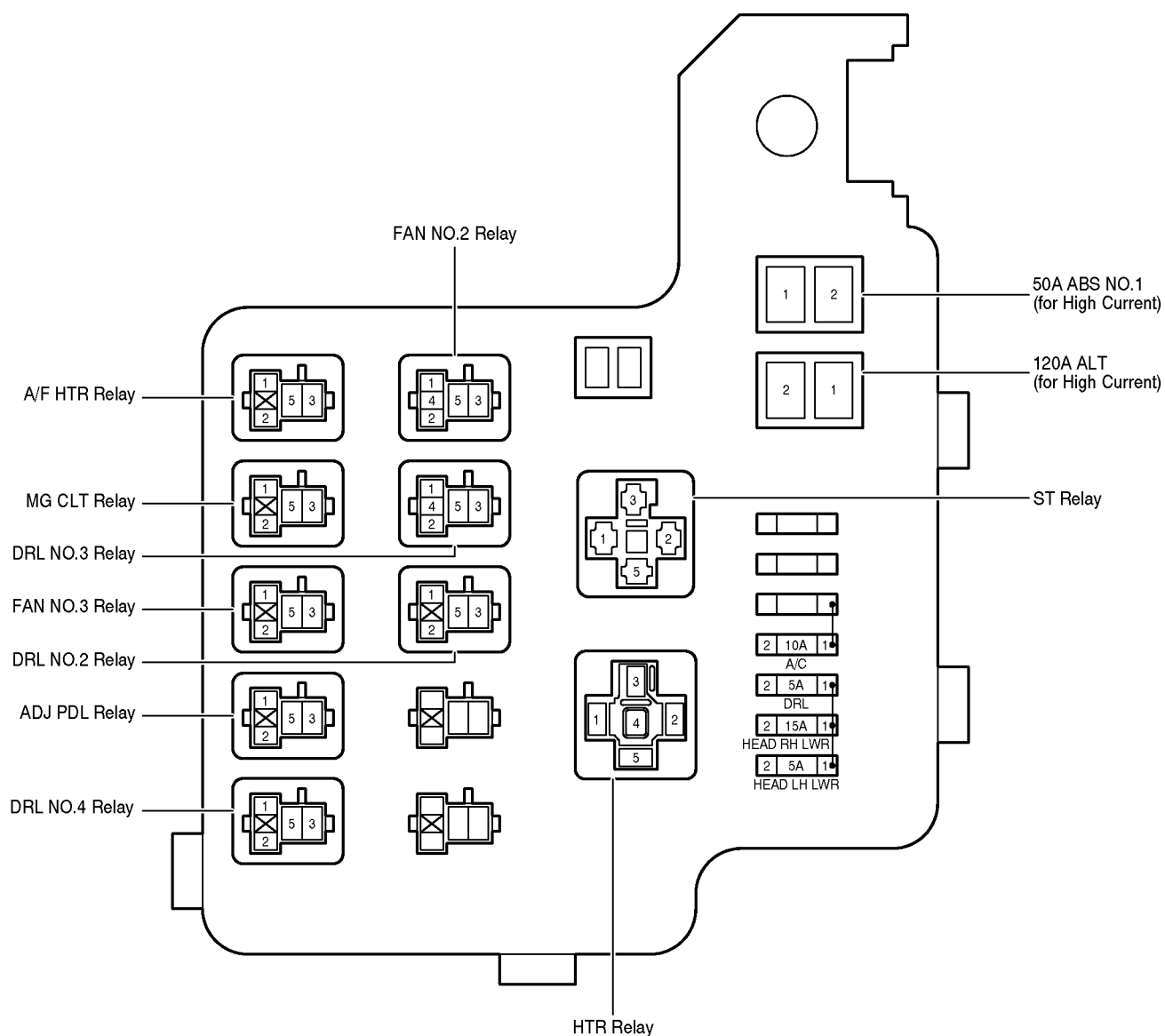
[Seat]



F RELAY LOCATIONS

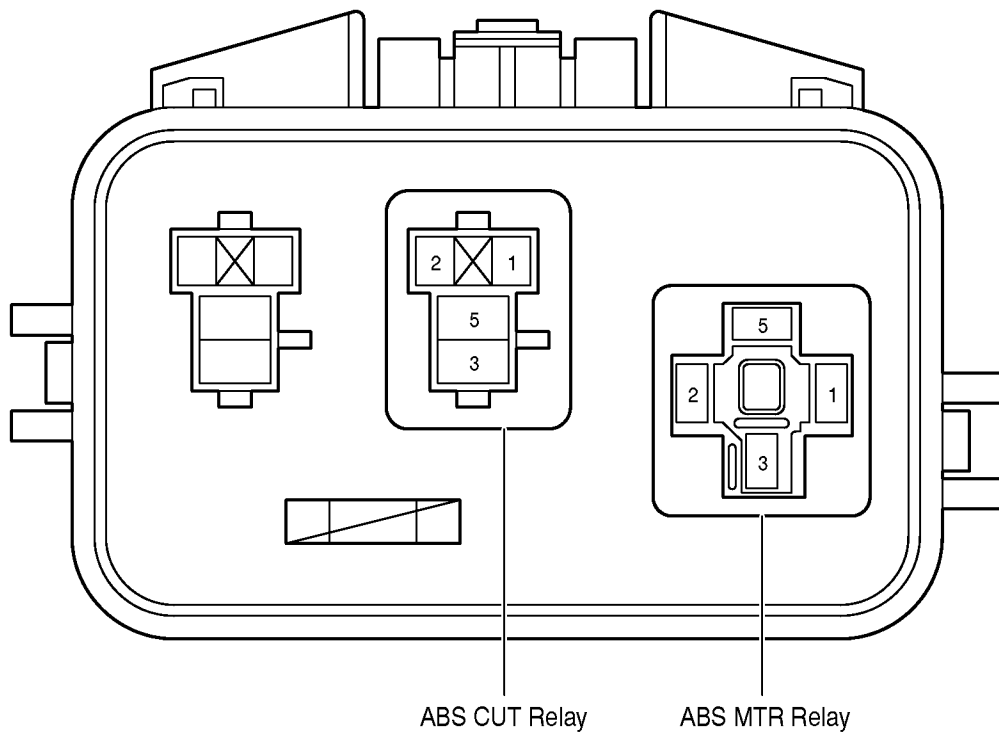
① : Engine Room R/B

Engine Compartment Left (See Page 20)



② : ABS R/B

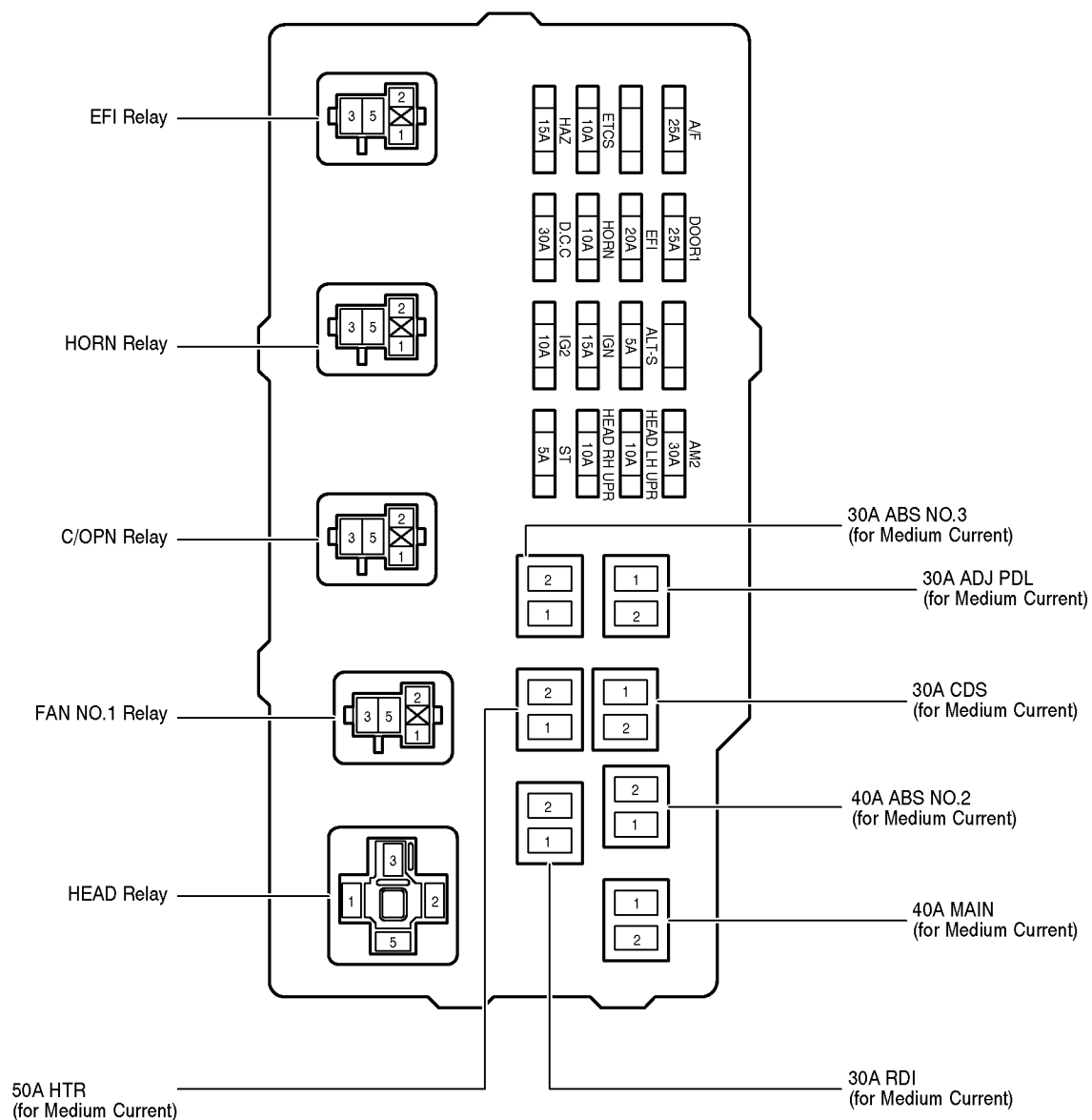
Radiator Side Support LH (See Page 20)

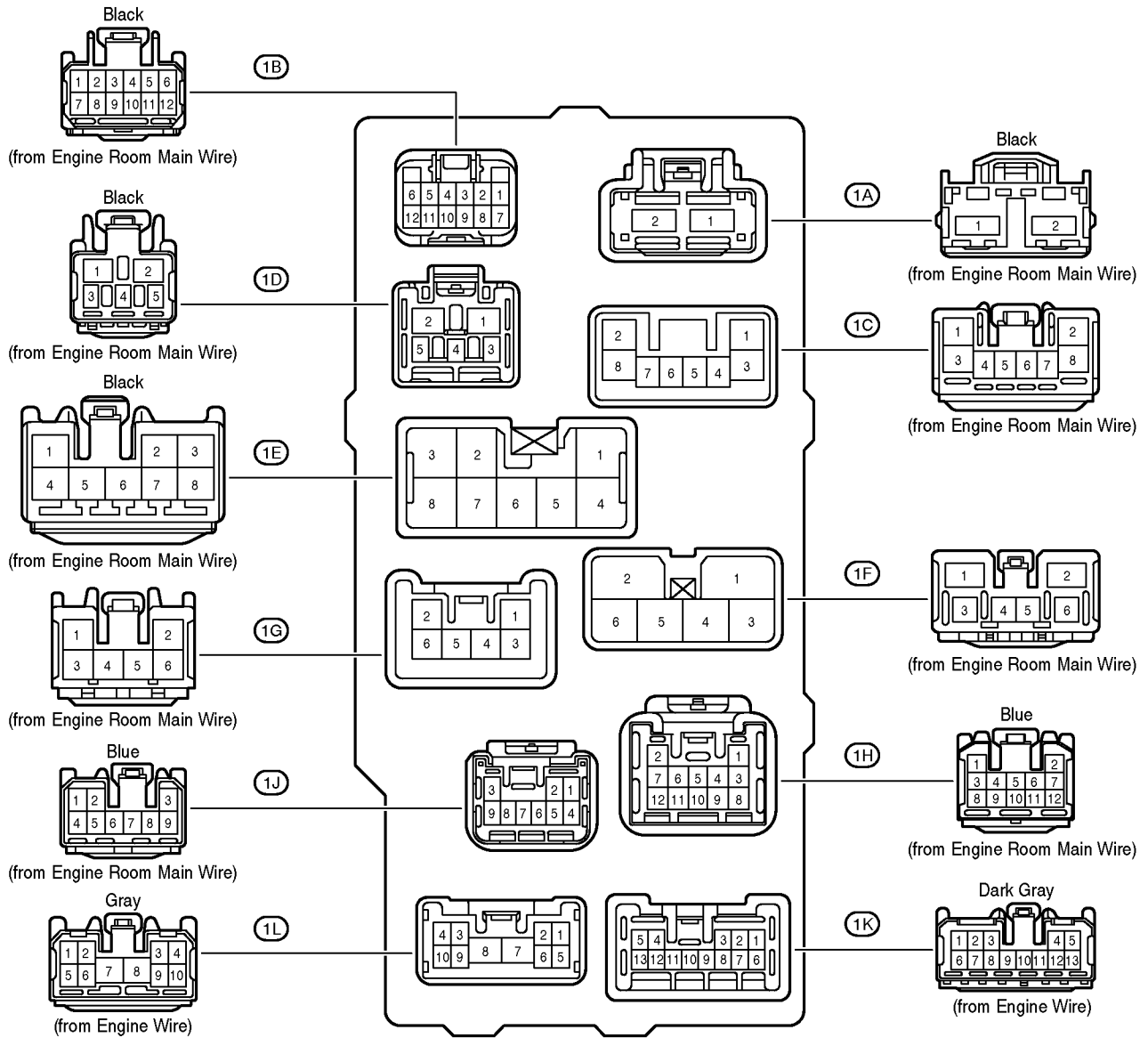


F RELAY LOCATIONS

 : Engine Room J/B

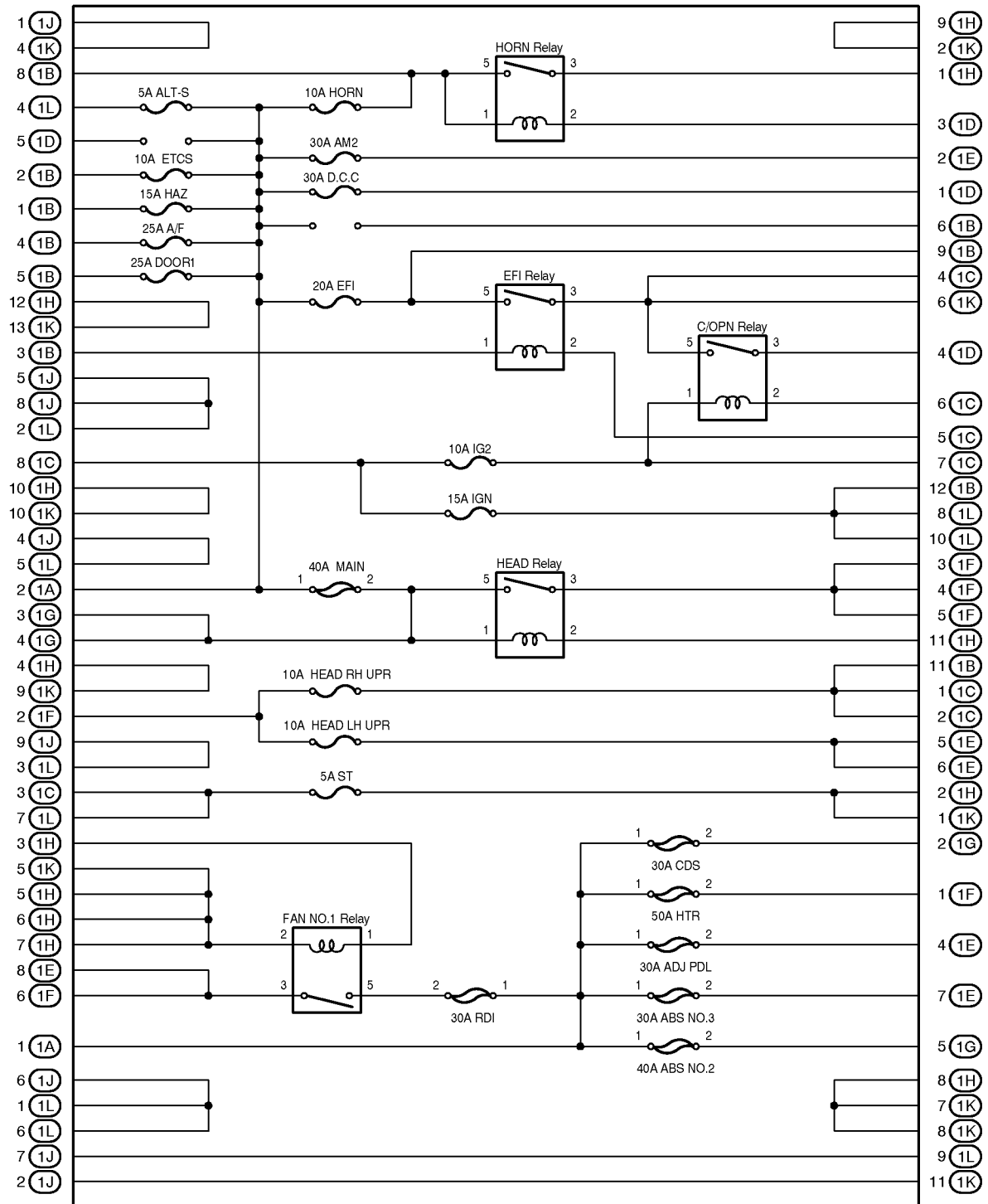
[Engine Compartment Left \(See Page 20\)](#)





F RELAY LOCATIONS

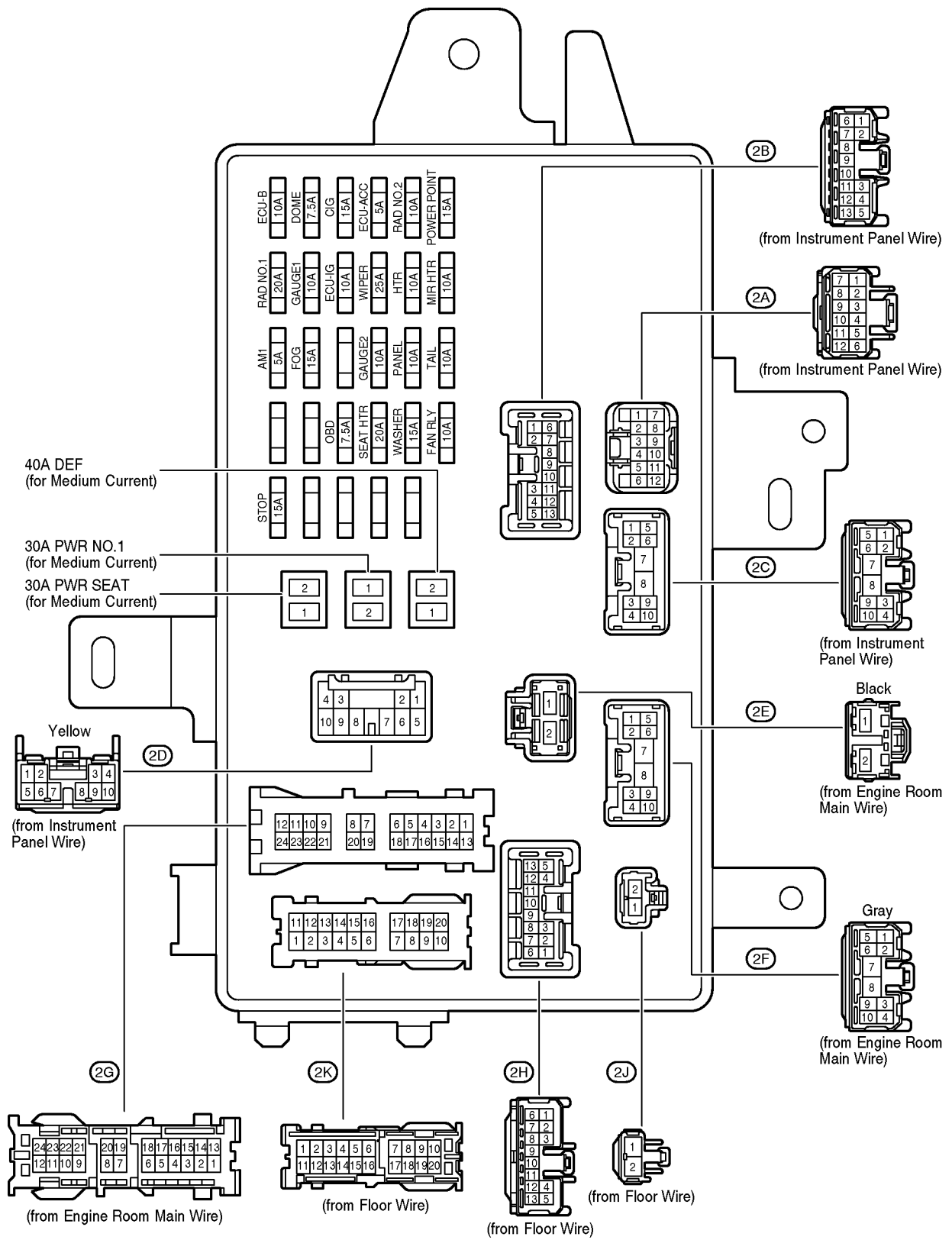
[Engine Room J/B Inner Circuit]

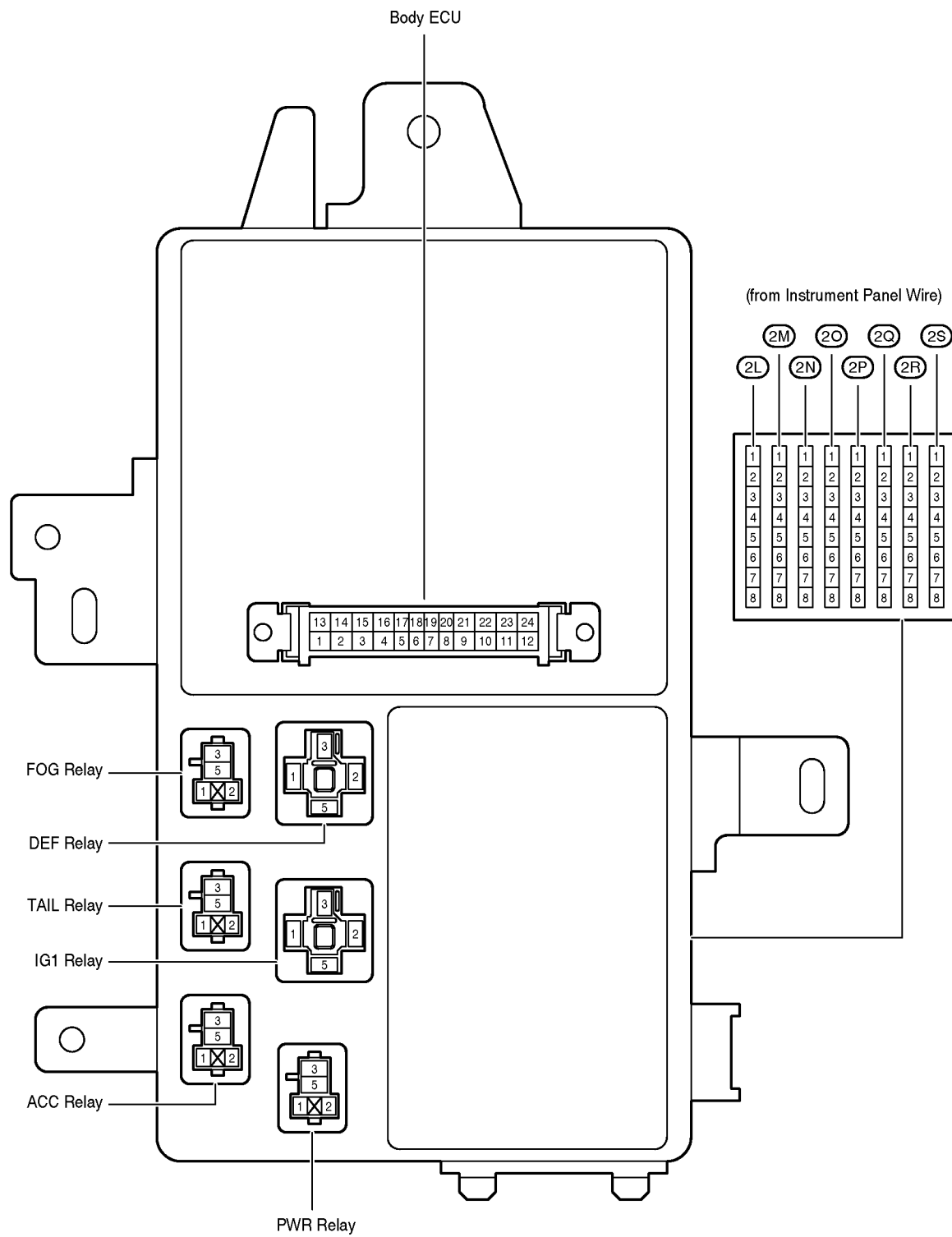


F RELAY LOCATIONS

○ : Driver Side J/B

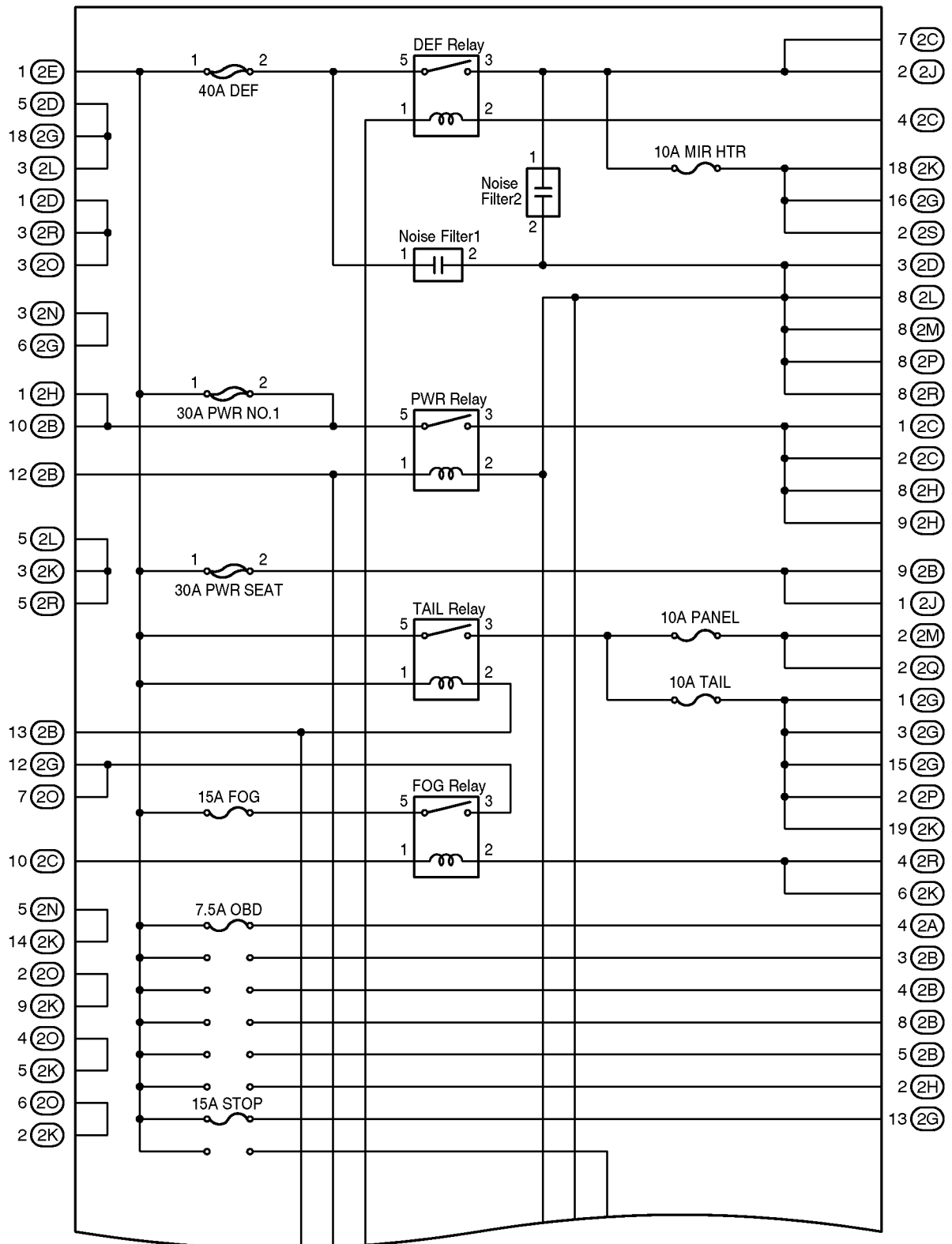
Lower Finish Panel (See Page 21)





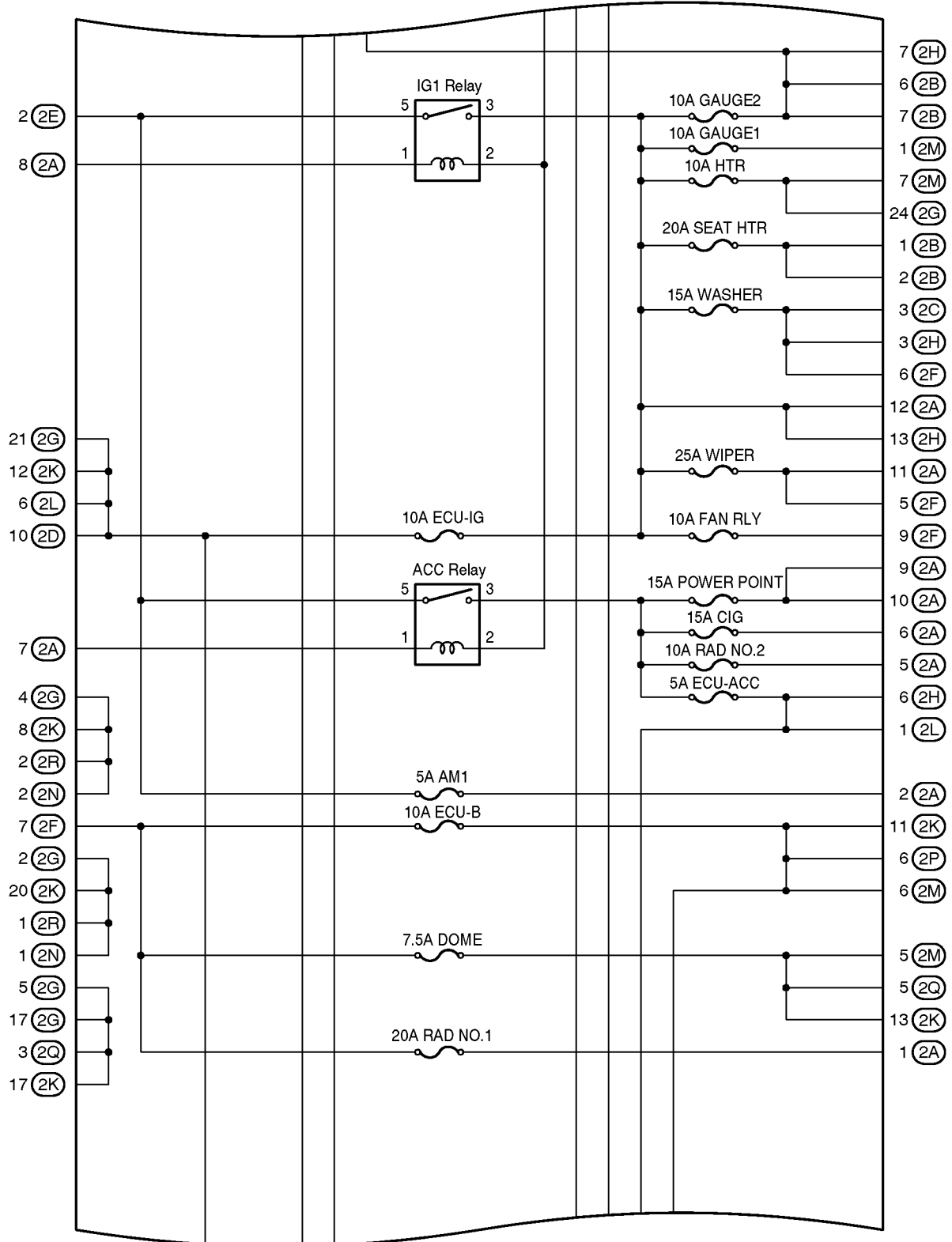
F RELAY LOCATIONS

[Driver Side J/B Inner Circuit]



(Cont. next page)

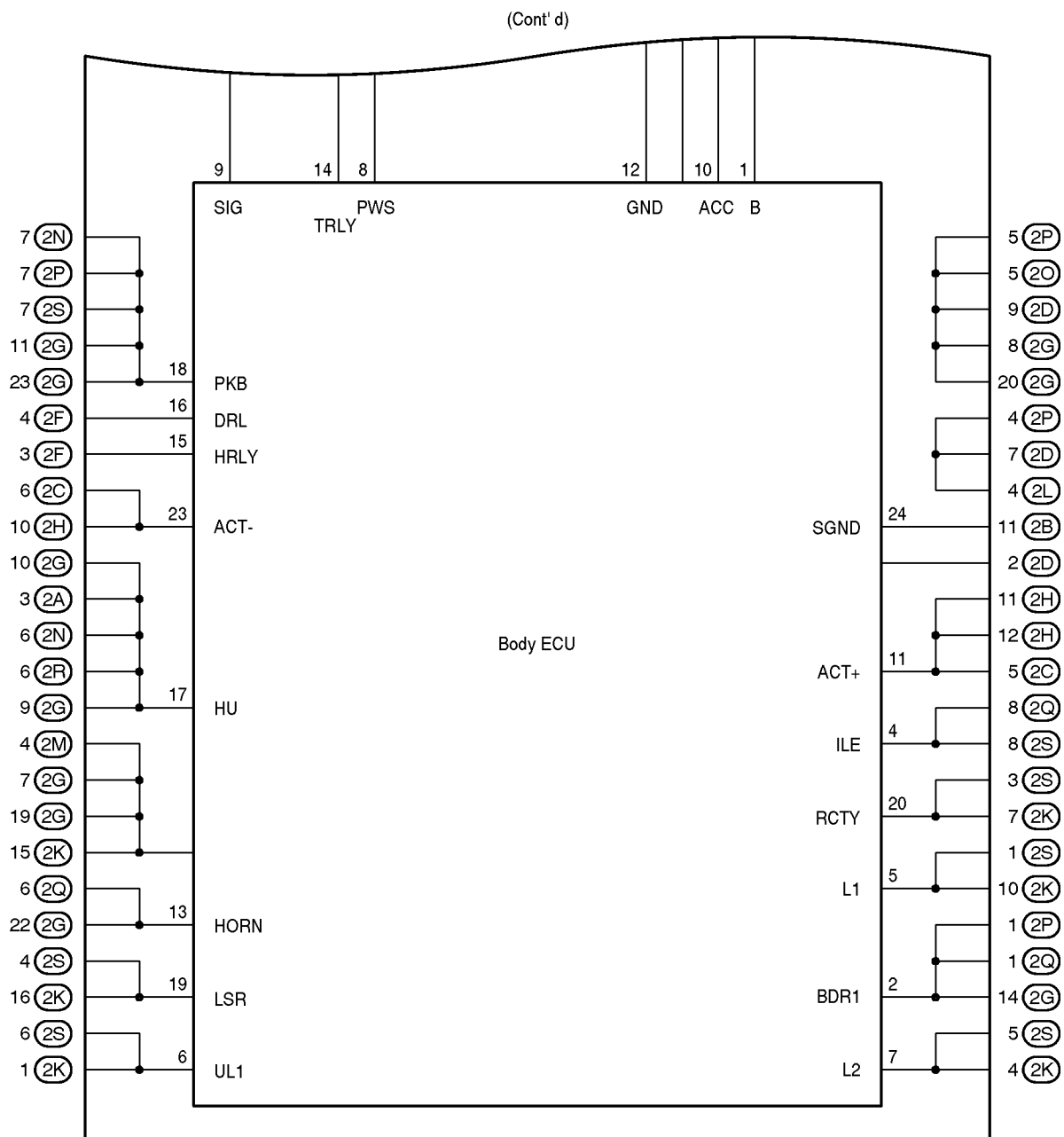
(Cont'd)



(Cont. next page)

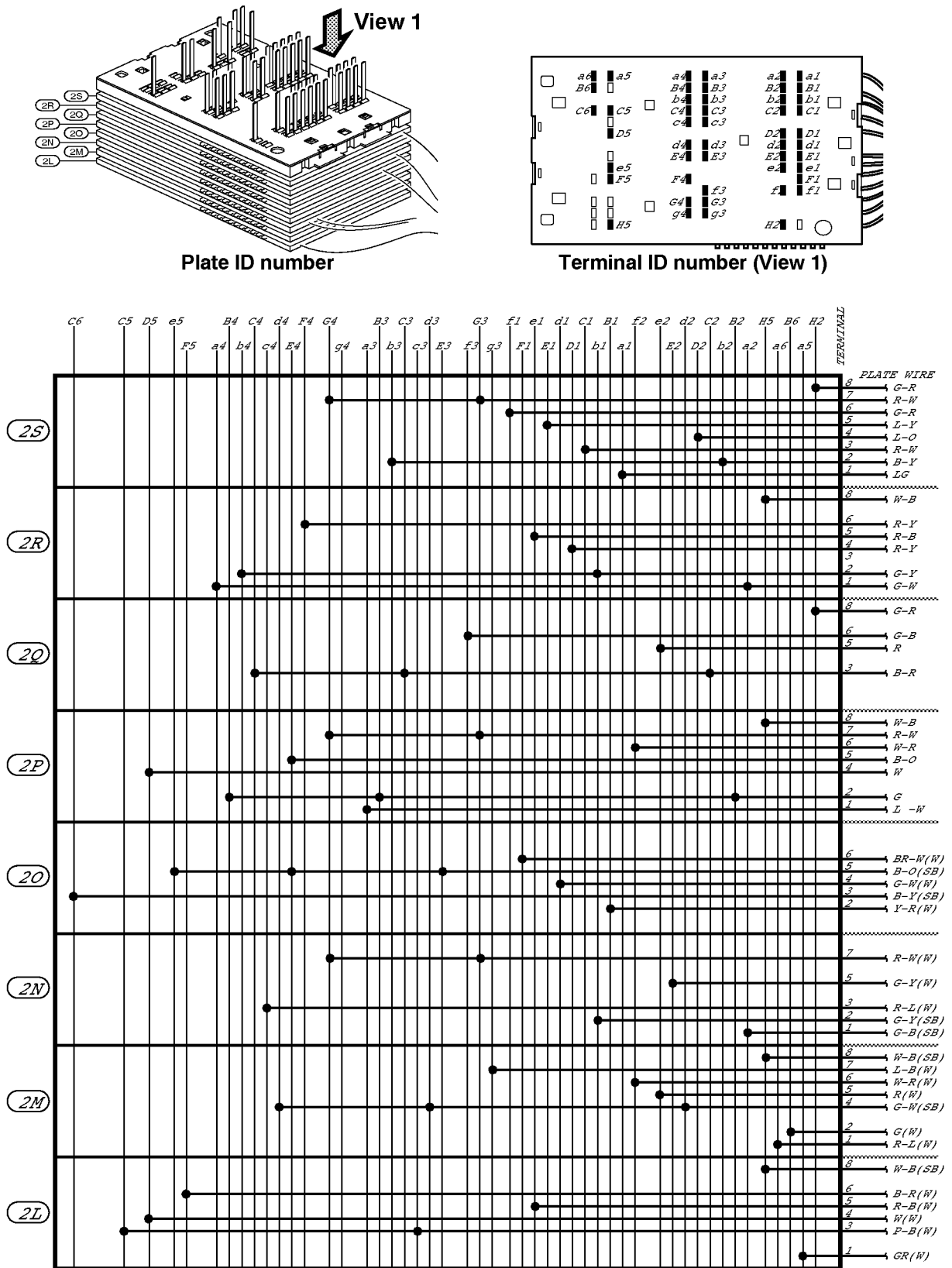
F RELAY LOCATIONS

[Driver Side J/B Inner Circuit]



Inside-the-Plate Wiring Connection Diagram

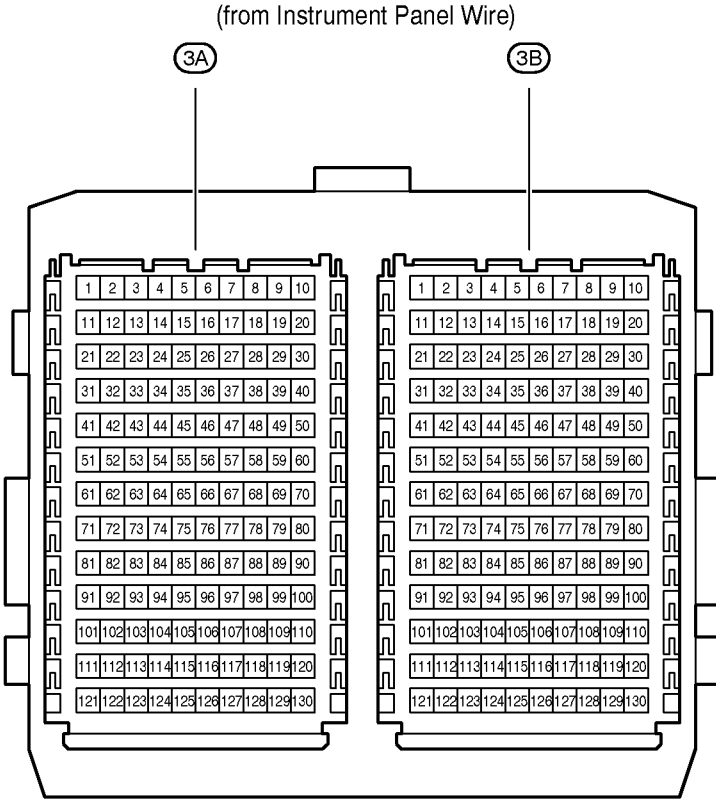
When conducting continuity test inside the plate, see the plate and terminal ID number (View 1) shown below as well as the inside-the-plate wiring connection diagram



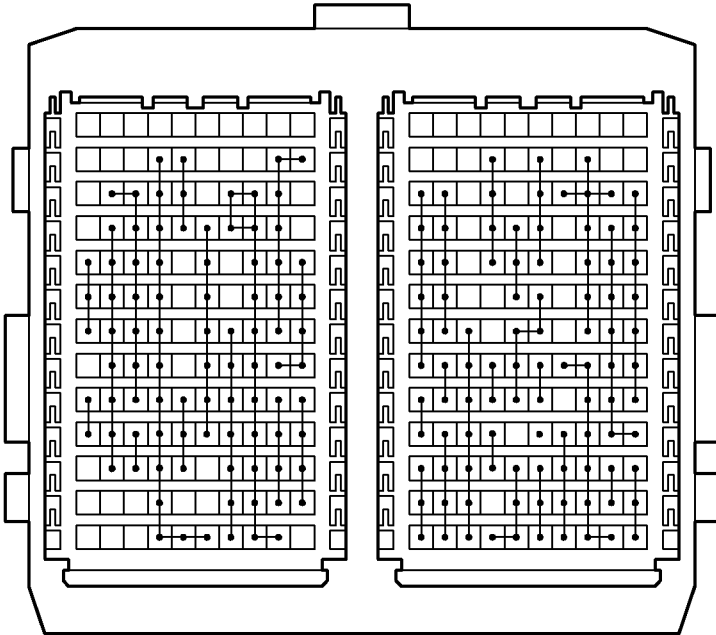
F RELAY LOCATIONS

 : Passenger Side J/B

Instrument Panel Brace RH (See Page 21)



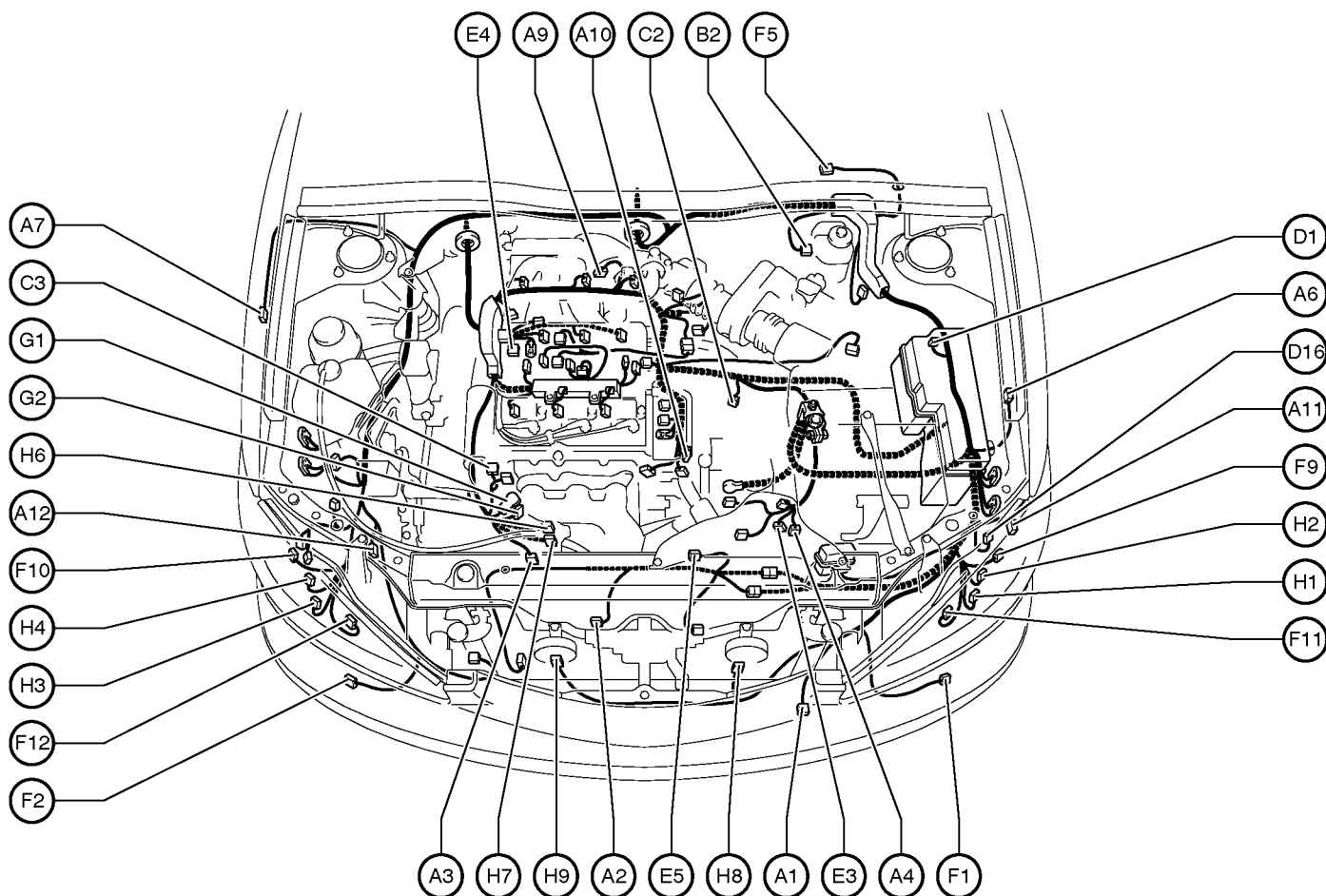
Short Terminal Grouping



G ELECTRICAL WIRING ROUTING

Position of Parts in Engine Compartment

[1MZ-FE, 3MZ-FE]



A 1 A/C Ambient Temp. Sensor

A 2 A/C Condenser Fan Motor

A 3 A/C Lock Sensor
A/C Magnetic Clutch

A 4 A/T Indicator Light SW
Back-Up Light SW
Park/Neutral Position SW

A 6 ABS Speed Sensor Front LH

A 7 ABS Speed Sensor Front RH

A 9 Air Fuel Ratio Sensor (Bank 1 Sensor 1)

A10 Air Fuel Ratio Sensor (Bank 2 Sensor 1)

A11 Airbag Sensor Front LH

A12 Airbag Sensor Front RH

B 2 Brake Fluid Level Warning SW

C 2 Counter Gear Speed Sensor

C 3 Crankshaft Position Sensor

D 1 Diode (A/C No.1)

D16 Daytime Running Light Resistor

E 3 Electronically Controlled Transmission Solenoid

E 4 Engine Coolant Temp. Sensor

E 5 Engine Hood Courtesy SW

F 1 Front Fog Light LH

F 2 Front Fog Light RH

F 5 Front Wiper Motor

F 9 Front Parking Light LH

F10 Front Parking Light RH

F11 Front Turn Signal Light LH

F12 Front Turn Signal Light RH

G 1 Generator

G 2 Generator

H 1 Headlight LH (High)

H 2 Headlight LH (Low)

H 3 Headlight RH (High)

H 4 Headlight RH (Low)

H 6 Heated Oxygen Sensor (Bank 1 Sensor 2)

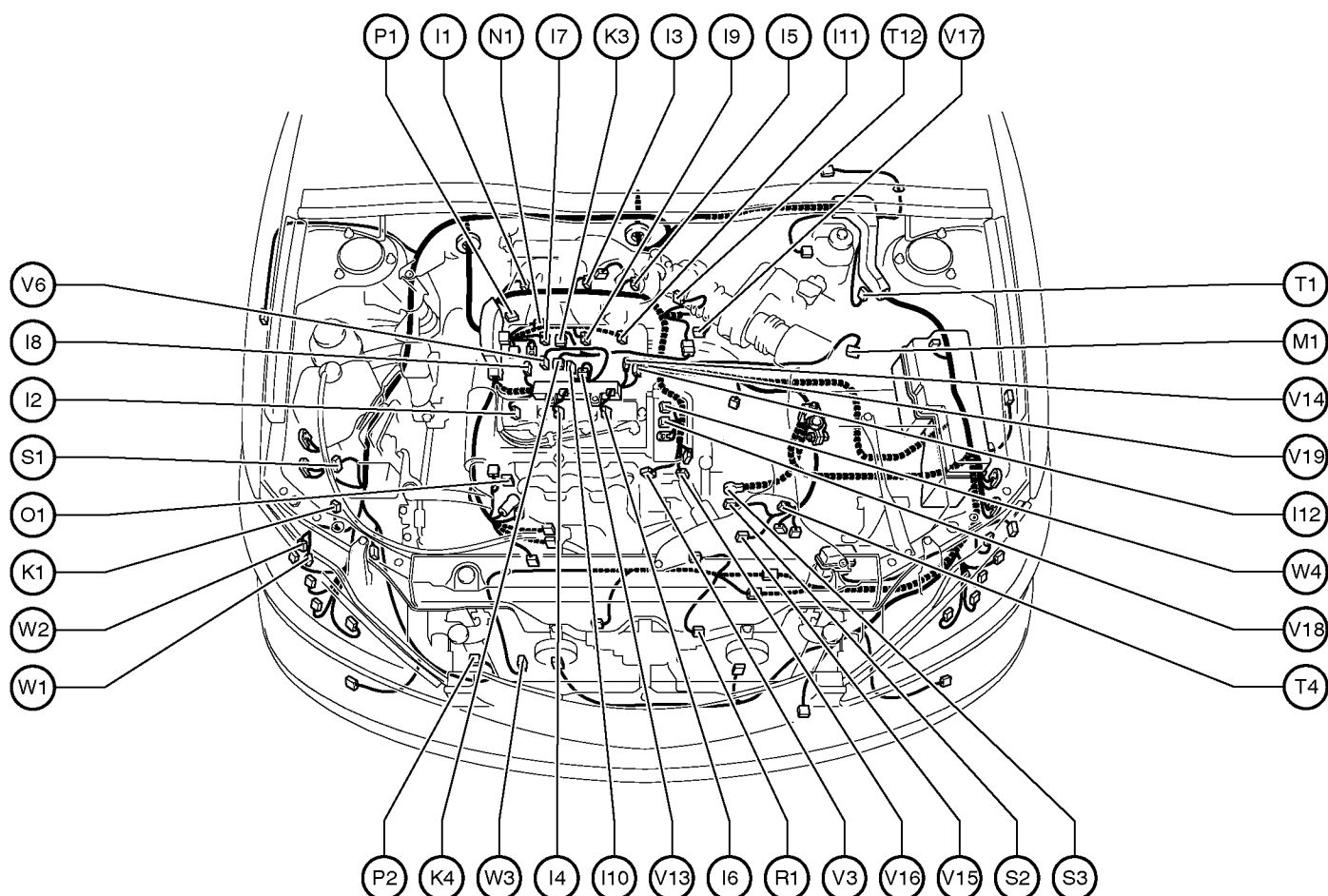
H 7 Heated Oxygen Sensor (Bank 2 Sensor 2)

H 8 Horn (High)

H 9 Horn (Low)

Position of Parts in Engine Compartment

[1MZ-FE, 3MZ-FE]



- I 1 Ignition Coil and Igniter No.1
- I 2 Ignition Coil and Igniter No.2
- I 3 Ignition Coil and Igniter No.3
- I 4 Ignition Coil and Igniter No.4
- I 5 Ignition Coil and Igniter No.5
- I 6 Ignition Coil and Igniter No.6
- I 7 Injector No.1
- I 8 Injector No.2
- I 9 Injector No.3
- I 10 Injector No.4
- I 11 Injector No.5
- I 12 Injector No.6

- K 1 Keyless Buzzer
- K 3 Knock Sensor (Bank 1)
- K 4 Knock Sensor (Bank 2)

- M 1 Mass Air Flow Meter

- N 1 Noise Filter (Ignition)

- O 1 Oil Pressure SW

- P 1 Power Steering Oil Pressure SW
- P 2 Pressure SW

- R 1 Radiator Fan Motor

- S 1 Skid Control ECU with Actuator
- S 2 Starter
- S 3 Starter

- T 1 Theft Deterrent Horn
- T 4 Turbine Speed Sensor
- T 12 Throttle Control Motor
Throttle Position Sensor

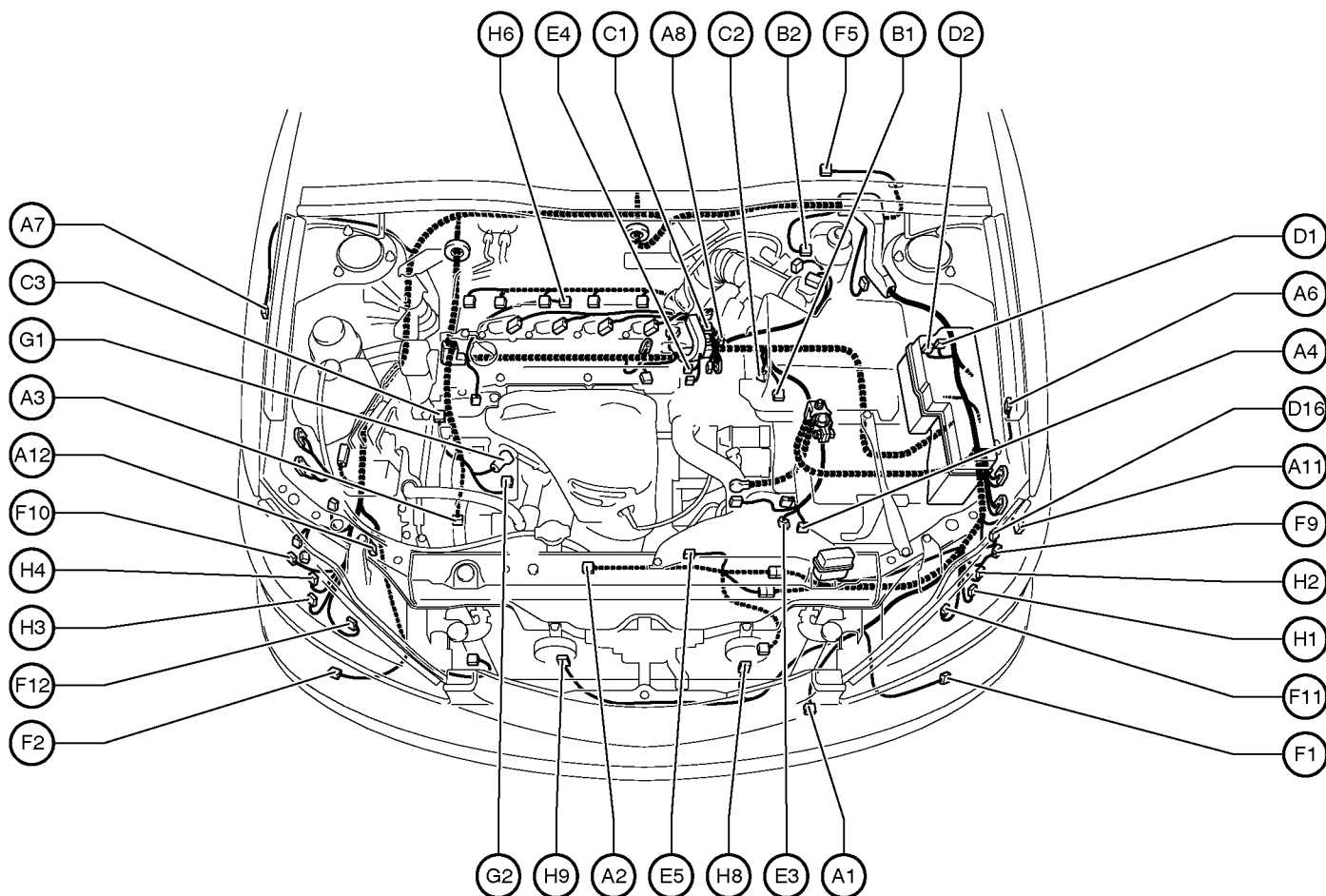
- V 3 VSV (AICV)
- V 6 VSV (EVAP)
- V 13 VSV (ACIS No.1)
- V 14 VSV (ACIS No.2)
- V 15 VSV (ACM)
- V 16 VVT Sensor LH
- V 17 VVT Sensor RH
- V 18 VVT Solenoid LH
- V 19 VVT Solenoid RH

- W 1 Washer Level Sensor
- W 2 Washer Motor
- W 3 Water Temp. SW No.1
- W 4 Water Temp. SW No.2

G ELECTRICAL WIRING ROUTING

Position of Parts in Engine Compartment

[2AZ-FE]



- A 1 A/C Ambient Temp. Sensor
- A 2 A/C Condenser Fan Motor
- A 3 A/C Lock Sensor
A/C Magnetic Clutch
- A 4 A/T Indicator Light SW
Back-Up Light SW
Park/Neutral Position SW
- A 6 ABS Speed Sensor Front LH
- A 7 ABS Speed Sensor Front RH
- A 8 Air Fuel Ratio Sensor (Bank 1 Sensor 1)
- A 11 Airbag Sensor Front LH
- A 12 Airbag Sensor Front RH

- B 1 Back-Up Light SW
- B 2 Brake Fluid Level Warning SW

- C 1 Camshaft Position Sensor
- C 2 Counter Gear Speed Sensor
- C 3 Crankshaft Position Sensor

- D 1 Diode (A/C No.1)
- D 2 Diode (A/C No.2)
- D16 Daytime Running Light Resistor

- E 3 Electronically Controlled Transmission Solenoid
- E 4 Engine Coolant Temp. Sensor
- E 5 Engine Hood Courtesy SW

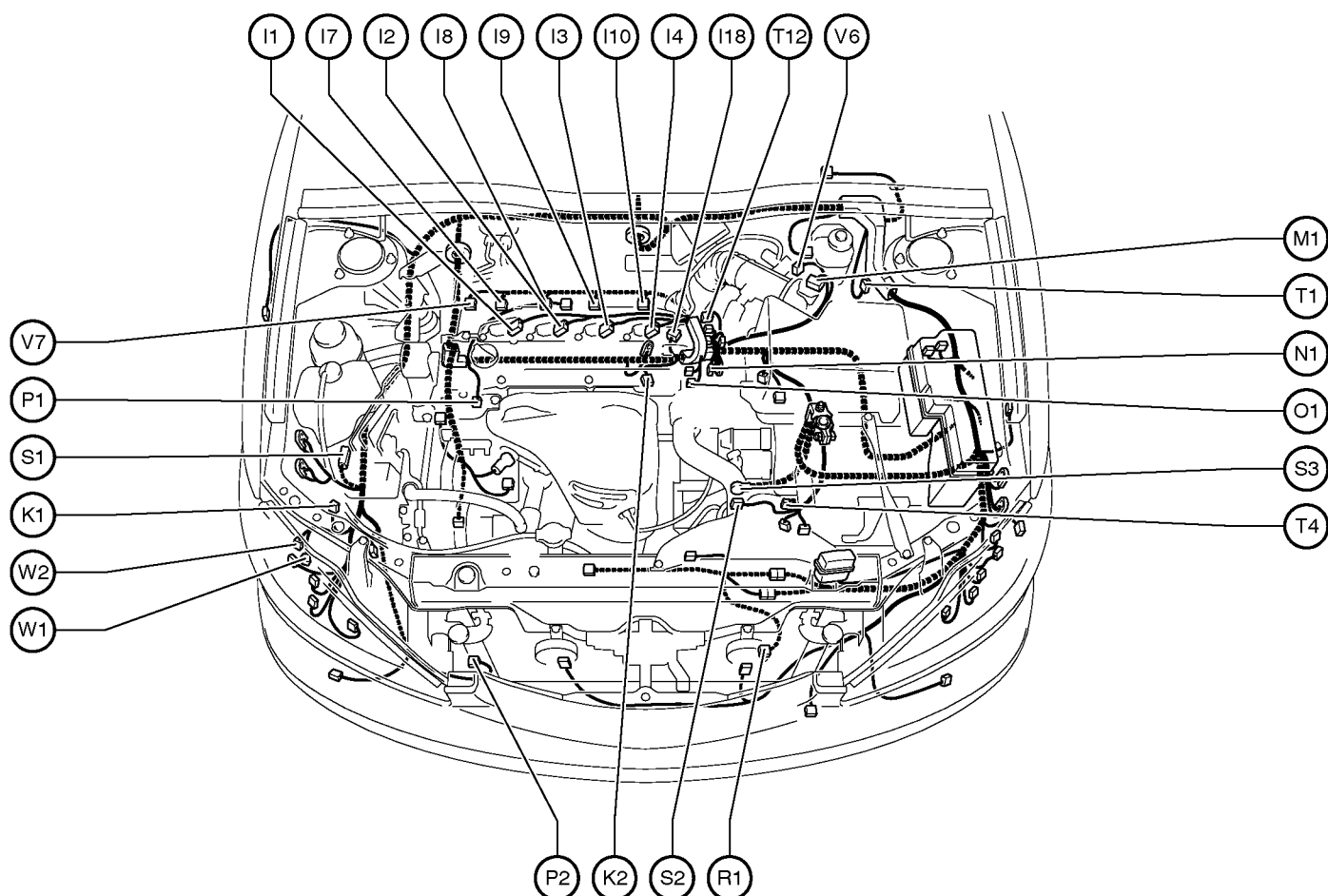
- F 1 Front Fog Light LH
- F 2 Front Fog Light RH
- F 5 Front Wiper Motor
- F 9 Front Parking Light LH
- F 10 Front Parking Light RH
- F 11 Front Turn Signal Light LH
- F 12 Front Turn Signal Light RH

- G 1 Generator
- G 2 Generator

- H 1 Headlight LH (High)
- H 2 Headlight LH (Low)
- H 3 Headlight RH (High)
- H 4 Headlight RH (Low)
- H 6 Heated Oxygen Sensor (Bank 1 Sensor 2)
- H 8 Horn (High)
- H 9 Horn (Low)

Position of Parts in Engine Compartment

[2AZ-FE]



I 1 Ignition Coil and Igniter No.1
 I 2 Ignition Coil and Igniter No.2
 I 3 Ignition Coil and Igniter No.3
 I 4 Ignition Coil and Igniter No.4
 I 7 Injector No.1
 I 8 Injector No.2
 I 9 Injector No.3
 I 10 Injector No.4
 I 18 Intake Air Control Valve

K 1 Keyless Buzzer
 K 2 Knock Sensor (Bank 1)

M 1 Mass Air Flow Meter

N 1 Noise Filter (Ignition)

O 1 Oil Pressure SW

P 1 Power Steering Oil Pressure SW
 P 2 Pressure SW

R 1 Radiator Fan Motor

S 1 Skid Control ECU with Actuator
 S 2 Starter
 S 3 Starter

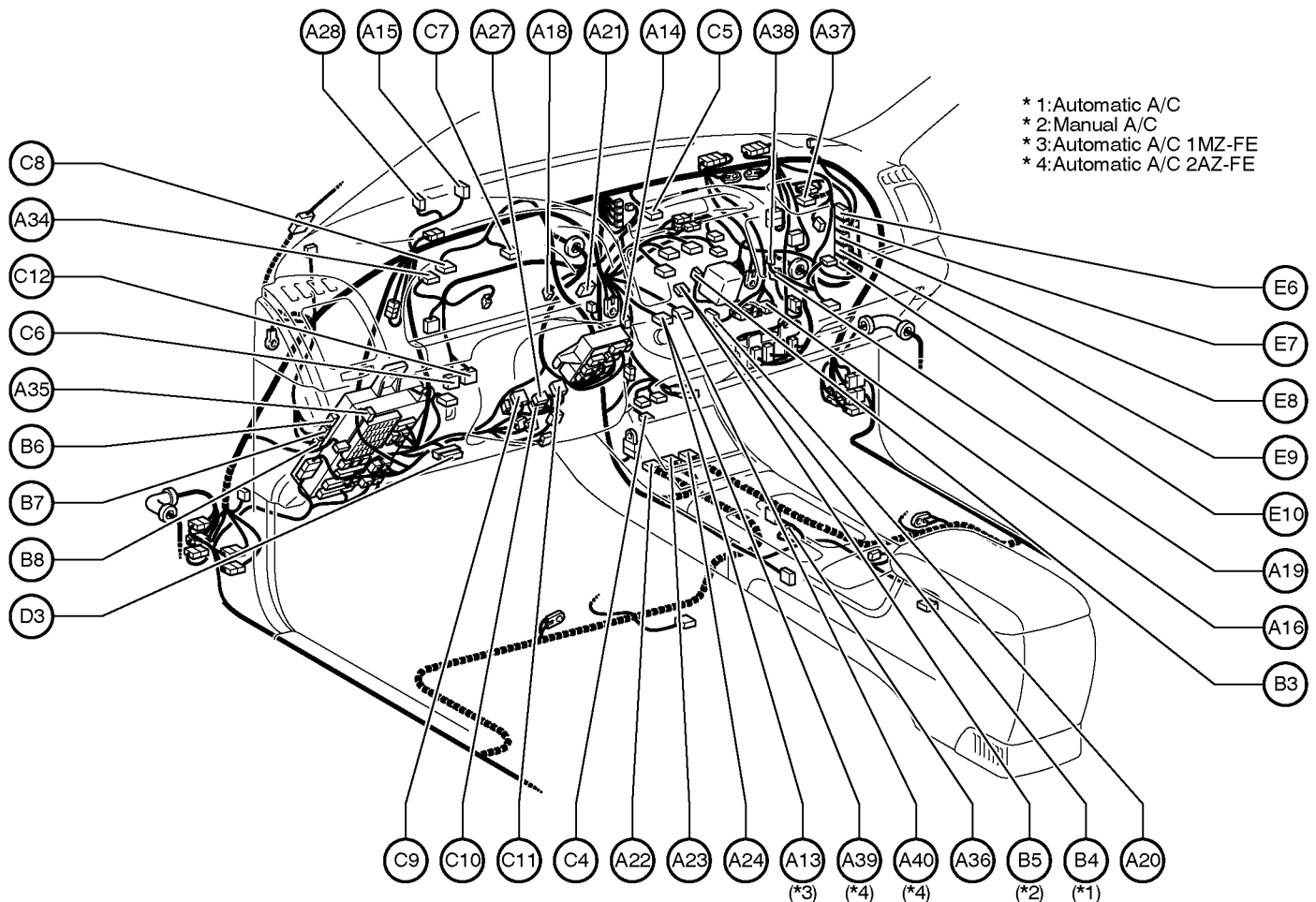
T 1 Theft Deterrent Horn
 T 4 Turbine Speed Sensor
 T 12 Throttle Control Motor
 Throttle Position Sensor

V 6 VSV (EVAP)
 V 7 VVT Solenoid

W 1 Washer Level Sensor
 W 2 Washer Motor

G ELECTRICAL WIRING ROUTING

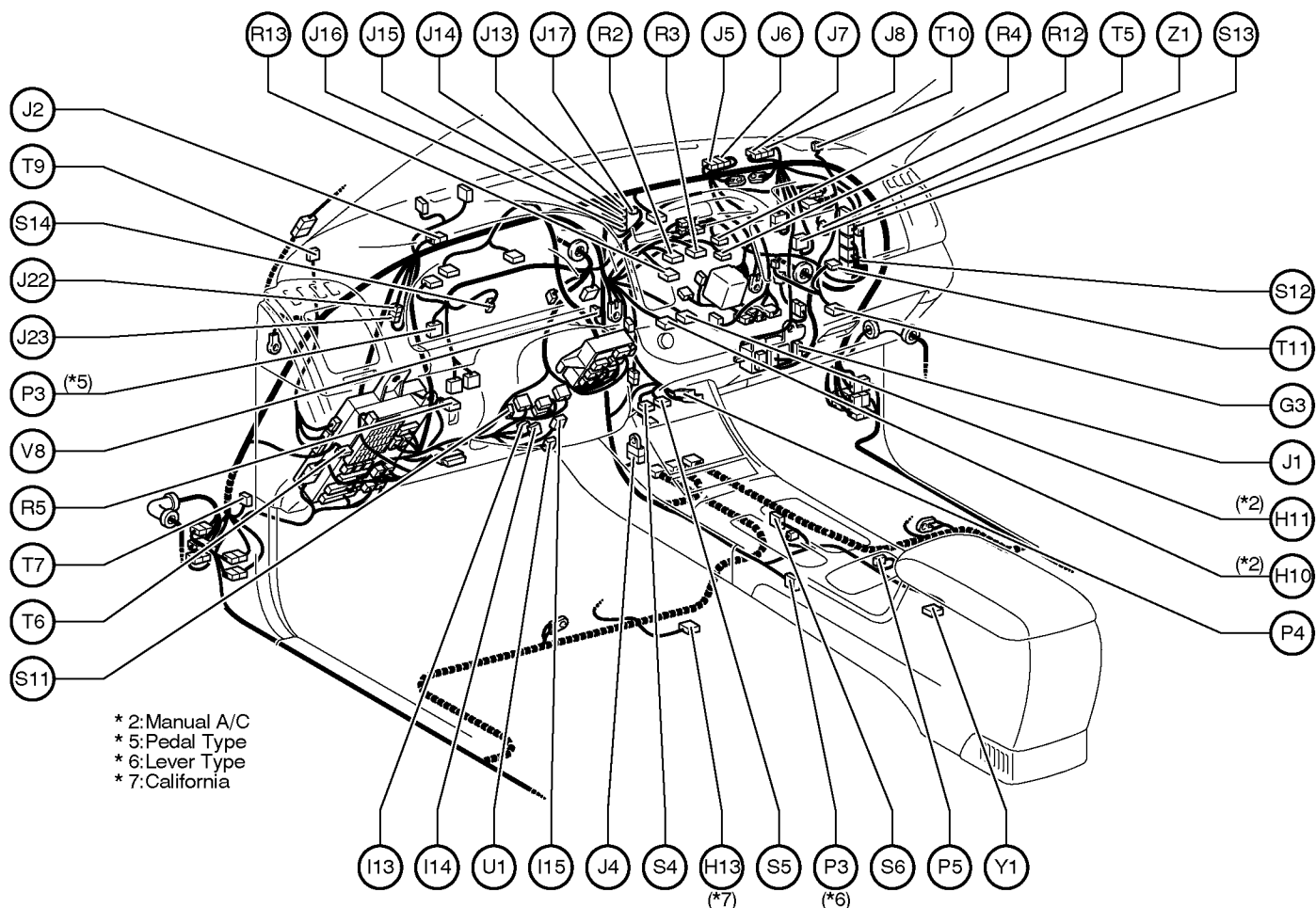
Position of Parts in Instrument Panel



A13 A/C Control Assembly
 A14 A/C Room Temp. Sensor
 A15 A/C Solar Sensor
 A16 A/C Thermistor
 A18 Accelerator Position Sensor
 A19 Air Inlet Control Servo Motor
 A20 Air Mix Control Servo Motor
 A21 Air Vent Mode Servo Motor
 A22 Airbag Sensor Assembly
 A23 Airbag Sensor Assembly
 A24 Airbag Sensor Assembly
 A27 Airbag Squib (Steering Wheel Pad)
 A28 Automatic Light Control Sensor
 A34 Adjustable Pedal Motor
 A35 Adjustable Pedal SW
 A36 A/T Shift Lever Illumination
 Transmission Control SW
 A37 Airbag Squib (Front Airbag Sensor Assembly)
 A38 A/C Amplifier
 A39 A/C Control Assembly
 A40 A/C Control Assembly

B 3 Blower Motor
 B 4 Blower Motor Controller
 B 5 Blower Resistor
 B 6 Body ECU
 B 7 Body ECU
 B 8 Body ECU
 C 4 Cigarette Lighter
 Cigarette Lighter Illumination
 C 5 Clock
 C 6 Clutch Start SW
 C 7 Combination Meter
 C 8 Combination Meter
 C 9 Combination SW
 C10 Combination SW
 C11 Combination SW
 C12 Cruise Control Clutch SW
 D 3 Data Link Connector 3
 E 6 Engine Control Module
 E 7 Engine Control Module
 E 8 Engine Control Module
 E 9 Engine Control Module
 E10 Engine Control Module

Position of Parts in Instrument Panel



G 3 Glove Box Light and SW

H10 Heater Control SW
 H11 Heater Control SW
 H13 Heated Oxygen Sensor (Bank 1 Sensor 3)

I 13 Ignition Key Cylinder Light
 I 14 Ignition Key Cylinder Light
 Transponder Key Amplifier
 I 15 Ignition SW

J 1 Junction Connector
 J 2 Junction Connector
 J 4 Junction Connector
 J 5 Junction Connector
 J 6 Junction Connector
 J 7 Junction Connector
 J 8 Junction Connector
 J 13 Junction Connector
 J 14 Junction Connector
 J 15 Junction Connector
 J 16 Junction Connector
 J 17 Junction Connector
 J 22 Junction Connector
 J 23 Junction Connector

P 3 Parking Brake SW
 P 4 Power Outlet (Front)
 P 5 Power Outlet (Rear)

R 2 Radio and Player
 R 3 Radio and Player
 R 4 Radio and Player with Display (w/ Navigation System)
 Radio and Player (w/o Navigation System)
 R 5 Rheostat
 R12 Radio and Player with Display
 R13 Radio and Player with Display (w/ Navigation System)
 Radio and Player (w/o Navigation System)

S 4 Seat Heater SW (Driver's Seat)
 S 5 Seat Heater SW (Front Passenger's Seat)
 S 6 Shift Lock Control ECU
 S11 Steering Sensor
 S12 Stereo Component Amplifier
 S13 Stereo Component Amplifier
 S14 Stop Light SW

T 5 Theft Deterrent ECU
 T 6 TRAC OFF SW
 T 7 Turn Signal Flasher Relay
 T 9 Tweeter LH
 T10 Tweeter RH
 T11 Transponder Key Computer

U 1 Unlock Warning SW

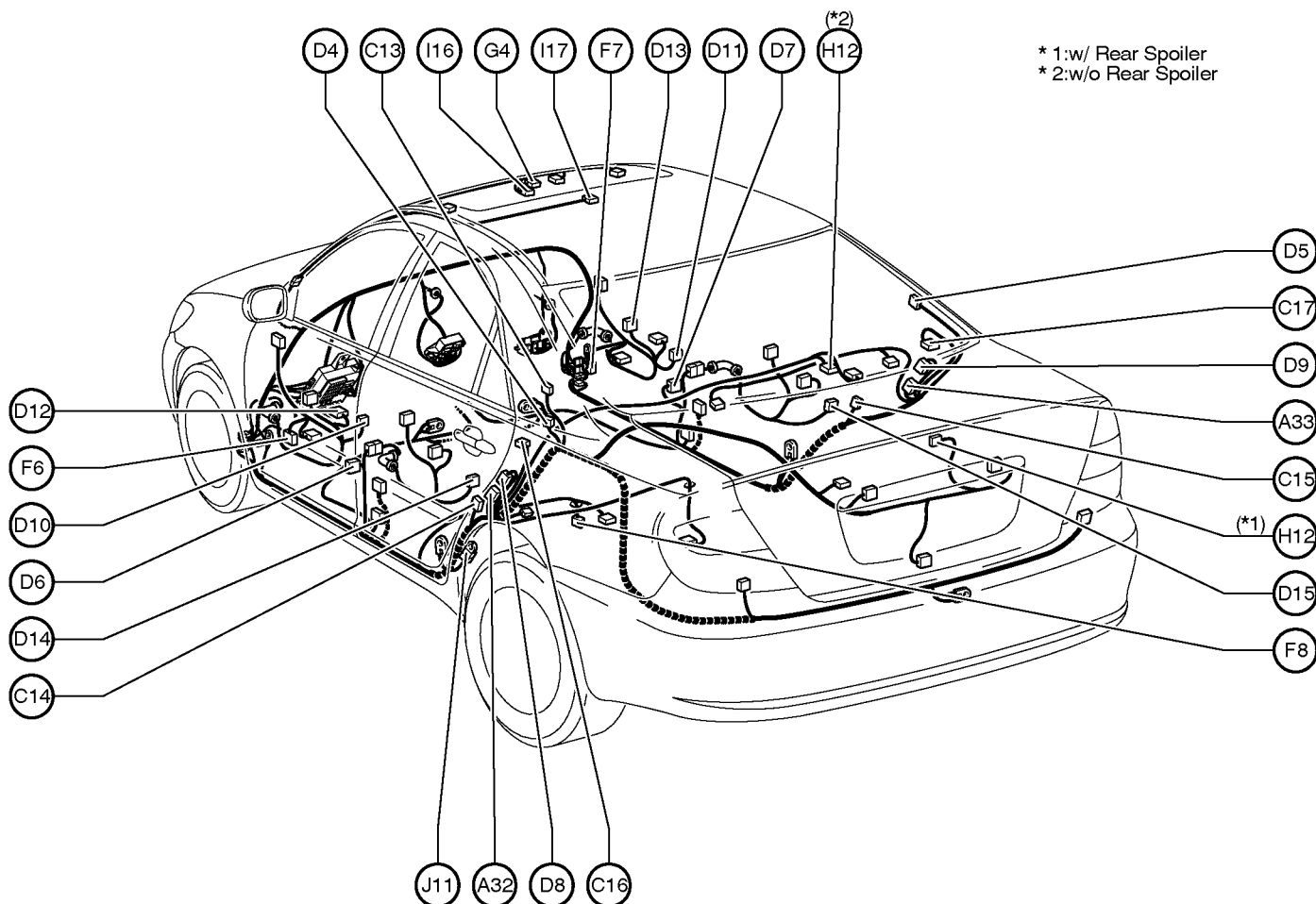
V 8 VSC Warning Buzzer

Y 1 Yaw Rate Sensor

Z 1 Option Connector (TVIP ECU)

G ELECTRICAL WIRING ROUTING

Position of Parts in Body



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

A32 ABS Speed Sensor Rear LH
A33 ABS Speed Sensor Rear RH

C13 Choke Coil
C14 Curtain Shield Airbag Sensor LH
C15 Curtain Shield Airbag Sensor RH
C16 Curtain Shield Airbag Squib LH
C17 Curtain Shield Airbag Squib RH

D 4 Diode
D 5 Door Control Receiver
D 6 Door Courtesy SW Front LH
D 7 Door Courtesy SW Front RH
D 8 Door Courtesy SW Rear LH
D 9 Door Courtesy SW Rear RH
D10 Door Key Lock and Unlock SW Front LH
Door Lock Motor Front LH
Door Unlock Detection SW Front LH
D11 Door Key Lock and Unlock SW Front RH
Door Lock Motor Front RH
Door Unlock Detection SW Front RH
D12 Door Lock Control SW Front LH
Power Window Master SW

D13 Door Lock Control SW RH
D14 Door Lock Motor Rear LH
Door Unlock Detection SW Rear LH
D15 Door Lock Motor Rear RH
Door Unlock Detection SW Rear RH

F 6 Front Door Speaker LH
F 7 Front Door Speaker RH
F 8 Fuel Pump
Fuel Sender

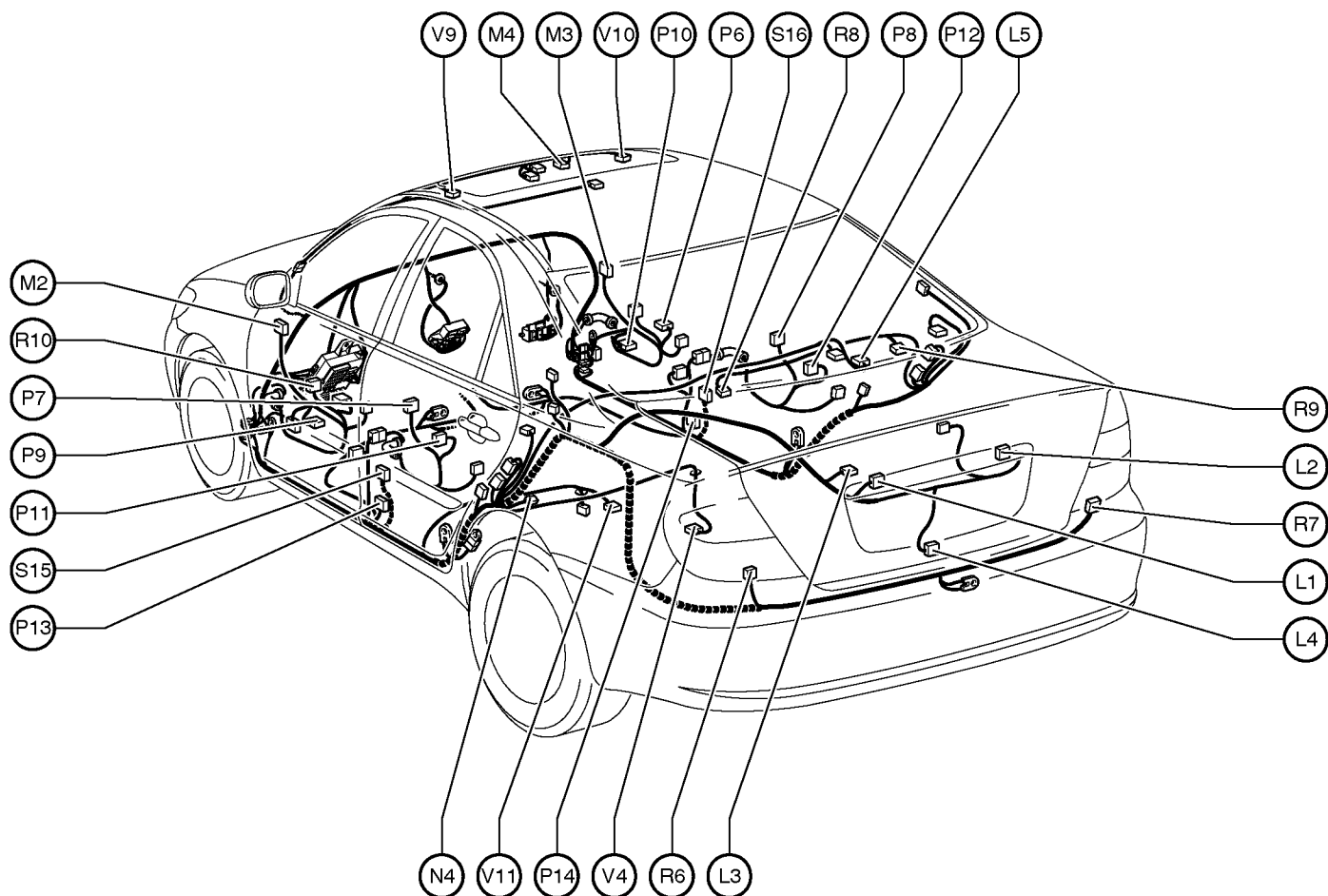
G 4 Garage Door Opener
Moon Roof Control SW
Personal Light

H12 High Mounted Stop Light

I 16 Inner Mirror
I 17 Interior Light

J 11 Junction Connector

Position of Parts in Body



- L 1 License Plate Light LH
- L 2 License Plate Light RH
- L 3 Luggage Compartment Door Key Unlock SW
- L 4 Luggage Compartment Door Opener Motor
- Luggage Compartment Light SW
- L 5 Luggage Compartment Light

- M 2 Mirror Heater LH
- Remote Control Mirror LH

- M 3 Mirror Heater RH
- Remote Control Mirror RH

- M 4 Moon Roof Control ECU and Motor

- N 4 Noise Filter

- P 6 Power Window Control SW Front RH
- P 7 Power Window Control SW Rear LH
- P 8 Power Window Control SW Rear RH
- P 9 Power Window Motor Front LH
- P10 Power Window Motor Front RH
- P11 Power Window Motor Rear LH
- P12 Power Window Motor Rear RH
- P13 Pretensioner LH
- P14 Pretensioner RH

- R 6 Rear Combination Light LH
- R 7 Rear Combination Light RH
- R 8 Rear Speaker LH
- R 9 Rear Speaker RH
- R10 Remote Control Mirror SW

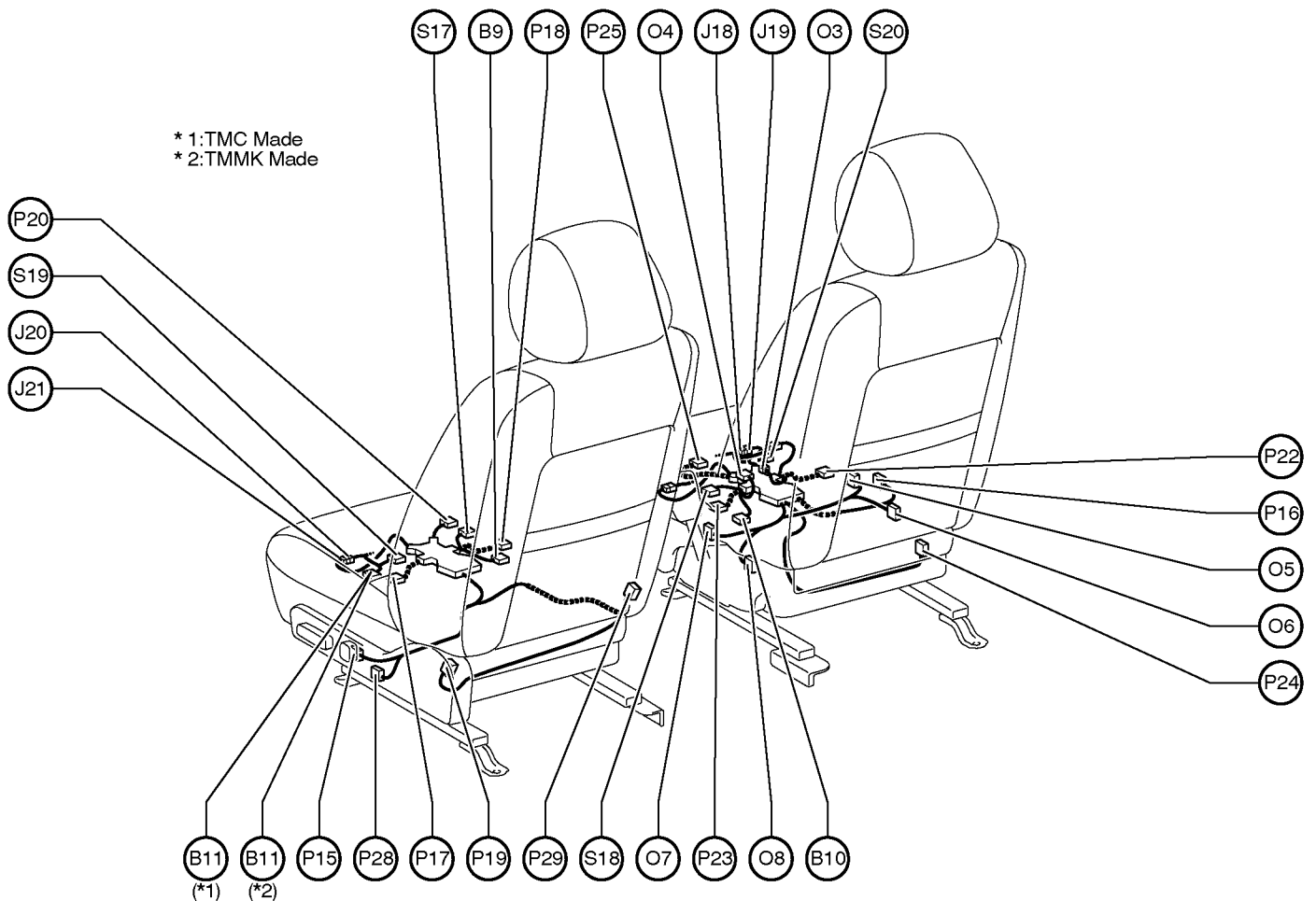
- S15 Side Airbag Sensor LH
- S16 Side Airbag Sensor RH

- V 4 VSV (Canister Closed Valve)
- V 9 Vanity Light LH
- V10 Vanity Light RH
- V11 Vapor Pressure Sensor

G ELECTRICAL WIRING ROUTING

Position of Parts in Seat

[w/ Power Seat]



B 9 Buckle SW LH
B 10 Buckle SW (Front Passenger's Side)
B 11 Buckle SW LH
Seat Position Airbag Sensor

J 18 Junction Connector
J 19 Junction Connector
J 20 Junction Connector
J 21 Junction Connector

O 3 Occupant Classification ECU
O 4 Occupant Classification ECU
O 5 Occupant Classification Sensor Front RH
O 6 Occupant Classification Sensor Rear RH
O 7 Occupant Classification Sensor Front LH
O 8 Occupant Classification Sensor Rear LH

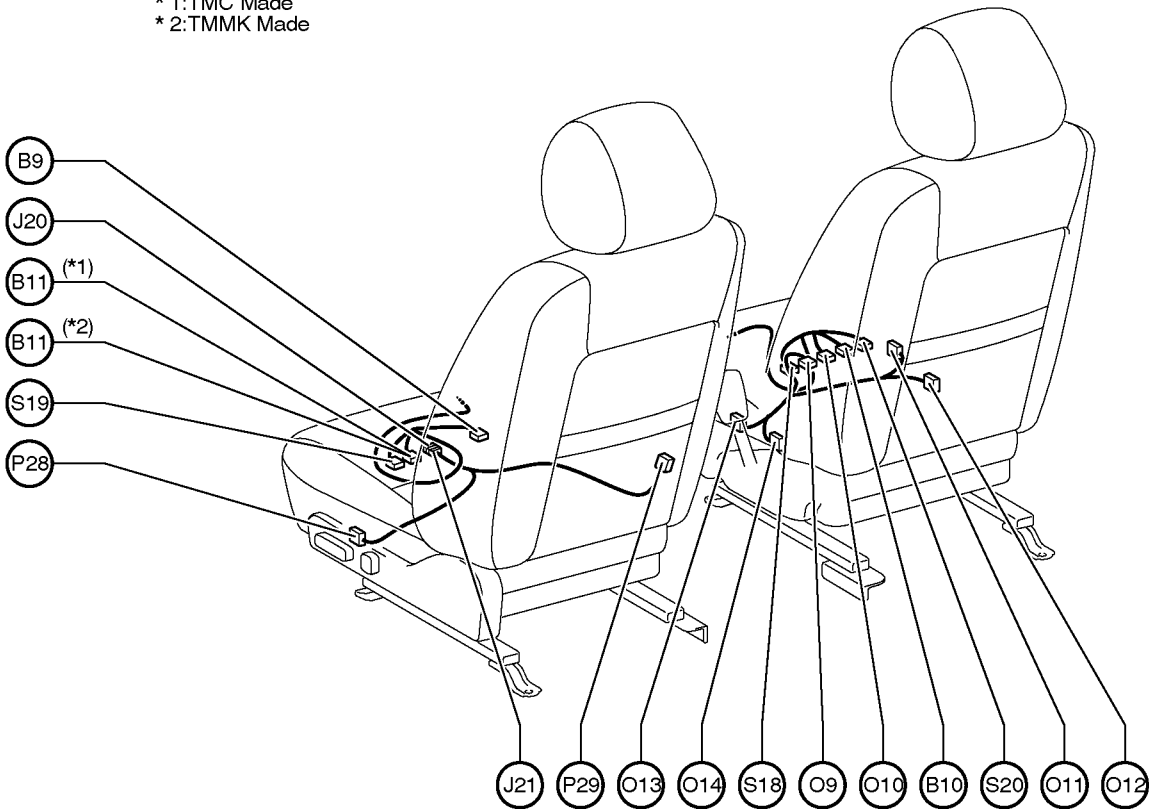
P 15 Power Seat Control SW (Driver's Seat)
P 16 Power Seat Control SW (Front Passenger's Seat)
P 17 Power Seat Motor (Driver's Seat Front Vertical Control)
P 18 Power Seat Motor (Driver's Seat Lifter Control)
P 19 Power Seat Motor (Driver's Seat Reclining Control)
P 20 Power Seat Motor (Driver's Seat Slide Control)
P 22 Power Seat Motor
(Front Passenger's Seat Front Vertical Control)
P 23 Power Seat Motor
(Front Passenger's Seat Lifter Control)
P 24 Power Seat Motor
(Front Passenger's Seat Reclining Control)
P 25 Power Seat Motor
(Front Passenger's Seat Slide Control)
P 28 Power Seat Control SW
(Driver's Seat Lumbar Support Control)
P 29 Power Seat Motor
(Driver's Seat Lumbar Support Control)

S 17 Seat Heater LH
S 18 Seat Heater RH
S 19 Side Airbag Squib LH
S 20 Side Airbag Squib RH

Position of Parts in Seat

[w/o Power Seat]

* 1:TMC Made
* 2:TMMK Made



B 9 Buckle SW LH
B10 Buckle SW (Front Passenger's Side)
B 11 Buckle SW LH
Seat Position Airbag Sensor

J 20 Junction Connector
J 21 Junction Connector

O 9 Occupant Classification ECU
O10 Occupant Classification ECU
O11 Occupant Classification Sensor Front RH
O12 Occupant Classification Sensor Rear RH
O13 Occupant Classification Sensor Front LH
O14 Occupant Classification Sensor Rear LH

P 28 Power Seat Control SW
(Driver's Seat Lumbar Support Control)
P 29 Power Seat Motor
(Driver's Seat Lumbar Support Control)

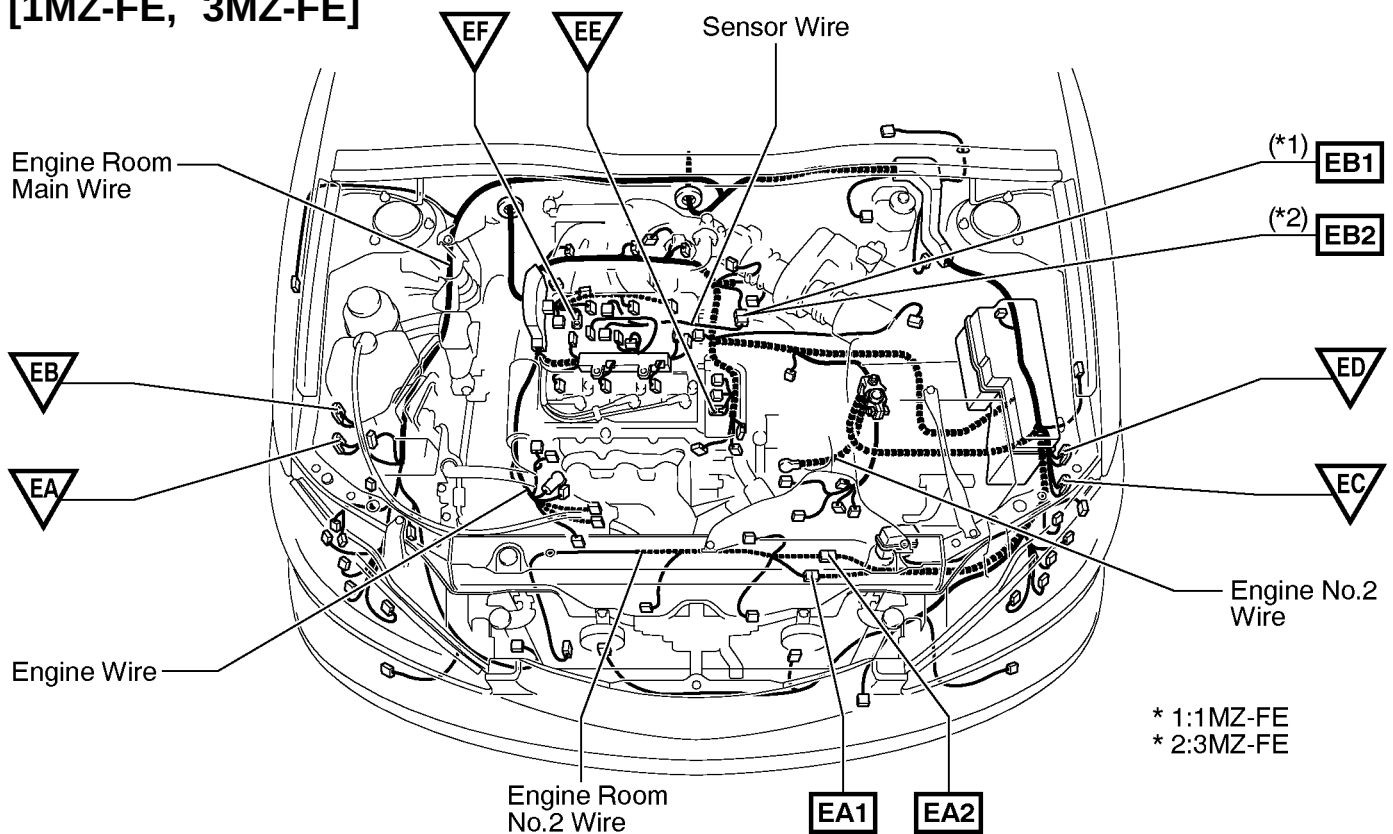
S18 Seat Heater RH
S19 Side Airbag Squib LH
S20 Side Airbag Squib RH

G ELECTRICAL WIRING ROUTING

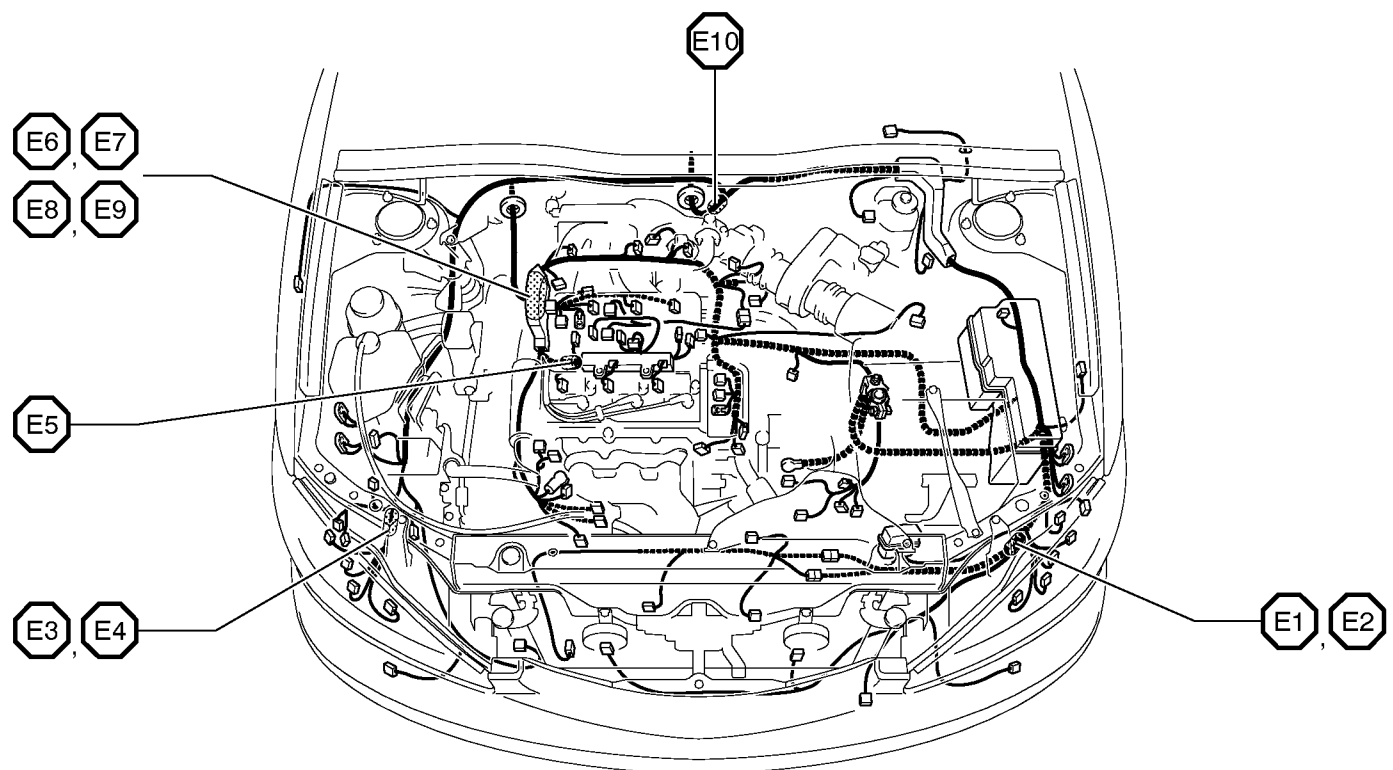
□ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

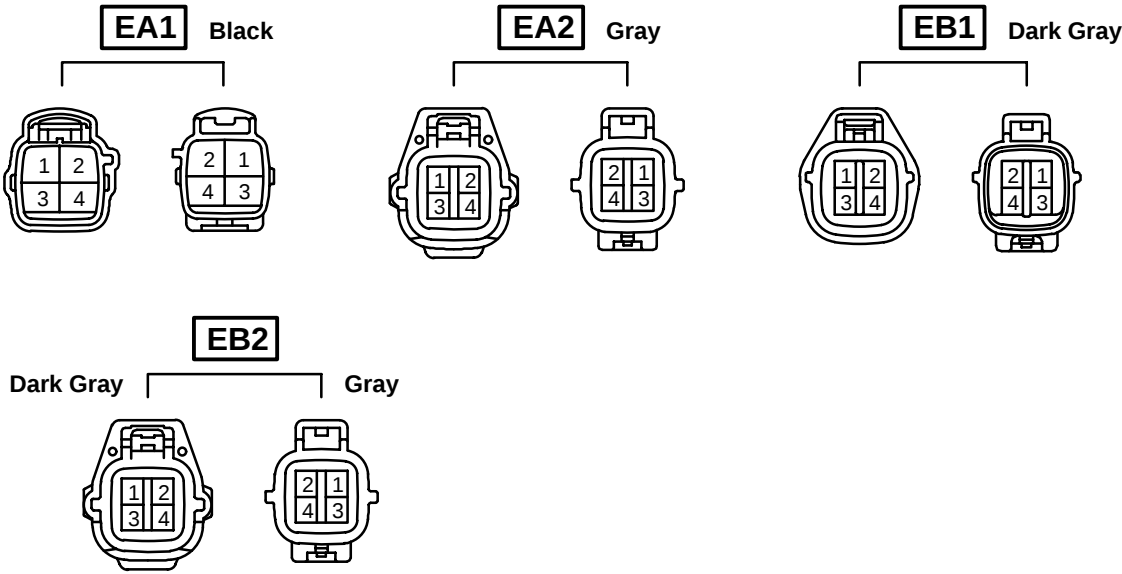
[1MZ-FE, 3MZ-FE]



○ : Location of Splice Points



Connector Joining Wire Harness and Wire Harness



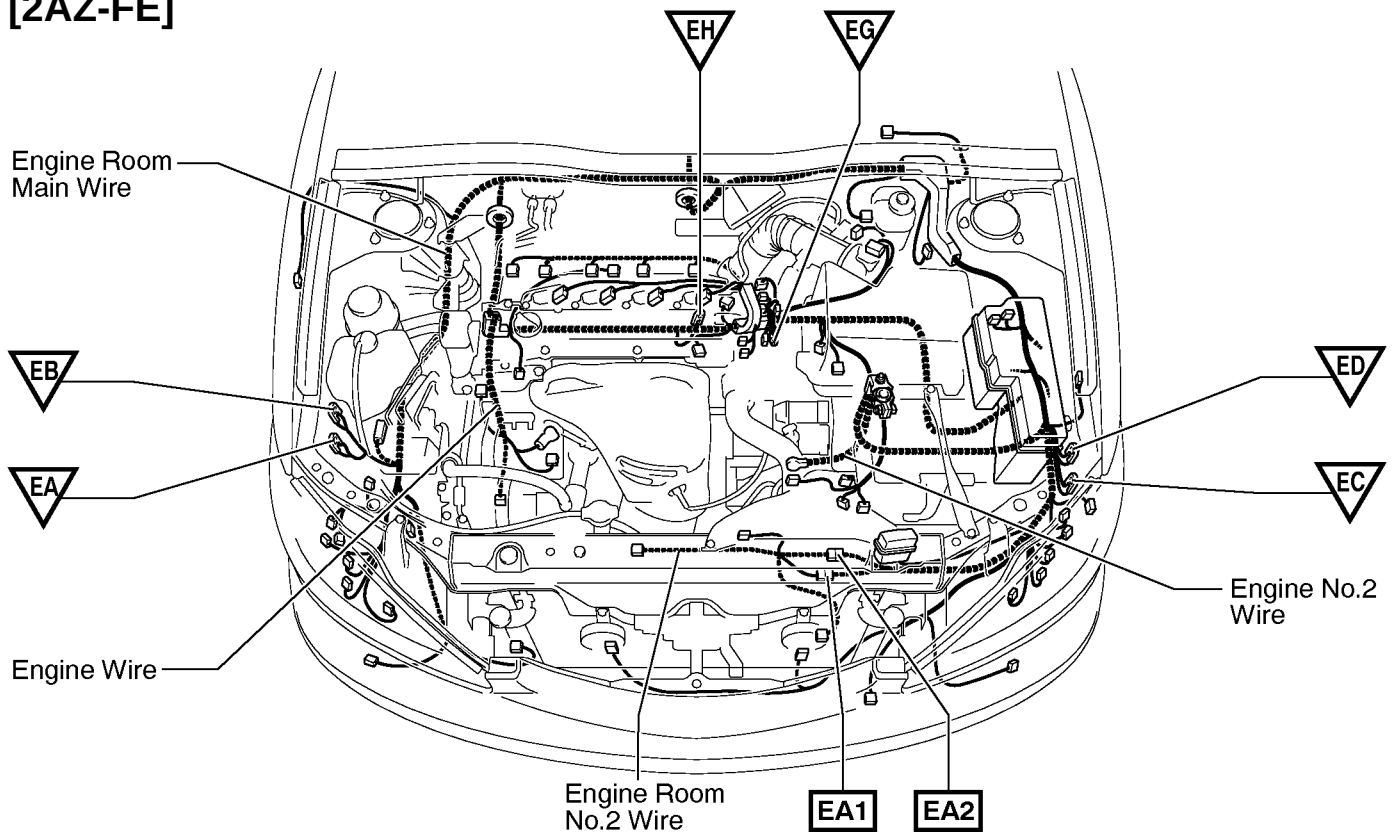
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
EA2	
EB1	Engine Wire and Sensor Wire (Left Bank of Cylinder Head)
EB2	

G ELECTRICAL WIRING ROUTING

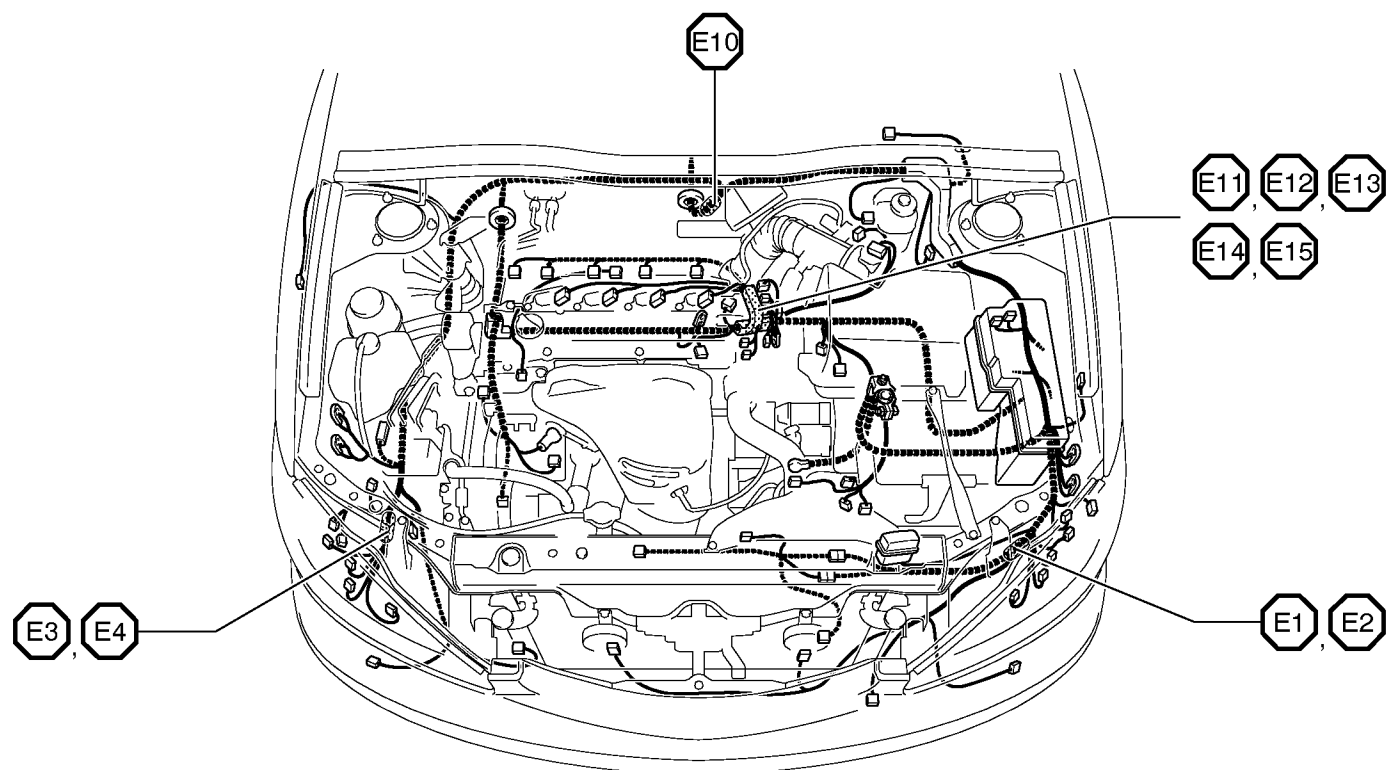
□ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

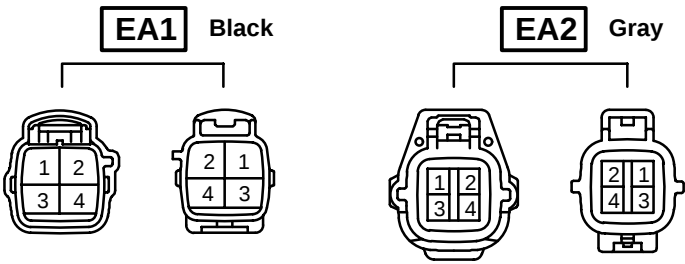
[2AZ-FE]



○ : Location of Splice Points



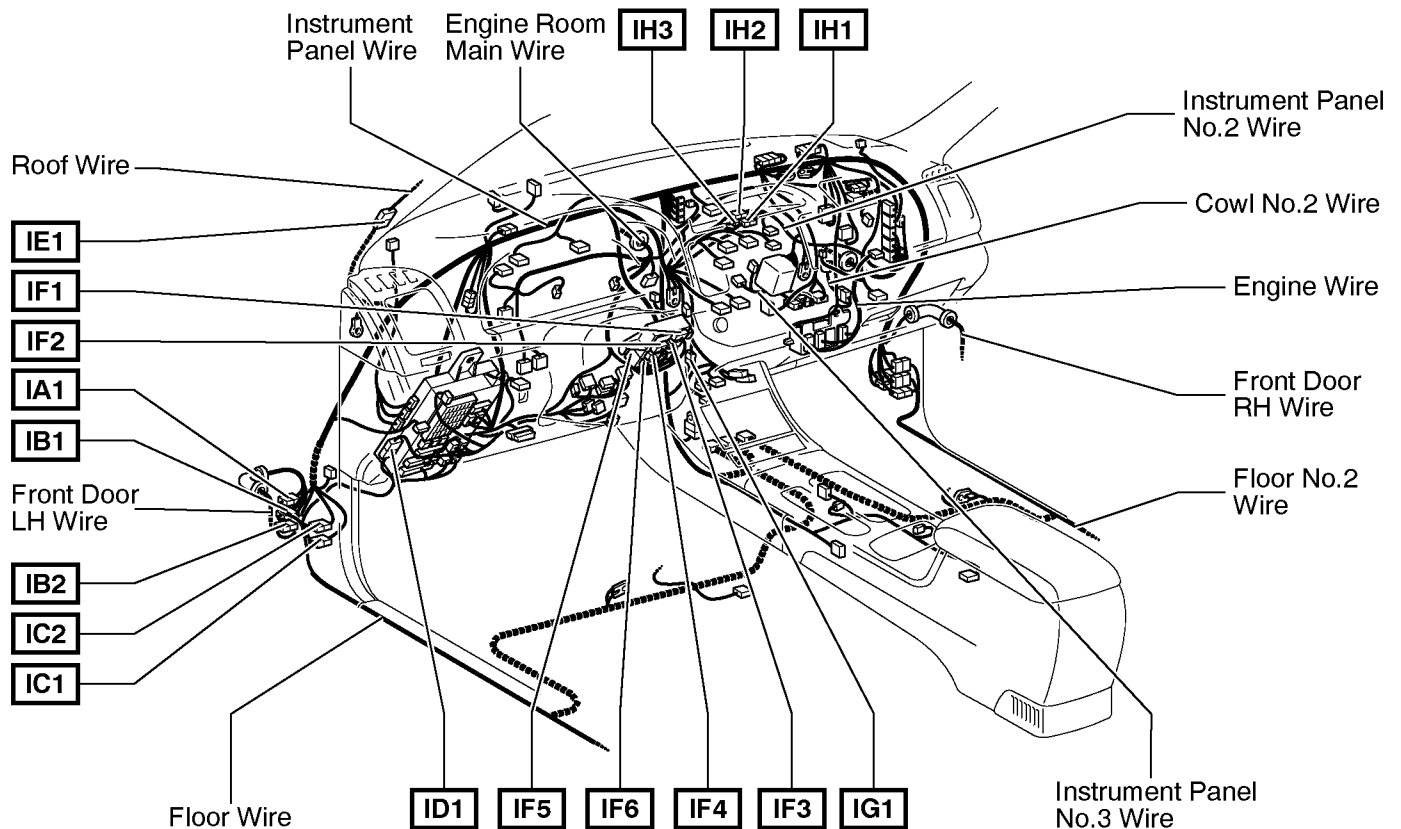
Connector Joining Wire Harness and Wire Harness



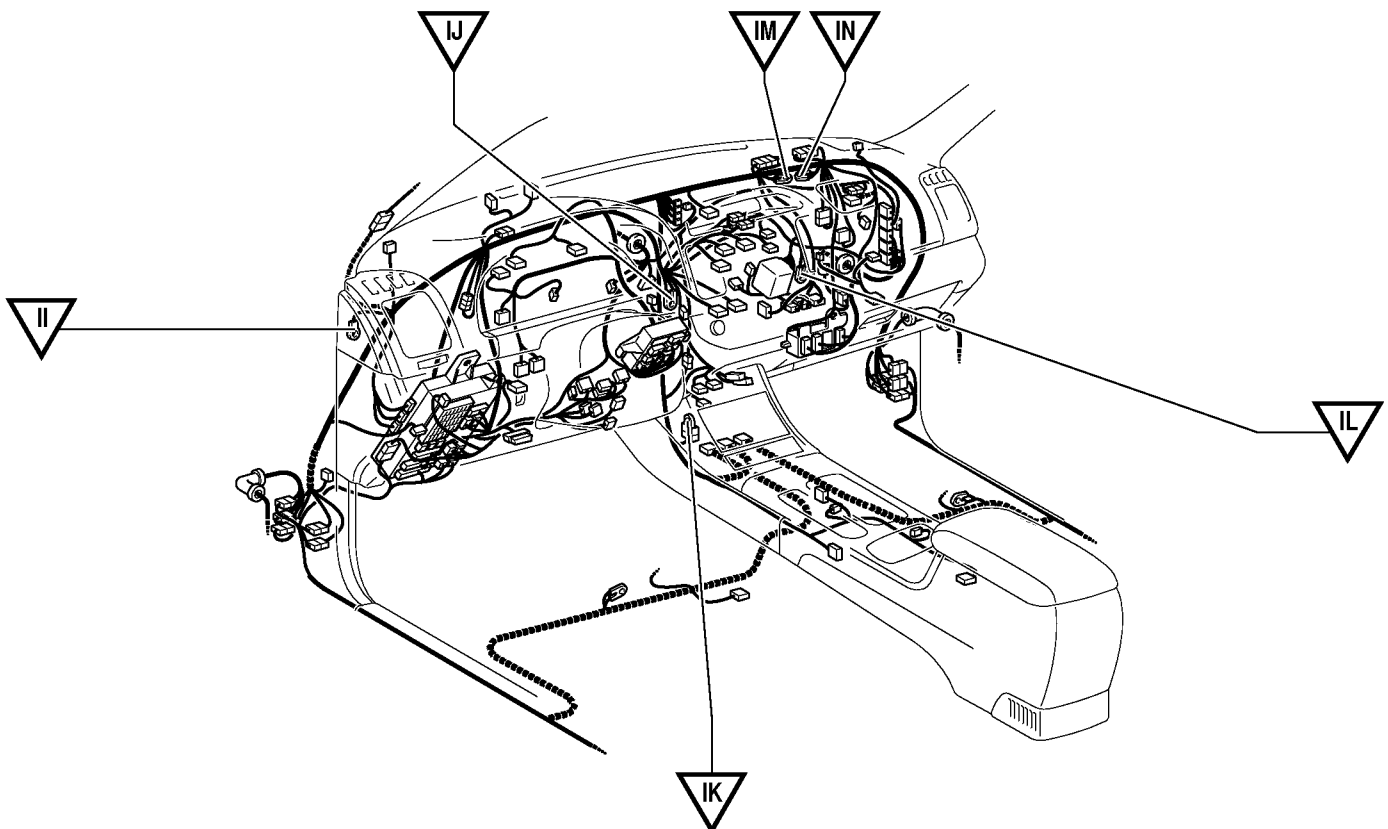
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
EA2	

G ELECTRICAL WIRING ROUTING

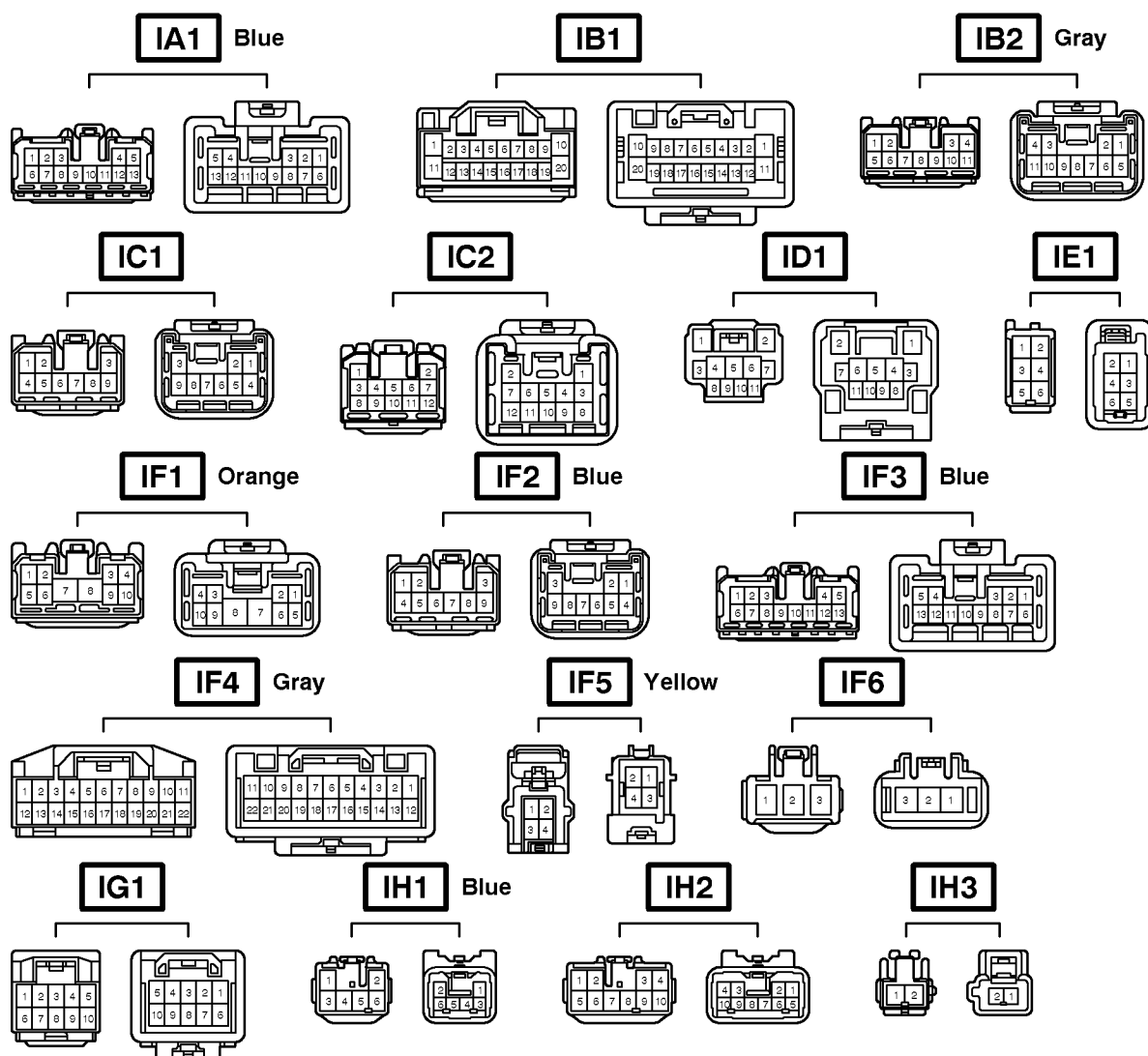
□ : Location of Connector Joining Wire Harness and Wire Harness



▽ : Location of Ground Points



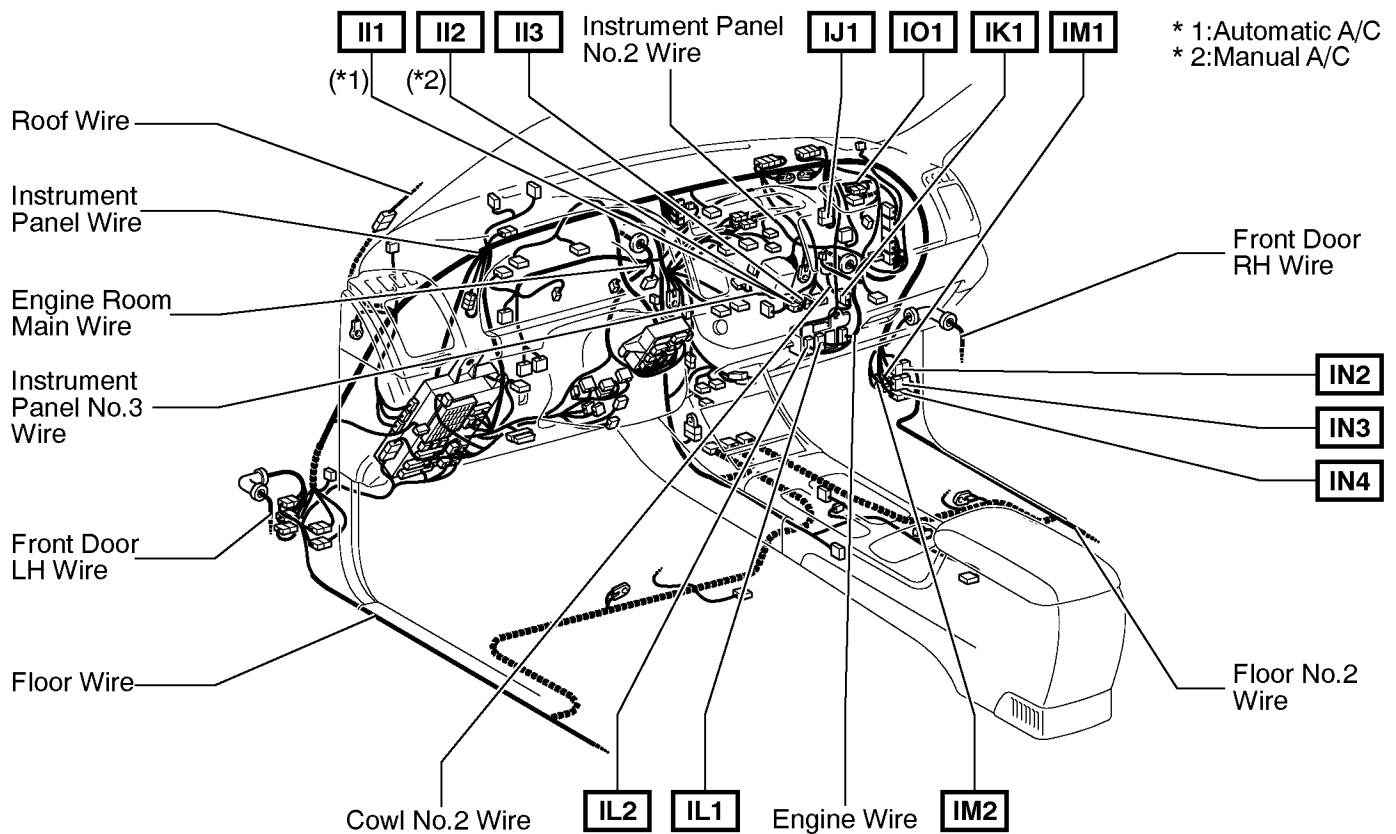
Connector Joining Wire Harness and Wire Harness



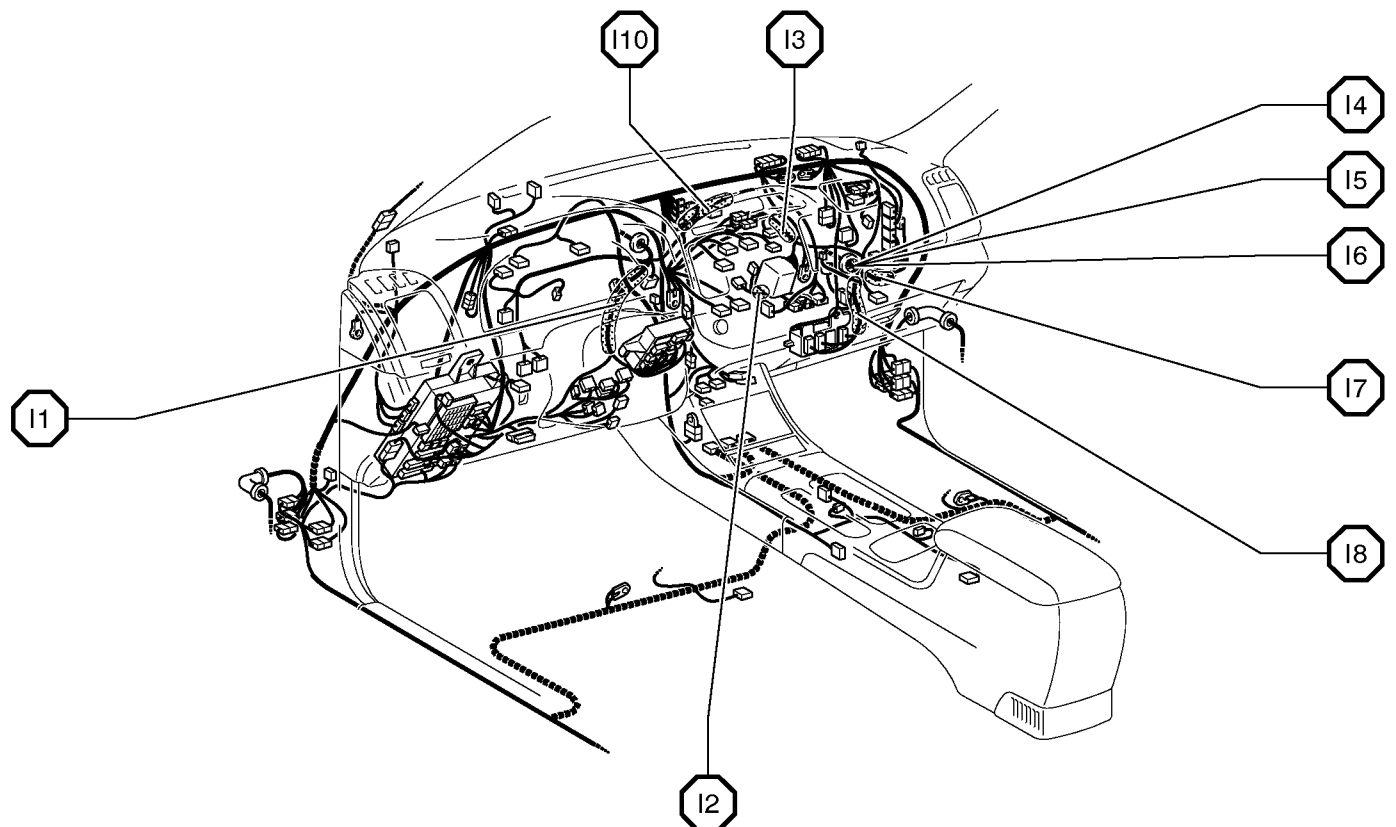
Code	Joining Wire Harness and Wire Harness (Connector Location)
IA1	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2	
IC1	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IC2	
ID1	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IE1	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)
IF1	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF2	
IF3	
IF4	
IF5	
IF6	
IG1	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
IH1	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH2	
IH3	

G ELECTRICAL WIRING ROUTING

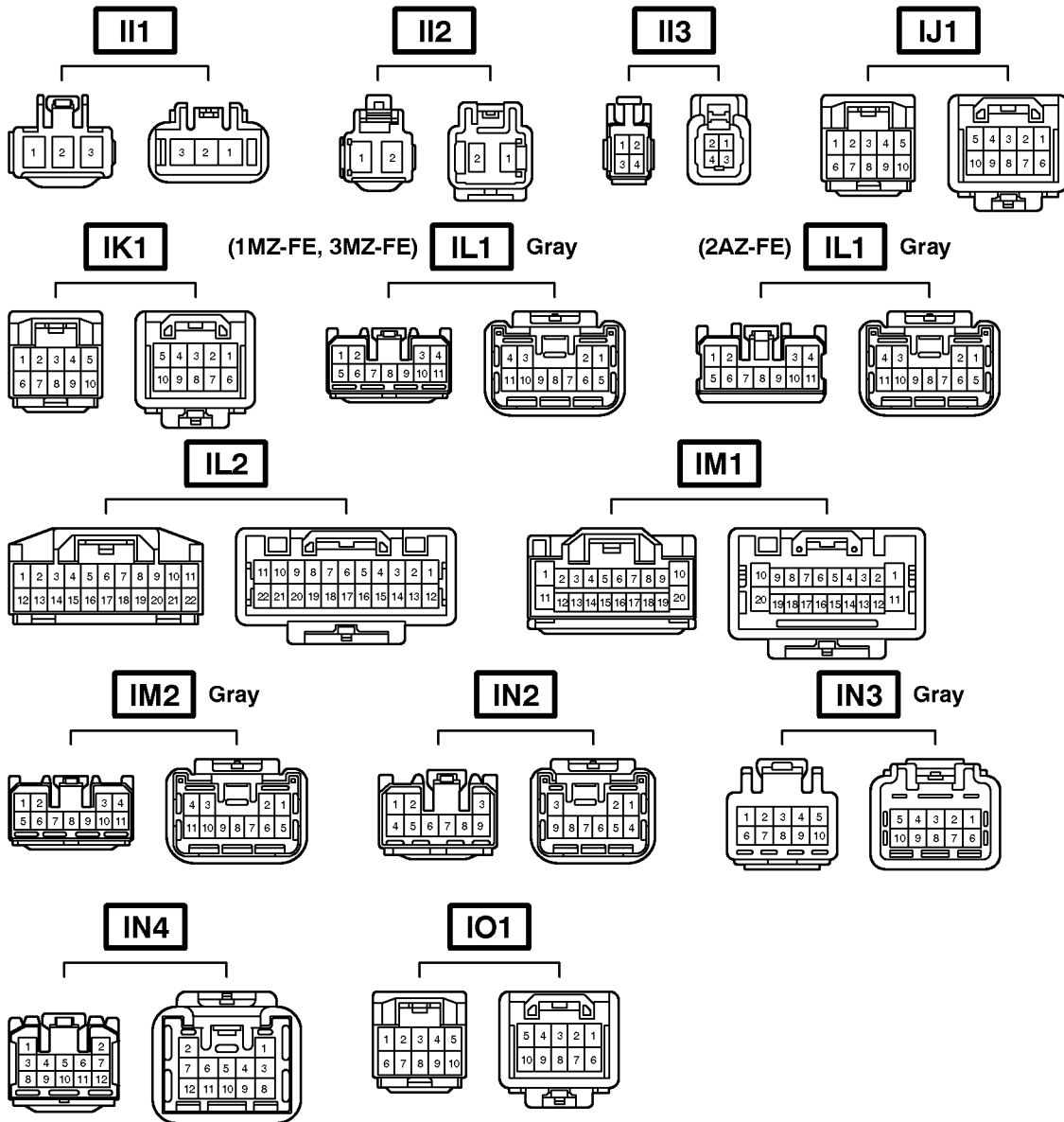
□ : Location of Connector Joining Wire Harness and Wire Harness



○ : Location of Splice Points



Connector Joining Wire Harness and Wire Harness

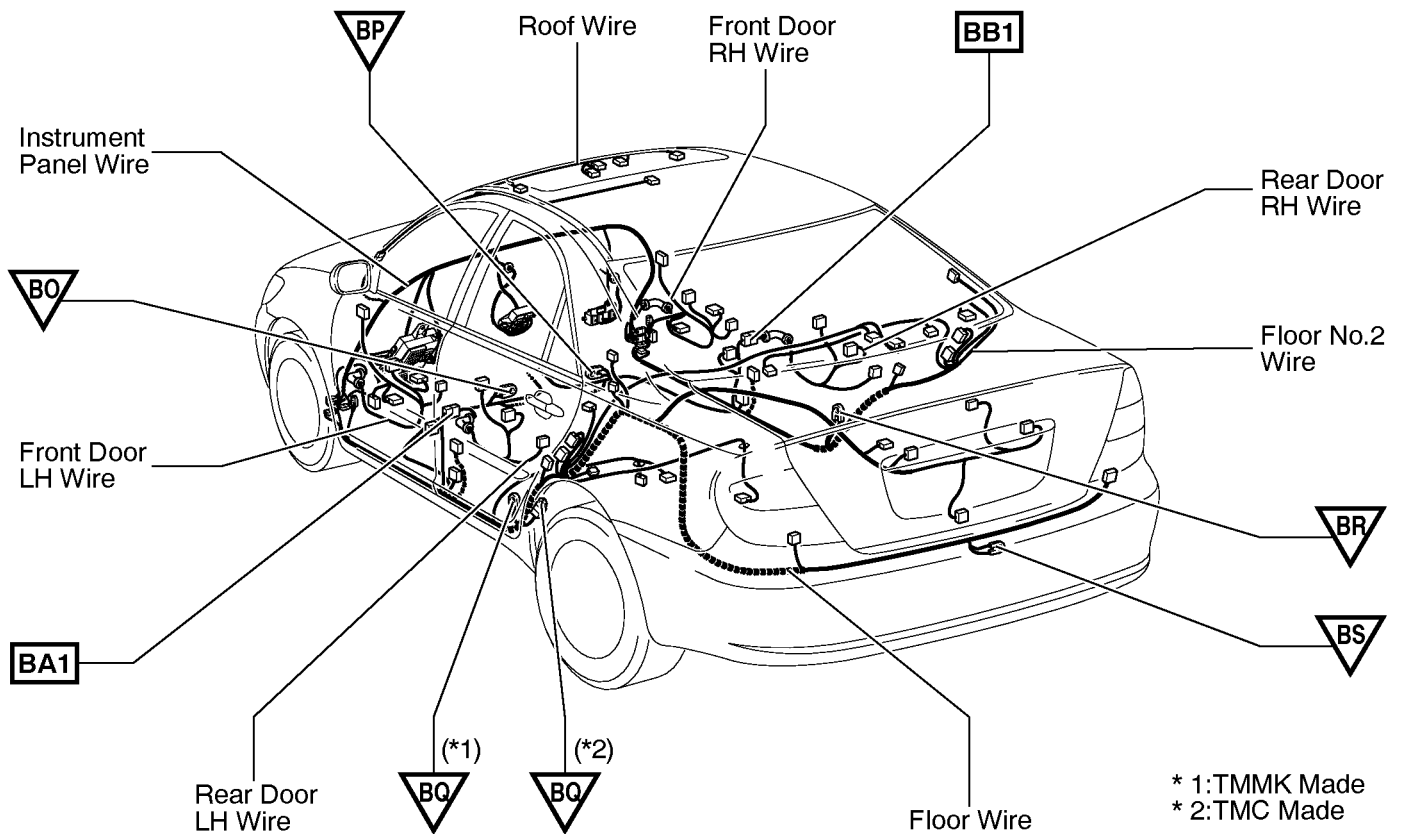


Code	Joining Wire Harness and Wire Harness (Connector Location)
II1	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
II2	
II3	
IJ1	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IK1	Instrument Panel Wire and Cowl No.2 Wire (Behind the Glove Box)
IL1	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2	
IM1	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2	
IN2	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN3	
IN4	
IO1	Engine Room Main Wire and Engine Room Main Wire (Right Side of the Instrument Panel)

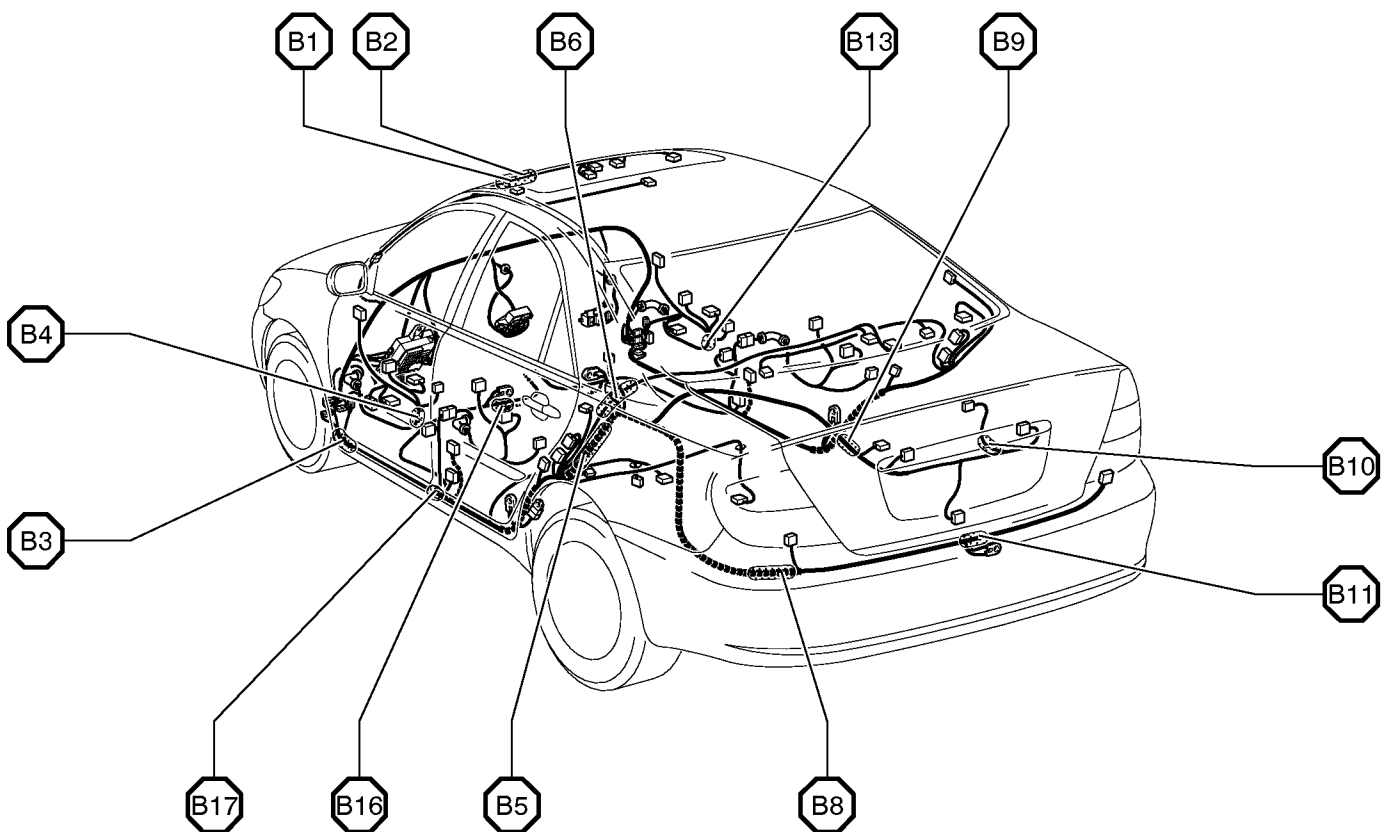
G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness

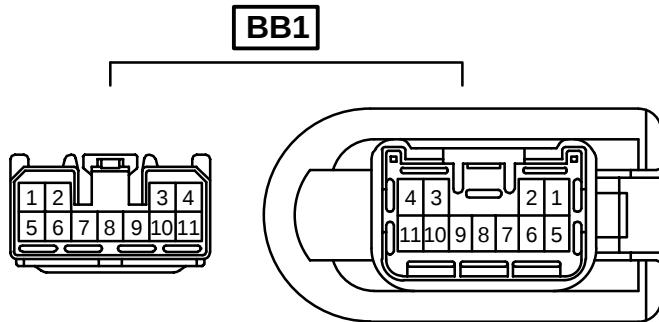
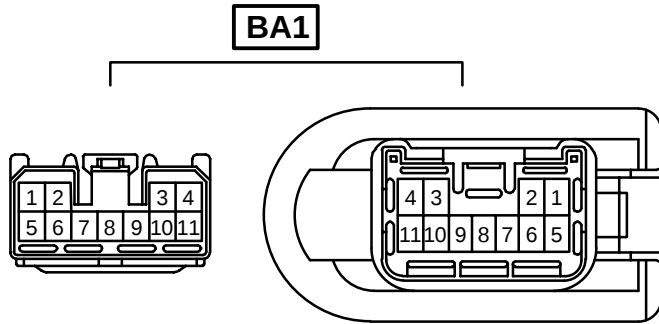
▽ : Location of Ground Points



○ : Location of Splice Points



Connector Joining Wire Harness and Wire Harness

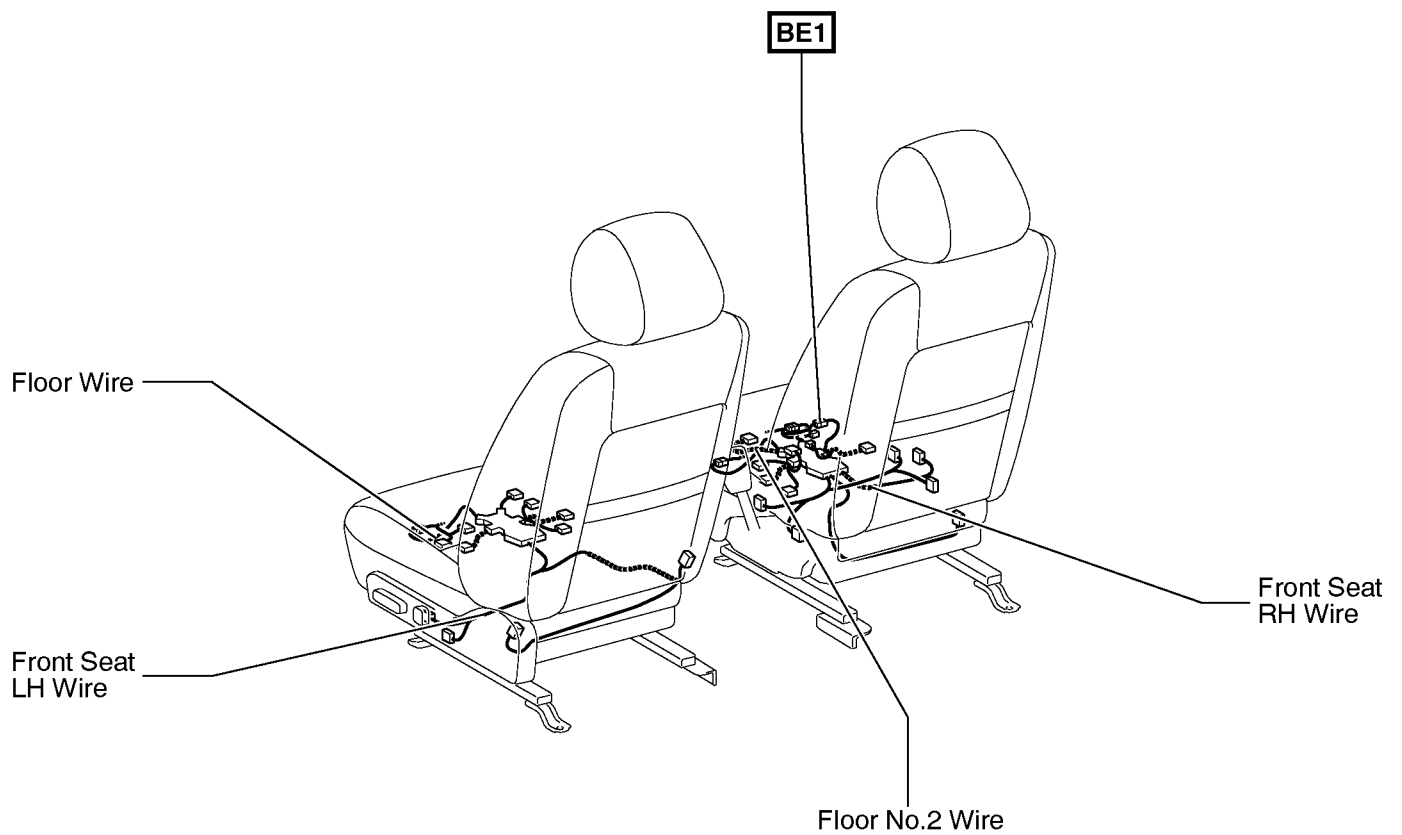


Code	Joining Wire Harness and Wire Harness (Connector Location)
BA1	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

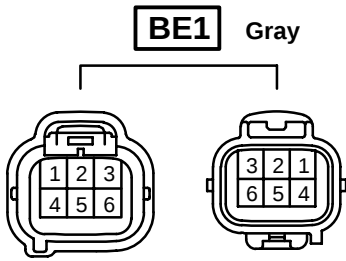
G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness

[w/ Power Seat]



Connector Joining Wire Harness and Wire Harness

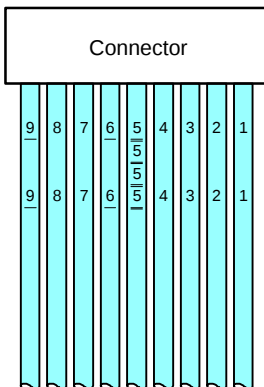


Code	Joining Wire Harness and Wire Harness (Connector Location)
BE1	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

2005 CAMRY ELECTRICAL WIRING DIAGRAM SYSTEM CIRCUITS

	Page
ABS (TMC Made)	176
ABS (TMMK Made)	180
Audio System (Built-in Type Amplifier w/o Navigation System)	258
Audio System (Separate Type Amplifier w/o Navigation System)	254
Audio System (w/ Navigation System)	250
Automatic Air Conditioning (1MZ-FE)	272
Automatic Air Conditioning (2AZ-FE)	278
Automatic Glare-Resistant EC Mirror	230
Automatic Light Control	128
Back-Up Light	148
Charging	72
Cigarette Lighter	234
Clock	246
Combination Meter	260
Cruise Control (1MZ-FE, 3MZ-FE)	192
Cruise Control (2AZ-FE)	198
Door Lock Control	152
Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
Engine Control (1MZ-FE, 3MZ-FE)	74
Engine Control (2AZ-FE)	86
Engine Immobilizer System	100
Fog Light	126
Garage Door Opener	232
Ground Point	296
Headlight	120
Horn	236
Ignition (1MZ-FE, 3MZ-FE)	64
Ignition (2AZ-FE)	68
Illumination	138
Interior Light	134
Key Reminder	150
Light Auto Turn Off System	130
Manual Air Conditioning (1MZ-FE, 3MZ-FE)	284
Manual Air Conditioning (2AZ-FE)	290
Mirror Heater	242
Moon Roof	164
Multiplex Communication System (BEAN)	104
Multiplex Communication System (BEAN Bus)	102
Multiplex Communication System (CAN Bus)	118
Navigation System	250
Power Adjustable Pedals	244
Power Outlet	234
Power Seat	218
Power Source	60
Power Window	166

	Page
Radiator Fan and Condenser Fan	266
Rear Window Defogger	242
Remote Control Mirror	228
Seat Belt Warning	224
Seat Heater	222
Shift Lock	216
SRS	185
Starting (1MZ-FE, 3MZ-FE)	64
Starting (2AZ-FE)	68
Stop Light	146
Taillight	144
Theft Deterrent	152
Turn Signal and Hazard Warning Light	142
VSC	170
Wiper and Washer	238
Wireless Door Lock Control	158



There are two types of wire harness for the instrument panel on CARMY.

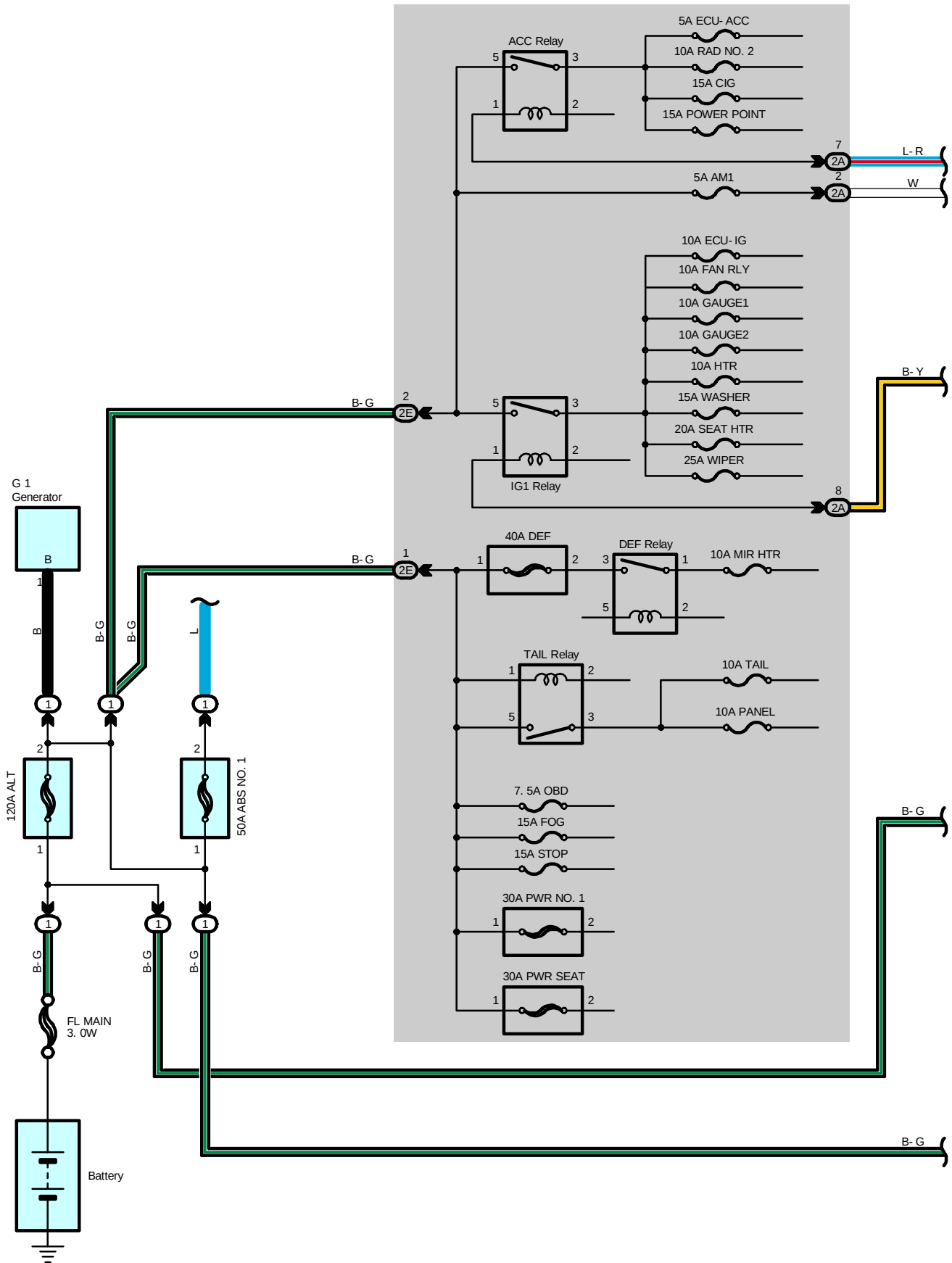
Type A : The wire harness that uses the color-coded wire.

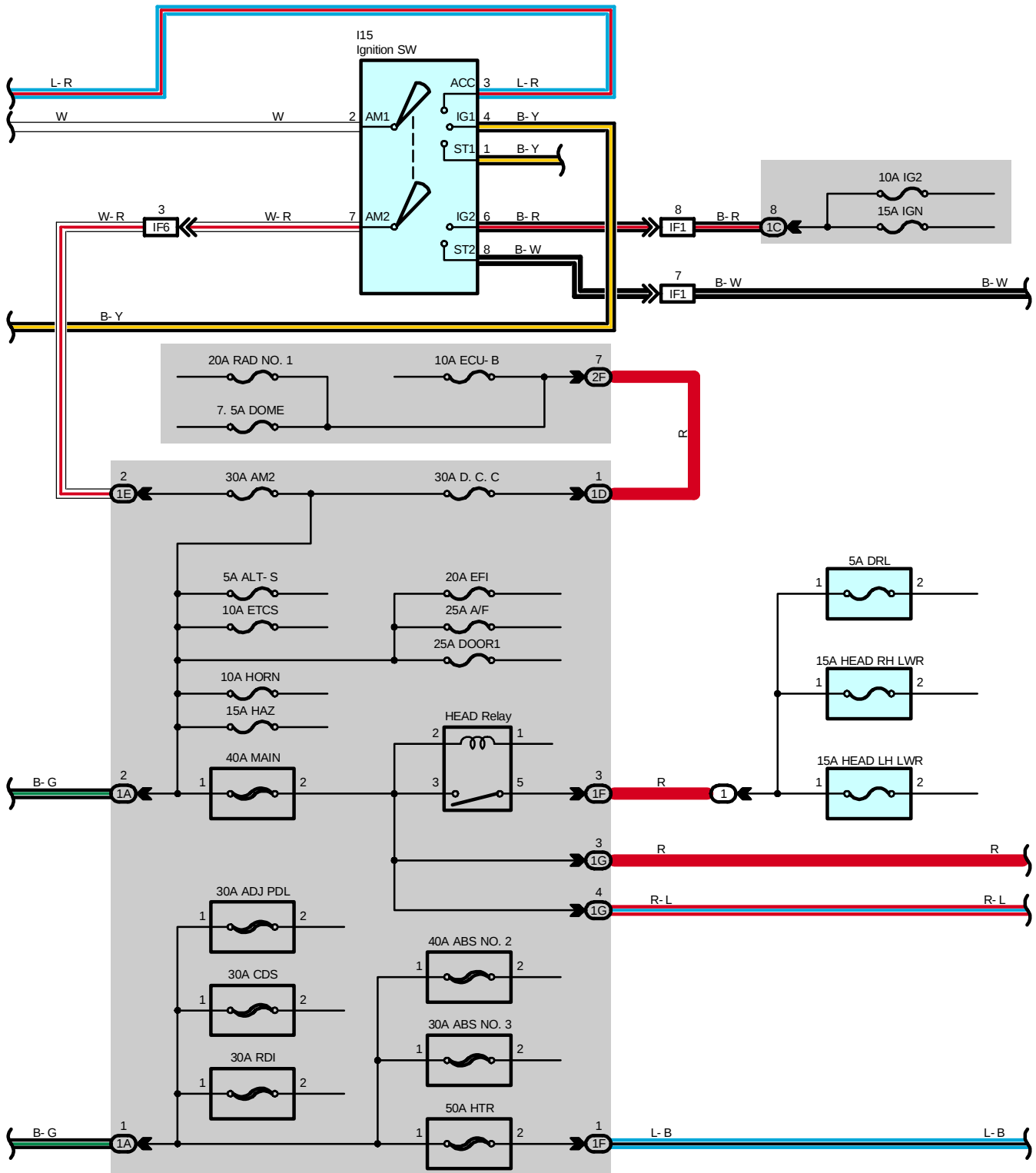
Type B : The wire harness that uses the same colored wire. (Not color-coded)

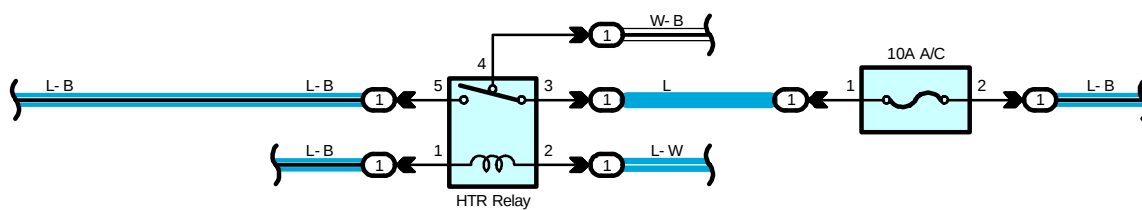
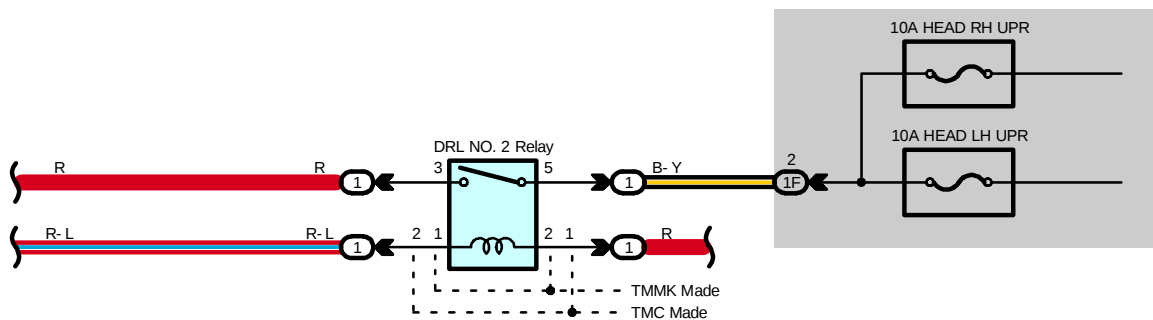
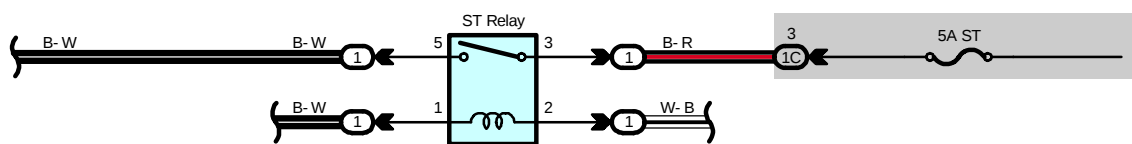
In case of using the same colored wires, each terminal number is printed on the wire as shown in the illustration on the left in order to distinguish each wiring.

Be sure to connect the terminal to the same place as indicated by the terminal number printed on the wire after disconnecting the terminal from the connector.

Power Source







Service Hints

I15 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

- 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)

: Parts Location

Code	See Page	Code	See Page	Code	See Page
G1	36 (*1)	G1	38 (*2)	I15	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

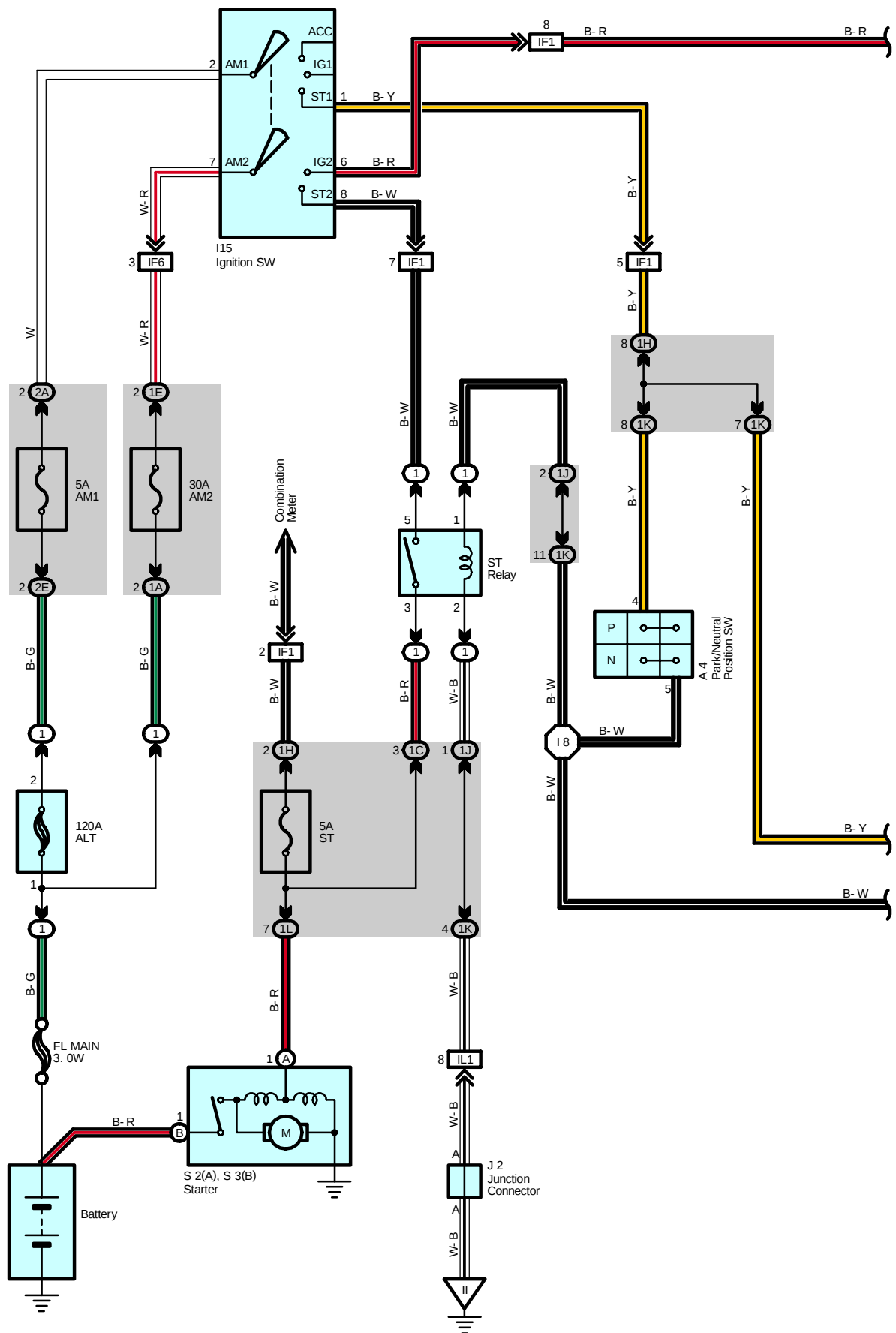
Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1D		
1E		
1F		
1G		
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2E	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)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

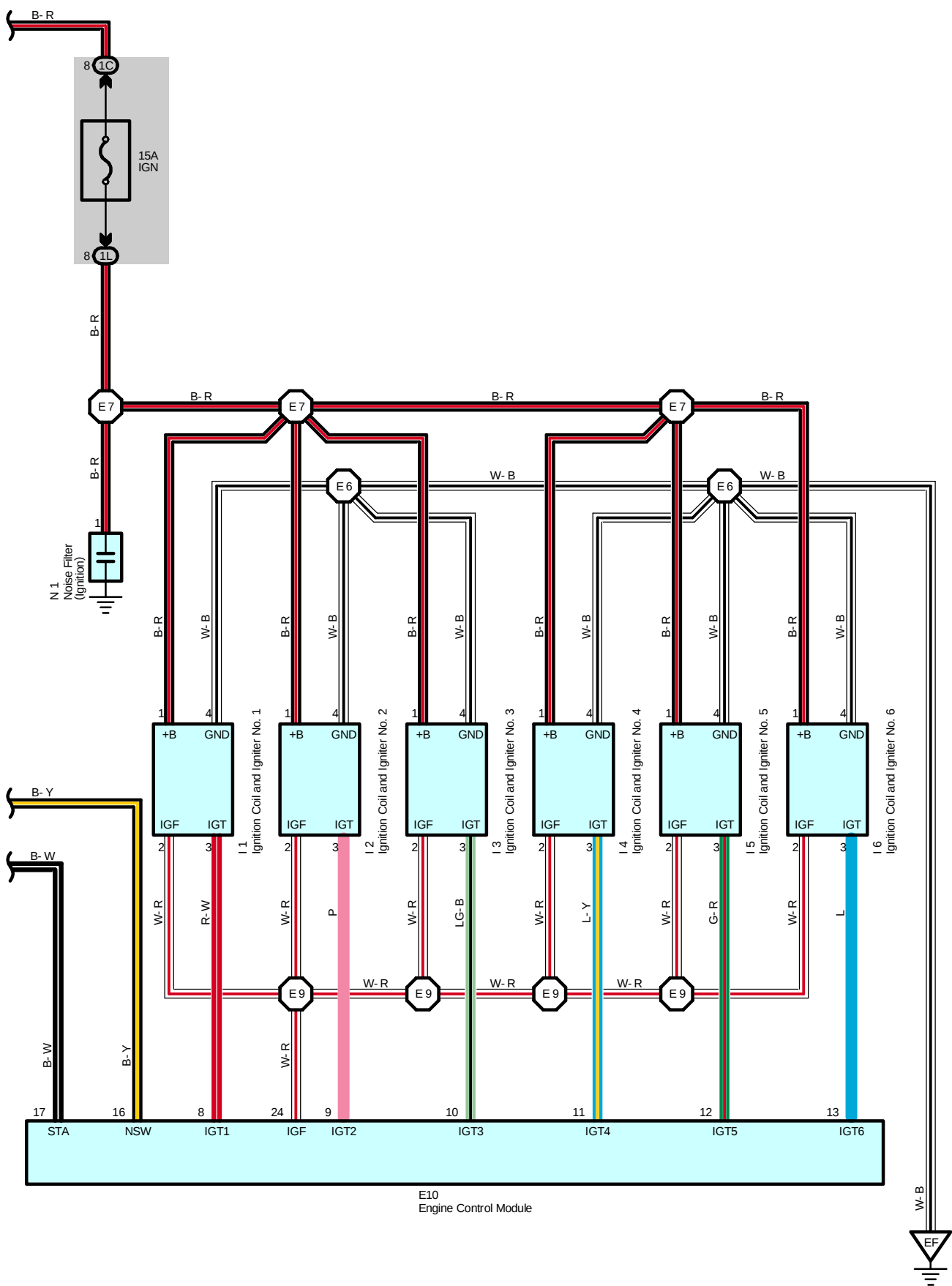
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Starting and Ignition for 1MZ-FE and 3MZ-FE





Starting and Ignition for 1MZ-FE and 3MZ-FE

Service Hints

I15 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

- 4-5 : 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 (*1)	I4	37 (*1)	N1	37 (*1)
E10	40	I5	37 (*1)	S2	37 (*1)
I1	37 (*1)	I6	37 (*1)	S3	37 (*1)
I2	37 (*1)	I15	41		
I3	37 (*1)	J2	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)
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)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

: Ground Points

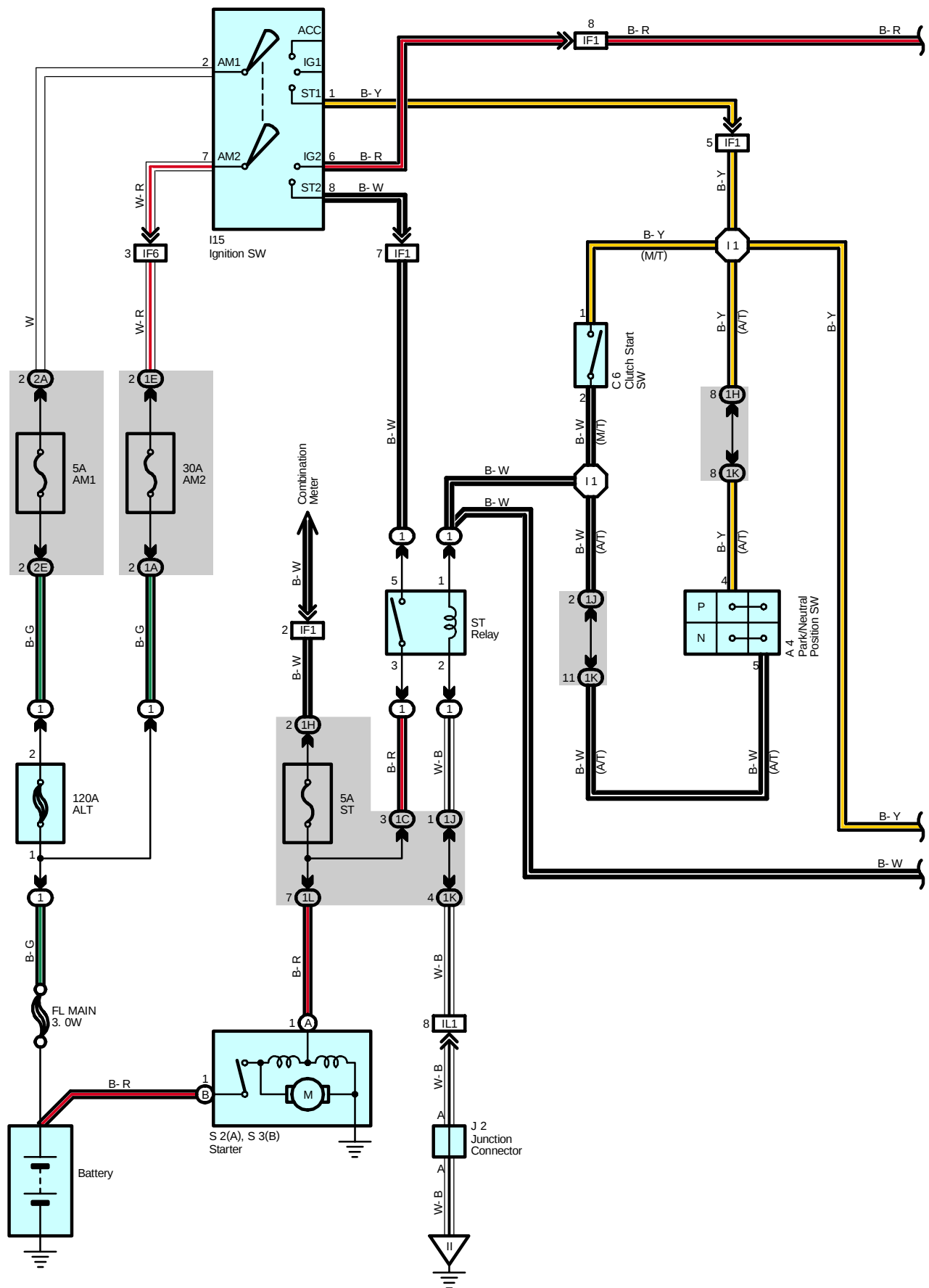
Code	See Page	Ground Points Location
EF	46 (*1)	Right Side of Cylinder Head
II	50	Cowl Side Panel LH

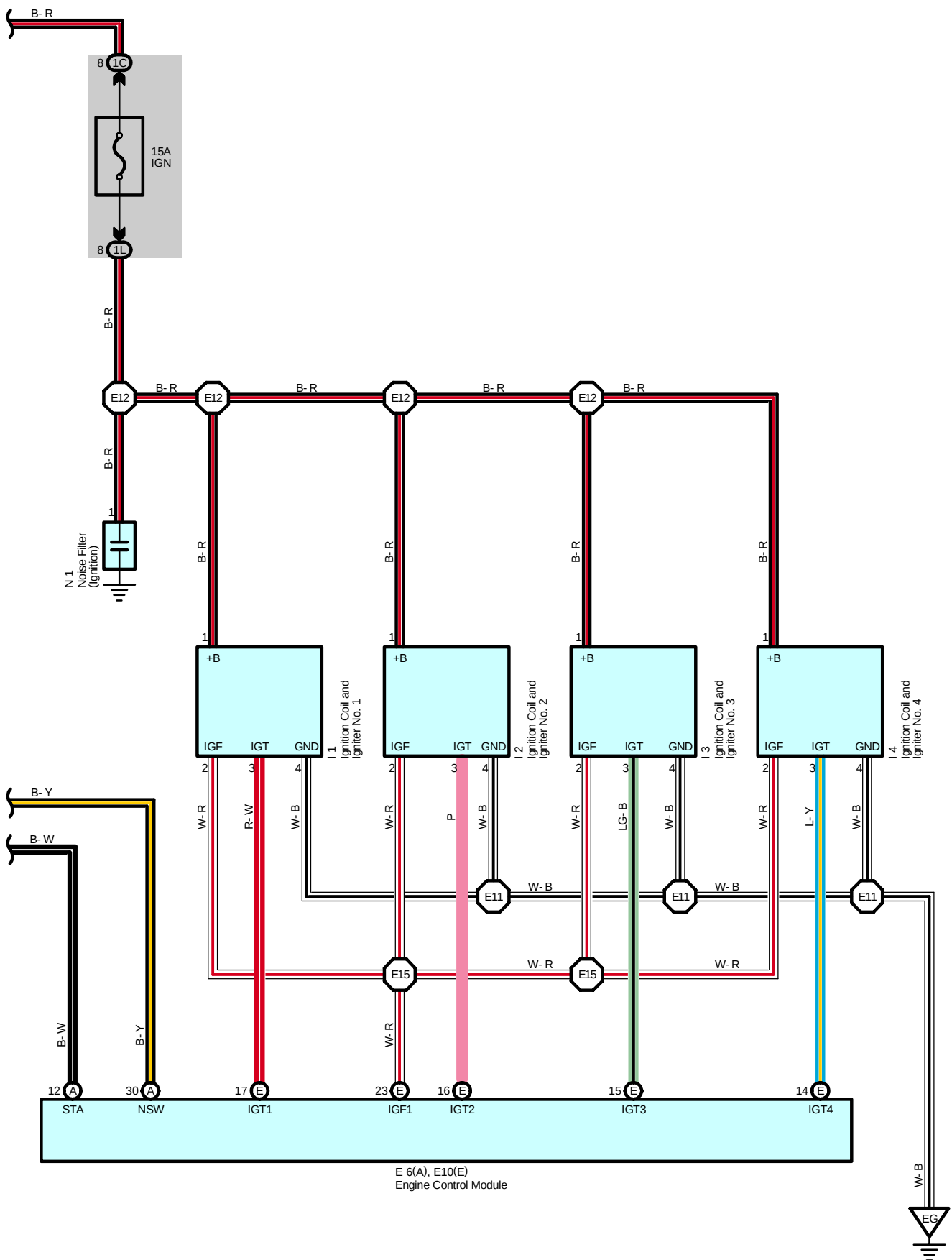
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E6	46 (*1)	Engine Wire	E9	46 (*1)	Engine Wire
E7			I8	52	

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Starting and Ignition for 2AZ-FE





Starting and Ignition for 2AZ-FE

Service Hints

I15 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 (A/T)

- 4-5 : 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 (A/T)
- Point closed with the clutch start SW on and the ignition SW at ST position (M/T)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (*2)	I2	39 (*2)	N1	39 (*2)
C6	40	I3	39 (*2)	S2	A 39 (*2)
E6	A 40	I4	39 (*2)	S3	B 39 (*2)
E10	E 40	I15	41		
I1	39 (*2)	J2	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)
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)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

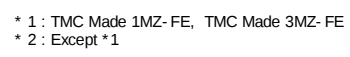
▽ : Ground Points

Code	See Page	Ground Points Location
EG	48 (*2)	Left Side of Cylinder Head
II	50	Cowl Side Panel LH

○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E11	48 (*2)	Engine Wire	E15	48 (*2)	Engine Wire
E12			I1	52	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



Service Hints

G2 (B) Generator

- (B) 1-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) 4-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	
B7		40		G1	A	38 (*2)		I15		41	
C7		40		G2	B	36 (*1)					
G1	A	36 (*1)				38 (*2)					

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

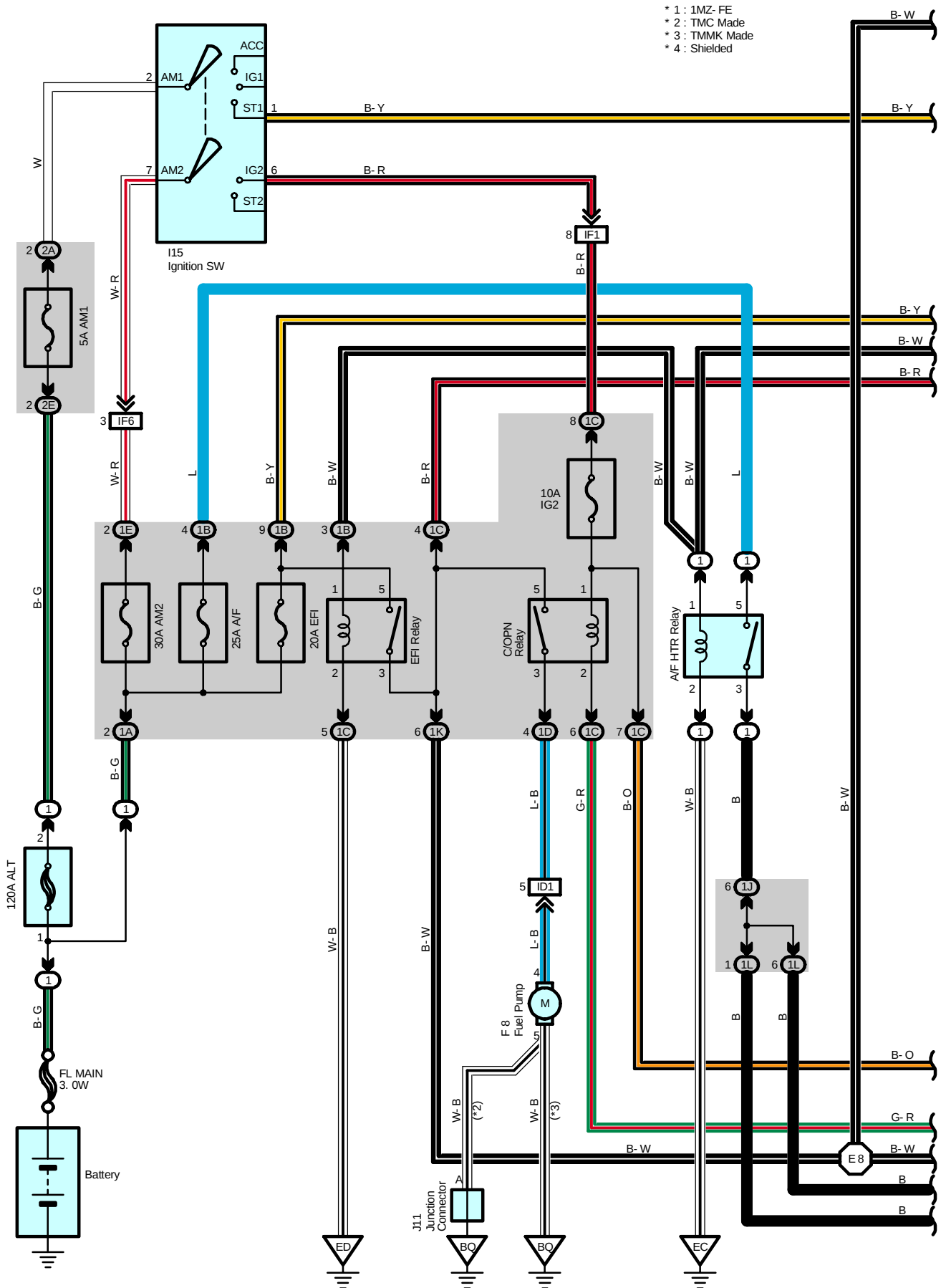
Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1L	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2G	28	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument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

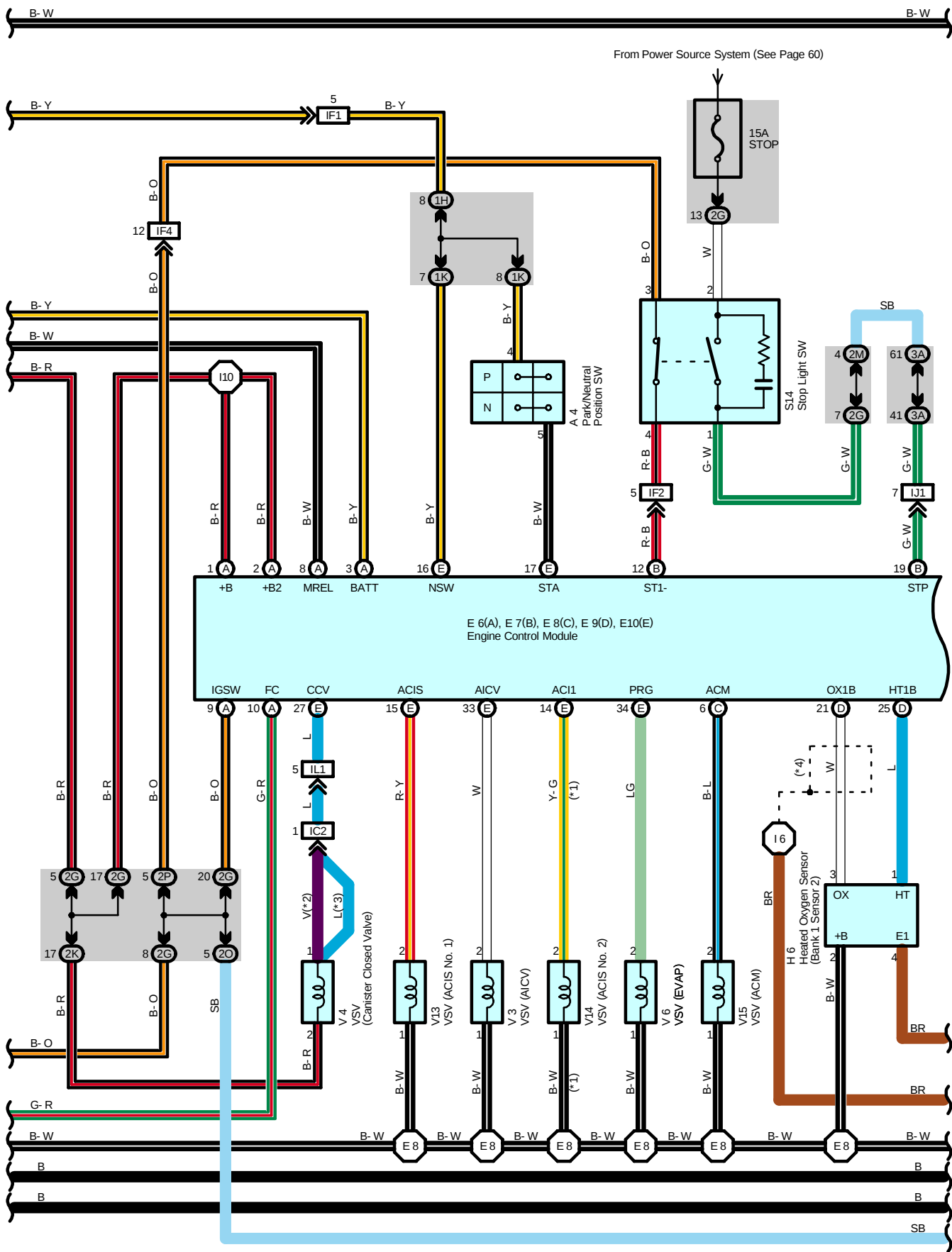
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF6		
IL2	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

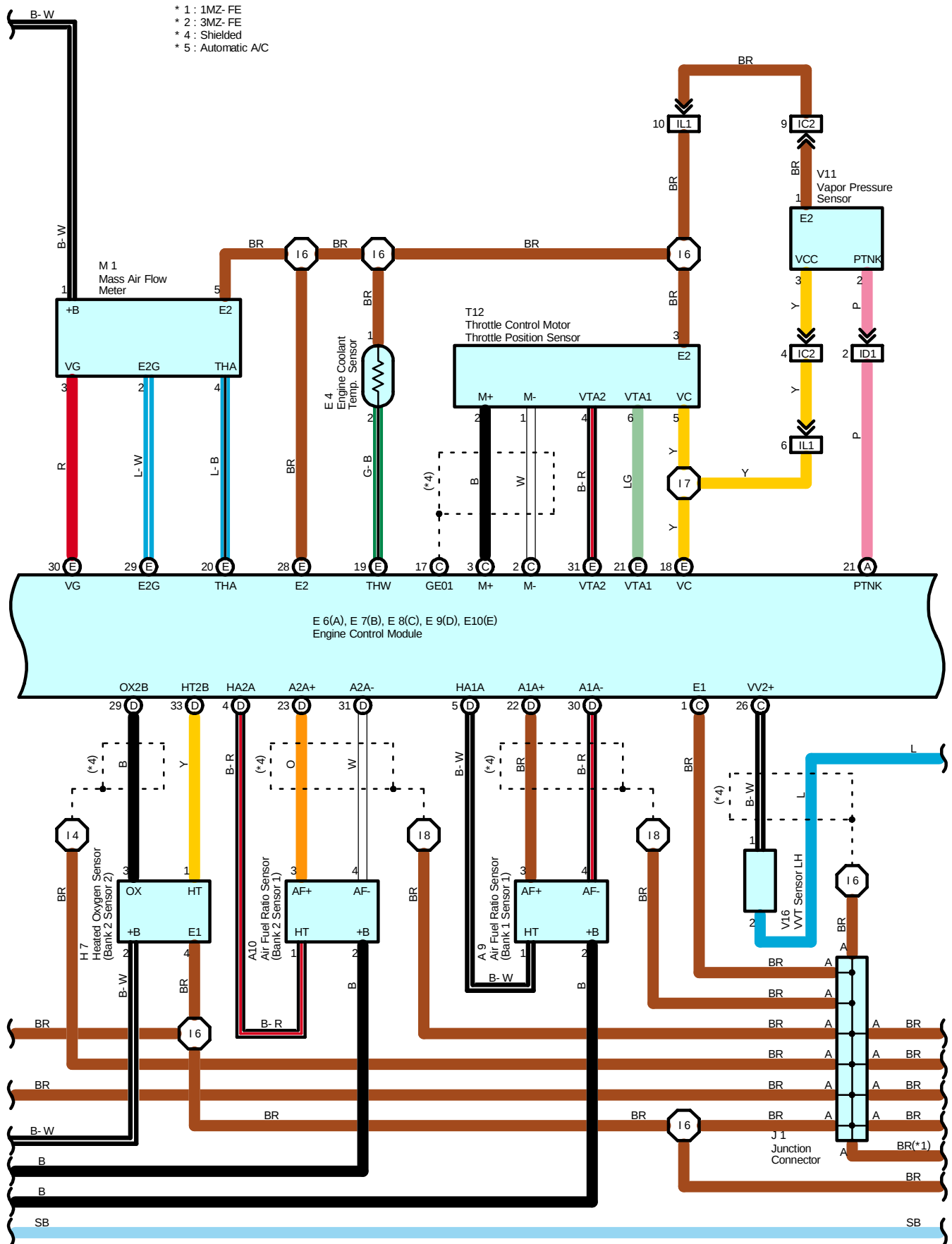
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

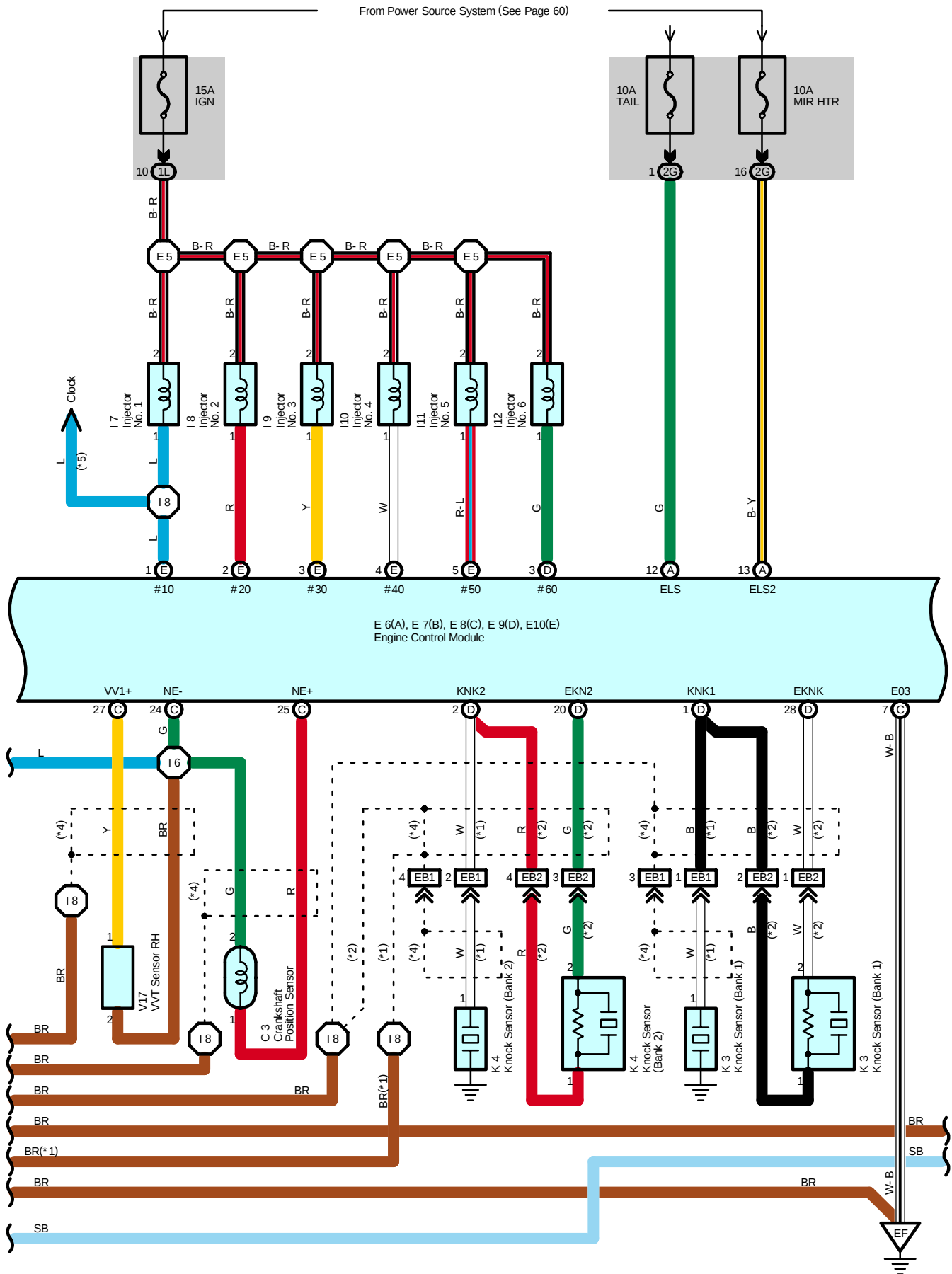
Engine Control for 1MZ-FE and 3MZ-FE



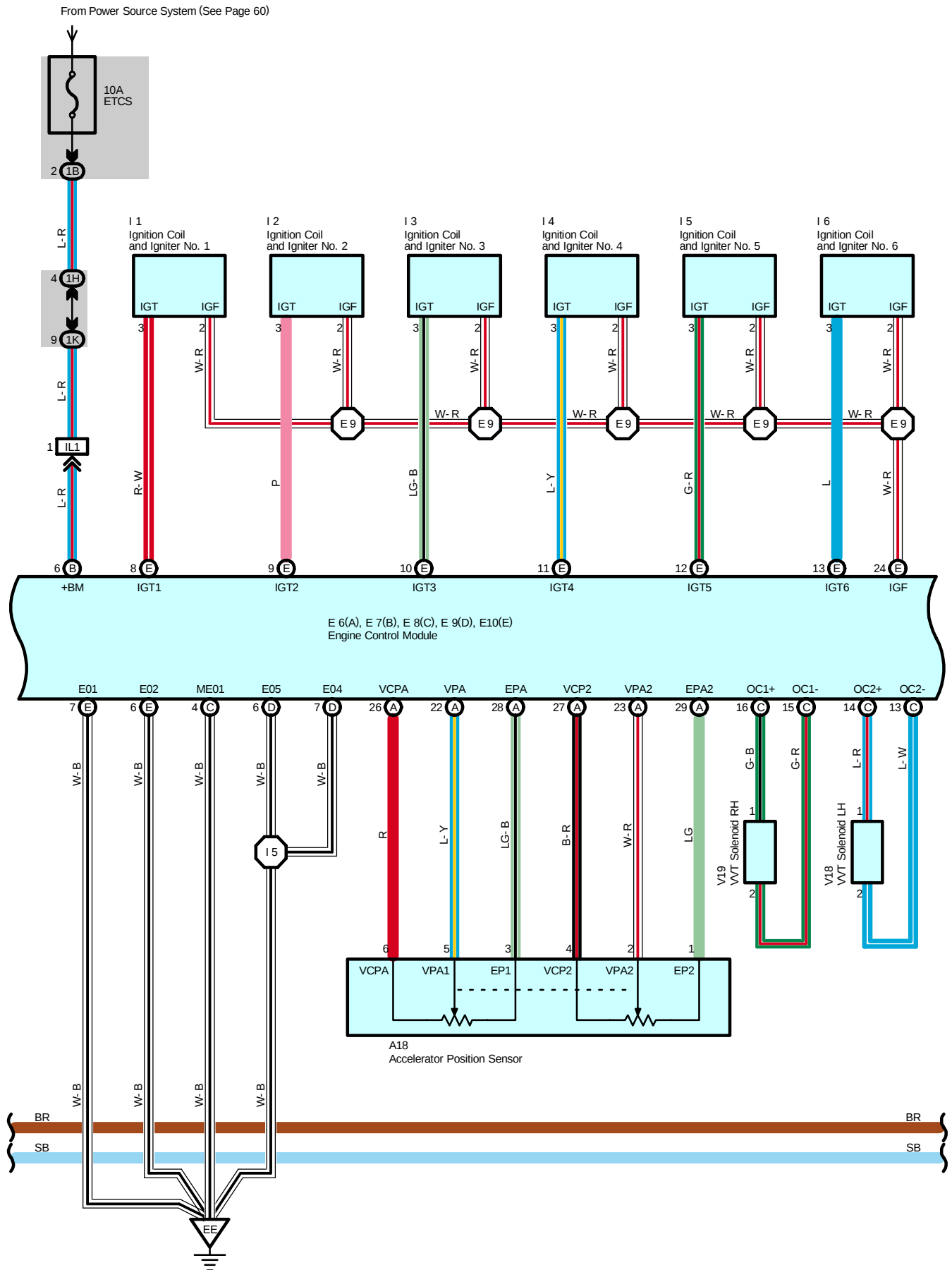


Engine Control for 1MZ-FE and 3MZ-FE

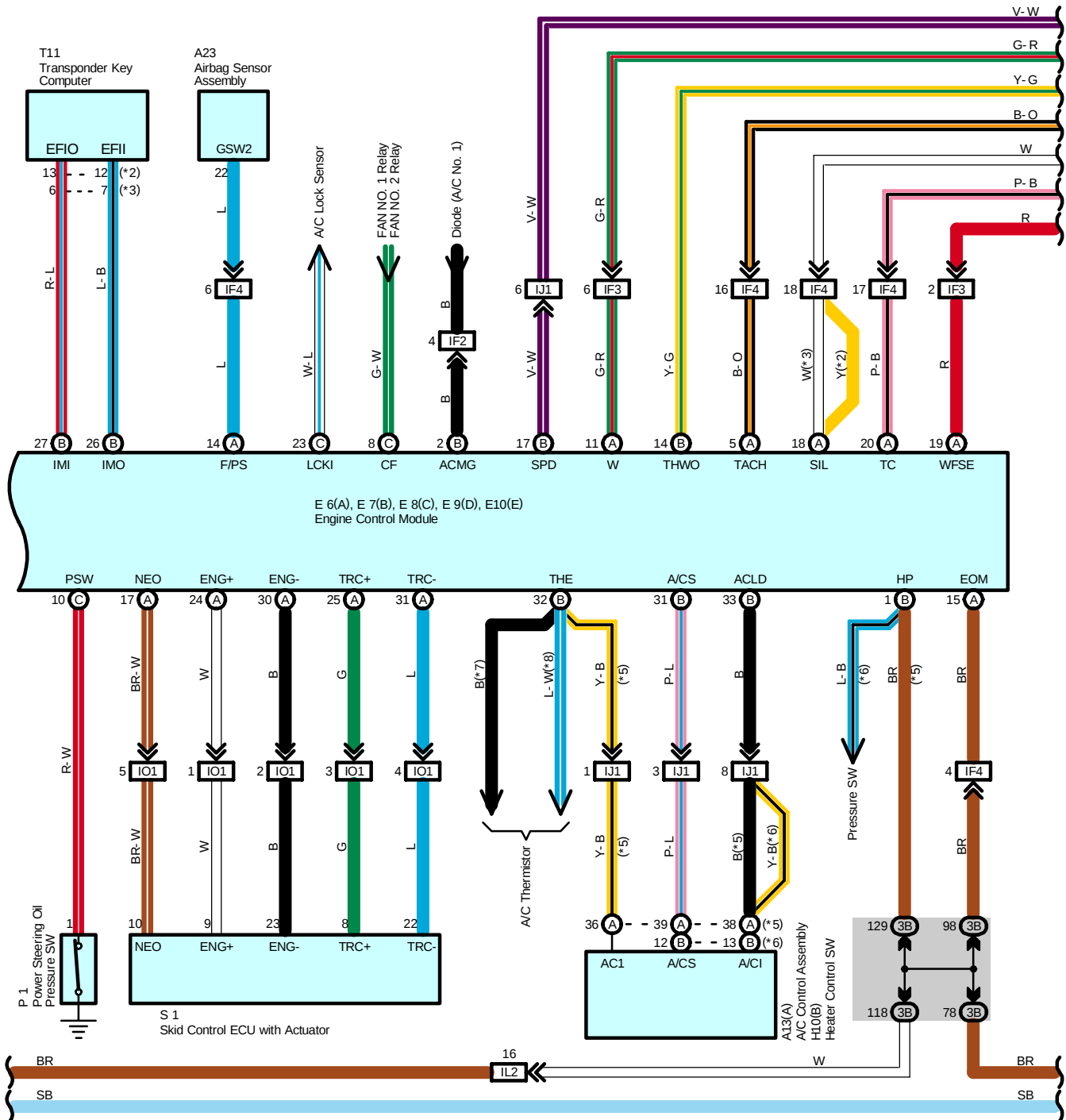




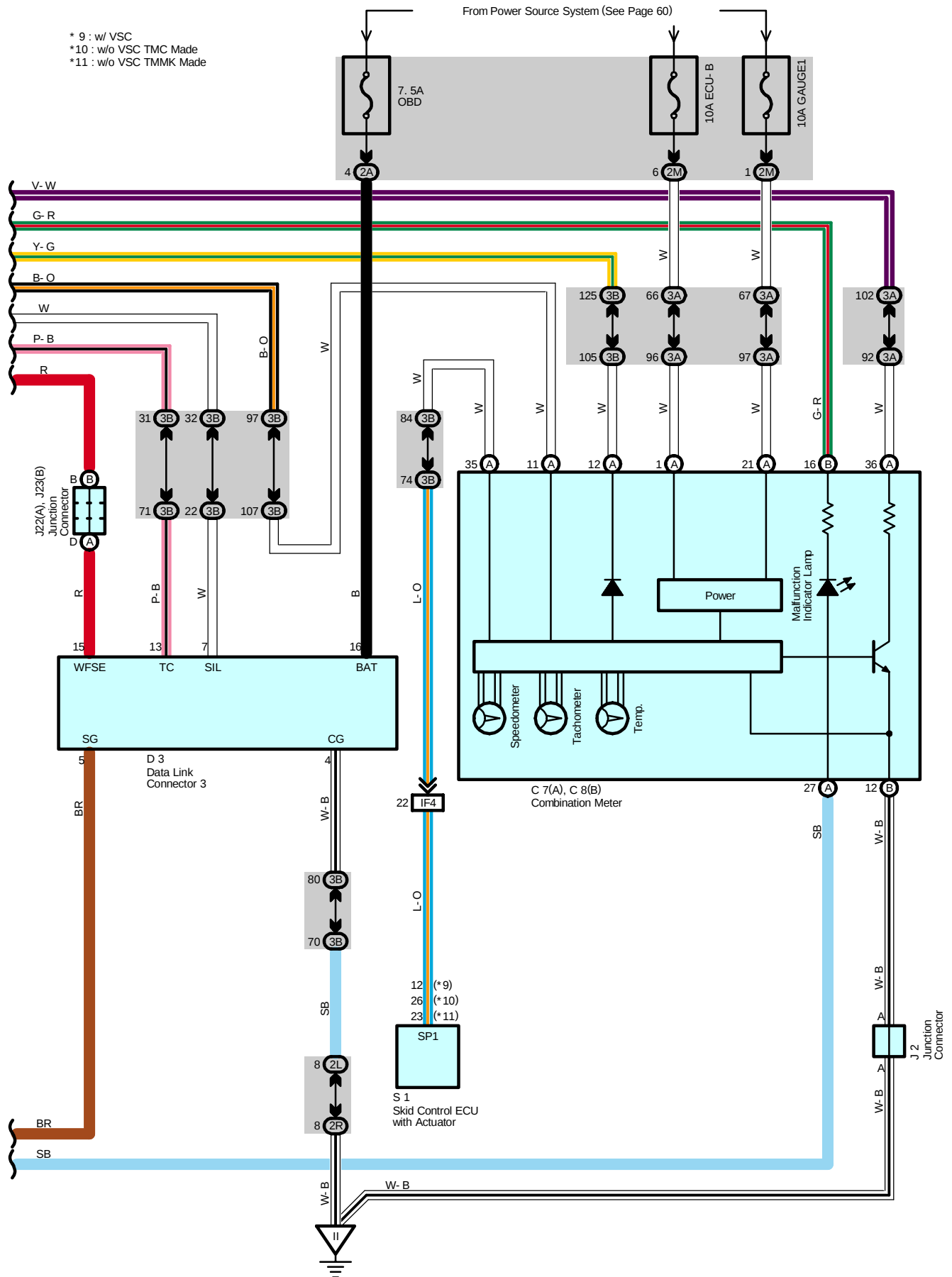
Engine Control for 1MZ-FE and 3MZ-FE



- * 2 : TMC Made
- * 3 : TMMK Made
- * 5 : Automatic A/C
- * 6 : Manual A/C
- * 7 : Manual A/C TMMK Made USA
- * 8 : Manual A/C TMMK Made Canada, Manual A/C TMC Made



Engine Control for 1MZ-FE and 3MZ-FE



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) Throttle signal circuit
The throttle position sensor detects the throttle valve opening angle as a control signal, which is input into TERMINALS VTA1 and VTA2 of the engine control module.
- (5) Vehicle speed signal circuit
The vehicle speed sensor, detects the vehicle speed and input to ABS speed sensor of the skid control ECU with actuator, from skid control ECU with actuator to TERMINAL SPD of the engine control module, Via combination meter.
- (6) 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.
- (7) A/C SW signal circuit
The A/C control assembly (Automatic A/C) or heater control SW (Manual A/C) inputs the A/C operations into TERMINAL A/CS of the engine control module as a control signal.
- (8) 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 TERMINALS +B and +B2 of the engine control module through the EFI relay.
- (9) 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.
- (10) 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.
- (11) Engine knock signal circuit
Engine knocking is detected by the knock sensor No.1 and No.2, then the signals are input into TERMINALS KNK1 and KNK2 of the engine control module as a control signal.
- (12) Air fuel ratio signal circuit
The air fuel ratio is detected and input as a control signal into TERMINALS A1A+, A2A+ 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 HA1A and HA2A, 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

E4 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, +B2-E1 : 9.0-14.0 volts (Ignition SW at ON position)
- VC-E2 : Always 4.5-5.5 volts (Ignition SW at ON position)
- VT1-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)
- 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
- ACLD-E1 : Below 2.0 volts (Engine idling and A/C SW on)
- 9.0-14.0 volts (A/C SW off)
- A/CS-E1 : 9.0-14.0 volts (Engine idling and A/C SW on)
- Below 2.0 volts (A/C SW off)
- 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)
- PRG-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)
- 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)
- KNK1, KNK2-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 the starter running

EFI Relay

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

Engine Control for 1MZ-FE and 3MZ-FE

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36 (*1)	H10	B 41	K3	37 (*1)
A9	36 (*1)	I1	37 (*1)	K4	37 (*1)
A10	36 (*1)	I2	37 (*1)	M1	37 (*1)
A13	A 40	I3	37 (*1)	P1	37 (*1)
A18	40	I4	37 (*1)	S1	37 (*1)
A23	40	I5	37 (*1)	S14	41
C3	36 (*1)	I6	37 (*1)	T11	41
C7	A 40	I7	37 (*1)	T12	37 (*1)
C8	B 40	I8	37 (*1)	V3	37 (*1)
D3	40	I9	37 (*1)	V4	43
E4	36 (*1)	I10	37 (*1)	V6	37 (*1)
E6	A 40	I11	37 (*1)	V11	43
E7	B 40	I12	37 (*1)	V13	37 (*1)
E8	C 40	I15	41	V14	37 (*1)
E9	D 40	J1	41	V15	37 (*1)
E10	E 40	J2	41	V16	37 (*1)
F8	42	J11	42	V17	37 (*1)
H6	36 (*1)	J22	A 41	V18	37 (*1)
H7	36 (*1)	J23	B 41	V19	37 (*1)

: Relay Blocks

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

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
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 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	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46 (1MZ-FE)	Engine Wire and Sensor Wire (Left Bank of Cylinder Head)
EB2	46 (3MZ-FE)	
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
ID1	50	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF2		
IF3		
IF4		
IF6		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IO1	52	Engine Room Main Wire and Engine Room Main Wire (Right Side of the Instrument Panel)

 : Ground Points

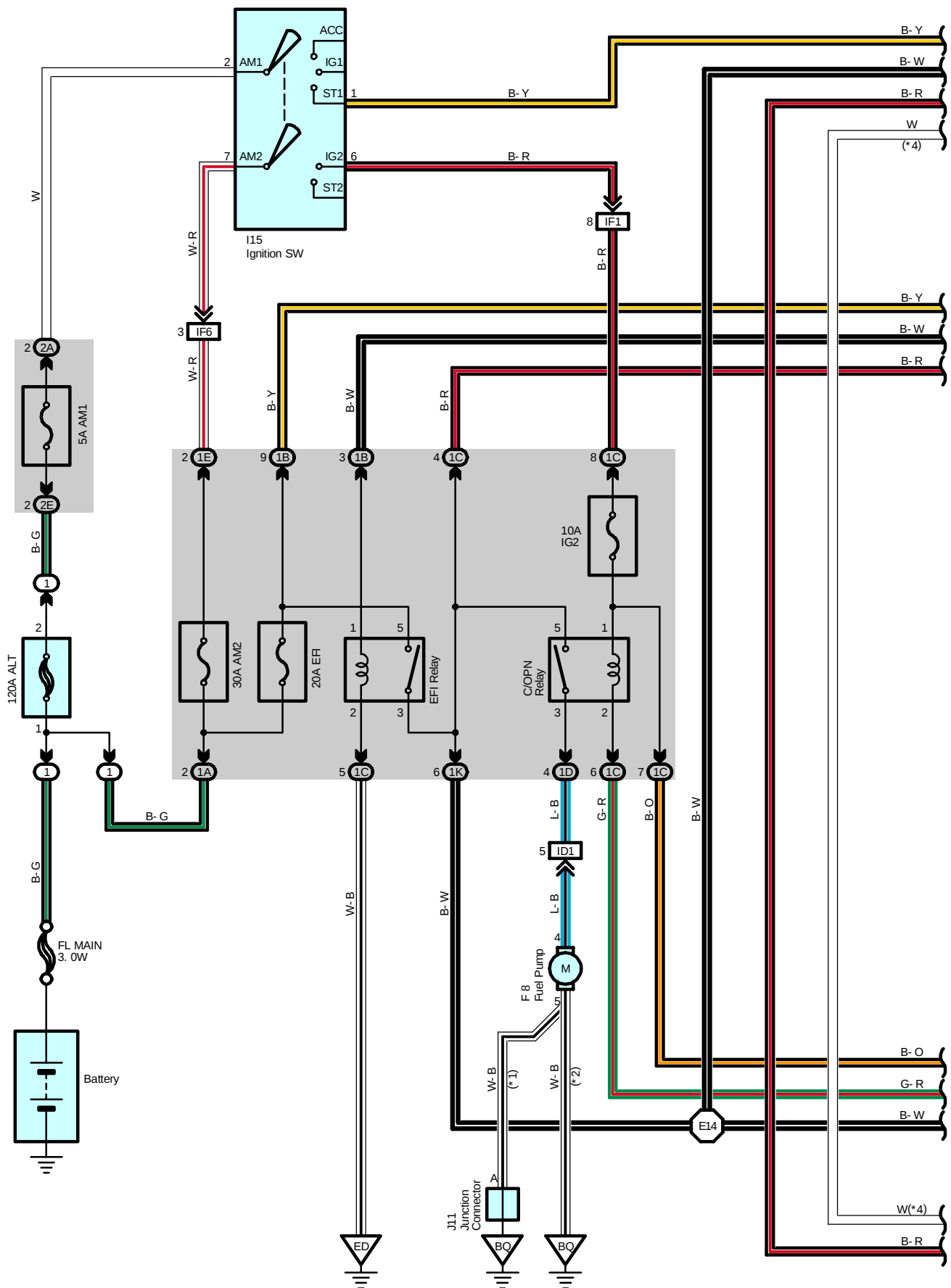
Code	See Page	Ground Points Location
EC	46 (*1)	Left Fender
ED		
EE	46 (*1)	Left Side of Cylinder Head
EF	46 (*1)	Right Side of Cylinder Head
II	50	Cowl Side Panel LH
BQ	54	Front Side of Rear Quarter Wheel House LH

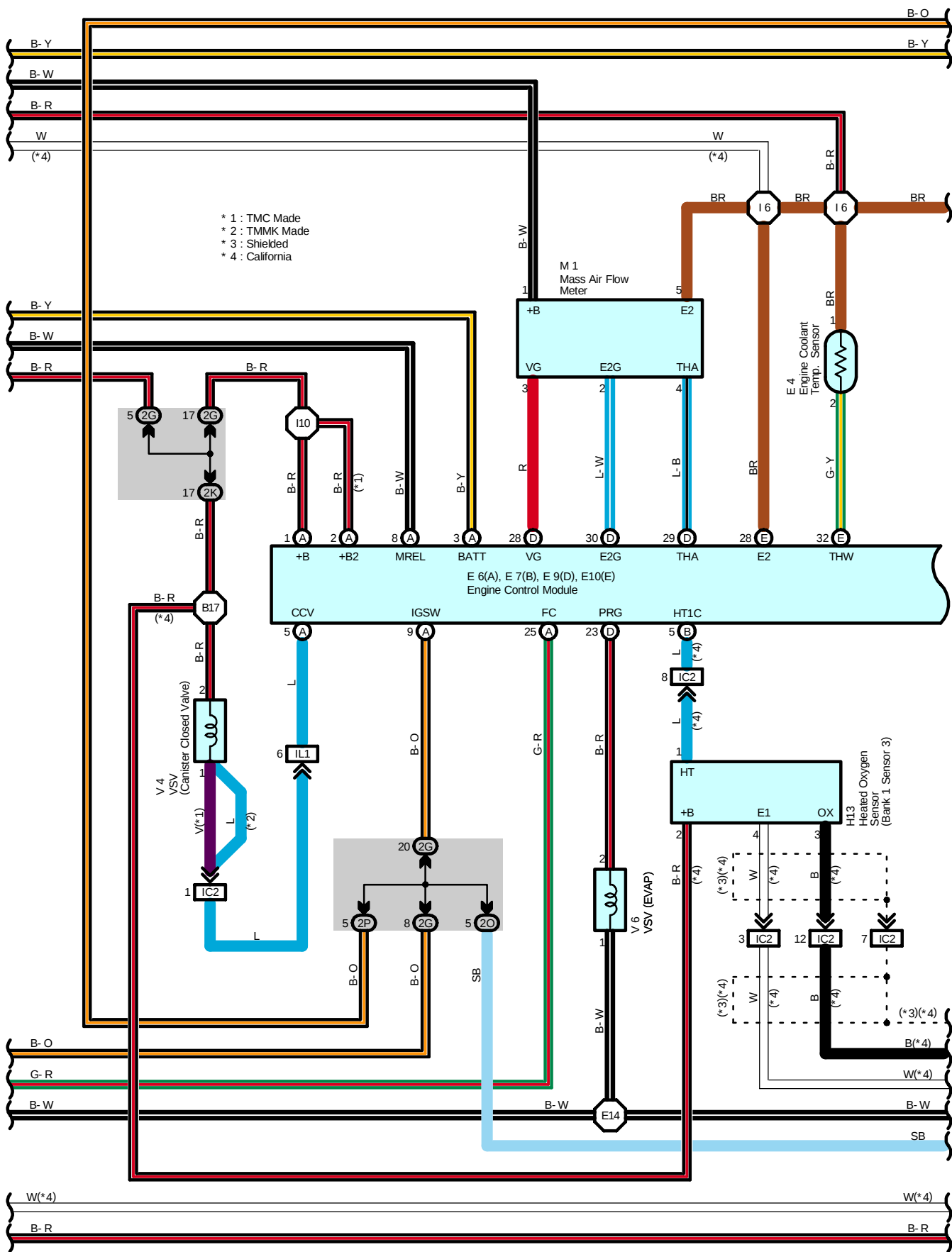
 : Splice Points

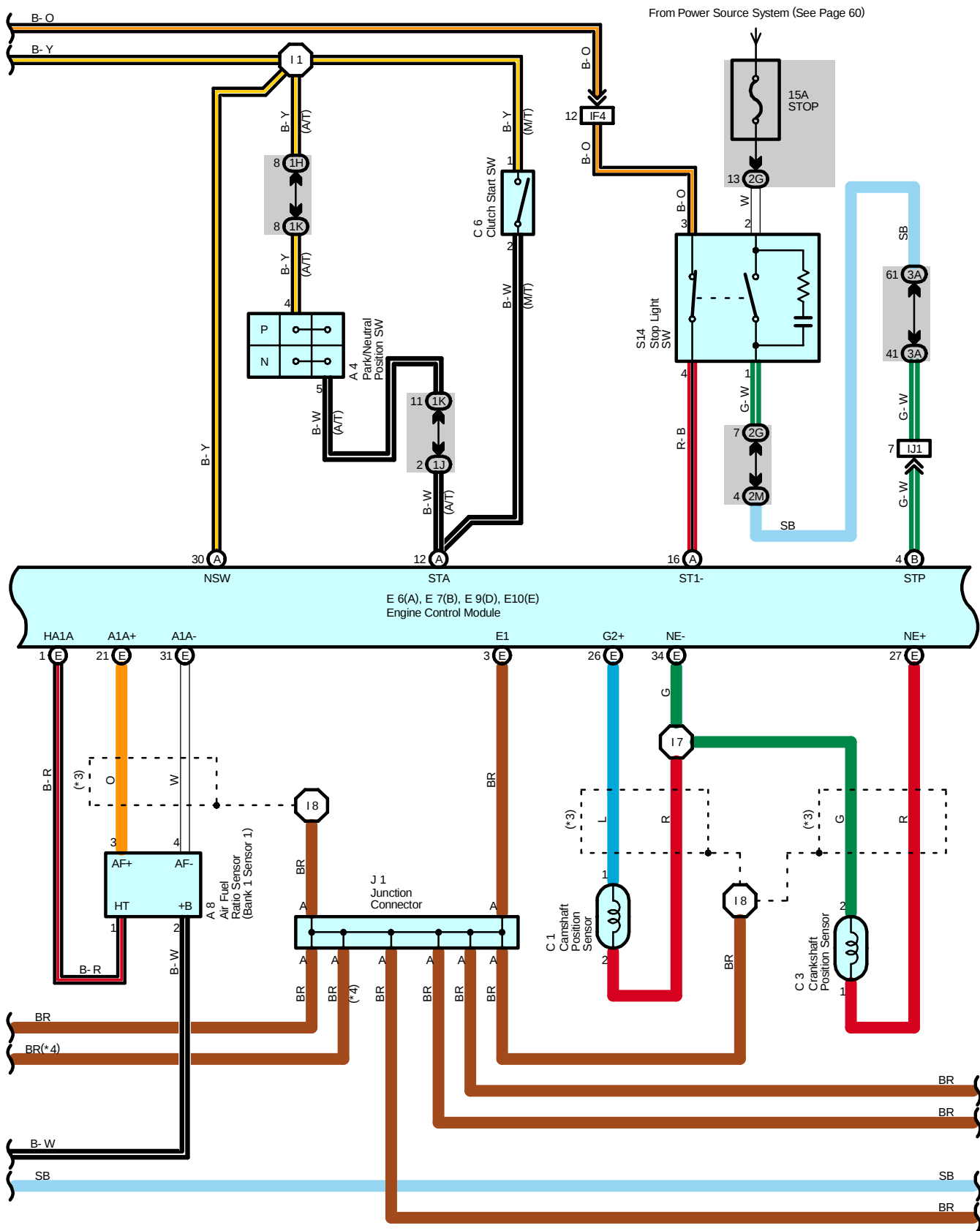
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E5	46 (*1)	Engine Wire	I6	52	Engine Wire
E8			I7		
E9			I8		
I4	52		I10	52	Engine Room Main Wire
I5					

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

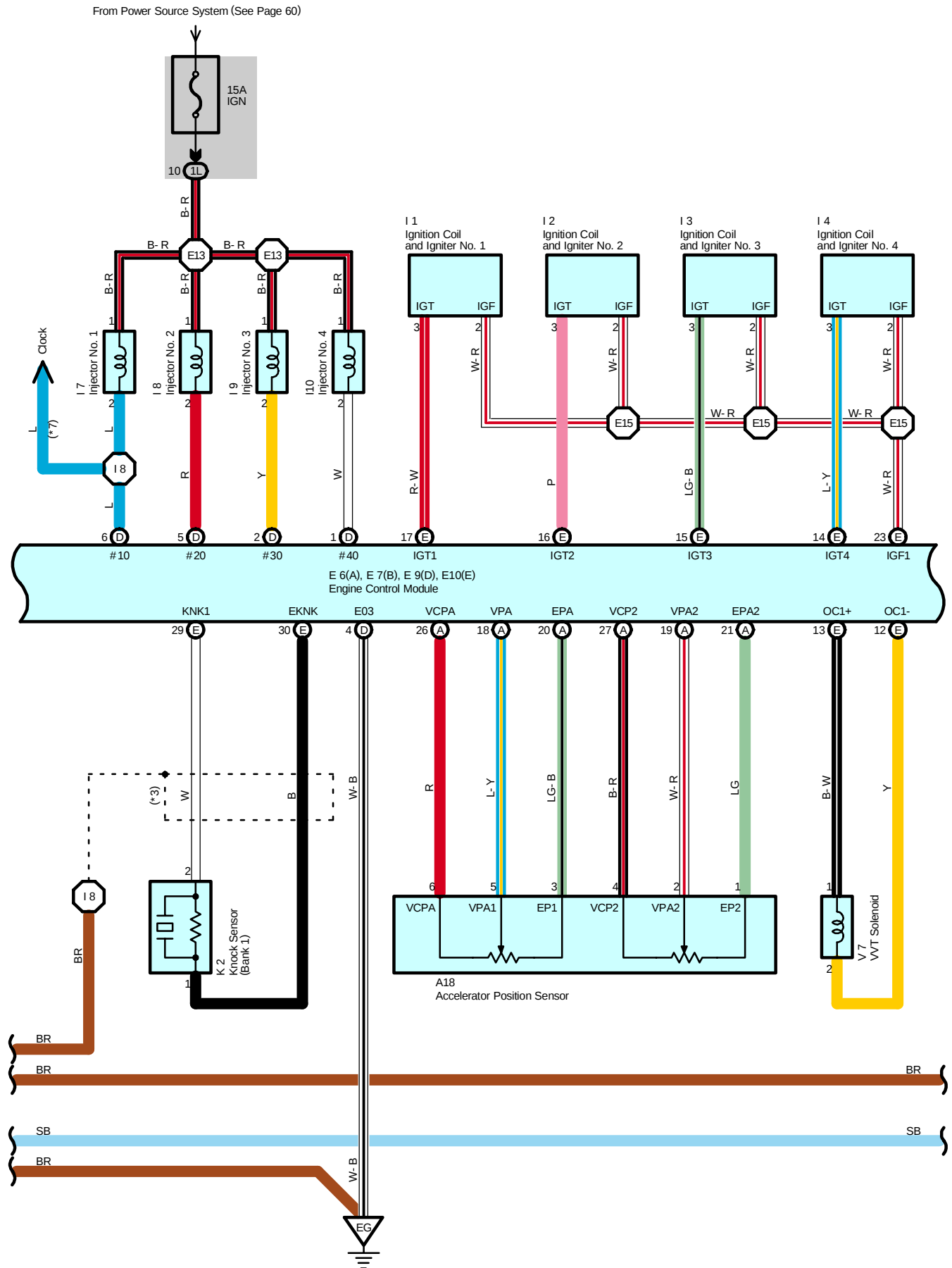
Engine Control for 2AZ-FE

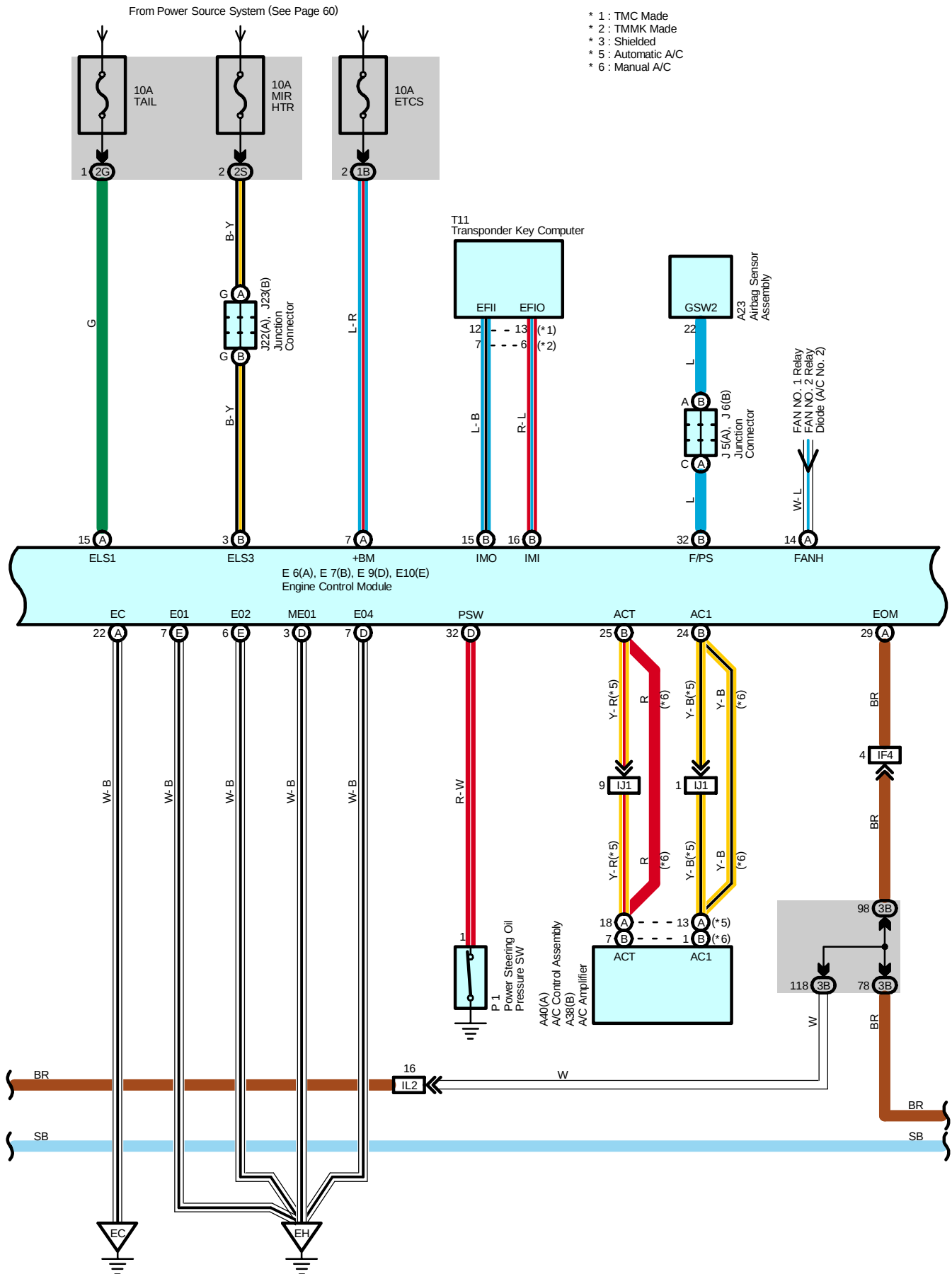




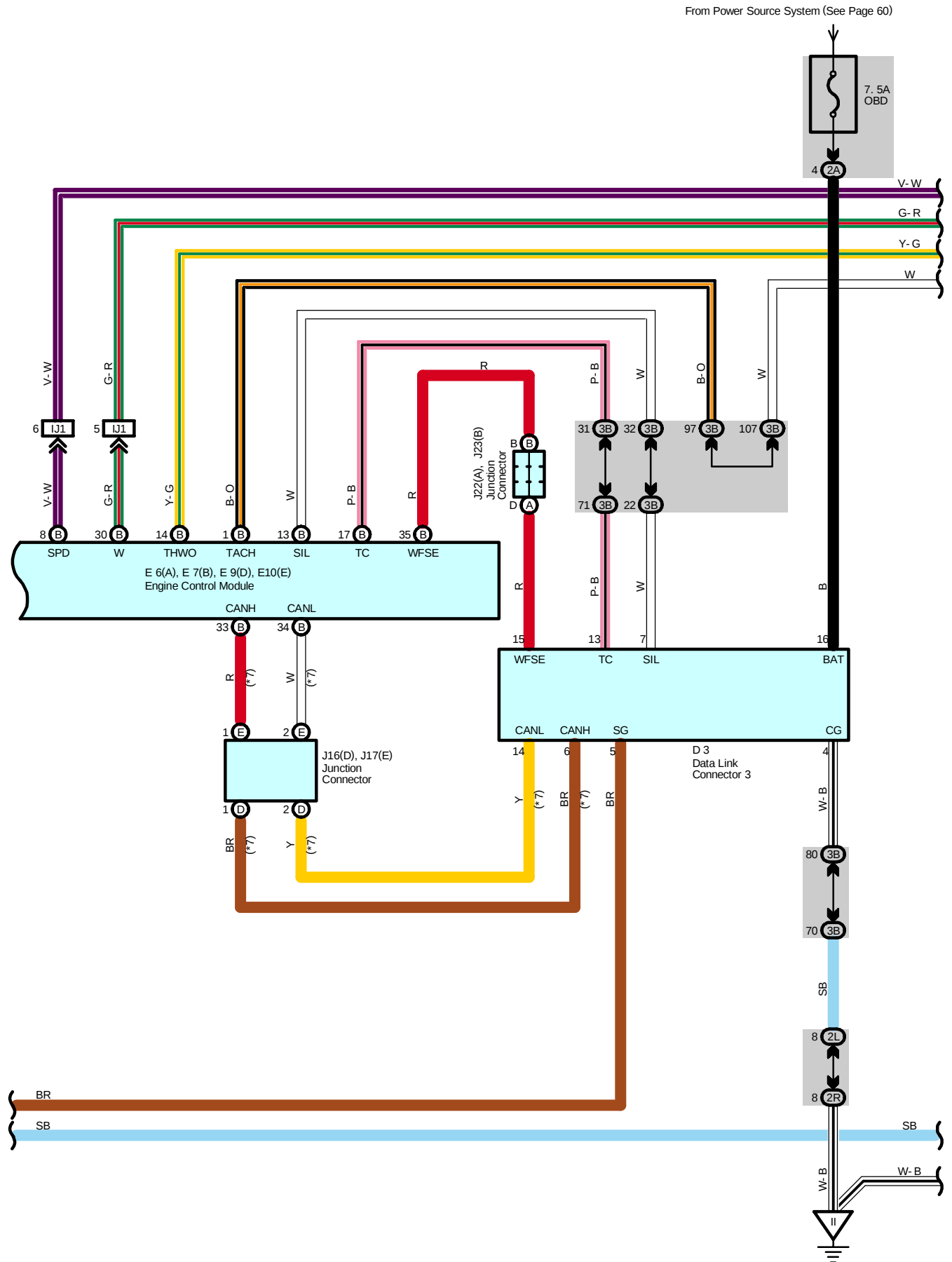


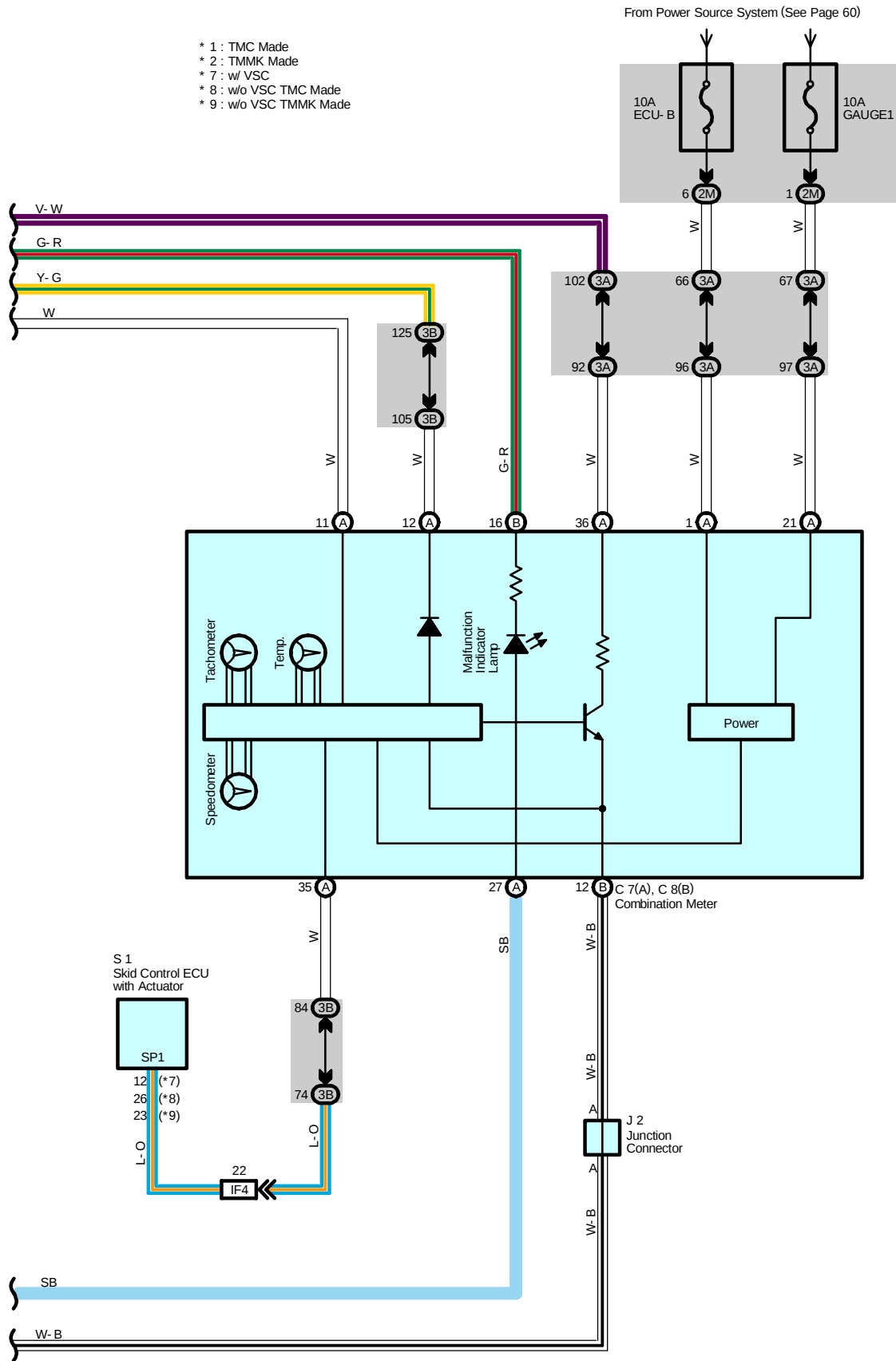
Engine Control for 2AZ-FE





Engine Control for 2AZ-FE





System Outline

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

1. Input Signals

(1) Engine coolant temp. signal circuit

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

(2) Intake air temp. signal circuit

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

(3) Oxygen density signal circuit

The oxygen density in the exhaust emission is detected by the heated oxygen sensor and input as a control signal to TERMINALS OX1B and OX1C of the engine control module (HT1B and HT1C)

(4) RPM signal circuit

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

(5) Throttle position signal circuit

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

(6) Vehicle speed circuit

The vehicle speed sensor, detects the vehicle speed and input to ABS speed sensor of the skid control ECU with actuator, from skid control ECU with actuator to TERMINAL SPD of the engine control module, Via combination meter.

(7) Battery signal circuit

Voltage is constantly applied to TERMINAL BATT of the engine control module. With the ignition SW turned on, the voltage for engine control module start-up power supply is applied to TERMINALS +B and +B2 of the engine control module via the EFI relay.

(8) A/C SW signal circuit

The A/C control assembly (Automatic A/C) or A/C amplifier (Manual A/C) inputs the A/C operations into TERMINAL AC1 of the engine control module.

(9) Stop light SW signal circuit

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

(10) Starter signal circuit

To confirm whether the engine is cranking, the voltage is 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.

(11) Engine knock signal circuit

Engine knocking is detected by knock sensor and the signal is input into TERMINAL KNK1 as a control signal.

(12) Air fuel ratio signal system

The air fuel ratio is detected and input as a control signal into TERMINAL AF1A+ of the engine control module.

2. Control System

*** SFI system**

The SFI system monitors the engine condition through the signals input from each sensor to the engine control module. And the control signal is output to TERMINALS #10, #20, #30, #40 of the engine control module to operate the injector (Inject the fuel). The SFI system controls the 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 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. 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, and outputs current to TERMINALS HT1B and HT1C (California) to control the heater.

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. The malfunctioning system can be found by reading the code displayed by the malfunction indicator lamp.

4. Fail-Safe System

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

Engine Control for 2AZ-FE

Service Hints

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

- BATT-E1 : Always 9.0-14.0 volts
- VC-E2 : 4.5-5.5 volts (Ignition SW at ON position)
- VT-A1-E2 : 0.3-1.0 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)
- 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 coolant temp. 80°C, 176°F)
- IGF1-E1 : 4.5-5.5 volts (Ignition SW at ON position)
Pulse generation (Engine idling)
- SIL-E1 : Pulse generation (During transmission)
- TACH-E1 : Pulse generation (Engine idling)
- STA-E1 : 6.0 volts or more (Engine cranking)
- FC-E01 : 9.0-14.0 volts (Ignition SW at ON position)
- SPD-E1 : Pulse generation (Ignition SW on and rotate driving wheel slowly)
- W-E01 : Below 3.0 volts (Ignition SW at ON position)
- NSW-E1 : 9.0-14.0 volts (Ignition SW on and other shift position in P or N position)
0-3.0 volts (Ignition SW on and shift position in P or N position)
- PRG-E01 : 9.0-14.0 volts (Ignition SW at ON position)
- 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)
- KNK1-E1 : Pulse generation (Engine idling)
- PSW-E1 : 9.0-14.0 volts (Ignition SW at ON position)
- HA1A-E04 : Below 3.0 volts (Engine idling)
- IGSW-E1 : 9.0-14.0 volts (Ignition SW at ON position)
- MREL-E1 : 9.0-14.0 volts (Ignition SW at ON position)
- G2+, NE+ -NE- : Pulse generation (Engine idling)
OC1+ -OC1- : Pulse generation (Ignition SW at ON position)
- HT1B-E1 : 9.0-14.0 volts (Engine idling)
Below 3.0 volts (Ignition SW at ON position)
- HT1C-E1 : 9.0-14.0 volts (Engine idling)
Below 3.0 volts (Ignition SW at ON position)
- AFA+ -E1 : 3.3 volts (Ignition SW at ON position)
- AFA- -E1 : 3.0 volts (Ignition SW at ON position)
- OX1B-E1 : Pulse generation (Maintain engine speed at 2500 rpm for 90 sec. after warming up)
- OX1C-E1 : Pulse generation (Maintain engine speed at 2500 rpm for 90 sec. after warming up)
- IGT1, IGT2, IGT3, IGT4-E1 : Pulse generation (Engine idling)
#10, #20, #30, #40-E01 : 9.0-14.0 volts (Ignition SW at ON position)
Pulse generation (Engine idling)

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (*2)	F8	42	J11	42
A8	38 (*2)	H6	38 (*2)	J16	D 41
A18	40	H13	41	J17	E 41
A23	40	I1	39 (*2)	J22	A 41
A38	B 40	I2	39 (*2)	J23	B 41
A40	A 40	I3	39 (*2)	K2	39 (*2)
C1	38 (*2)	I4	39 (*2)	M1	39 (*2)
C3	38 (*2)	I7	39 (*2)	P1	39 (*2)
C6	40	I8	39 (*2)	S1	39 (*2)
C7	A 40	I9	39 (*2)	S14	41
C8	B 40	I10	39 (*2)	T11	41
D3	40	I15	41	T12	39 (*2)
E4	38 (*2)	I18	39 (*2)	V4	43
E6	A 40	J1	41	V6	39 (*2)
E7	B 40	J2	41	V7	39 (*2)
E9	D 40	J5	A 41	V11	43
E10	E 40	J6	B 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)
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 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		
2S		
3A	34	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Engine Control for 2AZ-FE

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
ID1	50	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IF6		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: Ground Points

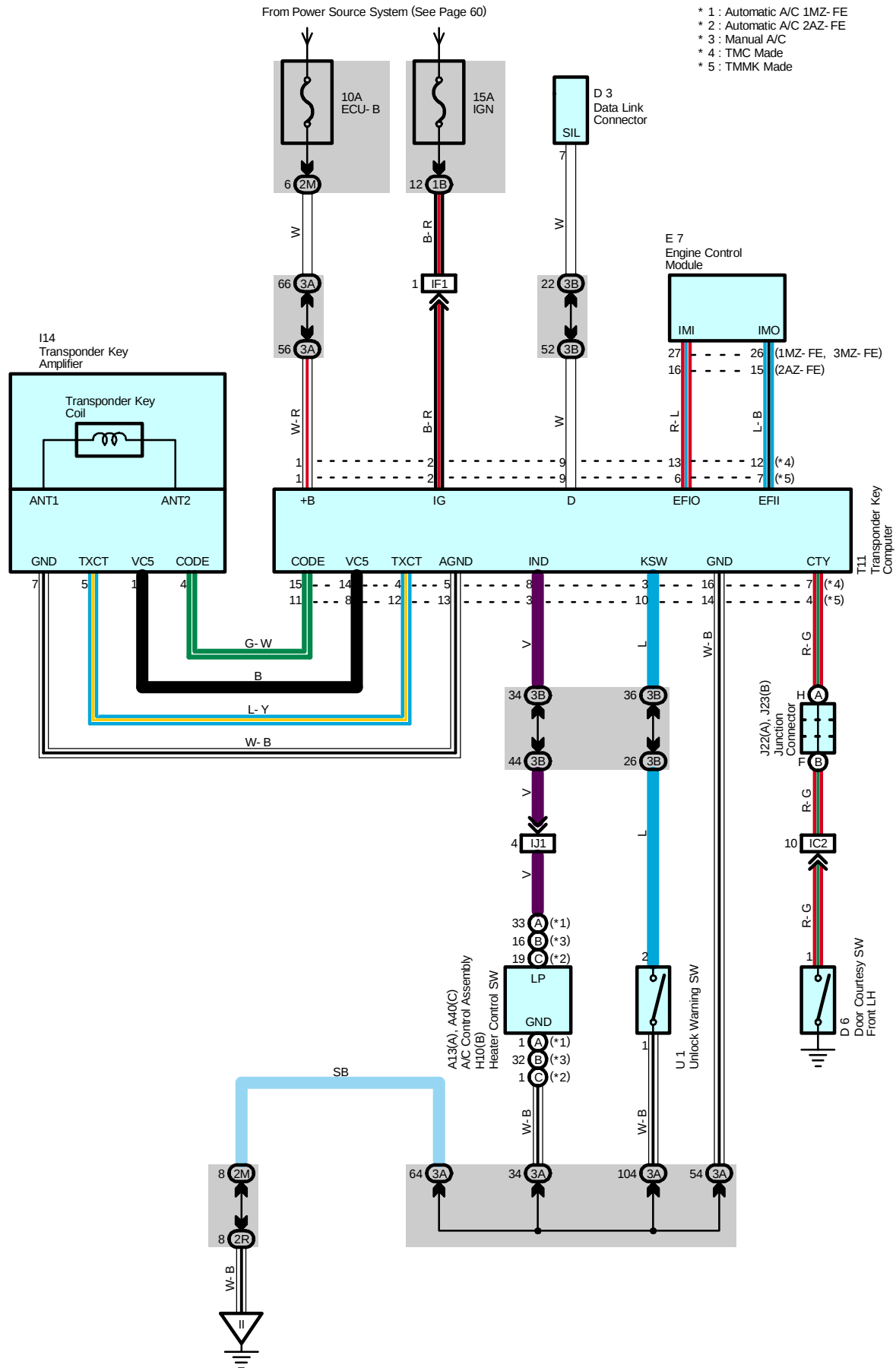
Code	See Page	Ground Points Location
EC	48 (*2)	Left Fender
ED		
EG	48 (*2)	Left Side of Cylinder Head
EH	48 (*2)	Intake Side of Cylinder Block
II	50	Cowl Side Panel LH
BQ	54	Front Side of Rear Quarter Wheel House LH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E12	48 (*2)	Engine Wire	I6	52	Engine Wire
E13			I7		
E14			I8		
E15			I10	52	Engine Room Main Wire
I1	52	Engine Room Main Wire	B17	54	Floor Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Engine Immobilizer System



Service Hints

T11 Transponder Key Computer

- 1-Ground : Always approx. 12 volts
- 2-Ground : Approx. 12 volts with ignition SW at ON or ST position
- 14 (TMMK Made), 16 (TMC Made)-Ground : Always continuity
- 10 (TMMK Made), 3 (TMC Made)-Ground : Continuity with the key in cylinder

○ : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A13	A	40		E7		40		J23	B	41	
A40	C	40		H10	B	41		T11		41	
D3		40		I14		41		U1		41	
D6		42		J22	A	41					

○ : 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)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
3A	34	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

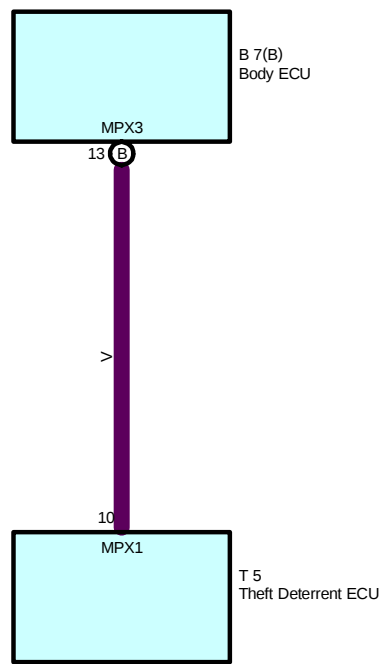
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)

▽ : Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



System Outline

The multiplex communication system communicates among the body ECU, theft deterrent ECU and controls the following systems according to the signals from respective sensors or switches.

Multiplex Communication System Includes Following Systems

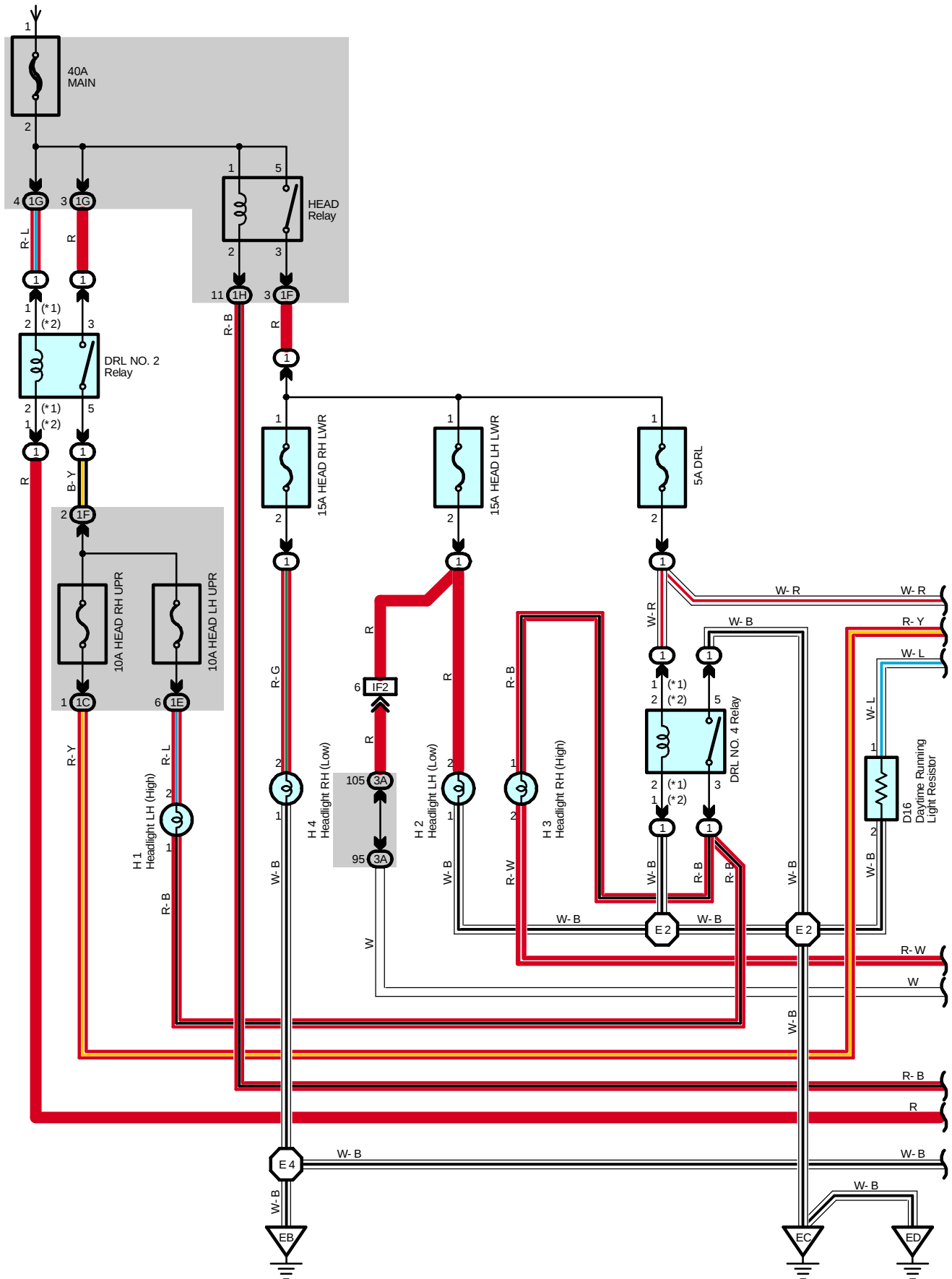
- * Automatic Light Control
- * Door Lock Control
- * Headlight
- * Interior Light
- * Key Reminder
- * Light Auto Turn Off System
- * Theft Deterrent
- * Wireless Door Lock Control

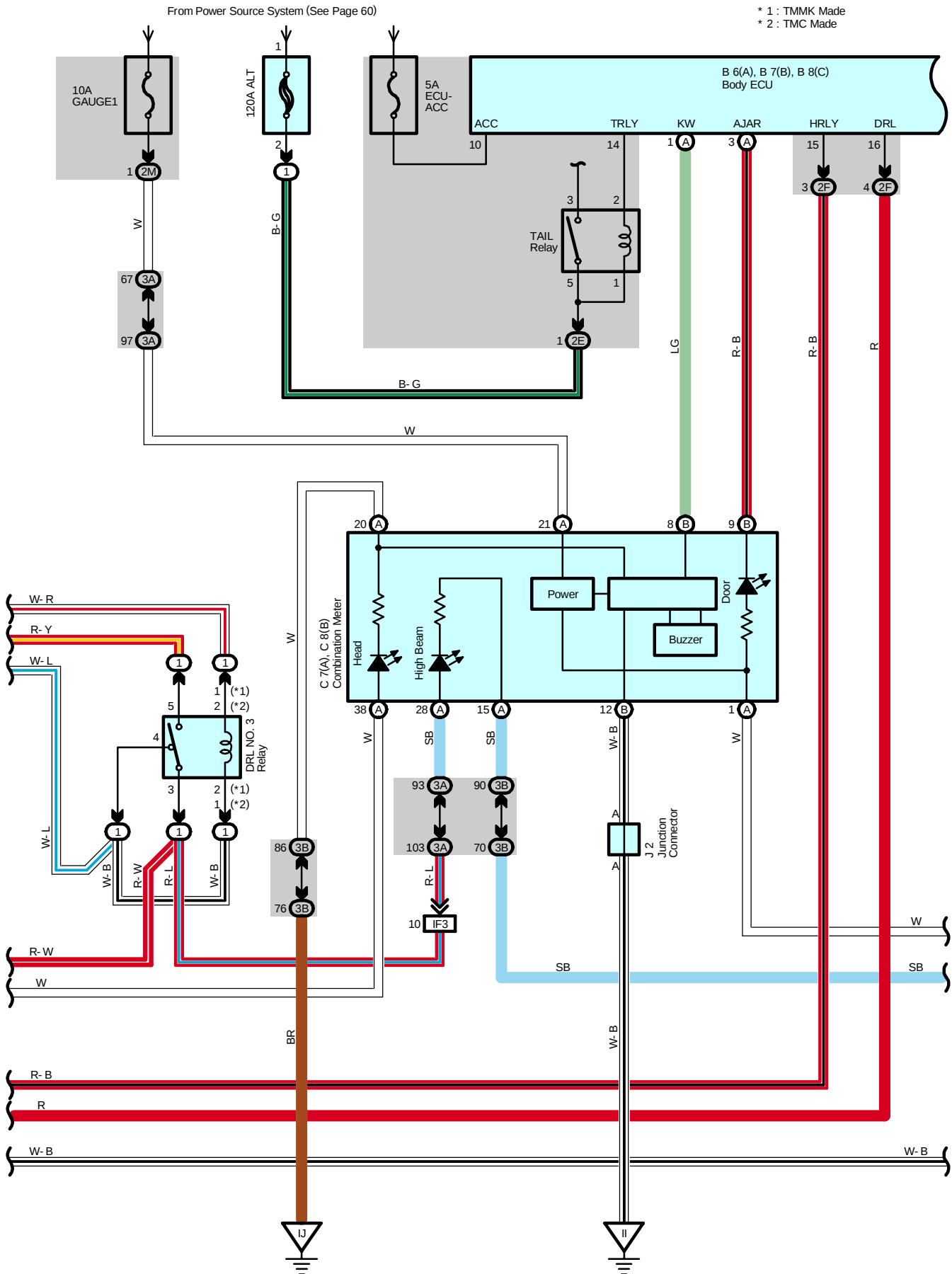
○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B7	B	40	T5	41				

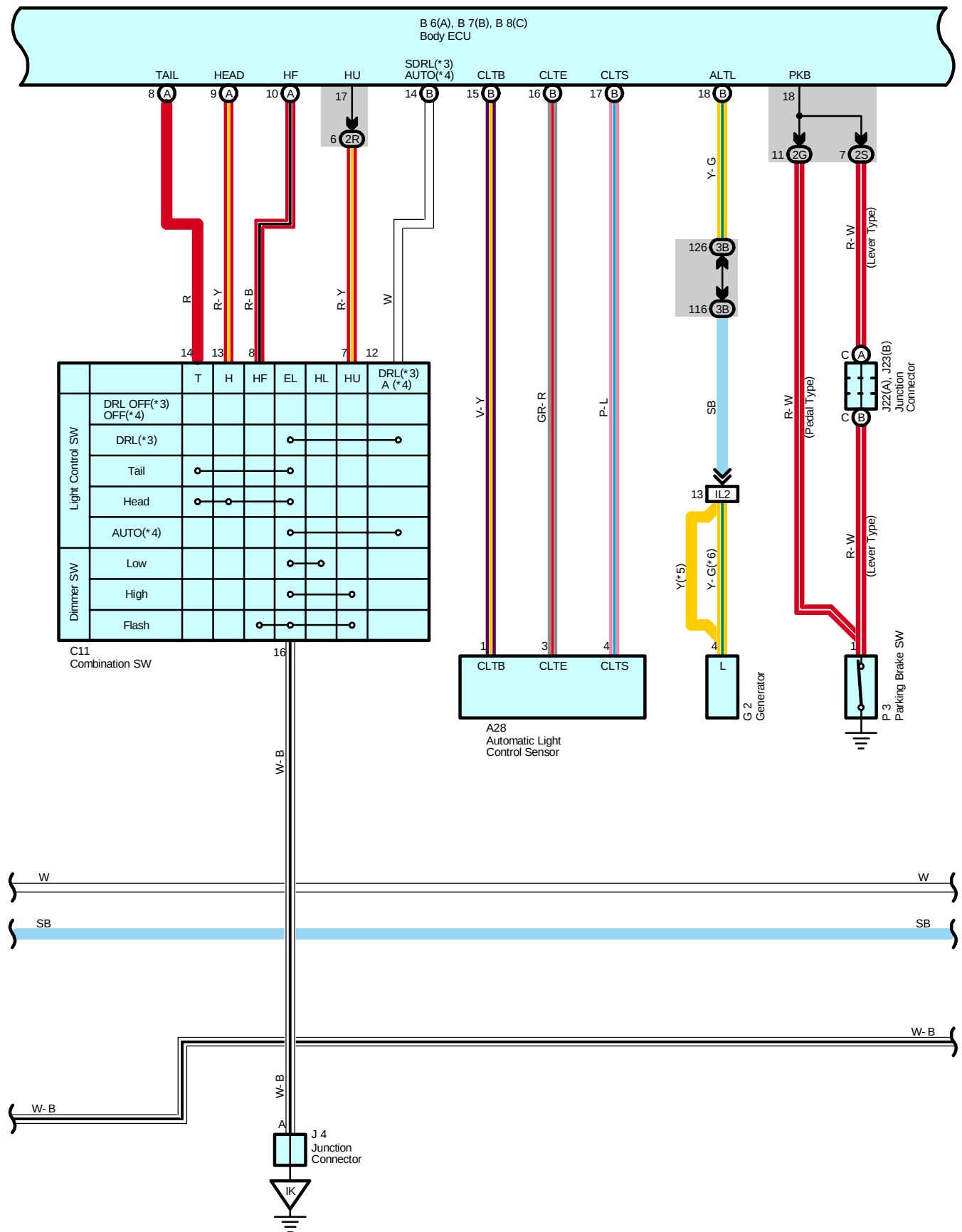
Multiplex Communication System - BEAN

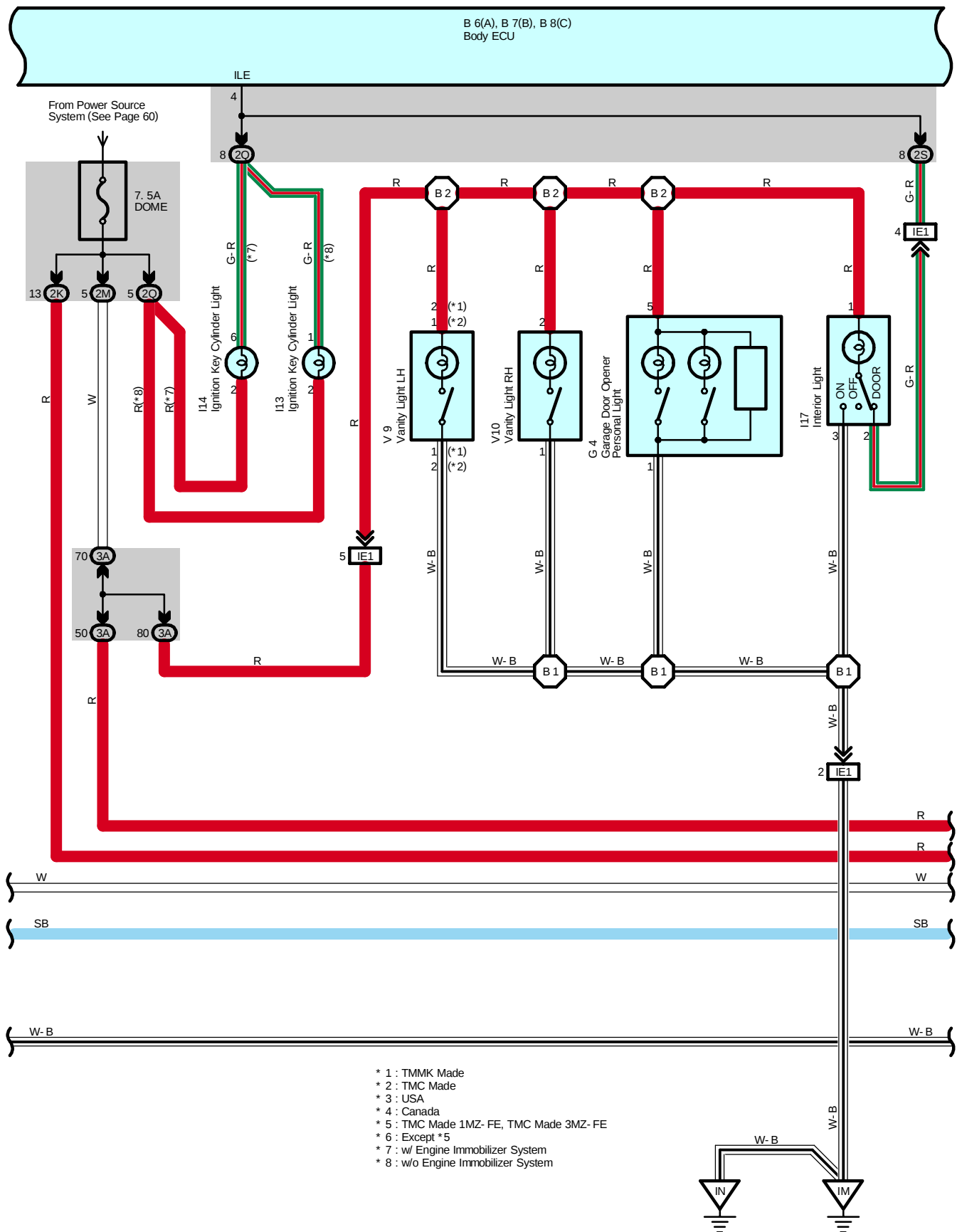
From Power Source System (See Page 60)



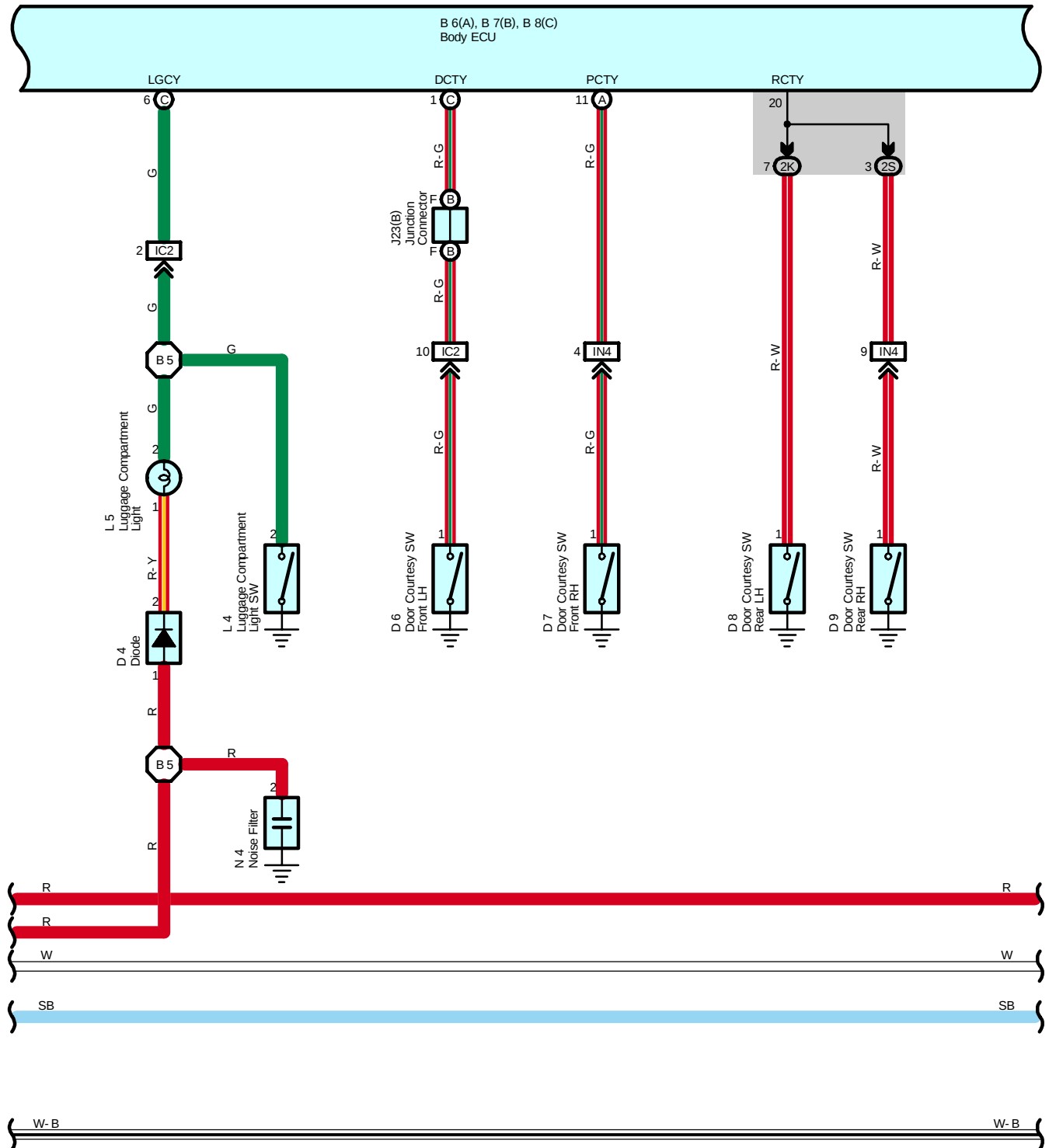


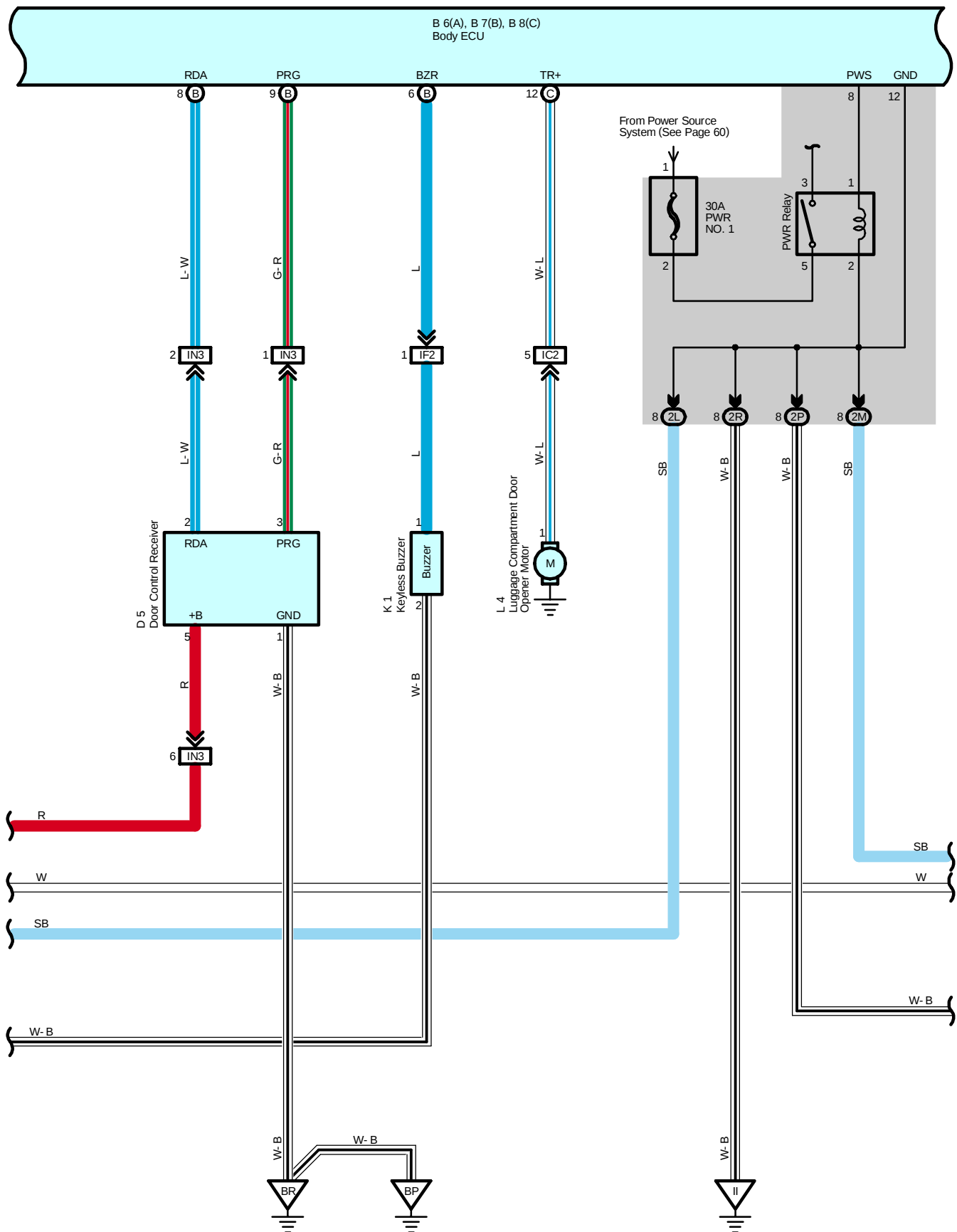
Multiplex Communication System - BEAN



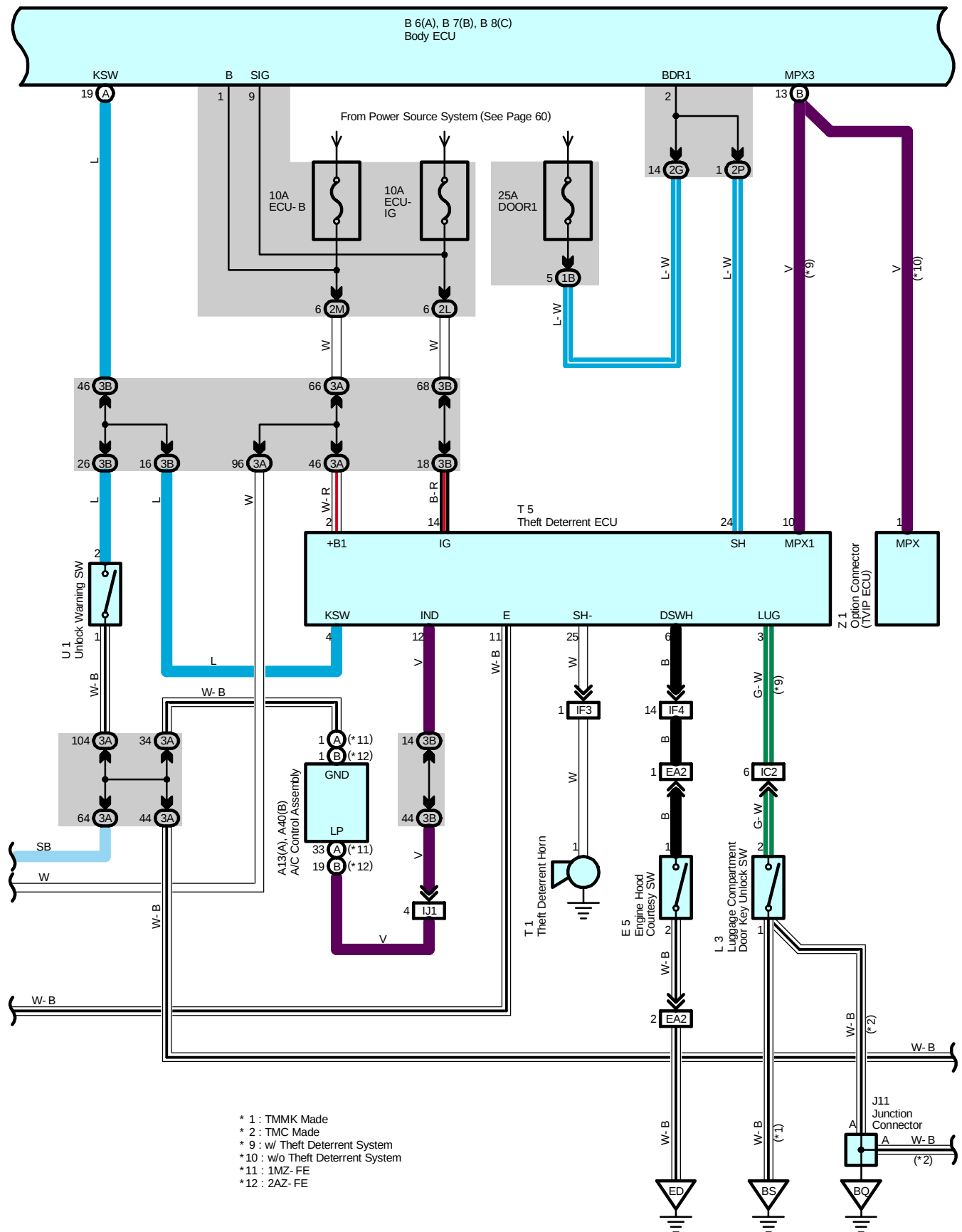


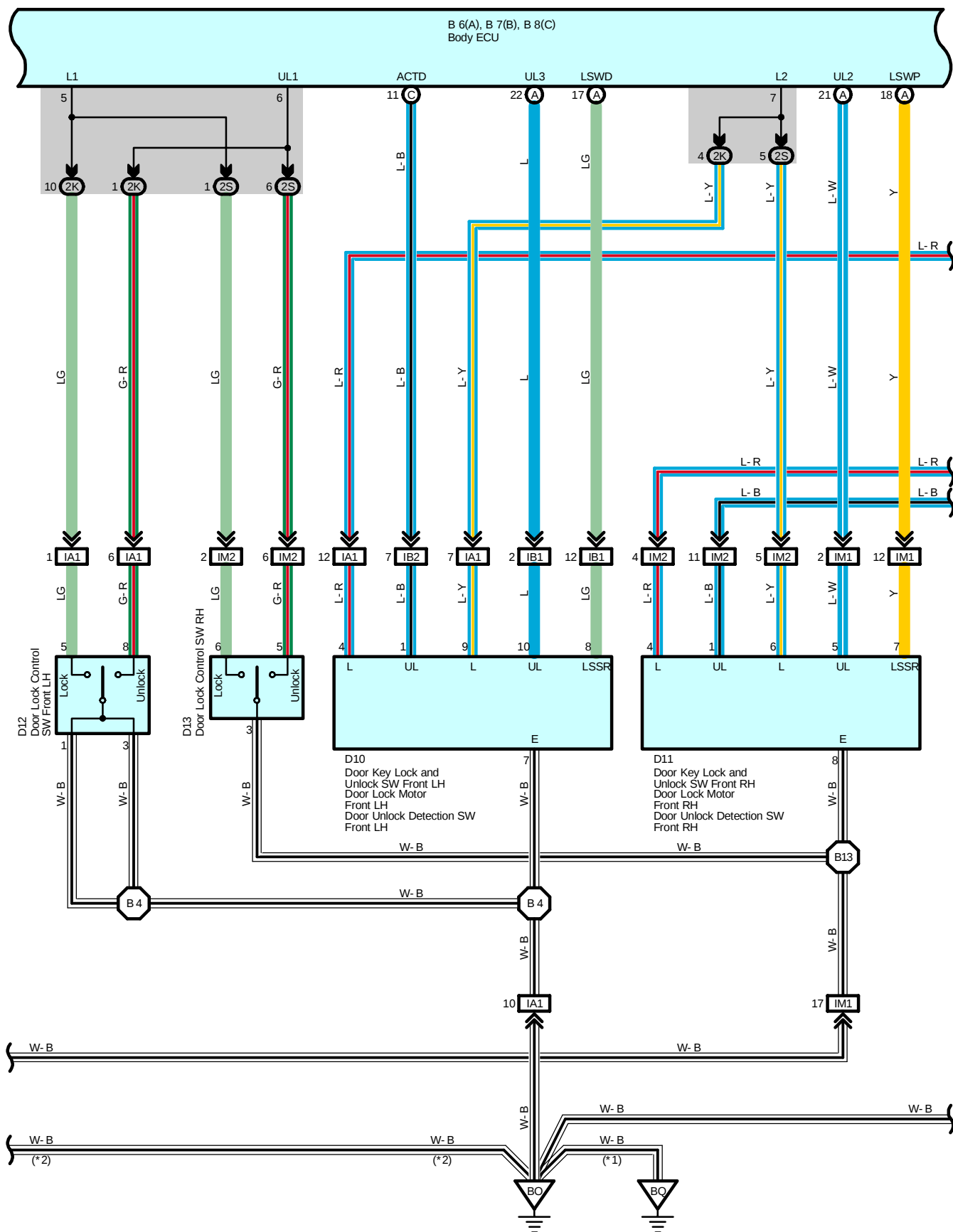
Multiplex Communication System - BEAN





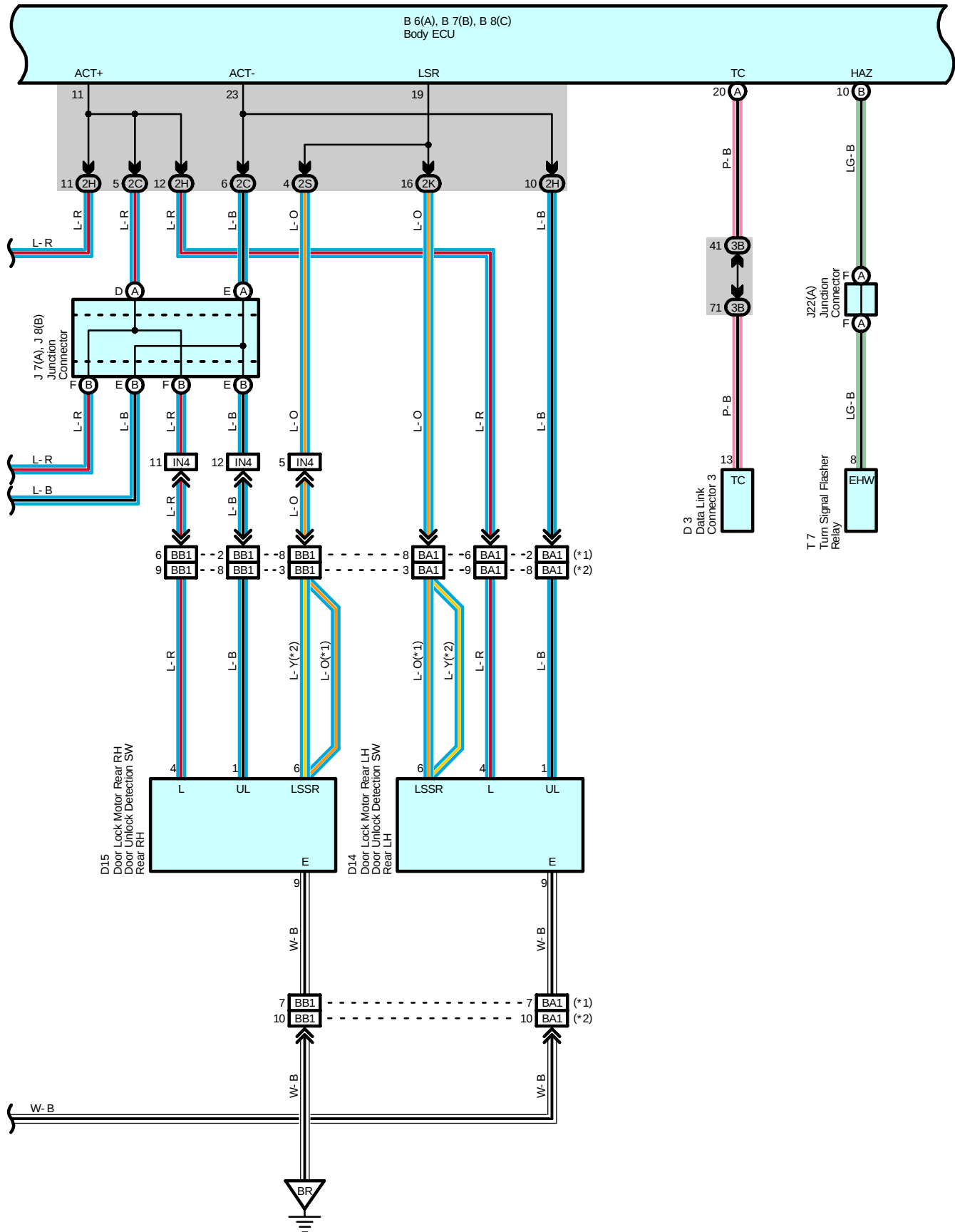
Multiplex Communication System - BEAN

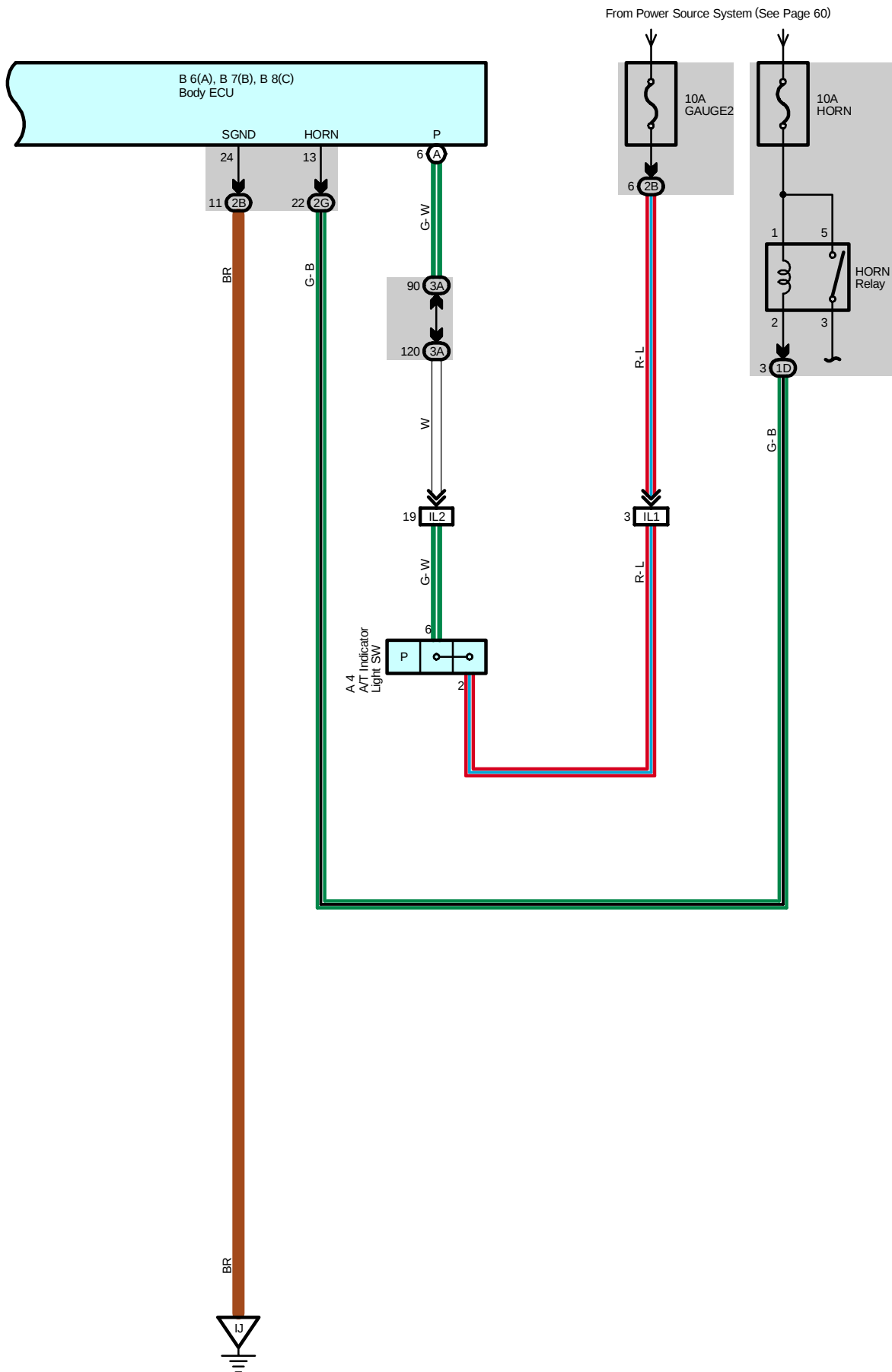




Multiplex Communication System - BEAN

* 1 : TMMK Made
* 2 : TMC Made





Multiplex Communication System - BEAN

Service Hints

Body ECU

- 10-Ground : Approx. 12 volts with the ignition SW at ACC or ON position
- 9-Ground : Approx. 12 volts with the 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
A4	36 (*1) 38 (*2)	D14	42	J7	A 41
		D15	42	J8	B 41
A13	A 40			J11	42
A28	40	D16	36 (*1) 38 (*2)	J22	A 41
A40	B 40			J23	B 41
B6	A 40	E5	36 (*1) 38 (*2)		
B7	B 40			K1	37 (*1) 39 (*2)
B8	C 40	G2	36 (*1) 38 (*2)	L3	43
C7	A 40	G4	42	L4	43
C8	B 40			L5	43
C11	40	H1	36 (*1) 38 (*2)	N4	43
D3	40			P3	41
D4	42	H2	36 (*1) 38 (*2)		
D5	42			T1	37 (*1) 39 (*2)
D6	42	H3	36 (*1) 38 (*2)	T5	41
D7	42			T7	41
D8	42	H4	36 (*1) 38 (*2)	U1	41
D9	42	I13	41	V9	43
D10	42	I14	41	V10	43
D11	42	I17	42	Z1	41
D12	42	J2	41		
D13	42	J4	41		

○ : Relay Blocks

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

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



: 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		
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 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	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)
EA2	46 (*1)	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
	48 (*2)	
IA1	50	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	50	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2		
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF4		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IM1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2		
IN3	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN4		
BA1	54	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	54	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Multiplex Communication System - BEAN



: Ground Points

Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
	48 (*2)	
EC	46 (*1)	Left Fender
	48 (*2)	
ED	46 (*1)	
	48 (*2)	
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IK		
IM	50	Instrument Panel Reinforcement RH
IN		
BO	54	Under the Driver's Seat
BP	54	Under the Front Passenger's Seat
BQ	54	Front Side of Rear Quarter Wheel House LH
BR	54	Front Side of Rear Quarter Wheel House RH
BS	54	Lower Back Panel Center

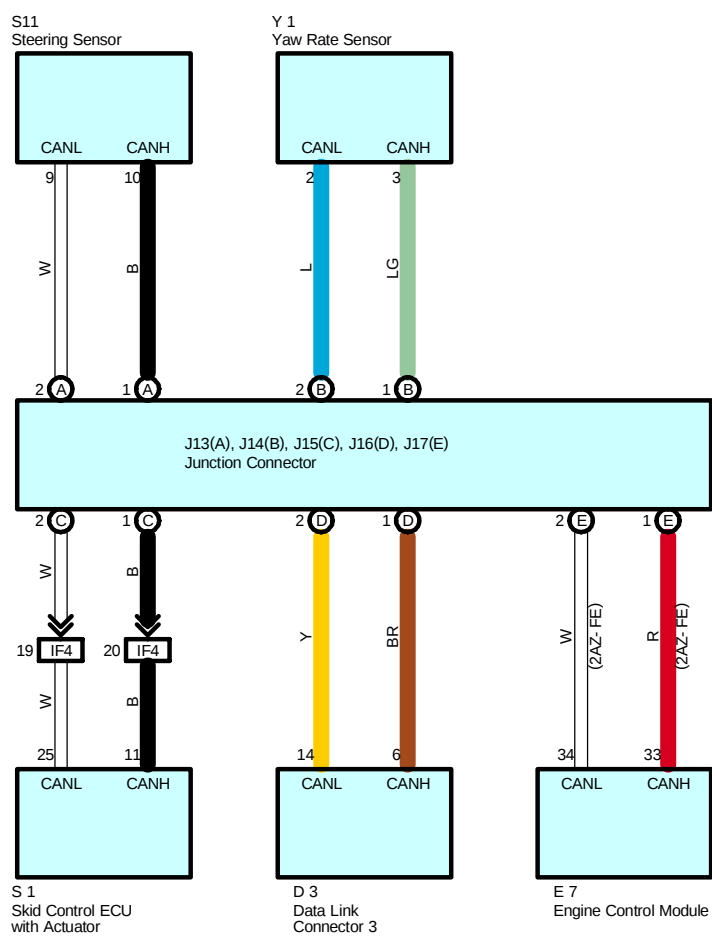


: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	46 (*1)	Engine Room Main Wire	B2	54	Roof Wire
	48 (*2)		B4	54	Front Door LH Wire
E4	46 (*1)		B5	54	Floor Wire
	48 (*2)		B13	54	Front Door RH Wire
B1	54	Roof Wire			

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Multiplex Communication System - CAN Bus



System Outline

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

* VSC

○ : Parts Location

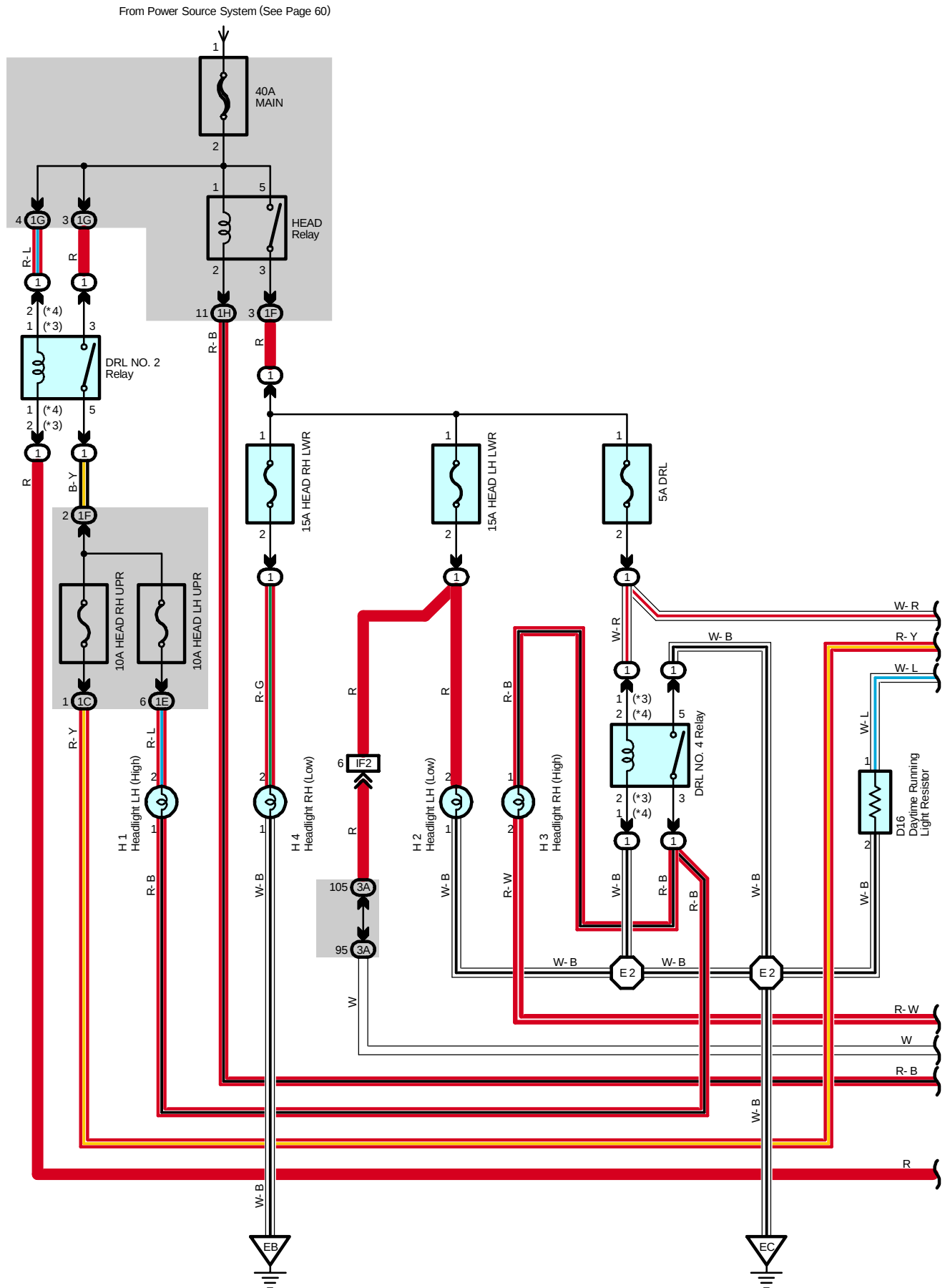
Code		See Page	Code		See Page	Code	See Page
D3		40	J15	C	41	S1	39 (*2)
E7		40	J16	D	41	S11	41
J13	A	41	J17	E	41	Y1	41
J14	B	41	S1		37 (*1)		

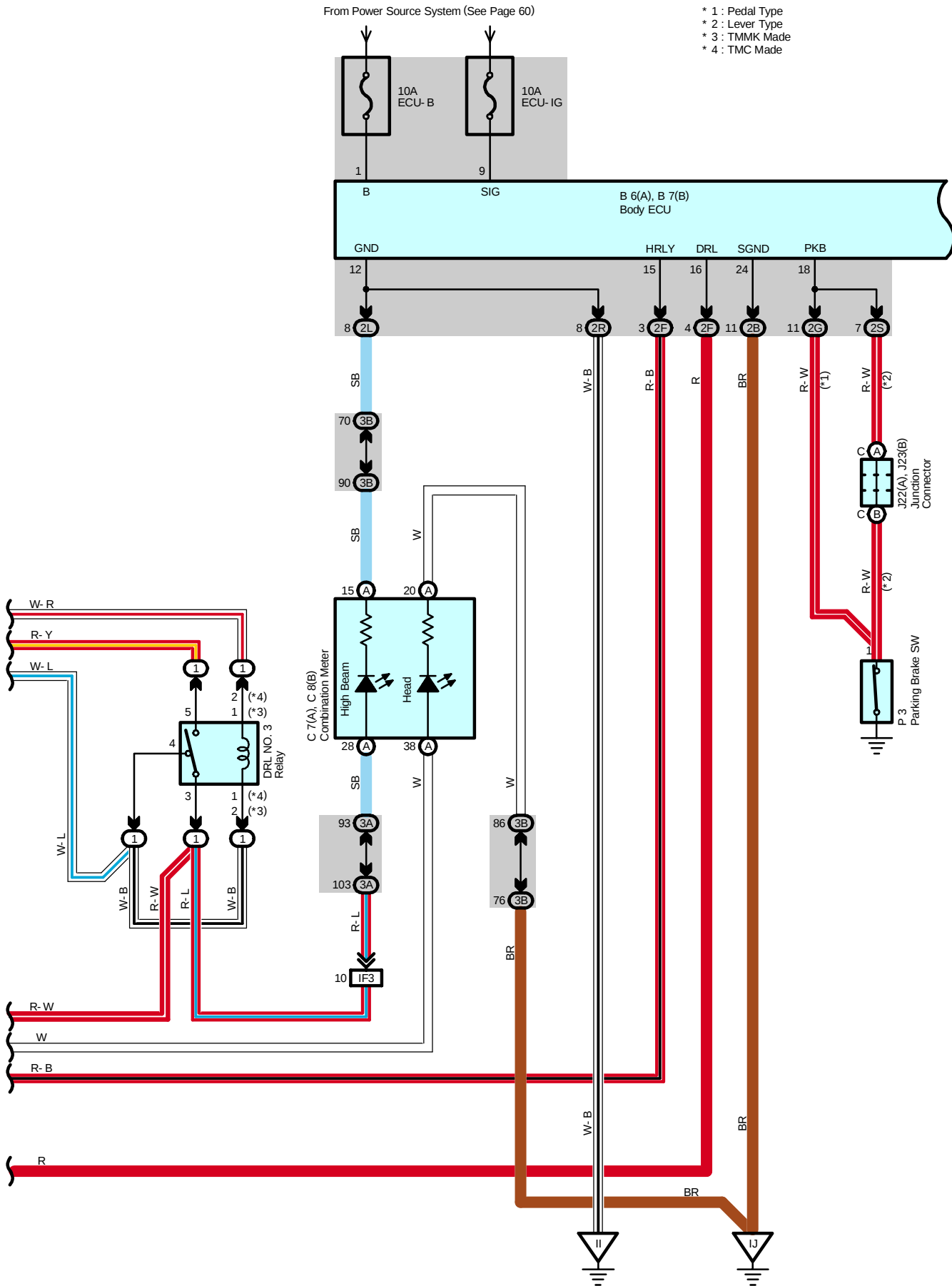
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF4	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

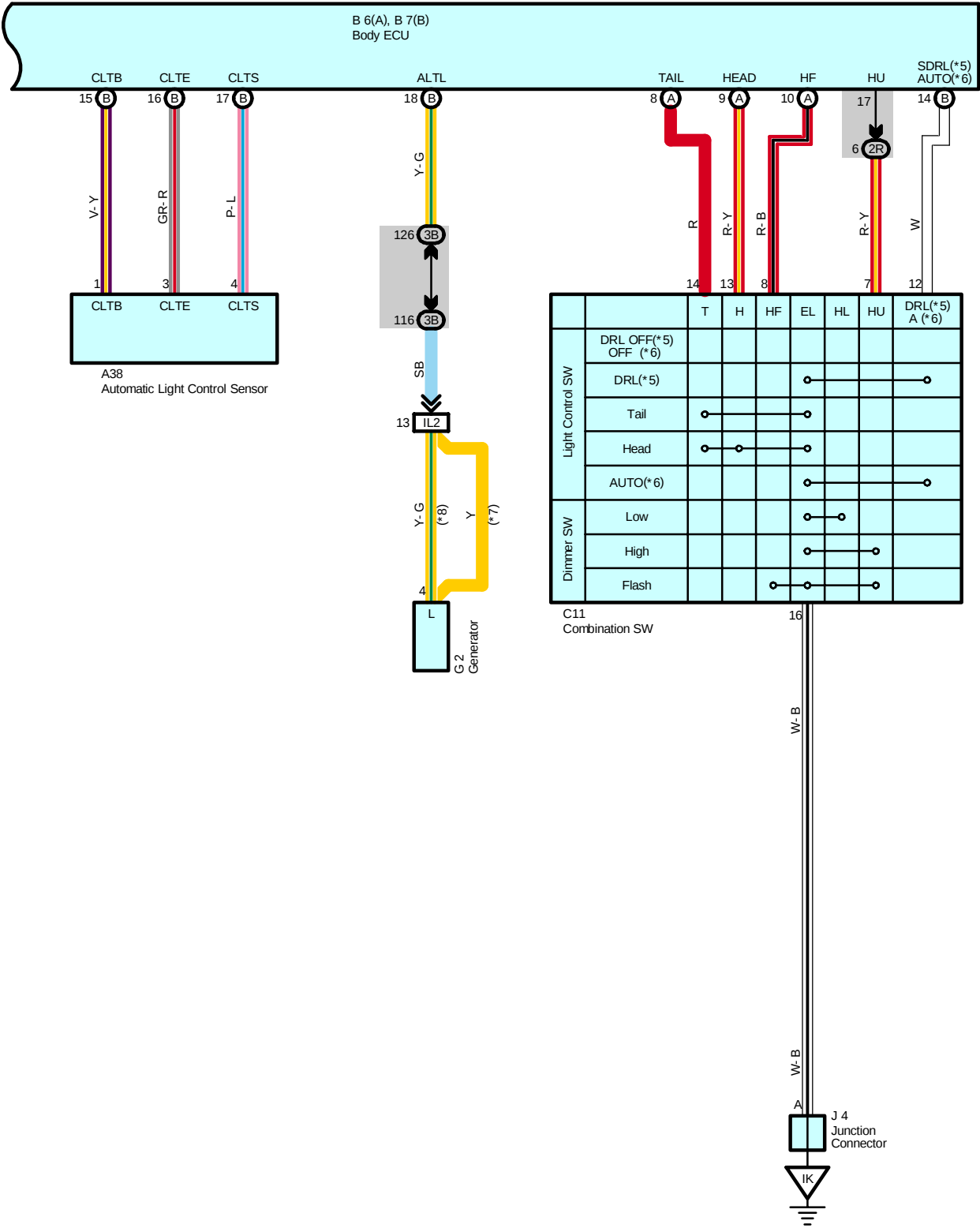
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Headlight





- * 5 : USA
- * 6 : Canada
- * 7 : TMC Made 1MZ- FE, TMC Made 3MZ- FE
- * 8 : Except *7



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 or parking brake lever is pulled (Parking brake SW ON), the body ECU is not activated, and the daytime running light system does not operate.

When the parking brake pedal or parking lever 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

Body ECU

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

12, 24-Ground : Always continuity

1-Ground : Always approx. 12 volts

P3 Parking Brake SW

1-Ground : Continuity with the parking brake pedal depressed (Pedal type)

Continuity with the parking brake lever pulled up (Lever type)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A38	40	G2	36 (*1)	H4	36 (*1)
B6 A	40		38 (*2)		38 (*2)
B7 B	40	H1	36 (*1)	J4	41
C7 A	40		38 (*2)	J22 A	41
C8 B	40	H2	36 (*1)	J23 B	41
C11	40		38 (*2)	P3	41
D16	36 (*1)	H3	36 (*1)		
	38 (*2)		38 (*2)		

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
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		
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2R		
2S		
3A	34	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)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IL2	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Headlight



: Ground Points

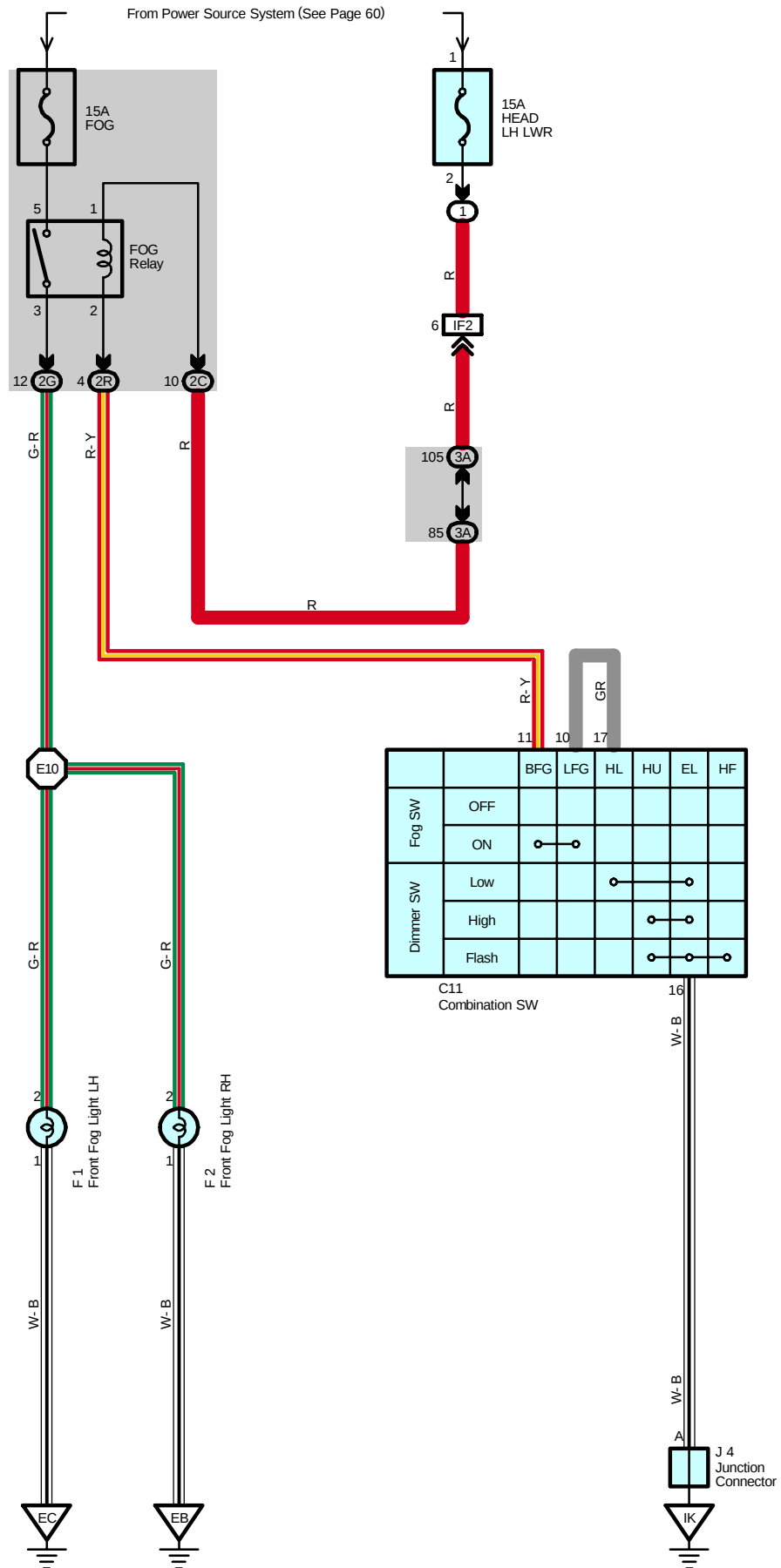
Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
	48 (*2)	
EC	46 (*1)	Left Fender
	48 (*2)	
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IK		



: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	46 (*1)	Engine Room Main Wire	E2	48 (*2)	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



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
C11	40	F1	38 (*2)	F2	38 (*2)
F1	36 (*1)	F2	36 (*1)	J4	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)
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)
2R	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3A	34	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)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

: Ground Points

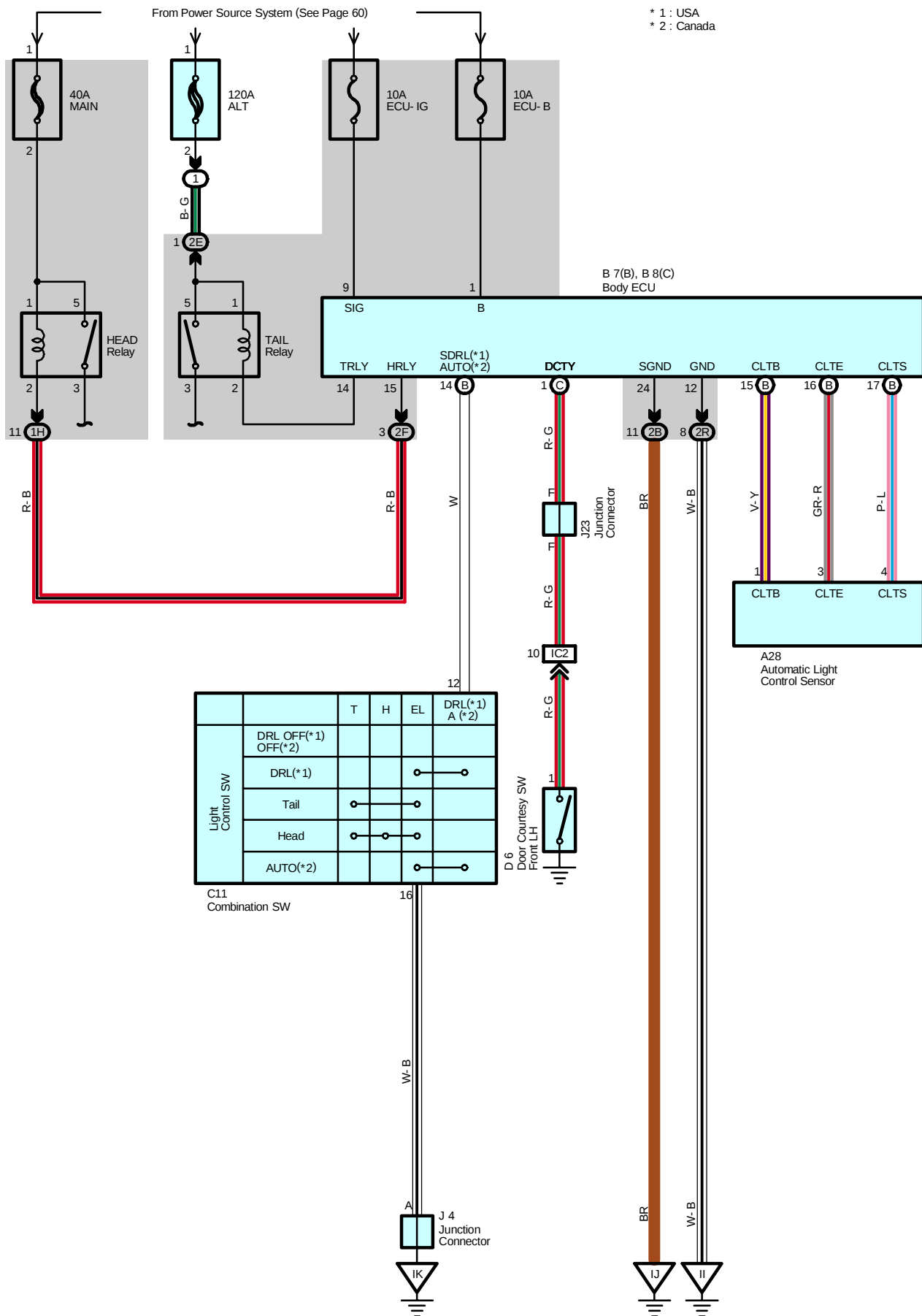
Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
	48 (*2)	
EC	46 (*1)	Left Fender
	48 (*2)	
IK	50	Instrument Panel Brace LH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E10	46 (*1)	Engine Room Main Wire	E10	48 (*2)	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

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

D6 Door Courtesy SW Front LH

- 1-Ground : Continuity with the driver's door open

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A28	40	C11	40	J23	41
B7	B	D6	42		
B8	C	J4	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)
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)

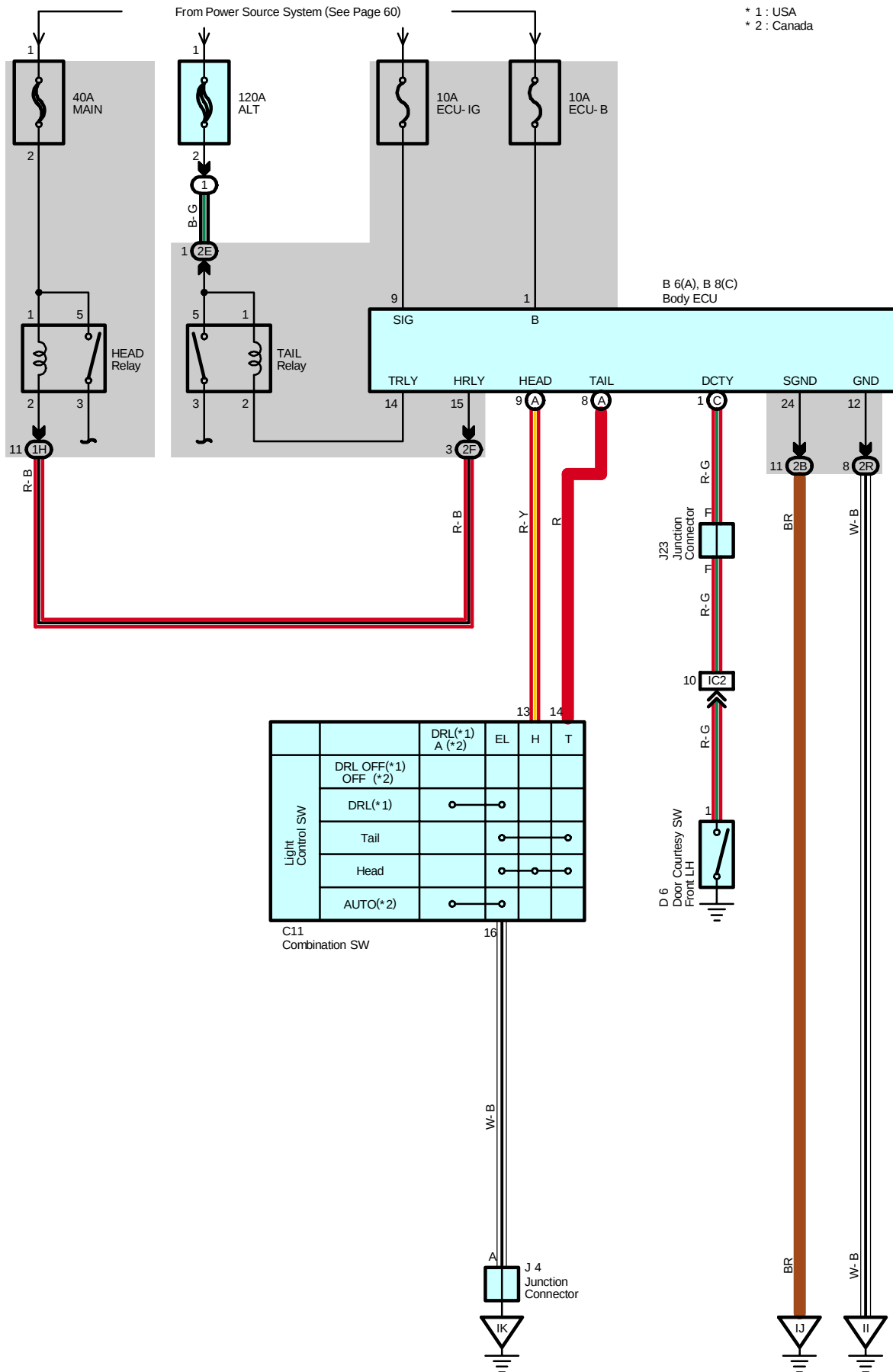
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IK		

Light Auto Turn Off System



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

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)

Body ECU

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

12, 24-Ground : Always continuity

1-Ground : Always approx. 12 volts

D6 Door Courtesy SW Front LH

1-Ground : Closed with the driver door open

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
B6	A	40	C11	40	J4	41
B8	C	40	D6	42	J23	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)
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

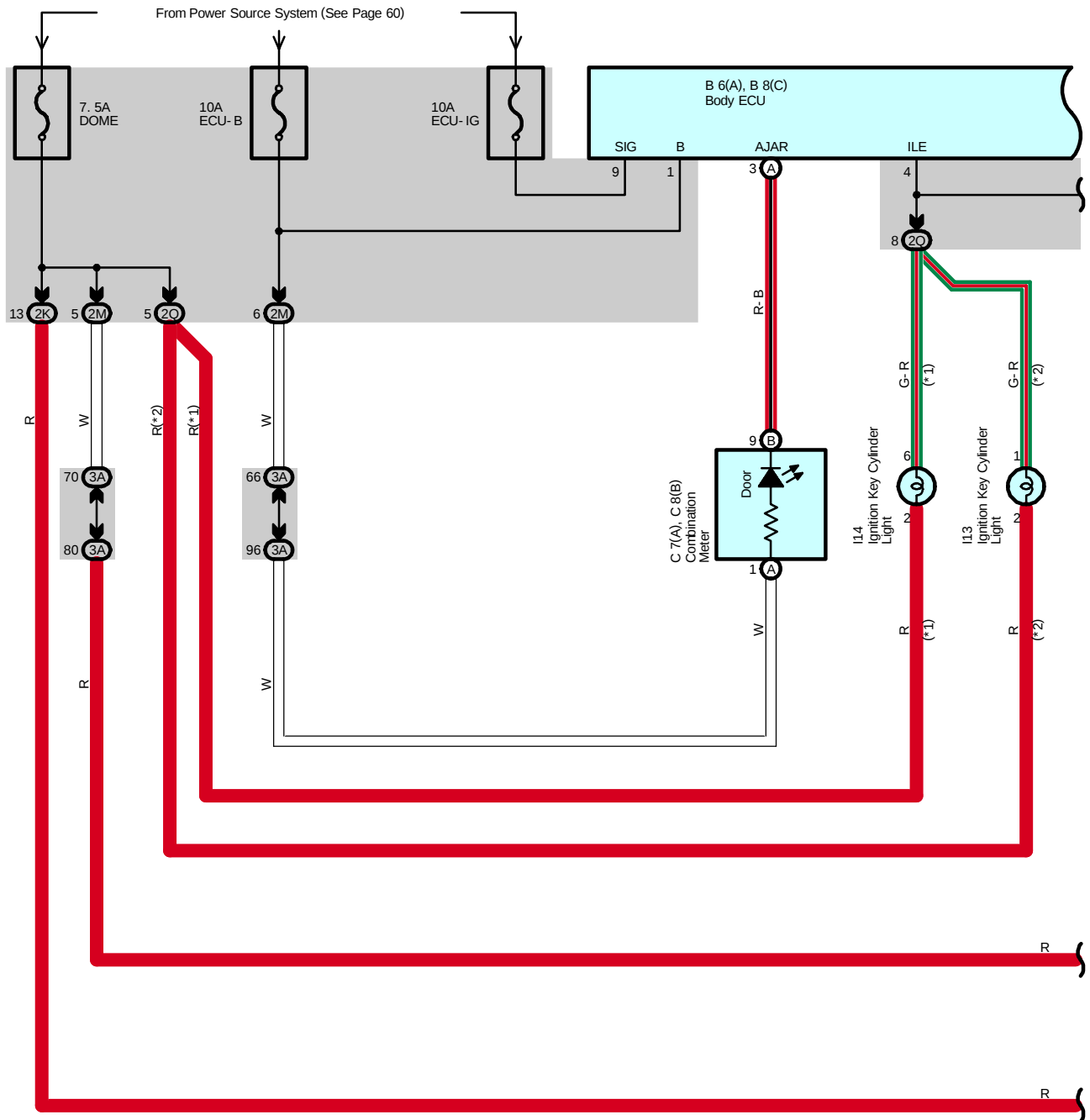
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)

Light Auto Turn Off System

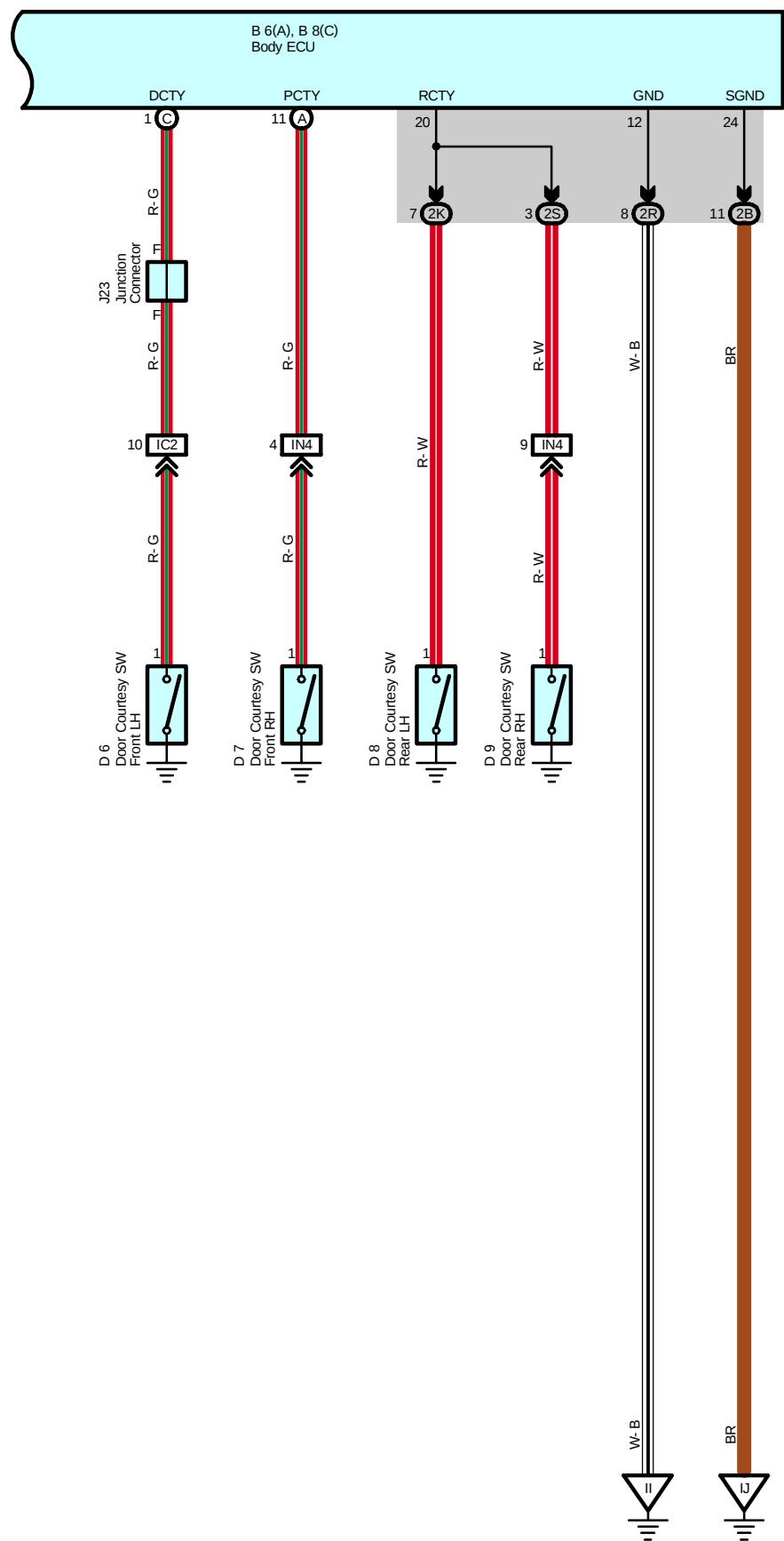


: Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IK		







Service Hints

Body ECU

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

D6, D7, D8, D9 Door Courtesy SW Front LH, RH, Rear LH, RH

- 1-Ground : Closed with each of the door open

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
B6	A	40	D8	42	L4	43
B8	C	40	D9	42	L5	43
C7	A	40	G4	42	N4	43
C8	B	40	I13	41	V9	43
D4		42	I14	41	V10	43
D6		42	I17	42		
D7		42	J23	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 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	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)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)
IN4	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

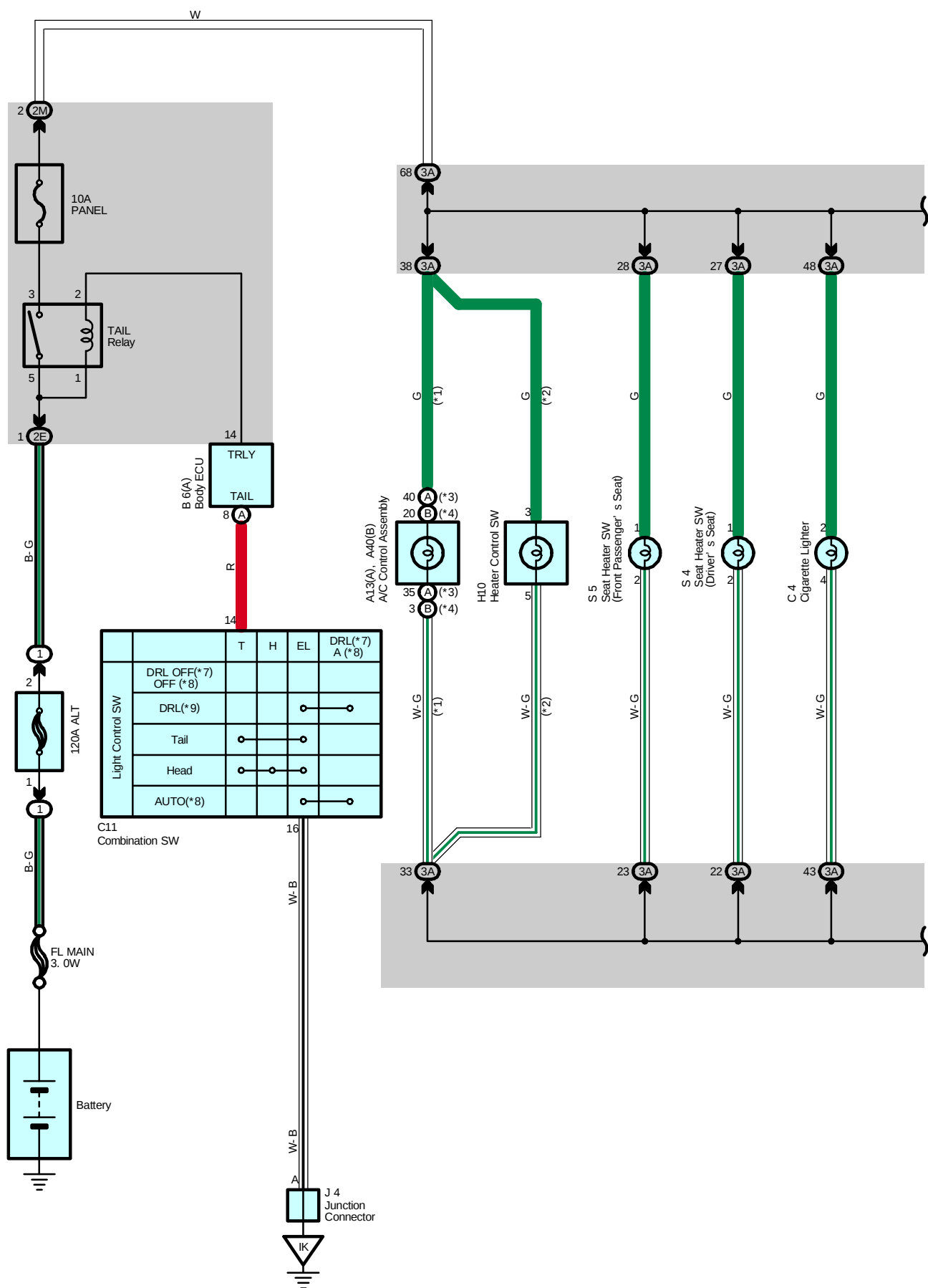
▽ : Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IM	50	Instrument Panel Reinforcement RH

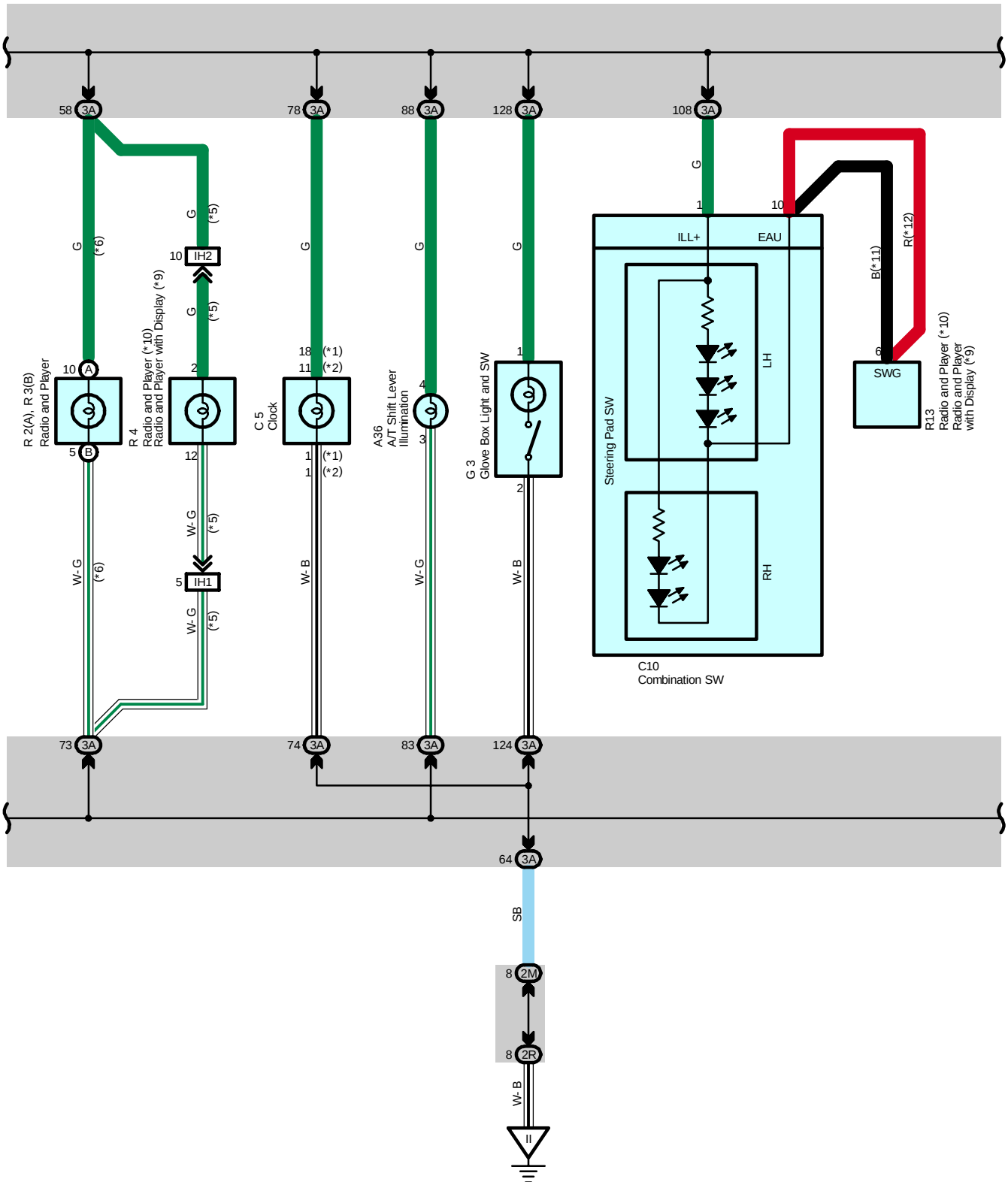
○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	54	Roof Wire	B5	54	Floor Wire
B2					

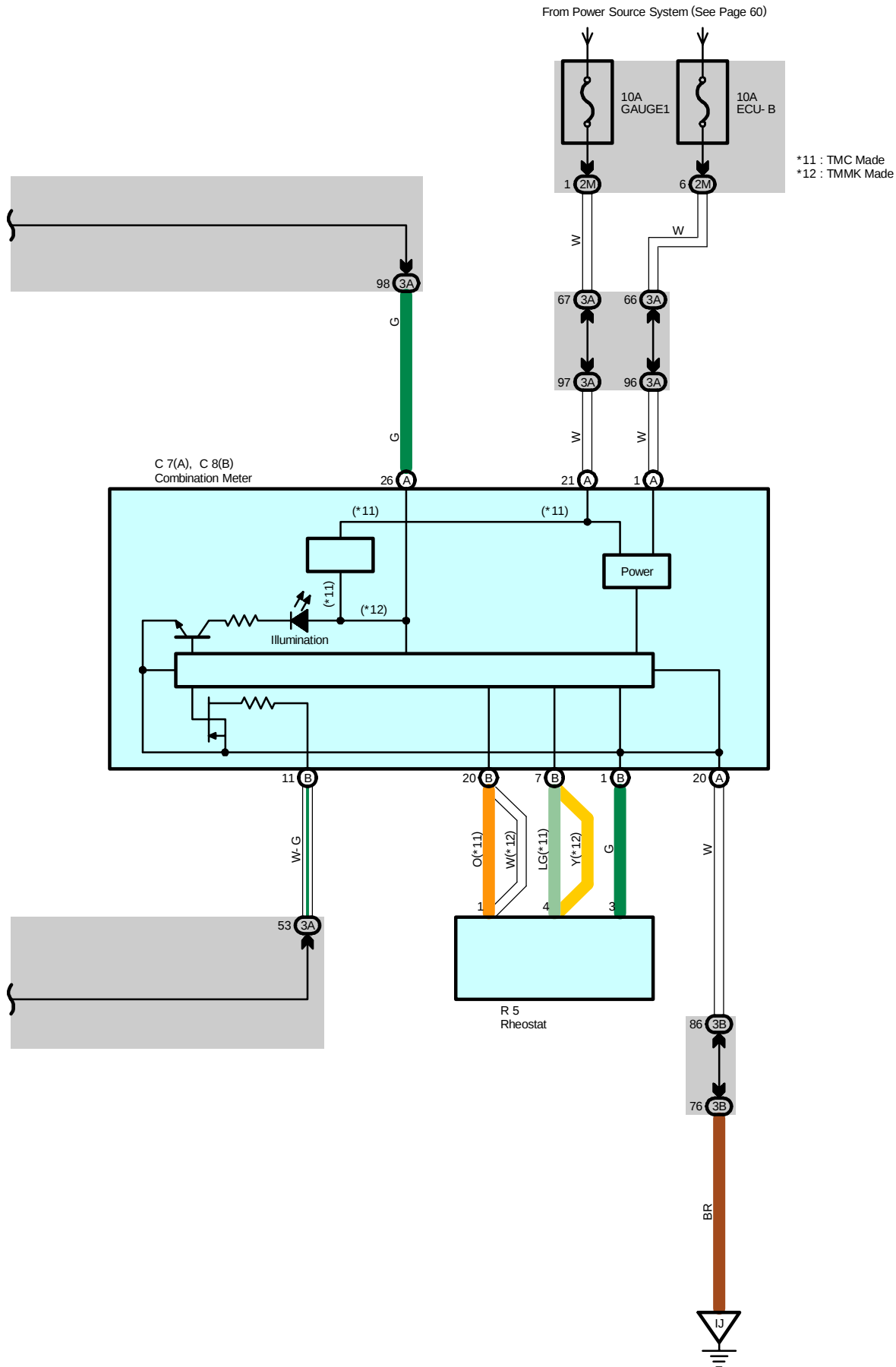
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



- * 1 : Automatic A/C
- * 2 : Manual A/C
- * 3 : 1MZ-FE
- * 4 : 2AZ-FE
- * 5 : Separate Type Amplifier
- * 6 : Built-In Type Amplifier
- * 7 : USA
- * 8 : Canada
- * 9 : w/ Navigation System
- * 10 : w/o Navigation System
- * 11 : TMC Made
- * 12 : TMMK Made



Illumination



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

O

Code		See Page	Code		See Page	Code		See Page
A13	A	40	C8	B	40	R3	B	41
A36		40	C10		40	R4		41
A40	B	40	C11		40	R5		41
B6	A	40	G3		41	R13		41
C4		40	H10		41	S4		41
C5		40	J4		41	S5		41
C7	A	40	R2	A	41			

○

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

	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	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

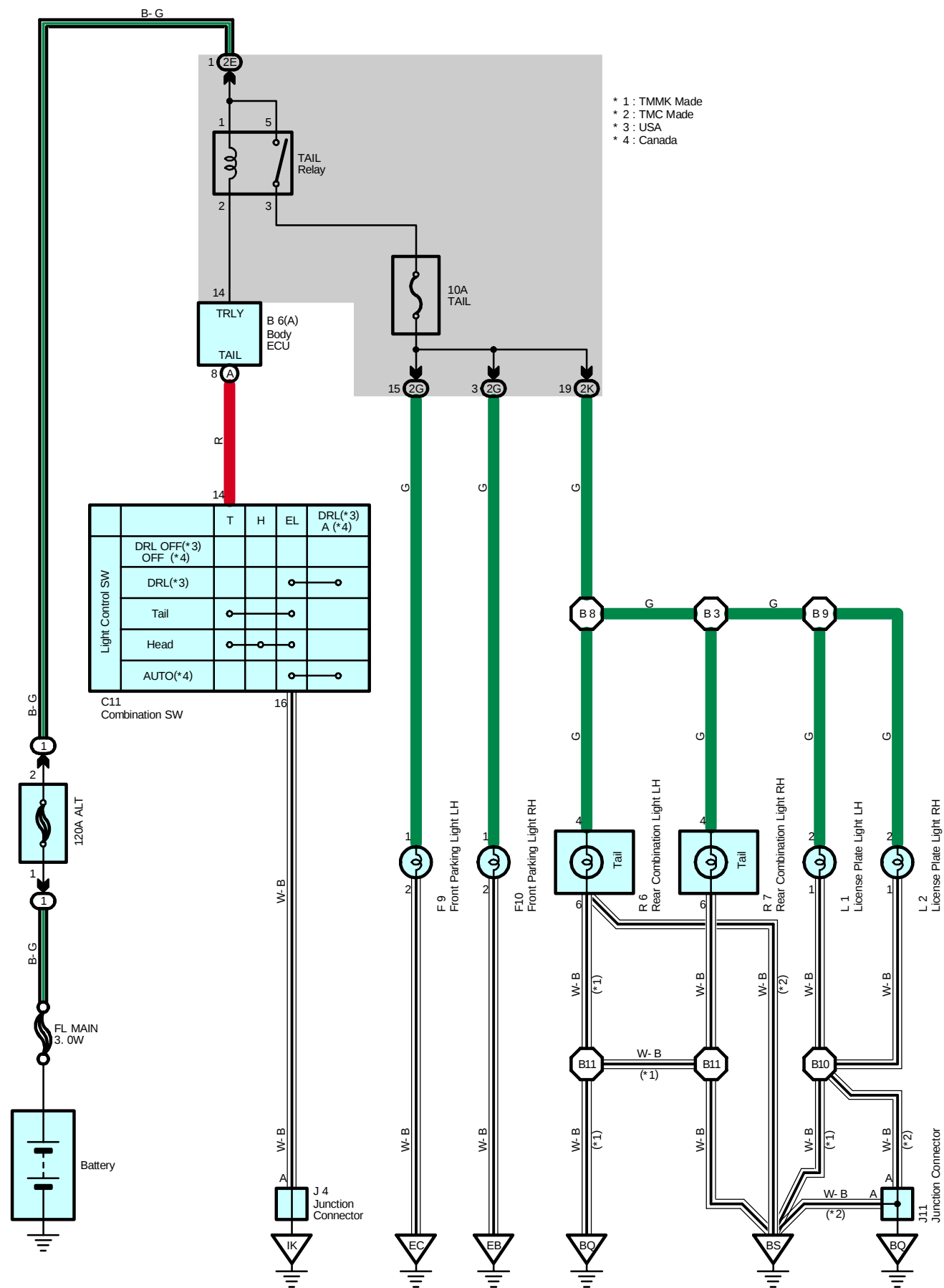
1

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IH1	50	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH2		

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IK		

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Taillight



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
B6	A	F10	36 (*1)	L1	43
C11	40		38 (*2)	L2	43
F9	36 (*1)	J4	41	R6	43
	38 (*2)	J11	42	R7	43

○ : 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	28	Floor Wire and Driver Side J/B (Lower Finish Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
	48 (*2)	
EC	46 (*1)	Left Fender
	48 (*2)	
IK	50	Instrument Panel Brace LH
BQ	54	Front Side of Rear Quarter Wheel House LH
BS	54	Lower Back Panel Center

○ : Splice Points

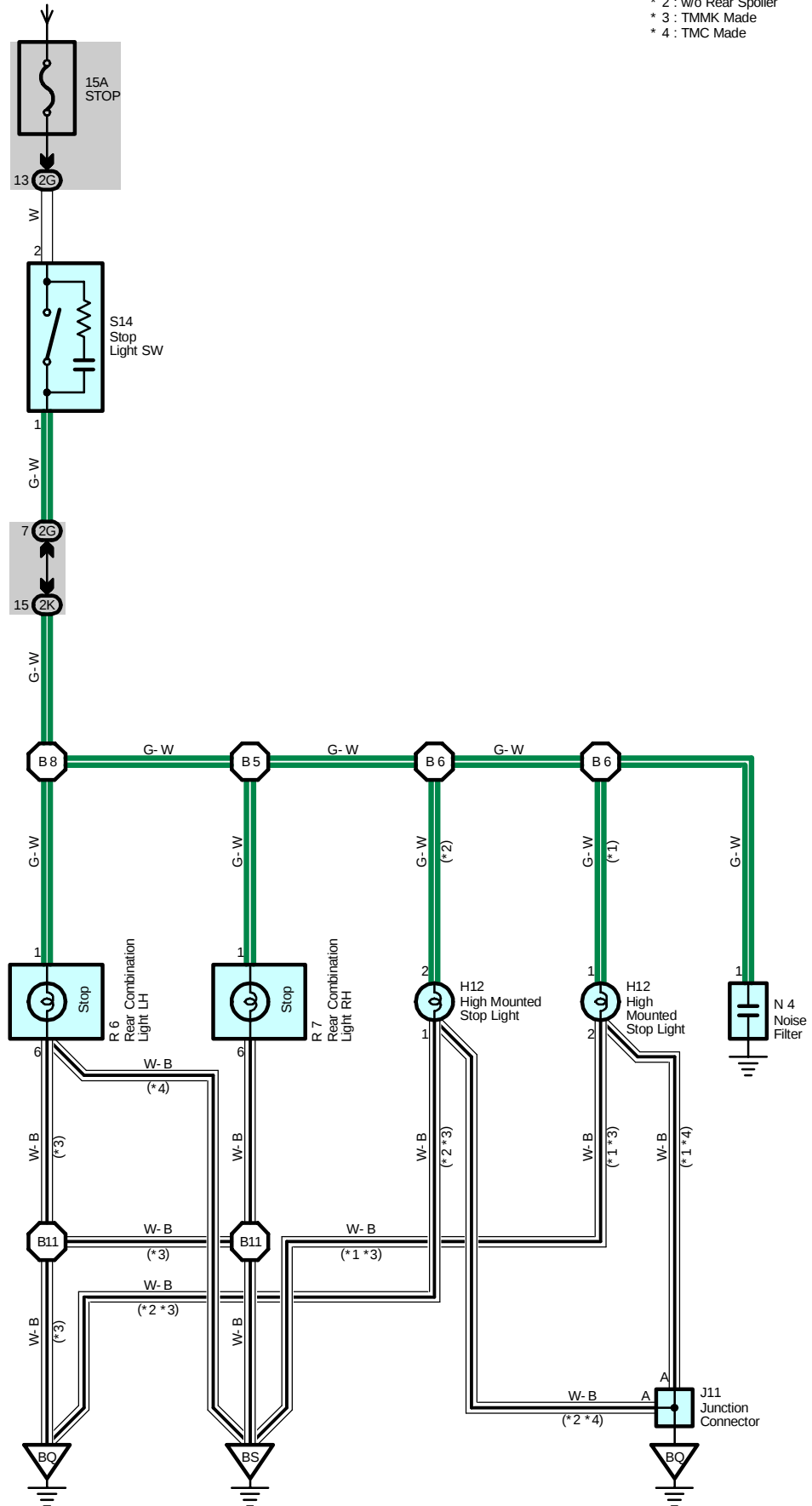
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B3	54	Floor Wire	B10	54	Floor Wire
B8			B11		
B9					

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Stop Light

From Power Source System (See Page 60)

- * 1 : w/ Rear Spoiler
- * 2 : w/o Rear Spoiler
- * 3 : TMMK Made
- * 4 : TMC Made



Service Hints

S14 Stop Light SW

2-1 : Closed with the brake pedal depressed

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
H12	42	N4	43	R7	43
J11	42	R6	43	S14	41

□ : 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)
2K	28	Floor Wire and Driver Side J/B (Lower Finish Panel)

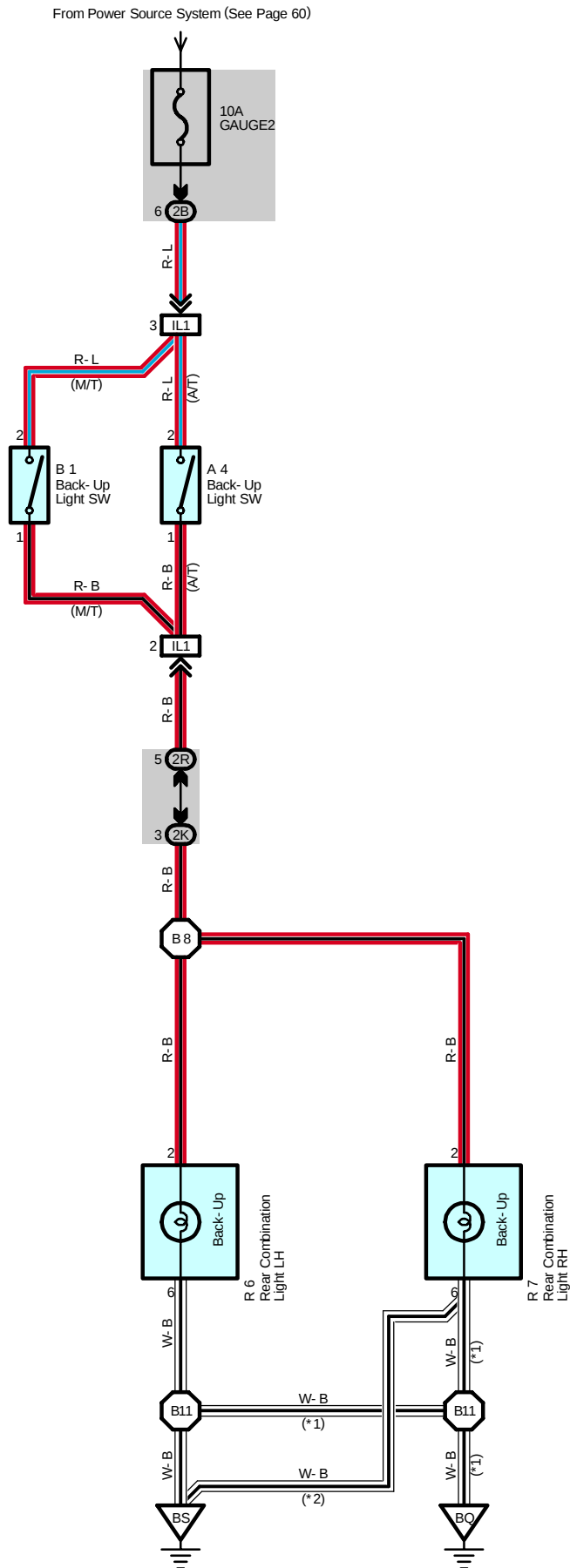
▽ : Ground Points

Code	See Page	Ground Points Location
BQ	54	Front Side of Rear Quarter Wheel House LH
BS	54	Lower Back Panel Center

○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B5	54	Floor Wire	B8	54	Floor Wire
B6			B11		

Back-Up Light



Service Hints

B1 Back-Up Light SW (M/T)

1-2 : Closed with the shift lever at R position

A4 Back-Up Light SW (A/T)

1-2 : Closed with the shift lever at R position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36 (*1)	B1	38 (*2)	R7	43
	38 (*2)	R6	43		

: 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 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)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

: Ground Points

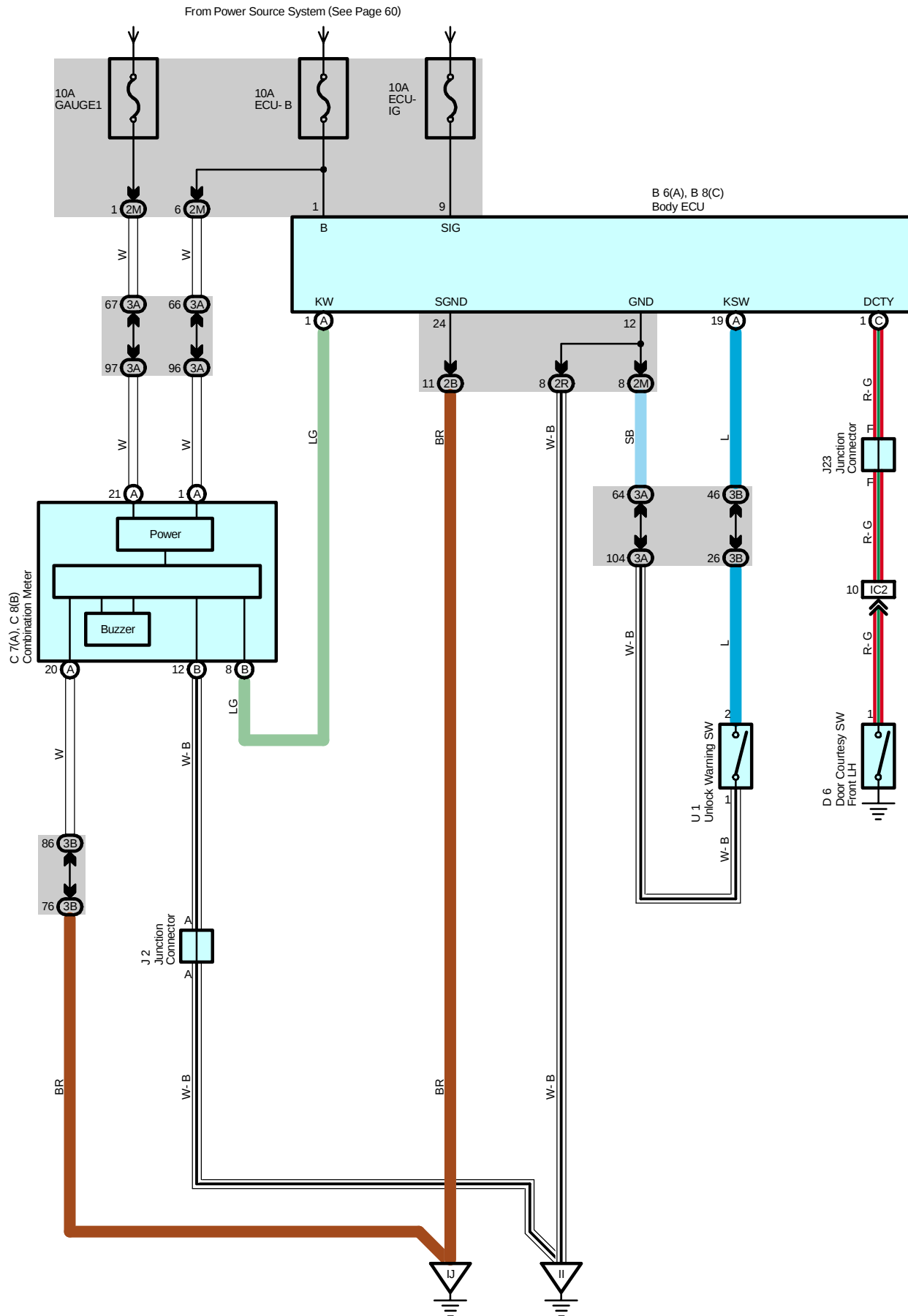
Code	See Page	Ground Points Location
BQ	54	Front Side of Rear Quarter Wheel House LH
BS	54	Lower Back Panel Center

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B8	54	Floor Wire	B11	54	Floor Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

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) 8 of the combination meter to GROUND and key reminder buzzer sounds.

Service Hints

Body ECU

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

D6 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		
B6	A	40	C8	B	40	J23		41			
B8	C	40	D6		42	U1		41			
C7	A	40	J2		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)
2M	29	
2R		
3A	34	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

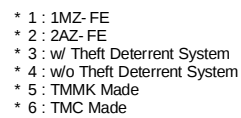
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)

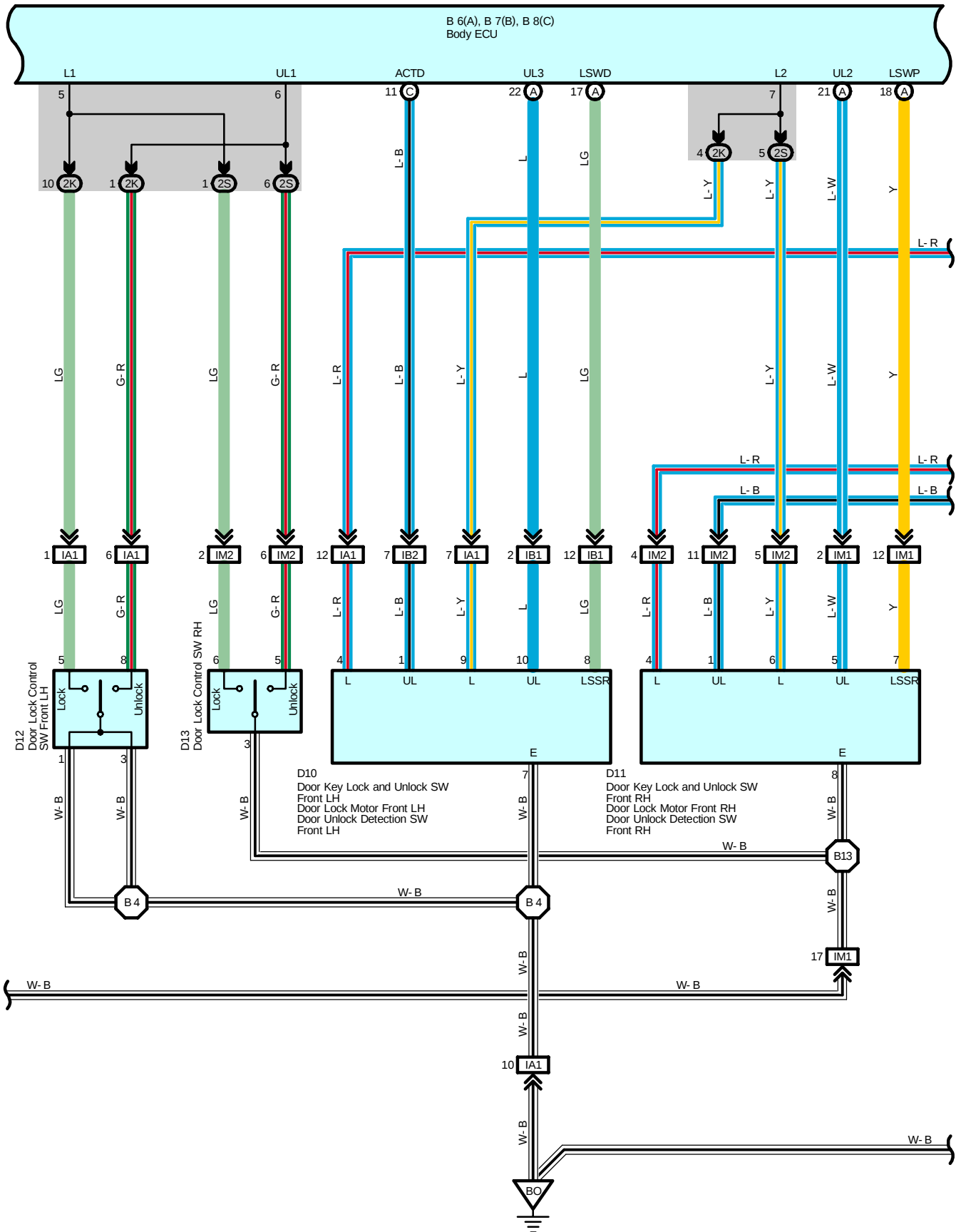
▽ : Ground Points

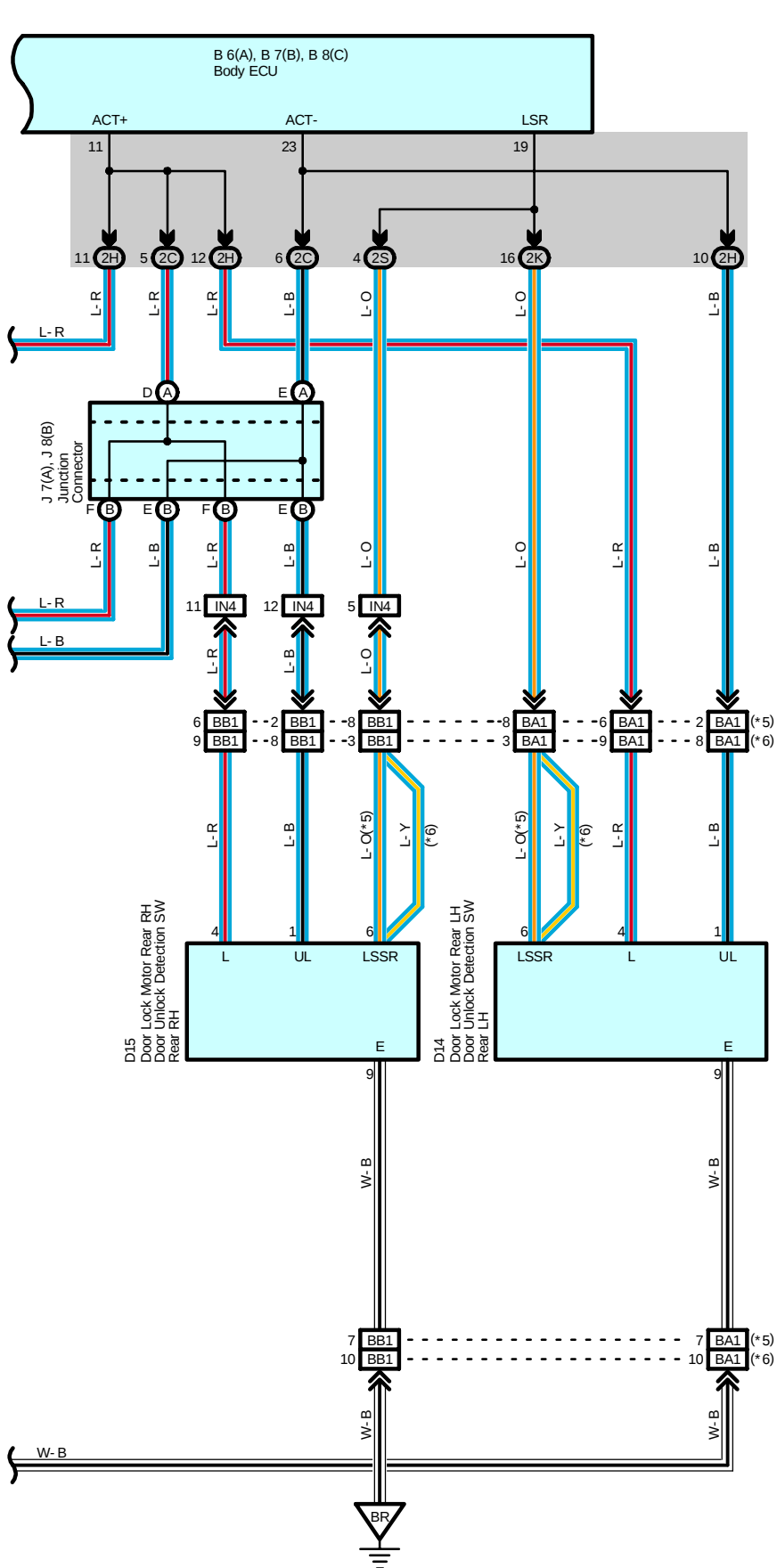
Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



Theft Deterrent and Door Lock Control





* 5 : TMMK Made
* 6 : TMC Made

Theft Deterrent and Door Lock Control

System Outline

1. Manual Unlock Operation

When the door lock control SW of the driver's or front 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 front 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

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

12, 24-Ground : Always continuity

1, 2-Ground : Always approx. 12 volts

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
A13	A	40	D11		42	J23		41
A40	B	40	D12		42	L3		43
B6	A	40	D13		42	L4		43
B7	B	40	D14		42	T1		37 (*1)
B8	C	40	D15		42			39 (*2)
D6		42	E5		36 (*1)	T5		41
D7		42			38 (*2)	U1		41
D8		42	J7	A	41	Z1		41
D9		42	J8	B	41			
D10		42	J11		42			

○ : 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		
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 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		
2R		
2S		
3A	34	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA2	46 (*1)	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
	48 (*2)	
IA1	50	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	50	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2		
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IF3	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IM1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2		
IN4	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BA1	54	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	54	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

 : Ground Points

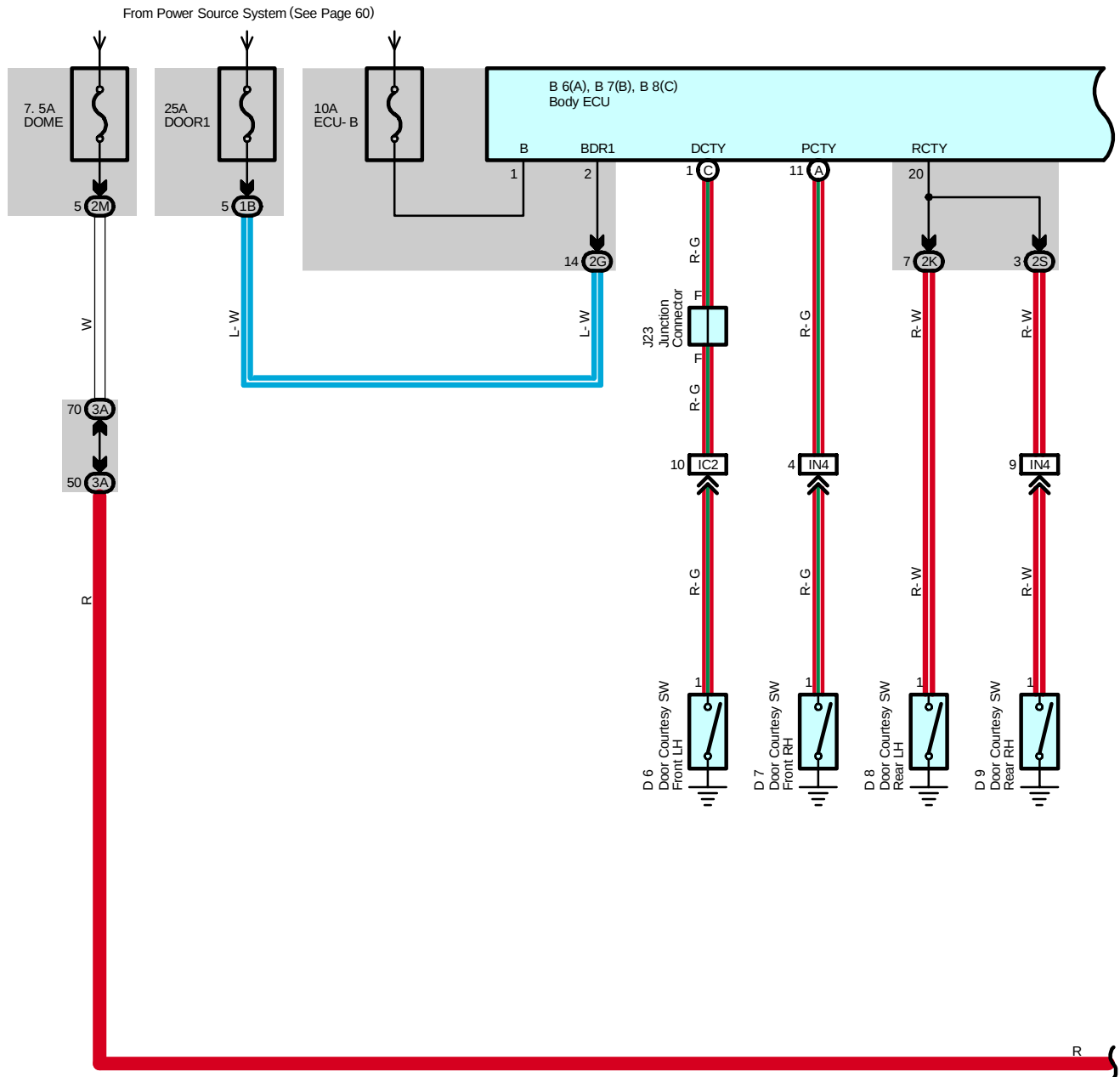
Code	See Page	Ground Points Location
ED	46 (*1)	Left Fender
	48 (*2)	
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
BO	54	Under the Driver's Seat
BQ	54	Front Side of Rear Quarter Wheel House LH
BR	54	Front Side of Rear Quarter Wheel House RH
BS	54	Lower Back Panel Center

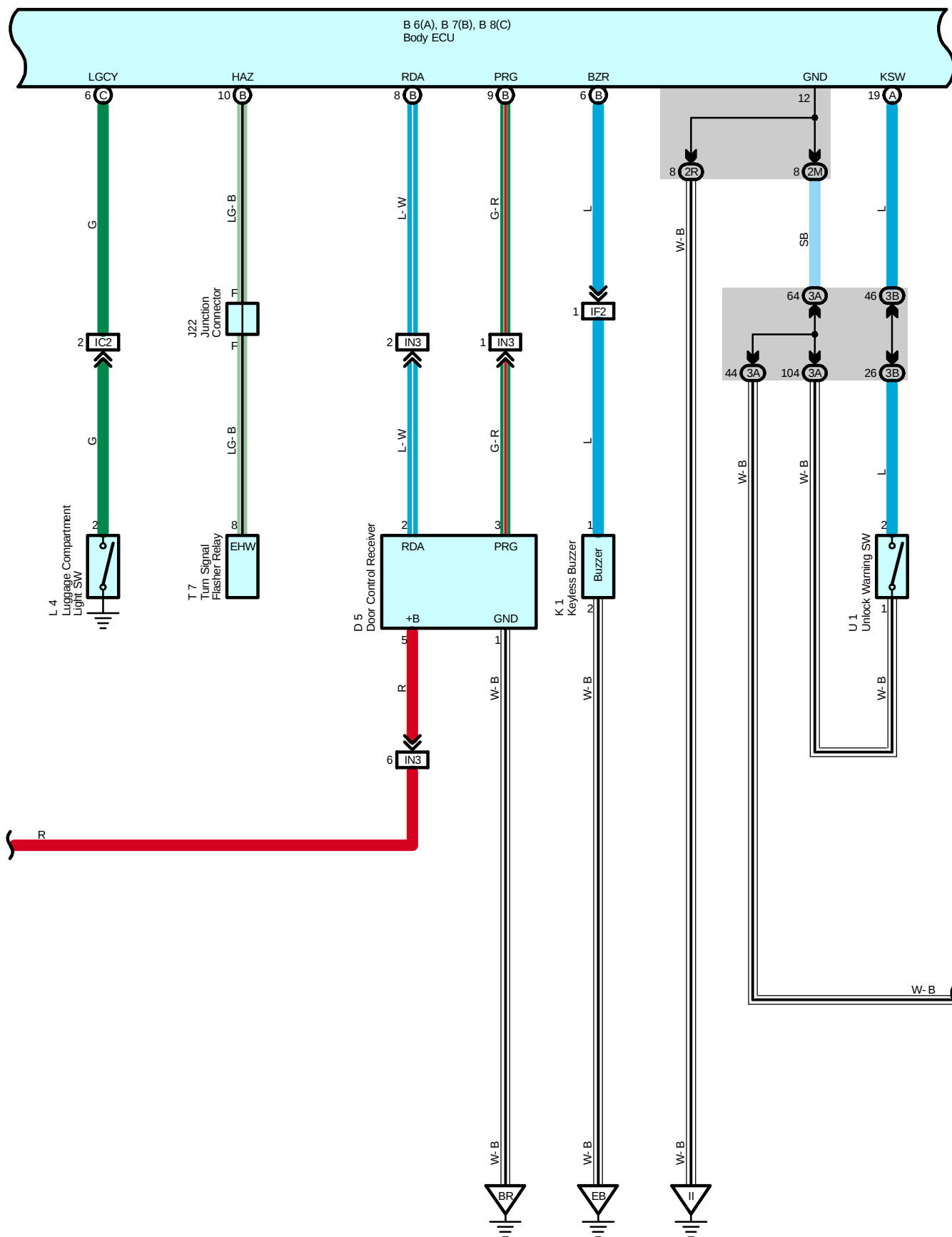
 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	54	Front Door LH Wire	B13	54	Front Door RH Wire

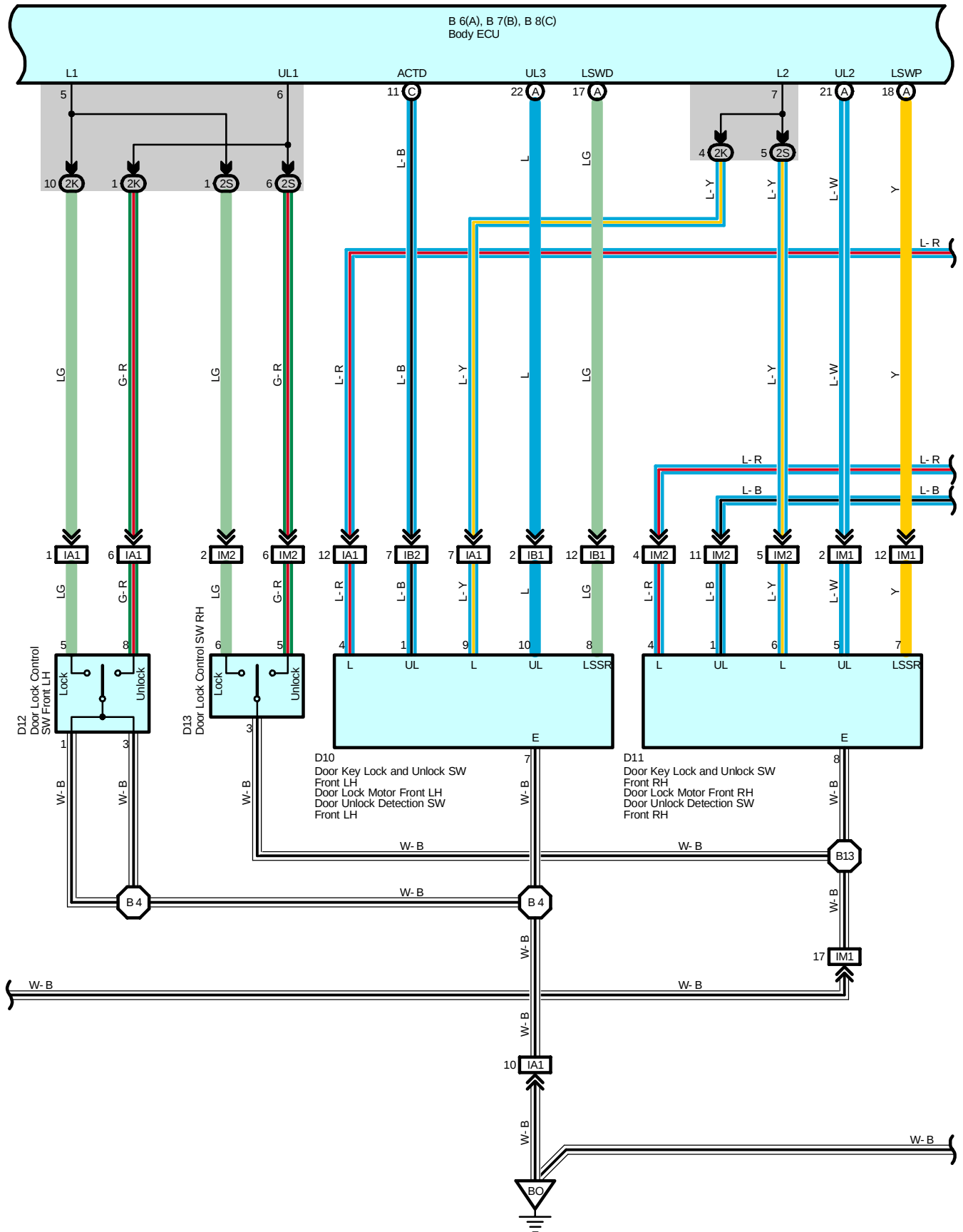
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Wireless Door Lock Control

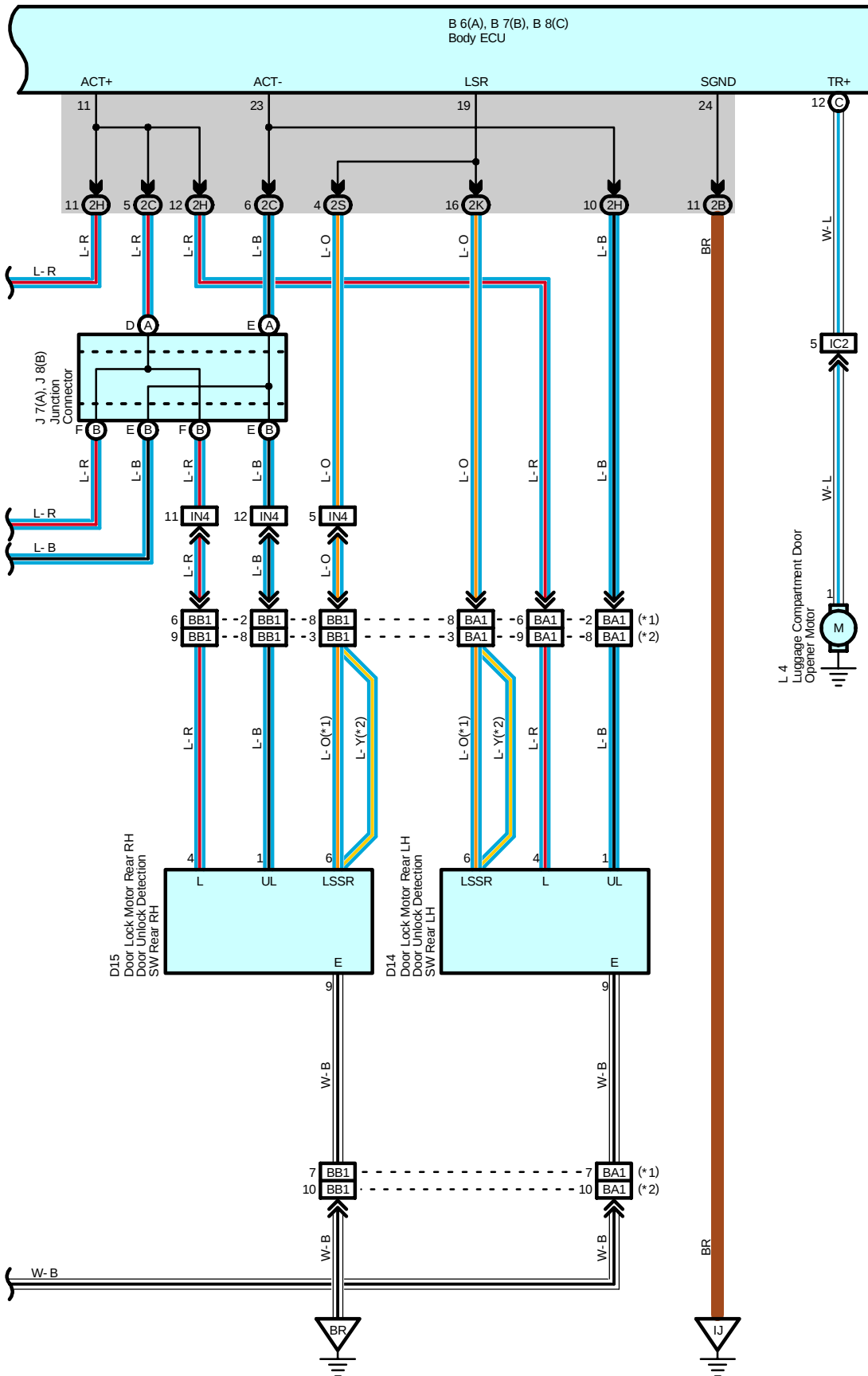




Wireless Door Lock Control



* 1 : TMMK Made
 * 2 : TMC Made



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 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

D6, D7, D8, D9 Door Courtesy SW Front LH, RH, Rear LH, RH

1-Ground : Closed with the each door open

U1 Unlock Warning SW

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

D5 Door Control Receiver

5-Ground : Always approx. 12 volts

1-Ground : Always continuity

 : Parts Location

Code		See Page	Code		See Page	Code	See Page
B6	A	40	D10		42	J22	41
B7	B	40	D11		42	J23	41
B8	C	40	D12		42	K1	37 (*1)
D5		42	D13		42		39 (*2)
D6		42	D14		42	L4	43
D7		42	D15		42	T7	41
D8		42	J7	A	41	U1	41
D9		42	J8	B	41		

 : 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 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	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)
IA1	50	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	50	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2		
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IM1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2		
IN3	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN4		
BA1	54	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	54	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

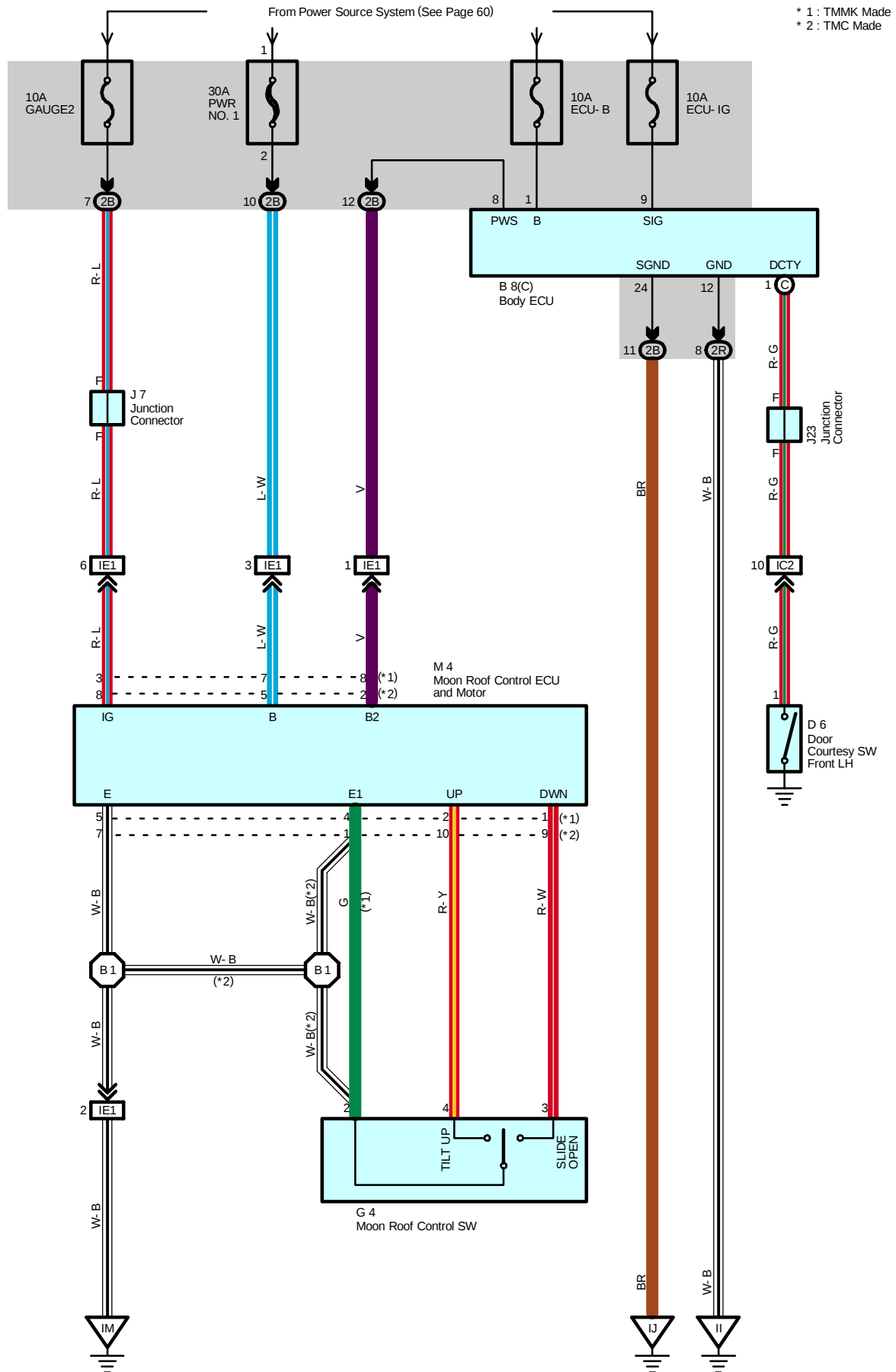
 : Ground Points

Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
	48 (*2)	
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
BO	54	Under the Driver's Seat
BR	54	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
B4	54	Front Door LH Wire	B13	54	Front Door RH Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



Service Hints

M4 Moon Roof Control ECU and Motor

3 (TMMK Made), 8 (TMC Made)-Ground : Approx. 12 volts with the ignition SW at ON or ST position

7 (TMMK Made), 5 (TMC Made)-Ground : Always approx. 12 volts

5 (TMMK Made), 7 (TMC Made)-Ground : Always continuity

: Parts Location

Code		See Page	Code	See Page	Code	See Page
B8	C	40	G4	42	J23	41
D6		42	J7	41	M4	43

: 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)
2R	29	

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)

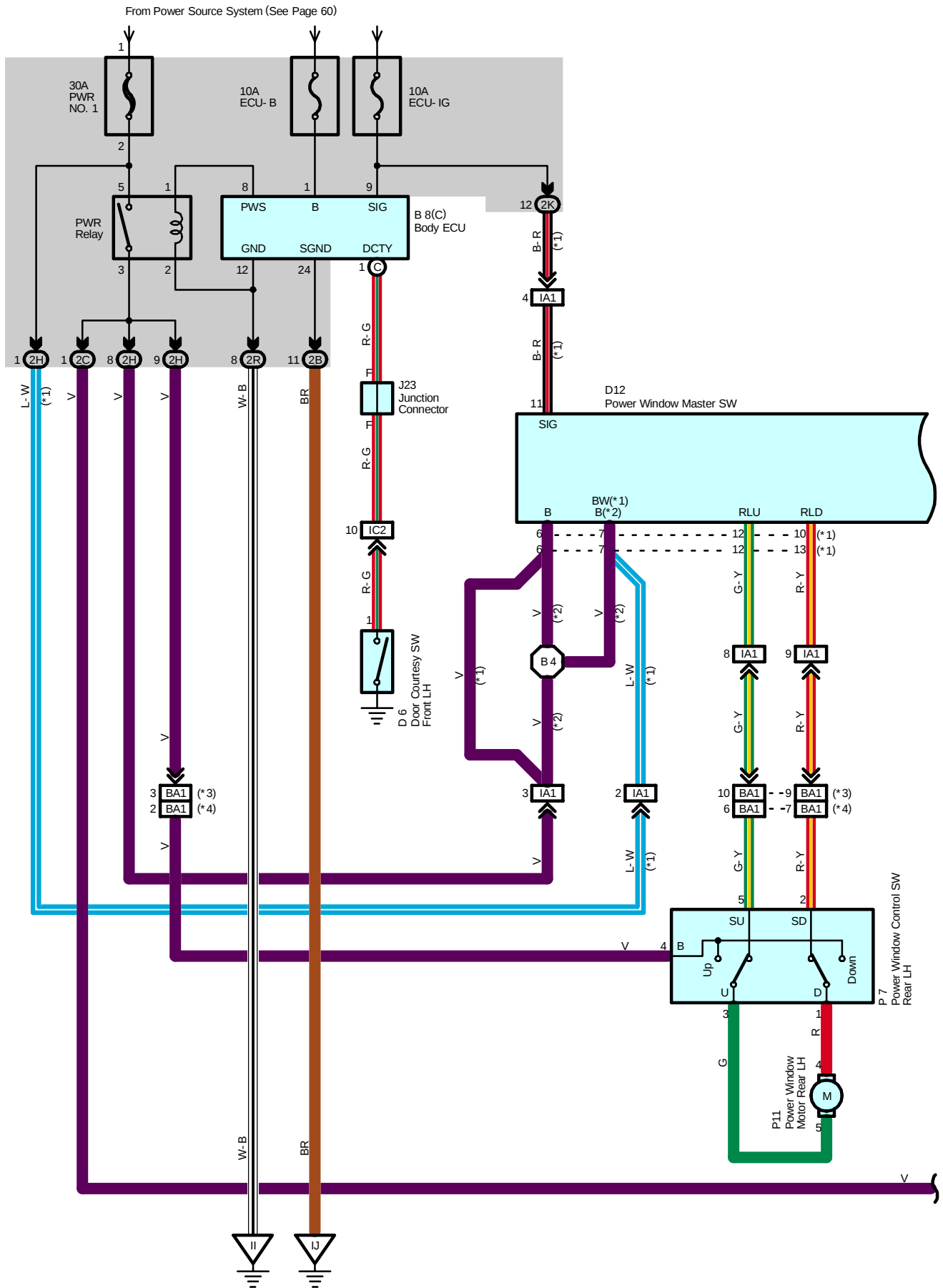
: Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IM	50	Instrument Panel Reinforcement RH

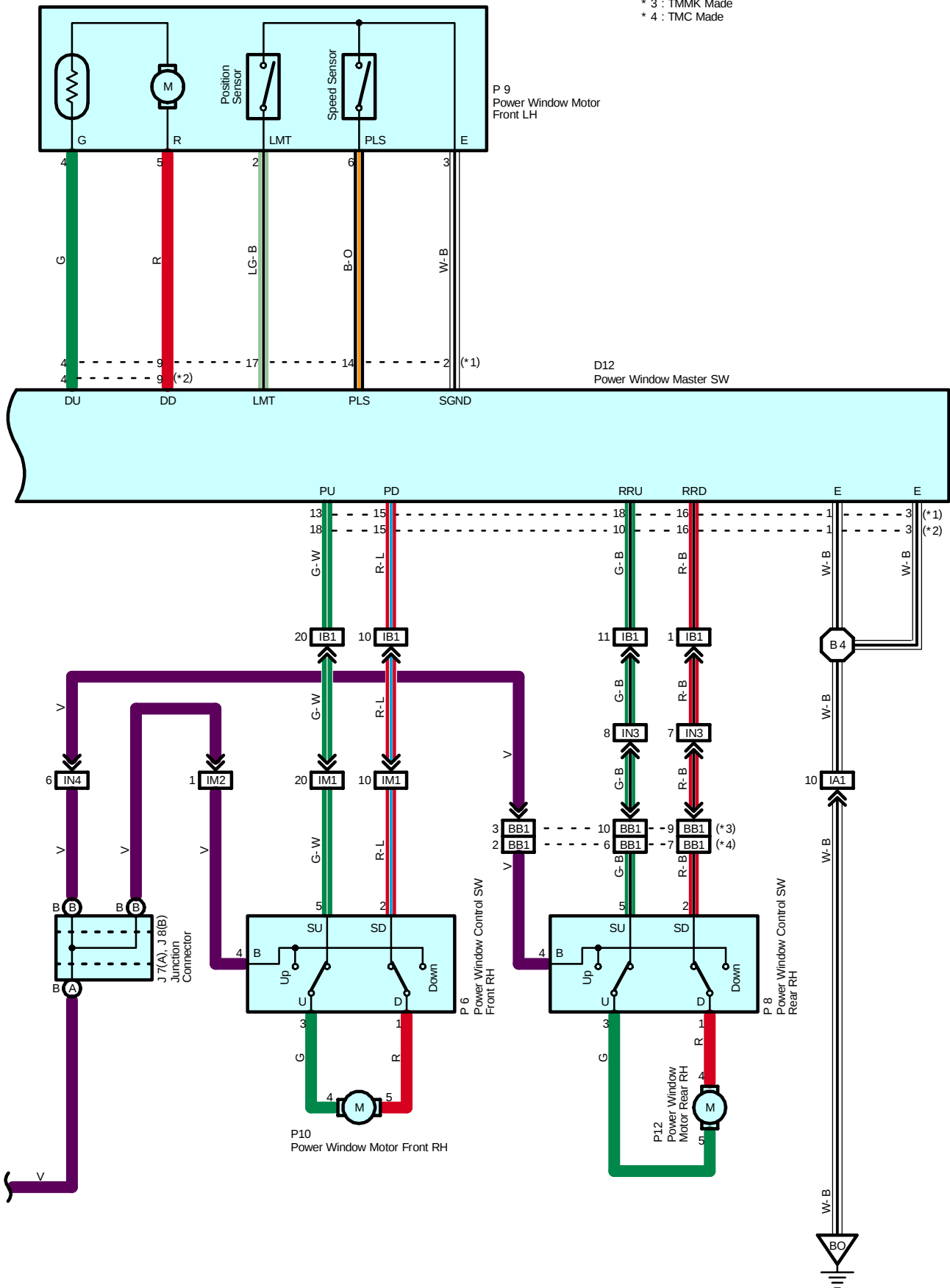
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	54	Roof Wire			

Power Window



- * 1 : w/ Jam Protection
- * 2 : w/o Jam Protection
- * 3 : TMMK Made
- * 4 : TMC Made



System Outline

1. Manual Operation (Driver's Window)

With the ignition SW turned on and with the power window master SW in UP position, the current flowing from TERMINAL B or BW of the power window master SW flows to TERMINAL DU of the master SW to TERMINAL 4 of the power window motor to TERMINAL 5 to TERMINAL DD of the master SW to TERMINAL E to GROUND and causes the power window motor to rotate in the up direction. The window ascends only while the SW is being pushed.

In down operation, the flow of current from TERMINAL B or BW of the power window master SW to TERMINAL DD of the master SW causes the flow of current from TERMINAL 5 of the power window motor to TERMINAL 4 to TERMINAL DU of the master SW to TERMINAL E to GROUND, flowing in the opposite detection to manual up operation and causing the motor to rotate in reverse, lowering the window.

2. Auto Down Operation (Driver's Window)

When the driver's window SW is pushed strongly to the down side, the current flowing to TERMINAL B or BW of the power window master SW flows to the down contact point and auto down contact point of the driver's SW.

This activates the relay (Down side) inside the power window master SW and the hold circuit also turns on at the same time, so the relay (Down side) remains activated even when the SW is released.

Current flows at this time from TERMINAL B or BW of the power window master SW to TERMINAL DD to TERMINAL 5 of the power window motor to TERMINAL 4 to TERMINAL DU of the power window master SW to TERMINAL E to GROUND, so the motor continues to operate until the driver's window is fully down.

When the driver's window finishes down operation and the hold circuit goes off, so the relay (Down side) also turns off. This stops the current flowing from TERMINAL B or BW of the power window master SW to TERMINAL DD is cut off, so the power window motor stops and auto down operation stops.

When the driver's SW is pulled to the up side during auto down operation, the hold circuit is turned off so the current flowing from TERMINAL B or BW of the power window master SW to TERMINAL DD is cut off and the power window motor stops. If the SW remains pulled up the relay (Up side) is activated, so current flows from TERMINAL B or BW of the power window master SW to TERMINAL DU to TERMINAL 4 of the power window motor to TERMINAL 5 to TERMINAL DD to TERMINAL E to GROUND, the power window motor rotates in the up direction and manual up operation occurs while the SW is pulled up.

3. Manual Operation (Front RH Window)

With the power window control SW front RH pulled to the up side, the current flowing from TERMINAL 4 of the power window control SW flows to TERMINAL 3 of the power window control SW to TERMINAL 4 of the power window motor to TERMINAL 5 to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL PD of the master SW to TERMINAL E to GROUND and causes the power window motor front RH to rotate in the up direction. The up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 5 to TERMINAL 4, and the motor rotates in reverse. When the window lock SW is pushed to the lock side, the ground circuit to the front RH window becomes open.

As a result, even if Open/Close operation of the front RH window is tried, the current from TERMINAL E of the power window master SW is not grounded and the motor does not rotate, so the front RH window can not be operated and window lock occurs.

4. Manual Operation (Rear LH, RH Window)

With the power window control SW rear LH, RH pulled to the up side, the current flowing from TERMINAL 4 of the power window control SW flows to TERMINAL 3 of the power control SW to TERMINAL 5 of the power window motor to TERMINAL 4 to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL RLD or RRD of the master SW to TERMINAL E to GROUND and causes the power window motor rear LH, RH to rotate in the up direction. The up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 4 to TERMINAL 5, and the motor rotates in reverse. When the window lock SW is pushed to the lock side, the ground circuit to the rear LH, RH window becomes open.

As a result, even if Open/Close operation of the rear LH, RH window is tried, the current from TERMINAL E of the power window master SW is not grounded and the motor does not rotate, so the rear LH, RH window can not be operated and window lock occurs.

5. Key Off Power Window Operation

With the ignition SW turned from on to off, the body ECU operates and current flows from the ECU-B fuse to TERMINAL 1 of the body ECU to TERMINAL 8 to TERMINAL 1 of the PWR relay to TERMINAL 2 to GROUND for about 43 seconds. The same as normal operation, the current flows from the PWR NO.1 fuse to TERMINAL 5 of the PWR relay to TERMINAL 3 to TERMINAL B or BW of the power window master SW and TERMINAL 4 (Front RH, Rear LH, RH) of the power window control SW. As a result, for about 43 seconds after the ignition SW is turned off, the functioning of this ECU makes it possible to raise and lower the power window. Also, by opening the front door LH (Door courtesy SW on) within about 43 seconds after turning the ignition SW to off, a signal is input to TERMINAL (C) 1 of the body ECU. As a result, the PWR relay turned off, and up and down movement of the power window stops.

Service Hints

D12 Power Window Master SW

- B, BW-Ground : Approx. 12 volts with the ignition SW at ON position or key off power window operation (w/o jam protection)
 : Always approx. 12 volts (w/ jam protection)
 E-Ground : Always continuity
 DU-Ground : Approx. 12 volts with the ignition SW on and the master SW (Driver's window) at UP position
 DD-Ground : Approx. 12 volts with the ignition SW on and the master SW (Driver's window)
 at DOWN or AUTO DOWN position

Window Lock SW

Open with the window lock SW at LOCK position

: Parts Location

Code		See Page	Code	See Page	Code	See Page
B8	C	40	J23	41	P10	43
D6		42	P6	43	P11	43
D12		42	P7	43	P12	43
J7	A	41	P8	43		
J8	B	41	P9	43		

: 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)
2C		
2H	28	Floor 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

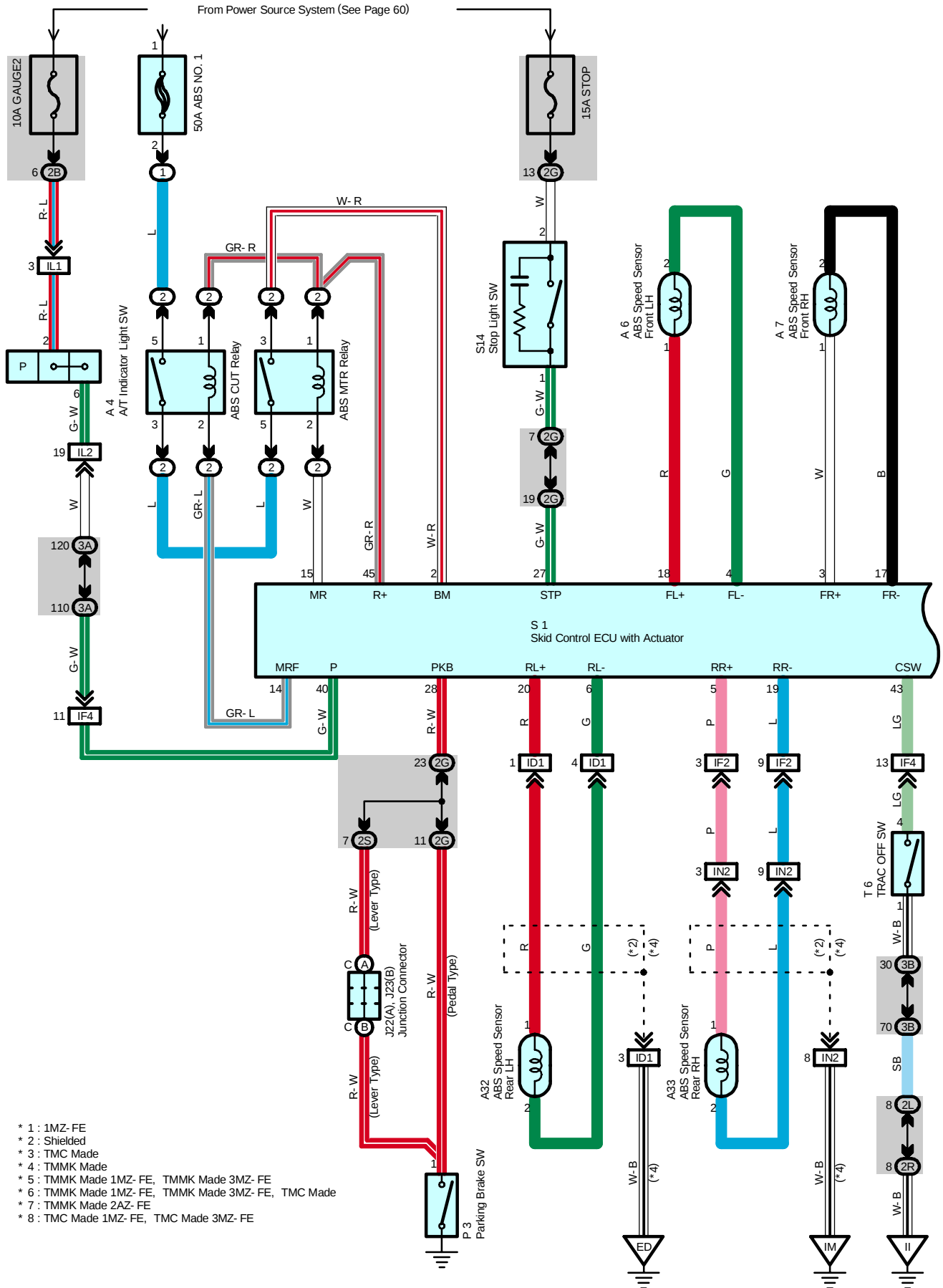
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	50	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	50	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IM1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IM2		
IN3	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IN4		
BA1	54	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	54	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

: Ground Points

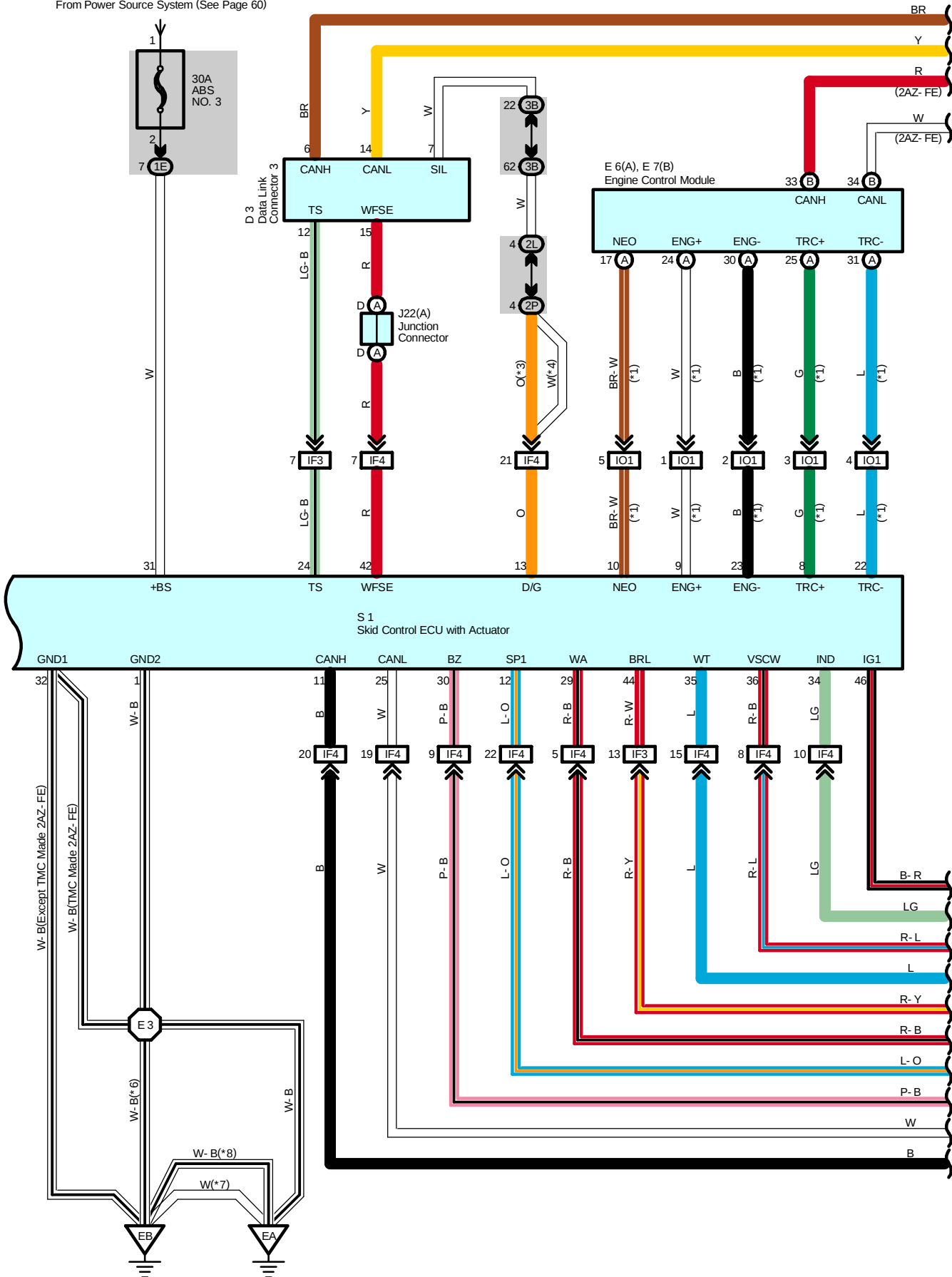
Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
BO	54	Under the Driver's Seat

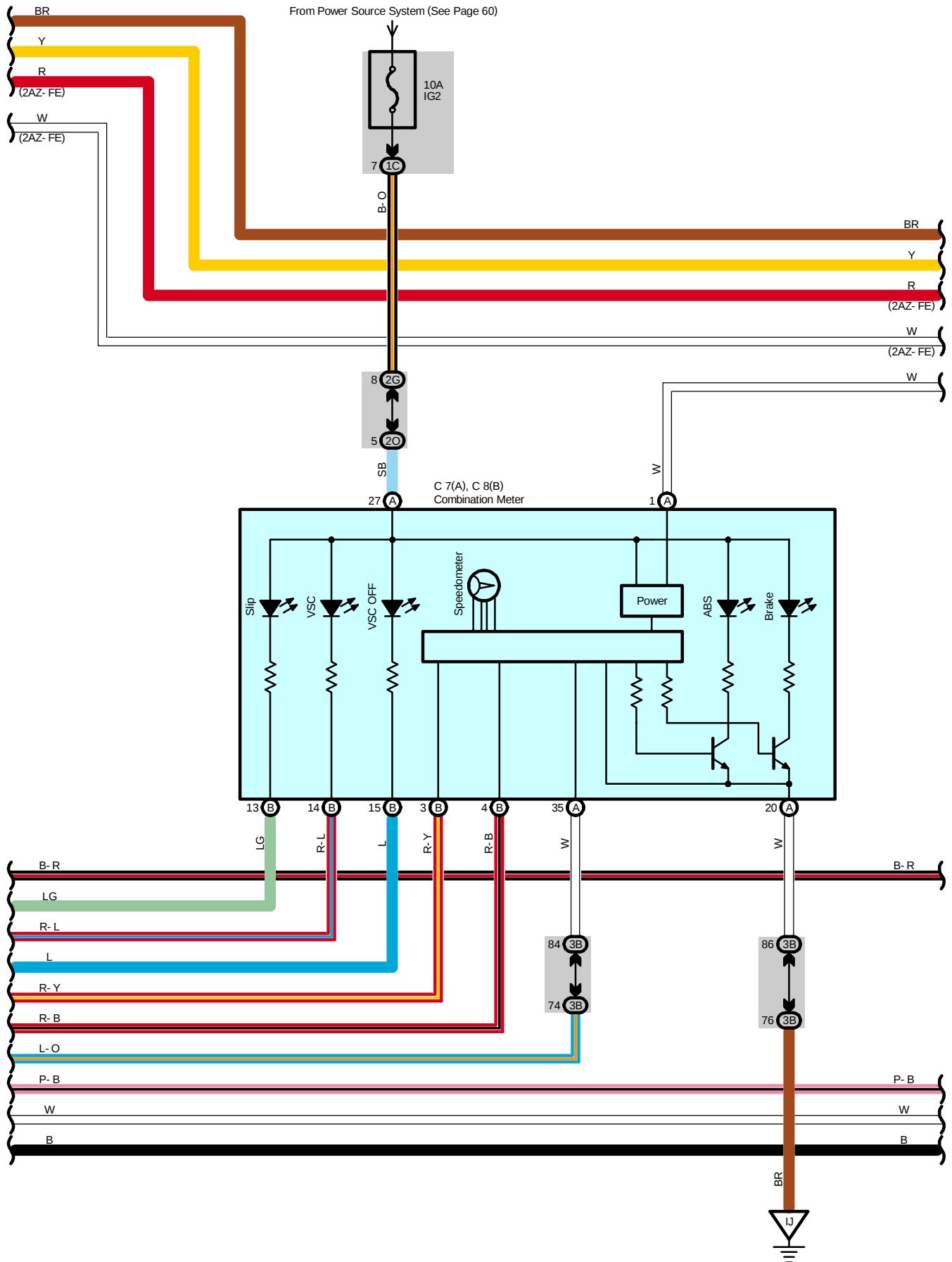
: Splice Points

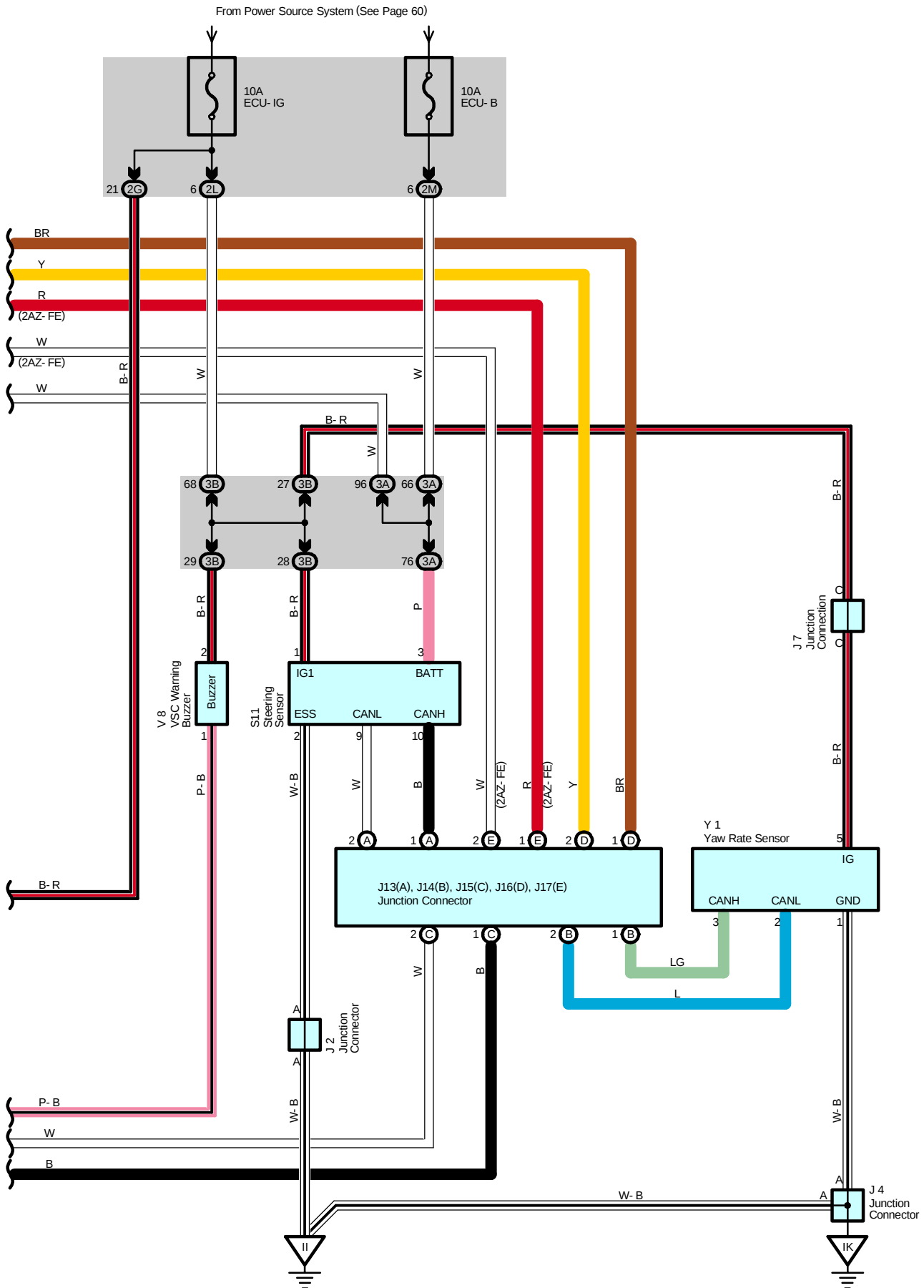
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	54	Front Door LH Wire			



From Power Source System (See Page 60)







System Outline

The vehicle could be in an extreme over steering or under steering tendency due to unexpected accidents, road conditions, vehicle speed, or by other external factors. In such a case, this system automatically controls the engine output and the braking to each wheel, to decrease the extreme over steering and under steering.

* To decrease extreme over steering tendency

When the system determines that the over steering tendency is large, the system applies brakes to the outer wheels according to the degree of over steering, and creates a moment towards the outer side of the vehicle, to decrease the tendency of over steering. Also, when the brakes are applied, the vehicle speed decreases while the stability increases.

* To decrease extreme under steering tendency

When the system determines that the under steering tendency is large, the system applies brakes to the front or rear wheels according to the degree of under steering, to decrease the tendency of under steering.

* TRAC off SW

TRAC off SW is only for two-wheel drive models. Four-wheel drive models is needless this SW.

The SW to send the traction control system into OFF mode. When the SW is pushed after starting the engine, the system will be in OFF mode, and the TRAC OFF indicator light will turn on. When the SW is pushed again, the system will be in standby mode. When the engine is stopped and re-started, regardless of the TRAC off SW, the system will be in standby mode.

Information to the driver

The VSC system informs the driver when the tire grip is about to exceed its grip capacity, by blinking the slip indicator light and emitting an intermittent sound of the buzzer. Accordingly, the driver is informed to drive more gently.

Service Hints

S1 Skid Control ECU with Actuator

31-Ground : Always approx. 12 volts

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

1, 32-Ground : Always continuity

S14 Stop Light SW

2-1 : Closed with the brake pedal depressed

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36 (*1)	E6	A	40	J23 B 41
	38 (*2)	E7	B	40	P3 41
A6	36 (*1)	J2		41	S1 37 (*1)
	38 (*2)	J4		41	
A7	36 (*1)	J7		41	S11 41
	38 (*2)	J13	A	41	S14 41
A32	42	J14	B	41	T6 41
A33	42	J15	C	41	V8 41
C7	A 40	J16	D	41	Y1 41
C8	B 40	J17	E	41	
D3	40	J22	A	41	

○ : Relay Blocks

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

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

**: 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		
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		
2S		
3A	34	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	50	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF4		
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IN2	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
IO1	52	Engine Room Main Wire and Engine Room Main Wire (Right Side of the Instrument Panel)

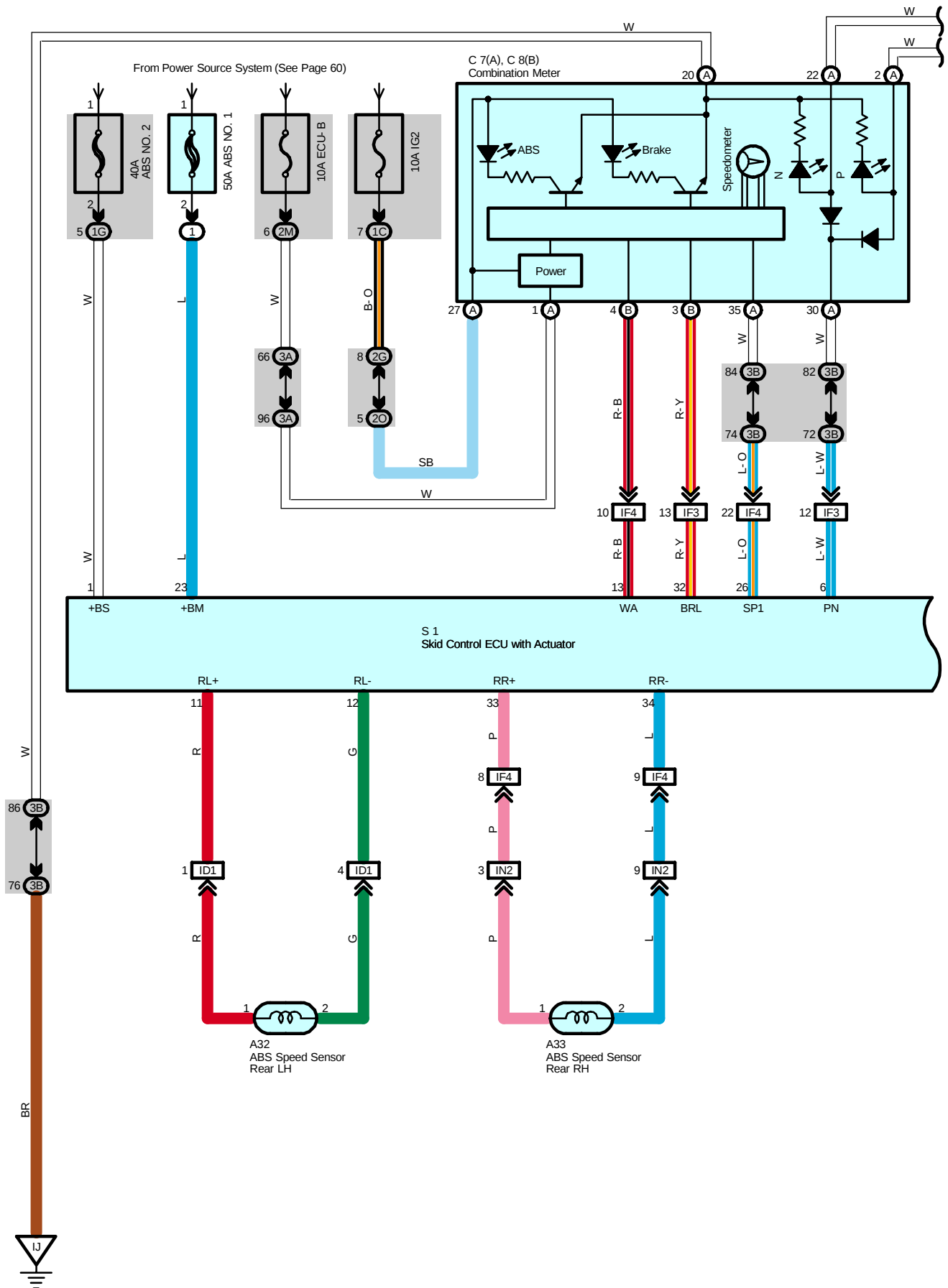
**: Ground Points**

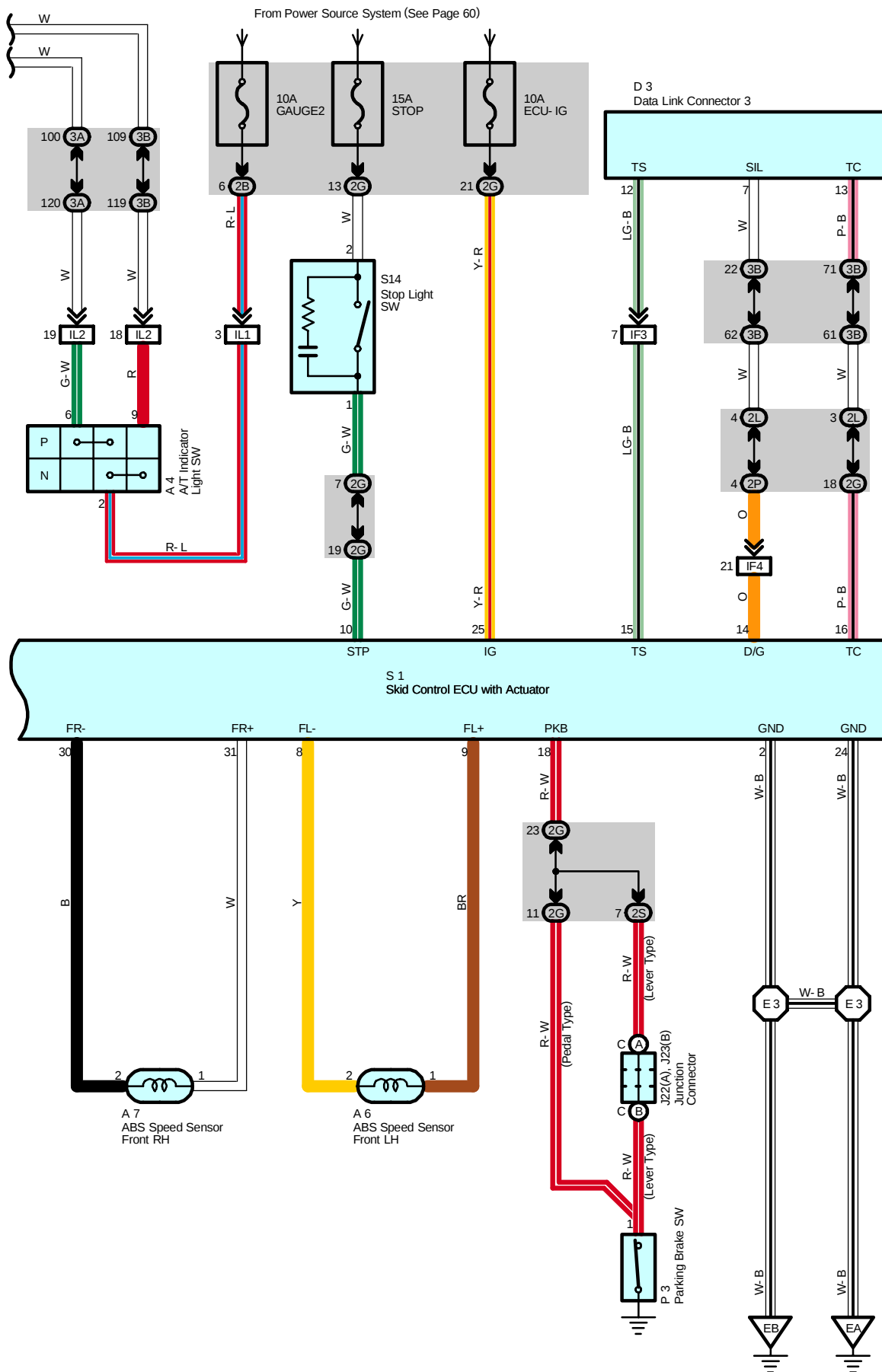
Code	See Page	Ground Points Location
EA	46 (*1)	Right Fender
	48 (*2)	
EB	46 (*1)	
	48 (*2)	
ED	46 (*1)	Left Fender
	48 (*2)	
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IK		
IM	50	Instrument Panel Reinforcement RH

**: Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	46 (*1)	Engine Room Main Wire	E3	48 (*2)	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat





ABS (TMC Made)

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. 1.6 kΩ

A32, A33 ABS Speed Sensor Rear LH, RH

2-1 : Approx. 2.2 kΩ

S1 Skid Control ECU with Actuator

2, 24-Ground : Always continuity

25-Ground : Approx. 12 volts with the ignition SW at ON or ST 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 (*1)	A32	42	J23 B	41
	38 (*2)	A33	42	P3	41
A6	36 (*1)	C7 A	40	S1	37 (*1)
	38 (*2)	C8 B	40		39 (*2)
A7	36 (*1)	D3	40	S14	41
	38 (*2)	J22 A	41		

○ : Relay Blocks

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

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

**: 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)
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		
2S		
3A	34	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	50	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF3	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IN2	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

**: Ground Points**

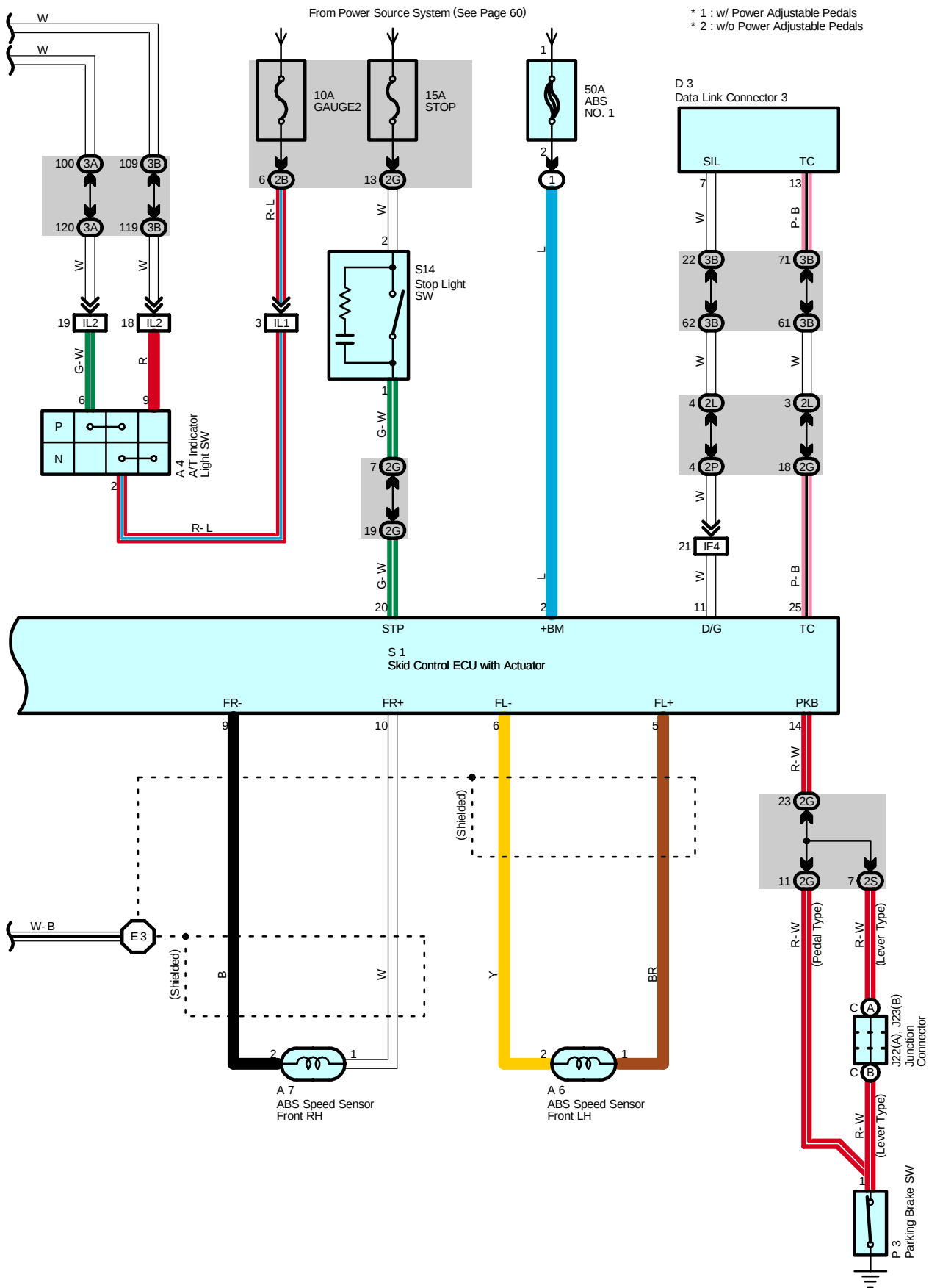
Code	See Page	Ground Points Location
EA	46 (*1)	Right Fender
	48 (*2)	
EB	46 (*1)	
	48 (*2)	
IJ	50	Instrument Panel Brace LH

**: Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	46 (*1)	Engine Room Main Wire	E3	48 (*2)	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat





ABS (TMMK Made)

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 5, 7, 10 and 19 of the skid control ECU with actuator.

(2) Stop light SW signal

A signal is input to TERMINAL 20 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. 1.07 kΩ

A32, A33 ABS Speed Sensor Rear LH, RH

2-1 : Approx. 2.2 kΩ

S1 Skid Control ECU with Actuator

1, 4-Ground : Always continuity

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

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

3, 18-Ground : Always approx. 12 volts

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36 (*1)	A32	42	J23 B	41
	38 (*2)	A33	42	P3	41
A6	36 (*1)	C7 A	40	S1	37 (*1)
	38 (*2)	C8 B	40		39 (*2)
A7	36 (*1)	D3	40	S14	41
	38 (*2)	J22 A	41		

○ : Relay Blocks

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

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

**: 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		
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		
2S		
3A	34	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	50	Engine Room Main Wire and Floor Wire (Left Side of Driver Side J/B)
IF3	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IN2	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

**: Ground Points**

Code	See Page	Ground Points Location
EA	46 (*1)	Right Fender
	48 (*2)	
EB	46 (*1)	
	48 (*2)	
ED	46 (*1)	Left Fender
	48 (*2)	
IJ	50	Instrument Panel Brace LH

**: Splice Points**

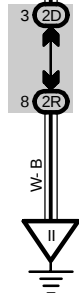
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	46 (*1)	Engine Room Main Wire	E3	48 (*2)	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

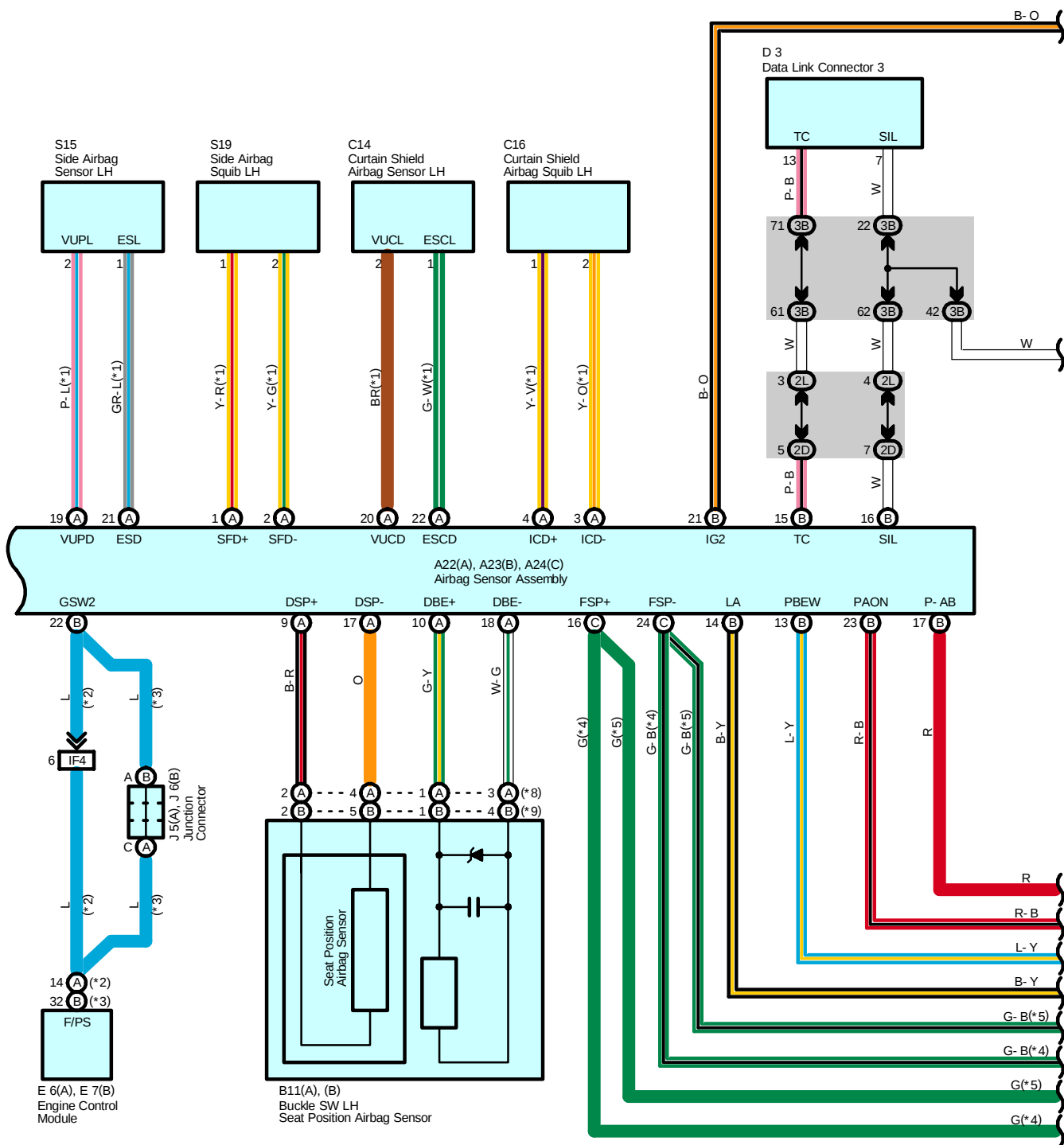
NOTICE: When inspecting or repairing the SRS, perform service in accordance with the following precautionary instructions and the procedure, and precautions in the Repair Manual applicable for the model year.

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

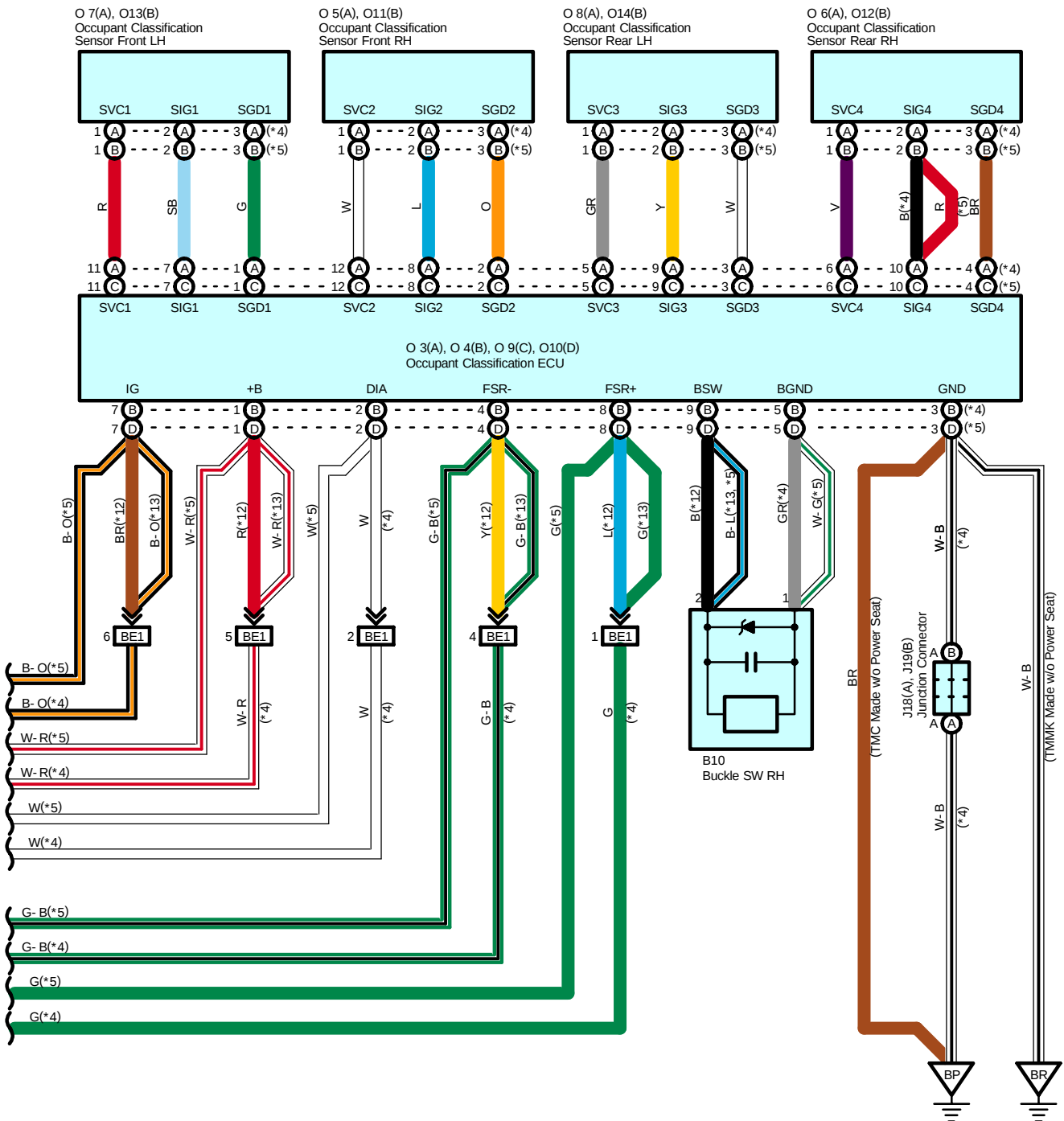
- * Steering wheel pad
- * Front passenger airbag assembly
- * Side airbag assembly
- * Curtain shield airbag assembly
- * Seat belt pretensioner
- * Center airbag sensor assembly
- * Front airbag sensor assembly
- * Side airbag sensor assembly



- * 1 : w/ Curtain Shield Airbag
- * 2 : 1MZ- FE, 3MZ- FE
- * 3 : 2AZ- FE
- * 4 : w/ Power Seat
- * 5 : w/o Power Seat
- * 6 : TMC Made w/ Curtain Shield Airbag
- * 7 : TMMK Made w/ Curtain Shield Airbag
- * 8 : TMC Made
- * 9 : TMMK Made



- * 4 : w/ Power Seat
- * 5 : w/o Power Seat
- *10 : Automatic A/C
- *11 : Manual A/C
- *12 : TMC Made w/ Power Seat
- *13 : TMMK Made w/ Power Seat



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 IG2 fuse to TERMINAL (B) 21 of the airbag sensor assembly.

If an accident occurs while driving, when the frontal impact exceeds a set level, the current from the IG2 fuse flows to TERMINALS (B) 5, (B) 8, (B) 4, (B) 1, (A) 5 and (C) 4 of the airbag sensor assembly to the airbag squibs and the pretensioners to TERMINALS (B) 6, (B) 7, (B) 3, (B) 2, (A) 6 and (C) 3 of the airbag sensor assembly to TERMINAL (B) 25, (B) 26 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 IG2 fuse flows to TERMINALS (A) 1, (C) 8, (A) 4 and (C) 5 of the airbag sensor assembly to the side airbag squibs and the curtain shield airbag squibs TERMINALS (A) 2, (C) 7, (A) 3 and (C) 6 of the airbag sensor assembly to TERMINAL (B) 25, (B) 26 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.

If occupant classification ECU detects the presence of a child in the front passenger seat, it prohibits the deployment of the SRS airbag to prevent the child from being injured by the airbag.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A11	36 (*1)	C8 B	40	O8 A	44 (*3)
	38 (*2)	C14	42	O9 C	45 (*4)
A12	36 (*1)	C15	42	O10 D	45 (*4)
	38 (*2)	C16	42	O11 B	45 (*4)
A22 A	40	C17	42	O12 B	45 (*4)
A23 B	40	D3	40	O13 B	45 (*4)
A24 C	40	E6 A	40	O14 B	45 (*4)
A27	40	E7 B	40	P13	43
A37	40	J5 A	41	P14	43
B10	44 (*3)	J6 B	41	S15	43
	45 (*4)	J18 A	44 (*3)	S16	43
B11	A	J19 B	44 (*3)	S19	44 (*3)
		O3 A	44 (*3)		45 (*4)
	B	O4 B	44 (*3)	S20	44 (*3)
		O5 A	44 (*3)		45 (*4)
C5	40	O6 A	44 (*3)		
C7 A	40	O7 A	44 (*3)		

○ : 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)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2R		
3A	34	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

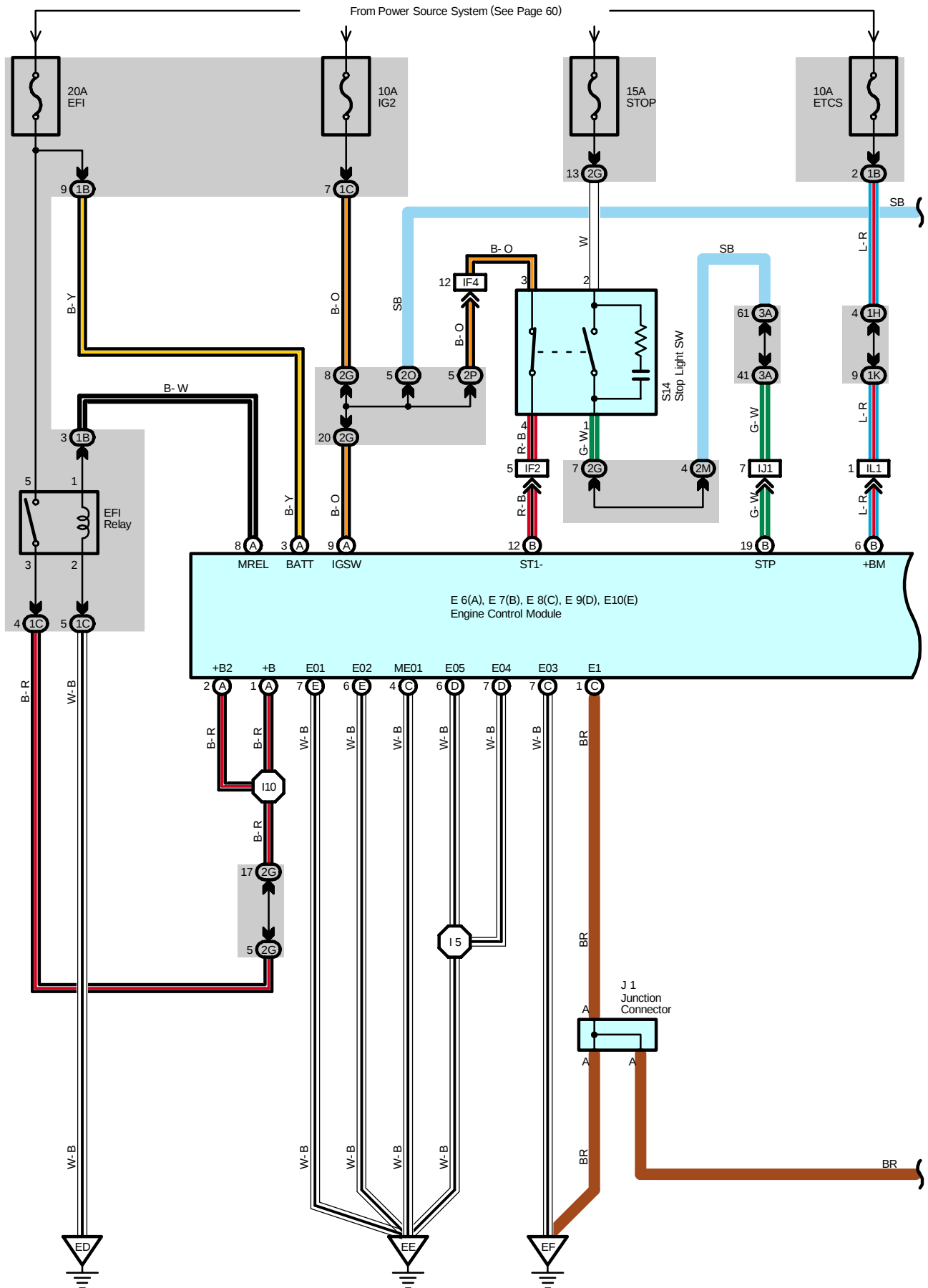
 : **Connector Joining Wire Harness and Wire Harness**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF4	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF5		
IN4	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BE1	56	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

 : **Ground Points**

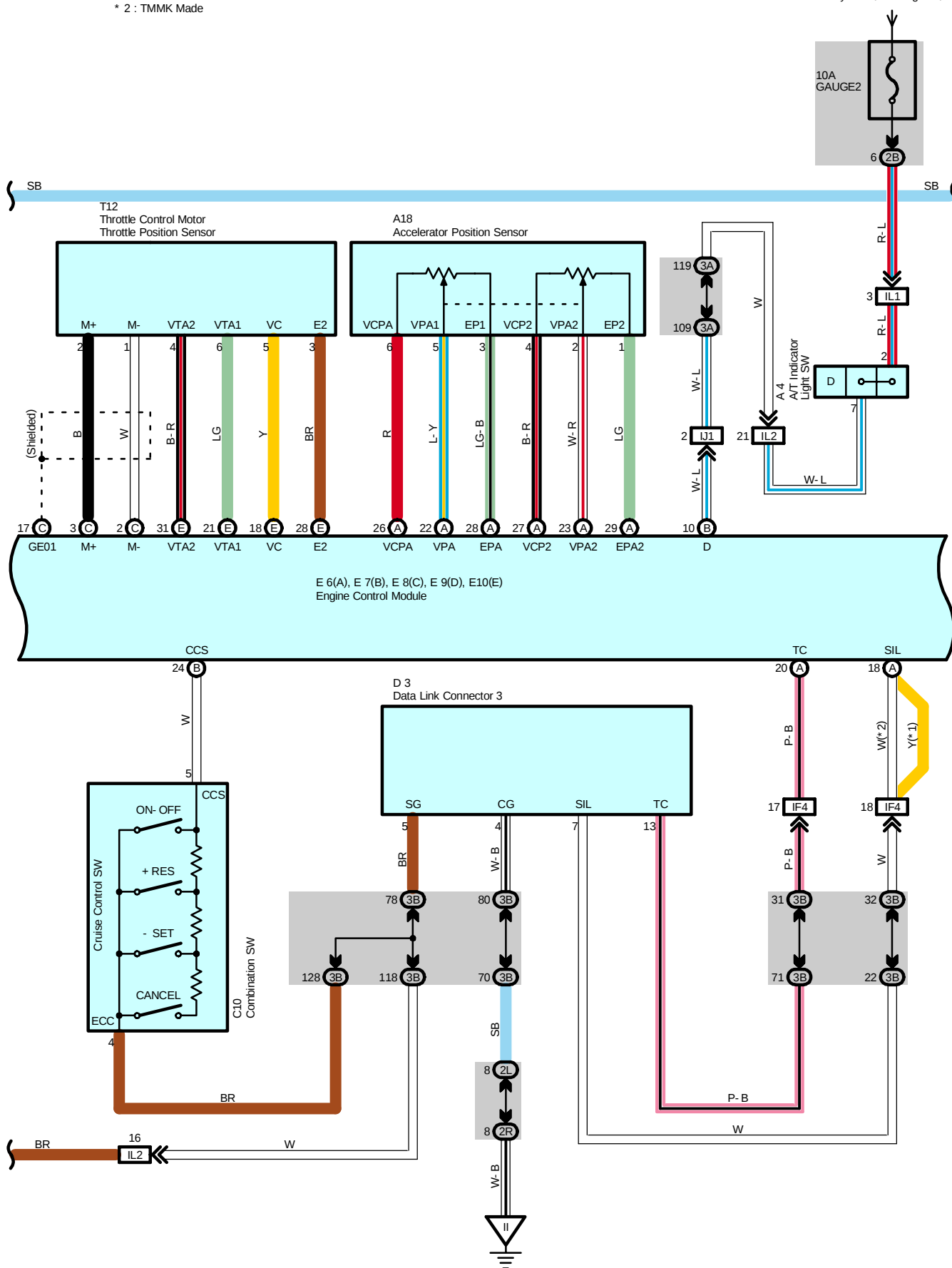
Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
BP	54	Under the Front Passenger's Seat
BR	54	Front Side of Rear Quarter Wheel House RH

Cruise Control for 1MZ-FE and 3MZ-FE



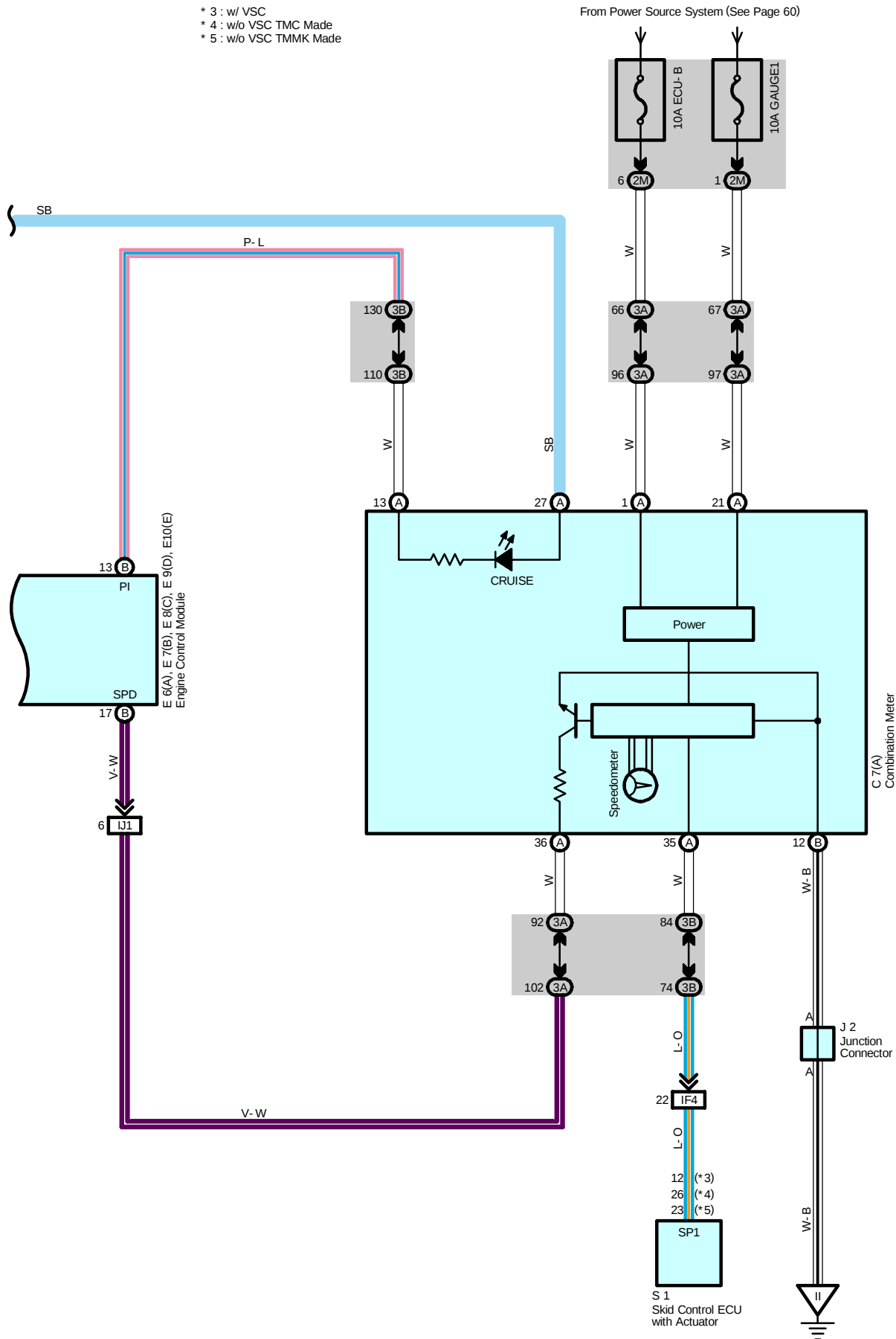
- * 1 : TMC Made
- * 2 : TMMK Made

From Power Source System (See Page 60)



Cruise Control for 1MZ-FE and 3MZ-FE

- * 3 : w/ VSC
- * 4 : w/o VSC TMC Made
- * 5 : w/o VSC TMMK Made



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

3. Coast Control

When the - SET SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to decelerate the vehicle. Every time the - SET SW is turned on instantaneously, the vehicle speed is decelerated approximately 1.6 km/h.

4. Accel Control

When the + RES SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to accelerate the vehicle. Every time the + RES SW is turned on instantaneously, the vehicle speed is accelerated approximately 1.6 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 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 SW is turned off.
- * Gear is shifted from D position to other position than D.

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 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 the ignition SW at ON or ST position
- (A) 3, (B) 6-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 the stop light SW at on
- (B)24-Ground : Continuity with the cruise control SW at on
 - Approx. 1540 Ω with the CANCEL SW on in cruise control SW
 - Approx. 240 Ω with the + RES SW on in cruise control SW
 - Approx. 630 Ω with the - SET SW on in cruise control SW

C10 Combination SW

- 5-4 : Approx. 1540 Ω with the CANCEL SW on
 - Approx. 240 Ω with the + RES SW on
 - Approx. 630 Ω with the - SET SW on

Cruise Control for 1MZ-FE and 3MZ-FE

: Parts Location

Code		See Page		Code		See Page		Code		See Page	
A4		36 (*1)		E6	A	40		J1	41		
A18		40		E7	B	40		J2	41		
C7	A	40		E8	C	40		S1	37 (*1)		
C10		40		E9	D	40		S14	41		
D3		40		E10	E	40		T12	37 (*1)		

: 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)
2L	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2M		
2O		
2P		
2R		
3A	34	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)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: Ground Points

Code	See Page	Ground Points Location
ED	46 (*1)	Left Fender
EE	46 (*1)	Left Side of Cylinder Head
EF	46 (*1)	Right Side of Cylinder Head
II	50	Cowl Side Panel LH

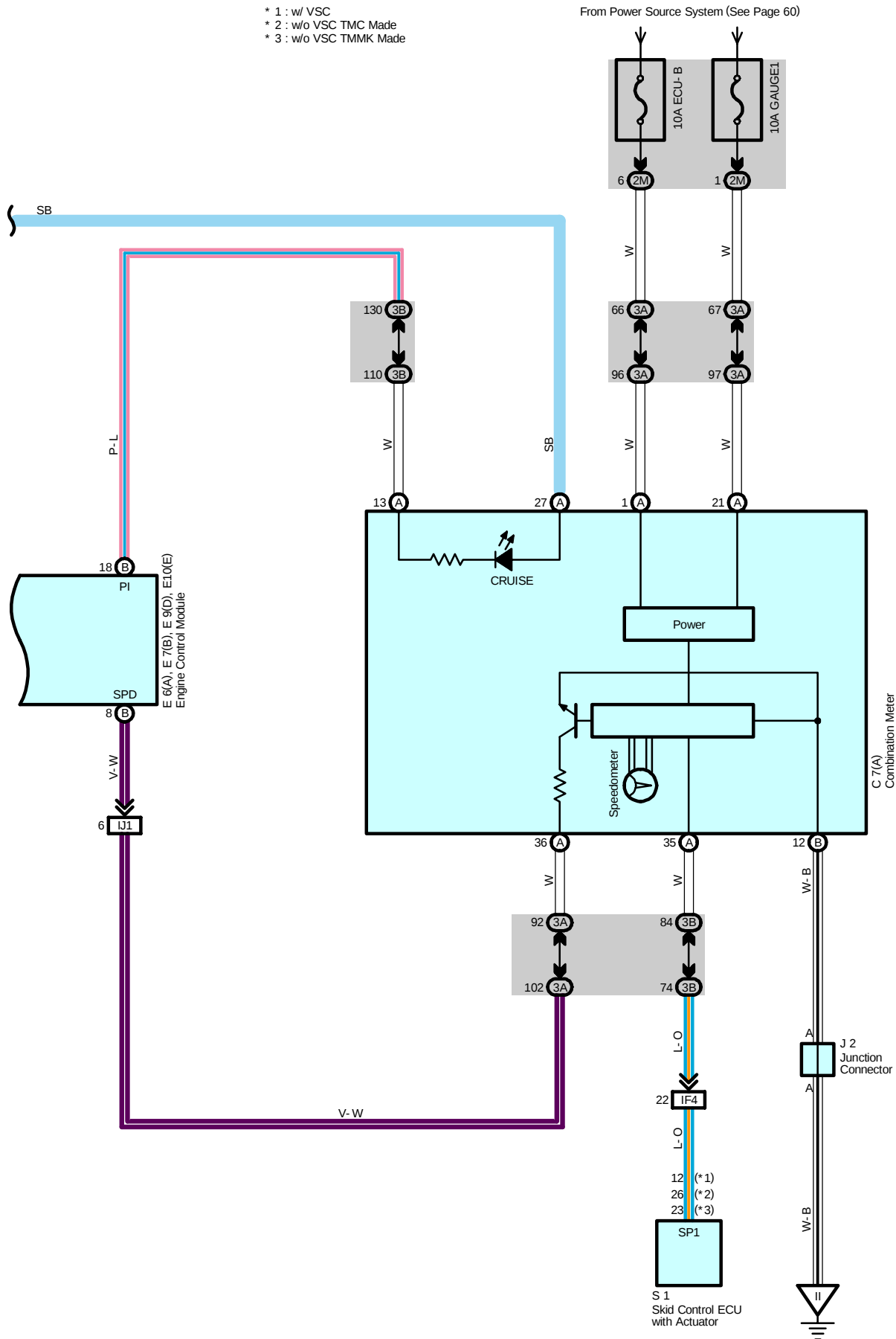
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	52	Engine Wire	I10	52	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Cruise Control for 2AZ-FE

- * 1 : w/ VSC
- * 2 : w/o VSC TMC Made
- * 3 : w/o VSC TMMK Made



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

3. Coast Control

When the - SET SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to decelerate the vehicle. Every time the - SET SW is turned on instantaneously, the vehicle speed is decelerated approximately 1.6 km/h.

4. Accel Control

When the + RES SW is kept turned on during cruise control travelling, the engine control module controls the throttle valve to accelerate the vehicle. Every time the + RES SW is turned on instantaneously, the vehicle speed is accelerated approximately 1.6 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 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 SW is turned off.
- * Gear is shifted D position to other positions than D. (A/T)
- * The clutch pedal is depressed. (M/T)

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 2 km/h, 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), E9 (D), E10 (E) Engine Control Module

- (A) 9-Ground : Approx. 12 volts with the ignition SW at ON or ST position
- (A) 3, (A) 7-Ground : Always approx. 12 volts
- (A)22, (D) 3, (D) 4, (D) 7, (E) 3, (E) 6, (E) 7-Ground : Always continuity
- (B) 4-Ground : Approx. 12 volts with the stop light SW at on
- (B)31-Ground : Continuity with the cruise control main SW at on
 - Approx. 1540 Ω with the CANCEL SW on in cruise control SW
 - Approx. 240 Ω with the + RES SW on in cruise control SW
 - Approx. 630 Ω with the - SET SW on in cruise control SW

C10 Combination SW

- 5-4 : Approx. 1540 Ω with the CANCEL SW on
 - Approx. 240 Ω with the + RES SW on
 - Approx. 630 Ω with the - SET SW on

Cruise Control for 2AZ-FE

: Parts Location

Code		See Page		Code		See Page		Code		See Page	
A4		38 (*2)		E6	A	40		J7	A	41	
A18		40		E7	B	40		J8	B	41	
C7	A	40		E9	D	40		S1		39 (*2)	
C10		40		E10	E	40		S14		41	
C12		40		J1		41		T12		39 (*2)	
D3		40		J2		41					

: 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		
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	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)
IF4	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

: Ground Points

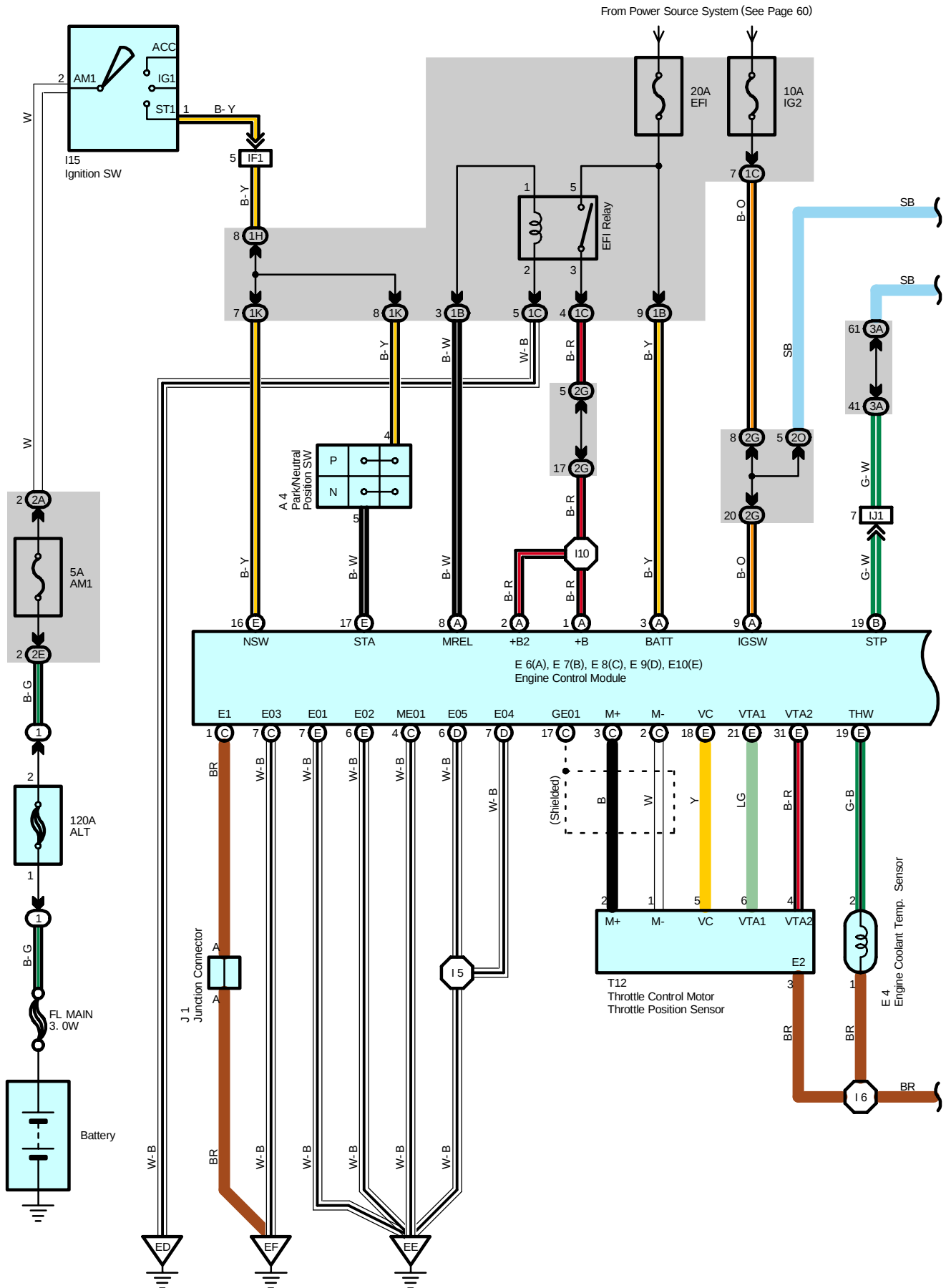
Code	See Page	Ground Points Location
EC	48 (*2)	Left Fender
ED		
EG	48 (*2)	Left Side of Cylinder Head
EH	48 (*2)	Intake Side of Cylinder Block
II	50	Cowl Side Panel LH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I10	52	Engine Room Main Wire			

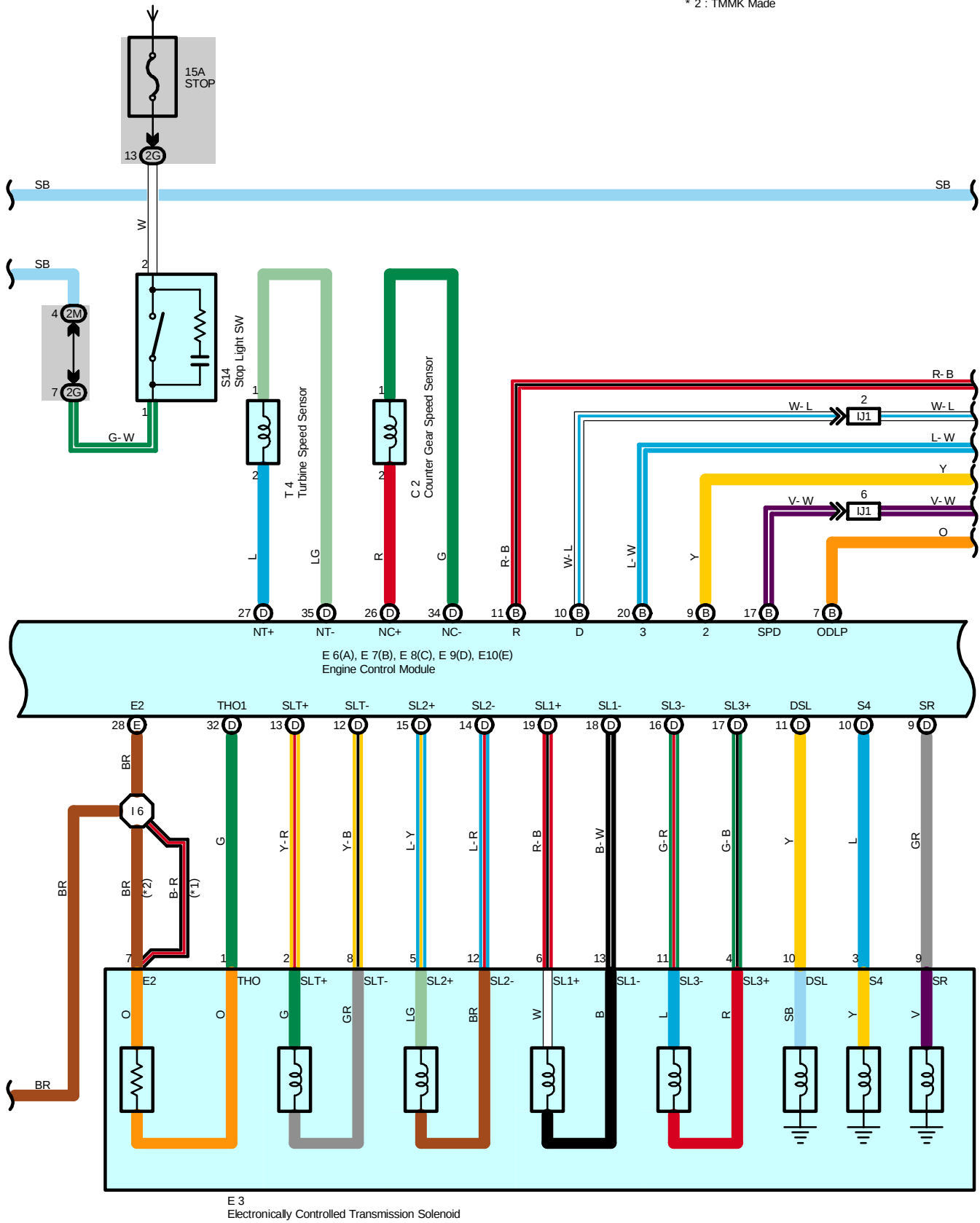
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

ECT and A/T Indicator for 1MZ-FE and 3MZ-FE

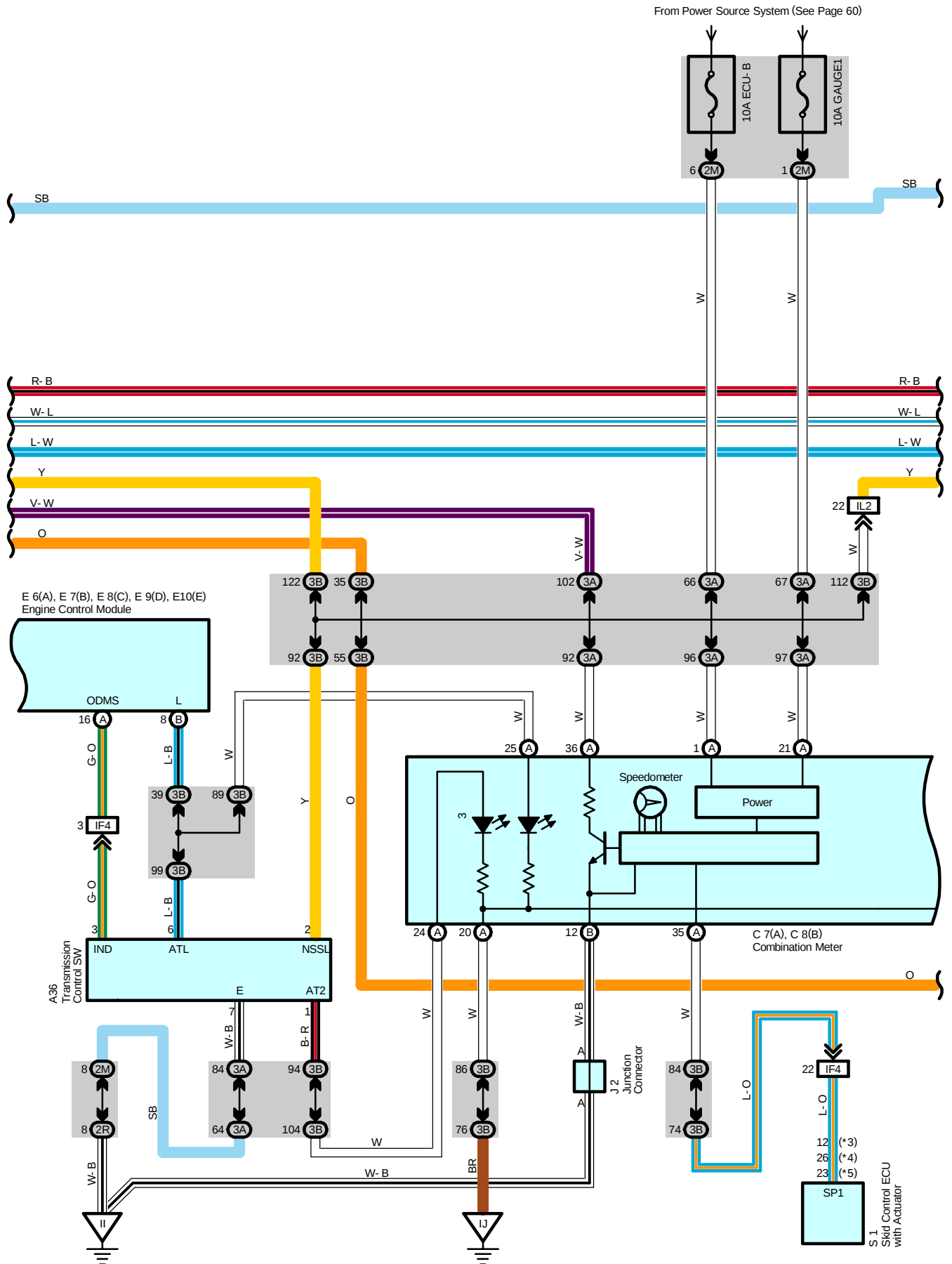


From Power Source System (See Page 60)

* 1 : TMC Made
* 2 : TMMK Made



ECT and A/T Indicator for 1MZ-FE and 3MZ-FE



ECT and A/T Indicator for 1MZ-FE and 3MZ-FE

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 10. At the same time, the current flows engine control module TERMINAL SL1+ to electronically controlled transmission solenoid TERMINAL 6 and from TERMINAL 13 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.

4. Overdrive Circuit

* Overdrive on

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

* Overdrive off

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

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)

ODMS-E1 : 10.0-14.0 volts (O/D main SW on)

Below 1.0 volts (O/D main SW off)

THO1-E2 : Below 1.0 volts (Ignition SW on and AFT temperature 110 °C (230 °F))

SLT+ -SLT- : 10.0-14.0 volts (Ignition SW on)

A4 A/T Indicator Light SW

2-6 : Closed with the shift lever in P position

2-1 : Closed with the shift lever in R position

2-9 : Closed with the shift lever in N position

2-7 : Closed with the shift lever in D position

2-8 : Closed with the shift lever in L position

2-3 : Closed with the shift lever in 2 position

 : Parts Location

Code		See Page		Code		See Page		Code		See Page	
A4		36 (*1)		E6	A	40		J2	41		
A36		40		E7	B	40		S1	37 (*1)		
C2		36 (*1)		E8	C	40		S14	41		
C7	A	40		E9	D	40		T4	37 (*1)		
C8	B	40		E10	E	40		T12	37 (*1)		
E3		36 (*1)		I15		41					
E4		36 (*1)		J1		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)
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)
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		
2O		
2R		
3A	34	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)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

 : Ground Points

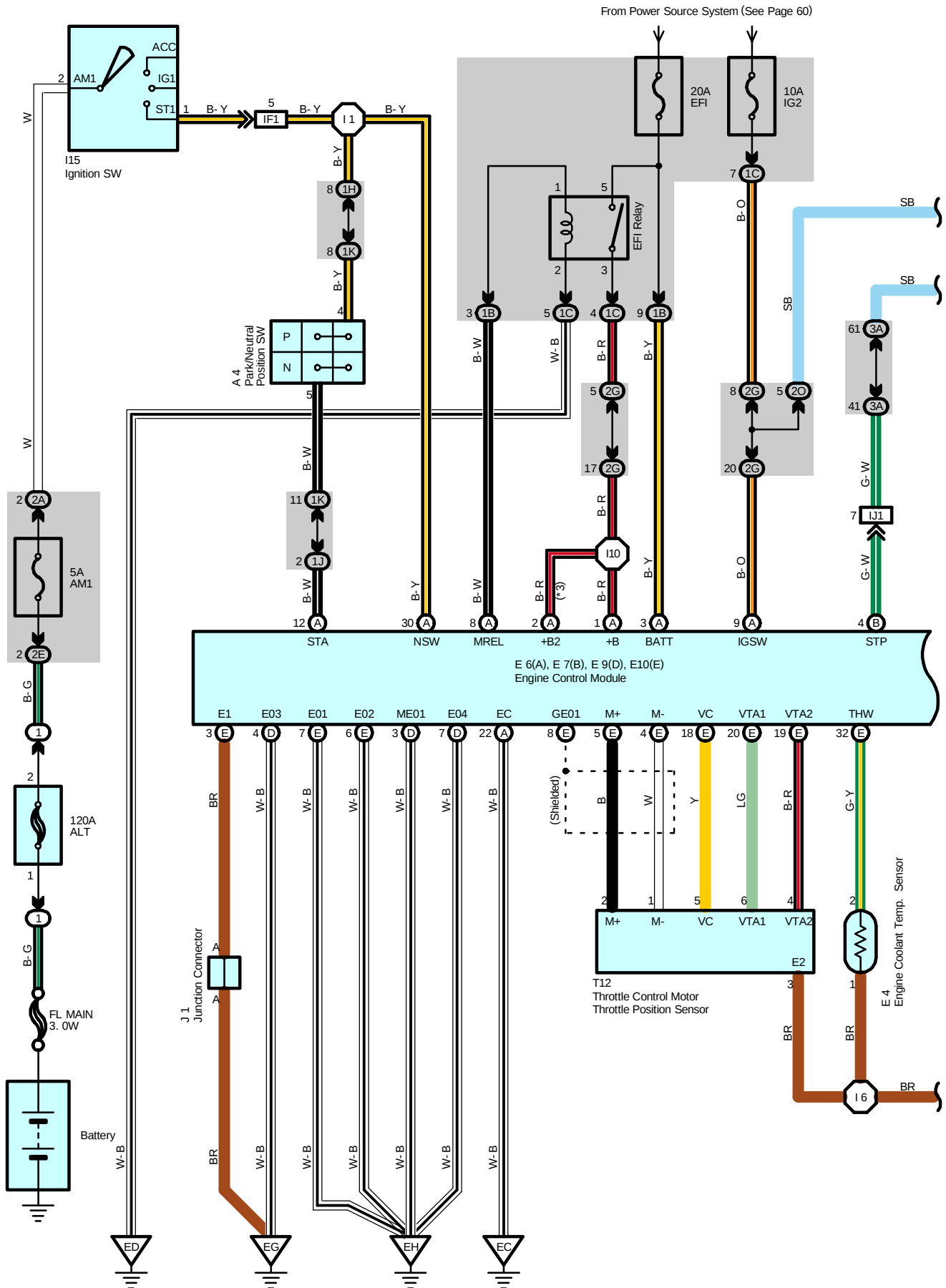
Code	See Page	Ground Points Location
ED	46 (*1)	Left Fender
EE	46 (*1)	Left Side of Cylinder Head
EF	46 (*1)	Right Side of Cylinder Head
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH

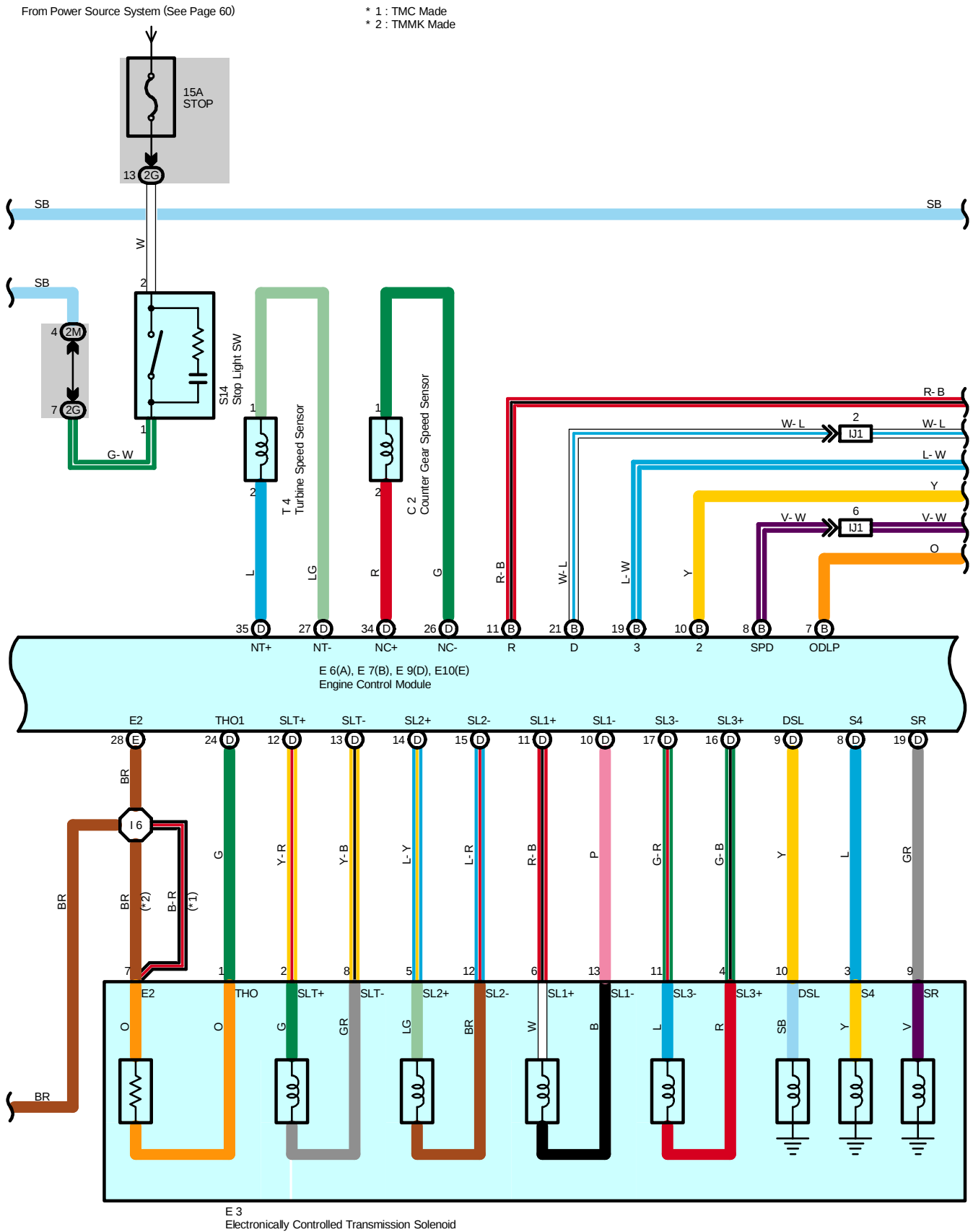
 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	52	Engine Wire	I10	52	Engine Room Main Wire
I6					

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

ECT and A/T Indicator for 2AZ-FE







ECT and A/T Indicator for 2AZ-FE

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 10. At the same time, the current flows engine control module TERMINAL SL1+ to electronically controlled transmission solenoid TERMINAL 6 and from TERMINAL 13 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.

4. Overdrive Circuit

* Overdrive on

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

* Overdrive off

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

Service Hints

E6 (A), E7 (B), 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)

ODMS-E1 : 10.0-14.0 volts (O/D main SW on)

Below 1.0 volts (O/D main SW off)

THO1-E2 : Below 1.0 volts (Ignition SW on and AFT temperature 110 °C (230 °F))

SLT+ -SLT- : 10.0-14.0 volts (Ignition SW on)

A4 A/T Indicator Light SW

2-6 : Closed with the shift lever in P position

2-1 : Closed with the shift lever in R position

2-9 : Closed with the shift lever in N position

2-7 : Closed with the shift lever in D position

2-8 : Closed with the shift lever in L position

2-3 : Closed with the shift lever in 2 position

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	38 (*2)	E4	38 (*2)	J1	41
A36	40	E6	A 40	J2	41
C2	38 (*2)	E7	B 40	S1	39 (*2)
C7	A 40	E9	D 40	S14	41
C8	B 40	E10	E 40	T4	39 (*2)
E3	38 (*2)	I15	41	T12	39 (*2)

 : Relay Blocks

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

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1C		
1H		
1J		
1K	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
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		
2O		
2R		
3A	34	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)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

 : Ground Points

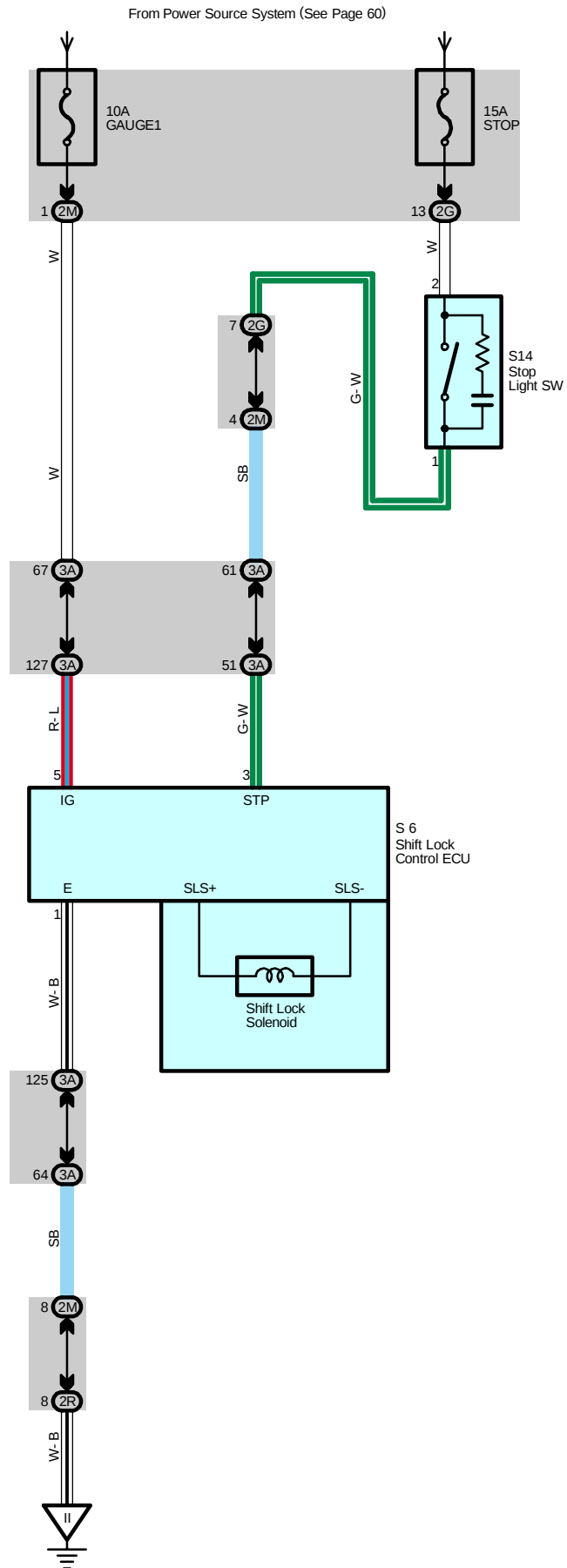
Code	See Page	Ground Points Location
EC	48 (*2)	Left Fender
ED		
EG	48 (*2)	Left Side of Cylinder Head
EH	48 (*2)	Intake Side of Cylinder Block
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH

 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	52	Engine Room Main Wire	I10	52	Engine Room Main Wire
I6	52	Engine Wire			

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

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

S6 Shift Lock Control ECU

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

1-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
S6	41	S14	41		

: 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	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)

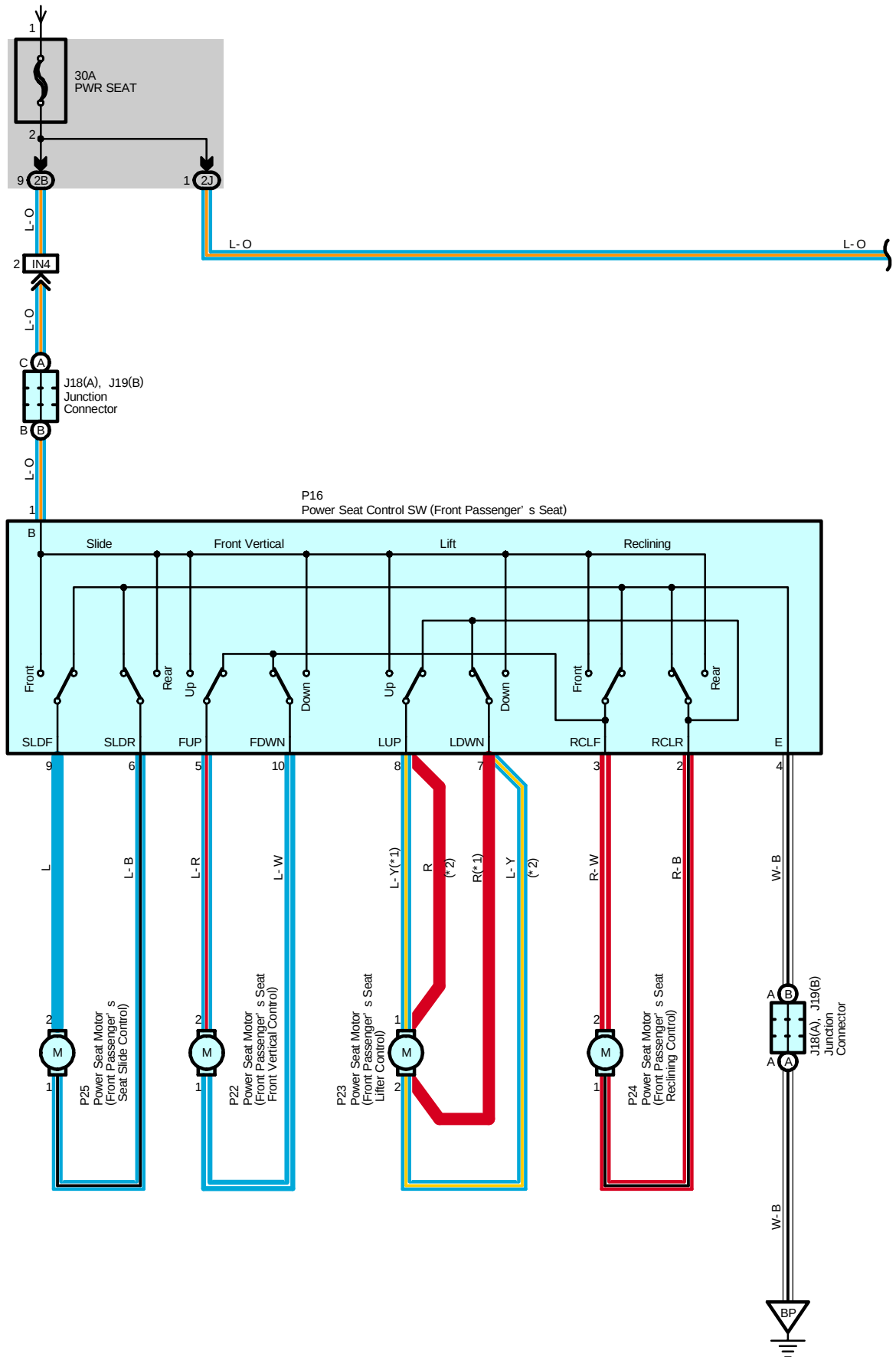
: Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH

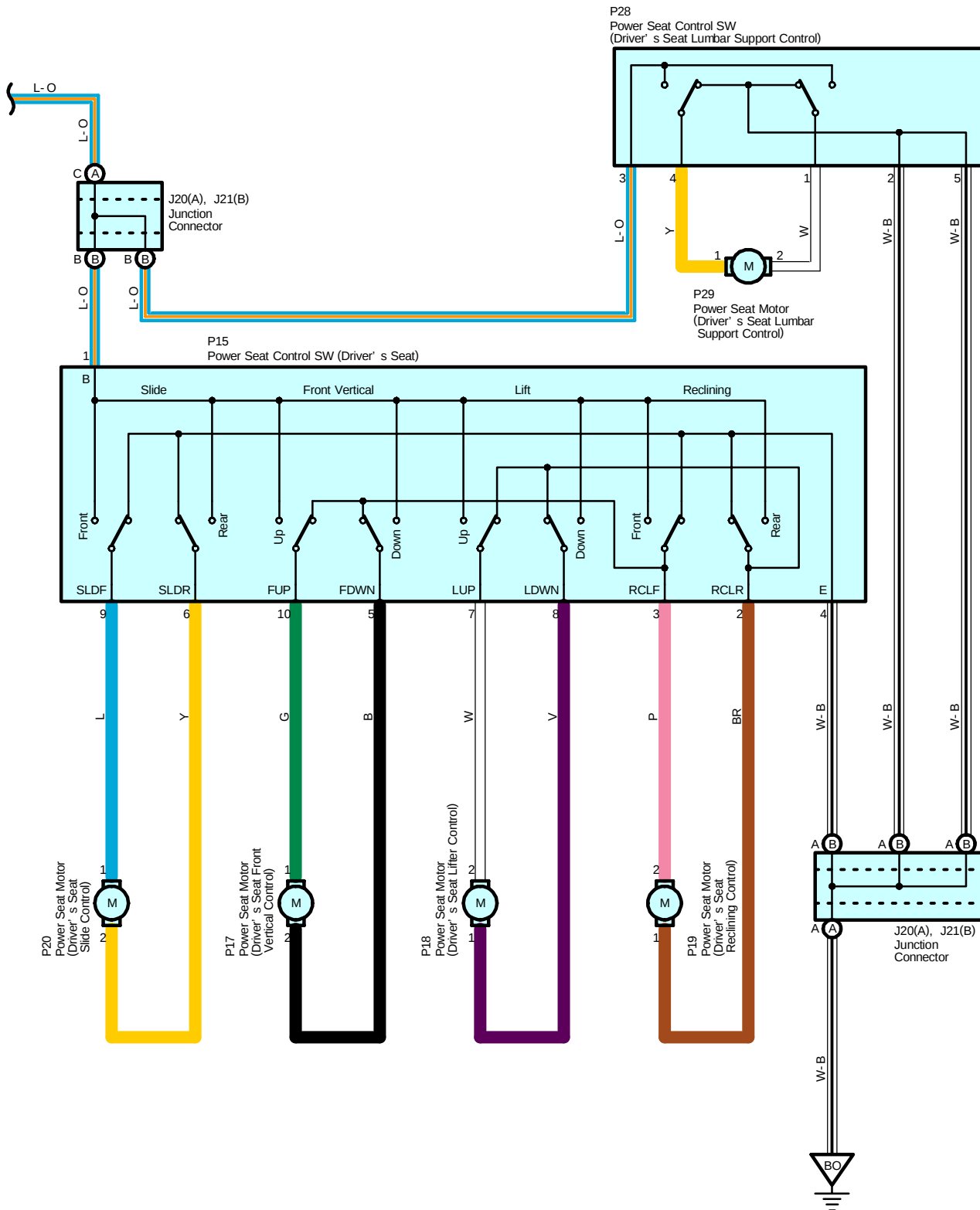
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Power Seat

From Power Source System (See Page 60)



- * 1 : TMC Made
- * 2 : TMMK Made



Power Seat

Service Hints

P15 Power Seat Control SW (Driver's Seat)

1-Ground : Always approx. 12 volts

4-Ground : Always continuity

P16 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
J18	A	44 (*3)	P16	44 (*3)	P24	44 (*3)
J19	B	44 (*3)	P17	44 (*3)	P25	44 (*3)
J20	A	44 (*3)	P18	44 (*3)	P28	44 (*3)
		45 (*4)	P19	44 (*3)		45 (*4)
J21	B	44 (*3)	P20	44 (*3)	P29	44 (*3)
		45 (*4)	P22	44 (*3)		45 (*4)
P15		44 (*3)	P23	44 (*3)		

○ : 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 Wire and Driver Side J/B (Lower Finish Panel)

□ : Connector Joining Wire Harness and Wire Harness

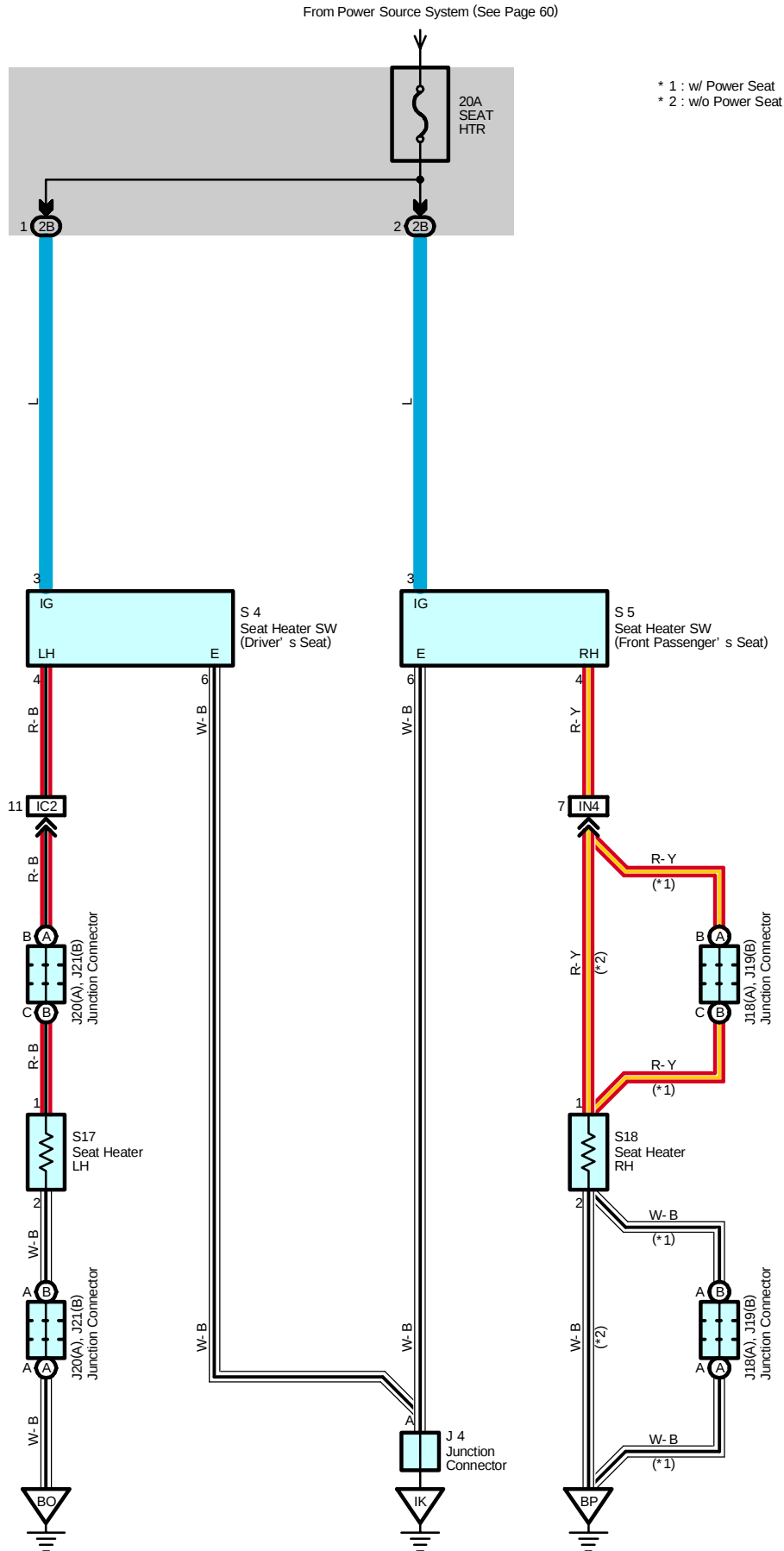
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IN4	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
BO	54	Under the Driver's Seat
BP	54	Under the Front Passenger's Seat

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Seat Heater



Service Hints

S4 Seat Heater SW (Driver's Seat)

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

6-Ground : Always continuity

S5 Seat Heater SW (Front Passenger's Seat)

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

6-Ground : Always continuity

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
J4		41	J20	A	45 (*4)	S5	41
J18	A	44 (*3)	J21	B	44 (*3)	S17	44 (*3)
J19	B	44 (*3)			45 (*4)	S18	44 (*3)
J20	A	44 (*3)	S4		41		45 (*4)

○ : 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

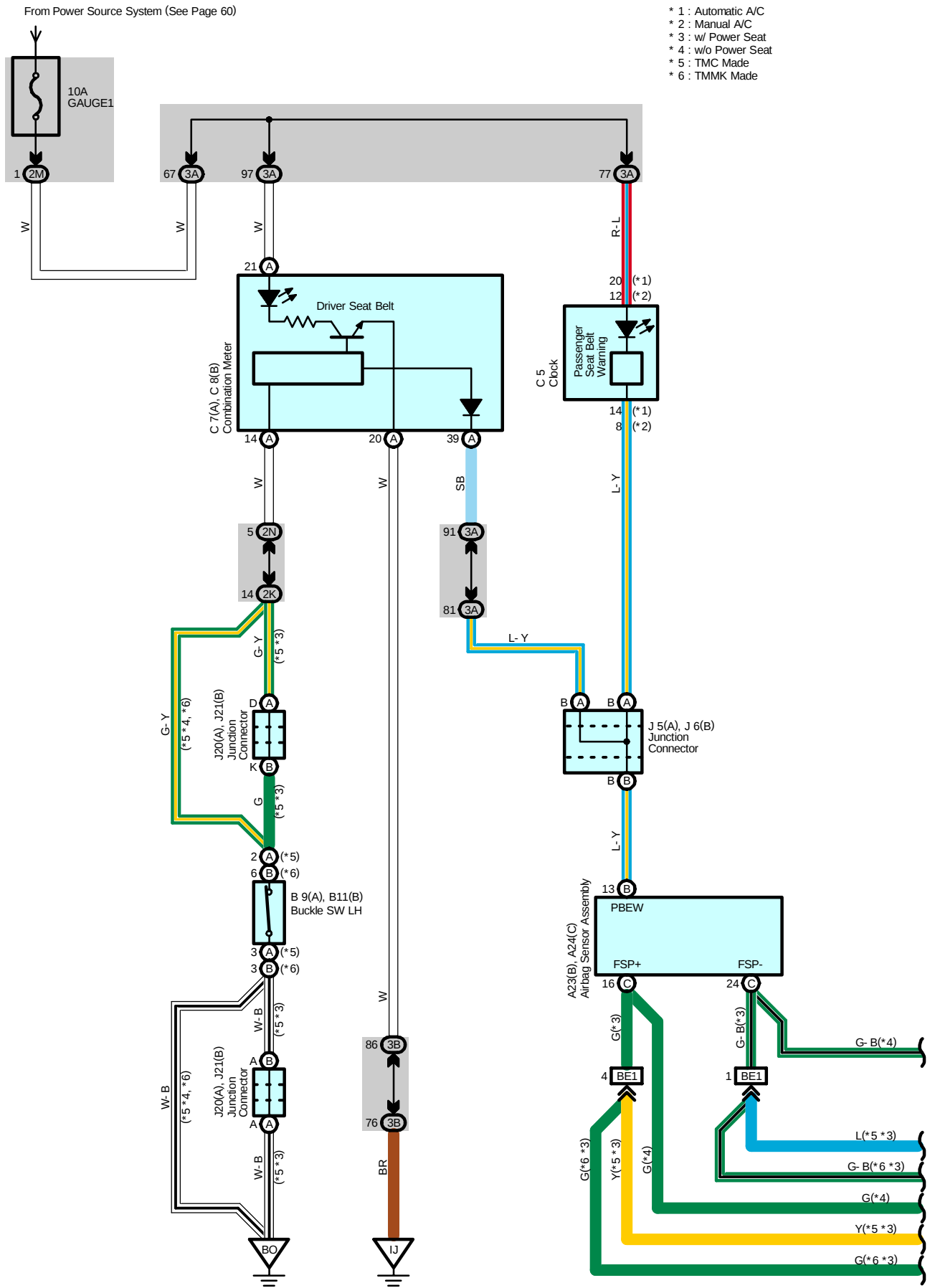
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC2	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IN4	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
IK	50	Instrument Panel Brace LH
BO	54	Under the Driver's Seat
BP	54	Under the Front Passenger's Seat

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Seat Belt Warning



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.

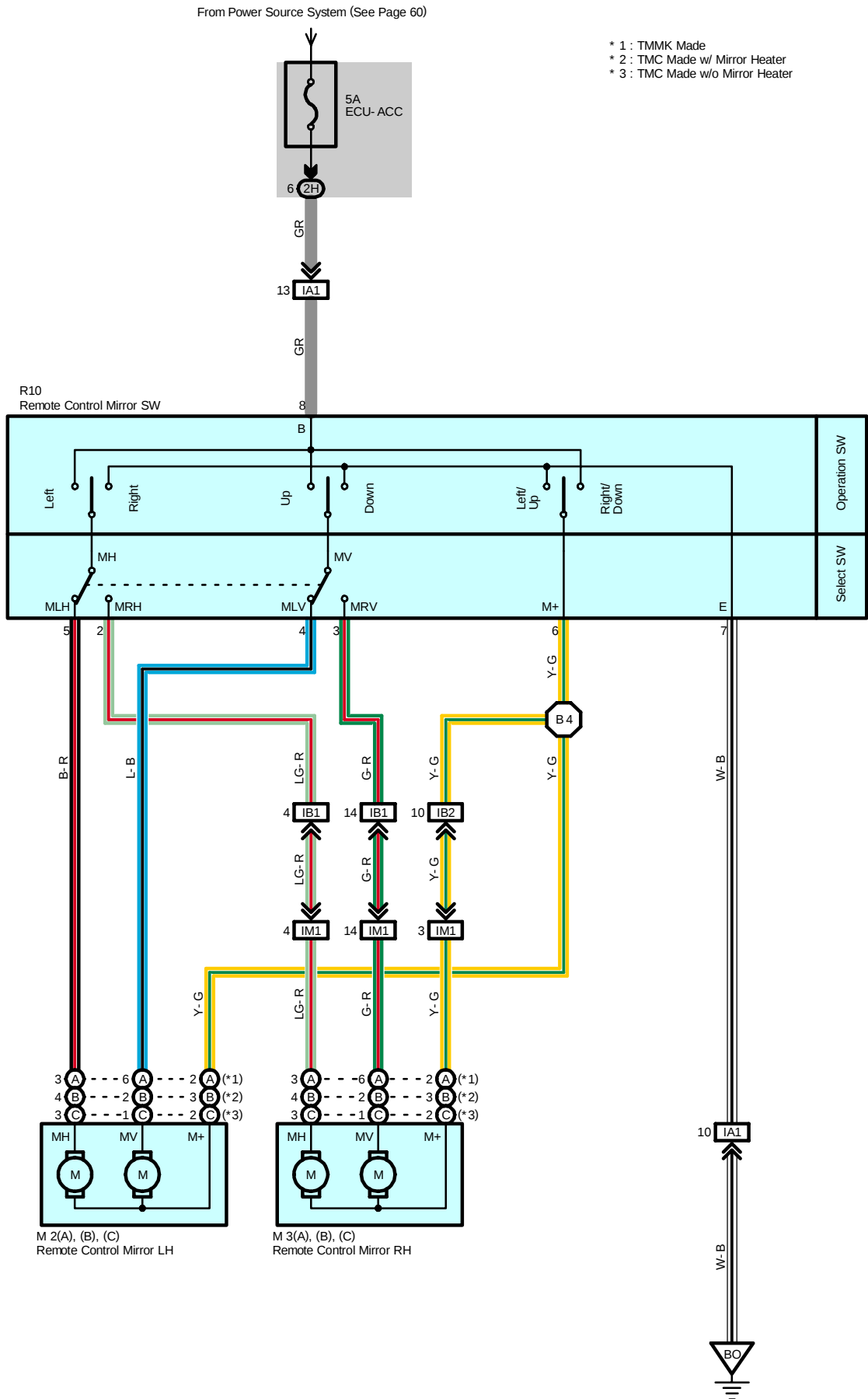
Code		See Page	Code		See Page	Code		See Page
A23	B	40	B11	B	45 (*4)	J19	B	44 (*3)
A24	C	40	C5		40	J20	A	44 (*3)
B9	A	44 (*3)	C7	A	40			45 (*4)
		45 (*4)	C8	B	40	J21	B	44 (*3)
B10		44 (*3)	J5	A	41			45 (*4)
		45 (*4)	J6	B	41		O4	A
B11	B	44 (*3)	J18	A	44 (*3)	O10	B	45 (*4)

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 Wire and Driver Side J/B (Lower Finish Panel)
2M	29	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
2N		
3A	34	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IN4	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)
BE1	56	Floor No.2 Wire and Front Seat RH Wire (Under the Front Passenger's Seat)

Code	See Page	Ground Points Location
IJ	50	Instrument Panel Brace LH
BO	54	Under the Driver's Seat
BP	54	Under the Front Passenger's Seat
BR	54	Front Side of Rear Quarter Wheel House RH

Remote Control Mirror



Service Hints

R10 Remote Control Mirror SW

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

7-Ground : Always continuity

8-6 : Continuity with the operation SW at DOWN or RIGHT position

6-7 : Continuity with the operation SW at UP or LEFT position

: Parts Location

Code		See Page	Code		See Page	Code		See Page
M2	A	43	M3	A	43	R10	43	
	B	43		B	43			
	C	43		C	43			

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
2H	28	Floor 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)
IA1	50	Front Door LH Wire and Floor Wire (Left Kick Panel)
IB1	50	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB2		
IM1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

: Ground Points

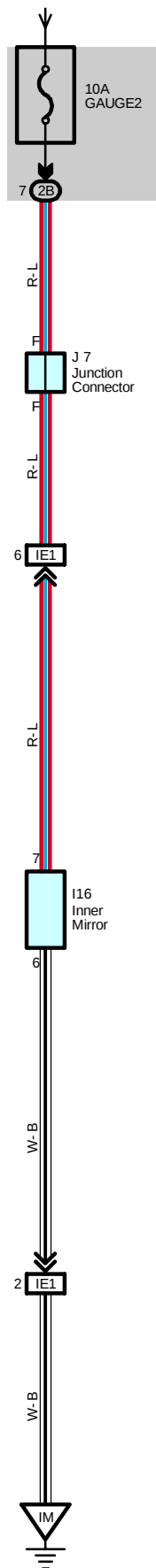
Code	See Page	Ground Points Location
BO	54	Under the Driver's Seat

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	54	Front Door LH Wire			

Automatic Glare-Resistant EC Mirror

From Power Source System (See Page 60)



Service Hints

I16 Inner Mirror

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

6-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
I16	42	J7	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

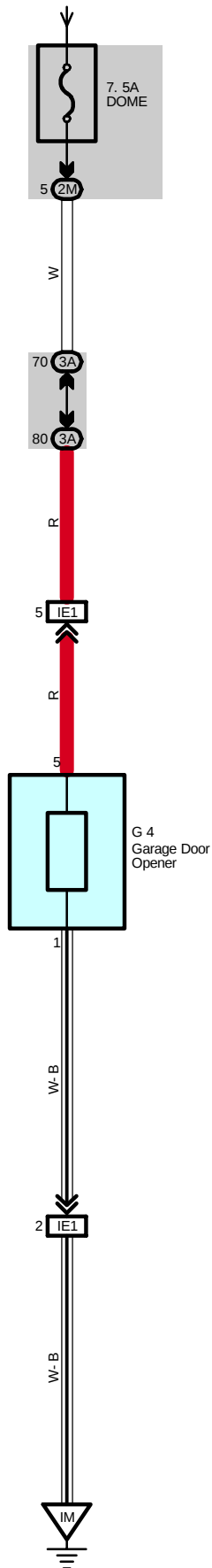
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	50	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)

: Ground Points

Code	See Page	Ground Points Location
IM	50	Instrument Panel Reinforcement RH

Garage Door Opener

From Power Source System (See Page 60)



Service Hints

G4 Garage Door Opener

5-Ground : Always approx. 12 volts

1-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
G4	42				

: 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	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)

: Connector Joining Wire Harness and Wire Harness

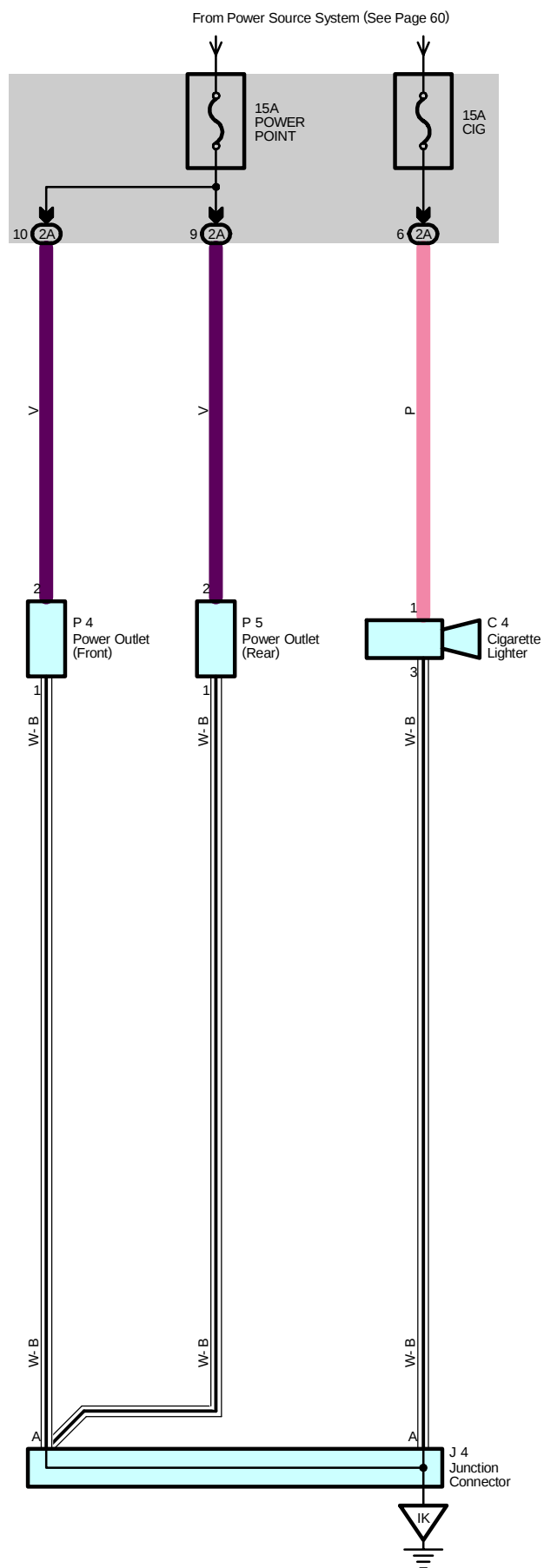
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	50	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)

: Ground Points

Code	See Page	Ground Points Location
IM	50	Instrument Panel Reinforcement RH

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Power Outlet and Cigarette Lighter



Service Hints

C4 Cigarette Lighter

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

P4 Power Outlet (Front)

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

P5 Power Outlet (Rear)

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

: Parts Location

Code	See Page	Code	See Page	Code	See Page
C4	40	P4	41		
J4	41	P5	41		

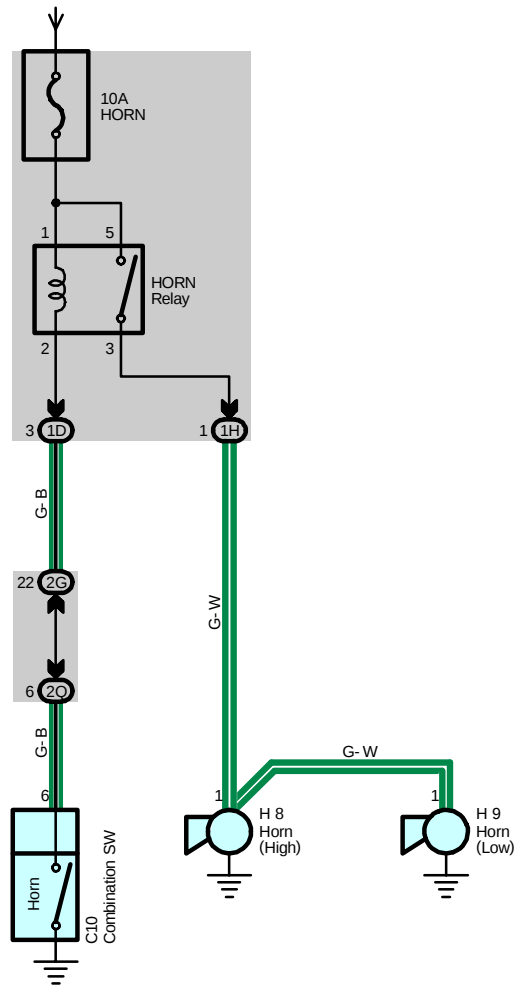
: Junction Block and Wire Harness Connector

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

: Ground Points

Code	See Page	Ground Points Location
IK	50	Instrument Panel Brace LH

From Power Source System (See Page 60)



Service Hints

HORN Relay

5-3 : Closed with the horn SW on

: Parts Location

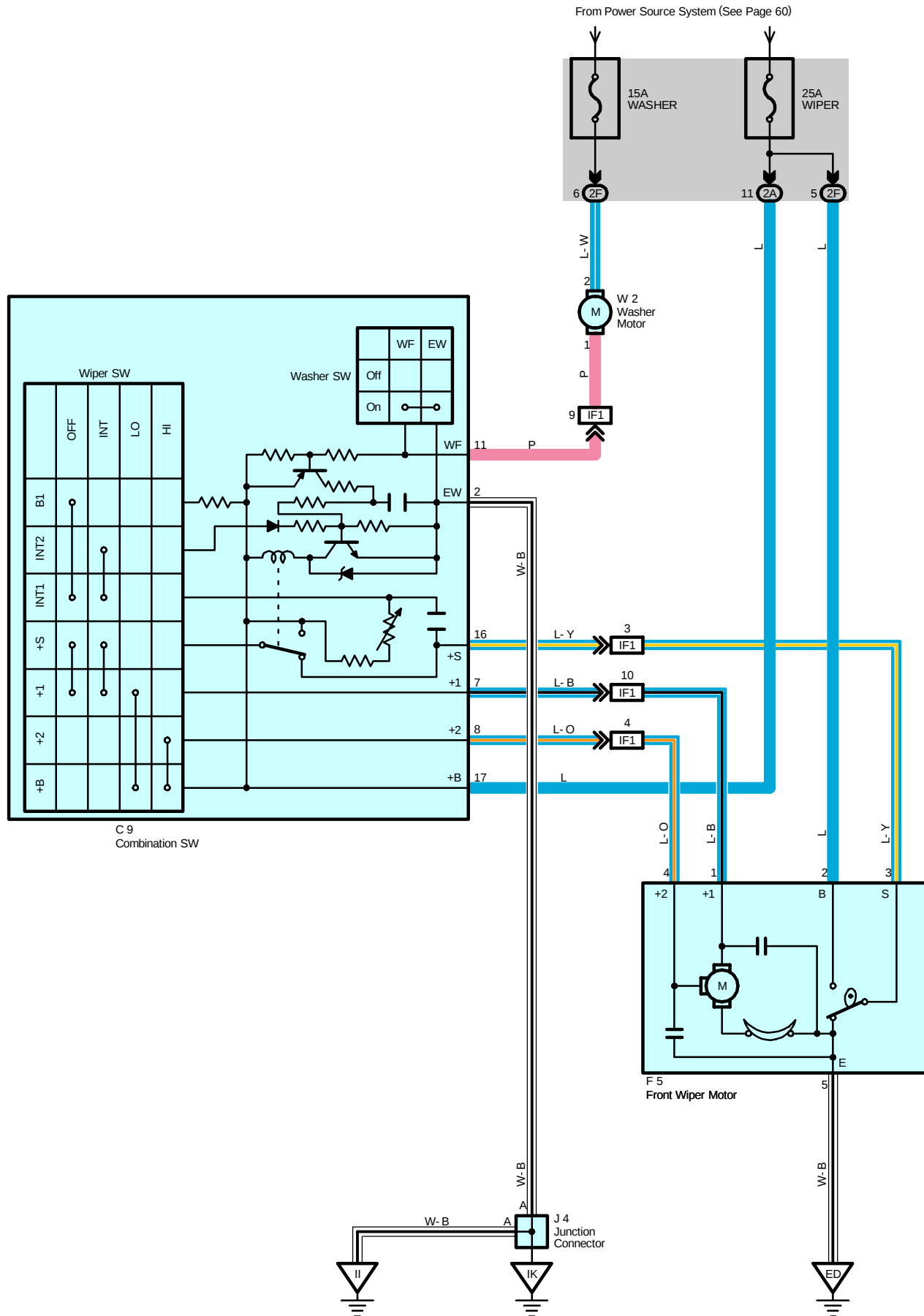
Code	See Page	Code	See Page	Code	See Page
C10	40	H8	38 (*2)	H9	38 (*2)
H8	36 (*1)	H9	36 (*1)		

: 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)

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Wiper and Washer



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 Interlocking 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

F5 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	40	F5	38 (*2)	W2	37 (*1)
F5	36 (*1)	J4	41		39 (*2)

○ : 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)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Wiper and Washer

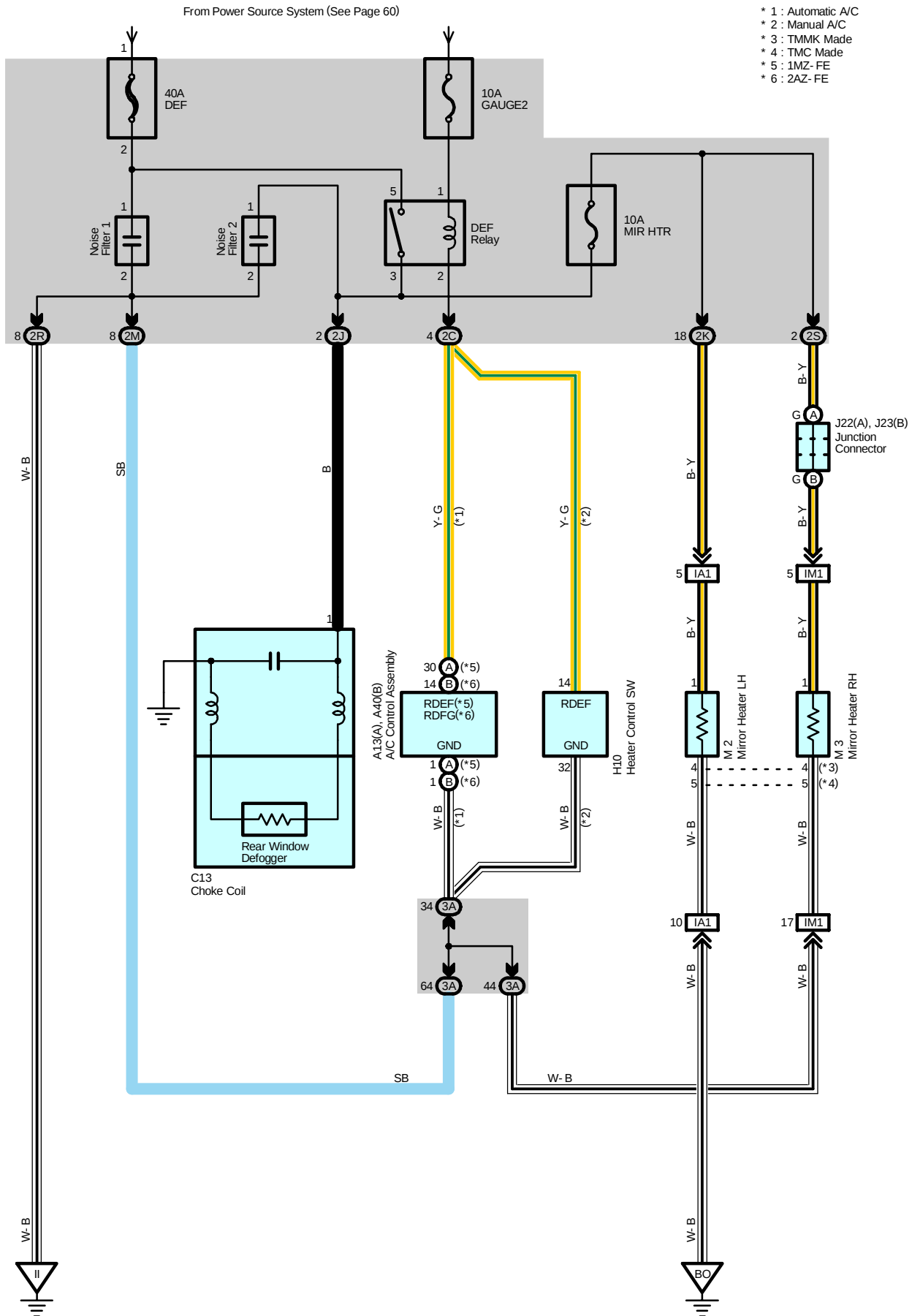


: Ground Points

Code	See Page	Ground Points Location
ED	46 (*1)	Left Fender
	48 (*2)	
II	50	Cowl Side Panel LH
IK	50	Instrument Panel Brace LH

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Rear Window Defogger and Mirror Heater



Service Hints

DEF Relay

5-3 : Closed with the ignition SW at on and rear window defogger SW (A/C control assembly), (Heater control SW) on

M2, M3 Mirror Heater LH, RH

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

4 (TMMK Made), 5 (TMC Made)-Ground : Always continuity

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
A13	A	40	H10		41	M2	43
A40	B	40	J22	A	41	M3	43
C13		42	J23	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 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	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)

□ : Connector Joining Wire Harness and Wire Harness

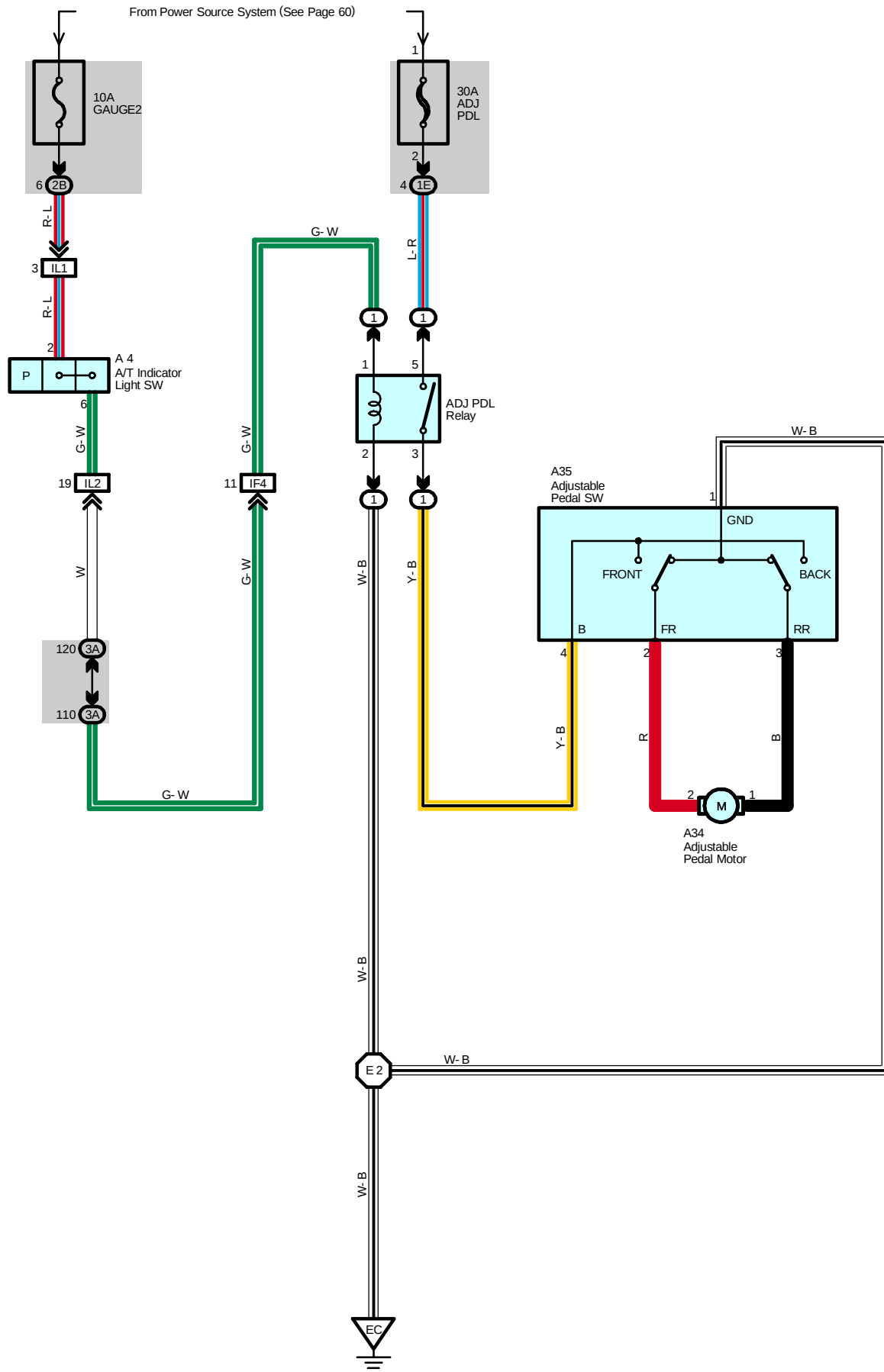
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	50	Front Door LH Wire and Floor Wire (Left Kick Panel)
IM1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
BO	54	Under the Driver's Seat

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Power Adjustable Pedals



Service Hints

A35 Adjustable Pedal SW

1-Ground : Always continuity

4-Ground : Approx. 12 volts with the ignition SW at ON position and A/T shift lever at P position

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36 (*1)	A34	40		
	38 (*2)	A35	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)
1E	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)
3A	34	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)
IF4	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		

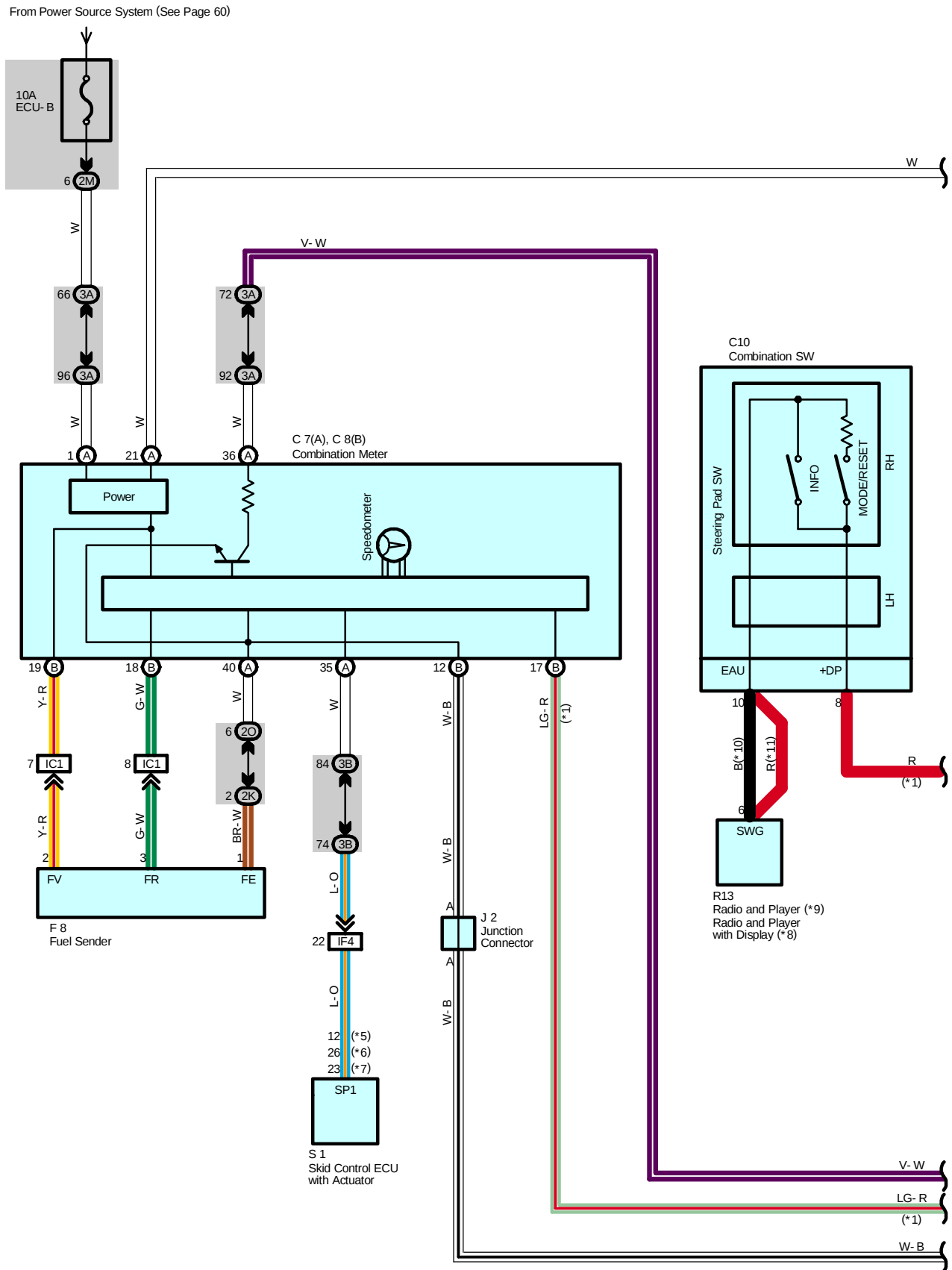
: Ground Points

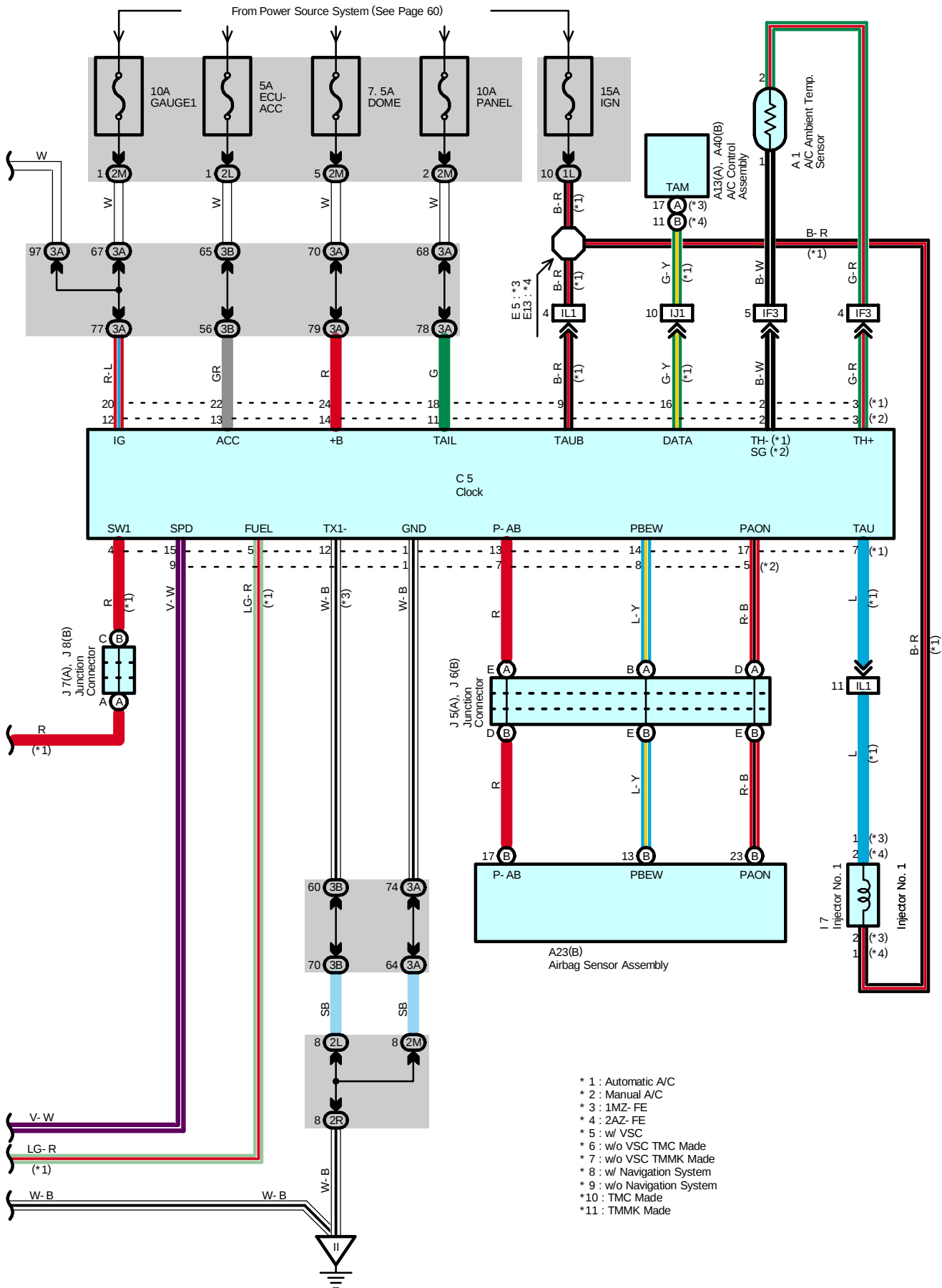
Code	See Page	Ground Points Location
EC	46 (*1)	Left Fender
	48 (*2)	

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	46 (*1)	Engine Room Main Wire	E2	48 (*2)	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat





Clock

Service Hints

C5 Clock

20 (Automatic A/C), 12 (Manual A/C)-Ground : Approx. 12 volts with the ignition SW at ON or ST position
 22 (Automatic A/C), 13 (Manual A/C)-Ground : Approx. 12 volts with the ignition SW at ACC or ON position
 24 (Automatic A/C), 14 (Manual A/C)-Ground : Always approx. 12 volts
 1 (Automatic A/C), 1 (Manual A/C)-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	36 (*1) 38 (*2)	C8 B	40	J6 B	41
A13 A	40	C10	40	J7 A	41
A23 B	40	F8	42	J8 B	41
A40 B	40	I7	37 (*1) 39 (*2)	R13	41
C5	40	J2	41	S1	37 (*1) 39 (*2)
C7 A	40	J5 A	41		

: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1L	25	Engine Wire and Engine Room J/B (Engine Compartment Left)
2K	28	Floor 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	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)
IC1	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IF3	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF4		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

: Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH

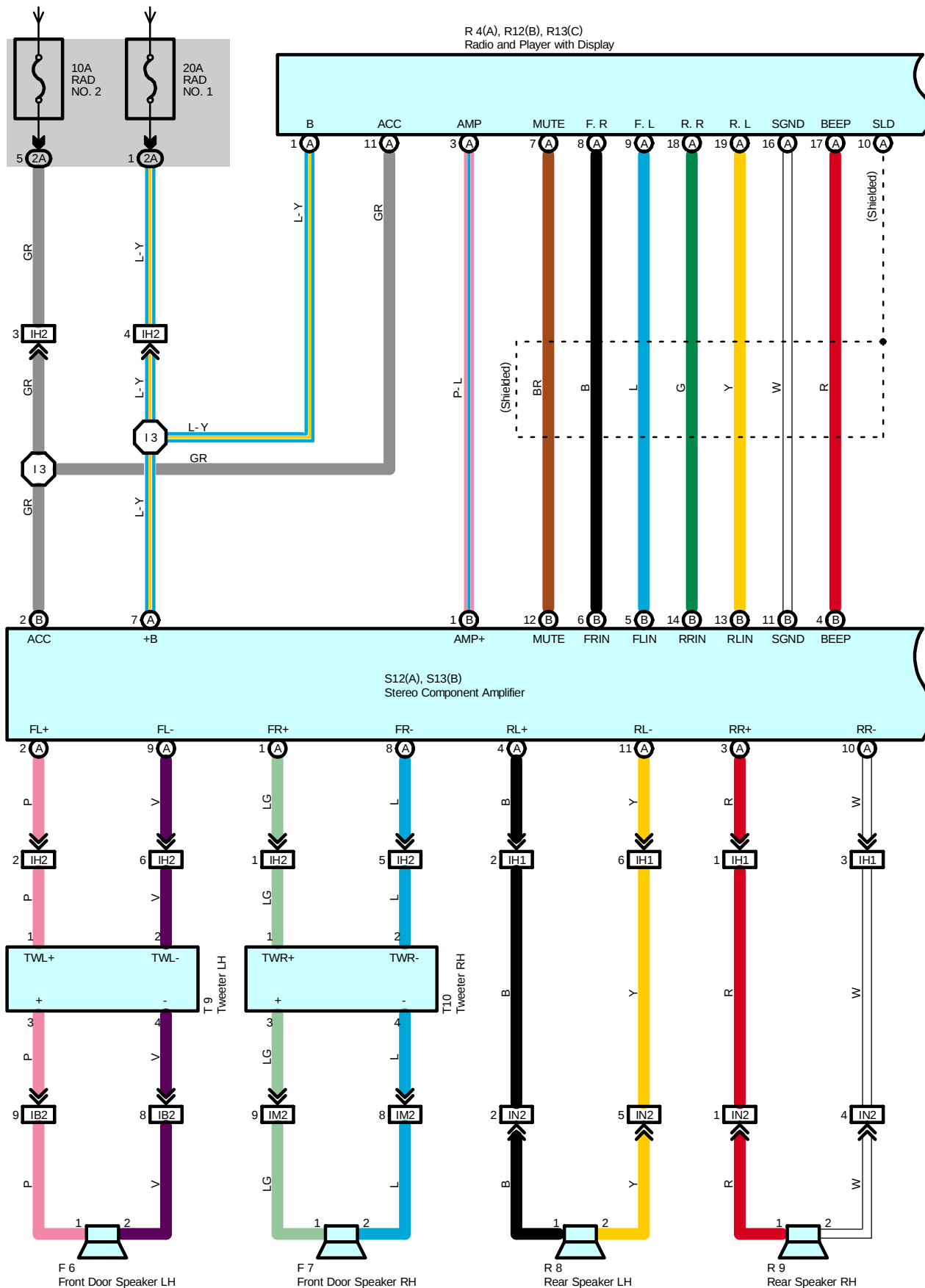
: Splice Points

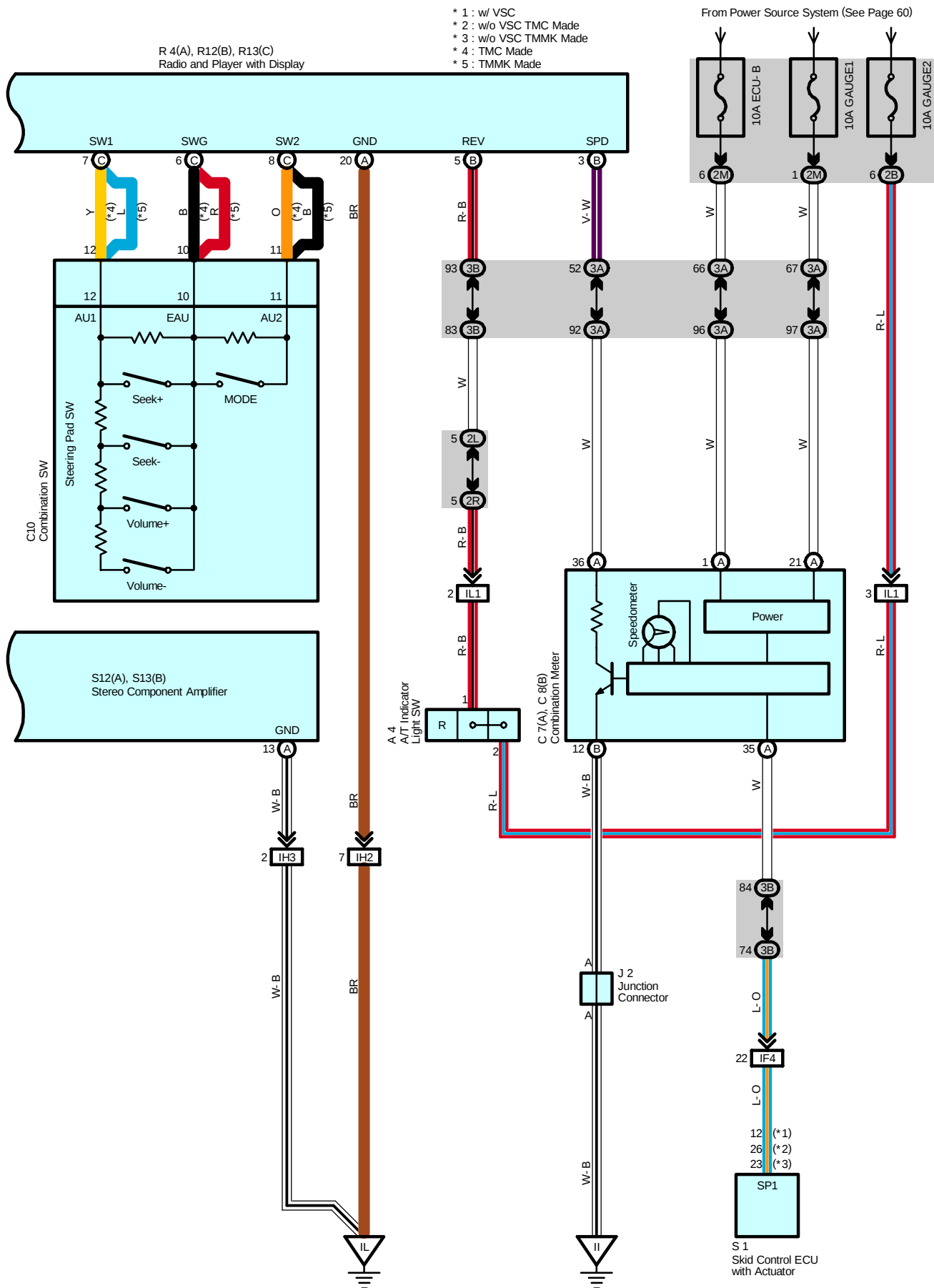
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E5	46 (*1)	Engine Wire	E13	48 (*2)	Engine Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Navigation and Audio System

From Power Source System (See Page 60)





Navigation and Audio System

System Outline

The navigation system displays the operating status and instructions for the radio and player with display. Additionally, the navigation system precisely measures the current vehicle position, displays the map obtained from the map database on the screen, and informs the route to the destination shown on the map using voice guidance.

Service Hints

R4 (A) Radio and Player with Display

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

S12 (A), S13 (B) Stereo Component Amplifier

- (B) 2-Ground : Approx. 12 volts with the ignition SW at ON or ACC position
- (A) 7-Ground : Always approx. 12 volts
- (A)13-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A4	36 (*1)	J2	41	S1	39 (*2)
	38 (*2)	R4 A	41	S12 A	41
C7 A	40	R8	43	S13 B	41
C8 B	40	R9	43	T9	41
C10	40	R12 B	41	T10	41
F6	42	R13 C	41		
F7	42	S1	37 (*1)		

○ : 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		
2L	29	
2M		
2R		
3A	34	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)
IB2	50	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IF4	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IH1	50	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH2		
IH3		
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IM2	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IN2	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
II	50	Cowl Side Panel LH
IL	50	Instrument Panel Brace RH

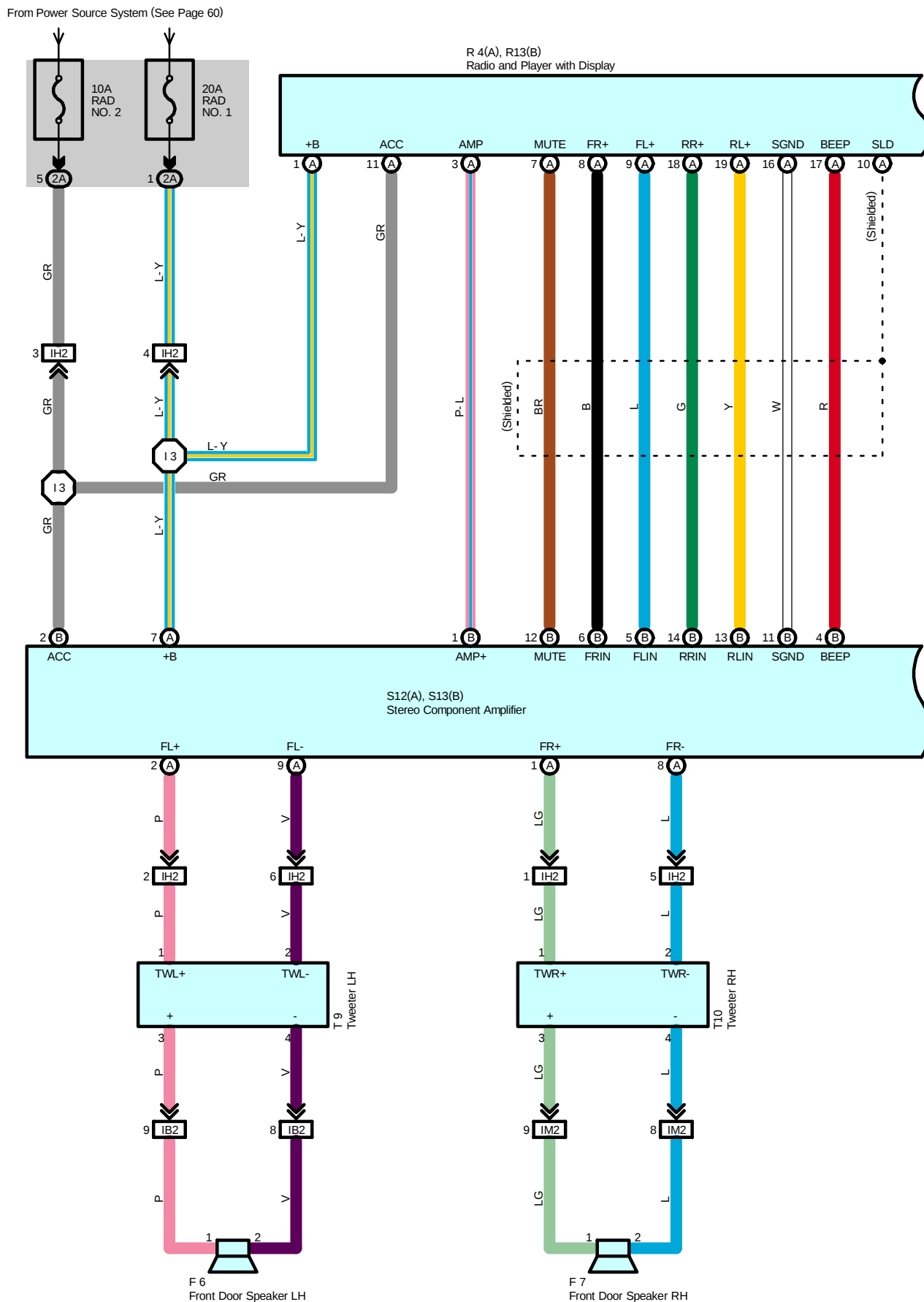
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



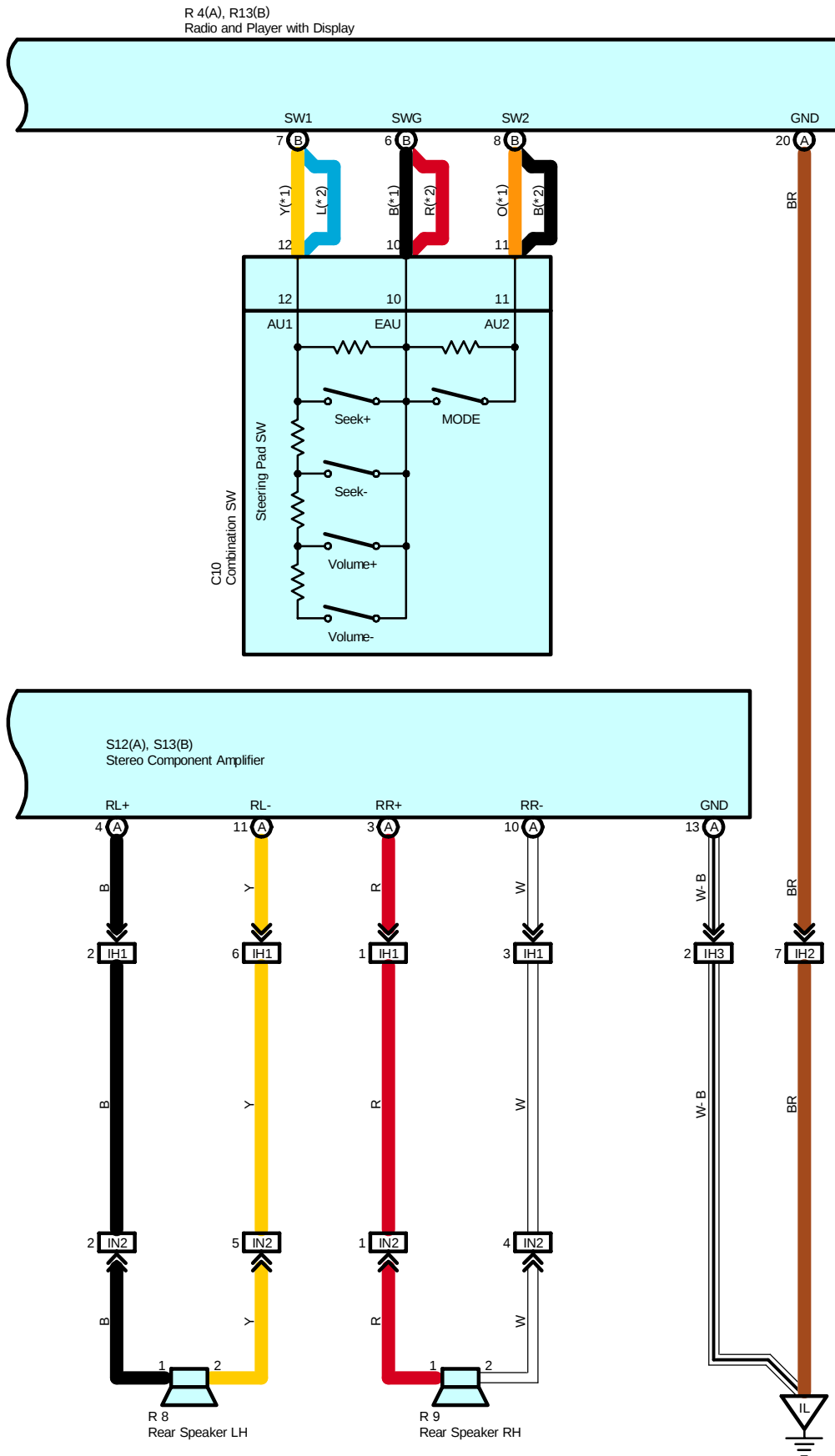
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	52	Instrument Panel No.2 Wire			

Audio System for Separate Type Amplifier



* 1 : TMC Made
 * 2 : TMMK Made



Audio System for Separate Type Amplifier

Service Hints

R4 (A) Radio and Player

(A)11-Ground : Approx. 12 volts with the ignition SW at ACC or ON position

(A) 1-Ground : Always approx. 12 volts

(A)20-Ground : Always continuity

S12 (A), S13 (B) Stereo Component Amplifier

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

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

(A)13-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C10	40	R8	43	S13 B	41
F6	42	R9	43	T9	41
F7	42	R13 B	41	T10	41
R4 A	41	S12 A	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)
IB2	50	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IH1	50	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH2		
IH3		
IM2	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IN2	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
IL	50	Instrument Panel Brace RH

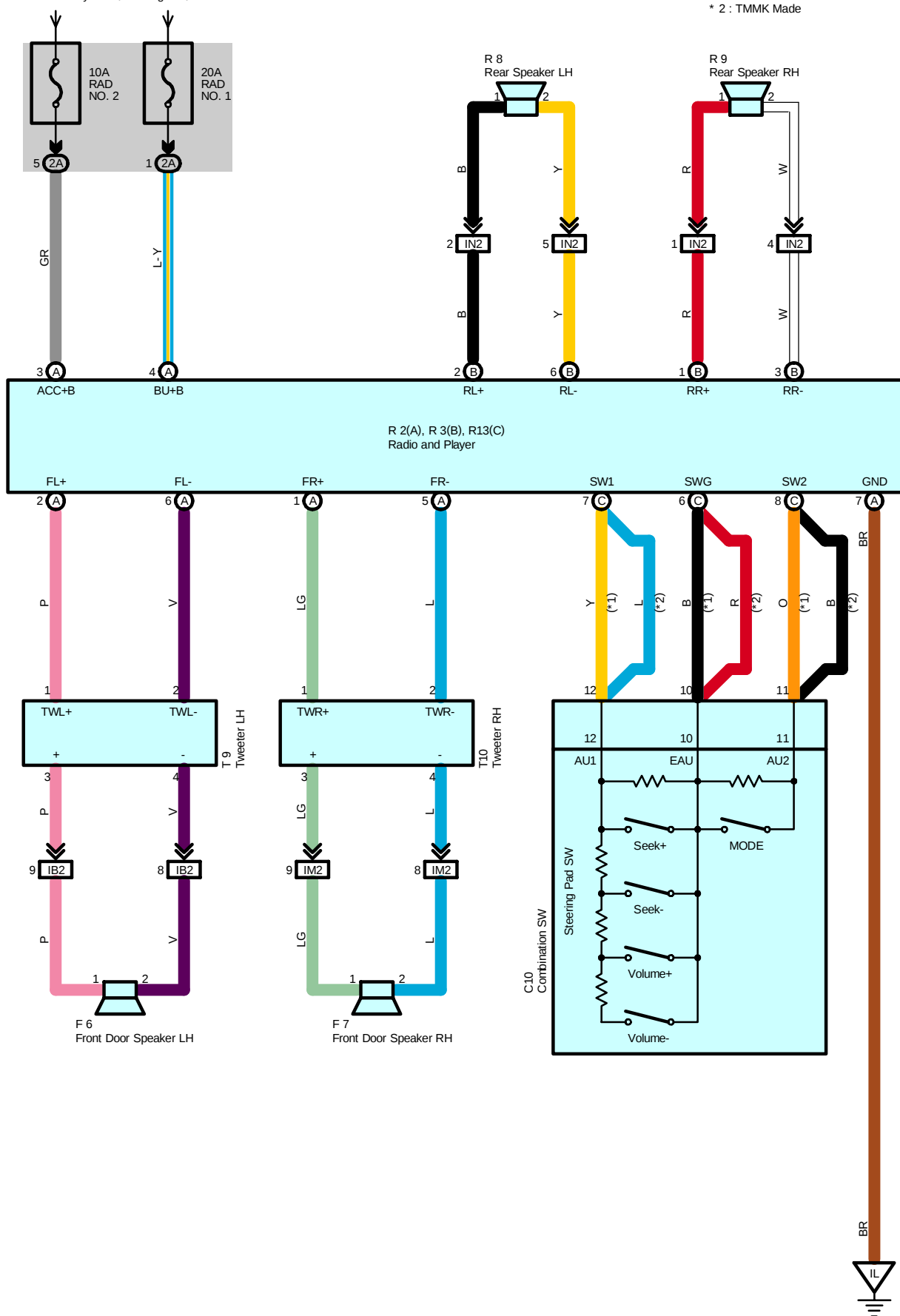
○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	52	Instrument Panel No.2 Wire			

Audio System for Built-In Type Amplifier

From Power Source System (See Page 60)

* 1 : TMC Made
* 2 : TMMK Made



Service Hints

R2 (A) Radio and Player

- (A) 3-Ground : Approx. 12 volts with the ignition SW at ACC or ON position
- (A) 4-Ground : Always approx. 12 volts
- (A) 7-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C10	40	R3	B	41	
F6	42	R8		43	
F7	42	R9		43	
R2	A	41			
		R13	C	41	

○ : Junction Block and Wire Harness Connector

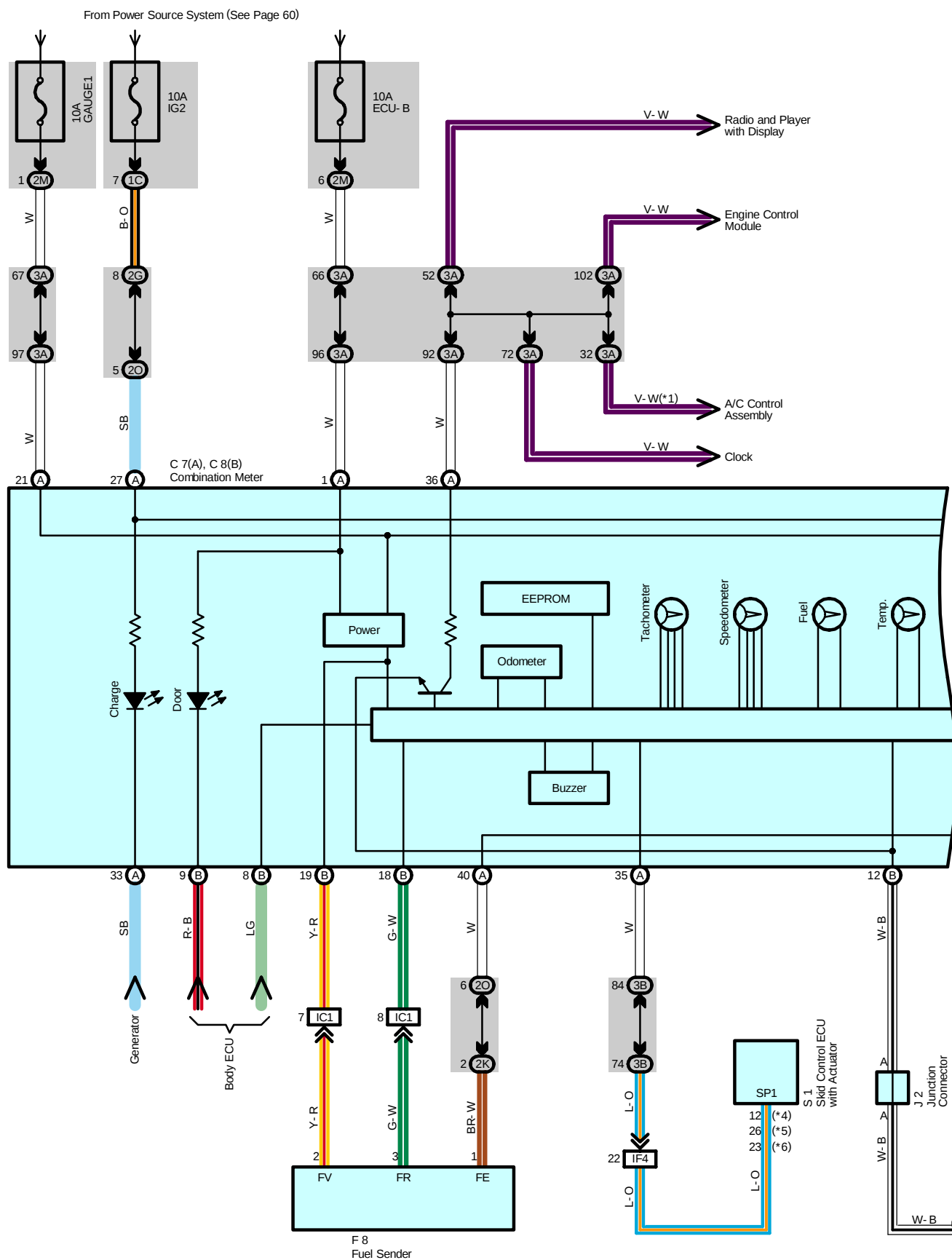
Code	See Page	Junction Block and Wire Harness (Connector Location)
2A	28	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

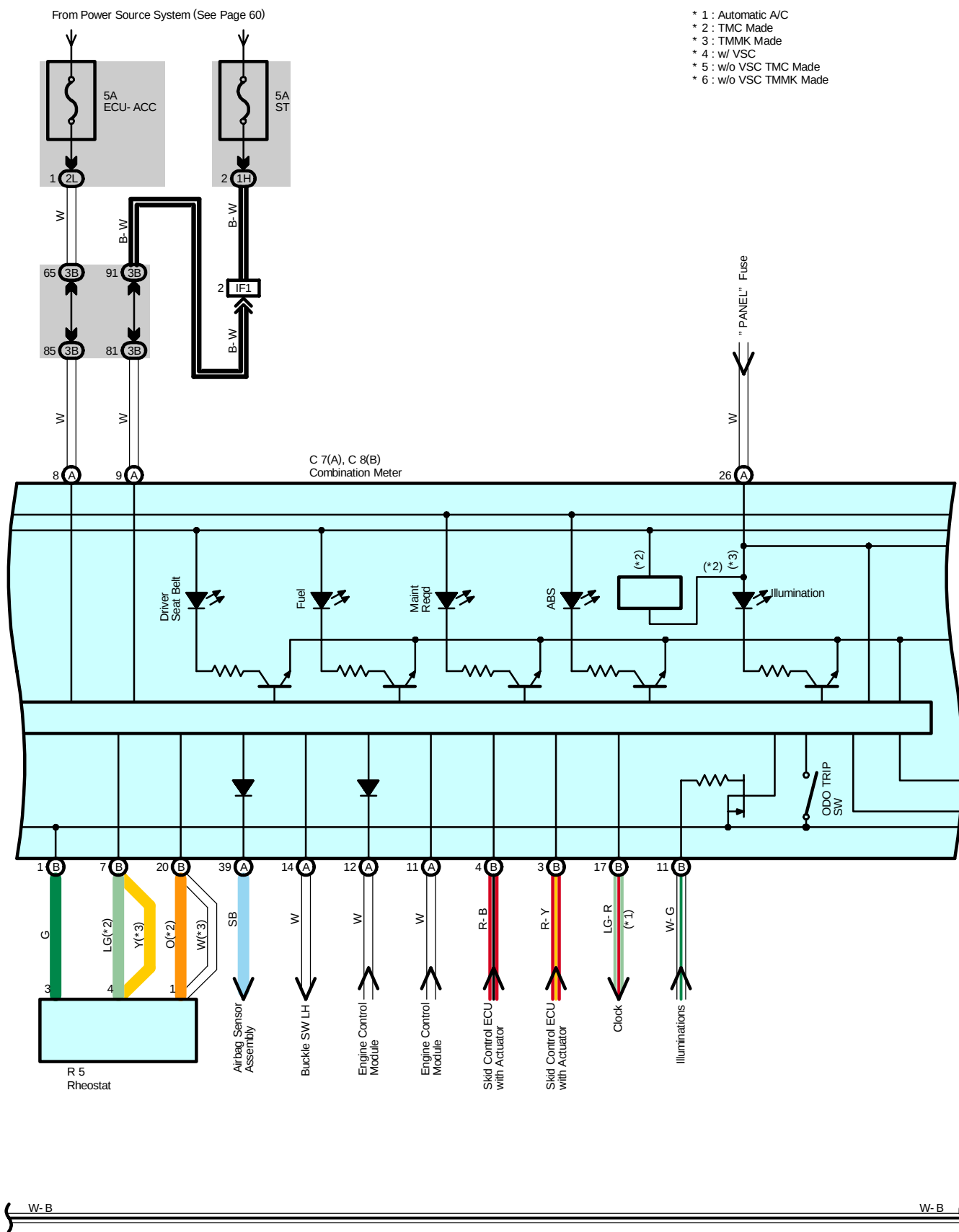
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB2	50	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IM2	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IN2	52	Instrument Panel Wire and Floor No.2 Wire (Right Kick Panel)

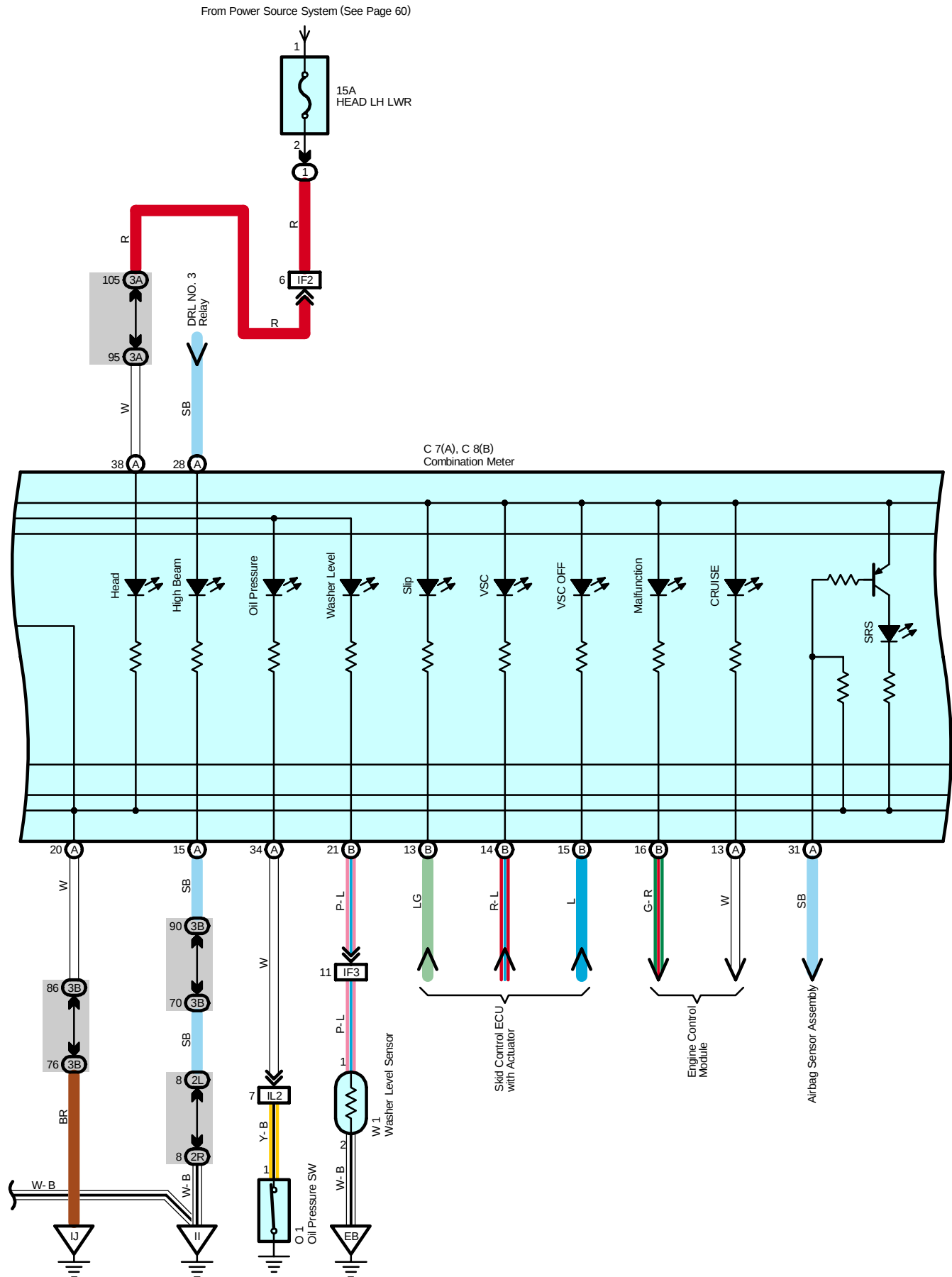
▽ : Ground Points

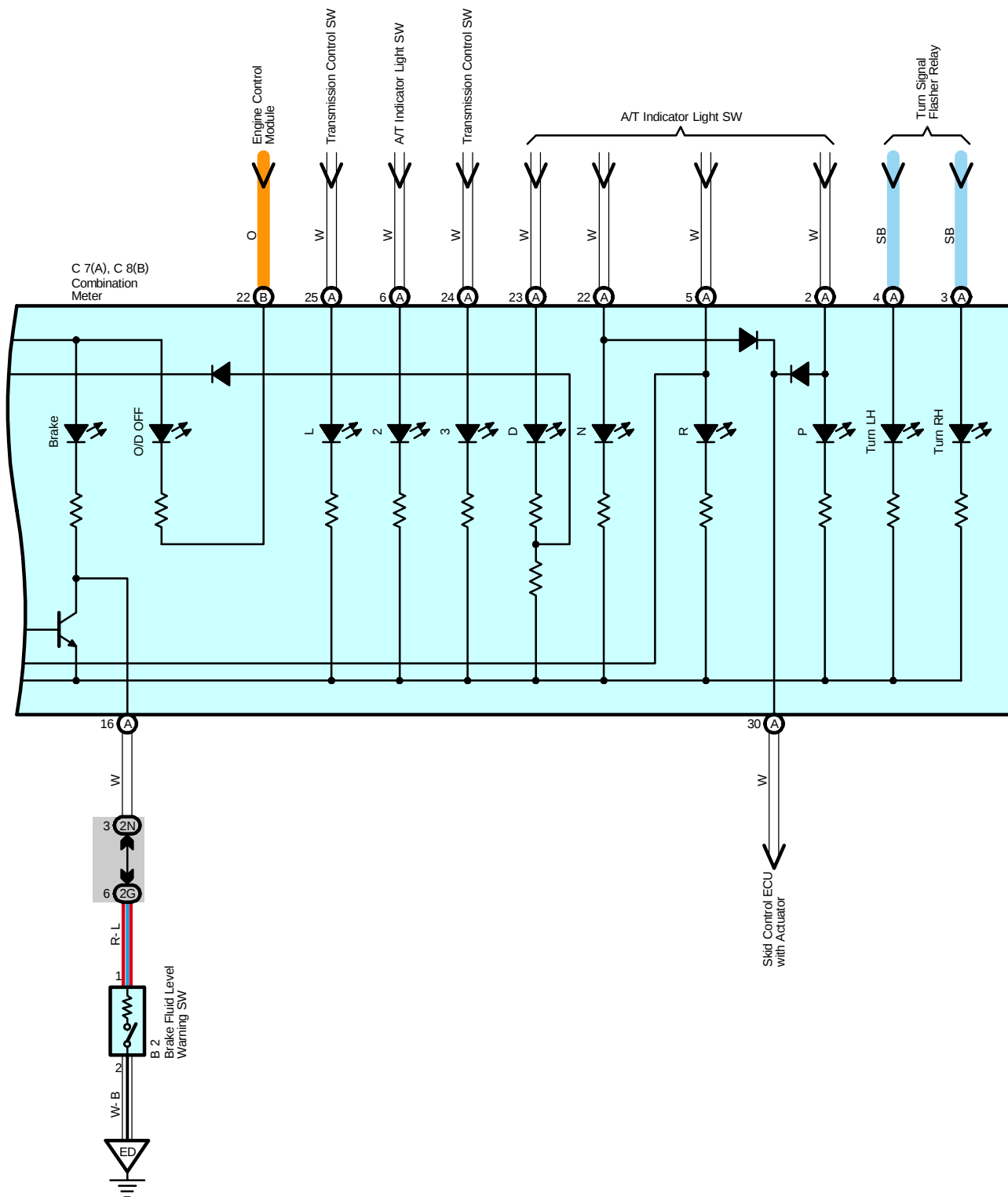
Code	See Page	Ground Points Location
IL	50	Instrument Panel Brace RH





Combination Meter





Combination Meter

Service Hints

B2 Brake Fluid Level Warning SW

1-2 : Closed with the float down

C7 (A) Combination Meter

(A) 21, (A) 27-Ground : Approx. 12 volts with the ignition SW at ON or ST position

(A) 1-Ground : Always approx. 12 volts

(A)15, (A) 20, (B) 12-Ground : Always continuity

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
B2	36 (*1)	J2	41	S1	39 (*2)
	38 (*2)	O1	37 (*1)	W1	37 (*1)
C7 A	40		39 (*2)		39 (*2)
C8 B	40	R5	41		
F8	42	S1	37 (*1)		

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
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 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	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)
IC1	50	Instrument Panel Wire and Floor Wire (Left Kick Panel)
IF1	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF2		
IF3		
IF4		
IL2	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

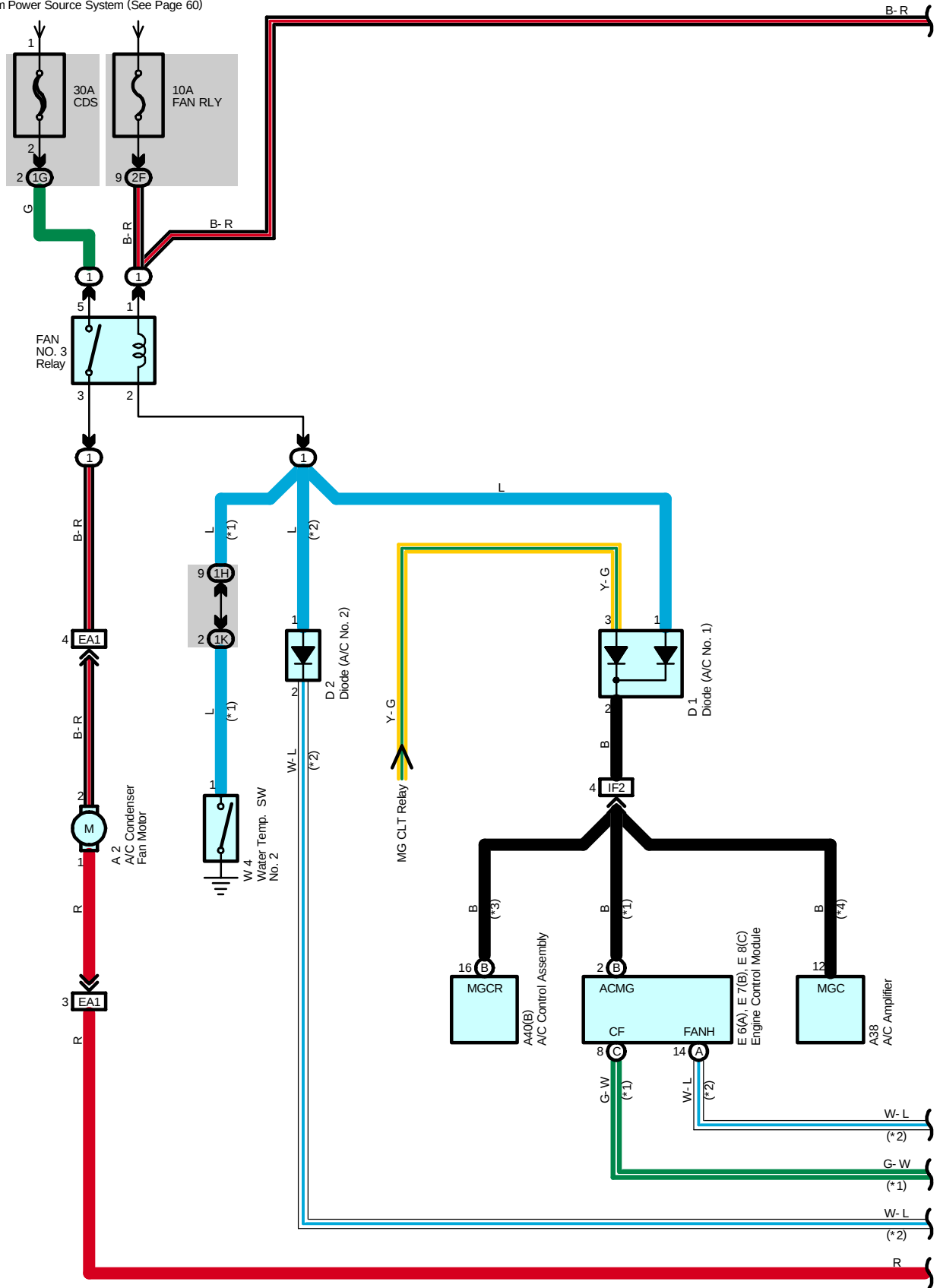
▽ : Ground Points

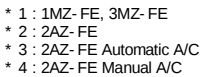
Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
	48 (*2)	
ED	46 (*1)	Left Fender
	48 (*2)	
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Radiator Fan and Condenser Fan

From Power Source System (See Page 60)





Radiator Fan and Condenser Fan

System Outline

Fan Motor Operation (3MZ-FE, 1MZ-FE)

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) 2 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 FAN 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 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.

Fan Motor Operation (2AZ-FE)

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

When the ignition SW is turned on and the A/C system is activated, 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) 16 of the A/C control assembly (Automatic A/C) or 12 of the A/C amplifier (Manual A/C) 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.

2. High Speed Operation

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 diode to TERMINAL 2 to TERMINAL 3 of the pressure SW to TERMINAL 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 engine coolant is too high, the current through the FAN RLY fuse flows to the FAN NO.1 and NO.2 relay (Coil side) to TERMINAL (A) 14 of the engine control module 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 to TERMINAL 2 to TERMINAL (A) 14 of the engine control module 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.

Service Hints

P2 Pressure SW

3-2 : Close 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 : Closed above approx. 95°C (203°F)

W4 Water Temp. SW No.2

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

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A2	36 (*1)	D2		38 (*2)	R1
	38 (*2)	E6	A	40	
A38	40	E7	B	40	W3
A40	B	E8	C	40	W4
D1	36 (*1)	P2		37 (*1)	
	38 (*2)			39 (*2)	

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
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)

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Radiator Fan and Condenser Fan

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	46 (*1)	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
	48 (*2)	
EA2	46 (*1)	
	48 (*2)	
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)

: Ground Points

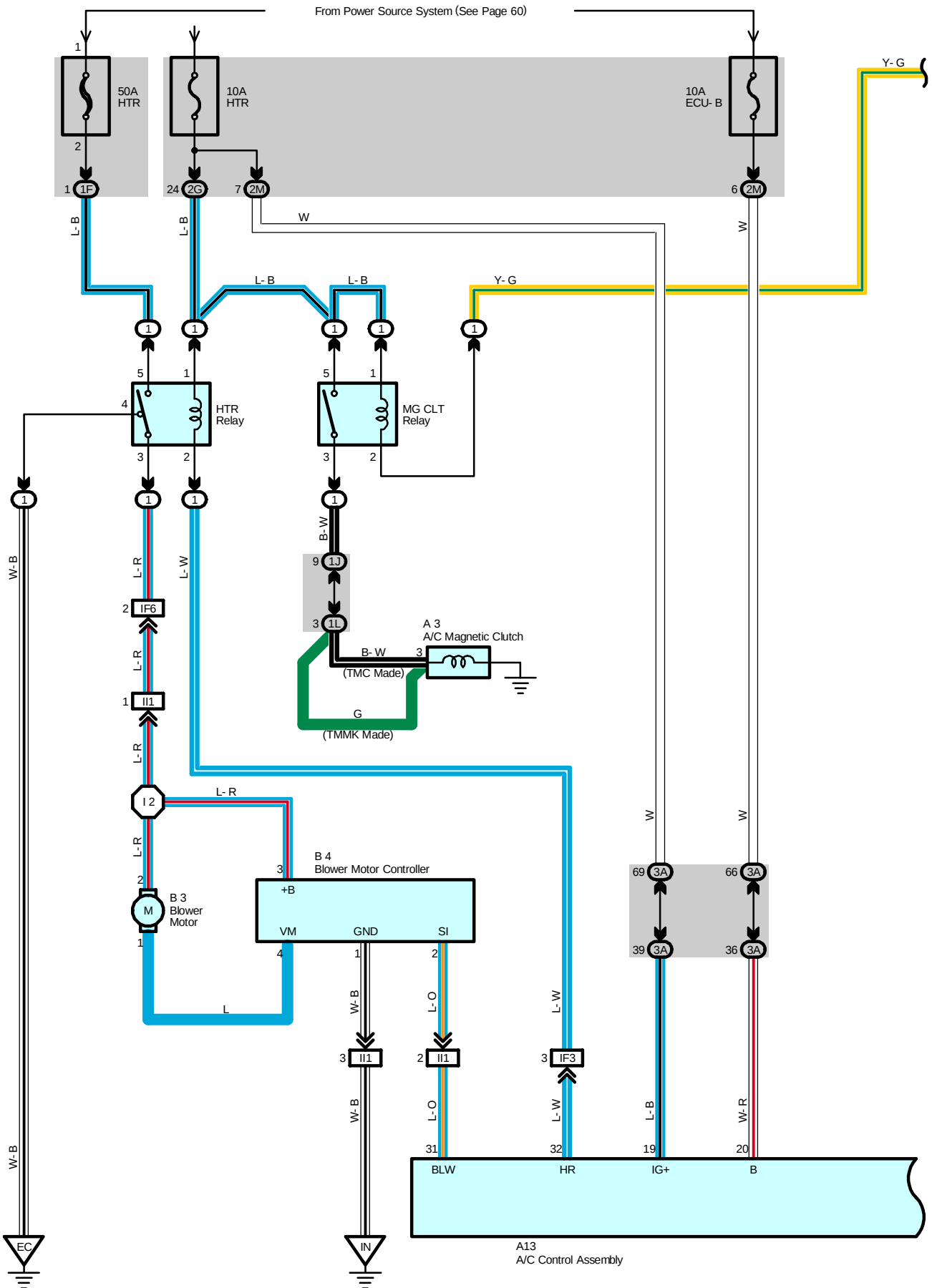
Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
	48 (*2)	
EC	46 (*1)	Left Fender
	48 (*2)	
ED	46 (*1)	
	48 (*2)	

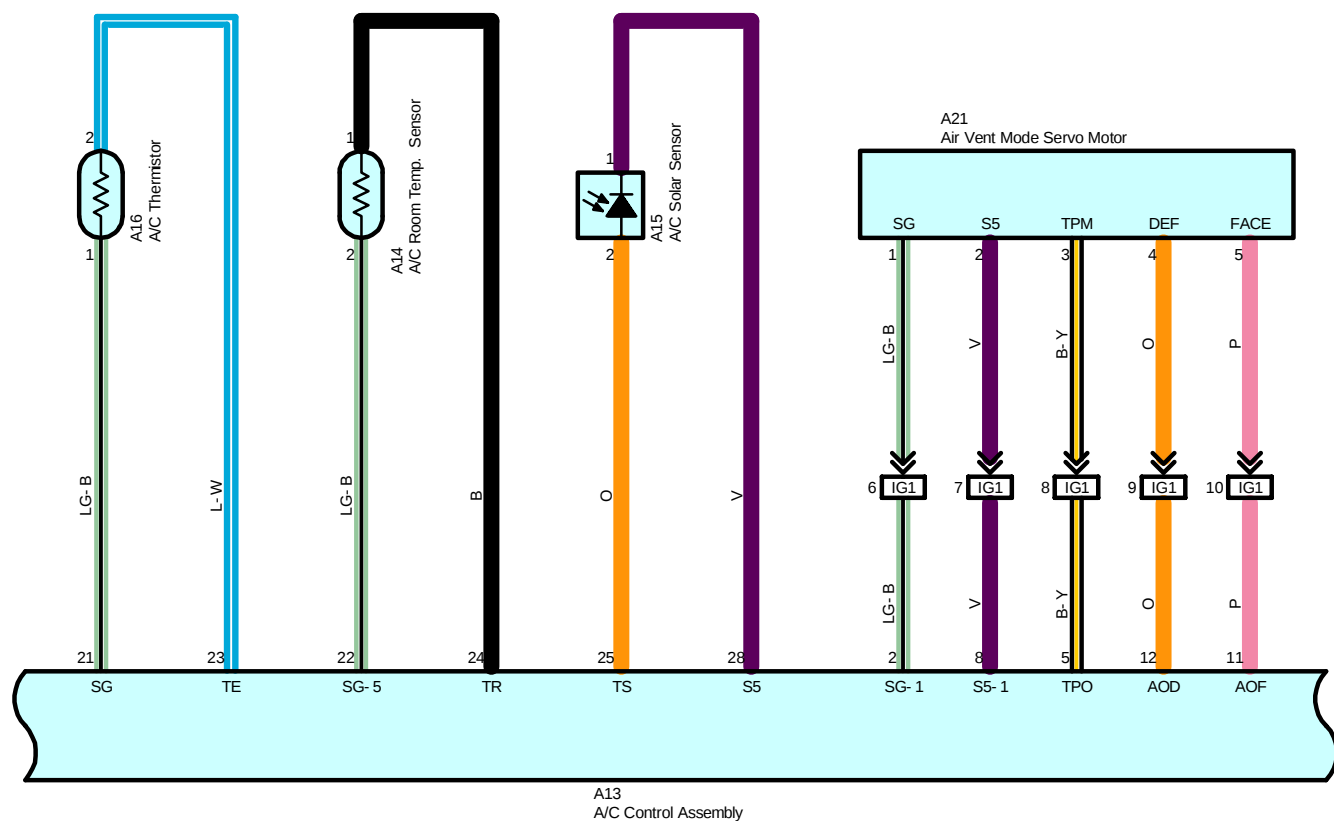
: Splice Points

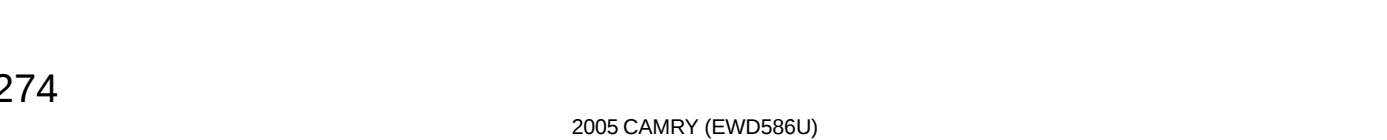
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	46 (*1)	Engine Room Main Wire	E1	48 (*2)	Engine Room Main Wire

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Automatic Air Conditioning for 1MZ-FE







Automatic Air Conditioning for 1MZ-FE

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 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 film damper.

4. Air Mix Control Servo Motor Control

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

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 3 of the diode 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

P2 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)

A13 A/C Control Assembly

- B-Ground : Always approx. 12 volts
IG+ -Ground : Approx. 12 volts with the ignition SW at ON or ST position
AIF-Ground : Approx. 12 volts with the FRESH SW on
AIR-Ground : Approx. 12 volts with the RECIRC SW on
GND-Ground : Always continuity

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	36 (*1)	A20	40	E7	B 40
A3	36 (*1)	A21	40	E8	C 40
A13	40	B3	40	E10	E 40
A14	40	B4	40	J1	41
A15	40	C5	40	P2	37 (*1)
A16	40	D1	36 (*1)		
A19	40	E4	36 (*1)		

 : Relay Blocks

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

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
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	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)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF6		
IG1	50	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
II1	52	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IK1	52	Instrument Panel Wire and Cowl No.2 Wire (Behind the Glove Box)
IL2	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

 : Ground Points

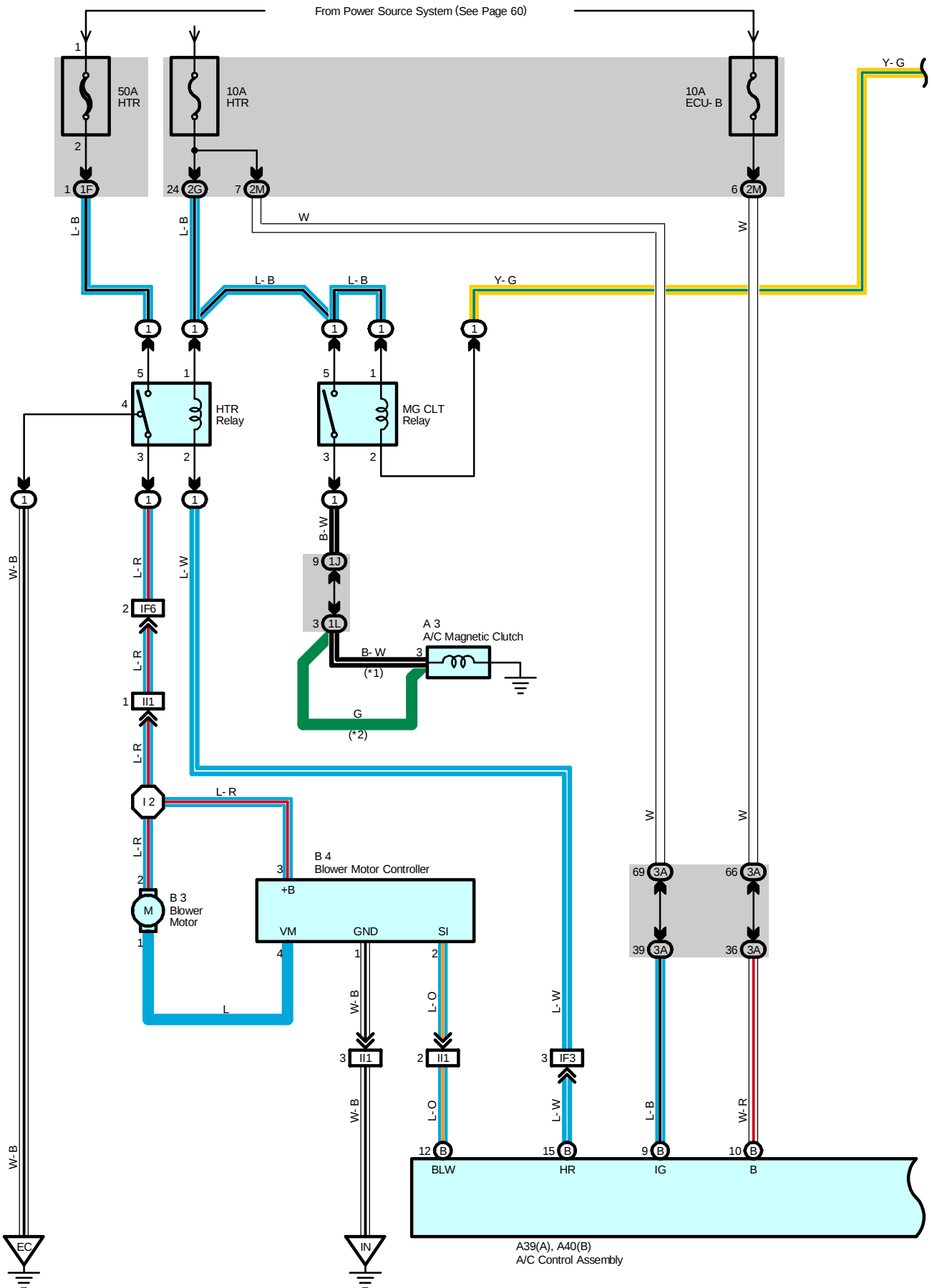
Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
EC	46 (*1)	Left Fender
EF	46 (*1)	Right Side of Cylinder Head
II	50	Cowl Side Panel LH
IN	50	Instrument Panel Reinforcement RH

 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I2	52	Instrument Panel No.3 Wire			

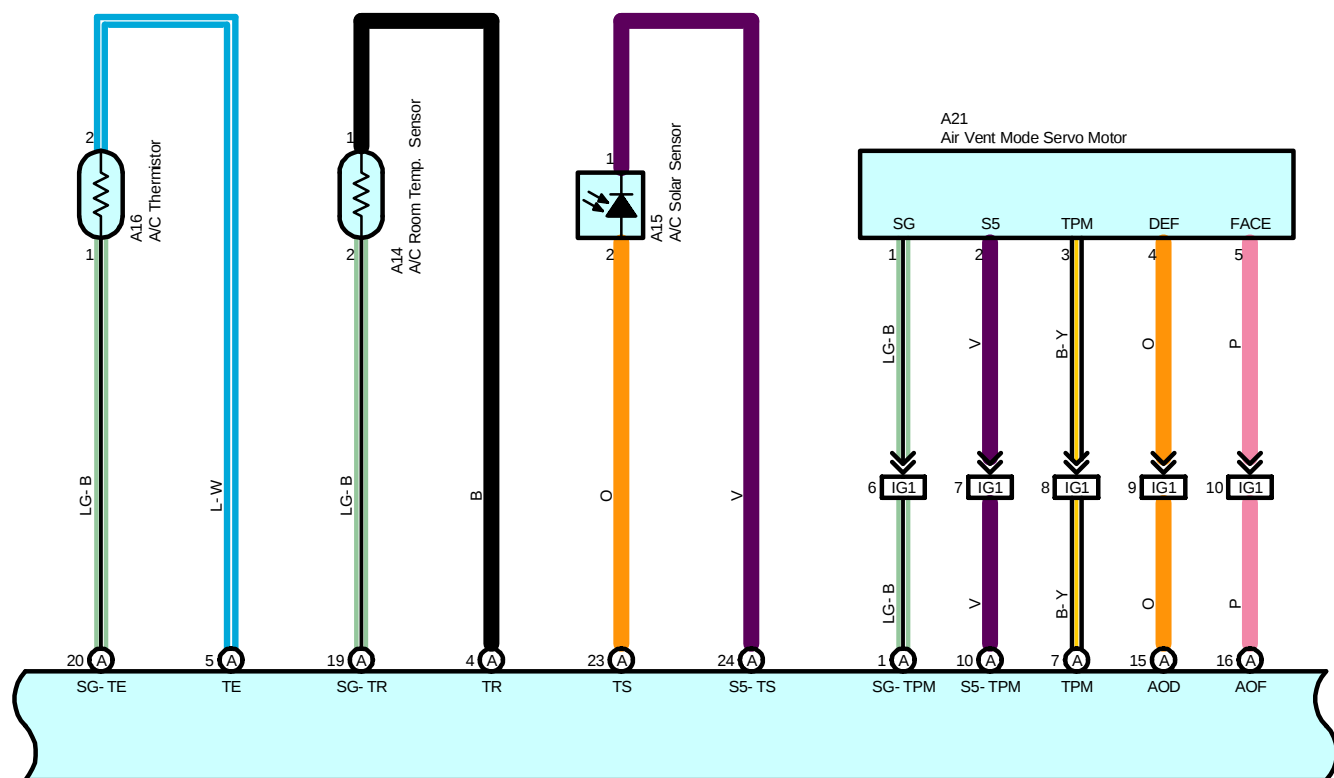
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Automatic Air Conditioning for 2AZ-FE



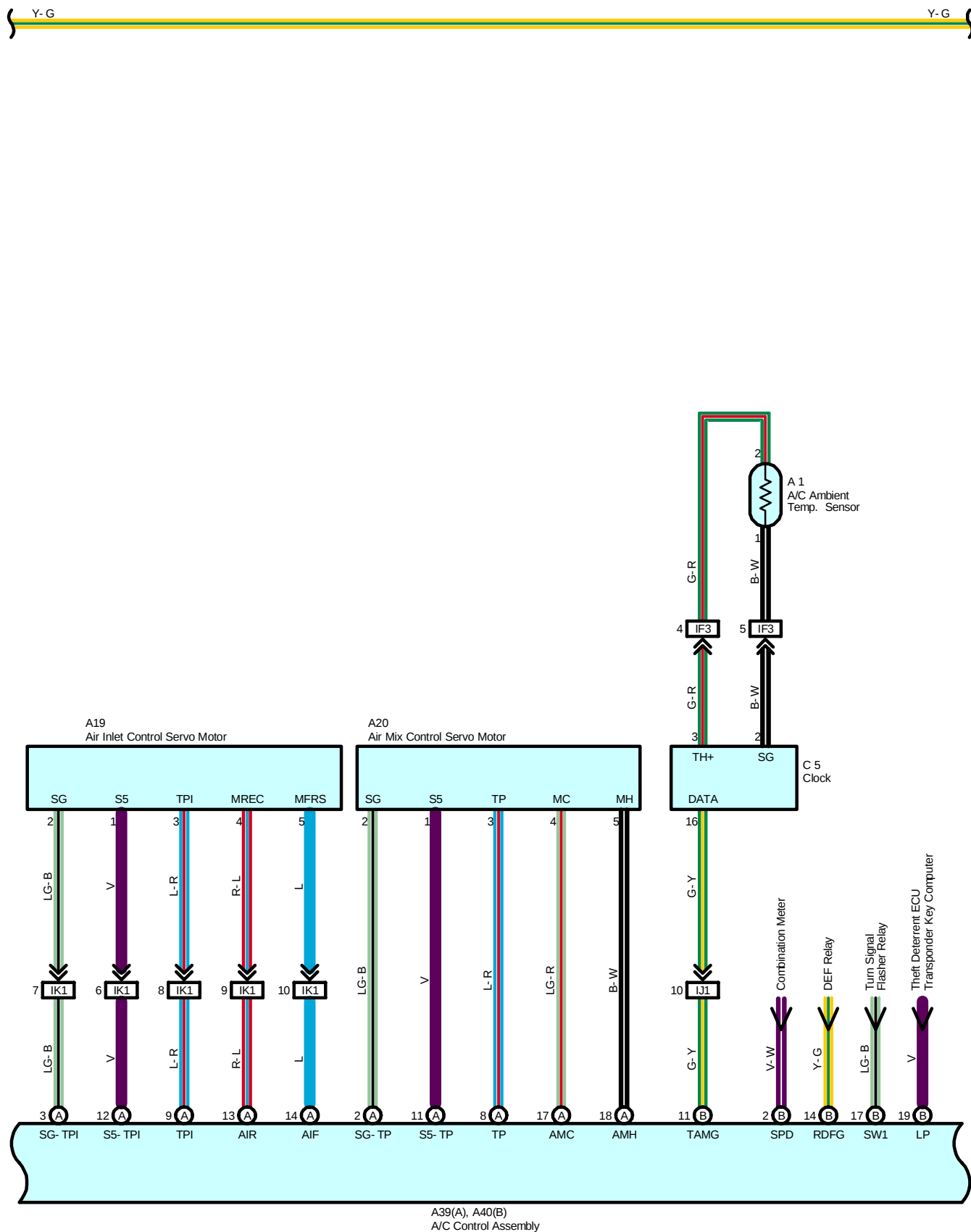


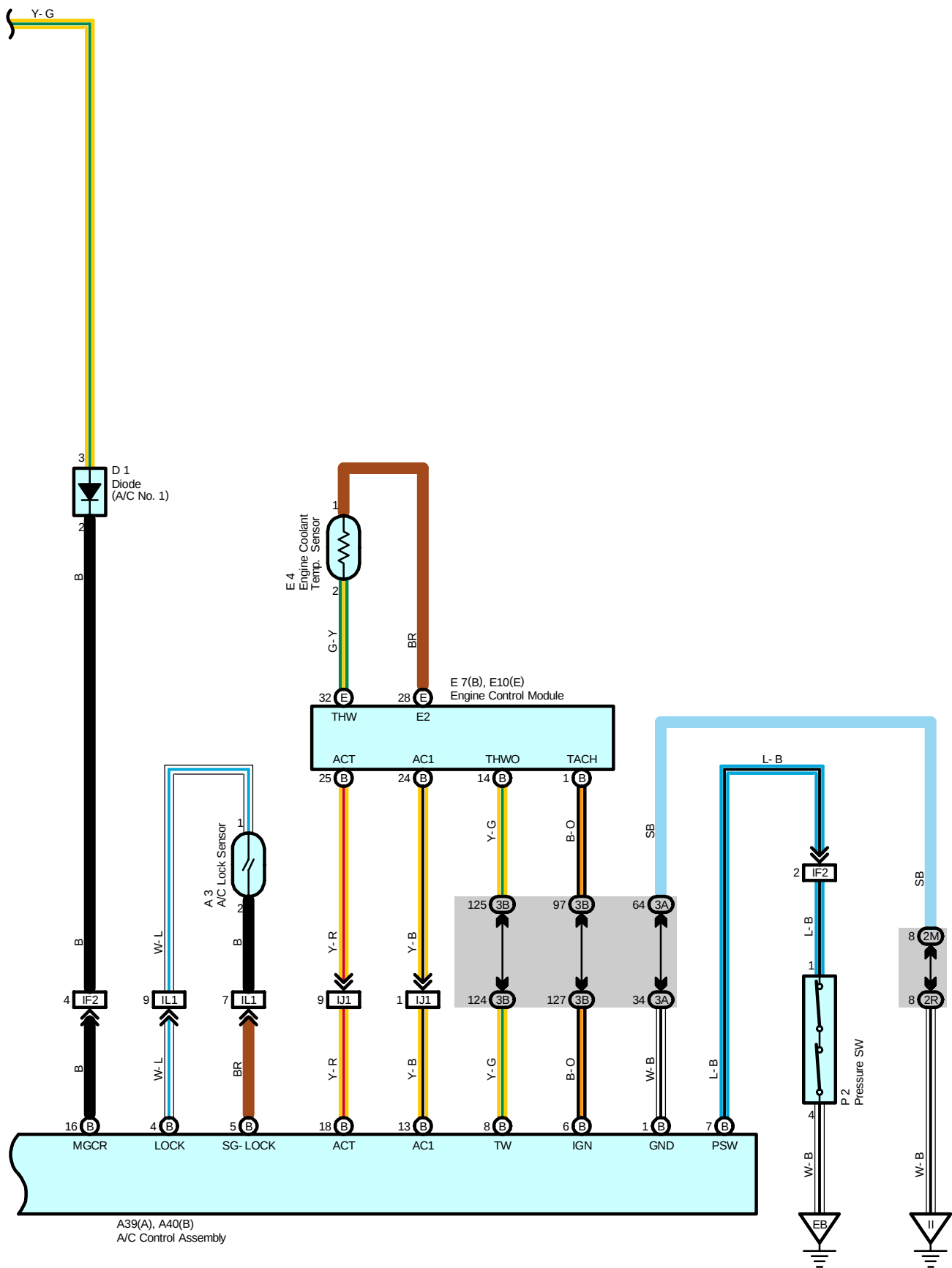
* 1 : TMC Made
 * 2 : TMMK Made



A39(A), A40(B)
 A/C Control Assembly

Automatic Air Conditioning for 2AZ-FE





Automatic Air Conditioning for 2AZ-FE

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 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 film damper.

4. Air Mix Control Servo Motor Control

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

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 3 of the diode to TERMINAL MGCR of the A/C control assembly to TERMINAL GND 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

P2 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)

A13 A/C Control Assembly

B-Ground : Always approx. 12 volts

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

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

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

GND-Ground : Always continuity

 : Parts Location

Code	See Page	Code	See Page	Code	See Page	
A1	38 (*2)	A20	40	C5	40	
A3	38 (*2)	A21	40	D1	38 (*2)	
A14	40	A39	A	E4	38 (*2)	
A15	40	A40	B	E7	B	40
A16	40	B3	40	E10	E	40
A19	40	B4	40	P2	39 (*2)	

 : Relay Blocks

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

 : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	25	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1J		
1L		
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	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)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF6		
IG1	50	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
II1	52	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IK1	52	Instrument Panel Wire and Cowl No.2 Wire (Behind the Glove Box)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

 : Ground Points

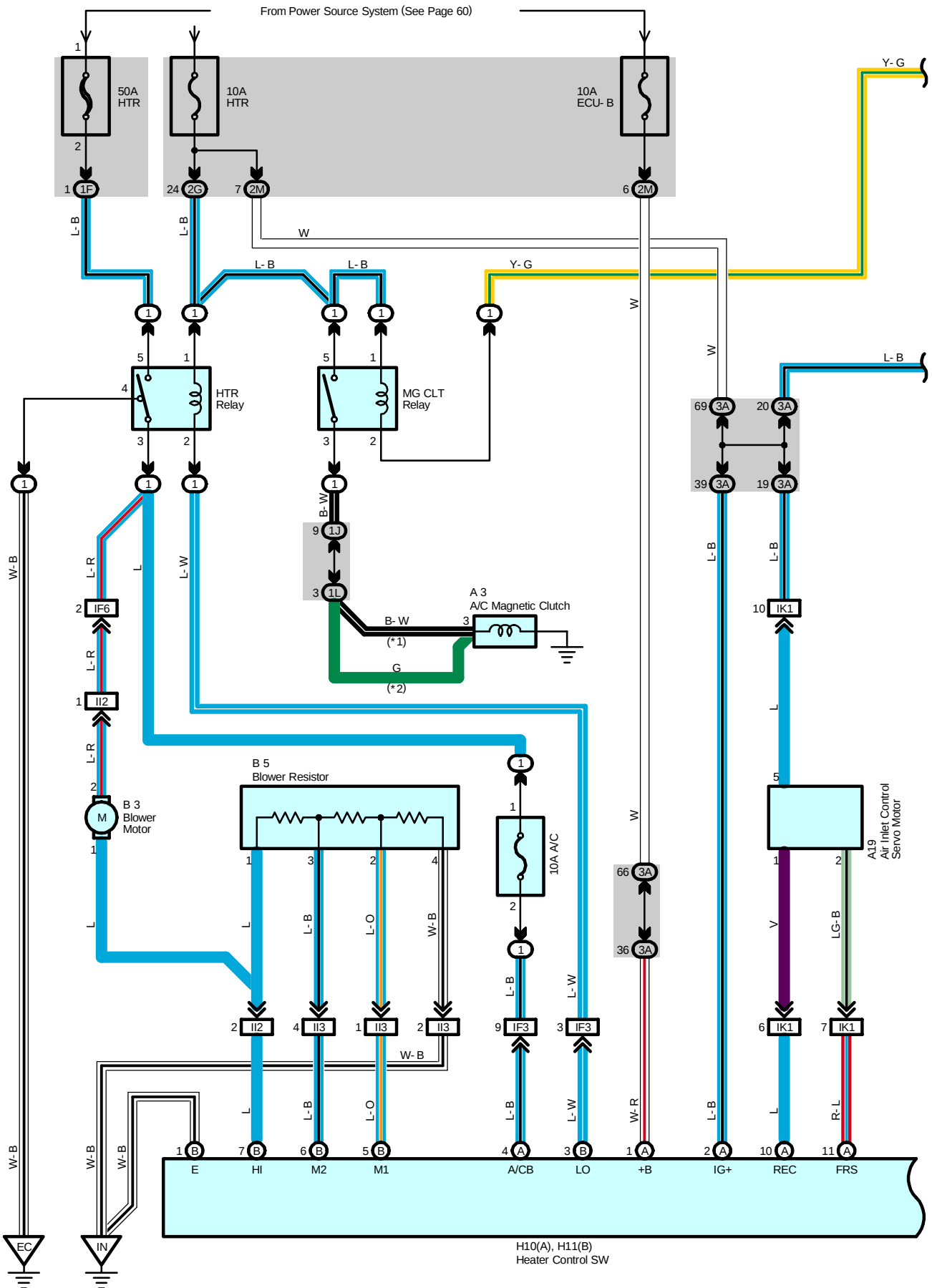
Code	See Page	Ground Points Location
EB	48 (*2)	Right Fender
EC	48 (*2)	Left Fender
II	50	Cowl Side Panel LH
IN	50	Instrument Panel Reinforcement RH

 : Splice Points

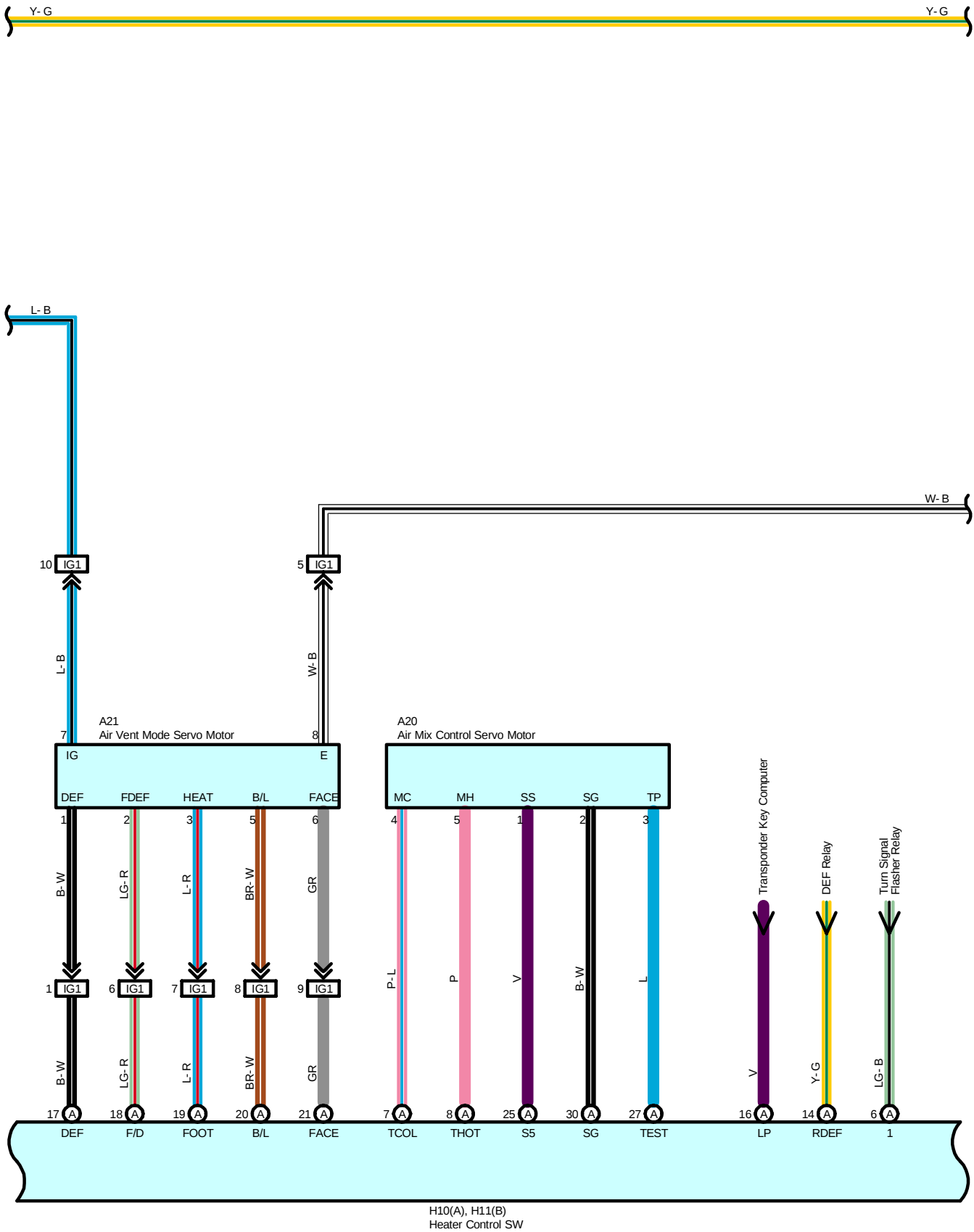
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I2	52	Instrument Panel No.3 Wire			

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

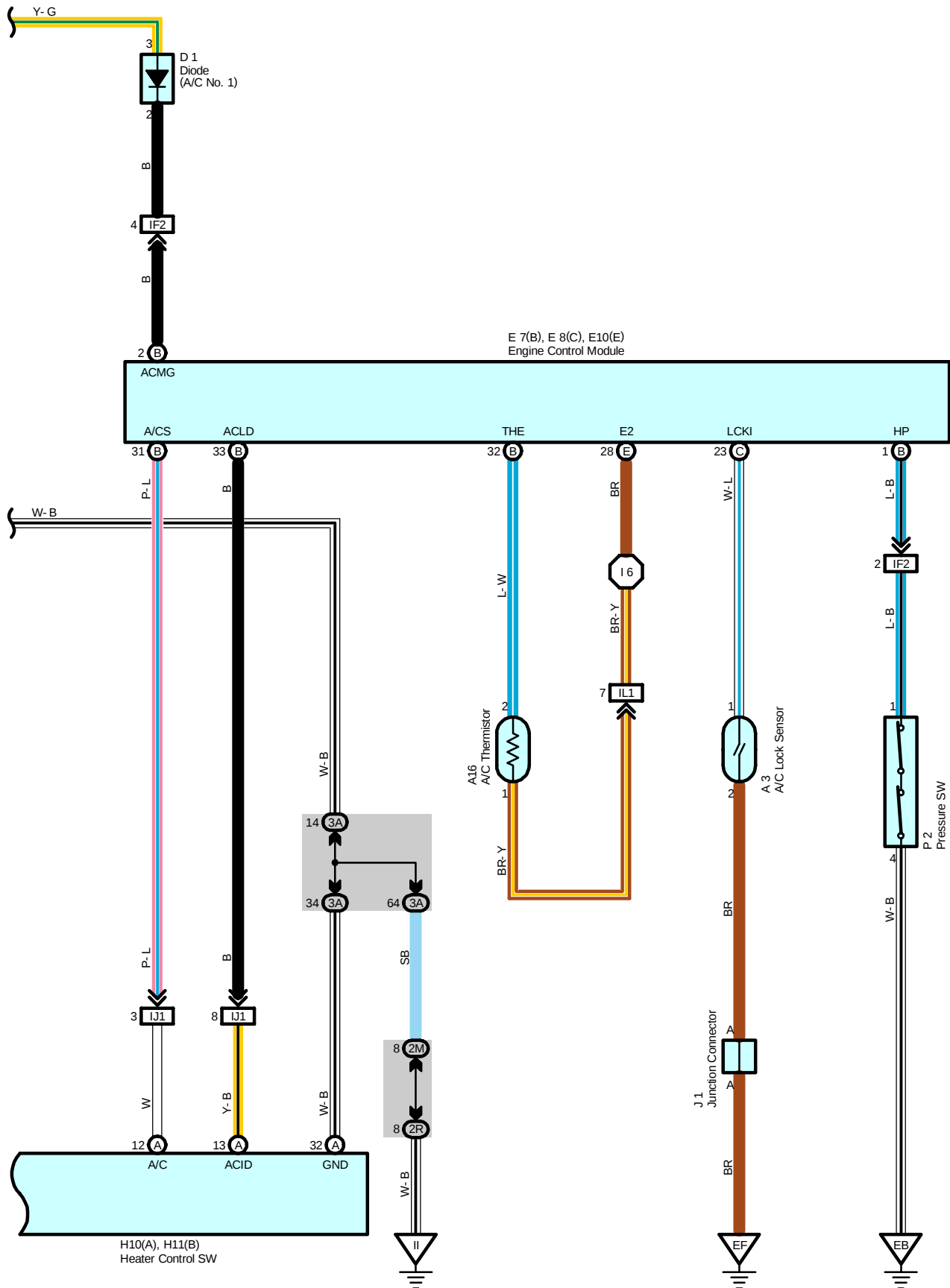
Manual Air Conditioning for 1MZ-FE and 3MZ-FE



* 1 : TMC Made
* 2 : TMMK Made



Manual Air Conditioning for 1MZ-FE and 3MZ-FE



System Outline

1. Heater Blower Motor Operation

* Low speed operation

When the heater control SW is moved to LO position, current flows to TERMINAL LO of the heater control SW to GROUND, activating the HTR relay. This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 1 of the blower resistor to TERMINAL 4 to GROUND, causing the blower motor to rotate at low speed.

* Medium speed operation (Operation at M1, M2)

When the blower SW is moved to M1 position, current flows to TERMINAL LO of the heater control SW to GROUND, turning the HTR relay to switch on. This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 1 of the blower resistor to TERMINAL 2 to TERMINAL (B) 5 of the heater control SW to GROUND. At this time, the blower resistance of the blower resistor is less than at low speed, so the blower motor rotates at medium low speed.

When the blower SW is moved to M2 position, current flows through the motor flows from TERMINAL 1 of the blower resistor to TERMINAL 3 to TERMINAL (B) 6 of the heater control SW to GROUND. At this time, resistance of the blower resistor is less than at M1 position, so the blower motor rotates at medium high speed.

* High speed operation

When the blower SW is moved to HIGH position, current flows to TERMINAL LO of the heater control SW to GROUND, turning the HTR relay to switch on.

This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL (B) 7 of the heater control SW to GROUND, causing the blower motor to rotate at high speed.

Service Hints

HTR Relay

5-3 : Closed with the ignition SW on and the heater control SW on

MG CLT Relay

5-3 : Closed with the ignition SW on, the heater control SW on and the A/C SW on or the heater control SW at DEF position

P2 Pressure SW

1-4 : Open with the pressure 2.0 kgf/cm² (29 psi, 196 kpa) or above 32 kgf/cm² (464 psi, 3138 kpa)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A3	36 (*1)	B3	40	E10	E 40
A16	40	B5	40	H10	A 41
A19	40	D1	36 (*1)	H11	B 41
A20	40	E7	B 40	J1	41
A21	40	E8	C 40	P2	37 (*1)

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
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	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Manual Air Conditioning for 1MZ-FE and 3MZ-FE

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF6		
IG1	50	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
II2	52	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
II3		
IJ1	52	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Reinforcement RH)
IK1	52	Instrument Panel Wire and Cowl No.2 Wire (Behind the Glove Box)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

: Ground Points

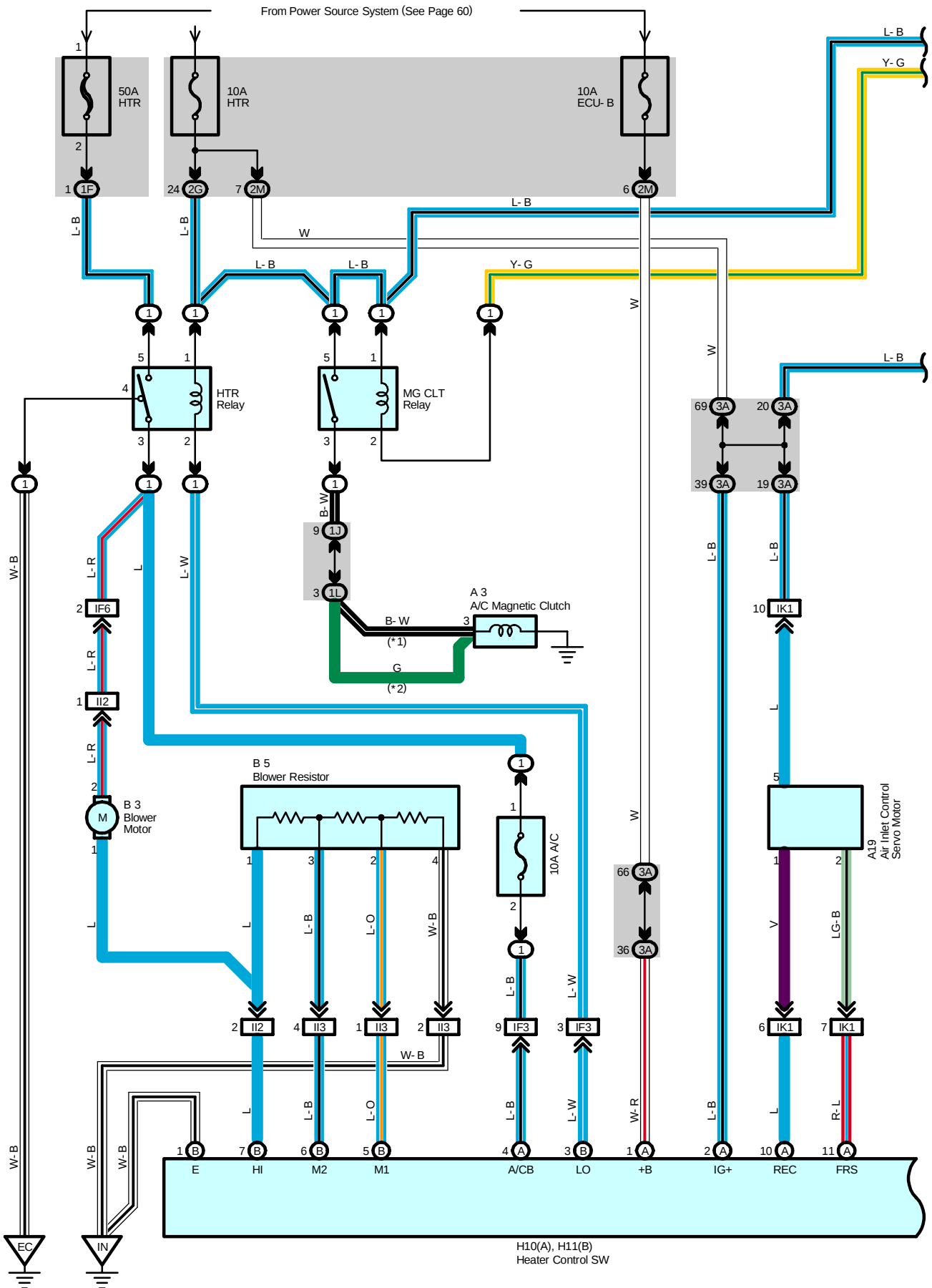
Code	See Page	Ground Points Location
EB	46 (*1)	Right Fender
EC	46 (*1)	Left Fender
EF	46 (*1)	Right Side of Cylinder Head
II	50	Cowl Side Panel LH
IN	50	Instrument Panel Reinforcement RH

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	52	Engine Wire			

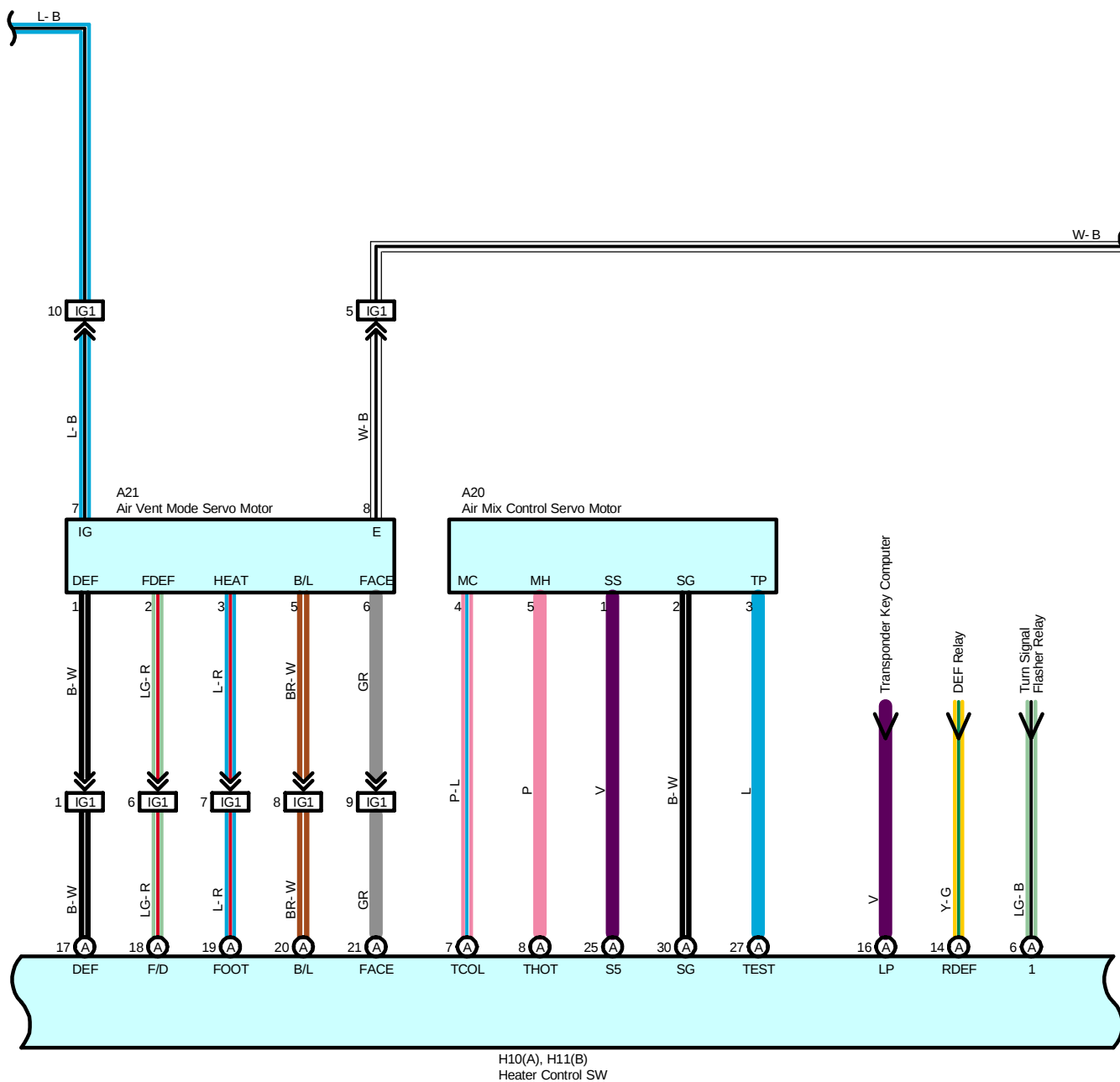
* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

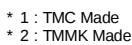
Manual Air Conditioning for 2AZ-FE





* 1 : TMC Made
* 2 : TMMK Made





System Outline

1. Heater Blower Motor Operation

* Low speed operation

When the heater control SW is moved to LO position, current flows to TERMINAL LO of the heater control SW to GROUND, activating the HTR relay. This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 1 of the blower resistor to TERMINAL 4 to GROUND, causing the blower motor to rotate at low speed.

* Medium speed operation (Operation at M1, M2)

When the blower SW is moved to M1 position, current flows to TERMINAL LO of the heater control SW to GROUND, turning the HTR relay to switch on. This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 1 of the blower resistor to TERMINAL 2 to TERMINAL (B) 5 of the heater control SW to GROUND. At this time, the blower resistance of the blower resistor is less than at low speed, so the blower motor rotates at medium low speed.

When the blower SW is moved to M2 position, current flows through the motor flows from TERMINAL 1 of the blower resistor to TERMINAL 3 to TERMINAL (B) 6 of the heater control SW to GROUND. At this time, resistance of the blower resistor is less than at M1 position, so the blower motor rotates at medium high speed.

* High speed operation

When the blower SW is moved to HIGH position, current flows to TERMINAL LO of the heater control SW to GROUND, turning the HTR relay to switch on.

This causes the current to flow from the HTR (50A) fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL (B) 7 of the heater control SW to GROUND, causing the blower motor to rotate at high speed.

Service Hints

HTR Relay

5-3 : Closed with the ignition SW on and the heater control SW on

MG CLT Relay

5-3 : Closed with the ignition SW on, the heater control SW on and the A/C SW on or the heater control SW at DEF position

P2 Pressure SW

1-4 : Open with the pressure 2.0 kgf/cm² (29 psi, 196 kpa) or above 32 kgf/cm² (464 psi, 3138 kpa)

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A3	38 (*2)	A38	40	H10 A	41
A16	40	B3	40	H11 B	41
A19	40	B5	40	P2	39 (*2)
A20	40	D1	38 (*2)		
A21	40	E7 B	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)
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	Instrument Panel Wire and Passenger Side J/B (Instrument Panel Brace RH)
3B		

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

Manual Air Conditioning for 2AZ-FE

: Connector Joining Wire Harness and Wire Harness

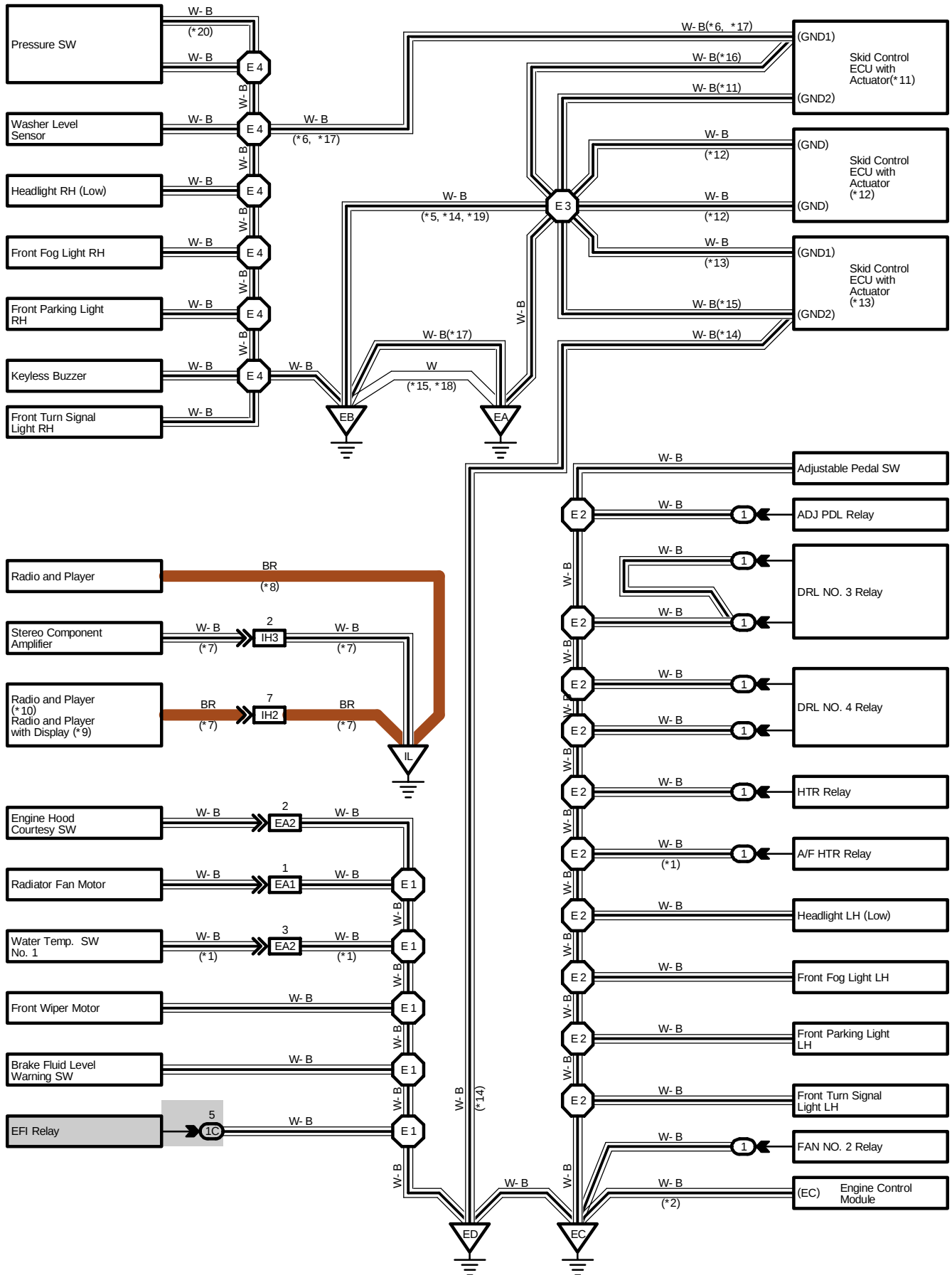
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF2	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IF3		
IF6		
IG1	50	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
II2	52	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
II3		
IK1	52	Instrument Panel Wire and Cowl No.2 Wire (Behind the Glove Box)
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)

: Ground Points

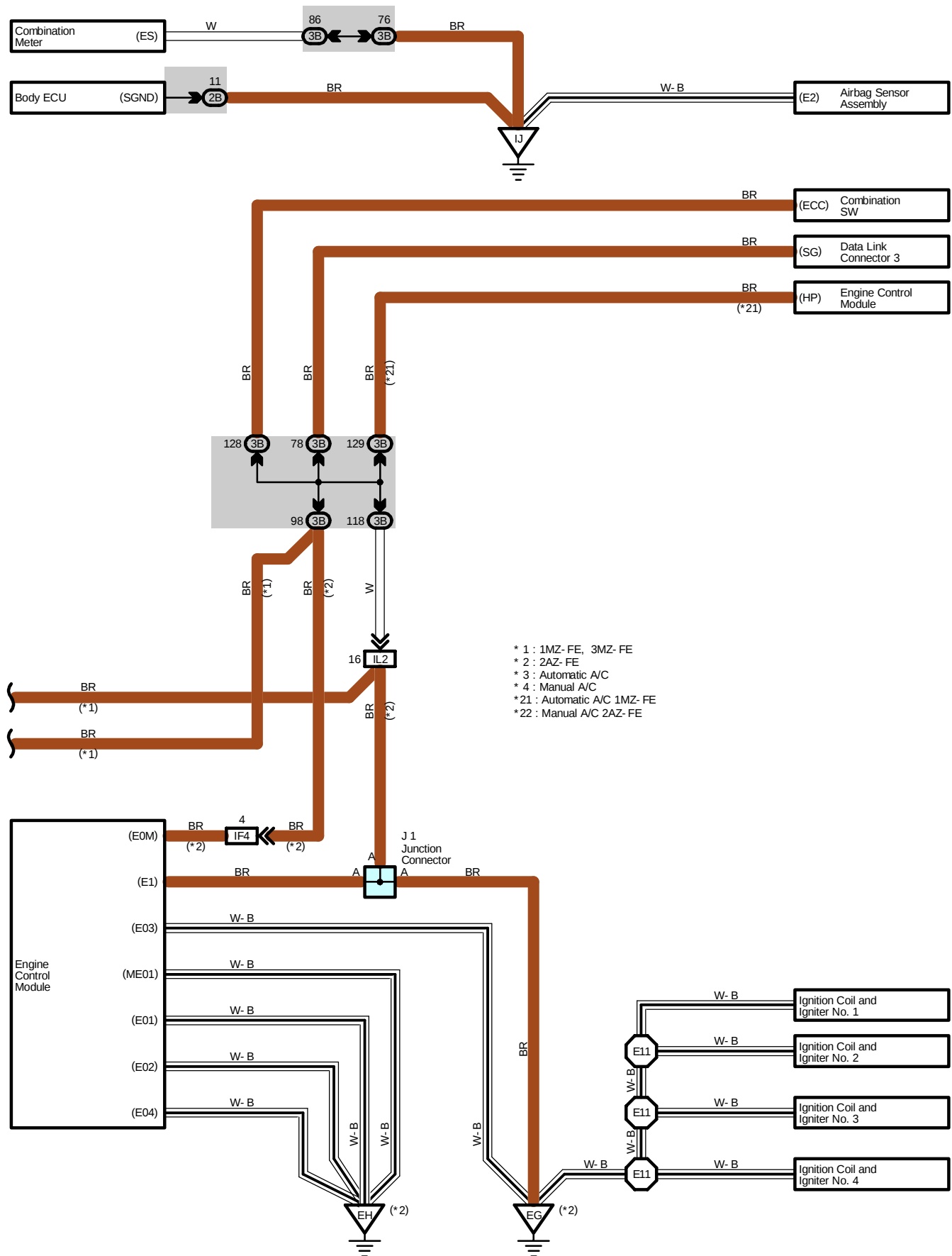
Code	See Page	Ground Points Location
EC	48 (*2)	Left Fender
II	50	Cowl Side Panel LH
IN	50	Instrument Panel Reinforcement RH

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

I GROUND POINT

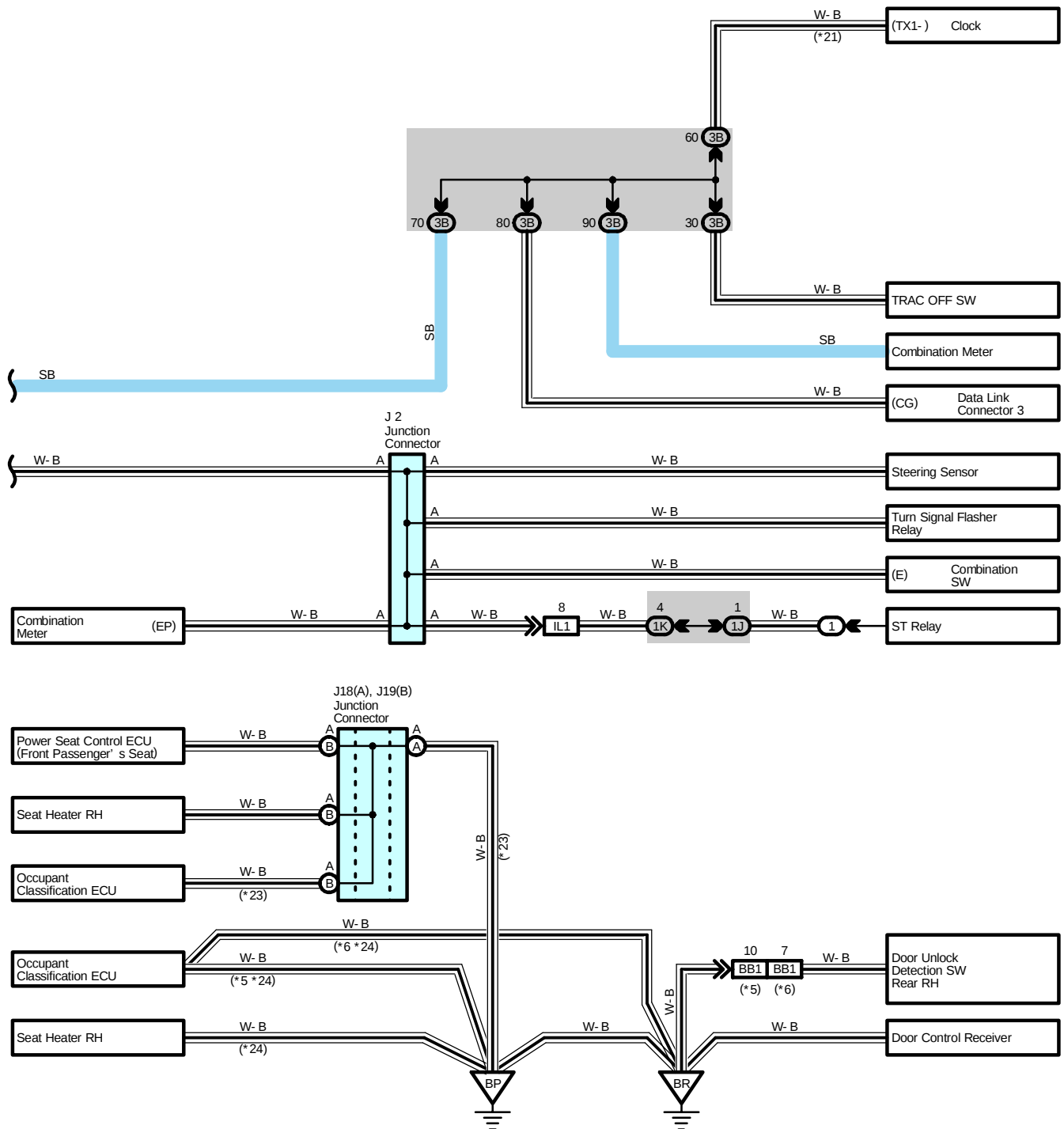


I GROUND POINT



I GROUND POINT

* 5 : TMC Made
 * 6 : TMMK Made
 * 21 : Automatic A/C 1MZ- FE
 * 23 : w/ Power Seat
 * 24 : w/o Power Seat
 * 25 : w/ Rear Spoiler
 * 26 : w/o Rear Spoiler



I GROUND POINT

: Parts Location

Code	See Page	Code	See Page	Code	See Page
J1	41	J18	A 44 (*3)	J21	B 44 (*3)
J2	41	J19	B 44 (*3)		
J4	41	J20	A 44 (*3)		
J11	42				

: 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)
1J		
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)
2D		
2L	29	
2M		
2P		
2R		
3A	34	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)
EA1	46 (*1)	Engine Room Main Wire and Engine Room No.2 Wire (Radiator Side Support LH)
	48 (*2)	
EA2	46 (*1)	
	48 (*2)	
IA1	50	Front Door LH Wire and Floor Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Roof Wire (Inside of Front Left Pillar)
IF4	50	Engine Room Main Wire and Instrument Panel Wire (Right Side of Steering Column Tube)
IG1	50	Instrument Panel Wire and Engine Room Main Wire (Instrument Panel Brace LH)
IH2	50	Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH)
IH3		
II1	52	Instrument Panel Wire and Instrument Panel No.3 Wire (Behind the Glove Box)
II3		
IL1	52	Engine Wire and Instrument Panel Wire (Behind the Glove Box)
IL2		
IM1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	54	Rear Door LH Wire and Floor Wire (Left Center Pillar)
BB1	54	Rear Door RH Wire and Floor No.2 Wire (Right Center Pillar)

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat



: Ground Points

Code	See Page	Ground Points Location
EA	46 (*1)	Right Fender
	48 (*2)	
EB	46 (*1)	
	48 (*2)	
EC	46 (*1)	Left Fender
	48 (*2)	
ED	46 (*1)	
	48 (*2)	
EE	46 (*1)	Left Side of Cylinder Head
EF	46 (*1)	Right Side of Cylinder Head
EG	48 (*2)	Left Side of Cylinder Head
EH	48 (*2)	Intake Side of Cylinder Block
II	50	Cowl Side Panel LH
IJ	50	Instrument Panel Brace LH
IK		
IL	50	Instrument Panel Brace RH
IM	50	Instrument Panel Reinforcement RH
IN		
BO	54	Under the Driver's Seat
BP	54	Under the Front Passenger's Seat
BQ	54	Front Side of Rear Quarter Wheel House LH
BR	54	Front Side of Rear Quarter Wheel House RH
BS	54	Lower Back Panel Center



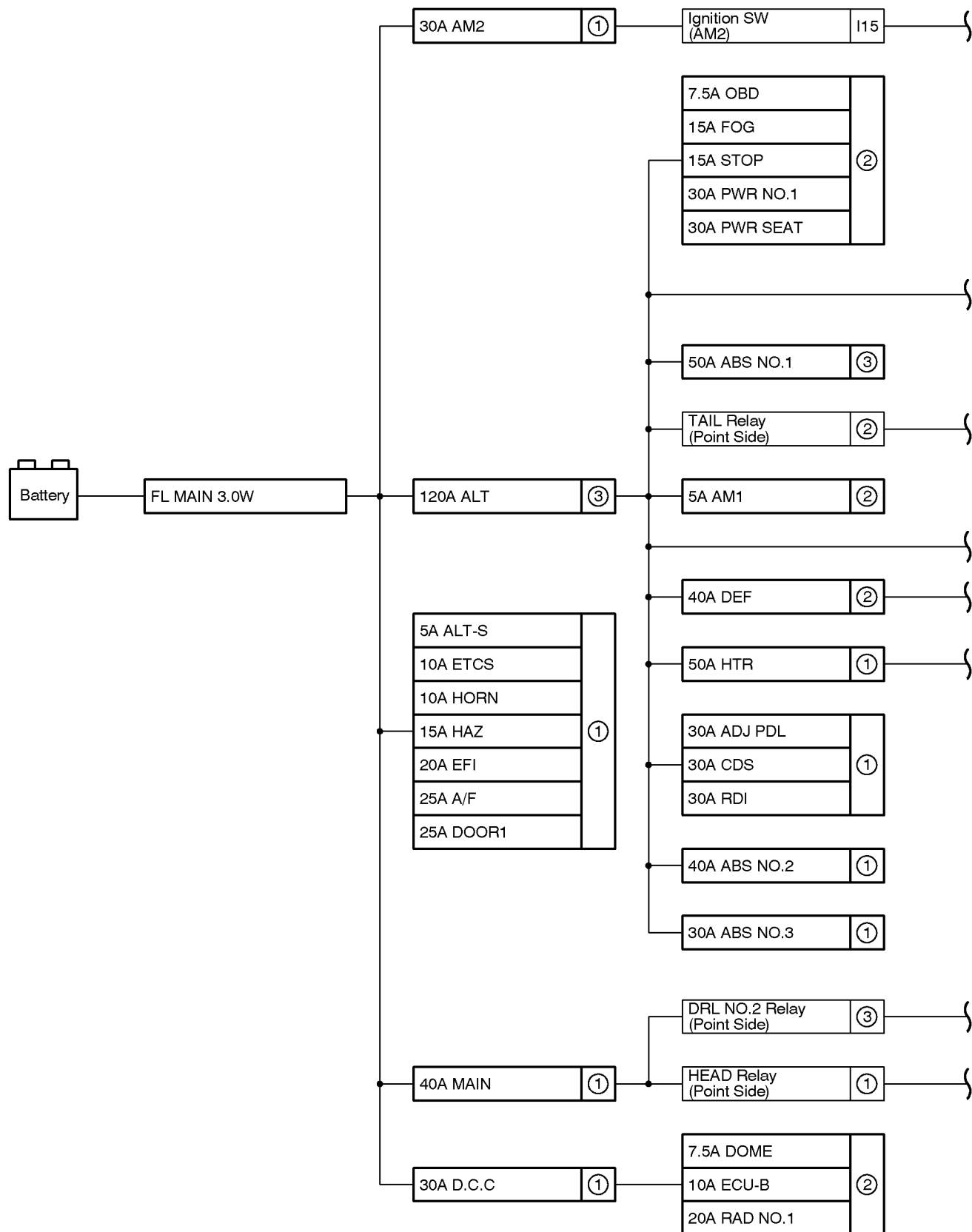
: Splice Points

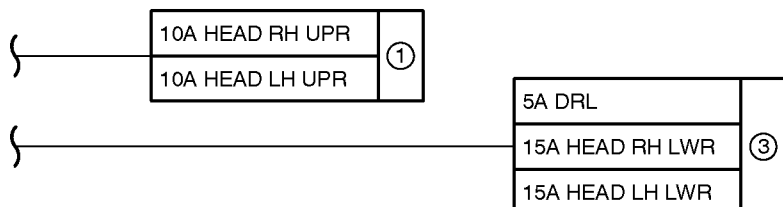
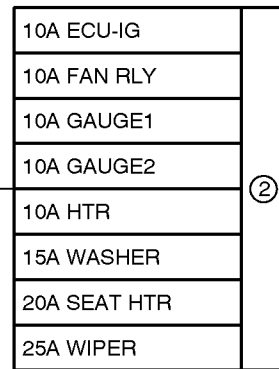
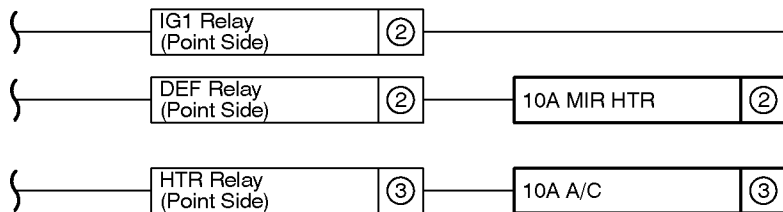
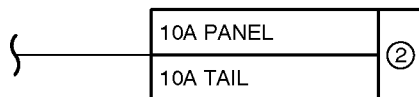
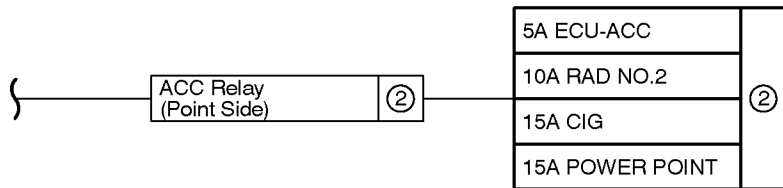
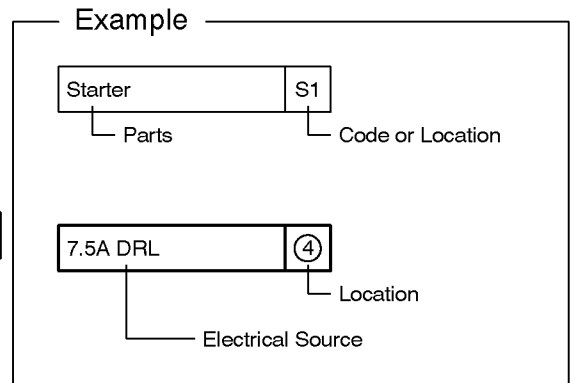
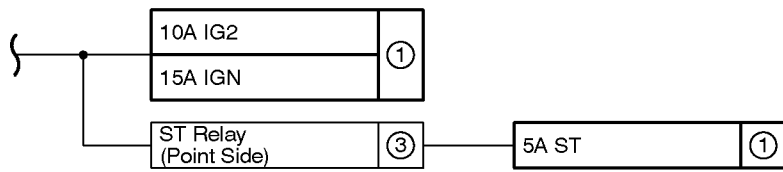
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	46 (*1)	Engine Room Main Wire	I5	52	Engine Wire
	48 (*2)		I6		
E2	46 (*1)		B1	54	Roof Wire
	48 (*2)		B4	54	Front Door LH Wire
E3	46 (*1)		B10	54	Floor Wire
	48 (*2)		B11		
E4	46 (*1)		B13	54	Front Door RH Wire
	48 (*2)		B16	54	Floor Wire
E6	46 (*1)	Engine Wire	B17		
E11	48 (*2)				

* 1 : 1MZ-FE, 3MZ-FE * 2 : 2AZ-FE * 3 : w/ Power Seat * 4 : w/o Power Seat

J POWER SOURCE (Current Flow Chart)

The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other Parts.





(LOCATION)

① : Engine Room J/B (See Page 24)

② : Driver Side J/B (See Page 28)

③ : Engine Room R/B (See Page 22)

J POWER SOURCE (Current Flow Chart)

Engine Room J/B (See Page 24)

Fuse		System	Page
5A	ALT-S	Charging	72
5A	ST	Combination Meter	260
		Starting and ignition (1MZ-FE, 3MZ-FE)	64
		Starting and ignition (2AZ-FE)	68
10A	ETCS	Cruise Control (1MZ-FE, 3MZ-FE)	192
		Cruise Control (2AZ-FE)	198
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
10A	HEAD LH UPR	Headlight	120
		Multiplex Communication System (BEAN)	104
10A	HEAD RH UPR	Headlight	120
		Multiplex Communication System (BEAN)	104
10A	HORN	Horn	236
		Multiplex Communication System (BEAN)	104
		Theft Deterrent and Door Lock Control	152
10A	IG2	ABS (TMC Made)	176
		ABS (TMMK Made)	180
		Charging	72
		Combination Meter	260
		Cruise Control (1MZ-FE, 3MZ-FE)	192
		Cruise Control (2AZ-FE)	198
		Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
		Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Seat Belt Warning	224
		SRS	185
		VSC	170
15A	HAZ	Turn Signal and Hazard Warning Light	142
15A	IGN	Clock	246
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Engine Immobilizer System	100
		Starting and ignition (1MZ-FE, 3MZ-FE)	64
		Starting and ignition (2AZ-FE)	68
20A	EFI	Cruise Control (1MZ-FE, 3MZ-FE)	192
		Cruise Control (2AZ-FE)	198
		Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
		Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86

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

Fuse		System	Page
25A	A/F	Engine Control (1MZ-FE, 3MZ-FE)	74
25A	DOOR1	Multiplex Communication System (BEAN)	104
		Theft Deterrent and Door Lock Control	152
		Wireless Door Lock Control	158
30A	ABS NO.3	ABS (TMMK Made)	180
		VSC	170
30A	ADJ PDL	Power Adjustable Pedals	244
30A	AM2	Charging	72
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Starting and ignition (1MZ-FE, 3MZ-FE)	64
		Starting and ignition (2AZ-FE)	68
30A	CDS	Radiator Fan and Condenser Fan	266
30A	RDI	Radiator Fan and Condenser Fan	266
40A	ABS NO.2	ABS (TMC Made)	176
40A	MAIN	Automatic Light Control	128
		Headlight	120
		Light Auto Turn Off System	130
		Multiplex Communication System (BEAN)	104
50A	HTR	Automatic Air Conditioning (1MZ-FE)	272
		Automatic Air Conditioning (2AZ-FE)	278
		Manual Air Conditioning (1MZ-FE, 3MZ-FE)	284
		Manual Air Conditioning (2AZ-FE)	290

Driver Side J/B (See Page 28)

Fuse		System	Page
5A	AM1	Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
		Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Starting and ignition (1MZ-FE, 3MZ-FE)	64
		Starting and ignition (2AZ-FE)	68
5A	ECU-ACC	Clock	246
		Combination Meter	260
		Multiplex Communication System (BEAN)	104
		Remote Control Mirror	228
7.5A	DOME	Clock	246
		Garage Door Opener	232
		Interior Light	134
		Multiplex Communication System (BEAN)	104
		Wireless Door Lock Control	158
7.5A	OBD	Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86

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

J POWER SOURCE (Current Flow Chart)

Fuse		System	Page
10A	ECU-B	ABS (TMC Made)	176
		ABS (TMMK Made)	180
		Automatic Air Conditioning (1MZ-FE)	272
		Automatic Air Conditioning (2AZ-FE)	278
		Automatic Light Control	128
		Clock	246
		Combination Meter	260
		Cruise Control (1MZ-FE, 3MZ-FE)	192
		Cruise Control (2AZ-FE)	198
		Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
		Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Engine Immobilizer System	100
		Headlight	120
		Illumination	138
		Interior Light	134
		Key Reminder	150
		Light Auto Turn Off System	130
		Manual Air Conditioning (1MZ-FE, 3MZ-FE)	284
		Manual Air Conditioning (2AZ-FE)	290
		Moon Roof	164
		Multiplex Communication System (BEAN)	104
		Navigation System, Audio System	250
		Power Window	166
		Seat Belt Warning	224
		SRS	185
		Theft Deterrent and Door Lock Control	152
		VSC	170
		Wireless Door Lock Control	158
10A	ECU-IG	ABS (TMC Made)	176
		ABS (TMMK Made)	180
		Automatic Light Control	128
		Headlight	120
		Interior Light	134
		Key Reminder	150
		Light Auto Turn Off System	130
		Moon Roof	164
		Multiplex Communication System (BEAN)	104
		Power Window	166
		Theft Deterrent and Door Lock Control	152
		VSC	170
10A	FAN RLY	Radiator Fan and Condenser Fan	266

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

Fuse		System	Page
10A	GAUGE1	Charging	72
		Clock	246
		Combination Meter	260
		Cruise Control (1MZ-FE, 3MZ-FE)	192
		Cruise Control (2AZ-FE)	198
		Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
		Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Illumination	138
		Key Reminder	150
		Multiplex Communication System (BEAN)	104
		Navigation System, Audio System	250
		Seat Belt Warning	224
		Shift Lock	216
		SRS	185
		Turn Signal and Hazard Warning Light	142
10A	GAUGE2	ABS (TMC Made)	176
		ABS (TMMK Made)	180
		Automatic Glare-Resistant EC Mirror	230
		Back-Up Light	148
		Cruise Control (1MZ-FE, 3MZ-FE)	192
		Cruise Control (2AZ-FE)	198
		Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
		Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
		Moon Roof	164
		Multiplex Communication System (BEAN)	104
		Navigation System, Audio System	250
		Power Adjustable Pedals	244
		Rear Window Defogger and Mirror Heater	242
		VSC	170
10A	HTR	Automatic Air Conditioning (1MZ-FE)	272
		Automatic Air Conditioning (2AZ-FE)	278
		Manual Air Conditioning (1MZ-FE, 3MZ-FE)	284
		Manual Air Conditioning (2AZ-FE)	290
10A	MIR HTR	Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Rear Window Defogger and Mirror Heater	242
10A	PANEL	Clock	246
		Illumination	138
10A	RAD NO.2	Audio System (Built-In Type Amplifier w/o Navigation System)	258
		Audio System (Separate Type Amplifier w/o Navigation System)	254
		Navigation System, Audio System	250

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

J POWER SOURCE (Current Flow Chart)

Fuse		System	Page
10A	TAIL	Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Taillight	144
15A	CIG	Power Outlet and Cigarette Lighter	234
15A	FOG	Fog Light	126
15A	POWER POINT	Power Outlet and Cigarette Lighter	234
15A	STOP	ABS (TMC Made)	176
		ABS (TMMK Made)	180
		Cruise Control (1MZ-FE, 3MZ-FE)	192
		Cruise Control (2AZ-FE)	198
		Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
		Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Shift Lock	216
		Stop Light	146
		VSC	170
15A	WASHER	Wiper and Washer	238
20A	RAD NO.1	Audio System (Built-In Type Amplifier w/o Navigation System)	258
		Audio System (Separate Type Amplifier w/o Navigation System)	254
		Navigation System, Audio System	250
20A	SEAT HTR	Seat Heater	222
25A	WIPER	Wiper and Washer	238
30A	PWR NO.1	Moon Roof	164
		Multiplex Communication System (BEAN)	104
		Power Window	166
30A	PWR SEAT	Power Seat	218
40A	DEF	Rear Window Defogger and Mirror Heater	242

Engine Room R/B (See Page 22)

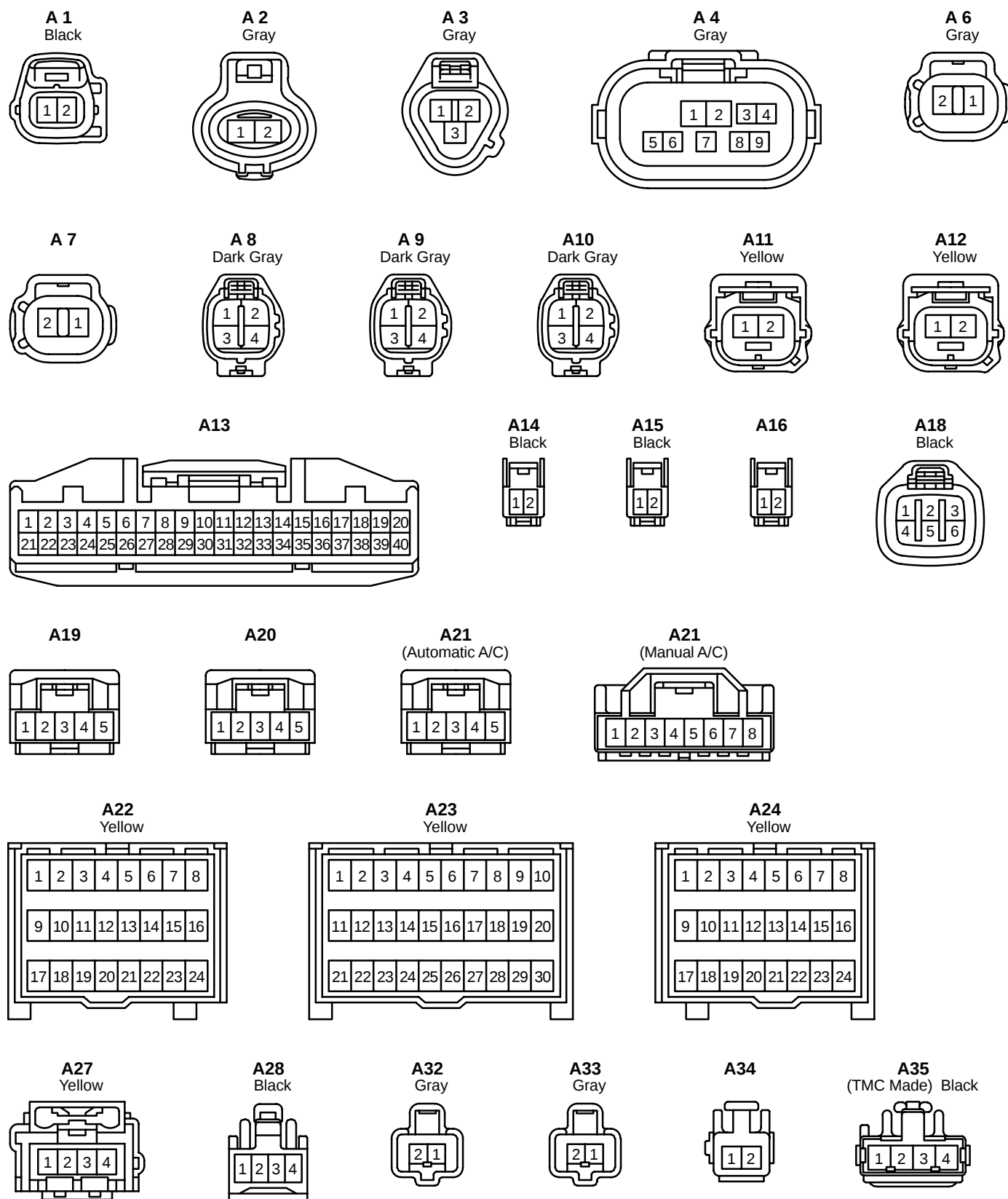
Fuse		System	Page
5A	DRL	Headlight	120
		Multiplex Communication System (BEAN)	104
10A	A/C	Manual Air Conditioning (1MZ-FE, 3MZ-FE)	284
		Manual Air Conditioning (2AZ-FE)	290
15A	HEAD LH LWR	Combination Meter	260
		Fog Light	126
		Headlight	120
		Multiplex Communication System (BEAN)	104
15A	HEAD RH LWR	Headlight	120
		Multiplex Communication System (BEAN)	104

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

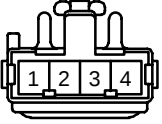
Fuse		System	Page
50A	ABS NO.1	ABS (TMC Made)	176
		ABS (TMMK Made)	180
		VSC	170
120A	ALT	Automatic Light Control	128
		Charging	72
		Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	204
		Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	210
		Engine Control (1MZ-FE, 3MZ-FE)	74
		Engine Control (2AZ-FE)	86
		Illumination	138
		Light Auto Turn Off System	130
		Multiplex Communication System (BEAN)	104
		Starting and ignition (1MZ-FE, 3MZ-FE)	64
		Starting and ignition (2AZ-FE)	68
		Taillight	144

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

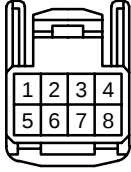
K CONNECTOR LIST



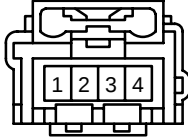
A35
(TMMK Made)



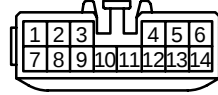
A36



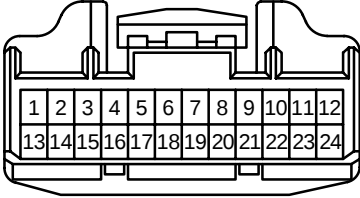
A37
Yellow



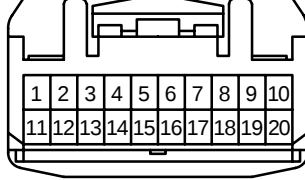
A38



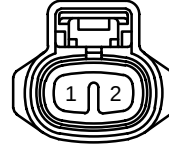
A39



A40



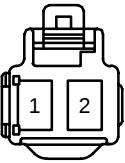
B 1
Gray



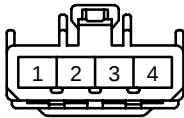
B 2
Gray



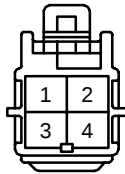
B 3



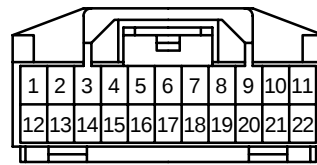
B 4
Black



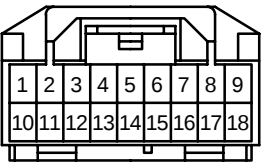
B 5
Black



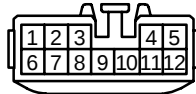
B 6



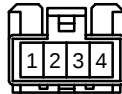
B 7



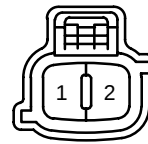
B 8



B 9



B10
(TMC Made)



B10
(TMMK Made)



B11
(TMC Made)



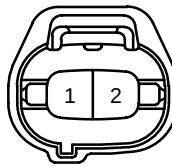
B11
(TMMK Made) Gray



C 1
Black



C 2
Black



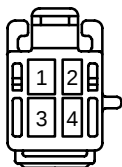
C 3
(1MZ-FE, 3MZ-FE) Black



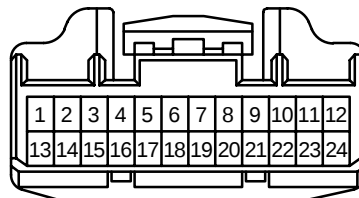
C 3
(2AZ-FE) Dark Gray



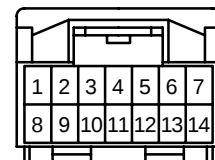
C 4



C 5
(Automatic A/C)



C 5
(Manual A/C)

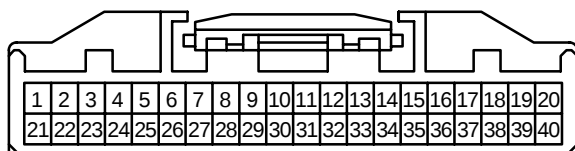


K CONNECTOR LIST

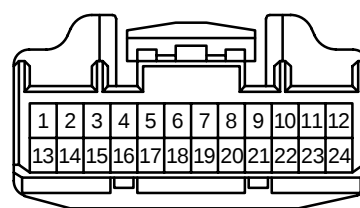
C 6
Black



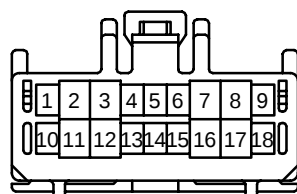
C 7



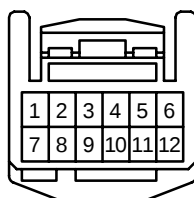
C 8



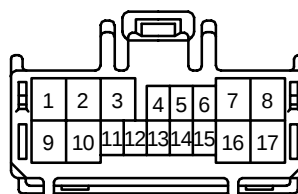
C 9
Black



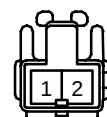
C10
Black



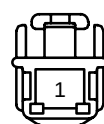
C11



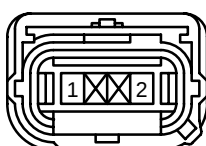
C12



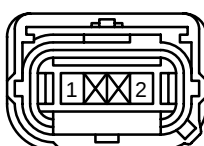
C13



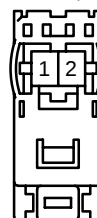
C14
Yellow



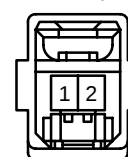
C15
Yellow



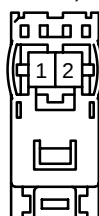
C16
(TMC Made) Black



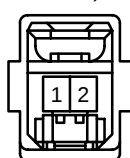
C16
(TMMK Made) Yellow



C17
(TMC Made) Black



C17
(TMMK Made) Yellow



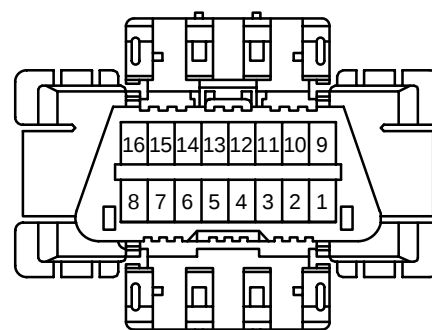
D 1
Gray



D 2
Black



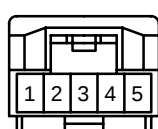
D 3



D 4
Black



D 5



D 6
(TMC Made) Black



D 6
(TMMK Made)



D 7
(TMC Made) Black



D 7
(TMMK Made)



D 8
(TMC Made) Black



D 8
(TMMK Made)



D 9
(TMC Made) Black



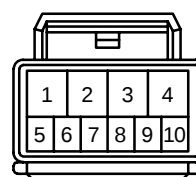
D 9
(TMMK Made)



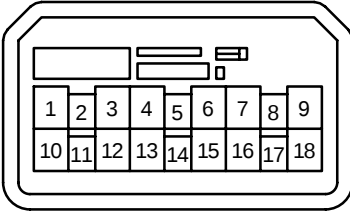
D10



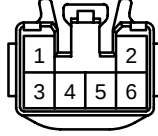
D11



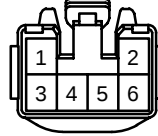
D12



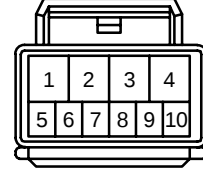
D13
(TMC Made)



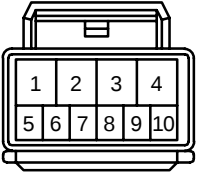
D13
(TMMK Made) Black



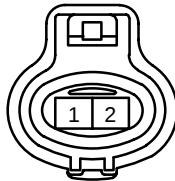
D14



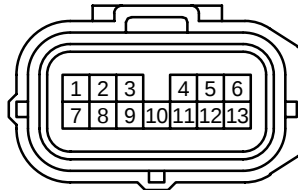
D15



D16
Gray



E 3
Gray



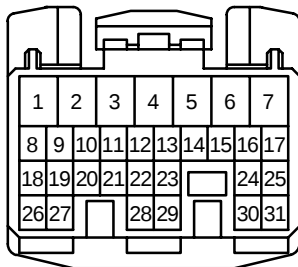
E 4
(1MZ-FE, 3MZ-FE) Dark Gray (2AZ-FE) Black



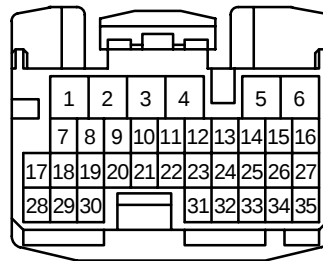
E 5
Black



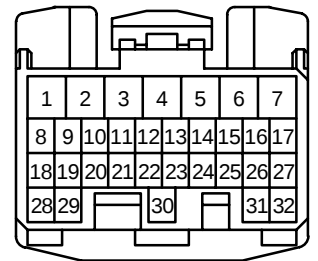
E 6



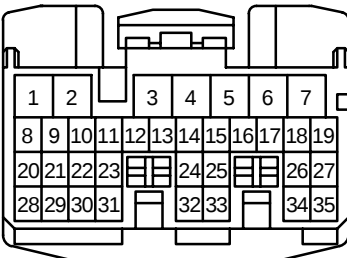
E 7



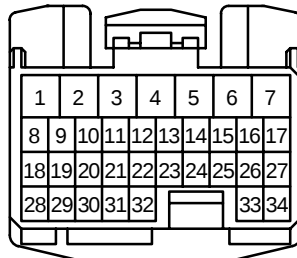
E 8



E 9



E10



F 1
Brown



F 2
Brown



F 5
(TMC Made) Gray



F 5
(TMMK Made) Black



F 6
(TMC Made)



F 6
(TMMK Made)



F 7
(TMC Made)



F 7
(TMMK Made)



F 8



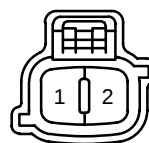
F 9
Gray



F10
Gray



F11
(TMC Made) Black



F11
(TMMK Made) Black



K CONNECTOR LIST

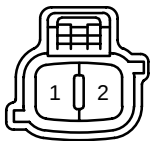
*1 : w/ Rear Spoiler

*3 : 2AZ-FE California TMC Made

*2 : w/o Rear Spoiler

*4 : 2AZ-FE California TMMK Made

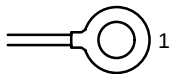
F12
(TMC Made) Black



F12
(TMMK Made) Black



G 1



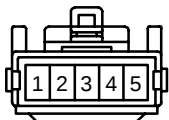
G 2
Black



G 3
Black



G 4



H 1
Black



H 2
Brown



H 3
Black



H 4
Brown



H 6
(1MZ-FE, 3MZ-FE) Dark Gray



H 6
(2AZ-FE)



H 7
Black



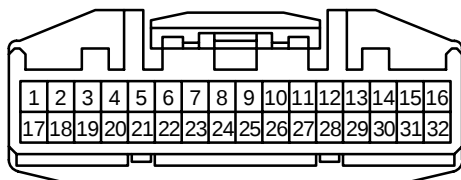
H 8
Black



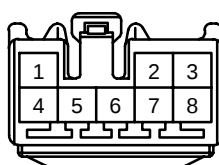
H 9
Black



H10



H11



H12
(*1)



H12
(*2) Gray



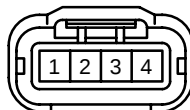
H13
(*3) Dark Gray



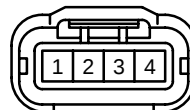
H13
(*4) Black



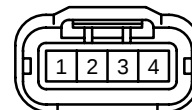
I 1
Black



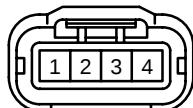
I 2
Black



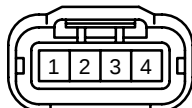
I 3
Black



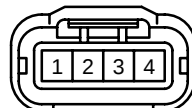
I 4
Black



I 5
Black



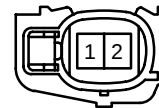
I 6
Black



I 7
(1MZ-FE, 3MZ-FE) Gray



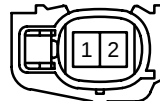
I 7
(2AZ-FE) Gray



I 8
(1MZ-FE, 3MZ-FE) Gray



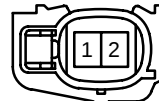
I 8
(2AZ-FE) Gray



I 9
(1MZ-FE, 3MZ-FE) Gray



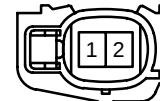
I 9
(2AZ-FE) Gray

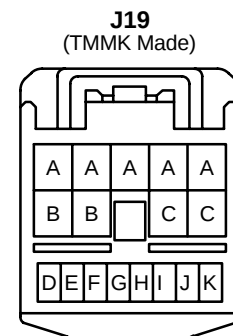
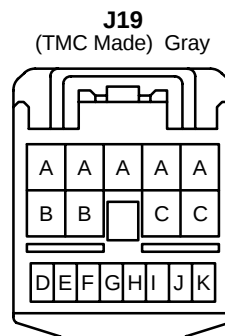
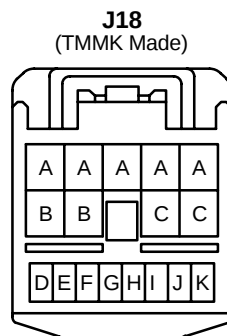
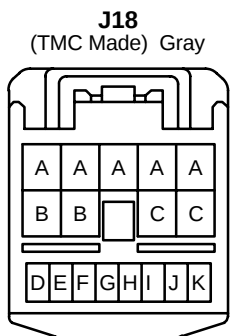
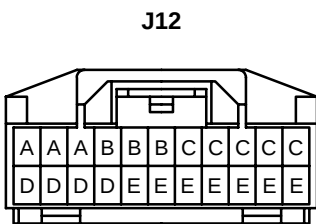
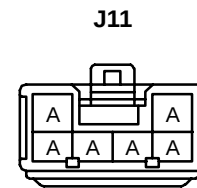
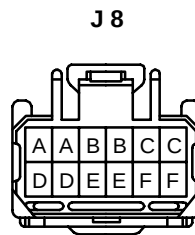
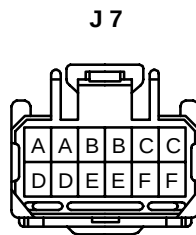
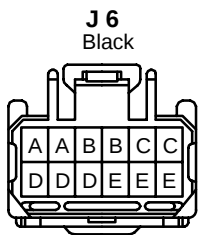
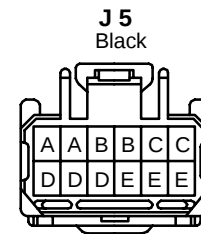
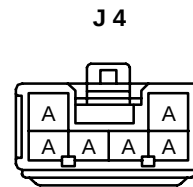
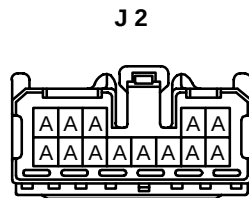
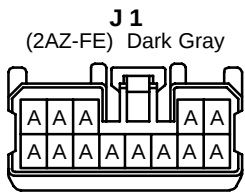
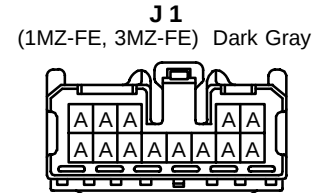
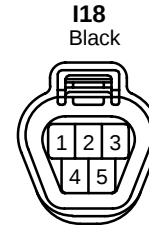
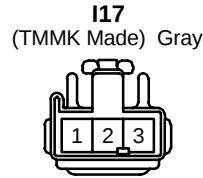
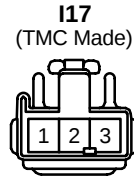
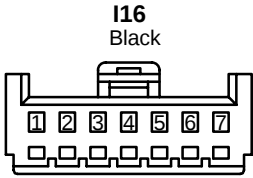
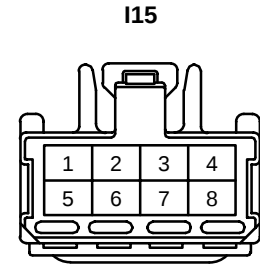
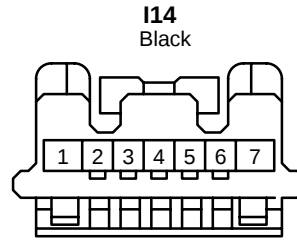
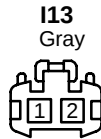


I10
(1MZ-FE, 3MZ-FE) Gray



I10
(2AZ-FE) Gray



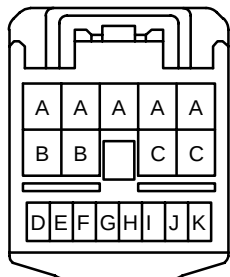


K CONNECTOR LIST

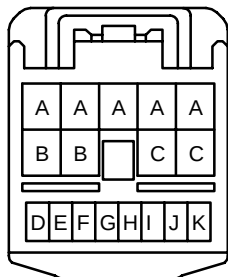
*5 : TMC Made w/ Mirror Heater

*6 : TMC Made w/o Mirror Heater

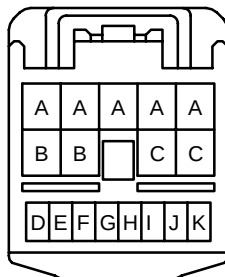
J20
Gray



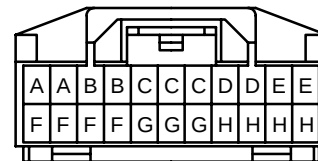
J21
(TMC Made) Gray



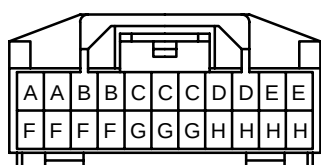
J21
(TMMK Made)



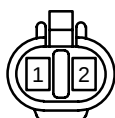
J22



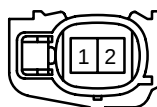
J23



K 1
Black



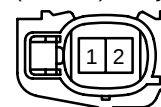
K 2
Black



K 3
(1MZ-FE) Dark Gray



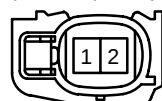
K 3
(3MZ-FE) Gray



K 4
(1MZ-FE) Dark Gray



K 4
(3MZ-FE) Gray



L 1
Gray



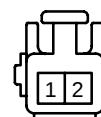
L 2
Gray



L 3



L 4
Black



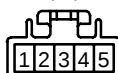
L 5



M 1
Black



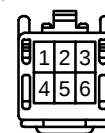
M 2
(*5)



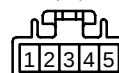
M 2
(*6)



M 2
(TMMK Made)



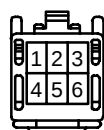
M 3
(*5)



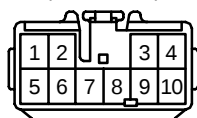
M 3
(*6)



M 3
(TMMK Made)



M 4
(TMC Made)



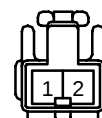
M 4
(TMMK Made)



N 1
Gray



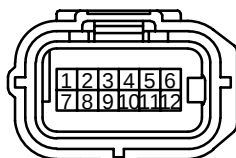
N 4



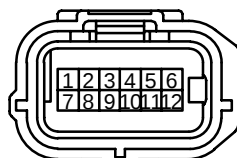
O 1
Gray



O 3
Gray



O 4
Black

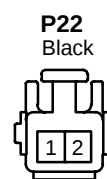
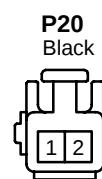
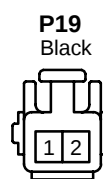
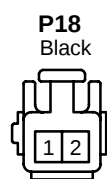
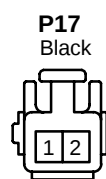
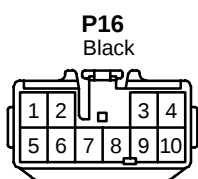
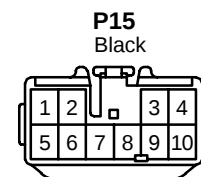
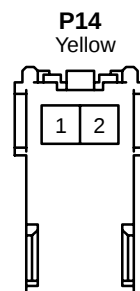
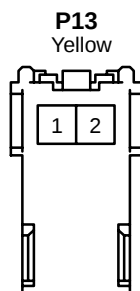
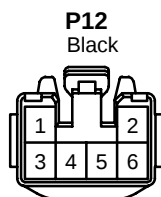
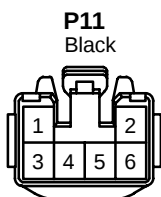
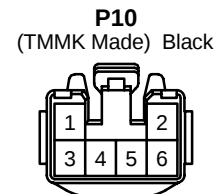
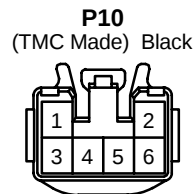
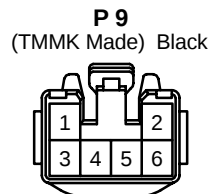
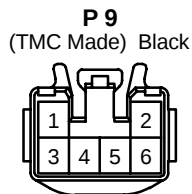
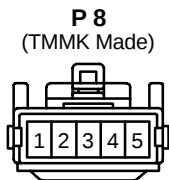
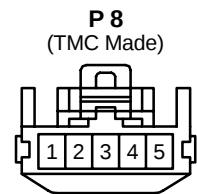
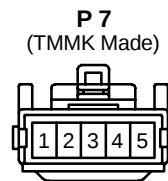
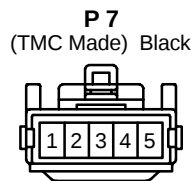
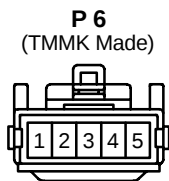
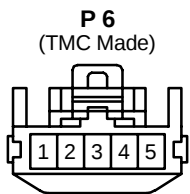
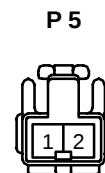
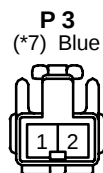
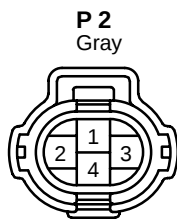
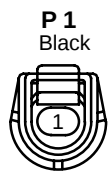
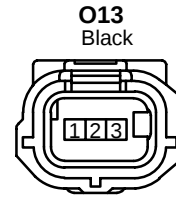
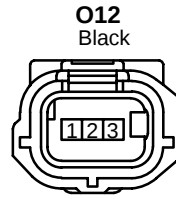
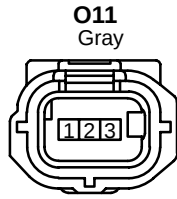
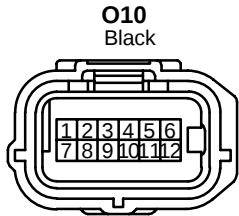
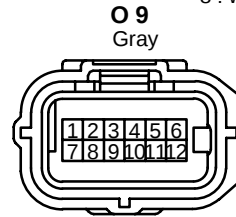
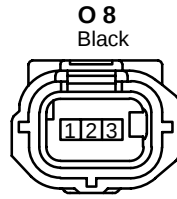
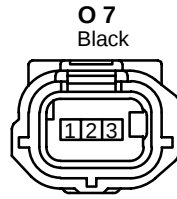
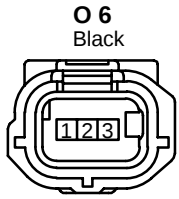


O 5
Gray



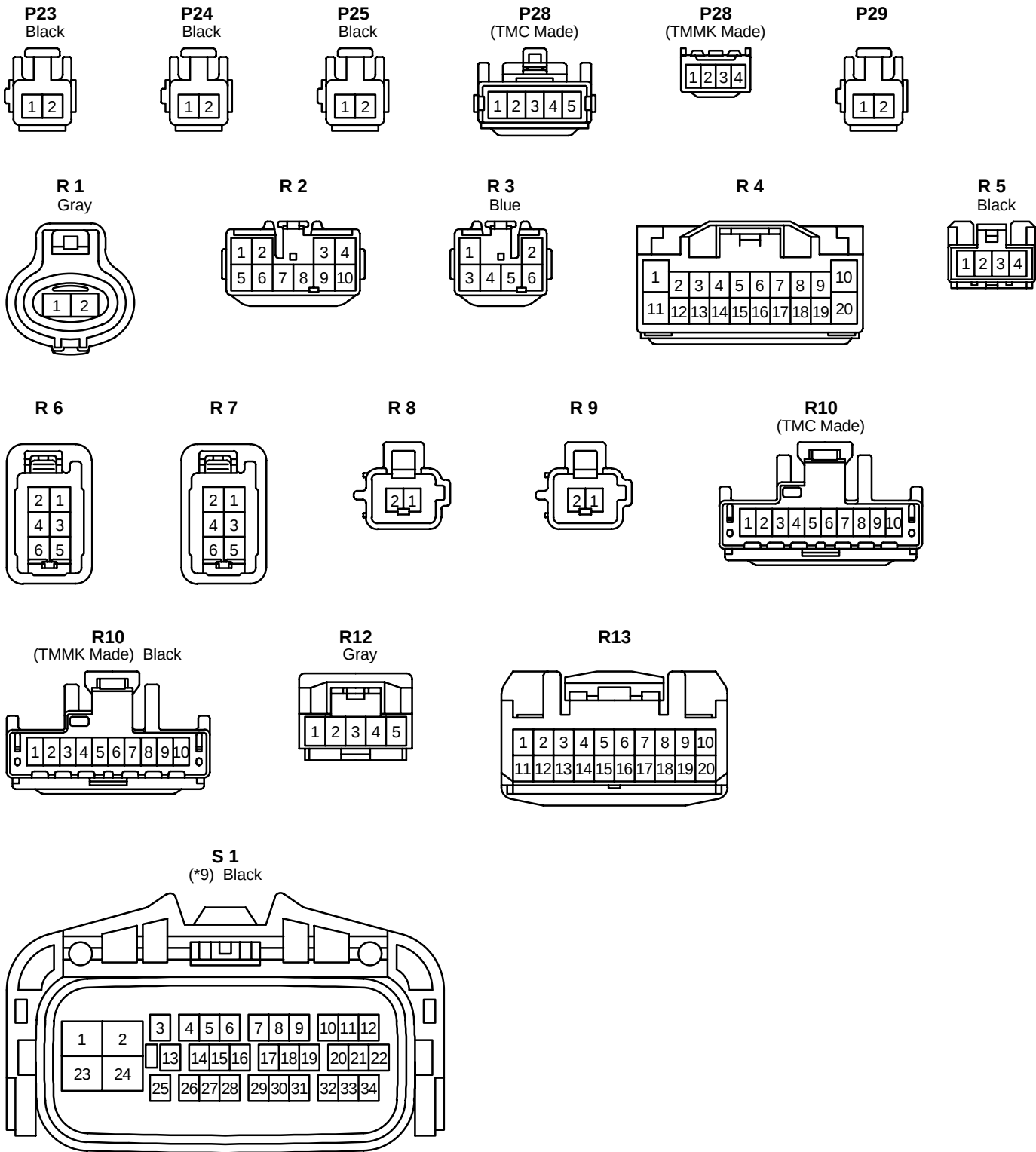
*7 : w/ Power Adjustable Pedals

*8 : w/o Power Adjustable Pedals



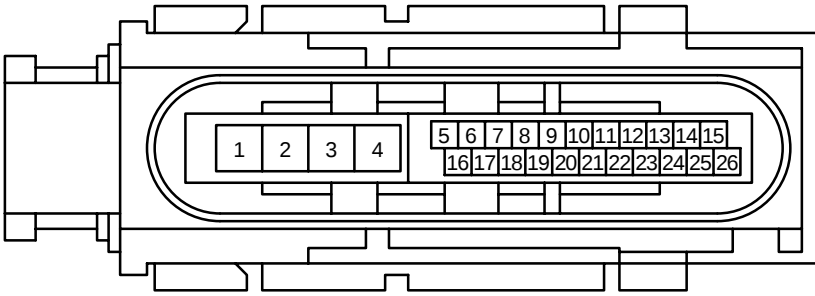
K CONNECTOR LIST

*9 : TMC Made w/o VSC

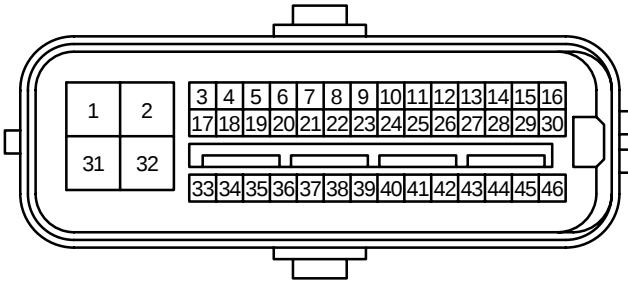


*10 : TMMK Made w/o VSC

S 1
(*10) Black



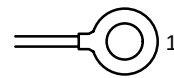
S 1
(w/ VSC) Black



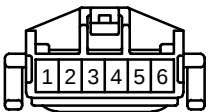
S 2
Black



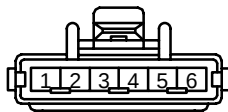
S 3



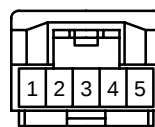
S 4
Black



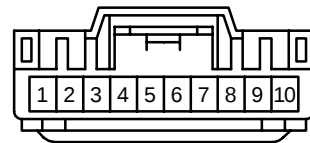
S 5
Blue



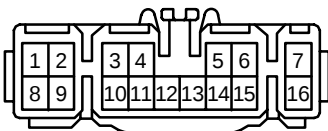
S 6



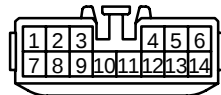
S11
Gray



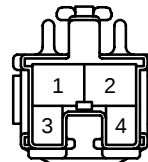
S12



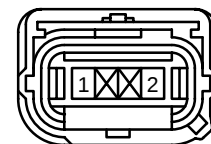
S13



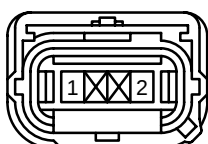
S14
Blue



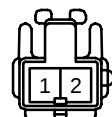
S15
Yellow



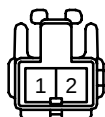
S16
Yellow



S17



S18



S19
Yellow



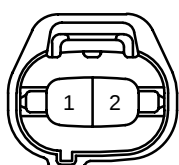
S20
Yellow



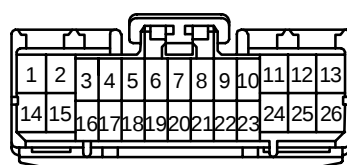
T 1
Black



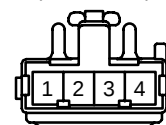
T 4
Black



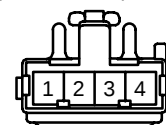
T 5



T 6
(TMC Made)



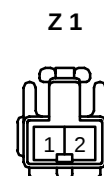
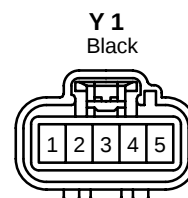
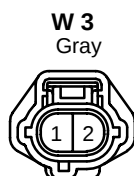
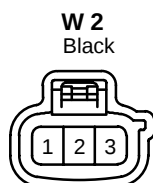
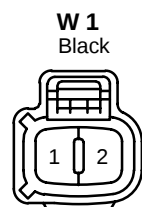
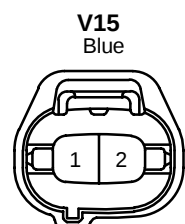
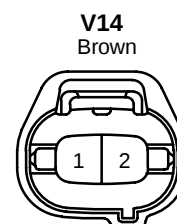
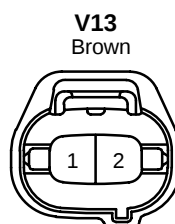
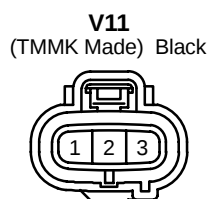
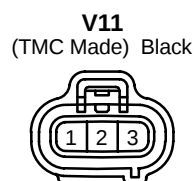
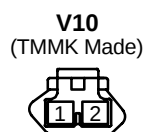
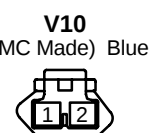
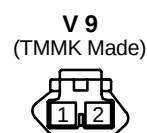
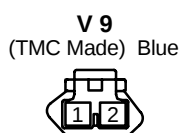
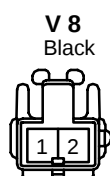
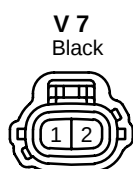
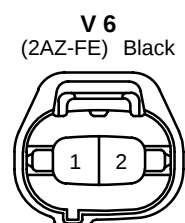
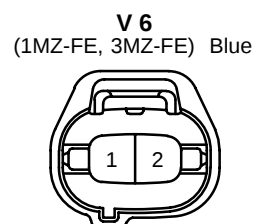
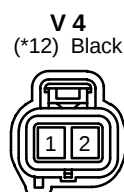
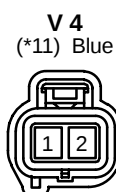
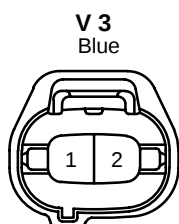
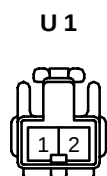
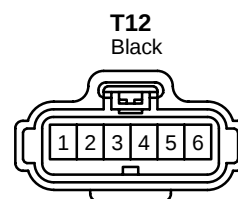
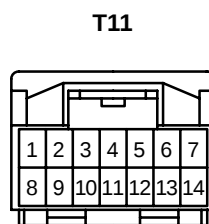
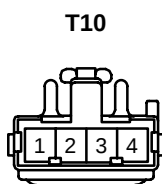
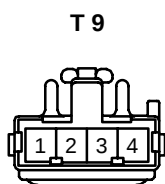
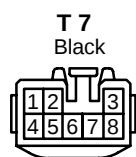
T 6
(TMMK Made) Black



K CONNECTOR LIST

*11 : TMMK Made Except 2AZ-FE California

*12 : TMMK Made 2AZ-FE California, TMC Made



L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number	Code	Part Name	Part Number
A 1	A/C Ambient Temp. Sensor	90980-11070	B 8	Body ECU	90980-10803
A 2	A/C Condenser Fan Motor	90980-10928	B 9	Buckle SW LH	90980-11950
A 3	A/C Lock Sensor	90980-11016	B10	Buckle SW (Front Passenger's Side) (TMC Made)	90980-11019
	A/C Magnetic Clutch			Buckle SW (Front Passenger's Side) (TMMK Made)	90980-10947
A 4	A/T Indicator Light SW	90980-12362	B11	Buckle SW LH (TMC Made)	90980-10942
	Back-Up Light SW			Buckle SW LH (TMMK Made)	90980-11034
	Park/Neutral Position SW			Seat Position Airbag Sensor (TMC Made)	90980-10942
A 6	ABS Speed Sensor Front LH	90980-11002			Seat Position Airbag Sensor (TMMK Made)
A 7	ABS Speed Sensor Front RH		C 1	Camshaft Position Sensor	90980-10947
A 8	Air Fuel Ratio Sensor (Bank 1 Sensor 1)	90980-11178	C 2	Counter Gear Speed Sensor	90980-11156
A 9	Air Fuel Ratio Sensor (Bank 1 Sensor 1)		C 3	Crankshaft Position Sensor	90980-10947
A10	Air Fuel Ratio Sensor (Bank 2 Sensor 1)		C 4	Cigarette Lighter	90980-11606
A11	Airbag Sensor Front LH	90980-11856		Cigarette Lighter Illumination	
A12	Airbag Sensor Front RH	C 5	Clock (Automatic A/C)	90980-12200	
A13	A/C Control Assembly	90980-12169		Clock (Manual A/C)	90980-11911
A14	A/C Room Temp. Sensor	90980-11918	C 6	Clutch Start SW	90980-10825
A15	A/C Solar Sensor		C 7	Combination Meter	90980-12170
A16	A/C Thermistor		C 8	Combination Meter	90980-12200
A18	Accelerator Position Sensor	90980-11144	C 9	Combination SW	90980-11594
A19	Air Inlet Control Servo Motor	90980-11909	C10	Combination SW	90980-12183
A20	Air Mix Control Servo Motor		C11	Combination SW	90980-11672
A21	Air Vent Mode Servo Motor (Automatic A/C)	90980-11909	C12	Cruise Control Clutch SW	90980-10906
	Air Vent Mode Servo Motor (Manual A/C)	90980-11989	C13	Choke Coil	90980-11259
A22	Airbag Sensor Assembly	90980-12392	C14	Curtain Shield Airbag Sensor LH	90980-12241
A23	Airbag Sensor Assembly	90980-12391	C15	Curtain Shield Airbag Sensor RH	
A24	Airbag Sensor Assembly	90980-12390	C16	Curtain Shield Airbag Squib LH (TMC Made)	90980-12219
A27	Airbag Squib (Steering Wheel Pad)	90980-12160		Curtain Shield Airbag Squib LH (TMMK Made)	90980-11884
A28	Automatic Light Control Sensor	90980-11107	C17	Curtain Shield Airbag Squib RH (TMC Made)	90980-12219
A32	ABS Speed Sensor Rear LH	90980-11060		Curtain Shield Airbag Squib RH (TMMK Made)	90980-11884
A33	ABS Speed Sensor Rear RH		D 1	Diode (A/C No.1)	90980-11071
A34	Adjustable Pedal Motor	90980-10825	D 2	Diode (A/C No.2)	90980-10962
A35	Adjustable Pedal SW	90980-11090	D 3	Data Link Connector 3	90980-11665
A36	A/T Shift Lever Illumination	90980-12221	D 4	Diode	90980-10962
	Transmission Control SW		D 5	Door Control Receiver	90980-11909
A37	Airbag Squib (Front Airbag Sensor Assembly)	90980-12160	D 6	Door Courtesy SW Front LH	90980-10871
A38	A/C Amplifier	90980-10807	D 7	Door Courtesy SW Front RH	
A39	A/C Control Assembly	90980-12200	D 8	Door Courtesy SW Rear LH	
A40	A/C Control Assembly	90980-12259	D 9	Door Courtesy SW Rear RH	
B 1	Back-Up Light SW	90980-11250	D10	Door Key Lock and Unlock SW Front LH	90980-12226
B 2	Brake Fluid Level Warning SW	90980-11207		Door Lock Motor Front LH	
B 3	Blower Motor	90980-10903		Door Unlock Detection SW Front LH	
B 4	Blower Motor Controller	90980-11676			
B 5	Blower Resistor	90980-11136			
B 6	Body ECU	90980-11915			
B 7	Body ECU	90980-11913			

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

Code	Part Name	Part Number	Code	Part Name	Part Number
D11	Door Key Lock and Unlock SW Front RH	90980-12226	H 3	Headlight RH (High)	90980-11095
	Door Lock Motor Front RH		H 4	Headlight RH (Low)	90980-11096
	Door Unlock Detection SW Front RH		H 6	Heated Oxygen Sensor (Bank 1 Sensor 2) (1MZ-FE, 3MZ-FE)	90980-10869
D12	Door Lock Control SW Front LH	Heated Oxygen Sensor (Bank 1 Sensor 2) (2AZ-FE)		90980-11028	
	Power Window Master SW	H 7	Heated Oxygen Sensor (Bank 2 Sensor 2)	90980-11028	
D13	Door Lock Control SW RH (TMC Made)	82824-12270	H 8	Horn (High)	90980-10619
	Door Lock Control SW RH (TMMK Made)	90980-10797	H 9	Horn (Low)	
D14	Door Lock Motor Rear LH	90980-12226	H10	Heater Control SW	90980-12153
	Door Unlock Detection SW Rear LH		H11	Heater Control SW	90980-11686
D15	Door Lock Motor Rear RH		H12	High Mounted Stop Light (w/ Rear Spoiler)	90980-11060
	Door Unlock Detection SW Rear RH			High Mounted Stop Light (w/o Rear Spoiler)	90980-11148
D16	Daytime Running Light Resistor	90980-10928	H13	Heated Oxygen Sensor (Bank 1 Sensor 3)	90980-11028
E 3	Electronically Controlled Transmission Solenoid	90980-12326	I 1	Ignition Coil and Igniter No.1	90980-11885
E 4	Engine Coolant Temp. Sensor (1MZ-FE, 3MZ-FE)	90980-10737	I 2	Ignition Coil and Igniter No.2	
	Engine Coolant Temp. Sensor (2AZ-FE)	90980-10735	I 3	Ignition Coil and Igniter No.3	
E 5	Engine Hood Courtesy SW	90980-11003	I 4	Ignition Coil and Igniter No.4	
E 6	Engine Control Module	90980-12525	I 5	Ignition Coil and Igniter No.5	
E 7	Engine Control Module	90980-12146	I 6	Ignition Coil and Igniter No.6	
E 8	Engine Control Module	90980-12143	I 7	Injector No.1 (1MZ-FE, 3MZ-FE)	90980-11153
E 9	Engine Control Module	90980-12145		Injector No.1 (2AZ-FE)	90980-11875
E10	Engine Control Module	90980-12144	I 8	Injector No.2 (1MZ-FE, 3MZ-FE)	90980-11153
F 1	Front Fog Light LH	90980-11096		Injector No.2 (2AZ-FE)	90980-11875
F 2	Front Fog Light RH		I 9	Injector No.3 (1MZ-FE, 3MZ-FE)	90980-11153
F 5	Front Wiper Motor	90980-11599		Injector No.3 (2AZ-FE)	90980-11875
F 6	Front Door Speaker LH (TMC Made)	82824-12260	I10	Injector No.4 (1MZ-FE, 3MZ-FE)	90980-11153
	Front Door Speaker LH (TMMK Made)	90980-10935		Injector No.4 (2AZ-FE)	90980-11875
F 7	Front Door Speaker RH (TMC Made)	82824-12260	I11	Injector No.5	90980-11153
	Front Door Speaker RH (TMMK Made)	90980-10935	I12	Injector No.6	
F 8	Fuel Pump	90980-11077	I13	Ignition Key Cylinder Light	90980-10679
	Fuel Sender		I14	Ignition Key Cylinder Light	90980-12092
F 9	Front Parking Light LH	90980-10887		Transponder Key Amplifier	
F10	Front Parking Light RH		I15	Ignition SW	90980-11615
F11	Front Turn Signal Light LH (TMC Made)	90980-11019	I16	Inner Mirror	90980-11794
	Front Turn Signal Light LH (TMMK Made)	90980-11020	I17	Interior Light	90980-10908
F12	Front Turn Signal Light RH (TMC Made)	90980-11019	I18	Intake Air Control Valve	90980-11599
	Front Turn Signal Light RH (TMMK Made)	90980-11020	J 1	Junction Connector (1MZ-FE, 3MZ-FE)	90980-11542
G 1	Generator	90980-09213		Junction Connector (2AZ-FE)	90980-12346
G 2	Generator	90980-11964	J 2	Junction Connector	90980-11542
G 3	Glove Box Light and SW	90980-11098	J 4	Junction Connector	90980-10976
G 4	Garage Door Opener	90980-10789	J 5	Junction Connector	90980-11661
	Moon Roof Control SW		J 6	Junction Connector	
	Personal Light		J 7	Junction Connector	
H 1	Headlight LH (High)	90980-11095	J 8	Junction Connector	
H 2	Headlight LH (Low)	90980-11096	J11	Junction Connector	90980-10976

L PART NUMBER OF CONNECTORS

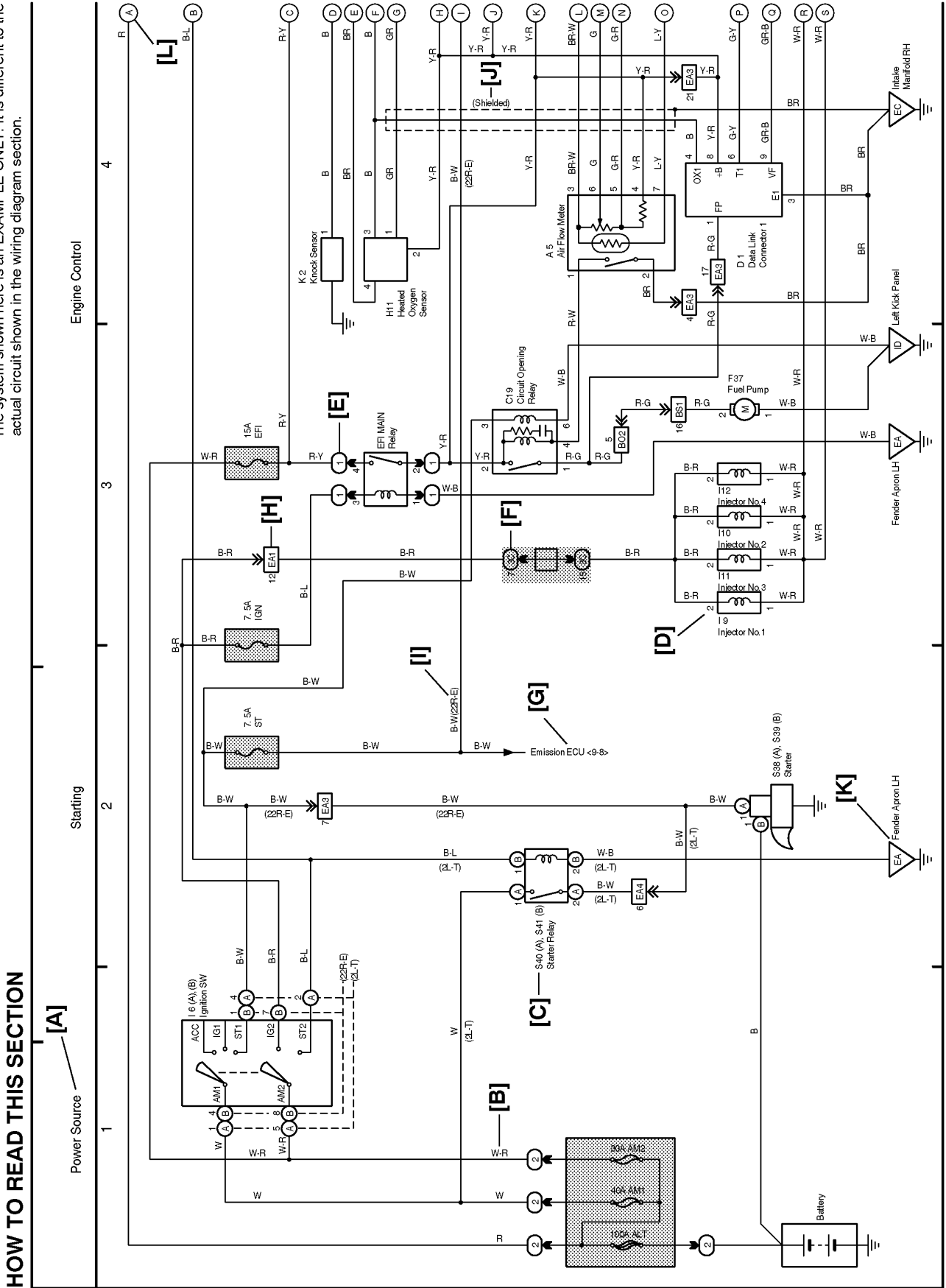
Code	Part Name	Part Number	Code	Part Name	Part Number
J12	Junction Connector	90980-11915	M 4	Moon Roof Control ECU and Motor (TMC Made)	90980-10997
J13	Junction Connector	90980-12355		Moon Roof Control ECU and Motor (TMMK Made)	90980-10799
J14	Junction Connector				
J15	Junction Connector				
J16	Junction Connector				
J17	Junction Connector				
J18	Junction Connector	90980-12374	N 1	Noise Filter (Ignition)	90980-10843
J19	Junction Connector		N 4	Noise Filter	90980-10860
J20	Junction Connector		O 1	Oil Pressure SW	90980-11363
J21	Junction Connector		O 3	Occupant Classification ECU	90980-12357
J22	Junction Connector		O 4	Occupant Classification ECU	90980-12356
J23	Junction Connector	90980-11915	O 5	Occupant Classification Sensor Front RH	90980-12354
K 1	Keyless Buzzer	90980-11142	O 6	Occupant Classification Sensor Rear RH	90980-12353
K 2	Knock Sensor (Bank 1)	90980-11875	O 7	Occupant Classification Sensor Front LH	
K 3	Knock Sensor (Bank 1) (1MZ-FE)	90980-11166	O 8	Occupant Classification Sensor Rear LH	90980-12354
	Knock Sensor (Bank 1) (3MZ-FE)	90980-11875	O 9	Occupant Classification ECU	90980-12357
K 4	Knock Sensor (Bank 2) (1MZ-FE)	90980-11166	O10	Occupant Classification ECU	90980-12356
	Knock Sensor (Bank 2) (3MZ-FE)	90980-11875	O11	Occupant Classification Sensor Front RH	90980-12354
L 1	License Plate Light LH	90980-11148	O12	Occupant Classification Sensor Rear RH	90980-12353
L 2	License Plate Light RH		O13	Occupant Classification Sensor Front LH	
L 3	Luggage Compartment Door Key Unlock SW	90980-11060	O14	Occupant Classification Sensor Rear LH	90980-12354
L 4	Luggage Compartment Door Opener Motor	90980-10825	P 1	Power Steering Oil Pressure SW	90980-11428
	Luggage Compartment Light SW		P 2	Pressure SW	90980-10943
L 5	Luggage Compartment Light	90980-11148	P 3	Parking Brake SW (w/ Power Adjustable Pedals)	90980-10860
M 1	Mass Air Flow Meter	90980-11317		Parking Brake SW (w/o Power Adjustable Pedals)	90980-10871
M 2	Mirror Heater LH (TMC Made w/ Mirror Heater)	90980-10558	P 4	Power Outlet (Front)	90980-10760
	Mirror Heater LH (TMC Made w/o Mirror Heater)	90980-10395	P 5	Power Outlet (Rear)	90980-10860
	Mirror Heater LH (TMMK Made)	90980-11488	P 6	Power Window Control SW Front RH (TMC Made)	82824-12230
	Remote Control Mirror LH (TMC Made w/ Mirror Heater)	90980-10558		Power Window Control SW Front RH (TMMK Made)	90980-10789
	Remote Control Mirror LH (TMC Made w/o Mirror Heater)	90980-10395	P 7	Power Window Control SW Rear LH	90980-10789
	Remote Control Mirror LH (TMMK Made)	90980-11488	P 8	Power Window Control SW Rear RH (TMC Made)	82824-12230
M 3	Mirror Heater RH (TMC Made w/ Mirror Heater)	90980-10558		Power Window Control SW Rear RH (TMMK Made)	90980-10789
	Mirror Heater RH (TMC Made w/o Mirror Heater)	90980-10395	P 9	Power Window Motor Front LH (TMC Made)	82824-12270
	Mirror Heater RH (TMMK Made)	90980-11488		Power Window Motor Front LH (TMMK Made)	90980-10797
	Remote Control Mirror RH (TMC Made w/ Mirror Heater)	90980-10558	P10	Power Window Motor Front RH (TMC Made)	82824-12270
	Remote Control Mirror RH (TMC Made w/o Mirror Heater)	90980-10395		Power Window Motor Front RH (TMMK Made)	90980-10797
	Remote Control Mirror RH (TMMK Made)	90980-11488	P11	Power Window Motor Rear LH	90980-10797
		P12	Power Window Motor Rear RH		

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

Code	Part Name	Part Number	Code	Part Name	Part Number
P13	Pretensioner LH	90980-12253	S 5	Seat Heater SW (Front Passenger's Seat)	90980-10933
P14	Pretensioner RH		S 6	Shift Lock Control ECU	90980-11909
P15	Power Seat Control SW (Driver's Seat)	90980-10997	S11	Steering Sensor	82824-45030
P16	Power Seat Control SW (Front Passenger's Seat)		S12	Stereo Component Amplifier	90980-10848
P17	Power Seat Motor (Driver's Seat Front Vertical Control)	90980-10825	S13	Stereo Component Amplifier	90980-10807
			S14	Stop Light SW	90980-11118
S15	Side Airbag Sensor LH		90980-12241		
S16	Side Airbag Sensor RH				
P18	Power Seat Motor (Driver's Seat Lifter Control)		S17	Seat Heater LH	90980-10906
P19	Power Seat Motor (Driver's Seat Reclining Control)		S18	Seat Heater RH	
P20	Power Seat Motor (Driver's Seat Slide Control)		S19	Side Airbag Squib LH	90980-11864
P22	Power Seat Motor (Front Passenger's Seat Front Vertical Control)		S20	Side Airbag Squib RH	
P23	Power Seat Motor (Front Passenger's Seat Lifter Control)		T 1	Theft Deterrent Horn	90980-10619
P24	Power Seat Motor (Front Passenger's Seat Reclining Control)		T 4	Turbine Speed Sensor	90980-11156
P25	Power Seat Motor (Front Passenger's Seat Slide Control)	T 5	Theft Deterrent ECU	90980-11423	
		T 6	TRAC OFF SW	90980-11013	
P28	Power Seat Control SW (Driver's Seat Lumbar Support Control) (TMC Made)	90980-10789	T 7	Turn Signal Flasher Relay	90980-10799
	Power Seat Control SW (Driver's Seat Lumbar Support Control) (TMMK Made)	90980-10601	T 9	Tweeter LH	90980-11013
P29	Power Seat Motor (Driver's Seat Lumbar Support Control)	90980-10825	T10	Tweeter RH	
R 1	Radiator Fan Motor	90980-10928	T11	Transponder Key Computer	90980-11858
R 2	Radio and Player	90980-10997	T12	Throttle Control Motor	
R 3	Radio and Player	90980-10996		Throttle Position Sensor	90980-10860
R 4	Radio and Player with Display (w/ Navigation System)	90980-12038	U 1	Unlock Warning SW	
	Radio and Player (w/o Navigation System)		V 3	VSV (AICV)	90980-11156
R 5	Rheostat	90980-11950	V 4	VSV (Canister Closed Valve)	90980-11859
R 6	Rear Combination Light LH	90980-11587	V 6	VSV (EVAP)	90980-11156
R 7	Rear Combination Light RH		V 7	VVT Solenoid	90980-11162
R 8	Rear Speaker LH	90980-11299	V 8	VSC Warning Buzzer	90980-10906
R 9	Rear Speaker RH		V 9	Vanity Light LH	90980-10621
R10	Remote Control Mirror SW	90980-11657	V10	Vanity Light RH	
R12	Radio and Player with Display	90980-11909	V11	Vapor Pressure Sensor (TMC Made)	90980-11860
R13	Radio and Player with Display (w/ Navigation System)	90980-12259		V13	VSV (ACIS No.1)
	Radio and Player (w/o Navigation System)		V14	VSV (ACIS No.2)	
S 1	Skid Control ECU with Actuator (TMC Made w/o VSC)	90980-12020	V15	VSV (ACM)	90980-11156
	Skid Control ECU with Actuator (TMMK Made w/o VSC)	90080-98317	V16	VVT Sensor LH	90980-10947
	Skid Control ECU with Actuator (w/ VSC)	90980-12297	V17	VVT Sensor RH	
S 2	Starter	90980-11400	V18	VVT Solenoid LH	90980-11162
S 3	Starter	90980-09463	V19	VVT Solenoid RH	
S 4	Seat Heater SW (Driver's Seat)	90980-10964	W 1	Washer Level Sensor	90980-11068
			W 2	Washer Motor	90980-10981
			W 3	Water Temp. SW No.1	90980-11235
			W 4	Water Temp. SW No.2	90980-11243
			Y 1	Yaw Rate Sensor	90980-11904
			Z 1	Option Connector (TVIP ECU)	90980-10860

M OVERALL ELECTRICAL WIRING DIAGRAM

* The system shown here is an **EXAMPLE ONLY**. It is different to the actual circuit shown in the wiring diagram section.



[A] : System Title

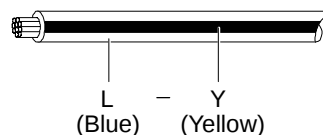
[B] : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

B = Black W = White BR = Brown
 L = Blue V = Violet SB = Sky Blue
 R = Red G = Green LG = Light Green
 P = Pink Y = Yellow GR = Gray
 O = Orange

The first letter indicates the basic wire color and the second letter indicates the color of the stripe.

Example: L - Y

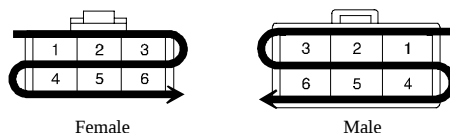


[C] : The position of the parts is the same as shown in the wiring diagram and wire routing.

[D] : Indicates the pin number of the connector. The numbering system is different for female and male connectors.

Example : Numbered in order from upper left to lower right

Numbered in order from upper right to lower left



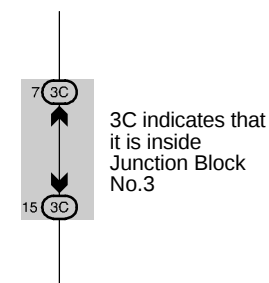
The numbering system for the overall wiring diagram is the same as above

[E] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B.

Example : ① Indicates Relay Block No.1

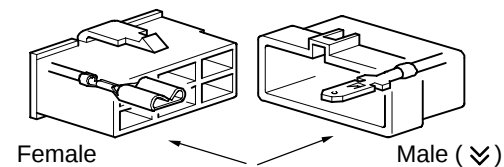
[F] : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

Example:



[G] : Indicates related system.

[H] : Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (↗). Outside numerals are pin numbers.



[I] : () is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.

[J] : Indicates a shielded cable.

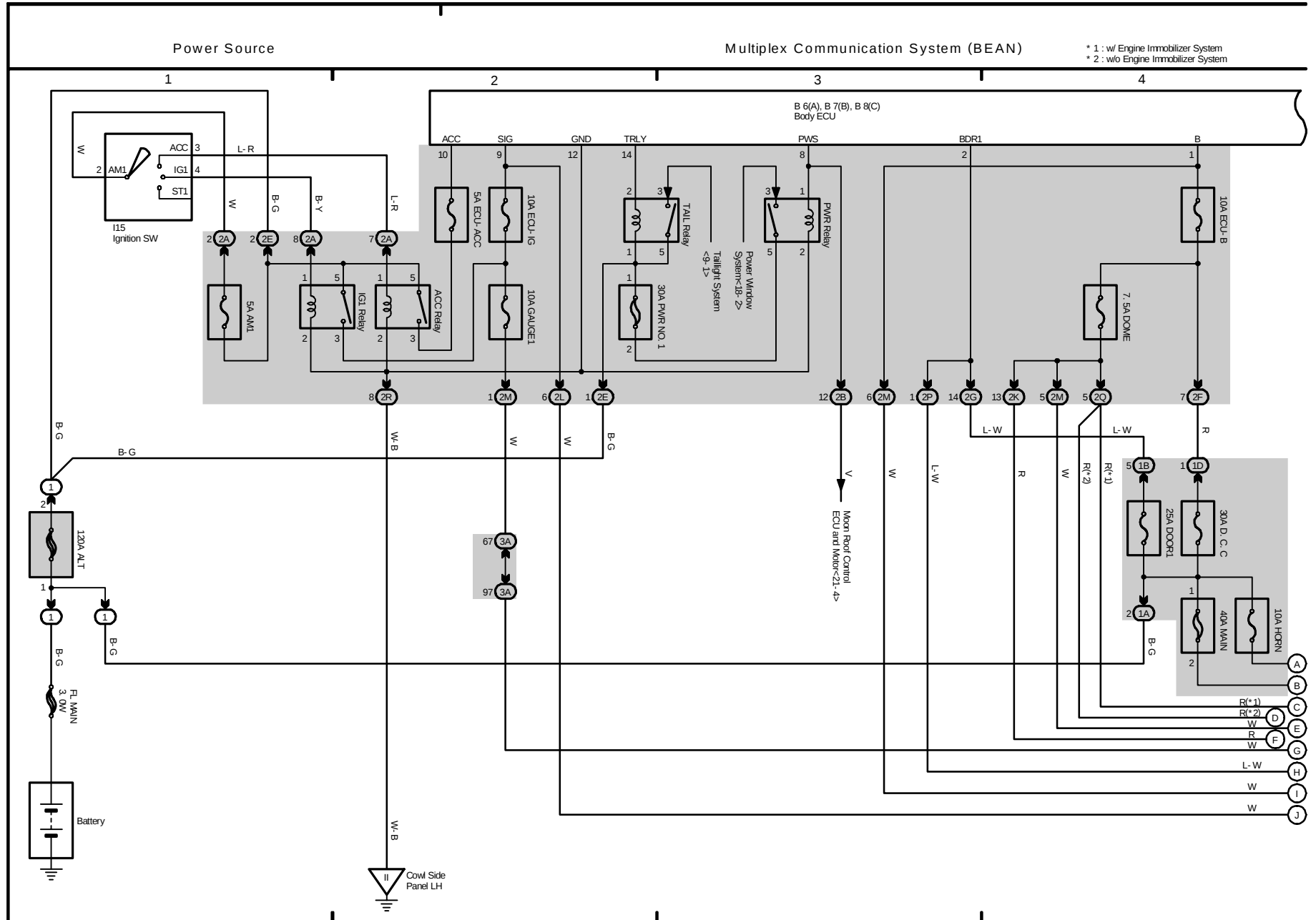


[K] : Indicates and located on ground point.

[L] : The same code occurring on the next page indicates that the wire harness is continuous.

SYSTEM INDEX

SYSTEMS	LOCATION	SYSTEMS	LOCATION
ABS (TMC Made)	14-2	Moon Roof	21-4
ABS (TMMK Made)	15-2	Multiplex Communication System (BEAN)	1-2
Audio System (Built-in Type Amplifier w/o Navigation System) . . .	29-3	*Automatic Light Control	
Audio System (Separate Type Amplifier w/o Navigation System) .	28-2	*Door Lock Control	
Audio System (w/ Navigation System)	27-2	*Garage Door Opener	
Automatic Air Conditioning (1MZ-FE)	32-2	*Headlight	
Automatic Air Conditioning (2AZ-FE)	33-2	*Interior Light	
Automatic Glare-Resistant EC Mirror	21-3	*Key Reminder	
Back-Up Light	12-2	*Light Auto Turn Off System	
Charging	4-2	*Theft Deterrent	
Cigarette Lighter	23-2	*Wireless Door Lock Control	
Clock	26-2	Multiplex Communication System (CAN)	13-11
Combination Meter	30-2	Navigation System	27-2
Cruise Control (1MZ-FE, 3MZ-FE)	5-18	Power Adjustable Pedals	25-2
Cruise Control (2AZ-FE)	6-18	Power Outlet	23-2
Electronically Controlled Transmission and A/T Indicator (1MZ-FE, 3MZ-FE)	7-2	Power Seat	24-2
Electronically Controlled Transmission and A/T Indicator (2AZ-FE)	8-2	Power Source	1~35-1
Engine Control (1MZ-FE, 3MZ-FE)	5-8	Power Window	18-3
Engine Control (2AZ-FE)	6-8	Radiator Fan and Condenser Fan	31-2
Engine Immobilizer System (1MZ-FE, 3MZ-FE)	5-3	Rear Window Defogger	20-3
Engine Immobilizer System (2AZ-FE)	6-4	Remote Control Mirror	19-3
Fog Light	12-4	Seat Belt Warning	17-2
Horn	17-4	Seat Heater	23-4
Ignition (1MZ-FE, 3MZ-FE)	2-2	Shift Lock	23-3
Ignition (2AZ-FE)	3-2	SRS	16-2
Illumination	10-2	Starting (1MZ-FE, 3MZ-FE)	2-2
Manual Air Conditioning (1MZ-FE, 3MZ-FE)	34-3	Starting (2AZ-FE)	3-2
Manual Air Conditioning (2AZ-FE)	35-3	Stop Light	9-3
Mirror Heater	20-4	Taillight	9-2
		Turn Signal and Hazard Warning Light	11-2
		VSC	13-4
		Wiper and Washer	22-3



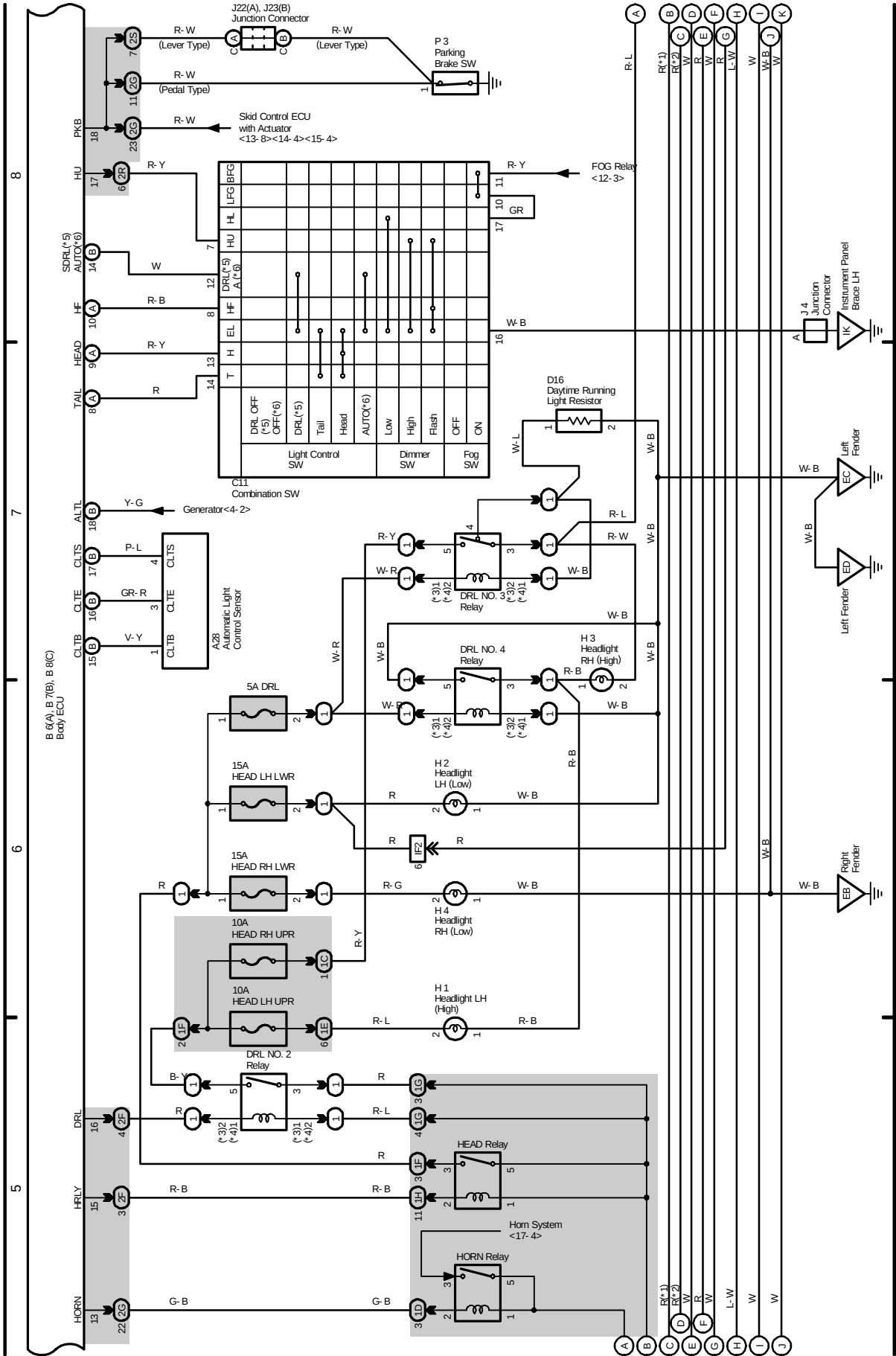
M OVERALL ELECTRICAL WIRING DIAGRAM

1 CAMRY (Cont' d)

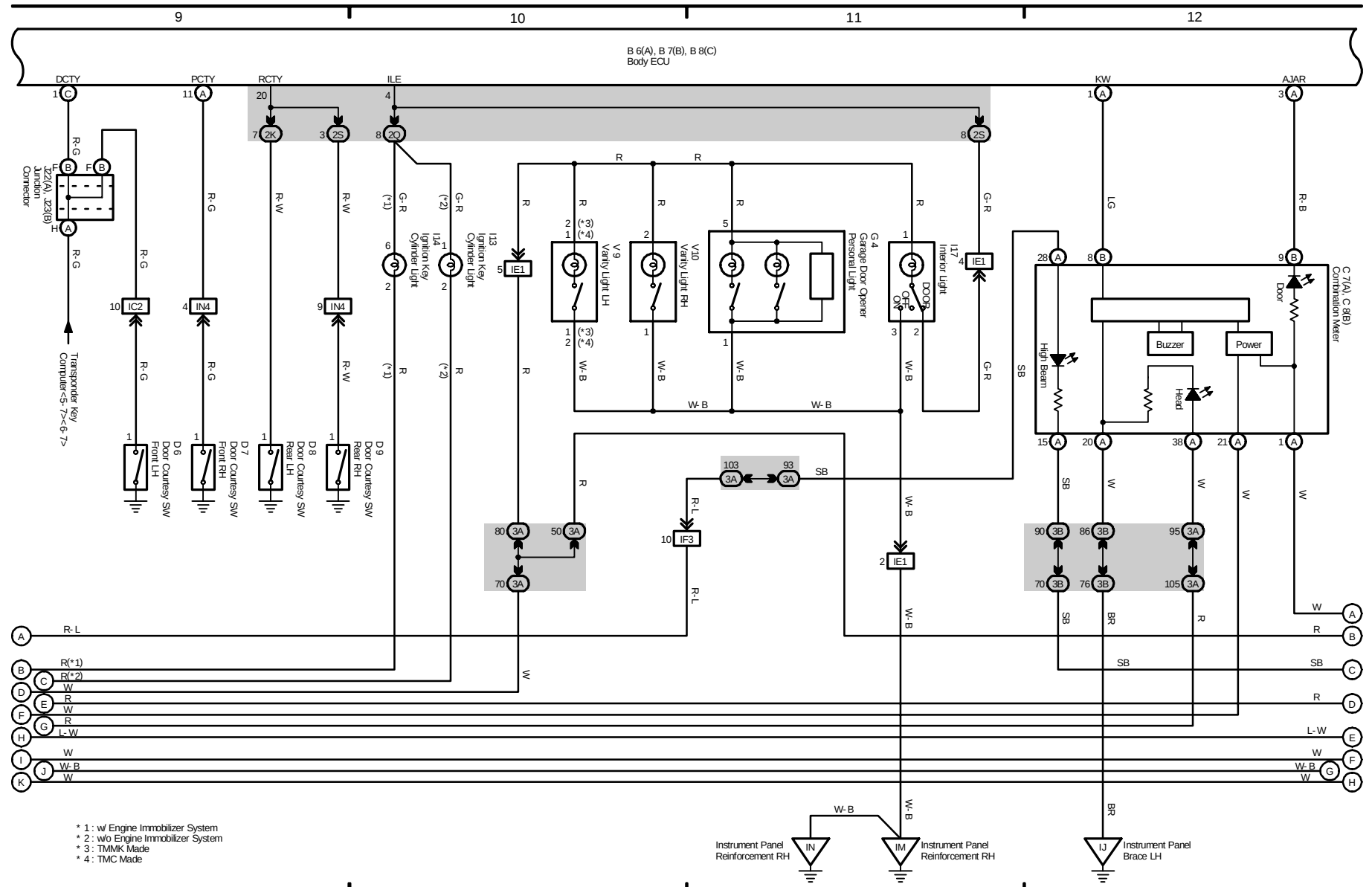
(Cont. next page)

* 1: w/ Engine Immobilizer System
 * 2: w/o Engine Immobilizer System
 * 3: TMMK Made
 * 4: TMC Made
 * 5: USA
 * 6: Canada

Multiplex Communication System (BEAN)



Multiplex Communication System (BEAN)

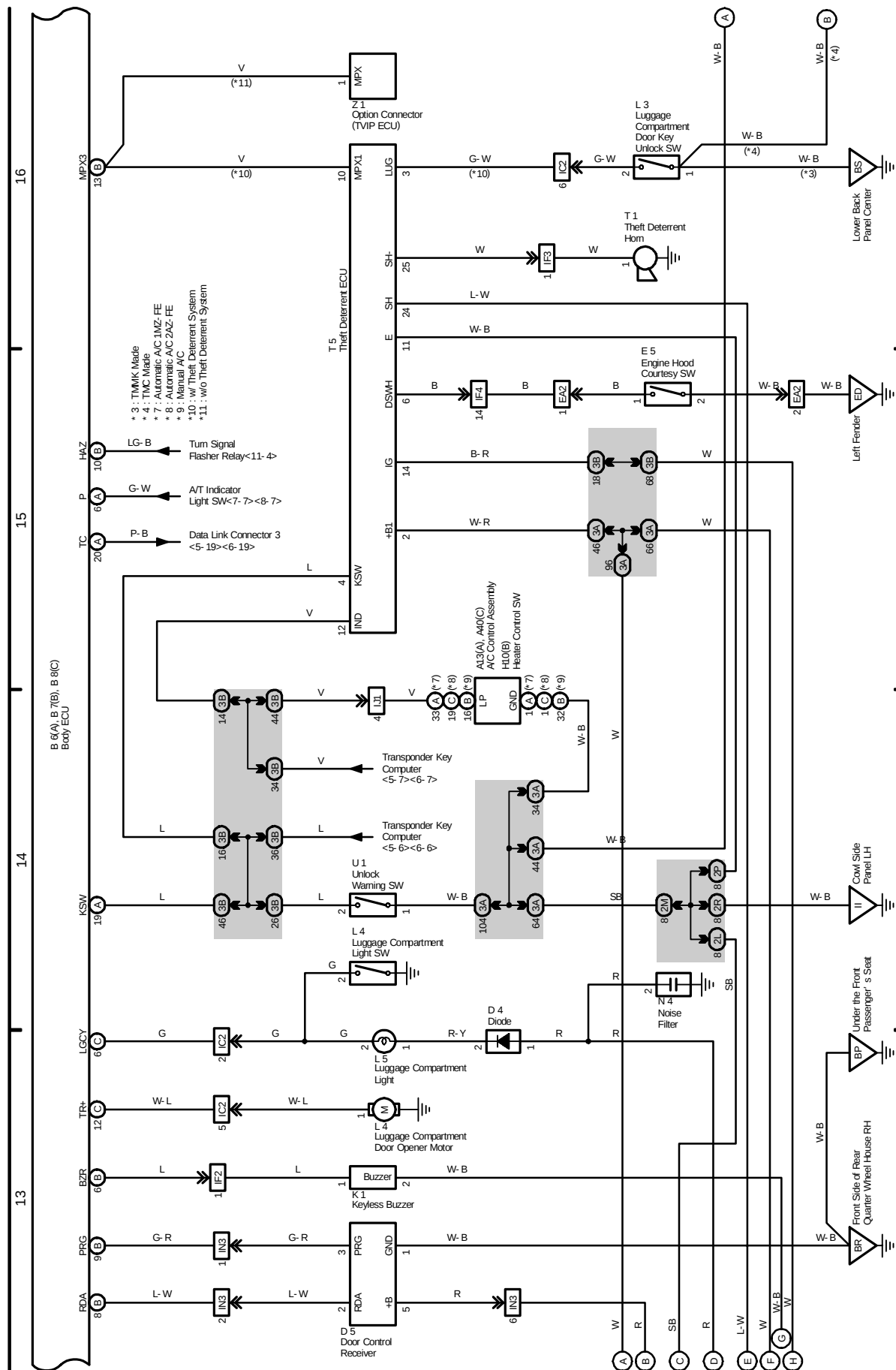


M OVERALL ELECTRICAL WIRING DIAGRAM

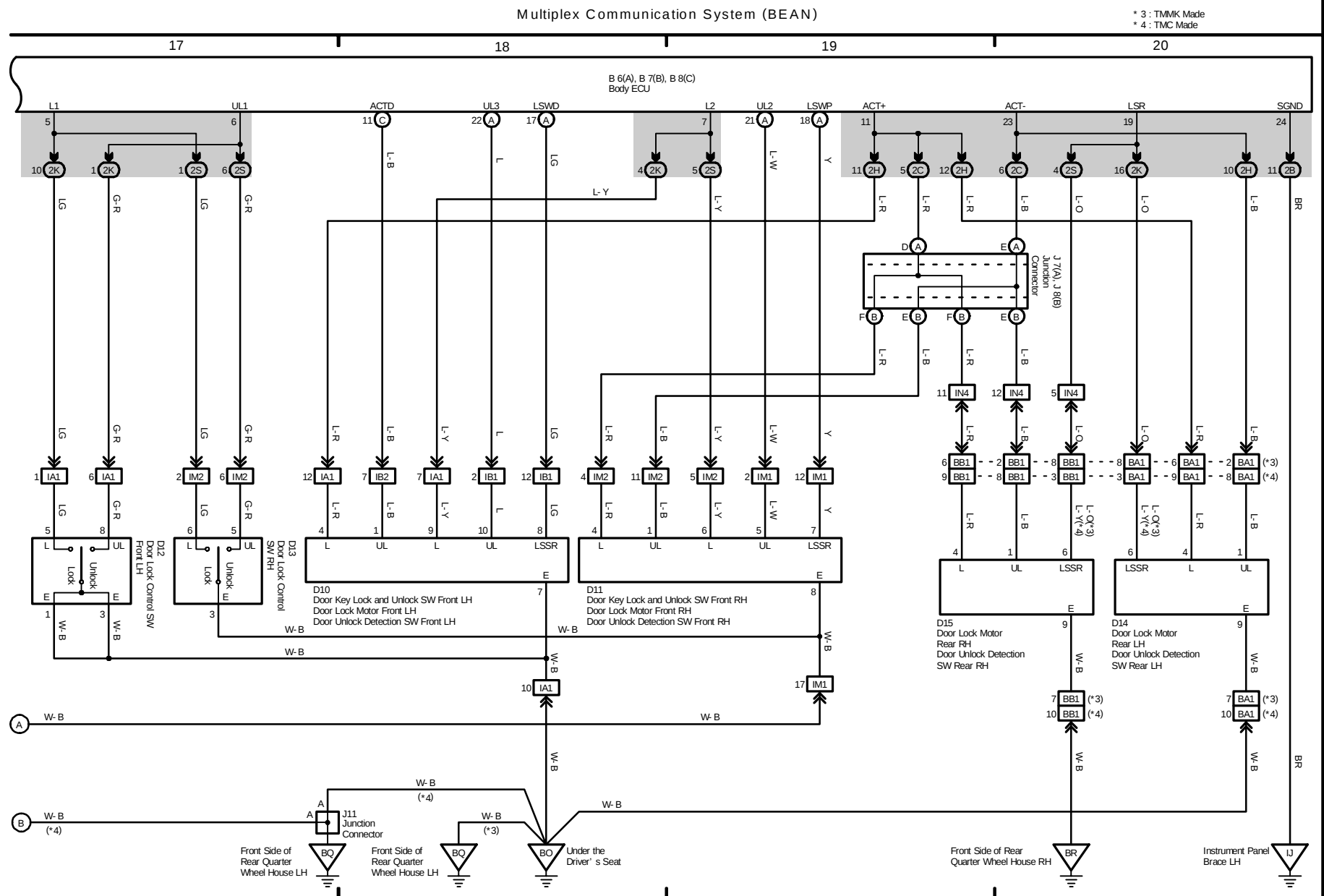
(Cont. next page)

1 CAMRY (Cont' d)

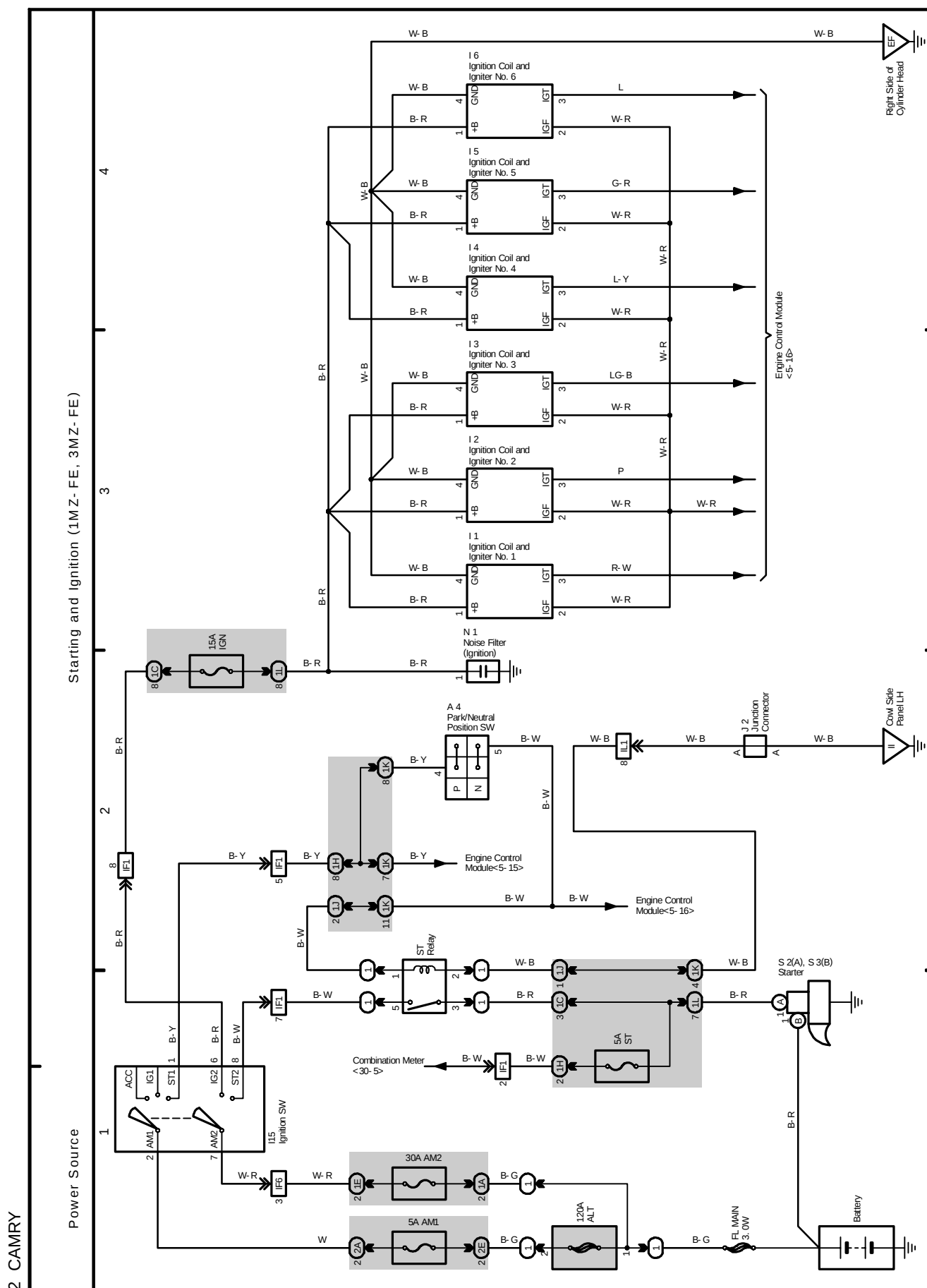
Multiplex Communication System (BEAN)



2005 CAMRY (EWD586U)

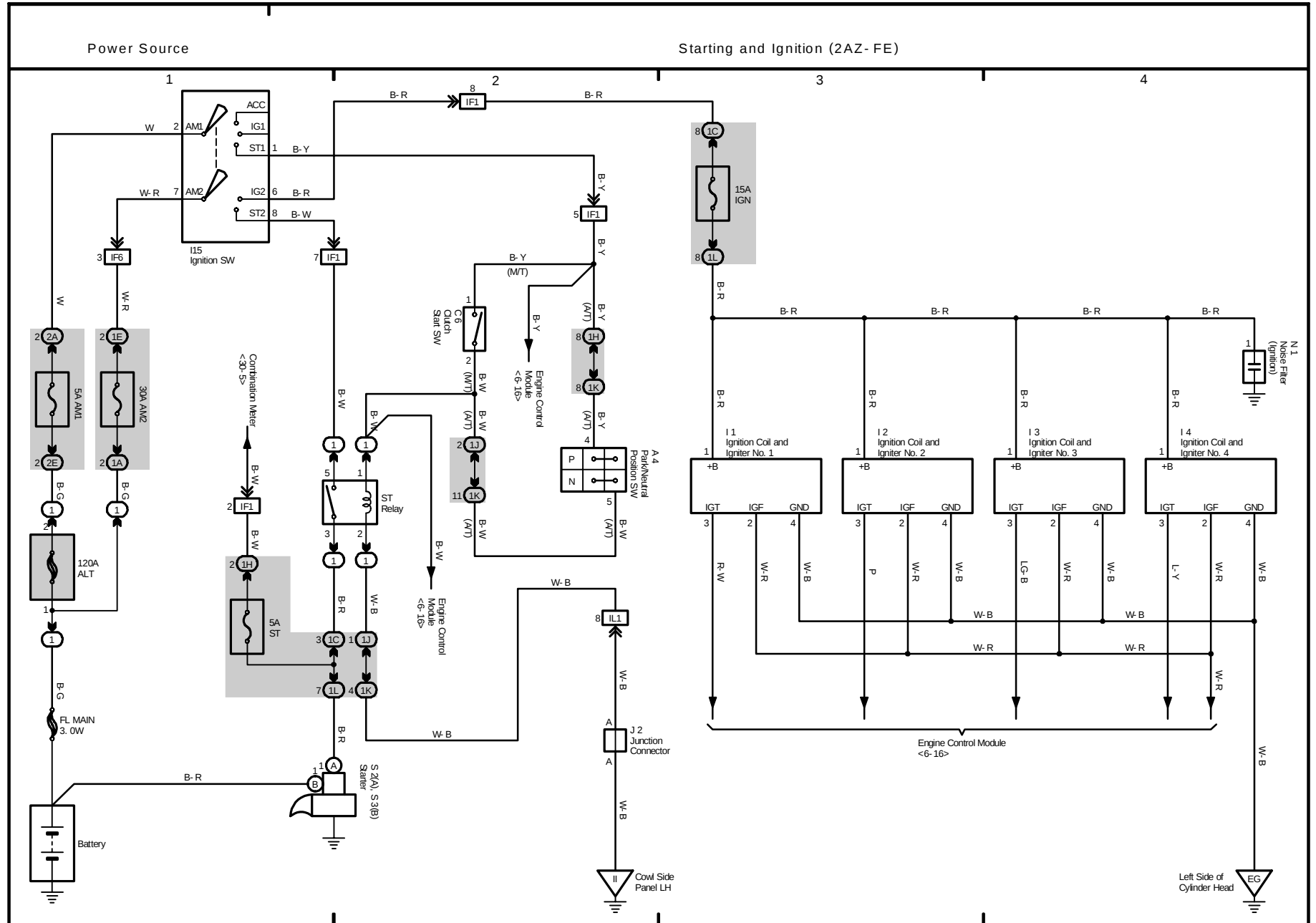


M OVERALL ELECTRICAL WIRING DIAGRAM

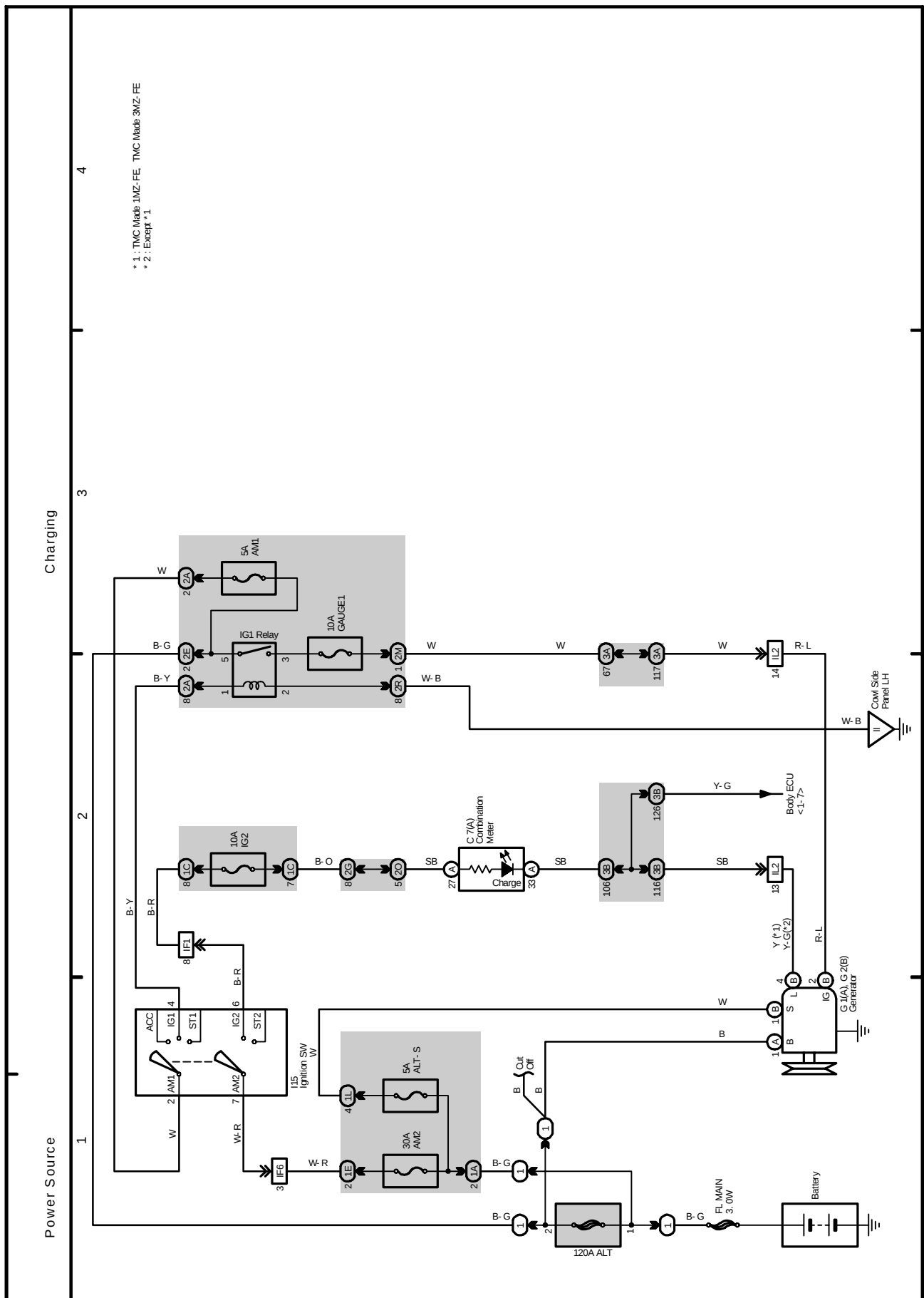


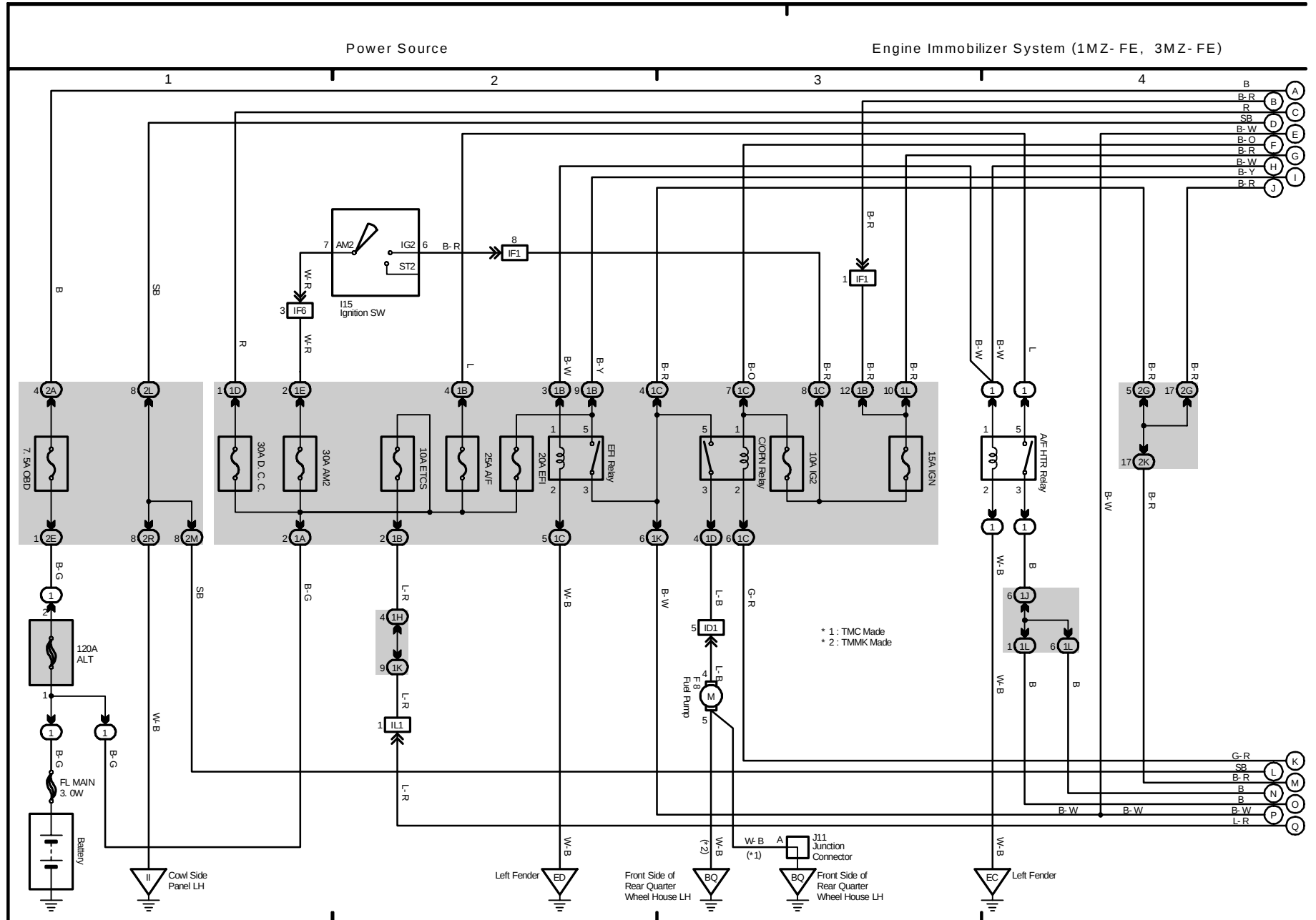
3 CAMRY

2005 CAMRY (EWD586U)



4 CAMRY

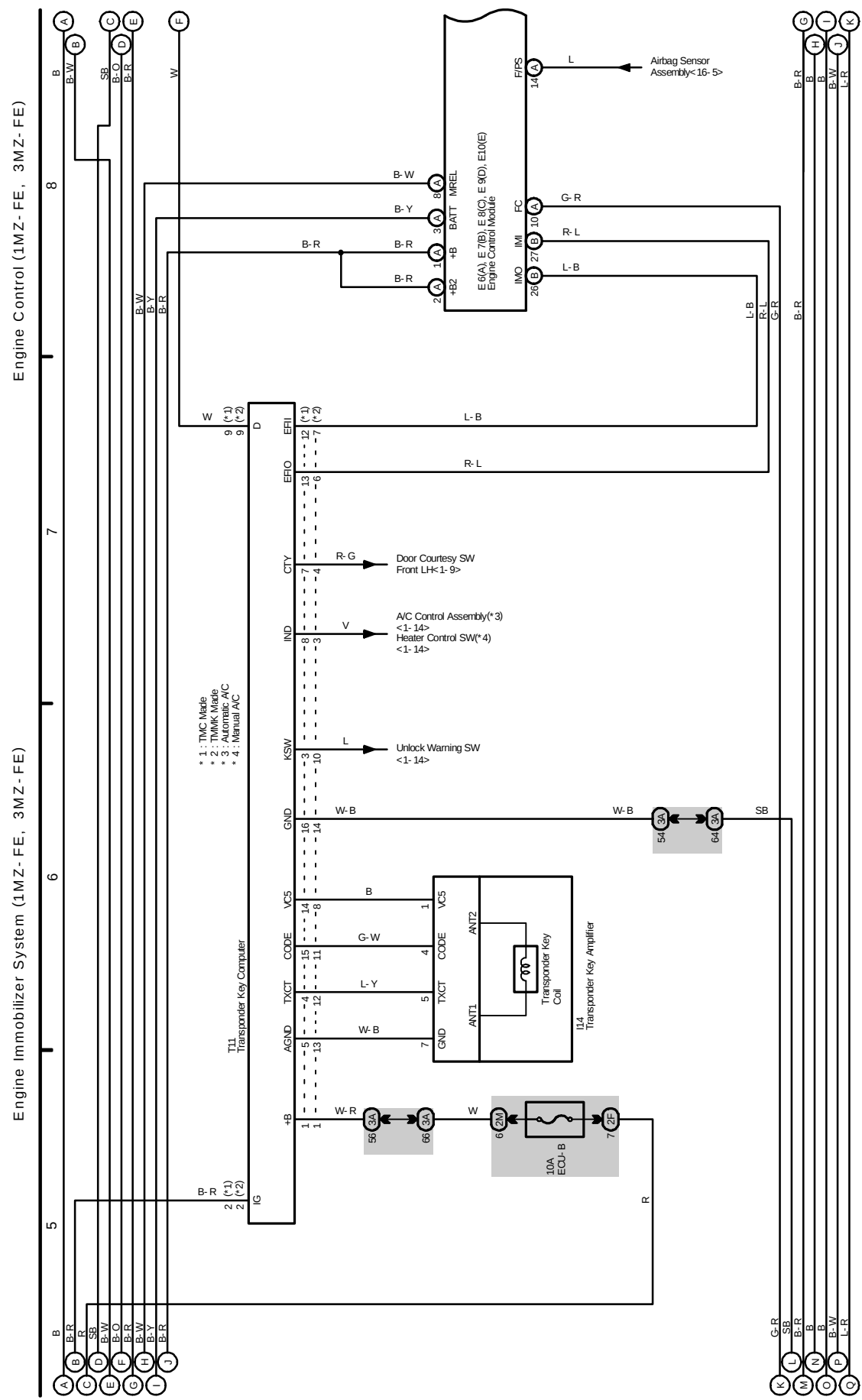




M OVERALL ELECTRICAL WIRING DIAGRAM

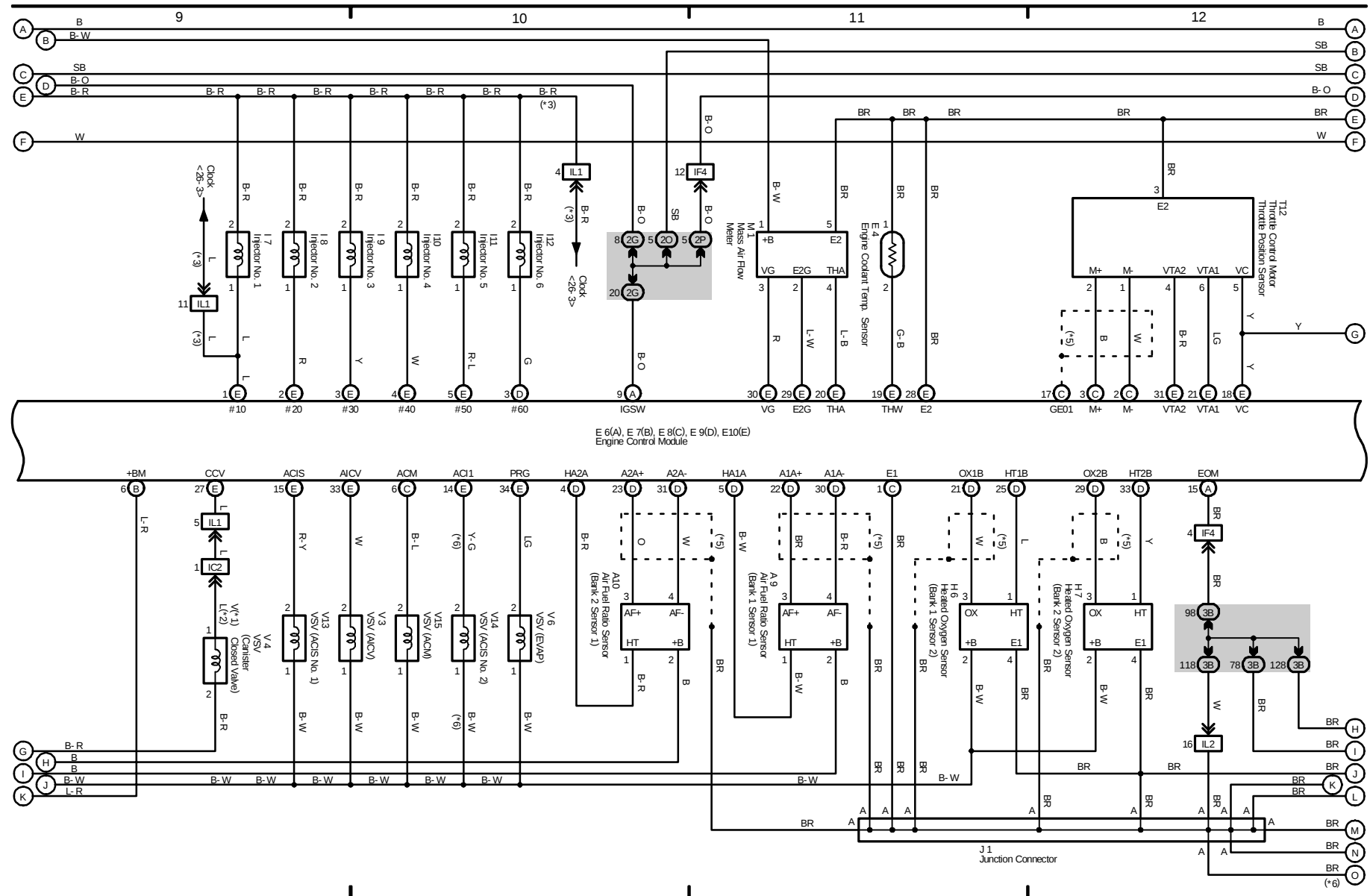
5 CAMRY (Cont' d)

(Cont. next page)



Engine Control (1MZ- FE, 3MZ- FE)

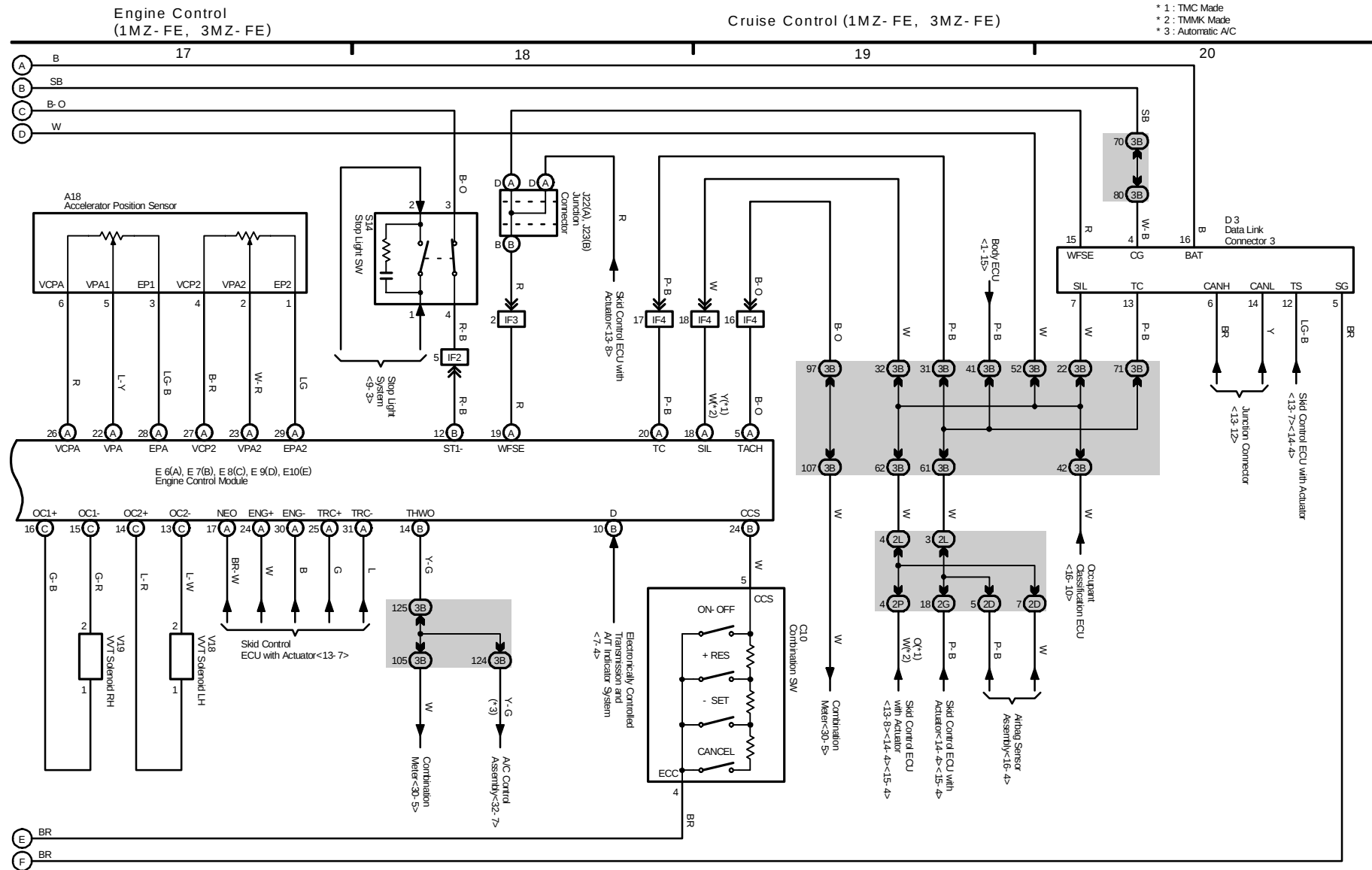
- * 1 : TMC Made
- * 2 : TMMK Made
- * 3 : Automatic A/C
- * 5 : Shielded
- * 6 : 1MZ- FE



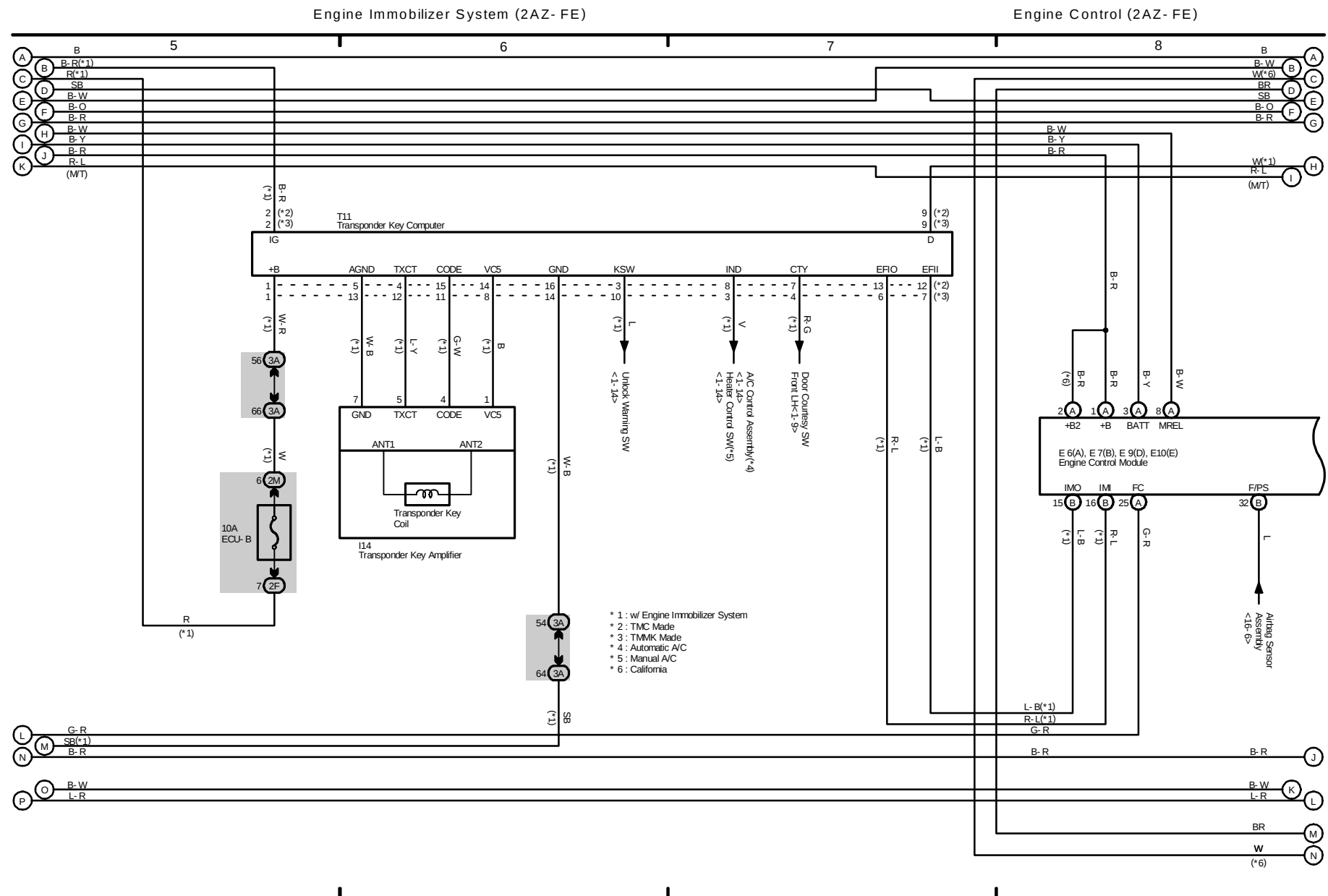
5 CAMRY (Cont' d)



5 CAMRY (Cont' d)



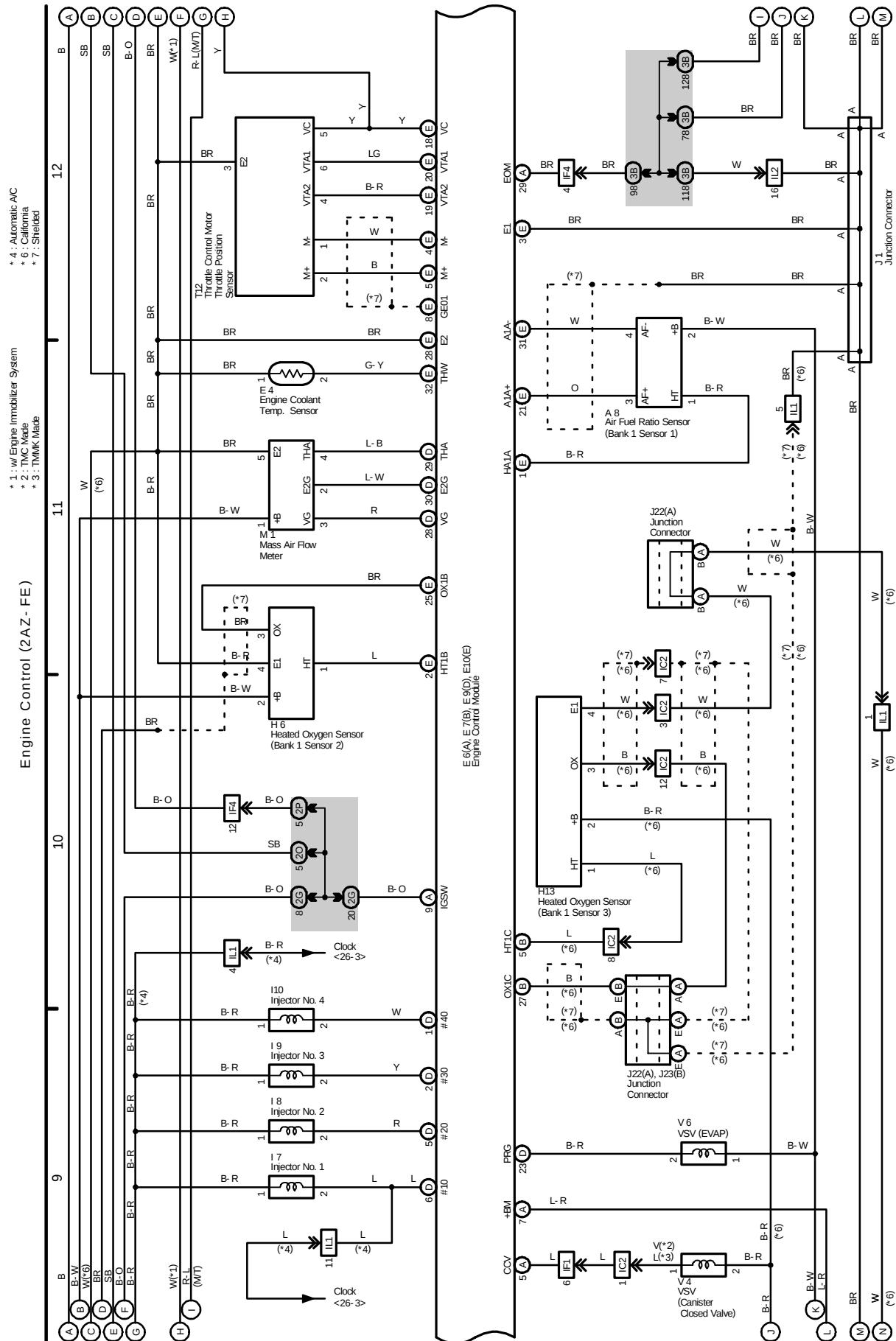
2005 CAMRY (EWD586U)

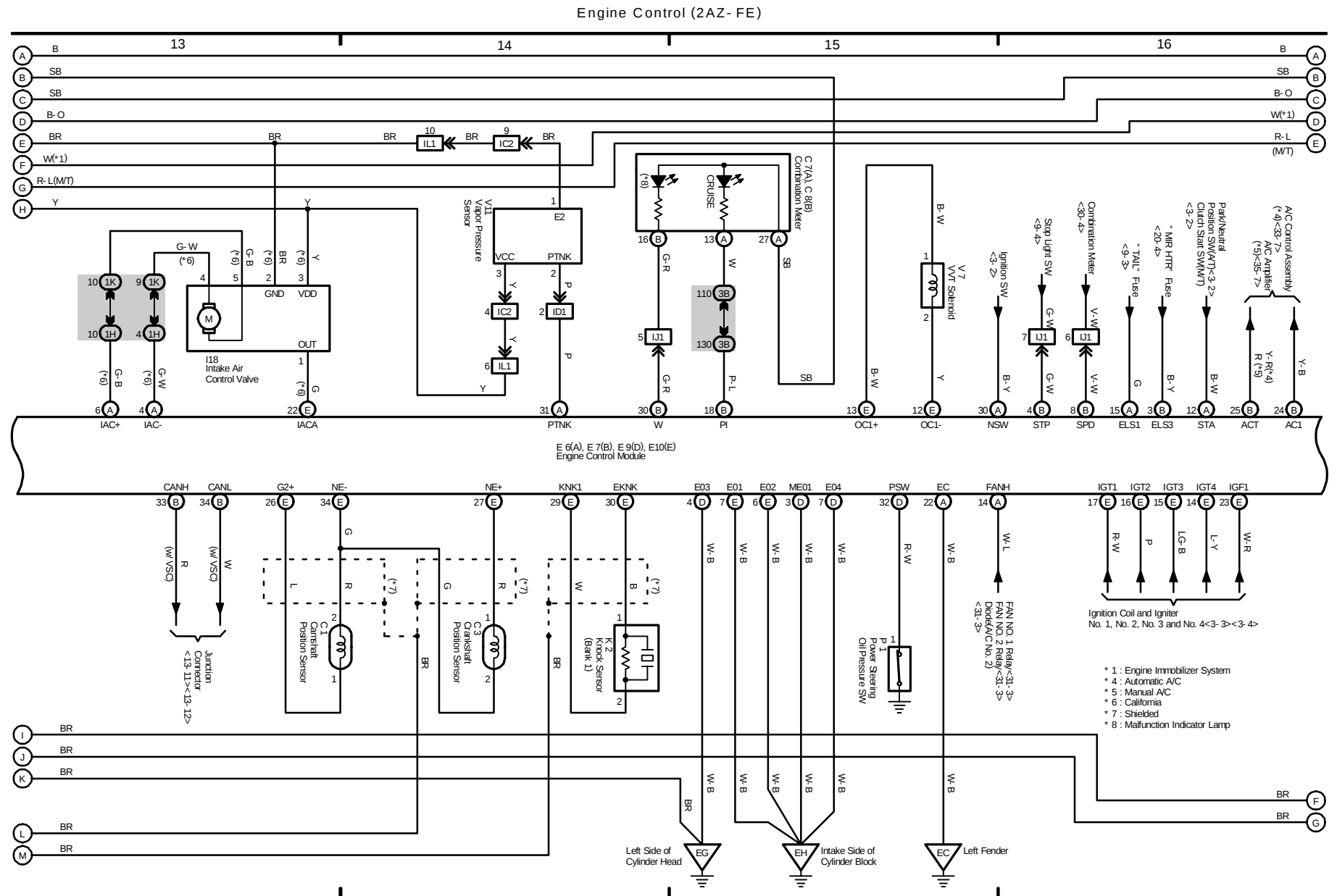


M OVERALL ELECTRICAL WIRING DIAGRAM

6 CAMRY (Cont' d)

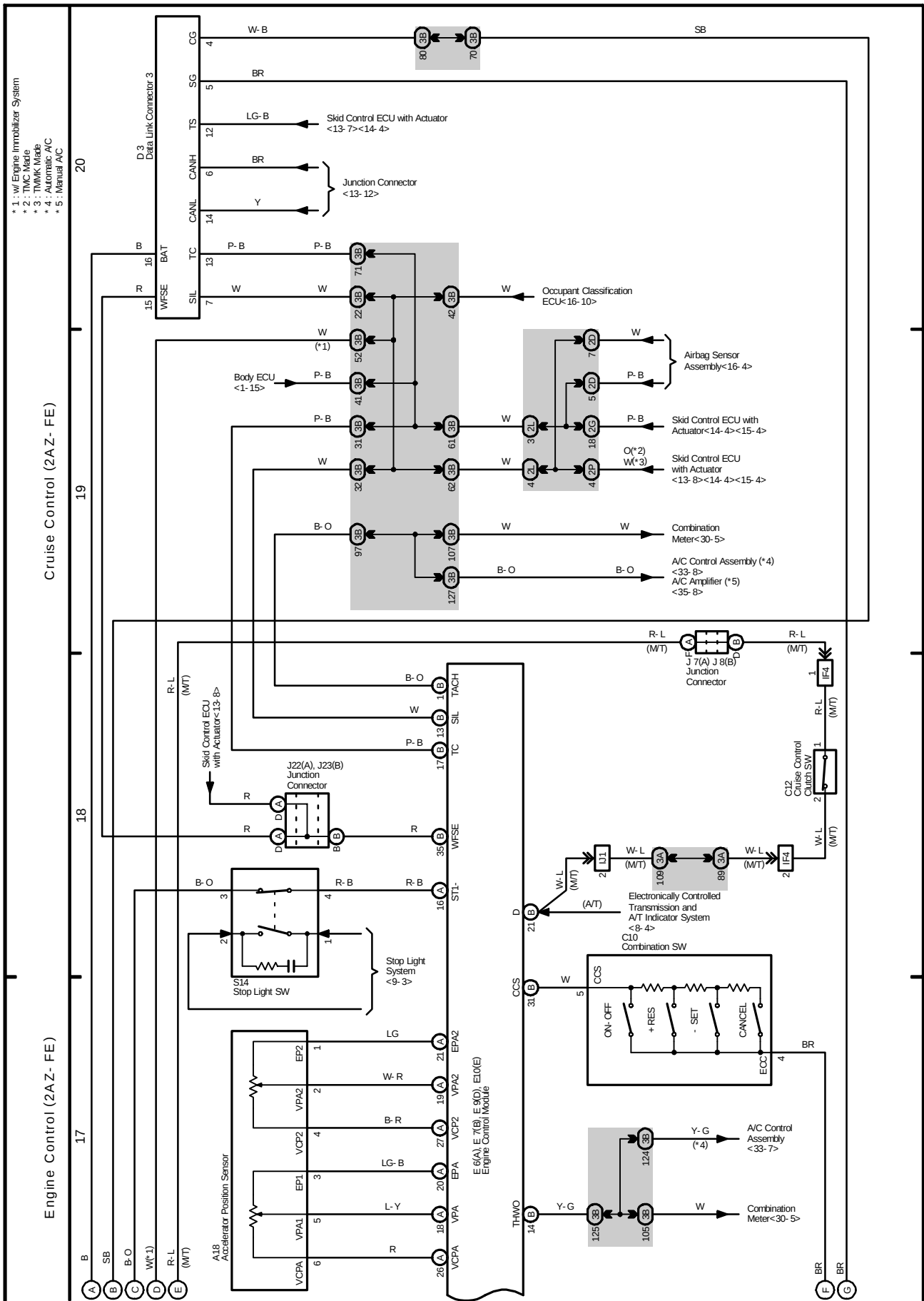
(Cont. next page)



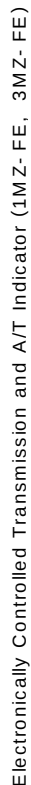


M OVERALL ELECTRICAL WIRING DIAGRAM

6 CAMRY (Cont' d)

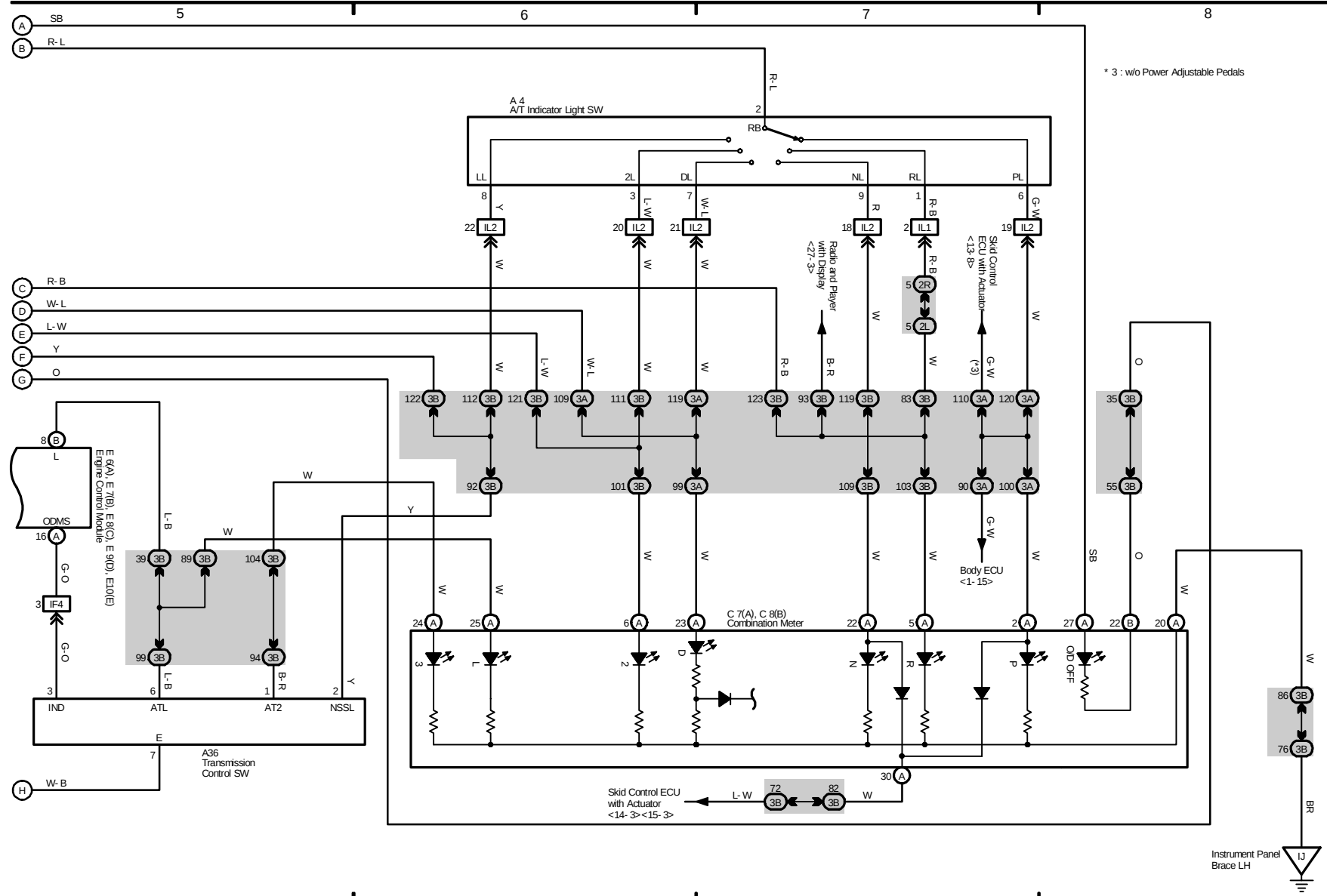


7 CAMRY



7 CAMRY (Cont' d)

Electronically Controlled Transmission and A/T Indicator (1MZ- FE, 3MZ- FE)



2005 CAMRY (EWD586U)

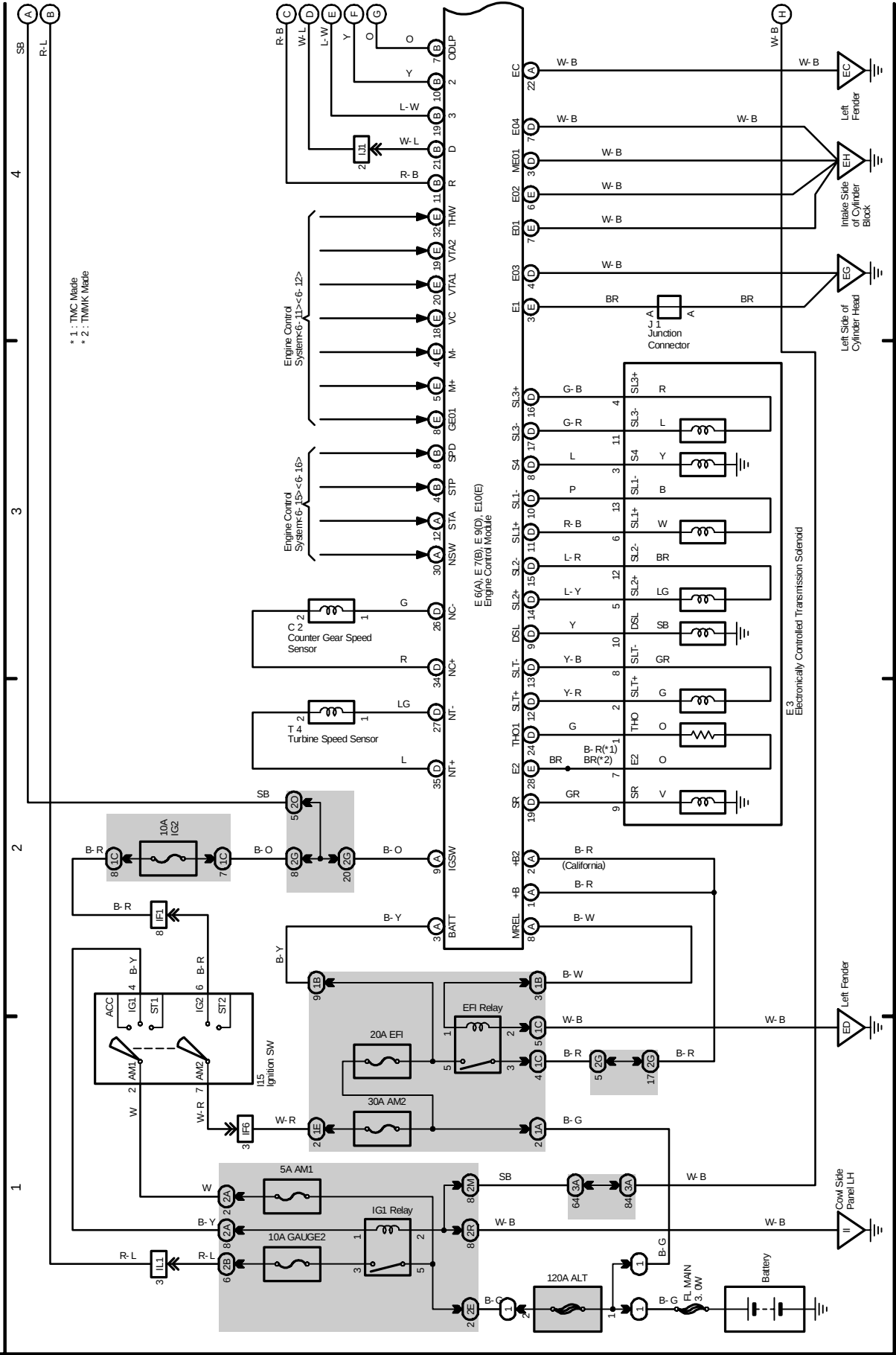
M OVERALL ELECTRICAL WIRING DIAGRAM

8 CAMRY

(Cont. next page)

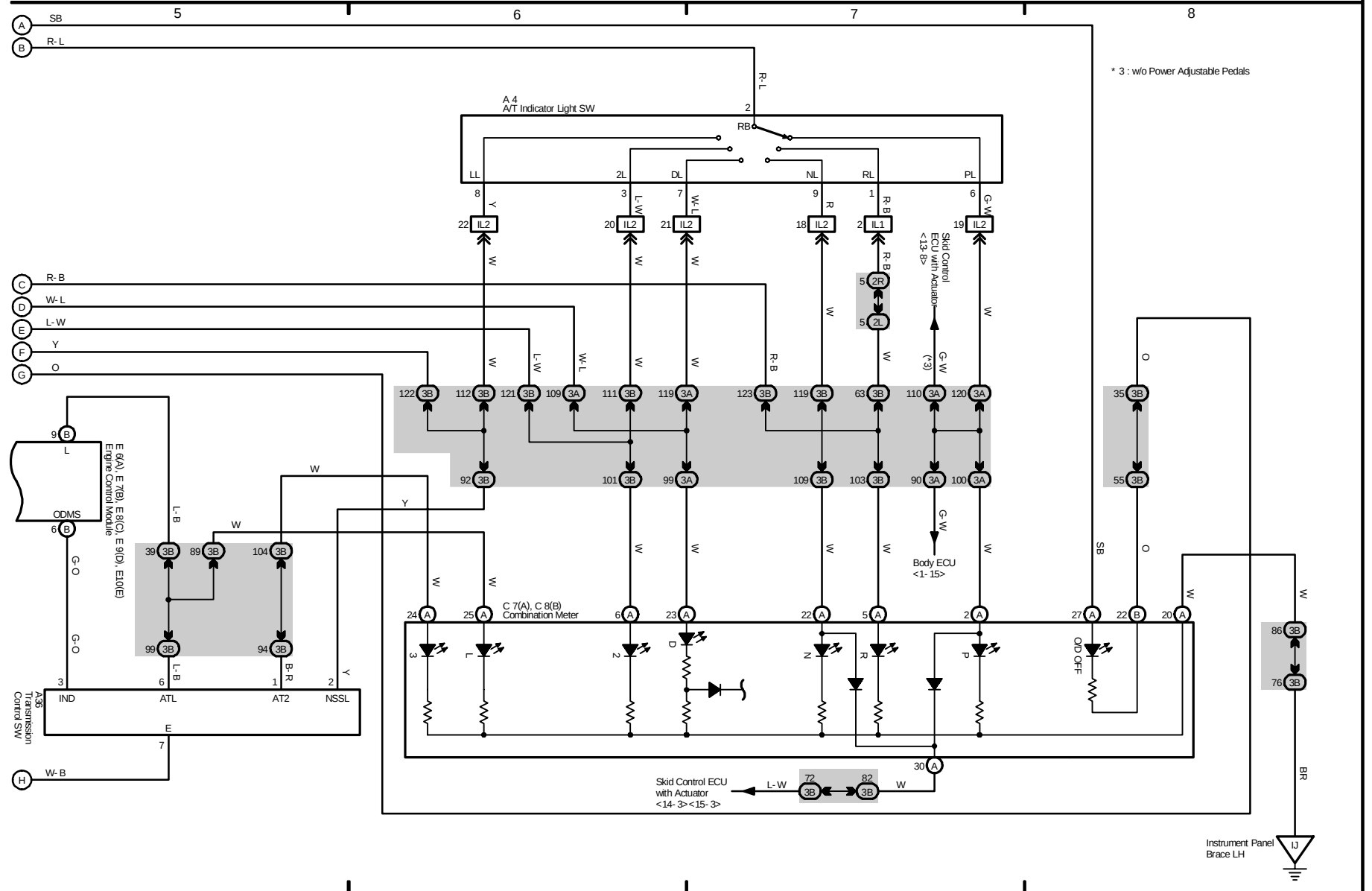
Electronically Controlled Transmission and A/T Indicator (2AZ-FE)

Power Source



8 CAMRY (Cont' d)

Electronically Controlled Transmission and A/T Indicator (2AZ- FE)



2005 CAMRY (EWD586U)

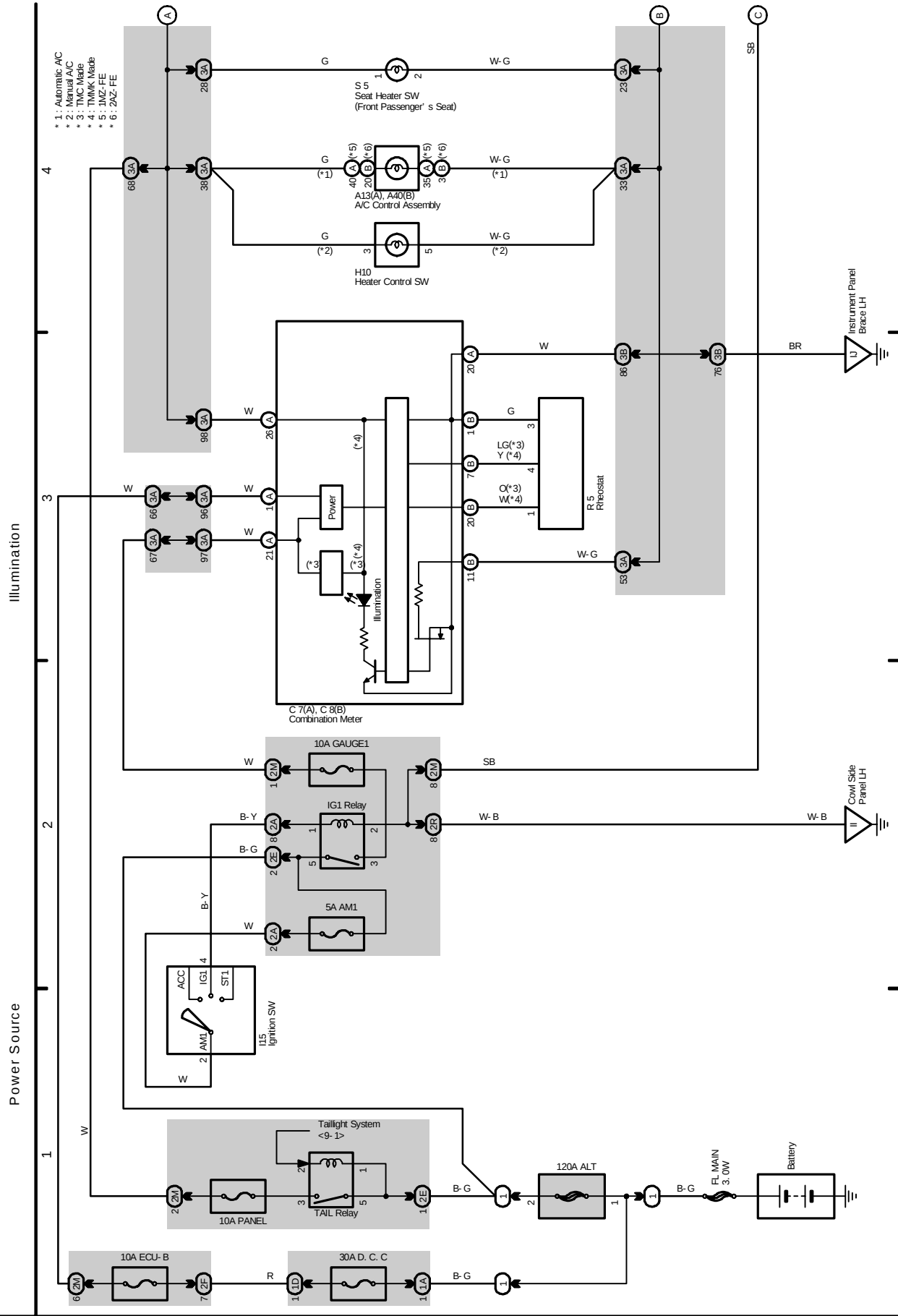
9 CAMRY



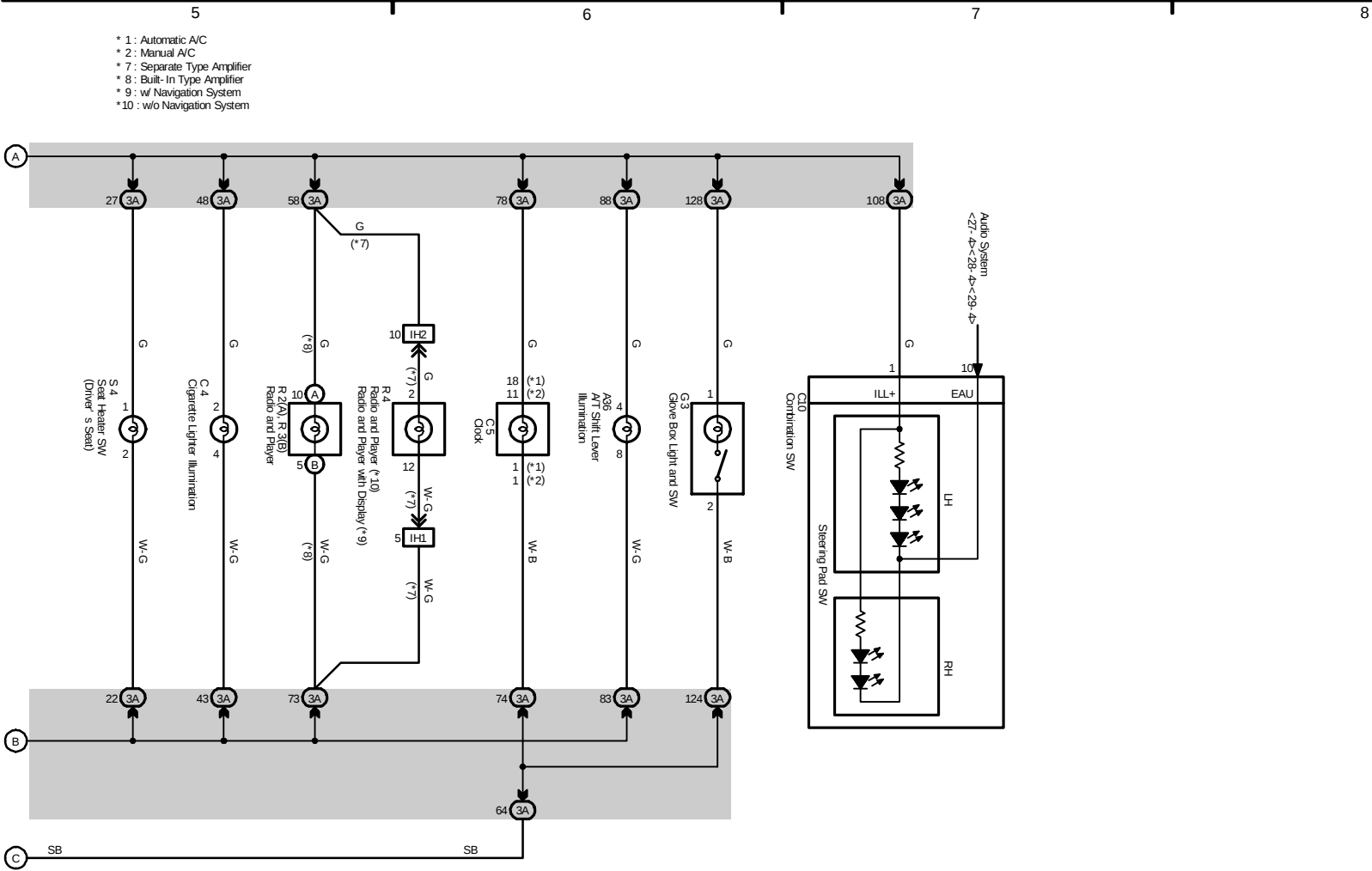
M OVERALL ELECTRICAL WIRING DIAGRAM

(Cont. next page)

10 CAMRY



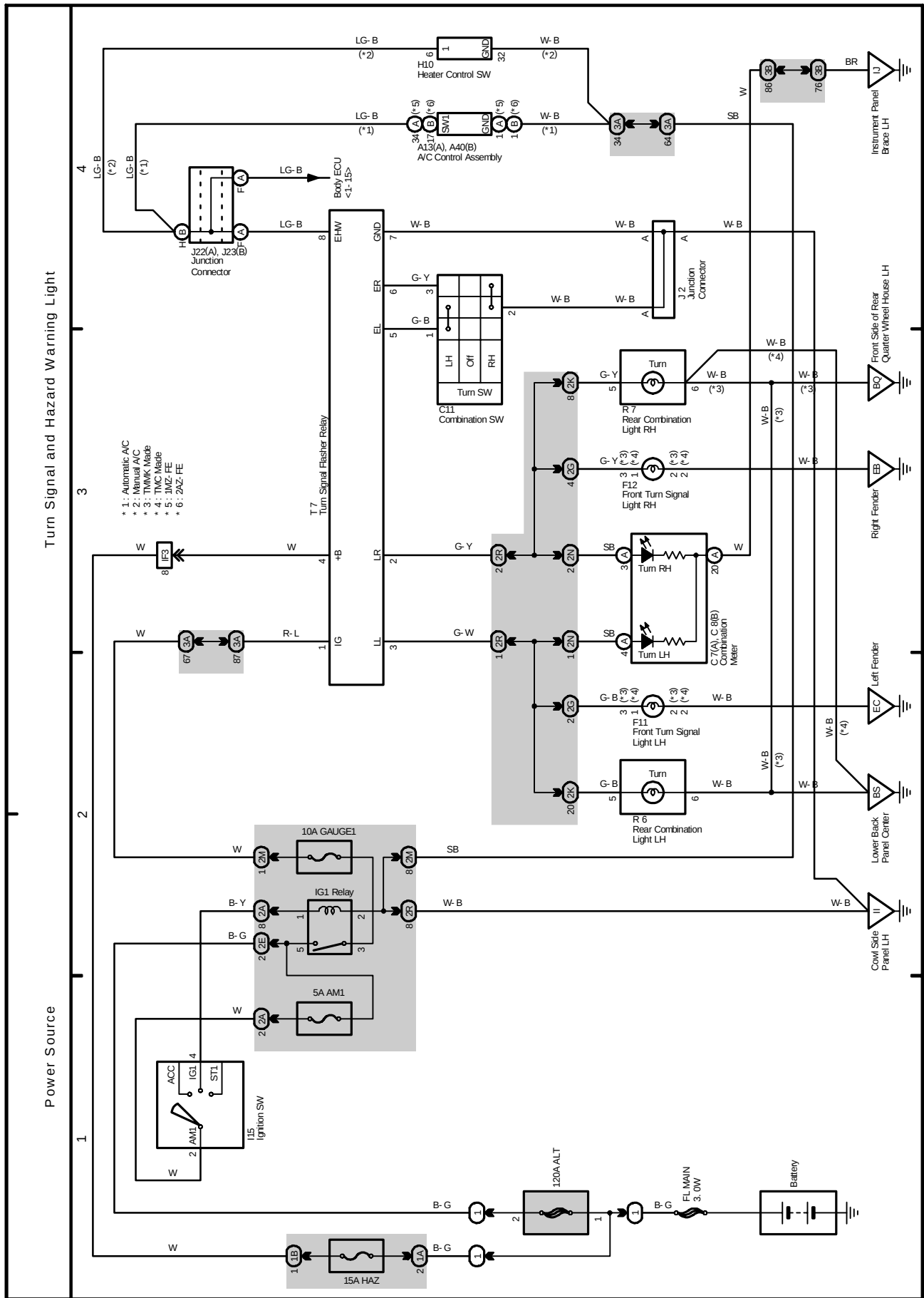
Illumination

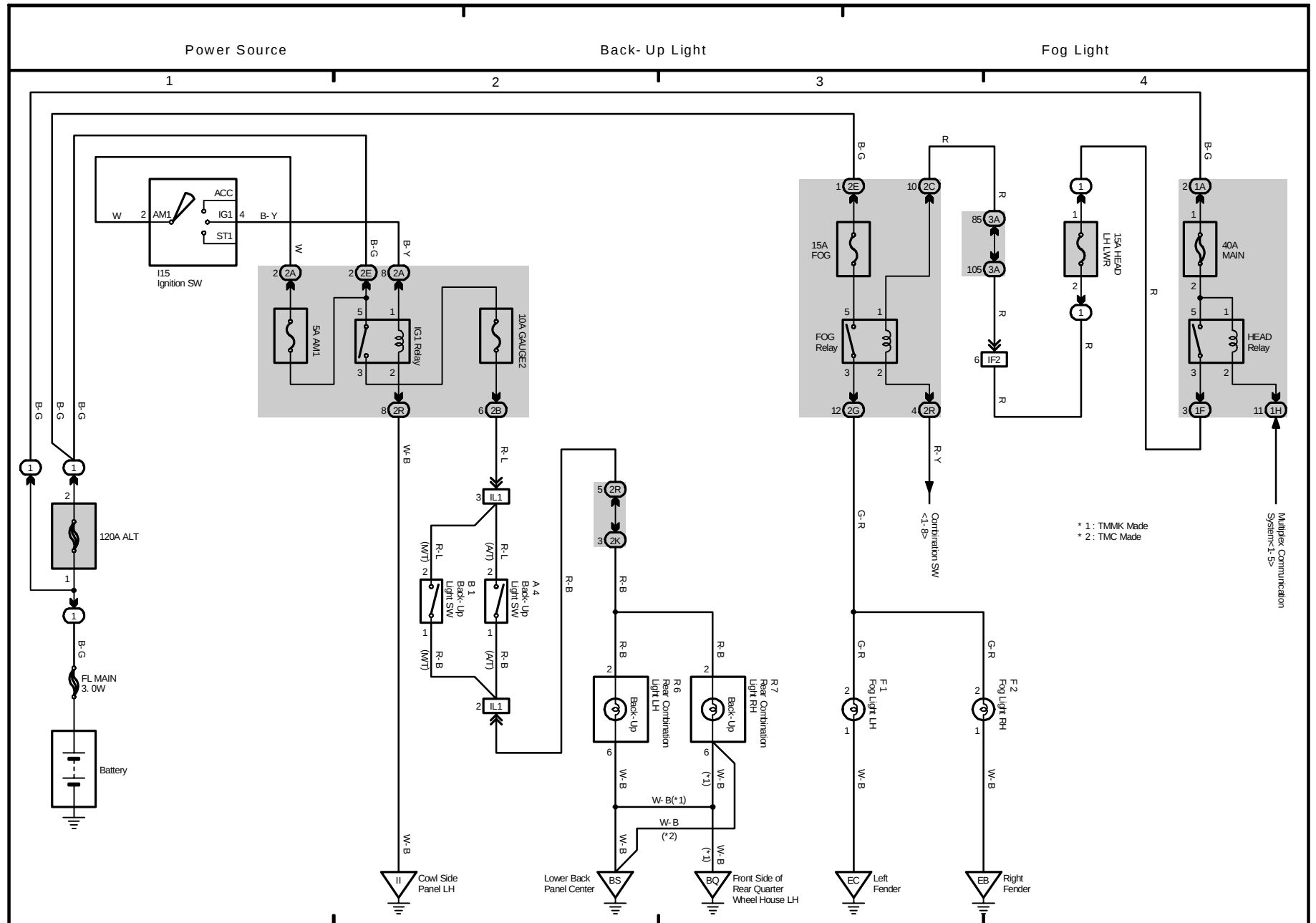


2005 CAMRY (EWD586U)

M OVERALL ELECTRICAL WIRING DIAGRAM

11 CAMRY

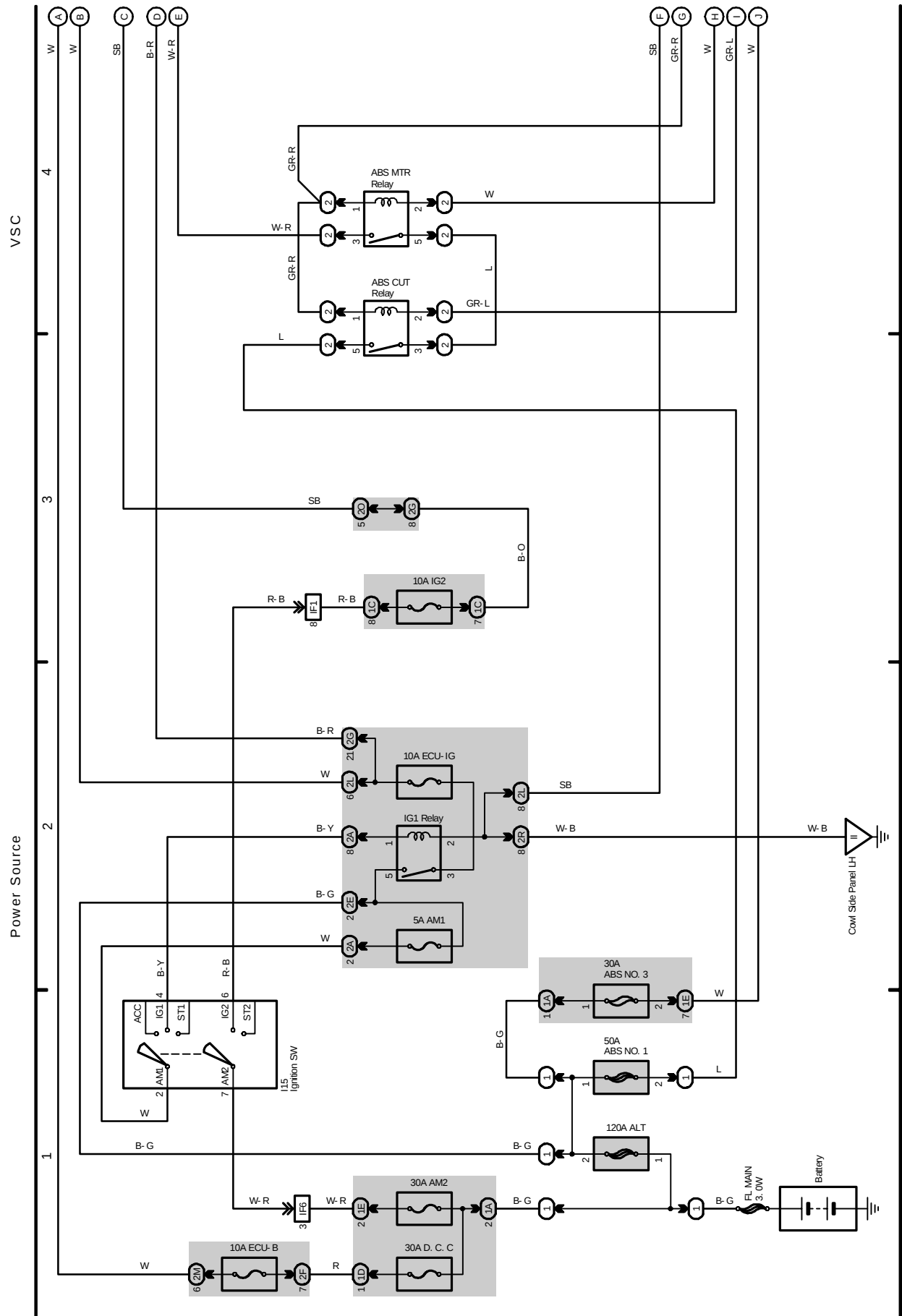


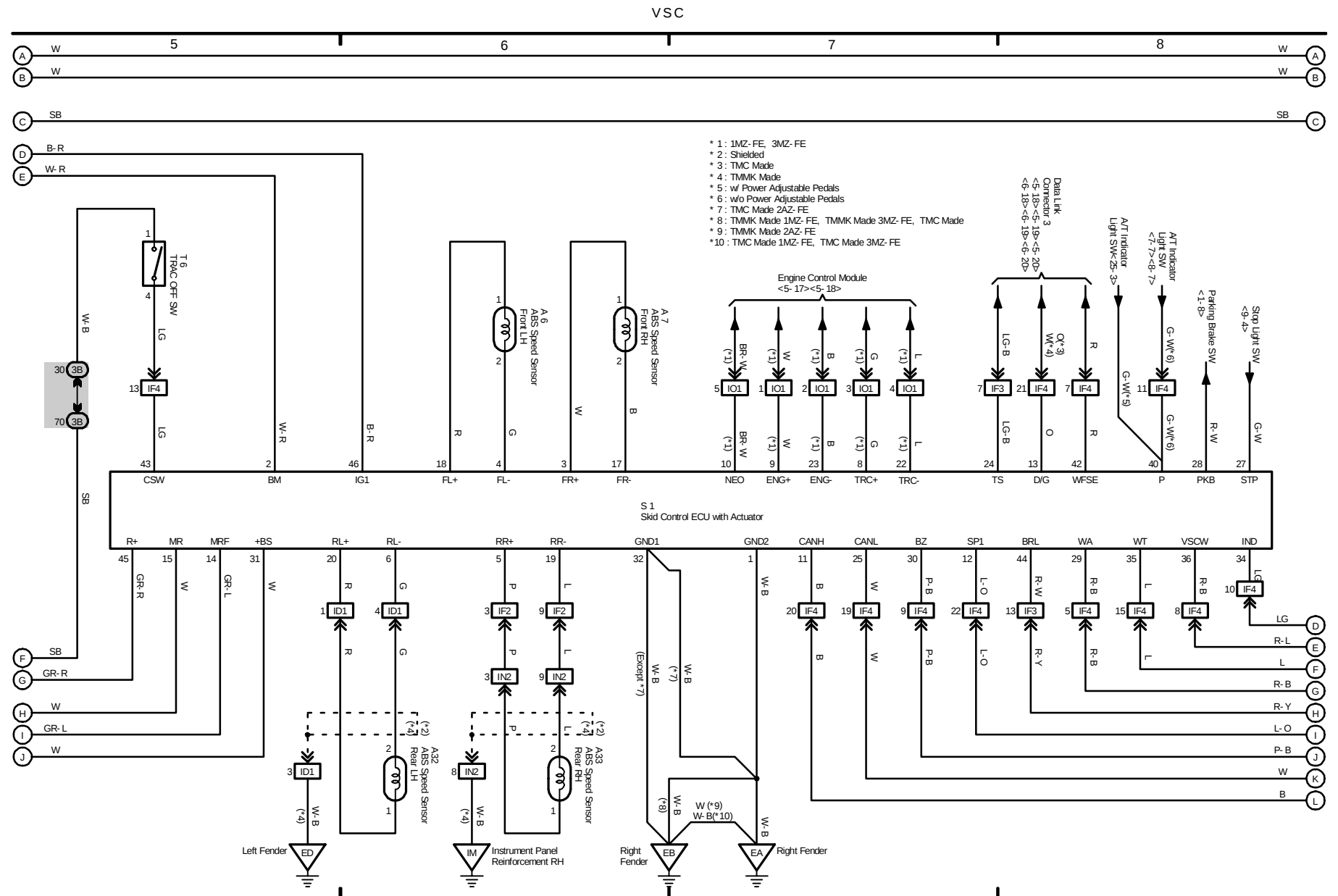


M OVERALL ELECTRICAL WIRING DIAGRAM

13 CAMURY

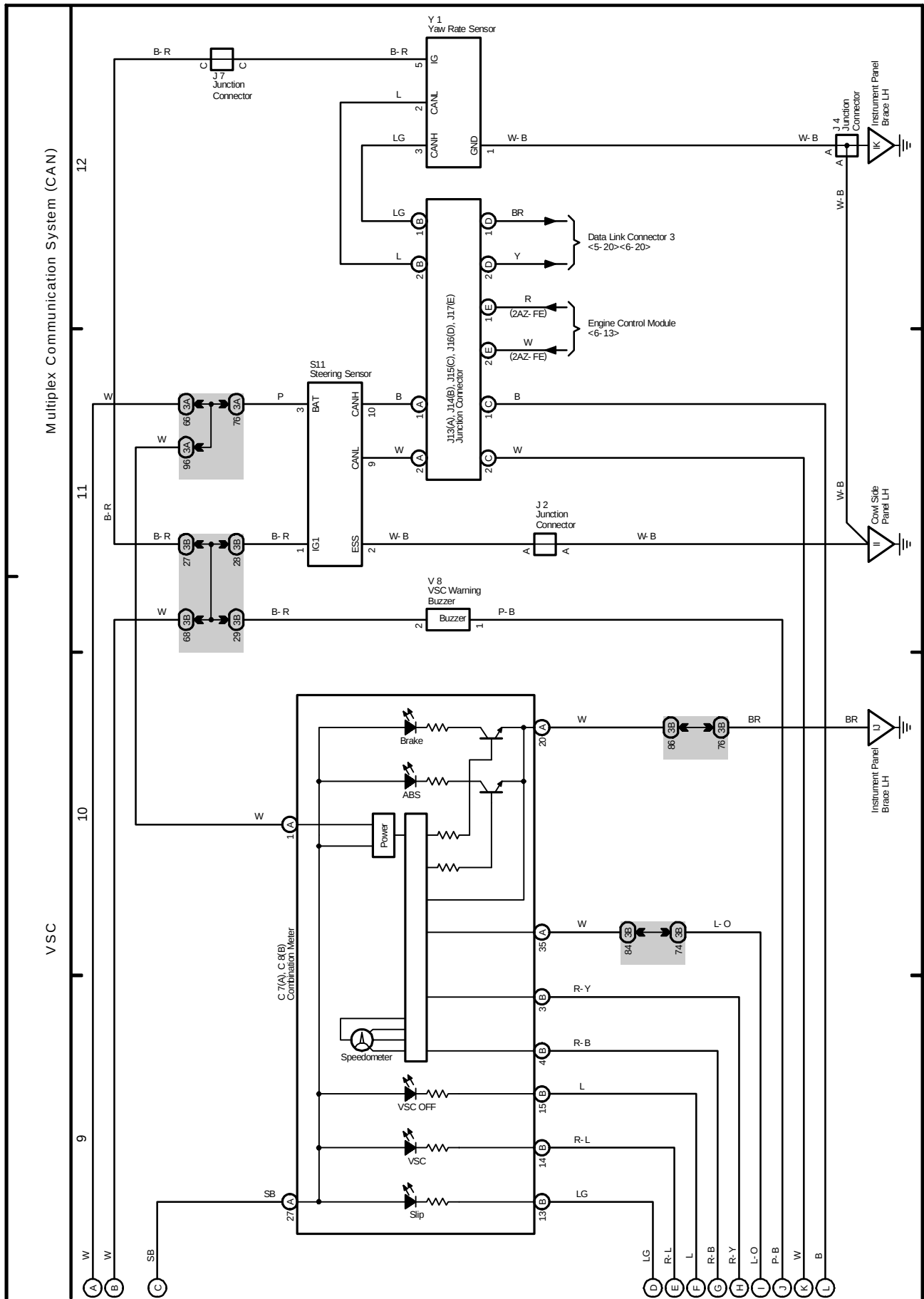
(Cont. next page)

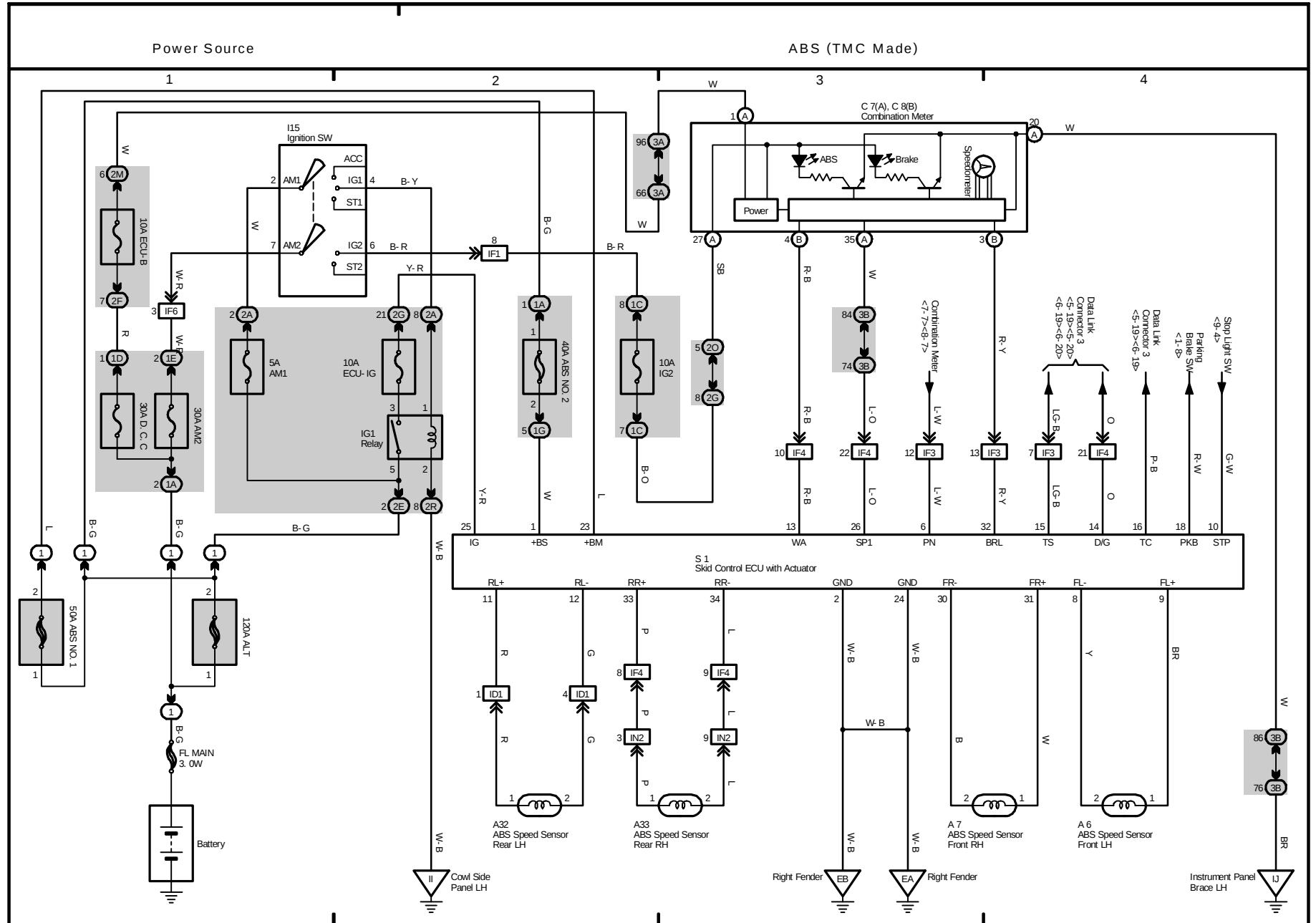




M OVERALL ELECTRICAL WIRING DIAGRAM

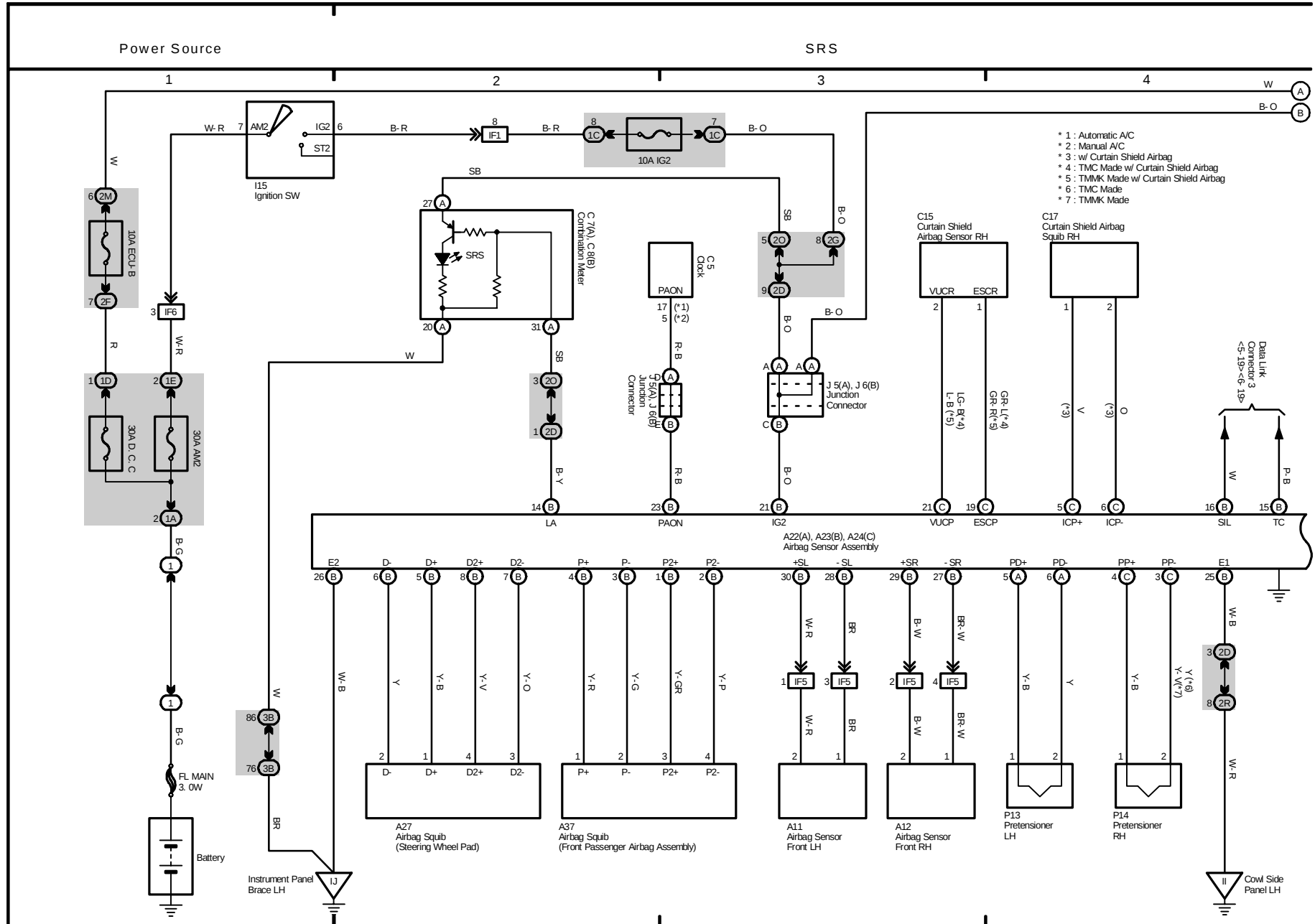
13 CAMRY (Cont' d)





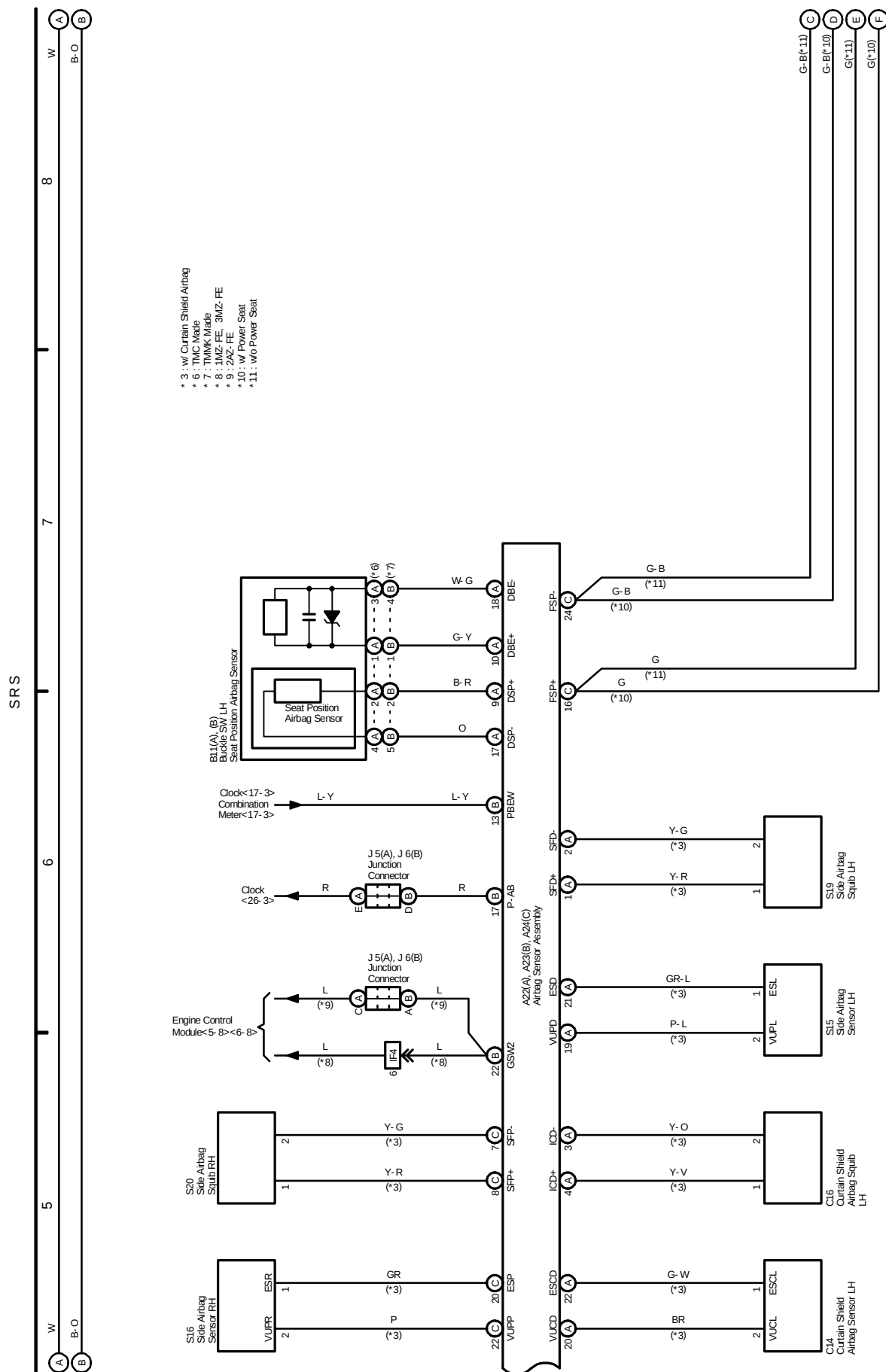
15 CAMRY





(Cont. next page)

16 CAMRY (Cont' d)

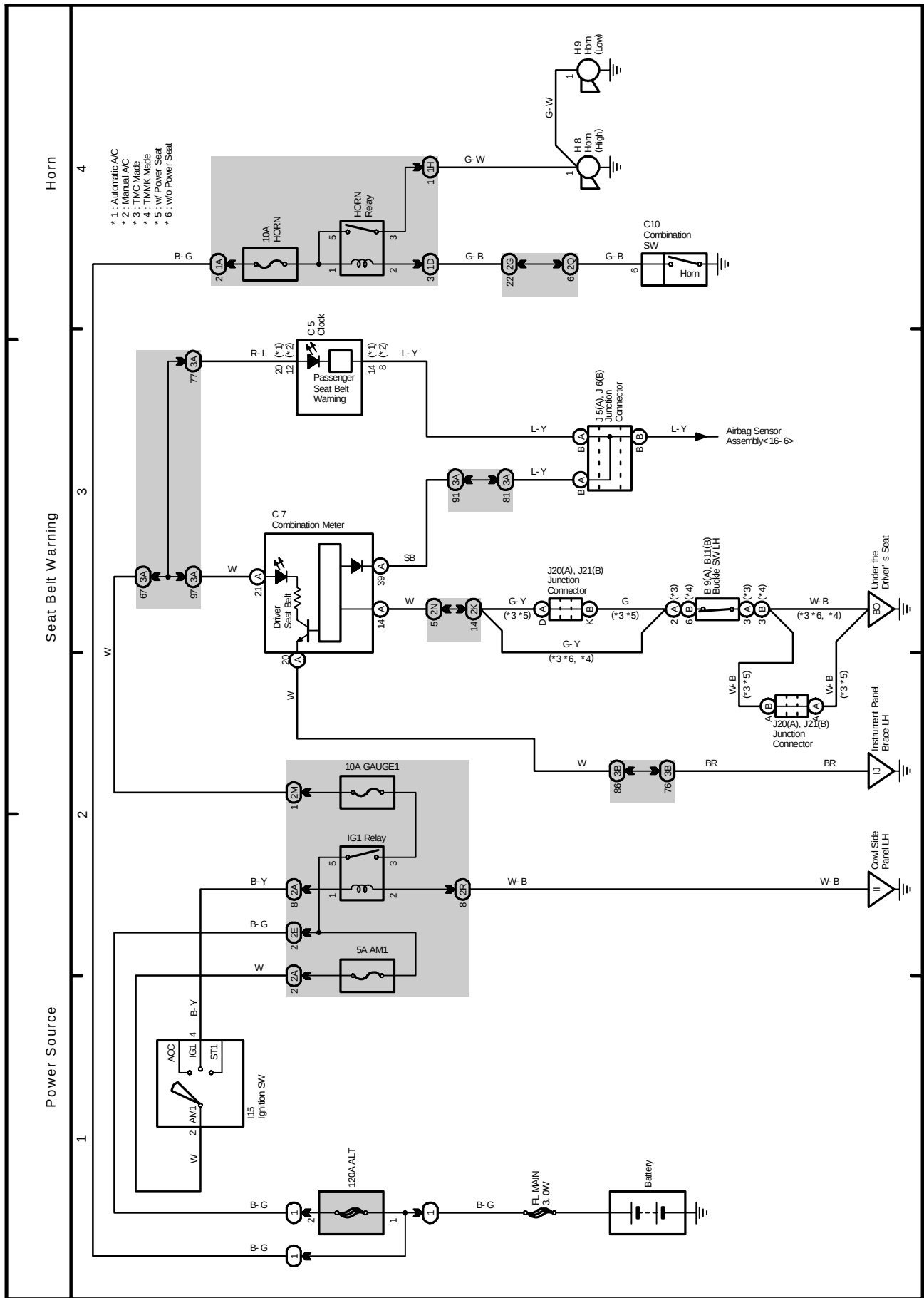


[illegible]

M

M OVERALL ELECTRICAL WIRING DIAGRAM

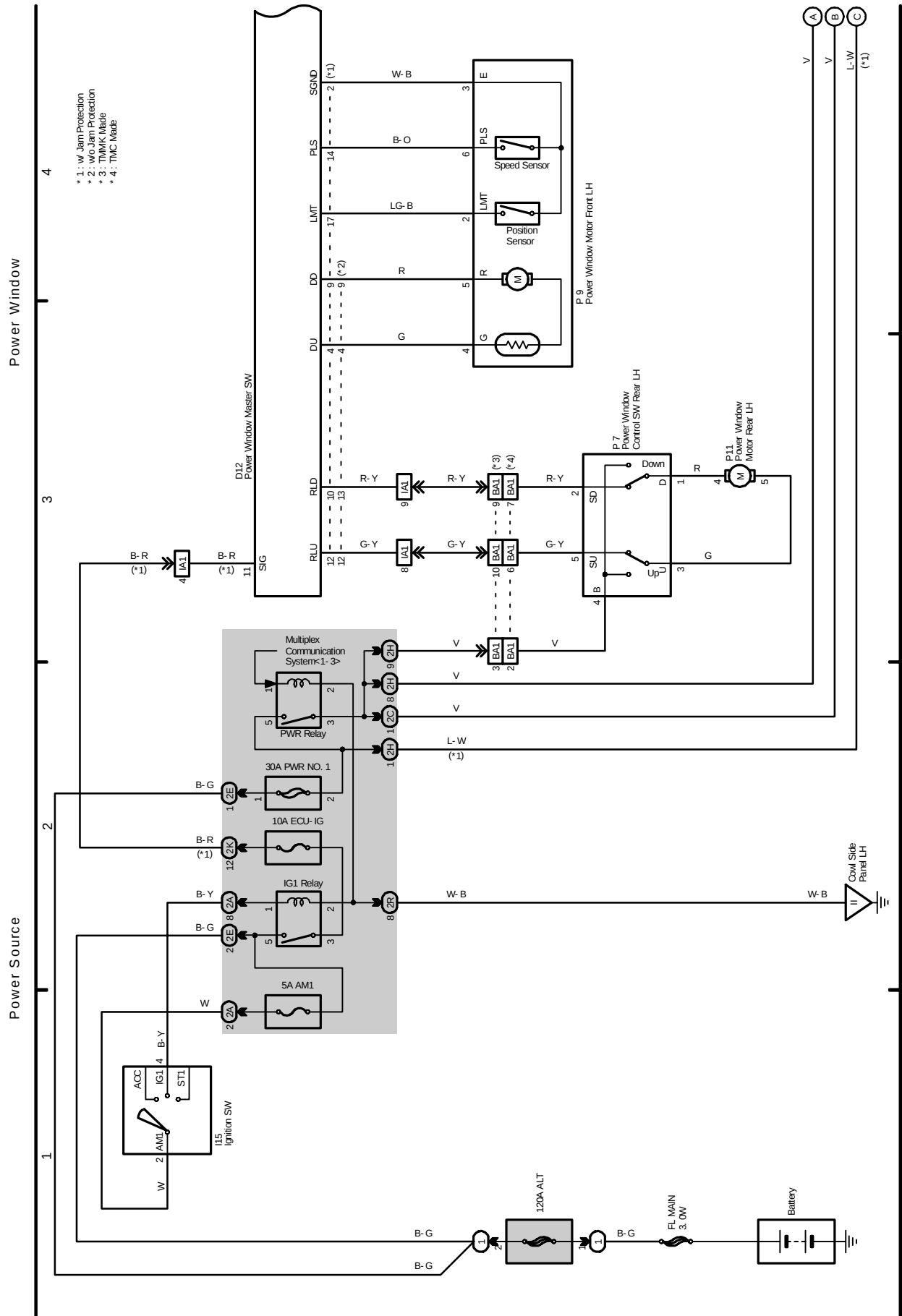
17 CAMRY



M OVERALL ELECTRICAL WIRING DIAGRAM

18 CAMRY

(Cont. next page)



Power Window

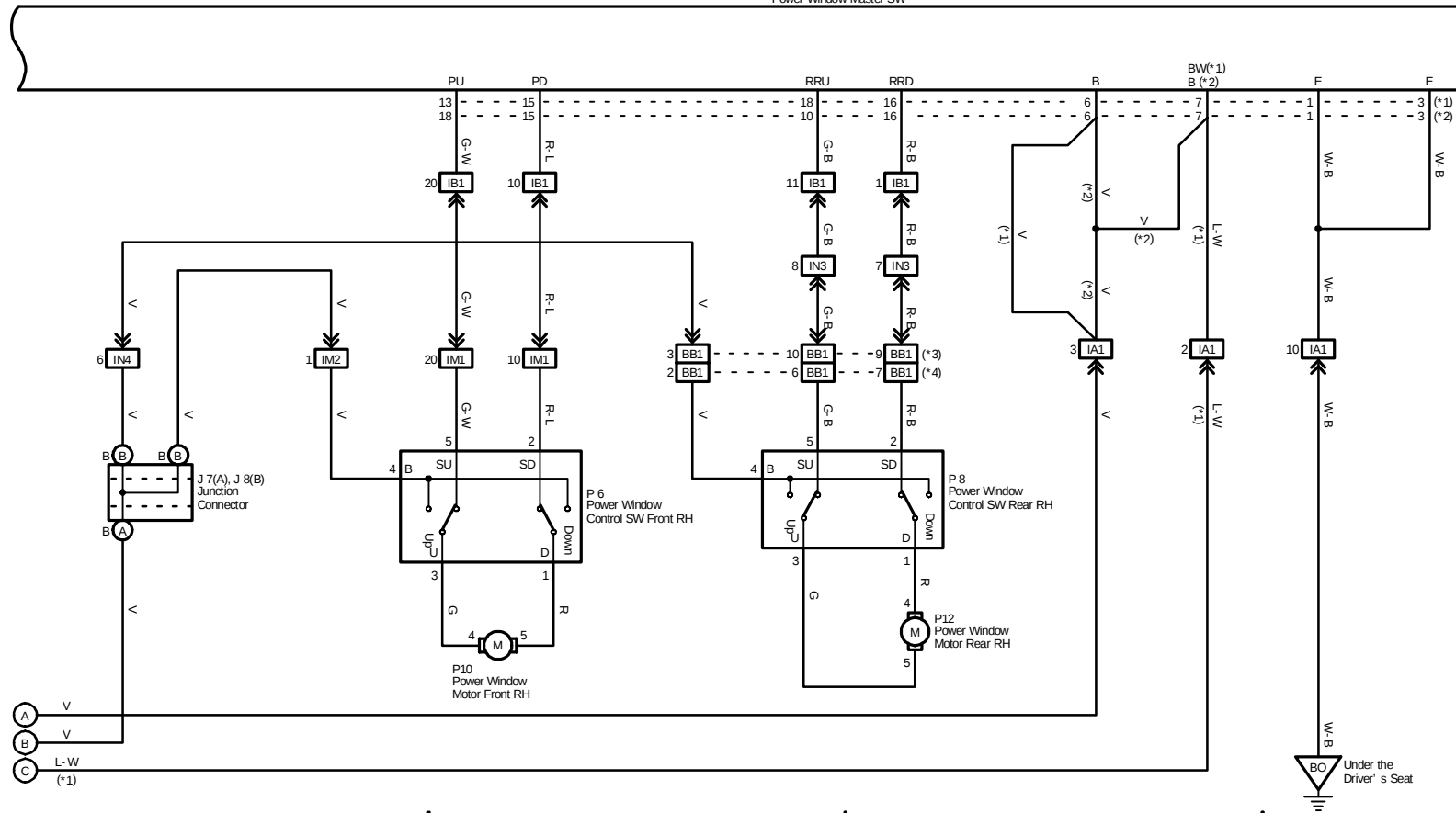
5

6

7

8

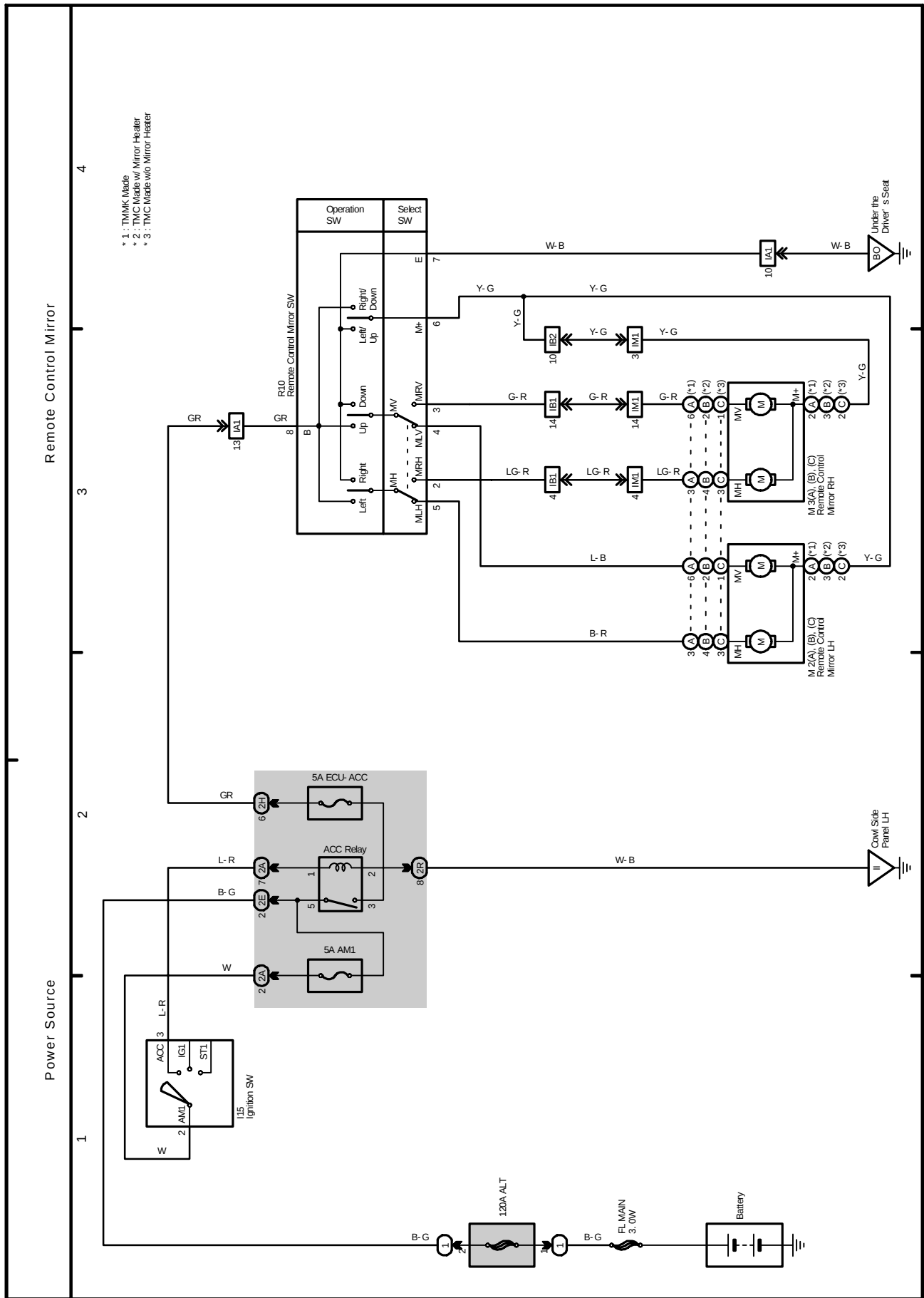
- * 1 : w/ Jam Protection
- * 2 : w/o Jam Protection
- * 3 : TMMK Made
- * 4 : TMC Made

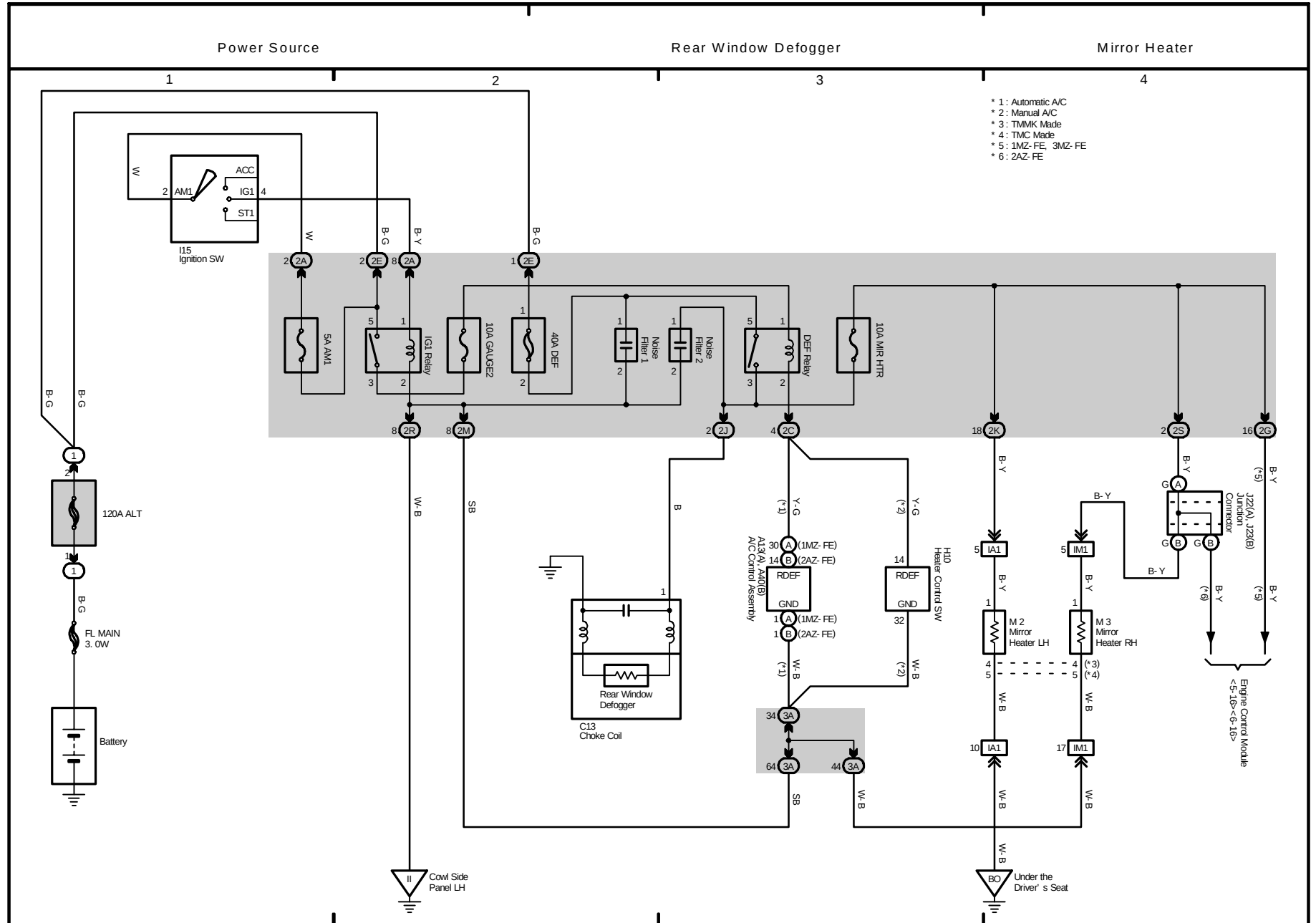
D12
Power Window Master SW

2005 CAMRY (EWD586U)

M OVERALL ELECTRICAL WIRING DIAGRAM

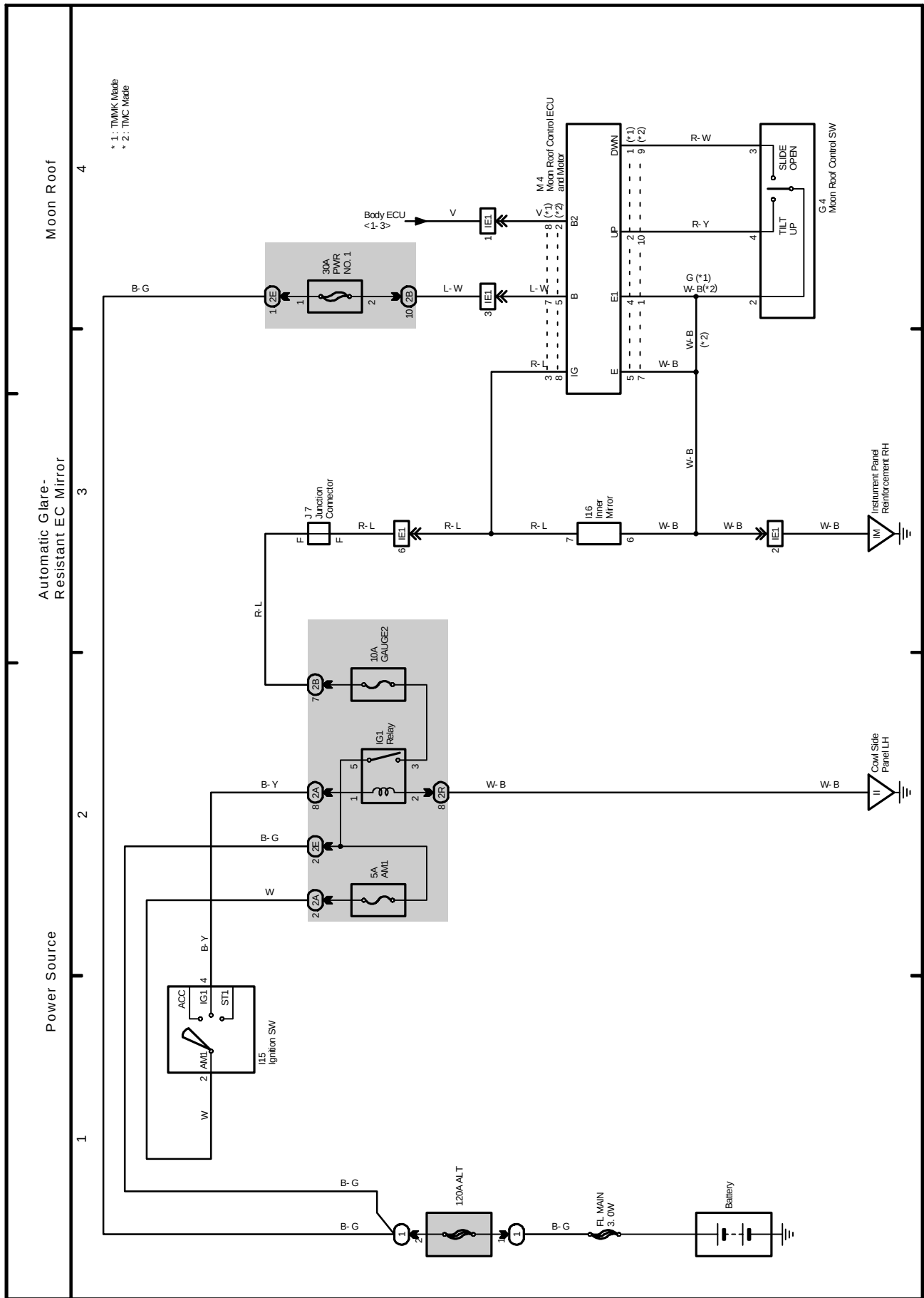
19 CAMRY

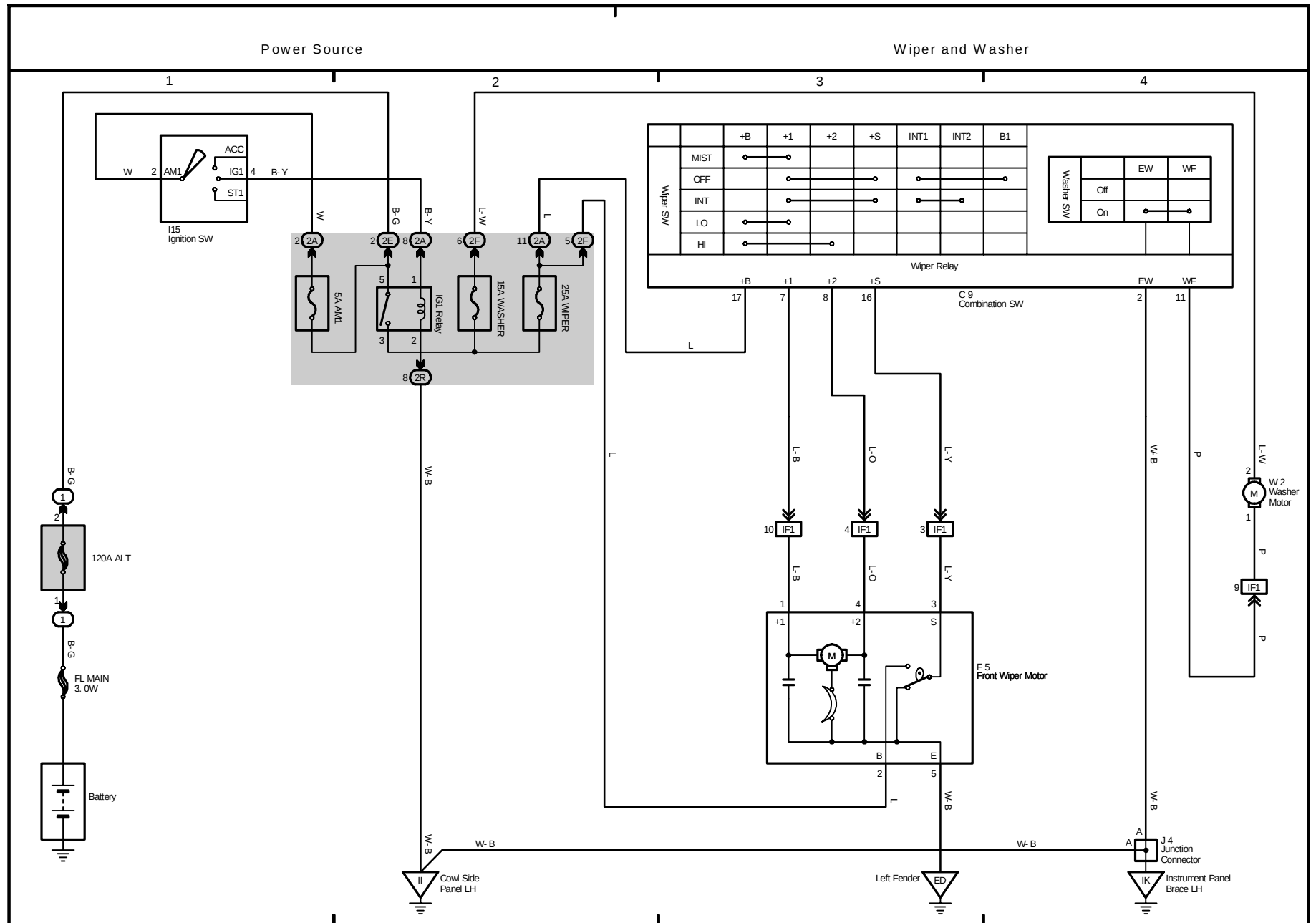




M OVERALL ELECTRICAL WIRING DIAGRAM

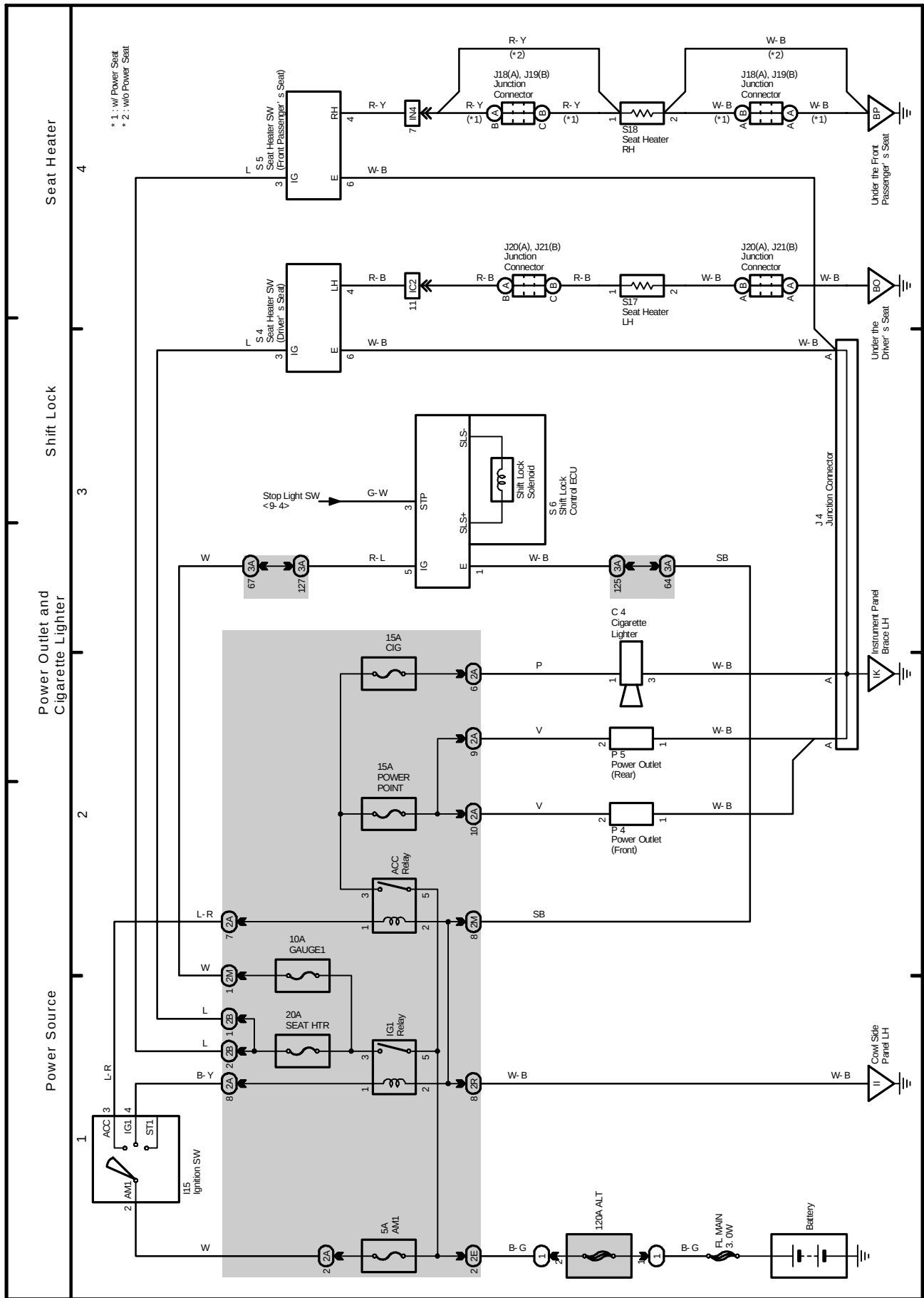
21 CAMRY

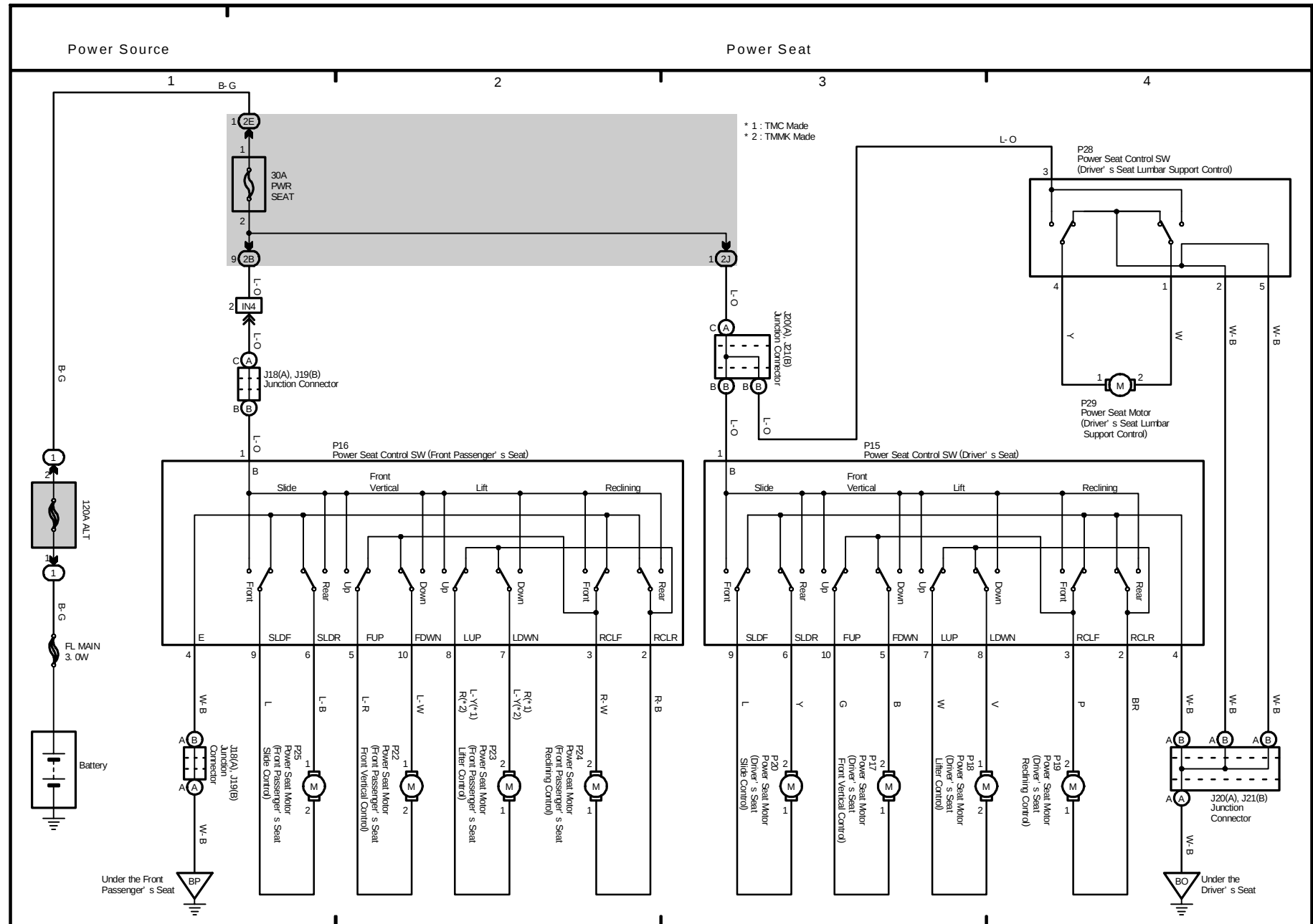




M OVERALL ELECTRICAL WIRING DIAGRAM

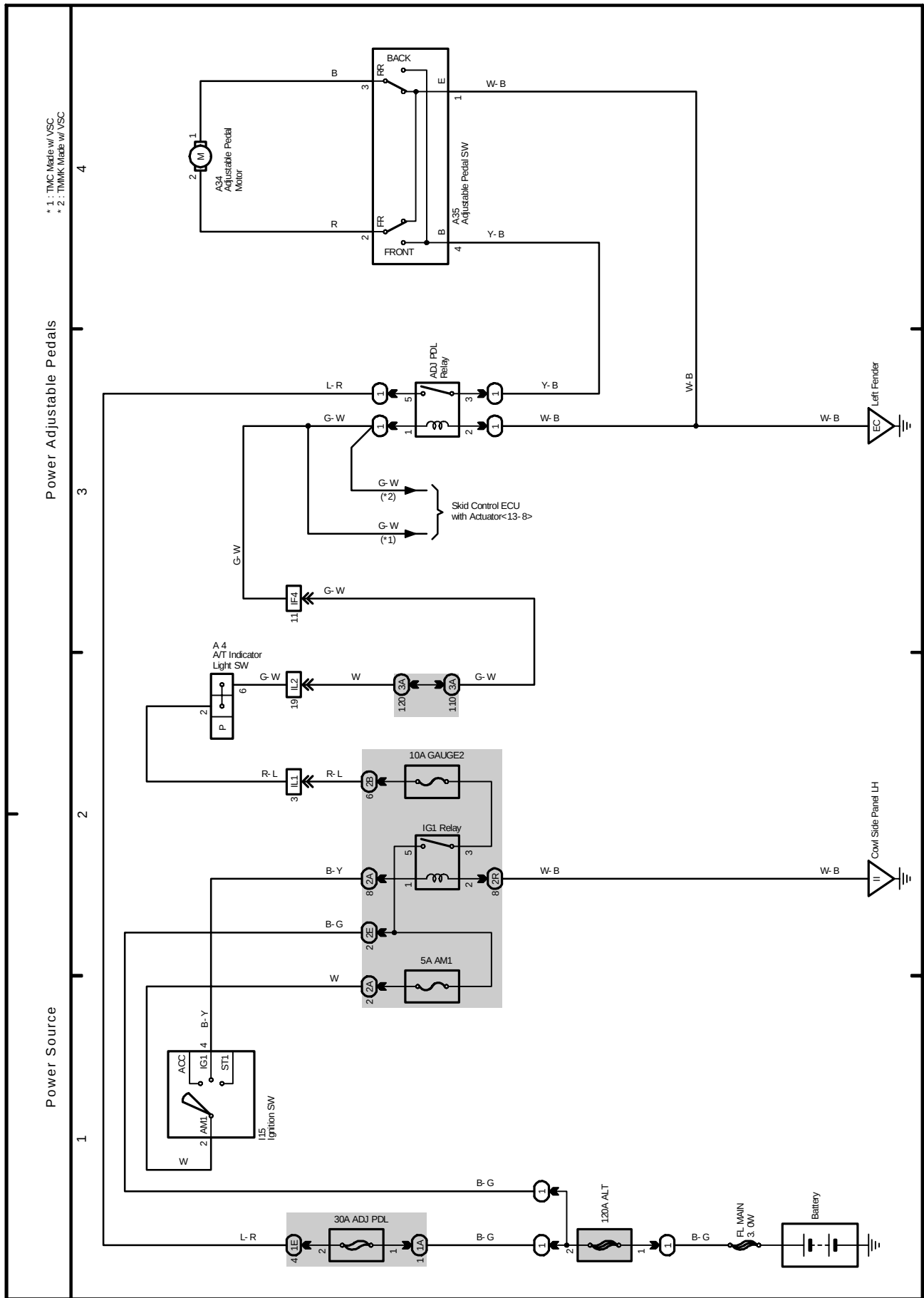
23 CAMRY

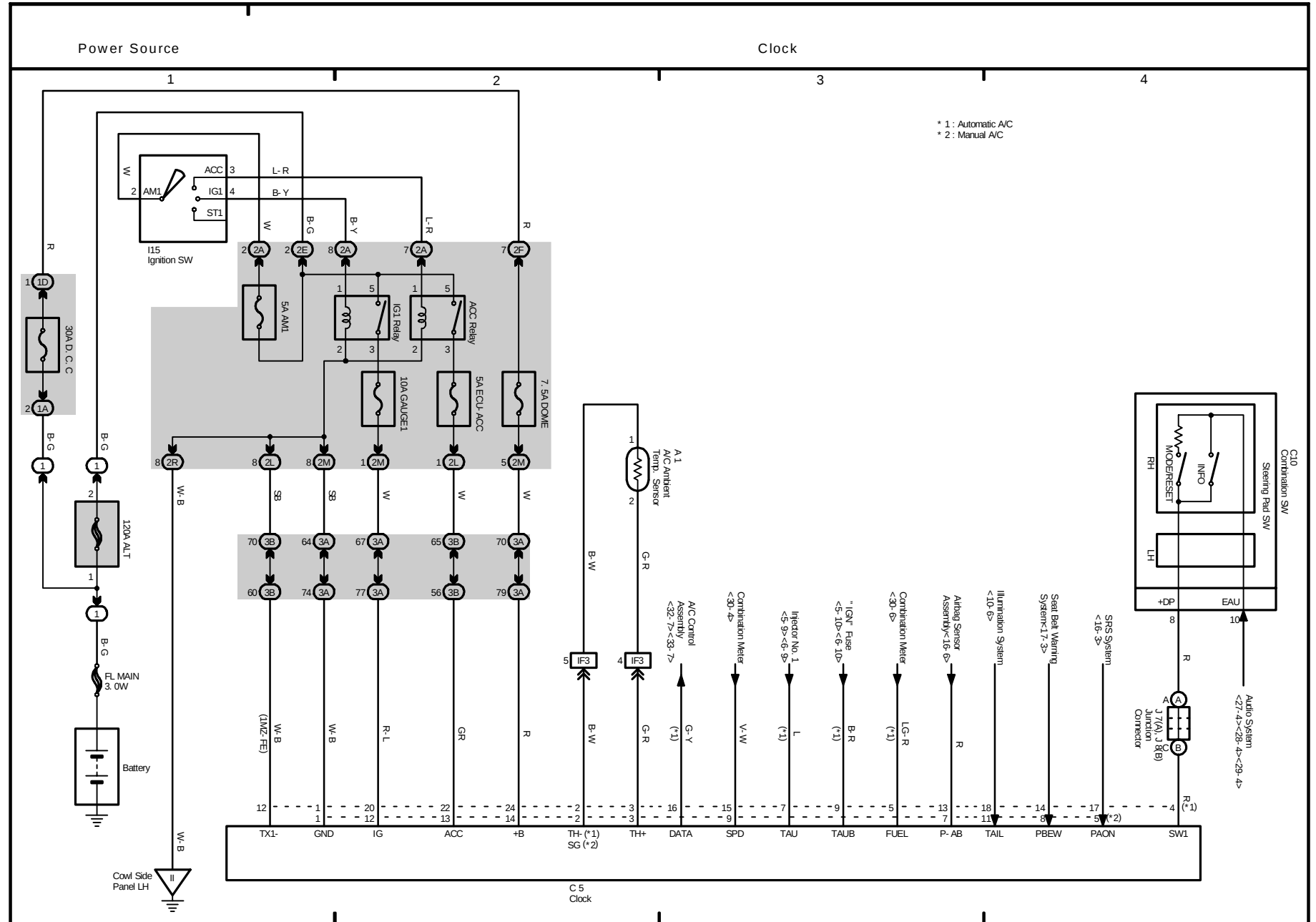




M OVERALL ELECTRICAL WIRING DIAGRAM

25 CAMRY





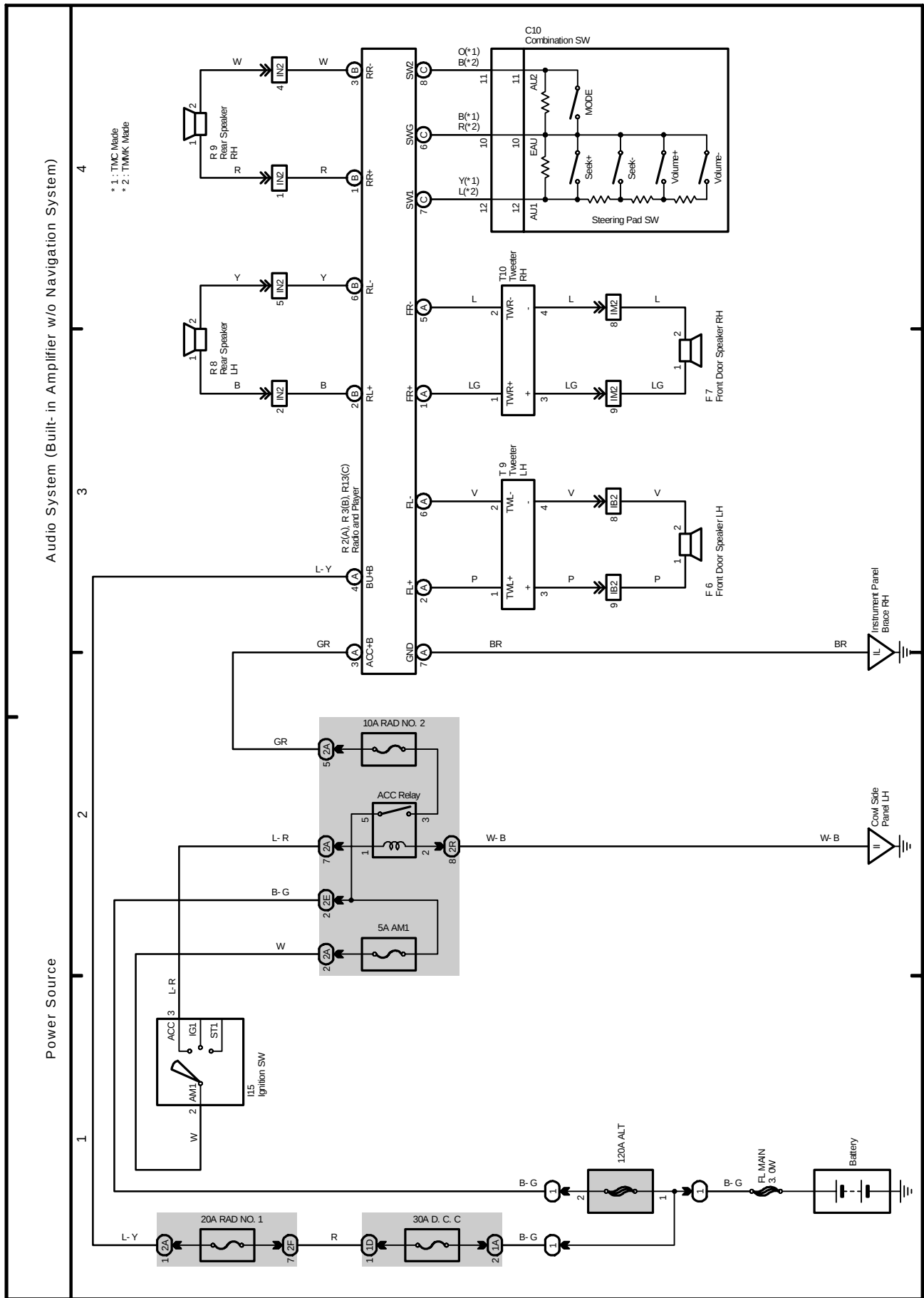
27 CAMRY





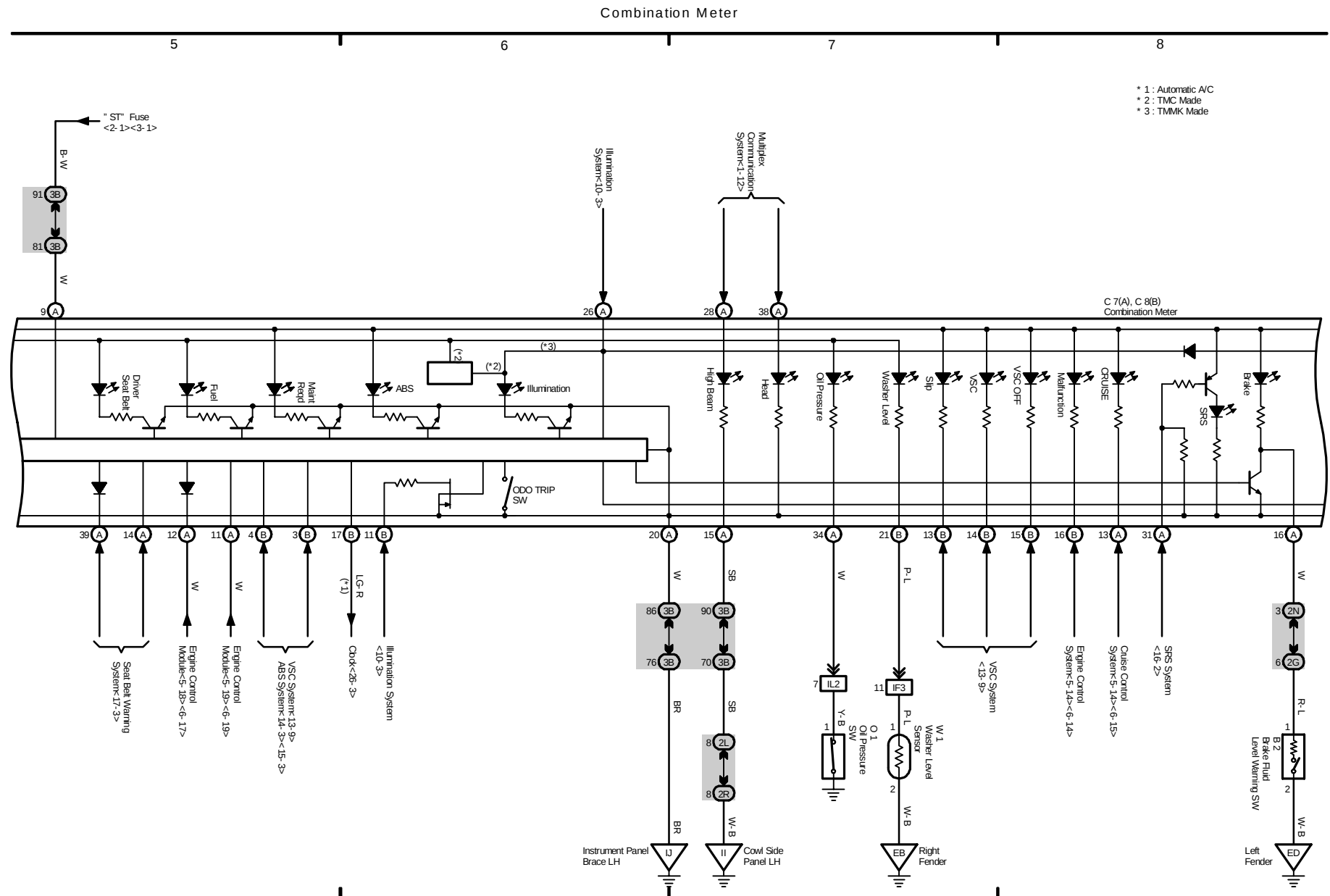
M OVERALL ELECTRICAL WIRING DIAGRAM

29 CAMRY



30 CAMRY





M OVERALL ELECTRICAL WIRING DIAGRAM

30 CAMRY (Cont' d)

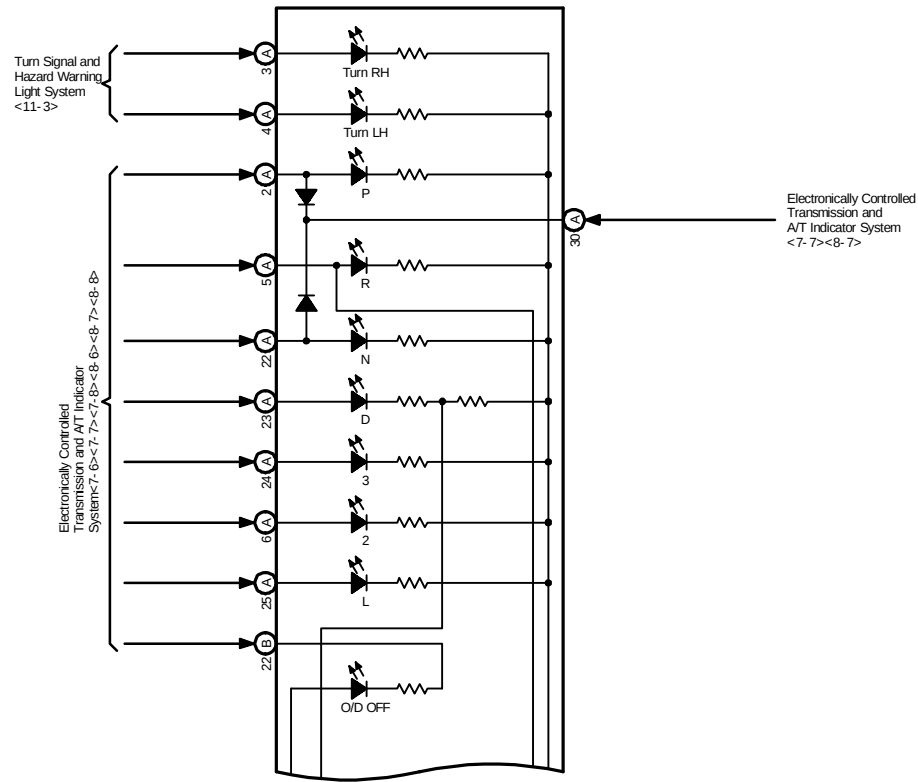
Combination Meter

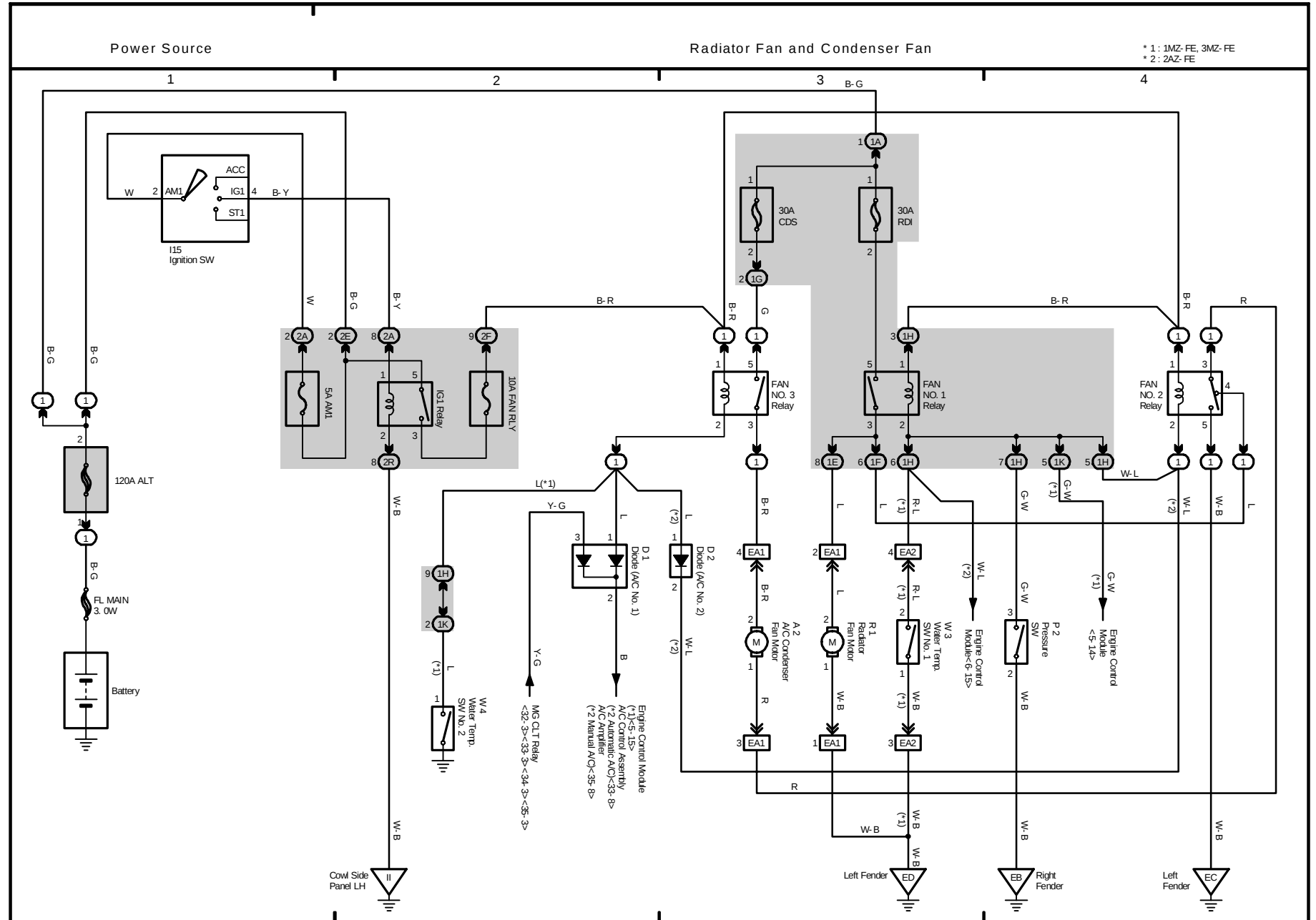
12

11

10

9

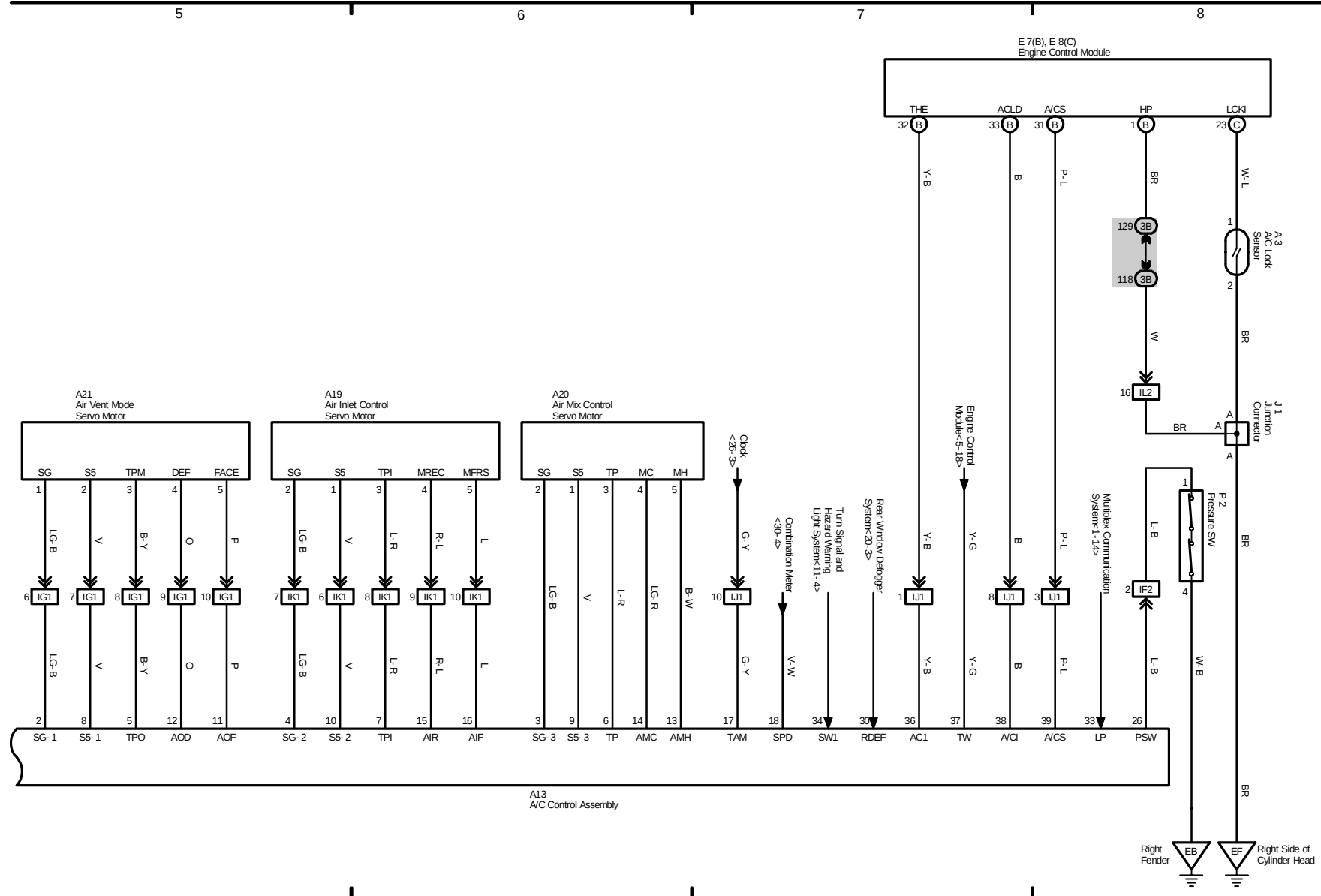




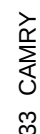
32 CAMRY



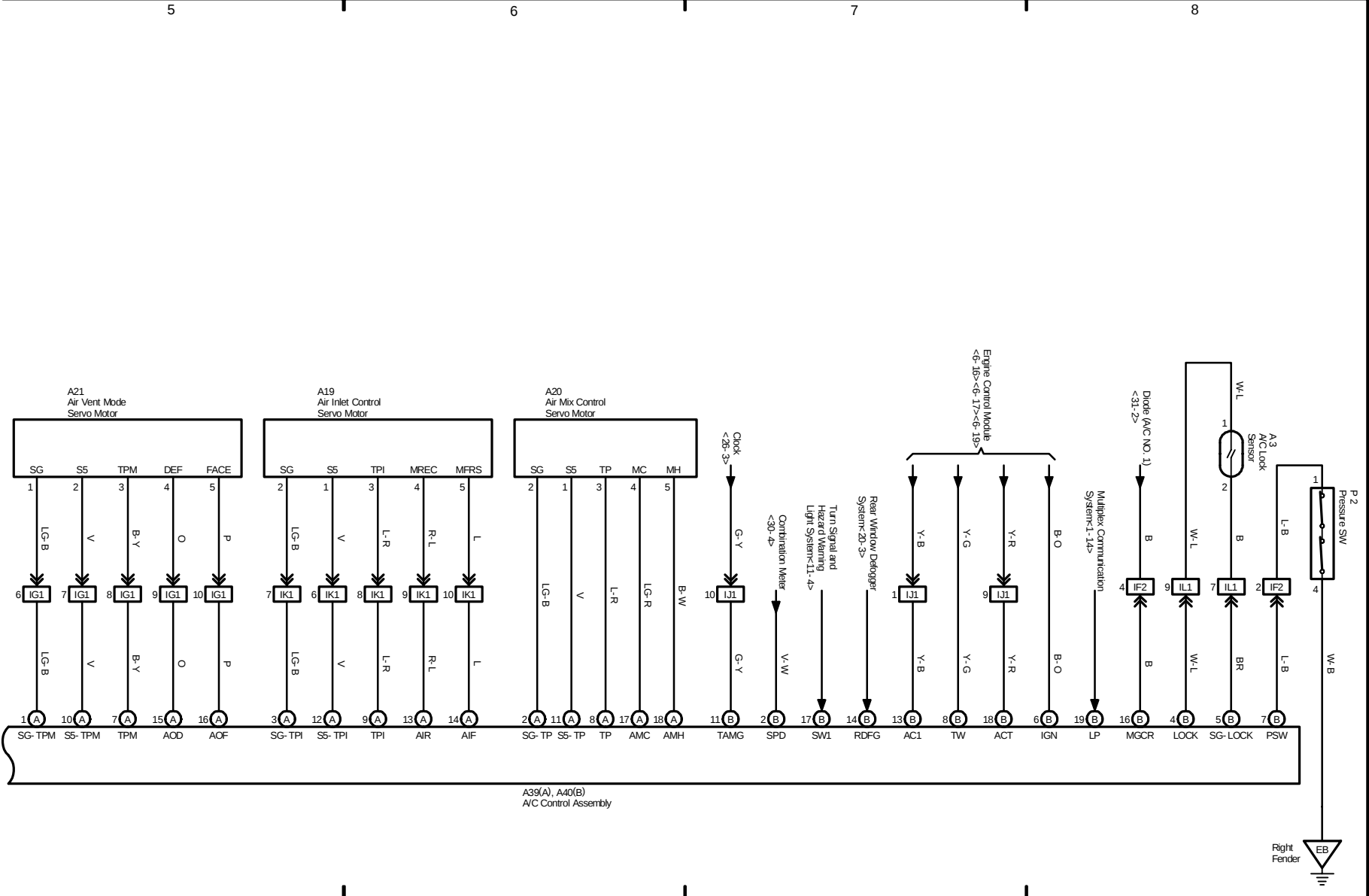
Automatic Air Conditioning (1MZ- FE)



(Cont. next page)



Automatic Air Conditioning (2AZ- FE)



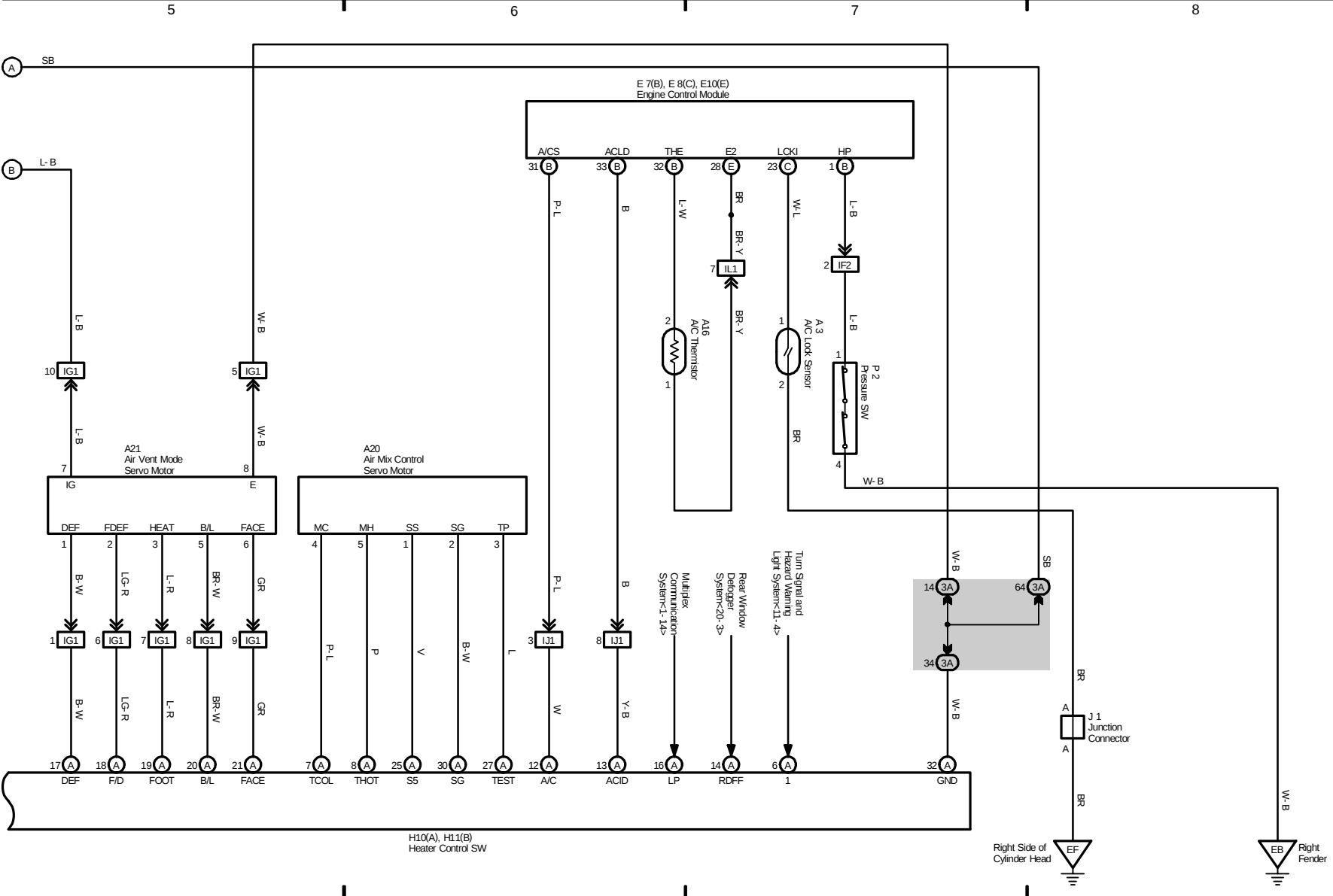
34 CAMRY

Power Source

Manual Air Conditioning (1MZ-FE, 3MZ-FE)

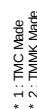


Manual Air Conditioning (1MZ- FE, 3MZ- FE)



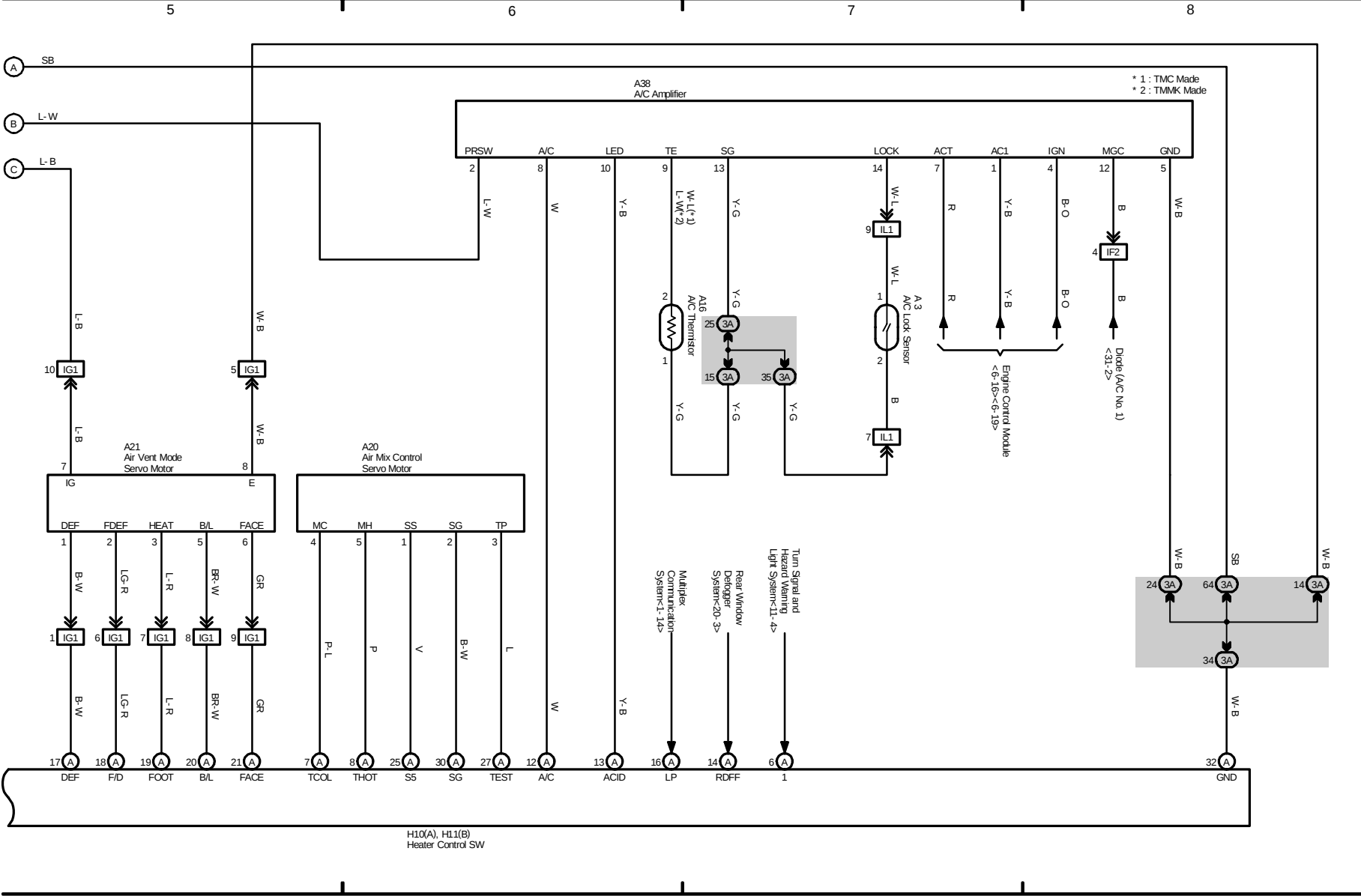
2005 CAMRY (EWD586U)

(Cont. next page)



35 CAMRY

Manual Air Conditioning (2AZ- FE)



2005 CAMRY (EWD586U)