

FOREWORD

This wiring diagram manual has been prepared to provide information on the electrical system of the 2002 LAND CRUISER.

Applicable models: UZJ100 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.
● 2002 Land Cruiser Repair Manual Volume 1 Volume 2	RM893U1 RM893U2
● 2002 TOYOTA New Car Features	NCF214U

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.

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.

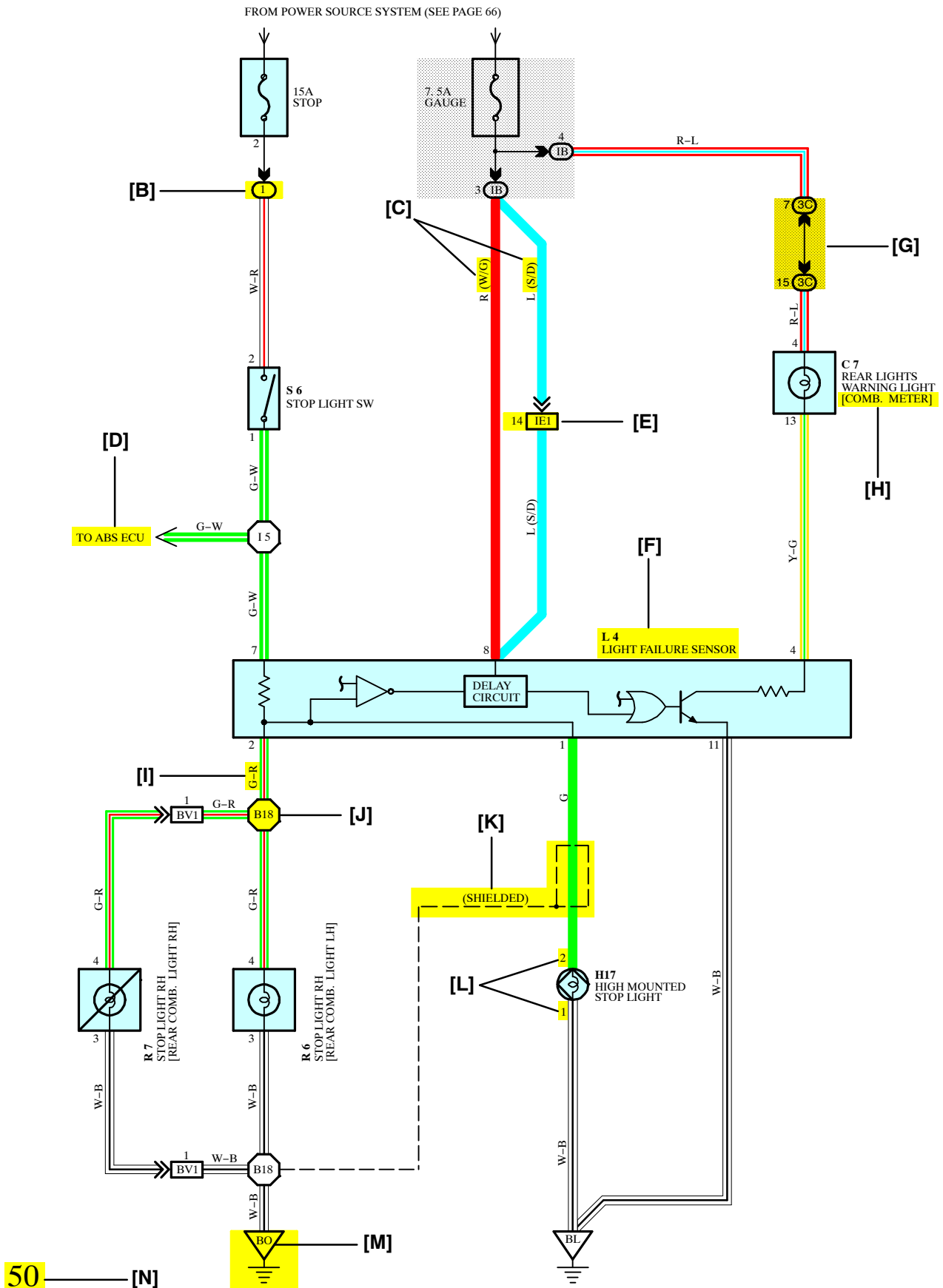
Wiring related to each system is indicated in each system circuit by arrows (from __, to __). When overall connections are required, see the Overall Electrical Wiring Diagram at the end of this manual.

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.



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

[A] : System Title

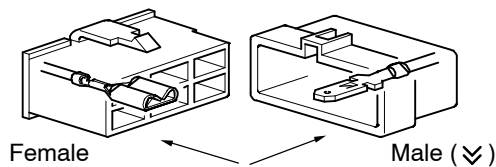
[B] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B

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.



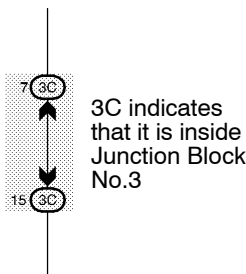
The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

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] : When 2 parts both use one connector in common, the parts connector name used in the wire routing section is shown in square brackets [].

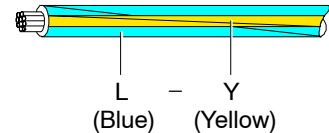
[I] : Indicates the wiring color.

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		

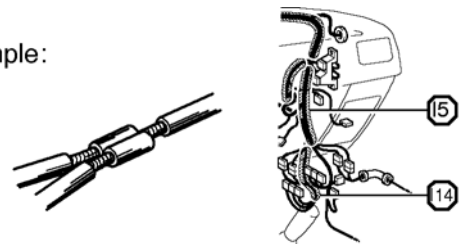
The first letter indicates the basic wire color and the second letter indicates the color of the stripe.

Example: L - Y



[J] : 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.

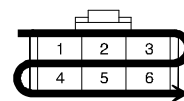
[K] : Indicates a shielded cable.



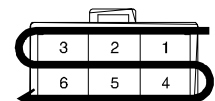
[L] : Indicates the pin number of the connector. The numbering system is different for female and male connectors.

Example: Numbered in order from upper left to lower right

Numbered in order from upper right to lower left



Female



Male

[M] : 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.

[N] : Page No.

B HOW TO USE THIS MANUAL

[O] 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.

[P] 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

[Q] : PARTS LOCATION

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

[R] : RELAY BLOCKS

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

[S] : 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 Left Side)

[T] : 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 Compartment Left)

[U] : GROUND POINTS

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

[V] : 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

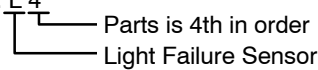
[O] : Explains the system outline.

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

[Q] : 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

[R] : 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.

[S] : 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.

[T] : 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.

[U] : 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.

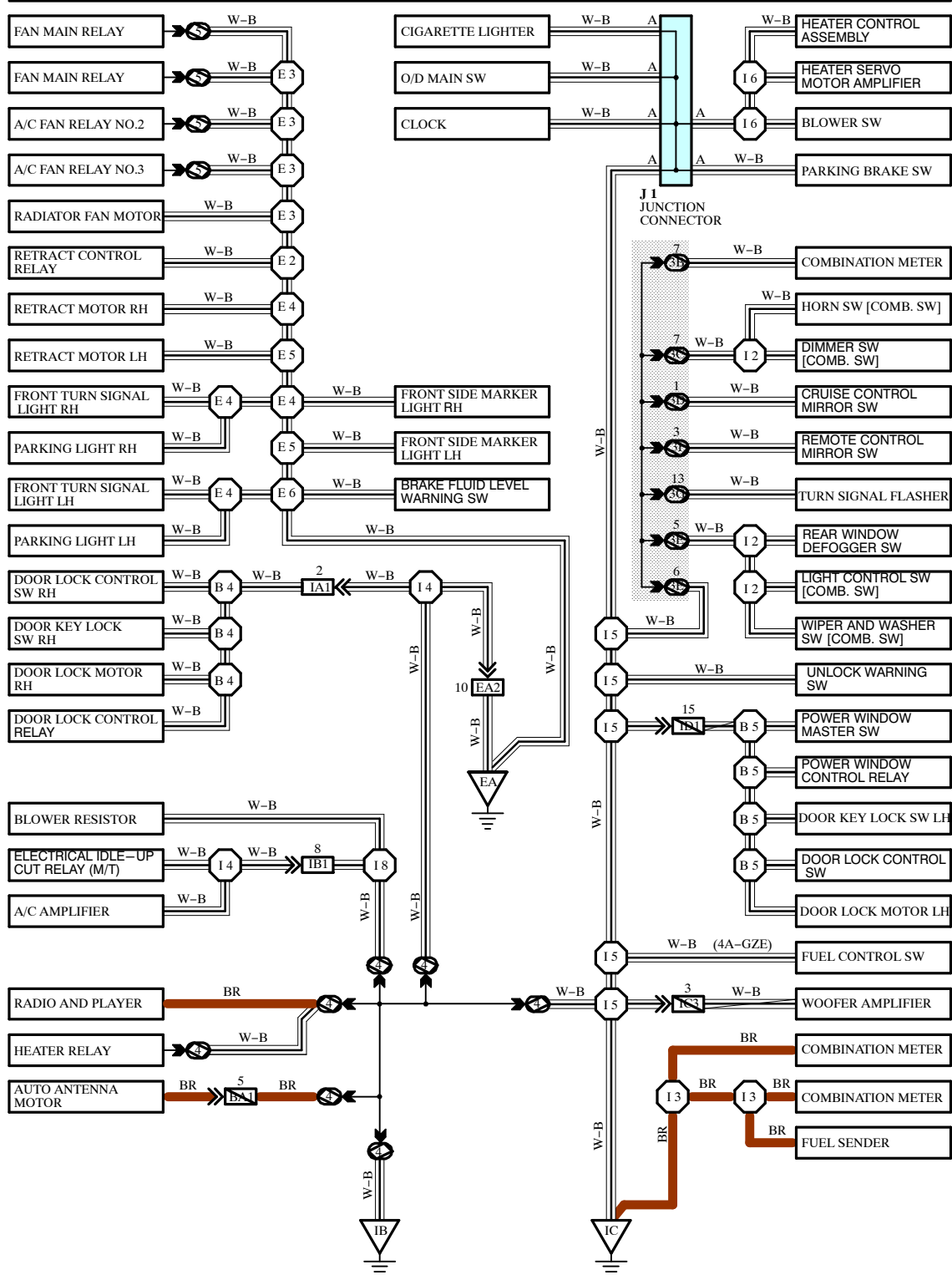
[V] : Indicates the reference page showing the position of the splice points on the vehicle.

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.

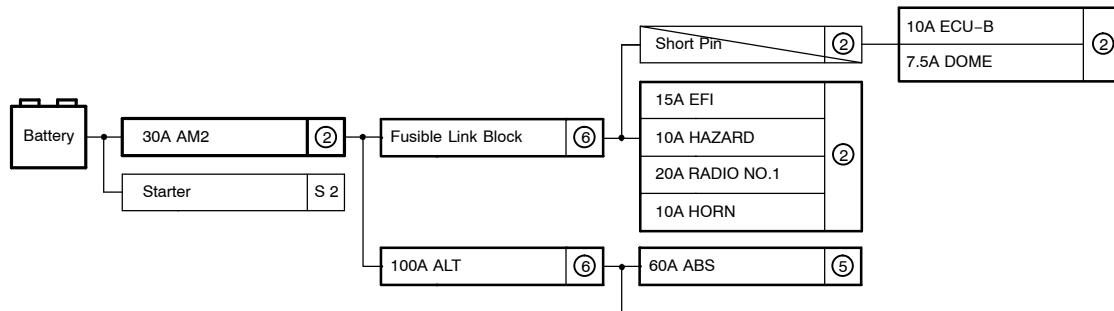
Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

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)

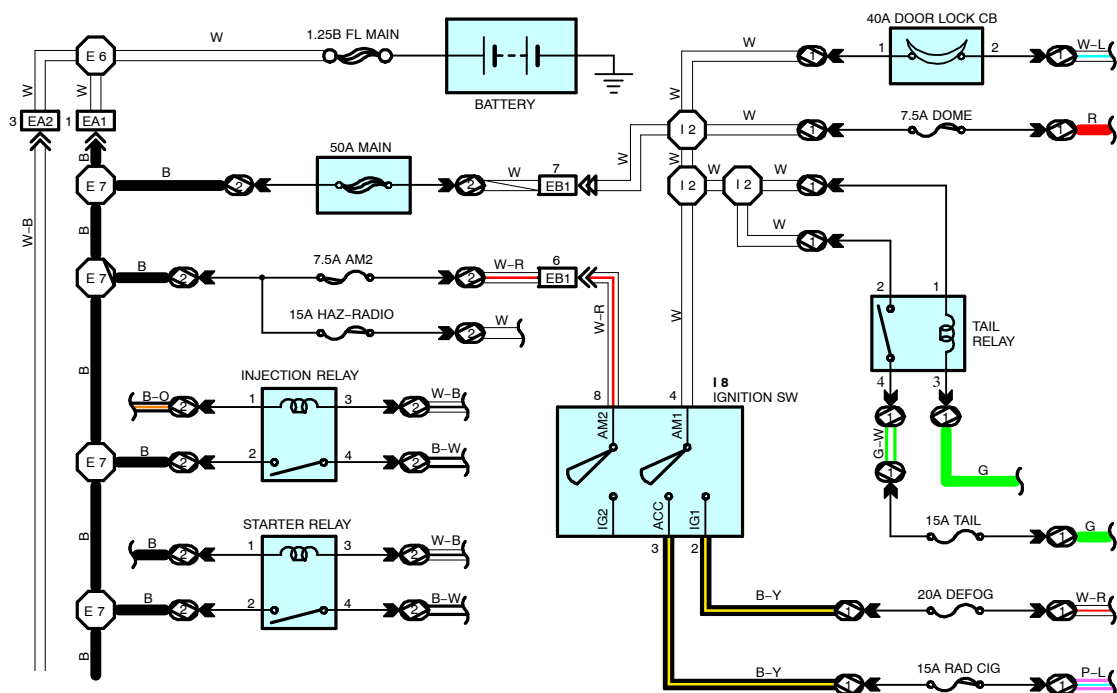
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.



Engine Room R/B (See Page 20)

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

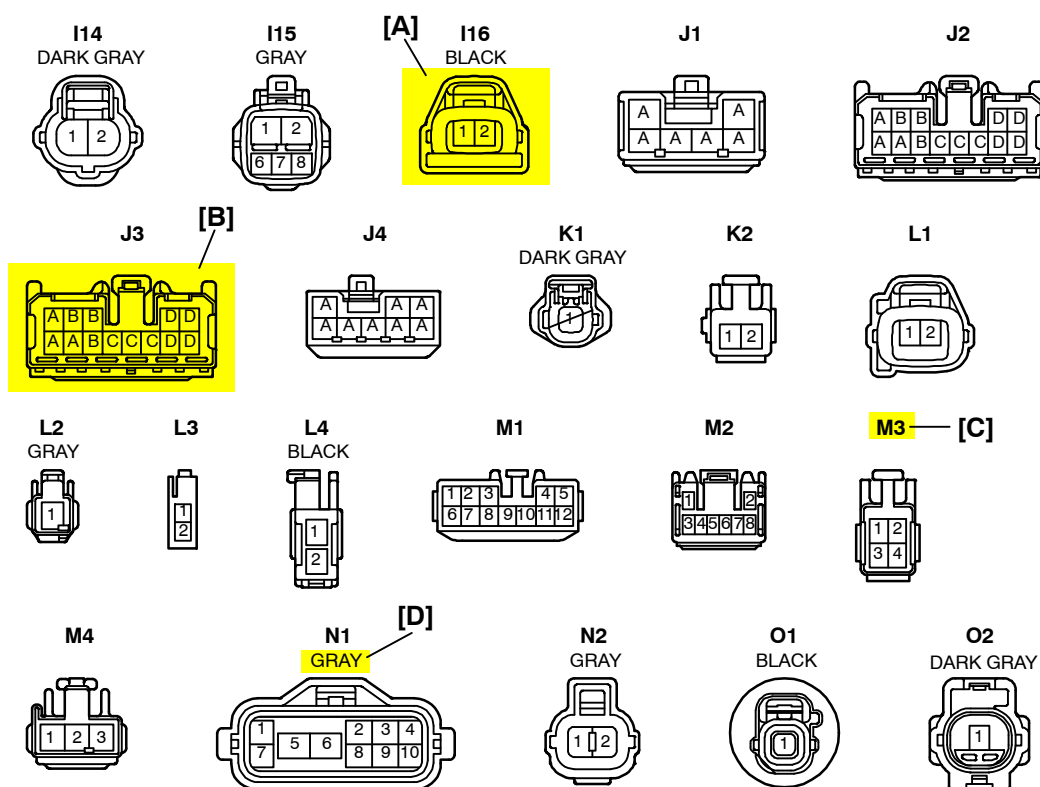
POWER SOURCE



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

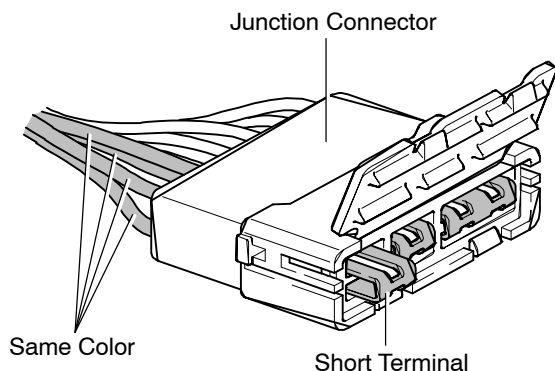
B HOW TO USE THIS MANUAL

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 (Door Courtesy Light)	90980-11608
A 2	A/C Condenser Fan Motor	90980-11237	D 5	Diode (Key Off Operation)	90980-10962
A 3	A/C Condenser Fan Relay	90980-10940	D 6	Diode (Luggage Compartment Light)	90980-11608
A 4	A/C Triple Pressure SW (A/C Dual and Single Pressure SW)	90980-10943	D 7	Door Lock Control Relay	90980-10848
[A]	A/T Oil Temp. Sensor [B]	90980-11143	D 8	Door Courtesy Light LH	90980-11148
A 6	ABS Actuator	90980-11151	D 9	Door Courtesy Light RH	
A 7	ABS Actuator	90980-11009	D10	Door Courtesy SW LH	90980-11097
A 8	ABS Speed Sensor Front LH	90980-10941	D11	Door Courtesy SW RH	
A 9	ABS Speed Sensor Front RH	90980-11002	D12	Door Courtesy SW Front LH	90980-11156
A10	Airbag Sensor Front LH	90980-11856	D13	Door Courtesy SW Front RH	
A11	Airbag Sensor Front RH		D14	Door Courtesy SW Rear LH	
A12	Airbag Sensor Rear LH	90980-11194	D15	Door Courtesy SW Rear RH	90980-11170
		90980-11194	D16	Door Courtesy SW Rear LH	

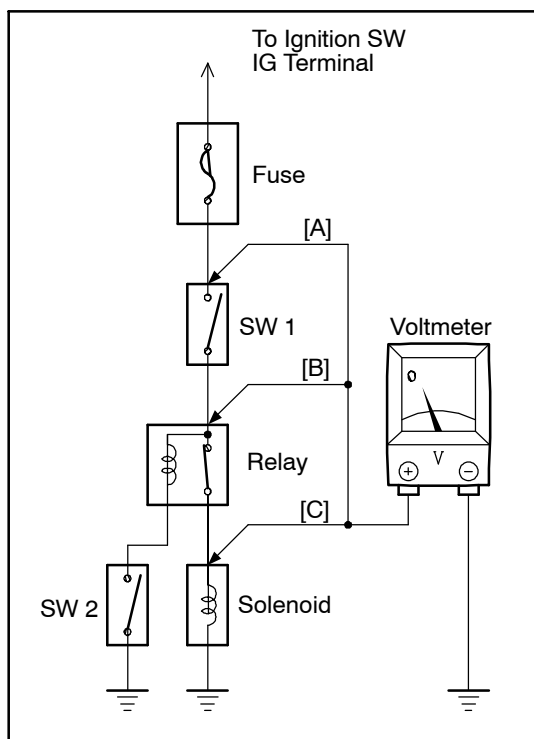
[A] : Part Code

[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

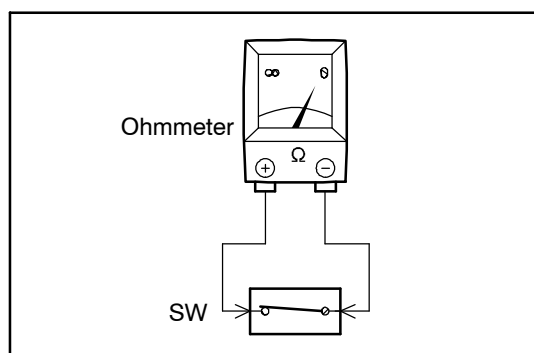
- (a) Establish conditions in which voltage is present at the check point.

Example:

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

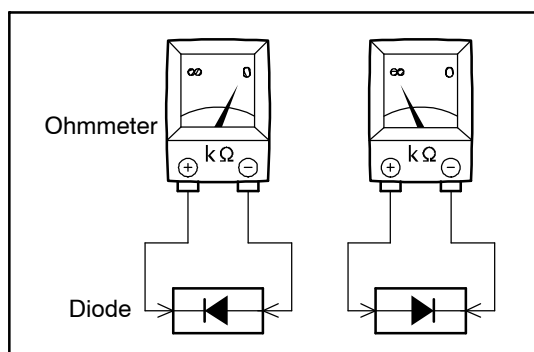
- (b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal.

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



CONTINUITY AND RESISTANCE CHECK

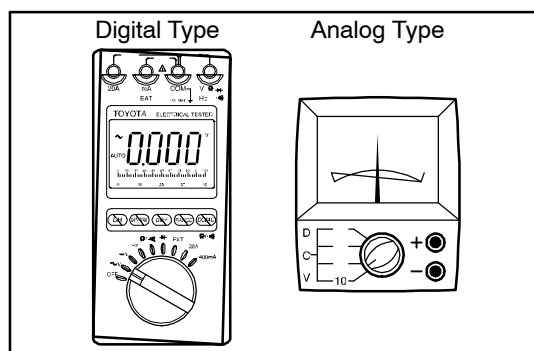
- (a) Disconnect the battery terminal or wire so there is no voltage between the check points.
- (b) Contact the two leads of an ohmmeter to each of the check points.



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.

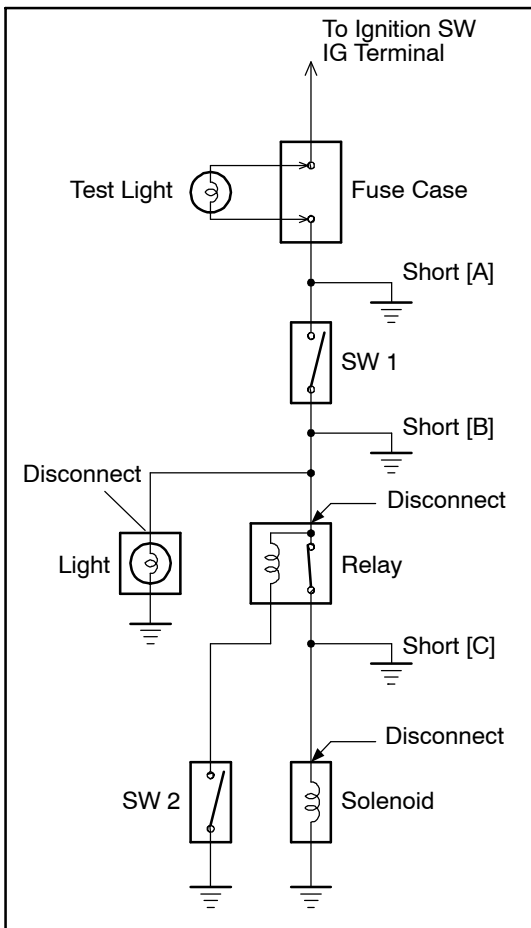
When contacting the two leads in reverse, there should be no continuity.



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

Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)



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.

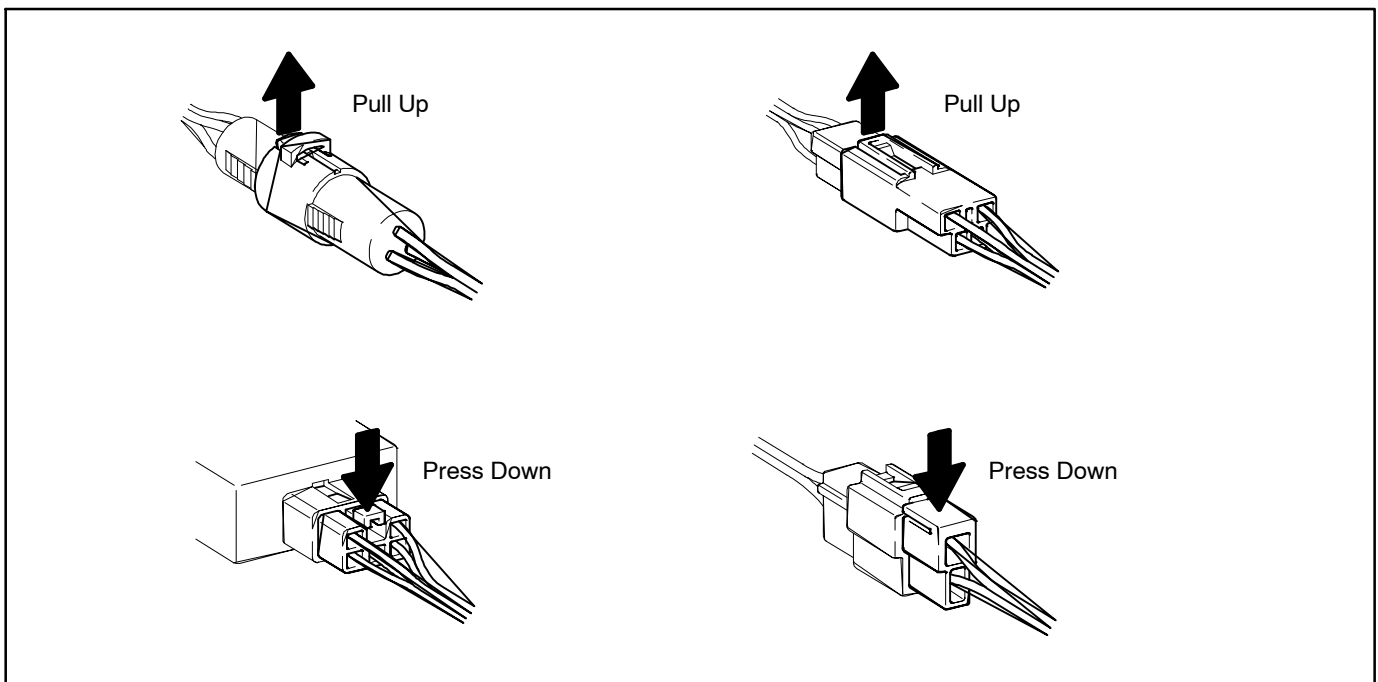
CAUTION:

- 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

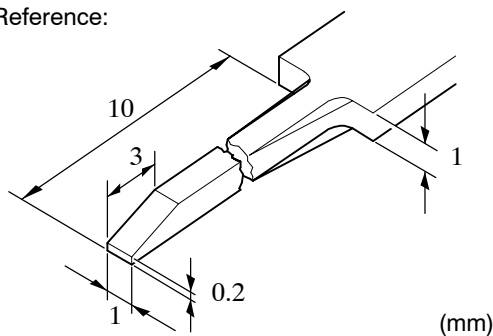
To pull apart the connectors, pull on the connector itself, not the wire harness.

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.

[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.

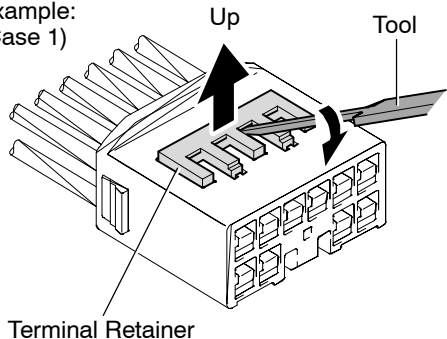
"Case 1"

Raise the terminal retainer up to the temporary lock position.

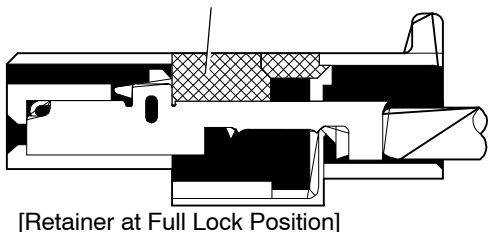
"Case 2"

Open the secondary locking device.

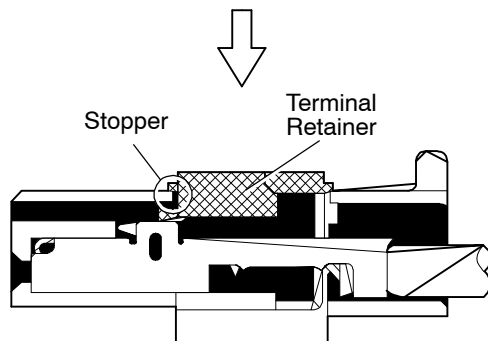
Example:
(Case 1)



Terminal Retainer

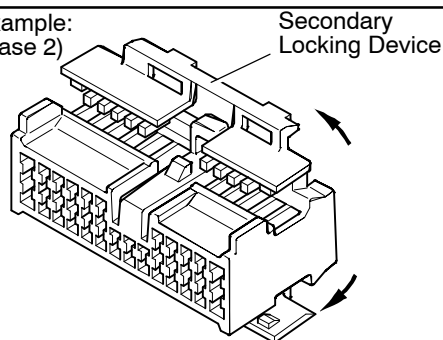


[Retainer at Full Lock Position]



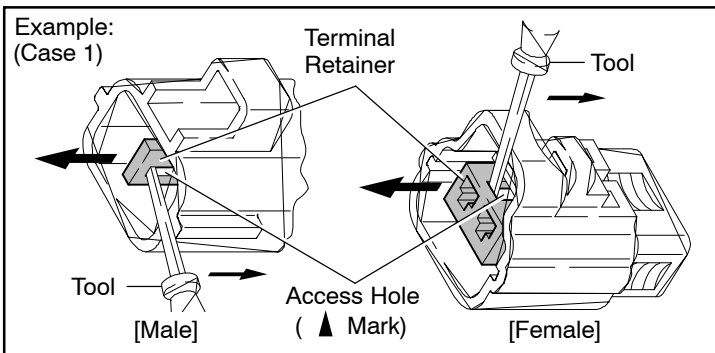
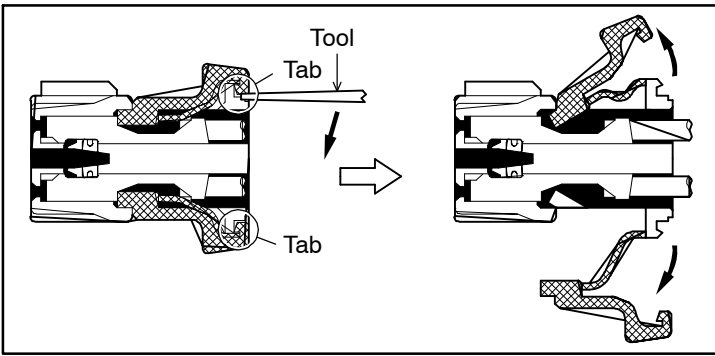
[Retainer at Temporary Lock Position]

Example:
(Case 2)



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)



[B] For Waterproof Type Connector

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

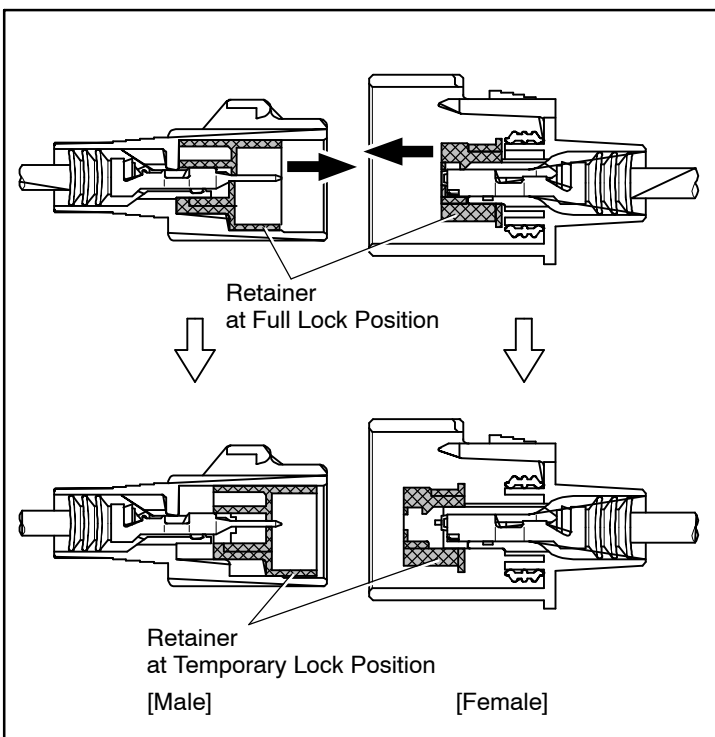
Example:

Terminal Retainer : Connector Body

Black or White : Gray

Black or White : Dark Gray

Gray or White : Black

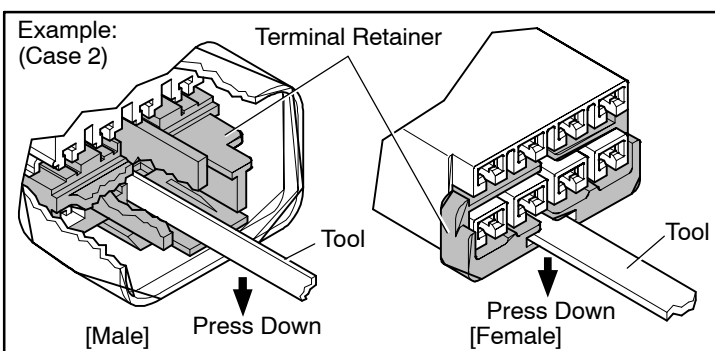


"Case 1"

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.

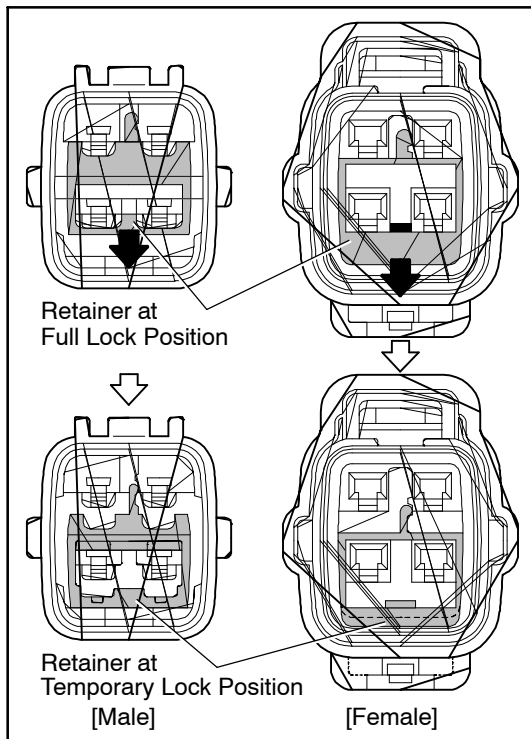
HINT : The needle insertion position varies according to the connector's shape (Number of terminals etc.), so check the position before inserting it.



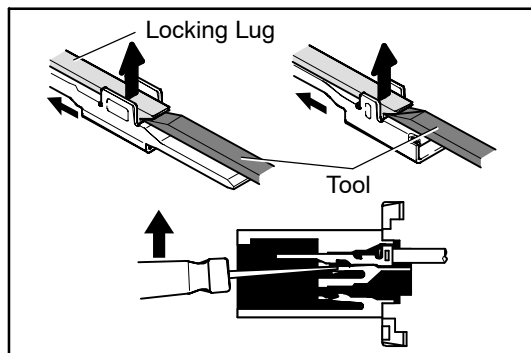
"Case 2"

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

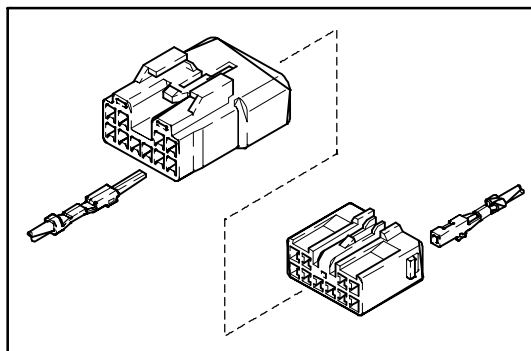
C TROUBLESHOOTING



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

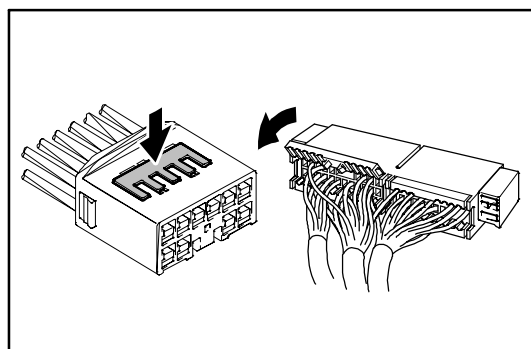
(a) Insert the terminal.

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



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

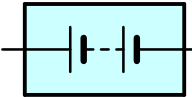
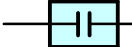
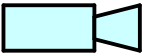
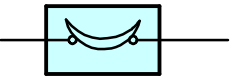
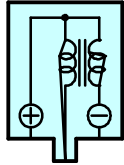
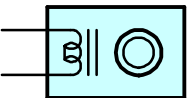
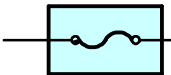
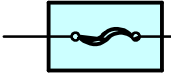
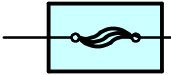
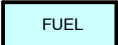
ABBREVIATIONS

The following abbreviations are used in this manual.

ABS	=	Anti-Lock Brake System
A/C	=	Air Conditioning
ACIS	=	Acoustic Control Induction System
A/T	=	Automatic Transmission
BA	=	Brake Assist
COMB.	=	Combination
DIFF.	=	Differential
DVD	=	Digital Versatile Disc
ECU	=	Electronic Control Unit
ESA	=	Electronic Spark Advance
ETCS-i	=	Electronic Throttle Control System-intelligent
EVAP	=	Evaporative Emission
J/B	=	Junction Block
LH	=	Left-Hand
O/D	=	Overdrive
R/B	=	Relay Block
RH	=	Right-Hand
SFI	=	Sequential Multiport Fuel Injection
SRS	=	Supplemental Restraint System
SW	=	Switch
TEMP.	=	Temperature
TRAC	=	Traction Control
VSC	=	Vehicle Skid Control
VSV	=	Vacuum Switching Valve
w/	=	With
w/o	=	Without

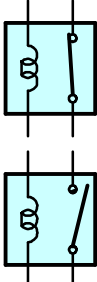
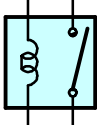
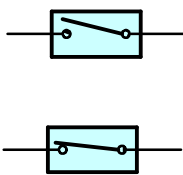
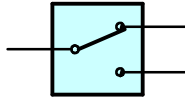
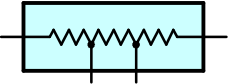
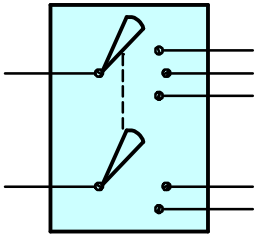
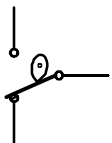
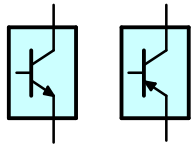
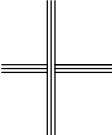
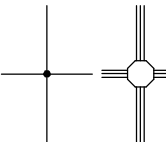
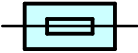
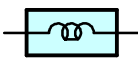
* The titles given inside the components are the names of the terminals (terminal codes) and are not treated as being abbreviations.

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 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.

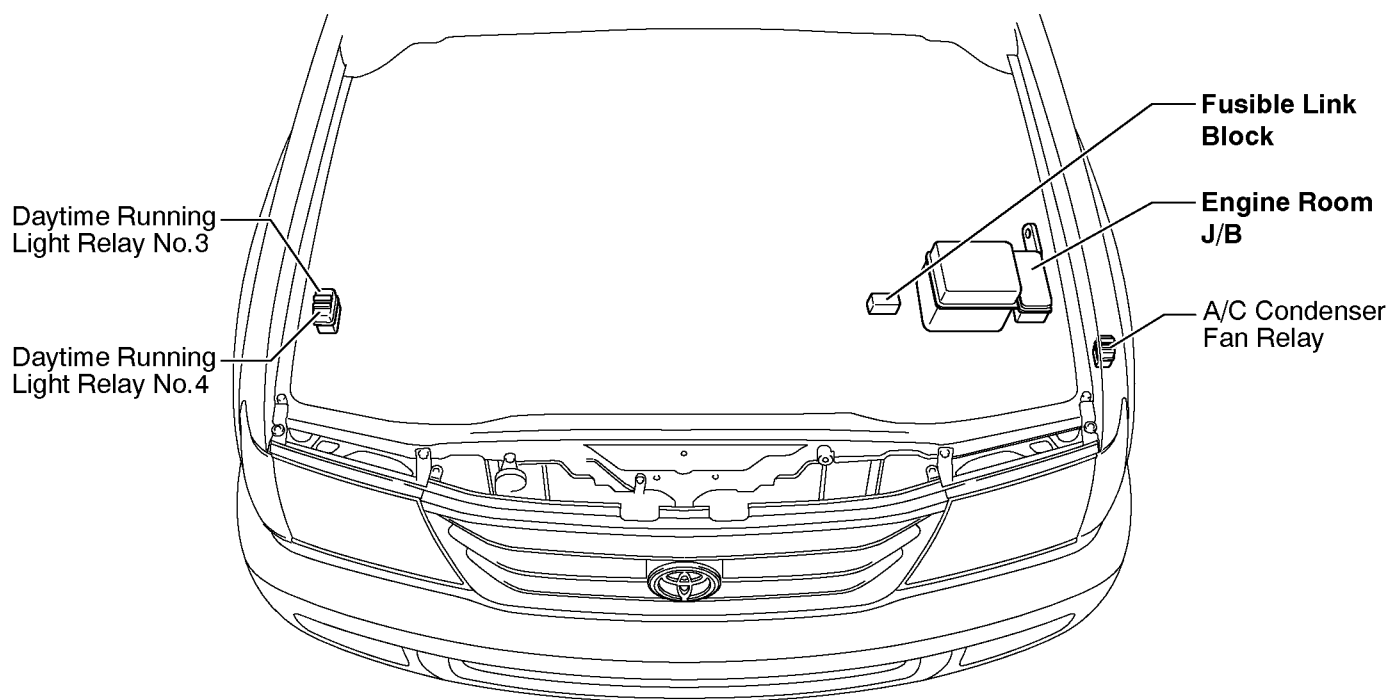
Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

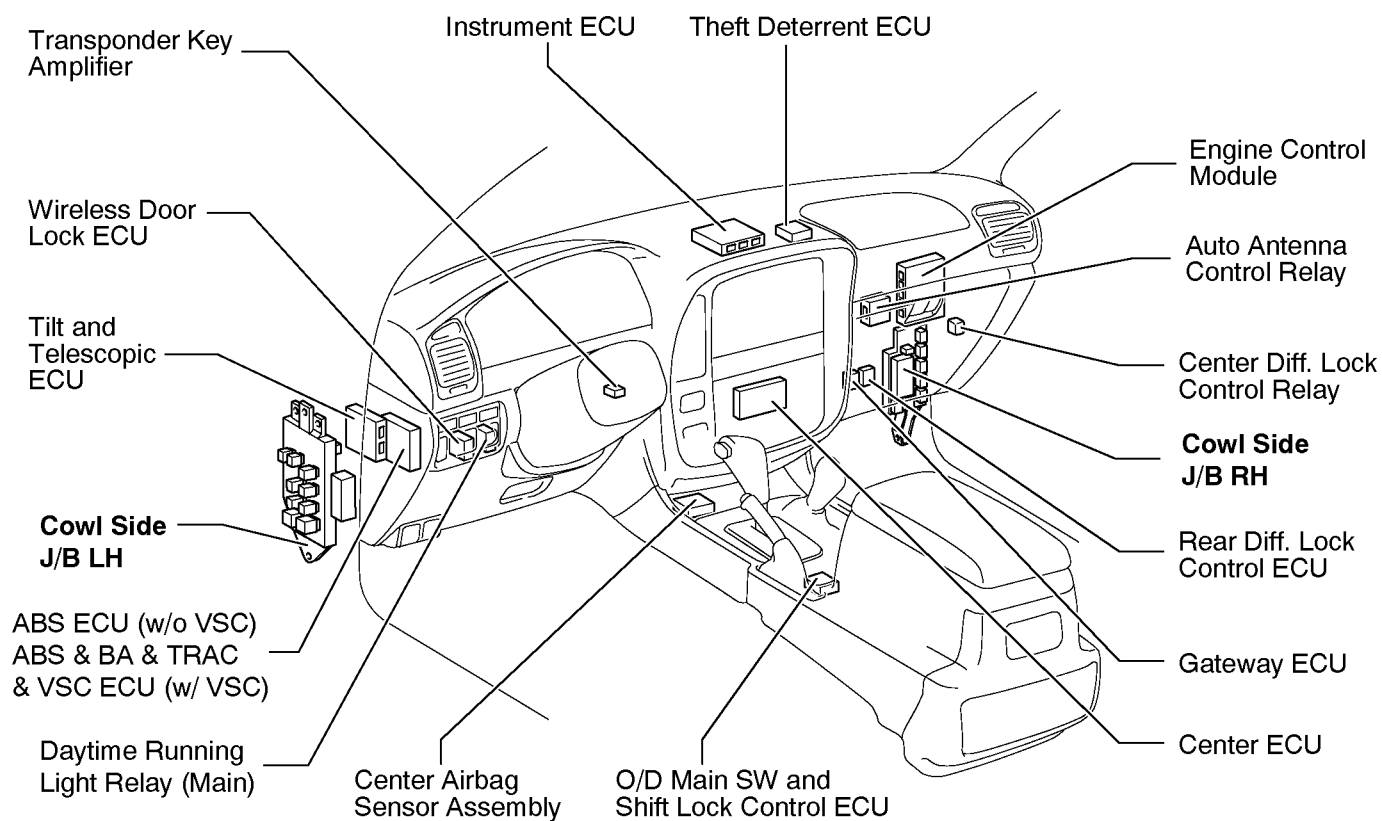
 RELAY Basically, an electrically operated switch which may be normally closed (1) or open (2). Current flow through a small coil creates a magnetic field which either opens or closes an attached switch.	 SPEAKER An electromechanical device which creates sound waves from current flow.
 RELAY, DOUBLE THROW 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 (1) NOT CONNECTED  (2) SPLICED  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.	

F RELAY LOCATIONS

[Engine Compartment]

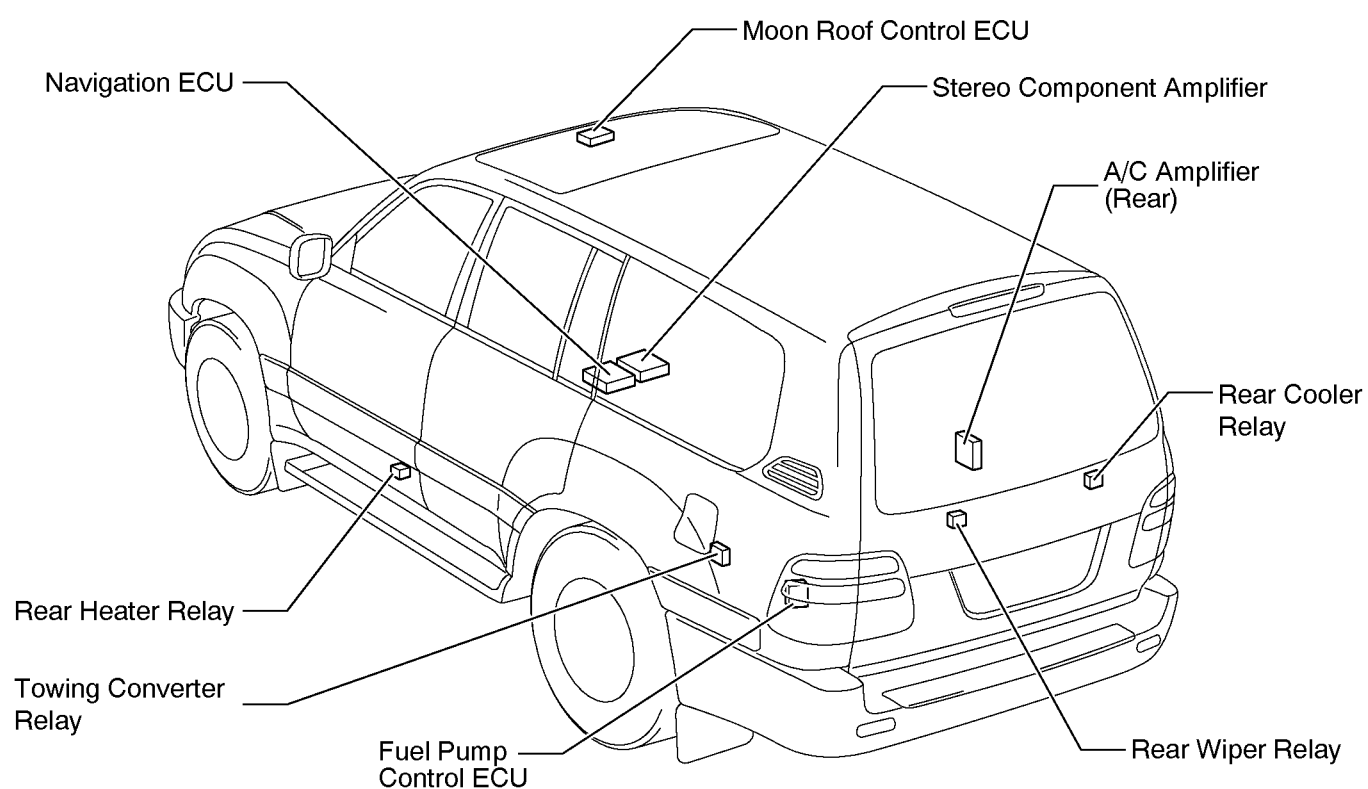


[Instrument Panel]



Donated by Andrew Schauer . cruisercult.com

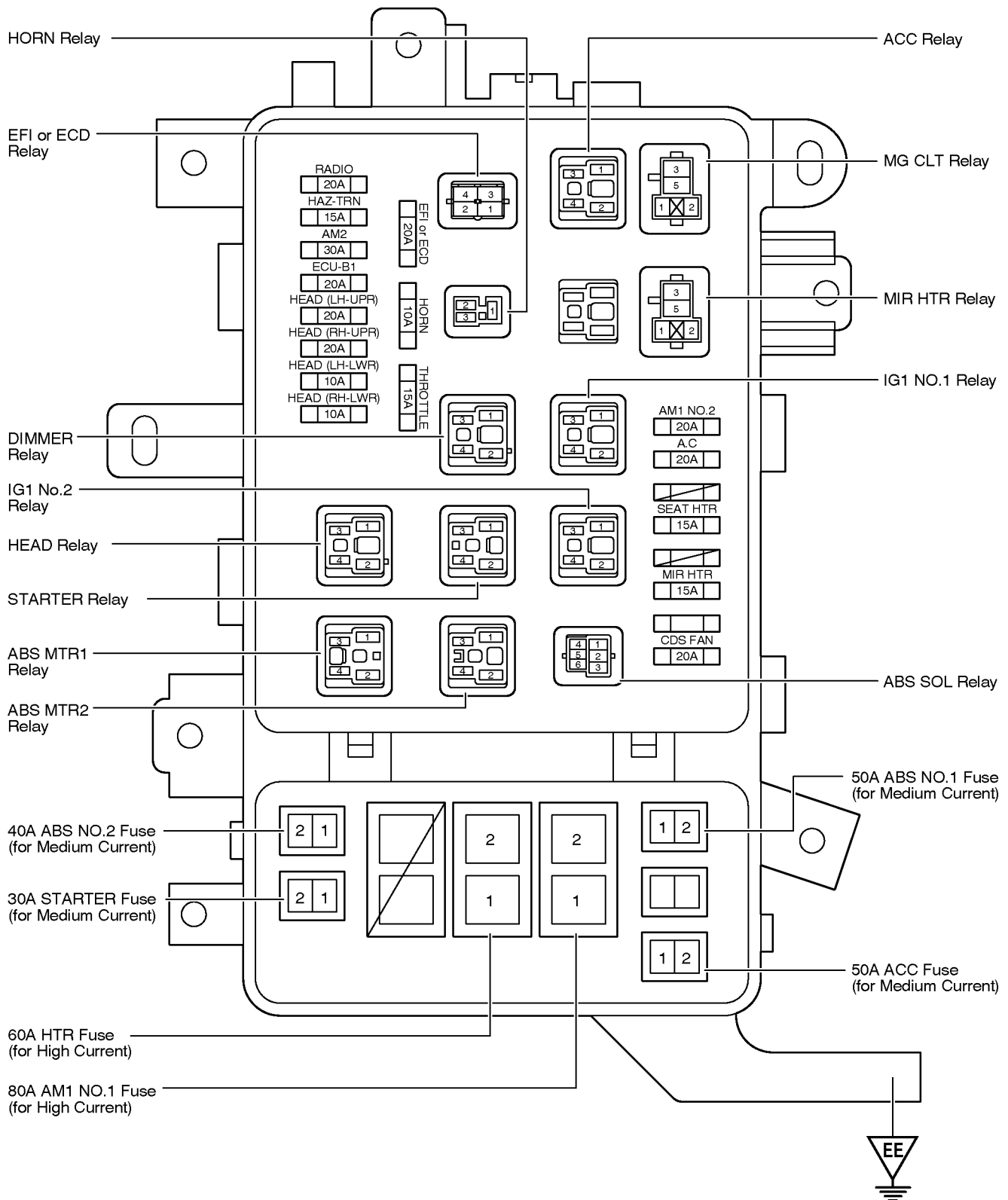
2002 LAND CRUISER (EWD469U)

[Body]

F RELAY LOCATIONS

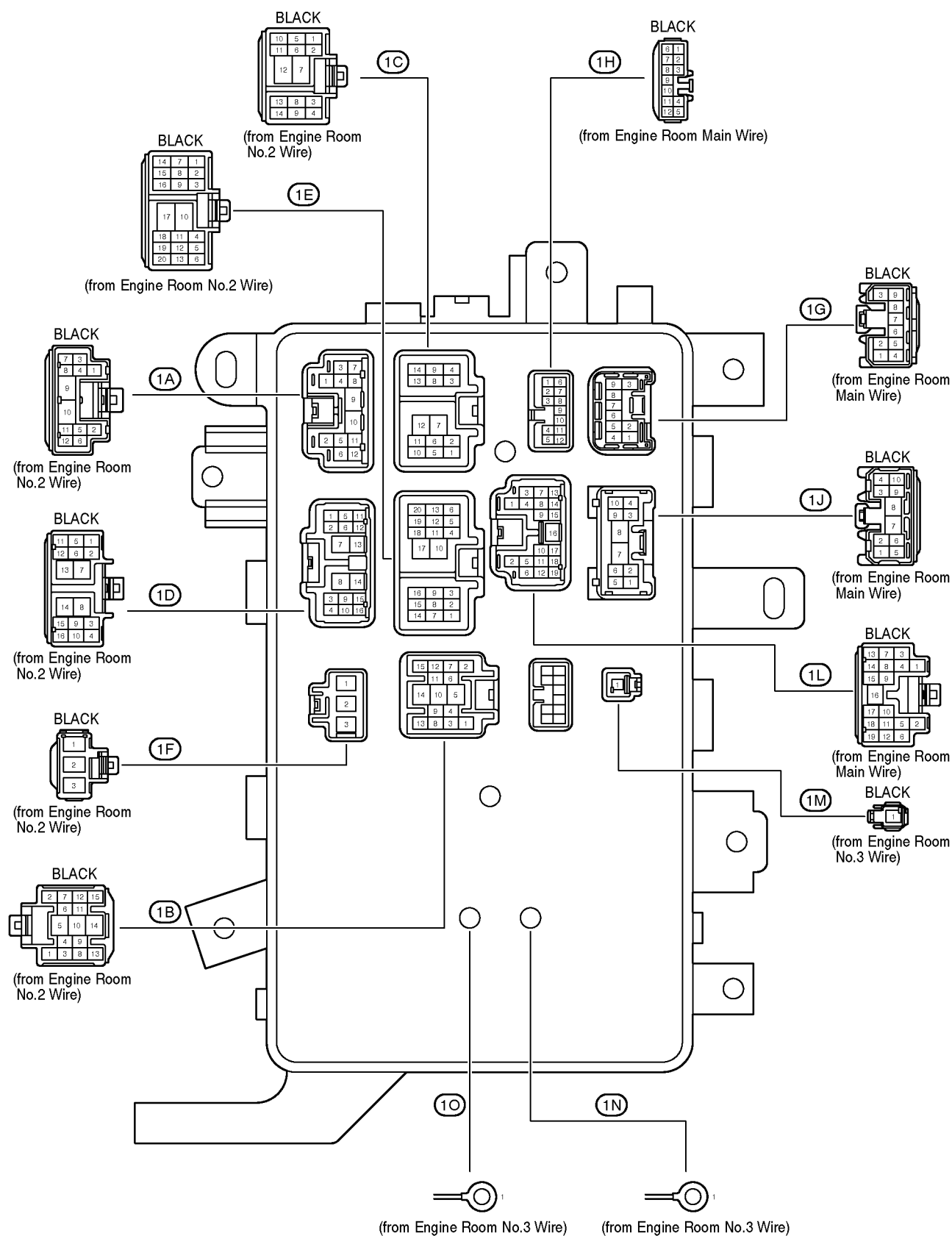
○ : Engine Room J/B

Engine Compartment Left (See Page 20)



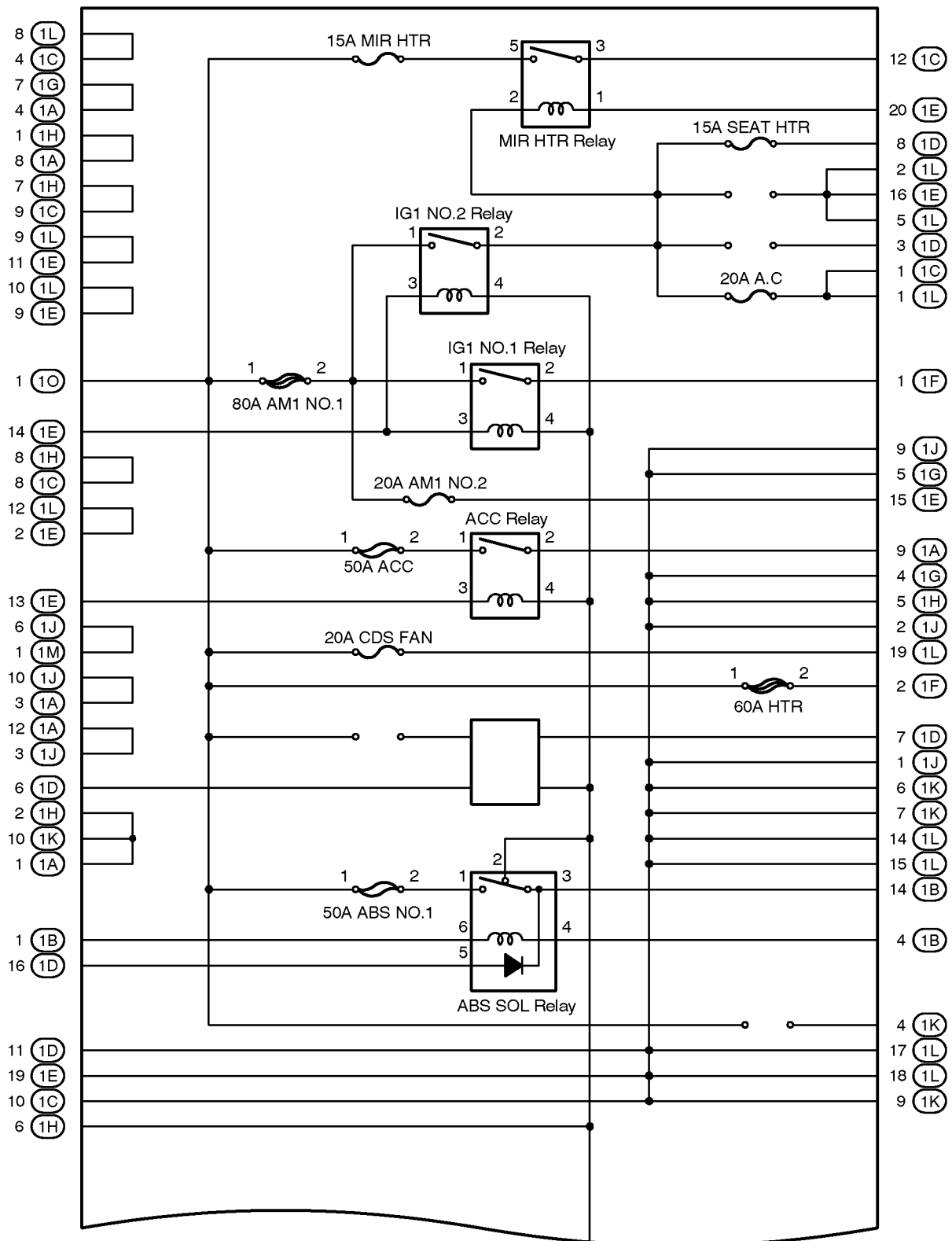
Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)



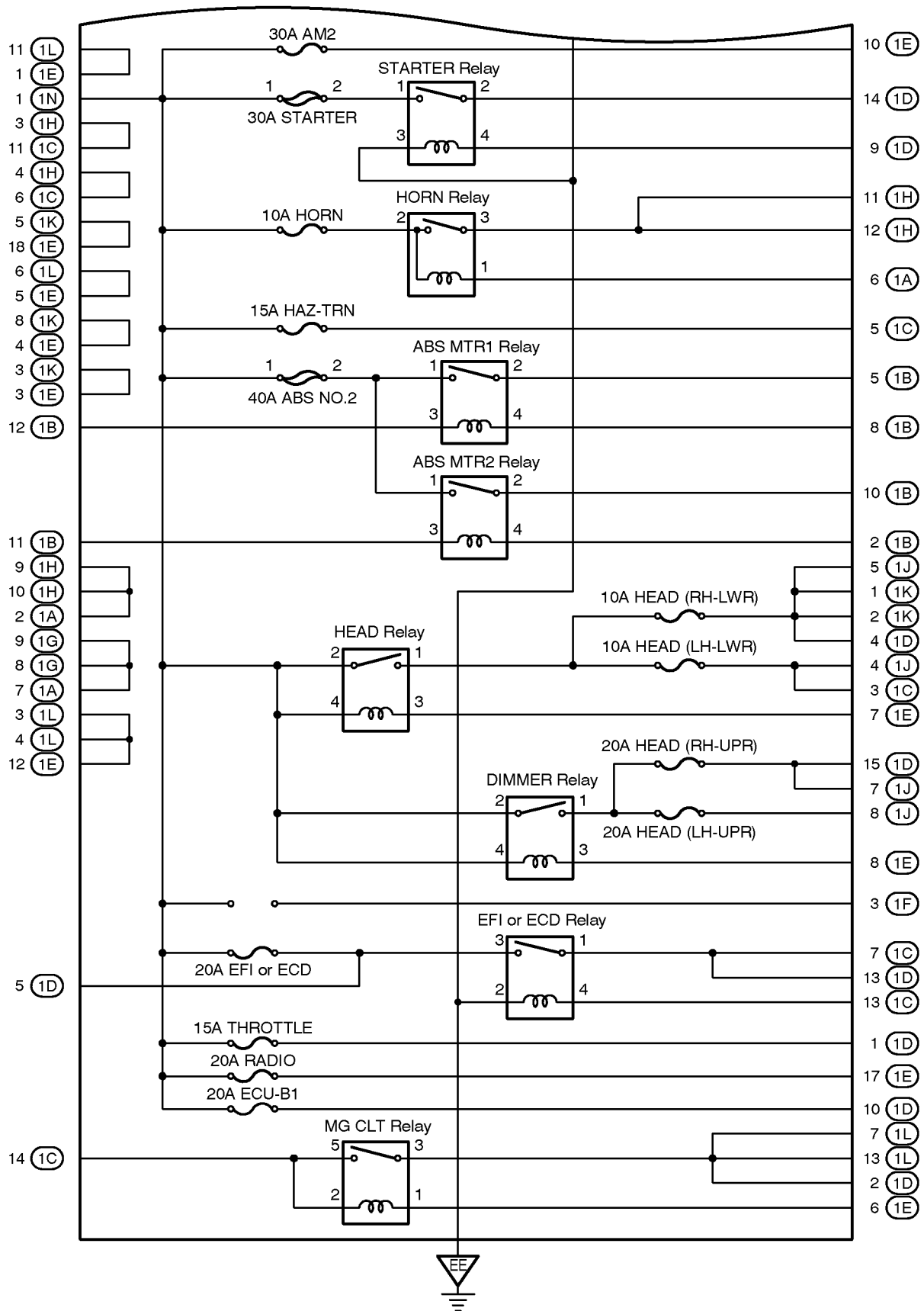
F RELAY LOCATIONS

[Engine Room J/B Inner Circuit]



Cont. Next Page

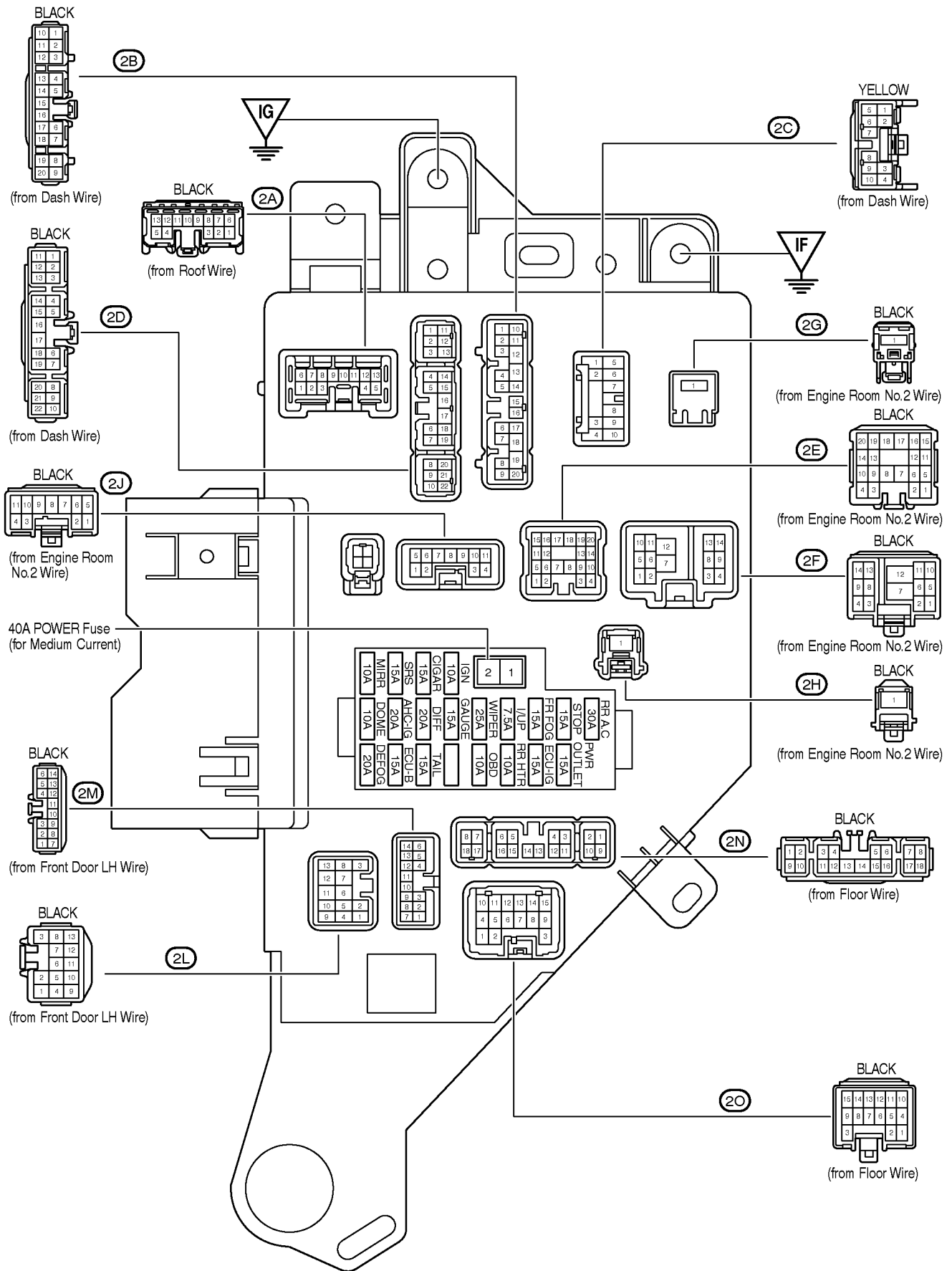
Cont'd



F RELAY LOCATIONS

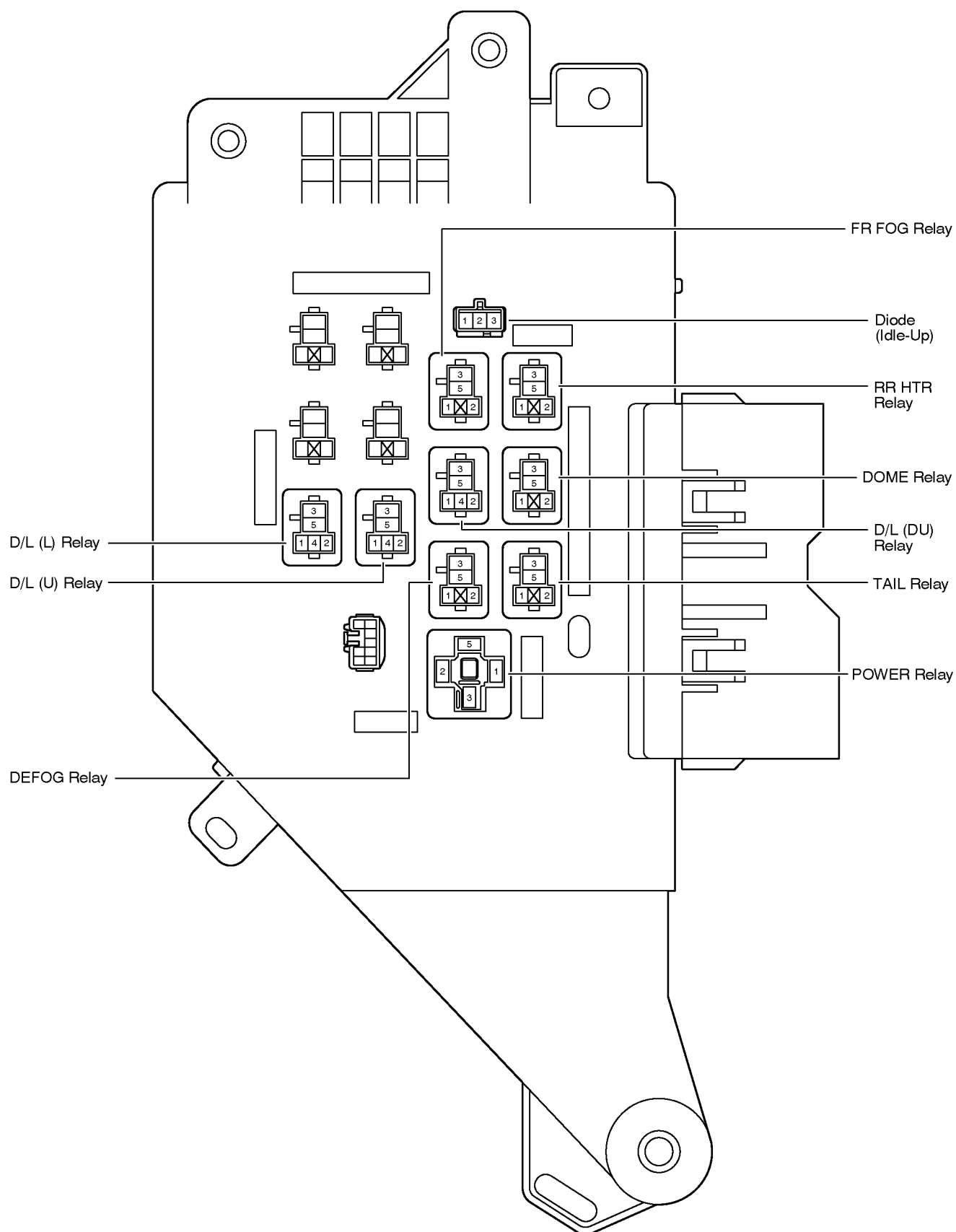
 : Cowl Side J/B LH

Left Kick Panel (See Page 20)



Donated by Andrew Schauer . cruisercult.com

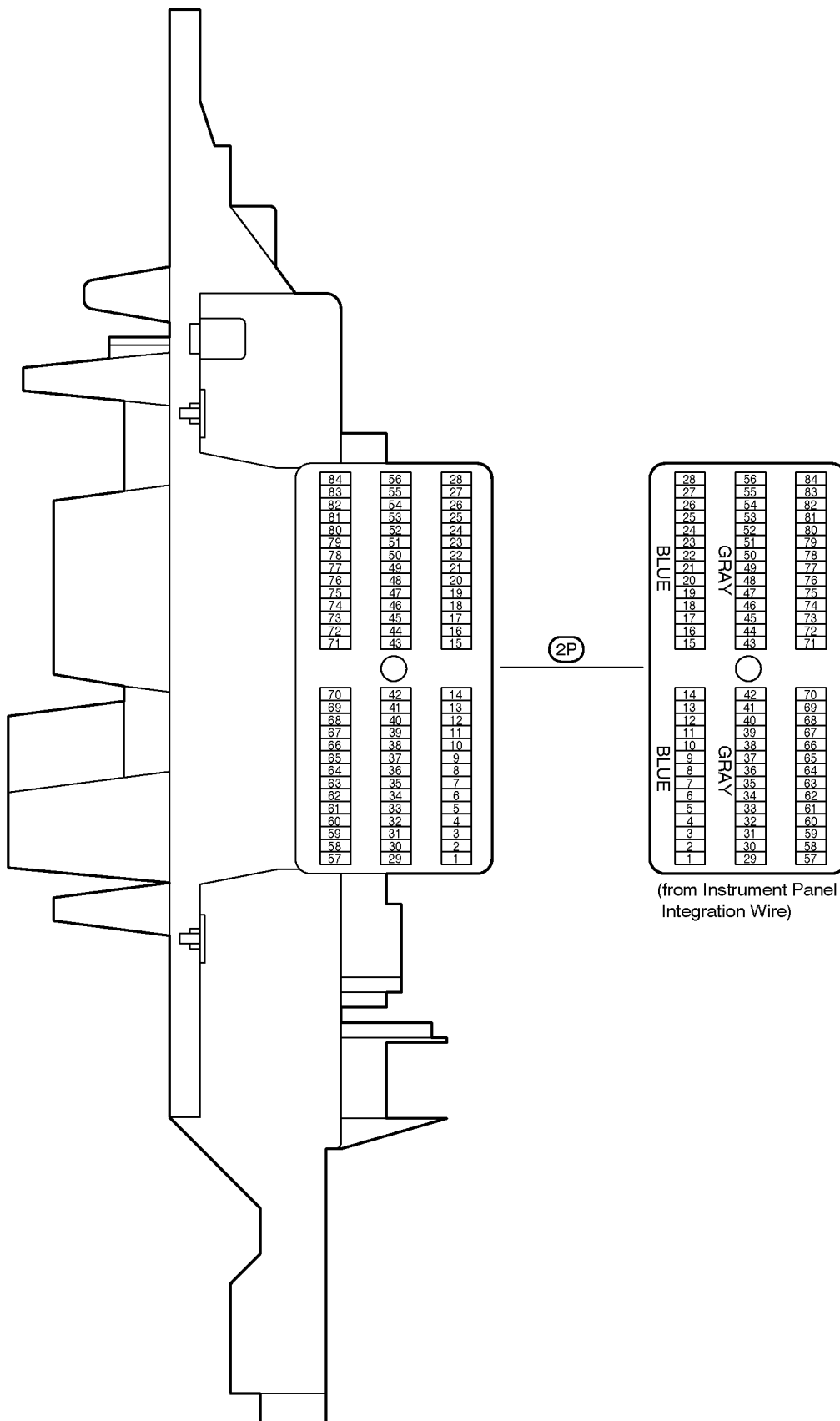
2002 LAND CRUISER (EWD469U)



F RELAY LOCATIONS

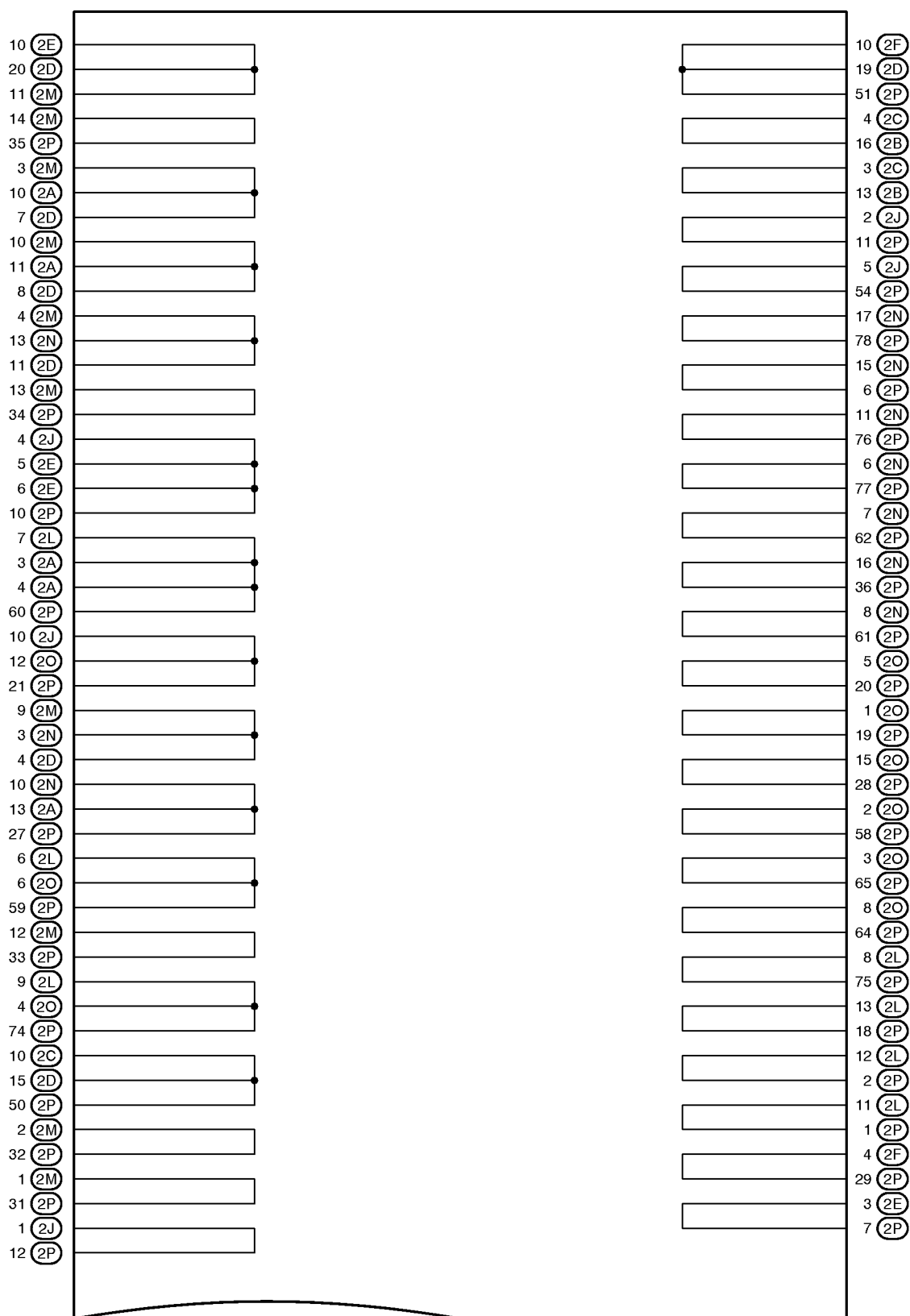
 : Cowl Side J/B LH

Left Kick Panel (See Page 20)



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)

[Cowl Side J/B LH Inner Circuit]

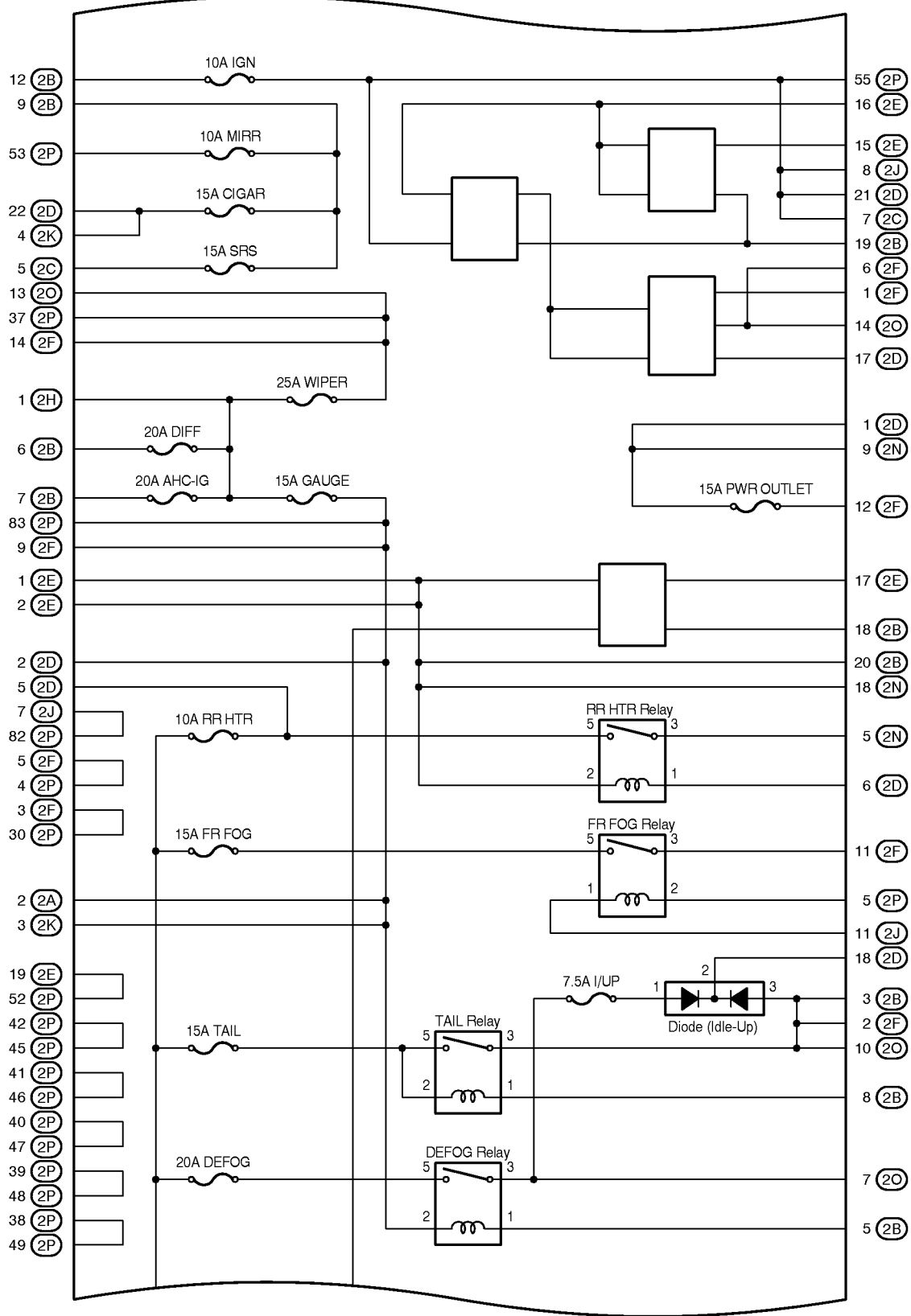


Cont. Next Page

F RELAY LOCATIONS

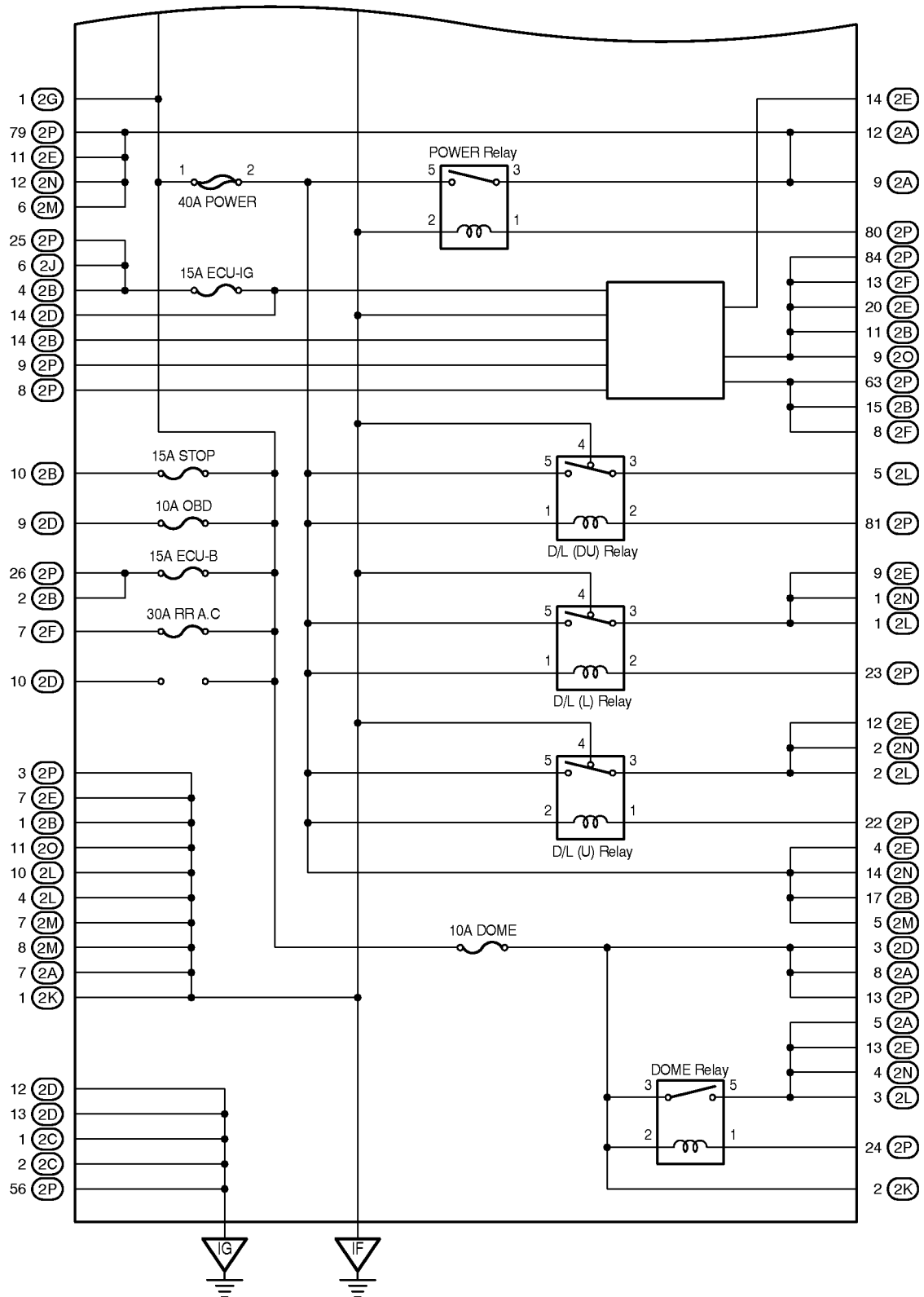
[Cowl Side J/B LH Inner Circuit]

Cont'd



Cont. Next Page

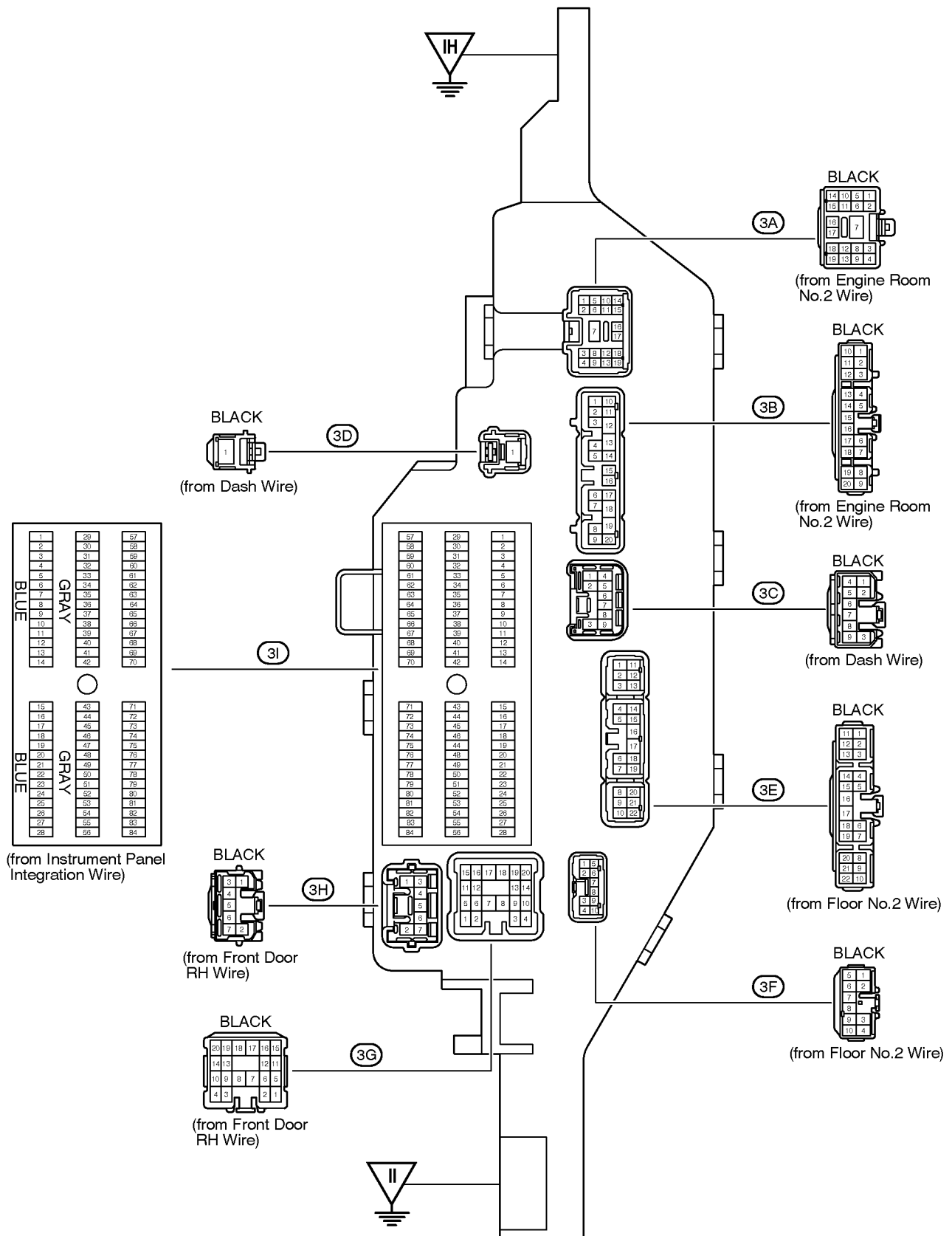
Cont'd

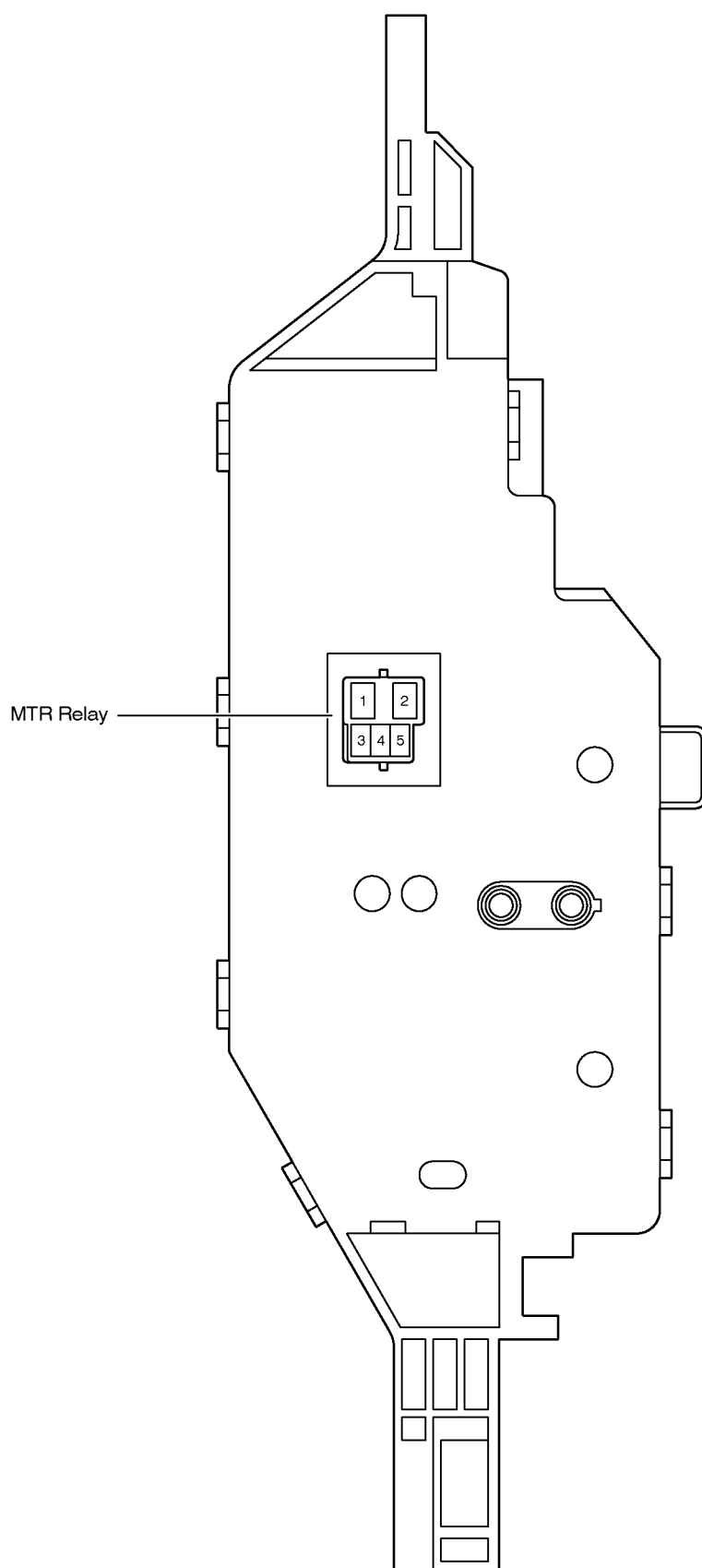


F RELAY LOCATIONS

○ : Cowl Side J/B RH

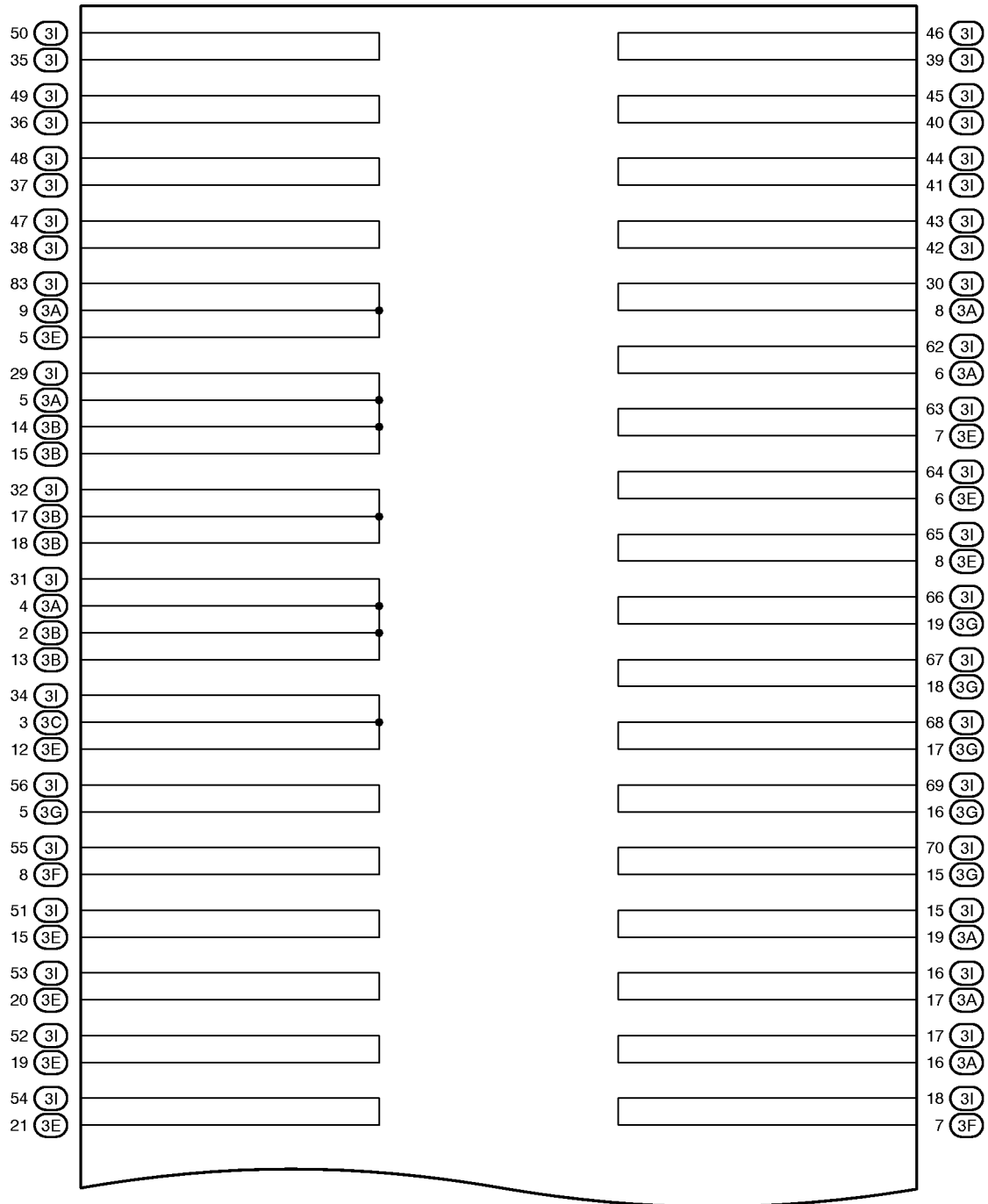
Right Kick Panel (See Page 20)





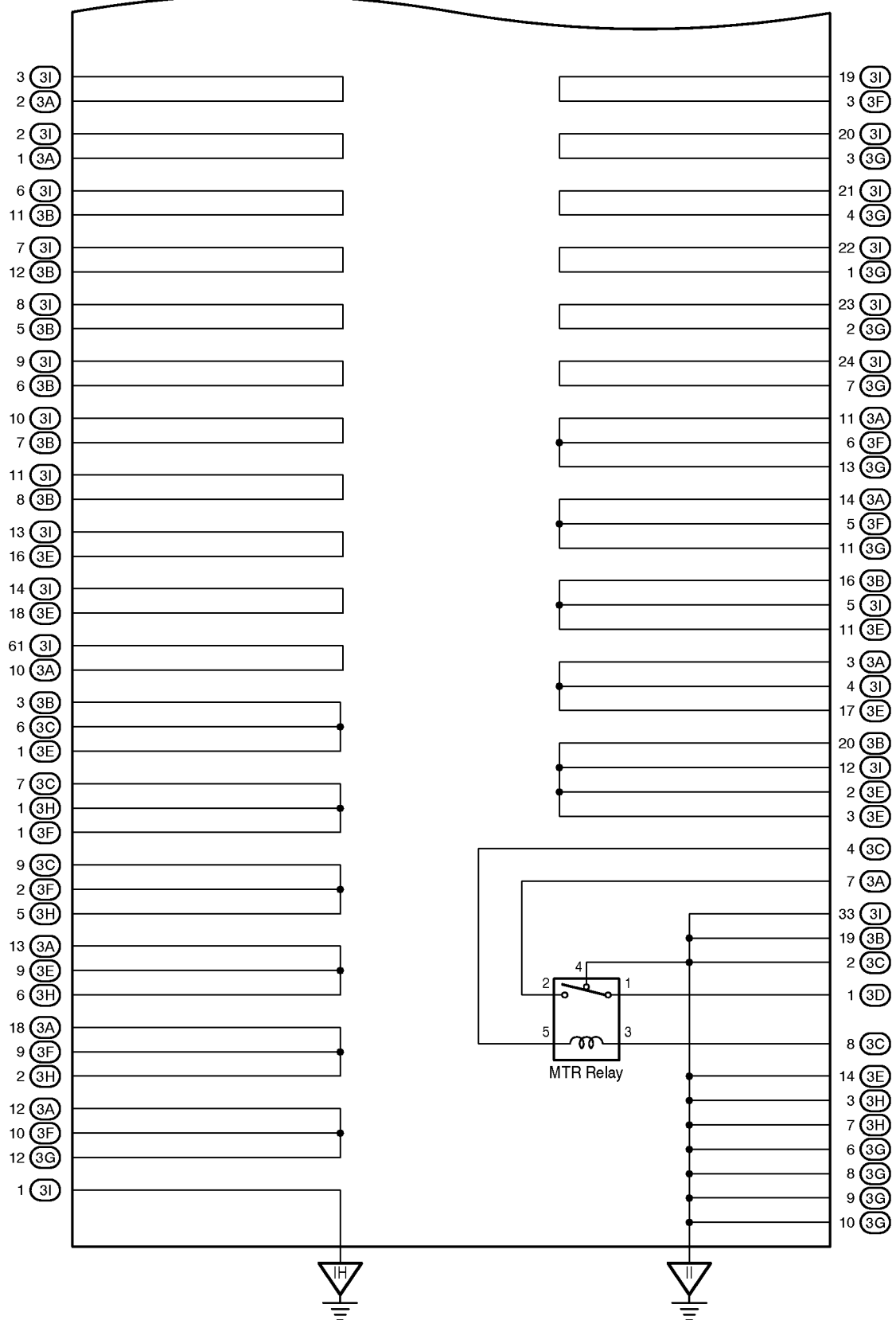
F RELAY LOCATIONS

[Cowl Side J/B RH Inner Circuit]



Cont. Next Page

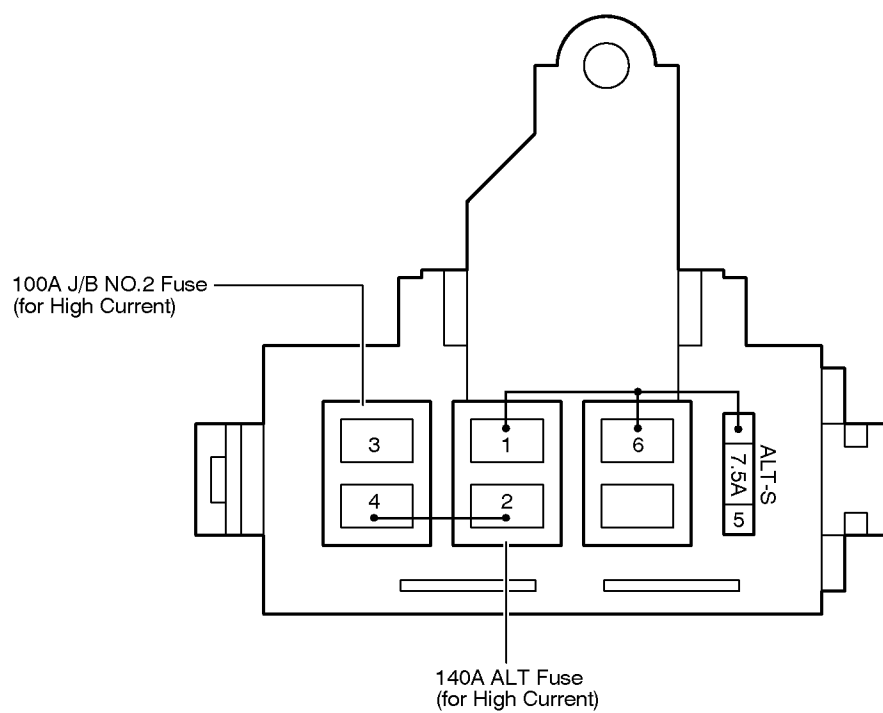
Cont'd



F RELAY LOCATIONS

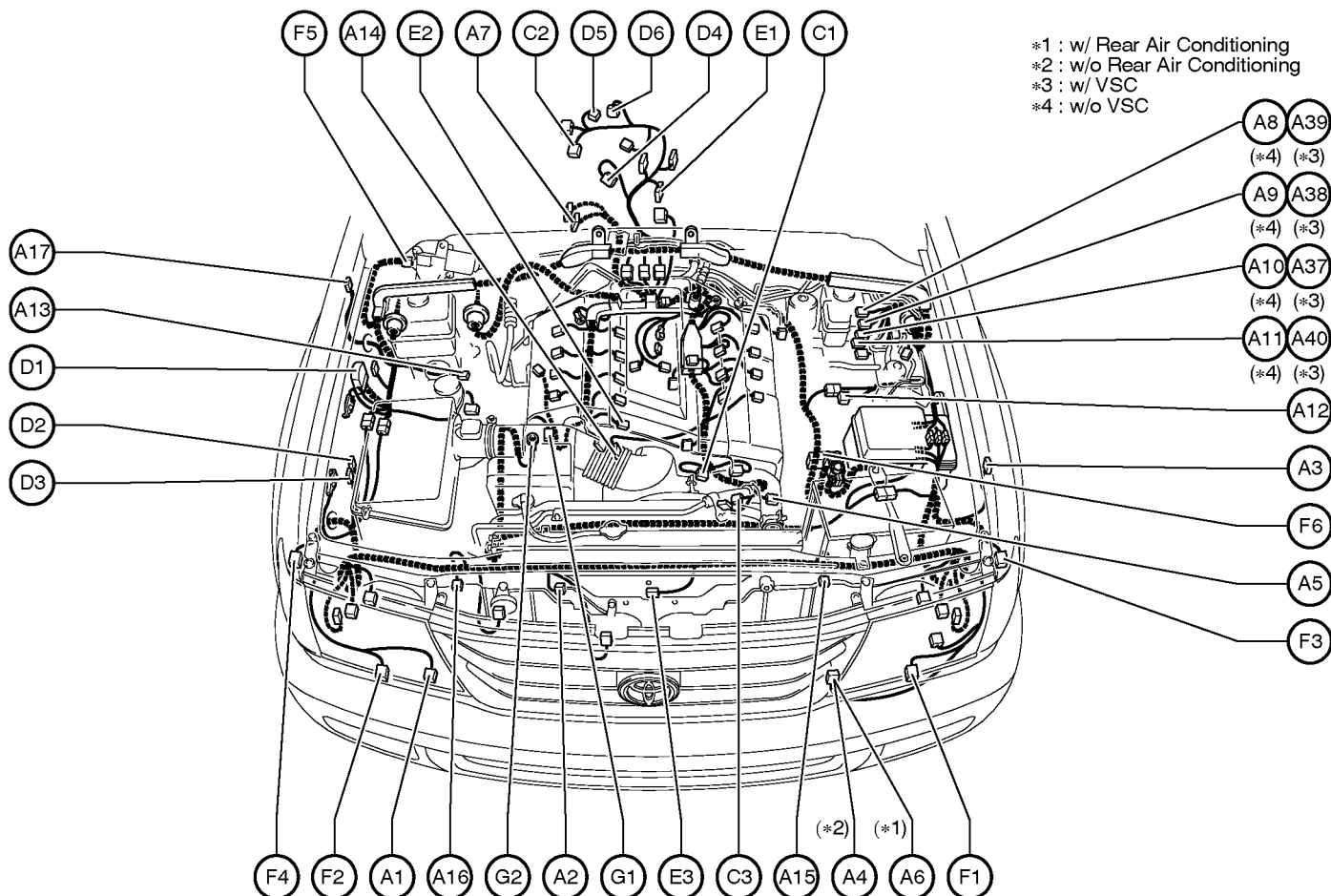
Fusible Link Block

Near the Battery (See Page 20)



G ELECTRICAL WIRING ROUTING

Position of Parts in Engine Compartment

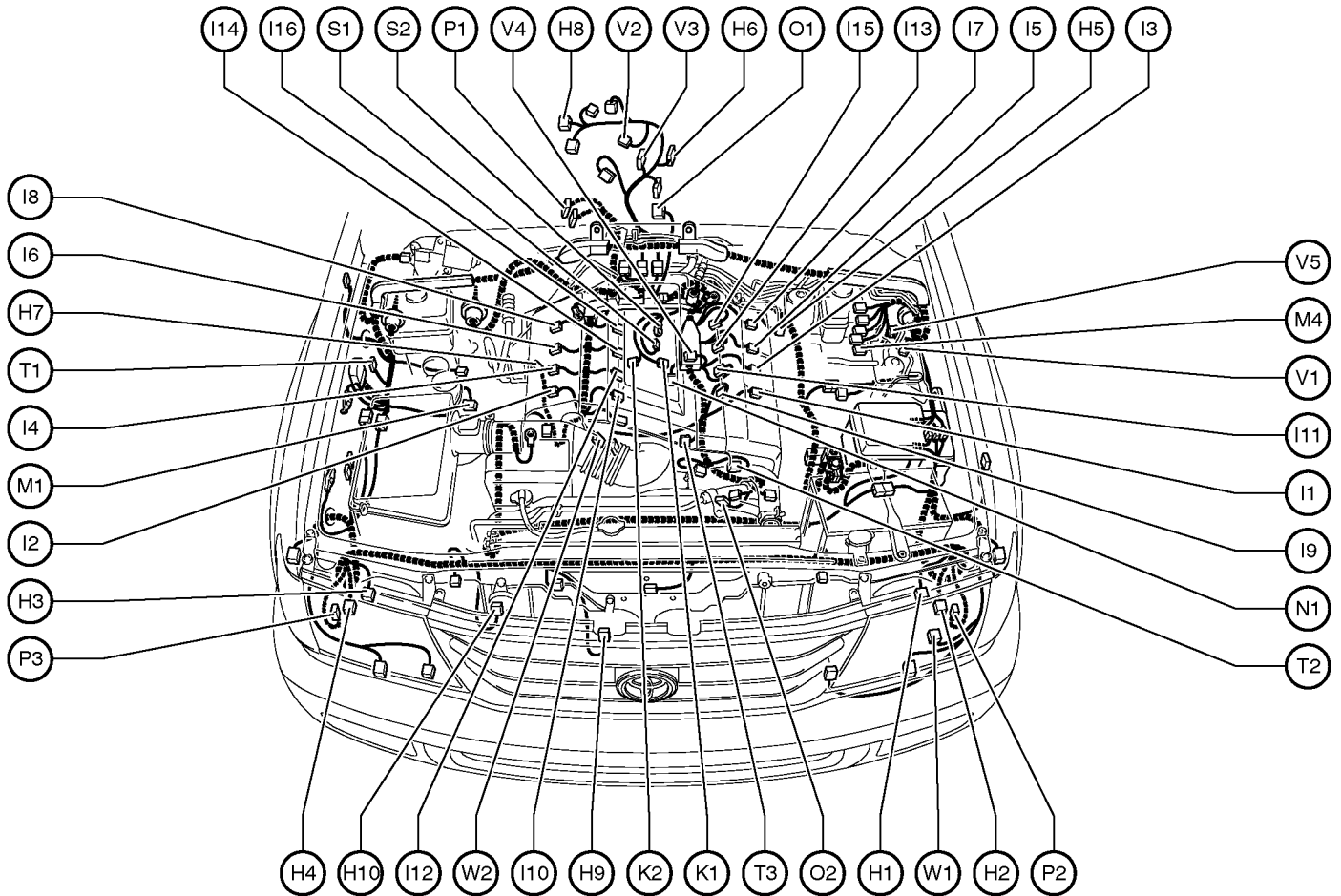


- *1 : w/ Rear Air Conditioning
- *2 : w/o Rear Air Conditioning
- *3 : w/ VSC
- *4 : w/o VSC

- A 1 A/C Ambient Temp. Sensor
- A 2 A/C Condenser Fan Motor
- A 3 A/C Condenser Fan Relay
- A 4 A/C Dual Pressure SW
- A 5 A/C Magnetic Clutch and Lock Sensor
- A 6 A/C Triple Pressure SW
(A/C Dual and Single Pressure SW)
- A 7 A/T Oil Temp. Sensor
- A 8 ABS Actuator
- A 9 ABS Actuator
- A10 ABS Actuator
- A11 ABS Actuator
- A12 ABS Speed Sensor Front LH
- A13 ABS Speed Sensor Front RH
- A14 Accel Position Sensor
- A15 Airbag Sensor Front LH
- A16 Airbag Sensor Front RH
- A17 Auto Antenna Motor
- A37 ABS & BA & TRAC & VSC Actuator
- A38 ABS & BA & TRAC & VSC Actuator
- A39 ABS & BA & TRAC & VSC Actuator
- A40 ABS & BA & TRAC & VSC Actuator

- C 1 Camshaft Position Sensor
- C 2 Center Diff. Lock Control Motor
- C 3 Crankshaft Position Sensor
- D 1 Data Link Connector 1
- D 2 Daytime Running Light Relay No.3
- D 3 Daytime Running Light Relay No.3
- D 4 Detection SW (Center Diff. Lock)
- D 5 Detection SW (Transfer L Position)
- D 6 Detection SW (Transfer Neutral Position)
- 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 Turn Signal and Side Marker Light LH
- F 4 Front Turn Signal and Side Marker Light RH
- F 5 Front Wiper Motor
- F 6 Fusible Link Block
- G 1 Generator
- G 2 Generator

Position of Parts in Engine Compartment



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 LH
 H10 Horn RH

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

K 1 Knock Sensor 1
 K 2 Knock Sensor 2

M 1 Mass Air Flow Meter
 M 4 Master Cylinder Pressure Sensor

N 1 Noise Filter (Ignition)

O 1 O/D Direct Clutch Speed Sensor
 O 2 Oil Pressure Sender

P 1 Park/Neutral Position SW, A/T Indicator Light SW and Back-Up Light SW

P 2 Parking Light LH
 P 3 Parking Light RH

S 1 Starter
 S 2 Starter

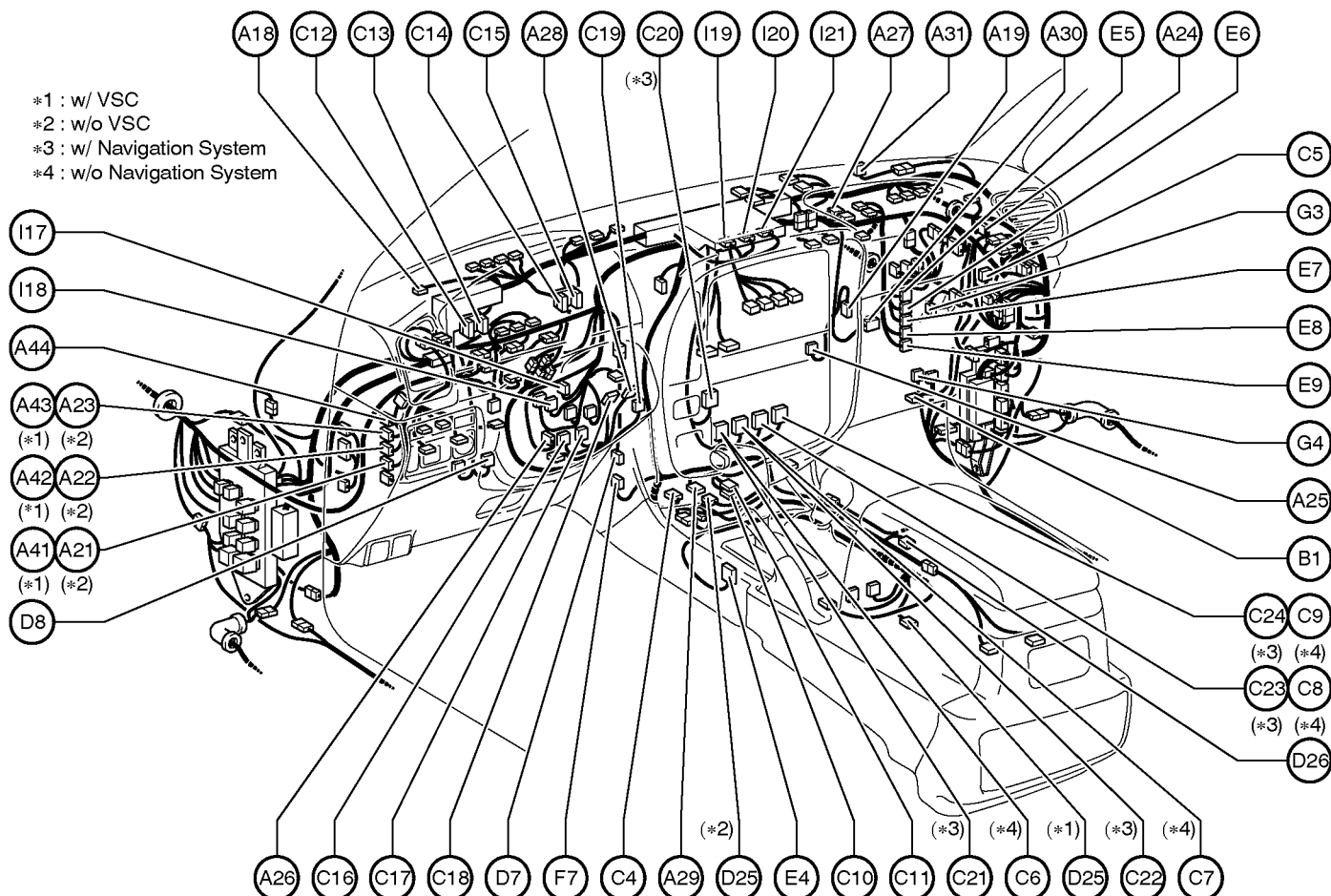
T 1 Theft Deterrent Horn
 T 2 Throttle Control Motor
 T 3 Throttle Position Sensor

V 1 Vapor Pressure Sensor
 V 2 Vehicle Speed Sensor (Combination Meter)
 V 3 Vehicle Speed Sensor
 (Electronically Controlled Transmission)
 V 4 VSV (EVAP)
 V 5 VSV (Vapor Pressure Sensor)

W 1 Washer Motor
 W 2 Water Temp. Sender

G ELECTRICAL WIRING ROUTING

Position of Parts in Instrument Panel



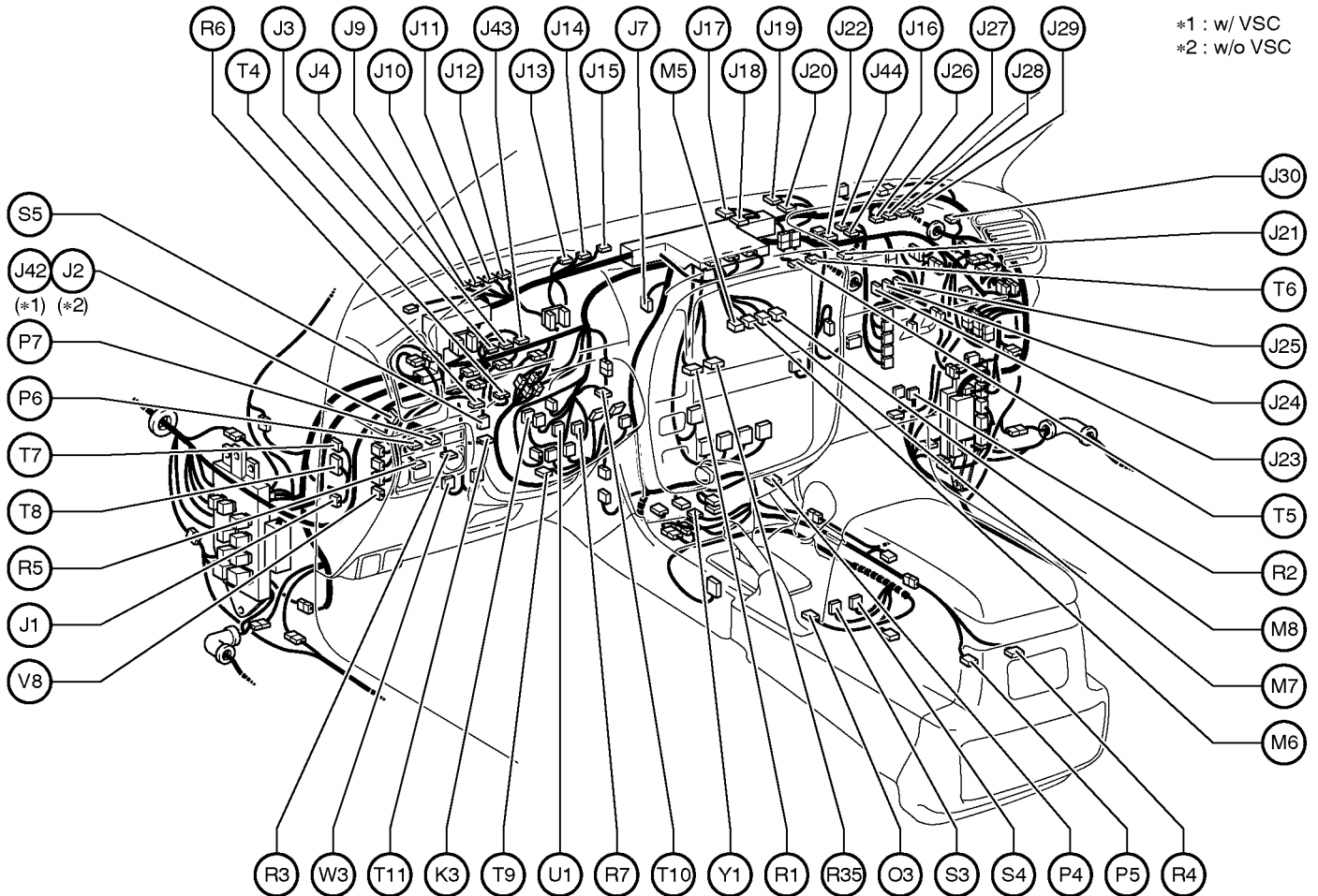
- A 18 A/C Solar Sensor
- A 19 A/C Thermistor
- A 21 ABS ECU
- A 22 ABS ECU
- A 23 ABS ECU
- A 24 Air Inlet Control Servo Motor
- A 25 Air Mix Control Servo Motor
- A 26 Air Vent Mode Control Servo Motor
- A 27 Airbag Squib (Front Passenger Airbag Assembly)
- A 28 Airbag Squib (Steering Wheel Pad)
- A 29 Ashtray Illumination
- A 30 Auto Antenna Control Relay
- A 31 Automatic Light Control Sensor
- A 41 ABS & BA & TRAC & VSC ECU
- A 42 ABS & BA & TRAC & VSC ECU
- A 43 ABS & BA & TRAC & VSC ECU
- A 44 ABS & BA & TRAC & VSC ECU
- B 1 Blower Motor Controller
- C 4 Center Airbag Sensor Assembly
- C 5 Center Diff. Lock Control Relay
- C 6 Center ECU
- C 7 Center ECU
- C 8 Center ECU
- C 9 Center ECU
- C 10 Cigarette Lighter
- C 11 Cigarette Lighter Illumination
- C 12 Combination Meter
- C 13 Combination Meter
- C 14 Combination Meter
- C 15 Combination Meter
- C 16 Combination SW

- C 17 Combination SW
- C 18 Combination SW
- C 19 Combination SW
- C 20 Center ECU
- C 21 Center ECU
- C 22 Center ECU
- C 23 Center ECU
- C 24 Center ECU
- D 7 Data Link Connector 3
- D 8 Daytime Running Light Relay (Main)
- D 25 Deceleration Sensor
- D 26 DVD Automatic Changer
- E 4 Electronically Controlled Transmission Pattern Select SW
- E 5 Engine Control Module
- E 6 Engine Control Module
- E 7 Engine Control Module
- E 8 Engine Control Module
- E 9 Engine Control Module
- F 7 Fuel Control SW
- G 3 Glove Box Light
- G 4 Gateway ECU
- I 17 Ignition Key Cylinder Light
- I 18 Ignition SW
- I 19 Instrument ECU
- I 20 Instrument ECU
- I 21 Instrument ECU

Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

Position of Parts in Instrument Panel



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

J 1 Junction Connector
J 2 Junction Connector
J 3 Junction Connector
J 4 Junction Connector
J 7 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 42 Junction Connector
J 43 Junction Connector
J 44 Junction Connector

K 3 Key Interlock Solenoid

M 5 Multi-Display
M 6 Multi-Display
M 7 Multi-Display
M 8 Multi-Display

O 3 O/D Main SW and Shift Lock Control ECU

P 4 Power Outlet (Front)
P 5 Power Outlet (Rear Console Box)
P 6 Power Quarter Window SW LH
P 7 Power Quarter Window SW RH

R 1 Radio and Player
R 2 Rear Diff. Lock Control ECU
R 3 Rear Diff. Lock SW
R 4 Rear Heater SW
R 5 Remote Control Mirror SW
R 6 Rheostat
R 7 Room Temp. Sensor (Front)
R 35 Radio and Player

S 3 Seat Heater SW (Driver's Seat)
S 4 Seat Heater SW (Front Passenger's Seat)
S 5 Stop Light SW

T 4 Telescopic Motor
T 5 Theft Deterrent ECU
T 6 Theft Deterrent ECU
T 7 Tilt and Telescopic ECU
T 8 Tilt and Telescopic ECU
T 9 Tilt Motor
T 10 Transponder Key Amplifier
T 11 Turn Signal Flasher

U 1 Unlock Warning SW

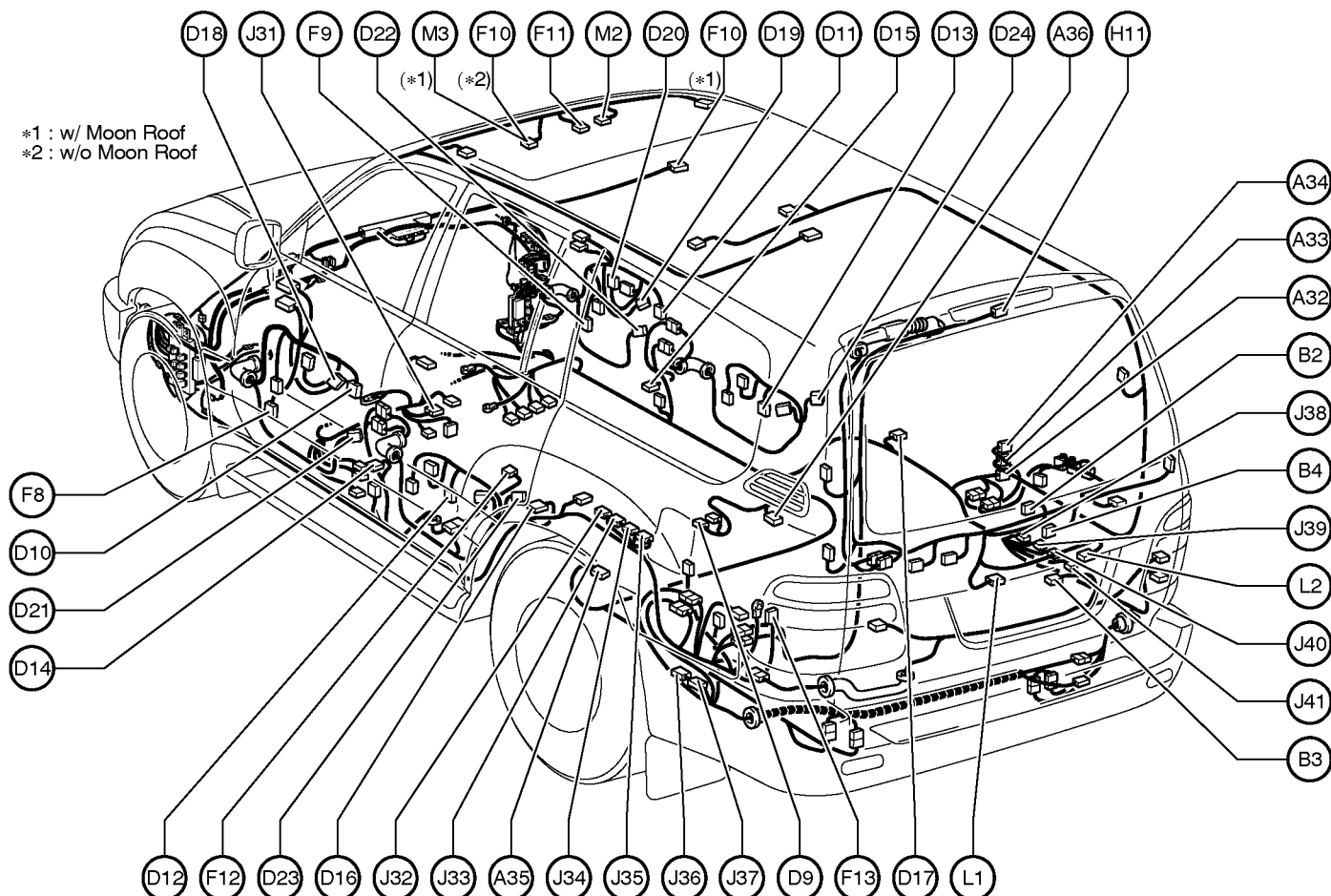
V 8 VSC Warning Buzzer

W 3 Wireless Door Lock ECU

Y 1 Yaw Rate Sensor

G ELECTRICAL WIRING ROUTING

Position of Parts in Body



A32 A/C Amplifier (Rear)
A33 A/C Amplifier (Rear)
A34 A/C Amplifier (Rear)
A35 ABS Speed Sensor Rear LH
A36 ABS Speed Sensor Rear RH

B 2 Back Door Courtesy SW
B 3 Back Door Key Lock and Unlock SW
B 4 Back Door Lock Motor and
Back Door Unlock Detection SW

D 9 Detection SW (Rear Diff. Lock)
D10 Door Courtesy Light Front LH
D11 Door Courtesy Light Front RH
D12 Door Courtesy Light Rear LH
D13 Door Courtesy Light Rear RH
D14 Door Courtesy SW Front LH
D15 Door Courtesy SW Front RH
D16 Door Courtesy SW Rear LH
D17 Door Courtesy SW Rear RH
D18 Door Key Lock and Unlock SW LH
D19 Door Key Lock and Unlock SW RH
D20 Door Lock Control SW RH
D21 Door Lock Motor and Door Unlock Detection SW
Front LH
D22 Door Lock Motor and Door Unlock Detection SW
Front RH
D23 Door Lock Motor and Door Unlock Detection SW
Rear LH
D24 Door Lock Motor and Door Unlock Detection SW
Rear RH

F 8 Front Door Speaker LH
F 9 Front Door Speaker RH
F10 Front Interior Light and Rear Personal Light
F11 Front Personal Light
F12 Fuel Pump and Sender
F13 Fuel Pump Control ECU

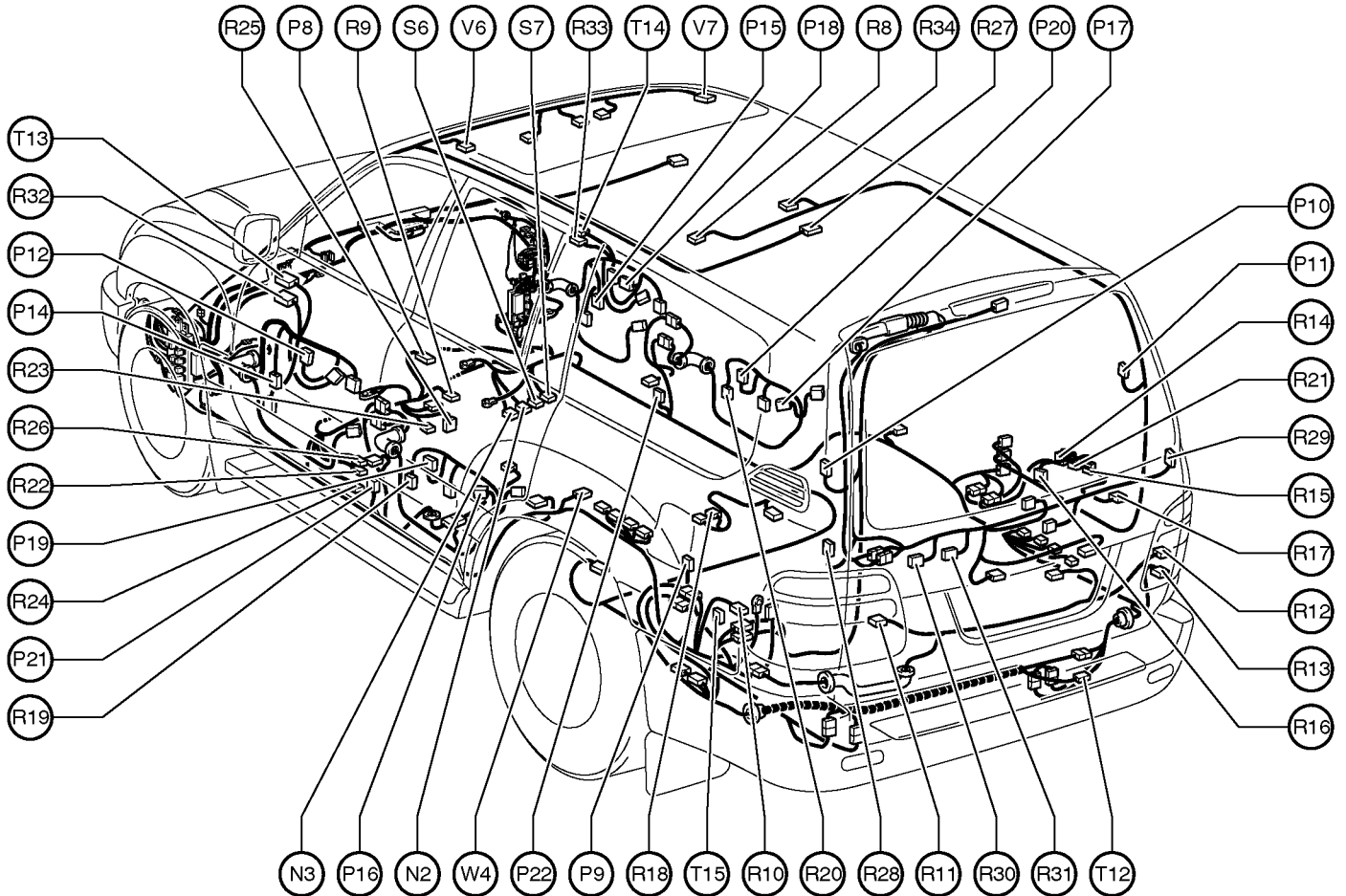
H11 High Mounted Stop Light

J31 Junction Connector
J32 Junction Connector
J33 Junction Connector
J34 Junction Connector
J35 Junction Connector
J36 Junction Connector
J37 Junction Connector
J38 Junction Connector
J39 Junction Connector
J40 Junction Connector
J41 Junction Connector

L 1 License Plate Light LH
L 2 License Plate Light RH

M 2 Moon Roof Control ECU
M 3 Moon Roof Control SW

Position of Parts in Body



N 2 Navigation ECU
N 3 Navigation ECU

P 8 Parking Brake SW
P 9 Power Outlet (Luggage Compartment)
P10 Power Vent Window Motor LH
P11 Power Vent Window Motor RH
P12 Power Window Master SW
P14 Power Window Motor Front LH
P15 Power Window Motor Front RH
P16 Power Window Motor Rear LH
P17 Power Window Motor Rear RH
P18 Power Window SW Front RH
P19 Power Window SW Rear LH
P20 Power Window SW Rear RH
P21 Pretensioner LH
P22 Pretensioner RH

R 8 Rear A/C Control SW
R 9 Rear Air Mix Control Servo Motor
R10 Rear Combination Light LH
R11 Rear Combination Light LH
R12 Rear Combination Light RH
R13 Rear Combination Light RH
R14 Rear Cooler Blower Motor
R15 Rear Cooler Magnetic Valve
R16 Rear Cooler Power Transistor
R17 Rear Cooler Relay
R18 Rear Diff. Lock Motor

R19 Rear Door Speaker LH
R20 Rear Door Speaker RH
R21 Rear Evaporator Temp. Sensor
R22 Rear Heater Blower Motor
R23 Rear Heater Blower Resistor
R24 Rear Heater Fan Relay
R25 Rear Heater Power Transistor
R26 Rear Inlet Air Temp. Sensor
R27 Rear Interior Light
R28 Rear Window Defogger
R29 Rear Window Defogger
R30 Rear Wiper Motor
R31 Rear Wiper Relay
R32 Remote Control Mirror LH
R33 Remote Control Mirror RH
R34 Room Temp. Sensor (Rear)

S 6 Stereo Component Amplifier
S 7 Stereo Component Amplifier

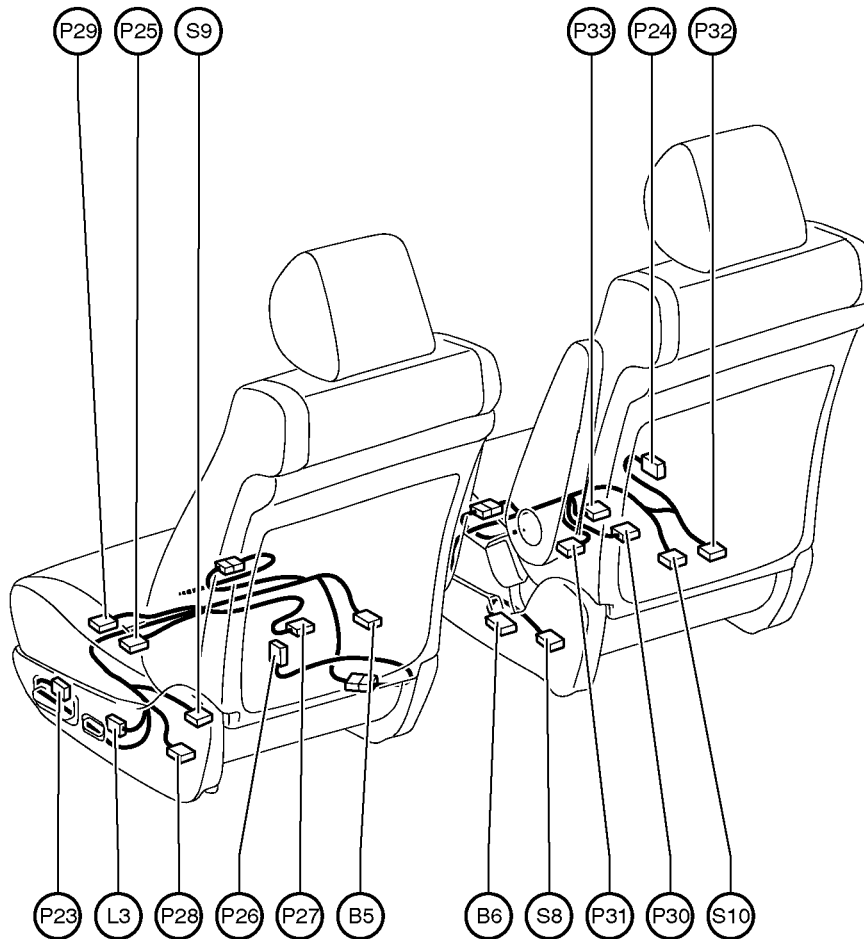
T12 Trailer Socket
T13 Tweeter LH
T14 Tweeter RH
T15 Towing Converter Relay

V 6 Vanity Light LH
V 7 Vanity Light RH

W 4 Woofer (Speaker)

G ELECTRICAL WIRING ROUTING

Position of Parts in Seat



B 5 Buckle SW LH
B 6 Buckle SW RH

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

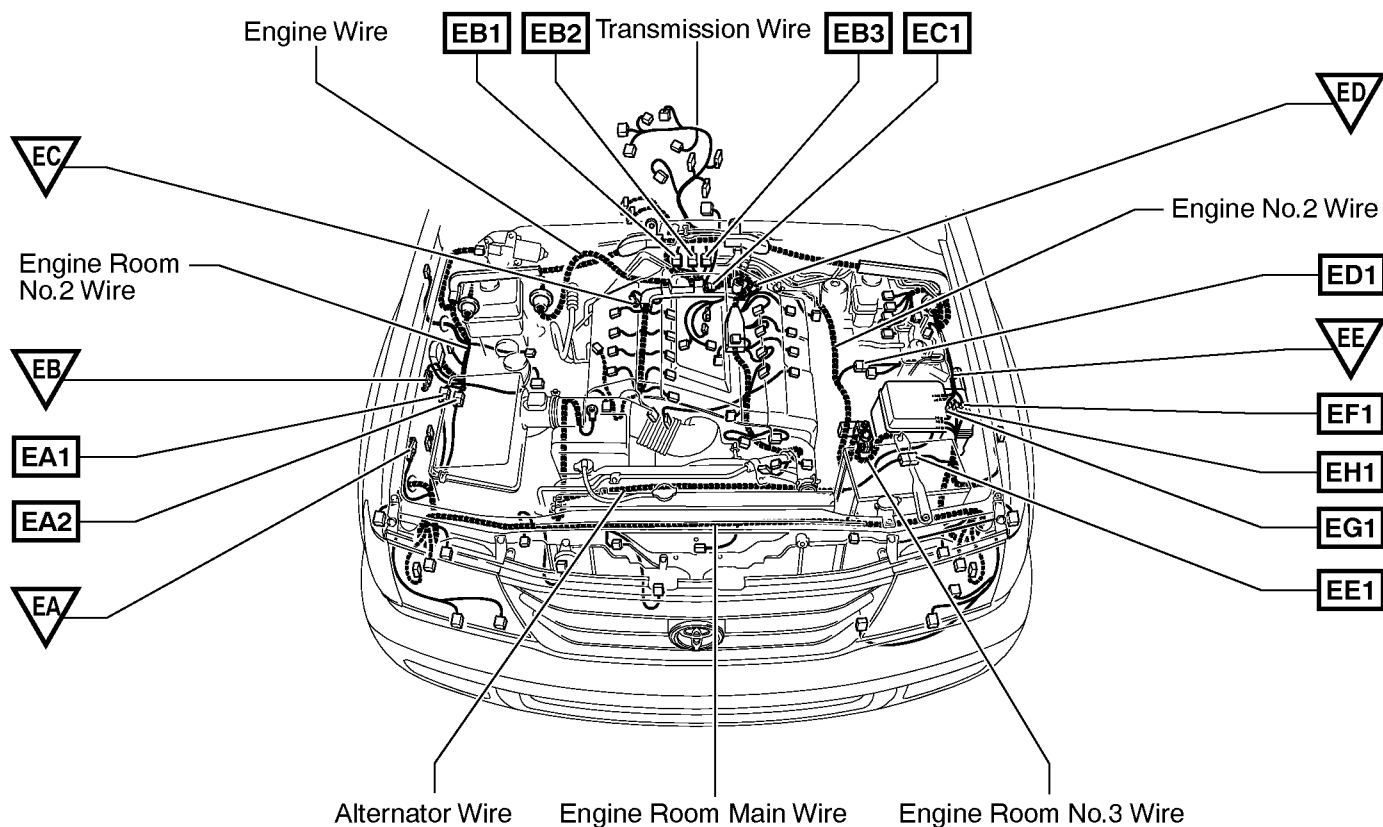
S 8 Seat Belt Warning Occupant Detection Sensor
S 9 Seat Heater (Driver's Seat)
S10 Seat Heater (Front Passenger's Seat)

P23 Power Seat Control SW (Driver's Seat)
P24 Power Seat Control SW (Front Passenger's Seat)
P25 Power Seat Motor (Driver's Seat Front Vertical Control)
P26 Power Seat Motor
(Driver's Seat Lumbar Support Control)
P27 Power Seat Motor (Driver's Seat Rear Vertical Control)
P28 Power Seat Motor (Driver's Seat Reclining Control)
P29 Power Seat Motor (Driver's Seat Slide Control)
P30 Power Seat Motor
(Front Passenger's Seat Front Vertical Control)
P31 Power Seat Motor
(Front Passenger's Seat Rear Vertical Control)
P32 Power Seat Motor
(Front Passenger's Seat Reclining Control)
P33 Power Seat Motor
(Front Passenger's Seat Slide Control)

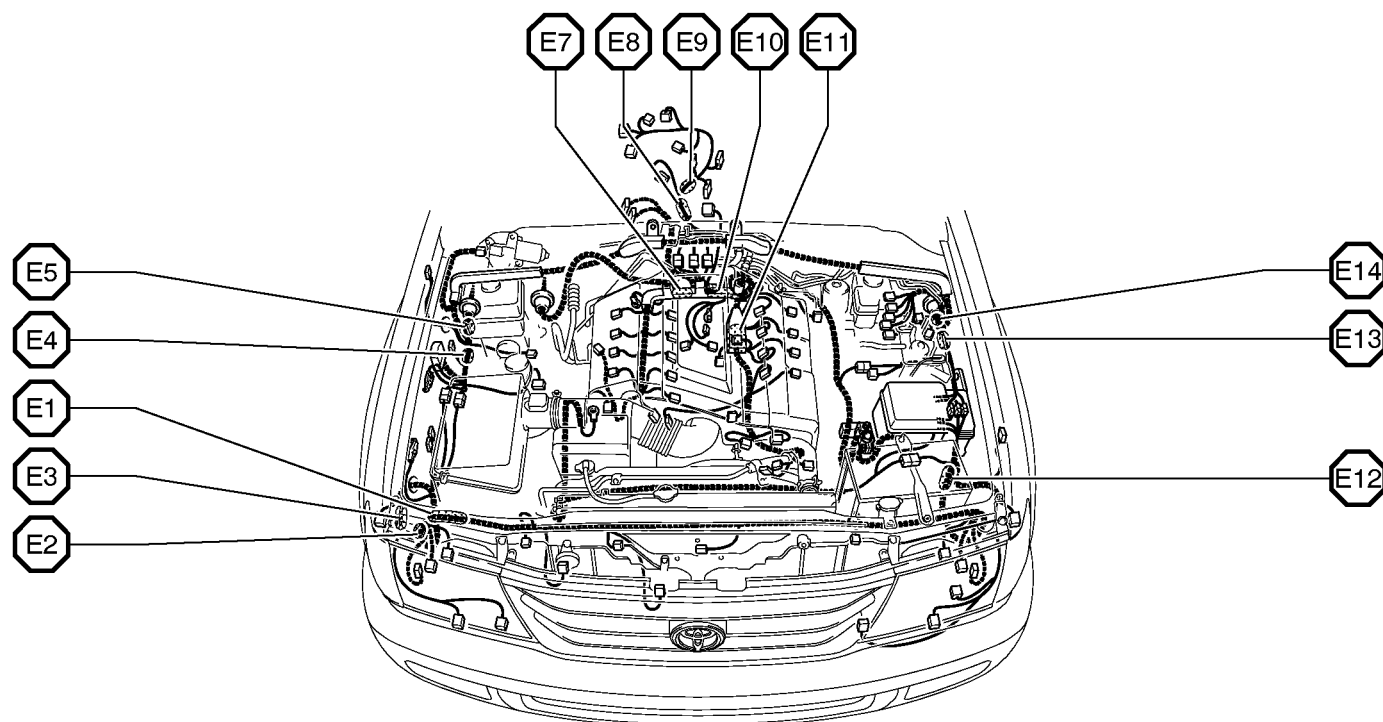
G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points



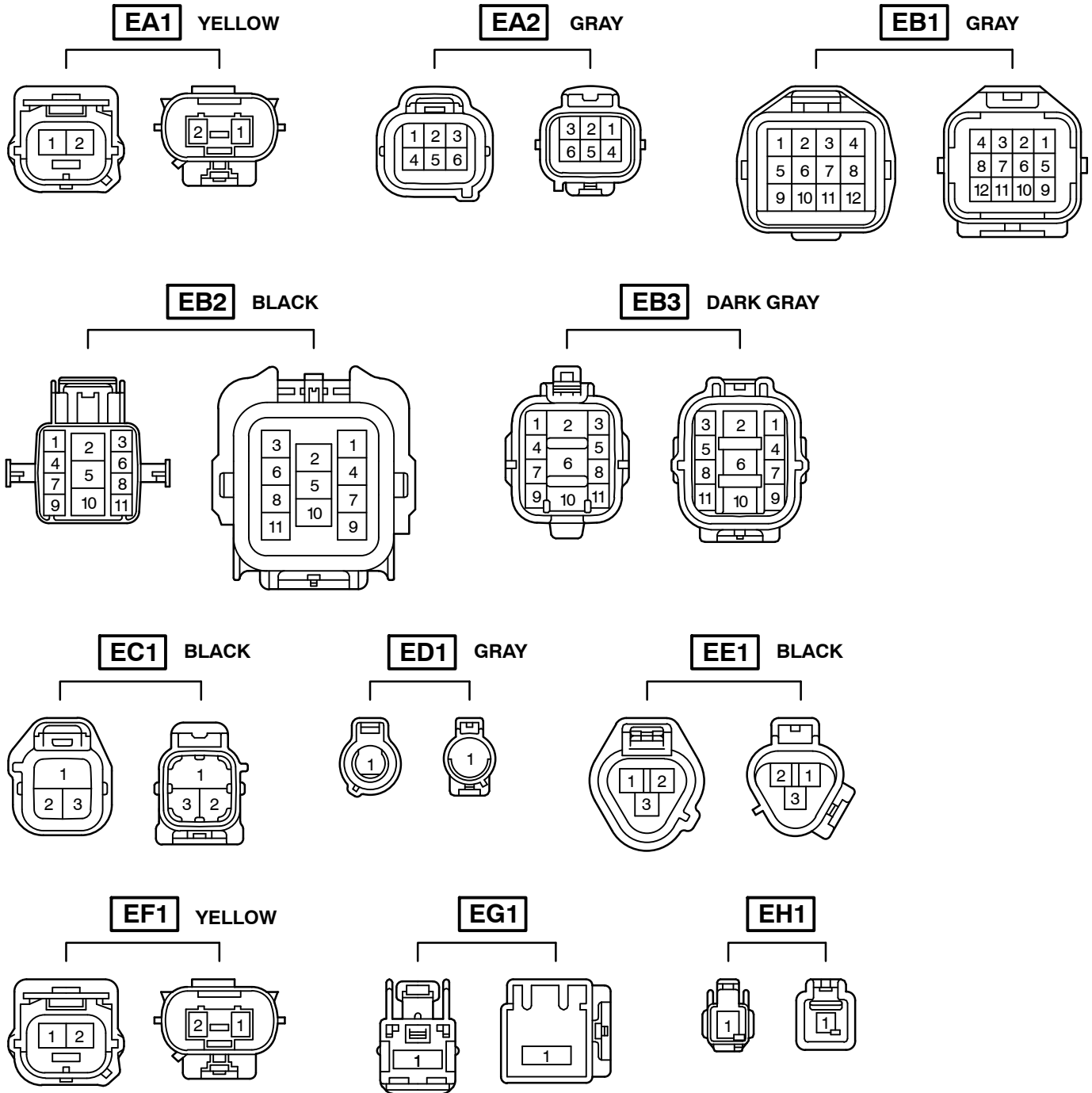
○ : Location of Splice Points



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

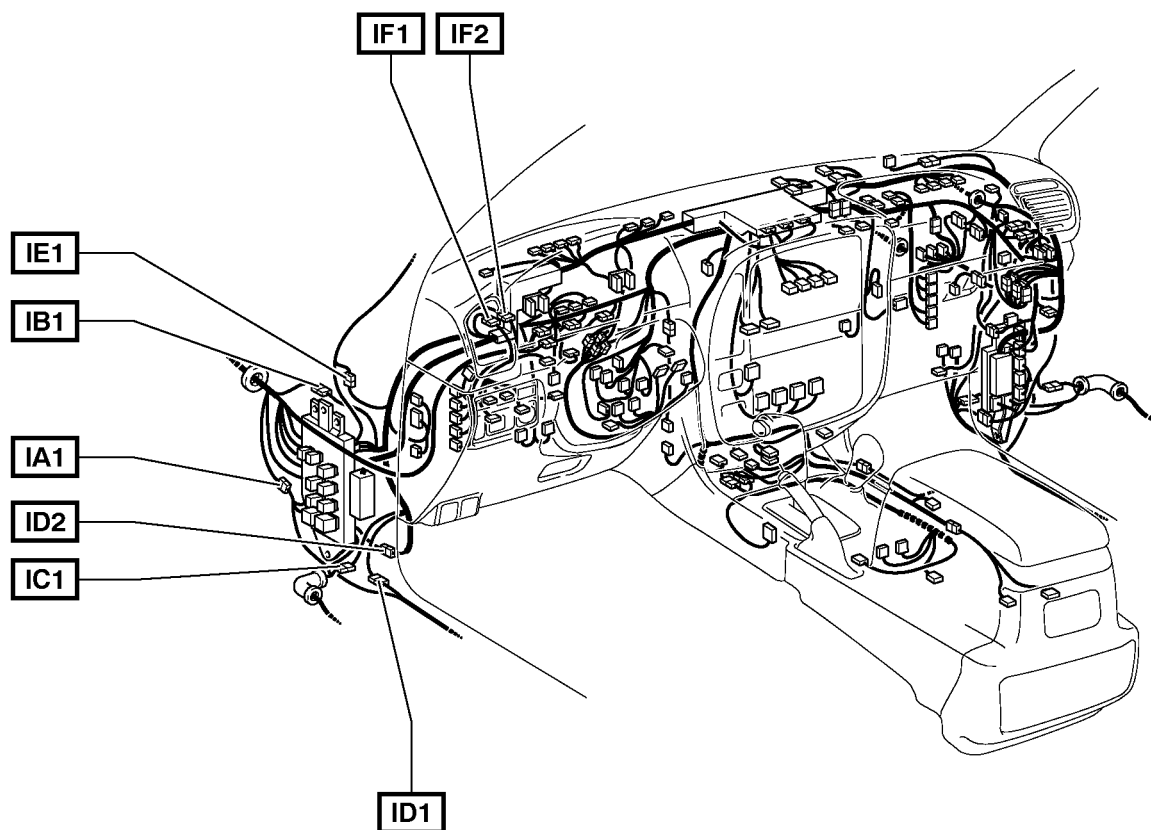
Connector Joining Wire Harness and Wire Harness



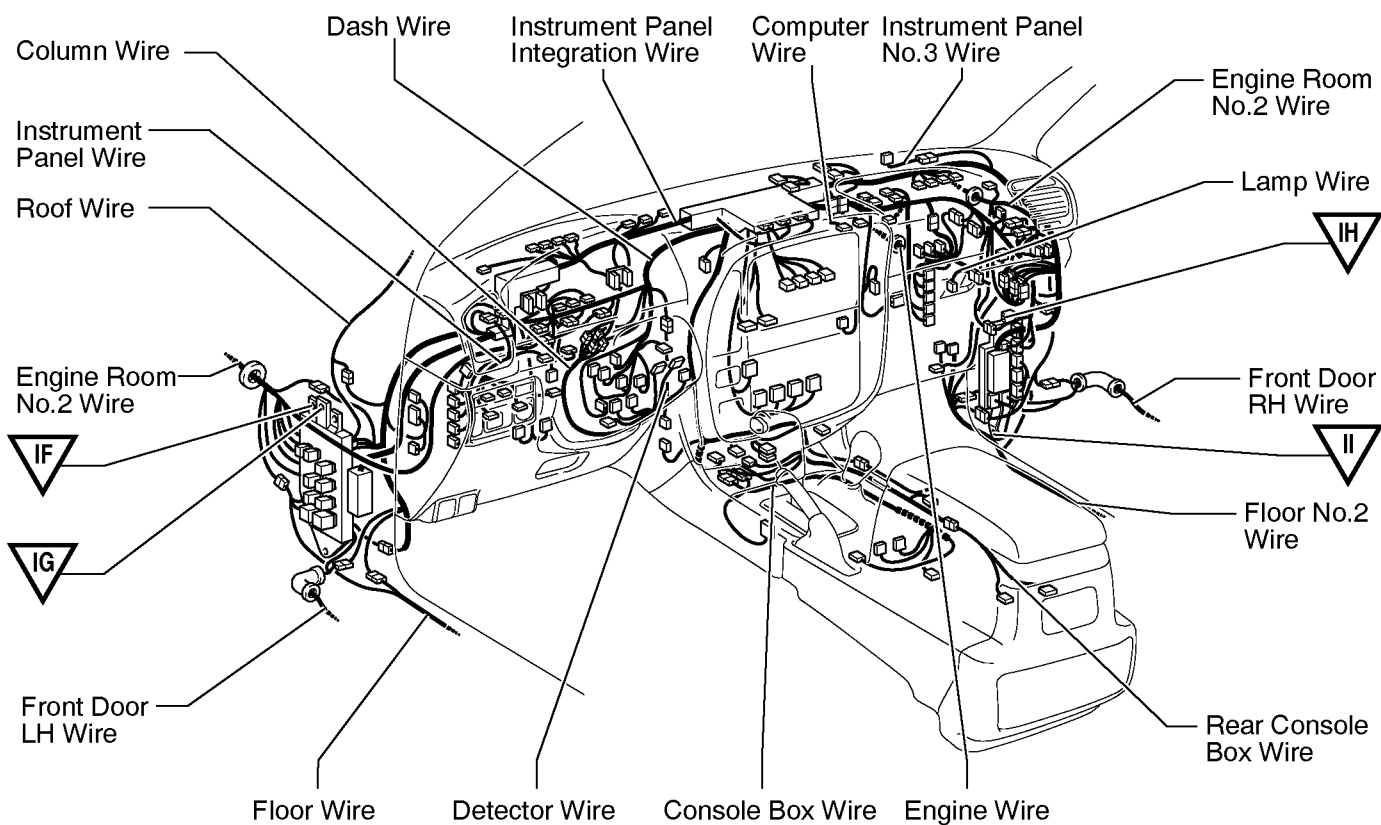
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine Room Main Wire and Engine Room No.2 Wire (Engine Compartment Right)
EA2	
EB1	
EB2	Engine Wire and Transmission Wire (On the Transmission)
EB3	
EC1	Engine No.2 Wire and Engine Wire (On the Transmission)
ED1	Engine No.2 Wire and Engine Room No.2 Wire (Near the Engine Room J/B)
EE1	Engine Room Main Wire and Alternator Wire (Near the Battery)
EF1	Engine Room No.2 Wire and Engine Room Main Wire (Under the Engine Room J/B)
EG1	Engine Room No.2 Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
EH1	Engine Room Main Wire and Engine Room No.3 Wire (Under the Engine Room J/B)

G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness



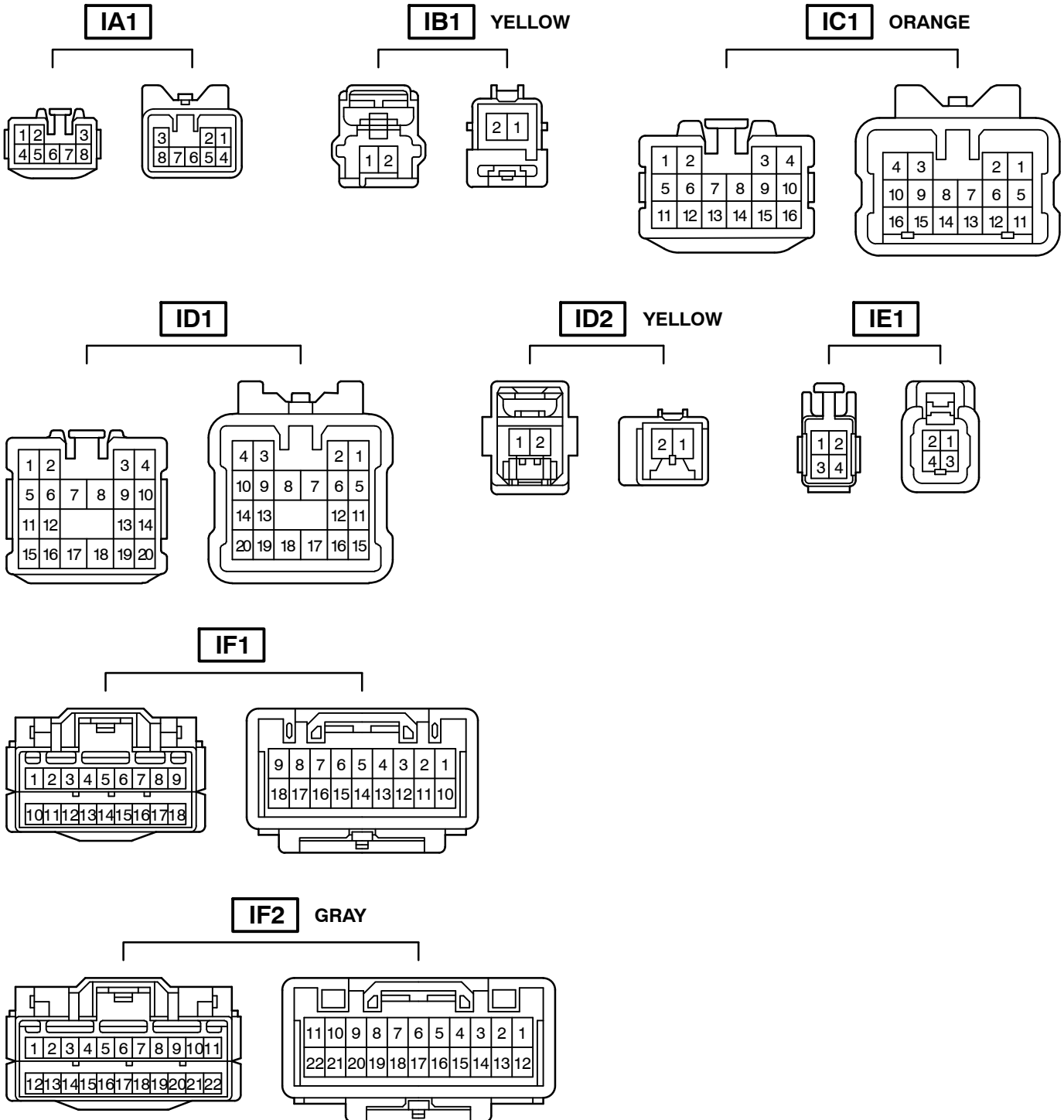
▽ : Location of Ground Points



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

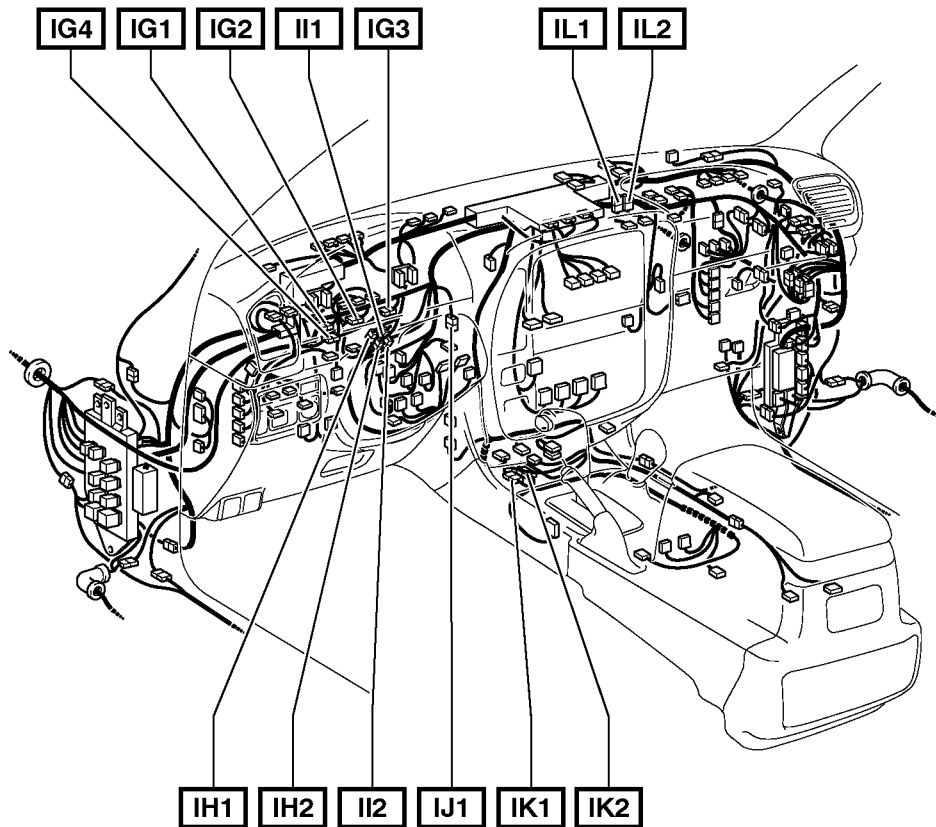
Connector Joining Wire Harness and Wire Harness



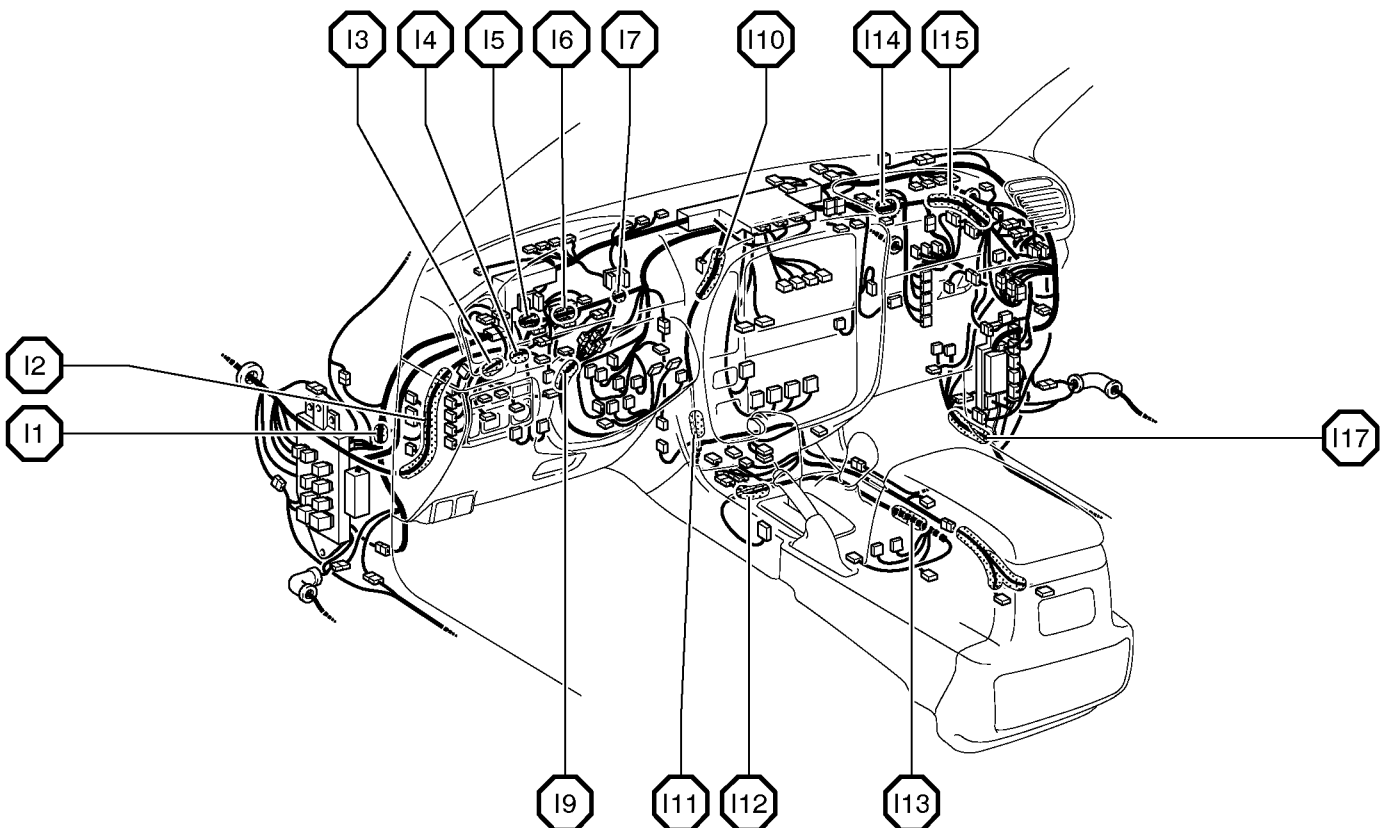
Code	Joining Wire Harness and Wire Harness (Connector Location)
IA1	Floor Wire and Engine Room No.2 Wire (Left Kick Panel)
IB1	Engine Room No.2 Wire and Dash Wire (Left Kick Panel)
IC1	Front Door LH Wire and Dash Wire (Left Kick Panel)
ID1	Dash Wire and Floor Wire (Left Kick Panel)
ID2	Dash Wire and Roof Wire (Left Kick Panel)
IE1	Dash Wire and Roof Wire (Left Kick Panel)
IF1	Instrument Panel Integration Wire and Instrument Panel Wire (Left Side of Instrument Panel)
IF2	Instrument Panel Integration Wire and Instrument Panel Wire (Left Side of Instrument Panel)

G ELECTRICAL WIRING ROUTING

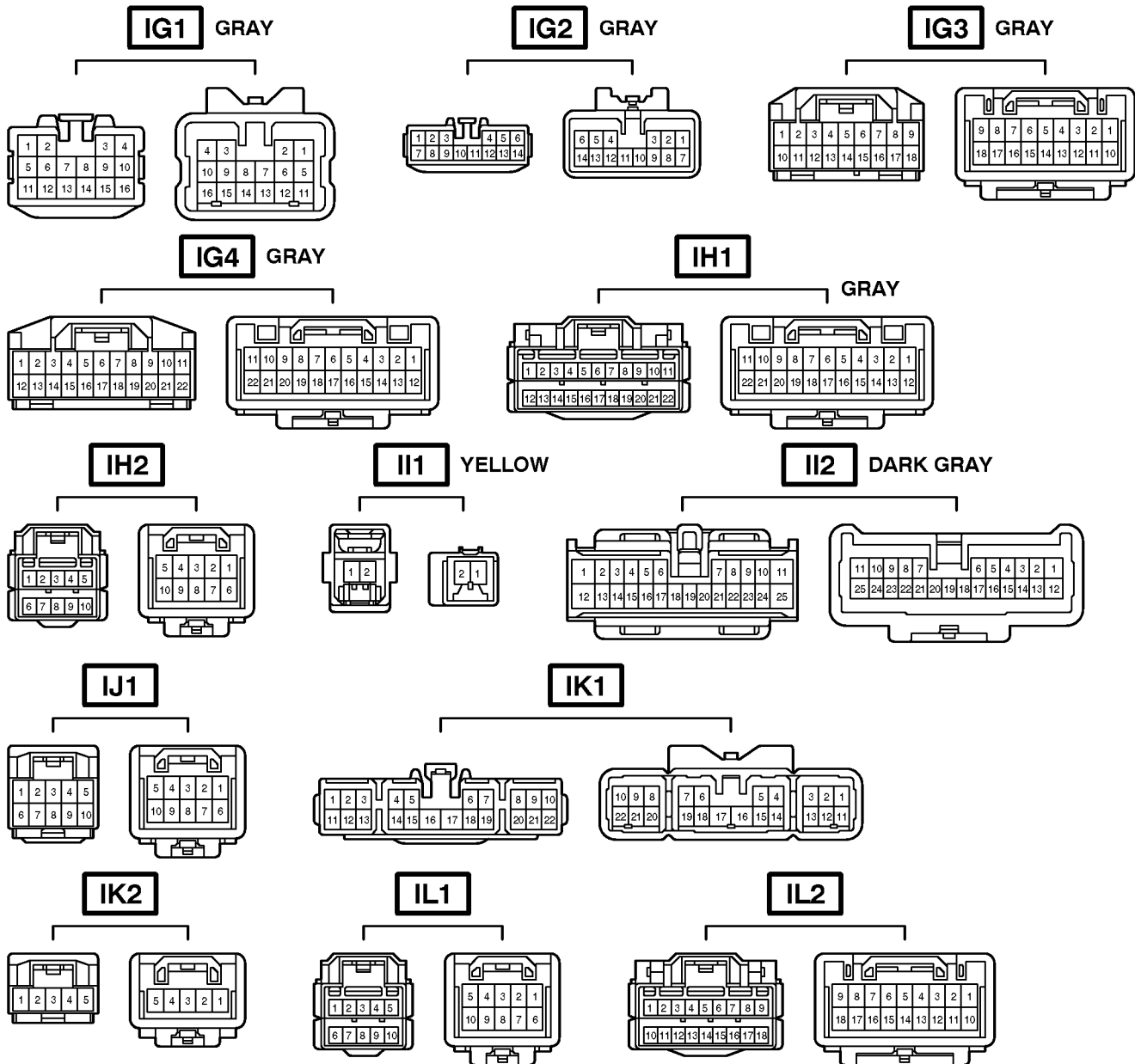
□ : Location of Connector Joining Wire Harness and Wire Harness



○ : Location of Splice Points



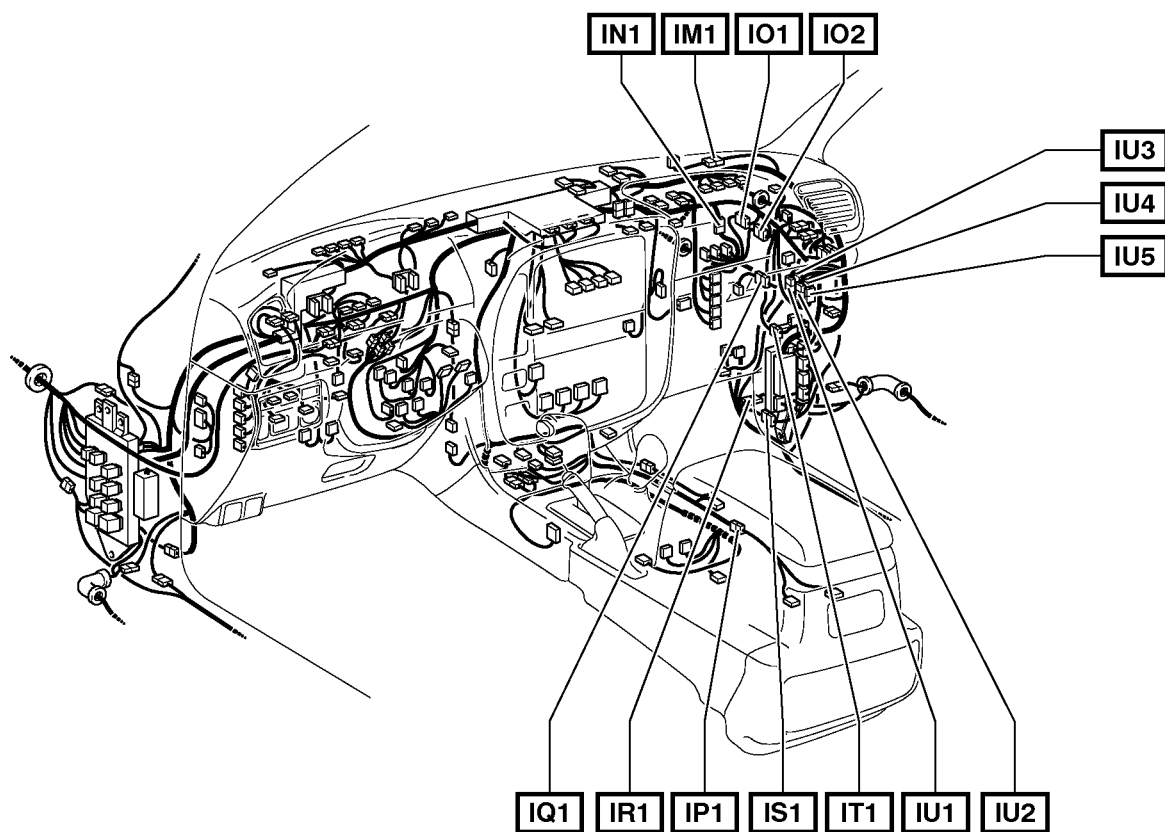
Connector Joining Wire Harness and Wire Harness



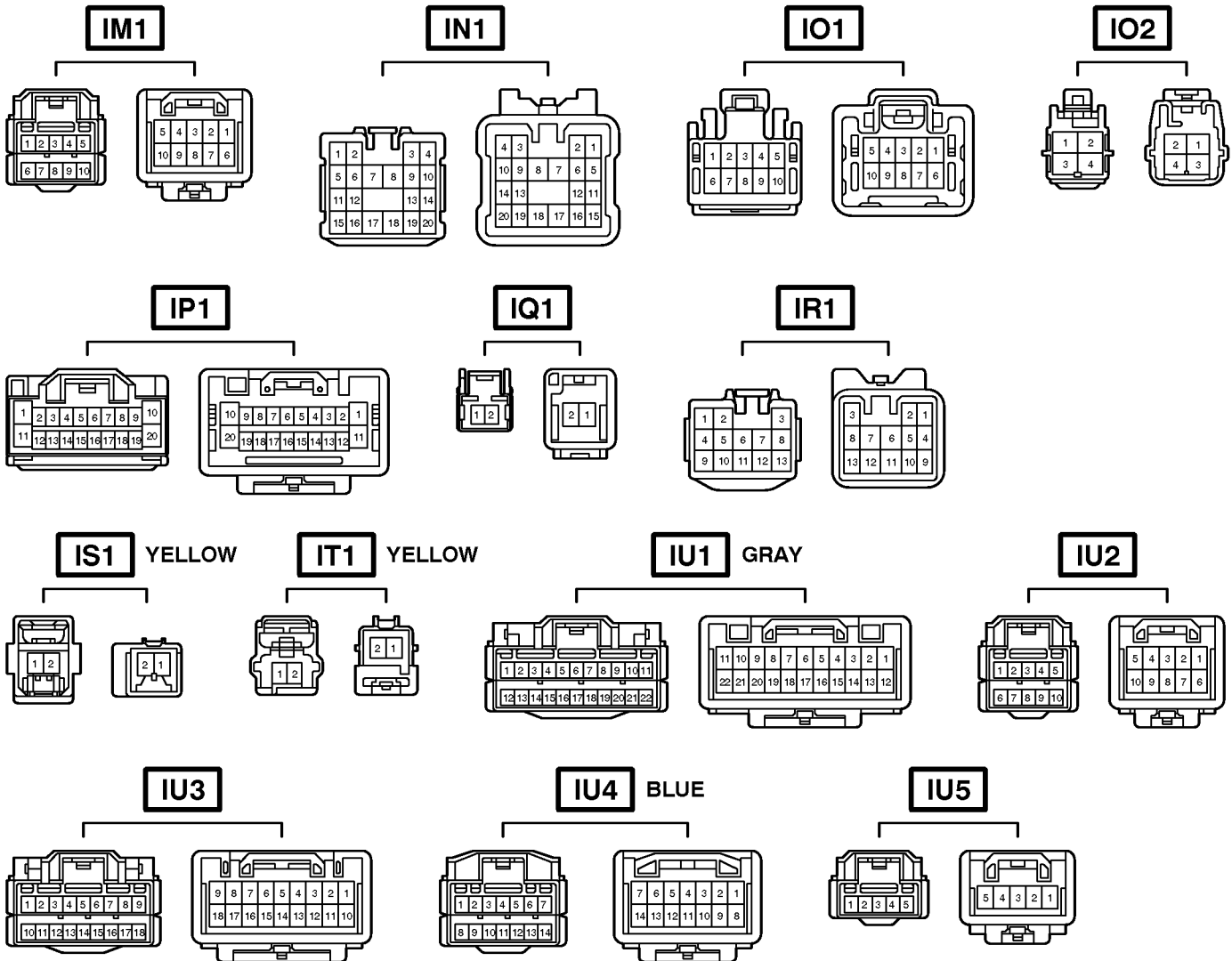
Code	Joining Wire Harness and Wire Harness (Connector Location)
IG1	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2	
IG3	
IG4	
IH1	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IH2	
II1	Dash Wire and Column Wire (Near the Ignition SW)
II2	Column Wire and Dash Wire (Near the Ignition SW)
IJ1	Dash Wire and Detector Wire (Instrument Panel Center)
IK1	Console Box Wire and Dash Wire (Left Side of Front Console)
IK2	
IL1	Instrument Panel Integration Wire and Computer Wire (Instrument Panel Center)
IL2	

G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness



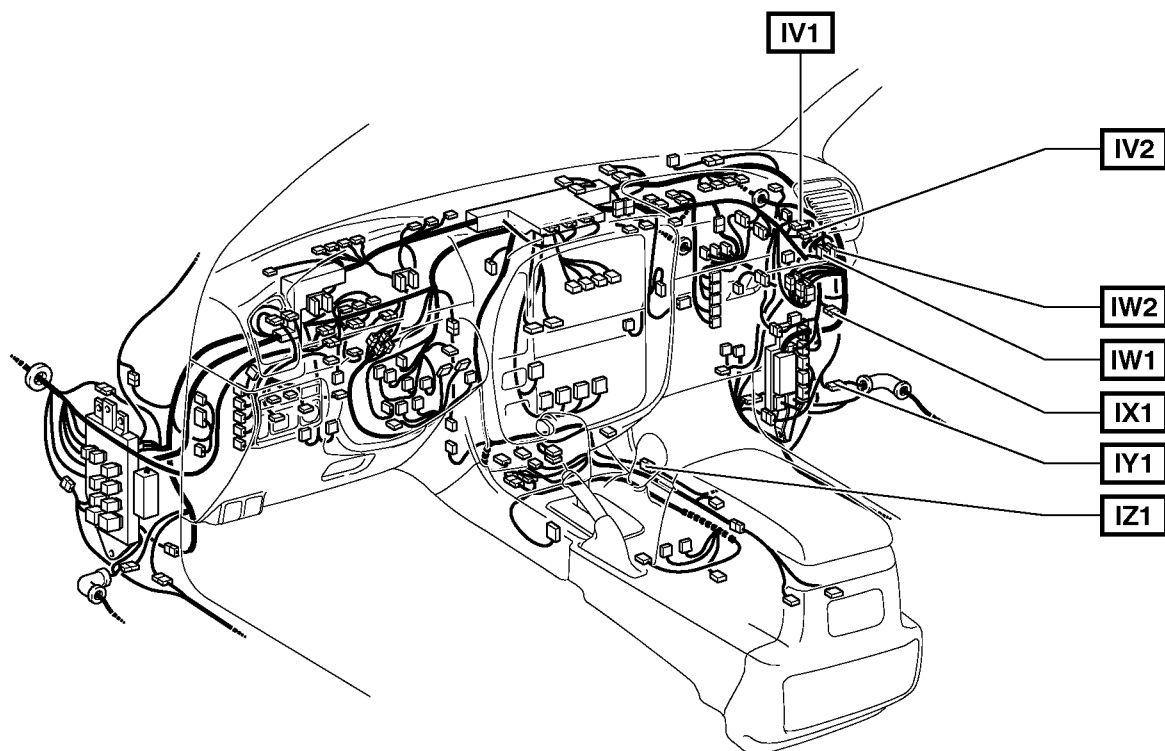
Connector Joining Wire Harness and Wire Harness



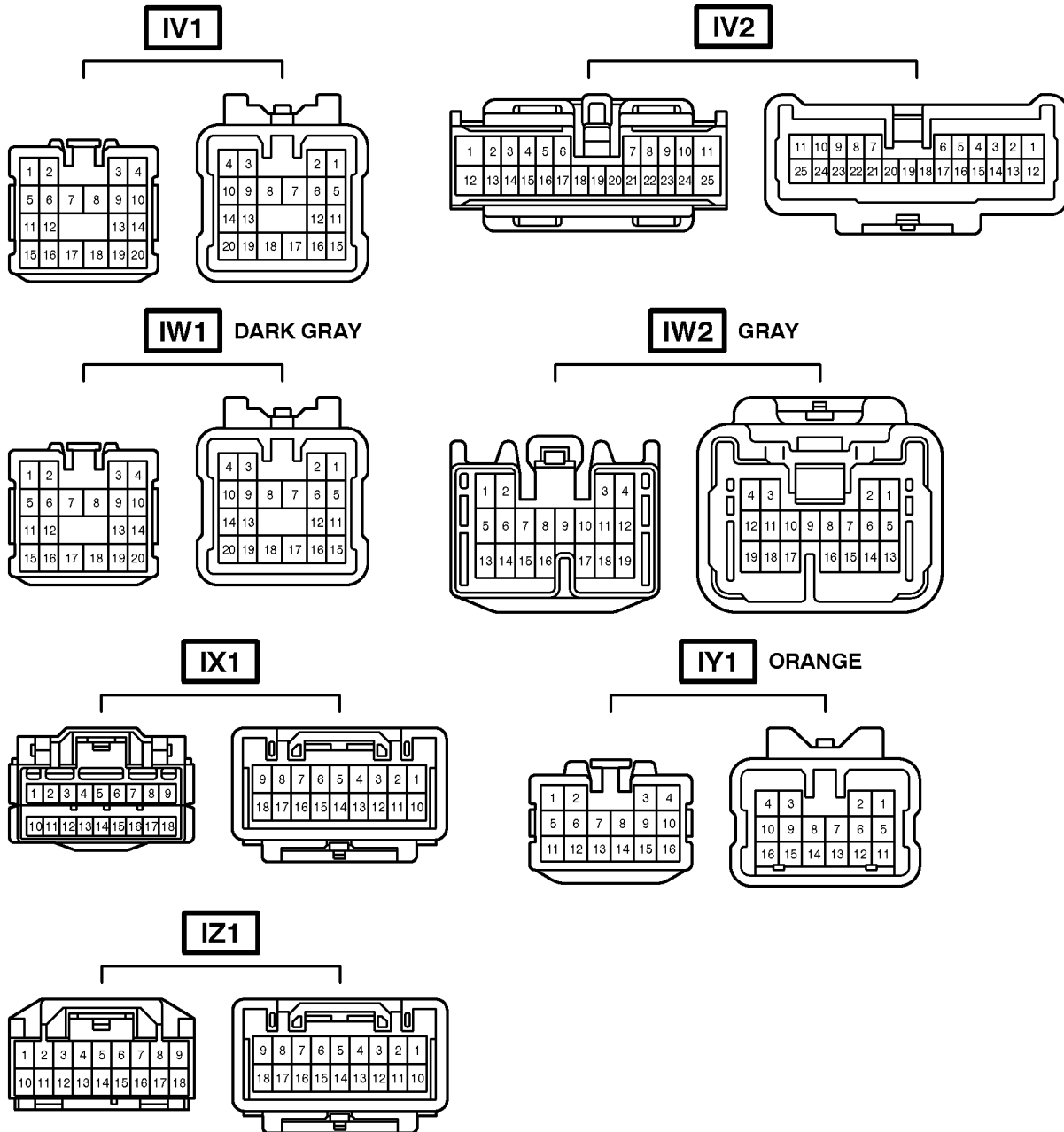
Code	Joining Wire Harness and Wire Harness (Connector Location)
IM1	Instrument Panel Integration Wire and Instrument Panel No.3 Wire (Right Side of Instrument Panel)
IN1	
IO1	Engine Wire and Dash Wire (Behind the Glove Box)
IO2	
IP1	Rear Console Box Wire and Dash Wire (Right Side of Rear Console)
IQ1	Instrument Panel Integration Wire and Lamp Wire (Behind the Glove Box)
IR1	Engine Room No.2 Wire and Floor No.2 Wire (Right Kick Panel)
IS1	Dash Wire and Floor No.2 Wire (Right Kick Panel)
IT1	Engine Room No.2 Wire and Dash Wire (Right Kick Panel)
IU1	
IU2	
IU3	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4	
IU5	

G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness



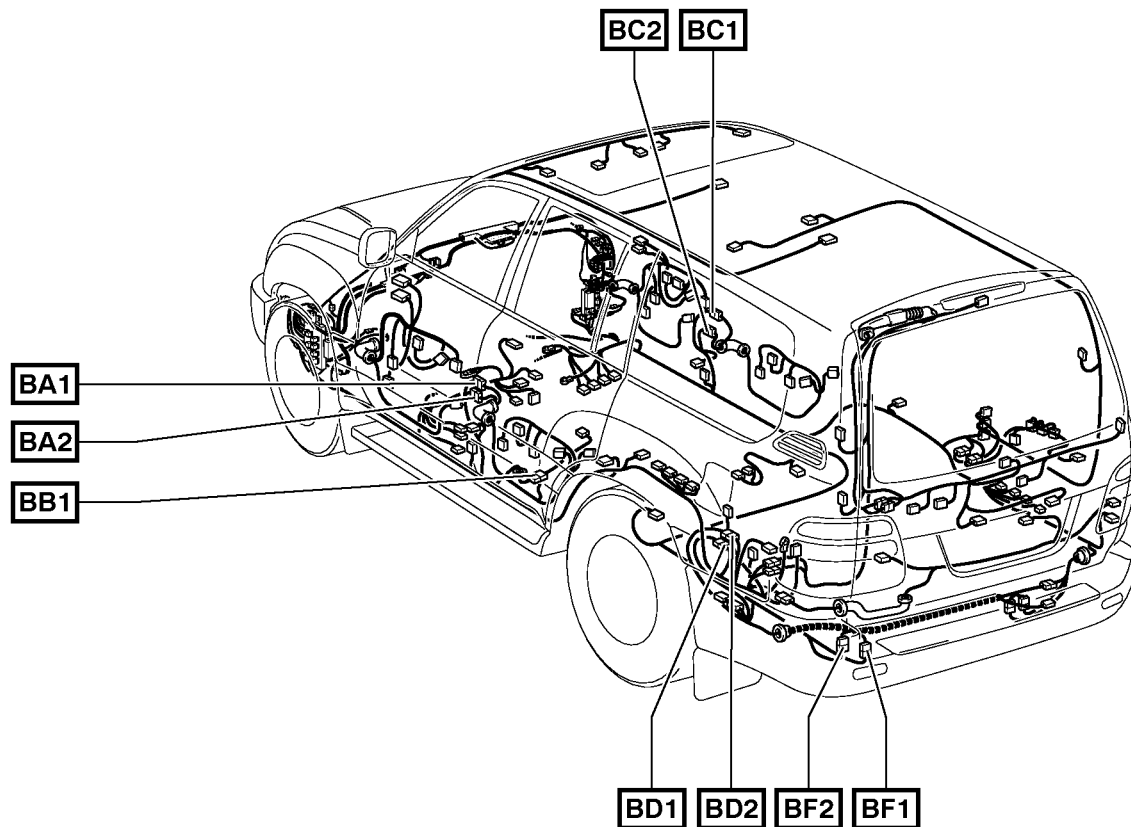
Connector Joining Wire Harness and Wire Harness



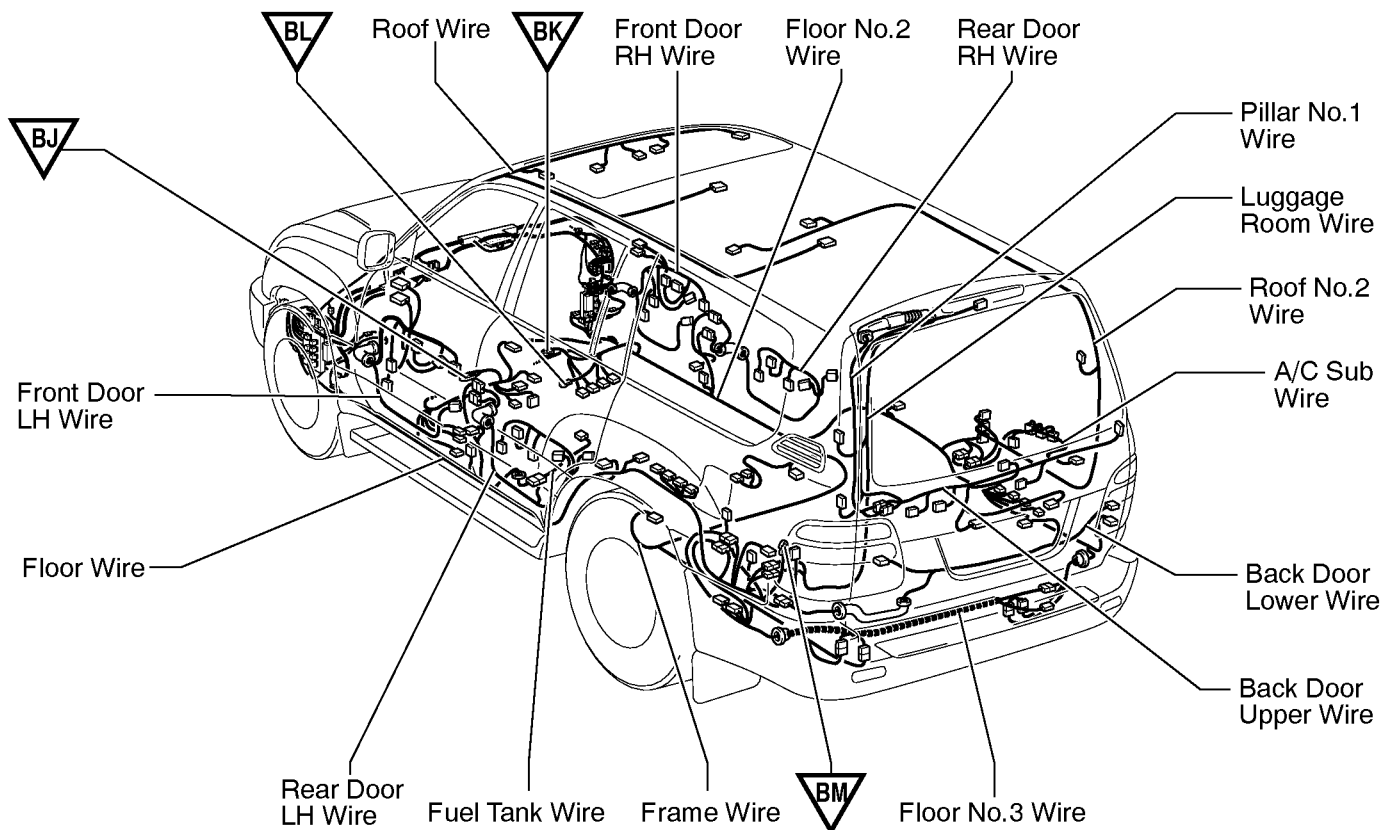
Code	Joining Wire Harness and Wire Harness (Connector Location)
IV1	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IV2	
IW1	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IW2	
IX1	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)
IY1	Front Door RH Wire and Dash Wire (Right Kick Panel)
IZ1	Floor No.2 Wire and Dash Wire (Right Side of Front Console)

G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness



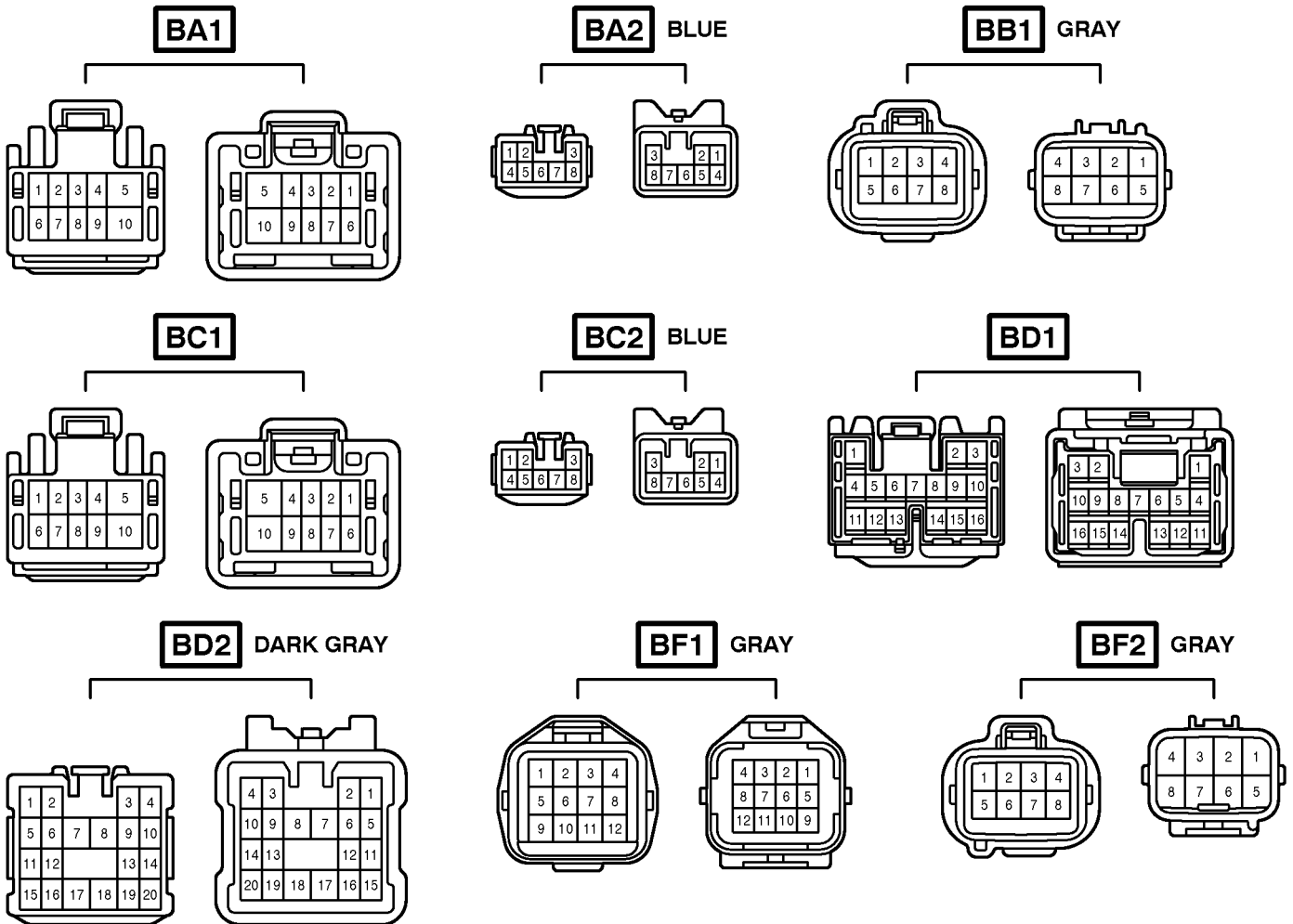
▽ : Location of Ground Points



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

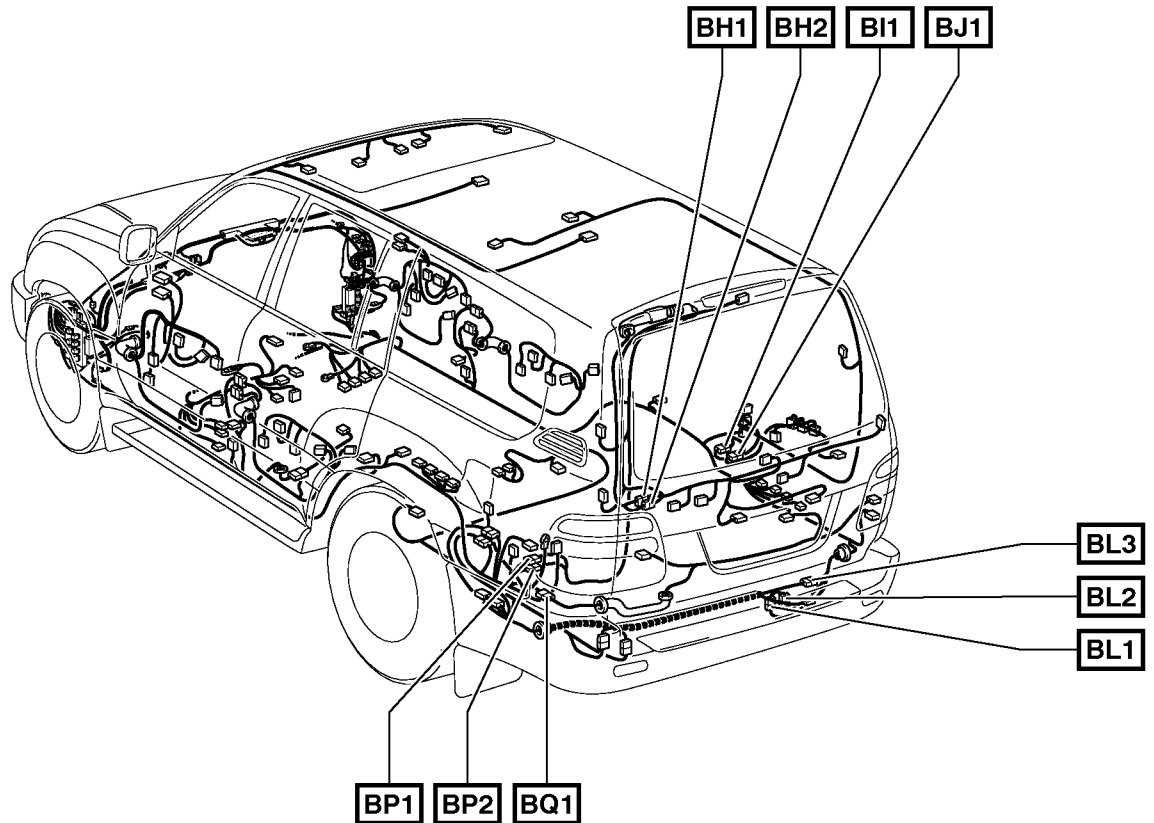
Connector Joining Wire Harness and Wire Harness



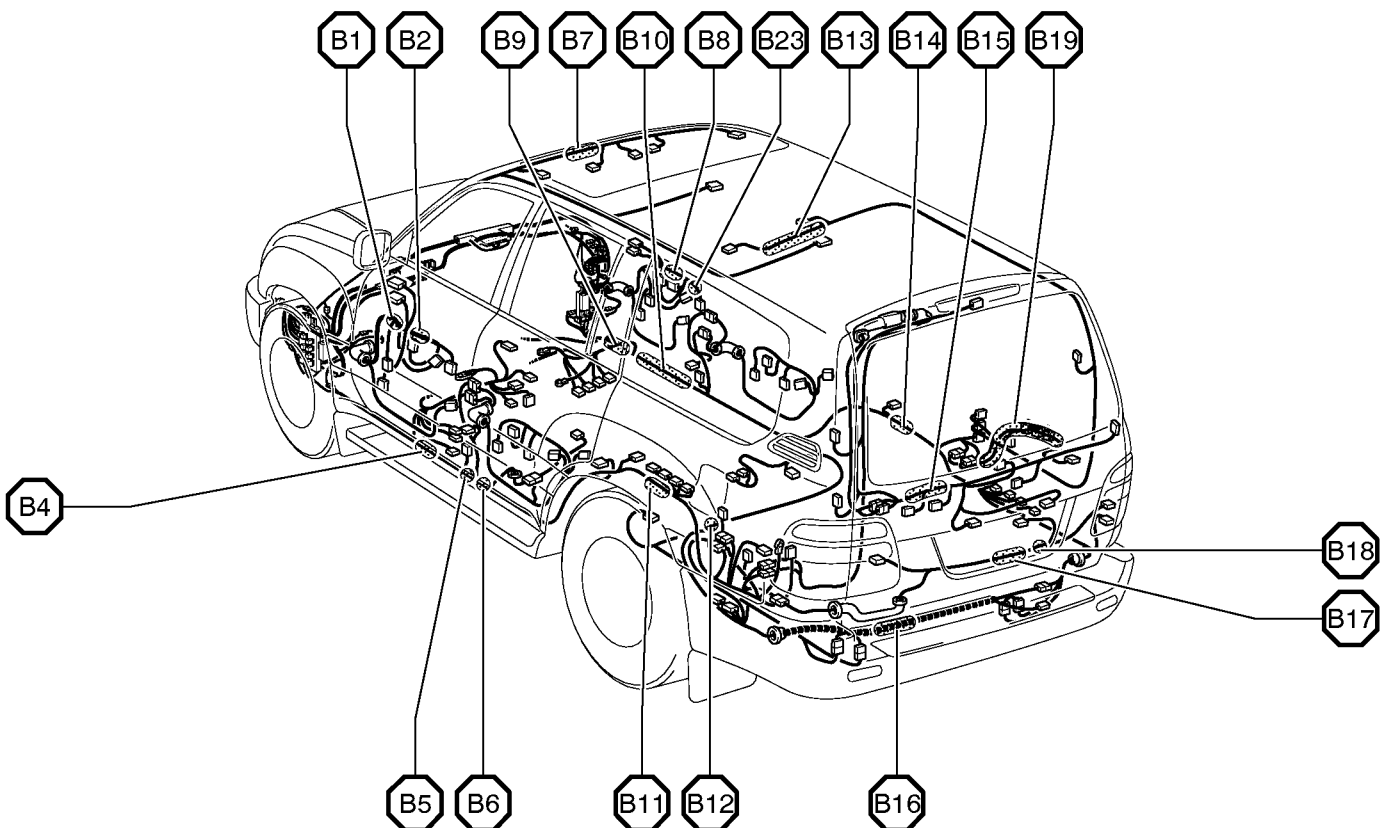
Code	Joining Wire Harness and Wire Harness (Connector Location)
BA1	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BA2	Floor Wire and Fuel Tank Wire (Near the Fuel Tank)
BB1	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)
BC1	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BC2	Frame Wire and Floor No.3 Wire (Left Side of Rear Floor Crossmember)
BD1	
BD2	
BF1	
BF2	

G ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness



○ : Location of Splice Points

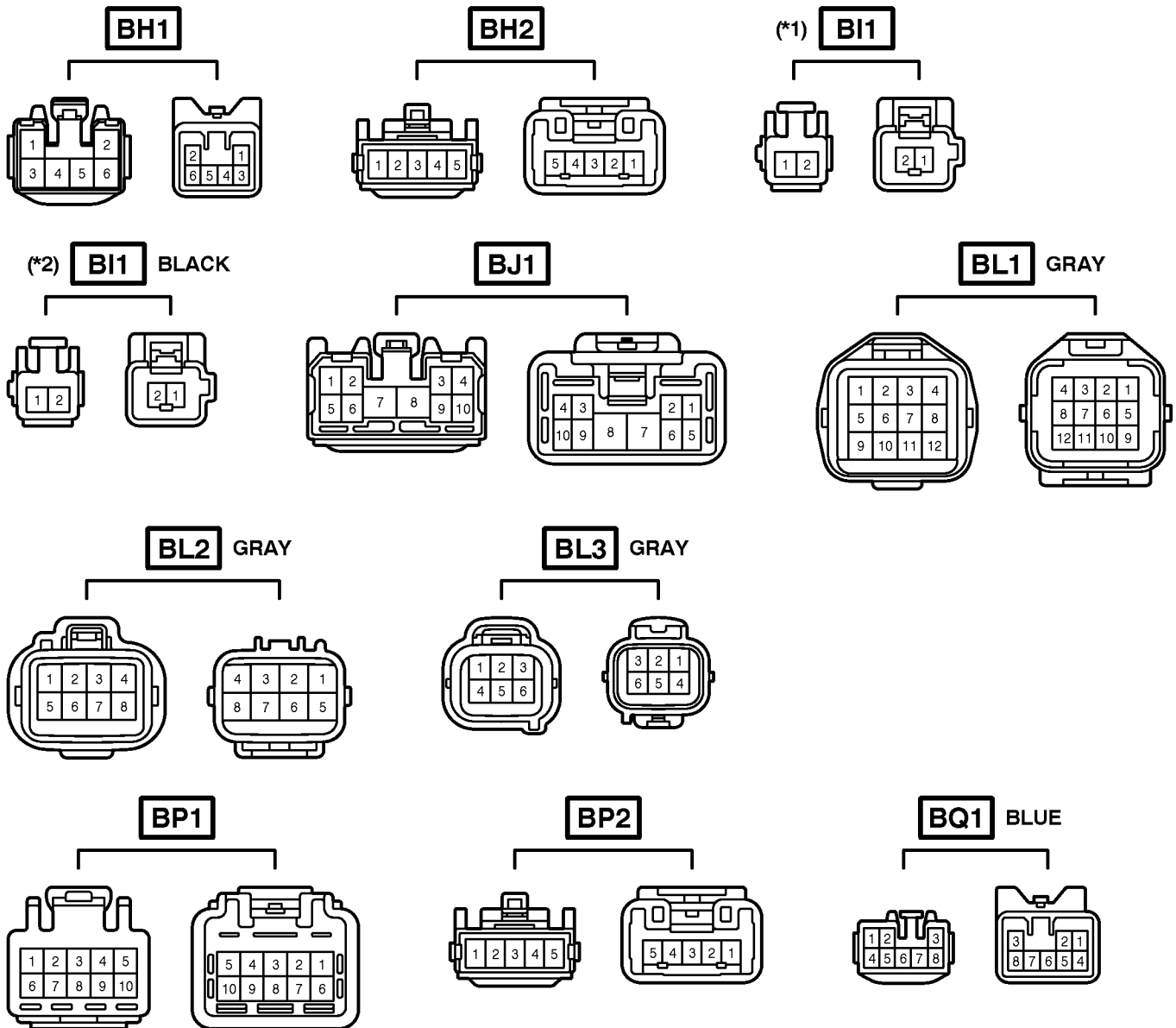


Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

Connector Joining Wire Harness and Wire Harness

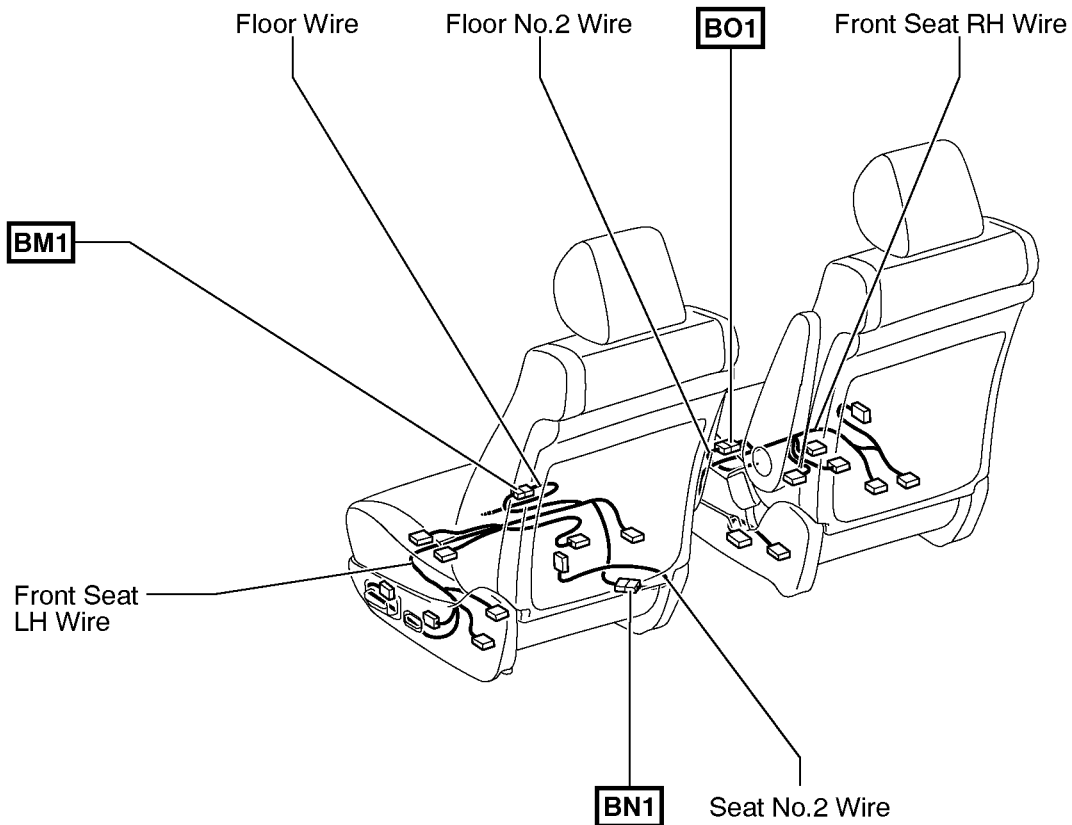
* 1:w/ Rear Air Conditioning
 * 2:w/o Rear Air Conditioning



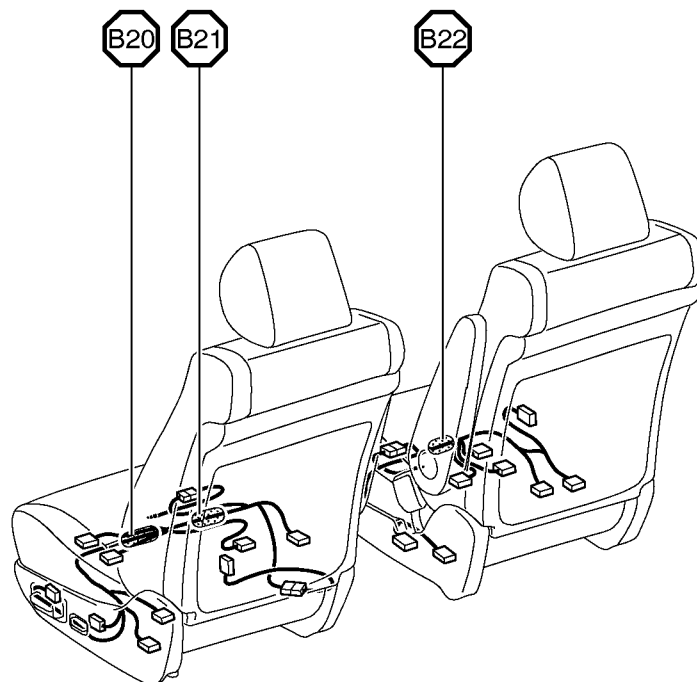
Code	Joining Wire Harness and Wire Harness (Connector Location)
BH1	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BH2	
BI1	Roof No.2 Wire and Floor No.2 Wire (Right Side Rear Quarter Panel)
BJ1	Floor No.2 Wire and A/C Sub Wire (Right Side Rear Quarter Panel)
BL1	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BL2	
BL3	
BP1	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BP2	
BQ1	Back Door Lower Wire and Floor Wire (Right Side of Rear Floor Crossmember)

G ELECTRICAL WIRING ROUTING

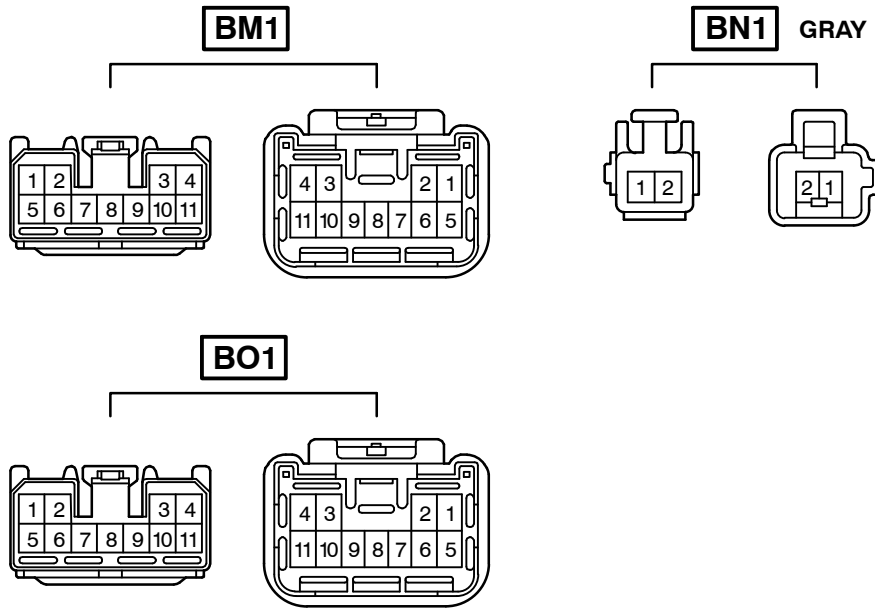
□ : Location of Connector Joining Wire Harness and Wire Harness



○ : Location of Splice Points

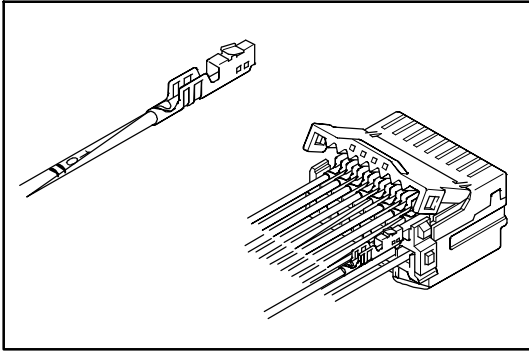


Connector Joining Wire Harness and Wire Harness



Code	Joining Wire Harness and Wire Harness (Connector Location)
BM1	Floor Wire and Front Seat LH Wire (Front Side Under the Driver's Seat)
BN1	Seat No.2 Wire and Front Seat LH Wire (Rear Side Under the Driver's Seat)
BO1	Floor No.2 Wire and Front Seat RH Wire (Front Side Under the Front Passenger's Seat)

HINT



WIRE COLOR AND TERMINAL NUMBER

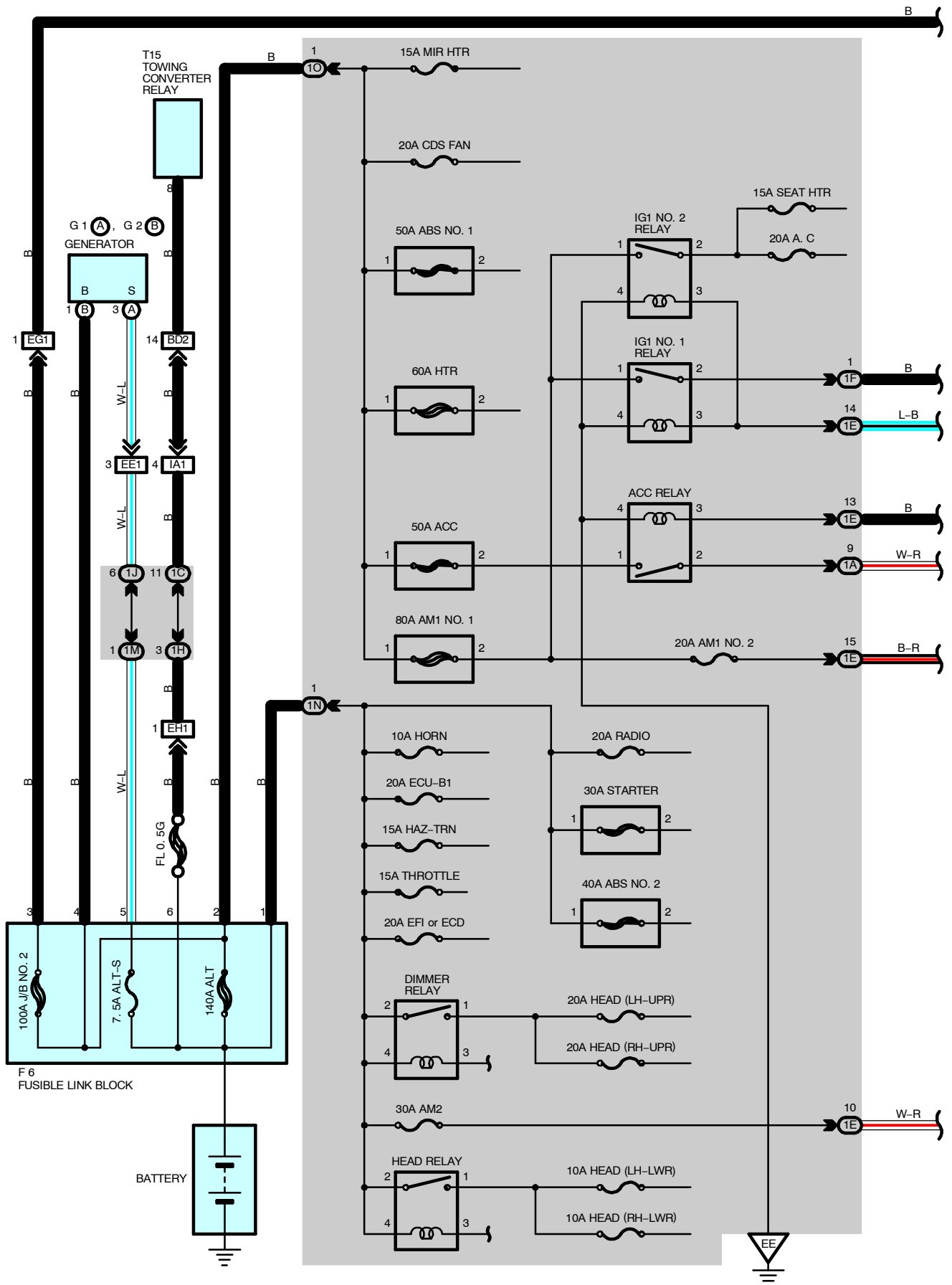
In some parts of the instrumental panel wiring harness, the same wire color (i.e. SB: Sky Blue) is used for all the wiring to a specific connector.

In order to identify the wiring, the terminal number is printed on the wiring.

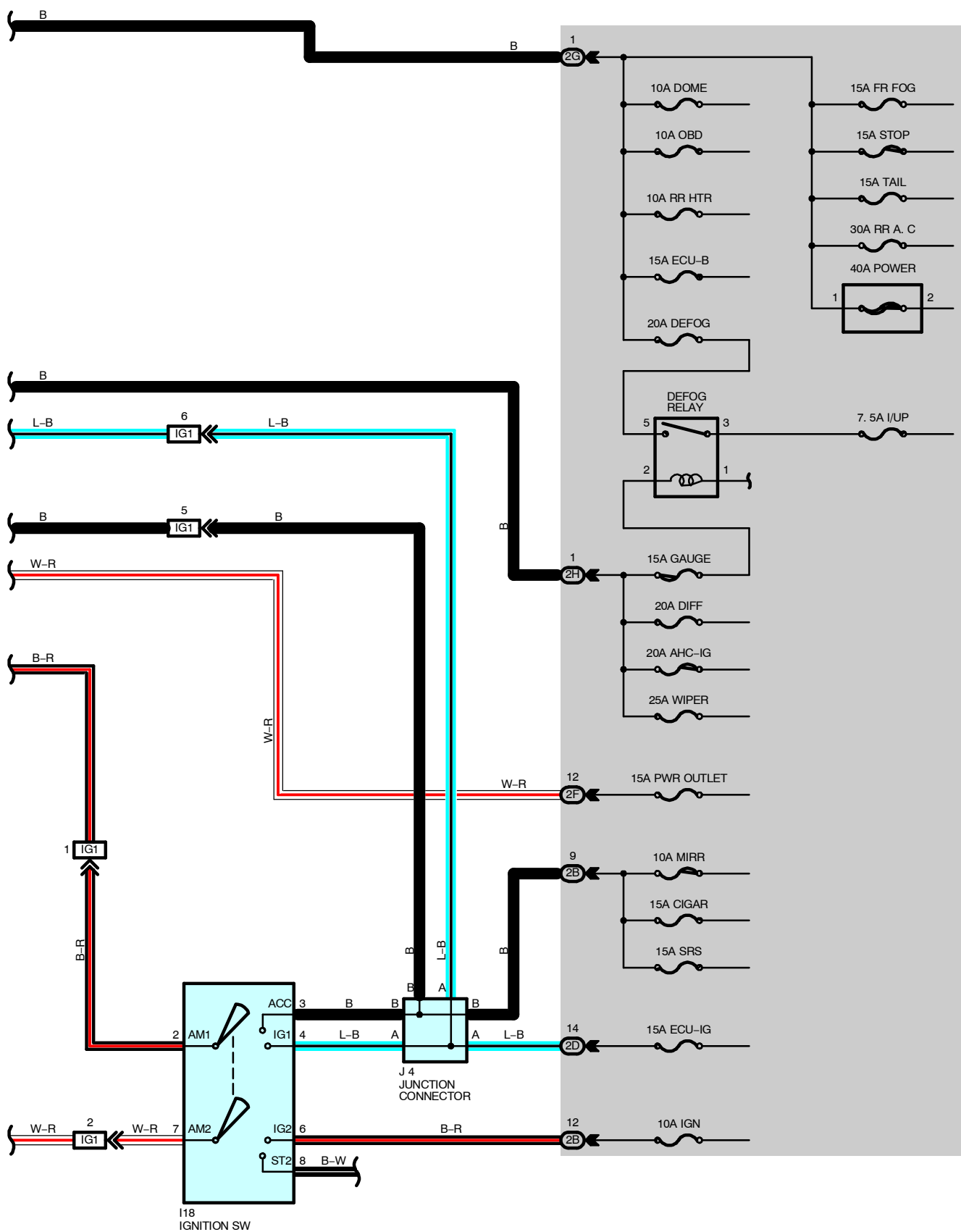
Install the wiring to the connector position with the same terminal number.

Some early production vehicles may not have these terminal numbers printed.

POWER SOURCE



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)



POWER SOURCE

SERVICE HINTS

HEAD RELAY

2-1 : Closed with light control SW at **HEAD** position or dimmer SW at **FLASH** position
(When the light auto turn off system does not operate)

DIMMER RELAY

1-2 : Closed with daytime running light operation
: Closed with light control SW at **HEAD** position and dimmer SW at **HIGH** position
: Closed with dimmer SW at **FLASH** position

I18 IGNITION SW

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

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
F6	38	G2	B	J4	41
G1	A	I18	40	T15	43

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1F		
1H	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1J		
1M	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
1N		
1O		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2G		
2H		

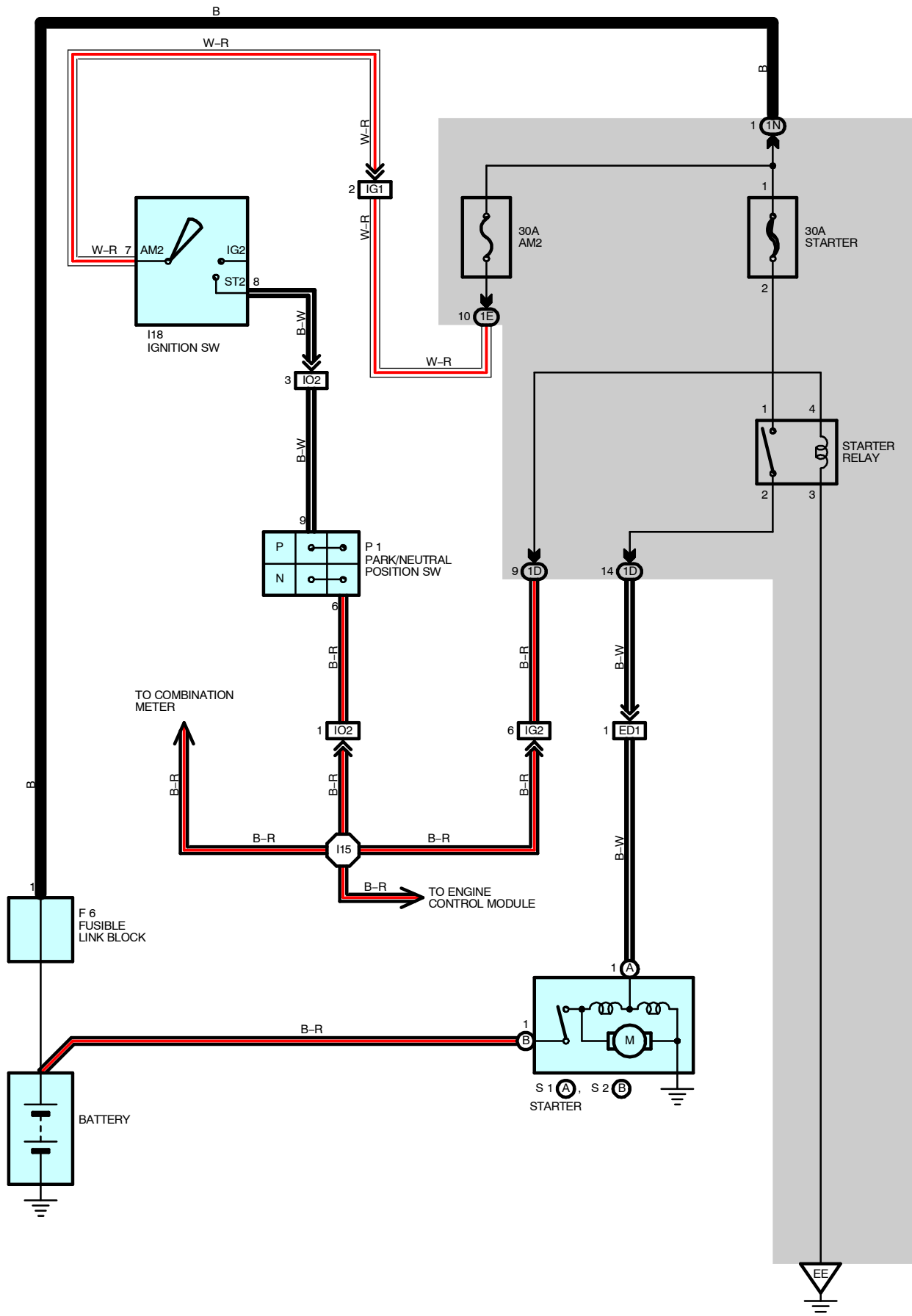
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EE1	46	Engine Room Main Wire and Alternator Wire (Near the Battery)
EG1	46	Engine Room No.2 Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
EH1	46	Engine Room Main Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
IA1	48	Floor Wire and Engine Room No.2 Wire (Left Kick Panel)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)

▽ : GROUND POINTS

Code	See Page	Ground Points Location
EE	46	Front Left Side of Fender Apron

STARTING



SERVICE HINTS

I18 IGNITION SW

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

P1 PARK/NEUTRAL POSITION SW

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

S1 (A), S2 (B) STARTER

Points closed with Park/Neutral position SW at **P** or **N** position and ignition SW at **ST** position

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
F6	38	P1	39	S2	B 39
I18	40	S1	A 39		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1E		
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ED1	46	Engine No.2 Wire and Engine Room No.2 Wire (Near the Engine Room J/B)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IO2	52	Engine Wire and Dash Wire (Behind the Glove Box)

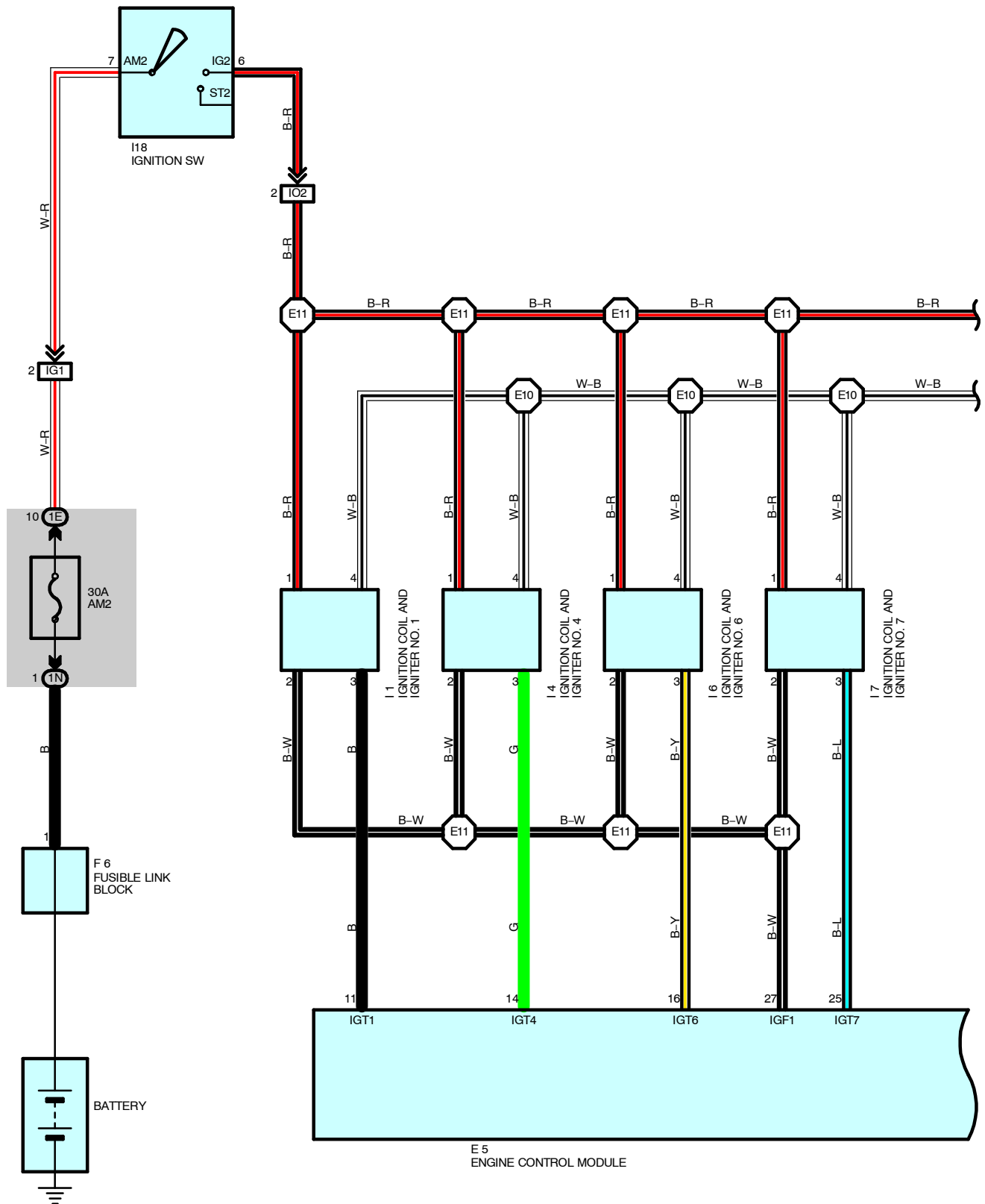
: GROUND POINTS

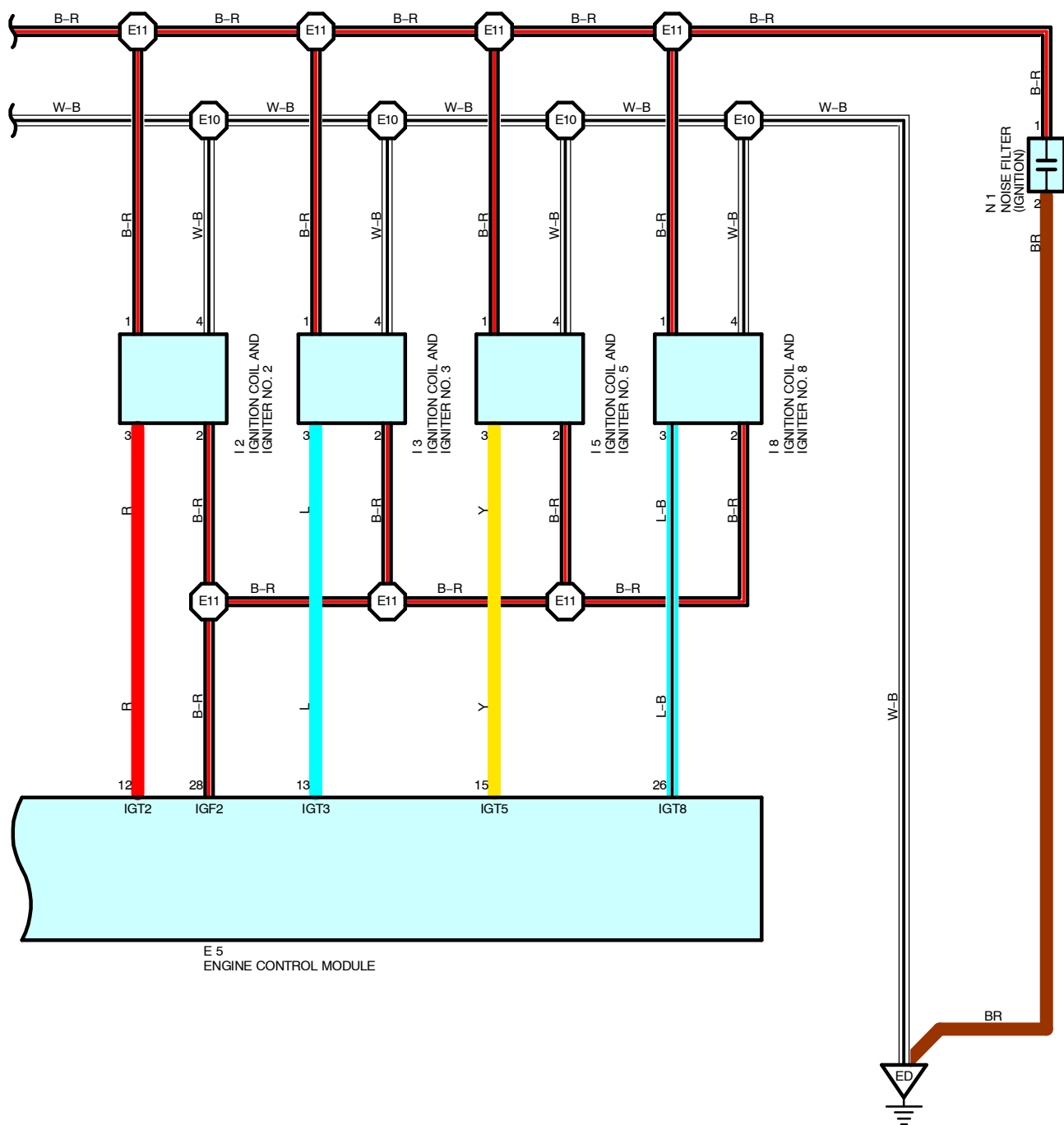
Code	See Page	Ground Points Location
EE	46	Front Left Side of Fender Apron

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I15	50	Dash Wire			

IGNITION





IGNITION

SERVICE HINTS

I18 IGNITION SW

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

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
E5	40	I3	39	I7	39
F6	38	I4	39	I8	39
I1	39	I5	39	I18	40
I2	39	I6	39	N1	39

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IO2	52	Engine Wire and Dash Wire (Behind the Glove Box)

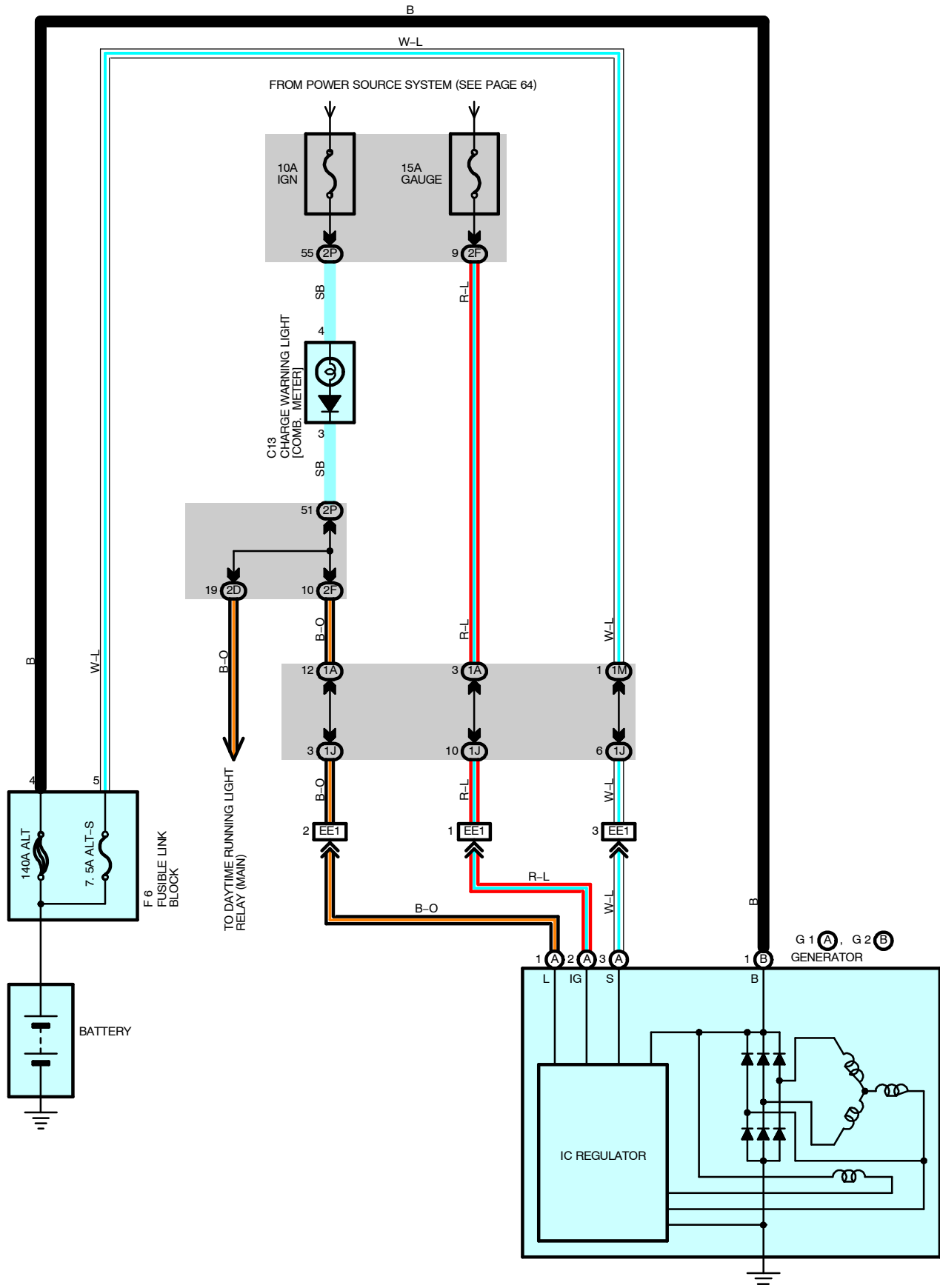
: GROUND POINTS

Code	See Page	Ground Points Location
ED	46	Rear Bank of Left Cylinder Head

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E10	46	Engine Wire	E11	46	Engine Wire

CHARGING



SERVICE HINTS

G1 GENERATOR

1-GROUND : 13.2-14.0 volts with engine running at 5000 rpm and 115°C (239°F)

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C13	40	G1	A	38	
F6	38	G2	B	38	

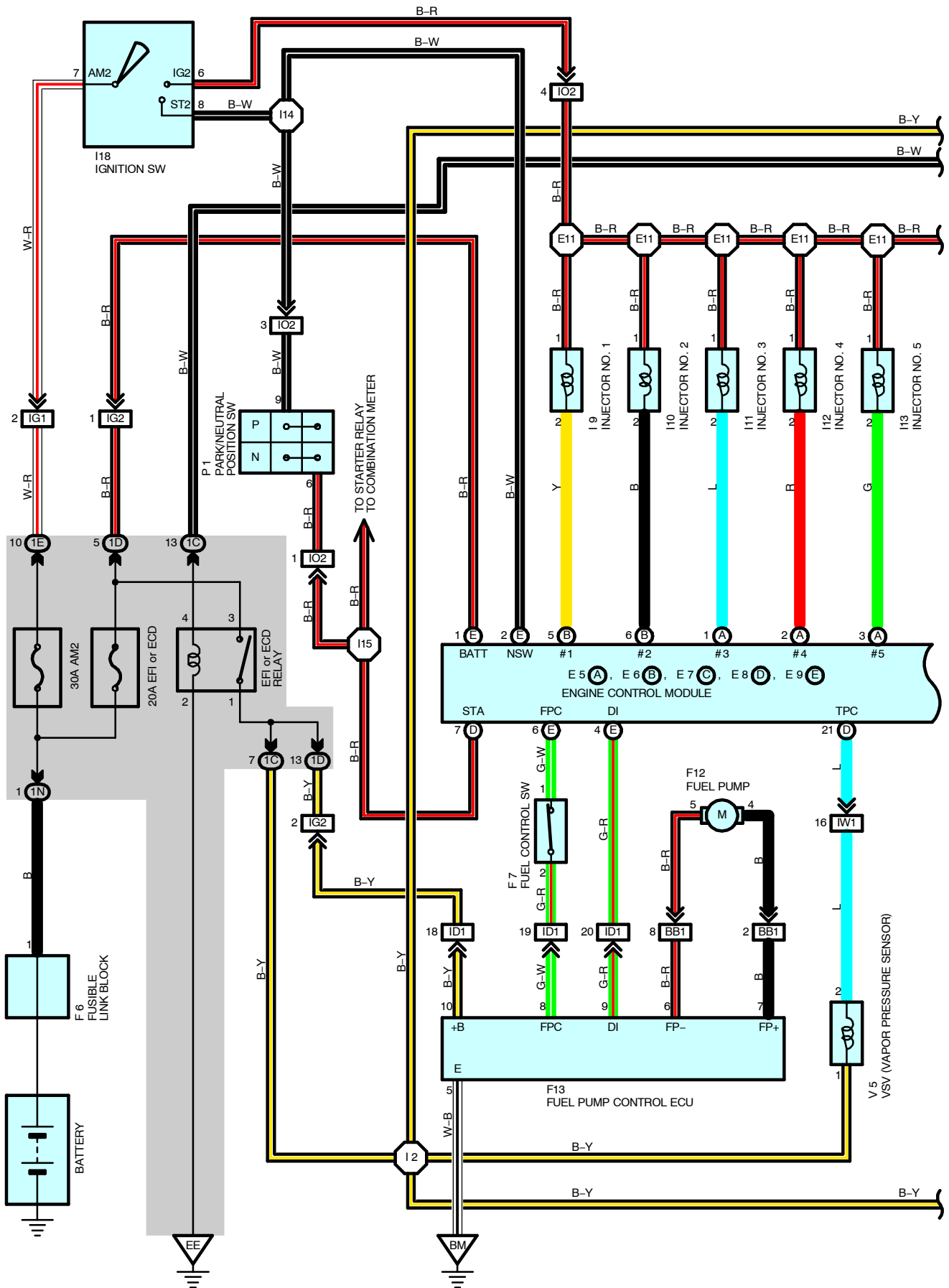
: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

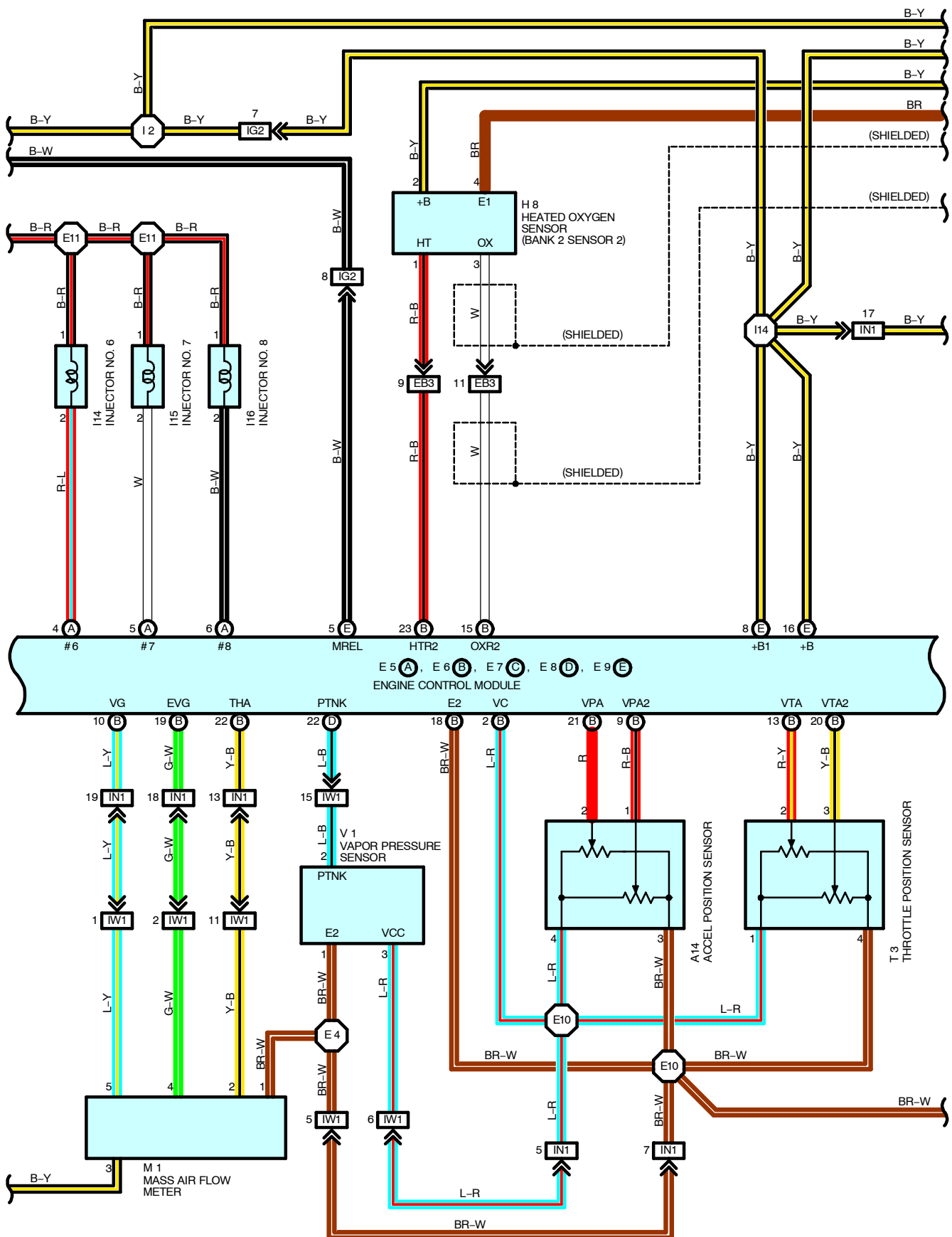
Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1J	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1M	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2D	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

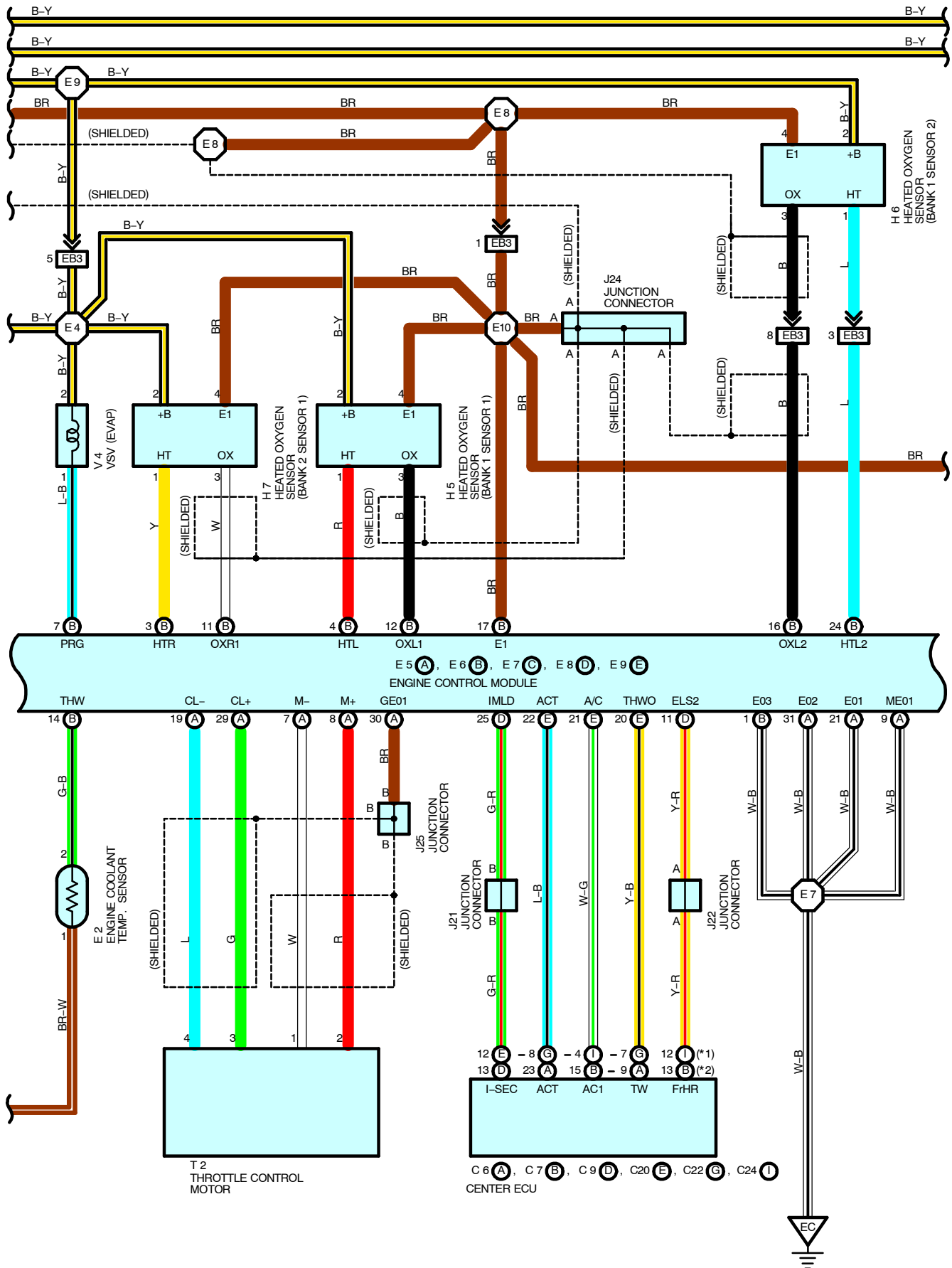
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EE1	46	Engine Room Main Wire and Alternator Wire (Near the Battery)

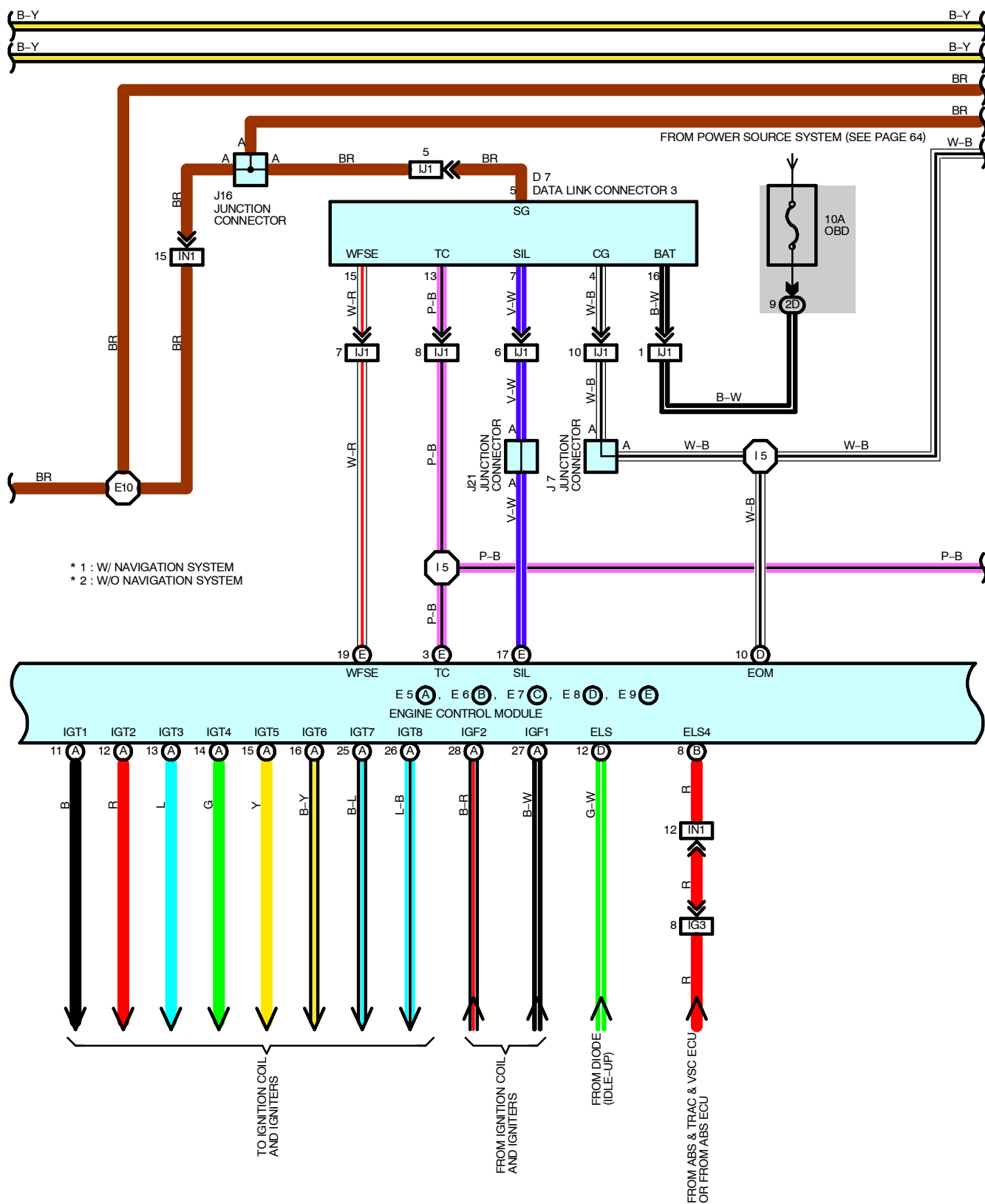
ENGINE CONTROL AND ENGINE IMMOBILISER SYSTEM



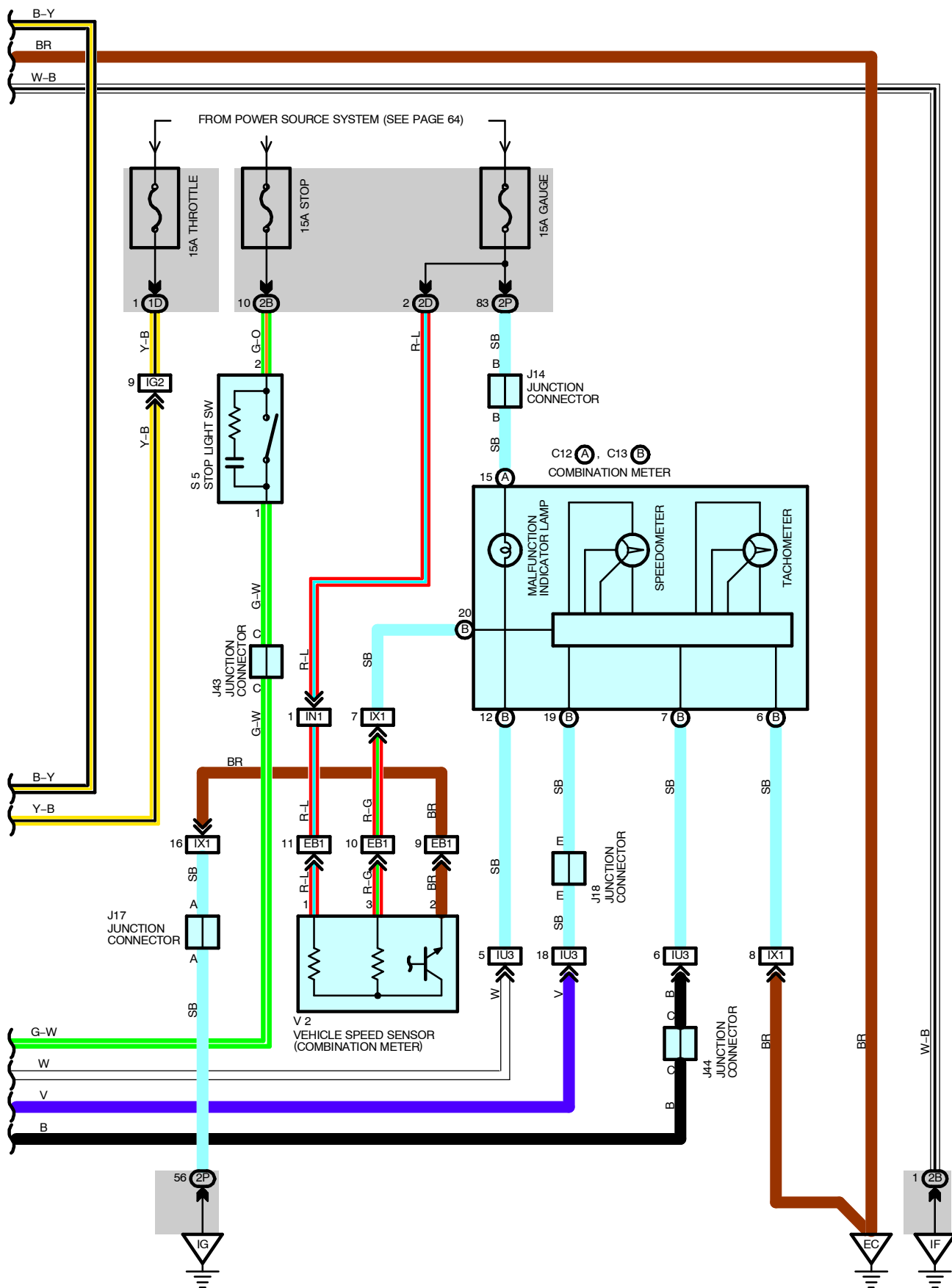


ENGINE CONTROL AND ENGINE IMMOBILISER SYSTEM





2002 LAND CRUISER (EWD469U)



ENGINE CONTROL AND ENGINE IMMOBILISER SYSTEM

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 OXL1, OXR1, OXL2, OXR2 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 TERMINAL VTA of the engine control module.

(6) Vehicle speed circuit

The vehicle speed sensor (Combination meter) detects the vehicle speed, and the signal is input into TERMINAL SPD of the engine control module via the combination meter.

(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 or ECD relay, to TERMINALS +B, +B1 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 KNKL, KNKR of the engine control module as a control signal.

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, #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, 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 HTL, HTR, HTL2, HTR2 to control the heater.

- * Fuel pump control system

The engine control module supplies current to TERMINAL FPC, and controls the operation speed of the fuel pump with the fuel pump control ECU.

- * 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.

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.

ENGINE CONTROL AND ENGINE IMMOBILISER SYSTEM

SERVICE HINTS

EFI or ECD RELAY

1-3 : Closed with ignition SW at **ON** or **ST** position

E2 ENGINE COOLANT TEMP. SENSOR

1-2 : Approx. **16.2 kΩ** (**-20°C**, **-4°F**)
 : Approx. **2.45 kΩ** (**20°C**, **68°F**)
 : Approx. **0.32 kΩ** (**80°C**, **176°F**)

E6 (B), E8 (D), E9 (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 ignition SW at **ON** or **ST** position
 +B, +B1-E1 : **9.0-14.0** volts with ignition SW at **ON** or **ST** position
 VC-E2 : **4.5-5.5** volts with ignition SW on
 VTA2-E2 : **2.0-2.9** volts with ignition SW on and throttle valve fully closed
 : **4.6-5.0** volts with ignition SW on and throttle valve fully opened
 VTA-E2 : **0.4-1.0** volts with ignition SW on and throttle valve fully closed
 : **3.2-4.8** volts with ignition SW on and throttle valve fully opened
 VPA-E2 : **0.25-0.9** volts with ignition SW at on and accelerator fully closed
 : **3.2-4.8** volts with ignition SW at on and accelerator fully opened
 VPA2-E2 : **1.8-2.7** volts with ignition SW at on and accelerator fully closed
 : **4.7-5.0** volts with ignition SW at on and accelerator fully opened
 THA-E2 : **0.5-3.4** volts with idling, intake air temp. **20°C (68°F)**
 THW-E2 : **0.2-1.0** volts with idling, coolant temp. **80°C (176°F)**
 STA-E1 : **6.0** volts or more with cranking
 W-E1 : **9.0-14.0** volts with idling
 : **0-3.0** volts with ignition SW on

○ : PARTS LOCATION

Code		See Page	Code		See Page	Code		See Page
A14		38	F6		38	J17		41
A42		40	F7		40	J18		41
C1		38	F12		42	J21		41
C3		38	F13		42	J22		41
C6	A	40	H5		39	J24		41
C7	B	40	H6		39	J25		41
C9	D	40	H7		39	J43		41
C12	A	40	H8		39	J44		41
C13	B	40	I9		39	K1		39
C20	E	40	I10		39	K2		39
C22	G	40	I11		39	M1		39
C24	I	40	I12		39	P1		39
D1		38	I13		39	S5		41
D7		40	I14		39	T2		39
E2		38	I15		39	T3		39
E5	A	40	I16		39	T10		41
E6	B	40	I18		40	V1		39
E7	C	40	J7		41	V2		39
E8	D	40	J14		41	V4		39
E9	E	40	J16		41	V5		39

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
1E		
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46	Engine Wire and Transmission Wire (On the Transmission)
EB3		
EC1	46	Engine No.2 Wire and Engine Wire (On the Transmission)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IG3		
IG4		
IJ1	50	Dash Wire and Detector Wire (Instrument Panel Center)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IO2		
IU3	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)
BB1	56	Floor Wire and Fuel Tank Wire (Near the Fuel Tank)

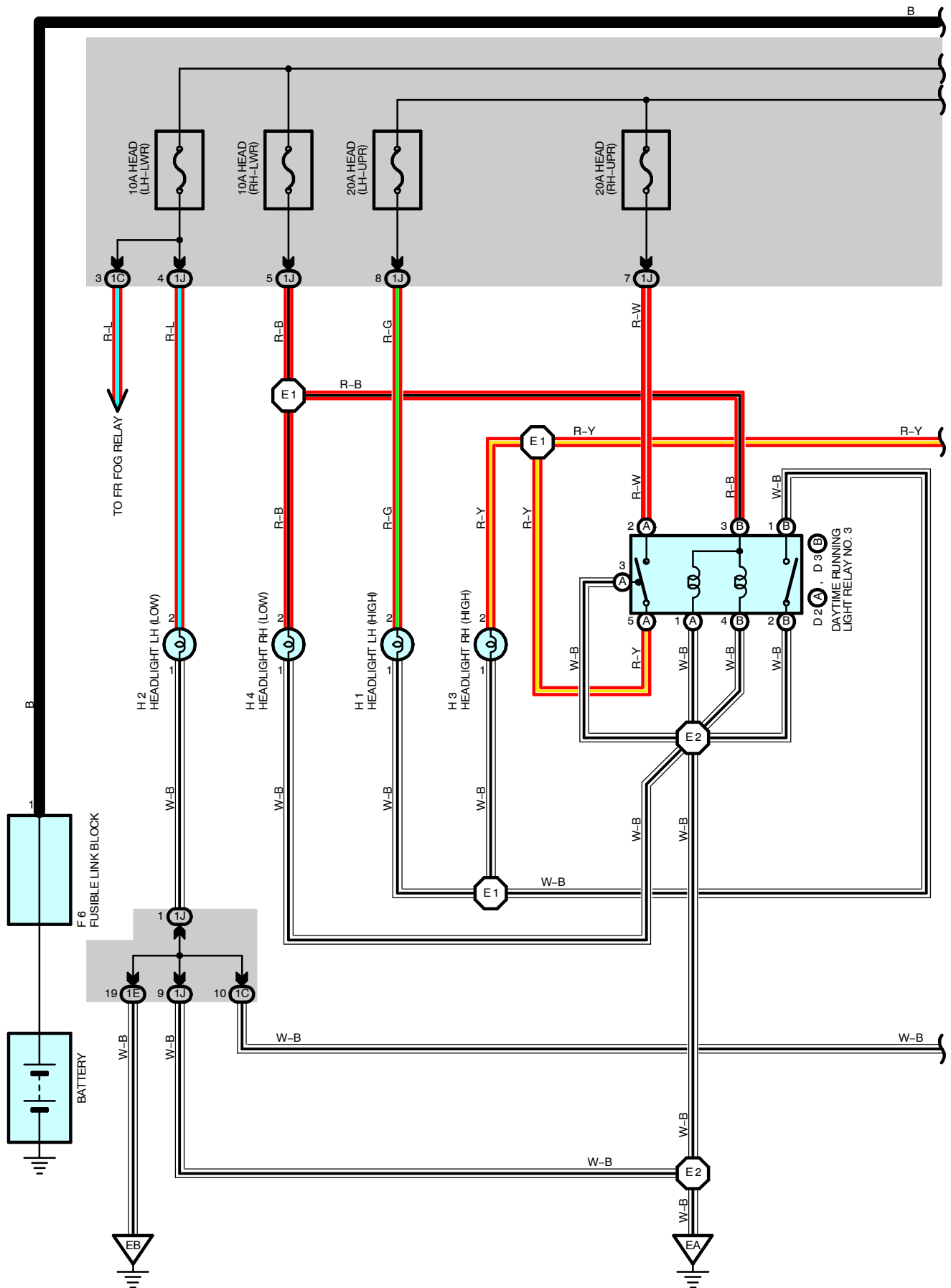
: GROUND POINTS

Code	See Page	Ground Points Location
EC	46	Rear Bank of Right Cylinder Head
EE	46	Front Left Side of Fender Apron
IF	48	Set Bolt of Cowl Side J/B LH
IG		
BM	56	Left Rear Side Quarter Panel

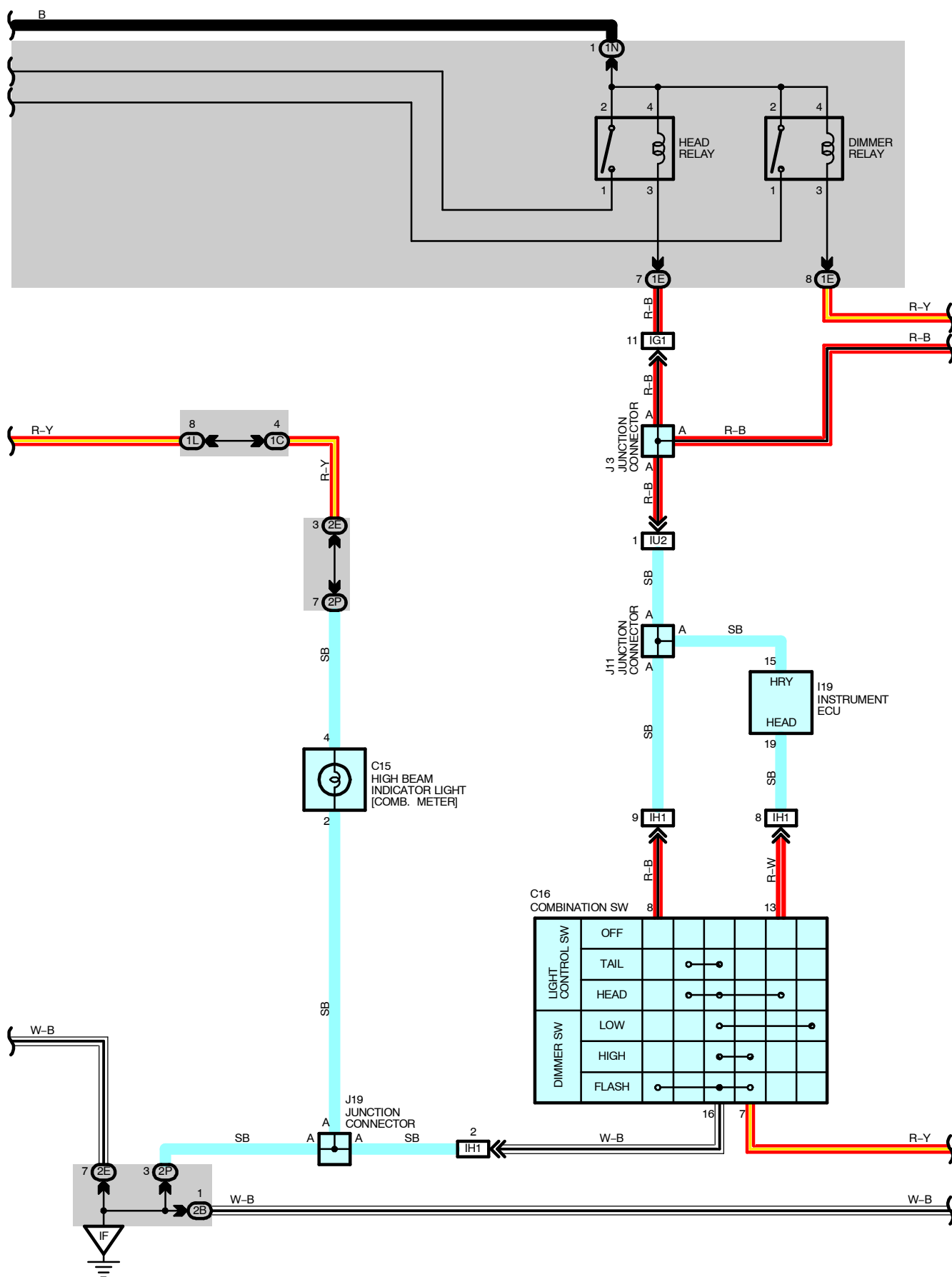
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E4	46	Engine Room No.2 Wire	E11	46	Engine Wire
E7	46	Engine Wire	I2	50	Engine Room No.2 Wire
E8	46	Transmission Wire	I5	50	Dash Wire
E9			I14		
E10	46	Engine Wire	I15		

HEADLIGHT



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)



SYSTEM OUTLINE

1. DAYTIME RUNNING LIGHT OPERATION

When the engine is started, a signal from the generator is input to daytime running light relay (Main) TERMINAL 11.

At this time, if the parking brake lever is pulled up, the relay does not operate, so the daytime running light system does not operate. When the parking brake lever is released, a signal is input to daytime running light relay (Main) TERMINAL 8. This activates the daytime running light relay (Main), and turns on the DIMMER relay. The current from the battery flows through the fusible link block to DIMMER relay (Point side) to HEAD (LH-UPR) fuse to headlight LH (High) to headlight RH (High) to daytime running light relay No.3 TERMINAL (A) 5 to TERMINAL (A) 3 to GROUND, and the headlights are lit dimmer than usual. Once the daytime running light system is operated, the headlights remain lit even though the parking brake lever is pulled up. The headlights remain lit even when the engine stops with the ignition SW on, and the signal from the generator is cut off. When the ignition SW is turned from on to off, the daytime running light system is canceled and the headlights are turned off. If the engine is started with the parking brake lever released, the daytime running light system operates and the headlights are turned on when the engine starts running.

2. HEADLIGHT OPERATION

- * When the light control SW is turned to HEAD position

When the light control SW is turned to HEAD position, the HEAD relay is turned on. At the same time, a signal is input to the daytime running light relay (Main) TERMINAL 5.

As a result, the daytime running light relay (Main) cancels the daytime running light system operation, and turns off the headlight LH, RH (High).

Simultaneously, the current from the battery flows from the fusible link block to HEAD relay (Point side) to HEAD (LH-LWR), HEAD (RH-LWR) fuse to headlight LH, RH (Low) to GROUND, and turns on the headlights at normal brightness.

- * When the dimmer SW is turned to HIGH position

When the light control SW is turned to HEAD position, the low beam of the headlights are turned on, and at the same time, current flows from HEAD (RH-LWR) fuse to daytime running light relay No.3 (Coil side) to GROUND, and turns on the daytime running light relay No.3.

When the dimmer SW is turned to HIGH position, a signal is input to daytime running light relay (Main) TERMINAL 16. This activates the DIMMER relay, and the current from the battery flows from the fusible link block to DIMMER relay (Point side) to HEAD (LH-UPR) fuse to headlight LH (High) to daytime running light relay No.3 TERMINAL (B) 2 to TERMINAL (B) 1 to GROUND. At the same time the current flows from DIMMER relay (Point side) to HEAD (RH-UPR) fuse to daytime running light relay No.3 TERMINAL (A) 2 to TERMINAL (A) 5 to headlight RH (High) to daytime running light relay No.3 TERMINAL (B) 2 to TERMINAL (B) 1 to GROUND. Also current flows from the daytime running light relay No.3 TERMINAL (A) 3 to TERMINAL (A) 5 to combination meter TERMINAL 4 to TERMINAL 2 to GROUND. As a result the headlight high beam, low beam, and high beam indicator light are turned on simultaneously.

- * When the dimmer SW is turned to FLASH position

When the dimmer SW is turned to FLASH position, the HEAD relay is turned on, the daytime running light system is canceled and the daytime running light relay No.3 is turned on, as when the light control SW is turned to HEAD position. At the same time, the DIMMER relay is turned on as when the dimmer SW is turned to HIGH position. As a result, the headlight high beam, low beam, and high beam indicator light are turned on simultaneously.

SERVICE HINTS

HEAD RELAY

1-2 : Closed with light control SW at **HEAD** position or dimmer SW at **FLASH** position

DIMMER RELAY

1-2 : Closed with daytime running light operation

: Closed with light control SW at **HEAD** position and dimmer SW at **HIGH** position

: Closed with dimmer SW at **FLASH** position

C16 COMBINATION SW

13-16 : Closed with light control SW at **HEAD** position

8-16 : Closed with dimmer SW at **FLASH** position

7-16 : Closed with dimmer SW at **HIGH** or **FLASH** position

HEADLIGHT

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C15	40	G1	38	J1	41
C16	40	H1	39	J3	41
D2	38	H2	39	J11	41
D3	38	H3	39	J19	41
D8	40	H4	39	J44	41
F6	38	I19	40	P8	43

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1J	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1L		
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2F		
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3C	32	Dash Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

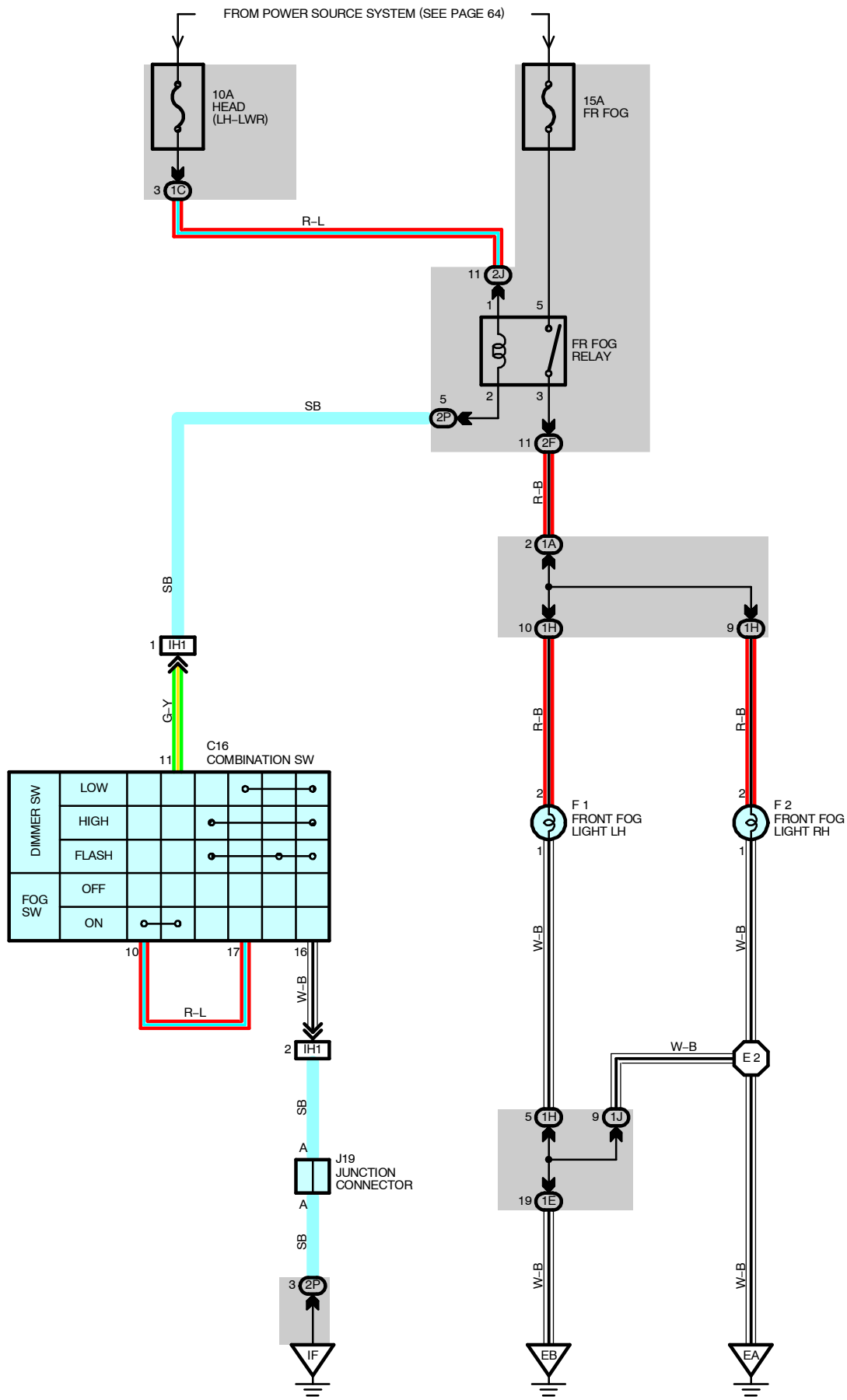
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EE1	46	Engine Room Main Wire and Alternator Wire (Near the Battery)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IU2	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)

: GROUND POINTS

Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
IF	48	Set Bolt of Cowl Side J/B LH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	46	Engine Room Main Wire	E2	46	Engine Room Main Wire



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)

SERVICE HINTS**FR FOG RELAY**

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

 : **PARTS LOCATION**

Code	See Page	Code	See Page	Code	See Page
C16	40	F2	38		
F1	38	J19	41		

 : **JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1H	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1J		
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2J		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

 : **CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)

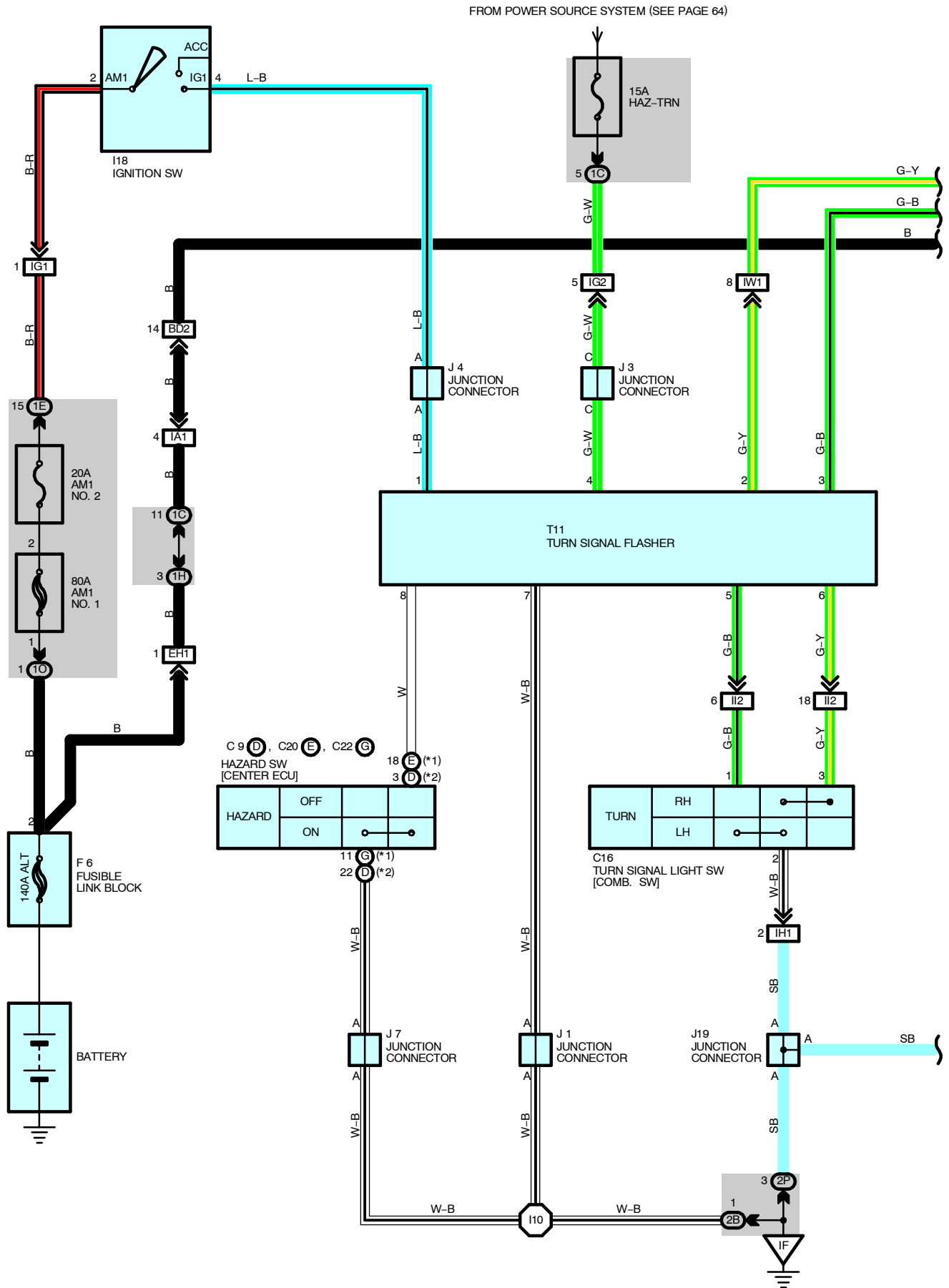
 : **GROUND POINTS**

Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
IF	48	Set Bolt of Cowl Side J/B LH

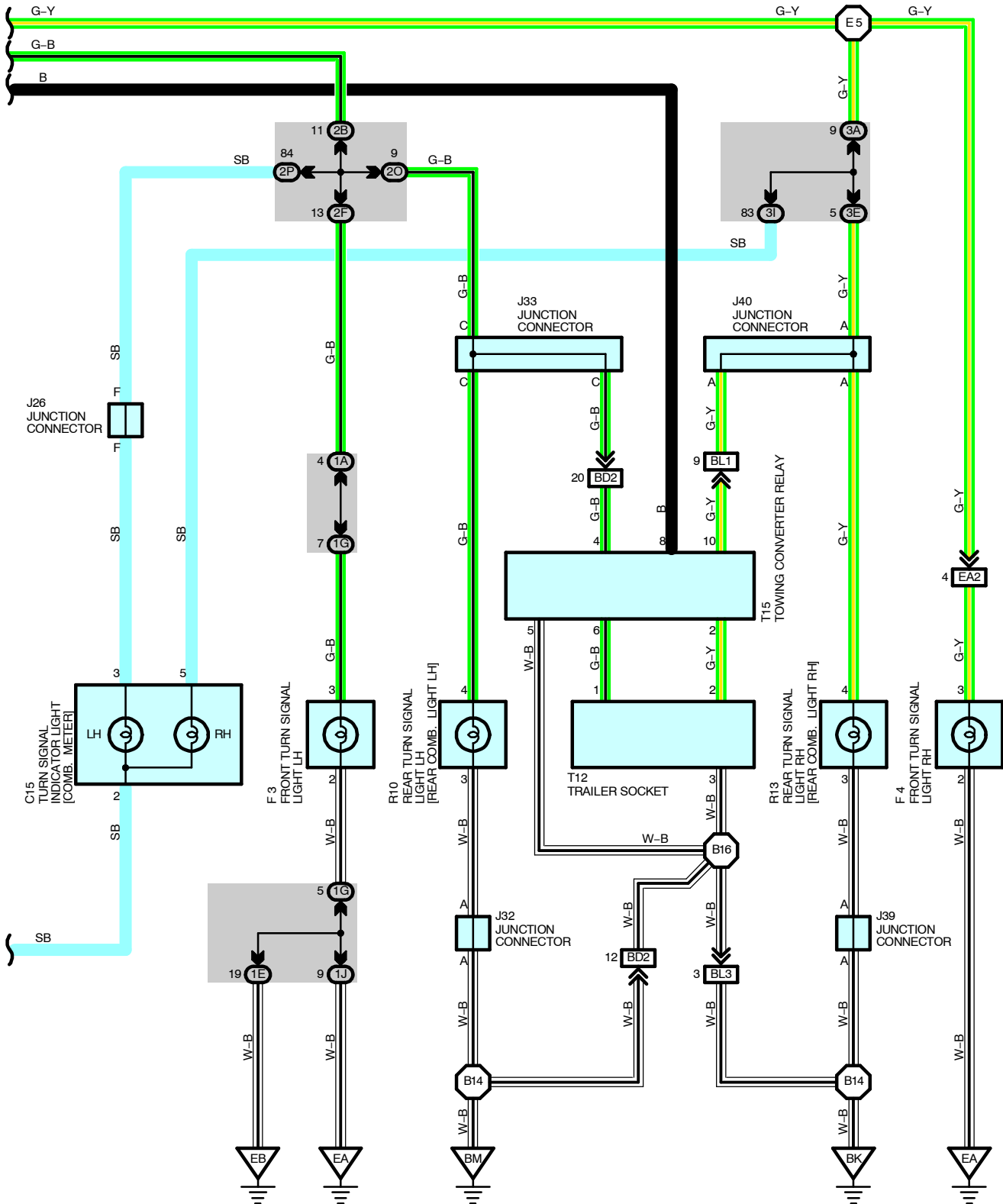
 : **SPLICE POINTS**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	46	Engine Room Main Wire			

TURN SIGNAL AND HAZARD WARNING LIGHT



* 1 : W/ NAVIGATION SYSTEM
 * 2 : W/O NAVIGATION SYSTEM



TURN SIGNAL AND HAZARD WARNING LIGHT

SERVICE HINTS

T11 TURN SIGNAL FLASHER

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

○ : PARTS LOCATION

Code		See Page	Code	See Page	Code	See Page
C9	D	40	I18	40	J33	42
C15		40	J1	41	J39	42
C16		40	J3	41	J40	42
C20	E	40	J4	41	R10	43
C22	G	40	J7	41	R13	43
F3		38	J19	41	T11	41
F4		38	J26	41	T12	43
F6		38	J32	42	T15	43

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1G	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
1J		
1O	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2O	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA2	46	Engine Room Main Wire and Engine Room No.2 Wire (Engine Compartment Right)
EH1	46	Engine Room Main Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
IA1	48	Floor Wire and Engine Room No.2 Wire (Left Kick Panel)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
II2	50	Column Wire and Dash Wire (Near the Ignition SW)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BL1	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BL3		

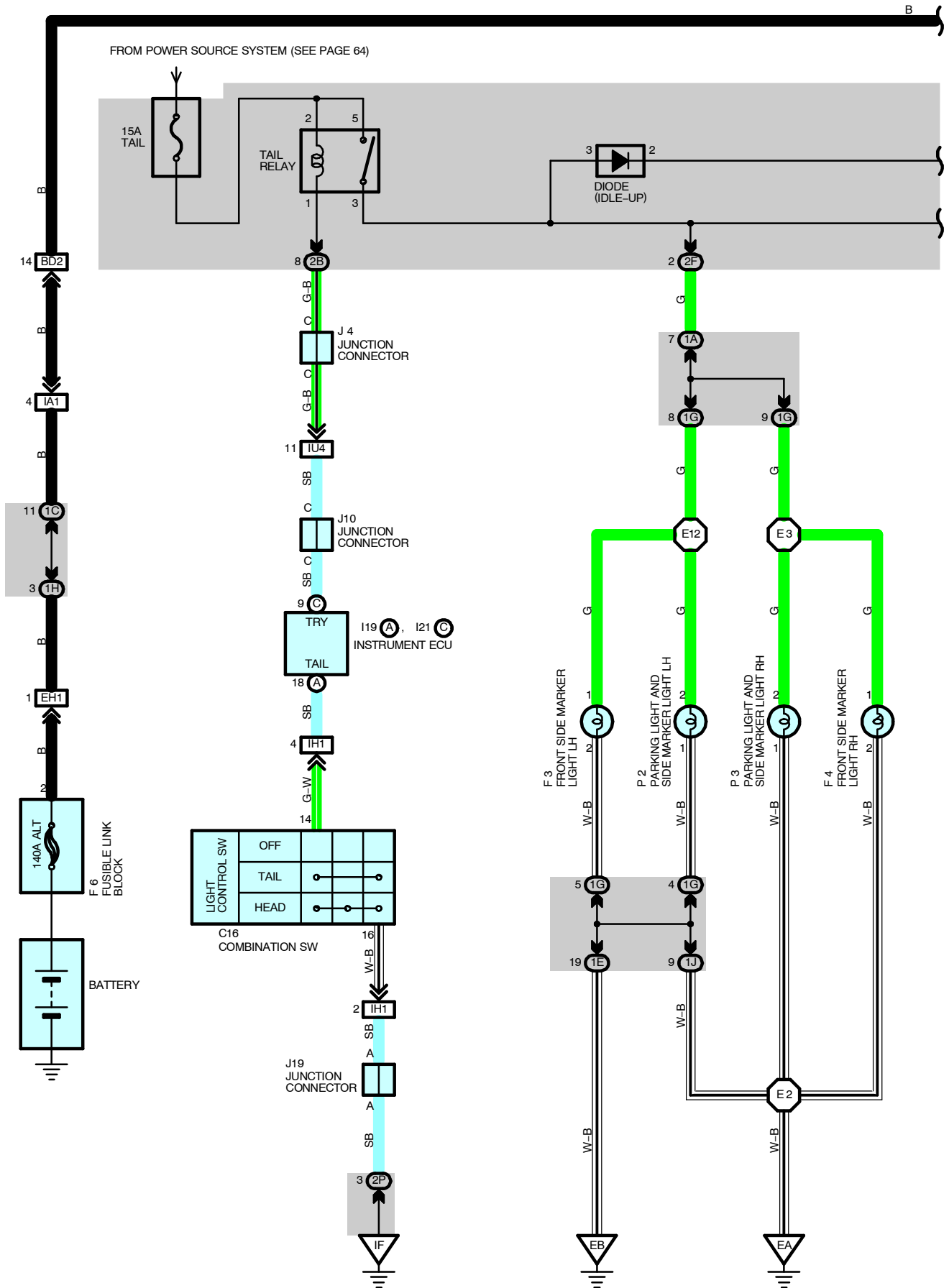
**: GROUND POINTS**

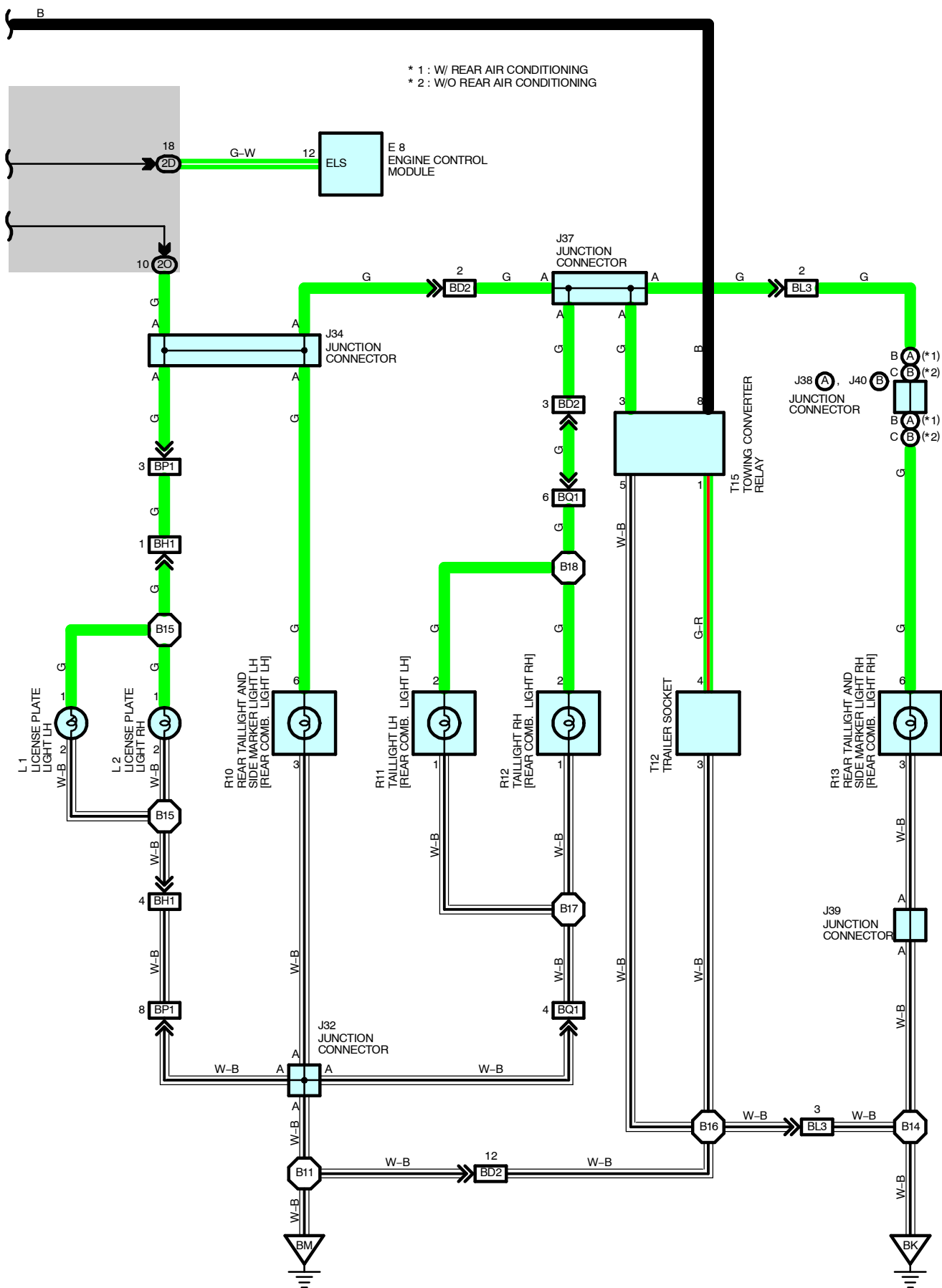
Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
IF	48	Set Bolt of Cowl Side J/B LH
BK	56	Front Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel

**: SPLICE POINTS**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E5	46	Engine Room No.2 Wire	B14	58	Floor No.2 Wire
I10	50	Dash Wire	B16	58	Floor No.3 Wire

TAILLIGHT





TAILLIGHT

SERVICE HINTS

TAIL RELAY

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

C16 COMBINATION SW

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



: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C16	40	J19	41	P2	39
E8	40	J32	42	P3	39
F3	38	J34	42	R10	43
F4	38	J37	42	R11	43
F6	38	J38	42	R12	43
I19	40	J39	42	R13	43
I21	40	J40	42	T12	43
J4	41	L1	42	T15	43
J10	41	L2	42		



: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1C		
1E		
1G	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
1J		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2O	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)



: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EH1	46	Engine Room Main Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
IA1	48	Floor Wire and Engine Room No.2 Wire (Left Kick Panel)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IU4	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BL3	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BQ1	58	Back Door Lower Wire and Floor Wire (Left Rear Side Quarter Panel)



: GROUND POINTS

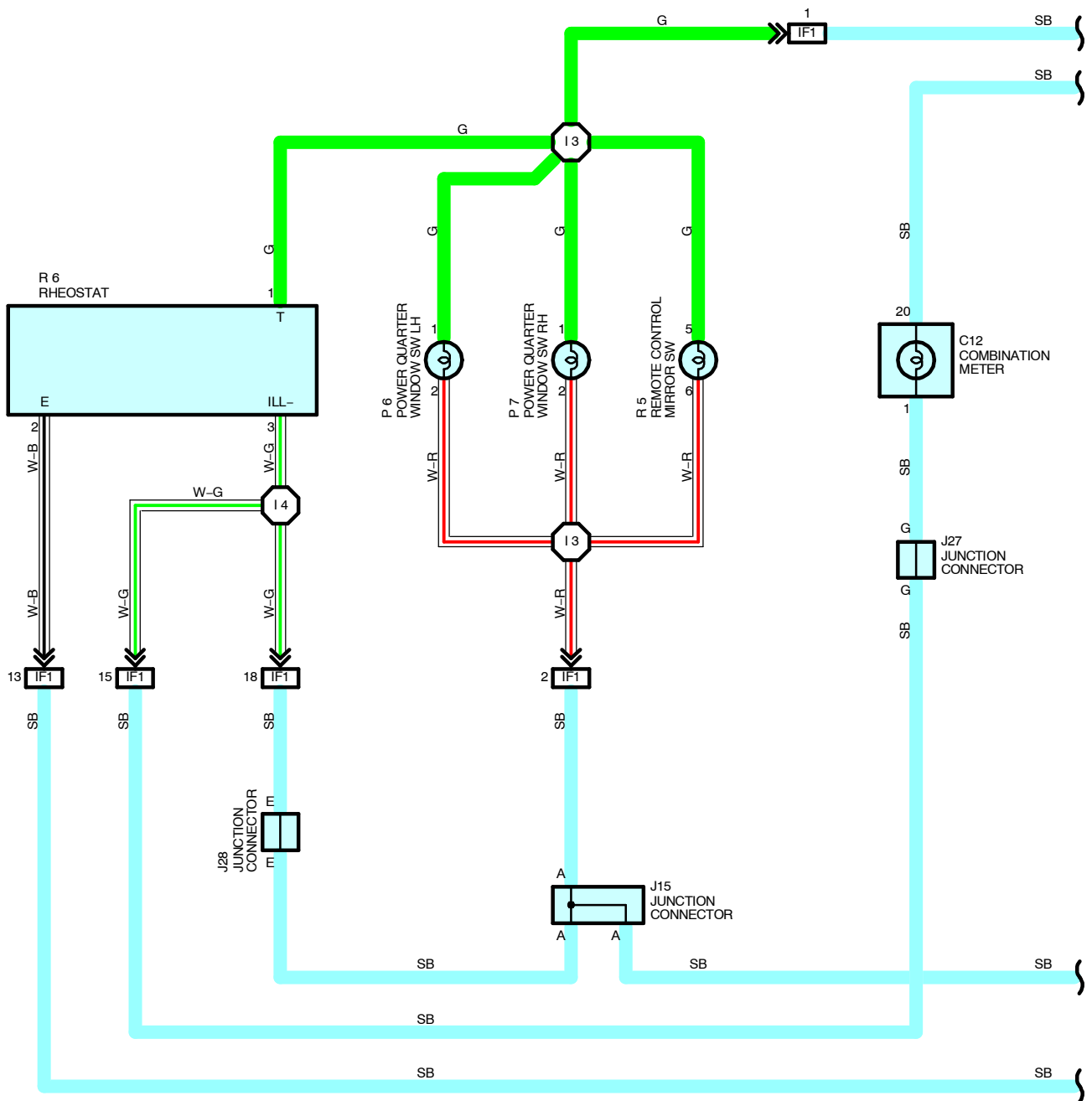
Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
IF	48	Set Bolt of Cowl Side J/B LH
BK	56	Front Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel



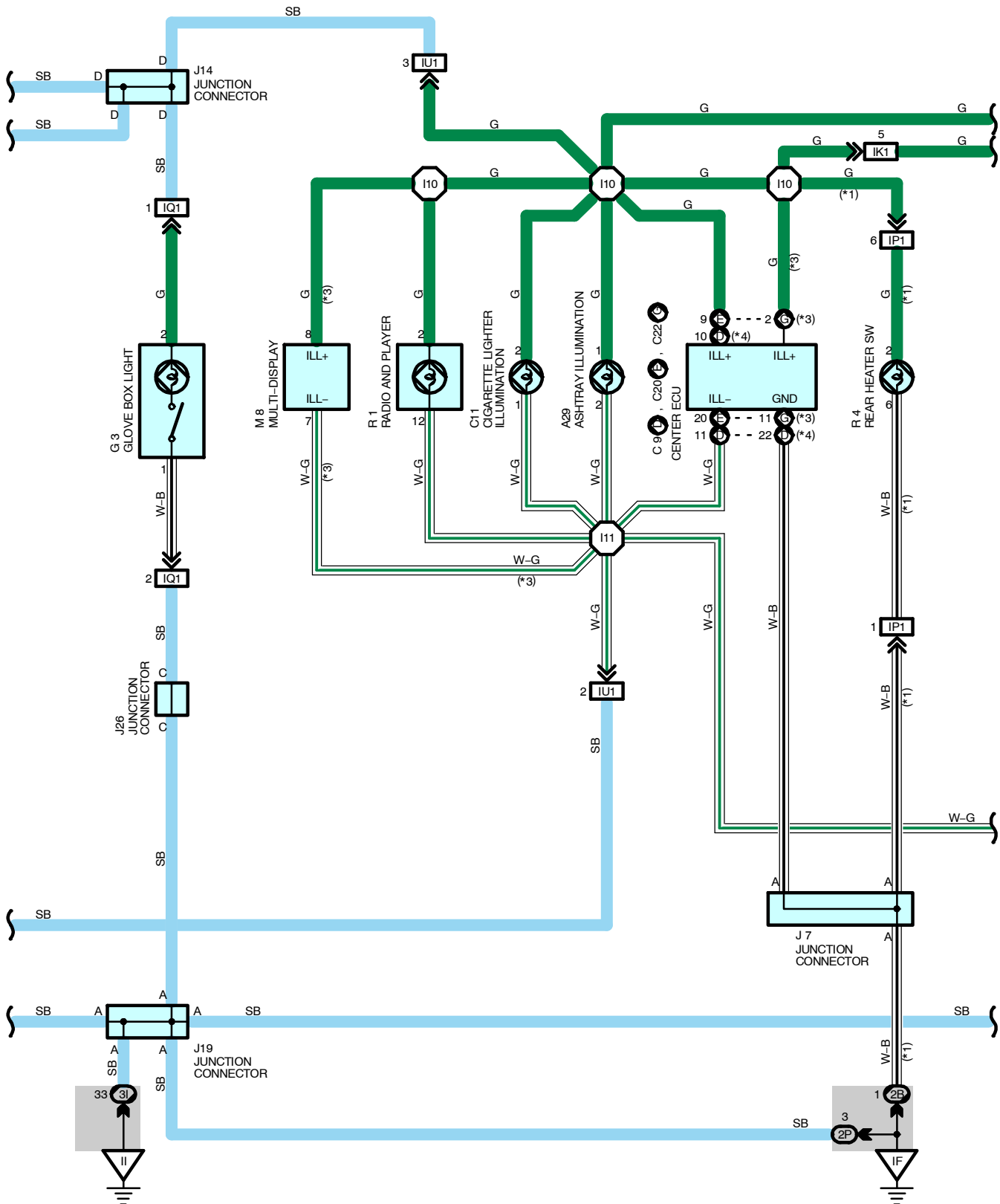
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	46	Engine Room Main Wire	B15	58	Back Door Upper Wire
E3			B16	58	Floor No.3 Wire
E12			B17	58	Back Door Lower Wire
B11	58	Floor Wire	B18		
B14	58	Floor No.2 Wire			

ILLUMINATION



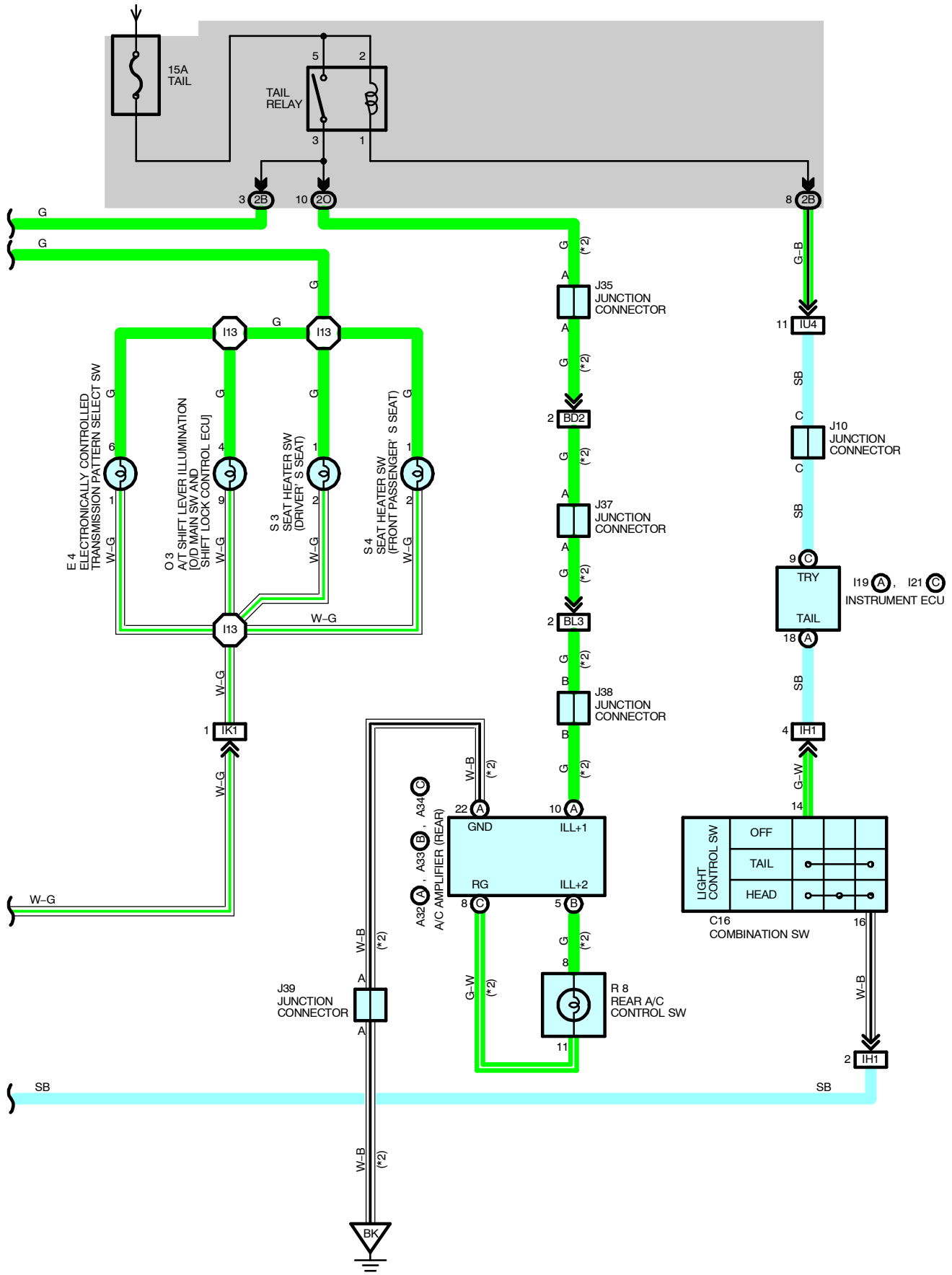
- * 1 : W/O REAR AIR CONDITIONING
- * 3 : W/ NAVIGATION SYSTEM
- * 4 : W/O NAVIGATION SYSTEM



ILLUMINATION

FROM POWER SOURCE SYSTEM (SEE PAGE 64)

* 2 : W/ REAR AIR CONDITIONING



SERVICE HINTS

TAIL RELAY

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

C16 COMBINATION SW

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

: PARTS LOCATION

Code		See Page	Code		See Page	Code	See Page
A29		40	I21	C	40	M8	41
A32	A	42	J7		41	O3	41
A33	B	42	J10		41	P6	41
A34	C	42	J14		41	P7	41
C9	D	40	J15		41	R1	41
C11		40	J19		41	R4	41
C12		40	J26		41	R5	41
C16		40	J27		41	R6	41
C20	E	40	J28		41	R8	43
C22	G	40	J35		42	S3	41
E4		40	J37		42	S4	41
G3		40	J38		42		
I19	A	40	J39		42		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2O	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	48	Instrument Panel Integration Wire and Instrument Panel Wire (Left Side of Instrument Panel)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IK1	50	Console Box Wire and Dash Wire (Left Side of Front Console)
IP1	52	Rear Console Box Wire and Dash Wire (Right Side of Rear Console)
IQ1	52	Instrument Panel Integration Wire and Lamp Wire (Behind the Glove Box)
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4		
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BL3	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)

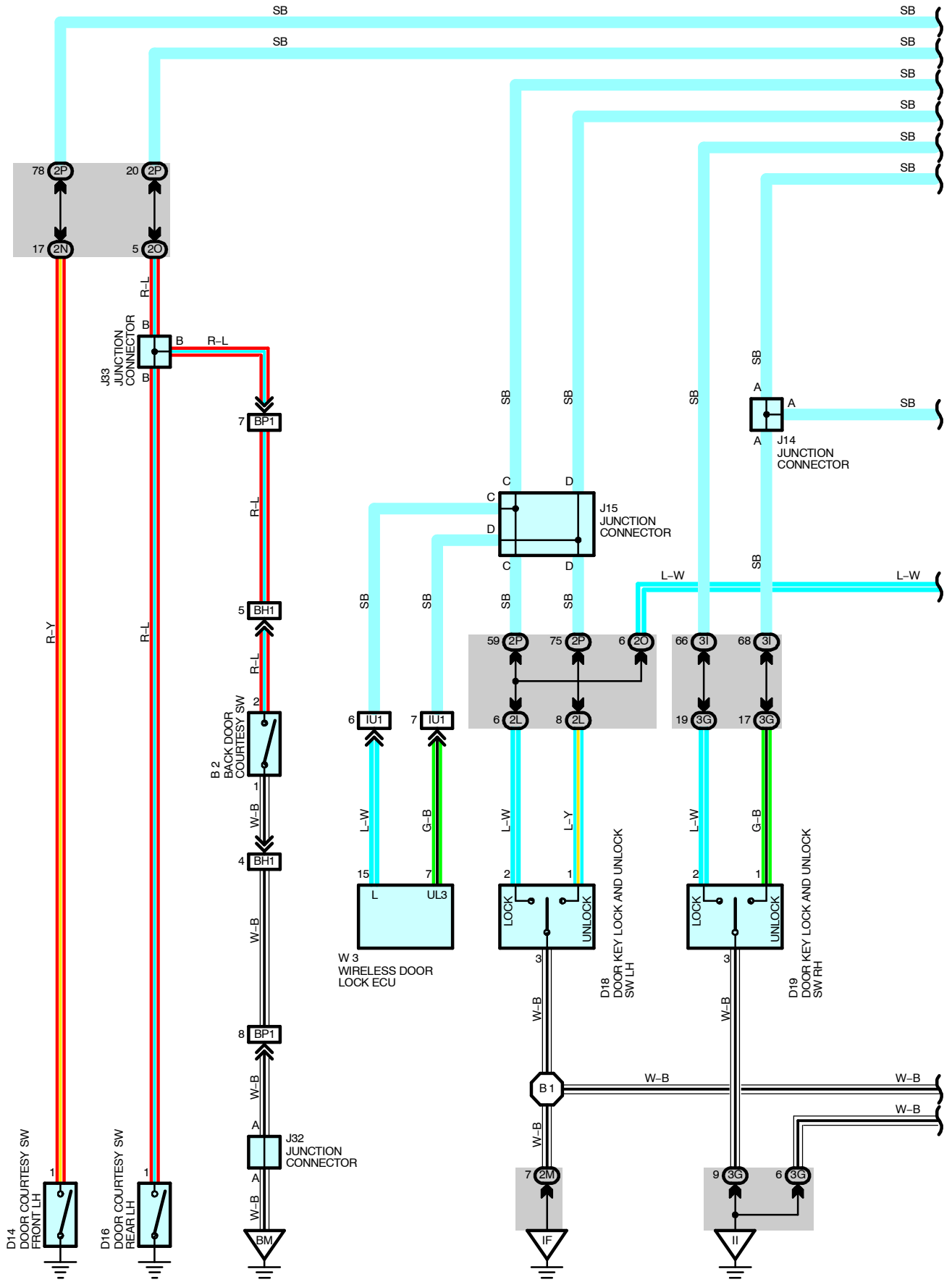
: GROUND POINTS

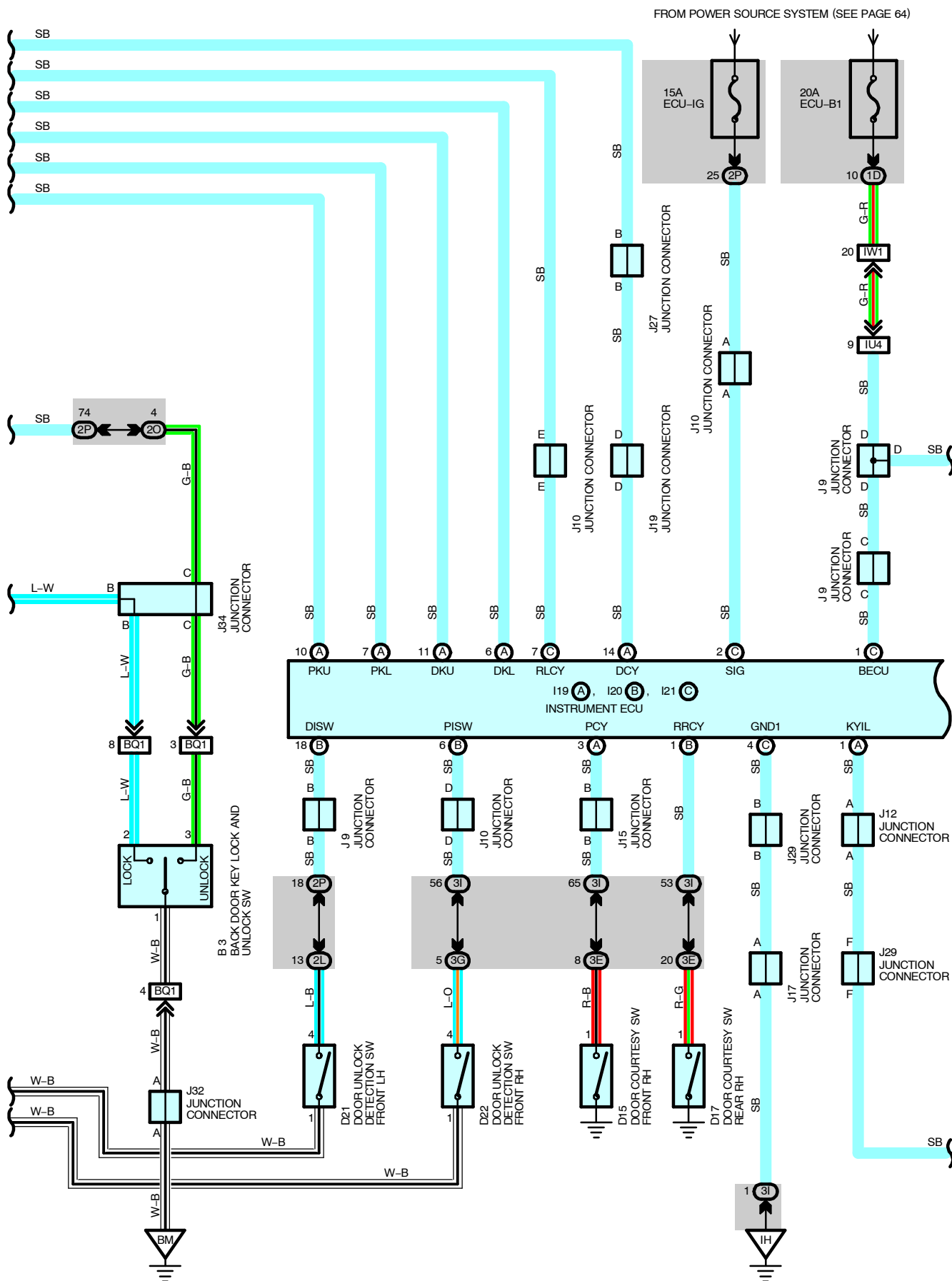
Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
II	48	Set Bolt of Cowl Side J/B RH
BK	56	Front Side Under the Front Passenger's Seat

: SPLICE POINTS

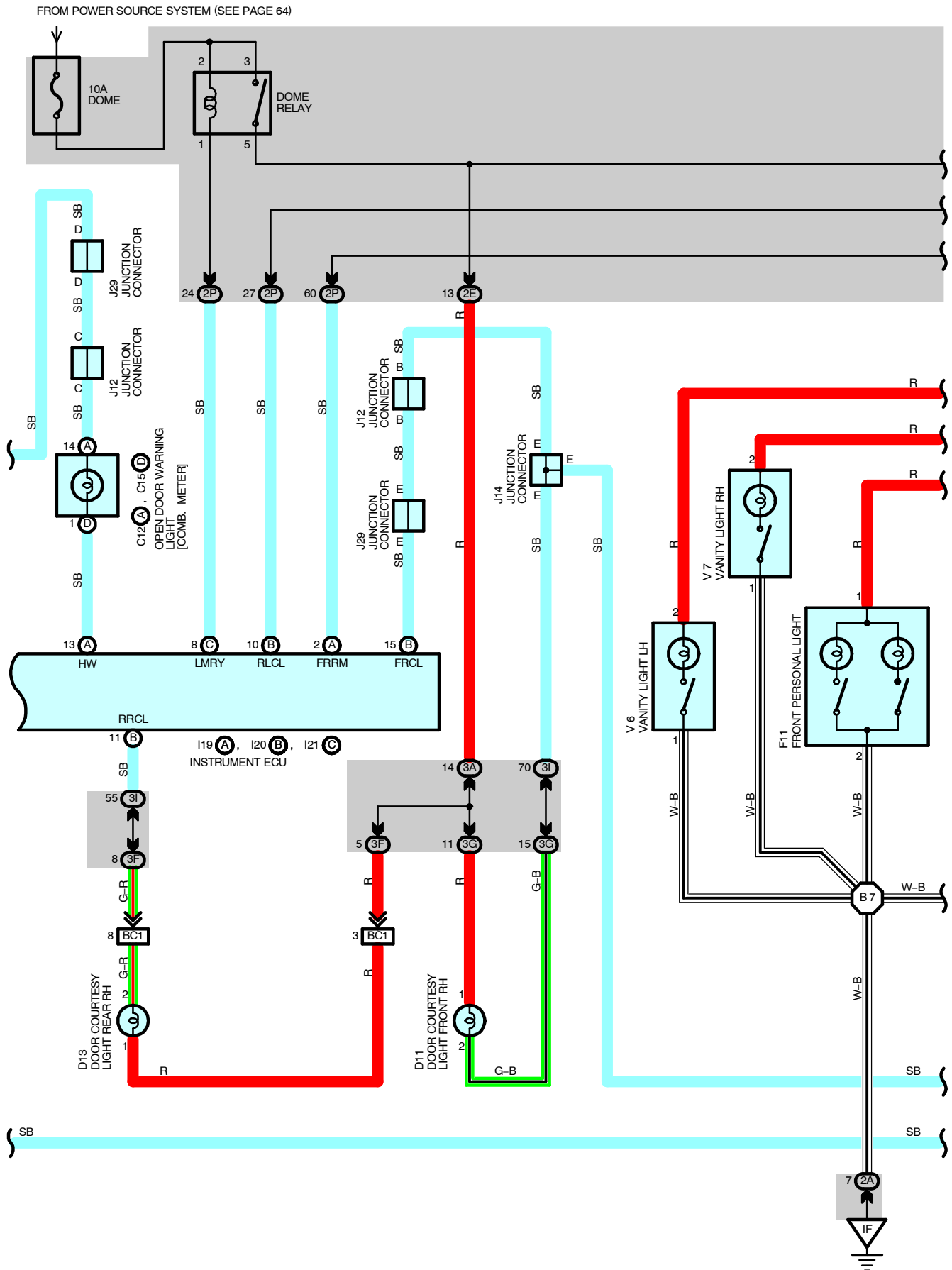
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	50	Instrument Panel Wire	I11	50	Dash Wire
I4			I13	50	Console Box Wire
I10	50	Dash Wire			

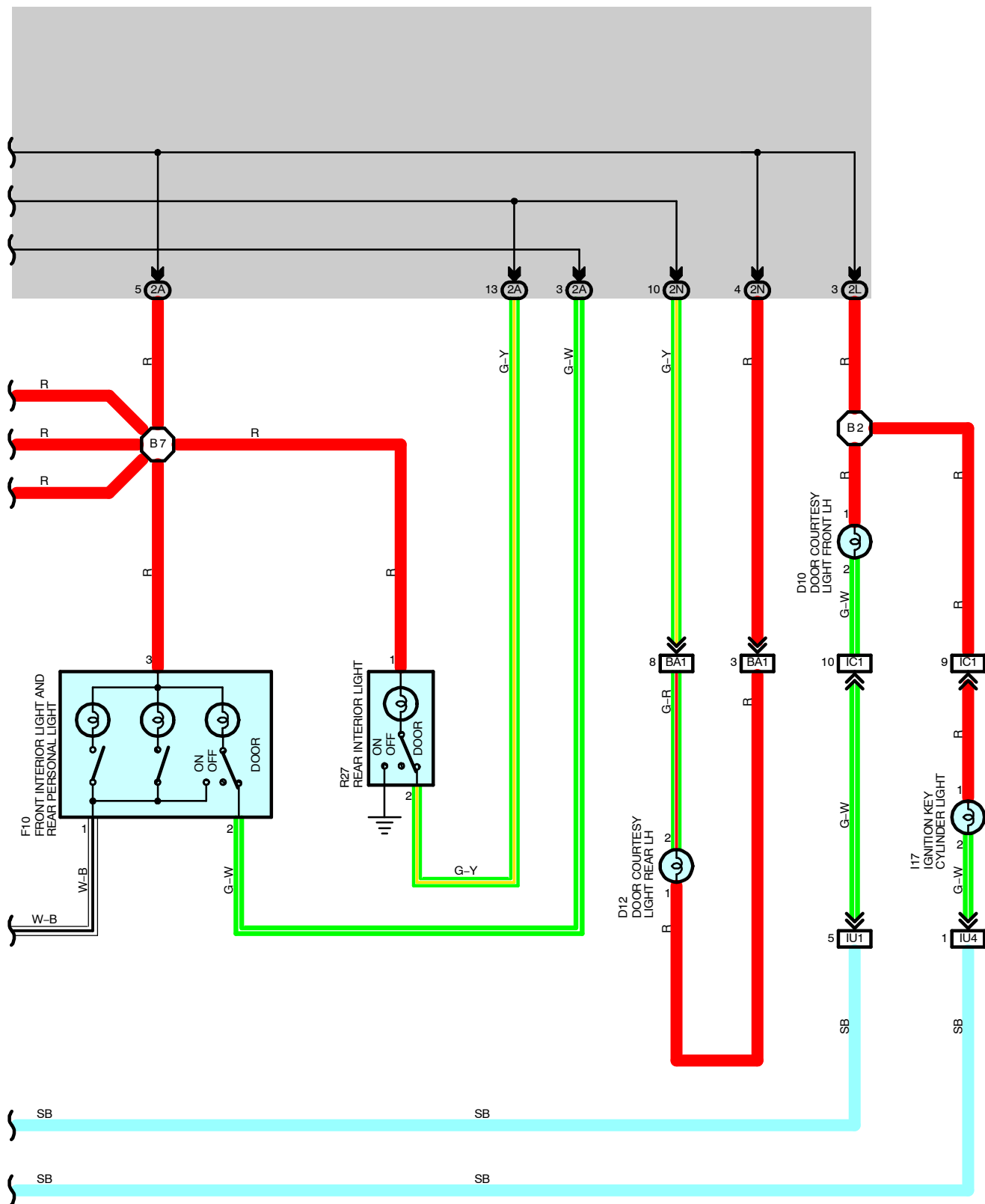
INTERIOR LIGHT





INTERIOR LIGHT





INTERIOR LIGHT

SYSTEM OUTLINE

NORMAL OPERATION

- * When the front Door LH or RH is opened
When the door is opened, the door courtesy light front LH, RH and open door warning light is turned on. When the front door LH and RH are closed, the door courtesy light front LH, RH is turned off.
- * When the rear door LH, RH or the back door is opened, door courtesy light rear LH, RH, rear interior light and the open door warning light is turned on. When the rear door LH, RH and back door are closed, the door courtesy light rear LH, RH is turned off.
- * When all the doors are closed, the open door warning light is turned off.

TURN OFF FUNCTION

When the ignition SW turned off and there is no change in the door courtesy SW for approx. 30 minutes, the DOME relay is turned off. The DOME relay is turned on again when any of the following conditions are met.

- * Ignition SW is turned from OFF position to ACC or ON position
- * Change to any door courtesy SW
- * Driver or front passenger door is unlocked by the key or transmitter

IMMEDIATE TURN OFF FUNCTION AT DOOR LOCK

When all the doors are closed, and the driver or front passenger door is locked by the key or transmitter, the DOME relay is turned off, after approx. 80 seconds. However, when the illuminated entry system is operating, the DOME relay is turned off after the operation is completed. the DOME relay is turned on again when any of the following conditions are met.

- * Ignition SW is turned from OFF position to ACC or ON position
- * Change to any door courtesy SW
- * Driver or front passenger door is unlocked by the key or transmitter

ILLUMINATED ENTRY SYSTEM

- * When any door is opened, each light is turned on.
- * The light remains on for approx. 15 seconds after all doors are closed, and fades out.
- * With the ignition SW is at ACC or ON position, and any door open, when all the doors are closed, each light fades out immediately.
- * When the ignition SW is turned to ACC or ON position during timer lighting, each light fades out immediately.
- * When the doors are locked during timer lighting, each light fades out immediately.
- * The lights include, the front interior light, ignition key cylinder light, and front door courtesy light LH,RH.

SERVICE HINTS

D14, D15, D16, D17 DOOR COURTESY SW FRONT LH, RH, REAR LH, RH

1-GROUND : Closed with door open

B2 BACK DOOR COURTESY SW

1-2 : Closed with back door open

I19 (A), I20 (B), I21 (C) INSTRUMENT ECU

- (C) 1-GROUND : Always approx. 12 volts
- (C) 2-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position
- (C) 4-GROUND : Always continuity
- (A) 3-GROUND : Continuity with front passenger door open
- (A)14-GROUND : Continuity with driver door open
- (B) 1-GROUND : Continuity with rear RH door open
- (C) 7-GROUND : Continuity with rear LH door or back door open

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B2	42	D19	42	J15	41
B3	42	D21	42	J17	41
C12	40	D22	42	J19	41
C15	40	F10	42	J27	41
D10	42	F11	42	J29	41
D11	42	I17	40	J32	42
D12	42	I19	40	J33	42
D13	42	I20	40	J34	42
D14	42	I21	40	R27	43
D15	42	J9	41	V6	43
D16	42	J10	41	V7	43
D17	42	J12	41	W3	41
D18	42	J14	41		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2A	26	Roof Wire and Cowl Side J/B LH (Left Kick Panel)
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2L	26	Front Door LH Wire and Cowl Side J/B LH (Left Kick Panel)
2M		
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2O		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3F		
3G	32	Front Door RH Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	48	Front Door LH Wire and Dash Wire (Left Kick Panel)
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BA1	56	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BC1	56	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BQ1	58	Back Door Lower Wire and Floor Wire (Left Rear Side Quarter Panel)

: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
IH	48	Set Bolt of Cowl Side J/B RH
II		
BM	56	Left Rear Side Quarter Panel

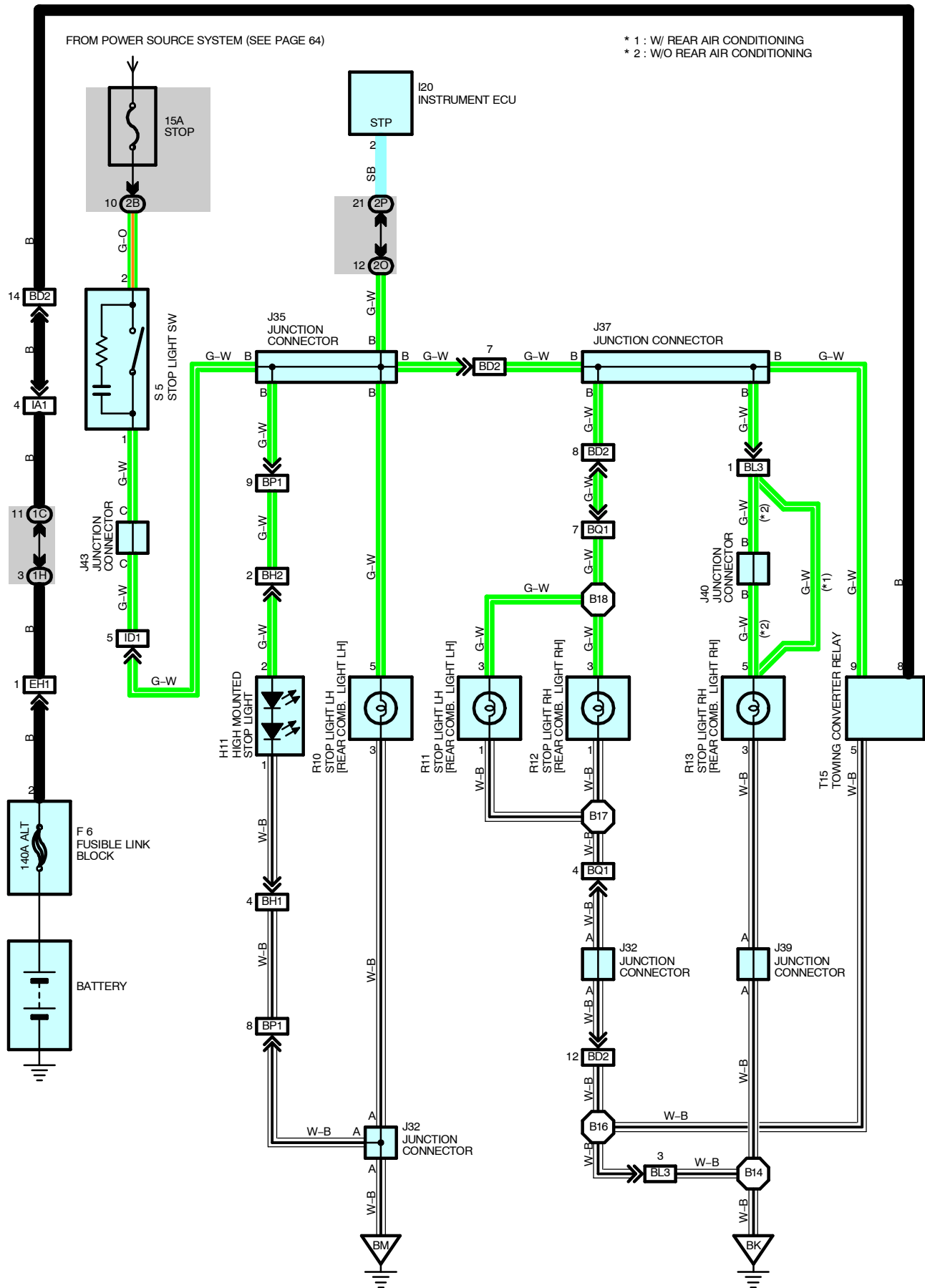
INTERIOR LIGHT



: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	58	Front Door LH Wire	B7	58	Roof Wire
B2					

STOP LIGHT



SERVICE HINTS**S5 STOP LIGHT SW**

2-1 : Closed with brake pedal depressed

 : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
F6	38	J37	42	R11	43
H11	42	J39	42	R12	43
I20	40	J40	42	R13	43
J32	42	J43	41	S5	41
J35	42	R10	43	T15	43

 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1H	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2O	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EH1	46	Engine Room Main Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
IA1	48	Floor Wire and Engine Room No.2 Wire (Left Kick Panel)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BH2		
BL3	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BQ1	58	Back Door Lower Wire and Floor Wire (Left Rear Side Quarter Panel)

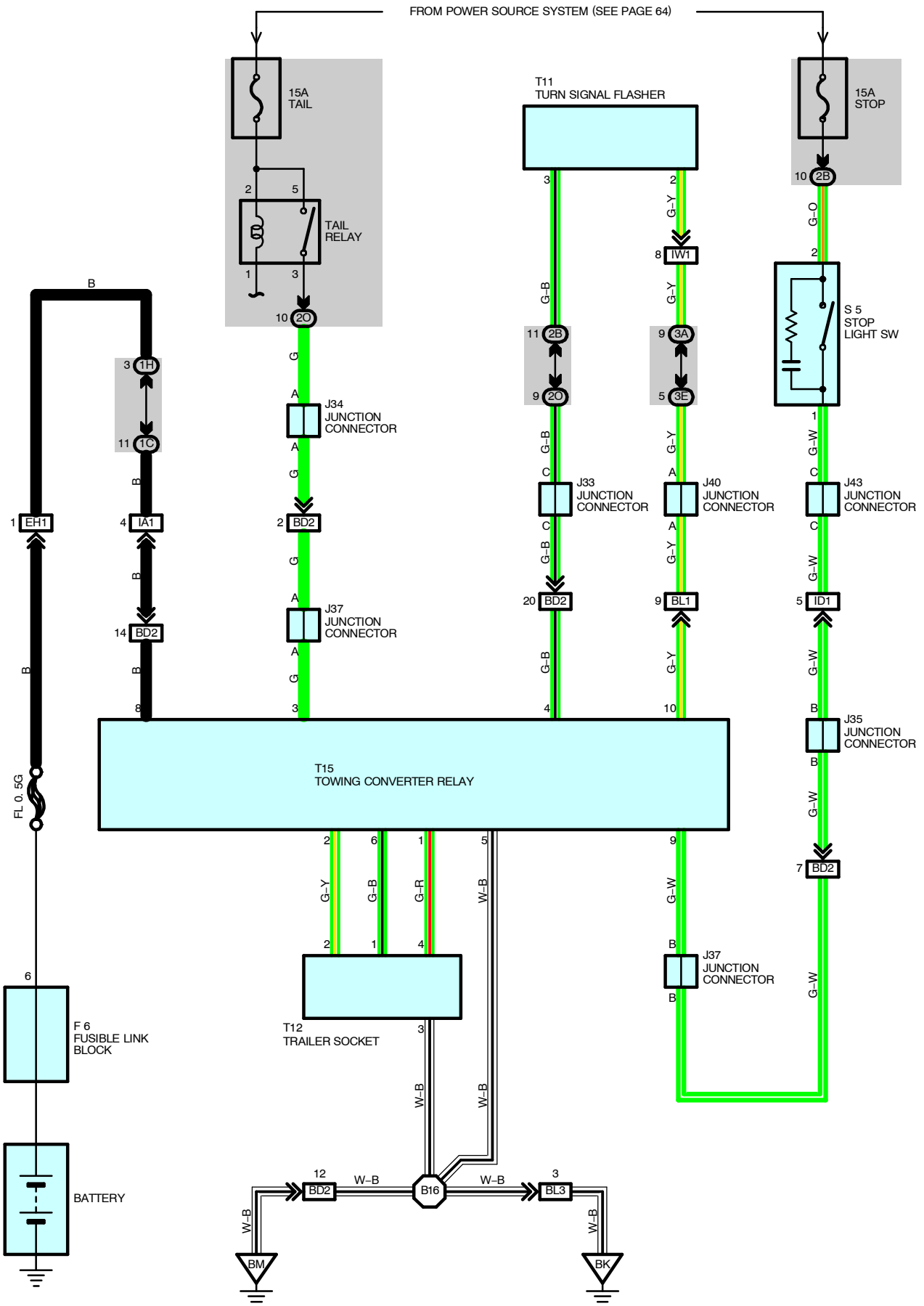
 : GROUND POINTS

Code	See Page	Ground Points Location
BK	56	Front Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel

 : SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B14	58	Floor No.2 Wire	B17	58	Back Door Lower Wire
B16	58	Floor No.3 Wire	B18		

TRAILER TOWING



SERVICE HINTS

T15 TOWING CONVERTER RELAY

8-GROUND : Always approx. 12 volts

5-GROUND : Always continuity

S5 STOP LIGHT SW

2-1 : Closed with brake pedal depressed

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
F6	38	J37	42	T11	41
J33	42	J40	42	T12	43
J34	42	J43	41	T15	43
J35	42	S5	41		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1H	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2O	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EH1	46	Engine Room Main Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
IA1	48	Floor Wire and Engine Room No.2 Wire (Left Kick Panel)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BL1	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BL3		

: GROUND POINTS

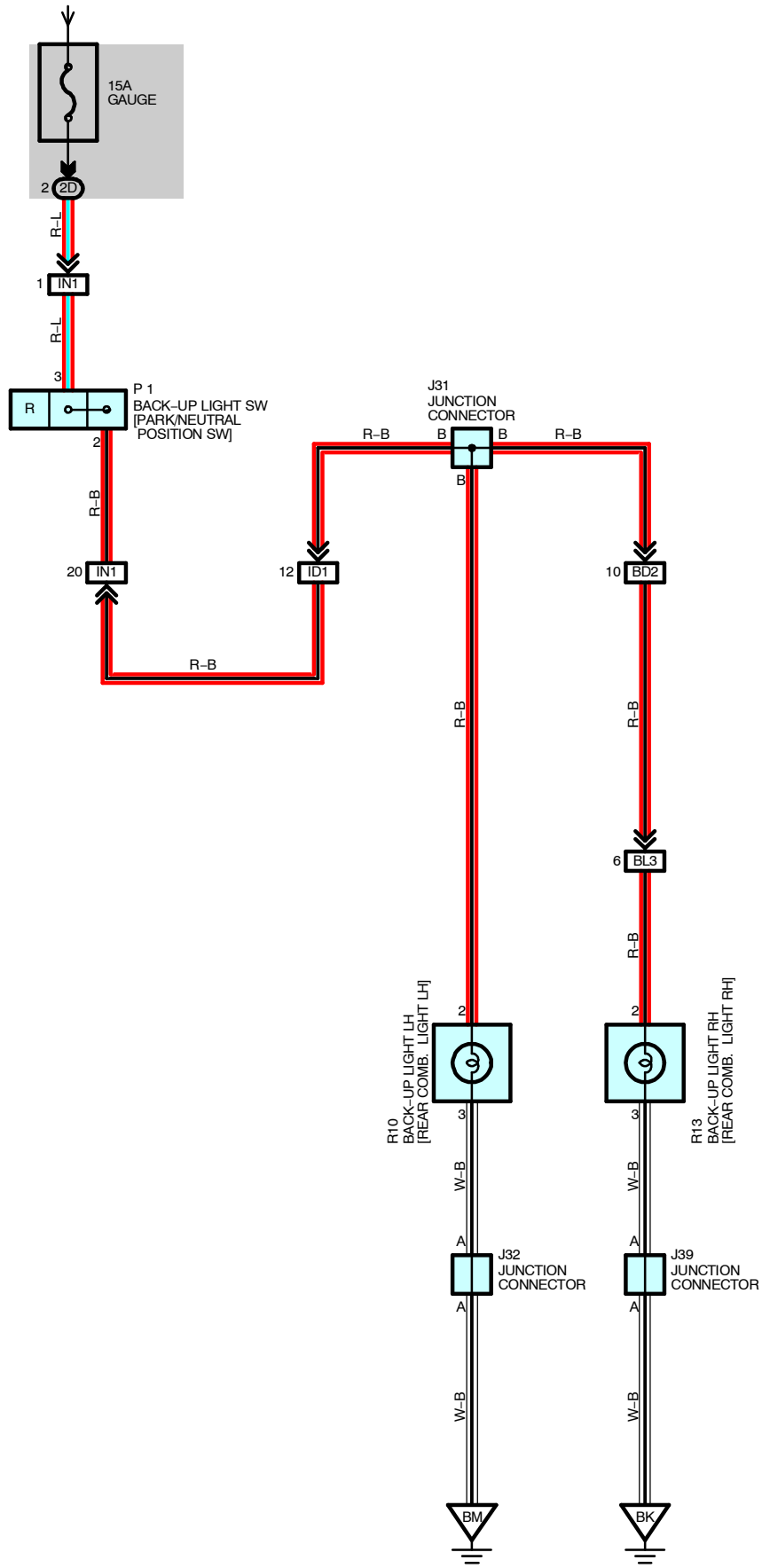
Code	See Page	Ground Points Location
BK	56	Front Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B16	58	Floor No.3 Wire			

BACK-UP LIGHT

FROM POWER SOURCE SYSTEM (SEE PAGE 64)



SERVICE HINTS

P1 BACK-UP LIGHT SW [PARK/NEUTRAL POSITION SW]

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

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J31	42	J39	42	R10	43
J32	42	P1	39	R13	43

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2D	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)

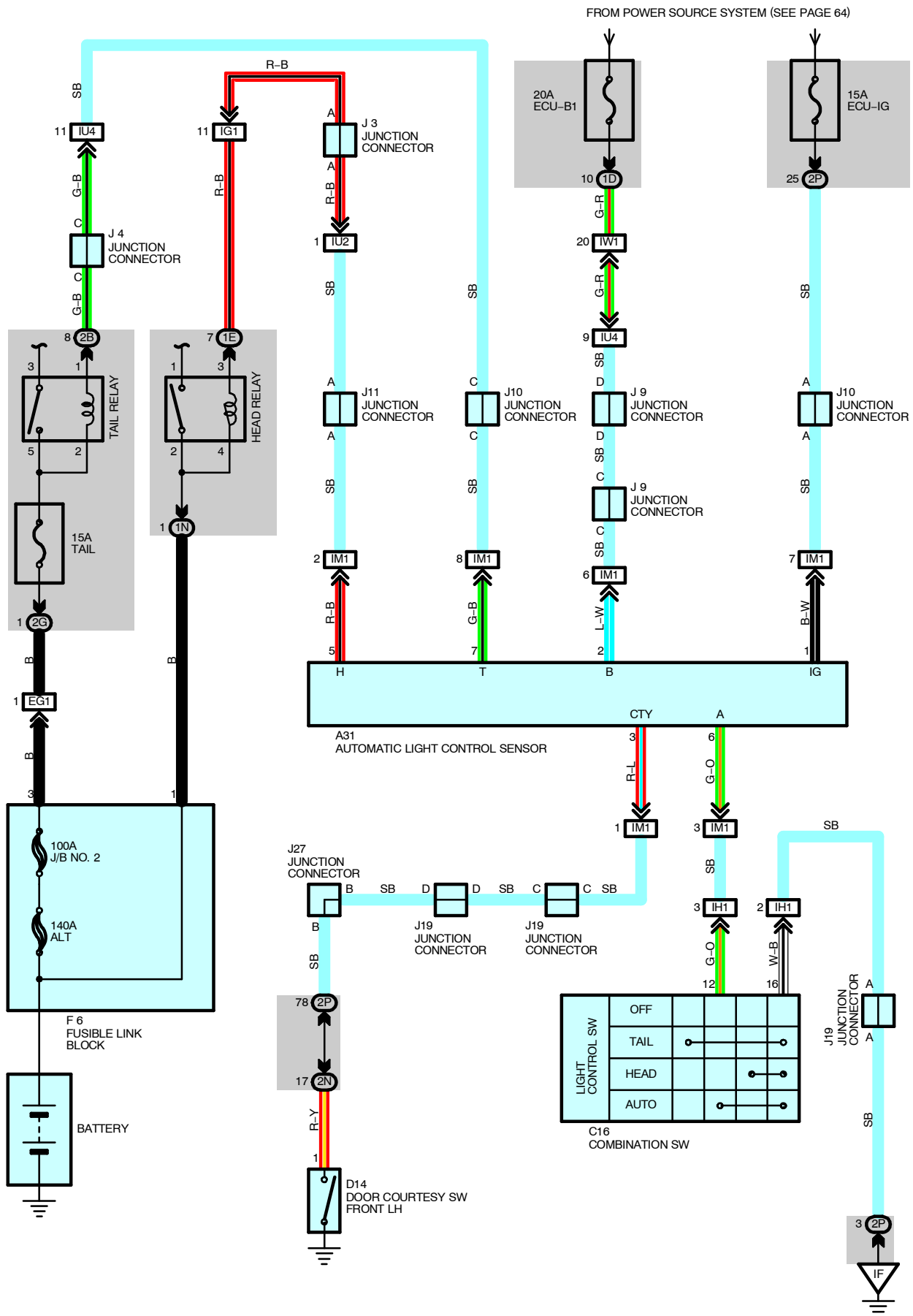
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BL3	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)

▽ : GROUND POINTS

Code	See Page	Ground Points Location
BK	56	Front Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel

AUTOMATIC LIGHT CONTROL



SYSTEM OUTLINE

When the light control SW is set at AUTO position, this system automatically turns ON/OFF the taillights and headlights depending on the brightness around the vehicle.

AUTOMATIC LIGHT CONTROL OPERATION

(1) Turn on operation

- * With the ignition SW turned on, and the light control SW set at AUTO position, when the brightness around the vehicle drops in between a predetermined level, the timer of the automatic light control sensor starts counting, and turns on the taillight and headlight after approx. 5.8 seconds have elapsed. In case the brightness around the vehicle increases over a predetermined level during timer counting, the timer will be reset.
- * With the ignition SW turned on and the light control SW set at AUTO position, when the brightness around the vehicle drops below a predetermined level, the timer of the automatic light control sensor starts counting, and turns on the taillight and headlight after approx. 2.9 seconds have elapsed. In case the brightness around the vehicle increases in between a predetermined level during timer counting, the timer will be stopped, and when the brightness increases over a predetermined level, the timer will be reset.

(2) Turn off operation

- * When the brightness increases over a predetermined level while the automatic light control system is operating, the timer of the automatic light control sensor starts counting, and turns off the taillight and headlight after approx. 5.8 seconds have elapsed. In case the brightness around the vehicle drops below a predetermined level during timer counting, the timer will be reset.
- * The taillights and headlights will be turned off when the ignition SW is turned from on to off and driver door is opened, during automatic light control system operation, with the light control SW set at AUTO position.

SERVICE HINTS

A31 AUTOMATIC LIGHT CONTROL SENSOR

- 1-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position
- 2-GROUND : Always approx. 12 volts
- 3-GROUND : Continuity with driver door open
- 6-GROUND : Continuity with light control SW at **AUTO** position

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A31	40	J3	41	J11	41
C16	40	J4	41	J19	41
D14	42	J9	41	J27	41
F6	38	J10	41		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1E		
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2G	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EG1	46	Engine Room No.2 Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IM1	52	Instrument Panel Integration Wire and Instrument Panel No.3 Wire (Right Side of Instrument Panel)
IU2	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

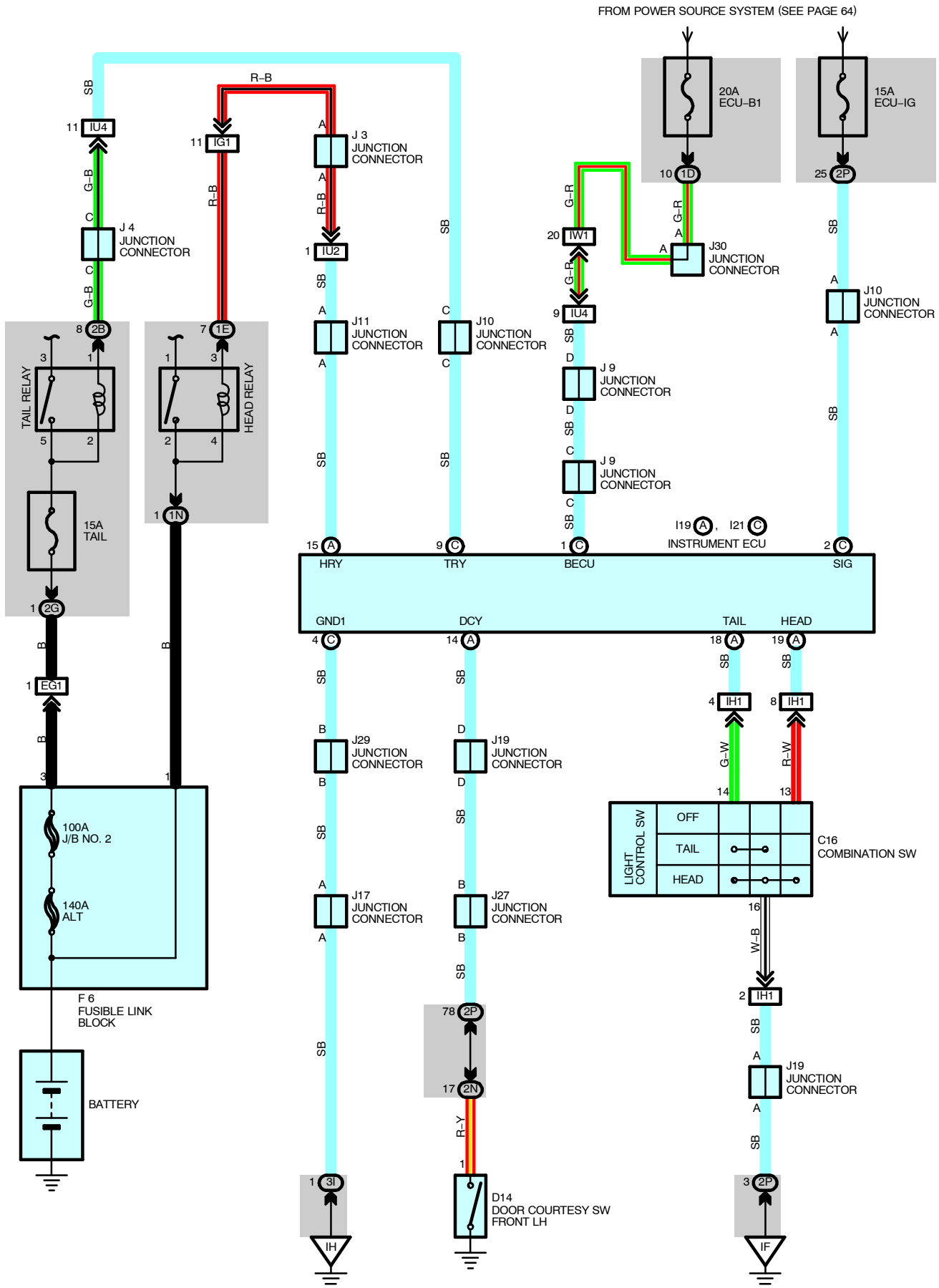
AUTOMATIC LIGHT CONTROL



: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH

LIGHT AUTO TURN OFF



SYSTEM OUTLINE

This system automatically turns off the taillight or headlight by the opening/closing of the driver door, to prevent the lights from remaining lit.

LIGHT AUTO TURN OFF OPERATION

* When headlights are on

When the ignition SW is turned from on to off with the headlights on (Light control SW at HEAD position), a signal is input to instrument ECU TERMINAL SIG. When the driver door is opened at this time, a signal is input from the door courtesy SW front LH to the instrument ECU TERMINAL DCY. The instrument ECU TERMINAL HRY is controlled to turn off the HEAD relay. As a result, the current to the headlight is cut off and the light is turned off.

* When taillights are on

When the ignition SW is turned from on to off with the taillights on (Light control SW at TAIL position), a signal is input to instrument ECU TERMINAL SIG. When the driver door is opened at this time, a signal is input from the door courtesy SW front LH to the instrument ECU TERMINAL DCY. The instrument ECU TERMINAL TRY is controlled to turn off the TAIL relay. As a result, the current to the taillight is cut off and the light is turned off.

SERVICE HINTS

I19 (A), I21 (C) INSTRUMENT ECU

(A)14-GROUND : Continuity with driver door open

(A)18-GROUND : Continuity with light control SW at **TAIL** or **HEAD** position

(A)19-GROUND : Continuity with light control SW at **HEAD** position

(C) 1-GROUND : Always approx. **12** volts

(C) 2-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position

(C) 4-GROUND : Always continuity

D14 DOOR COURTESY SW FRONT LH

1-GROUND : Closed with door open

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C16	40	J3	41	J17	41
D14	42	J4	41	J19	41
F6	38	J9	41	J27	41
I19	A 40	J10	41	J29	41
I21	C 40	J11	41	J30	41

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1E		
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2G	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EG1	46	Engine Room No.2 Wire and Engine Room No.3 Wire (Under the Engine Room J/B)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IU2	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

LIGHT AUTO TURN OFF



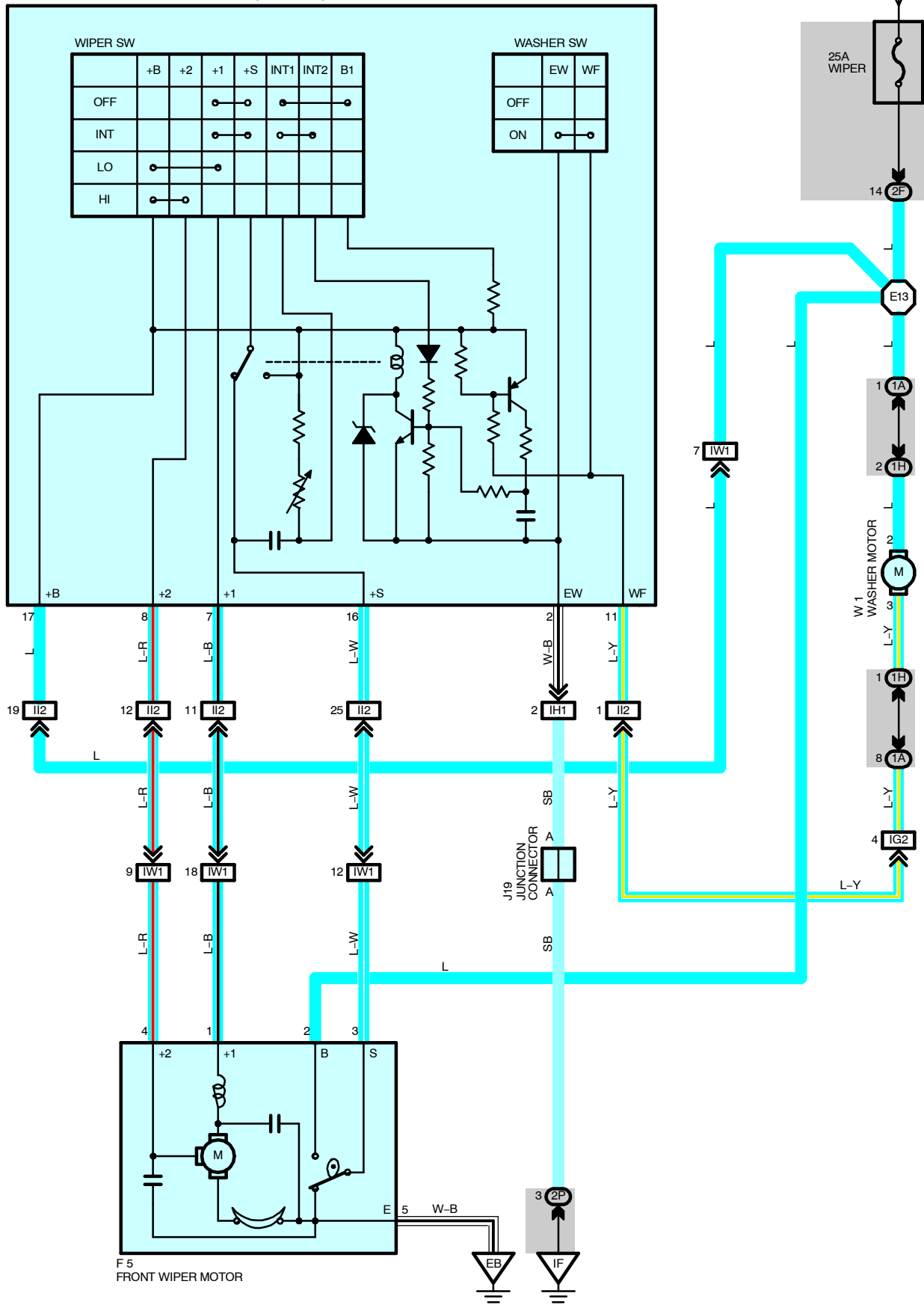
: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
IH	48	Set Bolt of Cowl Side J/B RH

FRONT WIPER AND WASHER

C19
FRONT WIPER AND WASHER SW [COMB. SW]

FROM POWER SOURCE SYSTEM (SEE PAGE 64)



SYSTEM OUTLINE

When the ignition SW turned on, the current from the WIPER fuse flows to the front wiper and washer SW TERMINAL 17, and front wiper motor TERMINAL 2.

1. LOW POSITION

When the wiper SW is turned to LO position, the current flows from the front wiper and washer SW TERMINAL 17 to TERMINAL 7 to front wiper motor TERMINAL 1 to TERMINAL 5 to GROUND, and operates the front wiper motor at low speed.

2. HIGH POSITION

When the wiper SW is turned to HI position, the current flows from the front wiper and washer SW TERMINAL 17 to TERMINAL 8 to front wiper motor TERMINAL 4 to TERMINAL 5 to GROUND, and operates the front wiper motor at high speed.

3. INT POSITION

When the wiper SW is turned to INT position, the relay operates and the current which is connected by the relay function flows from the front wiper and washer SW TERMINAL 17 to TERMINAL 2 to GROUND, and operates the wiper.

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

4. WASHER CONTINUOUS OPERATION

When the washer SW is turned on, the current flows from the washer motor TERMINAL 2 to TERMINAL 1 to front wiper and washer SW TERMINAL 11 to TERMINAL 2 to GROUND, operates the washer motor and the window washer emits a water spray. This causes the current to flow to the washer continuous operation circuit in front wiper and washer SW TERMINAL 11 to TERMINAL 7 to front wiper motor TERMINAL 1 to TERMINAL 5 to GROUND, and operates the wiper.

SERVICE HINTS

C19 FRONT WIPER AND WASHER SW [COMB. SW]

2-GROUND : Always continuity

17-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

7-GROUND : Approx. 12 volts with front wiper and washer SW at **LO** position

: Approx. 12 volts 1.6 to 10.7 seconds intermittently with the front wiper and washer SW at **INT** position

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

8-GROUND : Approx. 12 volts with front wiper and washer SW at **HI** position

F5 FRONT WIPER MOTOR

2-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

5-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C19	40	J19	41		
F5	38	W1	39		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1H	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG2	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
II2	50	Column Wire and Dash Wire (Near the Ignition SW)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

FRONT WIPER AND WASHER



: GROUND POINTS

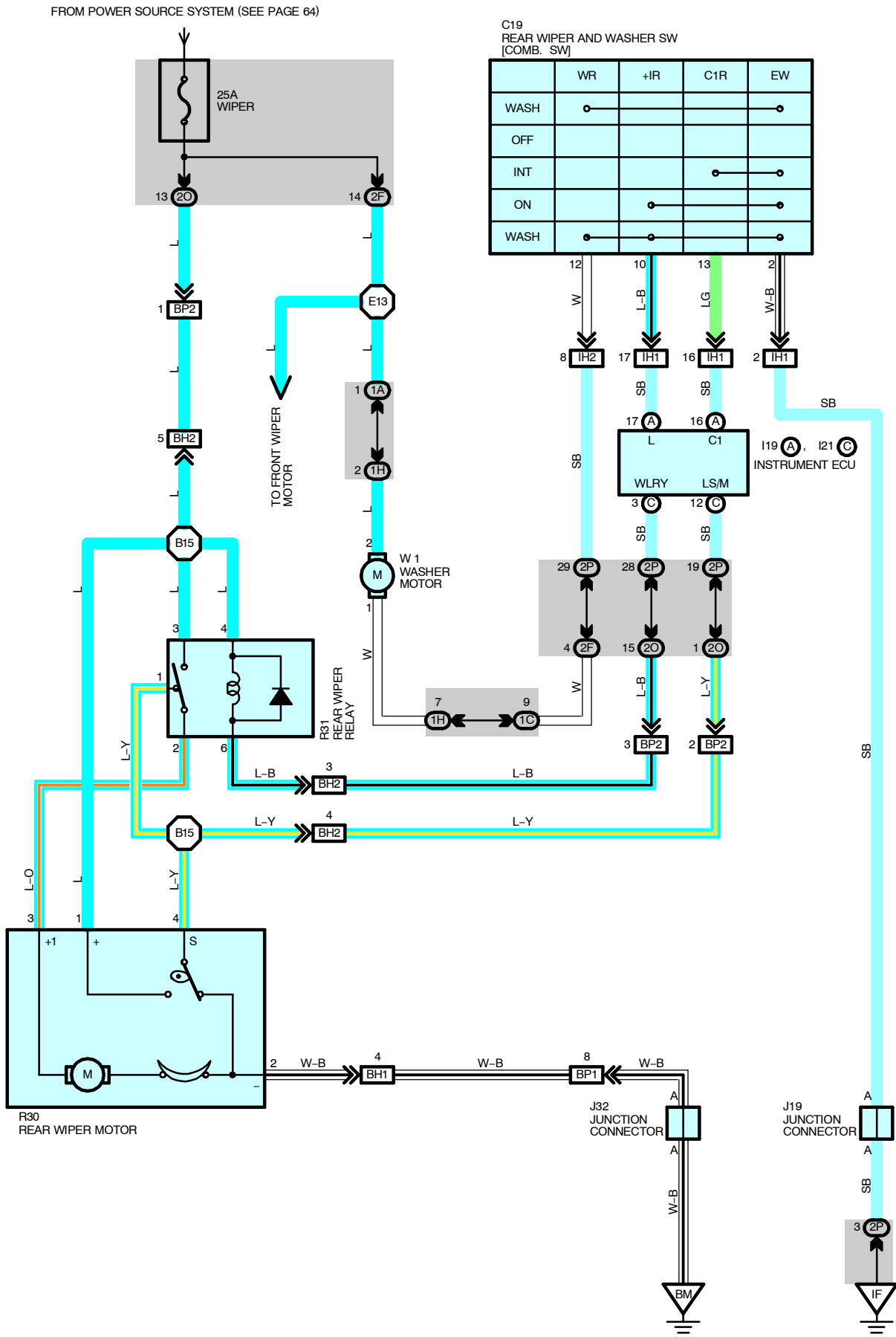
Code	See Page	Ground Points Location
EB	46	Front Right Side of Fender Apron
IF	48	Set Bolt of Cowl Side J/B LH



: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E13	46	Engine Room No.2 Wire			

REAR WIPER AND WASHER



SYSTEM OUTLINE

When the ignition SW is turned on, the current flows from WIPER fuse to washer motor TERMINAL 2, rear wiper relay TERMINAL 3 and TERMINAL 4, and rear wiper motor TERMINAL 1 respectively.

1. REAR WIPER NORMAL OPERATION

When the ignition SW is turned on, and the rear wiper and washer SW is turned to ON position, the current flows from rear wiper relay (Coil side) to instrument ECU TERMINAL (C) 3 to TERMINAL (A) 17 to rear wiper and washer SW TERMINAL 10 to TERMINAL 2 to GROUND, and turns on the rear wiper relay. As a result, the current flows from rear wiper relay TERMINAL 3 to TERMINAL 2 to rear wiper motor TERMINAL 3 to TERMINAL 2 to GROUND, and operates the rear wiper.

2. REAR WIPER INTERMITTENT OPERATION

When the ignition SW is turned on, and the rear wiper and washer SW is turned to INT position, the current flows from rear wiper relay (Coil side) to instrument ECU TERMINAL (C) 3 to TERMINAL (A) 16 to rear wiper and washer SW TERMINAL 13 to TERMINAL 2 to GROUND, and the intermittent circuit in the instrument ECU is controlled to operate the wiper intermittently.

3. WASHER OPERATION

When the ignition SW is turned on, and the rear wiper and washer SW is turned from OFF to WASH position, the current flows from the WIPER fuse to washer motor TERMINAL 2 to TERMINAL 3 to rear wiper and washer SW TERMINAL 12 to TERMINAL 2 to GROUND. This activates the washer motor, and the window washer emits a water spray. When the rear wiper and washer SW is turned to ON position, the window washer emits a water spray during rear wiper normal operation.

SERVICE HINTS

W1 WASHER MOTOR

2-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

1-GROUND : Continuity with rear wiper and washer SW at **WASH** position

R30 REAR WIPER MOTOR

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

2-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C19	40	J19	41	R31	43
I19	A 40	J32	42	W1	39
I21	C 40	R30	43		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1C		
1H	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2O	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IH2		
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BH2		
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BP2		

REAR WIPER AND WASHER



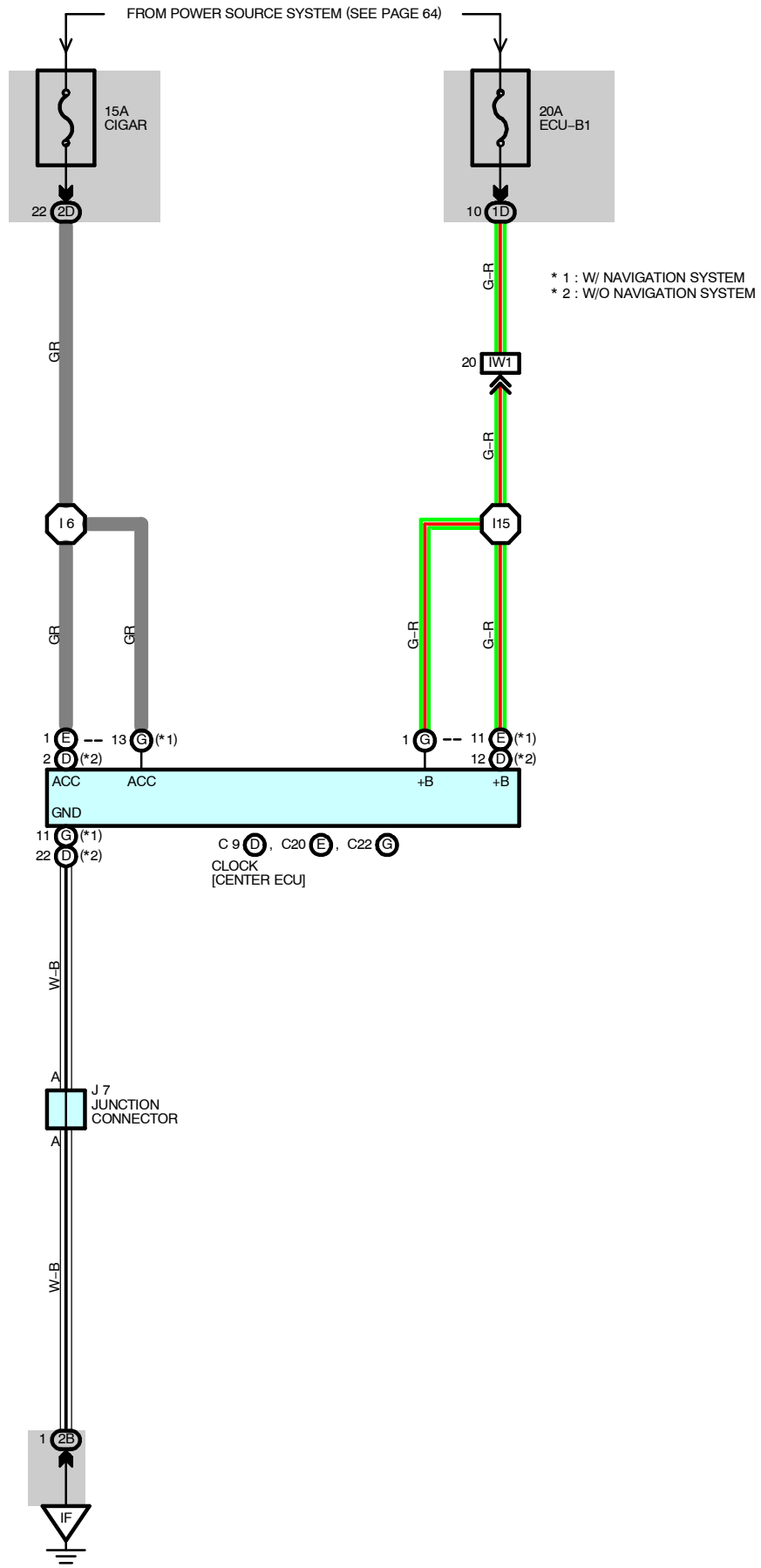
: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
BM	56	Left Rear Side Quarter Panel



: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E13	46	Engine Room No.2 Wire	B15	58	Back Door Upper Wire



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)

SERVICE HINTS

C9 (D), C20 (E), C22 (G) CLOCK [CENTER ECU]

(D) 2, (E) 1, (G) 13-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position

(D) 12, (E) 11, (G) 1-GROUND : Always approx. **12** volts

(D) 22, (G) 11-GROUND : Always continuity

: PARTS LOCATION

Code		See Page		Code		See Page		Code		See Page	
C9	D	40		C22	G	40					
C20	E	40		J7		41					

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

: GROUND POINTS

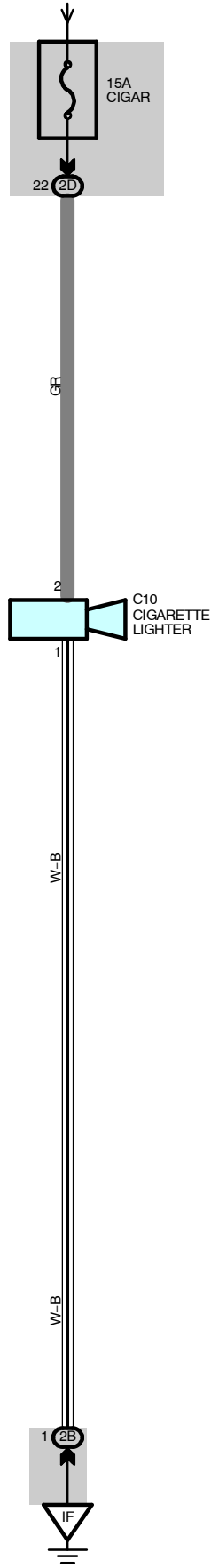
Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	50	Dash Wire	I15	50	Dash Wire

CIGARETTE LIGHTER

FROM POWER SOURCE SYSTEM (SEE PAGE 64)



SERVICE HINTS**C10 CIGARETTE LIGHTER**2-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position

1-GROUND : Always continuity

 : **PARTS LOCATION**

Code	See Page	Code	See Page	Code	See Page
C10	40				

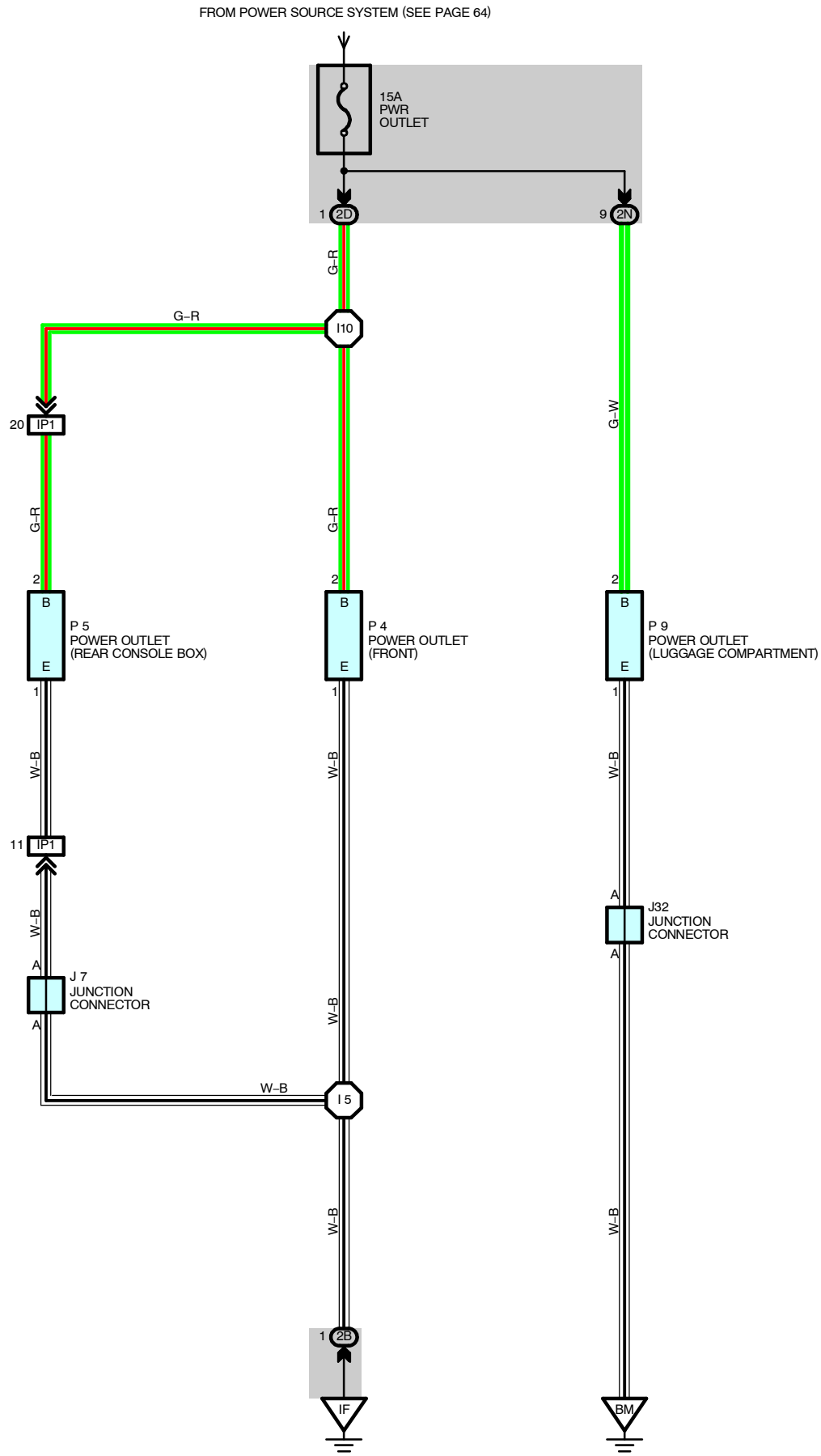
 : **JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	26	
2D		Dash Wire and Cowl Side J/B LH (Left Kick Panel)

 : **GROUND POINTS**

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH

POWER OUTLET



SERVICE HINTS

P4 POWER OUTLET (FRONT)

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

1-GROUND : Always continuity

P5 POWER OUTLET (REAR CONSOLE BOX)

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

1-GROUND : Always continuity

P9 POWER OUTLET (LUGGAGE COMPARTMENT)

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

1-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J7	41	P4	41	P9	43
J32	42	P5	41		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IP1	52	Rear Console Box Wire and Dash Wire (Right Side of Rear Console)

: GROUND POINTS

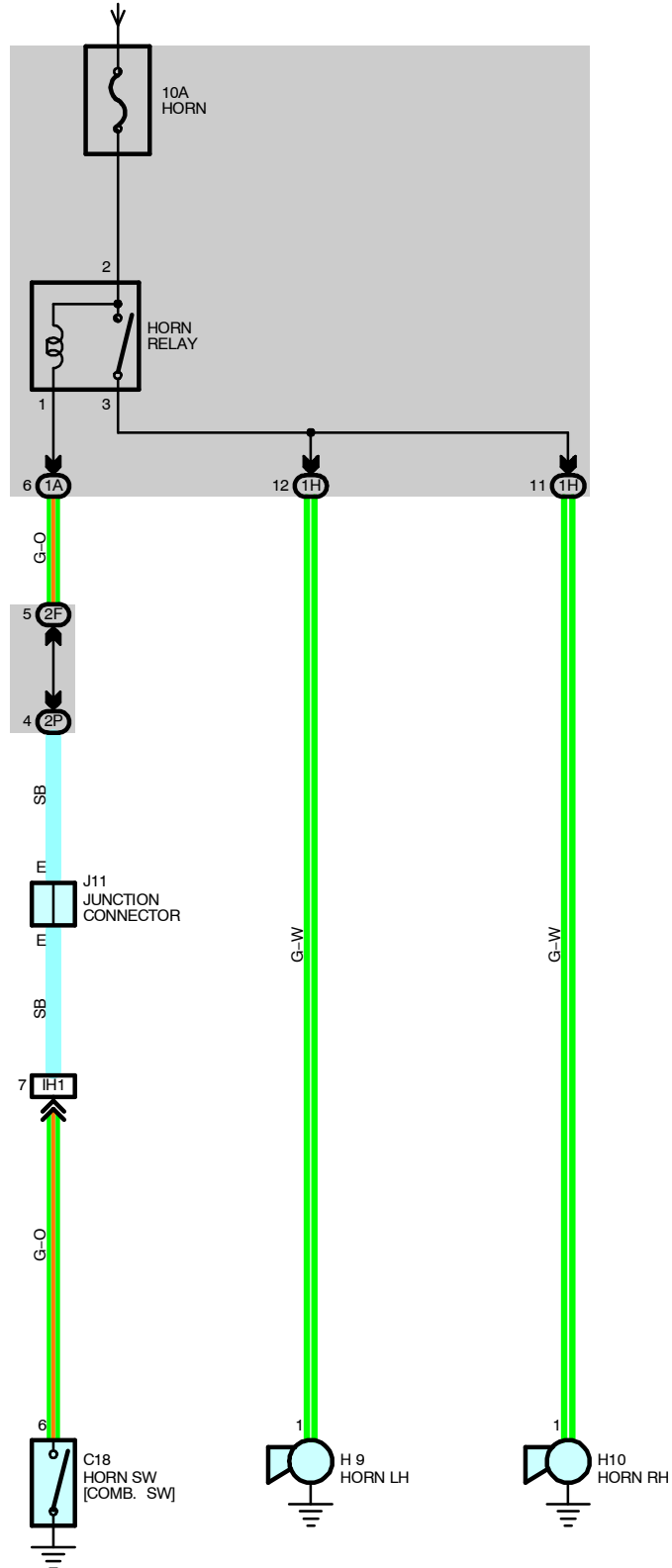
Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
BM	56	Left Rear Side Quarter Panel

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	50	Dash Wire	I10	50	Dash Wire

HORN

FROM POWER SOURCE SYSTEM (SEE PAGE 64)



SERVICE HINTS

HORN RELAY

2-3 : Closed with horn SW on

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C18	40	H10	39		
H9	39	J11	41		

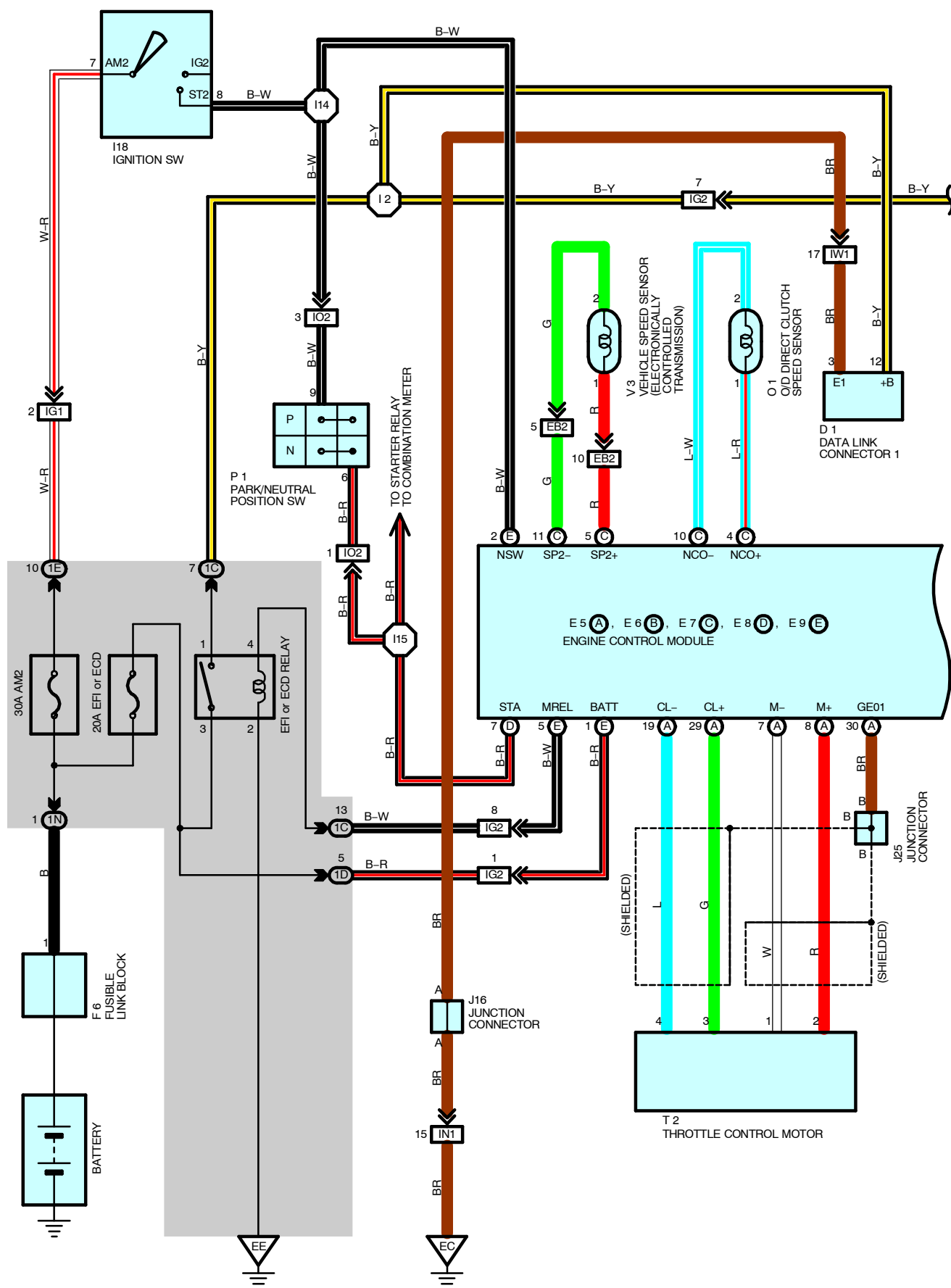
: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1H	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)

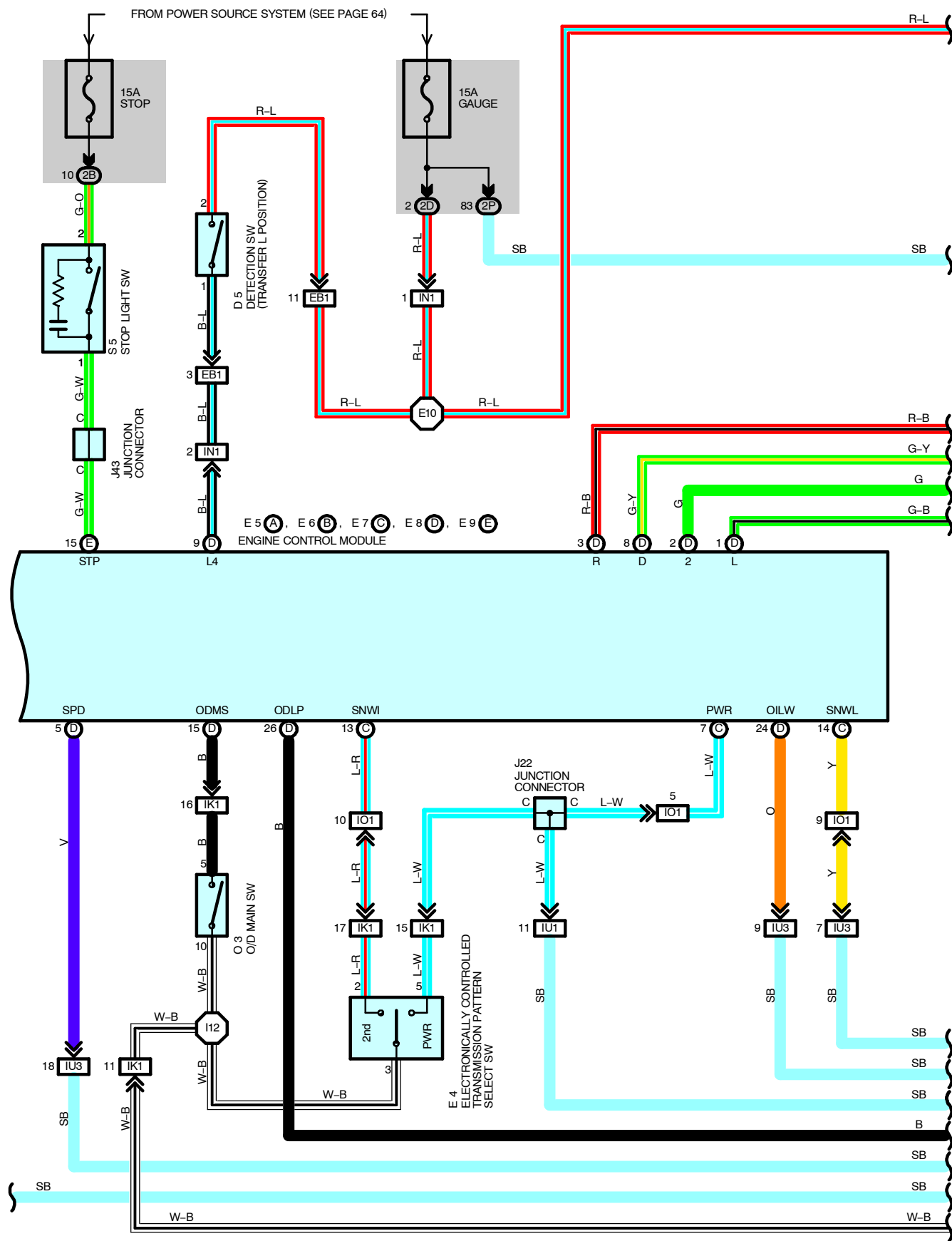
ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR



Donated by Andrew Schauer . cruisercult.com

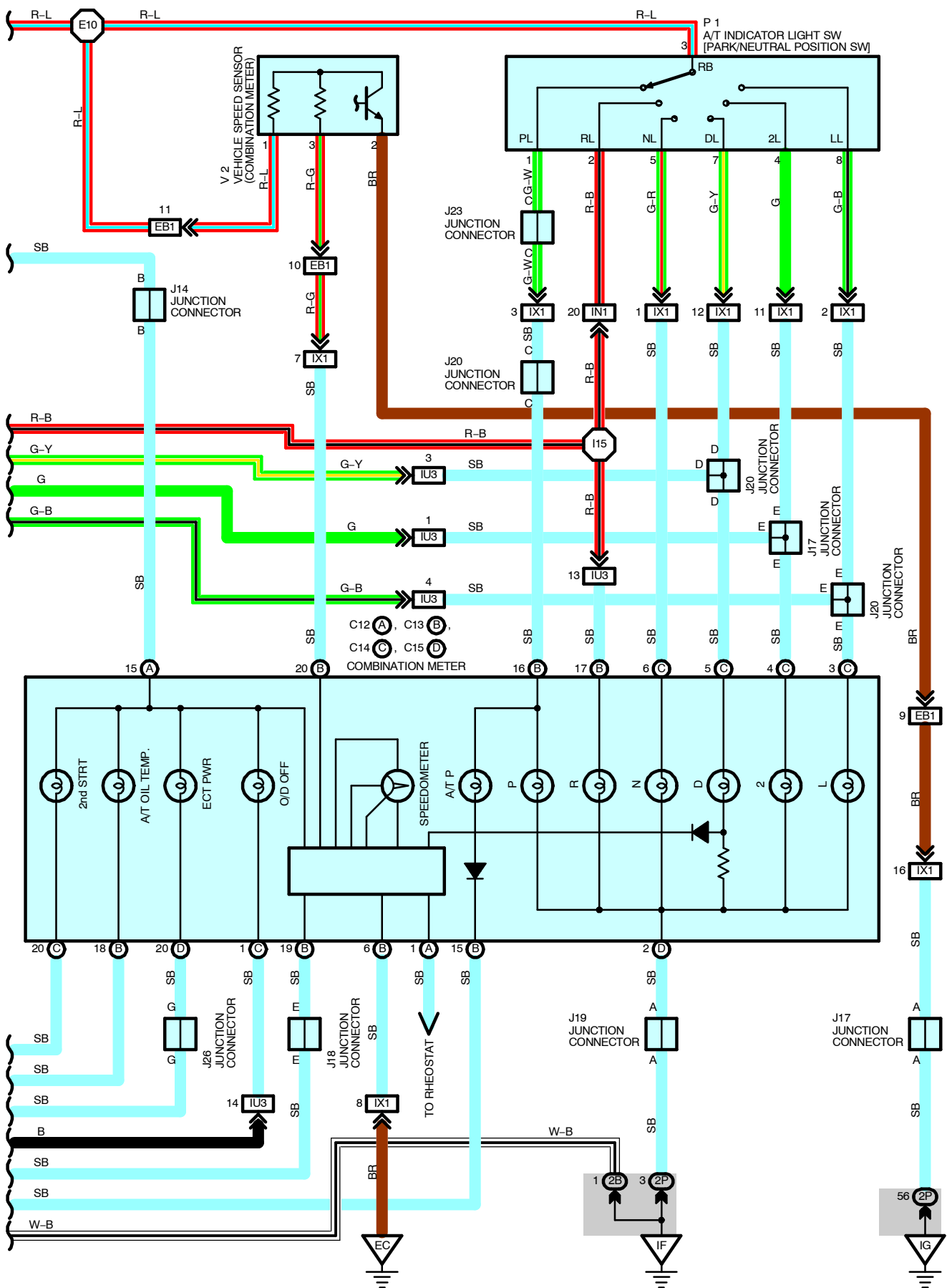
2002 LAND CRUISER (EWD469U)

ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)



ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

SYSTEM OUTLINE

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

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

1. GEAR SHIFT OPERATION

When driving, the engine warm up condition is input as a control signal from the engine coolant temp. sensor to TERMINAL THW of the engine control module, and the vehicle speed is input to TERMINAL SP2+ of the engine control module from the vehicle speed sensor. At the same time, the throttle valve opening signal from the throttle position sensor is input to TERMINALS VTA, VTA2 of the engine control module as a throttle angle signal. Based on these signals, the engine control module selects the best shift position for the driving conditions and sends current to the electronically controlled transmission solenoid.

2. LOCK-UP OPERATION

When the engine control module decides based on each signal that the lock-up condition has been met, the current flows from the engine control module TERMINAL SL to TERMINAL 7 of the electronically controlled transmission solenoid to GROUND.

3. STOP LIGHT SW CIRCUIT

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

4. ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW CIRCUIT

When the electronically controlled transmission pattern select SW is switched to PWR, a signal is input to TERMINAL PWR of the engine control module, and the engine control module controls to enable shift-up and shift-down at a higher speed range than usual. In that case, the ECT PWR indicator light in the combination meter is lit up. When the electronically controlled transmission pattern select SW is switched to 2nd position, a signal is input to the engine control module TERMINAL SNWL, and through control of the engine control module, the gear shift of the transmission is made from 2nd position. The 2nd STRT indicator light in the combination meter is lit up.

5. OVERDRIVE CIRCUIT

* O/D main SW on

When the O/D main SW is turned on, a signal is input to TERMINAL ODMS of the engine control module and engine control module operation causes gear shift when the conditions for overdrive are met.

* O/D main SW off

When the O/D main SW is turned off, a signal is input into TERMINAL ODMS of the engine control module, and turns on the O/D off indicator light. This activates the ECU, and the transmission system is controlled not to shift to overdrive.

6. TRANSFER SHIFT OPERATION

When the transfer shift lever is moved to L position, a signal is input into TERMINAL L4 of the engine control module. In addition when the transfer shift lever is moved to N position a signal is input to engine control module TERMINAL TFN. The engine control module detects the transfer condition through this.

SERVICE HINTS

E4 ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW

5-3 : Closed with select SW at **PWR** position

2-3 : Closed with select SW at **2nd** position

E6 (B), E8 (D), E9 (E) ENGINE CONTROL MODULE

BATT-E1 : Always **9.0-14.0** volts

+B-E1 : **9.0-14.0** volts with ignition SW at **ON** or **ST** position

+B1-E1 : **9.0-14.0** volts with ignition SW at **ON** or **ST** position

NSW-E1 : **9.0-14.0** volts with ignition SW at **ST** position

: **0-3.0** volts with ignition SW on and shift lever in **P** or **N** position

STA-E1 : **6.0** volts or more with ignition SW at **ST** position and shift lever in **P** or **N** position

P1 A/T INDICATOR LIGHT SW [PARK/NEUTRAL POSITION SW]

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

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

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

3-7 : Closed with shift lever in **D** position

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

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

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A7	38	E6	B 40	J23	41
A14	38	E7	C 40	J25	41
C12	A 40	E8	D 40	J26	41
C13	B 40	E9	E 40	J43	41
C14	C 40	F6	38	O1	39
C15	D 40	I18	40	O3	41
D1	38	J14	41	P1	39
D5	38	J16	41	S5	41
D6	38	J17	41	T2	39
E1	38	J18	41	T3	39
E2	38	J19	41	V2	39
E4	40	J20	41	V3	39
E5	A 40	J22	41		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
1E		
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46	Engine Wire and Transmission Wire (On the Transmission)
EB2		
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IK1	50	Console Box Wire and Dash Wire (Left Side of Front Console)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IO1		
IO2		
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU3		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)

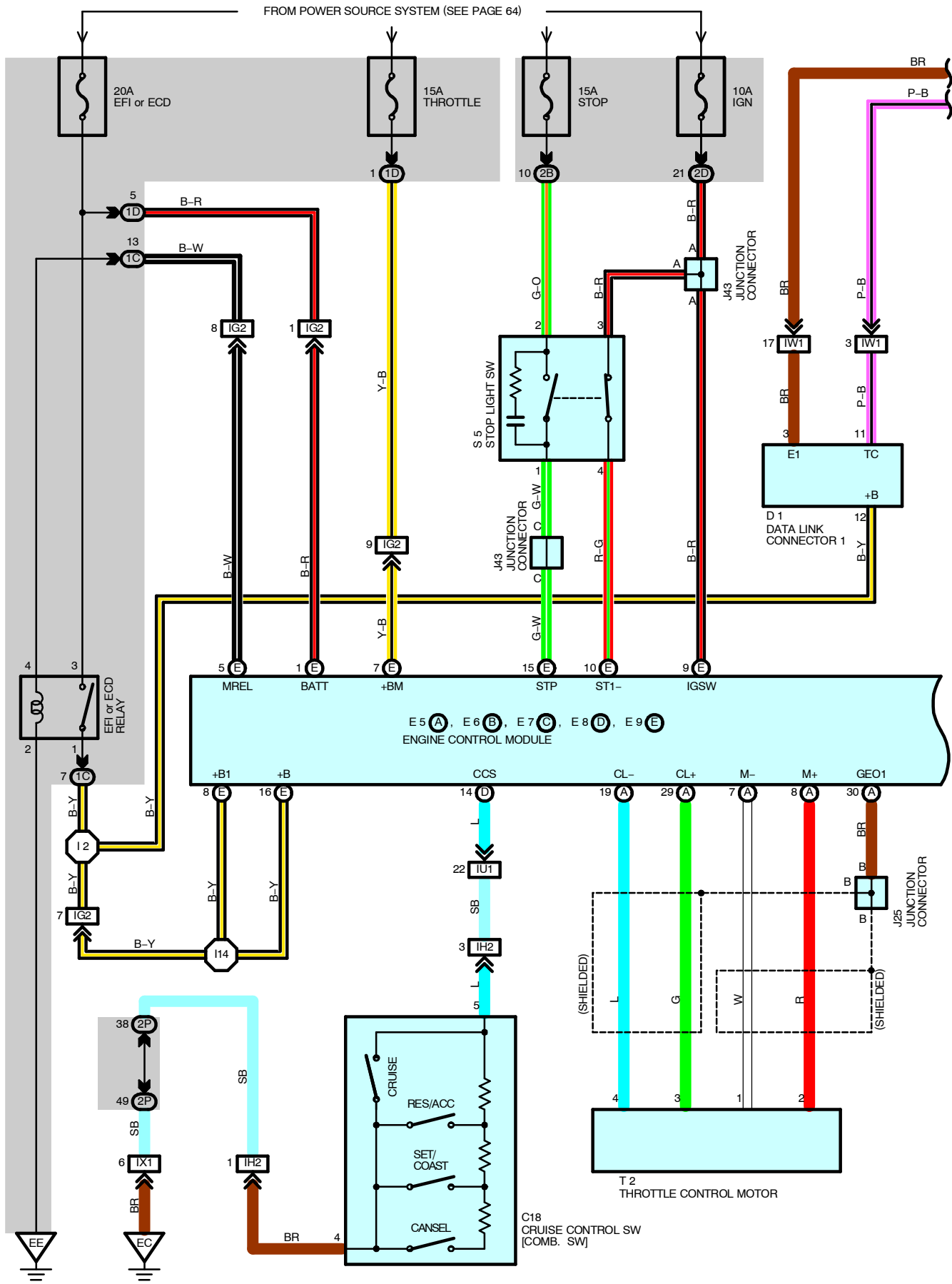
: GROUND POINTS

Code	See Page	Ground Points Location
EC	46	Rear Bank of Right Cylinder Head
EE	46	Front Left Side of Fender Apron
IF	48	Set Bolt of Cowl Side J/B LH
IG		

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E7	46	Engine Wire	I12	50	Console Box Wire
E10			I14	50	Dash Wire
I2	50	Engine Room No.2 Wire	I15		

CRUISE CONTROL



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)

SYSTEM OUTLINE

The cruise control system is a constant vehicle speed controller which controls the opening angle of the engine throttle valve by the SW, and allows driving at a constant speed without depressing the accelerator pedal.

SET OPERATION

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

SET SPEED CONTROL

When the SET/COAST SW is operated with the CRUISE SW turned on during driving, the speed is controlled at a constant speed.

COAST CONTROL

When the SET/COAST SW is kept turned on during cruise control driving, the engine control module controls the throttle valve to decelerate the vehicle speed.

Every time the SET/COAST SW is turned on instantaneously, the vehicle speed is decelerated approx. 1.5 km/h.

ACCEL CONTROL

When the RES/ACC SW is kept turned on during cruise control driving, the engine control module controls the throttle valve to accelerate the vehicle speed.

Every time the SET/COAST SW is turned on instantaneously, the vehicle speed is accelerated approx. 1.5 km/h.

RESUME CONTROL

If the vehicle speed is within the low speed limit (Approx. 40 km/h, 25 mph) when canceling the cruise control, operation of the RES/ACC SW accelerates the vehicle speed and resumes the level before canceling the cruise control.

MANUAL CANCEL MECHANISM

If any of the following signals are input during cruise control driving, the cruise control is canceled.

- * The stop light SW is on
- * The CANCEL SW is turned on
- * The CRUISE SW is turned off

AUTO CANCEL FUNCTION

If any of the following conditions are detected, the cruise control is canceled:

- * Failure in the stop light SW wiring
- * Abnormality in the vehicle speed signal
- * Malfunction in the electronically controlled throttle parts

OVERDRIVE FUNCTION

The overdrive may be canceled if the vehicle travels on an upward slope during cruise control driving. After the overdrive is canceled, if the vehicle speed exceeds the overdrive return speed (Set speed (2 km/h, 1.2 mph)) and it is determined that the slope has finished, and the vehicle returns to overdrive mode again.

SERVICE HINTS

E5 (A), E6 (B), E8 (D), E9 (E) ENGINE CONTROL MODULE

IGSW-E1 : 9.0-14.0 volts with ignition SW at ON or ST position

BATT-E1 : Always approx. 9.0-14.0 volts

STP-E1 : Approx. 12 volts with stop light SW at on

: Below 1.5 volts with brake pedal is released

C18 CRUISE CONTROL SW [COMB. SW]

5-4 : Approx. 1540 Ω with CANCEL SW on

: Approx. 240 Ω with SET/COAST SW on

: Approx. 630 Ω with RES/ACC SW on

CRUISE CONTROL

: PARTS LOCATION

Code		See Page		Code		See Page		Code		See Page	
A14		38		E7	C	40		J21	41		
C12	A	40		E8	D	40		J25	41		
C13	B	40		E9	E	40		J43	41		
C14	C	40		J7		41		P1	39		
C18		40		J14		41		S5	41		
D1		38		J16		41		T2	39		
D7		40		J17		41		T3	39		
E5	A	40		J18		41		V2	39		
E6	B	40		J20		41		V3	39		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

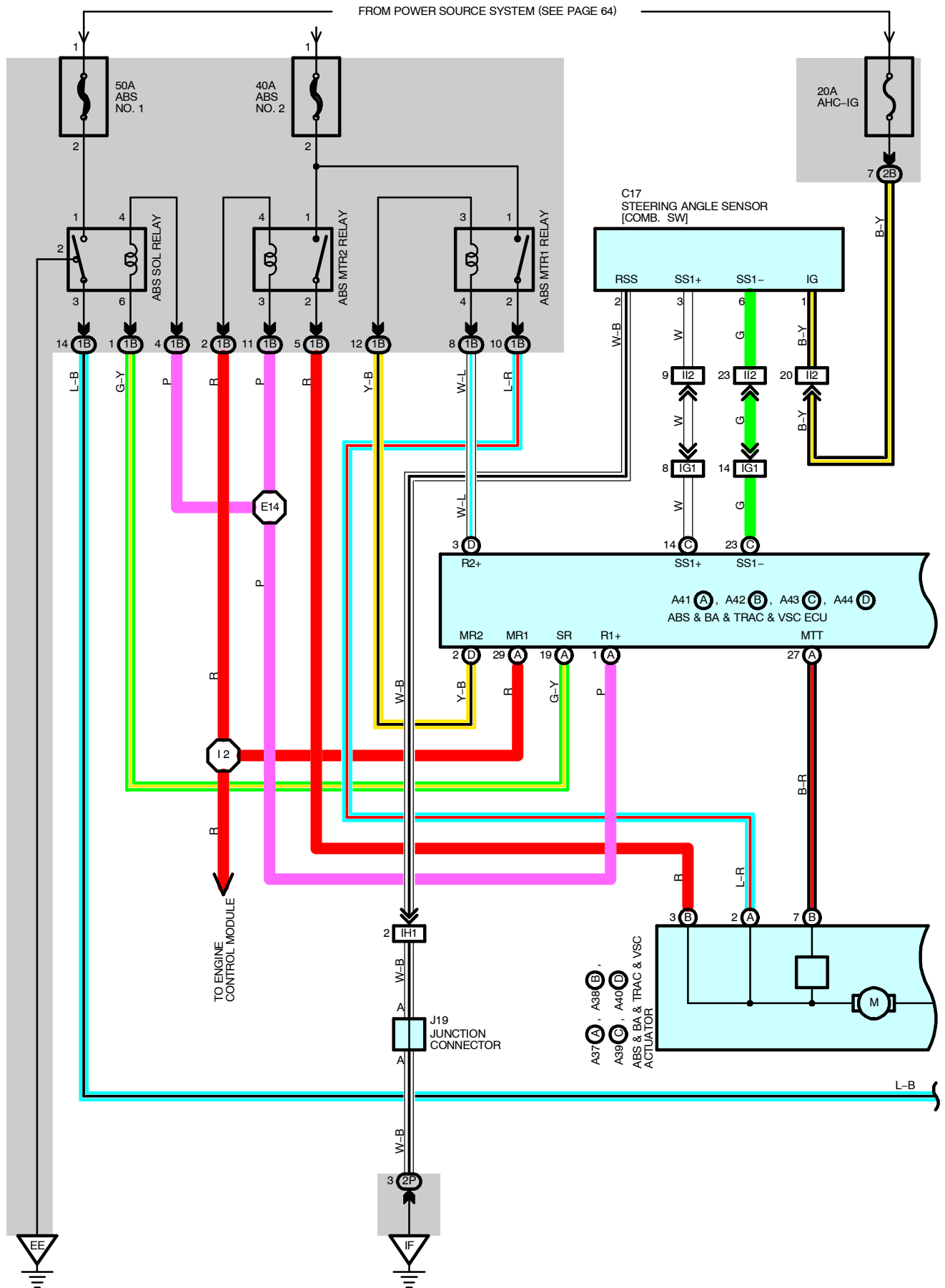
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46	Engine Wire and Transmission Wire (On the Transmission)
EB2		
IG2	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IH2		
IJ1	50	Dash Wire and Detector Wire (Instrument Panel Center)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU2		
IU3		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)

: GROUND POINTS

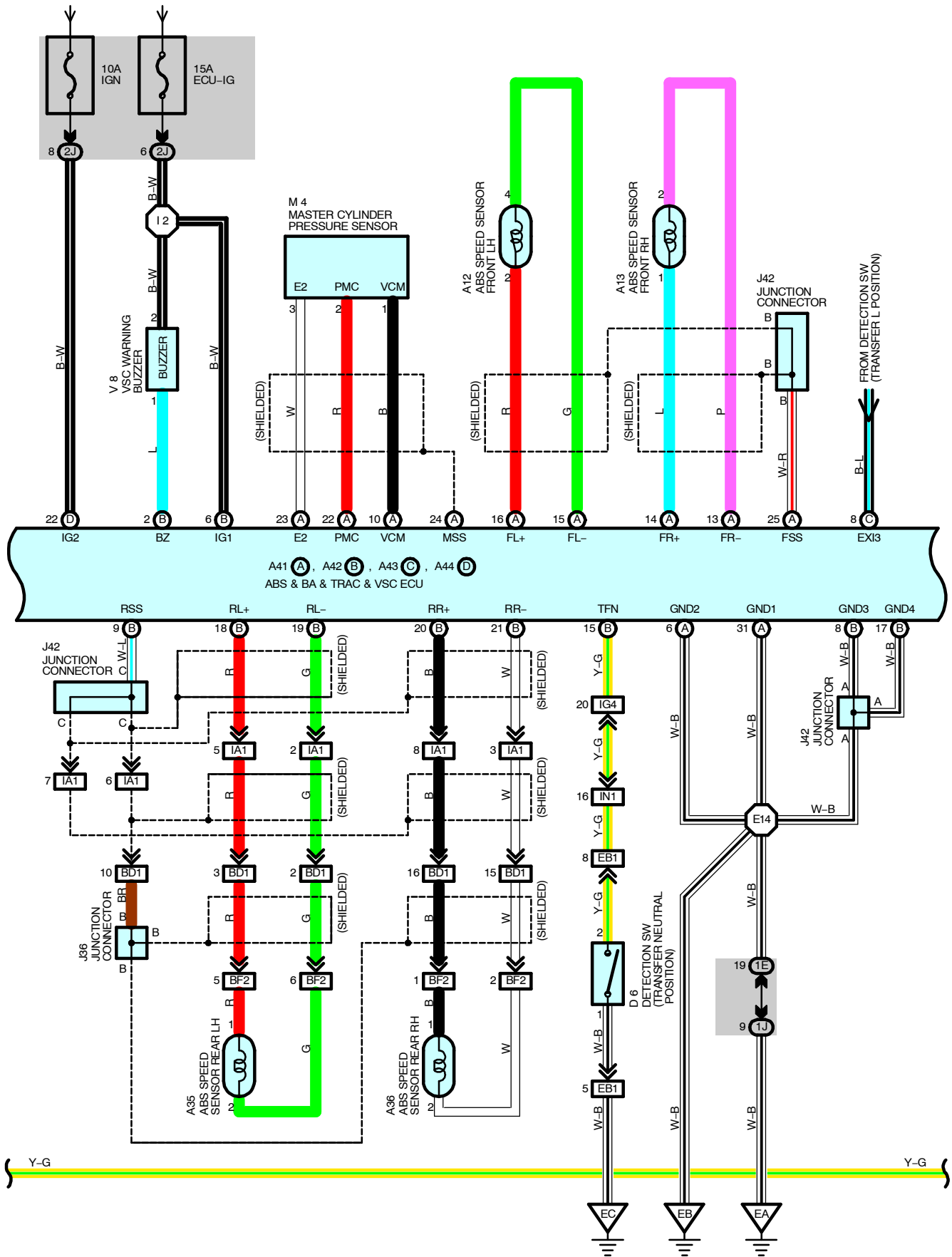
Code	See Page	Ground Points Location
EC	46	Rear Bank of Right Cylinder Head
EE	46	Front Left Side of Fender Apron
IF	48	Set Bolt of Cowl Side J/B LH
IG		

: SPLICE POINTS

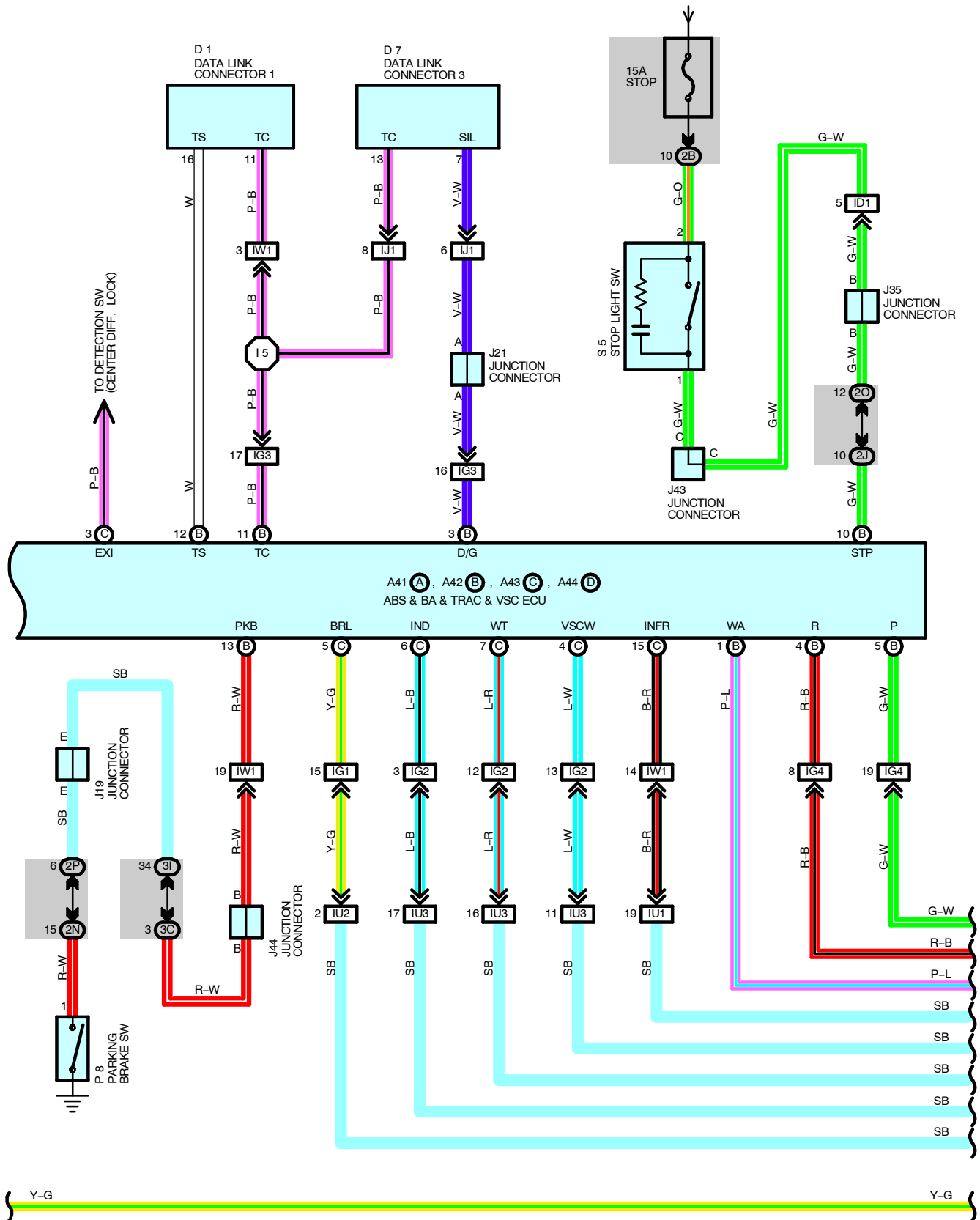
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E7	46	Engine Wire	I5	50	Dash Wire
E10			I14		
I2	50	Engine Room No.2 Wire			

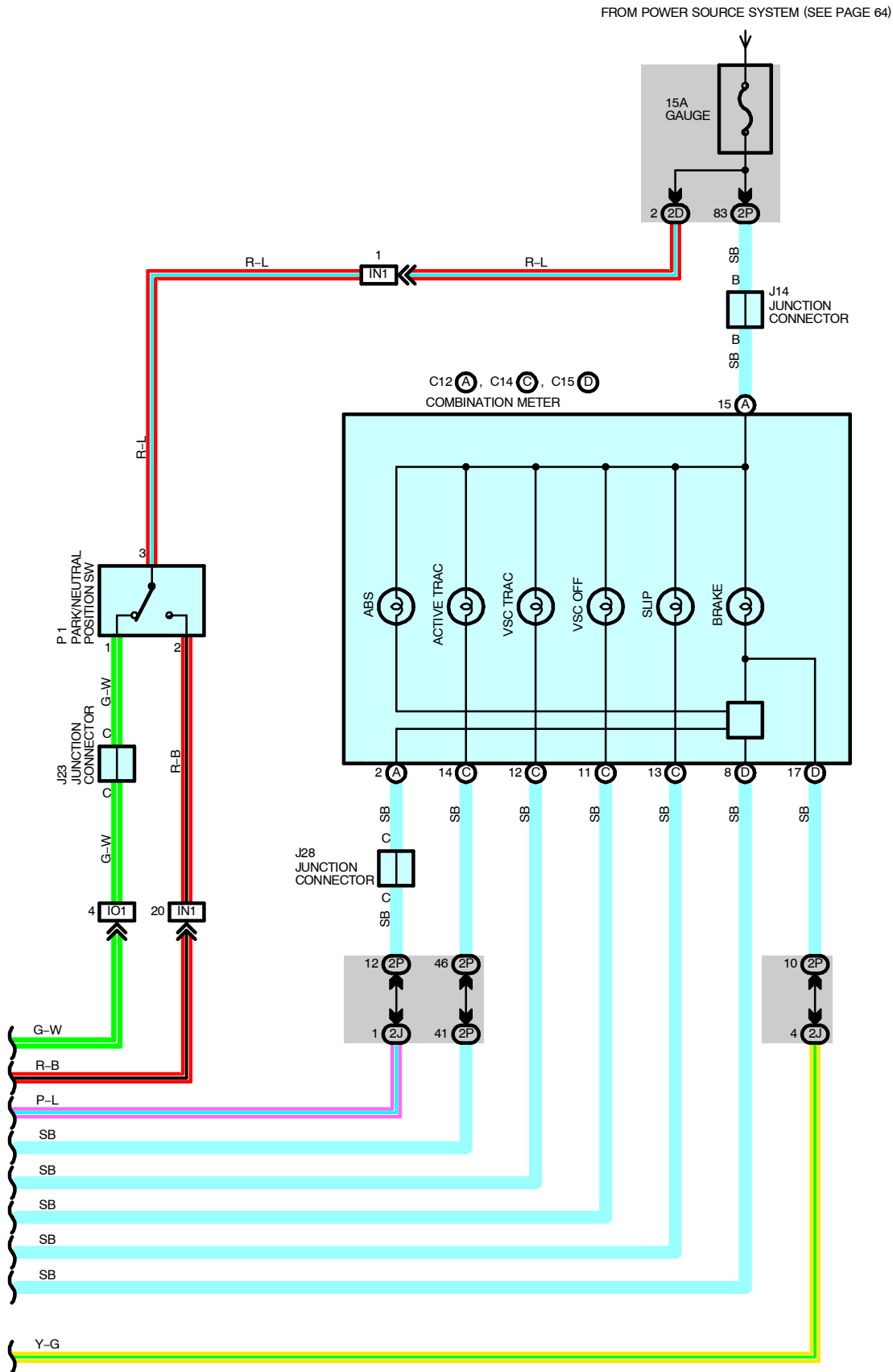


FROM POWER SOURCE SYSTEM (SEE PAGE 64)



FROM POWER SOURCE SYSTEM (SEE PAGE 64)





SYSTEM OUTLINE

1. ABS OPERATION

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

2. TRACTION CONTROL OPERATION

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

3. VSC OPERATION

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

To reduce large over-steering :

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

To reduce large under-steering :

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

VSC indicator light

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

4. TRACTION MODE AND VSC FUNCTION

When the center differential of the transfer is locked, the VSC function is turned off. At this time, the VSC OFF indicator light in the combination meter will come on, and informs the driver that the VSC function is OFF.

5. MUTUAL SYSTEM CONTROL

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

Engine throttle control

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

Engine control and electronically controlled transmission control

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

VSC system operation indication

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

6. FAIL SAFE FUNCTION

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

SERVICE HINTS

A41 (A), A42 (B), A44 (D) ABS & BA & TRAC & VSC ECU

(B) 6-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

(D)22-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

(B)10-GROUND : Approx. 12 volts with brake pedal depressed

(A) 6, (A) 31, (B) 8, (B) 17-GROUND : Always continuity

(B)12-GROUND : Approx. 12 volts with ignition SW at **ON** position and data link connector 1 **TS-E1** not connected

(B)11-GROUND : Approx. 12 volts with ignition SW at **ON** position and data link connector 1 **TC-E1** not connected

A12 ABS SPEED SENSOR FRONT LH

2-4 : Approx. 1.07 kΩ (20 °C, 68 °F)

A13 ABS SPEED SENSOR FRONT RH

1-2 : Approx. 1.07 kΩ (20 °C, 68 °F)

A35, A36 ABS SPEED SENSOR REAR LH, RH

1-2 : Approx. 1.2 kΩ (25 °C, 77 °F)



: PARTS LOCATION

Code		See Page		Code		See Page		Code		See Page	
A12		38		C14	C	40		J35		42	
A13		38		C15	D	40		J36		42	
A35		42		C17		40		J42		41	
A36		42		D1		38		J43		41	
A37	A	38		D6		38		J44		41	
A38	B	38		D7		40		M4		39	
A39	C	38		D25		40		P1		39	
A40	D	38		E8		40		P8		43	
A41	A	40		J14		41		S5		41	
A42	B	40		J19		41		V8		41	
A43	C	40		J21		41		Y1		41	
A44	D	40		J23		41					
C12	A	40		J28		41					



: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1E		
1J	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2J	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2O		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3C	32	Dash Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46	Engine Wire and Transmission Wire (On the Transmission)
IA1	48	Floor Wire and Engine Room No.2 Wire (Left Kick Panel)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IG3		
IG4		
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
II2	50	Column Wire and Dash Wire (Near the Ignition SW)
IJ1	50	Dash Wire and Detector Wire (Instrument Panel Center)
IK2	50	Console Box Wire and Dash Wire (Left Side of Front Console)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IO1		
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU2		
IU3		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BD1	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BF2	56	Frame Wire and Floor No.3 Wire (Left Side of Rear Floor Crossmember)

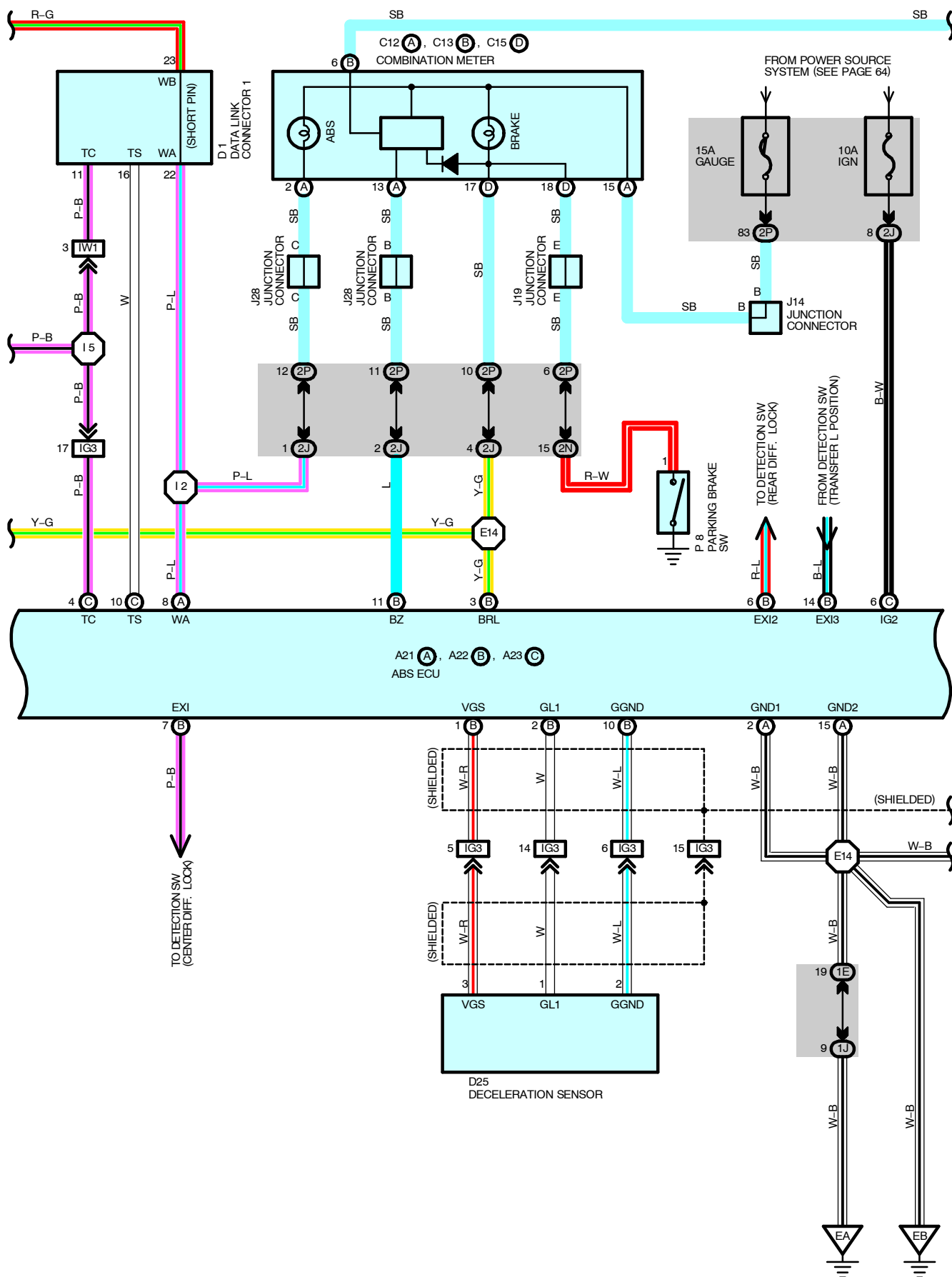
 : GROUND POINTS

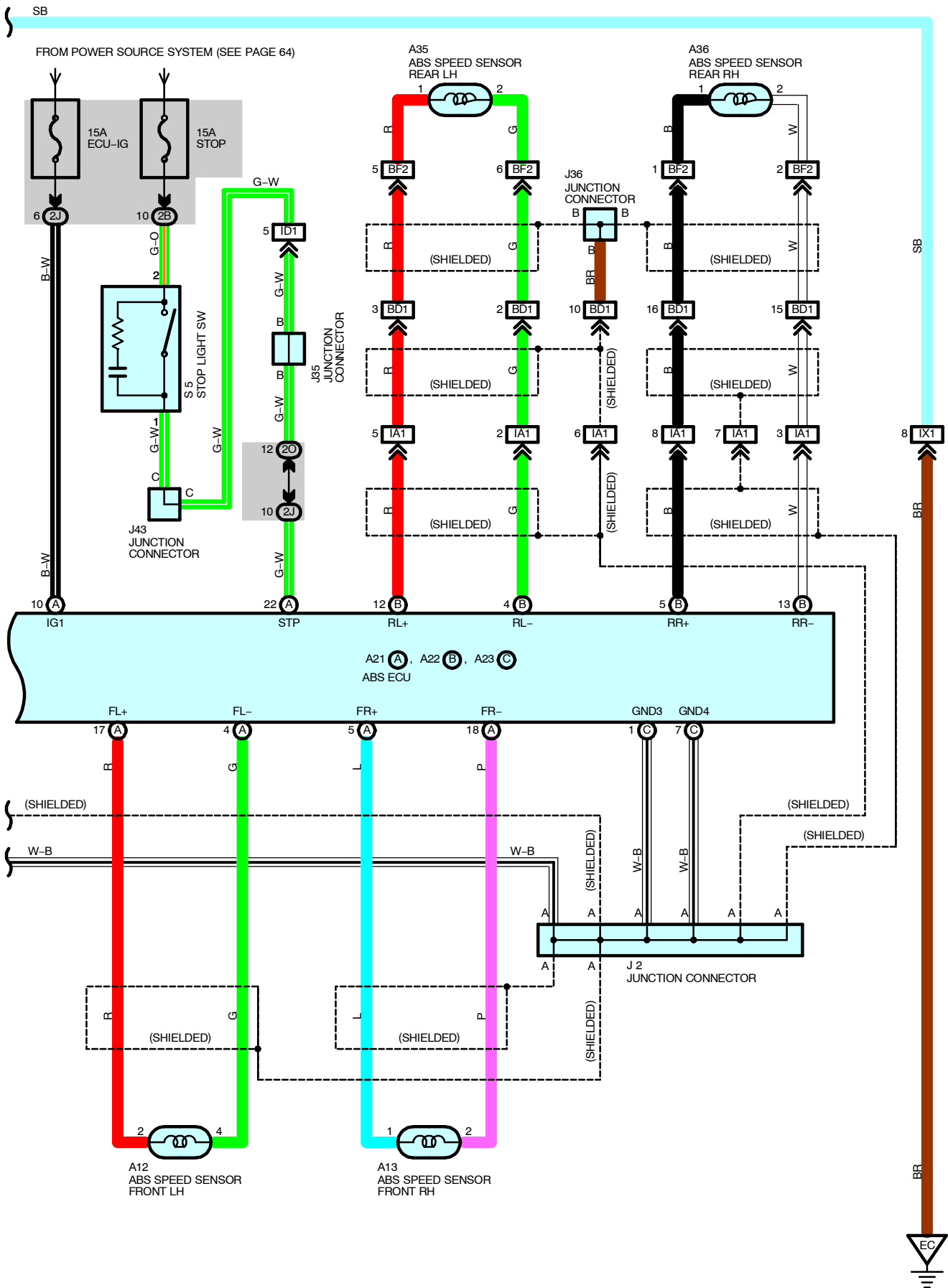
Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
EC	46	Rear Bank of Right Cylinder Head
EE	46	Front Left Side of Fender Apron
IF	48	Set Bolt of Cowl Side J/B LH

 : SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E13	46	Engine Room No.2 Wire	I2	50	Engine Room No.2 Wire
E14			I5	50	Dash Wire







SYSTEM OUTLINE

ABS OPERATION

If the brake pedal is depressed suddenly, the ABS controls the hydraulic pressure of the wheel cylinders to automatically avoid wheel locking and ensure the directional and steering stability of the vehicle.

In sudden braking, the ABS ECU controls the solenoids in the actuators using the signals from the sensors to move the brake fluid to the reservoir in order to release the braking pressure applied to the wheel cylinder. If the ABS ECU detects that the fluid pressure in the wheel cylinder is insufficient, the ABS ECU controls the solenoids in the actuators to increase the braking pressure.

FAIL-SAFE FUNCTION

If an error occurs in the ABS ECU, sensor signals, and/or actuators, the ABS ECU inhibits the brake actuator control. According to this, the brake actuator turns off the solenoid, and the vehicle operates without the ABS system.

SERVICE HINTS

A21 (A), A22 (B), A23 (C) ABS ECU

(A)10-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position

(C) 6-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position

(A)22-GROUND : Approx. **12** volts with brake pedal depressed

(A) 2, (A) 15, (C) 1, (C) 7-GROUND : Always continuity

(C)10-GROUND : Approx. **12** volts with ignition SW at **ON** position and the data link connector 1 **TS-E1** not connected

(C) 4-GROUND : Approx. **12** volts with ignition SW at **ON** position and the data link connector 1 **TC-E1** not connected

A11 (D) BRAKE FLUID LEVEL WARNING SW [ABS ACTUATOR]

(D) 2-(D) 1 : Closed with the float down

A12 ABS SPEED SENSOR FRONT LH

2-4 : Approx. **1.07** k Ω (**20**°C, **68**°F)

A13 ABS SPEED SENSOR FRONT RH

1-2 : Approx. **1.07** k Ω (**20**°C, **68**°F)

A35, A36 ABS SPEED SENSOR REAR LH, RH

1-2 : Approx. **1.2** k Ω (**25**°C, **77**°F)

: PARTS LOCATION

Code		See Page	Code		See Page	Code	See Page
A8	A	38	A35		42	J14	41
A9	B	38	A36		42	J19	41
A10	C	38	C12	A	40	J21	41
A11	D	38	C13	B	40	J28	41
A12		38	C15	D	40	J35	42
A13		38	D1		38	J36	42
A21	A	40	D7		40	J43	41
A22	B	40	D25		40	P8	43
A23	C	40	J2		41	S5	41

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
1E		
1J	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2J	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2O		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

ABS



: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA1	48	Floor Wire and Engine Room No.2 Wire (Left Kick Panel)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IG3	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IJ1	50	Dash Wire and Detector Wire (Instrument Panel Center)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)
BD1	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BF2	56	Frame Wire and Floor No.3 Wire (Left Side of Rear Floor Crossmember)



: GROUND POINTS

Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
EC	46	Rear Bank of Right Cylinder Head
EE	46	Front Left Side of Fender Apron

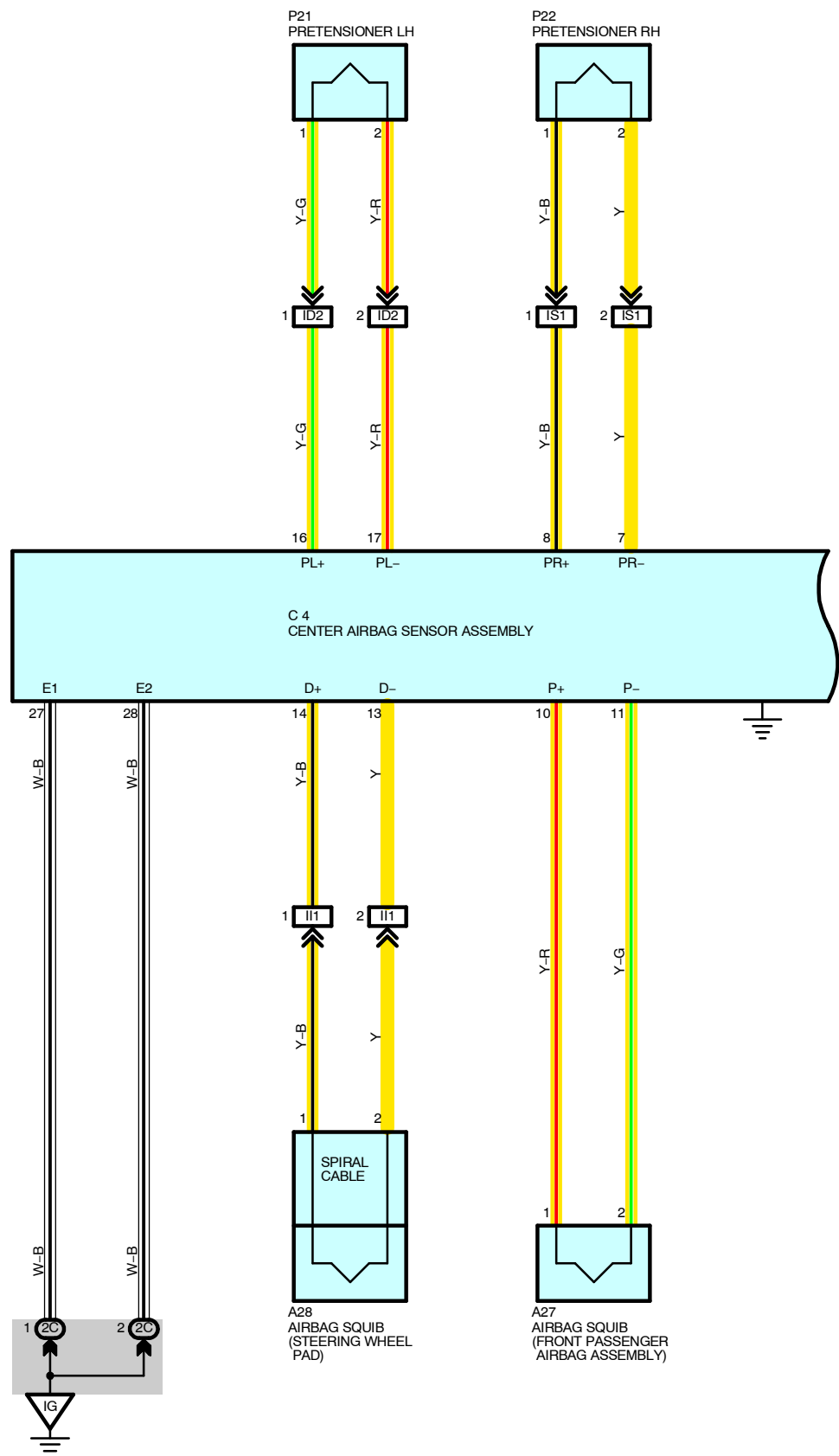


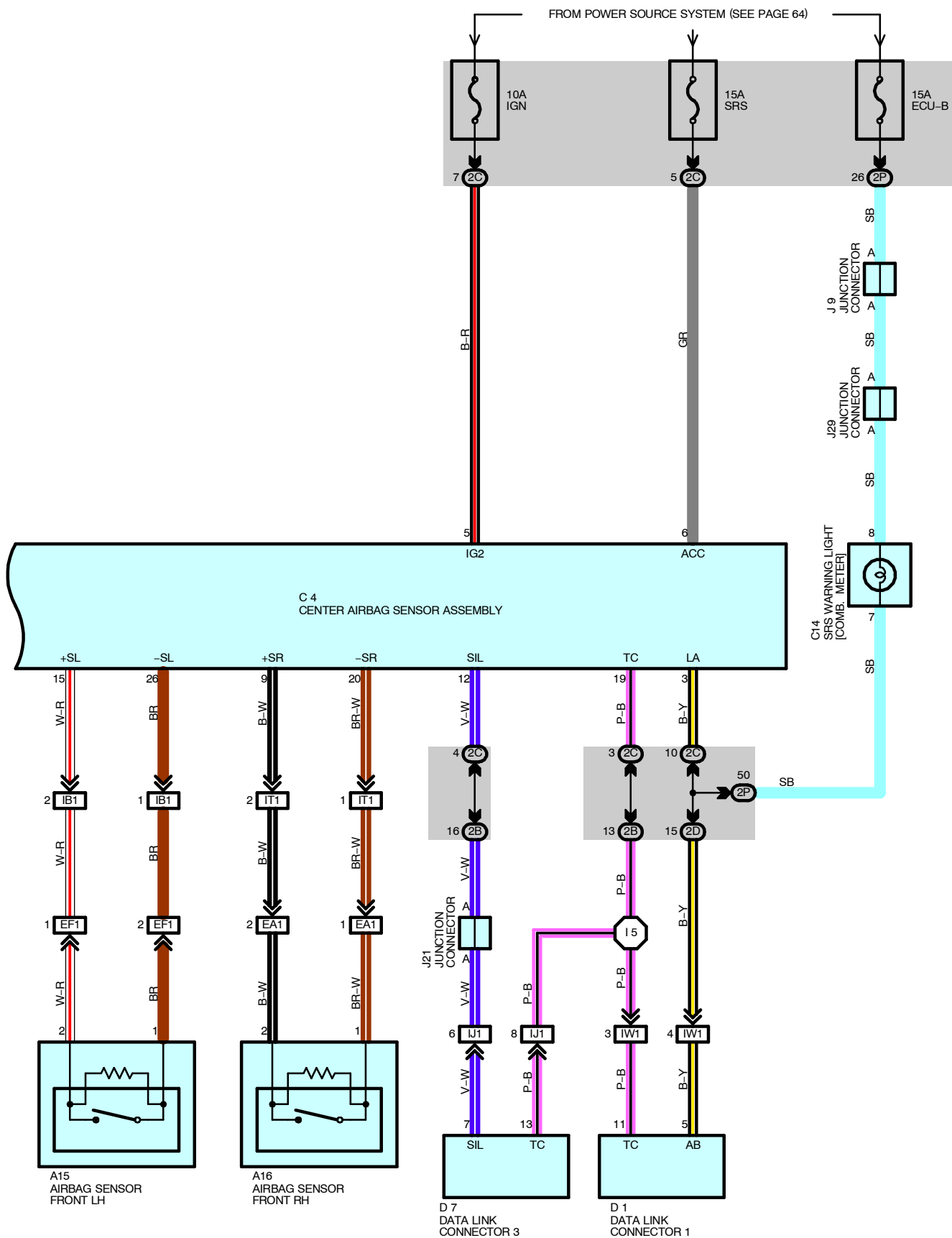
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E13	46	Engine Room No.2 Wire	I2	50	Engine Room No.2 Wire
E14			I5	50	Dash 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, seat belt pretensioner, airbag sensor front assembly or center 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, seat belt pretensioner, airbag sensor front assembly and center 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, seat belt pretensioner, airbag sensor front assembly or center airbag sensor assembly in order to reuse it.
- If the steering wheel pad, front passenger airbag assembly, seat belt pretensioner, airbag sensor front assembly or center 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 on, the current from the SRS fuse flows to the center airbag sensor assembly TERMINAL 6. Only when the ignition SW is on does the current from the IGN fuse flow to center airbag sensor assembly TERMINAL 5. In case an accident occurs while driving, when the frontal impact exceeds a predetermined level, the current from the SRS or IGN fuse flows to center airbag sensor assembly TERMINALS 14, 10, 16, 8 to airbag squibs and pretensioners to center airbag sensor assembly TERMINALS 13, 11, 17, 7 to TERMINALS 27, 28 or BODY GROUND to GROUND. As a result, the current flows to the airbag squibs and pretensioner squibs, and operates the airbag and pretensioners. The airbag stored in the steering wheel pad is instantaneously expanded to soften the shock to the driver. The airbag stored in the front passenger's instrument panel is instantaneously expanded to soften the shock to the front passenger. The pretensioners ensure the seat belt restrainability.

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A15	38	C14	40	J29	41
A16	38	D1	38	P21	43
A27	40	D7	40	P22	43
A28	40	J9	41		
C4	40	J21	41		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2C		
2D		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	46	Engine Room Main Wire and Engine Room No.2 Wire (Engine Compartment Right)
EF1	46	Engine Room No.2 Wire and Engine Room Main Wire (Under the Engine Room J/B)
IB1	48	Engine Room No.2 Wire and Dash Wire (Left Kick Panel)
ID2	48	Dash Wire and Floor Wire (Left Kick Panel)
II1	50	Dash Wire and Column Wire (Near the Ignition SW)
IJ1	50	Dash Wire and Detector Wire (Instrument Panel Center)
IS1	52	Dash Wire and Floor No.2 Wire (Right Kick Panel)
IT1	52	Engine Room No.2 Wire and Dash Wire (Right Kick Panel)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

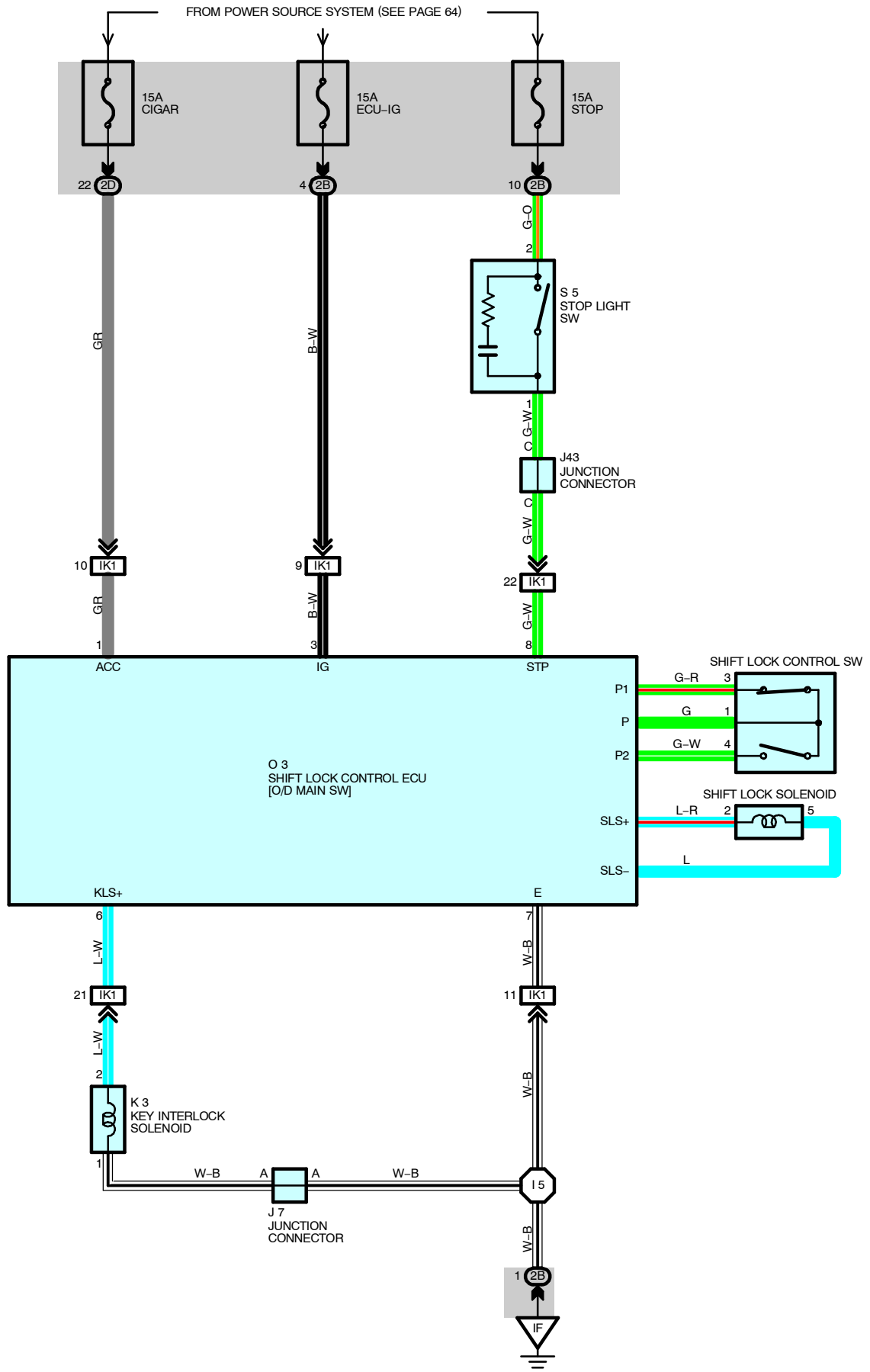
▽ : GROUND POINTS

Code	See Page	Ground Points Location
IG	48	Set Bolt of Cowl Side J/B LH

○ : SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	50	Dash Wire			

SHIFT LOCK



SYSTEM OUTLINE

1. SHIFT LOCK MECHANISM

When the brake pedal is depressed with the ignition SW is turned on (Stop light SW on), the shift lock control ECU is activated and allows the driver to change the shift lever to a position other than P position.

2. KEY INTERLOCK MECHANISM

When the ignition SW is turned on and the shift lever is at a position other than P position, shift lock control ECU is activated to flow current to the key interlock solenoid. This inhibits to turn the ignition SW is turned from on to OFF position.

SERVICE HINTS

O3 SHIFT LOCK CONTROL ECU [O/D MAIN SW]

3-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

7-GROUND : Always continuity

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

8-GROUND : Approx. 12 volts with brake pedal depressed

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J7	41	K3	41	S5	41
J43	41	O3	41		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IK1	50	Console Box Wire and Dash Wire (Left Side of Front Console)

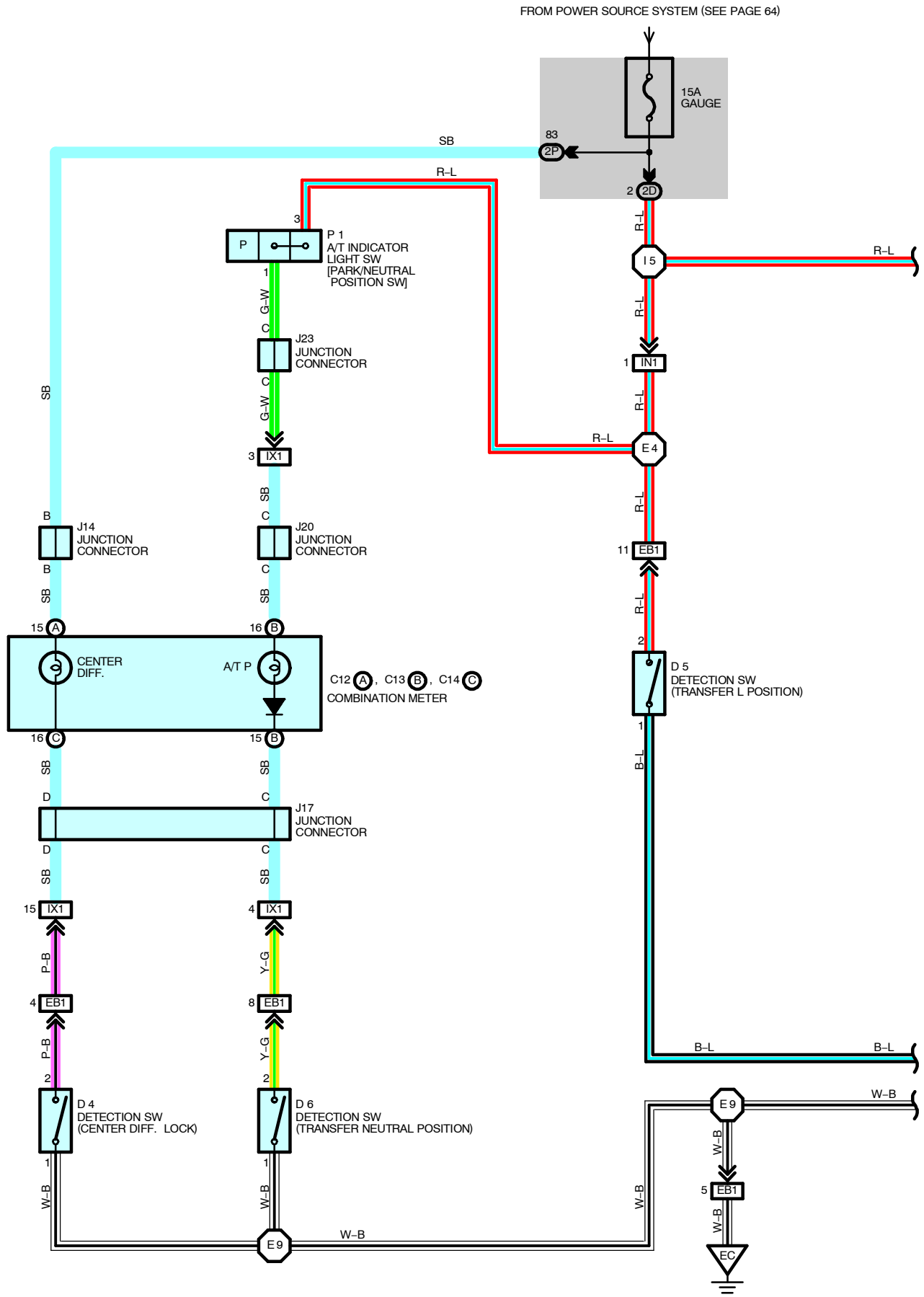
: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH

: SPLICE POINTS

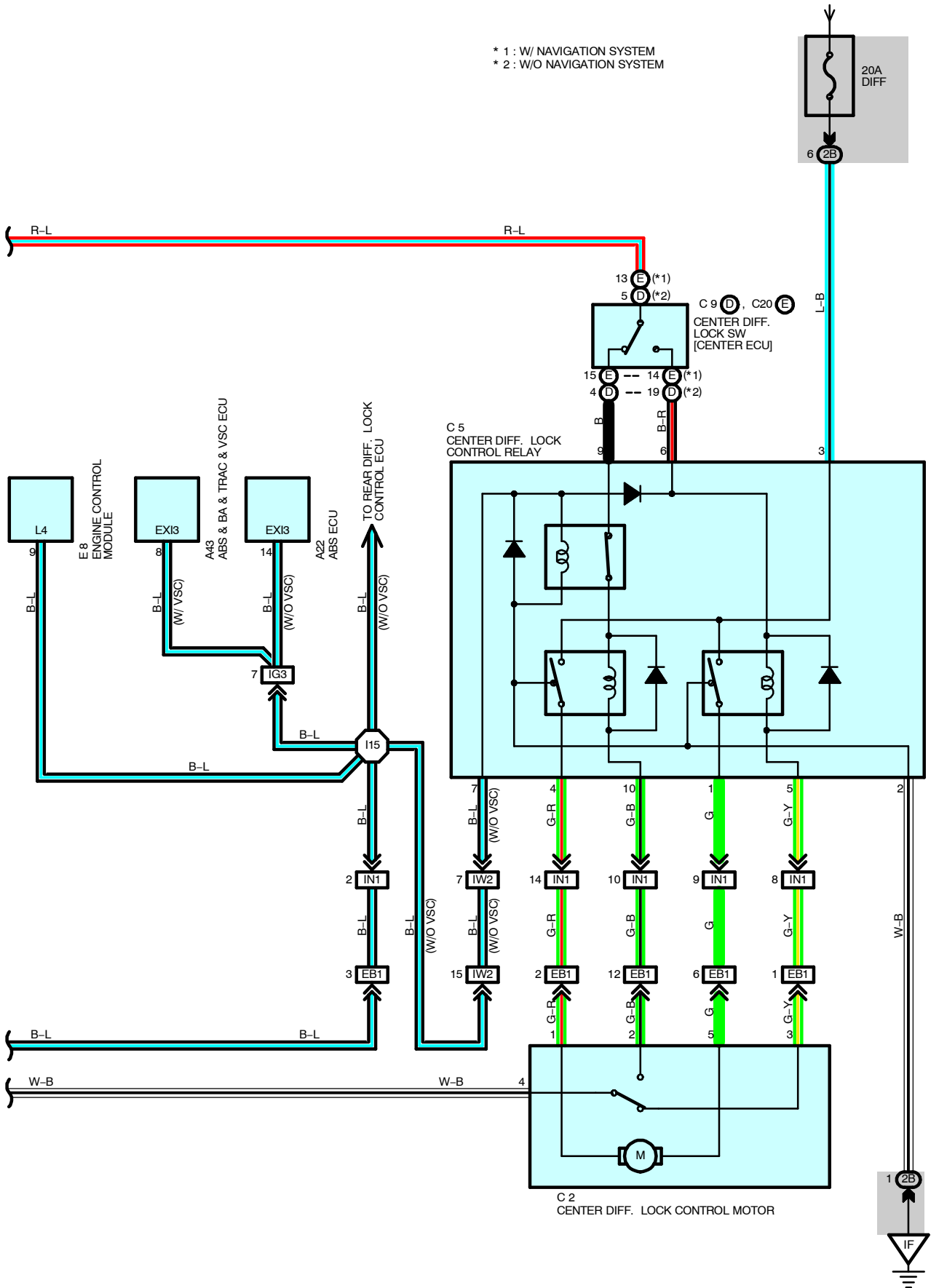
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	50	Dash Wire			

CENTER DIFFERENTIAL LOCK



FROM POWER SOURCE SYSTEM (SEE PAGE 64)

- * 1 : W/ NAVIGATION SYSTEM
- * 2 : W/O NAVIGATION SYSTEM



CENTER DIFFERENTIAL LOCK

SERVICE HINTS

C5 CENTER DIFF. LOCK CONTROL RELAY

- 3-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position
- 2-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A22	40	C13	B 40	E8	40
A43	40	C14	C 40	J14	41
C2	38	C20	E 40	J17	41
C5	40	D4	38	J20	41
C9	D 40	D5	38	J23	41
C12	A 40	D6	38	P1	39

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46	Engine Wire and Transmission Wire (On the Transmission)
IG3	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IW2	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)

: GROUND POINTS

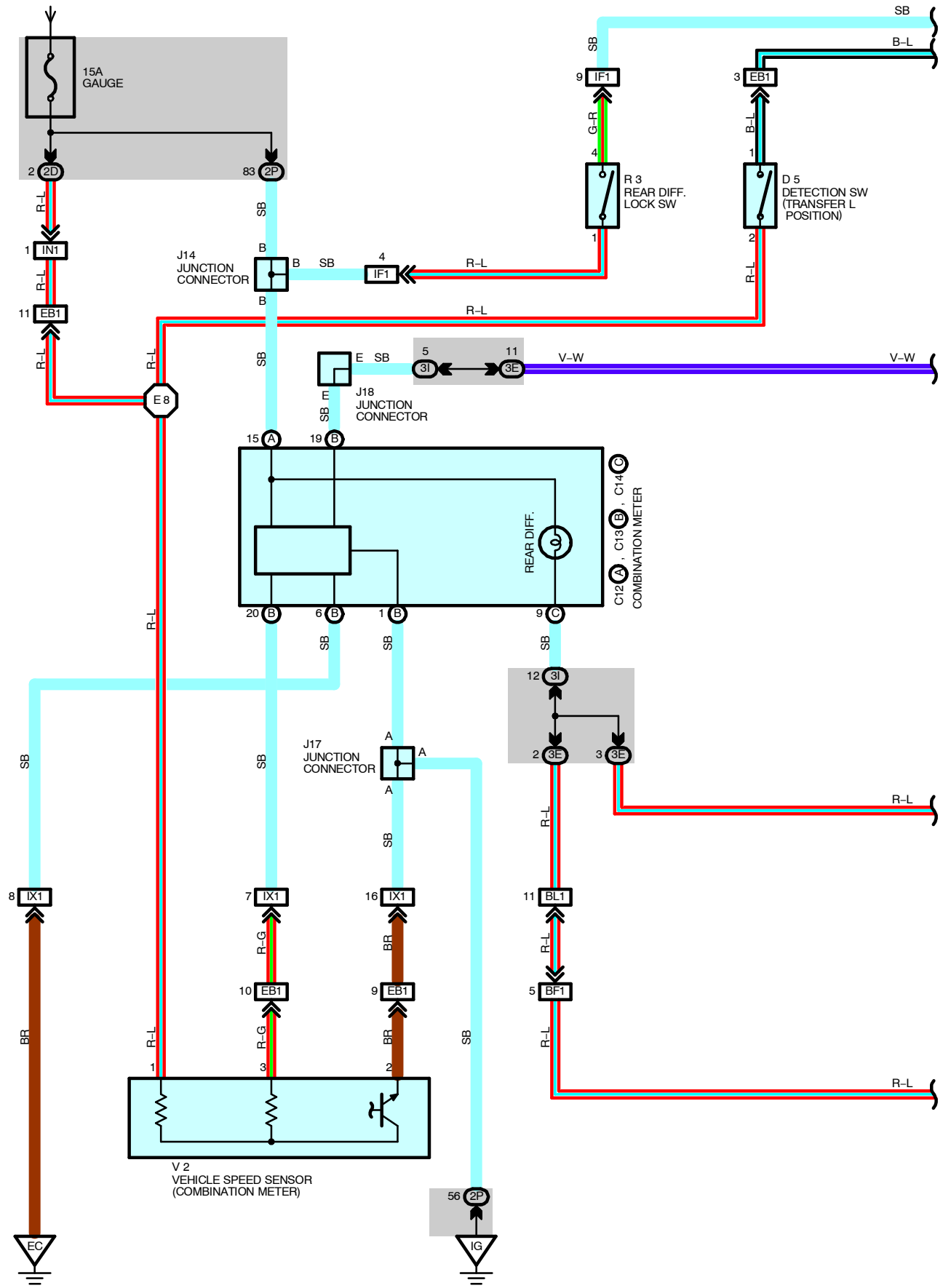
Code	See Page	Ground Points Location
EC	46	Rear Bank of Right Cylinder Head
IF	48	Set Bolt of Cowl Side J/B LH

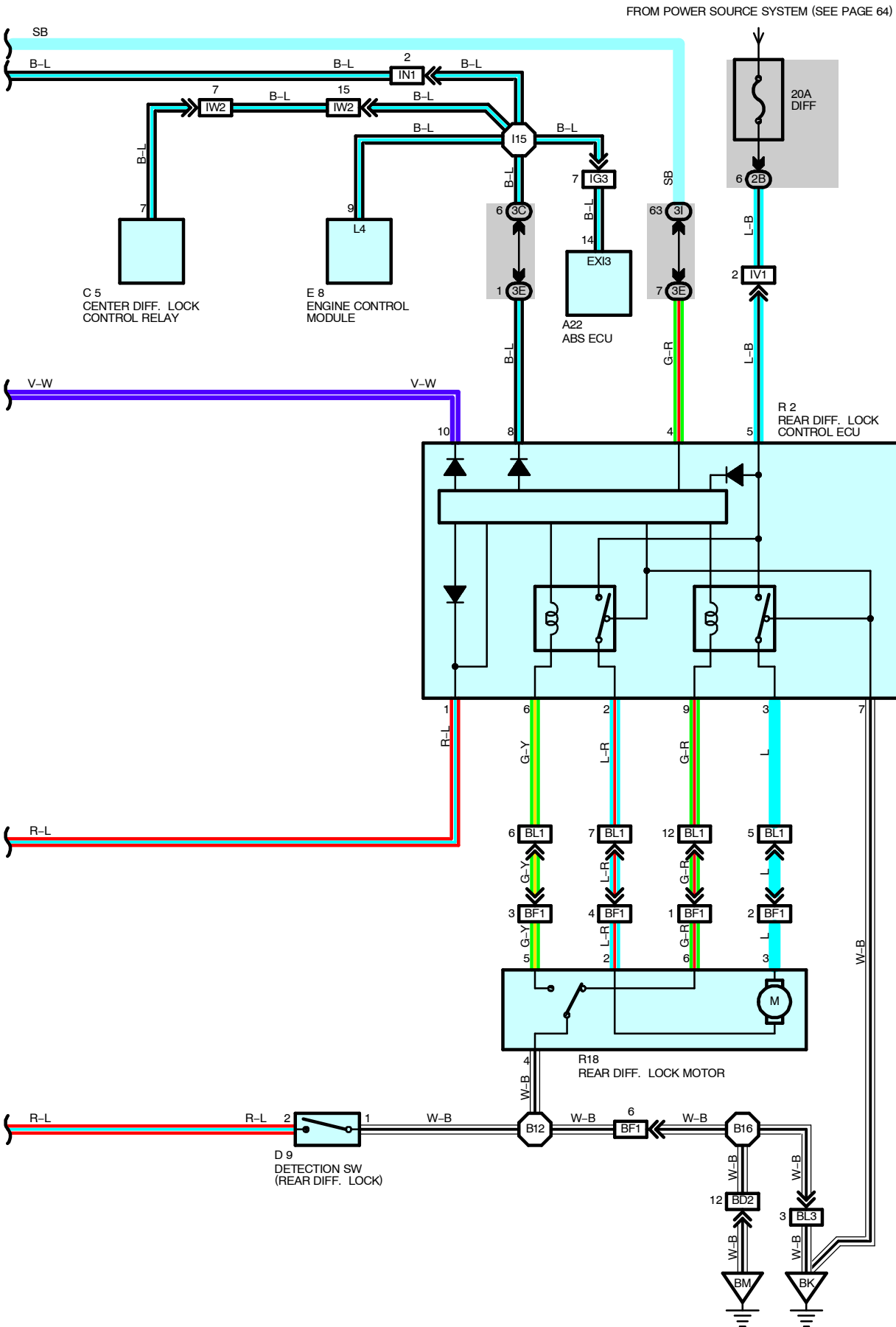
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E4	46	Engine Room No.2 Wire	I5	50	Dash Wire
E9	46	Transmission Wire	I15		

REAR DIFFERENTIAL LOCK

FROM POWER SOURCE SYSTEM (SEE PAGE 64)





REAR DIFFERENTIAL LOCK

SYSTEM OUTLINE

This system locks/frees the rear differential by operation of the rear diff. lock SW.

- * With the ignition SW turned on, rear diff. lock SW on, transfer lever in L, and the speed below 8 km/h (5 mph), the relay installed in the rear diff. lock control ECU is turned on through control of the rear diff. lock control ECU, and the current flows from DIFF fuse to rear diff. lock control ECU TERMINAL 5 to TERMINAL 3 to rear diff. lock motor TERMINAL 3 to TERMINAL 2 to rear diff. lock control ECU TERMINAL 2 to TERMINAL 7 to GROUND. As a result, the rear differential lock operates and the rear differential is locked. At the same time, the detection SW (Rear diff. lock) is turned on, and the rear diff. indicator light in the combination meter lights up.
- * When the rear diff. lock SW is turned to off from on, the relay installed in the rear diff. lock control ECU is turned on through control of the rear diff. lock control ECU, and the current flows from DIFF fuse to rear diff. lock control ECU TERMINAL 5 to TERMINAL 2 to rear diff. lock motor TERMINAL 2 to TERMINAL 3 to rear diff. lock control ECU TERMINAL 3 to TERMINAL 7 to GROUND. As a result, the rear differential lock operates and the rear differential is made free. At the same time, the detection SW (Rear diff. lock) is turned off, and the rear diff. indicator light in the combination meter is turned off.

The rear diff. indicator light blinks under the following conditions :

- * When the rear diff. lock SW is turned on with the ignition SW on and the transfer lever at a position other than L.
- * When the rear diff. lock SW is turned on at a speed over 8 km/h (5 mph), with the ignition SW on and the transfer position lever at L position.
- * When the rear diff. lock motor is operating the rear differential to free from lock, and the detection SW (Rear diff. lock) is off.

SERVICE HINTS

R2 REAR DIFF. LOCK CONTROL ECU

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

4-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position and rear diff. lock SW at **ON** position

7-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A22	40	D5	38	J18	41
C5	40	D9	42	R2	41
C12	A 40	E8	40	R3	41
C13	B 40	J14	41	R18	43
C14	C 40	J17	41	V2	39

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3C	32	Dash Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

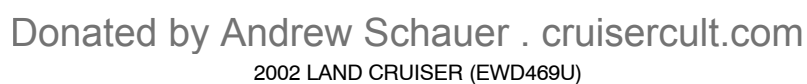
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46	Engine Wire and Transmission Wire (On the Transmission)
IF1	48	Instrument Panel Integration Wire and Instrument Panel Wire (Left Side of Instrument Panel)
IG3	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IV1	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)
IW2	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BF1	56	Frame Wire and Floor No.3 Wire (Left Side of Rear Floor Crossmember)
BL1	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BL3		

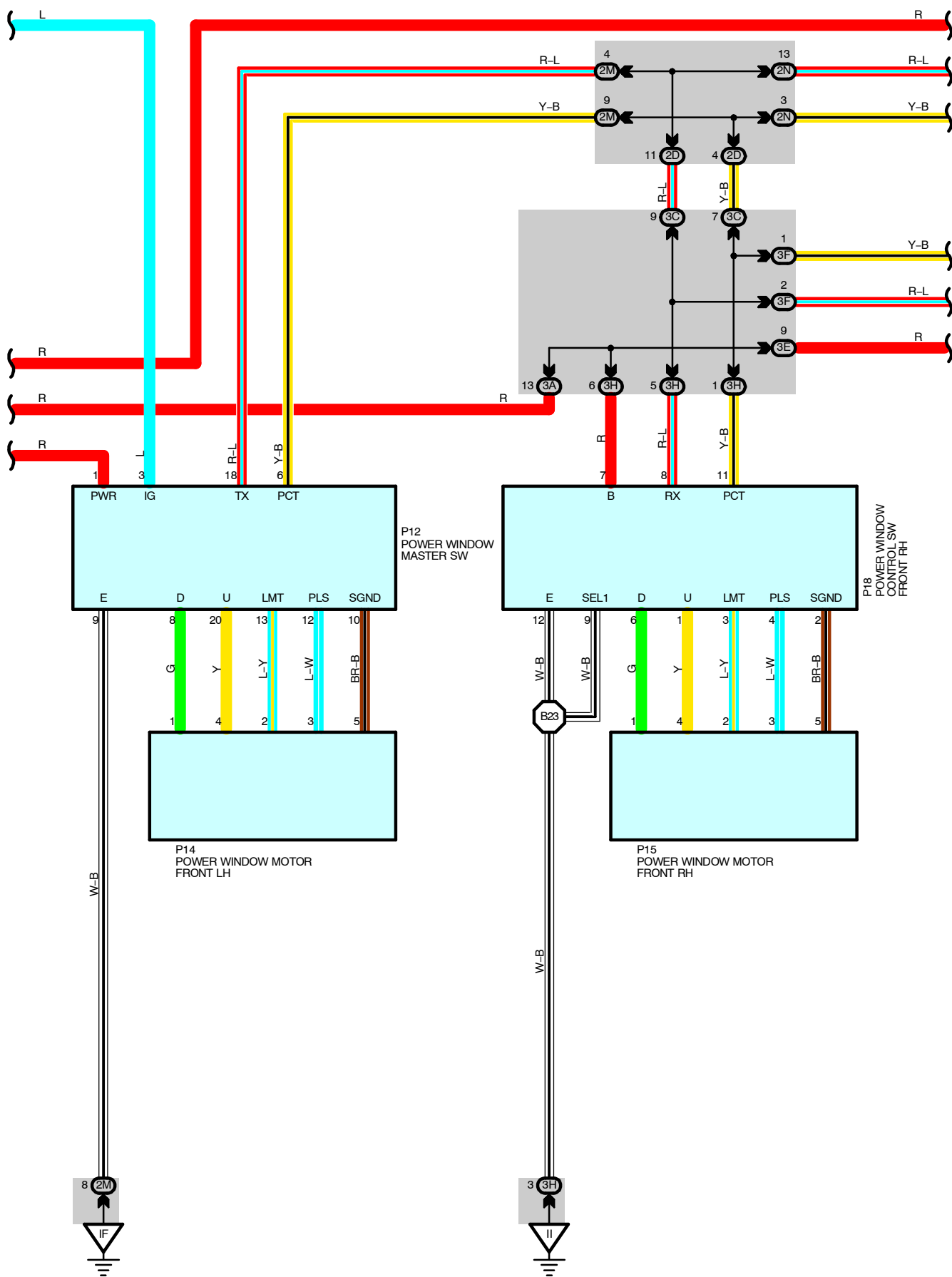
**: GROUND POINTS**

Code	See Page	Ground Points Location
EC	46	Rear Bank of Right Cylinder Head
IG	48	Set Bolt of Cowl Side J/B LH
BK	56	Front Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel

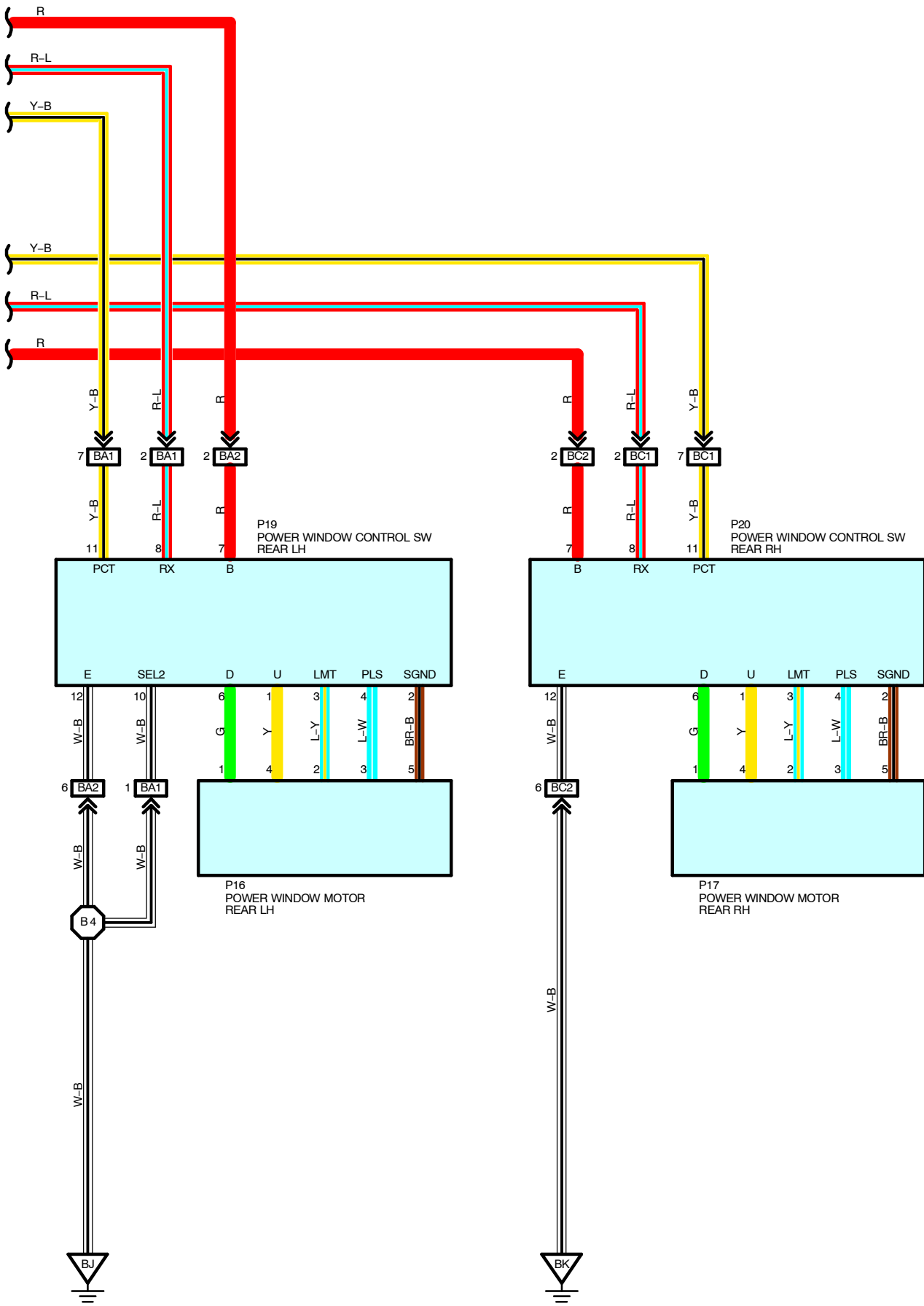
**: SPLICE POINTS**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E8	46	Transmission Wire	B12	58	Frame Wire
I15	50	Dash Wire	B16	58	Floor No.3 Wire





POWER WINDOW



SYSTEM OUTLINE

1. MANUAL DOWN OR UP OPERATION

When the power window master SW is pressed one step, the current flows from the power window master SW TERMINAL D to power window motor front LH to power window master SW TERMINAL U to GROUND, and rotates the motor to open the window.

When the power window master SW is pulled one step, the current flows from the power window master SW TERMINAL U to power window motor front LH to power window master SW TERMINAL D to GROUND, and rotates the motor to close the window.

For the other windows, as the power window master SW and power window SW is operated, the relevant door window is opened or closed.

2. AUTO DOWN OR UP OPERATION

When the power window master SW is pushed two steps, the power window master SW determines it is in auto mode and the current flows from the power window master SW TERMINAL D to power window motor front LH to power window master SW TERMINAL U to GROUND, and rotates the motor to open the window automatically.

When the power window master SW is pulled two steps, the power window master SW determines it is in auto mode and the current flows from the power window master SW TERMINAL U to power window motor front LH to power window master SW TERMINAL D to GROUND, and rotates the motor to close the window automatically.

Accordingly, when each window switch of the power window control SW is operated, the relevant door window is automatically opened/closed.

3. CATCHING PREVENTION FUNCTION

When any foreign matter is caught in the window during power window up operation, the pulse sensor in the power window motor detects the changes in the number of motor rotations and forcibly opens the door window 50 mm, or when the window opening is less than 200 mm, it opens the window until the opening is 200 mm.

4. KEY OFF POWER WINDOW OPERATION

It is possible to operate the power window for approx. 43 seconds after the ignition SW is turned from on to off. However, when the door is opened while the window is being operated, the power window operation is stopped even though 43 seconds have not elapsed.

SERVICE HINTS

P12 POWER WINDOW MASTER SW

- 1-GROUND : Always approx. 12 volts
- 3-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position
: Approx. 12 volts with key off power window operation
- 9-GROUND : Always continuity
- 20-GROUND : Continuity with power window master SW at **MANUAL UP** position
: Continuity with power window master SW at **AUTO UP** position
- 8-GROUND : Continuity with power window master SW at **MANUAL DOWN** position
: Continuity with power window master SW at **AUTO DOWN** position

P18 POWER WINDOW CONTROL SW FRONT RH

- 7-GROUND : Always approx. 12 volts
- 9, 12-GROUND : Always continuity
- 1-GROUND : Continuity with power window control SW at **MANUAL UP** position
: Continuity with power window control SW at **AUTO UP** position
- 6-GROUND : Continuity with power window control SW at **MANUAL DOWN** position
: Continuity with power window control SW at **AUTO DOWN** position

P19 POWER WINDOW CONTROL SW REAR LH

- 7-GROUND : Always approx. 12 volts
- 10, 12-GROUND : Always continuity
- 1-GROUND : Continuity with power window control SW at **MANUAL UP** position
: Continuity with power window control SW at **AUTO UP** position
- 6-GROUND : Continuity with power window control SW at **MANUAL DOWN** position
: Continuity with power window control SW at **AUTO DOWN** position

P20 POWER WINDOW CONTROL SW REAR RH

- 7-GROUND : Always approx. 12 volts
- 12-GROUND : Always continuity
- 1-GROUND : Continuity with power window control SW at **MANUAL UP** position
: Continuity with power window control SW at **AUTO UP** position
- 6-GROUND : Continuity with power window control SW at **MANUAL DOWN** position
: Continuity with power window control SW at **AUTO DOWN** position

POWER WINDOW

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
D14	42	J17	41	P15	43
D15	42	J19	41	P16	43
I19	40	J27	41	P17	43
I21	40	J28	41	P18	43
J9	41	J29	41	P19	43
J10	41	P12	43	P20	43
J15	41	P14	43		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2D	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2M	26	Front Door LH Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3C	32	Dash Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3F		
3H	32	Front Door RH Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

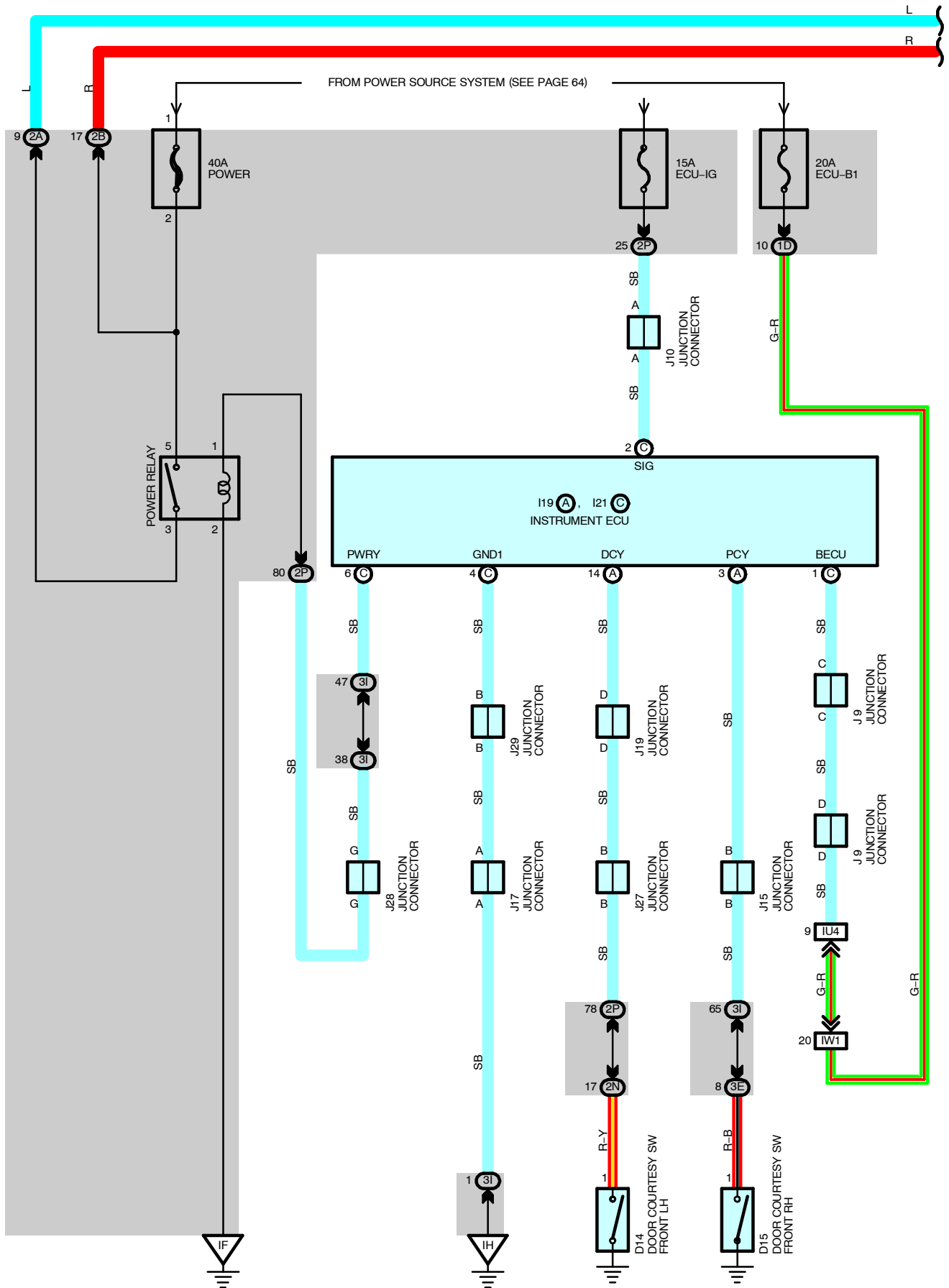
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IU4	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BA1	56	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BA2		
BC1	56	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)
BC2		

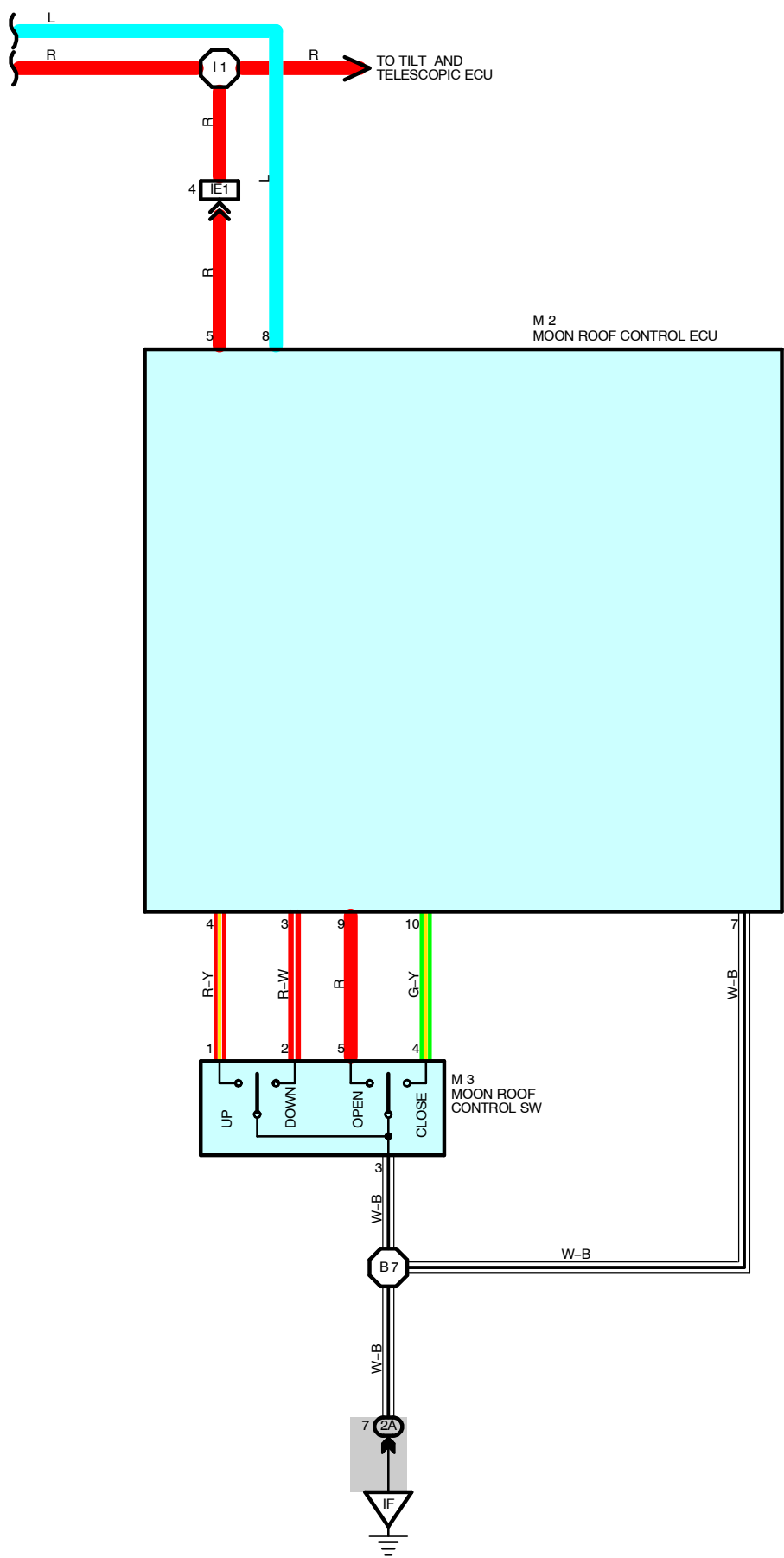
: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
IH	48	Set Bolt of Cowl Side J/B RH
II		
BJ	56	Under the Driver's Seat
BK	56	Front Side Under the Front Passenger's Seat

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	58	Floor Wire	B23	58	Front Door RH Wire





SYSTEM OUTLINE

In this system, the HALL IC in the moon roof control ECU detects the changes in motor rotation, and allows opening/closing, tilting up/down of the moon roof by one touch operation.

In addition, catching prevention function during moon roof operation is also provided.

Voltage is constantly applied from POWER fuse to moon roof control ECU TERMINAL 5 and POWER relay TERMINAL 5.

1. SLIDE OPEN OPERATION

When the moon roof control SW is kept pressed to OPEN position for approx. 0.3 seconds or longer (Limit SW No.1 off, limit SW No.2 on), a signal is input from moon roof control SW TERMINAL 5 to moon roof control ECU TERMINAL 9. This activates the moon roof control ECU and rotates the motor to open the moon roof automatically. Then, when the limit SW No.1 is turned on and then turned off again, the pulse signal sent from the HALL IC activates the moon roof control ECU, and determines that the moon roof is fully open, and stops the motor. If other operation SW or the open SW is operated while the moon roof is being opened, the moon roof control ECU is activated to stop the moon roof operation. In addition, when the moon roof is tilted up, the slide open operation does not function.

2. SLIDE CLOSE OPERATION

When the moon roof control SW is kept pressed to CLOSE position for approx. 0.3 seconds or longer (Limit SW No.1 off, limit SW No.2 off), a signal is input from moon roof control SW TERMINAL 4 to moon roof control ECU TERMINAL 10. This activates the moon roof control ECU and rotates the motor to close the moon roof automatically. Then, when the limit SW No.2 is turned on, the pulse signal sent from the HALL IC activates the moon roof control ECU, and determines that the moon roof is closed fully, and stops the motor. If other operation SW or the close SW is operated while the moon roof is being closed, the moon roof control ECU is activated to stop the moon roof operation.

3. TILT UP OPERATION

When the moon roof control SW is kept pressed to UP position for approx. 0.3 seconds or longer (Limit SW No.1 off, limit SW No.2 on), a signal is input from moon roof control SW TERMINAL 1 to moon roof control ECU TERMINAL 4. This activates the moon roof control ECU and rotates the motor to tilt up the moon roof automatically. If the pulse signal is not input from the HALL IC for 0.5 seconds or longer, it determines that the moon roof is fully tilted up, and stops the motor. If other operation SW or the tilt up SW is operated while the moon roof is being tilted up, the moon roof control ECU is activated to stop the moon roof operation. In addition, when the moon roof is opened, the tilt up operation does not function.

4. TILT DOWN OPERATION

When the moon roof control SW is kept pressed to DOWN position for approx. 0.3 seconds or longer (Limit SW No.1 on, limit SW No.2 on), a signal is input from moon roof control SW TERMINAL 2 to moon roof control ECU TERMINAL 3. This activates the moon roof control ECU and rotates the motor to tilt down the moon roof automatically.

Then, when the limit SW No.1 is turned off, the pulse signal sent from the HALL IC activated the moon roof control ECU, and determines that the moon roof is closed fully, and stops the motor.

If other operation SW or the tilt down SW is operated while the moon roof is being tilted down, the moon roof control ECU is activated to stop the moon roof operation.

5. CATCHING PREVENTION FUNCTION

During slide close or tilt down operation, if the moon roof control ECU detects a catching load from the changes in the rotation of the motor, the operation is stopped, and the motor is rotated in the reverse direction.

* Slide close operation

The moon roof is moved approx. 200 mm in the reverse direction (Slide open) after a catching load has been detected.

However, if the full open position is detected before moving approx. 200 mm, the reverse movement is stopped.

* Tilt down operation

If a catching load is detected, the moon roof is moved in the reverse direction until fully tilted up.

6. KEY OFF MOON ROOF OPERATION

Within approx. 45 seconds after the ignition SW is turned from ON to OFF, the moon roof can be operated. However, if the driver or front passenger door is opened during this period of time, the moon roof operation is stopped even though 45 seconds have not elapsed.

7. FAIL-SAFE FUNCTION

If the moon roof is operated continuously in the same direction, the current flowing to the motor is cut off when the time shown below has elapsed after the motor operation has been started.

* Slide open/close operation by the moon roof SW approx. 20 seconds

* Tilt up/down operation by the moon roof SW approx. 2 second

* Slide open operation for reverse movement in case of catching prevention function approx. 20 seconds

* Tilt up operation for reverse movement in case of catching prevention function approx. 2 seconds

SERVICE HINTS

M2 MOON ROOF CONTROL ECU

- 5-GROUND : Always approx. **12** volts
- 8-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position
: Approx. **12** volts with key off moon roof operation
- 7-GROUND : Always continuity

M3 MOON ROOF CONTROL SW

- 1-3 : Closed with moon roof control SW at **TILT UP** position
- 2-3 : Closed with moon roof control SW at **TILT DOWN** position
- 5-3 : Closed with moon roof control SW at **OPEN** position
- 4-3 : Closed with moon roof control SW at **CLOSE** position
- 3-GROUND : Always continuity

POWER RELAY

- 5-3 : Closed with ignition SW at **ON** or **ST** position
- : Closed with key off moon roof operation

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
D14	42	J10	41	J28	41
D15	42	J15	41	J29	41
I19	A 40	J17	41	M2	42
I21	C 40	J19	41	M3	42
J9	41	J27	41		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2A	26	Roof Wire and Cowl Side J/B LH (Left Kick Panel)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	48	Dash Wire and Roof Wire (Left Kick Panel)
IU4	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

▽ : GROUND POINTS

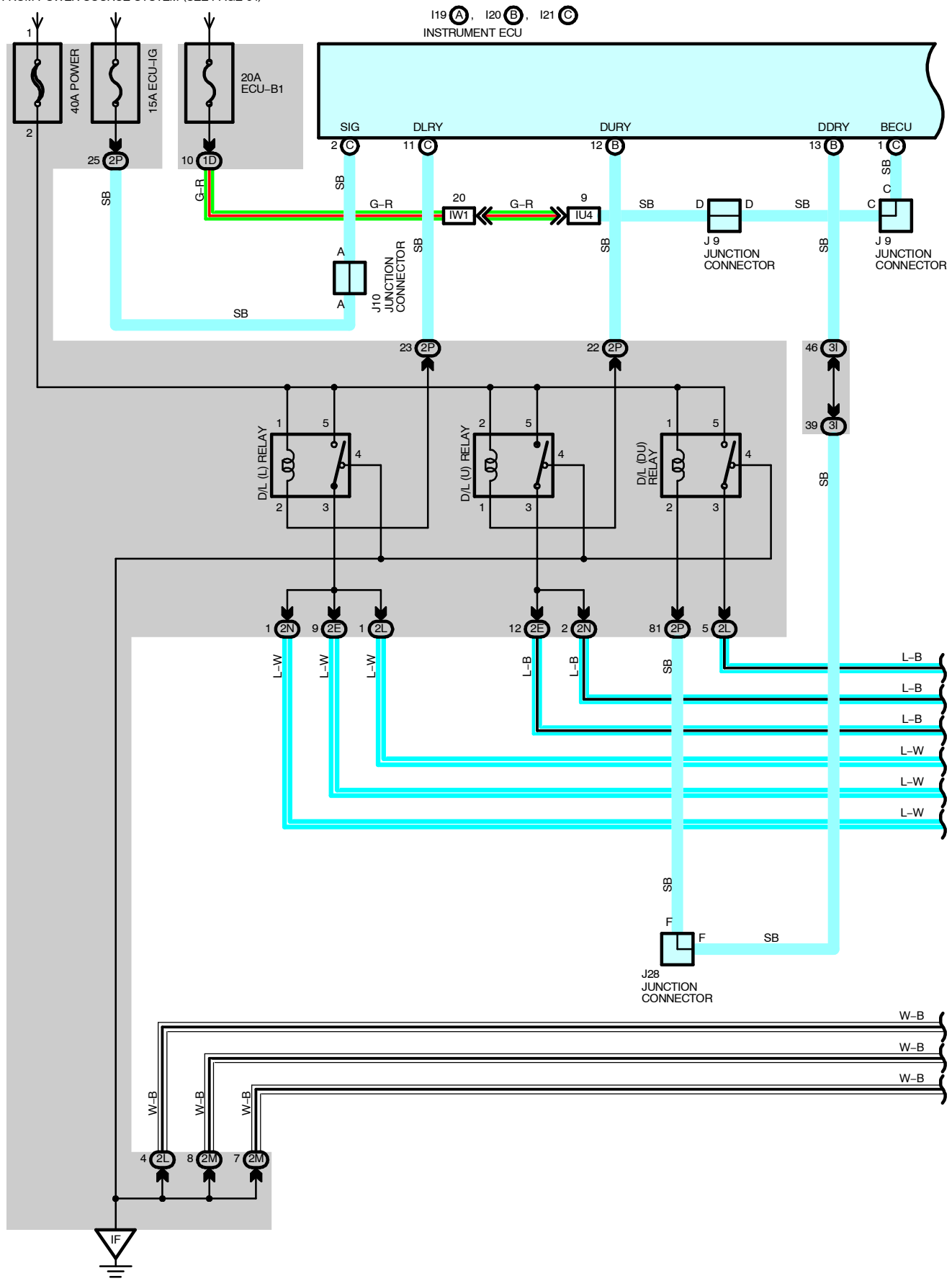
Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
IH	48	Set Bolt of Cowl Side J/B RH

○ : SPLICE POINTS

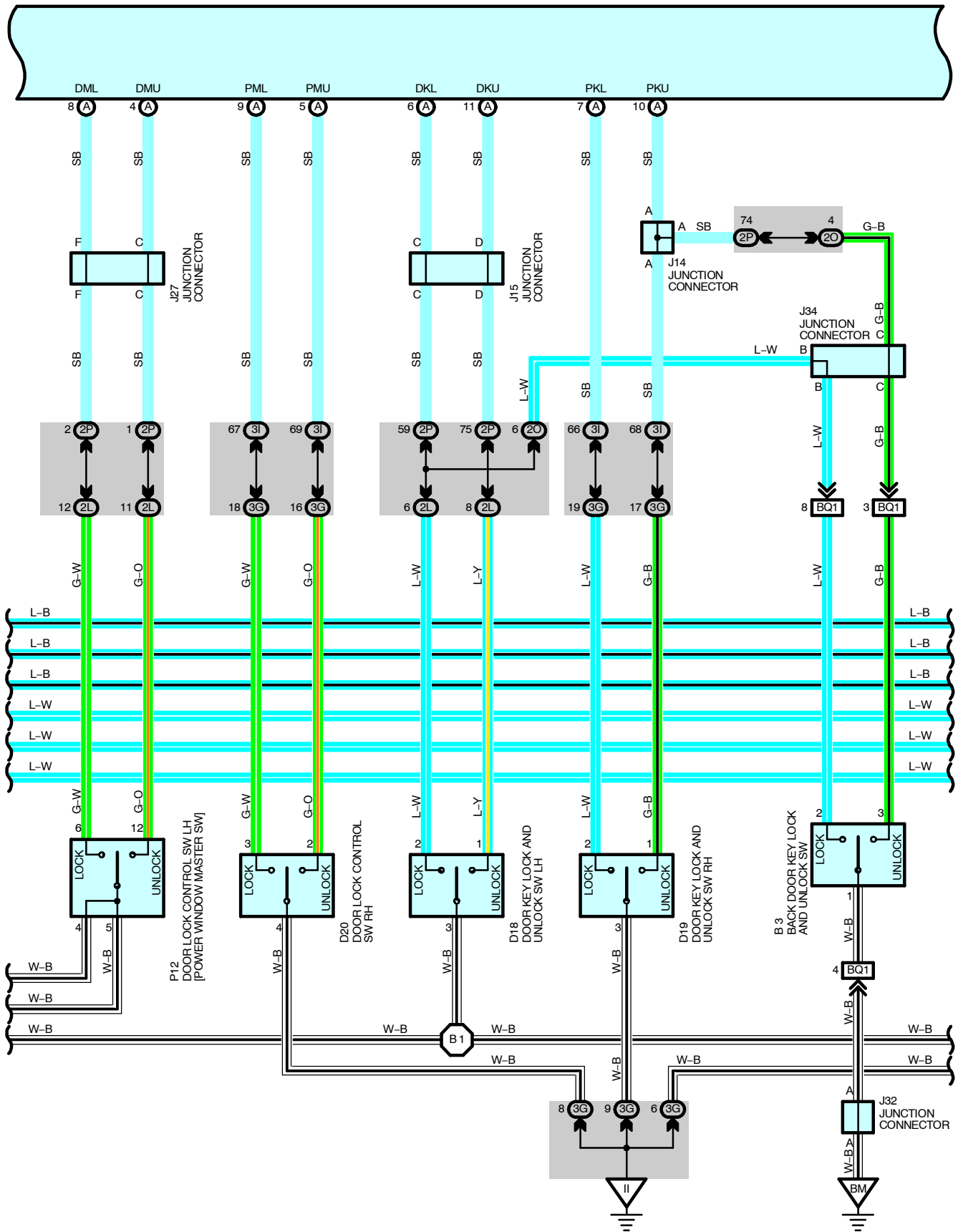
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	50	Dash Wire	B7	58	Roof Wire

DOOR LOCK CONTROL

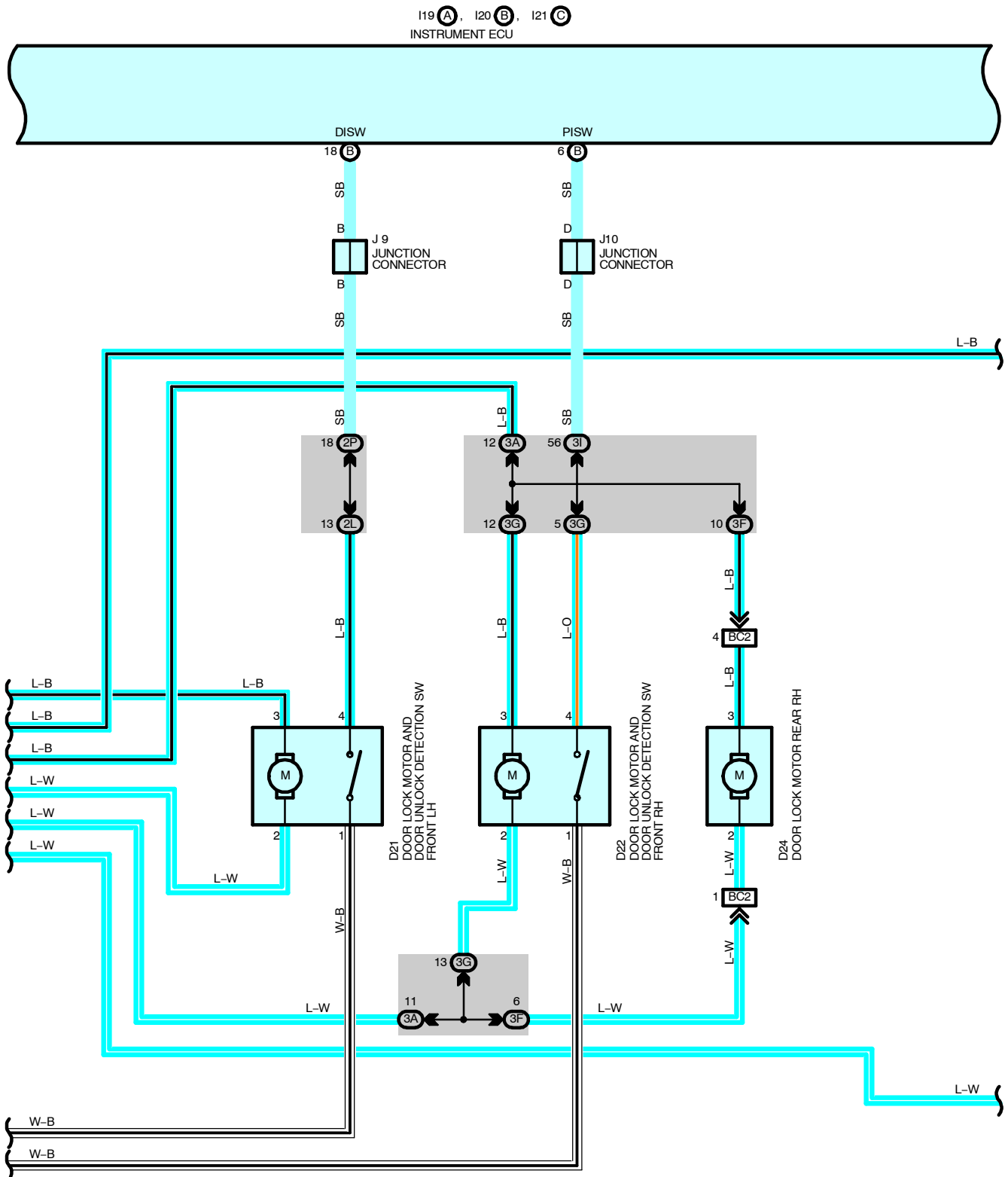
FROM POWER SOURCE SYSTEM (SEE PAGE 64)



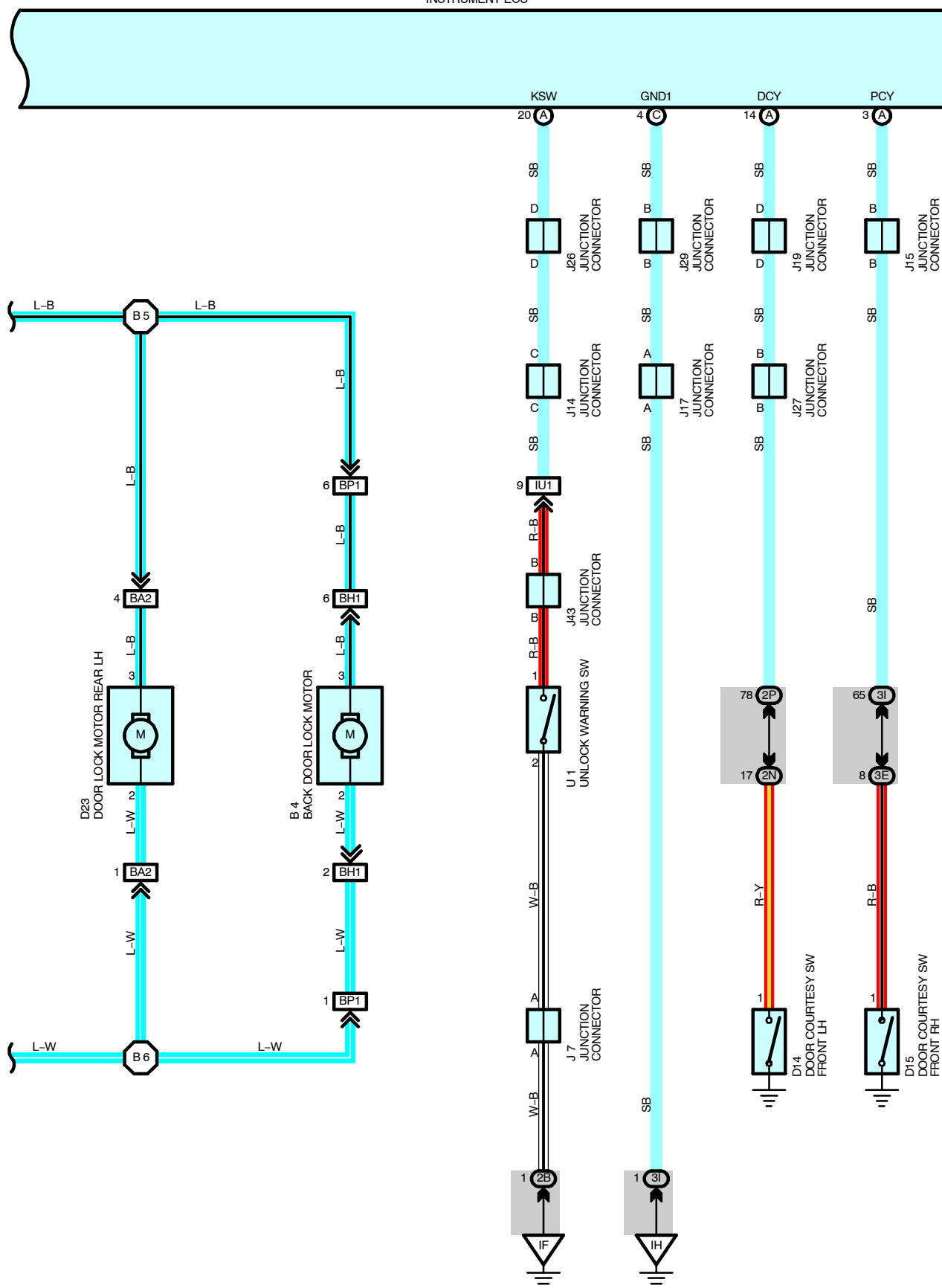
I19 (A), I20 (B), I21 (C)
INSTRUMENT ECU



DOOR LOCK CONTROL



I19 (A), I20 (B), I21 (C)
INSTRUMENT ECU



DOOR LOCK CONTROL

SYSTEM OUTLINE

1. MANUAL UNLOCK OPERATION

When the door lock control SW of the driver or front passenger door is pressed to unlock side, a signal is input to the instrument ECU TERMINAL DMU, and TERMINAL PMU respectively. Then the current flows from the POWER fuse to D/L (U) relay (Coil side) to instrument ECU TERMINAL DURY to TERMINAL GND1 to GROUND, and turns on the D/L (U) relay and D/L (DU) relay. At the same time, the current flows from the POWER fuse to D/L (U) relay, D/L (DU) relay TERMINAL 5 to TERMINAL 3 to door lock motor and back door lock motor to D/L (L) relay TERMINAL 3 to TERMINAL 4 to GROUND, and unlocks the door.

2. MANUAL LOCK OPERATION

When the door lock control SW of the driver or front passenger door is pressed to lock side, a signal is input to the instrument ECU TERMINAL DML, and TERMINAL PML respectively. Then the current flows from the POWER fuse to D/L (L) relay (Coil side) to instrument ECU TERMINAL DLRY to TERMINAL GND1 to GROUND. This turns on the D/L (L) relay and the current flows from the POWER fuse to D/L (L) relay TERMINAL 5 to TERMINAL 3 to door lock motor and back door lock motor to D/L (U) relay, D/L (DU) relay TERMINAL 3 to TERMINAL 4 to GROUND, and locks the door.

3. DOOR KEY UNLOCK OPERATION

* Unlock operation from driver door

When the door is unlocked once by the ignition key from the driver side, a signal is input from door key lock and unlock SW LH to instrument ECU TERMINAL DKU. As a result, the instrument ECU operates and the current flows from POWER fuse to D/L (DU) relay (Coil side) to instrument ECU TERMINAL DURY to TERMINAL GND1 to GROUND, and turns on the D/L (DU) relay. At the same time, the current flows from the POWER fuse to D/L (DU) relay TERMINAL 5 to TERMINAL 3 to door lock motor front LH to D/L (L) relay TERMINAL 3 to TERMINAL 4 to GROUND, and unlocks the driver door only. Accordingly, if the second unlock operation is made within 3 seconds, a signal is input to instrument ECU TERMINAL DKU, and the current flows as manual unlock operation, and unlocks all the doors.

* Unlock operation from front passenger or back door

When the front passenger door or back door is unlocked using the ignition key, a signal from the door key lock and unlock SW RH and/or back door key lock and unlock SW is input to instrument ECU TERMINAL PKU. As a result, the current flows as manual unlock operation and unlocks all the doors at once.

4. IGNITION KEY REMINDER OPERATION

When the door is locked using the door lock knob with the ignition key remaining in the key cylinder and door opened, it is automatically unlocked. Additionally, if lock operation is made by the door lock control SW or door key lock SW, after the lock operation is completed, the doors are unlocked automatically.

SERVICE HINTS

I19 (A), I21 (C) INSTRUMENT ECU

- (C) 1-GROUND : Always approx. 12 volts
- (C) 2-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position
- (C) 4-GROUND : Always continuity
- (A) 3-GROUND : Continuity with front RH door open
- (A)14-GROUND : Continuity with front LH door open
- (A)20-GROUND : Continuity with ignition key in ignition key cylinder

D21, D22 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT LH, RH

- 2-GROUND : Approx. 12 volts with door lock motor at lock operate
- 3-GROUND : Approx. 12 volts with door lock motor at unlock operate

D23, D24 DOOR LOCK MOTOR REAR LH, RH

- 2-GROUND : Approx. 12 volts with door lock motor at lock operate
- 3-GROUND : Approx. 12 volts with door lock motor at unlock operate

B4 BACK DOOR LOCK MOTOR

- 2-GROUND : Approx. 12 volts with door lock motor at lock operate
- 3-GROUND : Approx. 12 volts with door lock motor at unlock operate

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B3	42	D24	42	J19	41
B4	42	I19	A 40	J26	41
D14	42	I20	B 40	J27	41
D15	42	I21	C 40	J28	41
D18	42	J7	41	J29	41
D19	42	J9	41	J32	42
D20	42	J10	41	J34	42
D21	42	J14	41	J43	41
D22	42	J15	41	P12	43
D23	42	J17	41	U1	41

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2L	26	Front Door LH Wire and Cowl Side J/B LH (Left Kick Panel)
2M		
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2O		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3F		
3G	32	Front Door RH Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BA2	56	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BC2	56	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BQ1	58	Back Door Lower Wire and Floor Wire (Left Rear Side Quarter Panel)

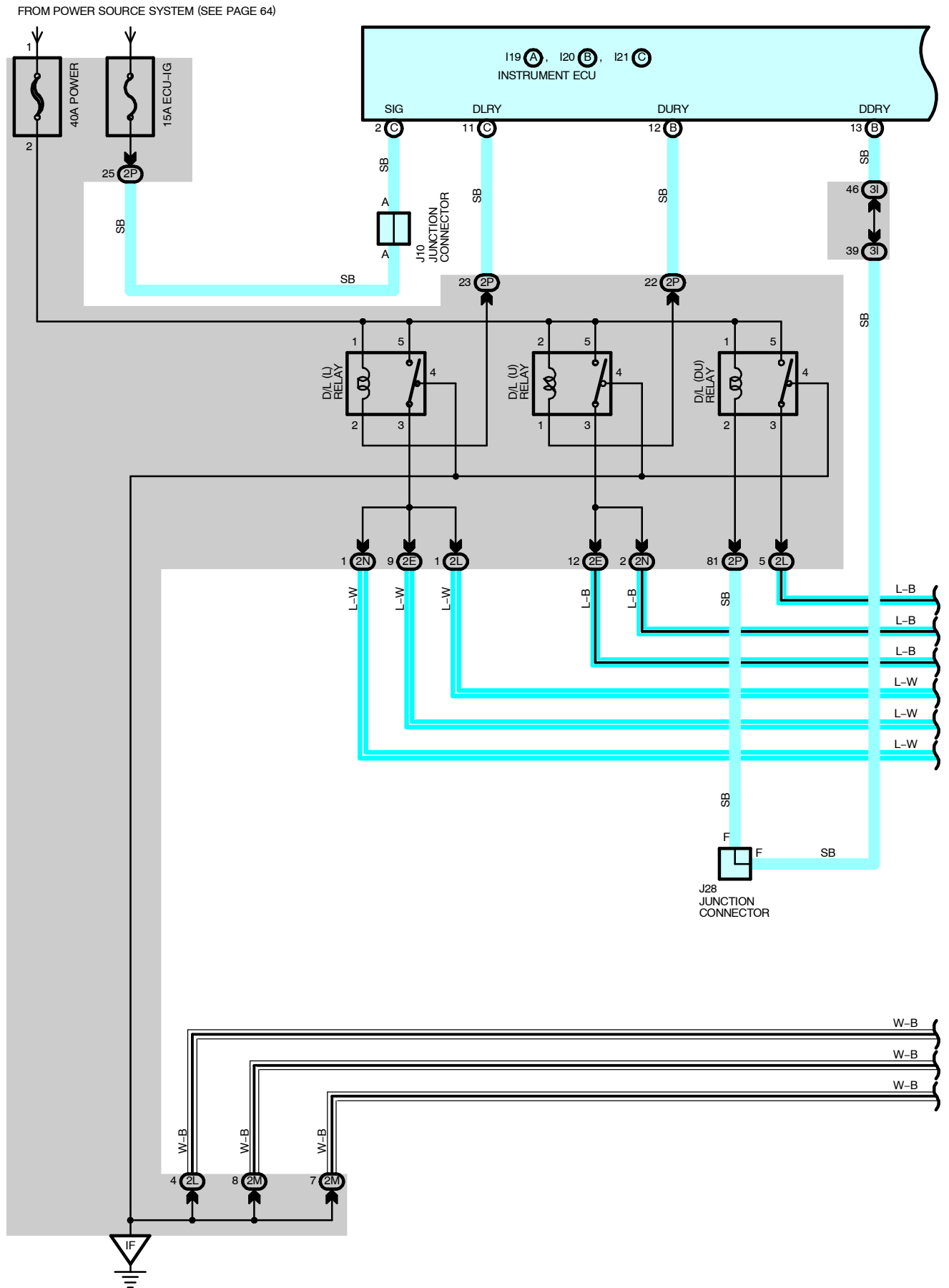
: GROUND POINTS

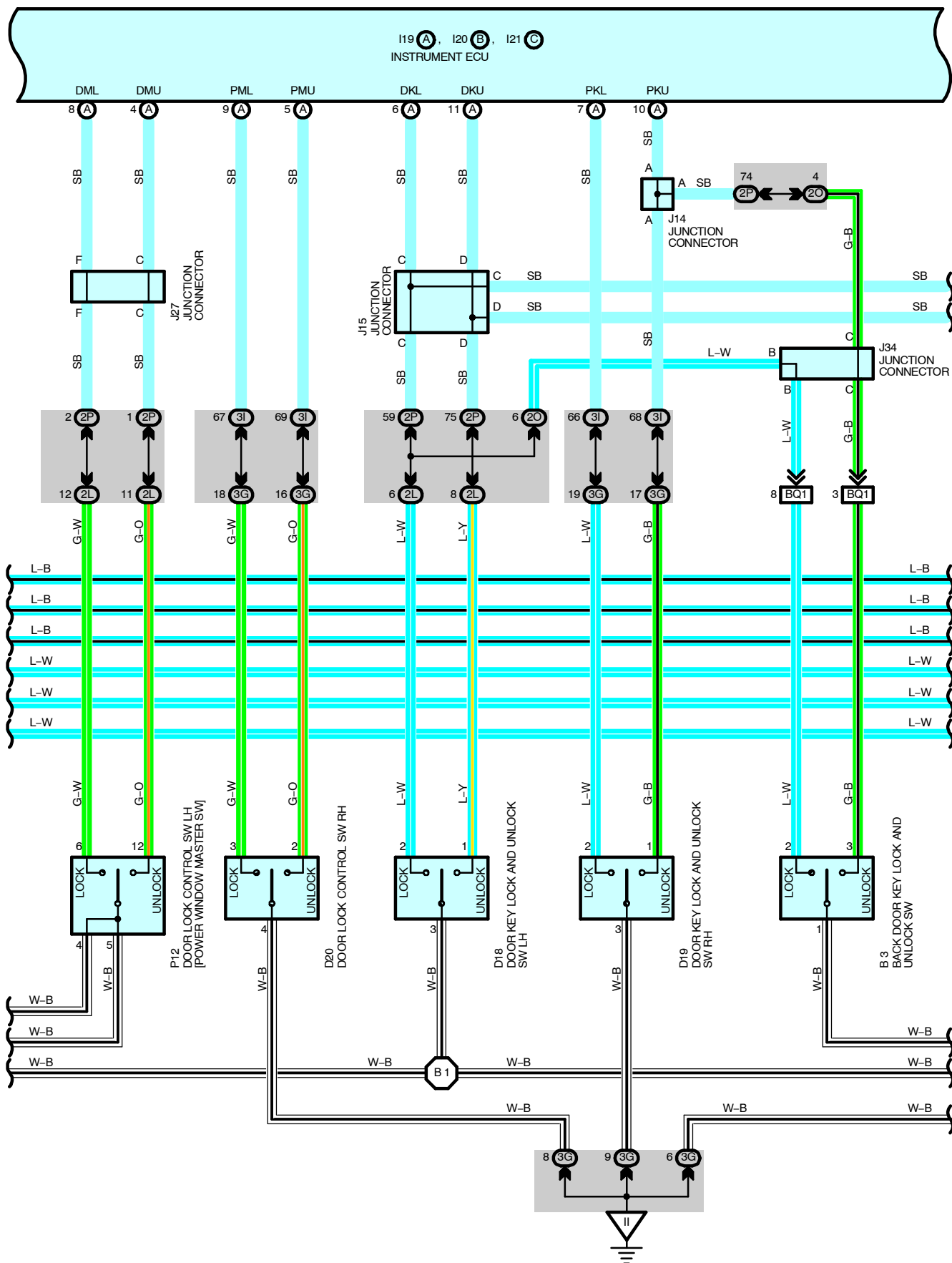
Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
IH	48	Set Bolt of Cowl Side J/B RH
II		
BM	56	Left Rear Side Quarter Panel

: SPLICE POINTS

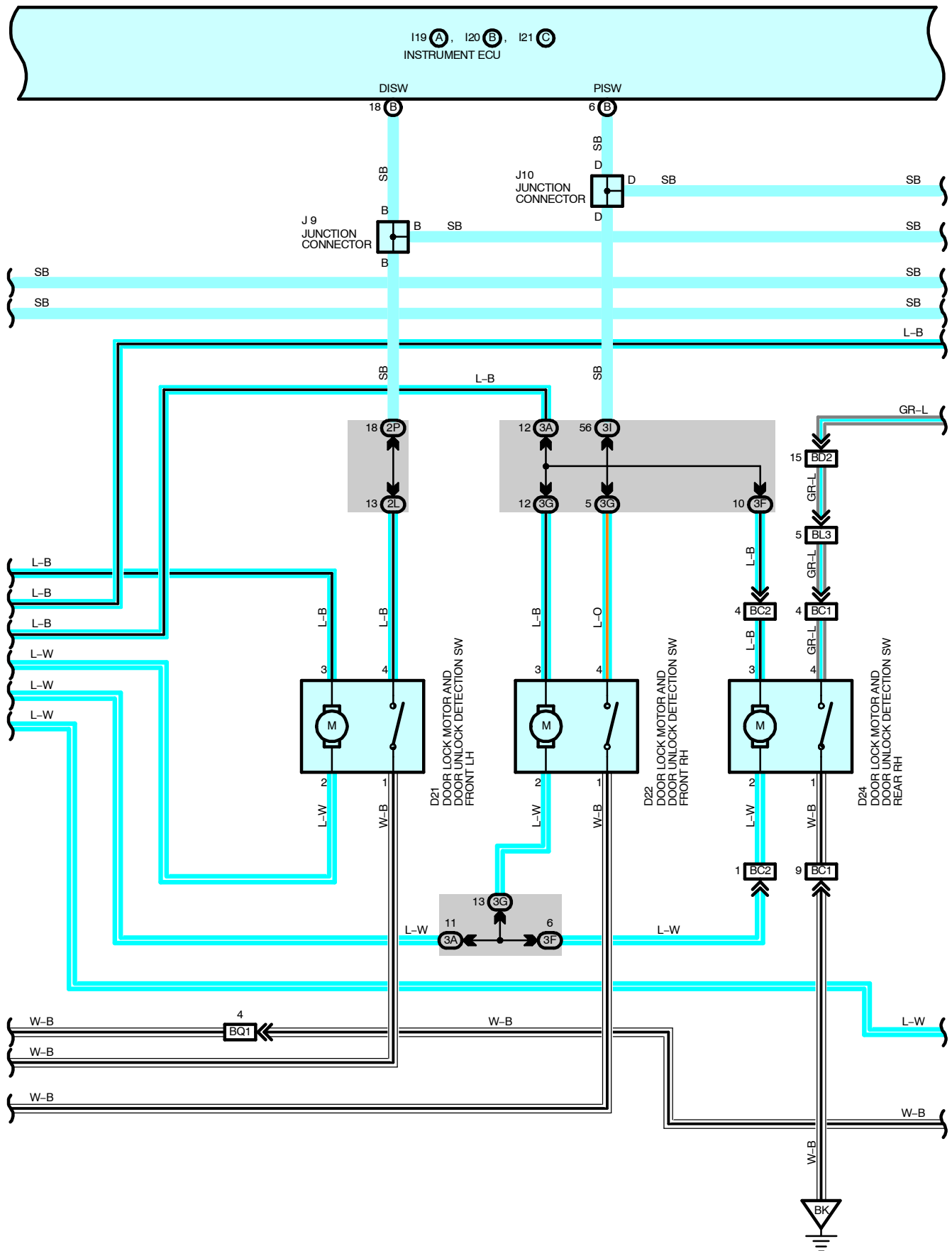
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	58	Front Door LH Wire	B6	58	Floor Wire
B5	58	Floor Wire			

WIRELESS DOOR LOCK CONTROL

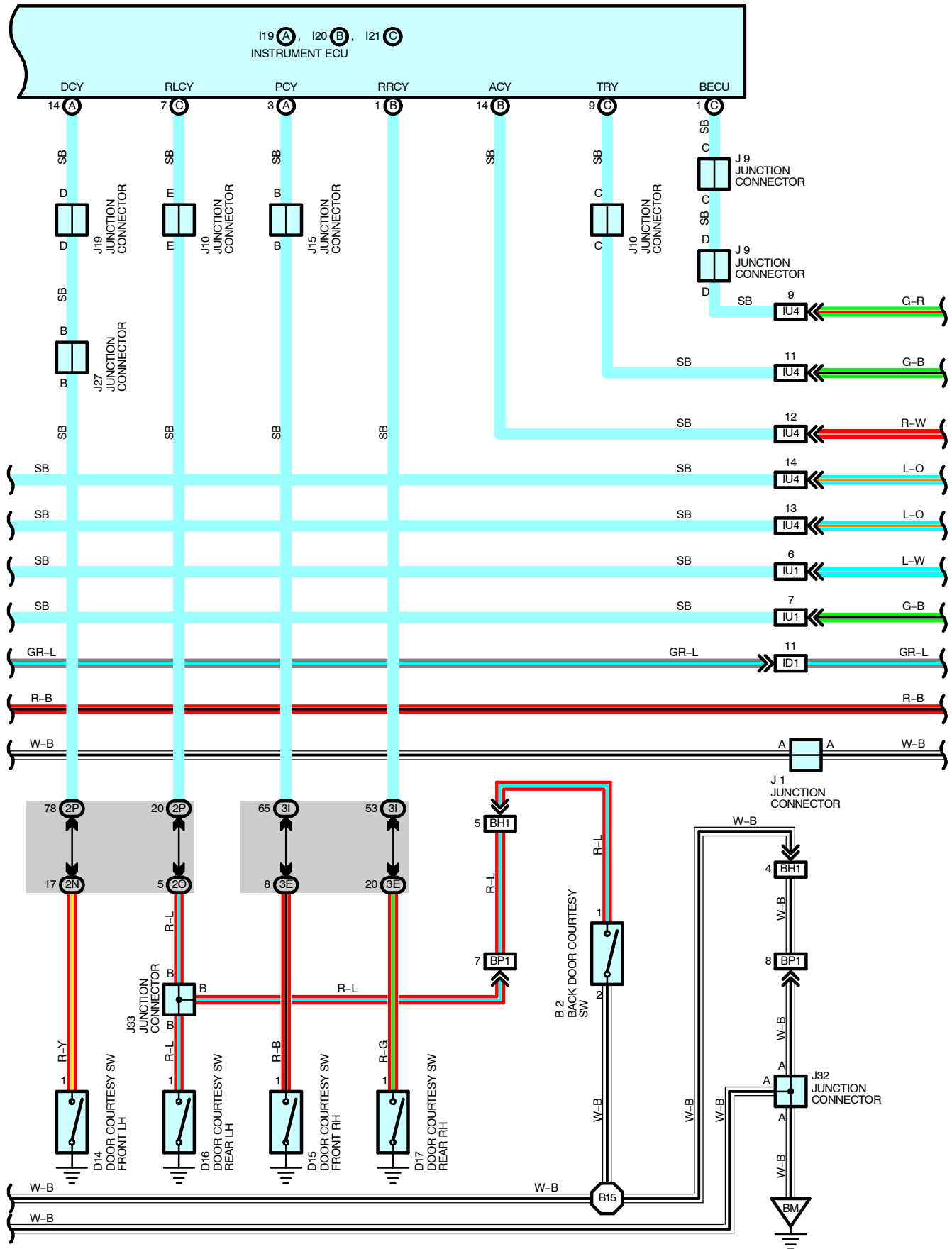




WIRELESS DOOR LOCK CONTROL

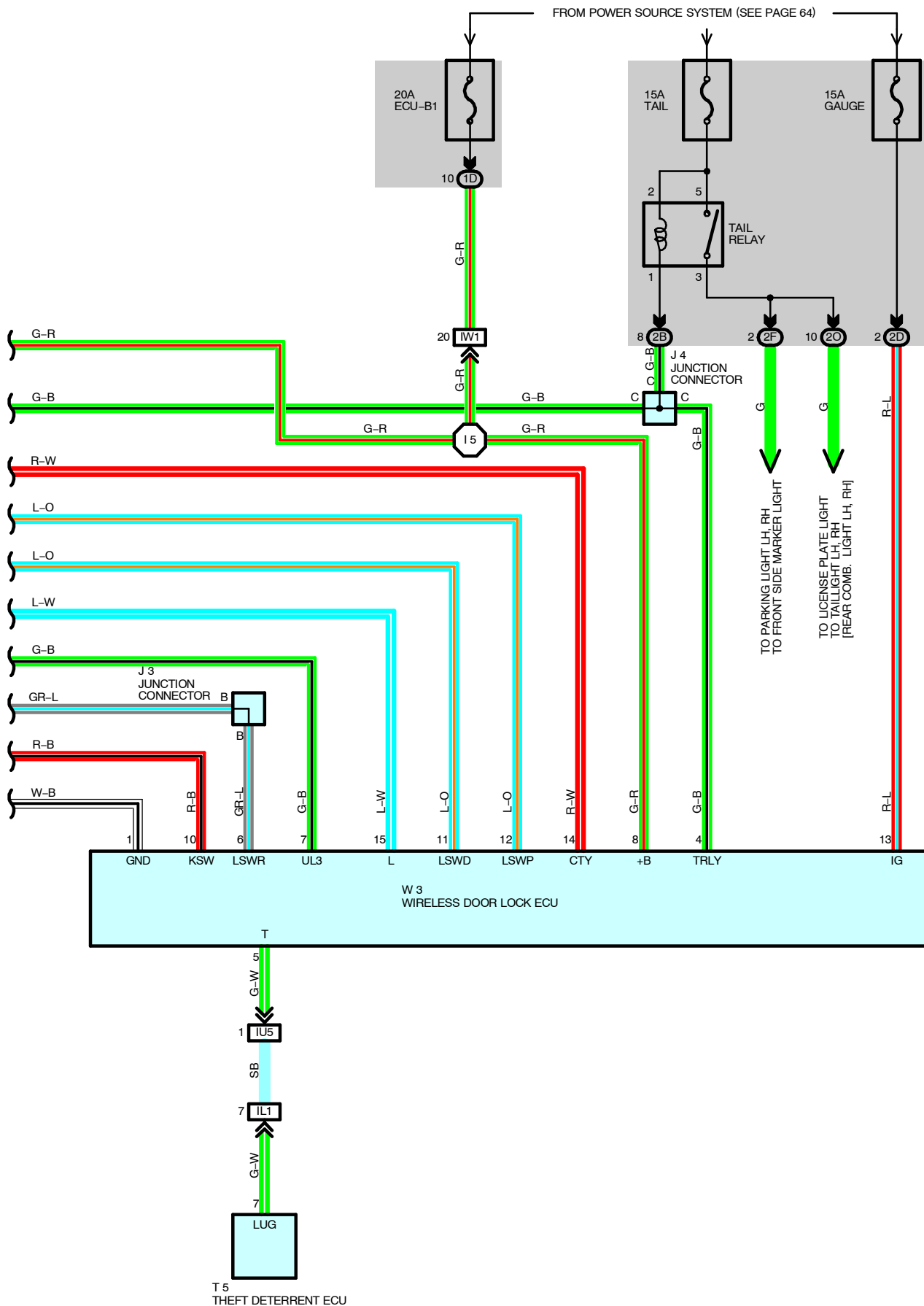


WIRELESS DOOR LOCK CONTROL



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)



WIRELESS DOOR LOCK CONTROL

SYSTEM OUTLINE

In this system, the wireless door lock ECU receives weak radio wave transmitted from the transmitter built-into the ignition key, and outputs a signal to the instrument ECU. Accordingly, all the doors are can be locked and unlocked by remote control.

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 unlock 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. VISUAL CONFIRMATION OF LOCK OR UNLOCK

During lock operation, when the wireless door lock ECU receives a lock signal from the door unlock detection SW, the taillight and parking light is flashed once. During unlock operation, when the wireless door lock ECU receives an unlock signal from the door unlock detection SW, the taillight and parking light is flashed twice.

5. PANIC MODE FUNCTION

When the panic SW on the transmitter is pressed, the wireless door lock ECU receives a signal and enters the panic mode. The signal input into the theft deterrent ECU from the wireless door lock ECU turns on the theft deterrent horn, and flashes the taillight and headlight. When the panic SW or the unlock SW of the transmitter is pressed during the panic mode, the panic mode is canceled, and the theft deterrent horn stops, and the taillight and headlight are turned off.

6. REPEAT FUNCTION

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

SERVICE HINTS

W3 WIRELESS DOOR LOCK ECU

- 1-GROUND : Always continuity
- 8-GROUND : Always approx. 12 volts
- 13-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

D21, D22, D23, D24 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT LH, RH, REAR LH, RH

- 2-GROUND : Approx. 12 volts with door lock motor at lock operation
- 3-GROUND : Approx. 12 volts with door lock motor at unlock operation

B4 BACK DOOR LOCK MOTOR AND BACK DOOR UNLOCK DETECTION SW

- 2-GROUND : Approx. 12 volts with door lock motor at lock operation
- 3-GROUND : Approx. 12 volts with door lock motor at unlock operation

I19 (A), I20 (B), I21 (C) INSTRUMENT ECU

- (A) 3-GROUND : Continuity with front passenger door open
- (A) 14-GROUND : Continuity with driver door open
- (B) 1-GROUND : Continuity with rear RH door open
- (C) 7-GROUND : Continuity with rear LH door or back door open
- (C) 1-GROUND : Always approx. 12 volts
- (C) 2-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position
- (C) 4-GROUND : Always continuity

D14, D15, D16, D17 DOOR COURTESY SW FRONT LH, RH, REAR LH, RH

- 1-GROUND : Closed with door open

B2 BACK DOOR COURTESY SW

- 1-2 : Closed with back door open

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B2	42	D24	42	J19	41
B3	42	I19 A	40	J26	41
B4	42	I20 B	40	J27	41
D14	42	I21 C	40	J28	41
D15	42	J1	41	J29	41
D16	42	J3	41	J32	42
D17	42	J4	41	J33	42
D18	42	J7	41	J34	42
D19	42	J9	41	J43	41
D20	42	J10	41	P12	43
D21	42	J14	41	T5	41
D22	42	J15	41	U1	41
D23	42	J17	41	W3	41

WIRELESS DOOR LOCK CONTROL



: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2F		
2L	26	Front Door LH Wire and Cowl Side J/B LH (Left Kick Panel)
2M		
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2O		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3F		
3G	32	Front Door RH Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)



: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IL1	50	Instrument Panel Integration Wire and Computer Wire (Instrument Panel Center)
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4		
IU5		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BA1	56	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BA2		
BC1	56	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)
BC2		
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BH2		
BL3	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BQ1	58	Back Door Lower Wire and Floor Wire (Left Rear Side Quarter Panel)



: GROUND POINTS

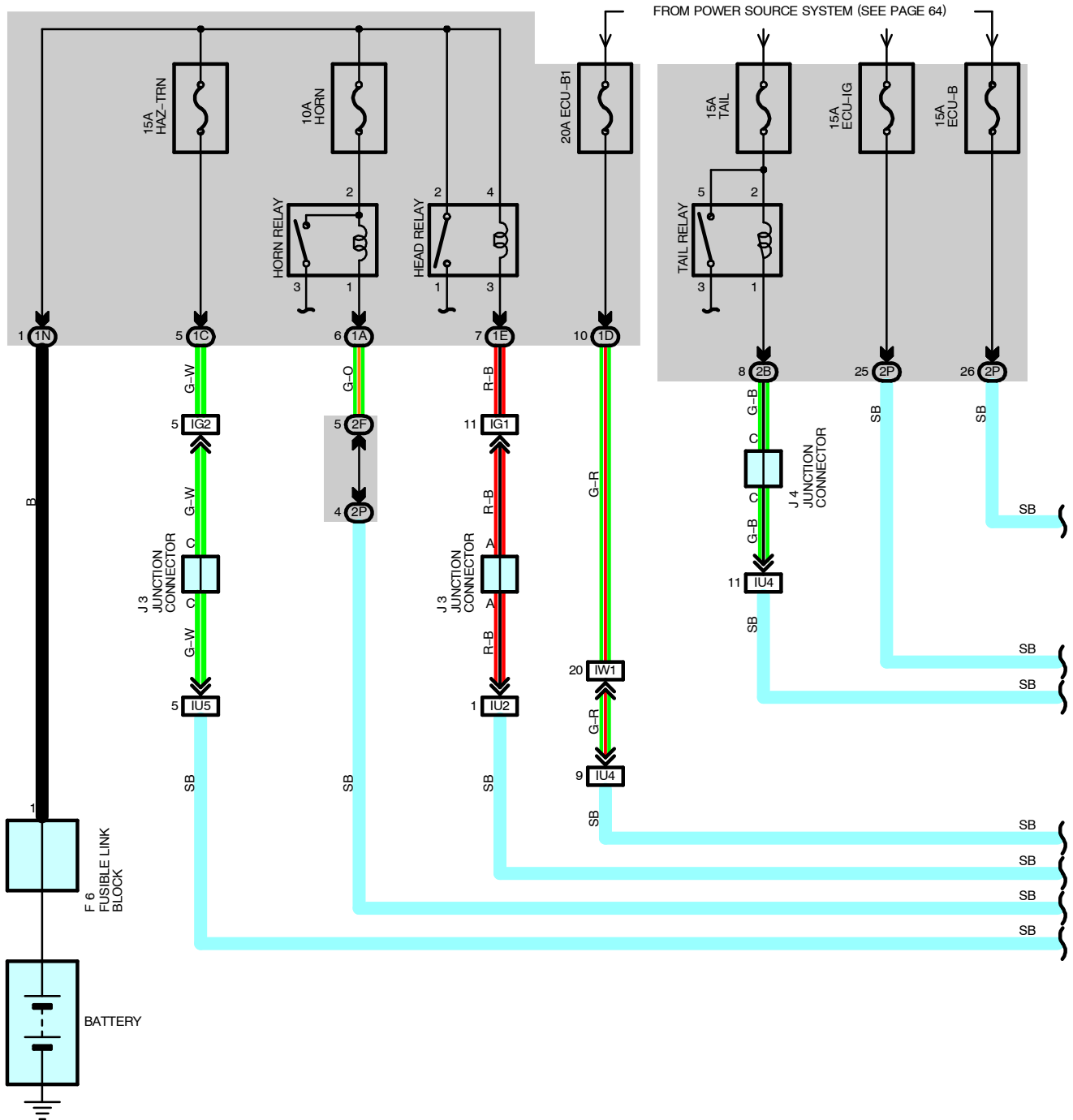
Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
IH	48	Set Bolt of Cowl Side J/B RH
II		
BJ	56	Under the Driver's Seat
BK	56	Front Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel



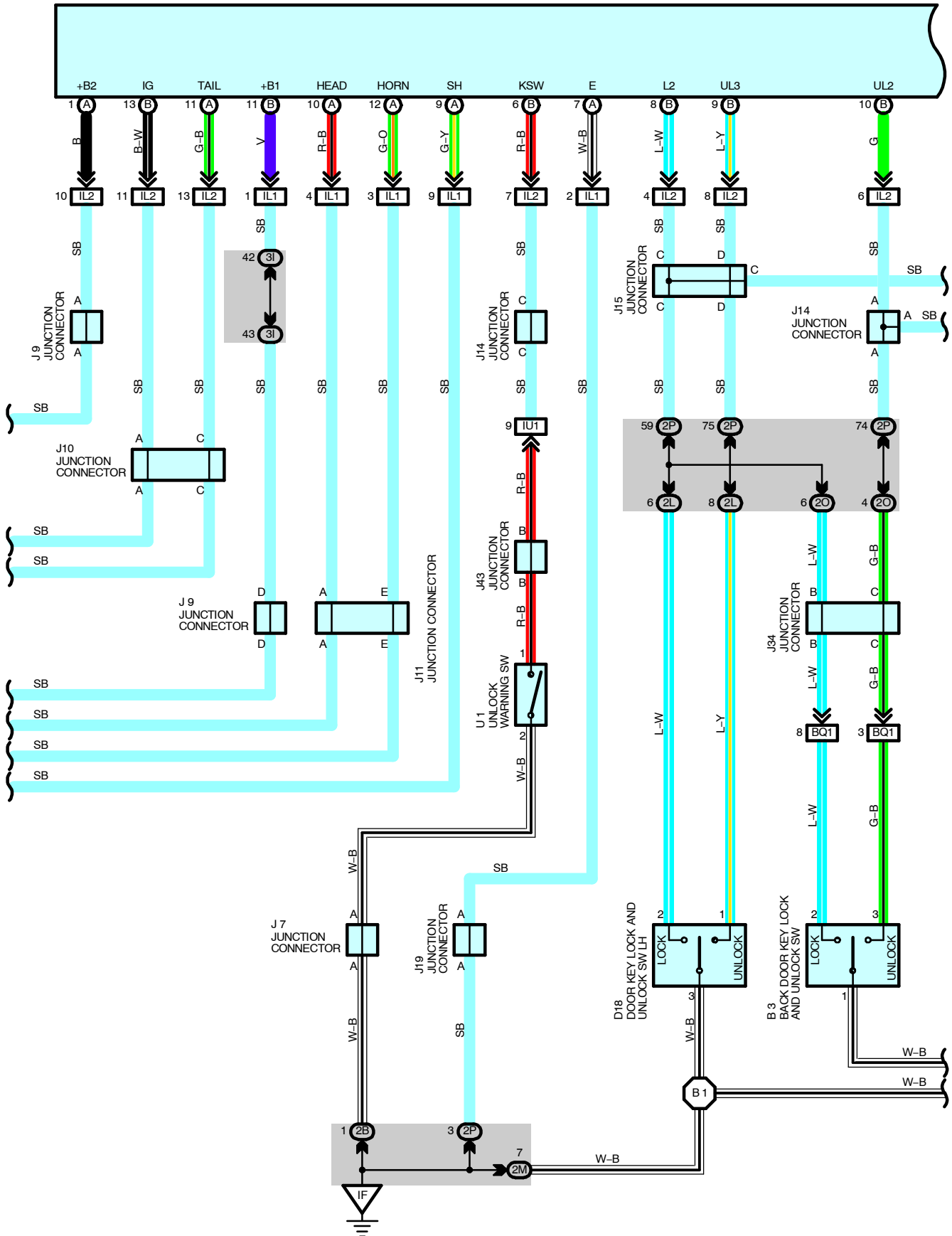
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	50	Dash Wire	B6	58	Floor Wire
B1	58	Front Door LH Wire	B15	58	Back Door Upper Wire
B5	58	Floor Wire			

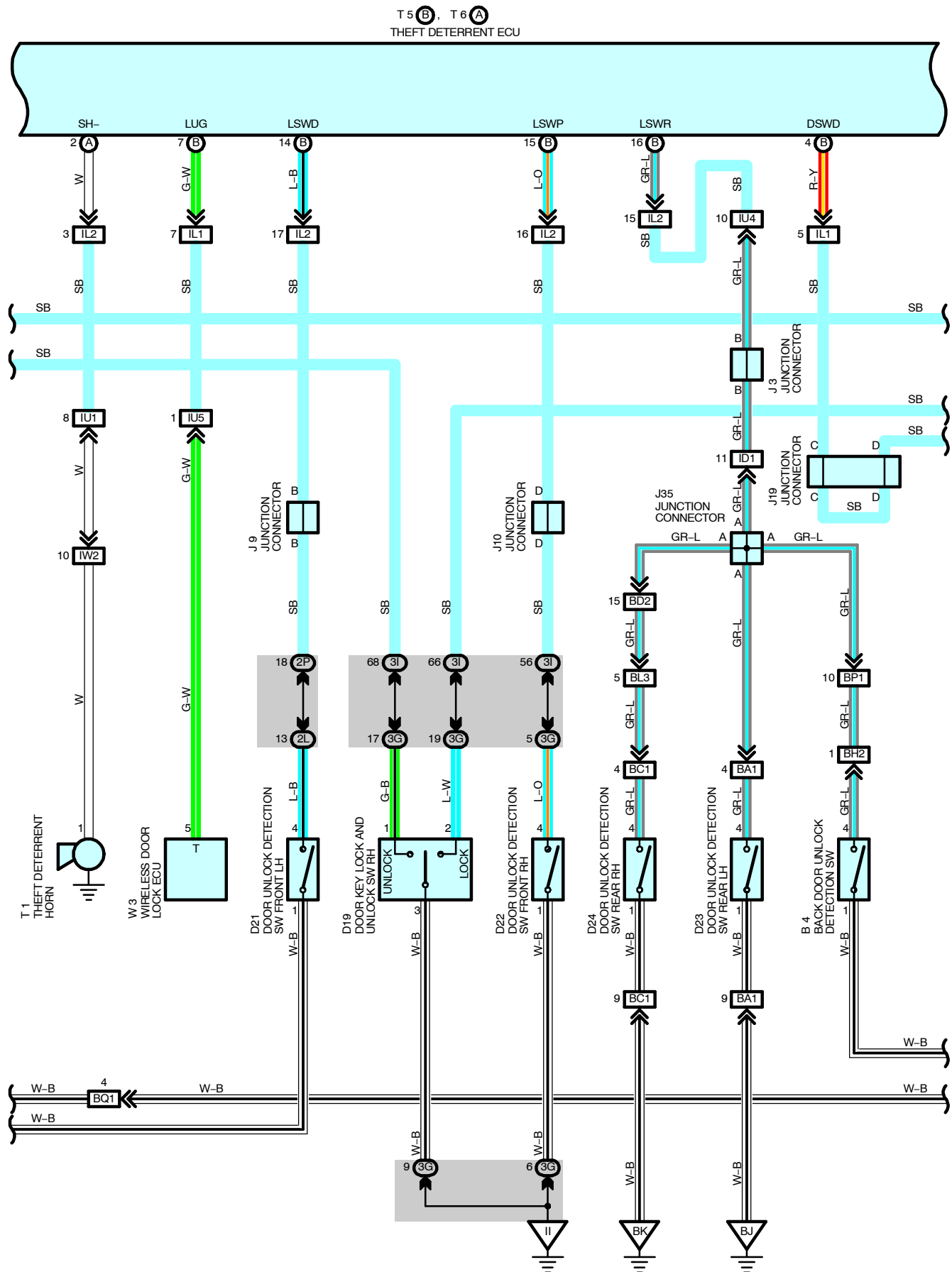
THEFT DETERRENT



T5 (B), T6 (A)
THEFT DETERRENT ECU

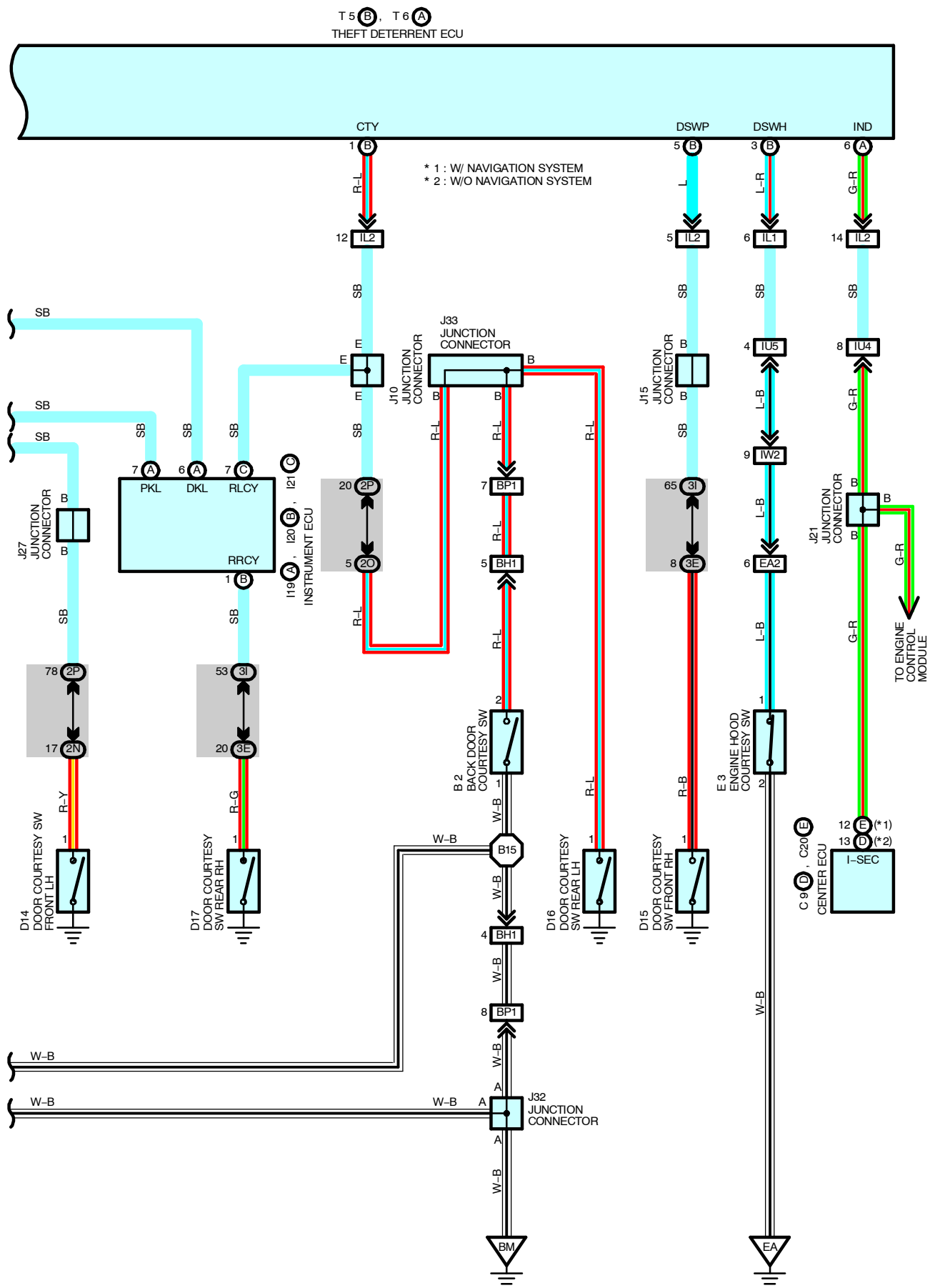


THEFT DETERRENT



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)



THEFT DETERRENT

SERVICE HINTS

D18, D19 DOOR KEY LOCK AND UNLOCK SW LH, RH

- 1-3 : Closed with door lock cylinder unlocked with key
- 2-3 : Closed with door lock cylinder locked with key

B3 BACK DOOR KEY LOCK AND UNLOCK SW

- 1-3 : Closed with door lock cylinder unlocked with key
- 1-2 : Closed with door lock cylinder locked with key

E3 ENGINE HOOD COURTESY SW

- 1-2 : Opened with engine hood open

U1 UNLOCK WARNING SW

- 2-1 : Closed with ignition key in cylinder

T5 (B), T6 (A) THEFT DETERRENT ECU

- (B) 6-GROUND : Continuity with ignition key in cylinder
- (B)15-GROUND : Continuity with front RH door unlocked
- (B)14-GROUND : Continuity with front LH door unlocked
- (B) 5-GROUND : Continuity with front RH door open
- (B) 4-GROUND : Continuity with front LH door open
- (B) 8-GROUND : Continuity with door key lock SW at **LOCK** position
- (A) 7-GROUND : Always continuity
- (B) 3-GROUND : Continuity with engine hood close
- (B) 9, (A) 10-GROUND : Continuity with door key lock SW to **UNLOCK** position
- (B)11, (A) 1, (A) 9-GROUND : Always approx. **12** volts

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B2	42	D24	42	J19	41
B3	42	E3	38	J21	41
B4	42	F6	38	J27	41
C9	D 40	I19	A 40	J32	42
C20	E 40	I20	B 40	J33	42
D14	42	I21	C 40	J34	42
D15	42	J3	41	J35	42
D16	42	J4	41	J43	41
D17	42	J7	41	T1	39
D18	42	J9	41	T5	B 41
D19	42	J10	41	T6	A 41
D21	42	J11	41	U1	41
D22	42	J14	41	W3	41
D23	42	J15	41		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1C		
1D		
1E		
1N	23	Engine Room No.3 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2F	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2L	26	Front Door LH Wire and Cowl Side J/B LH (Left Kick Panel)
2M		
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2O		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3G	32	Front Door RH Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA2	46	Engine Room Main Wire and Engine Room No.2 Wire (Engine Compartment Right)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IL1	50	Instrument Panel Integration Wire and Computer Wire (Instrument Panel Center)
IL2		
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU2		
IU4		
IU5		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IW2		
BA1	56	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BC1	56	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BH2		
BL3	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BQ1	58	Back Door Lower Wire and Floor Wire (Left Rear Side Quarter Panel)

: GROUND POINTS

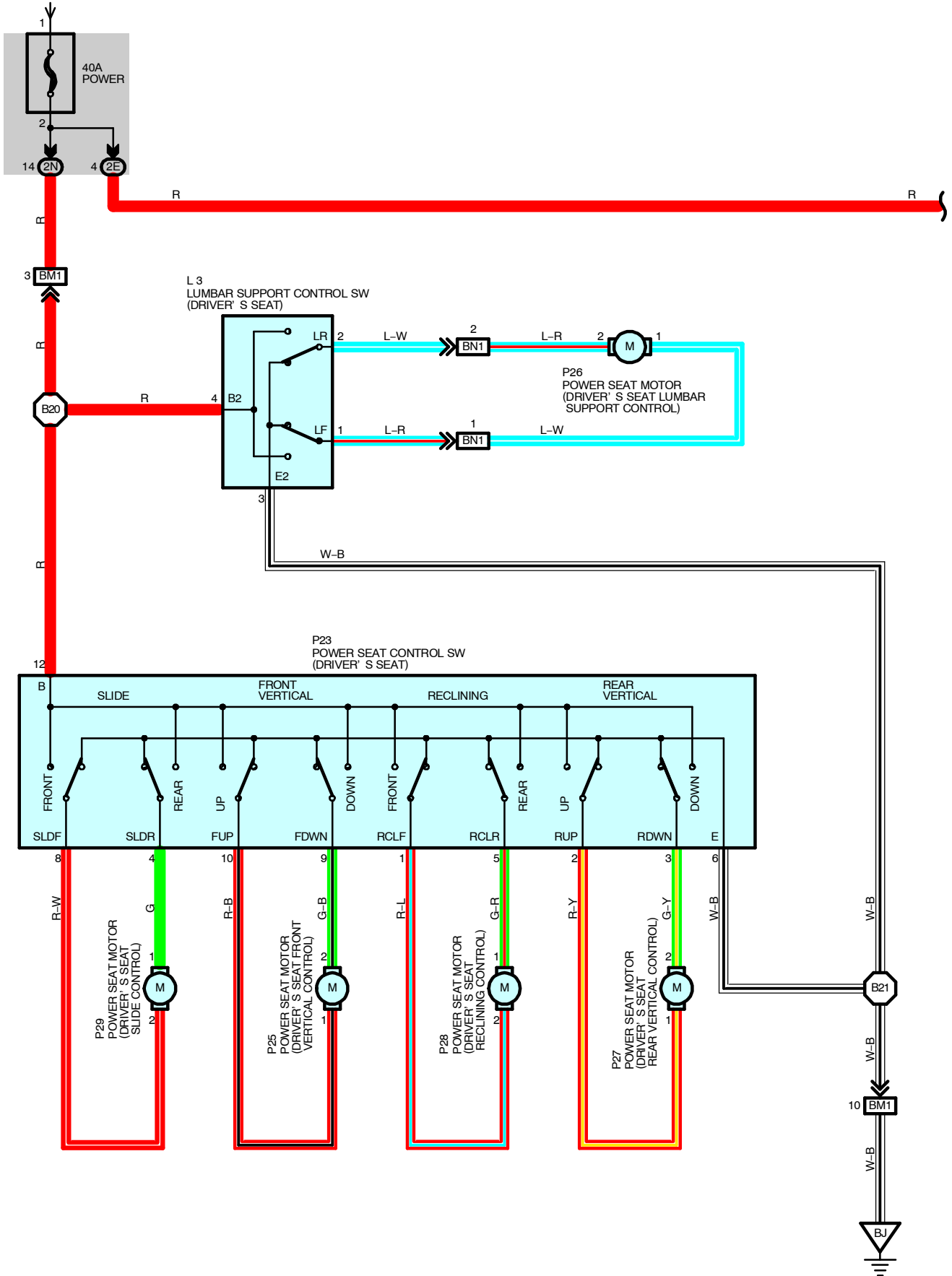
Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
IF	48	Set Bolt of Cowl Side J/B LH
II	48	Set Bolt of Cowl Side J/B RH
BJ	56	Under the Driver's Seat
BK	56	Front Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel

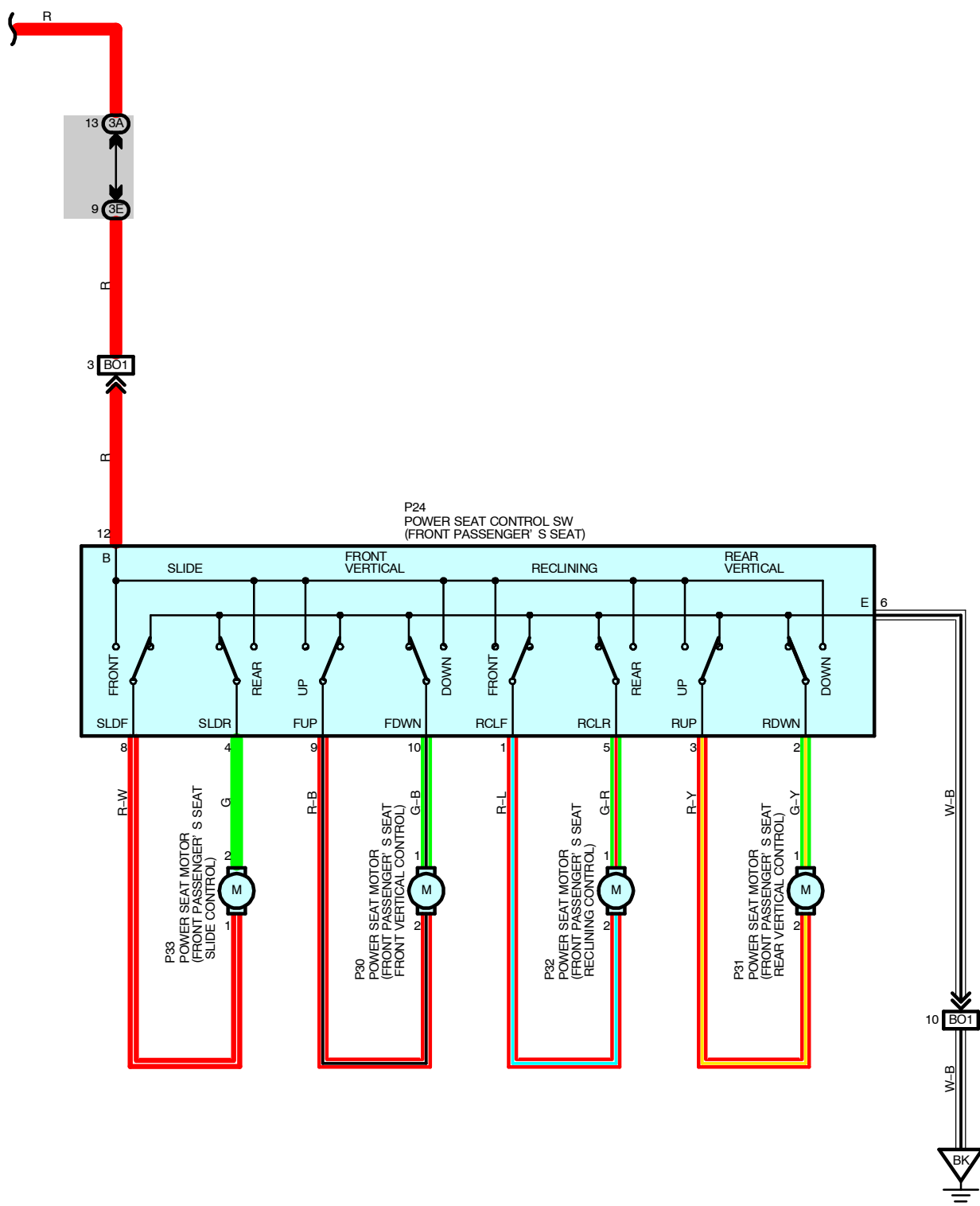
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	58	Front Door LH Wire	B15	58	Back Door Upper Wire

POWER SEAT

FROM POWER SOURCE SYSTEM (SEE PAGE 64)





POWER SEAT

SERVICE HINTS

P23 POWER SEAT CONTROL SW (DRIVER'S SEAT)

- 12-1 : Closed with driver's seat at front reclining operation
- 12-5 : Closed with driver's seat at rear reclining operation
- 12-10 : Closed with driver's seat at front vertical up operation
- 12-9 : Closed with driver's seat at front vertical down operation
- 12-2 : Closed with driver's seat at rear vertical up operation
- 12-3 : Closed with driver's seat at rear vertical down operation
- 12-8 : Closed with driver's seat at front slide operation
- 12-4 : Closed with driver's seat at rear slide operation
- 6-GROUND : Always continuity

P24 POWER SEAT CONTROL SW (FRONT PASSENGER'S SEAT)

- 12-1 : Closed with front passenger's seat at front reclining operation
- 12-5 : Closed with front passenger's seat at rear reclining operation
- 12-9 : Closed with front passenger's seat at front vertical up operation
- 12-10 : Closed with front passenger's seat at front vertical down operation
- 12-3 : Closed with front passenger's seat at rear vertical up operation
- 12-2 : Closed with front passenger's seat at rear vertical down operation
- 12-8 : Closed with front passenger's seat at front slide operation
- 12-4 : Closed with front passenger's seat at rear slide operation
- 6-GROUND : Always continuity

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
L3	44	P26	44	P30	44
P23	44	P27	44	P31	44
P24	44	P28	44	P32	44
P25	44	P29	44	P33	44

□ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
BM1	60	Floor Wire and Front Seat LH Wire (Front Side Under the Driver's Seat)
BN1	60	Seat No.2 Wire and Front Seat LH Wire (Rear Side Under the Driver's Seat)
BO1	60	Floor No.2 Wire and Front Seat RH Wire (Front Side Under the Front Passenger's Seat)

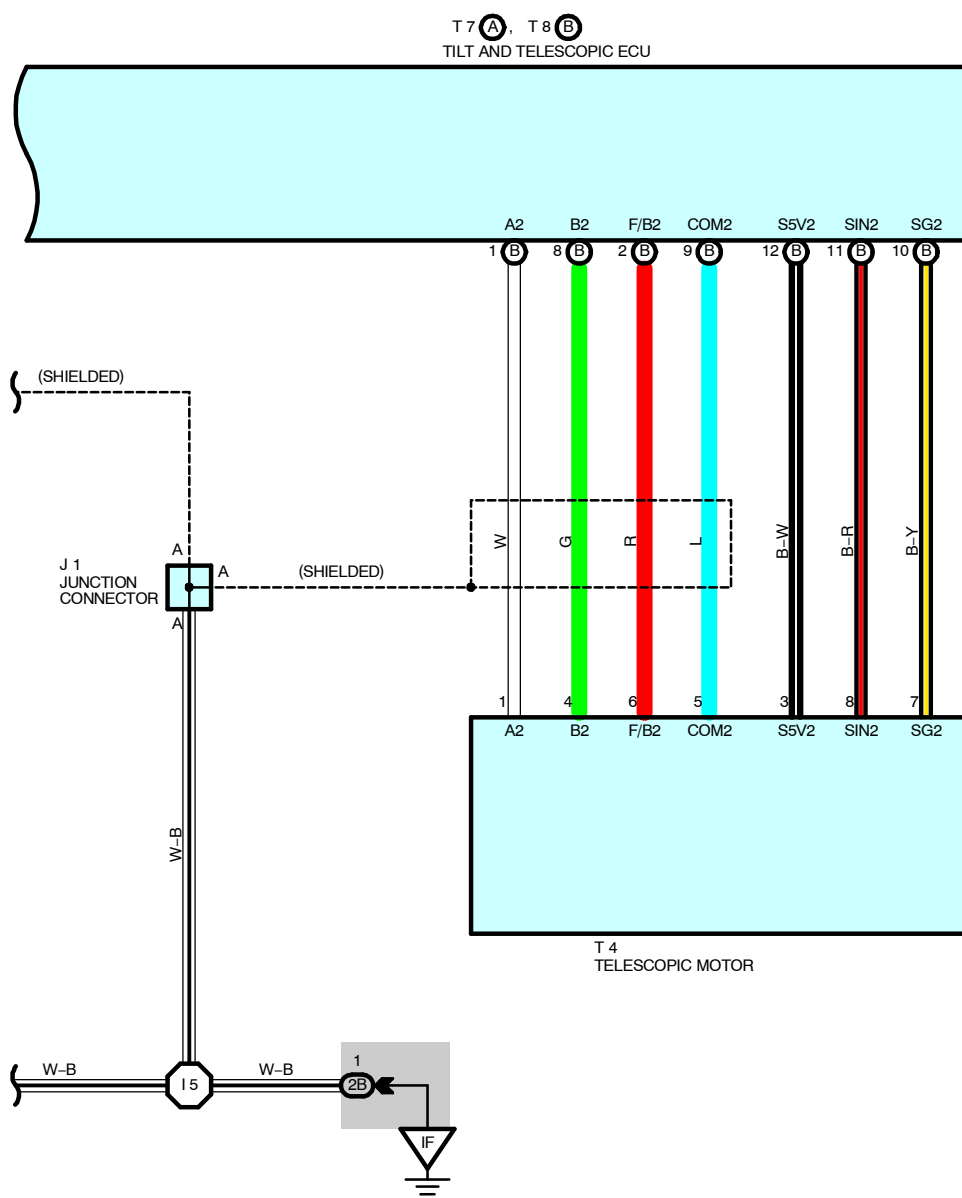
▽ : GROUND POINTS

Code	See Page	Ground Points Location
BJ	56	Under the Driver's Seat
BK	56	Front Side Under the Front Passenger's Seat

○ : SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B20	60	Front Seat LH Wire	B21	60	Front Seat LH Wire

2002 LAND CRUISER (EWD469U)



POWER TILT AND POWER TELESCOPIC

SYSTEM OUTLINE

This system provides the automatic tilt and telescopic mechanisms using the motor drive, tilt and telescopic ECU control, allowing variable steering movement in the back and forth, and vertical directions. This makes it possible to set the steering to the desired steering position.

1. MANUAL OPERATION

The tilt and telescopic can be adjusted while the ignition key is inserted into the key cylinder.

* Tilt operation

When the tilt and telescopic SW is pressed to TILT DOWN position, the current flows from tilt and telescopic ECU TERMINAL (A) 2 to tilt and telescopic SW TERMINAL 9 to TERMINAL 4 to tilt and telescopic ECU TERMINAL (A) 5, and a signal is input to the tilt and telescopic ECU. This activates the tilt and telescopic ECU and rotates the tilt motor to lower the steering while the tilt and telescopic SW is kept pressed to TILT DOWN position.

When the tilt and telescopic SW is pressed to TILT UP position, the current flows from tilt and telescopic ECU TERMINAL (A) 2 to tilt and telescopic SW TERMINAL 9 to TERMINAL 4 to tilt and telescopic ECU TERMINAL (A) 5, and a signal is input to the tilt and telescopic ECU. This activates the tilt and telescopic ECU and rotates the tilt motor to raise the steering while the tilt and telescopic SW is kept pressed to TILT UP position.

* Telescopic operation

When the tilt and telescopic SW is pressed to TELESCO LONG position, the current flows from tilt and telescopic ECU TERMINAL (A) 2 to tilt and telescopic SW TERMINAL 9 to TERMINAL 4 to tilt and telescopic ECU TERMINAL (A) 5, and a signal is input to the tilt and telescopic ECU. This activates the tilt and telescopic ECU and rotates the telescopic motor to extend the telescopic while the tilt and telescopic SW is kept pressed to TELESCO LONG position.

When the tilt and telescopic SW is pressed to TELESCO SHORT position, the current flows from tilt and telescopic ECU TERMINAL (A) 2 to tilt and telescopic SW TERMINAL 9 to TERMINAL 4 to tilt and telescopic ECU TERMINAL (A) 5, and a signal is input to the tilt and telescopic ECU. This activates the tilt and telescopic ECU and rotates the telescopic motor to retract the telescopic while the tilt and telescopic SW is kept pressed to TELESCO SHORT position.

SERVICE HINTS

T7 (A), T8 (B) TILT AND TELESCOPIC ECU

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

(B) 4-GROUND : Always approx. 12 volts

(A) 4-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

(A) 6-GROUND : Always continuity

C17 TILT AND TELESCOPIC SW [COMB. SW]

4-9 : Approx. 160 Ω with telesco long operation

: Approx. 360 Ω with tilt up operation

: Approx. 790 Ω with telesco short operation

: Approx. 1.99 kΩ with tilt down operation

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C13	40	J22	41	T8 B	41
C17	40	M2	42	T9	41
J1	41	T4	41		
J18	41	T7 A	41		

□ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	48	Dash Wire and Roof Wire (Left Kick Panel)
IU3	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
II2	50	Column Wire and Dash Wire (Near the Ignition SW)

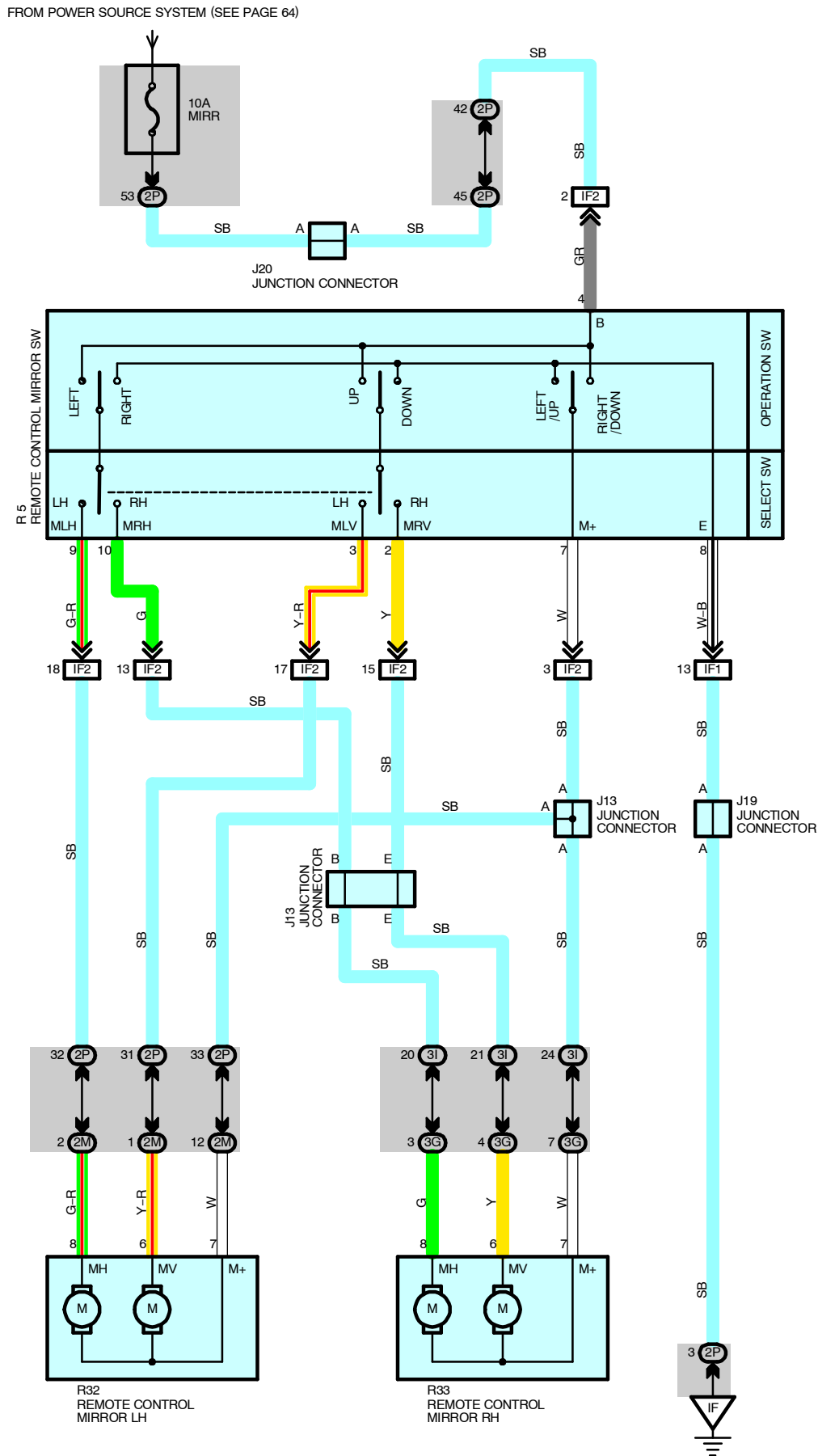
▽ : GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH



: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	50	Dash Wire	I9	50	Column Wire
I5					



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)

SERVICE HINTS

R5 REMOTE CONTROL MIRROR SW

- 7-8 : Continuity with the operation SW at **UP** or **LEFT** position
- 4-7 : Continuity with the operation SW at **RIGHT** or **DOWN** position
- 4-9 : Continuity with the operation SW at **LEFT** position and the select SW at **LH** position
- 4-3 : Continuity with the operation SW at **UP** position and the select SW at **LH** position
- 8-10 : Continuity with the operation SW at **RIGHT** position and the select SW at **RH** position
- 2-8 : Continuity with the operation SW at **DOWN** position and the select SW at **RH** position
- 4-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
- 8-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J13	41	J20	41	R32	43
J19	41	R5	41	R33	43

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

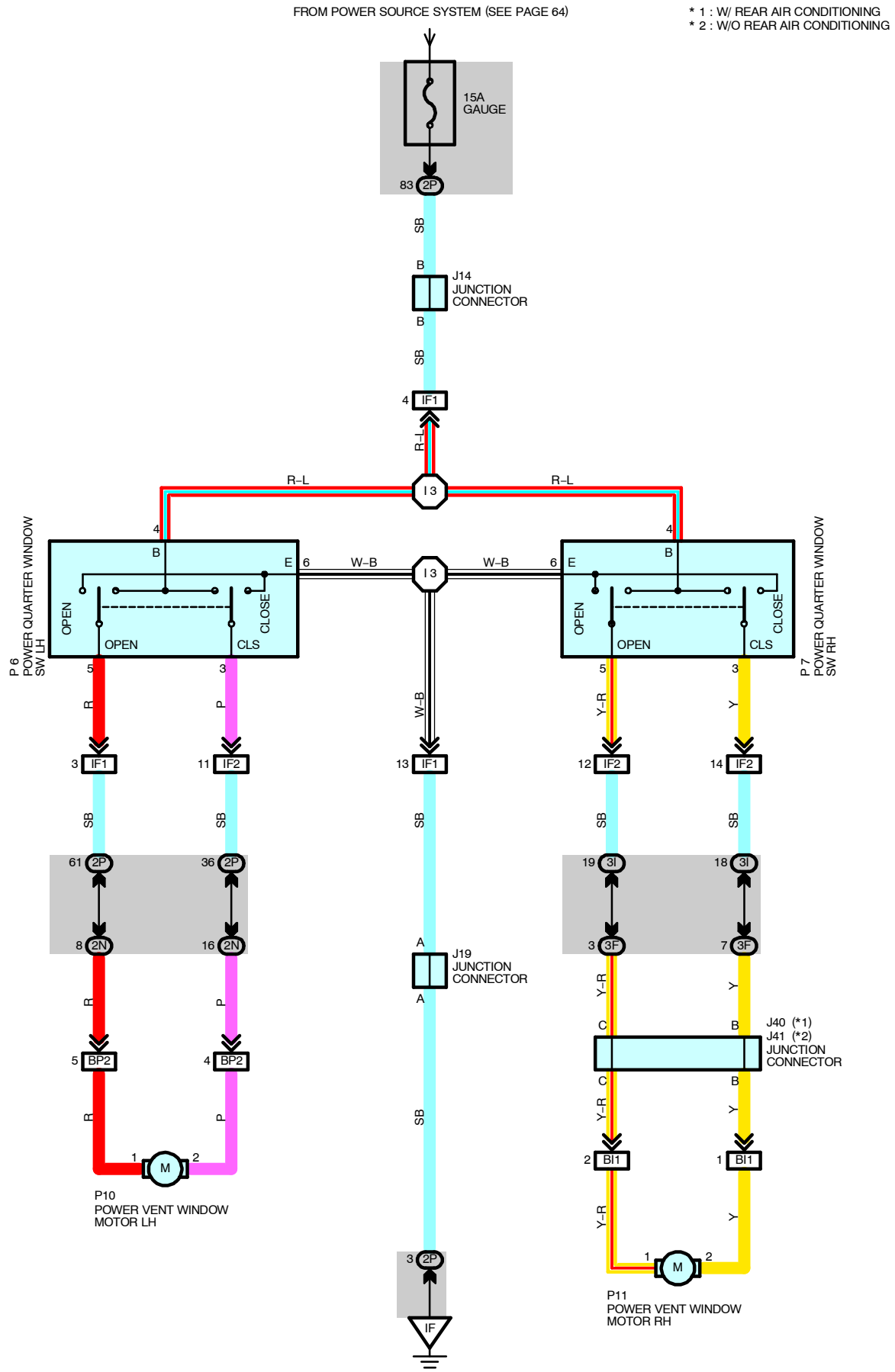
Code	See Page	Junction Block and Wire Harness (Connector Location)
2M	26	Front Door LH Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3G	32	Front Door RH Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	48	Instrument Panel Integration Wire and Instrument Panel Wire (Left Side of Instrument Panel)
IF2		

: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)

SERVICE HINTS

P6 POWER QUARTER WINDOW SW LH

4-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

6-GROUND : Always continuity

P7 POWER QUARTER WINDOW SW RH

4-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

6-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J14	41	J41	42	P10	43
J19	41	P6	41	P11	43
J40	42	P7	41		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3F	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	48	Instrument Panel Integration Wire and Instrument Panel Wire (Left Side of Instrument Panel)
IF2		
BI1	58	Roof No.2 Wire and Floor No.2 Wire (Right Side Rear Quarter Panel)
BP2	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)

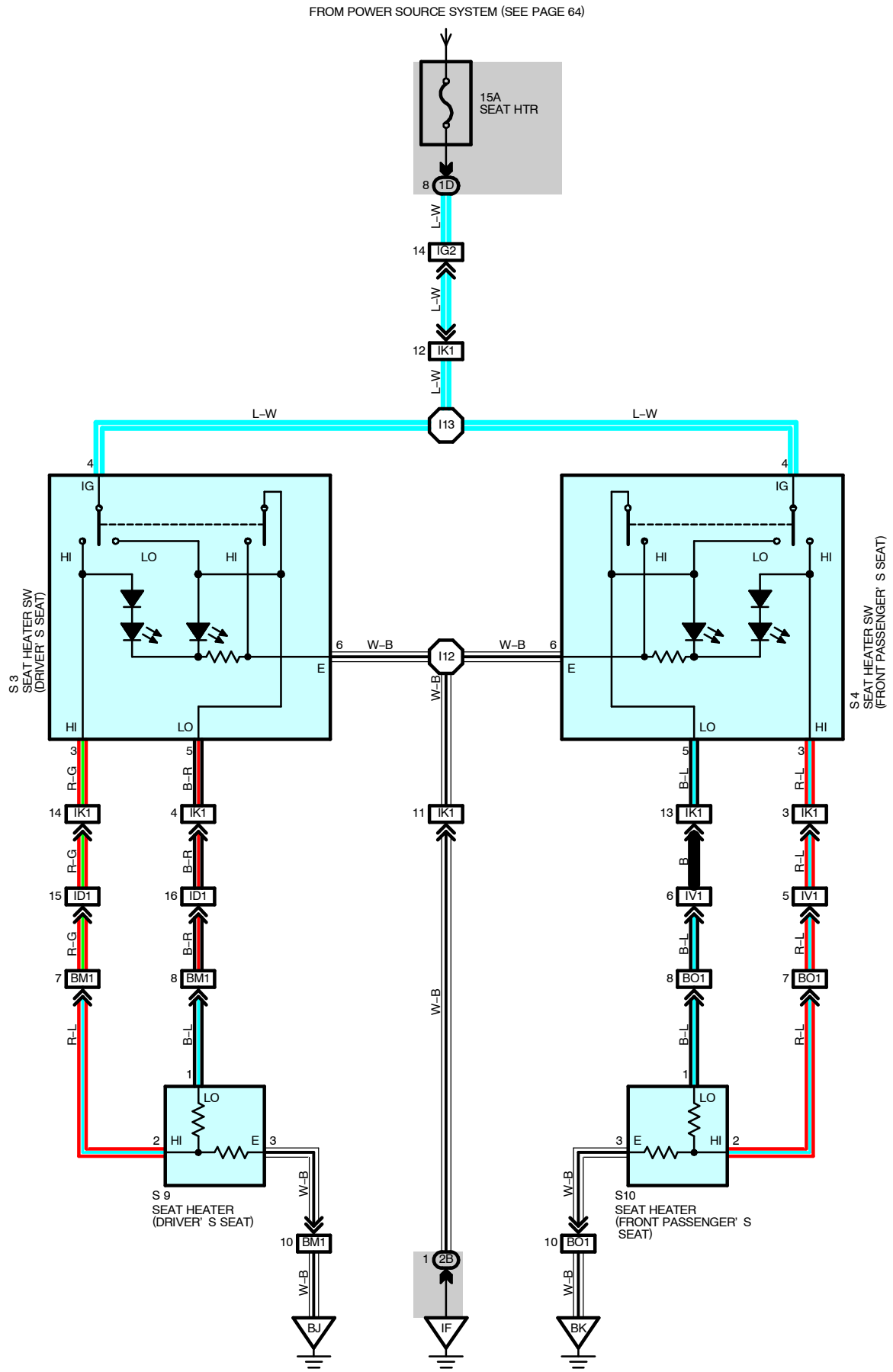
: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	50	Instrument Panel Wire			

SEAT HEATER



SERVICE HINTS

S3 SEAT HEATER SW (DRIVER'S SEAT)

4-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

6-GROUND : Always continuity

S4 SEAT HEATER SW (FRONT PASSENGER'S SEAT)

4-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

6-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
S3	41	S9	44		
S4	41	S10	44		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IG2	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IK1	50	Console Box Wire and Dash Wire (Left Side of Front Console)
IV1	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
BM1	60	Floor Wire and Front Seat LH Wire (Front Side Under the Driver's Seat)
BO1	60	Floor No.2 Wire and Front Seat RH Wire (Front Side Under the Front Passenger's Seat)

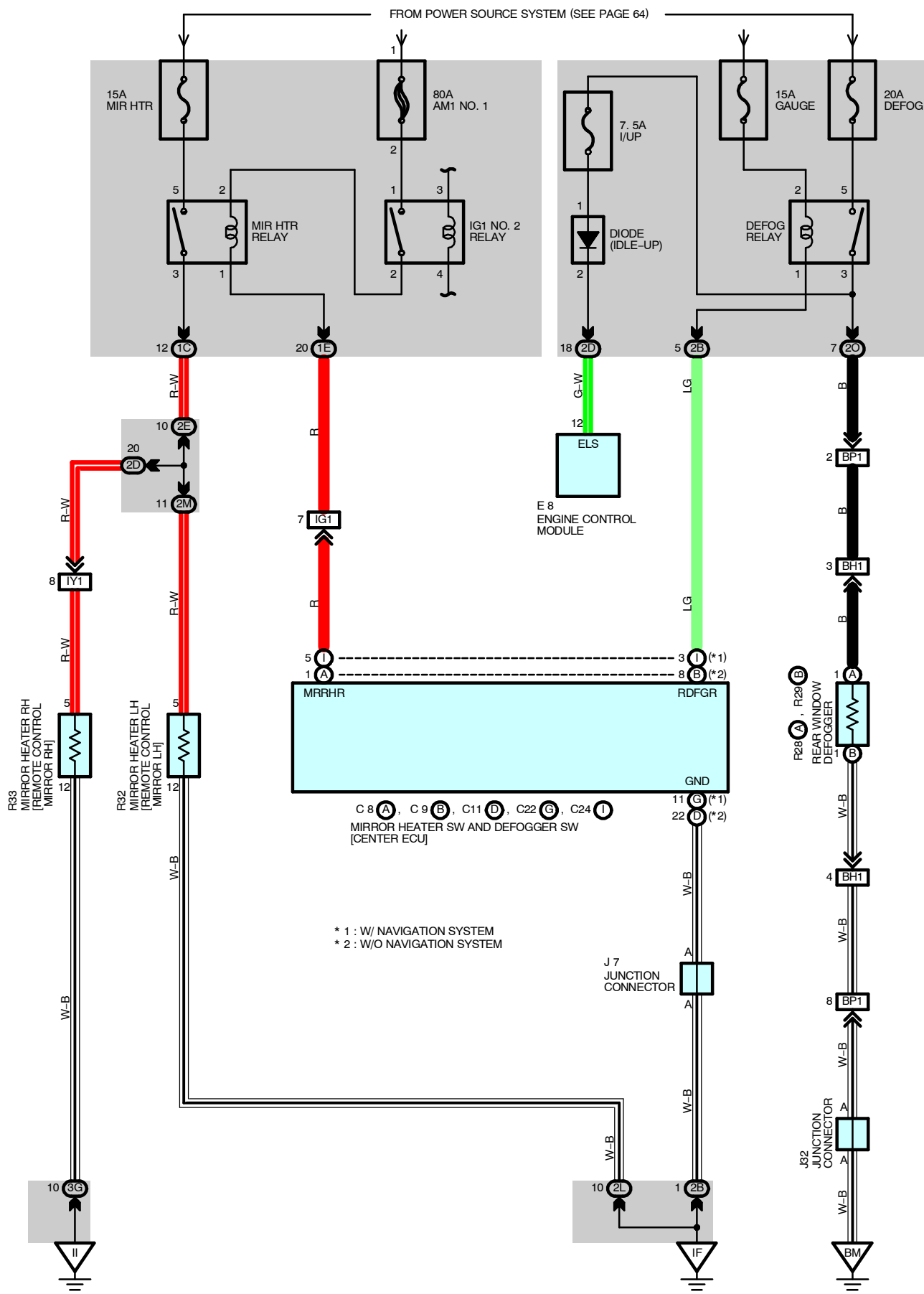
: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
BJ	56	Under the Driver's Seat
BK	56	Front Side Under the Front Passenger's Seat

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I12	50	Console Box Wire	I13	50	Console Box Wire

REAR WINDOW DEFOGGER AND MIRROR HEATER



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

SERVICE HINTS

DEFOG RELAY

5-3 : Closed with ignition SW at **ON** or **ST** position and defogger SW on

MIR HTR RELAY

5-3 : Closed with ignition SW at **ON** or **ST** position and mirror heater SW on

: PARTS LOCATION

Code		See Page	Code		See Page	Code		See Page
C8	A	40	C24	I	40	R28	A	43
C9	B	40	E8		40	R29	B	43
C11	D	40	J7		41	R32		43
C22	G	40	J32		42	R33		43

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

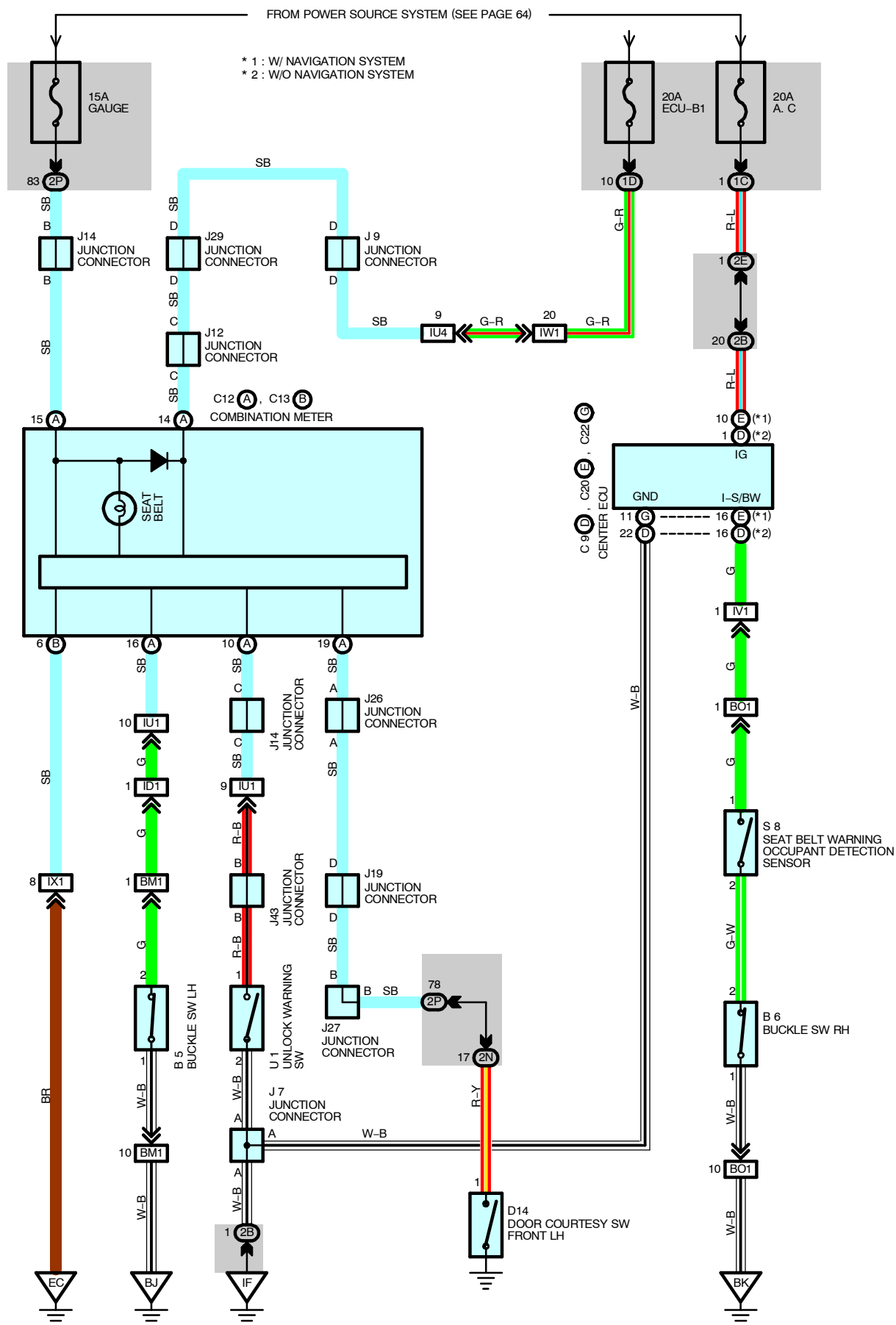
Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1E		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2L	26	Front Door LH Wire and Cowl Side J/B LH (Left Kick Panel)
2M		
2O	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
3G	32	Front Door RH Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IY1	54	Front Door RH Wire and Dash Wire (Right Kick Panel)
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)

: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
II	48	Set Bolt of Cowl Side J/B RH
BM	56	Left Rear Side Quarter Panel



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

SYSTEM OUTLINE

1. SEAT BELT WARNING SYSTEM

When the ignition SW turned on, a signal is input to the combination meter and center ECU. To determine whether the driver has fastened the seat belt, a signal is input from the buckle SW LH to the combination meter TERMINAL (A) 16. When the seat belt is not fastened, the seat belt warning light in the combination meter blinks, and emits a warning sound.

In addition, the front passenger is recognized by a sensor (Seat belt warning occupant detection sensor) is installed in the front passenger seat, and determines whether the seat belt is fastened. When not fastened, the signals from the seat belt warning occupant detection sensor and buckle SW RH is input to center ECU TERMINAL 16, and the passenger seat belt warning light blinks to warn the passenger.

2. KEY REMINDER SYSTEM

When the driver door is opened with the ignition SW off and ignition key remaining in the key cylinder (Unlock warning SW on), a signal is input from the unlock warning SW to the combination meter TERMINAL (A) 10, and from the door courtesy SW front LH to combination meter TERMINAL (A) 19. As a result, the buzzer in the combination meter goes on and warns the driver that the key is remaining in the key cylinder.

SERVICE HINTS

S8 SEAT BELT WARNING OCCUPANT DETECTION SENSOR

1-2 : Closed with passenger sit on the front passenger seat

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B5	44	D14	42	J27	41
B6	44	J7	41	J29	41
C9	D 40	J9	41	J43	41
C12	A 40	J12	41	S8	44
C13	B 40	J14	41	U1	41
C20	E 40	J19	41		
C22	G 40	J26	41		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4		
IV1	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)
BM1	60	Floor Wire and Front Seat LH Wire (Front Side Under the Driver's Seat)
BO1	60	Floor No.2 Wire and Front Seat RH Wire (Front Side Under the Front Passenger's Seat)

: GROUND POINTS

Code	See Page	Ground Points Location
EC	46	Rear Bank of Right Cylinder Head
IF	48	Set Bolt of Cowl Side J/B LH
BJ	56	Under the Driver's Seat
BK	56	Front Side Under the Front Passenger's Seat

236



SERVICE HINTS

A30 AUTO ANTENNA CONTROL RELAY

- 4-GROUND : Always approx. **12** volts
- 7-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position
- 17-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
- 5-GROUND : Always continuity

: PARTS LOCATION

Code		See Page		Code		See Page		Code		See Page	
A17		38		C20	E	40		J30	41		
A30		40		C22	G	40		R1	41		
C9	D	40		J7		41					

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
3B	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

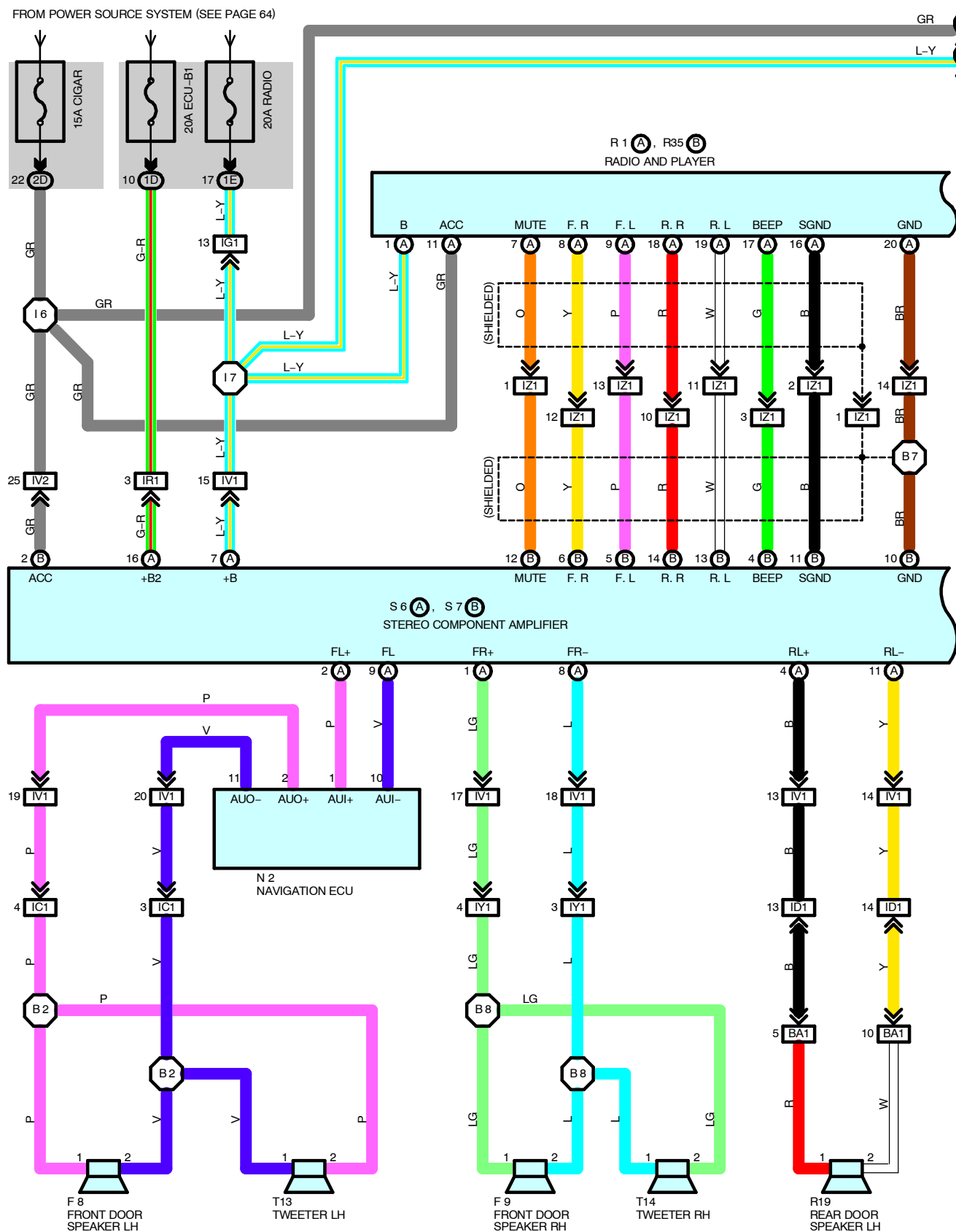
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IW2	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

: GROUND POINTS

Code	See Page	Ground Points Location
EB	46	Front Right Side of Fender Apron
IF	48	Set Bolt of Cowl Side J/B LH
II	48	Set Bolt of Cowl Side J/B RH

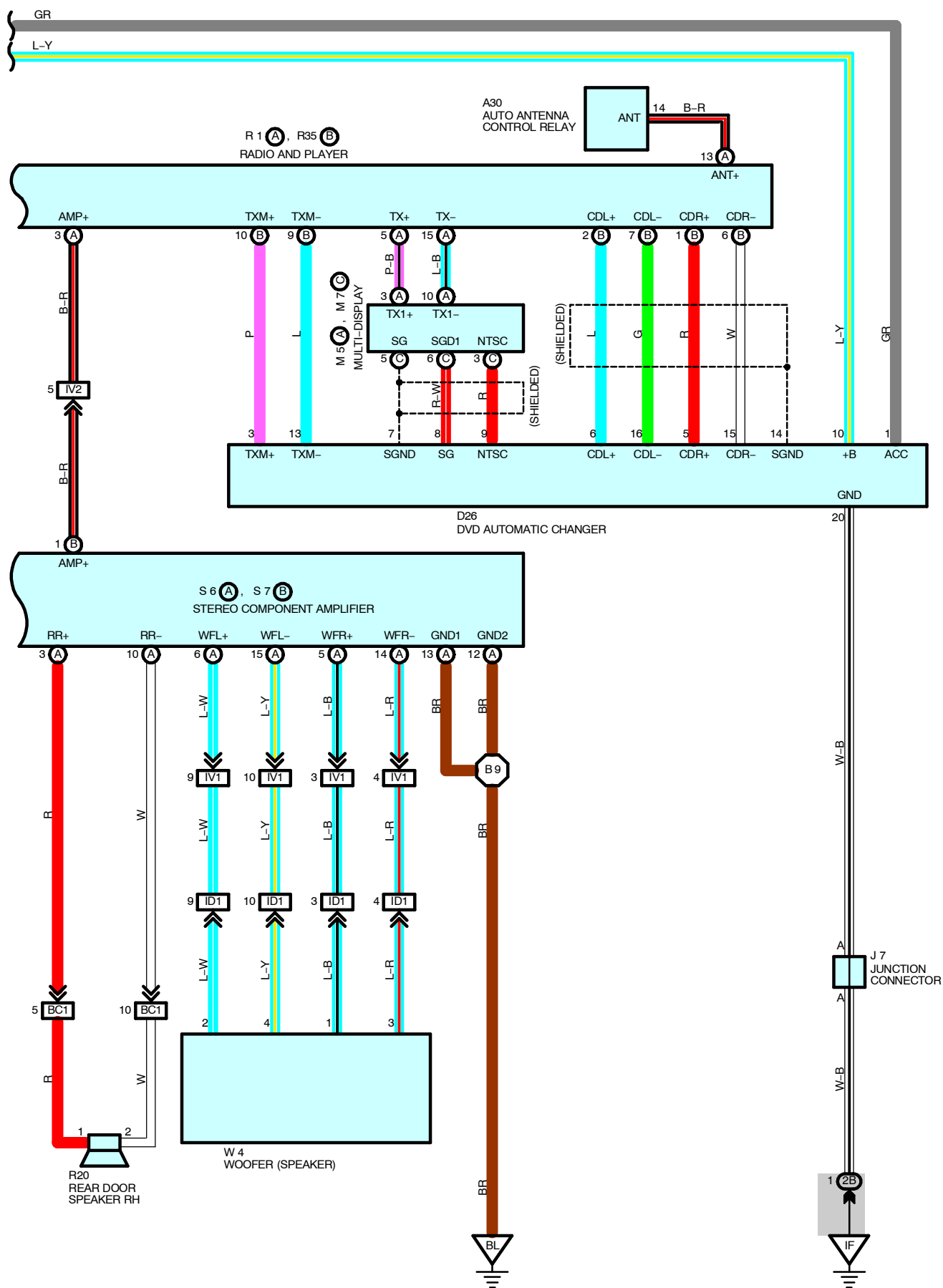
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E5	46	Engine Room No.2 Wire	I5	50	Dash Wire



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)



RADIO AND PLAYER (w/ NAVIGATION SYSTEM)

SERVICE HINTS

R1 RADIO AND PLAYER

- 1-GROUND : Always approx. **12** volts
- 11-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position

S6 (A), S7 (B) STEREO COMPONENT AMPLIFIER

- (B) 2-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
- (A) 7, (A) 16-GROUND : Always approx. **12** volts
- (A) 12, (A) 13-GROUND : Always continuity

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A30	40	M7 C	41	S6 A	43
D26	40	N2	43	S7 B	43
F8	42	R1 A	41	T13	43
F9	42	R19	43	T14	43
J7	41	R20	43	W4	43
M5 A	41	R35 B	41		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1E		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	48	Front Door LH Wire and Dash Wire (Left Kick Panel)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IR1	52	Engine Room No.2 Wire and Floor No.2 Wire (Right Kick Panel)
IV1	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IV2		
IY1	54	Front Door RH Wire and Dash Wire (Right Kick Panel)
IZ1	54	Floor No.2 Wire and Dash Wire (Right Side of Front Console)
BA1	56	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BC1	56	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)

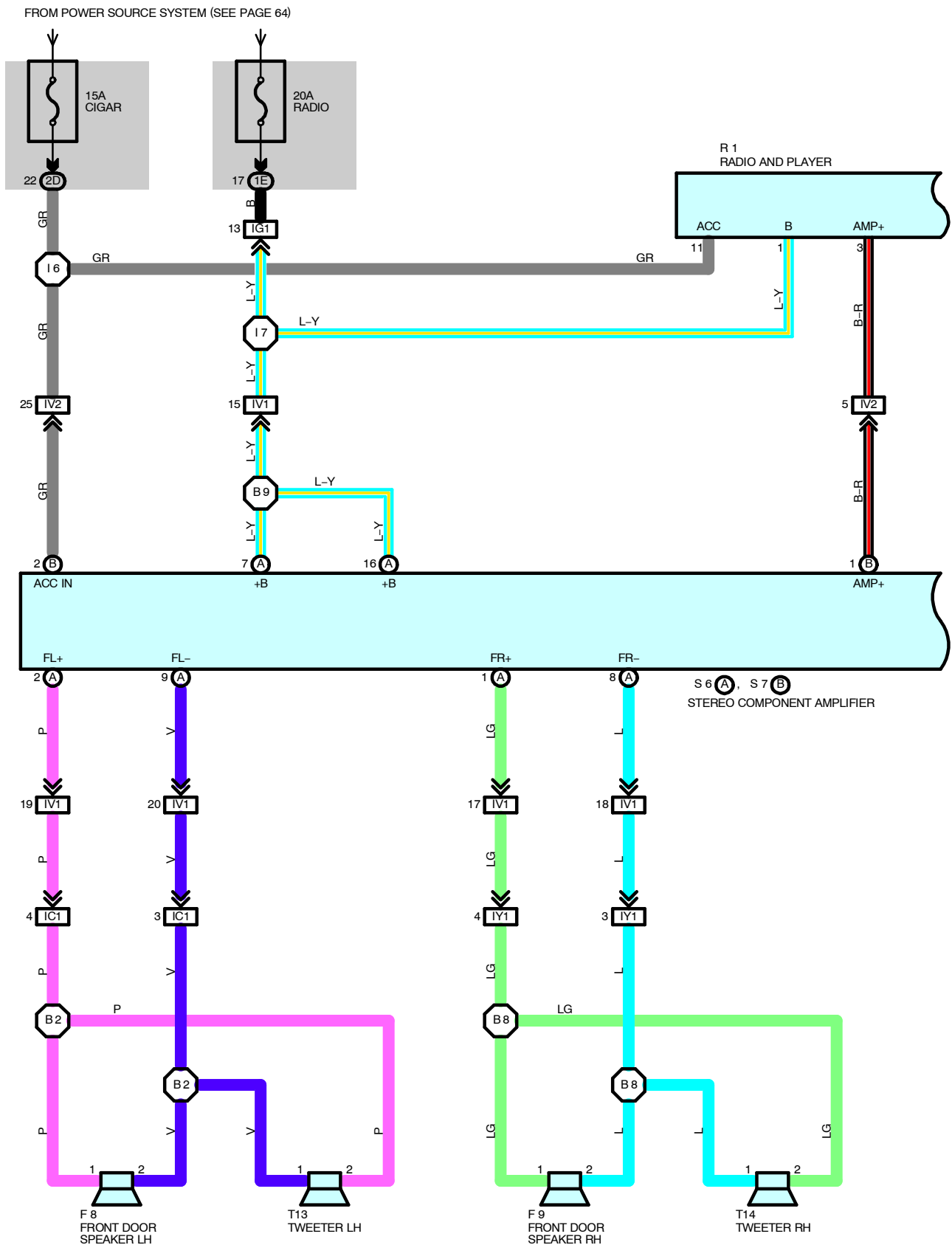
▽ : GROUND POINTS

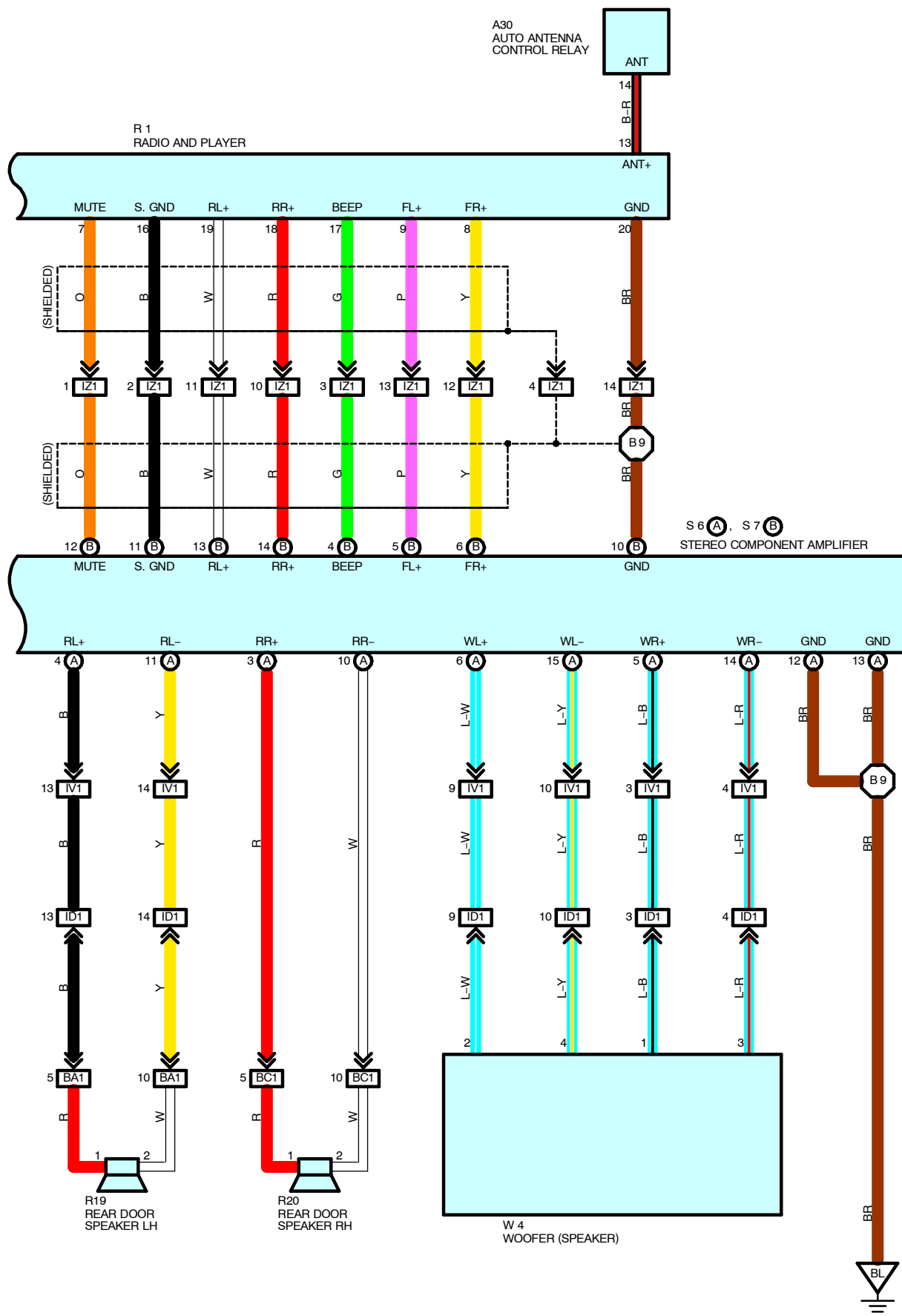
Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
BL	56	Rear Side Under the Front Passenger's Seat

○ : SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	50	Dash Wire	B7	58	Roof Wire
I7			B8	58	Front Door RH Wire
B2	58	Front Door LH Wire	B9	58	Floor No.2 Wire

RADIO AND PLAYER (w/o NAVIGATION SYSTEM)





RADIO AND PLAYER (w/o NAVIGATION SYSTEM)

SERVICE HINTS

R1 RADIO AND PLAYER

1-GROUND : Always approx. **12** volts

11-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position

S6 (A), S7 (B) STEREO COMPONENT AMPLIFIER

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

(A) 7, (A) 16-GROUND : Always approx. **12** volts

(A) 12, (A) 13-GROUND : Always continuity

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A30	40	R19	43	T13	43
F8	42	R20	43	T14	43
F9	42	S6	A 43	W4	43
R1	41	S7	B 43		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2D	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	48	Front Door LH Wire and Dash Wire (Left Kick Panel)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IV1	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IV2		
IY1	54	Front Door RH Wire and Dash Wire (Right Kick Panel)
IZ1	54	Floor No.2 Wire and Dash Wire (Right Side of Front Console)
BA1	56	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BC1	56	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)

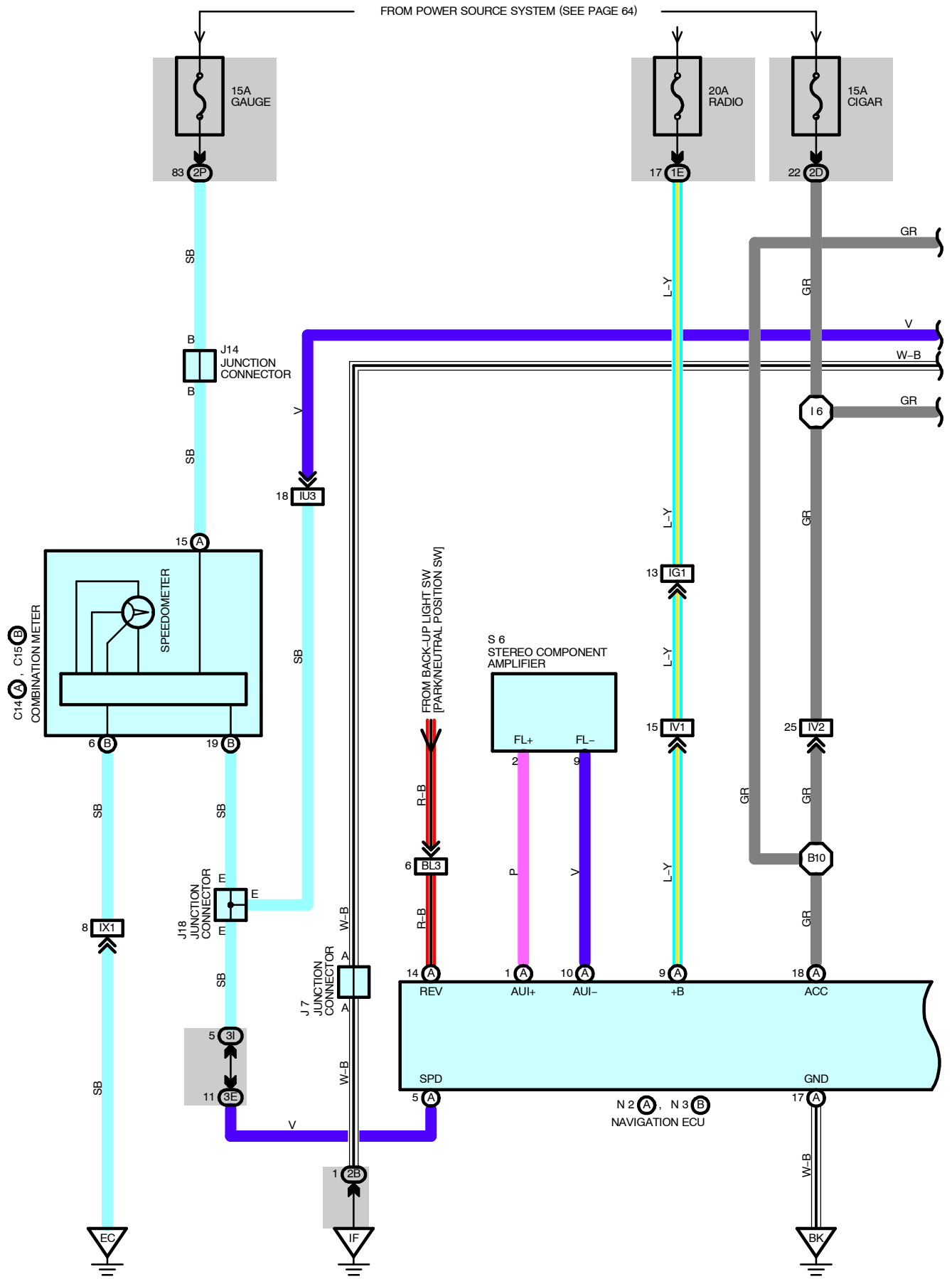
▽ : GROUND POINTS

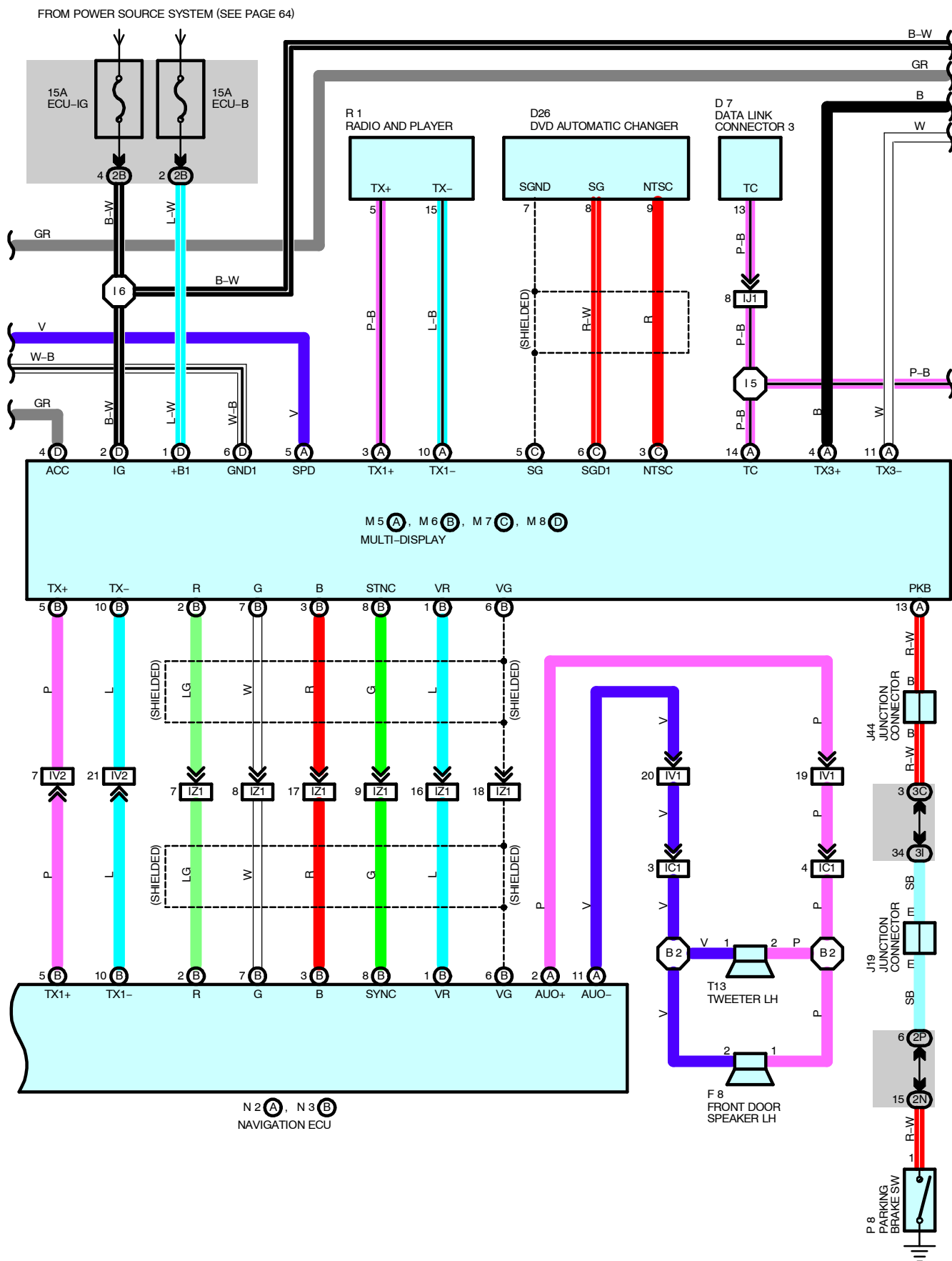
Code	See Page	Ground Points Location
BL	56	Rear Side Under the Front Passenger's Seat

○ : SPLICE POINTS

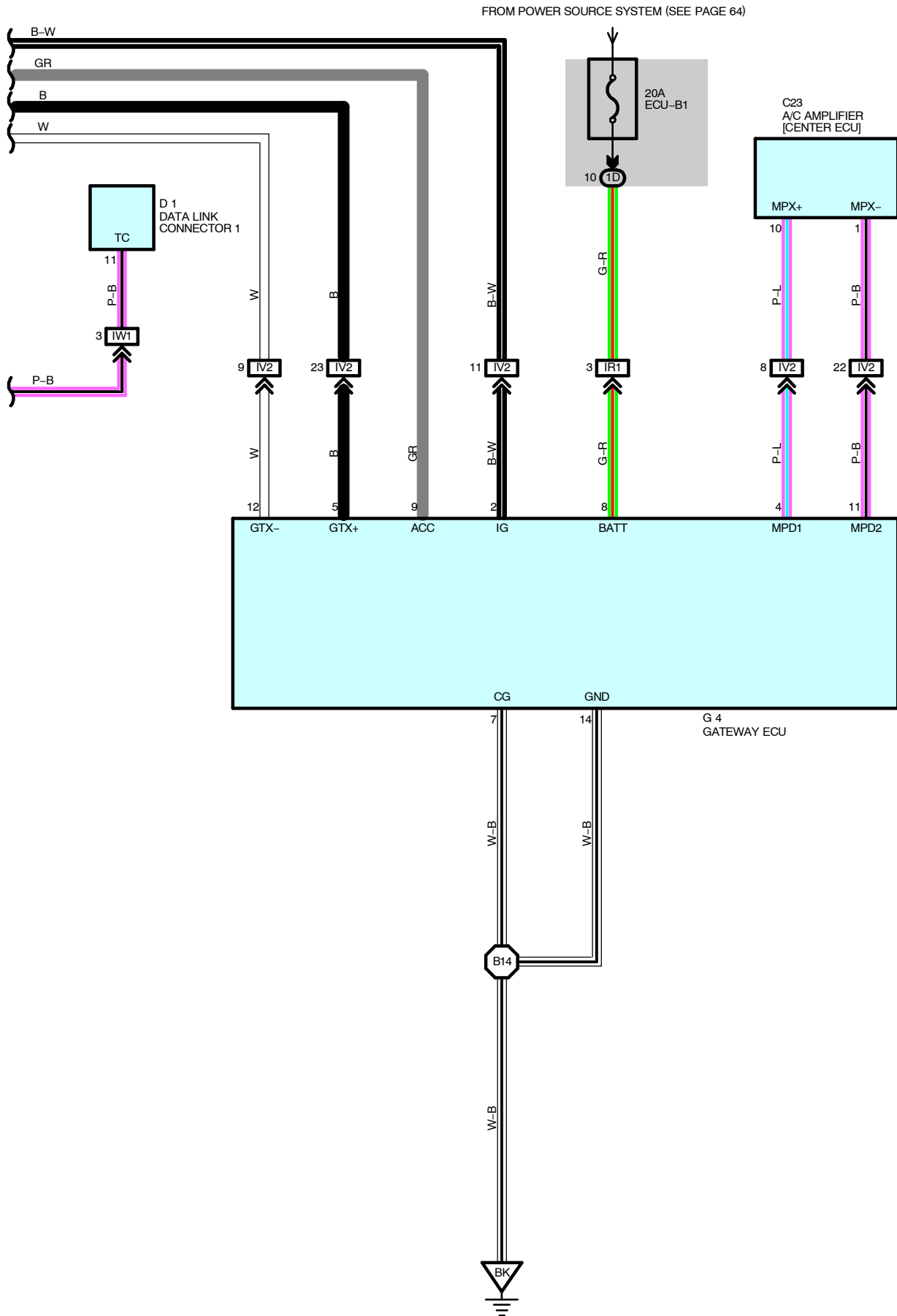
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	50	Dash Wire	B8	58	Front Door RH Wire
I7			B9	58	Floor No.2 Wire
B2	58	Front Door LH Wire			

NAVIGATION SYSTEM





NAVIGATION SYSTEM



SYSTEM OUTLINE

The navigation system displays the operating status and instructions for the automatic air conditioning or radio and player, as well as trip information. Additionally, the navigation system precisely measures the current vehicle position, displays the map obtained from the map database on the screen, and informs the route to the destination shown on the map using voice guidance.

SERVICE HINTS

N2 NAVIGATION ECU

- 9-GROUND : Always approx. **12** volts
- 18-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
- 17-GROUND : Always continuity

M8 MULTI-DISPLAY

- 1-GROUND : Always approx. **12** volts
- 4-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
- 6-GROUND : Always continuity

○ : PARTS LOCATION

Code		See Page	Code		See Page	Code		See Page
C14	A	40	J7	41	M8	D	41	
C15	B	40	J14	41	N2	A	43	
C23		40	J18	41	N3	B	43	
D1		38	J19	41	P8		43	
D7		40	J44	41	R1		41	
D26		40	M5	A	S6		43	
F8		42	M6	B	T13		43	
G4		40	M7	C	41			

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1E		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3C	32	Dash Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IC1	48	Front Door LH Wire and Dash Wire (Left Kick Panel)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IJ1	50	Dash Wire and Detector Wire (Instrument Panel Center)
IR1	52	Engine Room No.2 Wire and Floor No.2 Wire (Right Kick Panel)
IU3	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IV1	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IV2		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)
IZ1	54	Floor No.2 Wire and Dash Wire (Right Side of Front Console)
BL3	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)

NAVIGATION SYSTEM



: GROUND POINTS

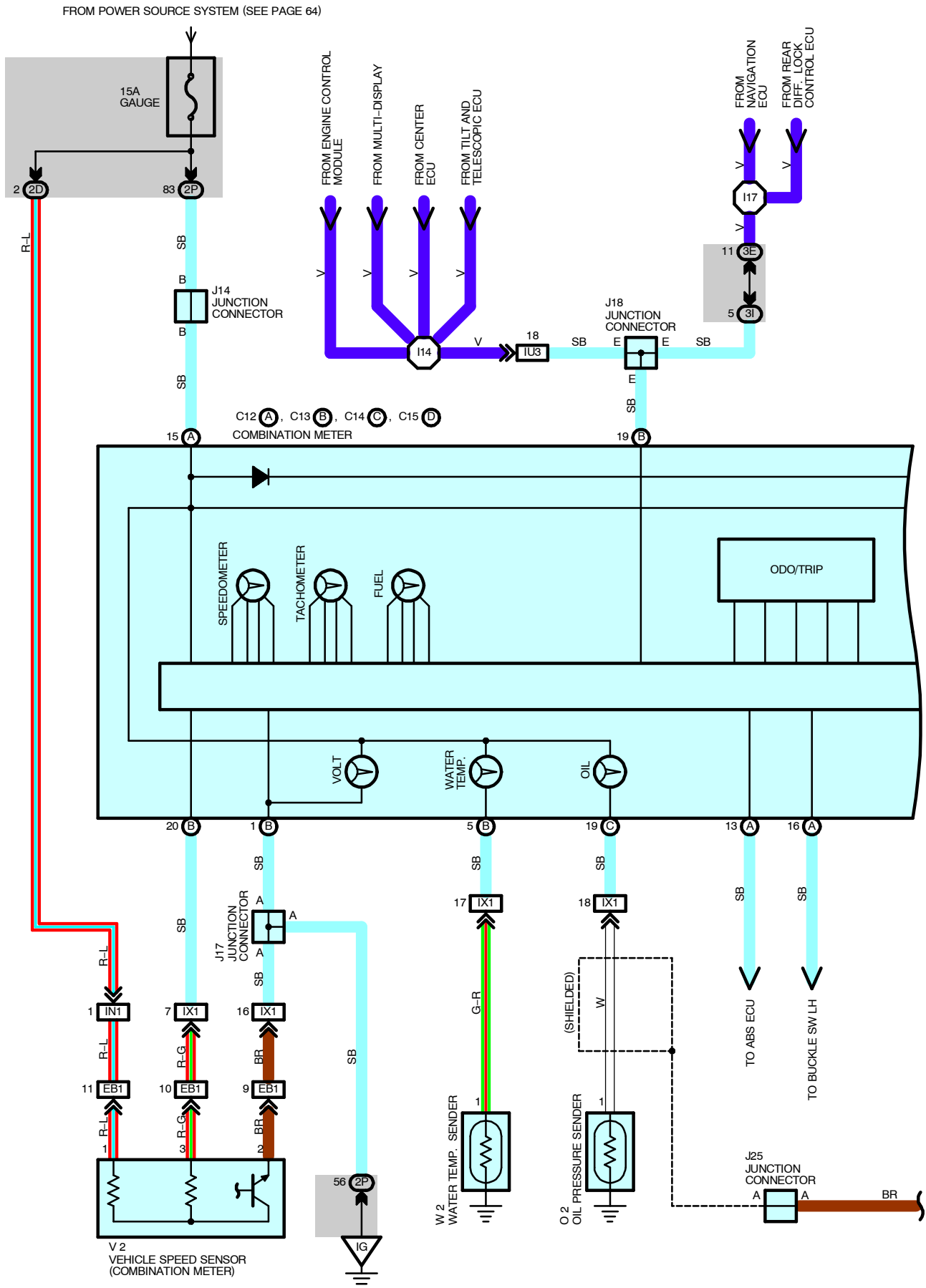
Code	See Page	Ground Points Location
EC	46	Rear Bank of Right Cylinder Head
IF	48	Set Bolt of Cowl Side J/B LH
BK	56	Front Side Under the Front Passenger's Seat

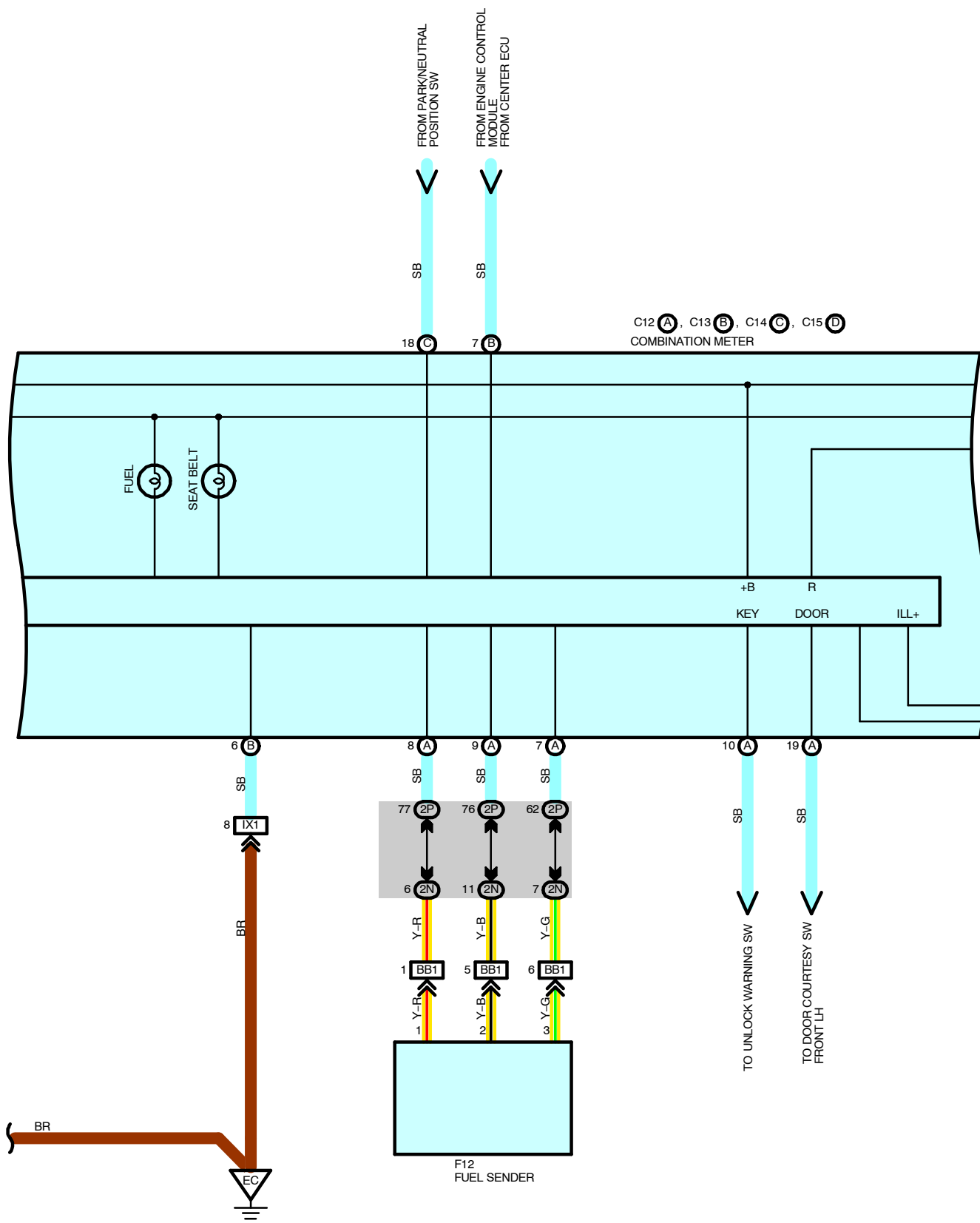


: SPLICE POINTS

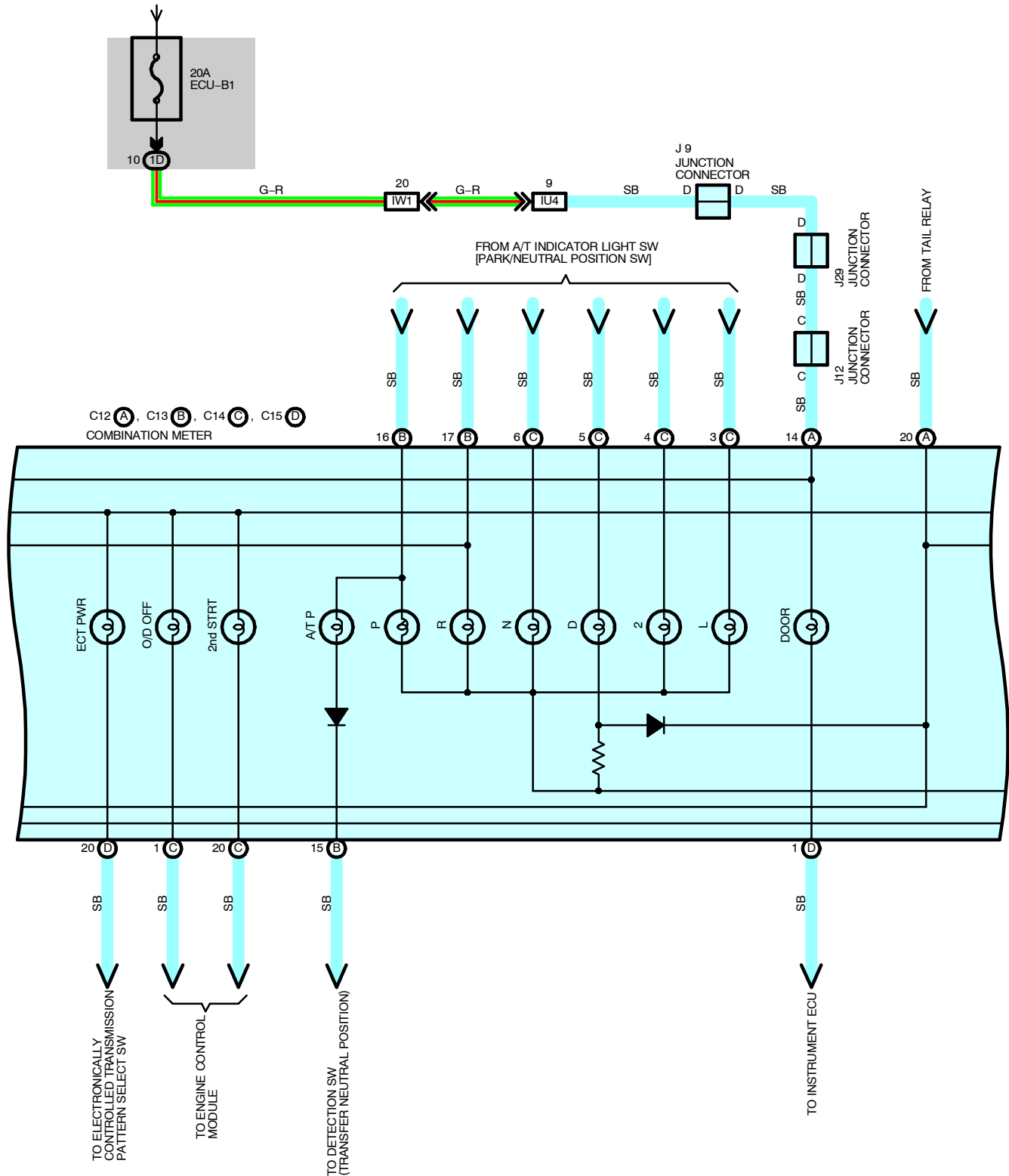
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	50	Dash Wire	B10	58	Floor No.2 Wire
I6			B14		
B2	58	Front Door LH Wire			

COMBINATION METER





FROM POWER SOURCE SYSTEM (SEE PAGE 64)

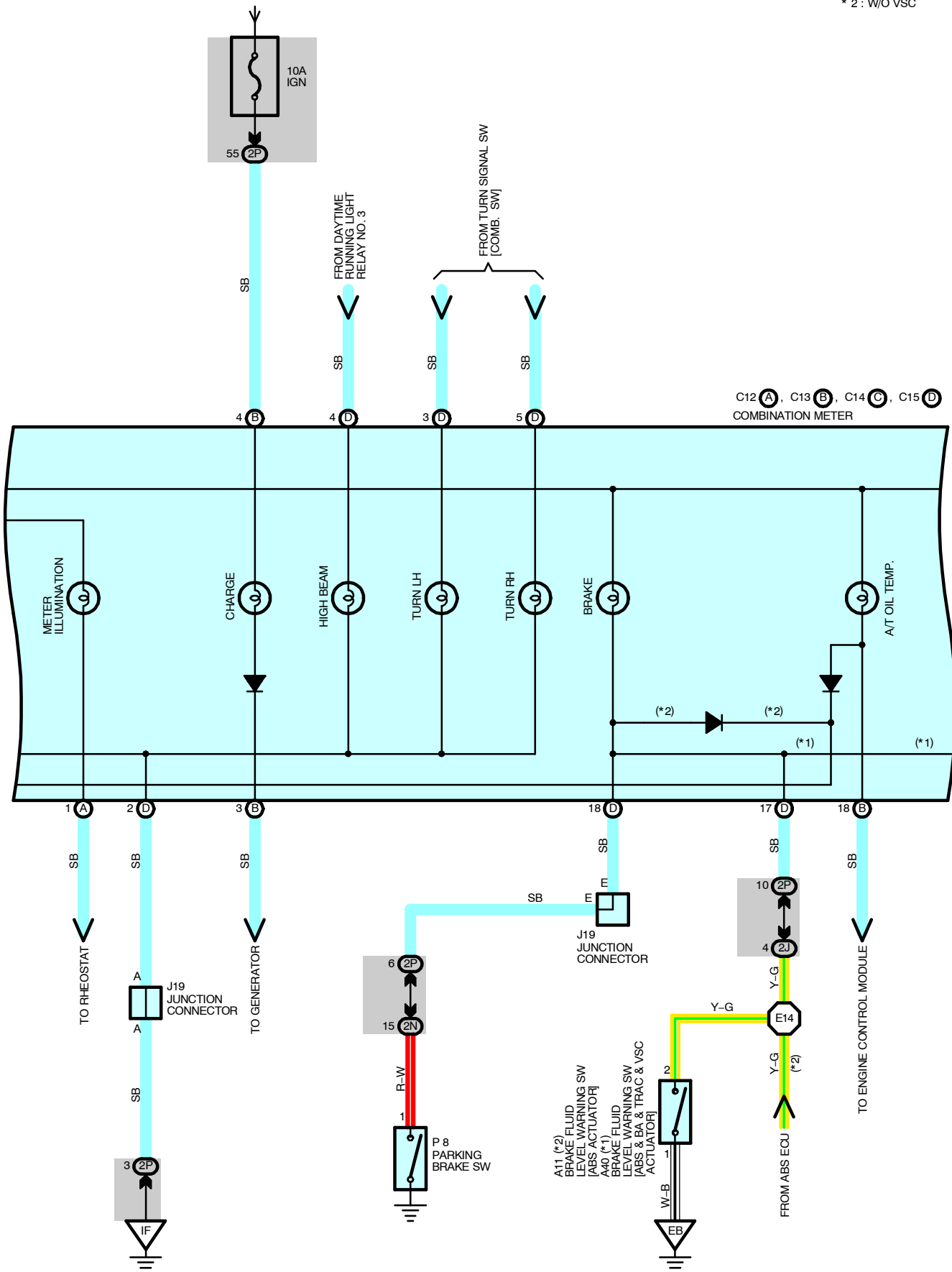


Donated by Andrew Schauer . cruisercult.com

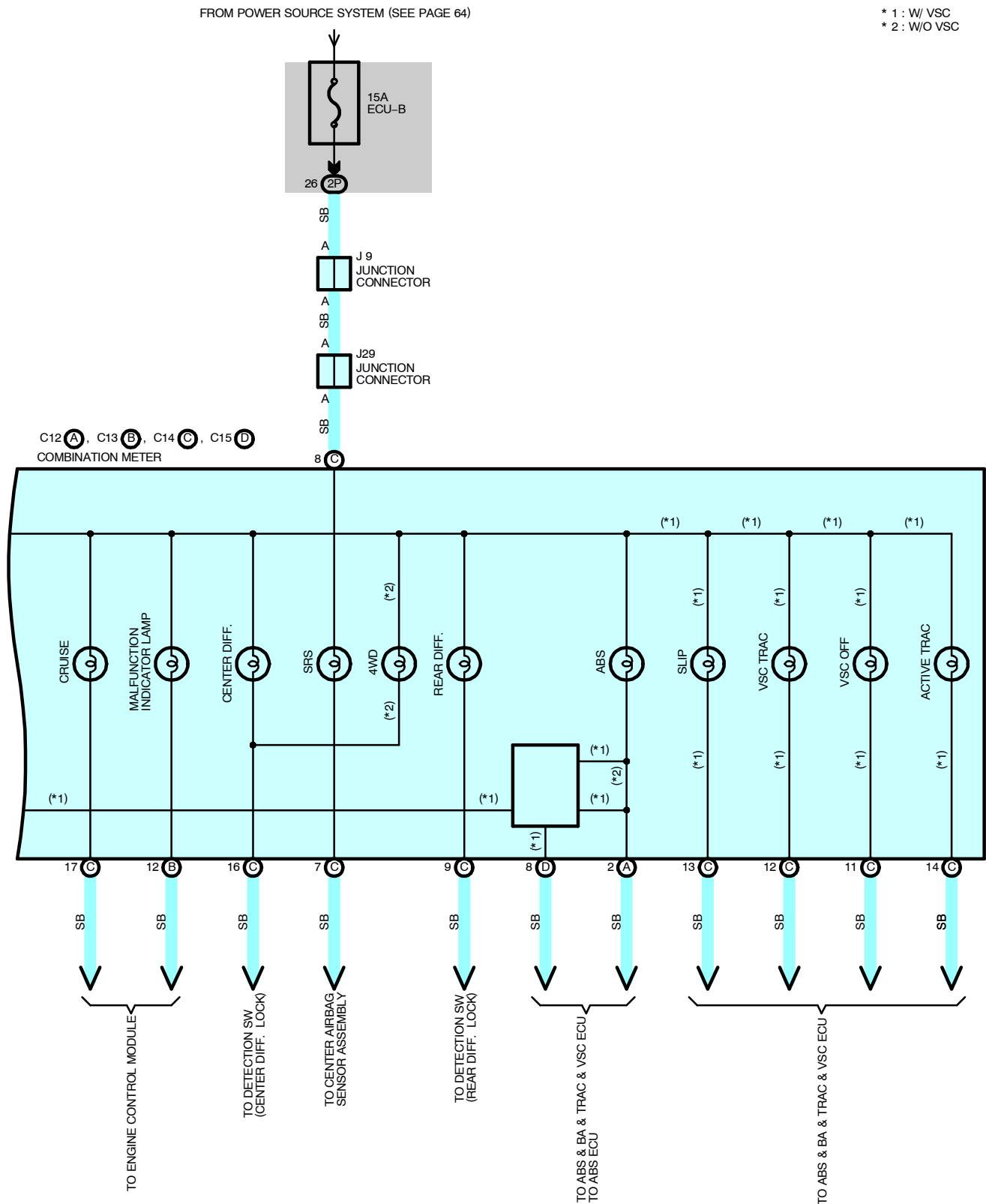
2002 LAND CRUISER (EWD469U)

FROM POWER SOURCE SYSTEM (SEE PAGE 64)

* 1 : W/ VSC
* 2 : W/O VSC



COMBINATION METER



SERVICE HINTS

A11 BRAKE FLUID LEVEL WARNING SW [ABS ACTUATOR]

1-2 : Closed with float down

A40 BRAKE FLUID LEVEL WARNING SW [ABS & BA & TRAC & VSC ACTUATOR]

1-2 : Closed with float down

P8 PARKING BRAKE SW

1-GROUND : Closed with parking brake lever pulled up

C12 (A), C13 (B), C14 (C), C15 (D) COMBINATION METER

(A) 14, (C) 8-GROUND : Always approx. 12 volts

(A) 15, (B) 4-GROUND : Approx. 12 volts with ignition SW at **ON** or **ST** position

(B) 1, (B) 6, (D) 2-GROUND : Always continuity

W2 WATER TEMP. SENDER

1-GROUND : Approx. 160-240 Ω (50°C, 122°F)

: Approx. 17.1-21.2 Ω (120°C, 248°F)

○ : PARTS LOCATION

Code		See Page	Code	See Page	Code	See Page
A11	A	38	J9	41	J29	41
A40	B	38	J12	41	O2	39
C12	A	40	J14	41	P8	43
C13	B	40	J17	41	V2	39
C14	C	40	J18	41	W2	39
C15	D	40	J19	41		
F12		42	J25	41		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
2D	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2J	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46	Engine Wire and Transmission Wire (On the Transmission)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IU3	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IU4		
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)
BB1	56	Floor Wire and Fuel Tank Wire (Near the Fuel Tank)

▽ : GROUND POINTS

Code	See Page	Ground Points Location
EB	46	Front Right Side of Fender Apron
EC	46	Rear Bank of Right Cylinder Head
IF	48	Set Bolt of Cowl Side J/B LH
IG		

COMBINATION METER

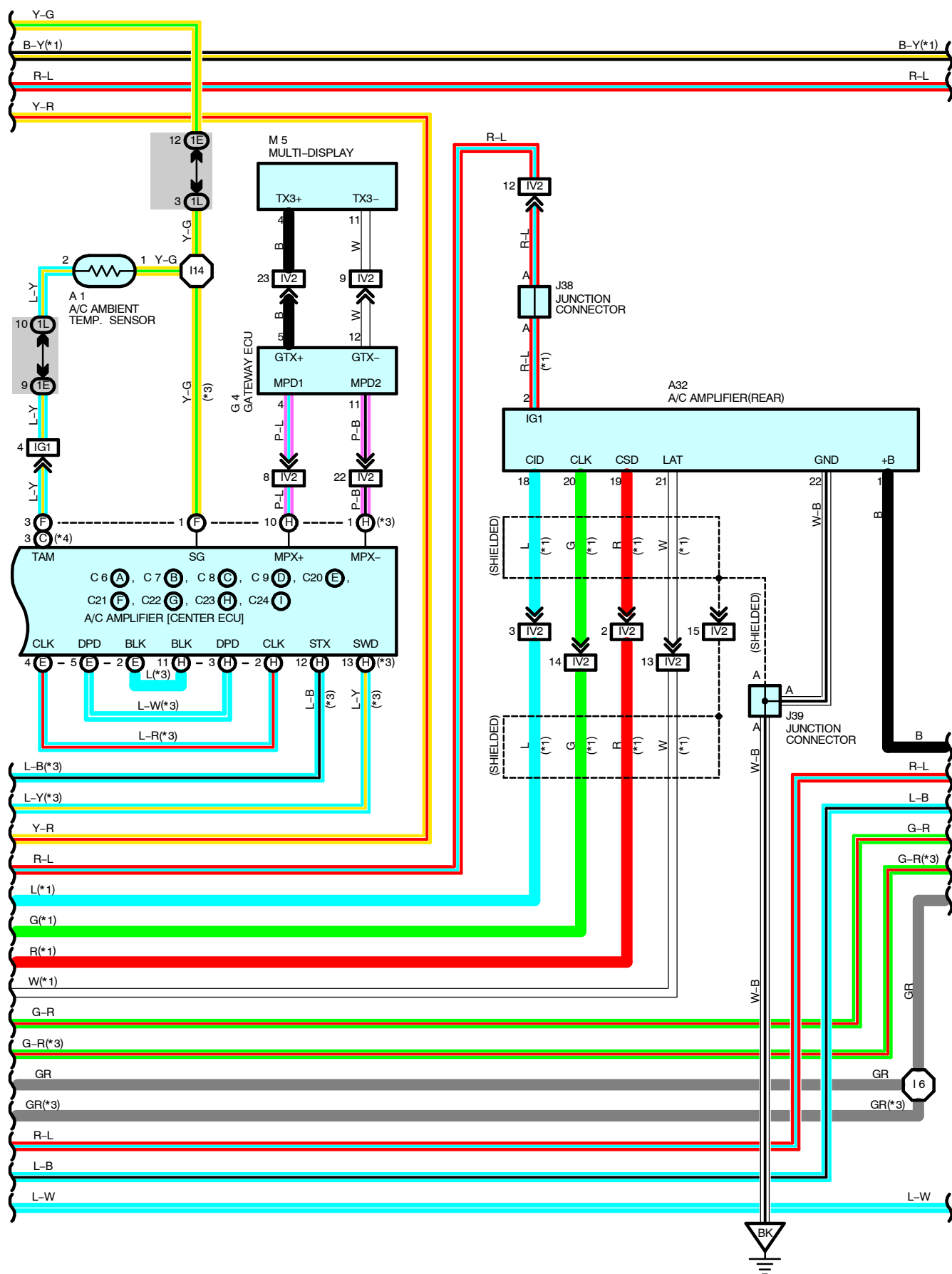


: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E14	46	Engine Room No.2 Wire	I17	50	Floor No.2 Wire
I14	50	Dash Wire			

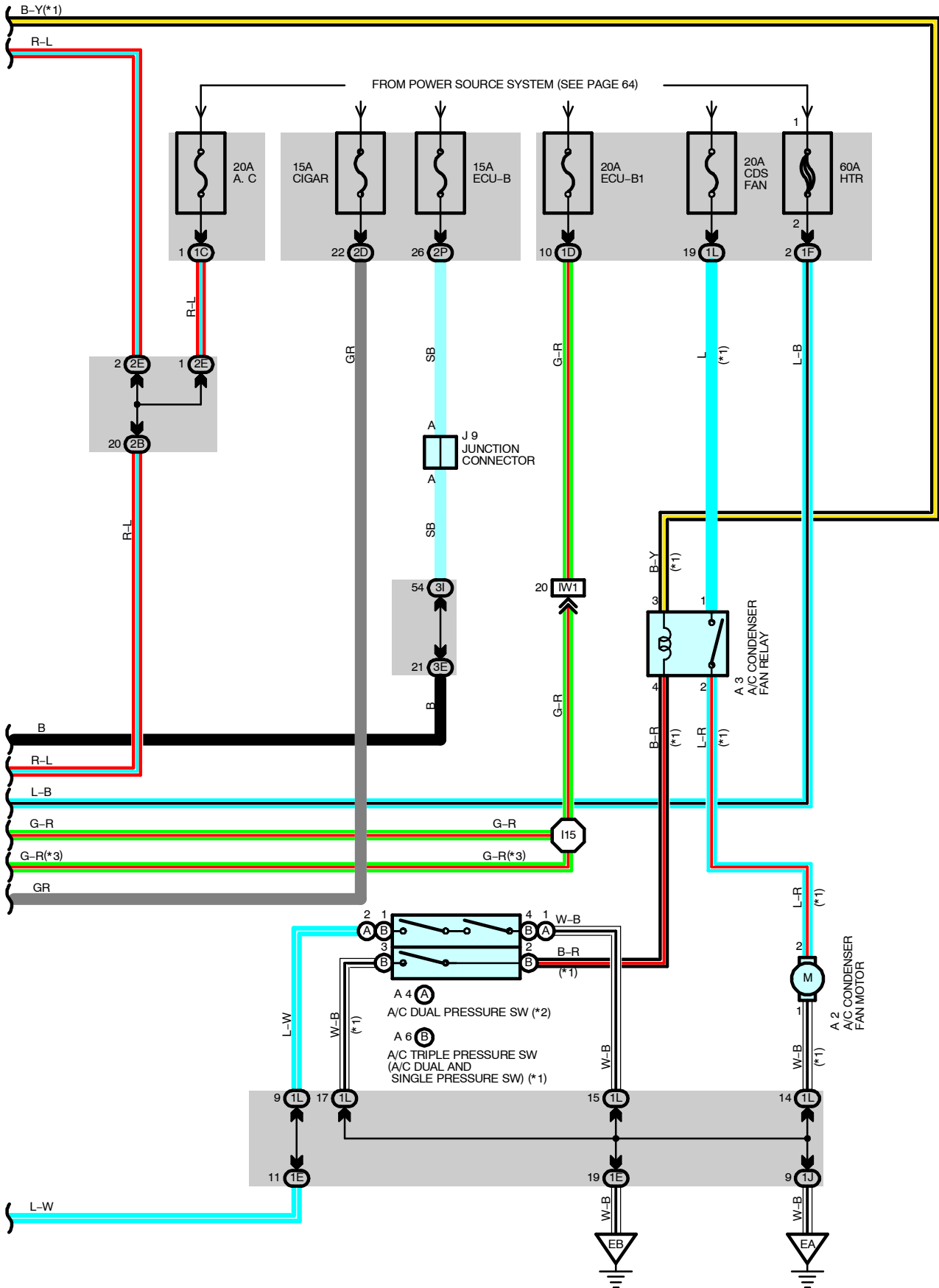
2002 LAND CRUISER (EWD469U)

CONDENSER FAN AND FRONT AIR CONDITIONING



* 1 : W/ REAR AIR CONDITIONING
 * 2 : W/O REAR AIR CONDITIONING

* 3 : W/ NAVIGATION SYSTEM
 * 4 : W/O NAVIGATION SYSTEM



CONDENSER FAN AND FRONT AIR CONDITIONING

SYSTEM OUTLINE

1. HEATER BLOWER OPERATION

Manual operation

When the blower speed is set to any speed by the blower control SW, the center ECU sends a signal to the blower motor controller, and controls the blower motor speed.

Auto operation

When the auto SW is operated, the center ECU sends signals to the blower motor controller, according to the signals from respective sensors, commands from the temperature SW etc., and controls the blower motor automatically.

2. AIR INLET CONTROL SERVO MOTOR CONTROL

When the FRESH/RECIRC select SW is switched to RECIRC, the motor in the air inlet control servo motor rotates to move the damper to the RECIRC side. The damper position is recognized by the A/C amplifier [Center ECU] TERMINAL TPI, and rotates the motor until the damper reaches its position.

When the FRESH/RECIRC select SW is switched to FRESH, the motor in the air inlet control servo motor rotates to move the damper to the FRESH side. The damper position is recognized by the A/C amplifier [Center ECU] TERMINAL TPI, and rotates the motor until the damper reaches its position.

3. AIR VENT MODE CONTROL SERVO MOTOR

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

4. AIR MIX CONTROL SERVO MOTOR

When the temperature control SW in the center ECU is pushed, a signal is sent from the center ECU, and activates the air mix control servo motor. The motor and damper is moved until it reaches the temperature set by the temperature control SW.

5. AIR CONDITIONING OPERATION

The center ECU receives various signals, i. e., the engine RPM from the crankshaft position sensor, outlet temperature from the A/C ambient temp. sensor, coolant temperature from the engine coolant temp. sensor, and the lock signal from the A/C compressor, etc. When the engine is started and the A/C SW is turned on, a signal is sent to the center ECU. As a result, the A/C magnetic clutch is turned on and operates the compressor.

In addition, when the engine control module detects that the A/C magnetic clutch is on and the A/C compressor is operating, it controls the engine in the direction to avoid lowering the engine RPM during A/C operation.

When any of the following signals are sent to the center ECU, the A/C is turned off.

- * Coolant temp. is high.
- * Outlet air temp. is low.
- * Large difference between the engine speed and compressor speed.
- * The refrigerant pressure is abnormally high or low.

6. CONDENSER FAN MOTOR OPERATION (w/ REAR AIR CONDITIONING)

When the A/C is operating and the A/C single pressure SW is on, the current flows from the A.C fuse to MG CLT relay TERMINAL 5 to TERMINAL 3 to A/C condenser fan relay TERMINAL 3 to TERMINAL 4 to A/C single pressure SW TERMINAL 2 to TERMINAL 3 to GROUND, and turns on the A/C condenser fan relay. As a result, the current flows from the CDS FAN fuse to A/C condenser fan relay TERMINAL 1 to TERMINAL 2 to A/C condenser fan motor TERMINAL 2 to TERMINAL 1 to GROUND, and operates the A/C condenser fan motor.

SERVICE HINTS

C6 (A), C7 (B), C9 (D), C20 (E), C21 (F), C22 (G) A/C AMPLIFIER [CENTER ECU]

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

+B-GROUND : Always approx. 12 volts

AIF-GROUND : Approx. 12 volts with FRESH select SW on

AIR-GROUND : Approx. 12 volts with RECIRC select SW on

VER1, VER2, VER3, VER4, GND, E-GROUND : Always continuity

A4 (A) A/C DUAL PRESSURE SW

(A) 2-(A) 1 : Open with the refrigerant pressure at less than approx. 2.0 kgf/cm² (196.1 kpa, 28.4 psi) or more than approx. 32.0 kgf/cm² (3138.1 kpa, 455 psi)

A6 (B) A/C TRIPLE PRESSURE SW (A/C DUAL AND SINGLE PRESSURE SW)

(B) 1-(B) 4 : Open with the refrigerant pressure at less than approx. 2.0 kgf/cm² (196.1 kpa, 28.4 psi) or more than approx. 32.0 kgf/cm² (3138.1 kpa, 455 psi)

(B) 2-(B) 3 : Open below approx. 12.5 kgf/cm² (1225 kpa, 178 psi)
: Closed above approx. 15.5 kgf/cm² (1520 kpa, 220 psi)

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A1	38	A32	42	E8	D 40
A2	38	B1	40	E9	E 40
A3	38	C6	A 40	G4	40
A4	A 38	C7	B 40	J7	41
A5	38	C8	C 40	J9	41
A6	B 38	C9	D 40	J22	41
A18	40	C20	E 40	J38	42
A19	40	C21	F 40	J39	42
A24	40	C22	G 40	J44	41
A25	40	C23	H 40	M5	41
A26	40	C24	I 40	R7	41

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
1E		
1F		
1J	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1L		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3A	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3C	32	Dash Wire and Cowl Side J/B RH (Right Kick Panel)
3D		
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

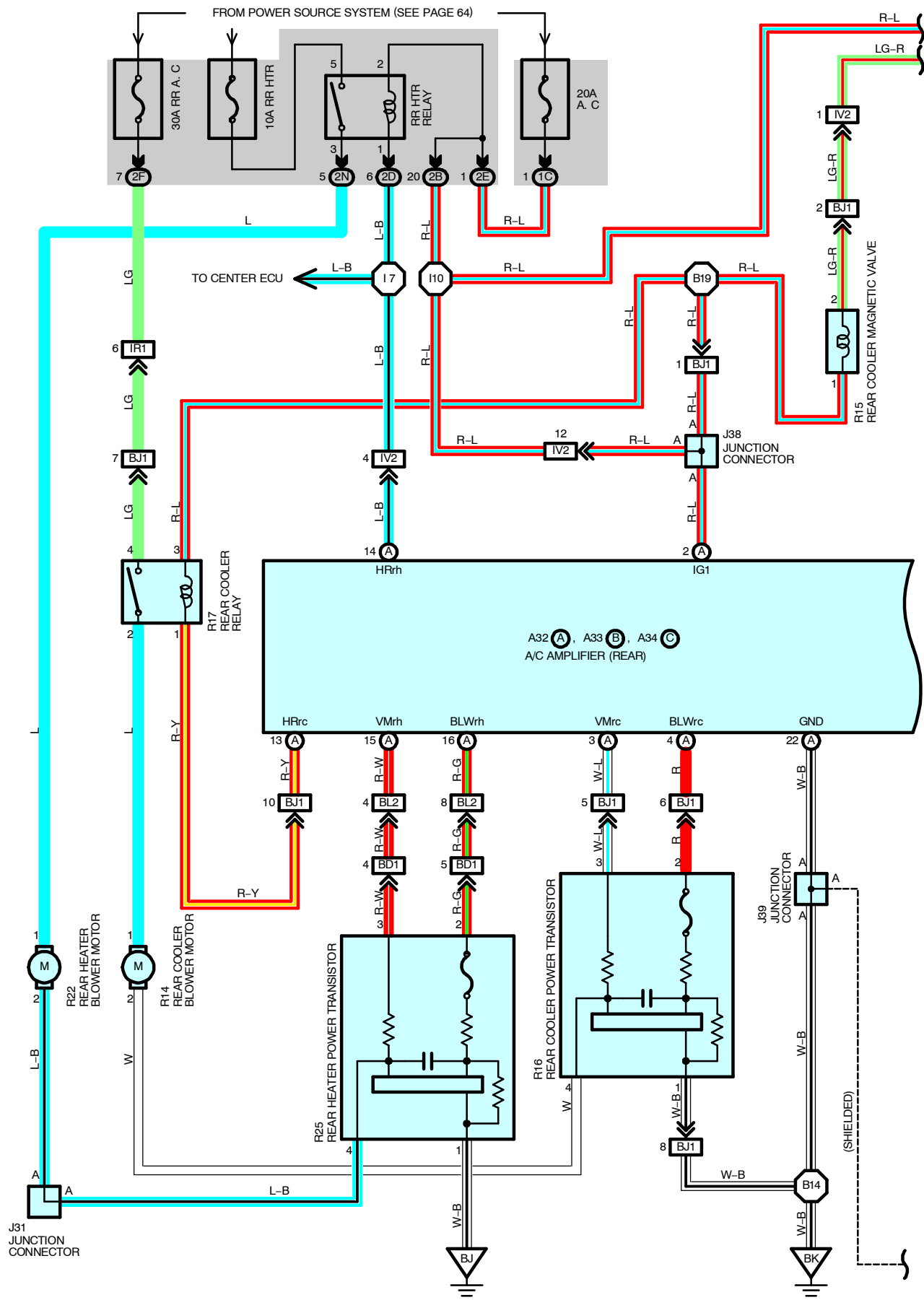
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	50	Engine Room No.2 Wire and Dash Wire (Behind the Combination Meter)
IG2		
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IU1	52	Instrument Panel Integration Wire and Dash Wire (Behind the Glove Box)
IV2	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)

▽ : GROUND POINTS

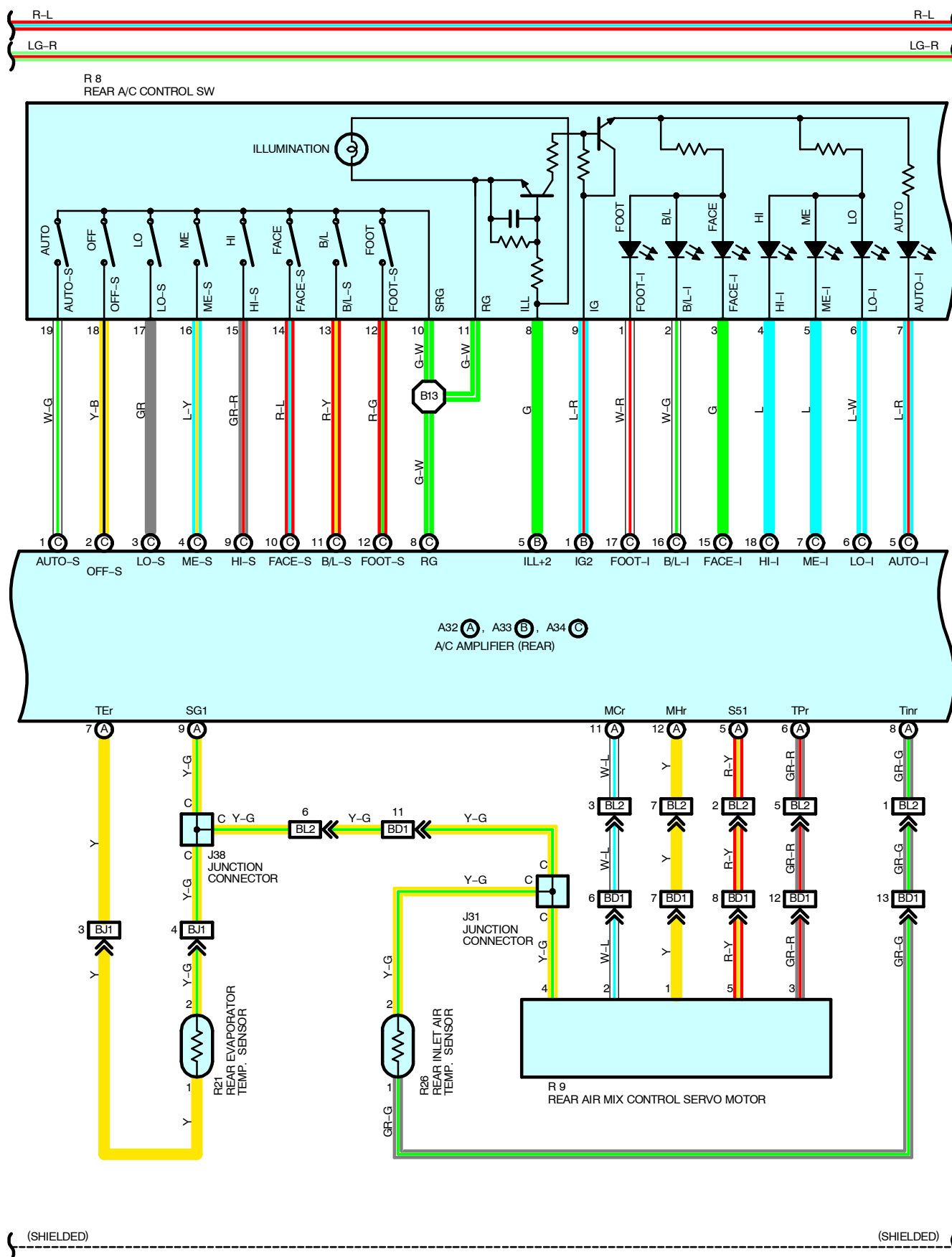
Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
IF	48	Set Bolt of Cowl Side J/B LH
II	48	Set Bolt of Cowl Side J/B RH
BK	56	Front Side Under the Front Passenger's Seat

○ : SPLICE POINTS

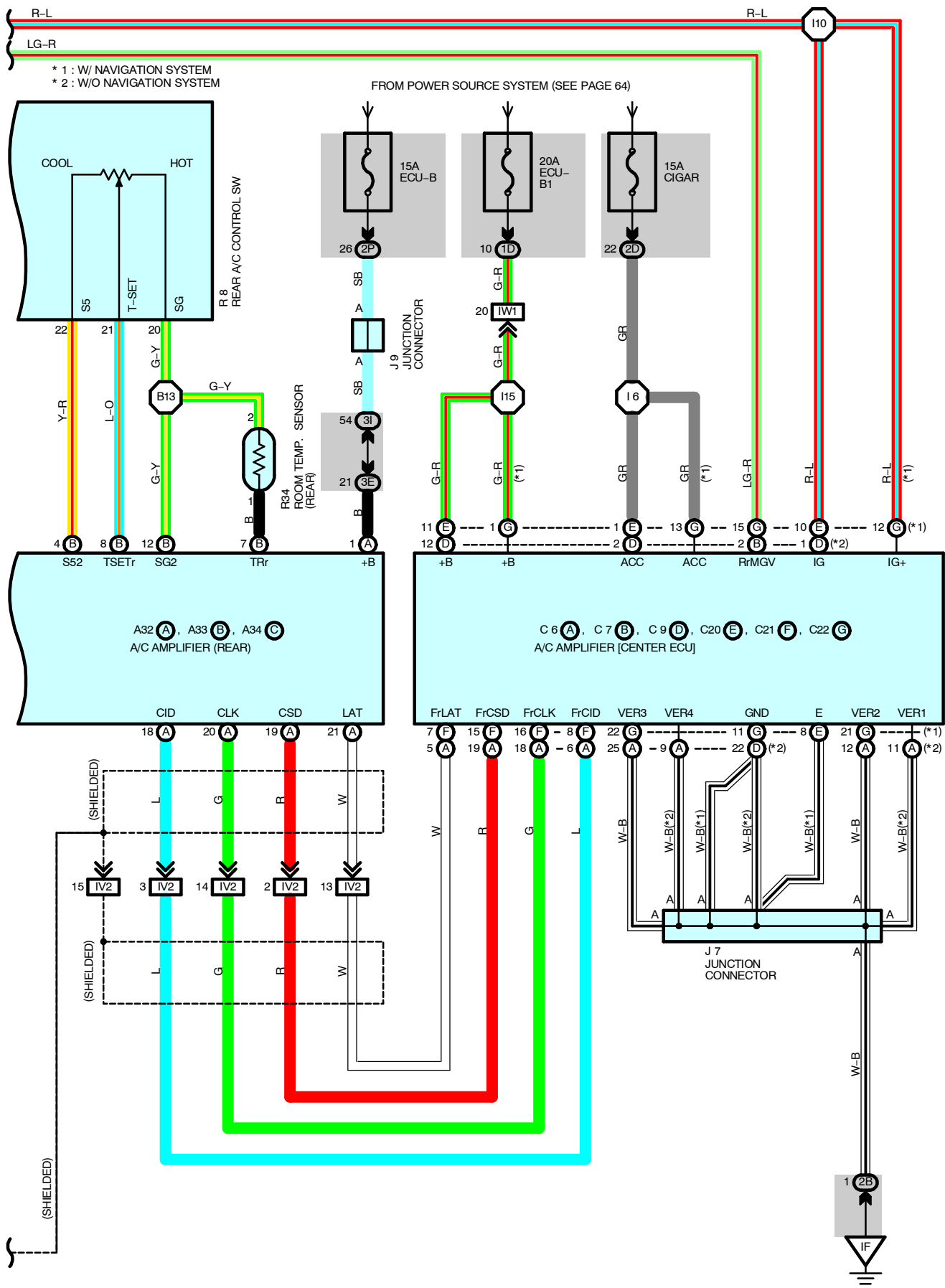
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	50	Dash Wire	I14	50	Dash Wire
I6			I15		
I10					



Donated by Andrew Schauer . cruisercult.com
2002 LAND CRUISER (EWD469U)



REAR AIR CONDITIONING



SYSTEM OUTLINE

1. COOLER AND HEATER BLOWER OPERATION

* Manual operation

When the blower control SW in the rear A/C control SW is set to any blower speed, a signal is sent to the A/C amplifier (Rear). The A/C amplifier (Rear) controls the power transistor and operates the rear cooler blower motor and rear heater blower motor at the set speed.

* Auto operation

When the auto SW in the rear A/C control SW is operated, a signal is sent to the A/C amplifier (Rear). The A/C amplifier (Rear) controls the power transistor according to the signals from respective sensors, and operates the rear cooler blower motor and rear heater blower motor.

2. AIR MIX CONTROL SERVO MOTOR CONTROL

When the temperature control lever in the rear A/C control SW is operated, a signal is sent to the A/C amplifier (Rear). The A/C amplifier (Rear) controls the rear air mix control servo motor to operate the damper until it reaches the temperature set by the temperature control lever.

3. AIR CONDITIONING OPERATION

The cooler and heater operation can be switched by the mode select SW in the rear A/C control SW.

SERVICE HINTS

A32 A/C AMPLIFIER (REAR)

+B-GROUND : Always approx. **12** volts

IG1-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position

GND-GROUND : Always continuity

○ : PARTS LOCATION

Code		See Page	Code		See Page	Code		See Page
A32	A	42	J7	41		R16	43	
A33	B	42	J9	41		R17	43	
A34	C	42	J31	42		R21	43	
C6	A	40	J38	42		R22	43	
C7	B	40	J39	42		R25	43	
C9	D	40	R8	43		R26	43	
C20	E	40	R9	43		R34	43	
C21	F	40	R14	43				
C22	G	40	R15	43				

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1D		
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2D		
2E	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2F		
2N	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

REAR AIR CONDITIONING



: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IR1	52	Engine Room No.2 Wire and Floor No.2 Wire (Right Kick Panel)
IV2	54	Dash Wire and Floor No.2 Wire (Behind the Glove Box)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
BD1	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BJ1	58	Floor No.2 Wire and A/C Sub Wire (Right Side Rear Quarter Panel)
BL2	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)



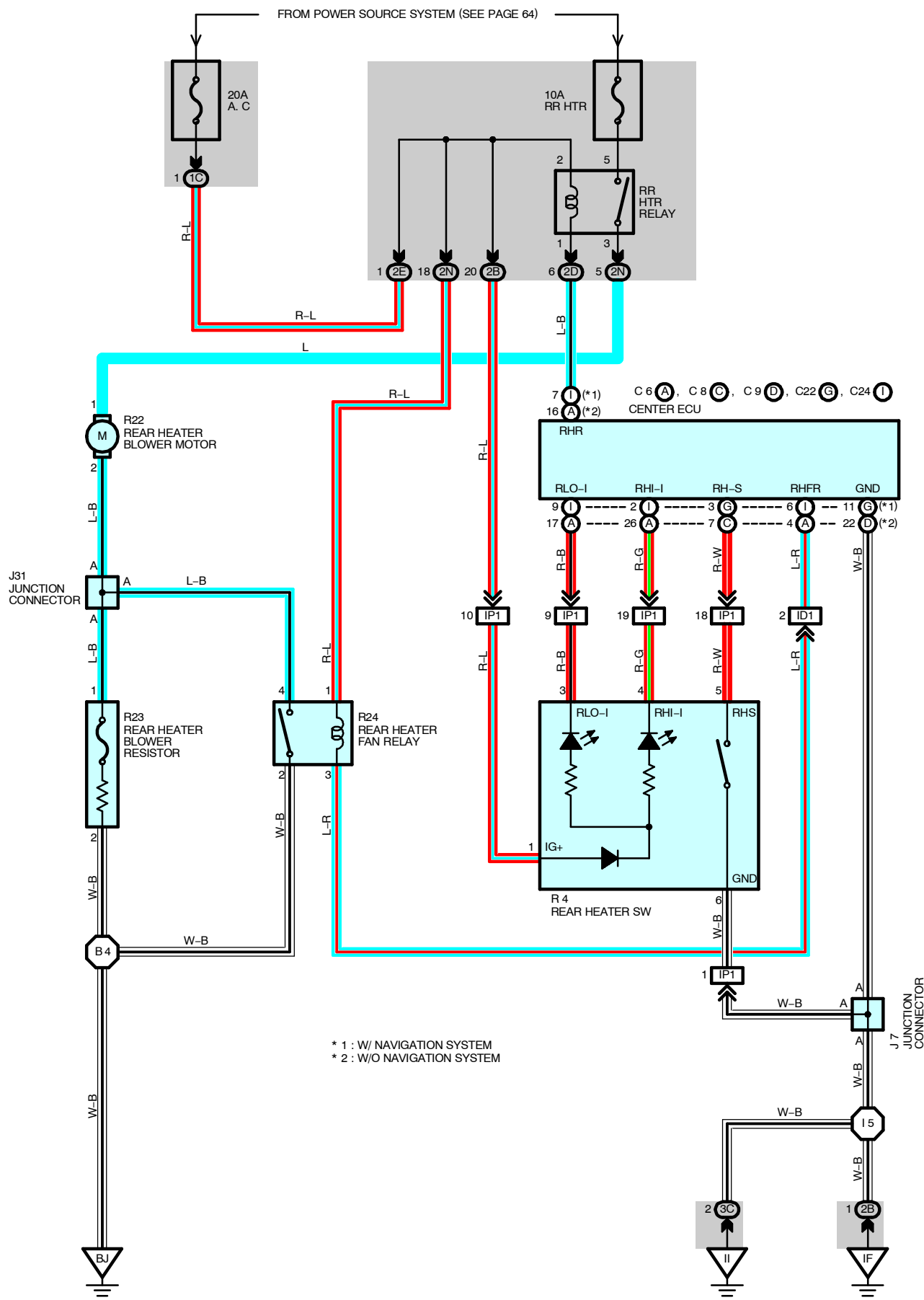
: GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
BJ	56	Under the Driver's Seat
BK	56	Front Side Under the Front Passenger's Seat



: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	50	Dash Wire	B13	58	Roof No.2 Wire
I7			B14	58	Floor No.2 Wire
I10			B19	58	A/C Sub Wire
I15					



SERVICE HINTS

RR HTR RELAY

5-3 : Closed with the ignition SW at **ON** position and the rear heater SW on

R4 REAR HEATER SW

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

5-6 : Continuity with rear heater SW at **LO** or **HI** position

6-GROUND : Always continuity

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C6	A	40	C24	I	40
C8	C	40	J7		41
C9	D	40	J31		42
C22	G	40	R4		41

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID1	48	Dash Wire and Floor Wire (Left Kick Panel)
IP1	52	Rear Console Box Wire and Dash Wire (Right Side of Rear Console)

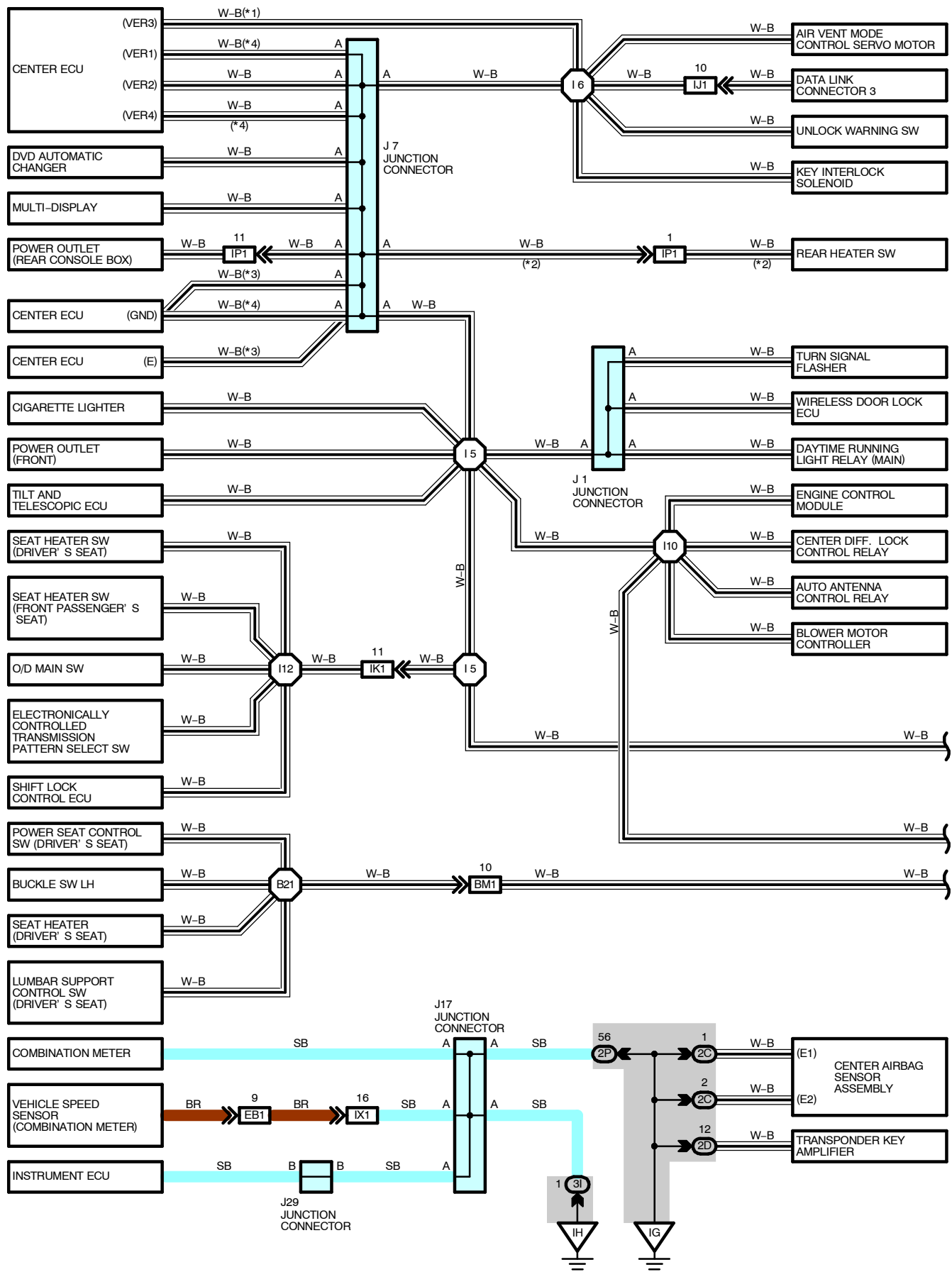
▽ : GROUND POINTS

Code	See Page	Ground Points Location
IF	48	Set Bolt of Cowl Side J/B LH
II	48	Set Bolt of Cowl Side J/B RH
BJ	56	Under the Driver's Seat

⬡ : SPLICE POINTS

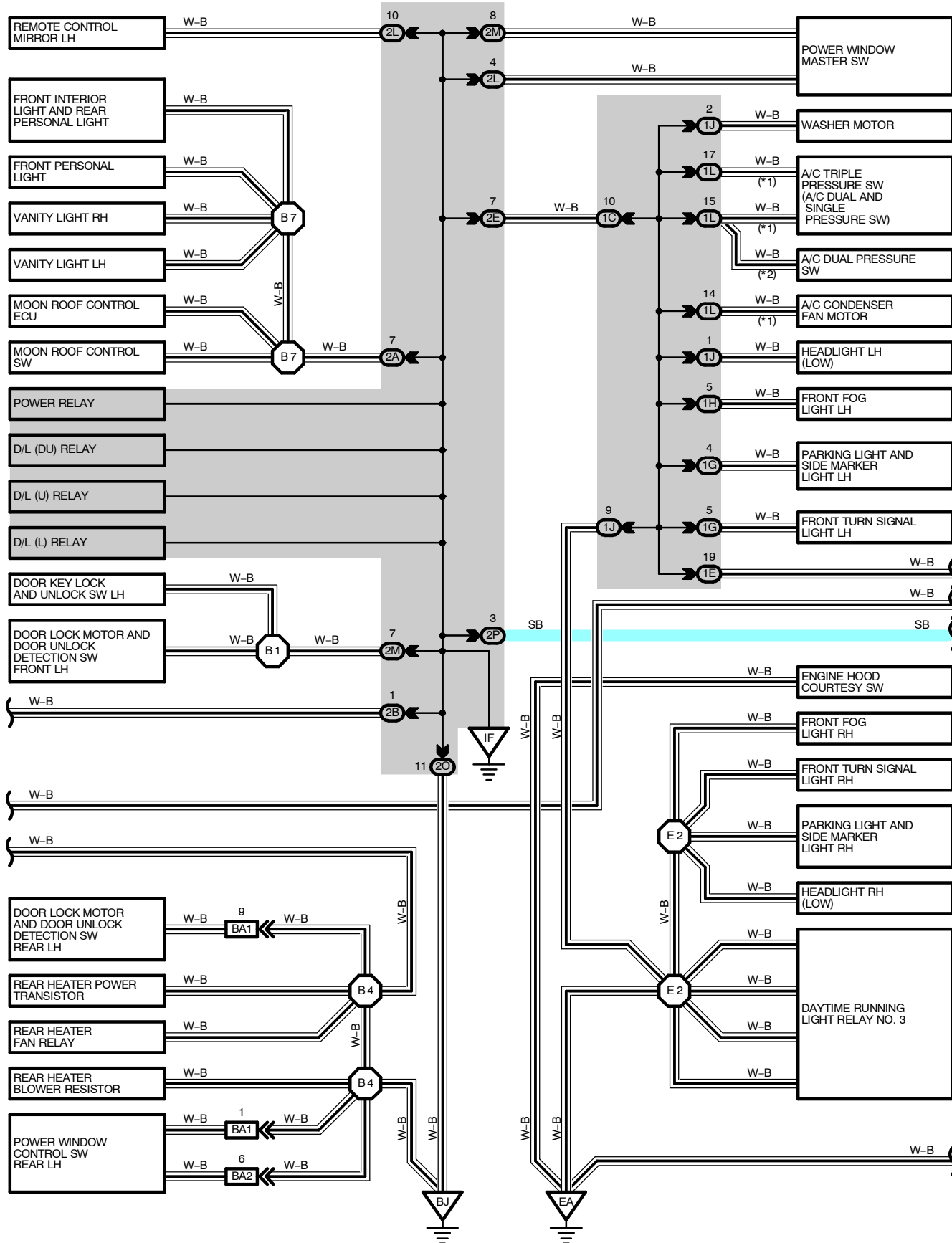
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	50	Dash Wire	B4	58	Floor Wire

I GROUND POINT

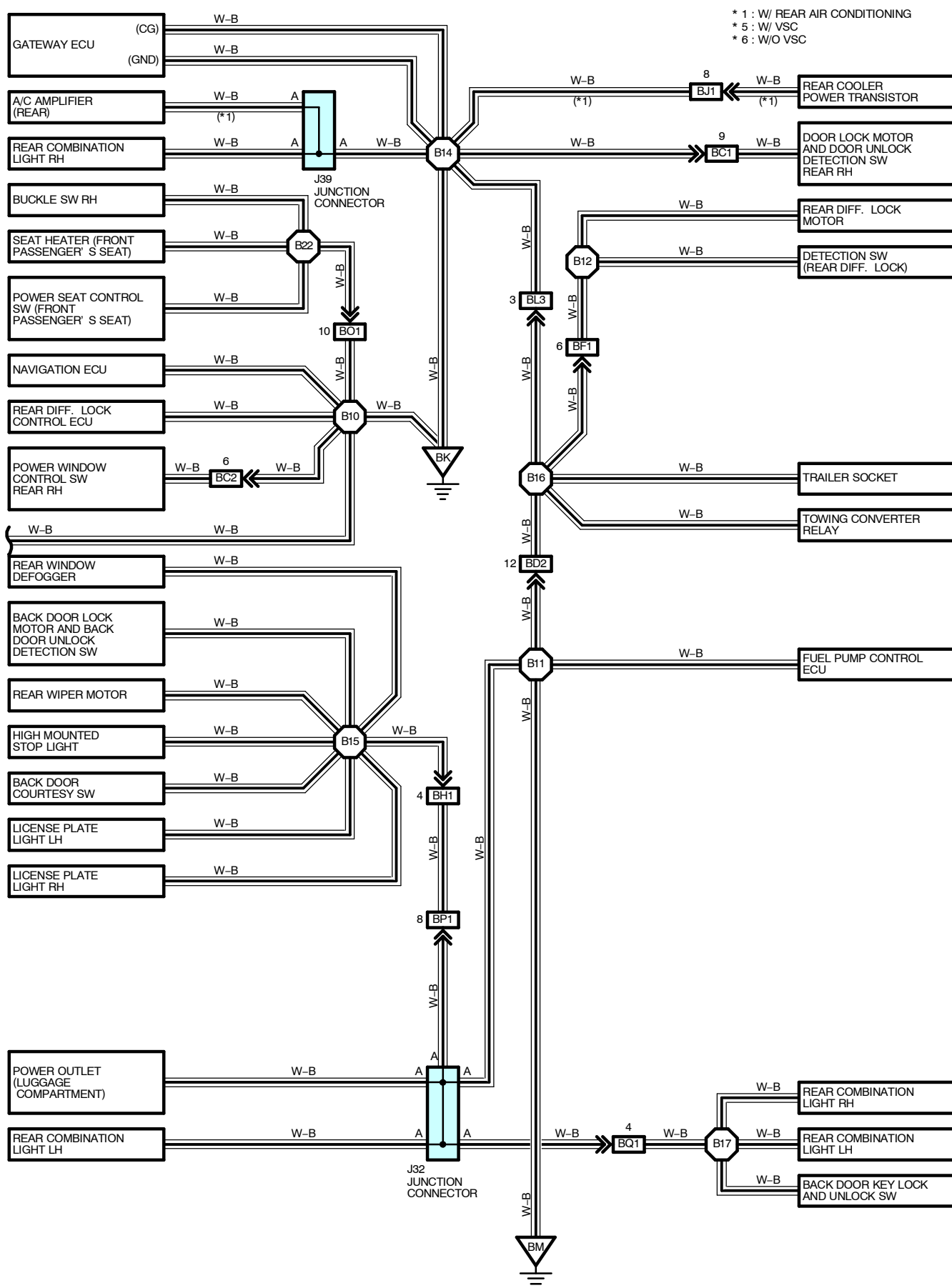


* 1 : W/ REAR AIR CONDITIONING
* 2 : W/O REAR AIR CONDITIONING

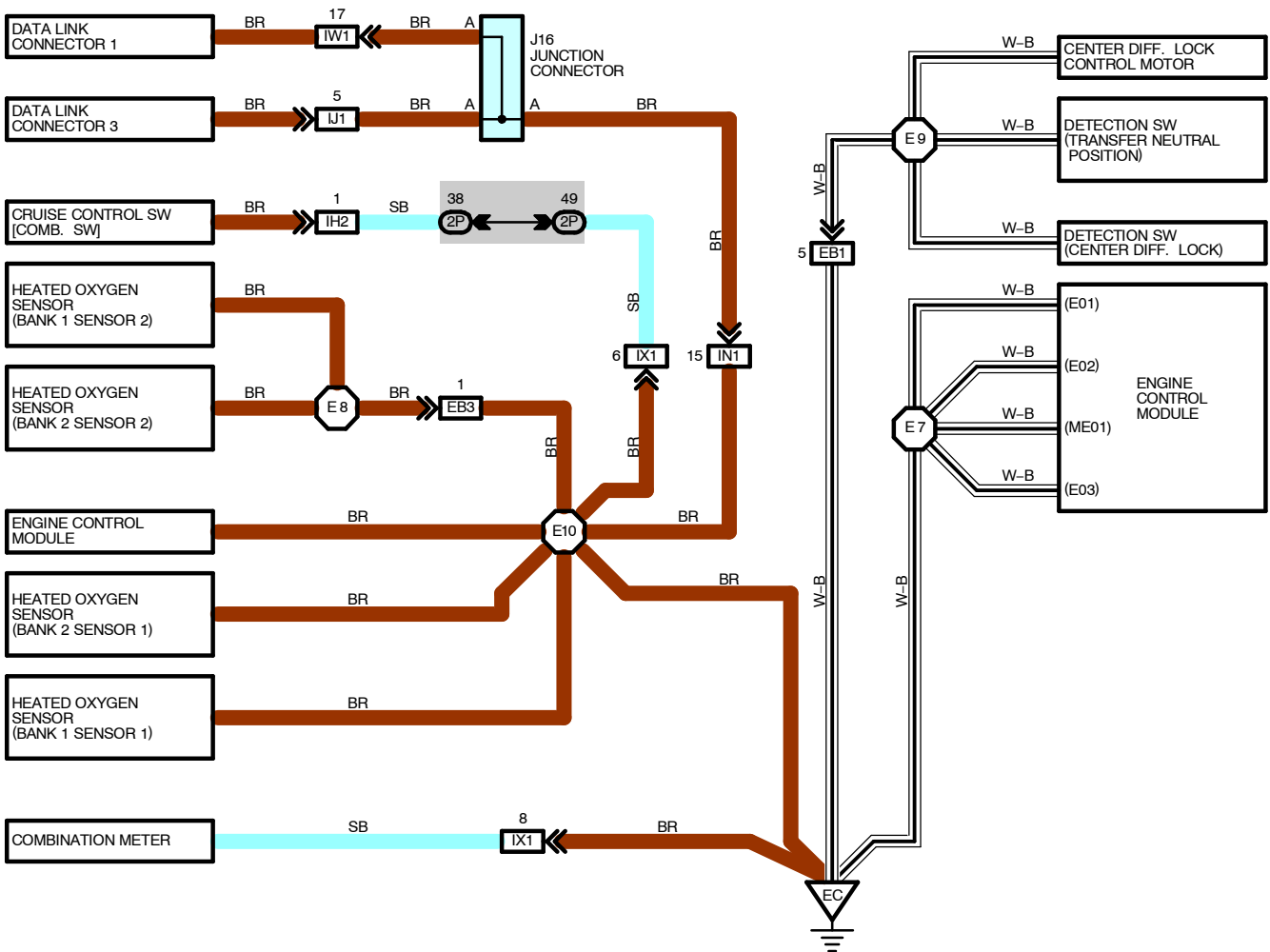
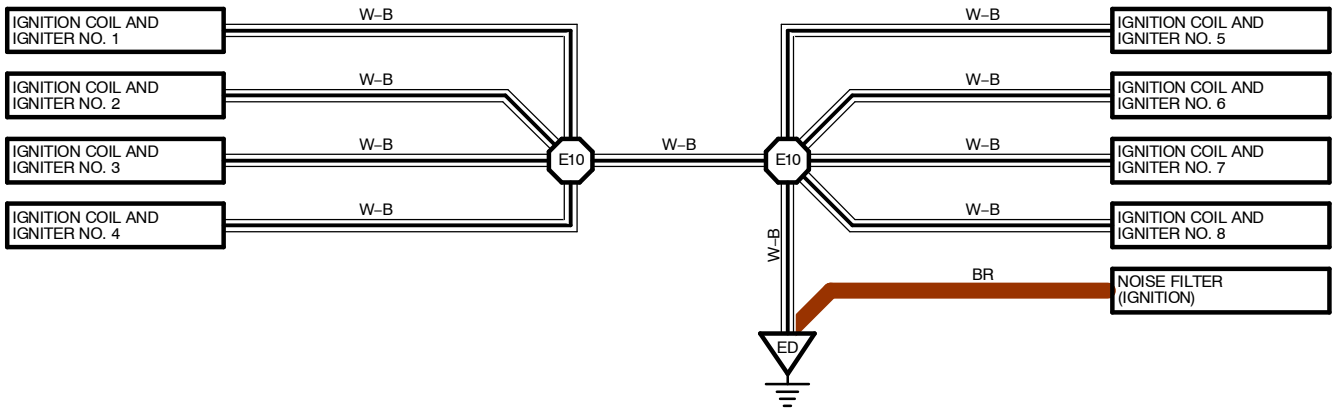
* 3 : W/ NAVIGATION SYSTEM
* 4 : W/O NAVIGATION SYSTEM



2002 LAND CRUISER (EWD469U)



I GROUND POINT



○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J1	41	J17	41	J30	41
J2	41	J19	41	J32	42
J7	41	J26	41	J39	42
J16	41	J29	41	J42	41

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	23	Engine Room No.2 Wire and Engine Room J/B (Engine Compartment Left)
1E		
1G	23	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
1H		
1J		
1L		
2A	26	Roof Wire and Cowl Side J/B LH (Left Kick Panel)
2B	26	Dash Wire and Cowl Side J/B LH (Left Kick Panel)
2C		
2D	26	Engine Room No.2 Wire and Cowl Side J/B LH (Left Kick Panel)
2E		
2L	26	Front Door LH Wire and Cowl Side J/B LH (Left Kick Panel)
2M	26	Floor Wire and Cowl Side J/B LH (Left Kick Panel)
2O		
2P	28	Instrument Panel Integration Wire and Cowl Side J/B LH (Left Kick Panel)
3B	32	Engine Room No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3C	32	Dash Wire and Cowl Side J/B RH (Right Kick Panel)
3E	32	Floor No.2 Wire and Cowl Side J/B RH (Right Kick Panel)
3G	32	Front Door RH Wire and Cowl Side J/B RH (Right Kick Panel)
3H		
3I	32	Instrument Panel Integration Wire and Cowl Side J/B RH (Right Kick Panel)

I GROUND POINT

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	46	Engine Wire and Transmission Wire (On the Transmission)
EB3		
IF1	48	Instrument Panel Integration Wire and Instrument Panel Wire (Left Side of Instrument Panel)
IH1	50	Instrument Panel Integration Wire and Column Wire (Near the Ignition SW)
IH2		
IJ1	50	Dash Wire and Detector Wire (Instrument Panel Center)
IK1	50	Console Box Wire and Dash Wire (Left Side of Front Console)
IL1	50	Instrument Panel Integration Wire and Computer Wire (Instrument Panel Center)
IN1	52	Engine Wire and Dash Wire (Behind the Glove Box)
IP1	52	Rear Console Box Wire and Dash Wire (Right Side of Rear Console)
IQ1	52	Instrument Panel Integration Wire and Lamp Wire (Behind the Glove Box)
IW1	54	Engine Room No.2 Wire and Dash Wire (Behind the Glove Box)
IX1	54	Instrument Panel Integration Wire and Engine Wire (Behind the Glove Box)
BA1	56	Rear Door LH Wire and Floor Wire (Left Side of Center Pillar)
BA2		
BC1	56	Rear Door RH Wire and Floor No.2 Wire (Right Side of Center Pillar)
BC2		
BD2	56	Floor No.3 Wire and Floor Wire (Left Rear Side Quarter Panel)
BF1	56	Frame Wire and Floor No.3 Wire (Left Side of Rear Floor Crossmember)
BH1	58	Pillar No.1 Wire and Back Door Upper Wire (Left Side of Back Door)
BJ1	58	Floor No.2 Wire and A/C Sub Wire (Right Side Rear Quarter Panel)
BL3	58	Floor No.2 Wire and Floor No.3 Wire (Right Side of Rear Floor Crossmember)
BM1	60	Floor Wire and Front Seat LH Wire (Front Side Under the Driver's Seat)
BO1	60	Floor No.2 Wire and Front Seat RH Wire (Front Side Under the Front Passenger's Seat)
BP1	58	Pillar No.1 Wire and Floor Wire (Left Rear Side Quarter Panel)
BQ1	58	Back Door Lower Wire and Floor Wire (Left Rear Side Quarter Panel)

: GROUND POINTS

Code	See Page	Ground Points Location
EA	46	Front Right Side of Fender Apron
EB		
EC	46	Rear Bank of Right Cylinder Head
ED	46	Rear Bank of Left Cylinder Head
EE	46	Front Left Side of Fender Apron
IF	48	Set Bolt of Cowl Side J/B LH
IG		
IH	48	Set Bolt of Cowl Side J/B RH
II		
BJ	56	Under the Driver's Seat
BK	56	Front Side Under the Front Passenger's Seat
BL	56	Rear Side Under the Front Passenger's Seat
BM	56	Left Rear Side Quarter Panel

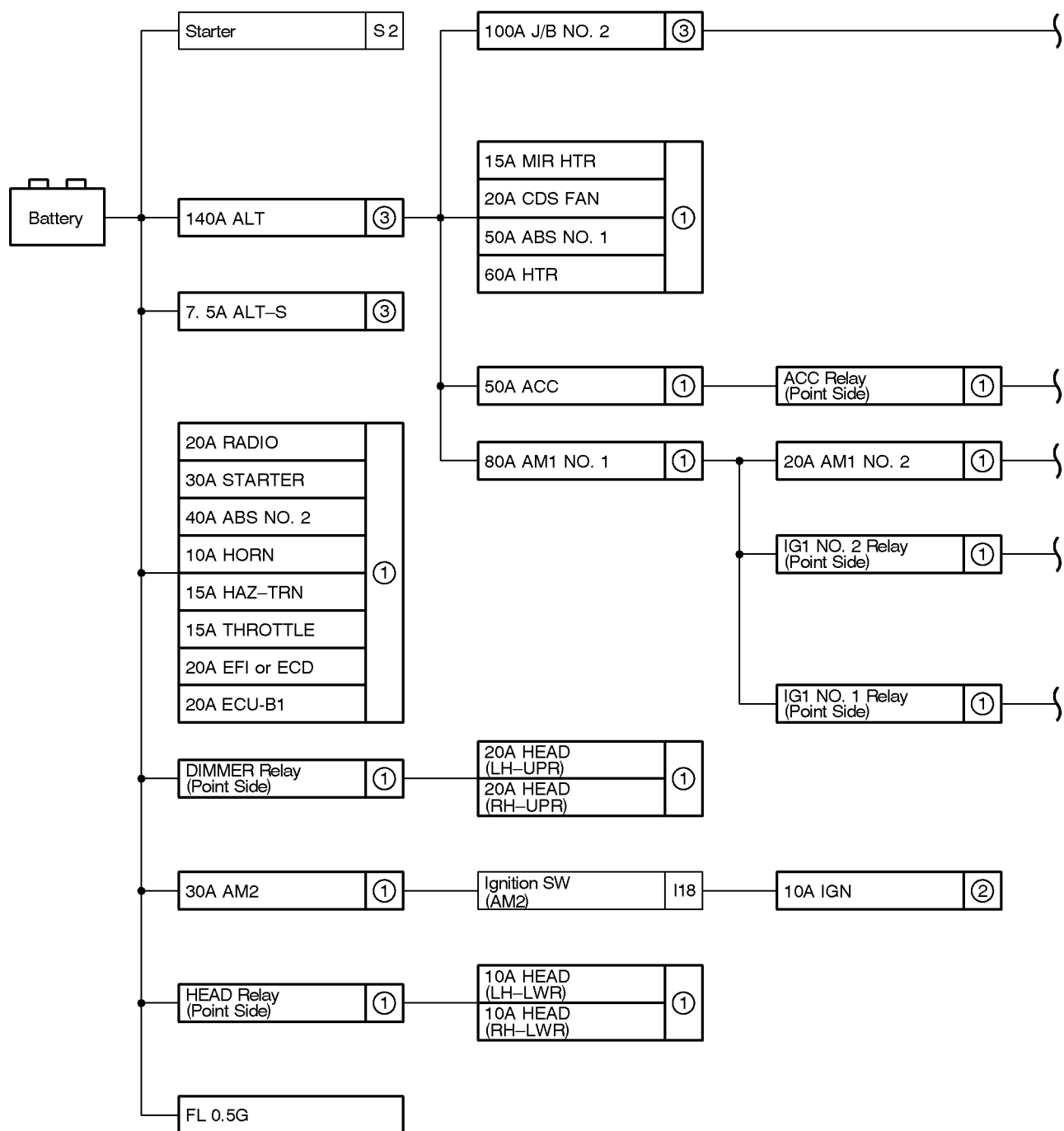


: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	46	Engine Room Main Wire	B1	58	Front Door LH Wire
E5	46	Engine Room No.2 Wire	B4	58	Floor Wire
E7	46	Engine Wire	B7	58	Roof Wire
E8	46	Transmission Wire	B9	58	Floor No.2 Wire
E9			B10		
E10	46	Engine Wire	B11	58	Floor Wire
E13	46	Engine Room No.2 Wire	B12	58	Frame Wire
E14			B14	58	Floor No.2 Wire
I3	50	Instrument Panel Wire	B15	58	Back Door Upper Wire
I5	50	Dash Wire	B16	58	Floor No.3 Wire
I6			B17	58	Back Door Lower Wire
I9	50	Column Wire	B21	60	Front Seat LH Wire
I10	50	Dash Wire	B22	60	Front Seat RH Wire
I12	50	Console Box Wire	B23	58	Front Door RH Wire

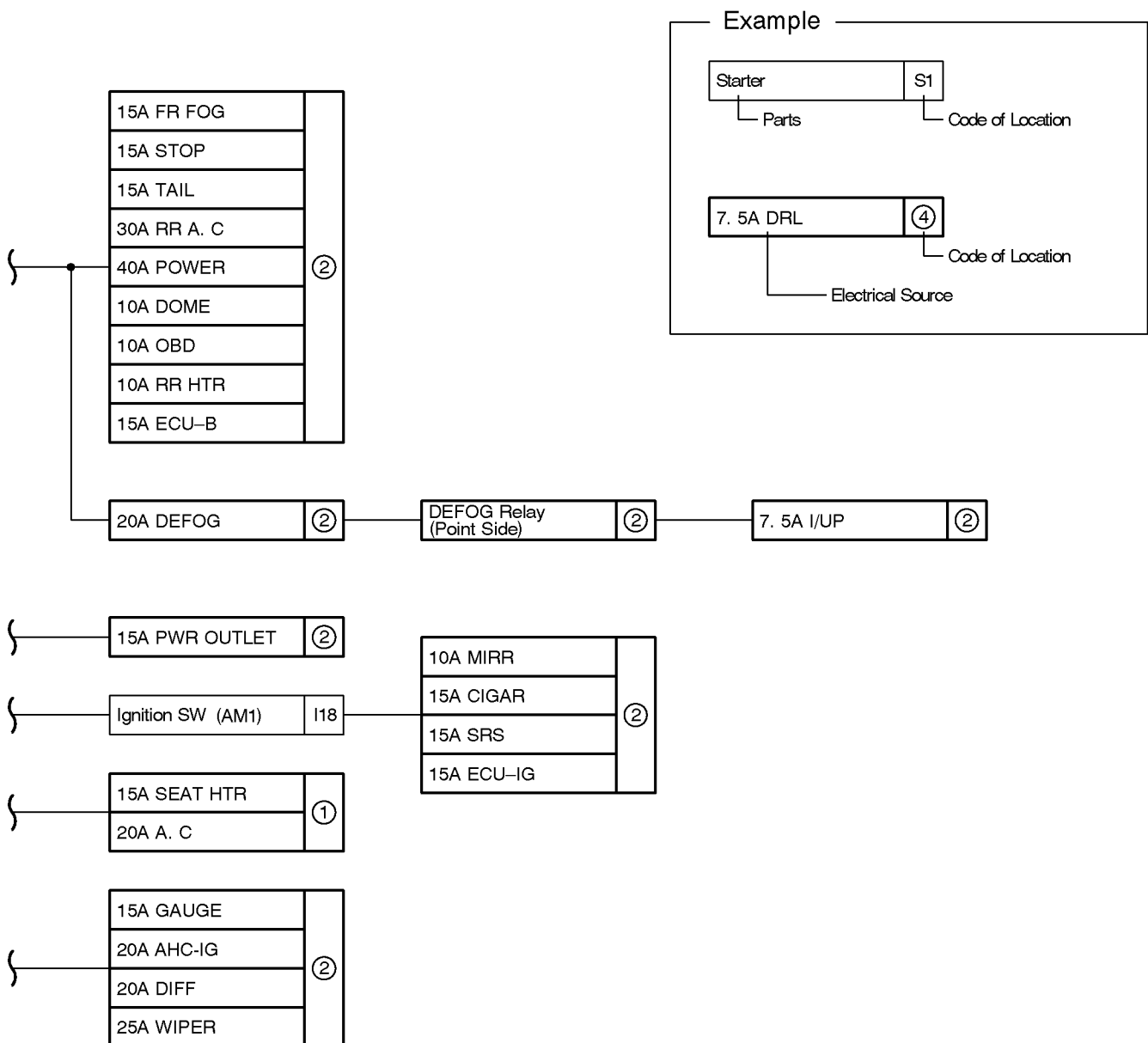
J POWER SOURCE (Current Flow Chart)

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.



[LOCATION] ① : Engine Room J/B (See Page 22)

② : Cowl Side J/B LH (See Page 26)



③ : Fusible Link Block (F 6 on See Page 36)

J POWER SOURCE (Current Flow Chart)

Engine Room J/B (See Page 22)

Fuse		System	Page
10A	HEAD (LH-LWR)	Front Fog Light	92
		Headlight	86
10A	HEAD (RH-LWR)	Headlight	86
10A	HORN	Horn	142
		Theft Deterrent	212
15A	HAZ-TRN	Theft Deterrent	212
		Turn Signal and Hazard Warning Light	94
15A	MIR HTR	Rear Window Defogger and Mirror Heater	232
15A	SEAT HTR	Seat Heater	230
15A	THROTTLE	Cruise Control	152
		Electronically Controlled Transmission and A/T Indicator	144
		Engine Control and Engine Immobiliser System	76
20A	A.C	Condenser Fan and Front Air Conditioning	260
		Key Reminder and Seat Belt Warning	234
		Rear Air Conditioning	266
		Rear Heater (w/o Rear Air Conditioning)	272
20A	AM1 NO.2	Turn Signal and Hazard Warning Light	94
20A	CDS FAN	Condenser Fan and Front Air Conditioning	260
20A	ECU-B1	Automatic Light Control	120
		Clock	136
		Combination Meter	252
		Condenser Fan and Front Air Conditioning	260
		Door Lock Control	196
		Interior Light	106
		Key Reminder and Seat Belt Warning	234
		Light Auto Turn Off	124
		Moon Roof	192
		Navigation System	246
		Power Window	186
		Radio and Player (w/ Navigation System)	238
		Rear Air Conditioning	266
		Theft Deterrent	212
		Wireless Door Lock Control	202
20A	EFI or ECD	Cruise Control	152
		Electronically Controlled Transmission and A/T Indicator	144
		Engine Control and Engine Immobiliser System	76
20A	HEAD (LH-UPR)	Headlight	86

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

Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

20A	HEAD (RH-UPR)	Headlight	86
20A	RADIO	Auto Antenna	236
		Navigation System	246
		Radio and Player (w/ Navigation System)	238
		Radio and Player (w/o Navigation System)	242

Fuse		System	Page
30A	AM2	Electronically Controlled Transmission and A/T Indicator	144
		Engine Control and Engine Immobiliser System	76
		Ignition	70
		Starting	68
30A	STARTER	Starting	68
40A	ABS NO.2	ABS	166
		VSC	158
50A	ABS NO.1	ABS	166
		VSC	158
60A	HTR	Condenser Fan and Front Air Conditioning	260
80A	AM1 NO.1	Rear Window Defogger and Mirror Heater	232
		Turn Signal and Hazard Warning Light	94

Cowl Side J/B LH (See Page 26)

Fuse		System	Page
7.5A	I/UP	Rear Window Defogger and Mirror Heater	232
10A	DOME	Interior Light	106
10A	IGN	ABS	166
		Charging	74
		Combination Meter	252
		Cruise Control	152
		Electronically Controlled Transmission and A/T Indicator	144
		Engine Control and Engine Immobiliser System	76
		SRS	171
		VSC	158
10A	MIRR	Remote Control Mirror	226
10A	OBD	Cruise Control	152
		Engine Control and Engine Immobiliser System	76
10A	RR HTR	Rear Air Conditioning	266
		Rear Heater (w/o Rear Air Conditioning)	272

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

Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

15A	CIGAR	Auto Antenna	236
		Cigarette Lighter	138
		Clock	136
		Condenser Fan and Front Air Conditioning	260
		Navigation System	246
		Radio and Player (w/ Navigation System)	238
		Radio and Player (w/o Navigation System)	242
		Rear Air Conditioning	266
		Shift Lock	176
15A	ECU-B	Combination Meter	252
		Condenser Fan and Front Air Conditioning	260
		Headlight	86
		Navigation System	246
		Power Tilt and Power Telescopic	222

J POWER SOURCE (Current Flow Chart)

Fuse		System	Page
15A	ECU-B	Rear Air Conditioning	266
		SRS	171
		Theft Deterrent	212
15A	ECU-IG	ABS	166
		Auto Antenna	236
		Automatic Light Control	120
		Door Lock Control	196
		Interior Light	106
		Light Auto Turn Off	124
		Moon Roof	192
		Navigation System	246
		Power Tilt and Power Telescopic	222
		Power Window	186
		Shift Lock	176
		Theft Deterrent	212
		VSC	158
		Wireless Door Lock Control	202
15A	FR FOG	Front Fog Light	92
15A	GAUGE	ABS	166
		Back-Up Light	118
		Center Differential Lock	178
		Charging	74
		Combination Meter	252
		Cruise Control	152
		Electronically Controlled Transmission and A/T Indicator	144
		Engine Control and Engine Immobiliser System	76
		Headlight	86
		Key Reminder and Seat Belt Warning	234
		Navigation System	246
		Power Rear Quarter Window	228
		Rear Differential Lock	182
		Rear Window Defogger and Mirror Heater	232
		VSC	158
		Wireless Door Lock Control	202
15A	PWR OUTLET	Power Outlet	140
15A	SRS	SRS	171
15A	STOP	ABS	166
		Cruise Control	152
		Electronically Controlled Transmission and A/T Indicator	144
		Engine Control and Engine Immobiliser System	76
		Shift Lock	176
		Stop Light	114
		Trailer Towing	116
		VSC	158

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

Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

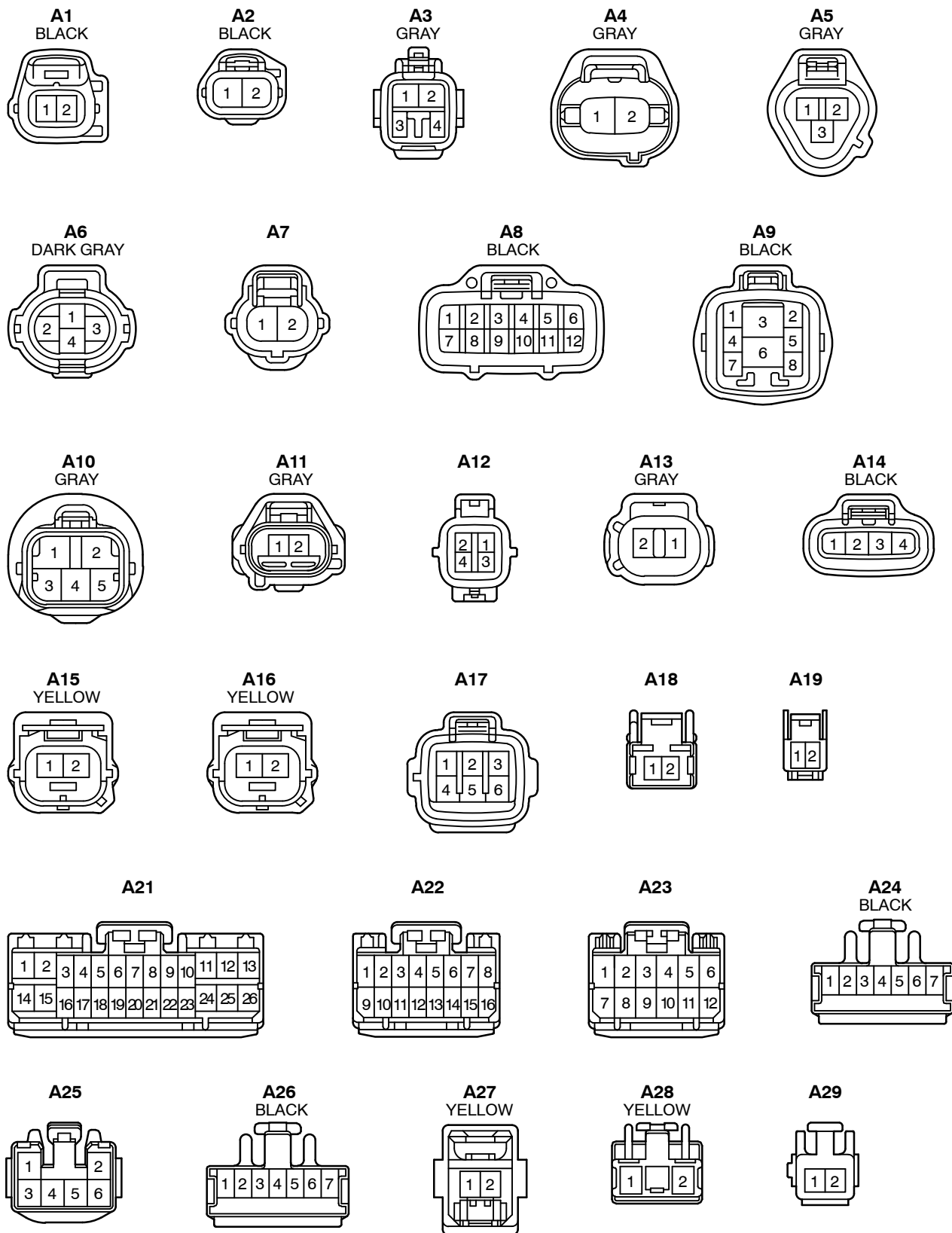
Fuse		System	Page
15A	TAIL	Automatic Light Control	120
		Illumination	102
		Light Auto Turn Off	124
		Taillight	98
		Theft Deterrent	212
		Trailer Towing	116
		Wireless Door Lock Control	202
20A	AHC-IG	VSC	158
20A	DEFOG	Rear Window Defogger and Mirror Heater	232
20A	DIFF	Center Differential Lock	178
		Rear Differential Lock	182
25A	WIPER	Front Wiper and Washer	128
		Rear Wiper and Washer	132
30A	RR A.C	Rear Air Conditioning	266
40A	POWER	Door Lock Control	196
		Moon Roof	192
		Power Seat	218
		Power Tilt and Power Telescopic	222
		Power Window	186
		Wireless Door Lock Control	202

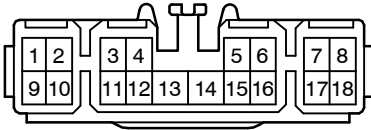
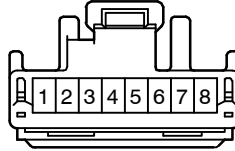
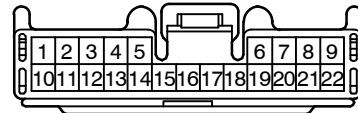
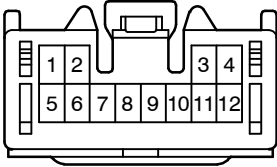
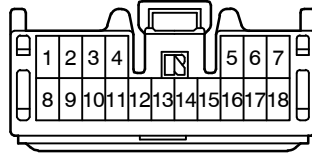
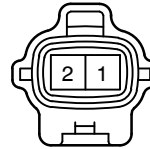
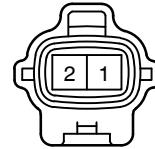
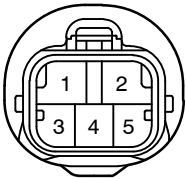
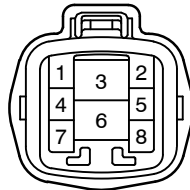
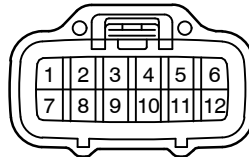
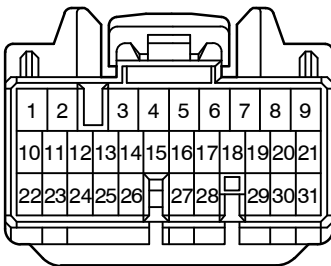
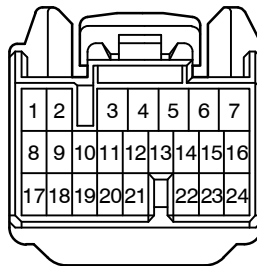
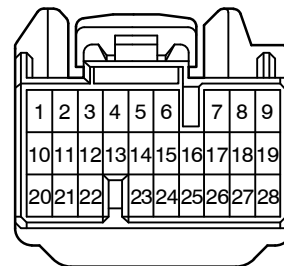
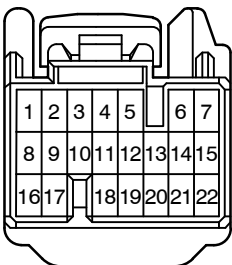
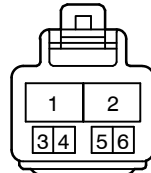
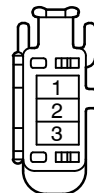
Fusible Link Block (F6 on See Page 36)

Fuse		System	Page
7.5A	ALT-S	Charging	74
100A	J/B NO.2	Automatic Light Control	120
		Light Auto Turn Off	124
140A	ALT	Automatic Light Control	120
		Charging	74
		Light Auto Turn Off	124
		Stop Light	114
		Taillight	98
		Trailer Towing	116
		Turn Signal and Hazard Warning Light	94

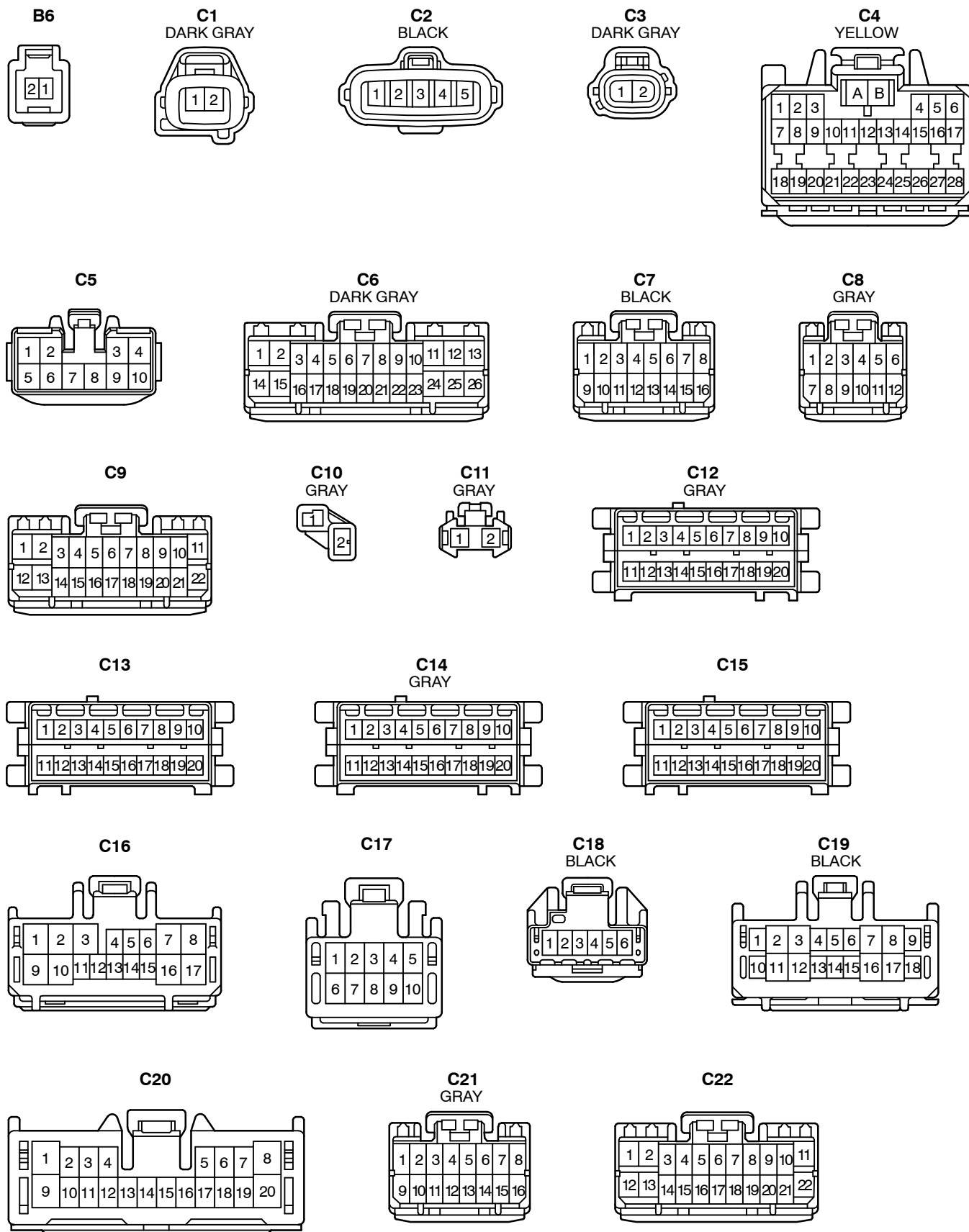
* These are the page numbers of the first page on which the related system is shown.

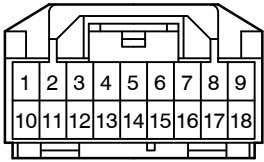
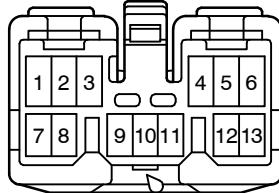
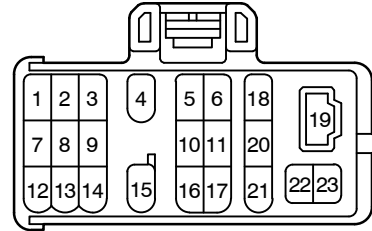
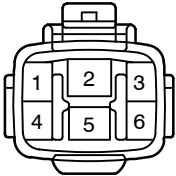
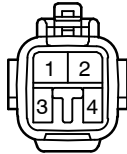
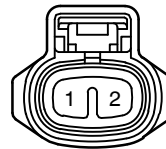
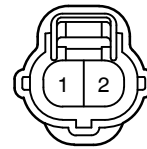
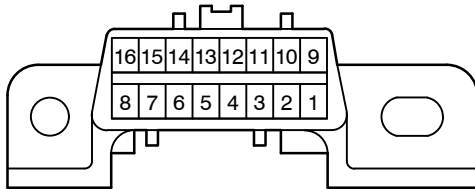
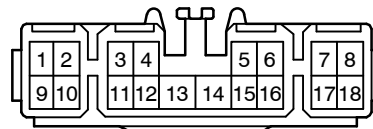
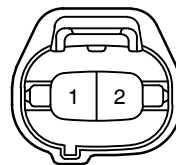
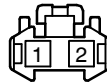
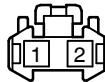
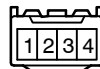
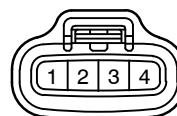
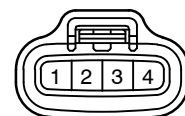
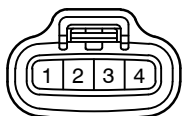
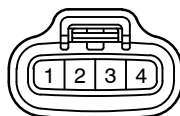
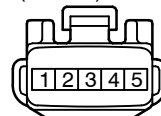
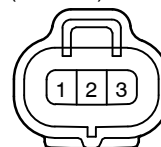
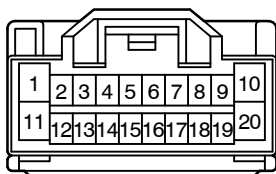
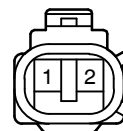
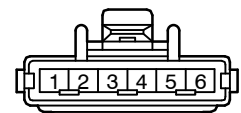
K CONNECTOR LIST



A30**A31**
BLACK**A32****A33****A34****A35**
GRAY**A36**
GRAY**A37**
GRAY**A38**
BLACK**A39**
BLACK**A40**
GRAY**A41****A42****A43****A44****B1**
BLACK**B2****B3****B4**
BLACK**B5**

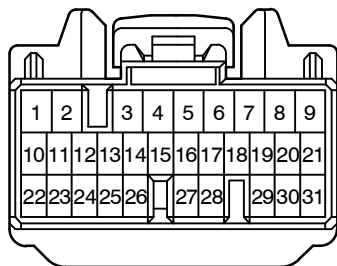
K CONNECTOR LIST



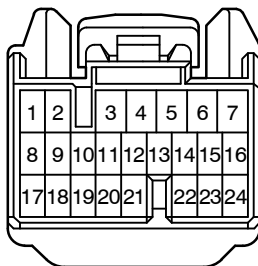
C23**C24**
DARK GRAY**D1**
BLACK**D2**
BLACK**D3**
BLACK**D4**
GRAY**D5**
GRAY**D6**
GRAY**D7****D8**
GRAY**D9**
BLUE**D10**
GRAY**D11**
GRAY**D12**
GRAY**D13**
GRAY**D14****D15****D16****D17****D18**
GRAY**D19**
GRAY**D20****D21**
BLACK**D22**
BLACK**D23**
BLACK**D24**
BLACK**D25**
(w/ VSC) BLACK**D25**
(w/o VSC) BLACK**D26****E1**
GRAY**E2**
BLACK**E3**
BLACK**E4**

K CONNECTOR LIST

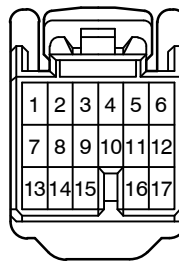
E5



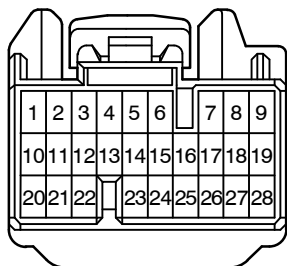
E6



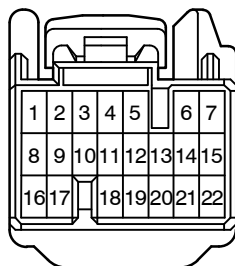
E7



E8

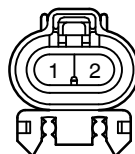


E9



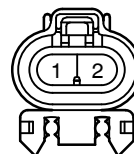
F1

BROWN



F2

BROWN



F3
GRAY



F4
GRAY



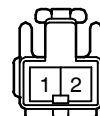
F5
BLACK



F6

(See Page 36)

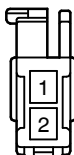
F7



F8



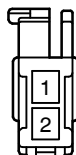
F9



F10

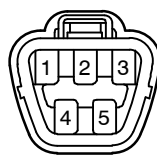


F11



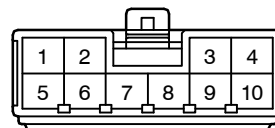
F12

DARK GRAY

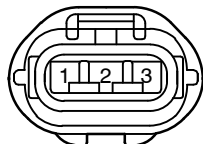


F13

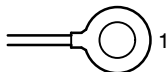
BLACK



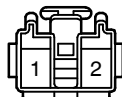
G1
BLACK



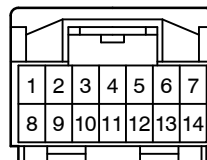
G2



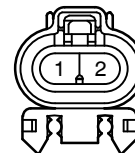
G3



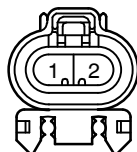
G4
GRAY



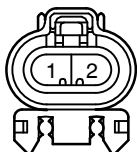
H1
BLACK



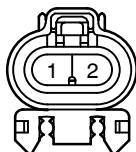
H2
BROWN



H3
BLACK



H4
BROWN



H5
DARK GRAY

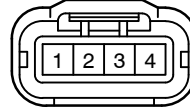
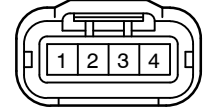
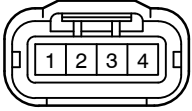
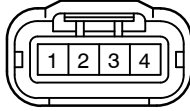
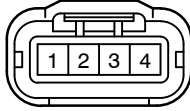
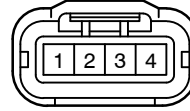
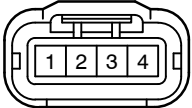
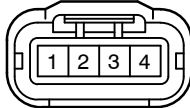
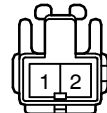
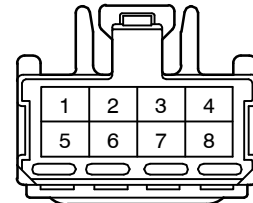
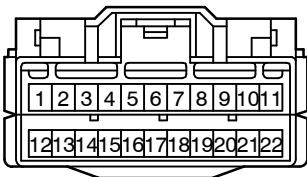
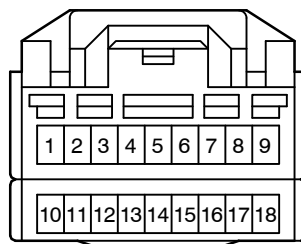
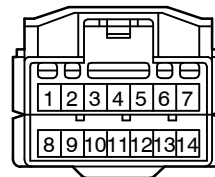
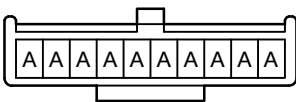
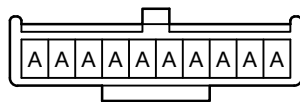
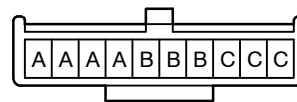
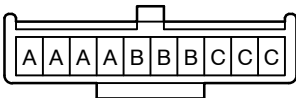
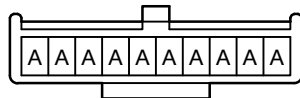
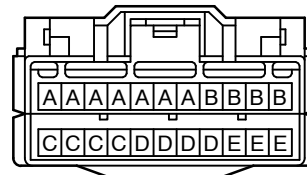


H6
DARK GRAY



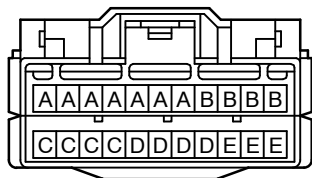
H7
DARK GRAY



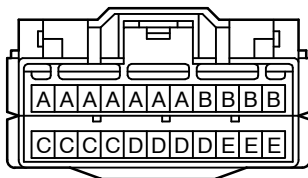
H8
DARK GRAY**H9**
BLACK**H10**
BLACK**H11****I1**
BLACK**I2**
BLACK**I3**
BLACK**I4**
BLACK**I5**
BLACK**I6**
BLACK**I7**
BLACK**I8**
BLACK**I9**
BLUE**I10**
BLUE**I11**
BLUE**I12**
BLUE**I13**
BLUE**I14**
BLUE**I15**
BLUE**I16**
BLUE**I17**
GRAY**I18****I19****I20****I21**
BLUE**J1****J2****J3**
BLUE**J4**
BLUE**J7****J9**
GRAY

K CONNECTOR LIST

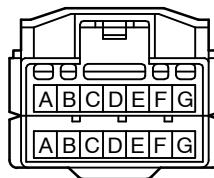
J10



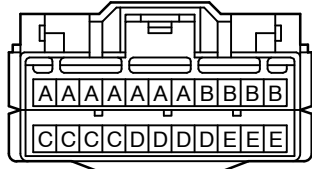
J11
GRAY



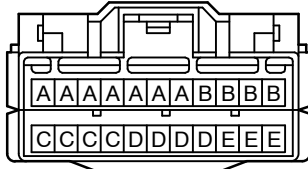
J12
BLUE



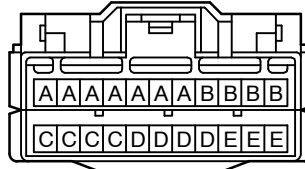
J13
GRAY



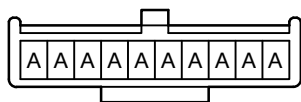
J14



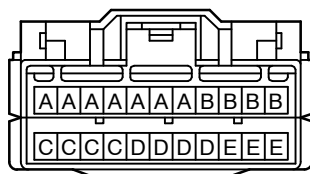
J15
GRAY



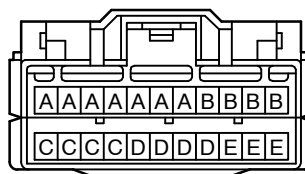
J16



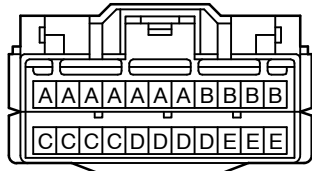
J17



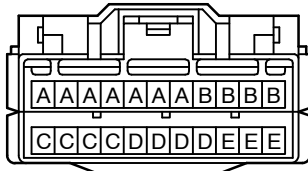
J18
GRAY



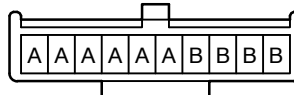
J19
GRAY



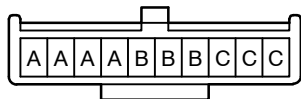
J20



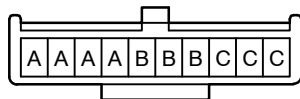
J21
BLACK



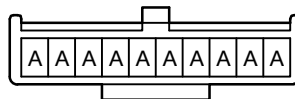
J22
BLUE



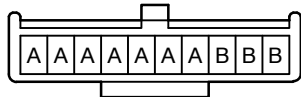
J23
BLUE



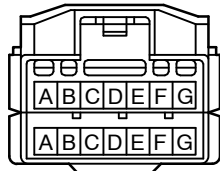
J24



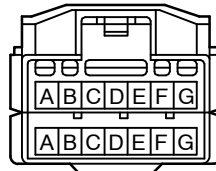
J25
RED



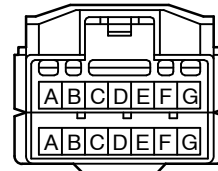
J26
BLUE



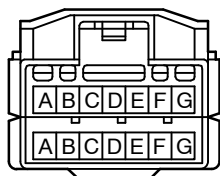
J27
GRAY



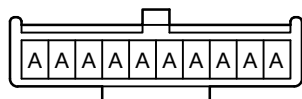
J28



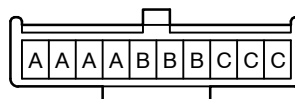
J29

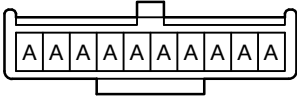
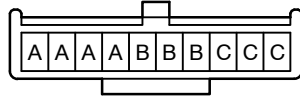
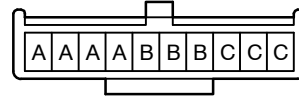
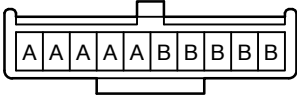
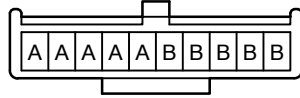
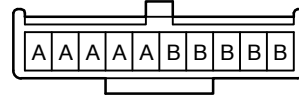
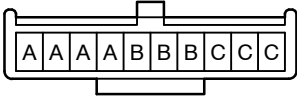
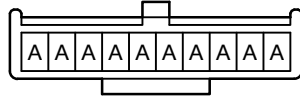
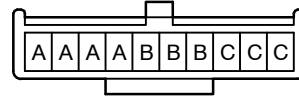
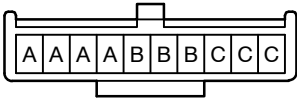
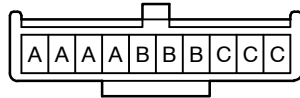
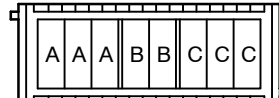
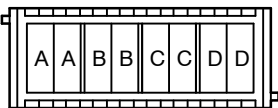
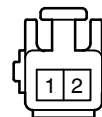
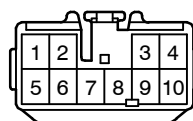
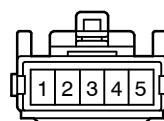
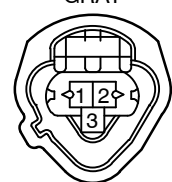
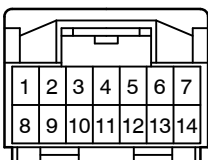
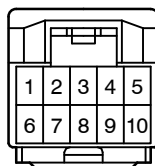
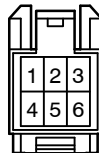
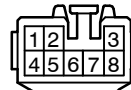
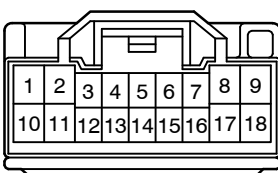
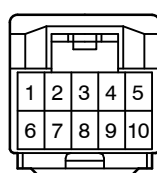
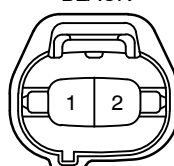


J30

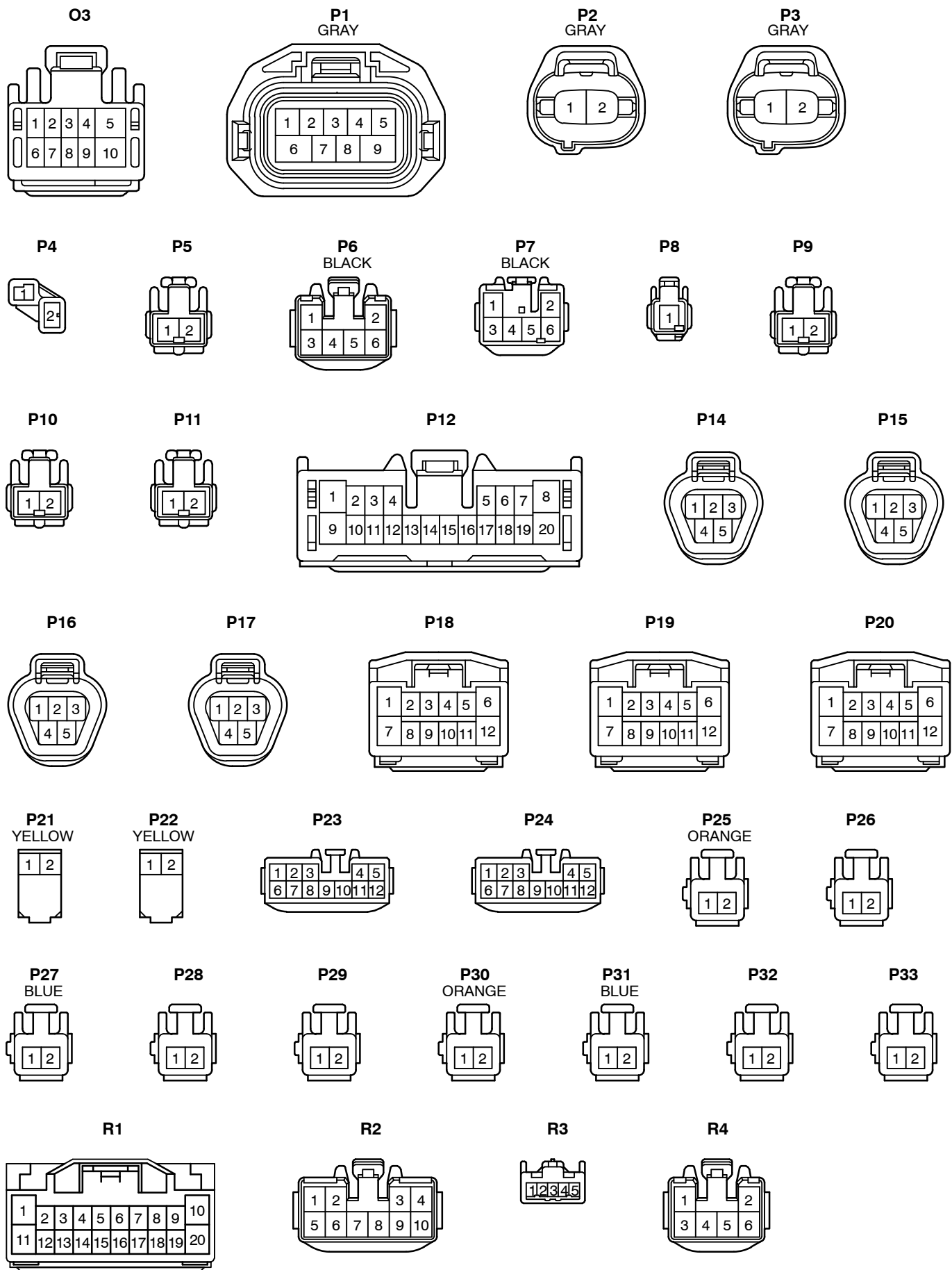


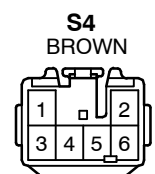
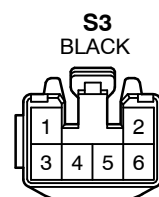
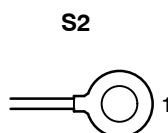
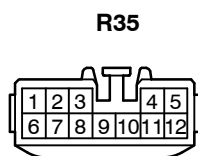
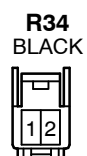
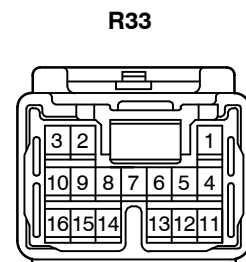
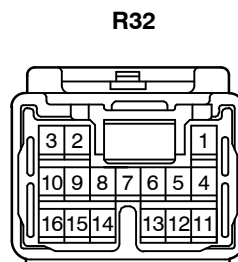
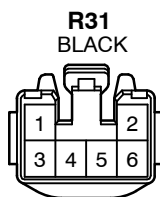
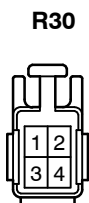
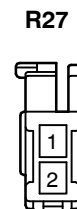
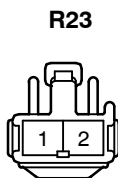
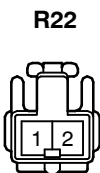
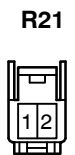
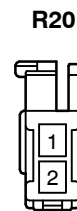
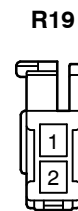
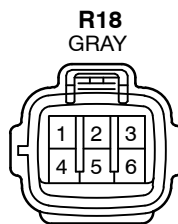
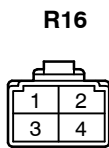
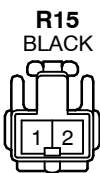
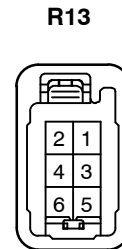
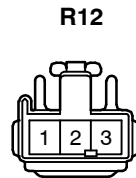
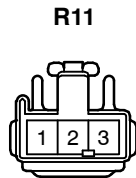
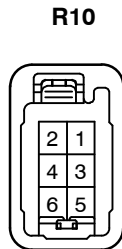
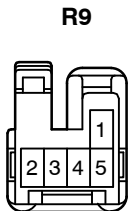
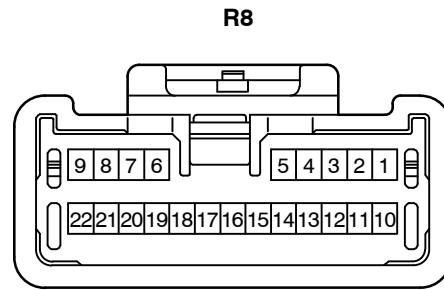
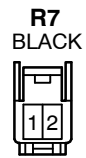
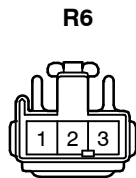
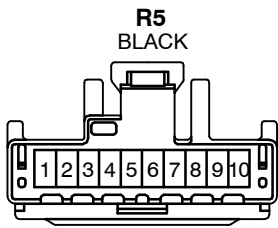
J31
BLUE



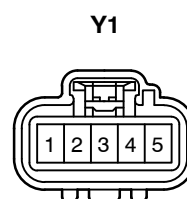
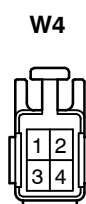
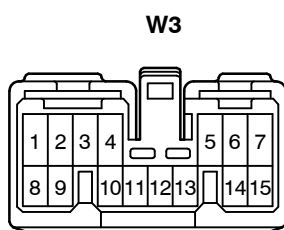
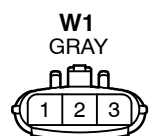
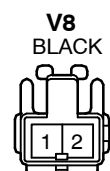
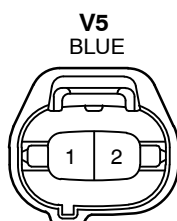
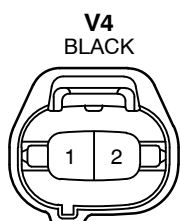
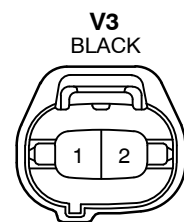
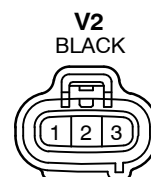
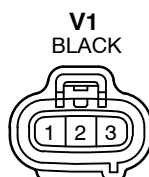
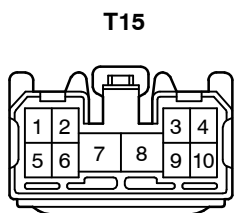
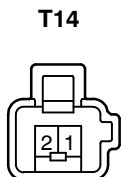
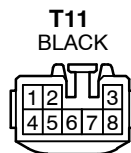
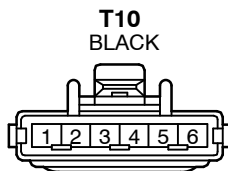
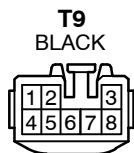
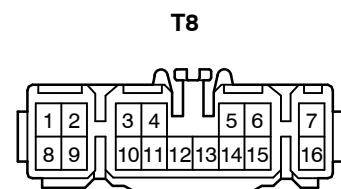
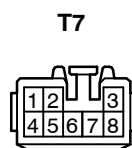
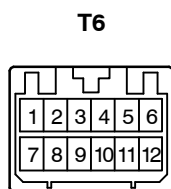
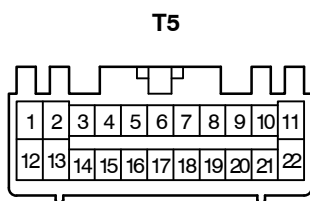
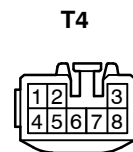
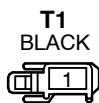
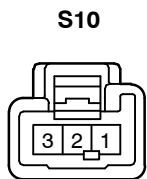
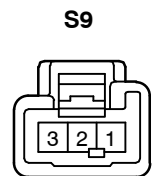
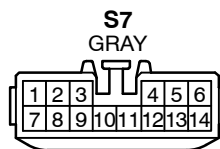
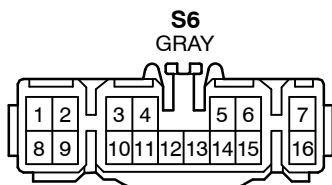
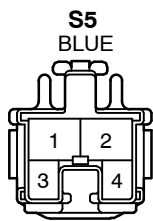
J32**J33**
BLUE**J34**
BLUE**J35**
GREEN**J36**
GREEN**J37**
GREEN**J38**
BLUE**J39****J40**
BLUE**J41**
BLUE**J42**
BLUE**J43**
BLACK**J44****K1**
DARK GRAY**K2****K3**
BLACK**L1****L2****L3****M1**
BLACK**M2****M3****M4**
GRAY**M5**
GRAY**M6****M7****M8****N1**
GRAY**N2****N3****O1**
BLACK**O2**
BLACK

K CONNECTOR LIST





K CONNECTOR LIST



Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

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 2	Back Door Courtesy SW	90980-10039
A 2	A/C Condenser Fan Motor	90980-11237	B 3	Back Door Key Lock and Unlock SW	90980-11490
A 3	A/C Condenser Fan Relay	90980-10940	B 4	Back Door Lock Motor and Back Door Unlock Detection SW	90980-11150
A 4	A/C Dual Pressure SW	90980-11149	B 5	Buckle SW LH	90980-11211
A 5	A/C Magnetic Clutch and Lock Sensor	90980-11016	B 6	Buckle SW RH	
A 6	A/C Triple Pressure SW (A/C Dual and Single Pressure SW)	90980-10943	C 1	Camshaft Position Sensor	90980-10947
A 7	A/T Oil Temp. Sensor	90980-11025	C 2	Center Diff. Lock Control Motor	90980-11024
A 8	ABS Actuator	90980-11151	C 3	Crankshaft Position Sensor	90980-11162
A 9	ABS Actuator	90980-10895	C 4	Center Airbag Sensor Assembly	90980-11872
A10	ABS Actuator	90980-11413	C 5	Center Diff. Lock Control Relay	90980-10801
A11	ABS Actuator	90980-11009	C 6	Center ECU	90980-11390
A12	ABS Speed Sensor Front LH	90980-10941	C 7	Center ECU	90980-11391
A13	ABS Speed Sensor Front RH	90980-11002	C 8	Center ECU	90980-11408
A14	Accel Position Sensor	90980-11150	C 9	Center ECU	90980-11392
A15	Airbag Sensor Front LH	90980-11856	C10	Cigarette Lighter	90980-10760
A16	Airbag Sensor Front RH		C11	Cigarette Lighter Illumination	90980-11148
A17	Auto Antenna Motor	90980-11194	C12	Combination Meter	82824-60060
A18	A/C Solar Sensor	90980-11919	C13	Combination Meter	82824-60050
A19	A/C Thermistor	90980-11918	C14	Combination Meter	82824-60060
A21	ABS ECU	90980-11390	C15	Combination Meter	82824-60050
A22	ABS ECU	90980-11391	C16	Combination SW	90980-11672
A23	ABS ECU	90980-11424	C17	Combination SW	90980-11581
A24	Air Inlet Control Servo Motor	90980-11165	C18	Combination SW	90980-11616
A25	Air Mix Control Servo Motor	90980-10797	C19	Combination SW	90980-11594
A26	Air Vent Mode Control Servo Motor	90980-11165	C20	Center ECU	90980-11469
A27	Airbag Squib (Front Passenger Airbag Assembly)	90980-11884	C21	Center ECU	90980-11391
A28	Airbag Squib (Steering Wheel Pad)	90980-10850	C22	Center ECU	90980-11392
A29	Ashtray Illumination	90980-10825	C23	Center ECU	90980-11913
A30	Auto Antenna Control Relay	90980-10819	C24	Center ECU	90980-11350
A31	Automatic Light Control Sensor	90980-11633	D 1	Data Link Connector 1	90980-11195
A32	A/C Amplifier (Rear)	90980-11502	D 2	Daytime Running Light Relay No.3	90980-10939
A33	A/C Amplifier (Rear)	90980-11475	D 3	Daytime Running Light Relay No.3	90980-10940
A34	A/C Amplifier (Rear)	90980-11497	D 4	Detection SW (Center Diff. Lock)	90980-11250
A35	ABS Speed Sensor Rear LH	90980-11073	D 5	Detection SW (Transfer L Position)	
A36	ABS Speed Sensor Rear RH		D 6	Detection SW (Transfer Neutral Position)	90980-11025
A37	ABS & BA & TRAC & VSC Actuator	90980-11413	D 7	Data Link Connector 3	90080-98012
A38	ABS & BA & TRAC & VSC Actuator	90980-10895	D 8	Daytime Running Light Relay (Main)	90980-10819
A39	ABS & BA & TRAC & VSC Actuator	90980-11151	D 9	Detection SW (Rear Diff. Lock)	90980-11156
A40	ABS & BA & TRAC & VSC Actuator	90980-11009	D10	Door Courtesy Light Front LH	90980-11148
A41	ABS & BA & TRAC & VSC ECU	90980-11935	D11	Door Courtesy Light Front RH	
A42	ABS & BA & TRAC & VSC ECU	90980-11476	D12	Door Courtesy Light Rear LH	
A43	ABS & BA & TRAC & VSC ECU	90980-11637	D13	Door Courtesy Light Rear RH	
A44	ABS & BA & TRAC & VSC ECU	90980-11638	D14	Door Courtesy SW Front LH	90980-10871
B 1	Blower Motor Controller	90980-10910	D15	Door Courtesy SW Front RH	

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

Donated by Andrew Schauer . cruisercult.com

2002 LAND CRUISER (EWD469U)

Code	Part Name	Part Number	Code	Part Name	Part Number
D16	Door Courtesy SW Rear LH	90980-10871	H 5	Heated Oxygen Sensor (Bank 1 Sensor 1)	90980-10869
D17	Door Courtesy SW Rear RH		H 6	Heated Oxygen Sensor (Bank 1 Sensor 2)	90980-11028
D18	Door Key Lock and Unlock SW LH	90980-11170	H 7	Heated Oxygen Sensor (Bank 2 Sensor 1)	90980-10869
D19	Door Key Lock and Unlock SW RH		H 8	Heated Oxygen Sensor (Bank 2 Sensor 2)	90980-11028
D20	Door Lock Control SW RH	90980-10601	H 9	Horn LH	90980-10619
D21	Door Lock Motor and Door Unlock Detection SW Front LH	90980-11150	H10	Horn RH	
D22	Door Lock Motor and Door Unlock Detection SW Front RH		H11	High Mounted Stop Light	90980-11211
D23	Door Lock Motor and Door Unlock Detection SW Rear LH		I 1	Ignition Coil and Igniter No.1	90980-11885
D24	Door Lock Motor and Door Unlock Detection SW Rear RH		I 2	Ignition Coil and Igniter No.2	
D25	Deceleration Sensor (w/ VSC)	90980-11182	I 3	Ignition Coil and Igniter No.3	
	Deceleration Sensor (w/o VSC)	90980-10845	I 4	Ignition Coil and Igniter No.4	
D26	DVD Automatic Changer	90980-11971	I 5	Ignition Coil and Igniter No.5	
E 1	Electronically Controlled Transmission Solenoid	90980-10891	I 6	Ignition Coil and Igniter No.6	
			I 7	Ignition Coil and Igniter No.7	
E 2	Engine Coolant Temp. Sensor	90980-10736	I 8	Ignition Coil and Igniter No.8	
E 3	Engine Hood Courtesy SW	90980-11003	I 9	Injector No.1	90980-11153
E 4	Electronically Controlled Transmission Pattern Select SW	90980-10933	I10	Injector No.2	
E 5	Engine Control Module	90980-11421	I11	Injector No.3	
E 6	Engine Control Module	90980-11476	I12	Injector No.4	
E 7	Engine Control Module	90980-11586	I13	Injector No.5	
E 8	Engine Control Module	90980-11637	I14	Injector No.6	
E 9	Engine Control Module	90980-11638	I15	Injector No.7	
F 1	Front Fog Light LH	90980-11660	I16	Injector No.8	
F 2	Front Fog Light RH		I17	Ignition Key Cylinder Light	90980-10906
F 3	Front Turn Signal and Side Marker Light LH	90980-11020	I18	Ignition SW	90980-11615
F 4	Front Turn Signal and Side Marker Light RH		I19	Instrument ECU	90980-11927
F 5	Front Wiper Motor	90980-11599	I20	Instrument ECU	90980-11914
F 6	Fusible Link Block	82620-60010	I21	Instrument ECU	90980-11925
F 7	Fuel Control SW	90980-10860	J 1	Junction Connector	-
F 8	Front Door Speaker LH	90980-10935	J 2	Junction Connector	
F 9	Front Door Speaker RH		J 3	Junction Connector	
F10	Front Interior Light and Rear Personal Light	90980-10365	J 4	Junction Connector	
F11	Front Personal Light	90980-10935	J 7	Junction Connector	90980-11927
F12	Fuel Pump and Sender	90980-11077	J 9	Junction Connector	
F13	Fuel Pump Control ECU	90980-10862	J10	Junction Connector	90980-11925
G 1	Generator	90980-11349	J11	Junction Connector	
G 2	Generator	90980-09212	J12	Junction Connector	90980-11927
G 3	Glove Box Light	90980-11098	J13	Junction Connector	
G 4	Gateway ECU	90980-11911	J14	Junction Connector	-
H 1	Headlight LH (High)	90980-11659	J15	Junction Connector	
H 2	Headlight LH (Low)	90980-11660	J16	Junction Connector	
H 3	Headlight RH (High)	90980-11659	J17	Junction Connector	
H 4	Headlight RH (Low)	90980-11660	J18	Junction Connector	90980-11927
			J19	Junction Connector	
			J20	Junction Connector	

L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number	Code	Part Name	Part Number
J21	Junction Connector	-	P 2	Parking Light LH	90980-11156
J22	Junction Connector		P 3	Parking Light RH	
J23	Junction Connector		P 4	Power Outlet (Front)	90980-10760
J24	Junction Connector		P 5	Power Outlet (Rear Console Box)	90980-10860
J25	Junction Connector		P 6	Power Quarter Window SW LH	90980-10797
J26	Junction Connector	90980-11925	P 7	Power Quarter Window SW RH	90980-10996
J27	Junction Connector		P 8	Parking Brake SW	90980-10871
J28	Junction Connector		P 9	Power Outlet (Luggage Compartment)	90980-10860
J29	Junction Connector		P10	Power Vent Window Motor LH	
J30	Junction Connector	-	P11	Power Vent Window Motor RH	90980-11469
J31	Junction Connector		P12	Power Window Master SW	
J32	Junction Connector		P14	Power Window Motor Front LH	90980-11599
J33	Junction Connector		P15	Power Window Motor Front RH	
J34	Junction Connector		P16	Power Window Motor Rear LH	
J35	Junction Connector		P17	Power Window Motor Rear RH	90980-11947
J36	Junction Connector		P18	Power Window Control SW Front RH	
J37	Junction Connector		P19	Power Window Control SW Rear LH	
J38	Junction Connector		P20	Power Window Control SW Rear RH	90980-11862
J39	Junction Connector		P21	Pretensioner LH	
J40	Junction Connector		P22	Pretensioner RH	90980-10803
J41	Junction Connector		P23	Power Seat Control SW (Driver's Seat)	
J42	Junction Connector		P24	Power Seat Control SW (Front Passenger's Seat)	90980-10825
J43	Junction Connector	82824-10020	P25	Power Seat Motor (Driver's Seat Front Vertical Control)	
J44	Junction Connector	82824-10010	P26	Power Seat Motor (Driver's Seat Lumbar Support Control)	
K 1	Knock Sensor 1	90980-11166	P27	Power Seat Motor (Driver's Seat Rear Vertical Control)	
K 2	Knock Sensor 2		P28	Power Seat Motor (Driver's Seat Reclining Control)	
K 3	Key Interlock Solenoid	90980-10825	P29	Power Seat Motor (Driver's Seat Slide Control)	
L 1	License Plate Light LH	90980-11148	P30	Power Seat Motor (Front Passenger's Seat Front Vertical Control)	
L 2	License Plate Light RH		P31	Power Seat Motor (Front Passenger's Seat Rear Vertical Control)	
L 3	Lumbar Support Control SW (Driver's Seat)	90980-10601	P32	Power Seat Motor (Front Passenger's Seat Reclining Control)	
M 1	Mass Air Flow Meter	90980-11317	P33	Power Seat Motor (Front Passenger's Seat Slide Control)	
M 2	Moon Roof Control ECU	90980-10997	R 1	Radio and Player	90980-12038
M 3	Moon Roof Control SW	90980-10789	R 2	Rear Diff. Lock Control ECU	90980-10801
M 4	Master Cylinder Pressure Sensor	90980-11451	R 3	Rear Diff. Lock SW	90980-10631
M 5	Multi-Display	90980-11911	R 4	Rear Heater SW	90980-10797
M 6	Multi-Display	90980-11923	R 5	Remote Control Mirror SW	90980-11657
M 7	Multi-Display	90980-12012	R 6	Rheostat	90980-10908
M 8	Multi-Display	90980-10799	R 7	Room Temp. Sensor (Front)	90980-11918
N 1	Noise Filter (Ignition)	90980-10843	R 8	Rear A/C Control SW	90980-11503
N 2	Navigation ECU	90980-11973			
N 3	Navigation ECU	90980-11923			
O 1	O/D Direct Clutch Speed Sensor	90980-11156			
O 2	Oil Pressure Sender	90980-11363			
O 3	O/D Main SW and Shift Lock Control ECU	90980-11614			
P 1	Park/Neutral Position SW, A/T Indicator Light SW and Back-Up Light SW	90980-11784			

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

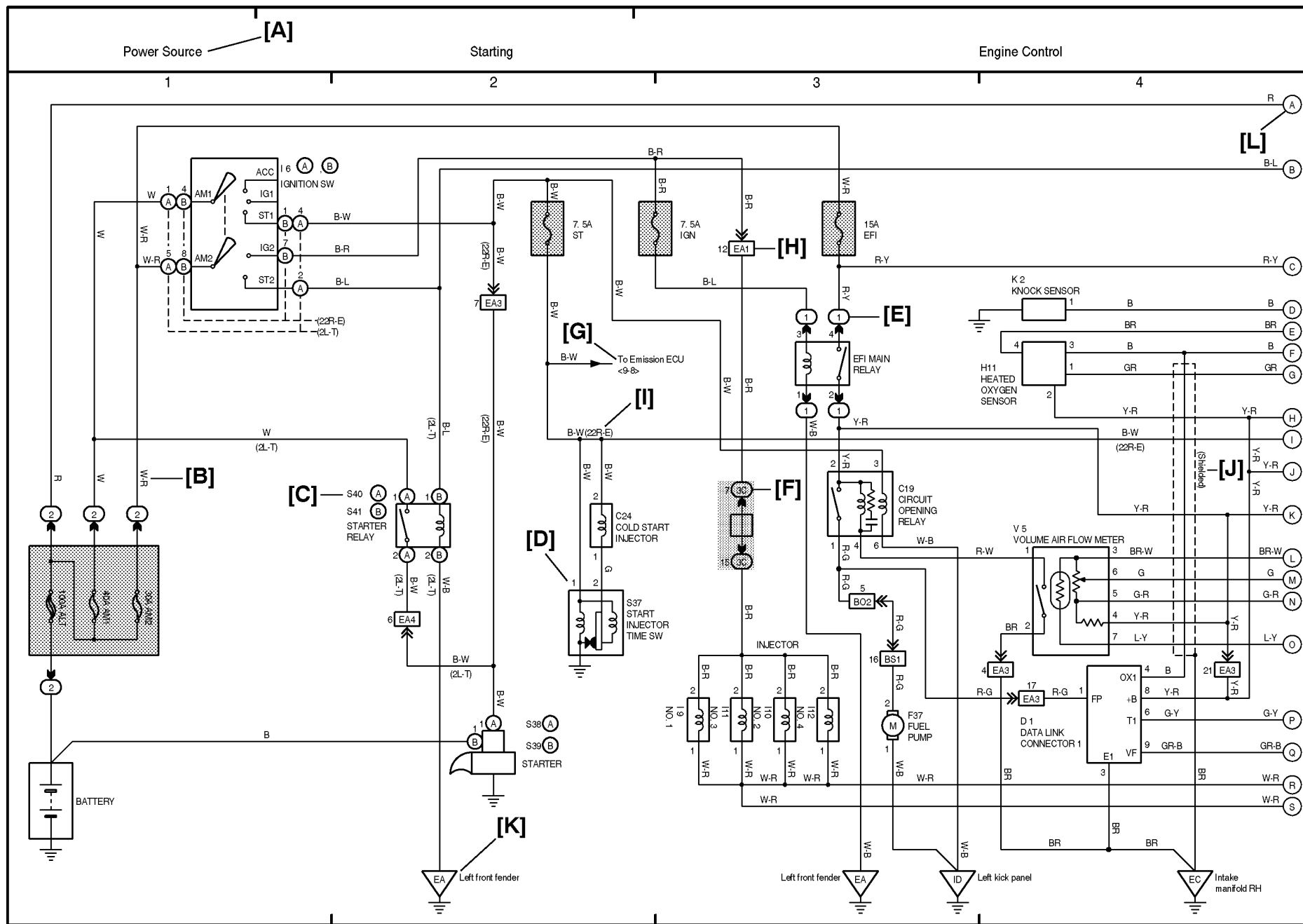
Donated by Andrew Schauer . cruisercult.com

Code	Part Name	Part Number	Code	Part Name	Part Number
R 9	Rear Air Mix Control Servo Motor	90980-11319	S 8	Seat Belt Warning Occupant Detection Sensor	90980-10860
R10	Rear Combination Light LH	90980-11587	S 9	Seat Heater (Driver's Seat)	90980-10907
R11	Rear Combination Light LH	90908-10908	S10	Seat Heater (Front Passenger's Seat)	
R12	Rear Combination Light RH		T 1	Theft Deterrent Horn	90980-10619
R13	Rear Combination Light RH	90908-11587	T 2	Throttle Control Motor	90980-10942
R14	Rear Cooler Blower Motor	90980-10214	T 3	Throttle Position Sensor	90980-11037
R15	Rear Cooler Magnetic Valve	90980-10860	T 4	Telescopic Motor	90980-10799
R16	Rear Cooler Power Transistor	90980-10171	T 5	Theft Deterrent ECU	90980-10765
R17	Rear Cooler Relay		T 6	Theft Deterrent ECU	90980-10973
R18	Rear Diff. Lock Motor	90980-11194	T 7	Tilt and Telescopic ECU	90980-10799
R19	Rear Door Speaker LH	90980-10935	T 8	Tilt and Telescopic ECU	90980-10848
R20	Rear Door Speaker RH		T 9	Tilt Motor	90980-10799
R21	Rear Evaporator Temp. Sensor	90980-11918	T10	Transponder Key Amplifier	90980-10933
R22	Rear Heater Blower Motor	90980-10860	T11	Turn Signal Flasher	90980-10799
R23	Rear Heater Blower Resistor	90980-10916	T12	Trailer Socket	90980-10941
R24	Rear Heater Fan Relay	90980-10171	T13	Tweeter LH	90980-11300
R25	Rear Heater Power Transistor		T14	Tweeter RH	
R26	Rear Inlet Air Temp. Sensor	90980-11369	T15	Towing Converter Relay	90980-11527
R27	Rear Interior Light	90980-10935	U 1	Unlock Warning SW	90980-10860
R28	Rear Window Defogger	90980-11097	V 1	Vapor Pressure Sensor	90980-11143
R29	Rear Window Defogger		V 2	Vehicle Speed Sensor (Combination Meter)	
R30	Rear Wiper Motor	90980-10795	V 3	Vehicle Speed Sensor (Electronically Controlled Transmission)	90980-11156
R31	Rear Wiper Relay	90908-10797	V 4	VSV (EVAP)	
R32	Remote Control Mirror LH	90980-11573	V 5	VSV (Vapor Pressure Sensor)	
R33	Remote Control Mirror RH		V 6	Vanity Light LH	90980-11369
R34	Room Temp. Sensor (Rear)	90980-11918	V 7	Vanity Light RH	
R35	Radio and Player	90980-10803	V 8	VSC Warning Buzzer	90980-10906
S 1	Starter	90980-11400	W 1	Washer Motor	90980-11294
S 2	Starter	90980-09585	W 2	Water Temp. Sender	90980-11428
S 3	Seat Heater SW (Driver's Seat)	90980-10797	W 3	Wireless Door Lock ECU	90980-11264
S 4	Seat Heater SW (Front Passenger's Seat)	90980-10996	W 4	Woofer (Speaker)	90980-10795
S 5	Stop Light SW	90980-11118	Y 1	Yaw Rate Sensor	90980-11904
S 6	Stereo Component Amplifier	90980-10848			
S 7	Stereo Component Amplifier	90980-10807			

OVERALL ELECTRICAL WIRING DIAGRAM

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

HOW TO READ THIS SECTION



[A] : System Title

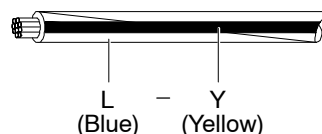
[B] : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

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

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

Example: L – Y

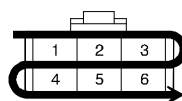


[C] : The position of the parts is the same as shown in the wiring diagram and wire routing.

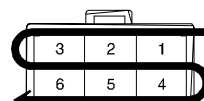
[D] : Indicates the pin number of the connector. The numbering system is different for female and male connectors.

Example : Numbered in order from upper left to lower right

Numbered in order from upper right to lower left



Female



Male

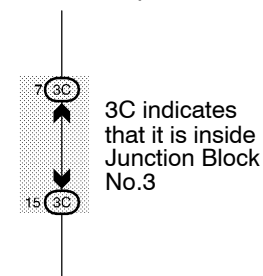
The numbering system for the overall wiring diagram is the same as above

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

Example : ① Indicates Relay Block No.1

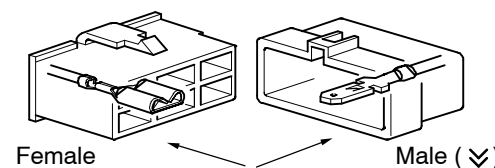
[F] : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

Example:



[G] : Indicates related system.

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



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

[J] : Indicates a shielded cable.



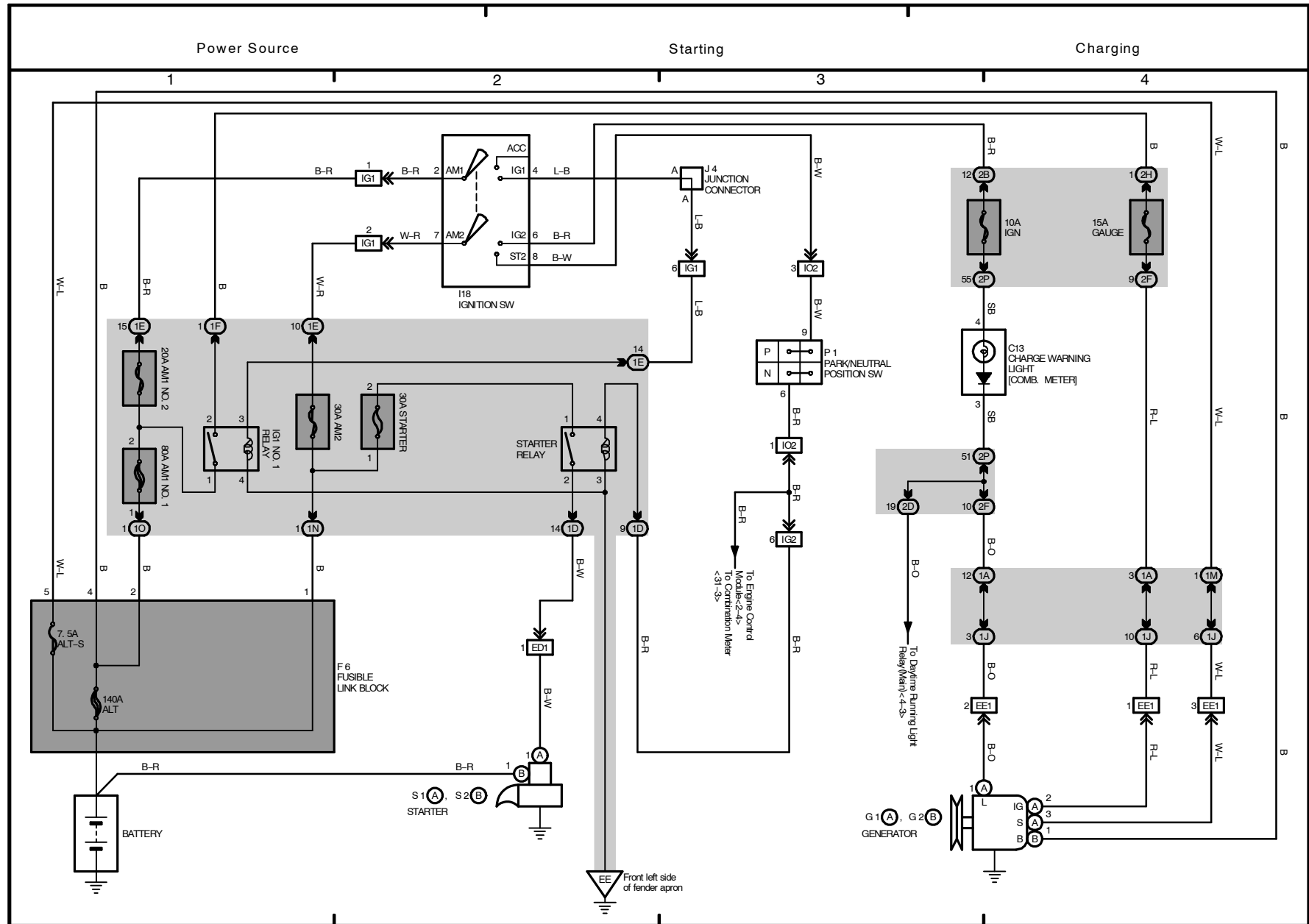
[K] : Indicates and located on ground point.

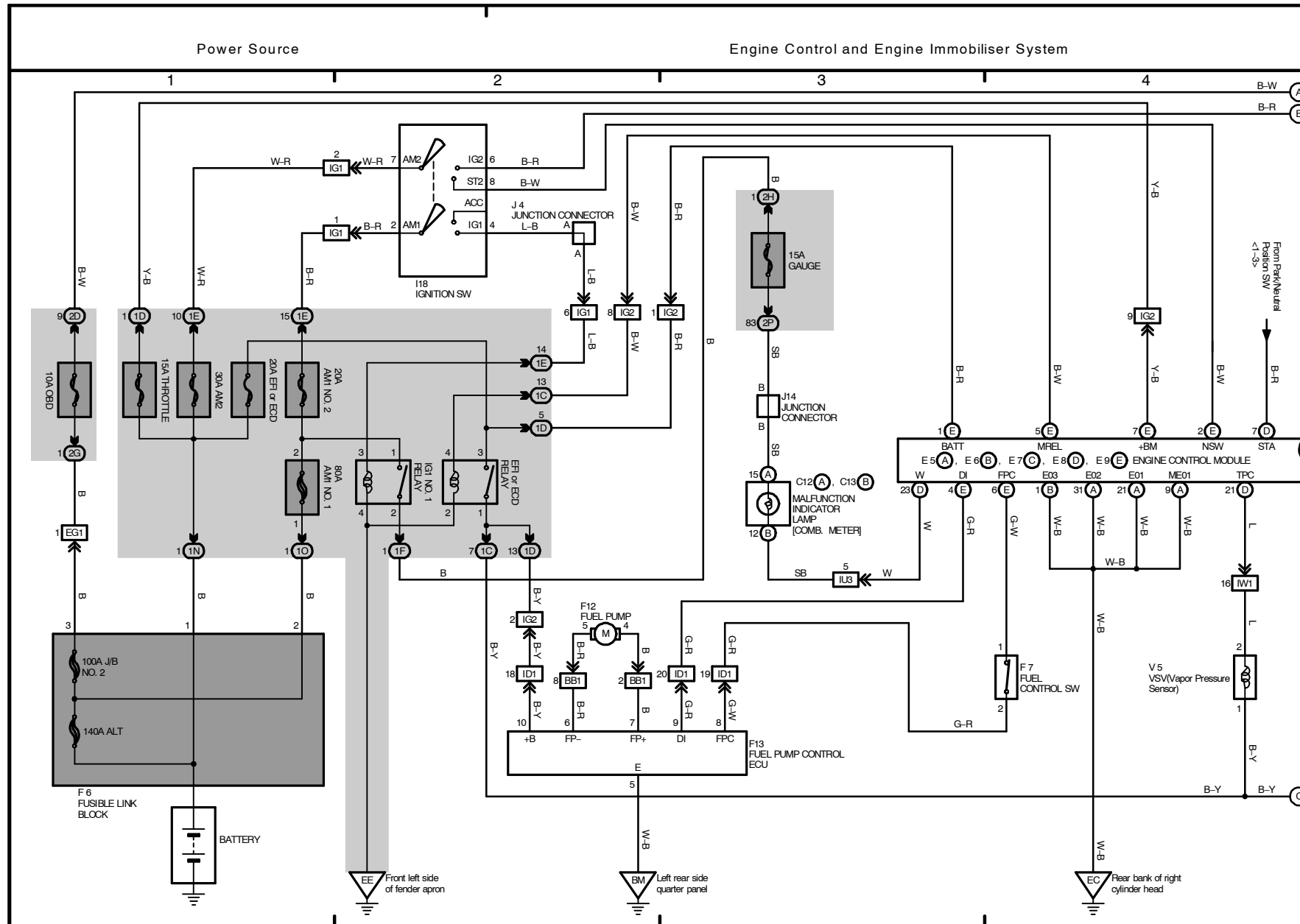
[L] : The same code occurring on the next page indicates that the wire harness is continuous.

SYSTEM INDEX

SYSTEMS	LOCATION	SYSTEMS	LOCATION
ABS	15-3	Navigation System	30-2
Auto Antenna	11-3	Power Outlet	23-2
Automatic Light Control	9-4	Power Rear Quarter Window	24-3
Back-up Light	8-2	Power Seat	20-3
Center Differential Lock	16-3	Power Source	1~33-1
Charging	1-4	Power Tilt and Power Telescopic	21-3
Cigarette Lighter	26-2	Power Window	19-3
Clock	23-4	Radio and Player (w/ Navigation System)	28-3
Combination Meter	31-3	Radio and Player (w/o Navigation System)	29-3
Condenser Fan	32-2	Rear Air Conditioning	33-3
Cruise Control	13-2	Rear Differential Lock	17-3
Door Lock Control	9-12	Rear Heater (w/o Rear Air Conditioning)	27-3
Electronically Controlled Transmission and A/T Indicator	13-3	Rear Window Defogger	24-2
Engine Control	2-3	Rear Wiper and Washer	9-2
Engine Immobiliser System	2-3	Remote Control Mirror	22-3
Front Air Conditioning	32-2	Seat Belt Warning	25-2
Front Fog Light	4-2	Seat Heater	26-3
Front Wiper and Washer	10-2	Shift Lock	11-2
Headlight	4-3	SRS	12-3
Horn	10-4	Starting	1-2
Ignition	3-3	Stop Light	8-3
Illumination	7-3	Taillight	6-3
Interior Light	9-6	Theft Deterrent	18-3
Key Reminder	25-2	Trailer Towing	5-2
Light Auto Turn Off	22-2	Turn Signal and Hazard Warning Light	5-3
Mirror Heater	24-2	VSC	14-2
Moon Roof	25-4	Wireless Door Lock Control	9-19

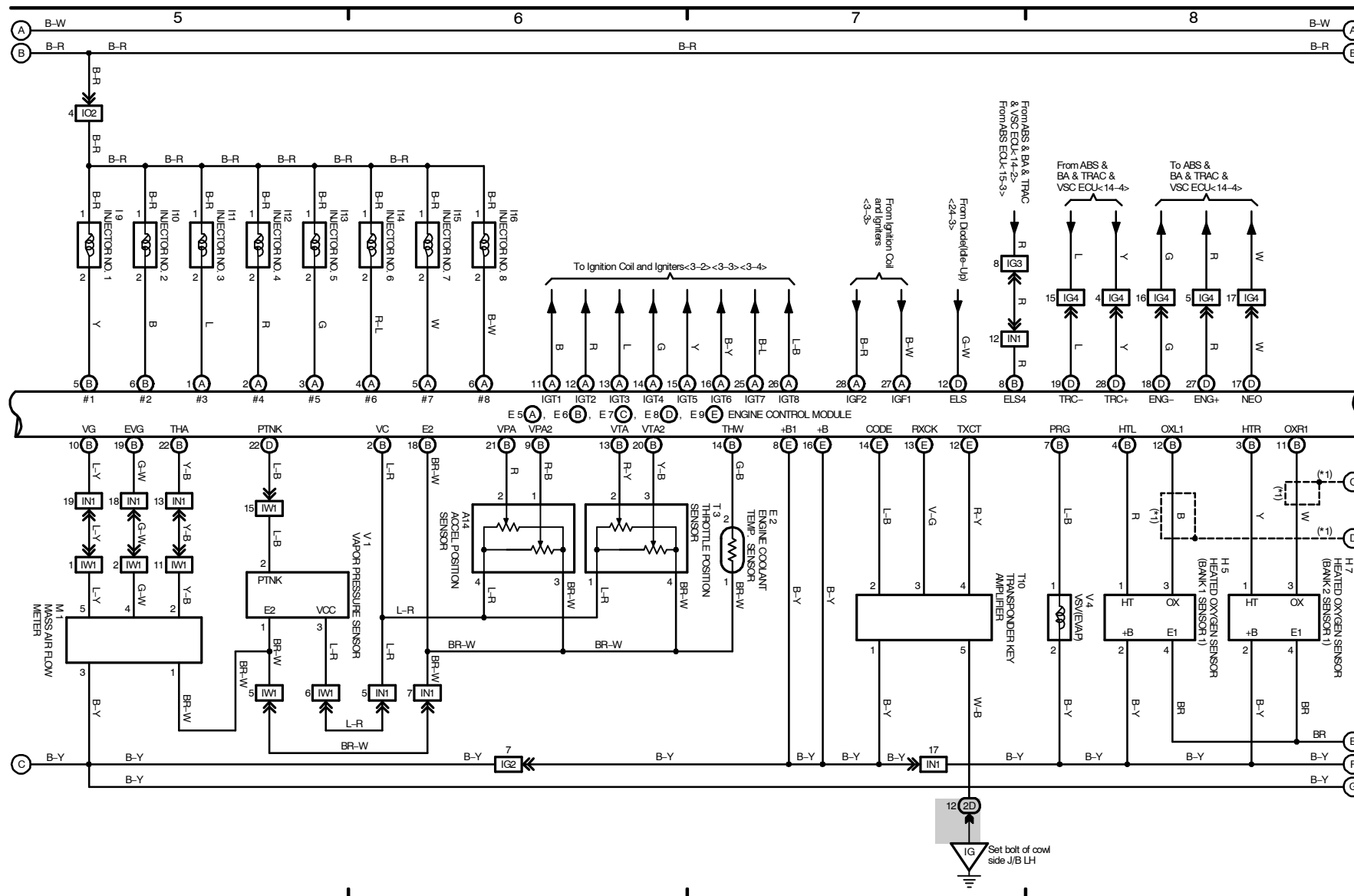
2002 LAND CRUISER (EWD469U)





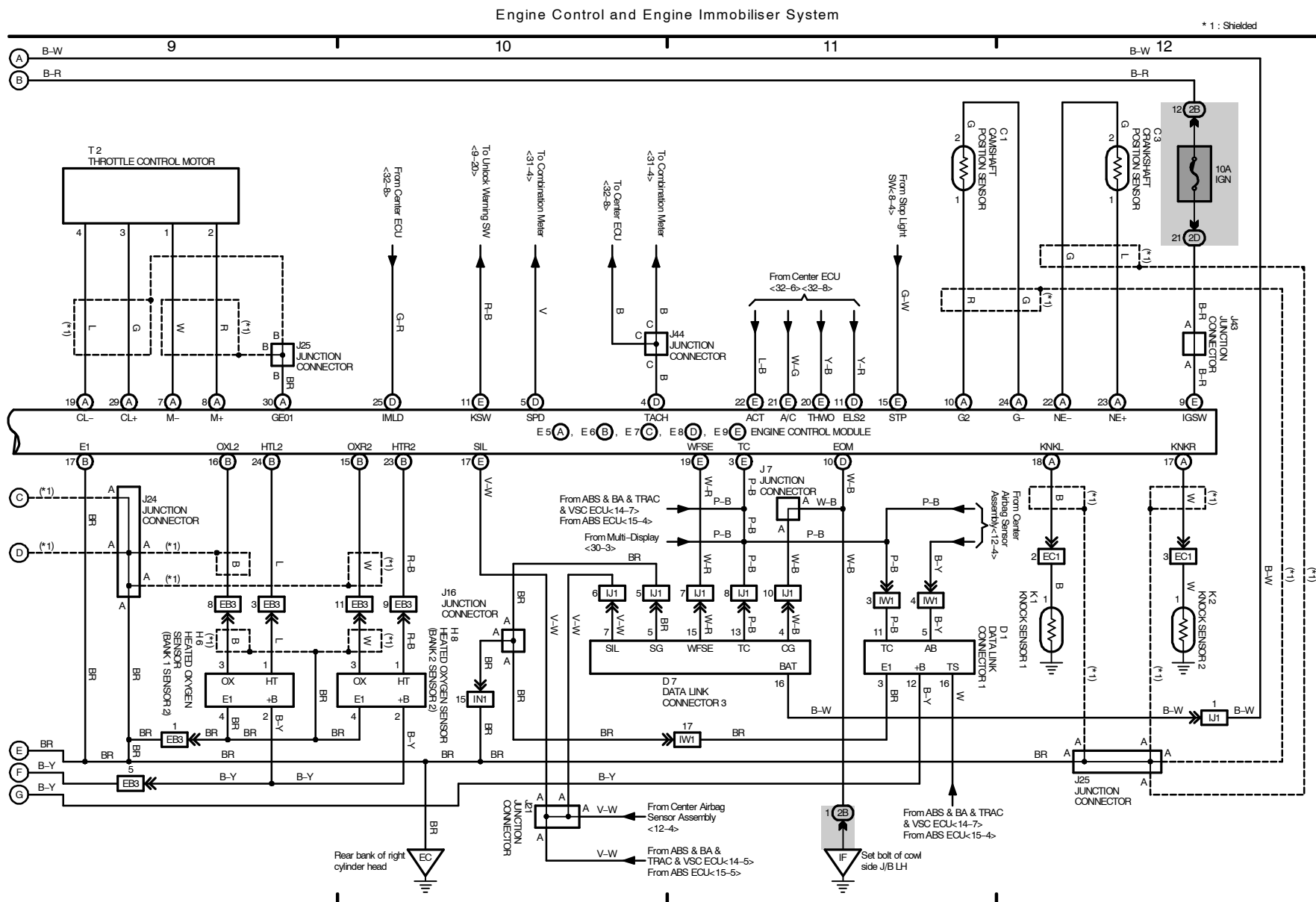
Engine Control and Engine Immobiliser System

* 1 : Shielded



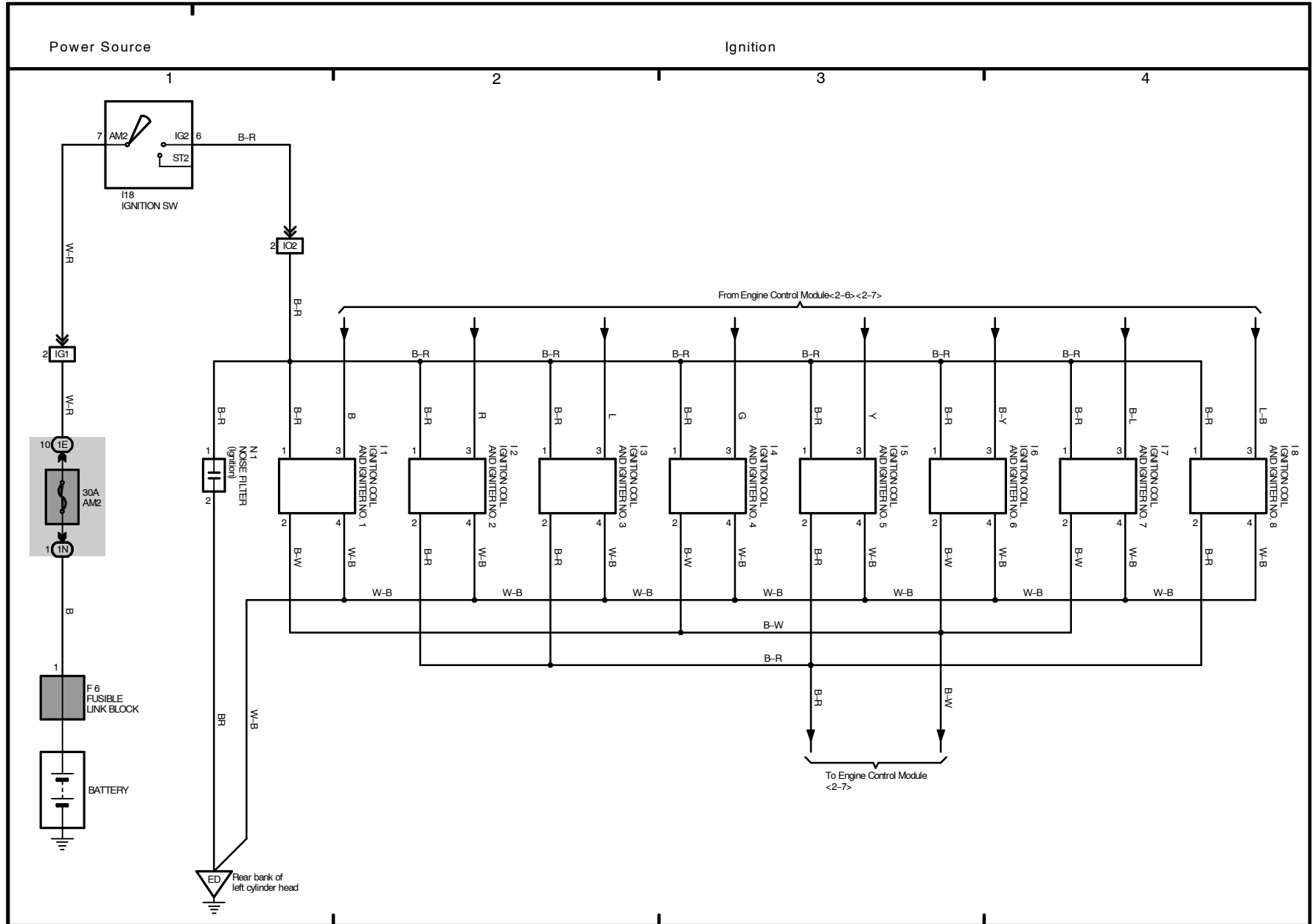
M OVERALL ELECTRICAL WIRING DIAGRAM

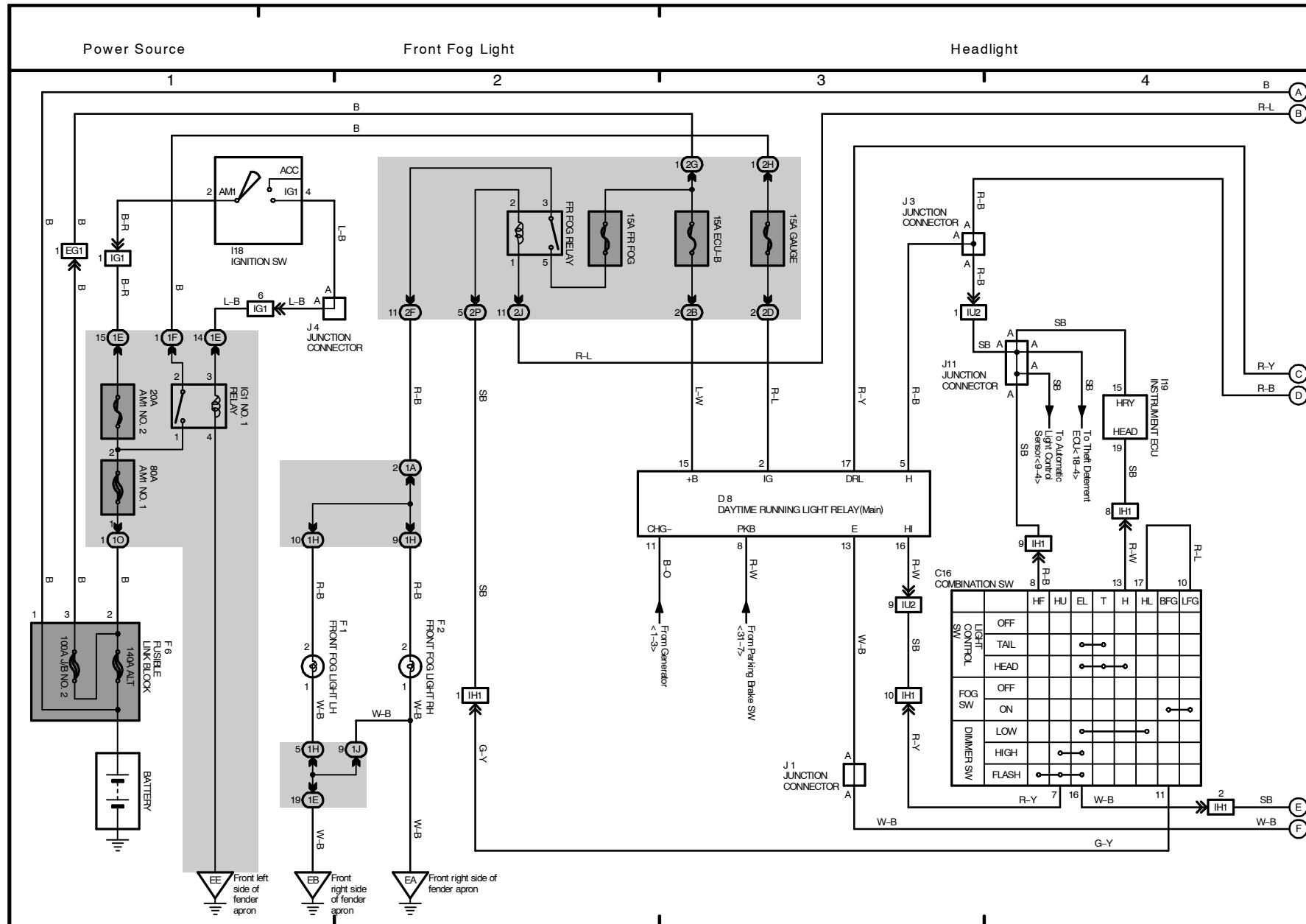
2 LAND CRUISER (Cont' d)



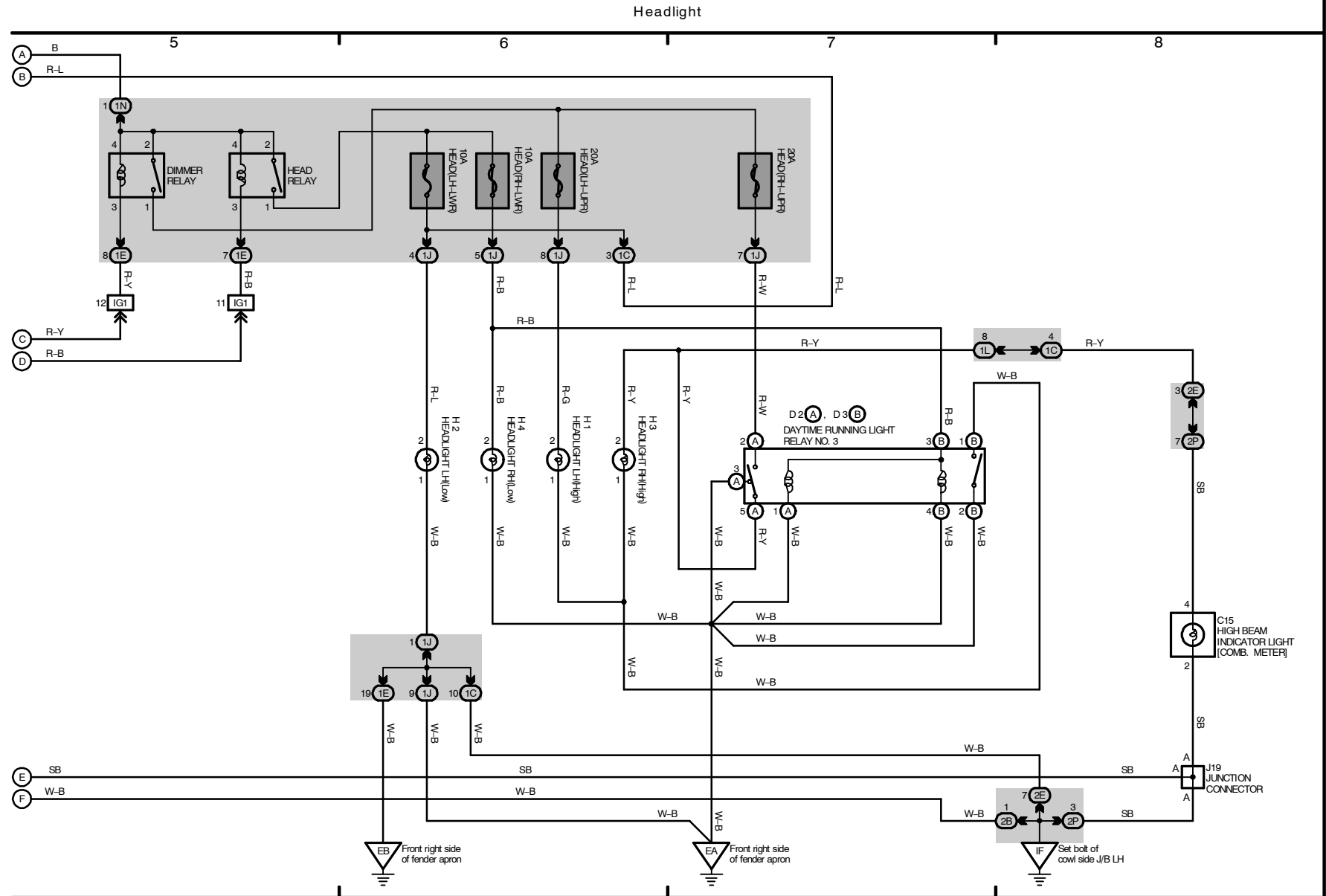
3 LAND CRUISER

2002 LAND CRUISER (EWD469U)





4 LAND CRUISER (Cont' d)



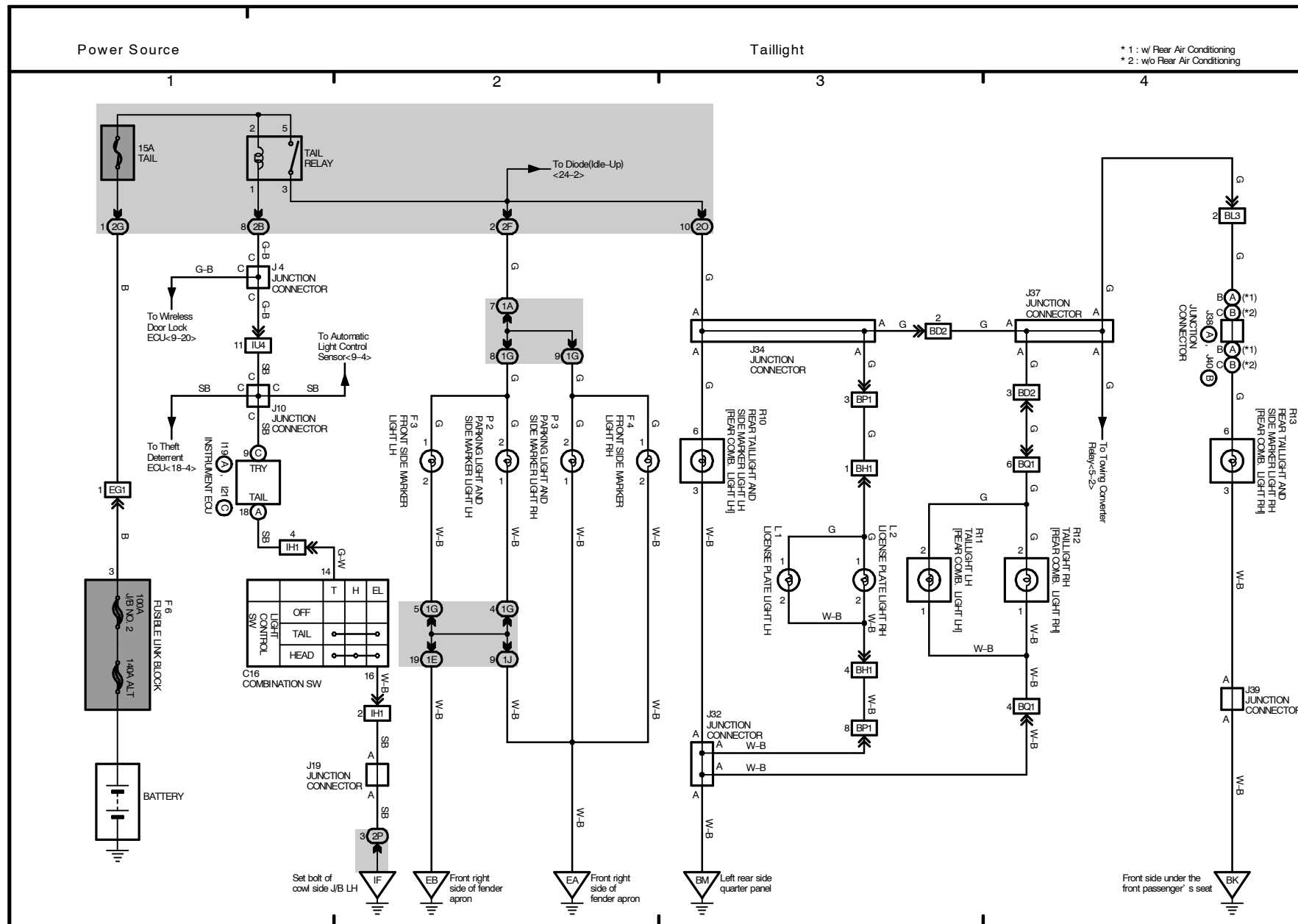
2002 LAND CRUISER (EWD469U)

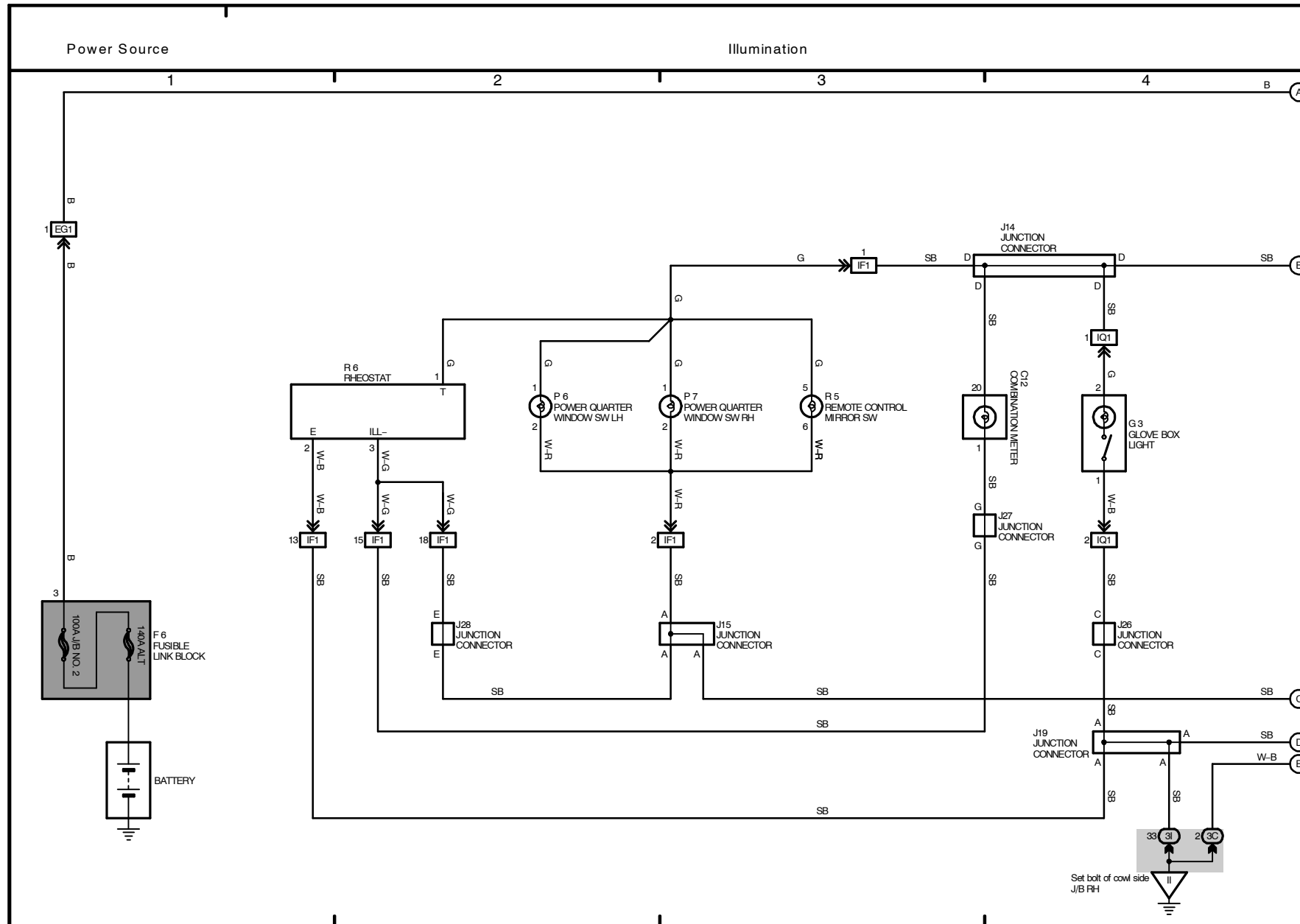
2002 LAND CRUISER (EWD469U)



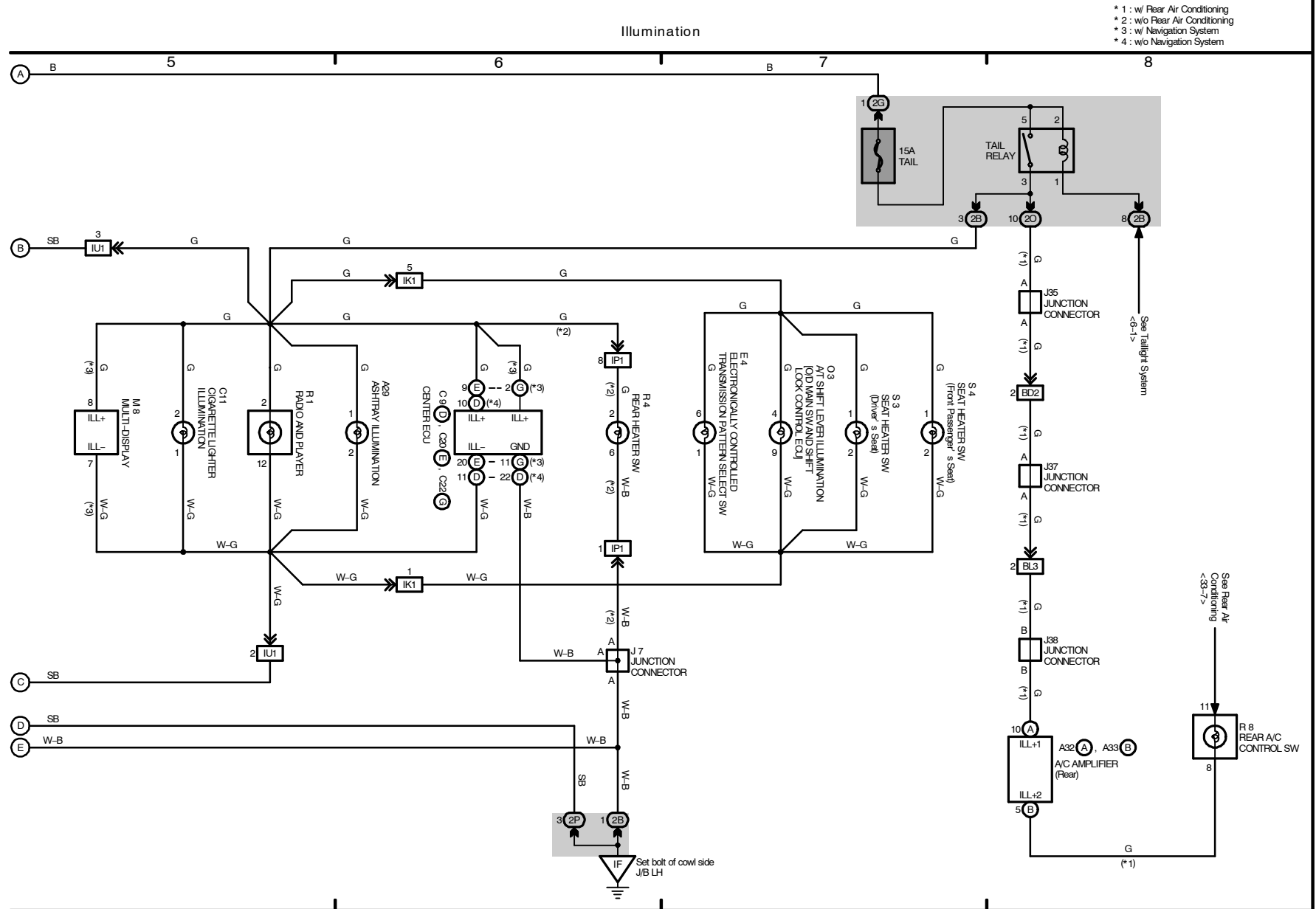
6 LAND CRUISER

2002 LAND CRUISER (EWD469U)

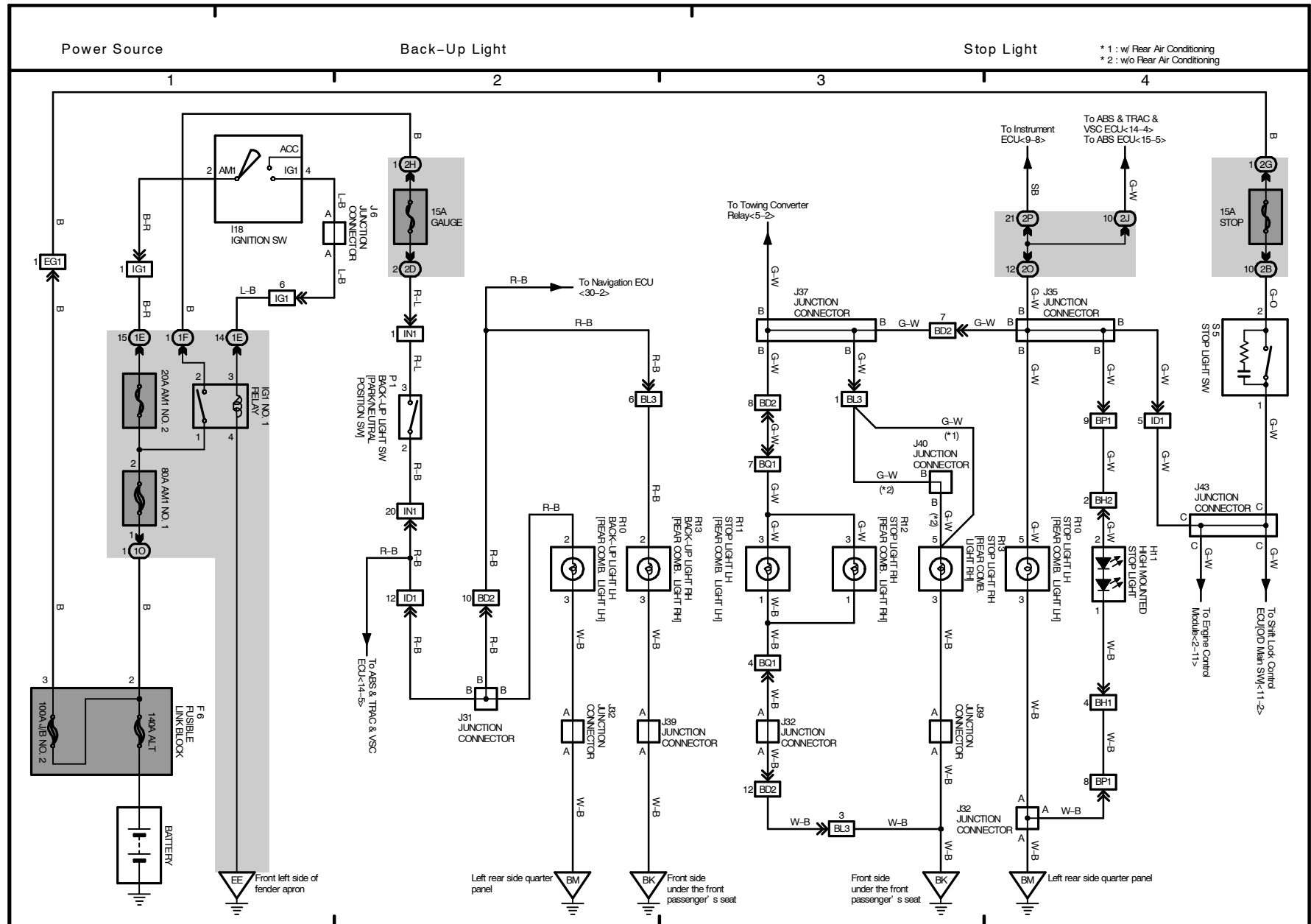




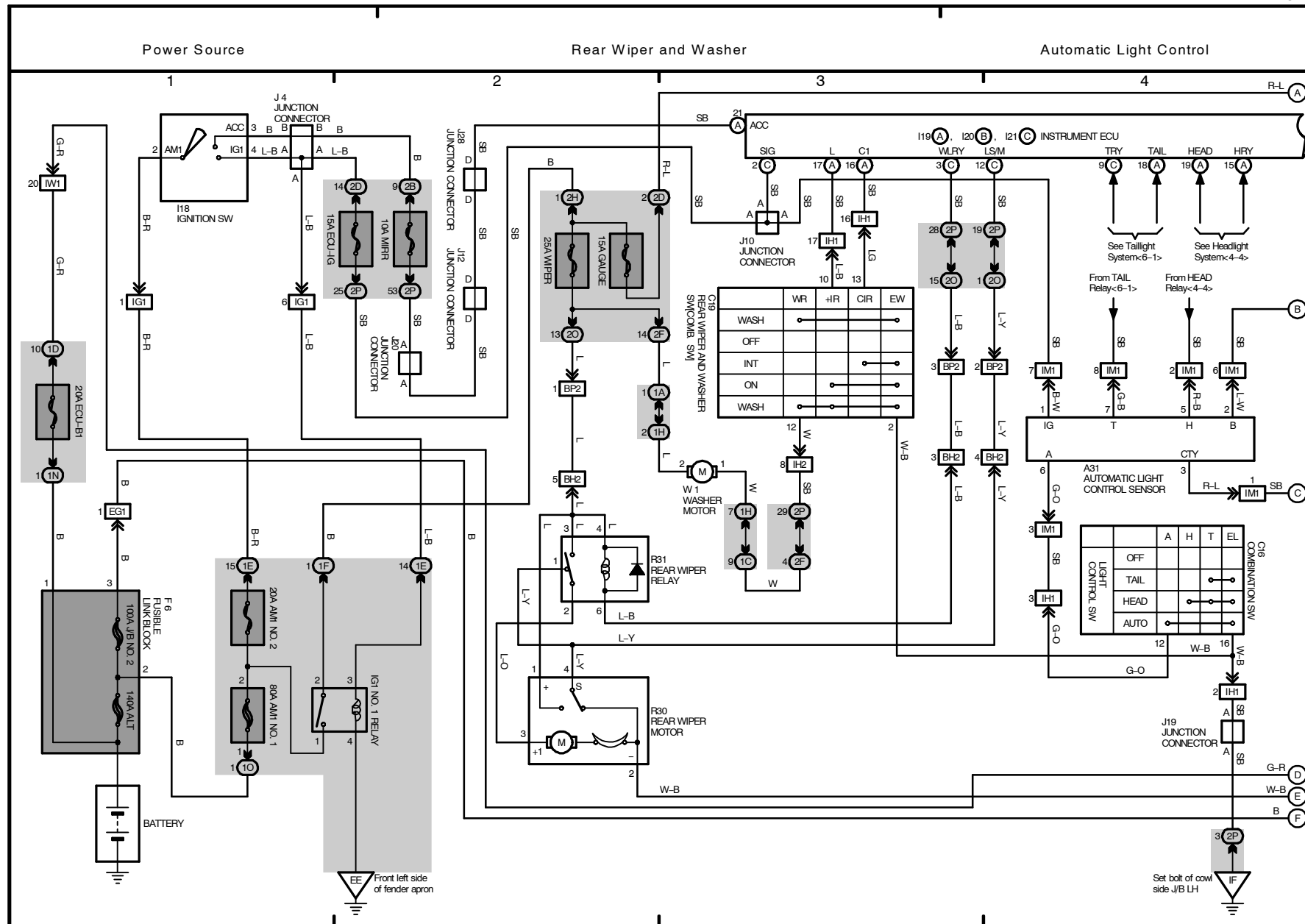
7 LAND CRUISER (Cont' d)

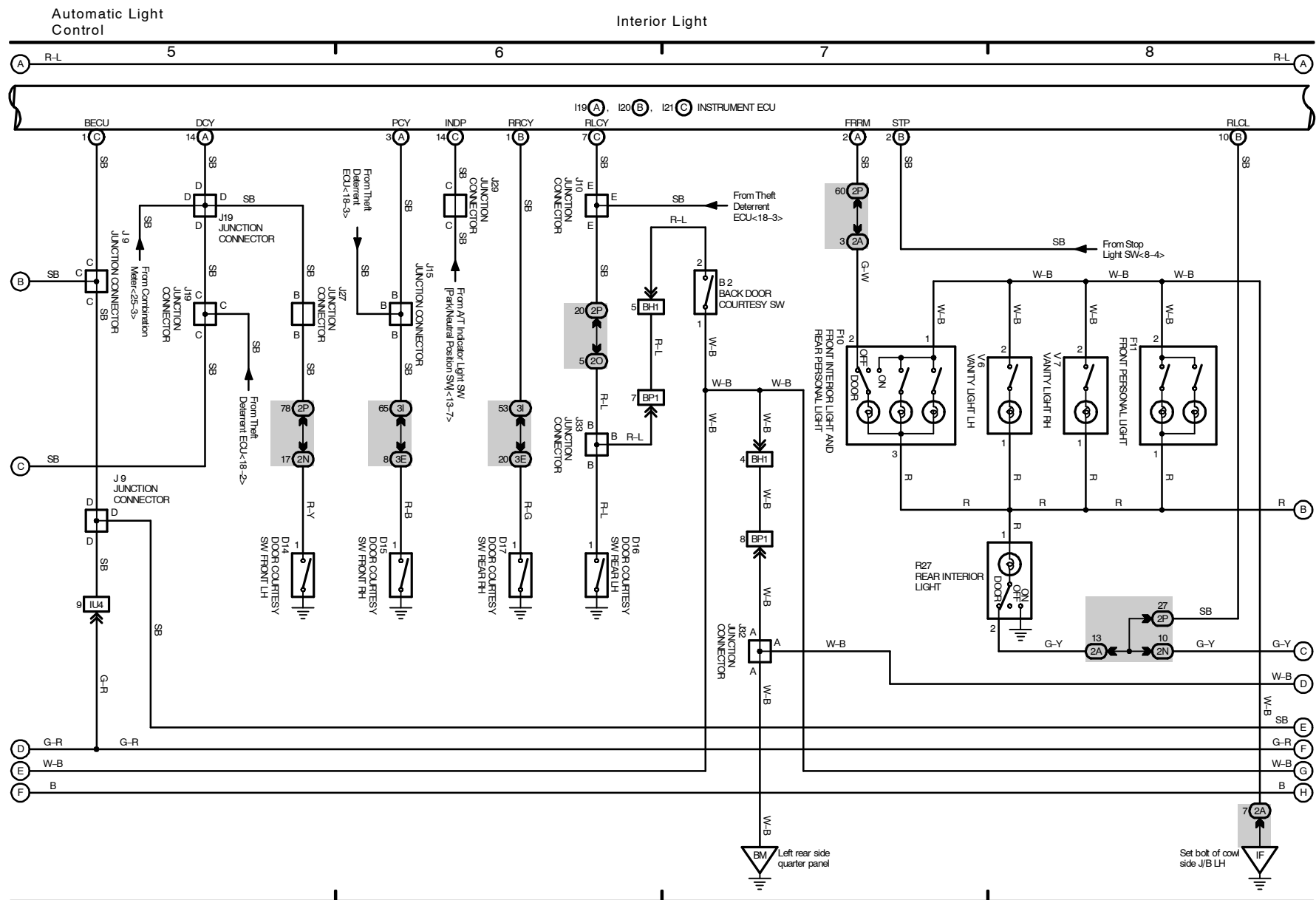


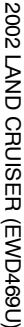
OVERALL ELECTRICAL WIRING DIAGRAM



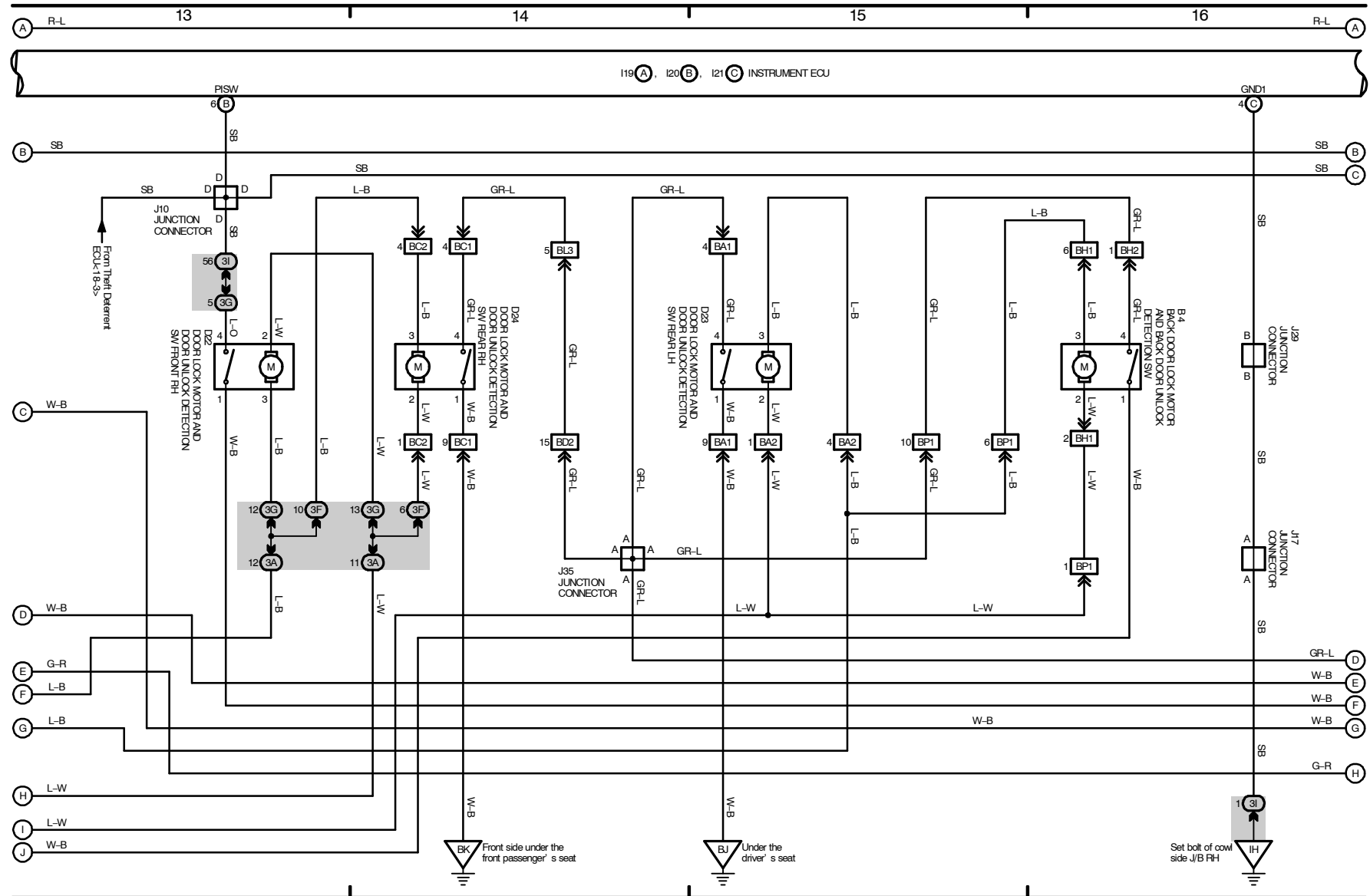
2002 LAND CRUISER (EWD469U)



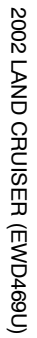




Door Lock Control

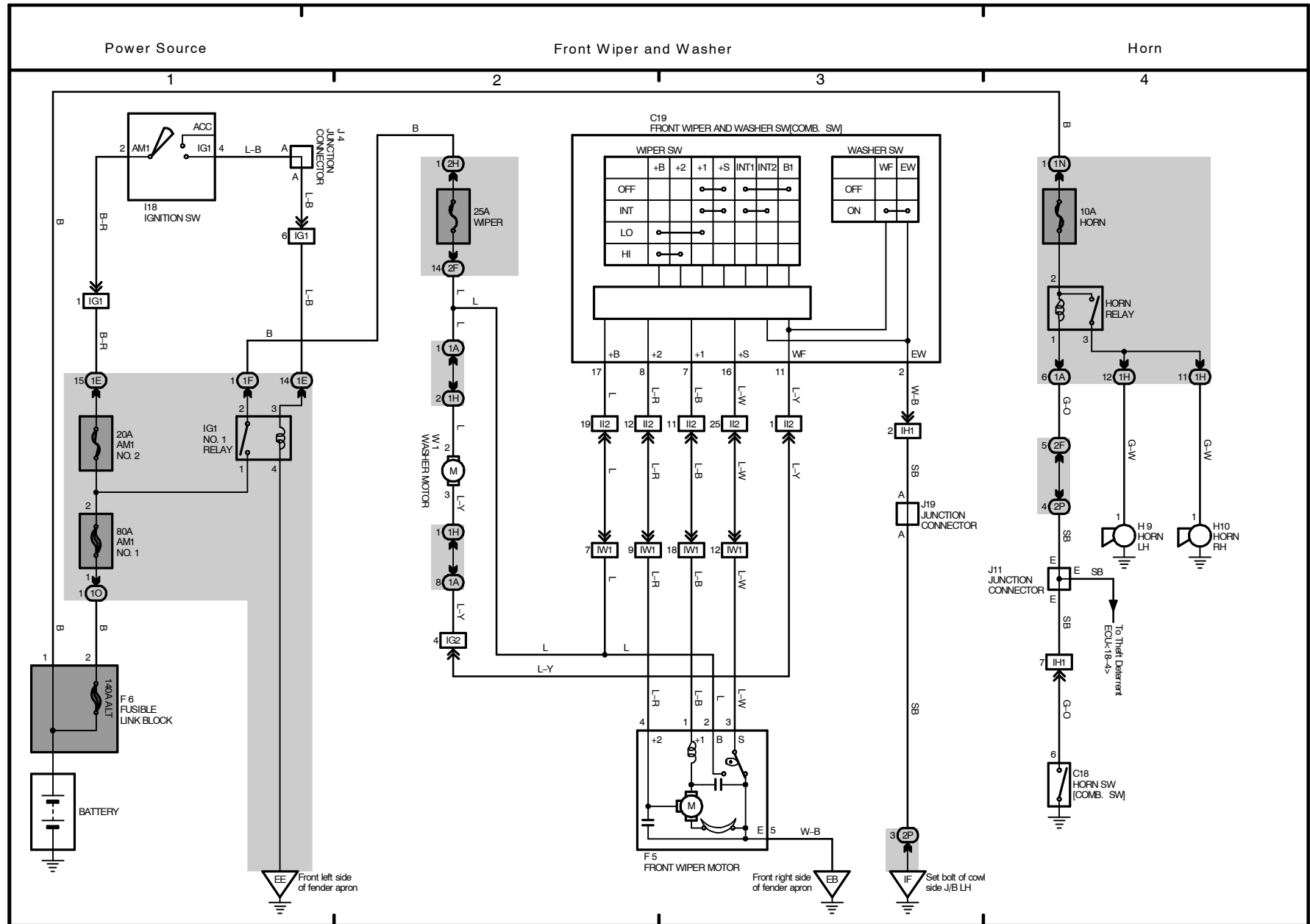


M OVERALL ELECTRICAL WIRING DIAGRAM



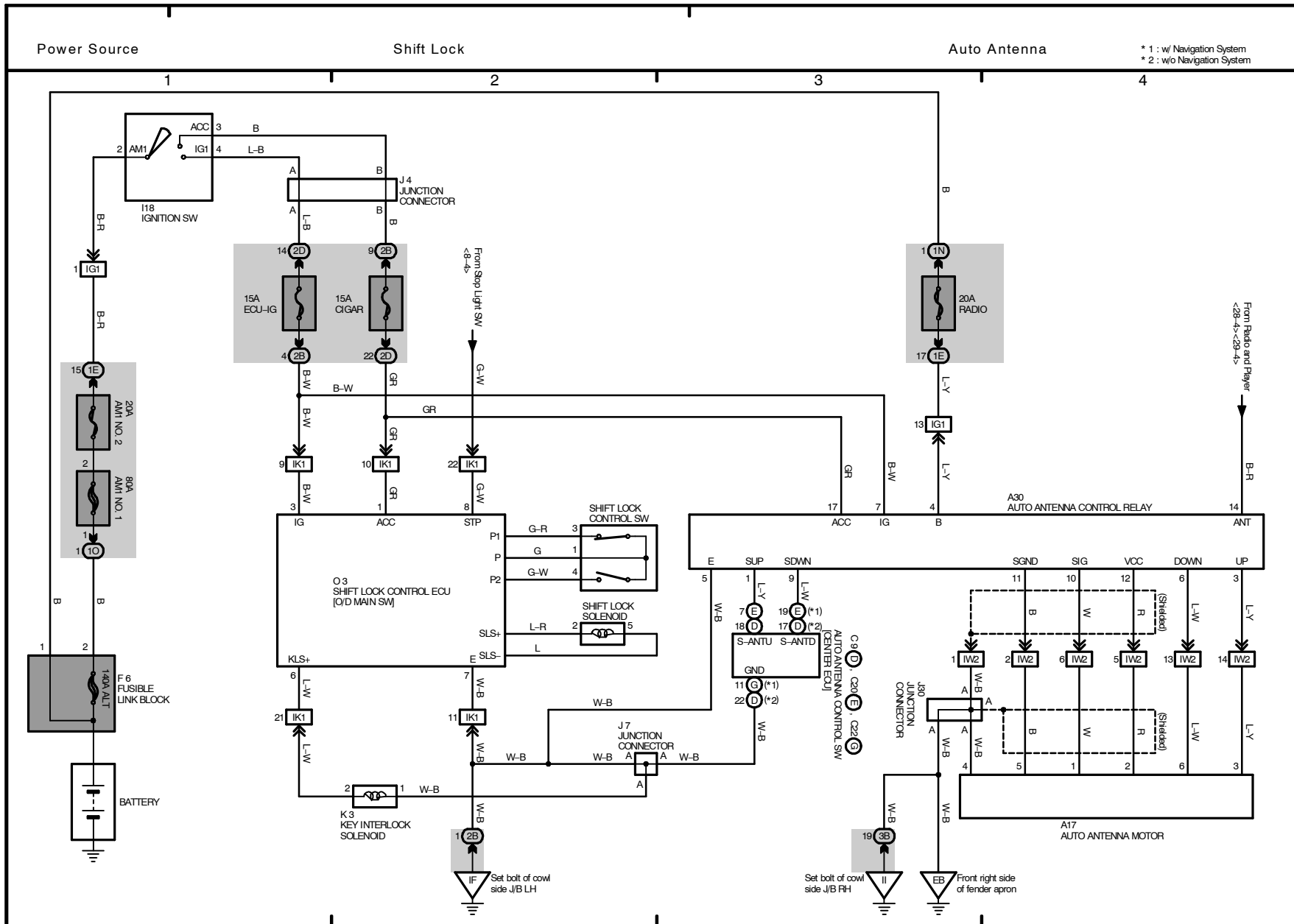
10 LAND CRUISER

2002 LAND CRUISER (EWD469U)



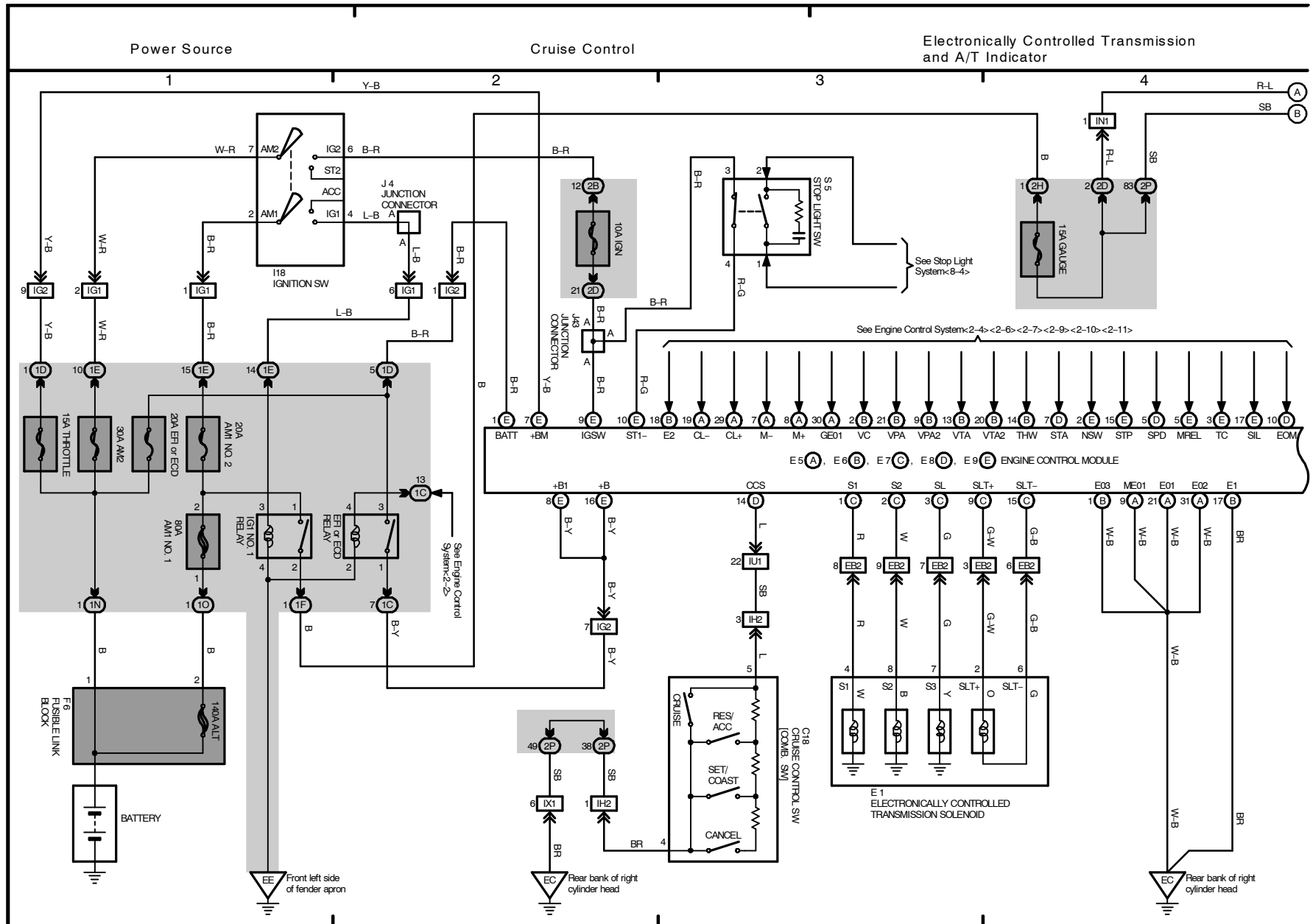
M OVERALL ELECTRICAL WIRING DIAGRAM

11 LAND CRUISER

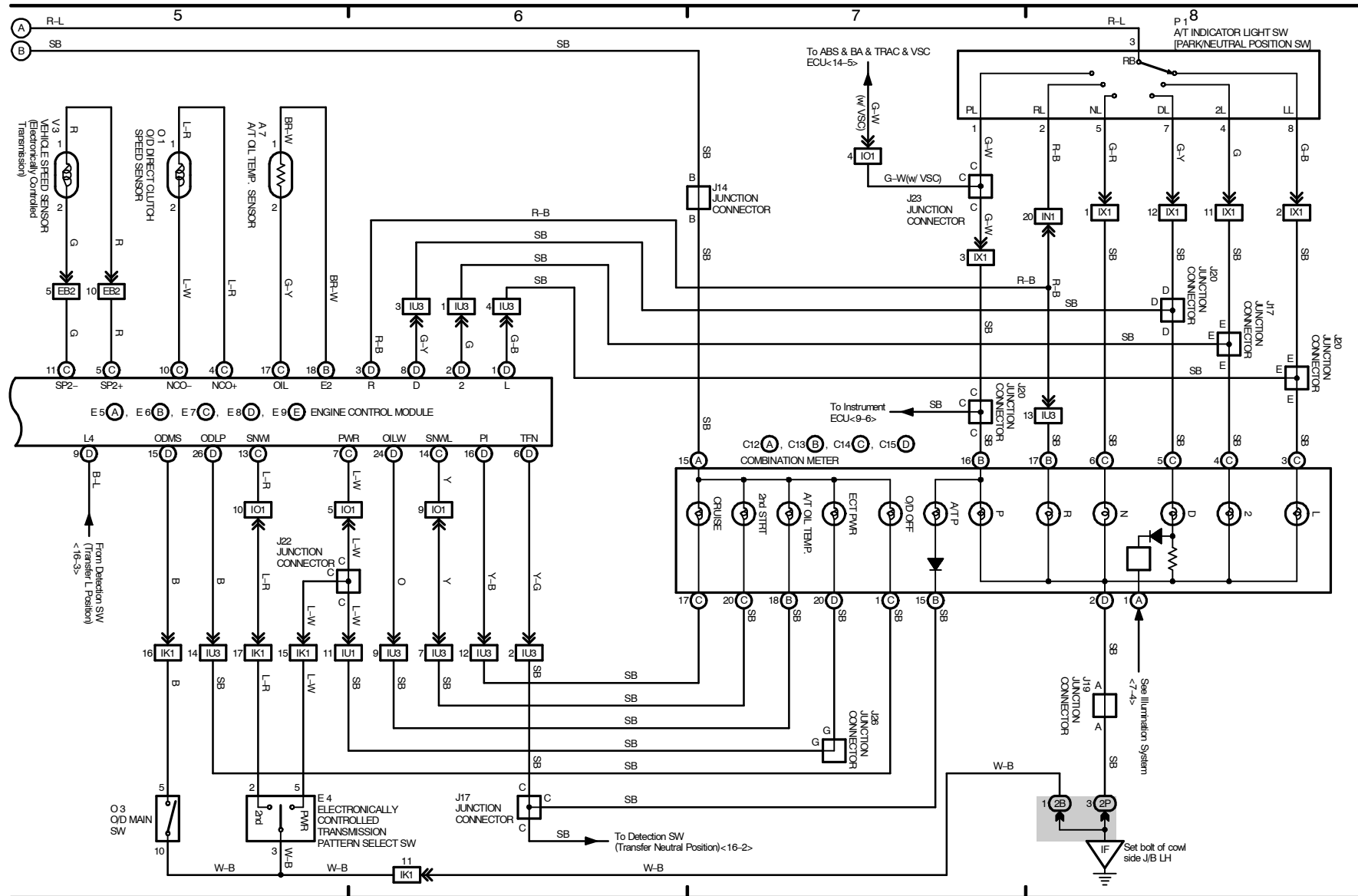


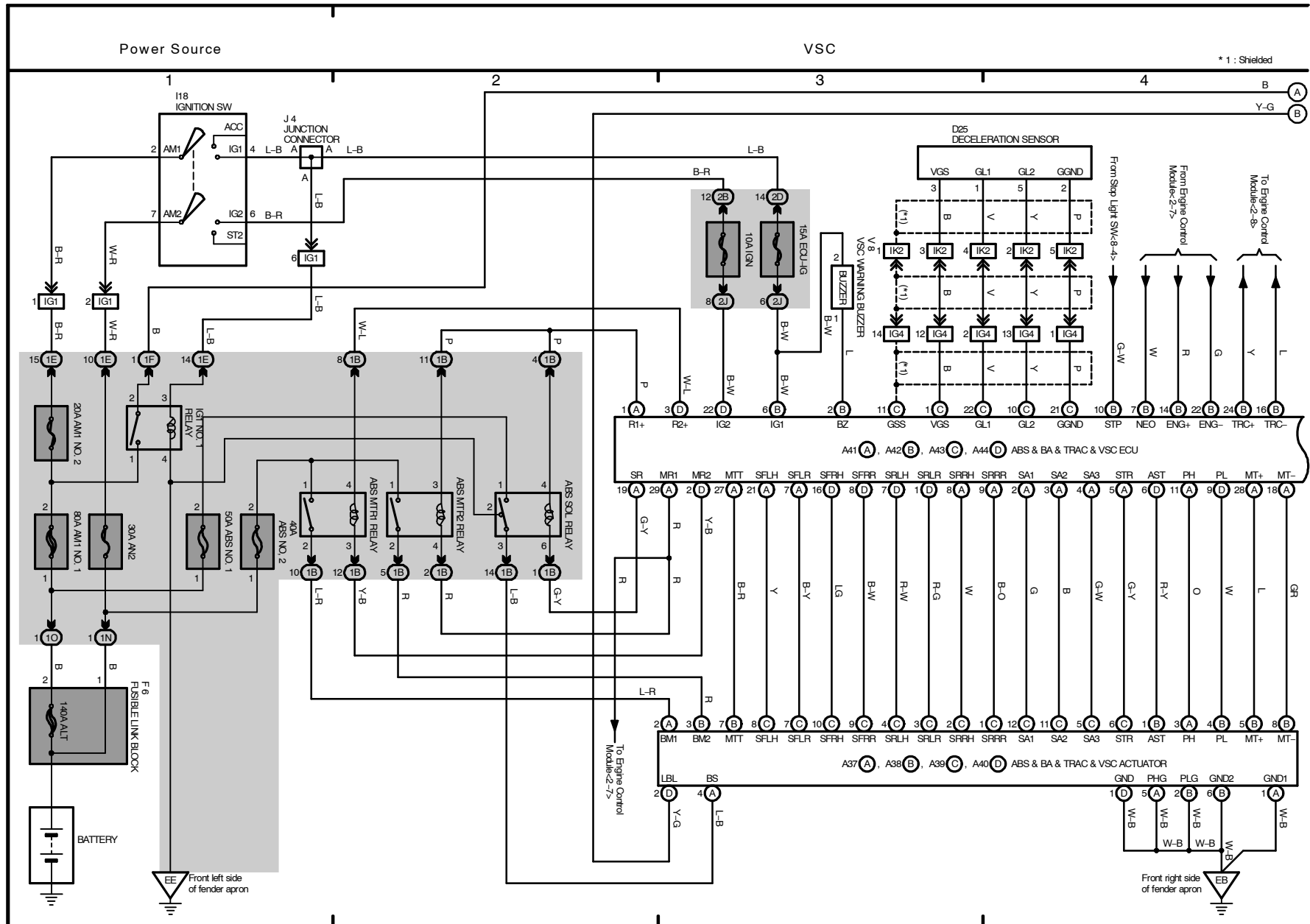
2002 LAND CRUISER (EWD469J)

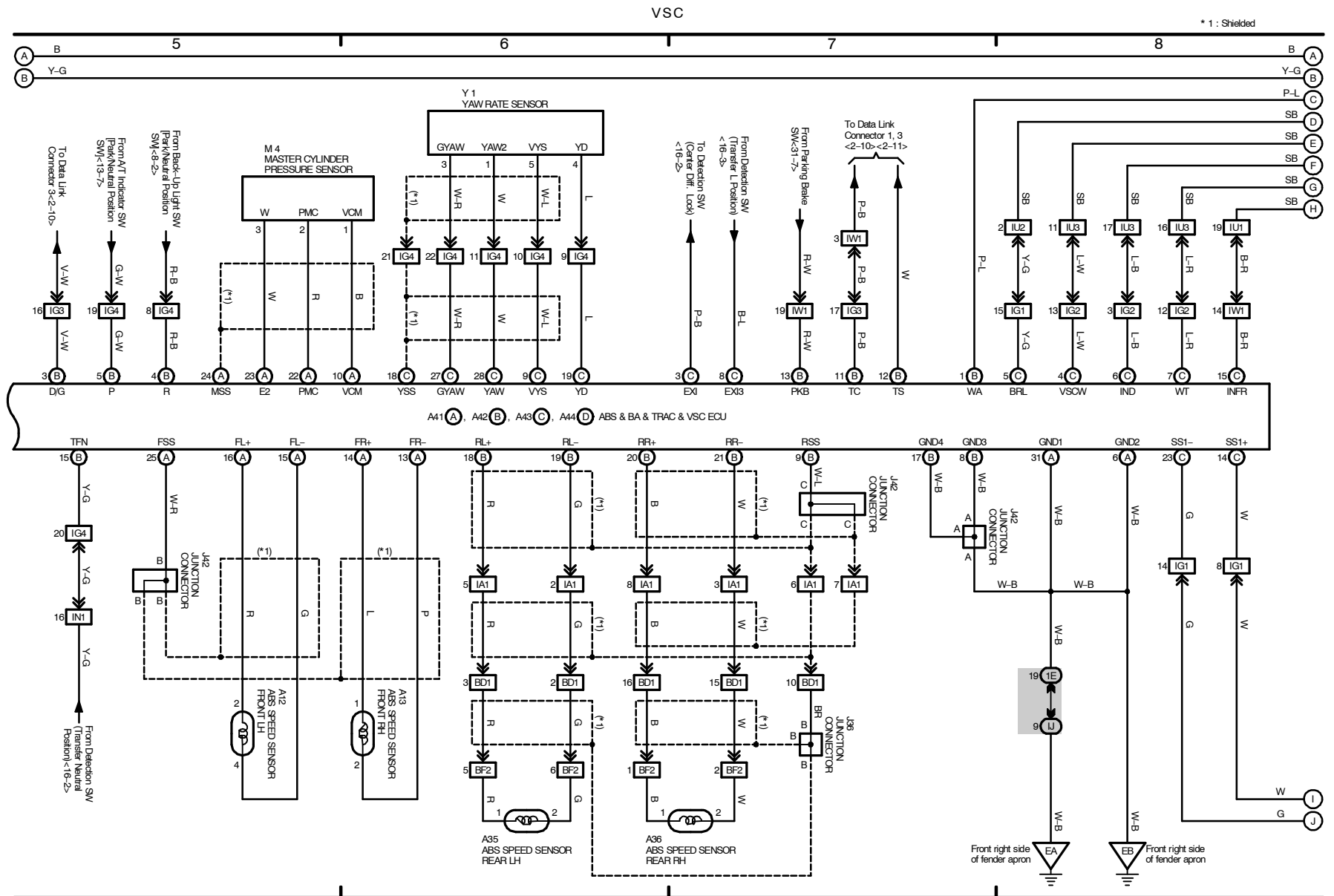




Electronically Controlled Transmission and A/T Indicator

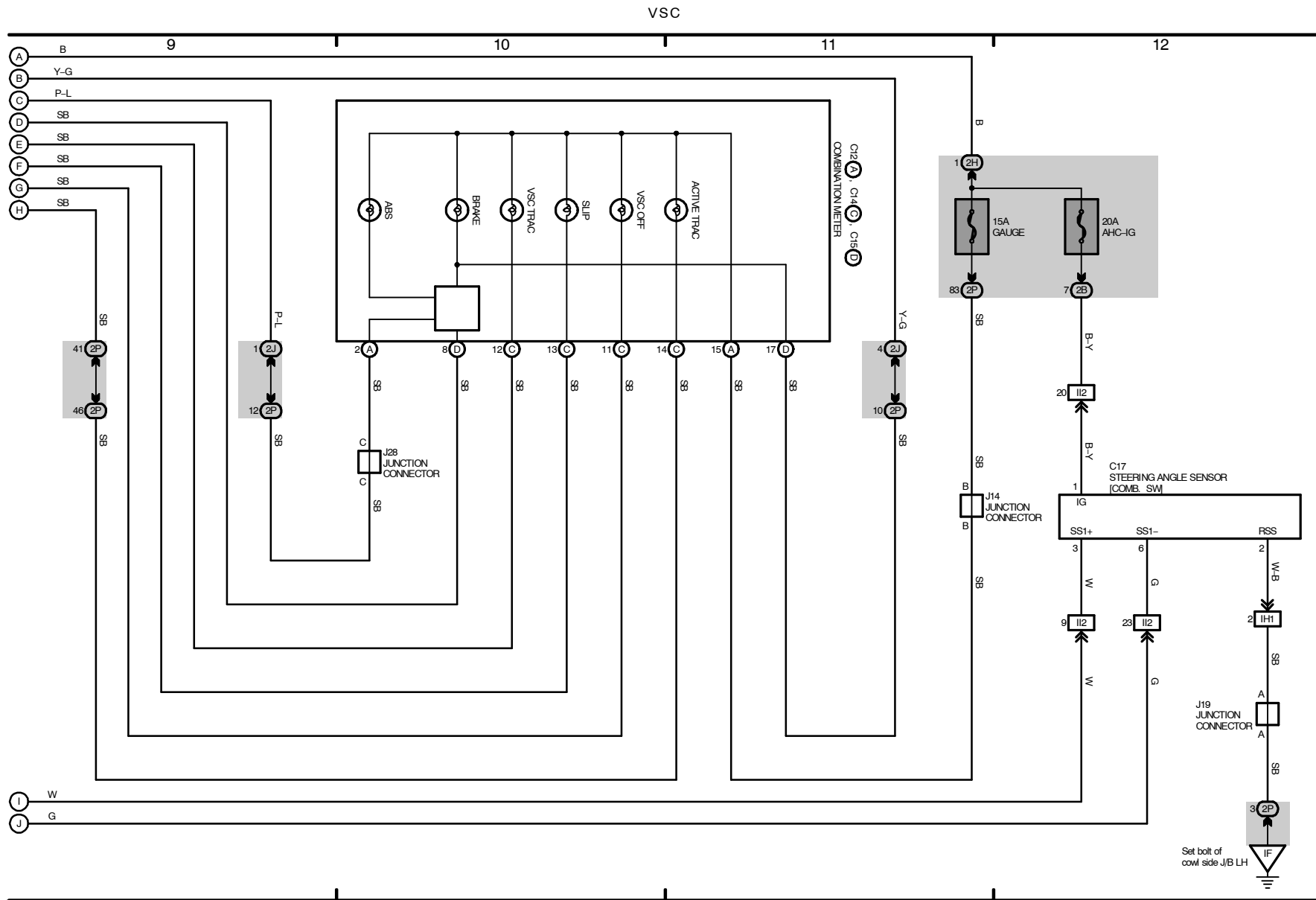






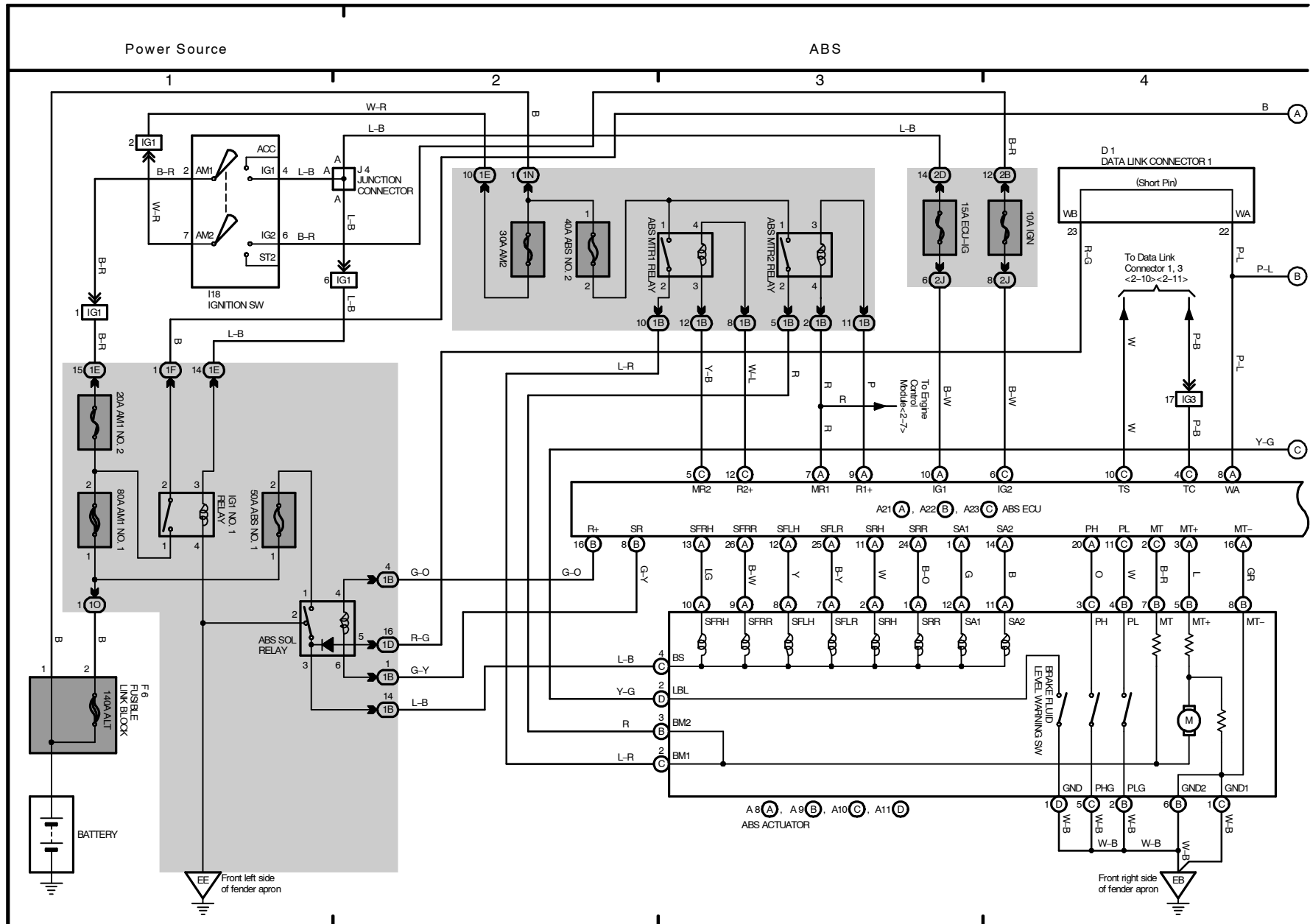
OVERALL ELECTRICAL WIRING DIAGRAM

14 LAND CRUISER (Cont' d)

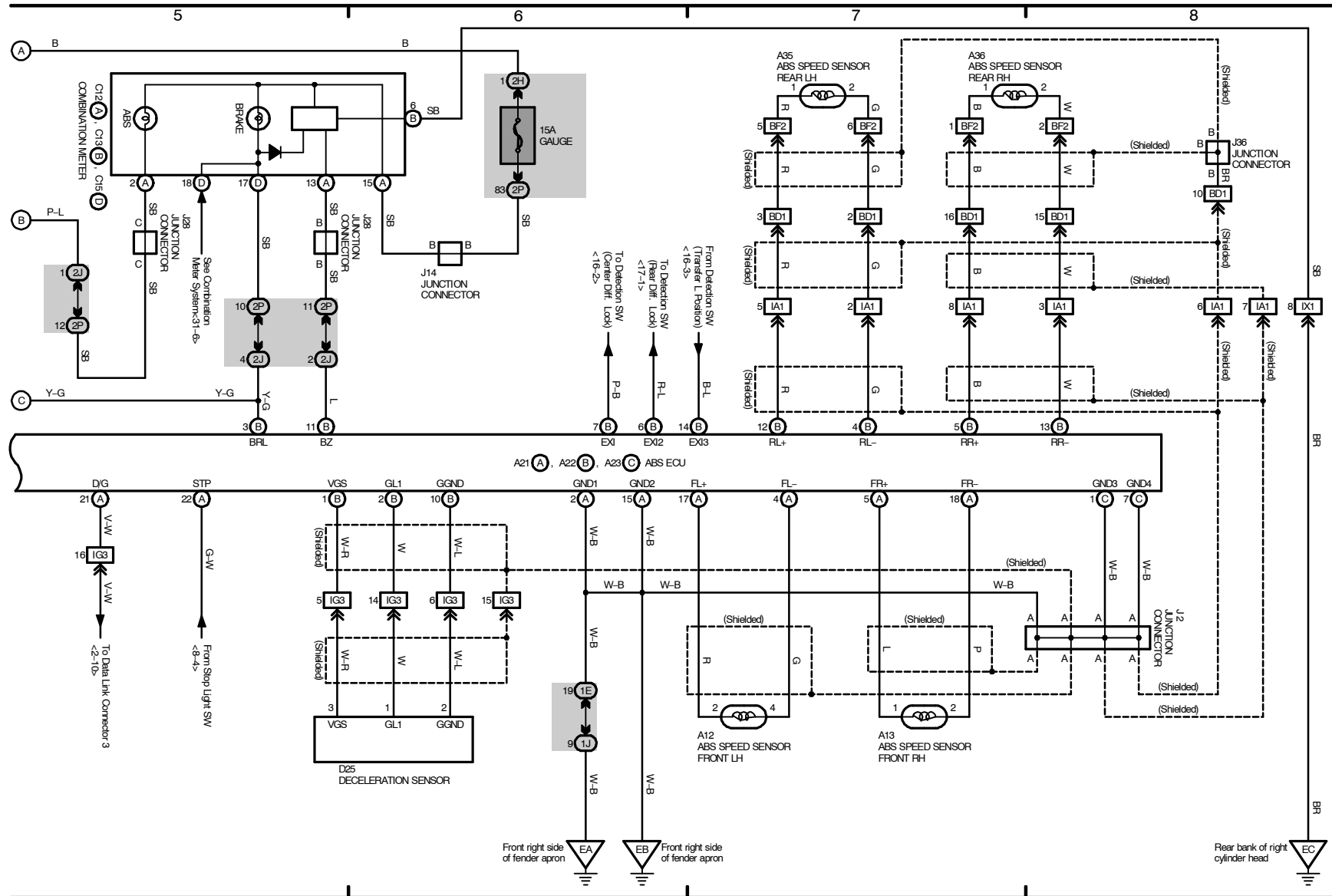


2002 LAND CRUISER (EWD469J)

2002 LAND CRUISER (EWD469U)

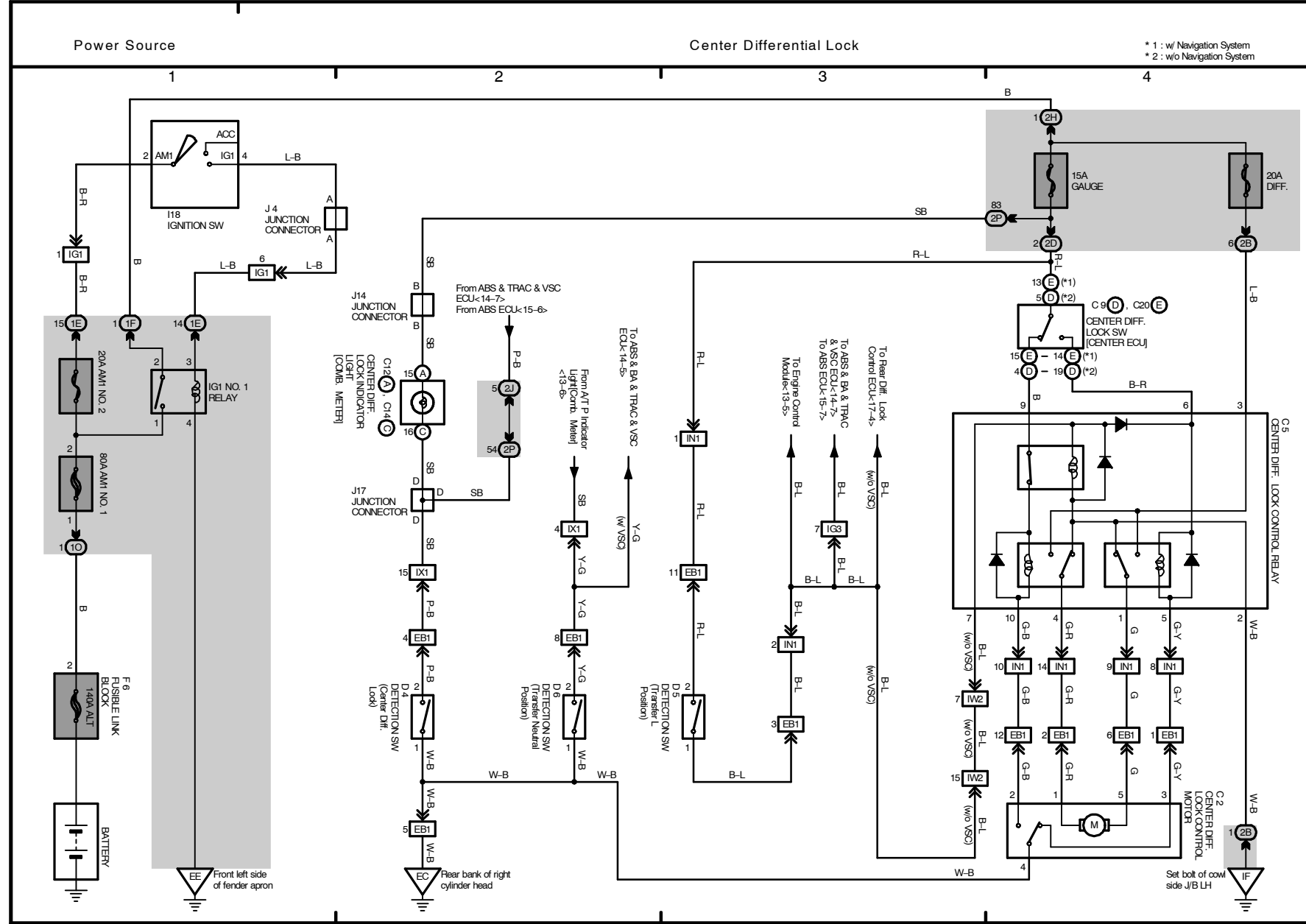


ABS



M OVERALL ELECTRICAL WIRING DIAGRAM

16 LAND CRUISER



2002 LAND CRUISER (EWD469U)

2002 LAND CRUISER (EWD469J)



The diagram illustrates the electrical system for the Theft Deterrent, organized into four main sections: Power Source, Theft Deterrent, and two unlabeled sections (1 and 2).

Power Source: Includes the BATTERY, FUSE BLOCK (F6) with 100A and 140A fuses, and the ENGINE HOOD COURTESY SW (E3).

Theft Deterrent: Features the THEFT DETERRANT ECU (T5, T6) and the THEFT DETERRANT HORN (T1). It also includes the J4 JUNCTION CONNECTOR, J9 JUNCTION CONNECTOR, J10 JUNCTION CONNECTOR, and J19 JUNCTION CONNECTOR.

Section 1: Contains the I18 IGNITION SW, 20A AM1 NO. 2, 80A AM1 NO. 1, and the 100A and 140A fuses.

Section 2: Contains the 15A ECU-IG, 15A ECU-B, 20A ECU-B1, 15A HAZ-TRN, and the 100A and 140A fuses.

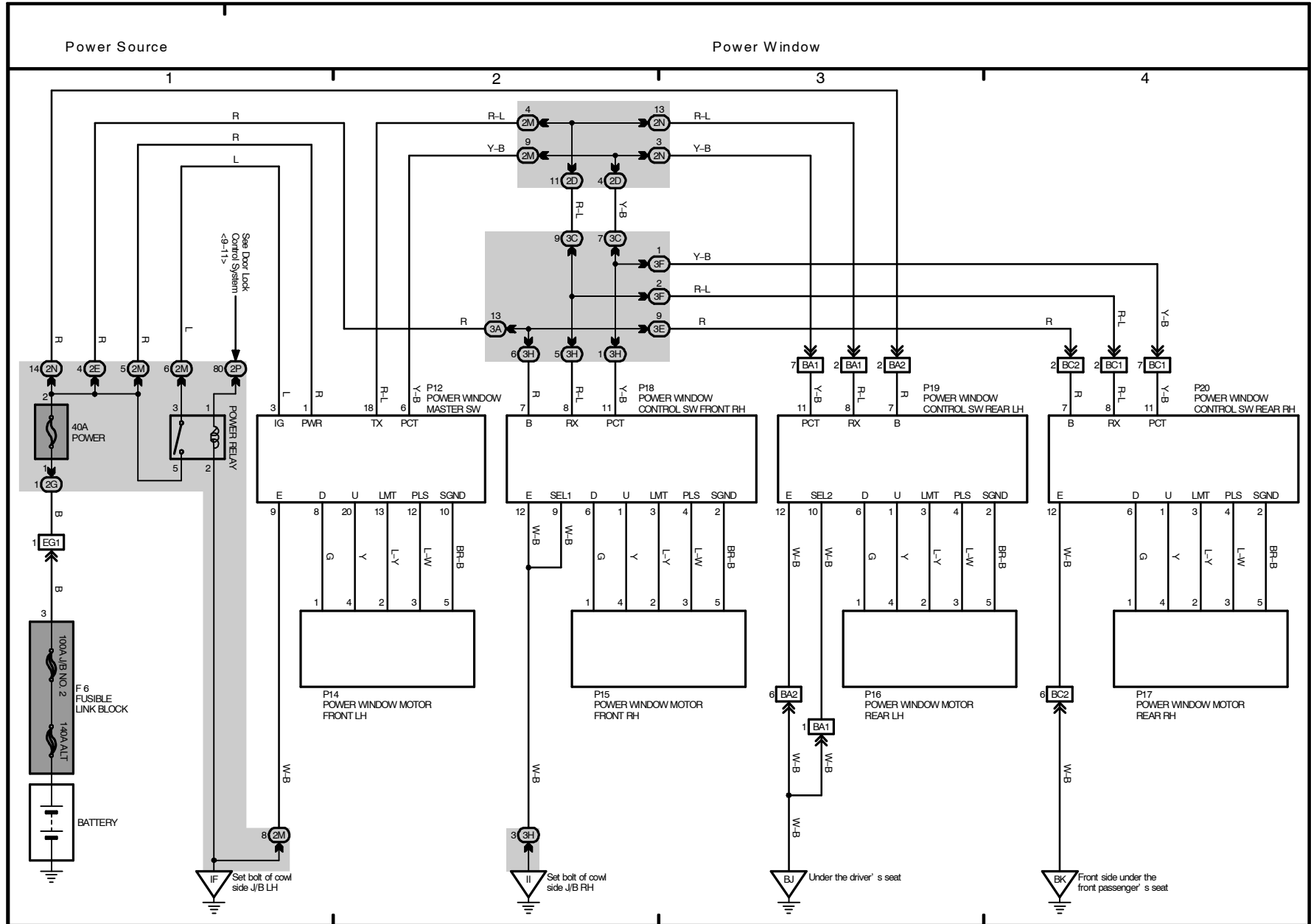
Section 3: Contains the 15A HAZ-TRN, 20A ECU-B1, 15A HAZ-TRN, and the 100A and 140A fuses.

Section 4: Contains the 15A HAZ-TRN, 20A ECU-B1, 15A HAZ-TRN, and the 100A and 140A fuses.

Wiring Details: The diagram shows various wires (e.g., B, L-B, G-R, G-W, G-Y, G-B, G-O, G-A, G-L, G-LW, G-LY, G-LV, G-LW, G-LY, G-LV, G-LW, G-LY, G-LV) connecting the components. It also shows the location of the front right side of the fender apron (EA) and the set bolt of the cowl side J/B LH (IF).

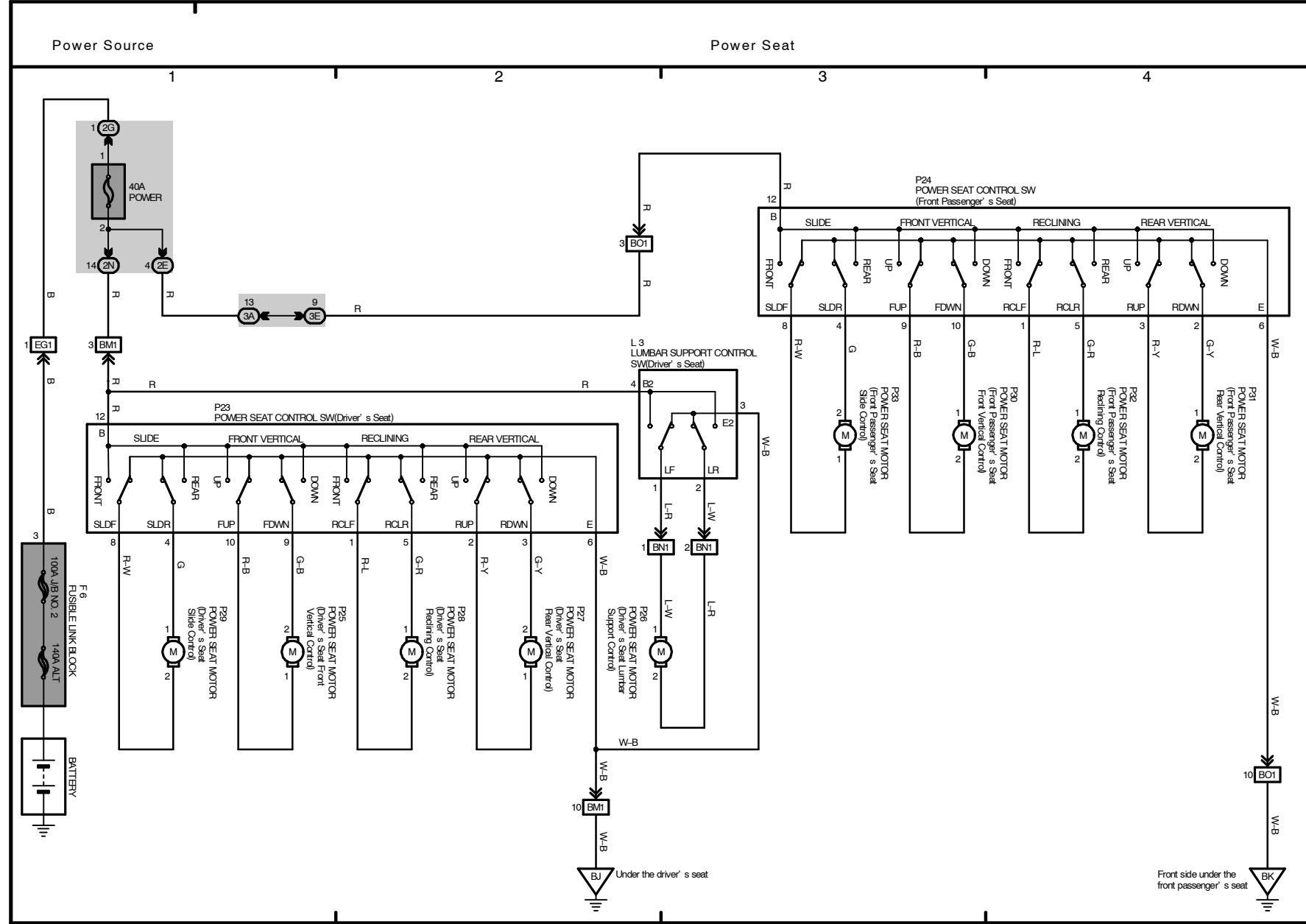
19 LAND CRUISER

2002 LAND CRUISER (EWD469U)



M OVERALL ELECTRICAL WIRING DIAGRAM

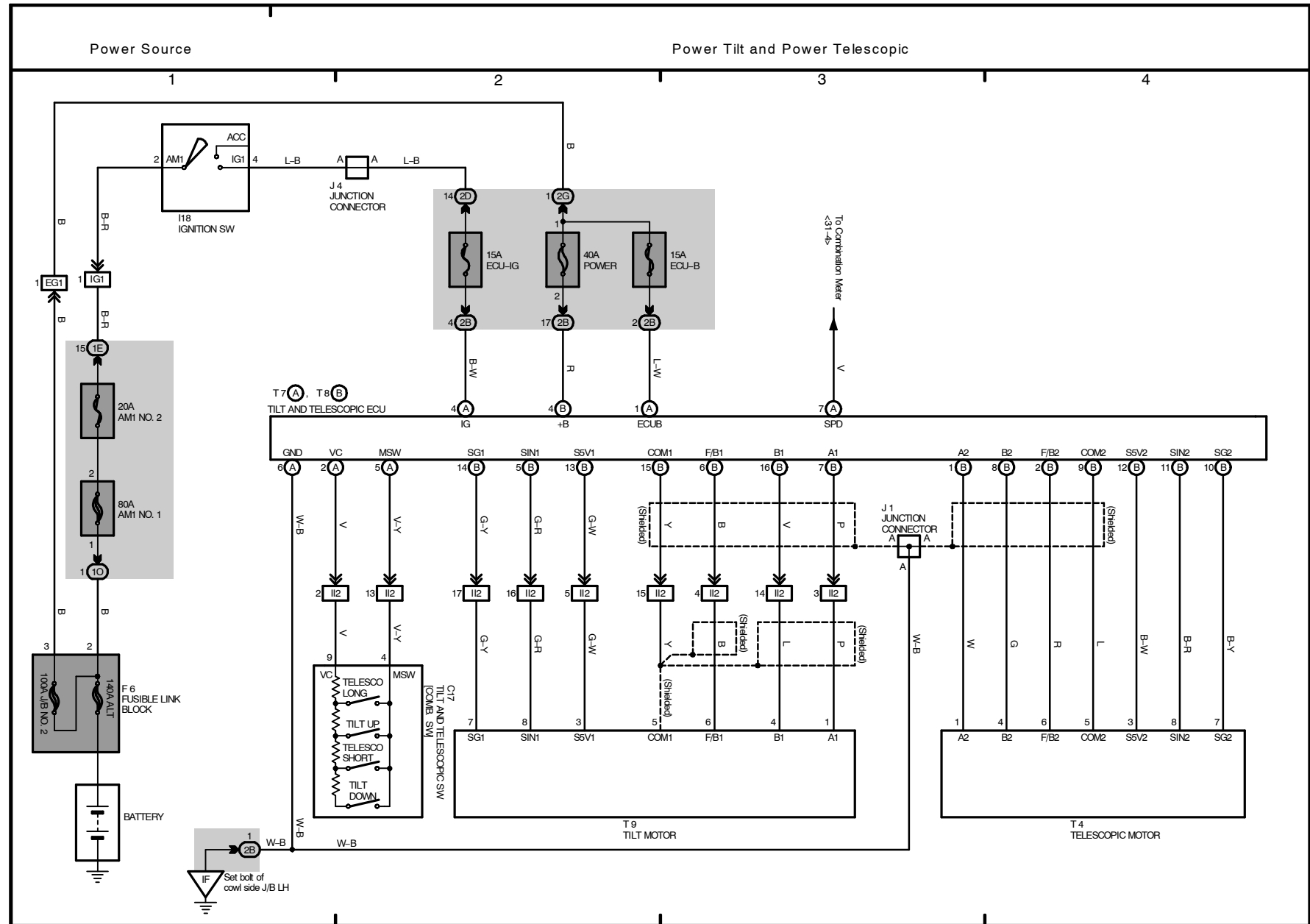
20 LAND CRUISER



2002 LAND CRUISER (EWD469U)

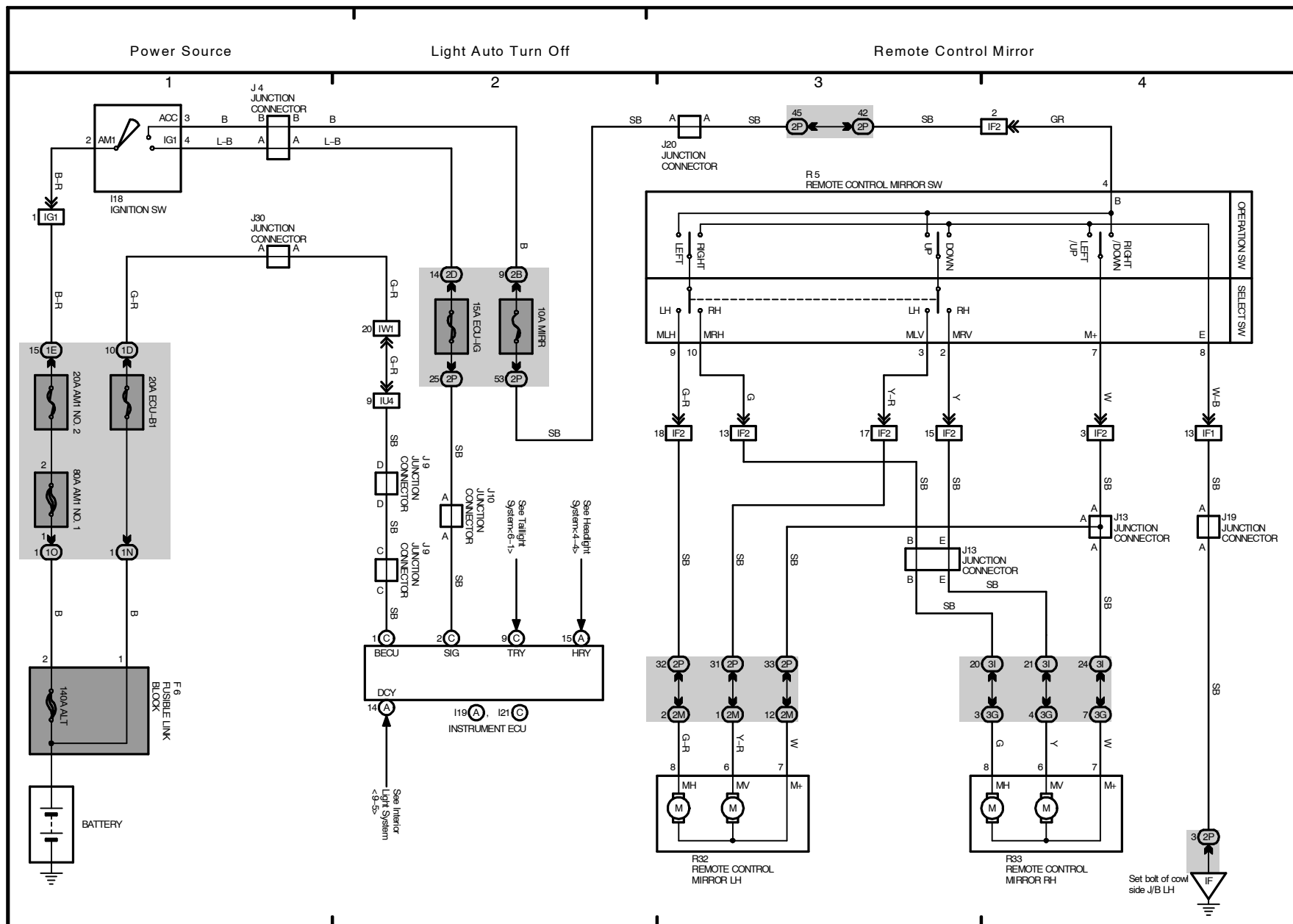
21 LAND CRUISER

2002 LAND CRUISER (EWD469U)



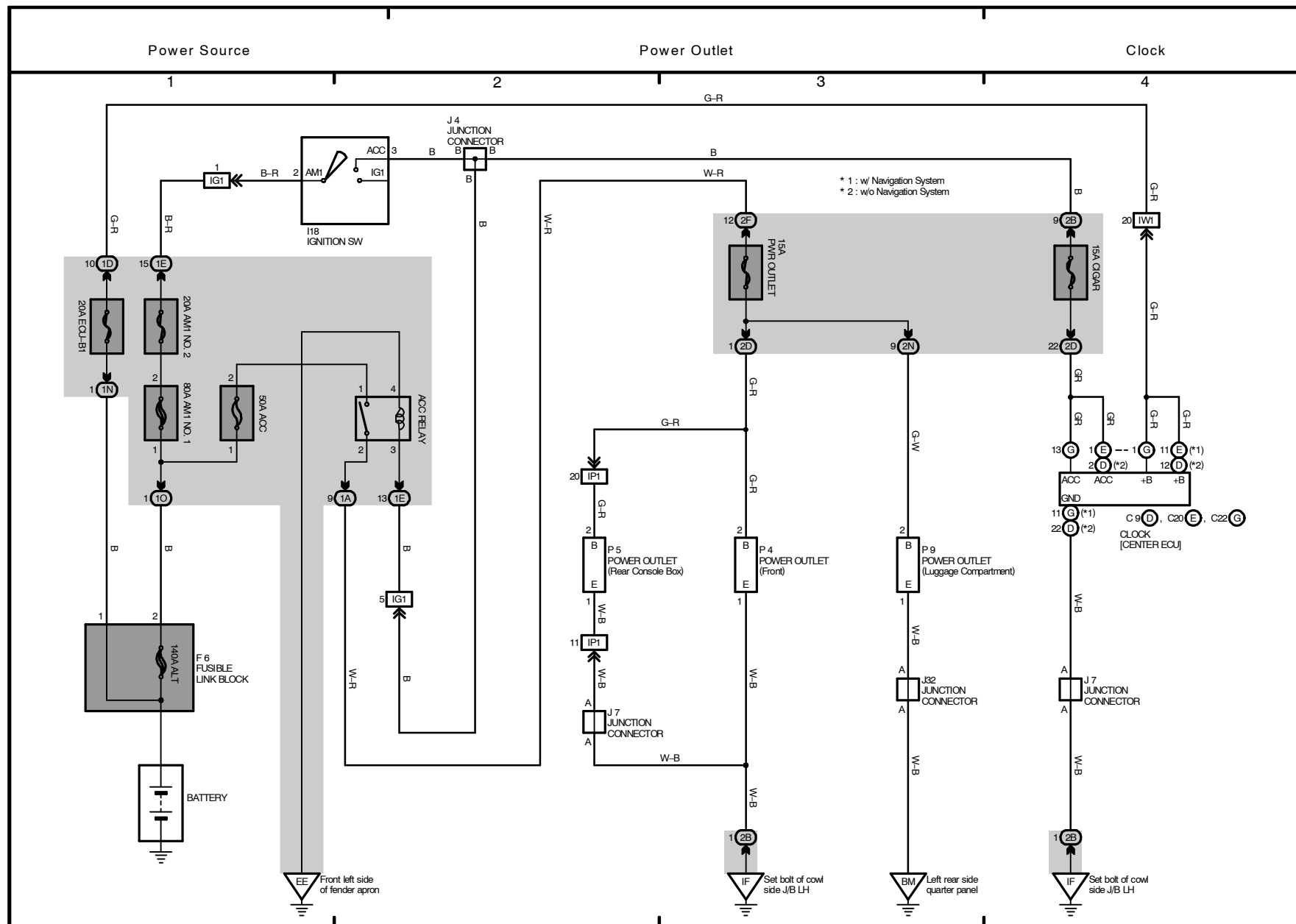
OVERALL ELECTRICAL WIRING DIAGRAM

22 LAND CRUISER



2002 LAND CRUISER (EWD469U)

2002 LAND CRUISER (EWD469U)



The diagram illustrates the electrical system for the rear window defogger and mirror heater, divided into four main sections: Power Source, Rear Window Defogger and Mirror Heater, and Power Rear Quarter Window.

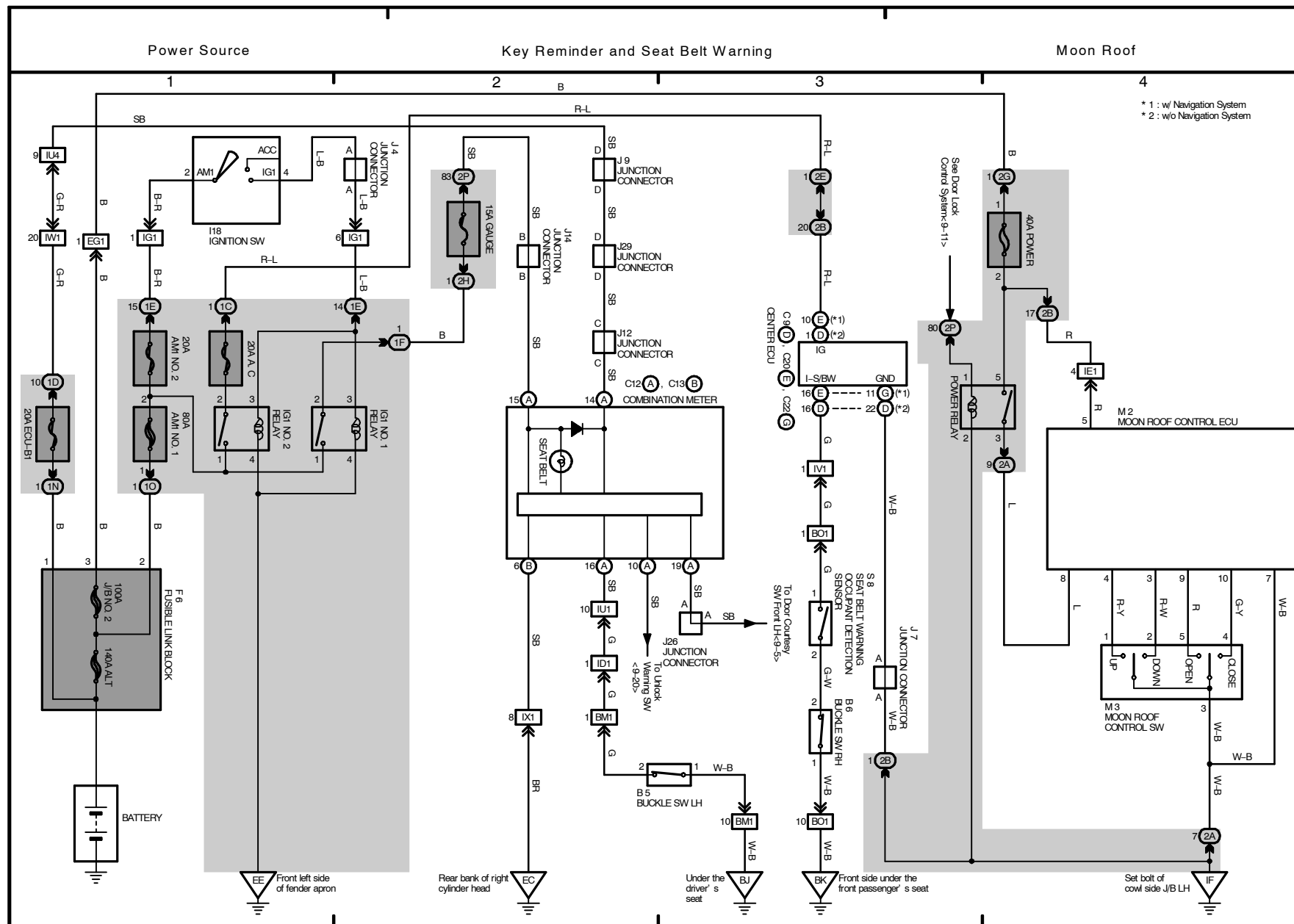
Power Source: The system is powered by a BATTERY. The main power line (B) passes through a 140A ALT (F6 FUSIBLE LINK BLOCK) and a 100A J/B NO. 2. It then splits into two main branches: one for the Rear Window Defogger and Mirror Heater (labeled 1) and another for the Power Rear Quarter Window (labeled 4).

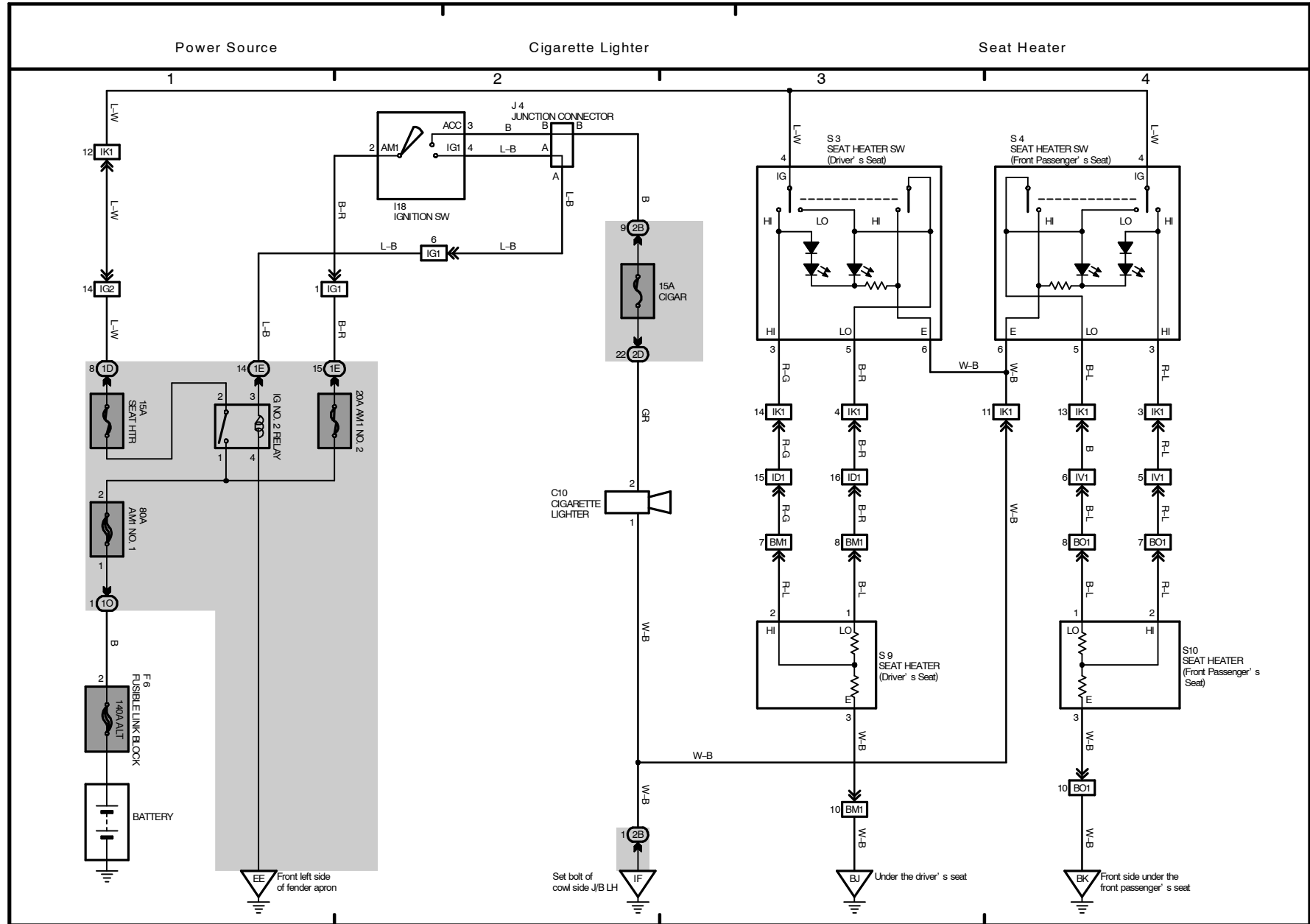
Rear Window Defogger and Mirror Heater: This section contains the main control logic. It includes an I18 IGNITION SW (ACC, IG1) and a J4 JUNCTION CONNECTOR. The power is distributed to the 20A AMT NO. 2, 80A AMT NO. 1, and 15A AMT HTR. The system also includes a 20A DEFOGG, 1A GAUGE, and a DEFOG RELAY. The power is then distributed to the R28 (A) and R29 (B) REAR WINDOW DEFOGGERS, the R22 (A) and R23 (B) MIRROR HEATER LH and RH, and the R24 (A) and R25 (B) MIRROR HEATER LH and RH. The system is controlled by the I18 IGNITION SW and the DEFOG RELAY.

Power Rear Quarter Window: This section shows the power distribution to the rear quarter window. It includes the P6 POWER QUARTER WINDOW SW LH and RH, the P7 POWER QUARTER WINDOW SW LH and RH, and the P10 POWER VENT WINDOW MOTOR LH and RH. The power is distributed through various junction connectors (J14, J19, J32, J40, J41) and fuses (IF1, IF2, IF3, IF4, IF5, IF6, IF7, IF8, IF9, IF10, IF11, IF12, IF13, IF14, IF15, IF16, IF17, IF18, IF19, IF20, IF21, IF22, IF23, IF24, IF25, IF26, IF27, IF28, IF29, IF30, IF31, IF32, IF33, IF34, IF35, IF36, IF37, IF38, IF39, IF40, IF41, IF42, IF43, IF44, IF45, IF46, IF47, IF48, IF49, IF50, IF51, IF52, IF53, IF54, IF55, IF56, IF57, IF58, IF59, IF60, IF61, IF62, IF63, IF64, IF65, IF66, IF67, IF68, IF69, IF70, IF71, IF72, IF73, IF74, IF75, IF76, IF77, IF78, IF79, IF80, IF81, IF82, IF83, IF84, IF85, IF86, IF87, IF88, IF89, IF90, IF91, IF92, IF93, IF94, IF95, IF96, IF97, IF98, IF99, IF100).

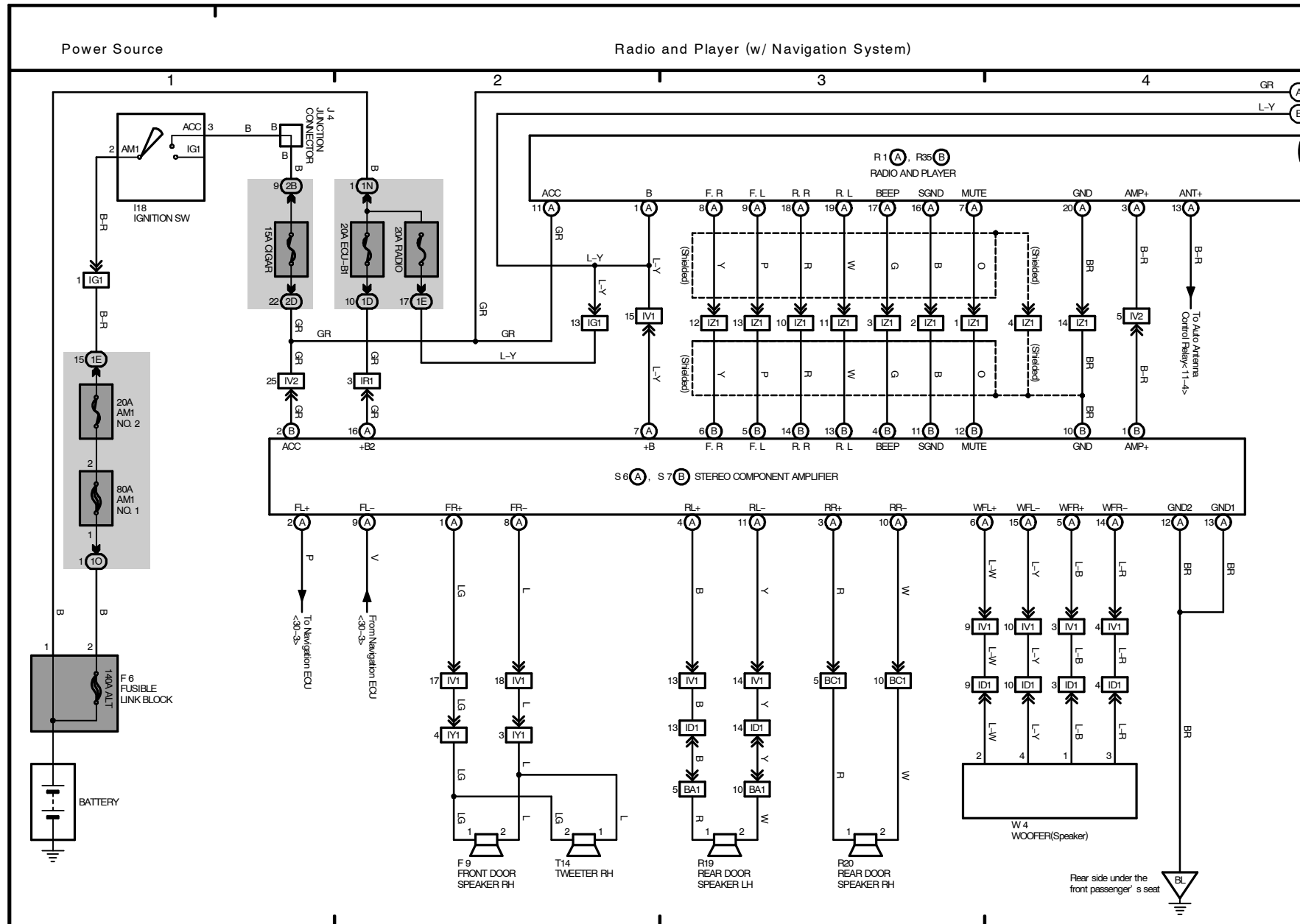
Legend:

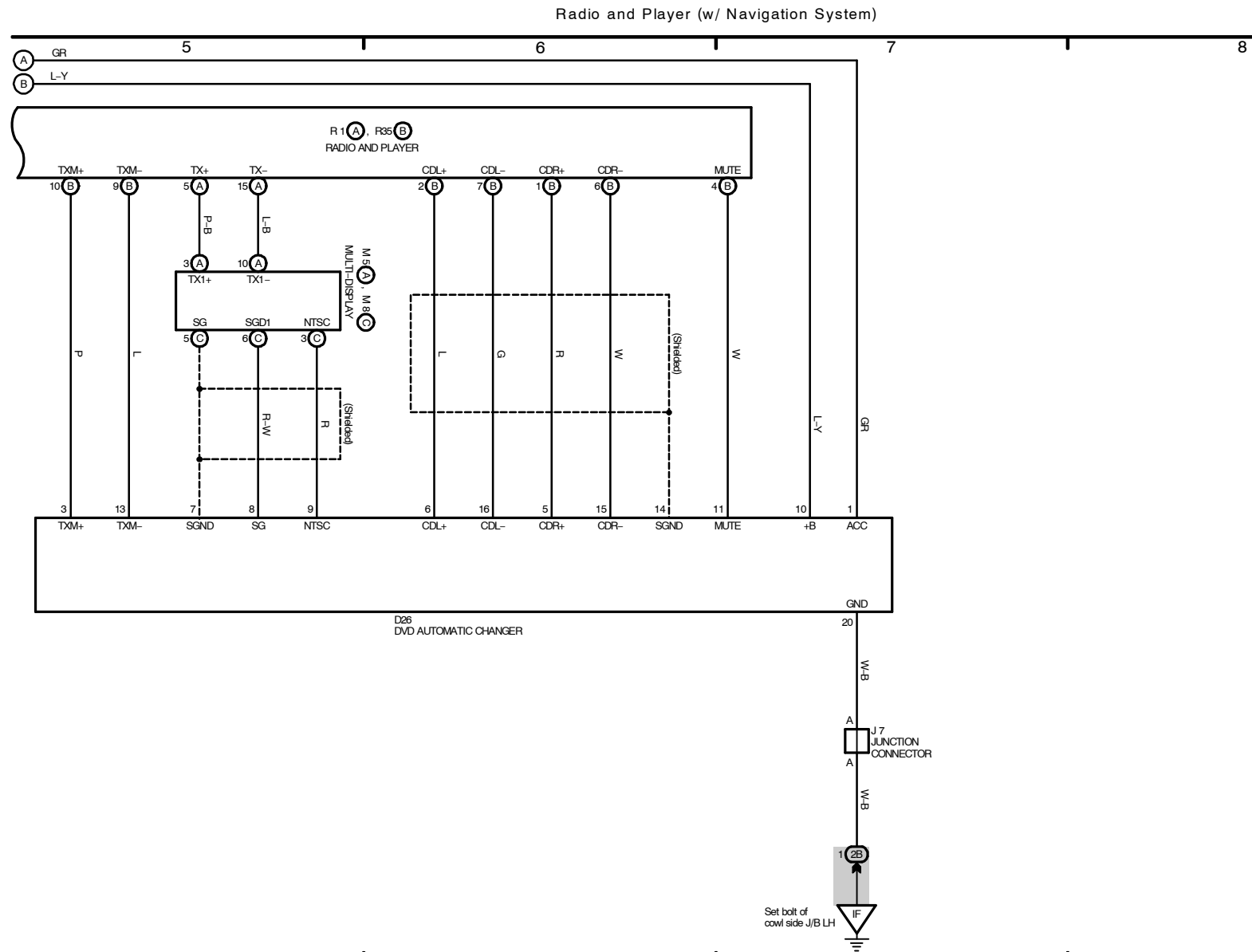
- * 1: w/ Rear Air Conditioning
- * 2: w/o Rear Air Conditioning
- * 3: w/ Navigation System
- * 4: w/o Navigation System

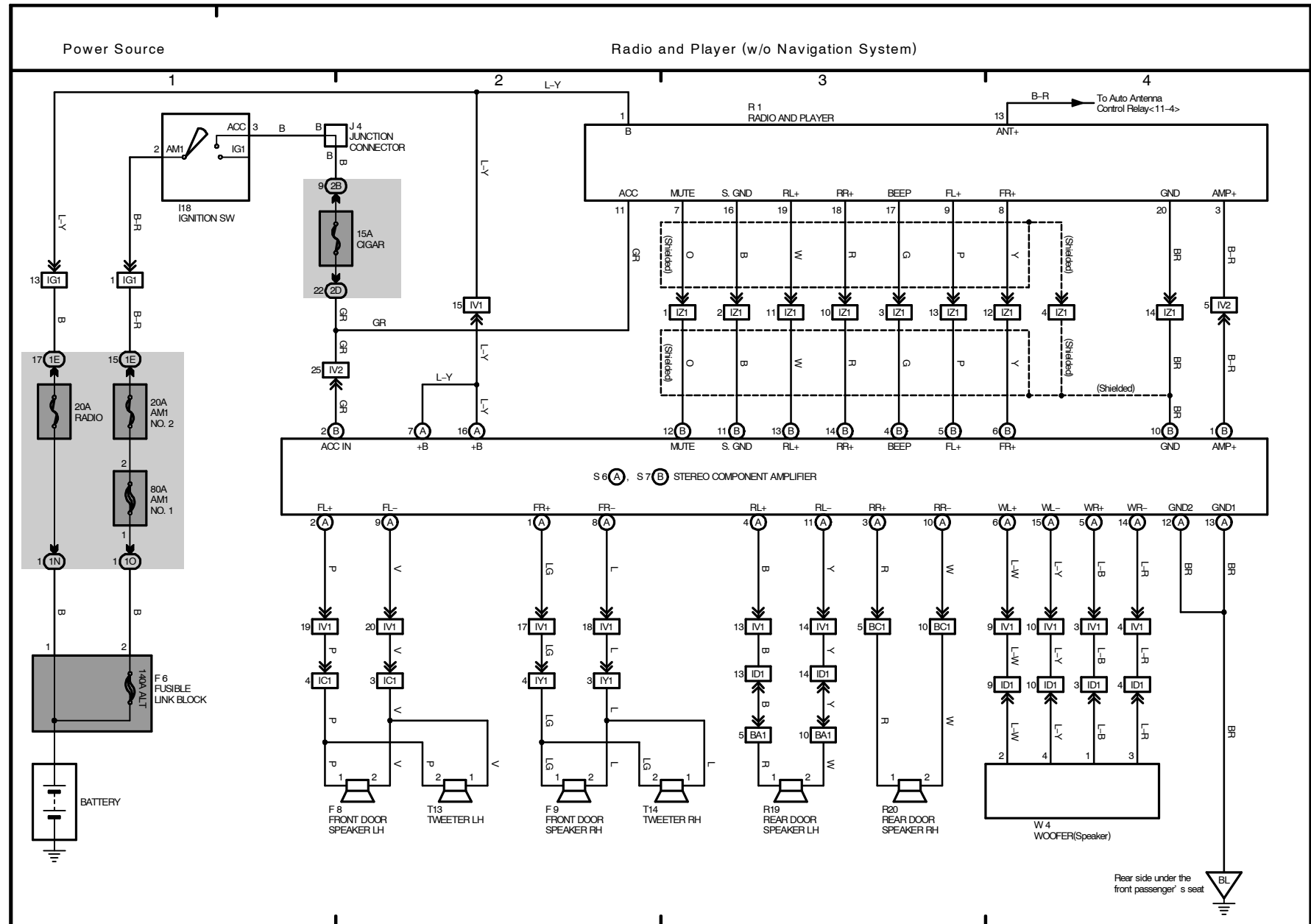




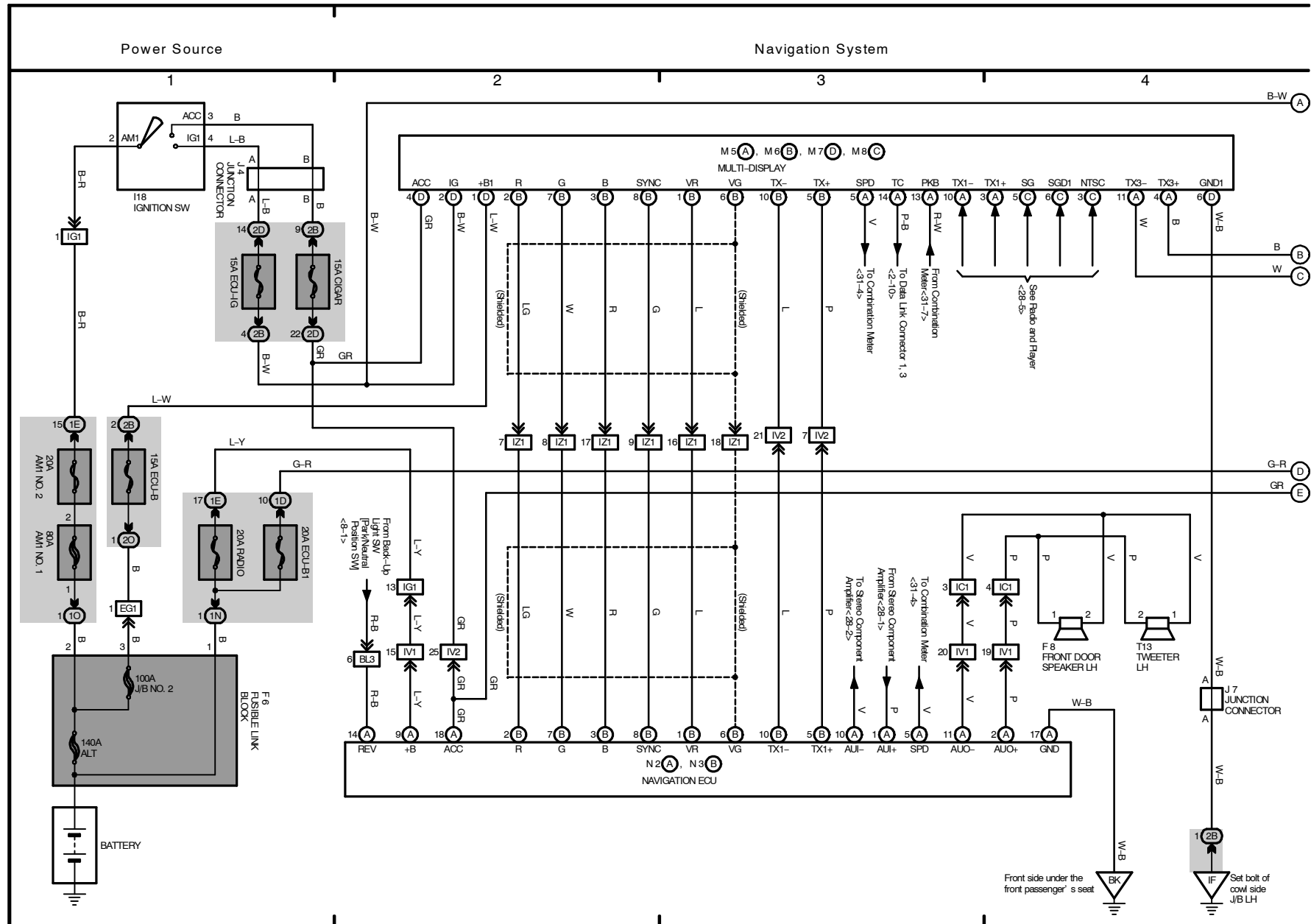






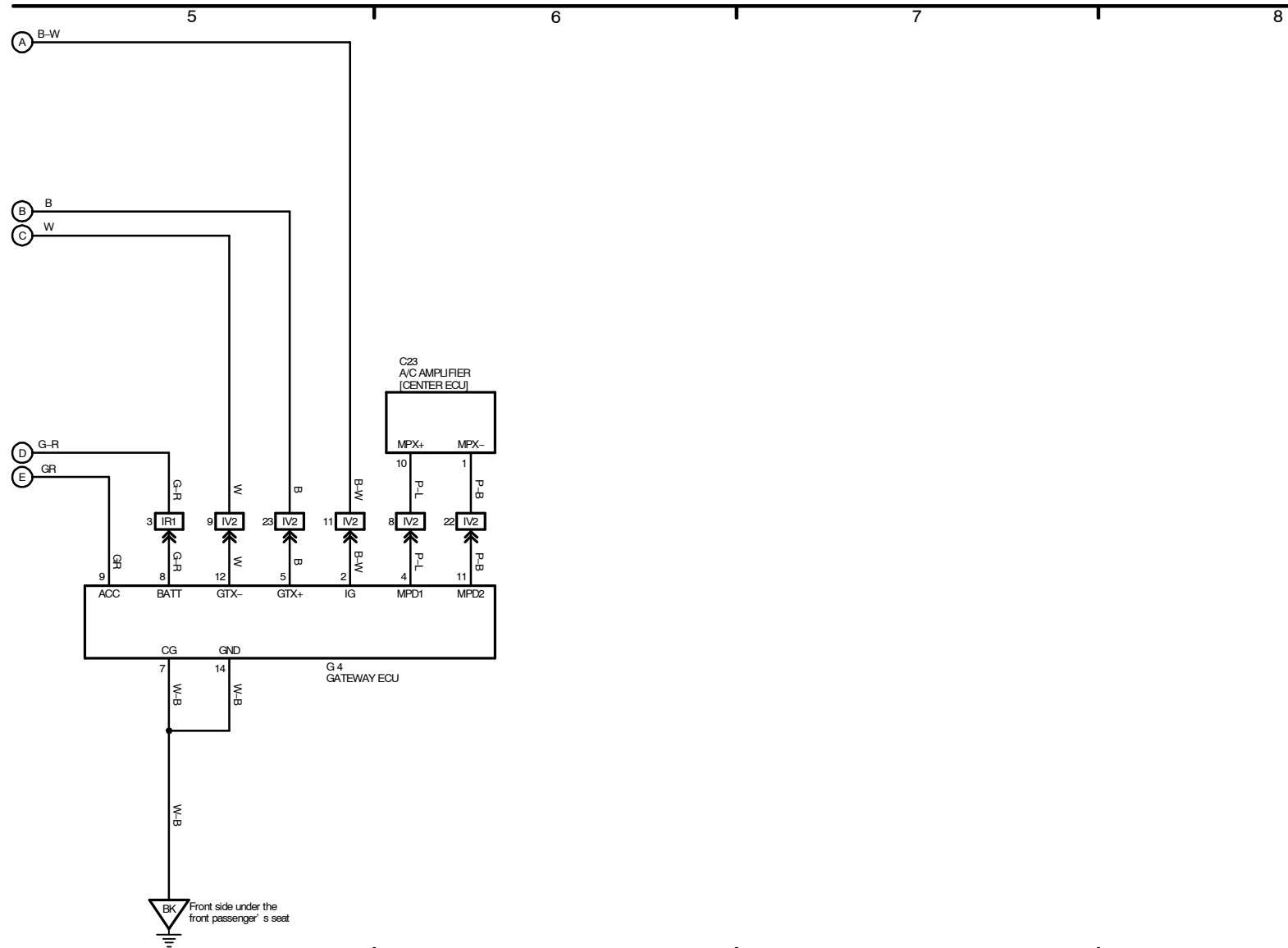


2002 LAND CRUISER (EWD469U)



30 LAND CRUISER (Cont' d)

Navigation System

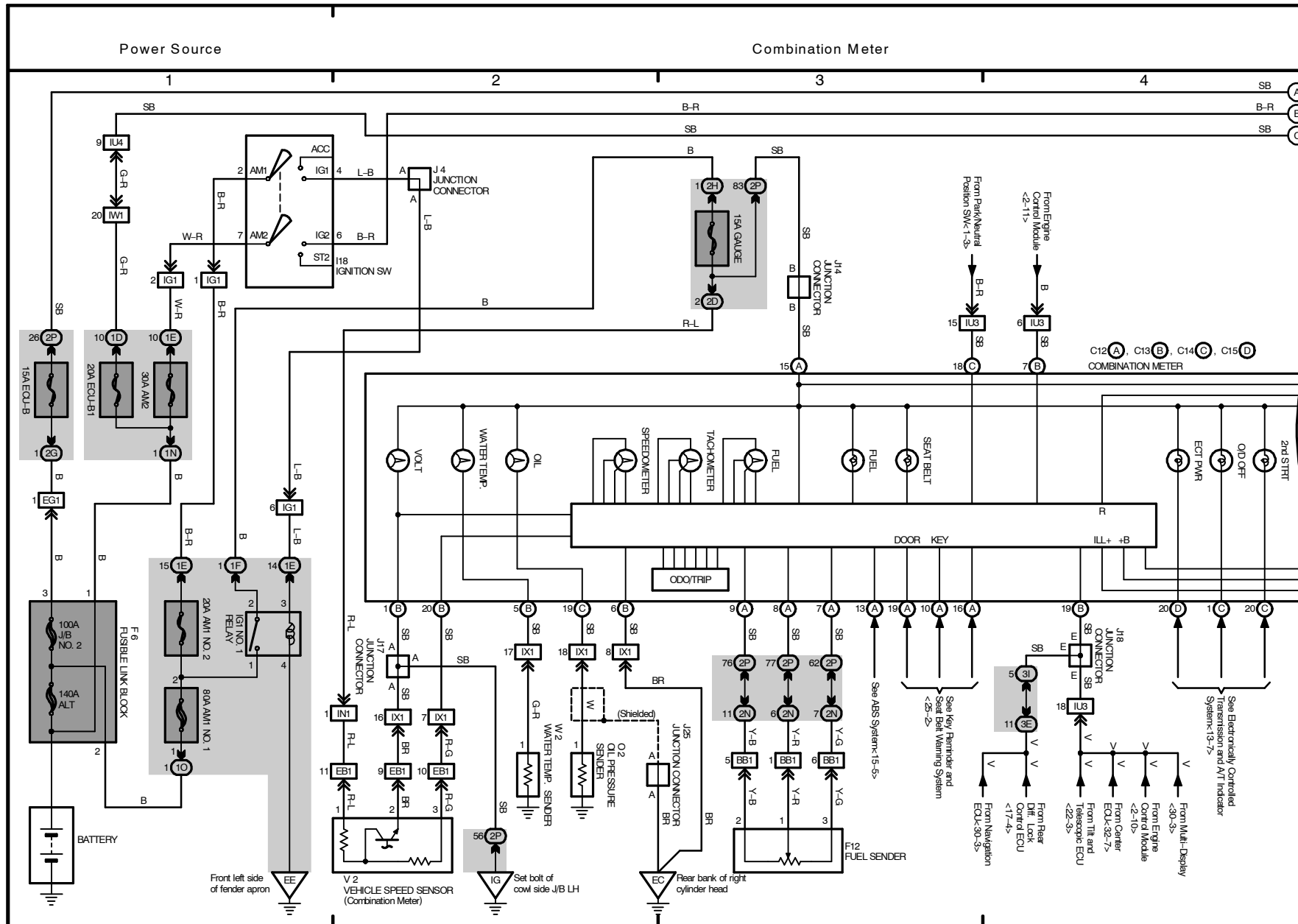


2002 LAND CRUISER (EWD469U)

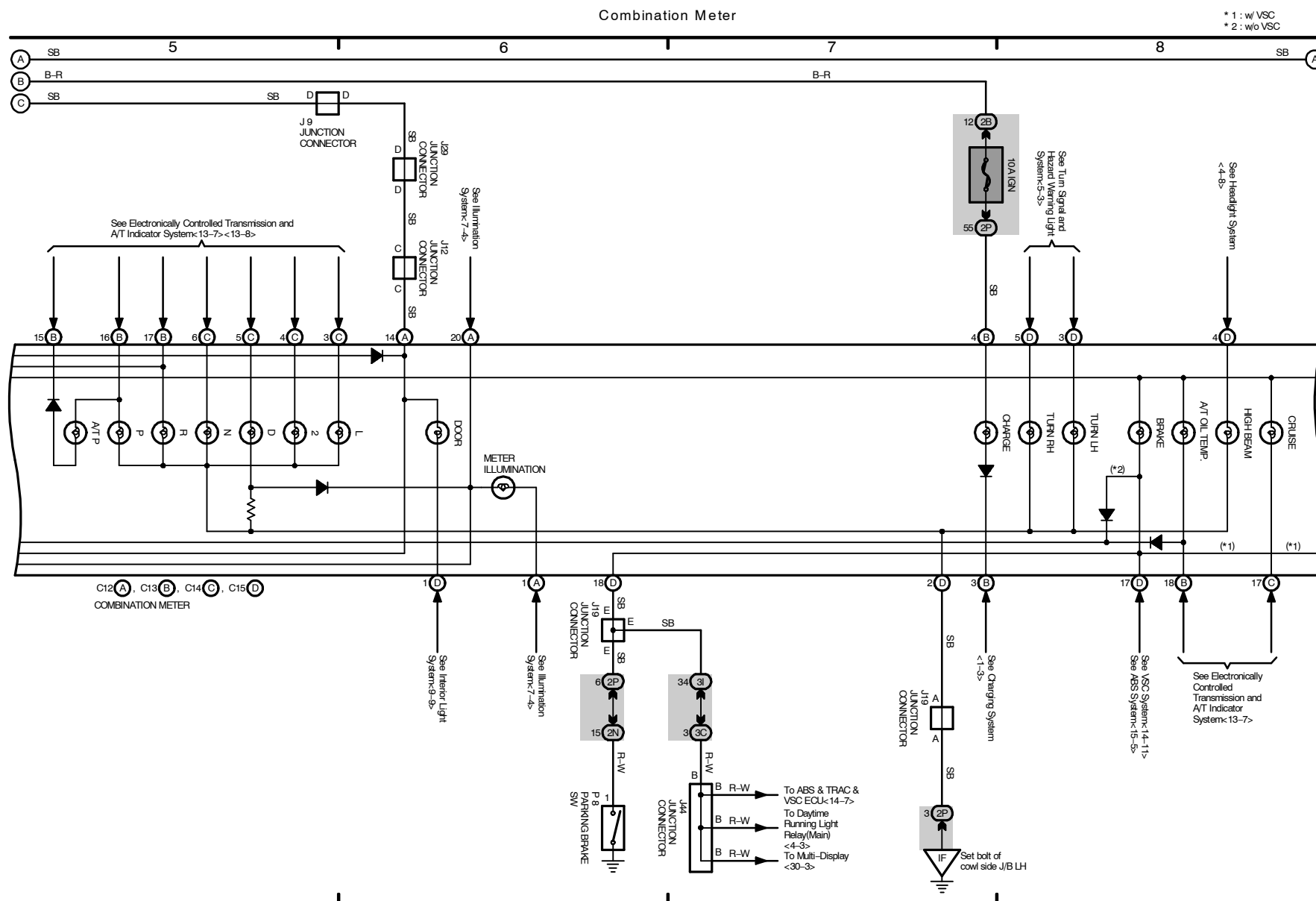
M OVERALL ELECTRICAL WIRING DIAGRAM

31 LAND CRUISER

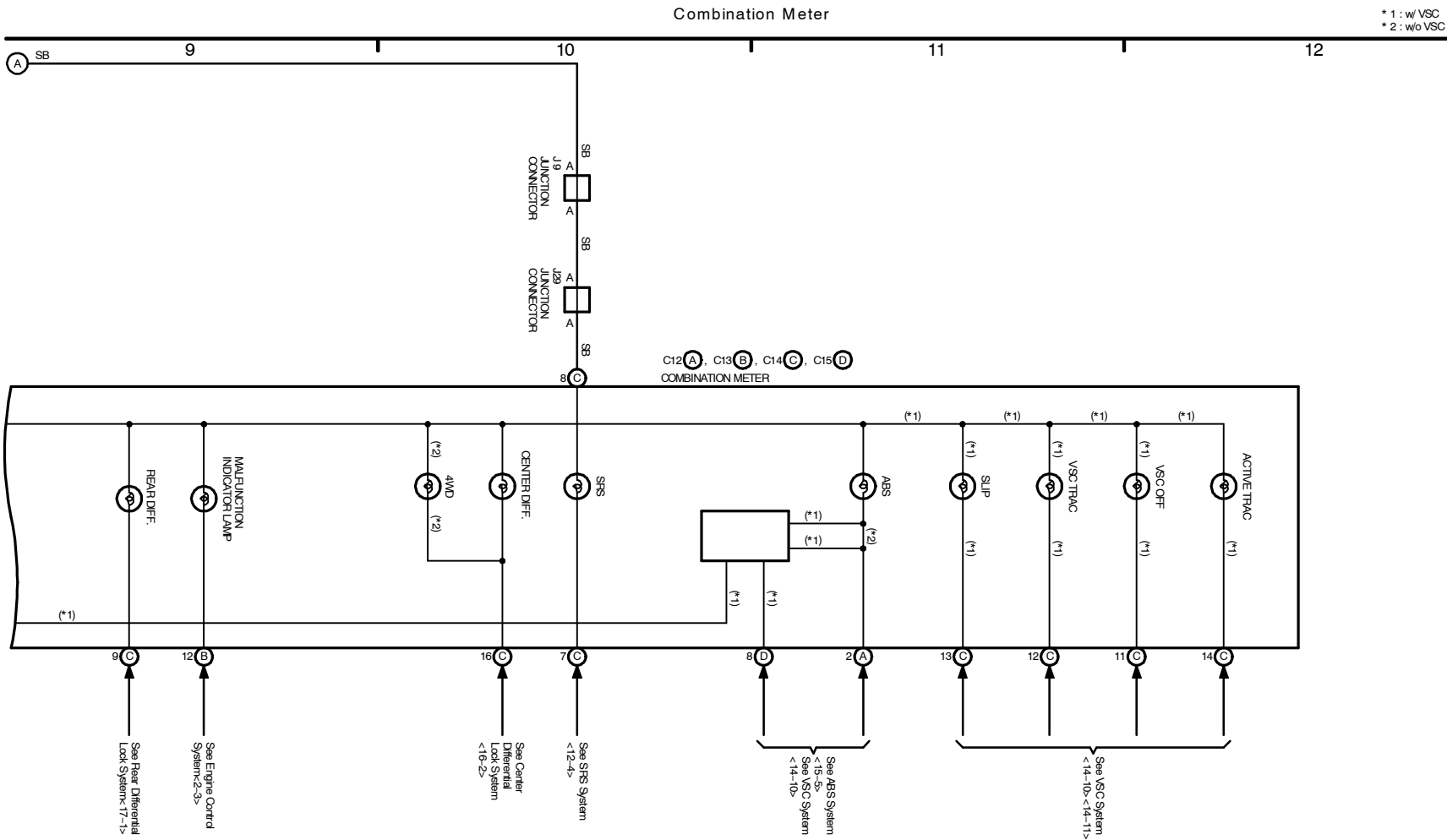
(Cont. next page)



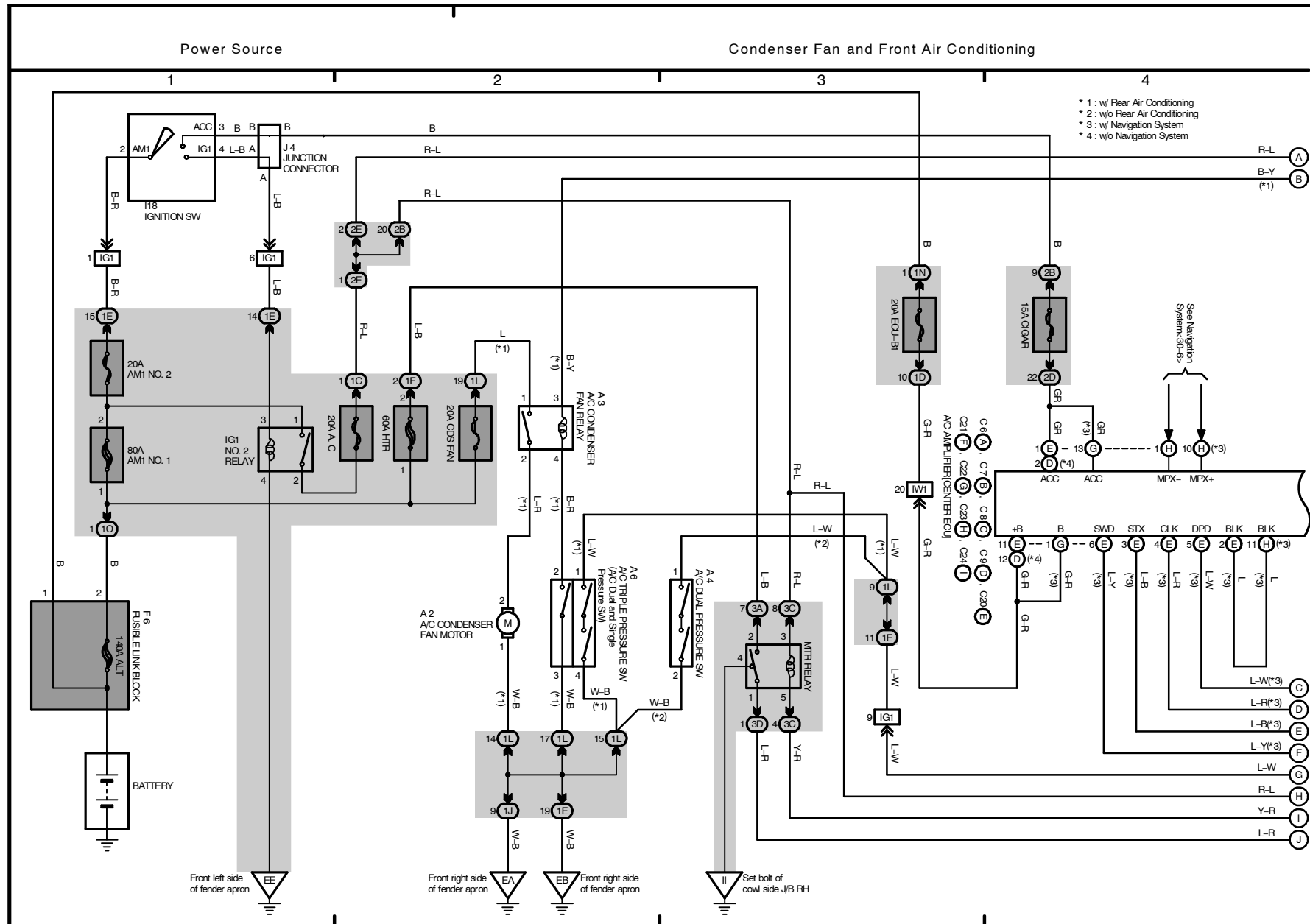
2002 LAND CRUISER (EWD469U)



M OVERALL ELECTRICAL WIRING DIAGRAM



2002 LAND CRUISER (EWD469U)



- * 1 : w/ Rear Air Conditioning
- * 3 : w/ Navigation System
- * 4 : w/o Navigation System

