

2003 4RUNNER ELECTRICAL WIRING DIAGRAM

	Section Code	Page
INTRODUCTION	A	2
HOW TO USE THIS MANUAL	B	3
TROUBLESHOOTING	C	12
ABBREVIATIONS	D	17
GLOSSARY OF TERMS AND SYMBOLS	E	18
RELAY LOCATIONS	F	20
ELECTRICAL WIRING ROUTING	G	32
SYSTEM CIRCUITS	H	NO TAG
GROUND POINT	I	356
POWER SOURCE (Current Flow Chart)	J	364
CONNECTOR LIST	K	374
PART NUMBER OF CONNECTORS	L	388
OVERALL ELECTRICAL WIRING DIAGRAM .	M	394

A INTRODUCTION

This manual consists of the following 13 sections:

No.	Section	Description
A	INDEX	Index of the contents of this manual.
	INTRODUCTION	Brief explanation of each section.
B	HOW TO USE THIS MANUAL	Instructions on how to use this manual.
C	TROUBLE–SHOOTING	Describes the basic inspection procedures for electrical circuits.
D	ABBREVIATIONS	Defines the abbreviations used in this manual.
E	GLOSSARY OF TERMS AND SYMBOLS	Defines the symbols and functions of major parts.
F	RELAY LOCATIONS	Shows position of the Electronic Control Unit, Relays, Relay Block, etc. This section is closely related to the system circuit.
G	ELECTRICAL WIRING ROUTING	Describes position of Parts Connectors, Splice points, Ground points, etc. This section is closely related to the system circuit.
H	INDEX	Index of the system circuits.
	SYSTEM CIRCUITS	Electrical circuits of each system are shown from the power supply through ground points. Wiring connections and their positions are shown and classified by code according to the connection method. (Refer to the section, "How to use this manual"). The "System Outline" and "Service Hints" useful for troubleshooting are also contained in this section.
I	GROUND POINT	Shows ground positions of all parts described in this manual.
J	POWER SOURCE (Current Flow Chart)	Describes power distribution from the power supply to various electrical loads.
K	CONNECTOR LIST	Describes the form of the connectors for the parts appeared in this book. This section is closely related to the system circuit.
L	PART NUMBER OF CONNECTORS	Indicates the part number of the connectors used in this manual.
M	OVERALL ELECTRICAL WIRING DIAGRAM	Provides circuit diagrams showing the circuit connections.

This manual provides information on the electrical circuits installed on vehicles by dividing them into a circuit for each system.

The actual wiring of each system circuit is shown from the point where the power source is received from the battery as far as each ground point. (All circuit diagrams are shown with the switches in the OFF position.)

When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Point section). See the System Outline to understand the circuit operation.

When the circuit operation is understood, begin troubleshooting of the problem circuit to isolate the cause. Use Relay Location and Electrical Wiring Routing sections to find each part, junction block and wiring harness connectors, wiring harness and wiring harness connectors, splice points, and ground points of each system circuit. Internal wiring for each junction block is also provided for better understanding of connection within a junction block.

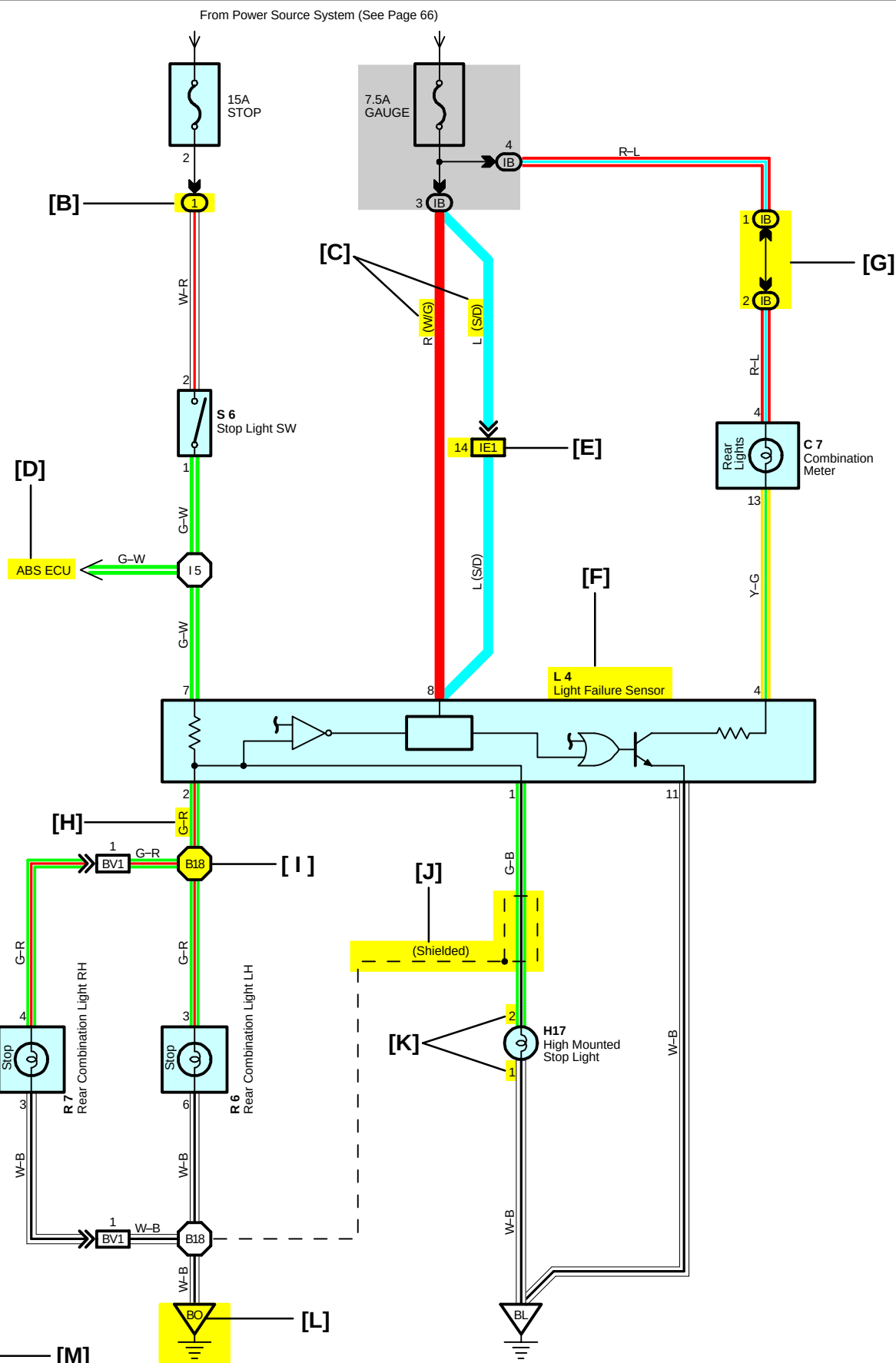
Wiring related to each system is indicated in each system circuit by arrows (from__, to__). When overall connections are required, see the Overall Electrical Wiring Diagram at the end of this manual.

B HOW TO USE THIS MANUAL

[A]

Stop Light

* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.



[A] : System Title

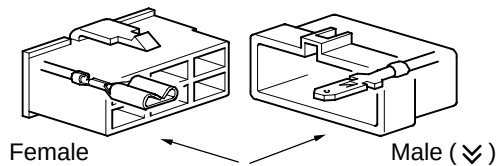
[B] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B

Example: ① Indicates Relay Block No.1

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

[D] : Indicates related system.

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



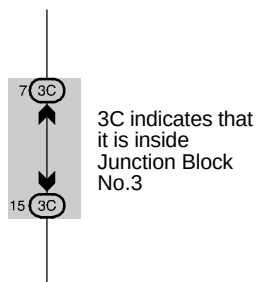
The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

When more than one code has the first and second letters in common, followed by numbers (e.g, IH1, IH2), this indicates the same type of wiring harness and wiring harness connector.

[F] : Represents a part (all parts are shown in sky blue). The code is the same as the code used in parts position.

[G] : 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:



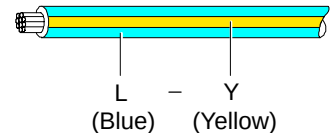
[H] : Indicates the wiring color.

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		

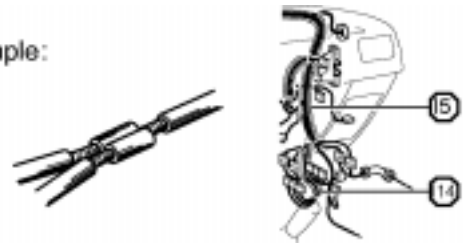
The first letter indicates the basic wire color and the second letter indicates the color of the stripe.

Example: L – Y



[I] : Indicates a wiring Splice Point (Codes are "E" for the Engine Room, "I" for the Instrument Panel, and "B" for the Body).

Example:



The Location of splice Point I 5 is indicated by the shaded section.

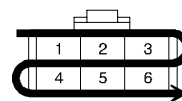
[J] : Indicates a shielded cable.



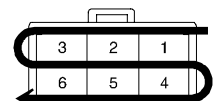
[K] : Indicates the pin number of the connector. The numbering system is different for female and male connectors.

Example: Numbered in order from upper left to lower right

Numbered in order from upper right to lower left



Female



Male

[L] : Indicates a ground point.

The first letter of the code for each ground point(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

[M] : Page No.

B HOW TO USE THIS MANUAL

[N]

System Outline

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

When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 8 of the light failure sensor, and also flows through the rear lights warning light to TERMINAL 4 of the light failure sensor.

Stop Light Disconnection Warning

When the ignition SW is turned on and the brake pedal is pressed (Stop light SW on), if the stop light circuit is open, the current flowing from TERMINAL 7 of the light failure sensor to TERMINALS 1, 2 changes, so the light failure sensor detects the disconnection and the warning circuit of the light failure sensor is activated.

As a result, the current flows from TERMINAL 4 of the light failure sensor to TERMINAL 11 to GROUND and turns the rear lights warning light on. By pressing the brake pedal, the current flowing to TERMINAL 8 of the light failure sensor keeps the warning circuit on and holds the warning light on until the ignition SW is turned off.

[O]

Service Hints

S6 Stop Light SW

2-1 : Closed with the brake pedal depressed

L4 Light Failure Sensor

1, 2, 7-Ground : Approx. 12 volts with the stop light SW on

4, 8-Ground : Approx. 12 volts with the ignition SW at ON position

11-Ground : Always continuity

[P]

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C7	34	L4	36	R7	37
H17	36	R6	37	S6	35

[Q]

○ : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	18	R/B No.1 (Instrument Panel Brace LH)

[R]

○ : Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
IB	20	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
3C	22	Instrument Panel Wire and J/B No.3 (Instrument Panel Brace LH)

[S]

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	42	Floor Wire and Instrument Panel Wire (Left Kick Panel)
BV1	50	Luggage Room Wire and Floor Wire (Luggage Room Left)

[T]

▽ : Ground Points

Code	See Page	Ground Points Location
BL	50	Under the Left Center Pillar
BO	50	Back Panel Center

[U]

○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	44	Cowl Wire	B18	50	Luggage Room Wire

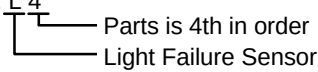
[N] : Explains the system outline.

[O] : Indicates values or explains the function for reference during troubleshooting.

[P] : Indicates the reference page showing the position on the vehicle of the parts in the system circuit.

Example : Part "L4" (Light Failure Sensor) is on page 36 of the manual.

* The letter in the code is from the first letter of the part, and the number indicates its order in parts starting with that letter.

Example : L 4

Parts is 4th in order
Light Failure Sensor

[Q] : Indicates the reference page showing the position on the vehicle of Relay Block Connectors in the system circuit.

Example : Connector "1" is described on page 18 of this manual and is installed on the left side of the instrument panel.

[R] : Indicates the reference page showing the position on the vehicle of J/B and Wire Harness in the system circuit.

Example : Connector "3C" connects the Instrument Panel Wire and J/B No.3. It is described on page 22 of this manual, and is installed on the instrument panel left side.

[S] : Indicates the reference page describing the wiring harness and wiring harness connector (the female wiring harness is shown first, followed by the male wiring harness).

Example : Connector "IE1" connects the floor wire (female) and Instrument panel wire (male). It is described on page 42 of this manual, and is installed on the left side kick panel.

[T] : Indicates the reference page showing the position of the ground points on the vehicle.

Example : Ground point "BO" is described on page 50 of this manual and is installed on the back panel center.

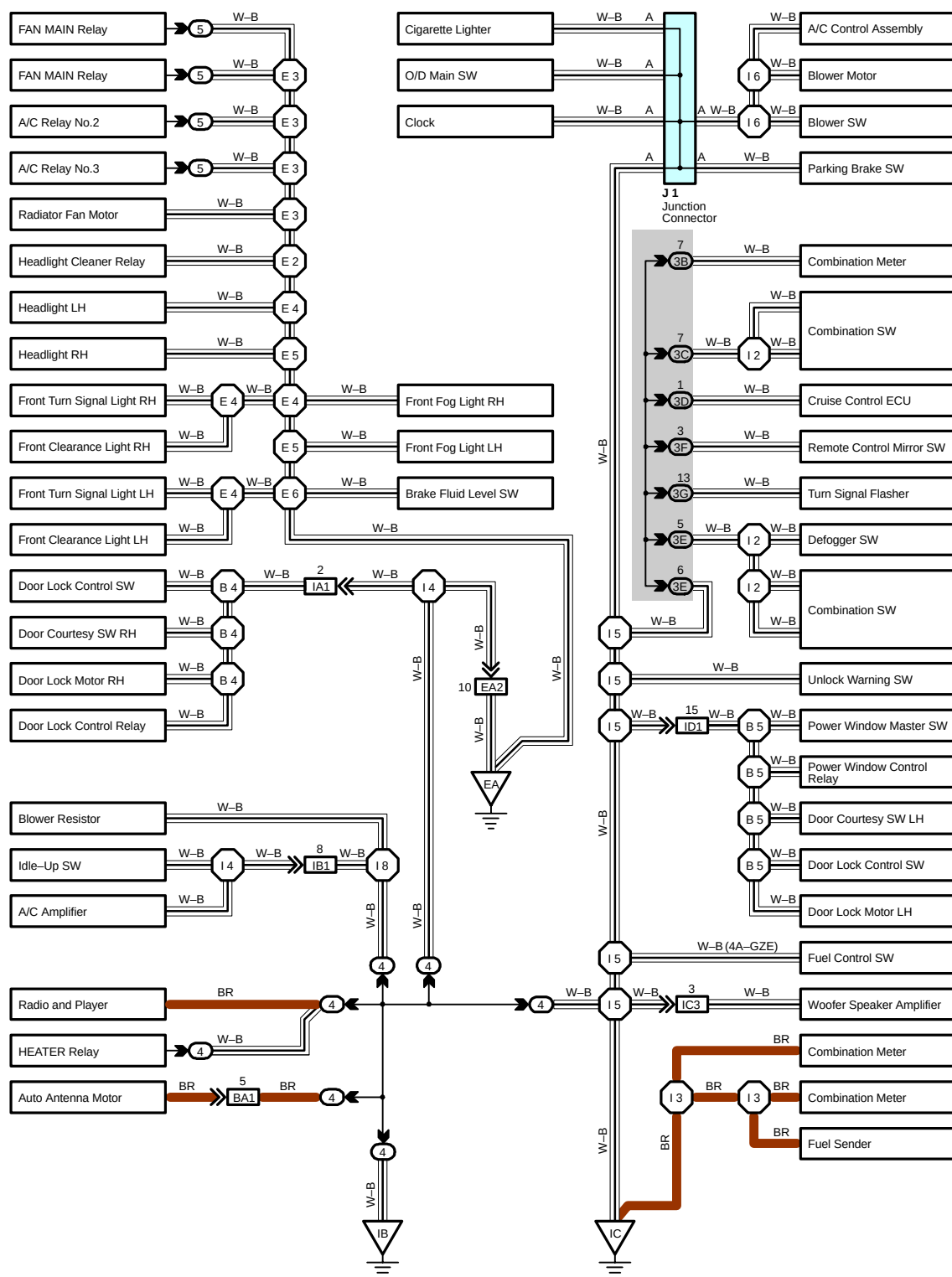
[U] : Indicates the reference page showing the position of the splice points on the vehicle.

Example : Splice point "I5" is on the Cowl Wire Harness and is described on page 44 of this manual.

B HOW TO USE THIS MANUAL

The ground points circuit diagram shows the connections from all major parts to the respective ground points. When troubleshooting a faulty ground point, checking the system circuits which use a common ground may help you identify the problem ground quickly. The relationship between ground points (∇_{EA} , ∇_{IB} and ∇_{IC} shown below) can also be checked this way.

I GROUND POINT

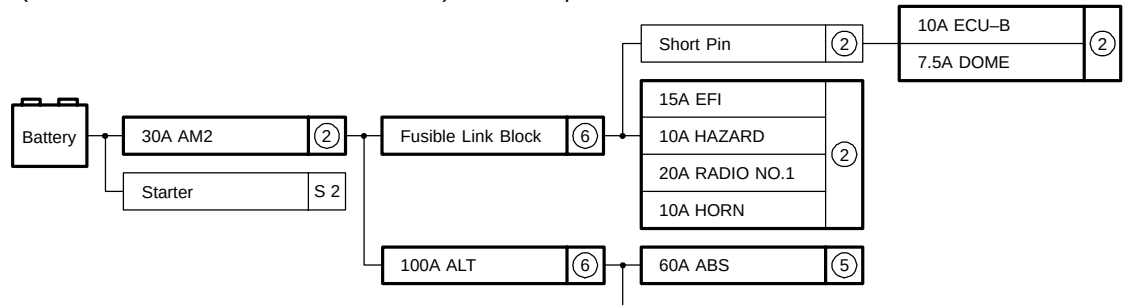


* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

The "Current Flow Chart" section, describes which parts each power source (fuses, fusible links, and circuit breakers) transmits current to. In the Power Source circuit diagram, the conditions when battery power is supplied to each system are explained. Since all System Circuit diagrams start from the power source, the power source system must be fully understood.

J POWER SOURCE (Current Flow Chart)

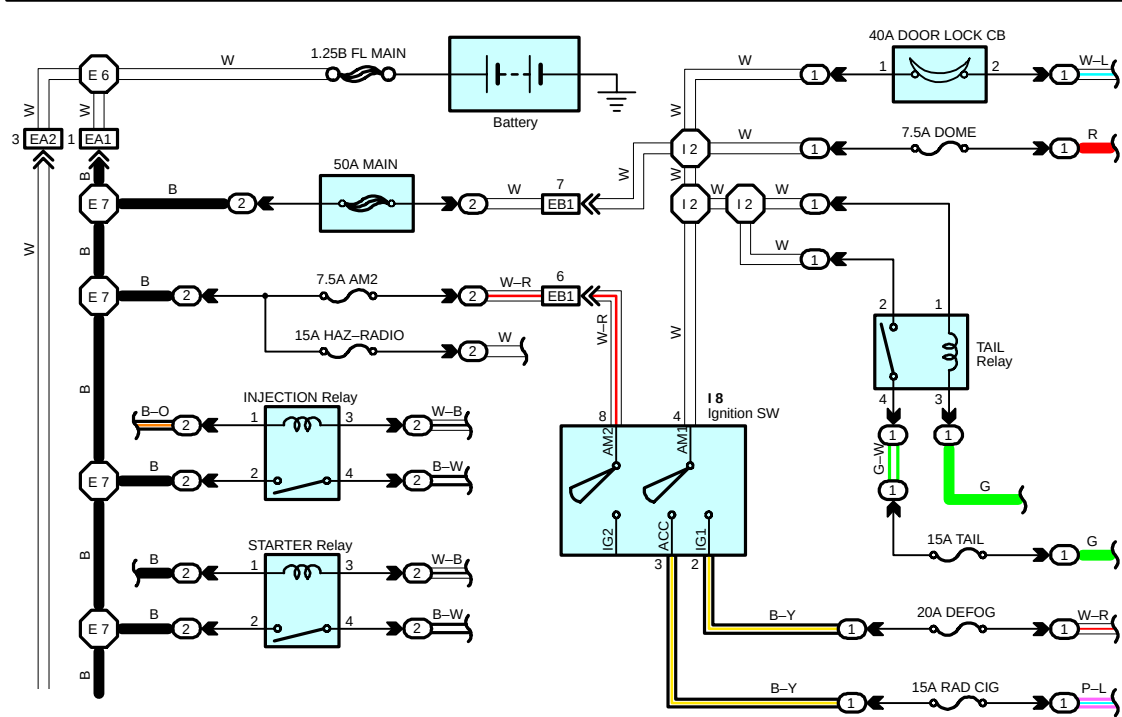
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.



Engine Room R/B (See Page 20)

Fuse		System	Page
20A	STOP	ABS	194
		ABS and Traction Control	187
		Cruise Control	180
		Electronically Controlled Transmission	166
		Multiplex Communication System	210
10A	DOME	Cigarette Lighter	214
		Combination Meter	230
		Headlight	112
		Interior Light	122
		Key Reminder and Seat Belt Warning	
		Light Auto Turn Off	

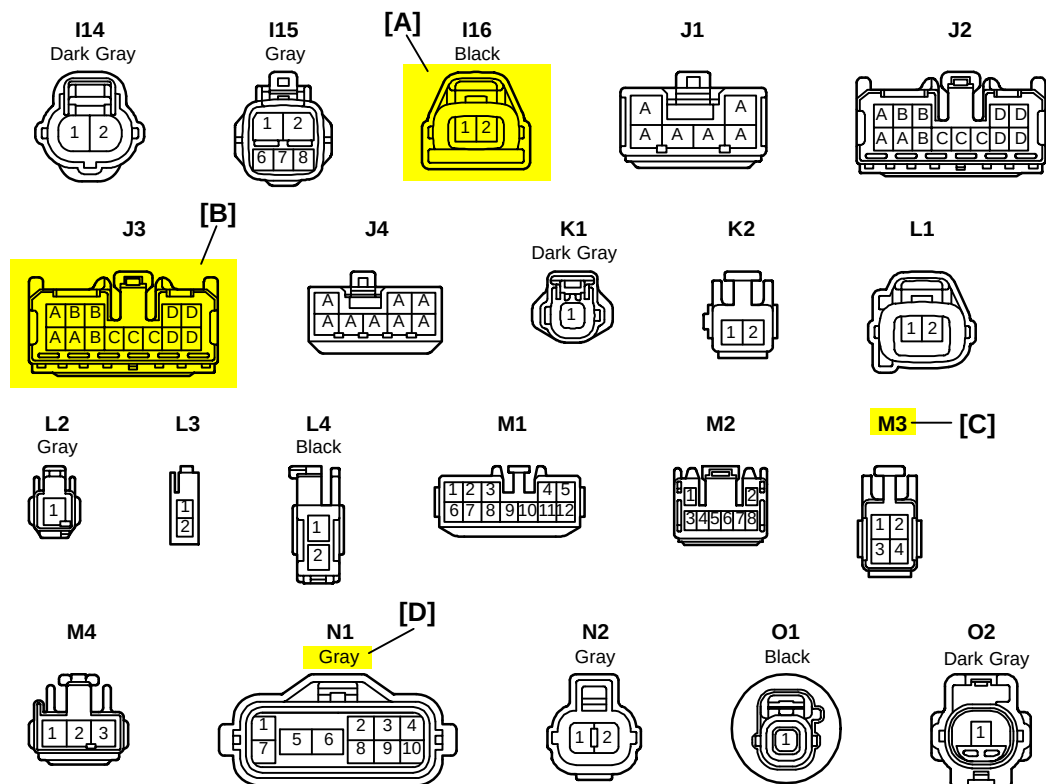
Power Source



* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

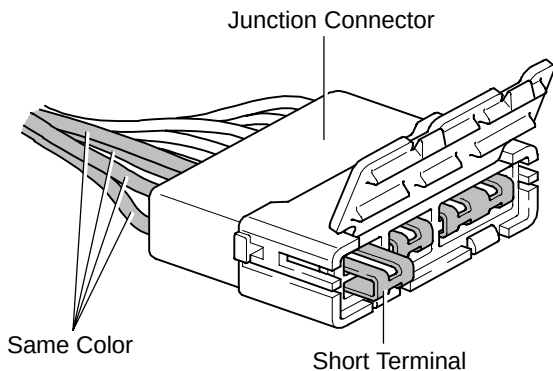
B HOW TO USE THIS MANUAL

K CONNECTOR LIST



[A] : Indicates connector to be connected to a part. (The numeral indicates the pin No.)

[B] : Junction Connector
Indicates a connector which is connected to a short terminal.



Junction connector in this manual include a short terminal which is connected to a number of wire harnesses. Always perform inspection with the short terminal installed. (When installing the wire harnesses, the harnesses can be connected to any position within the short terminal grouping. Accordingly, in other vehicles, the same position in the short terminal may be connected to a wire harness from a different part.)

Wire harness sharing the same short terminal grouping have the same color.

[C] : Parts Code
The first letter of the code is taken from the first letter of part, and the numbers indicates its order in parts which start with the same letter.

[D] : Connector Color
Connectors not indicated are milky white in color.

L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number	Code	Part Name	Part Number
A 1	A/C Ambient Temp. Sensor	90980-11070	D 4	Diode (Courtesy)	90980-11608
A 2	A/C Condenser Fan Motor	90980-11237	D 5	Diode (Interior Light)	90980-10962
A 3	A/C Condenser Fan Relay	90980-10940	D 6	Diode (Moon Roof)	90980-11608
A 4	A/C Condenser Fan Resistor	90980-10928	D 7	Door Lock Control Relay	90980-10848
A 5	A/C Magnetic Clutch	90980-11271	D 8	Door Lock Control SW LH	90980-11148
A 6	A/T Oil Temp. Sensor	90980-11413	D 9	Door Lock Control SW RH	
[A]	ABS Actual [B]	909-[C] 151	D10	Door Courtesy SW LH	90980-11097
A 8	ABS Actuator	90980-11009	D11	Door Courtesy SW RH	
A 9	ABS Speed Sensor Front LH	90980-10941	D12	Door Courtesy SW Front LH	90980-11156
A10	ABS Speed Sensor Front RH	90980-11002	D13	Door Courtesy SW Front RH	
A11	Airbag Sensor Front LH	90980-11856	D14	Door Courtesy SW Rear LH	
A12	Airbag Sensor Front RH		D15	Door Courtesy SW Rear RH	
A13	Airbag Sensor Front LH	90980-11194	D16	Door Lock and Unlock SW LH	90980-11170
		90980-11194			

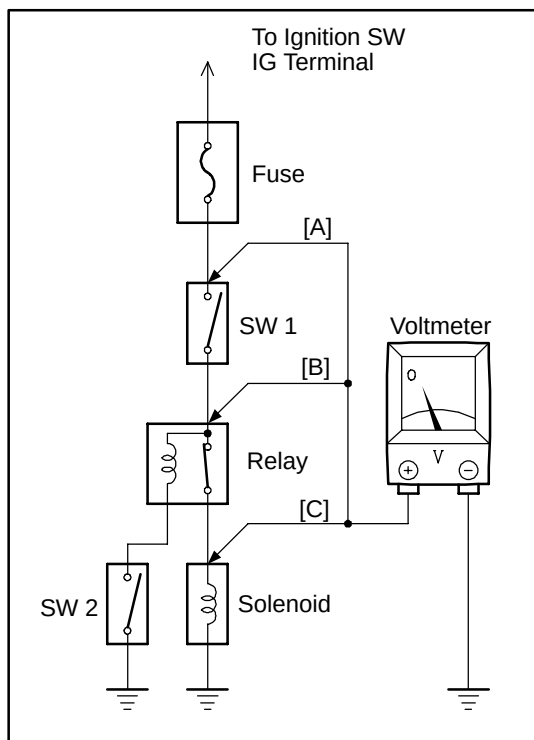
[A] : Part Code

[B] : Part Name

[C] : Part Number
Toyota Part Number are indicated.

Not all of the above part numbers of the connector are established for the supply. In case of ordering a connector or terminal with wire, please confirm in advance if there is supply for it using "Parts Catalog News" (published by Parts Engineering Administration Dept.).

C TROUBLESHOOTING



VOLTAGE CHECK

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

Example:

[A] – Ignition SW on

[B] – Ignition SW and SW 1 on

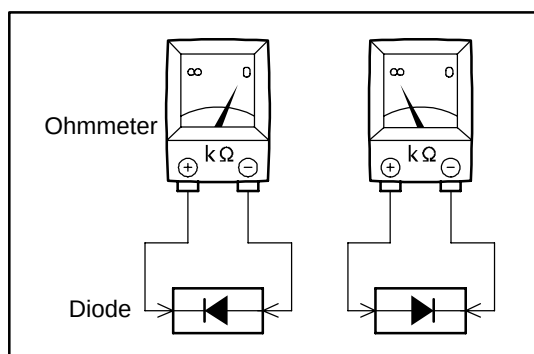
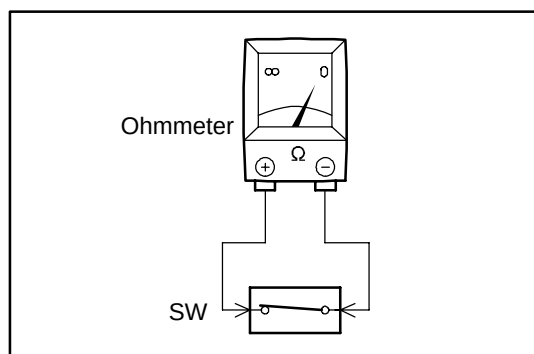
[C] – Ignition SW, SW 1 and Relay on (SW 2 off)

- (b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal.

This check can be done with a test light instead of a voltmeter.

CONTINUITY AND RESISTANCE CHECK

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

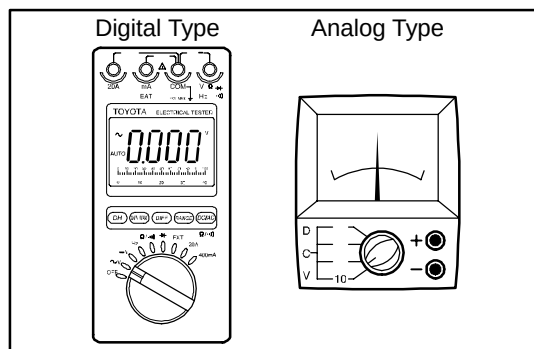


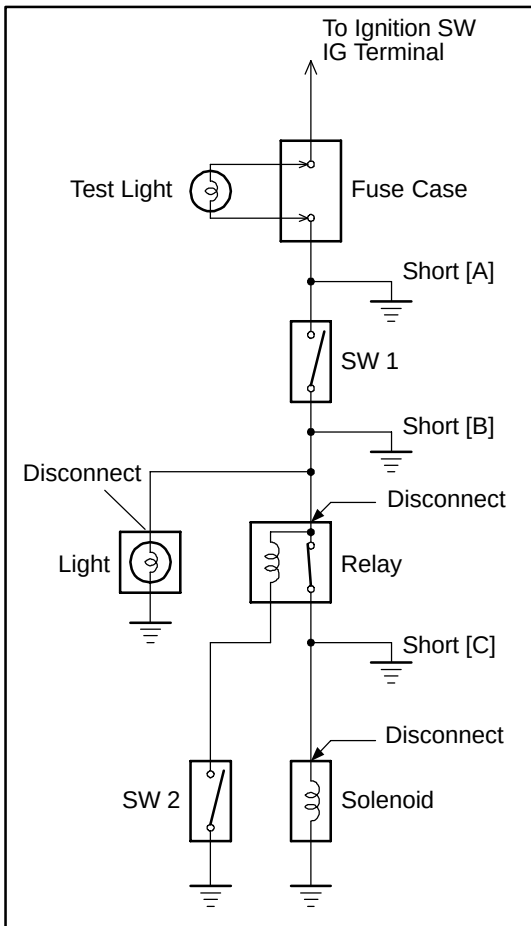
If the circuit has diodes, reverse the two leads and check again.

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

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

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





FINDING A SHORT CIRCUIT

- Remove the blown fuse and disconnect all loads of the fuse.
- Connect a test light in place of the fuse.
- Establish conditions in which the test light comes on.

Example:

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

- Disconnect and reconnect the connectors while watching the test light. The short lies between the connector where the test light stays lit and the connector where the light goes out.
- Find the exact location of the short by lightly shaking the problem wire along the body.

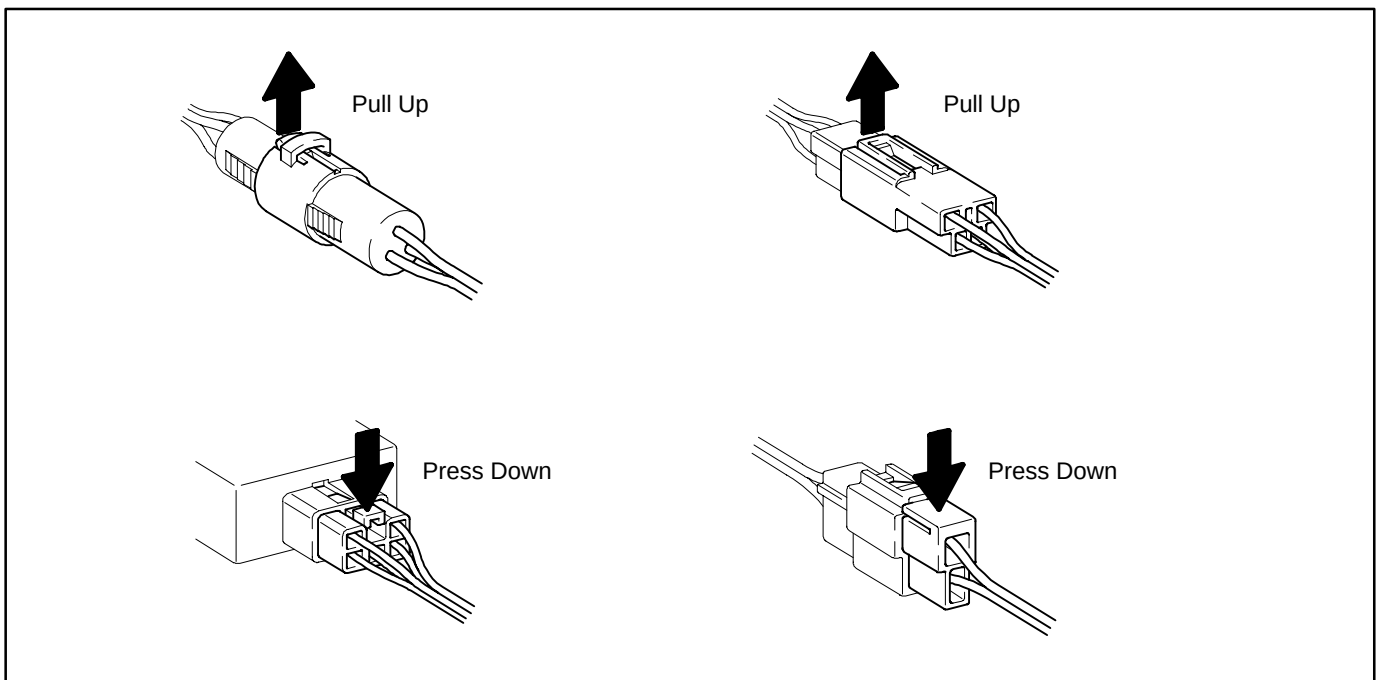
CAUTION:

- Do not open the cover or the case of the ECU unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)
- When replacing the internal mechanism (ECU part) of the digital meter, be careful that no part of your body or clothing comes in contact with the terminals of leads from the IC, etc. of the replacement part (spare part).

DISCONNECTION OF MALE AND FEMALE CONNECTORS

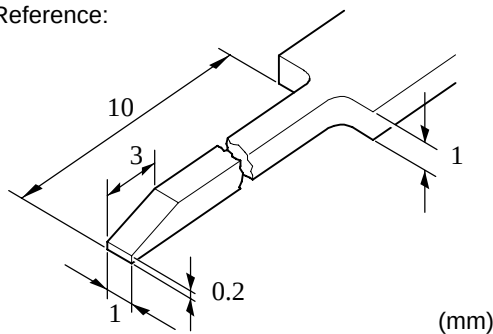
To pull apart the connectors, pull on the connector itself, not the wire harness.

HINT: Check to see what kind of connector you are disconnecting before pulling apart.



C TROUBLESHOOTING

Reference:



HOW TO REPLACE TERMINAL (with terminal retainer or secondary locking device)

1. PREPARE THE SPECIAL TOOL

HINT : To remove the terminal from the connector, please construct and use the special tool or like object shown on the left.

2. DISCONNECT CONNECTOR

3. DISENGAGE THE SECONDARY LOCKING DEVICE OR TERMINAL RETAINER.

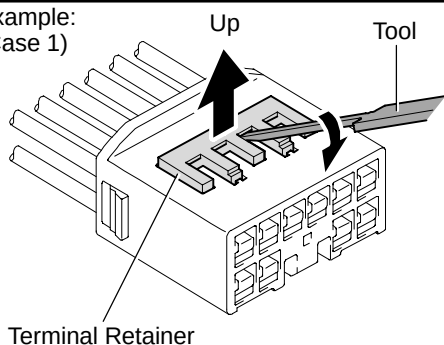
(a) Locking device must be disengaged before the terminal locking clip can be released and the terminal removed from the connector.

(b) Use a special tool or the terminal pick to unlock the secondary locking device or terminal retainer.

NOTICE:

Do not remove the terminal retainer from connector body.

Example:
(Case 1)

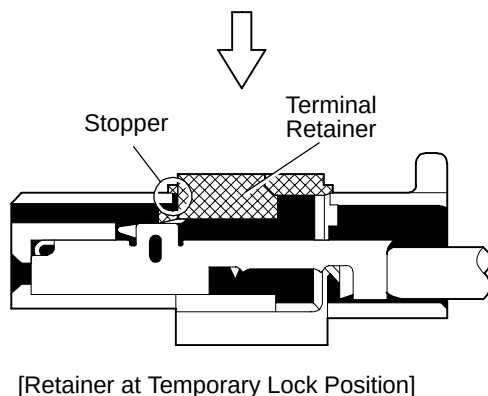
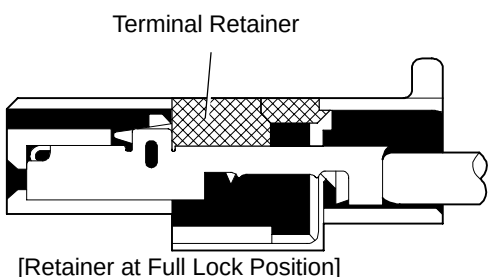


[A] For Non-Waterproof Type Connector

HINT : The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

"Case 1"

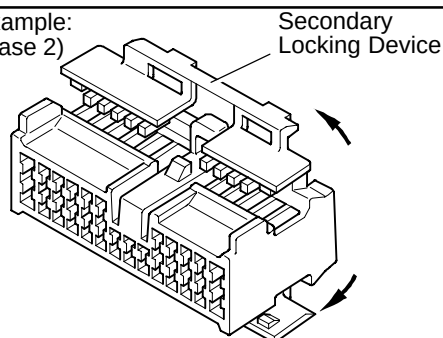
Raise the terminal retainer up to the temporary lock position.

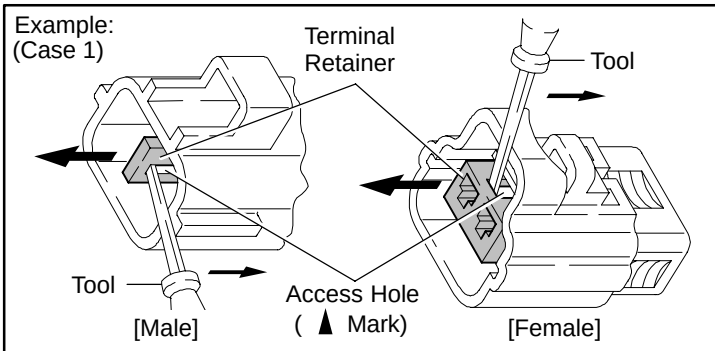
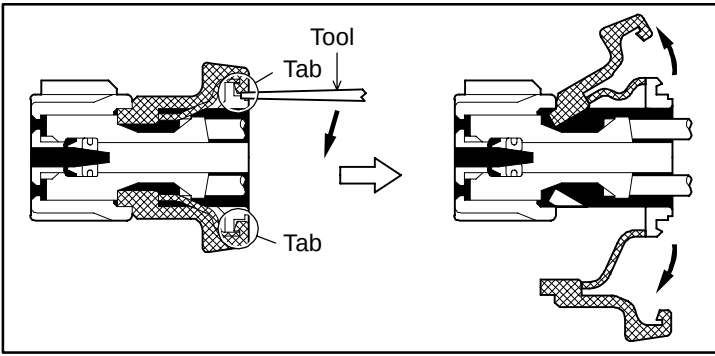


"Case 2"

Open the secondary locking device.

Example:
(Case 2)





[B] For Waterproof Type Connector

HINT : Terminal retainer color is different according to connector body.

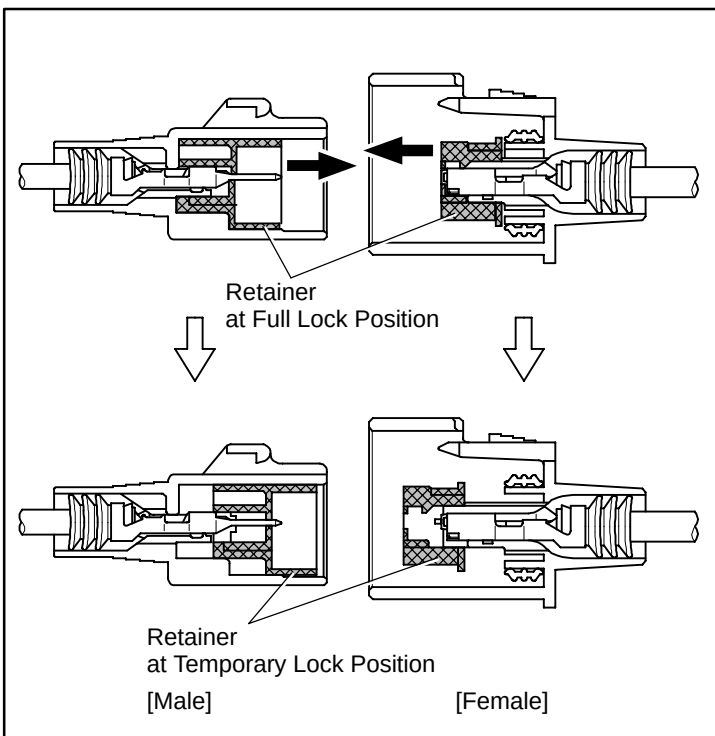
Example:

Terminal Retainer : Connector Body

Black or White : Gray

Black or White : Dark Gray

Gray or White : Black

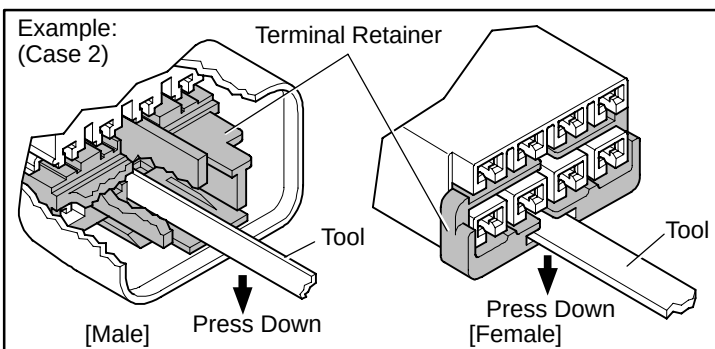


"Case 1"

Type where terminal retainer is pulled up to the temporary lock position (Pull Type).

Insert the special tool into the terminal retainer access hole (▲ Mark) and pull the terminal retainer up to the temporary lock position.

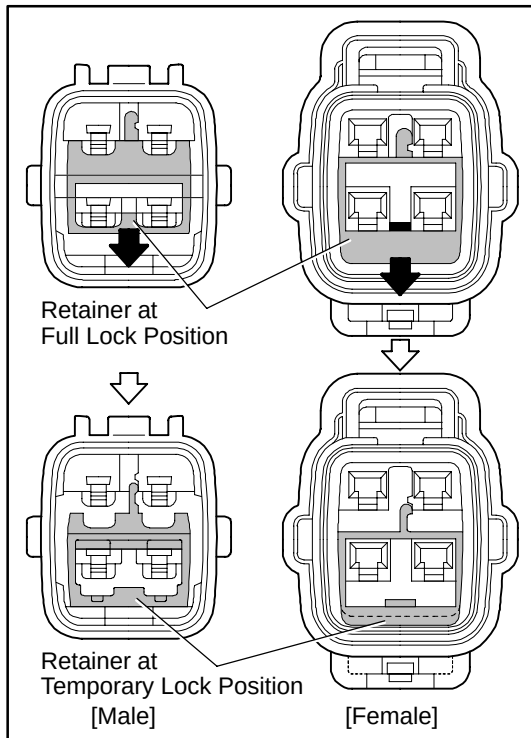
HINT : The needle insertion position varies according to the connector's shape (Number of terminals etc.), so check the position before inserting it.



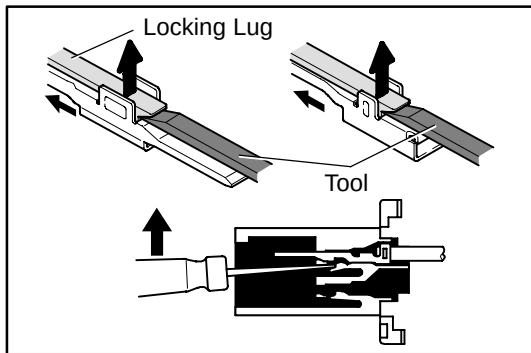
"Case 2"

Type which cannot be pulled as far as Power Lock insert the tool straight into the access hole of terminal retainer as shown.

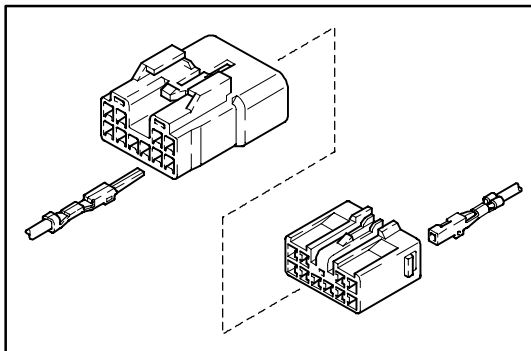
C TROUBLESHOOTING



Push the terminal retainer down to the temporary lock position.



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



4. INSTALL TERMINAL TO CONNECTOR

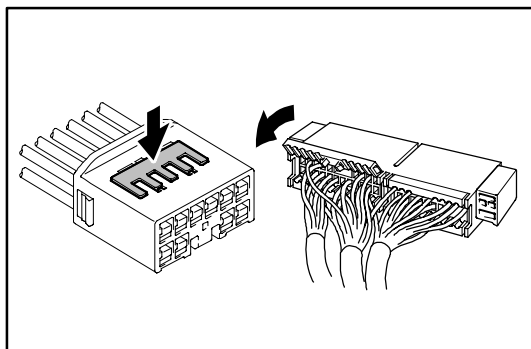
(a) Insert the terminal.

HINT:

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

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

5. CONNECT CONNECTOR



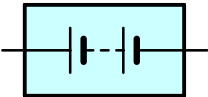
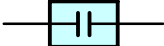
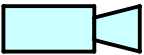
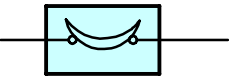
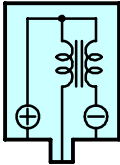
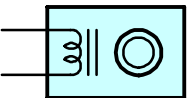
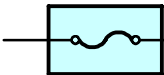
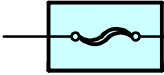
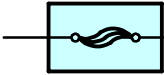
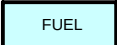
ABBREVIATIONS

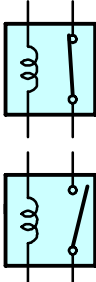
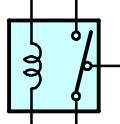
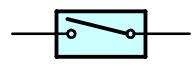
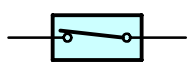
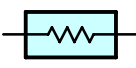
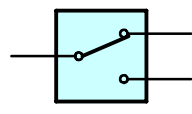
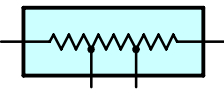
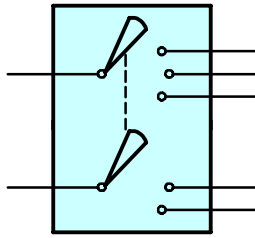
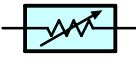
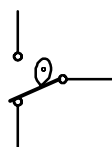
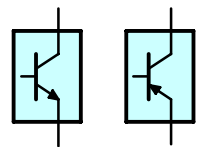
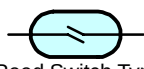
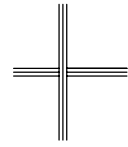
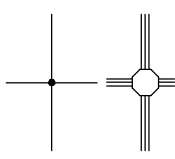
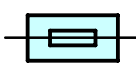
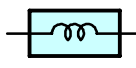
The following abbreviations are used in this manual.

2WD	=	Two Wheel Drive Vehicles
4WD	=	Four Wheel Drive Vehicles
A/C	=	Air Conditioning
A/T	=	Automatic Transmission
ABS	=	Anti-Lock Brake System
ACIS	=	Acoustic Control Induction System
ADD	=	Automatic Disconnecting Differential
BA	=	Brake Assist
COMB.	=	Combination
DAC	=	Downhill Assist Control
DIFF.	=	Differential
DVD	=	Digital Versatile Disc
EC	=	Electrochromic
ECU	=	Electronic Control Unit
ESA	=	Electronic Spark Advance
ETCS-i	=	Electronic Throttle Control System-intelligent
EVAP	=	Evaporative Emission
INT	=	Intermittent
J/B	=	Junction Block
LH	=	Left-Hand
MPX	=	Multiplex
O/D	=	Overdrive
R/B	=	Relay Block
RH	=	Right-Hand
SFI	=	Sequential Multiport Fuel Injection
SPEC.	=	Specification
SRS	=	Supplemental Restraint System
SW	=	Switch
TEMP.	=	Temperature
TRAC	=	Traction Control
TVIP	=	TOYOTA Vehicle Intrusion Protection
VSC	=	Vehicle Skid Control
VSV	=	Vacuum Switching Valve
VVT	=	Variable Valve Timing
w/	=	With
w/o	=	Without

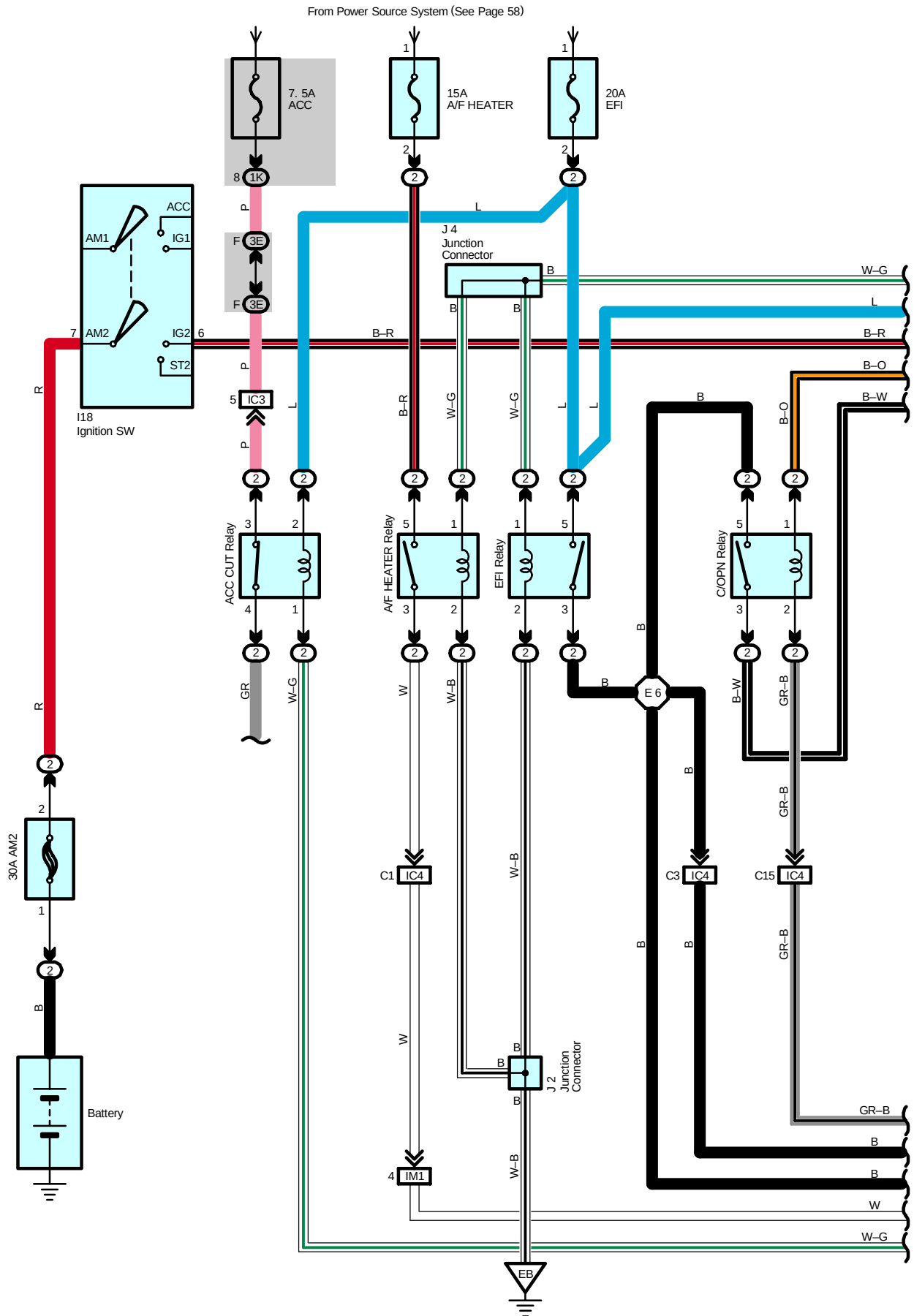
* The titles given inside the components are the names of the terminals (terminal codes) and are not treated as being abbreviations.

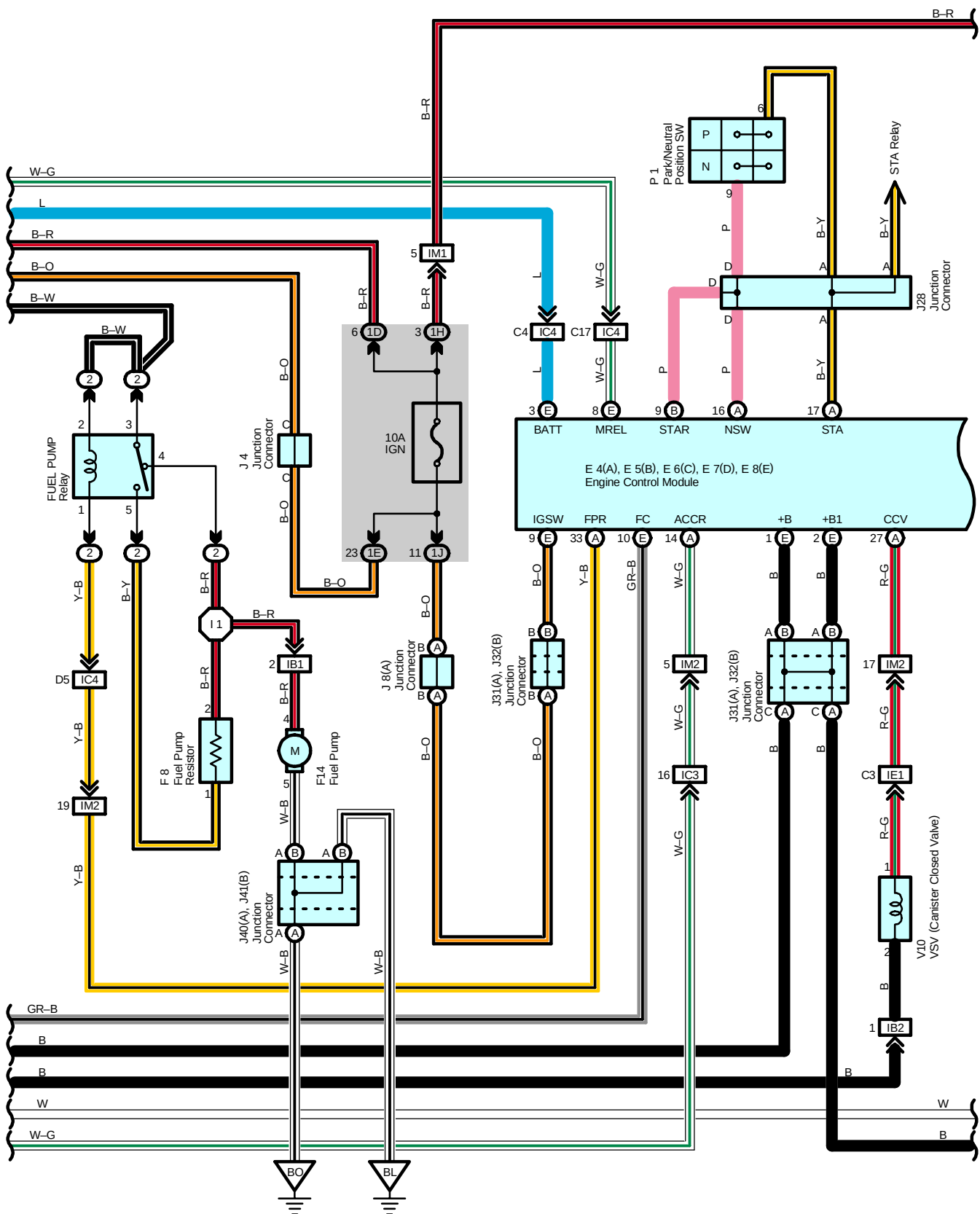
E GLOSSARY OF TERMS AND SYMBOLS

 BATTERY Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.	 GROUND The point at which wiring attaches to the Body, thereby providing a return path for an electrical circuit; without a ground, current cannot flow.
 CAPACITOR (Condenser) A small holding unit for temporary storage of electrical voltage.	HEADLIGHTS Current flow causes a headlight filament to heat up and emit light. A headlight may have either a single (1) filament or a double (2) filament 1. SINGLE FILAMENT  2. DOUBLE FILAMENT 
 CIGARETTE LIGHTER An electric resistance heating element.	
 CIRCUIT BREAKER Basically a reusable fuse, a circuit breaker will heat and open if too much current flows through it. Some units automatically reset when cool, others must be manually reset.	 HORN An electric device which sounds a loud audible signal.
 DIODE A semiconductor which allows current flow in only one direction.	 IGNITION COIL Converts low-voltage DC current into high-voltage ignition current for firing the spark plugs.
 DIODE, ZENER A diode which allows current flow in one direction but blocks reverse flow only up to a specific voltage. Above that potential, it passes the excess voltage. This acts as a simple voltage regulator.	 LIGHT Current flow through a filament causes the filament to heat up and emit light.
 PHOTODIODE The photodiode is a semiconductor which controls the current flow according to the amount of light.	 LED (LIGHT EMITTING DIODE) Upon current flow, these diodes emit light without producing the heat of a comparable light.
 DISTRIBUTOR, IIA Channels high-voltage current from the ignition coil to the individual spark plugs.	 METER, ANALOG Current flow activates a magnetic coil which causes a needle to move, thereby providing a relative display against a background calibration.
 FUSE A thin metal strip which burns through when too much current flows through it, thereby stopping current flow and protecting a circuit from damage.  FUSIBLE LINK A heavy-gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit. The numbers indicate the crosssection surface area of the wires.  (for Medium Current Fuse) (for High Current Fuse or Fusible Link)	 METER, DIGITAL Current flow activates one or many LED's, LCD's, or fluorescent displays, which provide a relative or digital display.
	 MOTOR A power unit which converts electrical energy into mechanical energy, especially rotary motion.

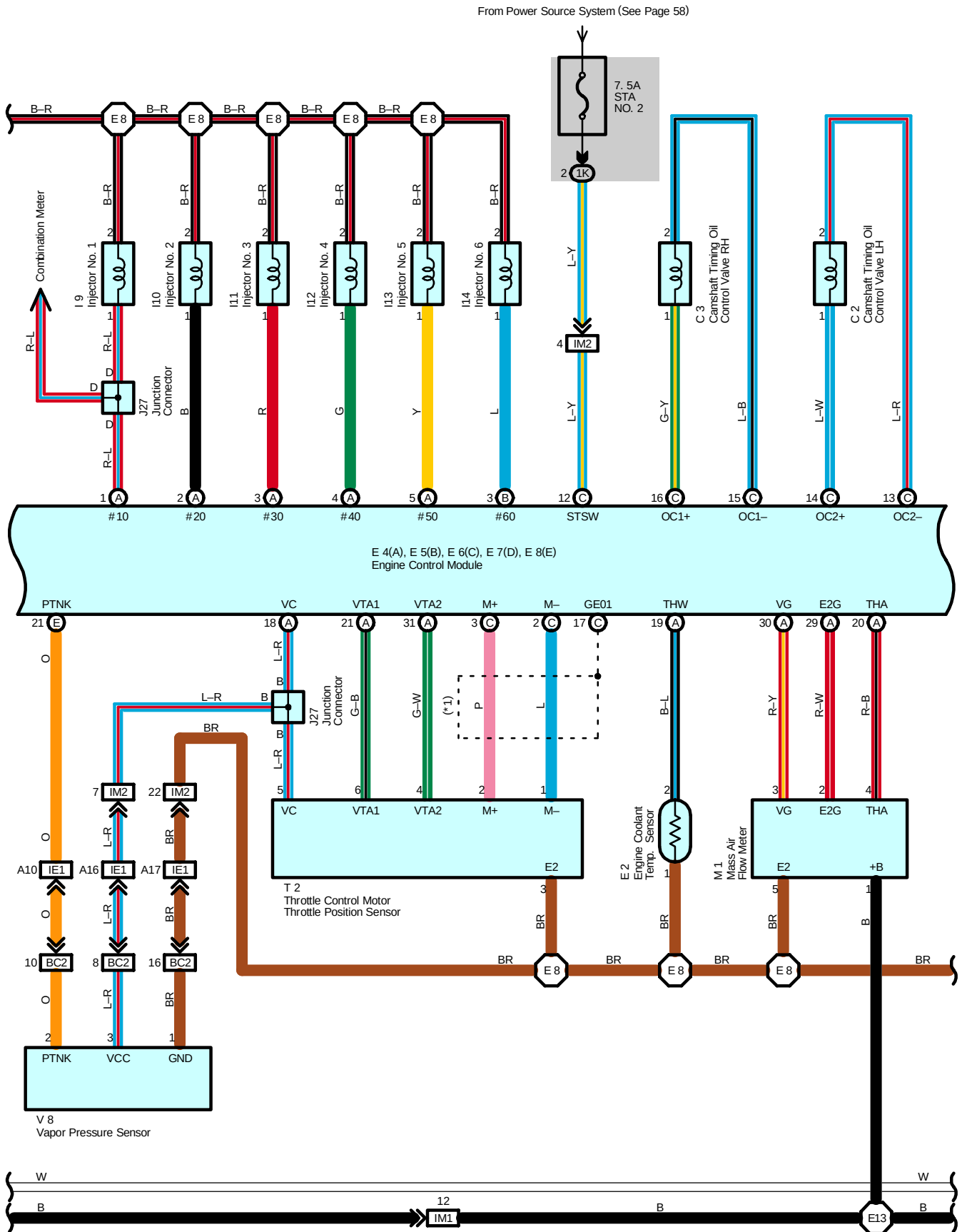
 RELAY Basically, an electrically operated switch which may be normally closed (1) or open (2). Current flow through a small coil creates a magnetic field which either opens or closes an attached switch.	 SPEAKER An electromechanical device which creates sound waves from current flow.
 RELAY, DOUBLE THROW A relay which passes current through one set of contacts or the other.	SWITCH, MANUAL Opens and closes circuits, thereby stopping (1) or allowing (2) current flow.  
 RESISTOR An electrical component with a fixed resistance, placed in a circuit to reduce voltage to a specific value.	SWITCH, DOUBLE THROW A switch which continuously passes current through one set of contacts or the other. 
 RESISTOR, TAPPED A resistor which supplies two or more different non adjustable resistance values.	SWITCH, IGNITION A key operated switch with several positions which allows various circuits, particularly the primary ignition circuit, to become operational. 
 RESISTOR, VARIABLE or RHEOSTAT A controllable resistor with a variable rate of resistance. Also called a potentiometer or rheostat.	SWITCH, WIPER PARK Automatically returns wipers to the stop position when the wiper switch is turned off. 
 SENSOR (Thermistor) A resistor which varies its resistance with temperature.	TRANSISTOR A solidstate device typically used as an electronic relay; stops or passes current depending on the voltage applied at "base". 
 SENSOR, SPEED Uses magnetic impulses to open and close a switch to create a signal for activation of other components. (Reed Switch Type)	WIRES Wires are always drawn as straight lines on wiring diagrams. Crossed wires (1) without a black dot at the junction are not joined; crossed wires (2) with a black dot or octagonal mark at the junction are spliced (joined) connections.  
 SHORT PIN Used to provide an unbroken connection within a junction block.	
 SOLENOID An electromagnetic coil which forms a magnetic field when current flows, to move a plunger, etc.	

Engine Control (1GR-FE)

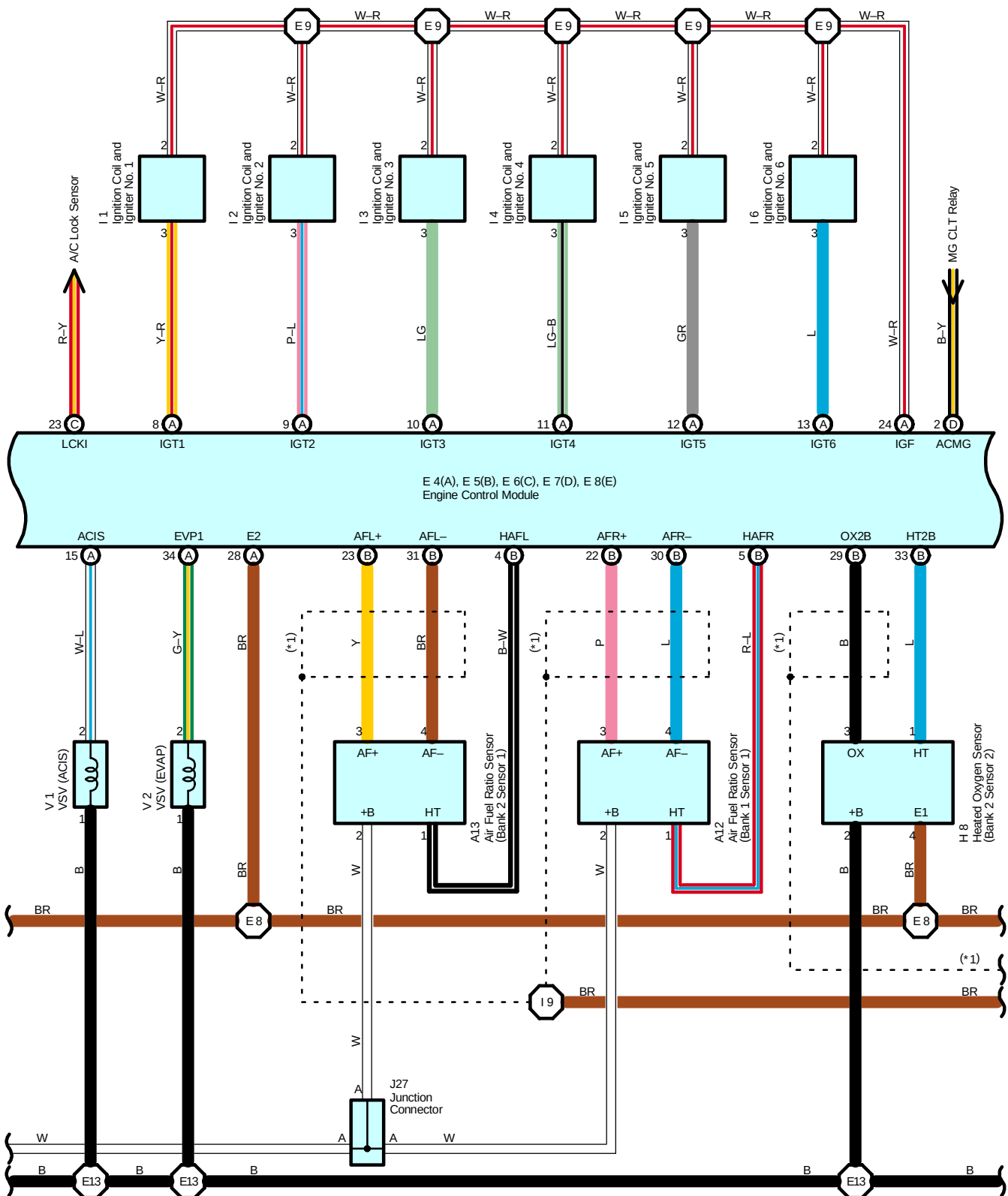




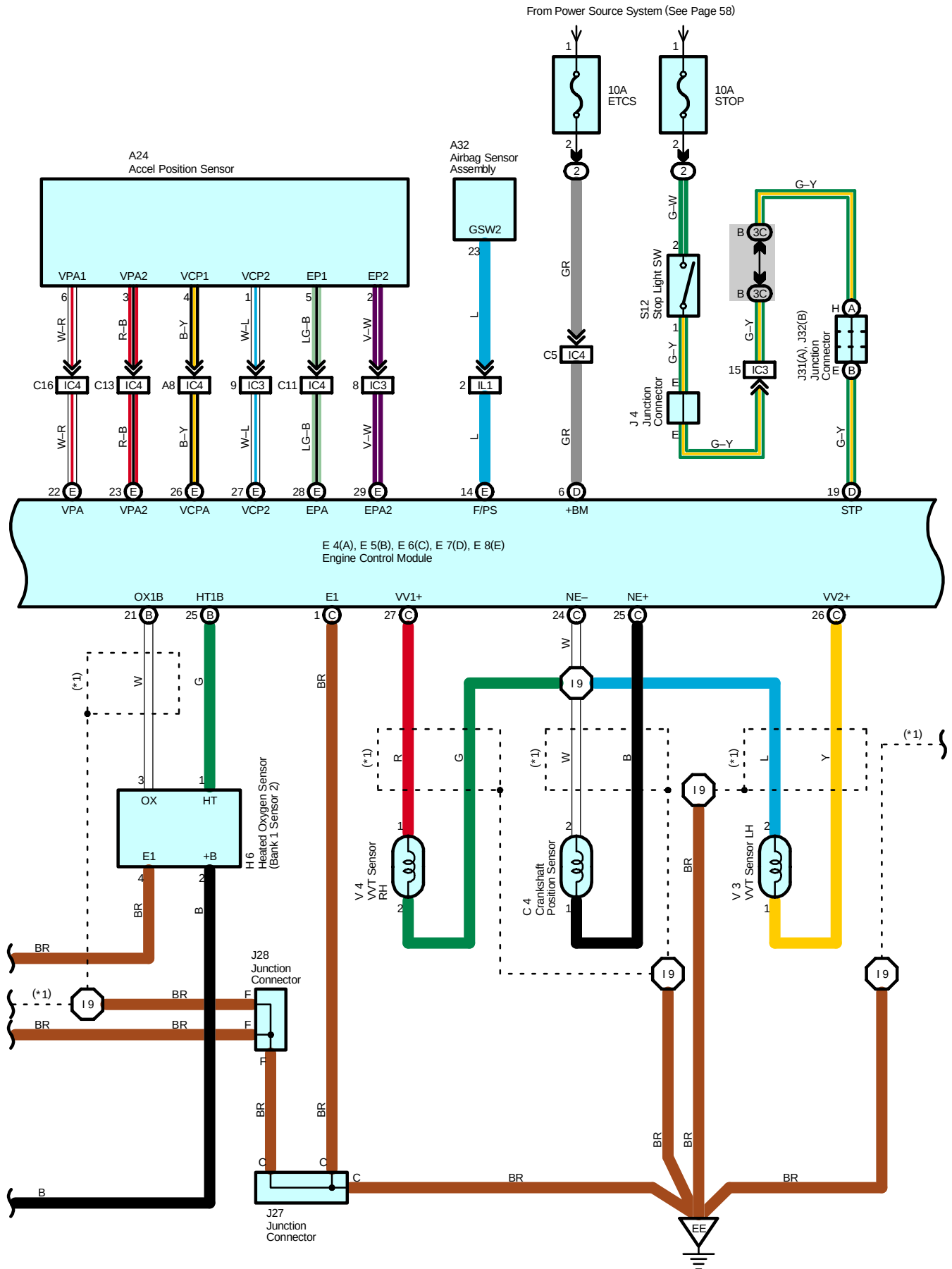
Engine Control (1GR-FE)



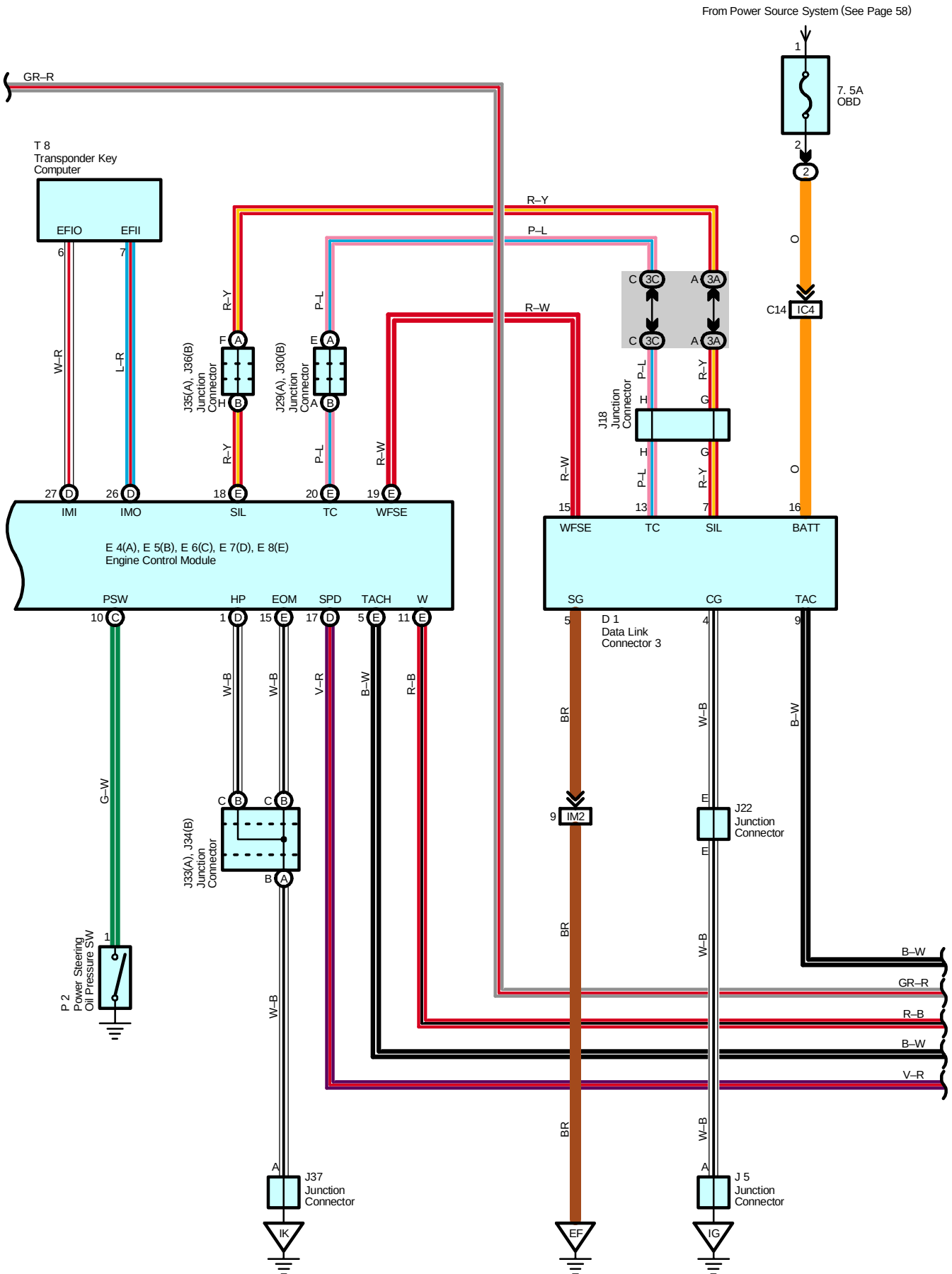
* 1 : Shielded



Engine Control (1GR-FE)



Engine Control (1GR-FE)



Engine Control (1GR-FE)

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A11	34 (1GR-FE)	I1	35 (1GR-FE)	J31	A 38
A12	34 (1GR-FE)	I2	35 (1GR-FE)	J32	B 38
A13	34 (1GR-FE)	I3	35 (1GR-FE)	J33	A 38
A16	A 36	I4	35 (1GR-FE)	J34	B 38
A17	B 36	I5	35 (1GR-FE)	J35	A 38
A24	36	I6	35 (1GR-FE)	J36	B 38
A32	36	I9	35 (1GR-FE)	J37	38
C2	34 (1GR-FE)	I10	35 (1GR-FE)	J40	A 40
C3	34 (1GR-FE)	I11	35 (1GR-FE)	J41	B 40
C4	34 (1GR-FE)	I12	35 (1GR-FE)	K1	35 (1GR-FE)
C8	A 37	I13	35 (1GR-FE)	K2	35 (1GR-FE)
C9	B 37	I14	35 (1GR-FE)	M1	35 (1GR-FE)
C10	C 37	I18	37	P1	35 (1GR-FE)
D1	37	J2	35 (1GR-FE)	P2	35 (1GR-FE)
E2	34 (1GR-FE)	J4	38	S8	B 39
E4	A 37	J5	38	S9	C 39
E5	B 37	J7	38	S12	39
E6	C 37	J8	A 38	T2	35 (1GR-FE)
E7	D 37	J9	B 38	T8	39
E8	E 37	J16	38	V1	35 (1GR-FE)
F8	34 (1GR-FE)	J18	38	V2	35 (1GR-FE)
F9	A 37	J22	38	V3	35 (1GR-FE)
F10	B 37	J27	38	V4	35 (1GR-FE)
F14	40	J28	38	V8	41
H6	34 (1GR-FE)	J29	A 38	V10	41
H8	34 (1GR-FE)	J30	B 38		

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	46 (1GR-FE)	Engine Wire and Differential Wire (Near the Front Differential)
ED1	46 (1GR-FE)	Engine Wire and Sensor Wire (Rear Side of Right Bank Cylinder Block)
IB1	48	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IB2		
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IK1	50	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IL1	50	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
BC2	54	Frame Wire and Floor No.2 Wire (Under the Rear LH Seat)

 : Ground Points

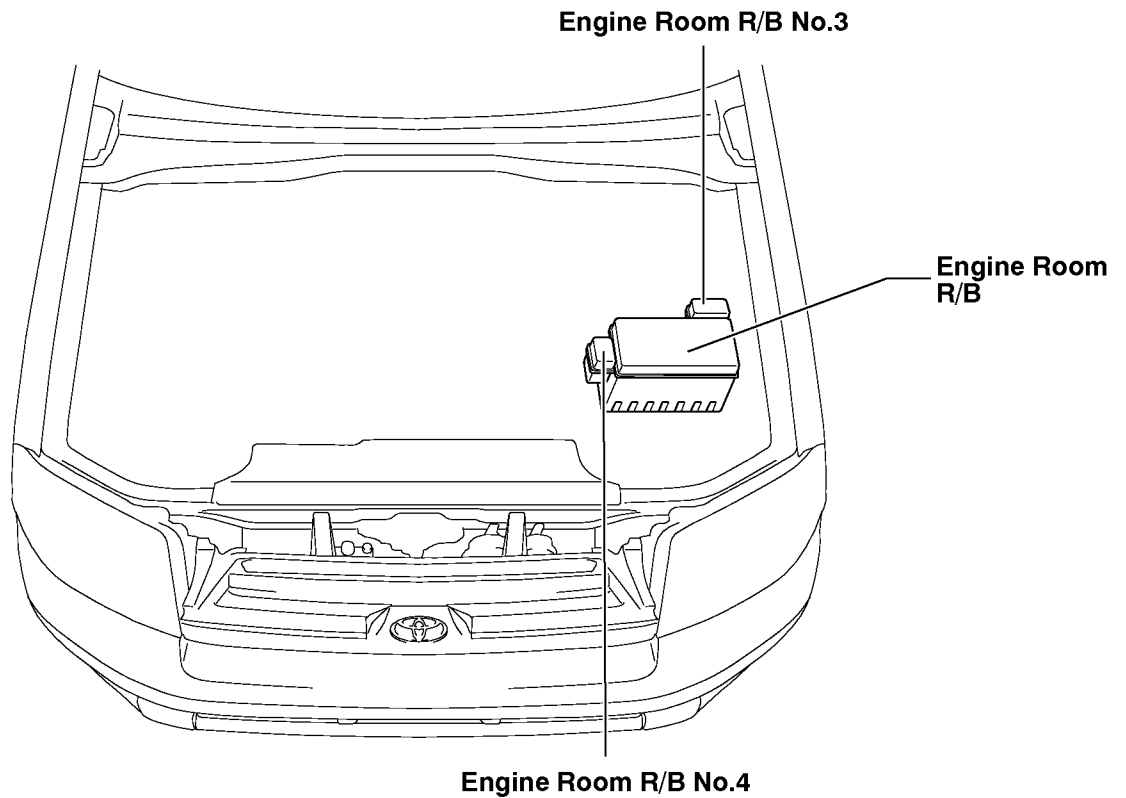
Code	See Page	Ground Points Location
EB	46 (1GR-FE)	Front Left Fender
EE	46 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	46 (1GR-FE)	Rear Side of Left Bank Cylinder Block
IG	48	Left Kick Panel
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

 : Splice Points

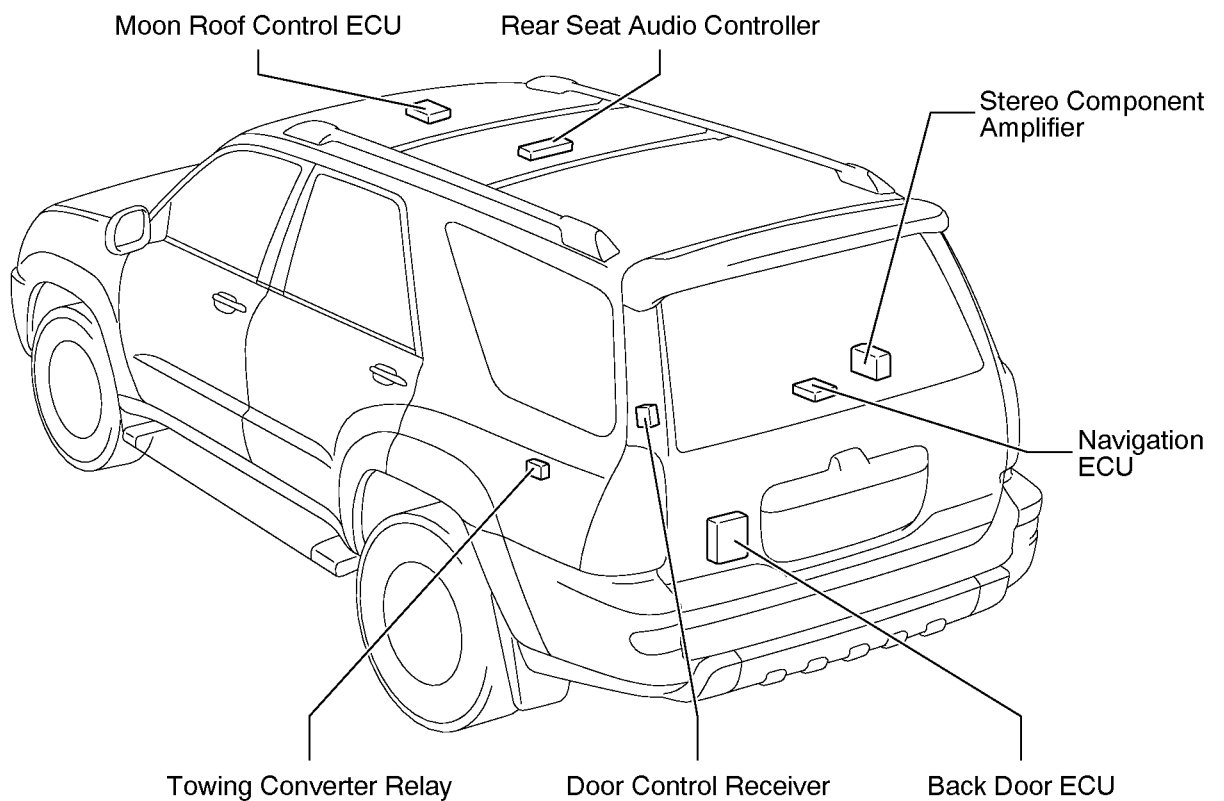
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E6	46 (1GR-FE)	Engine Room Main Wire	E11	46 (1GR-FE)	Sensor Wire
E8	46 (1GR-FE)	Engine Wire	E13	46 (1GR-FE)	Engine Wire
E9			I1	50	Engine Room Main Wire
E10			I9	50	Engine Wire

F RELAY LOCATIONS

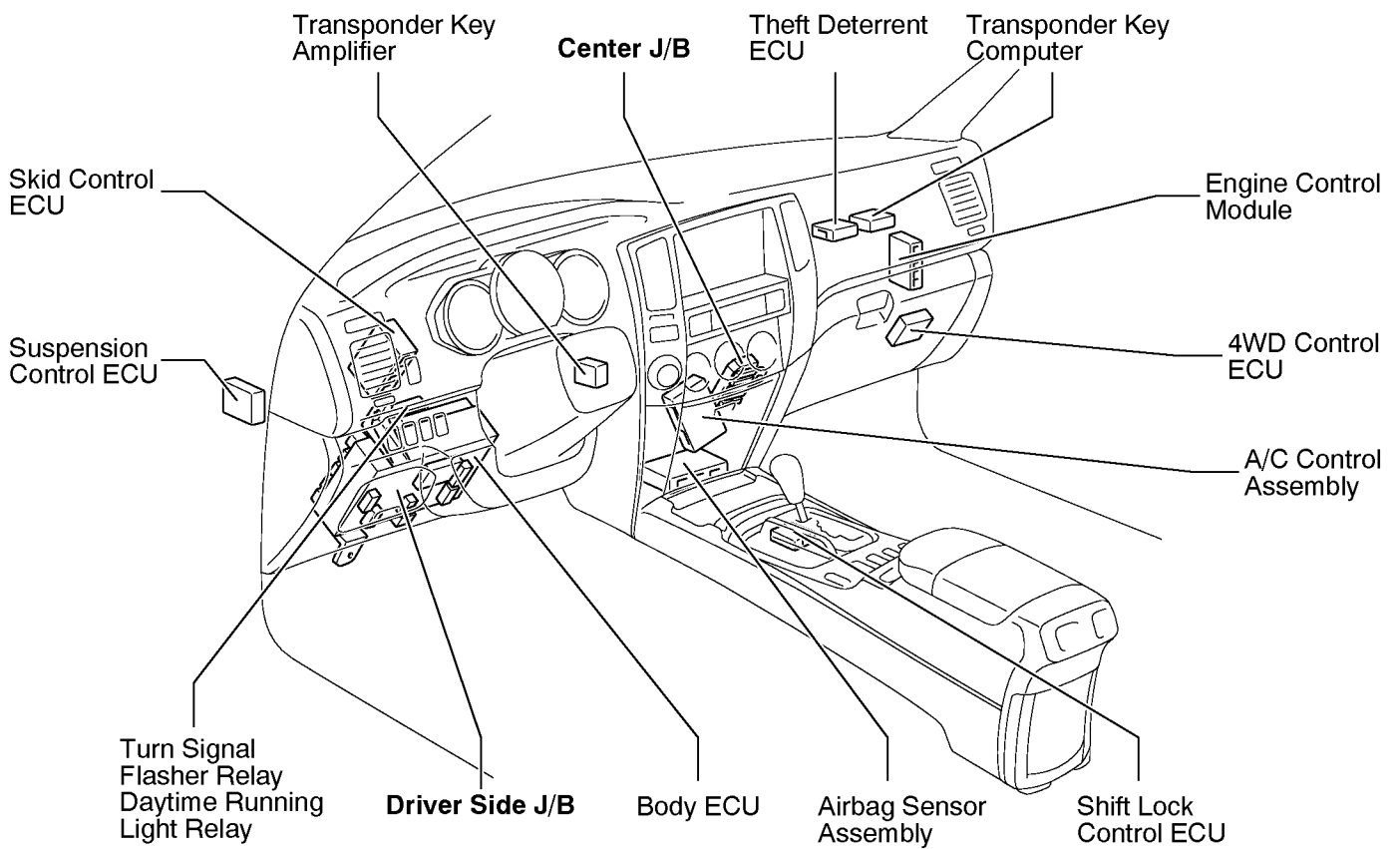
[Engine Compartment]



[Body]



[Instrument Panel]

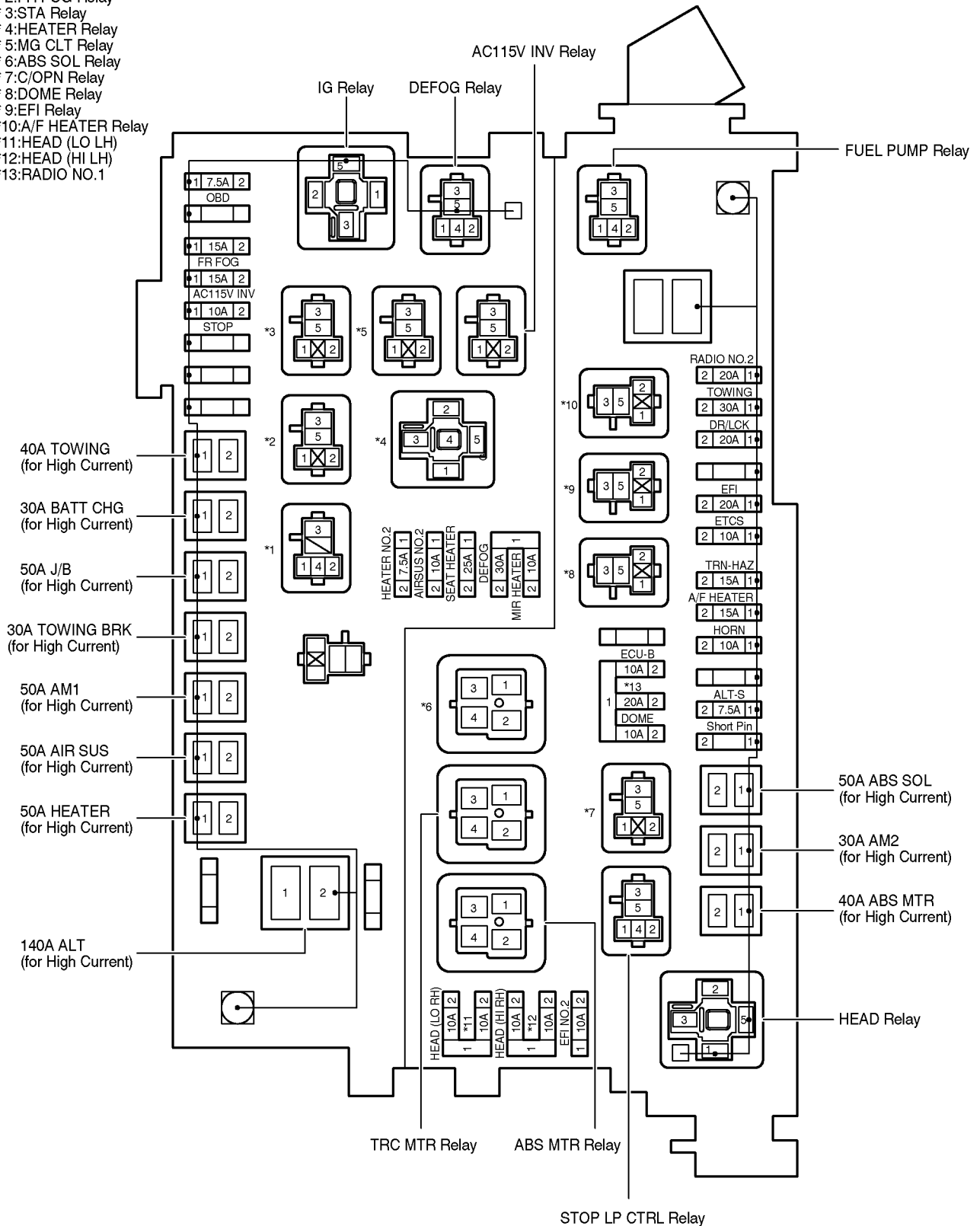


F RELAY LOCATIONS

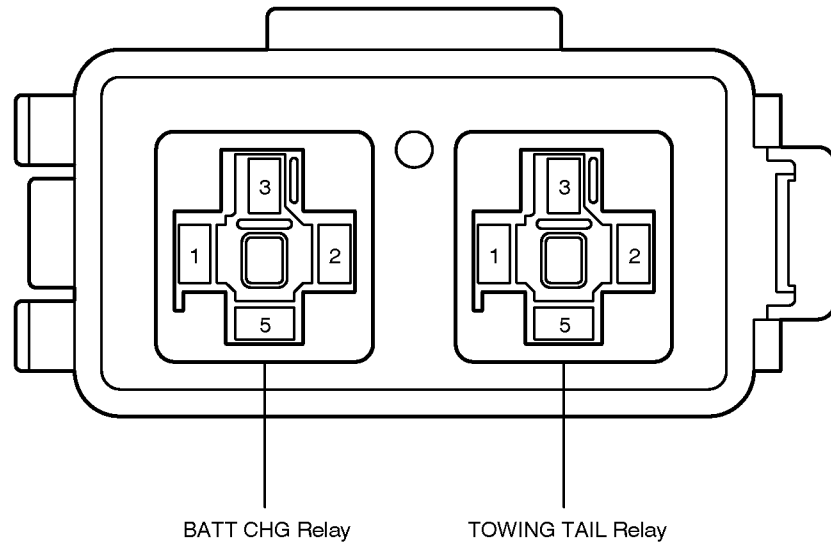
② : Engine Room R/B

Engine Compartment Left (See Page 20)

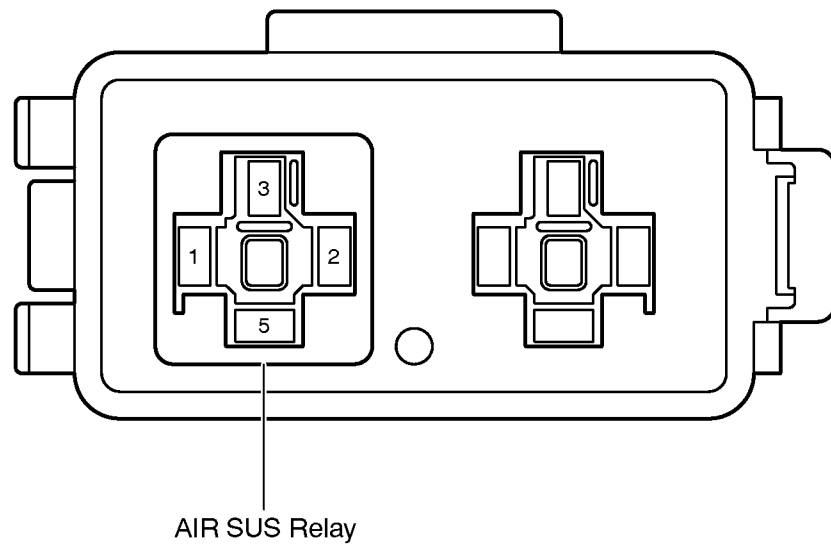
- *1:ACC CUT Relay
- *2:FR FOG Relay
- *3:STA Relay
- *4:HEATER Relay
- *5:MG CLT Relay
- *6:ABS SOL Relay
- *7:C/OPN Relay
- *8:DOME Relay
- *9:EFI Relay
- *10:A/F HEATER Relay
- *11:HEAD (LO LH)
- *12:HEAD (HI LH)
- *13:RADIO NO.1



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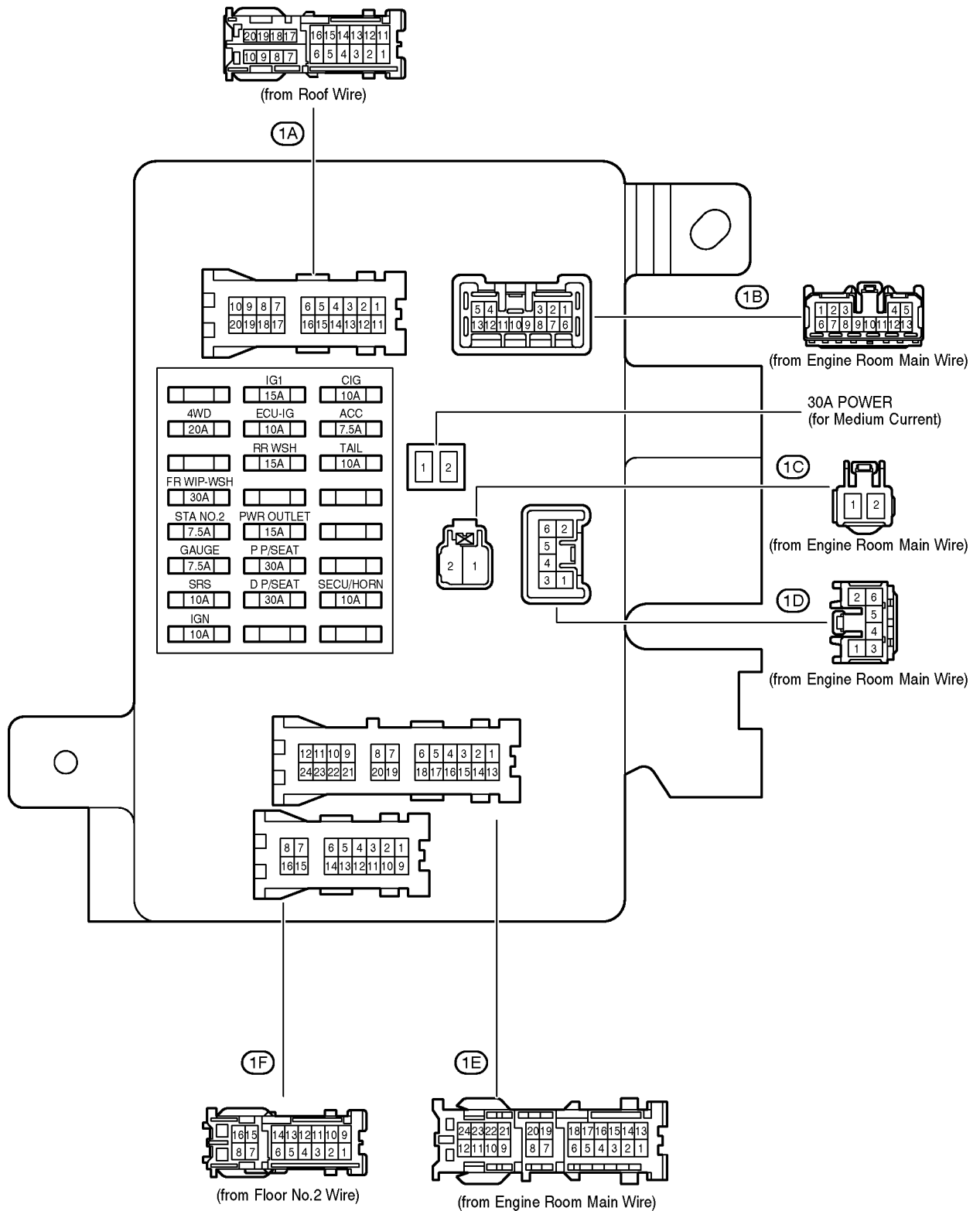
④ : Engine Room R/B No.4	Engine Compartment Left (See Page 20)
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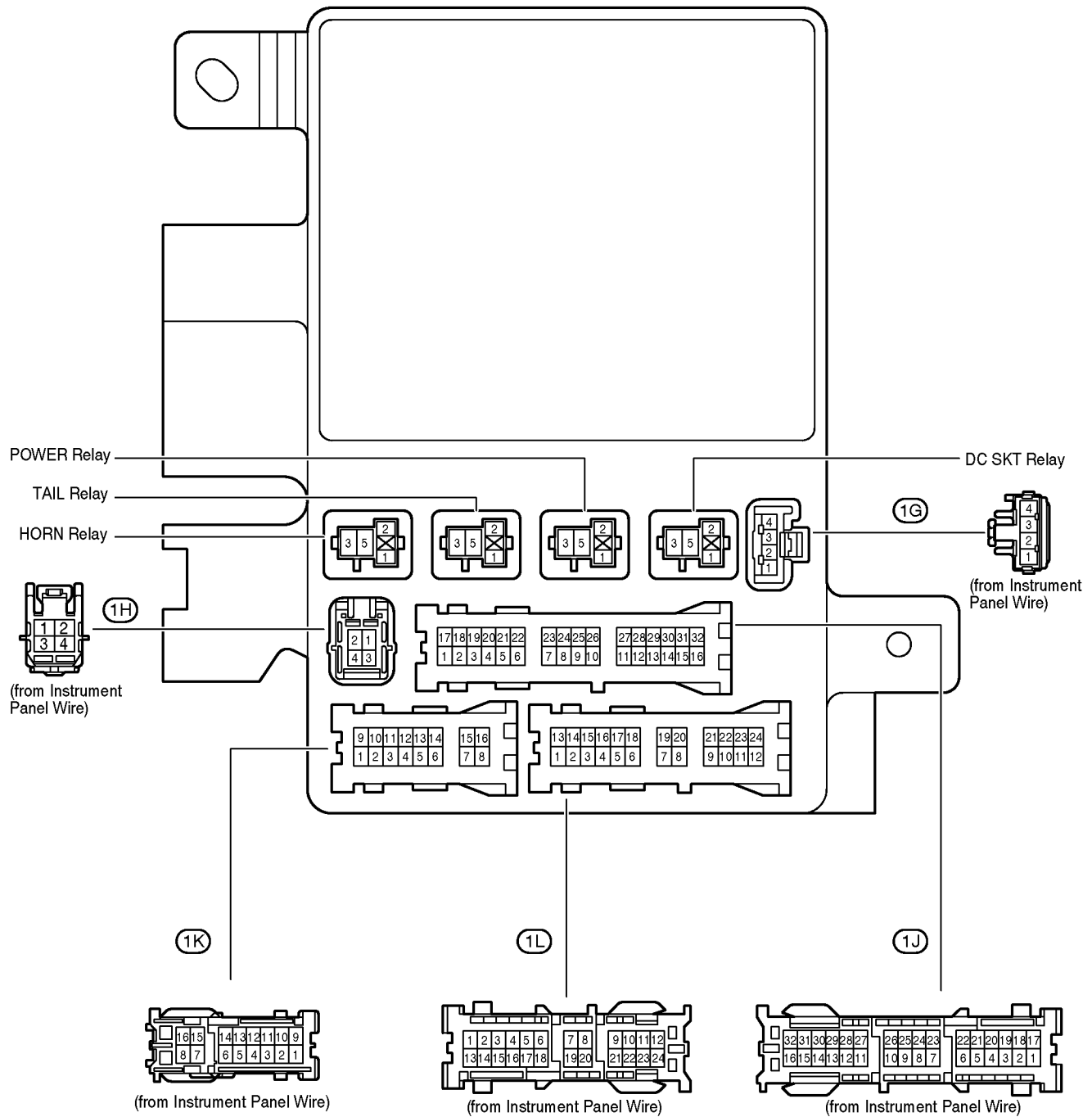


F RELAY LOCATIONS

 : Driver Side J/B

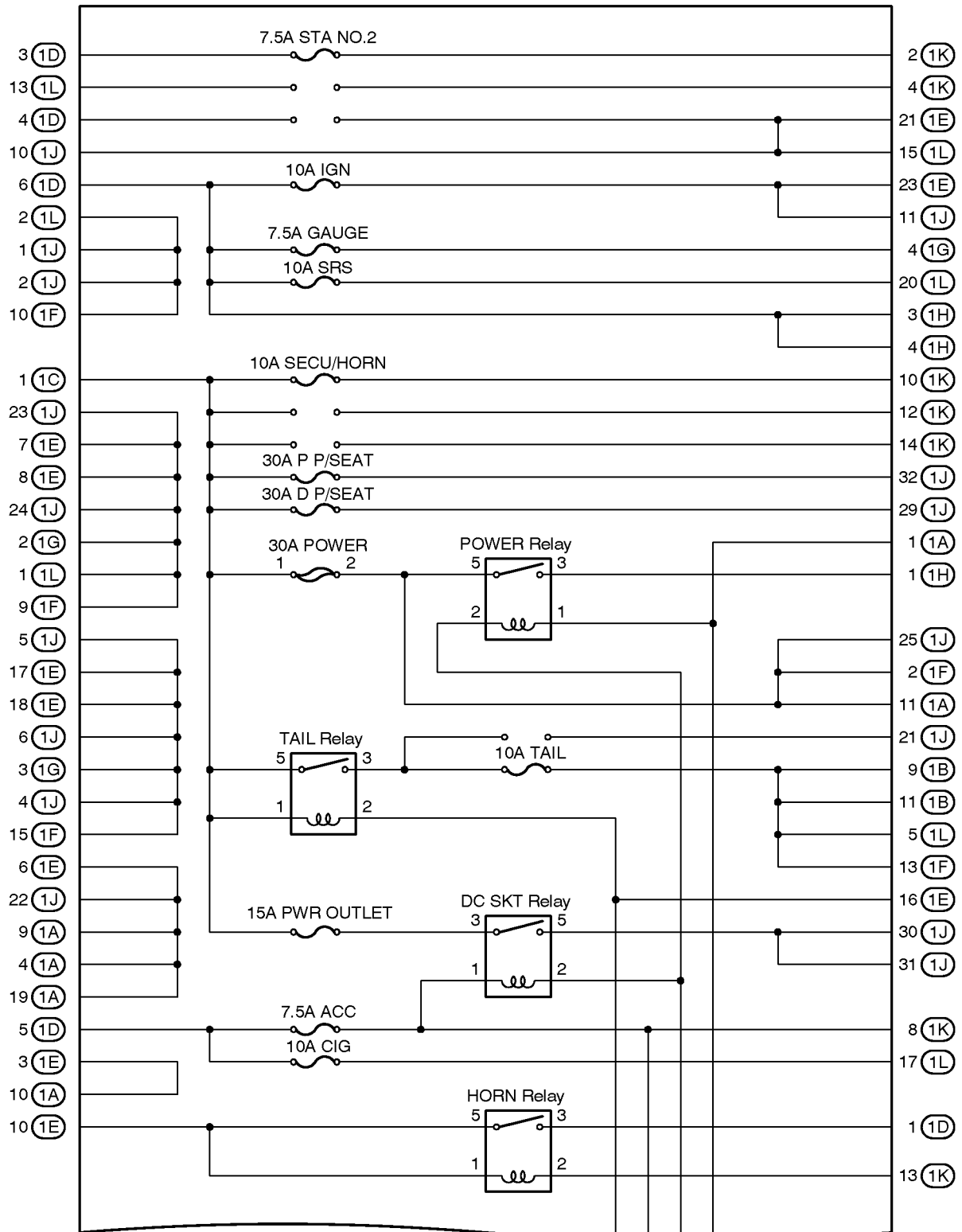
Lower Finish Panel (See Page 21)



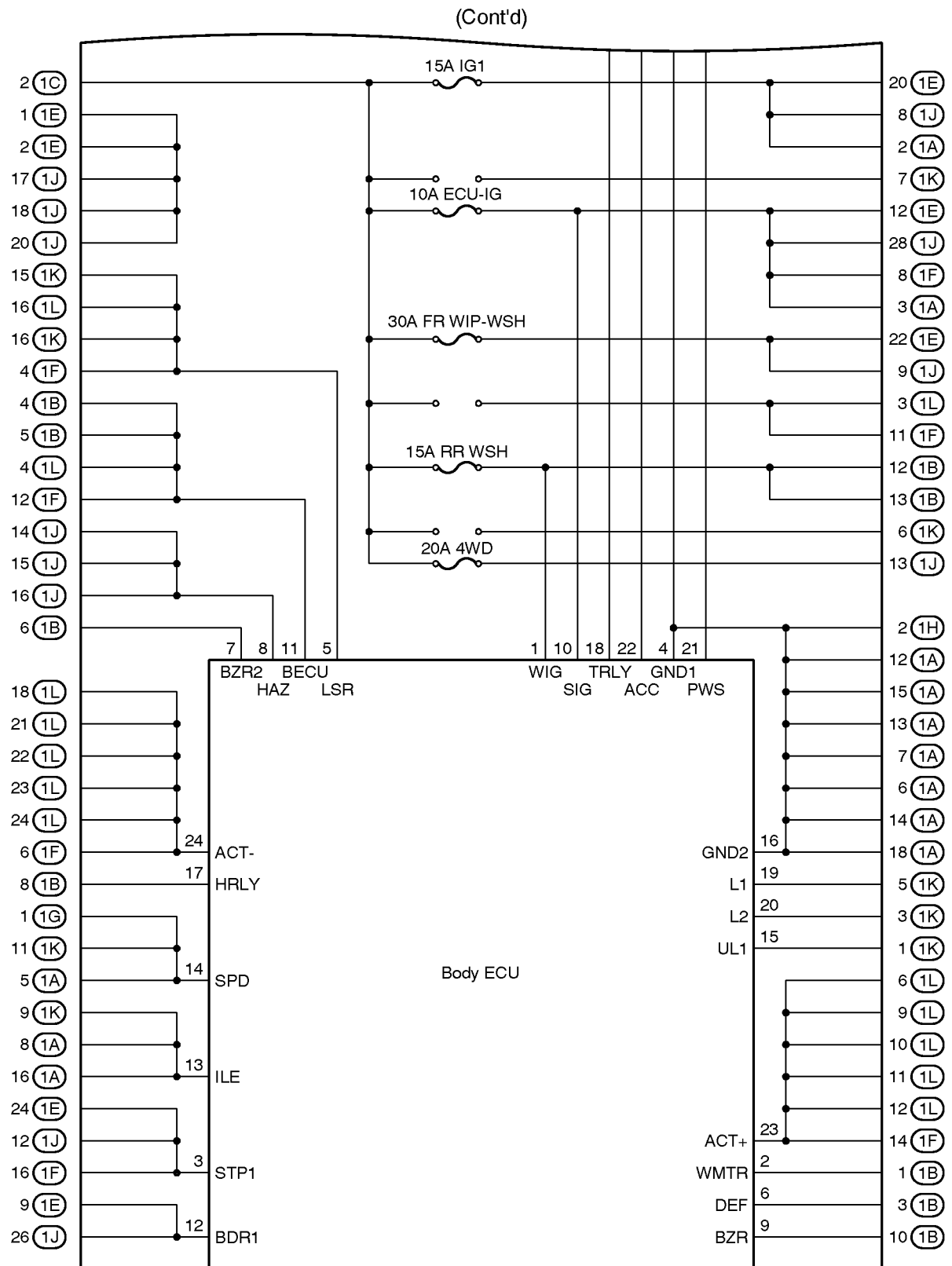


F RELAY LOCATIONS

[Driver Side J/B Inner Circuit]



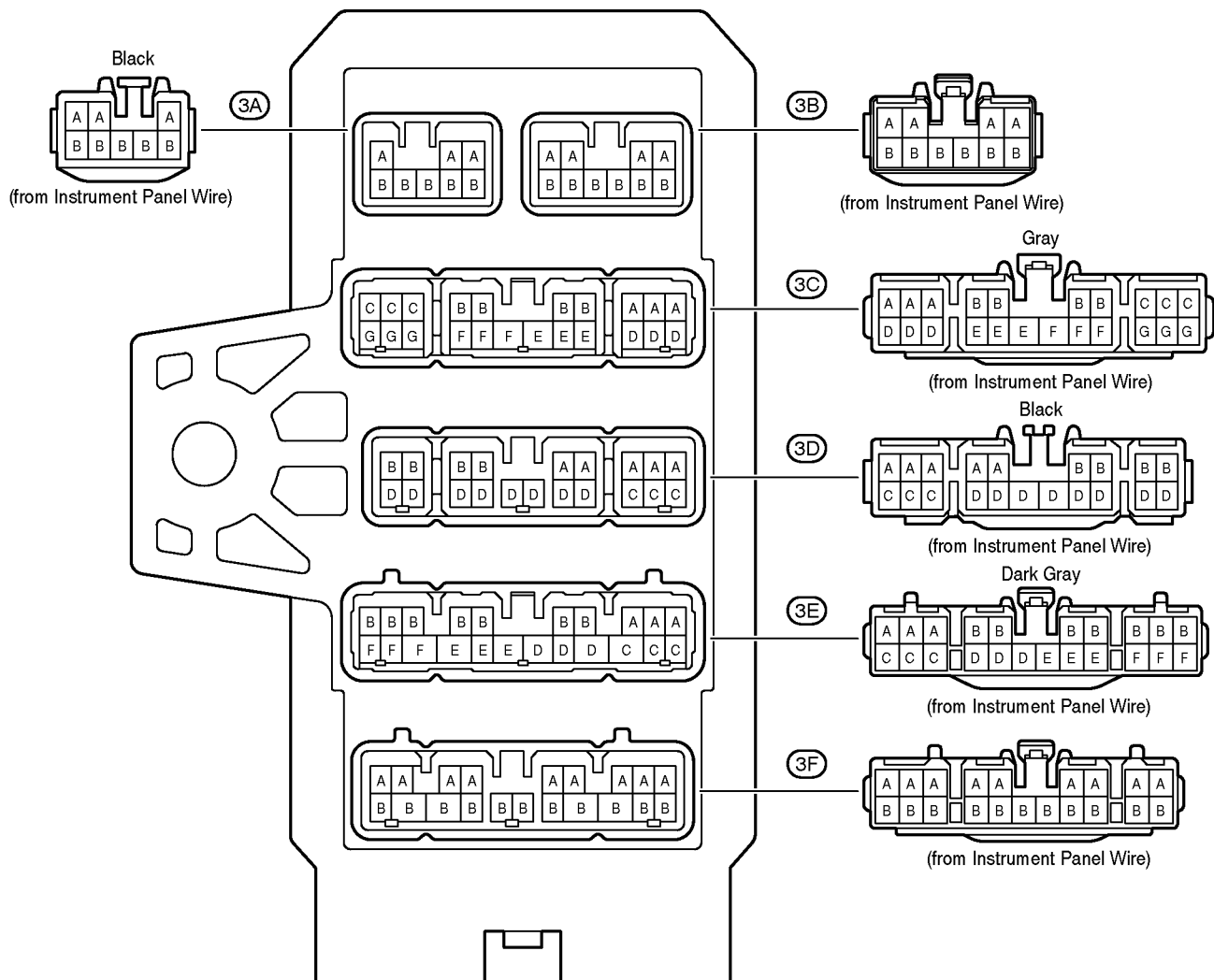
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F RELAY LOCATIONS

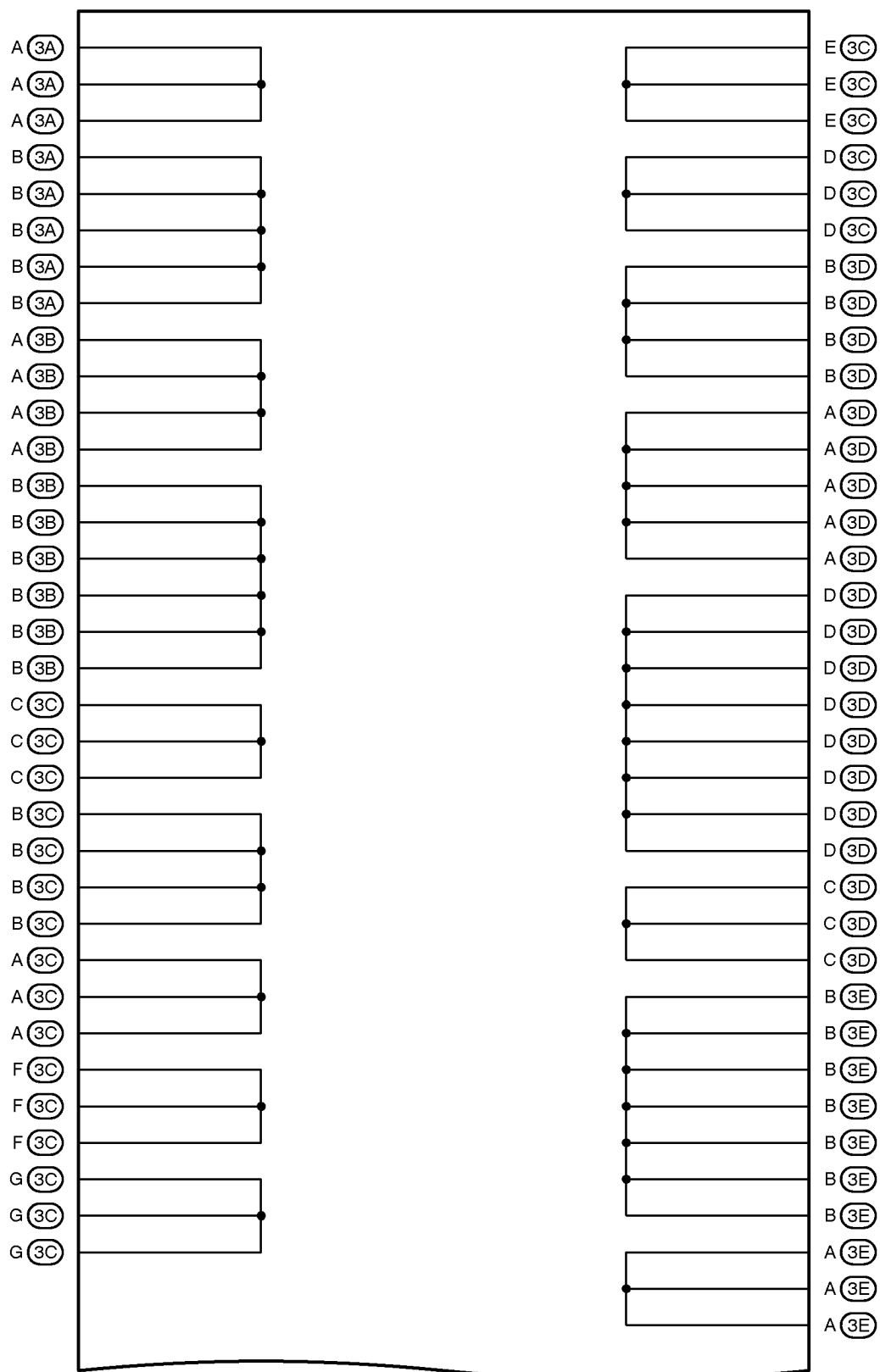
○ : Center J/B

Instrument Panel Brace RH (See Page 21)



F RELAY LOCATIONS

[Center J/B Inner Circuit]



(Cont. Next Page)

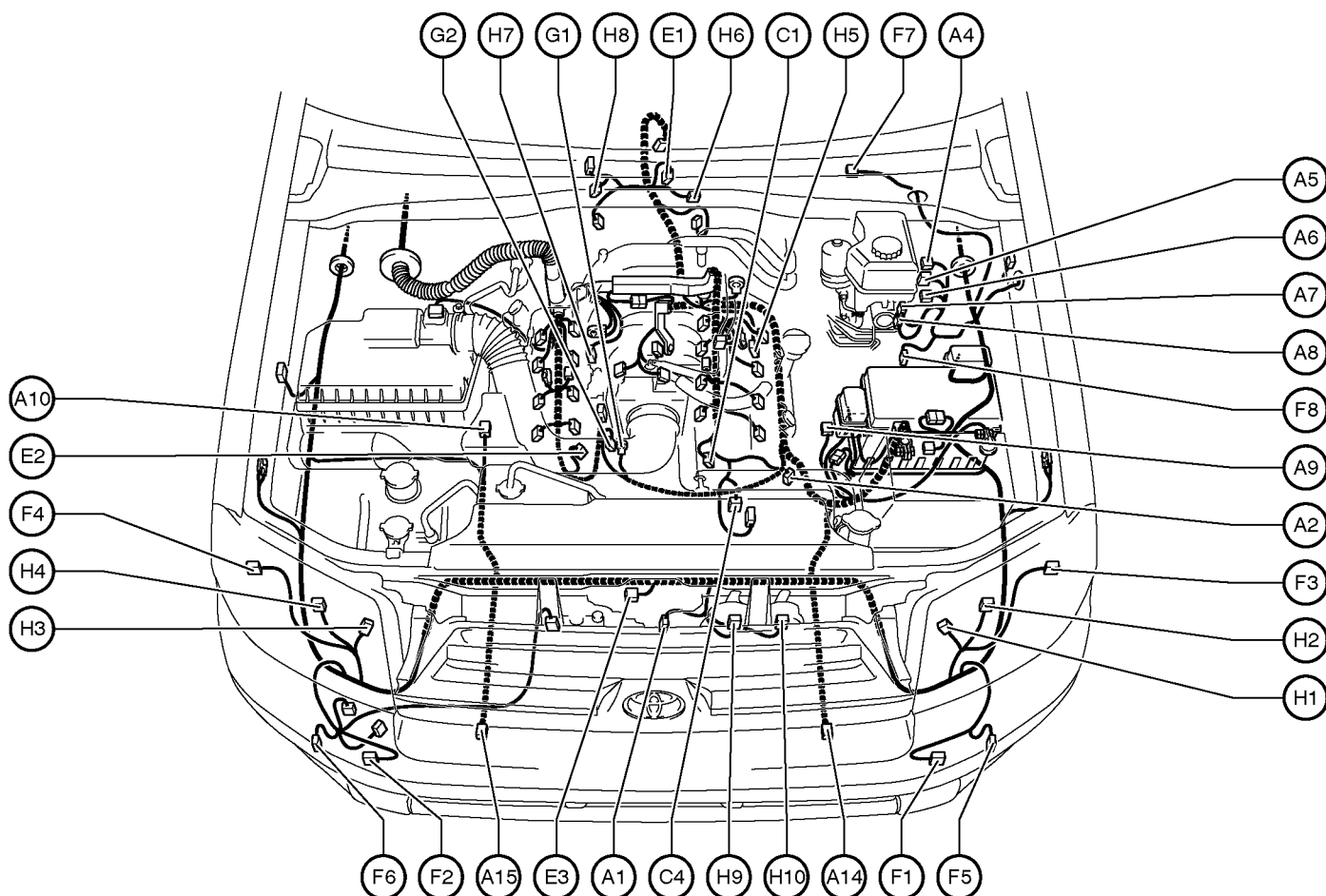
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F (3E)	
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F (3E)	
E (3E)	
E (3E)	•
E (3E)	
D (3E)	
D (3E)	•
D (3E)	
C (3E)	
C (3E)	•
C (3E)	
A (3F)	
A (3F)	•
A (3F)	•
A (3F)	•
A (3F)	•
A (3F)	•
A (3F)	•
A (3F)	•
A (3F)	•
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B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

G ELECTRICAL WIRING ROUTING

Position of Parts in Engine Compartment

[2UZ-FE]



A 1 A/C Ambient Temp. Sensor

A 2 A/C Lock Sensor
A/C Magnetic Clutch

A 4 ABS & BA & TRAC & VSC Actuator

A 5 ABS & BA & TRAC & VSC Actuator

A 6 ABS & BA & TRAC & VSC Actuator

A 7 ABS & BA & TRAC & VSC Actuator

A 8 ABS & BA & TRAC & VSC Actuator

A 9 ABS Speed Sensor Front LH

A10 ABS Speed Sensor Front RH

A14 Airbag Sensor Front LH

A15 Airbag Sensor Front RH

C 1 Camshaft Position Sensor

C 4 Crankshaft Position Sensor

E 1 Electronically Controlled Transmission Solenoid

E 2 Engine Coolant Temp. Sensor

E 3 Engine Hood Courtesy SW

F 1 Front Fog Light LH

F 2 Front Fog Light RH

F 3 Front Parking Light LH

F 4 Front Parking Light RH

F 5 Front Turn Signal Light LH

F 6 Front Turn Signal Light RH

F 7 Front Wiper Motor

F 8 Fuel Pump Resistor

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 5 Heated Oxygen Sensor (Bank 1 Sensor 1)

H 6 Heated Oxygen Sensor (Bank 1 Sensor 2)

H 7 Heated Oxygen Sensor (Bank 2 Sensor 1)

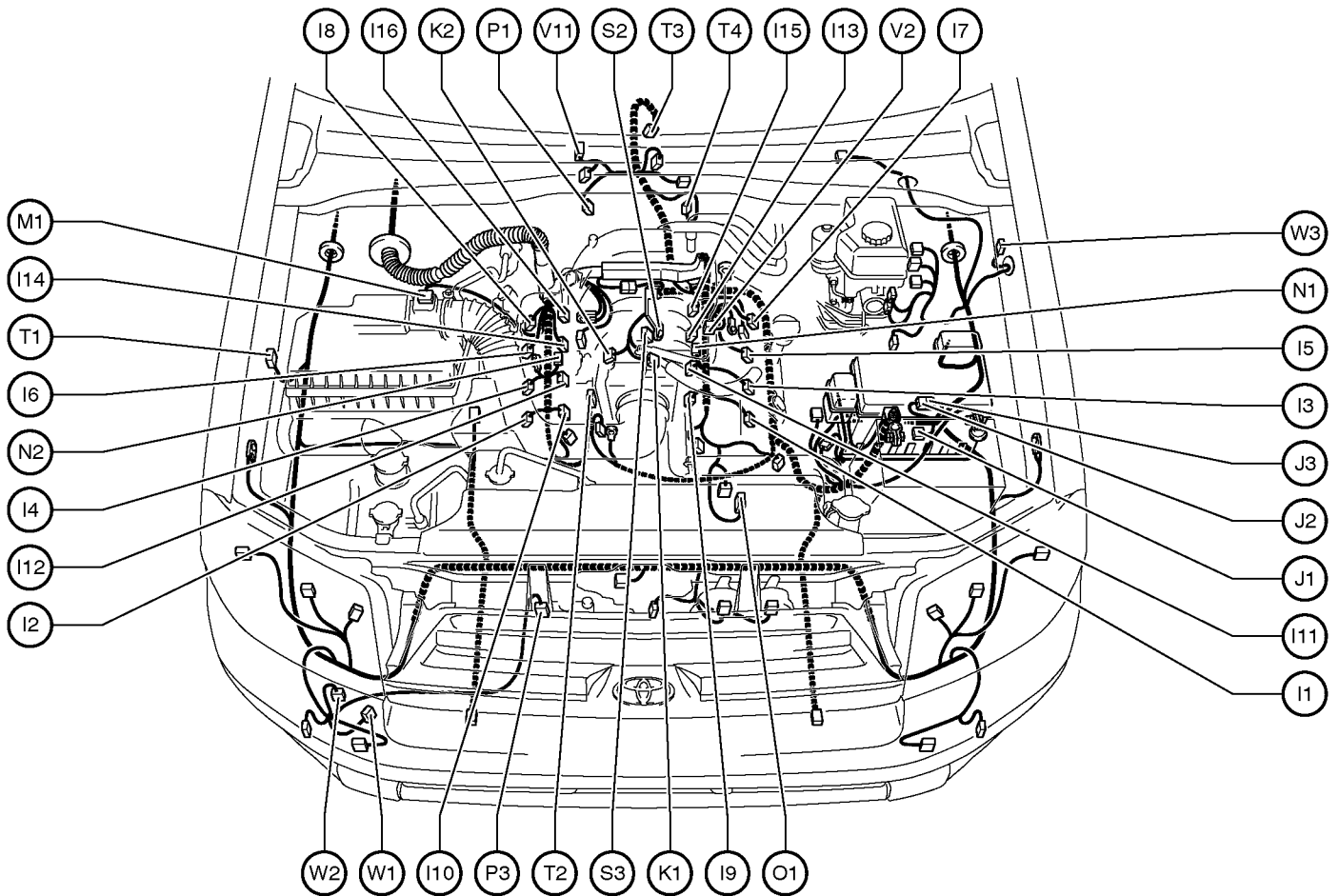
H 8 Heated Oxygen Sensor (Bank 2 Sensor 2)

H 9 Horn (High)

H10 Horn (Low)

Position of Parts in Engine Compartment

[2UZ-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 Ignition Coil and Igniter No.7
- I 8 Ignition Coil and Igniter No.8
- I 9 Injector No.1
- I 10 Injector No.2
- I 11 Injector No.3
- I 12 Injector No.4
- I 13 Injector No.5
- I 14 Injector No.6
- I 15 Injector No.7
- I 16 Injector No.8

- J 1 Junction Connector
- J 2 Junction Connector
- J 3 Junction Connector

- K 1 Knock Sensor 1
- K 2 Knock Sensor 2

- M 1 Mass Air Flow Meter

- N 1 Noise Filter (Ignition No.1)
- N 2 Noise Filter (Ignition No.2)

- O 1 Oil Pressure SW

- P 1 Park/Neutral Position SW
- P 3 Pressure SW

- S 2 Starter
- S 3 Starter

- T 1 Theft Deterrent Horn
- T 2 Throttle Control Motor
Throttle Position Sensor
- T 3 Transfer Shift Actuator
- T 4 Turbine Speed Sensor

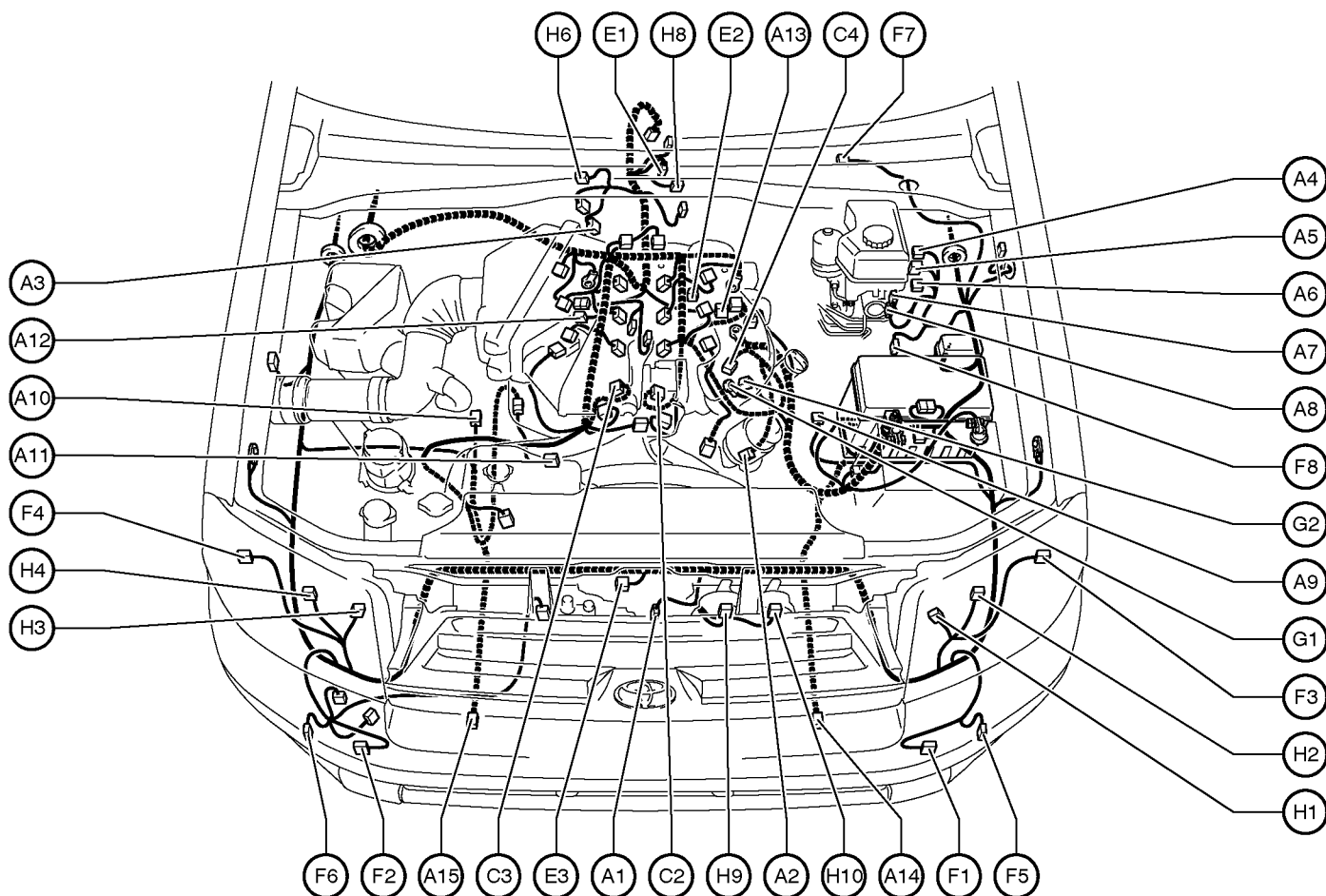
- V 2 VSV (EVAP)
- V 11 Vehicle Speed Sensor
(Electronically Controlled Transmission)

- W 1 Washer Level Sensor
- W 2 Washer Motor
- W 3 Wireless Door Lock Buzzer

G ELECTRICAL WIRING ROUTING

Position of Parts in Engine Compartment

[1GR-FE]



A 1 A/C Ambient Temp. Sensor

A 2 A/C Lock Sensor
A/C Magnetic Clutch

A 3 A/T Fluid Temp. Sensor

A 4 ABS & BA & TRAC & VSC Actuator

A 5 ABS & BA & TRAC & VSC Actuator

A 6 ABS & BA & TRAC & VSC Actuator

A 7 ABS & BA & TRAC & VSC Actuator

A 8 ABS & BA & TRAC & VSC Actuator

A 9 ABS Speed Sensor Front LH

A10 ABS Speed Sensor Front RH

A11 ADD Actuator

A12 Air Fuel Ratio Sensor (Bank 1 Sensor 1)

A13 Air Fuel Ratio Sensor (Bank 2 Sensor 1)

A14 Airbag Sensor Front LH

A15 Airbag Sensor Front RH

C 2 Camshaft Timing Oil Control Valve LH

C 3 Camshaft Timing Oil Control Valve RH

C 4 Crankshaft Position Sensor

E 1 Electronically Controlled Transmission Solenoid

E 2 Engine Coolant Temp. Sensor

E 3 Engine Hood Courtesy SW

F 1 Front Fog Light LH

F 2 Front Fog Light RH

F 3 Front Parking Light LH

F 4 Front Parking Light RH

F 5 Front Turn Signal Light LH

F 6 Front Turn Signal Light RH

F 7 Front Wiper Motor

F 8 Fuel Pump Resistor

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)

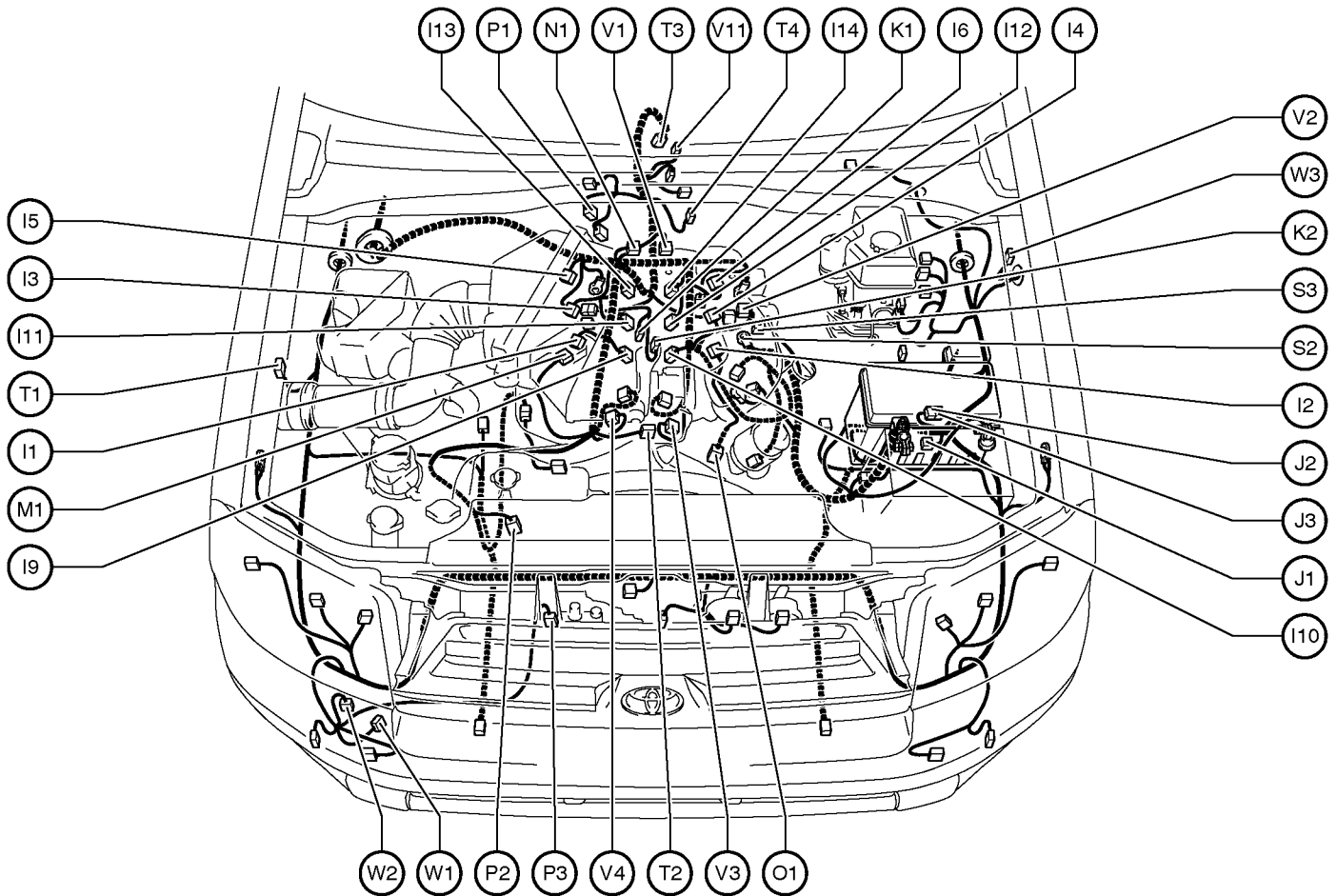
H 8 Heated Oxygen Sensor (Bank 2 Sensor 2)

H 9 Horn (High)

H10 Horn (Low)

Position of Parts in Engine Compartment

[1GR-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 9 Injector No.1
- I 10 Injector No.2
- I 11 Injector No.3
- I 12 Injector No.4
- I 13 Injector No.5
- I 14 Injector No.6

- J 1 Junction Connector
- J 2 Junction Connector
- J 3 Junction Connector

- K 1 Knock Sensor 1
- K 2 Knock Sensor 2

- M 1 Mass Air Flow Meter

- N 1 Noise Filter (Ignition No.1)

- O 1 Oil Pressure SW

- P 1 Park/Neutral Position SW
- P 2 Power Steering Oil Pressure SW
- P 3 Pressure SW

- S 2 Starter
- S 3 Starter

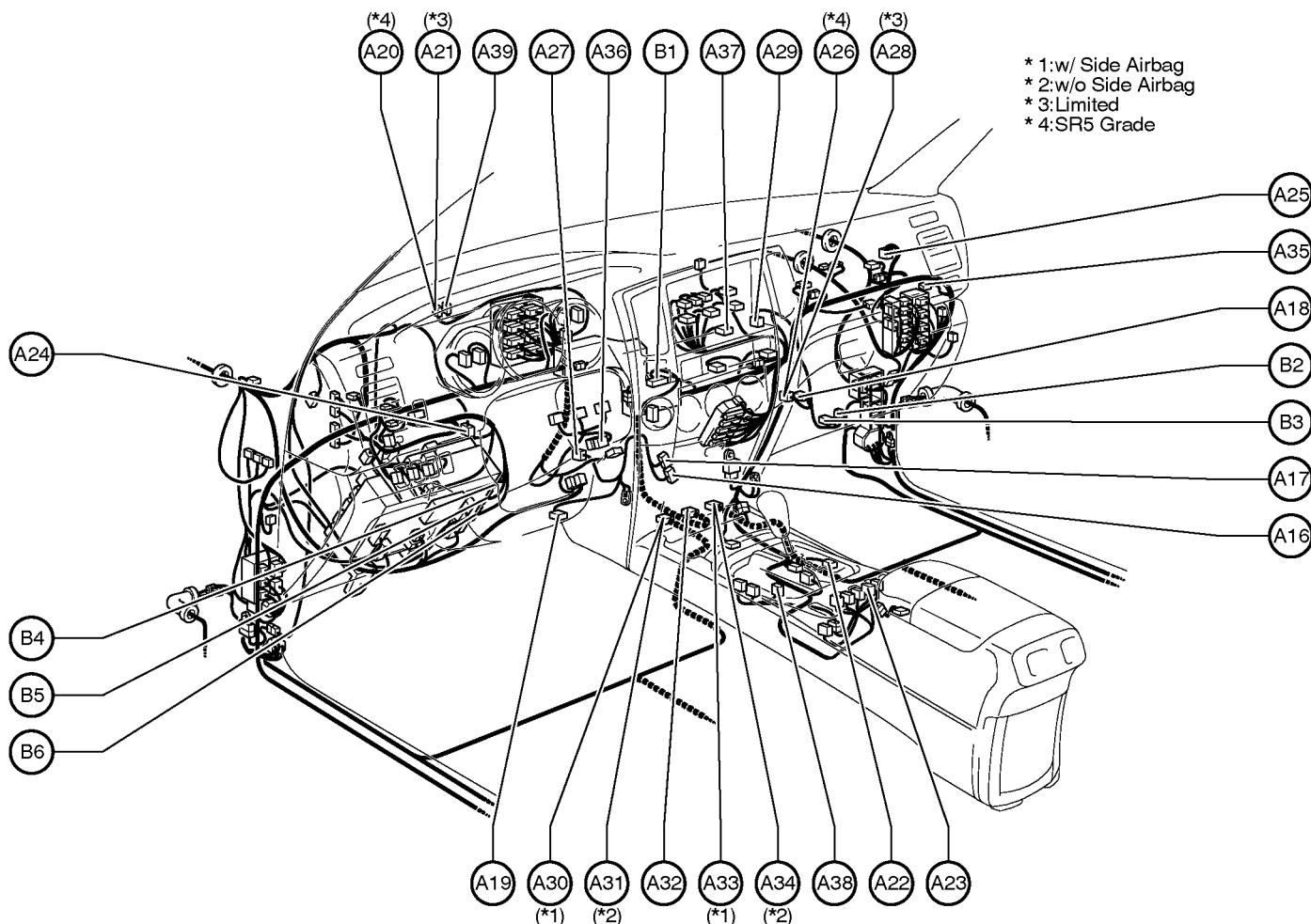
- T 1 Theft Deterrent Horn
- T 2 Throttle Control Motor
Throttle Position Sensor
- T 3 Transfer Shift Actuator
- T 4 Turbine Speed Sensor

- V 1 VSV (ACIS)
- V 2 VSV (EVAP)
- V 3 VVT Sensor LH
- V 4 VVT Sensor RH
- V 11 Vehicle Speed Sensor
(Electronically Controlled Transmission)

- W 1 Washer Level Sensor
- W 2 Washer Motor
- W 3 Wireless Door Lock Buzzer

G ELECTRICAL WIRING ROUTING

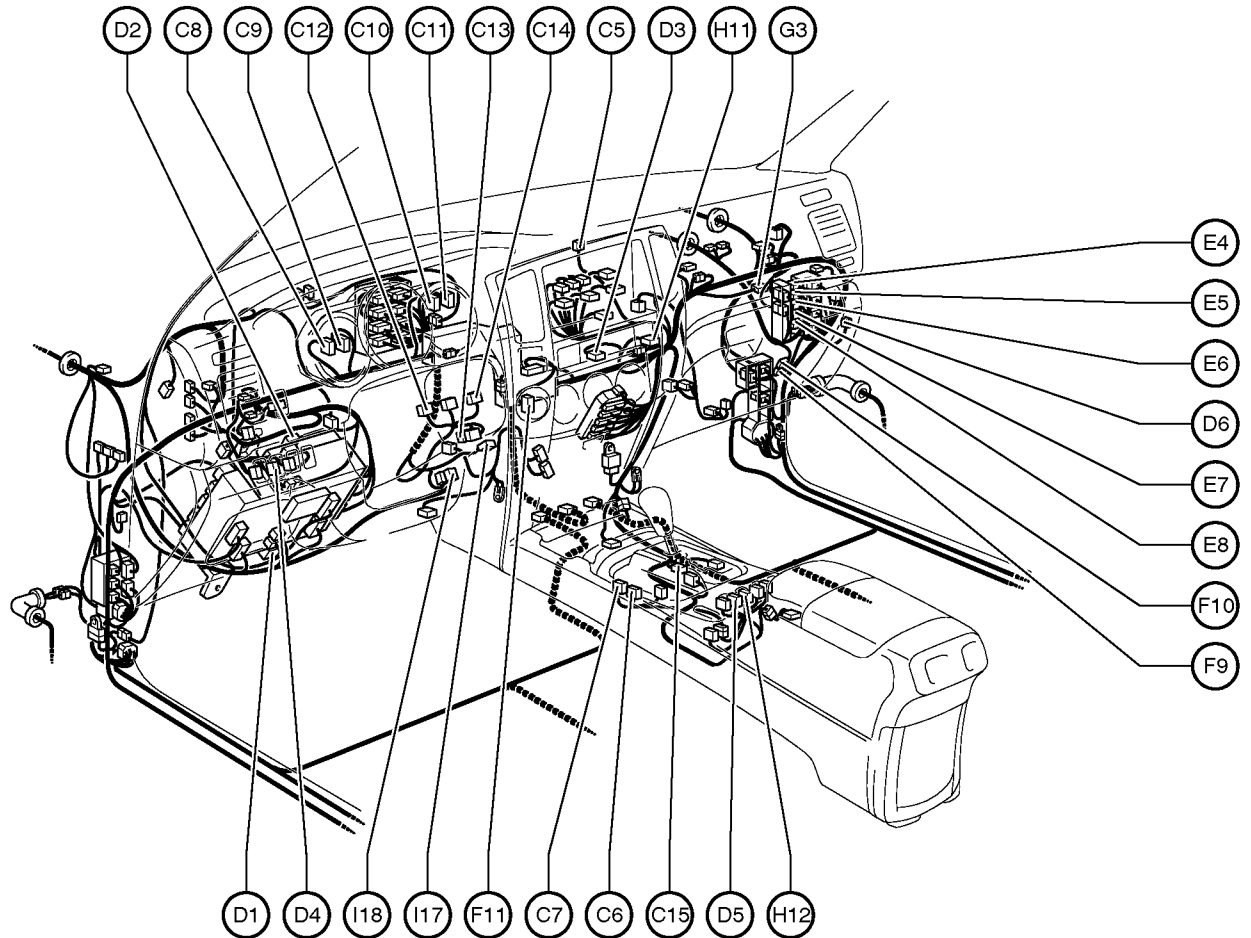
Position of Parts in Instrument Panel



A16 A/C Control Assembly
 A17 A/C Control Assembly
 A18 A/C Evaporator Temp. Sensor
 A19 A/C Room Temp. Sensor
 A20 A/C Solar Sensor
 A21 A/C Solar Sensor
 A22 A/T Shift Lever Illumination
 A23 Absorber Control SW
 A24 Accel Position Sensor
 A25 Air Inlet Control Servo Motor
 A26 Air Mix Control Servo Motor
 A27 Air Mix Control Servo Motor LH
 A28 Air Mix Control Servo Motor RH
 A29 Air Vent Mode Control Servo Motor
 A30 Airbag Sensor Assembly
 A31 Airbag Sensor Assembly
 A32 Airbag Sensor Assembly
 A33 Airbag Sensor Assembly
 A34 Airbag Sensor Assembly
 A35 Airbag Squib (Front Passenger Airbag Assembly)
 A36 Airbag Squib (Steering Wheel Pad)
 A37 Antenna Amplifier
 A38 Ashtray Illumination
 A39 Automatic Light Control Sensor

B 1 Back Door Power Window Control SW
 B 2 Blower Motor
 B 3 Blower Motor Controller
 B 4 Body ECU
 B 5 Body ECU
 B 6 Body ECU

Position of Parts in Instrument Panel



C 5 Center Speaker
 C 6 Cigarette Lighter
 C 7 Cigarette Lighter Illumination
 C 8 Combination Meter
 C 9 Combination Meter
 C10 Combination Meter
 C11 Combination Meter
 C12 Combination SW
 C13 Combination SW
 C14 Combination SW
 C15 Cup Holder Illumination

D 1 Data Link Connector 3
 D 2 Daytime Running Light Relay
 Turn Signal Flasher Relay
 D 3 Defogger SW
 Heater Control Panel
 Passenger Seat Belt Warning Light
 Security Indicator Light
 D 4 Diff. Lock SW
 D 5 Downhill Assist Control SW
 D 6 DVD Automatic Changer

E 4 Engine Control Module
 E 5 Engine Control Module
 E 6 Engine Control Module
 E 7 Engine Control Module
 E 8 Engine Control Module

F 9 4WD Control ECU
 F10 4WD Control ECU
 F11 4WD Control SW

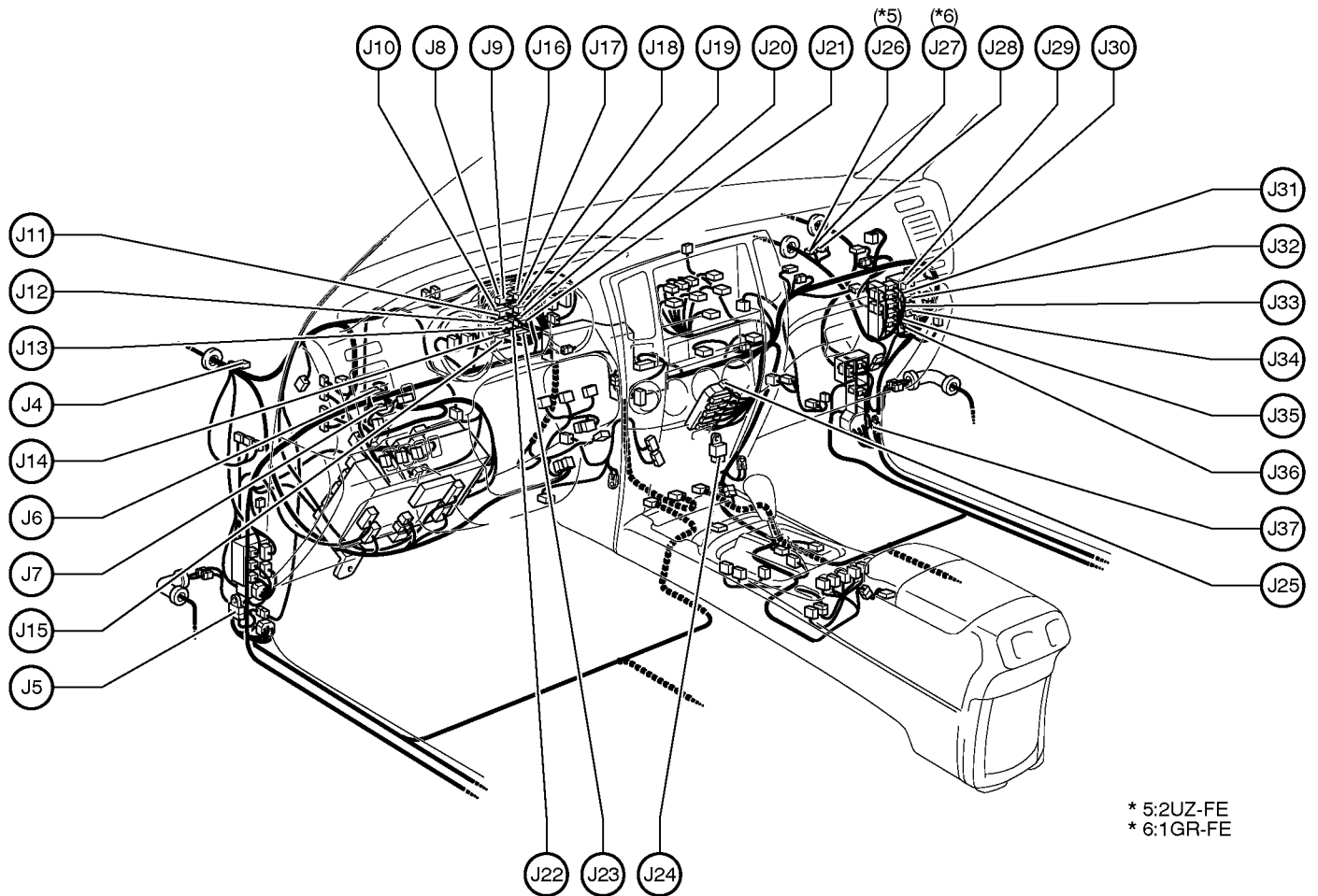
G 3 Glove Box Light

H11 Hazard SW
 H12 Height Control SW

I 17 Ignition Key Cylinder Light
 Transponder Key Amplifier
 I 18 Ignition SW

G ELECTRICAL WIRING ROUTING

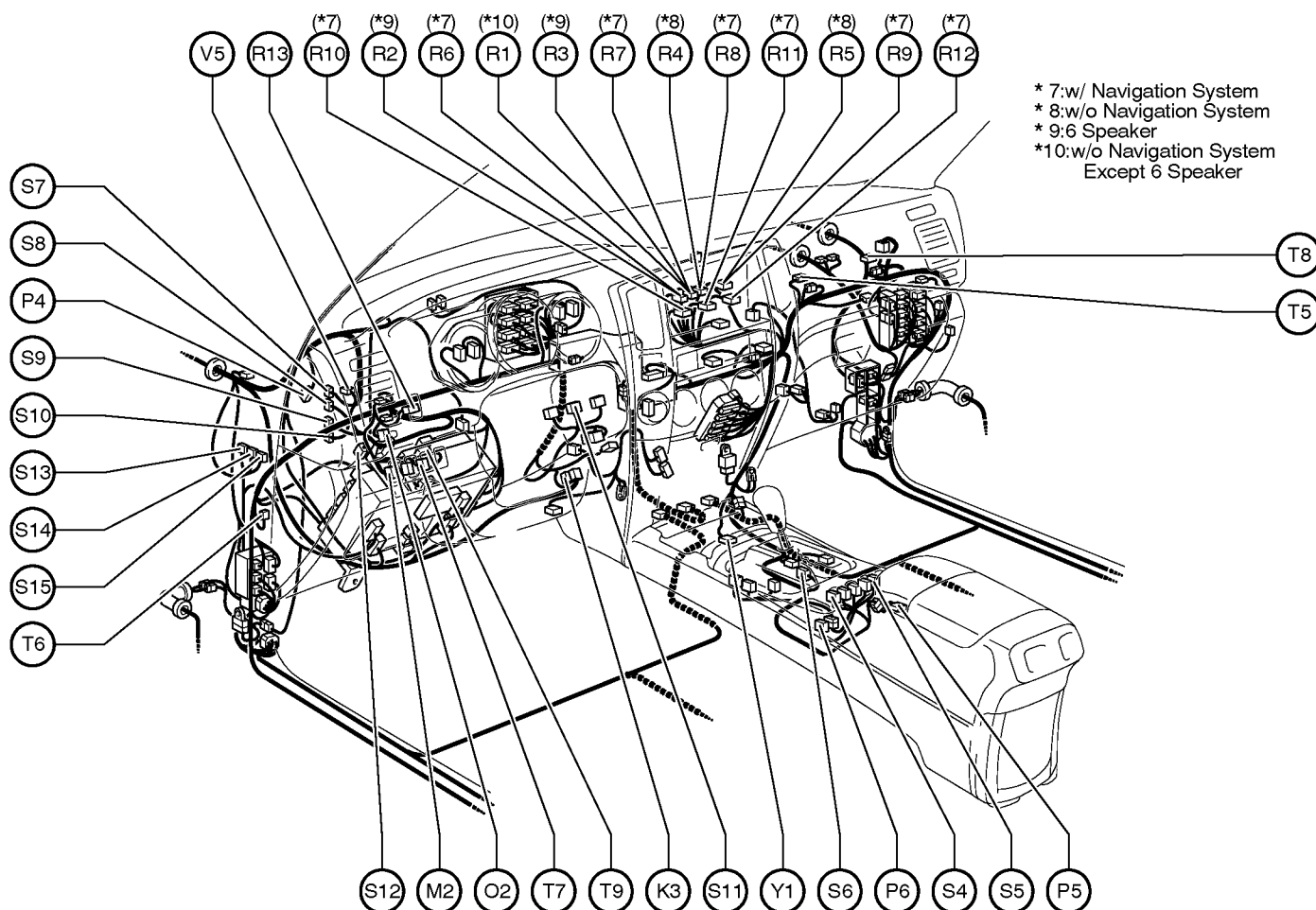
Position of Parts in Instrument Panel



J 4 Junction Connector
J 5 Junction Connector
J 6 Junction Connector
J 7 Junction Connector
J 8 Junction Connector
J 9 Junction Connector
J 10 Junction Connector
J 11 Junction Connector
J 12 Junction Connector
J 13 Junction Connector
J 14 Junction Connector
J 15 Junction Connector
J 16 Junction Connector
J 17 Junction Connector
J 18 Junction Connector
J 19 Junction Connector
J 20 Junction Connector

J 21 Junction Connector
J 22 Junction Connector
J 23 Junction Connector
J 24 Junction Connector
J 25 Junction Connector
J 26 Junction Connector
J 27 Junction Connector
J 28 Junction Connector
J 29 Junction Connector
J 30 Junction Connector
J 31 Junction Connector
J 32 Junction Connector
J 33 Junction Connector
J 34 Junction Connector
J 35 Junction Connector
J 36 Junction Connector
J 37 Junction Connector

Position of Parts in Instrument Panel



K 3 Key Interlock Solenoid
Unlock Warning SW

M 2 Main SW

O 2 ODO/Trip SW
Turn Signal Indicator Light

P 4 Parking Brake SW
P 5 Power Outlet (115V)
P 6 Power Outlet (Front)

R 1 Radio and Player
R 2 Radio and Player
R 3 Radio and Player
R 4 Radio and Player
R 5 Radio and Player
R 6 Radio and Player with Display
R 7 Radio and Player with Display
R 8 Radio and Player with Display
R 9 Radio and Player with Display
R10 Radio and Player with Display
R11 Radio and Player with Display
R12 Radio and Player with Display
R13 Rheostat

S 4 Seat Heater SW LH
S 5 Seat Heater SW RH
S 6 Shift Lock Control ECU
Transmission Control SW
S 7 Skid Control ECU
S 8 Skid Control ECU
S 9 Skid Control ECU
S10 Skid Control ECU
S11 Steering Sensor
S12 Stop Light SW
S13 Suspension Control ECU
S14 Suspension Control ECU
S15 Suspension Control ECU

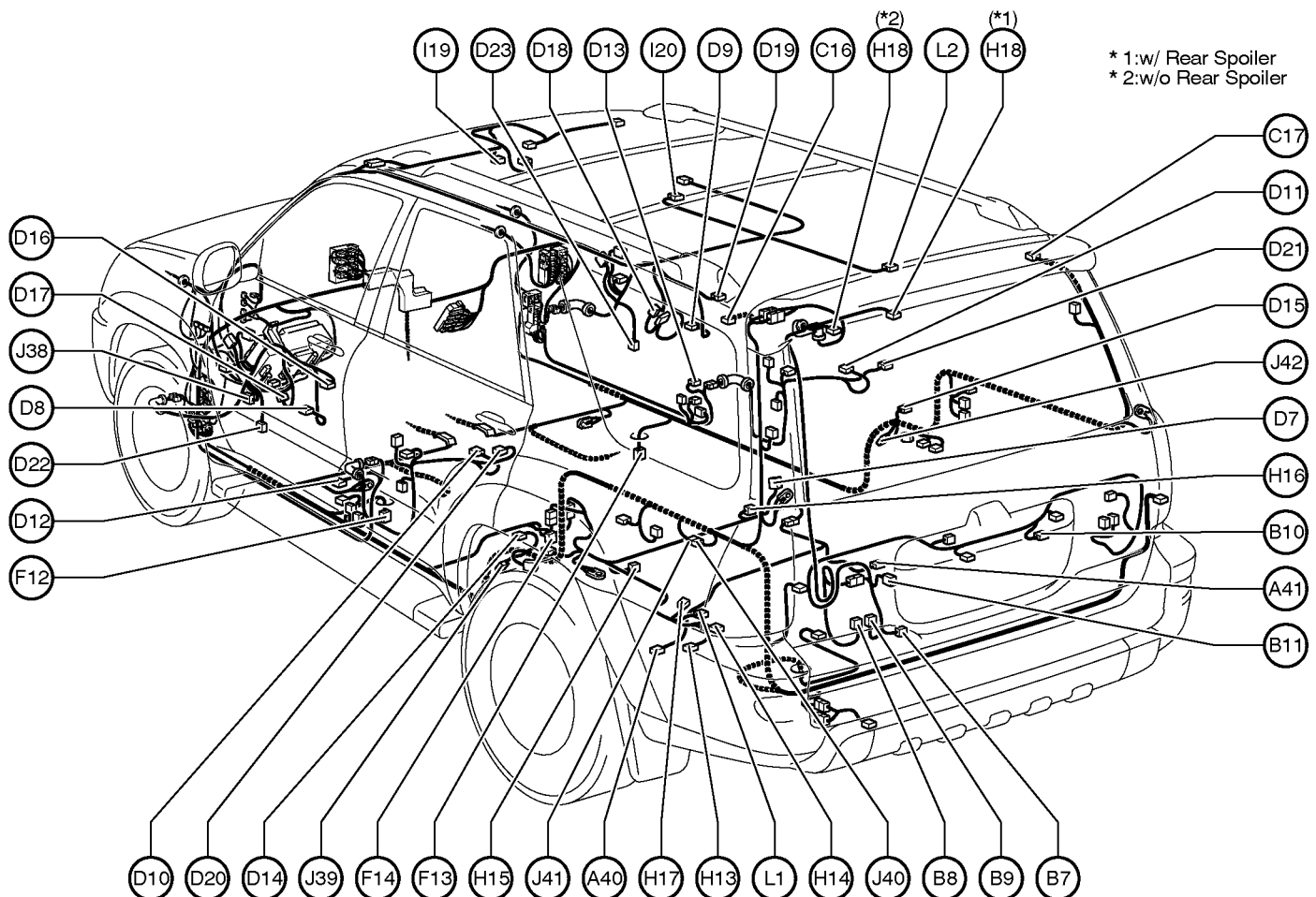
T 5 Theft Deterrent ECU
T 6 Towing Brake Controller
T 7 TRAC Off SW
T 8 Transponder Key Computer
T 9 Turn Signal Flasher Relay

V 5 VSC Warning Buzzer

Y 1 Yaw Rate Sensor

G ELECTRICAL WIRING ROUTING

Position of Parts in Body



A40 ABS Speed Sensor Rear LH
A41 ABS Speed Sensor Rear RH

B 7 Back Door Courtesy SW
Back Door Half Latch SW
Back Door Lock Detection SW
Back Door Lock Motor
B 8 Back Door ECU
B 9 Back Door ECU
B10 Back Door Opener SW
License Plate Light
B11 Back Door Power Window Motor

C16 Curtain Shield Airbag Squib LH
C17 Curtain Shield Airbag Squib RH

D 7 Door Control Receiver
D 8 Door Courtesy Light Front LH
D 9 Door Courtesy Light Front RH
D10 Door Courtesy Light Rear LH
D11 Door Courtesy Light Rear RH
D12 Door Courtesy SW Front LH
D13 Door Courtesy SW Front RH
D14 Door Courtesy SW Rear LH
D15 Door Courtesy SW Rear RH
D16 Door Key Lock and Unlock SW Front LH
Door Lock Detection SW Front LH
Door Lock Motor Front LH
D17 Door Lock Control SW Front LH
Power Window Master SW
D18 Door Lock Control SW Front RH
D19 Door Lock Detection SW Front RH
Door Lock Motor Front RH

D20 Door Lock Detection SW Rear LH
Door Lock Motor Rear LH
D21 Door Lock Detection SW Rear RH
Door Lock Motor Rear RH
D22 Door Speaker Front LH
D23 Door Speaker Front RH

F12 Foot Light LH
F13 Foot Light RH
F14 Fuel Pump
Fuel Sender

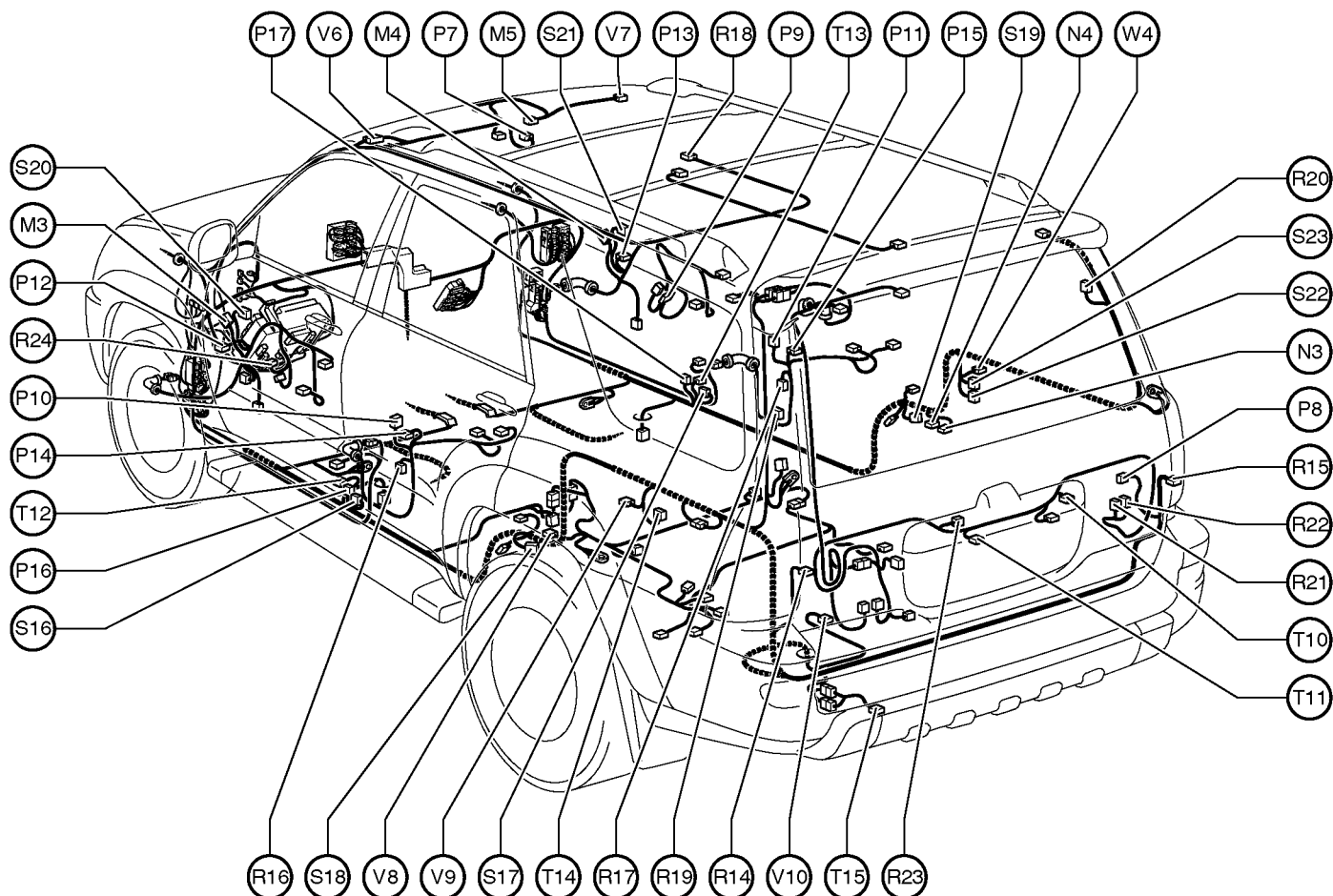
H13 Height Control Compressor
H14 Height Control Motor
H15 Height Control Sensor Rear LH
H16 Height Control Sensor Rear RH
H17 Height Control Valve
H18 High Mounted Stop Light

I 19 Inner Mirror
I 20 Interior Light

J 38 Junction Connector
J 39 Junction Connector
J 40 Junction Connector
J 41 Junction Connector
J 42 Junction Connector

L 1 Low Pressure Tank Valve
L 2 Luggage Compartment Light

Position of Parts in Body



M 3 Mirror Heater LH
Remote Control Mirror LH
M 4 Mirror Heater RH
Remote Control Mirror RH
M 5 Moon Roof Control ECU

N 3 Navigation ECU
N 4 Navigation ECU

P 7 Moon Roof Control SW
Personal Light
P 8 Power Outlet (Rear)
P 9 Power Window Control SW Front RH
P10 Power Window Control SW Rear LH
P11 Power Window Control SW Rear RH
P12 Power Window Motor Front LH
P13 Power Window Motor Front RH
P14 Power Window Motor Rear LH
P15 Power Window Motor Rear RH
P16 Pretensioner LH
P17 Pretensioner RH

R14 Rear Combination Light LH
R15 Rear Combination Light RH
R16 Rear Door Speaker LH
R17 Rear Door Speaker RH
R18 Rear Seat Audio Controller
R19 Rear Speaker LH
R20 Rear Speaker RH

R21 Rear Window Defogger
R22 Rear Window Defogger
R23 Rear Wiper Motor
Rear Wiper Position SW
R24 Remote Control Mirror SW

S16 Side Airbag Sensor Front LH
S17 Side Airbag Sensor Front RH
S18 Side Airbag Sensor Rear LH
S19 Side Airbag Sensor Rear RH
S20 Squawker LH
S21 Squawker RH
S22 Stereo Component Amplifier
S23 Stereo Component Amplifier

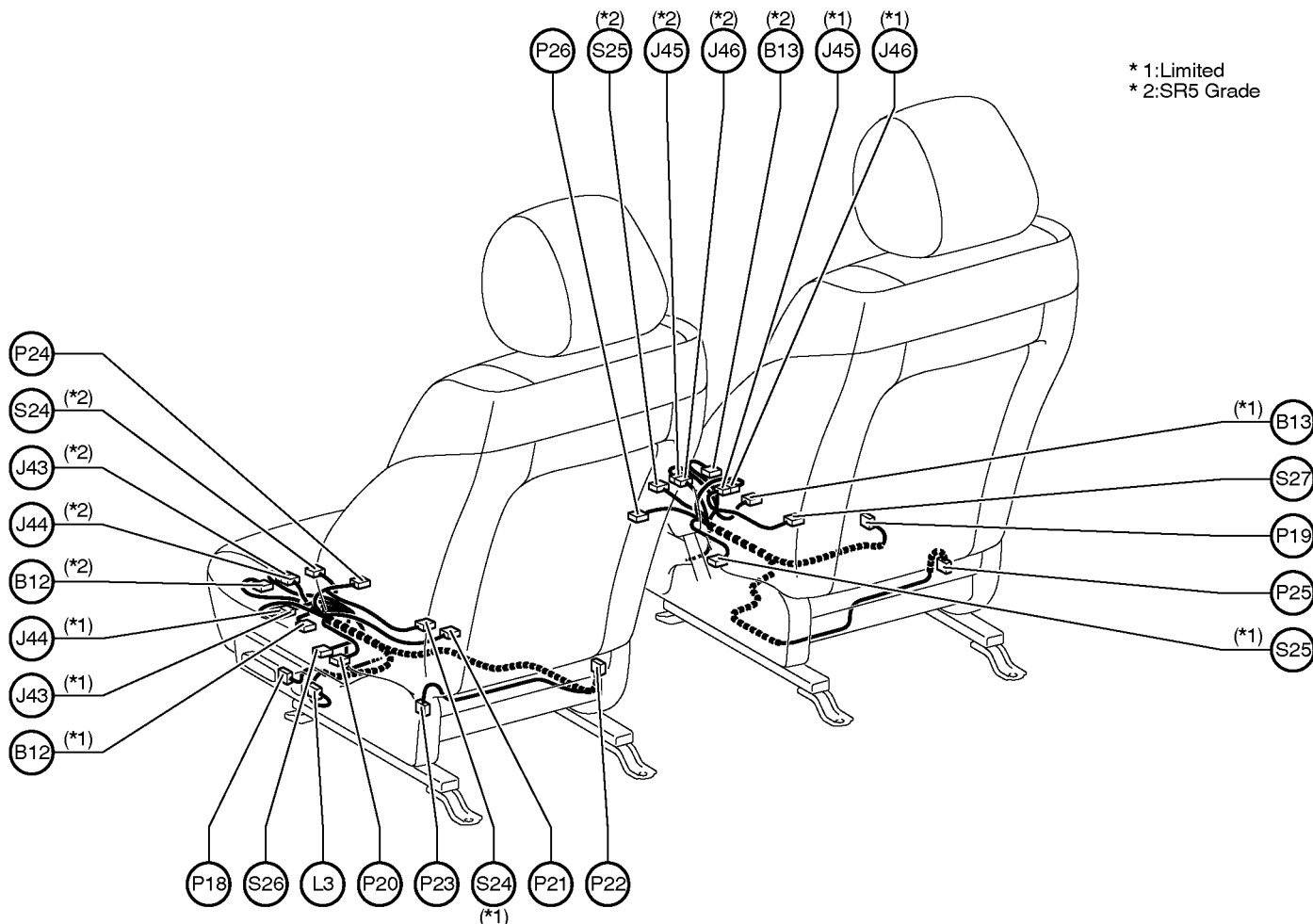
T10 Tailgate Control SW
T11 Television Camera
T12 Tension Reducer Solenoid LH
T13 Tension Reducer Solenoid RH
T14 Towing Converter Relay
T15 Trailer Socket

V 6 Vanity Light LH
V 7 Vanity Light RH
V 8 Vapor Pressure Sensor
V 9 Voltage Inverter
V10 VSV (Canister Closed Valve)

W 4 Woofer

G ELECTRICAL WIRING ROUTING

Position of Parts in Seat



B12 Buckle SW LH
Seat Position Airbag Sensor
B13 Buckle SW RH
Occupant Detection Sensor

S24 Seat Heater LH
S25 Seat Heater RH
S26 Side Airbag Squib LH
S27 Side Airbag Squib RH

J 43 Junction Connector
J 44 Junction Connector
J 45 Junction Connector
J 46 Junction Connector

L 3 Lumbar Support Control SW (Driver's Seat)

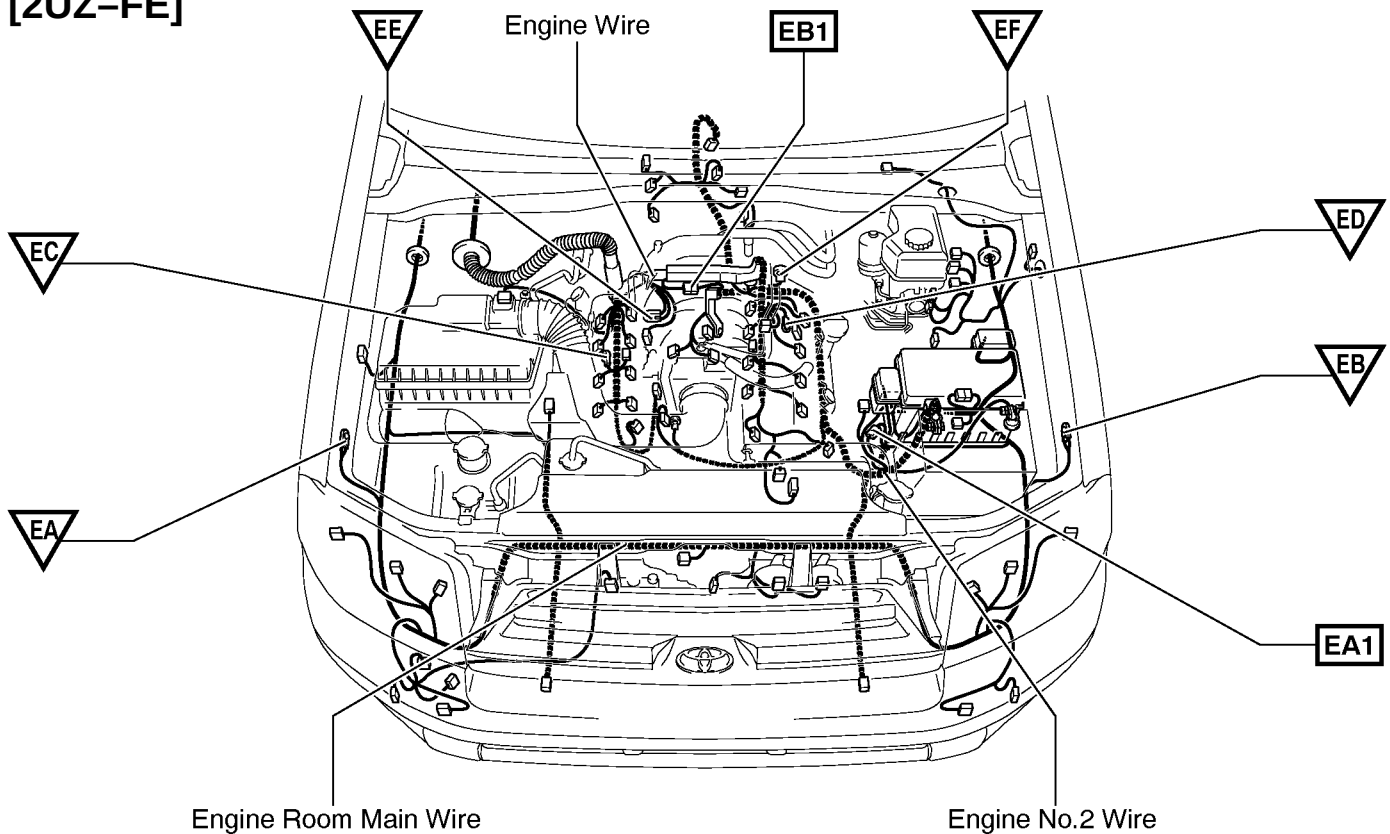
P18 Power Seat Control SW (Driver's Seat)
P19 Power Seat Control SW (Front Passenger's Seat)
P20 Power Seat Motor (Driver's Seat Front Vertical Control)
P21 Power Seat Motor (Driver's Seat Lifter Control)
P22 Power Seat Motor
(Driver's Seat Lumbar Support Control)
P23 Power Seat Motor (Driver's Seat Reclining Control)
P24 Power Seat Motor (Driver's Seat Slide Control)
P25 Power Seat Motor
(Front Passenger's Seat Reclining Control)
P26 Power Seat Motor
(Front Passenger's Seat Slide Control)

G ELECTRICAL WIRING ROUTING

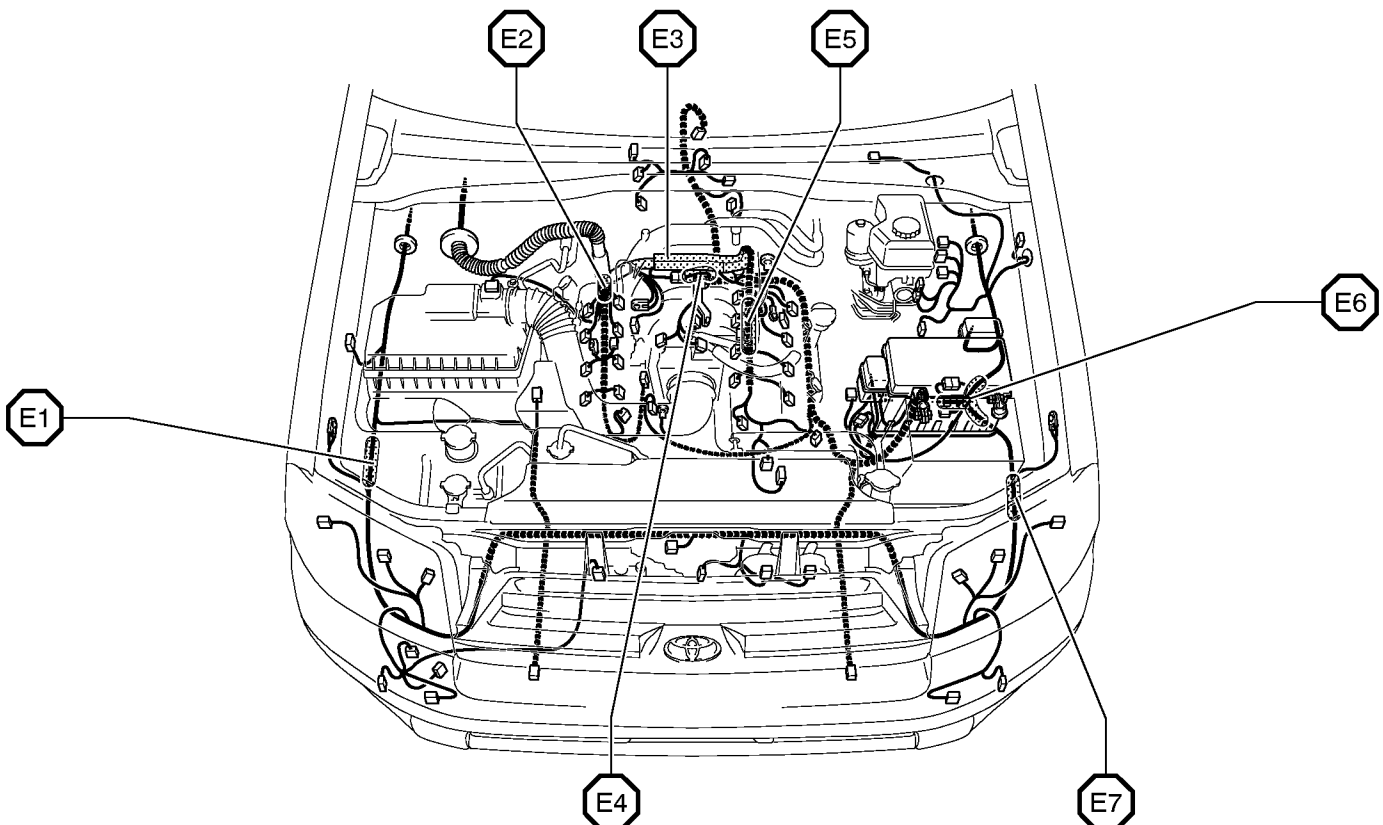
□ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

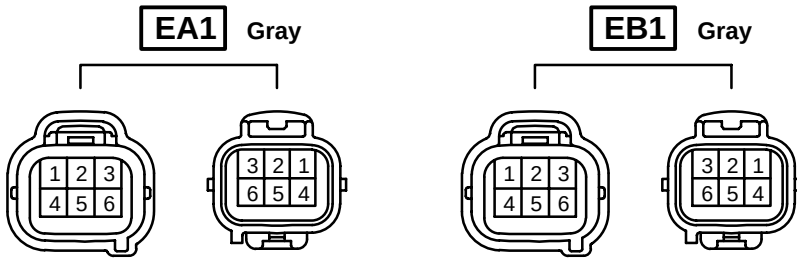
[2UZ-FE]



○ : Location of Splice Points



Connector Joining Wire Harness and Wire Harness



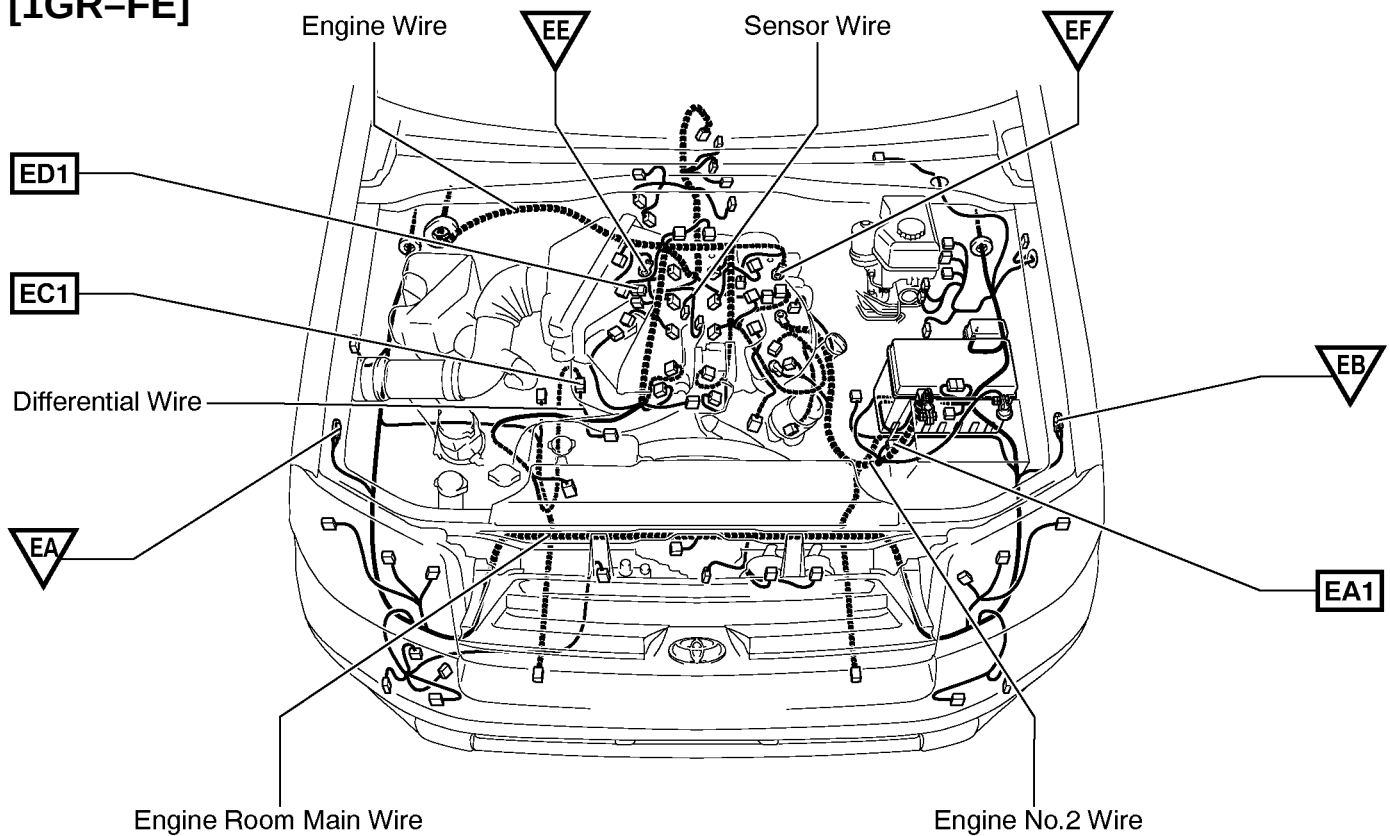
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EB1	Engine No.2 Wire and Engine Wire (Near the Starter)

G ELECTRICAL WIRING ROUTING

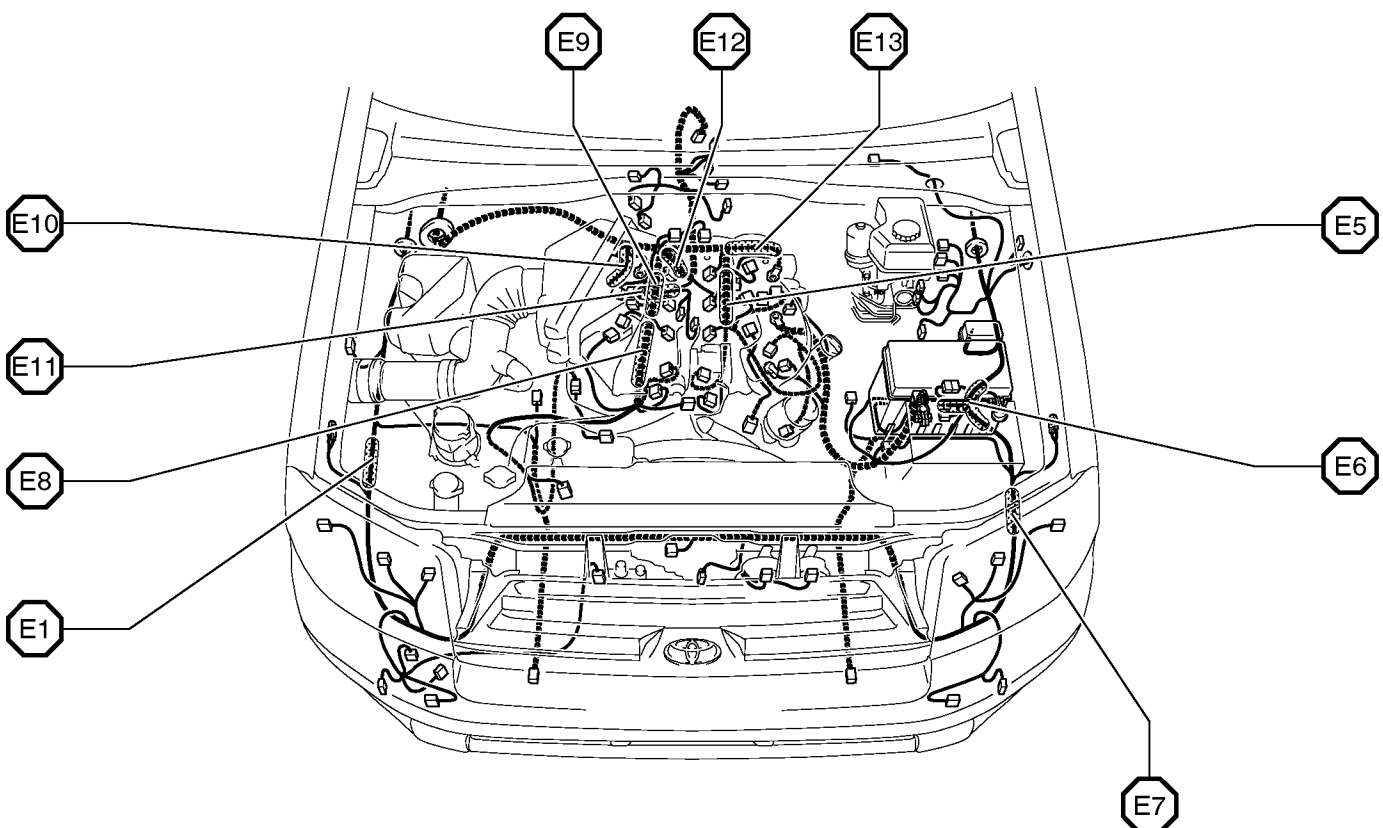
□ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

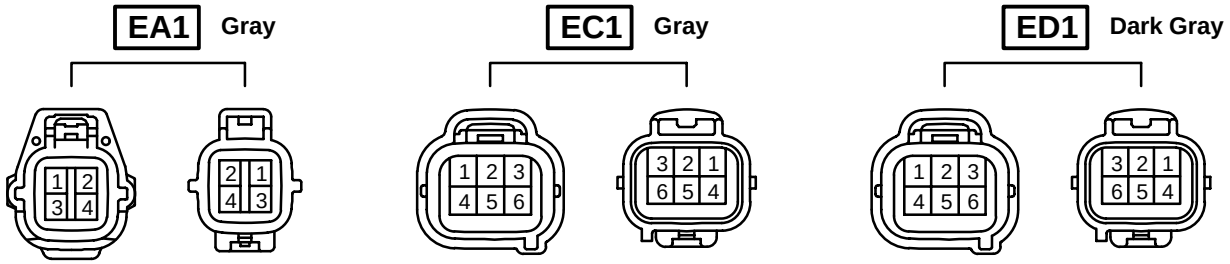
[1GR-FE]



○ : Location of Splice Points



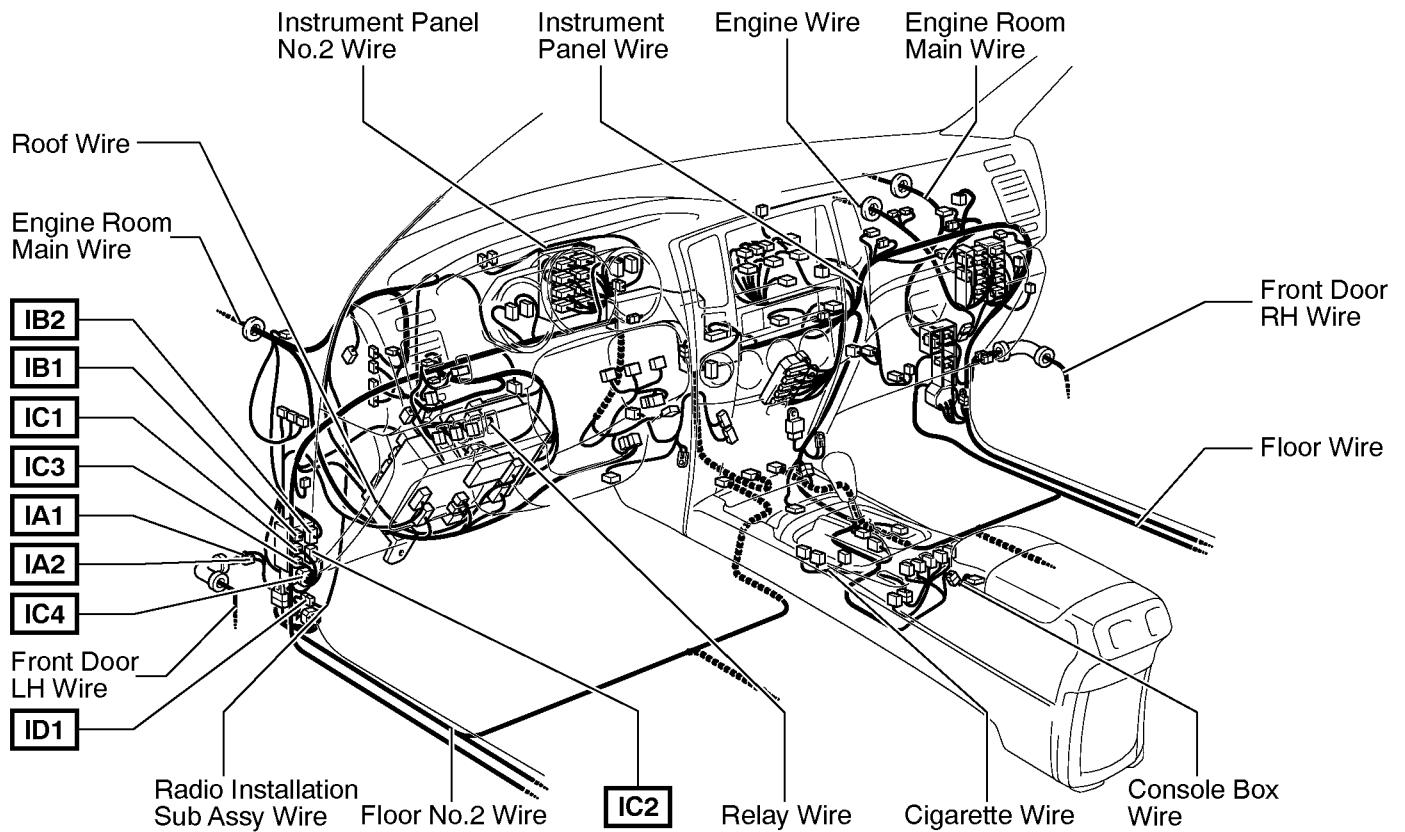
Connector Joining Wire Harness and Wire Harness



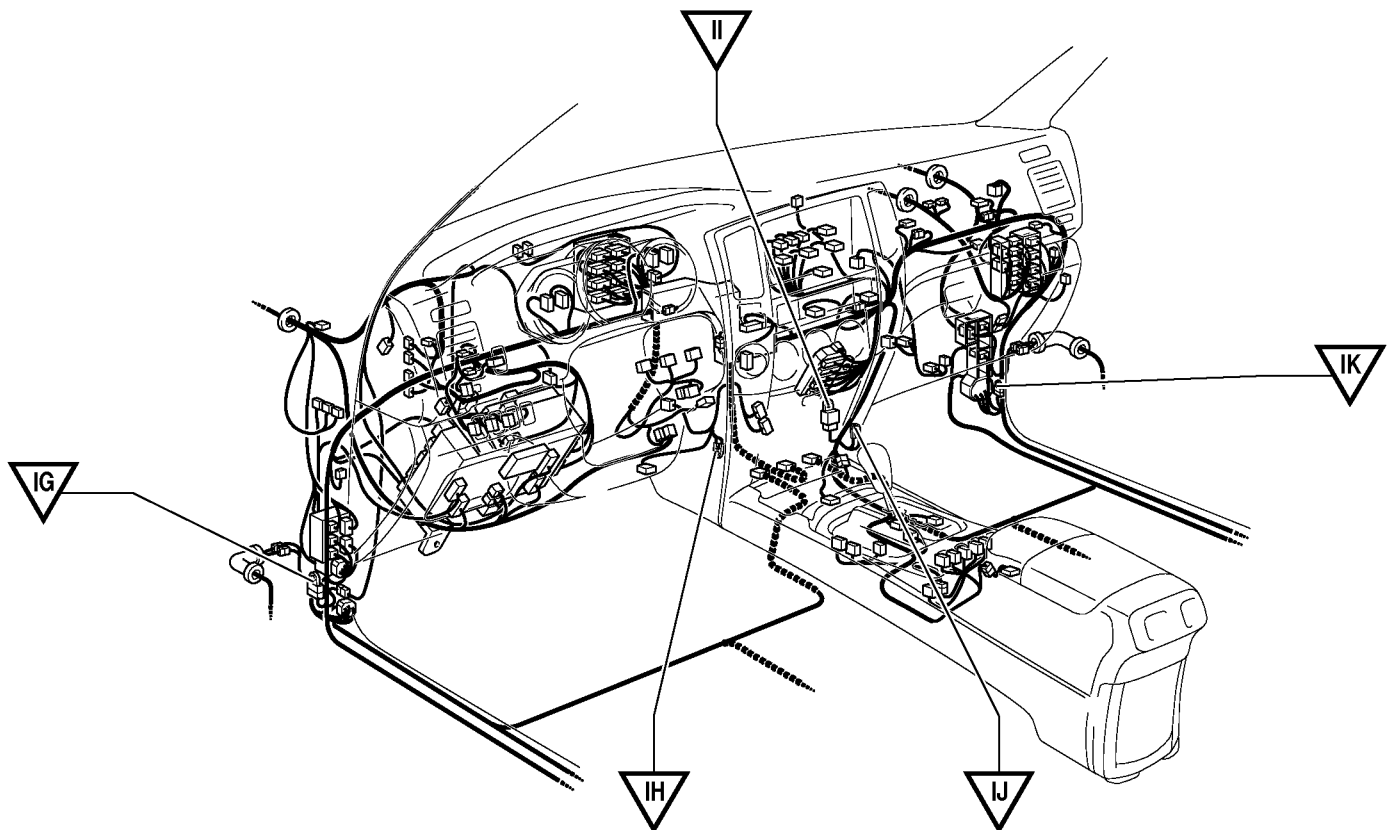
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EC1	Engine Wire and Differential Wire (Near the Front Differential)
ED1	Engine Wire and Sensor Wire (Rear Side of Right Bank Cylinder Block)

G ELECTRICAL WIRING ROUTING

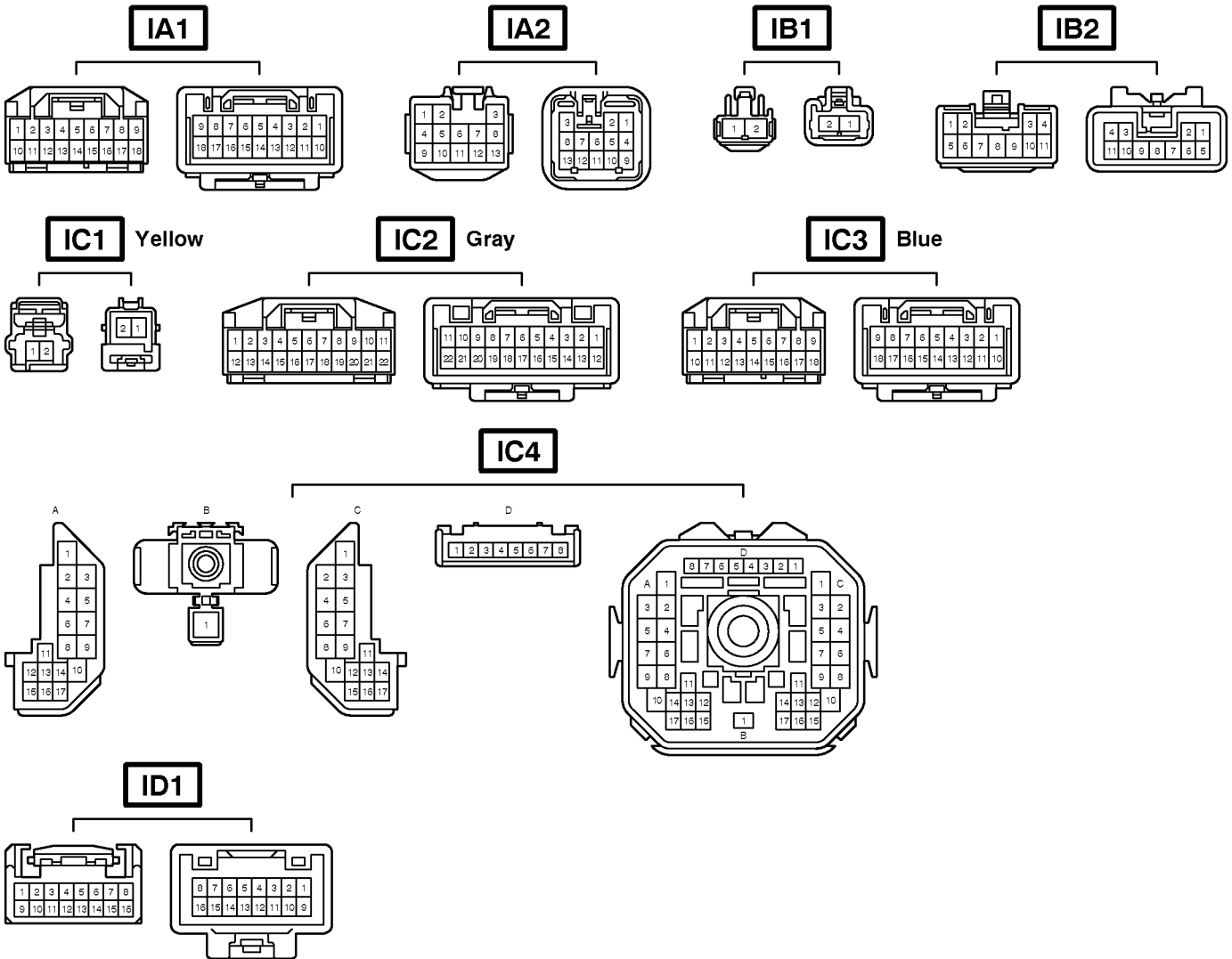
□ : Location of Connector Joining Wire Harness and Wire Harness



▽ : Location of Ground Points



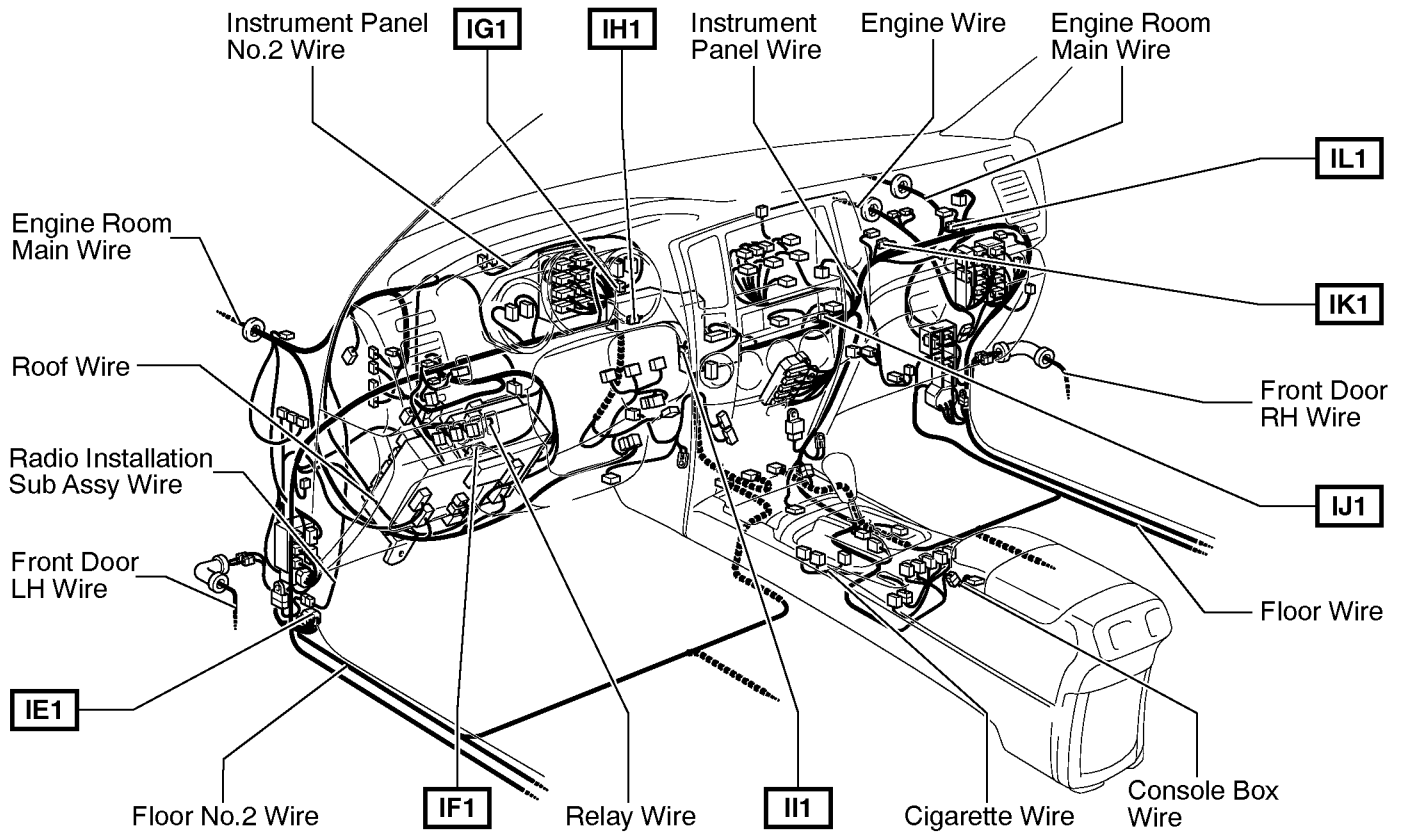
Connector Joining Wire Harness and Wire Harness



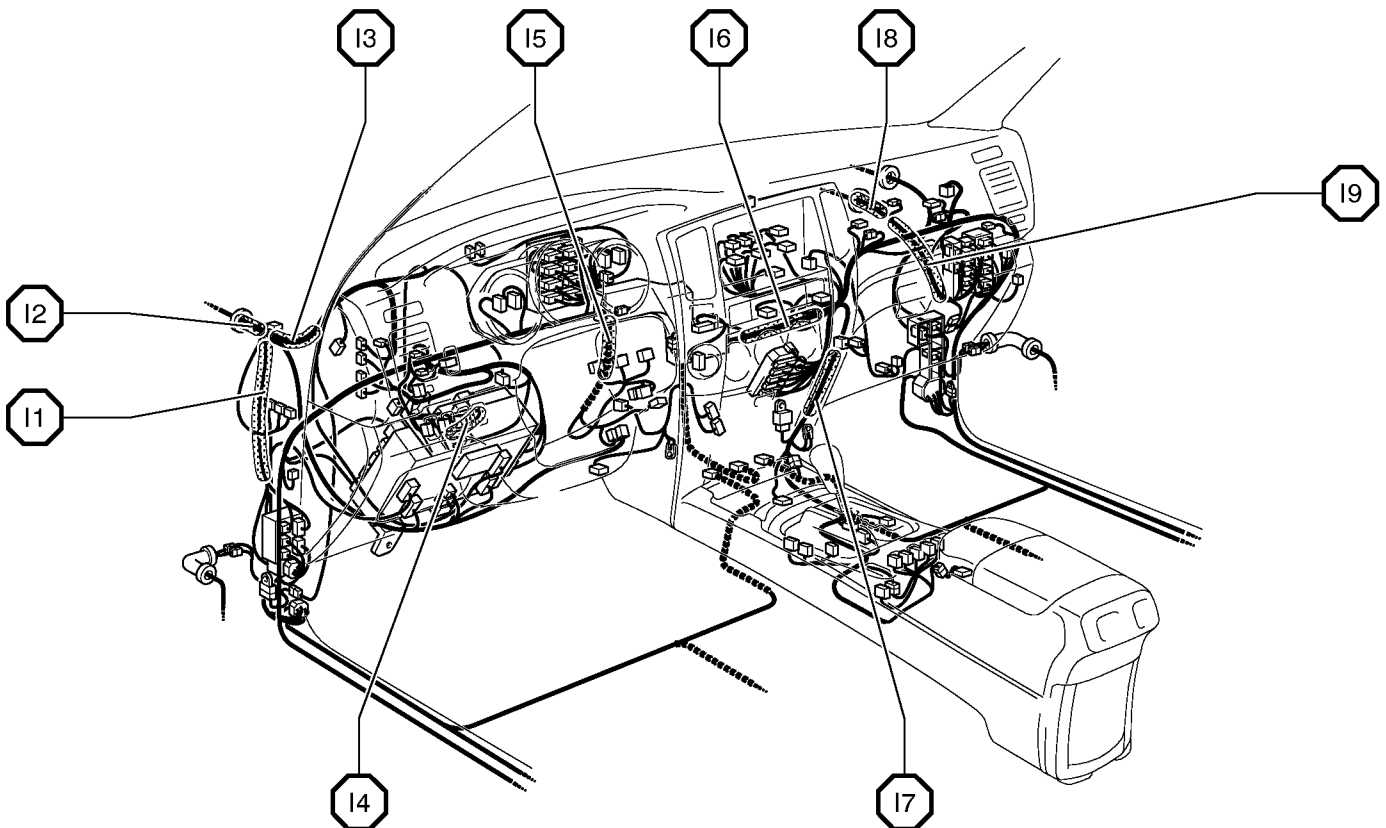
Code	Joining Wire Harness and Wire Harness (Connector Location)
IA1	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IB1	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IB2	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IC1	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC2	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
ID1	Radio Installation Sub Assy Wire and Instrument Panel Wire (Left Kick Panel)

G ELECTRICAL WIRING ROUTING

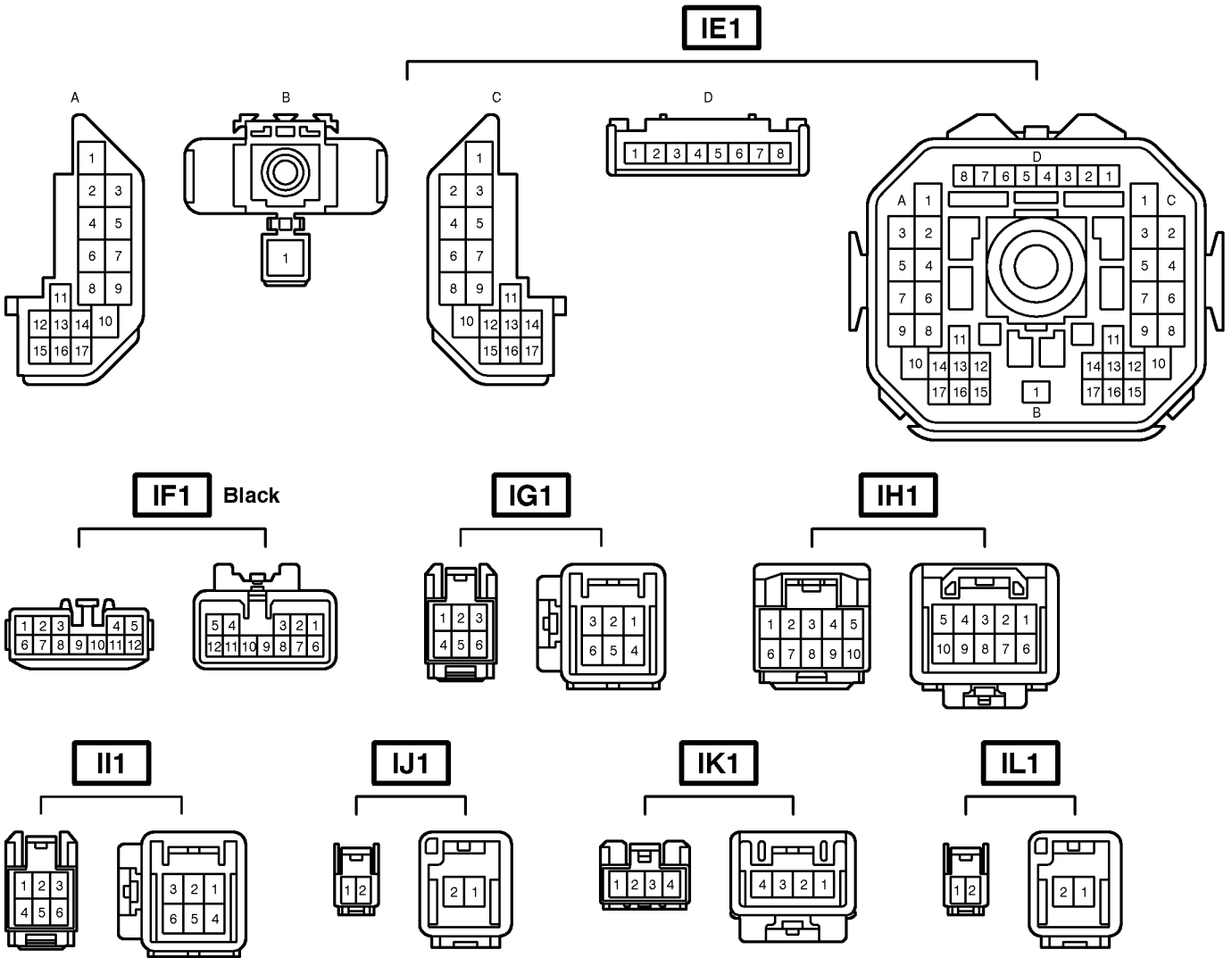
 : Location of Connector Joining Wire Harness and Wire Harness



 : Location of Splice Points



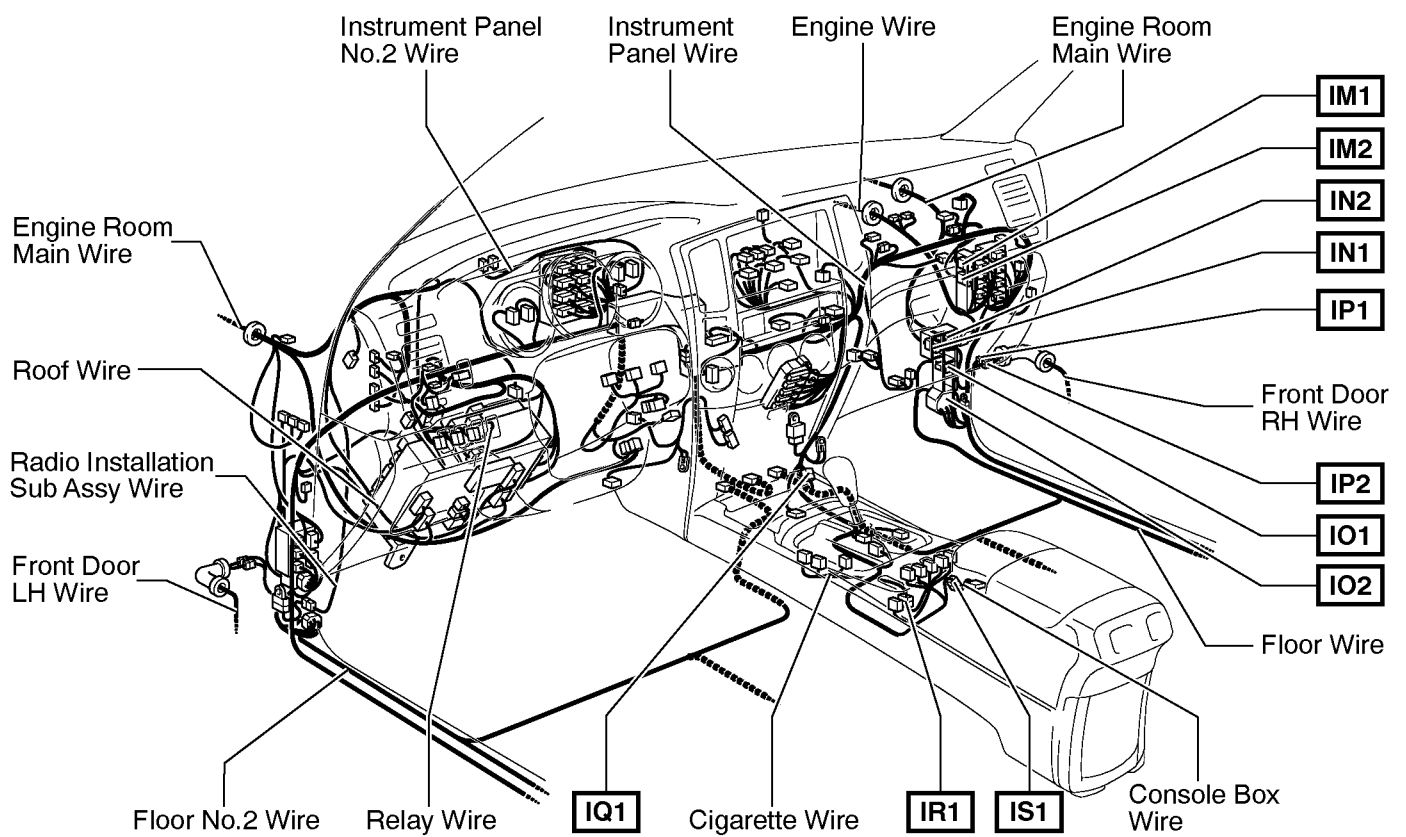
Connector Joining Wire Harness and Wire Harness



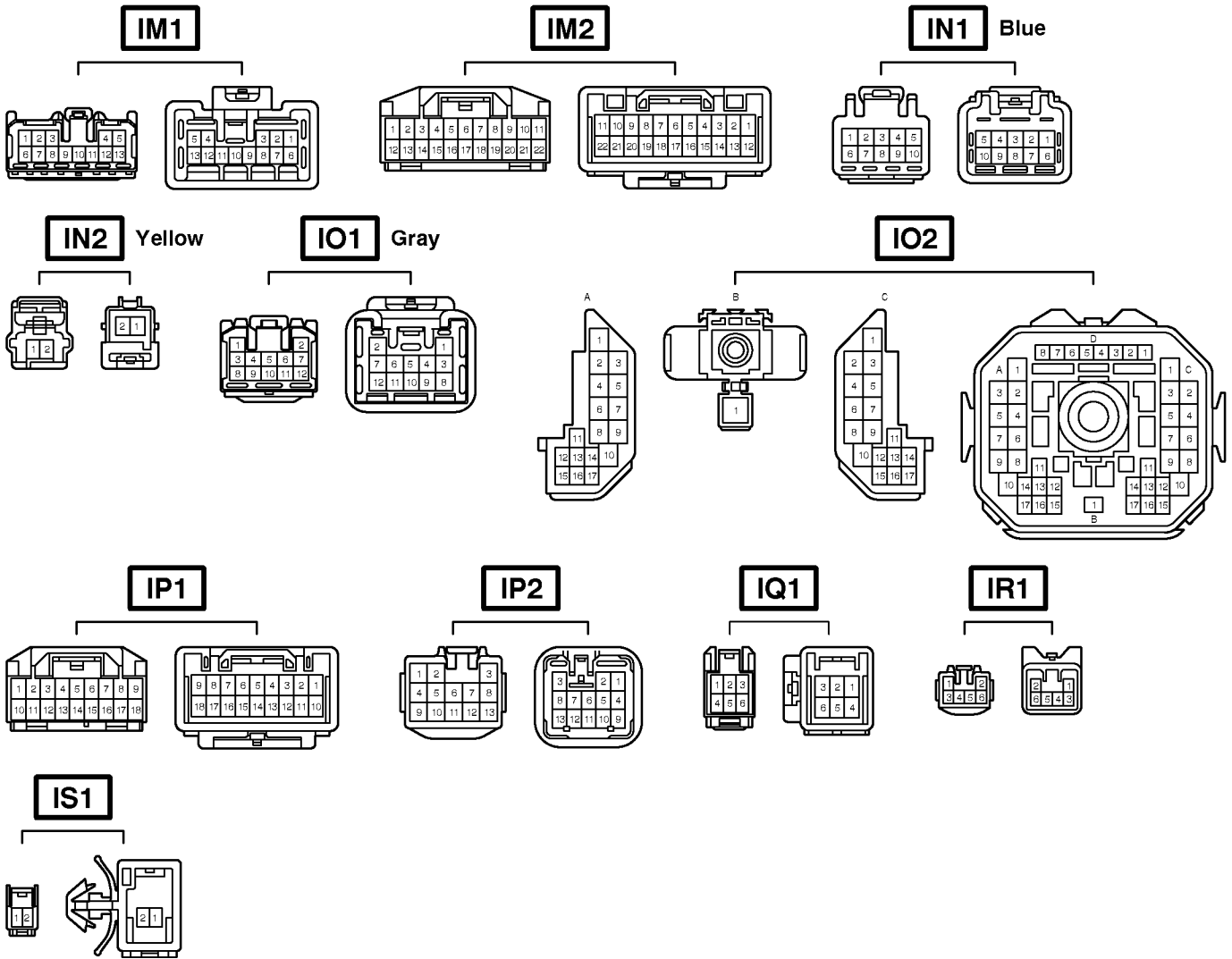
Code	Joining Wire Harness and Wire Harness (Connector Location)
IE1	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IG1	Instrument Panel No.2 Wire and Instrument Panel Wire (Behind the Combination Meter)
IH1	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
II1	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IJ1	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace RH)
IK1	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IL1	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)

G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness



Connector Joining Wire Harness and Wire Harness

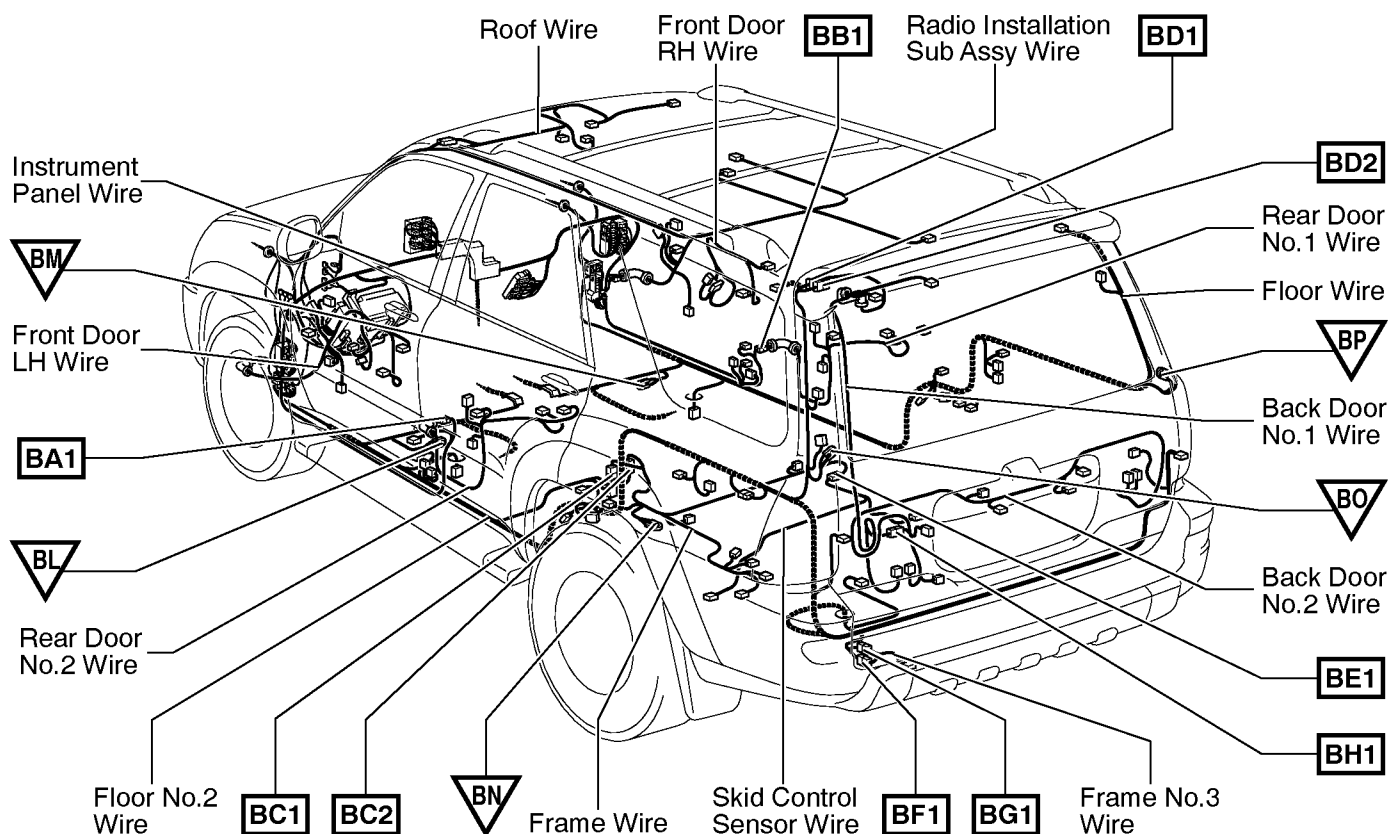


Code	Joining Wire Harness and Wire Harness (Connector Location)
IM1	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2	
IN1	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IN2	
IO1	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IO2	
IP1	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2	
IQ1	Floor Wire and Instrument Panel Wire (Instrument Panel Brace RH)
IR1	Instrument Panel Wire and Cigarette Wire (Rear Console)
IS1	Instrument Panel Wire and Console Box Wire (Rear Console)

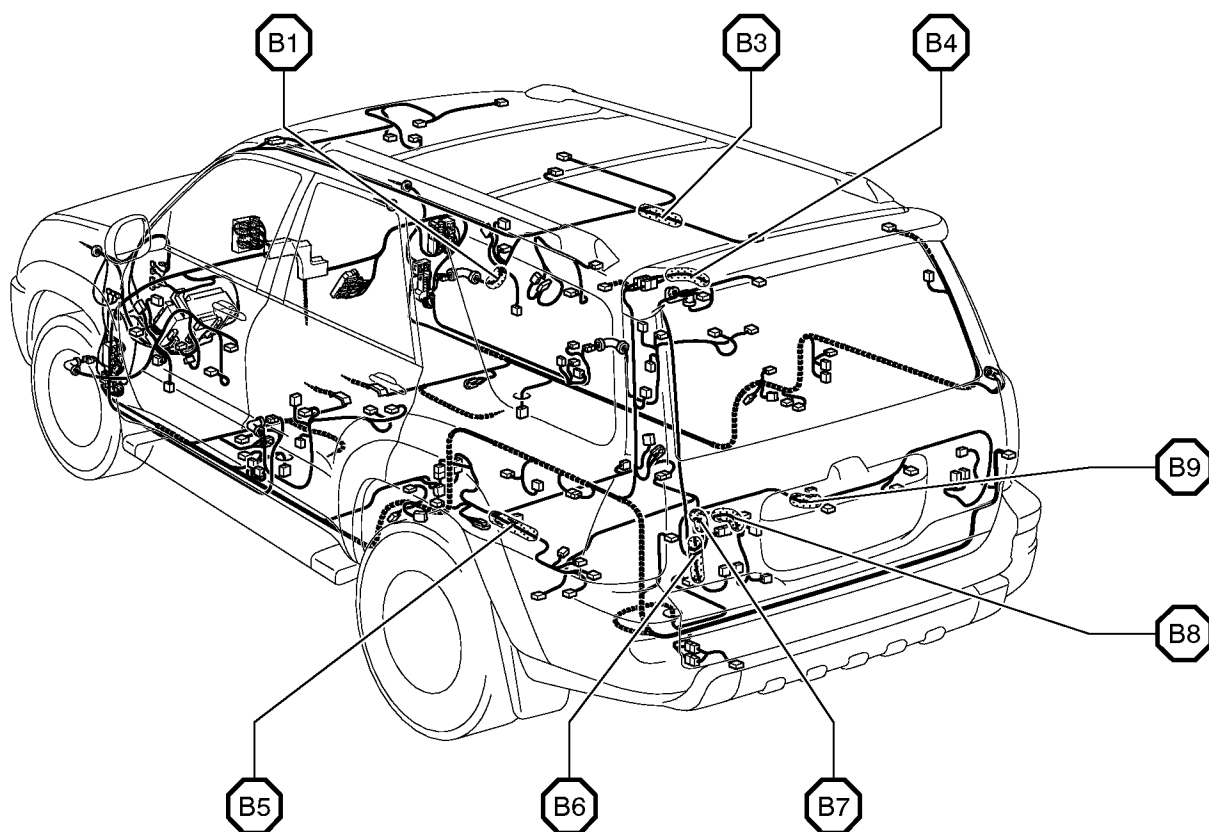
G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness

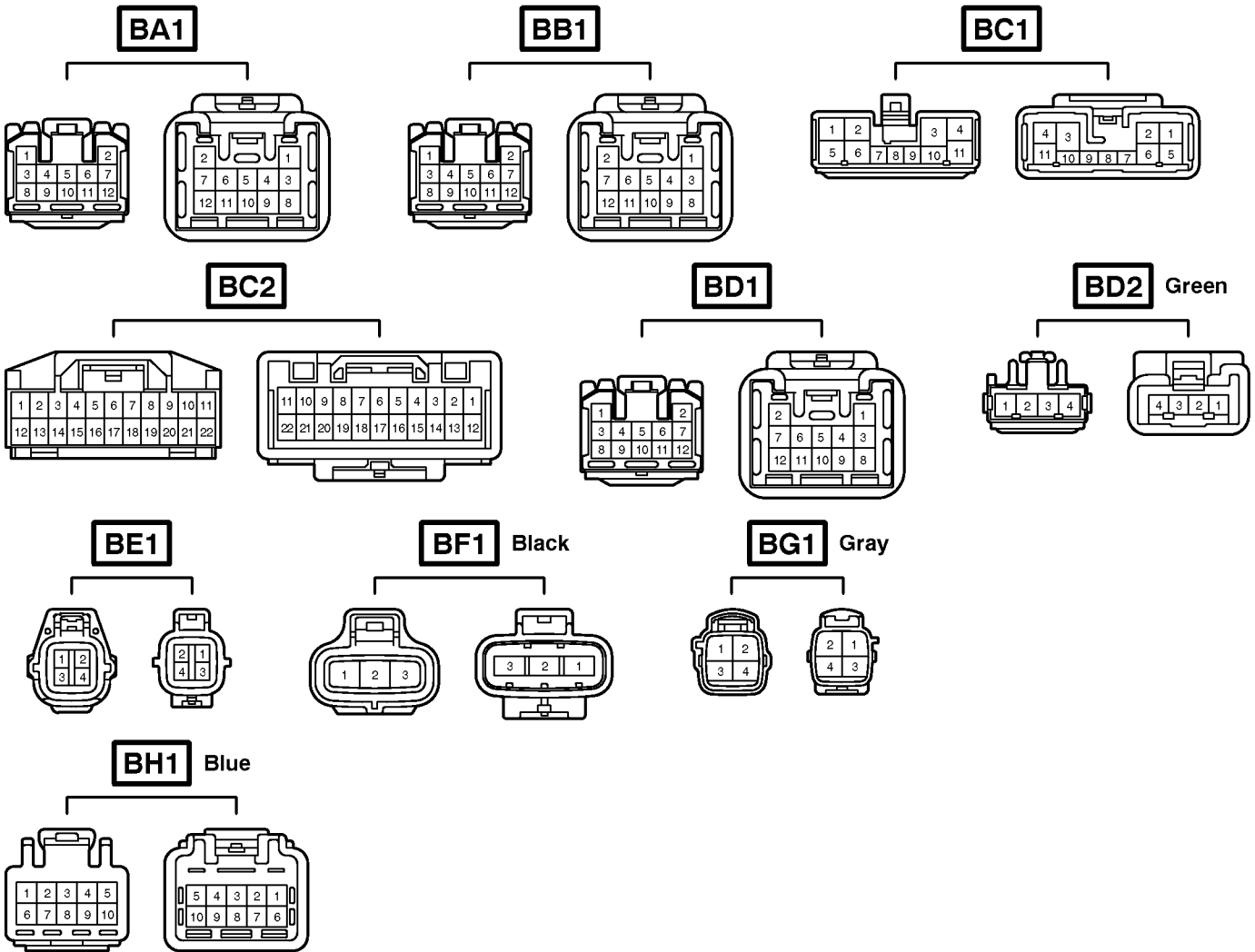
▽ : Location of Ground Points



○ : Location of Splice Points

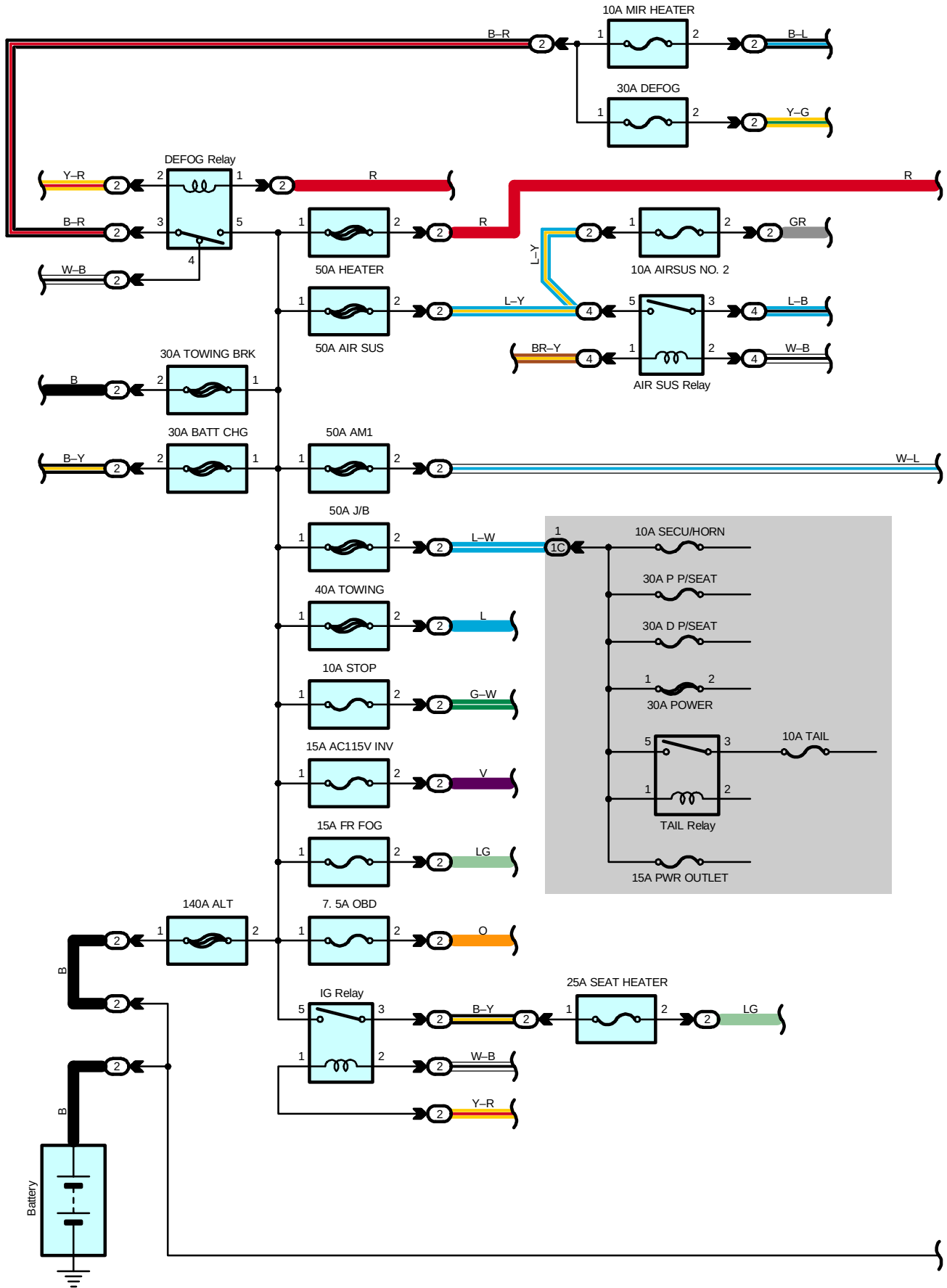


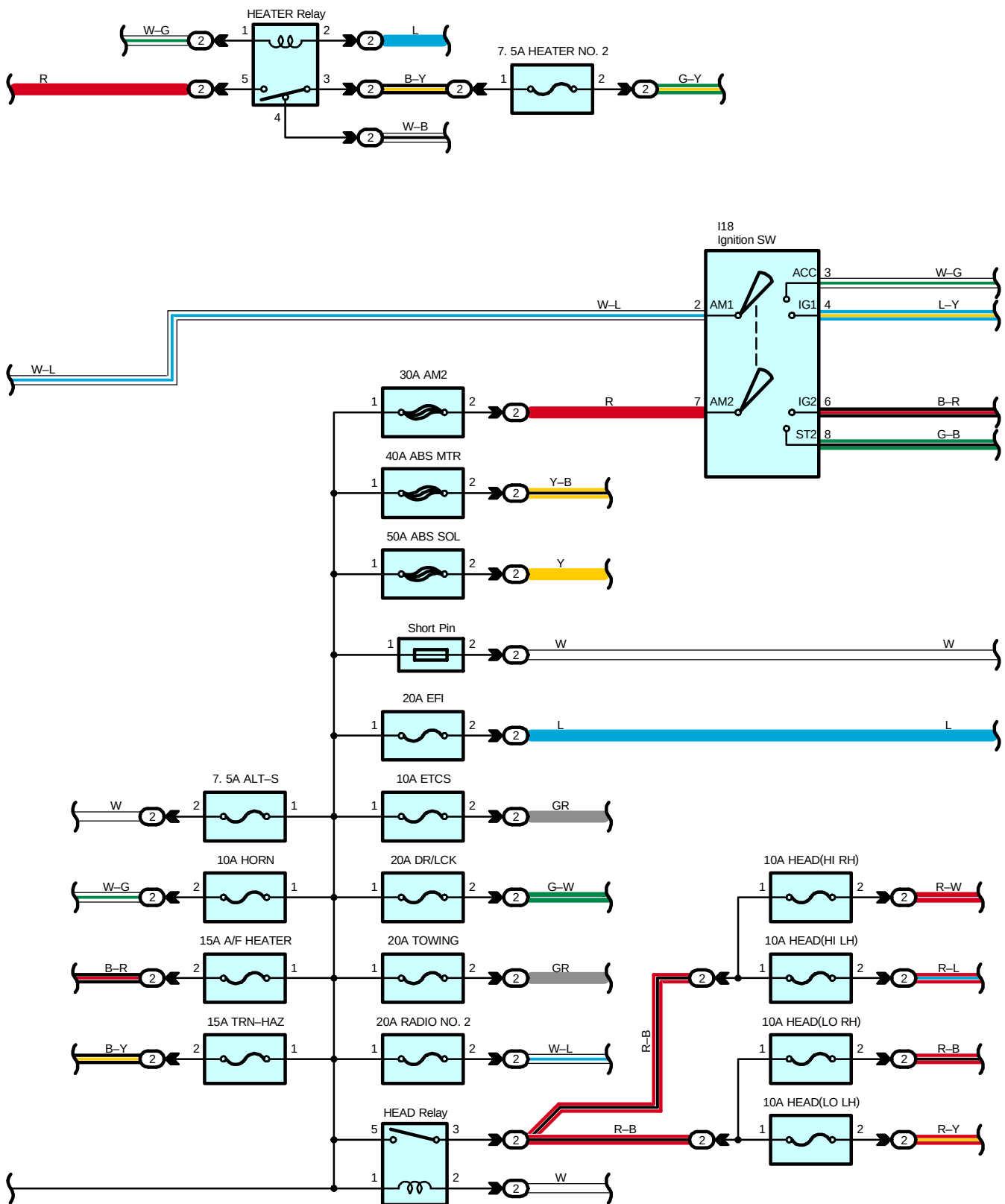
Connector Joining Wire Harness and Wire Harness



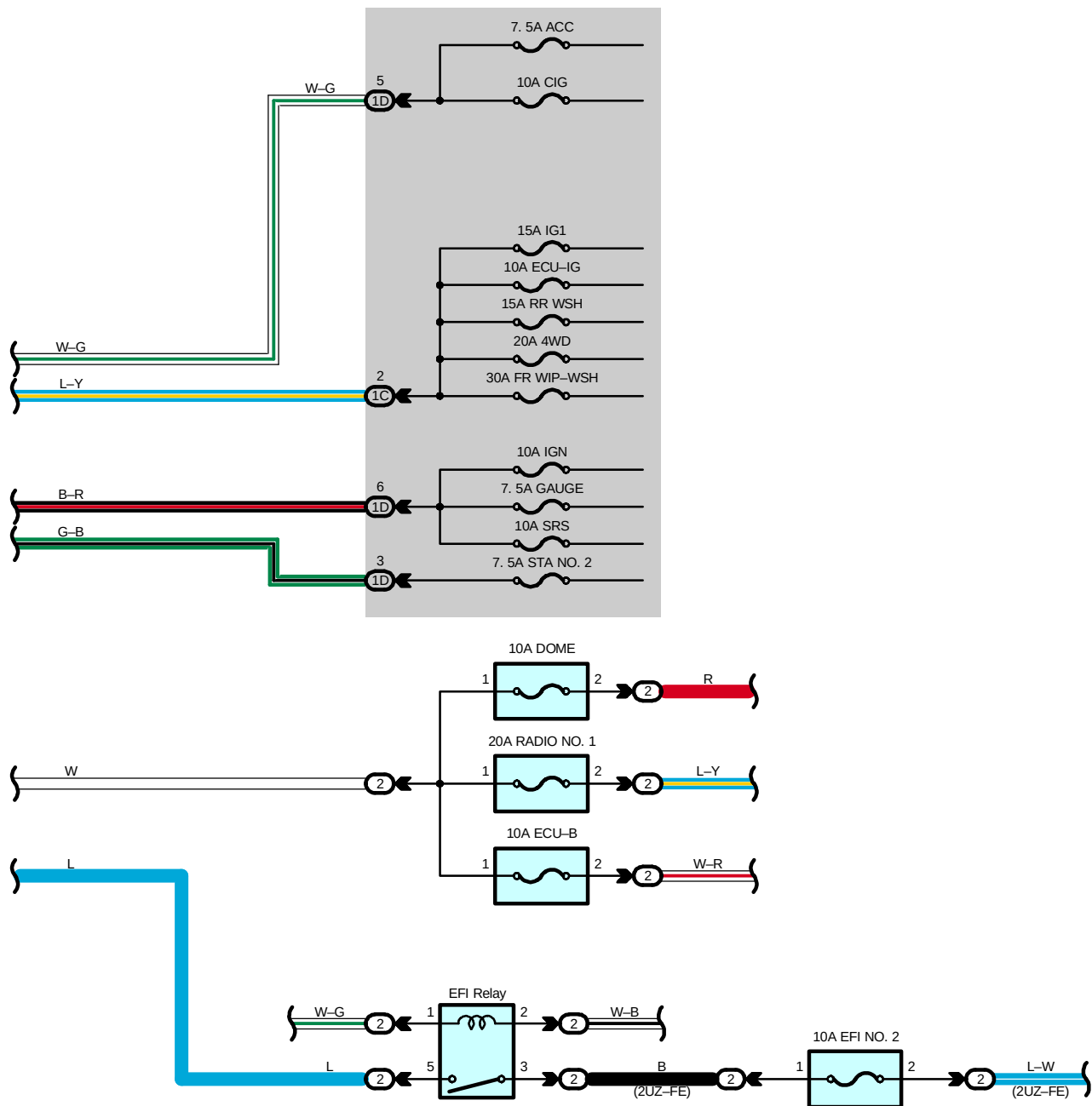
Code	Joining Wire Harness and Wire Harness (Connector Location)
BA1	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BC1	Frame Wire and Floor No.2 Wire (Under the Rear LH Seat)
BC2	
BD1	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BD2	
BE1	Frame Wire and Skid Control Sensor Wire (Right Side of No.5 Crossmember)
BF1	Frame No.3 Wire and Floor No.2 Wire (Rear Side of Side Frame LH)
BG1	Floor No.2 Wire and Frame No.3 Wire (Rear Side of Side Frame LH)
BH1	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)

Power Source





Power Source



Service Hints

HEAD Relay

- 5-3 : Closed with light control SW at HEAD position or dimmer SW at FLASH position
Closed with engine running and parking brake lever released (w/ daytime running light)

I18 Ignition SW

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

TAIL Relay

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

: Parts Location

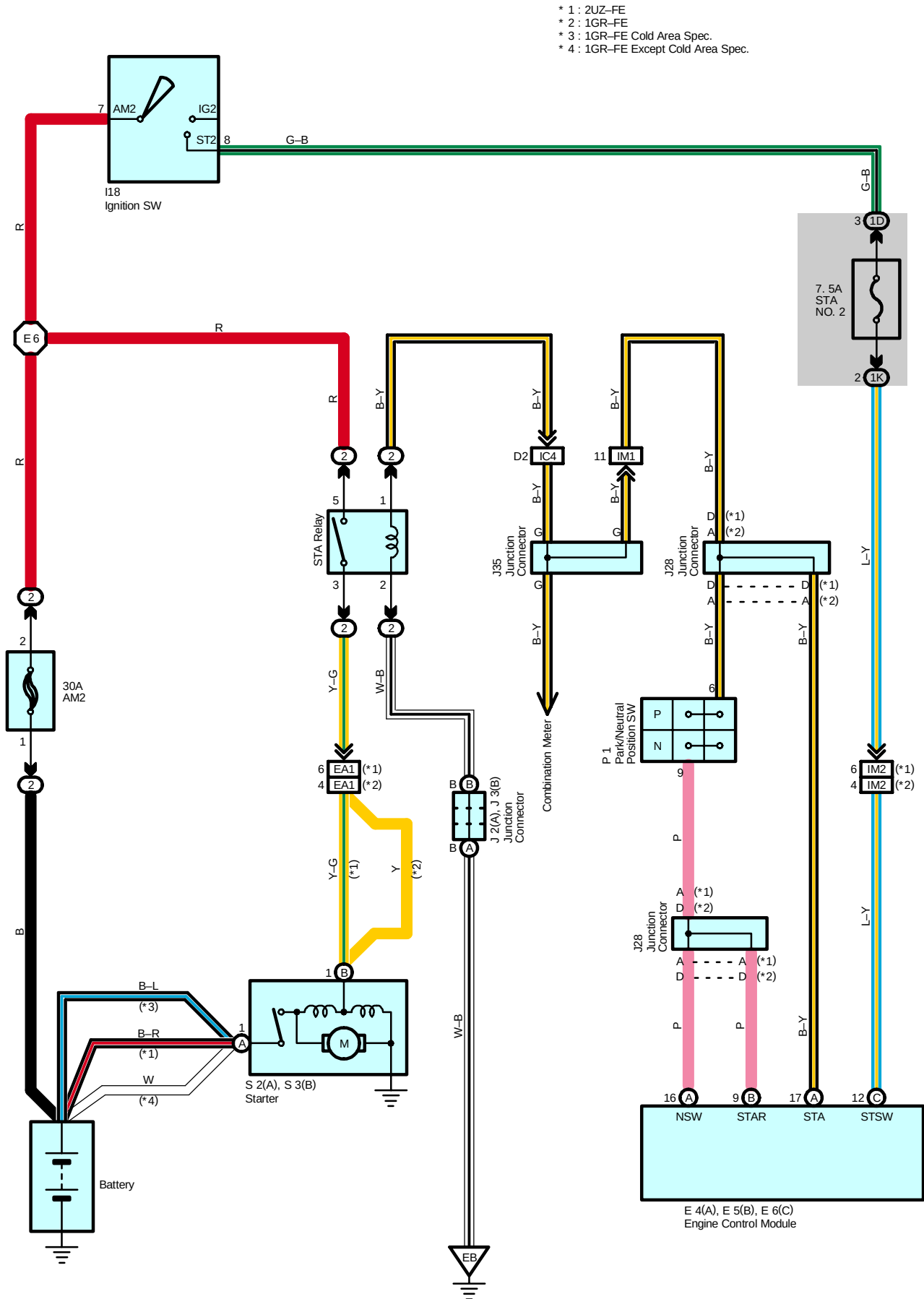
Code	See Page	Code	See Page	Code	See Page
I18	37				

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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



Service Hints

I18 Ignition SW

7-8 : Closed with the ignition SW at ST position

S2 (A), S3 (B) Starter

Points closed with the shift lever at P or N position and the ignition SW at ST position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
E4	A	J3	B	S2	A
E5	B				
E6	C	J28		S3	B
I18	37	J35			
J2	A	P1			

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
	46 (1GR-FE)	
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

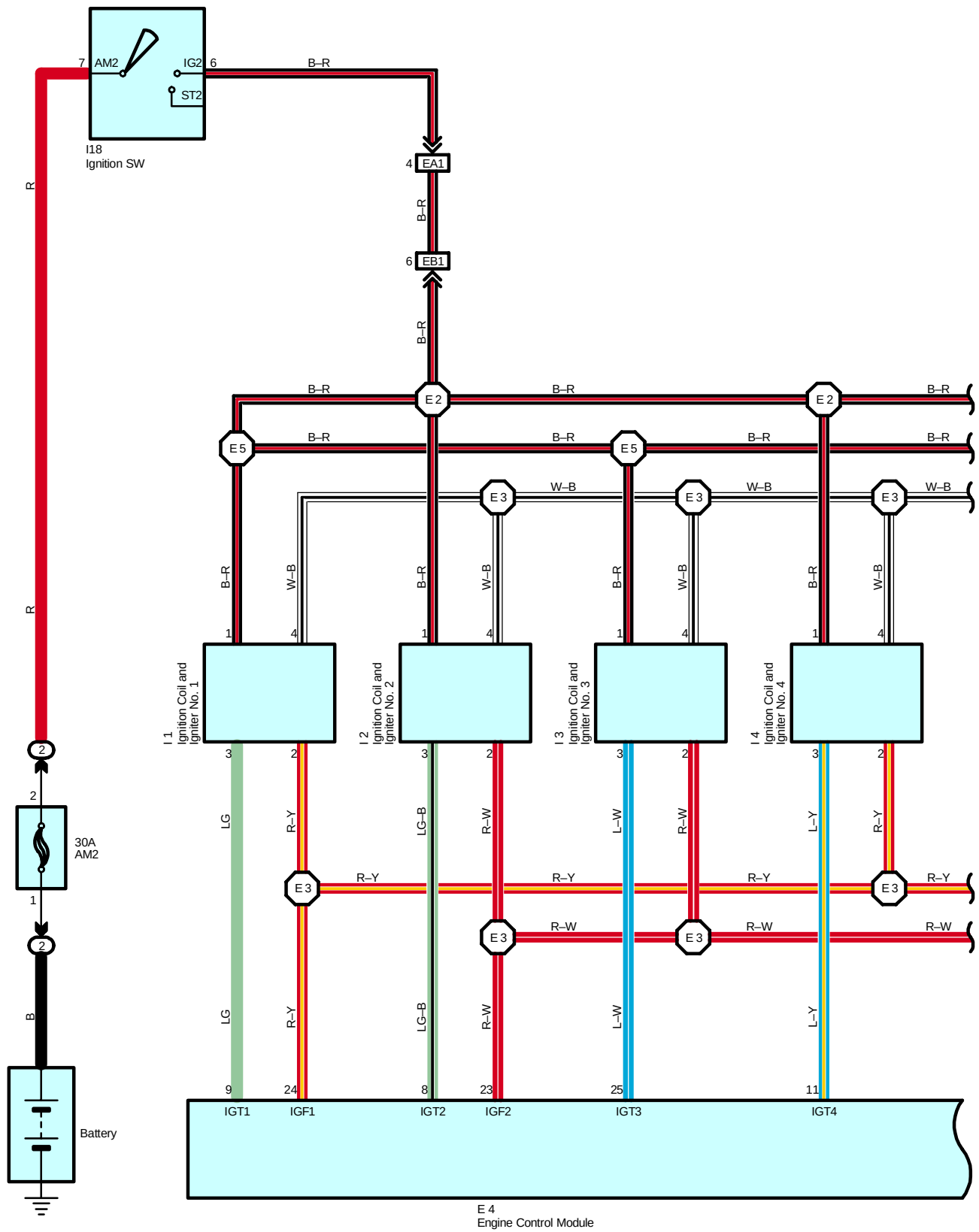
▽ : Ground Points

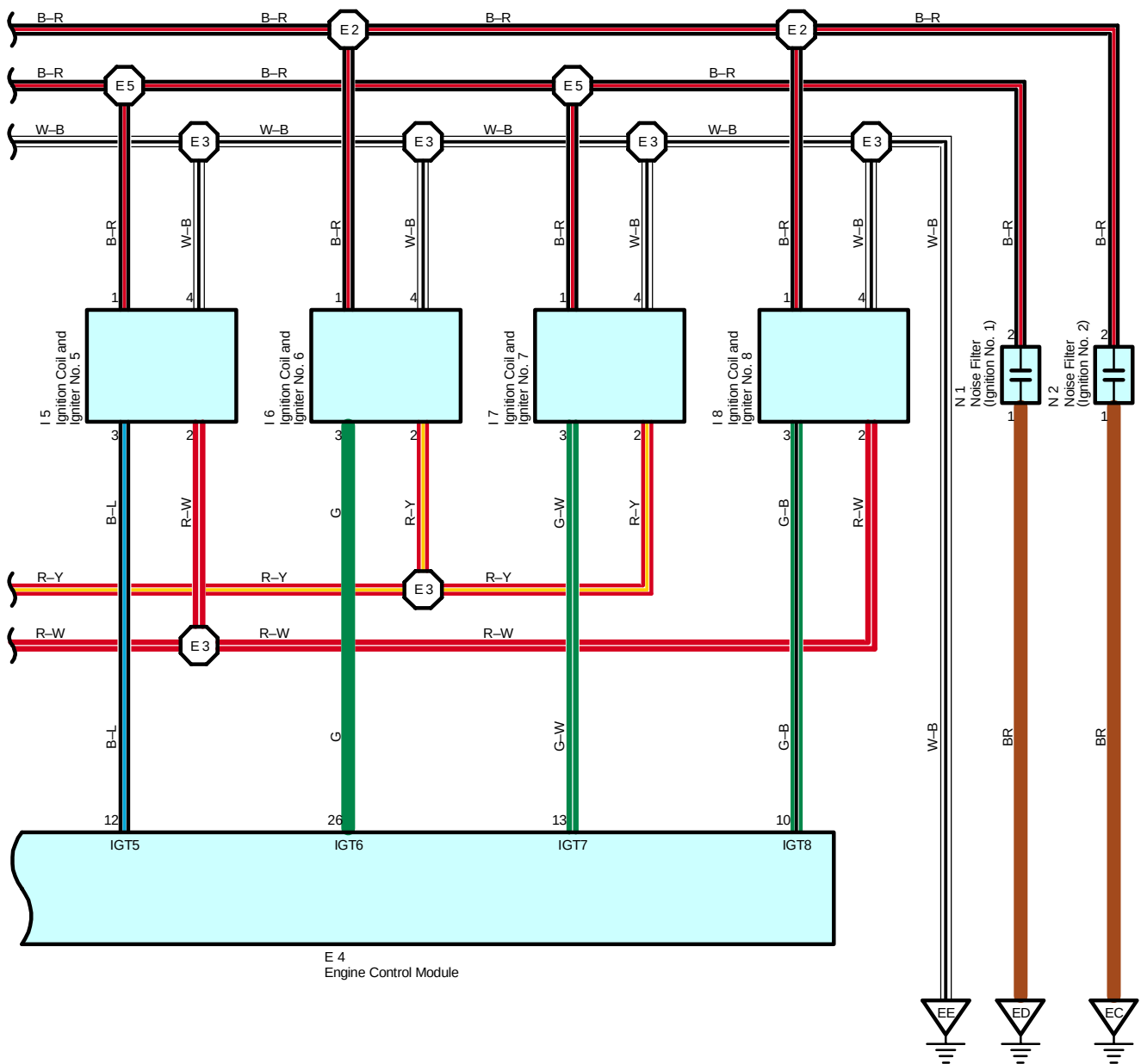
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	

○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E6	44 (2UZ-FE)	Engine Room Main Wire	E6	46 (1GR-FE)	Engine Room Main Wire

Ignition (2UZ-FE)





Ignition (2UZ-FE)

Service Hints

I18 Ignition SW

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

: Parts Location

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

: Relay Blocks

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

: Connector Joining Wire Harness and Wire Harness

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

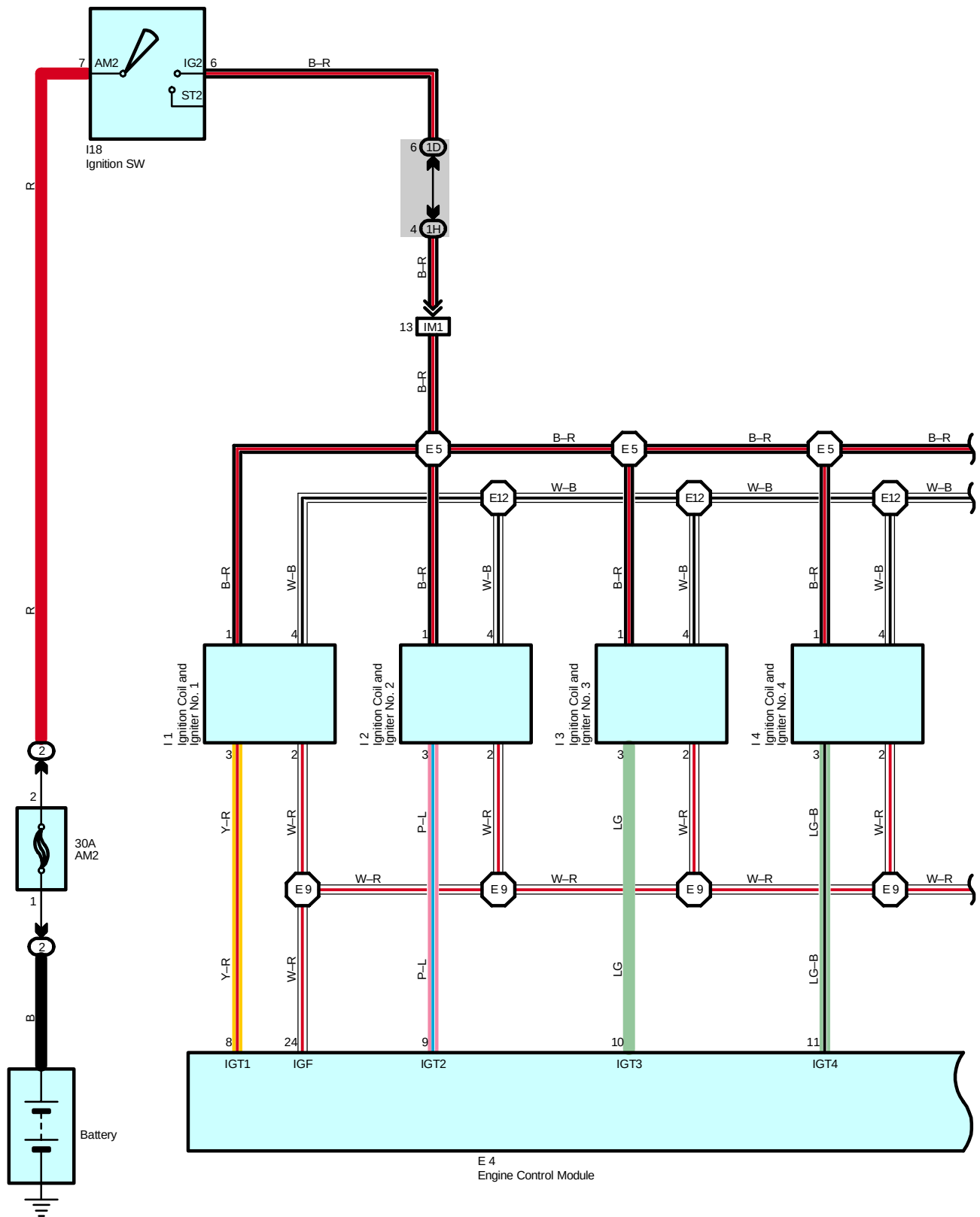
: Ground Points

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

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	44 (2UZ-FE)	Engine Wire	E5	44 (2UZ-FE)	Engine Wire
E3					

Ignition (1GR-FE)





Ignition (1GR-FE)

Service Hints

I18 Ignition SW

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

: Parts Location

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

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

: Connector Joining Wire Harness and Wire Harness

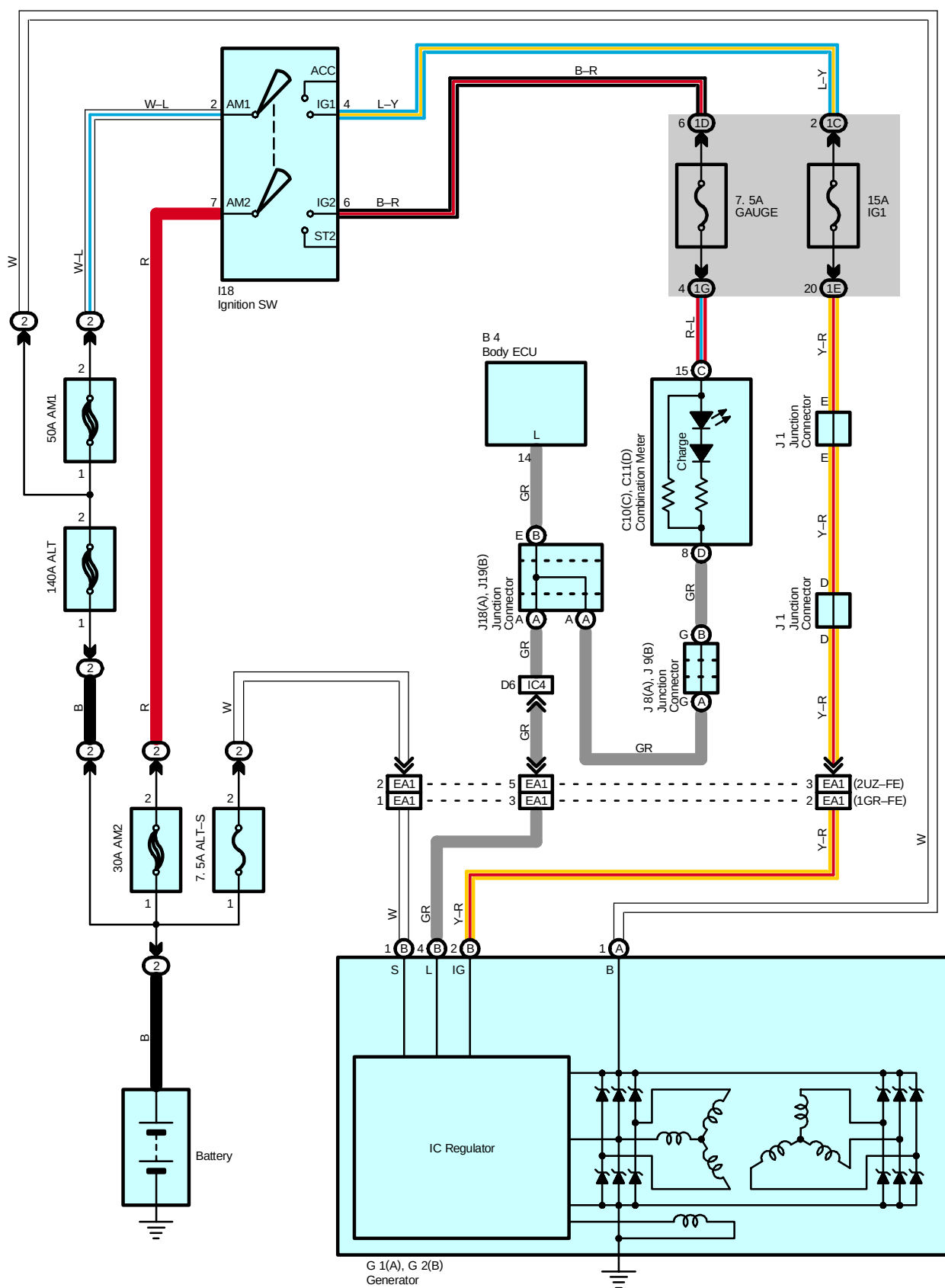
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)

: Ground Points

Code	See Page	Ground Points Location
EF	46 (1GR-FE)	Rear Side of Left Bank Cylinder Block

: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E5	46 (1GR-FE)	Engine Wire	E12	46 (1GR-FE)	Engine Wire
E9					



Service Hints

G2 (B) Generator

- (B) 1–Ground : 13.2–14.0 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	
B4		36		G2	B	32 (2UZ–FE)		J8	A	38	
C10	C	37				34 (1GR–FE)		J9	B	38	
C11	D	37		I18		37		J18	A	38	
G1	A	32 (2UZ–FE)		J1		33 (2UZ–FE)		J19	B	38	
		34 (1GR–FE)									

○ : Relay Blocks

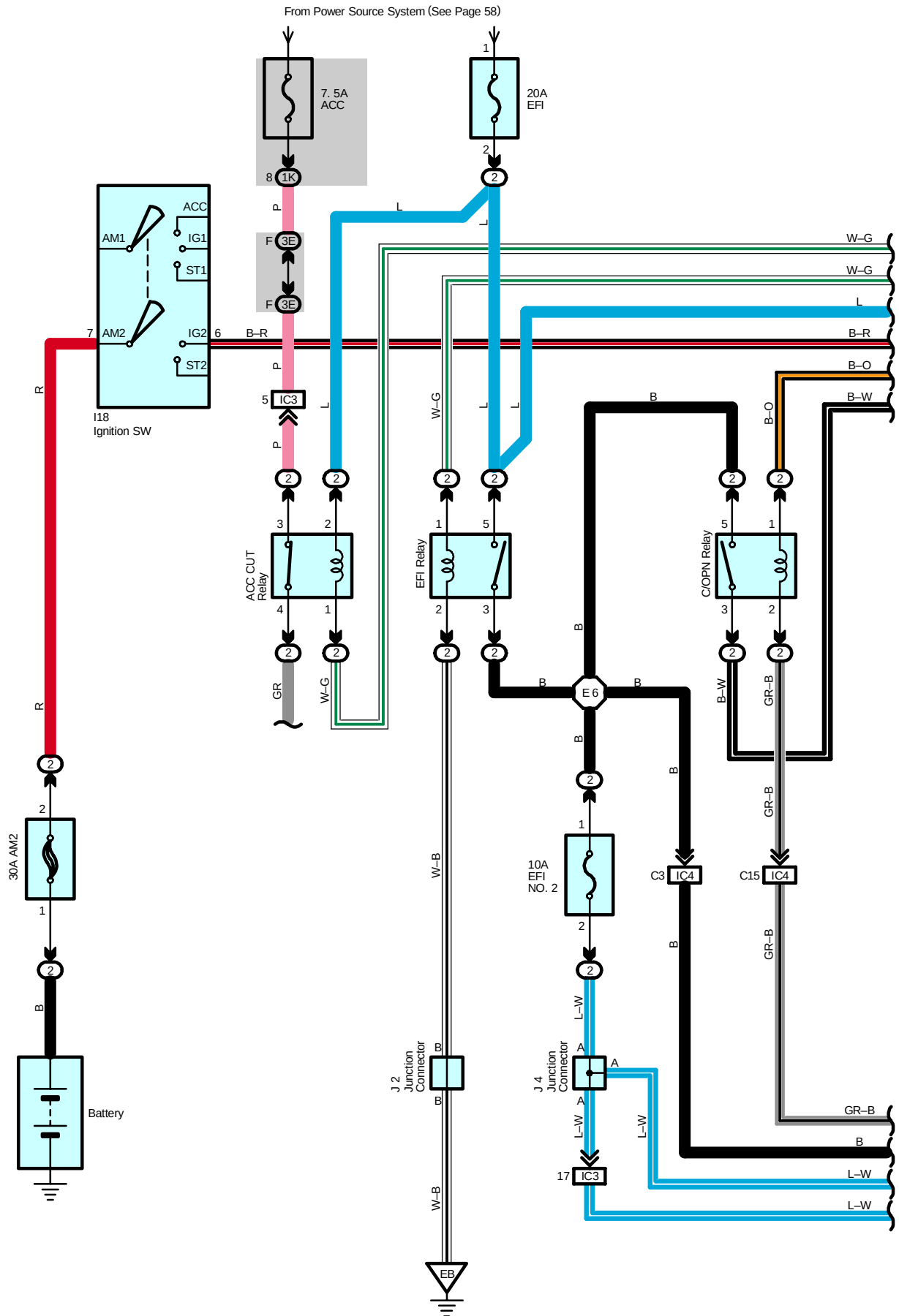
Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

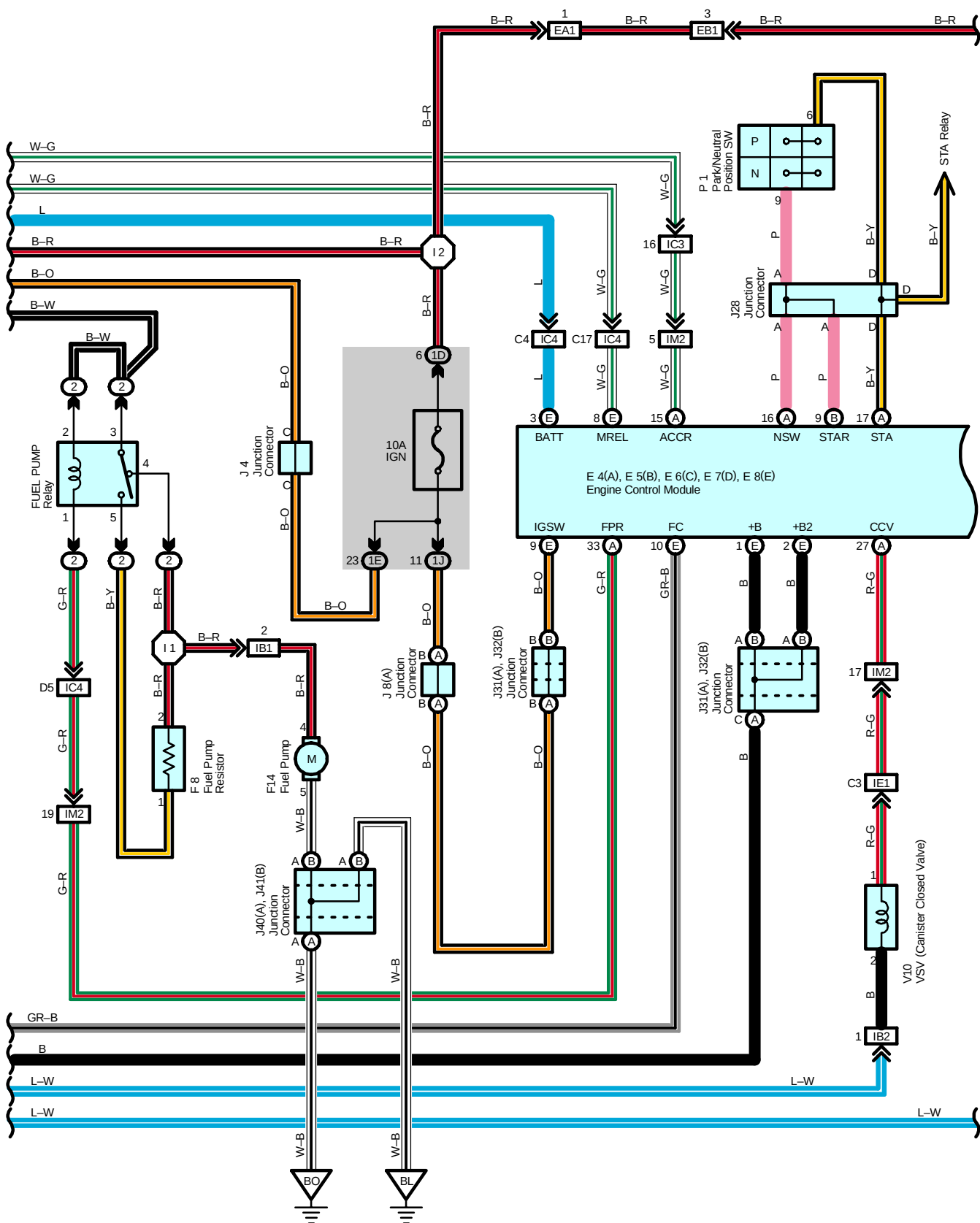
○ : Junction Block and Wire Harness Connector

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

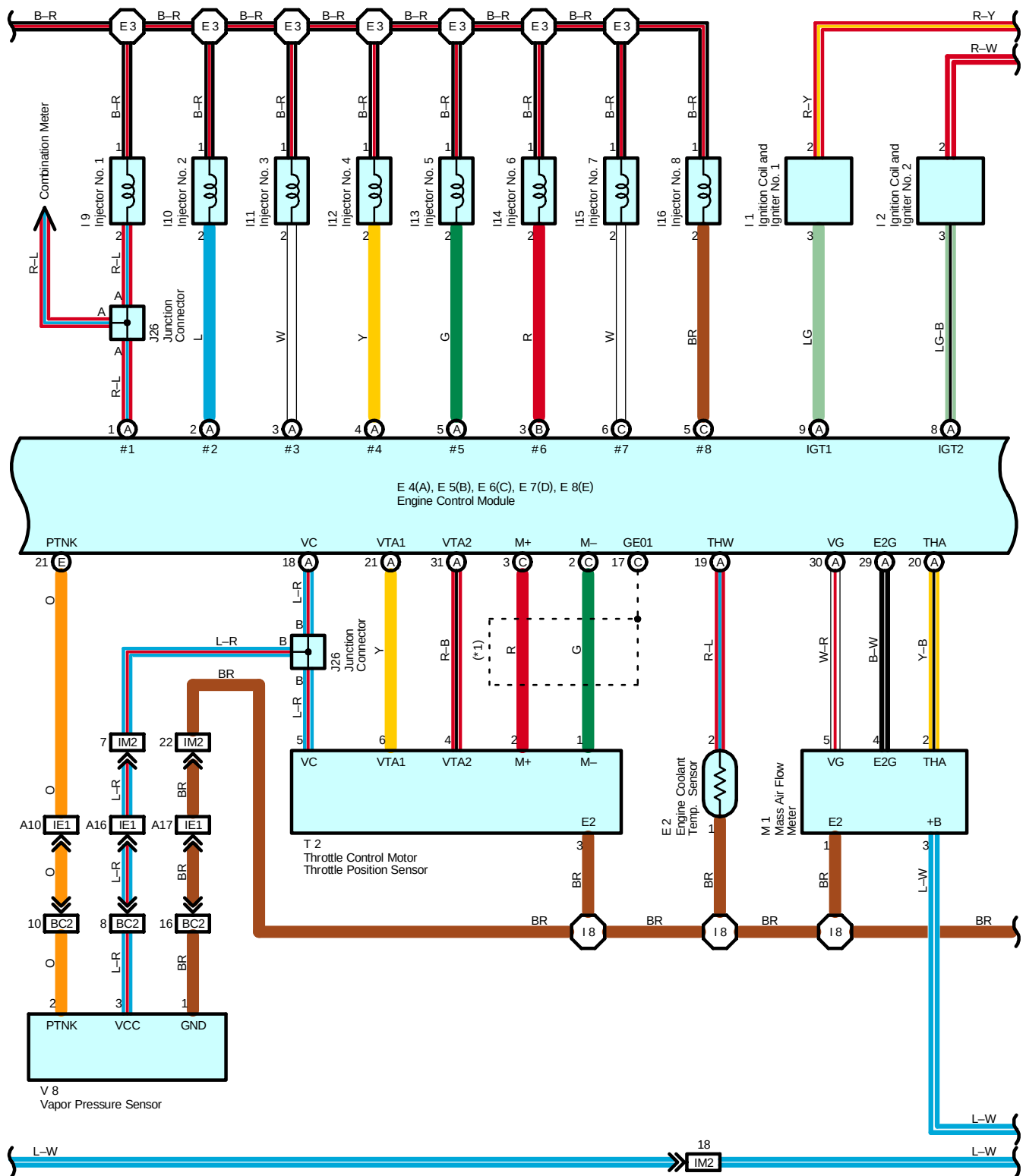
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ–FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
	46 (1GR–FE)	
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)

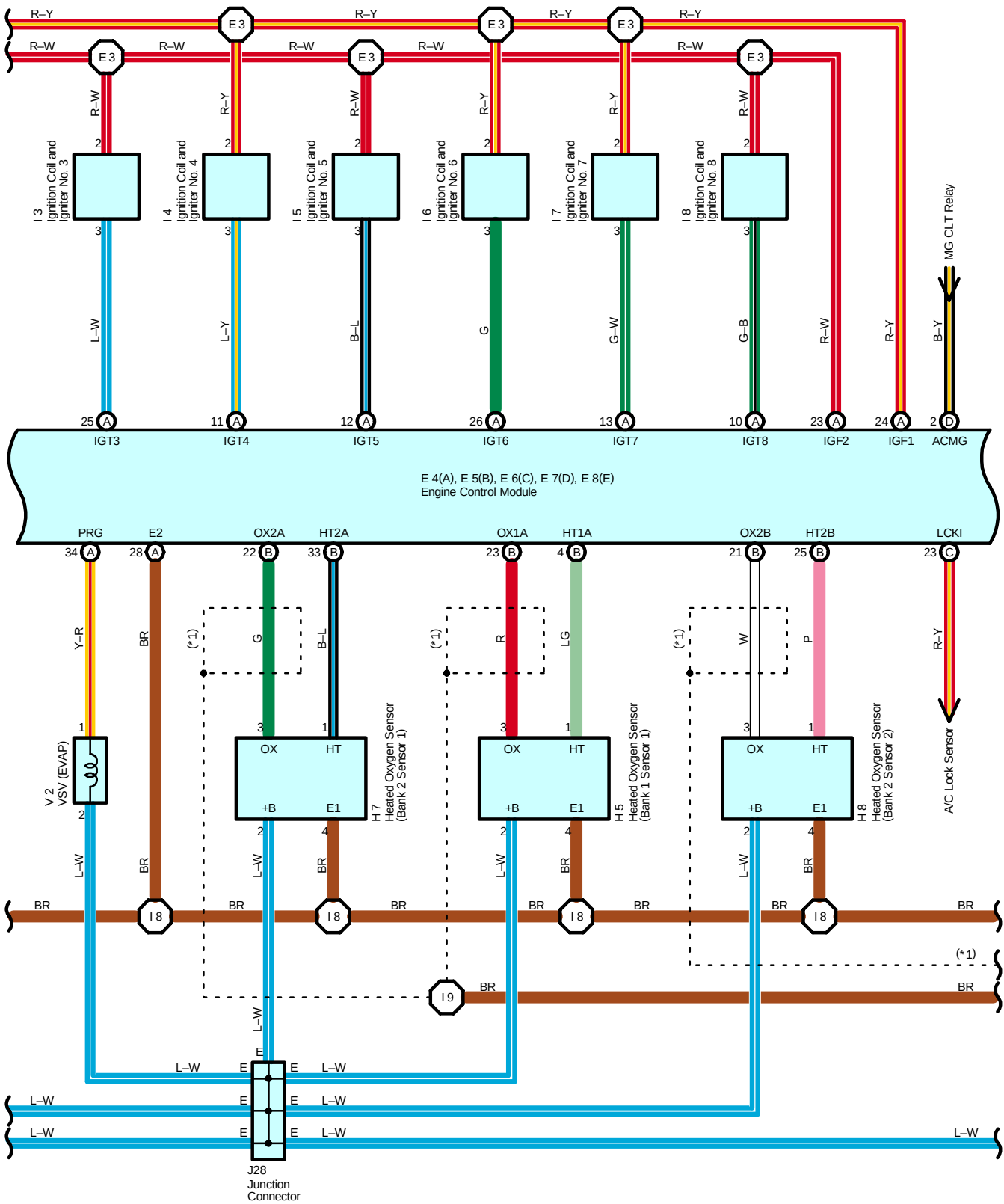


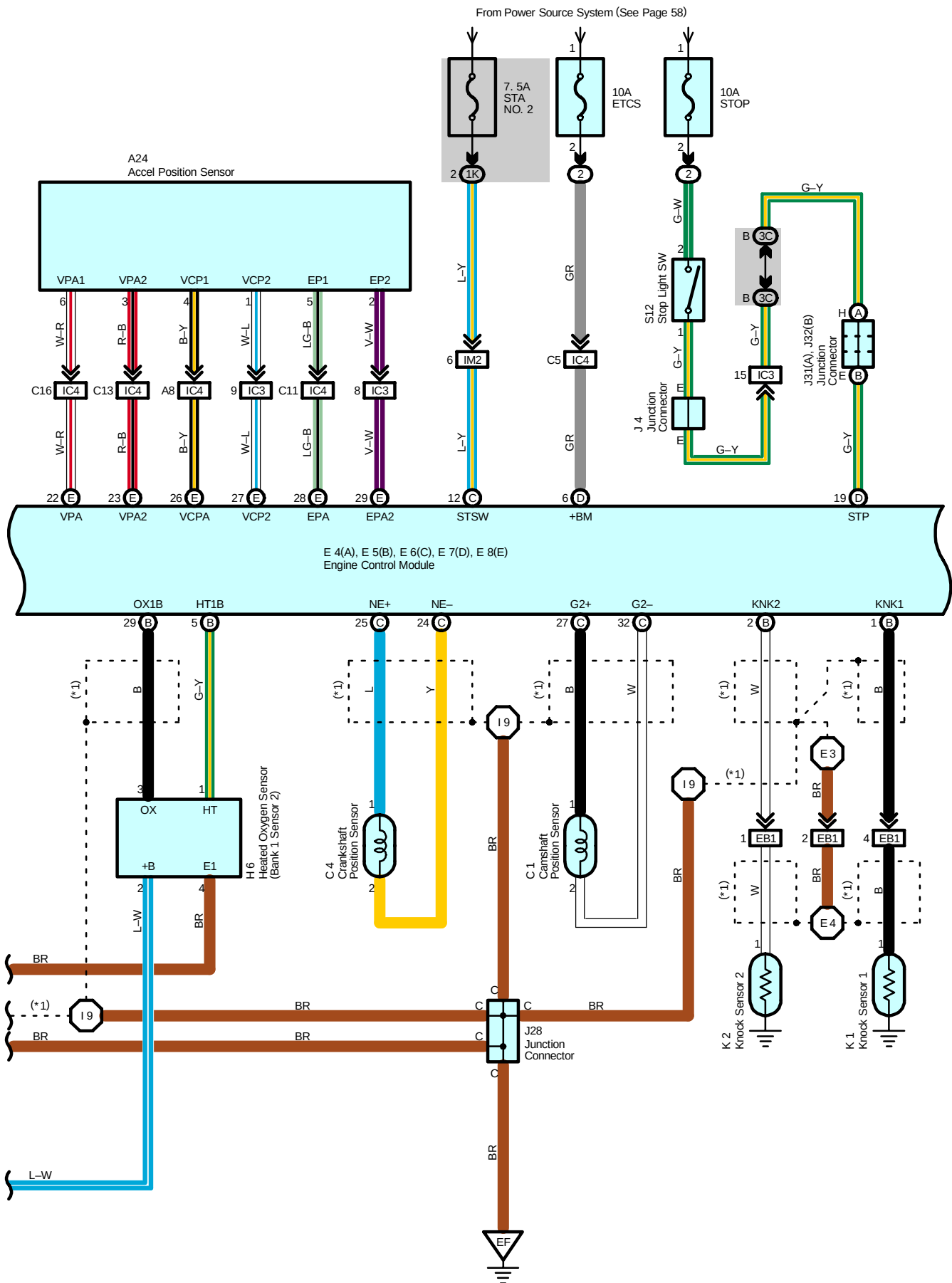


Engine Control (2UZ-FE)

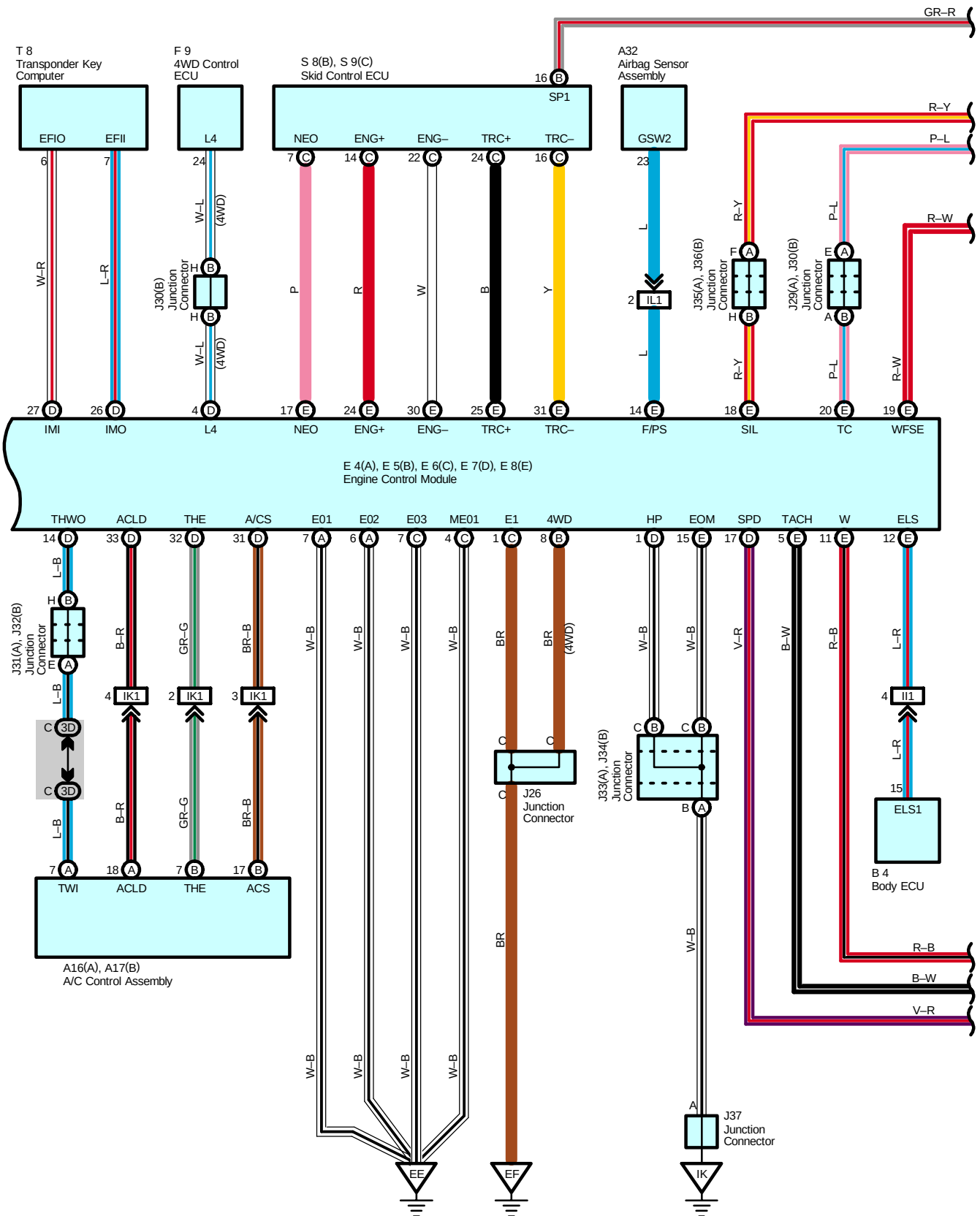


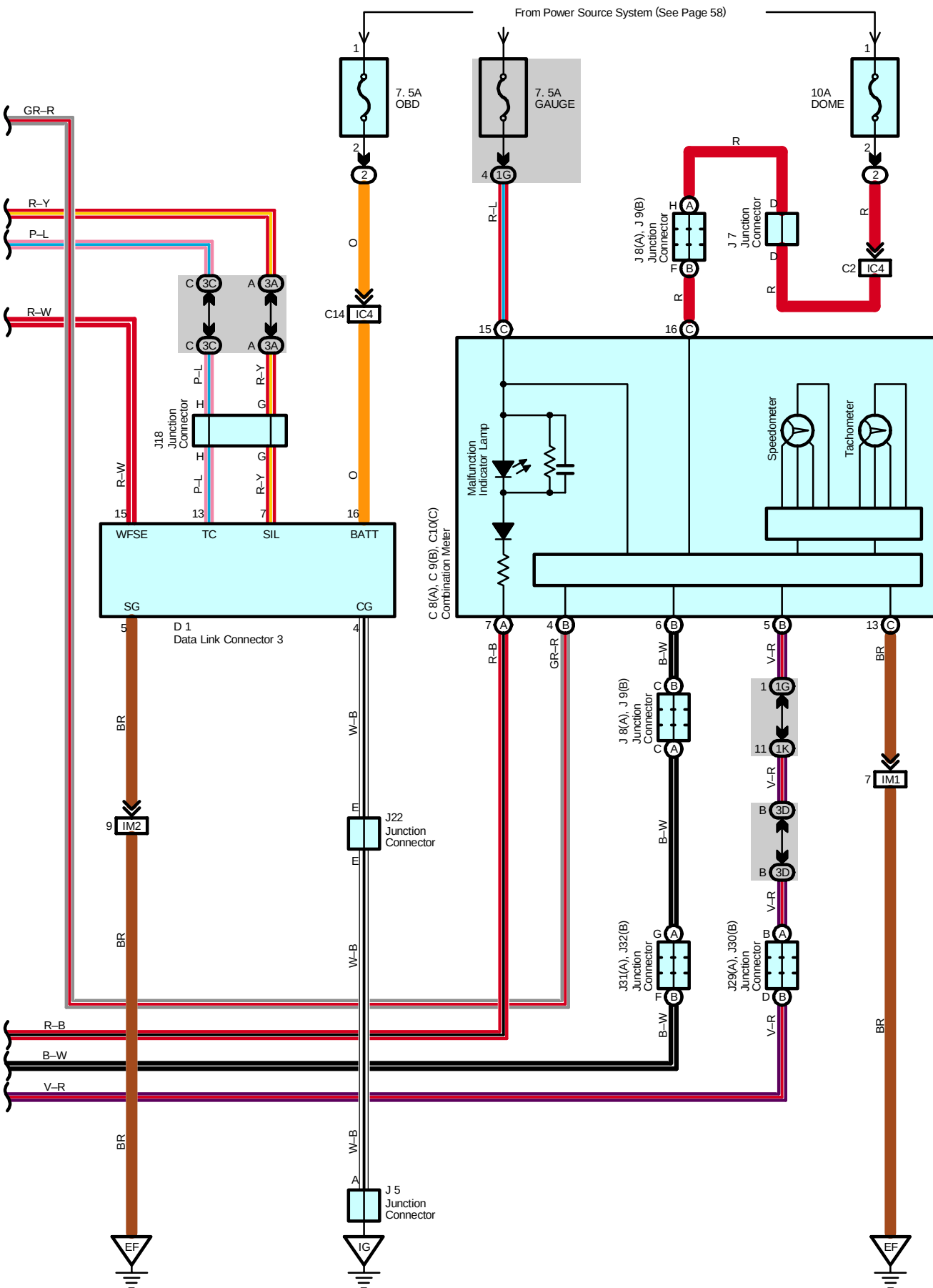
* 1 : Shielded





* 1 : Shielded





System Outline

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

1. Input Signals

- (1) Engine coolant temp. signal circuit
The engine coolant temp. sensor detects the engine coolant temp. and has a built-in thermistor with a resistance which varies according to the engine coolant temp. The engine coolant temp. is input into TERMINAL THW of the engine control module as a control signal.
- (2) Intake air temp. signal circuit
The intake air temp. sensor is installed in the mass air flow meter and detects the intake air temp., which is input as a control signal to TERMINAL THA of the engine control module.
- (3) Oxygen sensor signal circuit
The oxygen density in the exhaust emission is detected and is input as a control signal from the heated oxygen sensors to TERMINALS OX1A, OX1B, OX2A and OX2B of the engine control module.
- (4) RPM signal circuit
The camshaft position is detected by the camshaft position sensor and is input into TERMINAL G2+ of the engine control module as a control signal. Also, the engine RPM is detected by the crankshaft position sensor and the signal is input into TERMINAL NE+ of the engine control module.
- (5) Throttle position sensor signal circuit
The throttle position sensor detects the throttle valve opening angle as a control signal, which is input into TERMINALS VTA1 and VTA2 of the engine control module.
- (6) Vehicle speed circuit
The vehicle speed sensor detects the vehicle speed, and the signal is input into TERMINAL SPD of the engine control module via the combination meter, from TERMINAL SP1 of the skid control ECU.
- (7) Battery signal circuit
Voltage is constantly applied to TERMINAL BATT of the engine control module. When the ignition SW is turned on, the voltage for engine control module start up power supply is applied through the EFI relay, to TERMINALS +B and +B2 of the engine control module. The current from the IGN fuse flows to TERMINAL IGSW of the engine control module, and voltage is constantly applied to TERMINAL +BM.
- (8) Intake air volume signal circuit
The intake air volume is detected by the mass air flow meter, and is input as a control signal to TERMINAL VG of the engine control module.
- (9) Stop light SW signal circuit
The stop light SW is used to detect whether the vehicle is braking or not, and the signal is input into TERMINAL STP of the engine control module as a control signal.
- (10) Starter signal circuit
To confirm whether the engine is cranking, the voltage applied to the starter motor when the engine is cranking is detected, and is input into TERMINAL STA of the engine control module as a control signal.
- (11) Engine knock signal circuit
Engine knocking is detected by the knock sensors, and is input into TERMINALS KNK1 and KNK2 of the engine control module as a control signal.
- (12) A/C SW signal system
The operating voltage of the A/C magnetic clutch is detected and input in the form of a control signal to TERMINAL A/CS of the engine control module.

2. Control System

- * SFI system

The SFI system monitors the engine condition through the signals input from each sensors to the engine control module. The control signal is sent to the engine control module TERMINALS #1, #2, #3, #4, #5, #6, #7 and #8 to operate the injector (Fuel injection). The SFI system controls the fuel injection by the engine control module in response to the driving conditions.

- * ESA system

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

- * Heated oxygen sensor heater control system

The heated oxygen sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emission is low), and warms up the heated oxygen sensors to improve their detection performance. The engine control module evaluates the signals from each sensors, and outputs current to TERMINALS HT1A, HT1B, HT2A or HT2B to control the heater.

- * Fuel pump control system

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

- * ACIS

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

- * ETCS-i

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

- * Engine start control system

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

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

3. Diagnosis System

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

4. Fail-Safe System

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

Service Hints

EFI Relay

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

E2 Engine Coolant Temp. Sensor

1-2 : Approx. 15.0 kΩ (−20°C, −4°F)
 : Approx. 2.45 kΩ (20°C, 68°F)
 : Approx. 0.32 kΩ (80°C, 176°F)
 : Approx. 0.14 kΩ (110°C, 230°F)

E4 (A), E5 (B), E6 (C), E7 (D), E8 (E) Engine Control Module

BATT-E1 : Always 9.0–14.0 volts
 +BM-E1 : Always 9.0–14.0 volts
 IGSW-E1 : 9.0–14.0 volts with the ignition SW at ON position
 +B, +B2-E1 : 9.0–14.0 volts with the ignition SW at ON position
 VC-E1 : 4.5–5.5 volts with the ignition SW at ON position
 VTA2-E1 : 2.0–2.9 volts with the ignition SW on and throttle valve fully closed
 : 4.7–5.1 volts with the ignition SW on and throttle valve fully open
 VTA1-E1 : 0.4–1.0 volts with the ignition SW on and throttle valve fully closed
 : 3.2–4.8 volts with the ignition SW on and throttle valve fully open
 VPA-E1 : 0.3–0.9 volts with the ignition SW on and throttle valve fully closed
 : 3.2–4.8 volts with the ignition SW on and throttle valve fully open
 VPA2-E1 : 1.8–2.7 volts with the ignition SW on and throttle valve fully closed
 : 4.7–5.1 volts with the ignition SW on and throttle valve fully open
 THA-E1 : 0.5–3.4 volts with the idling, intake air temp. 0°C (32°F) –80°C (176°F)
 THW-E1 : 0.2–1.0 volts with the idling, engine coolant temp. 60°C (140°F) –120°C (248°F)
 STA-E1 : 6.0 volts or more with the engine cranking
 W-E1 : 9.0–14.0 volts with the idling and malfunction indicator lamp off
 SPD-E1 : Pulse generation with the vehicle moving
 STP-E1 : 7.5–14.0 volts with the brake pedal depressed

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
A16	A	36	I2		33 (2UZ-FE)	J28		38
A17	B	36	I3		33 (2UZ-FE)	J29	A	38
A24		36	I4		33 (2UZ-FE)	J30	B	38
A32		36	I5		33 (2UZ-FE)	J31	A	38
B4		36	I6		33 (2UZ-FE)	J32	B	38
C1		32 (2UZ-FE)	I7		33 (2UZ-FE)	J33	A	38
C4		32 (2UZ-FE)	I8		33 (2UZ-FE)	J34	B	38
C8	A	37	I9		33 (2UZ-FE)	J35	A	38
C9	B	37	I10		33 (2UZ-FE)	J36	B	38
C10	C	37	I11		33 (2UZ-FE)	J37		38
D1		37	I12		33 (2UZ-FE)	J40	A	40
E2		32 (2UZ-FE)	I13		33 (2UZ-FE)	J41	B	40
E4	A	37	I14		33 (2UZ-FE)	K1		33 (2UZ-FE)
E5	B	37	I15		33 (2UZ-FE)	K2		33 (2UZ-FE)
E6	C	37	I16		33 (2UZ-FE)	M1		33 (2UZ-FE)
E7	D	37	I18		37	P1		33 (2UZ-FE)
E8	E	37	J2		33 (2UZ-FE)	S8	B	39
F8		32 (2UZ-FE)	J4		38	S9	C	39
F9		37	J5		38	S12		39
F14		40	J7		38	T2		33 (2UZ-FE)
H5		32 (2UZ-FE)	J8	A	38	T8		39
H6		32 (2UZ-FE)	J9	B	38	V2		33 (2UZ-FE)
H7		32 (2UZ-FE)	J18		38	V8		41
H8		32 (2UZ-FE)	J22		38	V10		41
I1		33 (2UZ-FE)	J26		38			

Engine Control (2UZ-FE)

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EB1	44 (2UZ-FE)	Engine No.2 Wire and Engine Wire (Near the Starter)
IB1	48	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IB2		
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
II1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IK1	50	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IL1	50	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
BC2	54	Frame Wire and Floor No.2 Wire (Under the Rear LH Seat)

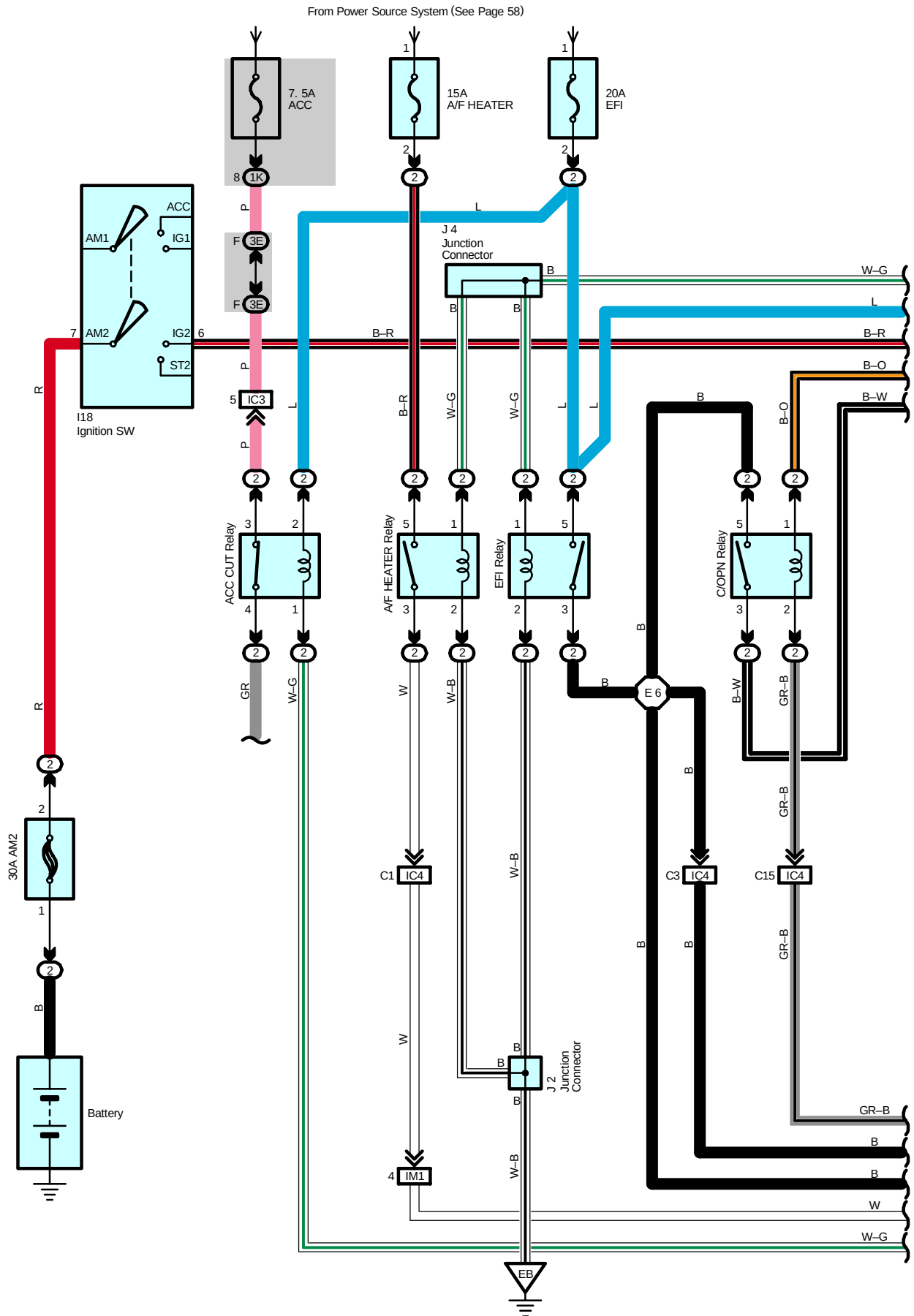
: Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
EE	44 (2UZ-FE)	Rear Side of Right Bank Cylinder Block
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
IG	48	Left Kick Panel
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

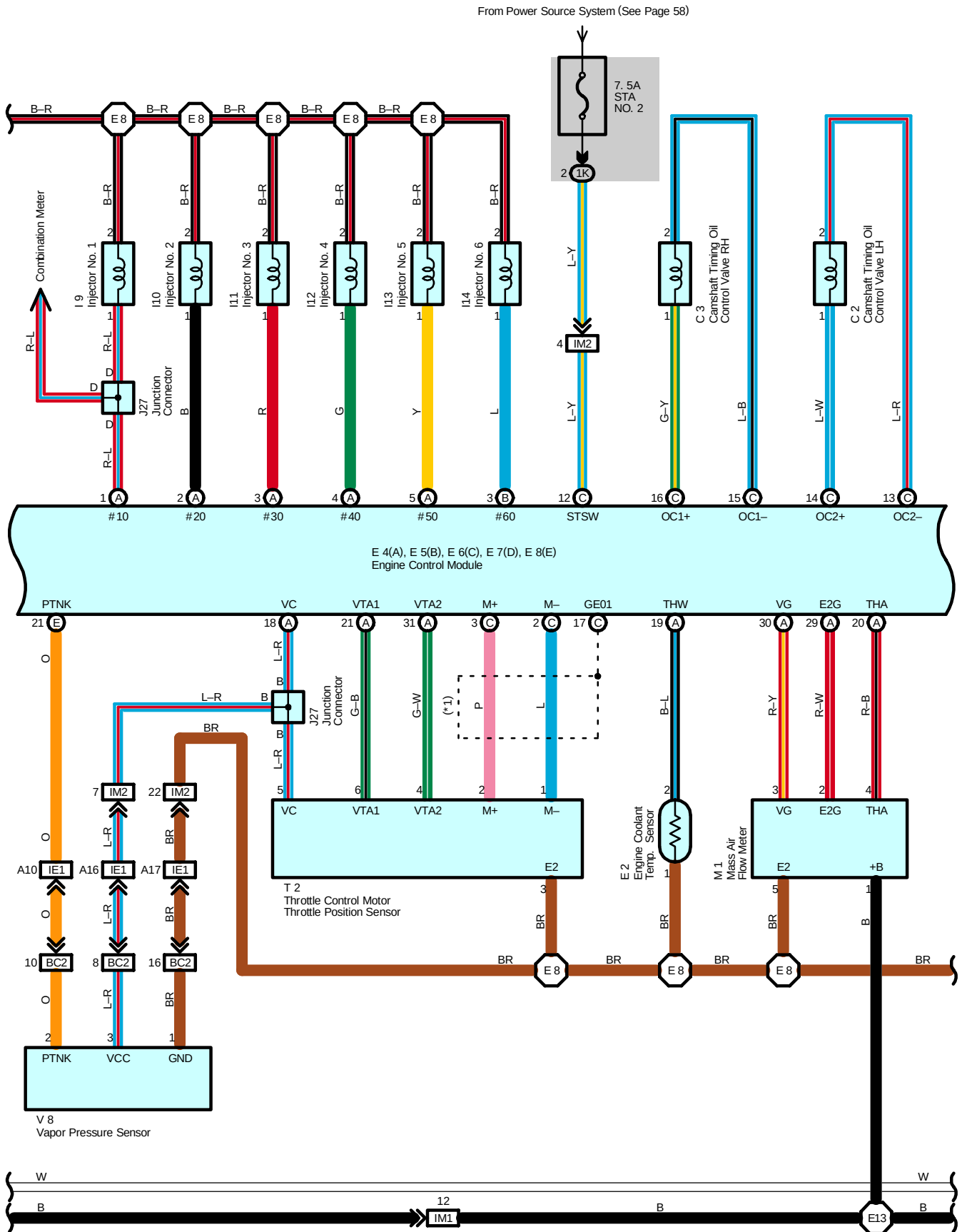
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	44 (2UZ-FE)	Engine Wire	I2	50	Engine Room Main Wire
E4	44 (2UZ-FE)	Engine No.2 Wire	I8	50	Engine Wire
E6	44 (2UZ-FE)	Engine Room Main Wire	I9		
I1	50				

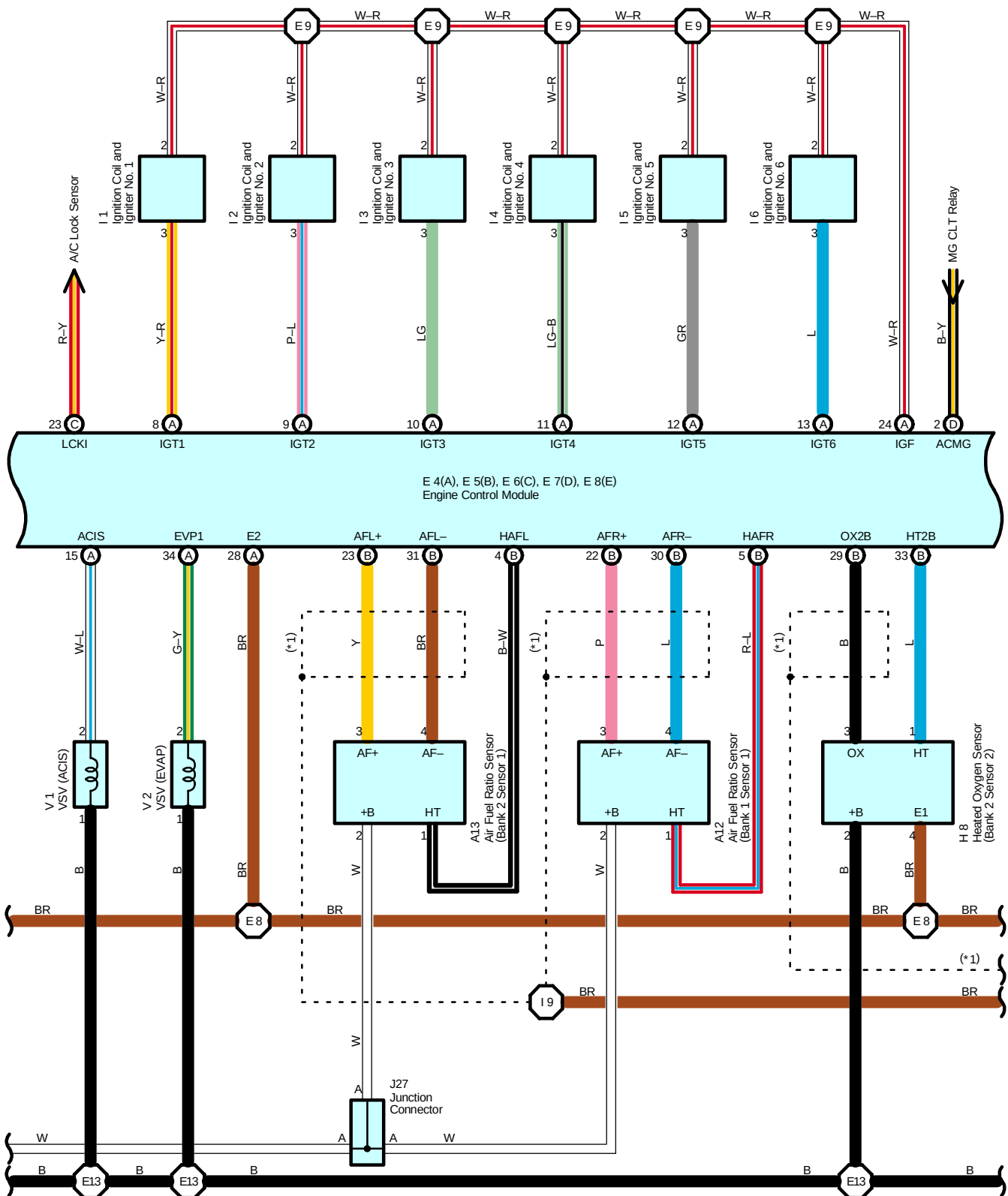
Engine Control (1GR-FE)

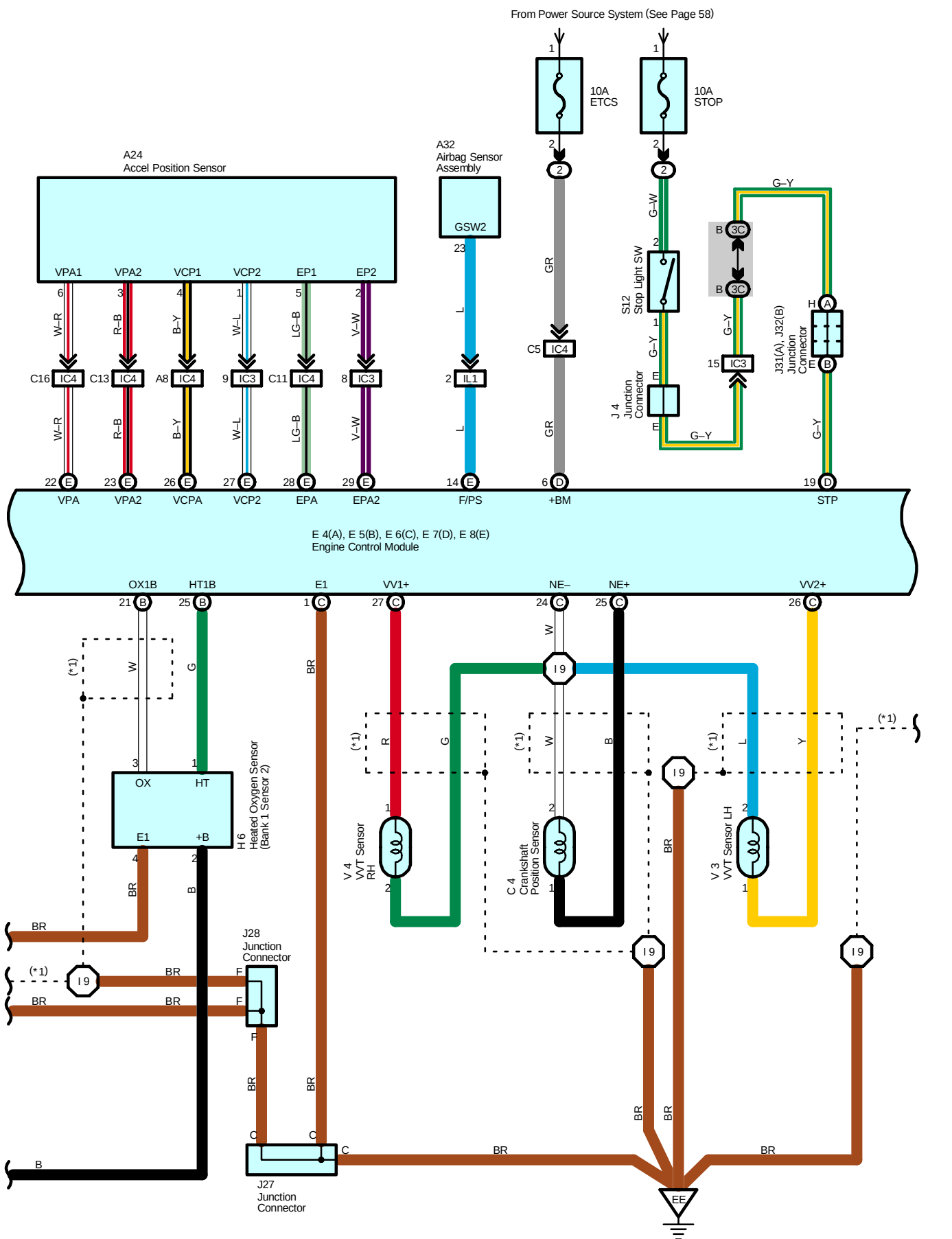


Engine Control (1GR-FE)

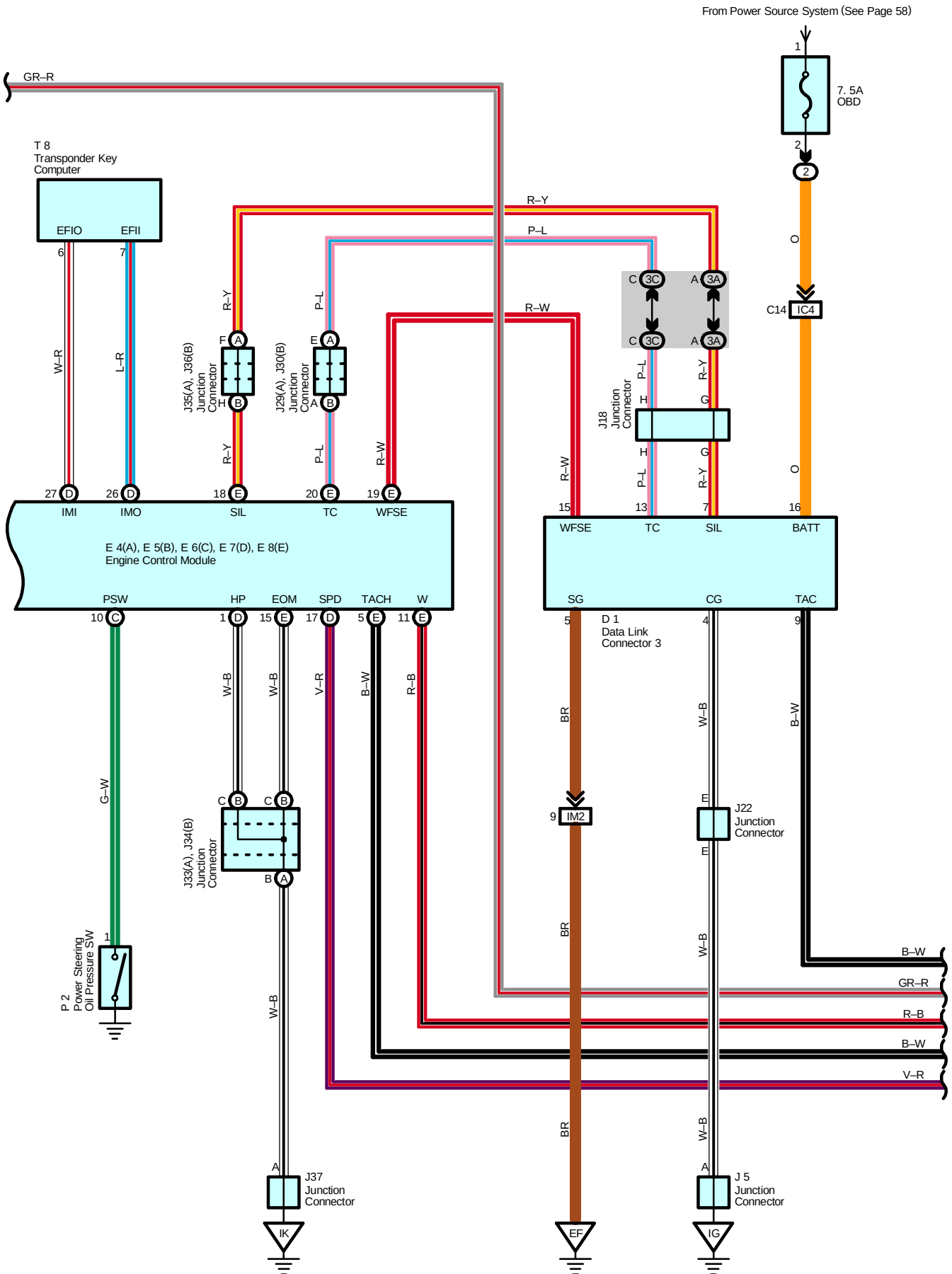


* 1 : Shielded





Engine Control (1GR-FE)



Engine Control (1GR-FE)

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A11	34 (1GR-FE)	I1	35 (1GR-FE)	J31	A 38
A12	34 (1GR-FE)	I2	35 (1GR-FE)	J32	B 38
A13	34 (1GR-FE)	I3	35 (1GR-FE)	J33	A 38
A16	A 36	I4	35 (1GR-FE)	J34	B 38
A17	B 36	I5	35 (1GR-FE)	J35	A 38
A24	36	I6	35 (1GR-FE)	J36	B 38
A32	36	I9	35 (1GR-FE)	J37	38
C2	34 (1GR-FE)	I10	35 (1GR-FE)	J40	A 40
C3	34 (1GR-FE)	I11	35 (1GR-FE)	J41	B 40
C4	34 (1GR-FE)	I12	35 (1GR-FE)	K1	35 (1GR-FE)
C8	A 37	I13	35 (1GR-FE)	K2	35 (1GR-FE)
C9	B 37	I14	35 (1GR-FE)	M1	35 (1GR-FE)
C10	C 37	I18	37	P1	35 (1GR-FE)
D1	37	J2	35 (1GR-FE)	P2	35 (1GR-FE)
E2	34 (1GR-FE)	J4	38	S8	B 39
E4	A 37	J5	38	S9	C 39
E5	B 37	J7	38	S12	39
E6	C 37	J8	A 38	T2	35 (1GR-FE)
E7	D 37	J9	B 38	T8	39
E8	E 37	J16	38	V1	35 (1GR-FE)
F8	34 (1GR-FE)	J18	38	V2	35 (1GR-FE)
F9	A 37	J22	38	V3	35 (1GR-FE)
F10	B 37	J27	38	V4	35 (1GR-FE)
F14	40	J28	38	V8	41
H6	34 (1GR-FE)	J29	A 38	V10	41
H8	34 (1GR-FE)	J30	B 38		

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	46 (1GR-FE)	Engine Wire and Differential Wire (Near the Front Differential)
ED1	46 (1GR-FE)	Engine Wire and Sensor Wire (Rear Side of Right Bank Cylinder Block)
IB1	48	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IB2		
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IK1	50	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IL1	50	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
BC2	54	Frame Wire and Floor No.2 Wire (Under the Rear LH Seat)

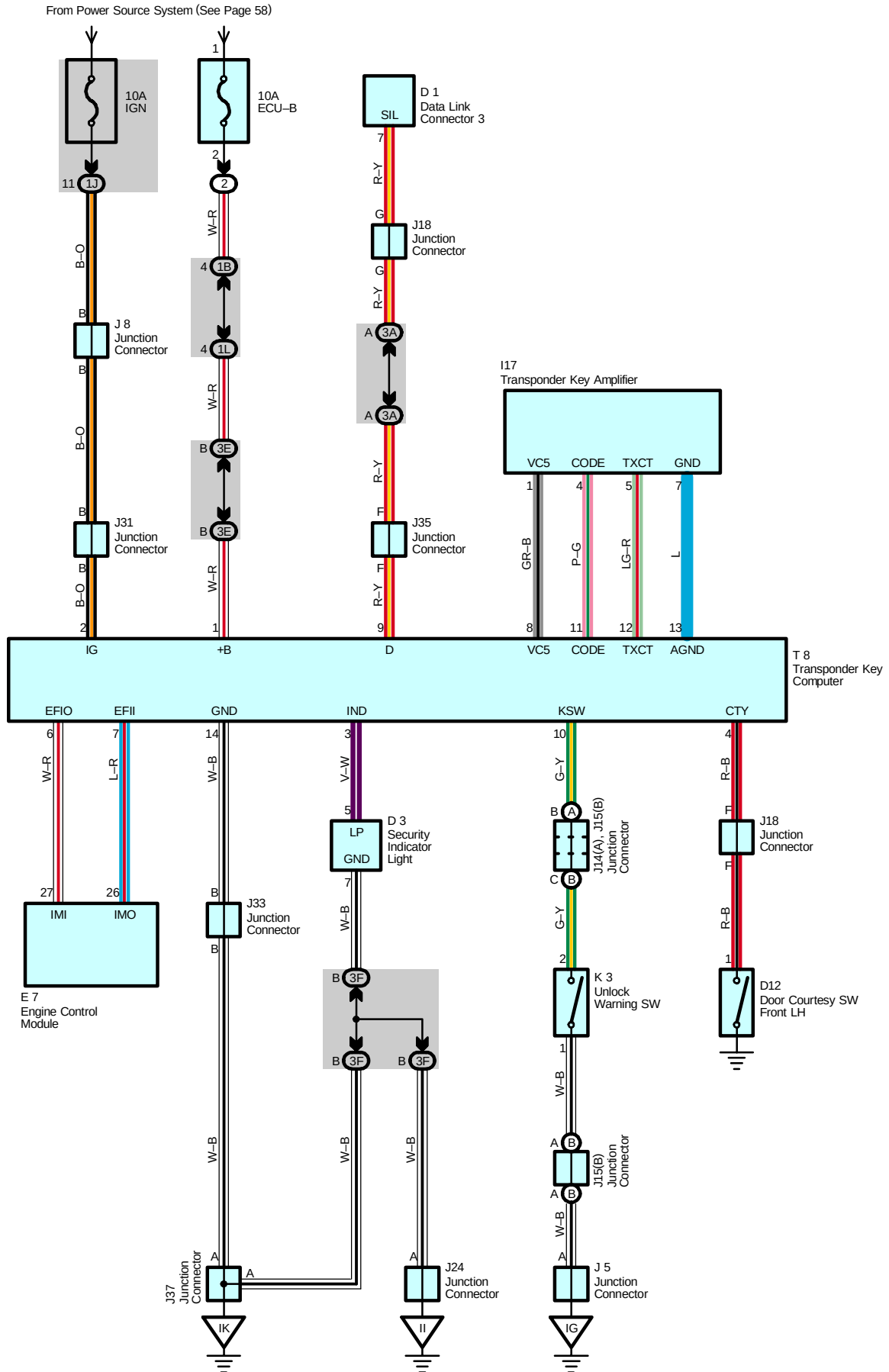
 : **Ground Points**

Code	See Page	Ground Points Location
EB	46 (1GR-FE)	Front Left Fender
EE	46 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	46 (1GR-FE)	Rear Side of Left Bank Cylinder Block
IG	48	Left Kick Panel
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

 : **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E6	46 (1GR-FE)	Engine Room Main Wire	E11	46 (1GR-FE)	Sensor Wire
E8	46 (1GR-FE)	Engine Wire	E13	46 (1GR-FE)	Engine Wire
E9			I1	50	Engine Room Main Wire
E10			I9	50	Engine Wire

Engine Immobiliser System



Service Hints

T8 Transponder Key Computer

- 1-Ground : Always approx. 12 volts
- 14-Ground : Always continuity
- 2-Ground : Approx. 12 volts with ignition SW at ON position

○ : Parts Location

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

○ : Relay Blocks

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

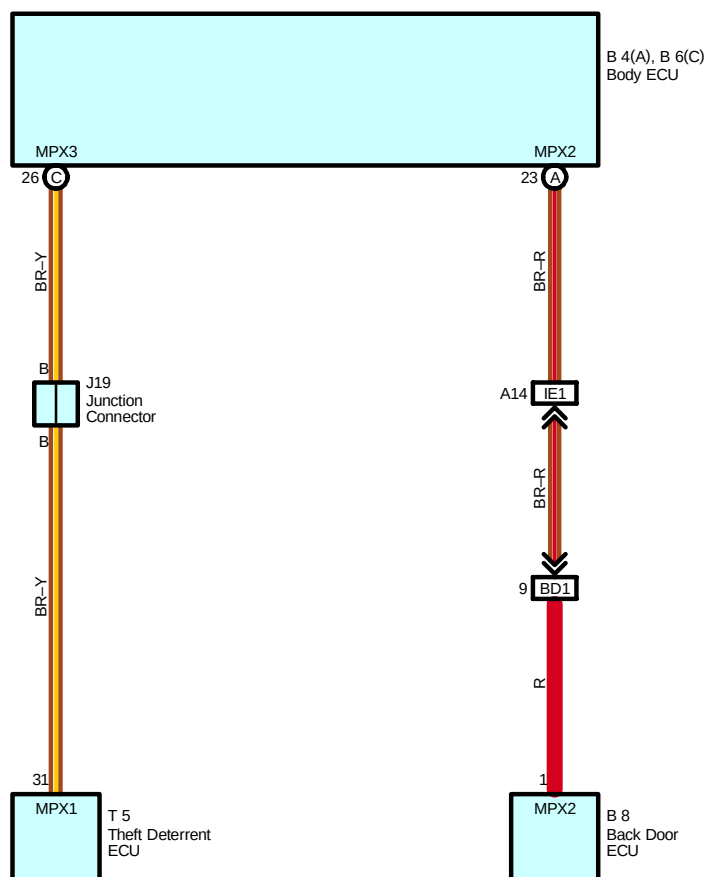
○ : Junction Block and Wire Harness Connector

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

▽ : Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel

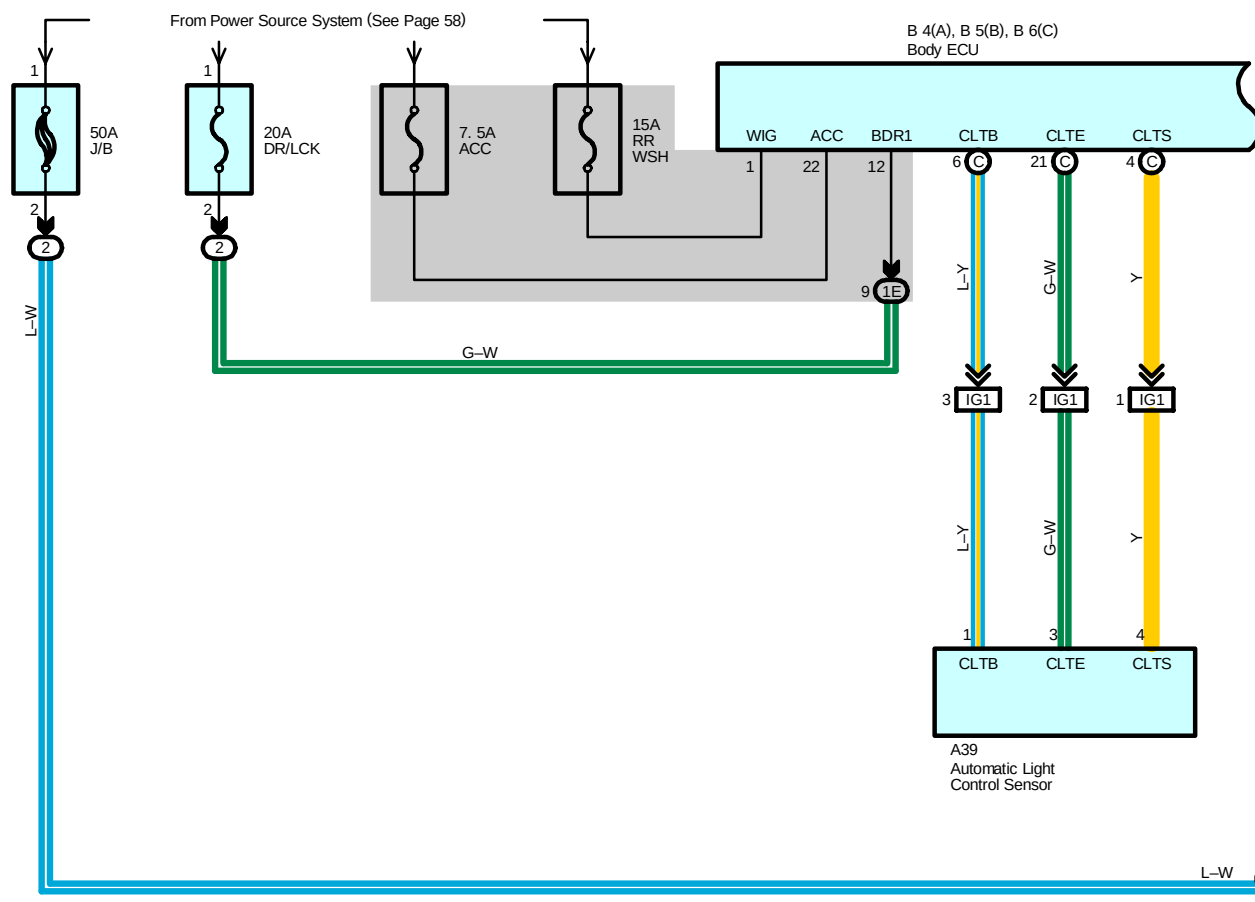
Multiplex Communication System (Communication Bus)

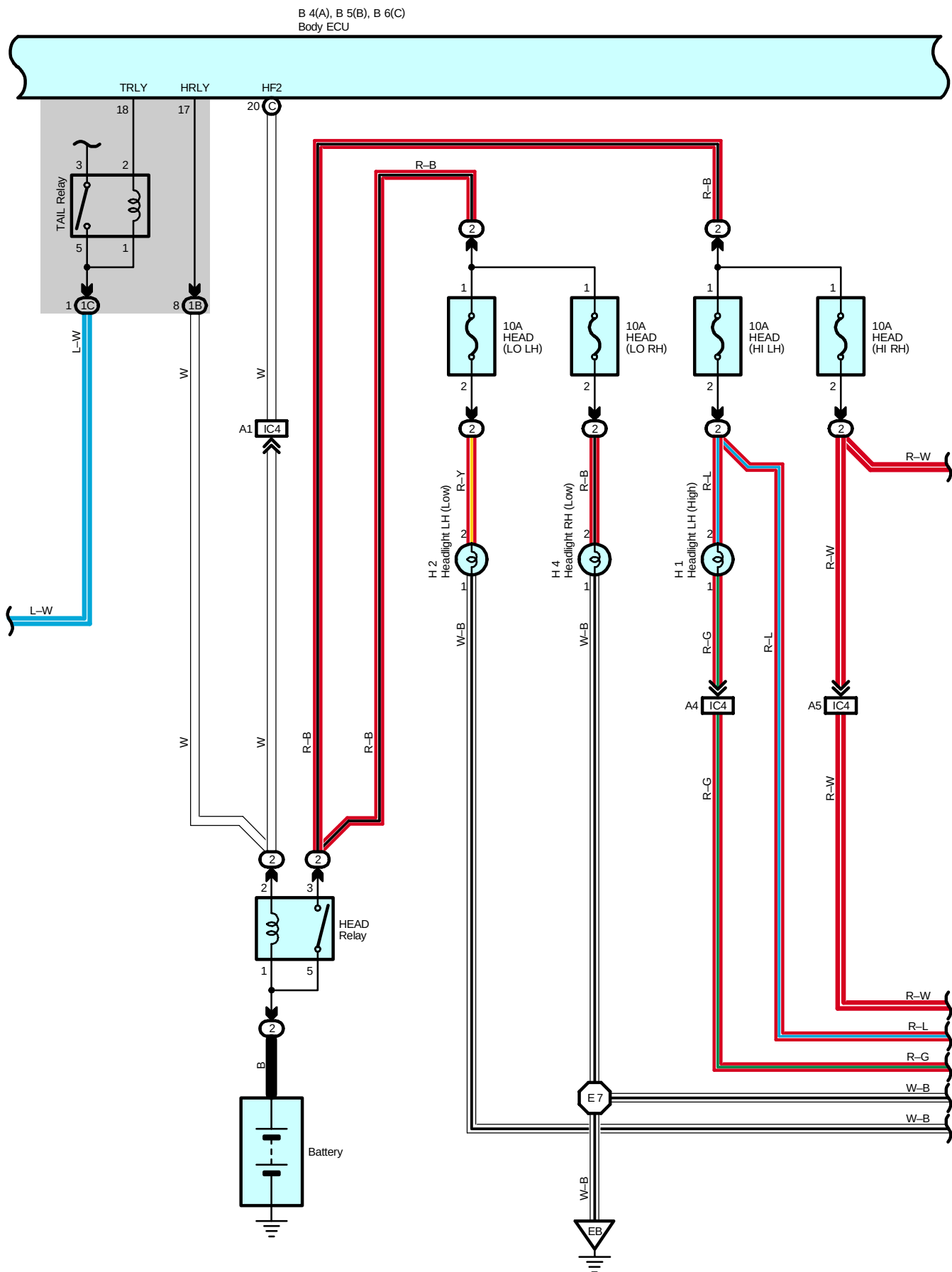


Multiplex Communication System Includes Following Systems

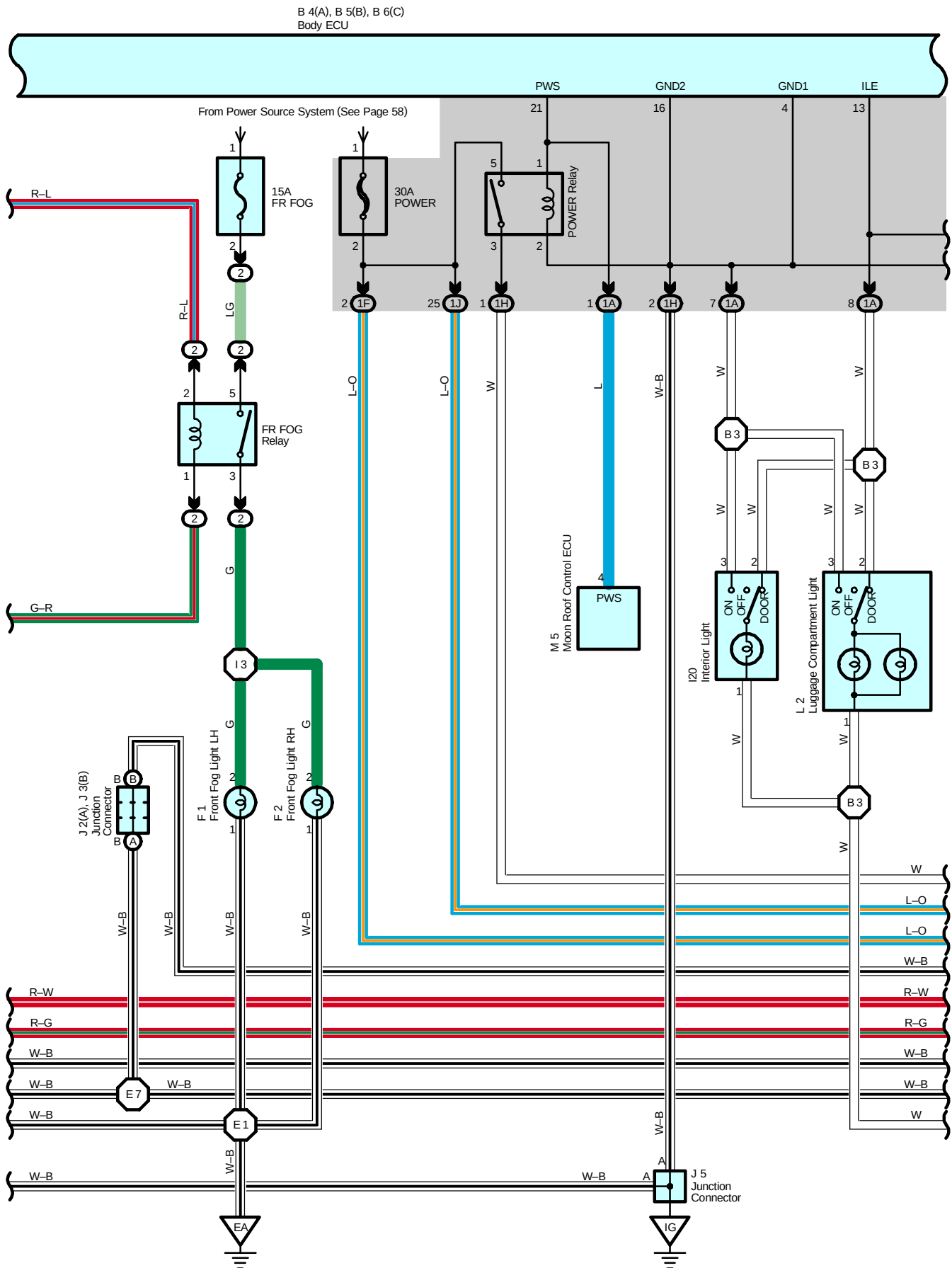
- * **Automatic Light Control**
- * **Door Lock Control**
- * **Front Fog Light**
- * **Garage Door Opener**
- * **Headlight**
- * **Interior Light**
- * **Key Reminder**
- * **Light Auto Turn Off**
- * **Mirror Heater**
- * **Power Window**
- * **Rear Window Defogger**
- * **Rear Wiper and Washer**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

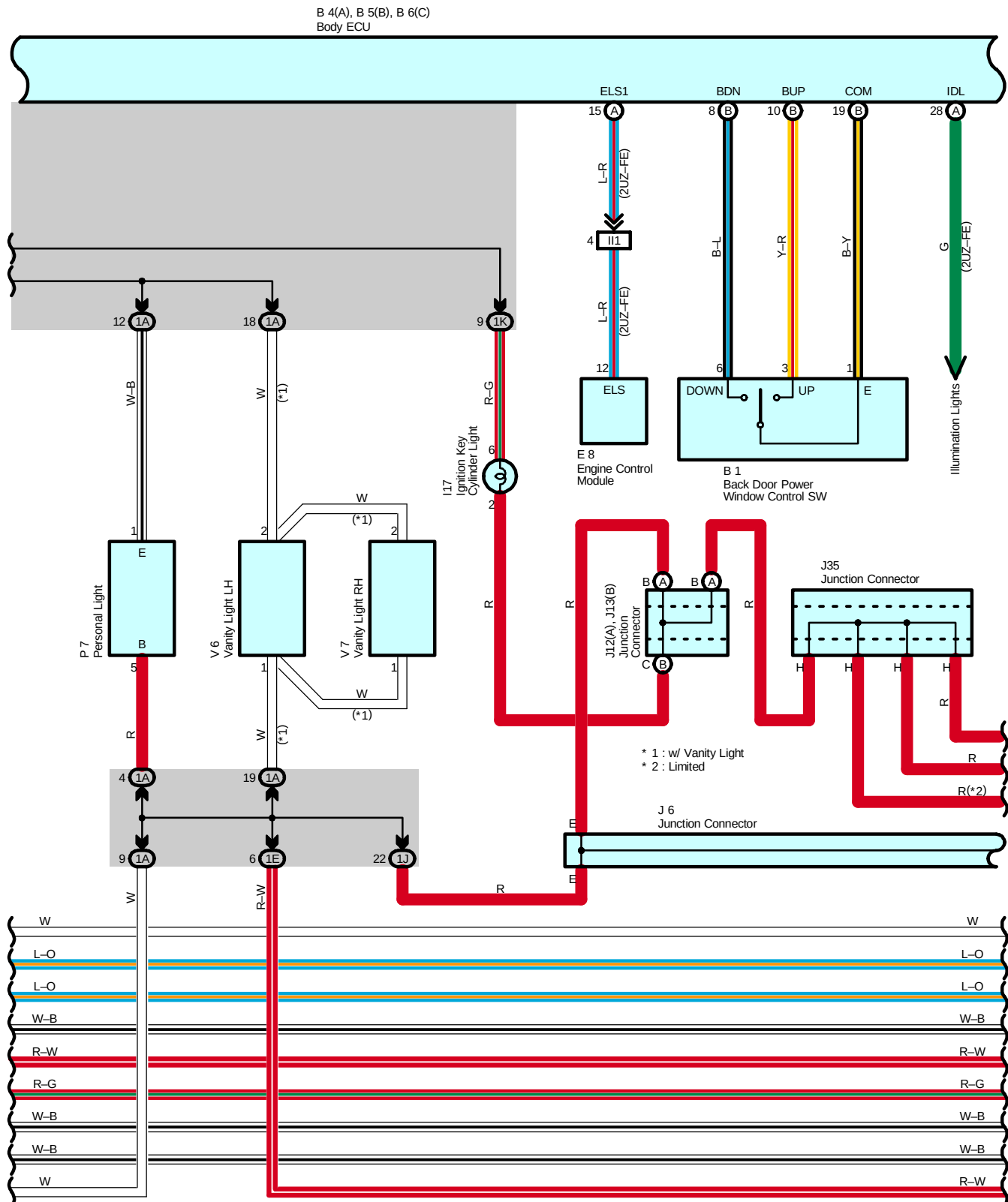
Multiplex Communication System

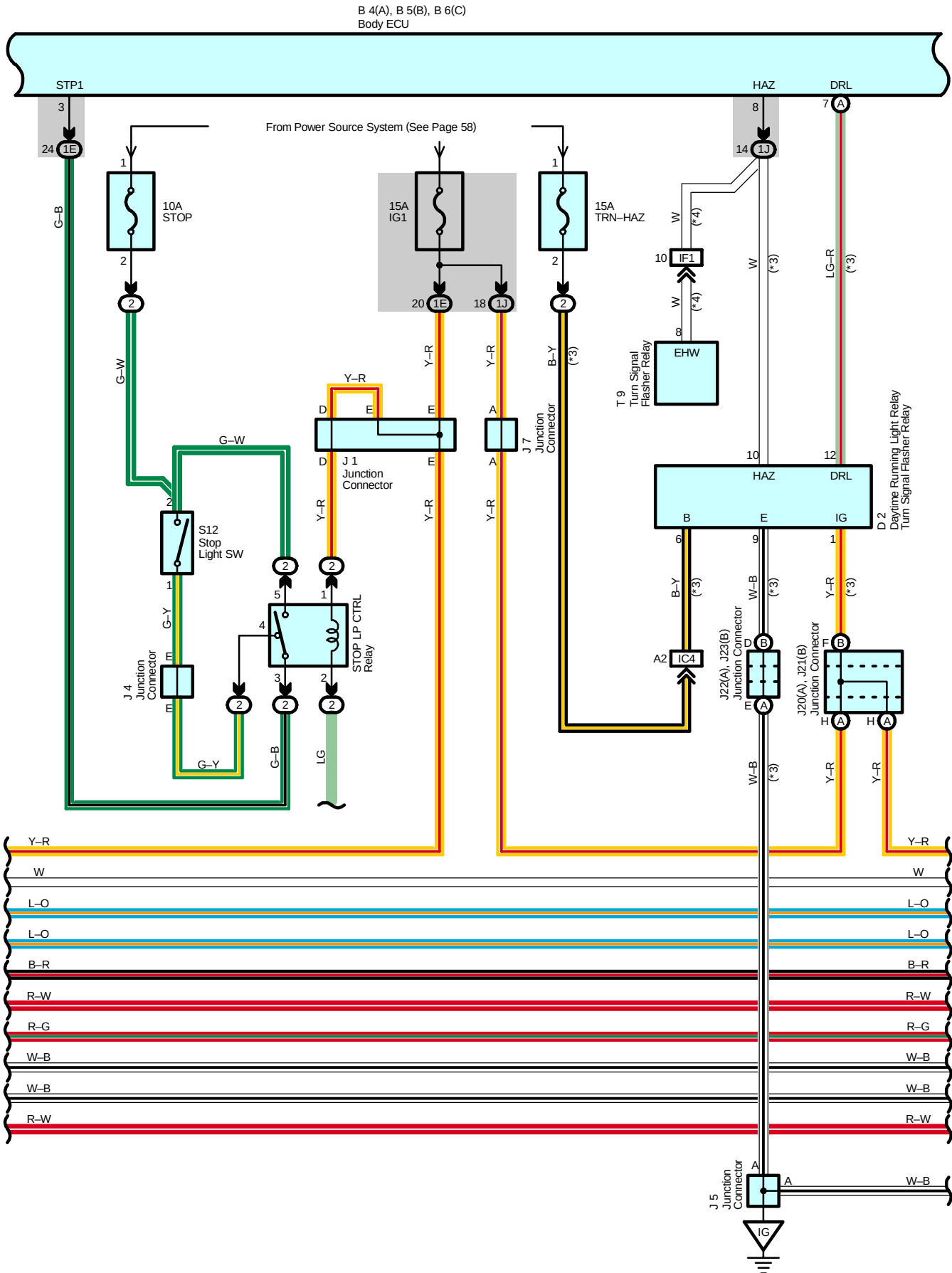


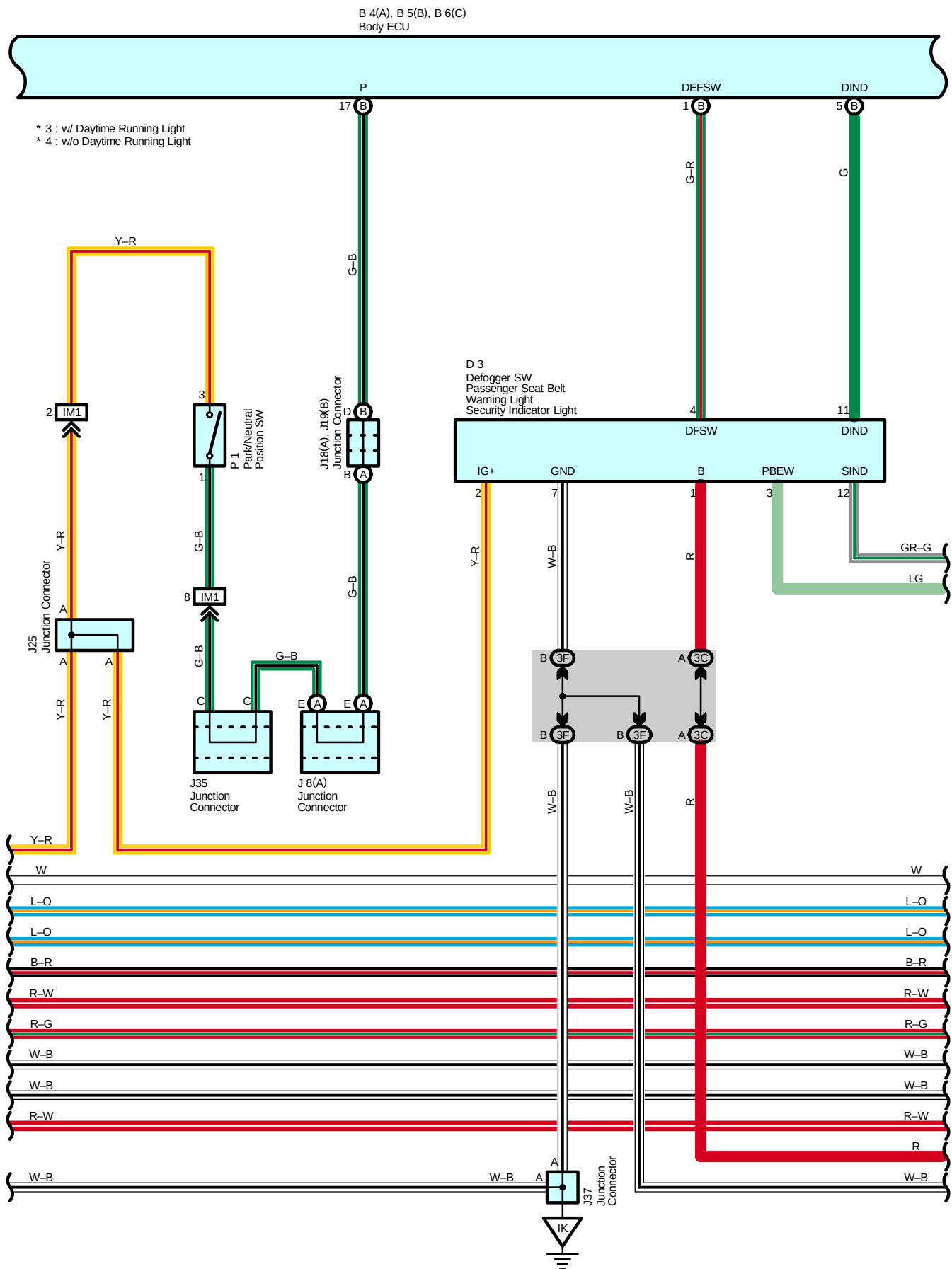




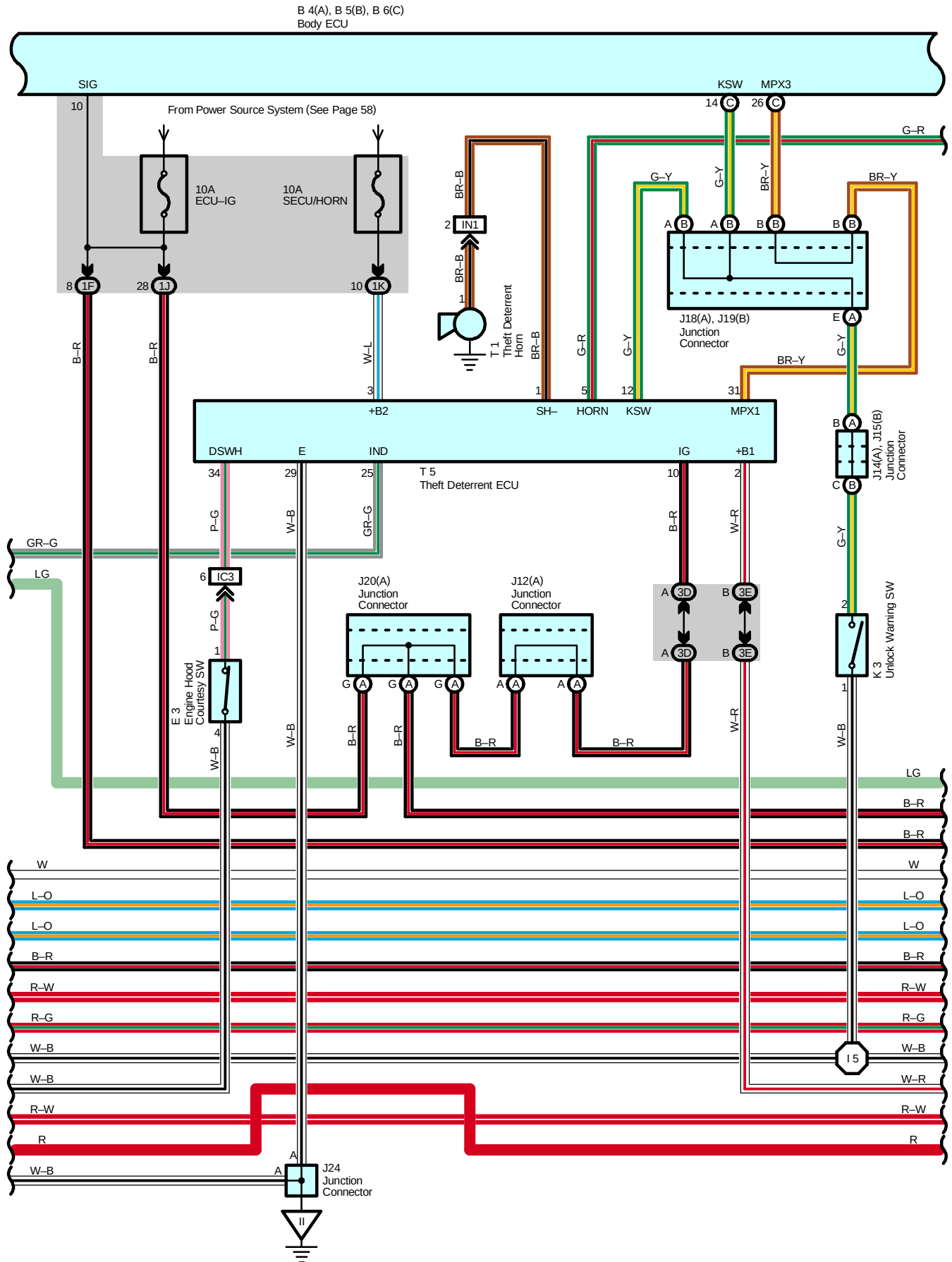




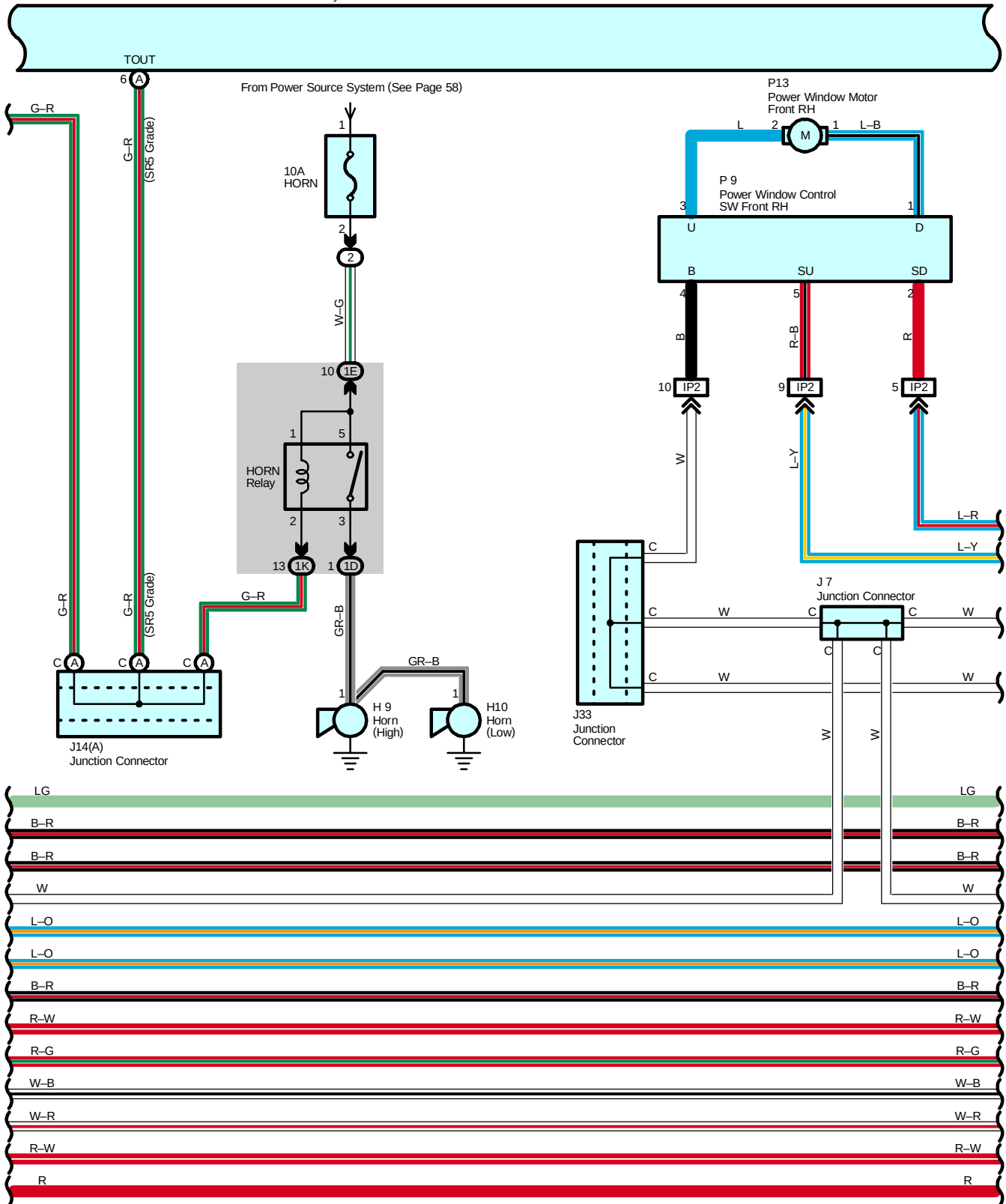


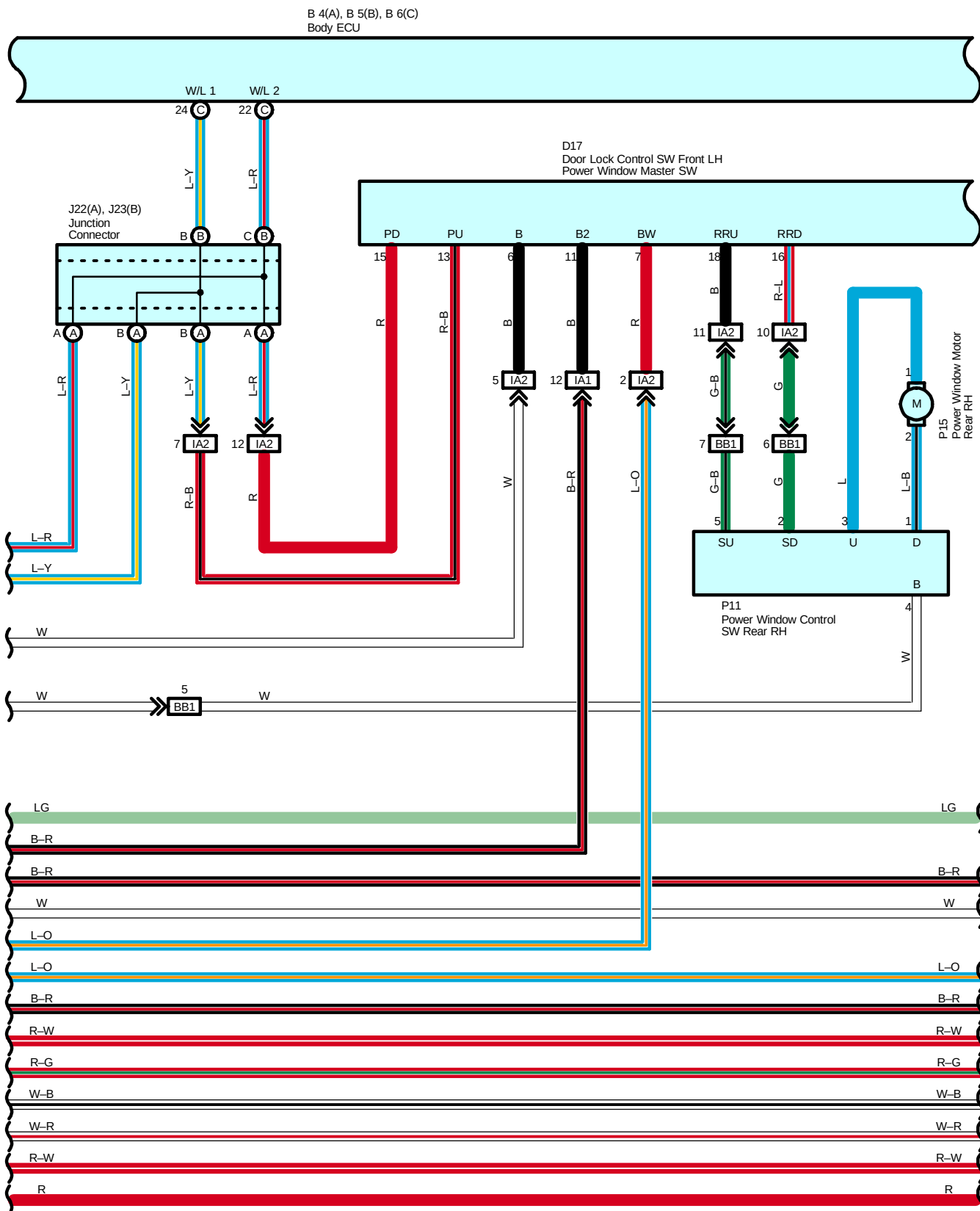


Multiplex Communication System



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

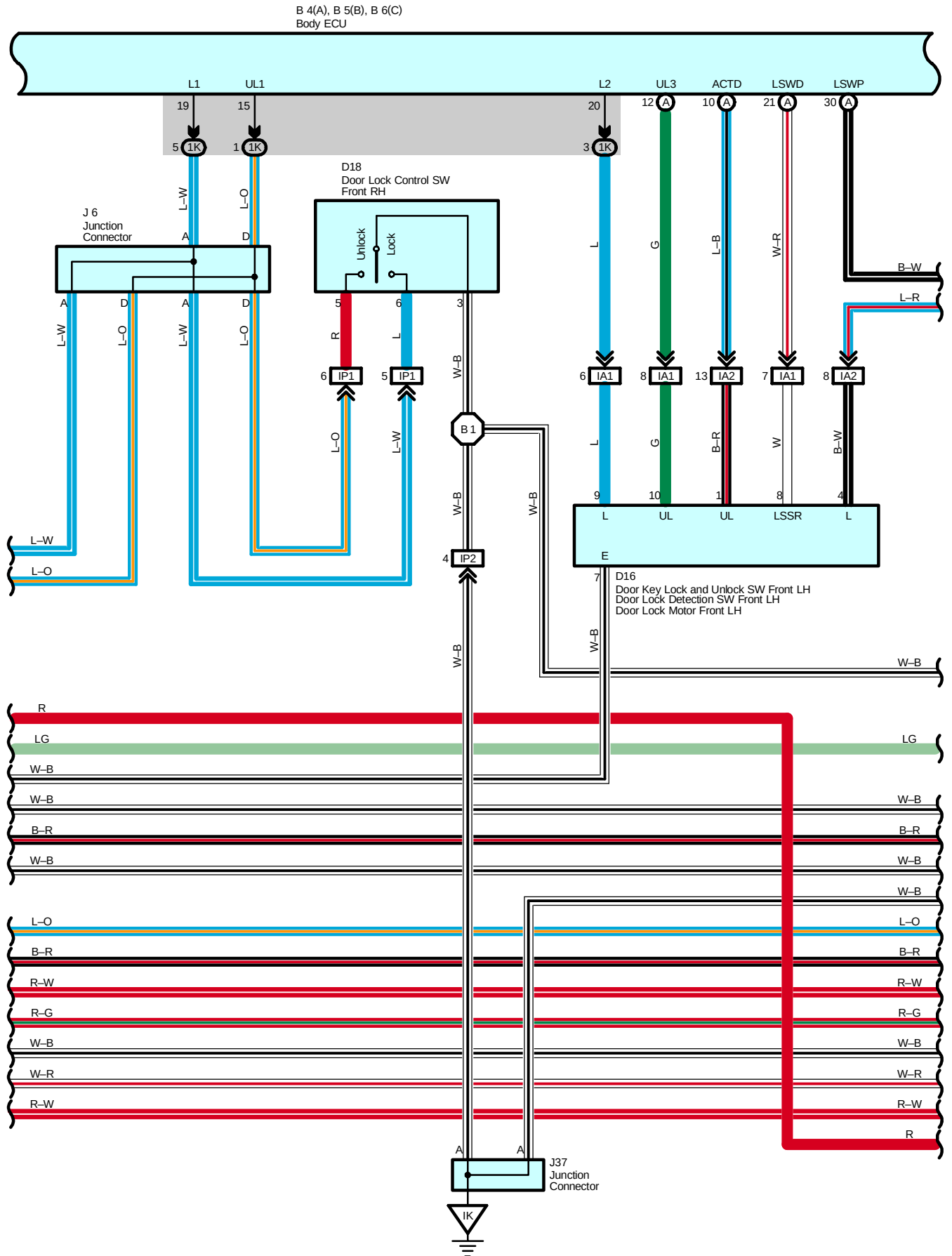




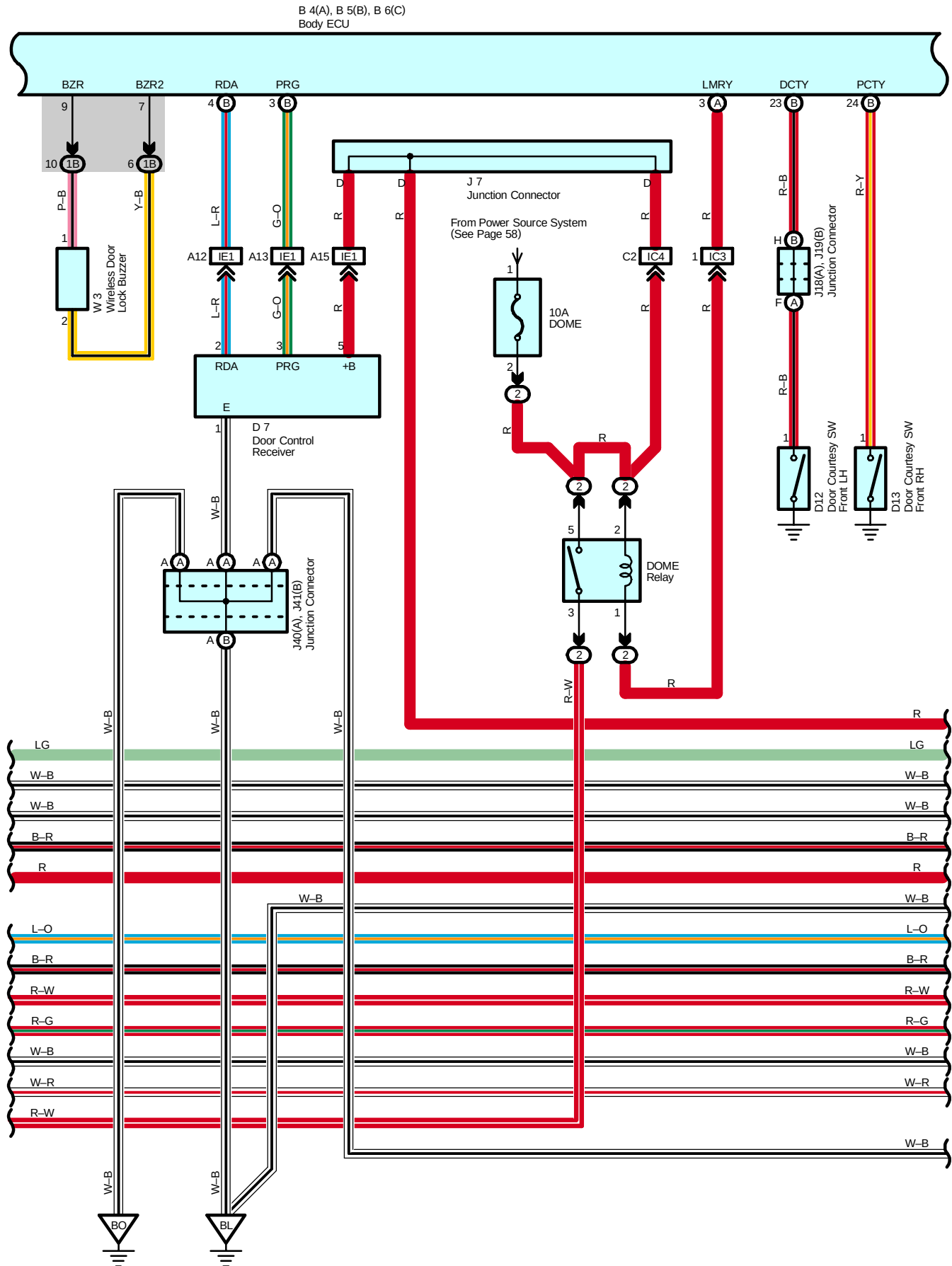
RLU RLD DD DU PLS2 VCC PLS GND E UL L



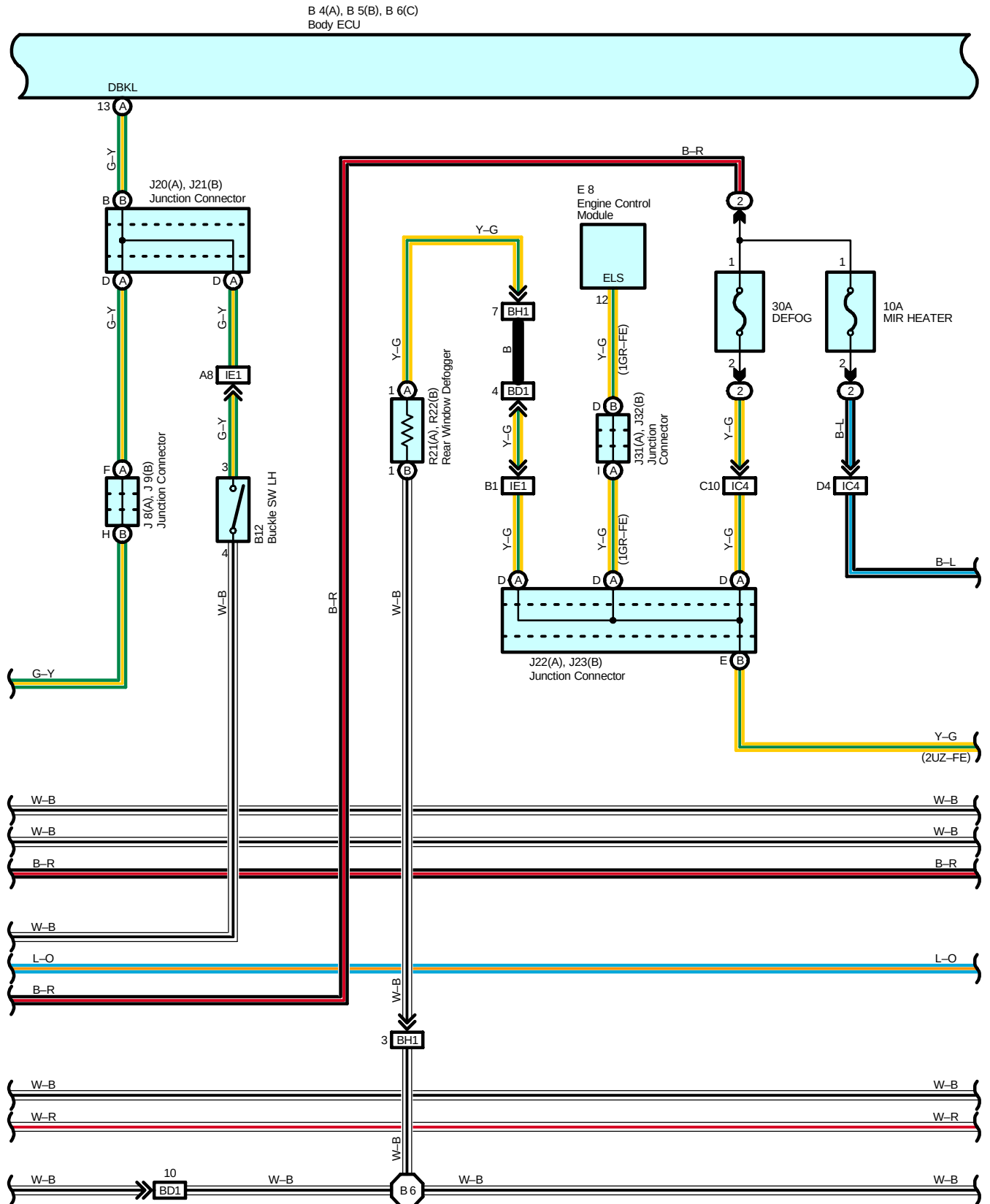
Multiplex Communication System

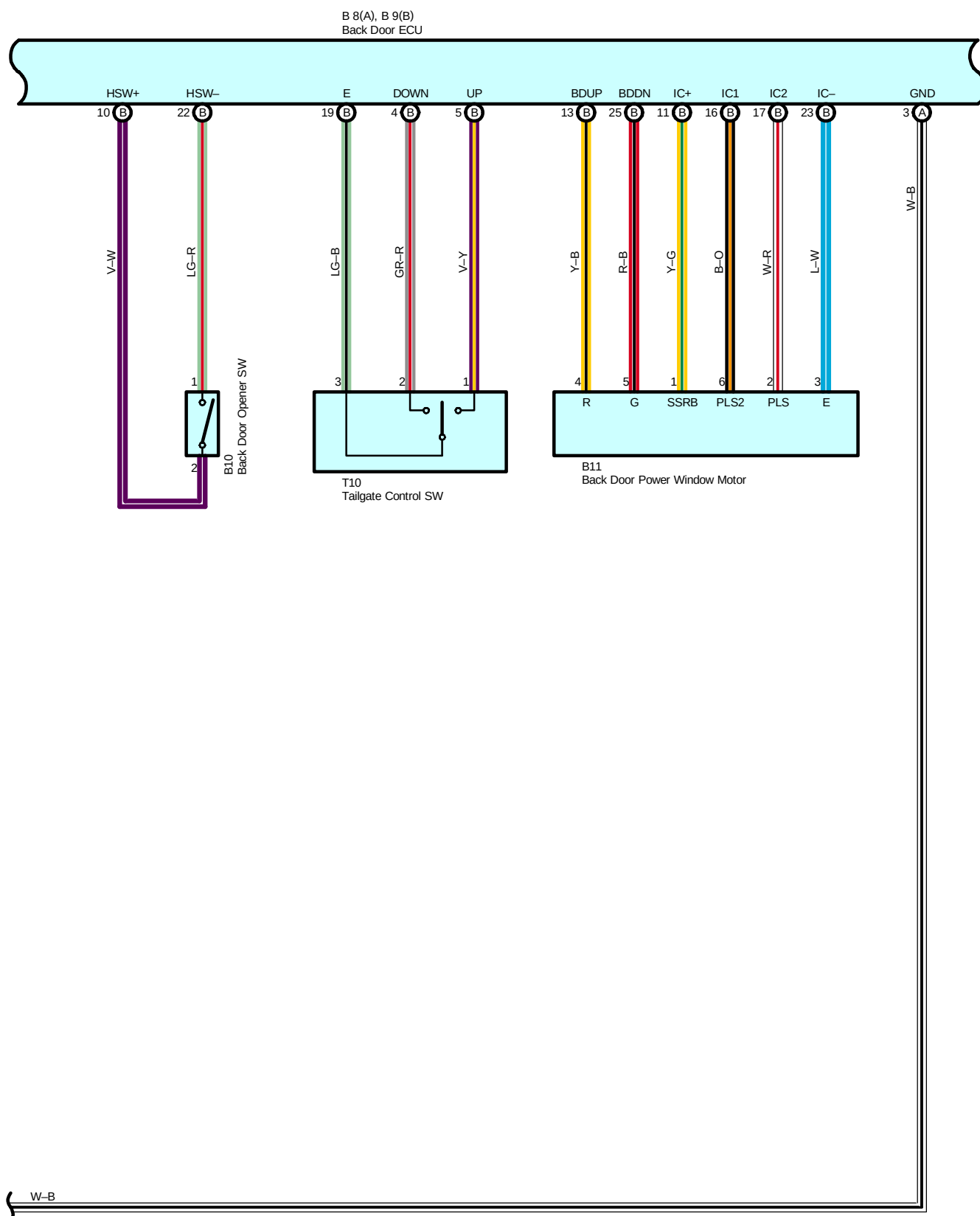


Multiplex Communication System

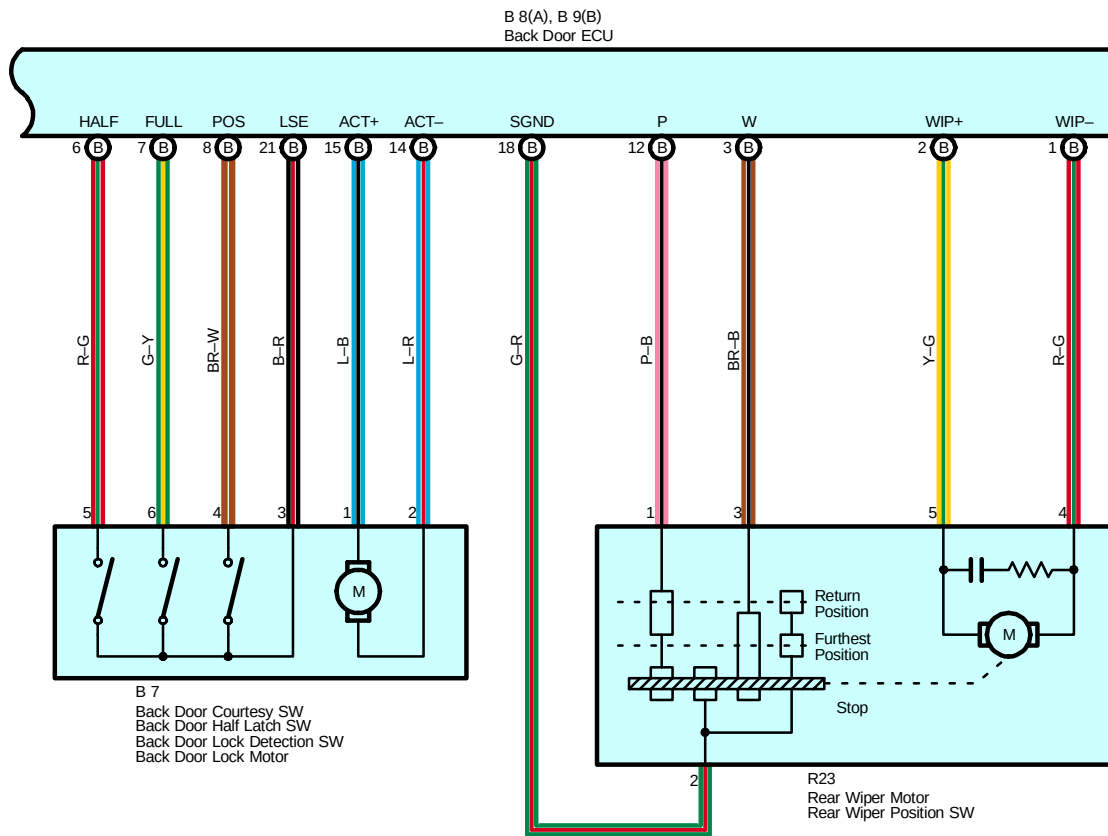


Multiplex Communication System





Multiplex Communication System



System Outline

Communication Outline

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

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

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

Service Hints

Body ECU

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

11, 12–Ground : Always approx. 12 volts

1, 10–Ground : Approx. 12 volts with ignition SW at ON position

4, 16–Ground : Always continuity

B8 (A) Back Door ECU

(A) 4, (A) 5–Ground : Always approx. 12 volts

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

(A) 3–Ground : Always continuity

T5 Theft Deterrent ECU

2, 3–Ground : Always approx. 12 volts

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

29–Ground : Always continuity

Multiplex Communication System

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A39	36	F13	40	J31	A 38
B1	36	G2	32 (2UZ-FE)	J32	B 38
B4	A 36		34 (1GR-FE)	J33	38
B5	B 36	H1	32 (2UZ-FE)	J35	38
B6	C 36		34 (1GR-FE)	J37	38
B7	40	H2	32 (2UZ-FE)	J38	40
B8	A 40		34 (1GR-FE)	J40	A 40
B9	B 40	H3	32 (2UZ-FE)	J41	B 40
B10	40		34 (1GR-FE)	K3	39
B11	40	H4	32 (2UZ-FE)	L2	40
B12	42		34 (1GR-FE)	M3	41
B13	42	H9	32 (2UZ-FE)	M4	41
C8	A 37		34 (1GR-FE)	M5	41
C9	B 37	H10	32 (2UZ-FE)	P1	33 (2UZ-FE)
C10	C 37		34 (1GR-FE)		35 (1GR-FE)
C12	37	I17	37	P4	39
C14	37	I20	40	P7	41
D1	37	J1	33 (2UZ-FE)	P9	41
D2	37		35 (1GR-FE)	P10	41
D3	37	J2	33 (2UZ-FE)	P11	41
D7	40		35 (1GR-FE)	P12	41
D8	40	J3	33 (2UZ-FE)	P13	41
D9	40		35 (1GR-FE)	P14	41
D10	40	J4	38	P15	41
D11	40	J5	38	R21	A 41
D12	40	J6	38	R22	B 41
D13	40	J7	38	R23	41
D14	40	J8	A 38	S8	39
D15	40	J9	B 38	S12	39
D16	40	J10	A 38	S15	39
D17	40	J11	B 38	T1	33 (2UZ-FE)
D18	40	J12	A 38		35 (1GR-FE)
D19	40	J13	B 38	T5	39
D20	40	J14	A 38	T9	39
D21	40	J15	B 38	T10	41
E3	32 (2UZ-FE)	J18	A 38	V6	41
	34 (1GR-FE)	J19	B 38	V7	41
E8	37	J20	A 38	W2	33 (2UZ-FE)
F1	32 (2UZ-FE)	J21	B 38		35 (1GR-FE)
	34 (1GR-FE)	J22	A 38	W3	33 (2UZ-FE)
F2	32 (2UZ-FE)	J23	B 38		35 (1GR-FE)
	34 (1GR-FE)	J24	38		
F12	40	J25	38		

○ : Relay Blocks

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



: Junction Block and Wire Harness Connector

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



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
	46 (1GR-FE)	
IA1	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC2	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	50	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IG1	50	Instrument Panel No.2 Wire and Instrument Panel Wire (Behind the Combination Meter)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
II1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BH1	54	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)

Multiplex Communication System



: Ground Points

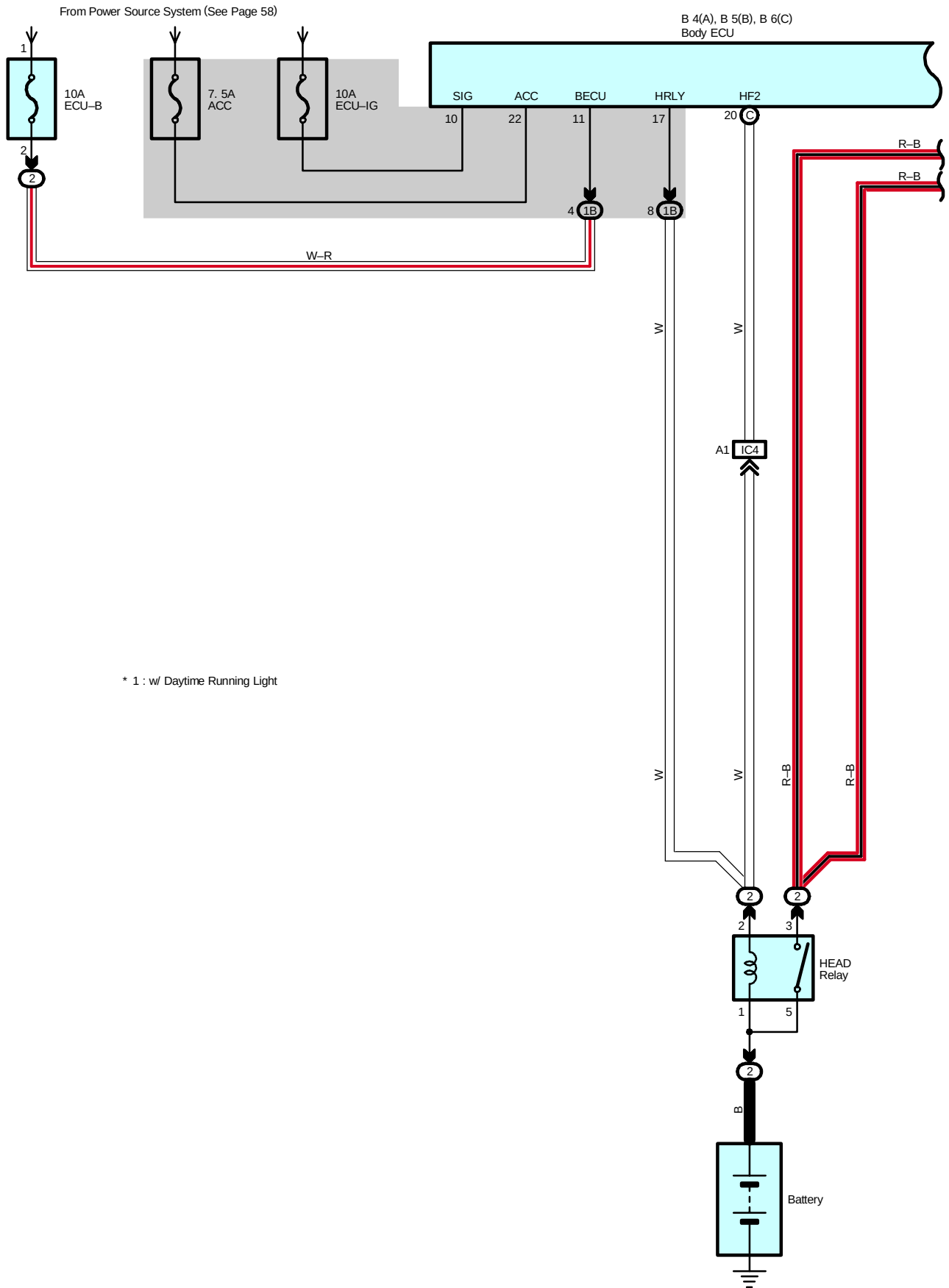
Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	46 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BM	54	Floor Seat Crossmember RH
BO	54	Rear Pillar LH

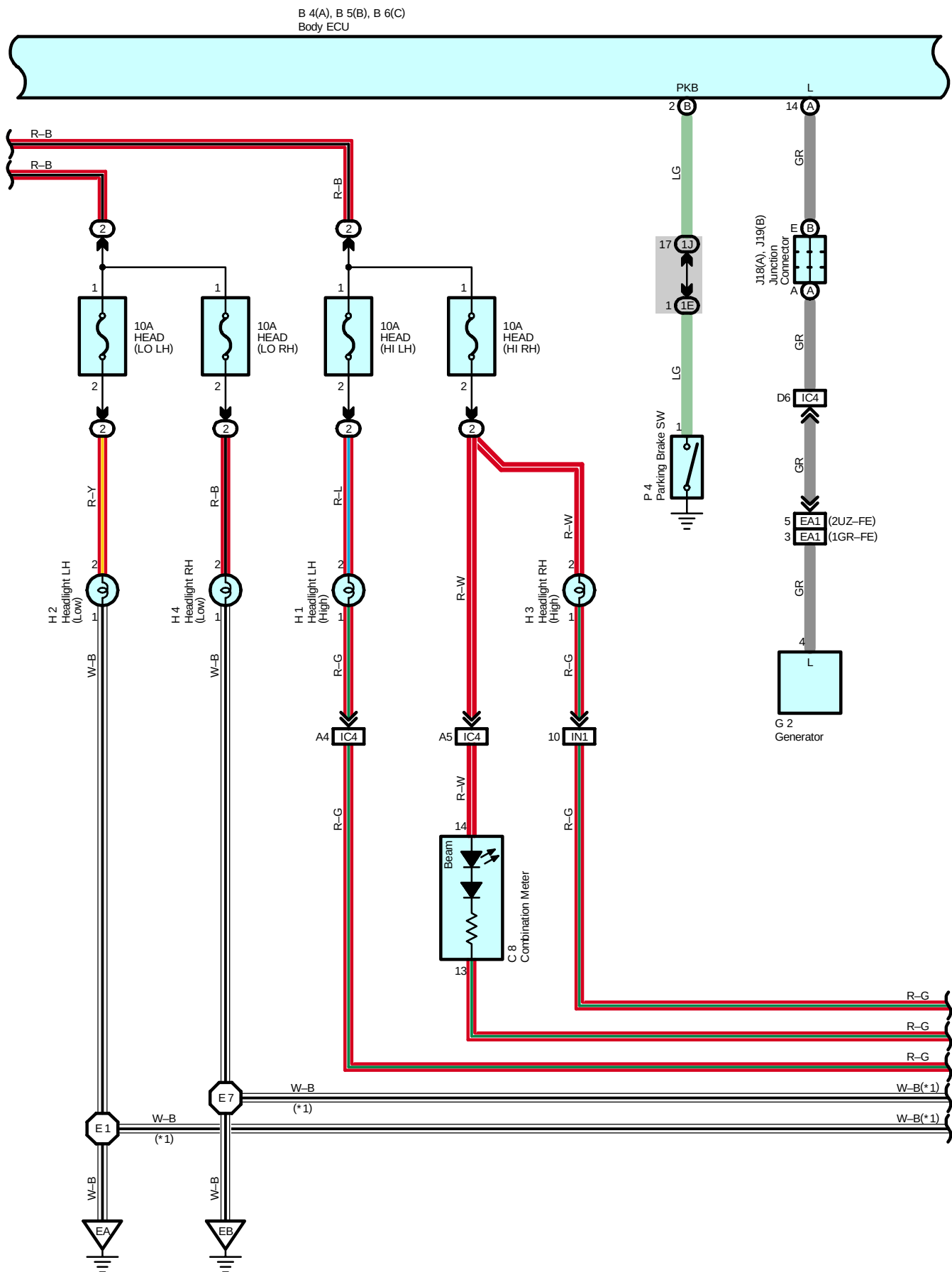


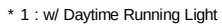
: Splice Points

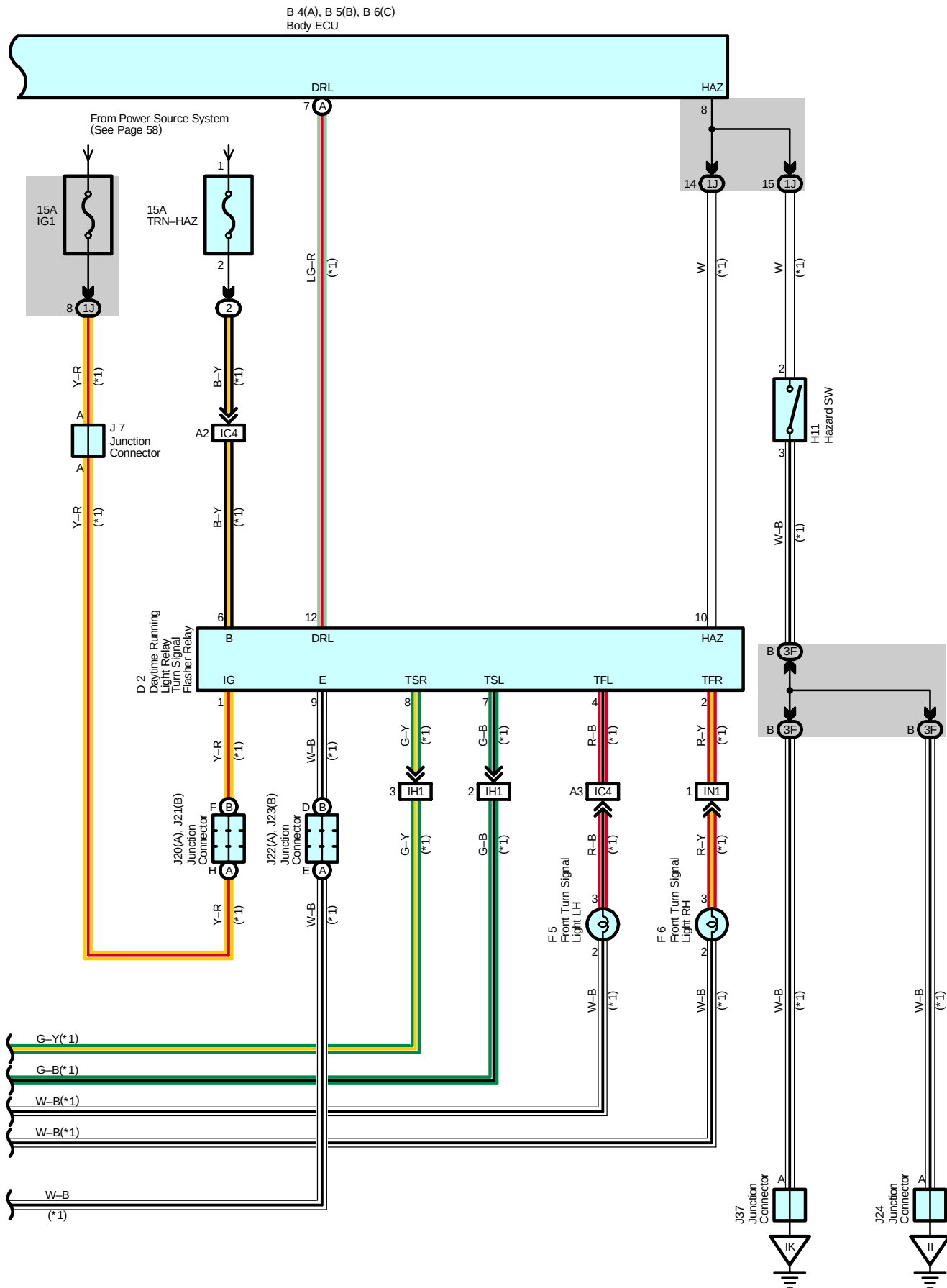
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44 (2UZ-FE)	Engine Room Main Wire	I5	50	Instrument Panel Wire
	46 (1GR-FE)		B1	54	Front Door RH Wire
E7	44 (2UZ-FE)		B3	54	Roof Wire
	46 (1GR-FE)		B6	54	Back Door No.1 Wire
I3	50				

Headlight









Headlight

System Outline

(w/ daytime running light)

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

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

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

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

- A) Ignition switch ON condition
- B) Turn signal light switch OFF condition
- C) Hazard light switch OFF condition
- D) Light control switch OFF condition
- E) Parking brake switch OFF condition (Parking brake out of operating condition)**

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

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B4	A 36	H1	34 (1GR-FE)	J13	B 38
B5	B 36	H2	32 (2UZ-FE)	J15	38
B6	C 36		34 (1GR-FE)	J18	A 38
C8	37	H3	32 (2UZ-FE)	J19	B 38
C12	37		34 (1GR-FE)	J20	A 38
D2	37	H4	32 (2UZ-FE)	J21	B 38
F5	32 (2UZ-FE)		34 (1GR-FE)	J22	A 38
	34 (1GR-FE)	H11	37	J23	B 38
F6	32 (2UZ-FE)	J5	38	J24	38
	34 (1GR-FE)	J7	38	J37	38
G2	32 (2UZ-FE)	J10	A 38	P4	39
	34 (1GR-FE)	J11	B 38		
H1	32 (2UZ-FE)	J12	A 38		

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

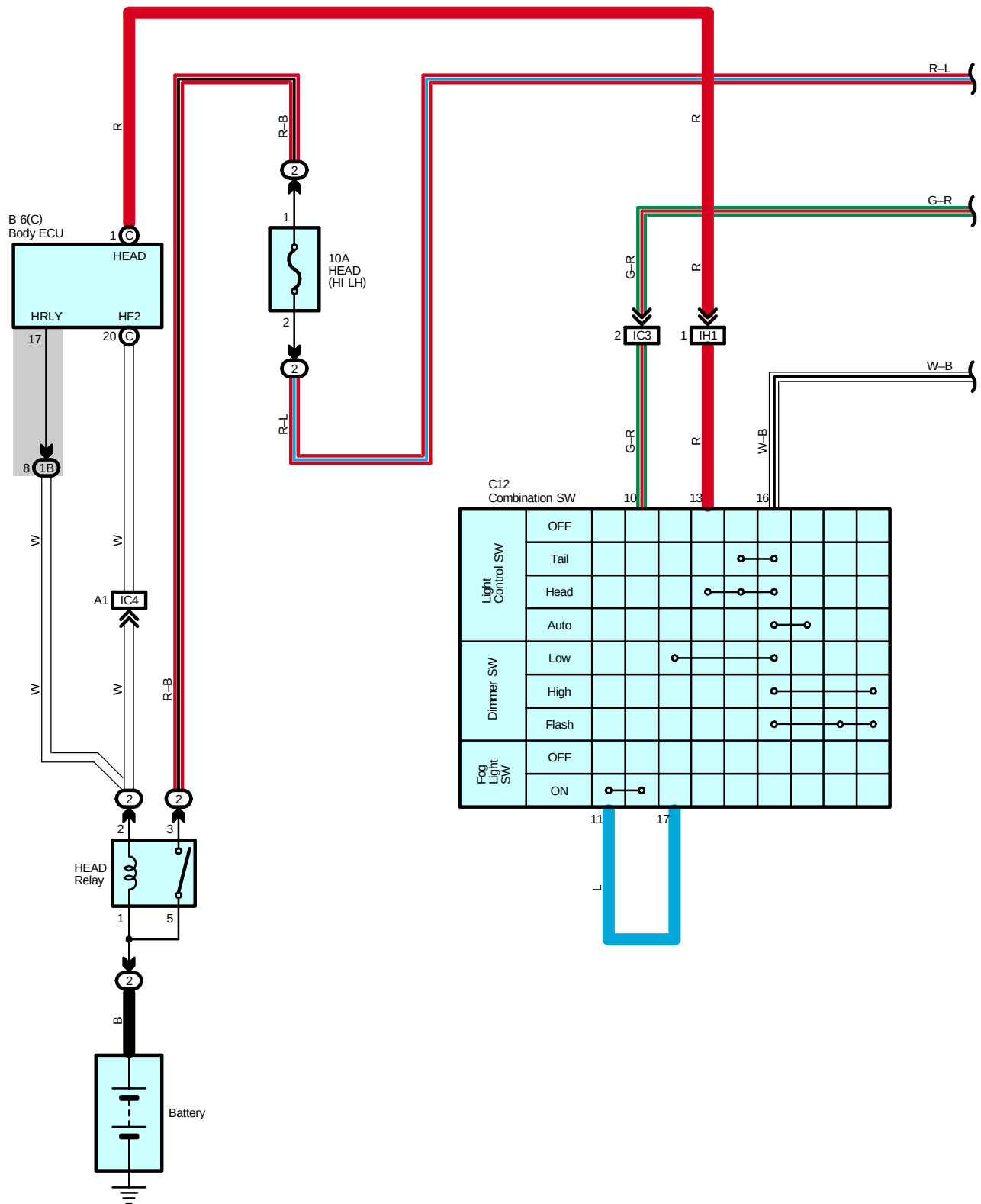
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
	46 (1GR-FE)	
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

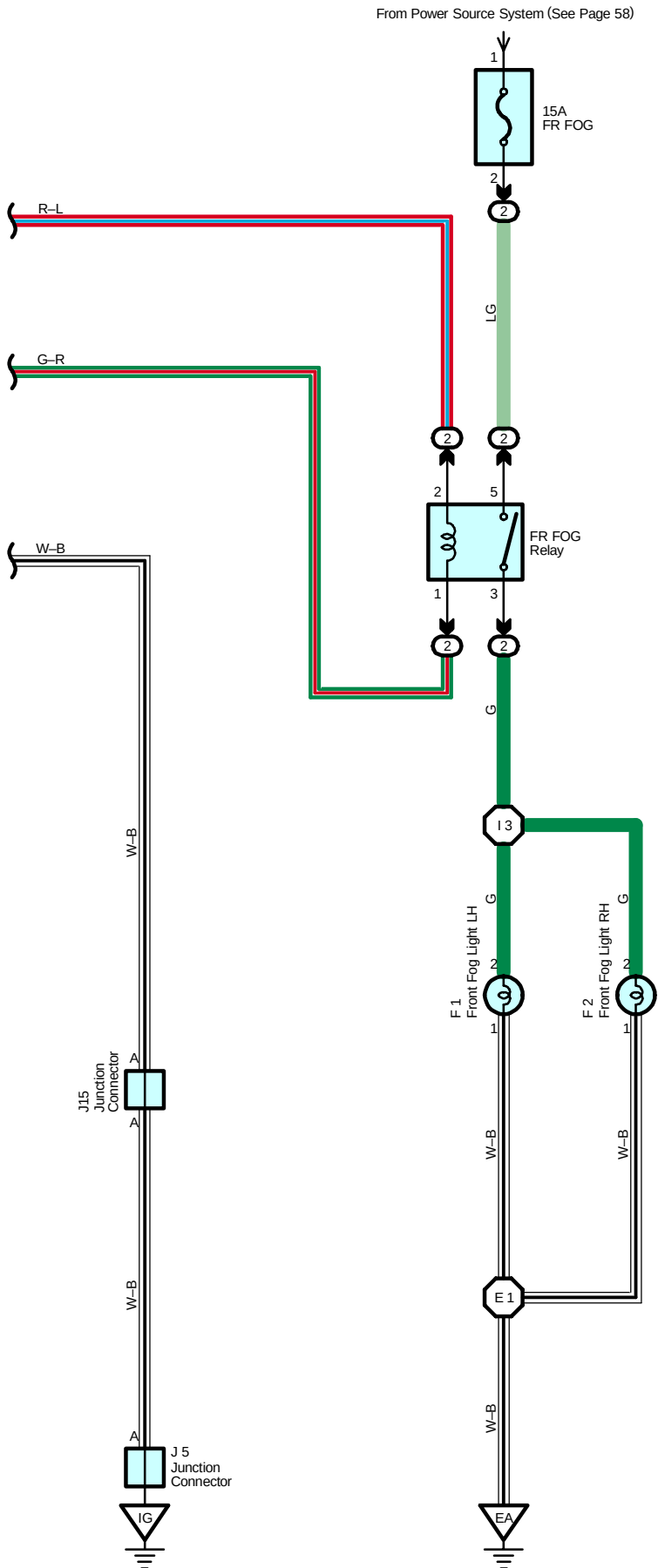
**: Ground Points**

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	46 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel

**: Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44 (2UZ-FE)	Engine Room Main Wire	E7	46 (1GR-FE)	Engine Room Main Wire
	46 (1GR-FE)		I5	50	Instrument Panel Wire
E7	44 (2UZ-FE)				





Front Fog Light

Service Hints

FR FOG Relay

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

○ : Parts Location

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

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)

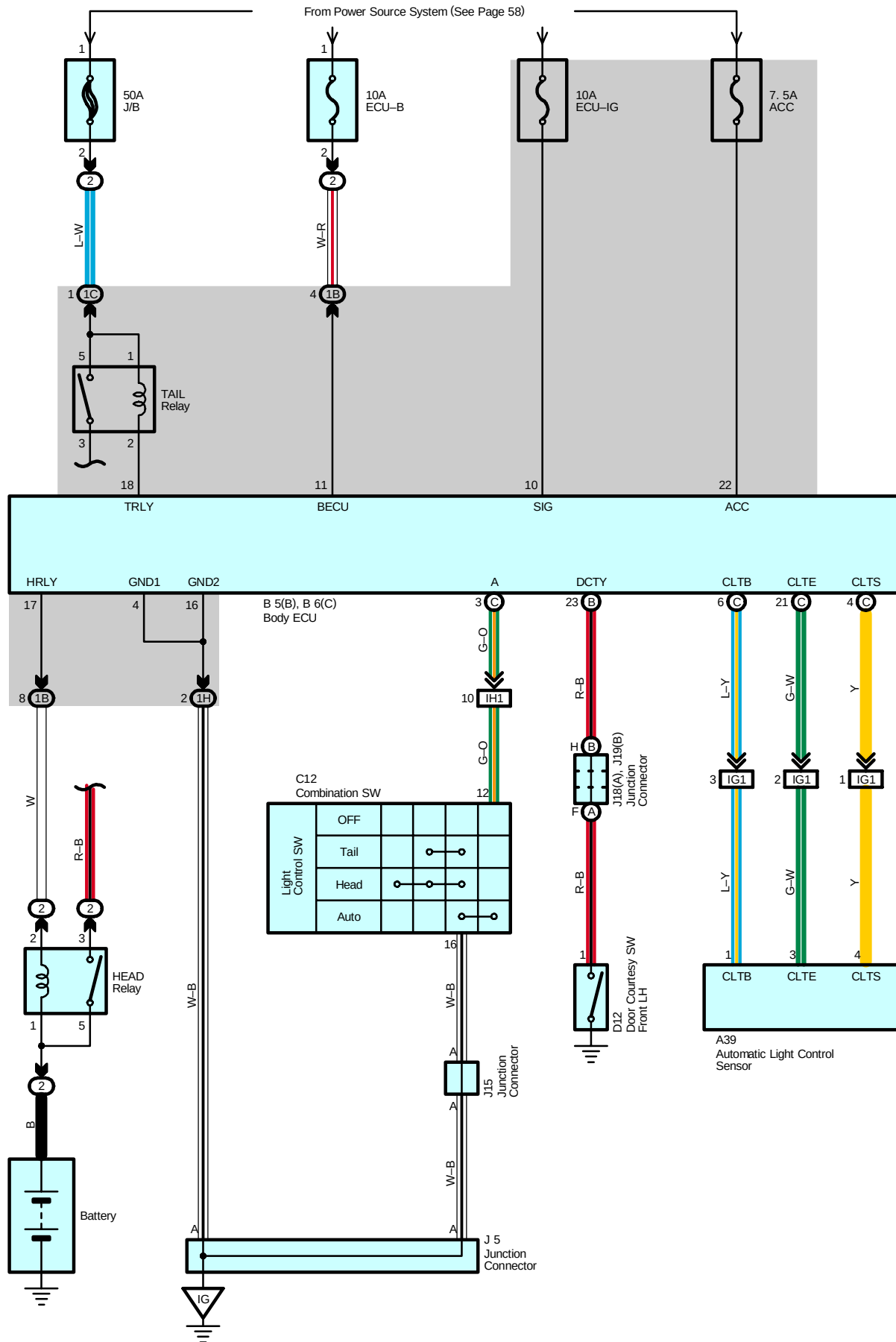
▽ : Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	46 (1GR-FE)	
IG	48	Left Kick Panel

○ : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44 (2UZ-FE)	Engine Room Main Wire	I3	50	Engine Room Main Wire
	46 (1GR-FE)				

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

C12 Combination SW

12-16 : Closed with the light control SW at AUTO position

Body ECU

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

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

11-Ground : Always approx. 12 volts

4, 16-Ground : Always continuity

D12 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
A39	36	C12	37	J15	38
B5	36	D12	40	J18	38
B6	36	J5	38	J19	38

: Relay Blocks

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

: Junction Block and Wire Harness Connector

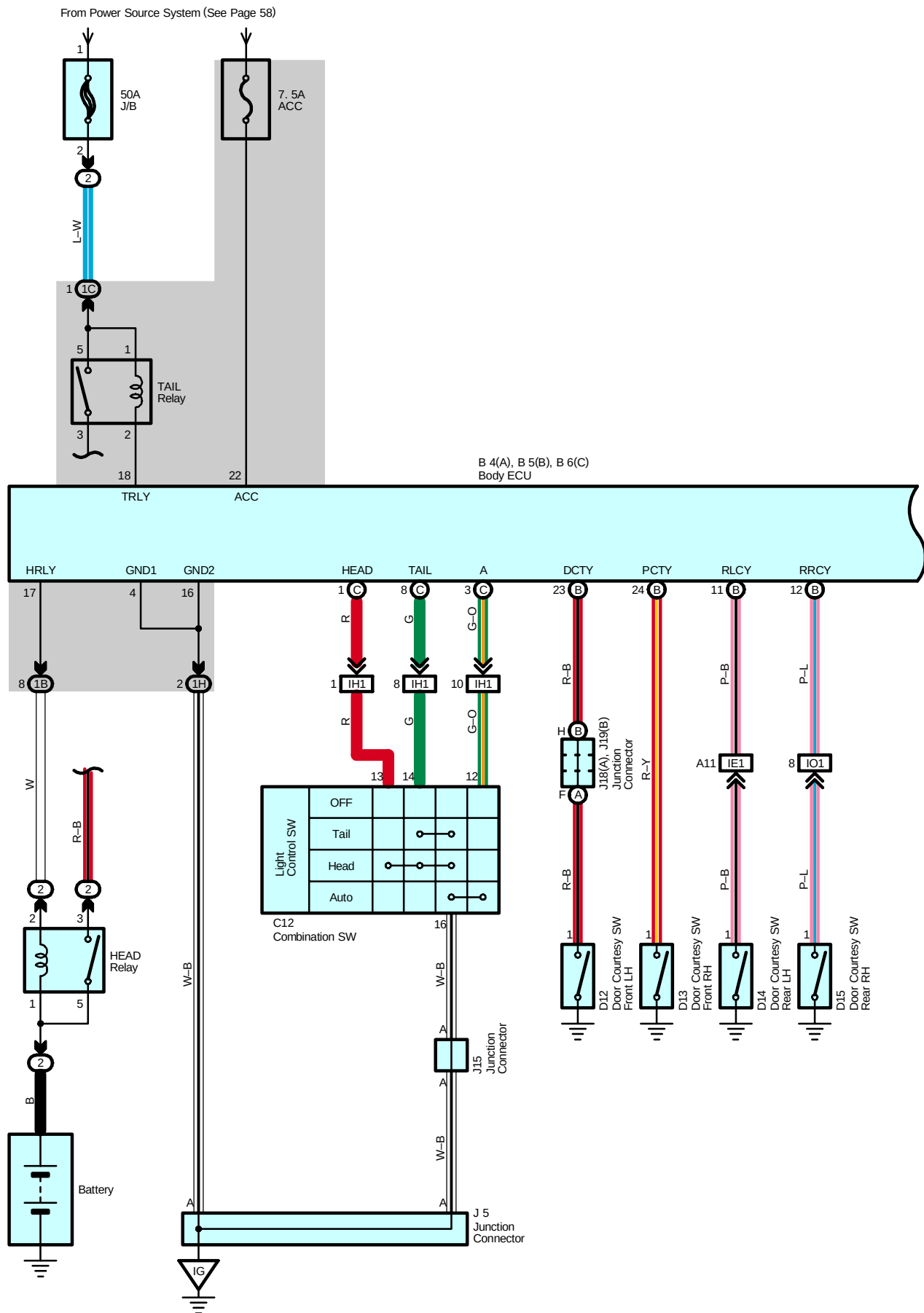
Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1C		
1H	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	50	Instrument Panel No.2 Wire and Instrument Panel Wire (Behind the Combination Meter)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)

: Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel



Light Auto Turn Off

System Outline

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

Service Hints

C12 Combination SW

- 14–16 : Closed with the light control SW at TAIL or HEAD position
- 13–16 : Closed with the light control SW at HEAD position
- 12–16 : Closed with the light control SW at AUTO position

Body ECU

- 22–Ground : Approx. 12 volts with the ignition SW at ACC or ON position
- 10–Ground : Approx. 12 volts with the ignition SW at ON position
- 11–Ground : Always approx. 12 volts
- 4, 16–Ground : Always continuity

D12, D13, D14, D15 Door Courtesy SW Front LH, RH, Rear LH, RH

- 1–Ground : Continuity with the door open

○ : Parts Location

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

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

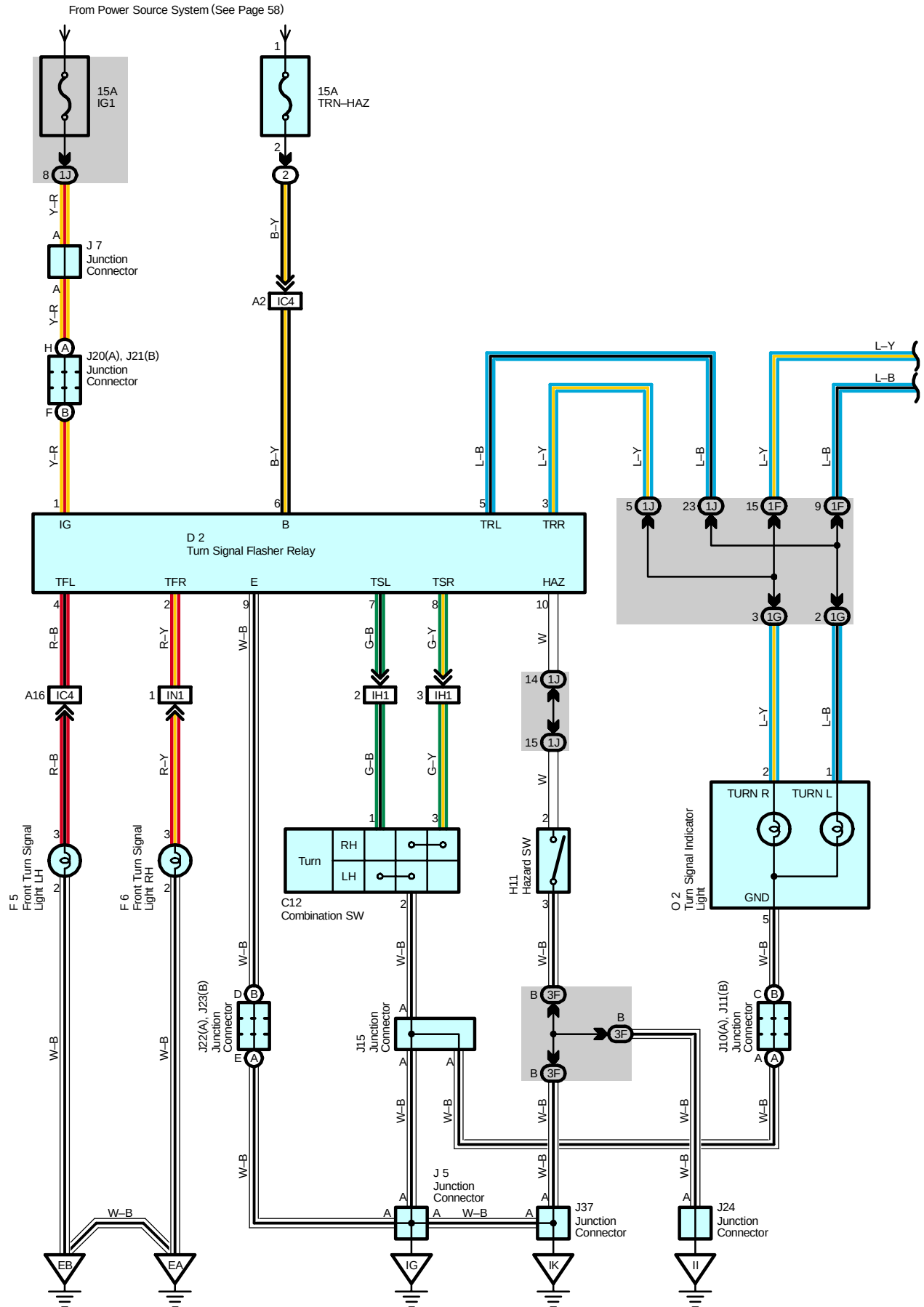
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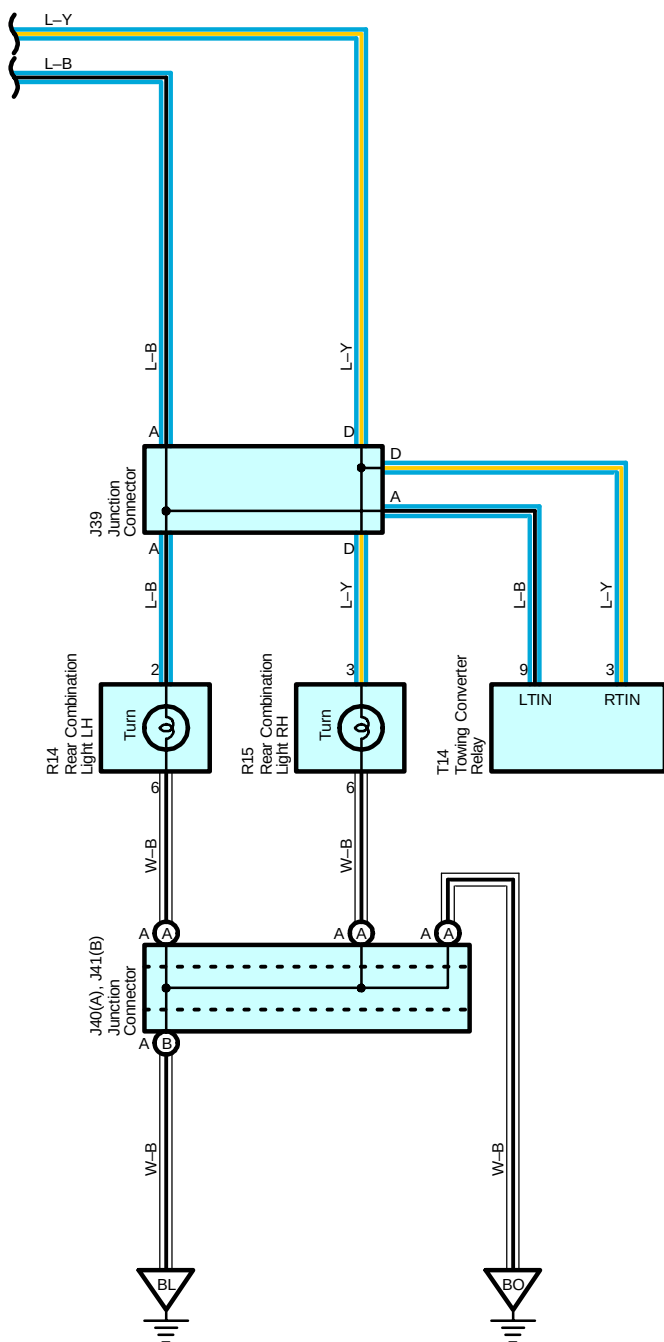
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

▽ : Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

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





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

Service Hints

D2 Turn Signal Flasher Relay

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

9–Ground : Always continuity

6–Ground : Always approx. 12 volts

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C12	37	J10	A 38	J39	40
D2	37	J11	B 38	J40	A 40
F5	32 (2UZ–FE)	J15	38	J41	B 40
	34 (1GR–FE)	J20	A 38	O2	39
F6	32 (2UZ–FE)	J21	B 38	R14	41
	34 (1GR–FE)	J22	A 38	R15	41
H11	37	J23	B 38	T14	41
J5	38	J24	38		
J7	38	J37	38		

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

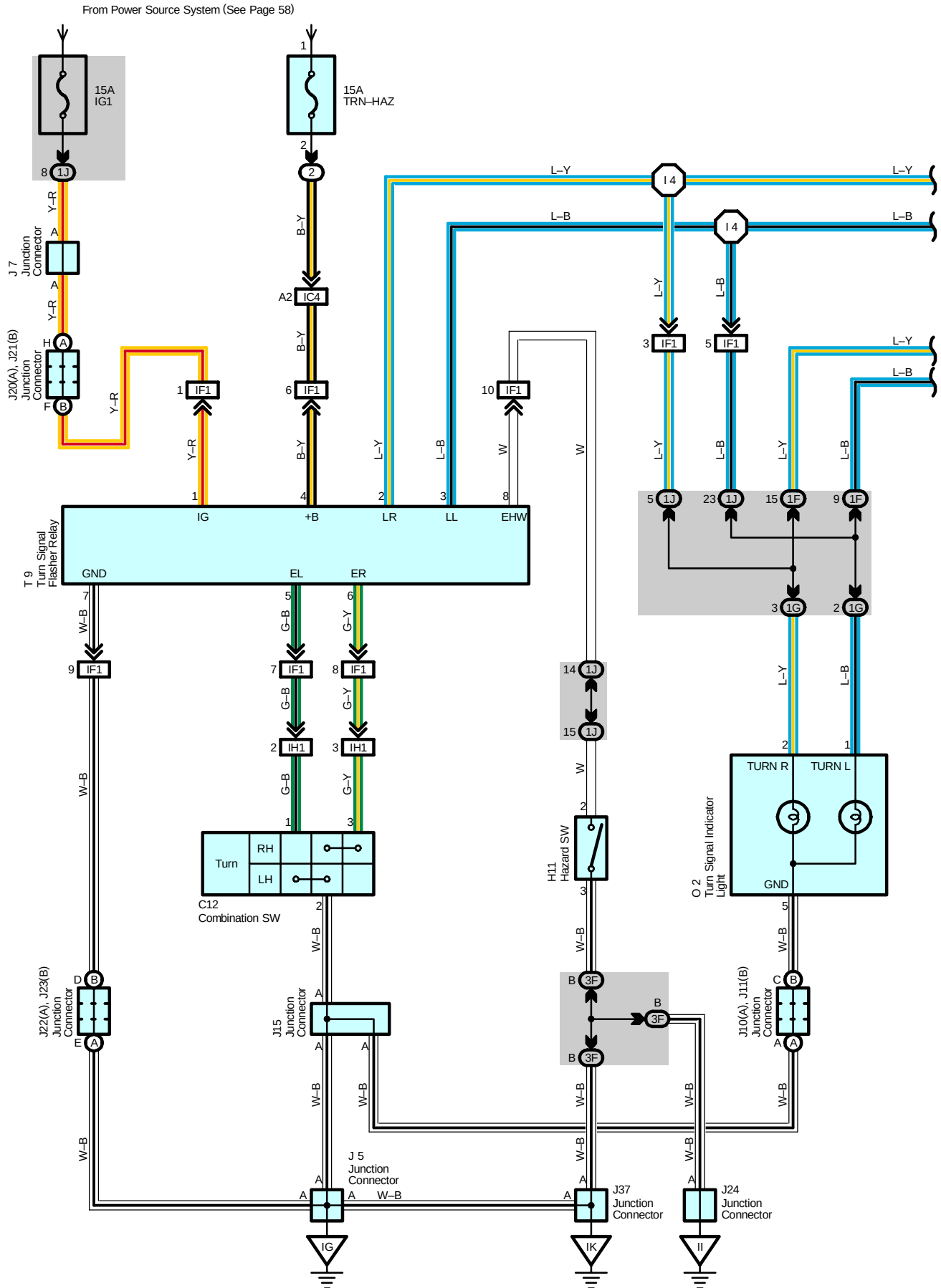
□ : Connector Joining Wire Harness and Wire Harness

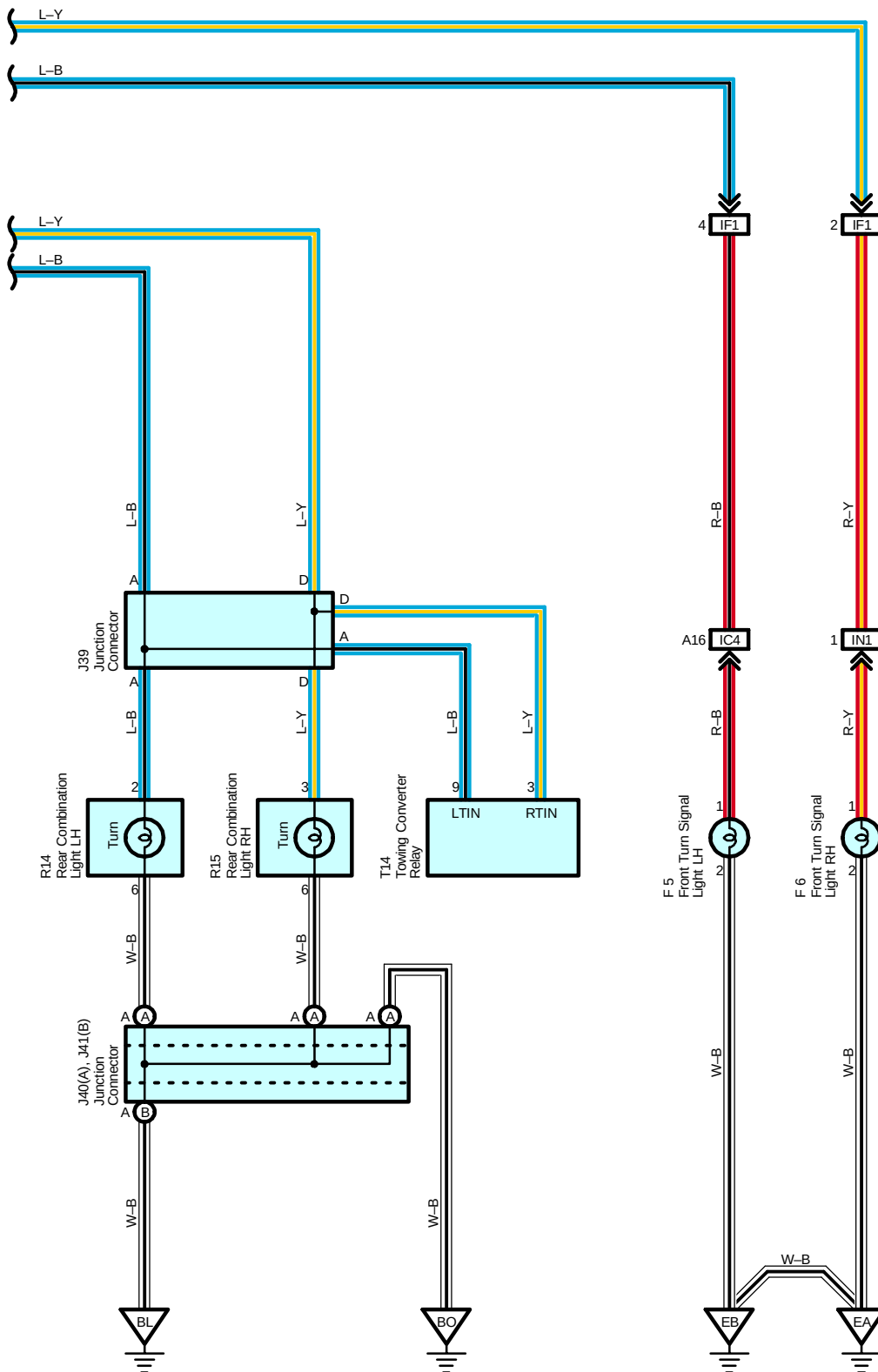
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ–FE)	Front Right Fender
	46 (1GR–FE)	
EB	44 (2UZ–FE)	Front Left Fender
	46 (1GR–FE)	
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

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





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

Service Hints

T9 Turn Signal Flasher Relay

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

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
C12	37	J11	B 38	J40	A 40
F5	32 (2UZ-FE)	J15	38	J41	B 40
	34 (1GR-FE)	J20	A 38	O2	39
F6	32 (2UZ-FE)	J21	B 38	R14	41
	34 (1GR-FE)	J22	A 38	R15	41
H11	37	J23	B 38	T9	39
J5	38	J24	38	T14	41
J7	38	J37	38		
J10	A 38	J39	40		

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IF1	50	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	46 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

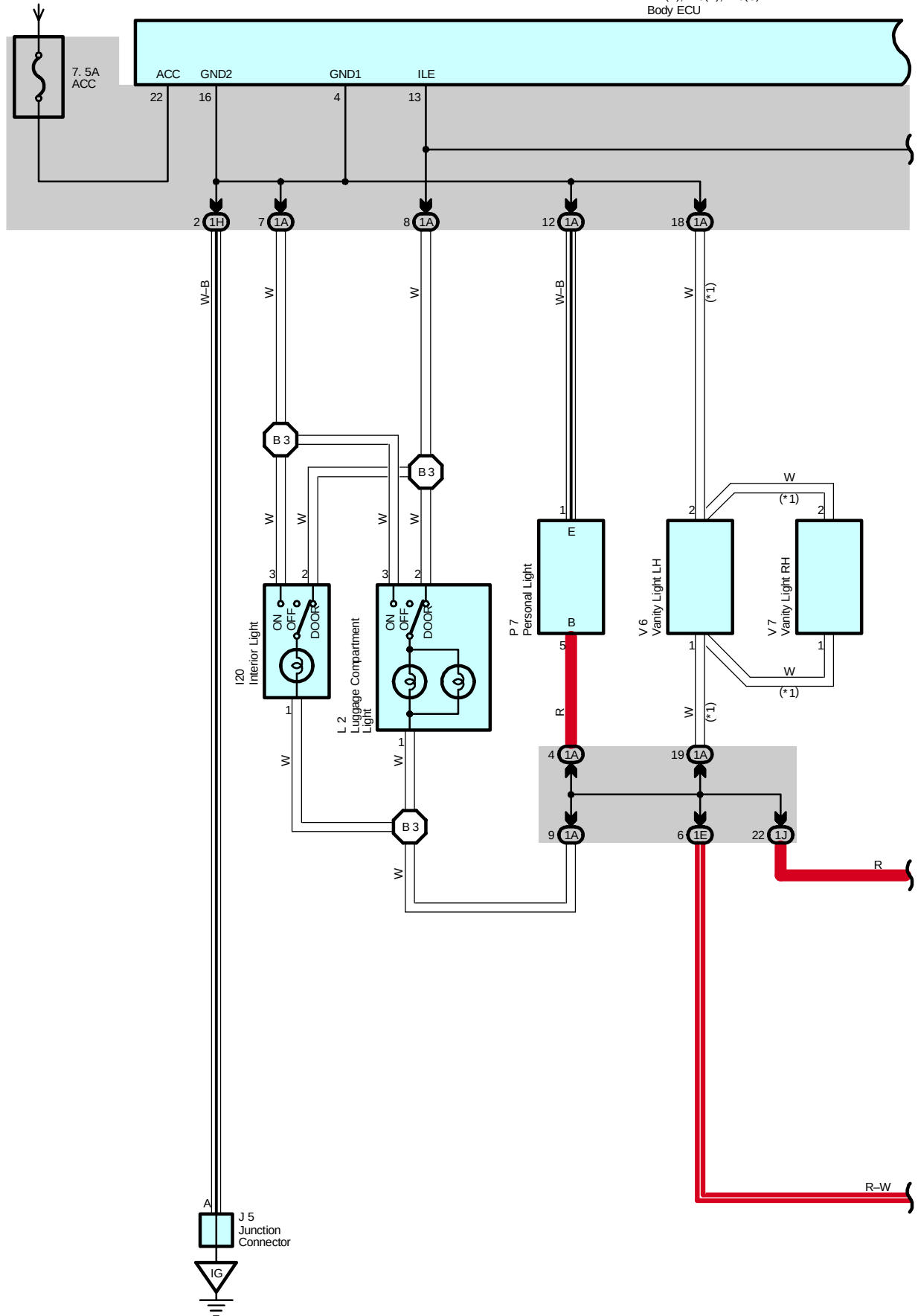
○ : Splice Points

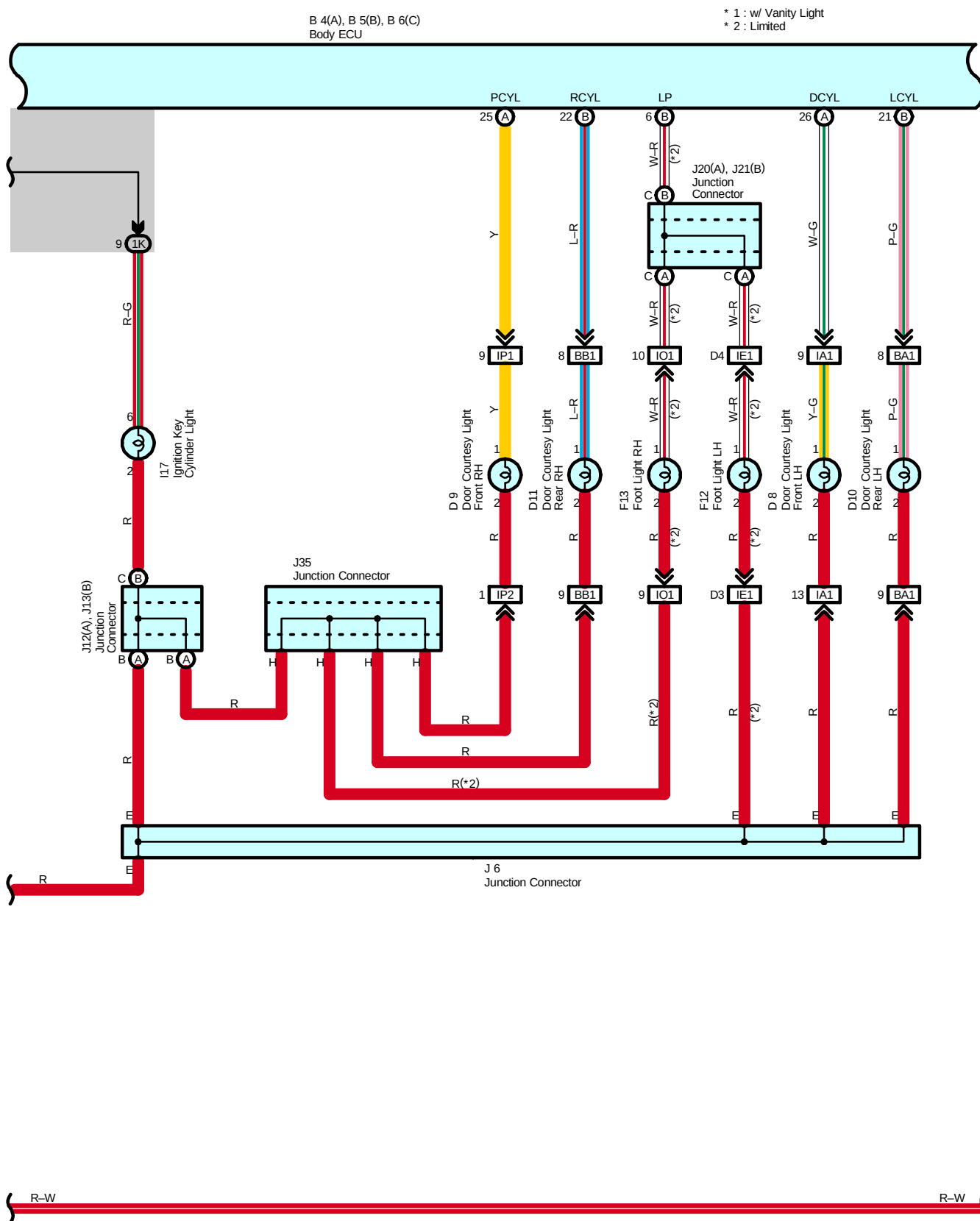
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I4	50	Relay Wire			

Interior Light

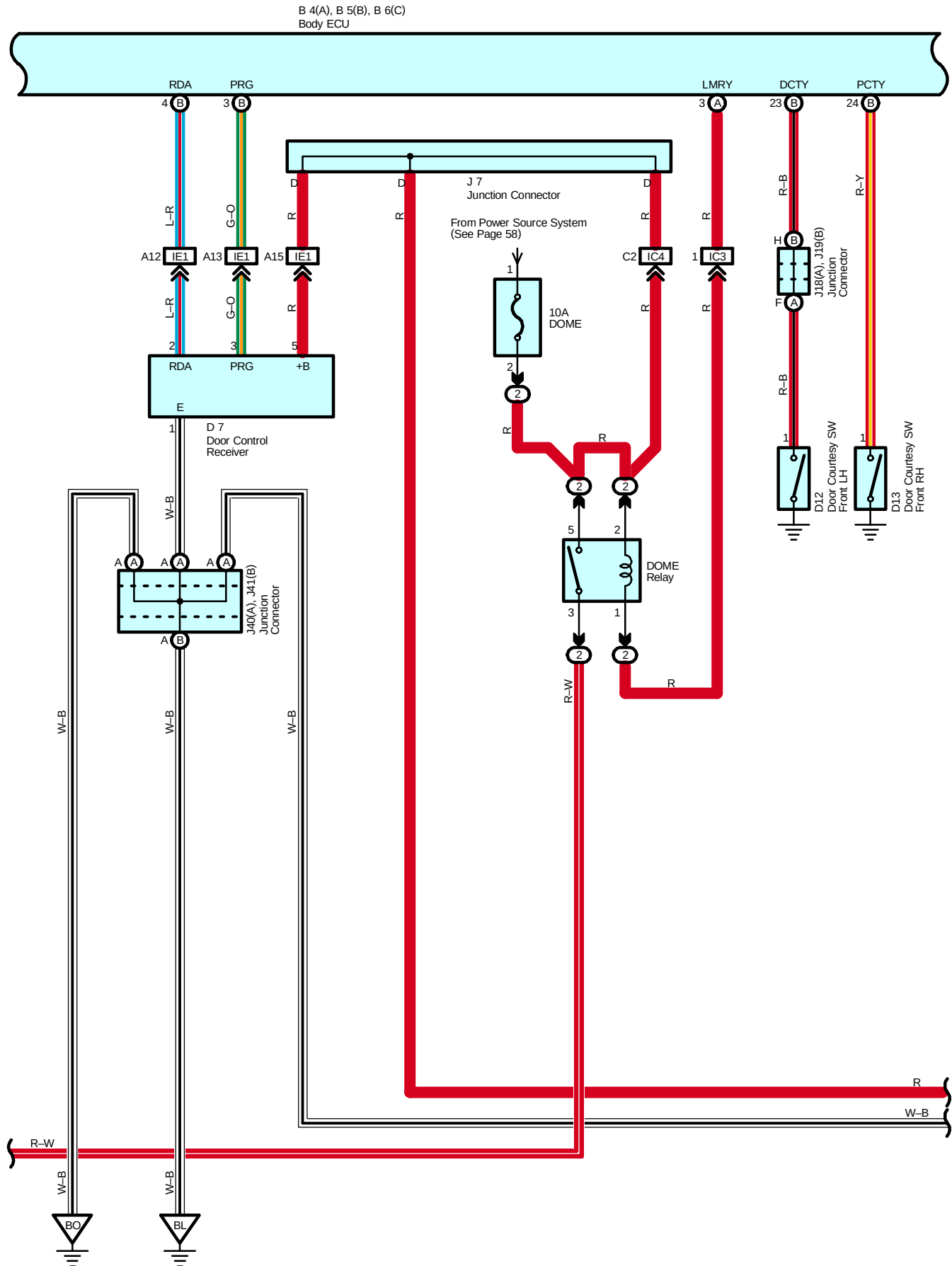
From Power Source System (See Page 58)

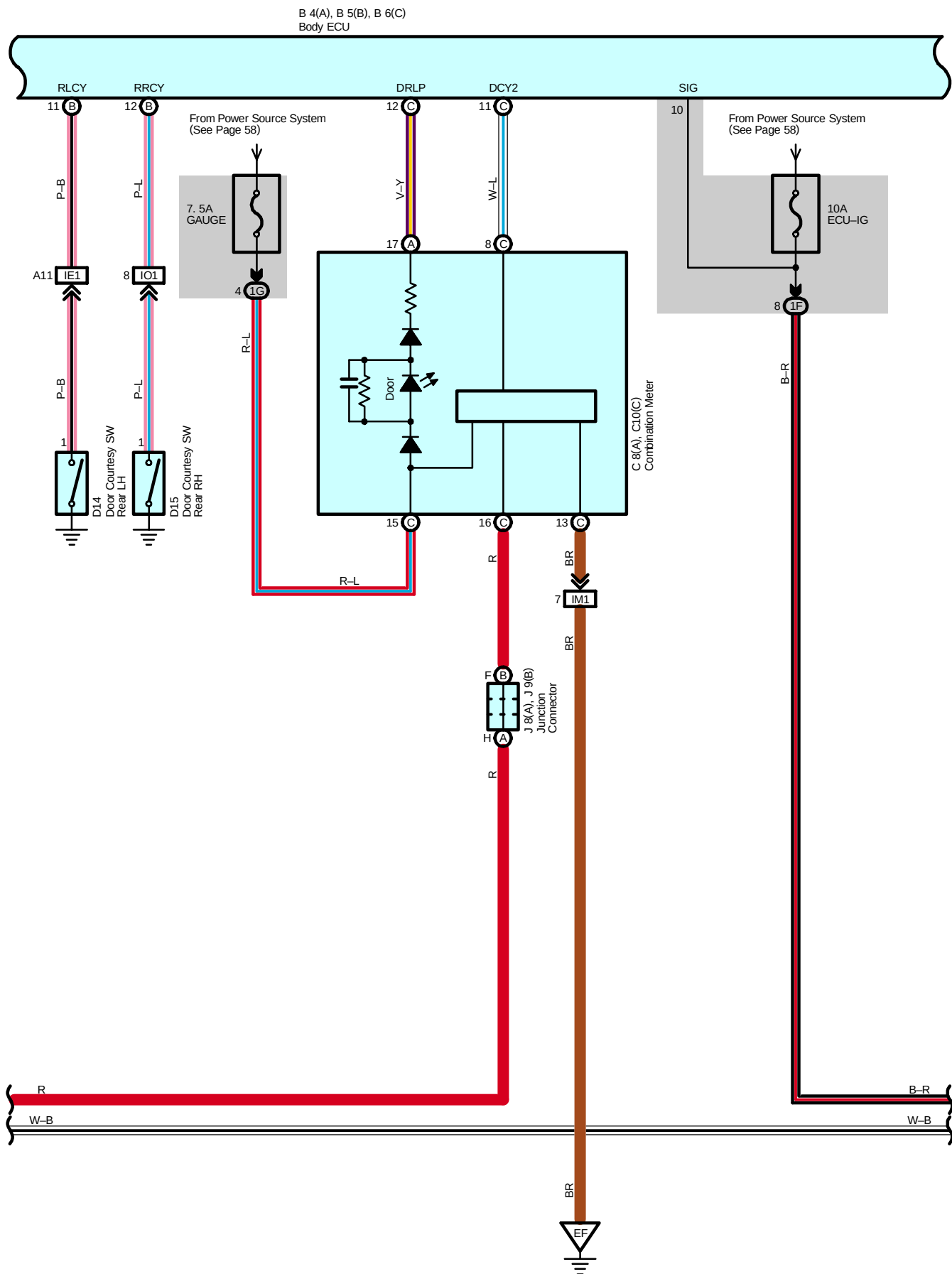
B 4(A), B 5(B), B 6(C)
Body ECU



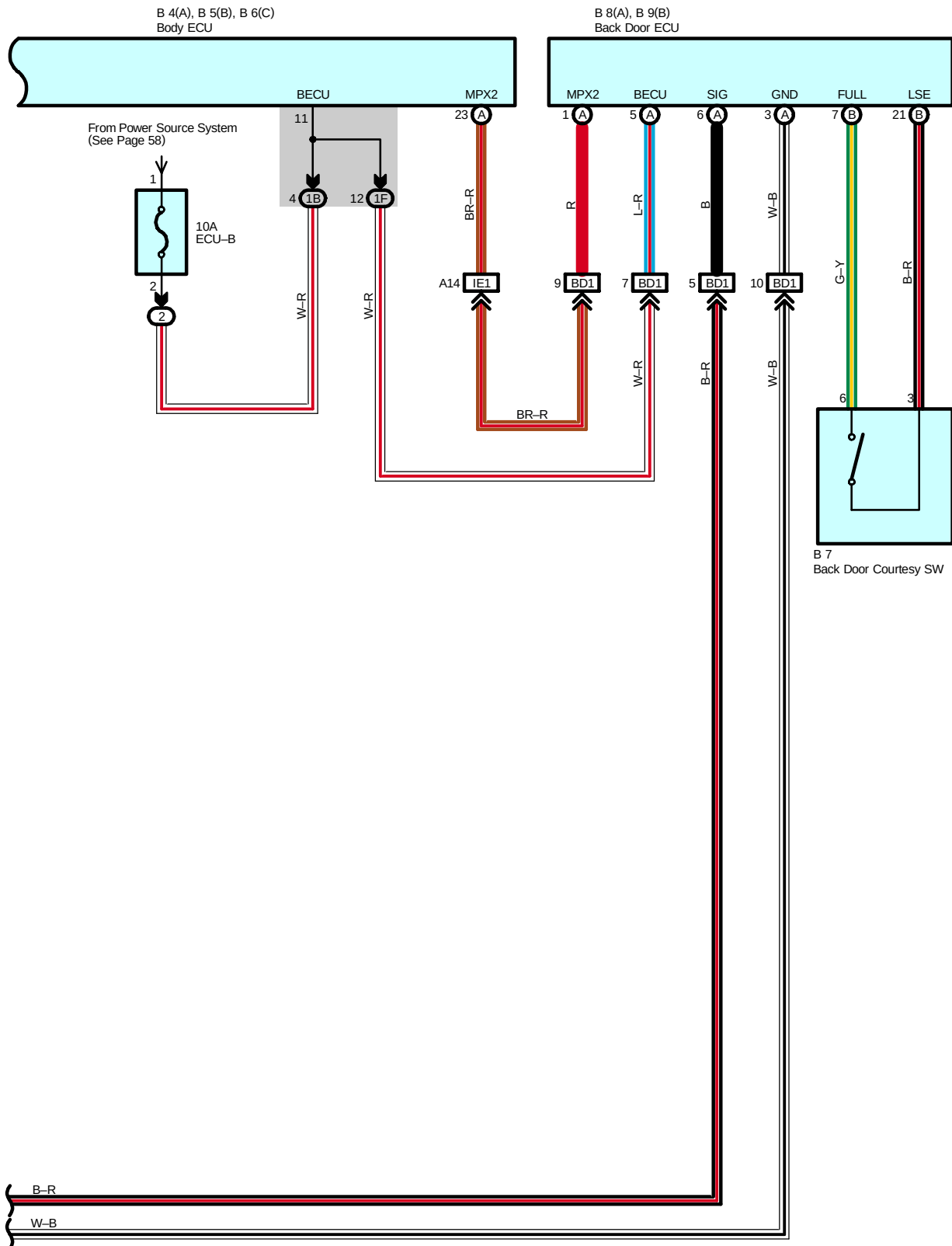


Interior Light





Interior Light



System Outline

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

1. Normal Operation

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

2. Illuminated Entry System

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

: Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	D12	40		J12	A	38
B5	B	36	D13	40		J13	B	38
B6	C	36	D14	40		J18	A	38
B7		40	D15	40		J19	B	38
B8	A	40	F12	40		J20	A	38
B9	B	40	F13	40		J21	B	38
C8	A	37	I17	37		J35		38
C10	C	37	I20	40		J40	A	40
D7		40	J5	38		J41	B	40
D8		40	J6	38		L2		40
D9		40	J7	38		P7		41
D10		40	J8	A	38	V6		41
D11		40	J9	B	38	V7		41

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

Interior Light



: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)



: Ground Points

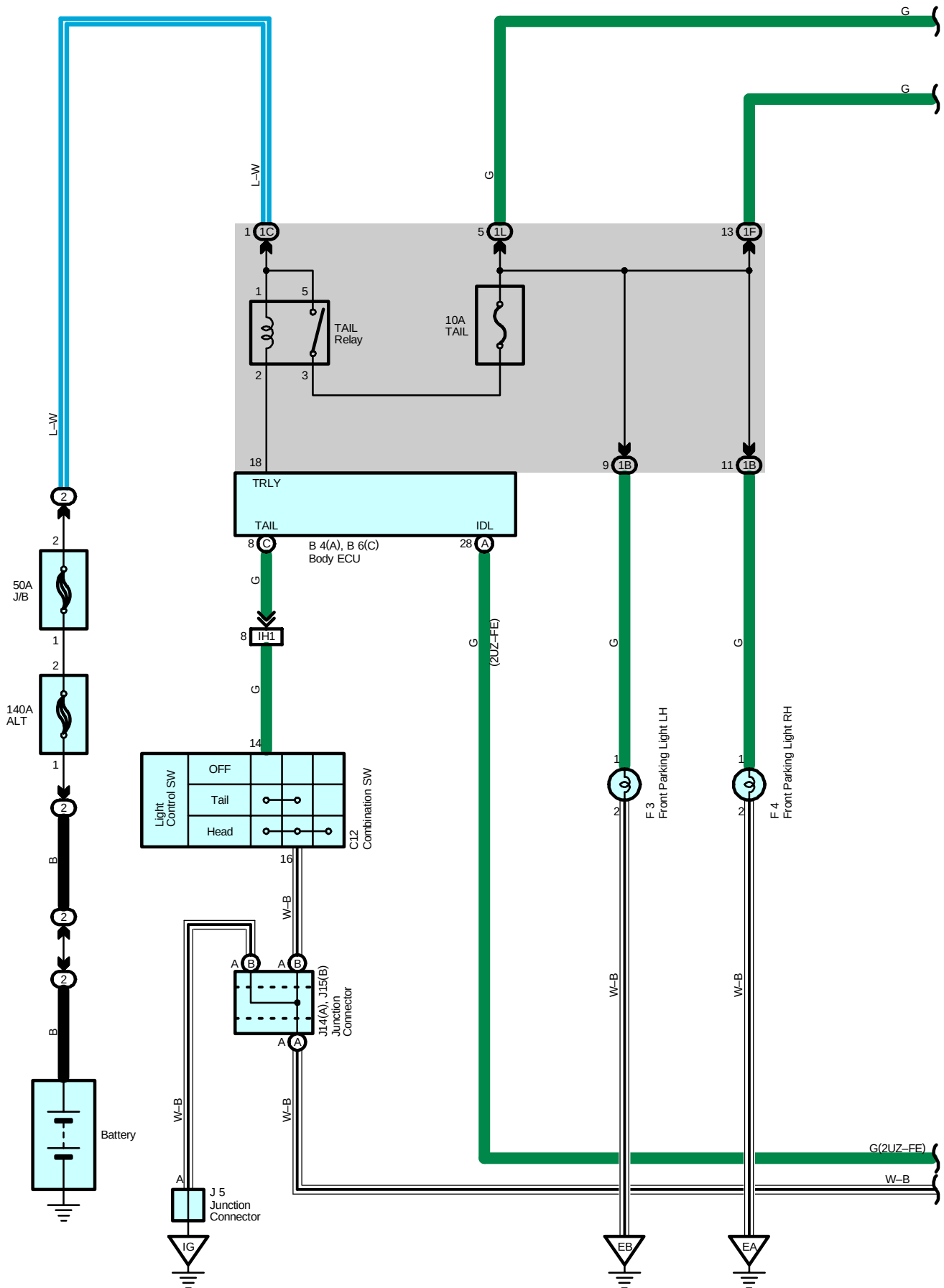
Code	See Page	Ground Points Location
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

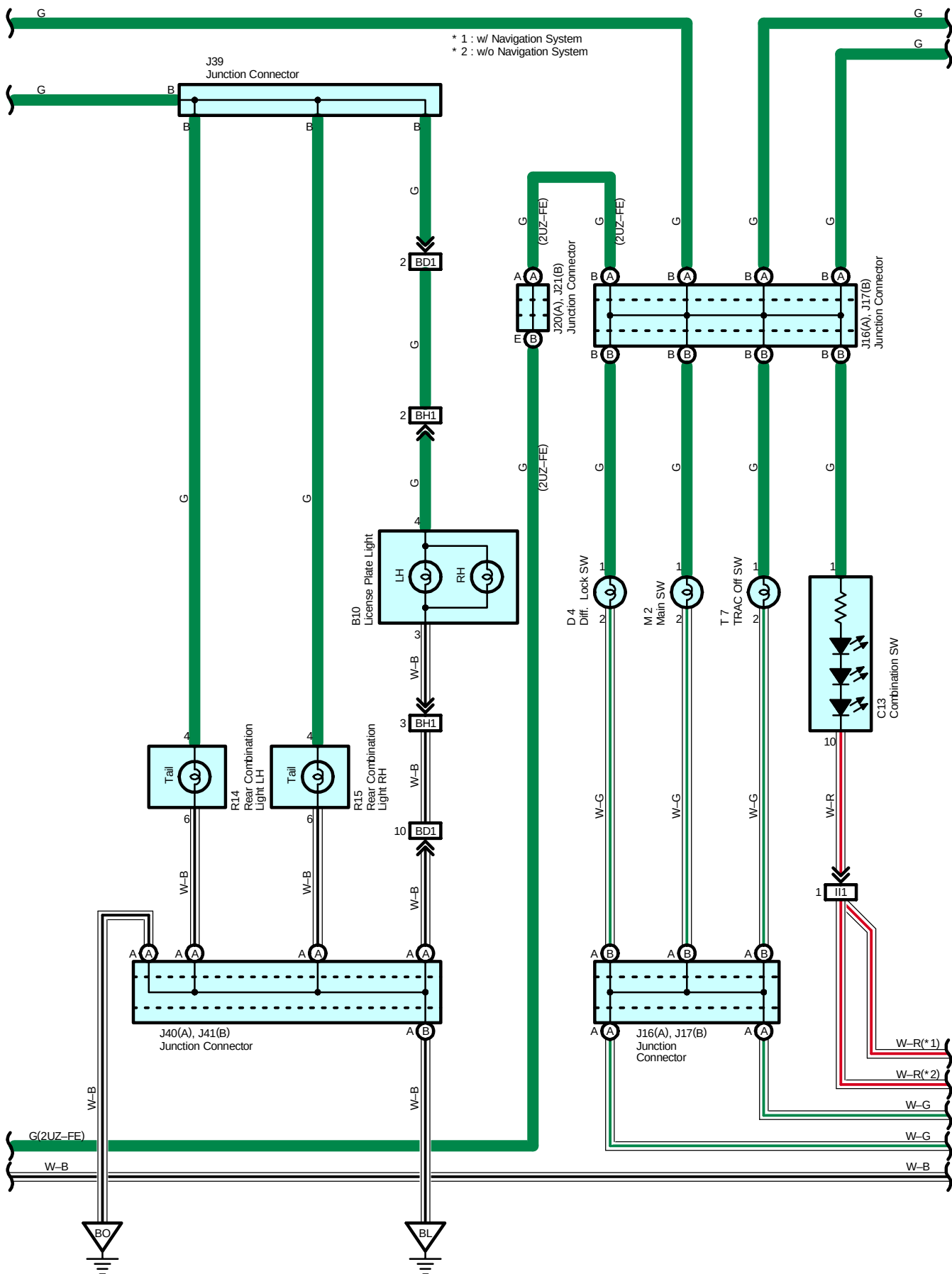


: Splice Points

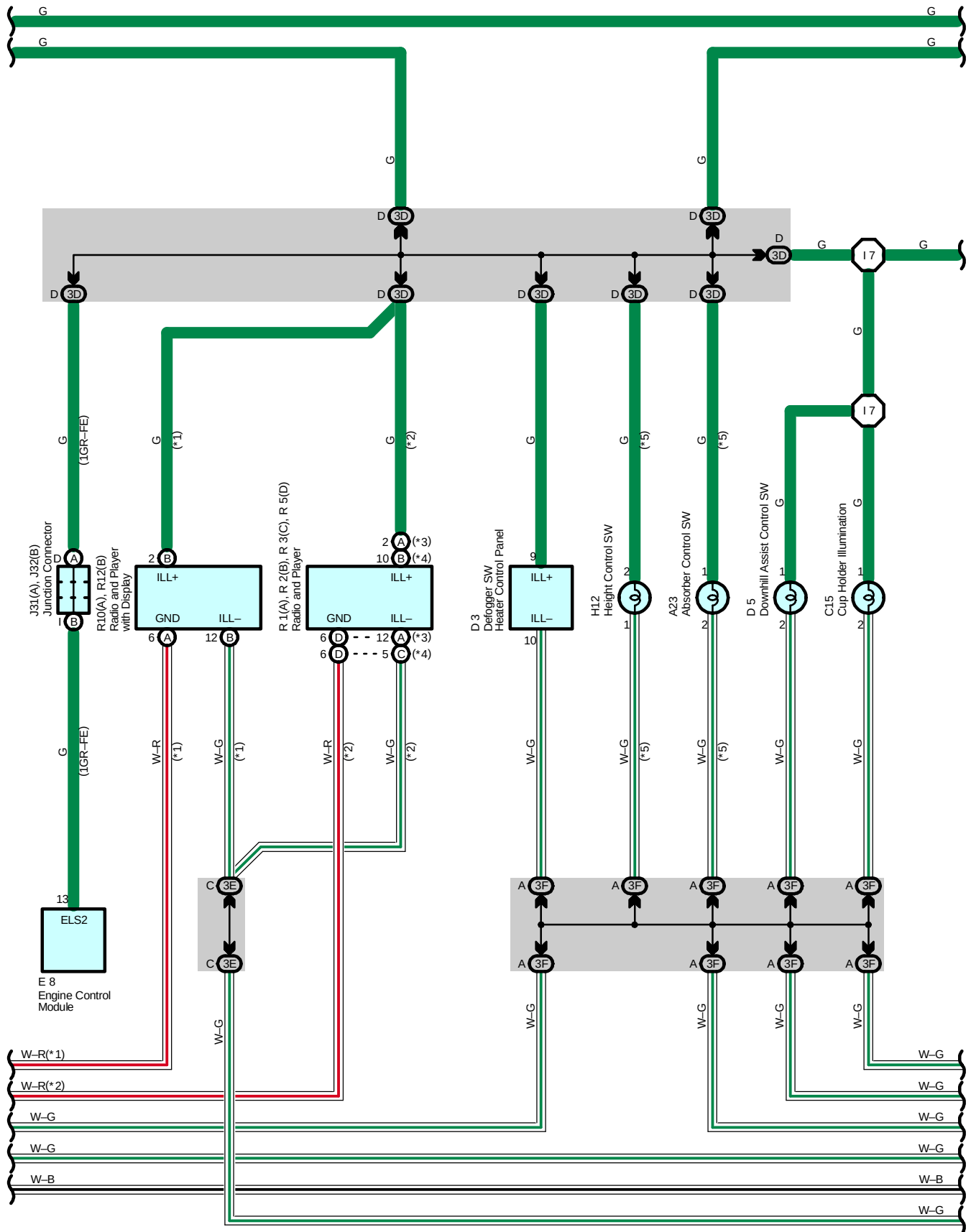
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B3	54	Roof Wire			

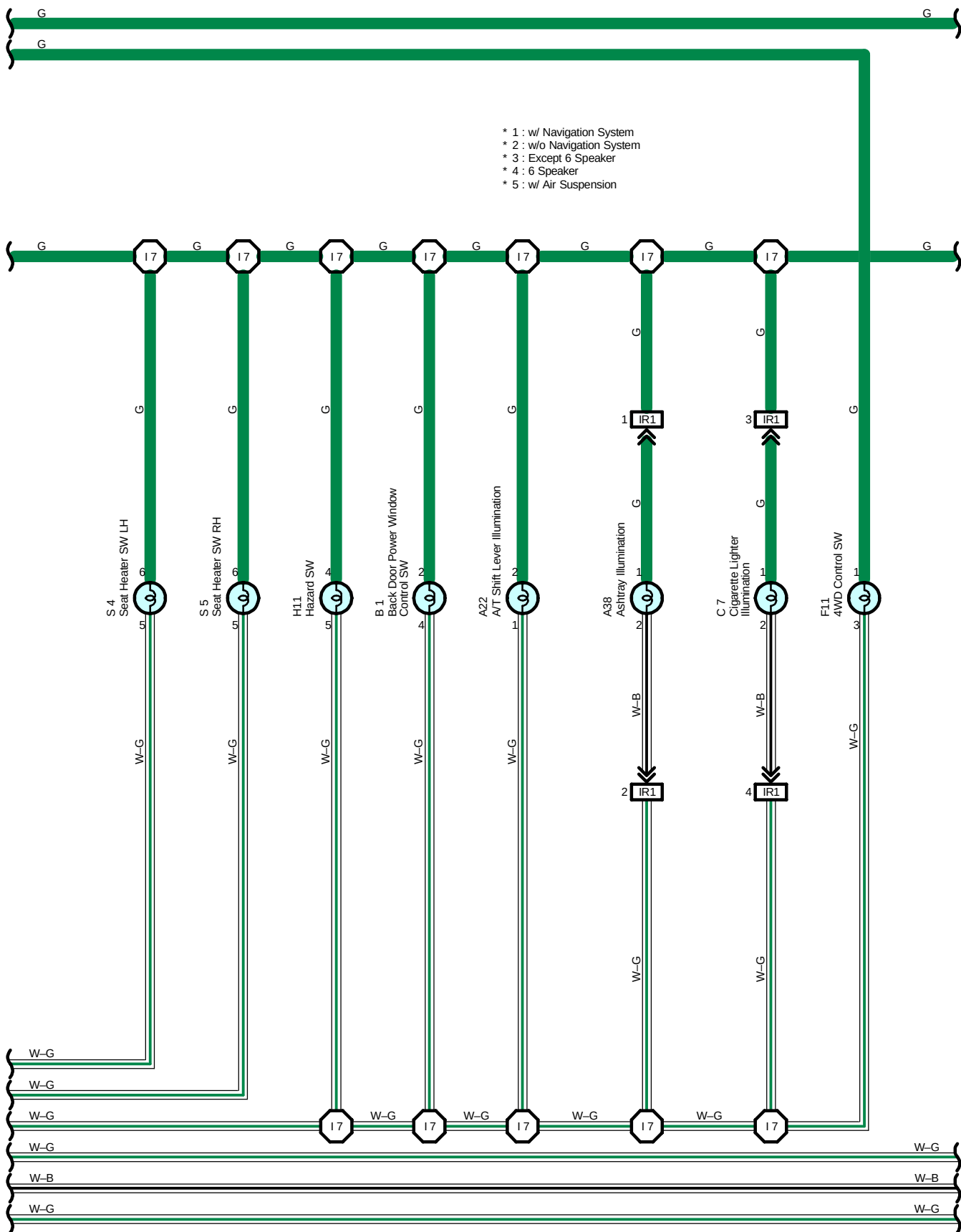
Taillight and Illumination

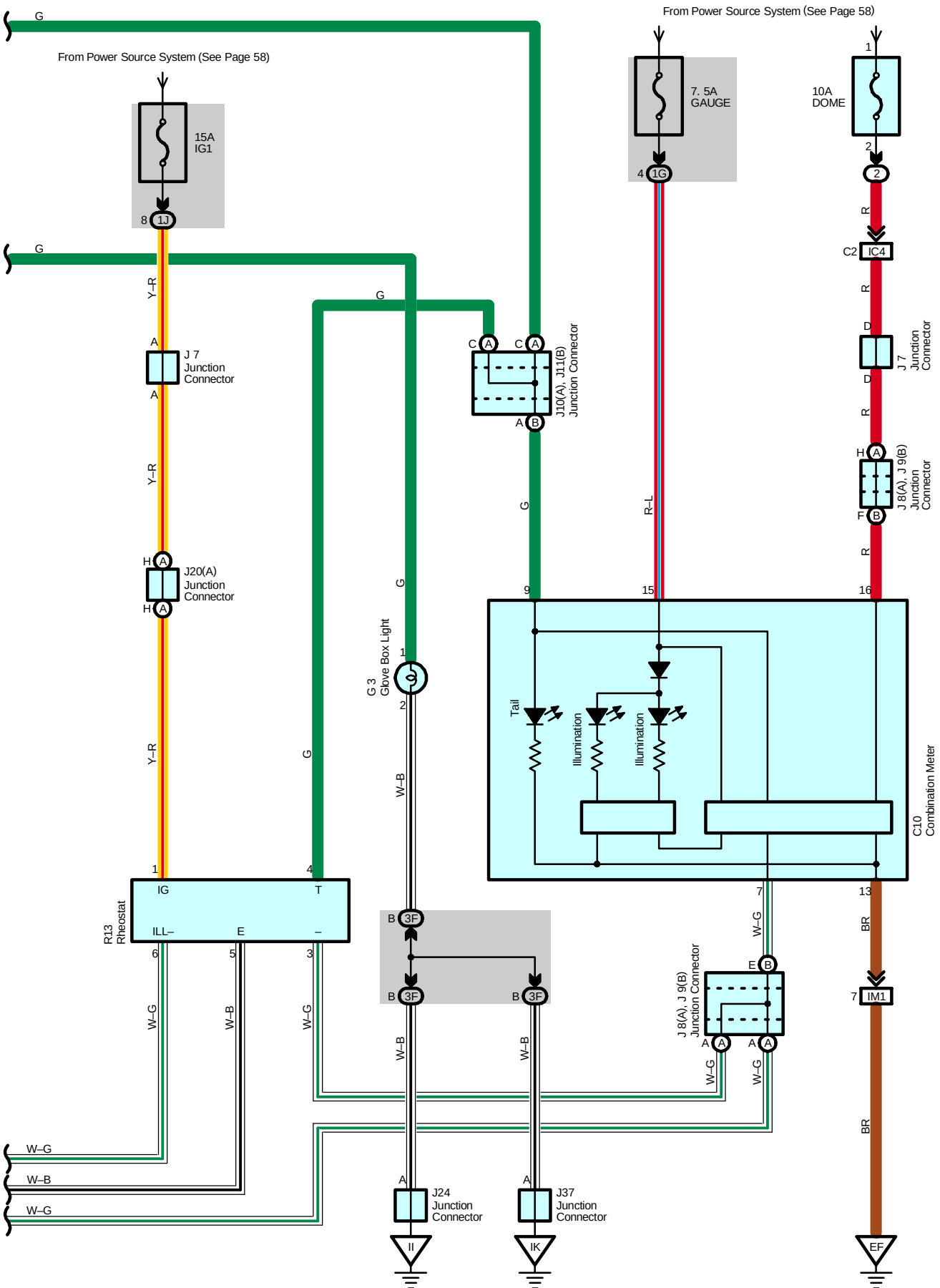




Taillight and Illumination







Service Hints

C12 Combination SW

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

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A22	36	F4	34 (1GR-FE)	J32	B 38
A23	36	F11	37	J37	38
A38	36	G3	37	J39	40
B1	36	H11	37	J40	A 40
B4	A 36	H12	37	J41	B 40
B6	C 36	J5	38	M2	39
B10	40	J7	38	R1	A 39
C7	37	J8	A 38	R2	B 39
C10	37	J9	B 38	R3	C 39
C12	37	J10	A 38	R5	D 39
C13	37	J11	B 38	R10	A 39
C15	37	J14	A 38	R12	B 39
D3	37	J15	B 38	R13	39
D4	37	J16	A 38	R14	41
D5	37	J17	B 38	R15	41
E8	37	J20	A 38	S4	39
F3	32 (2UZ-FE)	J21	B 38	S5	39
	34 (1GR-FE)	J24	38	T7	39
F4	32 (2UZ-FE)	J31	A 38		

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
II1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IR1	52	Instrument Panel Wire and Cigarette Wire (Rear Console)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BH1	54	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)

Taillight and Illumination



: Ground Points

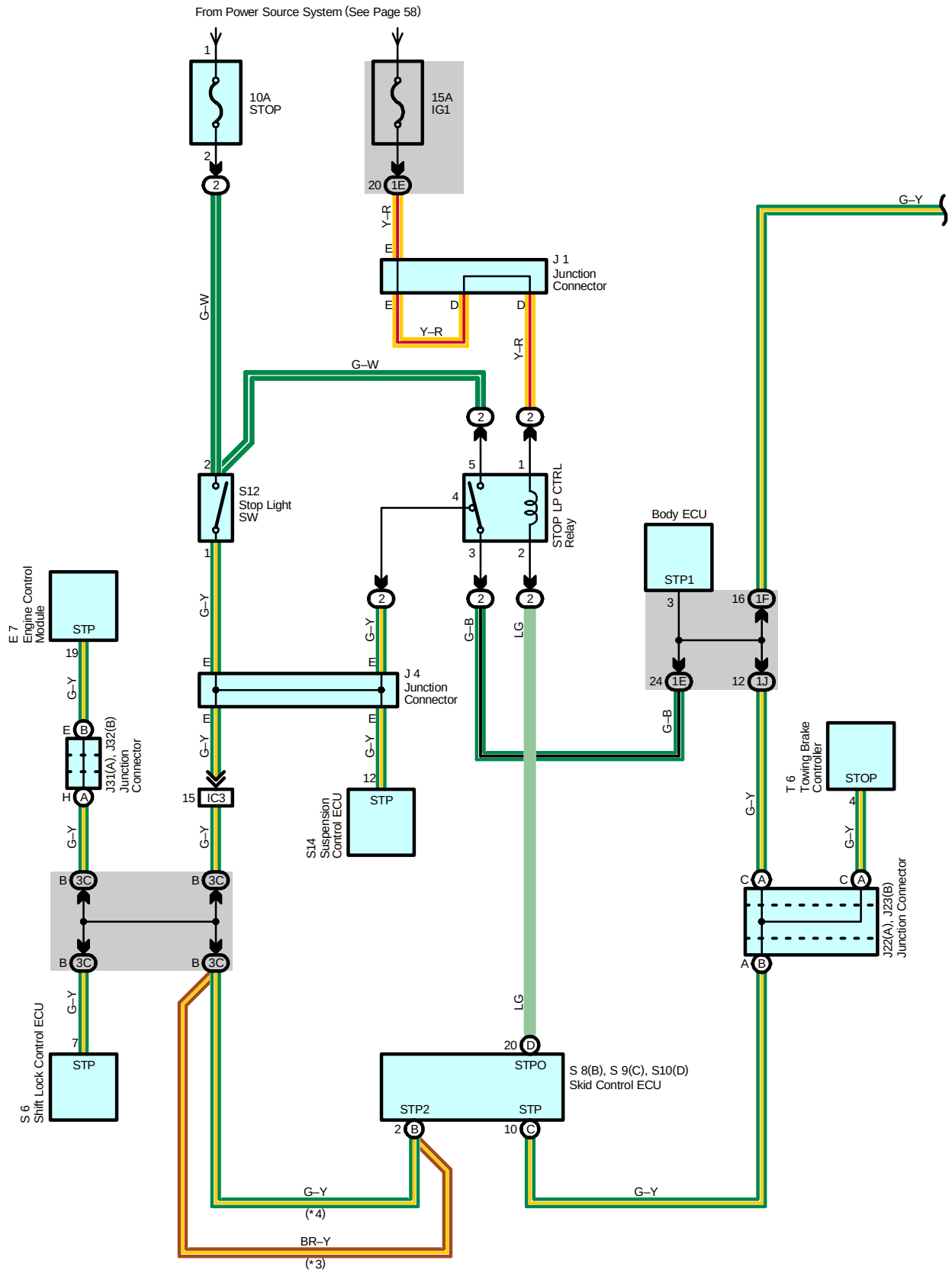
Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	46 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

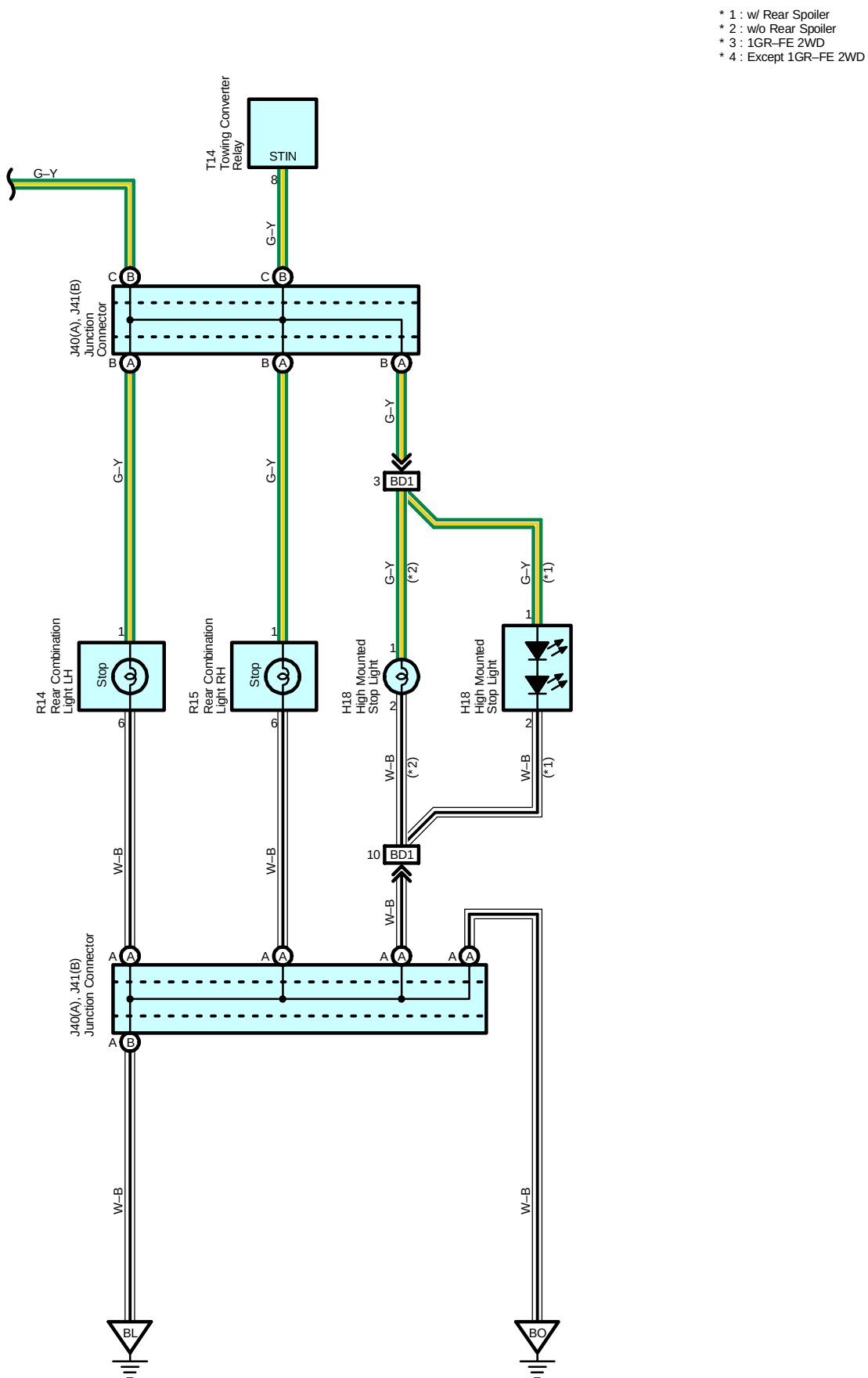


: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I7	50	Instrument Panel Wire			

Stop Light





Stop Light

Service Hints

S12 Stop Light SW

2-1 : Closed with the brake pedal depressed

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
E7	37	J31	A 38	S8	B 39
H18	40	J32	B 38	S9	C 39
J1	33 (2UZ-FE)	J40	A 40	S10	D 39
	35 (1GR-FE)	J41	B 40	S12	39
J4	38	R14	41	S14	39
J22	A 38	R15	41	T6	39
J23	B 38	S6	39	T14	41

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

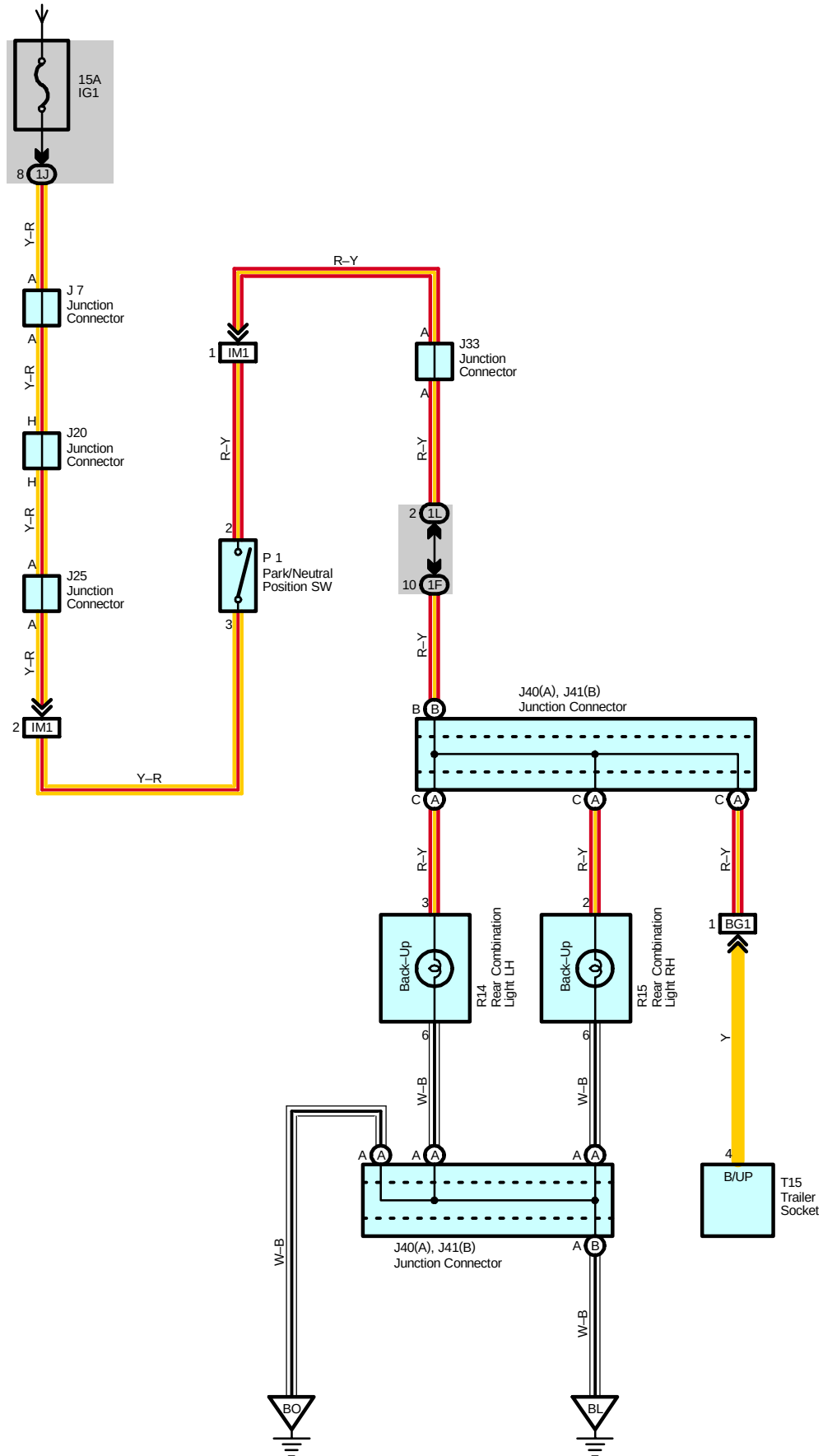
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

▽ : Ground Points

Code	See Page	Ground Points Location
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

Back-Up Light

From Power Source System (See Page 58)



Service Hints

P1 Park/Neutral Position SW

3-2 : Continuity with the shift lever in R position

○ : Parts Location

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

□ : Junction Block and Wire Harness Connector

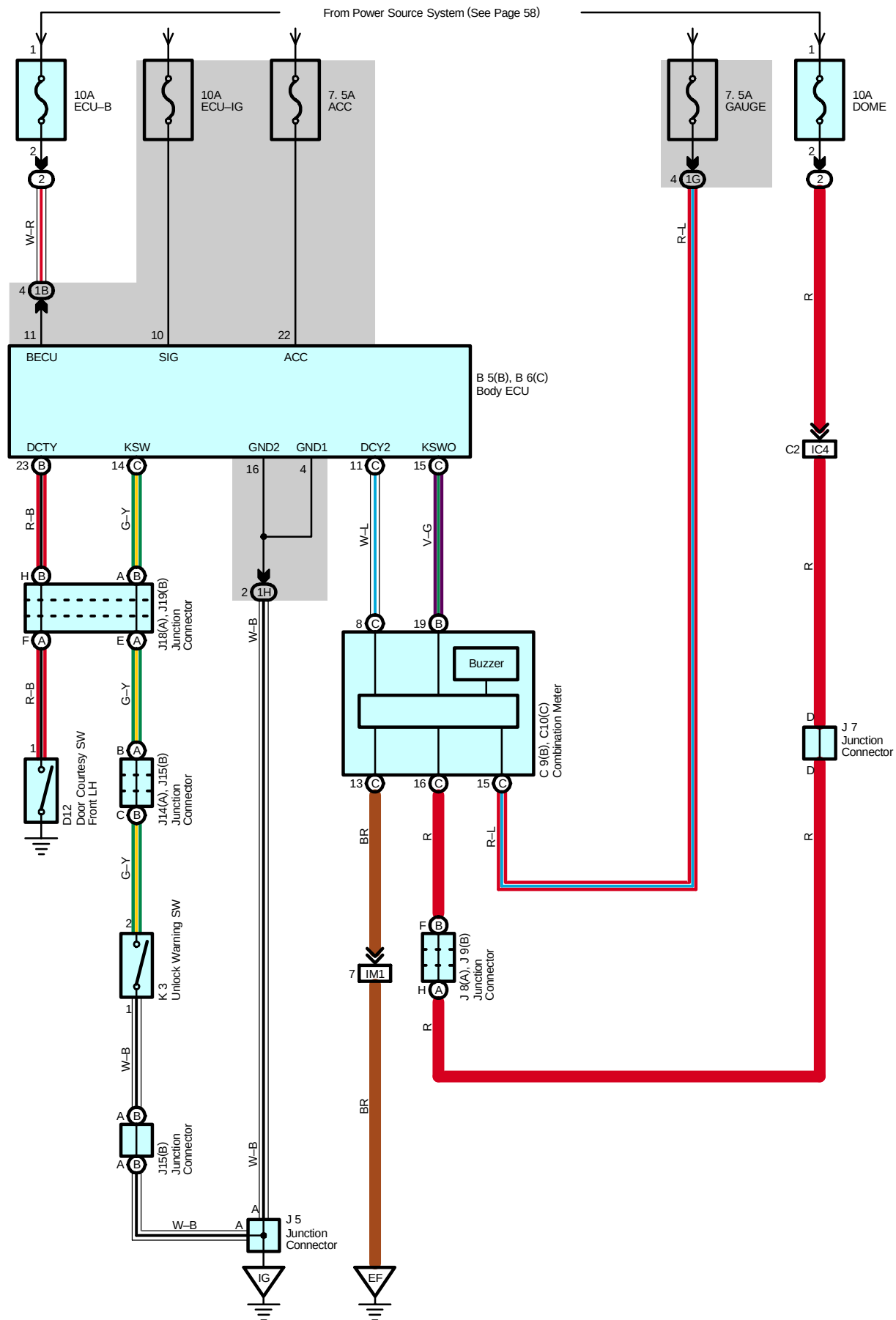
Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Floor No.2 Wire and Driver Side J/B (Lower Finish Panel)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1L		

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
BG1	54	Floor No.2 Wire and Frame No.3 Wire (Rear Side of Side Frame LH)

▽ : Ground Points

Code	See Page	Ground Points Location
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH



System Outline

Key Reminder System

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

Service Hints

Body ECU

- 22-Ground : Approx. 12 volts with ignition SW at ACC or ON position
- 10-Ground : Approx. 12 volts with ignition SW at ON position
- 4, 16-Ground : Always continuity
- 11-Ground : Always approx. 12 volts

D12 Door Courtesy SW Front LH

- 1-Ground : Continuity with the driver door open

K3 Unlock Warning SW

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

○ : Parts Location

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

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

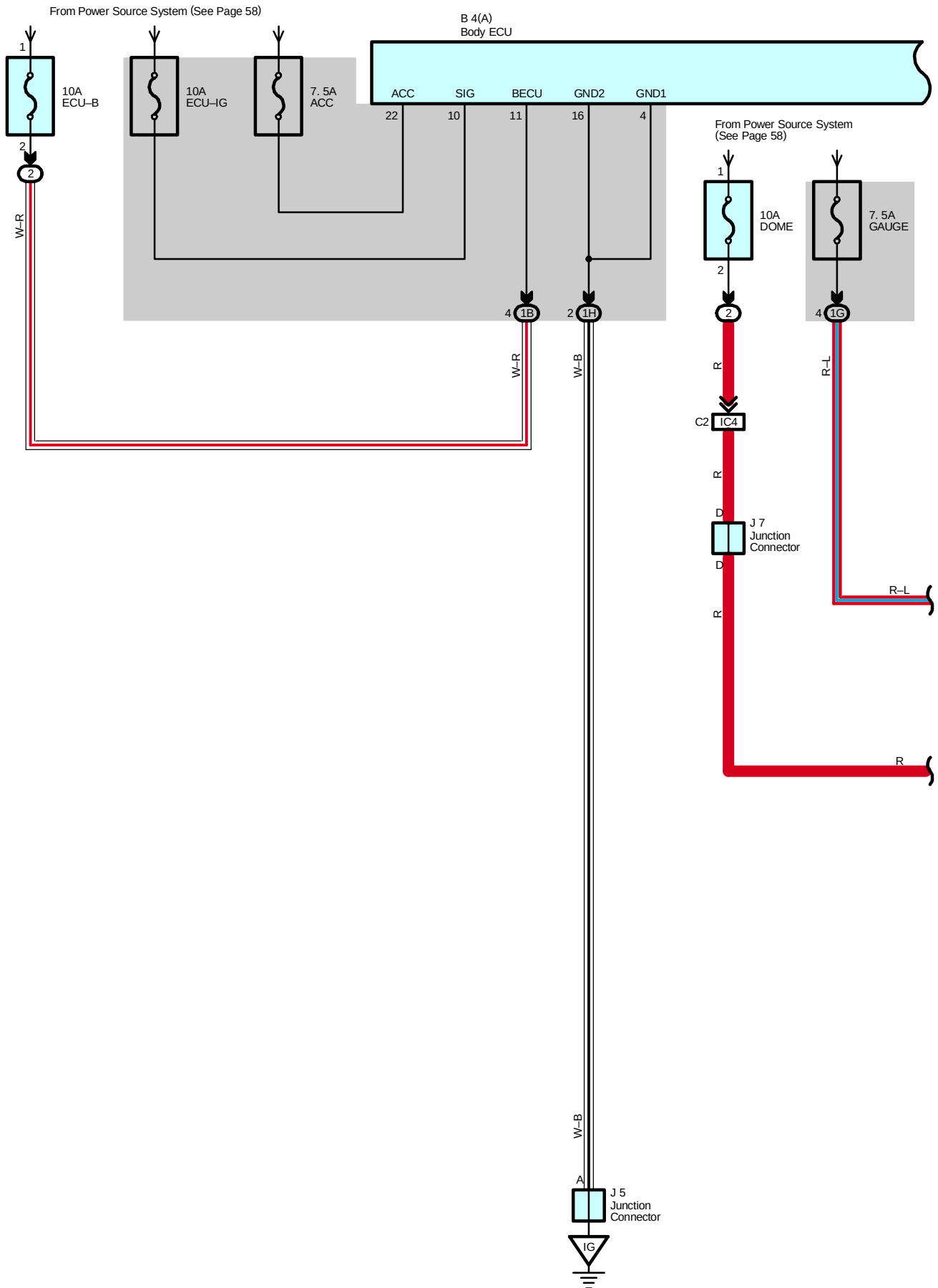
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)

▽ : Ground Points

Code	See Page	Ground Points Location
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel

Seat Belt Warning



Seat Belt Warning

System Outline

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

Service Hints

B12 Buckle SW LH

3-4 : Continuity with driver's seat belt in use

B13 Buckle SW RH

Occupant Detection Sensor

2-3 : Continuity with front passenger sit on front passenger seat and front passenger's seat belt not use

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	D3		37	J20	A	38
B12		42	J5		38	J21	B	38
B13		42	J7		38	J25		38
C9	B	37	J8	A	38			
C10	C	37	J9	B	38			

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

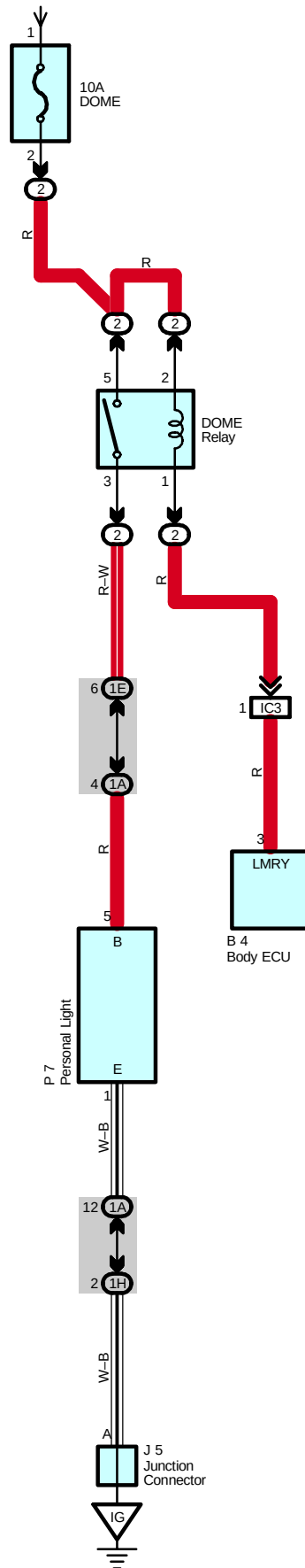
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel
BL	54	Floor Seat Crossmember LH
BM	54	Floor Seat Crossmember RH

Garage Door Opener

From Power Source System (See Page 58)



Service Hints

P7 Personal Light

1-Ground : Always continuity

: Parts Location

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

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

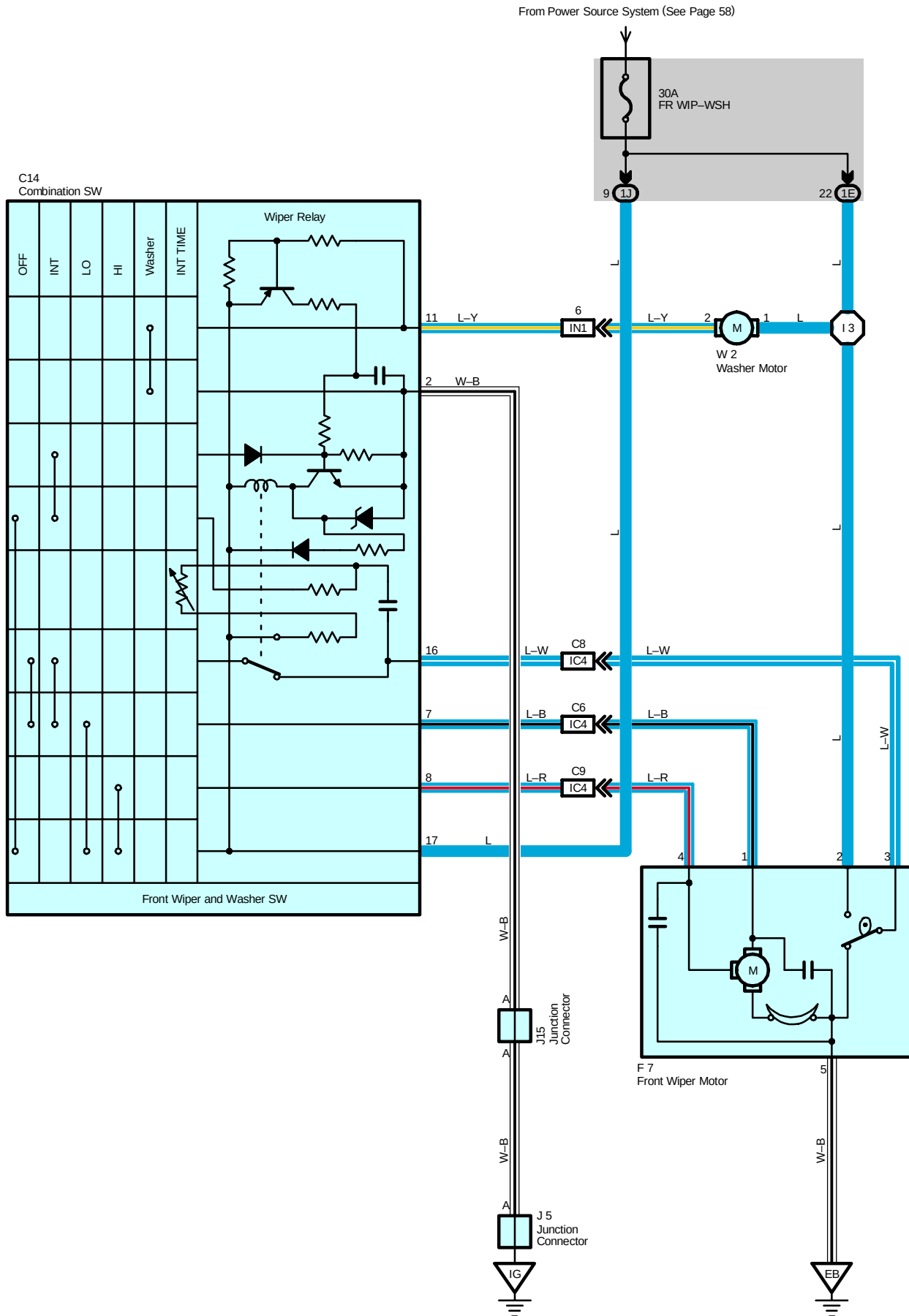
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel

Front Wiper and Washer



System Outline

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

1. Low Speed Position

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

2. High Speed Position

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

3. INT Position

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

4. Washer Interlocking Operation

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

Service Hints

C14 Combination SW

2–Ground : Always continuity

17–Ground : Approx. 12 volts with the ignition SW at ON position

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

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

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

F7 Front Wiper Motor

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

○ : Parts Location

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

□ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

Front Wiper and Washer



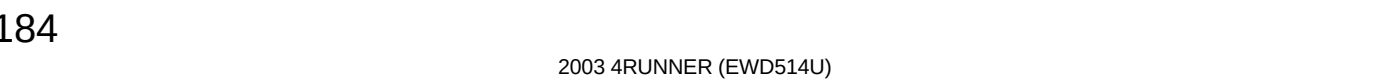
: **Ground Points**

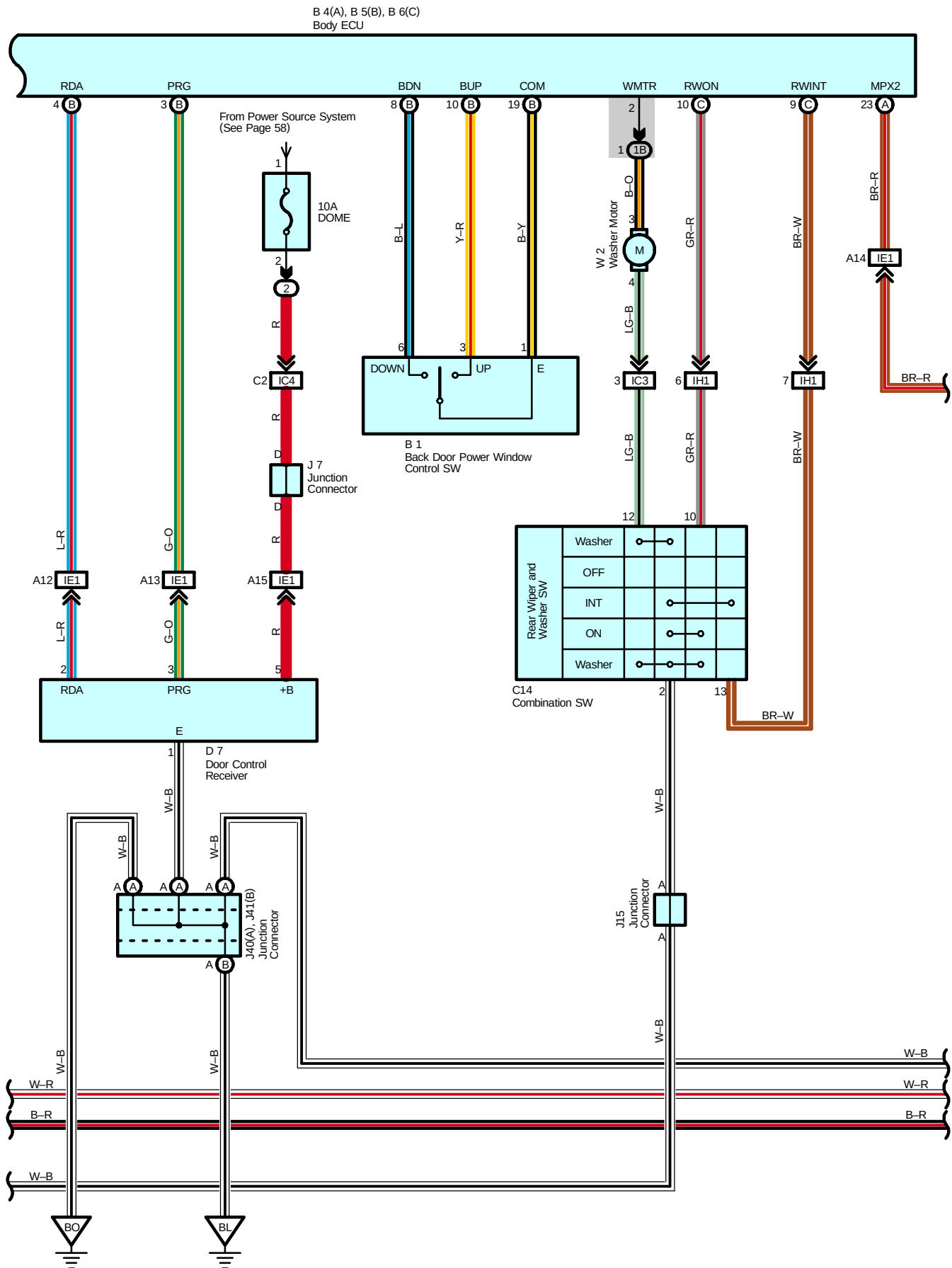
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
IG	48	Left Kick Panel



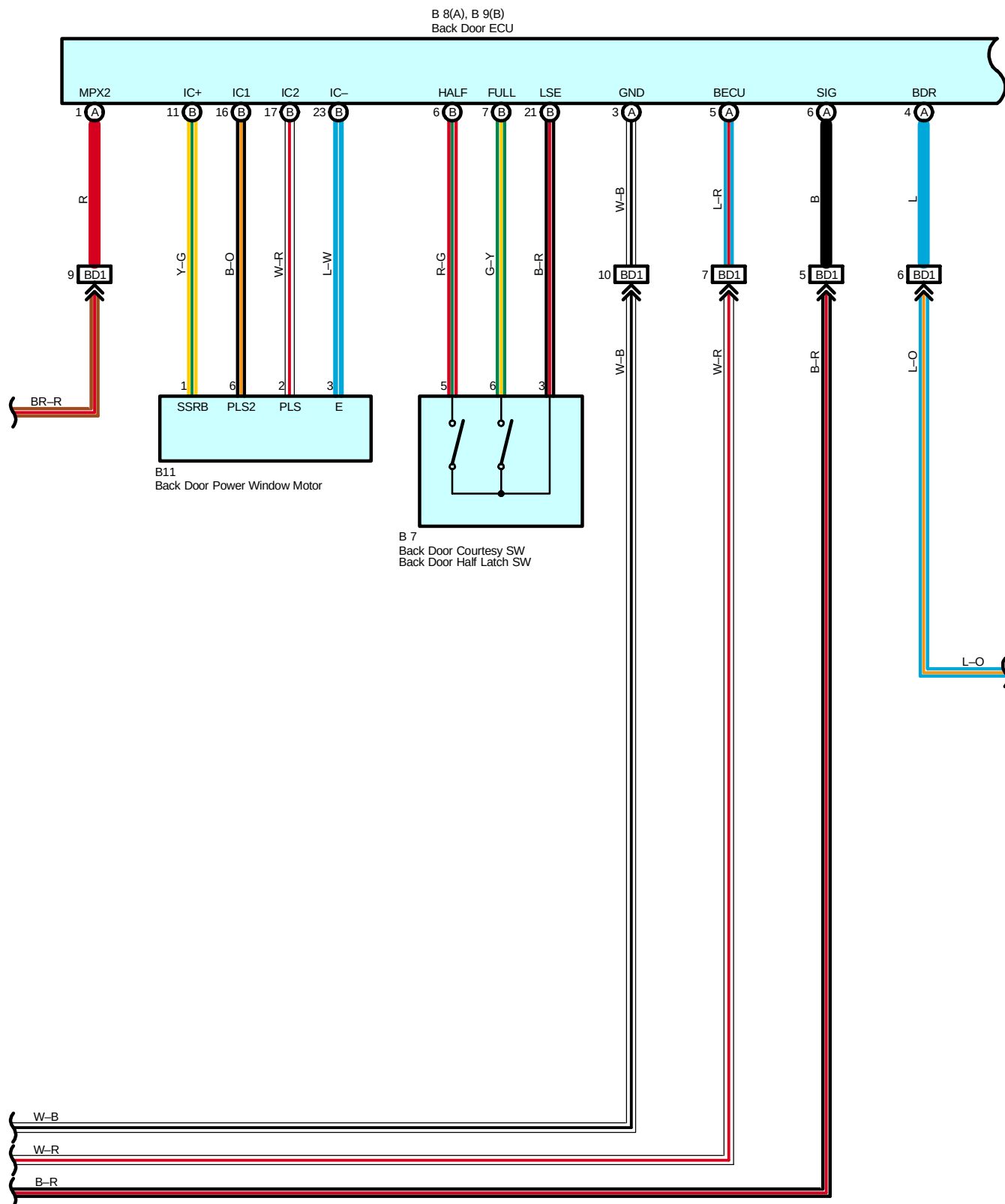
: **Splice Points**

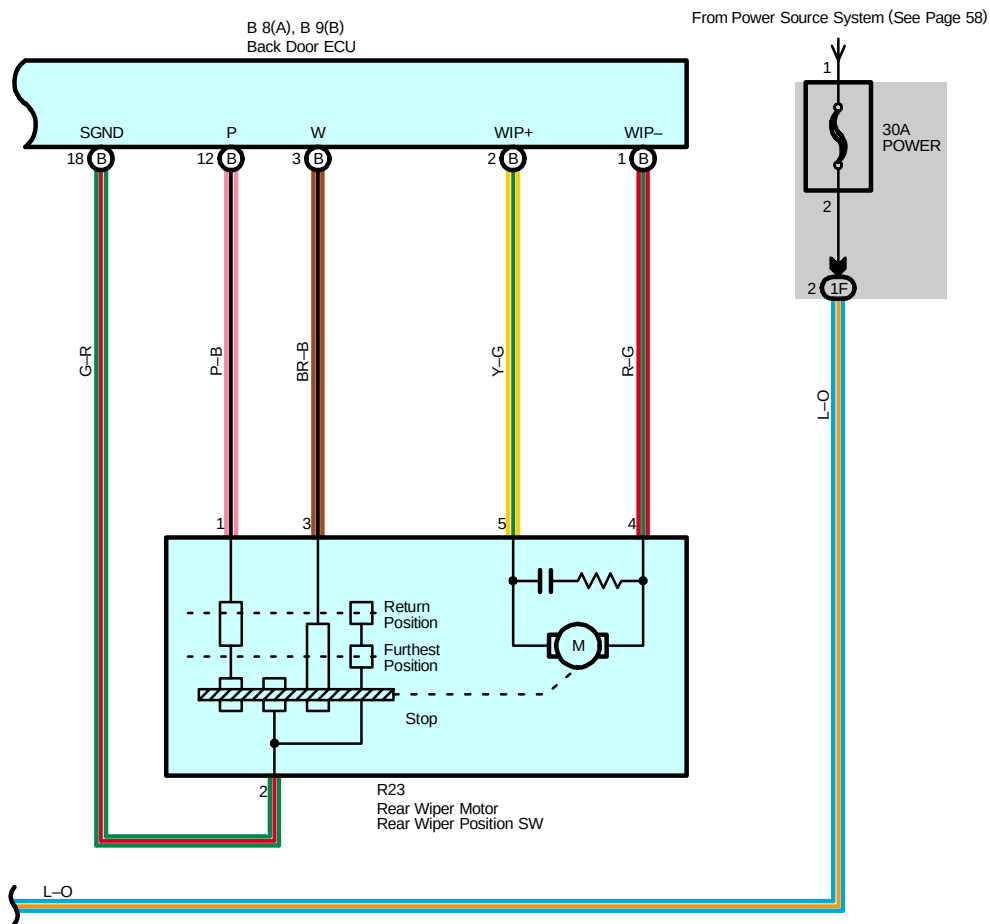
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	50	Engine Room Main Wire			





Rear Wiper and Washer





Rear Wiper and Washer

System Outline

* Rear wiper operation

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

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

* Rear washer operation

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

Service Hints

C14 Combination SW

10–Ground : Continuity with the rear wiper SW at ON position

13–Ground : Continuity with the rear wiper SW at INT position

2–Ground : Always continuity

Body ECU

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

1, 10–Ground : Approx. 12 volts with ignition SW at ON position

11–Ground : Always approx. 12 volts

4, 16–Ground : Always continuity

B8 (A) Back Door ECU

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

(A) 4, (A) 5–Ground : Always approx. 12 volts

(A) 3–Ground : Always continuity

○ : Parts Location

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

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

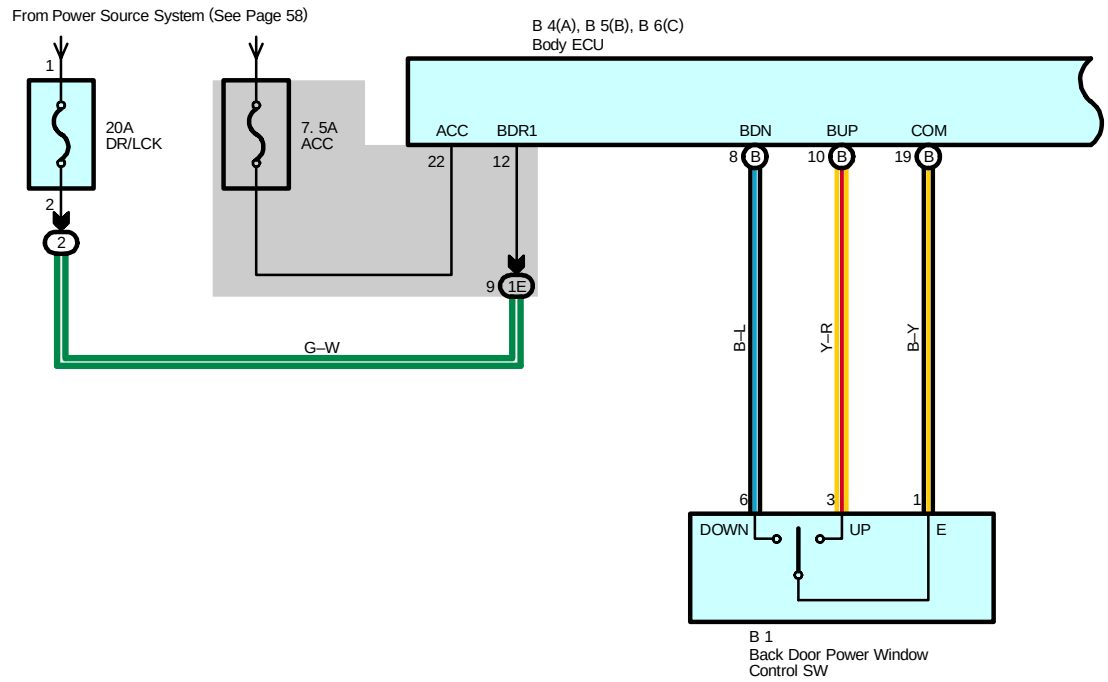
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

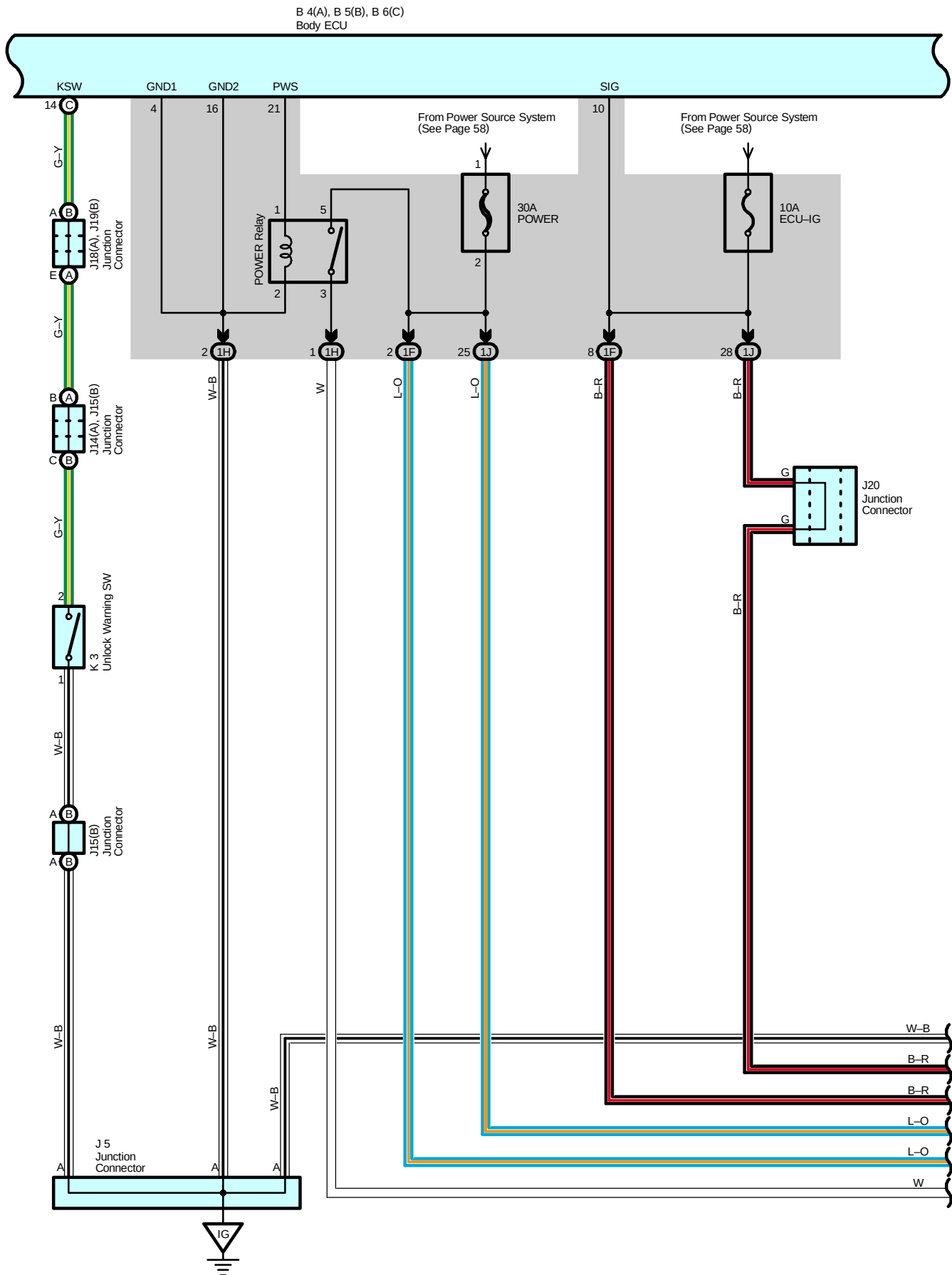


: Ground Points

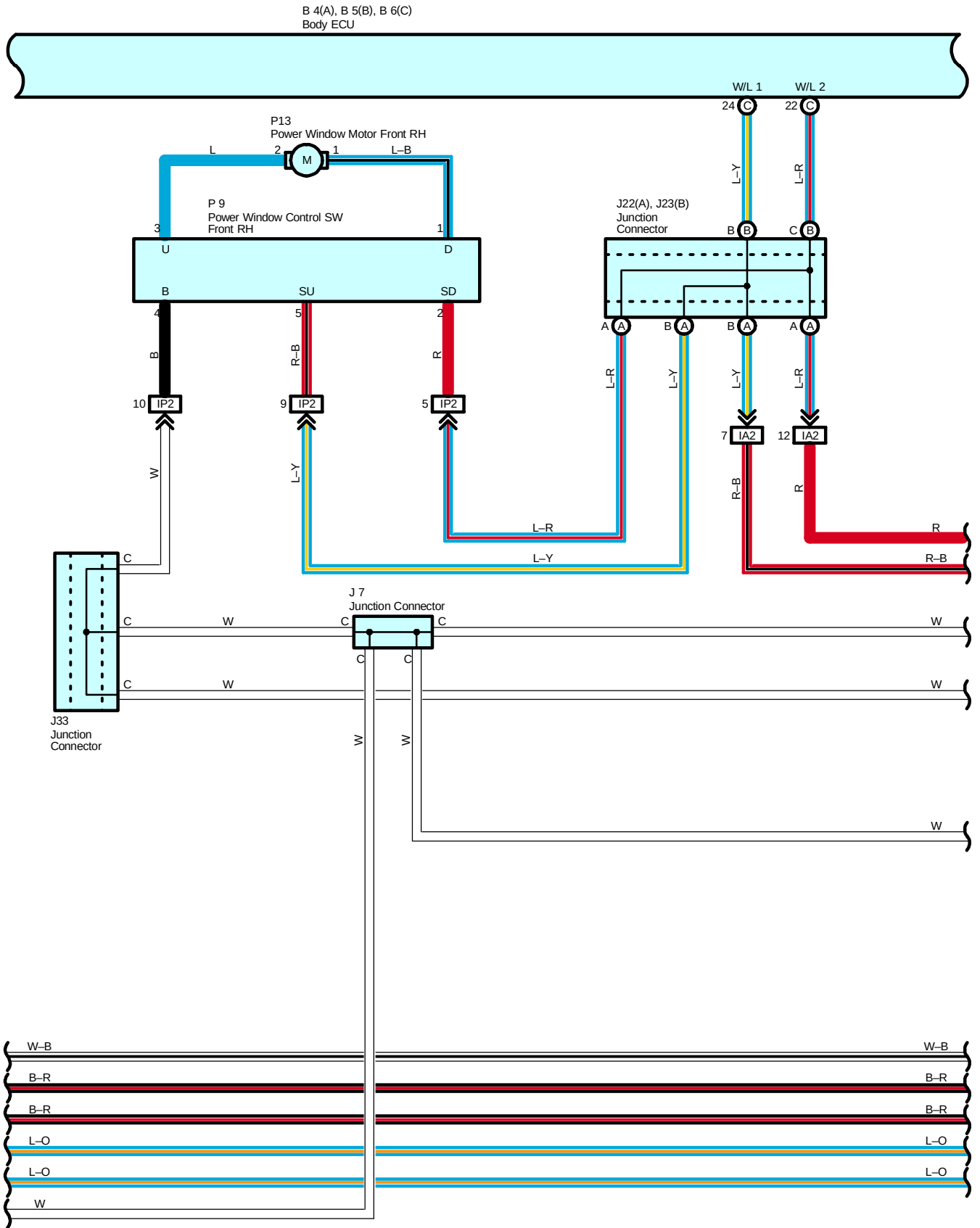
Code	See Page	Ground Points Location
IG	48	Left Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

Power Window



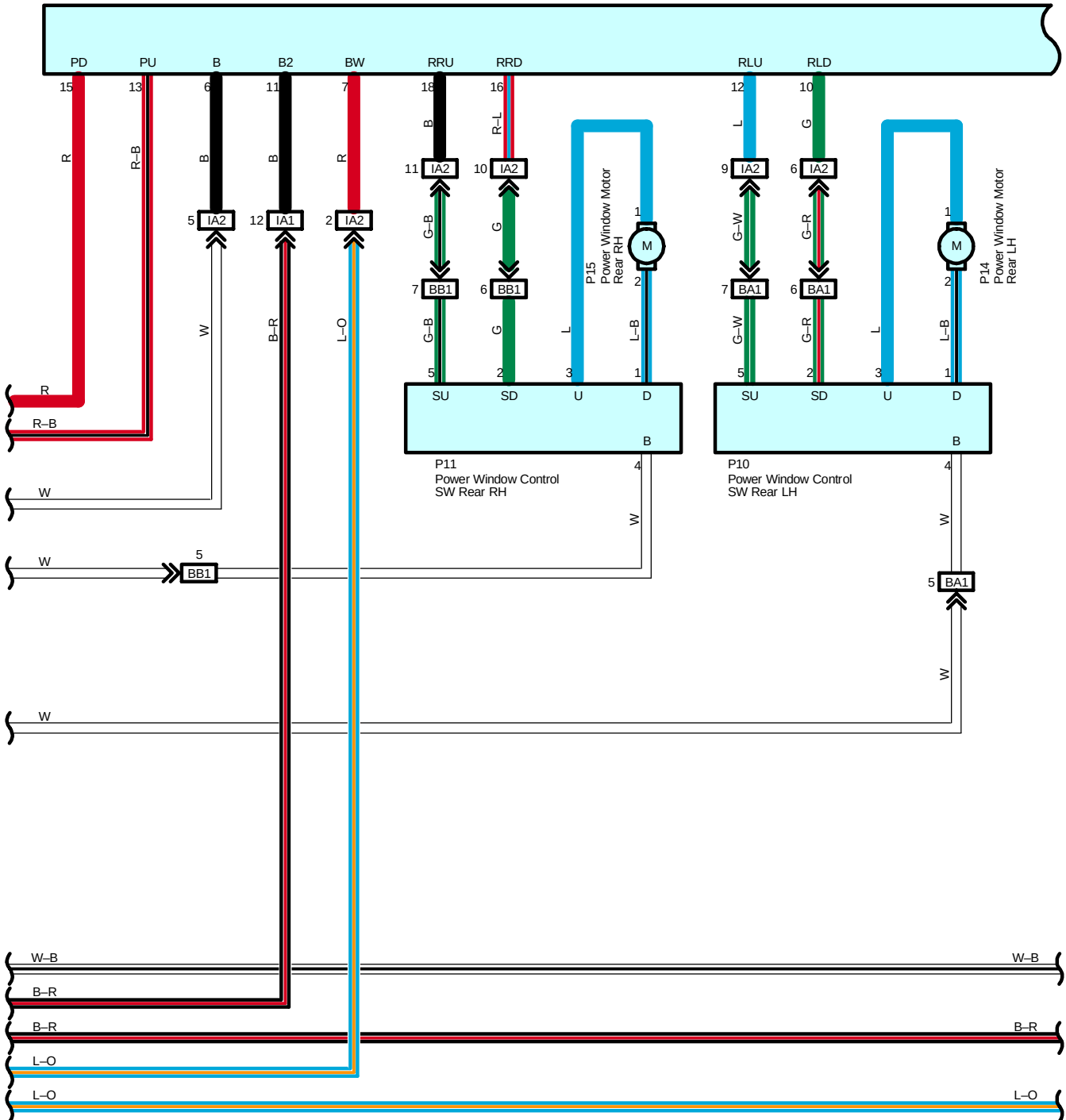


Power Window

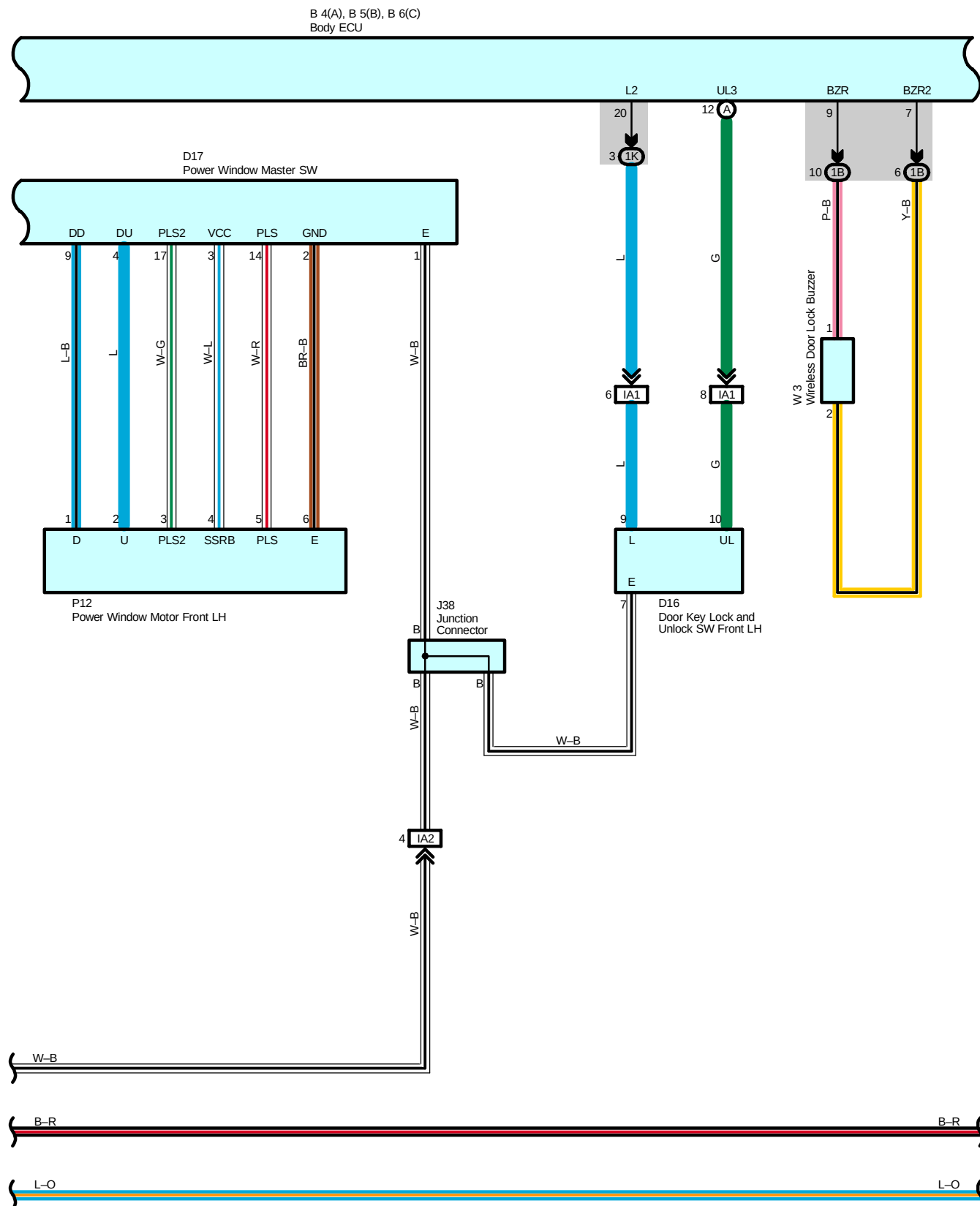


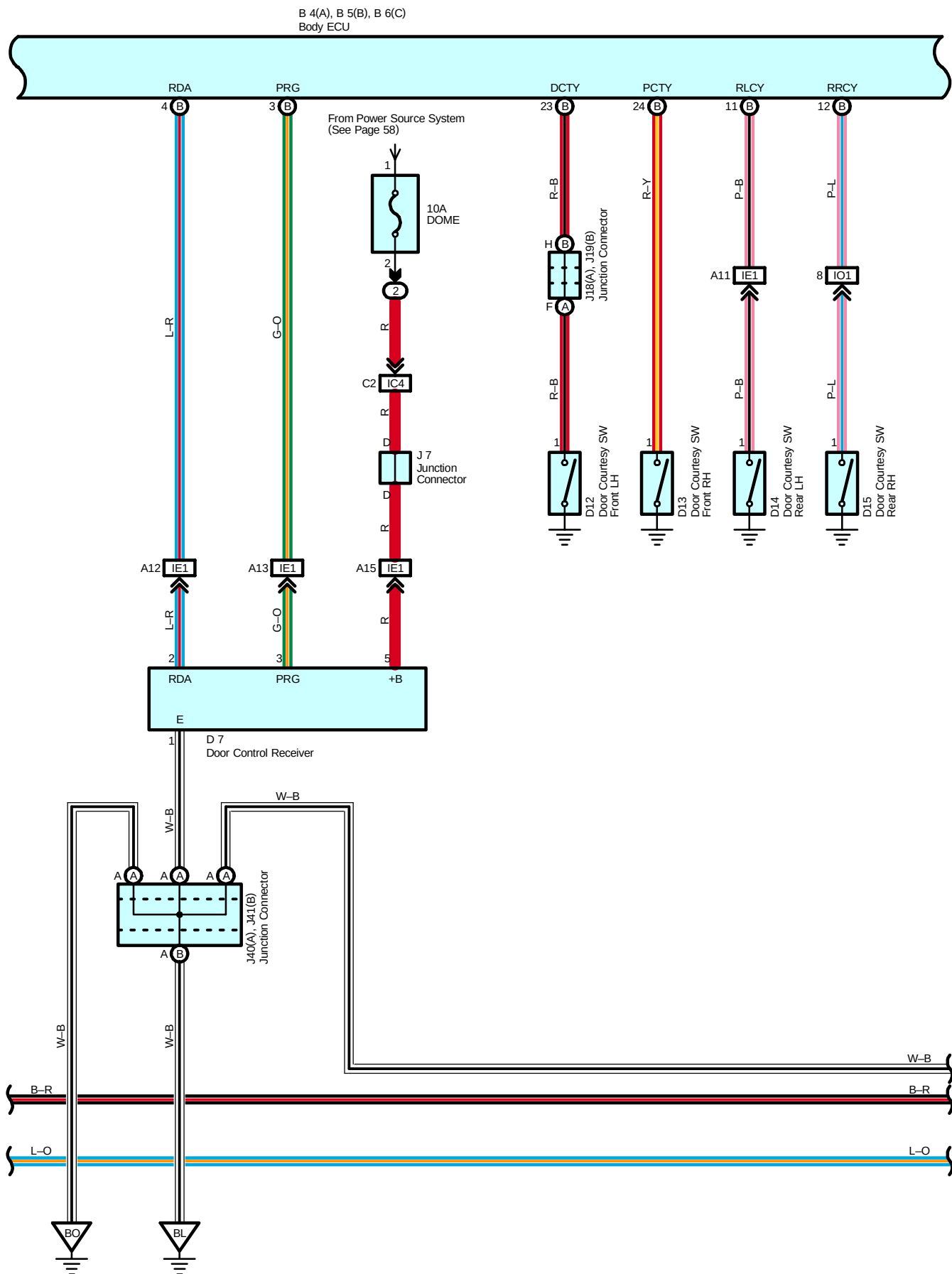
B 4(A), B 5(B), B 6(C)
Body ECU

D17
Power Window Master SW

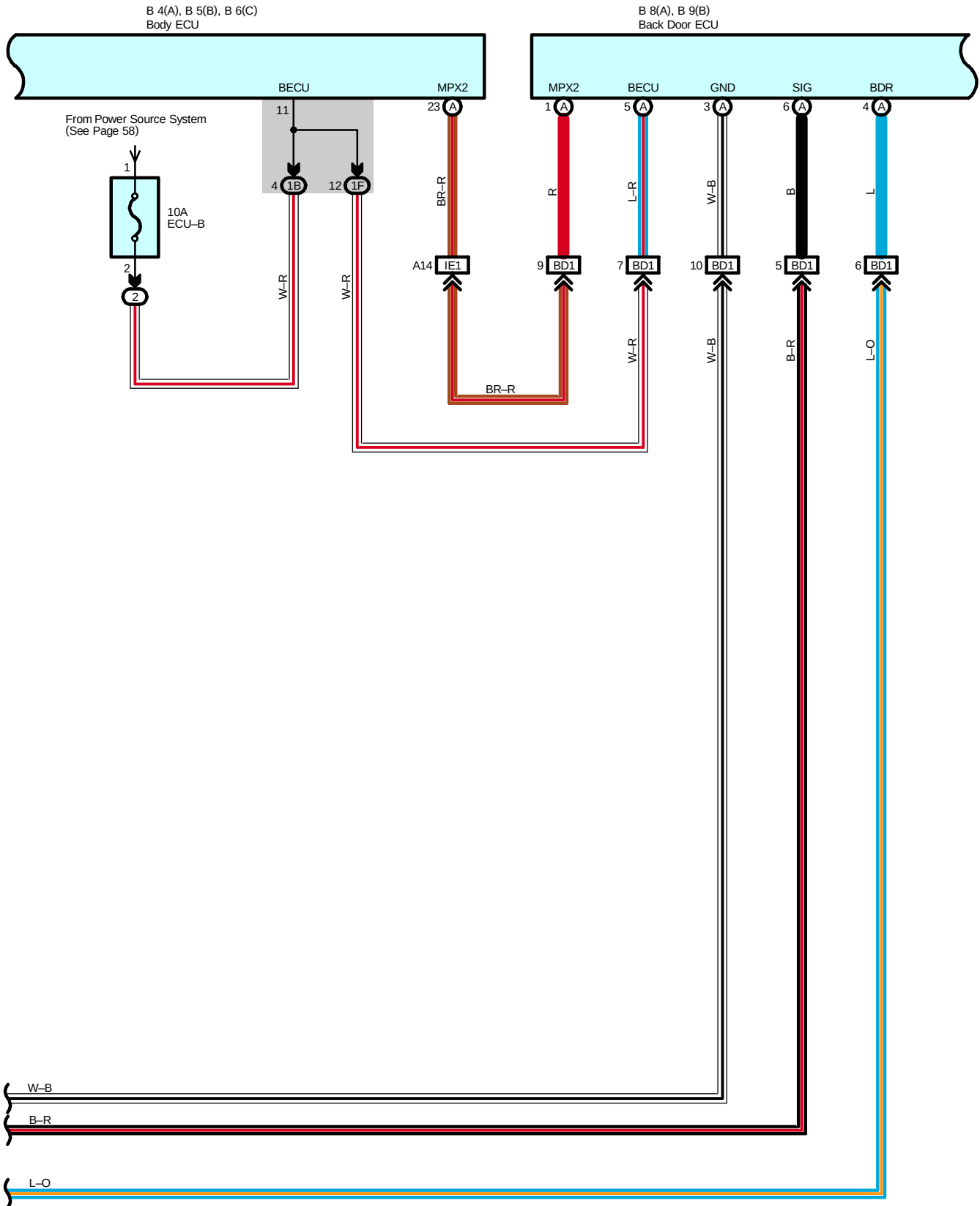


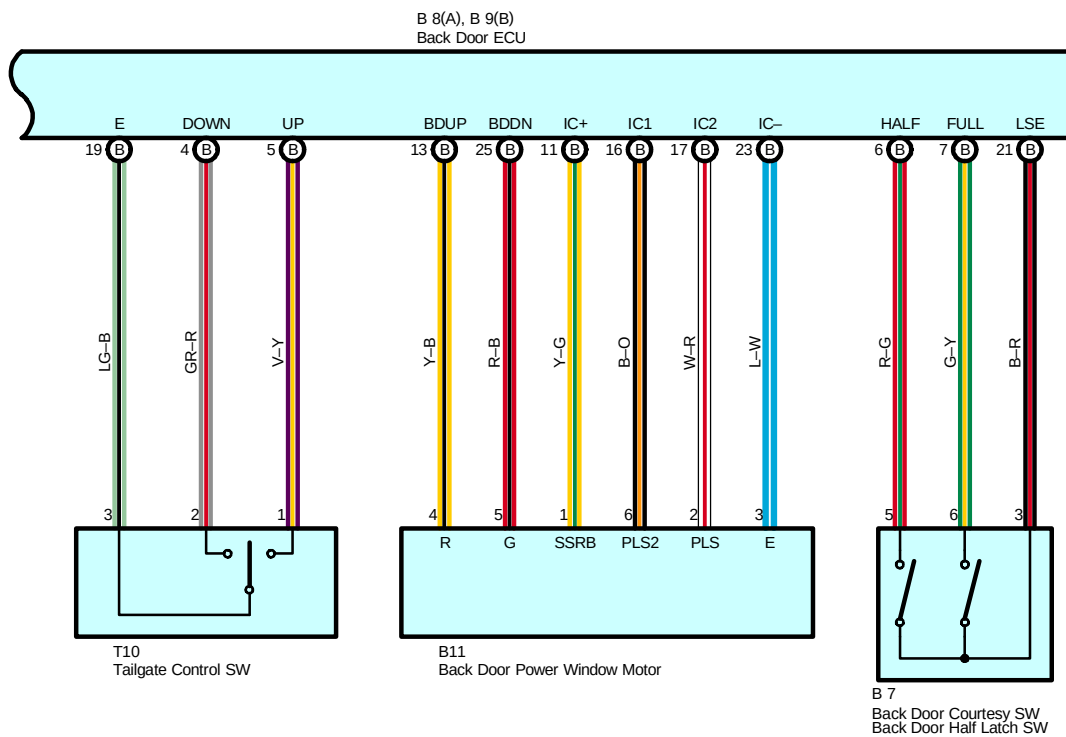
Power Window





Power Window





Power Window

System Outline

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

1. Manual Up and Down Function

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

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

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

3. Jam Protection Function

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

4. Remote Control Function

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

5. Ker-Off Operation Function

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

6. Key-Linked Up and Down Function

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

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

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

○ : Parts Location

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

○ : Relay Blocks

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



: Junction Block and Wire Harness Connector

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



: Connector Joining Wire Harness and Wire Harness

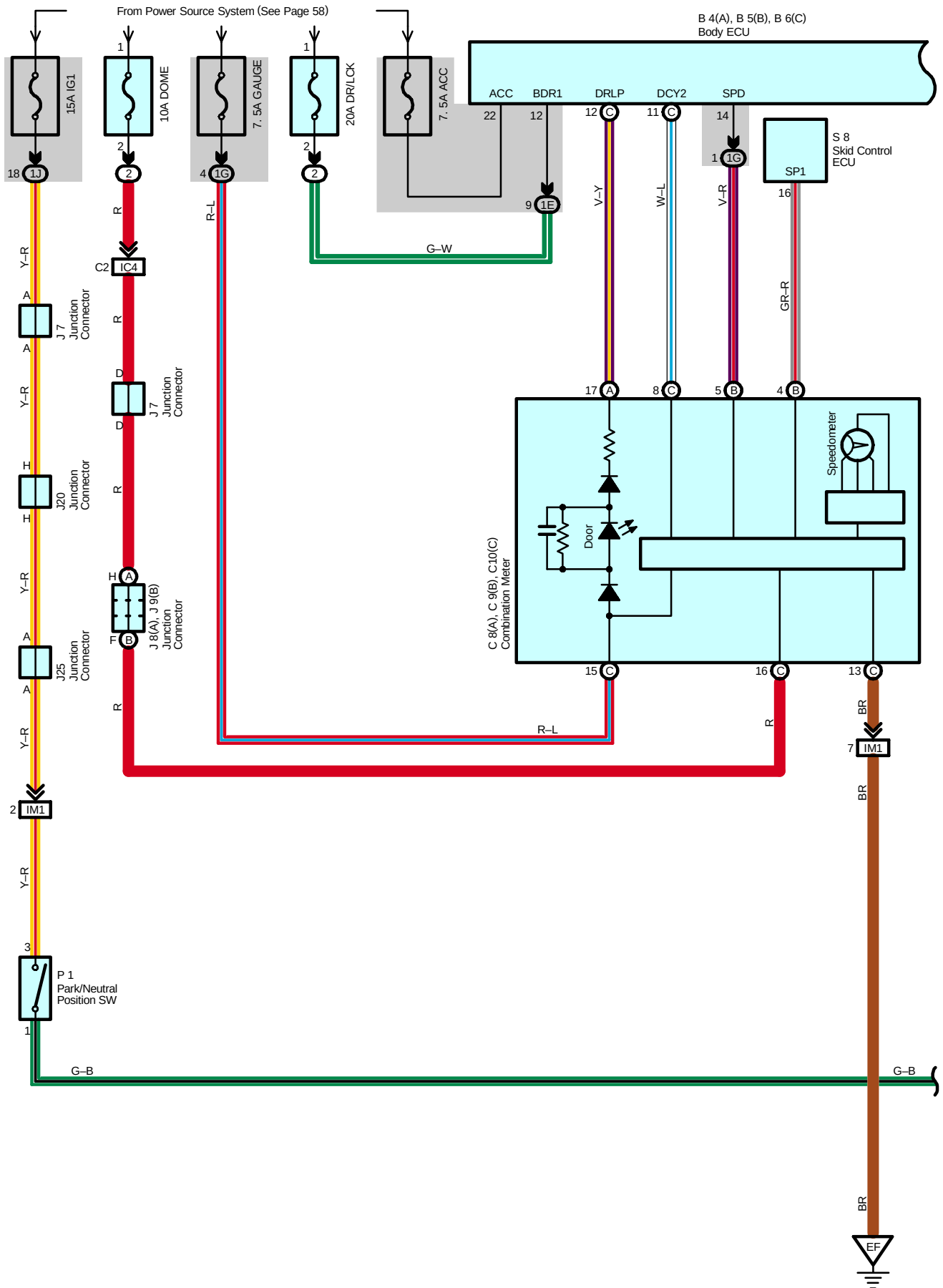
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP2	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

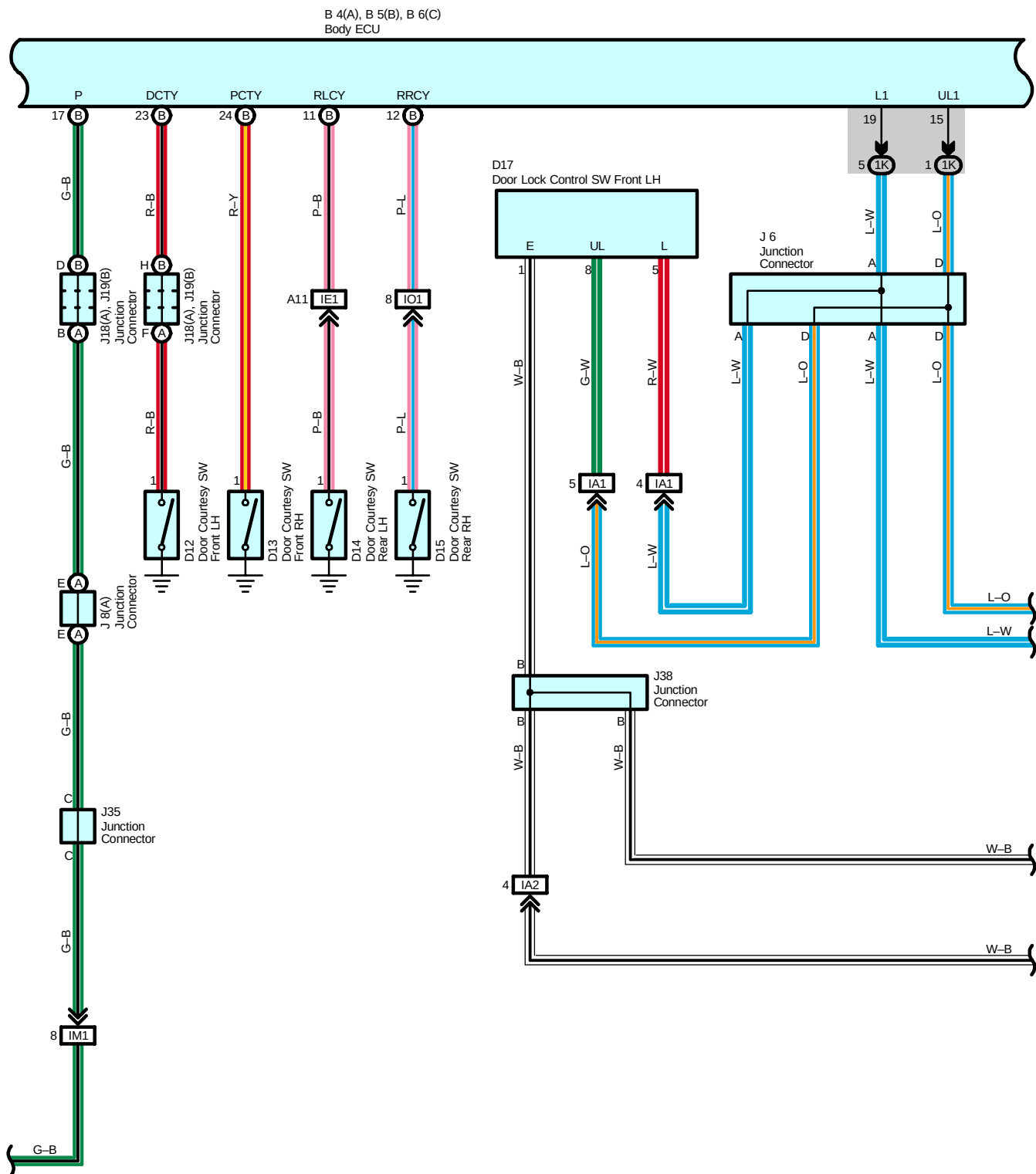


: Ground Points

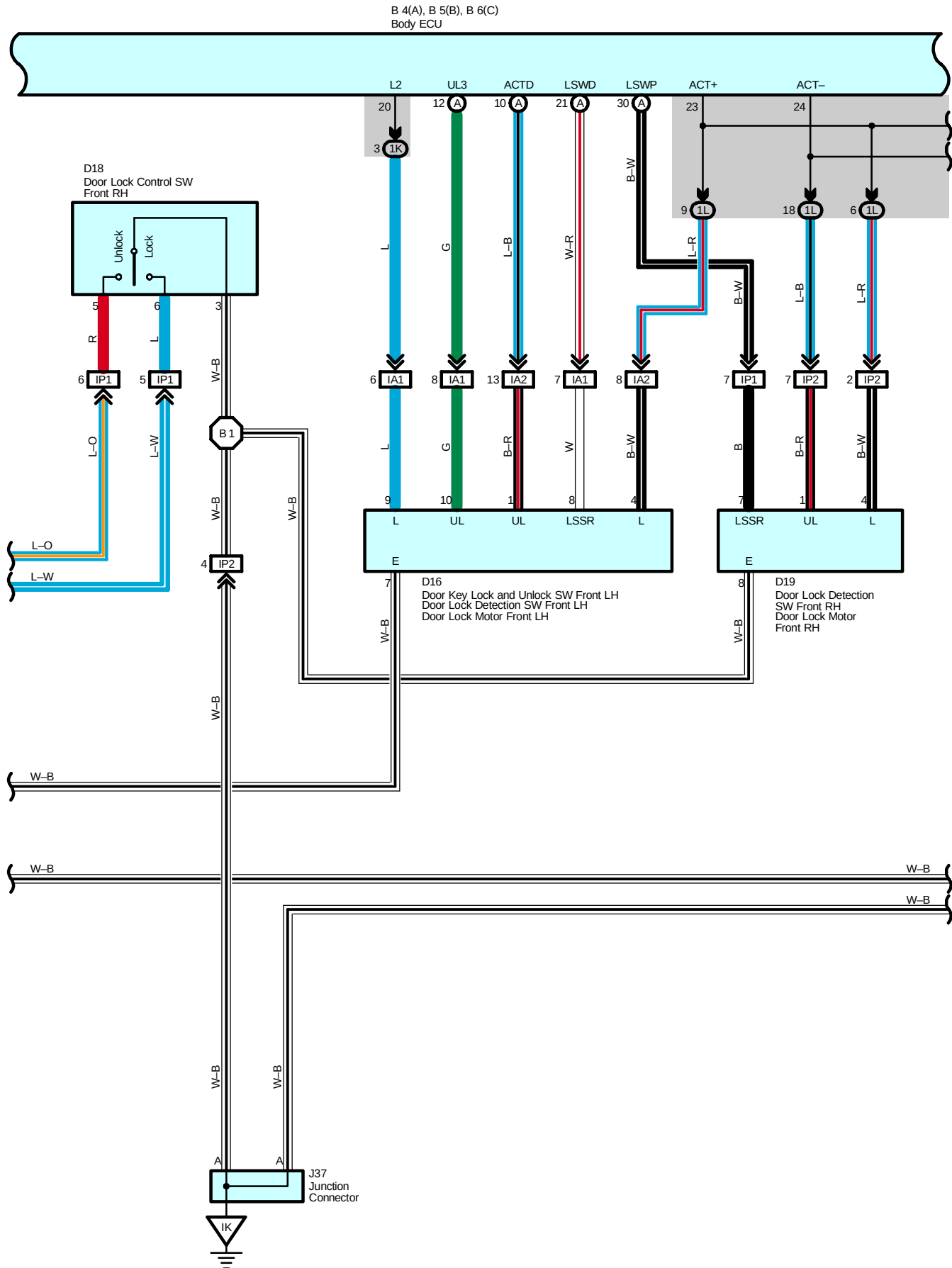
Code	See Page	Ground Points Location
IG	48	Left Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

Door Lock Control

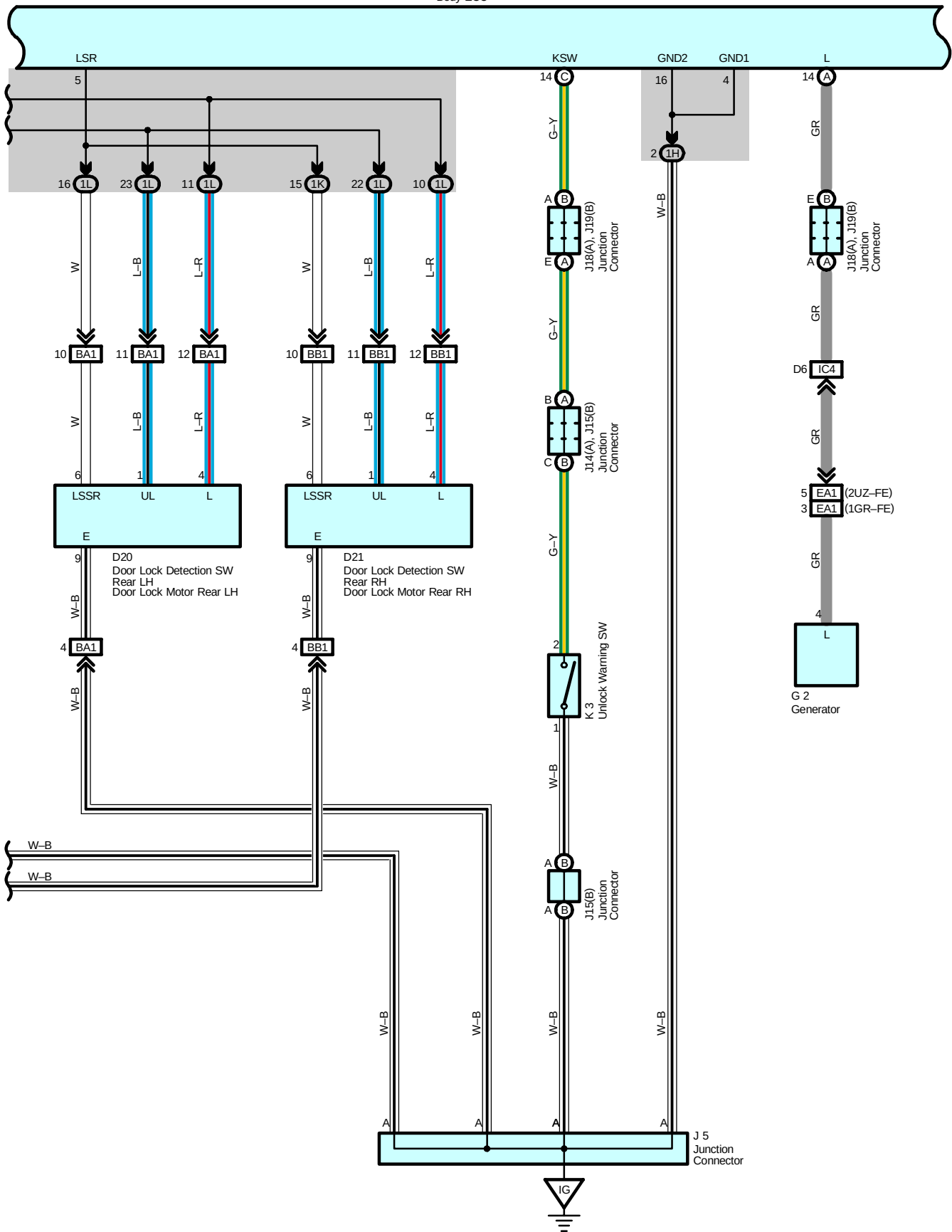




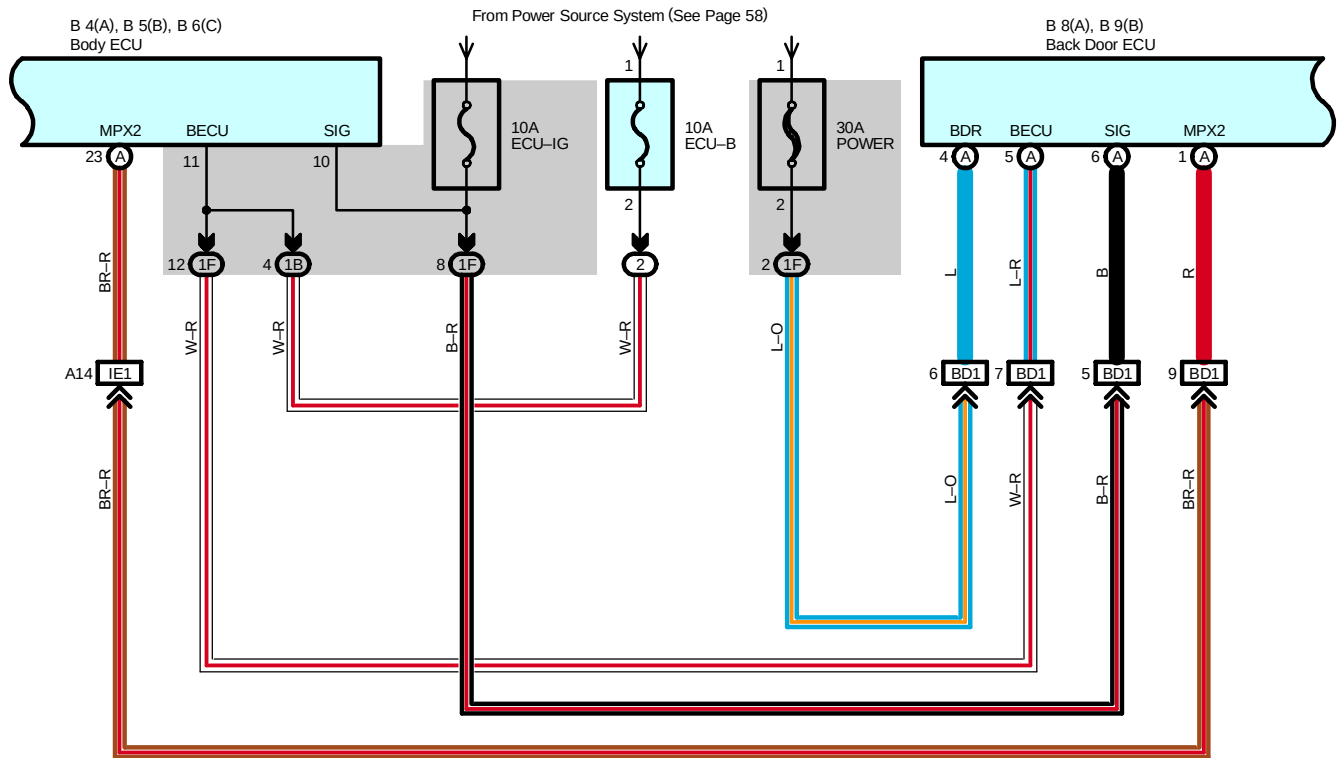
Door Lock Control

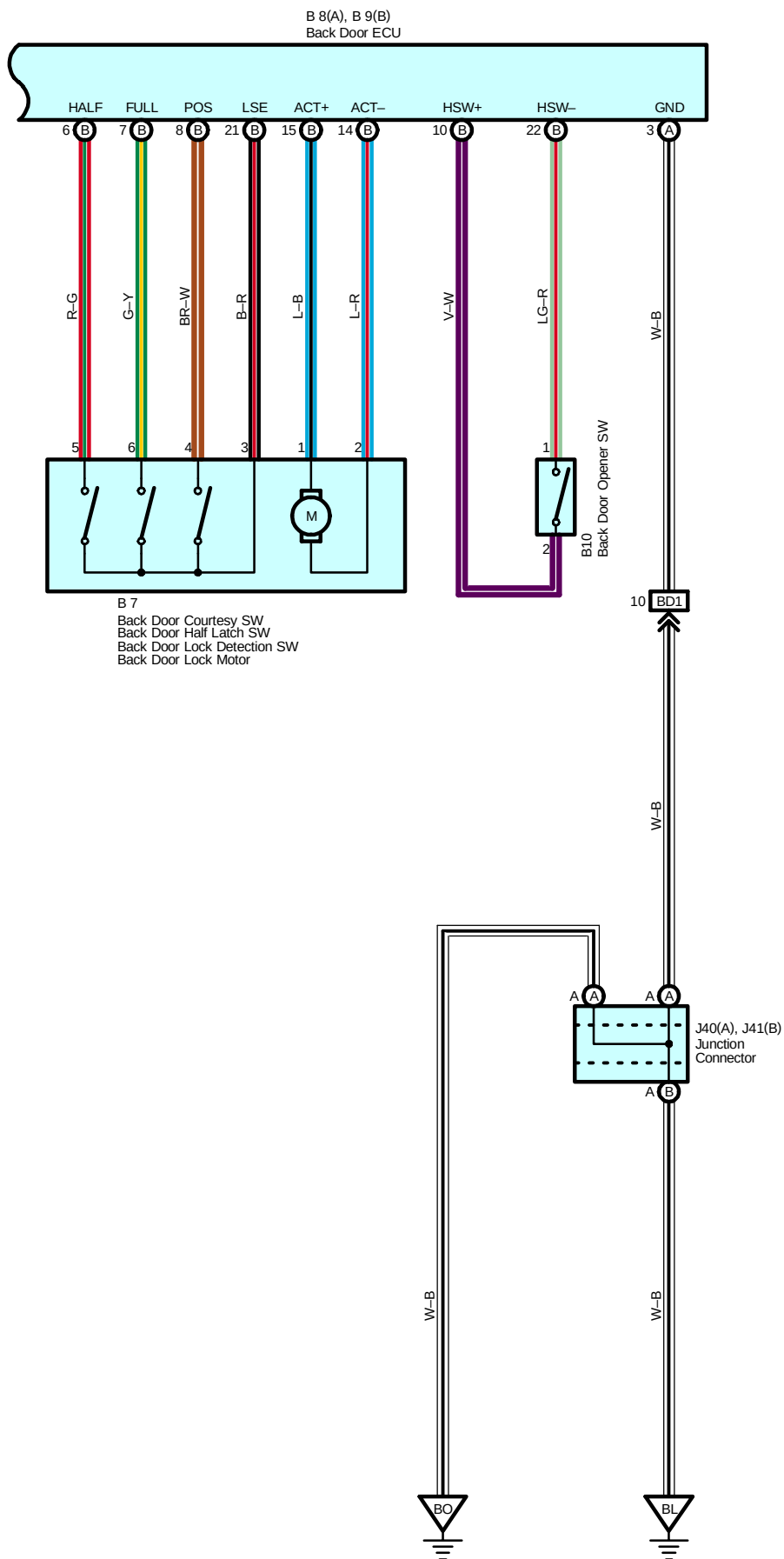


B 4(A), B 5(B), B 6(C)
Body ECU



Door Lock Control





Door Lock Control

System Outline

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

1. Manual Unlock Operation

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

2. Manual Lock Operation

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

3. Door Key Unlock Operation

* Unlock operation from driver's side door

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

4. Ignition Key Reminder Operation

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

5. Shift-Lever-Interlocked Auto Lock Control

* Auto lock operation

The auto lock control automatically locks all doors when the shift lever is thrown into another position from parking — with all doors closed, the ignition switch ON, and the engine running.

* Auto unlocking operation

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

6. Vehicle-Speed-Interlocked Auto Lock Control

* Auto lock operation control

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

* Unlocking prevention feature

When the vehicle is traveling at a speed reaching or exceeding 20 km/h, the unlocking function that prevents driver from locking himself out is disabled.

* Auto lock repeat prevention feature

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

7. Door-Open/Close-Interlocked Auto Unlocking

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

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

(1) Reconnect the battery terminal or fuse.

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

Service Hints

Body ECU

11, 12-Ground : Always approx. 12 volts

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

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

4, 16-Ground : Always continuity

B8 (A) Back Door ECU

(A) 4, (A) 5-Ground : Always approx. 12 volts

(A) 6-Ground : Approx. 12 volts with ignition SW at ON position

(A) 3-Ground : Always continuity

 : Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	D16		40	J15	B	38
B5	B	36	D17		40	J18	A	38
B6	C	36	D18		40	J19	B	38
B7		40	D19		40	J20		38
B8	A	40	D20		40	J25		38
B9	B	40	D21		40	J35		38
B10		40	G2		32 (2UZ-FE)	J37		38
C8	A	37			34 (1GR-FE)	J38		40
C9	B	37	J5		38	J40	A	40
C10	C	37	J6		38	J41	B	40
D12		40	J7		38	K3		39
D13		40	J8	A	38	P1		33 (2UZ-FE)
D14		40	J9	B	38			35 (1GR-FE)
D15		40	J14	A	38	S8		39

 : Relay Blocks

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

 : Junction Block and Wire Harness Connector

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

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	44 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
	46 (1GR-FE)	
IA1	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

Door Lock Control



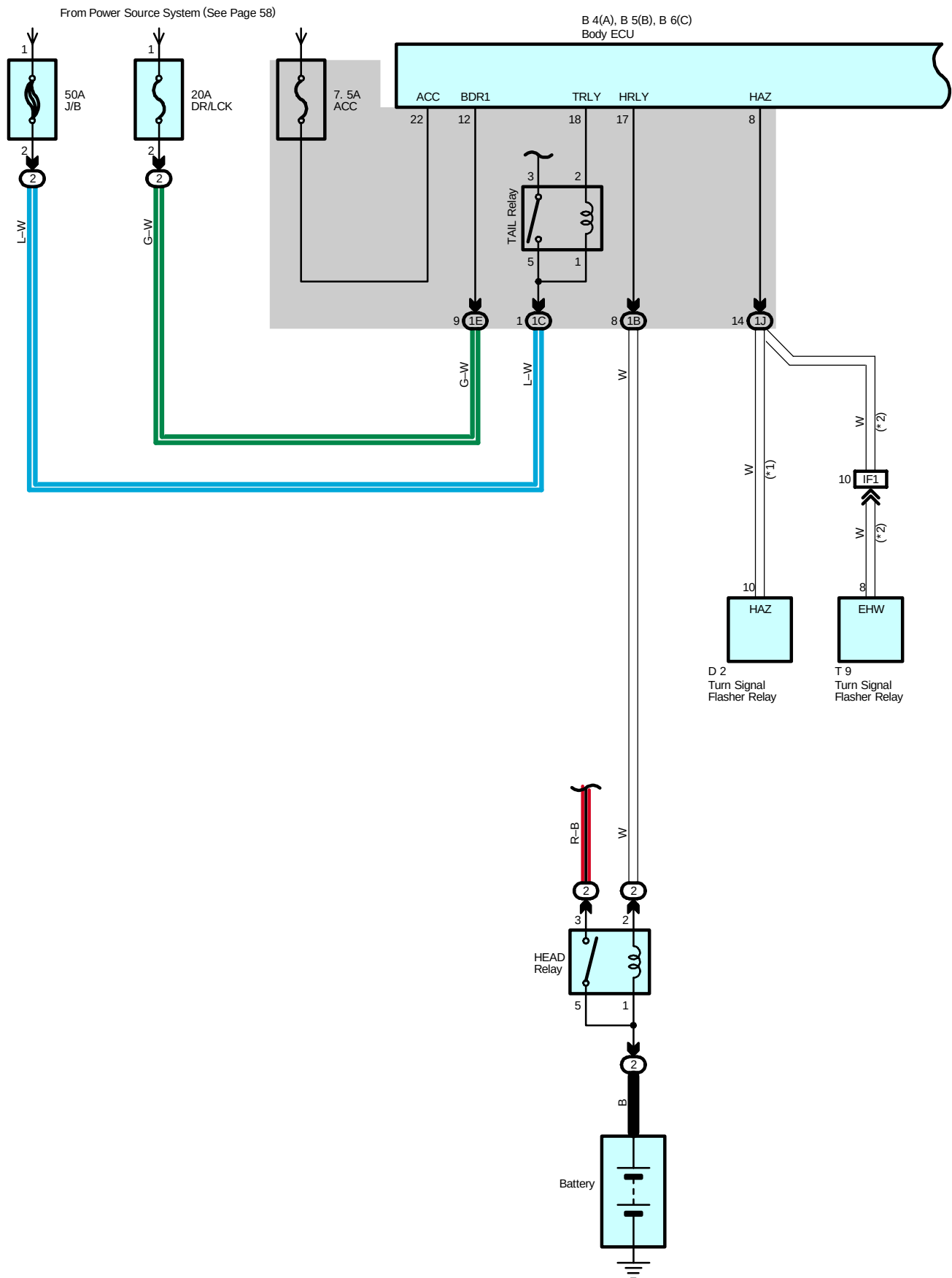
: Ground Points

Code	See Page	Ground Points Location
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

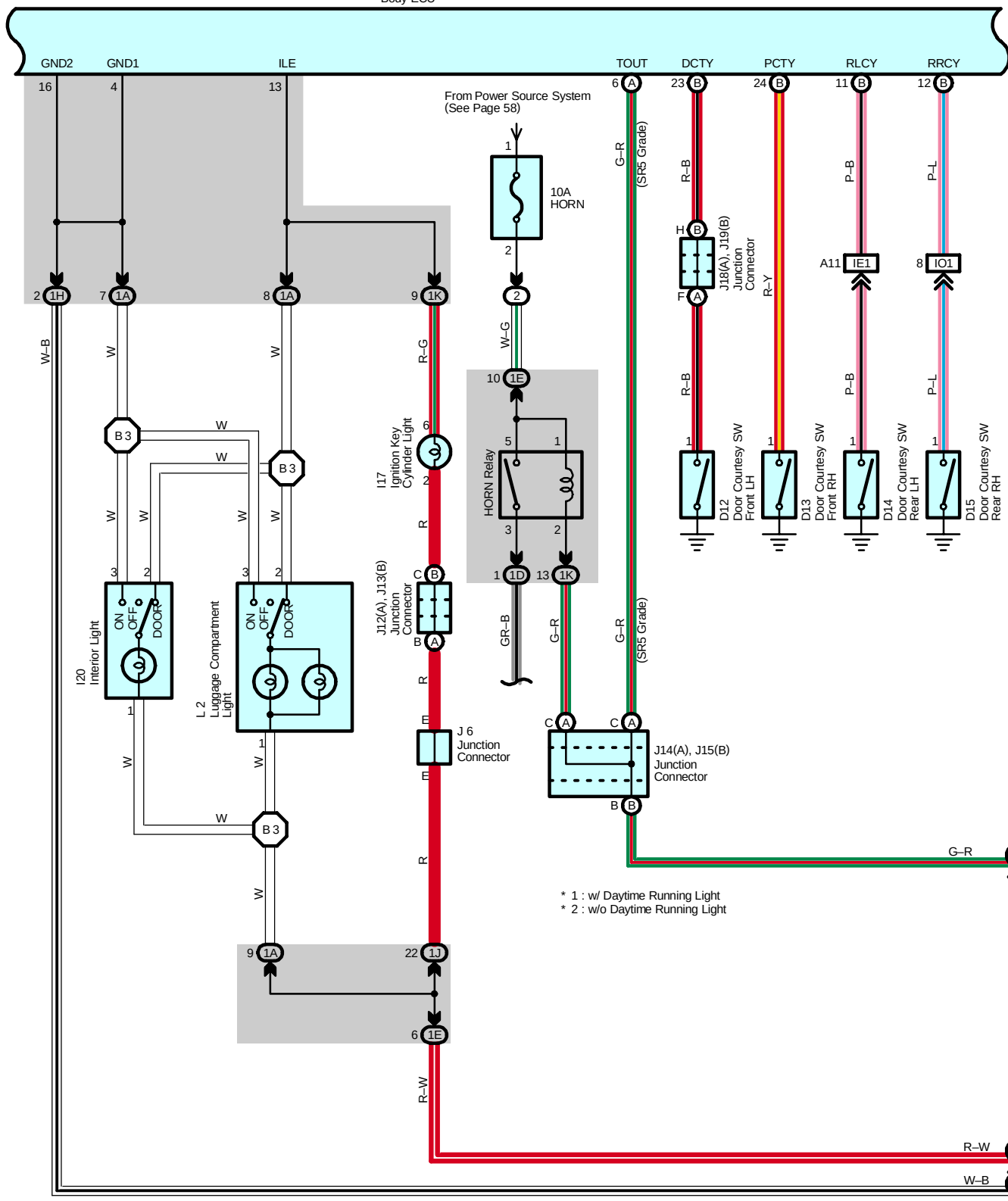


: Splice Points

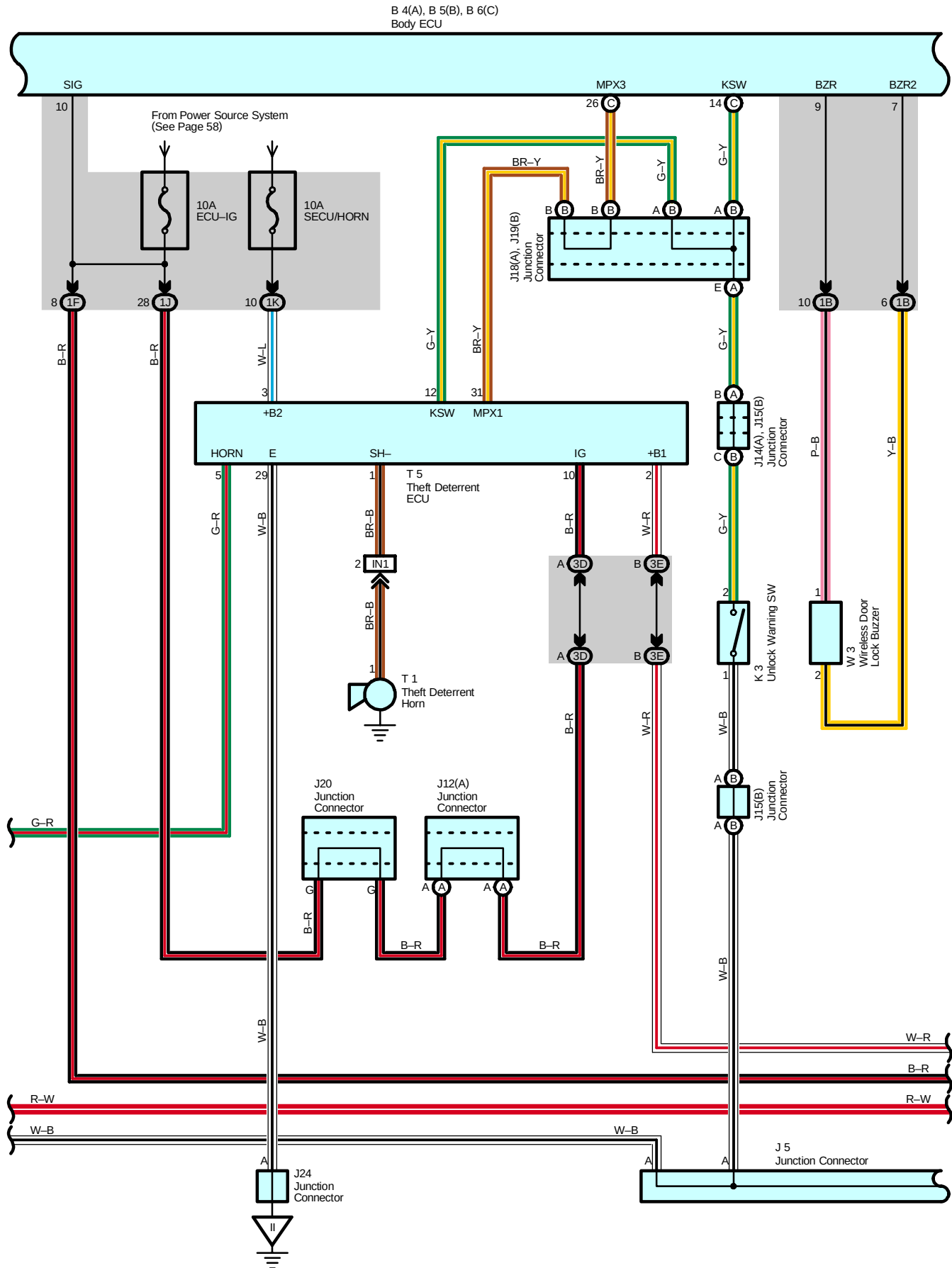
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	54	Front Door RH Wire			



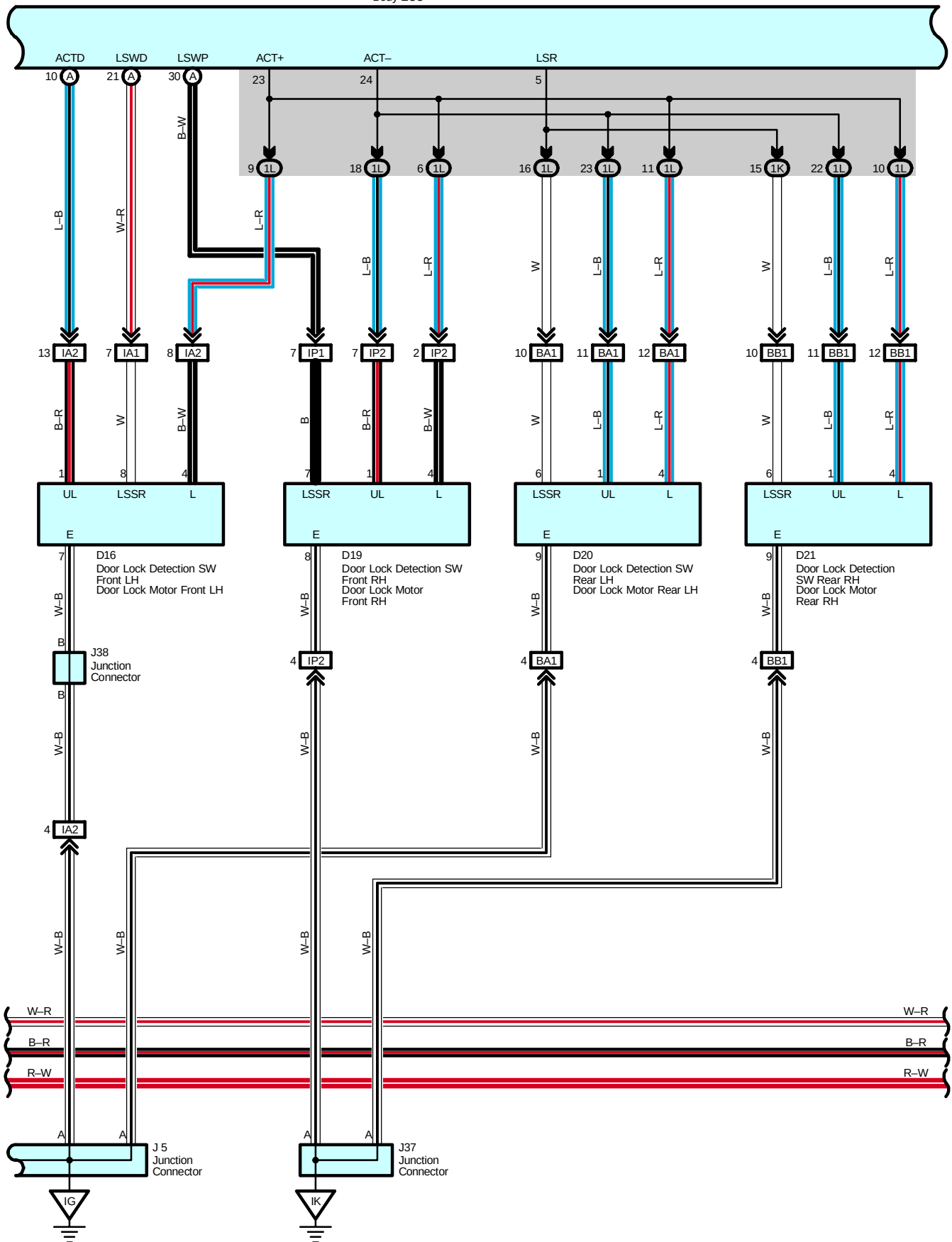
B 4(A), B 5(B), B 6(C)
Body ECU

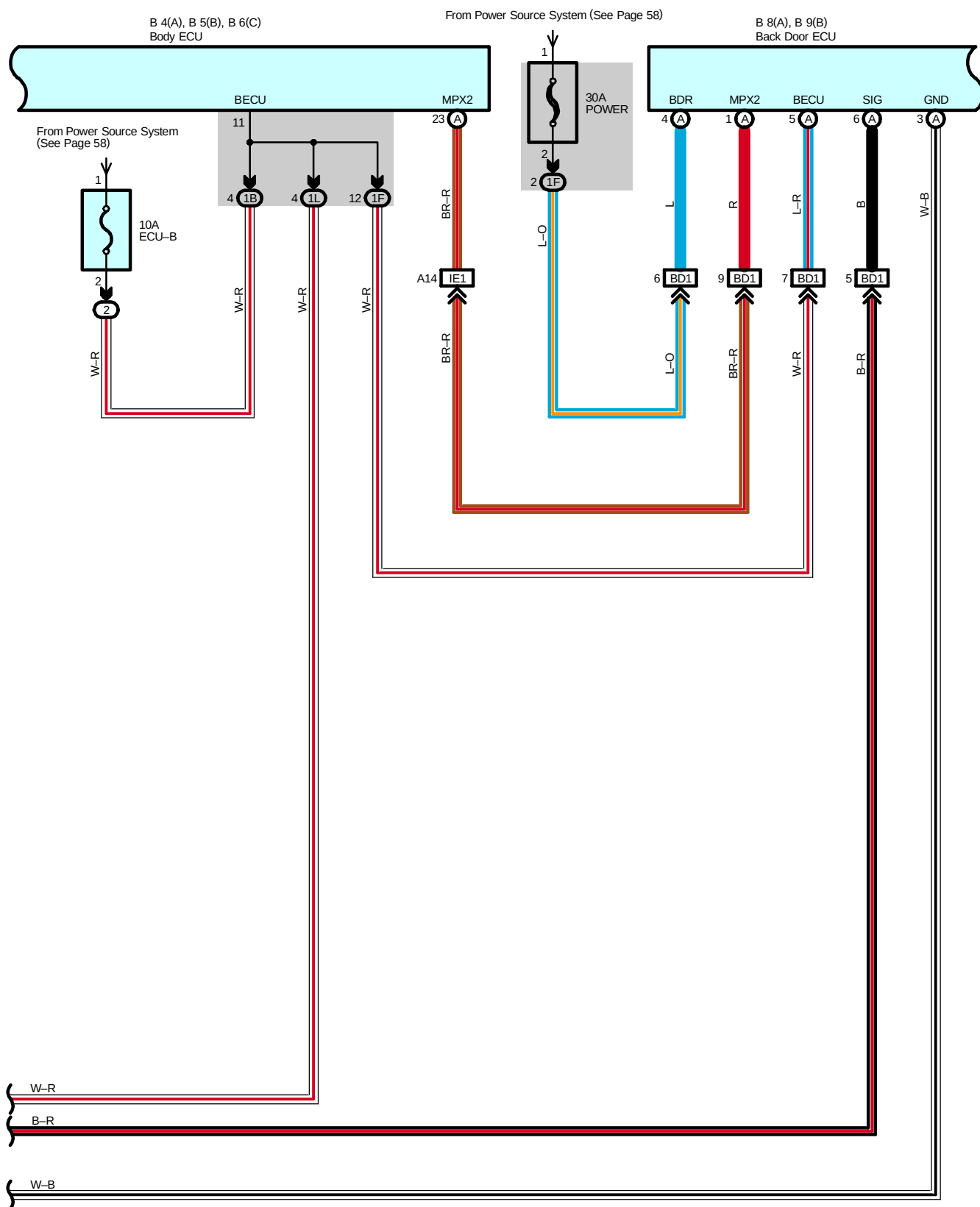


Wireless Door Lock Control

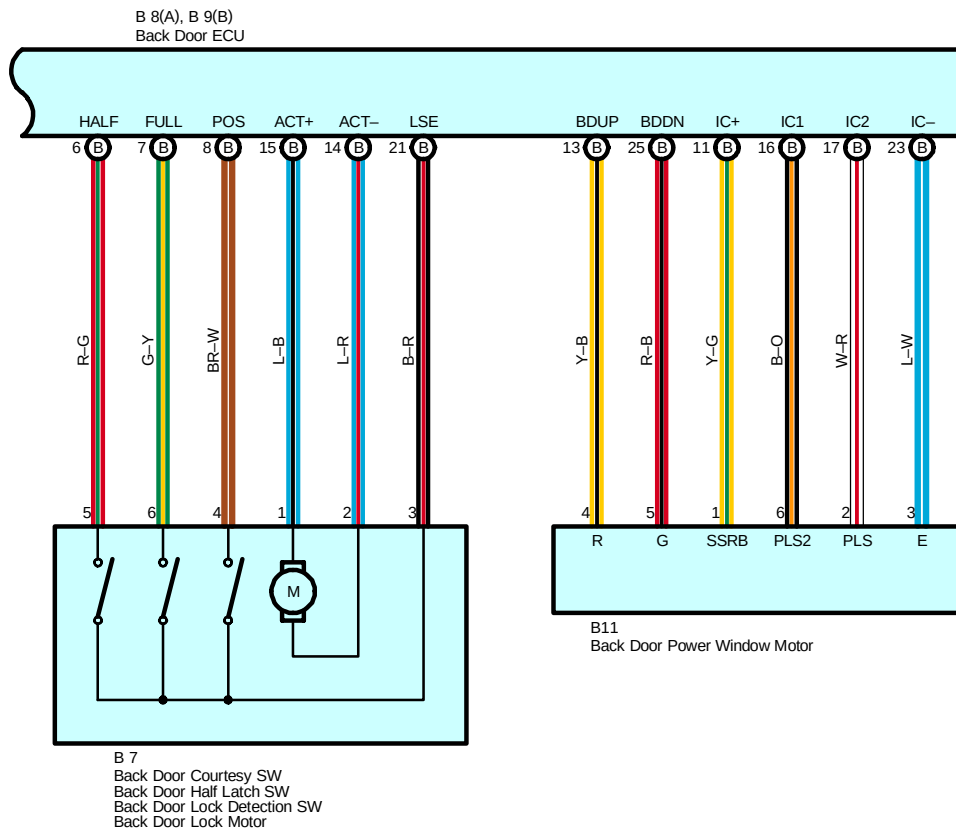


B 4(A), B 5(B), B 6(C)
Body ECU





Wireless Door Lock Control



System Outline

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

1. Normal Operation

* Lock operation

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

* Unlock operation

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

2. Auto Lock Function

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

* Any door is opened.

* The ignition key is inserted into the ignition SW.

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

3. Wireless Door Lock Stop Function

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

Lock operation

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

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

* Ignition SW is on

Unlock operation

* Ignition SW is on

4. Buzzer Sound Function

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

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

5. Visual Confirmation of Lock or Unlock

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

6. Remote Panic Operation

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

7. Repeat Function

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

8. Buzzer Volume Control

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

9. Back Window Control

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

10. Illuminated Entry Function

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

Wireless Door Lock Control

Service Hints

Body ECU

- 11, 12–Ground : Always approx. 12 volts
- 10–Ground : Approx. 12 volts with ignition SW at ON position
- 22–Ground : Approx. 12 volts with ignition SW at ACC or ON position
- 4, 16–Ground : Always continuity

B8 (A) Back Door ECU

- (A) 4, (A) 5–Ground : Always approx. 12 volts
- (A) 6–Ground : Approx. 12 volts with ignition SW at ON position
- (A) 3–Ground : Always continuity

○ : Parts Location

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

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	50	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

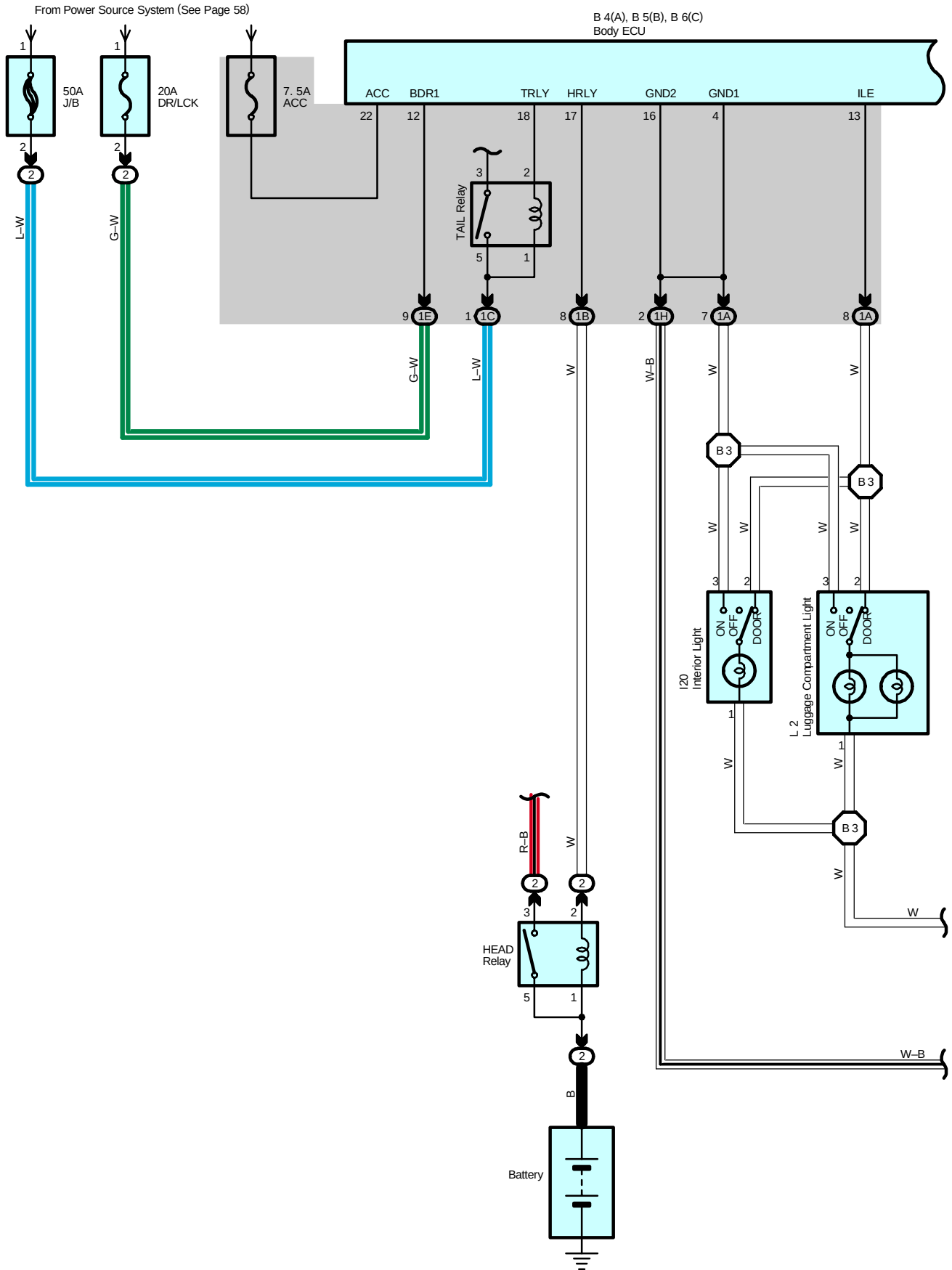
 : Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

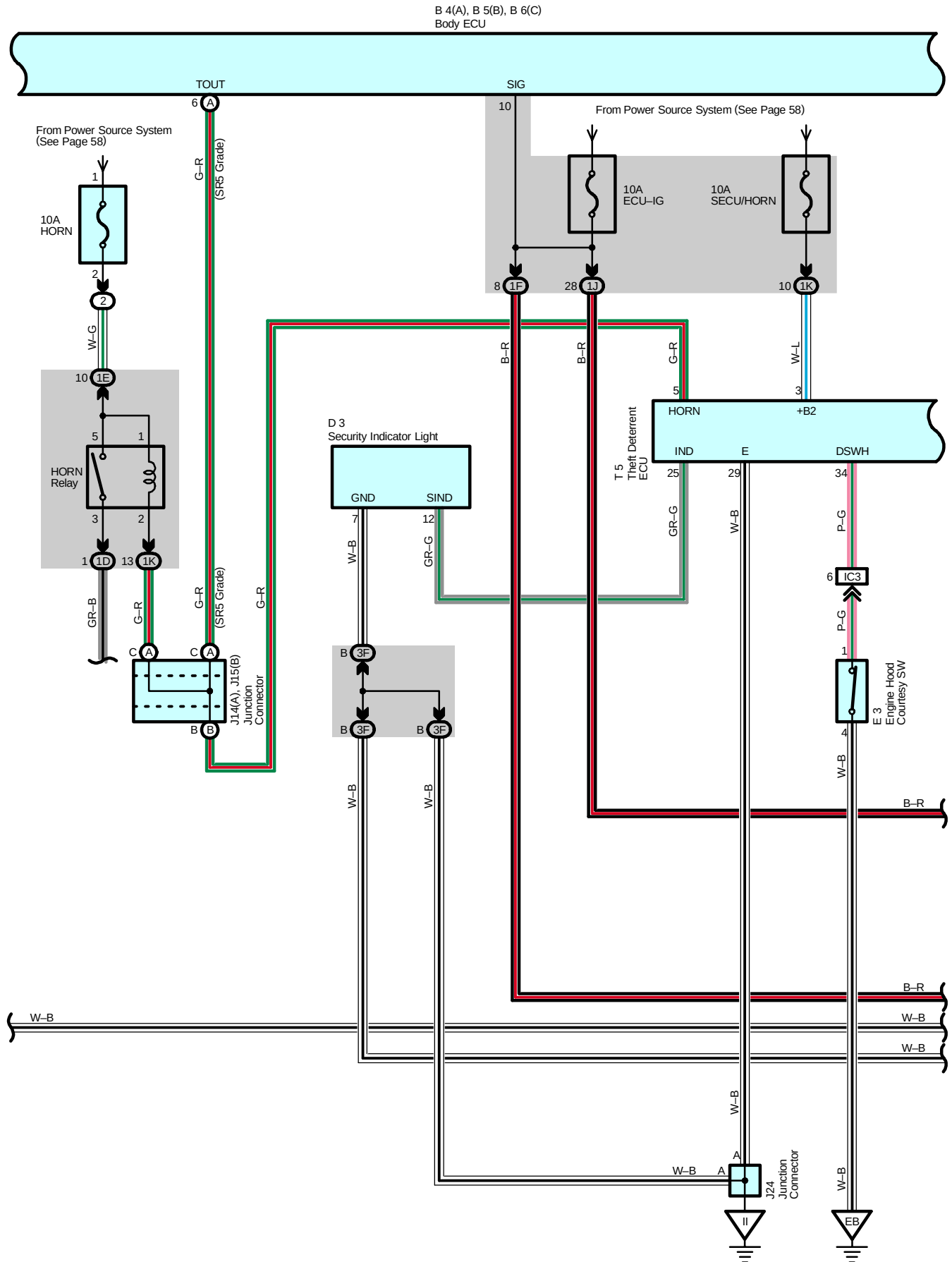
 : Splice Points

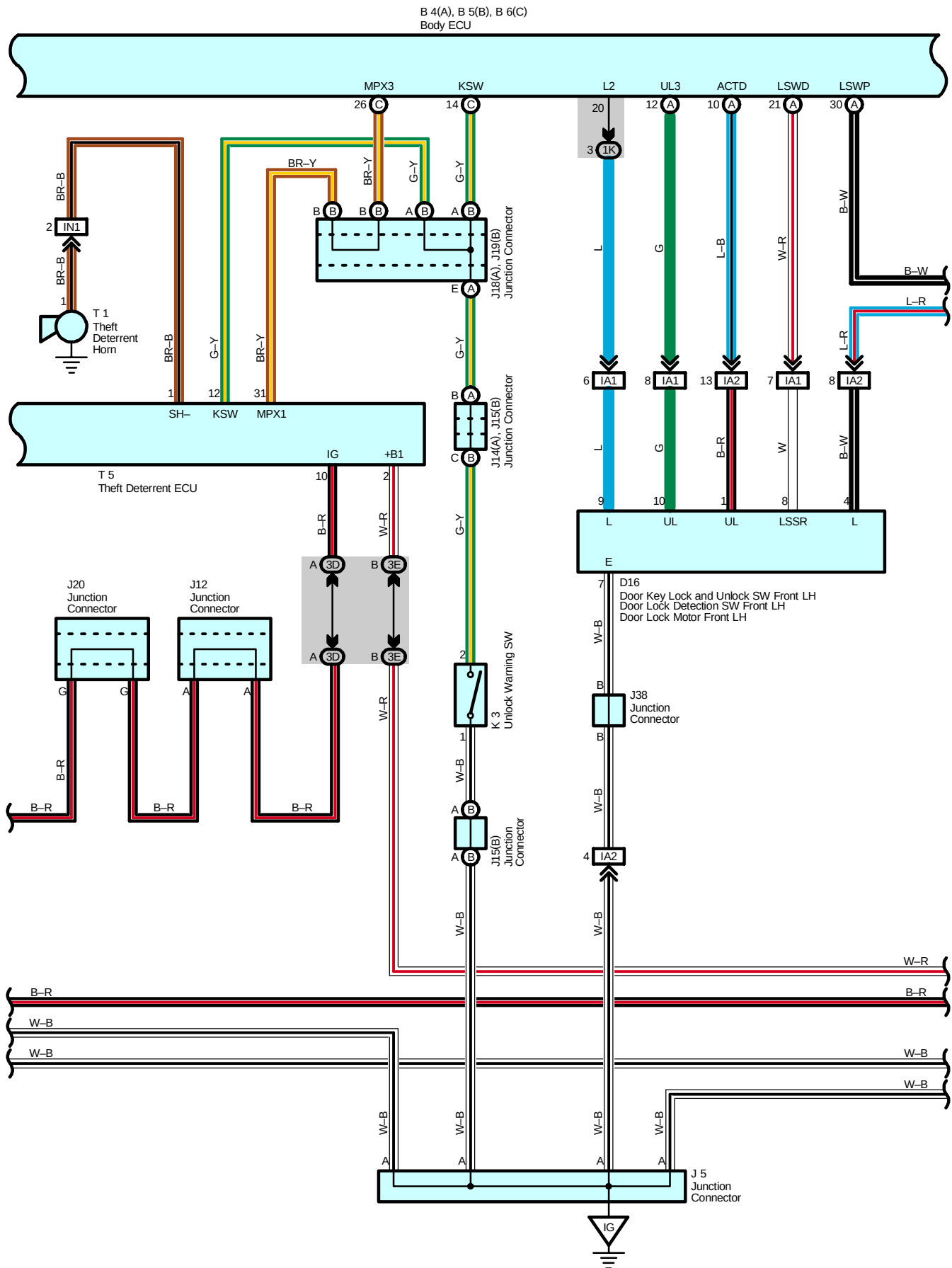
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B3	54	Roof Wire			

Theft Deterrent

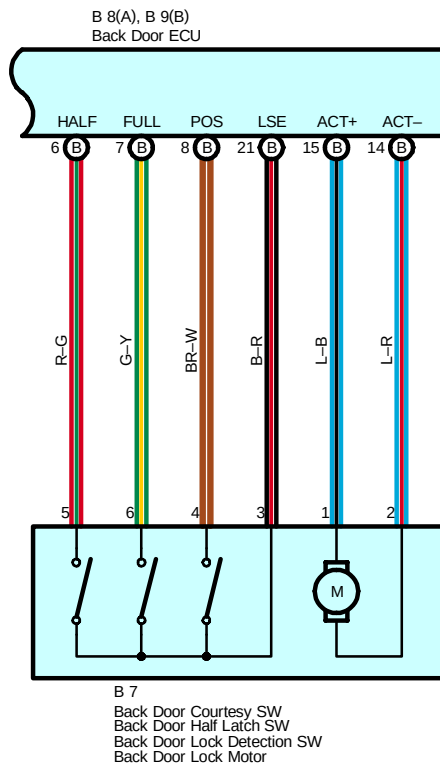


Theft Deterrent





Theft Deterrent



Service Hints

Body ECU

- 11, 12–Ground : Always approx. 12 volts
- 10–Ground : Approx. 12 volts with ignition SW at ON position
- 22–Ground : Approx. 12 volts with ignition SW at ACC or ON position
- 4, 16–Ground : Always continuity

B8 (A) Back Door ECU

- (A) 4, (A) 5–Ground : Always approx. 12 volts
- (A) 6–Ground : Approx. 12 volts with ignition SW at ON position
- (A) 3–Ground : Always continuity

T5 Theft Deterrent ECU

- 2, 3–Ground : Always approx. 12 volts
- 10–Ground : Approx. 12 volts with ignition SW at ON position
- 29–Ground : Always continuity

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	D15		40	J20		38
B5	B	36	D16		40	J24		38
B6	C	36	D19		40	J37		38
B7		40	D20		40	J38		40
B8	A	40	D21		40	J40	A	40
B9	B	40	E3		32 (2UZ–FE)	J41	B	40
B10		40			34 (1GR–FE)		K3	
C8	A	37	I20		40	L2		40
C10	C	37	J5		38	T1		33 (2UZ–FE)
D2		37	J12		38			35 (1GR–FE)
D3		37	J14	A	38	T5		39
D12		40	J15	B	38	T9		39
D13		40	J18	A	38			
D14		40	J19	B	38			

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

Theft Deterrent

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	50	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

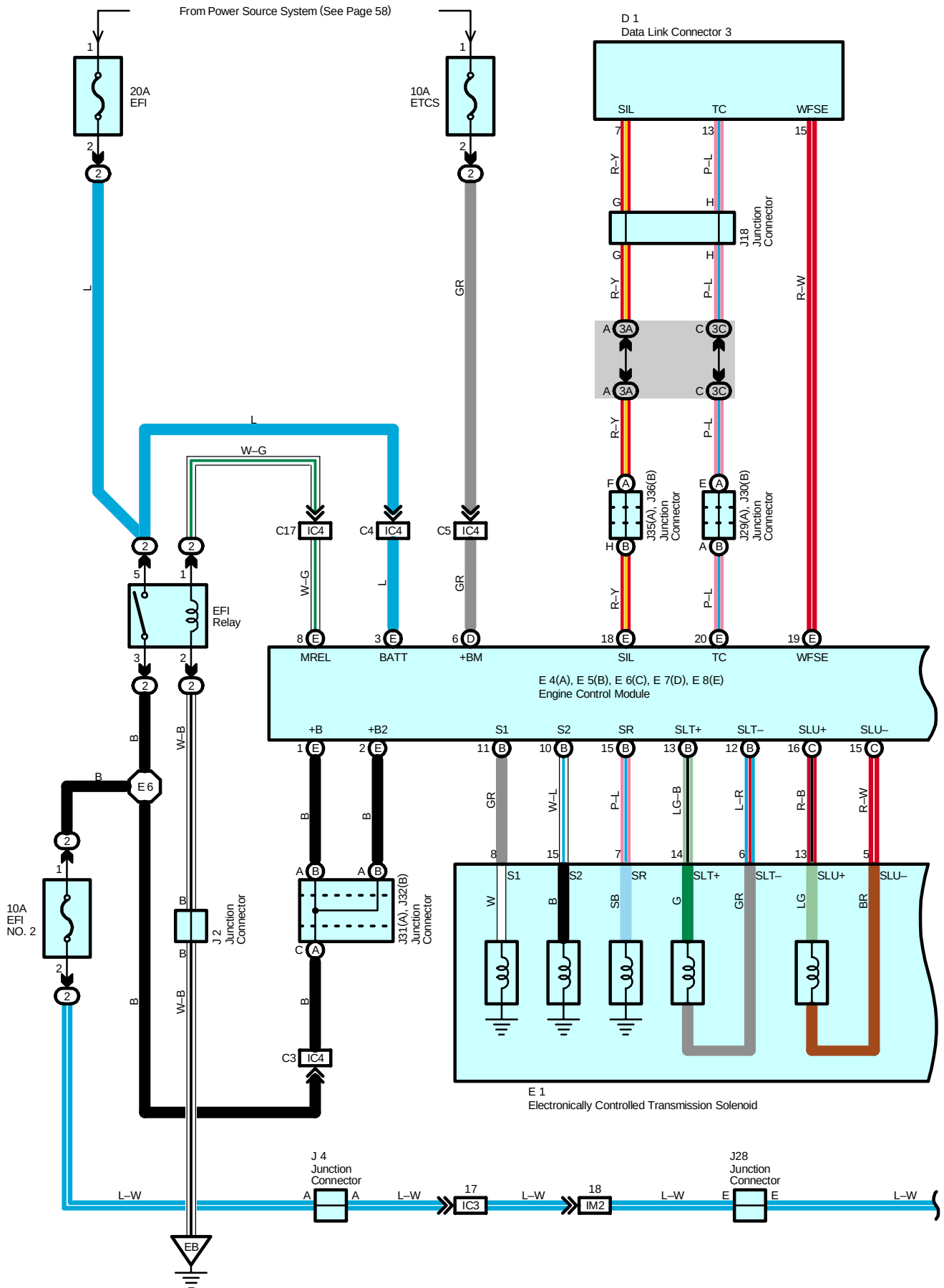
: Ground Points

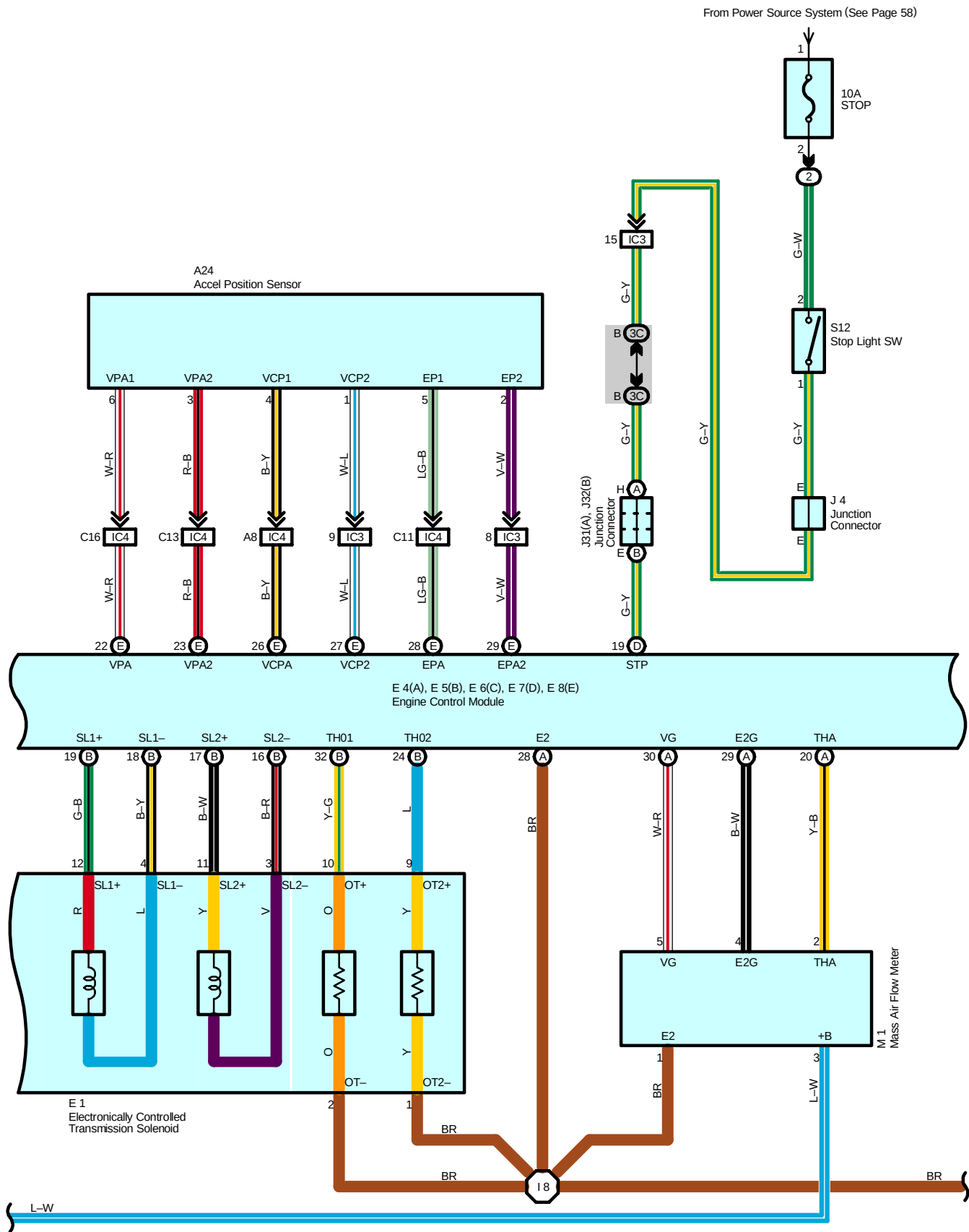
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

: Splice Points

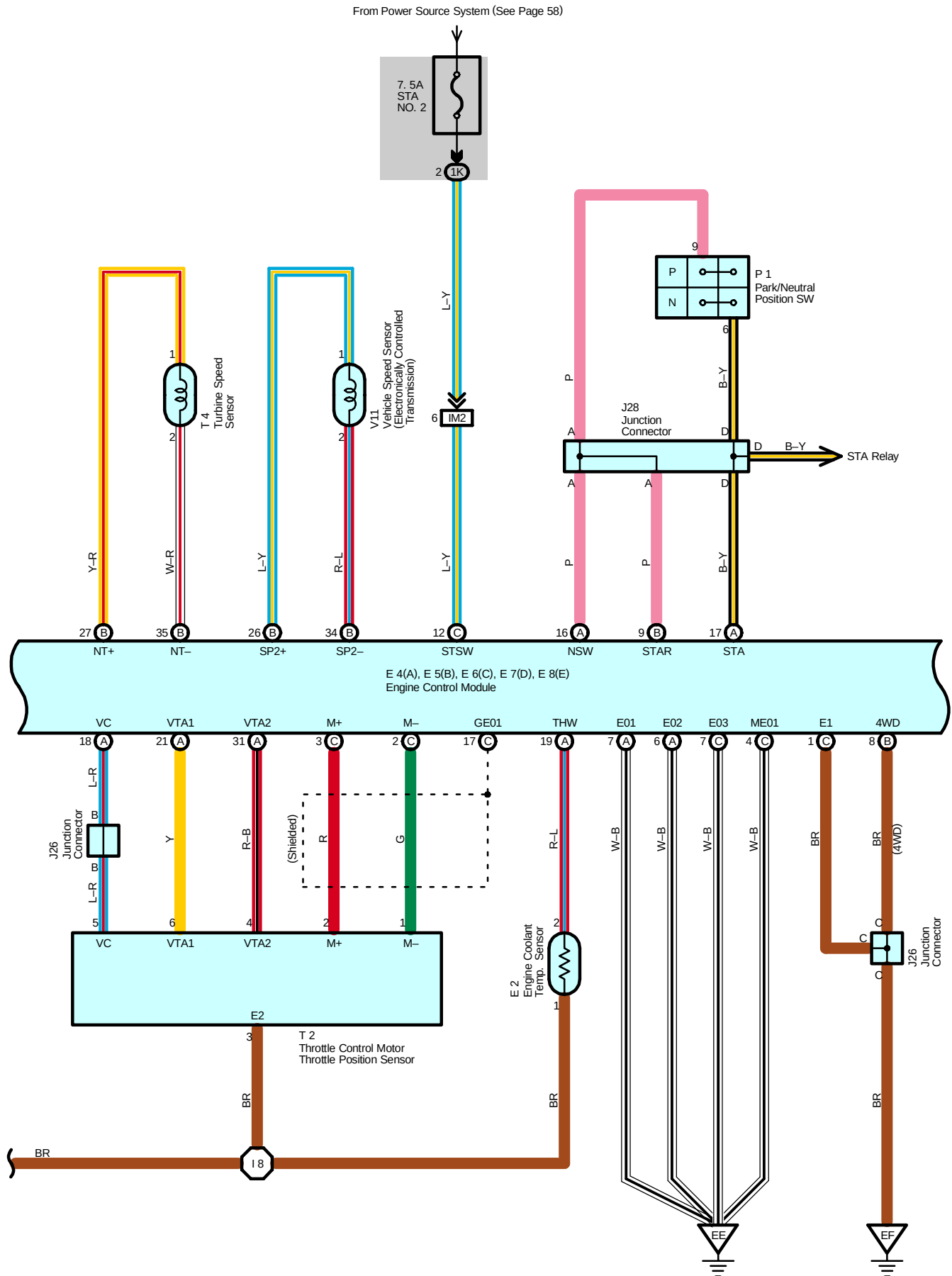
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B3	54	Roof Wire			

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

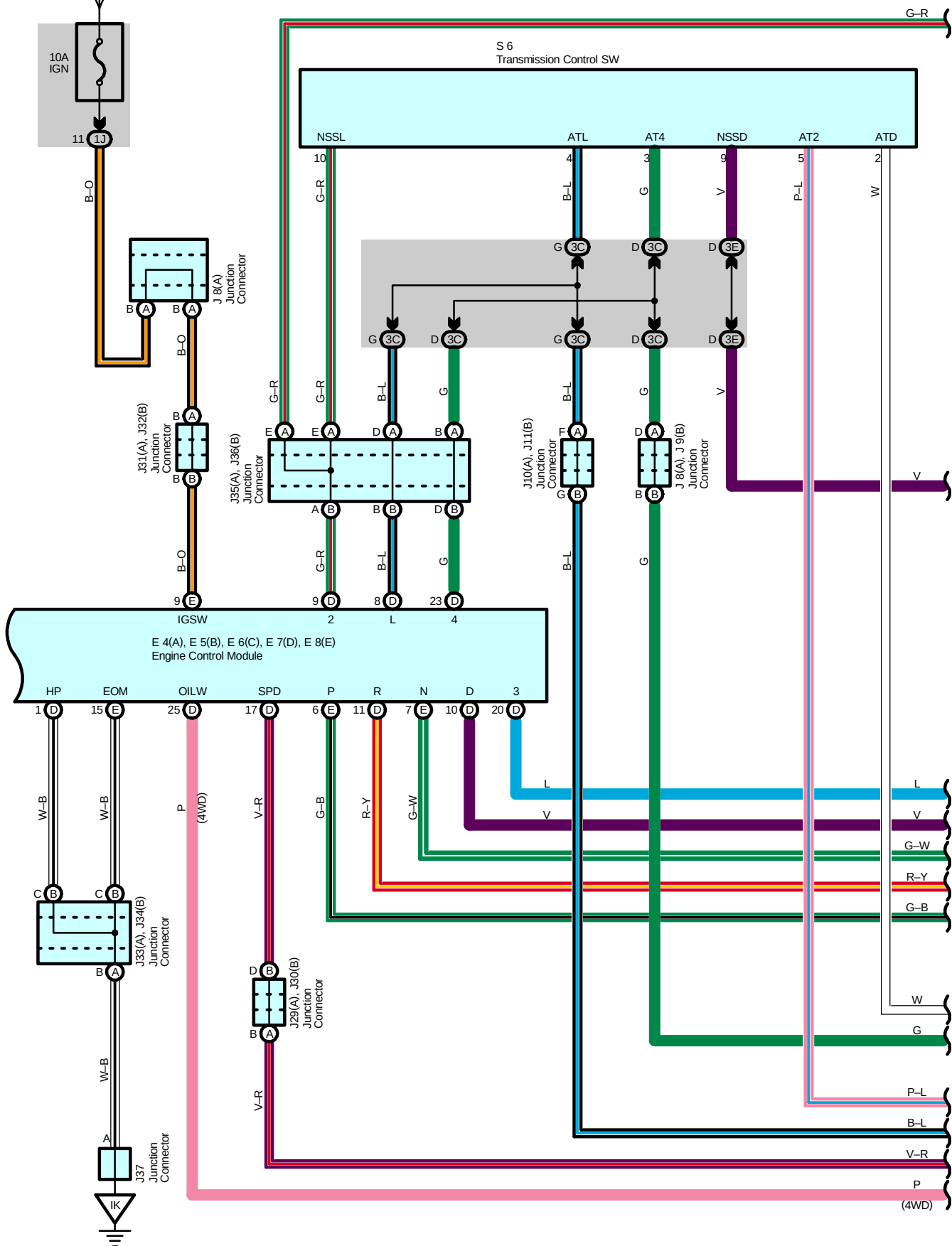




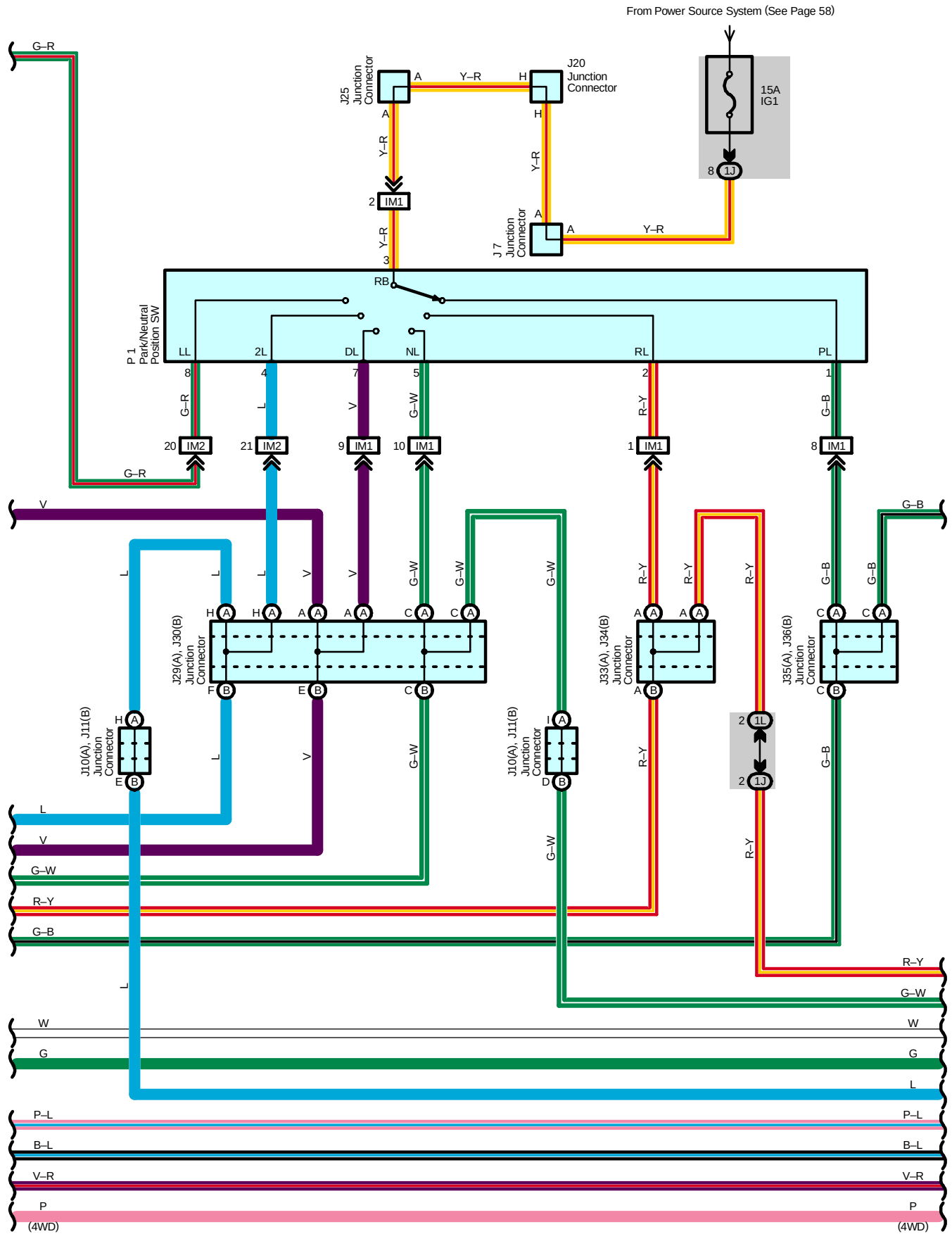
Electronically Controlled Transmission and A/T Indicator (2UZ-FE)



From Power Source System (See Page 58)



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



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

System Outline

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

1. Gear Shift Operation

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

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

2. Line Hydraulic Pressure Control

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

3. High Response Gear Shifting Control

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

4. Clutch Hydraulic Pressure Control

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

5. Lock-Up and Flexible Lock-Up Control

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

6. Stop Light SW Circuit

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

7. AI-Shift Control

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

Service Hints

E4 (A), E5 (B), E6 (C), E7 (D), E8 (E) Engine Control Module

(E) 9-Ground : Approx. 12 volts with the ignition SW at ON position

(D) 6, (E) 3-Ground : Always approx. 12 volts

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

(D)19-Ground : Approx. 12 volts with the brake pedal depressed

(A) 6, (A) 7, (B) 8, (C) 1, (C) 4, (C) 7, (D) 1, (E) 15-Ground : Always continuity

P1 Park/Neutral Position SW

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

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

3-5 : Closed with the shift lever in N position

3-7 : Closed with the shift lever in D position or 4 position

3-4 : Closed with the shift lever in 3 position

3-8 : Closed with the shift lever in 2 position or L position

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A24	36	J4	38	J32	B 38
C8	A 37	J7	38	J33	A 38
C9	B 37	J8	A 38	J34	B 38
C10	C 37	J9	B 38	J35	A 38
C11	D 37	J10	A 38	J36	B 38
D1	37	J11	B 38	J37	38
E1	32 (2UZ-FE)	J18	38	M1	33 (2UZ-FE)
E2	32 (2UZ-FE)	J20	38	P1	33 (2UZ-FE)
E4	A 37	J25	38	S6	39
E5	B 37	J26	38	S8	39
E6	C 37	J28	38	S12	39
E7	D 37	J29	A 38	T2	33 (2UZ-FE)
E8	E 37	J30	B 38	T4	33 (2UZ-FE)
J2	33 (2UZ-FE)	J31	A 38	V11	33 (2UZ-FE)

 : Relay Blocks

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

 : Junction Block and Wire Harness Connector

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

 : Connector Joining Wire Harness and Wire Harness

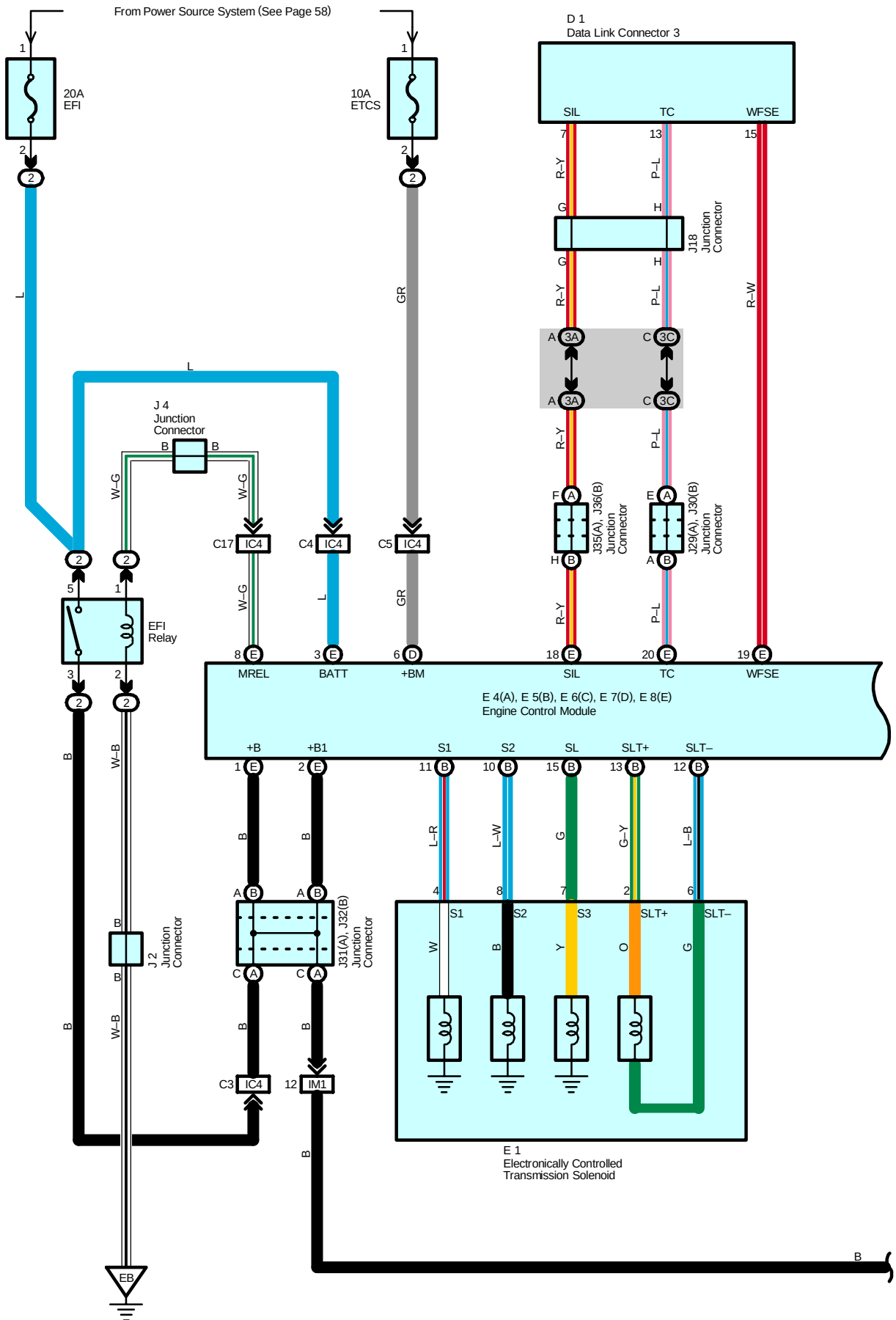
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

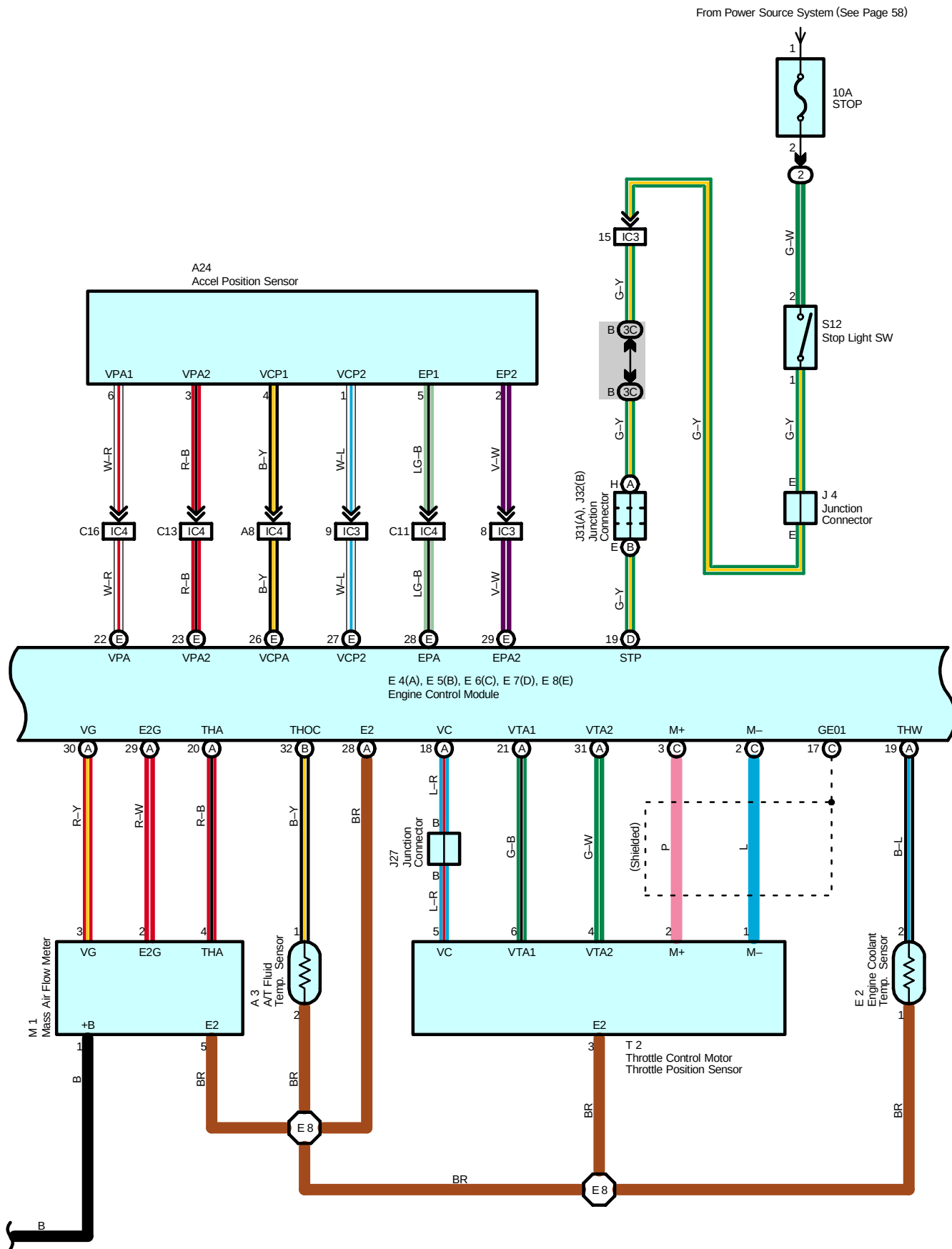
 : Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
EE	44 (2UZ-FE)	Rear Side of Right Bank Cylinder Block
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
IK	48	Right Kick Panel

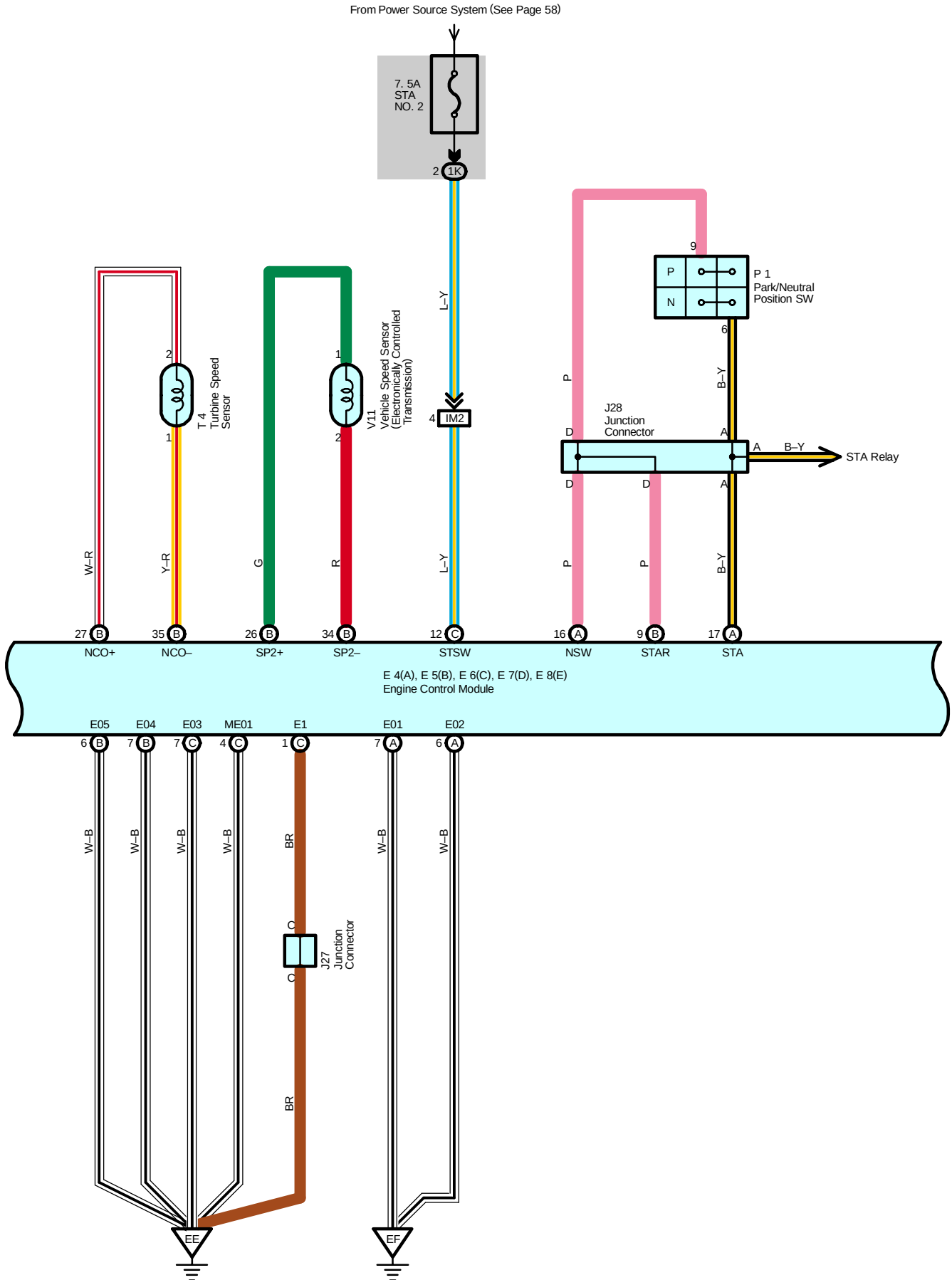
 : Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E6	44 (2UZ-FE)	Engine Room Main Wire	I8	50	Engine Wire

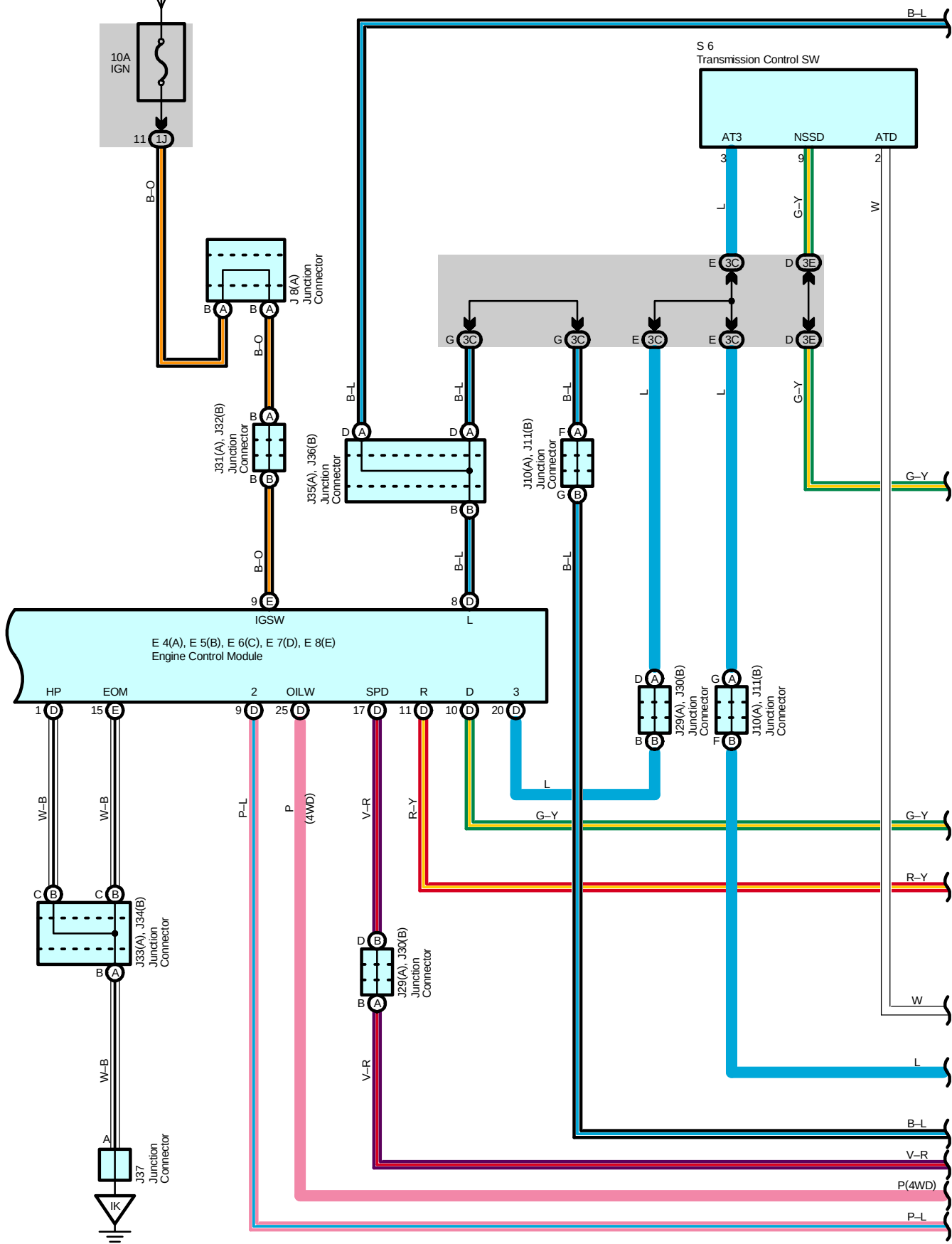




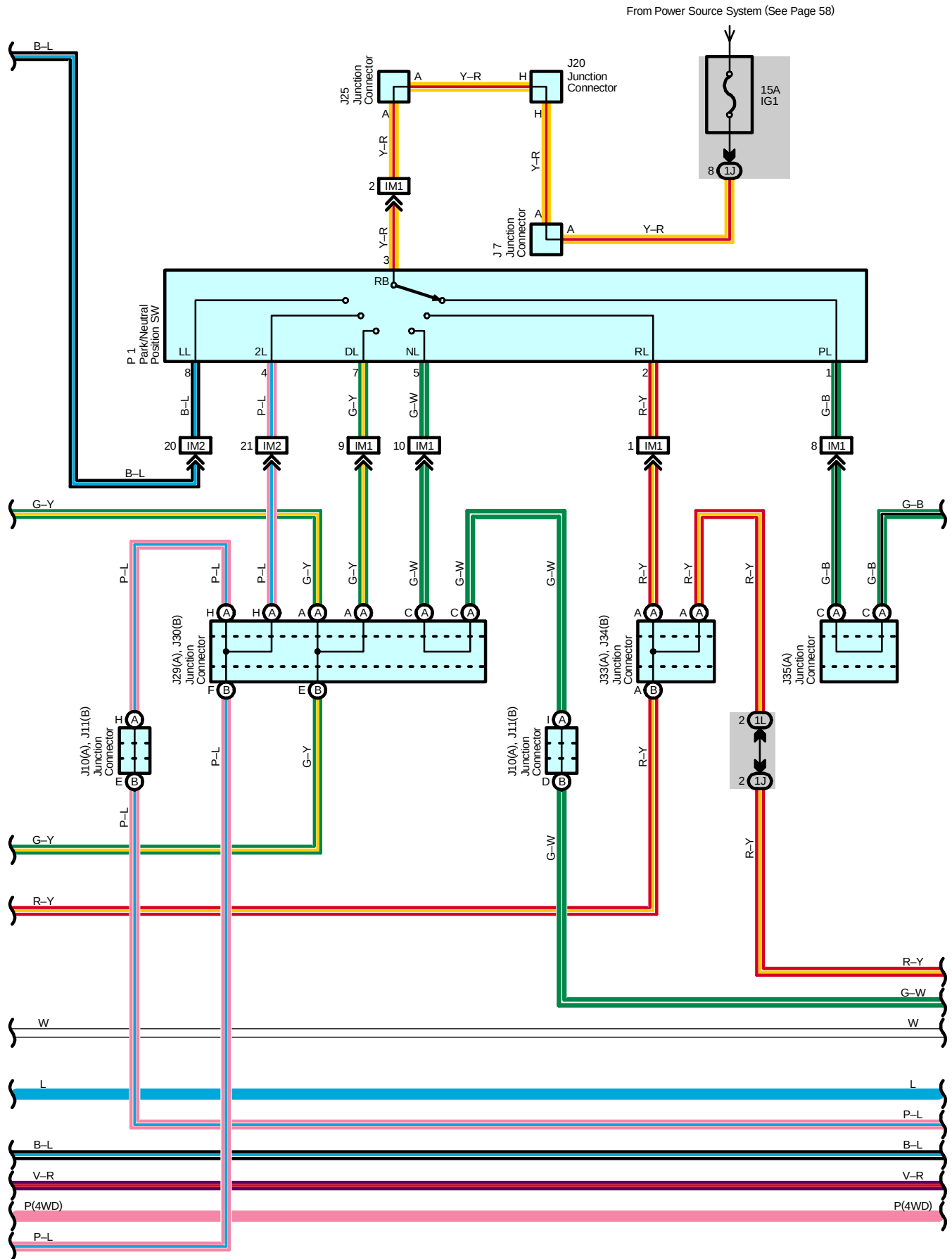
Electronically Controlled Transmission and A/T Indicator (1GR-FE)

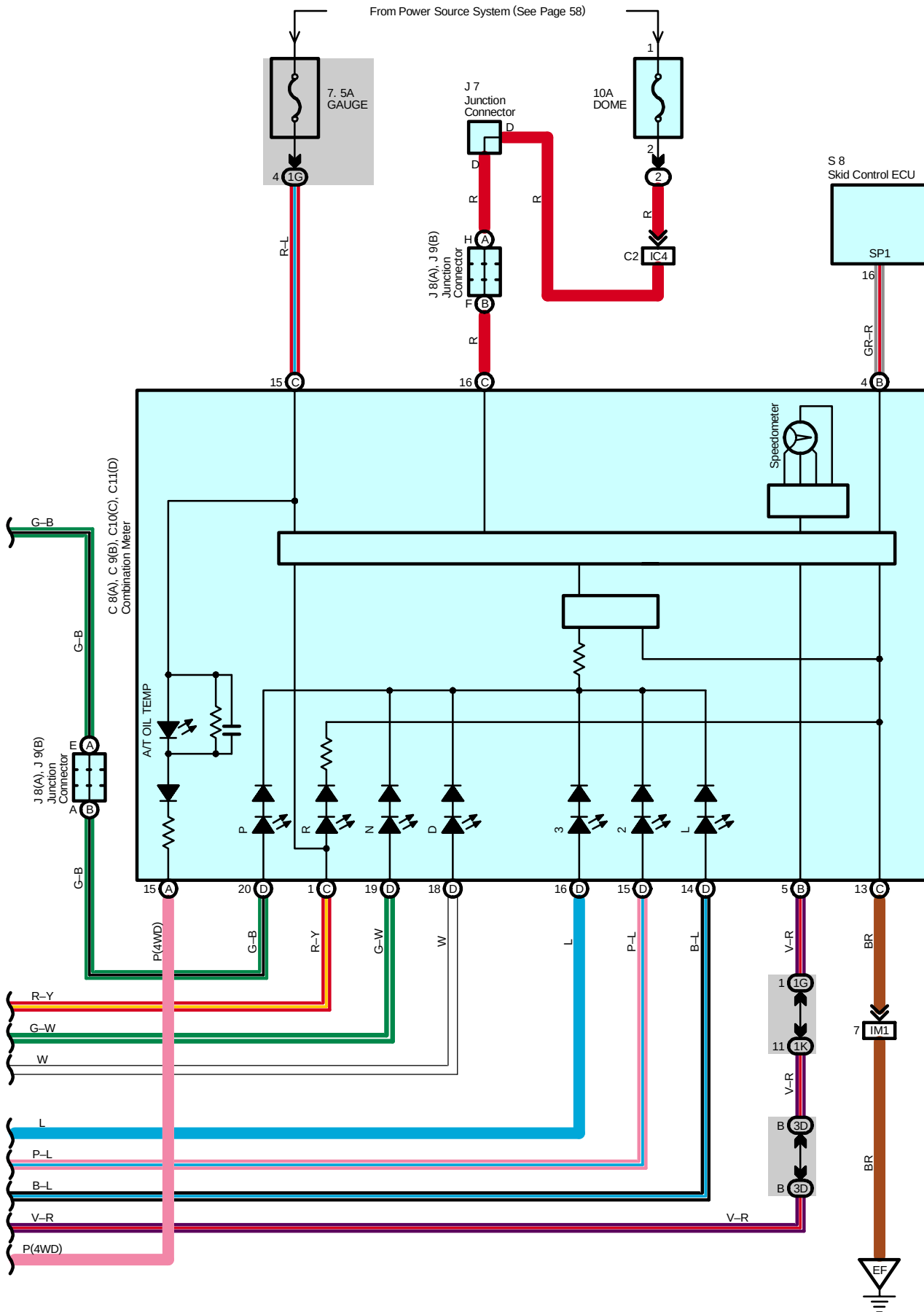


From Power Source System (See Page 58)



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





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

System Outline

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

1. Gear Shift Operation

When driving, the engine warm up condition is input as a signal to TERMINAL THW of the engine control module from the engine coolant temp. sensor and the vehicle speed signal from vehicle speed sensor is input to TERMINAL SP2+ of the engine control module. At the same time, the throttle valve opening signal from the throttle control motor and 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 the engine control module decides based on each signal that the lock-up condition has been met, the current flows through TERMINAL SL of the engine control module to TERMINAL 7 of the electronically controlled transmission solenoid to GROUND, causing lock-up operation.

3. Stop Light SW Circuit

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

Service Hints

E4 (A), E5 (B), E6 (C), E7 (D), E8 (E) Engine Control Module

(E) 9-Ground : Approx. 12 volts with the ignition SW at ON position

(D) 6, (E) 3-Ground : Always approx. 12 volts

(A)16-Ground : Approx. 12 volts with the ignition SW at ST position

(D)19-Ground : Approx. 12 volts with the brake pedal depressed

(A)6, (A) 7, (B) 6, (B) 7, (C) 1, (C) 4, (C) 7, (D) 1, (E) 15-Ground : Always continuity

P1 Park/Neutral Position SW

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

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

3-5 : Closed with the shift lever in N position

3-7 : Closed with the shift lever in D position or 3 position

3-4 : Closed with the shift lever in 2 position

3-8 : Closed with the shift lever in L position

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A3	34 (1GR-FE)	J4	38	J33	A 38
A24	36	J7	38	J34	B 38
C8	A 37	J8	A 38	J35	A 38
C9	B 37	J9	B 38	J36	B 38
C10	C 37	J10	A 38	J37	38
C11	D 37	J11	B 38	M1	35 (1GR-FE)
D1	37	J18	38	P1	35 (1GR-FE)
E1	34 (1GR-FE)	J20	38	S6	39
E2	34 (1GR-FE)	J25	38	S8	39
E4	A 37	J27	38	S12	39
E5	B 37	J28	38	T2	35 (1GR-FE)
E6	C 37	J29	A 38	T4	35 (1GR-FE)
E7	D 37	J30	B 38	V11	35 (1GR-FE)
E8	E 37	J31	A 38		
J2	35 (1GR-FE)	J32	B 38		

 : **Relay Blocks**

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

 : **Junction Block and Wire Harness Connector**

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

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

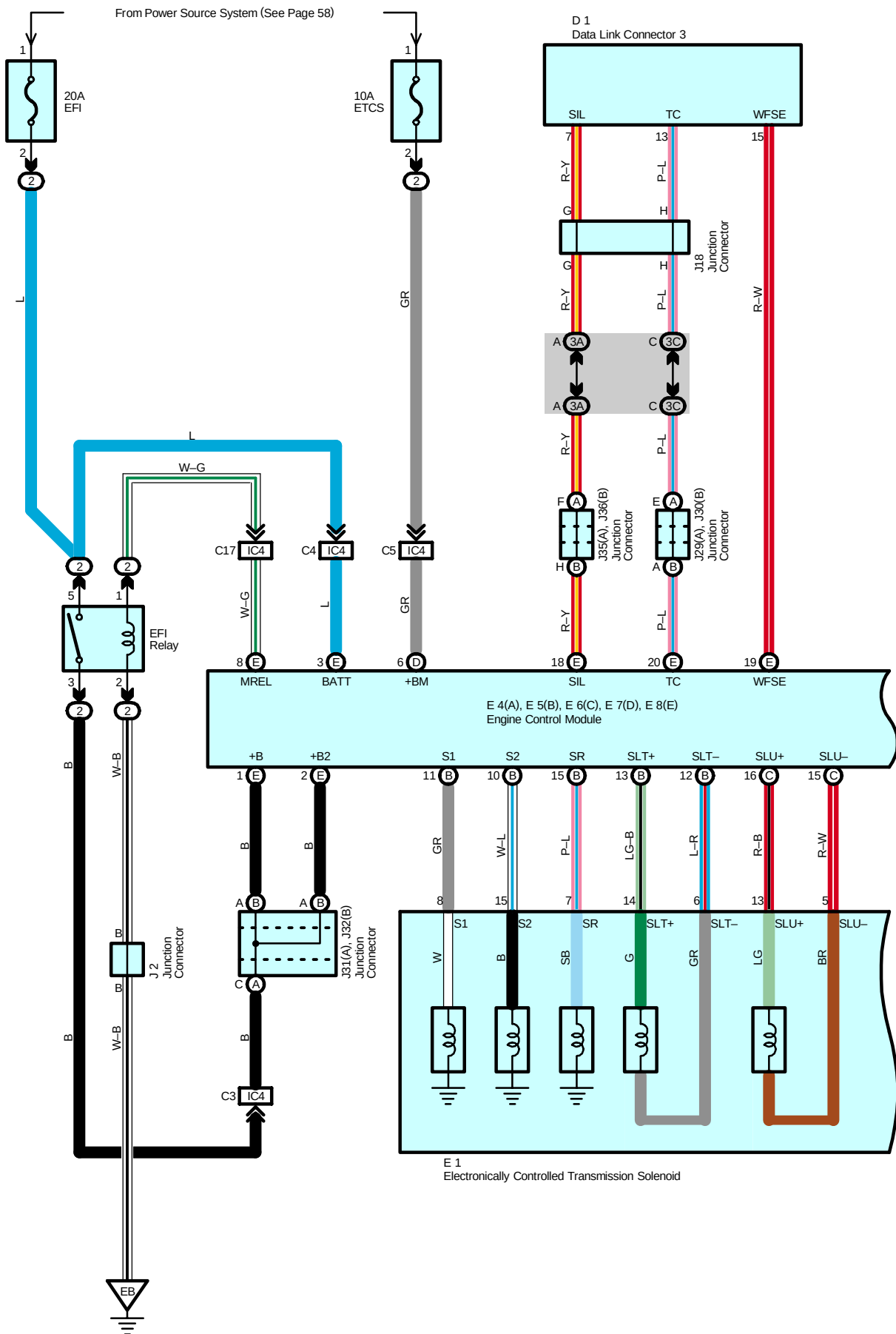
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

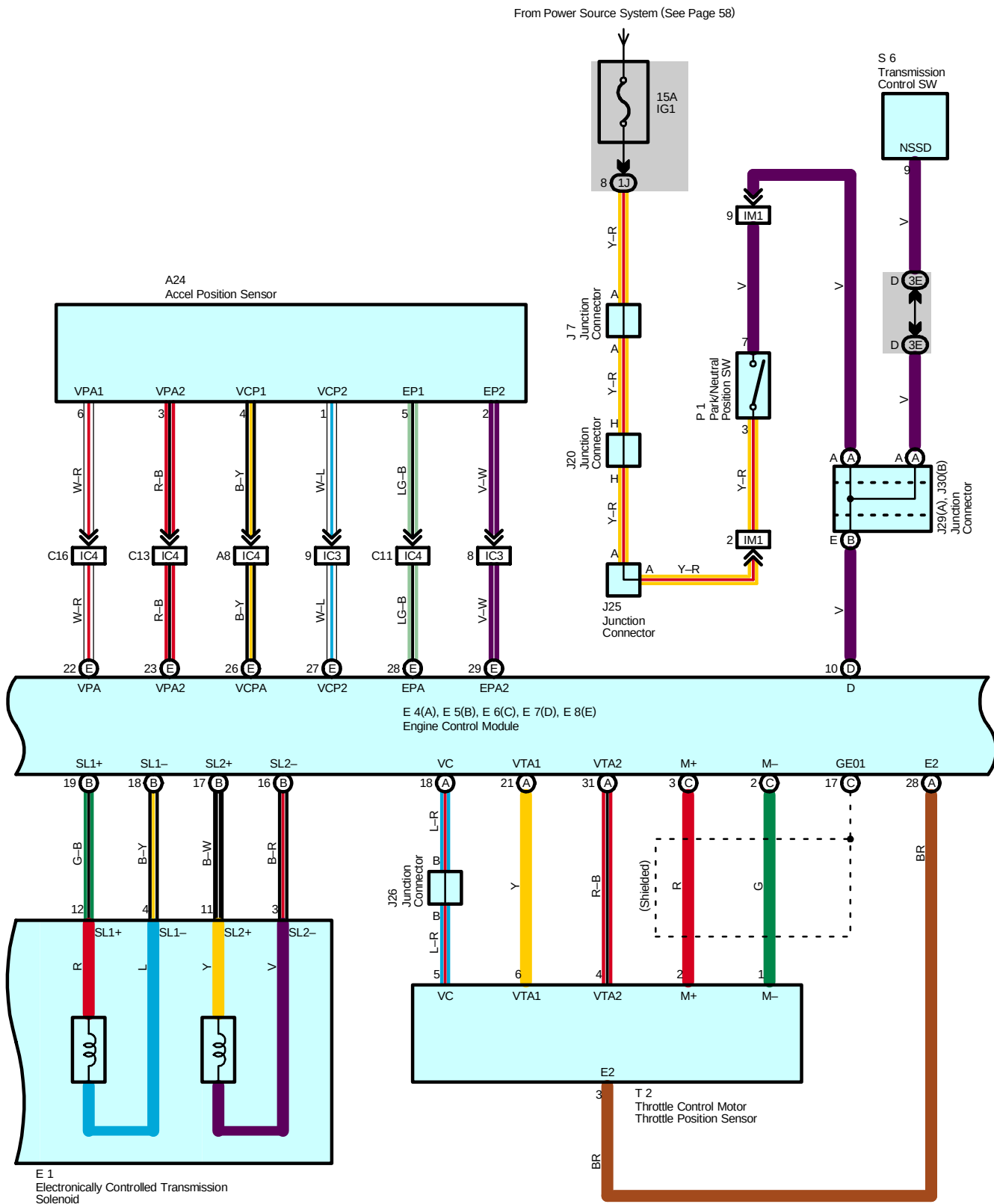
 : **Ground Points**

Code	See Page	Ground Points Location
EB	46 (1GR-FE)	Front Left Fender
EE	46 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	46 (1GR-FE)	Rear Side of Left Bank Cylinder Block
IK	48	Right Kick Panel

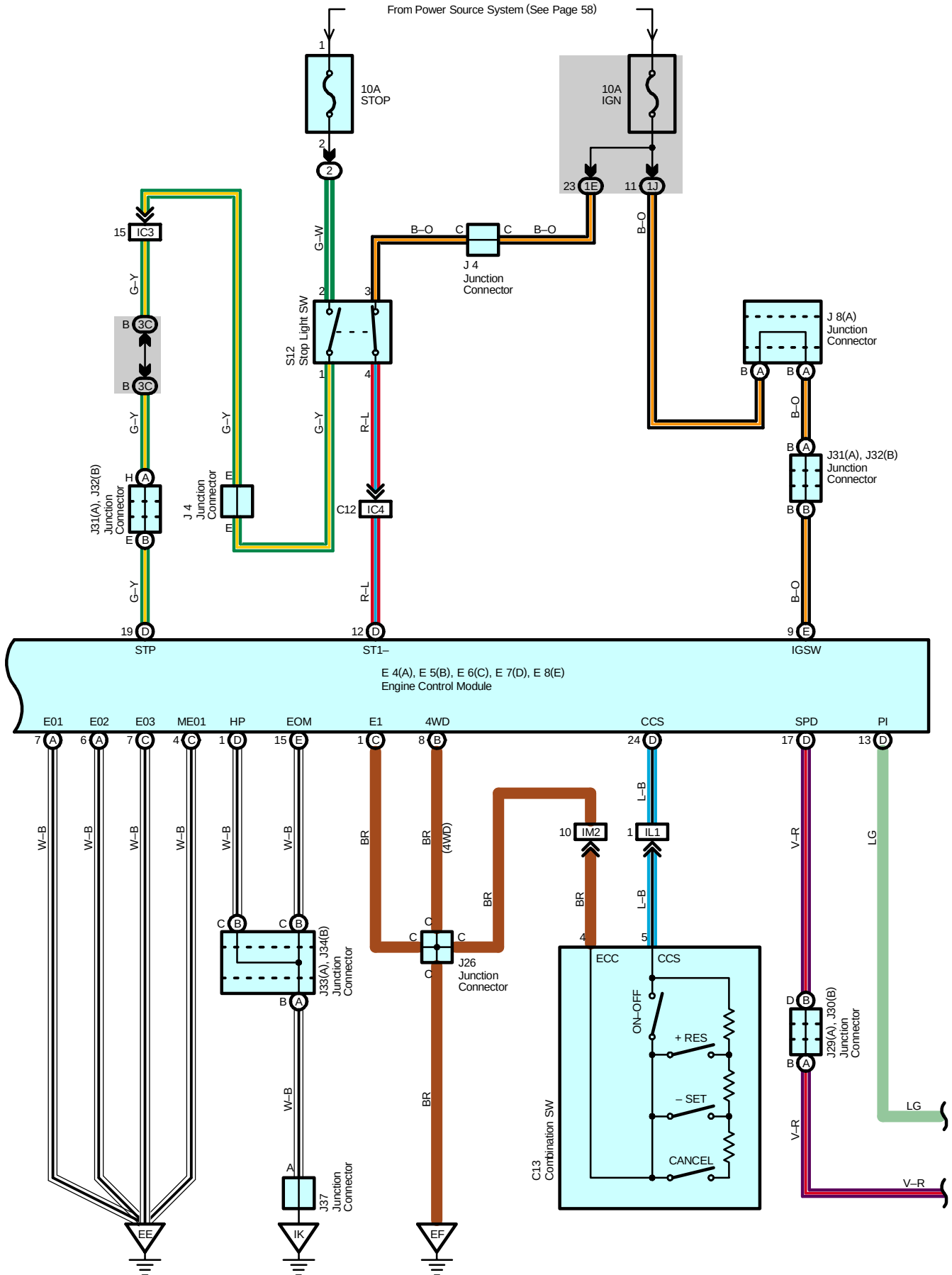
 : **Splice Points**

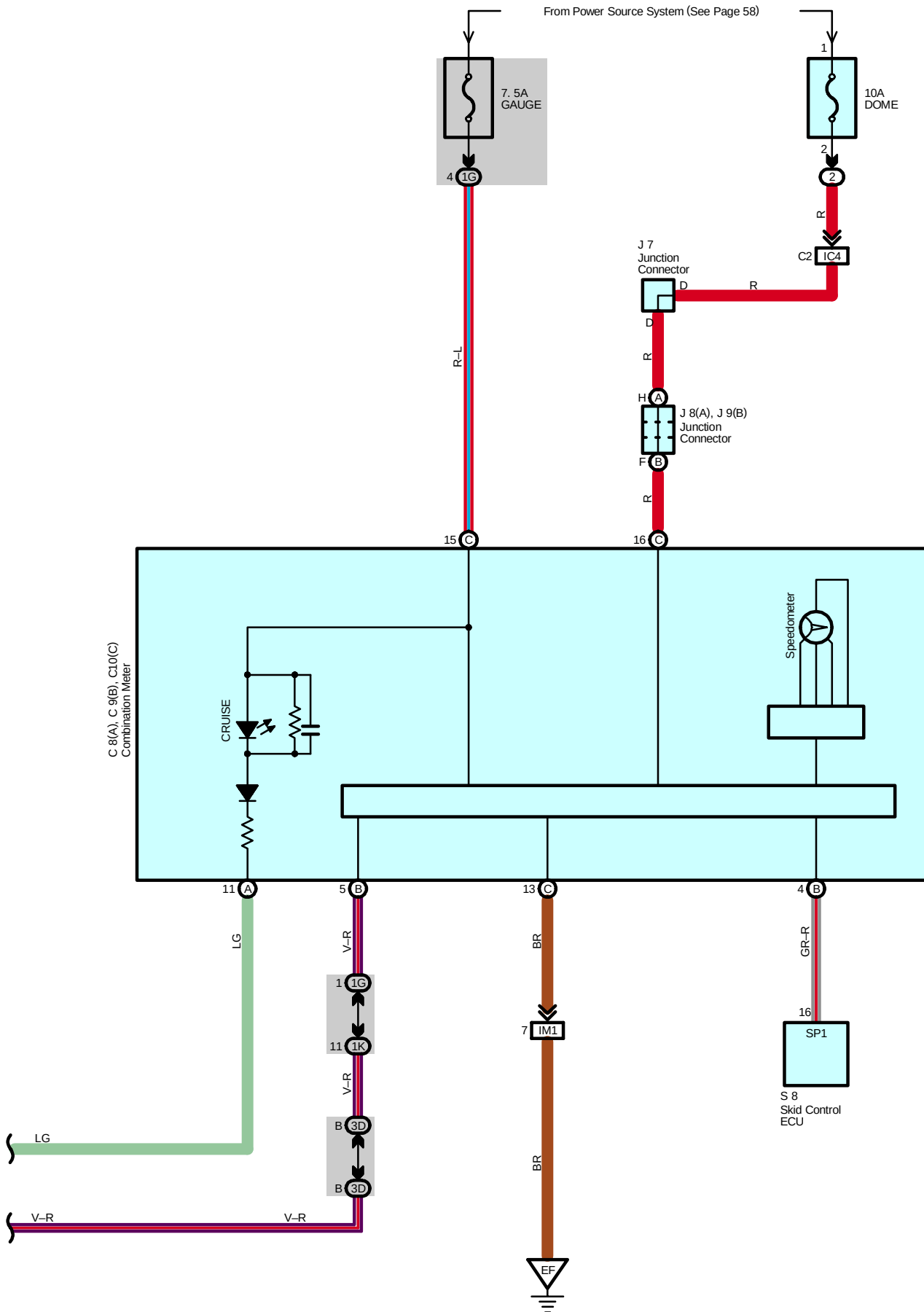
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E8	46 (1GR-FE)	Engine Wire			





Cruise Control (2UZ-FE)





Cruise Control (2UZ-FE)

System Outline

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

1. Set Operation

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

2. Set Speed Control

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

3. Coast Control

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

4. Accel Control

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

5. Resume Control

When the vehicle speed is 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 ON-OFF SW is turned off.

7. Auto Cancel Function

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

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

8. Overdrive Control Function

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

Service Hints

E4 (A), E5 (B), E6 (C), E7 (D), E8 (E) Engine Control Module

- (E) 9-Ground : Approx. 12 volts with ignition SW at ON position
- (D) 6, (E) 3-Ground : Always approx. 12 volts
- (A) 6, (A) 7, (B) 8, (C) 1, (C) 4, (C) 7, (D) 1, (E) 15-Ground : Always continuity
- (D)19-Ground : Approx. 12 volts with brake pedal depressed
- (D)24-Ground : Continuity with cruise control ON-OFF SW at on
 - Approx. 1540 Ω with CANCEL SW on in cruise control SW
 - Approx. 240 Ω with + RES SW on in cruise control SW
 - Approx. 630 Ω with - SET SW on in cruise control SW

C13 Combination SW

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

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A24	36	J2	33 (2UZ-FE)	J32	B 38
C8	A 37	J4	38	J33	A 38
C9	B 37	J7	38	J34	B 38
C10	C 37	J8	A 38	J35	A 38
C13	37	J9	B 38	J36	B 38
D1	37	J18	38	J37	38
E1	32 (2UZ-FE)	J20	38	P1	33 (2UZ-FE)
E4	A 37	J25	38	S6	39
E5	B 37	J26	38	S8	39
E6	C 37	J29	A 38	S12	39
E7	D 37	J30	B 38	T2	33 (2UZ-FE)
E8	E 37	J31	A 38		

 : Relay Blocks

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

 : Junction Block and Wire Harness Connector

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

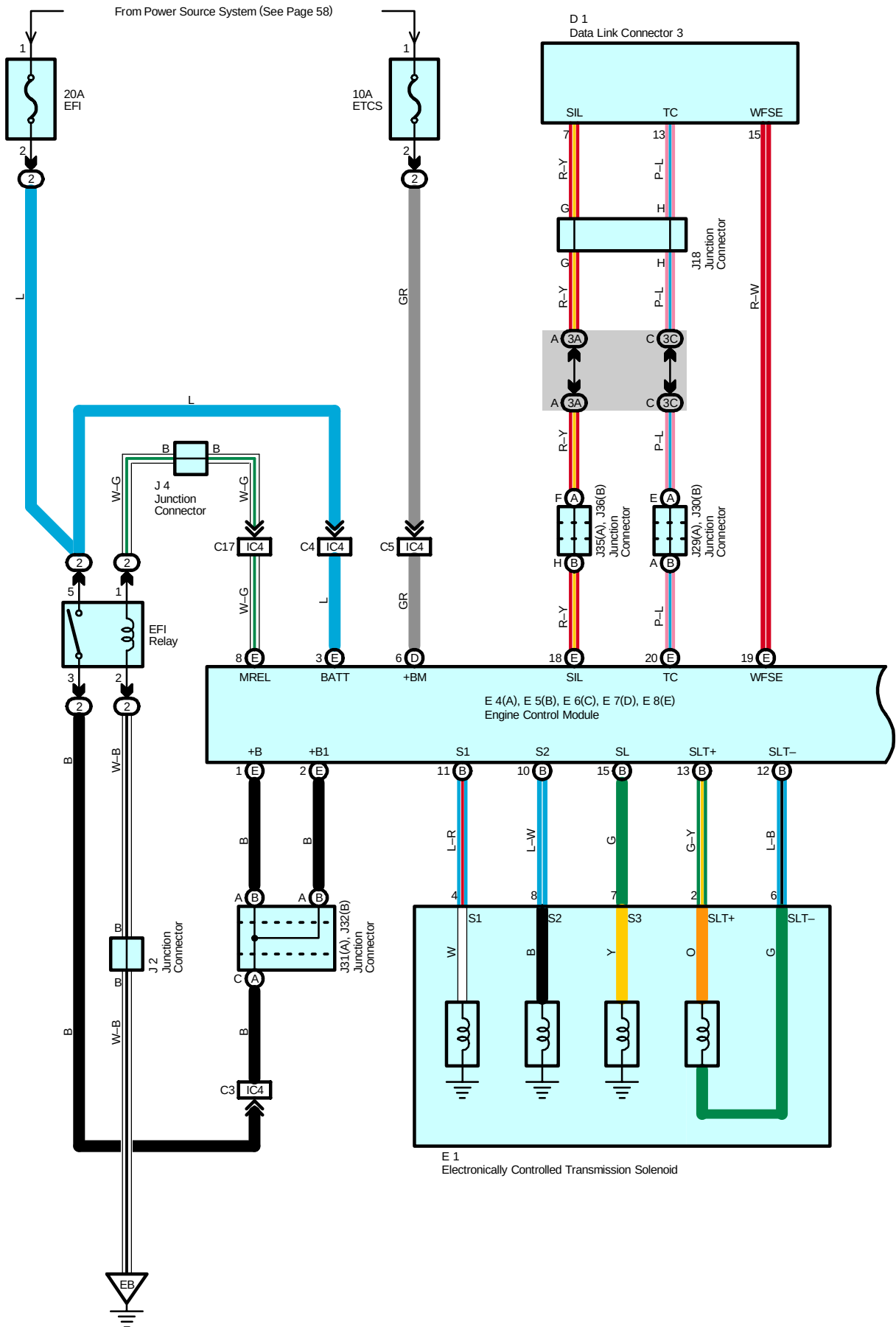
 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IL1	50	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

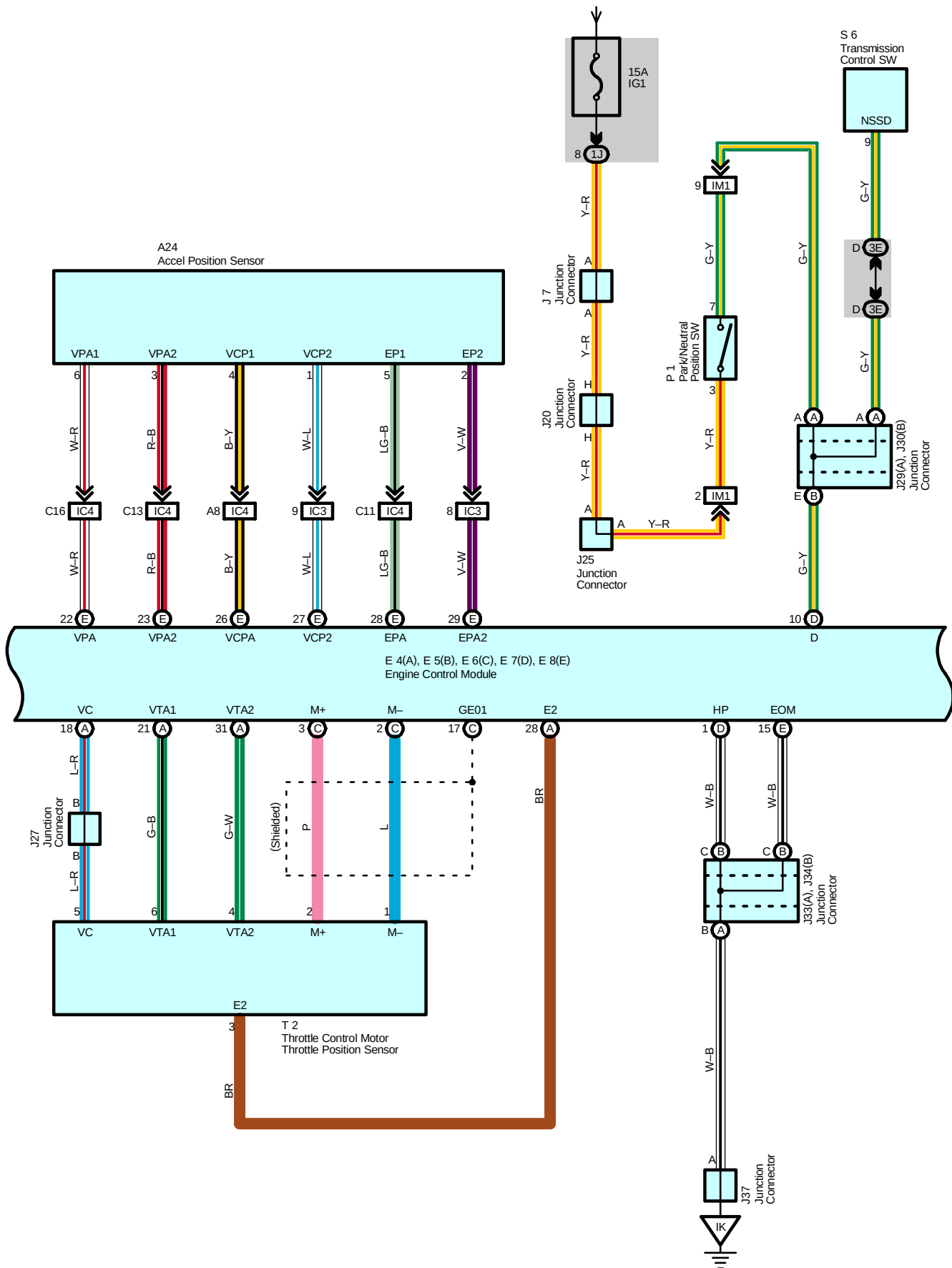
 : Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
EE	44 (2UZ-FE)	Rear Side of Right Bank Cylinder Block
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
IK	48	Right Kick Panel

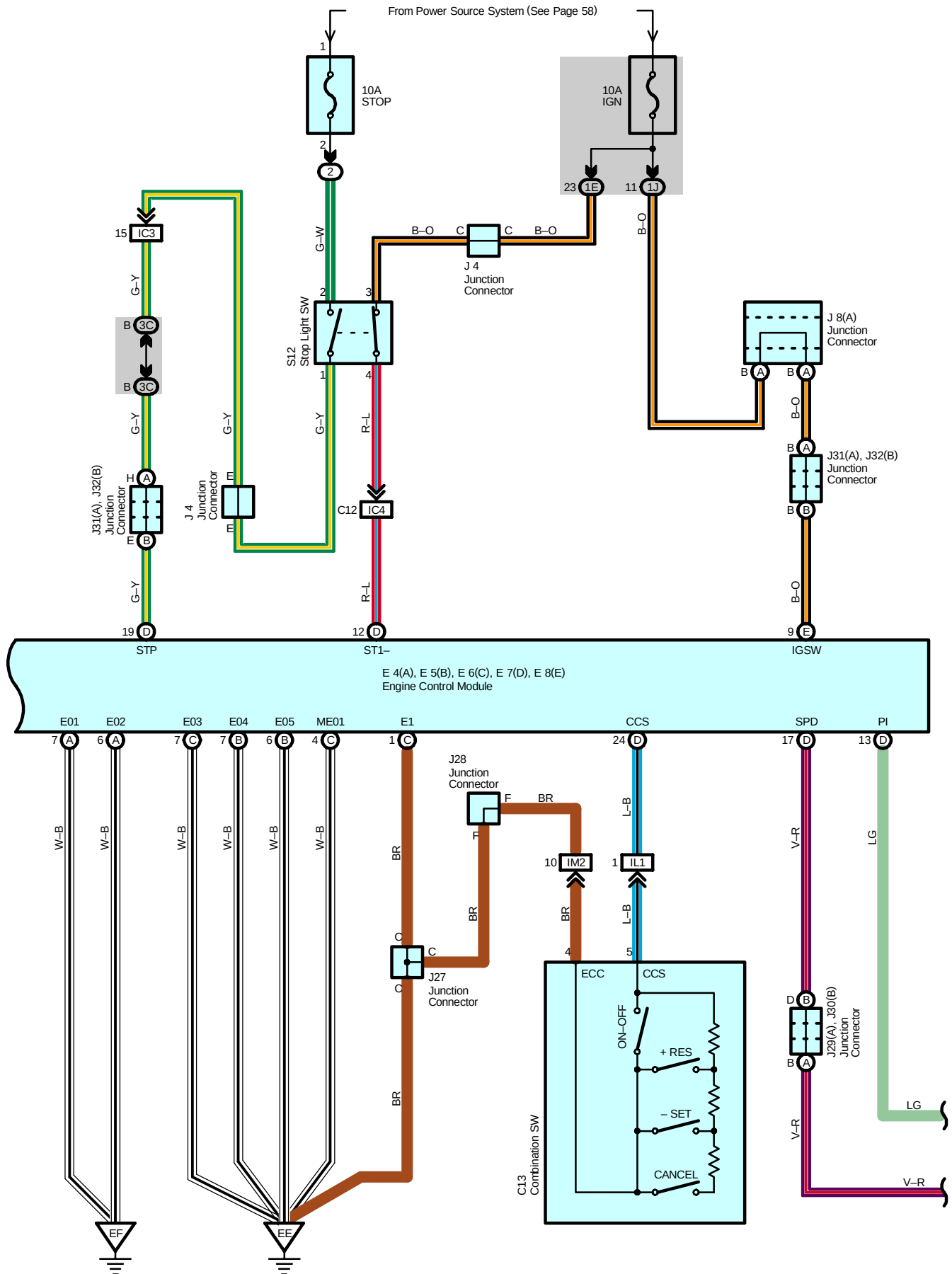
Cruise Control (1GR-FE)

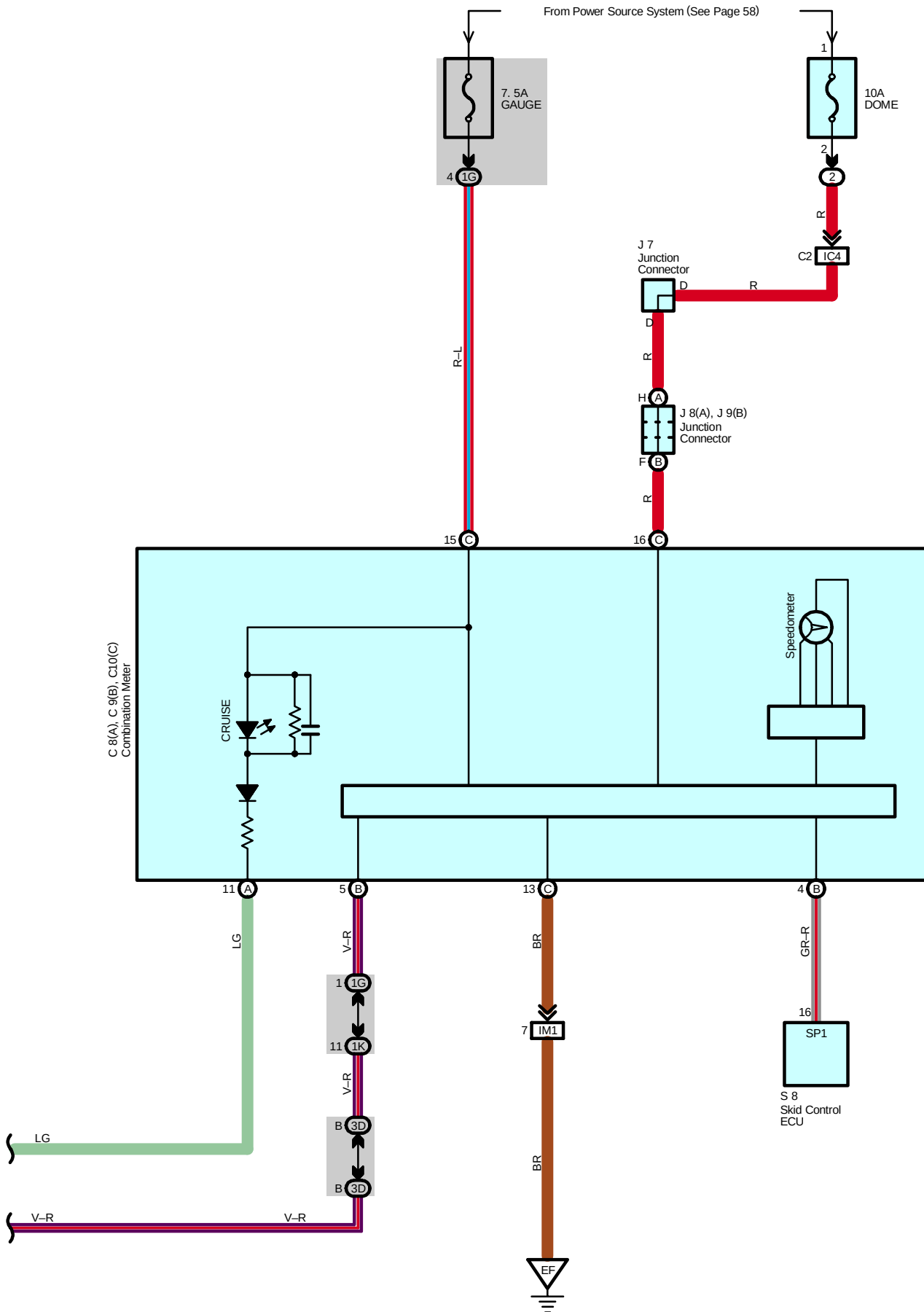


From Power Source System (See Page 58)



Cruise Control (1GR-FE)





Cruise Control (1GR-FE)

System Outline

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

1. Set Operation

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

2. Set Speed Control

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

3. Coast Control

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

4. Accel Control

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

5. Resume Control

When the vehicle speed is 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 ON-OFF SW is turned off.

7. Auto Cancel Function

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

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

8. Overdrive Control Function

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

Service Hints

E4 (A), E5 (B), E6 (C), E7 (D), E8 (E) Engine Control Module

- (E) 9-Ground : Approx. 12 volts with ignition SW at ON position
- (D) 6, (E) 3-Ground : Always approx. 12 volts
- (A)6, (A) 7, (B) 6, (B) 7, (C) 1, (C) 4, (C) 7, (D) 1, (E) 15-Ground : Always continuity
- (D)19-Ground : Approx. 12 volts with brake pedal depressed
- (D)24-Ground : Continuity with cruise control ON-OFF SW at on
 - Approx. 1540 Ω with CANCEL SW on in cruise control SW
 - Approx. 240 Ω with + RES SW on in cruise control SW
 - Approx. 630 Ω with - SET SW on in cruise control SW

C13 Combination SW

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

 : Parts Location

Code	See Page	Code	See Page	Code	See Page
A24	36	J2	35 (1GR-FE)	J31	A 38
C8	A 37	J4	38	J32	B 38
C9	B 37	J7	38	J33	A 38
C10	C 37	J8	A 38	J34	B 38
C13	37	J9	B 38	J35	A 38
D1	37	J18	38	J36	B 38
E1	34 (1GR-FE)	J20	38	J37	38
E4	A 37	J25	38	P1	35 (1GR-FE)
E5	B 37	J27	38	S6	39
E6	C 37	J28	38	S8	39
E7	D 37	J29	A 38	S12	39
E8	E 37	J30	B 38	T2	35 (1GR-FE)

 : Relay Blocks

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

 : Junction Block and Wire Harness Connector

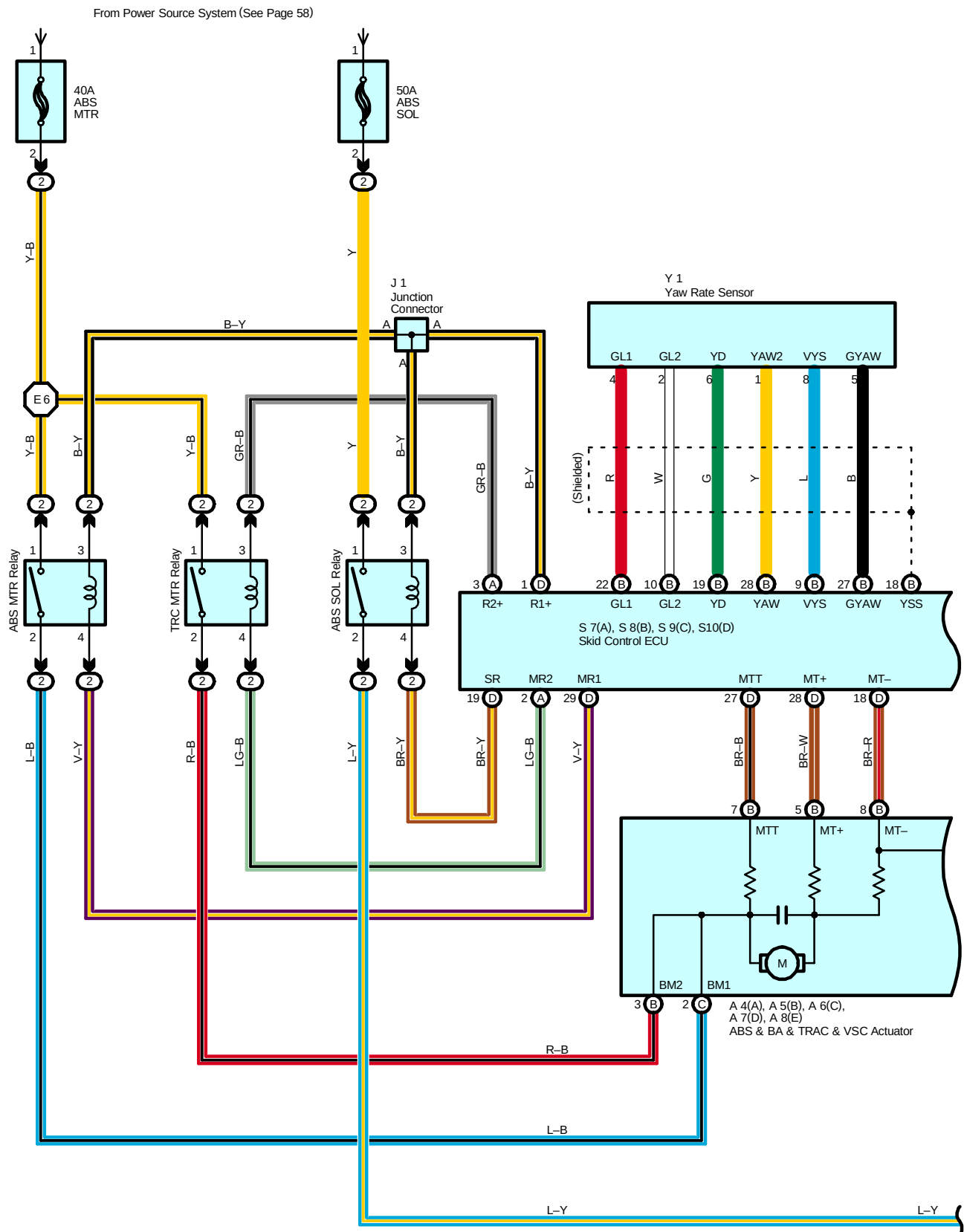
Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
3A	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3C		
3D		
3E		

 : Connector Joining Wire Harness and Wire Harness

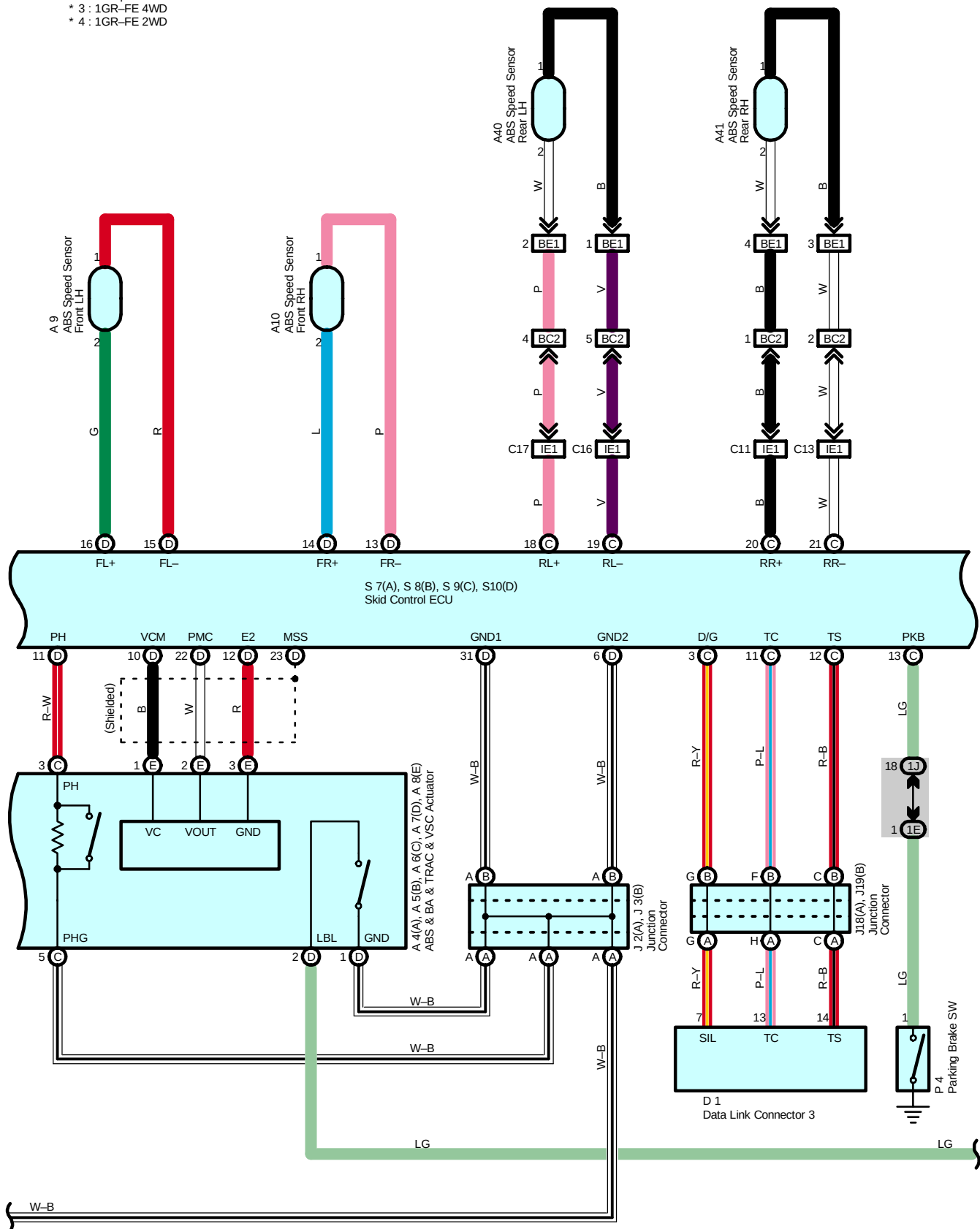
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IL1	50	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		

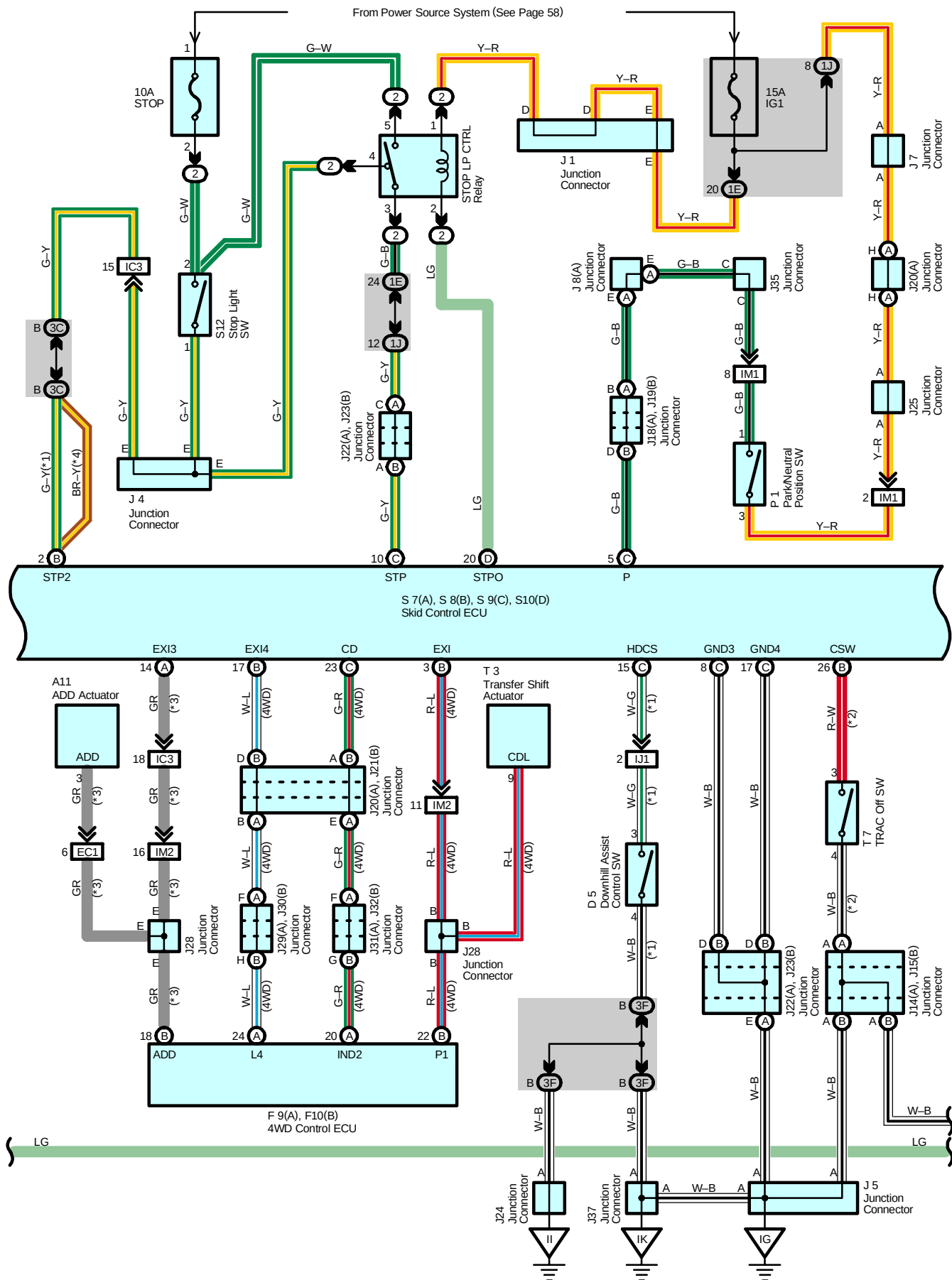
 : Ground Points

Code	See Page	Ground Points Location
EB	46 (1GR-FE)	Front Left Fender
EE	46 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	46 (1GR-FE)	Rear Side of Left Bank Cylinder Block
IK	48	Right Kick Panel



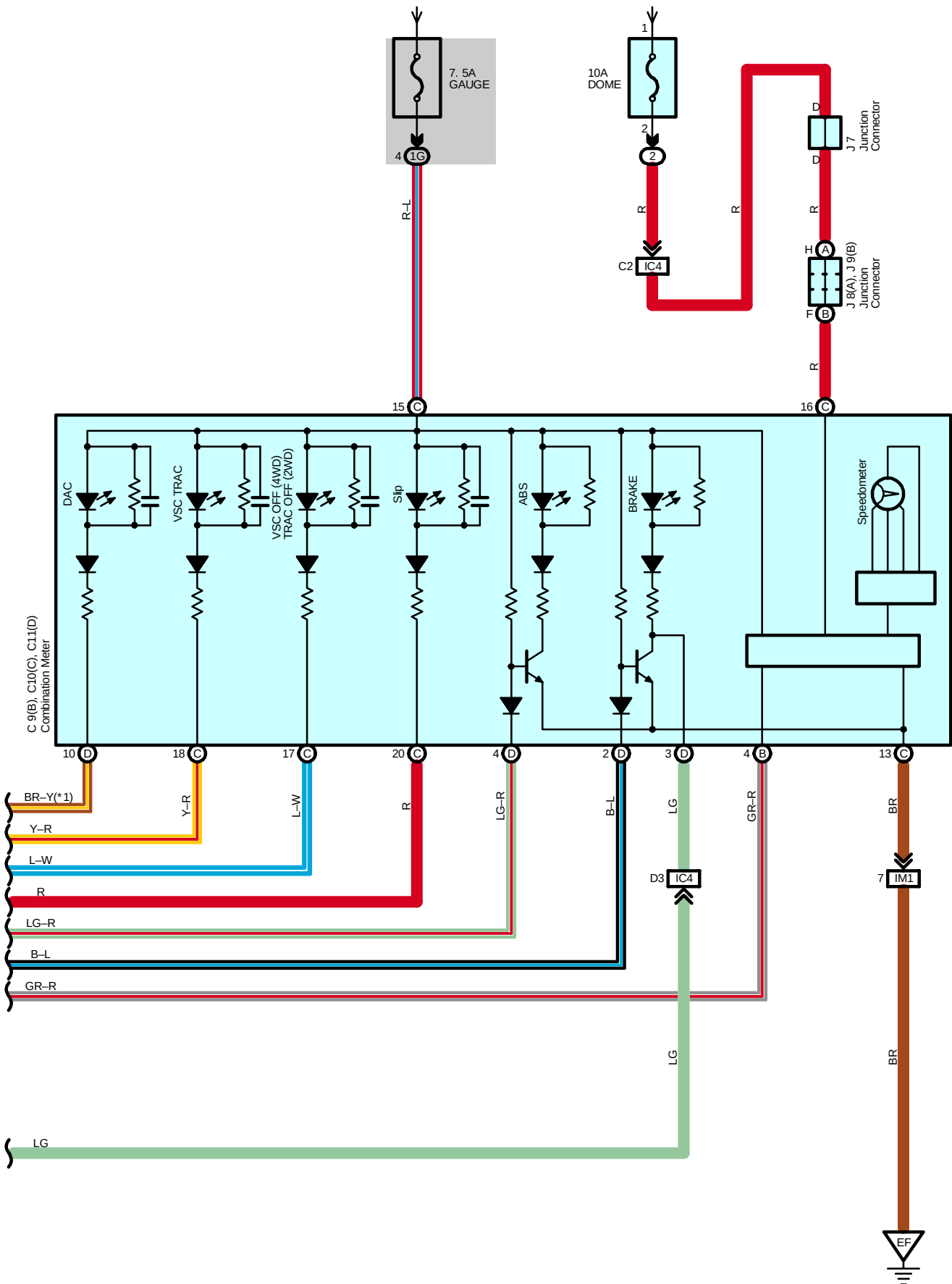
- * 1 : Except 1GR-FE 2WD
- * 2 : Except 1GR-FE 4WD
- * 3 : 1GR-FE 4WD
- * 4 : 1GR-FE 2WD





* 1 : Except 1GR-FE 2WD

From Power Source System (See Page 58)



System Outline

1. Normal Operation

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

The followings are two examples that can be considered as circumstances in which the tires exceed their lateral grip limit. The VSC system is designed to help control the vehicle behavior by controlling the engine's output and the brakes at each wheel when the vehicle is under one of the conditions indicated below.

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

2. Downhill Assist Control Operation

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

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

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

3. Hill-Start Support Control Operation

When starting on a steep hill for ascending, the hill-start support control automatically puts the brake on momentarily – from the moment when the driver releases his foot from the brake pedal until he steps on the accelerator pedal – to help the driver start the vehicle safely and smoothly.

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

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

- * Shift position = D, 2, or L
- * Vehicle not moving forward with some wheel(s) slipping
- * Vehicle speed > 0 km/h

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
A4	A	32 (2UZ-FE)	F10	B	37	J28		38
		34 (1GR-FE)	J1		33 (2UZ-FE)	J29	A	38
A5	B	32 (2UZ-FE)			35 (1GR-FE)	J30	B	38
		34 (1GR-FE)	J2	A	33 (2UZ-FE)	J31	A	38
A6	C	32 (2UZ-FE)			35 (1GR-FE)	J32	B	38
		34 (1GR-FE)	J3	B	33 (2UZ-FE)	J35		38
A7	D	32 (2UZ-FE)			35 (1GR-FE)	J37		38
		34 (1GR-FE)	J4		P1	33 (2UZ-FE)		
A8	E	32 (2UZ-FE)	J5			38	35 (1GR-FE)	
		34 (1GR-FE)	J7		38	P4		39
A9		32 (2UZ-FE)	J8	A	38	S7	A	39
		34 (1GR-FE)	J9	B	38	S8	B	39
A10		32 (2UZ-FE)	J12	A	38	S9	C	39
		34 (1GR-FE)	J13	B	38	S10	D	39
A11		34 (1GR-FE)	J14	A	38	S11		39
A40		40	J15	B	38	S12		39
A41		40	J18	A	38	S15		39
C9	B	37	J19	B	38	T3		33 (2UZ-FE)
C10	C	37	J20	A	38			35 (1GR-FE)
C11	D	37	J21	B	38	T7		39
D1		37	J22	A	38	V5		39
D5		37	J23	B	38	Y1		39
E8		37	J24		38			
F9	A	37	J25		38			

 : **Relay Blocks**

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

 : **Junction Block and Wire Harness Connector**

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

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	46 (1GR-FE)	Engine Wire and Differential Wire (Near the Front Differential)
IC2	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC3		
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IH1	50	Instrument Panel Wire and Instrument Panel Wire (Behind the Combination Meter)
IJ1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace RH)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
BC2	54	Frame Wire and Floor No.2 Wire (Under the Rear LH Seat)
BE1	54	Frame Wire and Skid Control Sensor Wire (Right Side of No.5 Crossmember)

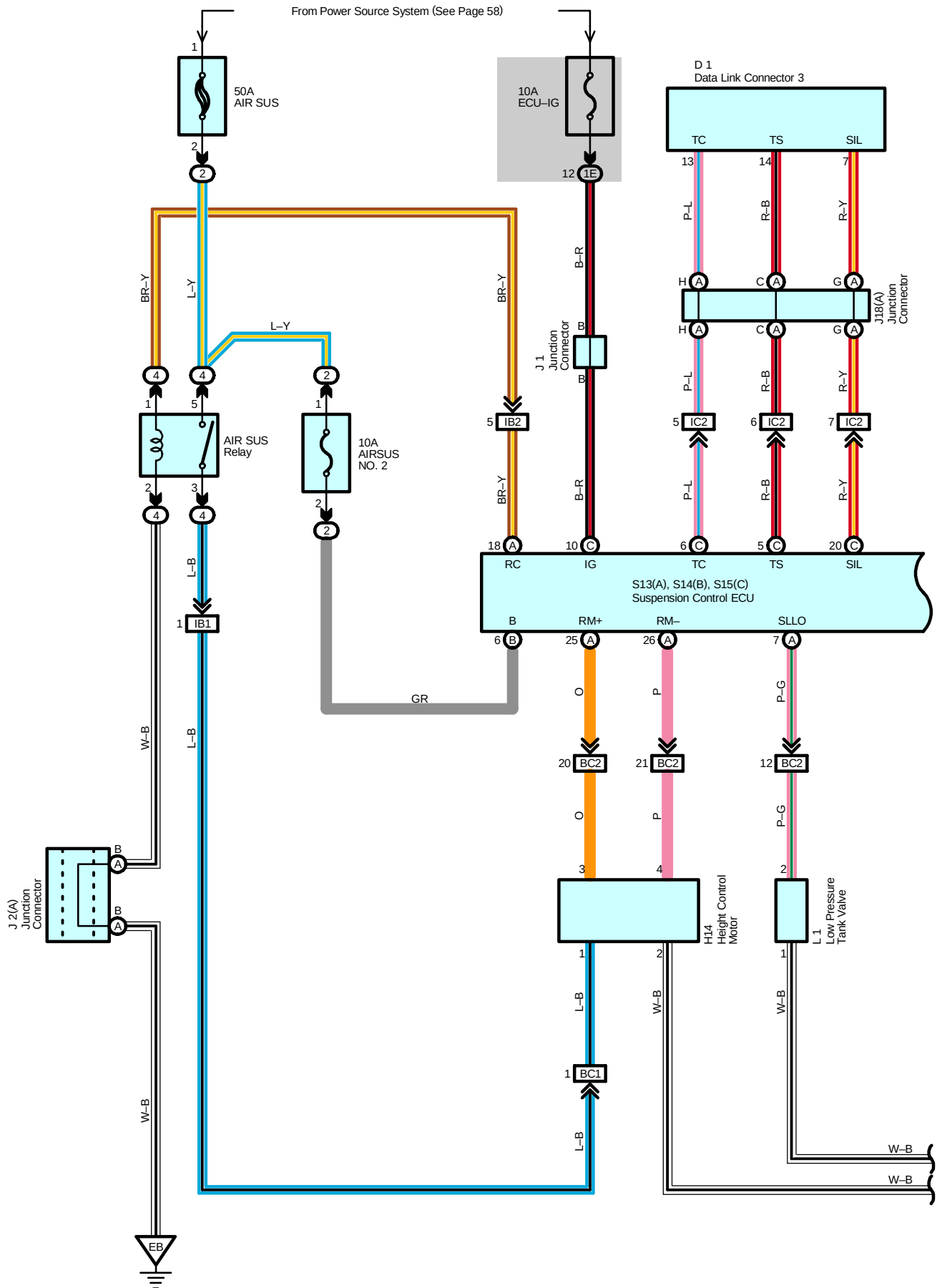
 : **Ground Points**

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

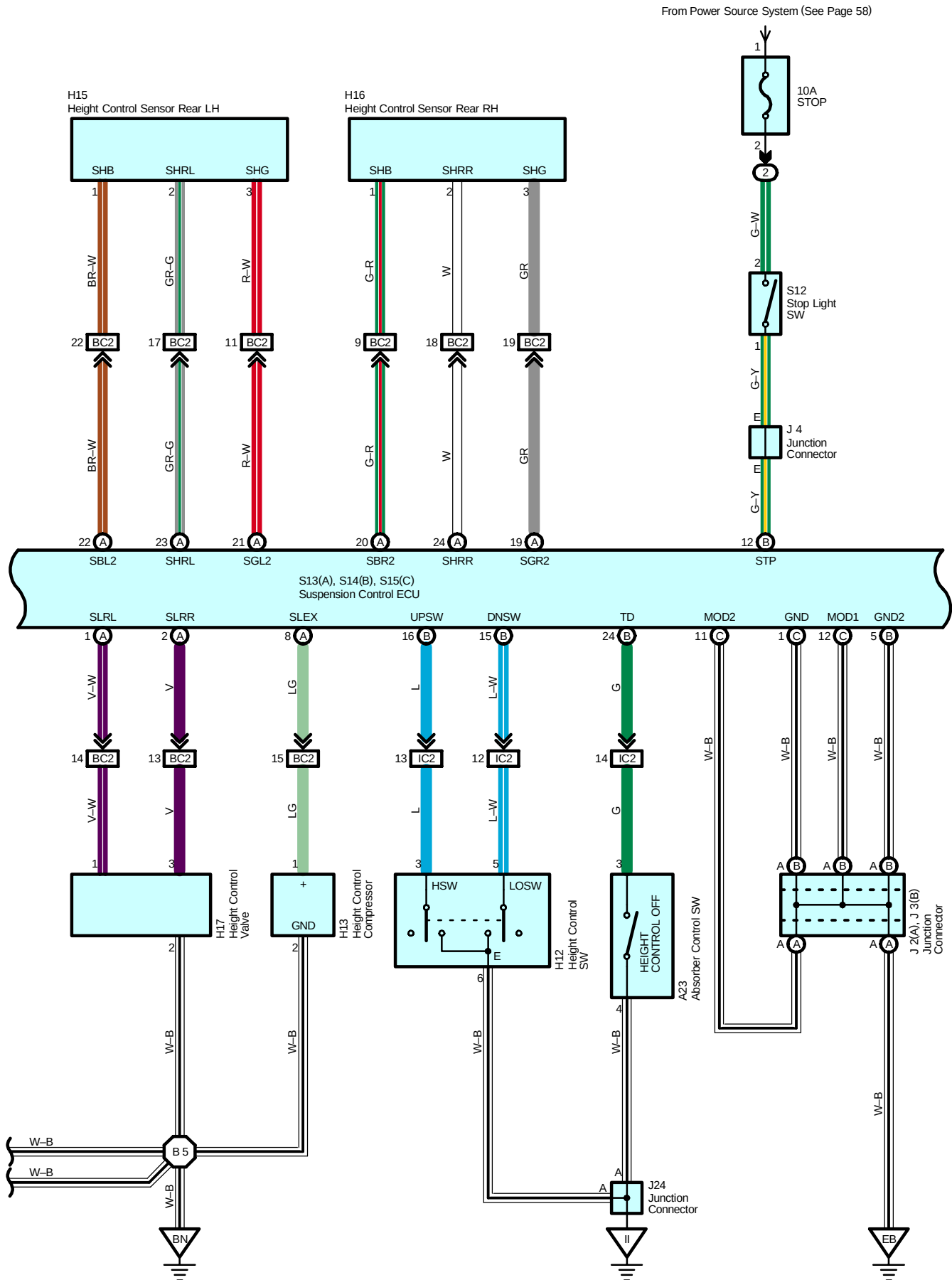
 : **Splice Points**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E6	44 (2UZ-FE)	Engine Room Main Wire	E6	46 (1GR-FE)	Engine Room Main Wire

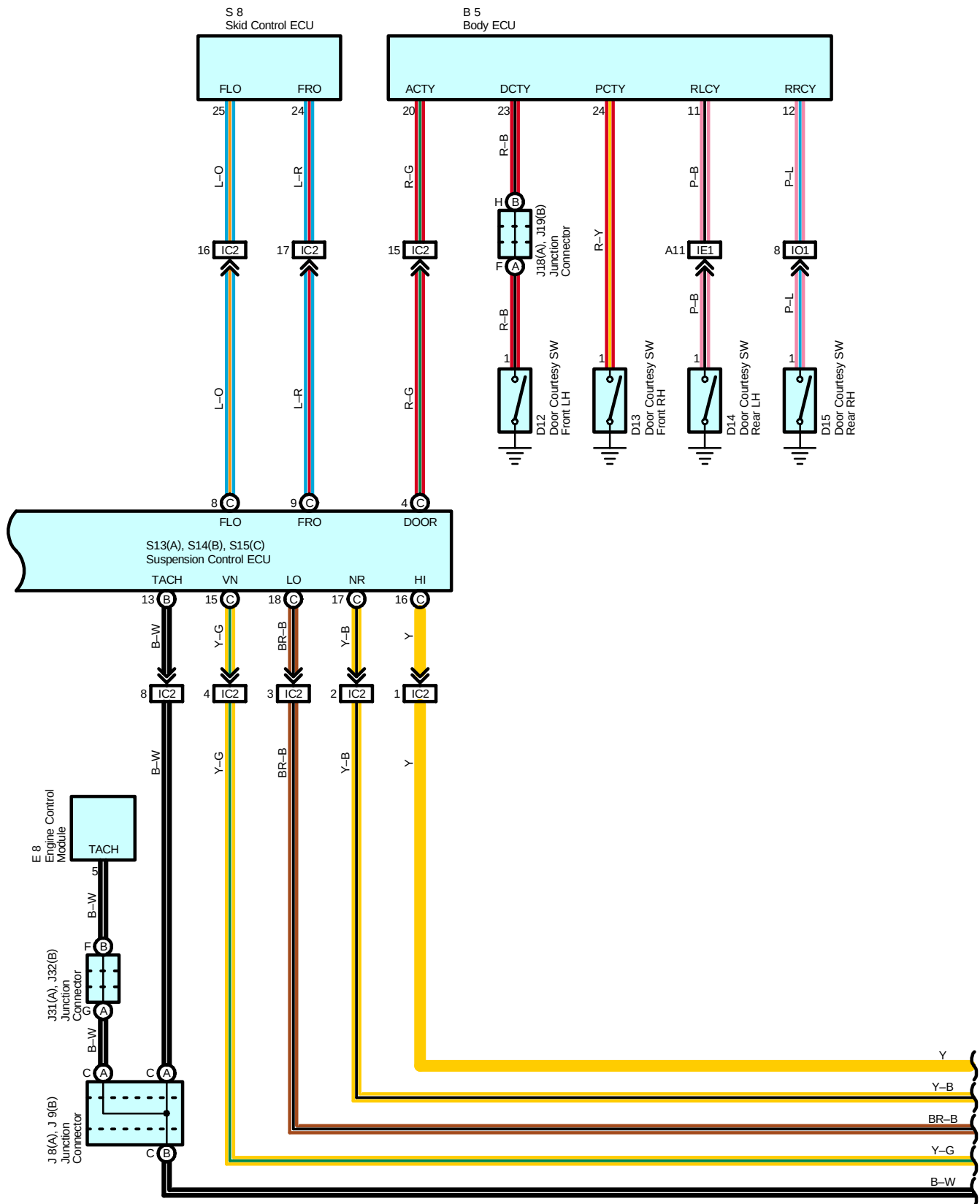
Active Height Control Suspension and Electric Modulated Air Suspension



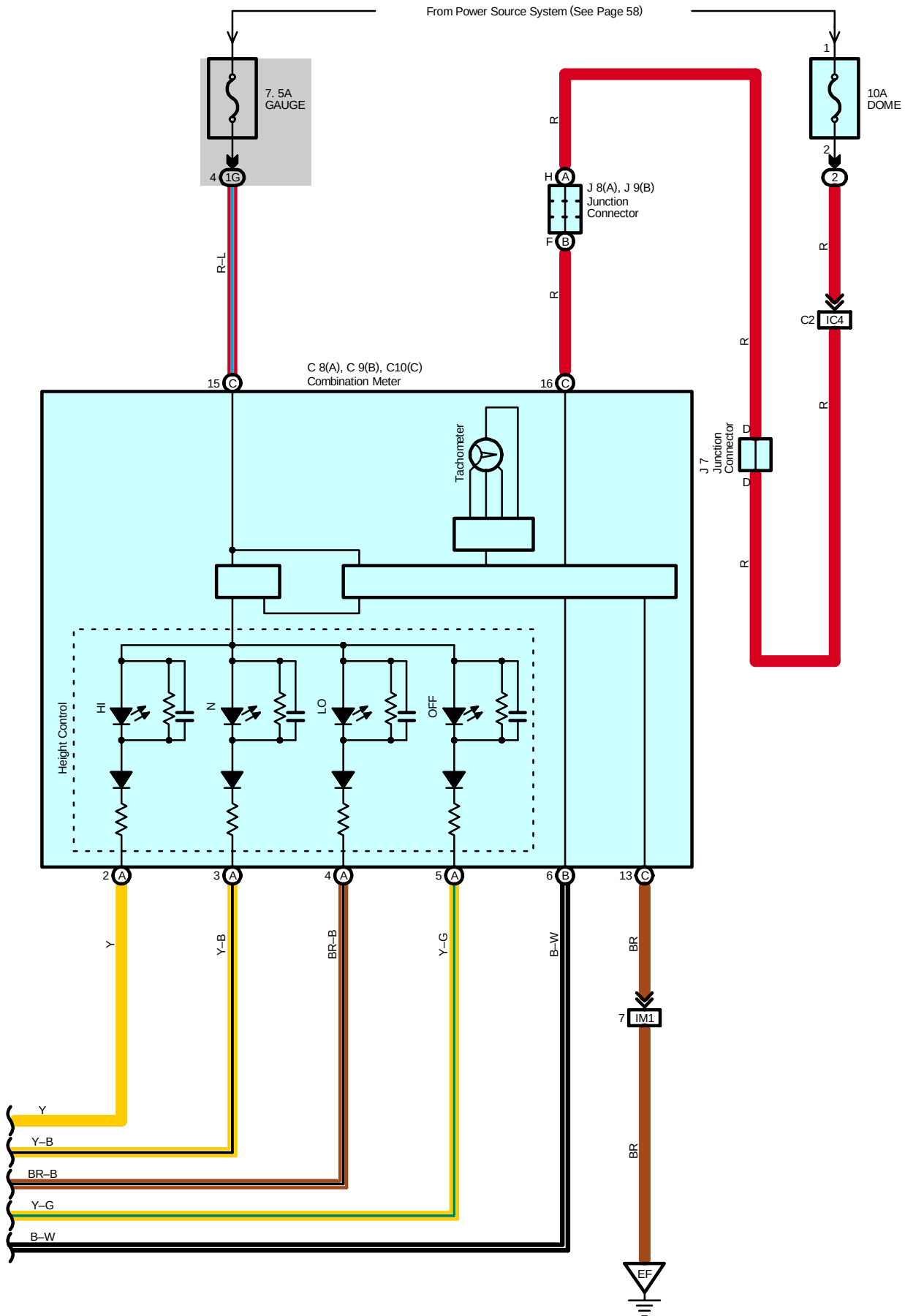
Electric Modulated Air Suspension



Active Height Control Suspension and



Electric Modulated Air Suspension



Active Height Control Suspension and

System Outline

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

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A23	36	H13	40	J18	A 38
B5	36	H14	40	J19	B 38
C8	A 37	H15	40	J24	38
C9	B 37	H16	40	J31	A 38
C10	C 37	H17	40	J32	B 38
D1	37	J1	33 (2UZ–FE)	L1	40
D12	40	J2	A 33 (2UZ–FE)	S8	39
D13	40	J3	B 33 (2UZ–FE)	S12	39
D14	40	J4	38	S13	A 39
D15	40	J7	38	S14	B 39
E8	37	J8	A 38	S15	C 39
H12	37	J9	B 38		

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

Electric Modulated Air Suspension

: Connector Joining Wire Harness and Wire Harness

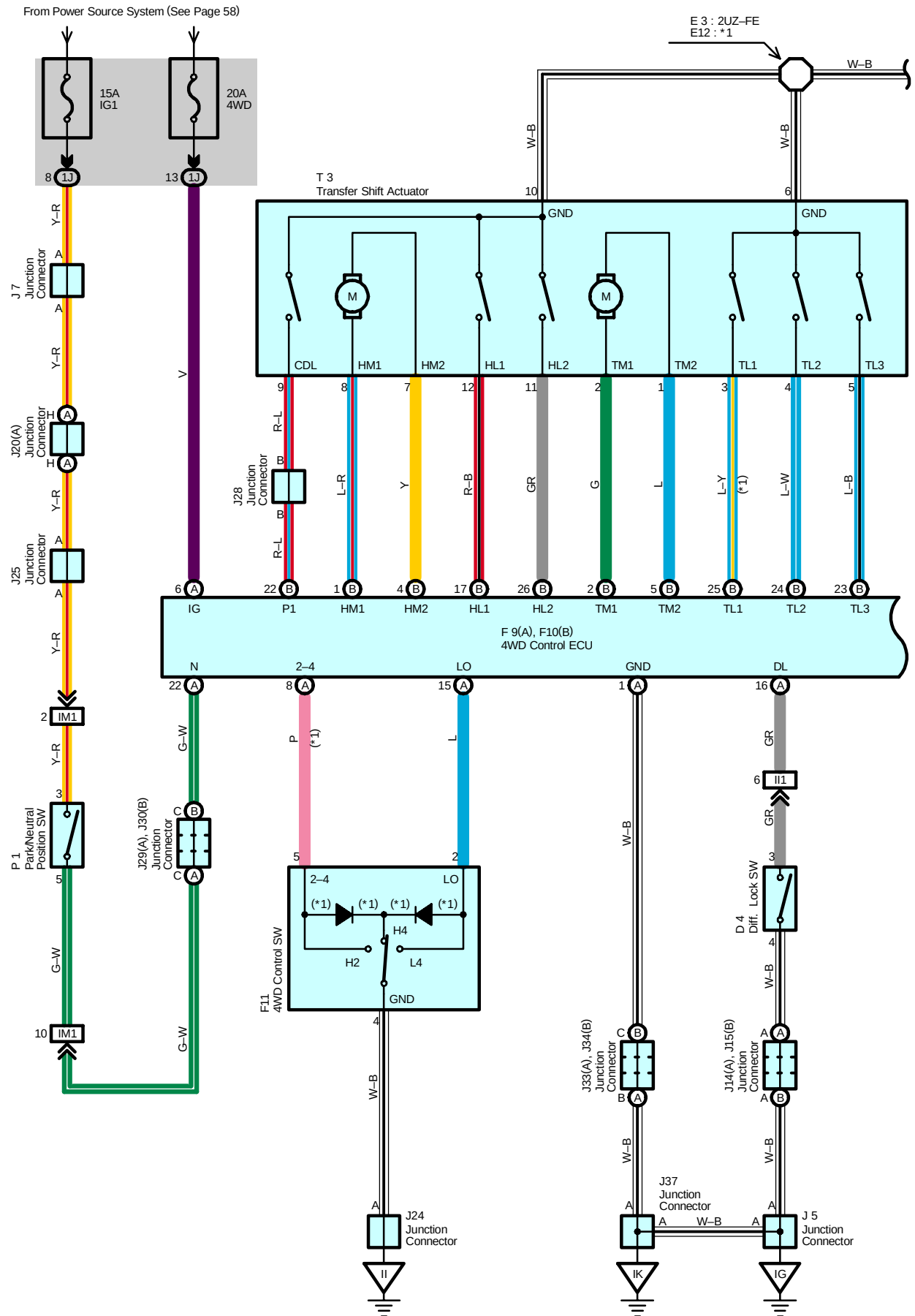
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB1	48	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IB2		
IC2	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
BC1	54	Frame Wire and Floor No.2 Wire (Under the Rear LH Seat)
BC2		

: Ground Points

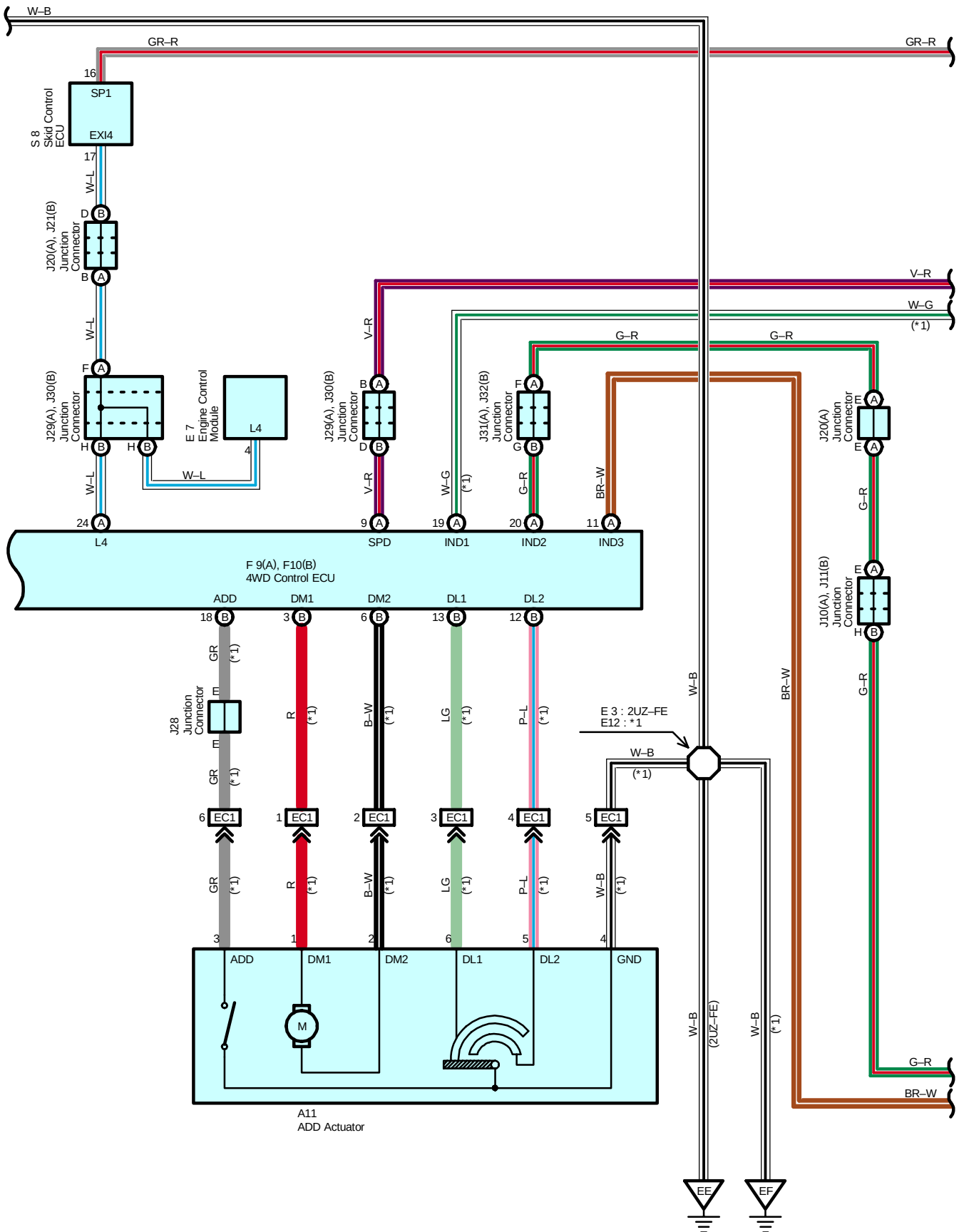
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
II	48	Instrument Panel Brace RH
BN	54	Near the No.5 Crossmember of Side Frame LH

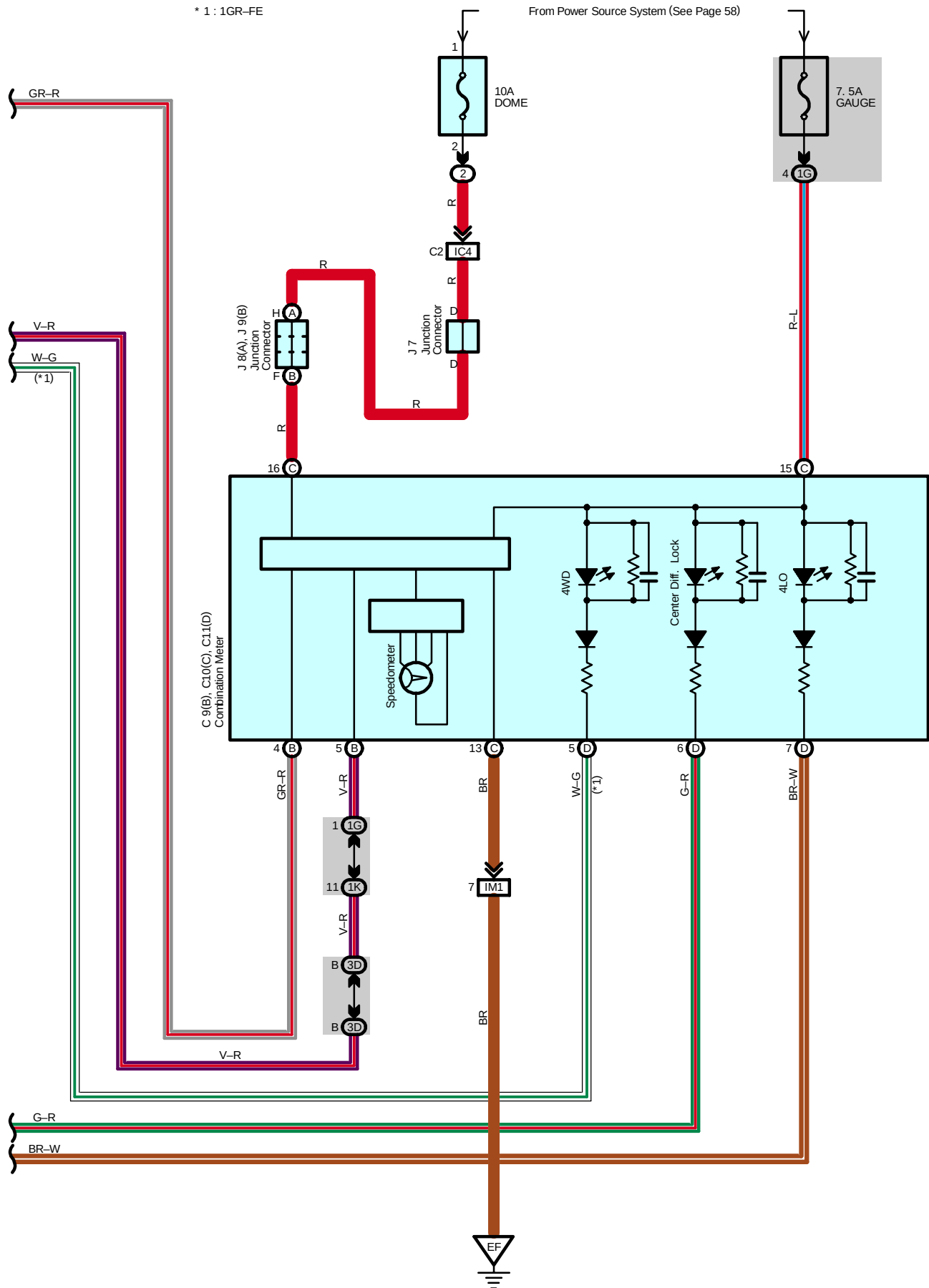
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B5	54	Frame Wire			



* 1 : 1GR-FE





System Outline

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

1. Shift Select Control

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

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

Switching diff. lock ON when in H4 position.

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

Shifting from H4 into L4 position

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

Switching diff. lock ON when in L4 position.

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

2. Function of Limit Switch

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

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

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

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

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

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

3. Shift Limit Control

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

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

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

4. ADD Actuator Control (1GR-FE)

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

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

Multi Mode 4WD

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A11	34 (1GR-FE)	J9	B 38	J31	A 38
C9	B 37	J10	A 38	J32	B 38
C10	C 37	J11	B 38	J33	A 38
C11	D 37	J14	A 38	J34	B 38
D4	37	J15	B 38	J37	38
E7	37	J20	A 38	P1	33 (2UZ-FE)
F9	A 37	J21	B 38		35 (1GR-FE)
F10	B 37	J24	38	S8	39
F11	37	J25	38	T3	33 (2UZ-FE)
J5	38	J28	38		35 (1GR-FE)
J7	38	J29	A 38		
J8	A 38	J30	B 38		

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	46 (1GR-FE)	Engine Wire and Differential Wire (Near the Front Differential)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
II1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)

: Ground Points

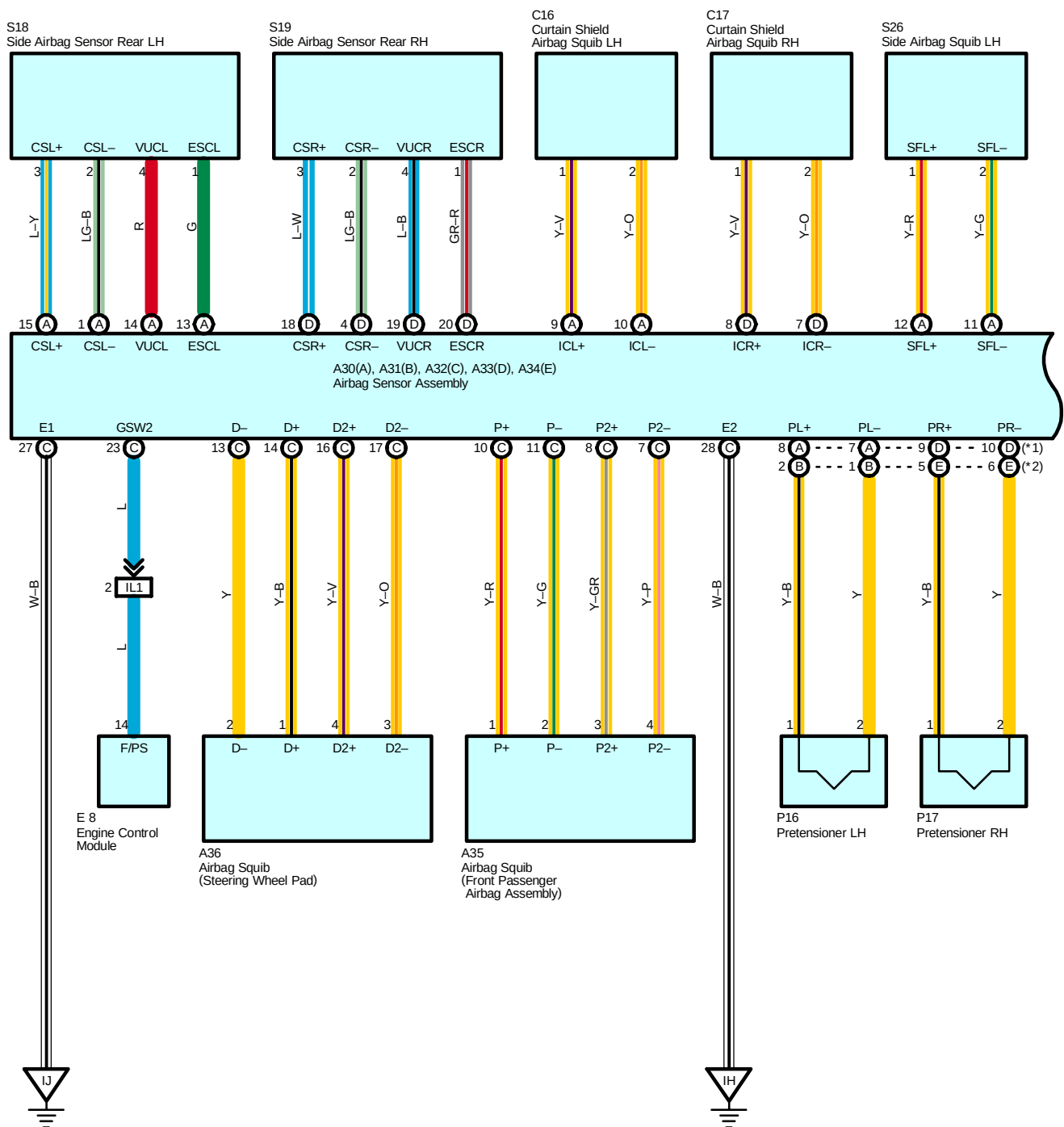
Code	See Page	Ground Points Location
EE	44 (2UZ-FE)	Rear Side of Right Bank Cylinder Block
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel

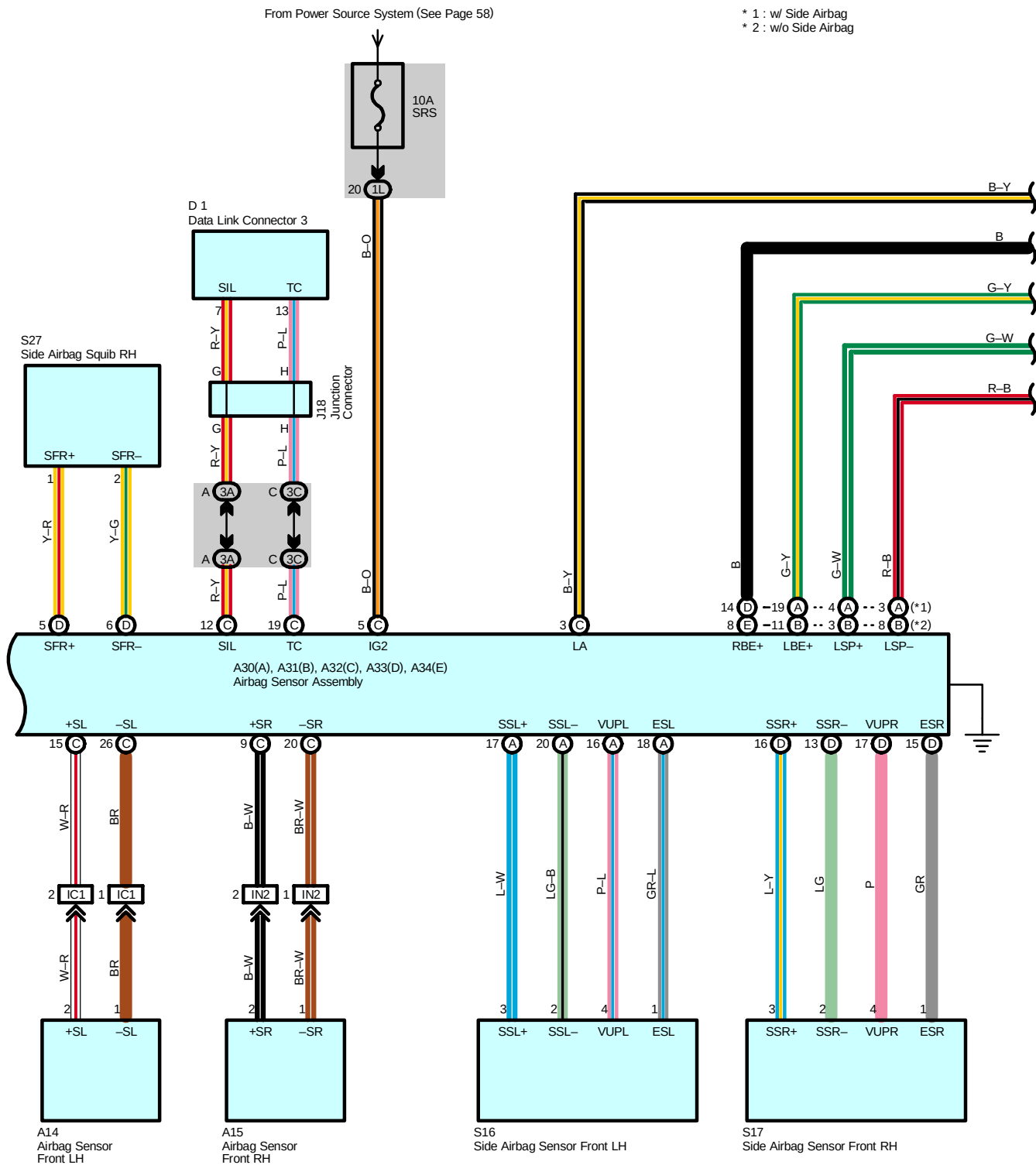
: Splice Points

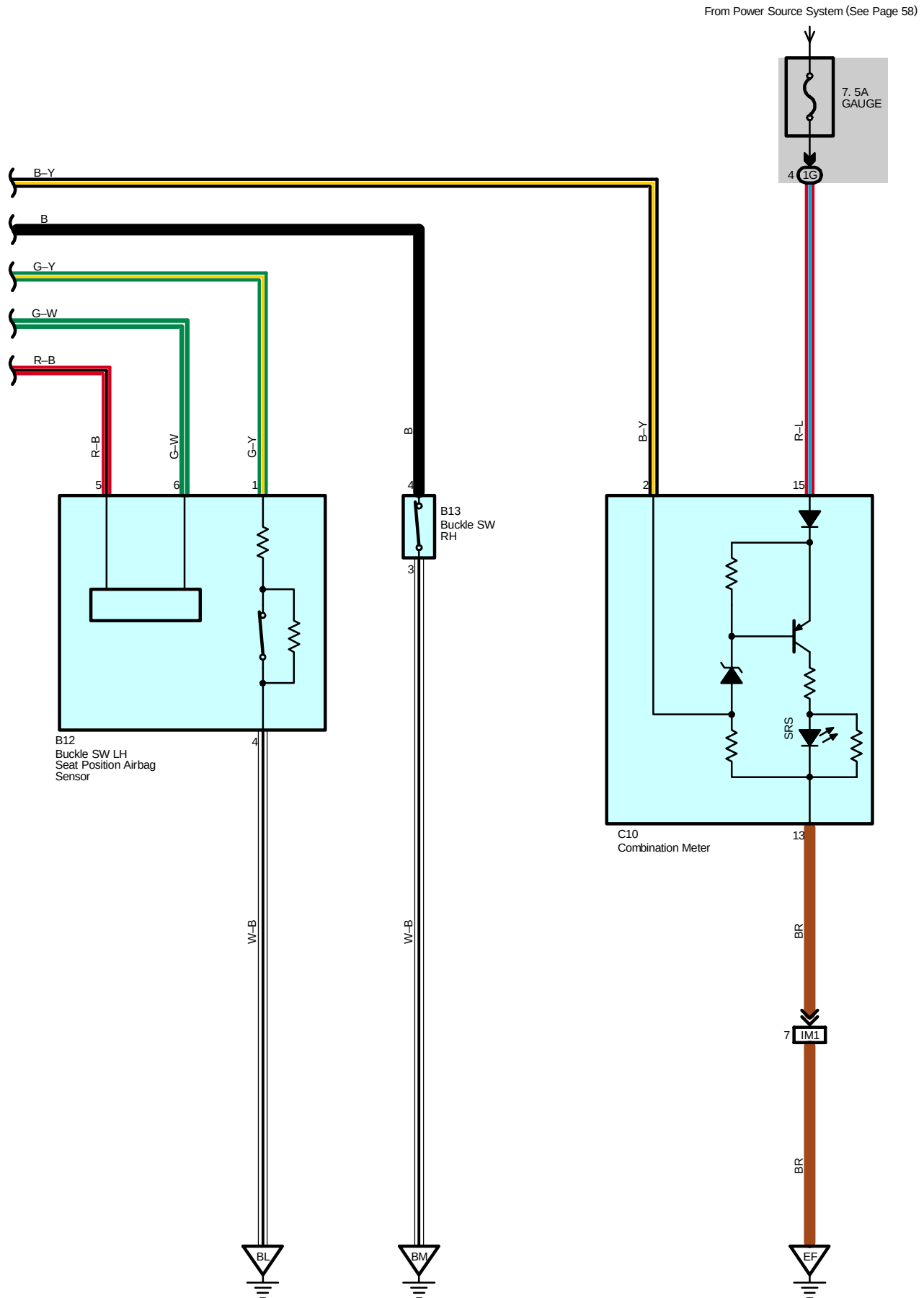
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	44 (2UZ-FE)	Engine Wire	E12	46 (1GR-FE)	Engine Wire

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

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







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 SRS fuse flows to TERMINAL (C) 5 of the airbag sensor assembly.

If an accident occurs while driving, when the frontal impact exceeds a set level, the current from the SRS fuse flows to TERMINALS (C) 14, (C) 16, (C) 10, (C) 8, (A) 8 (w/ side airbag) or (B) 2 (w/o side airbag) and (D) 9 (w/ side airbag) or (E) 5 (w/o side airbag) of the airbag sensor assembly to the airbag squibs and the pretensioners to TERMINALS (C) 13, (C) 17, (C) 11, (C) 7, (A) 7 (w/ side airbag) or (B) 1 (w/o side airbag) and (D) 10 (w/ side airbag) or (E) 6 (w/o side airbag) of the airbag sensor assembly to TERMINAL (C) 27, (C) 28 or BODY GROUND to GROUND, so that current flows to the airbag squibs and the pretensioners and causes them to operate.

When the side impact also exceeds a set level, the current from the SRS fuse flows to TERMINALS (A) 12, (D) 5, (A) 9 and (D) 8 of the airbag sensor assembly to the side airbag squibs and the curtain shield airbag squibs TERMINALS (A) 11, (D) 6, (A) 10 and (D) 7 of the airbag sensor assembly to TERMINAL (C) 27, (C) 28 or BODY GROUND to GROUND, causing side airbag squibs and curtain shield airbag squibs to operate.

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

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

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

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

The pretensioners make sure of the seat belt restrainability.

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A14	32 (2UZ-FE)	A35	36	J18	38
	34 (1GR-FE)	A36	36	P16	41
A15	32 (2UZ-FE)	B12	42	P17	41
	34 (1GR-FE)	B13	42	S16	41
A30	A	C10	37	S17	41
A31	B	C16	40	S18	41
A32	C	C17	40	S19	41
A33	D	D1	37	S26	42
A34	E	E8	37	S27	42

○ : Junction Block and Wire Harness Connector

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

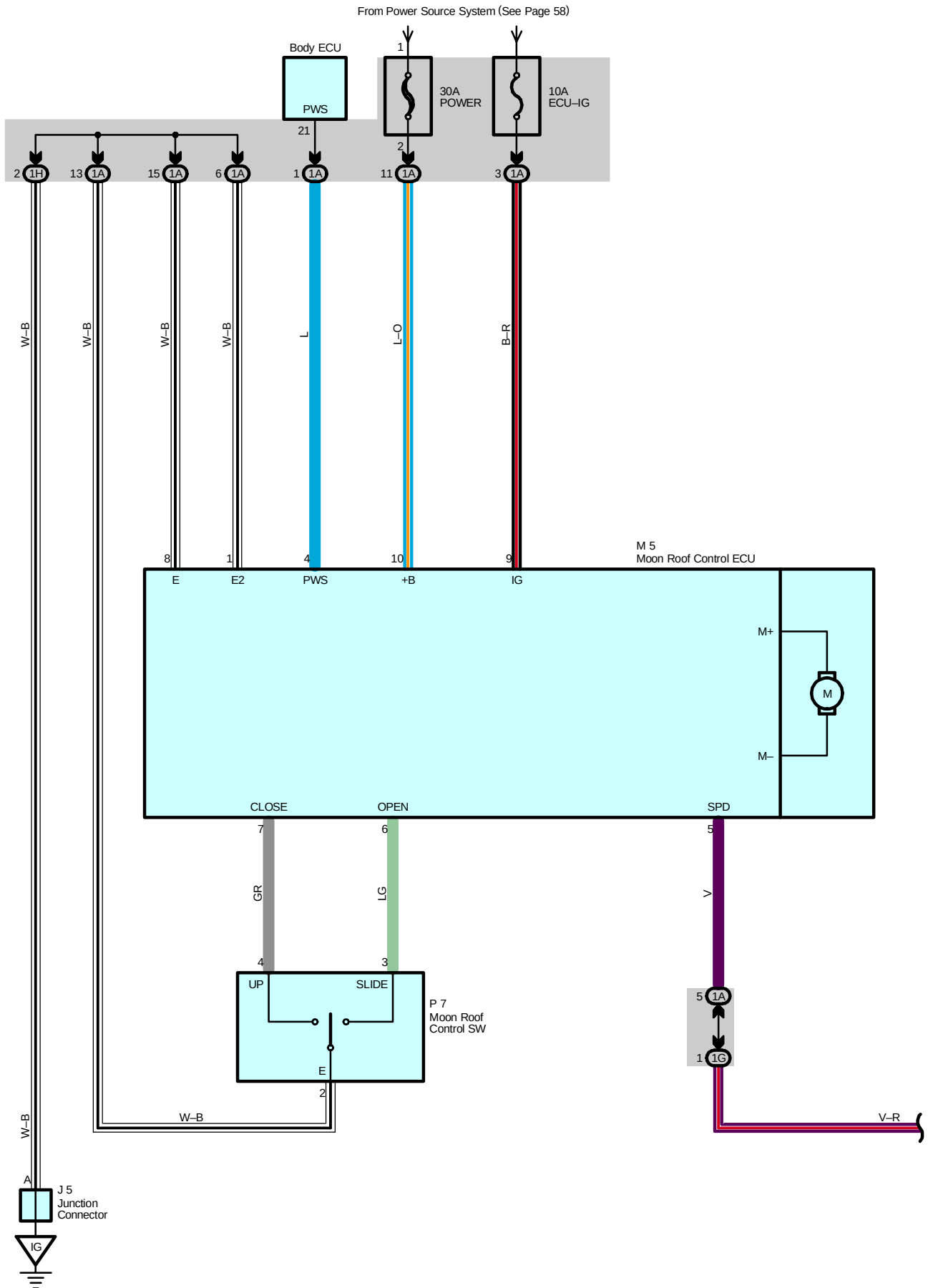
□ : Connector Joining Wire Harness and Wire Harness

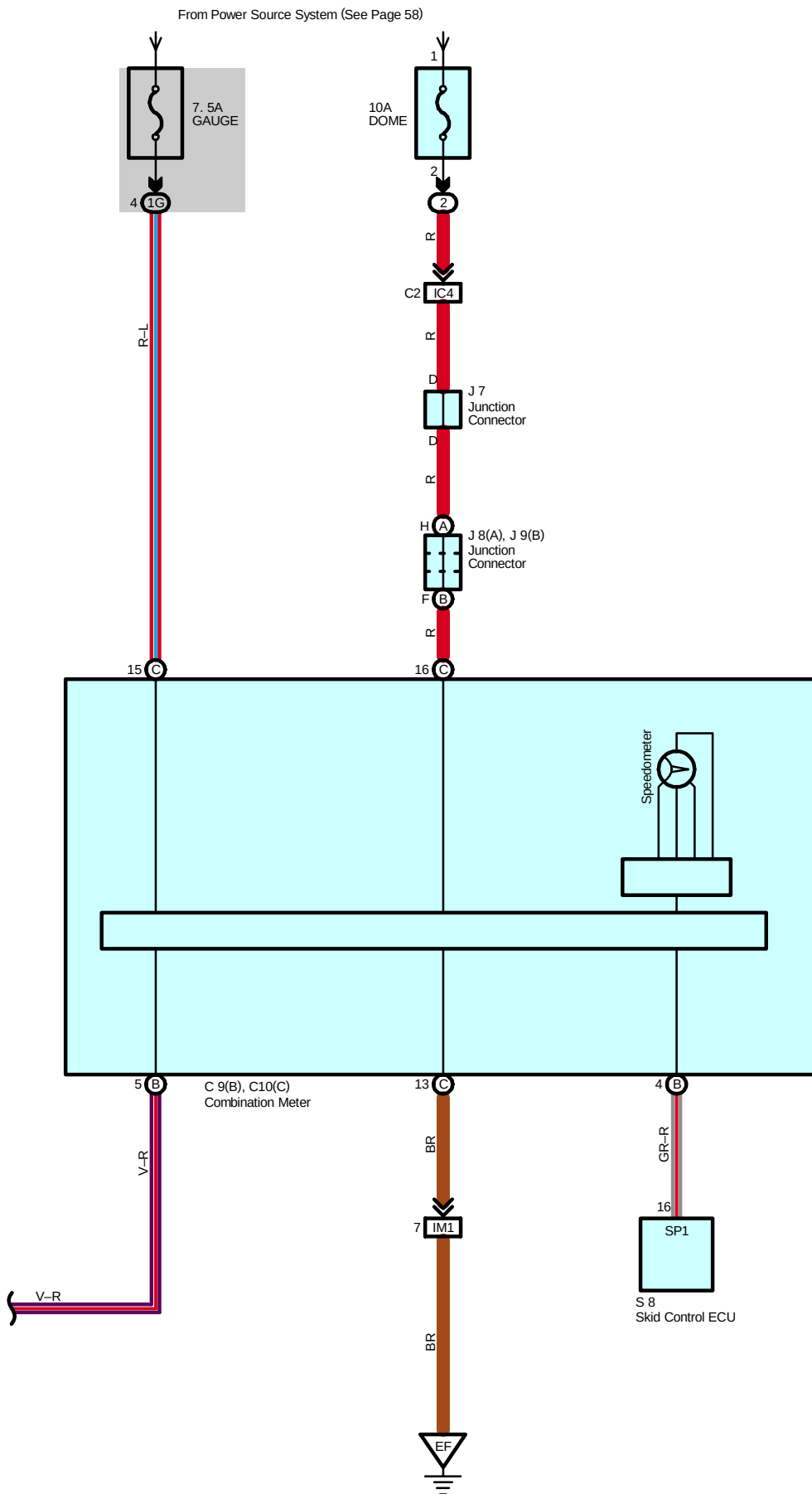
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IL1	50	Instrument Panel Wire and Instrument Panel Wire (Right Upper Side of the Glove Box)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IN2	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IH	48	Instrument Panel Brace LH
IJ	48	Instrument Panel Brace RH
BL	54	Floor Seat Crossmember LH
BM	54	Floor Seat Crossmember RH

Moon Roof





Moon Roof

System Outline

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

1. Moon Roof Open/Close Operation

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

2. Key-Off Operation

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

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

3. Overload Reverse Operation

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

4. Deflector Control Function

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

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

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

Service Hints

M5 Moon Roof Control ECU

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

10-Ground : Always approx. 12 volts

1, 8-Ground : Always continuity

○ : Parts Location

Code		See Page	Code		See Page	Code	See Page
C9	B	37	J7		38	M5	41
C10	C	37	J8	A	38	P7	41
J5		38	J9	B	38	S8	39

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

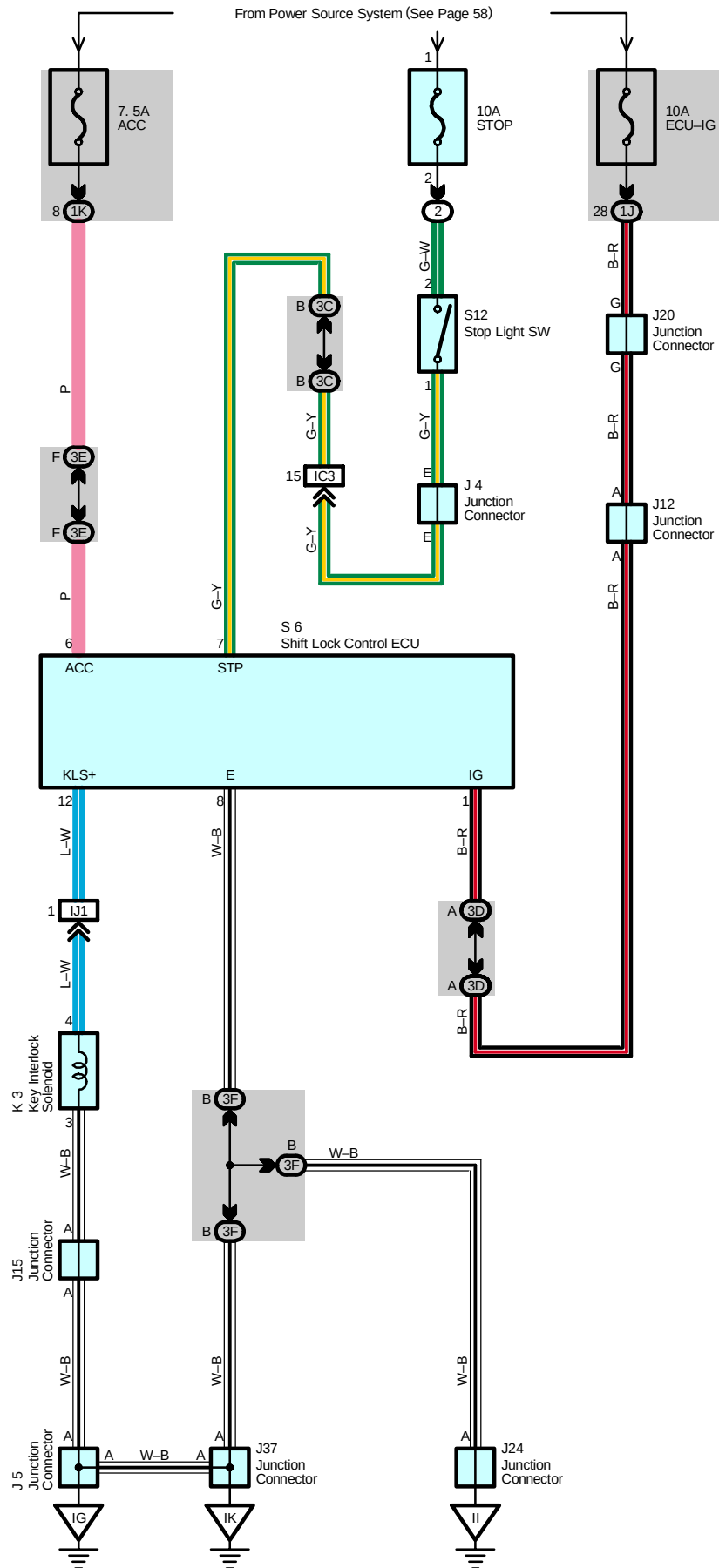
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)



: Ground Points

Code	See Page	Ground Points Location
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel

Shift Lock



System Outline

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

1. Shift Lock Mechanism

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

2. Key Interlock Mechanism

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

Service Hints

S6 Shift Lock Control ECU

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

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

8-Ground : Always continuity

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

: Parts Location

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

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IJ1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace RH)

: Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel



Service Hints

R24 Remote Control Mirror SW

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

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

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

7-Ground : Always continuity

: Parts Location

Code	See Page	Code	See Page	Code	See Page
E4	37	J38	40	R24	41
J5	38	M3	41		
J6	38	M4	41		

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

: Connector Joining Wire Harness and Wire Harness

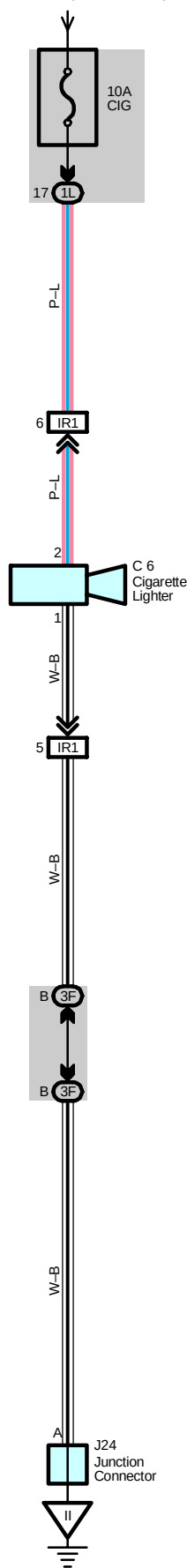
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IM2	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IP1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel

Cigarette Lighter

From Power Source System (See Page 58)



Service Hints

C6 Cigarette Lighter

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
C6	37	J24	38		

: Junction Block and Wire Harness Connector

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

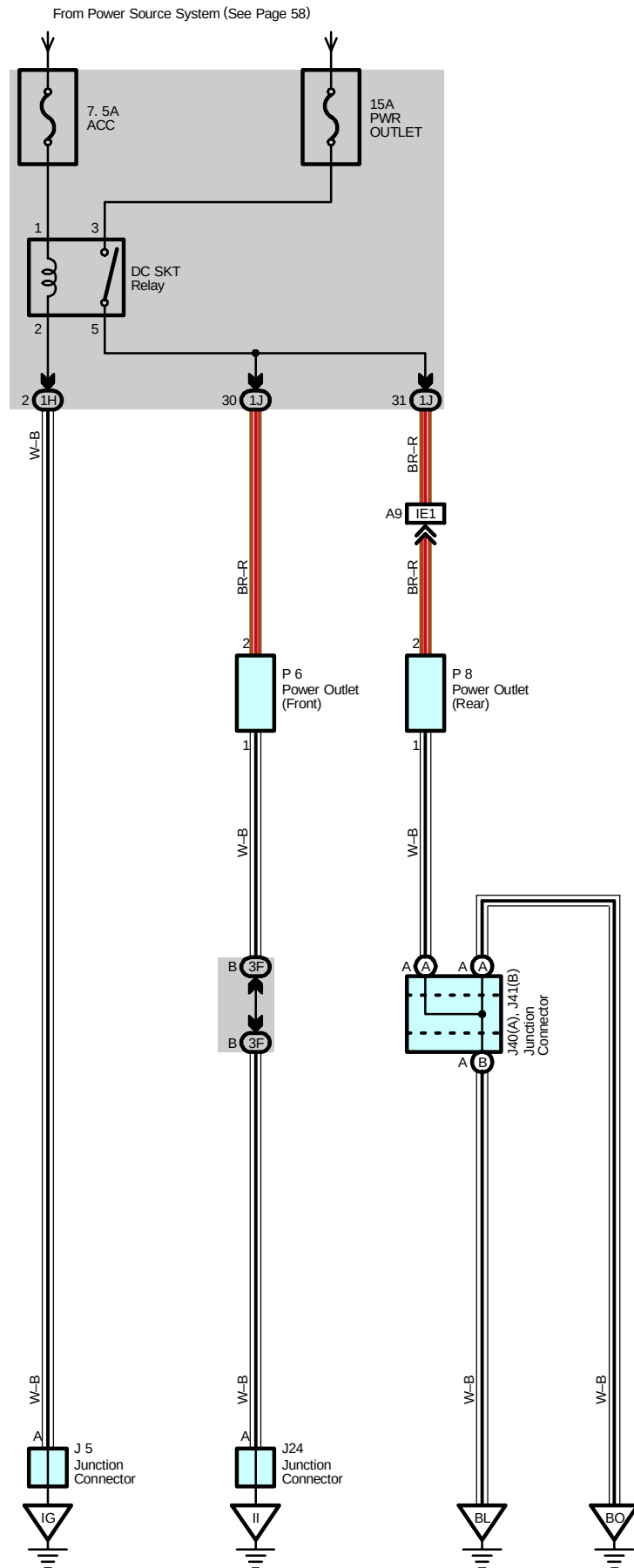
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IR1	52	Instrument Panel Wire and Cigarette Wire (Rear Console)

: Ground Points

Code	See Page	Ground Points Location
II	48	Instrument Panel Brace RH

Power Outlet (12V)



Service Hints

DC SKT Relay

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

: Parts Location

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

: Junction Block and Wire Harness Connector

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

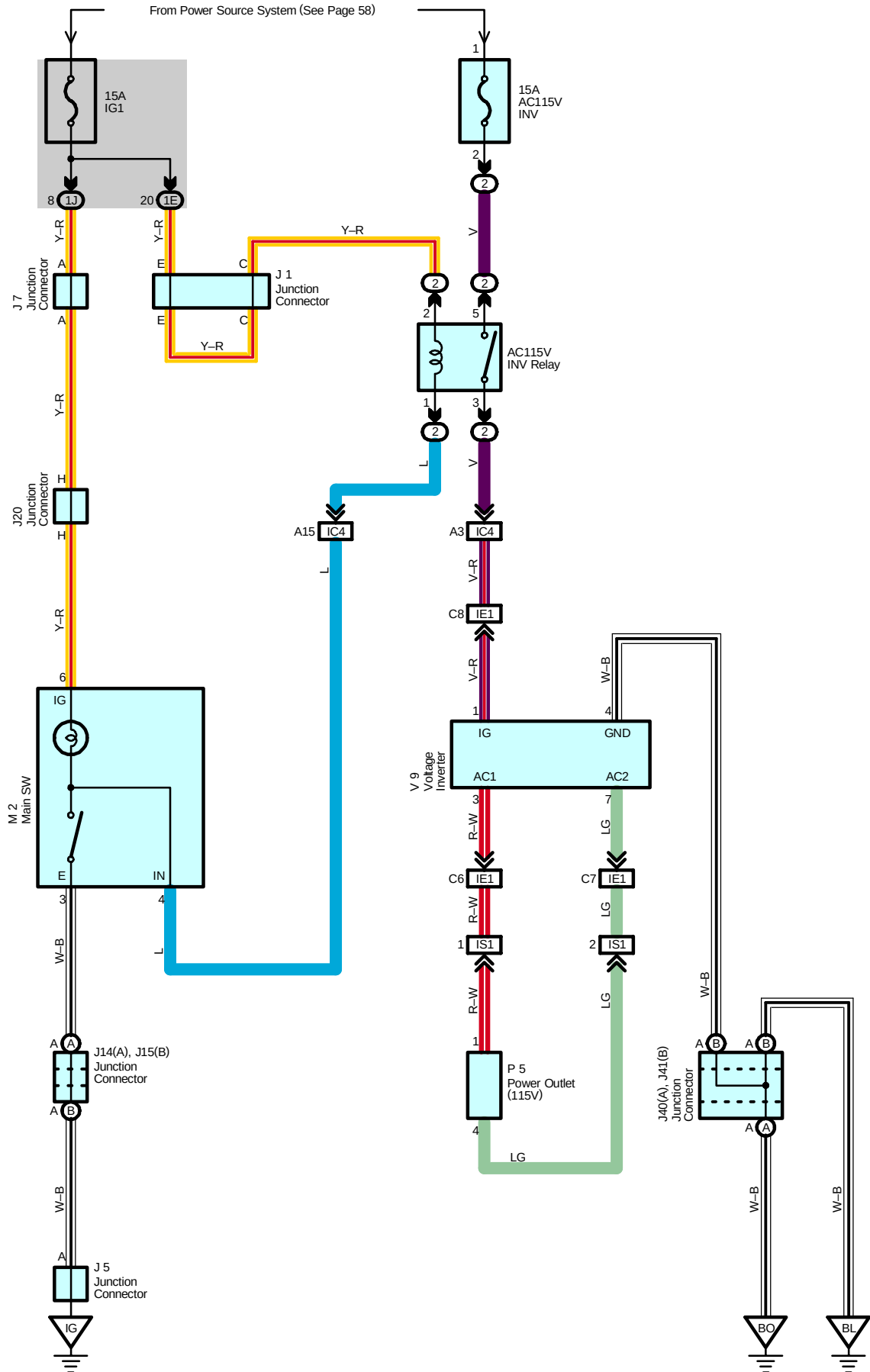
: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)

: Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

Power Outlet (115V)



Service Hints

AC115V INV Relay

3-5 : Closed with ignition SW at ON position and main SW at on

○ : Parts Location

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

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

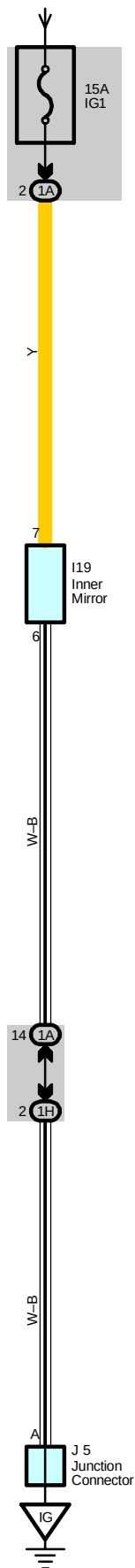
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IS1	52	Instrument Panel Wire and Console Box Wire (Rear Console)

▽ : Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

Automatic Glare-Resistant EC Mirror with Compass

From Power Source System (See Page 58)



Service Hints

I19 Inner Mirror

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

6-Ground : Always continuity

: Parts Location

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

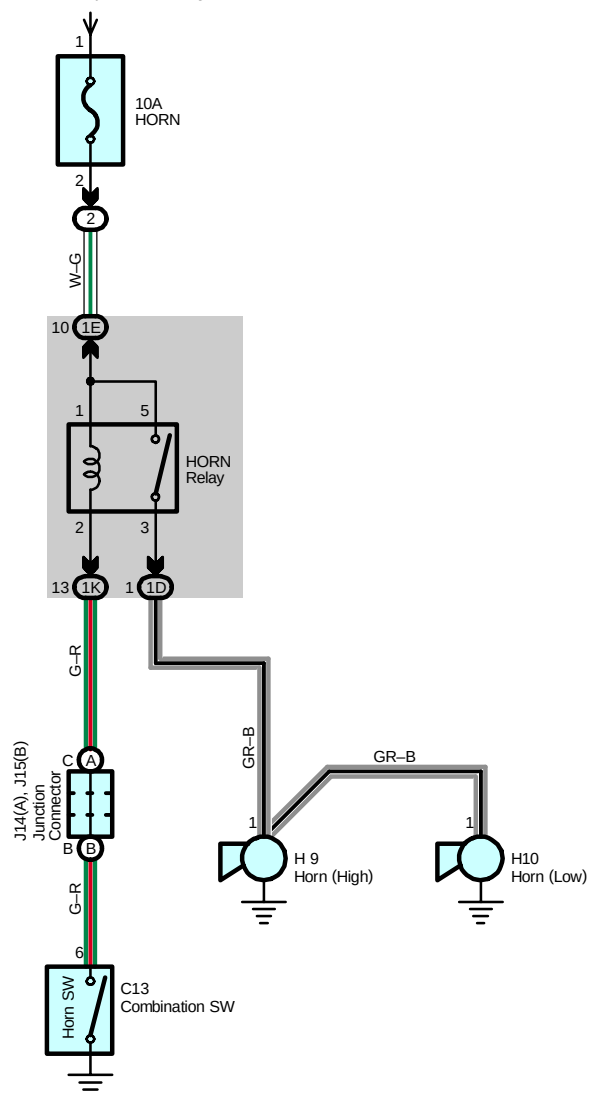
: Junction Block and Wire Harness Connector

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

: Ground Points

Code	See Page	Ground Points Location
IG	48	Left Kick Panel

From Power Source System (See Page 58)



Service Hints

HORN Relay

5-3 : Closed with the horn SW on

○ : Parts Location

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

○ : Relay Blocks

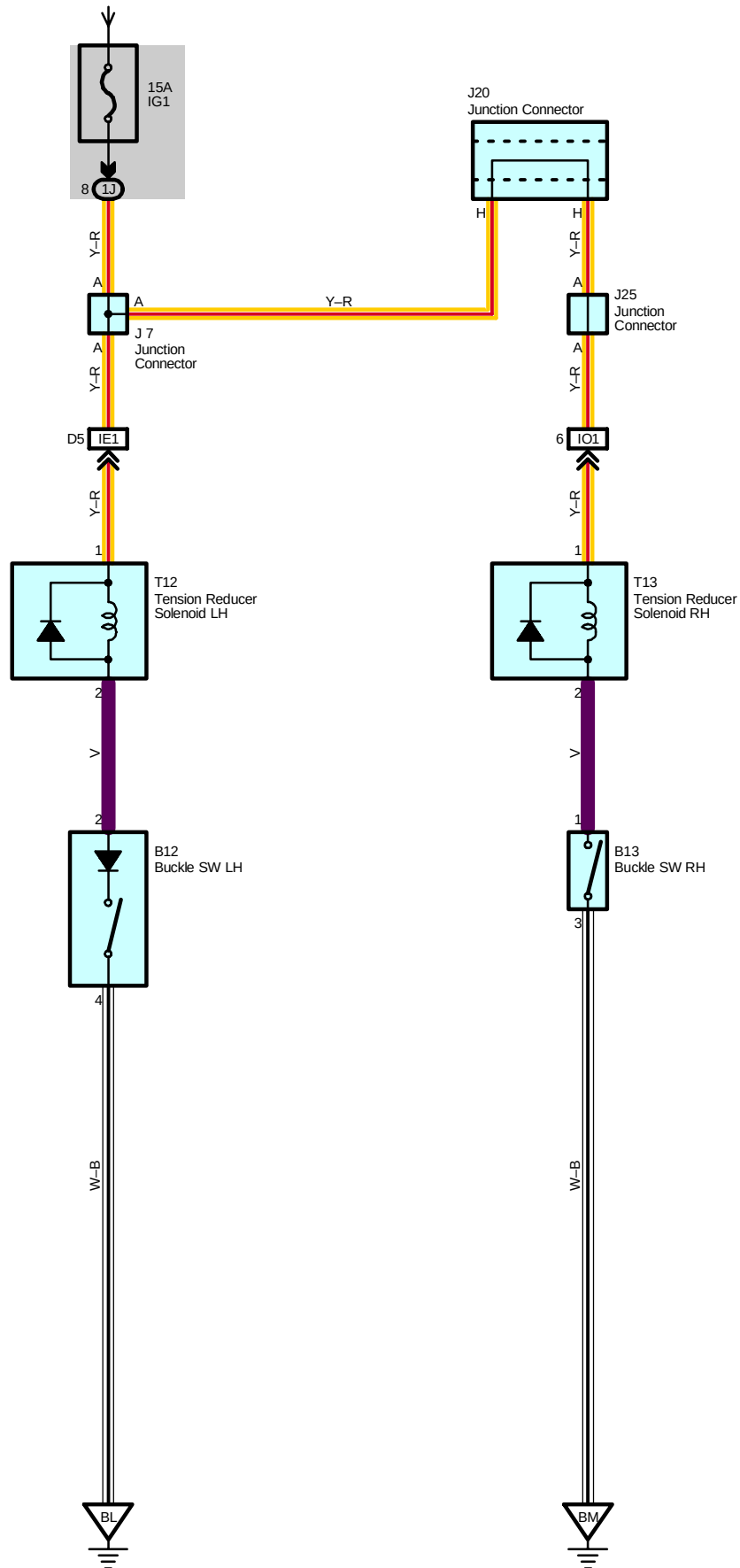
Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

○ : Junction Block and Wire Harness Connector

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

Electric Tension Reducer

From Power Source System (See Page 58)



Service Hints

B12 Buckle SW LH

2-4 : Closed with the driver seat belt in use

B13 Buckle SW RH

1-3 : Closed with the front passenger seat Belt in use

T12, T13 Tension Reducer Solenoid LH, RH

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

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
B12	42	J20	38	T13	41
B13	42	J25	38		
J7	38	T12	41		

□ : Junction Block and Wire Harness Connector

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

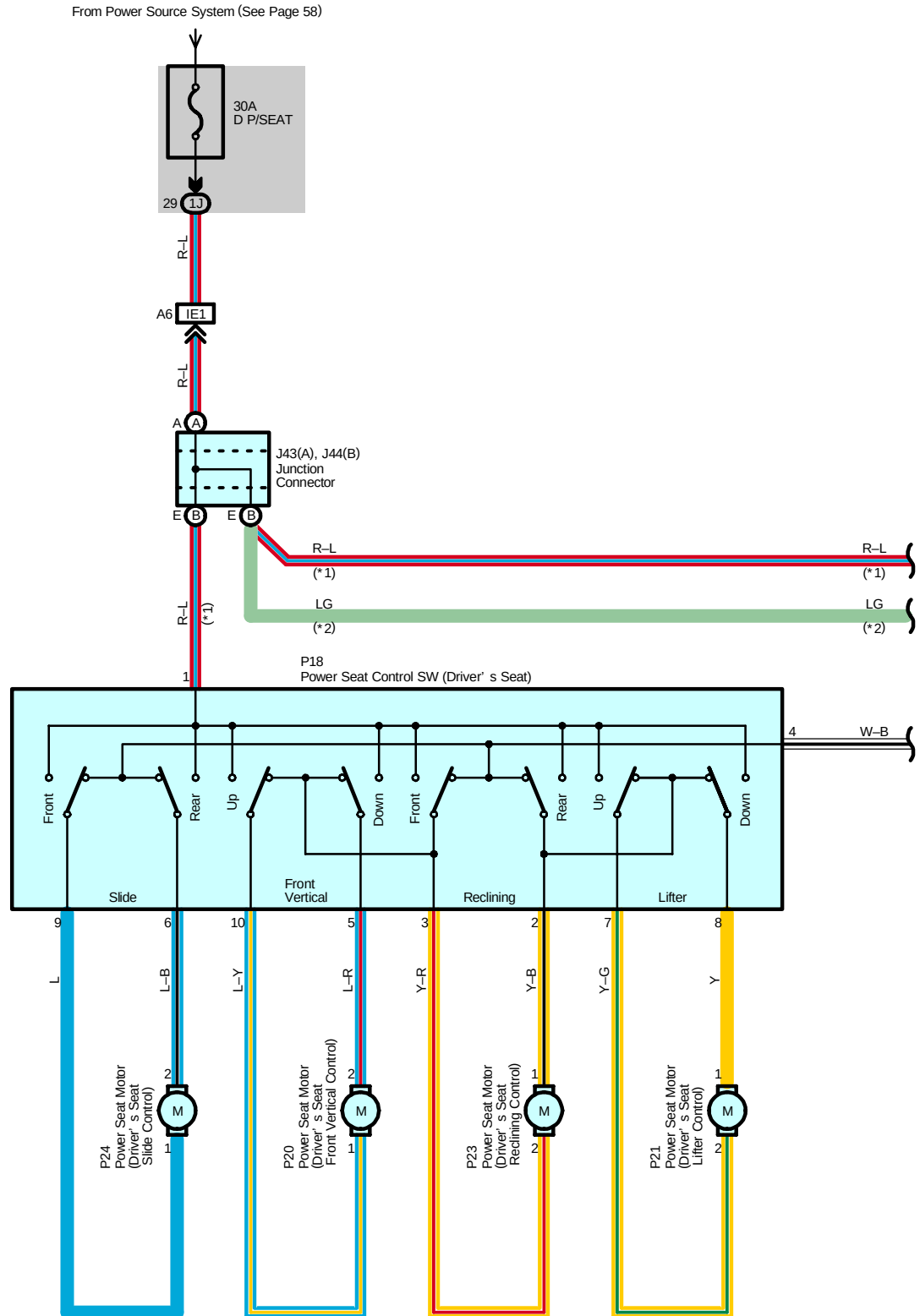
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
BL	54	Floor Seat Crossmember LH
BM	54	Floor Seat Crossmember RH

Power Seat



From Power Source System (See Page 58)



Power Seat

Service Hints

L3 Lumbar Support Control SW (Driver's Seat)

- 3-1 : Closed with the driver's seat at lumbar support release operation
- 3-4 : Closed with the driver's seat at lumbar support hold operation
- 2, 5-Ground : Always continuity

P18 Power Seat Control SW (Driver's Seat)

- 1-9 : Closed with the driver's seat at front slide operation
- 1-6 : Closed with the driver's seat at rear slide operation
- 1-3 : Closed with the driver's seat at front reclining operation
- 1-2 : Closed with the driver's seat at rear reclining operation
- 1-10 : Closed with the driver's seat at front vertical up operation
- 1-5 : Closed with the driver's seat at front vertical down operation
- 1-7 : Closed with the driver's seat at lifter up operation
- 1-8 : Closed with the driver's seat at lifter down operation
- 4-Ground : Always continuity

P19 Power Seat Control SW (Front Passenger's Seat)

- 1-9 : Closed with the front passenger's seat at front slide operation
- 1-6 : Closed with the front passenger's seat at rear slide operation
- 1-3 : Closed with the front passenger's seat at front reclining operation
- 1-2 : Closed with the front passenger's seat at rear reclining operation
- 4-Ground : Always continuity

○ : Parts Location

Code		See Page	Code	See Page	Code	See Page
J43	A	42	P18	42	P23	42
J44	B	42	P19	42	P24	42
J45	A	42	P20	42	P25	42
J46	B	42	P21	42	P26	42
L3		42	P22	42		

○ : Junction Block and Wire Harness Connector

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

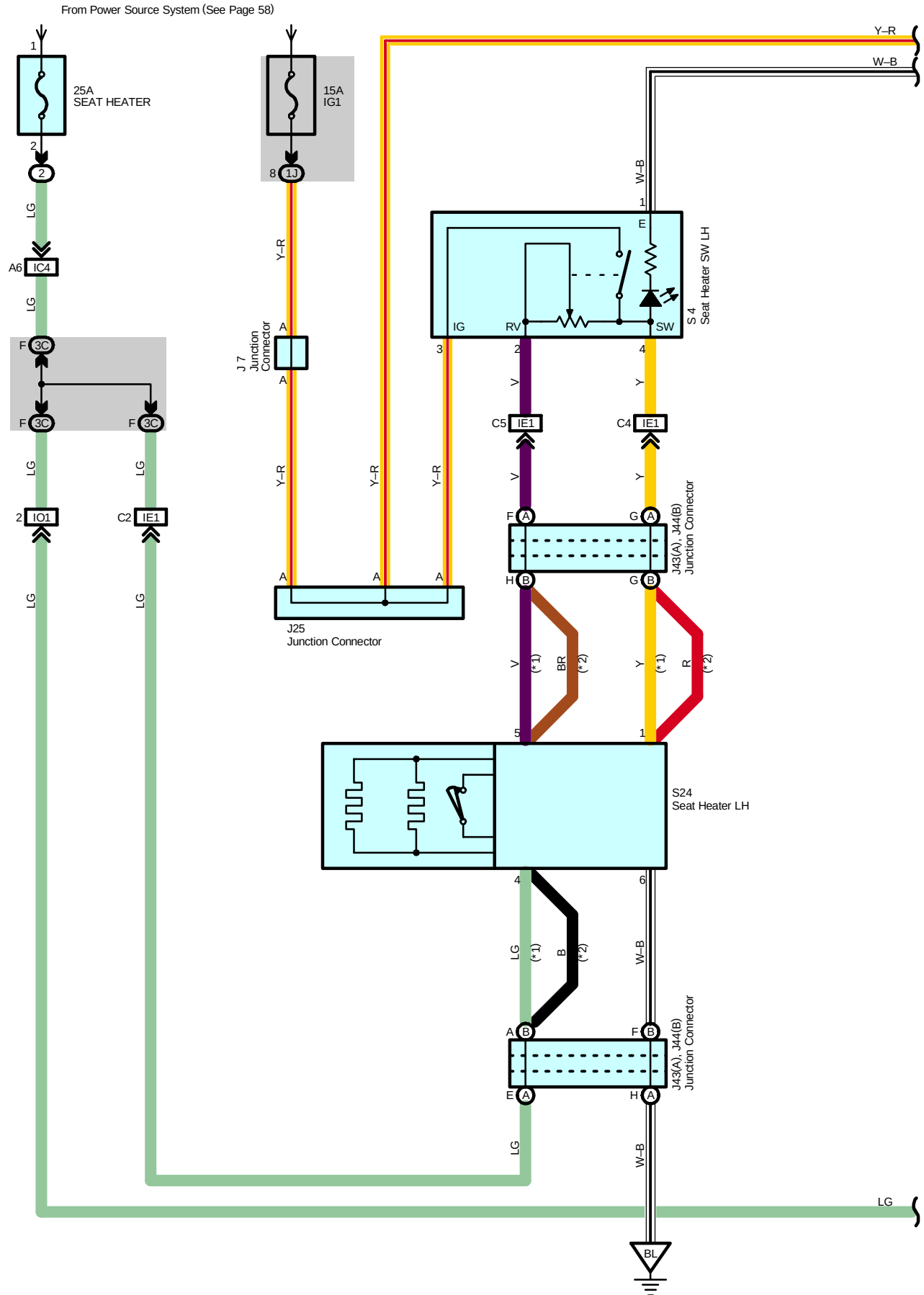
□ : Connector Joining Wire Harness and Wire Harness

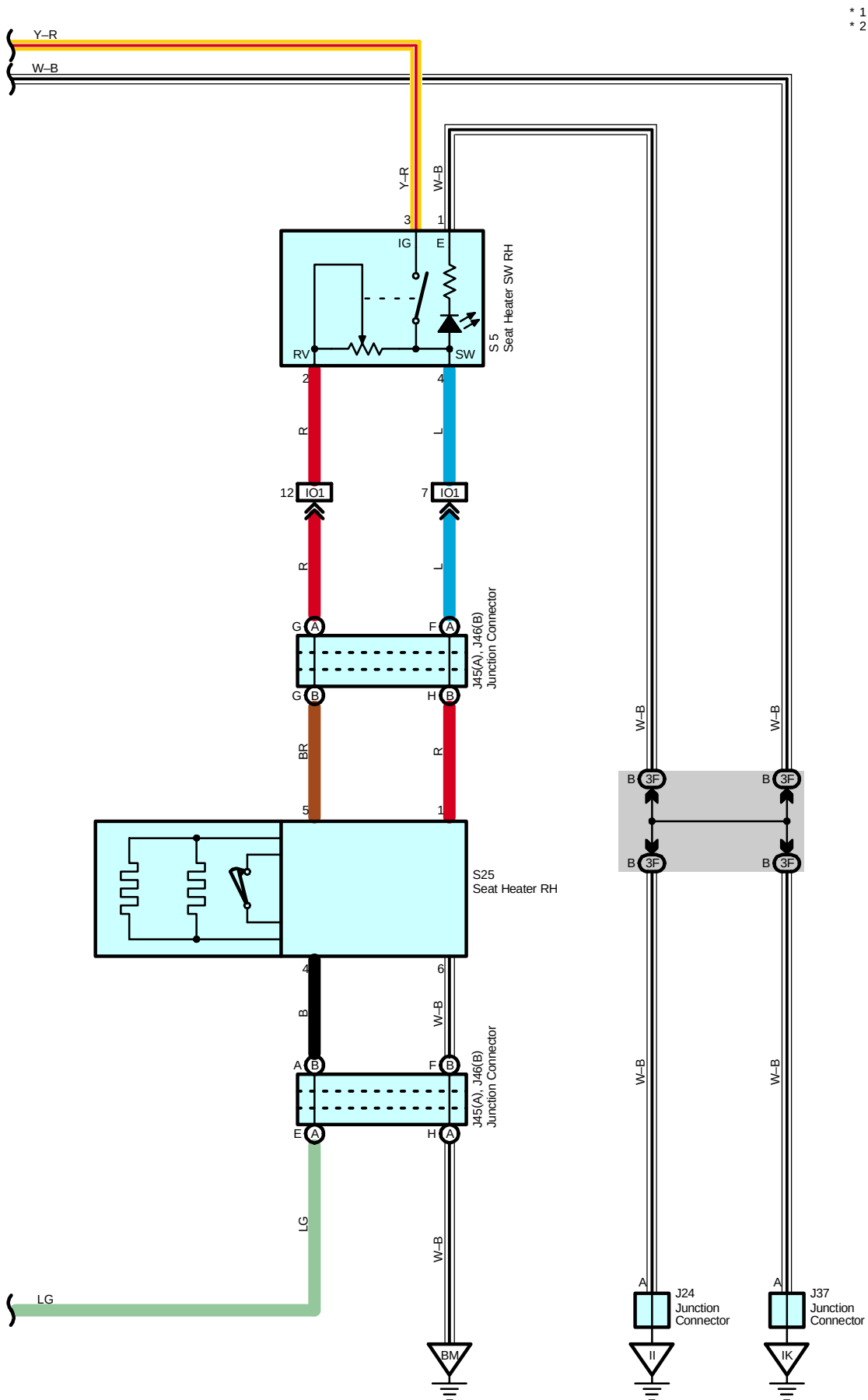
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)

▽ : Ground Points

Code	See Page	Ground Points Location
BL	54	Floor Seat Crossmember LH
BM	54	Floor Seat Crossmember RH

Seat Heater





* 1 : Limited
* 2 : SR5 Grade

Seat Heater

Service Hints

S4, S5 Seat Heater SW LH, RH

3—Ground : Approx. 12 volts with the ignition SW at ON position

1—Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
J7	38	J43	A 42	S4	39
J24	38	J44	B 42	S5	39
J25	38	J45	A 42	S24	42
J37	38	J46	B 42	S25	42

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

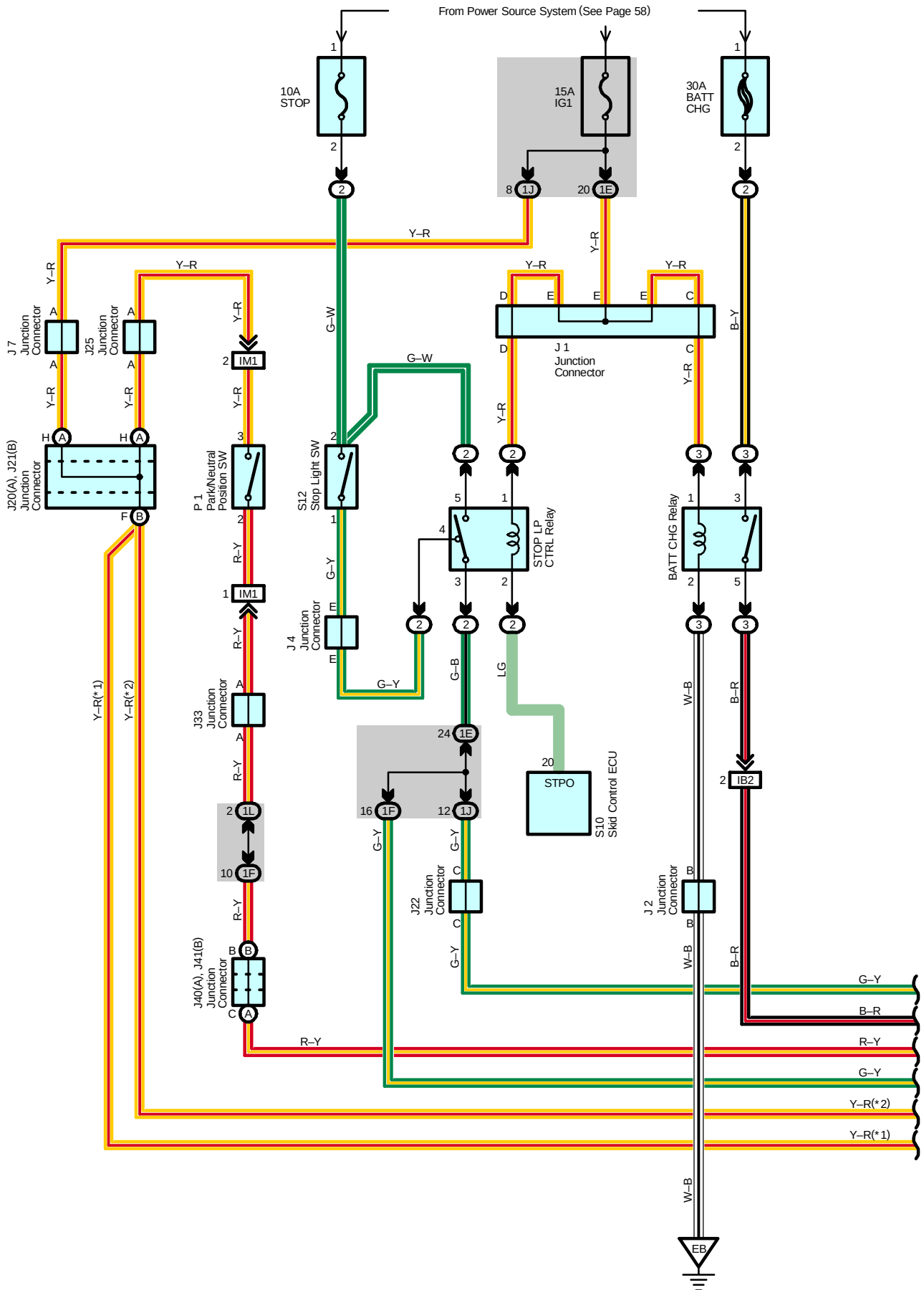
Code	See Page	Junction Block and Wire Harness (Connector Location)
1J	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
3C	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)
3F		

□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)

▽ : Ground Points

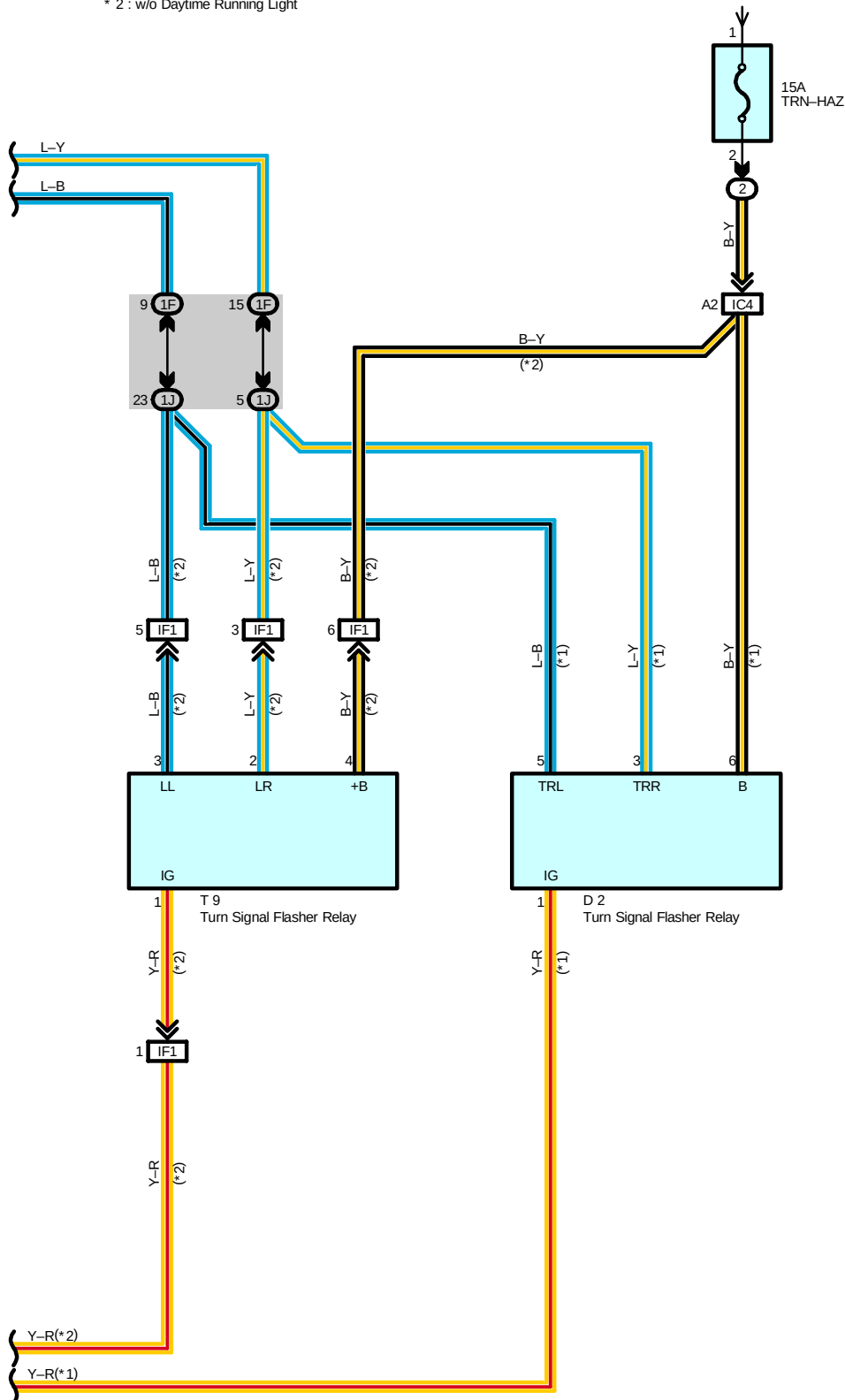
Code	See Page	Ground Points Location
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BM	54	Floor Seat Crossmember RH



Trailer Towing

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

From Power Source System (See Page 58)



Service Hints

T14 Towing Converter Relay

- 1-Ground : Always approx. 12 volts
- 6-Ground : Always continuity

T15 Trailer Socket

- 1-Ground : Approx. 12 volts with light control SW at TAIL or HEAD position
- 2-Ground : Approx. 12 volts with ignition SW at ON position
- 4-Ground : Approx. 12 volts with ignition SW at ON position and shift lever in R position
- 6-Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
D2	37	J15 B	38	J41 B	40
J1	33 (2UZ-FE)	J16	38	P1	33 (2UZ-FE)
	35 (1GR-FE)	J20 A	38		35 (1GR-FE)
J2	33 (2UZ-FE)	J21 B	38	S10	39
	35 (1GR-FE)	J22	38	S12	39
J4	38	J25	38	T6	39
J5	38	J33	38	T9	39
J7	38	J39	40	T14	41
J14 A	38	J40 A	40	T15	41

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

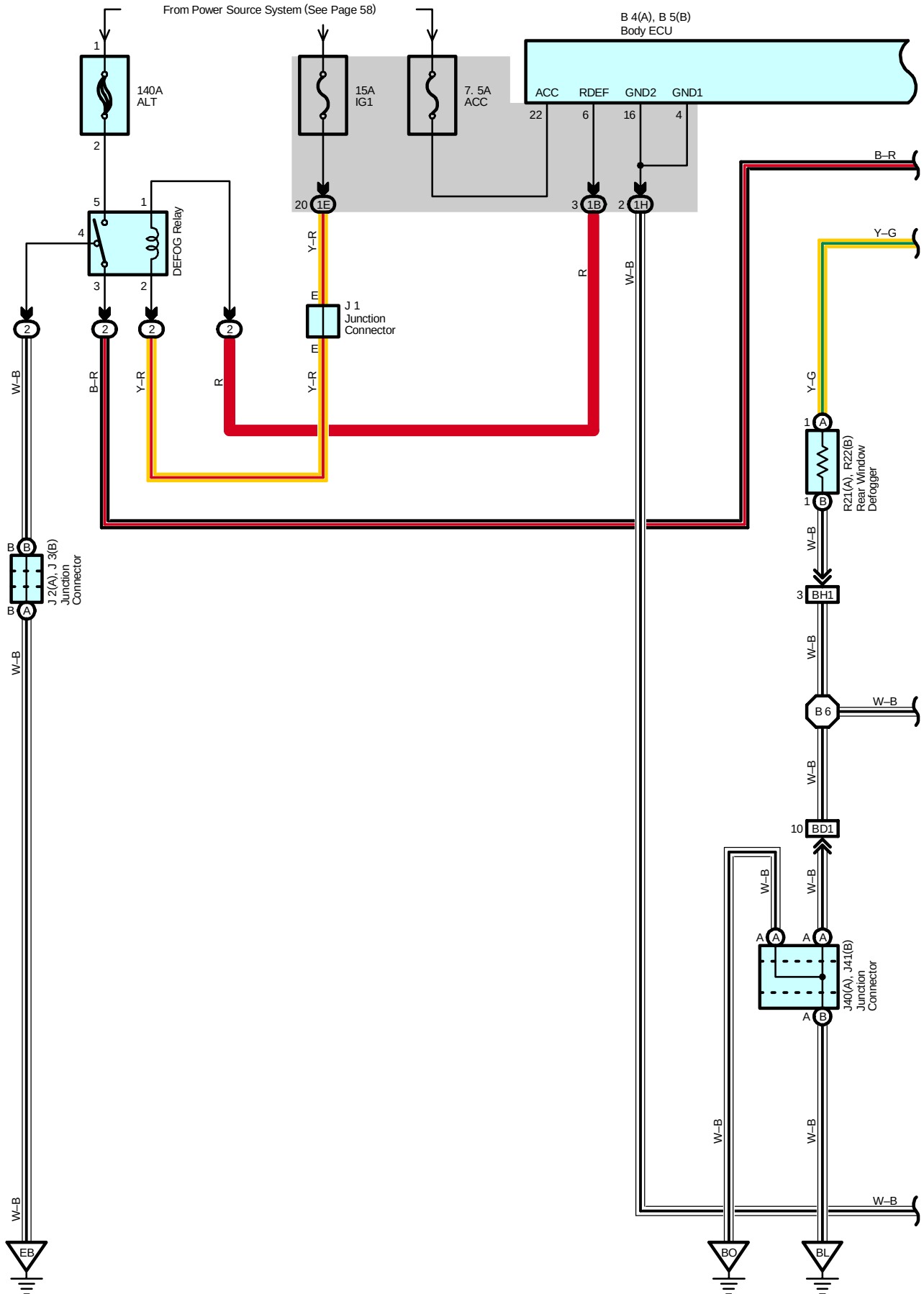
□ : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB2	48	Floor No.2 Wire and Engine Room Main Wire (Left Kick Panel)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IF1	50	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
BF1	54	Frame No.3 Wire and Floor No.2 Wire (Rear Side of Side Frame LH)
BG1	54	Floor No.2 Wire and Frame No.3 Wire (Rear Side of Side Frame LH)

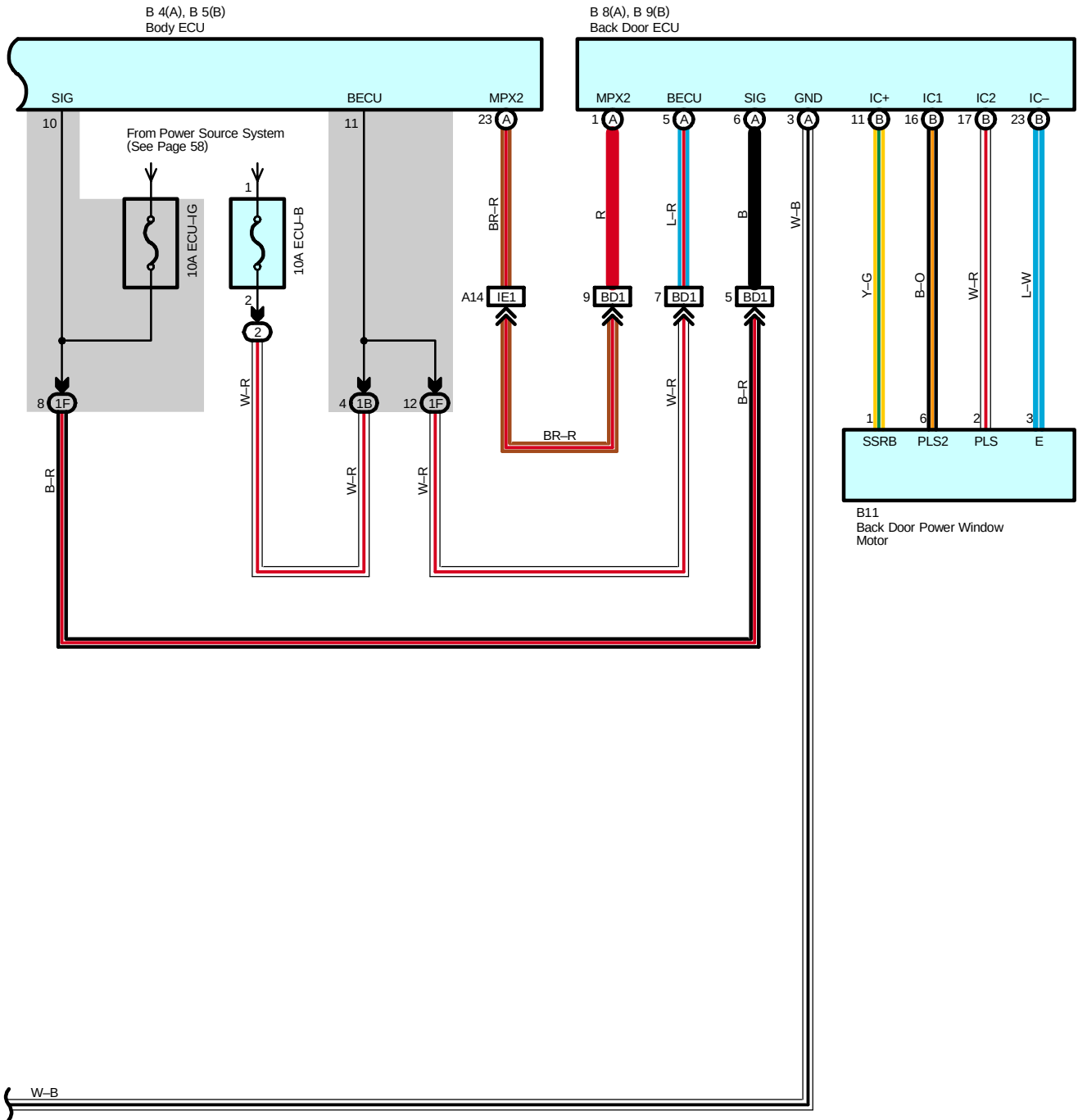
▽ : Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
IG	48	Left Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

Rear Window Defogger and Mirror Heater



Rear Window Defogger and Mirror Heater



System Outline

- * Start control

Turning the rear window defogger SW ON, with the ignition SW ON and the back door window fully closed, initiates operation of the rear window defogger and illuminates the indicator lamp for 15 minutes.

- * Stop control

When any one of the following conditions exists, rear window defogger operation comes to a stop and the indicator lamp goes out.

- * The ignition SW is turned from the ON position to either the ACC or OFF position.

- * The rear window defogger SW is pressed ON again when rear window defogger operation is already under way.

- * The back door window is open.

Service Hints

DEFOG Relay

5-3 : Closed with the ignition SW at ON position and rear window defogger SW on

D3 Defogger SW

4-7 : Continuity with the ignition SW at ON position and rear window defogger SW on

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
B4	A	36	J2	A	35 (1GR–FE)	J38		40
B5	B	36	J3	B	33 (2UZ–FE)	J40	A	40
B8	A	40			35 (1GR–FE)	J41	B	40
B9	B	40	J5		38	M3		41
B11		40	J6		38	M4		41
D3		37	J22	A	38	R21	A	41
J1		33 (2UZ–FE)	J23	B	38	R22	B	41
		35 (1GR–FE)	J24		38			
J2	A	33 (2UZ–FE)	J37		38			

 : Relay Blocks

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

 : Junction Block and Wire Harness Connector

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

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IA2		
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IP1	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IP2		
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BH1	54	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)

Rear Window Defogger and Mirror Heater



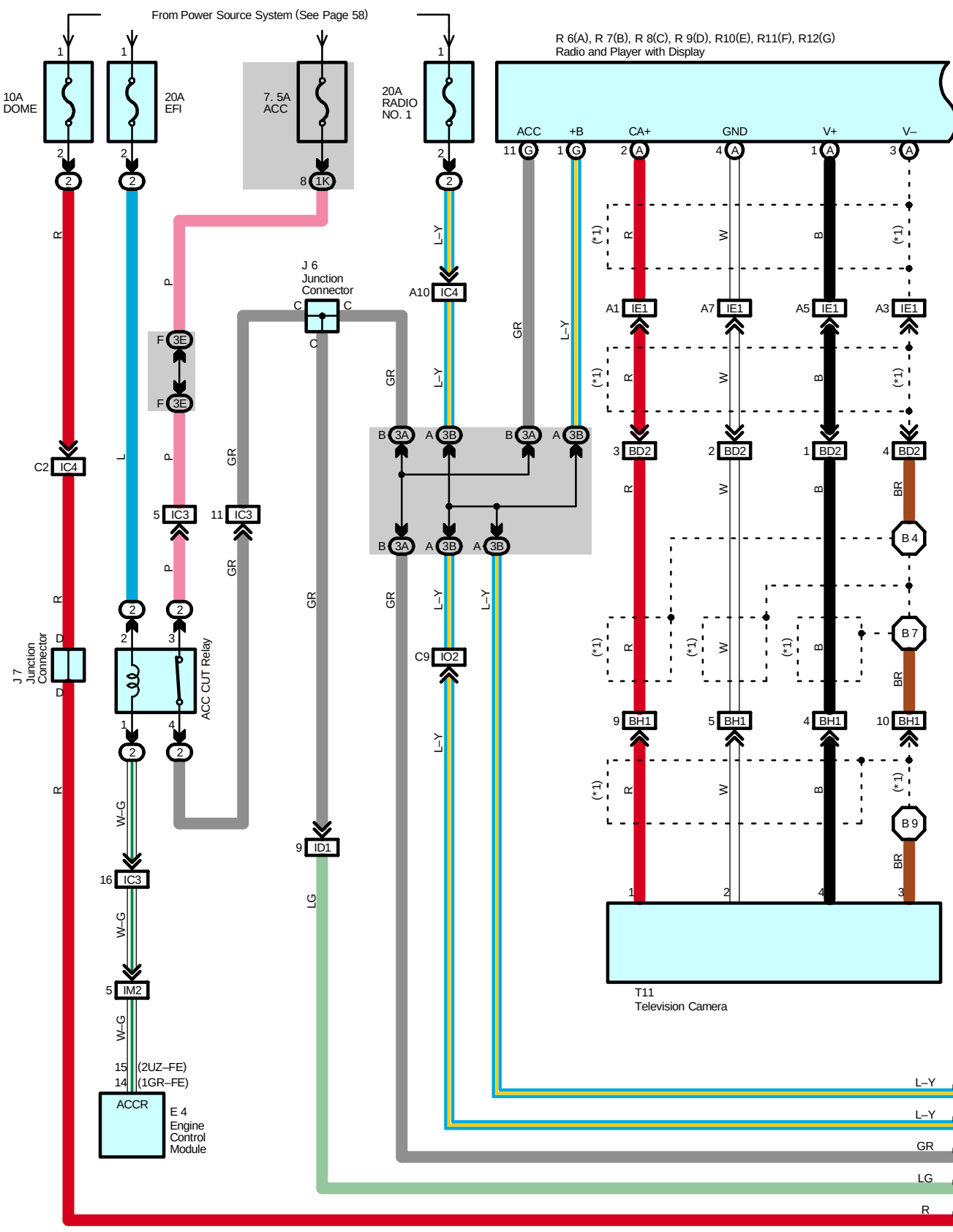
: Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
IG	48	Left Kick Panel
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BO	54	Rear Pillar LH

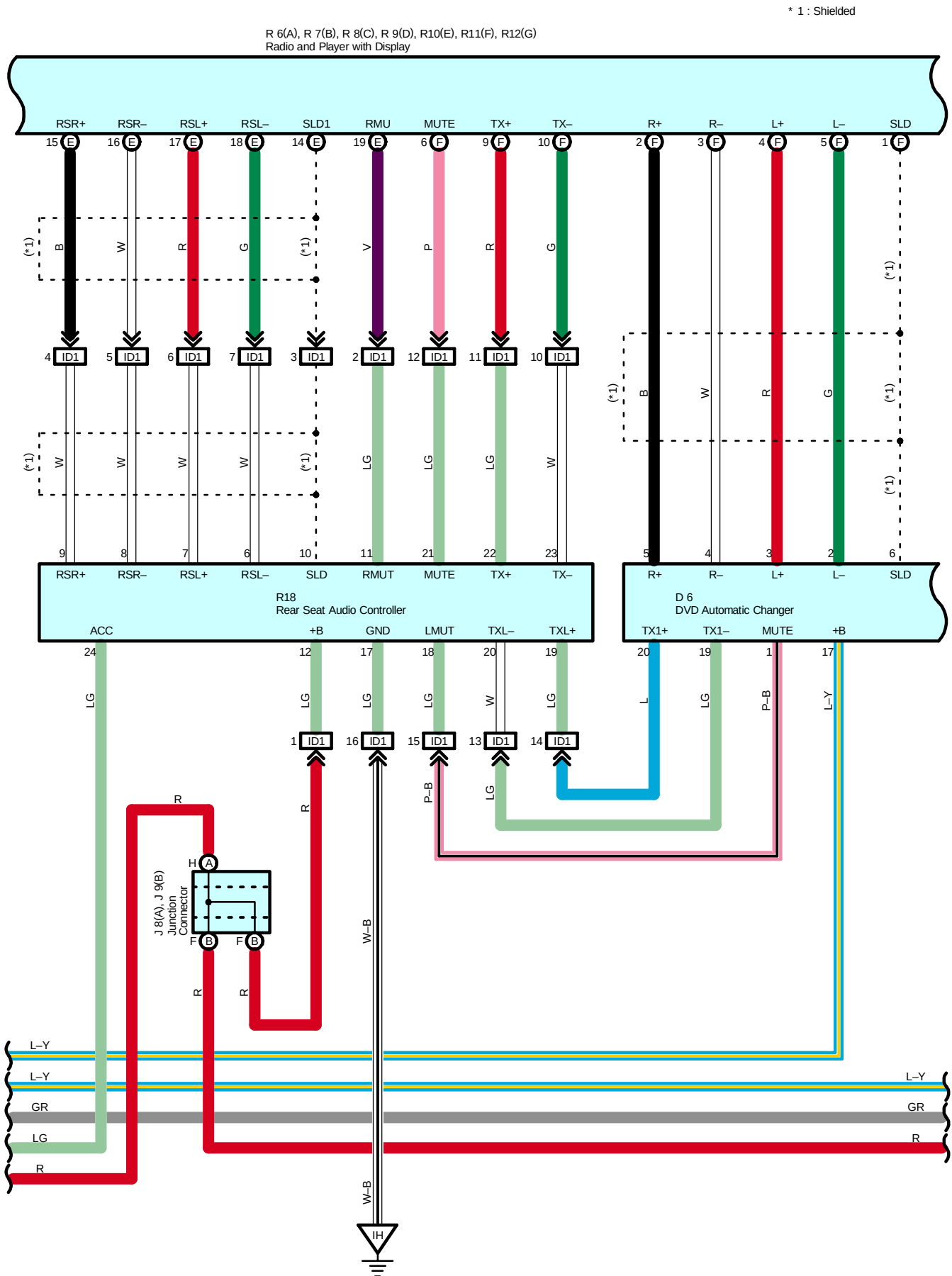


: Splice Points

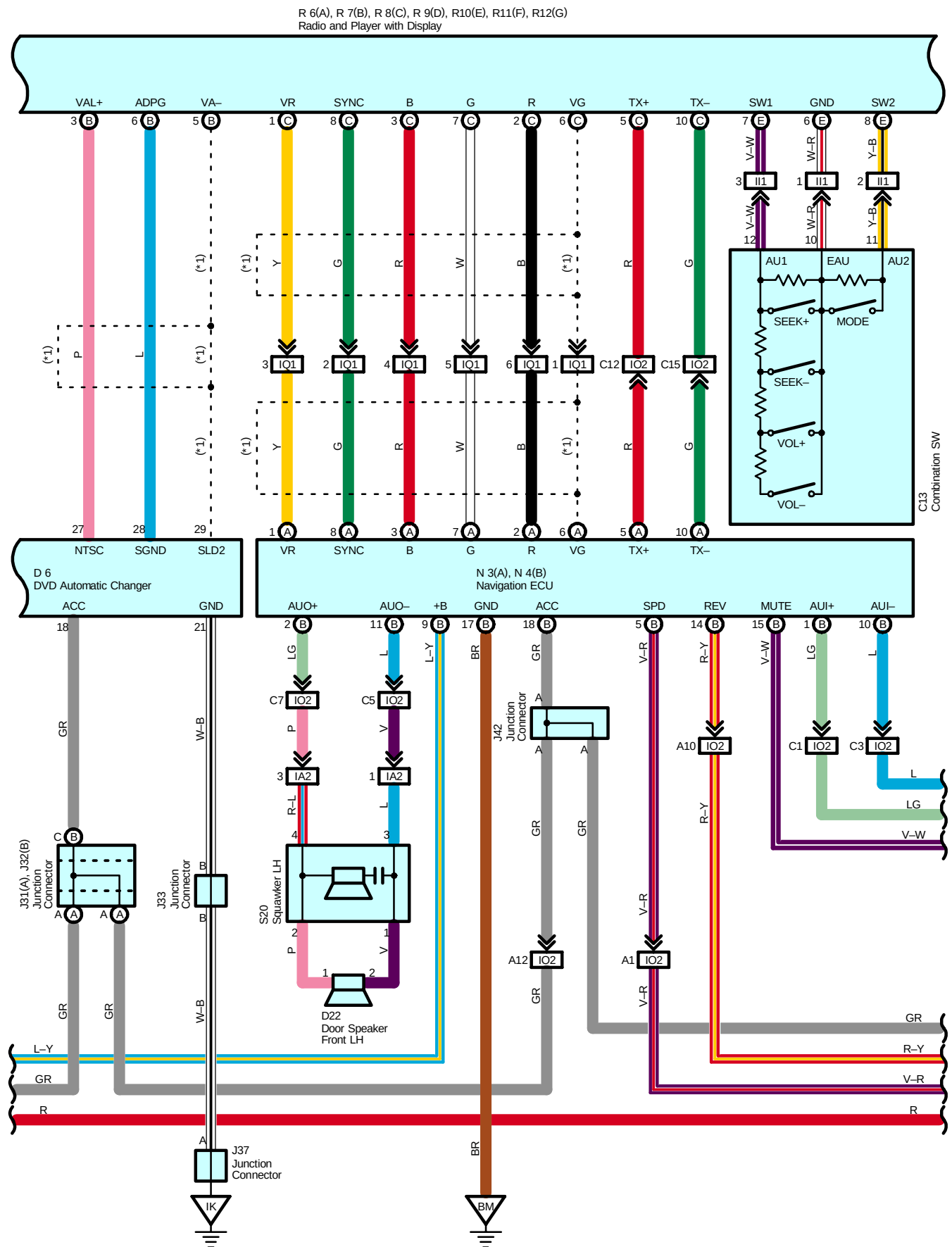
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B6	54	Back Door No.1 Wire			



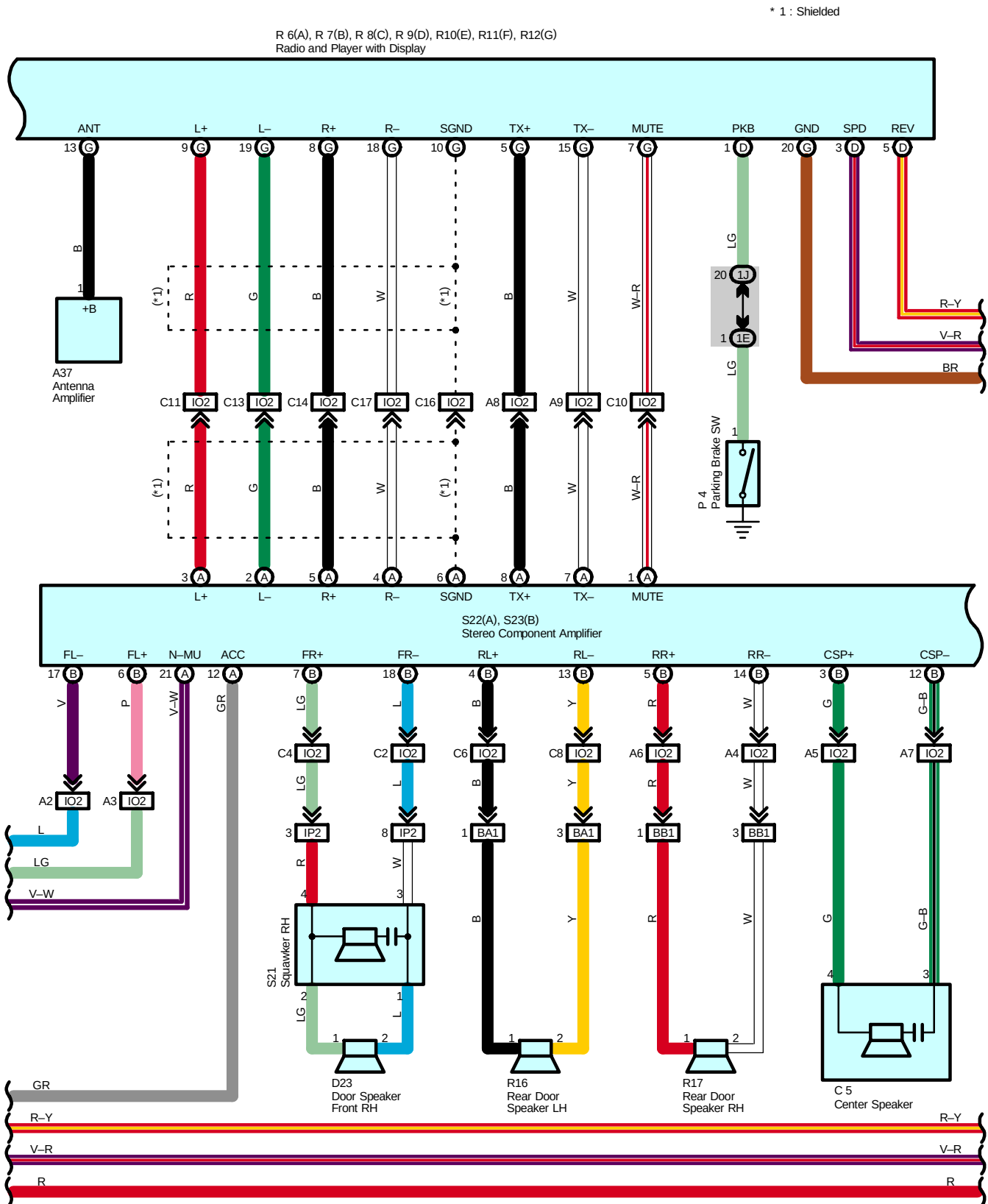
TOYOTA Parking Assist (Rear View Monitor)



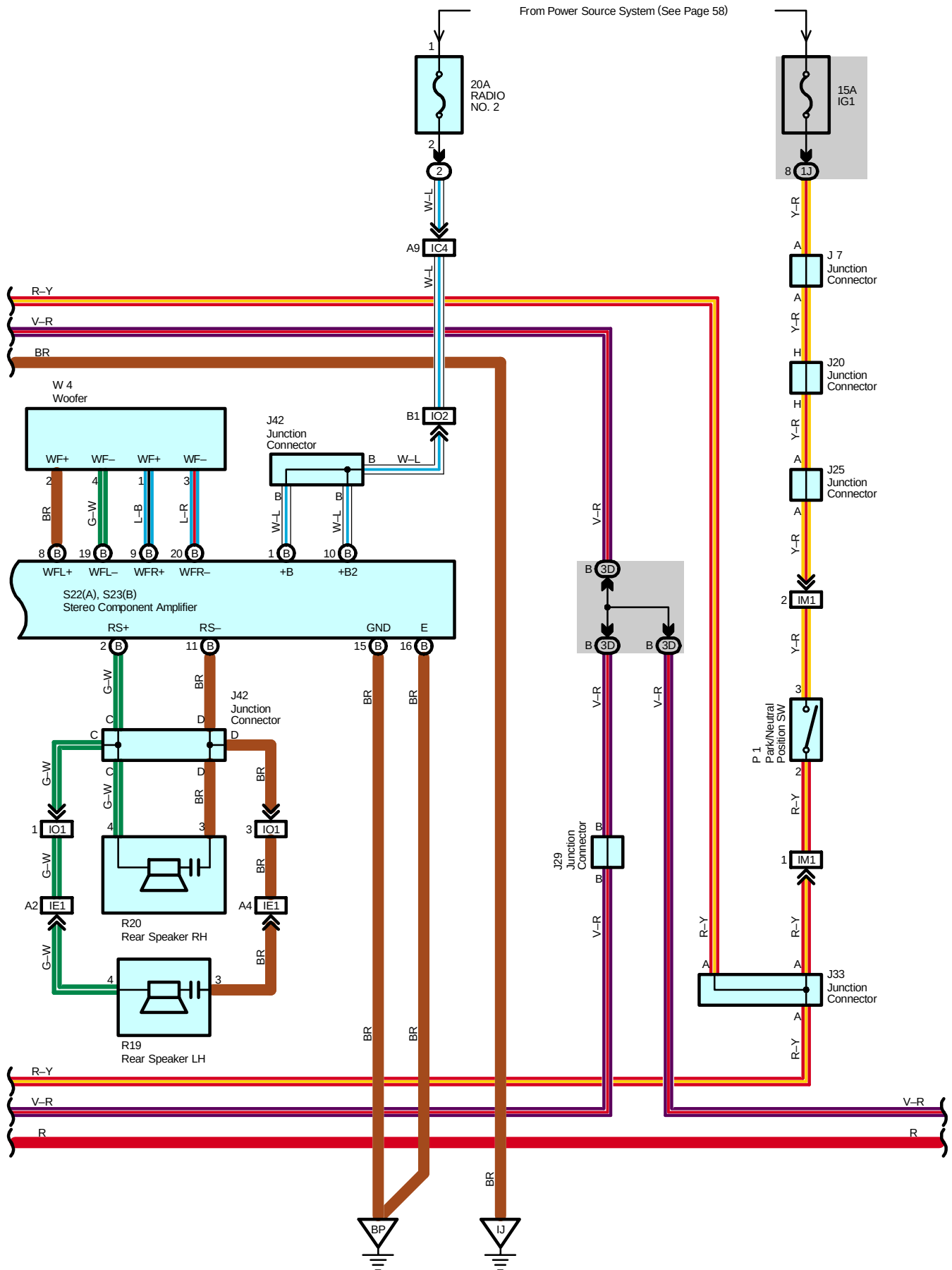
Navigation System, Radio and Player (w/ Navigation System),



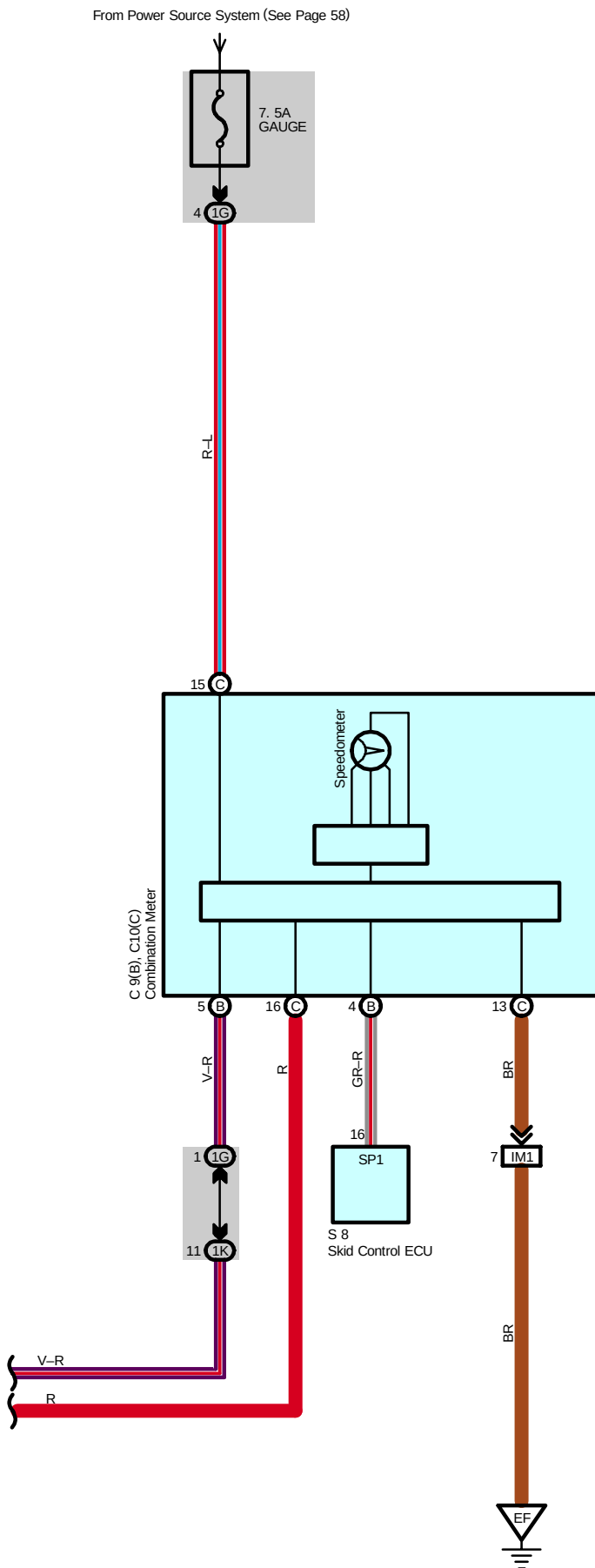
TOYOTA Parking Assist (Rear View Monitor)



Navigation System, Radio and Player (w/ Navigation System),



TOYOTA Parking Assist (Rear View Monitor)



Navigation System, Radio and Player (w/ Navigation System),

Service Hints

R12 (G) Radio and Player with Display

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

(G) 1–Ground : Always approx. 12 volts

(G)20–Ground : Always continuity

S22 (A), S23 (B) Stereo Component Amplifier

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

(B) 1, (B) 10–Ground : Always approx. 12 volts

(B)15, (B) 16–Ground: Always continuity

N4 (B) Navigation ECU

(B)18–Ground : Approx. 12 volts with ignition SW at ACC or ON position

(B) 9–Ground : Always approx. 12 volts

(B)17–Ground : Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A37	36	J29	38	R10	E 39
C5	37	J31	A 38	R11	F 39
C9	B 37	J32	B 38	R12	G 39
C10	C 37	J33	38	R16	41
C13	37	J37	38	R17	41
D6	37	J42	40	R18	41
D22	40	N3	A 41	R19	41
D23	40	N4	B 41	R20	41
E4	37	P1	33 (2UZ–FE)	S8	39
J6	38		35 (1GR–FE)	S20	41
J7	38	P4	39	S21	41
J8	A 38	R6	A 39	S22	A 41
J9	B 38	R7	B 39	S23	B 41
J20	38	R8	C 39	T11	41
J25	38	R9	D 39	W4	41

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

TOYOTA Parking Assist (Rear View Monitor)

: Connector Joining Wire Harness and Wire Harness

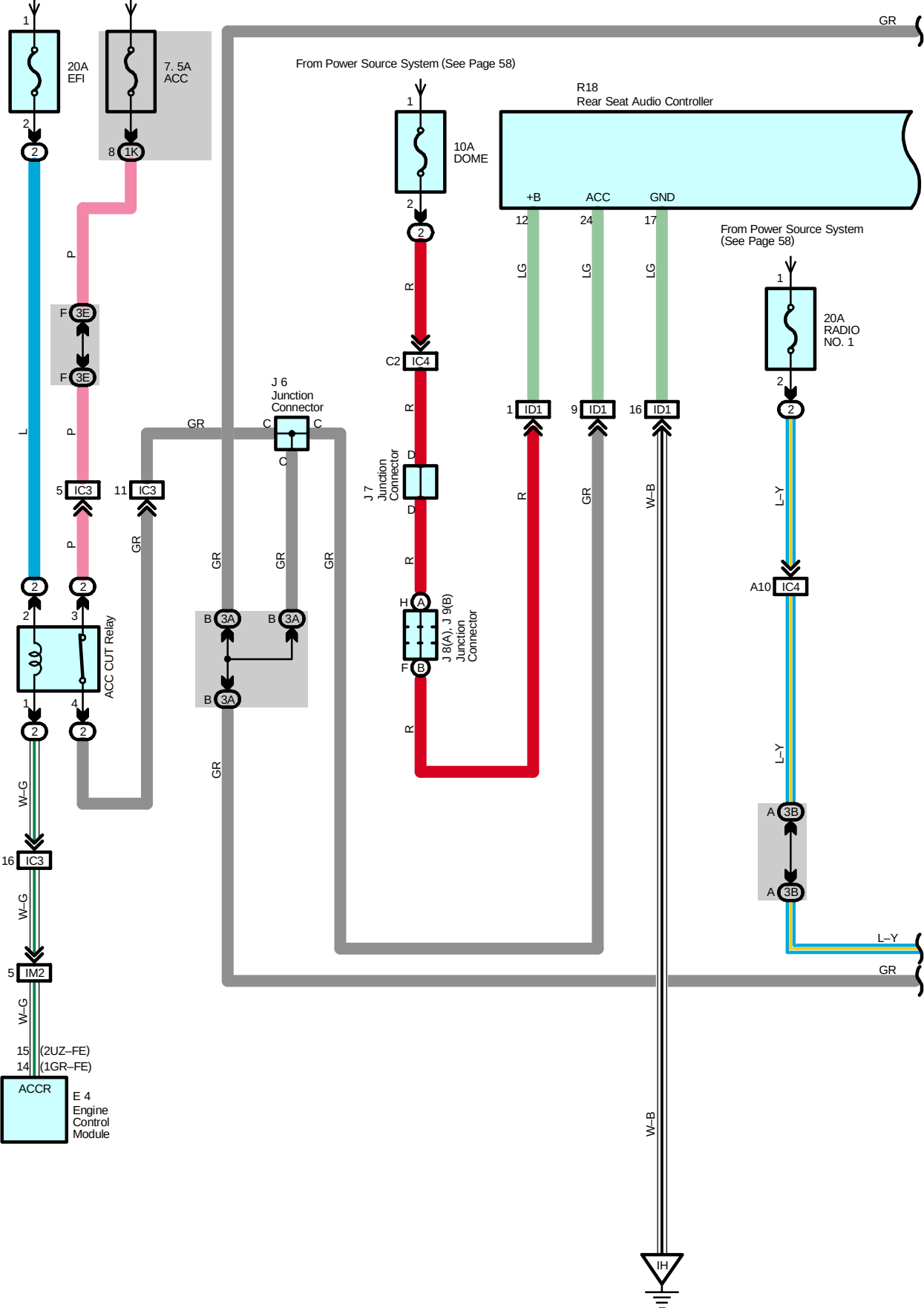
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
ID1	48	Radio Installation Sub Assy Wire and Instrument Panel Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
II1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IO2		
IP2	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IQ1	52	Floor Wire and Instrument Panel Wire (Instrument Panel Brace RH)
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD2	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BH1	54	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)

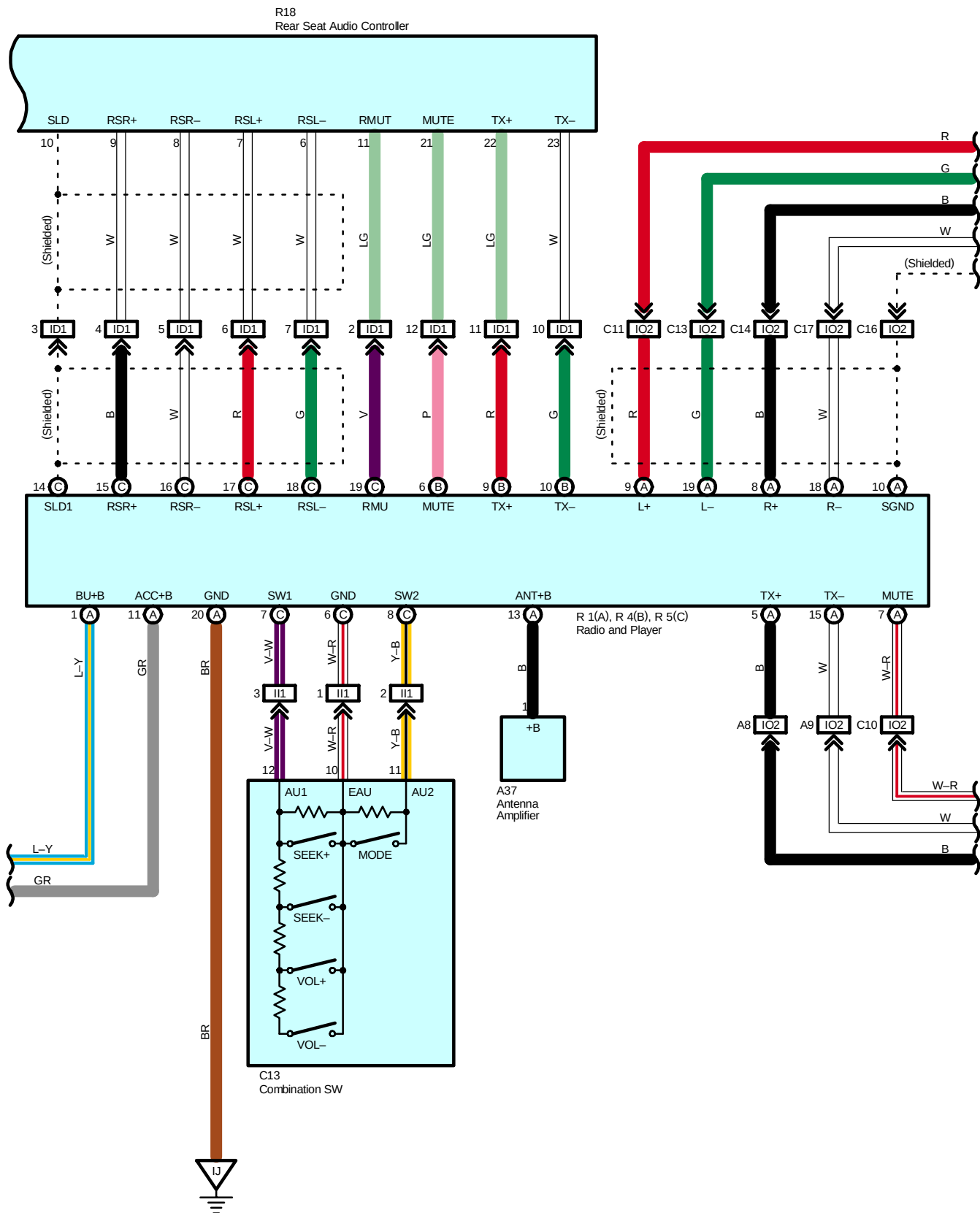
: Ground Points

Code	See Page	Ground Points Location
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IH	48	Instrument Panel Brace LH
IJ	48	Instrument Panel Brace RH
IK	48	Right Kick Panel
BM	54	Floor Seat Crossmember RH
BP	54	Rear Pillar RH

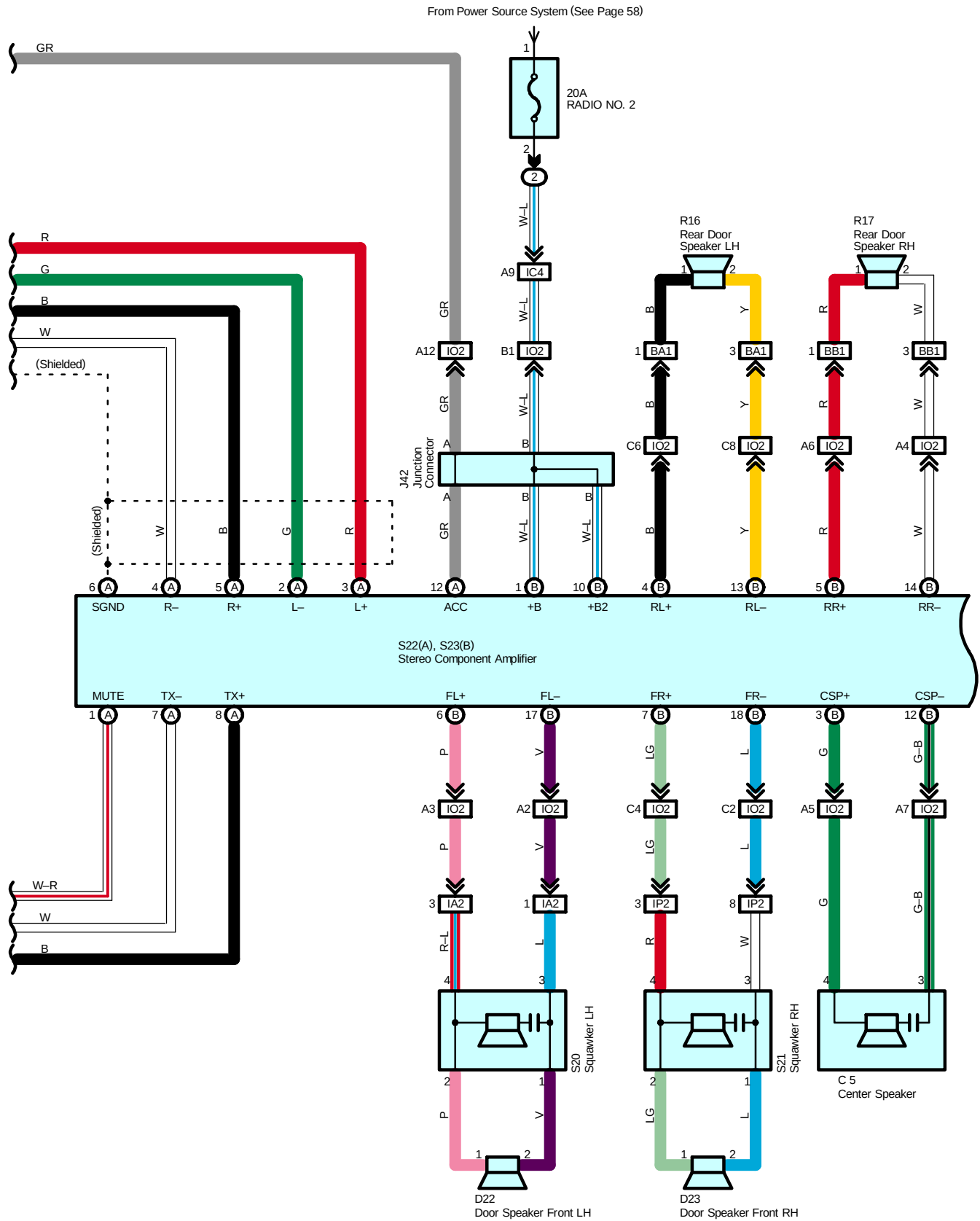
: Splice Points

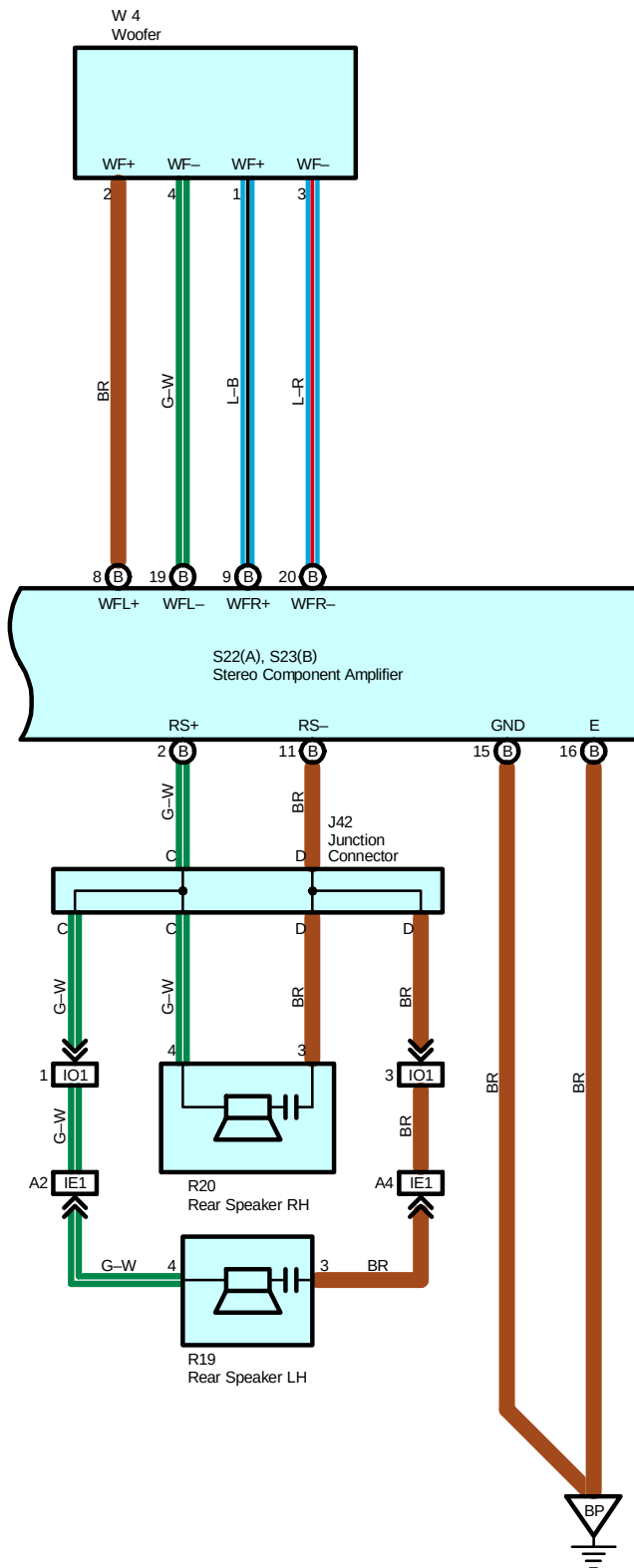
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	54	Back Door No.1 Wire	B9	54	Back Door No.2 Wire
B7					





Radio and Player (w/o Navigation System Except 6 Speaker)





Radio and Player (w/o Navigation System Except 6 Speaker)

Service Hints

R1 (A) Radio and Player

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

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

(A)20–Ground : Always continuity

S22 (A), S23 (B) Stereo Component Amplifier

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

(B) 1, (B) 10–Ground : Always approx. 12 volts

(B)15, (B) 16–Ground: Always continuity

○ : Parts Location

Code	See Page	Code	See Page	Code	See Page
A37	36	J8	A 38	R18	41
C5	37	J9	B 38	R19	41
C13	37	J42	40	R20	41
D22	40	R1	A 39	S20	41
D23	40	R4	B 39	S21	41
E4	37	R5	C 39	S22	A 41
J6	38	R16	41	S23	B 41
J7	38	R17	41	W4	41

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

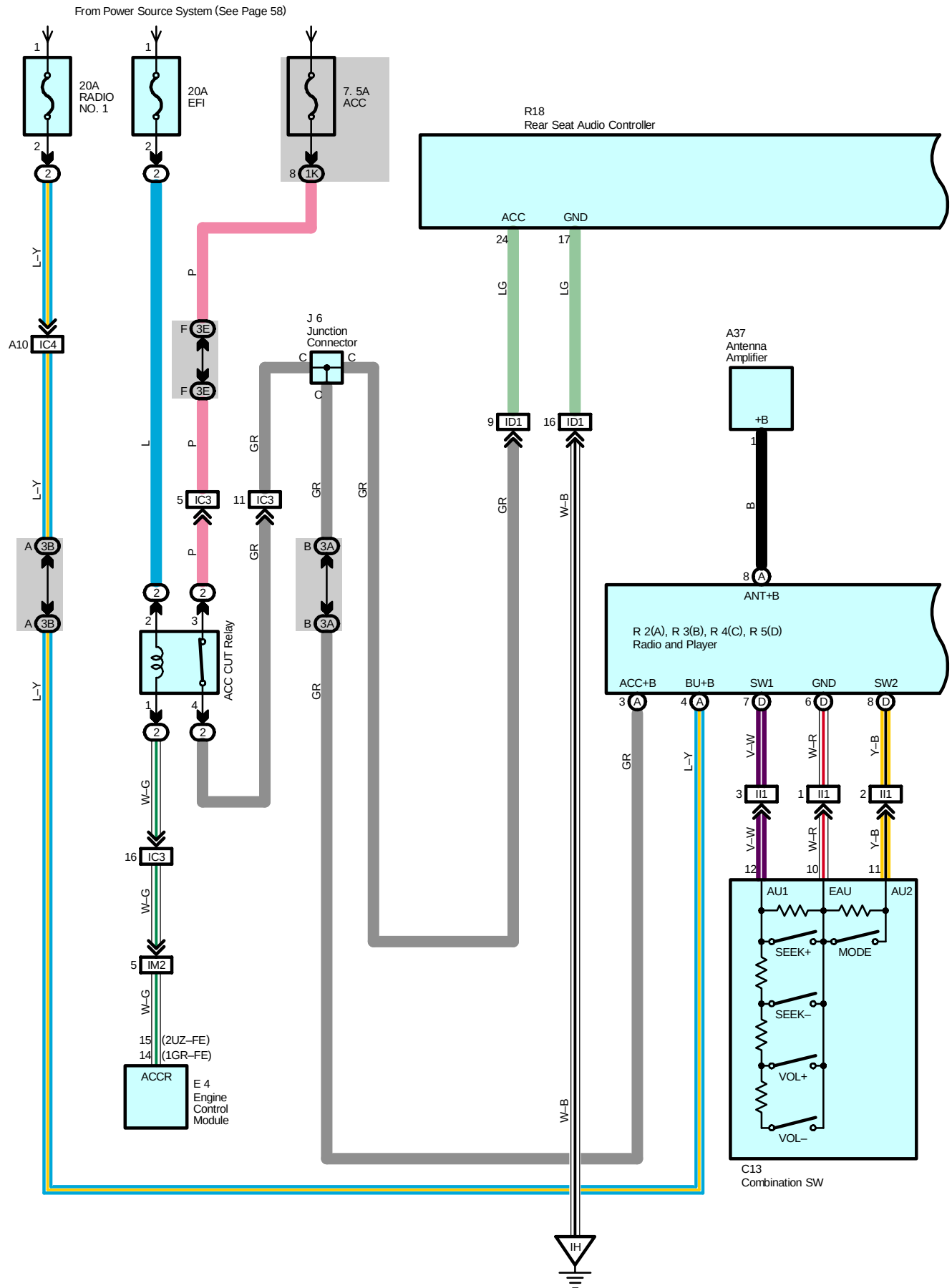
□ : Connector Joining Wire Harness and Wire Harness

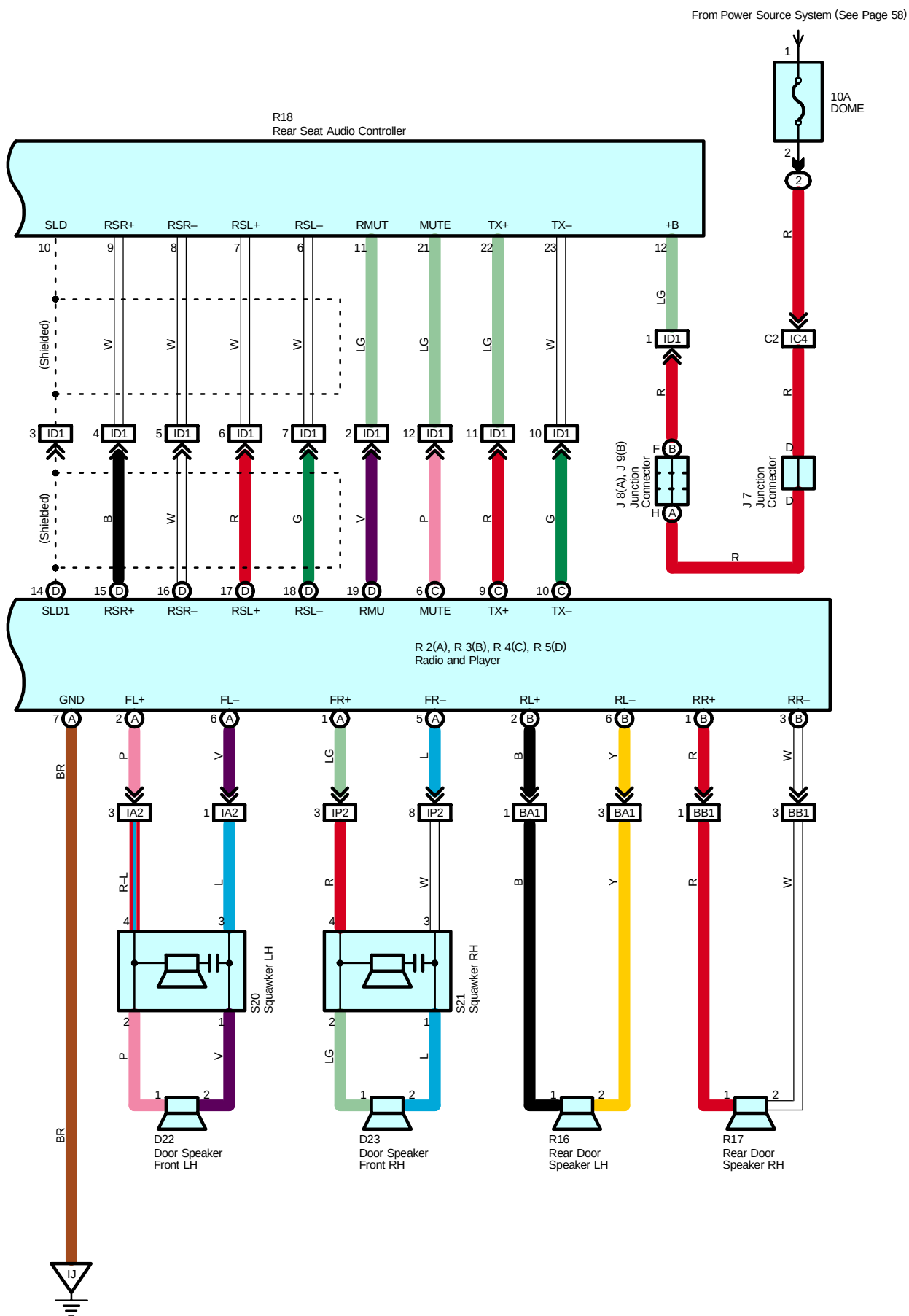
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
ID1	48	Radio Installation Sub Assy Wire and Instrument Panel Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
II1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IM2	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IO2		
IP2	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)

▽ : Ground Points

Code	See Page	Ground Points Location
IH	48	Instrument Panel Brace LH
IJ	48	Instrument Panel Brace RH
BP	54	Rear Pillar RH

Radio and Player (6 Speaker)





Radio and Player (6 Speaker)

Service Hints

R2 (A) Radio and Player

(A) 3—Ground : Approx. 12 volts with 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
A37	36	J7	38	R5	D 39
C13	37	J8	A 38	R16	41
D22	40	J9	B 38	R17	41
D23	40	R2	A 39	R18	41
E4	37	R3	B 39	S20	41
J6	38	R4	C 39	S21	41

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

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

□ : Connector Joining Wire Harness and Wire Harness

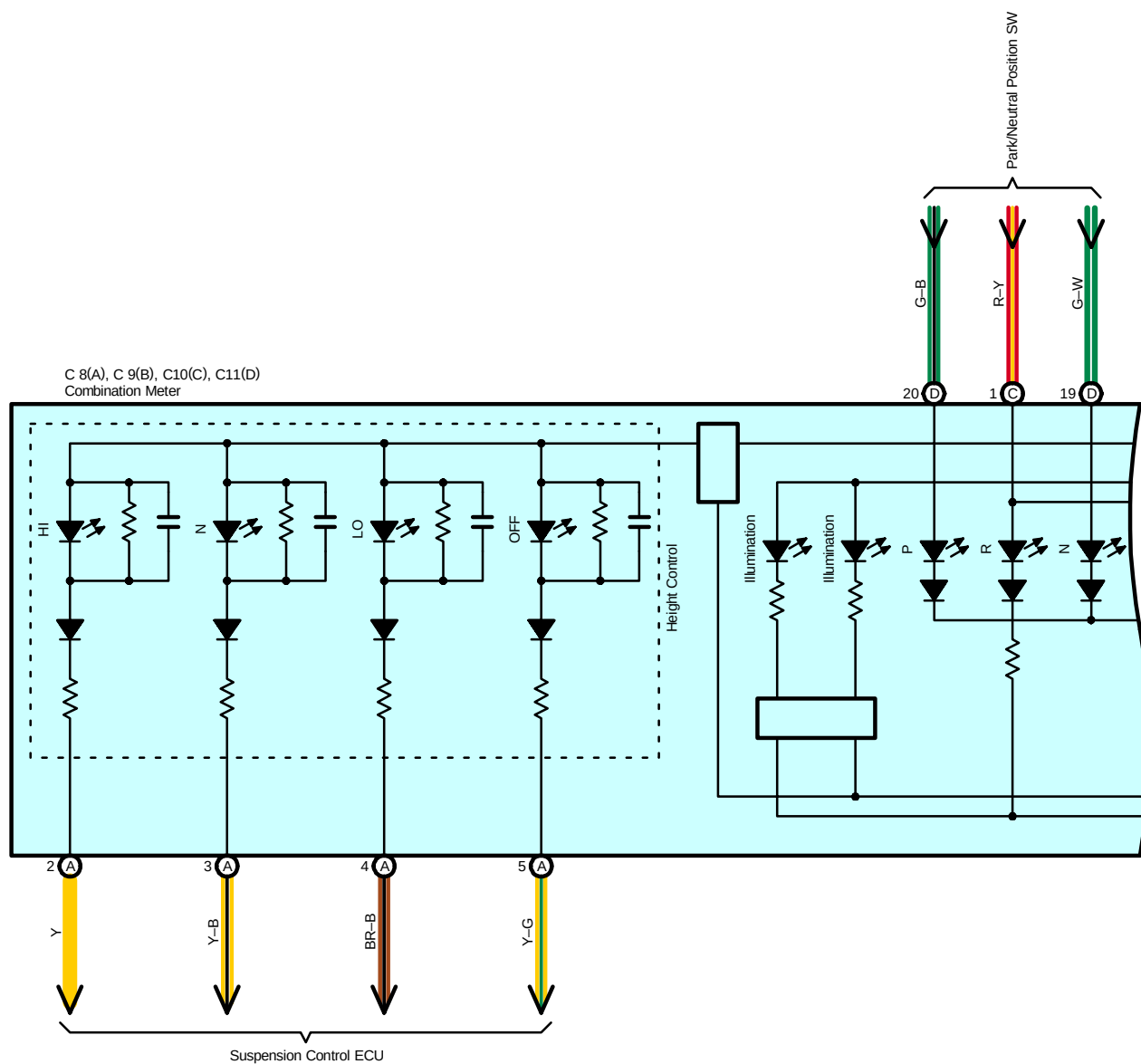
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA2	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
ID1	48	Radio Installation Sub Assy Wire and Instrument Panel Wire (Left Kick Panel)
II1	50	Instrument Panel Wire and Instrument Panel Wire (Instrument Panel Brace LH)
IM2	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IP2	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)

▽ : Ground Points

Code	See Page	Ground Points Location
IH	48	Instrument Panel Brace LH
IJ	48	Instrument Panel Brace RH

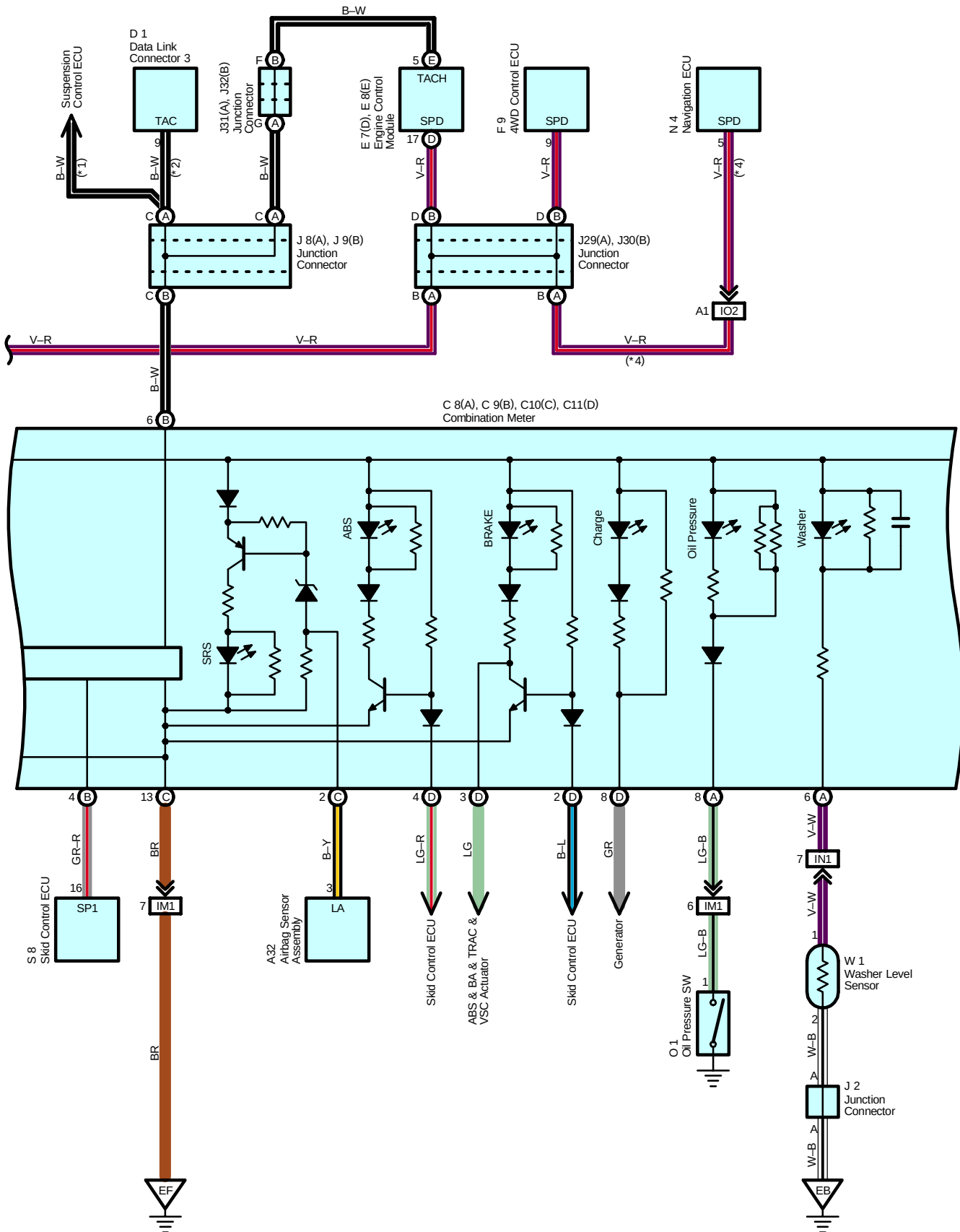
Combination Meter

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

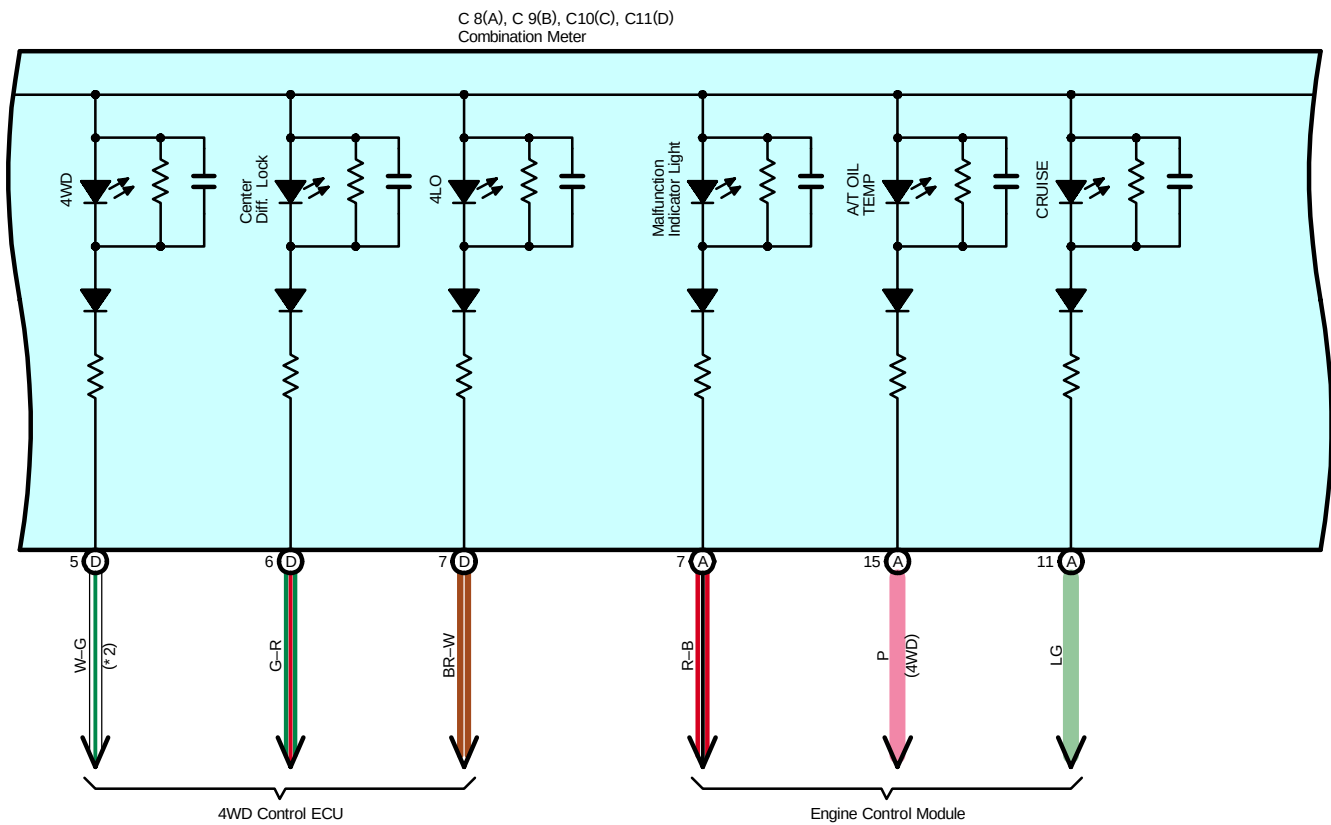




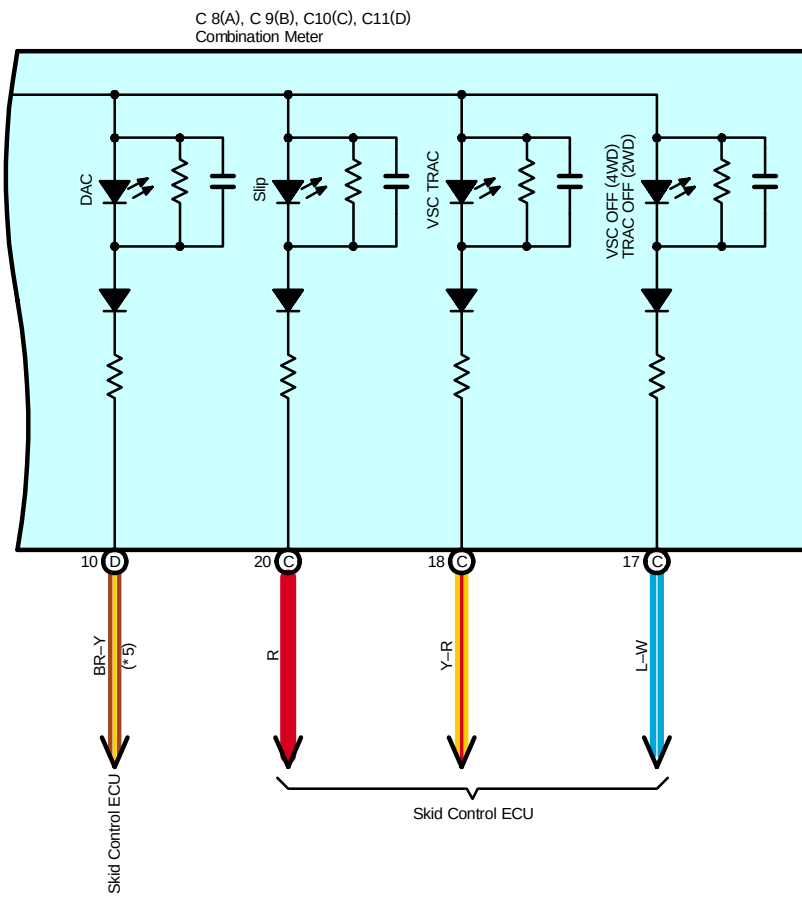
- * 1 : 2UZ-FE
- * 2 : 1GR-FE
- * 3 : w/ Moon Roof
- * 4 : w/ Navigation System



Combination Meter



* 2 : 1GR-FE
 * 5 : Except 1GR-FE 2WD



Combination Meter

Service Hints

C10 (C) Combination Meter

(C)5, (C) 15–Ground: Approx. 12 volts with the ignition SW at ON position

(C)13–Ground : Always continuity

(C)16–Ground : Always approx. 12 volts

○ : Parts Location

Code		See Page	Code		See Page	Code		See Page
A16	A	36	J2		33 (2UZ–FE)	J31	A	38
A17	B	36			35 (1GR–FE)	J32	B	38
A32		36	J5		38		M5	41
C8	A	37	J7		38		N4	41
C9	B	37	J8	A	38		O1	33 (2UZ–FE)
C10	C	37	J9	B	38			35 (1GR–FE)
C11	D	37	J10	A	38		O2	39
D1		37	J11	B	38		R9	39
E7	D	37	J15		38		S8	39
E8	E	37	J16		38		W1	33 (2UZ–FE)
F9		37	J29	A	38			35 (1GR–FE)
F14		40	J30	B	38			

○ : Relay Blocks

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

○ : Junction Block and Wire Harness Connector

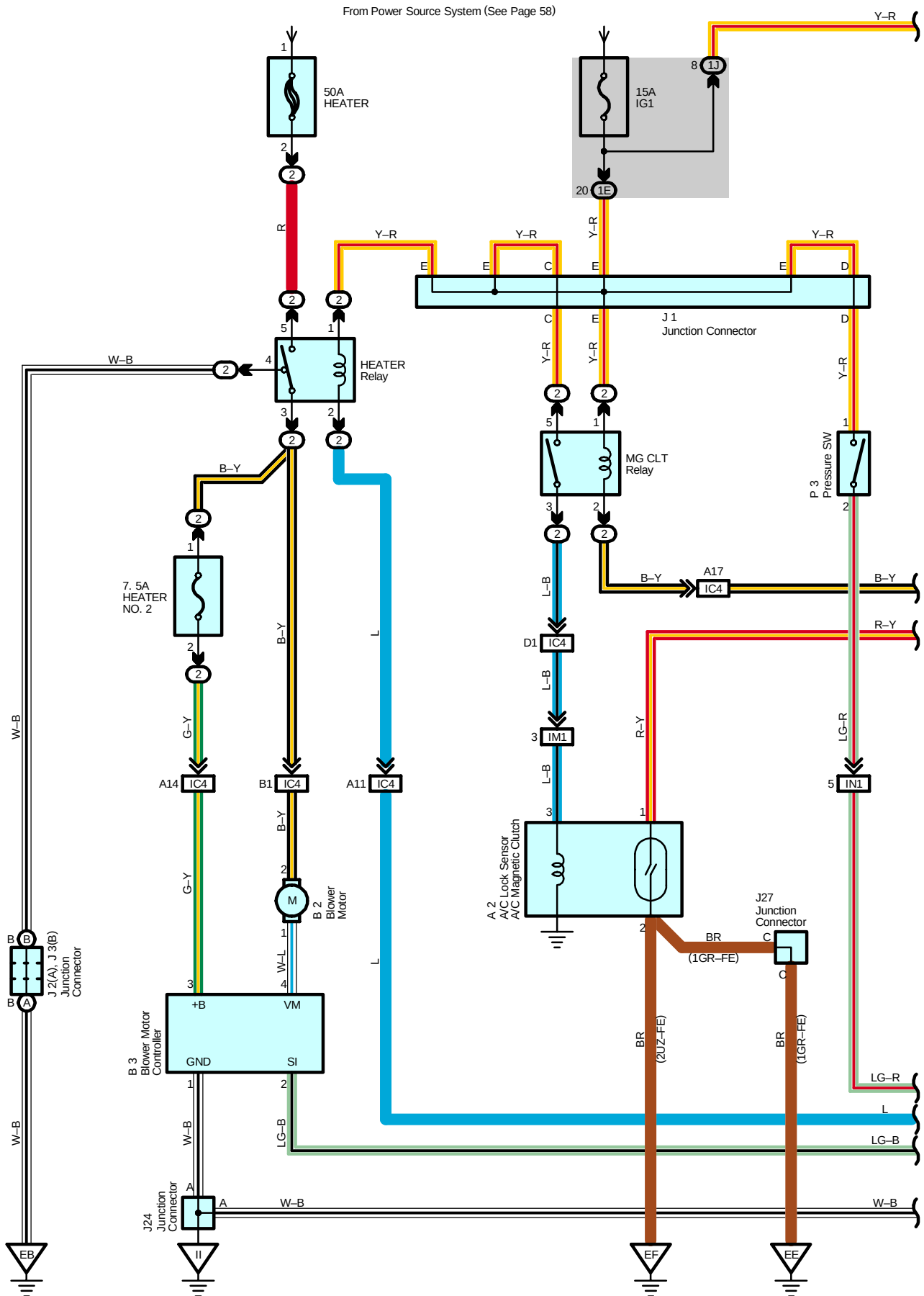
Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1G	25	Instrument Panel Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K		
1L		
3D	28	Instrument Panel Wire and Center J/B (Instrument Panel Brace RH)

□ : Connector Joining Wire Harness and Wire Harness

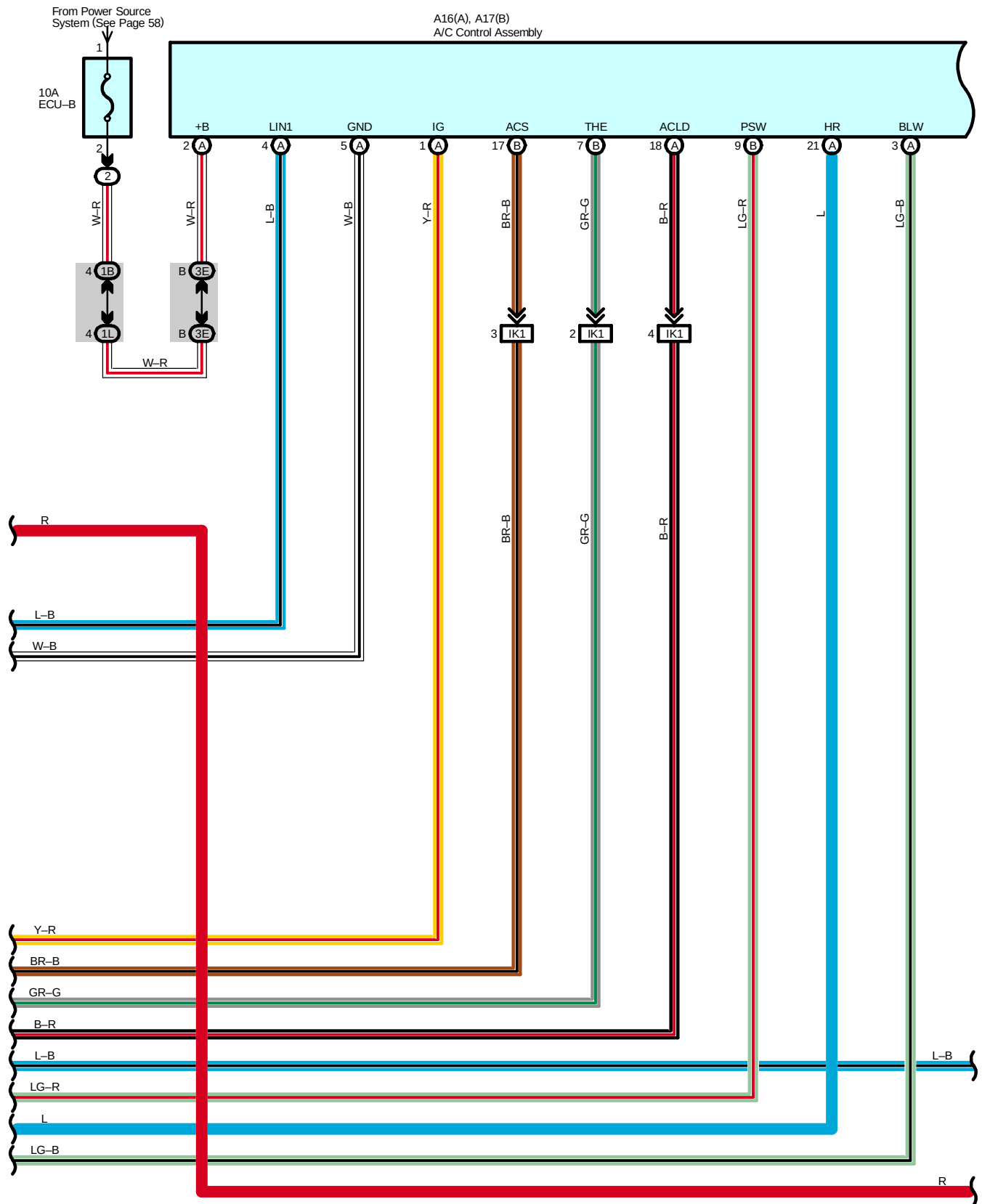
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC4	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IE1	50	Instrument Panel Wire and Floor No.2 Wire (Left Kick Panel)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)
IO2	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)

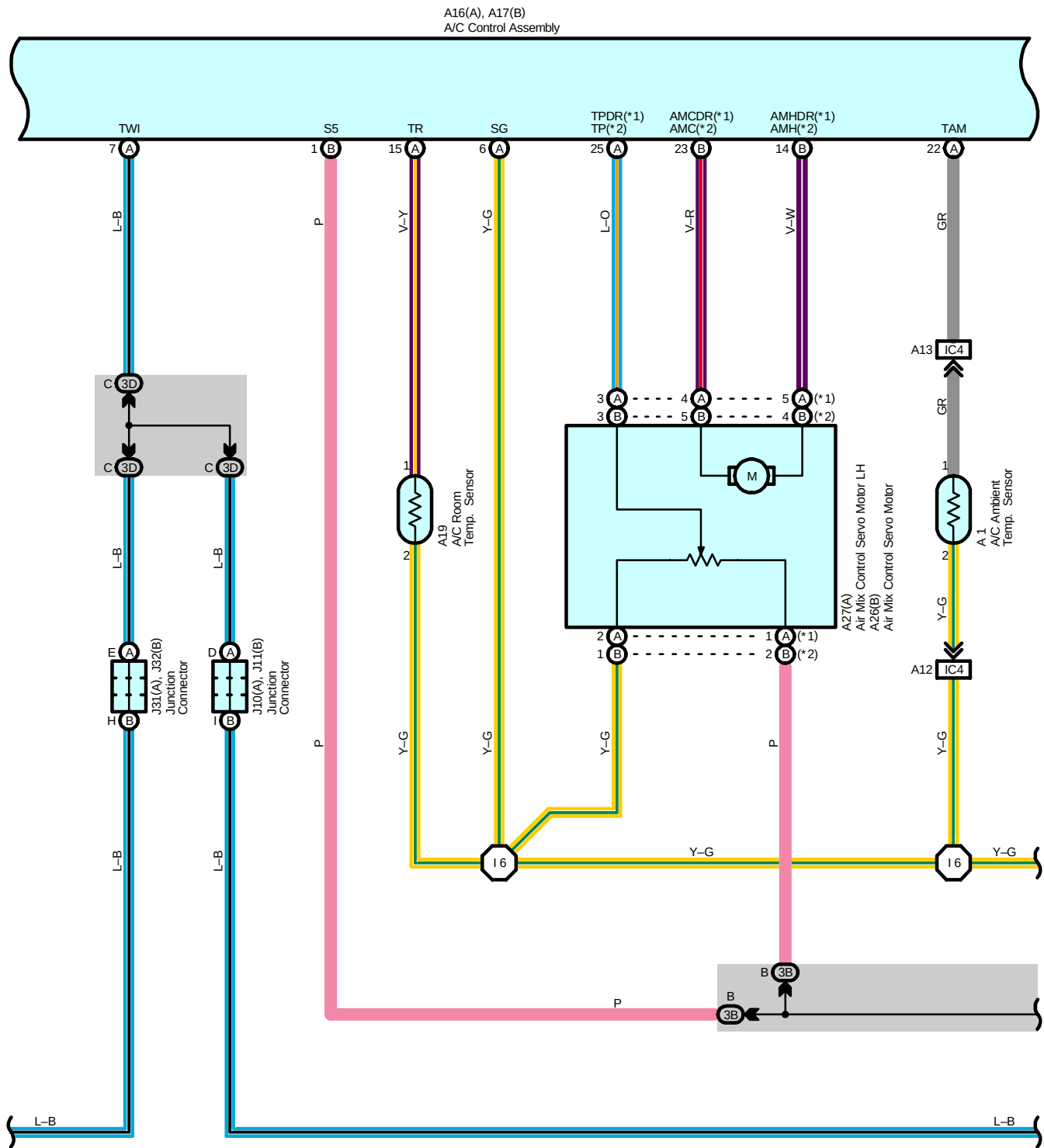
▽ : Ground Points

Code	See Page	Ground Points Location
EB	44 (2UZ–FE)	Front Left Fender
	46 (1GR–FE)	
EF	44 (2UZ–FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR–FE)	
IG	48	Left Kick Panel



Air Conditioning

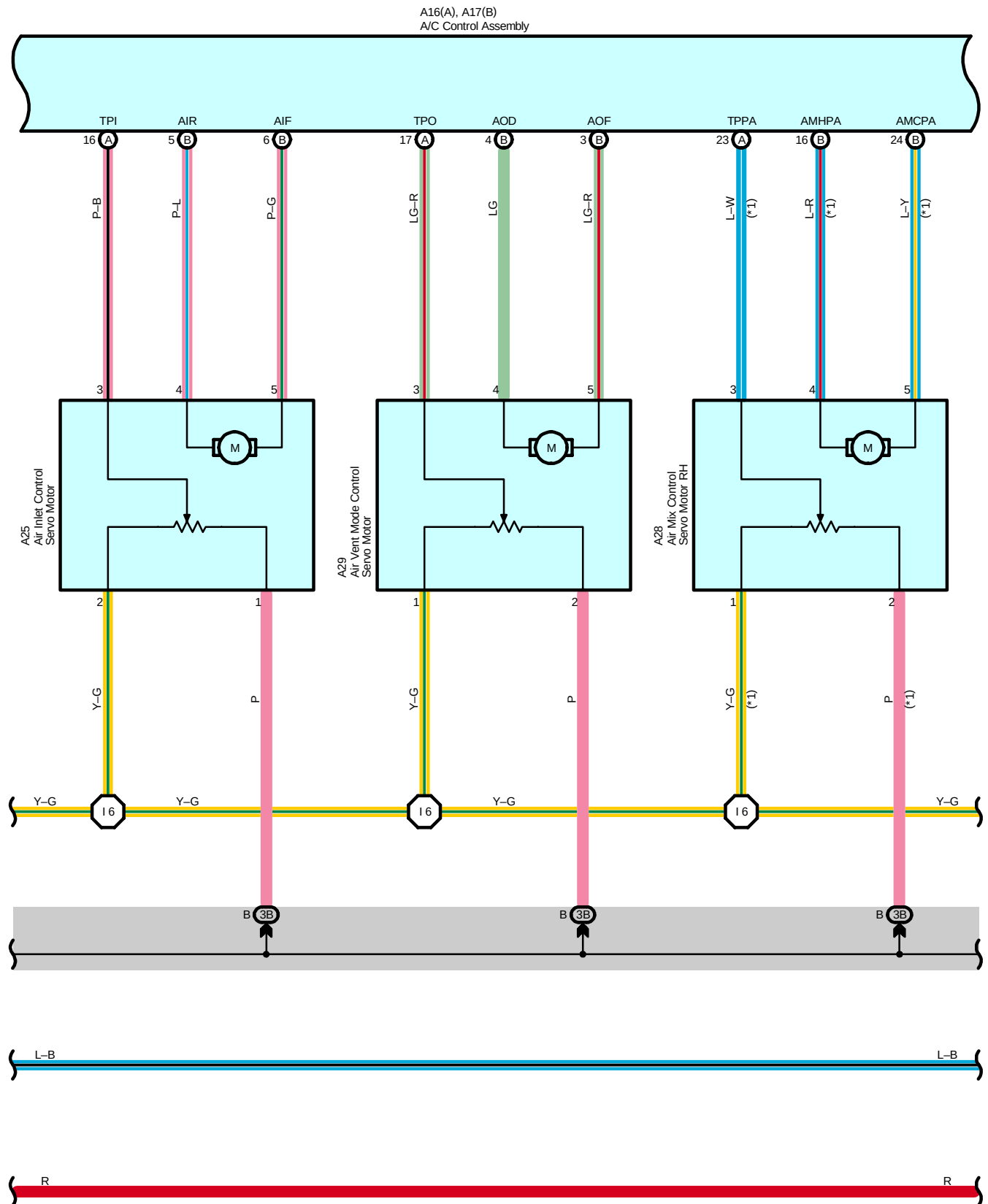


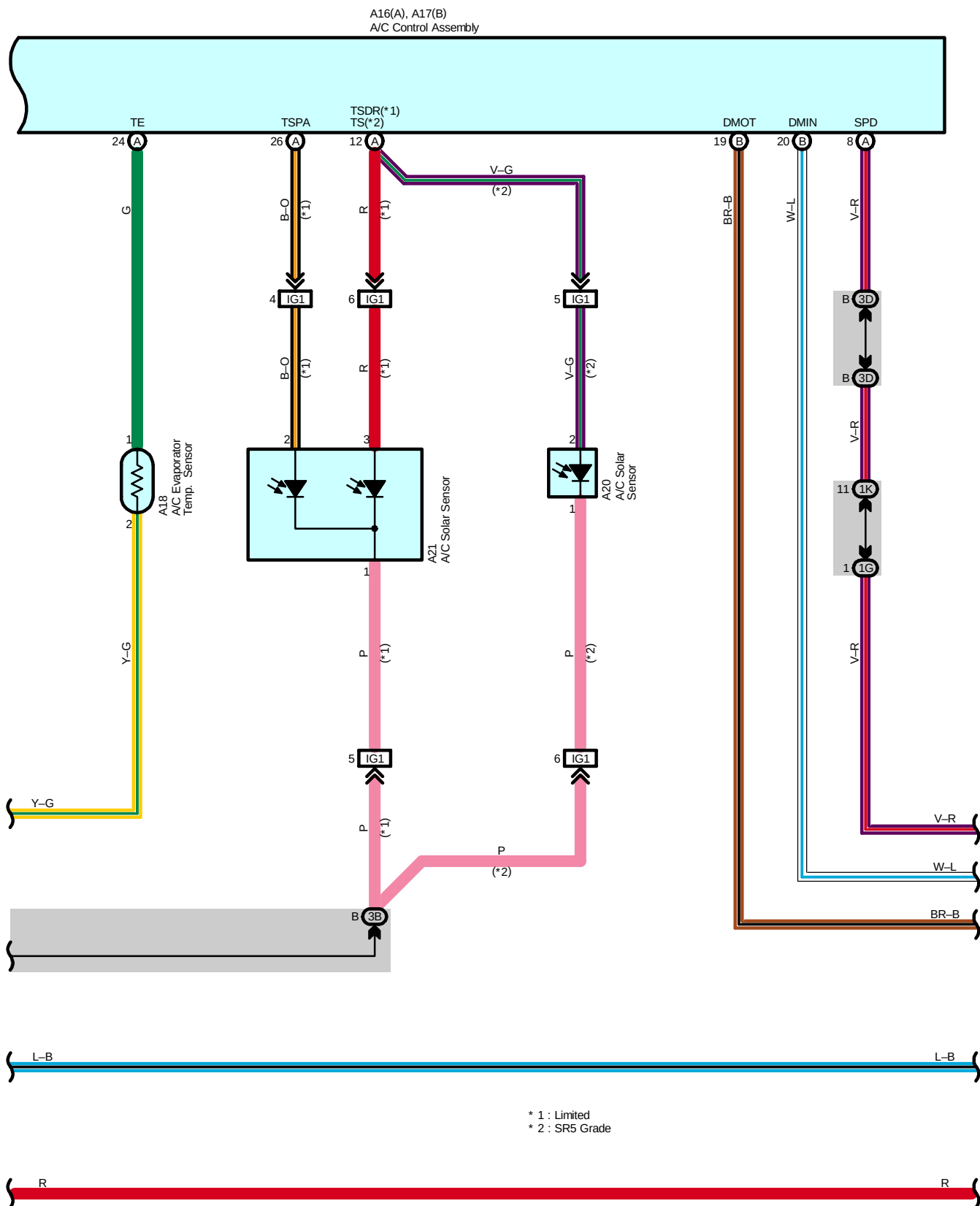


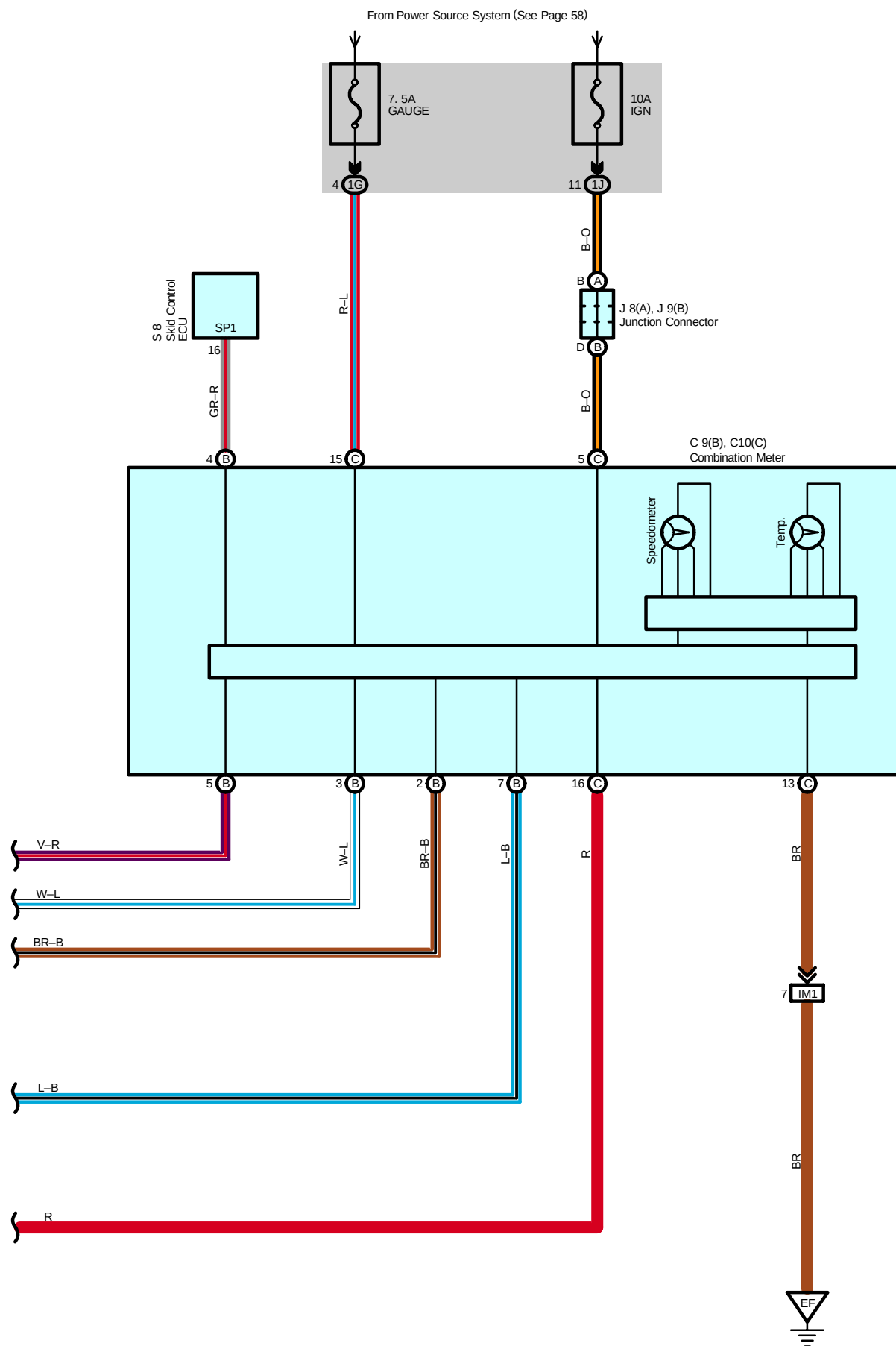
* 1 : Limited
* 2 : SR5 Grade



Air Conditioning







System Outline

1. Heater Blower Operation

Manual operation

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

Auto operation

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

2. Air Inlet Control Servo Motor Control

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

3. Air Vent Mode Control Servo Motor Control

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

4. Air Mix Control Servo Motor Control (Limited)

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

5. Air Mix Control Servo Motor Control (SR5 Grade)

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

6. Air Conditioning Operation

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

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

As a result, the ground circuit in A/C control assembly is closed and current flows from IG1 fuse to TERMINAL 1 of the MG CLT relay to TERMINAL 2 to TERMINAL ACMG of the engine control module to TERMINAL HP to GROUND, turning the MG CLT relay on, so that the magnetic clutch is on and the A/C compressor operates.

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

P3 Pressure SW

1-2 : 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)

A16 (A) A/C Control Assembly

- (A) 2-Ground : Always approx. 12 volts
- (A) 1-Ground : Approx. 12 volts with ignition SW at ON or ST position
- (A) 5-Ground : Always continuity

Air Conditioning

: Parts Location

Code	See Page	Code	See Page	Code	See Page
A1	32 (2UZ-FE)	B3	36	J9	B 38
	34 (1GR-FE)	C9	B 37	J10	A 38
A2	32 (2UZ-FE)	C10	C 37	J11	B 38
	34 (1GR-FE)	D3	37	J20	38
A16	A 36	E4	A 37	J24	38
A17	B 36	E6	C 37	J25	38
A18	36	E7	D 37	J27	38
A19	36	J1	33 (2UZ-FE)	J31	A 38
A20	36		35 (1GR-FE)	J32	B 38
A21	36	J2	A 33 (2UZ-FE)	J33	A 38
A25	36		35 (1GR-FE)	J34	B 38
A26	B 36	J3	B 33 (2UZ-FE)	J37	38
A27	A 36		35 (1GR-FE)	P3	33 (2UZ-FE)
A28	36	J6	38		35 (1GR-FE)
A29	36	J7	38	S8	39
B2	36	J8	A 38		

: Relay Blocks

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

: Junction Block and Wire Harness Connector

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

: Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC3	48	Instrument Panel Wire and Engine Room Main Wire (Left Kick Panel)
IC4		
IG1	50	Instrument Panel No.2 Wire and Instrument Panel Wire (Behind the Combination Meter)
IK1	50	Instrument Panel Wire and Instrument Panel Wire (Left Upper Side of the Glove Box)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
IN1	52	Instrument Panel Wire and Engine Room Main Wire (Right Kick Panel)

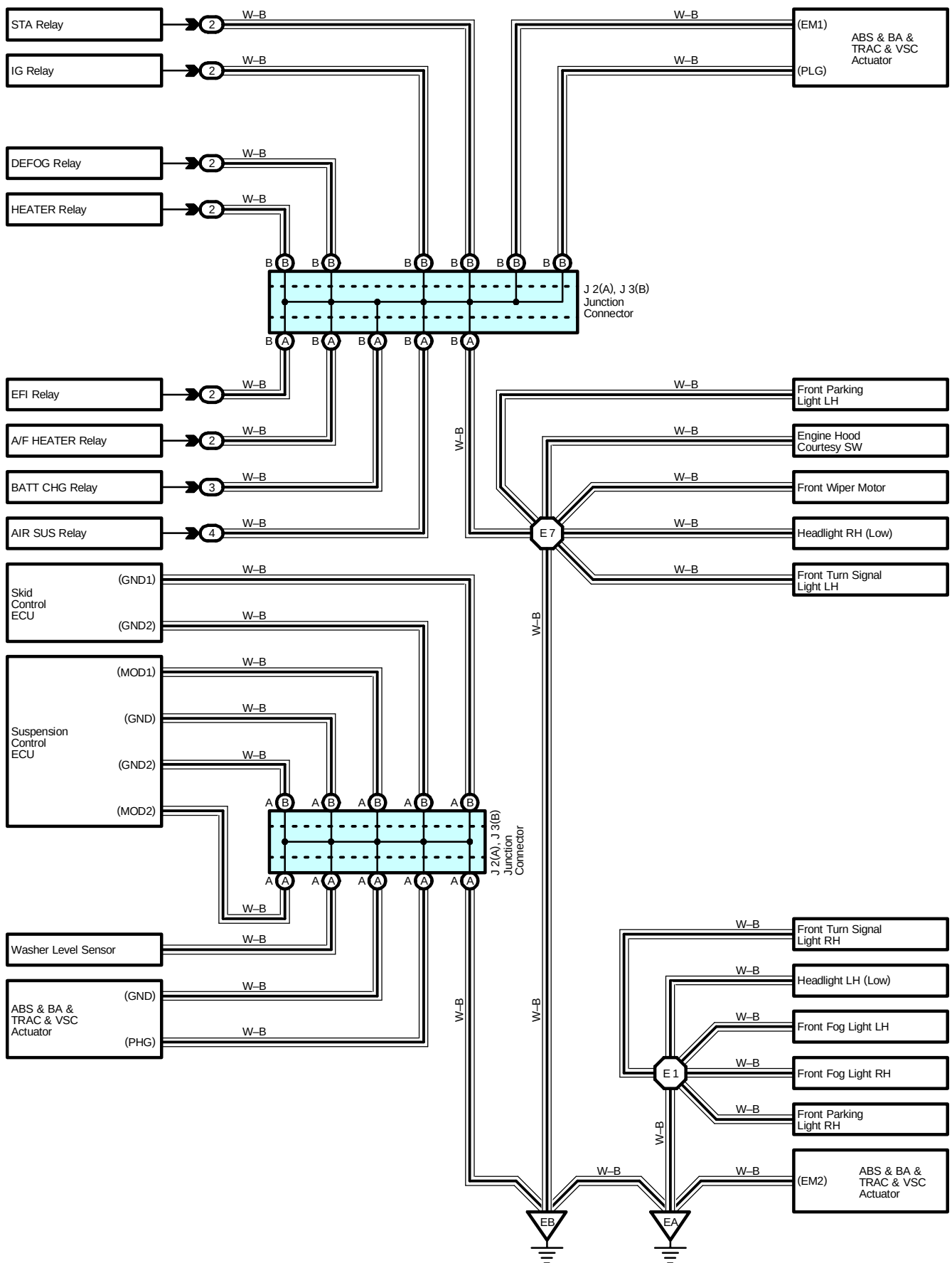
**: Ground Points**

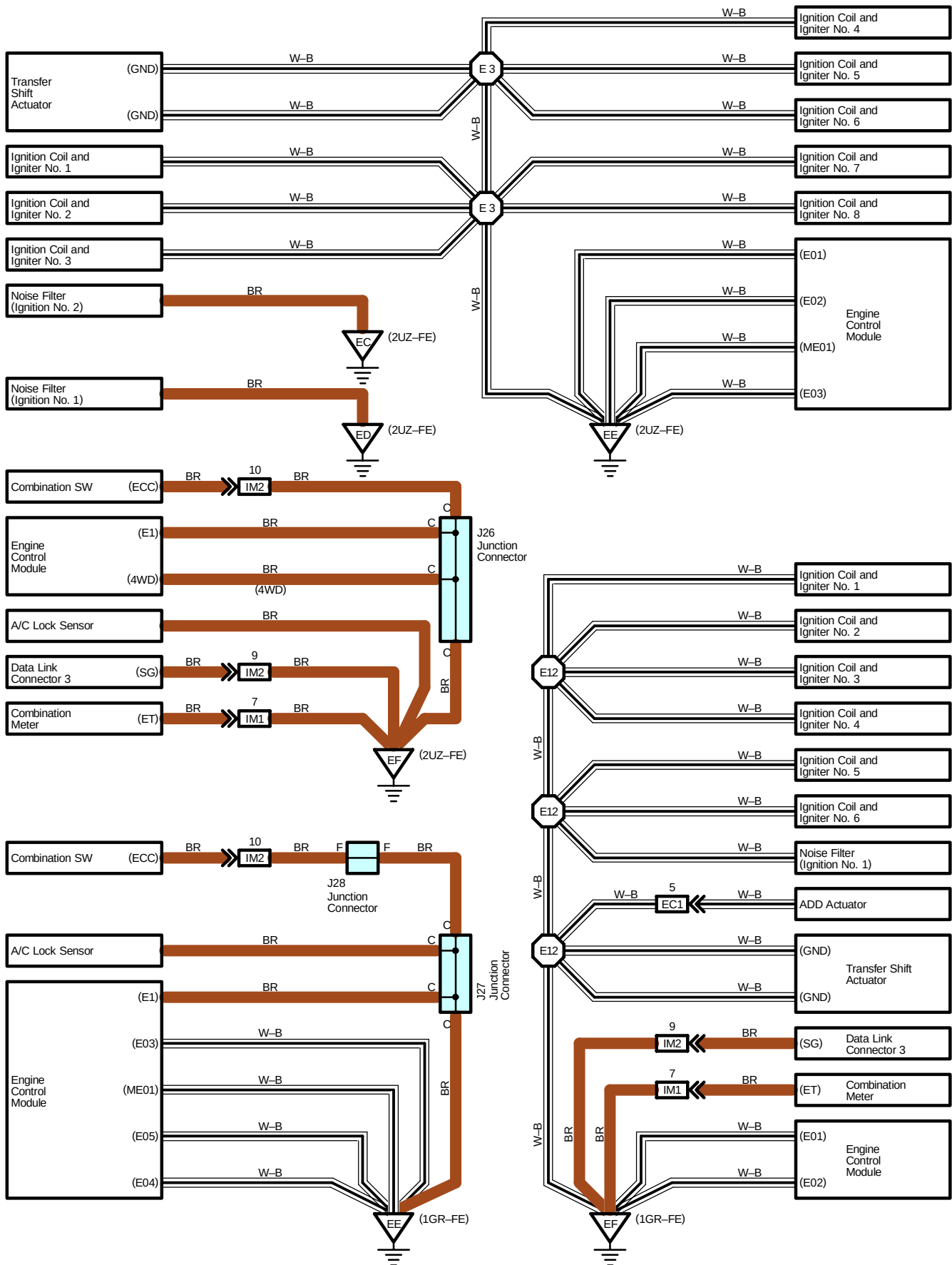
Code	See Page	Ground Points Location
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
EE	46 (1GR-FE)	Rear Side of Right Bank Cylinder Block
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
II	48	Instrument Panel Brace RH
IK	48	Right Kick Panel

**: Splice Points**

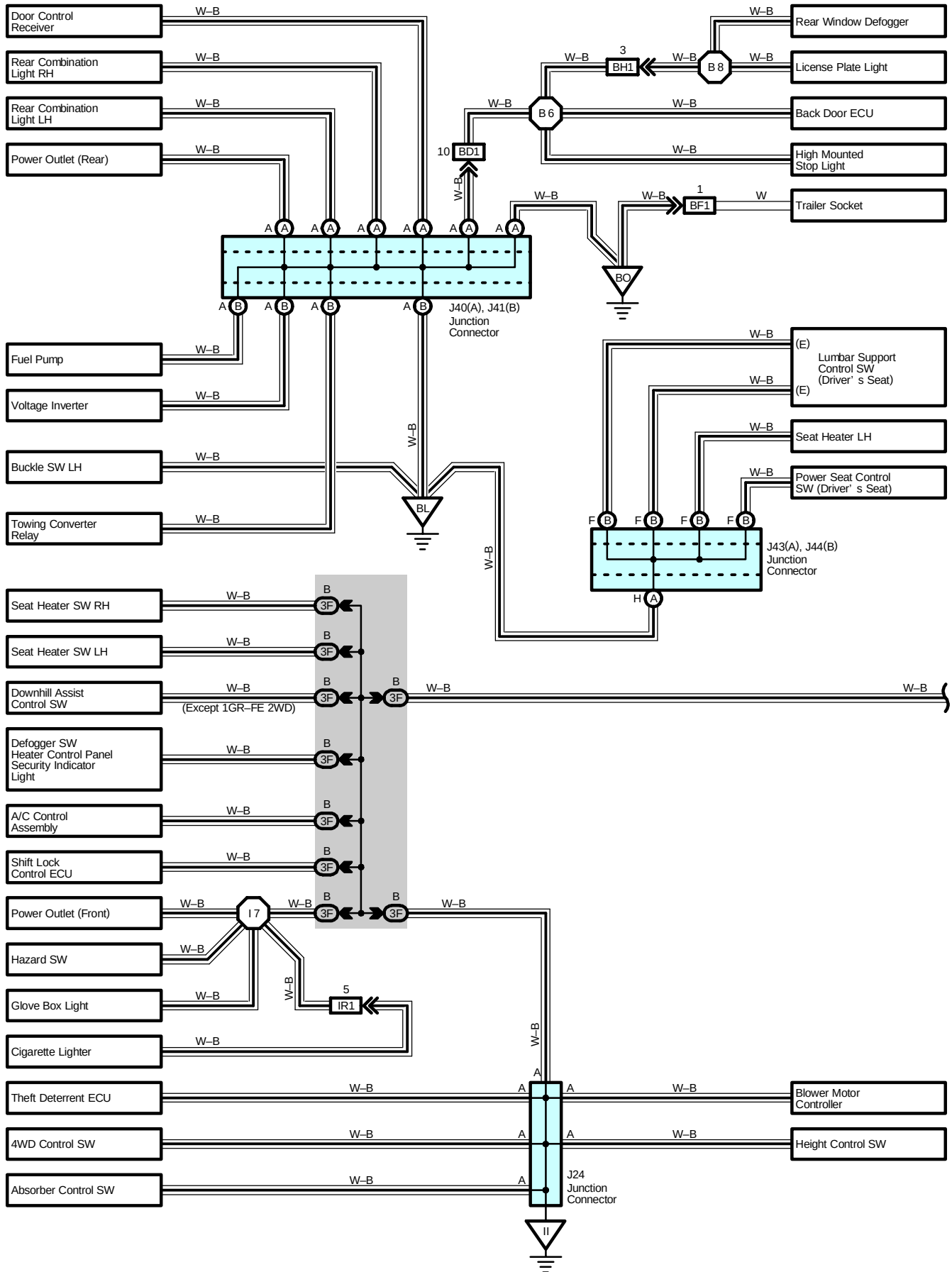
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	50	Instrument Panel Wire			

I GROUND POINT

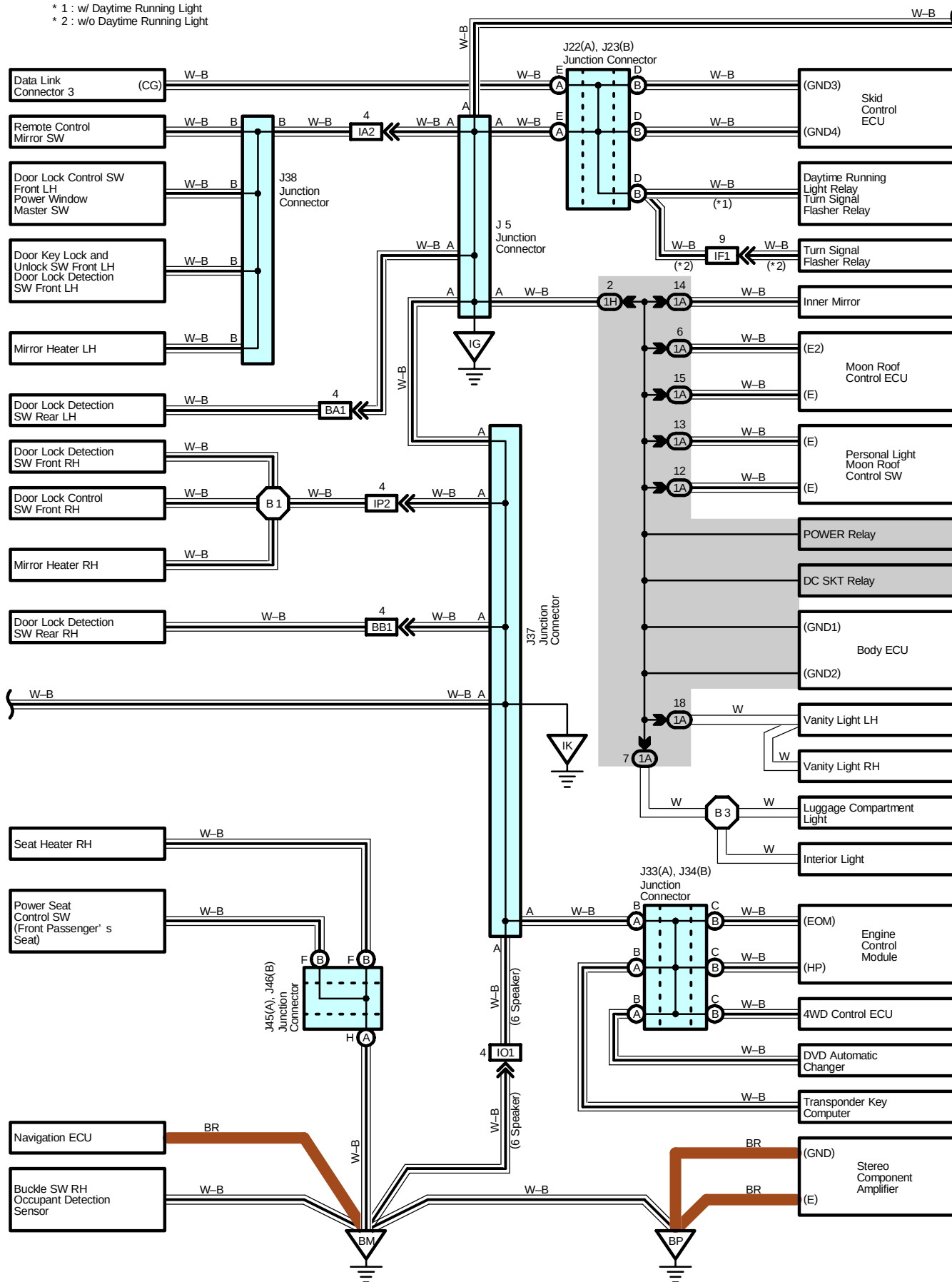




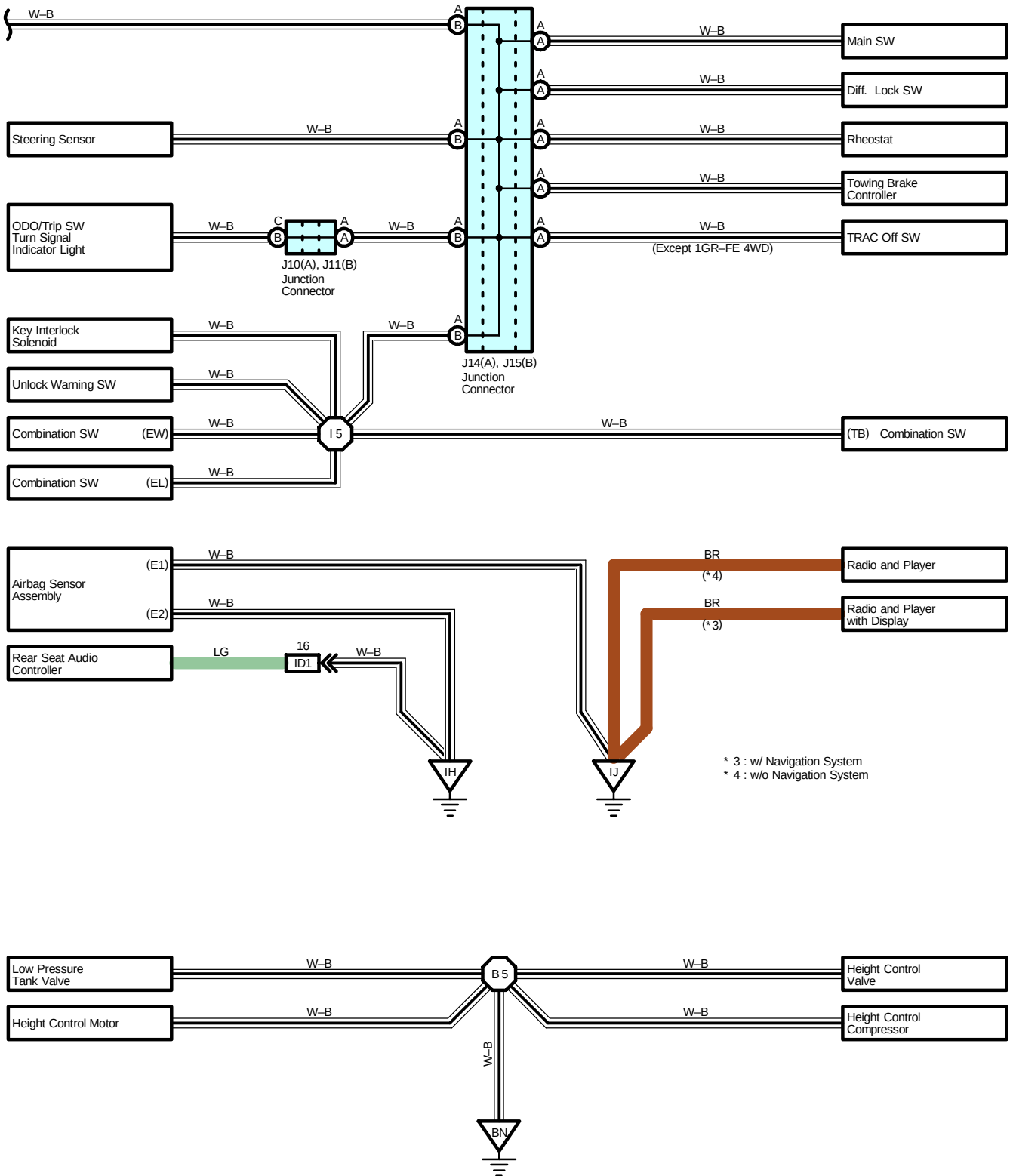
I GROUND POINT



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



I GROUND POINT



 : Parts Location

Code		See Page	Code		See Page	Code		See Page
J2	A	33 (2UZ-FE)	J22	A	38	J38		40
		35 (1GR-FE)	J23	B	38	J40	A	40
J3	B	33 (2UZ-FE)	J24		38	J41	B	40
		35 (1GR-FE)	J26		38	J43	A	42
J5		38	J27		38	J44	B	42
J10	A	38	J28		38	J45	A	42
J11	B	38	J33	A	38	J46	B	42
J14	A	38	J34	B	38			
J15	B	38	J37		38			

 : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)
3	23	Engine Room R/B No.3 (Engine Compartment Left)
4	23	Engine Room R/B No.4 (Engine Compartment Left)

 : Junction Block and Wire Harness Connector

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

 : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	46 (1GR-FE)	Engine Wire and Differential Wire (Near the Front Differential)
IA2	48	Front Door LH Wire and Instrument Panel Wire (Left Kick Panel)
ID1	48	Radio Installation Sub Assy Wire and Instrument Panel Wire (Left Kick Panel)
IF1	50	Instrument Panel Wire and Relay Wire (Behind the Instrument Panel J/B)
IM1	52	Engine Wire and Instrument Panel Wire (Right Side of Blower Unit)
IM2		
IO1	52	Instrument Panel Wire and Floor Wire (Right Kick Panel)
IP2	52	Front Door RH Wire and Instrument Panel Wire (Right Kick Panel)
IR1	52	Instrument Panel Wire and Cigarette Wire (Rear Console)
BA1	54	Rear Door No.2 Wire and Instrument Panel Wire (Left Center Pillar)
BB1	54	Rear Door No.1 Wire and Instrument Panel Wire (Right Center Pillar)
BD1	54	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BF1	54	Frame No.3 Wire and Floor No.2 Wire (Rear Side of Side Frame LH)
BH1	54	Back Door No.1 Wire and Back Door No.2 Wire (Left Side of Back Door)

I GROUND POINT



: Ground Points

Code	See Page	Ground Points Location
EA	44 (2UZ-FE)	Front Right Fender
	46 (1GR-FE)	
EB	44 (2UZ-FE)	Front Left Fender
	46 (1GR-FE)	
EC	44 (2UZ-FE)	Right Bank Cylinder Head
ED	44 (2UZ-FE)	Left Bank Cylinder Head
EE	44 (2UZ-FE)	Rear Side of Right Bank Cylinder Block
	46 (1GR-FE)	
EF	44 (2UZ-FE)	Rear Side of Left Bank Cylinder Block
	46 (1GR-FE)	
IG	48	Left Kick Panel
IH	48	Instrument Panel Brace LH
II	48	Instrument Panel Brace RH
IJ		
IK	48	Right Kick Panel
BL	54	Floor Seat Crossmember LH
BM	54	Floor Seat Crossmember RH
BN	54	Near the No.5 Crossmember of Side Frame LH
BO	54	Rear Pillar LH
BP	54	Rear Pillar RH

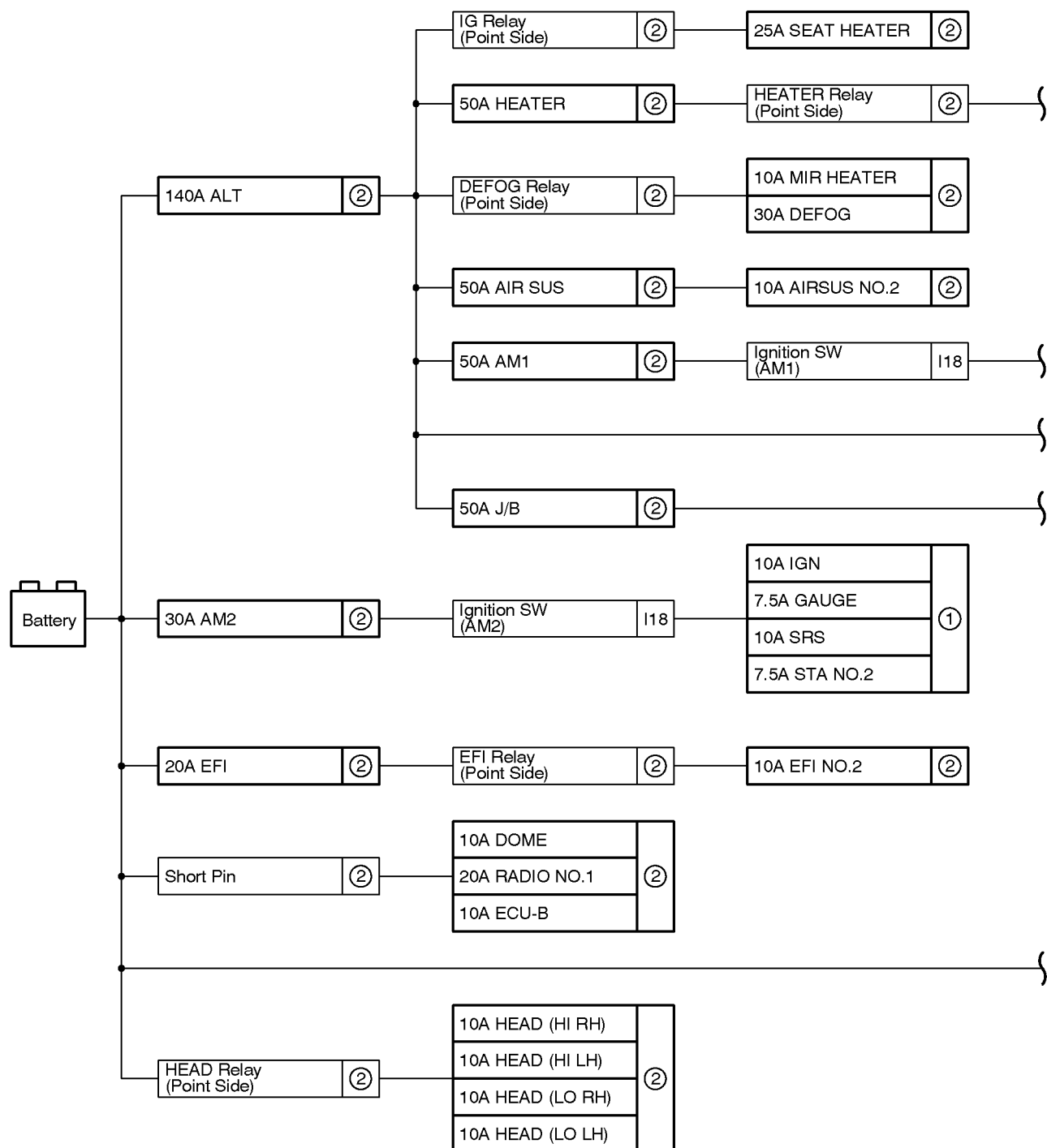


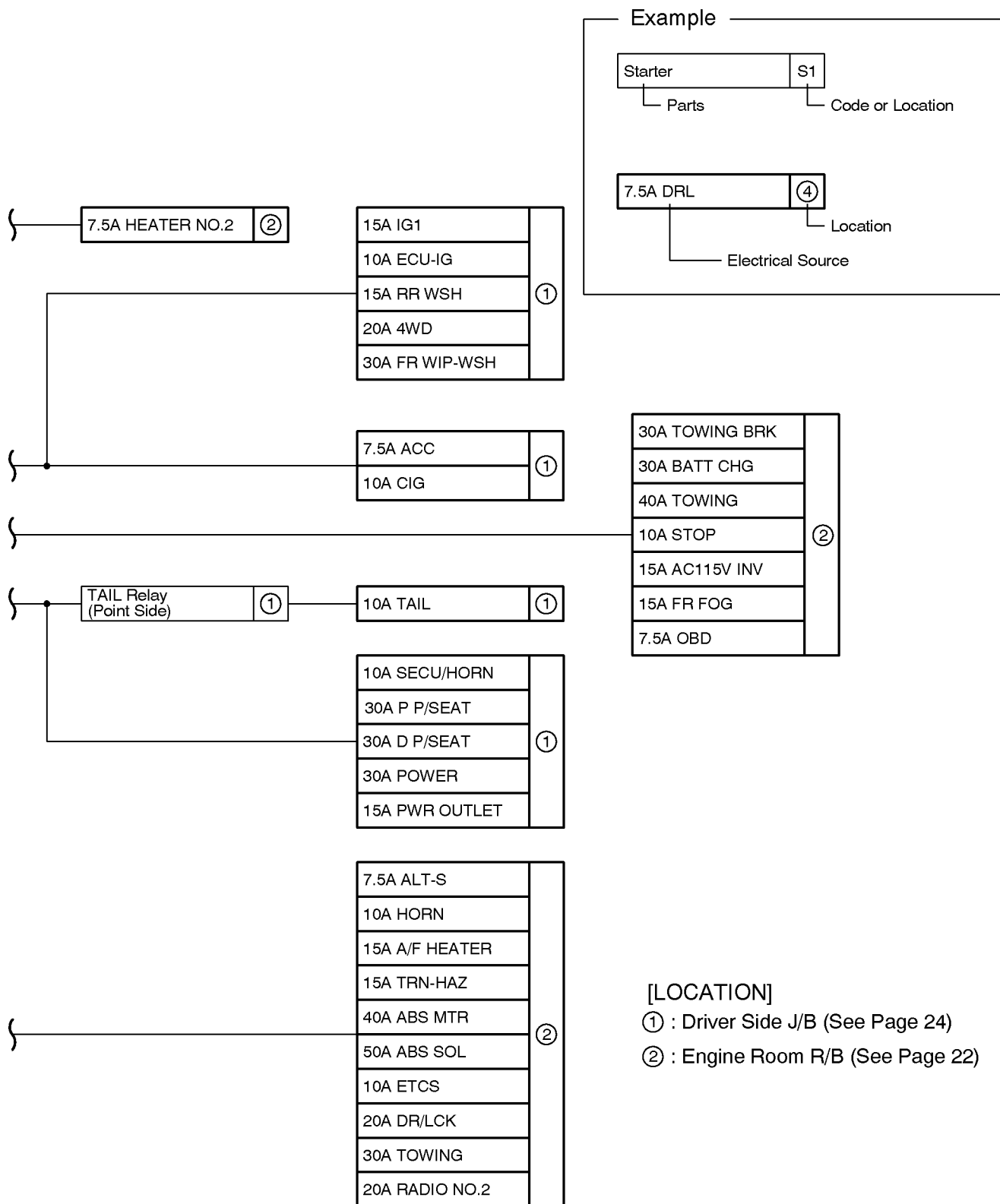
: Splice Points

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	44 (2UZ-FE)	Engine Room Main Wire	I7	50	Instrument Panel Wire
	46 (1GR-FE)		B1	54	Front Door RH Wire
E3	44 (2UZ-FE)	Engine Wire	B3	54	Roof Wire
E7	44 (2UZ-FE)	Engine Room Main Wire	B5	54	Frame Wire
	46 (1GR-FE)		B6	54	Back Door No.1 Wire
E12	46 (1GR-FE)	Engine Wire	B8	54	Back Door No.2 Wire
I5	50	Instrument Panel Wire			

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.





J POWER SOURCE (Current Flow Chart)

Driver Side J/B (See Page 24)

Fuse		System	Page
7.5A	ACC	Air Conditioning	346
		Automatic Light Control	136
		Door Lock Control	200
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
		Headlight	126
		Interior Light	150
		Key Reminder	172
		Light Auto Turn Off	138
		Multiplex Communication System	100
		Navigation System, Radio and Player (w/ Navigation System), TOYOTA Parking Assist (Rear View Monitor)	—
		Power Outlet (12V)	292
		Power Window	190
		Radio and Player (w/o Navigation System Except 6 Speaker)	328
		Radio and Player (6 Speaker)	334
		Rear Window Defogger and Mirror Heater	314
		Rear Wiper and Washer	184
		Remote Control Mirror	288
		Seat Belt Warning	174
		Shift Lock	286
		Theft Deterrent	220
		Wireless Door Lock Control	210
7.5A	GAUGE	Active Height Control Suspension and Electric Modulated Air Suspension	266
		Air Conditioning	346
		Charging	72
		Combination Meter	338
		Cruise Control (1GR-FE)	252
		Cruise Control (2UZ-FE)	246
		Door Lock Control	200
		Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
		Interior Light	150
		Key Reminder	172
		Moon Roof	282
		Multi Mode 4WD	272
		Multiplex Communication System	100
		Navigation System, Radio and Player (w/ Navigation System), TOYOTA Parking Assist (Rear View Monitor)	—
		Seat Belt Warning	174
		SRS	277

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

Fuse		System	Page
7.5A	GAUGE	Taillight and Illumination	158
		Theft Deterrent	220
		VSC	258
		Wireless Door Lock Control	210
7.5A	STA NO.2	Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
		Starting	62
10A	CIG	Cigarette Lighter	290
10A	ECU-IG	Active Height Control Suspension and Electric Modulated Air Suspension	266
		Automatic Light Control	136
		Door Lock Control	200
		Headlight	126
		Interior Light	150
		Key Reminder	172
		Light Auto Turn Off	138
		Moon Roof	282
		Multiplex Communication System	100
		Power Window	190
		Rear Window Defogger and Mirror Heater	314
		Rear Wiper and Washer	184
		Seat Belt Warning	174
		Shift Lock	286
		Theft Deterrent	220
		VSC	258
		Wireless Door Lock Control	210
10A	IGN	Air Conditioning	346
		Combination Meter	338
		Cruise Control (1GR-FE)	252
		Cruise Control (2UZ-FE)	246
		Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
		Engine Immobiliser System	96
		VSC	258
10A	SECU/HORN	Multiplex Communication System	100
		Theft Deterrent	220
		Wireless Door Lock Control	210
10A	SRS	SRS	277
10A	TAIL	Combination Meter	338
		Engine Control (1GR-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	TAIL	Taillight and Illumination	158
		Trailer Towing	310
15A	IG1	Air Conditioning	346
		Automatic Glare-Resistant EC Mirror with Compass	296
		Back-Up Light	170
		Charging	72
		Cruise Control (1GR-FE)	252
		Cruise Control (2UZ-FE)	246
		Door Lock Control	200
		Electric Tension Reducer	300
		Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Headlight	126
		Multi Mode 4WD	272
		Multiplex Communication System	100
		Navigation System, Radio and Player (w/ Navigation System), TOYOTA Parking Assist (Rear View Monitor)	---
		Power Outlet (115V)	294
		Rear Window Defogger and Mirror Heater	314
		Seat Belt Warning	174
		Seat Heater	306
		Stop Light	166
		Taillight and Illumination	158
		Trailer Towing	310
		Turn Signal and Hazard Warning Light (w/ Daytime Running Light)	142
		Turn Signal and Hazard Warning Light (w/o Daytime Running Light)	146
		VSC	258
15A	PWR OUTLET	Power Outlet (12V)	292
15A	RR WSH	Multiplex Communication System	100
		Rear Wiper and Washer	184
20A	4WD	Multi Mode 4WD	272
30A	D P/SEAT	Power Seat	302
30A	FR WIP-WSH	Front Wiper and Washer	180
30A	P P/SEAT	Power Seat	302
30A	POWER	Door Lock Control	200
		Moon Roof	282
		Multiplex Communication System	100
		Power Window	190
		Rear Wiper and Washer	184
		Theft Deterrent	220
		Wireless Door Lock Control	210

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

Engine Room R/B (See Page 22)

Fuse		System	Page
7.5A	ALT-S	Charging	72
7.5A	HEATER NO.2	Air Conditioning	346
7.5A	OBD	Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
10A	AIRSUS NO.2	Active Height Control Suspension and Electric Modulated Air Suspension	266
10A	DOME	Active Height Control Suspension and Electric Modulated Air Suspension	266
		Air Conditioning	346
		Combination Meter	338
		Cruise Control (1GR-FE)	252
		Cruise Control (2UZ-FE)	246
		Door Lock Control	200
		Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
		Garage Door Opener	178
		Interior Light	150
		Key Reminder	172
		Light Auto Turn Off	138
		Moon Roof	282
		Multi Mode 4WD	272
		Multiplex Communication System	100
		Navigation System, Radio and Player (w/ Navigation System), TOYOTA Parking Assist (Rear View Monitor)	190
		Power Window	190
		Radio and Player (w/o Navigation System Except 6 Speaker)	328
		Radio and Player (6 Speaker)	334
		Rear Wiper and Washer	184
		Seat Belt Warning	174
		Taillight and Illumination	158
		Theft Deterrent	220
		VSC	258
		Wireless Door Lock Control	210
10A	ECU-B	Air Conditioning	346
		Automatic Light Control	136
		Door Lock Control	200
		Engine Immobiliser System	96
		Headlight	126
		Interior Light	150
		Key Reminder	172
		Light Auto Turn Off	138

* 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	Multiplex Communication System	100
		Power Window	190
		Rear Window Defogger and Mirror Heater	314
		Rear Wiper and Washer	184
		Seat Belt Warning	174
		Theft Deterrent	220
		VSC	258
		Wireless Door Lock Control	210
10A	EFI NO.2	Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Engine Control (2UZ-FE)	74
10A	ETCS	Cruise Control (1GR-FE)	252
		Cruise Control (2UZ-FE)	246
		Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
10A	HEAD (HI LH)	Front Fog Light	132
		Headlight	126
		Multiplex Communication System	100
10A	HEAD (HI RH)	Combination Meter	338
		Headlight	126
		Multiplex Communication System	100
10A	HEAD (LO LH)	Headlight	126
		Multiplex Communication System	100
10A	HEAD (LO RH)	Headlight	126
		Multiplex Communication System	100
10A	HORN	Horn	298
		Multiplex Communication System	100
		Theft Deterrent	220
		Wireless Door Lock Control	210
10A	MIR HEATER	Multiplex Communication System	100
		Rear Window Defogger and Mirror Heater	314
10A	STOP	Active Height Control Suspension and Electric Modulated Air Suspension	266
		Cruise Control (1GR-FE)	252
		Cruise Control (2UZ-FE)	246
		Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
		Multiplex Communication System	100
		Shift Lock	286
		Stop Light	166

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

Fuse		System	Page
10A	STOP	Trailer Towing	310
		VSC	258
15A	AC115V INV	Power Outlet (115V)	294
15A	A/F HEATER	Engine Control (1GR-FE)	86
15A	FR FOG	Front Fog Light	132
		Multiplex Communication System	100
15A	TRN-HAZ	Headlight	126
		Multiplex Communication System	100
		Trailer Towing	310
		Turn Signal and Hazard Warning Light (w/ Daytime Running Light)	142
		Turn Signal and Hazard Warning Light (w/o Daytime Running Light)	146
20A	DR/LCK	Door Lock Control	200
		Multiplex Communication System	100
		Power Window	190
		Theft Deterrent	220
		Wireless Door Lock Control	210
20A	EFI	Air Conditioning	346
		Cruise Control (1GR-FE)	252
		Cruise Control (2UZ-FE)	246
		Electronically Controlled Transmission and A/T Indicator (1GR-FE)	238
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	230
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
		Navigation System, Radio and Player (w/ Navigation System), TOYOTA Parking Assist (Rear View Monitor)	328
		Radio and Player (w/o Navigation System Except 6 Speaker)	334
		Radio and Player (6 Speaker)	288
20A	RADIO NO.1	Navigation System, Radio and Player (w/ Navigation System), TOYOTA Parking Assist (Rear View Monitor)	320
		Radio and Player (w/o Navigation System Except 6 Speaker)	328
		Radio and Player (6 Speaker)	334
20A	RADIO NO.2	Navigation System, Radio and Player (w/ Navigation System), TOYOTA Parking Assist (Rear View Monitor)	320
		Radio and Player (w/o Navigation System Except 6 Speaker)	328
25A	SEAT HEATER	Seat Heater	306
30A	AM2	Charging	72
		Engine Control (1GR-FE)	86
		Engine Control (2UZ-FE)	74
		Ignition (1GR-FE)	68
		Ignition (2UZ-FE)	64
30A	BATT CHG	Starting	62
30A	BATT CHG	Trailer Towing	310

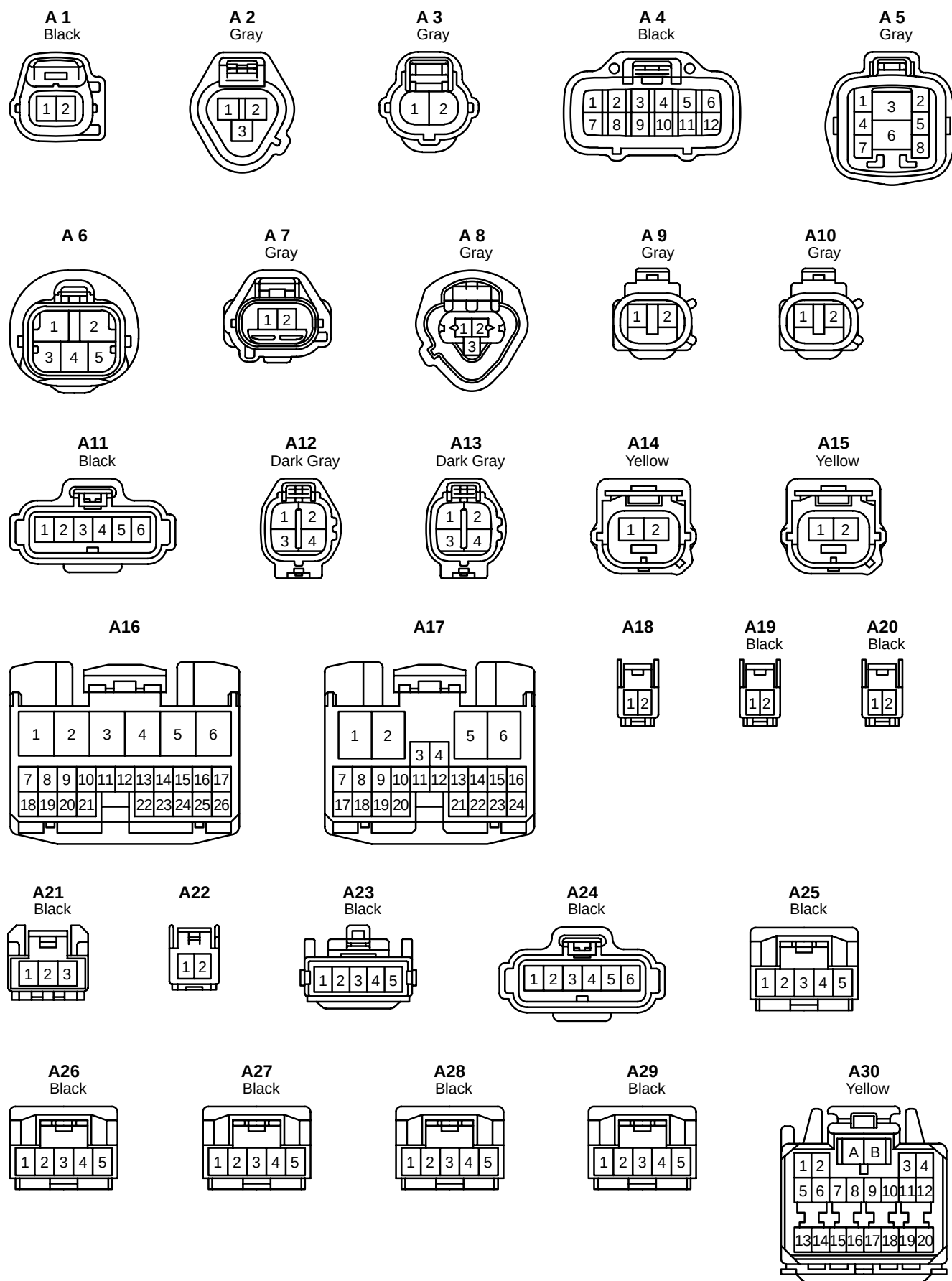
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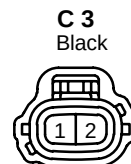
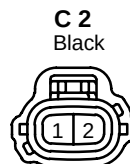
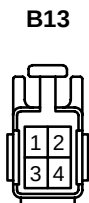
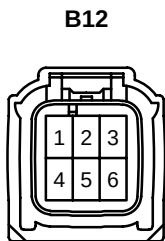
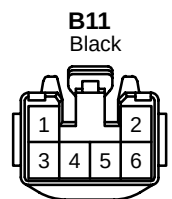
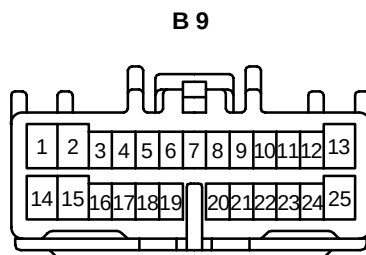
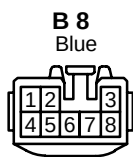
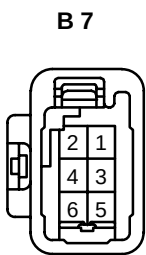
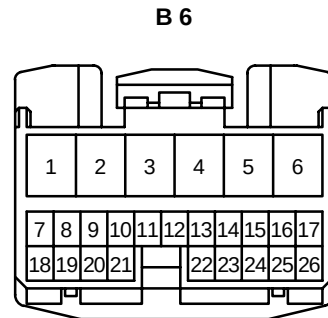
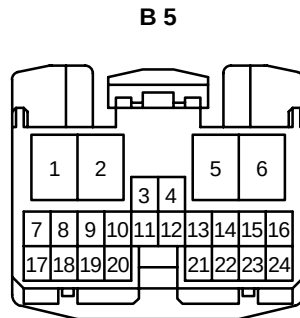
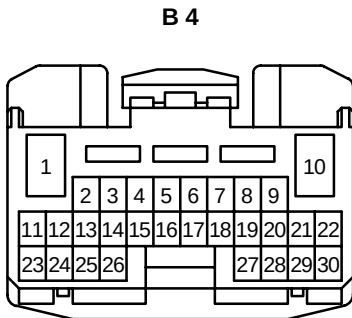
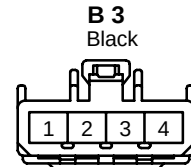
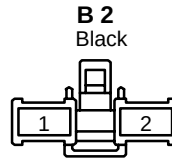
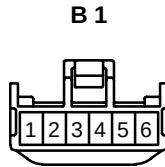
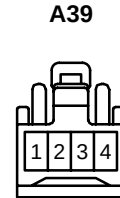
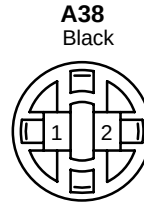
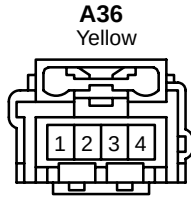
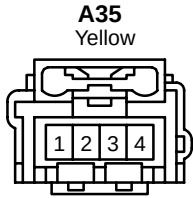
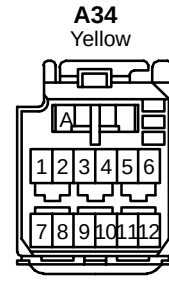
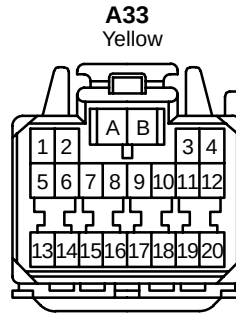
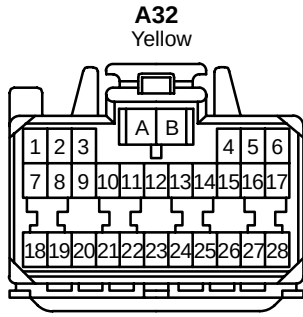
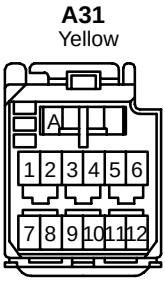
J POWER SOURCE (Current Flow Chart)

Fuse		System	Page
30A	DEFOG	Engine Control (1GR-FE)	86
		Multiplex Communication System	100
		Rear Window Defogger and Mirror Heater	314
30A	TOWING	Trailer Towing	310
30A	TOWING BRK	Trailer Towing	310
40A	ABS MTR	VSC	258
40A	TOWING	Trailer Towing	310
50A	ABS SOL	VSC	258
50A	AIR SUS	Active Height Control Suspension and Electric Modulated Air Suspension	266
50A	AM1	Charging	72
50A	HEATER	Air Conditioning	346
50A	J/B	Automatic Light Control	136
		Light Auto Turn Off	138
		Multiplex Communication System	100
		Taillight and Illumination	158
		Theft Deterrent	220
		Wireless Door Lock Control	210
140A	ALT	Charging	72
		Multiplex Communication System	100
		Rear Window Defogger and Mirror Heater	314
		Taillight and Illumination	158

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

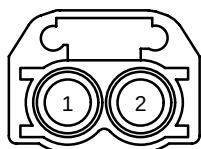
K CONNECTOR LIST





K CONNECTOR LIST

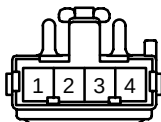
C 4
(1GR-FE) Black



C 4
(2UZ-FE) Dark Gray



C 5



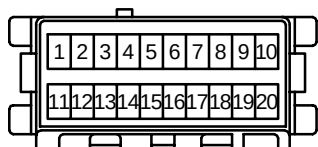
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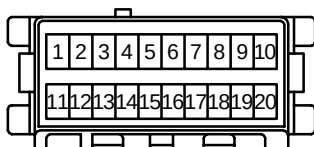
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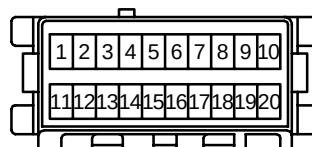
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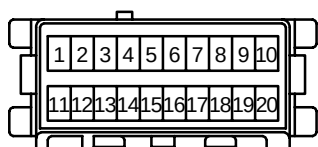
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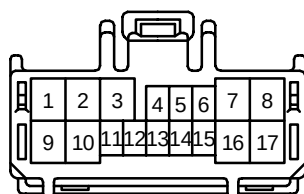
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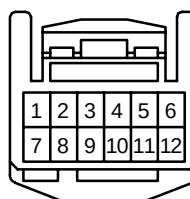
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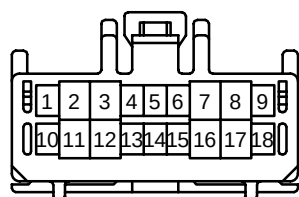
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C13
Black



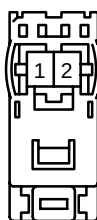
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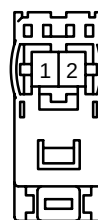
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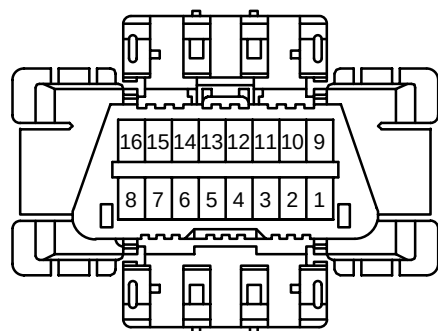
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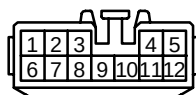
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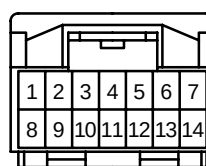
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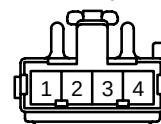
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Black



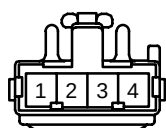
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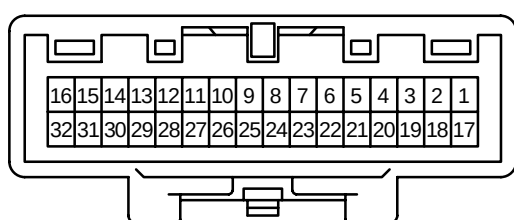
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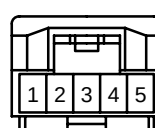
D 5
Blue



D 6

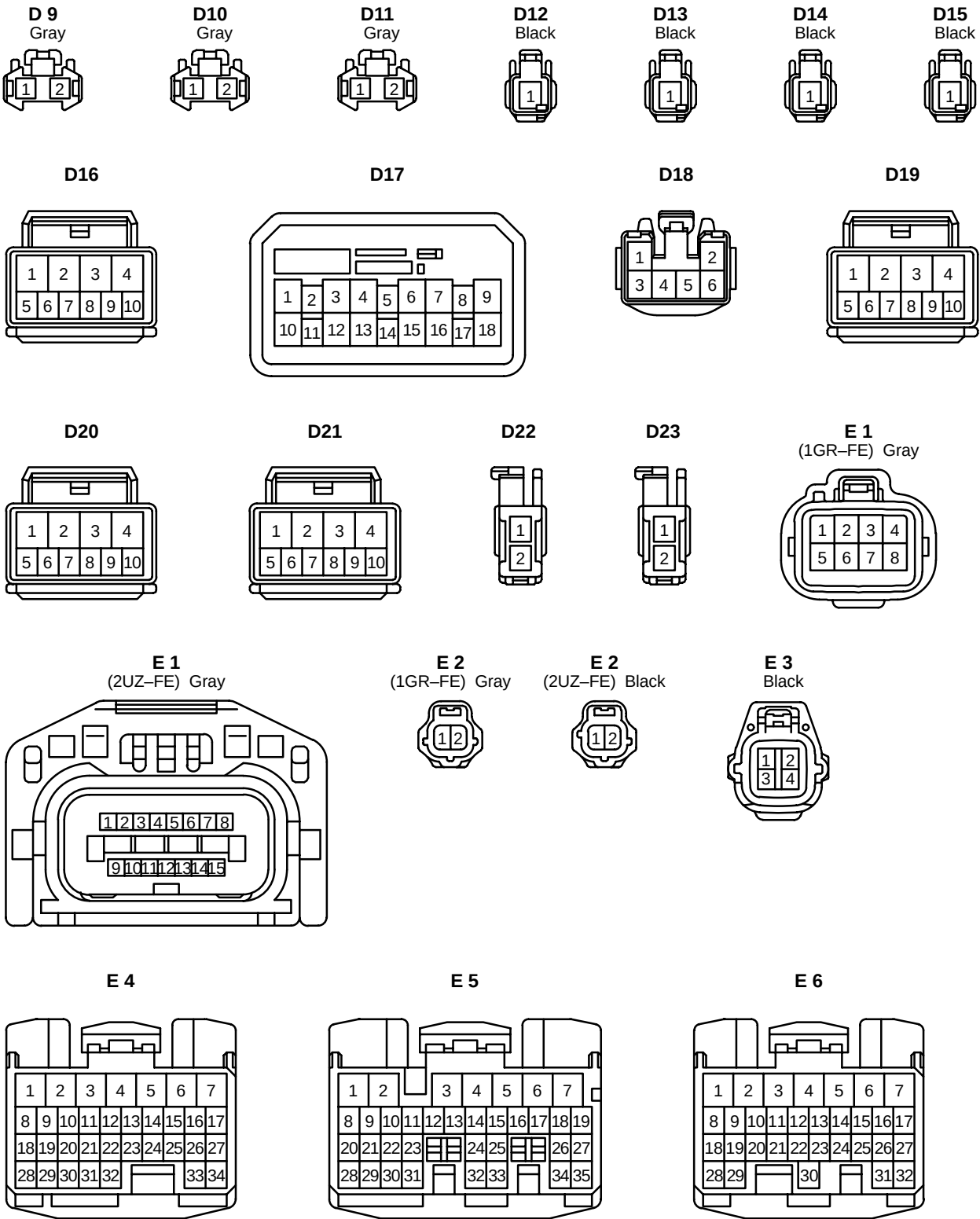


D 7



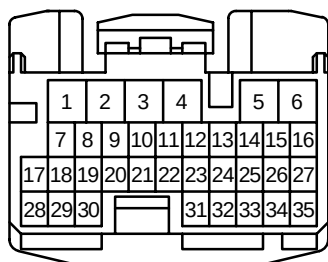
D 8
Gray



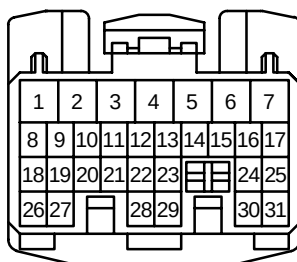


K CONNECTOR LIST

E 7



E 8



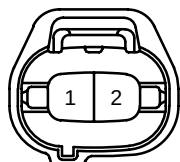
F 1
Brown



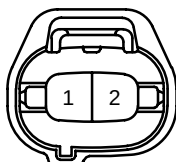
F 2
Brown



F 3
Gray



F 4
Gray



F 5
Gray



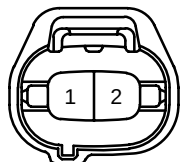
F 6
Gray



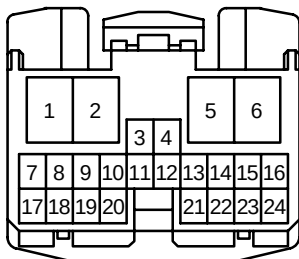
F 7
Black



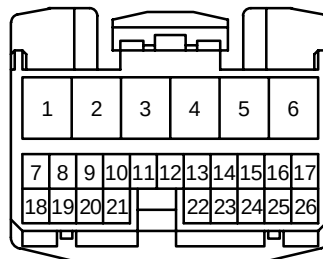
F 8
Gray



F 9



F 10



F 11
Black



F 12



F 13



F 14
Gray



G 1



G 2
Green



G 3
Black



H 1
Black



H 2
Brown



H 3
Black



H 4
Brown



H 5
Dark Gray



H 6
Dark Gray



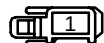
H 7
Dark Gray



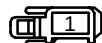
H 8
Dark Gray



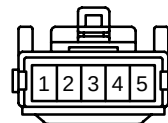
H 9
Black



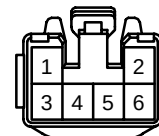
H 10
Black



H 11
Black

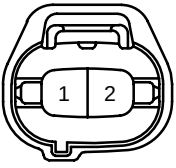
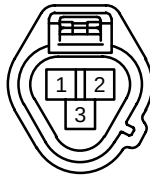
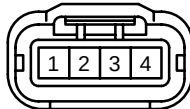
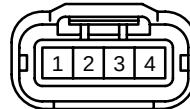
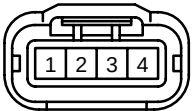
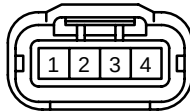
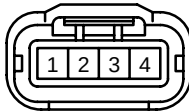
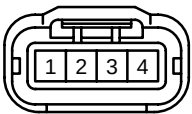
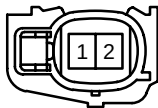
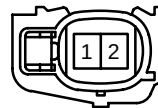
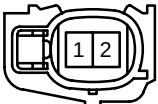
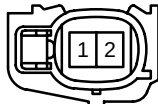
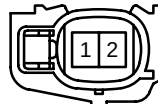
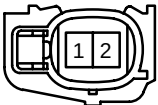
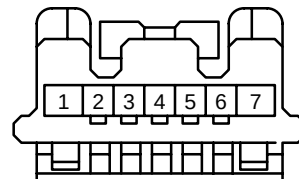
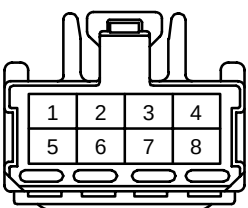
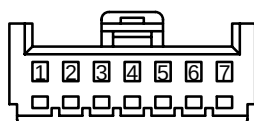
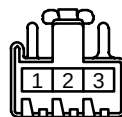
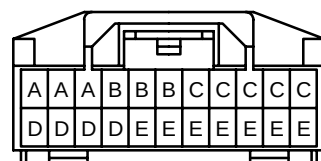


H 12
Gray



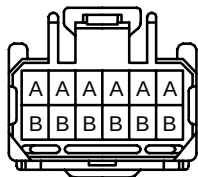
*1 : w/ Rear Spoiler

*2 : w/o Rear Spoiler

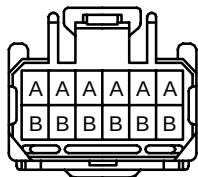
H13
Black**H14**
Gray**H15**
Black**H16**
Black**H17**
Black**H18**
(*1) Gray**H18**
(*2) Brown**I1**
Black**I2**
Black**I3**
Black**I4**
Black**I5**
Black**I6**
Black**I7**
Black**I8**
Black**I9**
(1GR-FE) Gray**I9**
(2UZ-FE) Blue**I10**
(1GR-FE) Gray**I10**
(2UZ-FE) Blue**I11**
(1GR-FE) Gray**I11**
(2UZ-FE) Blue**I12**
(1GR-FE) Gray**I12**
(2UZ-FE) Blue**I13**
(1GR-FE) Gray**I13**
(2UZ-FE) Blue**I14**
(1GR-FE) Gray**I14**
(2UZ-FE) Blue**I15**
Blue**I16**
Blue**I17**
Black**I18****I19**
Black**I20****J1**

K CONNECTOR LIST

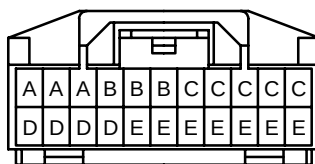
J 2
Blue



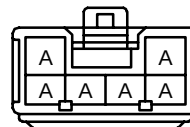
J 3
Blue



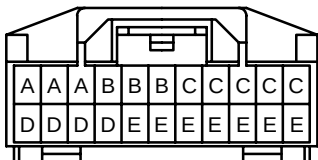
J 4



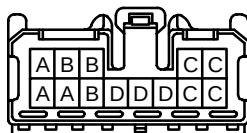
J 5



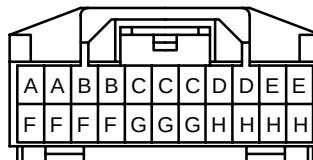
J 6



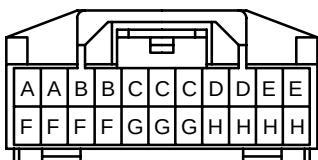
J 7
Blue



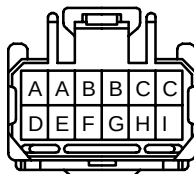
J 8
Blue



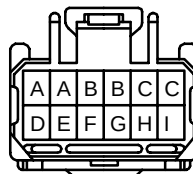
J 9
Blue



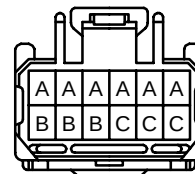
J10
Black



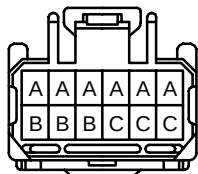
J11
Black



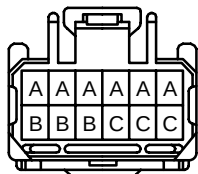
J12
Gray



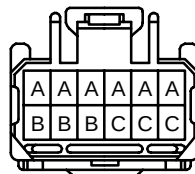
J13
Gray



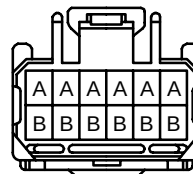
J14
Gray



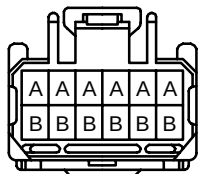
J15
Gray



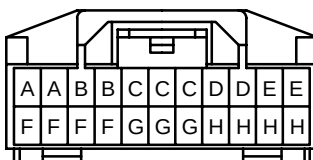
J16
Blue



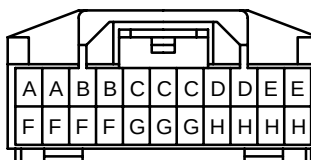
J17
Blue



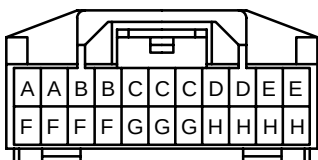
J18
Blue



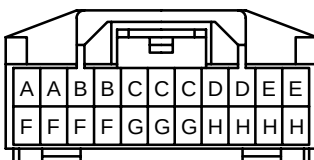
J19
Blue



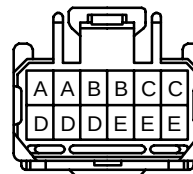
J20
Blue



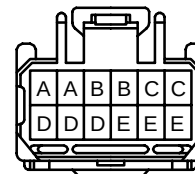
J21
Blue

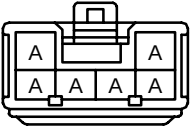
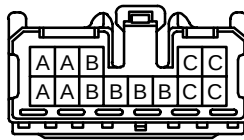
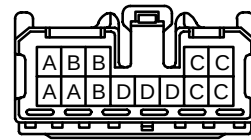
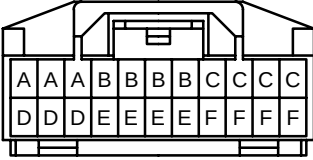
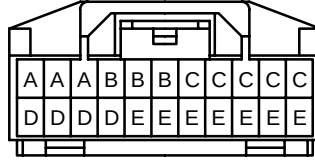
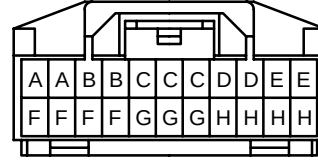
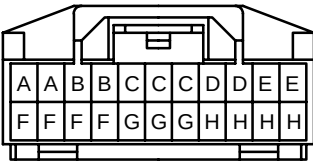
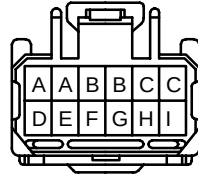
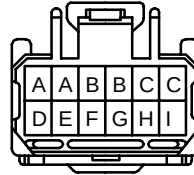
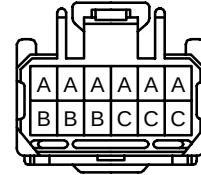
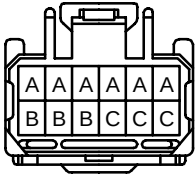
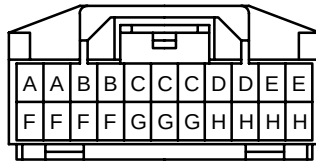
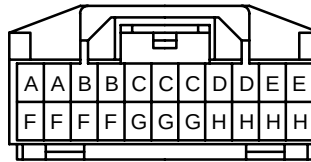
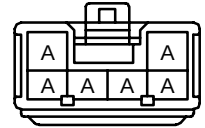
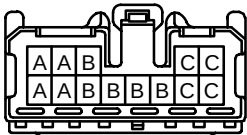
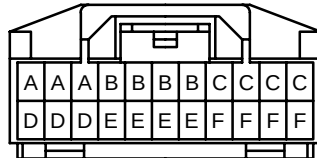
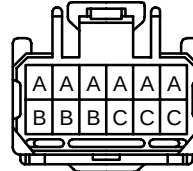
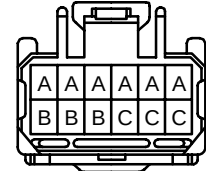
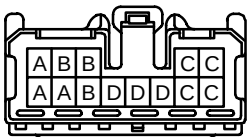
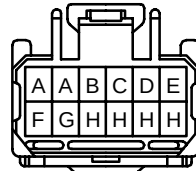
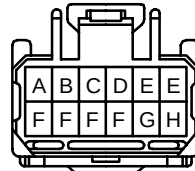
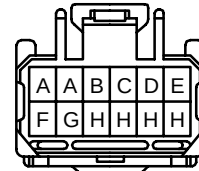


J22
Black



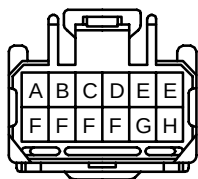
J23
Black



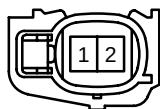
J24**J25**
Blue**J26****J27****J28**
(1GR-FE)**J28**
(2UZ-FE)**J29**
Blue**J30**
Blue**J31**
Black**J32**
Black**J33**
Gray**J34**
Gray**J35**
Blue**J36**
Blue**J37****J38****J39****J40****J41****J42****J43****J44****J45**

K CONNECTOR LIST

J46



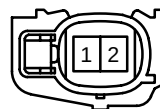
K 1
(1GR-FE) Black



K 1
(2UZ-FE) Dark Gray



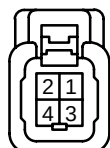
K 2
(1GR-FE) Black



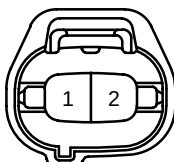
K 2
(2UZ-FE) Dark Gray



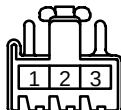
K 3
Blue



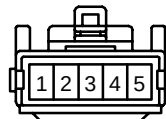
L 1
Black



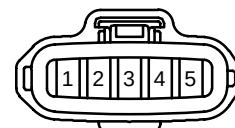
L 2



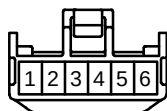
L 3



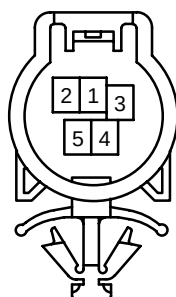
M 1
Black



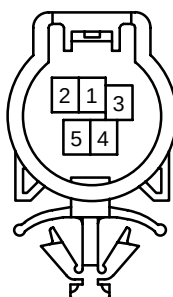
M 2
Black



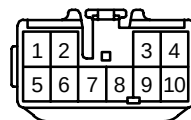
M 3



M 4



M 5



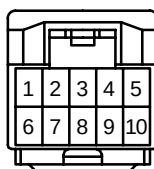
N 1
Gray



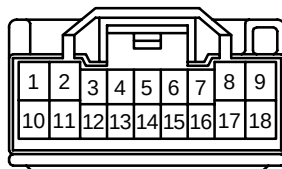
N 2
Gray



N 3



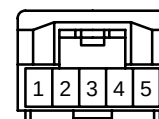
N 4



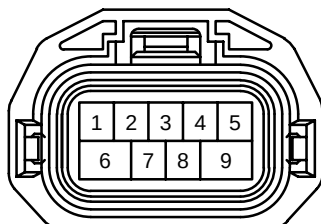
O 1
Gray



O 2



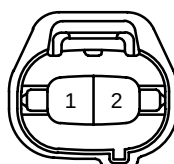
P 1
Gray



P 2
Black



P 3
Gray



P 4
Black



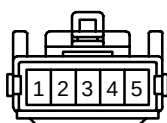
P 5



P 6



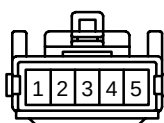
P 7



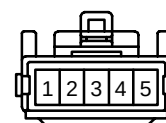
P 8

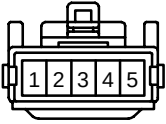
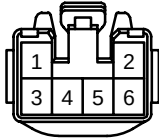
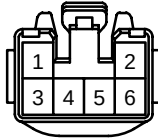
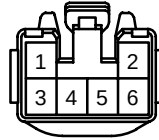
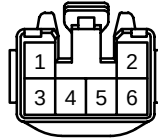
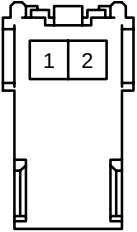
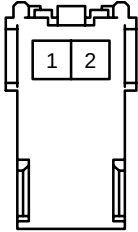
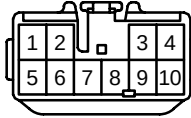
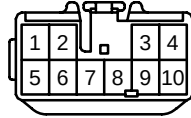
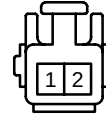
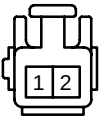
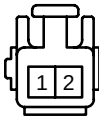
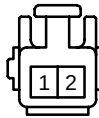
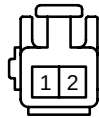
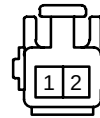
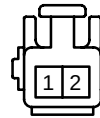
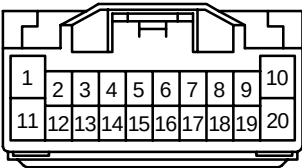
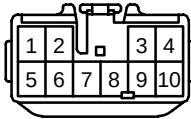
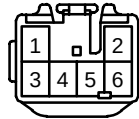
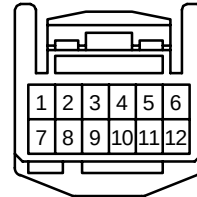
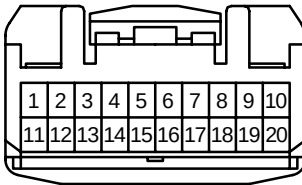
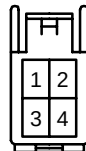
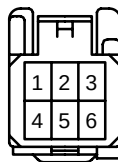
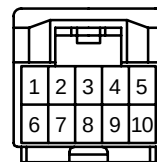
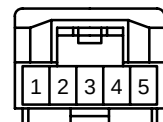
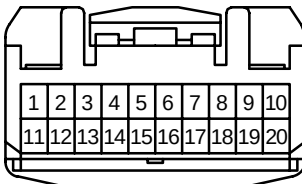
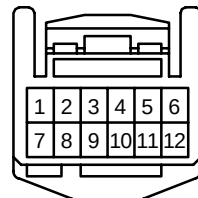
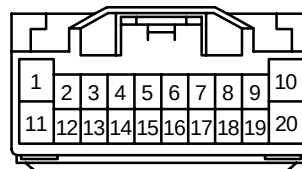


P 9

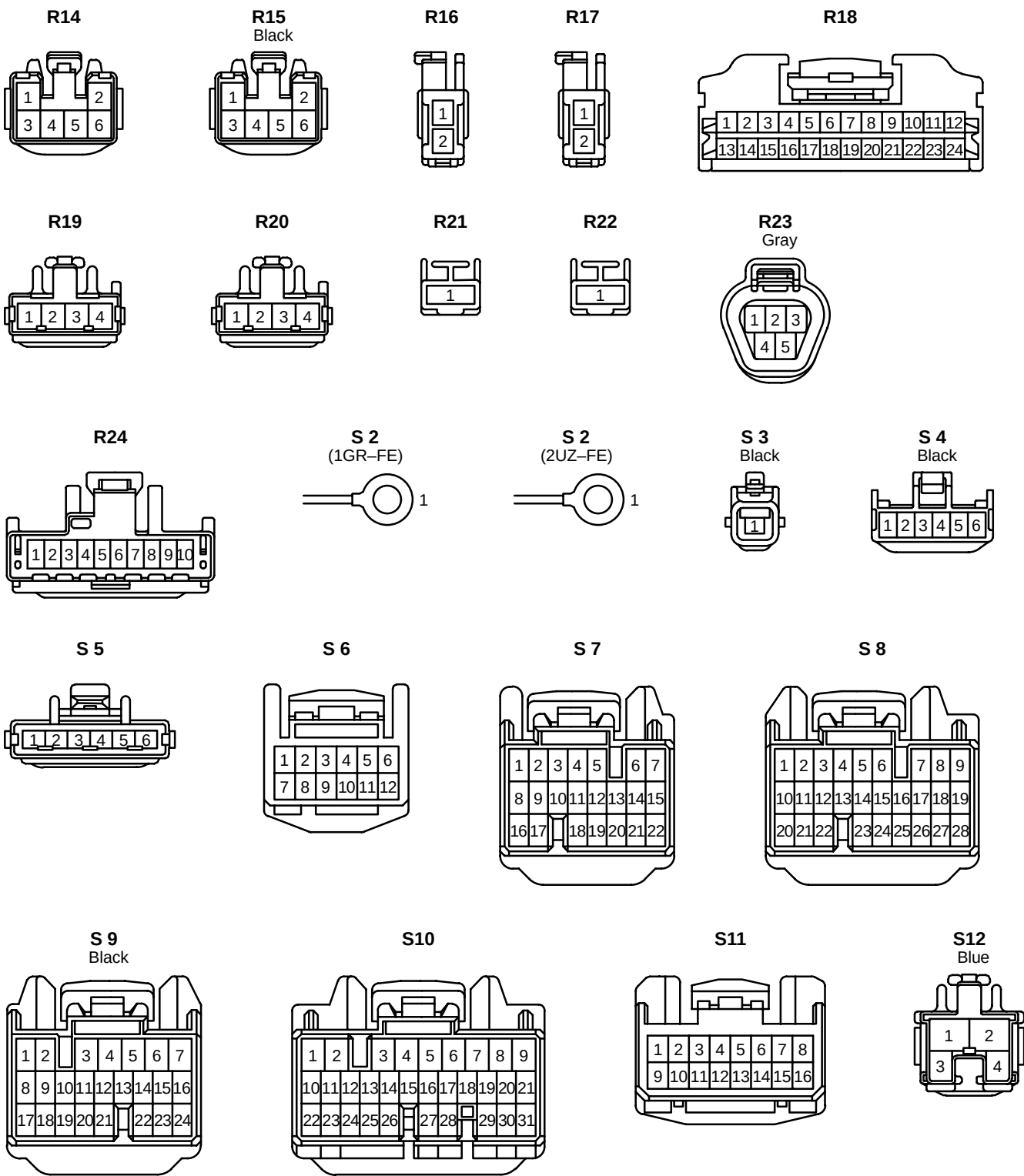


P10

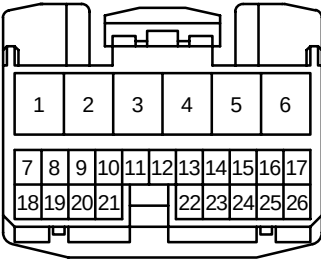


P11**P12**
Black**P13**
Black**P14**
Black**P15**
Black**P16**
Yellow**P17**
Yellow**P18**
Black**P19**
Black**P20**
Black**P21**
Black**P22**
Black**P23**
Black**P24**
Black**P25**
Black**P26**
Black**R 1****R 2****R 3****R 4****R 5****R 6****R 7**
Blue**R 8**
Black**R 9**
Gray**R10****R11****R12****R13**
Blue

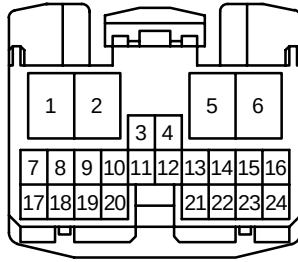
K CONNECTOR LIST



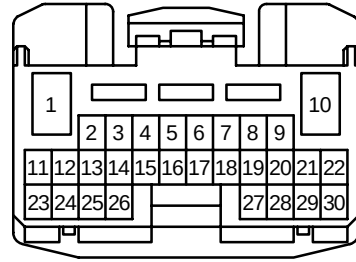
S13



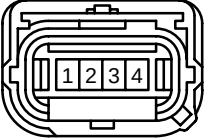
S14



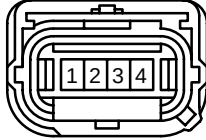
S15



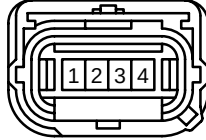
S16
Yellow



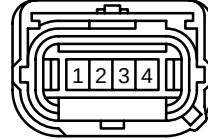
S17
Yellow



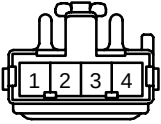
S18
Yellow



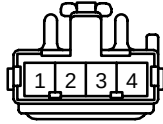
S19
Yellow



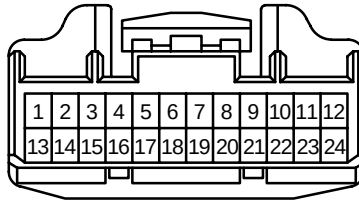
S20



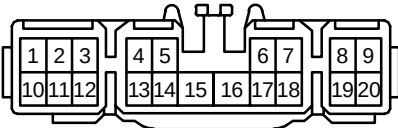
S21



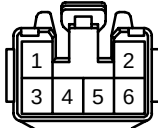
S22



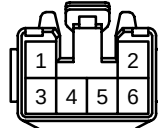
S23



S24



S25



S26
Yellow



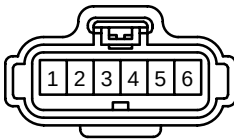
S27
Yellow



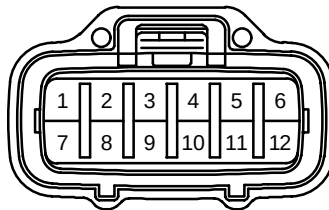
T 1
Black



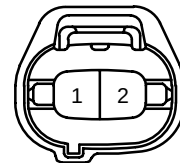
T 2
Black



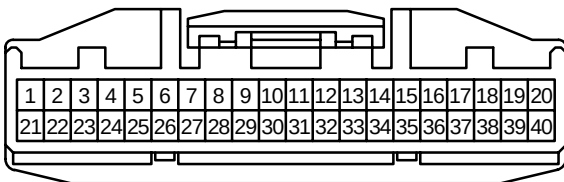
T 3
Black



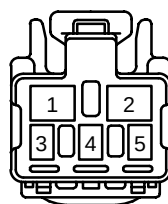
T 4
Black



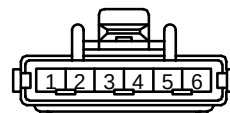
T 5



T 6

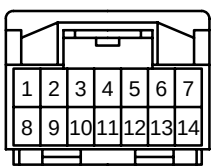


T 7
Blue



K CONNECTOR LIST

T 8



T 9
Gray



T10



T11



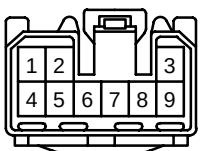
T12



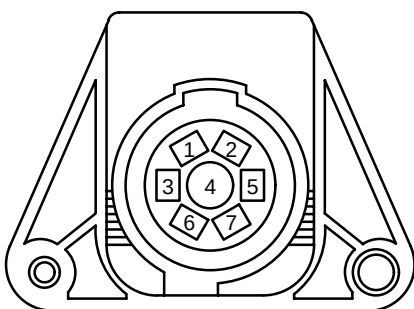
T13



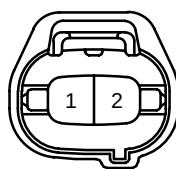
T14



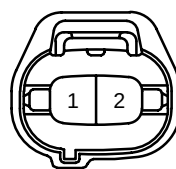
T15
Black



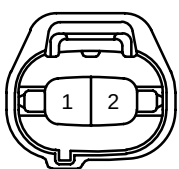
V 1
Brown



V 2
(1GR-FE) Gray



V 2
(2UZ-FE) Black



V 3
Black



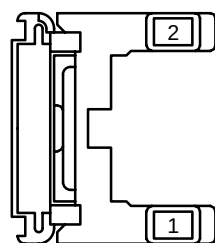
V 4
Black



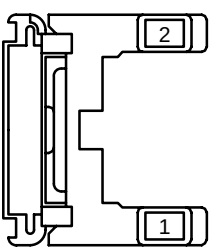
V 5
Black



V 6



V 7



V 8
Black



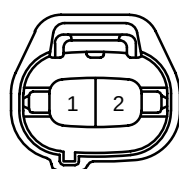
V 9



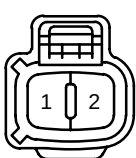
V10
Blue



V11
Black



W 1
Black



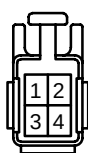
W 2
Dark Gray



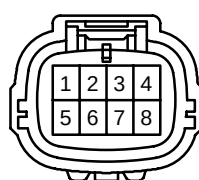
W 3
Black



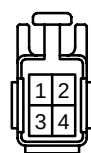
W 4



Y 1
Black



Z 1



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 4	Body ECU	90980-12151
A 2	A/C Lock Sensor	90980-11016	B 5	Body ECU	90980-12149
	A/C Magnetic Clutch		B 6	Body ECU	90980-12150
A 3	A/T Fluid Temp. Sensor	90980-11025	B 7	Back Door Courtesy SW	90980-11452
A 4	ABS & BA & TRAC & VSC Actuator	90980-11151		Back Door Half Latch SW	
A 5	ABS & BA & TRAC & VSC Actuator	90980-10895		Back Door Lock Detection SW	
A 6	ABS & BA & TRAC & VSC Actuator	90980-11413		Back Door Lock Motor	
A 7	ABS & BA & TRAC & VSC Actuator	90980-11009	B 8	Back Door ECU	90980-10799
A 8	ABS & BA & TRAC & VSC Actuator	90980-11451	B 9	Back Door ECU	90980-11877
A 9	ABS Speed Sensor Front LH	90980-11003	B10	Back Door Opener SW	90980-11178
A10	ABS Speed Sensor Front RH			License Plate Light	
A11	ADD Actuator	90980-11858	B11	Back Door Power Window Motor	90980-10797
A12	Air Fuel Ratio Sensor (Bank 1 Sensor 1)	90980-11178	B12	Buckle SW LH	90980-12257
A13	Air Fuel Ratio Sensor (Bank 2 Sensor 1)			Seat Position Airbag Sensor	
A14	Airbag Sensor Front LH	90980-11856	B13	Buckle SW RH	90980-10795
A15	Airbag Sensor Front RH			Occupant Detection Sensor	
A16	A/C Control Assembly	90980-12150	C 1	Camshaft Position Sensor	90980-10947
A17	A/C Control Assembly	90980-12149	C 2	Camshaft Timing Oil Control Valve LH	90980-11162
A18	A/C Evaporator Temp. Sensor	90980-11918	C 3	Camshaft Timing Oil Control Valve RH	
A19	A/C Room Temp. Sensor		C 4	Crankshaft Position Sensor (1GR-FE)	90980-12028
A20	A/C Solar Sensor			Crankshaft Position Sensor (2UZ-FE)	90980-11162
A21	A/C Solar Sensor	90980-11987	C 5	Center Speaker	90980-11013
A22	A/T Shift Lever Illumination	90980-12063	C 6	Cigarette Lighter	90980-10760
A23	Absorber Control SW	90980-10789	C 7	Cigarette Lighter Illumination	90980-11148
A24	Accel Position Sensor	90980-11858	C 8	Combination Meter	82824-35040
A25	Air Inlet Control Servo Motor	90980-11909	C 9	Combination Meter	82824-35030
A26	Air Mix Control Servo Motor		C10	Combination Meter	82824-35040
A27	Air Mix Control Servo Motor LH		C11	Combination Meter	82824-35030
A28	Air Mix Control Servo Motor RH		C12	Combination SW	90980-11672
A29	Air Vent Mode Control Servo Motor		C13	Combination SW	90980-12183
A30	Airbag Sensor Assembly	82824-50160	C14	Combination SW	90980-11594
A31	Airbag Sensor Assembly	90980-11869	C15	Cup Holder Illumination	90980-11299
A32	Airbag Sensor Assembly	90980-11872	C16	Curtain Shield Airbag Squib LH	90980-12219
A33	Airbag Sensor Assembly	82824-50150	C17	Curtain Shield Airbag Squib RH	
A34	Airbag Sensor Assembly	90980-11867	D 1	Data Link Connector 3	90980-11978
A35	Airbag Squib (Front Passenger Airbag Assembly)	90980-12160	D 2	Daytime Running Light Relay	90980-10803
	A36			Airbag Squib (Steering Wheel Pad)	
A37	Antenna Amplifier	90980-10870	D 3	Defogger SW	90980-11911
A38	Ashtray Illumination	90980-12111		Heater Control Panel	
A39	Automatic Light Control Sensor	90980-11107		Passenger Seat Belt Warning Light	
A40	ABS Speed Sensor Rear LH	90980-11900		Security Indicator Light	
A41	ABS Speed Sensor Rear RH		D 4	Diff. Lock SW	90980-11013
B 1	Back Door Power Window Control SW	90980-10957	D 5	Downhill Assist Control SW	
B 2	Blower Motor	90980-10385	D 6	DVD Automatic Changer	90980-12262
B 3	Blower Motor Controller	90980-11676	D 7	Door Control Receiver	90980-11909

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
D 8	Door Courtesy Light Front LH	90980-11148	F14	Fuel Pump	90980-11077
D 9	Door Courtesy Light Front RH			Fuel Sender	
D10	Door Courtesy Light Rear LH		G 1	Generator	90980-09365
D11	Door Courtesy Light Rear RH		G 2	Generator	90980-11964
D12	Door Courtesy SW Front LH	90980-10871	G 3	Glove Box Light	90980-11148
D13	Door Courtesy SW Front RH		H 1	Headlight LH (High)	90980-11095
D14	Door Courtesy SW Rear LH		H 2	Headlight LH (Low)	90980-11096
D15	Door Courtesy SW Rear RH		H 3	Headlight RH (High)	90980-11095
D16	Door Key Lock and Unlock SW Front LH	90980-12226	H 4	Headlight RH (Low)	90980-11096
	Door Lock Detection SW Front LH		H 5	Heated Oxygen Sensor (Bank 1 Sensor 1)	90980-10869
	Door Lock Motor Front LH		H 6	Heated Oxygen Sensor (Bank 1 Sensor 2)	90980-11028
D17	Door Lock Control SW Front LH	90980-12122	H 7	Heated Oxygen Sensor (Bank 2 Sensor 1)	90980-10869
	Power Window Master SW		H 8	Heated Oxygen Sensor (Bank 2 Sensor 2)	90980-11028
D18	Door Lock Control SW Front RH	90980-10797	H 9	Horn (High)	90980-10619
D19	Door Lock Detection SW Front RH	90980-12226	H10	Horn (Low)	
	Door Lock Motor Front RH		H11	Hazard SW	90980-10789
D20	Door Lock Detection SW Rear LH		H12	Height Control SW	90980-10797
	Door Lock Motor Rear LH		H13	Height Control Compressor	90980-11156
D21	Door Lock Detection SW Rear RH		H14	Height Control Motor	90980-10990
	Door Lock Motor Rear RH		H15	Height Control Sensor Rear LH	90980-11016
D22	Door Speaker Front LH	90980-10935	H16	Height Control Sensor Rear RH	
D23	Door Speaker Front RH		H17	Height Control Valve	90980-11143
E 1	Electronically Controlled Transmission Solenoid (1GR-FE)	90980-10891	H18	High Mounted Stop Light (w/ Rear Spoiler)	90980-11272
	Electronically Controlled Transmission Solenoid (2UZ-FE)	90980-12293		High Mounted Stop Light (w/o Rear Spoiler)	90980-11162
E 2	Engine Coolant Temp. Sensor (1GR-FE)	90980-10735	I 1	Ignition Coil and Igniter No.1	90980-11885
	Engine Coolant Temp. Sensor (2UZ-FE)	90980-10736	I 2	Ignition Coil and Igniter No.2	
E 3	Engine Hood Courtesy SW	90980-10942	I 3	Ignition Coil and Igniter No.3	
E 4	Engine Control Module	90980-12144	I 4	Ignition Coil and Igniter No.4	
E 5	Engine Control Module	90980-12145	I 5	Ignition Coil and Igniter No.5	
E 6	Engine Control Module	90980-12143	I 6	Ignition Coil and Igniter No.6	
E 7	Engine Control Module	90980-12146	I 7	Ignition Coil and Igniter No.7	
E 8	Engine Control Module	90980-12142	I 8	Ignition Coil and Igniter No.8	
F 1	Front Fog Light LH	90980-11096	I 9	Injector No.1 (1GR-FE)	90980-11875
	Front Fog Light RH			Injector No.1 (2UZ-FE)	90980-11153
F 2	Front Fog Light RH	90980-11156	I10	Injector No.2 (1GR-FE)	90980-11875
F 3	Front Parking Light LH			Injector No.2 (2UZ-FE)	90980-11153
F 4	Front Parking Light RH	90980-11020	I11	Injector No.3 (1GR-FE)	90980-11875
F 5	Front Turn Signal Light LH			Injector No.3 (2UZ-FE)	90980-11153
F 6	Front Turn Signal Light RH	90980-11599	I12	Injector No.4 (1GR-FE)	90980-11875
F 7	Front Wiper Motor			Injector No.4 (2UZ-FE)	90980-11153
F 8	Fuel Pump Resistor	90980-11156	I13	Injector No.5 (1GR-FE)	90980-11875
F 9	4WD Control ECU	90980-12149		Injector No.5 (2UZ-FE)	90980-11153
F10	4WD Control ECU	90980-12150	I14	Injector No.6 (1GR-FE)	90980-11875
F11	4WD Control SW	90980-11909		Injector No.6 (2UZ-FE)	90980-11153
F12	Foot Light LH	90980-11075	I15	Injector No.7	90980-11153
F13	Foot Light RH		I16	Injector No.8	

L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number	Code	Part Name	Part Number	
I17	Ignition Key Cylinder Light	90980-12092	J42	Junction Connector	90980-11542	
	Transponder Key Amplifier		J43	Junction Connector	90980-11661	
I18	Ignition SW	90980-11615	J44	Junction Connector		
I19	Inner Mirror	90980-11794	J45	Junction Connector		
I20	Interior Light	90980-12321	J46	Junction Connector		
J 1	Junction Connector	90980-11915	K 1	Knock Sensor 1 (1GR-FE)	90980-11875	
J 2	Junction Connector	90980-11661			Knock Sensor 1 (2UZ-FE)	90980-11166
J 3	Junction Connector			K 2	Knock Sensor 2 (1GR-FE)	90980-11875
J 4	Junction Connector	90980-11915			Knock Sensor 2 (2UZ-FE)	90980-11166
J 5	Junction Connector	90980-10976	K 3	Key Interlock Solenoid	90980-10794	
J 6	Junction Connector	90980-11915				Unlock Warning SW
J 7	Junction Connector	90980-11542	L 1	Low Pressure Tank Valve	90980-11156	
J 8	Junction Connector	90980-11915	L 2	Luggage Compartment Light	90980-12321	
J 9	Junction Connector		L 3	Lumbar Support Control SW (Driver's Seat)	90980-10789	
J10	Junction Connector	90980-11661	M 1	Mass Air Flow Meter	90980-11317	
J11	Junction Connector		M 2	Main SW	90980-10957	
J12	Junction Connector		M 3	Mirror Heater LH	90980-12189	
J13	Junction Connector					Remote Control Mirror LH
J14	Junction Connector		M 4	Mirror Heater RH		
J15	Junction Connector					Remote Control Mirror RH
J16	Junction Connector		M 5	Moon Roof Control ECU	90980-10997	
J17	Junction Connector		N 1	Noise Filter (Ignition No.1)	90980-10843	
J18	Junction Connector	90980-11915	N 2	Noise Filter (Ignition No.2)		
J19	Junction Connector		N 3	Navigation ECU	90980-11923	
J20	Junction Connector		N 4	Navigation ECU	90980-11973	
J21	Junction Connector			O 1	Oil Pressure SW	90980-11363
J22	Junction Connector	90980-11661	O 2	ODO/Trip SW	90980-11909	
J23	Junction Connector					Turn Signal Indicator Light
J24	Junction Connector	90980-10976	P 1	Park/Neutral Position SW	90980-11784	
J25	Junction Connector	90980-10803	P 2	Power Steering Oil Pressure SW	90980-11428	
J26	Junction Connector	90980-11542	P 3	Pressure SW	90980-11149	
J27	Junction Connector		P 4	Parking Brake SW	90980-10871	
J28	Junction Connector	90980-11915	P 5	Power Outlet (115V)	90980-10601	
J29	Junction Connector		P 6	Power Outlet (Front)	90980-10860	
J30	Junction Connector		P 7	Moon Roof Control SW	90980-10789	
J31	Junction Connector			Personal Light		
J32	Junction Connector	90980-11661	P 8	Power Outlet (Rear)	90980-10760	
J33	Junction Connector		P 9	Power Window Control SW Front RH	90980-10789	
J34	Junction Connector		P10	Power Window Control SW Rear LH		
J35	Junction Connector		90980-11915	P11		Power Window Control SW Rear RH
J36	Junction Connector	P12		Power Window Motor Front LH	90980-10797	
J37	Junction Connector	90980-10976	P13	Power Window Motor Front RH		
J38	Junction Connector	90980-11542	P14	Power Window Motor Rear LH		
J39	Junction Connector	90980-11915	P15	Power Window Motor Rear RH		
J40	Junction Connector	90980-11661	P16	Pretensioner LH	90980-12253	
J41	Junction Connector		P17	Pretensioner RH		

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

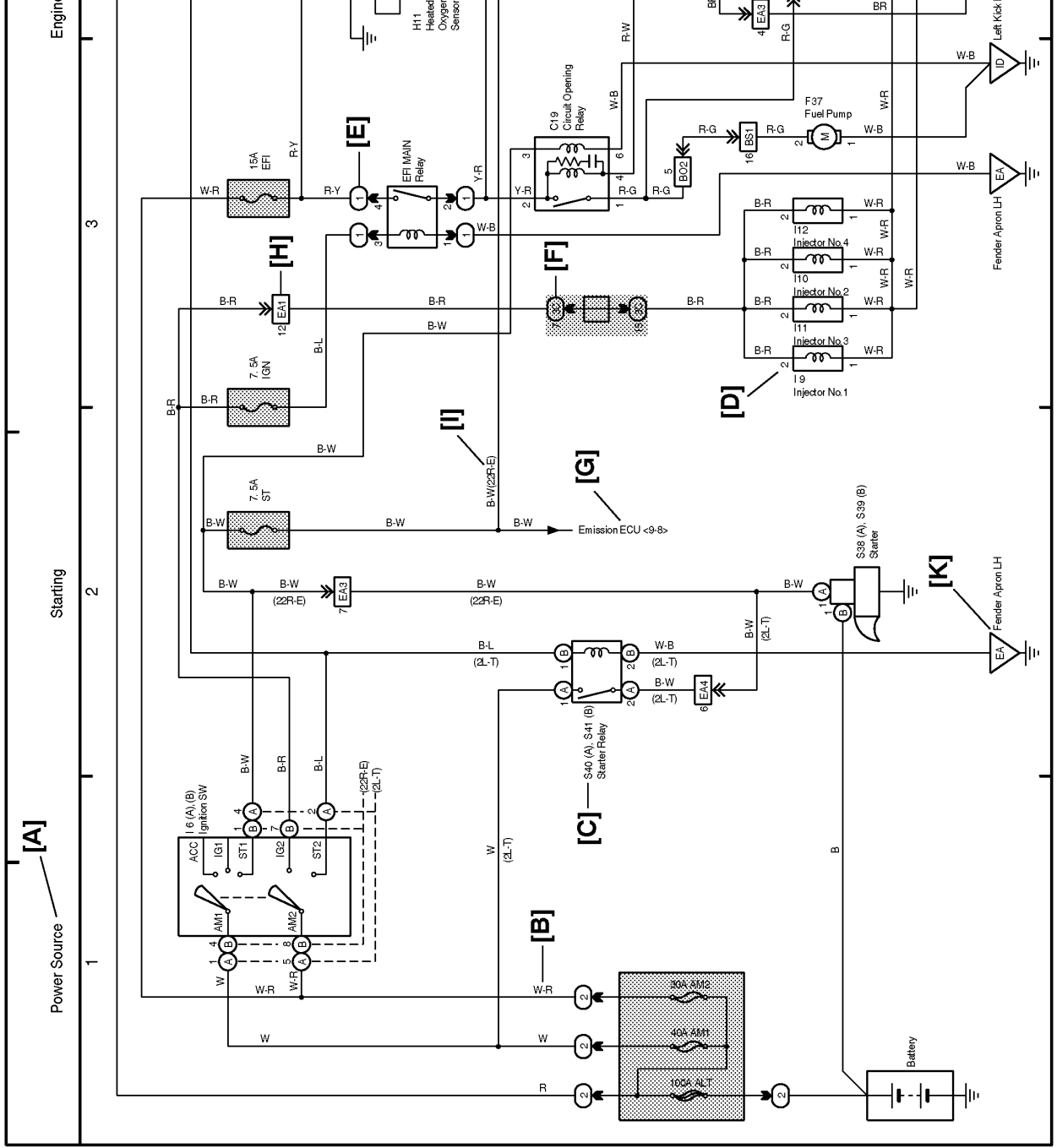
Code	Part Name	Part Number	Code	Part Name	Part Number
P18	Power Seat Control SW (Driver's Seat)	90980-10997	S 7	Skid Control ECU	90980-11638
P19	Power Seat Control SW (Front Passenger's Seat)		S 8	Skid Control ECU	90980-11637
P20	Power Seat Motor (Driver's Seat Front Vertical Control)	90980-10825	S 9	Skid Control ECU	90980-11476
P21	Power Seat Motor (Driver's Seat Lifter Control)		S10	Skid Control ECU	90980-11935
P22	Power Seat Motor (Driver's Seat Lumbar Support Control)		S11	Steering Sensor	90980-12155
P23	Power Seat Motor (Driver's Seat Reclining Control)		S12	Stop Light SW	90980-11118
P24	Power Seat Motor (Driver's Seat Slide Control)		S13	Suspension Control ECU	90980-12150
P25	Power Seat Motor (Front Passenger's Seat Reclining Control)		S14	Suspension Control ECU	90980-12149
P26	Power Seat Motor (Front Passenger's Seat Slide Control)		S15	Suspension Control ECU	90980-12151
R 1	Radio and Player	90980-12038	S16	Side Airbag Sensor Front LH	90980-12225
R 2	Radio and Player	90980-10997	S17	Side Airbag Sensor Front RH	
R 3	Radio and Player	90980-10996	S18	Side Airbag Sensor Rear LH	
R 4	Radio and Player	90980-12183	S19	Side Airbag Sensor Rear RH	
R 5	Radio and Player	90980-12259	S20	Squawker LH	90980-11013
R 6	Radio and Player with Display	90980-12211	S21	Squawker RH	
R 7	Radio and Player with Display	90980-12209	S22	Stereo Component Amplifier	90980-12200
R 8	Radio and Player with Display	90980-11923	S23	Stereo Component Amplifier	90980-10821
R 9	Radio and Player with Display	90980-11909	S24	Seat Heater LH	90980-10797
R10	Radio and Player with Display	90980-12259	S25	Seat Heater RH	
R11	Radio and Player with Display	90980-12183	S26	Side Airbag Squib LH	90980-11864
R12	Radio and Player with Display	90980-12038	S27	Side Airbag Squib RH	
R13	Rheostat	90980-10797	T 1	Theft Deterrent Horn	90980-10619
R14	Rear Combination Light LH		T 2	Throttle Control Motor	90980-11858
R15	Rear Combination Light RH			Throttle Position Sensor	
R16	Rear Door Speaker LH	90980-10935	T 3	Transfer Shift Actuator	90980-11664
R17	Rear Door Speaker RH		T 4	Turbine Speed Sensor	90980-11156
R18	Rear Seat Audio Controller	90980-12267	T 5	Theft Deterrent ECU	90980-12169
R19	Rear Speaker LH	90980-11013	T 6	Towing Brake Controller	90980-11603
R20	Rear Speaker RH		T 7	TRAC Off SW	90980-10933
R21	Rear Window Defogger	90980-10359	T 8	Transponder Key Computer	90980-11911
R22	Rear Window Defogger		T 9	Turn Signal Flasher Relay	90980-10799
R23	Rear Wiper Motor	90980-11599	T10	Tailgate Control SW	90980-11015
	Rear Wiper Position SW		T11	Television Camera	90980-11292
R24	Remote Control Mirror SW	90980-11657	T12	Tension Reducer Solenoid LH	90980-12063
S 2	Starter (1GR-FE)	90980-09463	T13	Tension Reducer Solenoid RH	
	Starter (2UZ-FE)	90980-09585	T14	Towing Converter Relay	90980-11535
S 3	Starter	90980-11400	T15	Trailer Socket	82824-34030
S 4	Seat Heater SW LH	90980-10957	V 1	VSV (ACIS)	90980-11149
S 5	Seat Heater SW RH	90980-10933	V 2	VSV (EVAP)	90980-11156
S 6	Shift Lock Control ECU	90980-12183	V 3	VVT Sensor LH	90980-10947
	Transmission Control SW		V 4	VVT Sensor RH	
			V 5	VSC Warning Buzzer	90980-10906
			V 6	Vanity Light LH	90980-12322
			V 7	Vanity Light RH	
			V 8	Vapor Pressure Sensor	90980-11143
			V 9	Voltage Inverter	90980-10799

L PART NUMBER OF CONNECTORS

[illegible]

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

* The system shown here is an actual circuit shown in



[A] : System Title

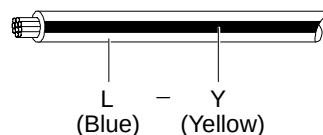
[B] : Indicates the wiring color.

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

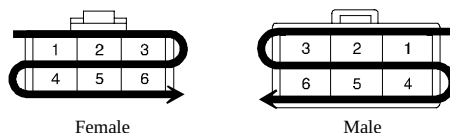


[C] : The position of the parts is the same as shown in the wiring diagram and wire routing.

[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



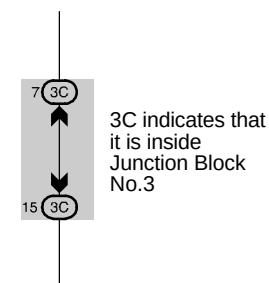
The numbering system for the overall wiring diagram is the same as above

[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

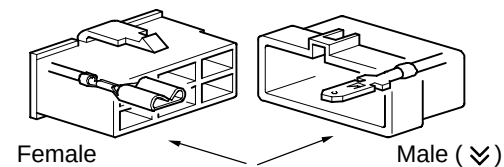
[F] : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

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
Active Height Control Suspension	18-2	* Interior Light	
Air Conditioning	32-2	* Key Reminder	
Automatic Glare-Resistant EC Mirror with Compass	24-1	* Light Auto Turn Off	
Back-Up Light	12-2	* Mirror Heater	
Charging	4-2	* Power Window	
Cigarette Lighter	25-3	* Rear Window Defogger	
Combination Meter	31-2	* Rear Wiper and Washer	
Cruise Control (1GR-FE)	17-2	* Seat Belt Warning	
Cruise Control (2UZ-FE)	16-2	* Theft Deterrent	
Electric Modulated Air Suspension	18-2	* Wireless Door Lock Control	
Electric Tension Reducer	26-4	Navigation System	28-2
Electronically Controlled Transmission and A/T Indicator (1GR-FE)	14-2	Power Outlet (115V)	25-2
Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	13-2	Power Outlet (12V)	25-4
Engine Control (1GR-FE)	6-2	Power Seat	22-2
Engine Control (2UZ-FE)	5-2	Power Source	1-32-1
Engine Immobiliser System (1GR-FE)	6-19	Radio and Player (w/ Navigation System)	28-2
Engine Immobiliser System (2UZ-FE)	5-19	Radio and Player (w/o Navigation System Except 6 Speaker)	29-2
Front Wiper and Washer	21-2	Radio and Player (6 Speaker)	30-2
Horn	26-2	Remote Control Mirror	24-3
Ignition (1GR-FE)	3-2	Seat Heater	23-2
Ignition (2UZ-FE)	2-2	Shift Lock	30-6
Illumination	10-2	SRS	20-2
Moon Roof	24-2	Starting	1-2
Multi Mode 4WD	19-2	Stop Light	11-2
Multiplex Communication System	7-3	Taillight	10-2
* Automatic Light Control		TOYOTA Parking Assist (Rear View Monitor)	28-2
* Door Lock Control		Trailer Towing	27-2
* Front Fog Light		Turn Signal and Hazard Warning (w/ Daytime Running Light)	8-2
* Garage Door Opener		Turn Signal and Hazard Warning (w/o Daytime Running Light)	9-2
* Headlight		VSC	15-2

FOREWORD

This wiring diagram manual has been prepared to provide information on the electrical system of the 2003 4RUNNER.

Applicable models: UZN210, 215 Series
GRN210, 215 Series

For service specifications and repair procedures of the above models other than those listed in this manual, refer to the following manuals;

Manual Name	Pub. No.
● 2003 4RUNNER Repair Manual Volume 1 Volume 2	RM1001U1 RM1001U2
● 2003 4RUNNER New Car Features	NCF232U
● 2003 4RUNNER New Car Features Supplement	NCF238U

All information in this manual is based on the latest product information at the time of publication. However, specifications and procedures are subject to change without notice.

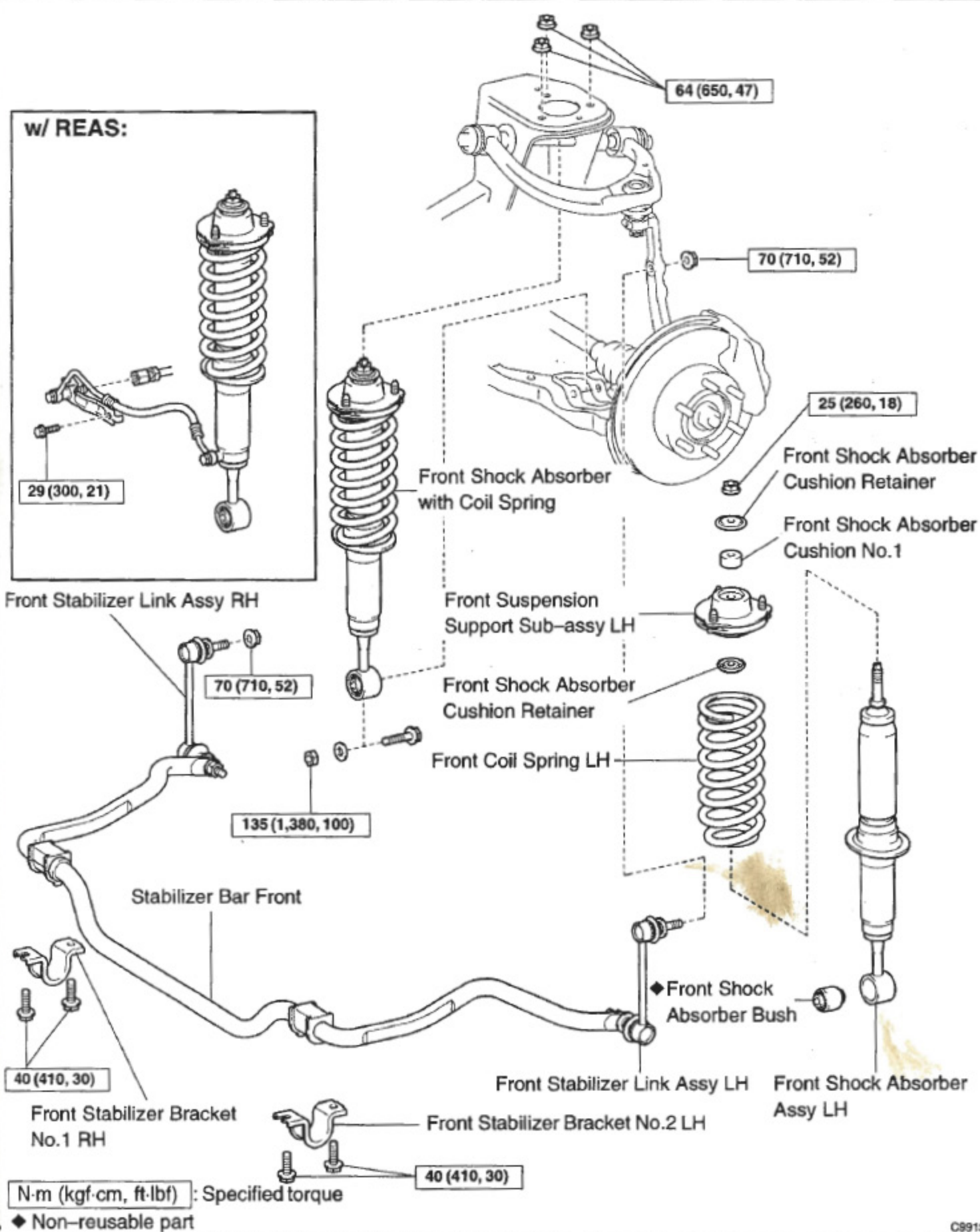
TOYOTA MOTOR CORPORATION

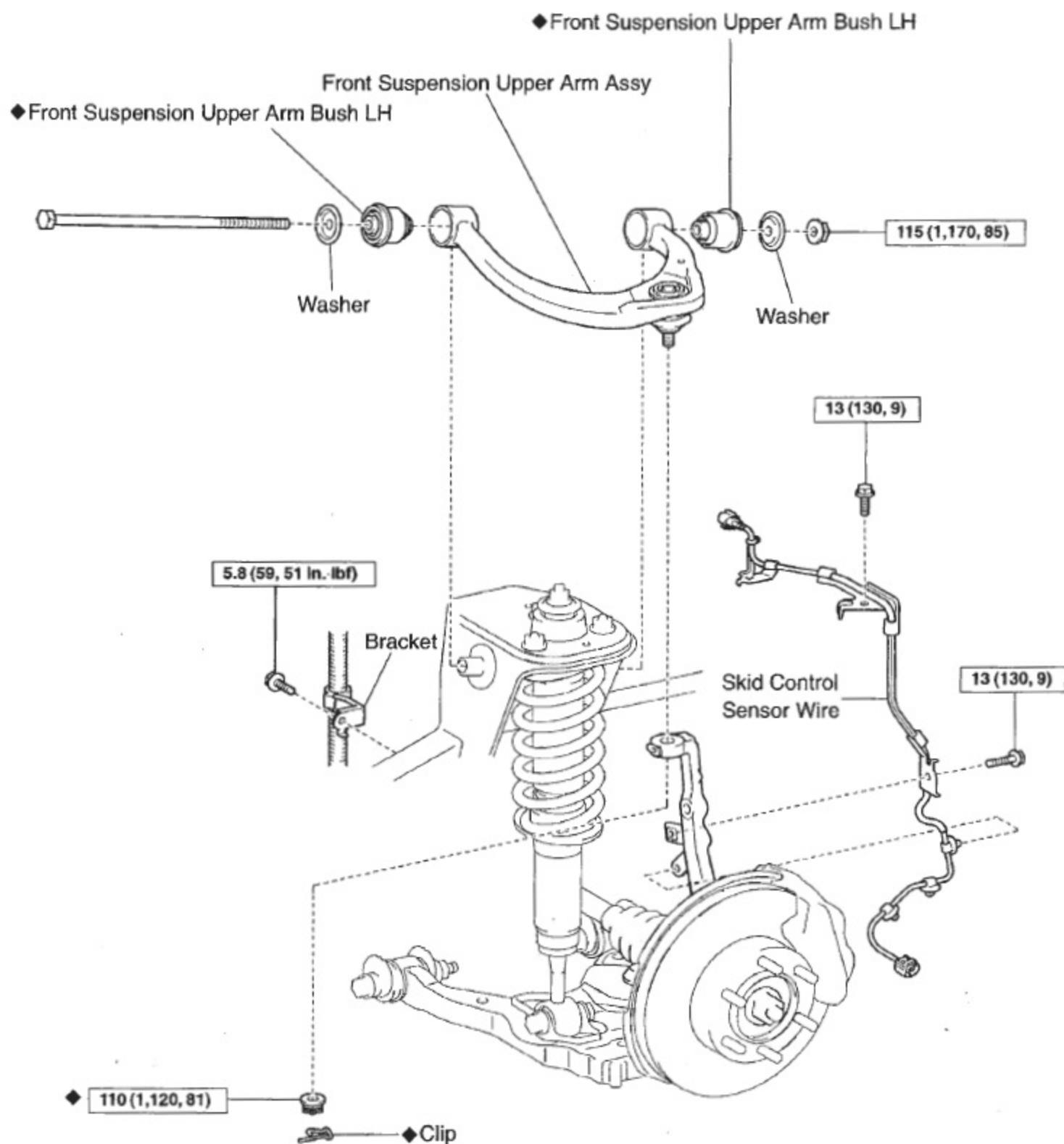
NOTICE

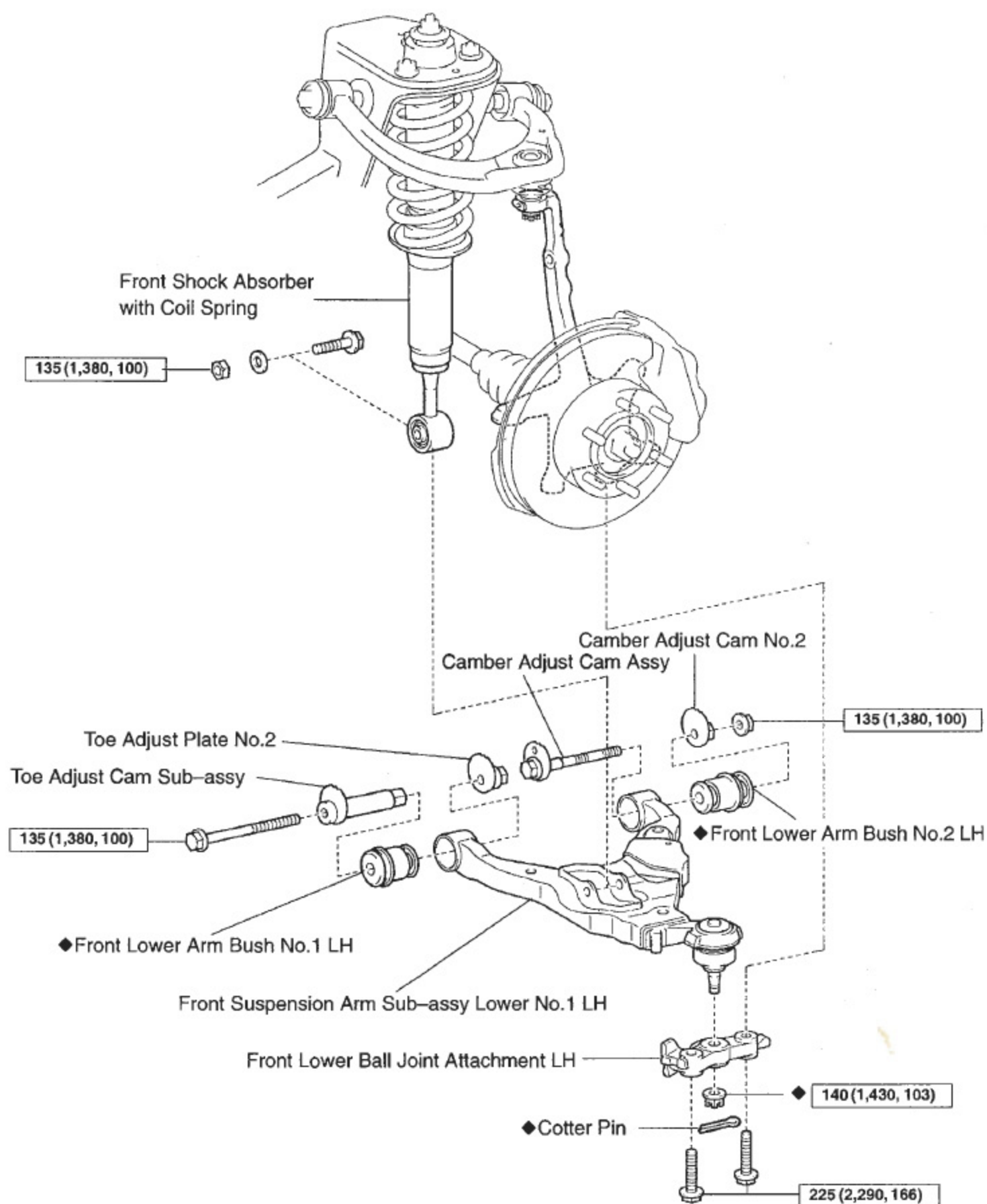
When handling supplemental restraint system components (removal, installation or inspection, etc.), always follow the direction given in the repair manuals listed above to prevent accidents and supplemental restraint system malfunction.

FRONT SUSPENSION COMPONENTS

2609K-01





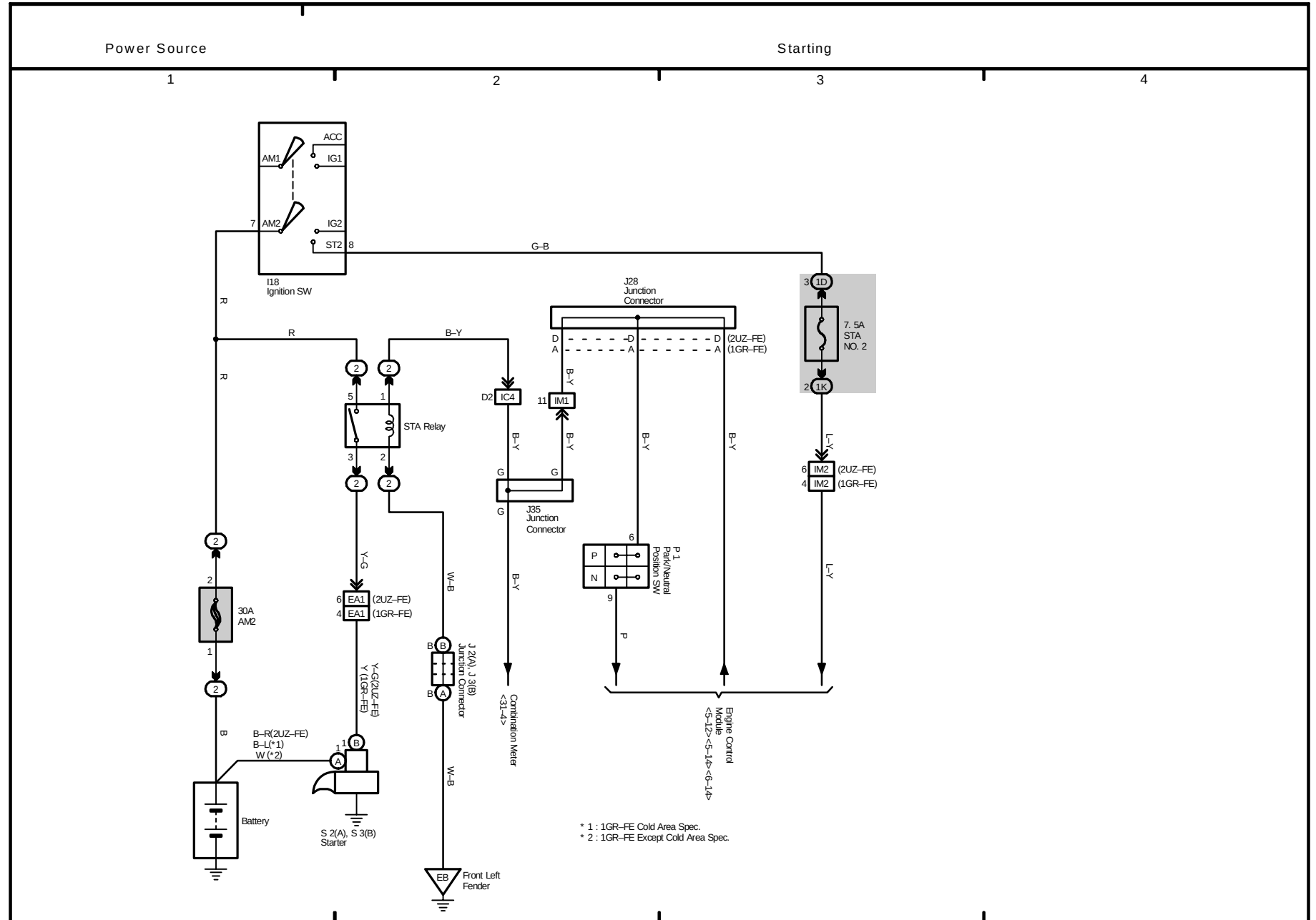


P

N·m (kgf·cm, ft·lbf) : Specified torque

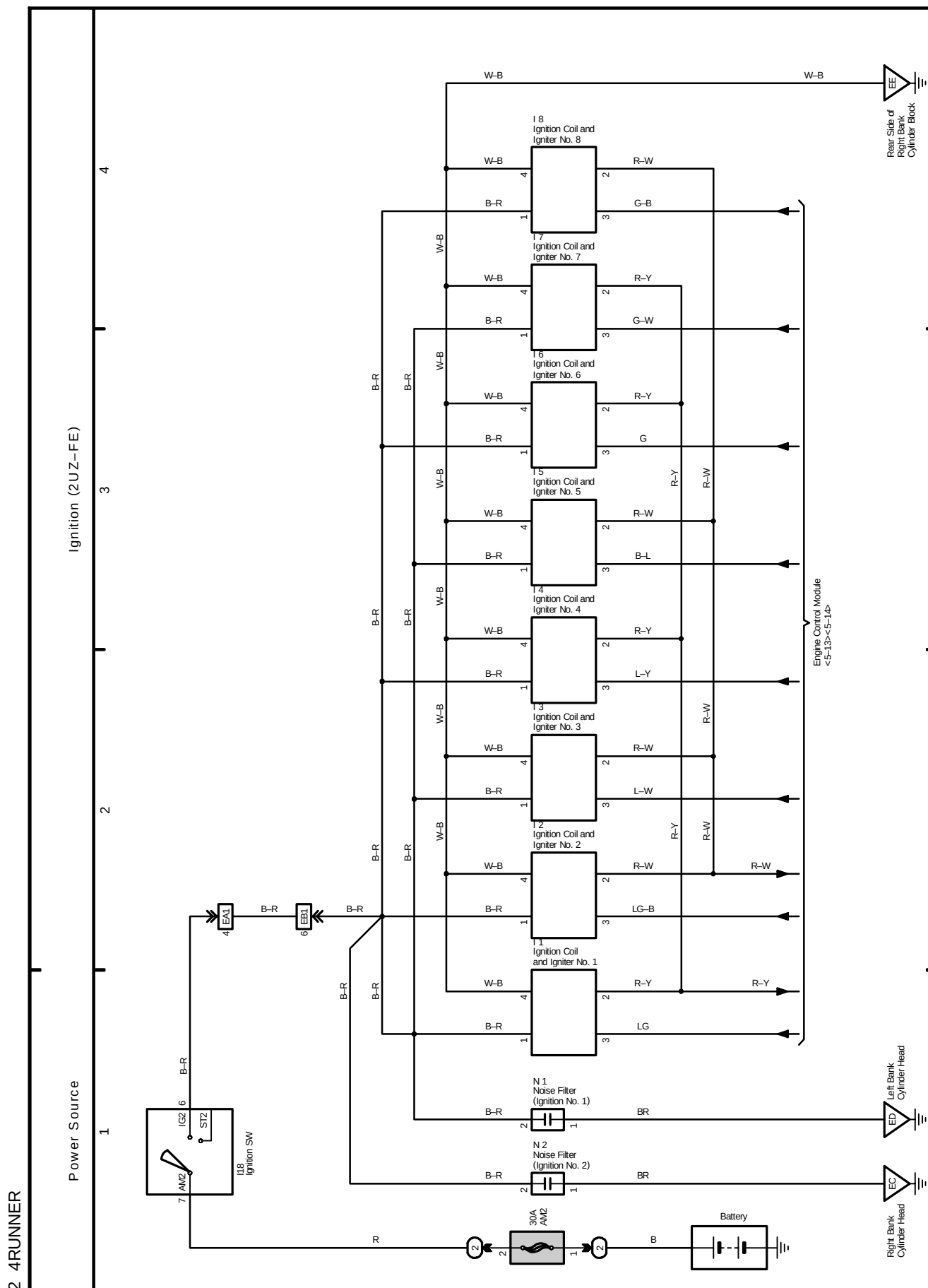
◆ Non-reusable part

1 4RUNNER

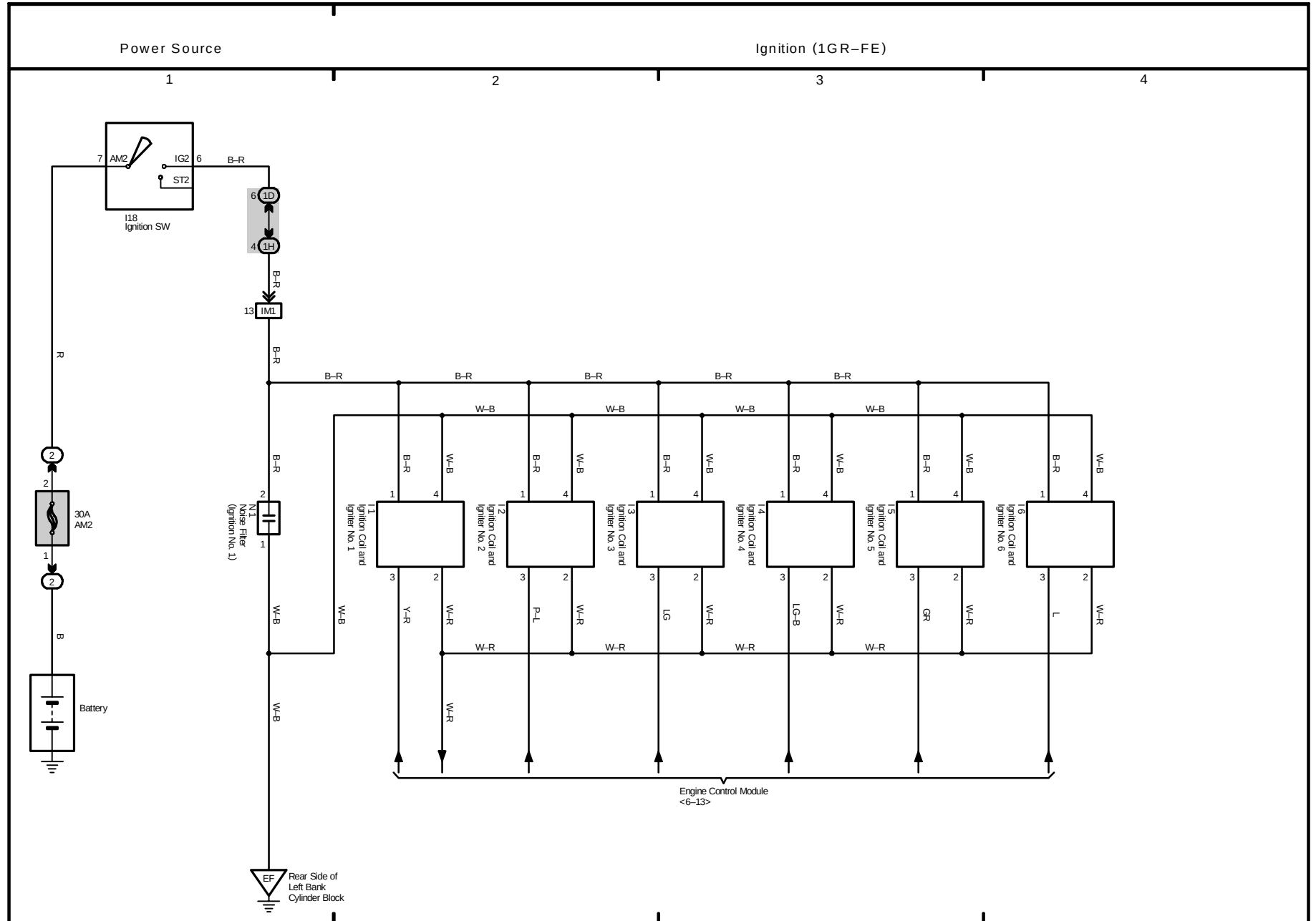


2003 4RUNNER (EWD514U)

M OVERALL ELECTRICAL WIRING DIAGRAM



2003 4RUNNER (EWD514U)



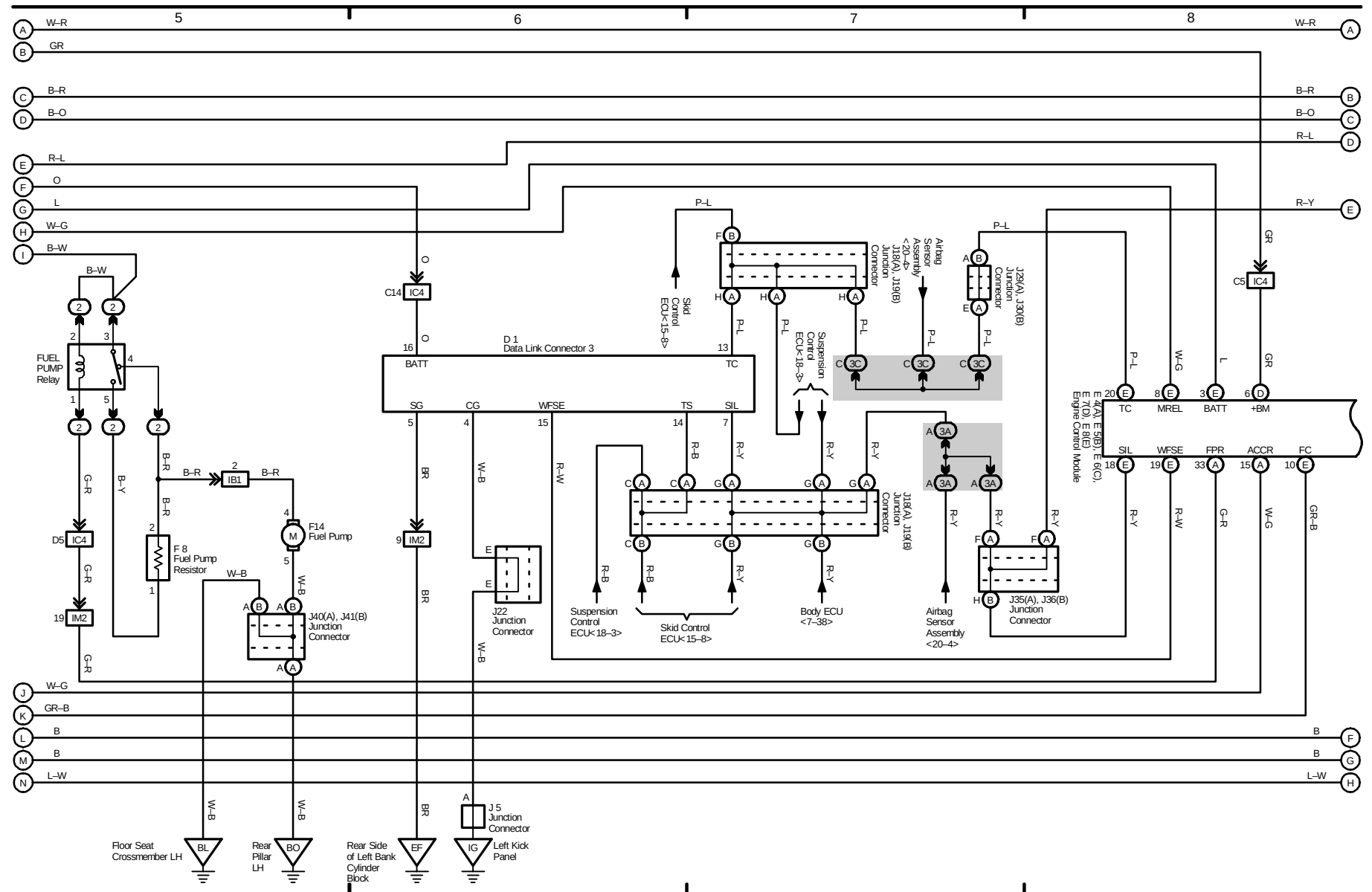
4 4RUNNER

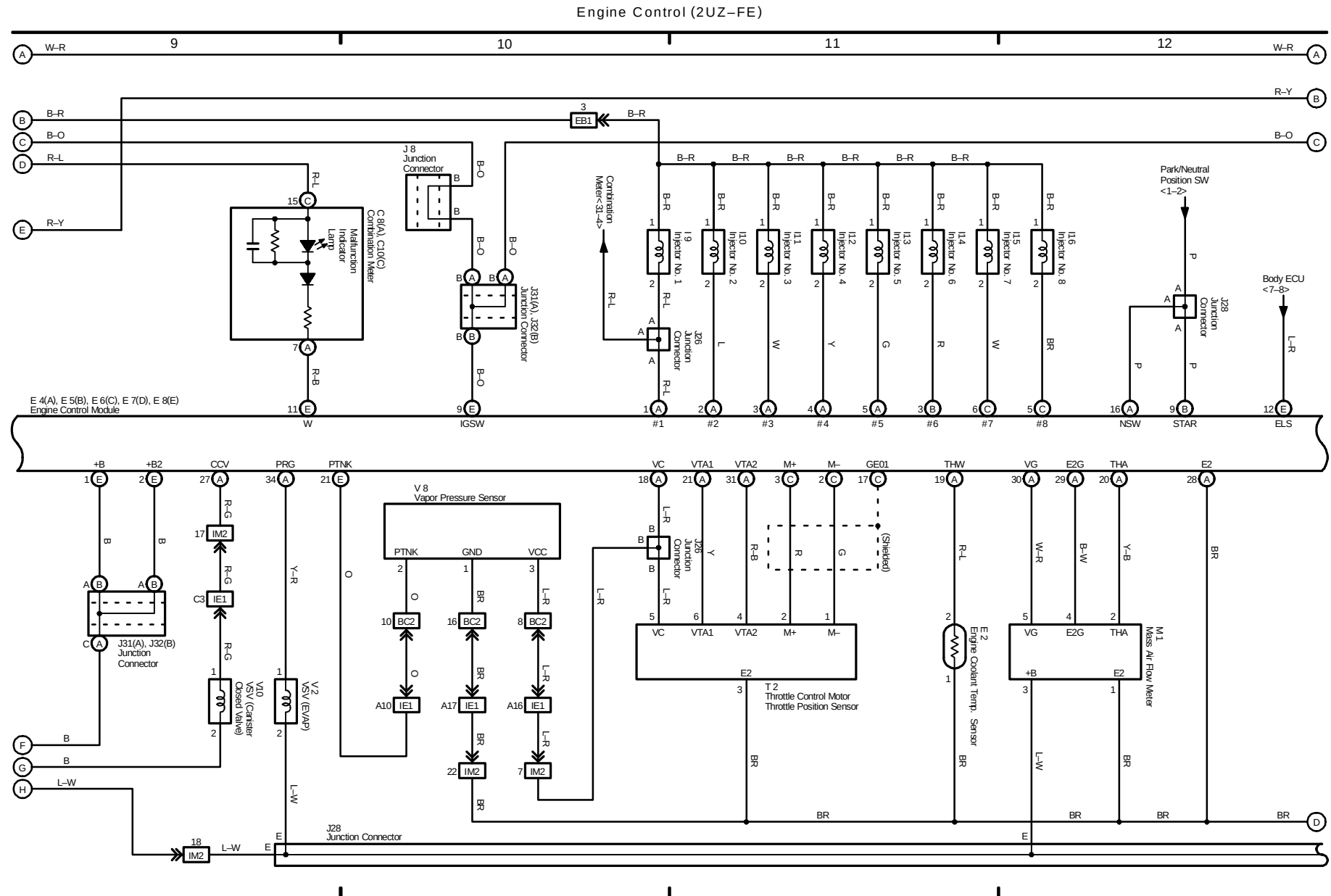


5 4RUNNER

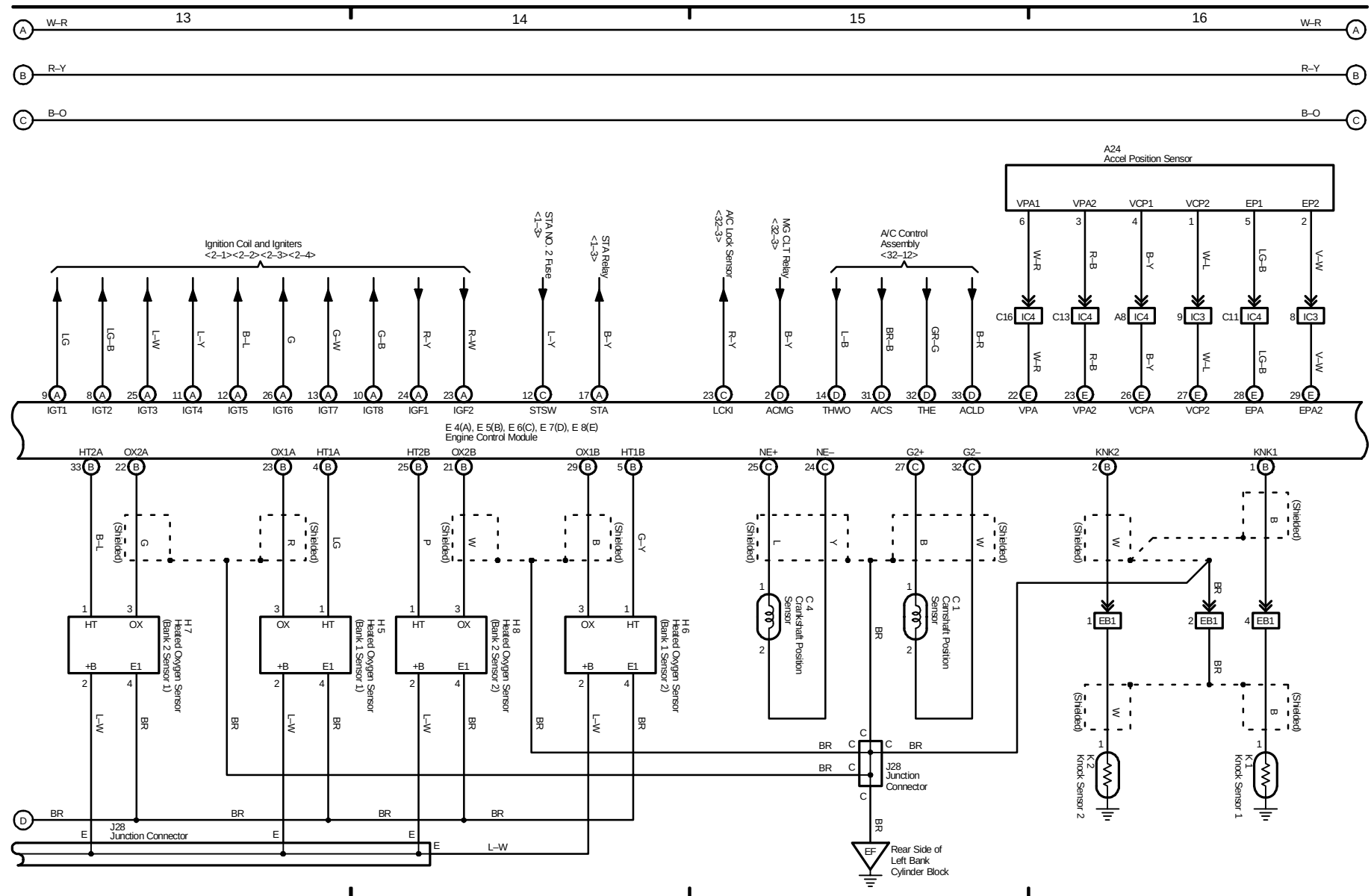


Engine Control (2UZ-FE)



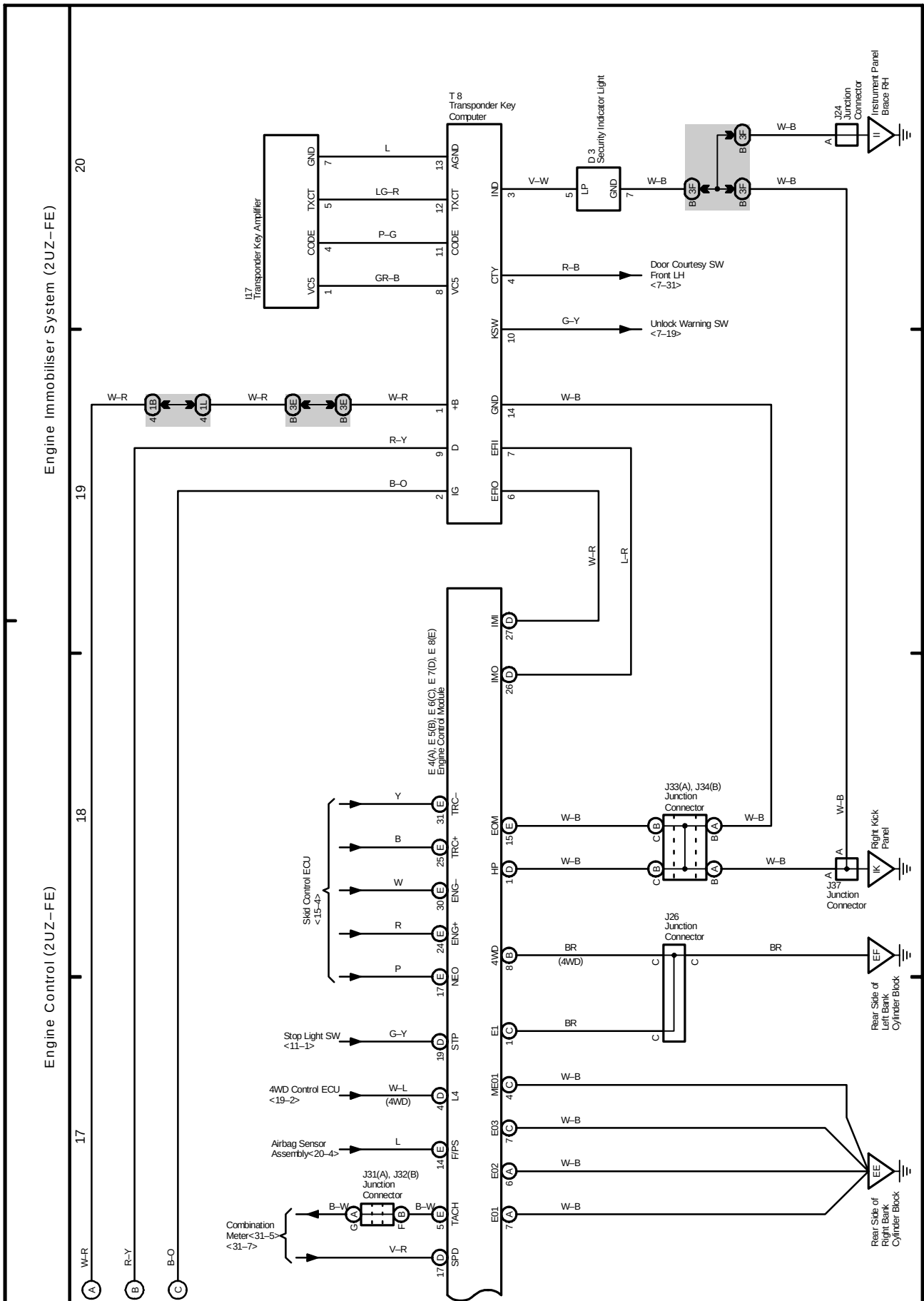


Engine Control (2UZ-FE)



M OVERALL ELECTRICAL WIRING DIAGRAM

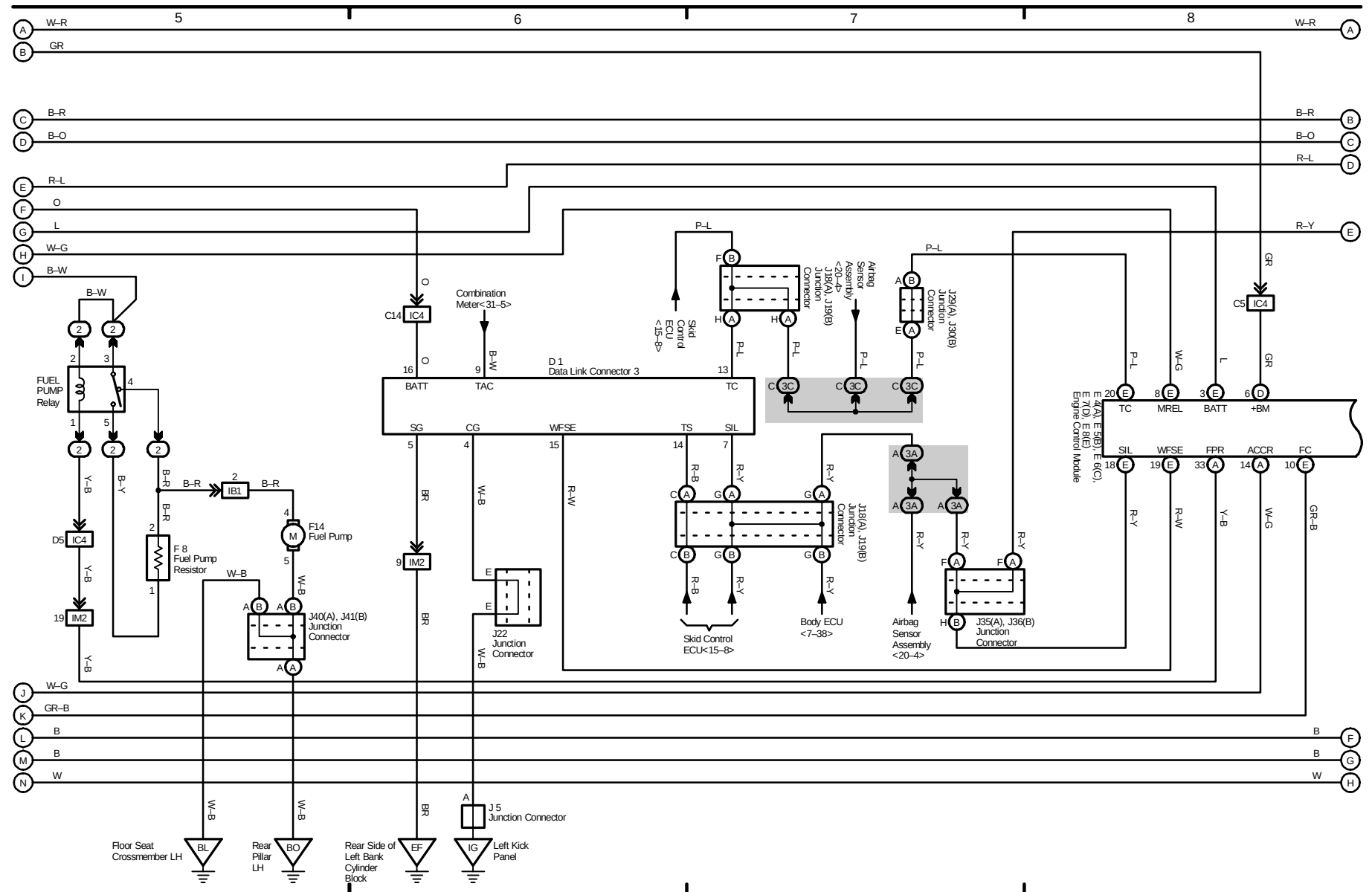
5 4RUNNER (Cont' d)

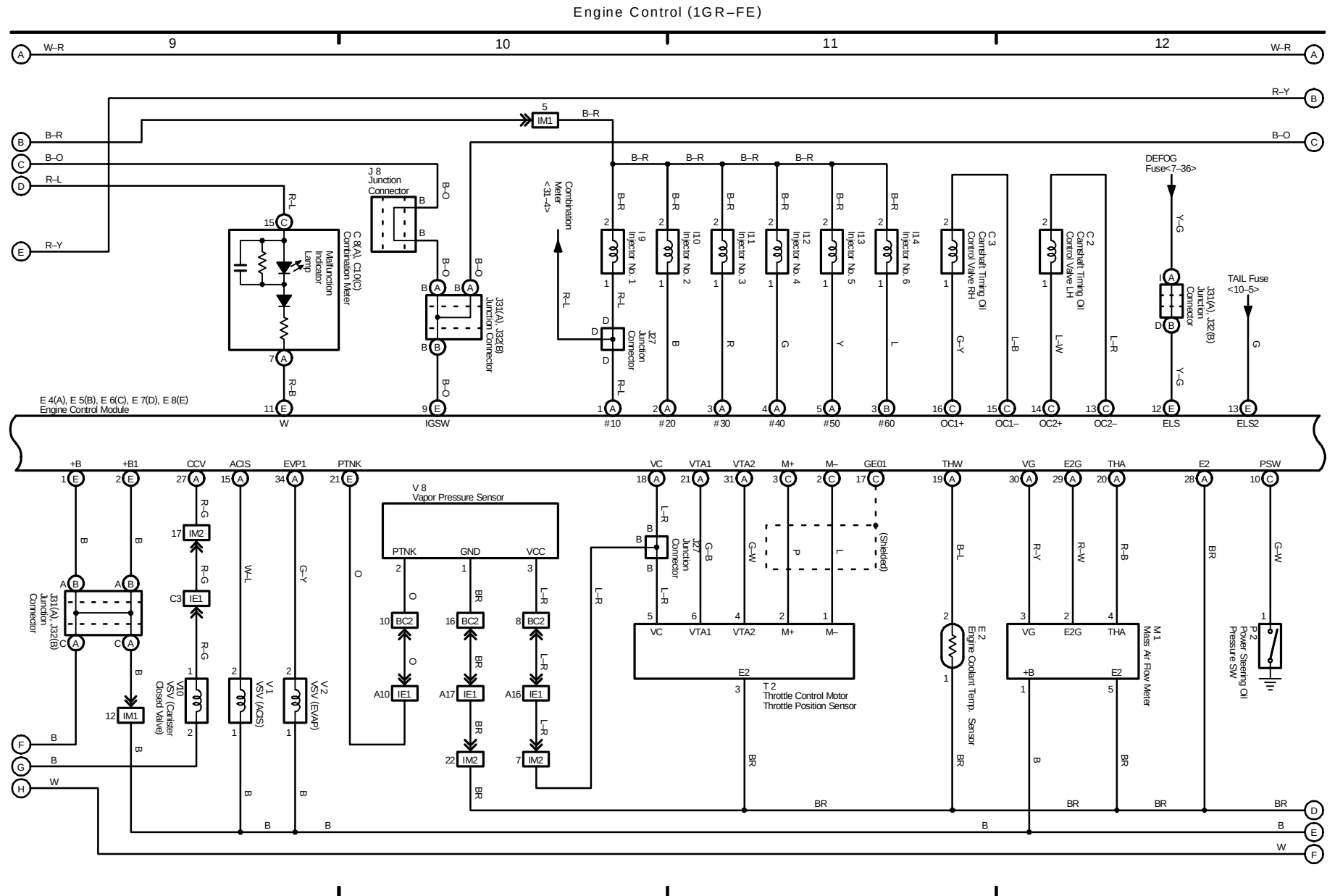


6 4RUNNER



Engine Control (1GR-FE)



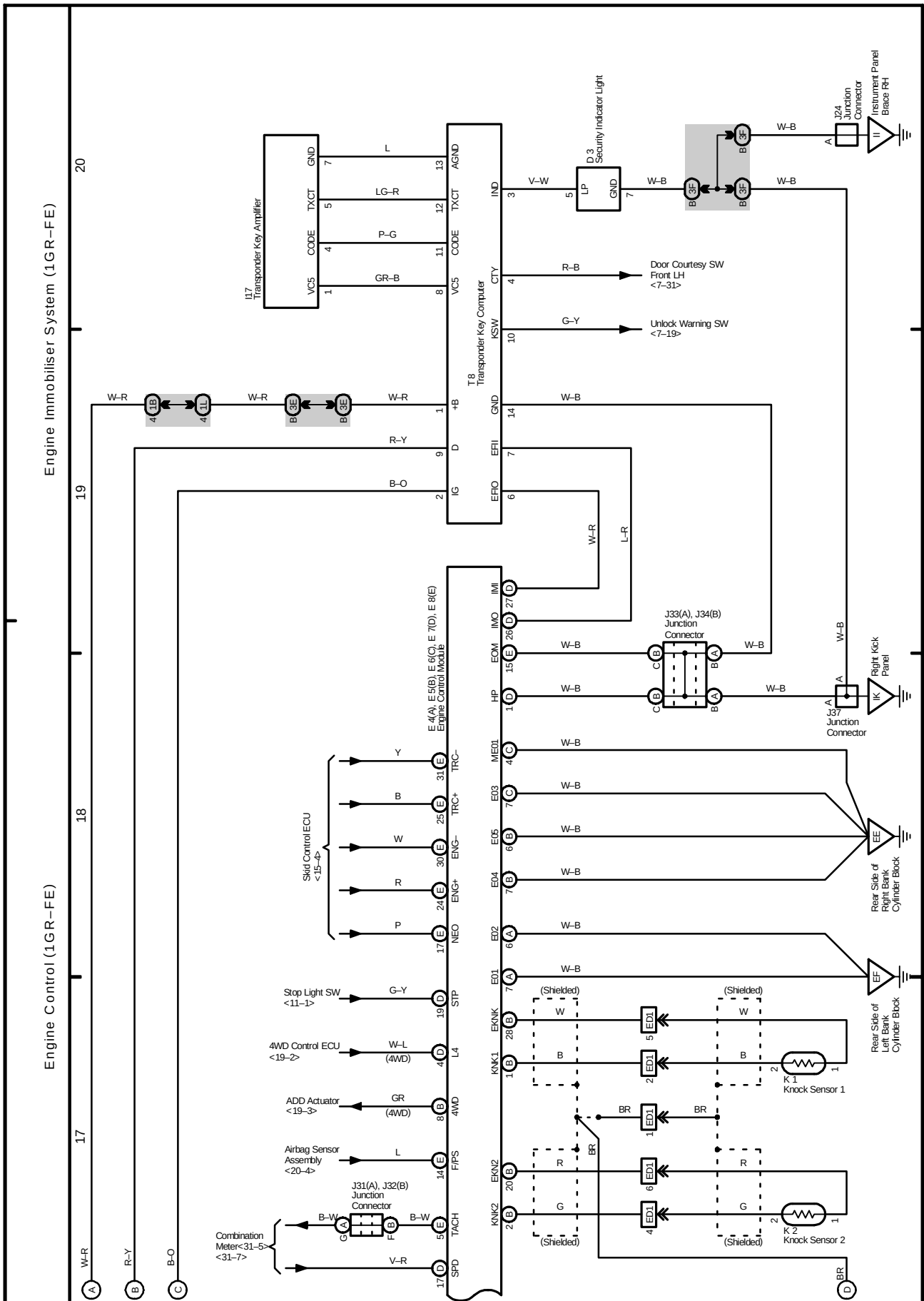


This diagram illustrates the electrical wiring for the rear side of the right bank cylinder block. It shows the following components and their connections:

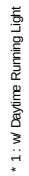
- Wiring Harness (Top):** Features terminals A through C, with labels W-R, R-Y, and B-O.
- Ignition System:** Includes Ignition Coil and Igniters (terminals 8-13, 24) connected to Y-R, P-L, LG, LG-B, GR, L, and W-R.
- Engine Control Module (ECM):** Labeled E 4(A), E 5(B), E 6(C), E 7(D), E 8(E). It receives inputs from STA NO. 2 Fuse (L-Y), STA Relay (B-Y), A/C Lock Sensor (R-Y), MG CLT Relay (B-Y), and A/C Control Assembly (L-B, BR-B, GR-G, B-R).
- Position Sensors:**
 - A24 Accel Position Sensor (terminals 6, 3, 4, 1, 5, 2) connected to W-R, R-B, B-Y, W-L, LG-B, and V-W.
 - Crankshaft Position Sensor (C4) connected to W and BR.
 - W/T Sensor LH (V3) and W/T Sensor RH (V4) connected to W and BR.
- Fuel and Air Sensors:**
 - A13 Air/Fuel Ratio Sensor (Bank 2 Sensor 1) connected to AF+, AF-, HT, and W.
 - A12 Air/Fuel Ratio Sensor (Bank 1 Sensor 1) connected to AFR+, AFR-, HT, and W.
 - H8 Heated Oxygen Sensor (Bank 2 Sensor 2) connected to HT, OX, HT1B, and BR.
 - H6 Heated Oxygen Sensor (Bank 1 Sensor 2) connected to HT, OX, HT1B, and BR.
- Other Components:**
 - HAFL, AFL+, AFL-, AFR+, AFR-, HAFL, HT2B, OX2B, OX1B, HT1B, VV1+, NE-, NE+, VV2+, and E1 terminals.
 - Wiring for the rear side of the right bank cylinder block (terminals D, E, F).

M OVERALL ELECTRICAL WIRING DIAGRAM

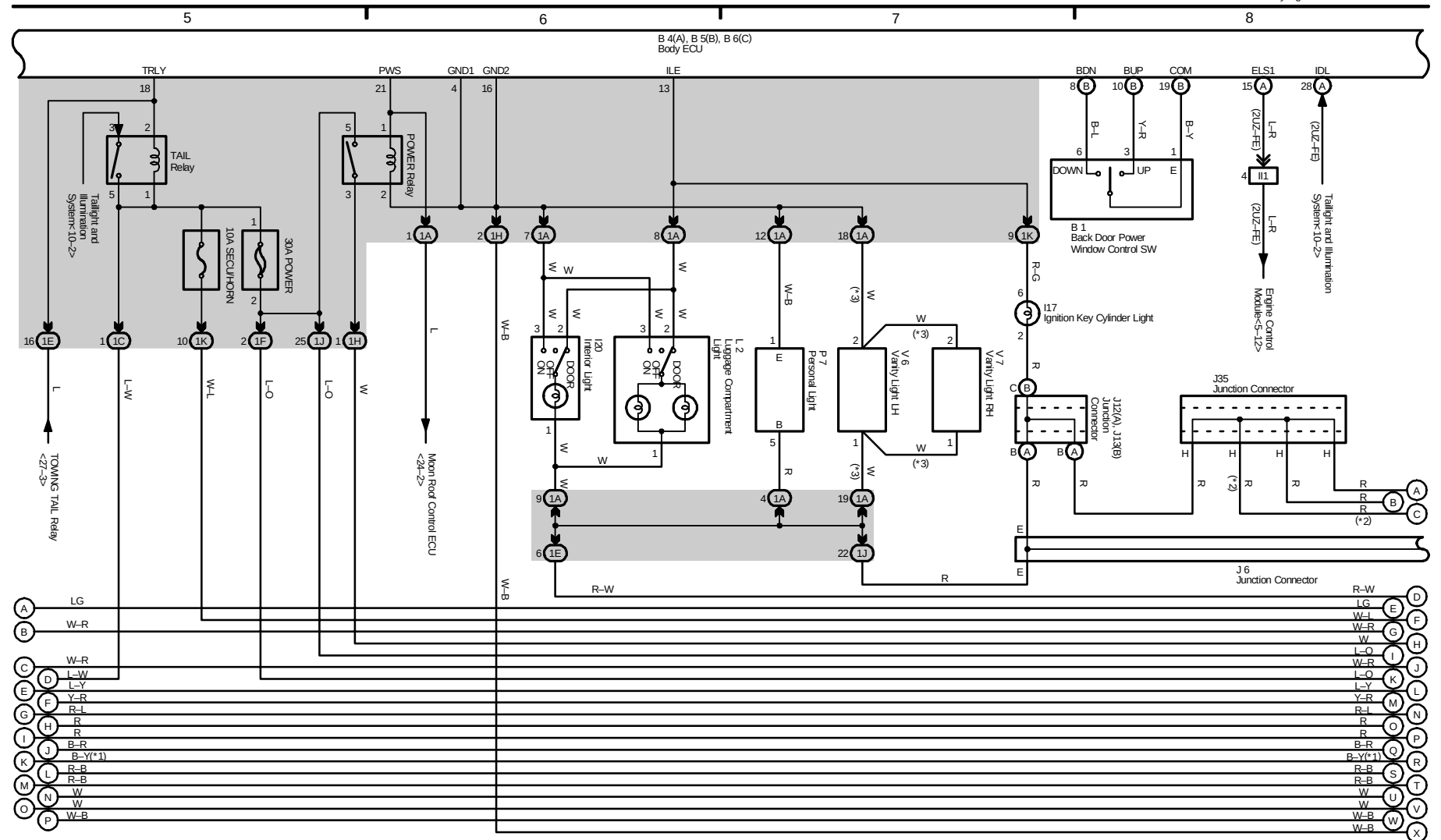
6 4RUNNER (Cont' d)



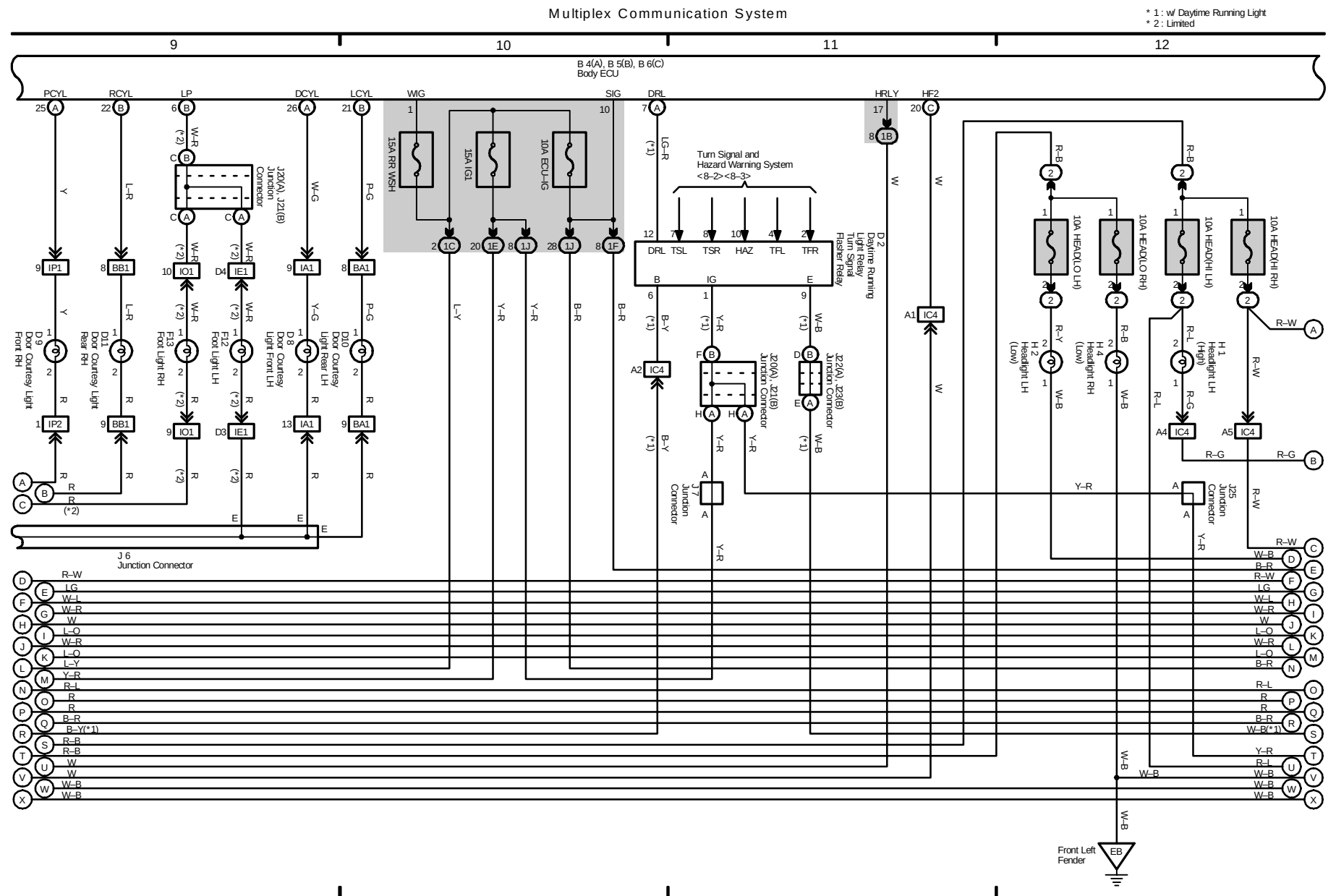
7 4RUNNER

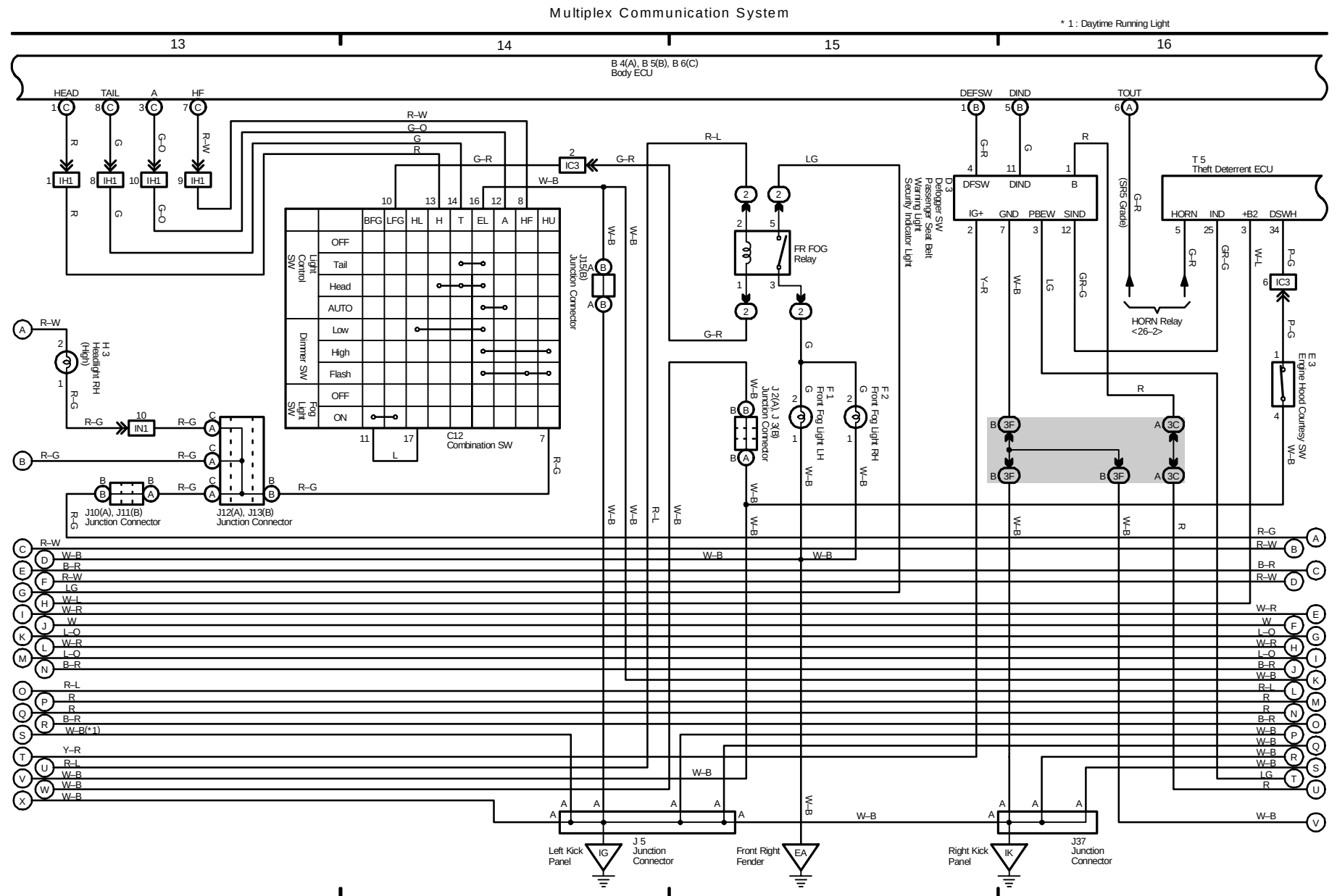


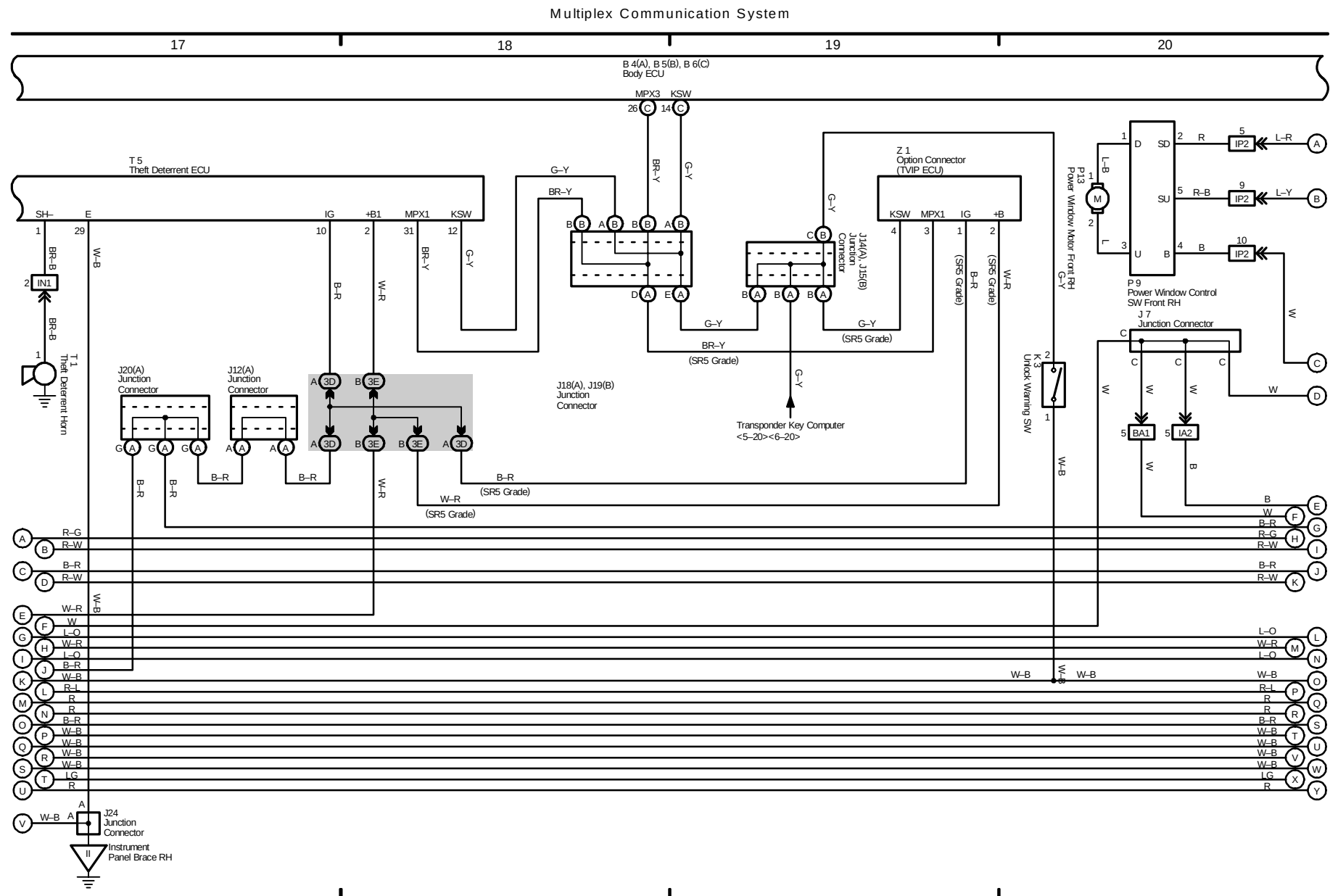
Multiplex Communication System

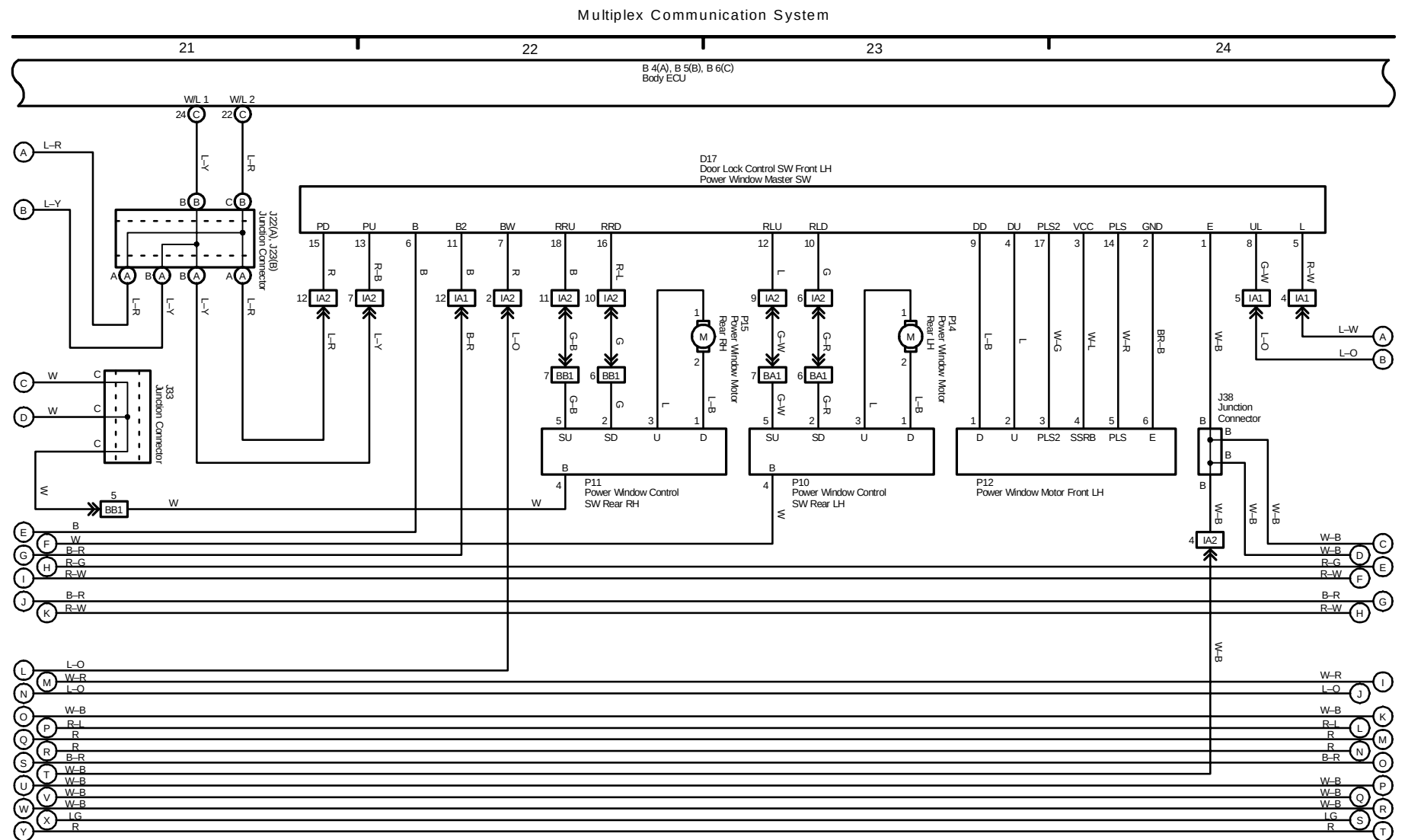


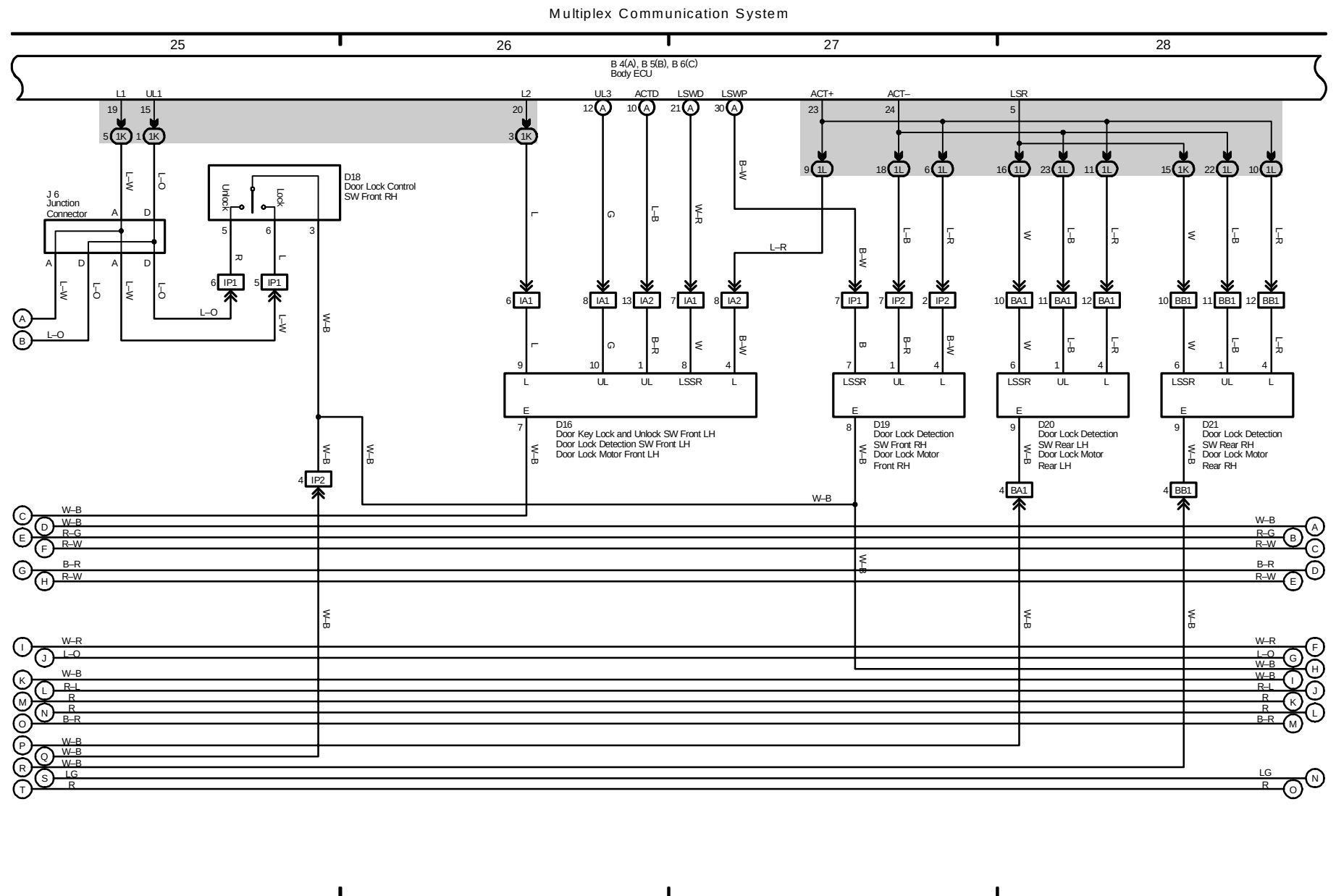
OVERALL ELECTRICAL WIRING DIAGRAM

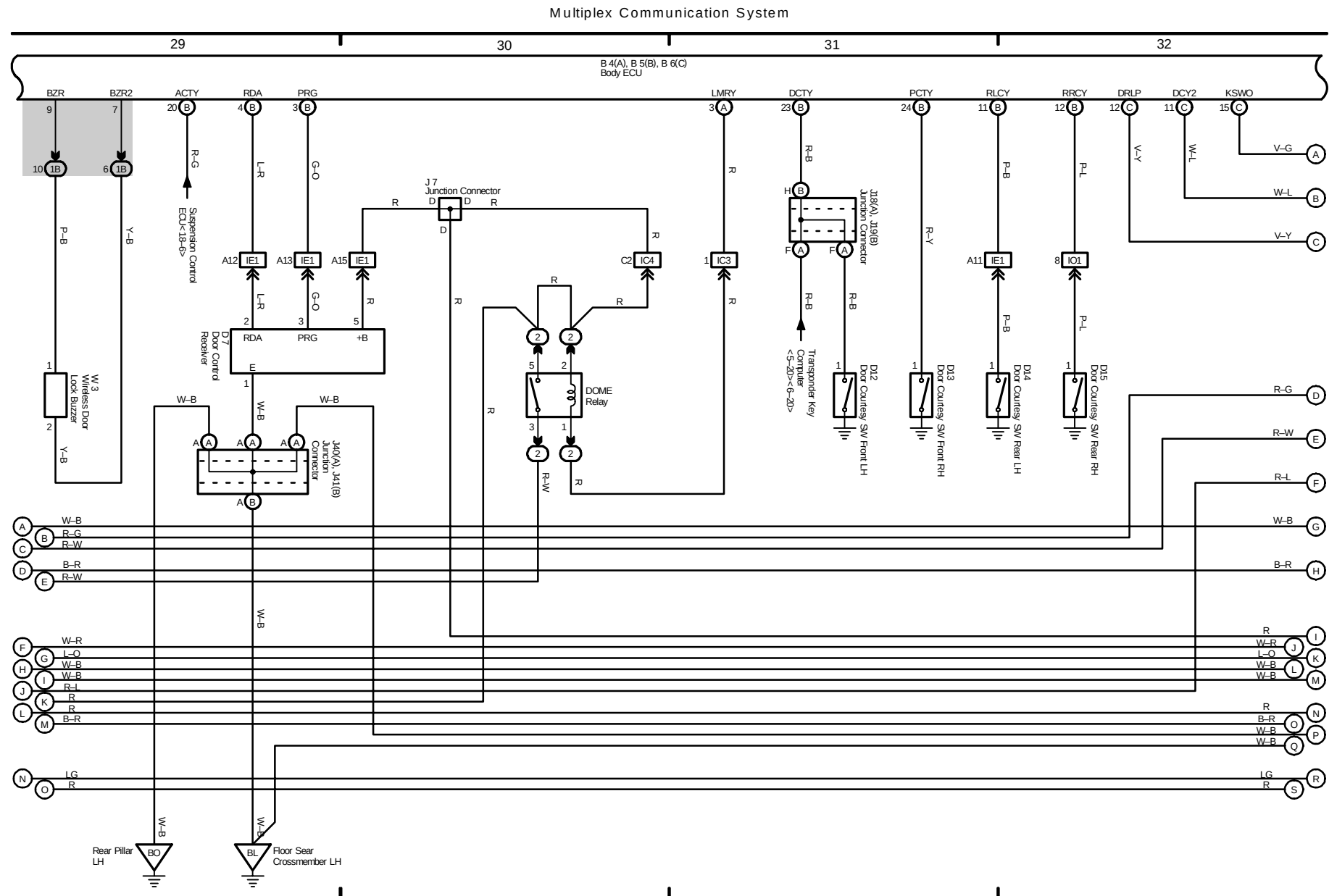


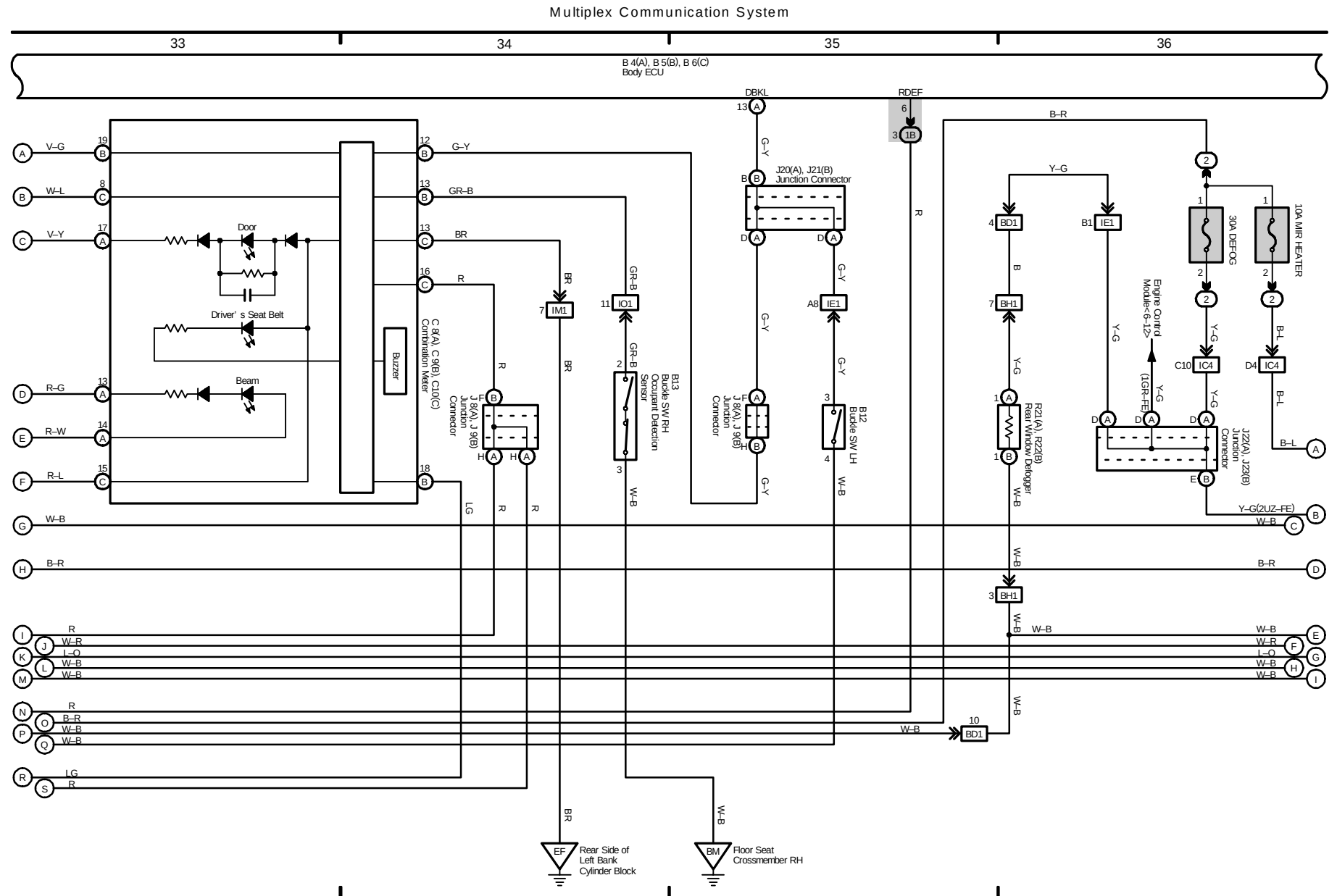


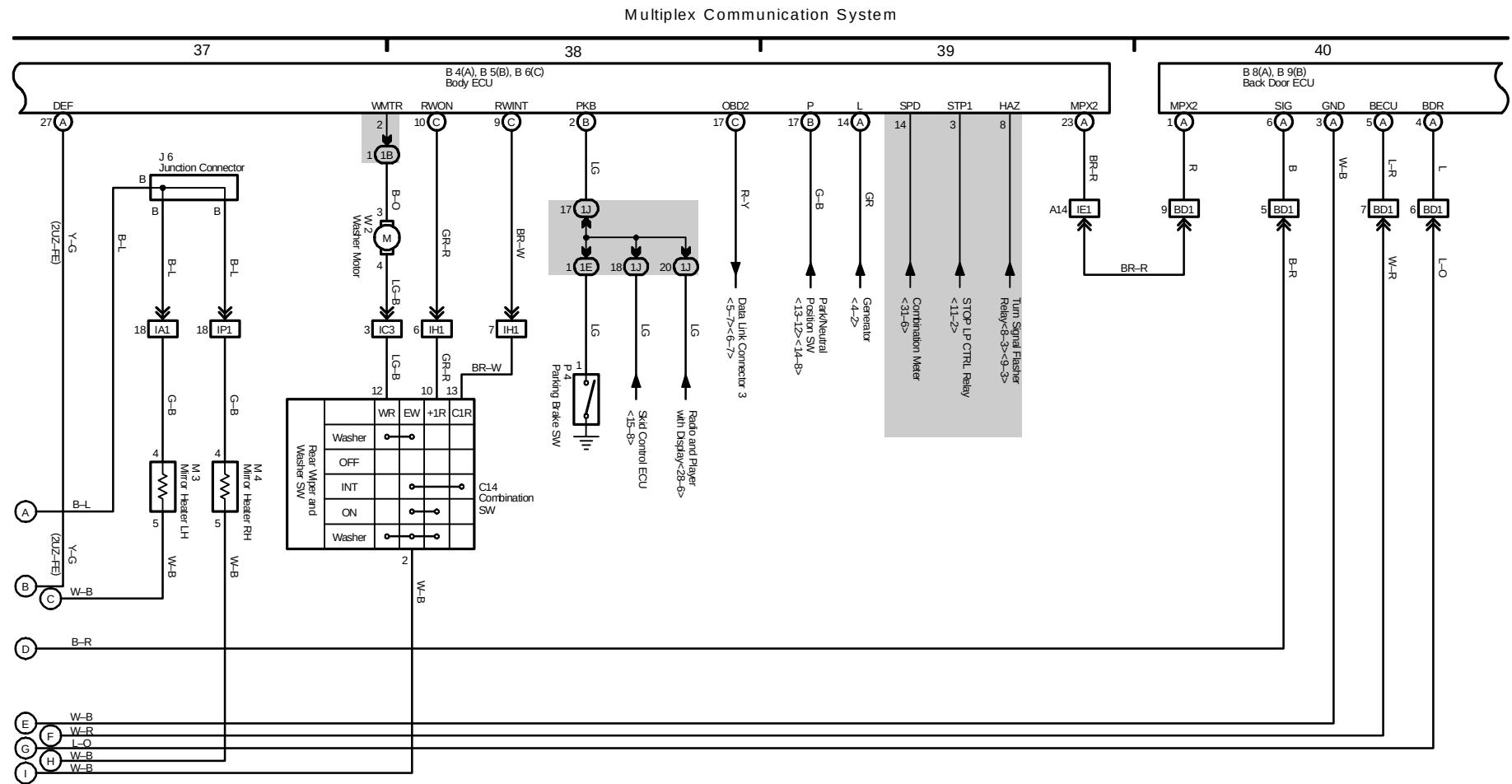








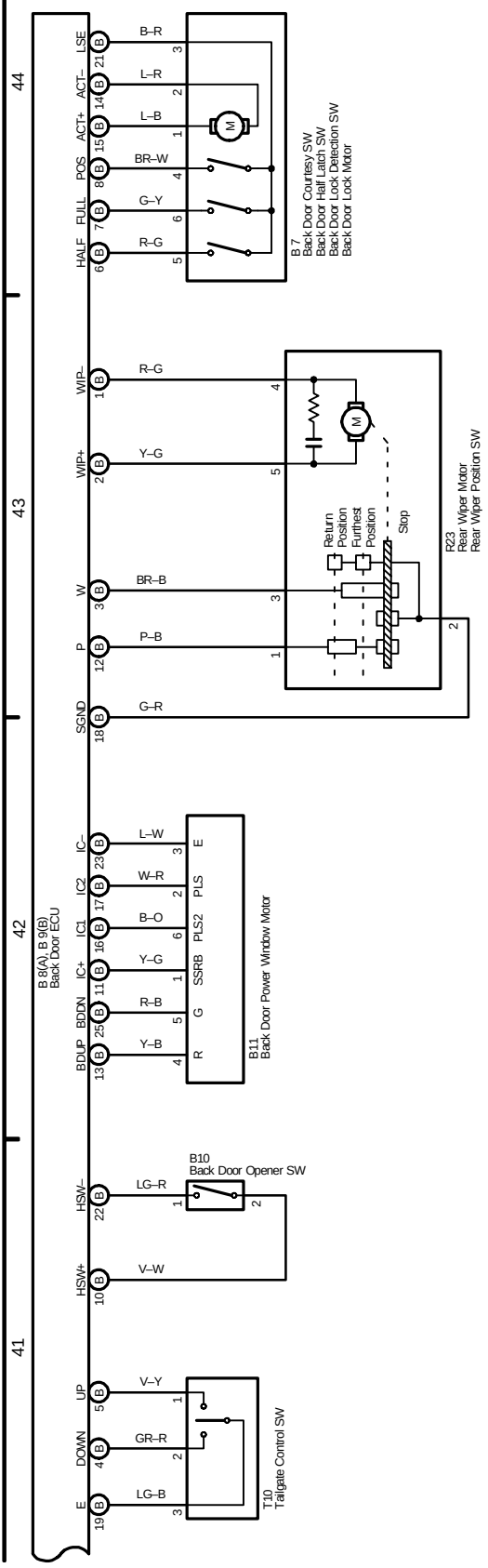




M OVERALL ELECTRICAL WIRING DIAGRAM

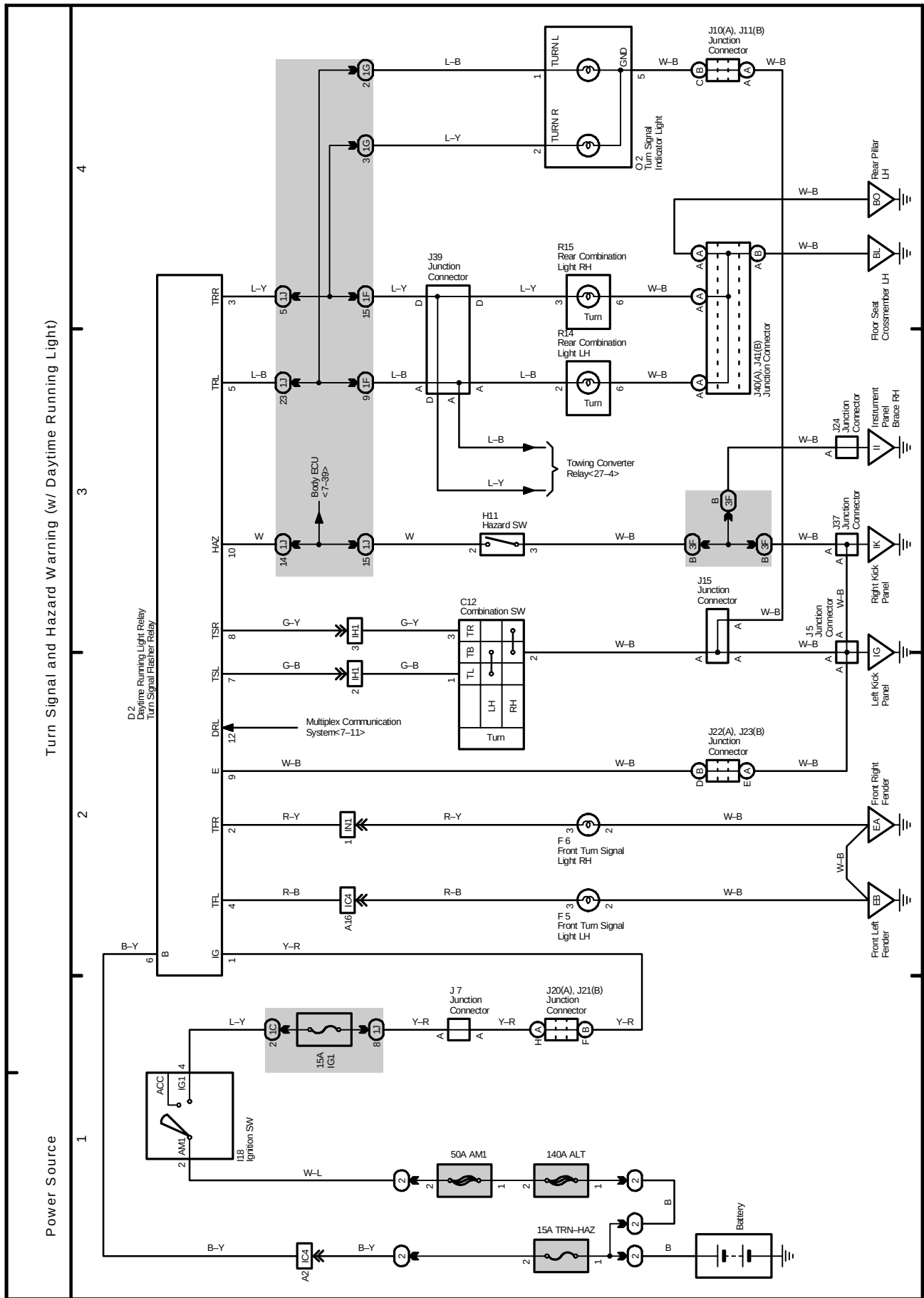
7 4RUNNER (Cont' d)

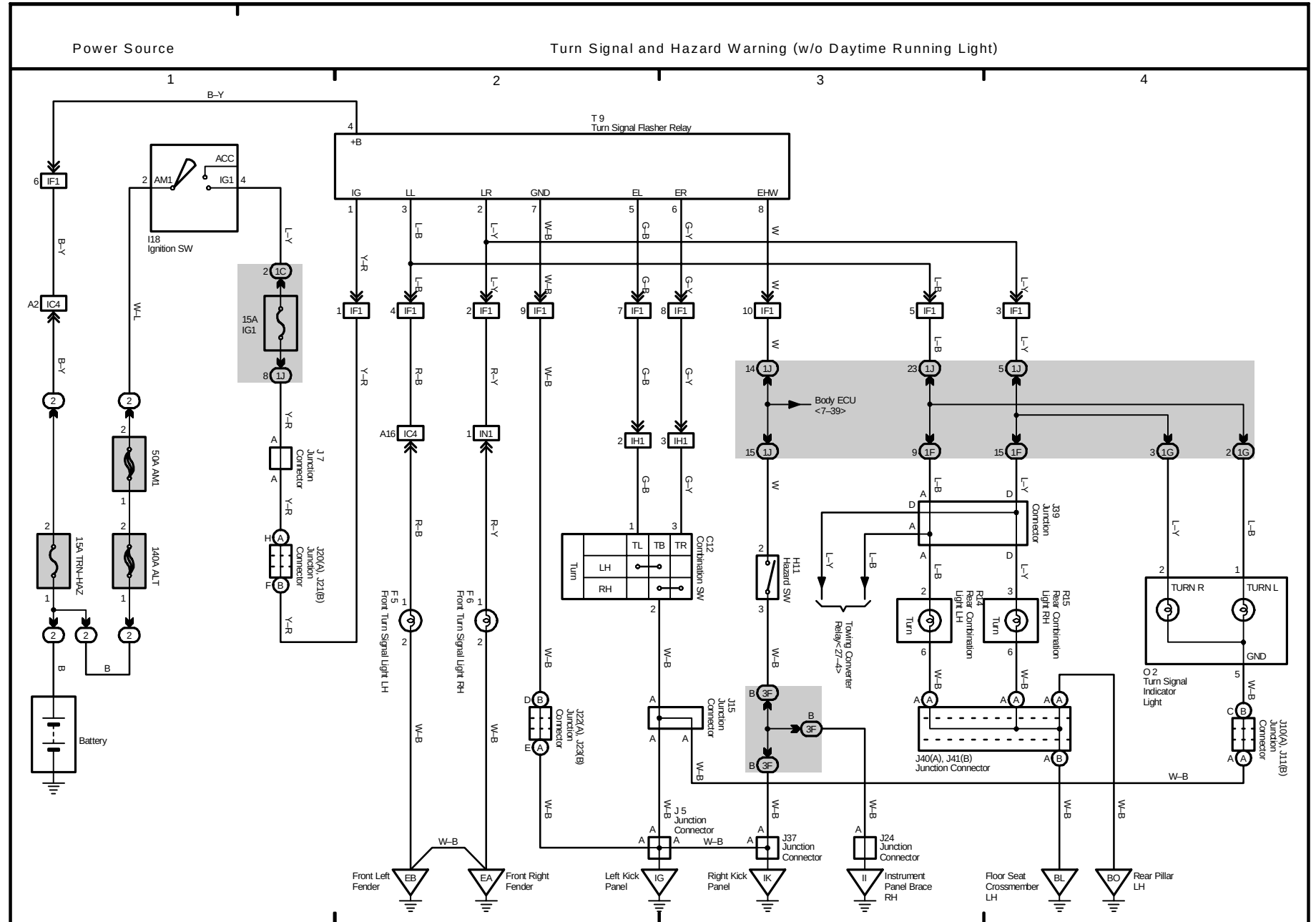
Multiplex Communication System



M OVERALL ELECTRICAL WIRING DIAGRAM

8 4RUNNER

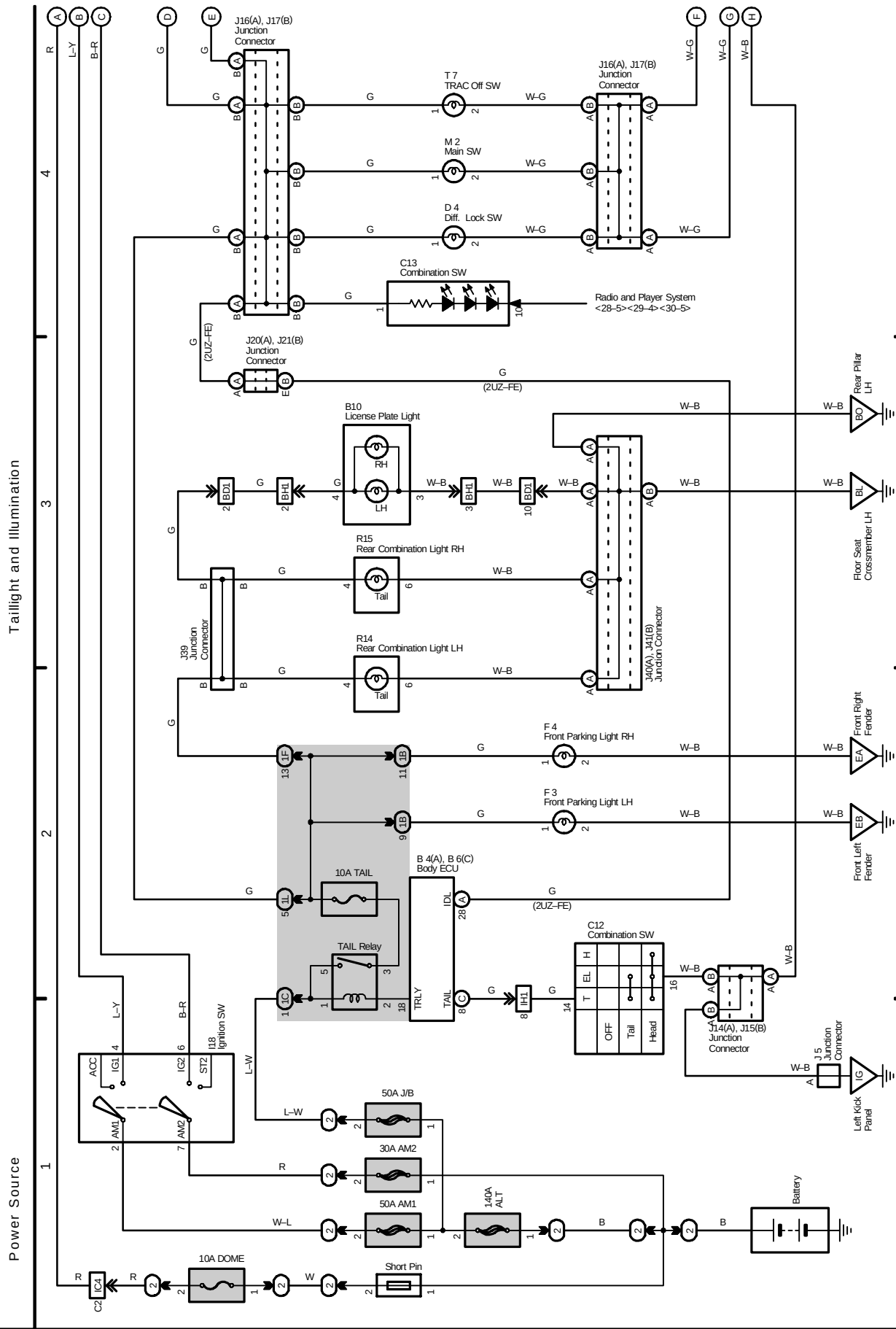




M OVERALL ELECTRICAL WIRING DIAGRAM

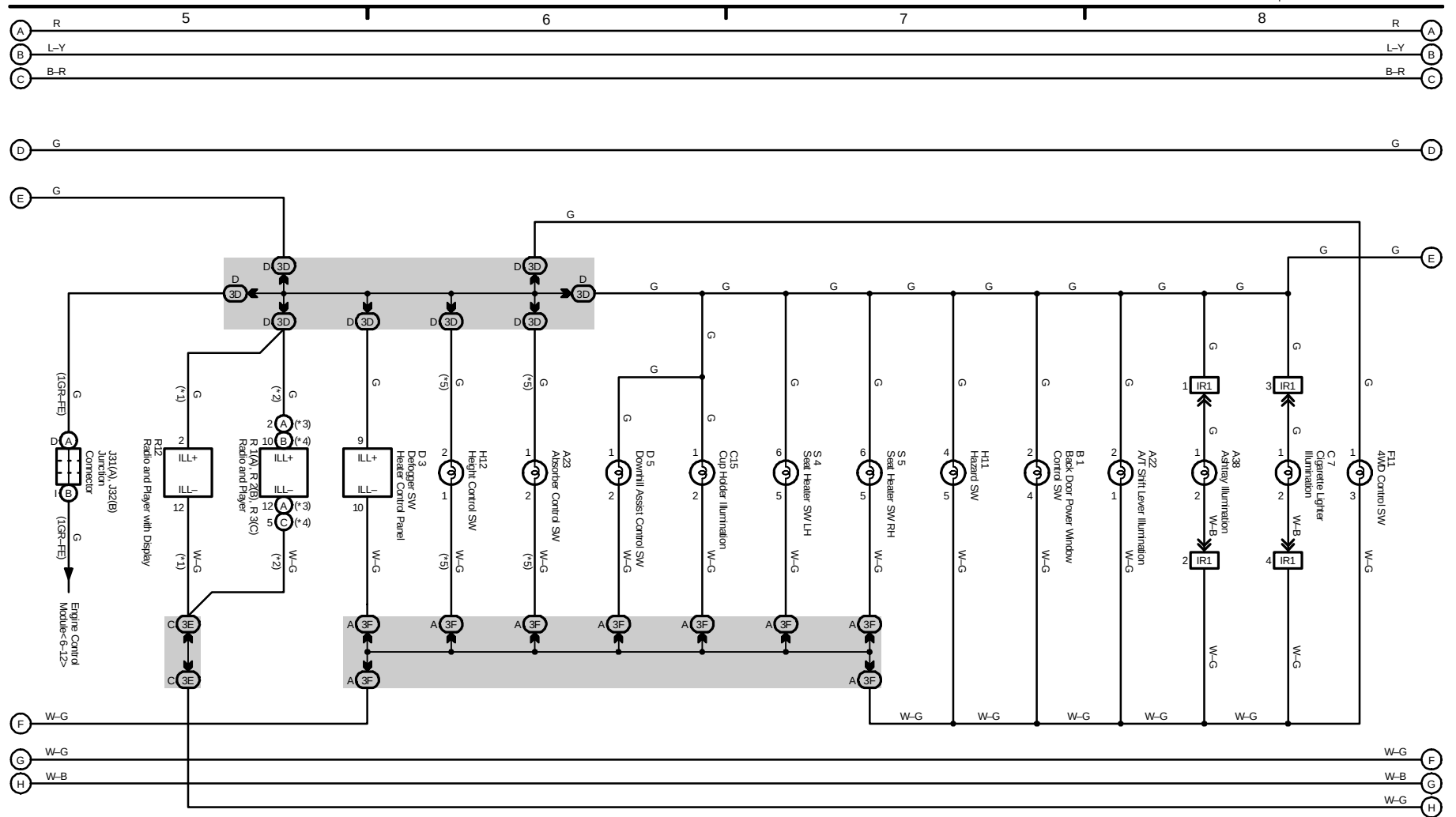
10 4RUNNER

(Cont. next page)



- * 1 : w/ Navigation System
- * 2 : w/o Navigation System
- * 3 : Except 6 Speaker
- * 4 : 6 Speaker
- * 5 : w/ Air Suspension

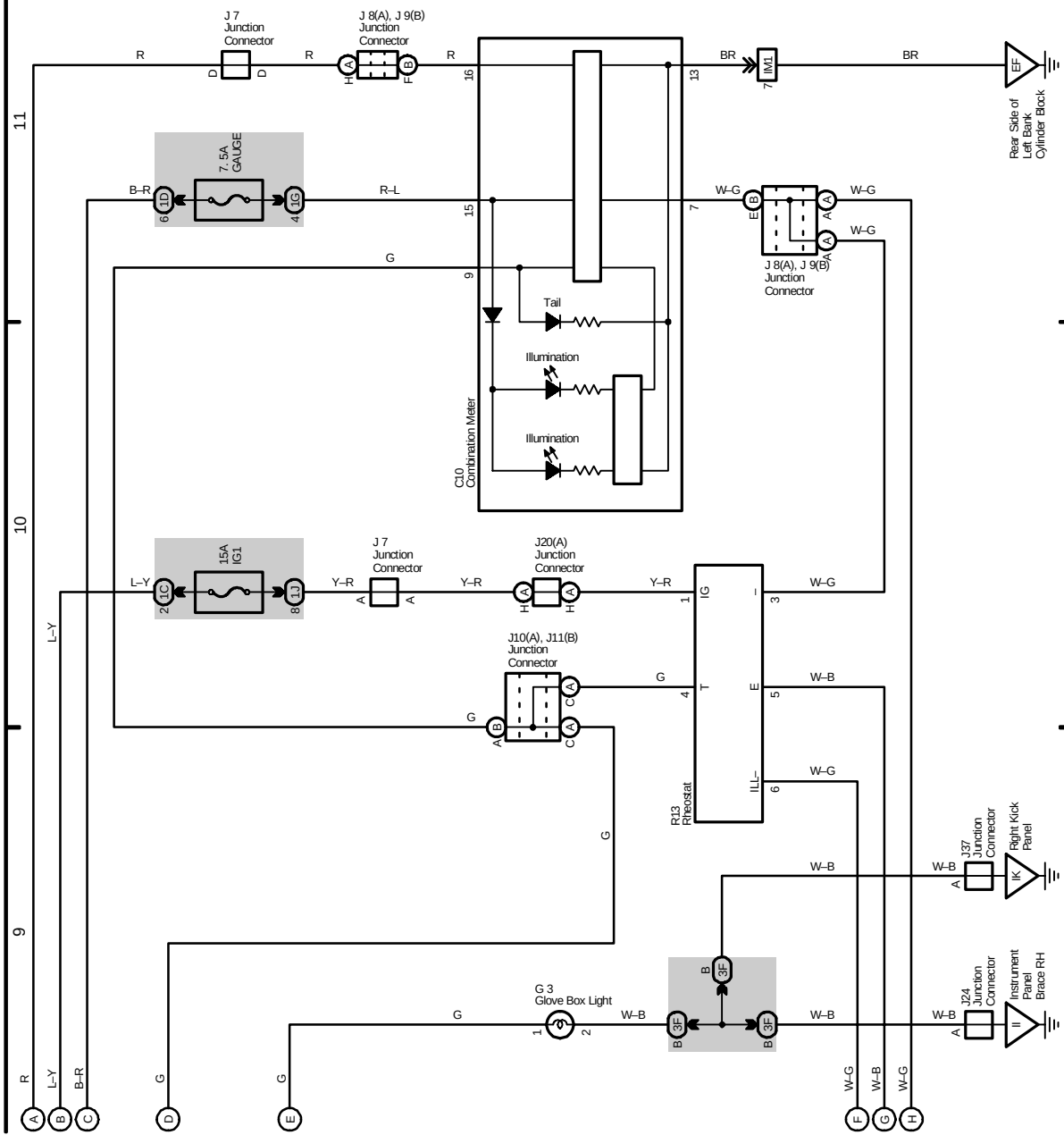
Taillight and Illumination



M OVERALL ELECTRICAL WIRING DIAGRAM

10 4RUNNER (Cont' d)

Taillight and Illumination





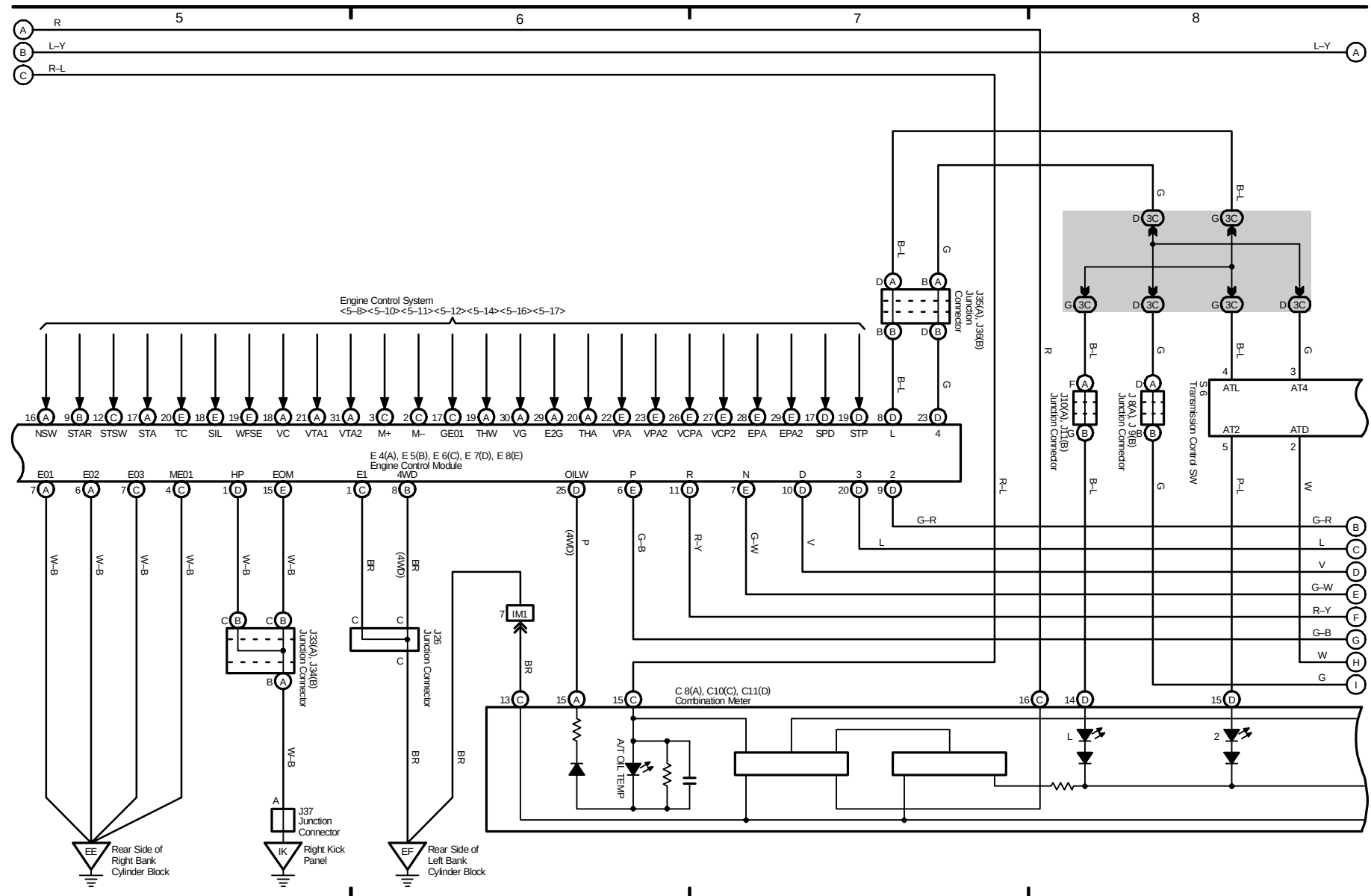
12 4RUNNER



13 4RUNNER



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



13 4RUNNER (Cont' d)

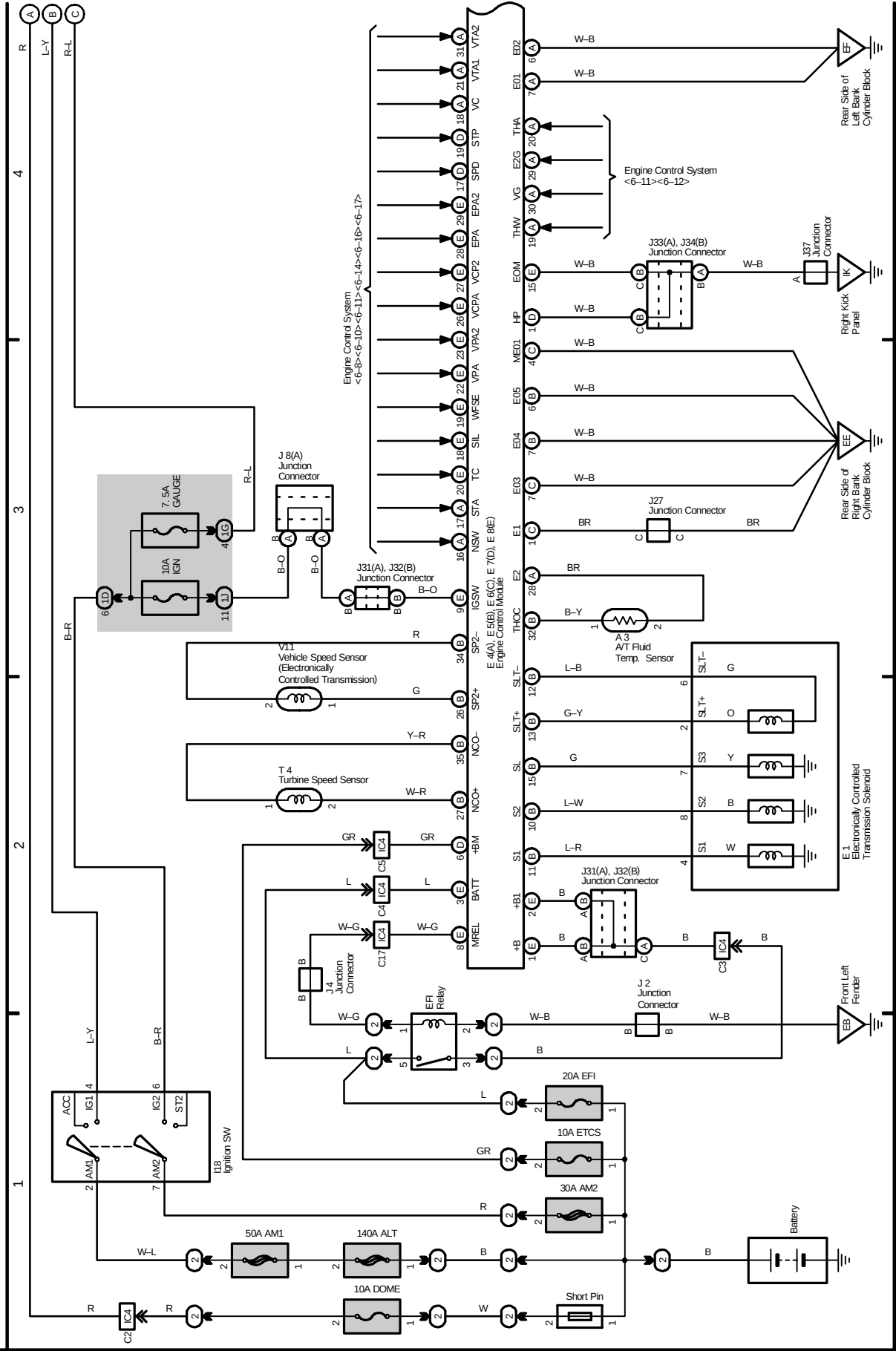


M OVERALL ELECTRICAL WIRING DIAGRAM

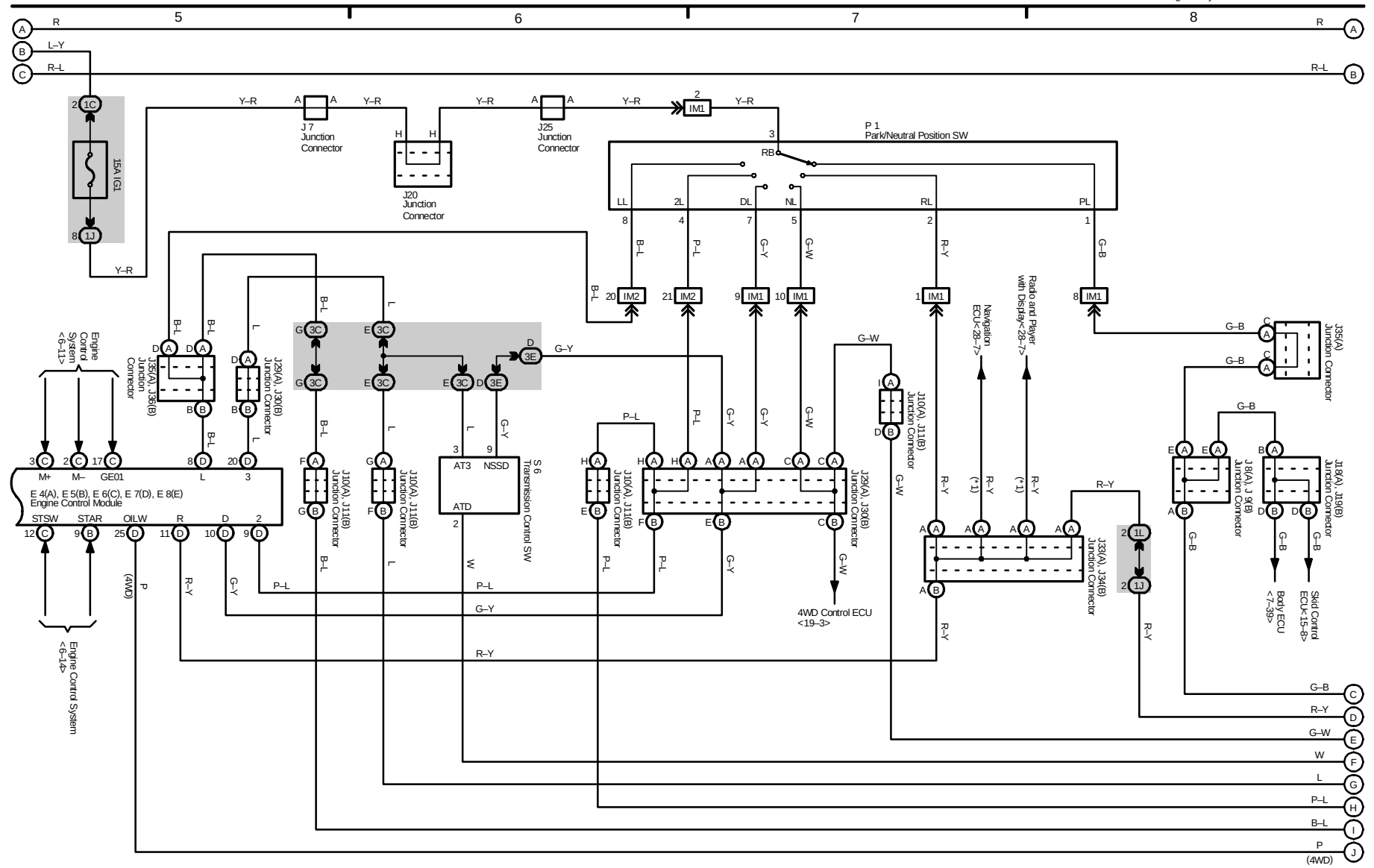
14 4RUNNER

(Cont. next page)

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



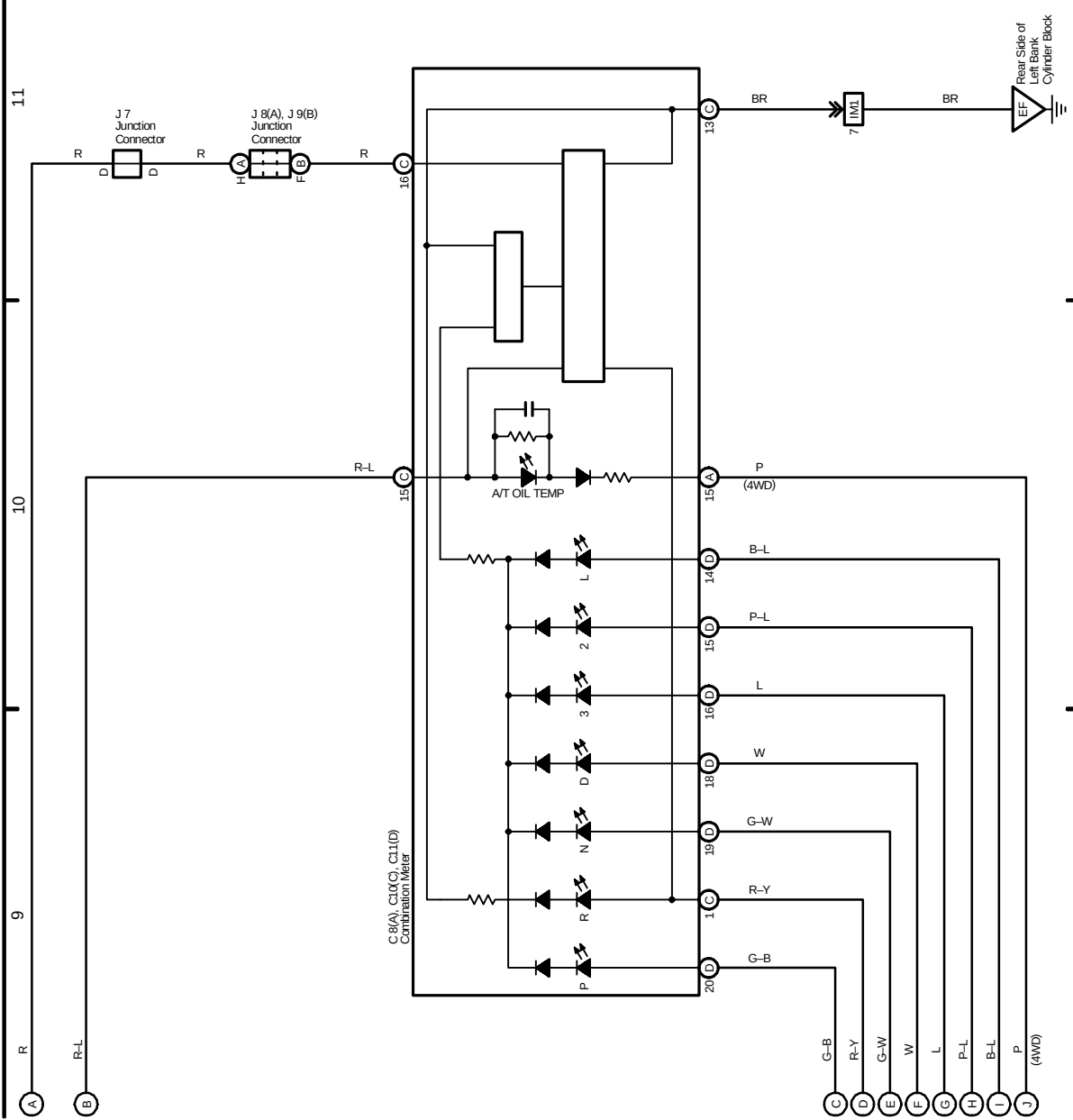
* 1 : w/ Navigation System



M OVERALL ELECTRICAL WIRING DIAGRAM

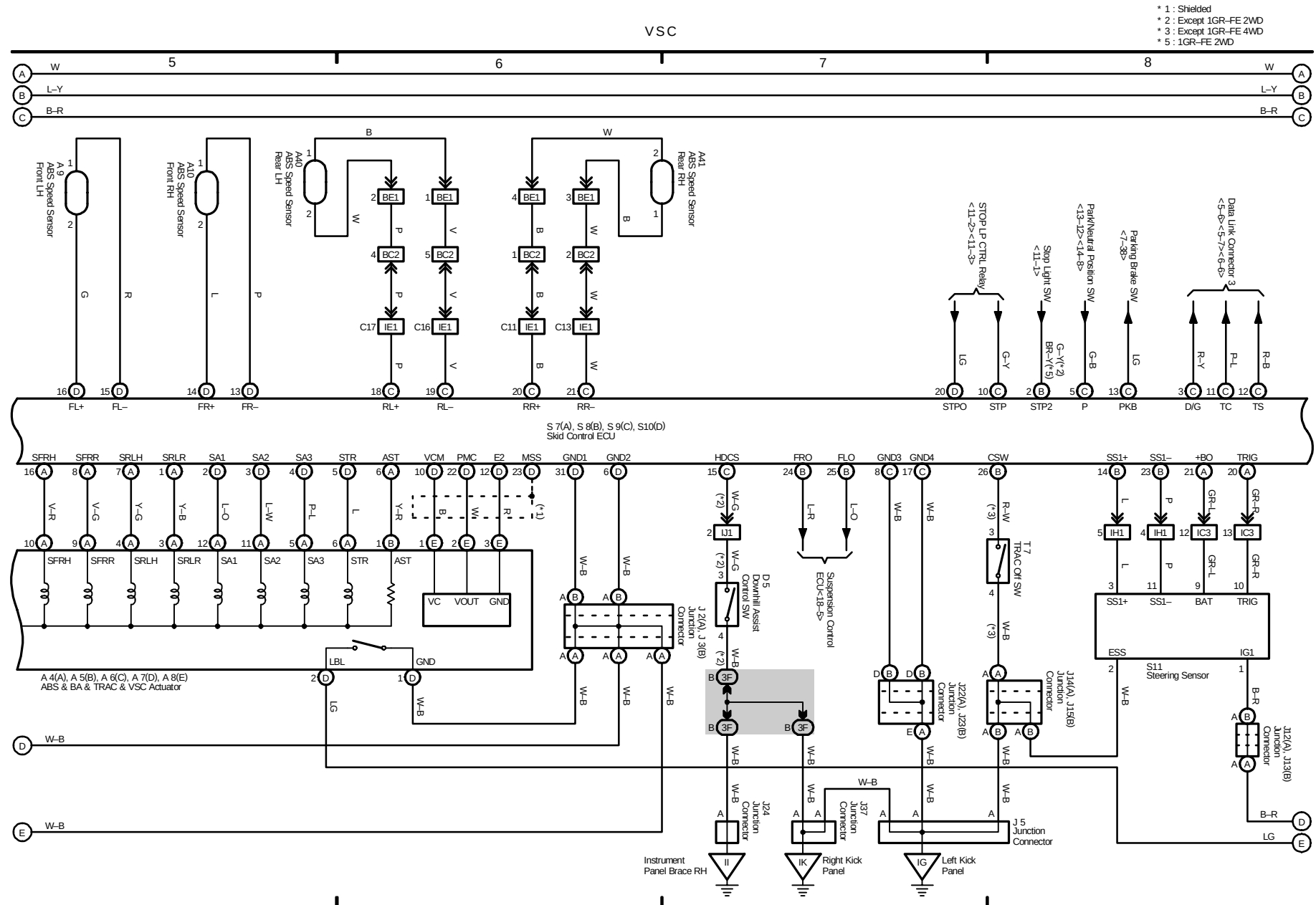
14 4RUNNER (Cont' d)

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



15 4RUNNER



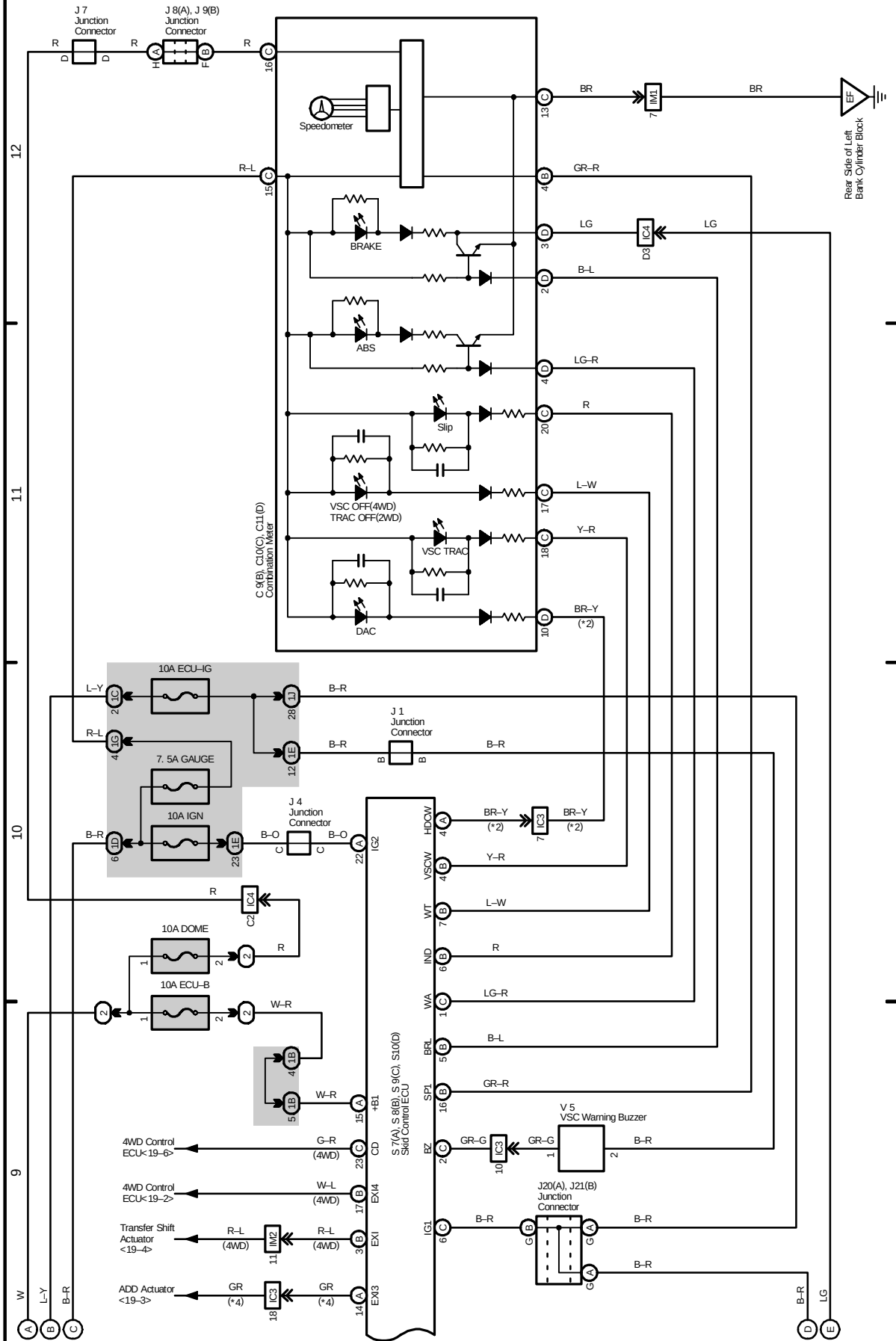


M OVERALL ELECTRICAL WIRING DIAGRAM

15 4RUNNER (Cont' d)

* 2 : Except 1GR-FE 2WD
* 4 : 1GR-FE 4WD

VSC



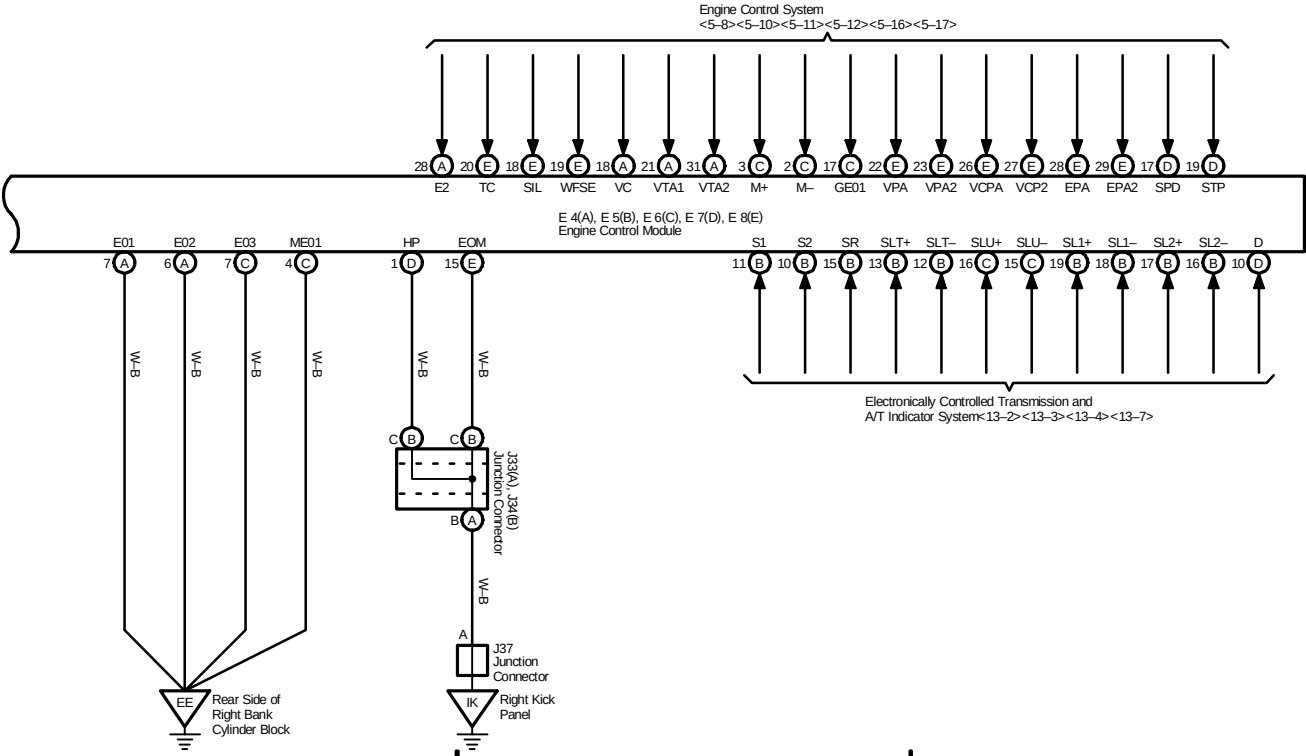
(Cont. next page)

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Cruise Control (2UZ-FE)

5 6 7 8

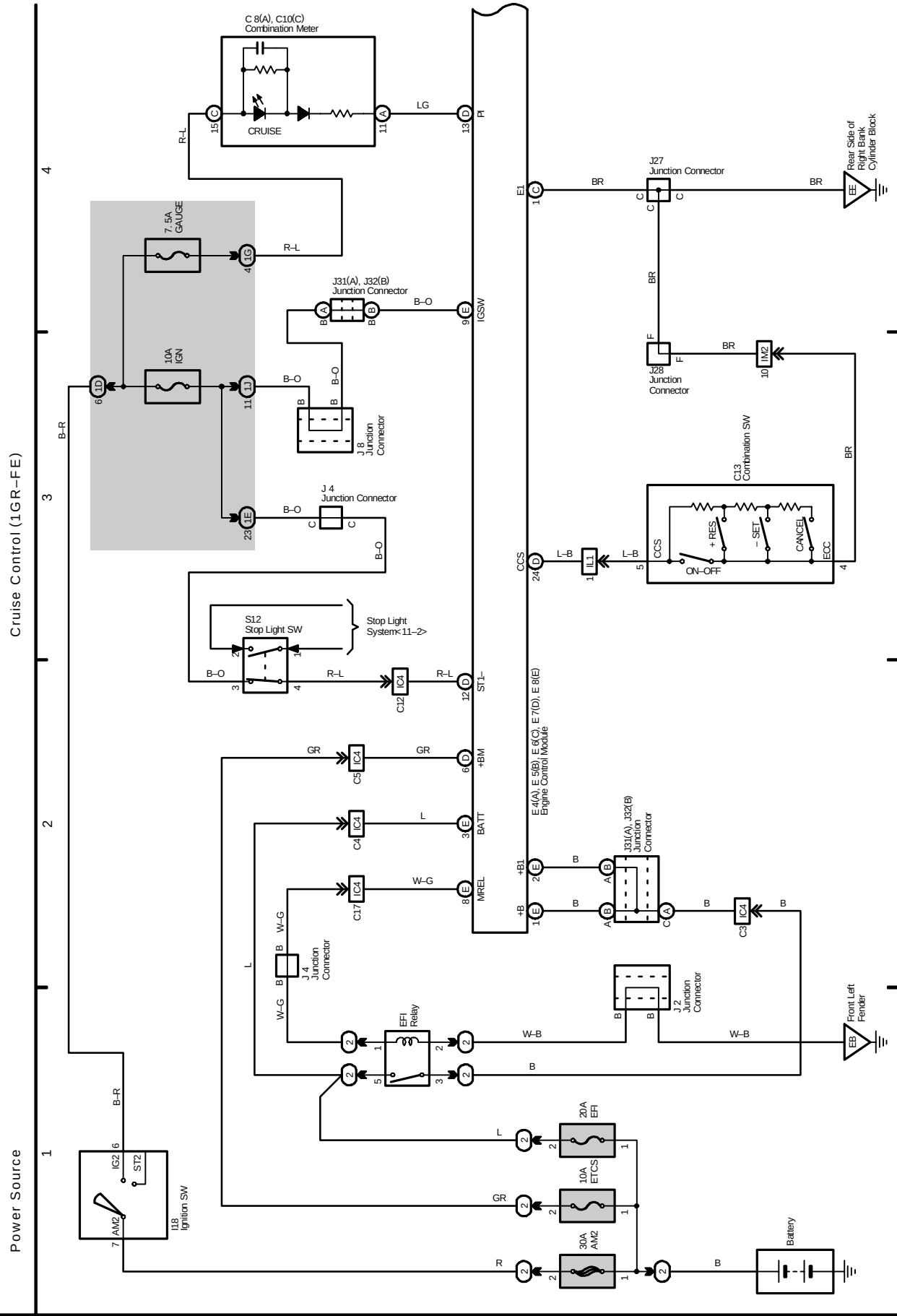


2003 4RUNNER (EWD514U)

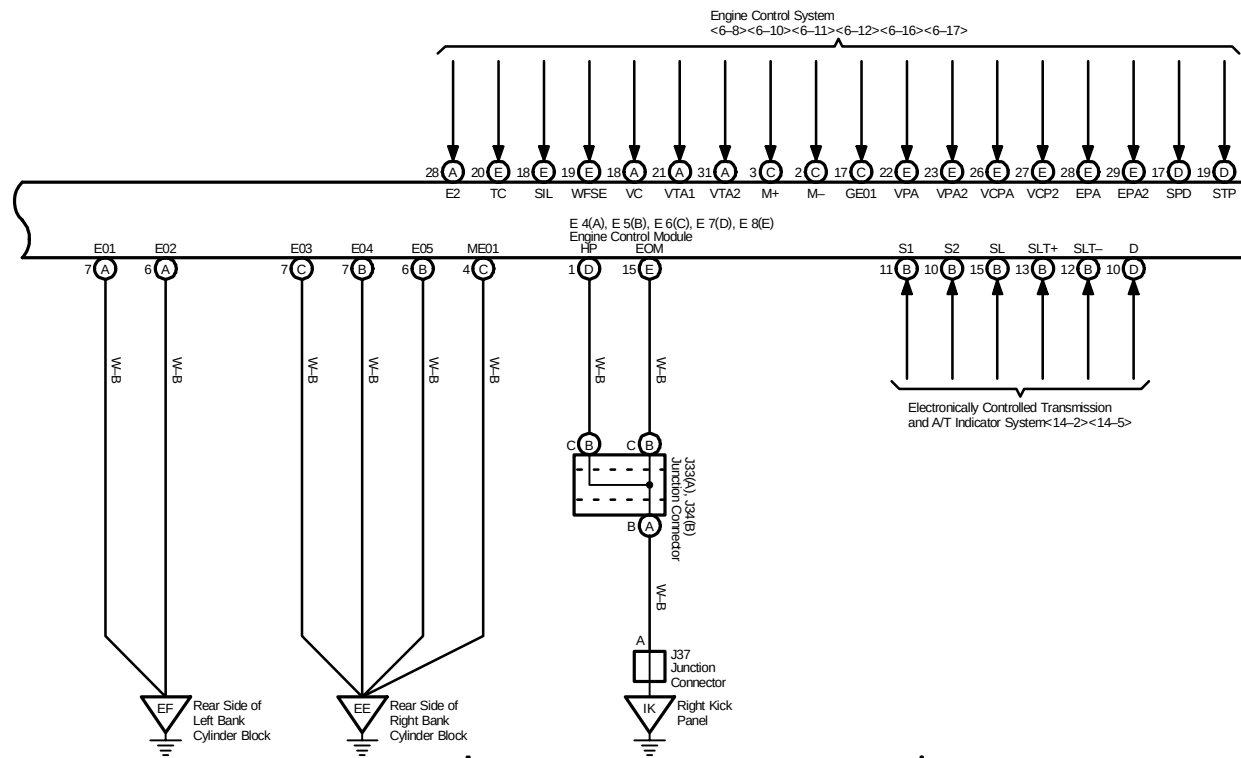
M OVERALL ELECTRICAL WIRING DIAGRAM

17 4RUNNER

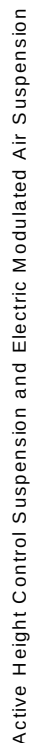
(Cont. next page)



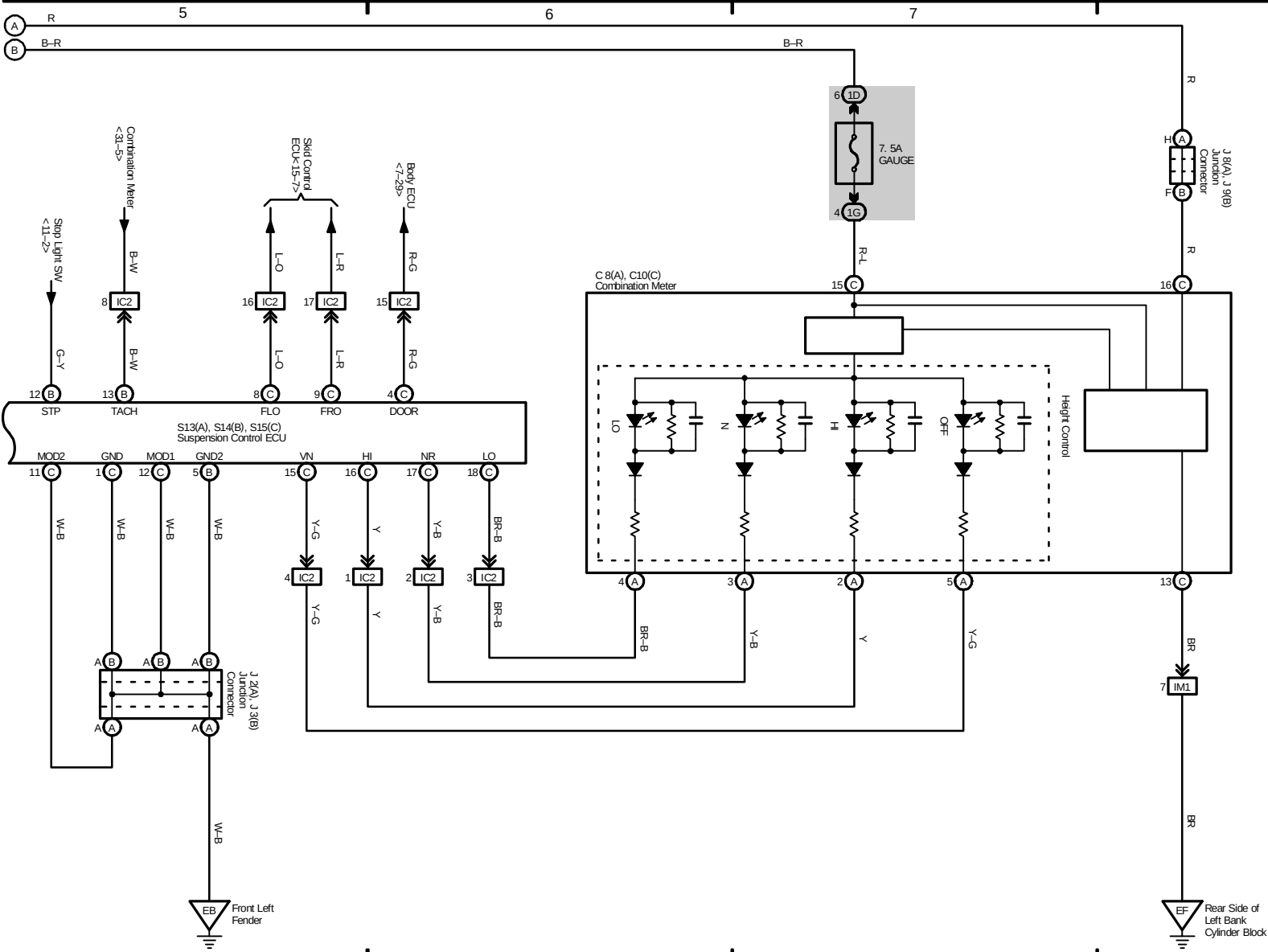
A horizontal number line with arrows at both ends. There are four major tick marks labeled 5, 6, 7, and 8 from left to right. The line is divided into three equal segments by these tick marks.



18 4RUNNER

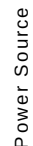


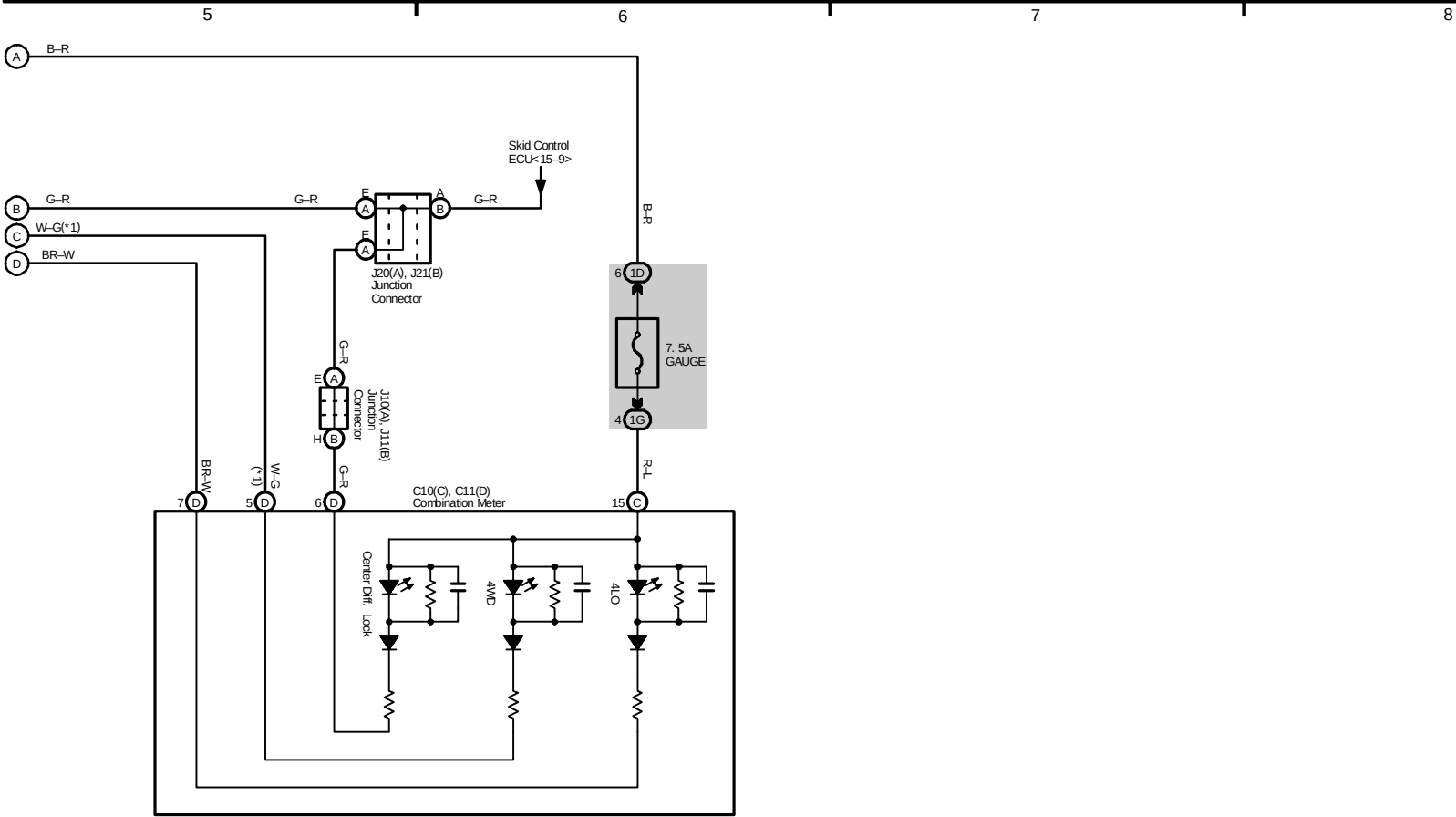
Active Height Control Suspension and Electric Modulated Air Suspension



2003 4RUNNER (EWD514U)

19 4RUNNER

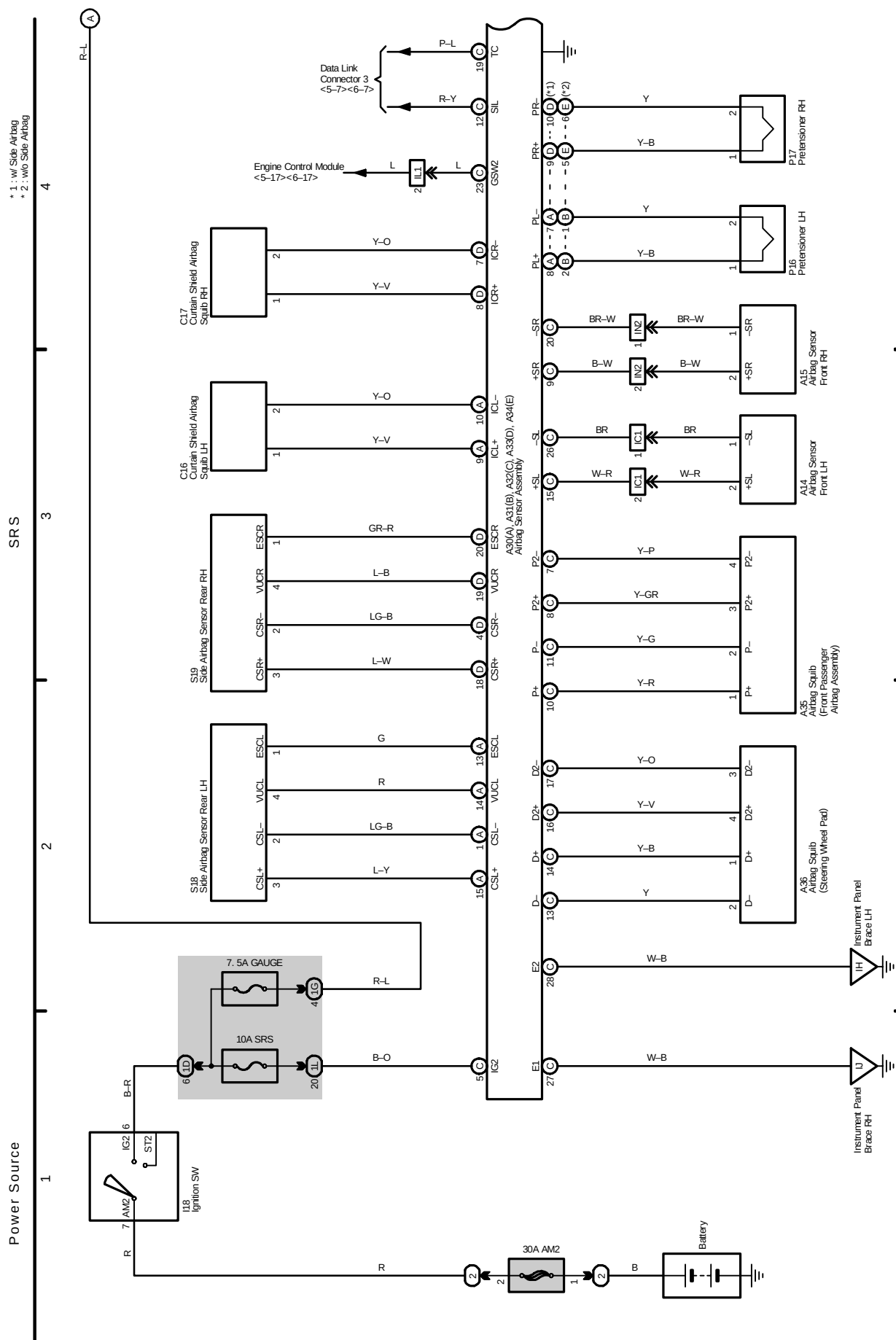




M OVERALL ELECTRICAL WIRING DIAGRAM

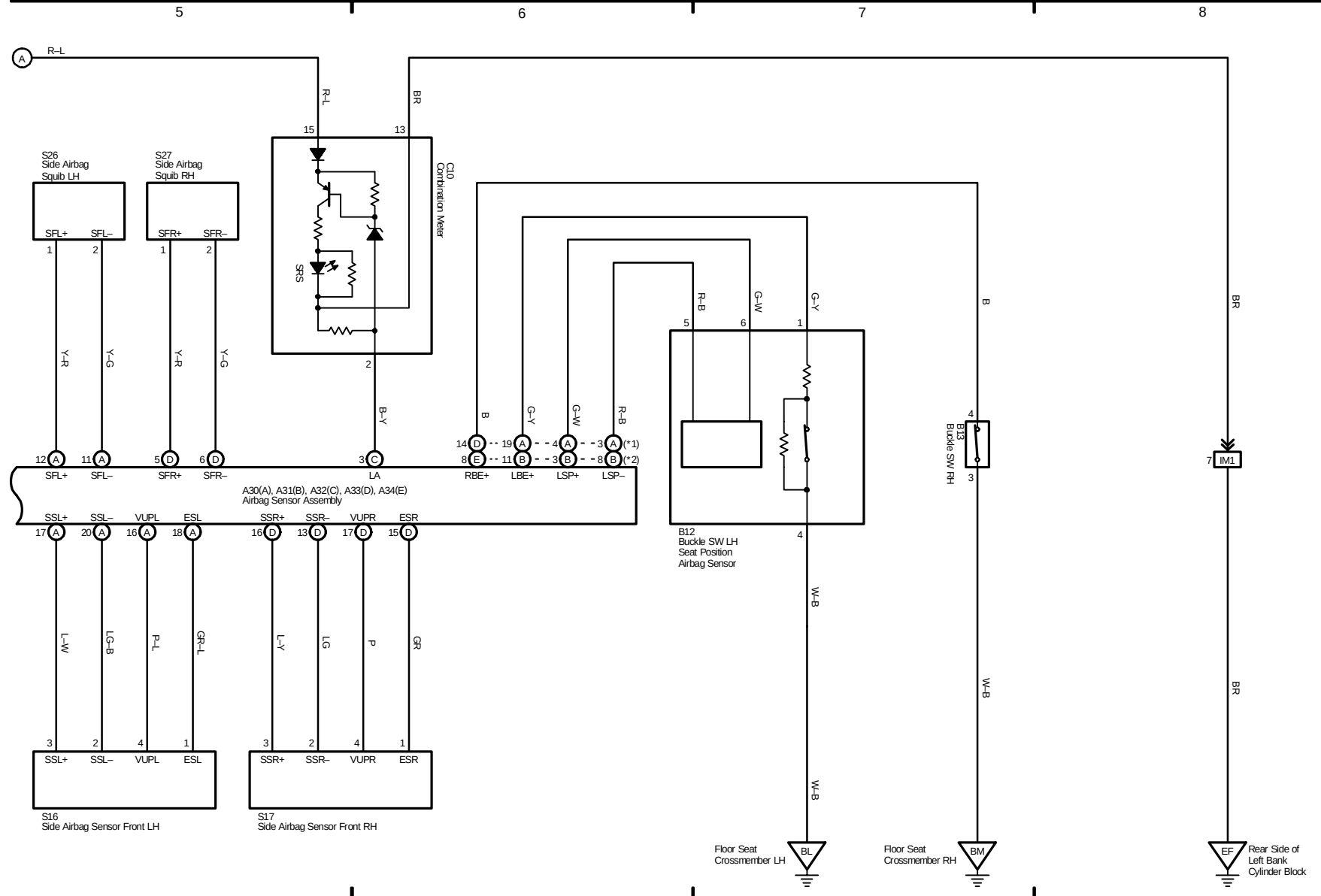
20 4RUNNER

(Cont. next page)



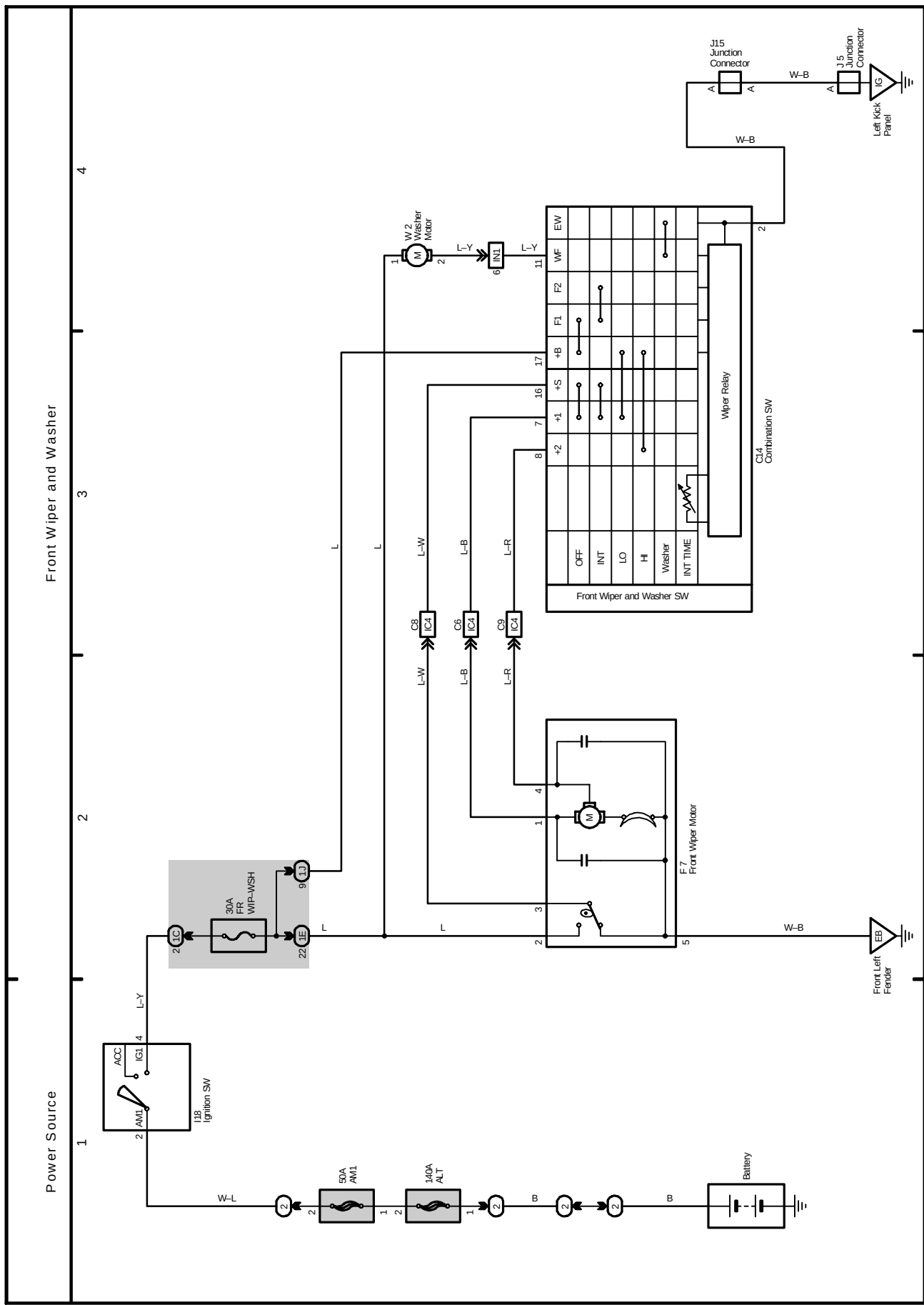
SRS

* 1 : w/ Side Airbag
 * 2 : w/o Side Airbag



M OVERALL ELECTRICAL WIRING DIAGRAM

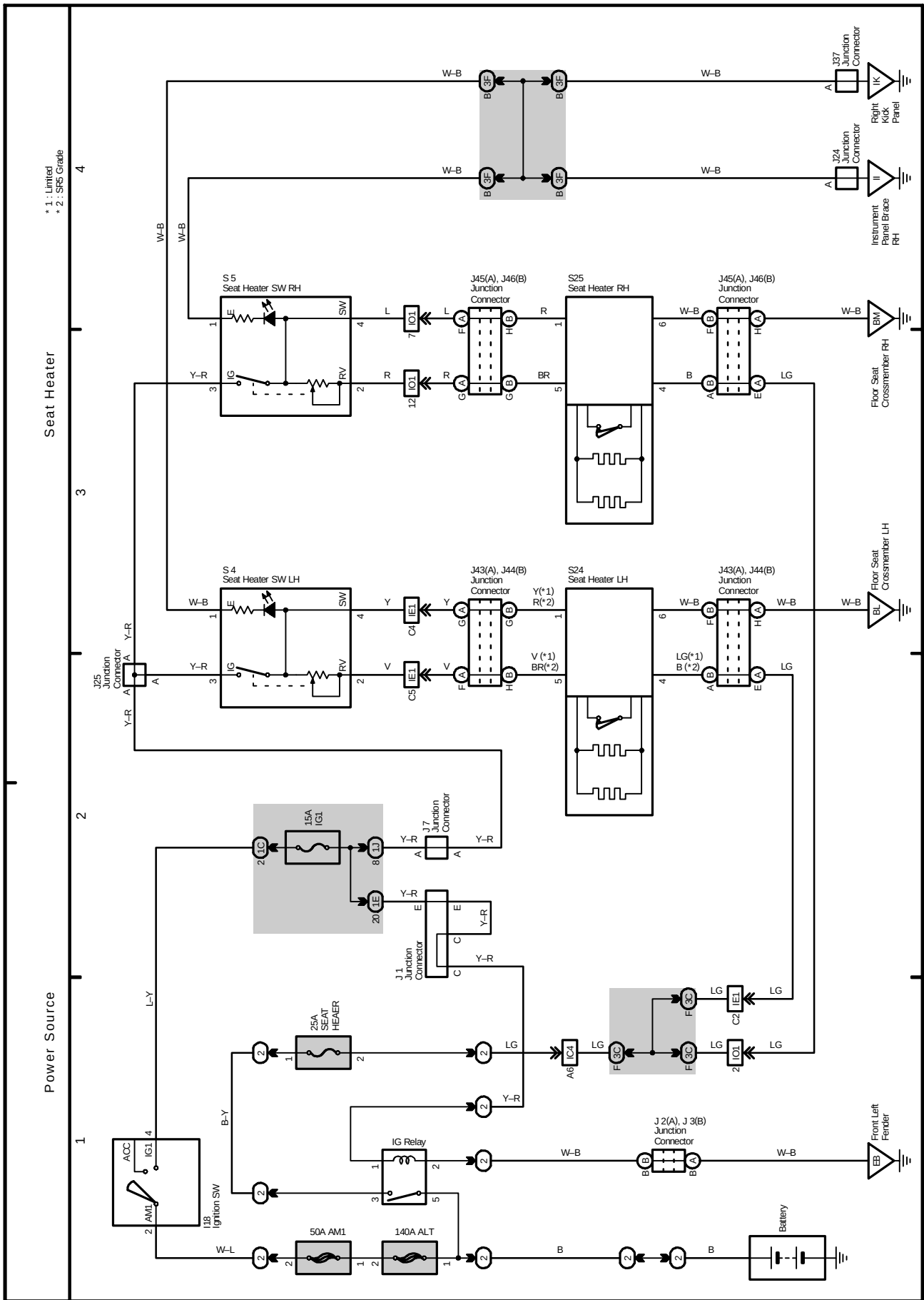
21 4RUNNER

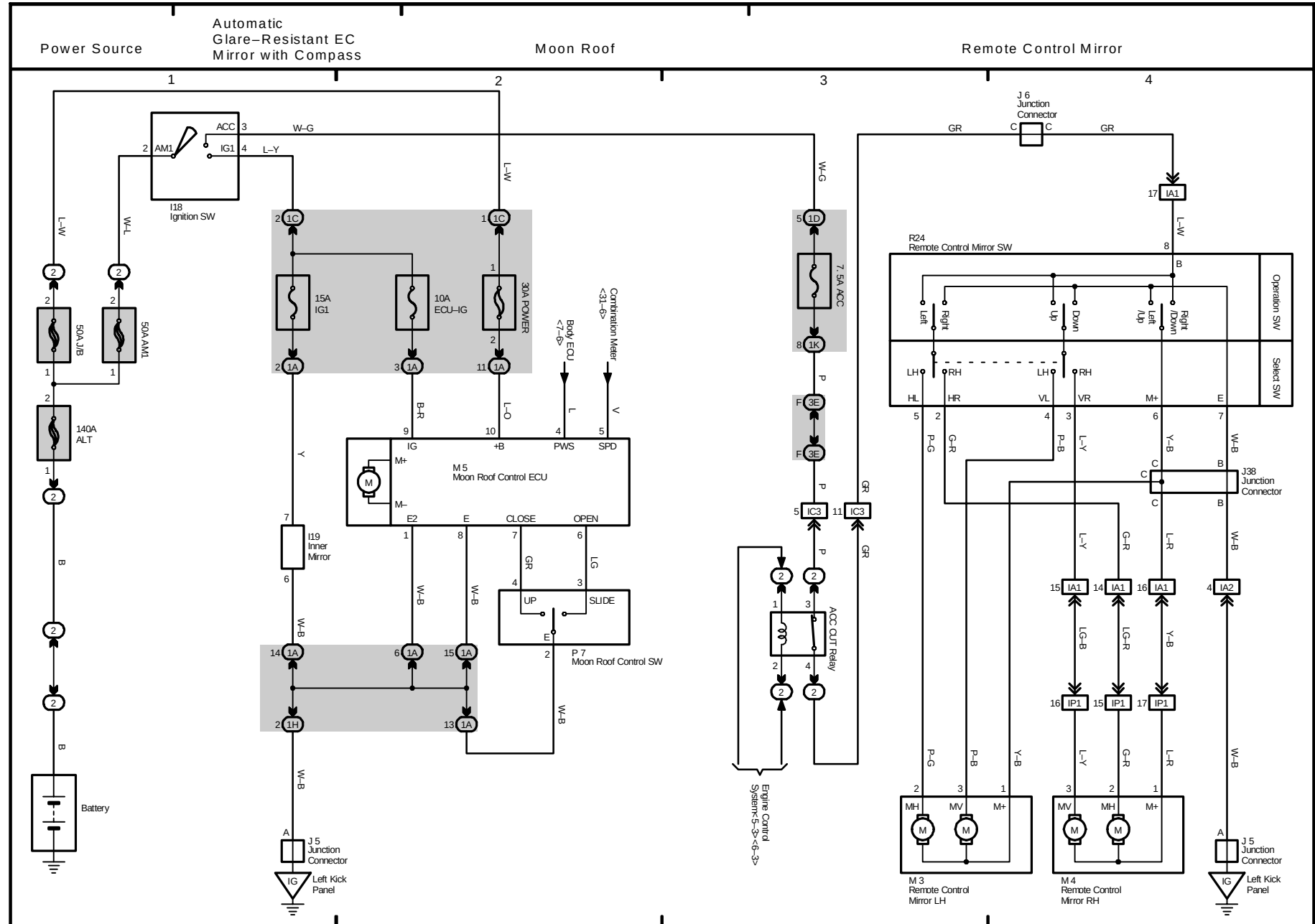




M OVERALL ELECTRICAL WIRING DIAGRAM

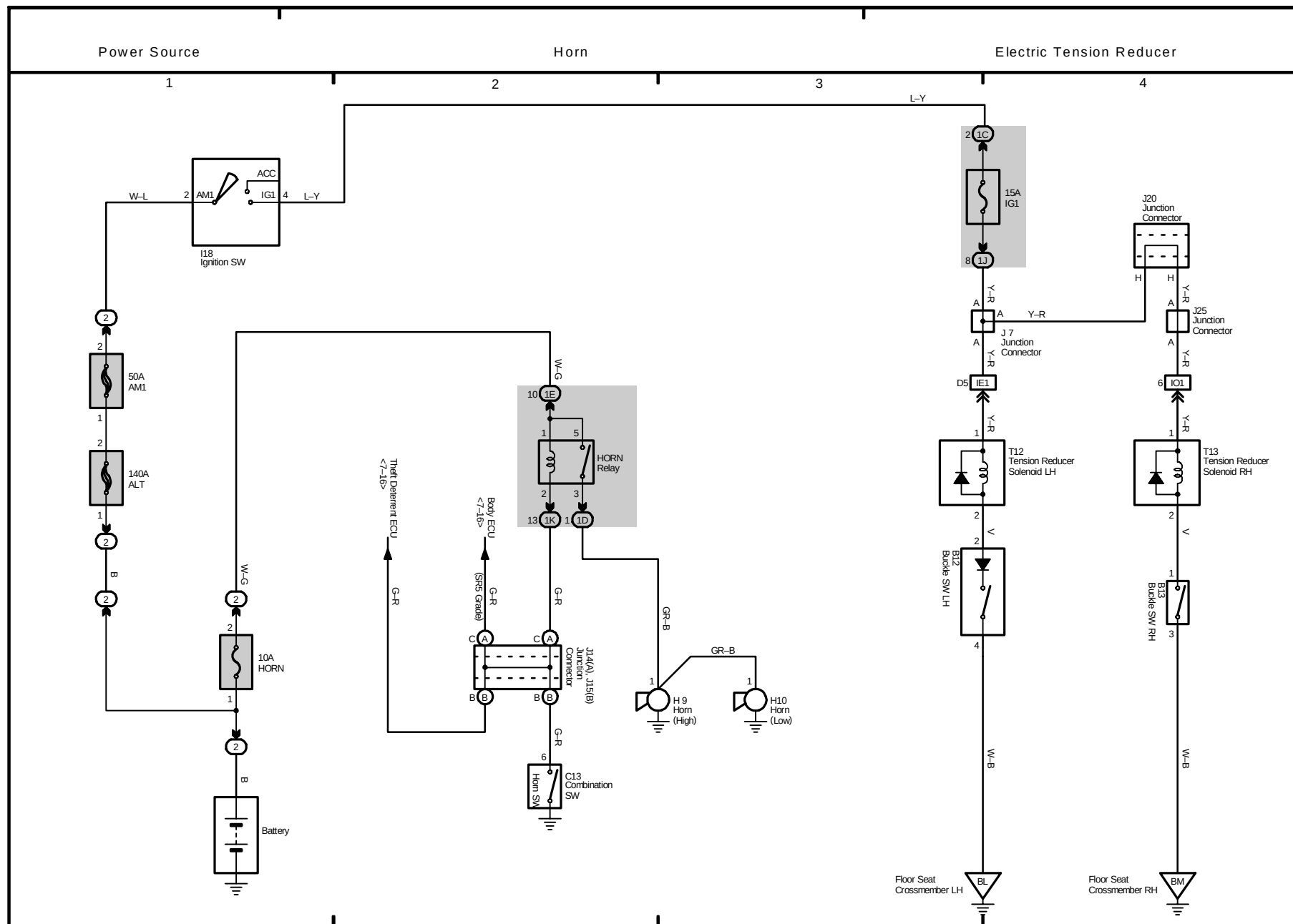
23 4RUNNER





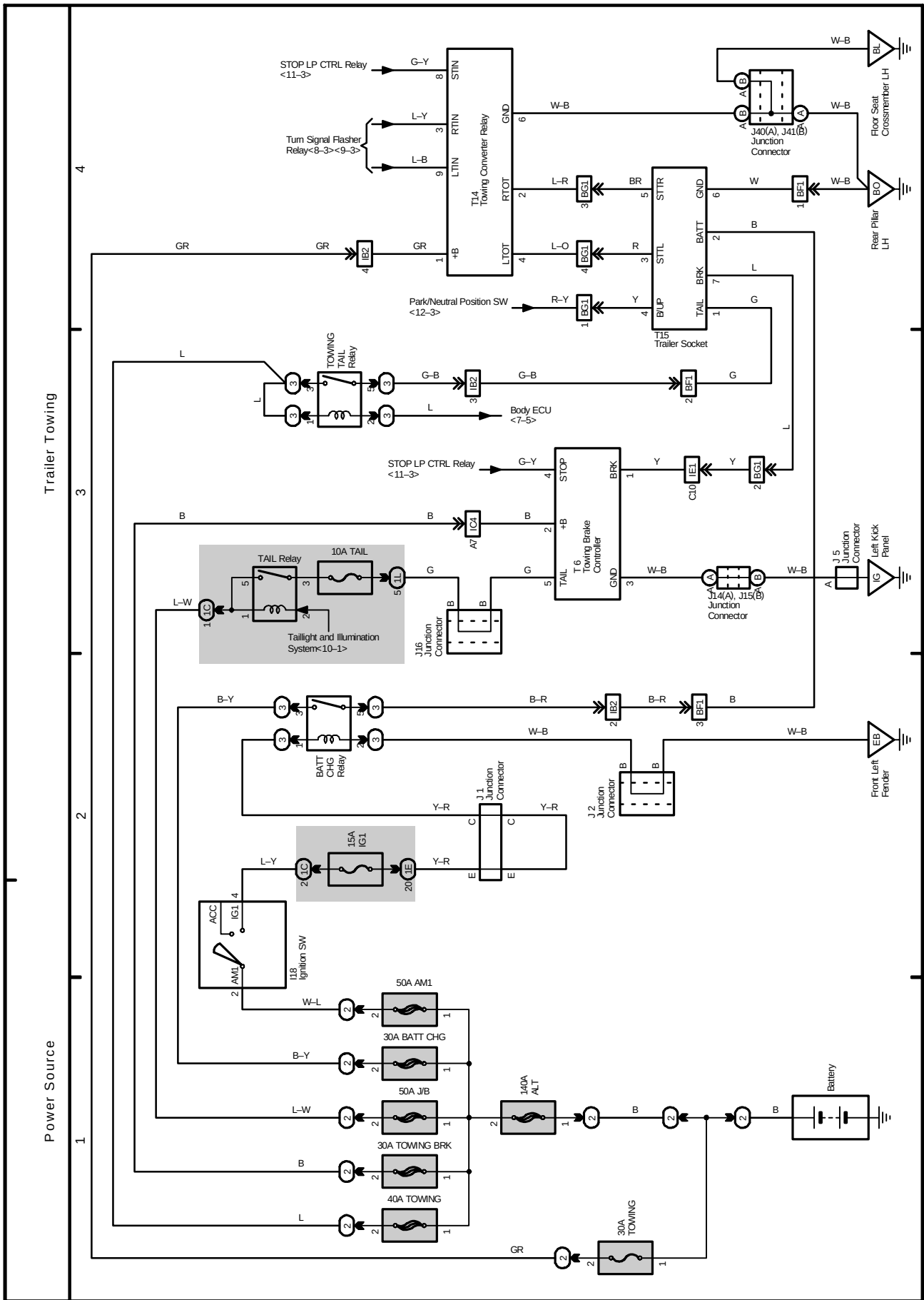
25 4RUNNER

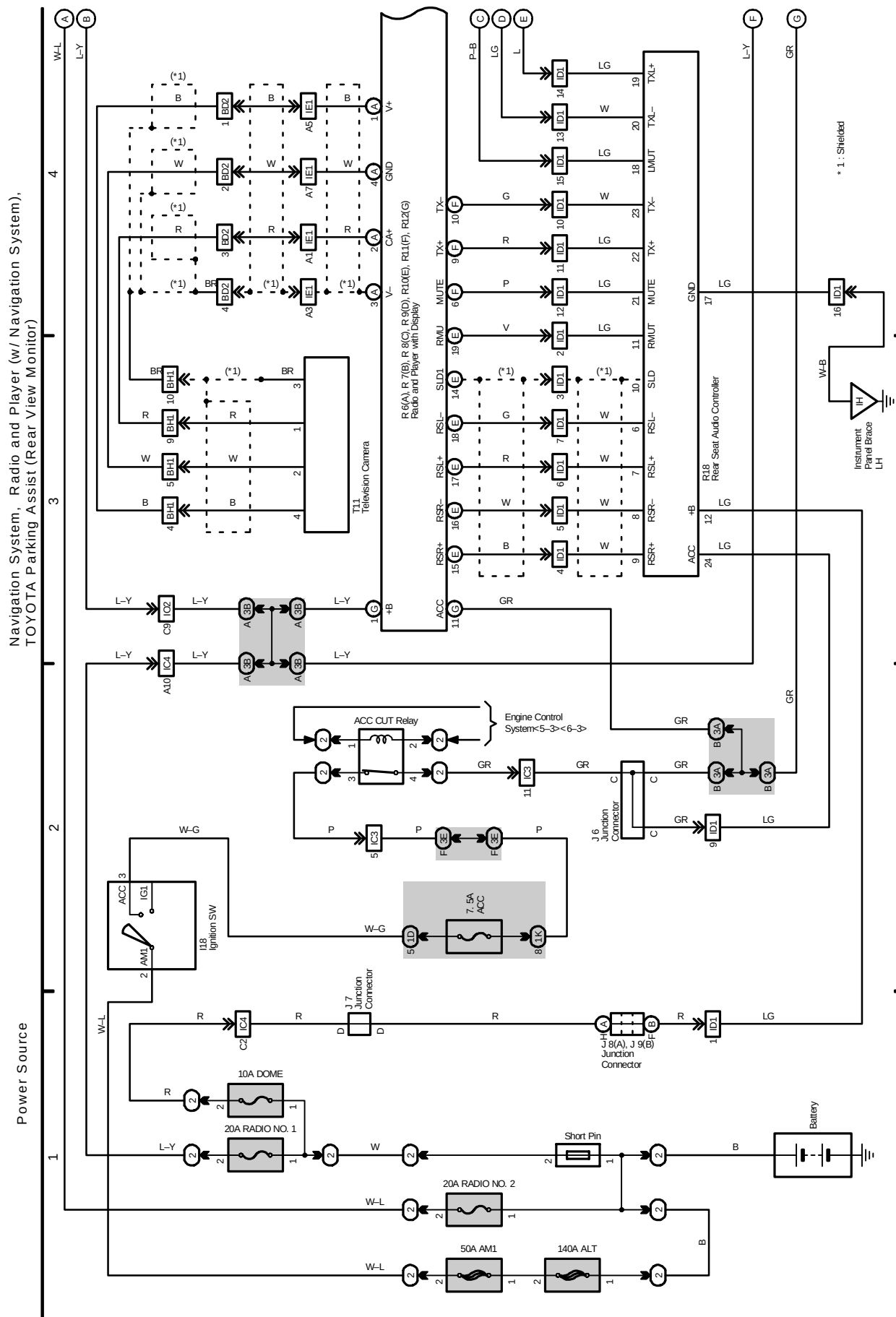


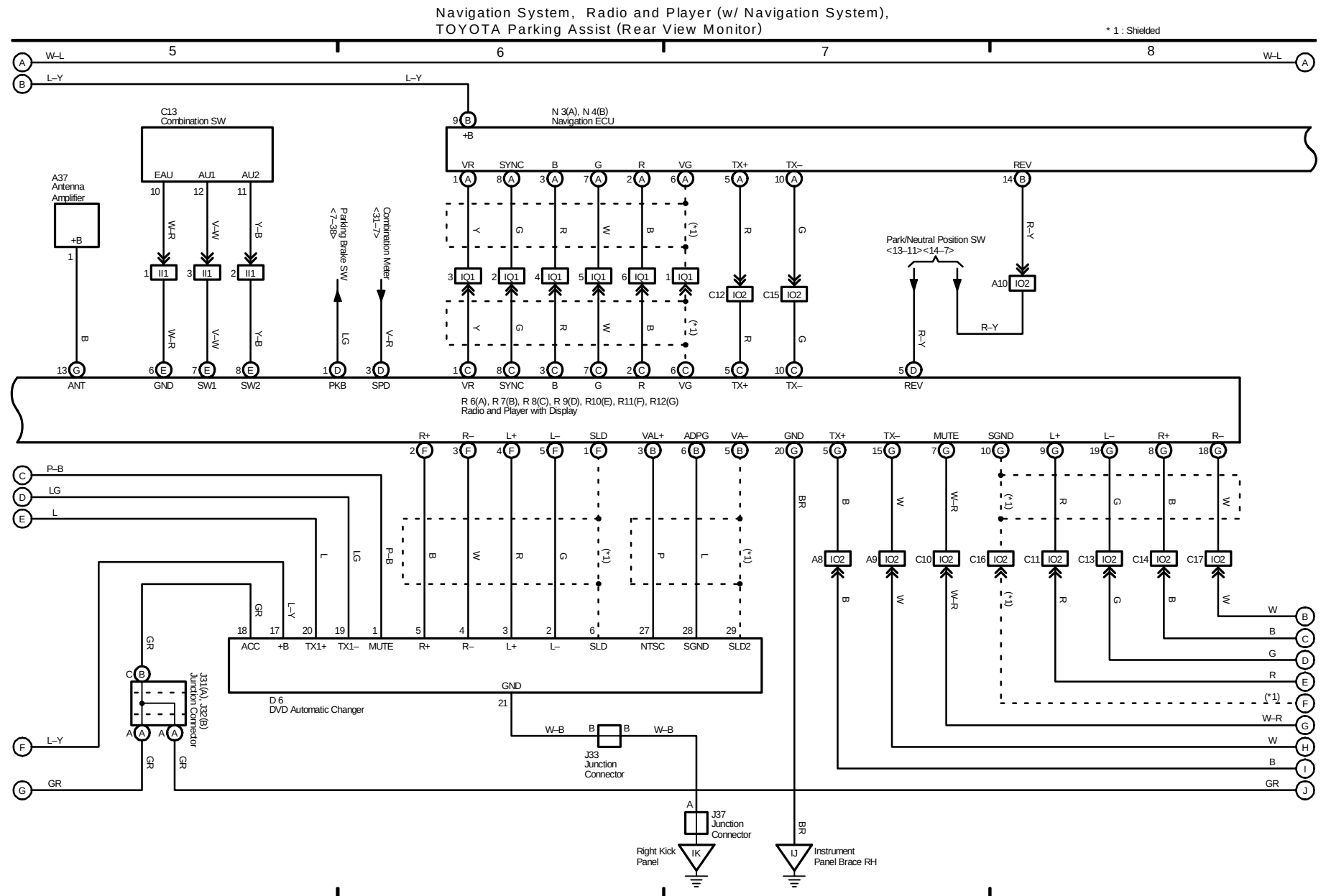


M OVERALL ELECTRICAL WIRING DIAGRAM

27 4RUNNER



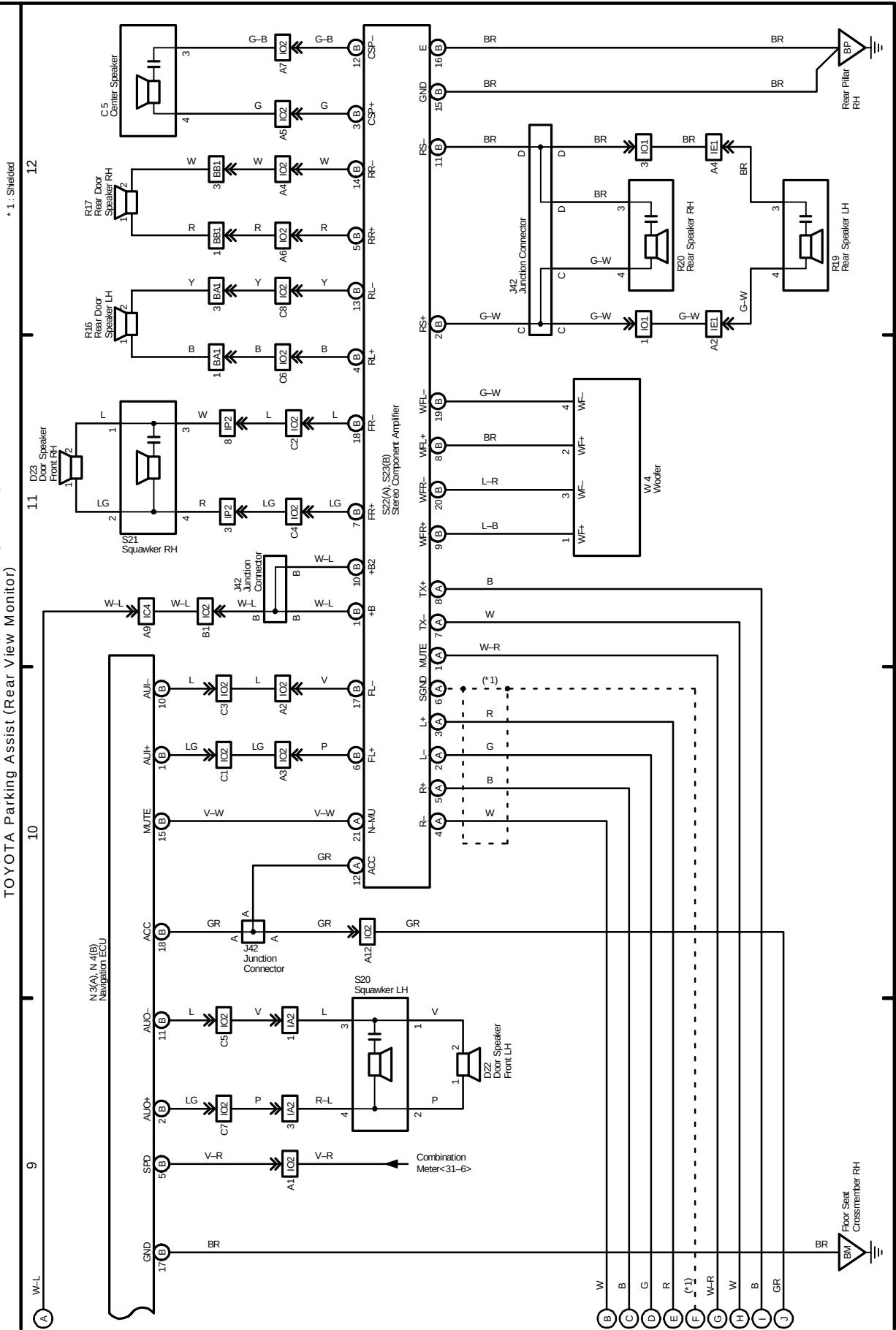




M OVERALL ELECTRICAL WIRING DIAGRAM

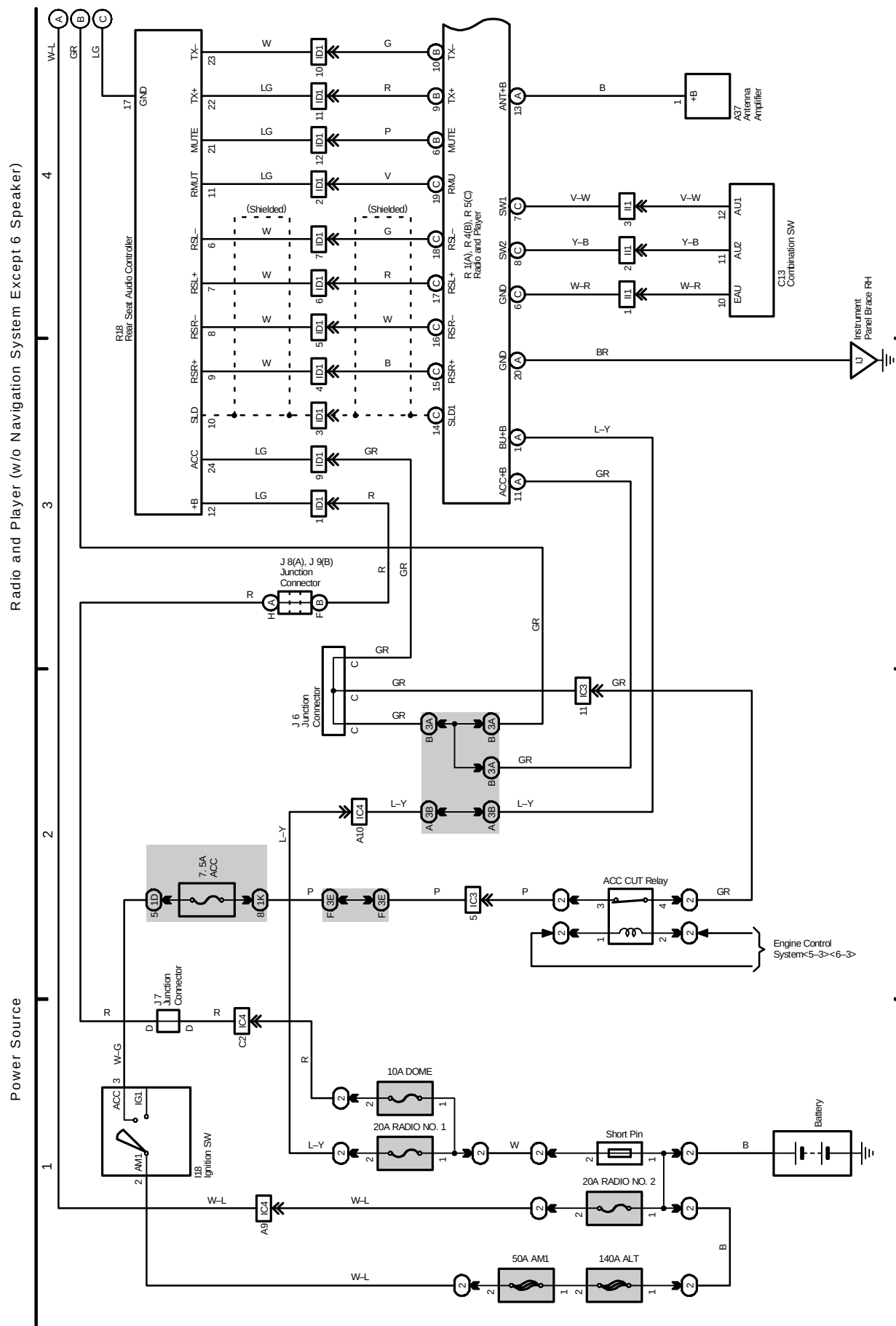
28 4RUNNER (Cont' d)

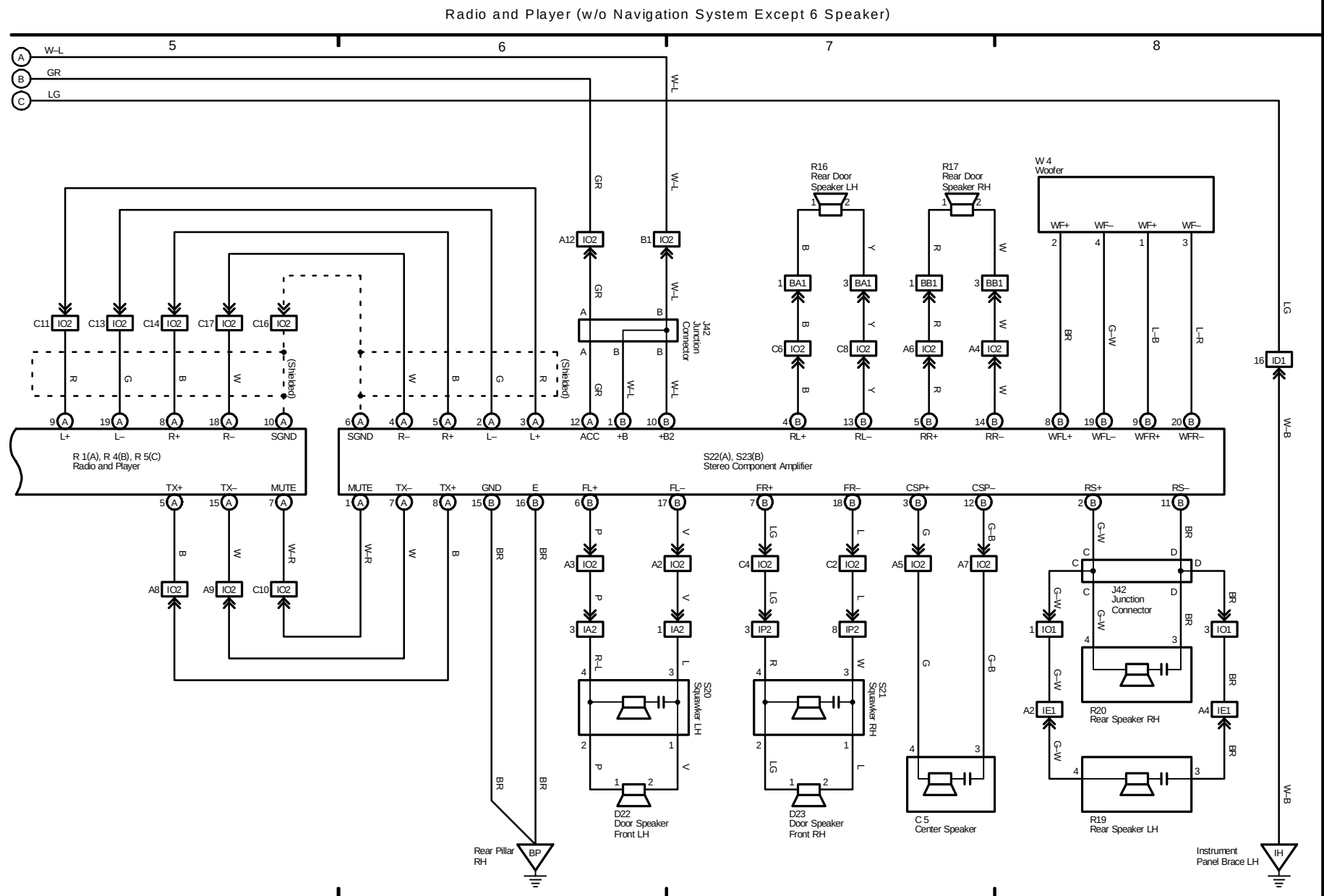
Navigation System, Radio and Player (w/ Navigation System),
TOYOTA Parking Assist (Rear View Monitor)



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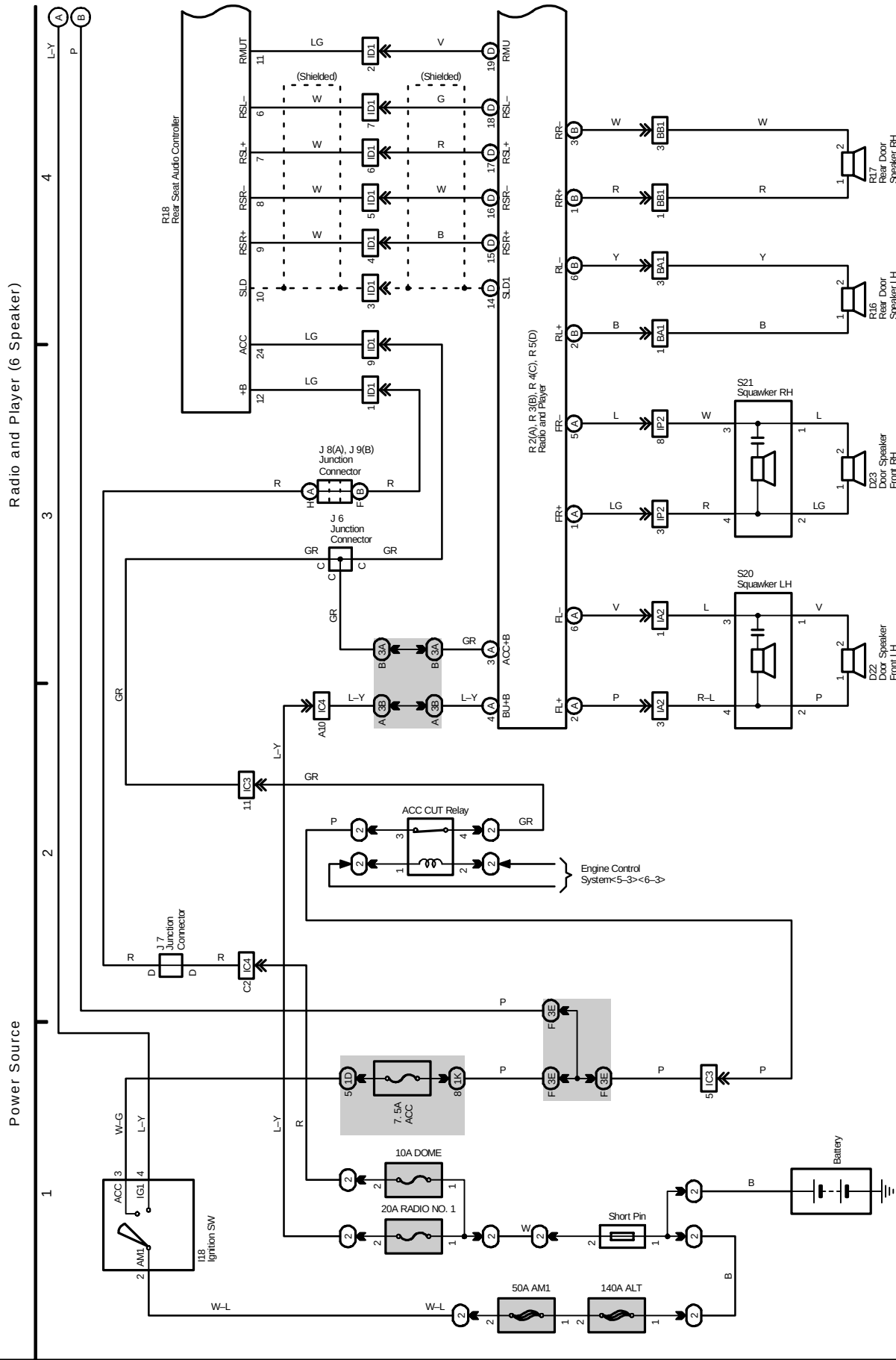




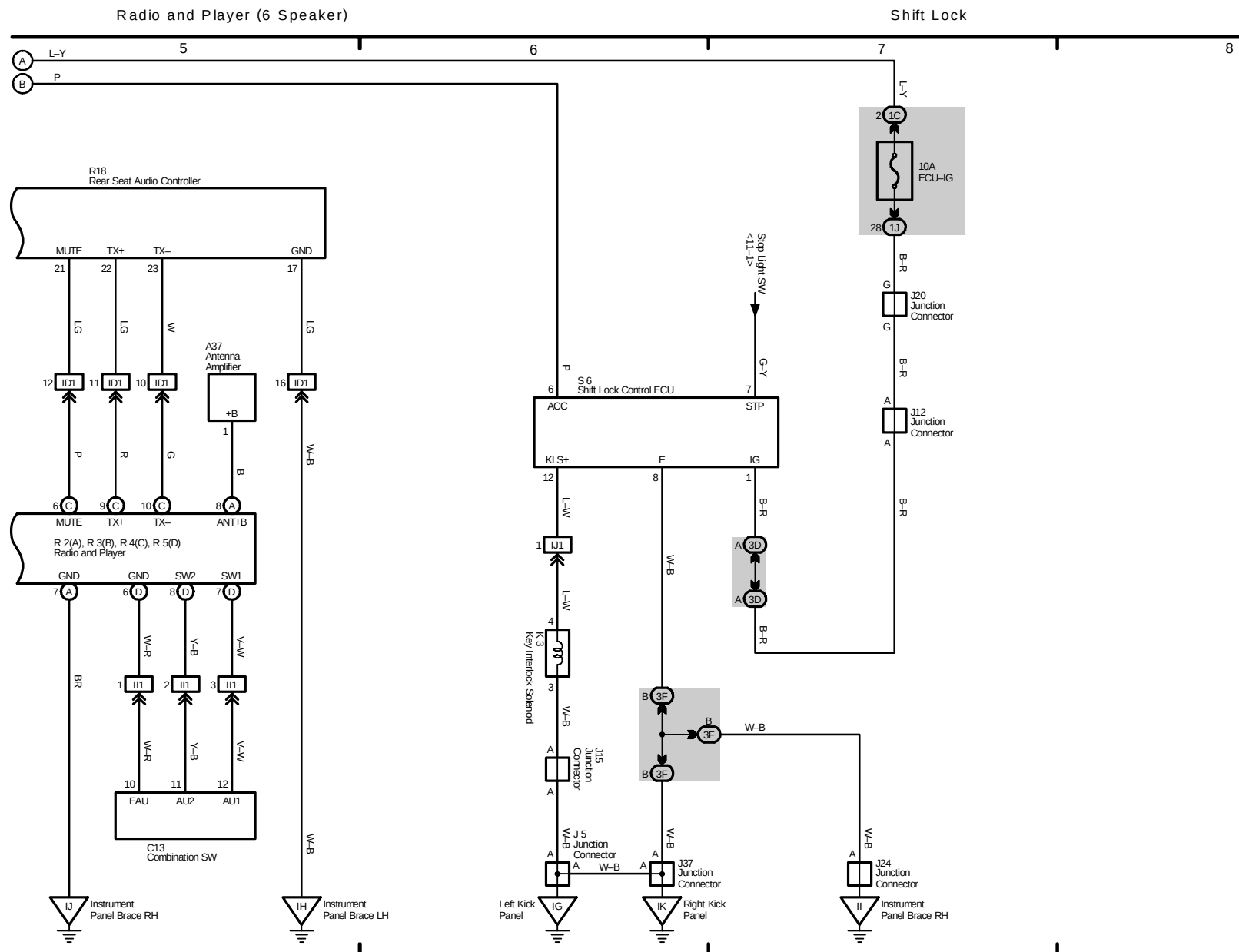
M OVERALL ELECTRICAL WIRING DIAGRAM

30 4RUNNER

(Cont. next page)



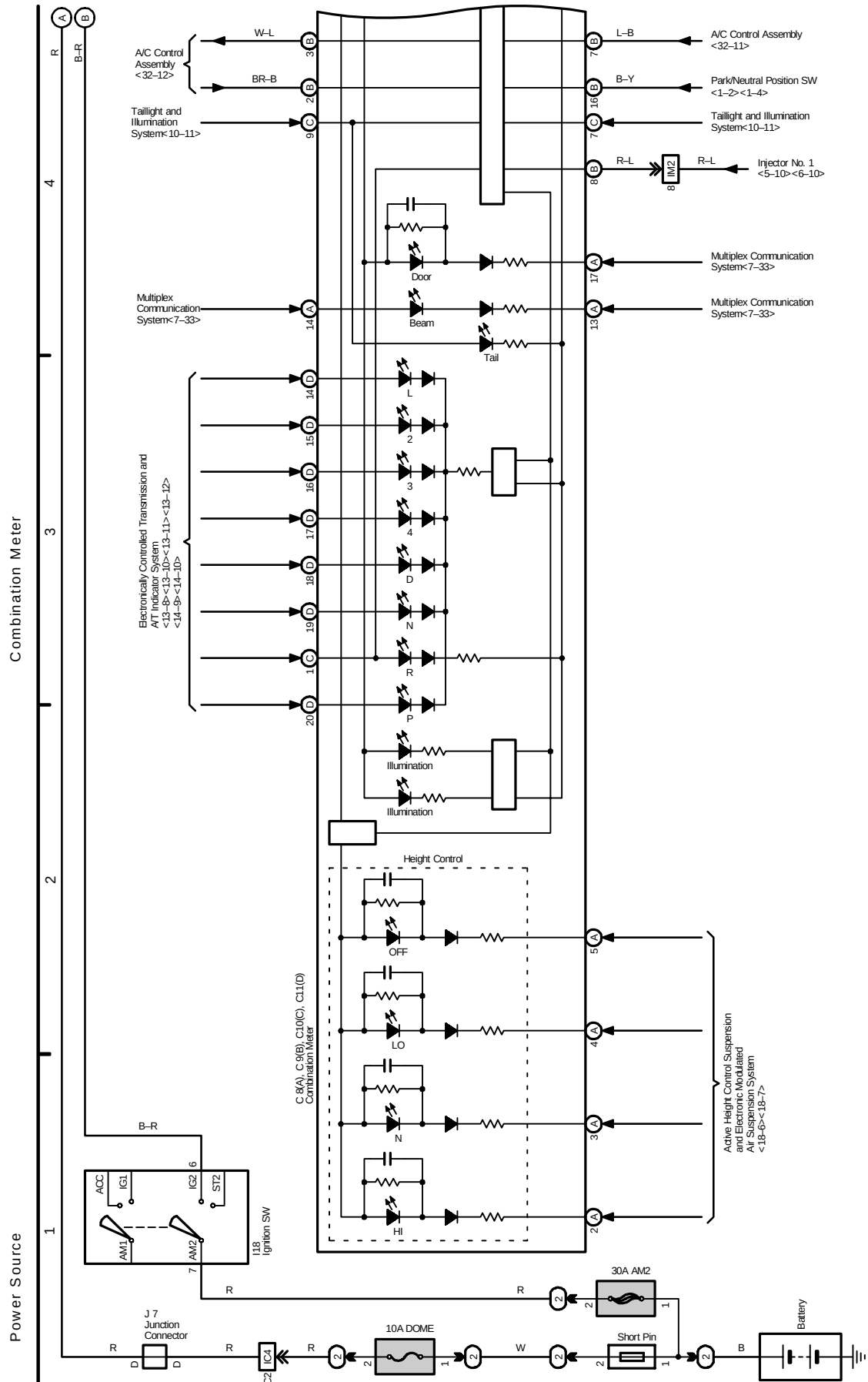
2003 4RUNNER (EWD514U)

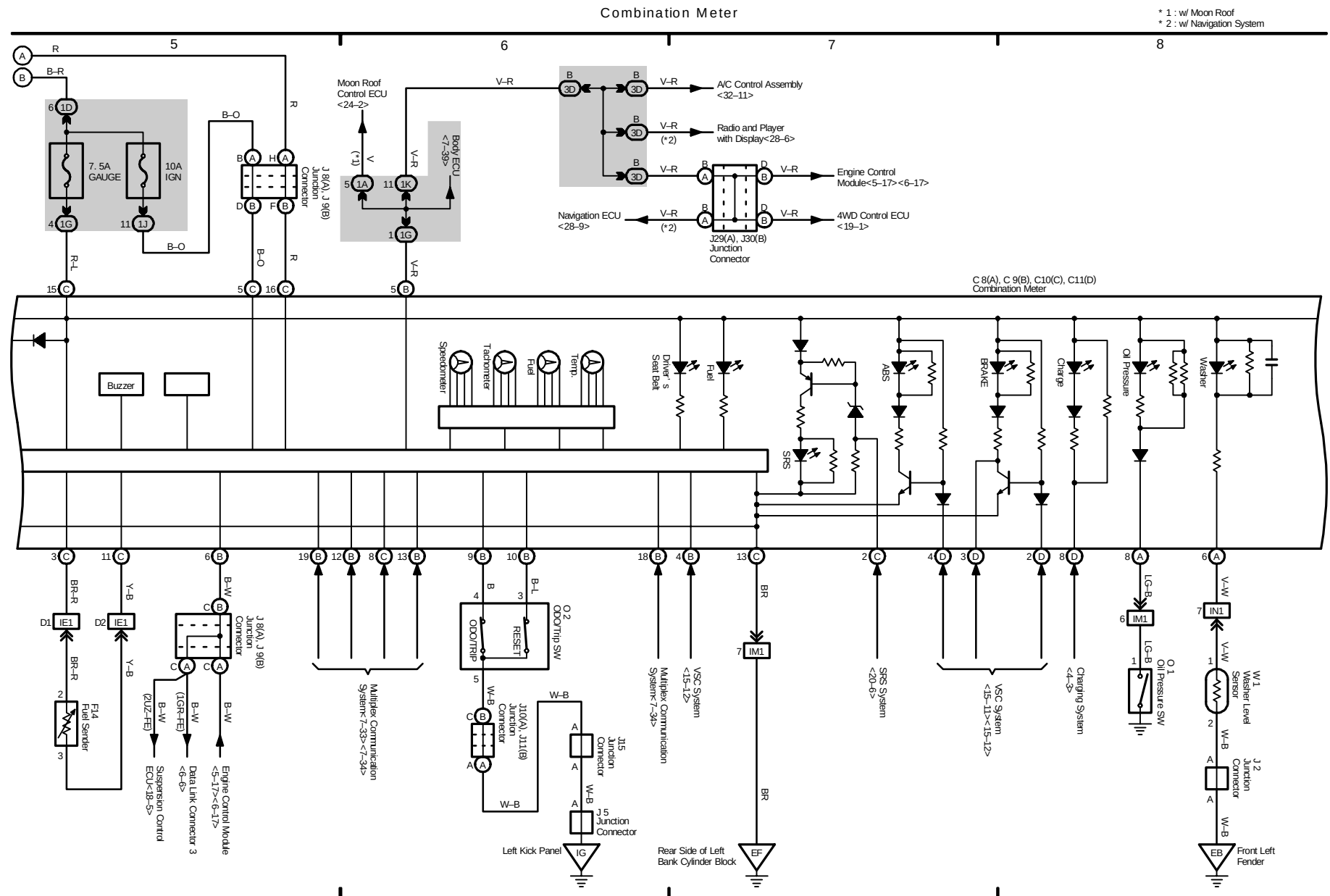


M OVERALL ELECTRICAL WIRING DIAGRAM

31 4RUNNER

(Cont. next page)





M OVERALL ELECTRICAL WIRING DIAGRAM

31 4RUNNER (Cont' d)

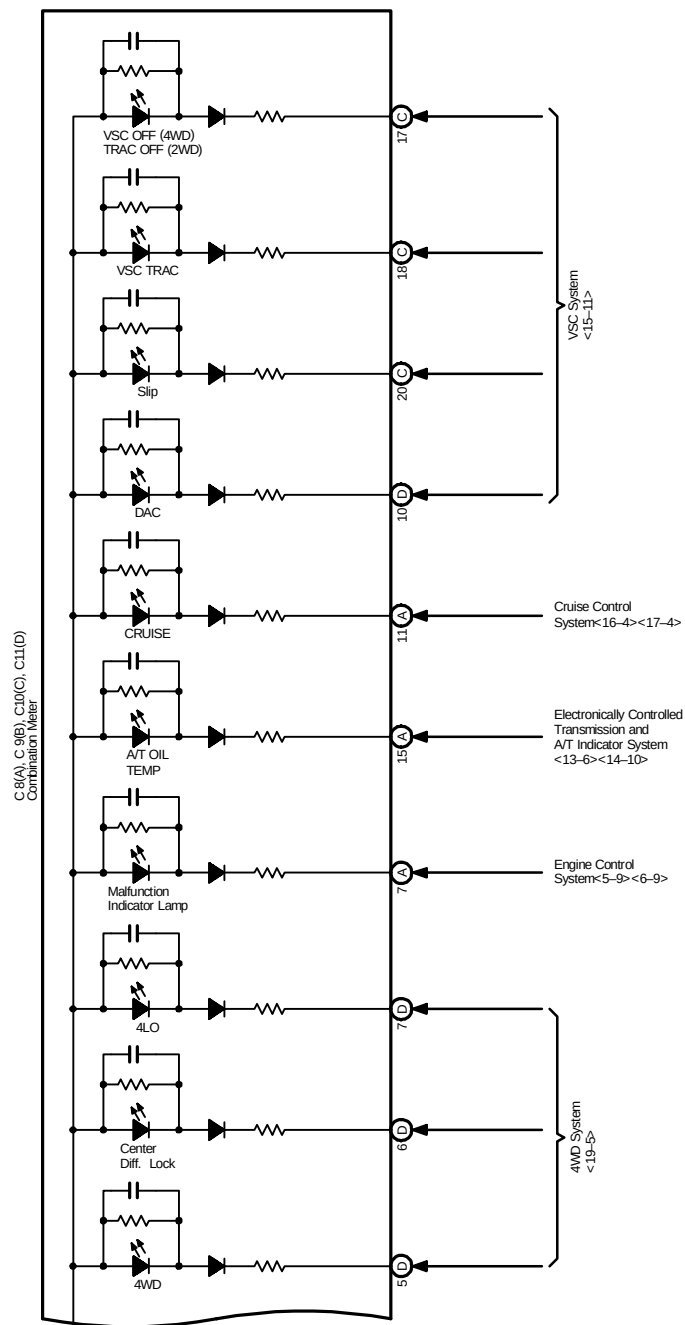
Combination Meter

12

11

10

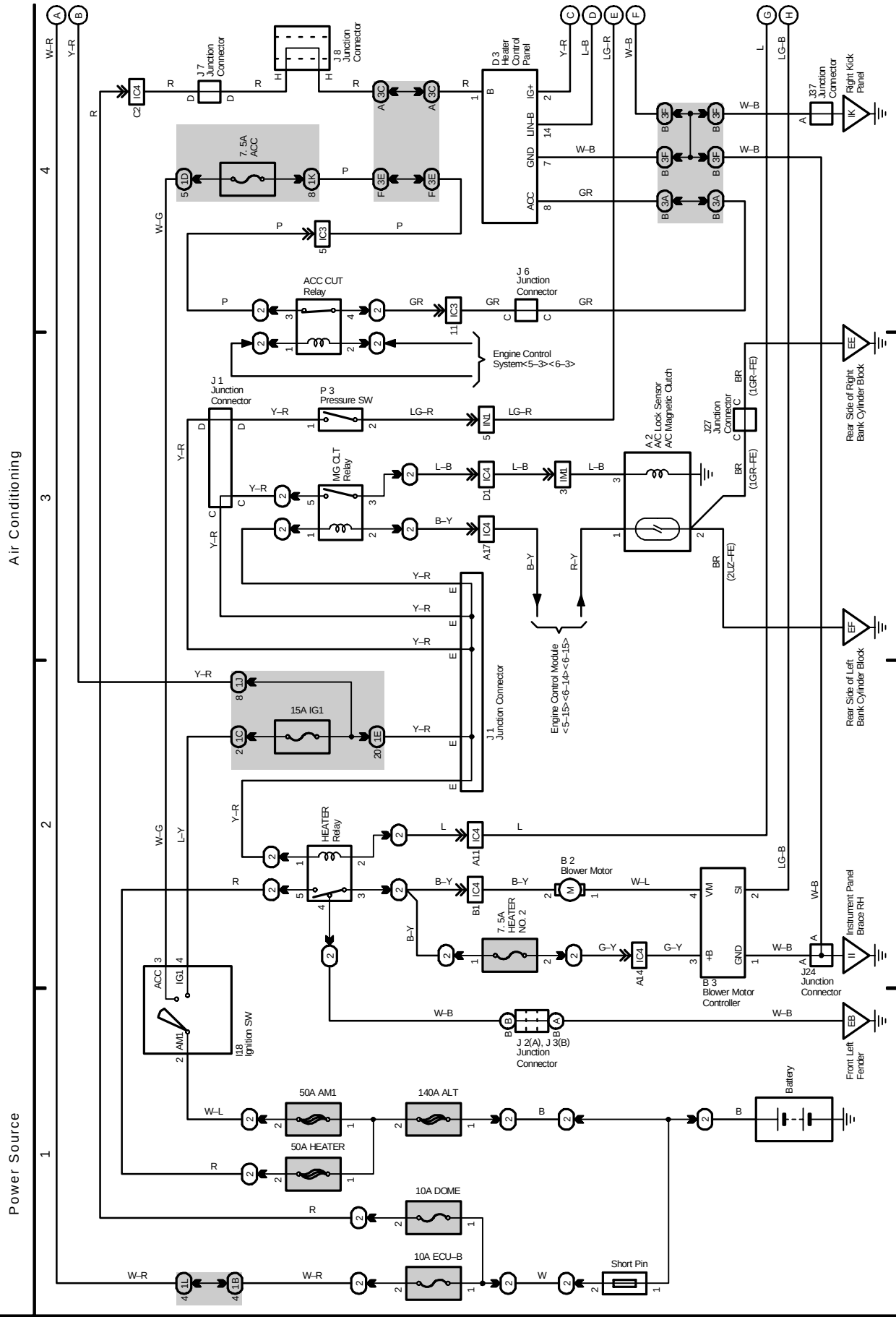
9

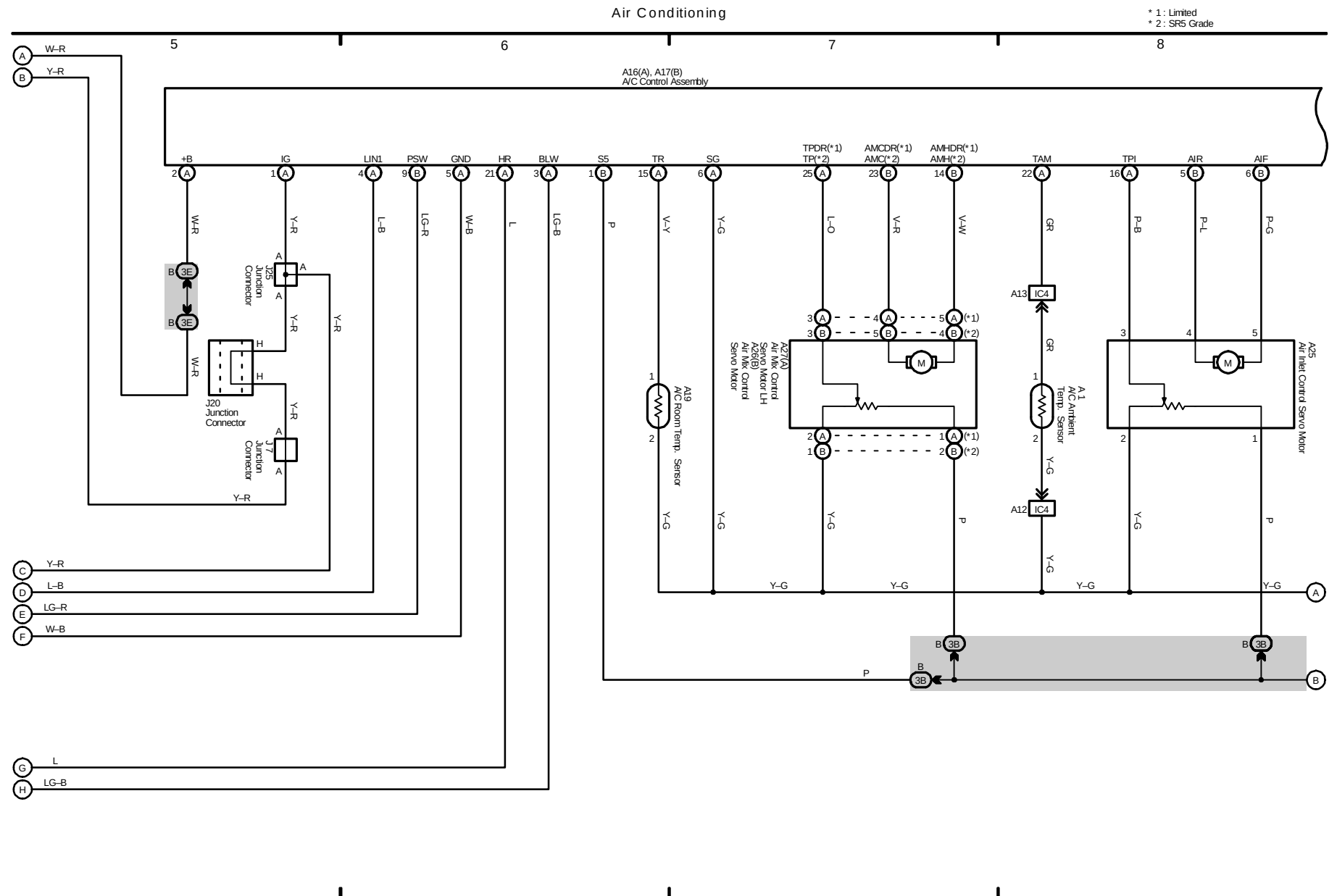


M OVERALL ELECTRICAL WIRING DIAGRAM

32 4RUNNER

(Cont. next page)





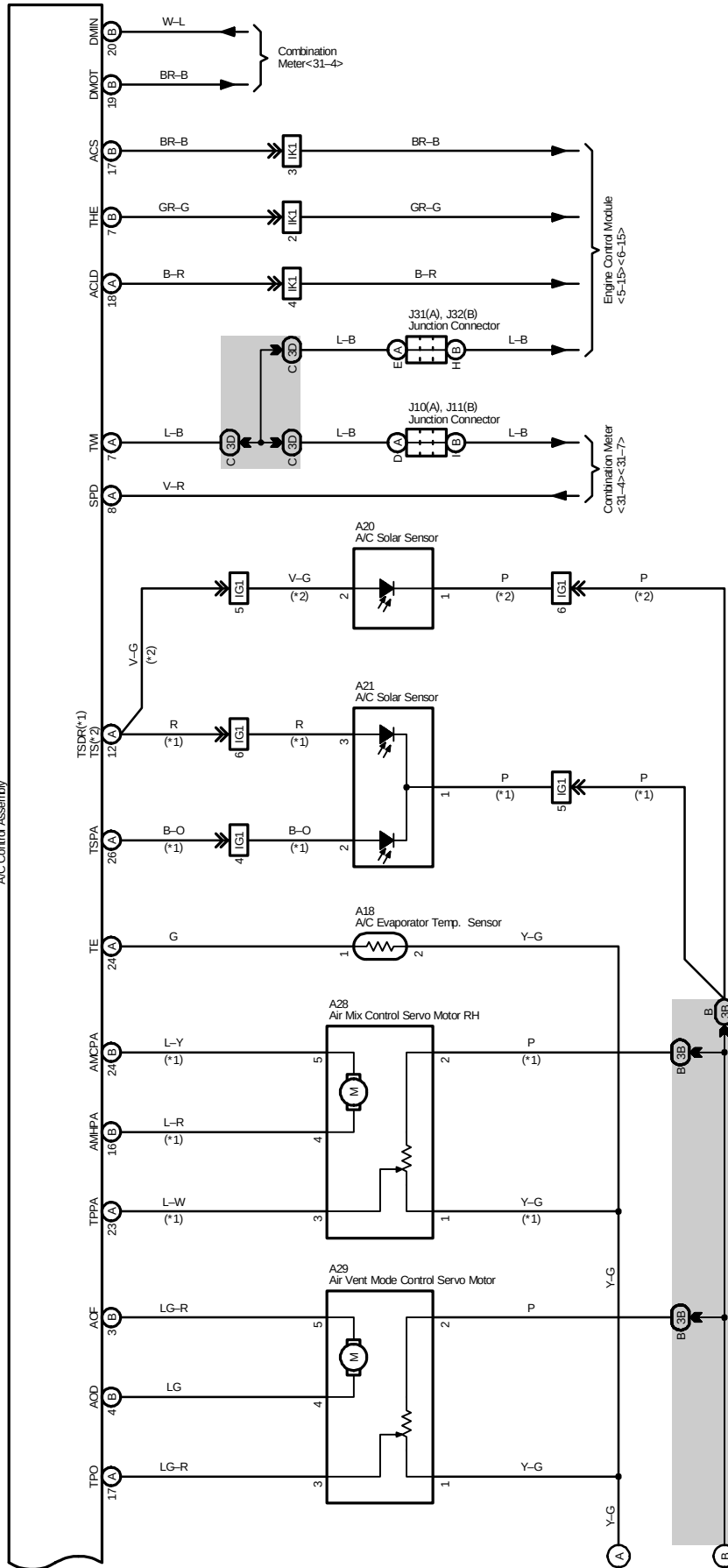
M OVERALL ELECTRICAL WIRING DIAGRAM

32 4RUNNER (Cont' d)

* 1 : Limited
* 2 : SPS Grade

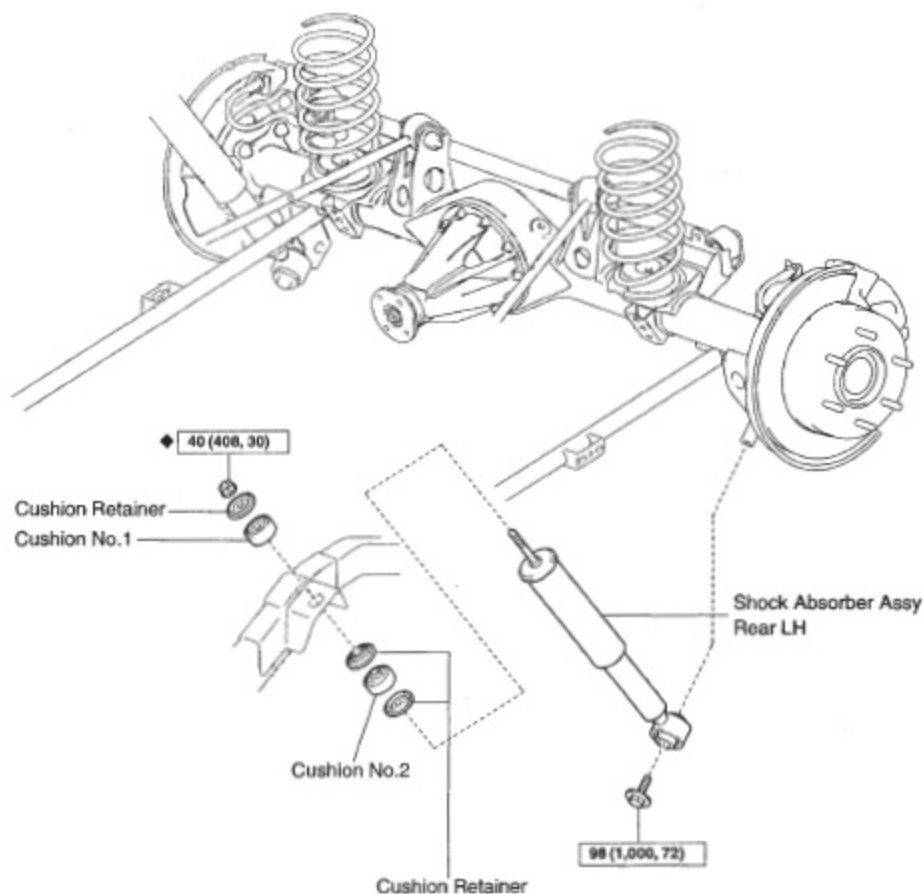
Air Conditioning

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



SHOCK ABSORBER ASSY REAR LH (W/O REAS) COMPONENTS

2798-01



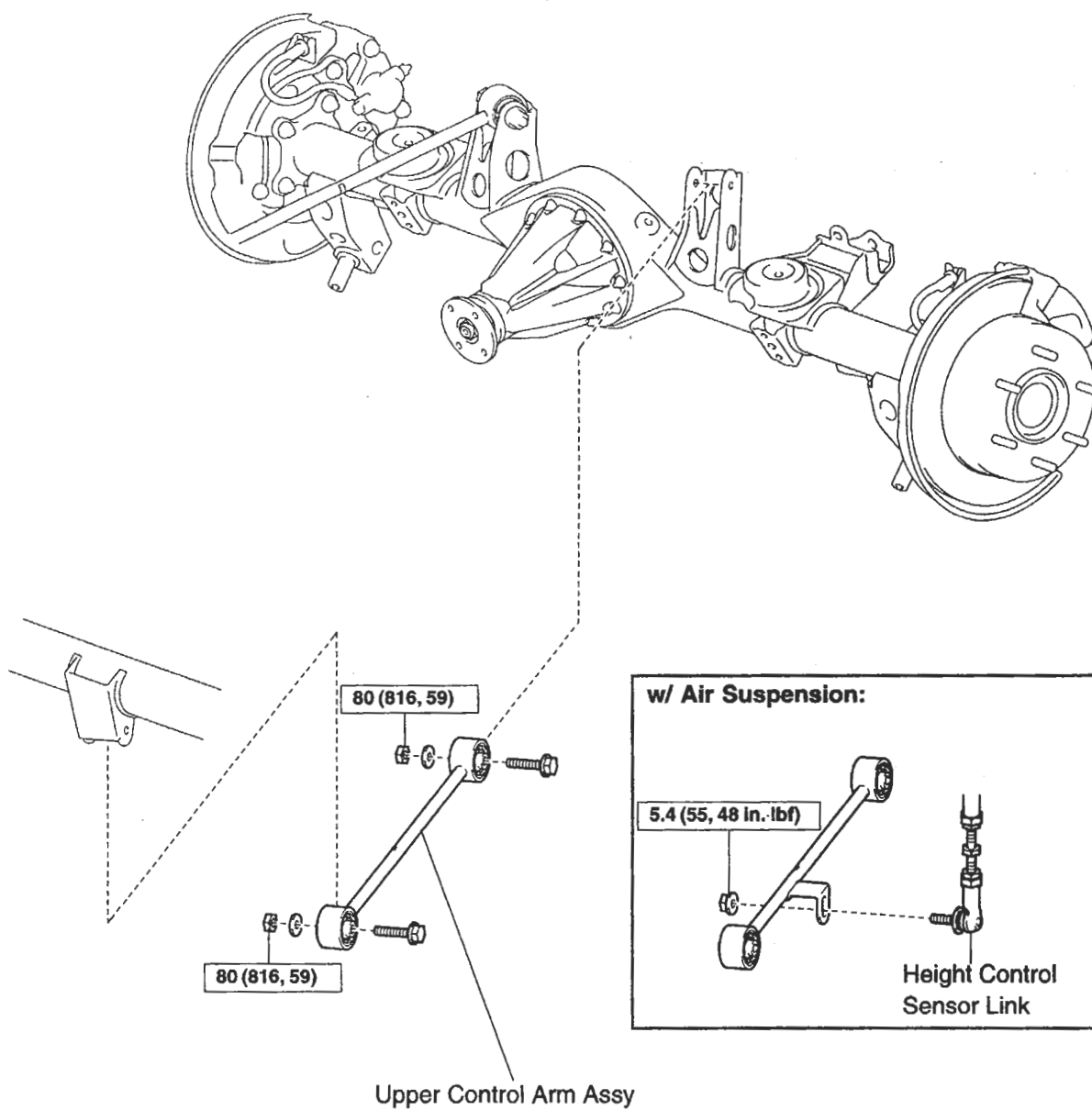
N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

D08134

UPPER CONTROL ARM ASSY COMPONENTS

270AL-01

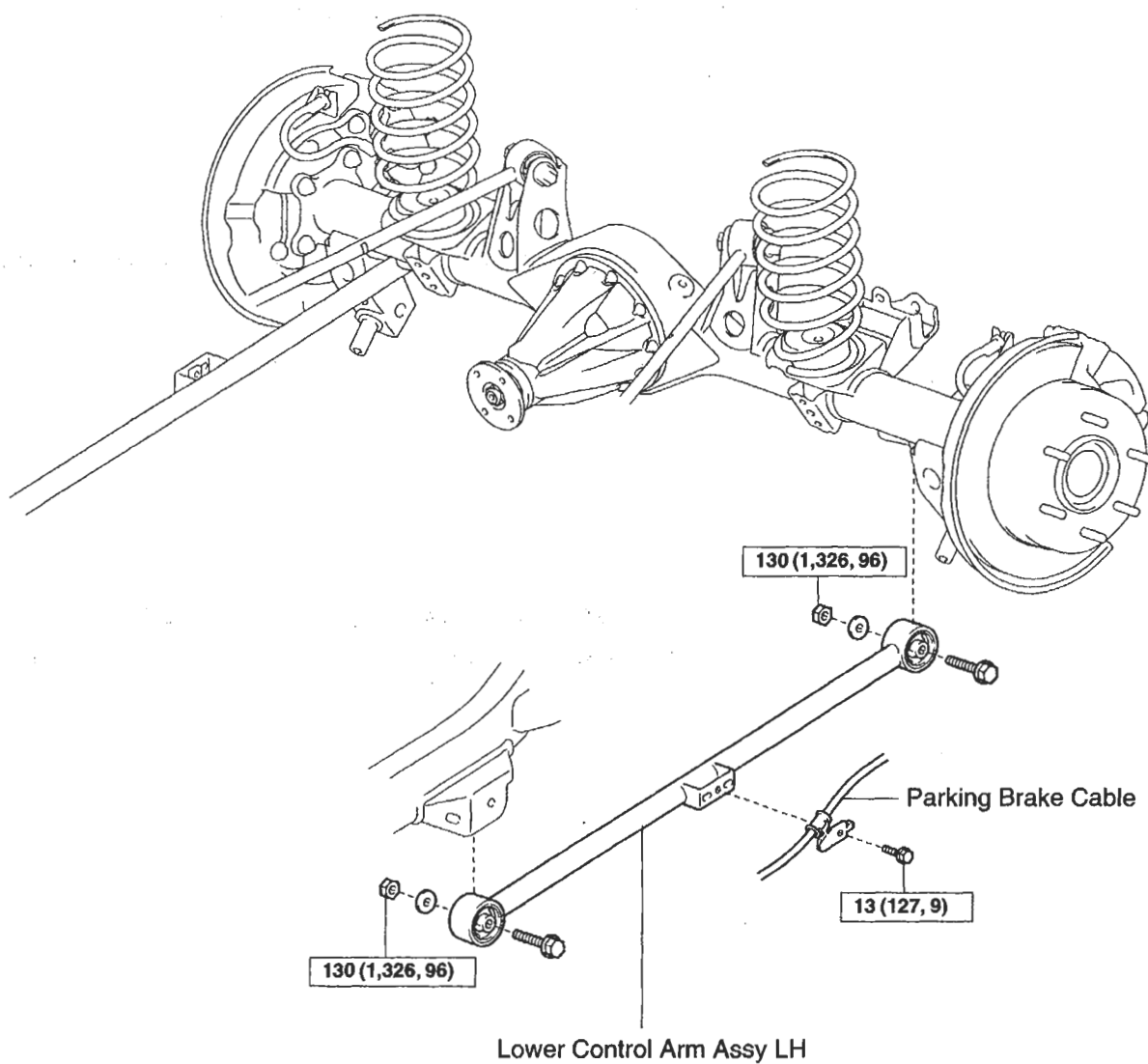


N·m (kgf·cm, ft·lbf) : Specified torque

D28136

LOWER CONTROL ARM ASSY LH COMPONENTS

270AN-01

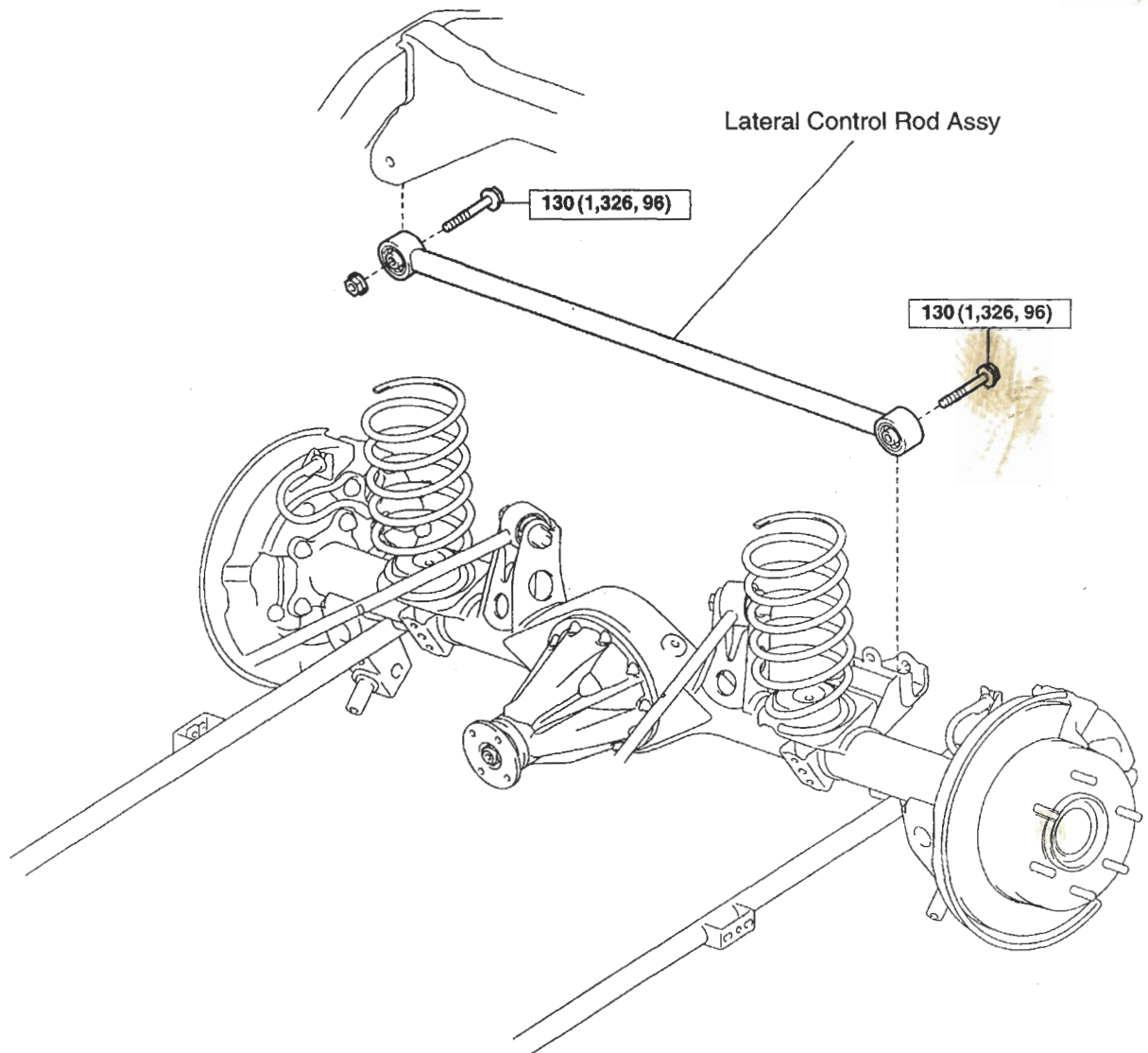


N·m (kgf·cm, ft·lbf) : Specified torque

D28141

REAR LATERAL CONTROL ROD ASSY COMPONENTS

270AP-01

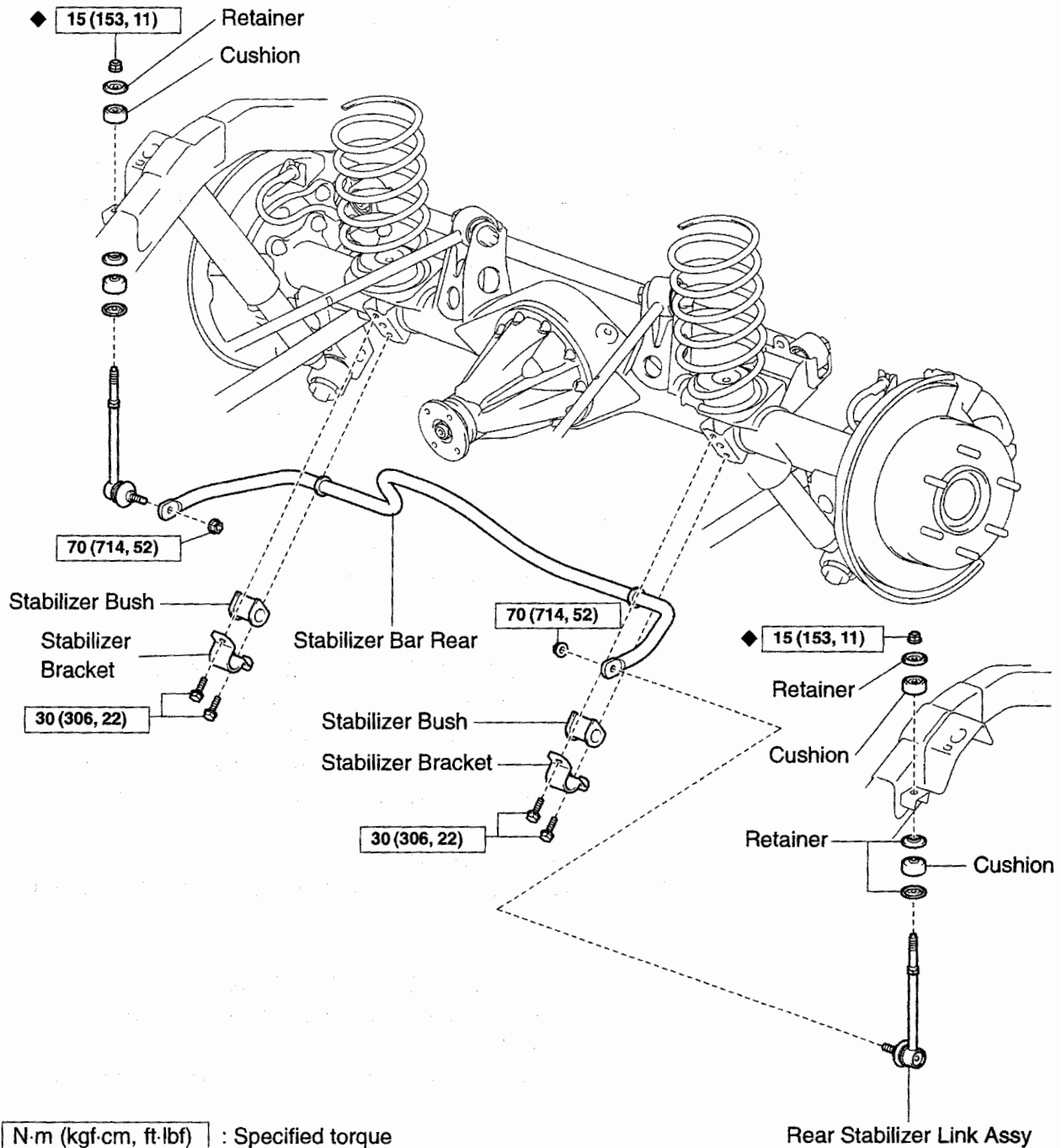


P N·m (kgf·cm, ft·lbf) : Specified torque

D28253

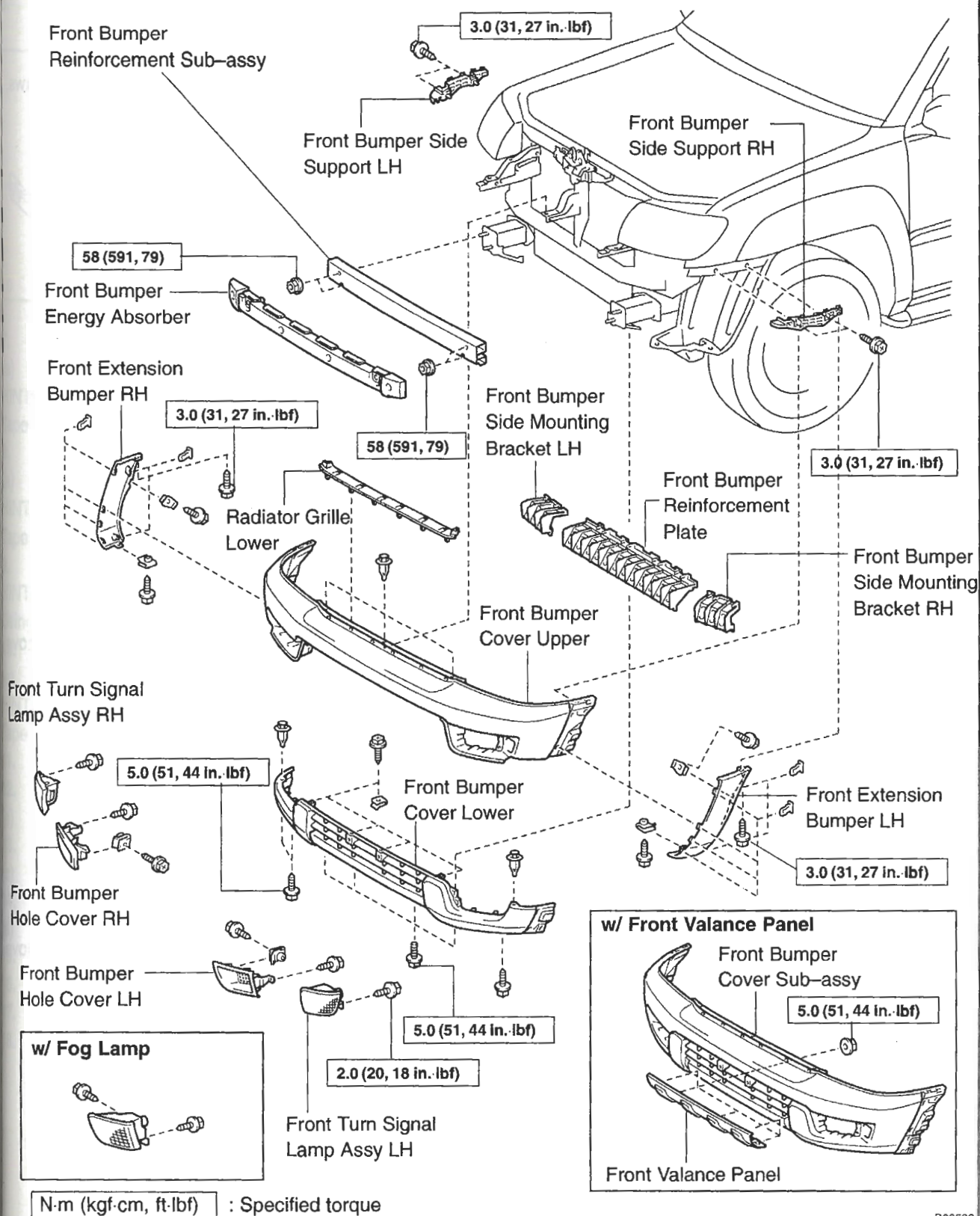
STABILIZER BAR REAR COMPONENTS

270AR-01



FRONT BUMPER COMPONENTS

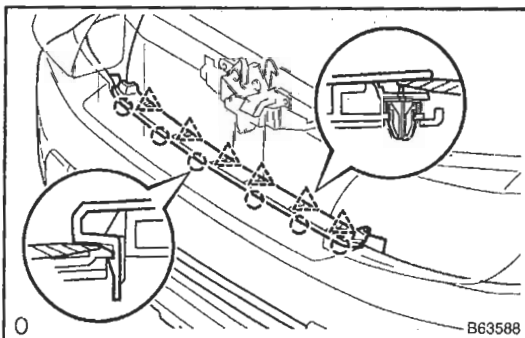
76CP5-01



REPLACEMENT

HINT:

Installation is in the reverse order of the removal. However, when there is a special point concerning the illustration, it is indicated.

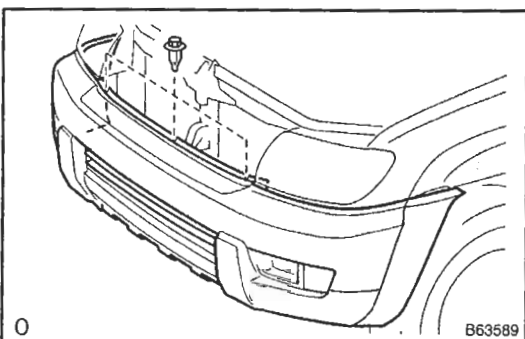


1. REMOVE RADIATOR GRILLE LOWER

- (a) Using a screwdriver, disengage the 6 clips and 6 claws, and remove the radiator grille.

HINT:

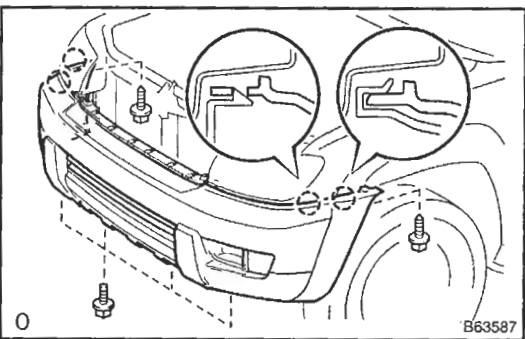
Tape the screwdriver tip before use.



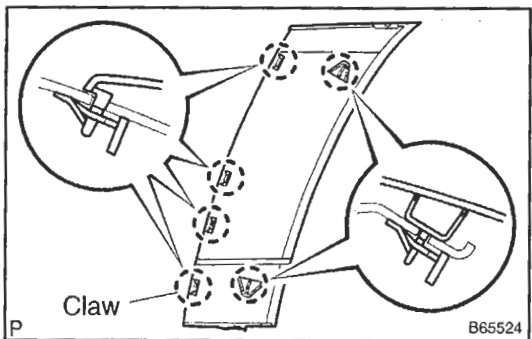
2. REMOVE FRONT BUMPER COVER SUB-ASSY

- (a) Disconnect the turn signal lamp connectors.
 (b) w/ Fog lamp:
 Disconnect the fog lamp connectors.
 (c) Remove the 3 clips.

76



- (d) Remove the 6 bolts and front bumper cover.
 (e) Using a screwdriver, disengage the 4 claws and remove the bumper cover.



3. REMOVE FRONT BUMPER EXTENSION LH

- (a) Remove the 3 bolts.
 (b) Using a screwdriver, disengage the 6 claws and remove the extension.

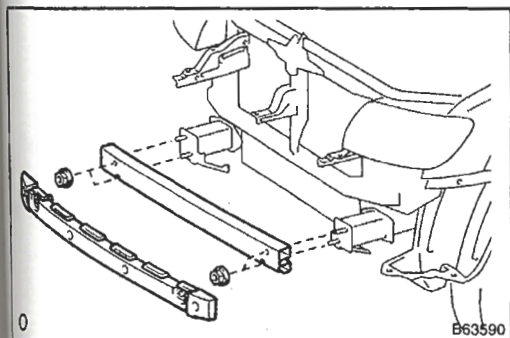
HINT:

Tape the screwdriver tip before use.

4. REMOVE FRONT BUMPER EXTENSION RH

HINT:

Use the same procedures above for the LH side.

5. REMOVE FRONT BUMPER ENERGY ABSORBER**6. REMOVE FRONT BUMPER REINFORCEMENT SUB-ASSY**

- (a) Remove the 4 nuts and bumper reinforcement.

7. REMOVE FRONT BUMPER REINFORCEMENT PLATE

- (a) Using a screwdriver, remove the reinforcement plate.

HINT:

Tape the screwdriver tip before use.

8. REMOVE FRONT BUMPER SIDE MOUNTING BRACKET LH

- (a) Using a screwdriver, remove the mounting bracket.

HINT:

Tape the screwdriver tip before use.

9. REMOVE FRONT BUMPER SIDE MOUNTING BRACKET RH

HINT:

Using the same procedures described above for the LH side.

10. REMOVE FRONT BUMPER SIDE SUPPORT LH

- (a) Using a screwdriver, remove the 2 bolts and side support.

HINT:

Tape the screwdriver tip before use.

11. REMOVE FRONT BUMPER SIDE SUPPORT RH**12. REMOVE FRONT VALANCE PANEL**

- (a) Remove the 5 nuts and valance panel.

13. REMOVE FRONT BUMPER HOLE COVER LH (W/O FOG LAMP)

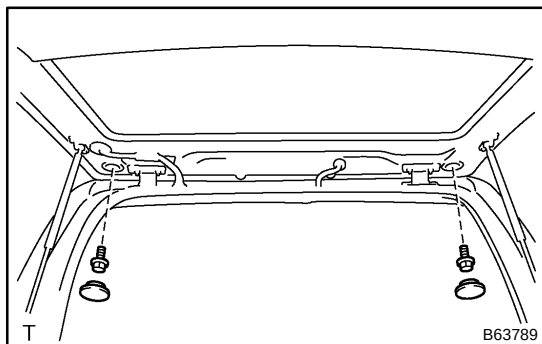
- (a) Remove the 2 screws and hole cover LH.

14. REMOVE FRONT BUMPER HOLE COVER RH (W/O FOG LAMP)

- (a) Remove the 2 screws and hole cover RH.

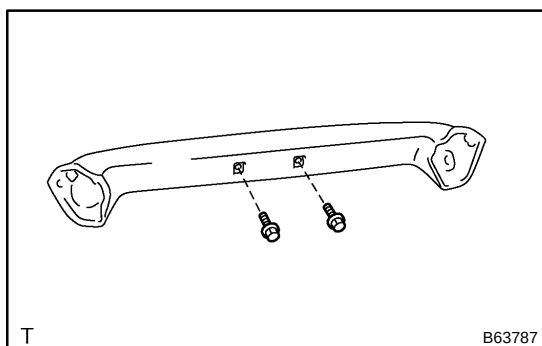
15. REMOVE FOG LAMP ASSY LH (W/ FOG LAMP)**16. REMOVE FOG LAMP ASSY RH (W/ FOG LAMP)****17. REMOVE FRONT TURN SIGNAL LAMP LH****18. REMOVE FRONT TURN SIGNAL LAMP RH**

REPLACEMENT



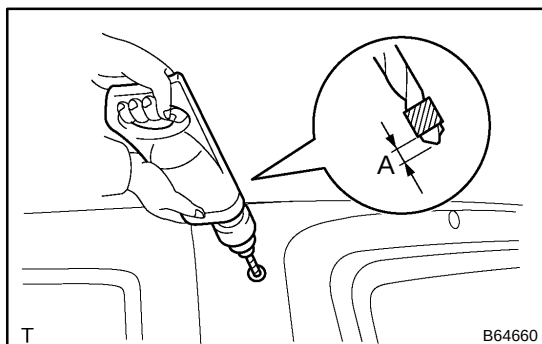
1. REMOVE REAR SPOILER

- (a) Remove the 2 grommets, 2 bolts and spoiler.
- (b) Disconnect the center stop lamp connector.



2. REMOVE CENTER STOP LAMP ASSY

- (a) Remove the 2 bolts and stop lamp assy.



3. REMOVE REAR SPOILER CLIP NO.1

- (a) Use a drill which tip is less than ϕ 4 mm (0.16 in.).
- (b) Tape the drill tip as shown in the illustration.
Dimension (A): 5 mm (0.20 in.)

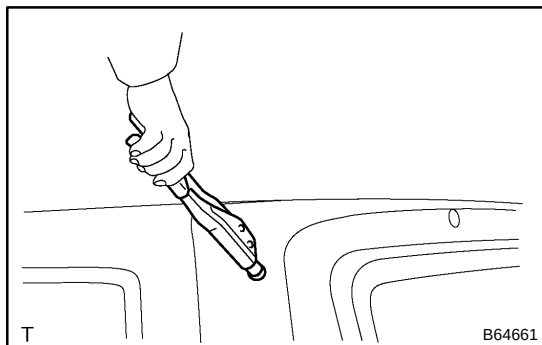
HINT:

In order not to drill too deeply, tape the drill tip.

- (c) Gently and vertically place the drill tip onto the rivet, cut the rivet flanges, and then remove the rivet.

NOTICE:

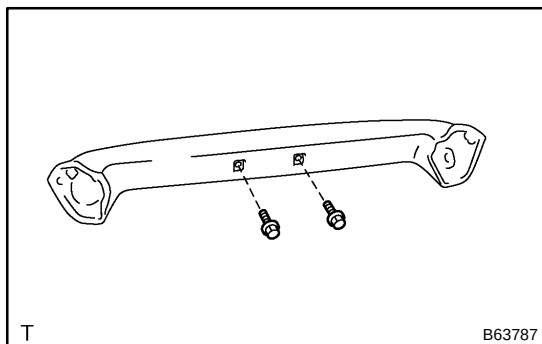
- Placing the drill tip strongly will turn the rivet together with the drill, and so the rivet will not be cut.
 - Prizing the hole with a drill can lead to damage to the rivet hole or the drill itself.
 - Be careful in undertaking this task as the cut rivet is hot.
- (d) Remove the 2 spoiler clips from the back door panel.

**4. INSTALL REAR SPOILER CLIP NO.1**

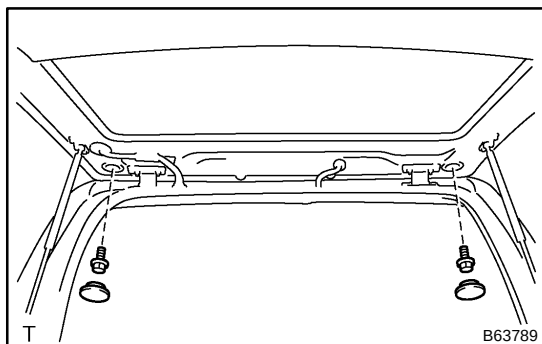
- (a) Using an air riveter or hand riveter with nose piece, strike waterproof rivets of ϕ 4 mm into the body panel to install the 2 rear spoiler clips No.1 to the back door panel.

NOTICE:

If the rivet is not positioned perpendicularly, it will bend the mandrel.

**5. INSTALL CENTER STOP LAMP ASSY**

- (a) Install the stop lamp assy with the 2 bolts.
Torque: 2.5 N·m (25 kgf·cm, 22 in·lbf)

**6. INSTALL REAR SPOILER**

- (a) Connect the center stop lamp connector.
(b) Install the spoiler with the 2 bolts and 2 grommets.
Torque: 7.0 N·m (71 kgf·cm, 62 in·lbf)