FOREWORD

This wiring diagram manual has been prepared to provide information on the electrical system of the 2002 4RUNNER.

Applicable models: VZN180, 185 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 4RUNNER Repair Manual	
Volume 1	RM887U1
Volume 2	RM887U2
● 2002 TOYOTA New Car Features	NCF214U

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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.)

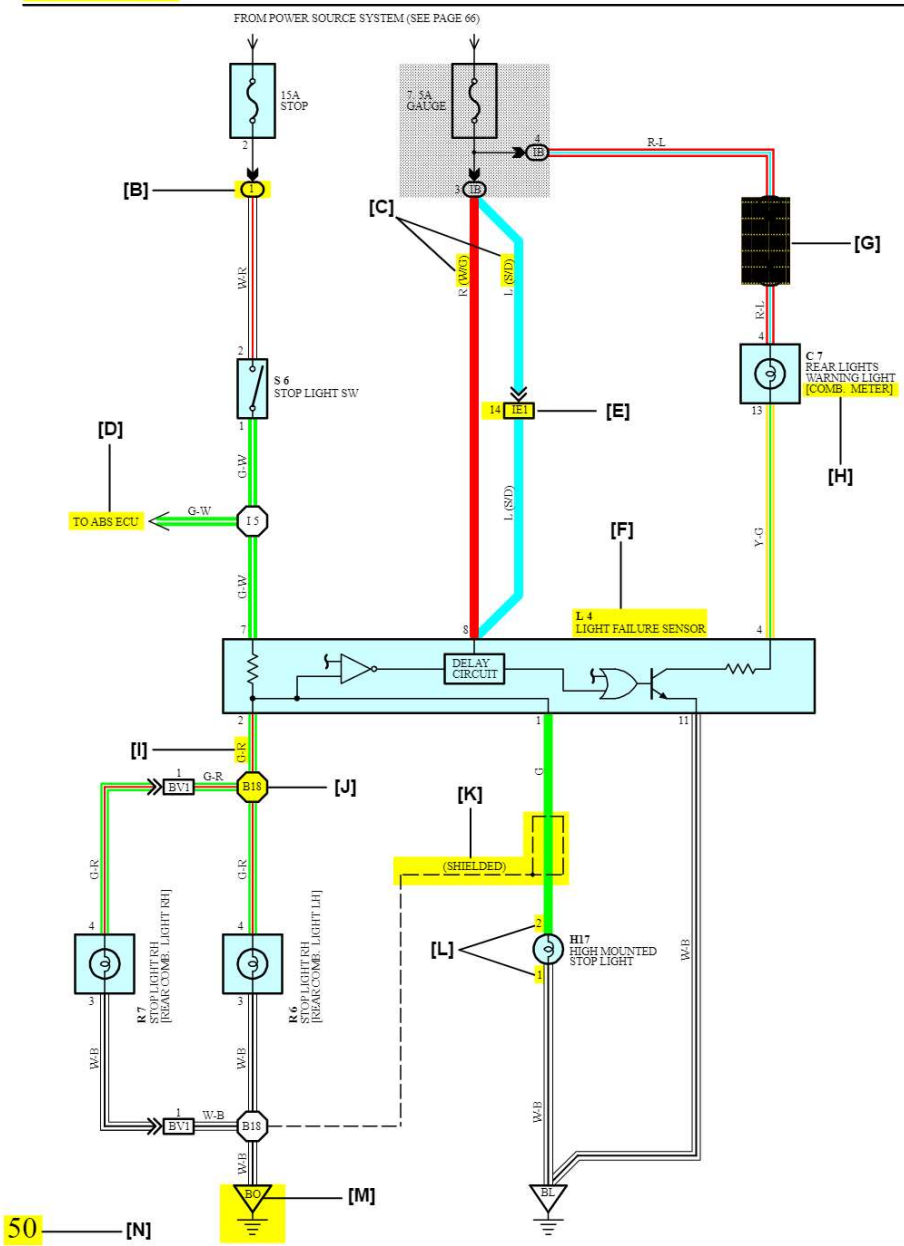
When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Point section). See the System Outline to understand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

[A]

STOP LIGHT

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



[A] : System Title

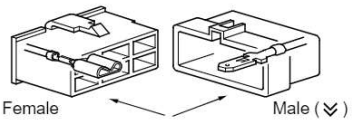
[B] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B

Example: (1) Indicates Relay Block No.1

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

[D] : Indicates related system.

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

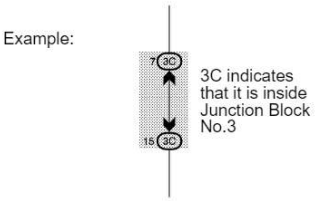


The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

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

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

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



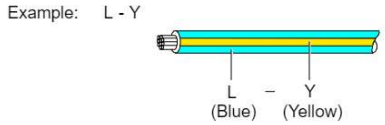
[H] : When 2 parts both use one connector in common, the parts connector name used in the wire routing section is shown in square brackets [ ].

[I] : Indicates the wiring color.

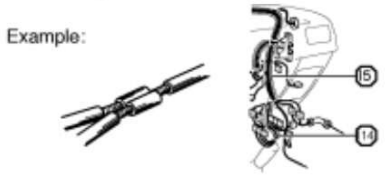
Wire colors are indicated by an alphabetical code.

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.



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

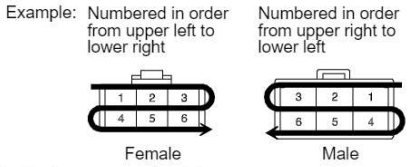


The Location of splice Point I 5 is indicated by the shaded section.

[K] : Indicates a shielded cable.



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



[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.

[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**

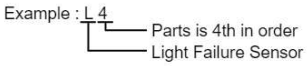
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	44	Cowl Wire	B18	50	Luggage Room Wire

[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.



[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.

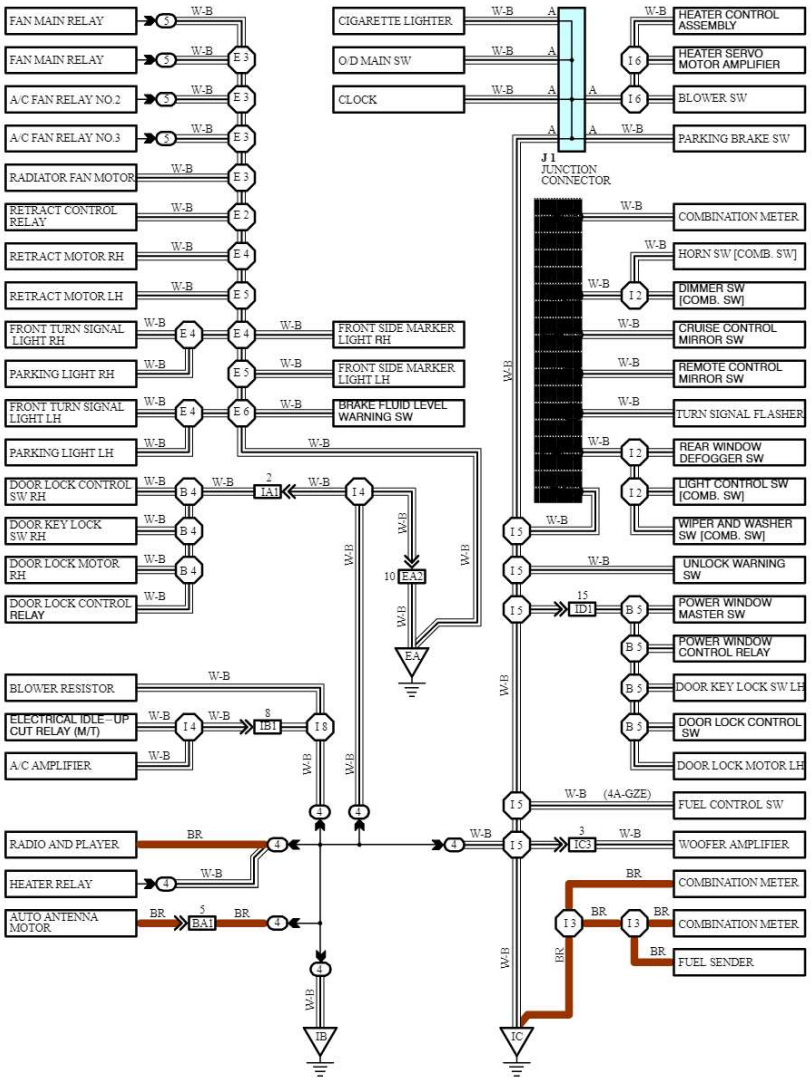
[V] : Indicates the reference page showing the position of the splice points on the vehicle.

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

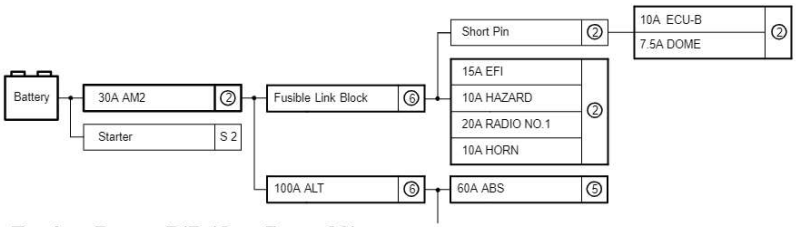


* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

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

J POWER SOURCE (Current Flow Chart)

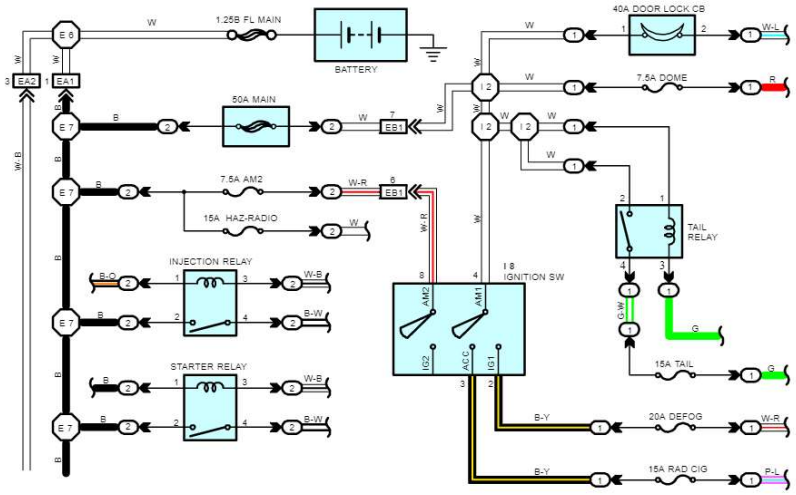
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.



Engine Room R/B (See Page 20)

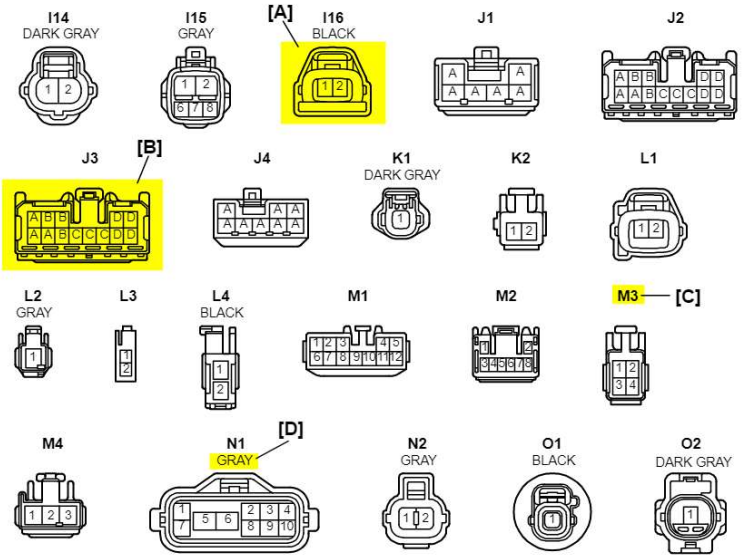
Fuse		System	Page
20A	STOP	ABS ABS and Traction Control Cruise Control Electronically Controlled Transmission and A/T Indicator Multiplex Communication System	194 187 180 166 210
10A	DOME	Cigarette Lighter and Clock Combination Meter Headlight Interior Light Key Reminder and Seat Belt Warning Light Auto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

POWER SOURCE



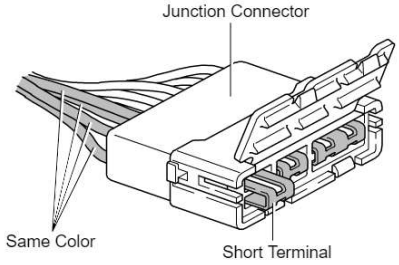
* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

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
A 1	A/C Ambient Temp. Sensor	90980-11070
A 2	A/C Condenser Fan Motor	90980-11237
A 3	A/C Condenser Fan Relay	90980-10940
A 4	A/C Triple Pressure SW (A/C Dual and Single Pressure SW)	90980-10943
[A]	A/T Oil Temp. Sensor [B]	909 [C] 413
A 6	ABS Actuator	90980-11151
A 7	ABS Actuator	90980-11009
A 8	ABS Speed Sensor Front LH	90980-10941
A 9	ABS Speed Sensor Front RH	90980-11002
A10	Airbag Sensor Front LH	90980-11856
A11	Airbag Sensor Front RH	
A12		90980-11194
		90980-11

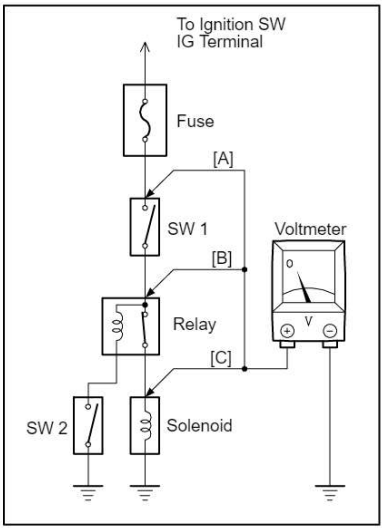
Code	Part Name	Part Number
D 4	Diode (Door Courtesy Light)	90980-11608
D 5	Diode (Key Off Operation)	90980-10962
D 6	Diode (Luggage Compartment Light)	90980-11608
D 7	Door Lock Control Relay	90980-10848
D 8	Door Courtesy Light LH	90980-11148
D 9	Door Courtesy Light RH	
D10	Door Courtesy SW LH	90980-11097
D11	Door Courtesy SW RH	
D12	Door Courtesy SW Front LH	90980-11156
D13	Door Courtesy SW Front RH	
D14	Door Courtesy SW Rear LH	
D15	Door Courtesy SW Rear RH	
D16	Unlock SW LH	90980-11170
	RH	

[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.).

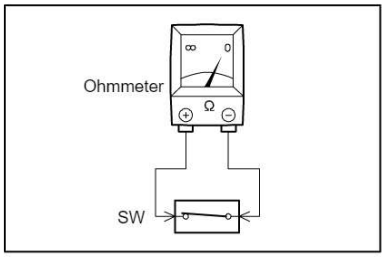


VOLTAGE CHECK

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

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

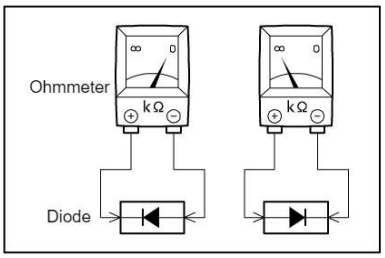
(b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal.
This check can be done with a test light instead of a voltmeter.



CONTINUITY AND RESISTANCE CHECK

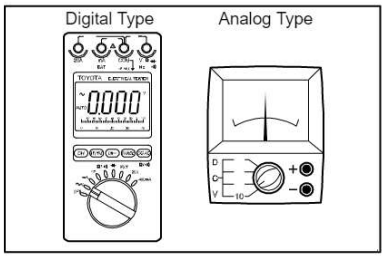
(a) Disconnect the battery terminal or wire so there is no voltage between the check points.

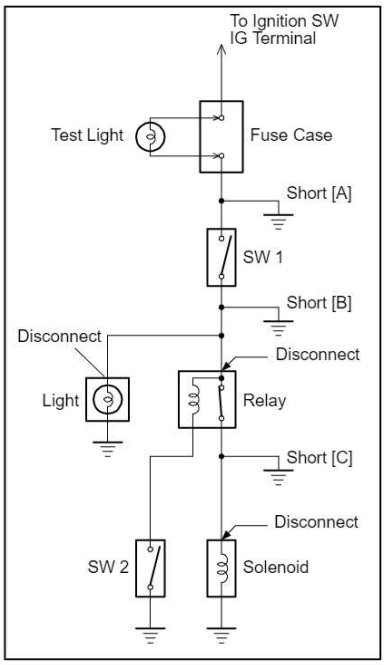
(b) Contact the two leads of an ohmmeter to each of the check points.



If the circuit has diodes, reverse the two leads and check again.
When contacting the negative lead to the diode positive side and the positive lead to the negative side, there should be continuity.
When contacting the two leads in reverse, there should be no continuity.

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





FINDING A SHORT CIRCUIT

(a) Remove the blown fuse and disconnect all loads of the fuse.

(b) Connect a test light in place of the fuse.

(c) 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)

(d) 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.

(e) Find the exact location of the short by lightly shaking the problem wire along the body.

CAUTION:

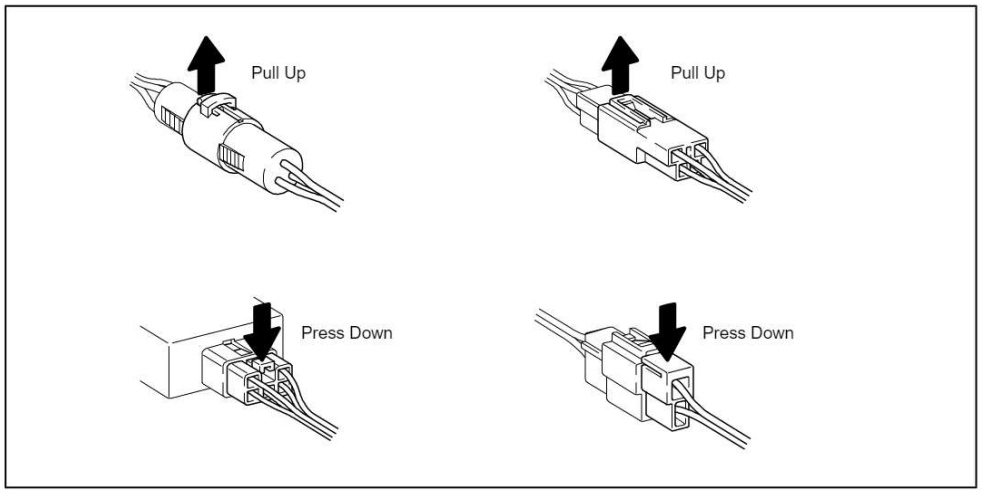
(a) Do not open the cover or the case of the ECU unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)

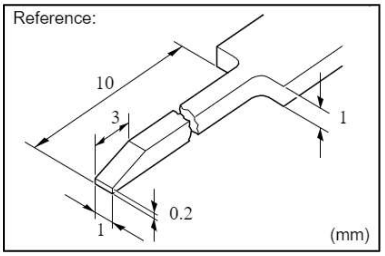
(b) When replacing the internal mechanism (ECU part) of the digital meter, be careful that no part of your body or clothing comes in contact with the terminals of leads from the IC, etc. of the replacement part (spare part).

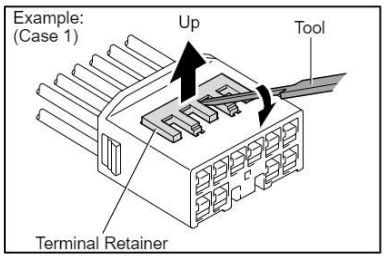
DISCONNECTION OF MALE AND FEMALE CONNECTORS

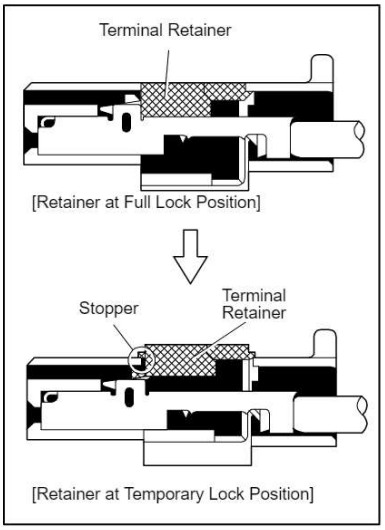
To pull apart the connectors, pull on the connector itself, not the wire harness.

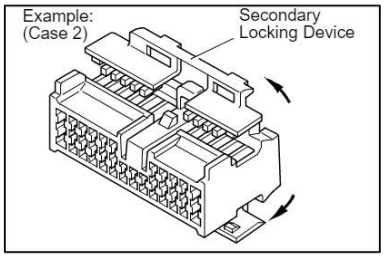
HINT : Check to see what kind of connector you are disconnecting before pulling apart.











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

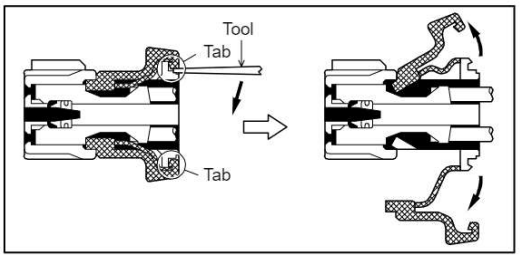
   HINT : The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

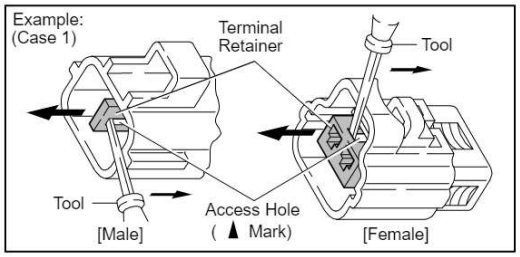
   "Case 1"

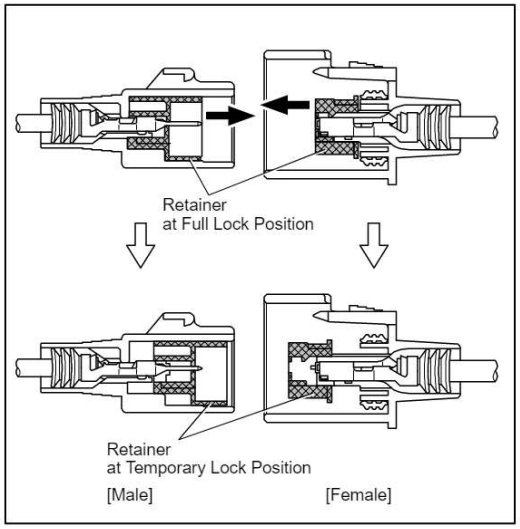
   Raise the terminal retainer up to the temporary lock position.

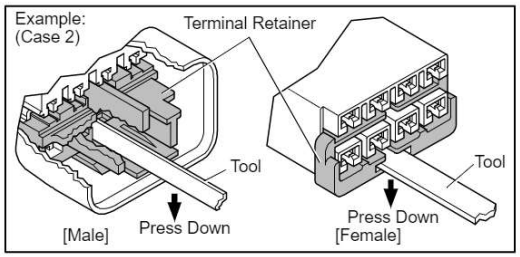
   "Case 2"

   Open the secondary locking device.









[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"

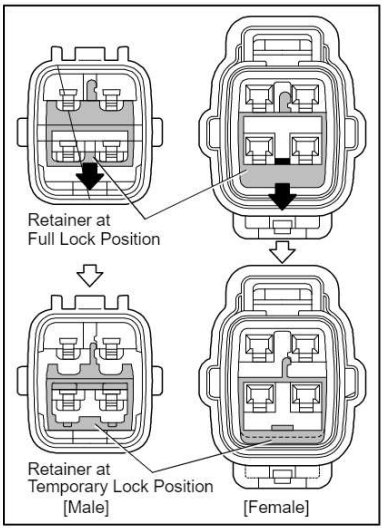
Type where terminal retainer is pulled up to the temporary lock position (Pull Type).

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

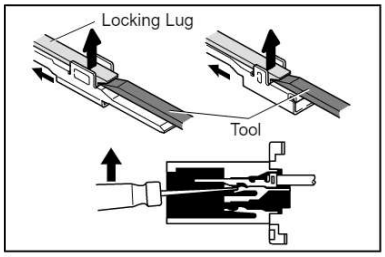
HINT : The needle insertion position varies according to the connector's shape (Number of terminals etc.), so check the position before inserting it.

"Case 2"

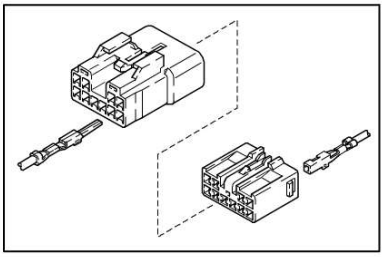
Type which cannot be pulled as far as Power Lock insert the tool straight into the access hole of terminal retainer as shown.



Push the terminal retainer down to the temporary lock position.



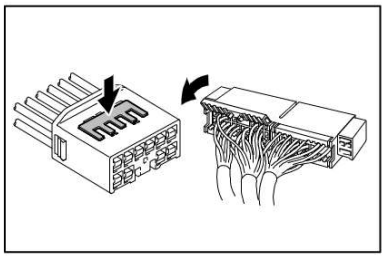
(c) Release the locking lug from terminal and pull the terminal out from rear.



4. INSTALL TERMINAL TO CONNECTOR

(a) Insert the terminal.

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



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

5. CONNECT CONNECTOR

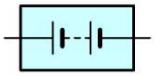
ABBREVIATIONS

The following abbreviations are used in this manual.

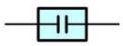
ABS	=	Anti-Lock Brake System
A/C	=	Air Conditioning
ADD	=	Automatic Disconnecting Differential
A/T	=	Automatic Transmission
COMB.	=	Combination
DIFF.	=	Differential
ECU	=	Electronic Control Unit
ESA	=	Electronic Spark Advance
EVAP	=	Evaporative Emission
J/B	=	Junction Block
LH	=	Left-Hand
O/D	=	Overdrive
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
2WD	=	Two Wheel Drive
4WD	=	Four Wheel Drive

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

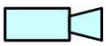
E GLOSSARY OF TERMS AND SYMBOLS



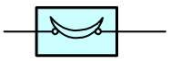
BATTERY
Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.



CAPACITOR (Condenser)
A small holding unit for temporary storage of electrical voltage.



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.



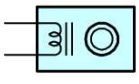
DIODE
A semiconductor which allows current flow in only one direction.



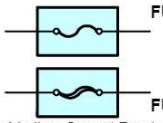
DIODE, ZENER
A diode which allows current flow in one direction but blocks reverse flow only up to a specific voltage. Above that potential, it passes the excess voltage. This acts as a simple voltage regulator.



PHOTODIODE
The photodiode is a semiconductor which controls the current flow according to the amount of light.



DISTRIBUTOR, IIA
Channels high-voltage current from the ignition coil to the individual spark plugs.



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.

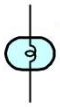
(for Medium Current Fuse)

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)



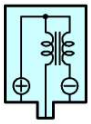
GROUND
The point at which wiring attaches to the Body, thereby providing a return path for an electrical circuit; without a ground, current cannot flow.



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



HORN
An electric device which sounds a loud audible signal.



IGNITION COIL
Converts low-voltage DC current into high-voltage ignition current for firing the spark plugs.

LIGHT
Current flow through a filament causes the filament to heat up and emit light.



LED (LIGHT EMITTING DIODE)
Upon current flow, these diodes emit light without producing the heat of a comparable light.



METER, ANALOG
Current flow activates a magnetic coil which causes a needle to move, thereby providing a relative display against a background calibration.

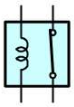


METER, DIGITAL
Current flow activates one or many LED's, LCD's, or fluorescent displays, which provide a relative or digital display.



MOTOR
A power unit which converts electrical energy into mechanical energy, especially rotary motion.

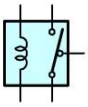
RELAY
Basically, an electrically operated switch which may be normally closed (1) or open (2). Current flow through a small coil creates a magnetic field which either opens or closes an attached switch.



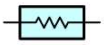
1. NORMALLY CLOSED



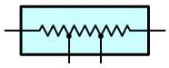
2. NORMALLY OPEN



RELAY, DOUBLE THROW
A relay which passes current through one set of contacts or the other.



RESISTOR
An electrical component with a fixed resistance, placed in a circuit to reduce voltage to a specific value.



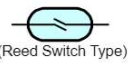
RESISTOR, TAPPED
A resistor which supplies two or more different non adjustable resistance values.



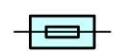
RESISTOR, VARIABLE or RHEOSTAT
A controllable resistor with a variable rate of resistance. Also called a potentiometer or rheostat.



SENSOR (Thermistor)
A resistor which varies its resistance with temperature.

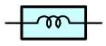


SENSOR, SPEED
Uses magnetic impulses to open and close a switch to create a signal for activation of other components.



(Reed Switch Type)

SHORT PIN
Used to provide an unbroken connection within a junction block.

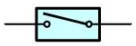


SOLENOID
An electromagnetic coil which forms a magnetic field when current flows, to move a plunger, etc.

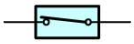
SPEAKER
An electromechanical device which creates sound waves from current flow.



SWITCH, MANUAL
Opens and closes circuits, thereby stopping (1) or allowing (2) current flow.

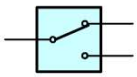


1. NORMALLY OPEN

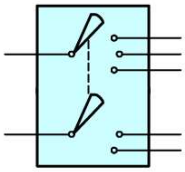


2. NORMALLY CLOSED

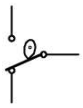
SWITCH, DOUBLE THROW
A switch which continuously passes current through one set of contacts or the other.



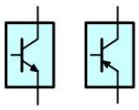
SWITCH, IGNITION
A key operated switch with several positions which allows various circuits, particularly the primary ignition circuit, to become operational.



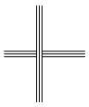
SWITCH, WIPER PARK
Automatically returns wipers to the stop position when the wiper switch is turned off.



TRANSISTOR
A solidstate device typically used as an electronic relay; stops or passes current depending on the voltage applied at "base".

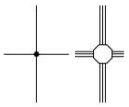


WIRES



(1) NOT CONNECTED

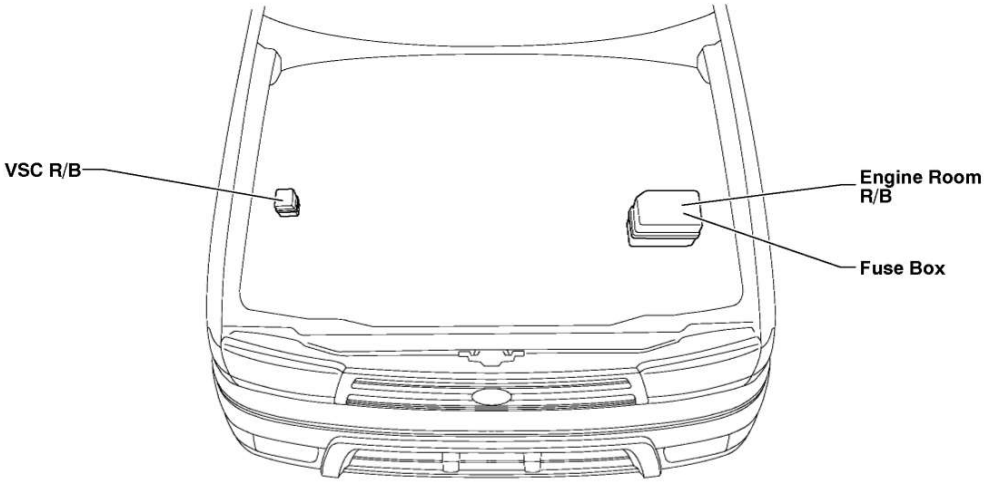
Wires are always drawn as straight lines on wiring diagrams. Crossed wires (1) without a black dot at the junction are not joined; crossed wires (2) with a black dot or octagonal ( ) mark at the junction are spliced (joined) connections.



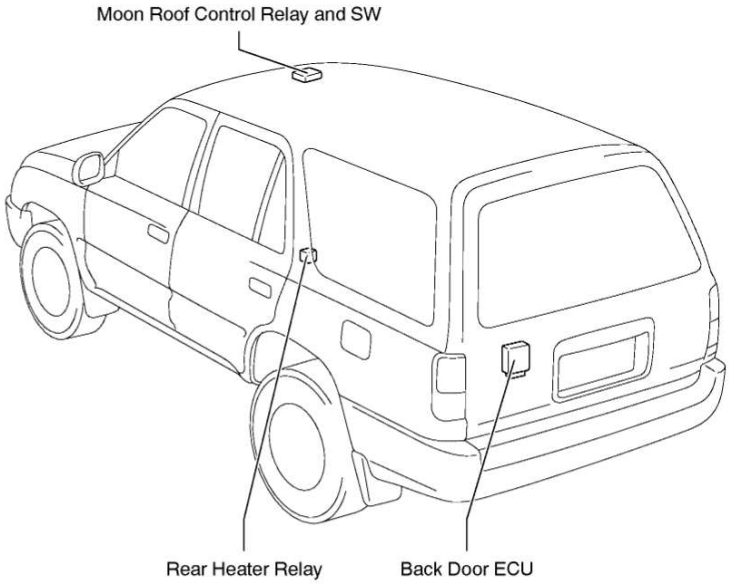
(2) SPLICED

F RELAY LOCATIONS

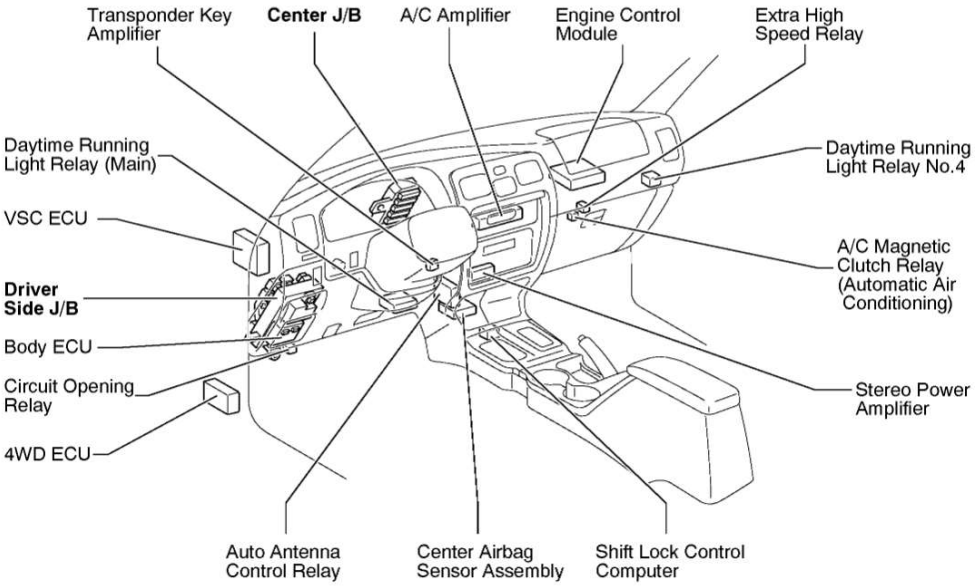
[Engine Compartment]



[Body]

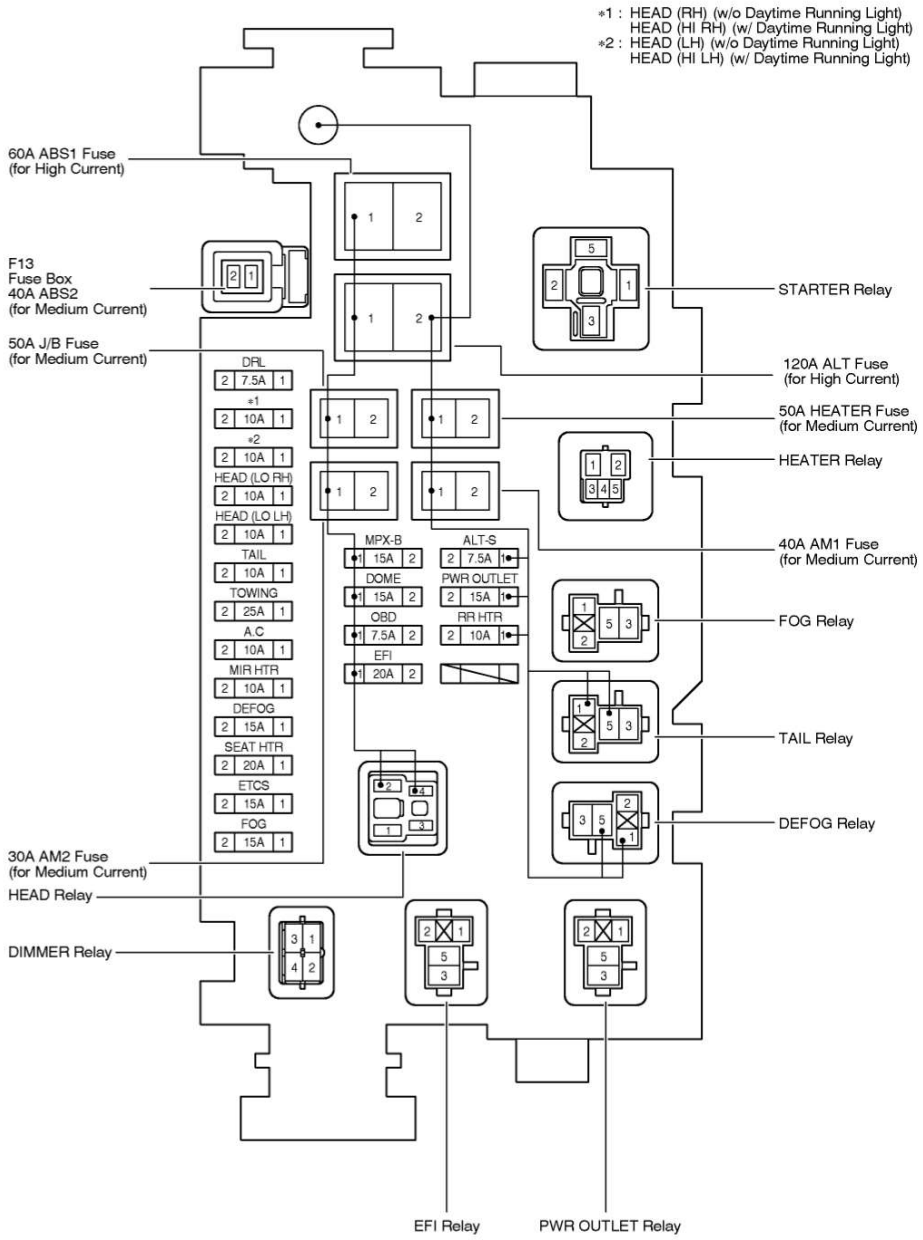


[Instrument Panel]

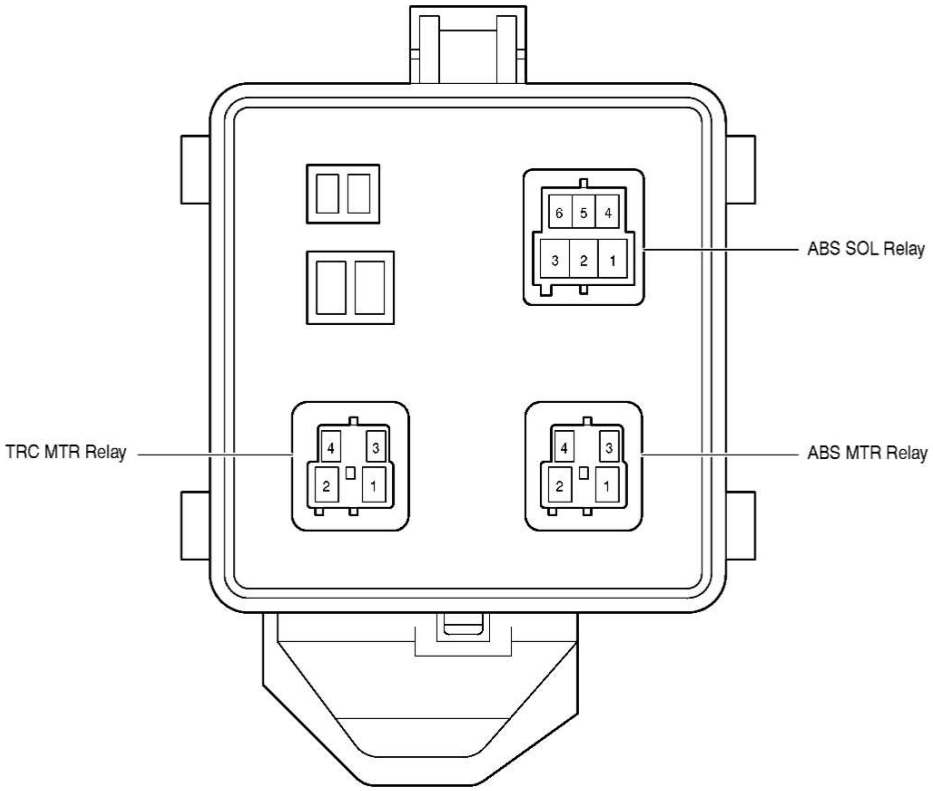


F RELAY LOCATIONS

② : Engine Room R/B	Engine Compartment Left (See Page 20)

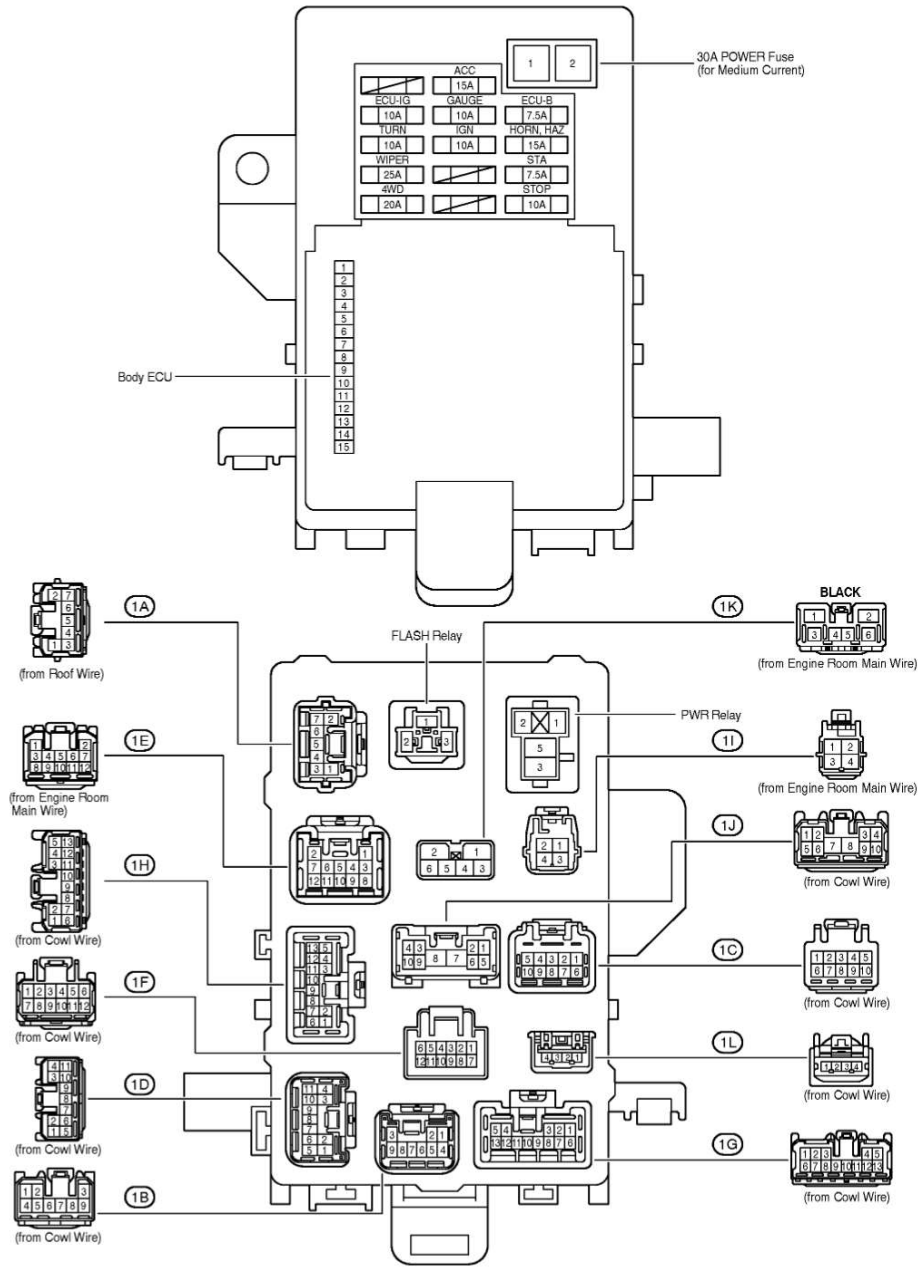


⑤ : VSC R/B	Engine Compartment Right (See Page 20)

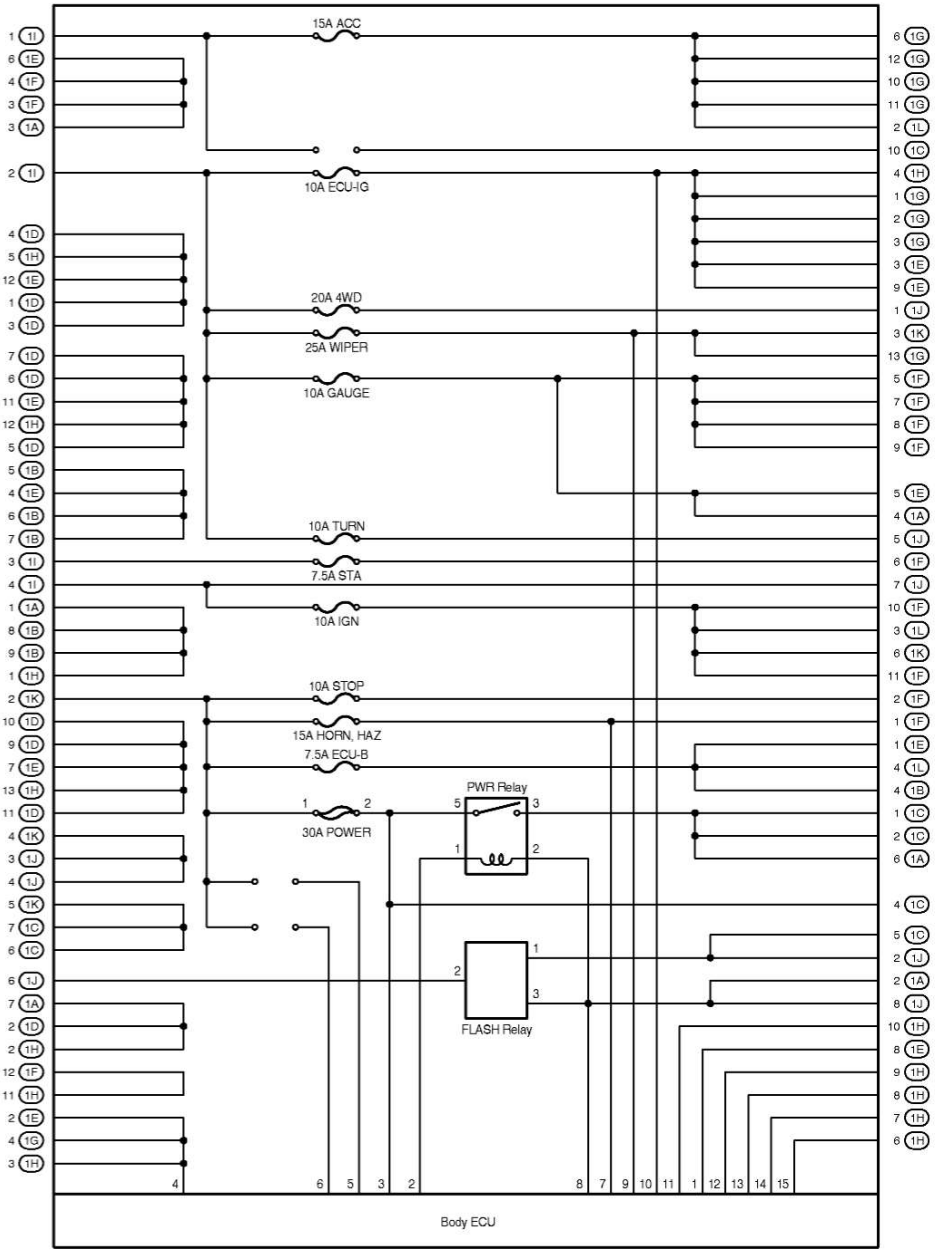


F RELAY LOCATIONS

: Driver Side J/B	Lower Finish Panel (See Page 21)

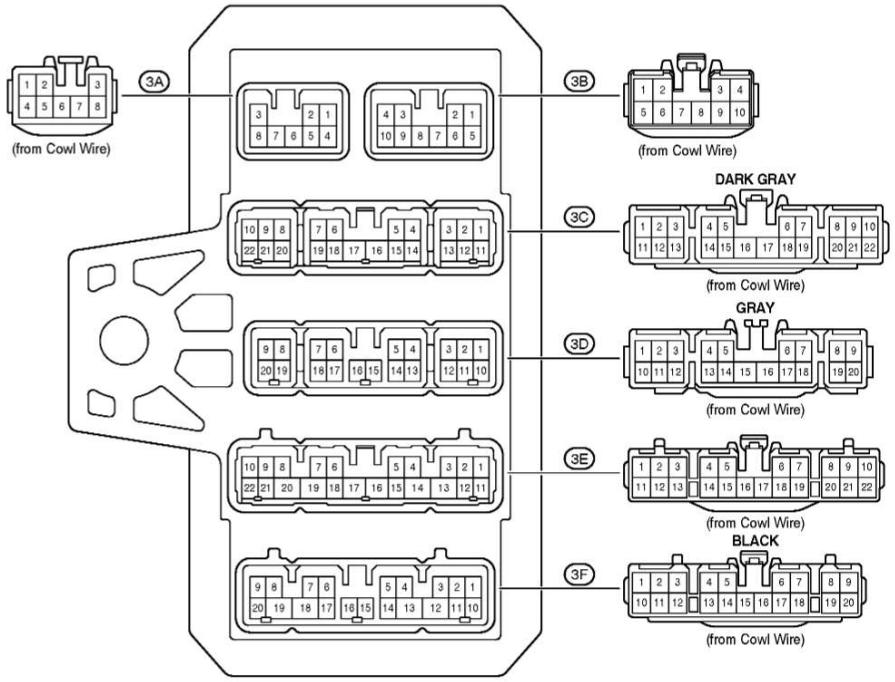


[Driver Side J/B Inner Circuit]

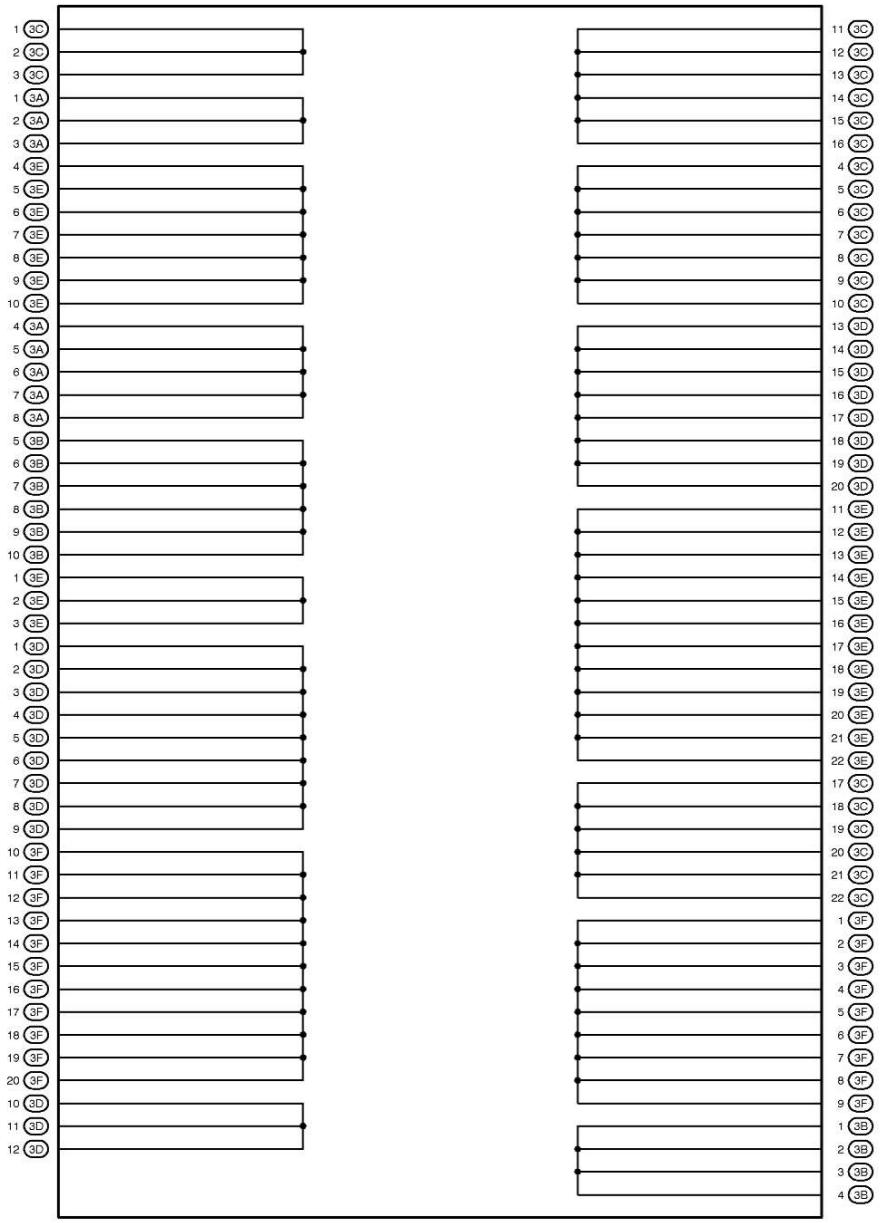


F RELAY LOCATIONS

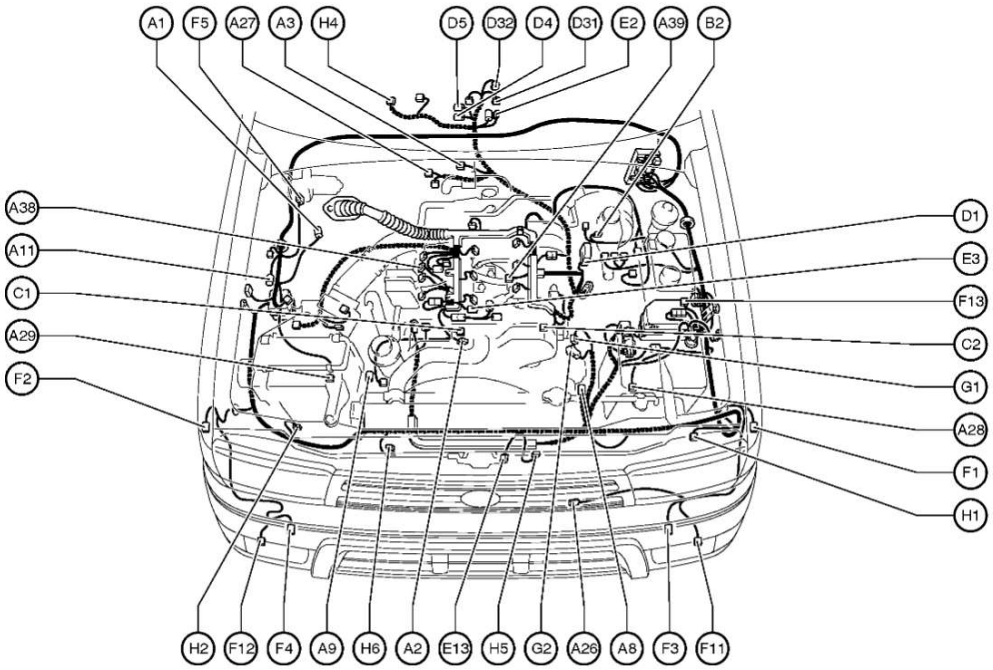
: Center J/B	Near the Steering Column Tube (See Page 21)



[Center J/B Inner Circuit]



Position of Parts in Engine Compartment



A 1 A/C Dual Pressure SW
A 2 A/C Magnetic Clutch
A 3 A/T Fluid Temp. Sensor
A 8 ABS Speed Sensor Front LH
A 9 ABS Speed Sensor Front RH
A 11 Auto Antenna Motor
A 26 A/C Ambient Temp. Sensor
A 27 Air Fuel Ratio Sensor
A 28 Airbag Sensor Front LH
A 29 Airbag Sensor Front RH
A 38 Accel Position Sensor
A 39 ADD Actuator

B 2 Brake Fluid Level Warning SW

C 1 Camshaft Position Sensor
C 2 Crankshaft Position Sensor

D 1 Data Link Connector 1
D 4 Detection SW (Transfer L4 Position)
D 5 Detection SW (Transfer Neutral Position)
D 31 Detection SW (Transfer 4WD Position)
D 32 Detection SW (Transfer H4L Position)

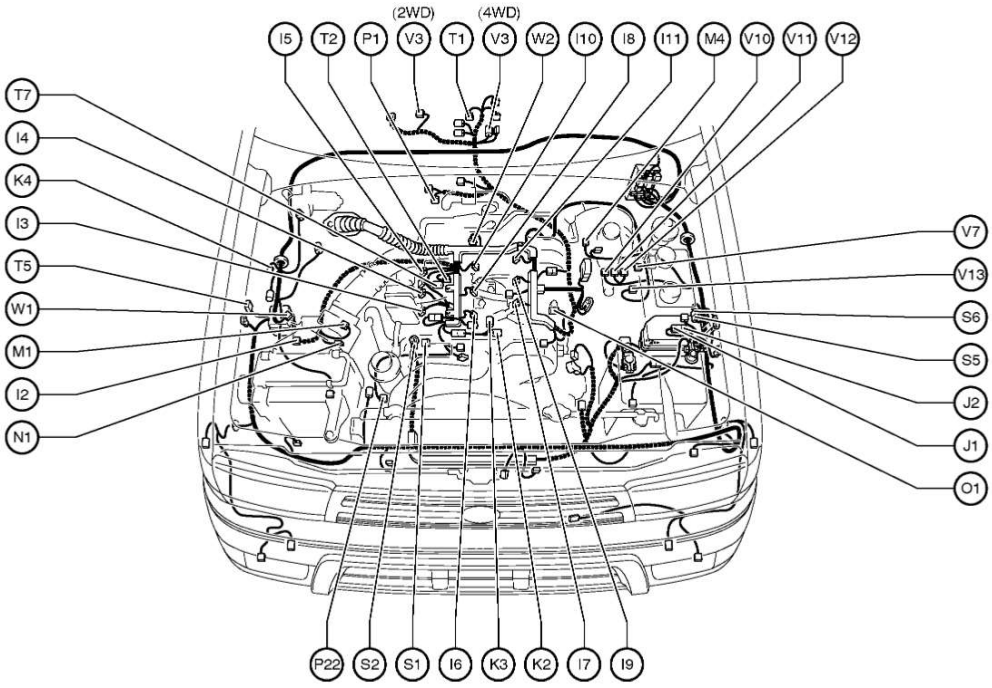
E 2 Electronically Controlled Transmission Solenoid
E 3 Engine Coolant Temp. Sensor
E 13 Engine Hood Courtesy SW

F 1 Front Parking Light LH
F 2 Front Parking Light RH
F 3 Front Turn Signal Light LH
F 4 Front Turn Signal Light RH
F 5 Front Wiper Motor
F 11 Front Fog Light LH
F 12 Front Fog Light RH
F 13 Fuse Box

G 1 Generator
G 2 Generator

H 1 Headlight LH
H 2 Headlight RH
H 4 Heated Oxygen Sensor (Bank 1 Sensor 2)
H 5 Horn LH
H 6 Horn RH

Position of Parts in Engine Compartment



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

J 1 Junction Connector
J 2 Junction Connector

K 2 Knock Sensor No.1
K 3 Knock Sensor No.2
K 4 Keyless Buzzer

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

N 1 Noise Filter

O 1 Oil Pressure SW

P 1 Park/Neutral Position SW
P22 Power Steering Oil Pressure SW

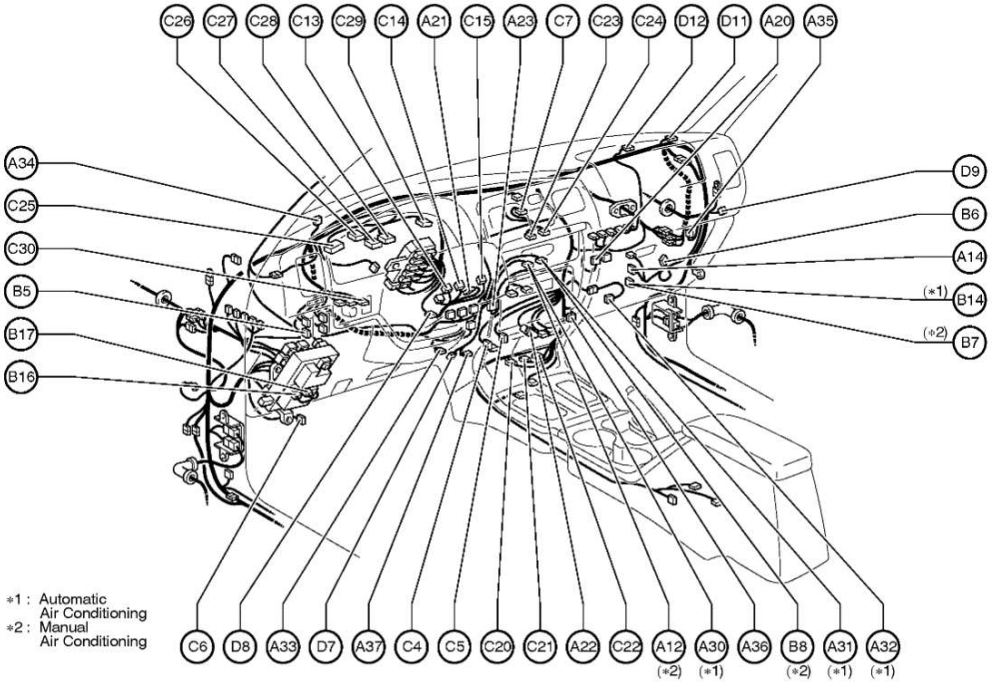
S 1 Starter
S 2 Starter
S 5 Short Connector (VSC)
S 6 Short Connector (VSC)

T 1 2-4 Select Motor
T 2 Throttle Position Sensor
T 5 Theft Deterrent Horn
T 7 Throttle Control Motor and Clutch

V 3 Vehicle Speed Sensor
(Electronically Controlled Transmission)
V 7 VSV (EVAP)
V10 VSC Actuator
V11 VSC Actuator
V12 VSC Actuator
V13 VSV (Canister Closed Valve)

W 1 Washer Motor (w/o Daytime Running Light),
Washer Motor and Washer Level Warning SW
(w/ Daytime Running Light)
W 2 Water Temp. Sender

Position of Parts in Instrument Panel



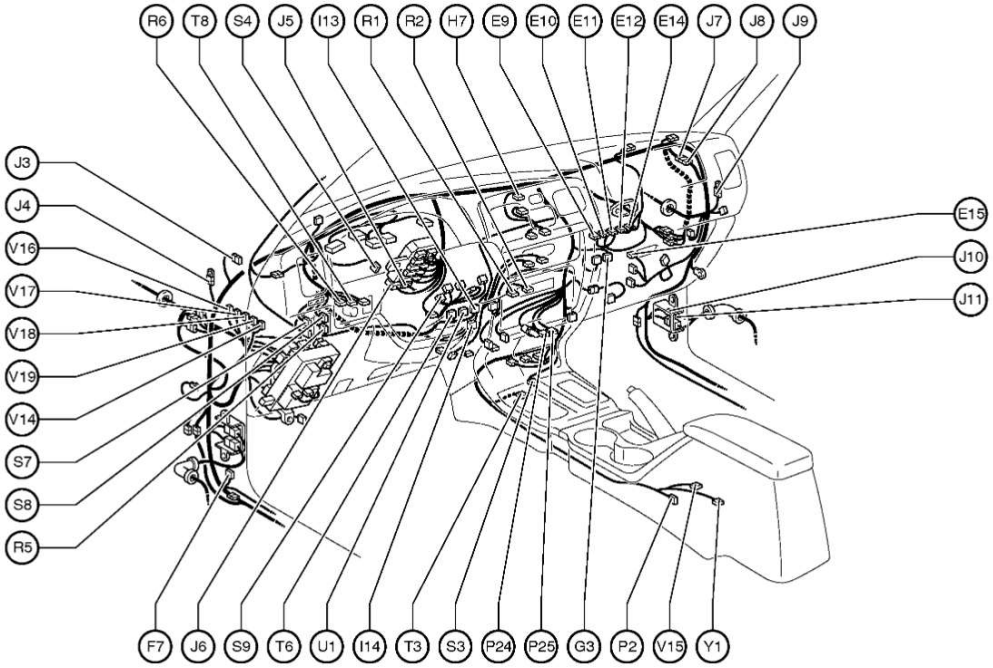
A12 A/C Amplifier
A14 A/C Thermistor
A20 Airbag Squib (Front Passenger Airbag Assembly)
A21 Airbag Squib (Steering Wheel Pad)
A22 Ashtray Illumination
A23 Auto Antenna Control Relay
A30 A/C Amplifier
A31 A/C Amplifier
A32 A/C Magnetic Clutch Relay
A33 A/C Room Temp. Sensor
A34 A/C Solar Sensor
A35 Air Inlet Control Servo Motor
A36 Air Mix Control Servo Motor and A/C Water Temp. Sensor
A37 Air Vent Mode Control Servo Motor

B 5 Back Window Lock SW
B 6 Blower Motor
B 7 Blower Resistor
B 8 Blower SW
B14 Blower Motor Linear Controller
B16 Body ECU
B17 Body ECU

C 4 Cigarette Lighter
C 5 Cigarette Lighter Illumination
C 6 Circuit Opening Relay
C 7 Clock
C13 Combination SW
C14 Combination SW
C15 Combination SW
C20 Center Airbag Sensor Assembly
C21 Center Airbag Sensor Assembly
C22 Center Airbag Sensor Assembly
C23 Center Cluster SW
C24 Center Cluster SW
C25 Combination Meter
C26 Combination Meter
C27 Combination Meter
C28 Combination Meter
C29 Combination Meter
C30 Center Diff. Lock SW

D 7 Data Link Connector 3
D 8 Daytime Running Light Relay (Main)
D 9 Daytime Running Light Relay No.4
D11 Diode (Back Window)
D12 Diode (Daytime Running Light No.1)

Position of Parts in Instrument Panel



E 9 Engine Control Module
E10 Engine Control Module
E11 Engine Control Module
E12 Engine Control Module
E14 Engine Control Module
E15 Extra High Speed Relay

F 7 4WD ECU

G 3 Glove Box Light

H 7 Hazard SW

I 13 Ignition Key Cylinder Light
I 14 Ignition SW

J 3 Junction Connector
J 4 Junction Connector
J 5 Junction Connector
J 6 Junction Connector
J 7 Junction Connector
J 8 Junction Connector
J 9 Junction Connector
J 10 Junction Connector
J 11 Junction Connector

P 2 Parking Brake SW
P24 Power Outlet Front LH
P25 Power Outlet Front RH

R 1 Radio and Player (Built-In Type Amplifier) or Stereo Power Amplifier (Separate Type Amplifier)
R 2 Radio and Player (Built-In Type Amplifier) or Stereo Power Amplifier (Separate Type Amplifier)
R 5 Remote Control Mirror SW
R 6 Rheostat

S 3 Shift Lock Control Computer
S 4 Stop Light SW
S 7 Seat Heater SW LH
S 8 Seat Heater SW RH
S 9 Steering Sensor

T 3 2-4 Select SW
T 6 Transponder Key Amplifier
T 8 TRAC Off SW

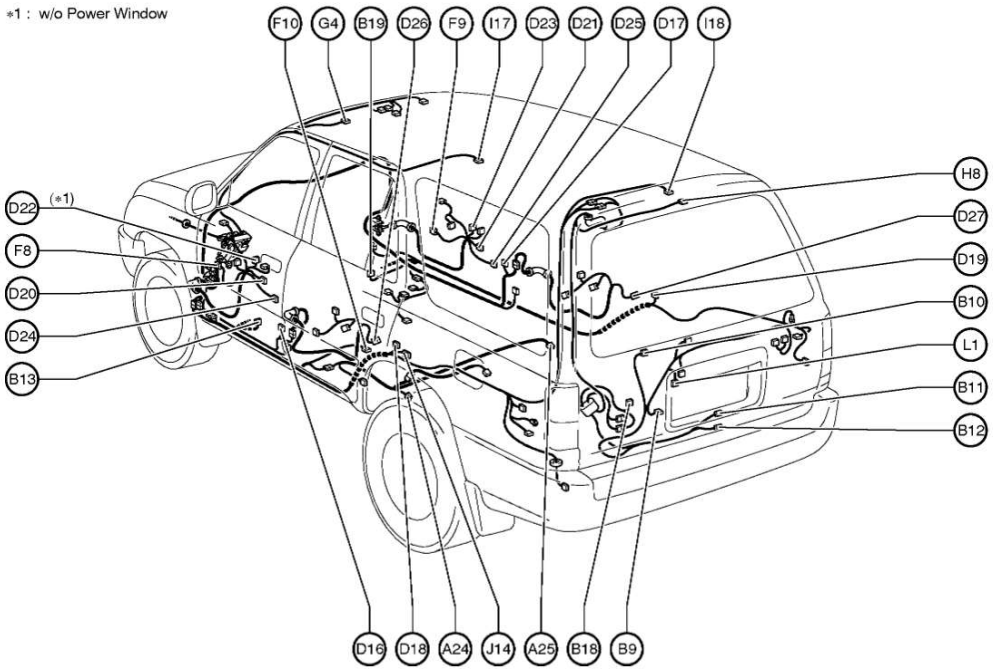
U 1 Unlock Warning SW

V14 VSC Buzzer
V15 VSC Deceleration Sensor
V16 VSC ECU
V17 VSC ECU
V18 VSC ECU
V19 VSC ECU

Y 1 Yaw Rate Sensor

Position of Parts in Body

*1 : w/o Power Window



A24 ABS Speed Sensor Rear LH
A25 ABS Speed Sensor Rear RH

B 9 Back Door Courtesy SW
B10 Back Door Lock Motor and Back Door Unlock Detection SW
B11 Back Window Limit SW
B12 Back Window Motor
B13 Buckle SW LH (w/o Power Seat)
B18 Back Door ECU
B19 Buckle SW RH (w/o Power Seat)

D16 Door Courtesy SW Front LH
D17 Door Courtesy SW Front RH
D18 Door Courtesy SW Rear LH
D19 Door Courtesy SW Rear RH
D20 Door Key Lock and Unlock SW Front LH
D21 Door Key Lock and Unlock SW Front RH
D22 Door Lock Control SW Front LH (w/o Power Window)
D23 Door Lock Control SW Front RH
D24 Door Lock Motor and Door Unlock Detection SW Front LH
D25 Door Lock Motor and Door Unlock Detection SW Front RH
D26 Door Lock Motor and Door Unlock Detection SW Rear LH
D27 Door Lock Motor and Door Unlock Detection SW Rear RH

F 8 Front Door Speaker LH
F 9 Front Door Speaker RH
F10 Fuel Sender and Fuel Pump

G 4 Garage Door Opener

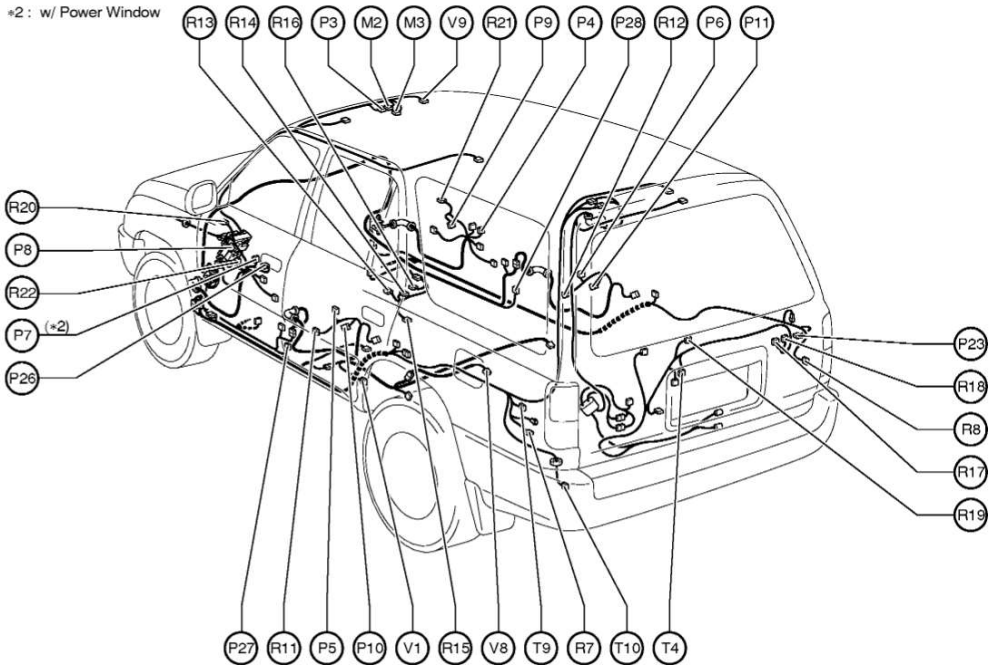
H 8 High Mounted Stop Light

I 17 Interior Light (Front)
I 18 Interior Light (Rear)

J 14 Junction Connector

L 1 License Plate Light

Position of Parts in Body



M 2 Moon Roof Control Motor and Limit SW
M 3 Moon Roof Control Relay and SW

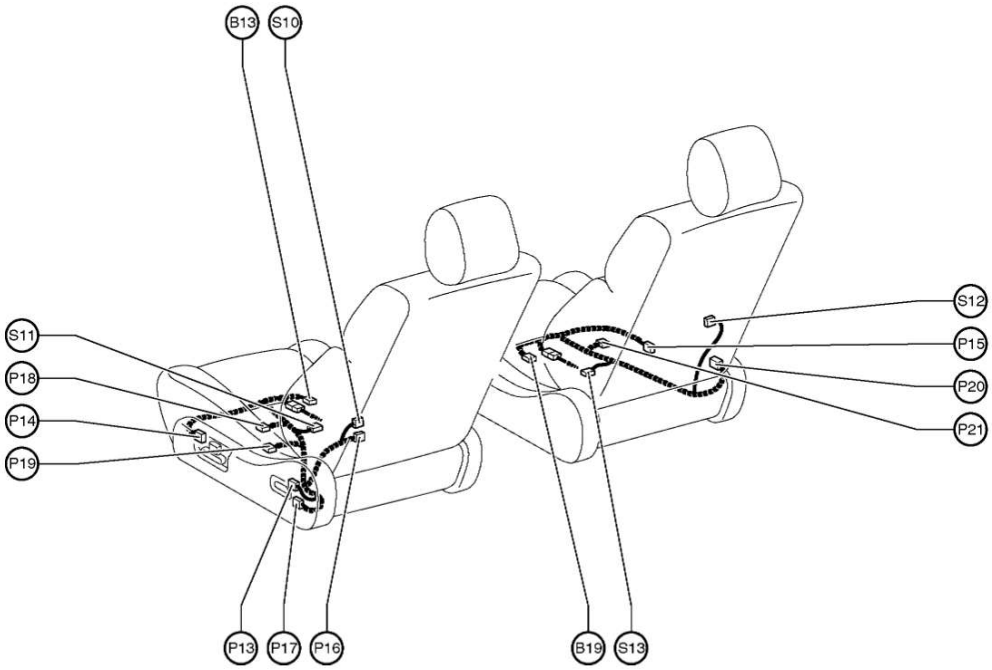
P 3 Personal Light
P 4 Power Window Control SW Front RH
P 5 Power Window Control SW Rear LH
P 6 Power Window Control SW Rear RH
P 7 Power Window Master SW
P 8 Power Window Motor Front LH
P 9 Power Window Motor Front RH
P10 Power Window Motor Rear LH
P11 Power Window Motor Rear RH
P23 Power Outlet (Rear)
P26 Power Window Master SW
P27 Pretensioner LH
P28 Pretensioner RH

R 7 Rear Combination Light LH
R 8 Rear Combination Light RH
R11 Rear Door Speaker LH
R12 Rear Door Speaker RH
R13 Rear Heater Blower Motor
R14 Rear Heater Blower Resistor
R15 Rear Heater Blower SW
R16 Rear Heater Relay
R17 Rear Window Defogger
R18 Rear Window Defogger
R19 Rear Wiper Motor
R20 Remote Control Mirror LH
R21 Remote Control Mirror RH
R22 Remote Control Mirror SW

T 4 Tailgate Control SW
T 9 Trailer Converter
T10 Trailer Socket

V 1 Vapor Pressure Sensor
V 8 VSV (Vapor Pressure Sensor)
V 9 Vanity Light RH

Position of Parts in Seat



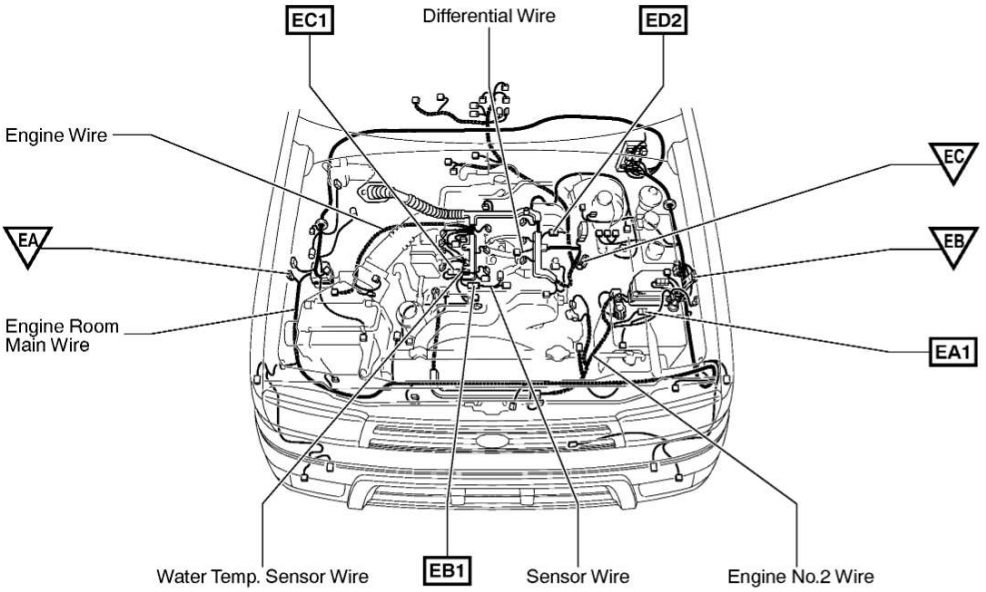
B13 Buckle SW LH (w/ Power Seat)
B19 Buckle SW RH (w/ Power Seat)

P13 Power Seat Control SW (Driver's Seat Lumbar Support)
P14 Power Seat Control SW (Driver's Side)
P15 Power Seat Control SW (Front Passenger's Side)
P16 Power Seat Motor (Driver's Seat Lumbar Support)
P17 Power Seat Motor (Driver's Seat Reclining Control)
P18 Power Seat Motor (Driver's Seat Slide Control)
P19 Power Seat Motor (Driver's Seat Vertical Control)
P20 Power Seat Motor
(Front Passenger's Seat Reclining Control)
P21 Power Seat Motor
(Front Passenger's Seat Slide Control)

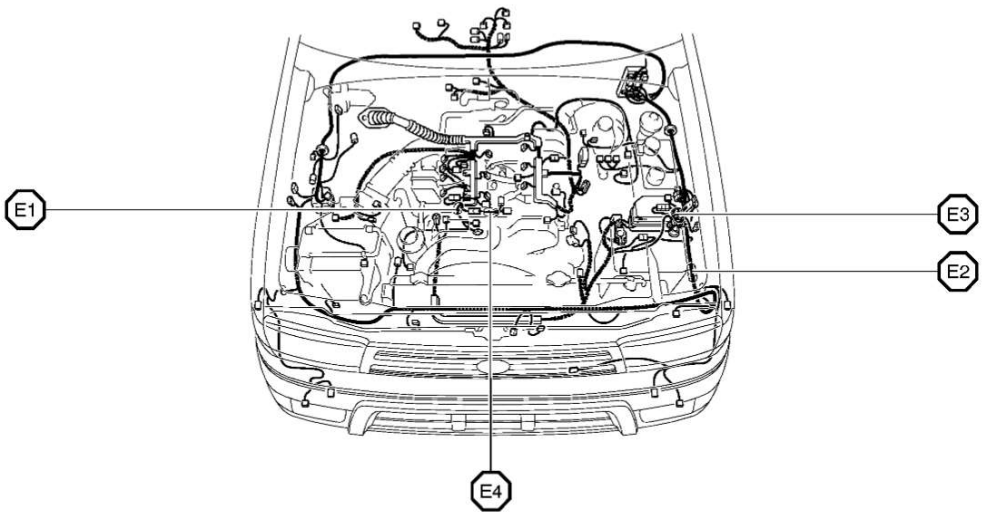
S10 Seat Heater (Driver's Seat Back)
S11 Seat Heater (Driver's Seat Cushion)
S12 Seat Heater (Front Passenger's Seat Back)
S13 Seat Heater (Front Passenger's Seat Cushion)

G ELECTRICAL WIRING ROUTING

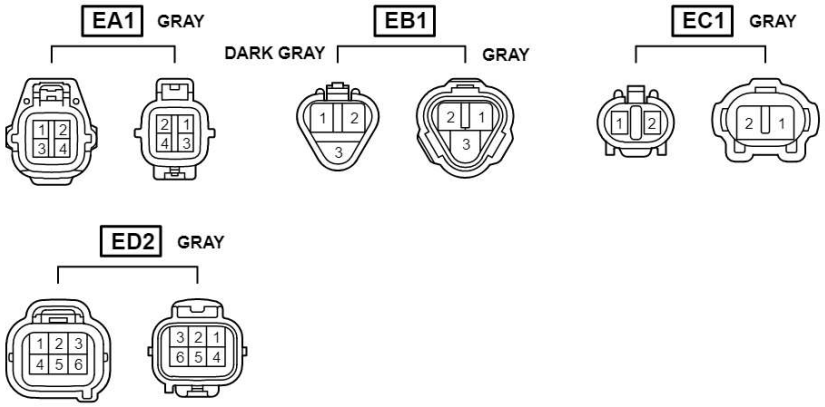
▭ : Location of Connector Joining Wire Harness and Wire Harness
▽ : Location of Ground Points



○ : Location of Splice Points

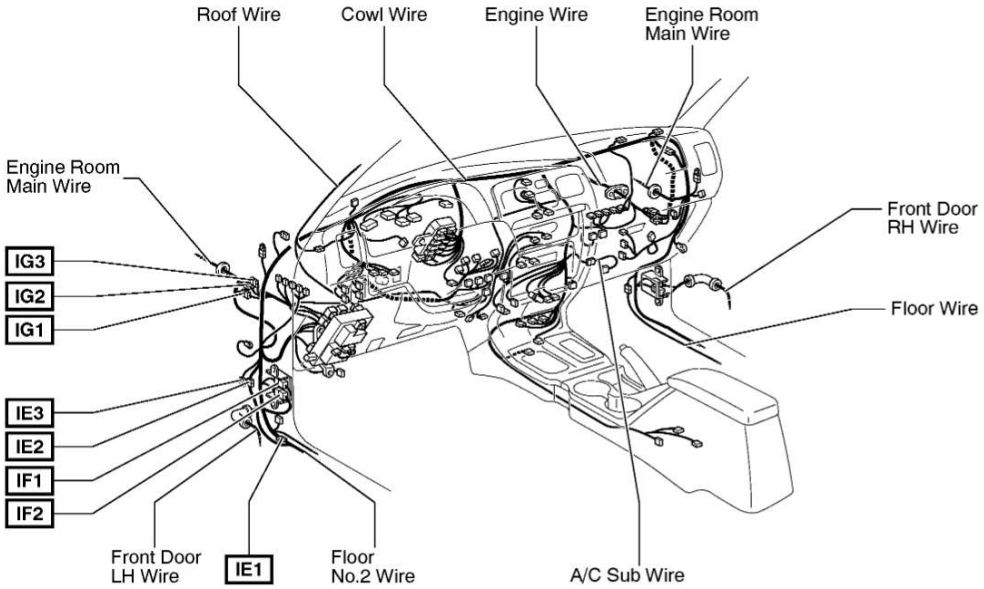


Connector Joining Wire Harness and Wire Harness

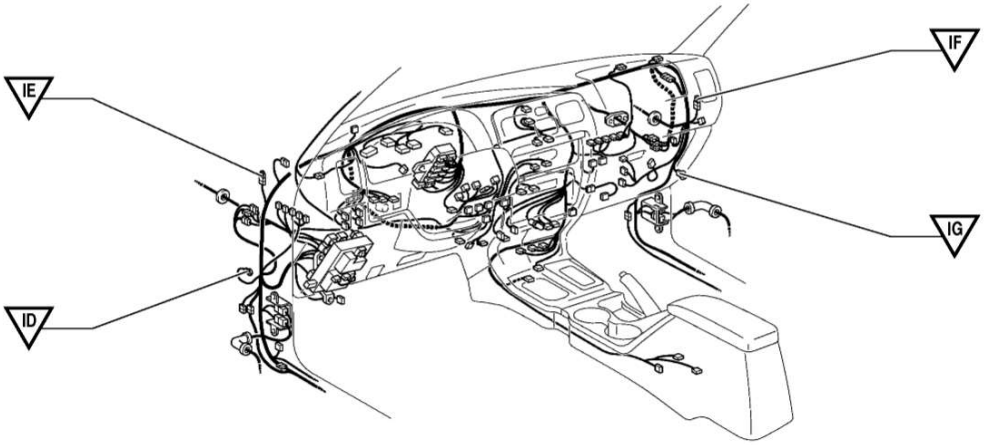


Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Engine No.2 Wire and Engine Room Main Wire (Near the Engine Room R/B)
EB1	Sensor Wire and Engine Wire (Front Side of Cylinder Head Cover Right)
EC1	Engine Wire and Water Temp. Sensor Wire (Front Side of Cylinder Head Cover Right)
ED2	Engine Wire and Differential Wire (Near the Front Differential)

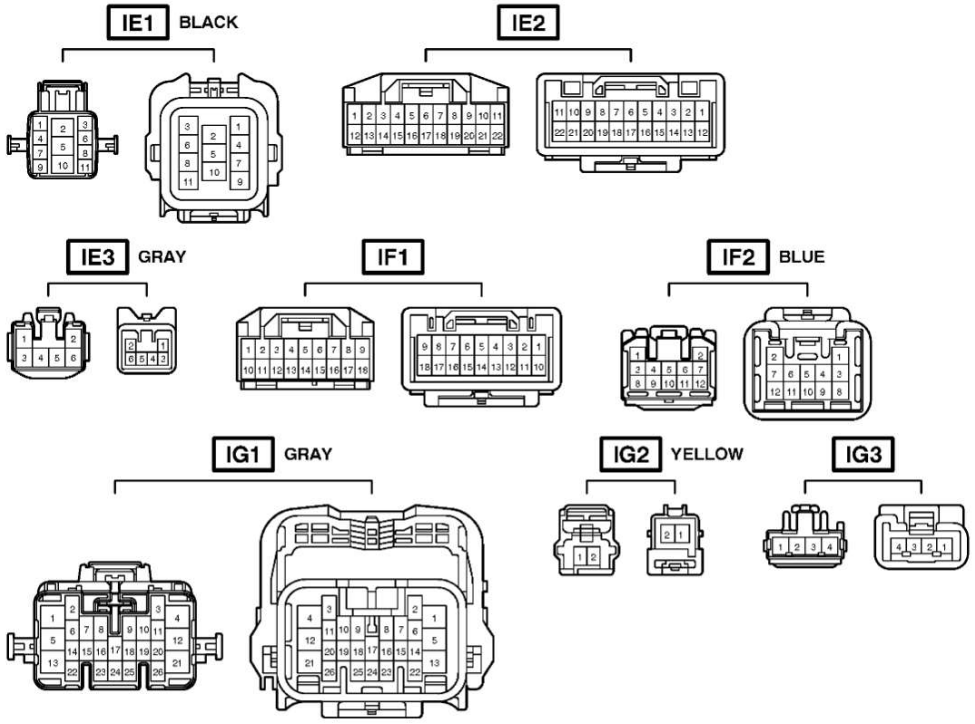
▭ : Location of Connector Joining Wire Harness and Wire Harness



▽ : Location of Ground Points



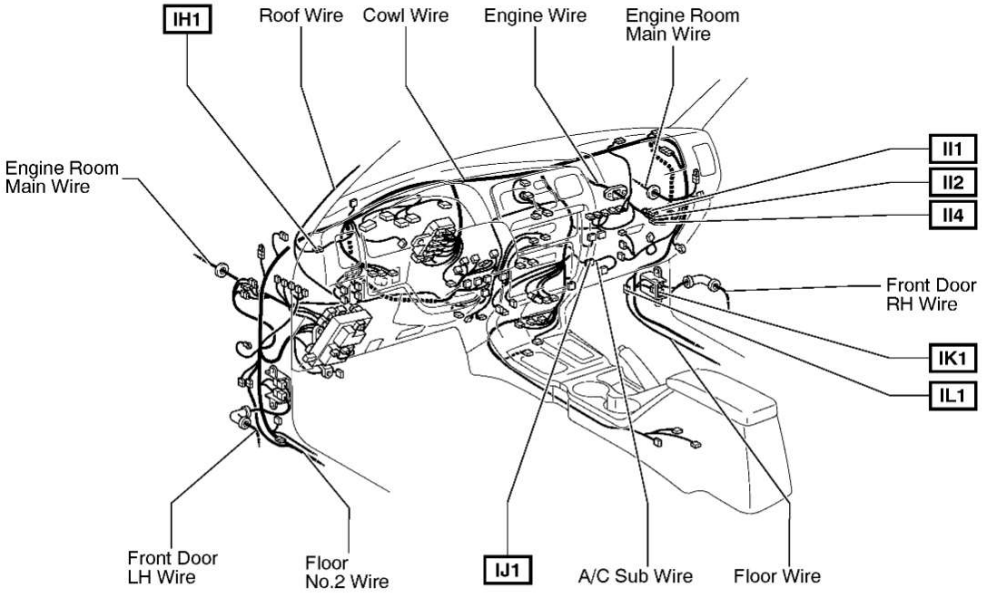
Connector Joining Wire Harness and Wire Harness



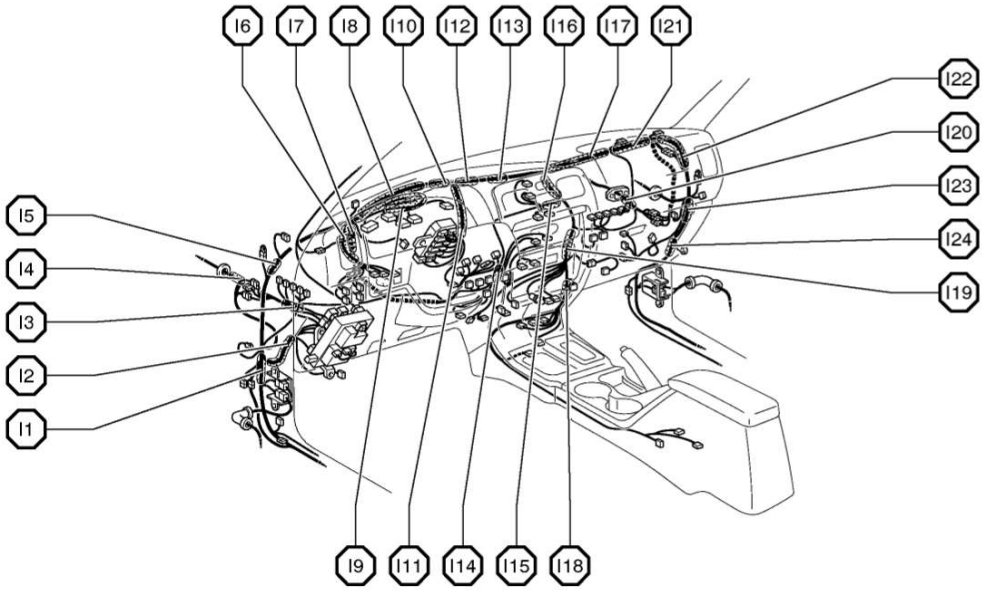
Code	Joining Wire Harness and Wire Harness (Connector Location)
IE1	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE2	
IE3	
IF1	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF2	
IG1	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IG2	
IG3	

G ELECTRICAL WIRING ROUTING

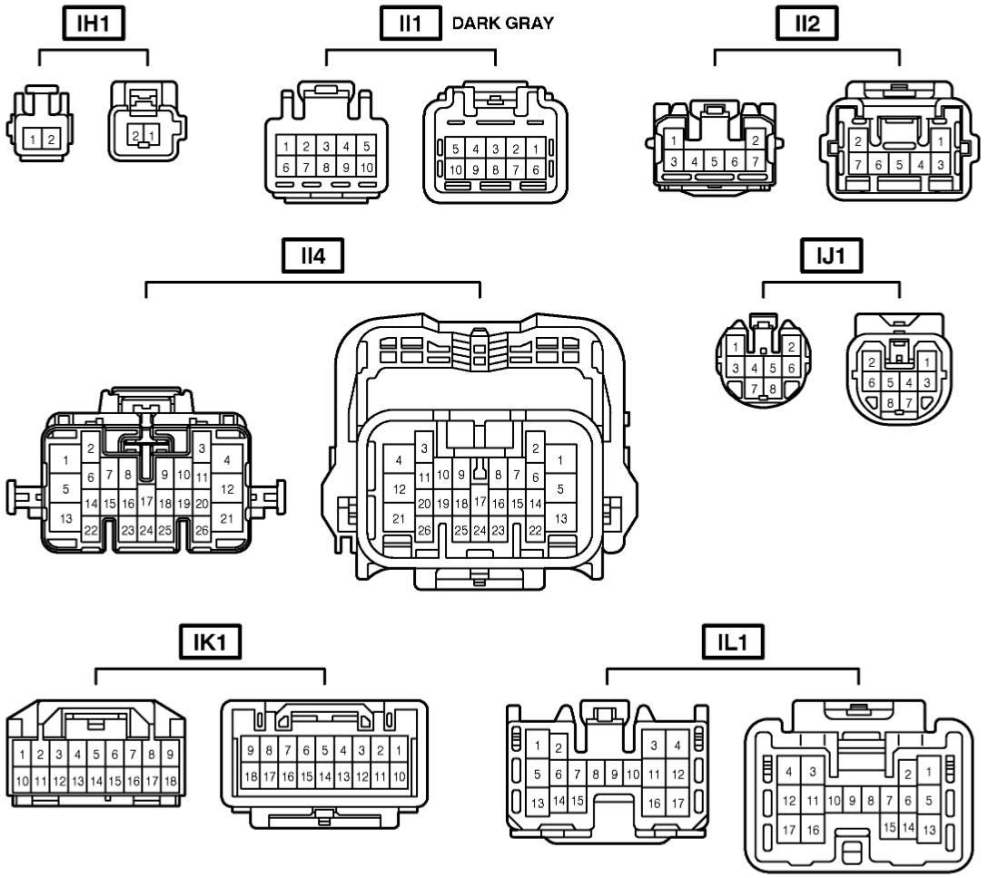
▭ : Location of Connector Joining Wire Harness and Wire Harness



◯ : Location of Splice Points



Connector Joining Wire Harness and Wire Harness

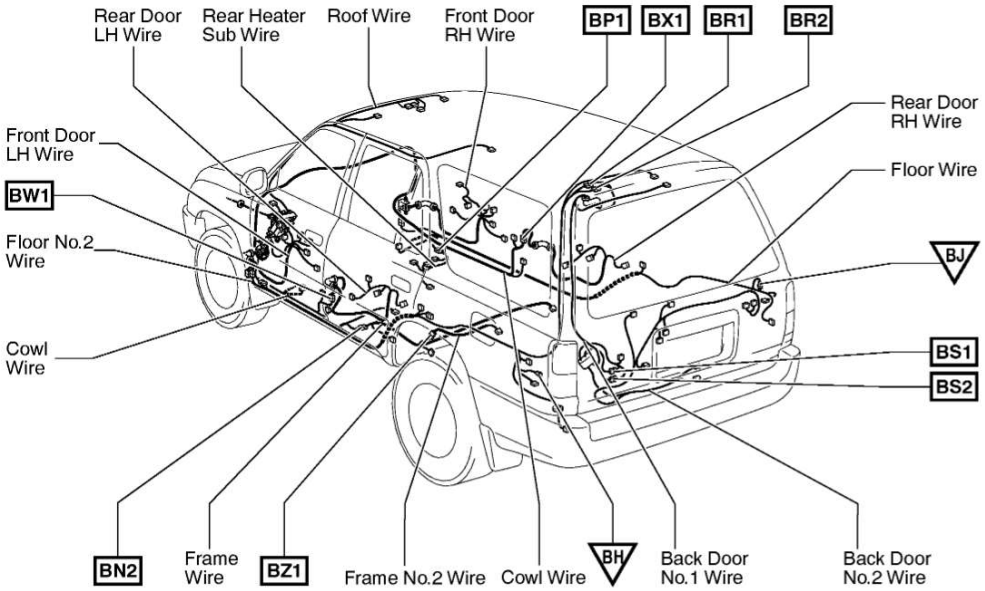


Code	Joining Wire Harness and Wire Harness (Connector Location)
IH1	Roof Wire and Cowl Wire (Instrument Panel Reinforcement Left)
II1	Engine Wire and Cowl Wire (On the Glove Box)
II2	
II4	
IJ1	Cowl Wire and A/C Sub Wire (Near the A/C Unit)
IK1	Front Door RH Wire and Cowl Wire (Right Kick Panel)
IL1	Cowl Wire and Floor Wire (Right Kick Panel)

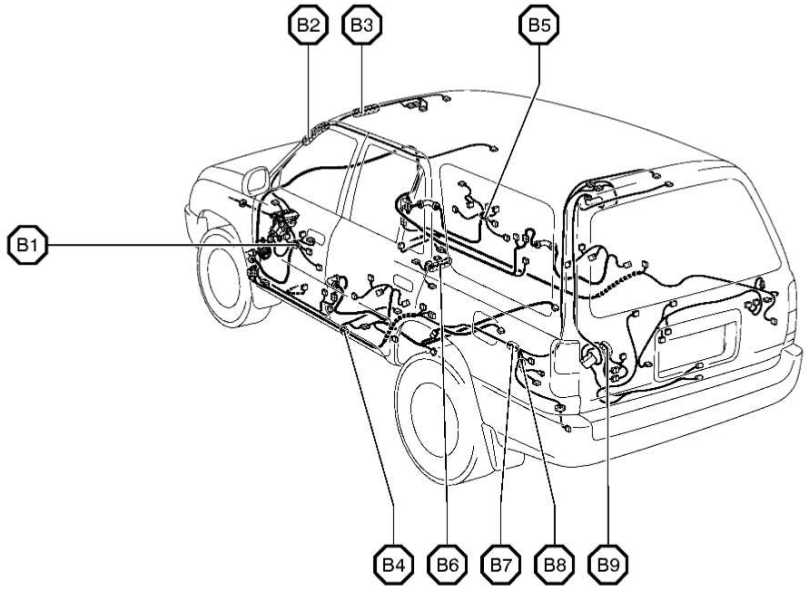
G ELECTRICAL WIRING ROUTING

▭ : Location of Connector Joining Wire Harness and Wire Harness

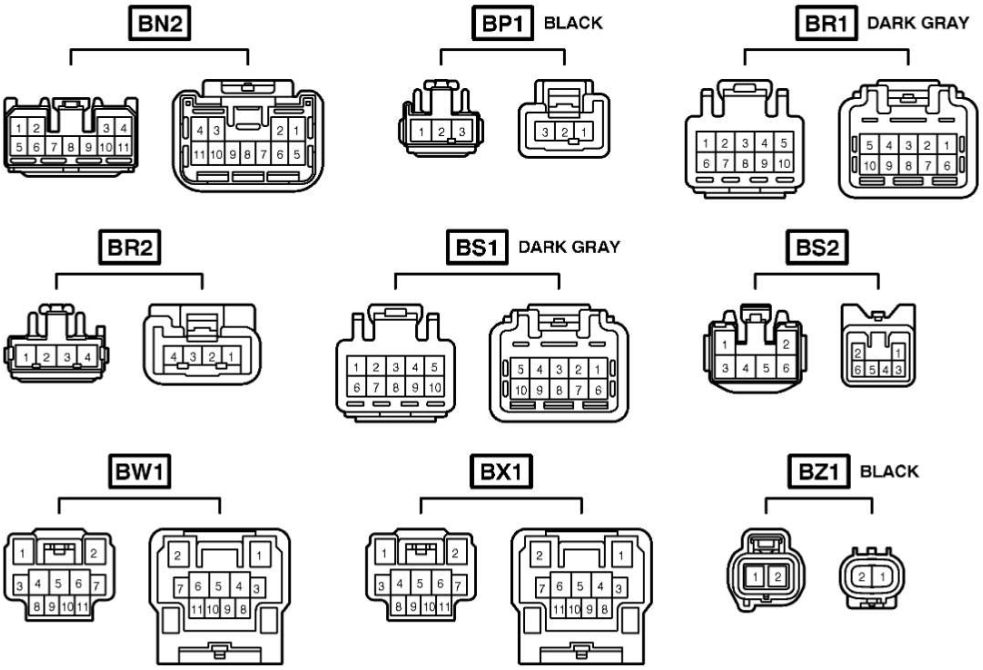
▽ : Location of Ground Points



○ : Location of Splice Points

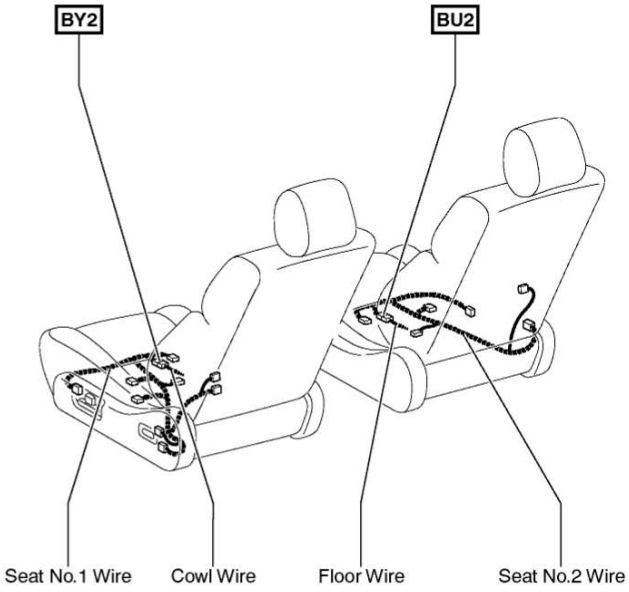


Connector Joining Wire Harness and Wire Harness

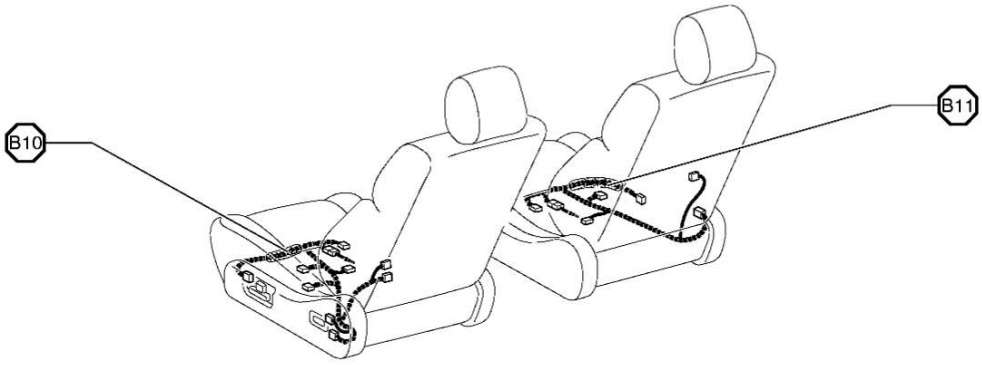


Code	Joining Wire Harness and Wire Harness (Connector Location)
BN2	Frame Wire and Floor No.2 Wire (Under the Left Side of Rear Seat Cushion)
BP1	Floor Wire and Rear Heater Sub Wire (Under the Front Passenger's Seat)
BR1	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BR2	
BS1	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)
BS2	
BW1	Rear Door LH Wire and Cowl Wire (Left Center Pillar)
BX1	Rear Door RH Wire and Cowl Wire (Right Center Pillar)
BZ1	Frame Wire and Frame No.2 Wire (Upper the Rear Axle Housing Left)

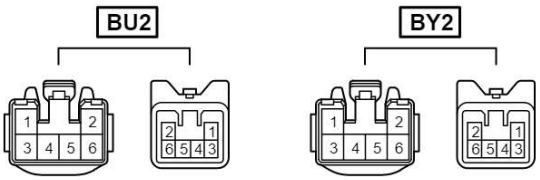
▭ : Location of Connector Joining Wire Harness and Wire Harness



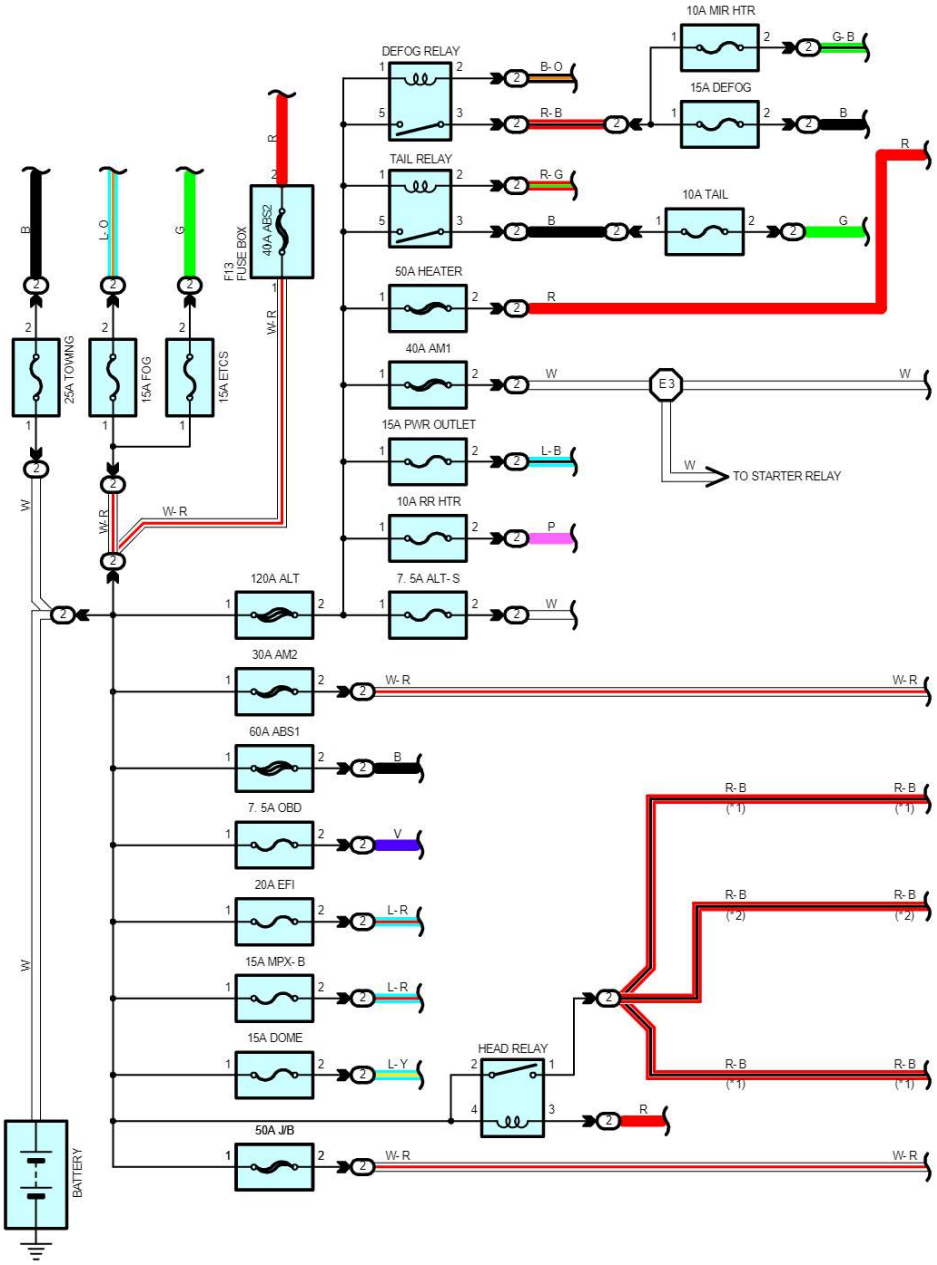
○ : Location of Splice Points

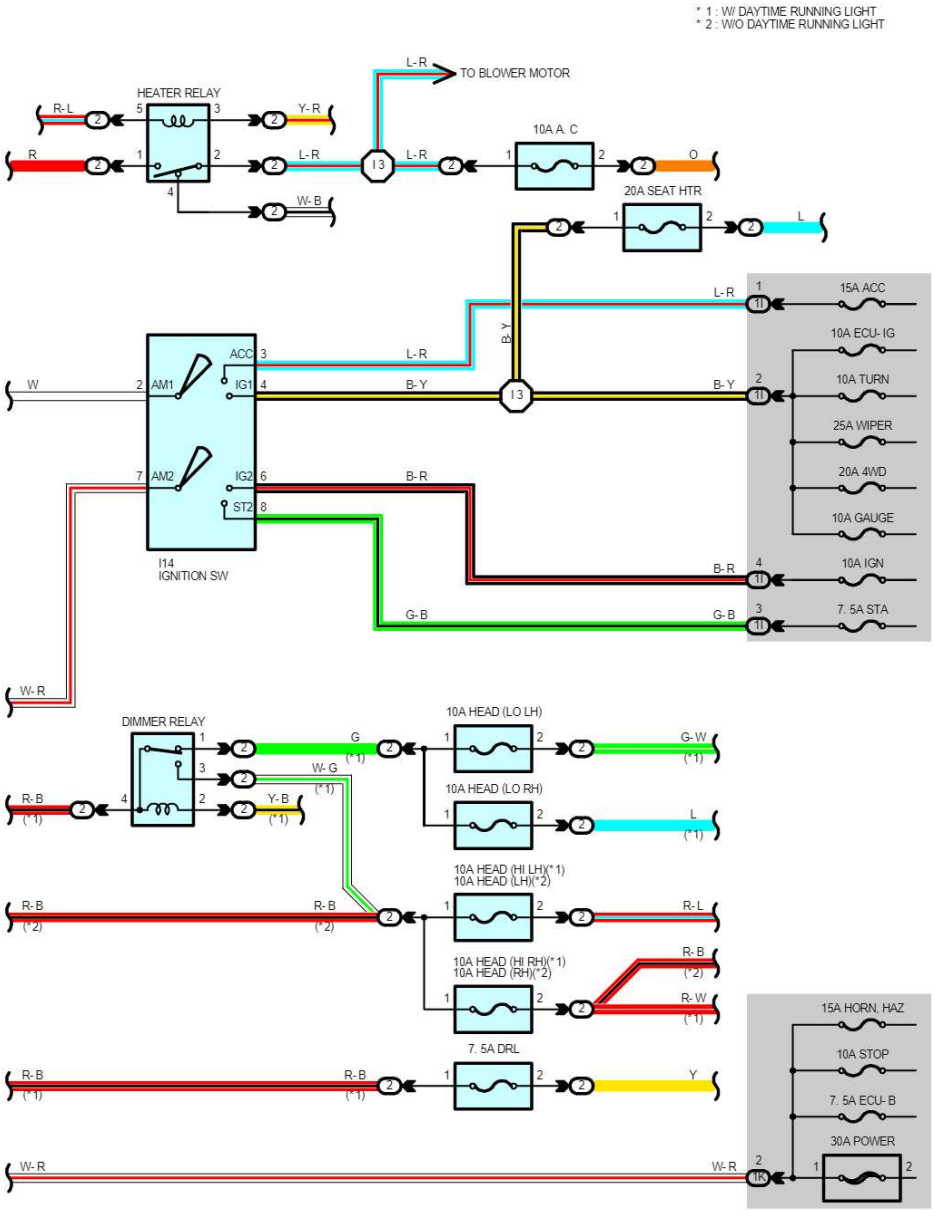


Connector Joining Wire Harness and Wire Harness



Code	Joining Wire Harness and Wire Harness (Connector Location)
BU2	Floor Wire and Seat No.2 Wire (Under the Front Passenger's Seat)
BY2	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)


10A MIR HTR
G-B
DEFOG RELAY
B-O
15A DEFOG
R-B
B
TAIL RELAY
R-G
10A TAIL
G
B
R
50A HEATER
R
40A AM1
W
E3
W
15A PWR OUTLET
L-B
W
TO STARTER RELAY
10A RR HTR
P
7. 5A ALT-S
W
120A ALT
30A AM2
W-R
W-R
60A ABS1
B
7. 5A OBD
V
R-B
(*1)
R-B
(*1)
20A EFI
L-R
R-B
(*2)
R-B
(*2)
15A MPX-B
L-R
15A DOME
L-Y
HEAD RELAY
R-B
(*1)
R-B
(*1)
R
50A J/B
W-R
W-R
F13
FUSE BOX
40A ABS2
W-R
R
B
L-O
G
25A TOWING
15A FOG
15A ETCS
W
W-R
W-R
W
BATTERY


* 1 : W/ DAYTIME RUNNING LIGHT
* 2 : W/O DAYTIME RUNNING LIGHT
HEATER RELAY
R-L
Y-R
R
L-R
W-B
L-R
TO BLOWER MOTOR
I3
10A A. C
O
20A SEAT HTR
L
15A ACC
10A ECU-IG
10A TURN
25A WIPER
20A 4WD
10A GAUGE
10A IGN
7. 5A STA
B-Y
B-R
G-B
W
AM1
ACC
IG1
AM2
IG2
ST2
I14
IGNITION SW
W-R
DIMMER RELAY
G
W-G
Y-B
R-B
10A HEAD (LO LH)
10A HEAD (LO RH)
G-W
L
10A HEAD (HI LH)(*1)
10A HEAD (LH)(*2)
R-L
10A HEAD (HI RH)(*1)
10A HEAD (RH)(*2)
R-W
7. 5A DRL
Y
15A HORN, HAZ
10A STOP
7. 5A ECU-B
30A POWER

POWER SOURCE

SERVICE HINTS

HEATER RELAY

2-1 : Closed with ignition SW on and blower SW on (Manual Air Conditioning),
heater control panel SW [A/C amplifier] on (Automatic Air Conditioning)

HEAD RELAY

2-1 : Closed with light control SW at **HEAD** position or dimmer SW at **FLASH** position
Closed with engine running and parking brake lever released (w/ daytime running light)

I14 IGNITION SW

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

TAIL RELAY

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

DIMMER RELAY

Changed from HEAD (LO) to HEAD (HI) with dimmer SW at **FLASH** position or with HEAD relay on and dimmer SW at **HIGH** position (w/ daytime running light)

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
F13	28	I14	31		

: RELAY BLOCKS

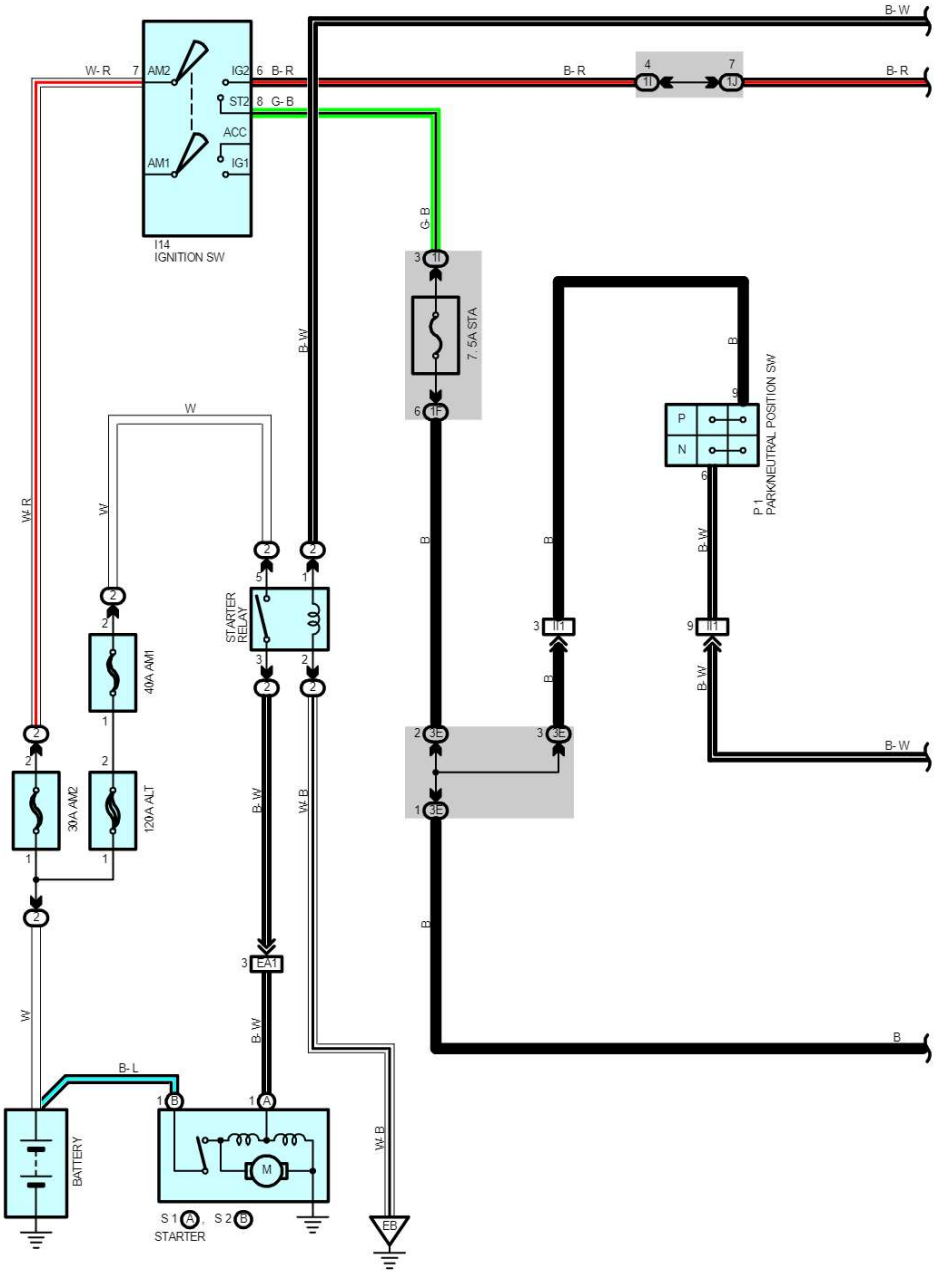
Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

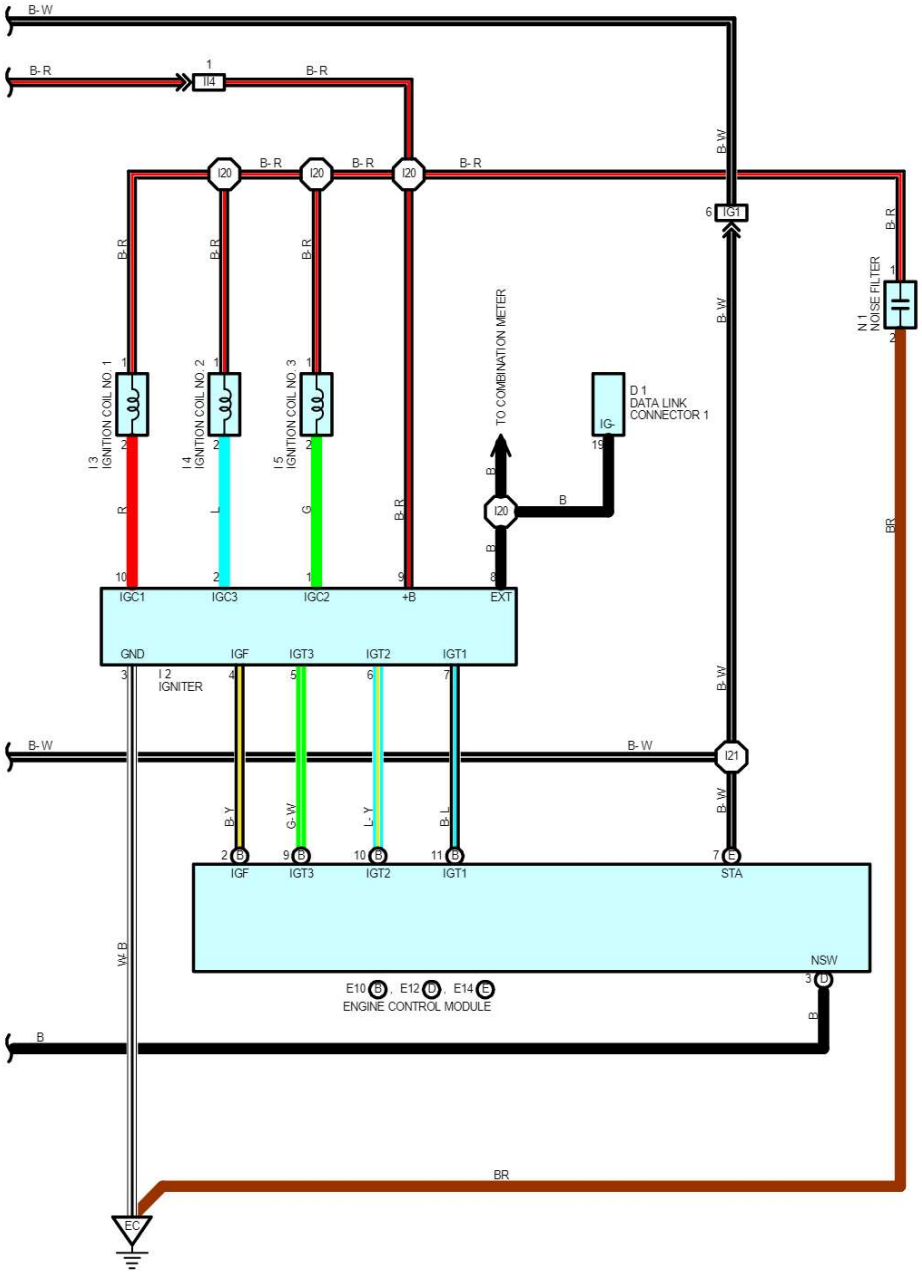
: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

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

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	36	Engine Room Main Wire	I3	40	Engine Room Main Wire


I14
IGNITION SW
AM2
IG2
ST2
ACC
IG1
AM1
W-R
B-R
G-B
B-W
W
B
B-L
W-B
7.5A STA
40A AM1
30A AM2
120A ALT
STARTER RELAY
P
N
P,I
PARK/NEUTRAL POSITION SW
BATTERY
M
S 1
S 2
STARTER
EB


B-W
B-R
I14
I20
I21
IG1
B-R
B-W
N 1
NOISE FILTER
I 3
IGNITION COIL NO. 1
I 4
IGNITION COIL NO. 2
I 5
IGNITION COIL NO. 3
TO COMBINATION METER
D 1
DATA LINK
CONNECTOR 1
IG-
IGC1
IGC3
IGC2
+B
EXT
GND
IGF
IGT3
IGT2
IGT1
I 2
IGNITER
B-Y
G-W
L-Y
B-L
STA
NSW
E10
E12
E14
ENGINE CONTROL MODULE
W-B
B
BR
EC

SERVICE HINTS

S1 (A), S2 (B) STARTER

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

I14 IGNITION SW

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

STARTER RELAY

3-5 : 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
D1	28	I3	29	P1	29
E10 B	31	I4	29	S1 A	29
E12 D	31	I5	29	S2 B	29
E14 E	31	I14	31		
I2	29	N1	29		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1I	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1J	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

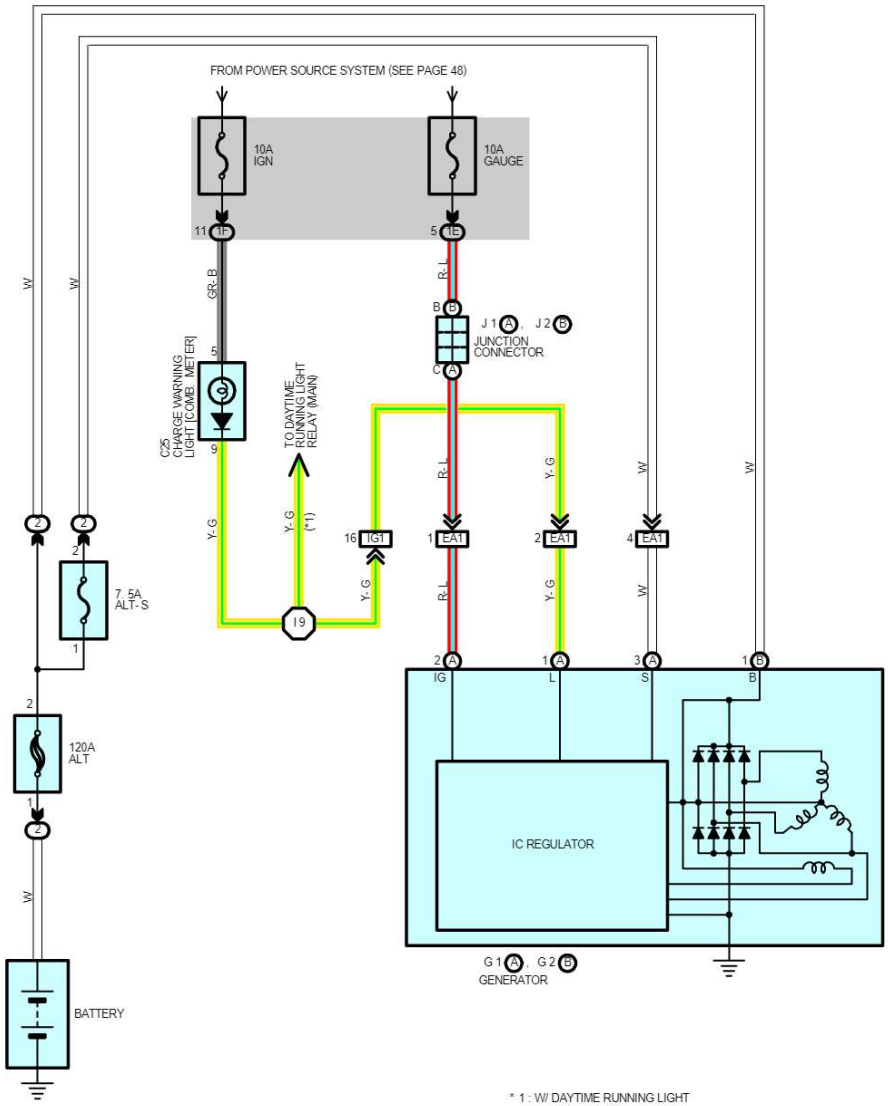
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	36	Engine No.2 Wire and Engine Room Main Wire (Near the Engine Room R/B)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II1	40	Engine Wire and Cowl Wire (On the Glove Box)
II4		

: GROUND POINTS

Code	See Page	Ground Points Location
EB	36	Front Left Fender
EC	36	Intake Manifold Left

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I20	40	Engine Wire	I21	40	Cowl Wire



* 1 : W/ DAYTIME RUNNING LIGHT

SERVICE HINTS

G1 (A), G2 (B) GENERATOR

(B) 1-GROUND : **13.9- 15.1** volts with engine running at **2000** rpm and **25**°C (**77**°F)
13.5- 14.3 volts with engine running at **2000** rpm and **115**°C (**239**°F)

(A) 1-GROUND : **0- 4** volts with ignition SW at **ON** position and engine not running

: PARTS LOCATION

Code		See Page	Code		See Page	Code		See Page
C25		30	G2	B	28	J2	B	29
G1	A	28	J1	A	29			

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

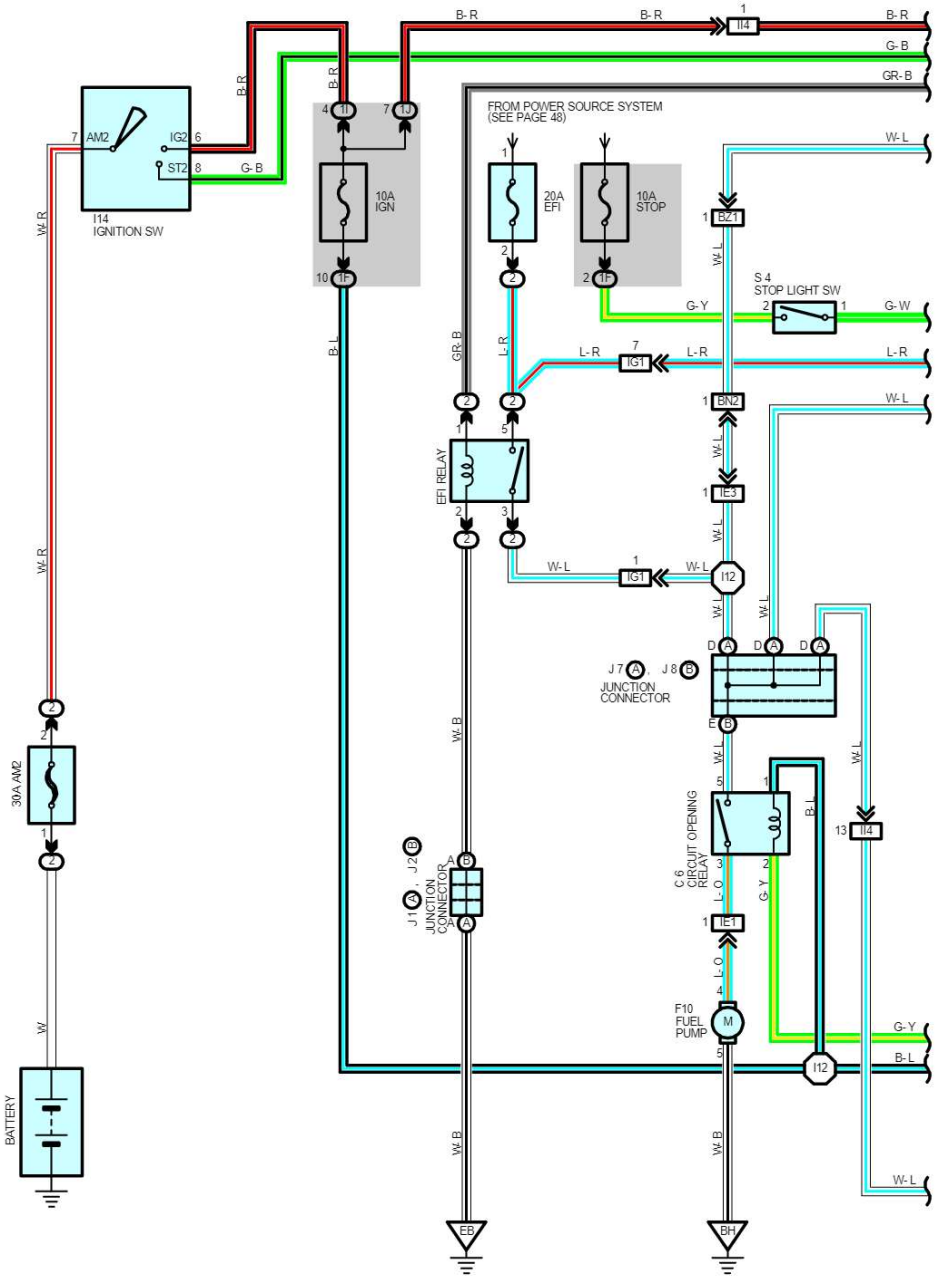
Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)

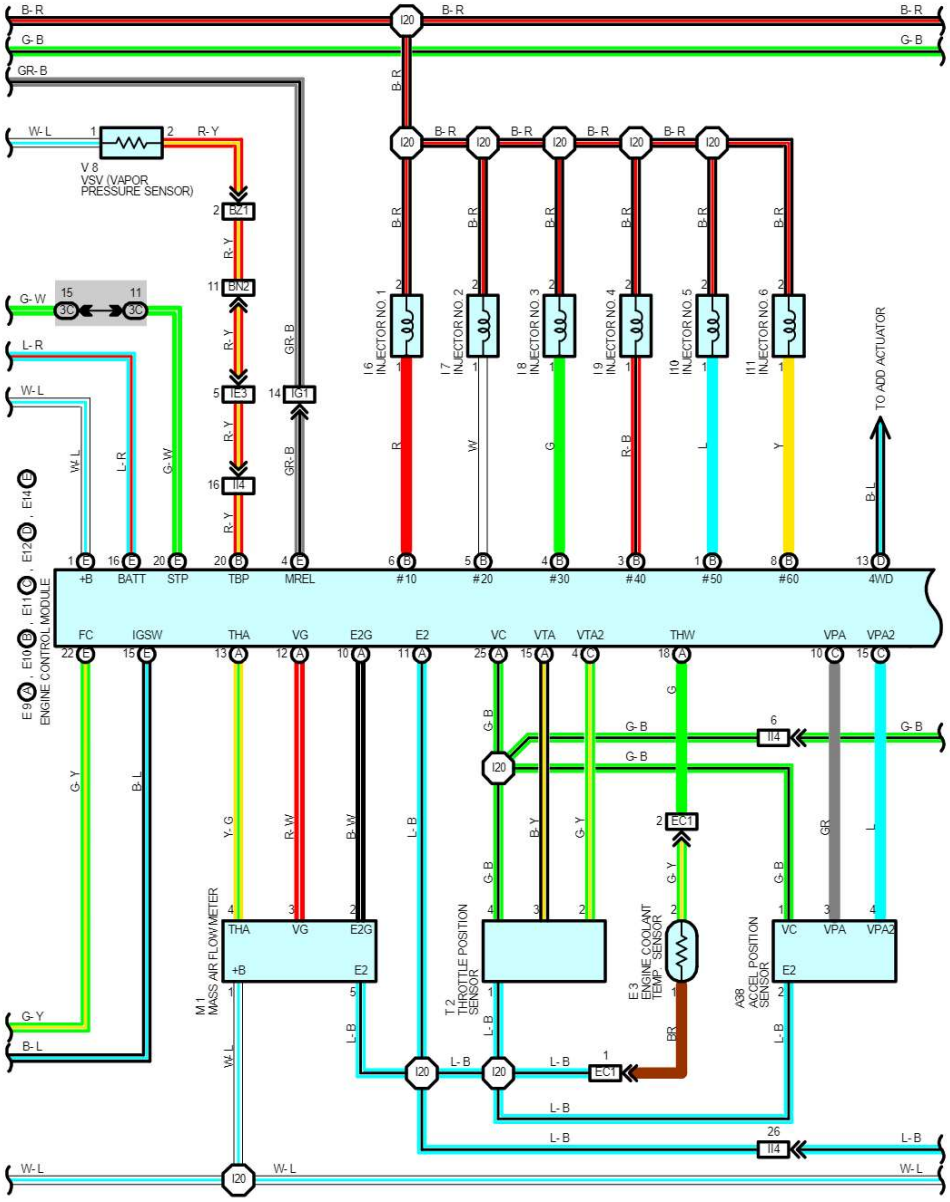
: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

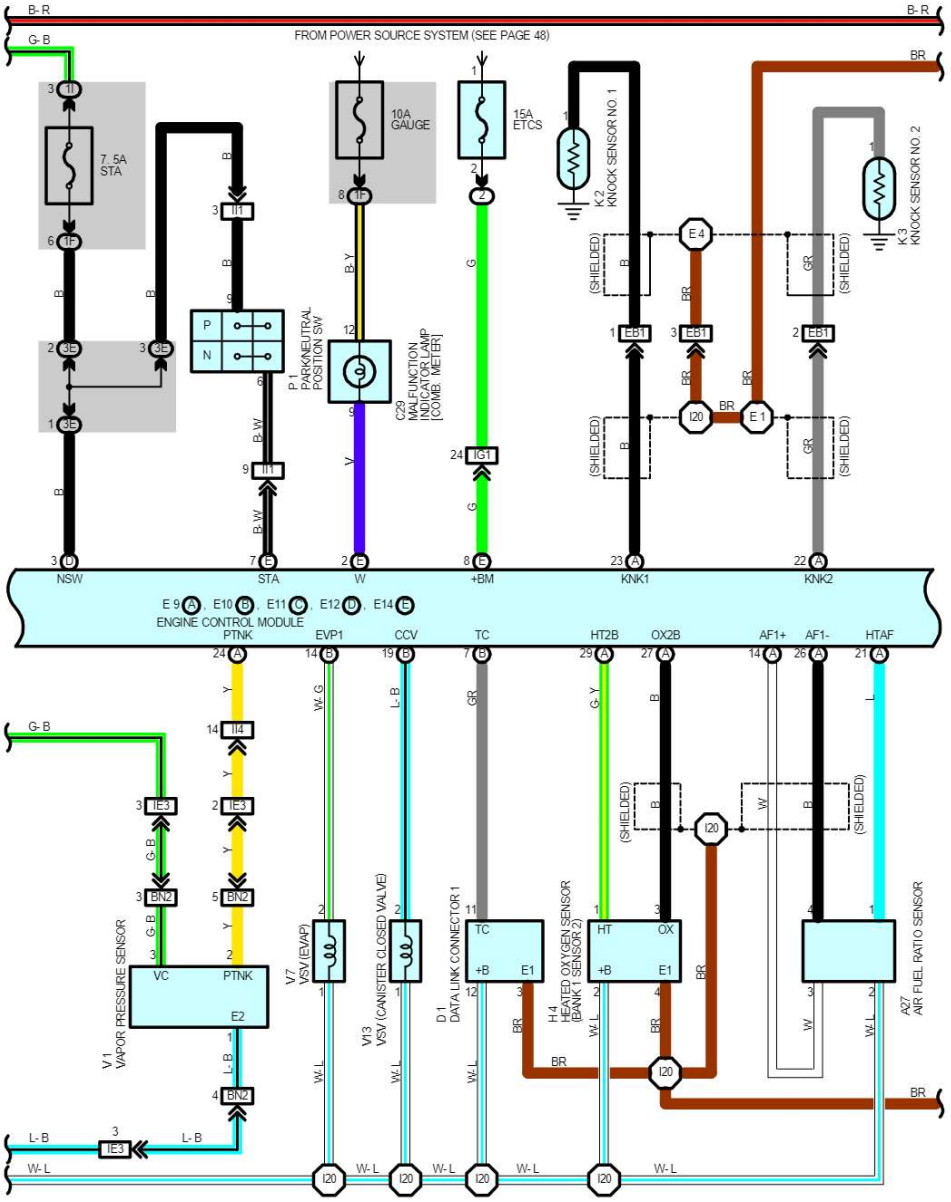
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	36	Engine No.2 Wire and Engine Room Main Wire (Near the Engine Room R/B)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

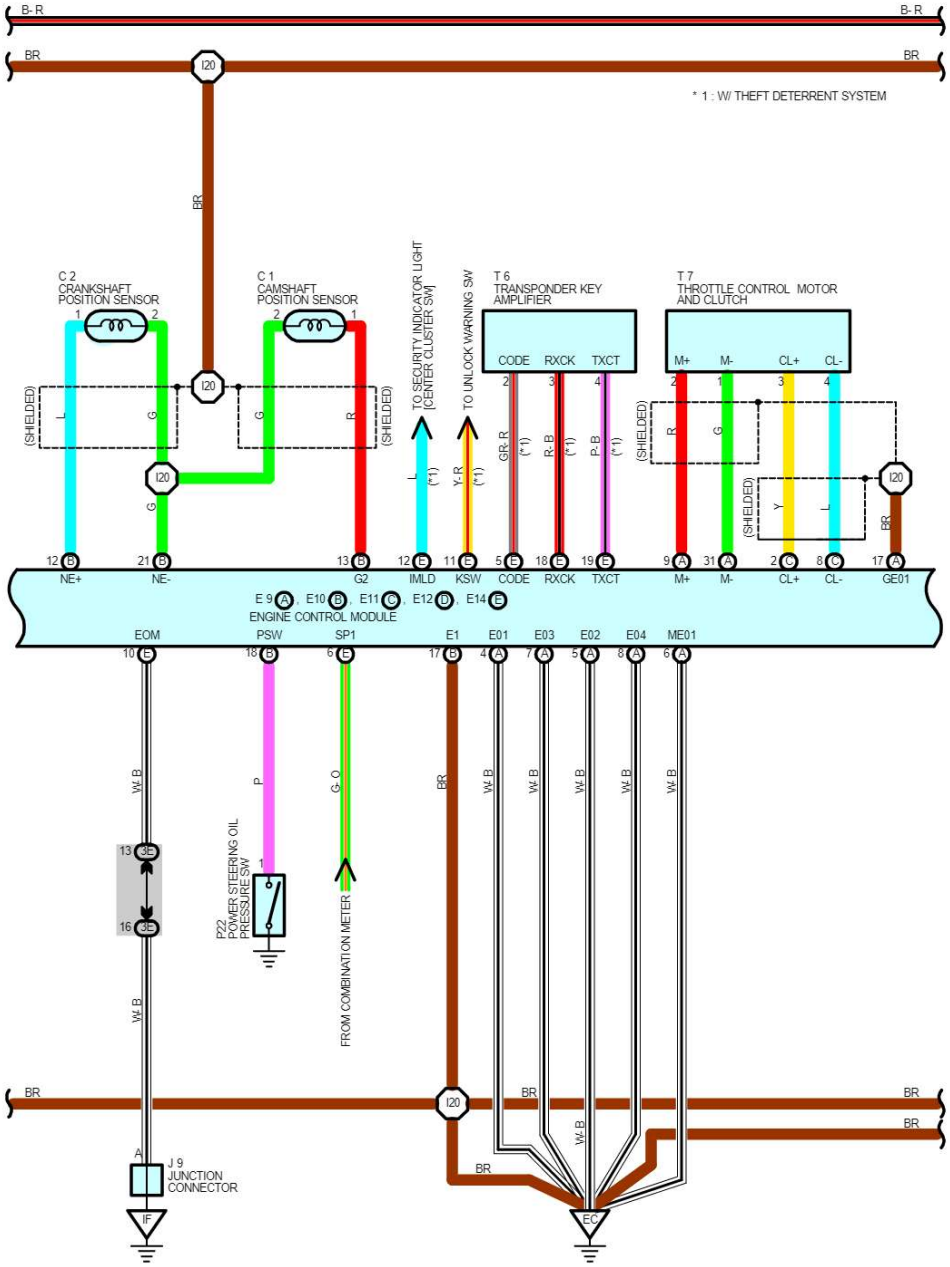
: SPLICE POINTS

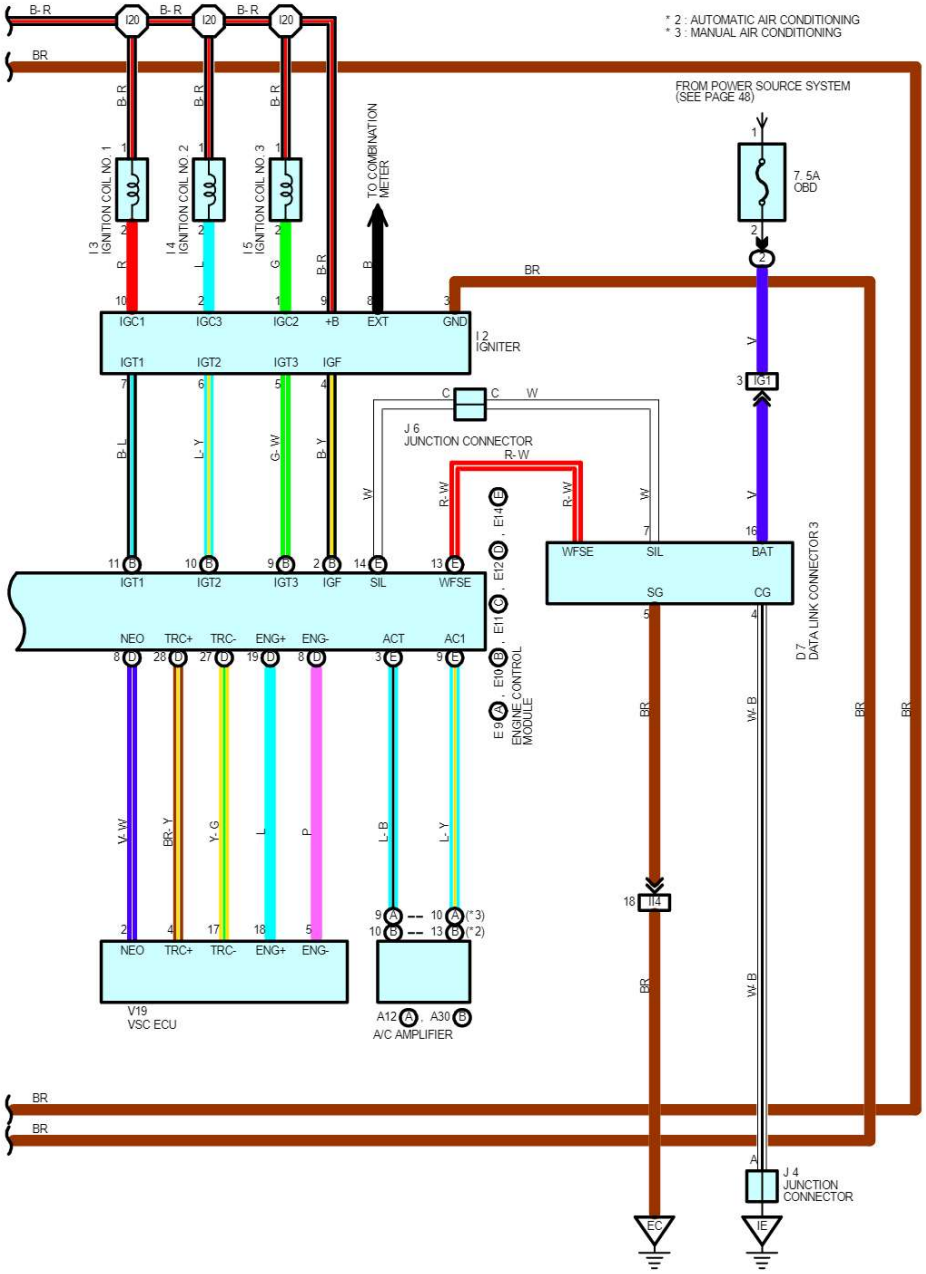
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I9	40	Cowl Wire			


B-R
B-R
1
II4
B-R
G-B
GR-B
FROM POWER SOURCE SYSTEM
(SEE PAGE 48)
W-L
7 AM2
IG2 6
ST2 8
G-B
I14
IGNITION SW
W-R
4 II1
7 II2
10A
IGN
10 IF
B-L
1
20A
EFI
2
2 IF
10A
STOP
1 BZ1
W-L
S 4
STOP LIGHT SW
G-Y
2
1
G-W
L-R
7
IG1
L-R
L-R
GR-B
L-R
1 BN2
W-L
EFI RELAY
1 IE3
W-L
W-L
1
IG1
W-L
I12
W-L
W-L
D A D A D A
J 7 A , J 8 B
JUNCTION
CONNECTOR
E B
W-L
W-L
5
1
B-L
C 6
CIRCUIT OPENING
RELAY
3
2
L-O
G-Y
1 IE1
L-O
4
F10
FUEL
PUMP
M
G-Y
B-L
I12
W-L
30A AM2
W
W-B
J 2 B
J 1 A
JUNCTION
CONNECTOR
B
A
13 II4
BATTERY
W-B
W-B
EB
EH


B-R
G-B
GR-B
W-L
R-Y
V8
VSV (VAPOR PRESSURE SENSOR)
BZ1
BN2
TE3
TG1
II4
G-W
L-R
W-L
GR-B
I20
I6 INJECTOR NO. 1
I7 INJECTOR NO. 2
I8 INJECTOR NO. 3
I9 INJECTOR NO. 4
I10 INJECTOR NO. 5
I11 INJECTOR NO. 6
TO ADD ACTUATOR
B-L
E14, E12, E11, E10, E9
ENGINE CONTROL MODULE
+B
BATT
STP
TBP
MREL
#10
#20
#30
#40
#50
#60
4WD
FC
IGSW
THA
VG
E2G
E2
VC
VTA
VTA2
THW
VPA
VPA2
G-Y
B-L
Y-G
R-W
B-W
L-B
G-B
B-Y
G
GR
L
EC1
M1 MASS AIR FLOW METER
T2 THROTTLE POSITION SENSOR
E3 ENGINE COOLANT TEMP. SENSOR
A38 ACCEL POSITION SENSOR
BR


B-R
G-B
FROM POWER SOURCE SYSTEM (SEE PAGE 48)
7.5A STA
10A GAUGE
15A ETCS
K2 KNOCK SENSOR NO. 1
K3 KNOCK SENSOR NO. 2
P 1 PARK/NEUTRAL POSITION SW
C29 MALFUNCTION INDICATOR LAMP [COMB. METER]
(SHIELDED)
NSW
STA
W
+BM
KNK1
KNK2
E 9 (A), E10 (B), E11 (C), E12 (D), E14 (E)
ENGINE CONTROL MODULE
PTNK
EVP1
CCV
TC
HT2B
OX2B
AF1+
AF1-
HTAF
V1 VAPOR PRESSURE SENSOR
V7 VSV (EVAP)
V13 VSV (CANISTER CLOSED VALVE)
D1 DATA LINK CONNECTOR 1
H4 HEATED OXYGEN SENSOR (BANK 1 SENSOR 2)
A27 AIR FUEL RATIO SENSOR


B-R
B-R
BR
I20
BR
* 1 : W/ THEFT DETERRENT SYSTEM
C 2
CRANKSHAFT
POSITION SENSOR
C 1
CAMSHAFT
POSITION SENSOR
TO SECURITY INDICATOR LIGHT
[CENTER CLUSTER SW]
TO UNLOCK WARNING SW
T 6
TRANSPONDER KEY
AMPLIFIER
CODE
RXCK
TXCT
T 7
THROTTLE CONTROL MOTOR
AND CLUTCH
M+
M-
CL+
CL-
(SHIELDED)
NE+
NE-
G2
IMLD
KSW
CODE
RXCK
TXCT
M+
M-
CL+
CL-
GE01
E 9 A , E10 B , E11 C , E12 D , E14 E
ENGINE CONTROL MODULE
EOM
PSW
SP1
E1
E01
E03
E02
E04
ME01
P22
POWER STEERING OIL
PRESSURE SW
FROM COMBINATION METER
J 9
JUNCTION
CONNECTOR
IF
EC


* 2 : AUTOMATIC AIR CONDITIONING
* 3 : MANUAL AIR CONDITIONING
FROM POWER SOURCE SYSTEM (SEE PAGE 48)
7.5A OBD
TO COMBINATION METER
I3 IGNITION COIL NO. 1
I4 IGNITION COIL NO. 2
I5 IGNITION COIL NO. 3
I2 IGNITER
IGC1 IGC3 IGC2 +B EXT GND
IGT1 IGT2 IGT3 IGF
J6 JUNCTION CONNECTOR
WFSE SIL BAT SG CG
D7 DATA LINK CONNECTOR 3
ENGINE CONTROL MODULE
NEO TRC+ TRC- ENG+ ENG- ACT AC1
V19 VSC ECU
A12 A30 A/C AMPLIFIER
I4
J4 JUNCTION CONNECTOR
EC
IE

SYSTEM OUTLINE

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

1. INPUT SIGNAL

(1) Engine coolant temp. signal system

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 as a control signal to TERMINAL THW of the engine control module.

(2) Heated oxygen sensor signal system

The oxygen density in the exhaust emissions is detected and input as a control signal to TERMINAL OXB2 of the engine control module. To maintain stable detection performance by the heated oxygen sensor, the heated oxygen sensors are warmed. The heater is also controlled by the engine control module (HT2B).

(3) RPM signal system

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

(4) Throttle signal system

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

(5) Vehicle speed signal system

The vehicle speed sensor, detects the vehicle speed and input to ABS speed sensor of the VSC ECU, from VSC ECU to TERMINAL SP1 of the engine control module, via combination meter.

(6) A/C SW signal system

The operating voltage of the A/C magnetic clutch is detected and input as a control signal to TERMINAL AC1 of the engine control module.

(7) Battery signal system

Voltage is constantly applied to TERMINAL BATT of the engine control module. When the ignition SW is turned to on, voltage for engine control module operation is applied via the EFI relay to TERMINAL +B of the engine control module.

(8) Intake air volume signal system

Intake air volume is detected by the mass air flow meter and a signal is input into TERMINAL VG of the engine control module as a control signal.

(9) Stop light SW signal system

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

(10) Starter signal system

To confirm that the engine is cranking, the voltage applied to the starter motor during cranking is detected and is input as a control signal to TERMINAL STA of the engine control module.

(11) Engine knock signal system

Engine knocking is detected by the knock sensor no. 1 and no. 2 and the signals are input to TERMINALS KNK1 and KNK2 of the engine control module.

(12) 4WD signal system (4WD)

Whether or not the vehicle is operating in 4WD mode is determined, and a control signal is input to TERMINAL 4WD of the engine control module.

(13) Intake air temp. signal circuit

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

(14) Air fuel ratio signal system

The air fuel ratio is detected and input as a control signal into TERMINAL AF1+ of the engine control module.

2. CONTROL SYSTEM

- SFI system
  The SFI system monitors the engine conditions through the signals each sensor inputs to the engine control module. Based on this data and the program memorized in the engine control module, the most appropriate fuel injection timing is detected and current is output to TERMINALS #10, #20, #30, #40, #50 AND #60 of the engine control module, causing the injectors to operate (to inject fuel). It is this system which, through the work of the engine control module, finely controls fuel injection in response to driving conditions.
- ESA system
  The ESA system monitors the engine conditions using the signals input to the engine control module from each sensor. Based on this data and the program memorizes in the engine control module, the most appropriate ignition timing is decided and current is output to TERMINALS IGT1, IGT2 and IGT3 of the engine control module. This output controls the igniter to produce the most appropriate ignition timing for the driving conditions.
- Heated oxygen sensor heater control system
  The heated oxygen sensor heater control system turns the heater to on when the intake air volume is low (Temp. of exhaust emissions is low). And warms up the heated oxygen sensors to improve detection performance of the sensors. The engine control module evaluates the signals from each sensor current is output to TERMINAL HT2B and controls the heater.

3. DIAGNOSIS SYSTEM

With the diagnosis system, when there is a malfunction in the ECU signal system, the malfunctioning system is recorded in the memory. The malfunctioning system can then be found by reading the display (Code) of the malfunction indicator lamp.

4. FAIL- SAFE SYSTEM

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

SERVICE HINTS

EFI RELAY

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

C6 CIRCUIT OPENING RELAY

5-3 : Closed with starter running or ignition SW at **ON** position

I6, I7, I8, I9, I10, I11 INJECTOR

1-2 : **13.4- 14.2** Ω

E3 ENGINE COOLANT TEMP. SENSOR

1-2 : **10- 20** kΩ (**-20** °C, **-4** °F)
4- 7 kΩ (**0**°C, **32**°F)
2- 3 kΩ (**20**°C, **68**°F)
0.9- 1.3 kΩ (**40**°C, **104**°F)
0.4- 0.7 kΩ (**60**°C, **140**°F)
0.2- 0.4 kΩ (**80**°C, **176**°F)

E9 (A), E10 (B), E11 (C), E12 (D), E14 (E) ENGINE CONTROL MODULE

Voltage at engine control module wiring connectors
+B-E1 : **9- 14** volts (Ignition SW on)
BATT-E1 : **9- 14** volts (Always)
VC-E2 : **4.5- 5.5** volts (Ignition SW on)
VTA-E2 : Approx. **0.6** volts (Ignition SW on and throttle valve fully closed)
Approx. **4** volts (ignition SW on and throttle valve fully open)
STA-E1 : **6** volts or more (Ignition SW at **ST** position)
W-E1 : **9- 14** volts (No trouble and engine running)
THW-E1 : **0.2- 1.0** volts (Ignition SW on and coolant temp. **80**°C, **176**°F)
SP1-E1 : Pulse generation with vehicle moving
STP-E1 : **7.5- 14** volts (Stop light SW on)
IGT1, IGT2, IGT3-E1 : Pulse generation (Cranking or idling)
#10, #20, #30, #40, #50, #60-E1 : **9- 14** volts (Ignition SW on)

RESISTANCE AT ECU WIRING CONNECTOR

(Disconnect wiring connector)
THW-E2 : **0.2- 0.4** kΩ (Coolant temp. **80**°C, **176**°F)
NE+-E2 : **140- 180** Ω

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A12 A	30	H4	28	J8 B	31
A27	28	I2	29	J9	31
A30 B	30	I3	29	K2	29
A38	28	I4	29	K3	29
C1	28	I5	29	M1	29
C2	28	I6	29	P1	29
C6	30	I7	29	P22	29
C29	30	I8	29	S4	31
D1	28	I9	29	T2	29
D7	30	I10	29	T6	31
E3	28	I11	29	T7	29
E9 A	31	I14	31	V1	33
E10 B	31	J1 A	29	V7	29
E11 C	31	J2 B	29	V8	33
E12 D	31	J4	31	V13	29
E14 E	31	J6	31	V19	31
F10	32	J7 A	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1I	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1J	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

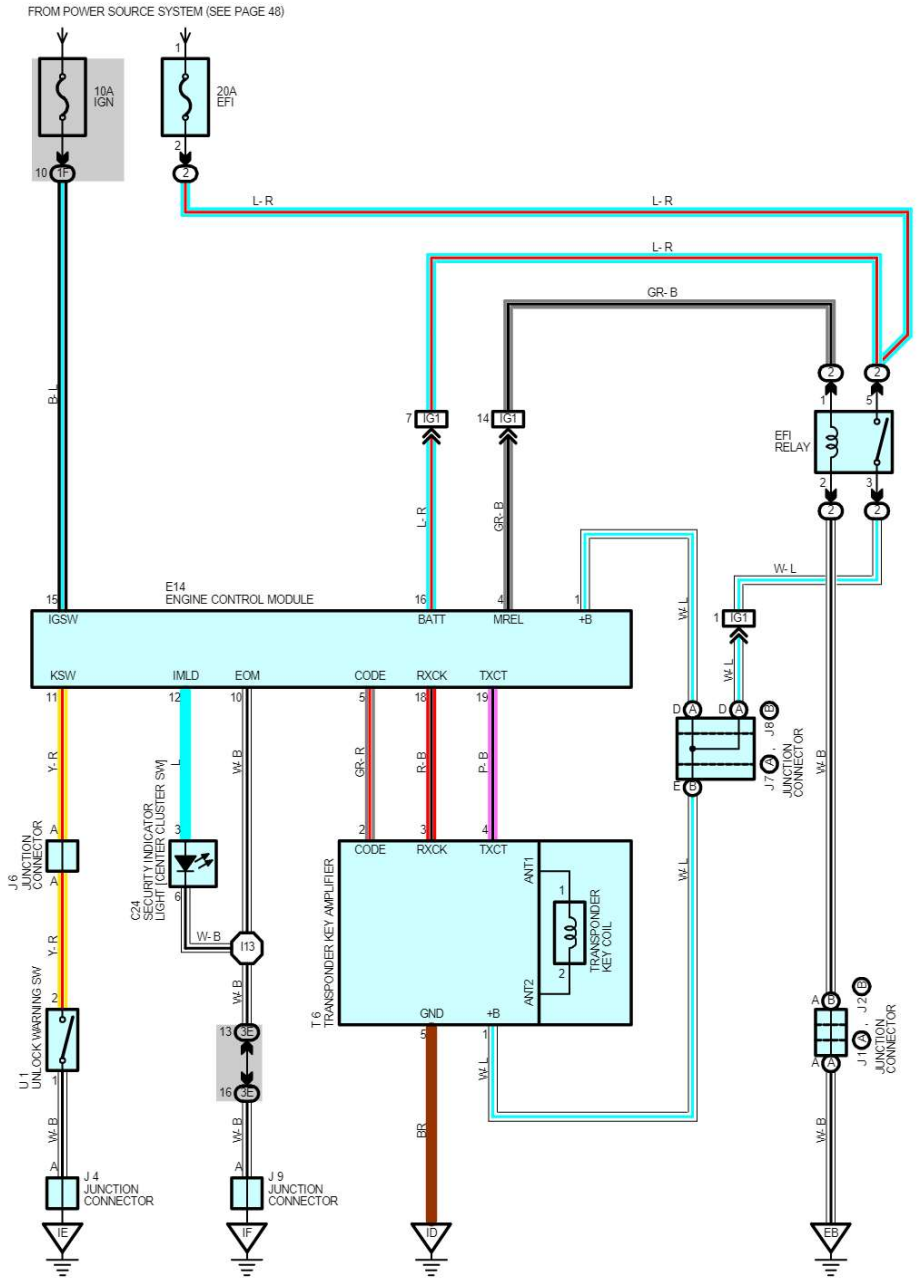
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EB1	36	Sensor Wire and Engine Wire (Front Side of Cylinder Head Cover Right)
EC1	36	Engine Wire and Water Temp. Sensor Wire (Front Side of Cylinder Head Cover Right)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE3		
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II1	40	Engine Wire and Cowl Wire (On the Glove Box)
II4		
BN2	42	Frame Wire and Floor No.2 Wire (Under the Left Side of Rear Seat Cushion)
BZ1	42	Frame Wire and Frame No.2 Wire (Upper the Rear Axle Housing Left)

: GROUND POINTS

Code	See Page	Ground Points Location
EB	36	Front Left Fender
EC	36	Intake Manifold Left
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
BH	42	Left Quarter Panel Inner

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E1	36	Engine Wire	I12	40	Cowl Wire
E4	36	Sensor Wire	I20	40	Engine Wire


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A IGN
20A EFI
L-R
GR-B
W-L
EFI RELAY
E14 ENGINE CONTROL MODULE
IGSW
BATT
MREL
+B
KSW
IMLD
EOM
CODE
RXCK
TXCT
J6 JUNCTION CONNECTOR
C24 SECURITY INDICATOR LIGHT (CENTER CLUSTER SW)
I13
T6 TRANSPONDER KEY AMPLIFIER
GND
ANT1
ANT2
TRANSPONDER KEY COIL
J7 JUNCTION CONNECTOR
J8
J1 JUNCTION CONNECTOR
J2
U1 UNLOCK WARNING SW
J4 JUNCTION CONNECTOR
J9 JUNCTION CONNECTOR
IE
IF
ID
EB

SERVICE HINTS

E14 ENGINE CONTROL MODULE

11-GROUND : Continuity with ignition key in cylinder
16-GROUND : Always Approx. **12** volts
15-GROUND : Approx. **12** volts with ignition SW on
10-GROUND : Always continuity

: PARTS LOCATION

Code		See Page	Code		See Page	Code	See Page
C24		30	J4		31	J9	31
E14		31	J6		31	T6	31
J1	A	29	J7	A	31	U1	31
J2	B	29	J8	B	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

: GROUND POINTS

Code	See Page	Ground Points Location
EB	36	Front Left Fender
ID	38	Left Kick Panel
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

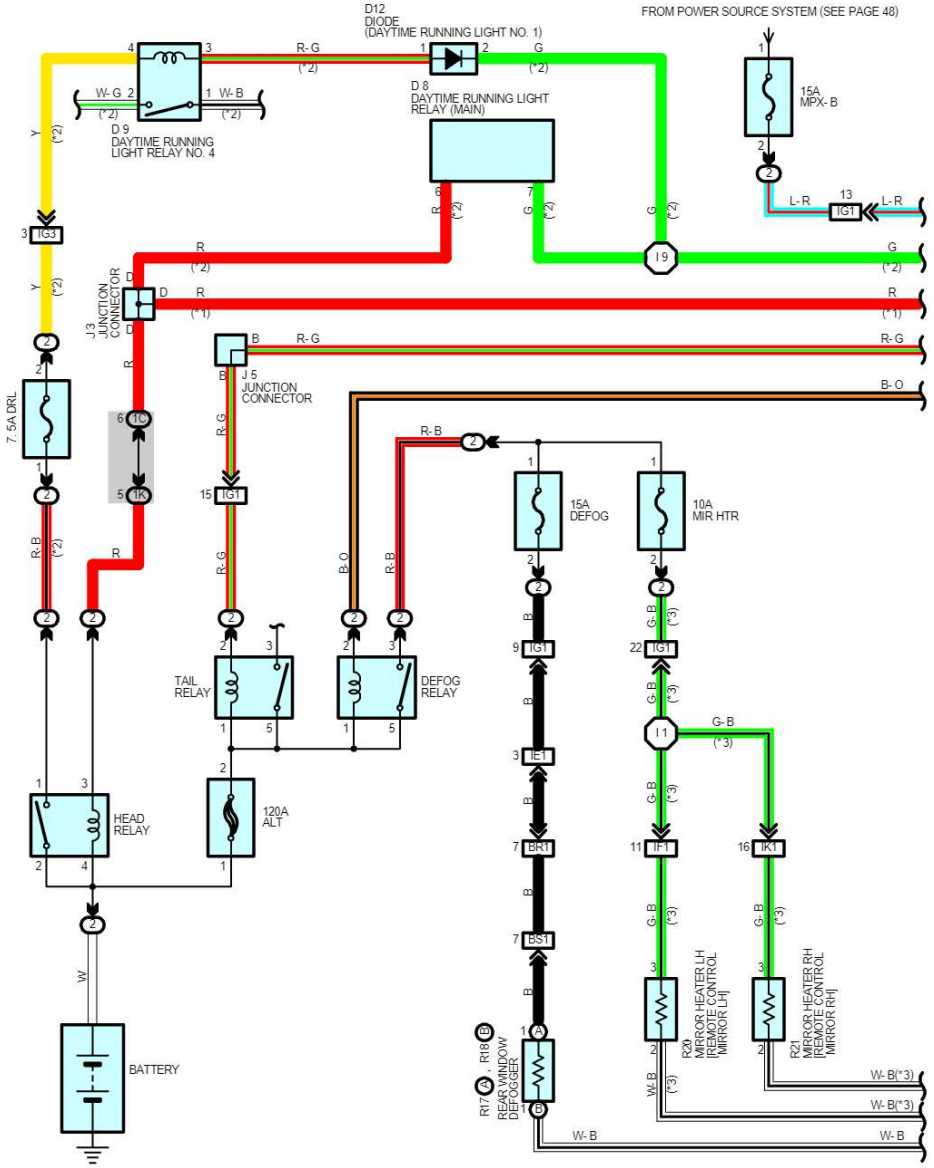
: SPLICE POINTS

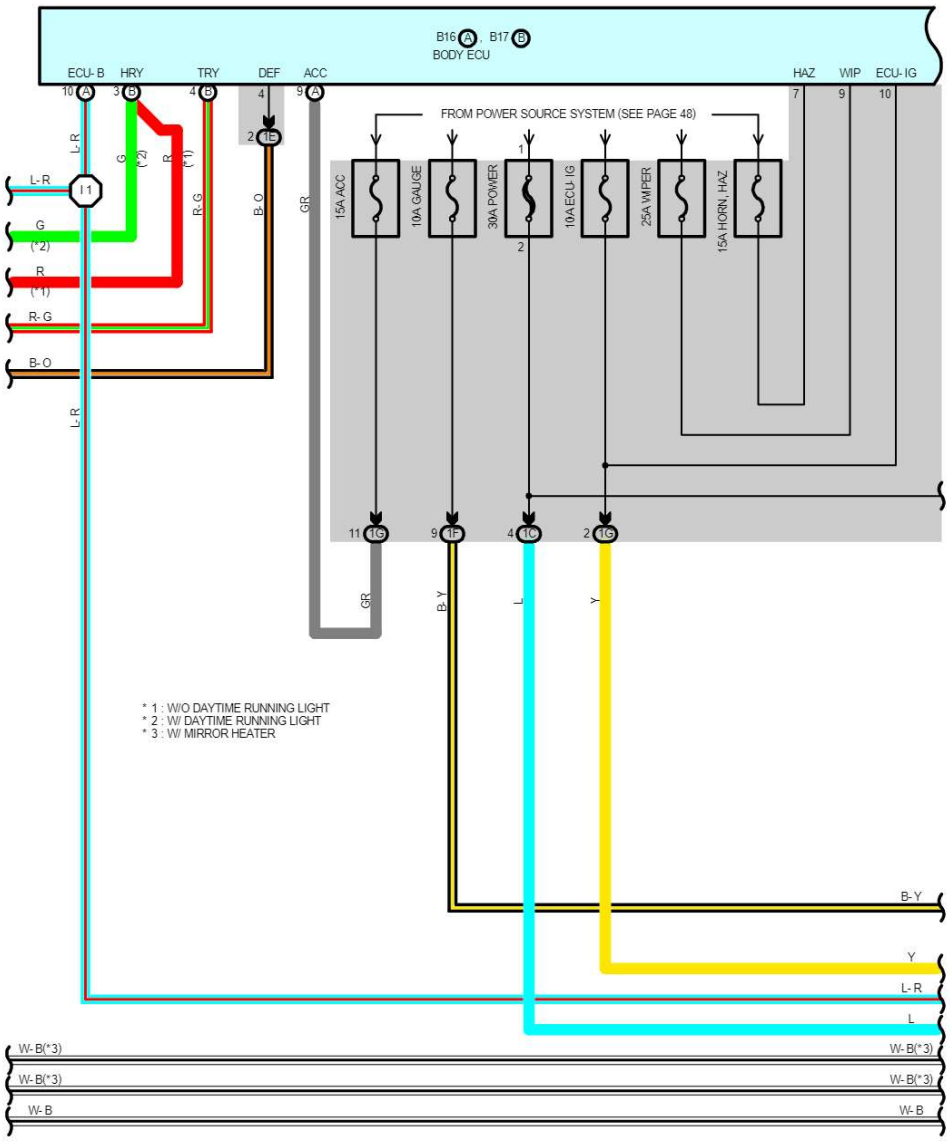
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I13	40	Cowl Wire			

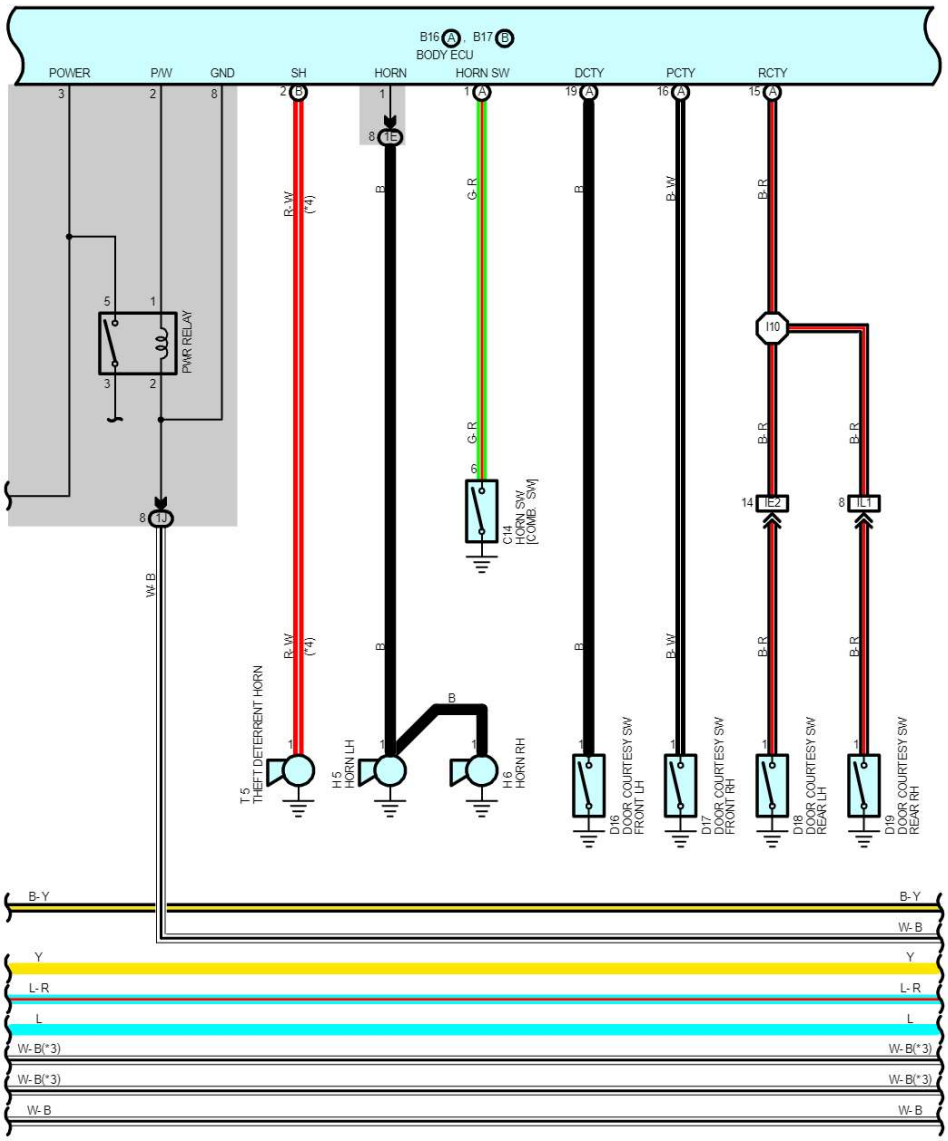

B16
BODY ECU
MPX1
7
V-W
8
IE2
V-W
4
BR2
V-W
5
BS1
V-W
18
MPX1
B18
BACK DOOR ECU

MULTIPLEX COMMUNICATION SYSTEM INCLUDES FOLLOWING SYSTEMS

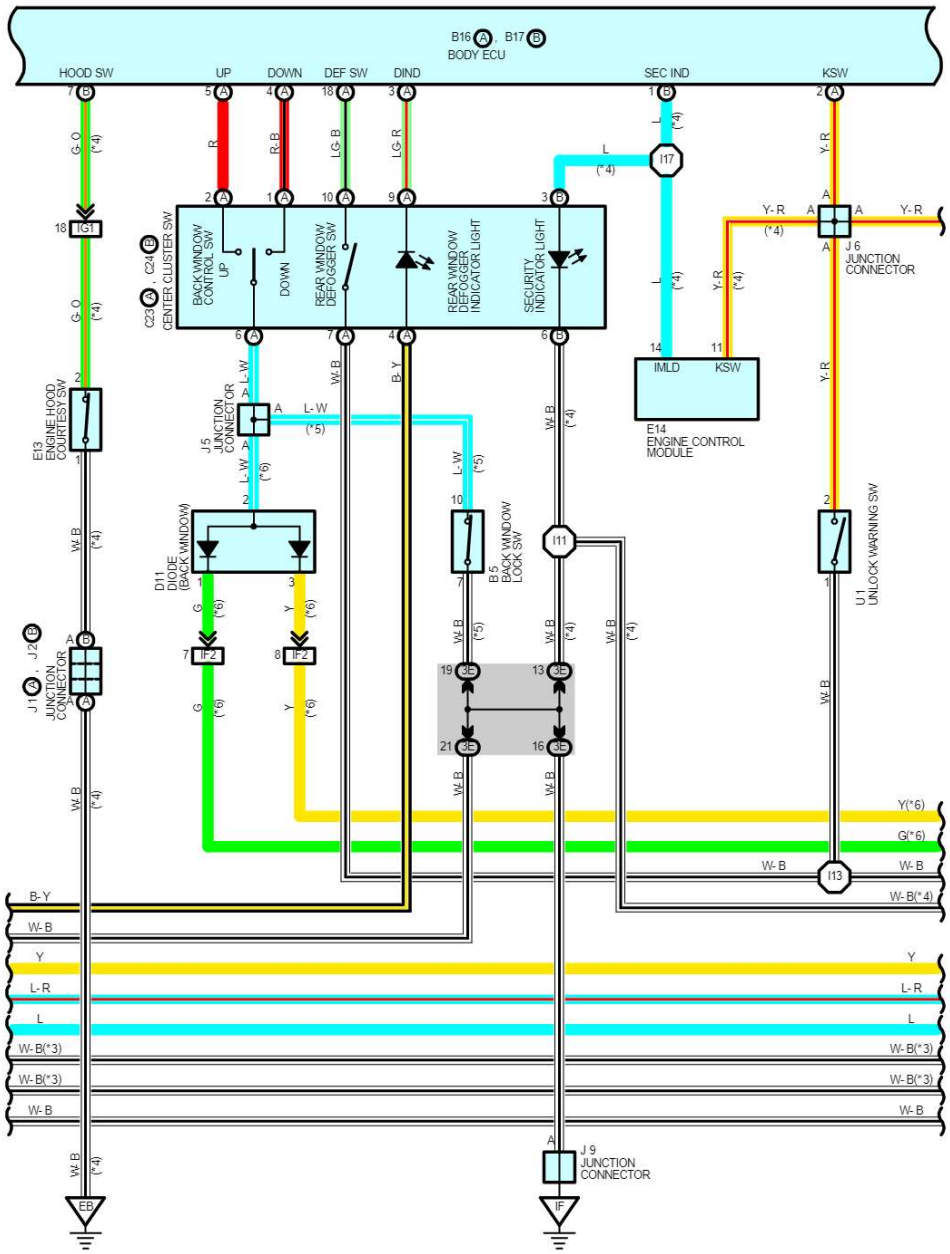
- DOOR LOCK CONTROL
- HORN
- MIRROR HEATER
- POWER WINDOW (REAR)
- REAR WINDOW DEFOGGER
- REAR WIPER AND WASHER
- THEFT DETERRENT
- WIRELESS DOOR LOCK CONTROL

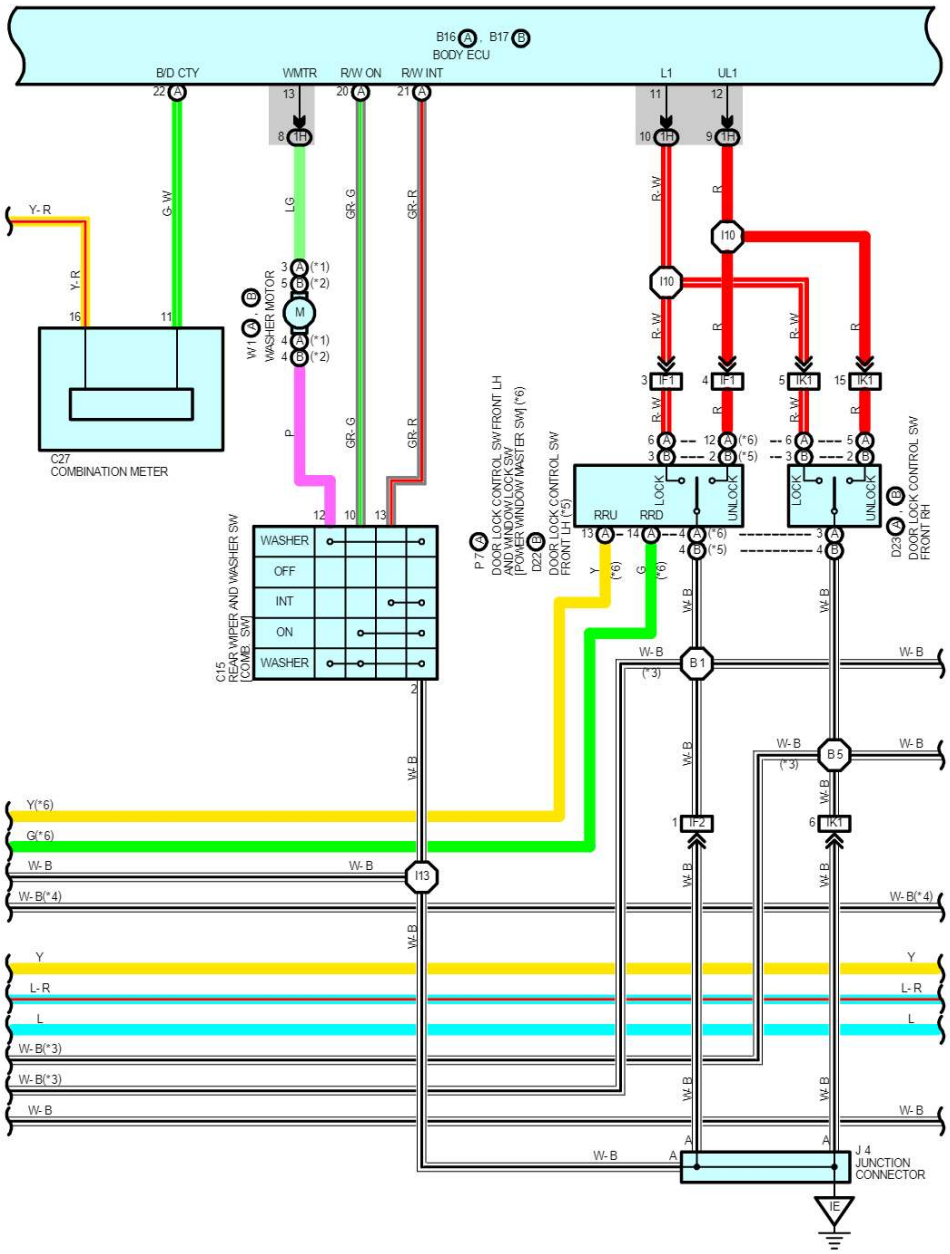

D12
DIODE
(DAYTIME RUNNING LIGHT NO. 1)
FROM POWER SOURCE SYSTEM (SEE PAGE 48)
D 8
DAYTIME RUNNING LIGHT
RELAY (MAIN)
D 9
DAYTIME RUNNING
LIGHT RELAY NO. 4
15A
MPX- B
J3
JUNCTION
CONNECTOR
J 5
JUNCTION
CONNECTOR
7. 5A DRL
15A
DEFOG
10A
MIR HTR
TAIL
RELAY
DEFOG
RELAY
HEAD
RELAY
120A
ALT
BATTERY
REAR WINDOW
DEFOGGER
R17 , R18
R20
MIRROR HEATER LH
[REMOTE CONTROL
MIRROR LH]
R21
MIRROR HEATER RH
[REMOTE CONTROL
MIRROR RH]
W- B(*3)
W- B

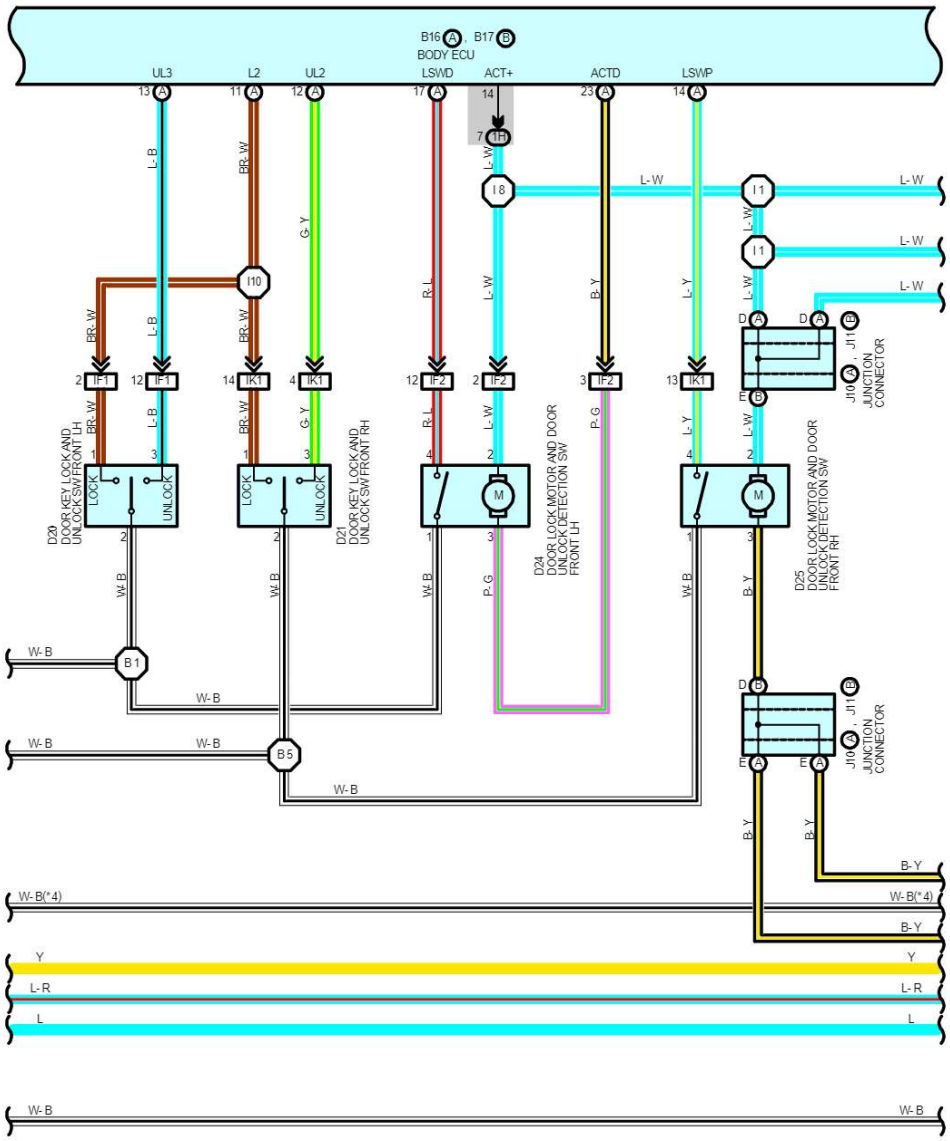

B16 A B17 B
BODY ECU
ECU-B
HRY
TRY
DEF
ACC
HAZ
WIP
ECU-IG
FROM POWER SOURCE SYSTEM (SEE PAGE 48)
15A ACC
10A GAUGE
30A POWER
10A ECU-IG
25A WIPER
15A HORN, HAZ
I1
L-R
G (*2)
R (*1)
R-G
B-O
GR
B-Y
L
Y
* 1 : W/O DAYTIME RUNNING LIGHT
* 2 : W/ DAYTIME RUNNING LIGHT
* 3 : W/ MIRROR HEATER
W-B(*3)
W-B

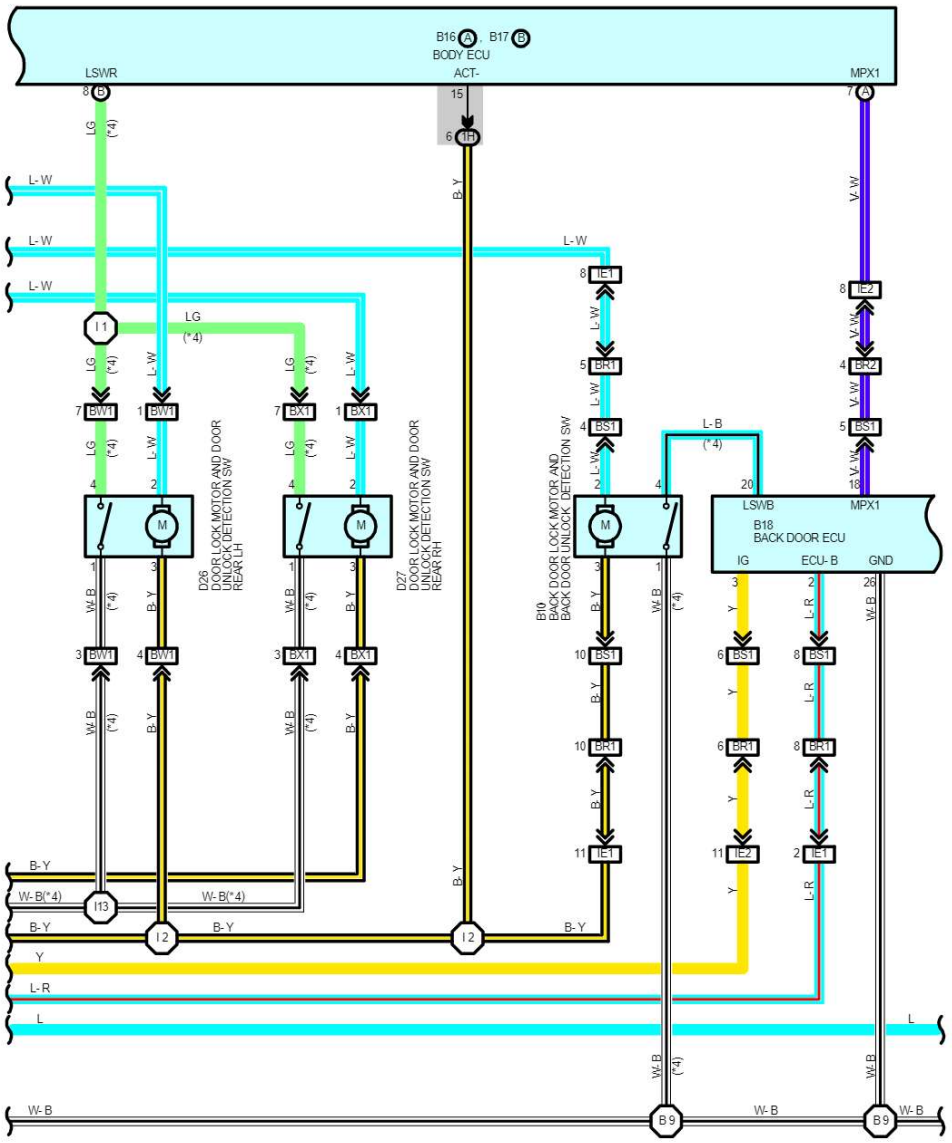


* 3 : W/ MIRROR HEATER
* 4 : W/ THEFT DETERRENT SYSTEM
* 5 : W/O POWER WINDOW
* 6 : W/ POWER WINDOW

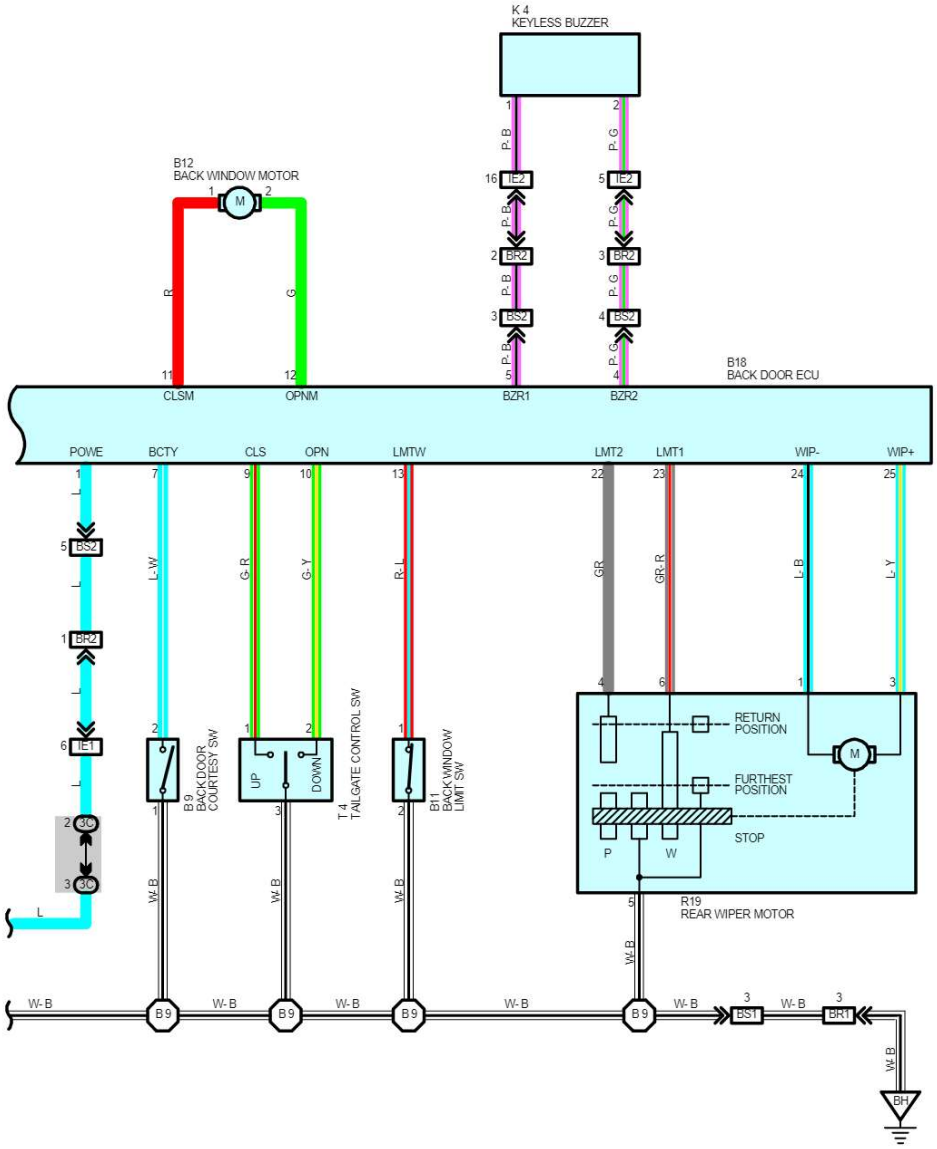

B16 A B17 B
BODY ECU
HOOD SW
UP
DOWN
DEF SW
DIND
SEC IND
KSW
BACK WINDOW CONTROL SW
UP
DOWN
REAR WINDOW DEFOGGER SW
REAR WINDOW DEFOGGER INDICATOR LIGHT
SECURITY INDICATOR LIGHT
C23 A , C24 B
CENTER CLUSTER SW
E13
ENGINE HOOD COURTESY SW
J5
JUNCTION CONNECTOR
D11
DIODE (BACK WINDOW)
B5
BACK WINDOW LOCK SW
J6
JUNCTION CONNECTOR
U1
UNLOCK WARNING SW
I17
I11
I13
IMLD
KSW
E14
ENGINE CONTROL MODULE
J2 B
J1 A
JUNCTION CONNECTOR
J9
JUNCTION CONNECTOR
EB
IF
IF2
3E
Y(*6)
G(*6)
W-B
W-B(*4)
B-Y
W-B
Y
L-R
L
W-B(*3)
W-B(*3)
W-B


B16 A, B17 B
BODY ECU
B/D CTY
WMTR
R/W ON
R/W INT
L1
UL1
22 A
13
20 A
21 A
11
12
8 1H
10 1H
9 1H
Y-R
G-W
LG
GR-G
GR-R
R-W
R
I10
Y-R
16
11
3 A (*1)
5 B (*2)
M
W-B
4 A (*1)
4 B (*2)
WASHER MOTOR
C27
COMBINATION METER
P
3 IF1
4 IF1
5 IK1
15 IK1
6 A
3 B
12 A (*6)
2 B (*5)
LOCK
UNLOCK
RRU
RRD
P7
DOOR LOCK CONTROL SW FRONT LH
AND MAIN DOOR LOCK SW
(POWER WINDOW MASTER SW) (*6)
D22
DOOR LOCK CONTROL SW
FRONT LH (*5)
D23
DOOR LOCK CONTROL SW
FRONT RH
12
10
13
WASHER
OFF
INT
ON
WASHER
C15
REAR WIPER AND WASHER SW
(COMB. SW)
2
13 A
14 A
4 A (*6)
4 B (*5)
3 A
4 B
Y
(*6)
G
(*6)
W-B
B1
(*3)
B5
1F2
6 IK1
I13
Y(*6)
G(*6)
W-B(*4)
Y
L-R
L
W-B(*3)
W-B(*3)
W-B
A
J4
JUNCTION
CONNECTOR
IE


B16 A , B17 B
BODY ECU
UL3
L2
UL2
LSWD
ACT+
ACTD
LSWP
13 A
11 A
12 A
17 A
14
7 H
23 A
14 A
L-B
BR-W
G-Y
R-L
L-W
B-Y
L-Y
I8
I10
I1
I1
L-W
L-W
L-W
D A
D A
E B
J10 , J11
JUNCTION CONNECTOR
2 IF1
12 IF1
14 IK1
4 IK1
12 IF2
2 IF2
3 IF2
13 IK1
D20
DOOR KEY LOCK AND UNLOCK SW FRONT LH
LOCK
UNLOCK
D21
DOOR KEY LOCK AND UNLOCK SW FRONT RH
D24
DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT LH
D25
DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT RH
M
W-B
P-G
B-Y
B1
B5
W-B(*4)
Y
L-R
L
W-B
* 1 : W/O DAYTIME RUNNING LIGHT
* 2 : W/ DAYTIME RUNNING LIGHT
* 3 : W/ MIRROR HEATER
* 4 : W/ THEFT DETERRENT SYSTEM
* 5 : W/O POWER WINDOW
* 6 : W/ POWER WINDOW


B16 A B17 B
BODY ECU
LSWR
ACT-
MPX1
8 B
15
6 IE1
7 A
LG (*4)
L-W
B-Y
V-W
L-W
L-W
L-W
8 IE1
8 IE2
I1
LG (*4)
L-W
V-W
5 BR1
4 BR2
7 BW1
1 BW1
7 BX1
1 BX1
4 BS1
5 BS1
L-B (*4)
4
2
4
2
2
4
20
18
LSWB
MPX1
B18
BACK DOOR ECU
IG
ECU-B
GND
M
D26
DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR LH
D27
DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR RH
B10
BACK DOOR LOCK MOTOR AND BACK DOOR UNLOCK DETECTION SW
1
3
1
3
1
3
3
1
W-B (*4)
B-Y
3 BW1
4 BW1
3 BX1
4 BX1
10 BS1
6 BS1
8 BS1
Y
L-R
10 BR1
6 BR1
8 BR1
11 IE1
11 IE2
2 IE1
B-Y
W-B(*4)
I13
I2
I2
L
W-B
B9
B9

* 4 : W/ THEFT DETERRENT SYSTEM



MULTIPLEX COMMUNICATION SYSTEM

SYSTEM OUTLINE

1. COMMUNICATION OUTLINE

Communication is made among the body and back door ECUs.
When the ECU receives a signal from related switches, i.e., the rear wiper SW, the body ECU sends signals to the back door ECU, and moves rear wiper.
For details, please refer to the new car features and/or the repair manual.

SERVICE HINTS

B16 (A) BODY ECU

(A) 9-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
3, 7, (A)10-GROUND : Always approx. **12** volts
9,10-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position
8-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B5	30	D18	32	J5	31
B9	32	D19	32	J6	31
B10	32	D20	32	J9	31
B11	32	D21	32	J10 A	31
B12	32	D22 B	32	J11 B	31
B16 A	30	D23 A	32	K4	29
B17 B	30	D23 B	32	P7 A	33
B18	32	D24	32	R17 A	33
C14	30	D25	32	R18 B	33
C15	30	D26	32	R19	33
C23 A	30	D27	32	R20	33
C24 B	30	E13	28	R21	33
C27	30	E14	31	T4	33
D8	30	H5	28	T5	29
D9	30	H6	28	U1	31
D11	30	J1 A	29	W1 A	29
D12	30	J2 B	29	W1 B	29
D16	32	J3	31		
D17	32	J4	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
1H		
1J		
1K	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE2		
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF2		
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IG3		
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BR2		
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)
BS2		
BW1	42	Rear Door LH Wire and Cowl Wire (Left Center Pillar)
BX1	42	Rear Door RH Wire and Cowl Wire (Right Center Pillar)

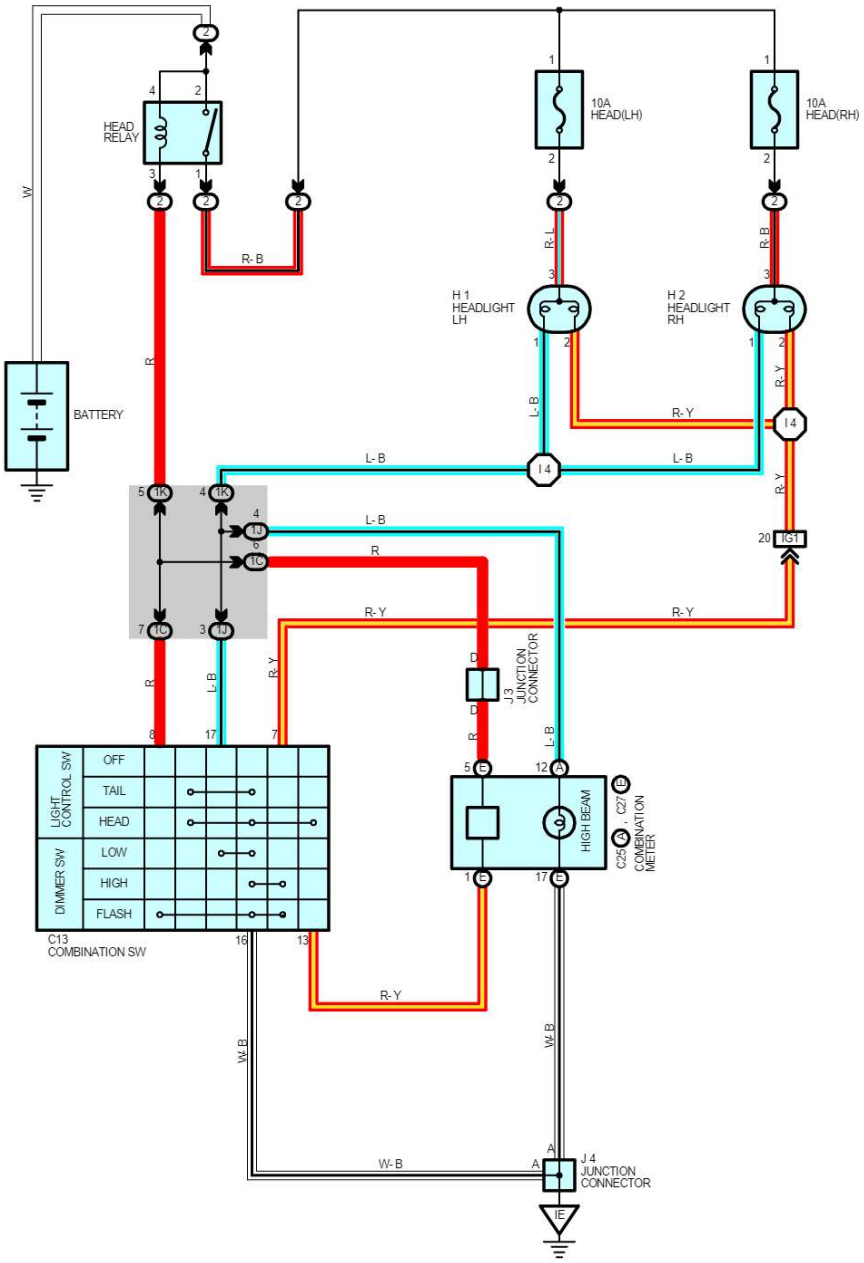
: GROUND POINTS

Code	See Page	Ground Points Location
EB	36	Front Left Fender
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
BH	42	Left Quarter Panel Inner

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	I13	40	Cowl Wire
I2			I17		
I8			B1	42	Front Door LH Wire
I9			B5	42	Front Door RH Wire
I10			B9	42	Back Door No.2 Wire
I11					

HEADLIGHT (w/o DAYTIME RUNNING LIGHT)



SERVICE HINTS

HEAD RELAY

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

: PARTS LOCATION

Code		See Page	Code	See Page	Code	See Page
C13		30	H1	28	J4	31
C25	A	30	H2	28		
C27	E	30	J3	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

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

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

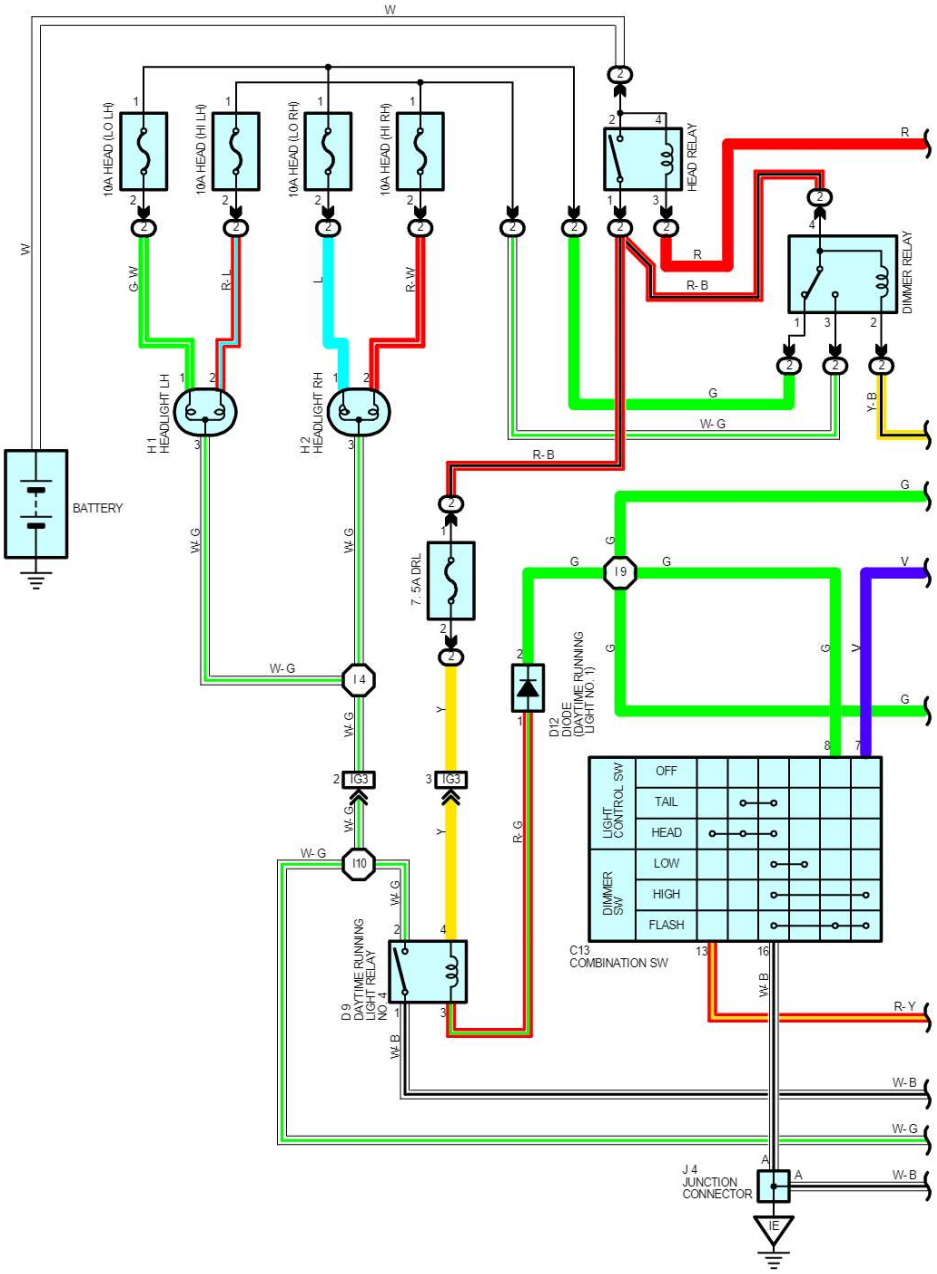
: GROUND POINTS

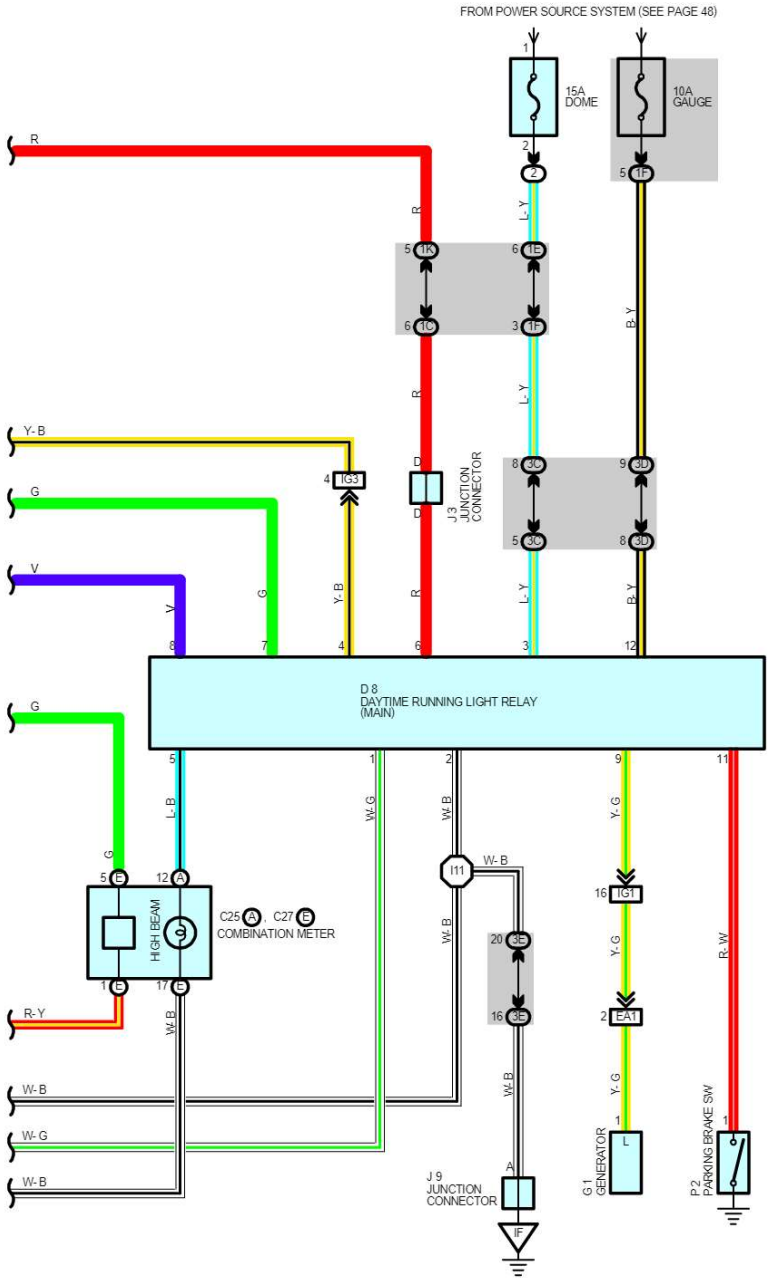
Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I4	40	Engine Room Main Wire			

HEADLIGHT (w/ DAYTIME RUNNING LIGHT)




FROM POWER SOURCE SYSTEM (SEE PAGE 48)
15A DOME
10A GAUGE
J3 JUNCTION CONNECTOR
D 8 DAYTIME RUNNING LIGHT RELAY (MAIN)
HIGH BEAM
C25 A , C27 E COMBINATION METER
J 9 JUNCTION CONNECTOR
G 1 GENERATOR
P 2 PARKING BRAKE SW

HEADLIGHT (w/ DAYTIME RUNNING LIGHT)

SYSTEM OUTLINE

1. DAYTIME RUNNING LIGHT OPERATION

When the engine is started, voltage generated at TERMINAL L of the generator is applied to TERMINAL 9 of the daytime running light relay (Main).

If the parking brake lever is pulled up (Parking brake SW on) at this time, the relay is not activated so the daytime running light system does not operate. If the parking brake lever is then released (Parking brake SW off), a signal is input to TERMINAL 11 of the relay. This activates the relay, so current flows from battery to the HEAD relay (Point side) to TERMINAL 4 of the DIMMER relay to TERMINAL 1 to HEAD (LO LH), (LO RH) fuse to TERMINAL 1 of the headlights to TERMINAL 3 to TERMINAL 1 of the daytime running light relay (Main) to TERMINAL 2 to GROUND. This causes the headlights to light up (The headlights light up dimmer than full brightness.).

Once the daytime running light system operates and headlights light up, headlights remain on even if the parking brake lever is pulled up (Parking brake SW on).

If the engine stalls and the ignition SW remains on, headlights remain lighted up even though current is no longer output from TERMINAL L of the generator. If the ignition SW is then turned off, the headlights go off. If the engine is started with the parking brake lever released (Parking brake SW off), the daytime running light system operates and the headlights light up when the engine starts.

2. HEADLIGHT OPERATION

When the light control SW is switched to HEAD position, current flows from the DRL fuse to TERMINAL 4 of the daytime running light relay no. 4 to TERMINAL 3 to TERMINAL 1 of the diode (Daytime running light no. 1) to TERMINAL 2 to TERMINAL (E) 5 of the combination meter to TERMINAL (E) 1 to TERMINAL 13 of the light control SW to TERMINAL 16 to GROUND, activating the daytime running light relay no. 4. Current then flows from the HEAD (LO LH), (LO RH) fuse to TERMINAL 1 of the headlights to TERMINAL 3 to TERMINAL 2 of the daytime running light relay no. 4 to TERMINAL 1 to GROUND, causing the headlights to light up at normal intensity.

When the dimmer SW is switched to the HIGH position, the signal from the dimmer SW is input to the daytime running light relay (Main). This activates the relay and current flows from TERMINAL 4 of the DIMMER relay to TERMINAL 2 to TERMINAL 4 of the daytime running light relay (Main), activating the DIMMER relay.

This causes current to flow from TERMINAL 4 of the DIMMER relay to TERMINAL 3 to HEAD (HI LH), (HI RH) fuse to TERMINAL 2 of the headlights to TERMINAL 3 to TERMINAL 2 of the daytime running light relay no. 4 to TERMINAL 1 to GROUND, causing the headlights to light up at high beam.

When the dimmer SW is switched to FLASH position, the daytime running light relay (Main) is activated and current flows from TERMINAL 4 of the DIMMER relay to TERMINAL 3. Current from the DRL fuse flows to TERMINAL 4 of the daytime running light relay no. 4 to TERMINAL 3 to TERMINAL 1 of the diode (Daytime running light no. 1) to TERMINAL 2 to TERMINAL 8 of the dimmer SW to TERMINAL 16 to GROUND, and also flows from the HEAD (HI LH), (HI RH) fuse to TERMINAL 2 of the headlights to TERMINAL 3 to TERMINAL 2 of the daytime running light relay no. 4 to TERMINAL 1 to GROUND, causing the high beam to operate.

SERVICE HINTS

HEAD RELAY

2-1 : Closed with light control SW at **HEAD** position or dimmer SW at **FLASH** position
Closed with engine running and parking brake lever released

DIMMER RELAY

Changes from HEAD(LO) to HEAD(HI) with dimmer SW at **FLASH** position or with HEAD relay on and dimmer SW at **HIGH** position

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C13	30	D12	30	J4	31
C25 A	30	G1	28	J9	31
C27 E	30	H1	28	P2	31
D8	30	H2	28		
D9	30	J3	31		

⬭ : RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1K	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3D		
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EA1	36	Engine No.2 Wire and Engine Room Main Wire (Near the Engine Room R/B)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IG3		

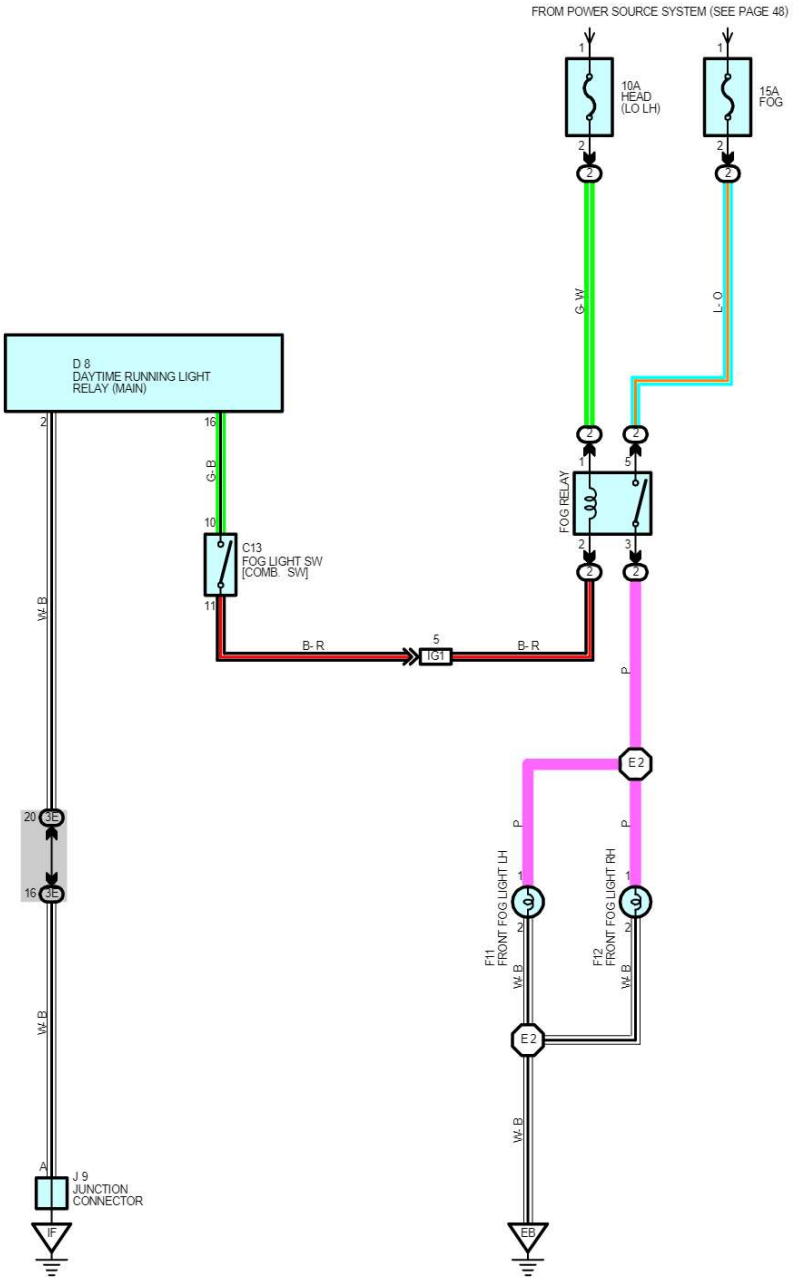
: GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I4	40	Engine Room Main Wire	I10	40	Cowl Wire
I9	40	Cowl Wire	I11		

FRONT FOG LIGHT



SERVICE HINTS

FOG RELAY

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

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C13	30	F11	28	J9	31
D8	30	F12	28		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

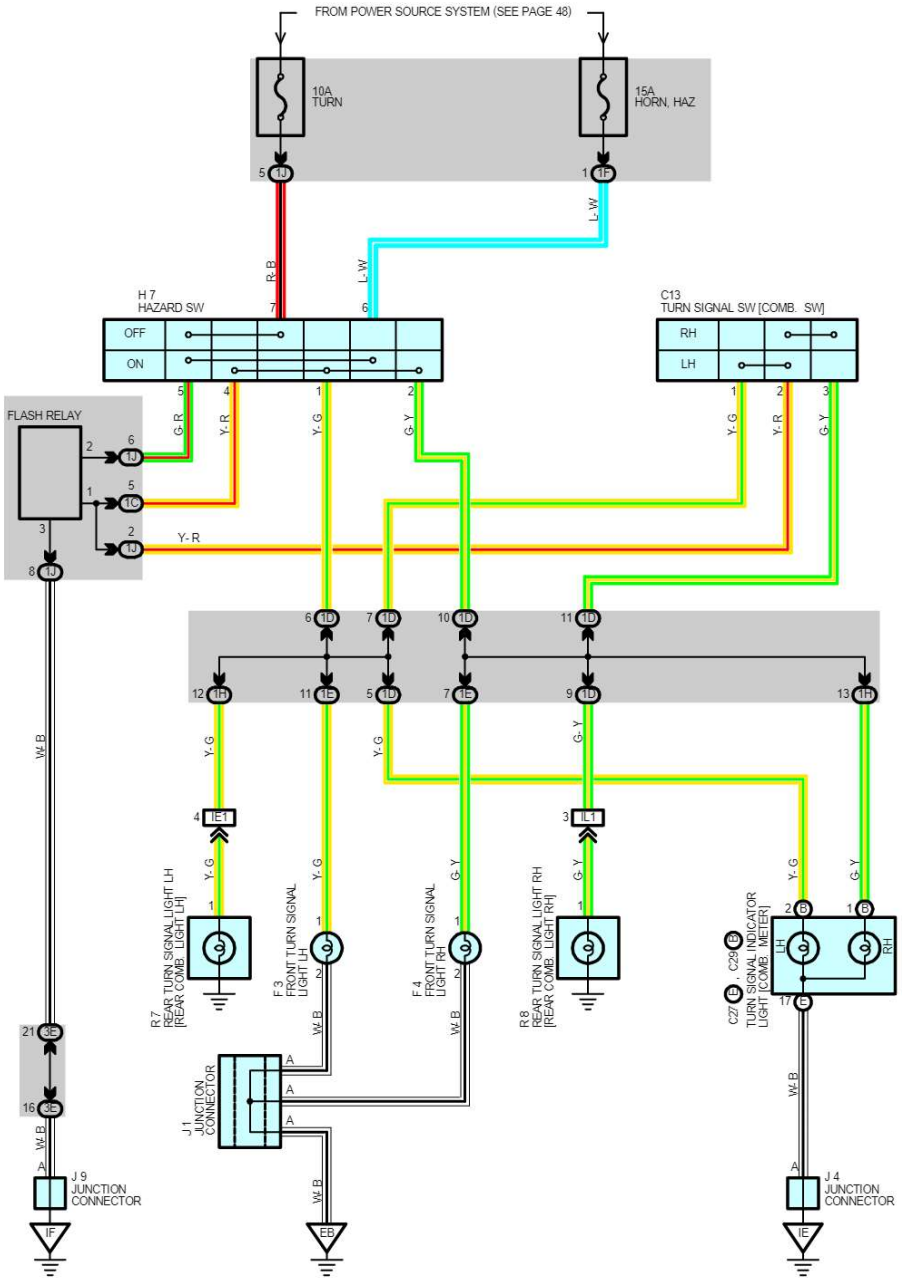
: GROUND POINTS

Code	See Page	Ground Points Location
EB	36	Front Left Fender
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	36	Engine Room Main Wire			

TURN SIGNAL AND HAZARD WARNING LIGHT



SERVICE HINTS

FLASH RELAY

2-GROUND : Approx. **12** volts with ignition SW on or hazard SW on
1-GROUND : Changes from **12** to **0** volts with ignition SW on and turn signal SW at **LH** or **RH** position, or with hazard SW on
3-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C13	30	F4	28	J9	31
C27 E	30	H7	31	R7	33
C29 B	30	J1	29	R8	33
F3	28	J4	31		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1D		
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1H		
1J		
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

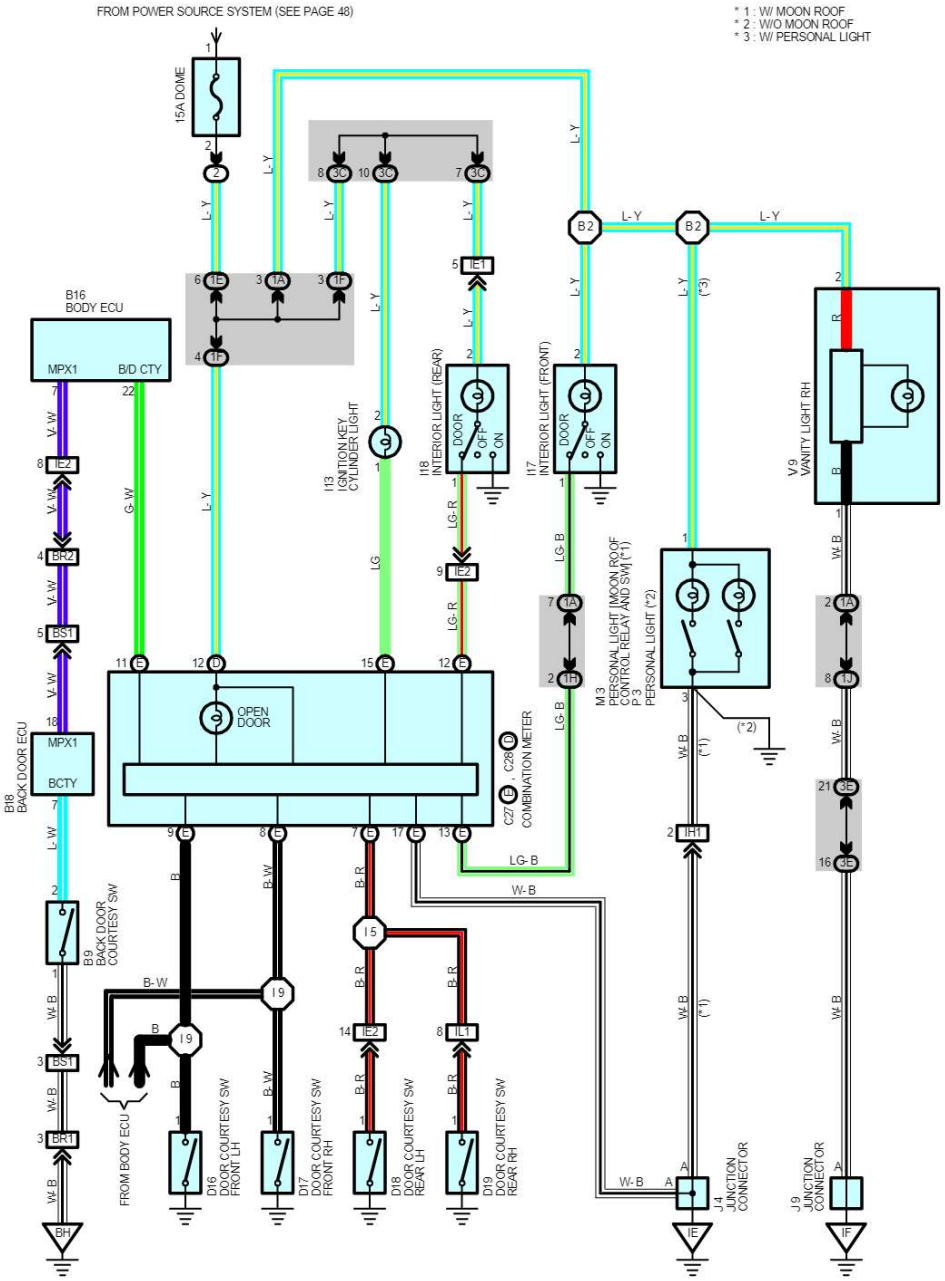
: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)

: GROUND POINTS

Code	See Page	Ground Points Location
EB	36	Front Left Fender
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

INTERIOR LIGHT



SYSTEM OUTLINE

NORMAL OPERATION

- When the front door LH, RH rear door LH or RH is opened
  When the door is opened, the interior light (Front) and open door warning light is turned on. When the front door LH, RH rear door LH and RH are closed, the interior light (Front) is turned off.
- When the back door is opened, interior light (Rear) and the open door warning light is turned on. When back door is closed, the interior light (Rear) is turned off.
- When all the doors are closed, the open door warning light is turned off.

ILLUMINATED ENTRY SYSTEM

- When driver's door is opened, the ignition key cylinder light is turned on.
- The ignition key cylinder light remains on for approx. 5 seconds after driver's door is closed.

SERVICE HINTS

D16, D17, D18, D19 DOOR COURTESY SW FRONT LH, RH, REAR LH, RH

1-GROUND : Closed with door open

B9 BACK DOOR COURTESY SW

1-2 : Closed with door open

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B9	32	D17	32	J4	31
B16	30	D18	32	J9	31
B18	32	D19	32	M3	33
C27 E	30	I13	31	P3	33
C28 D	30	I17	32	V9	33
D16	32	I18	32		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1H		
1J		
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE2		
IH1	40	Roof Wire and Cowl Wire (Instrument Panel Reinforcement Left)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BR2		
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)

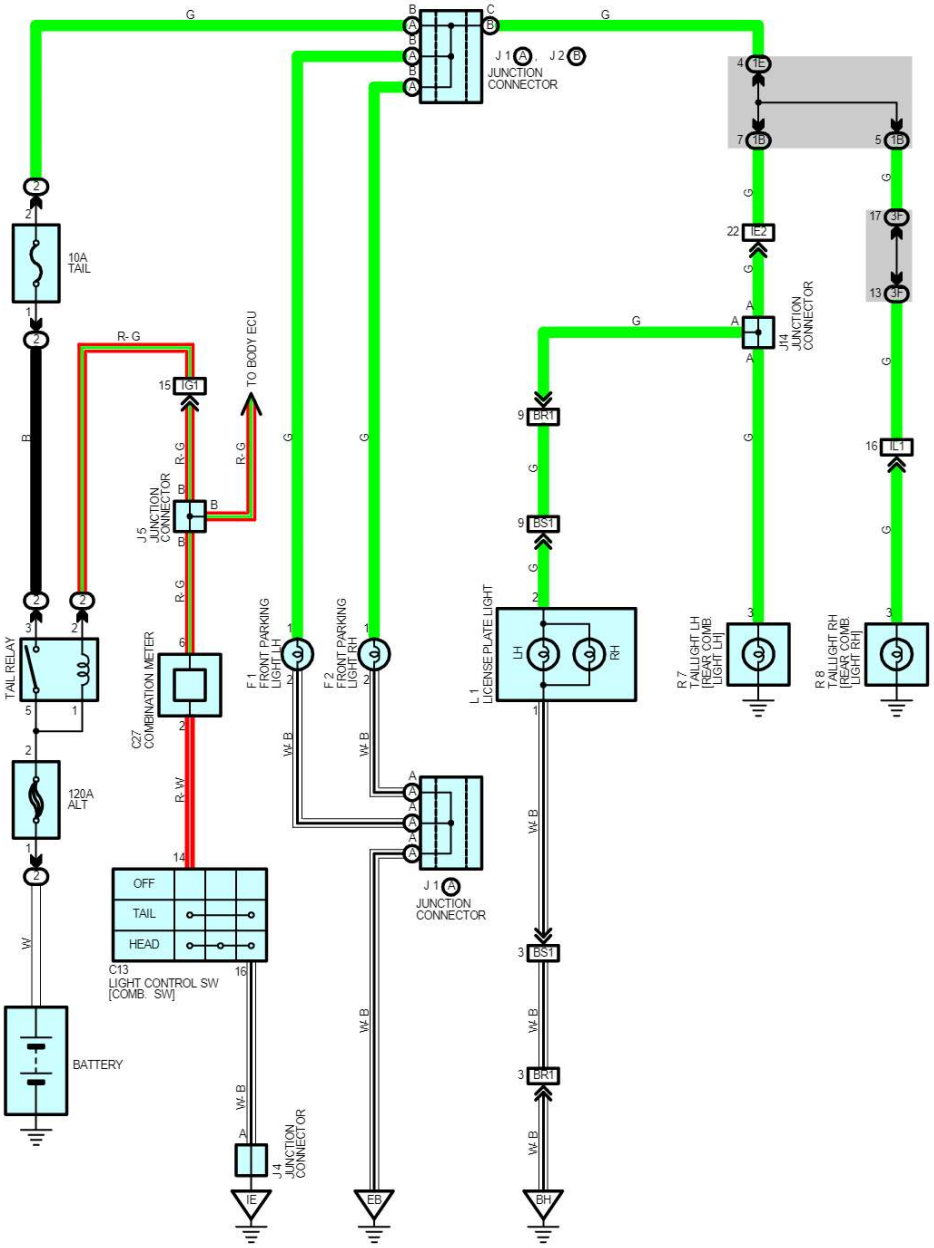
INTERIOR LIGHT

: GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
BH	42	Left Quarter Panel Inner

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I5	40	Cowl Wire	B2	42	Roof Wire
I9					


J 1 A , J 2 B
JUNCTION CONNECTOR
10A TAIL
TAIL RELAY
120A ALT
BATTERY
TO BODY ECU
J5 JUNCTION CONNECTOR
C27 COMBINATION METER
C13 LIGHT CONTROL SW [COMB. SW]
OFF
TAIL
HEAD
F 1 FRONT PARKING LIGHT LH
F 2 FRONT PARKING LIGHT RH
L 1 LICENSE PLATE LIGHT
LH
RH
J 1 A JUNCTION CONNECTOR
J14 JUNCTION CONNECTOR
R 7 TAILLIGHT LH [REAR COMB. LIGHT LH]
R 8 TAILLIGHT RH [REAR COMB. LIGHT RH]
J4 JUNCTION CONNECTOR
IE
EB
BH

SERVICE HINTS

C13 LIGHT CONTROL SW [COMB. SW]

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

TAIL RELAY

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

: PARTS LOCATION

Code	See Page	Code		See Page	Code	See Page
C13	30	J1	A	29	J14	32
C27	30	J2	B	29	L1	32
F1	28	J4		31	R7	33
F2	28	J5		31	R8	33

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

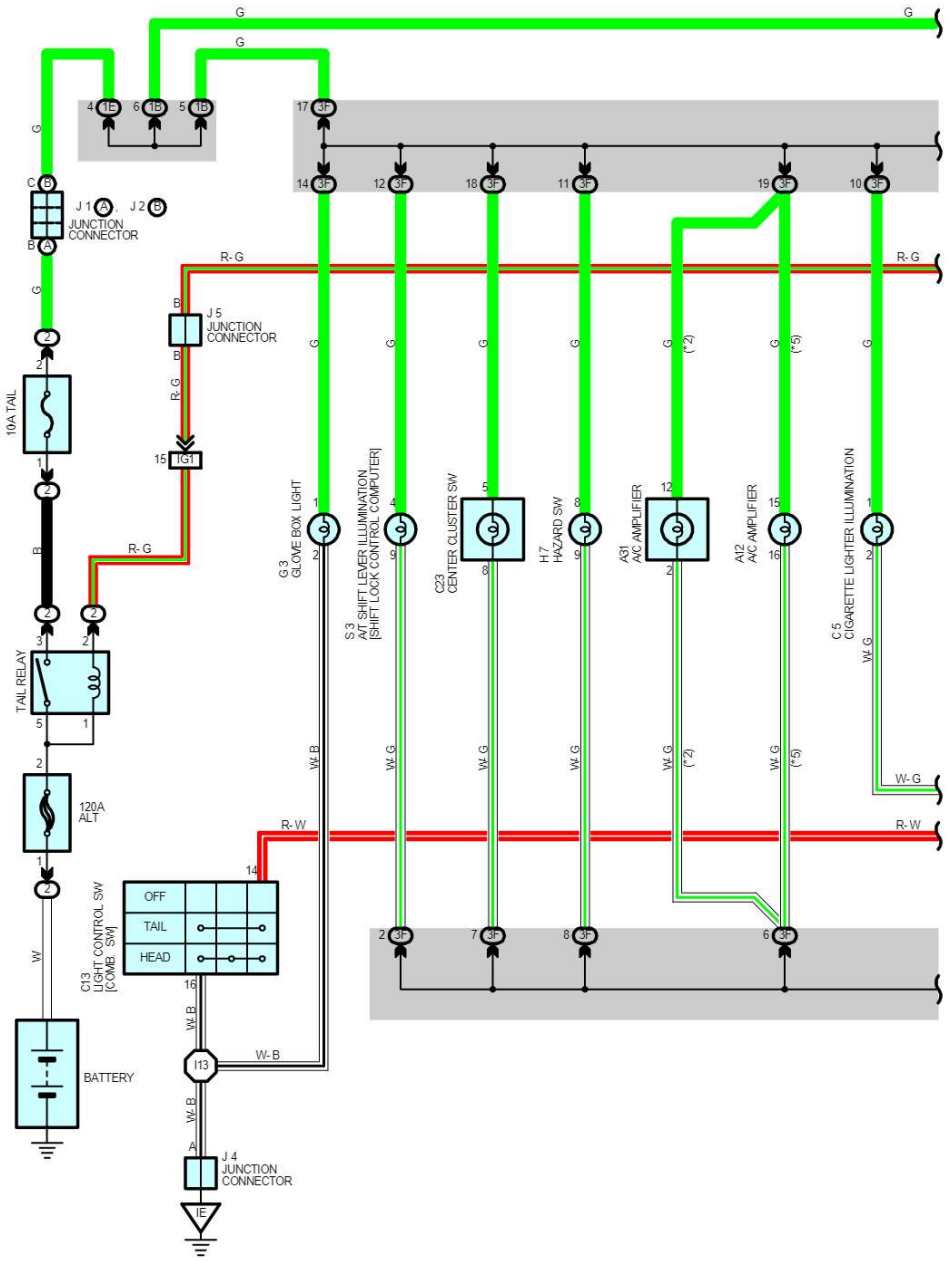
Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
3F	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

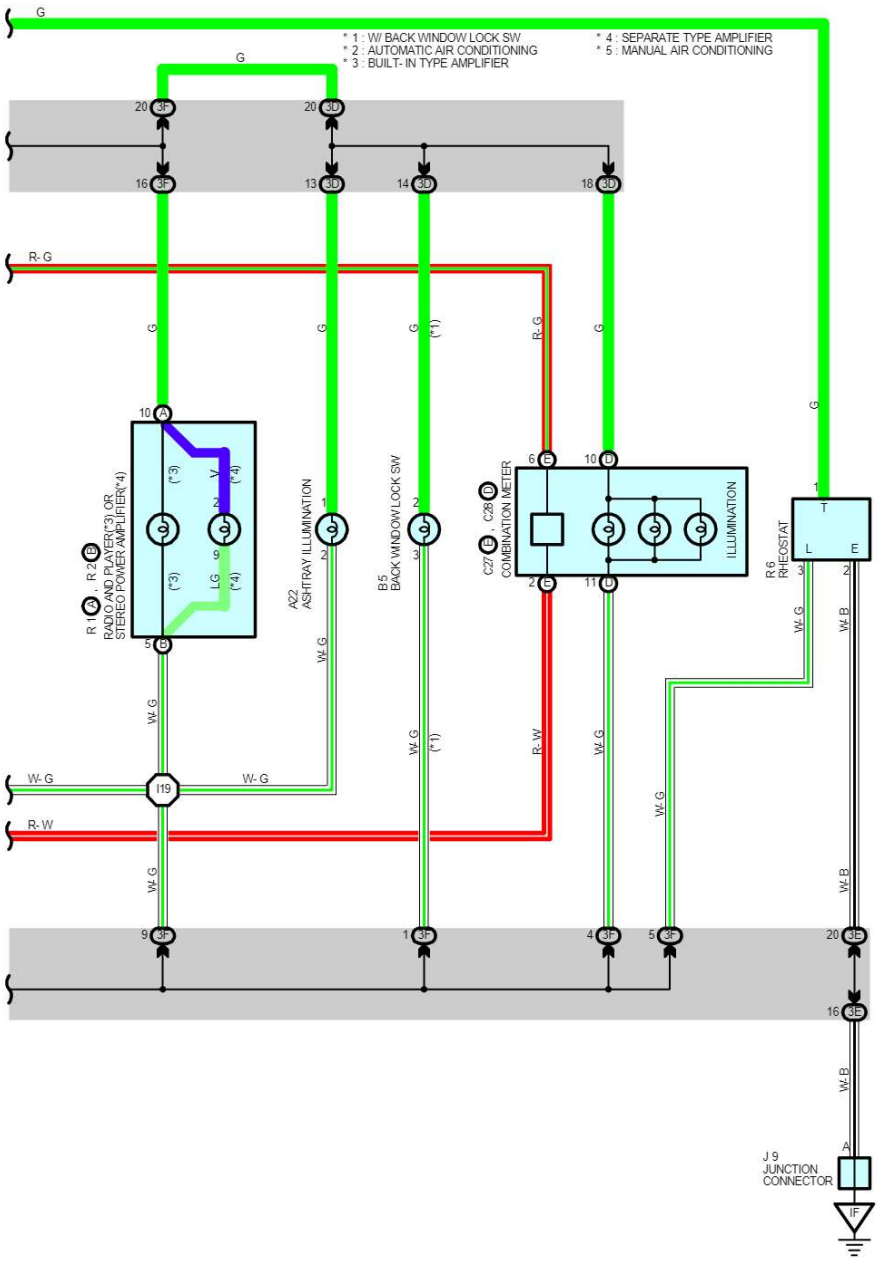
: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE2	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)

: GROUND POINTS

Code	See Page	Ground Points Location
EB	36	Front Left Fender
IE	38	Cowl Side Panel LH
BH	42	Left Quarter Panel Inner


G
R-G
W-G
W-B
R-W
W
J 1
J 2
JUNCTION CONNECTOR
J 5
JUNCTION CONNECTOR
J 4
JUNCTION CONNECTOR
10A TAIL
TAIL RELAY
120A ALT
BATTERY
C13 LIGHT CONTROL SW [COMB. SW]
OFF
TAIL
HEAD
G 3 GLOVE BOX LIGHT
S 3 A/T SHIFT LEVER ILLUMINATION [SHIFT LOCK CONTROL COMPUTER]
C23 CENTER CLUSTER SW
H 7 HAZARD SW
A31 A/C AMPLIFIER
A12 A/C AMPLIFIER
C 5 CIGARETTE LIGHTER ILLUMINATION
IG1
I13
1E
1B
3F
(*2)
(*5)


* 1 : W/ BACK WINDOW LOCK SW
* 2 : AUTOMATIC AIR CONDITIONING
* 3 : BUILT- IN TYPE AMPLIFIER
* 4 : SEPARATE TYPE AMPLIFIER
* 5 : MANUAL AIR CONDITIONING
R 1 , R 2
RADIO AND PLAYER(*3) OR
STEREO POWER AMPLIFIER(*4)
A22
ASHTRAY ILLUMINATION
B5
BACK WINDOW LOCK SW
C27 , C28
COMBINATION METER
ILLUMINATION
R 6
RHEOSTAT
J 9
JUNCTION
CONNECTOR
I19

ILLUMINATION

SERVICE HINTS

C13 LIGHT CONTROL SW [COMB. SW]

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

TAIL RELAY

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

R6 RHEOSTAT

1-2 : Approx. **12** volts with rheostat fully turned counterclockwise and **0** volts with fully turned clockwise

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A12	30	C27 E	30	J5	31
A22	30	C28 D	30	J9	31
A31	30	G3	31	R1 A	31
B5	30	H7	31	R2 B	31
C5	30	J1 A	29	R6	31
C13	30	J2 B	29	S3	31
C23	30	J4	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
3D	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		
3F		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

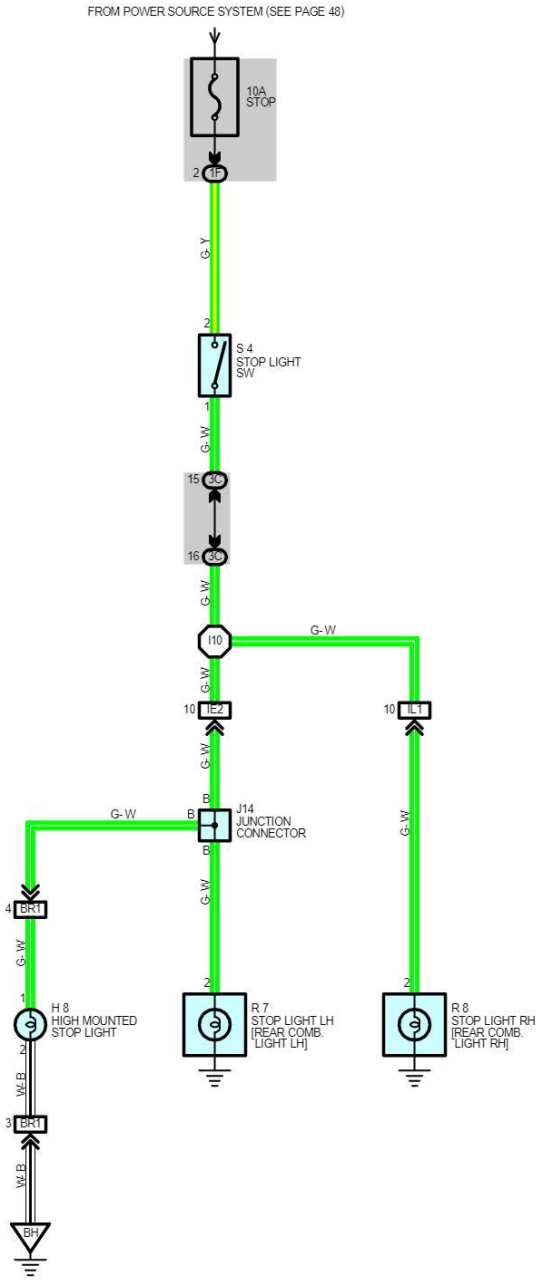
: GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I13	40	Cowl Wire	I19	40	Cowl Wire

STOP LIGHT


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A
STOP
2 1F
G-Y
2
S 4
STOP LIGHT
SW
1
G-W
15 3C
16 3C
G-W
I10
G-W
G-W
10 IE2
10 IL1
G-W
B
G-W
B J14
JUNCTION
CONNECTOR
B
G-W
G-W
4 BR1
G-W
1
H 8
HIGH MOUNTED
STOP LIGHT
2
W-B
3 BR1
W-B
BH
2
R 7
STOP LIGHT LH
[REAR COMB.
LIGHT LH]
2
R 8
STOP LIGHT RH
[REAR COMB.
LIGHT RH]

SERVICE HINTS

S4 STOP LIGHT SW

2-1 : Closed with brake pedal depressed

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
H8	32	R7	33	S4	31
J14	32	R8	33		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE2	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)

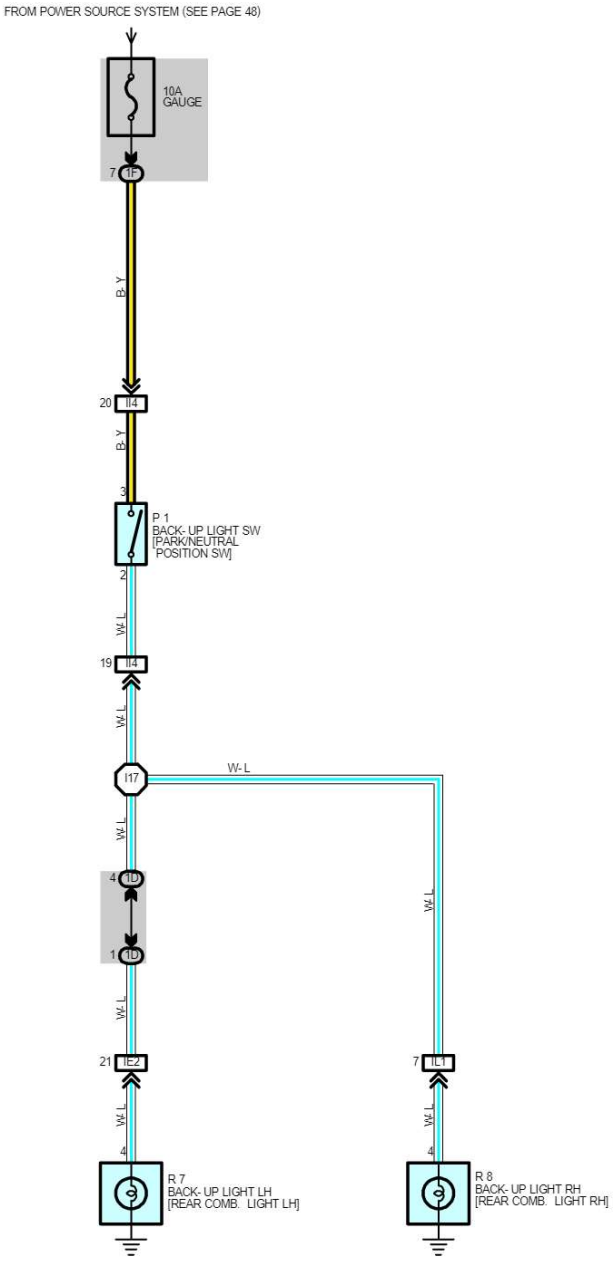
: GROUND POINTS

Code	See Page	Ground Points Location
BH	42	Left Quarter Panel Inner

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I10	40	Cowl Wire			

BACK-UP LIGHT



SERVICE HINTS

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

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

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
P1	29	R7	33	R8	33

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1F		

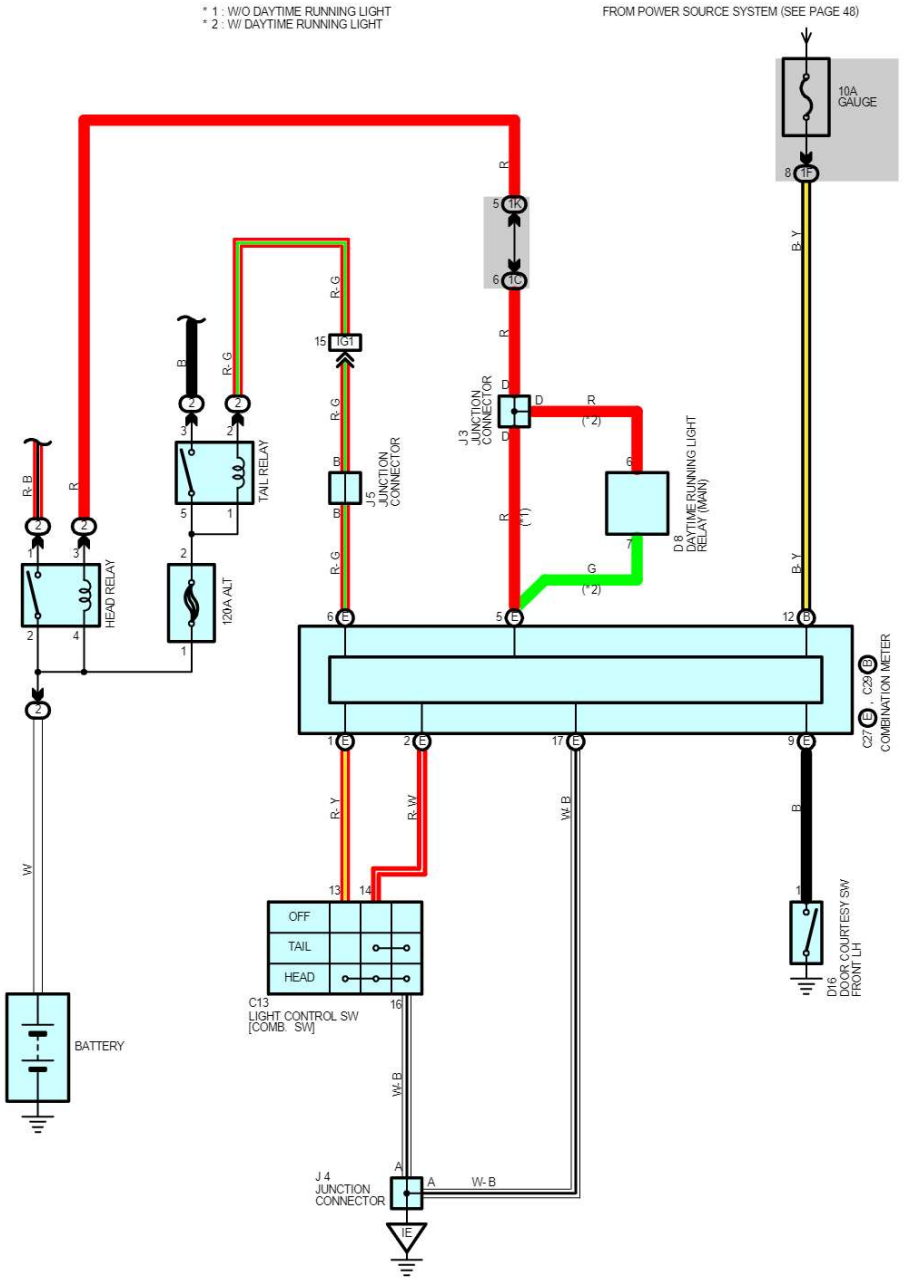
: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE2	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
II4	40	Engine Wire and Cowl Wire (On the Glove Box)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I17	40	Cowl Wire			

LIGHT AUTO TURN OFF



SYSTEM OUTLINE

With the ignition SW turned on, the current flows to TERMINAL (B) 12 of the combination meter through GAUGE fuse.
Voltage is applied at all times to TERMINAL (E) 6 of the combination meter through the TAIL relay (Coil side), and to TERMINAL (E) 5 of the combination meter through the HEAD relay (Coil side) [w/o daytime running light] or through the daytime running light relay (Main) [w/ daytime running light].

1. NORMAL LIGHTING OPERATION

(Turn taillight on)
With the light control SW turned to TAIL position, a signal is input into TERMINAL (E) 2 of the combination meter. According to this signal, the current flowing to TERMINAL (E) 6 of the combination meter flows from TERMINAL (E) 2 to TERMINAL 14 of the light control SW to TERMINAL 16 to GROUND and TAIL relay causes taillight to turn on.

(Turn headlight on)
With the light control SW turned to HEAD position, the signals are input into TERMINALS (E) 1 and (E) 2 of the combination meter. According to these signals, the current flowing to TERMINAL (E) 5 of the combination meter flows to TERMINAL (E) 1 to TERMINAL 13 of the light control SW to TERMINAL 16 to GROUND in the headlight circuit, and causes TAIL and HEAD relay to turn the light on. The taillight circuit is same as above.

2. LIGHT AUTO TURN OFF OPERATION

With the lights on and the ignition SW turned off (Input signal goes to TERMINAL (B) 12 of the combination meter), when door on front LH side is opened (Input signal goes to TERMINAL (E) 9 of the combination meter), the relay operates and the current is cut off which flows from TERMINAL (E) 6 of the combination meter to TERMINAL (E) 2 in taillight circuit and from TERMINAL (E) 5 to TERMINAL (E) 1 in headlight circuit. As a result, all lights are turned off automatically.

SERVICE HINTS

C27 (E), C29 (B) COMBINATION METER

(E) 1-GROUND : Continuity with the light control SW at **HEAD** position
(E) 2-GROUND : Continuity with the light control SW at **TAIL** or **HEAD** position
(E) 9-GROUND : Continuity with the front LH door open
(B)12-GROUND : Approx. **12** volts with the ignition SW at **ON** position
(E)17-GROUND : Always continuity

: PARTS LOCATION

Code		See Page	Code	See Page	Code	See Page
C13		30	D8	30	J4	31
C27	E	30	D16	32	J5	31
C29	B	30	J3	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

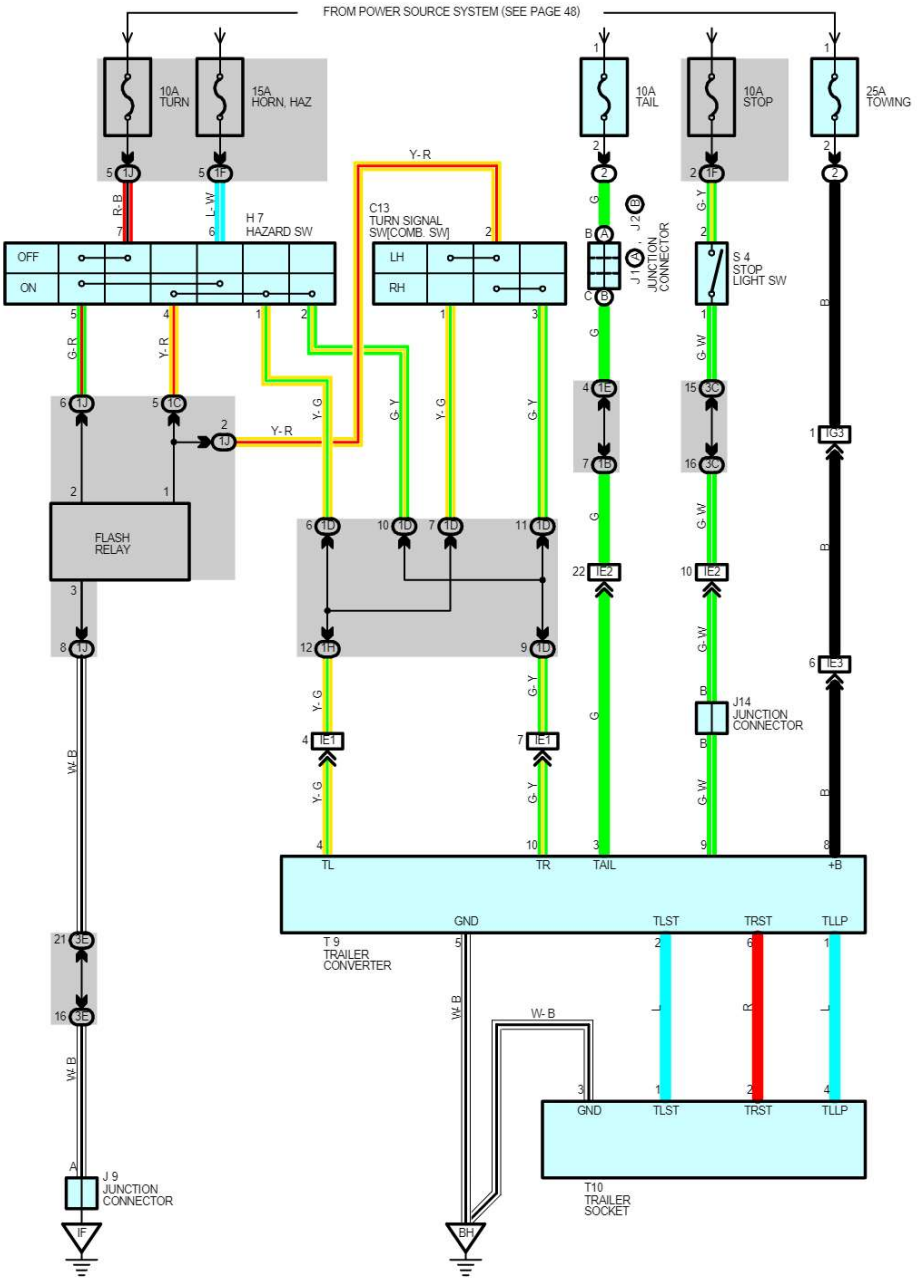
Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1F		
1K	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

: GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A TURN
15A HORN, HAZ
10A TAIL
10A STOP
25A TOWING
H 7 HAZARD SW
OFF
ON
C13 TURN SIGNAL SW[COMB. SW]
LH
RH
J 2 JUNCTION CONNECTOR
J 11 JUNCTION CONNECTOR
S 4 STOP LIGHT SW
FLASH RELAY
J14 JUNCTION CONNECTOR
T 9 TRAILER CONVERTER
T10 TRAILER SOCKET
J 9 JUNCTION CONNECTOR
TL
TR
TAIL
+B
GND
TLST
TRST
TLLP
Y-R
G-R
Y-G
G-Y
G-W
W-B
L-W
R-B
G
B
L
R

SERVICE HINTS

T9 TRAILER CONVERTER

8-GROUND : Always approx. **12** volts
5-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C13	30	J2 B	29	S4	31
H7	31	J9	31	T9	33
J1 A	29	J14	32	T10	33

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1C		
1D		
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1H		
1J		
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

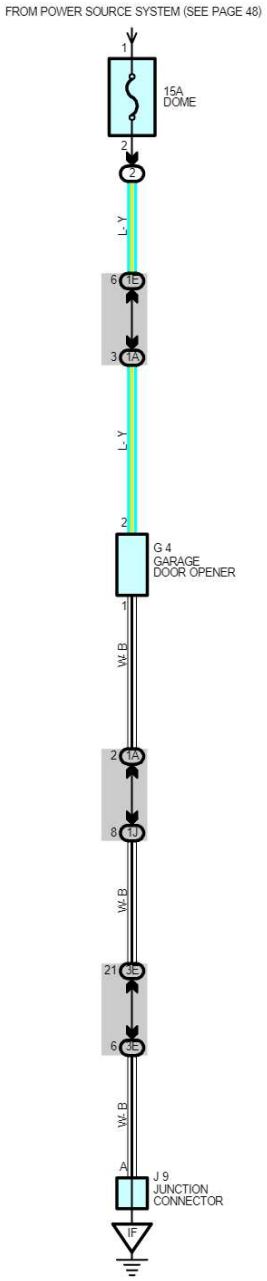
: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE2		
IE3		
IG3	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

: GROUND POINTS

Code	See Page	Ground Points Location
IF	38	Cowl Side Panel RH
BH	42	Left Quarter Panel Inner

GARAGE DOOR OPENER



SERVICE HINTS

G4 GARAGE DOOR OPENER

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

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
G4	32	J9	31		

: RELAY BLOCKS

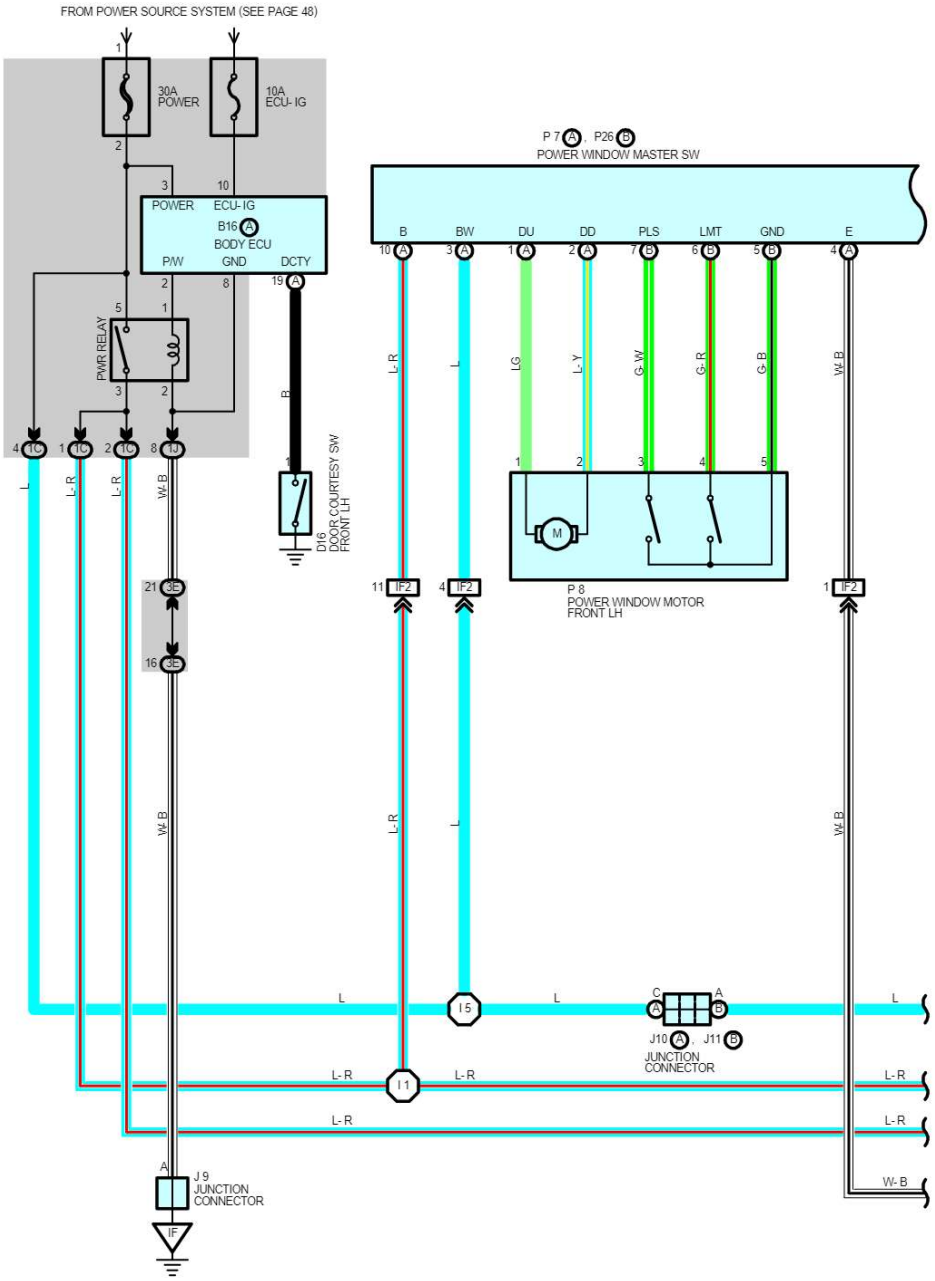
Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

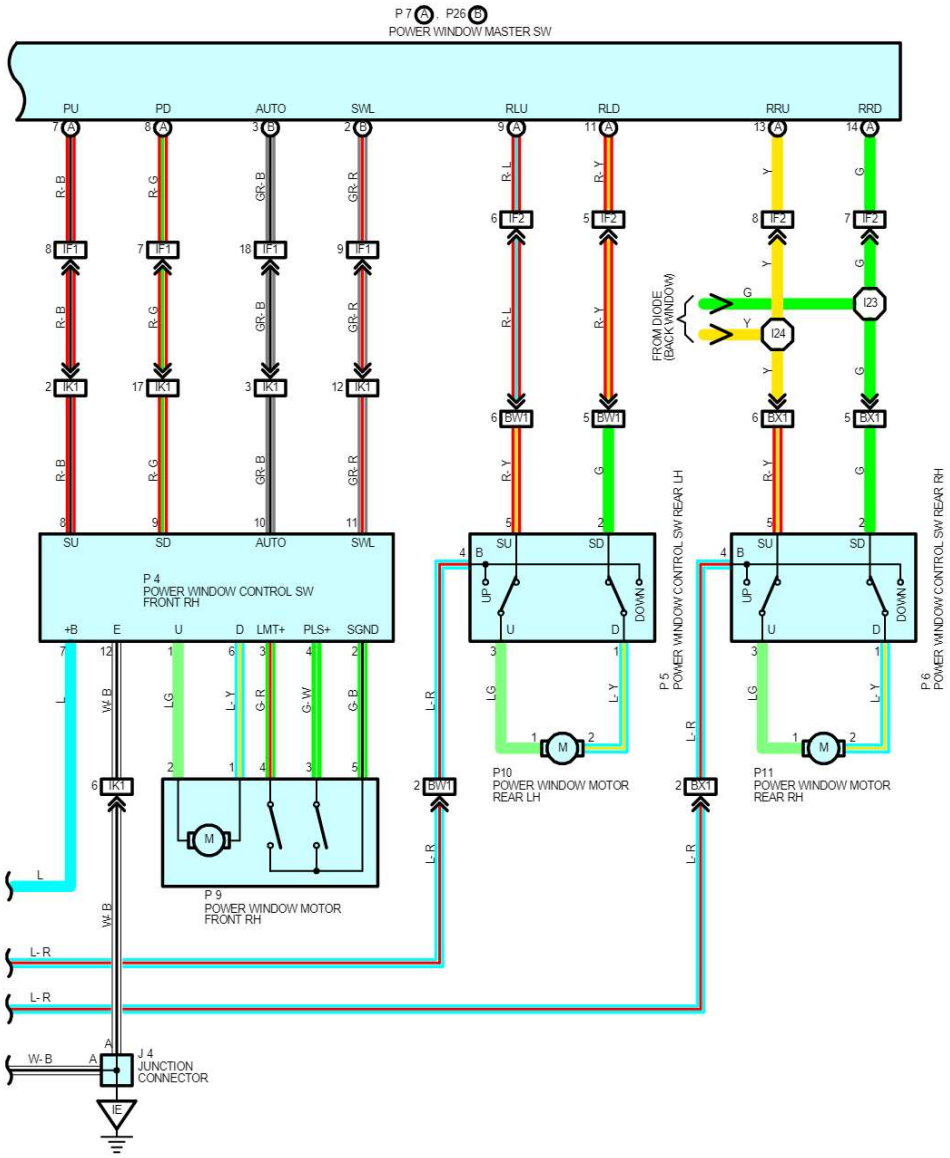
: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1J	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: GROUND POINTS

Code	See Page	Ground Points Location
IF	38	Cowl Side Panel RH


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
30A POWER
10A ECU- IG
POWER
ECU- IG
B16
BODY ECU
P/W
GND
DCTY
PWR RELAY
P 7 P26
POWER WINDOW MASTER SW
B
BW
DU
DD
PLS
LMT
GND
E
L
L- R
W- B
L- R
W- B
L- R
L
LG
L- Y
G- W
G- R
G- B
W- B
D10
DOOR COURTESY SW FRONT LH
P 8
POWER WINDOW MOTOR FRONT LH
J10 J11
JUNCTION CONNECTOR
J 9
JUNCTION CONNECTOR
L
L- R
W- B


P 7 A , P26 B
POWER WINDOW MASTER SW
PU
PD
AUTO
SWL
RLU
RLD
RRU
RRD
FROM DIODE (BACK WINDOW)
P 4
POWER WINDOW CONTROL SW FRONT RH
+B
E
U
D
LMT+
PLS+
SGND
SU
SD
AUTO
SWL
UP
DOWN
P 5
POWER WINDOW CONTROL SW REAR LH
P 6
POWER WINDOW CONTROL SW REAR RH
P 9
POWER WINDOW MOTOR FRONT RH
P10
POWER WINDOW MOTOR REAR LH
P11
POWER WINDOW MOTOR REAR RH
J 4
JUNCTION CONNECTOR
IE

SYSTEM OUTLINE

With the ignition SW turned on, current flows through the ECU-IG fuse to TERMINAL 10 of the body ECU. This activates the ECU and at all times the current flowing to TERMINAL 3 of the ECU, TERMINAL (A) 3 of the power window master SW and TERMINAL 7 of the power window control SW front RH from POWER fuse. When the ignition SW turned on, current flows to TERMINAL 5 of the PWR relay to TERMINAL 3 to TERMINAL (A) 10 of the power window master SW and TERMINAL 4 of the power window control SW (Rear LH, rear RH).

1. MANUAL OPERATION (DRIVER'S SW)

With the ignition SW turned on and with the power window master SW (Manual SW) in UP position, the current flowing to TERMINAL (A) 10 of the power window master SW flows to TERMINAL (A) 1 to TERMINAL 1 of the power window motor front LH to TERMINAL 2 to TERMINAL (A) 2 of the power window master SW to TERMINAL (A) 4 to GROUND and causes the power window motor to rotate in the up direction. The window ascends only while the SW is being pushed (Manual up position). In down operation, the flow of current from TERMINAL (A) 10 of the power window master SW to TERMINAL (A) 2 to TERMINAL 2 of the power window motor front LH to TERMINAL 1 to TERMINAL (A) 1 of the power window master SW to TERMINAL (A) 4 to GROUND, flowing in the opposite direction to manual up operation and causing the motor to rotate in reverse, lowering the window.
For the other windows, as the power window master SW is operated, the relevant door window is opened or closed.

2. MANUAL OPERATION (FRONT PASSENGER'S SW)

With the power window control SW pulled to the up side, current flowing from TERMINAL 7 of the power window control SW to TERMINAL 1 to TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 6 of the power window control SW to TERMINAL 12 to GROUND and causes the power window motor to rotate in the up direction. Up operation continues only while the power window control SW is pulled to the up side (Manual up position). When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 2 to TERMINAL 1, and the motor rotates in reverse. When the window lock SW is pushed to the lock side, the ground circuit to the front passenger's SW becomes open. As a result, even if Open/Close operation of the front passenger's window is tried, the current from TERMINAL 12 of the power window control SW is not grounded and the motor does not rotate, so the front passenger's window can not be operated and window lock occurs.

3. MANUAL OPERATION (REAR LH, RH SW)

With the power window control SW pulled to the up side, current flowing from TERMINAL 4 of the power window control SW to TERMINAL 3 to TERMINAL 1 of the power window motor to TERMINAL 2 to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL (A) 11 or (A) 14 of the power window master SW to TERMINAL (A) 4 to GROUND and causes the power window motor to rotate in the up direction. Up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 1 to TERMINAL 2, and the motor rotates in reverse. When the window lock SW is pushed to the lock side, the ground circuit to the rear LH, RH window becomes open. As a result, even if Open/Close operation of the rear LH, RH window is tried, the current from TERMINAL (A) 4 of the power window master SW is not grounded and the motor does not rotate, so the rear LH, RH window can not be operated and window lock occurs.

4. STOPPING OF AUTO DOWN (DRIVER'S WINDOW)

When the manual SW (Power window master SW) is pulled to the up side during auto down operation, a ground circuit opens in the master SW and current does not flow from TERMINAL (A) 1 of the power window master SW to TERMINAL (A) 4, so the motor stops, causing auto down operation to stop. If the manual SW is pulled continuously, the motor rotates in the up direction in manual up operation.

5. STOPPING OF AUTO DOWN (FRONT PASSENGER'S WINDOW)

When the manual SW (Power window master SW or power window control SW front RH) is pulled to the up side during auto down operation, a ground circuit opens in the control SW and current does not flow from TERMINAL 1 of the power window control SW front RH to TERMINAL 12, so the motor stops, causing auto down operation to stop. If the manual SW is pulled continuously, the motor rotates in the up direction in manual up operation.

6. STOPPING OF AUTO UP (DRIVER'S WINDOW)

When the manual SW (Power window master SW) is pushed to the down side during auto up operation, a ground circuit opens in the master SW and current does not flow from TERMINAL (A) 2 of the power window master SW to TERMINAL (A) 4, so the motor stops, causing auto up operation to stop. If the manual SW is pushed continuously, the motor rotates in the down direction in manual down operation.

7. STOPPING OF AUTO UP (FRONT PASSENGER'S WINDOW)

When the manual SW (Power window master SW or power window control SW front RH) is pushed to the down side during auto up operation, a ground circuit opens in the control SW and current does not flow from TERMINAL 6 of the power window control SW front RH to TERMINAL 12, so the motor stops, causing auto up operation to stop. If the manual SW is pushed continuously, the motor rotates in the down direction in manual down operation.

8. AUTO DOWN OPERATION (DRIVER'S WINDOW)

With the ignition SW on and with the auto SW of the power window master SW in DOWN position, current flowing to TERMINAL (A) 10 of the power window master SW to TERMINAL (A) 2 to TERMINAL 2 of the power window motor front LH to TERMINAL 1 to TERMINAL (A)1 of the power window master SW to TERMINAL (A) 4 to GROUND, causing the motor to rotate towards the down side. Then the solenoid in the power window master SW is activated and it locks the auto SW being pushed, causing the motor to continue to rotate in auto down operation. When the window has completely descended, the current flow between TERMINAL (A) 1 of the power window master SW and TERMINAL (A) 4 increases. As a result, the solenoid stops operating, the auto SW turns off and flow from TERMINAL (A) 10 of the power window master SW to TERMINAL (A) 2 is cut off, stopping the motor so that auto stop occurs.

9. AUTO DOWN OPERATION (FRONT PASSENGER'S WINDOW)

With the ignition SW on and with the auto SW of the power window master SW or power window control SW front RH in DOWN position, current flowing to TERMINAL 7 of the power window control SW front RH to TERMINAL 6 to TERMINAL 1 of the power window motor front RH to TERMINAL 2 to TERMINAL 1 of the power window control SW front RH to TERMINAL 12 to GROUND, causing the motor to rotate towards the down side. Then the solenoid in the power window control SW front RH is activated and it locks the auto SW being pushed, causing the motor to continue to rotate in auto down operation. When the window has completely descended, the current flow between TERMINAL 6 of the power window control SW front RH and TERMINAL 12 increases. As a result, the solenoid stops operating, the auto SW turns off and flow from TERMINAL 7 of the power window control SW front RH to TERMINAL 6 is cut off, stopping the motor so that auto stop occurs.

10. AUTO UP OPERATION (DRIVER'S WINDOW)

With the ignition SW on and with the auto SW of the power window master SW in UP position, current flowing to TERMINAL (A) 10 of the power window master SW to TERMINAL (A) 1 to TERMINAL 1 of the power window motor front LH to TERMINAL 2 to TERMINAL (A) 2 of the power window master SW to TERMINAL (A) 4 to GROUND, causing the motor to rotate towards the up side. Then the solenoid in the power window master SW is activated and it locks the auto SW being pulled, causing the motor to continue to rotate in auto up operation. When the window has completely descended, the current flow between TERMINAL (A) 2 of the power window master SW and TERMINAL (A) 4 increases. As a result, the solenoid stops operating, the auto SW turns off and flow from TERMINAL (A) 10 of the power window master SW to TERMINAL (A) 1 is cut off, stopping the motor so that auto stop occurs.

11. AUTO UP OPERATION (FRONT PASSENGER'S WINDOW)

With the ignition SW on and with the auto SW of the power window master SW or power window control SW front RH in UP position, current flowing to TERMINAL 7 of the power window control SW front RH to TERMINAL 1 to TERMINAL 2 of the power window motor front RH to TERMINAL 1 to TERMINAL 6 of the power window control SW front RH to TERMINAL 12 to GROUND, causing the motor to rotate towards the up side. Then the solenoid in the power window control SW front RH is activated and it locks the auto SW being pulled, causing the motor to continue to rotate in auto up operation. When the window has completely descended, the current flow between TERMINAL 6 of the power window control SW front RH and TERMINAL 12 increases. As a result, the solenoid stops operating, the auto SW turns off and flow from TERMINAL 7 of the power window control SW front RH to TERMINAL 1 is cut off, stopping the motor so that auto stop occurs.

12. KEY OFF POWER WINDOW OPERATION

With the ignition SW turned from on to off, the body ECU operates and current flows from the POWER fuse to TERMINAL 3 of the body ECU to TERMINAL 2 to TERMINAL 1 of the PWR relay to TERMINAL 2 to GROUND for about 43 seconds. The same as normal operation, the current flows from the POWER fuse to TERMINAL 5 of the PWR relay to TERMINAL 3 to TERMINAL (A) 10 of the power window master SW, TERMINAL 4 (Rear LH, RH) of the power window control SW and signal input in to the TERMINAL 11 of the power window control SW front RH. As a result, for about 43 seconds after the ignition SW is turned off, it is possible to raise and lower the power window by the functioning of this ECU. Also, by opening the front door LH (the door courtesy SW front LH on) within about 43 seconds after turning the ignition SW to off, a signal is input to TERMINAL (A) 19 of the body ECU. As a result, the ECU turns off and up and down movement of the window stops.
Furthermore, front RH, rear LH, RH window operate the same as the above circuit.

13. CATCHING PREVENTION FUNCTION (DRIVER'S, FRONT PASSENGER'S WINDOW)

When any foreign matter is caught in the window during power window auto 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 then 200 mm, it opens the window until the opening is 200 mm.

POWER WINDOW

SERVICE HINTS

B16 (A) BODY ECU

3-GROUND : Always approx. **12** volts
10-GROUND : Approx. **12** volts with ignition SW at **ON** position
(A)19-GROUND : Continuity with front LH door opened
8-GROUND : Always continuity

PWR RELAY

5-3 : Closed with ignition SW on and stays at **12** volts for **43** seconds after the ignition SW is turned off, but if a door is opened in this **43** seconds period, voltage will drop to **0** volts

D16 DOOR COURTESY SW FRONT LH

1-GROUND : Continuity with door opened

P4 POWER WINDOW CONTROL SW FRONT RH

7-GROUND : Always approx. **12** volts
12-GROUND : Always continuity

P5, P6 POWER WINDOW CONTROL SW REAR LH, RH

4-GROUND : Approx. **12** volts with ignition SW on and stays at **12** volts for **43** seconds after the ignition SW is turned off, but if a door is opened in this **43** seconds period, voltage will drop to **0** volts

P7 (A) POWER WINDOW MASTER SW

(A) 4-GROUND : Always continuity
(A)10-GROUND : Approx. **12** volts with ignition SW on and stays at **12** volts for **43** seconds after the ignition SW is turned off, but if a door is opened in this **43** seconds period, voltage will drop to **0** volts
(A) 3-GROUND : Always approx. **12** volts

WINDOW LOCK SW

Open with window lock SW at **LOCK** position

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B16 A	30	J11 B	31	P8	33
D16	32	P4	33	P9	33
J4	31	P5	33	P10	33
J9	31	P6	33	P11	33
J10 A	31	P7 A	33	P26 B	33

⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J		
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

▭ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF2		
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)
BW1	42	Rear Door LH Wire and Cowl Wire (Left Center Pillar)
BX1	42	Rear Door RH Wire and Cowl Wire (Right Center Pillar)

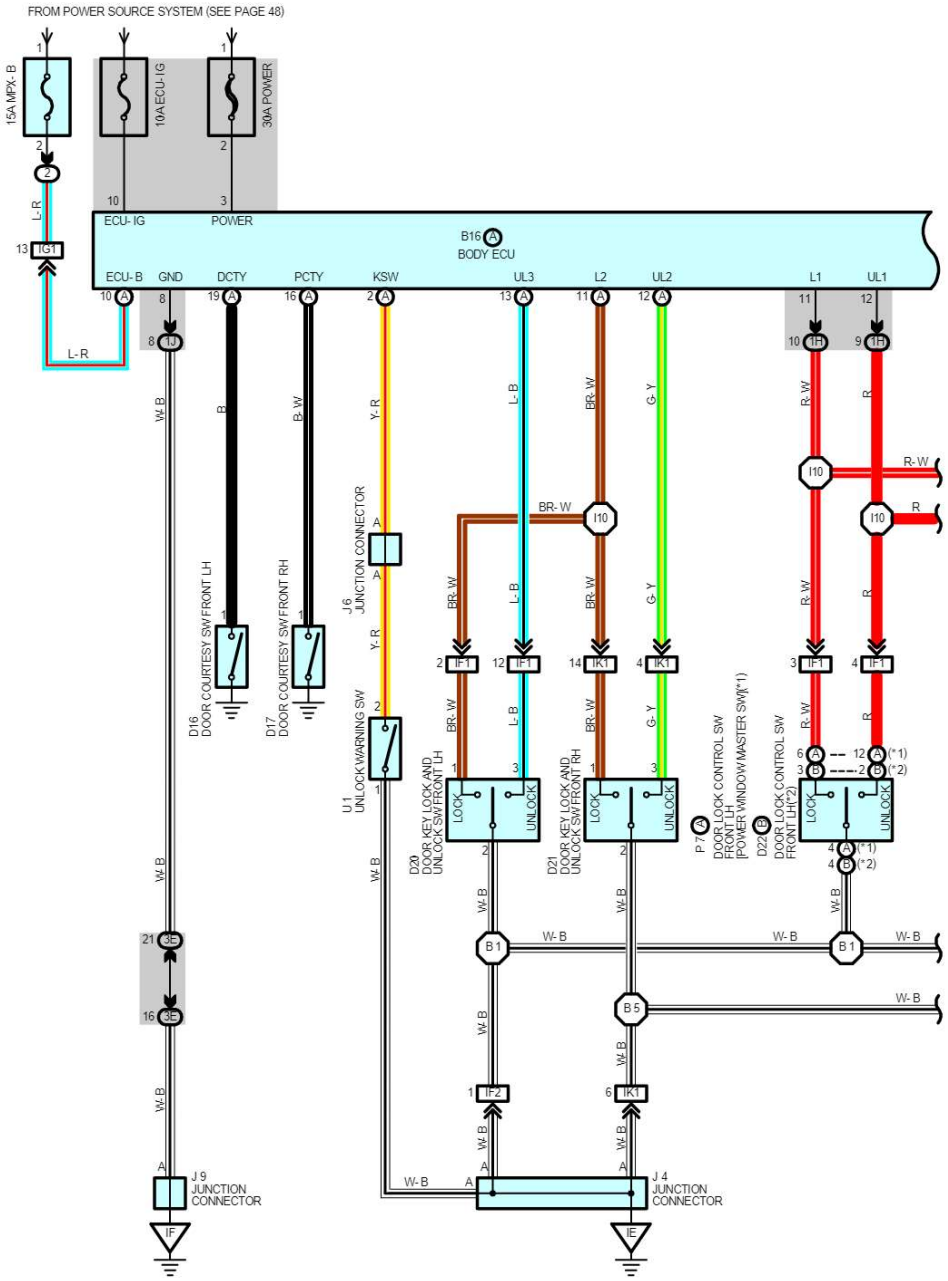
▽ : GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

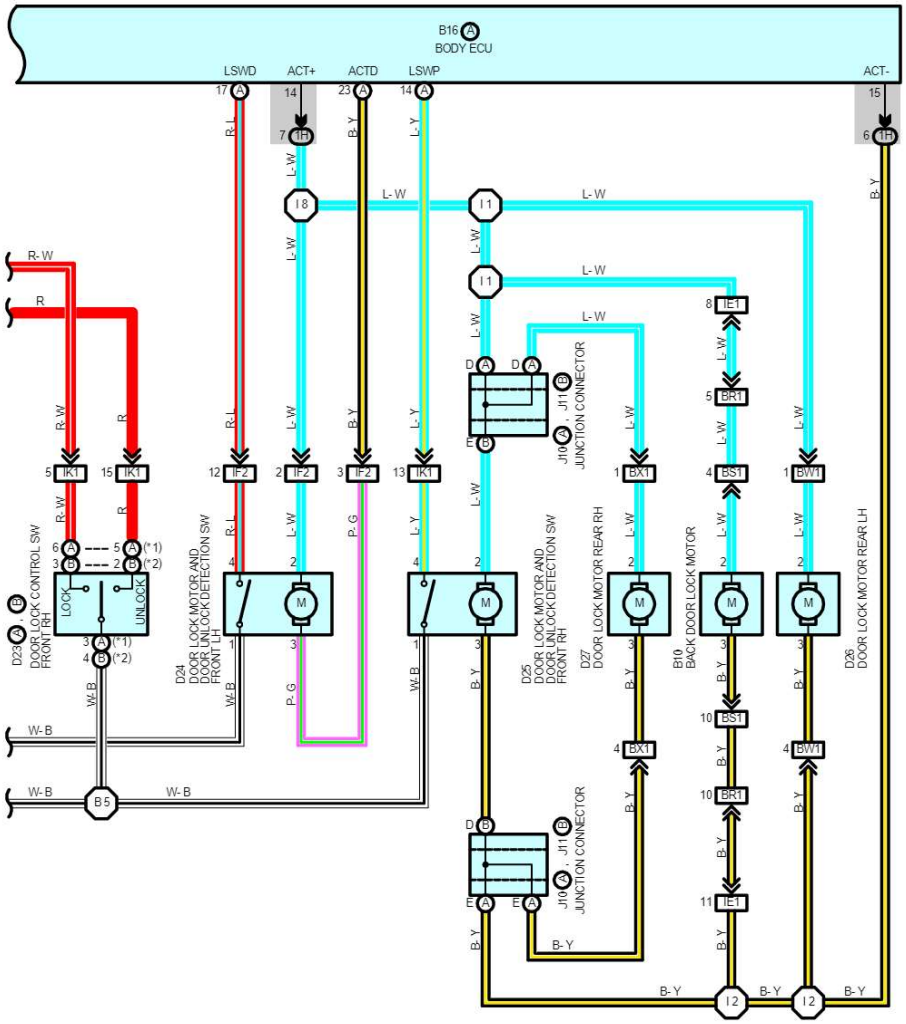
: **SPLICE POINTS**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	I23	40	Cowl Wire
I5			I24		

DOOR LOCK CONTROL



* 1 : W/ POWER WINDOW
* 2 : W/O POWER WINDOW



DOOR LOCK CONTROL

SYSTEM OUTLINE

Current always flows to TERMINAL POWER of the body ECU through the POWER fuse.

1. MANUAL LOCK OPERATION

To push door lock control SW or door key lock and unlock SW to LOCK position, a lock signal is input to TERMINAL L1 or L2 of the body ECU and causes the body ECU to function. Current flows from TERMINAL POWER of the body ECU to TERMINAL ACT+ to TERMINAL 2 of the door lock motors to TERMINAL 3 to TERMINAL ACT- and ACTD of the body ECU to TERMINAL GND to GROUND and the door lock motor causes the door to lock.

2. MANUAL UNLOCK OPERATION

To push door lock control SW or door key lock and unlock SW to UNLOCK position, an unlock signal is input to TERMINAL UL1, UL2 or UL3 of the body ECU and causes the body ECU to function. Current flows from TERMINAL POWER of the body ECU to TERMINAL ACT- and ACTD to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL ACT+ of the body ECU to TERMINAL GND to GROUND and the door lock motor causes the door to unlock.

3. IGNITION KEY REMINDER OPERATION

- Operating door lock knob (in door lock motor operation)
  With ignition key in cylinder (Unlock warning SW on), when the driver's door is opened (Door courtesy SW on) and locked using the driver's door lock knob (Door lock motor), the driver's door is locked once but all door is unlocked soon by the function of the body ECU. As a result, the current flows from TERMINAL POWER of the body ECU to TERMINAL ACT- and ACTD to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL ACT+ of the body ECU to TERMINAL GND to GROUND and causes all the door to unlock.
  For front passenger's door, as driver's door lock knob operated, the door lock motor is operated.

- Operating door lock control SW or door key lock and unlock SW
  With ignition key in cylinder (Unlock warning SW on), when the door is opened (Door courtesy SW on) and locked using door lock control SW or door key lock and unlock SW, all door lock is locked once but all door is unlocked by the function of SW contained in motor, which inputs the signal to TERMINAL LSWD or LSWP of the body ECU. According to this input signal, the current in the body ECU flows from TERMINAL POWER of the body ECU to TERMINAL ACT- and ACTD to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL ACT+ of the body ECU to TERMINAL GND to GROUND and causes all the doors to unlock.

4. DOUBLE OPERATION UNLOCK OPERATION

When the door key lock and unlock SW front LH is turned to the unlock side, only the driver's door is unlocked. Turning the door key lock and unlock SW front LH to the unlock side causes a signal to be input to TERMINAL UL3 of the body ECU, and if the signal input again within 3 seconds by turning the SW to the unlock side again, current flows from TERMINAL POWER of the body ECU to TERMINAL ACT- and ACTD to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL ACT+ of the body ECU to TERMINAL GND to GROUND and the door lock motor causes all the doors to unlock.

SERVICE HINTS

B16 (A) BODY ECU

10-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position
8-GROUND : Always continuity
3-GROUND : Always approx. **12** volts
15-GROUND : Approx. **12** volts for **0.2** seconds with following operations.
∗ Door lock control SW unlocked.
∗ Door lock control SW locked with ignition key in cylinder and driver's door open.
(Ignition key reminder function)
∗ Door lock knob locked with ignition key in cylinder and driver's door open.
(Ignition key reminder function)
∗ Unlocking the passenger's door cylinder with key.
∗ Double operation unlocking the driver's door cylinder with key.
14-GROUND : Approx. **12** volts for **0.2** seconds with following operations.
∗ Door lock control SW locked.
∗ Locking the driver's, passenger's door cylinder with key.
(A)17-GROUND : Continuity with driver's door lock knob unlocked.
(A)14-GROUND : Continuity with Front passenger's door lock knob unlocked.
(A)23-GROUND : Approx. **12** volts for **0.2** seconds with following operations.
∗ Door lock control SW unlocked.
∗ Door lock control SW locked with ignition key in cylinder and driver's door open.
(Ignition key reminder function)
∗ Door lock knob locked with ignition key in cylinder and driver's door open.
(Ignition key reminder function)
∗ Unlocking the driver's door cylinder with key.

D20, D21 DOOR KEY LOCK AND UNLOCK SW FRONT LH, RH

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

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B10	32	D23 A	32	J6	31
B16 A	30	D23 B	32	J9	31
D16	32	D24	32	J10 A	31
D17	32	D25	32	J11 B	31
D20	32	D26	32	P7 A	33
D21	32	D27	32	U1	31
D22 B	32	J4	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1H	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J		
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

DOOR LOCK CONTROL

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

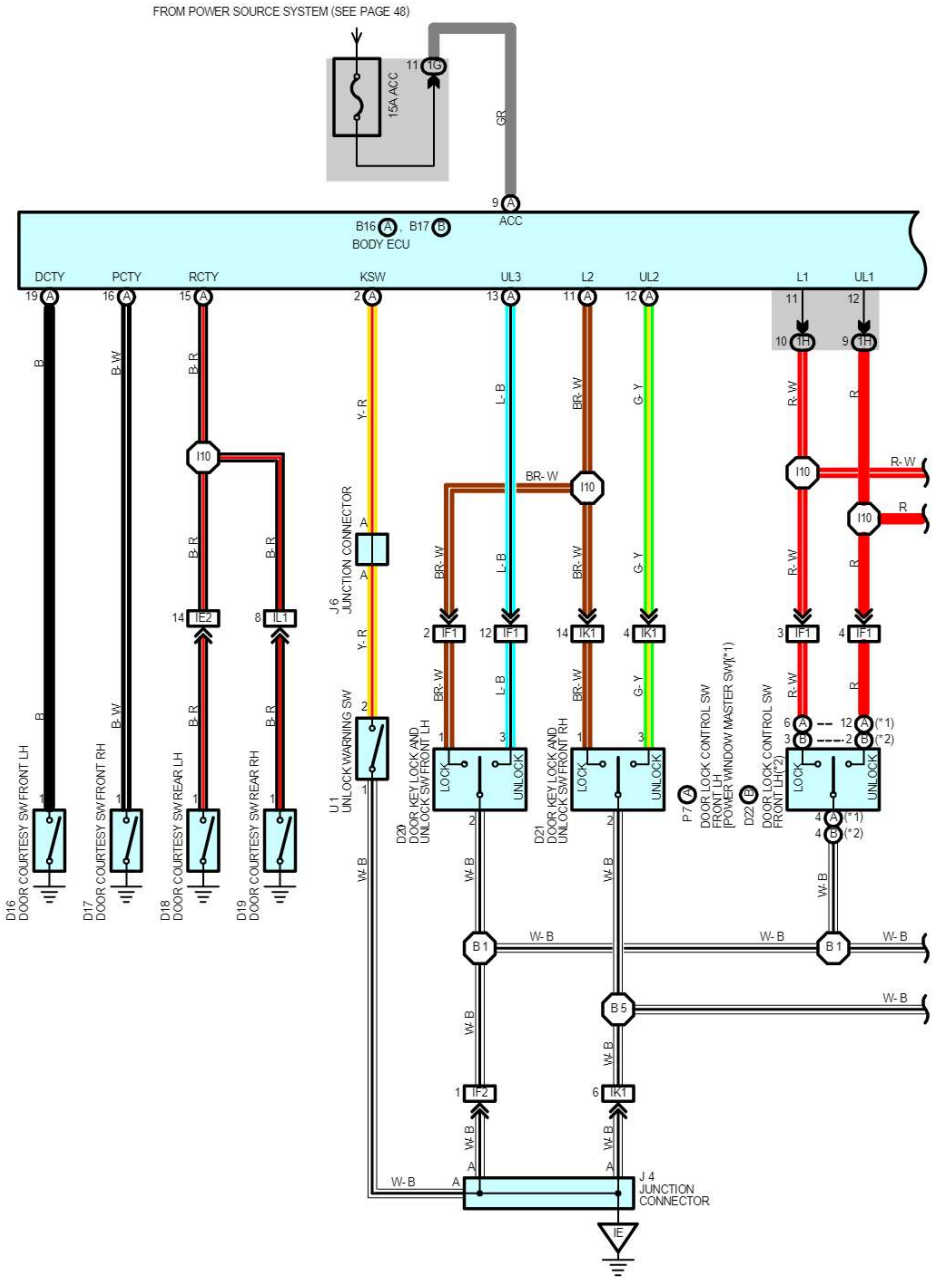
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF2		
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)
BW1	42	Rear Door LH Wire and Cowl Wire (Left Center Pillar)
BX1	42	Rear Door RH Wire and Cowl Wire (Right Center Pillar)

: GROUND POINTS

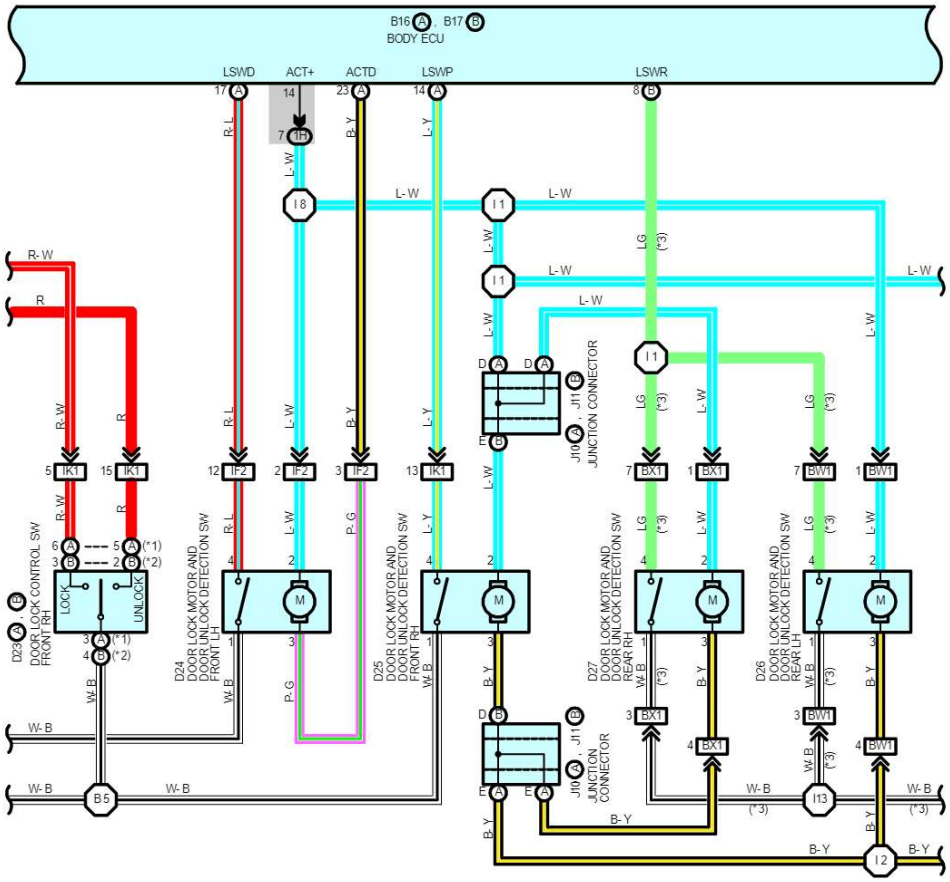
Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

: SPLICE POINTS

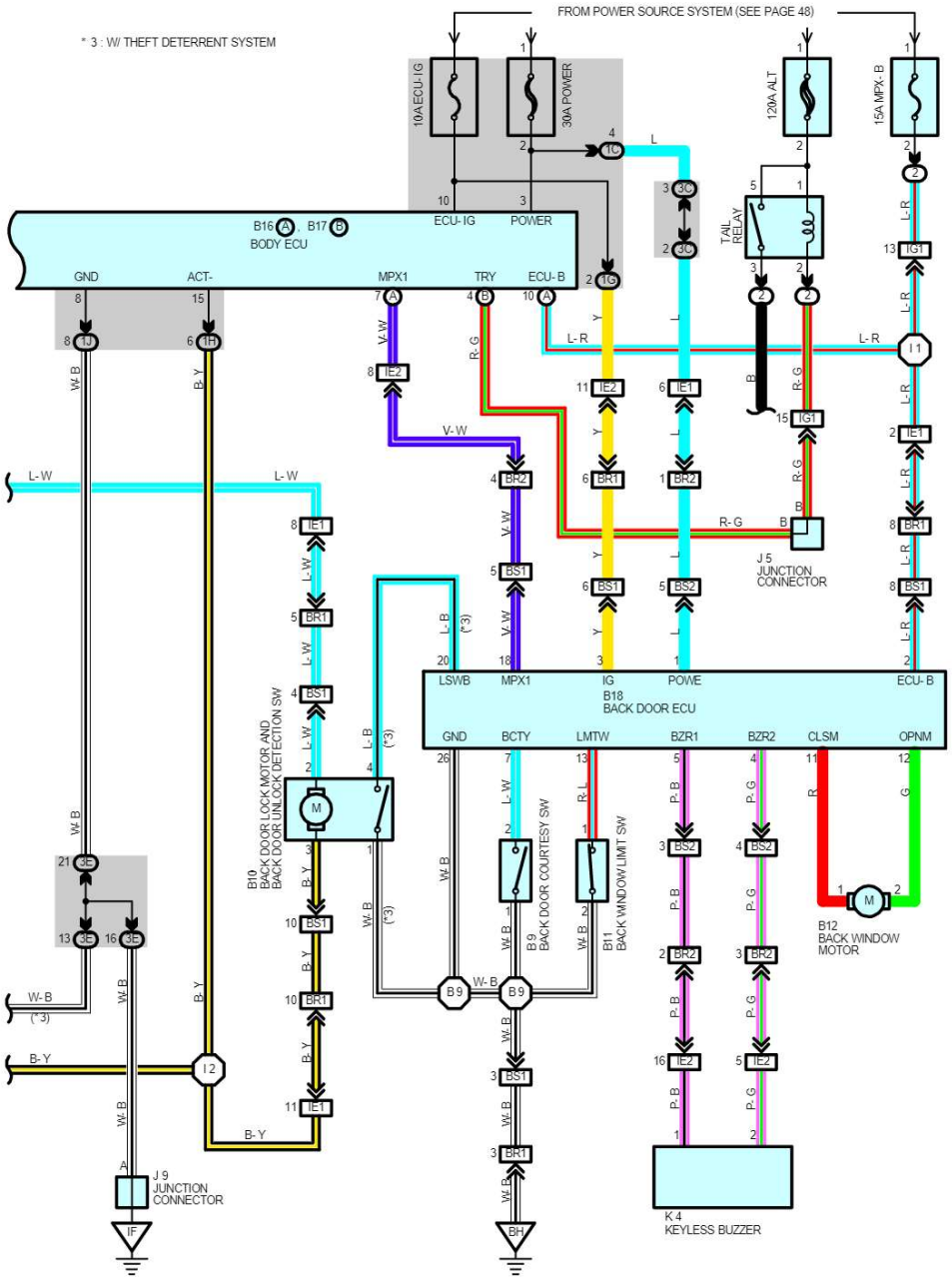
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	I10	40	Cowl Wire
I2			B1	42	Front Door LH Wire
I8			B5	42	Front Door RH Wire


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
15A ACC
GR
ACC
B16 B17
BODY ECU
DCTY
PCTY
RCTY
KSW
UL3
L2
UL2
L1
UL1
J6 JUNCTION CONNECTOR
U1 UNLOCK WARNING SW
D20 DOOR KEY LOCK AND UNLOCK SW FRONT LH
D21 DOOR KEY LOCK AND UNLOCK SW FRONT RH
P7 DOOR LOCK CONTROL SW FRONT LH (POWER WINDOW MASTER SW)(*1)
D22 DOOR LOCK CONTROL SW FRONT LH(*2)
D16 DOOR COURTESY SW FRONT LH
D17 DOOR COURTESY SW FRONT RH
D18 DOOR COURTESY SW REAR LH
D19 DOOR COURTESY SW REAR RH
J 4 JUNCTION CONNECTOR
LOCK
UNLOCK
(*1)
(*2)

* 1 : W/ POWER WINDOW
* 2 : W/O POWER WINDOW
* 3 : W/ THEFT DETERRENT SYSTEM



WIRELESS DOOR LOCK CONTROL



SYSTEM OUTLINE

In this system, the back door ECU receivers weak radio wave transmitted from the transmitter built-into the ignition key, and outputs a signal to the body 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. BUZZER SOUND FUNCTION

During lock operation, when the back door ECU receives a lock signal from the door unlock detection SW, the wireless door lock buzzer goes on once. During unlock operation, when the back door ECU receives an unlock signal from the door unlock detection SW, the keyless buzzer goes on twice.
With any door open, when the back door ECU receives a lock signal from the transmitter, the keyless buzzer goes on for approx. 10 seconds. If the door is closed, or ignition SW is on, or if the unlock signal is received from the transmitter while the buzzer is on, the buzzer stops.

5. VISUAL CONFIRMATION OF LOCK OR UNLOCK

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

6. PANIC MODE FUNCTION

When the panic SW on the transmitter is pressed, the back door ECU receives a signal and enters the panic mode. The signal input into the body ECU from the back door ECU turns on (during 60 seconds) the theft deterrent horn, the horn LH and RH, and flashes the front parking light, 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, the horn LH and RH stop, and the front parking light, taillight and headlight are turned off.

7. REPEAT FUNCTION

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

8. BUZZER VOLUME CONTROL

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

9. BACK WINDOW CONTROL

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

WIRELESS DOOR LOCK CONTROL

SERVICE HINTS

B16 (A) BODY ECU

8-GROUND : Always continuity
3, (A)10-GROUND : Always approx. **12** volts
10-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position

D24, D25, D26, D27 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

B10 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

B18 BACK DOOR ECU

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

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B9	32	D19	32	J4	31
B10	32	D20	32	J5	31
B11	32	D21	32	J6	31
B12	32	D22 B	32	J9	31
B16 A	30	D23 A	32	J10 A	31
B17 B	30	D23 B	32	J11 B	31
B18	32	D24	32	K4	29
D16	32	D25	32	P7 A	33
D17	32	D26	32	U1	31
D18	32	D27	32		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
1H		
1J		
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

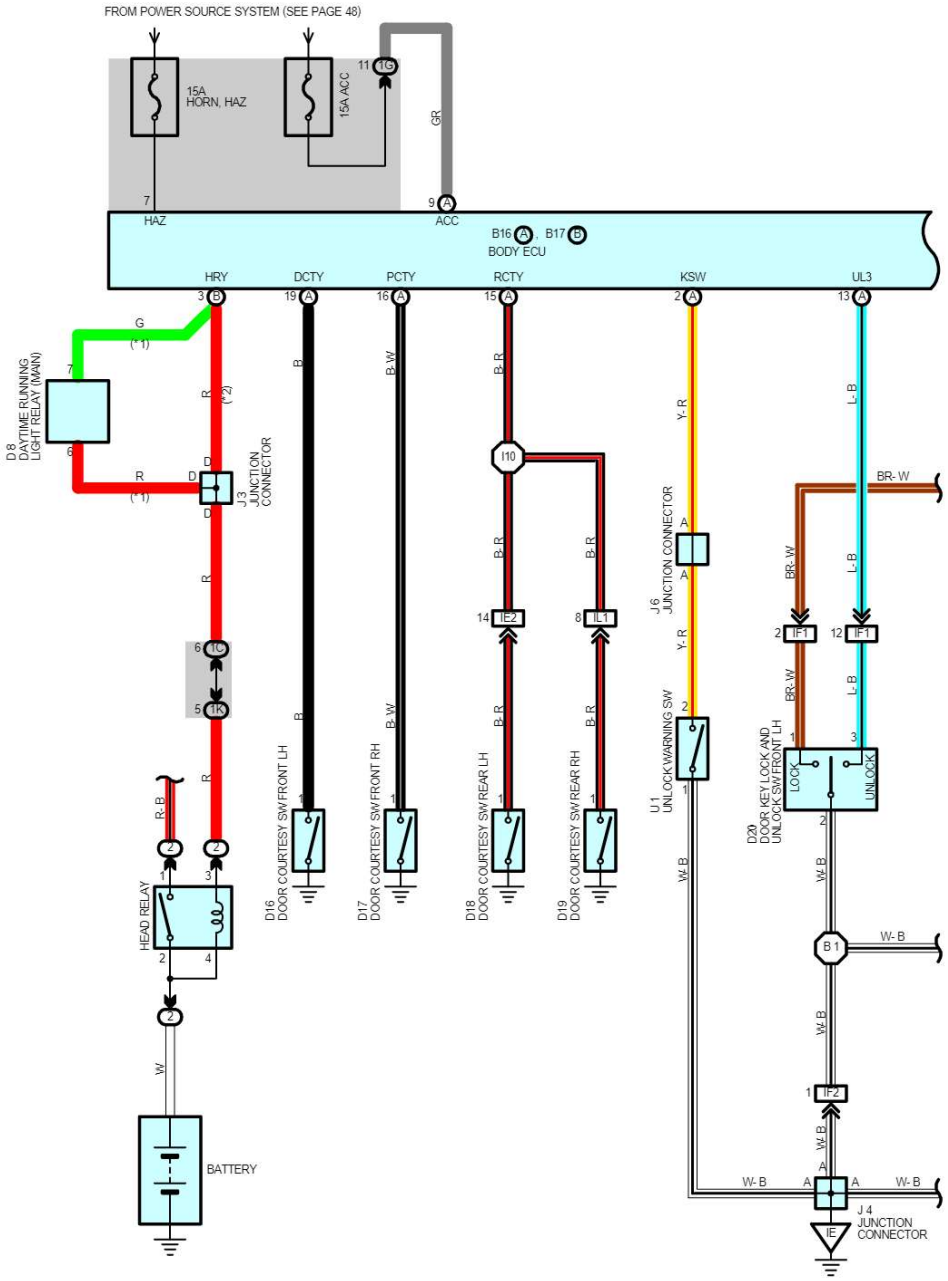
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE2		
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF2		
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BR2		
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)
BS2		
BW1	42	Rear Door LH Wire and Cowl Wire (Left Center Pillar)
BX1	42	Rear Door RH Wire and Cowl Wire (Right Center Pillar)

: GROUND POINTS

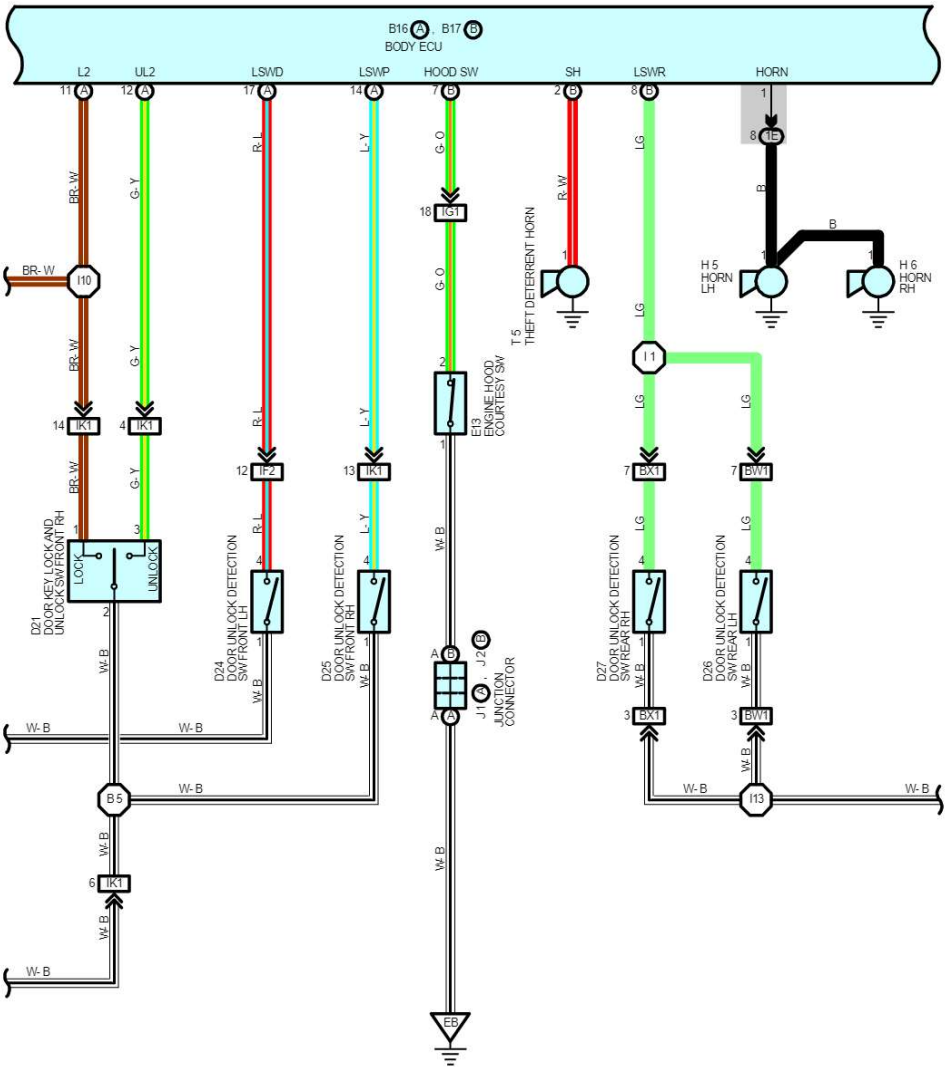
Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
BH	42	Left Quarter Panel Inner

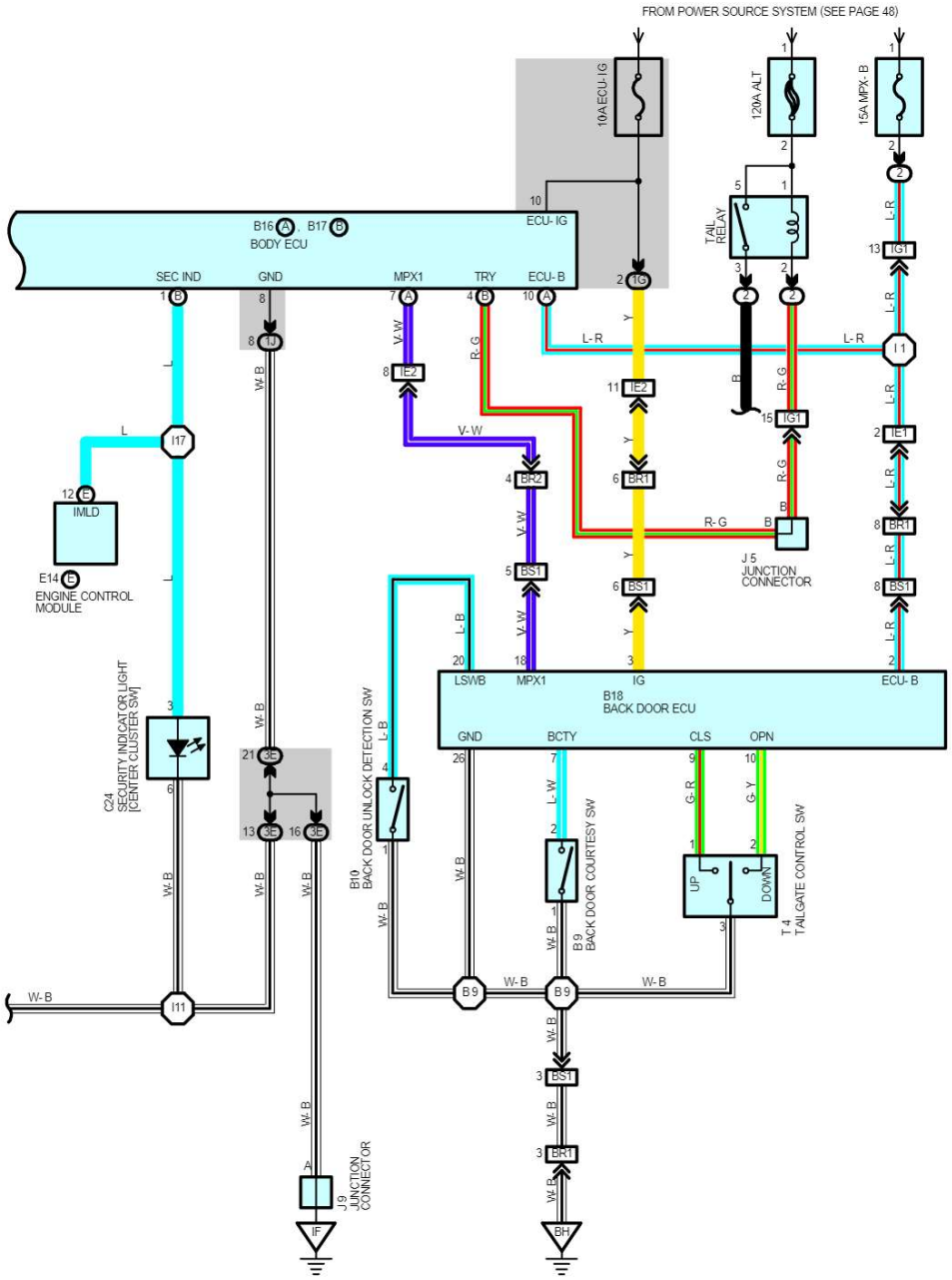
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	I13	40	Cowl Wire
I2			B1	42	Front Door LH Wire
I8			B5	42	Front Door RH Wire
I10			B9	42	Back Door No.2 Wire


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
15A HORN, HAZ
15A ACC
GR
HAZ
ACC
B16 A , B17 B
BODY ECU
HRY
DCTY
PCTY
RCTY
KSW
UL3
D8 DAYTIME RUNNING LIGHT RELAY (MAIN)
J3 JUNCTION CONNECTOR
HEAD RELAY
BATTERY
D16 DOOR COURTESY SW FRONT LH
D17 DOOR COURTESY SW FRONT RH
D18 DOOR COURTESY SW REAR LH
D19 DOOR COURTESY SW REAR RH
U1 UNLOCK WARNING SW
J6 JUNCTION CONNECTOR
D20 DOOR KEY LOCK AND UNLOCK SW FRONT LH
J4 JUNCTION CONNECTOR
LOCK
UNLOCK

* 1 : W/ DAYTIME RUNNING LIGHT
* 2 : W/O DAYTIME RUNNING LIGHT




FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A ECU-IG
12DA ALT
15A MPX-B
TAIL RELAY
B16 B17
BODY ECU
ECU-IG
SEC IND
GND
MPX1
TRY
ECU-B
IMLD
E14
ENGINE CONTROL MODULE
C24
SECURITY INDICATOR LIGHT [CENTER CLUSTER SW]
J 5
JUNCTION CONNECTOR
B18
BACK DOOR ECU
LSWB
MPX1
IG
ECU-B
GND
BCTY
CLS
OPN
B10
BACK DOOR UNLOCK DETECTION SW
B9
BACK DOOR COURTESY SW
T4
TAILGATE CONTROL SW
UP
DOWN
J9
JUNCTION CONNECTOR
IF
BH
I11
I17
I1
IE2
IE1
IG1
BR2
BR1
BS1
SE
L
W-B
L-R
V-W
R-G
L-B
G-R
G-Y
L-W

SERVICE HINTS

D20, D21 DOOR KEY LOCK AND UNLOCK SW FRONT LH, RH

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

T4 TAILGATE CONTROL SW

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

E13 ENGINE HOOD COURTESY SW

2-1 : Open with engine hood open

U1 UNLOCK WARNING SW

2-1 : Closed with ignition key in cylinder

B16 (A), B17 (B) BODY ECU

(A) 2-GROUND : Continuity with ignition key in cylinder
(A)16-GROUND : Continuity with front RH door open
(A)19-GROUND : Continuity with front LH door open
(A)11-GROUND : Continuity with door key lock and unlock SW at **LOCK** position
8-GROUND : Always continuity
(B) 7-GROUND : Continuity with engine hood closed
(A)13-GROUND :
Continuity with door key lock and unlock SW front LH at **UNLOCK** position
(A)12-GROUND :
Continuity with door key lock and unlock SW front RH at **UNLOCK** position
(A) 9-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
10-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position
7, (A) 10-GROUND : Always approx. **12** volts

B18 BACK DOOR ECU

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

O : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B9	32	D20	32	J2 B	29
B10	32	D21	32	J3	31
B16 A	30	D24	32	J4	31
B17 B	30	D25	32	J5	31
B18	32	D26	32	J6	31
C24	30	D27	32	J9	31
D8	30	E13	28	T4	33
D16	32	E14	31	T5	29
D17	32	H5	28	U1	31
D18	32	H6	28		
D19	32	J1 A	29		

: RELAY BLOCKS

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

 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1G	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE2		
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF2		
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BR2		
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)
BW1	42	Rear Door LH Wire and Cowl Wire (Left Center Pillar)
BX1	42	Rear Door RH Wire and Cowl Wire (Right Center Pillar)

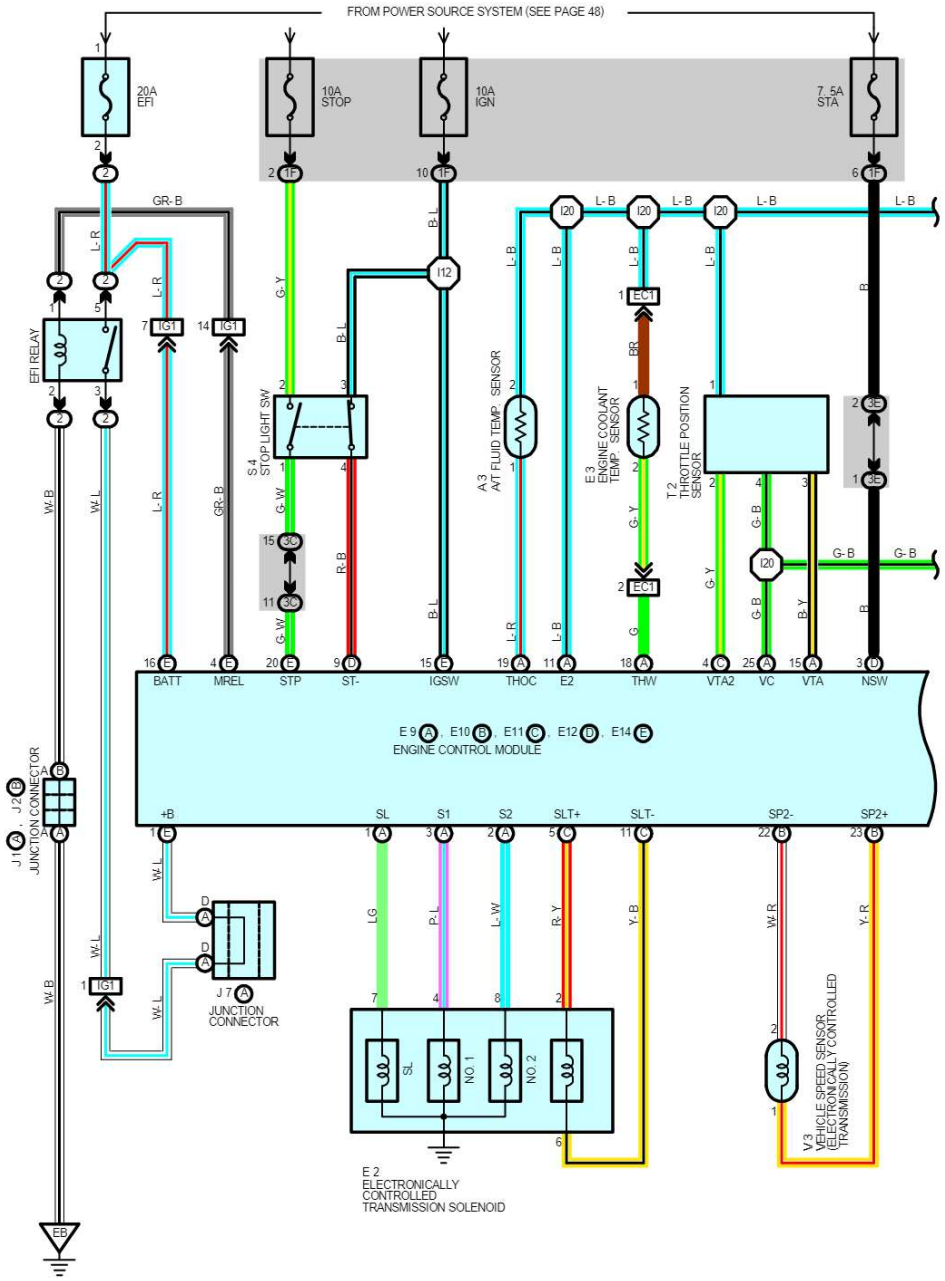
 : GROUND POINTS

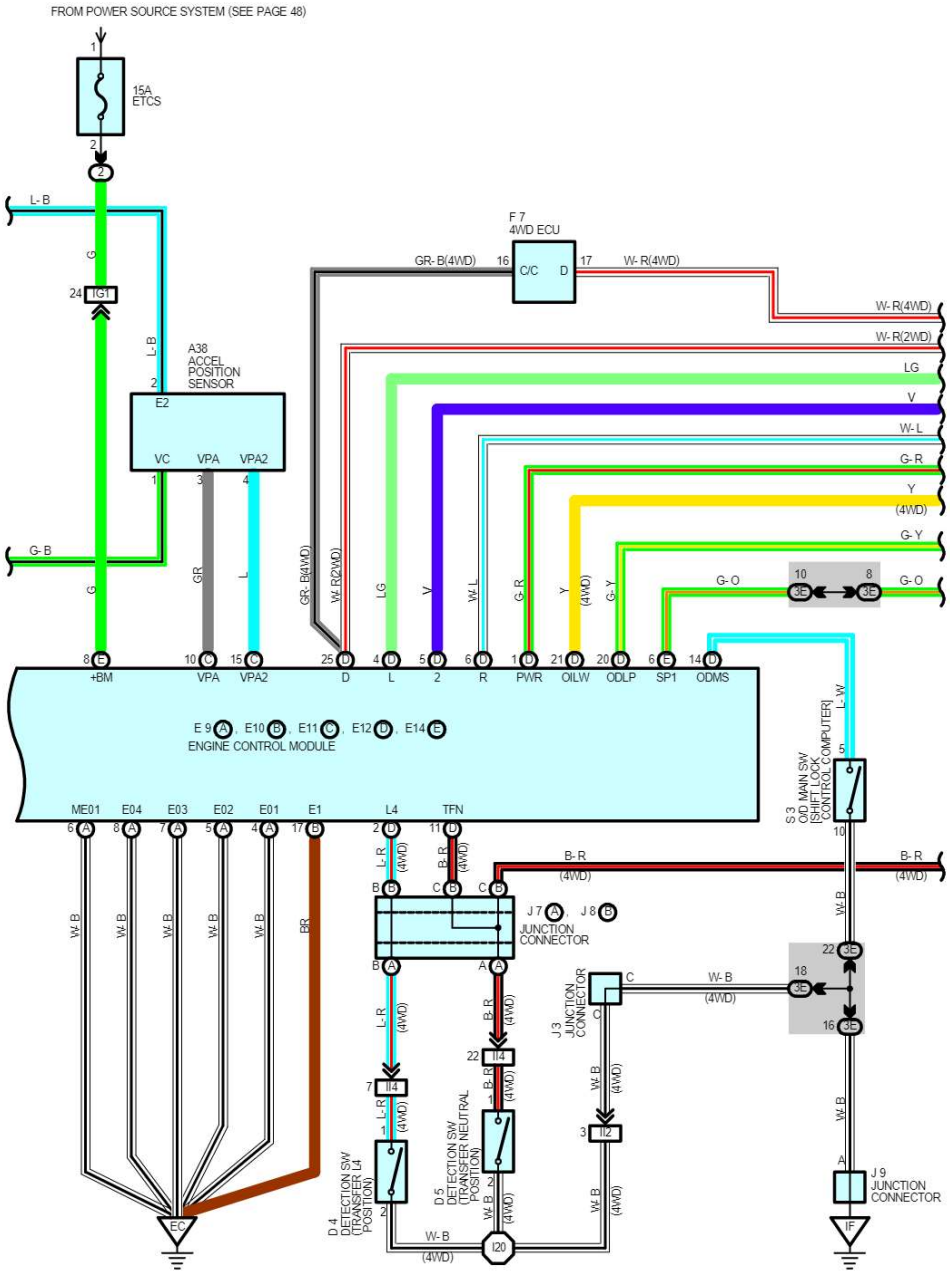
Code	See Page	Ground Points Location
EB	36	Front Left Fender
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
BH	42	Left Quarter Panel Inner

 : SPLICE POINTS

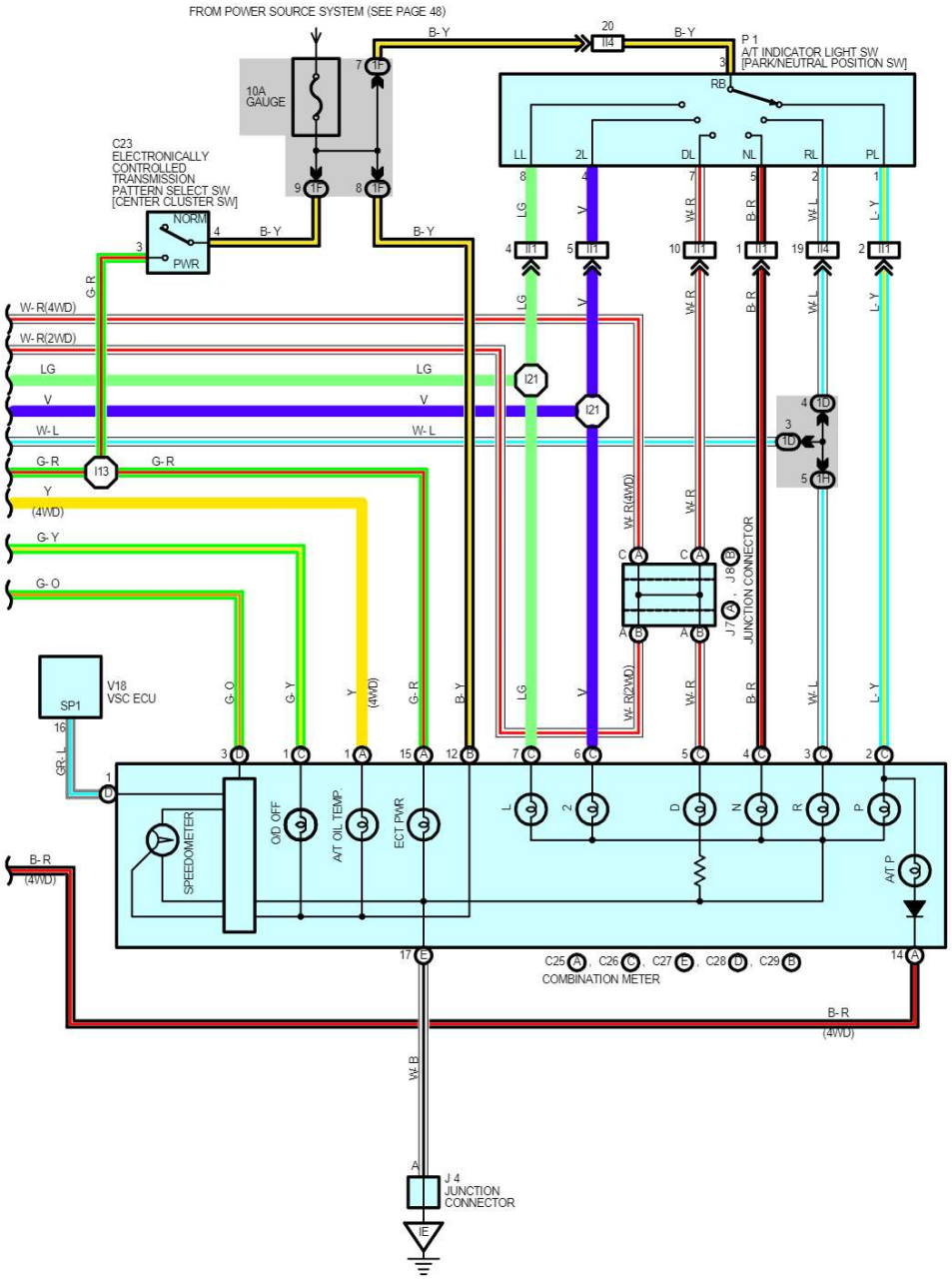
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	I17	40	Cowl Wire
I10			B1	42	Front Door LH Wire
I11			B5	42	Front Door RH Wire
I13			B9	42	Back Door No.2 Wire

ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR




FROM POWER SOURCE SYSTEM (SEE PAGE 48)
15A ETCS
L-B
G
IG1
A38 ACCEL POSITION SENSOR
E2
VC VPA VPA2
G-B
GR
L
F 7 4WD ECU
C/C
GR-B(4WD)
W-R(4WD)
W-R(2WD)
LG
V
W-L
G-R
Y (4WD)
G-Y
G-O
+BM VPA VPA2 D L 2 R PWR OILW ODLP SP1 ODMS
E 9 , E10 , E11 , E12 , E14
ENGINE CONTROL MODULE
S 3 O/D MAIN SW [SHIFT LOCK CONTROL COMPUTER]
L-W
B-R (4WD)
W-B
ME01 E04 E03 E02 E01 E1 L4 TFN
J 7 , J 8
JUNCTION CONNECTOR
L-R (4WD)
B-R (4WD)
J 3 JUNCTION CONNECTOR
W-B (4WD)
D 4 DETECTION SW (TRANSFER L4 POSITION)
D 5 DETECTION SW (TRANSFER NEUTRAL POSITION)
J 9 JUNCTION CONNECTOR
EC
IF

ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR



SYSTEM OUTLINE

Previous automatic transmissions have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock-up hydraulic pressure. The electronically controlled transmission, however, electrically controls the governor pressure and lock-up through the solenoid valve. Control of the solenoid valve by the engine control module based on the input signals from each sensor makes smooth driving possible by shift selection for each is most appropriate to the driving conditions at that time.

1. GEAR SHIFT OPERATION

During driving, the engine control module selects the shift for each gear which is most appropriate to the driving conditions, based on input signals from the engine coolant temp. sensor to TERMINAL THW of the engine control module and also the input signals to TERMINAL SP2+ of the engine control module from the vehicle speed sensor devoted to the electronically controlled transmission. Current is then output to the electronically controlled transmission solenoid.

When shifting to 1st speed, current flows from TERMINAL S1 of the engine control module to TERMINAL 4 of the electronically controlled transmission solenoid to GROUND, and continuity to the no. 1 solenoid causes the shift.

For 2nd speed, current flows from TERMINAL S1 of the engine control module to TERMINAL 4 of the electronically controlled transmission solenoid to GROUND, and from TERMINAL S2 of the engine control module to TERMINAL 8 of the electronically controlled transmission solenoid to GROUND. And continuity to solenoid no.1 and no.2 causes the shift.

For 3rd speed, there is no continuity to no.1 solenoid, only to no.2 causing the shift. Shifting into 4th speed (Overdrive) takes place when there is no continuity to the either no. 1 or no.2 solenoid.

2. LOCK-UP OPERATION

When the engine control module judges from each signal that lock-up operation conditions have been met, current flows from TERMINAL SL of the engine control module to TERMINAL 7 of the electronically controlled transmission solenoid to GROUND, causing continuity to the lock-up solenoid and causing lock-up operation.

3. STOP LIGHT SW CIRCUIT

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

4. 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.

5. A/T OIL TEMP. WARNING

When the A/T fluid temp. sensor affixed to the transmission case detects that the fluid temp. is 150°C (302°F) or more, the engine control module operates and the current flowing through the GAUGE fuse flows to the A/T oil temp. warning light to TERMINAL OILW of the engine control module to GROUND, so that warning light lights up, informing that the A/T oil temp. is high. When the A/T oil temp. drops to 120°C (248°F) or less, the engine control module stops operating and the warning light goes out.

ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

SERVICE HINTS

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

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

S4 STOP LIGHT SW

1-2 : Closed with brake pedal depressed

E9 (A), E10 (B), E11 (C), E12 (D), E14 (E) ENGINE CONTROL MODULE

S1-E1 : **9- 14** volts
S2-E1 : **9- 14** volts
SL-E1 : **9- 14** volts
STP-E1 : **7.5- 14** volts with brake pedal depressed
: **0- 1.5** volts with brake pedal released
THW-E2 : **0.2- 1.0** volts with coolant temp. **80**°C (**176**°F)
THO-E2 : **4- 5** volts with fluid temp. **20**°C (**68**°F)
VTA-E2 : Approx. **4** volts with throttle valve fully closed
: Approx. **0.6** volts with throttle valve fully open
VC-E2 : **4.5- 5.5** volts
ODMS-E1 : **9- 14** volts O/D main SW turned on
: **0** volts O/D main SW turned off
SP1-E1 : Pulse generation with vehicle moving
2-E1 : **10- 14** volts with shift lever at **2** position
: **0- 2** volts with shift lever at except **2** position
L-E1 : **10- 14** volts with shift lever at **L** position
: **0- 2** volts with shift lever at except **L** position
OILW-E1 : **0.1- 4.9** volts
+B-E1 :**9- 14** volts
BATT-E1 : **9- 14** volts

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A3	28	E3	28	J7 A	31
A38	28	E9 A	31	J8 B	31
C23	30	E10 B	31	J9	31
C25 A	30	E11 C	31	P1	29
C26 C	30	E12 D	31	S3	31
C27 E	30	E14 E	31	S4	31
C28 D	30	F7	31	T2	29
C29 B	30	J1 A	29	V3	29
D4	28	J2 B	29	V18	31
D5	28	J3	31		
E2	28	J4	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1F		
1H		
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

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

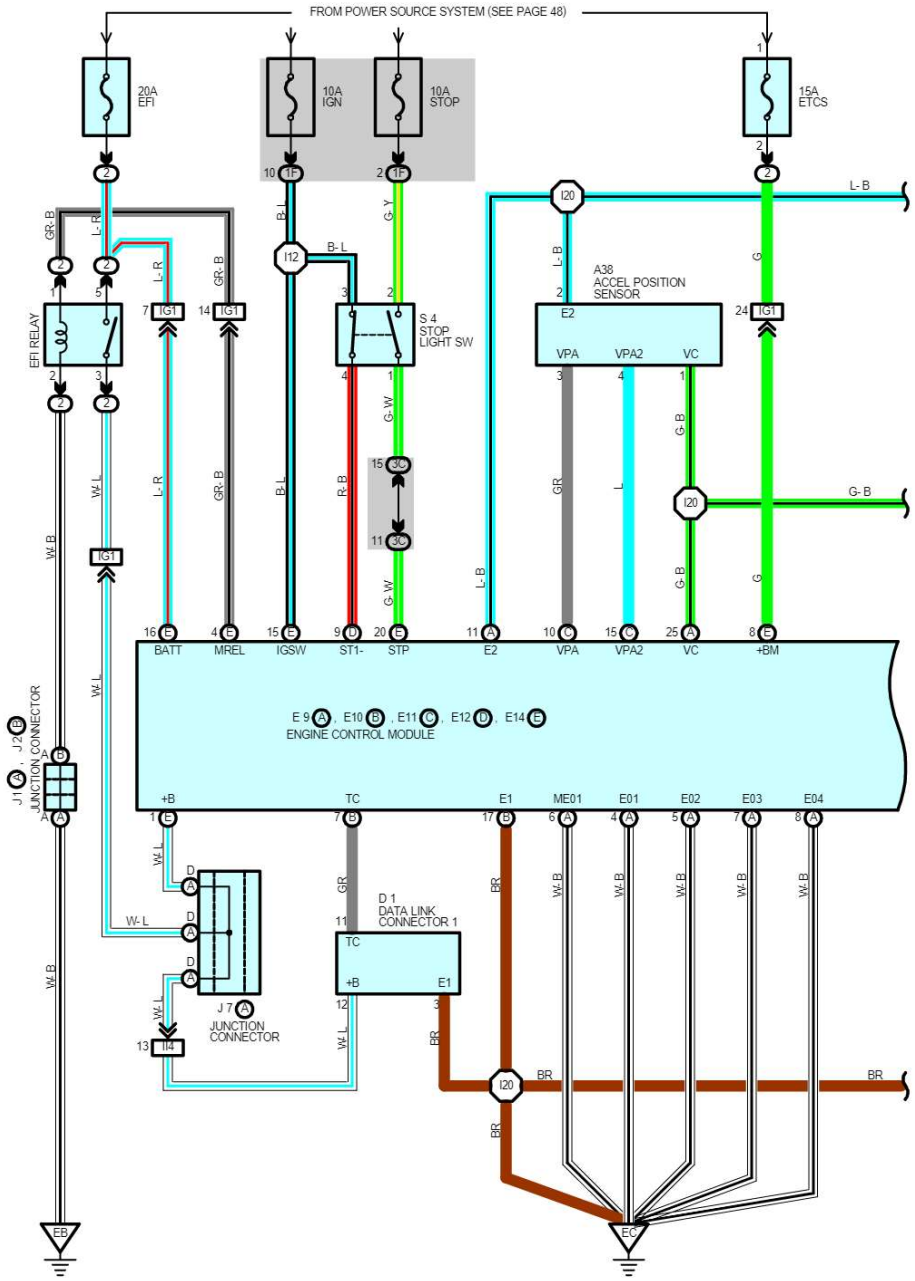
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EC1	36	Engine Wire and Water Temp. Sensor Wire (Front Side of Cylinder Head Cover Right)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II1	40	Engine Wire and Cowl Wire (On the Glove Box)
II2		
II4		

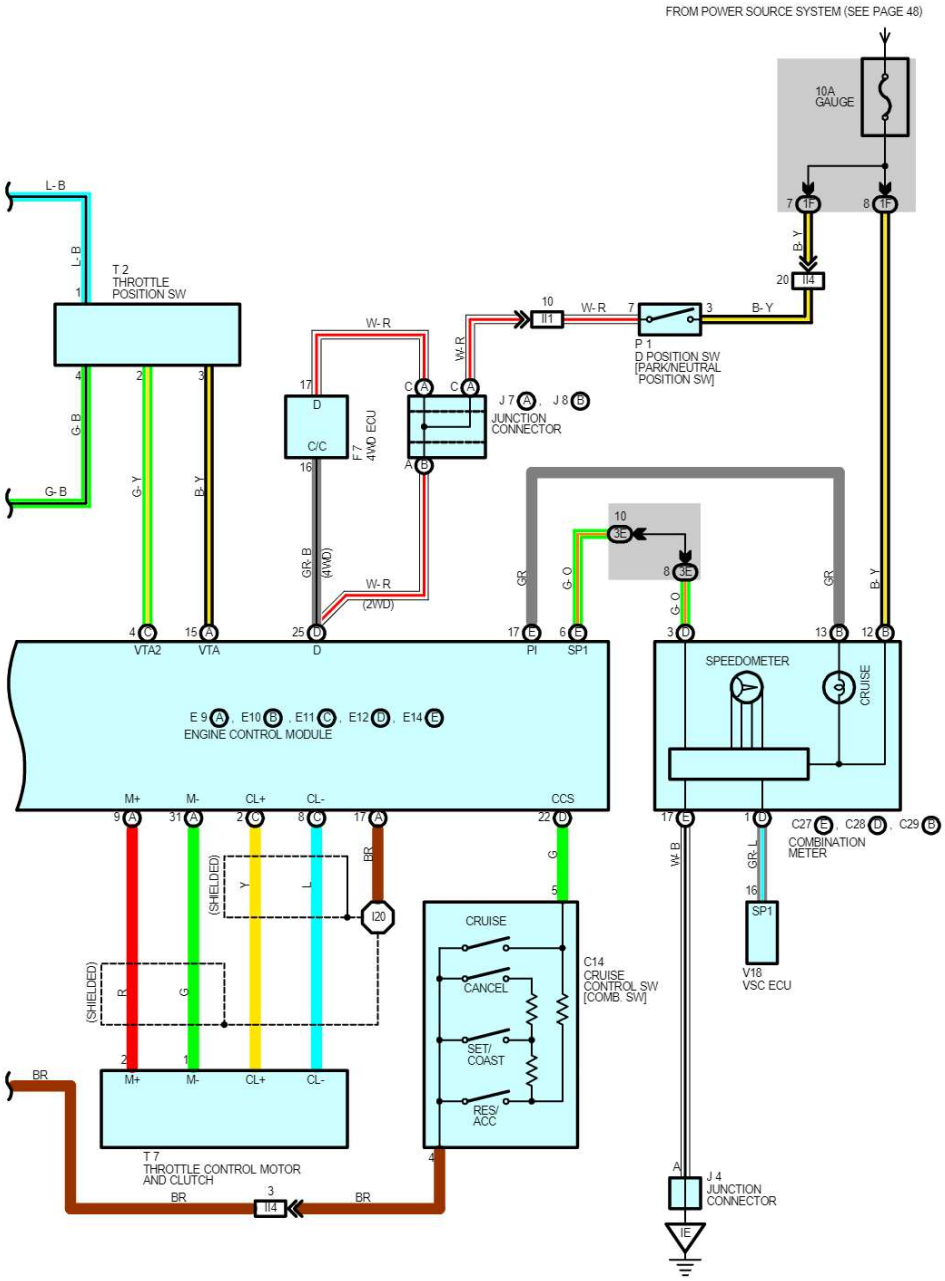
: **GROUND POINTS**

Code	See Page	Ground Points Location
EB	36	Front Left Fender
EC	36	Intake Manifold Left
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

: **SPLICE POINTS**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I12	40	Cowl Wire	I20	40	Engine Wire
I13			I21	40	Cowl Wire


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
20A EFI
10A IGN
10A STOP
15A ETCS
EFI RELAY
S 4 STOP LIGHT SW
A38 ACCEL POSITION SENSOR
E2
VPA
VPA2
VC
BATT
MREL
IGSW
ST1-
STP
+BM
E 9 , E10 , E11 , E12 , E14
ENGINE CONTROL MODULE
JUNCTION CONNECTOR
+B
TC
E1
ME01
E01
E02
E03
E04
D 1 DATA LINK CONNECTOR 1
J 7 JUNCTION CONNECTOR
EB
EC


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A GAUGE
L-B
T 2 THROTTLE POSITION SW
G-B
G-Y
B-Y
W-R
D C/C F7 4WD ECU
GR-B (4WD)
W-R (2WD)
J 7 A , J 8 B JUNCTION CONNECTOR
I11
I14
P 1 D POSITION SW [PARK/NEUTRAL POSITION SW]
3E
GR
G-O
B-Y
VTA2
VTA
D
PI
SP1
E 9 A , E10 B , E11 C , E12 D , E14 E ENGINE CONTROL MODULE
SPEEDOMETER
CRUISE
M+
M-
CL+
CL-
CCS
(SHIELDED)
BR
I20
C14 CRUISE CONTROL SW [COMB. SW]
CANCEL
SET/ COAST
RES/ ACC
W-B
GR-L
C27 E , C28 D , C29 B COMBINATION METER
V18 VSC ECU
T 7 THROTTLE CONTROL MOTOR AND CLUTCH
J 4 JUNCTION CONNECTOR
IE

CRUISE CONTROL

SYSTEM OUTLINE

The cruise control system allows to travel at a constant speed, by the operation of the switch, without having to depress the accelerator pedal. In this system, the engine throttle valve opening angle is adjusted automatically to control the vehicle at a constant speed.

1. SET CONTROL

When the SET/COAST SW is operated while traveling with the CRUISE SW ON, the speed when the SW is operated to OFF (SW released) is memorized, and the vehicle speed is controlled at that speed.

2. COAST CONTROL

When the SET/COAST SW is operated to ON, the motor in the actuator rotates the throttle valve until it is closed fully to decrease the vehicle speed, and the speed when the SW is operated to OFF is memorized, and the vehicle speed is controlled at that speed.
Furthermore, every time the SET/COAST SW is operated momentarily (Approx. 0.5 sec.) to ON, the memorized vehicle speed is decreased by approx. 1.5 km/h.

3. ACCEL CONTROL

When the RESUME/ACCEL SW is operated to ON, the motor in the actuator rotates the throttle valve to open direction to increase the vehicle speed, and the speed when the SW is operated to OFF is memorized, and the vehicle speed is controlled at that speed.
Furthermore, every time the RES/ACC SW is operated momentarily (Approx. 0.5 sec.) to ON, the memorized vehicle speed is increased by approx. 1.5 km/h.

4. MANUAL CANCEL MECHANISM

If any of the following signals are input during cruise control traveling, the magnetic clutch of the actuator is turned off, and the current to the motor flows in the direction to close the throttle valve, and cancel the cruise control.

(1) Stop light SW is ON (Brake pedal is depressed)

(2) The CANCEL SW of the control SW is ON

(3) CRUISE SW is OFF

5. RESUME CONTROL

After canceling the cruise control (Except when the CRUISE SW is OFF) if the vehicle speed is above the minimum speed limit (Approx. 40 km/h, 25 mph), operating the RES/ACC SW from OFF to ON will cause the system to accelerate and resume to the vehicle speed before manual cancellation.

6. OVERDRIVE FUNCTION

The overdrive may be cut on an uphill grade, while traveling with the cruise control.
After the overdrive is cut, if the vehicle seed reaches the overdrive resume speed (Set speed minus 2 km/h), and if the system determines that the uphill grade has finished, the overdrive will resume after the overdrive timer operation.

7. AUTO CANCEL OPERATION

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

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

SERVICE HINTS

E9 (A), E10 (B), E12 (D), E14 (E) ENGINE AND ECT ECU

(E)15-GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position
(E)16-GROUND : Always approx. **12** volts
(A)4, (A) 5, (A) 6, (A) 7, (A) 8, (B) 17-GROUND: Always continuity
(E)20-GROUND : Approx. **12** volts with stop light SW at on
(D)22-GROUND : Continuity with cruise control SW at on
Approx. **1540** Ω with CANCEL SW on in cruise control SW
Approx. **240** Ω with RES/ACC SW on in cruise control SW
Approx. **630** Ω with SET/COAST SW on in cruise control SW

C14 CRUISE CONTROL SW [COMB. SW]

5-4 : Approx. **1540** Ω with CANCEL SW on
Approx. **240** Ω with RES/ACC SW on
Approx. **630** Ω with SET/COAST SW on

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A38	28	E11 C	31	J8 B	31
C14	30	E12 D	31	P1	29
C27 E	30	E14 E	31	S4	31
C28 D	30	F7	31	T2	29
C29 B	30	J1 A	29	T7	29
D1	28	J2 B	29	V18	31
E9 A	31	J4	31		
E10 B	31	J7 A	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3C 3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

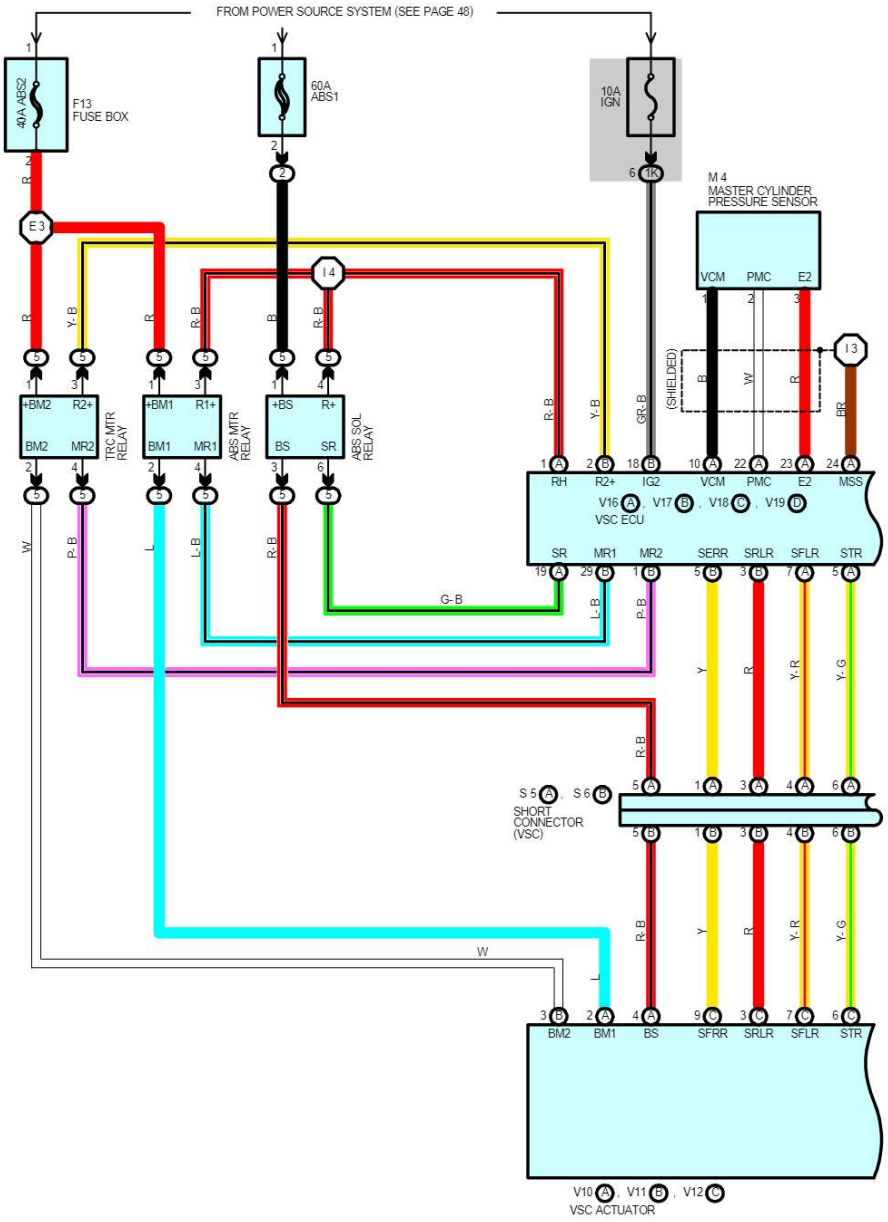
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II1 II4	40	Engine Wire and Cowl Wire (On the Glove Box)

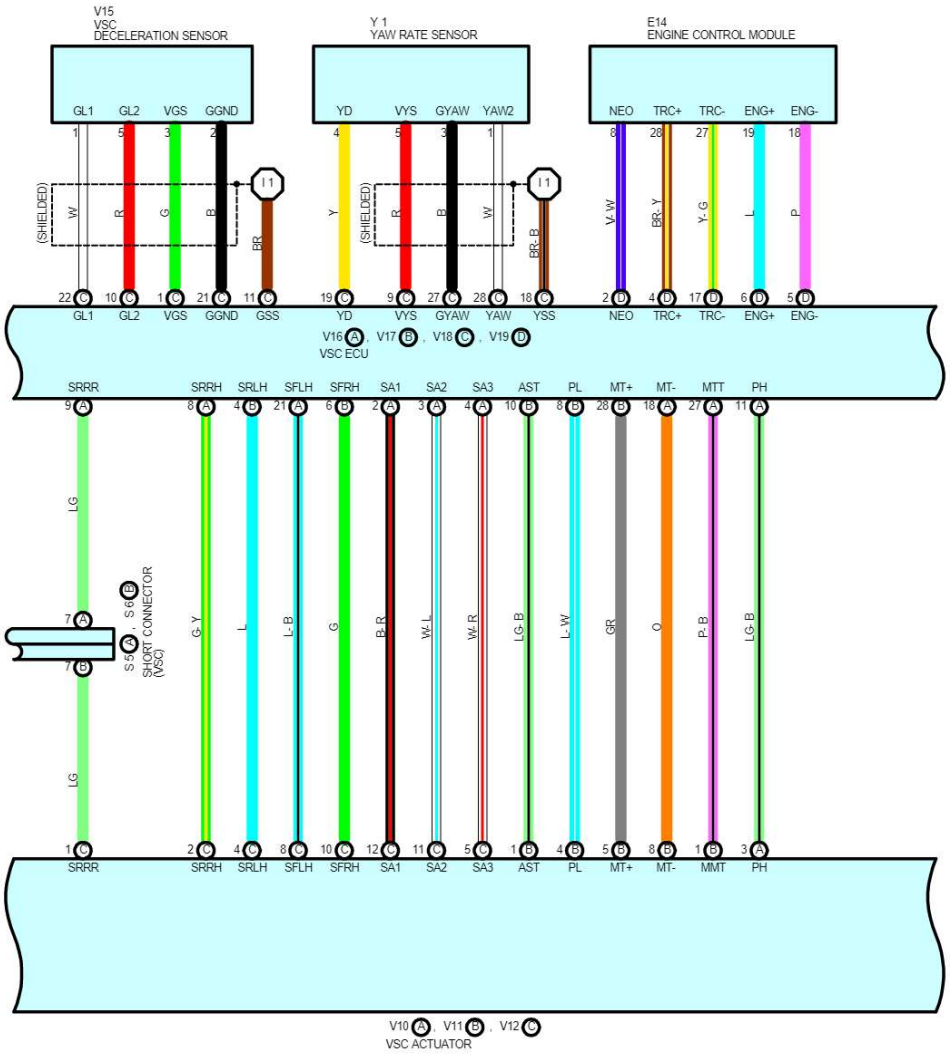
: GROUND POINTS

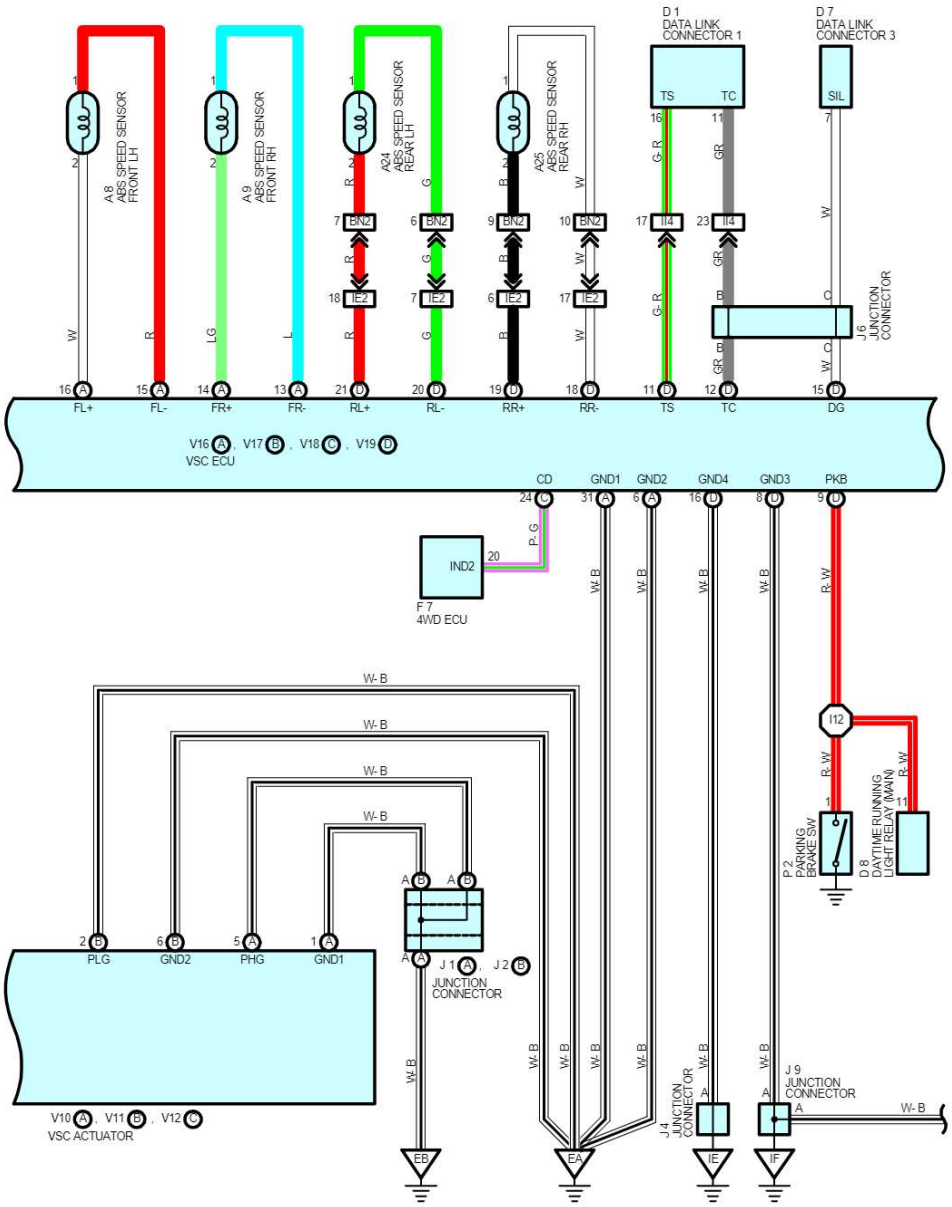
Code	See Page	Ground Points Location
EB	36	Front Left Fender
EC	36	Intake Manifold Left
IE	38	Cowl Side Panel LH

: SPLICE POINTS

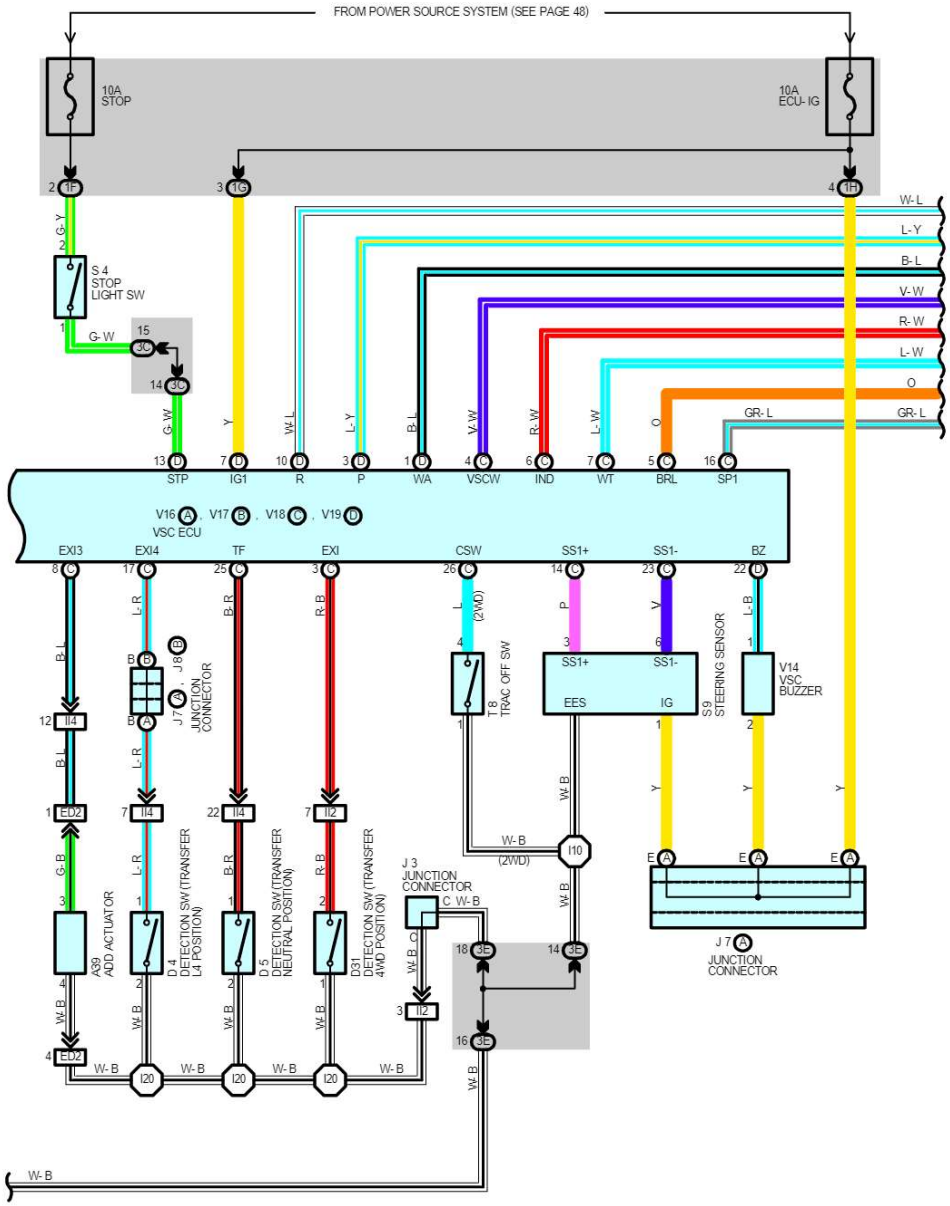
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I12	40	Cowl Wire	I20	40	Engine Wire

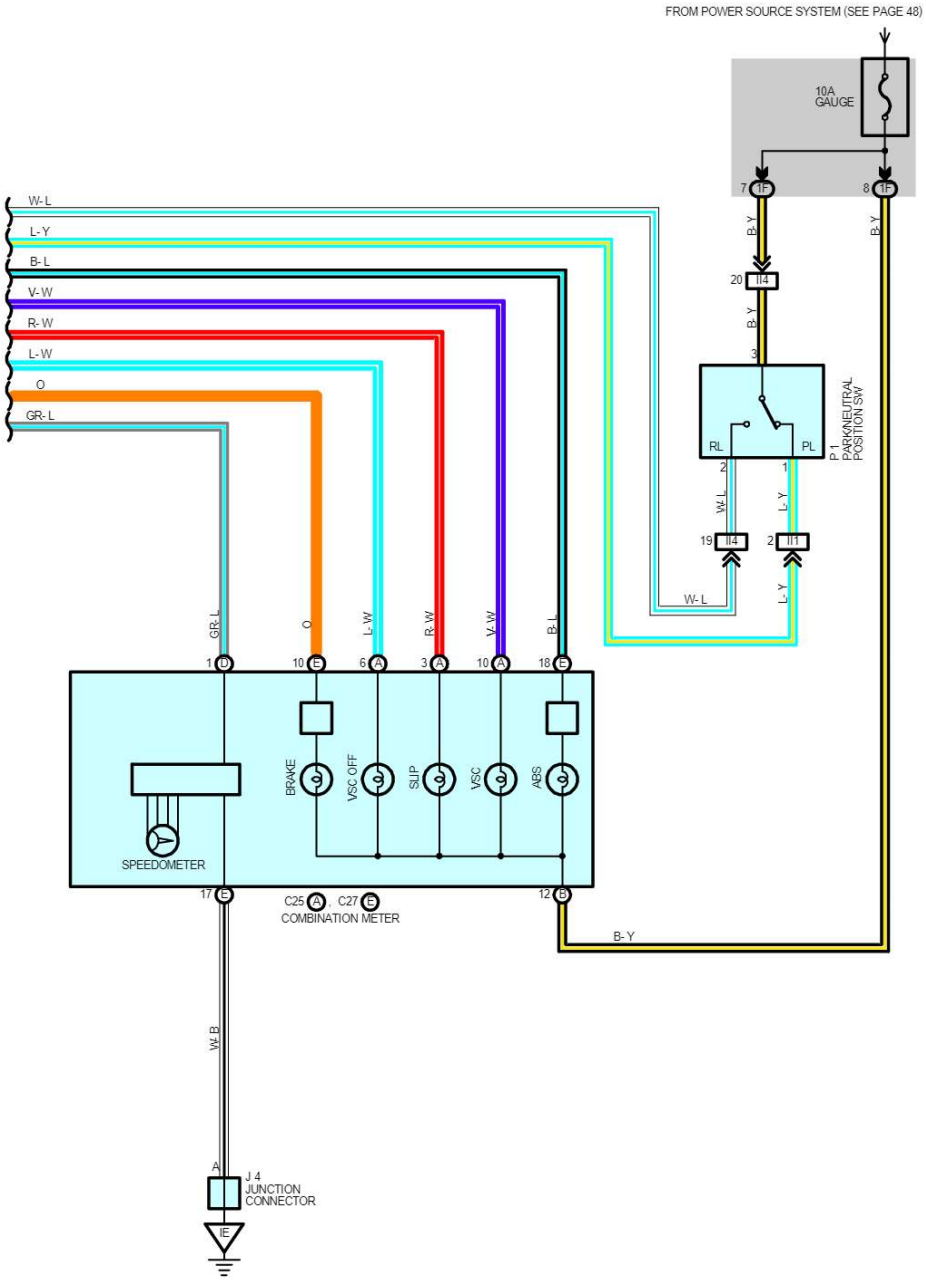

FROM POWER SOURCE SYSTEM (SEE PAGE 48)
40A ABS2
F13
FUSE BOX
60A
ABS1
10A
IGN
E 3
I 4
I 3
M 4
MASTER CYLINDER
PRESSURE SENSOR
VCM PMC E2
(SHIELDED)
+BM2 R2+
BM2 MR2
TRC MTR
RELAY
+BM1 R1+
BM1 MR1
ABS MTR
RELAY
+BS R+
BS SR
ABS SOL
RELAY
RH R2+ IG2 VCM PMC E2 MSS
V16 , V17 , V18 , V19
VSC ECU
SR MR1 MR2 SERR SRLR SFLR STR
S 5 , S 6
SHORT
CONNECTOR
(VSC)
BM2 BM1 BS SFRR SRLR SFLR STR
V10 , V11 , V12
VSC ACTUATOR
R
Y-B
R-B
B
GR-B
BR
W
P-B
L
L-B
G-B
Y
Y-R
Y-G


V15
VSC
DECELERATION SENSOR
GL1
GL2
VGS
GGND
(SHIELDED)
W
R
G
B
BR
GL1
GL2
VGS
GGND
GSS
Y 1
YAW RATE SENSOR
YD
VYS
GYAW
YAW2
(SHIELDED)
Y
R
B
W
BR-B
YD
VYS
GYAW
YAW
YSS
E14
ENGINE CONTROL MODULE
NEO
TRC+
TRC-
ENG+
ENG-
V-W
BR-Y
Y-G
L
P
NEO
TRC+
TRC-
ENG+
ENG-
V16 , V17 , V18 , V19
VSC ECU
SRRR
SRRH
SRLH
SFLH
SFRH
SA1
SA2
SA3
AST
PL
MT+
MT-
MTT
PH
LG
LG
G-Y
L
L-B
G
B-R
W-L
W-R
LG-B
L-W
GR
O
P-B
LG-B
S5 , S6
SHORT CONNECTOR
(VSC)
SRRR
SRRH
SRLH
SFLH
SFRH
SA1
SA2
SA3
AST
PL
MT+
MT-
MMT
PH
V10 , V11 , V12
VSC ACTUATOR



2002 4RUNNER (EWD471U)


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A
STOP
10A
ECU-IG
S 4
STOP
LIGHT SW
G-W
W-L
L-Y
B-L
V-W
R-W
L-W
O
GR-L
STP
IG1
R
P
WA
VSCW
IND
WT
BRL
SP1
V16 , V17 , V18 , V19
VSC ECU
EXI3
EXI4
TF
EXI
CSW
SS1+
SS1-
BZ
JUNCTION CONNECTOR
T 8
TRAC OFF SW
(2WD)
SS1+
SS1-
EES
IG
S9
STEERING SENSOR
V14
VSC
BUZZER
A39
ADD ACTUATOR
D 4
DETECTION SW (TRANSFER L4 POSITION)
D 5
DETECTION SW (TRANSFER NEUTRAL POSITION)
D31
DETECTION SW (TRANSFER 4WD POSITION)
J 3
JUNCTION CONNECTOR
J 7
JUNCTION CONNECTOR
W-B


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A GAUGE
7 1F
8 1F
B-Y
B-Y
20 II4
B-Y
3
RL
PL
P 1 PARK/NEUTRAL POSITION SW
2
1
W-L
L-Y
19 II4
2 II1
W-L
L-Y
W-L
L-W
O
R-W
V-W
B-L
GR-L
1 D
10 E
6 A
3 A
10 A
18 E
BRAKE
VSC OFF
SLIP
VSC
ABS
SPEEDOMETER
17 E
C25 A , C27 E
COMBINATION METER
12 B
B-Y
W-B
A
J 4
JUNCTION CONNECTOR
IE

SERVICE HINTS

V16 (A), V17 (B), V19 (D) VSC ECU

(B) 18, (D) 7-GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position

(A) 6, (A) 31, (D) 8, (D) 16-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A8	28	F7	31	S5 A	29
A9	28	F13	28	S6 B	29
A24	32	J1 A	29	S9	31
A25	32	J2 B	29	T8	31
A39	28	J3	31	V10 A	29
C25 A	30	J4	31	V11 B	29
C27 E	30	J6	31	V12 C	29
D1	28	J7 A	31	V14	31
D4	28	J8 B	31	V15	31
D5	28	J9	31	V16 A	31
D7	30	M4	29	V17 B	31
D8	30	P1	29	V18 C	31
D31	28	P2	31	V19 D	31
E14	31	S4	31	Y1	31

: RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)
5	23	VSC R/B (Engine Compartment Right)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
1H		
1K	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ED2	36	Engine Wire and Differential Wire (Near the Front Differential)
IE2	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
II1	40	Engine Wire and Cowl Wire (On the Glove Box)
II2		
II4		
BN2	42	Frame Wire and Floor No.2 Wire (Under the Left Side of Rear Seat Cushion)

: GROUND POINTS

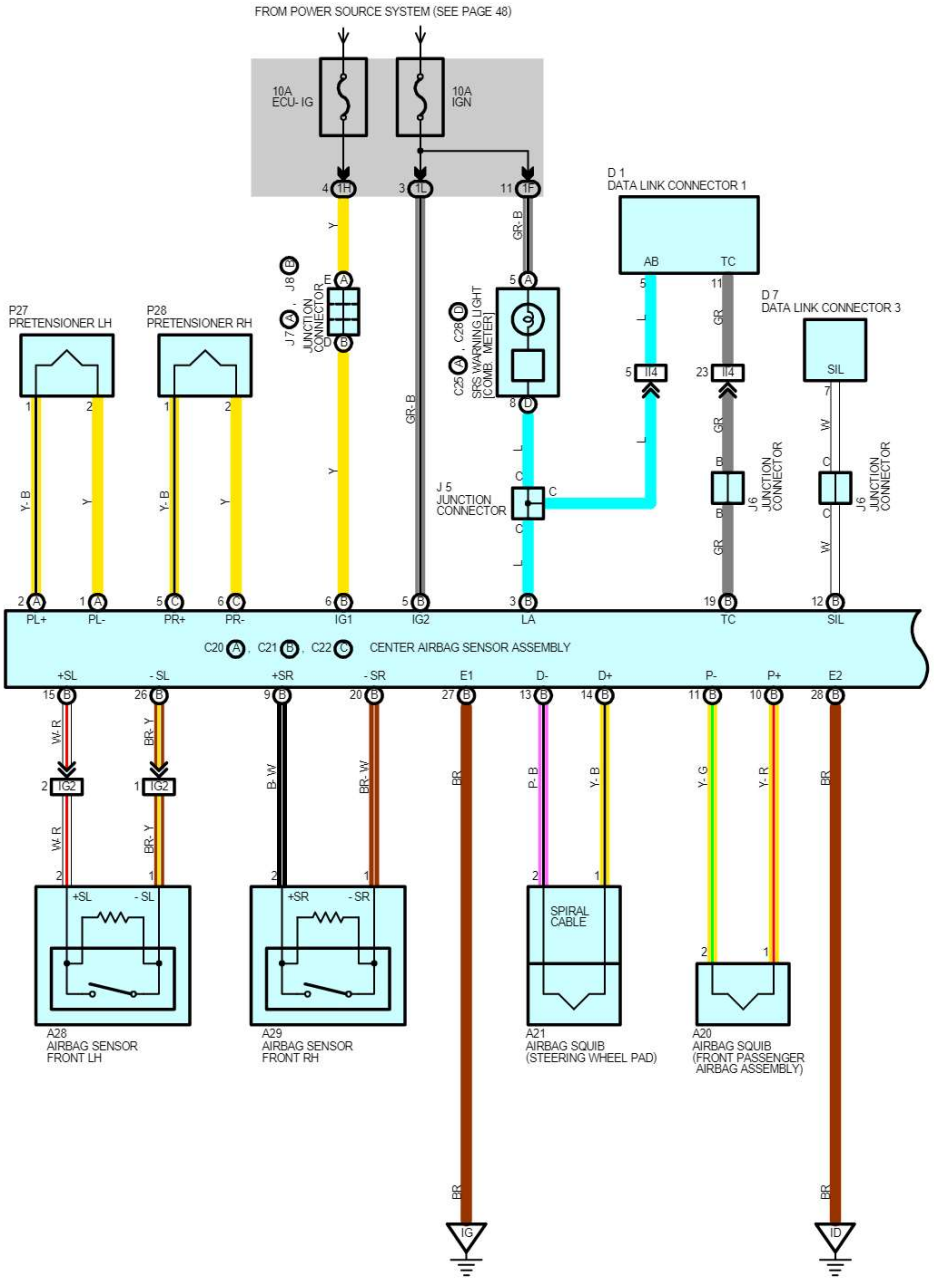
Code	See Page	Ground Points Location
EA	36	Front Right Fender
EB	36	Front Left Fender
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

: SPLICE POINTS

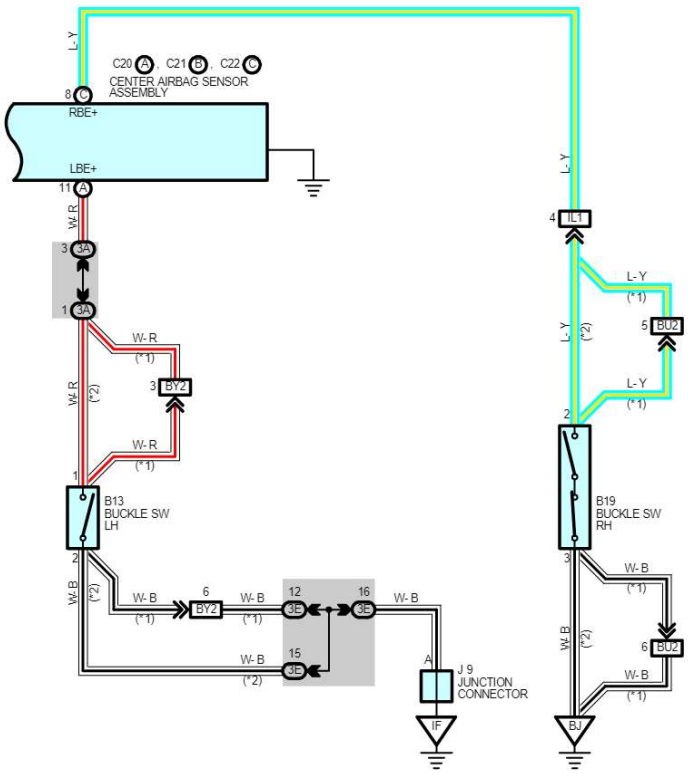
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E3	36	Engine Room Main Wire	I10	40	Cowl Wire
I1	40	Cowl Wire	I12		
I3	40	Engine Room Main Wire	I20	40	Engine Wire
I4					

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 tot 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, pretensioner assembly, 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, pretensioner assembly, 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, pretensioner assembly, airbag sensor front assembly or center airbag sensor assembly in order to reuse it.
- If the steering wheel pad, front passenger airbag assembly, pretensioner assembly, 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 kΩ/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.


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A ECU- IG
10A IGN
D 1 DATA LINK CONNECTOR 1
D 7 DATA LINK CONNECTOR 3
P27 PRETENSIONER LH
P28 PRETENSIONER RH
J 5 JUNCTION CONNECTOR
J6 JUNCTION CONNECTOR
J7 JUNCTION CONNECTOR
J8 JUNCTION CONNECTOR
SRS WARNING LIGHT (COMBI METER)
C20 , C21 , C22 CENTER AIRBAG SENSOR ASSEMBLY
PL+
PL-
PR+
PR-
IG1
IG2
LA
TC
SIL
+SL
- SL
+SR
- SR
E1
D-
D+
P-
P+
E2
SPIRAL CABLE
A28 AIRBAG SENSOR FRONT LH
A29 AIRBAG SENSOR FRONT RH
A21 AIRBAG SQUIB (STEERING WHEEL PAD)
A20 AIRBAG SQUIB (FRONT PASSENGER AIRBAG ASSEMBLY)
IG
ID

* 1 : W/ POWER SEAT
* 2 : W/O POWER SEAT



SYSTEM OUTLINE

The SRS is a driver and front passenger protection device which has a supplemental role to the seat belts.
When the ignition SW is turned to ON position, the current from the ECU-IG, IGN fuse flows to the center airbag sensor assembly TERMINAL IG1, IG2.
In case an accident occurs while driving, when the frontal impact exceeds a predetermined level, the current from the ECU-IG or IGN fuse flows to center airbag sensor assembly TERMINALS D+, P+, PL+, PR+ to airbag squibs and pretensioners to center airbag sensor assembly TERMINALS D-, P-, PL-, PR- to TERMINALS E1, E2 or BODY GROUND to GROUND.
The current flows to the airbag squibs and pretensioners, and operates the airbag.
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
A20	30	C20 A	30	J6	31
A21	30	C21 B	30	J7 A	31
A28	28	C22 C	30	J8 B	31
A29	28	C25 A	30	J9	31
B13	32 (w/o Power Seat)	C28 D	30	P27	33
	34 (w/ Power Seat)	D1	28	P28	33
B19	32 (w/o Power Seat)	D7	30		
	34 (w/ Power Seat)	J5	31		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

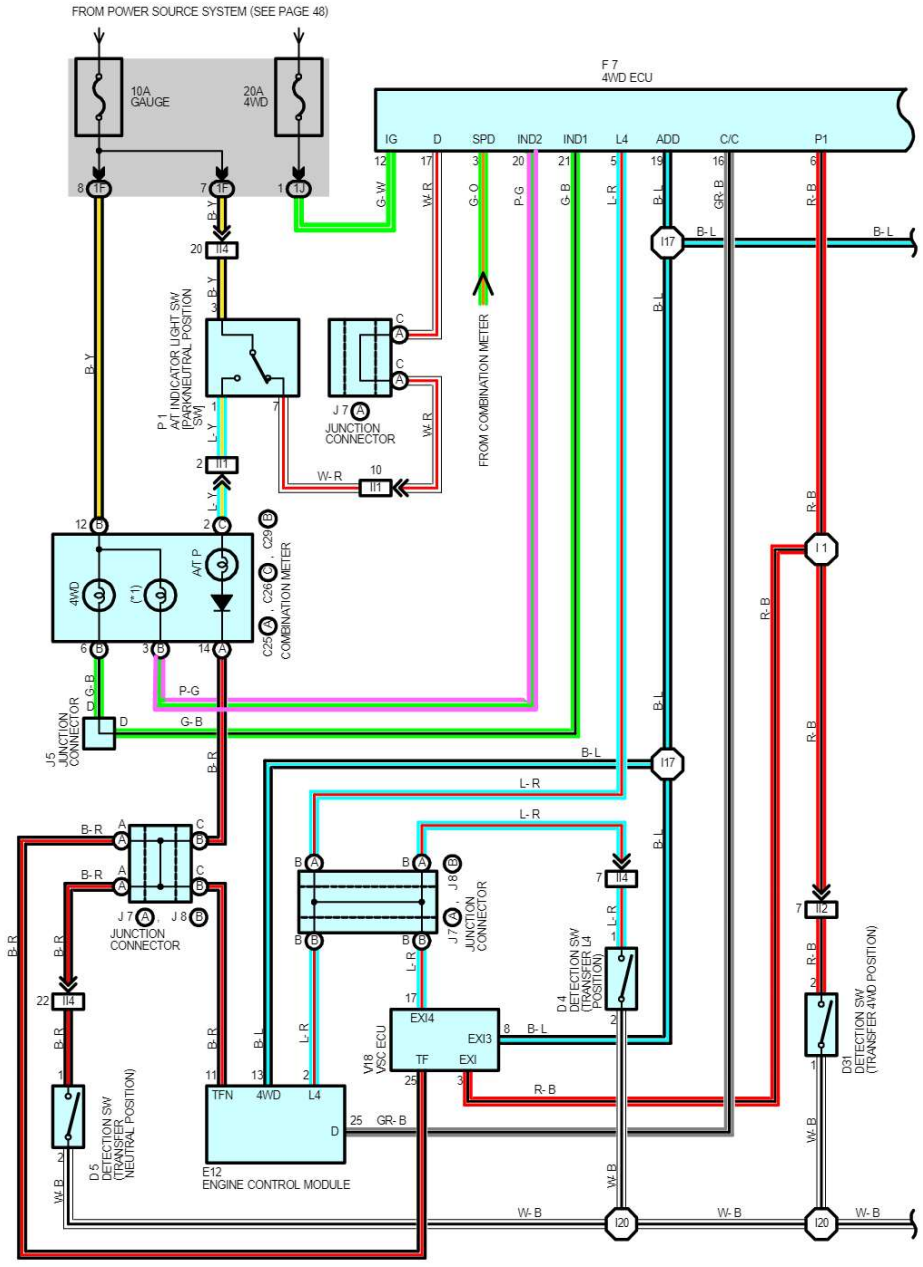
Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1H		
1L		
3A	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

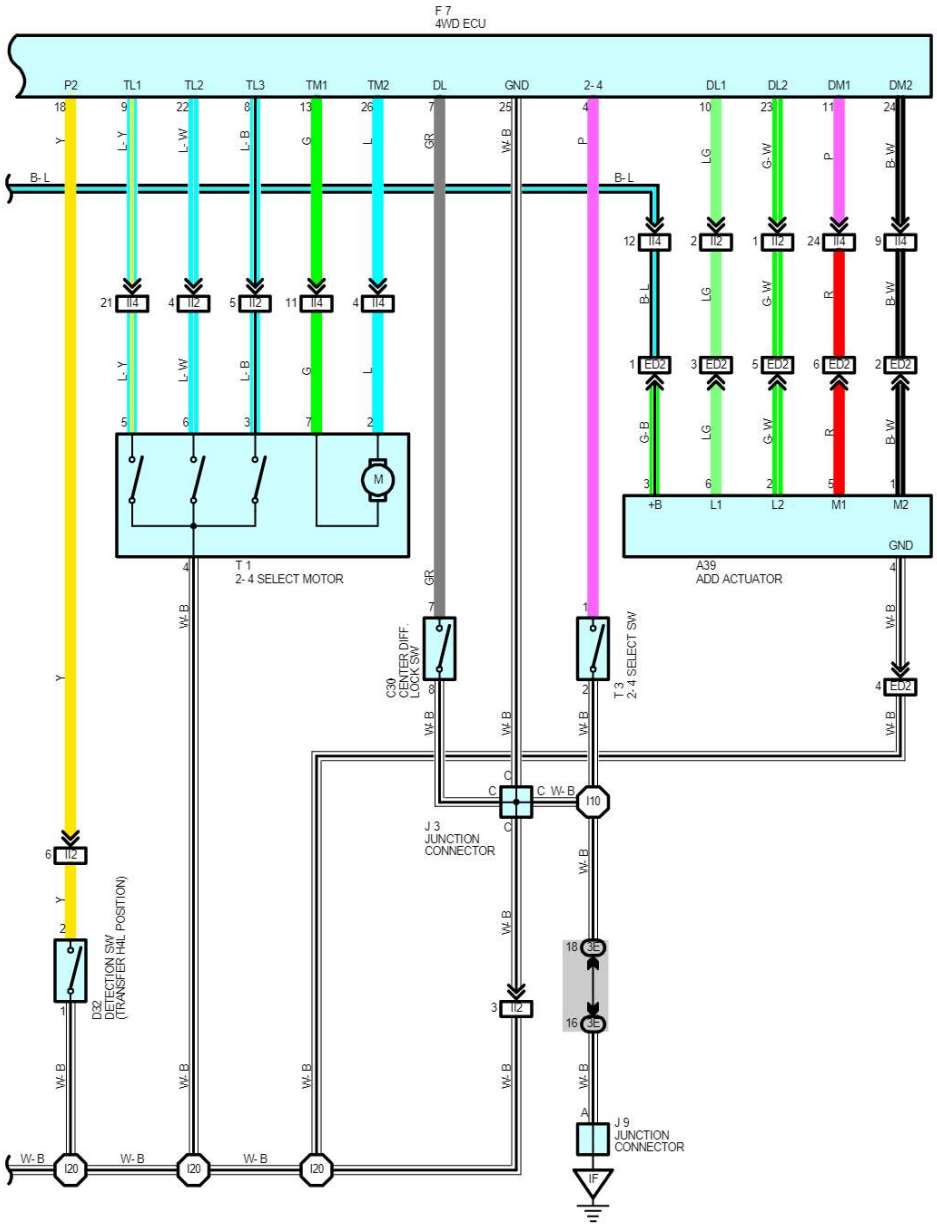
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG2	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II4	40	Engine Wire and Cowl Wire (On the Glove Box)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BU2	44	Floor Wire and Seat No.2 Wire (Under the Front Passenger's Seat)
BY2	44	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)

▽ : GROUND POINTS

Code	See Page	Ground Points Location
ID	38	Left Kick Panel
IF	38	Cowl Side Panel RH
IG	38	Right Kick Panel
BJ	42	Right Quarter Panel Inner


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A GAUGE
20A 4WD
F 7 4WD ECU
IG
D
SPD
IND2
IND1
L4
ADD
C/C
P1
FROM COMBINATION METER
P 1 A/T INDICATOR LIGHT SW [PARK/NEUTRAL POSITION SW]
J 7 JUNCTION CONNECTOR
4WD
A/T P
(*1)
C25, C26, C29 COMBINATION METER
J5 JUNCTION CONNECTOR
J 7, J 8 JUNCTION CONNECTOR
J 8 JUNCTION CONNECTOR
D 4 DETECTION SW (TRANSFER L4 POSITION)
D31 DETECTION SW (TRANSFER 4WD POSITION)
D 5 DETECTION SW (TRANSFER NEUTRAL POSITION)
VI8 VSC ECU
EXI4
EXI3
TF
EXI
E12 ENGINE CONTROL MODULE
TFN
4WD
L4
I17
I20
I11
I14
I12
I1

* 1 : CENTER DIFF. LOCK



SYSTEM OUTLINE

The 4WD ECU detects the condition of the detection SW ((Transfer 4WD position), (Transfer H4L Position)), 2-4 select SW and the vehicle speed, and controls the 2-4 select motor and center diff. lock SW.

4WD CONTROL

(1) Shift position

The target shift position determined through the condition of the 2-4 select SW and center diff. lock SW, and operates the 2-4 select motor.

- When the 2-4 select SW and the center diff. lock SW are both off, put in to H2 position. At this time, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 26 to TERMINAL 2 of the 2-4 select motor to TERMINAL 7 to TERMINAL 13 of the 4WD ECU to TERMINAL 25 to GROUND, so the 2-4 select motor rotates at H2 position.
- When the 2-4 select SW is on and the center diff. lock SW is off, put in to H4 position. At this time, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 13 to TERMINAL 7 of the 2-4 select motor to TERMINAL 2 to TERMINAL 26 of the 4WD ECU to TERMINAL 25 to GROUND, so the 2-4 select motor rotates at H4 position.
- When the 2-4 select SW and the center diff. lock SW are both on, or the 2-4 select SW is off, and the center diff. lock SW is on, put in to H4L position. When switched from H4F to H4L, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 26 to TERMINAL 2 of the 2-4 select motor to TERMINAL 7 to TERMINAL 13 of the 4WD ECU to TERMINAL 25 to GROUND, so the 2-4 select motor rotates at H4L position. When switched from H2 to H4L, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 13 to TERMINAL 7 of the 2-4 select motor to TERMINAL 2 to TERMINAL 26 of the 4WD ECU to TERMINAL 25 to GROUND, so the 2-4 select motor rotates at H4L position.

(2) Shift limit control

When the vehicle speed is over 100 km/h, shift change to H4 or H4L mode can not be made. The vehicle speed signal is input to TERMINAL 3 of the 4WD ECU. At this time, the 4WD indicator light and the center diff. lock indicator light flashes, and the buzzer installed in the 4WD ECU goes on. This condition can be canceled by decelerating the vehicle speed to below 100 km/h, or by selecting H2 mode.

(3) Shift control

When the 2-4 select motor will not switch after approximately 3 seconds from shifting (When there are no changes to the signals to TERMINAL 8, TERMINAL 9 and TERMINAL 22 of the 4WD ECU), the 4WD indicator light and the center diff. lock indicator light flashes. The cruise control is canceled if in use. When the 2-4 select motor switch is completed, the indicator lights go off and the cruise control can be set again.

(4) ADD valve control

When switching between 2WD to 4WD, the ADD actuator is controlled to free or lock the ADD. At this time, current flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 23 to TERMINAL 2 of the ADD actuator to GROUND, or flows from the 4WD fuse to TERMINAL 12 of the 4WD ECU to TERMINAL 10 to TERMINAL 6 of the ADD actuator to GROUND, so the ADD actuator is controlled.

SERVICE HINTS

F7 4WD ECU

12-GROUND : Approx. **12** volts with ignition SW on
25-GROUND : Always continuity
3-GROUND : Pulse generation with vehicle moving

T3 2-4 SELECT SW

1-2 : Closed with 2-4 select SW on

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

3-1 : Closed with A/T shift lever at **P** position
3-7 : Closed with A/T shift lever at **D** position

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A39	28	D31	28	J8 B	31
C25 A	30	D32	28	J9	31
C26 C	30	E12	31	P1	29
C29 B	30	F7	31	T1	29
C30	30	J3	31	T3	31
D4	28	J5	31	V18	31
D5	28	J7 A	31		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J		
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

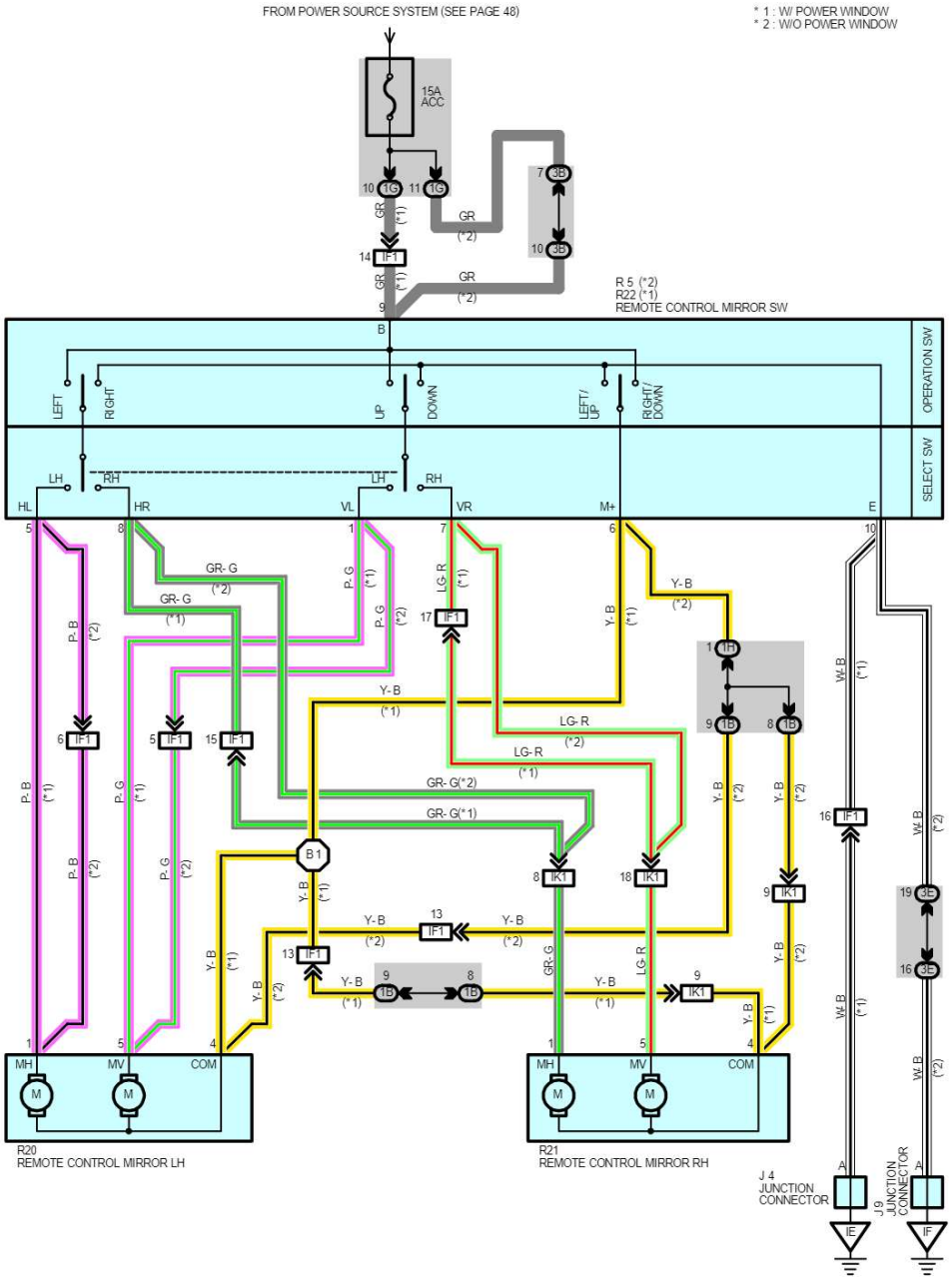
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ED2	36	Engine Wire and Differential Wire (Near the Front Differential)
II1	40	Engine Wire and Cowl Wire (On the Glove Box)
II2		
II4		

: GROUND POINTS

Code	See Page	Ground Points Location
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	I17	40	Cowl Wire
I10			I20	40	Engine Wire


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
* 1 : W/ POWER WINDOW
* 2 : W/O POWER WINDOW
15A ACC
R 5 (*2)
R22 (*1)
REMOTE CONTROL MIRROR SW
OPERATION SW
SELECT SW
LEFT
RIGHT
UP
DOWN
LEFT/ UP
RIGHT/ DOWN
LH
RH
HL
HR
VL
VR
M+
E
R20
REMOTE CONTROL MIRROR LH
R21
REMOTE CONTROL MIRROR RH
J 4
JUNCTION CONNECTOR
J9
JUNCTION CONNECTOR
MH
MV
COM

SERVICE HINTS

R5, R22 REMOTE CONTROL MIRROR SW

10-GROUND : Always continuity
10-6 : Continuity with operation SW at **UP** or **LEFT** position
9-6 : Continuity with operation SW at **DOWN** or **RIGHT** position
9-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J4	31	R5	31	R21	33
J9	31	R20	33	R22	33

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
1H		
3B	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

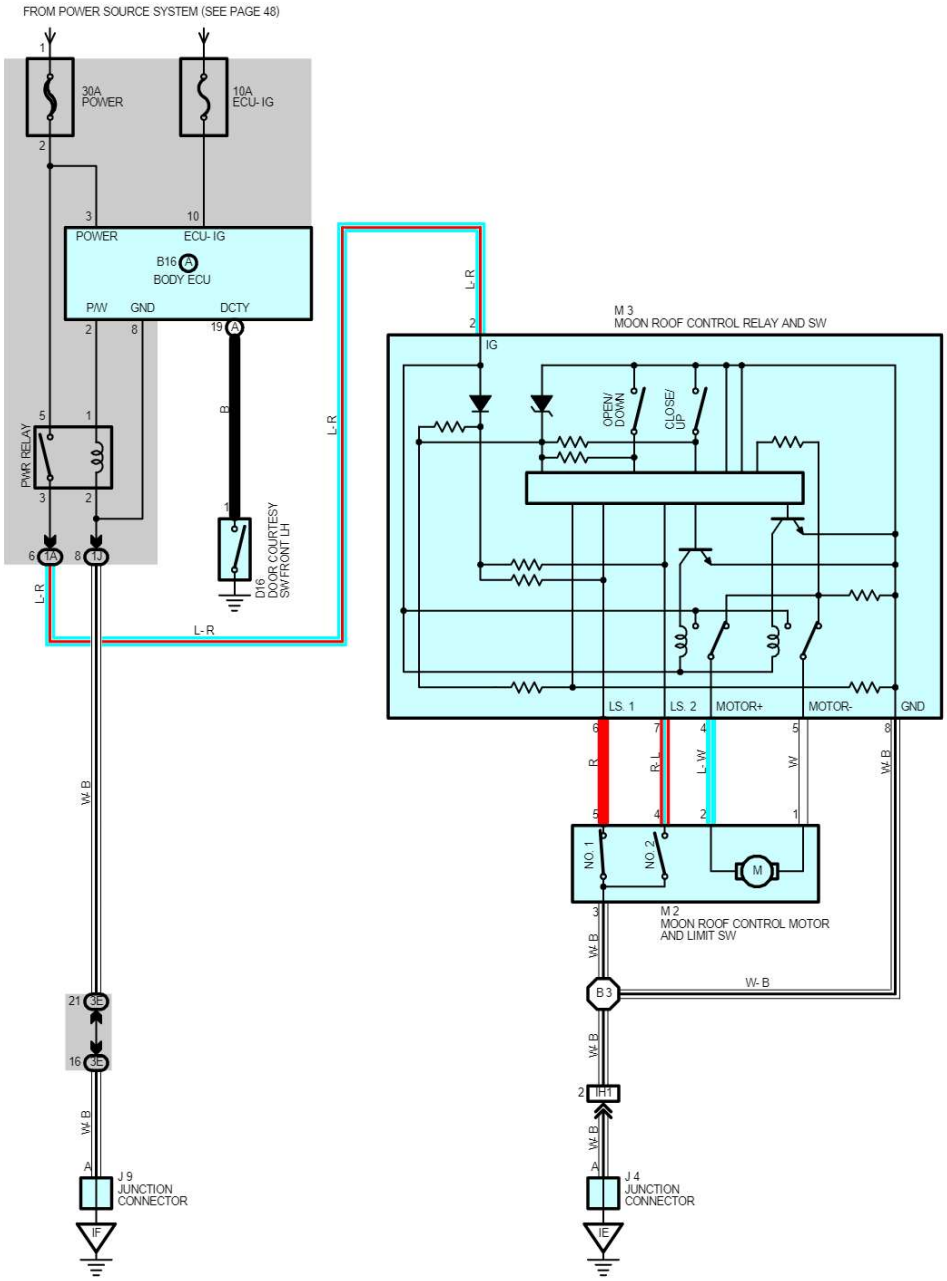
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)

: GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B1	42	Front Door LH Wire			


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
30A POWER
10A ECU-IG
POWER
ECU-IG
B16 BODY ECU
P/W
GND
DCTY
PWR RELAY
D16 DOOR COURTESY SW FRONT LH
L-R
W-B
M 3 MOON ROOF CONTROL RELAY AND SW
IG
OPEN/ DOWN
CLOSE/ UP
LS. 1
LS. 2
MOTOR+
MOTOR-
GND
R
R-L
L-W
W
W-B
NO. 1
NO. 2
M
M 2 MOON ROOF CONTROL MOTOR AND LIMIT SW
B3
IH1
J 9 JUNCTION CONNECTOR
J 4 JUNCTION CONNECTOR
IF
IE

SYSTEM OUTLINE

Current is applied at all times through the POWER fuse to TERMINAL 5 of the PWR relay.
With the ignition SW turned on, the current flows from TERMINAL 1 of the PWR relay to TERMINAL 2 to GROUND through the ECU-IG fuse. As a result, the PWR relay is activated and the current to TERMINAL 5 of the PWR relay flows from TERMINAL 3 of the relay to TERMINAL 2 of the moon roof control relay and SW.

1. SLIDE OPEN OPERATION

When the ignition SW is turned on and the moon roof control SW is pushed to the OPEN position, a signal is input to HALL IC of the moon roof control relay and SW. The moon roof limit SW no. 2 is turned on at this time.
This activates the moon roof control relay and SW and rotates the motor to fully open the moon roof automatically. If other operation SW or the open SW is operated while the moon roof is being opened, the moon roof control relay and SW is activated to stop the moon roof operation.

2. SLIDE CLOSE OPERATION

With the ignition SW turned on, moon roof completely open and the moon roof limit switch no. 1 and no. 2 both are on, when the moon roof control SW is pushed to the CLOSE position, a signal is input to HALL IC of the moon roof control relay and SW.
When this occurs, the relay is activated and the current to TERMINAL 2 of the moon roof control relay and SW flows from TERMINAL 4 to TERMINAL 2 of the moon roof control motor to TERMINAL 1 to TERMINAL 5 of the moon roof control relay and SW to TERMINAL 8 to GROUND, rotating the motor to close the moon roof while the SW is being pushed to CLOSE position.
When the moon roof limit SW no. 1 is turned off (The moon roof limit SW no. 2 is on), and moon roof reaches 100mm from fully close position, signal is input from TERMINAL 5 of the moon roof limit SW to TERMINAL 6 of the moon roof control relay and SW. This signal activates the relay and stops continuity from TERMINAL 2 of the moon roof control relay and SW to TERMINAL 8, as a result, the moon roof stops at this position.
To close the moon roof completely, pushing the moon roof control SW again to the close side causes a signal to be input again to HALL IC of the moon roof control relay and SW. This activates the relay and the moon roof will close as long as the moon roof control SW is being pushed, allowing the moon roof to fully close.

3. TILT UP OPERATION

When the moon roof control SW is pushed to UP position, with the ignition SW turned on and the moon roof completely closed (Moon roof limit SW no.2 is off), a signal is input to HALL IC of the moon roof control relay and SW. As a result, the relay is activated and the current to TERMINAL 2 of the moon roof control relay and SW flows from TERMINAL 4 of the moon roof control relay and SW to TERMINAL 2 of the moon roof control motor to TERMINAL 1 to TERMINAL 5 of the moon roof control relay and SW to TERMINAL 8 to GROUND, rotating the motor so that tilt up operation occurs as long as the moon roof control SW is pushed on the tilt up side.

4. TILT DOWN OPERATION

When the moon roof control SW is pushed to DOWN position, with the ignition SW turned on and the moon roof tilted up (The moon roof limit SW no.1 and no.2 are both off.), a signal input to HALL IC of the moon roof control relay and SW.
As the result, the moon roof control relay is activated and the current to TERMINAL 2 of the moon roof control relay and SW flows from TERMINAL 5 of the moon roof control relay and SW to TERMINAL 1 of the moon roof control motor to TERMINAL 2 to TERMINAL 4 of the moon roof control relay and SW to TERMINAL 8 to GROUND, rotating the motor so that tilt down operation occurs as long as the moon roof control SW is pushed on the tilt down side. (During tilt down, the moon roof limit SW no. 1 is changes off to on.)

5. KEY OFF MOON ROOF OPERATION

With the ignition SW turned from on to off, the body ECU operates and the current flows from the POWER fuse to TERMINAL 3 of the body ECU to TERMINAL 2 to TERMINAL 1 of the PWR relay to TERMINAL 2 to GROUND, at this time, for about 43 seconds the same as normal operation, the current flows from the POWER fuse to TERMINAL 5 of the PWR relay to TERMINAL 3 to TERMINAL 2 of the moon roof control relay and SW. As a result, for about 43 seconds after the ignition SW is turned off, the function of this relay makes it possible to open and close the moon roof. Also, by opening the front door LH (Door courtesy SW front LH on) within about 43 seconds after turning the ignition SW to off, a signal is input to TERMINAL (A) 19 of the body ECU. As a result, the relay turns off, and open and close, movement of the moon roof stops.

MOON ROOF

SERVICE HINTS

PWR RELAY

5-3 : Closed with the ignition SW at **ON** position or key off operated

M3 MOON ROOF CONTROL RELAY AND SW

8-GROUND : Always continuity
2-GROUND : Approx. **12** volts with the ignition SW at **ON** position or key off operated
4-GROUND : Approx. **12** volts with the ignition SW on and the moon roof control SW at **CLOSE** or **UP** position
5-GROUND : Approx. **12** volts with the ignition SW on and the moon roof control SW at **OPEN** or **DOWN** position

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B16 A	30	J4	31	M2	33
D16	32	J9	31	M3	33

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1J	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

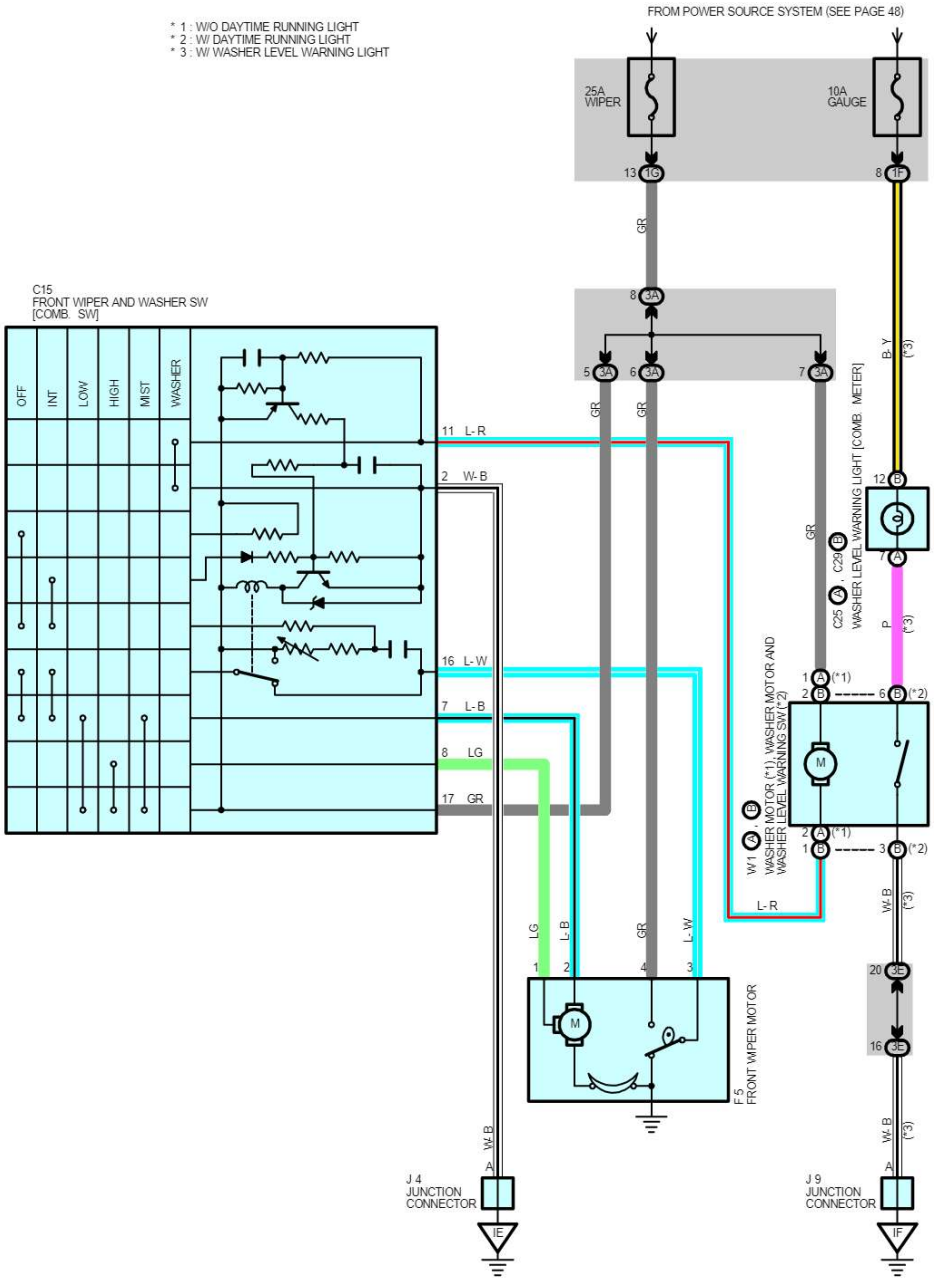
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IH1	40	Roof Wire and Cowl Wire (Instrument Panel Reinforcement Left)

: GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B3	42	Roof Wire			


* 1 : W/O DAYTIME RUNNING LIGHT
* 2 : W/ DAYTIME RUNNING LIGHT
* 3 : W/ WASHER LEVEL WARNING LIGHT
FROM POWER SOURCE SYSTEM (SEE PAGE 48)
25A WIPER
10A GAUGE
C15
FRONT WIPER AND WASHER SW [COMB. SW]
OFF
INT
LOW
HIGH
MIST
WASHER
11 L-R
2 W-B
16 L-W
7 L-B
8 LG
17 GR
GR
B-Y
(*3)
WASHER LEVEL WARNING LIGHT [COMB. METER]
C29
C25
P
W11
WASHER MOTOR (*1), WASHER MOTOR AND WASHER LEVEL WARNING SW (*2)
(*1)
(*2)
L-R
W-B
LG
L-B
L-W
F5
FRONT WIPER MOTOR
J 4
JUNCTION CONNECTOR
J 9
JUNCTION CONNECTOR

SYSTEM OUTLINE

With the ignition SW turned on, current flows to TERMINAL 17 of the front wiper and washer SW, TERMINAL 1 (w/o daytime running light) or 2 (w/ daytime running light) of the washer motor and TERMINAL 4 of the front wiper motor through the WIPER Fuse.

1. LOW SPEED POSITION

With the wiper SW turned to LOW position, the current flows from TERMINAL 17 of the front wiper and washer SW to TERMINAL 7 to TERMINAL 2 of the front wiper motor to GROUND and causes to the front wiper motor to run at low speed.

2. HIGH SPEED POSITION

With the wiper SW turned to HIGH position, the current flows from TERMINAL 17 of the front wiper and washer SW to TERMINAL 8 to TERMINAL 1 of the front wiper motor to GROUND and causes to the front wiper motor to run at high speed.

3. INT POSITION (w/ INTERMITTENT OPERATION)

With the wiper SW turned to INT position, the relay operated and the current which is connected by relay function flows from TERMINAL 17 of the front wiper and washer SW to TERMINAL 2 to GROUND. This flow of the current operates the intermittent circuit and the current flows from TERMINAL 17 of the front wiper and washer SW to TERMINAL 7 to TERMINAL 2 of the front wiper motor to GROUND and functions. The intermittent operation is controlled by a condenser's charged and discharged function installed in relay.

4. MIST POSITION (w/o INTERMITTENT OPERATION)

With wiper SW turned to MIST position, the current flows TERMINAL 17 of the front wiper and washer SW to TERMINAL 7 to TERMINAL 2 of the front wiper motor to GROUND and causes to the front wiper motor to run at low speed.

5. WASHER CONTINUITY OPERATION (w/ INTERMITTENT OPERATION)

With the washer SW turned to on, the current flows through TERMINAL 1 (w/o daytime running light) or 2 (w/ daytime running light) of the washer motor to TERMINAL 2 (w/o daytime running light) or 1 (w/ daytime running light) to TERMINAL 11 of the front wiper and washer SW to TERMINAL 2 to GROUND and causes the washer motor to run and window washer to spray. Simultaneously, current flows from the WIPER fuse to TERMINAL 17 of the front wiper and washer SW to TERMINAL 7 to TERMINAL 2 of the front wiper motor to GROUND, causing the wiper to function.

6. WASHER OPERATION (w/o INTERMITTENT OPERATION)

With the washer SW turned to on, the current flows from TERMINAL 1 (w/o daytime running light) or 2 (w/ daytime running light) of the washer motor to TERMINAL 2 (w/o daytime running light) or 1 (w/ daytime running light) to TERMINAL 11 of the front wiper and washer SW to TERMINAL 2 to GROUND and causes the washer motor to run and the window washer to spray, operates only while the washer SW is pressed.

SERVICE HINTS

C15 FRONT WIPER AND WASHER SW [COMB. SW]

2-GROUND : Always continuity
17-GROUND : Approx. **12** volts with ignition SW at **ON** position
7-GROUND : Approx. **12** volts with front wiper and washer SW at **LOW** position
Approx. **12** volts every approx. **1** to **10** seconds intermittently with front wiper and washer SW at **INT** position
(w/ intermittent operation)
Approx. **12** volts front wiper and washer SW at **MIST** position (w/o intermittent operation)
16-GROUND : Approx. **12** volts with ignition SW on unless front wiper motor at **STOP** position
8-GROUND : Approx. **12** volts with ignition SW on and front wiper and washer SW at **HIGH** position

F5 FRONT WIPER MOTOR

3-4 : Closed unless front wiper motor at **STOP** position

○ : PARTS LOCATION

Code		See Page	Code	See Page	Code		See Page
C15		30	F5	28	W1	A	29
C25	A	30	J4	31		B	29
C29	B	30	J9	31			

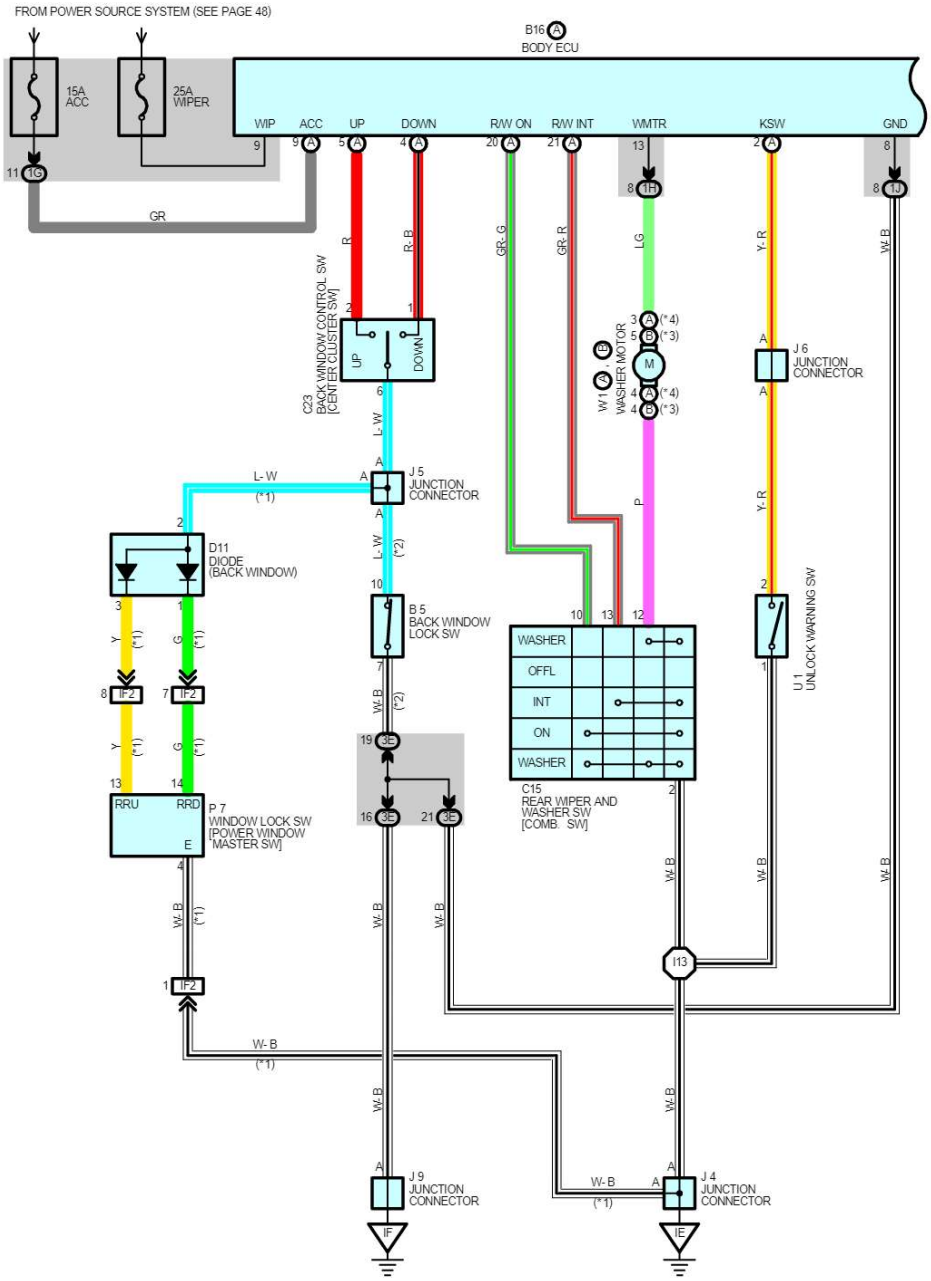
 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

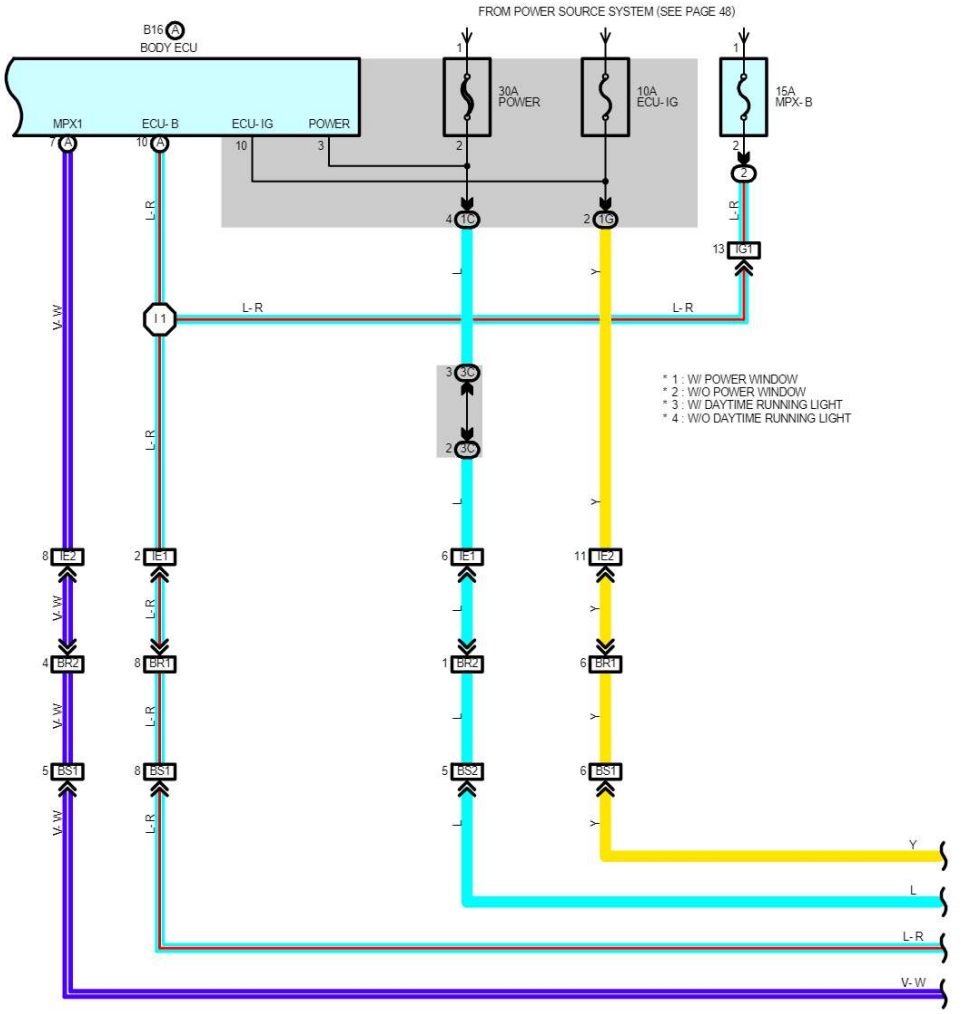
Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
3A	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

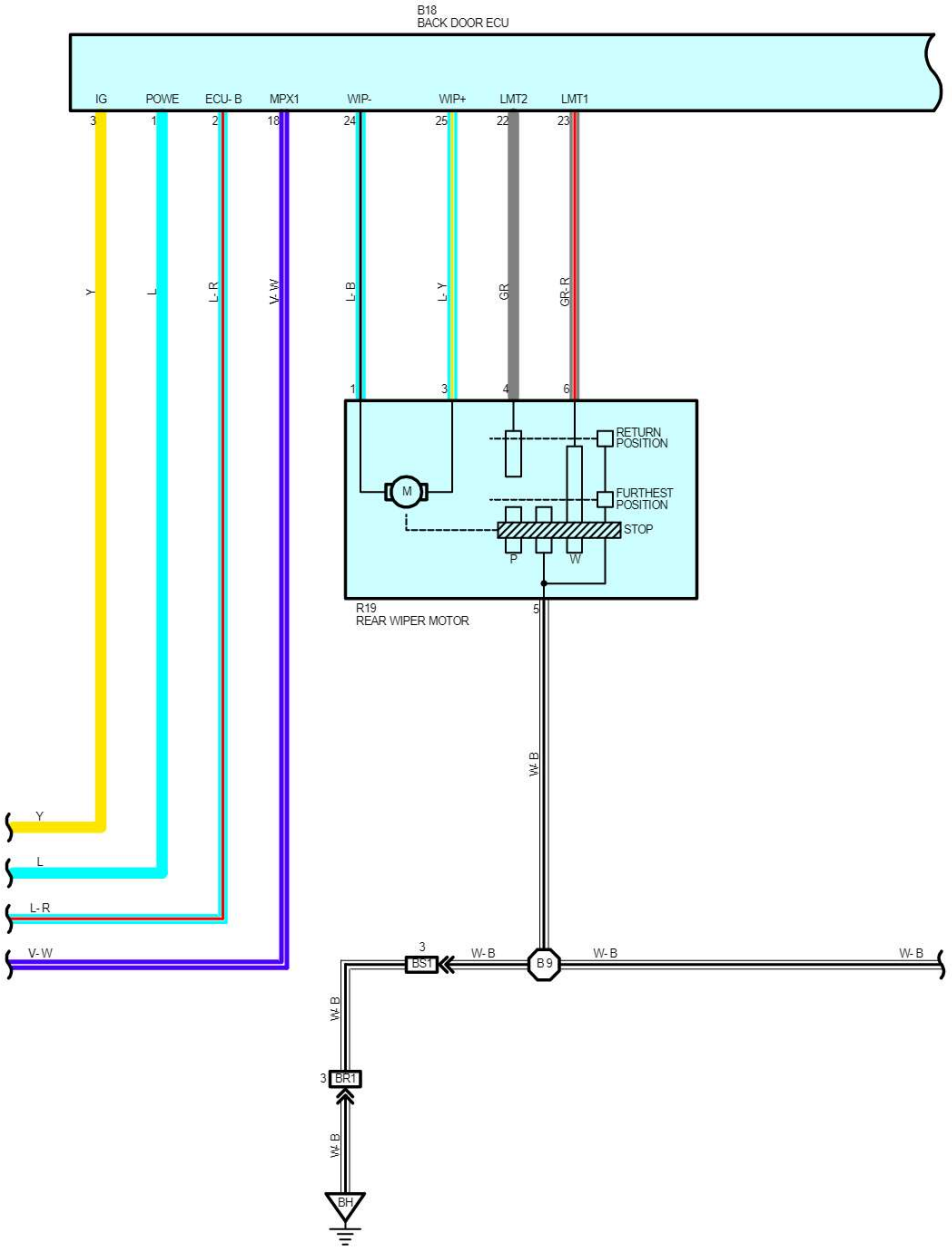
 : GROUND POINTS

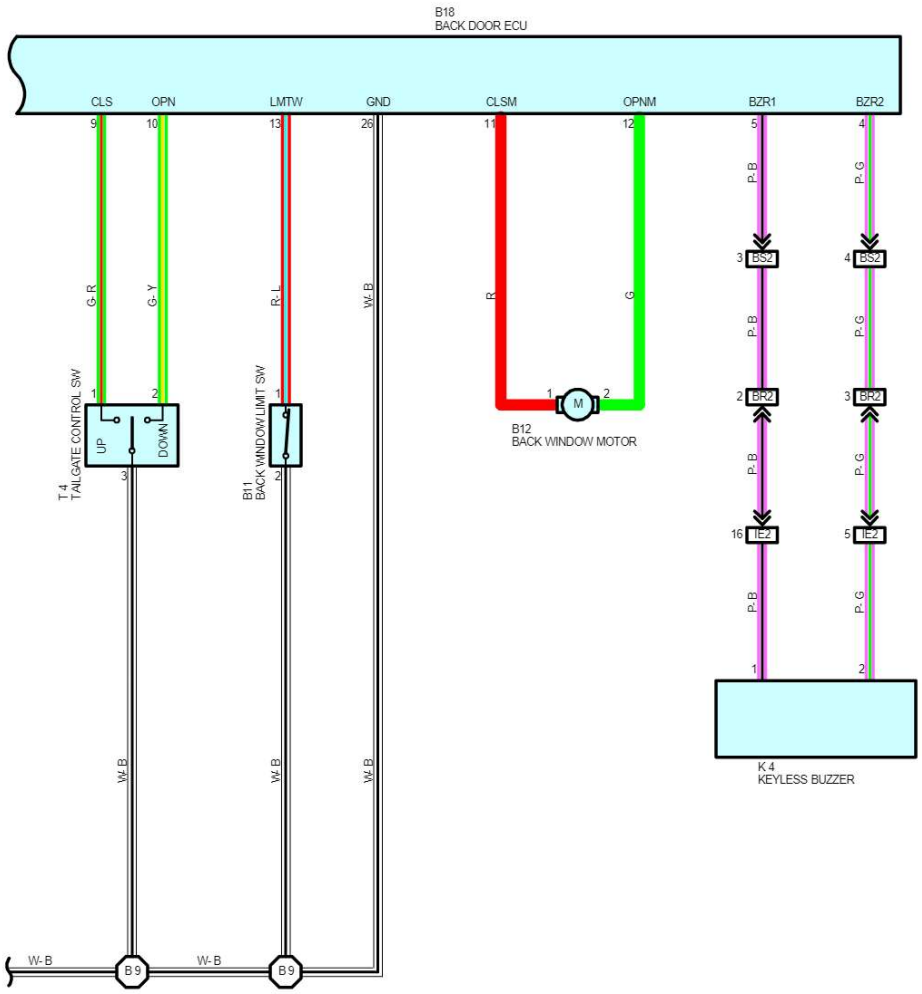
Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

POWER WINDOW (REAR), REAR WIPER AND WASHER




FROM POWER SOURCE SYSTEM (SEE PAGE 48)
B16
BODY ECU
MPX1
ECU-B
ECU-IG
POWER
30A
POWER
10A
ECU-IG
15A
MPX-B
IG
IG1
I1
IE2
IE1
BR2
BR1
BS1
BS2
L-R
V-W
L
Y
* 1 : W/ POWER WINDOW
* 2 : W/O POWER WINDOW
* 3 : W/ DAYTIME RUNNING LIGHT
* 4 : W/O DAYTIME RUNNING LIGHT


B18
BACK DOOR ECU
IG
POWE
ECU-B
MPX1
WIP-
WIP+
LMT2
LMT1
3
1
2
18
24
25
22
23
Y
L
L-R
V-W
L-B
L-Y
GR
GR-R
1
3
4
6
RETURN POSITION
FURTHEST POSITION
STOP
M
P
W
R19
REAR WIPER MOTOR
5
W-B
Y
L
L-R
V-W
3
BST
W-B
B9
W-B
W-B
W-B
3
BRT
W-B
BH


B18
BACK DOOR ECU
CLS
OPN
LMTW
GND
CLSM
OPNM
BZR1
BZR2
9
10
13
26
11
12
5
4
G-R
G-Y
R-L
W-B
R
G
P-B
P-G
3
4
BS2
2
3
BR2
16
5
IE2
1
2
T4
TAILGATE CONTROL SW
UP
DOWN
B11
BACK WINDOW LIMIT SW
M
B12
BACK WINDOW MOTOR
K4
KEYLESS BUZZER
W-B
B9

SYSTEM OUTLINE

Current always flows through the POWER fuse to TERMINAL 3 of the body ECU and TERMINAL 1 of the back door ECU. With the ignition SW turned on, the WIPER fuse to TERMINAL 9 of the body ECU, the ECU-IG fuse to TERMINAL 10 of the body ECU and TERMINAL 3 of the back door ECU.

1. REAR POWER WINDOW MANUAL OPERATION (BACK WINDOW CONTROL SW)

When the back window control SW is pushed to the up side (With the ignition SW on), an "ON" signal is input from TERMINAL 2 of the back window control SW to TERMINAL (A) 5 of the body ECU to TERMINAL (A) 7 to TERMINAL 18 of the back door ECU. Thus, the back door ECU is activated and the current to TERMINAL 1 of the back door ECU flows to TERMINAL 26 of the back door ECU to GROUND so that the current to back window motor flows from TERMINAL 1 of the back door ECU to TERMINAL 11 to TERMINAL 1 of the back window motor to TERMINAL 2 to TERMINAL 12 of the back door ECU to TERMINAL 26 to GROUND. This causes the back window motor to rotate toward the up side and the window ascends only while the back window control SW is being pushed.

To lower the window, the signal input from TERMINAL 1 of the back window control SW to TERMINAL (A) 4 of the body ECU to TERMINAL (A) 7 to TERMINAL 18 of the back door ECU. Causes current to the back window motor to flow from TERMINAL 1 of the back door ECU to TERMINAL 12 to TERMINAL 2 of the back window motor to TERMINAL 1 to TERMINAL 11 of the back door ECU to TERMINAL 26 to GROUND, so the current flows in the revers direction to manual up operation and causes the motor to rotate in the opposite direction, thus lowering the window.

When the back window lock SW is pushed the lock side, the ground circuit of the back window control SW becomes open. Thus even if the driver operates the Open/Close function of the power window (Rear), the power window (Rear) will not operate because the back door ECU dose not receive the on signal and the back door ECU does not operate.

2. REAR POWER WINDOW MANUAL OPERATION (TAILGATE CONTROL SW)

When the tailgate control SW to the up side a signal is input to TERMINAL 9 of the back door ECU from TERMINAL 1 of the tailgate control SW. This activates the back door ECU regardless of whether the ignition SW is on or off, and the current flows from TERMINAL 1 of the back door ECU to TERMINAL 26. So the current to the back window motor flows to TERMINAL 1 of the back door ECU to TERMINAL 11 to TERMINAL 1 of the back window motor to TERMINAL 2 to TERMINAL 12 of the back door ECU to TERMINAL 26 to GROUND and causes the back window motor to rotate in the up direction so the back window ascends only while the tailgate control SW is being pushed to lower the window. The on signal of the tailgate control SW (Rotate to down side) is input to TERMINAL 10, causing the current to the motor to flow to TERMINAL 1 of the back door ECU to TERMINAL 12 to TERMINAL 2 of the back window motor to TERMINAL 1 to TERMINAL 11 of the back door ECU to TERMINAL 26 to GROUND. This flow is the reverse of manual up, so the motor rotates in the reverse direction and the window is lowered.

3. WIRELESS BACK WINDOW CONTROL

When the ignition SW is off, the back window can be opened by pressing the back window open SW of the transmitter for approximately 0.8 seconds. At that time, the keyless buzzer beeps once.

4. REAR WIPER OPERATION

With ignition SW turned on and the back door window completely closed (Back window limit SW on), when the rear wiper and washer SW is turned on, the signal is input from TERMINAL 10 of the rear wiper and washer SW to TERMINAL (A) 20 of the body ECU to TERMINAL 7 to TERMINAL 18 of the back door ECU. Thus the back door ECU activates and the current flows from TERMINAL 1 of the back door ECU to TERMINAL 25 to TERMINAL 3 of the rear wiper motor to TERMINAL 1 to TERMINAL 24 of the back door ECU to TERMINAL 26 to GROUND and operates the rear wiper to the upper limit of the wiping area. When the upper limit of the wiping area is reached, the point (Cam plate P point) on the wiper motor is turned on (in the case, W point of cam plate is off), and the signal to reverse the rear wiper motor is input to TERMINAL 22 of the back door ECU. The back door ECU stops the rear wiper motor for about 0.1 seconds and the current flows from TERMINAL 24 of the back door ECU to TERMINAL 1 of the rear wiper motor to TERMINAL 3 to TERMINAL 25 of the back door ECU to TERMINAL 26 to GROUND. As a result, the rear wiper motor reverses and stops the rear wiper before the retraction position. At that time, the point (Cam plate W point) on the rear wiper motor is turned on (in this case, P point of cam plate is off), and the signal to rotate the motor is input to TERMINAL 25 of the back door ECU to TERMINAL 3 of the rear wiper motor to TERMINAL 1 to TERMINAL 24 of the back door ECU to TERMINAL 26 to GROUND and the rear wiper SW off, the signal to TERMINAL 23 of the back door ECU from W point of cam plate is cancelled and the wiping function is continued when P point is turned on. The rear wiper continues beyond the rear wiper area to the retraction position. At that time, P and W points are turned on, the power window relay stops operating, and the current to the rear wiper is cut off to cam plate rear wiper operation.

5. WASHER OPERATION

With the ignition SW turned on and back window closed completely (Back window limit SW on), when the rear wiper and washer SW is turned strongly (Rear washer SW on), current flows from TERMINAL 9 of the body ECU to TERMINAL 13 to TERMINAL 3 (w/o daytime running light), 5 (w/ daytime running light) of the washer motor to TERMINAL 4 to TERMINAL 12 of the rear wiper and washer SW to TERMINAL 2 to GROUND and causes the rear window washer emits a water spray only while the rear washer SW is turned. When the rear wiper SW is off, and the rear wiper SW is then turned in the off direction, washer liquid will also spray.

SERVICE HINTS

T4 TAILGATE CONTROL SW

2-3 : Continuity with tailgate control SW at down side
1-3 : Continuity with tailgate control SW at up side

C15 REAR WIPER AND WASHER SW [COMB. SW]

12-2 : Continuity with rear wiper and washer SW at **WASHER** position
10-2 : Continuity with rear wiper and washer SW at **ON** position

B18 BACK DOOR ECU

3-GROUND : Approx. **12** volts with ignition SW at **ON** position
1-GROUND : Always approx. **12** volts
26-GROUND : Always continuity
11-GROUND : Approx. **12** volts with back window at **UP** operation
12-GROUND : Approx. **12** volts with back window at **DOWN** operation
9-GROUND : Continuity with tailgate control SW at **UP** position
10-GROUND : Continuity with tailgate control SW at **DOWN** position

B11 BACK WINDOW LIMIT SW

1-2 : Closed with back power window fully closed

R19 REAR WIPER MOTOR

4, 6-5 : Continuity with rear wiper retracted
4-5 : Continuity with rear wiper at **RETURN** position

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B5	30	D11	30	R19	33
B11	32	J4	31	T4	33
B12	32	J5	31	U1	31
B16 A	30	J6	31	W1 A	29
B18	32	J9	31	W1 B	29
C15	30	K4	29		
C23	30	P7	33		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
1H		
1J		
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE2		
IF2	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BR2		
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)
BS2		

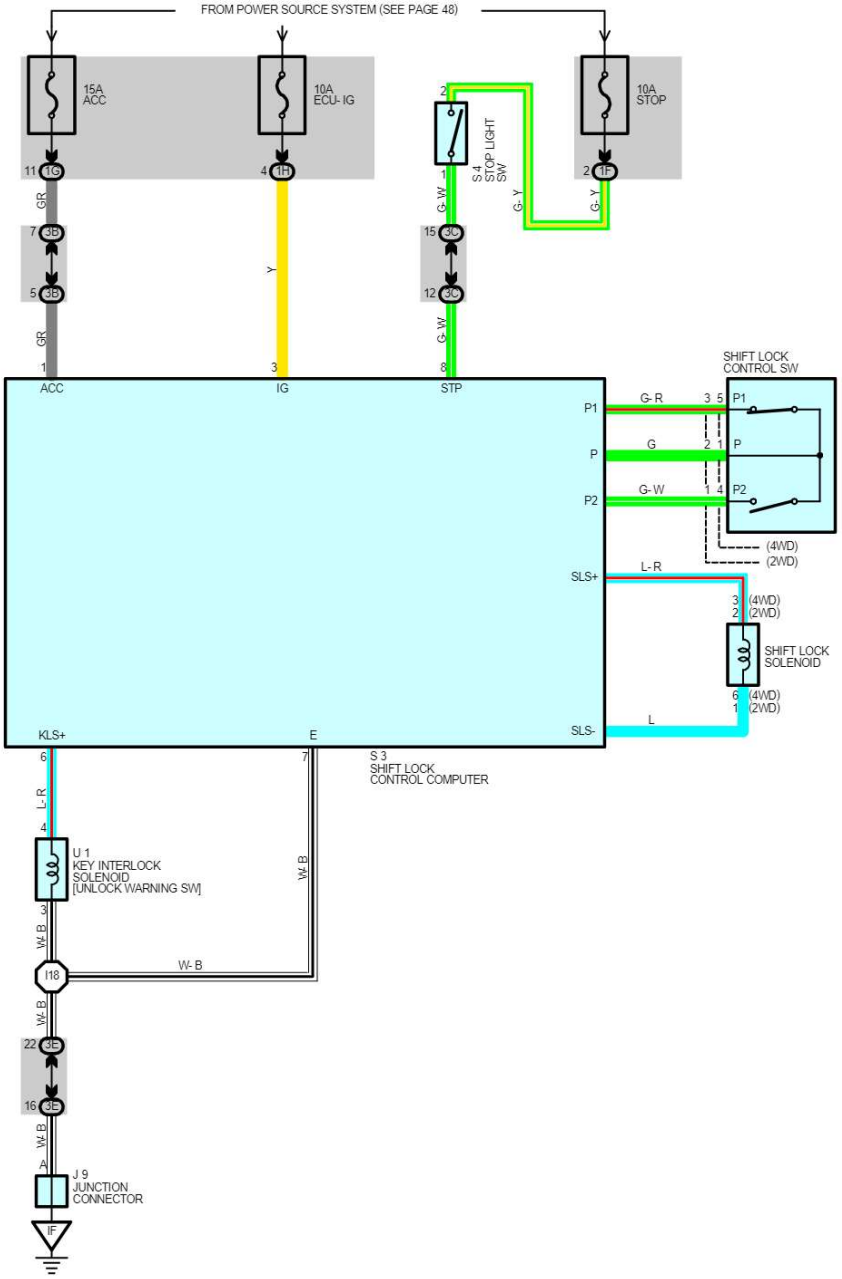
 : GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
BH	42	Left Quarter Panel Inner

 : SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	B9	42	Back Door No.2 Wire
I13					

SHIFT LOCK


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
15A ACC
10A ECU- IG
10A STOP
S 4 STOP LIGHT SW
SHIFT LOCK CONTROL SW
ACC
IG
STP
P1
P
P2
SLS+
SLS-
KLS+
E
(4WD)
(2WD)
SHIFT LOCK SOLENOID
S 3 SHIFT LOCK CONTROL COMPUTER
U 1 KEY INTERLOCK SOLENOID [UNLOCK WARNING SW]
J 9 JUNCTION CONNECTOR

SYSTEM OUTLINE

When the ignition SW is turned to ACC position the current from the ACC fuse flows to TERMINAL 1 of the shift lock control computer. When the ignition SW is turned to ON position, the current from the ECU-IG fuse flows to TERMINAL 3 of the shift lock control computer.

1. SHIFT LOCK MECHANISM

With the ignition SW on, when a signal that the brake pedal is depressed (Stop light SW on) and a signal that the shift lever is put in P position (Continuous between P1 and P of the shift lock control SW) is input to the shift lock control computer, the shift lock control computer operates and current from the ECU-IG fuse flows to TERMINAL 3 of the shift lock control computer to TERMINAL SLS+ to TERMINAL 3 (4WD) or 2 (2WD) of the shift lock solenoid to TERMINAL 6 (4WD) or 1 (2WD) to TERMINAL SLS- of the shift lock control computer to TERMINAL 7 to GROUND. This causes the shift lock solenoid to turn on (Plate stopper disengages) and the shift lever can shift into position other than P.

2. KEY INTERLOCK MECHANISM

With the ignition SW at ON or ACC position, when the shift lever is put in P position (No continuous between P2 and P of the shift lock control SW), the current flowing from TERMINAL 6 of the shift lock control computer to key interlock solenoid is cut off. This causes the key interlock solenoid to turn off (Lock lever disengages from LOCK position) and the ignition key can be turned from ACC to LOCK position.

SERVICE HINTS

S3 SHIFT LOCK CONTROL COMPUTER

1-GROUND : Approx. **12** volts with the ignition SW at **ACC** or **ON** position
3-GROUND : Approx. **12** volts with the ignition SW at **ON** position
6-GROUND : **0** volts with ignition SW at **ACC** position and shift lever position in **P** position
6- 12 volts with shift lever position in except **P** position
7-GROUND : Always continuity
8-GROUND : Approx. **12** volts with the brake pedal depressed

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J9	31	S4	31		
S3	31	U1	31		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
1H		
3B	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3C		
3E		

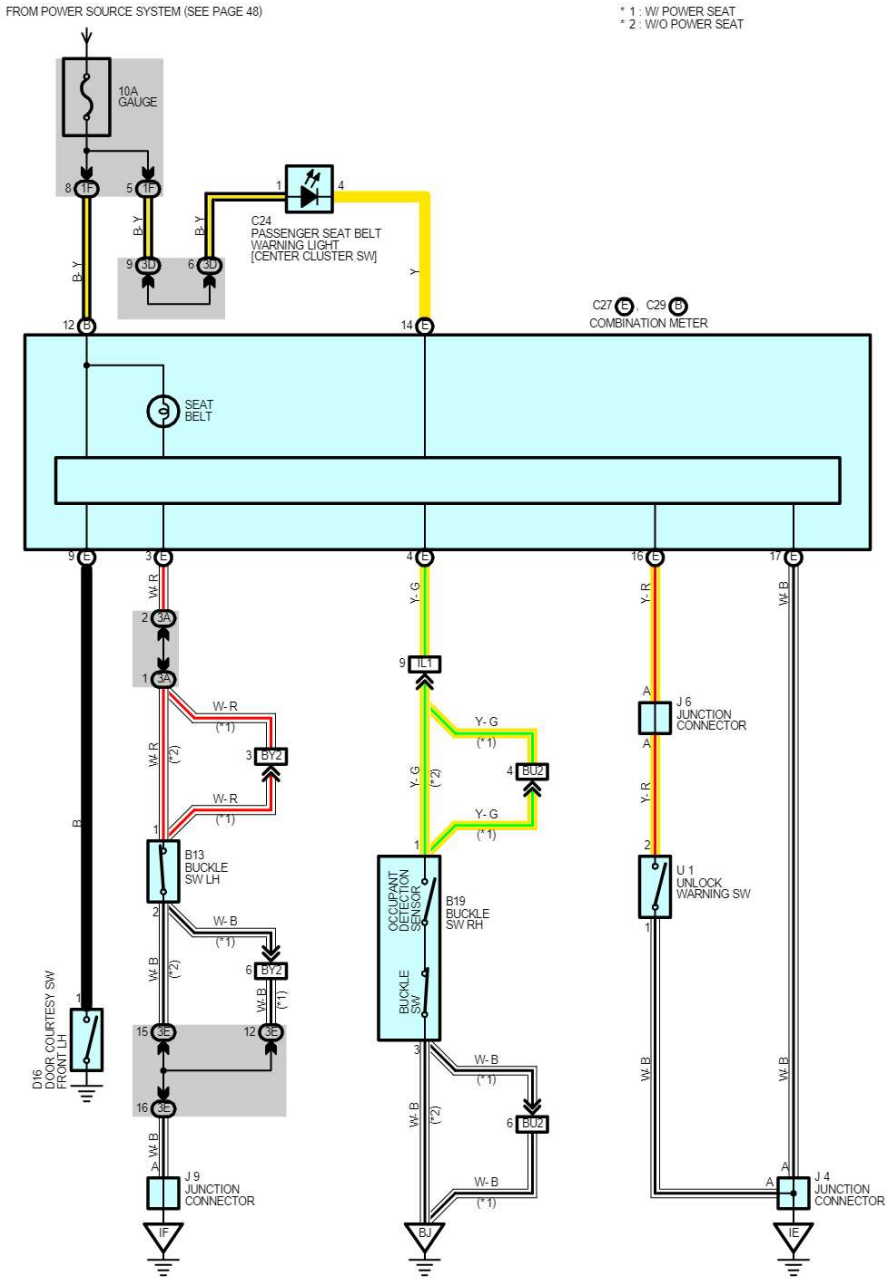
: GROUND POINTS

Code	See Page	Ground Points Location
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I18	40	Cowl Wire			

KEY REMINDER AND SEAT BELT WARNING



SYSTEM OUTLINE

1. SEAT BELT WARNING SYSTEM

When the ignition SW turned on, a signal is input to the combination meter. To determine whether the driver has fastened the seat belt, a signal is input from the buckle SW LH to the combination meter TERMINAL (E) 3. 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 (Buckle SW RH)) is installed in the front passenger seat, and determines whether the seat belt is fastened. When not fastened, the signals from the buckle SW RH is input to combination meter TERMINAL (E) 4, 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 (E) 16, and from the door courtesy SW front LH to combination meter TERMINAL (E) 9. 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

C27 (E), C29 (B) COMBINATION METER
(B)12-GROUND : Approx. **12** volts with ignition SW at **ON** position
(E)17-GROUND : Always continuity

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B13	32 (w/o Power Seat)	C24	30	J4	31
	34 (w/ Power Seat)	C27 E	30	J6	31
B19	32 (w/o Power Seat)	C29 B	30	J9	31
	34 (w/ Power Seat)	D16	32	U1	31

⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

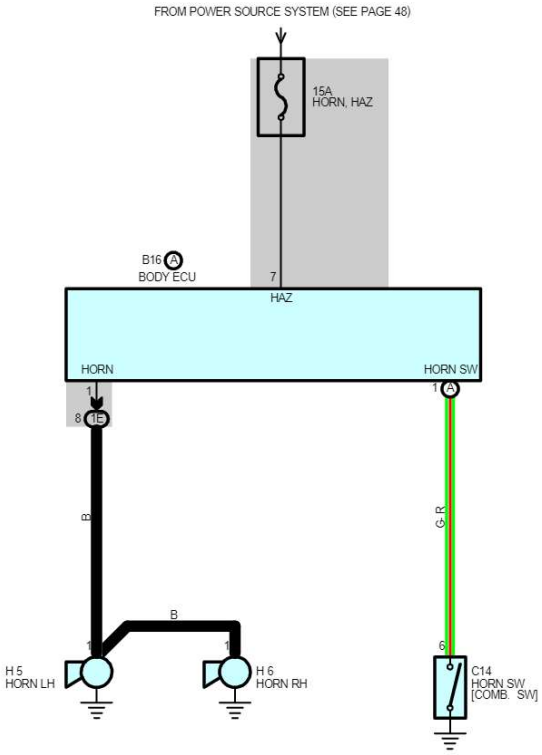
Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3A	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3D		
3E		

▭ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BU2	44	Floor Wire and Seat No.2 Wire (Under the Front Passenger's Seat)
BY2	44	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)

▽ : GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
BJ	42	Right Quarter Panel Inner


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
15A
HORN, HAZ
B16
BODY ECU
7
HAZ
HORN
HORN SW
1
8
1
B
G-R
B
1
1
6
H 5
HORN LH
H 6
HORN RH
C14
HORN SW
[COMB. SW]

SERVICE HINTS

B16 (A) BODY ECU

7-GROUND : Always approx. **12** volts
(A)1-GROUND : Continuity with horn SW on

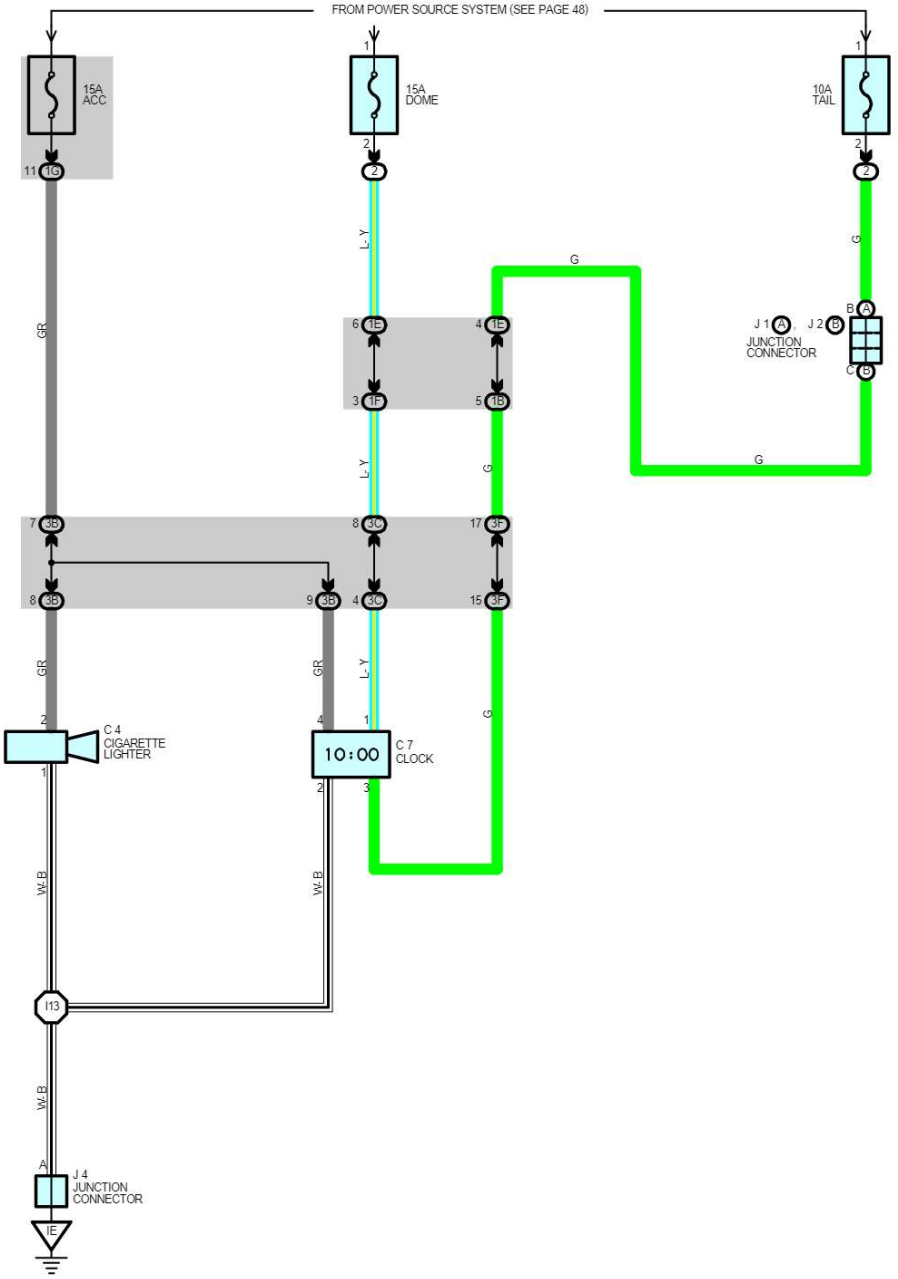
: PARTS LOCATION

Code		See Page	Code	See Page	Code	See Page
B16	A	30	H5	28		
C14		30	H6	28		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

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

CIGARETTE LIGHTER AND CLOCK



SERVICE HINTS

C4 CIGARETTE LIGHTER

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

C7 CLOCK

1-GROUND : Always approx. **12** volts (Power for clock)
4-GROUND : Approx. **12** volts with ignition SW at **ON** or **ACC** position (Power for indication)
3-GROUND : Approx. **12** volts with light control SW at **TAIL** or **HEAD** position (Signal of indication)
2-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code		See Page	Code	See Page
C4	30	J1	A	29	J4	31
C7	30	J2	B	29		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

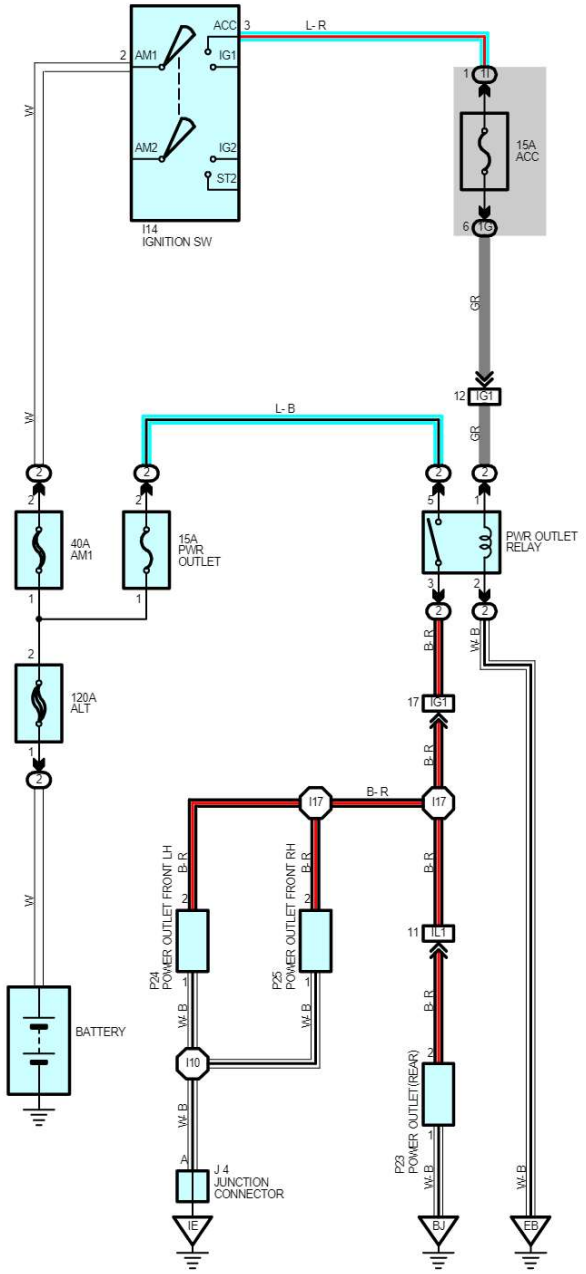
Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
3B	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3C		
3F		

: GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I13	40	Cowl Wire			



2002 4RUNNER (EWD471U)

SERVICE HINTS

PWR OUTLET RELAY

3-5 : Closed with ignition SW at **ACC** or **ON** position
1-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
5-GROUND : Always approx. **12** volts
2-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
I14	31	P23	33	P25	31
J4	31	P24	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

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

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

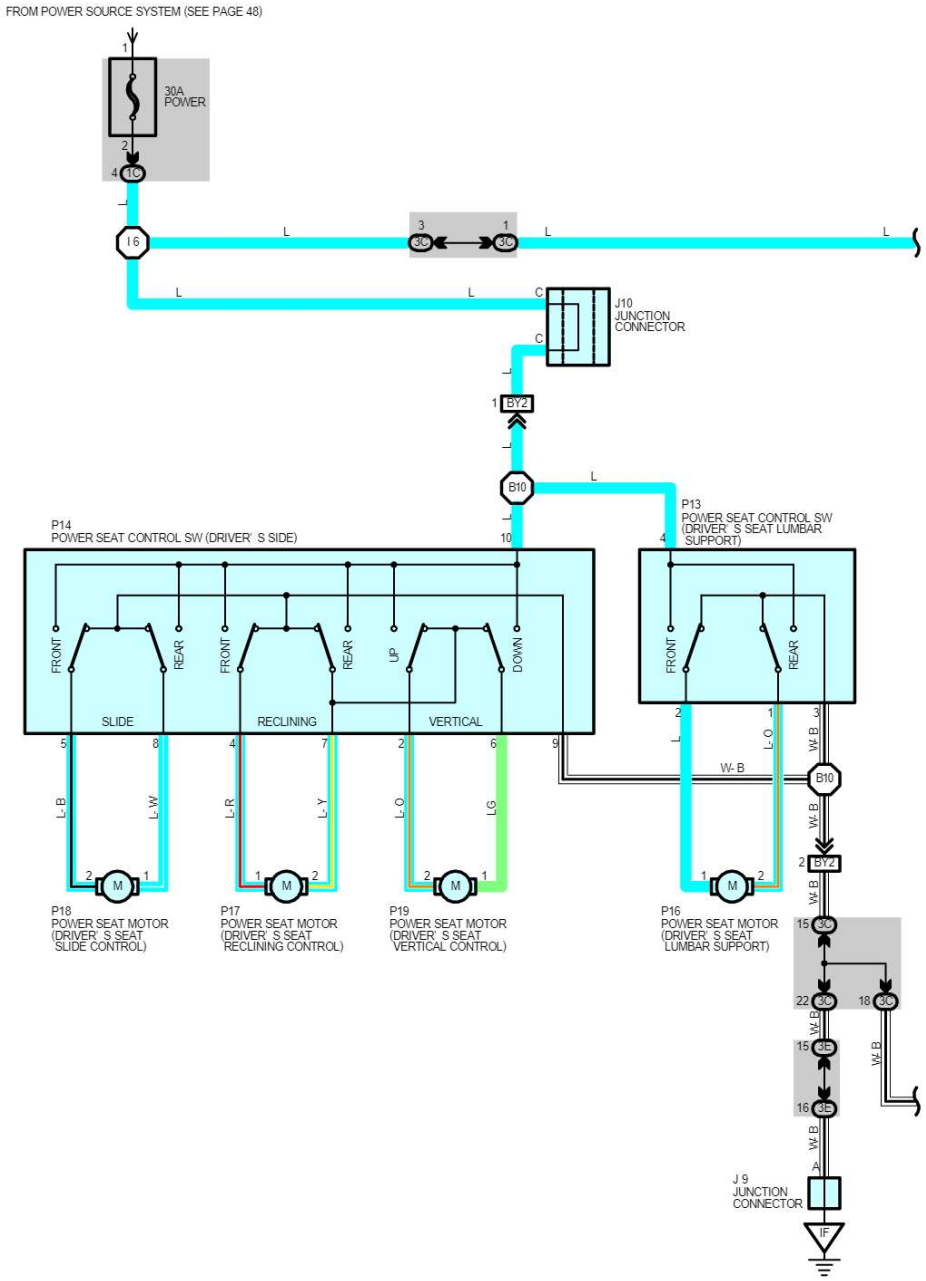
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)

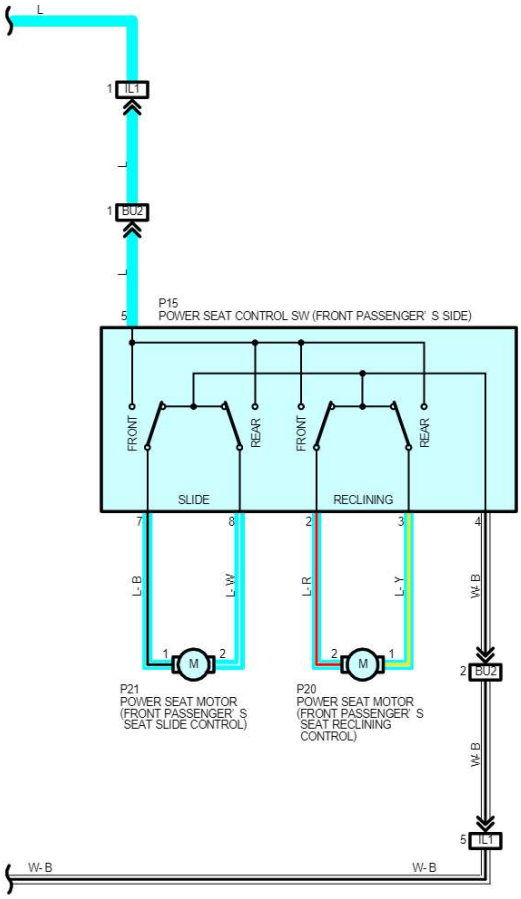
: GROUND POINTS

Code	See Page	Ground Points Location
EB	36	Front Left Fender
IE	38	Cowl Side Panel LH
BJ	42	Right Quarter Panel Inner

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I10	40	Cowl Wire	I17	40	Cowl Wire


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
30A POWER
1C
I6
3C
3B
J10 JUNCTION CONNECTOR
BY2
B10
P14 POWER SEAT CONTROL SW (DRIVER' S SIDE)
P13 POWER SEAT CONTROL SW (DRIVER' S SEAT LUMBAR SUPPORT)
FRONT
REAR
UP
DOWN
SLIDE
RECLINING
VERTICAL
W-B
L-O
L-B
L-W
L-R
L-Y
LG
M
P18 POWER SEAT MOTOR (DRIVER' S SEAT SLIDE CONTROL)
P17 POWER SEAT MOTOR (DRIVER' S SEAT RECLINING CONTROL)
P19 POWER SEAT MOTOR (DRIVER' S SEAT VERTICAL CONTROL)
P16 POWER SEAT MOTOR (DRIVER' S SEAT LUMBAR SUPPORT)
3C
2C
3E
J 9 JUNCTION CONNECTOR
IF


L
1
IL1
L
1
BU2
L
5
P15
POWER SEAT CONTROL SW (FRONT PASSENGER' S SIDE)
FRONT
REAR
FRONT
REAR
SLIDE
RECLINING
7
8
2
3
4
L-B
L-W
L-R
L-Y
W-B
M
M
1
2
2
1
P21
POWER SEAT MOTOR
(FRONT PASSENGER' S
SEAT SLIDE CONTROL)
P20
POWER SEAT MOTOR
(FRONT PASSENGER' S
SEAT RECLINING
CONTROL)
2
BU2
W-B
5
IL1
W-B
W-B

POWER SEAT

SERVICE HINTS

P13 POWER SEAT CONTROL SW (DRIVER'S SEAT LUMBAR SUPPORT)

4-2 : Closed with the driver's seat at lumbar support front operation
4-1 : Closed with the driver's seat at lumbar support rear operation
3-GROUND : Always continuity

P14 POWER SEAT CONTROL SW (DRIVER'S SIDE)

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

P15 POWER SEAT CONTROL SW (FRONT PASSENGER'S SIDE)

5-7 : Closed with the front passenger's seat at front slide operation
5-8 : Closed with the front passenger's seat at rear slide operation
5-2 : Closed with the front passenger's seat at front reclining operation
5-3 : Closed with the front passenger's seat at rear reclining operation
4-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J9	31	P15	34	P19	34
J10	31	P16	34	P20	34
P13	34	P17	34	P21	34
P14	34	P18	34		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

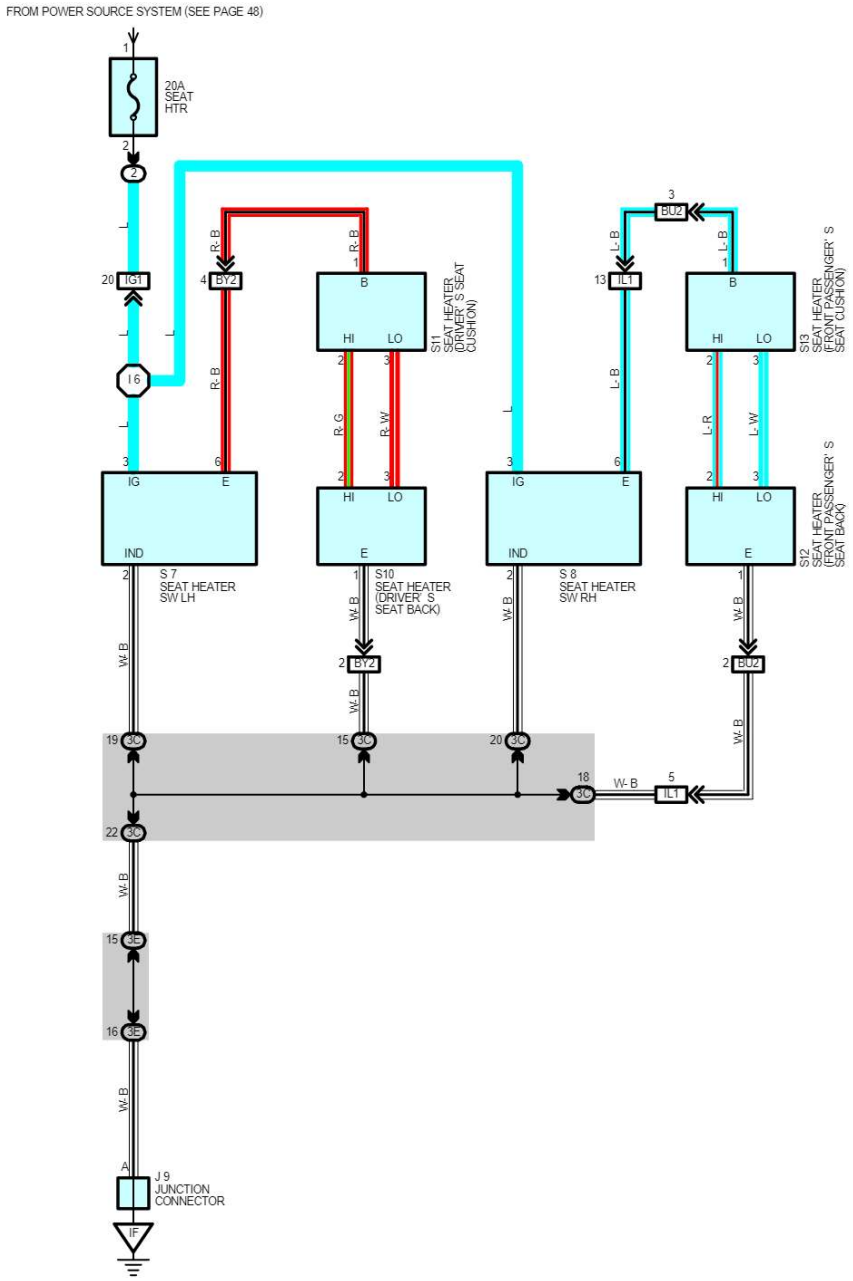
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BU2	44	Floor Wire and Seat No.2 Wire (Under the Front Passenger's Seat)
BY2	44	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)

: GROUND POINTS

Code	See Page	Ground Points Location
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	40	Cowl Wire	B10	44	Seat No.1 Wire


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
20A SEAT HTR
IG1
I 6
IG
E
IND
S 7 SEAT HEATER SW LH
S10 SEAT HEATER (DRIVER' S SEAT BACK)
S 8 SEAT HEATER SW RH
IL1
BU2
BY2
S11 SEAT HEATER (DRIVER' S SEAT CUSHION)
S13 SEAT HEATER (FRONT PASSENGER' S SEAT CUSHION)
S12 SEAT HEATER (FRONT PASSENGER' S SEAT BACK)
HI
LO
3C
3E
J 9 JUNCTION CONNECTOR
IF
R- B
R- G
R- W
L
L- B
L- R
L- W
W- B

SERVICE HINTS

S7, S8 SEAT HEATER SW LH, RH

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

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J9	31	S10	34	S13	34
S7	31	S11	34		
S8	31	S12	34		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BU2	44	Floor Wire and Seat No.2 Wire (Under the Front Passenger's Seat)
BY2	44	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)

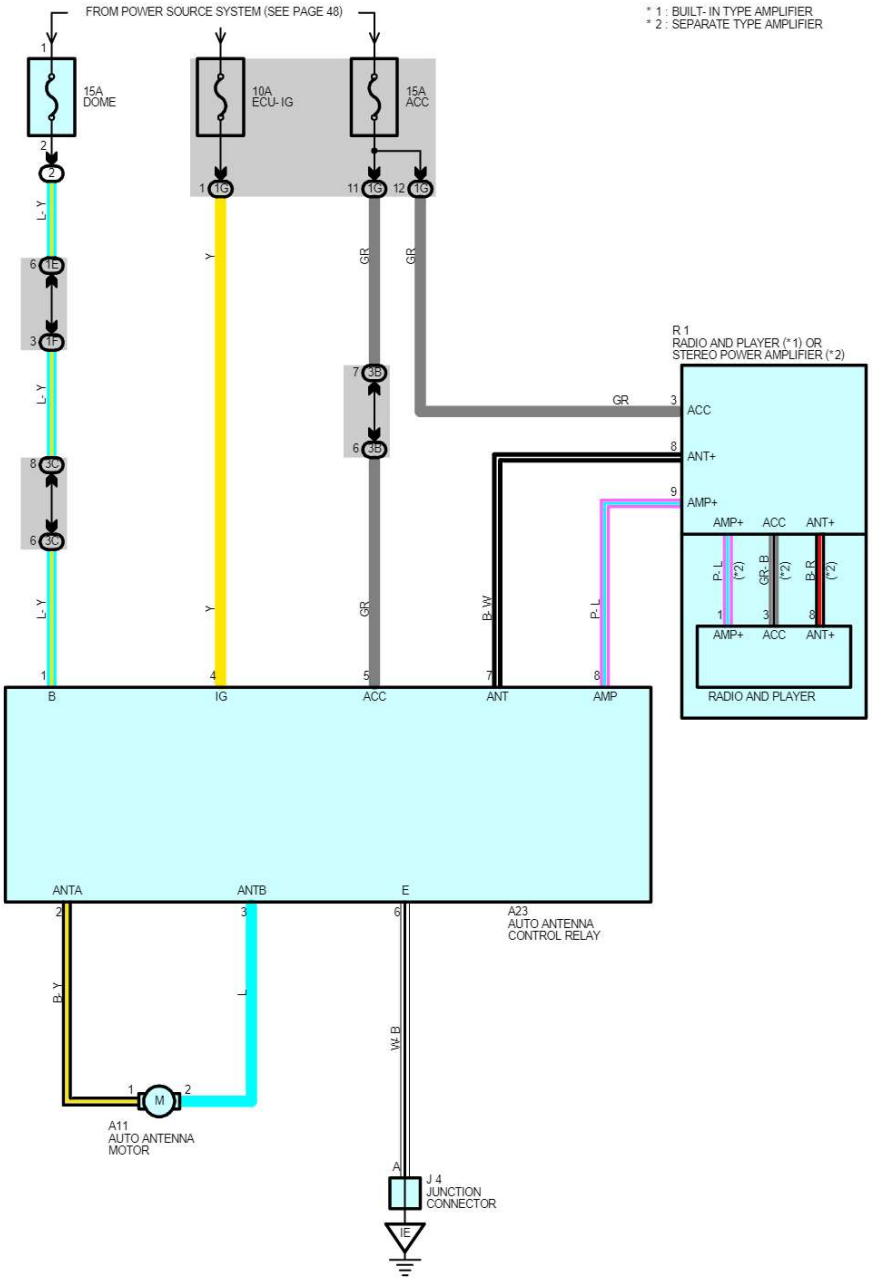
: GROUND POINTS

Code	See Page	Ground Points Location
IF	38	Cowl Side Panel RH

: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I6	40	Cowl Wire			

AUTO ANTENNA



SERVICE HINTS

A23 AUTO ANTENNA CONTROL RELAY

1-GROUND : Always approx. **12** volts
5-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position
4-GROUND : Approx. **12** volts with ignition SW at **ON** position
6-GROUND : Always continuity
7-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position and radio SW on and player SW off
8-GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position and radio SW off and player SW on

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A11	28	J4	31		
A23	30	R1	31		

: RELAY BLOCKS

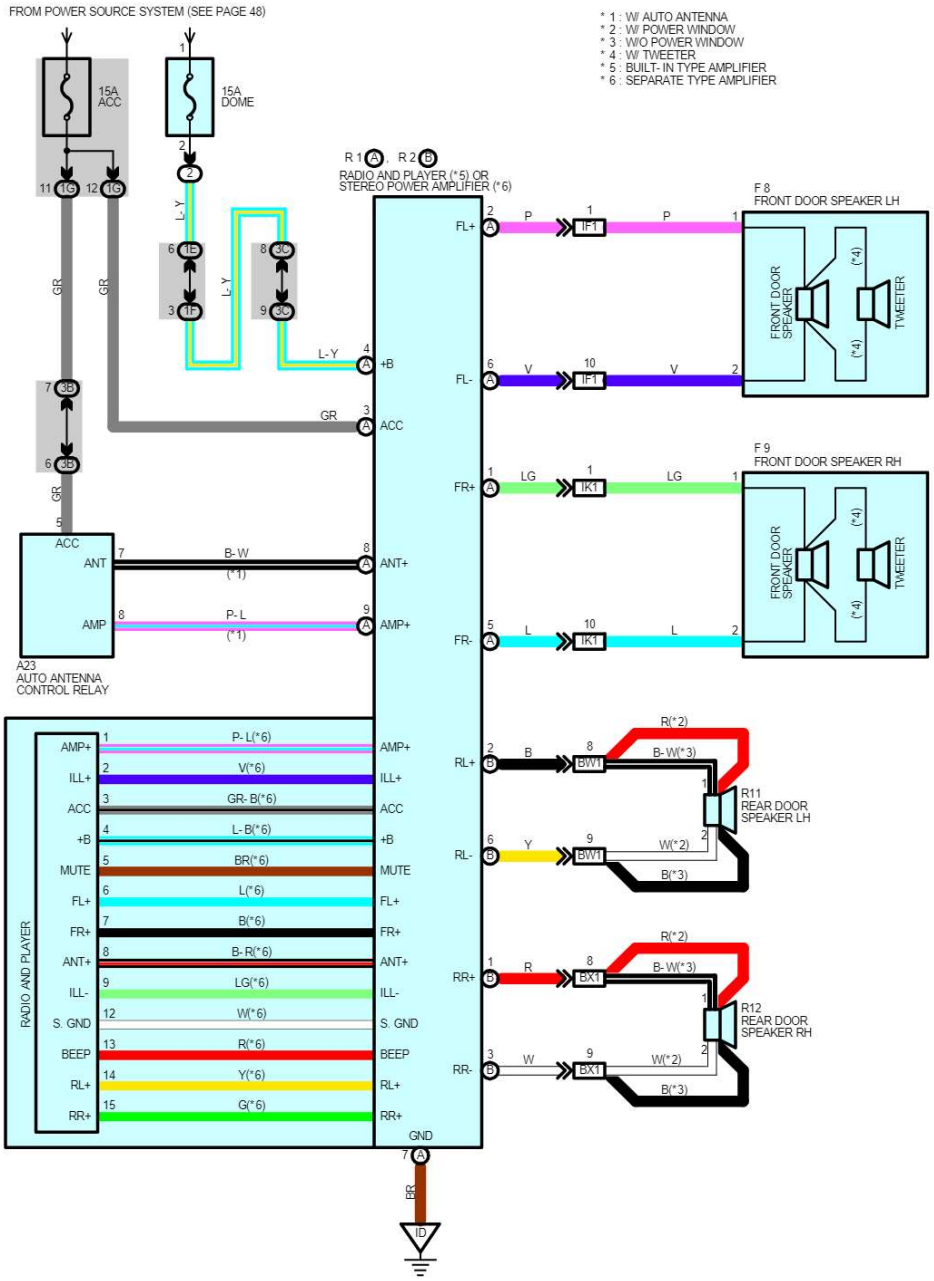
Code	See Page	Relay Blocks (Relay Block Location)
2	22	Engine Room R/B (Engine Compartment Left)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
3B	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3C		

: GROUND POINTS

Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
* 1 : W/ AUTO ANTENNA
* 2 : W/ POWER WINDOW
* 3 : W/O POWER WINDOW
* 4 : W/ TWEETER
* 5 : BUILT- IN TYPE AMPLIFIER
* 6 : SEPARATE TYPE AMPLIFIER
15A ACC
15A DOME
R1 A, R2 B
RADIO AND PLAYER (*5) OR STEREO POWER AMPLIFIER (*6)
F 8 FRONT DOOR SPEAKER LH
F 9 FRONT DOOR SPEAKER RH
FRONT DOOR SPEAKER
TWEETER
(*4)
A23 AUTO ANTENNA CONTROL RELAY
ACC
ANT
AMP
B- W (*1)
P- L (*1)
ANT+
AMP+
+B
ACC
FL+
FL-
FR+
FR-
RL+
RL-
RR+
RR-
GND
RADIO AND PLAYER
AMP+
ILL+
ACC
+B
MUTE
FL+
FR+
ANT+
ILL-
S. GND
BEEP
RL+
RR+
P- L(*6)
V(*6)
GR- B(*6)
L- B(*6)
BR(*6)
L(*6)
B(*6)
B- R(*6)
LG(*6)
W(*6)
R(*6)
Y(*6)
G(*6)
R(*2)
B- W(*3)
W(*2)
B(*3)
R11 REAR DOOR SPEAKER LH
R12 REAR DOOR SPEAKER RH
ID

SERVICE HINTS

R1 (A) RADIO AND PLAYER (BUILT-IN TYPE AMPLIFIER) OR STEREO POWER AMPLIFIER (SEPARATE TYPE AMPLIFIER)

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

: PARTS LOCATION

Code	See Page	Code		See Page	Code	See Page
A23	30	R1	A	31	R12	33
F8	32	R2	B	31		
F9	32	R11		33		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
3B	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3C		

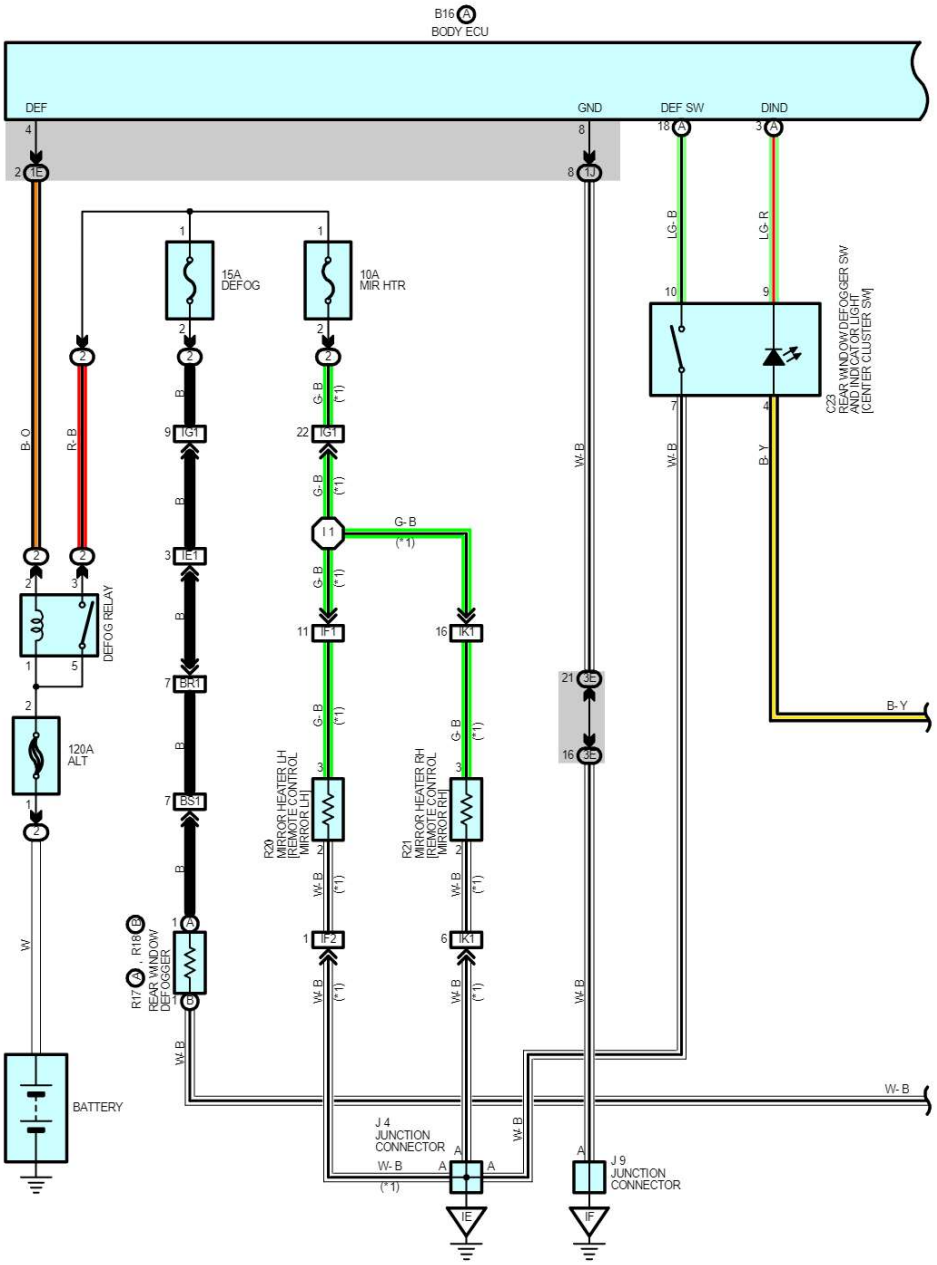
: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

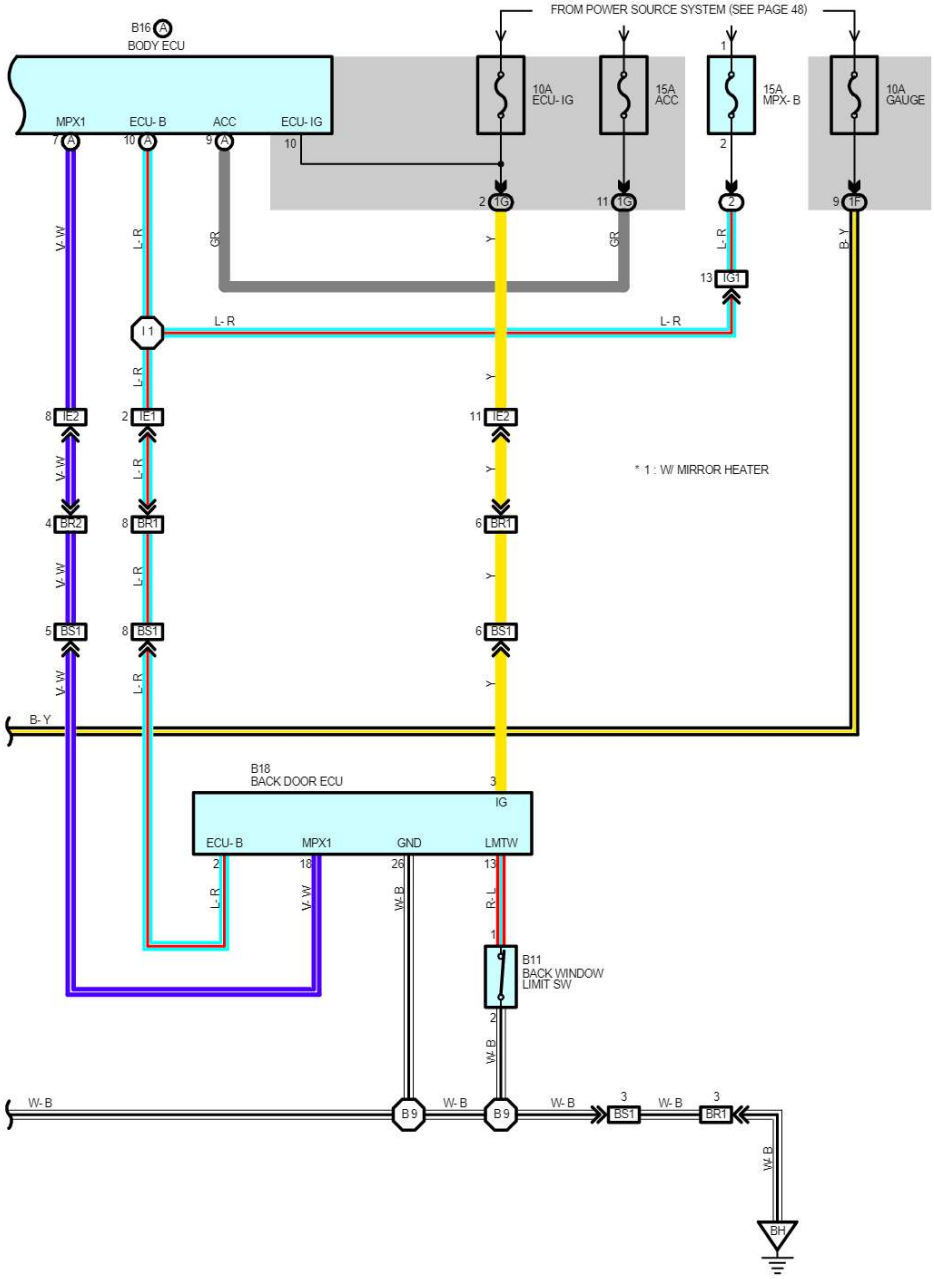
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)
BW1	42	Rear Door LH Wire and Cowl Wire (Left Center Pillar)
BX1	42	Rear Door RH Wire and Cowl Wire (Right Center Pillar)

: GROUND POINTS

Code	See Page	Ground Points Location
ID	38	Left Kick Panel

REAR WINDOW DEFOGGER AND MIRROR HEATER




FROM POWER SOURCE SYSTEM (SEE PAGE 48)
B16
BODY ECU
MPX1
ECU- B
ACC
ECU- IG
10A
ECU- IG
15A
ACC
15A
MPX- B
10A
GAUGE
IG1
IE2
IE1
BR2
BR1
BS1
I 1
B18
BACK DOOR ECU
IG
ECU- B
MPX1
GND
LMTW
B11
BACK WINDOW
LIMIT SW
B 9
BH
* 1 : W/ MIRROR HEATER

REAR WINDOW DEFOGGER AND MIRROR HEATER

SYSTEM OUTLINE

When the rear window defogger SW (Center cluster SW) is turned on while the ignition SW is on and the back window is closed, the rear window defogger and mirror heater is operated through the control of the body ECU, and the rear window defogger indicator light comes on.

SERVICE HINTS

B11 BACK WINDOW LIMIT SW

1-2 : Closed with back power window fully closed

DEFOG RELAY

3-5 : Closed with ignition SW at **ON** position, rear window fully closed (Limit SW on) and rear window defogger SW on

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
B11	32	J4	31	R20	33
B16 A	30	J9	31	R21	33
B18	32	R17 A	33		
C23	30	R18 B	33		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G		
1J		
3E	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

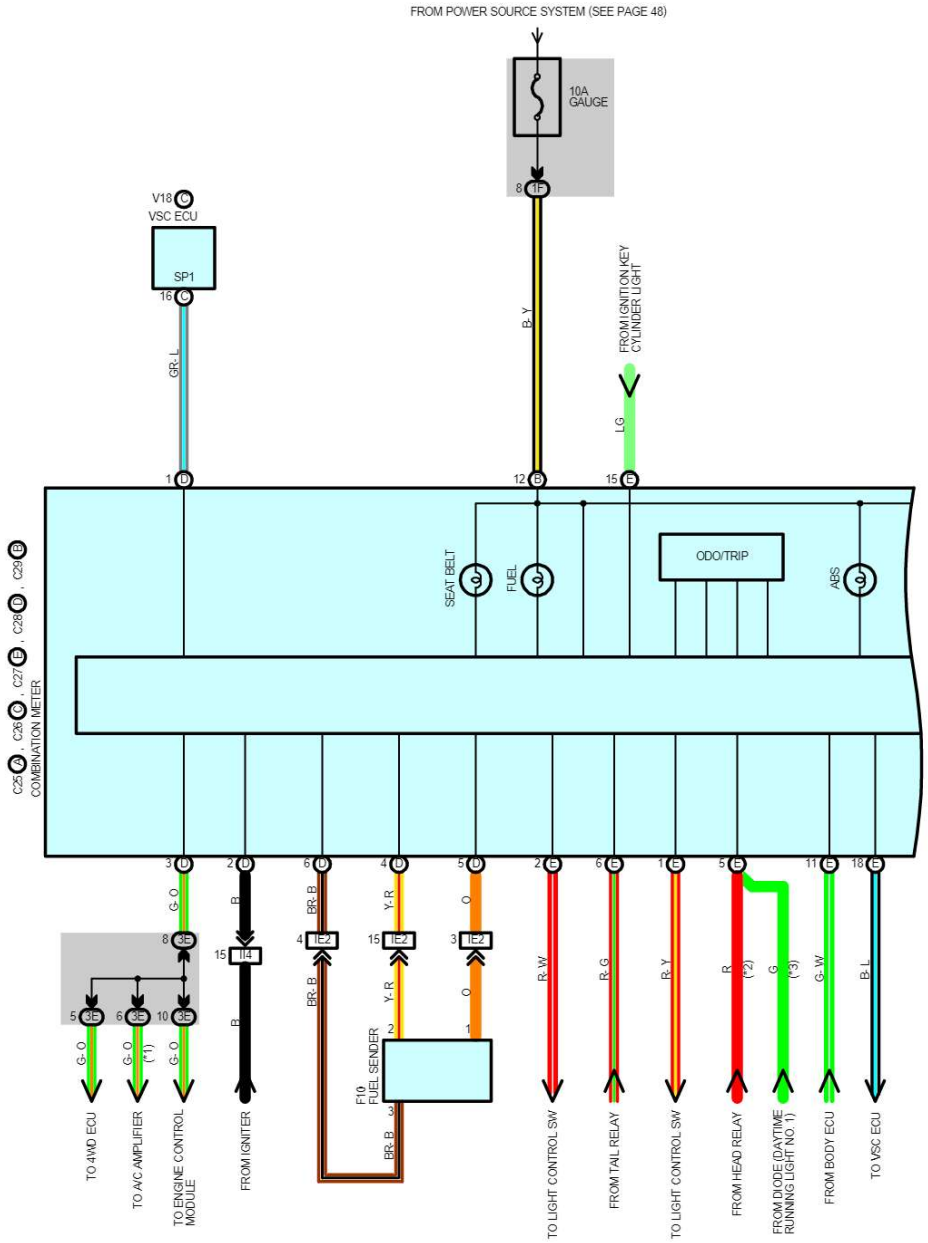
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IE2		
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF2		
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BR2		
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)

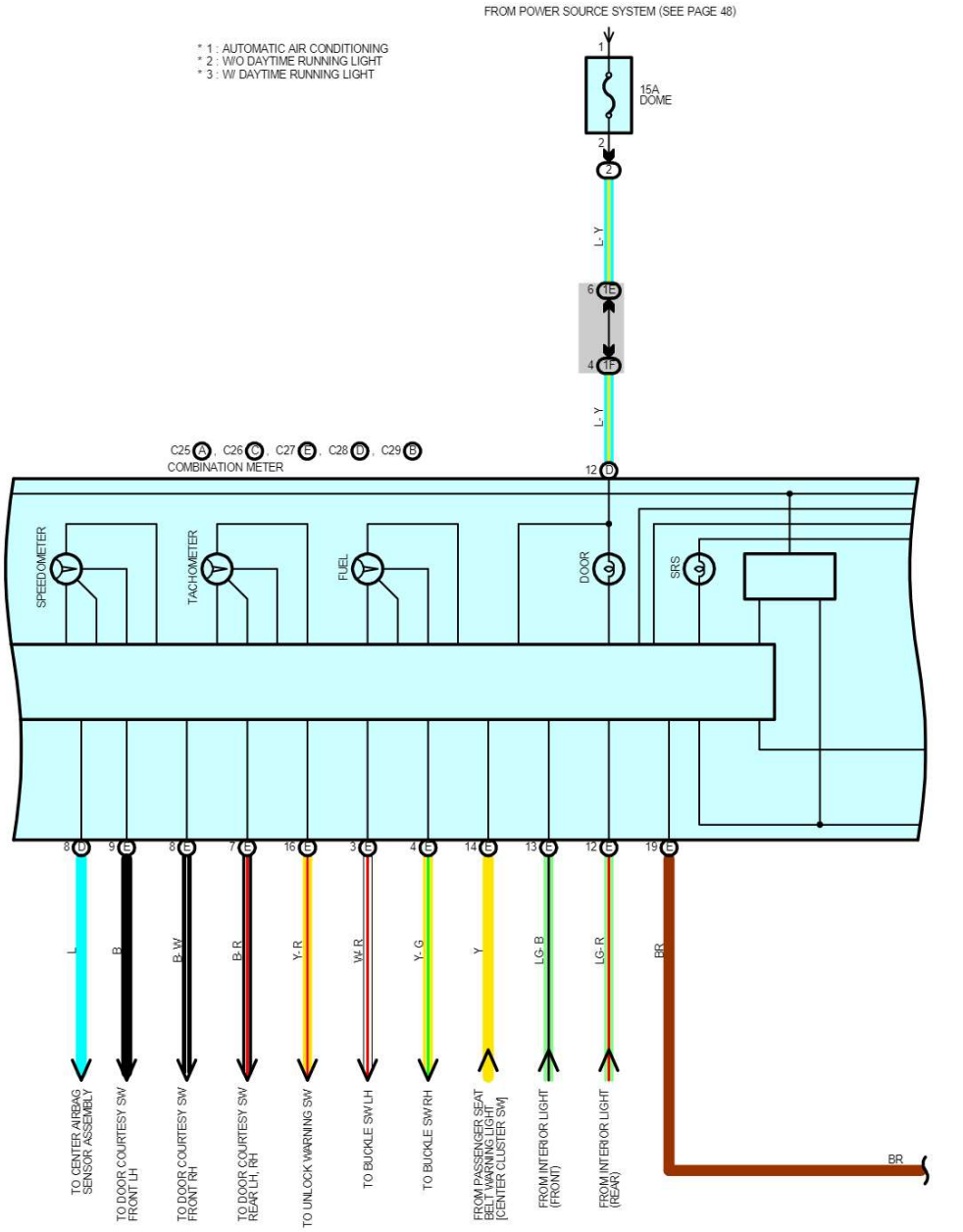
: GROUND POINTS

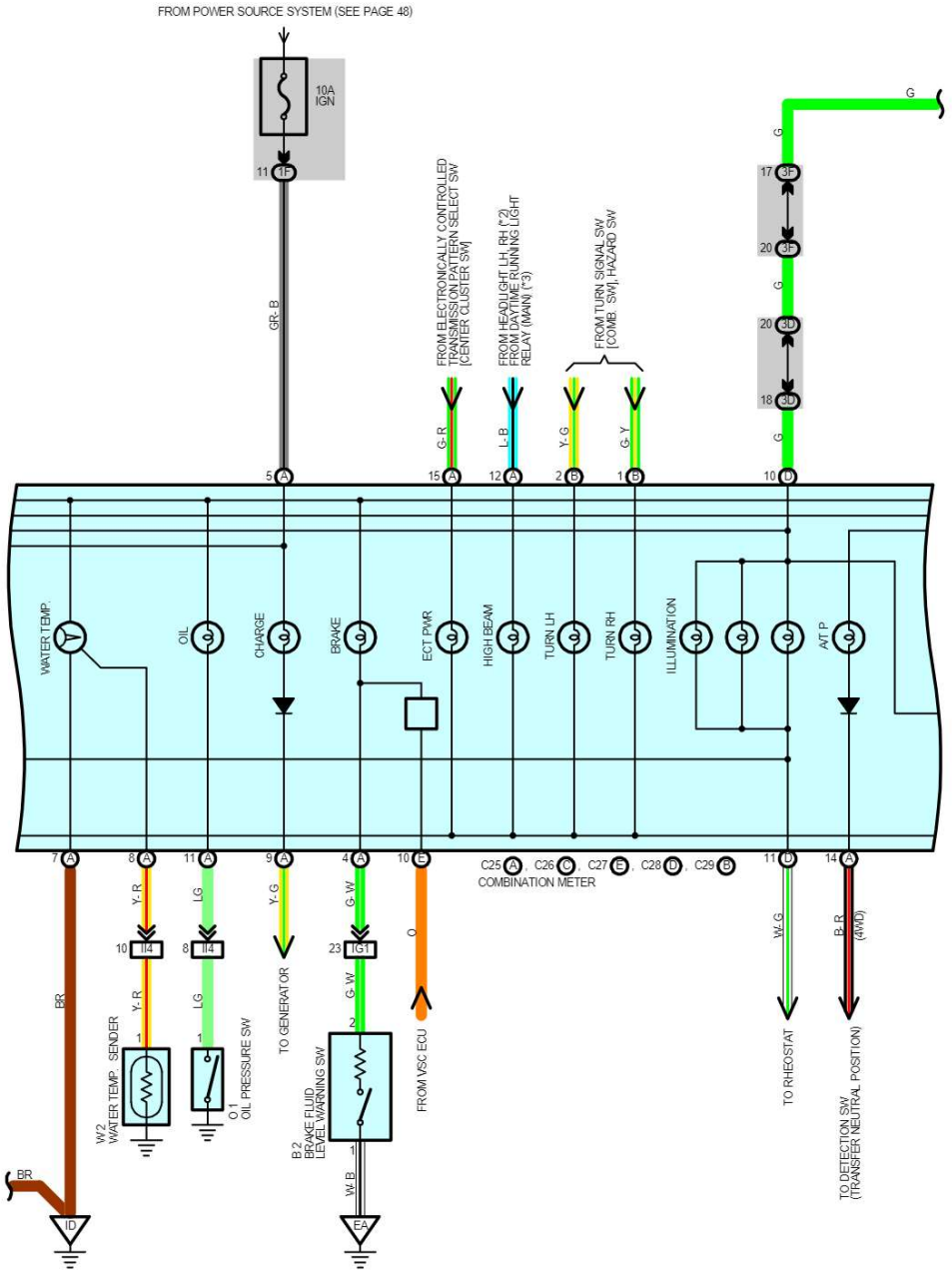
Code	See Page	Ground Points Location
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
BH	42	Left Quarter Panel Inner

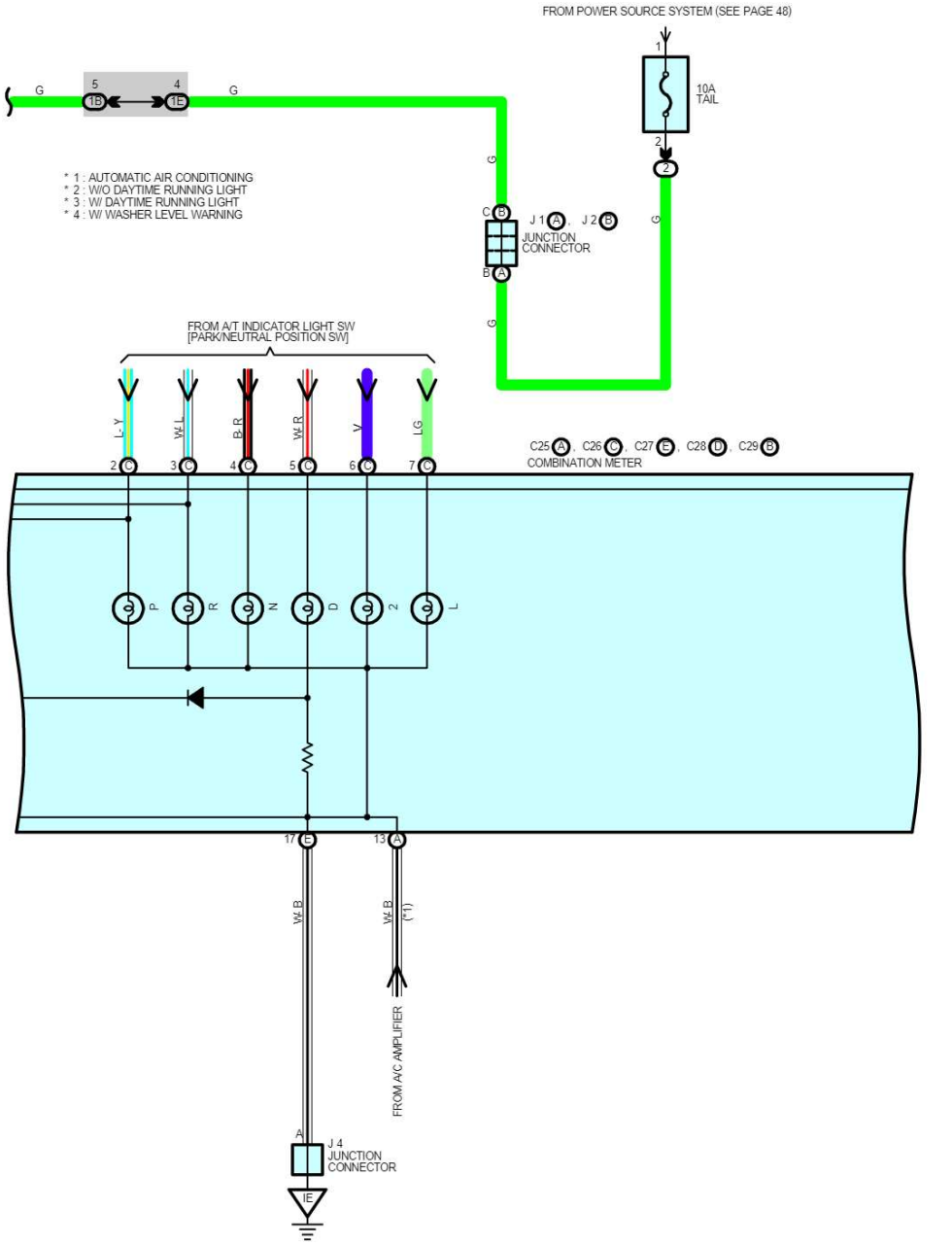
: SPLICE POINTS

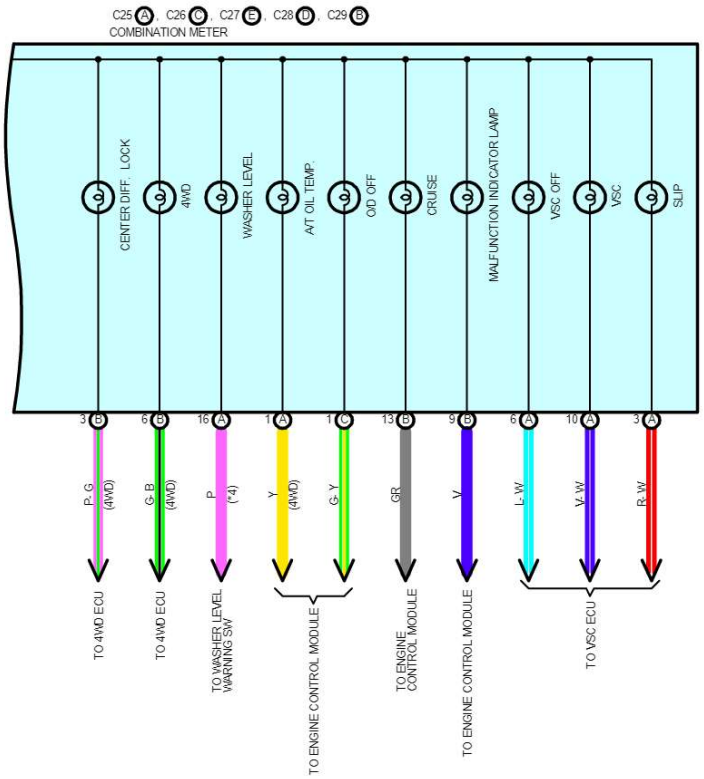
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	40	Cowl Wire	B9	42	Back Door No.2 Wire


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A GAUGE
V18 VSC ECU
SP1
GR-L
B-Y
FROM IGNITION KEY CYLINDER LIGHT
LG
SEAT BELT
FUEL
ODO/TRIP
ABS
C25 , C26 , C27 , C28 , C29 COMBINATION METER
G-O
B
BR-B
Y-R
O
R-W
R-G
R-Y
R
G
G-W
B-L
F10 FUEL SENDER
TO 4WD ECU
TO A/C AMPLIFIER
TO ENGINE CONTROL MODULE
FROM IGNITER
TO LIGHT CONTROL SW
FROM TAIL RELAY
TO LIGHT CONTROL SW
FROM HEAD RELAY
FROM DIODE (DAYTIME RUNNING LIGHT NO. 1)
FROM BODY ECU
TO VSC ECU


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
* 1 : AUTOMATIC AIR CONDITIONING
* 2 : W/O DAYTIME RUNNING LIGHT
* 3 : W/ DAYTIME RUNNING LIGHT
15A
DOME
L - Y
L - Y
C25 A , C26 C , C27 E , C28 D , C29 B
COMBINATION METER
SPEEDOMETER
TACHOMETER
FUEL
DOOR
SRS
L
B
B - W
B - R
Y - R
W - R
Y - G
Y
LG - B
LG - R
BR
BR
TO CENTER AIRBAG SENSOR ASSEMBLY
TO DOOR COURTESY SW FRONT LH
TO DOOR COURTESY SW FRONT RH
TO DOOR COURTESY SW REAR LH, RH
TO UNLOCK WARNING SW
TO BUCKLE SW LH
TO BUCKLE SW RH
FROM PASSENGER SEAT BELT WARNING LIGHT (CENTER CLUSTER SW)
FROM INTERIOR LIGHT (FRONT)
FROM INTERIOR LIGHT (REAR)


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A IGN
GR-B
FROM ELECTRONICALLY CONTROLLED TRANSMISSION/TRANSFER SELECT SW [CENTER CLUSTER SW]
FROM HEADLIGHT LH, RH (*2) FROM DAYTIME RUNNING LIGHT RELAY (MAIN) (*3)
FROM TURN SIGNAL SW [COMB. SW], HAZARD SW
G-R
L-B
Y-G
G-Y
G
WATER TEMP.
OIL
CHARGE
BRAKE
ECT PWR
HIGH BEAM
TURN LH
TURN RH
ILLUMINATION
A/T P
C25, C26, C27, C28, C29
COMBINATION METER
Y-R
LG
G-W
O
W-G
B-R (4WD)
BR
W-B
W2 WATER TEMP. SENDER
O 1 OIL PRESSURE SW
TO GENERATOR
B2 BRAKE FLUID LEVEL WARNING SW
FROM VSC ECU
TO RHEOSTAT
TO DETECTION SW (TRANSFER NEUTRAL POSITION)
ID
EA


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A
TAIL
* 1 : AUTOMATIC AIR CONDITIONING
* 2 : W/O DAYTIME RUNNING LIGHT
* 3 : W/ DAYTIME RUNNING LIGHT
* 4 : W/ WASHER LEVEL WARNING
J 1 , J 2
JUNCTION
CONNECTOR
FROM A/T INDICATOR LIGHT SW
[PARK/NEUTRAL POSITION SW]
L-Y
W-L
B-R
W-R
V
LG
C25 , C26 , C27 , C28 , C29
COMBINATION METER
P
R
N
D
2
L
W-B
W-B
(*1)
FROM A/C AMPLIFIER
J 4
JUNCTION
CONNECTOR


C25 A, C26 C, C27 E, C28 D, C29 B
COMBINATION METER
CENTER DIFF. LOCK
4WD
WASHER LEVEL
A/T OIL TEMP.
O/D OFF
CRUISE
MALFUNCTION INDICATOR LAMP
VSC OFF
VSC
SLIP
3 B
6 B
16 A
1 A
1 C
13 B
9 B
6 A
10 A
3 A
P - G (4WD)
G - B (4WD)
P (*4)
Y (4WD)
G - Y
GR
V
L - W
V - W
R - W
TO 4WD ECU
TO 4WD ECU
TO WASHER LEVEL WARNING SW
TO ENGINE CONTROL MODULE
TO ENGINE CONTROL MODULE
TO ENGINE CONTROL MODULE
TO VSC ECU

SERVICE HINTS

B2 BRAKE FLUID LEVEL WARNING SW

1-2 : Closed with float down

C25 (A), C27 (E), C28 (D), C29 (B) COMBINATION METER

(B)12-GROUND : Approx. **12** volts with ignition SW at **ON** position
(A) 5-GROUND : Approx. **12** volts with ignition SW at **ON** position
(A) 7, (E) 17, (E) 19-GROUND : Always continuity
(D)12-GROUND : Always approx. **12** volts

: PARTS LOCATION

Code		See Page	Code		See Page	Code	See Page
B2		28	C29	B	30	O1	29
C25	A	30	F10		32	V18	31
C26	C	30	J1	A	29	W2	29
C27	E	30	J2	B	29		
C28	D	30	J4		31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

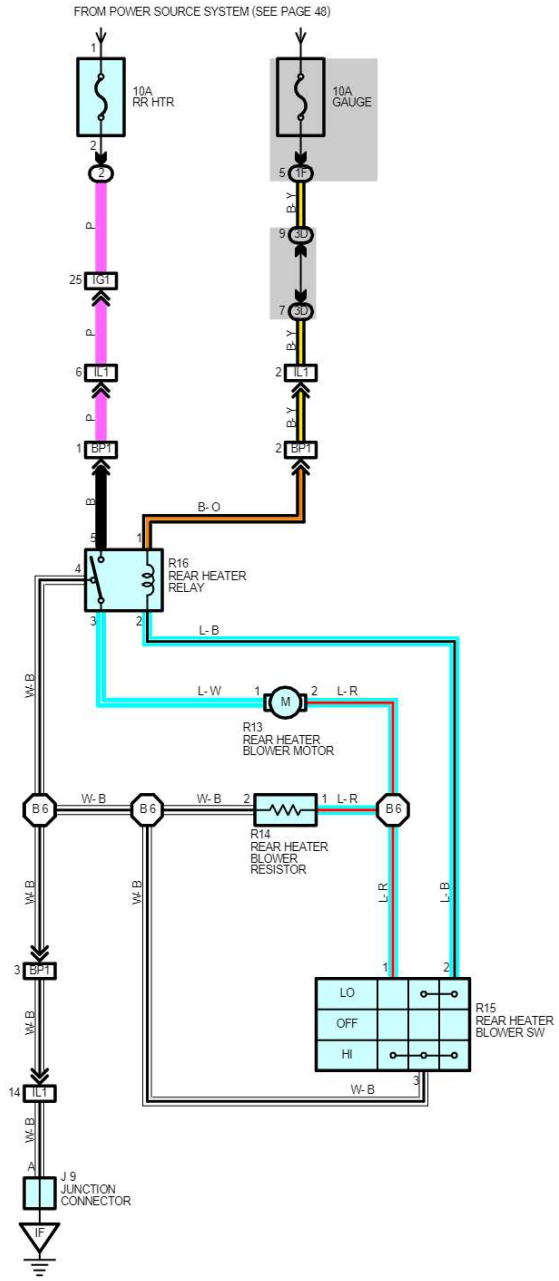
Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3D	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		
3F		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE2	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II4	40	Engine Wire and Cowl Wire (On the Glove Box)

: GROUND POINTS

Code	See Page	Ground Points Location
EA	36	Front Right Fender
ID	38	Left Kick Panel
IE	38	Cowl Side Panel LH


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A
RR HTR
10A
GAUGE
2
5
1F
B-Y
9
3D
P
25
IG1
7
3D
P
B-Y
6
IL1
2
IL1
P
B-Y
1
BP1
2
BP1
B
B-O
1
4
R16
REAR HEATER
RELAY
3
2
L-B
W-B
L-W
1
M
2
L-R
R13
REAR HEATER
BLOWER MOTOR
B6
W-B
B6
W-B
2
1
L-R
B6
R14
REAR HEATER
BLOWER
RESISTOR
W-B
W-B
L-R
L-B
3
BP1
1
2
LO
OFF
HI
R15
REAR HEATER
BLOWER SW
3
W-B
W-B
14
IL1
W-B
A
J 9
JUNCTION
CONNECTOR
IF

SERVICE HINTS

R15 REAR HEATER BLOWER SW

2-3 : Closed with the ignition SW at on and rear heater blower SW at **LO** position

1, 2-3 : Closed with the ignition SW at on and rear heater blower SW at **HI** position

R16 REAR HEATER RELAY

5-3 : Closed with the ignition SW at **ON** position and rear heater blower SW at **HI** or **LO** position

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
J9	31	R14	33	R16	33
R13	33	R15	33		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3D	26	Cowl Wire and Center J/B (Near the Steering Column Tube)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

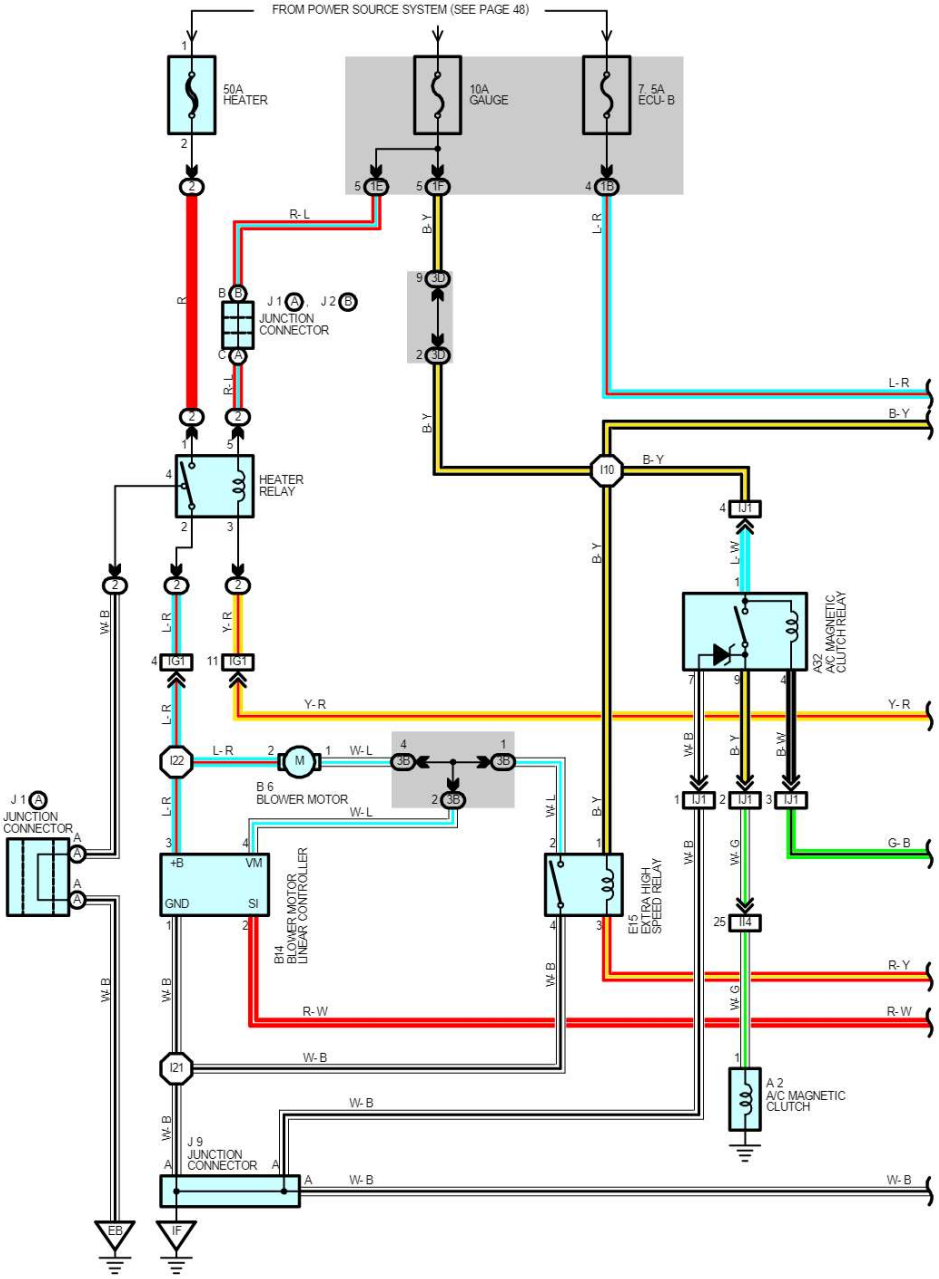
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BP1	42	Floor Wire and Rear Heater Sub Wire (Under the Front Passenger's Seat)

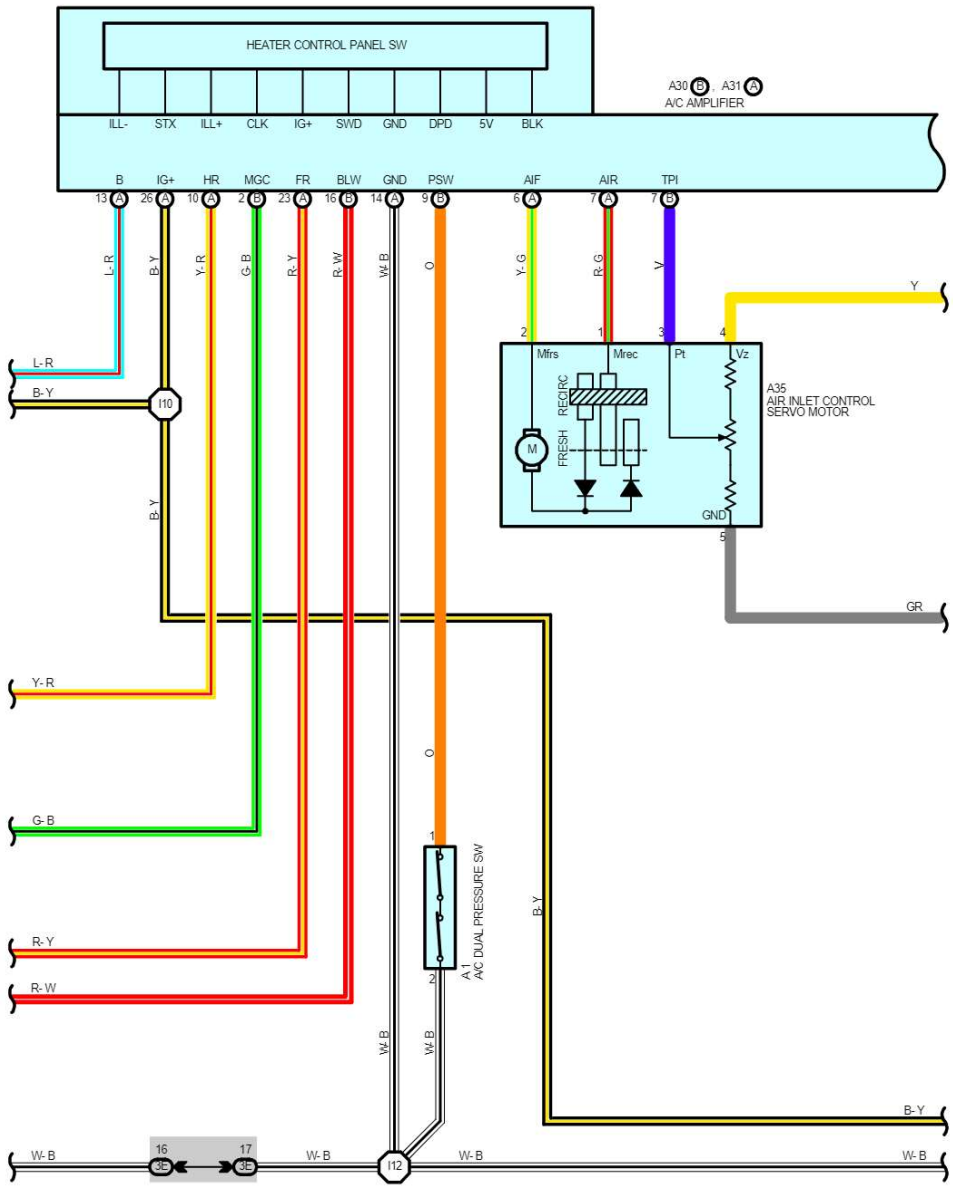
: GROUND POINTS

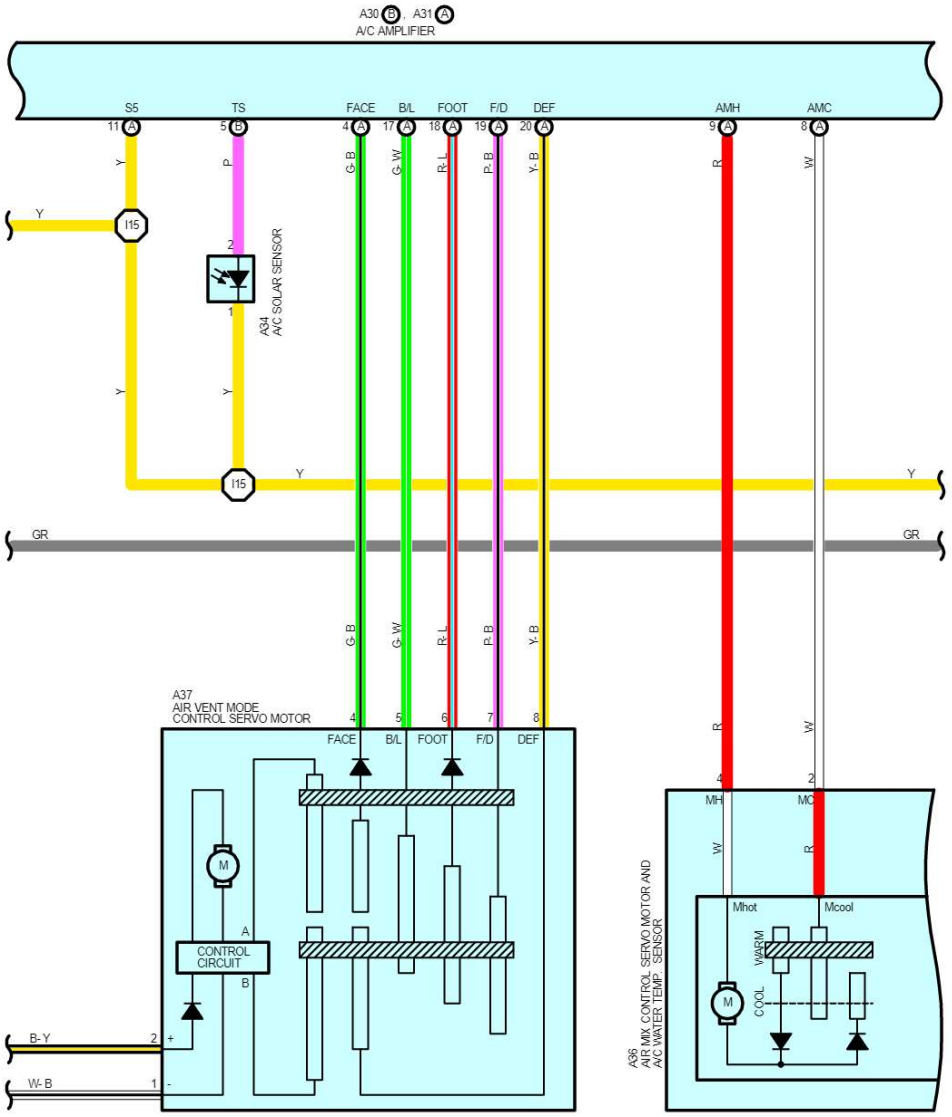
Code	See Page	Ground Points Location
IF	38	Cowl Side Panel RH

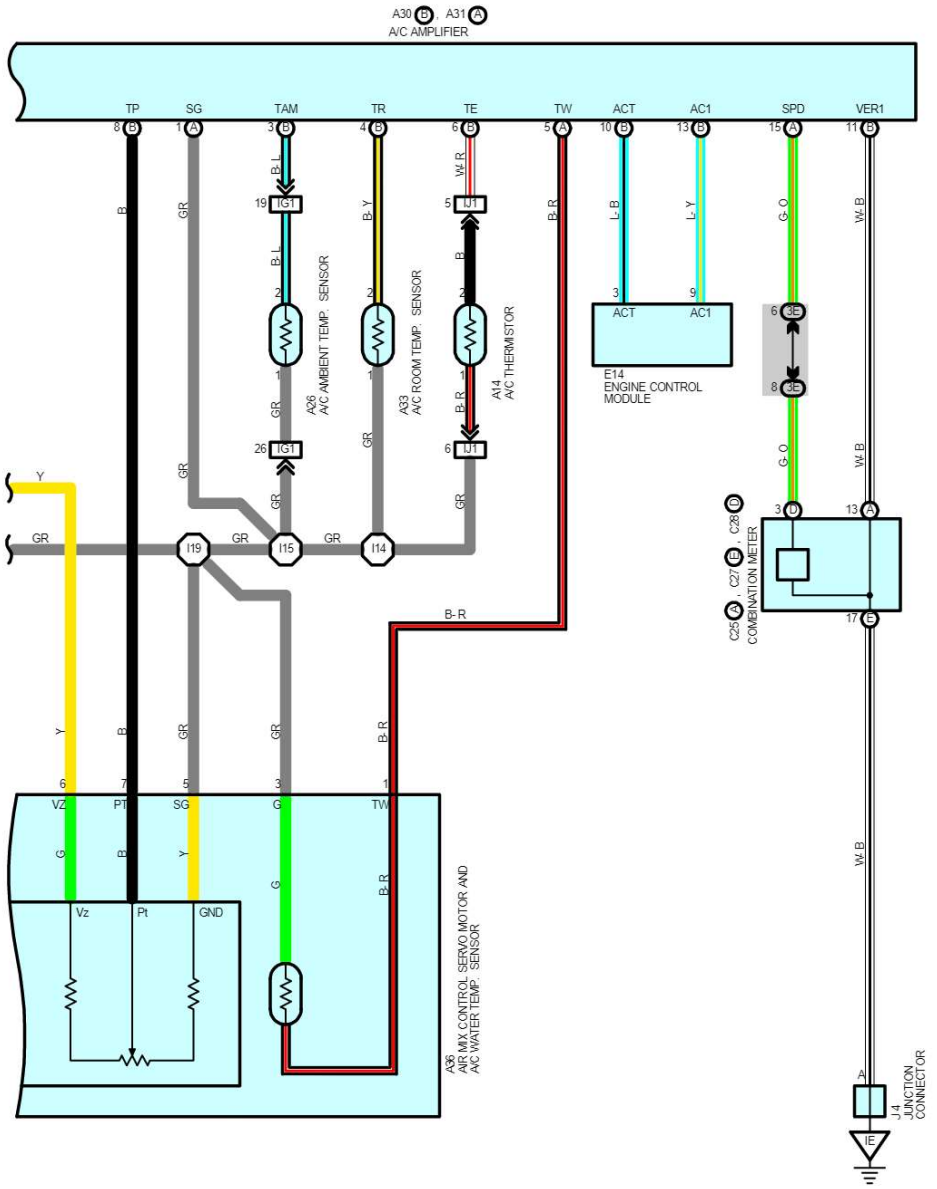
: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B6	42	Rear Heater Sub Wire			


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
50A HEATER
10A GAUGE
7.5A ECU-B
JUNCTION CONNECTOR
HEATER RELAY
A2 A/C MAGNETIC CLUTCH RELAY
B 6 BLOWER MOTOR
B14 BLOWER MOTOR LINEAR CONTROLLER
EI5 EXTRA HIGH SPEED RELAY
A 2 A/C MAGNETIC CLUTCH
J 9 JUNCTION CONNECTOR
R-L
B-Y
L-R
B-Y
B-Y
L-W
Y-R
Y-R
L-R
W-L
W-B
B-Y
B-W
G-B
W-B
W-G
R-Y
R-W
R-W
W-B
W-B
W-B
W-B
W-B
W-B
W-G
EB
IF


HEATER CONTROL PANEL SW
ILL-
STX
ILL+
CLK
IG+
SWD
GND
DPD
5V
BLK
A30 B , A31 A
A/C AMPLIFIER
B
IG+
HR
MGC
FR
BLW
GND
PSW
AIF
AIR
TPI
13 A
26 A
10 A
2 B
23 A
16 B
14 A
9 B
6 A
7 A
7 B
L-R
B-Y
Y-R
G-B
R-Y
R-W
W-B
O
Y-G
R-G
V
Y
2
1
3
4
Mfrs
Mrec
Pt
Vz
RECIRC
FRESH
M
GND
5
A35
AIR INLET CONTROL
SERVO MOTOR
GR
I10
I12
1
2
A-1
A/C DUAL PRESSURE SW
16
17
3E
3E


A30 B , A31 A
A/C AMPLIFIER
S5
TS
FACE
B/L
FOOT
F/D
DEF
AMH
AMC
11 A
5 B
4 A
17 A
18 A
19 A
20 A
9 A
8 A
Y
P
G-B
G-W
R-L
P-B
Y-B
R
W
I15
2
1
A34
A/C SOLAR SENSOR
GR
A37
AIR VENT MODE
CONTROL SERVO MOTOR
4
5
6
7
8
FACE
B/L
FOOT
F/D
DEF
M
A
CONTROL
CIRCUIT
B
B-Y
2
+
W-B
1
-
4
2
MH
MC
Mhot
Mcool
WARM
COOL
A36
AIR MIX CONTROL SERVO MOTOR AND
A/C WATER TEMP. SENSOR


A30 B , A31 A
A/C AMPLIFIER
TP
SG
TAM
TR
TE
TW
ACT
AC1
SPD
VER1
A26
A/C AMBIENT TEMP. SENSOR
A33
A/C ROOM TEMP. SENSOR
A14
A/C THERMISTOR
E14
ENGINE CONTROL MODULE
C25 , C27 , C28
COMBINATION METER
I19
I15
I14
A35
AIR MIX CONTROL SERVO MOTOR AND A/C WATER TEMP. SENSOR
Vz
Pt
GND
J4
JUNCTION CONNECTOR
1E

SYSTEM OUTLINE

1. HEATER BLOWER MOTOR OPERATION

Current is applied at all times through HEATER fuse to TERMINAL 1 of the HEATER relay. When the ignition SW is turned on, current flows through the GAUGE fuse to TERMINAL 5 of the HEATER relay to TERMINAL 3 to TERMINAL HR of the A/C amplifier. At the same time, current also flows from GAUGE fuse to TERMINAL IG+ of the A/C amplifier.

* Low speed operation
  When the blower SW (Heater control panel SW) is pushed to LOW SPEED position, the current to TERMINAL HR of the A/C amplifier flows to TERMINAL GND of the A/C amplifier to GROUND and turns the HEATER relay on. As a result, the current to TERMINAL 1 of the HEATER relay flows to TERMINAL 2 of the relay to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 2 of the blower resistor (Low) to TERMINAL 1 to GROUND and causes the blower motor to rotate at low speed.

* High speed operation
  When the blower SW (Heater control panel SW) is pushed to HIGH SPEED position, the current to TERMINAL HR of the A/C amplifier flows to TERMINAL GND of the A/C amplifier to GROUND and turns the HEATER relay on. As a result, the current to TERMINAL 1 of the HEATER relay flows to TERMINAL 2 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 4 of the blower motor linear controller to TERMINAL 2 to TERMINAL BLW of the A/C amplifier (Which is activated when the blower SW is pushed to high speed position) to TERMINAL GND to GROUND without passing through the blower resistor (Low), causing the blower motor to rotate at high speed.

2. AIR INLET CONTROL SERVO MOTOR OPERATION

(Switching from FRESH to RECIRC)
With the ignition SW turned on, the current flows from GAUGE fuse to TERMINAL IG+ of the A/C amplifier to TERMINAL AIR to TERMINAL 1 of the air inlet control servo motor to TERMINAL 2 to TERMINAL AIF of the A/C amplifier to TERMINAL GND to GROUND, the motor rotates and the damper moves to the RECIRC side. when the damper operates with the heater control panel SW at RECIRC position, the damper position signal is input from TERMINAL 3 of the servo motor to TERMINAL TPI of the A/C amplifier. As a result, current to the servo motor circuit is cut off by the A/C amplifier, so the damper stops at that position.
(Switching from RECIRC to FRESH)
With the ignition SW turned on, when the heater control panel SW is switched to the FRESH side, the current flows from TERMINAL IG+ of the A/C amplifier to TERMINAL AIF to TERMINAL 2 of the air inlet control servo motor to TERMINAL 1 to TERMINAL AIR of the A/C amplifier to TERMINAL GND to GROUND, The motor rotates and the damper stops at that position.

3. AIR VENT MODE CONTROL SERVO MOTOR OPERATION

When the ignition SW turned on, the current flows from GAUGE fuse to TERMINAL IG+ of the A/C amplifier.
(Switching from DEF to FACE)
The current flows from TERMINAL FACE of the A/C amplifier to TERMINAL 4 of the air vent mode control servo motor to TERMINAL 8 to TERMINAL DEF of the A/C amplifier to TERMINAL GND to GROUND. The motor rotates and the damper moves to the FACE side. When the damper operates with the heater control panel SW at FACE position, the damper position signal is input from TERMINAL 8 of the servo motor to the TERMINAL DEF of the A/C amplifier. As a result, current to the servo motor circuit is cut off by the A/C amplifier, so the damper stops at that position.
(Switching from FACE to DEF)
The current flows from TERMINAL DEF of the A/C amplifier to TERMINAL 8 of the air vent control servo motor to TERMINAL 4 to TERMINAL FACE of the A/C amplifier to TERMINAL GND to GROUND, the motor rotates and the damper stops at that position.

4. AIR MIX CONTROL SERVO MOTOR OPERATION

When the temperature control SW (Heater control panel SW) is turned to the "COOL" side the current flows from TERMINAL AMC of the A/C amplifier to TERMINAL 2 of the air mix control servo motor to motor to TERMINAL 4 to TERMINAL AMH of the A/C amplifier to GROUND and the motor rotates. The damper opening angle at this time is input from TERMINAL 7 of the servo motor to TERMINAL TP of the A/C amplifier, this is used to determine the DAMPER STOP position and maintain the set temperature.
When the temperature control SW (Heater control panel SW) is turned to the "HOT" side, the current flows from servo motor to TERMINAL AMH of the A/C amplifier to TERMINAL 4 of the air mix control servo motor to motor to TERMINAL 2 to TERMINAL AMC of the A/C amplifier, rotating the motor in reverse and switching the damper from "COOL" to "HOT" side.

5. AIR CONDITIONING OPERATION

The A/C amplifier receives various signals, I.E., out side air temperature signal from the A/C ambient temp. sensor, coolant temperature from water temp. sensor, etc.
When the engine is started and the A/C SW (Heater control panel SW) is on, a signal is input to the A/C amplifier.
As a result, the ground circuit in A/C amplifier is closed and current flows from GAUGE fuse to TERMINAL 1 of the A/C magnetic clutch relay to TERMINAL 4 to TERMINAL MGC of the A/C amplifier to TERMINAL GND to GROUND, turning the A/C magnetic clutch relay on, so that the magnetic clutch is on and the A/C compressor operates.
At the same time, the engine control module. Detects the magnetic clutch is on and the A/C compressor operates.
If the A/C amplifier detects the following conditions, it stops the air conditioning:

- Evaporator outlet air is too low.
- The refrigerant pressure is abnormally high or abnormally low.
- The engine speed is too low.
- Rapid acceleration occurs.

SERVICE HINTS

A1 A/C DUAL PRESSURE SW

1-2 : Open above approx. **2.0** kgf/cm^2 (**28** psi, **196** kpa) or **32** kgf/cm^2 (**455** psi, **3138** kpa)

A2 A/C MAGNETIC CLUTCH

1-GROUND : Approx. **3.7** Ω

A30 (B), A31 (A) A/C AMPLIFIER

B-GROUND : Always approx. **12** volts
IG+ -GROUND : Approx. **12** volts with the ignition SW at **ON** position
HR -GROUND : Approx. **12** volts with the ignition SW at **ON** position and do not turn the blower motor
Below **1** volts with the ignition SW at **ON** position and turn the blower motor
PSW-GROUND : Below **1** volts with the ignition SW at **ON** position
AC1-GROUND : Below **1** volts at start the engine, operate the compressor
+ OR MORE volts at start the engine, do not operate the compressor
BLW-GROUND : Below **1.5** volts with the ignition SW on and turn the blower motor
S5-SG : **4- 6** volts with the ignition SW at **ON** position
SG-GROUND : Always continuity
AMH-AMC : **1.3- 1.9** volts with the ignition SW off
AIF-GROUND : Approx. **12** volts with the FRESH SW on
AIR-GROUND : Approx. **12** volts with the RECIRC SW on
FACE-GROUND : Approx. **12** volts with the FACE SW on
DEF-GROUND : Approx. **12** volts with the DEF SW on
GND-GROUND : Always continuity

: PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A1	28	A34	30	C28 D	30
A2	28	A35	30	E14	31
A14	30	A36	30	E15	31
A26	28	A37	30	J1 A	29
A30 B	30	B6	30	J2 B	29
A31 A	30	B14	30	J4	31
A32	30	C25 A	30	J9	31
A33	30	C27 E	30		

: RELAY BLOCKS

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

 **: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3B	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3D		
3E		

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

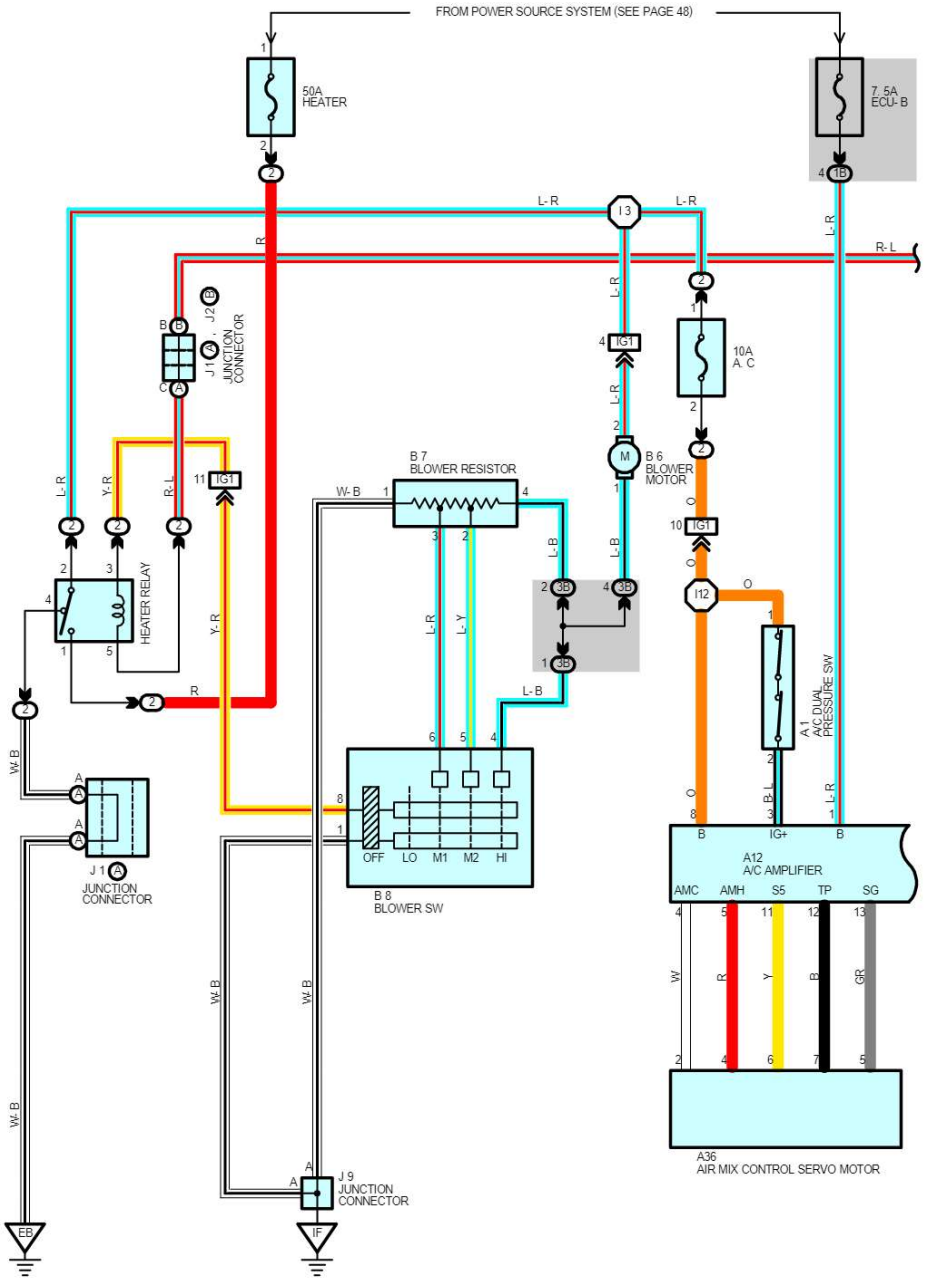
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II4	40	Engine Wire and Cowl Wire (On the Glove Box)
IJ1	40	Cowl Wire and A/C Sub Wire (Near the A/C Unit)

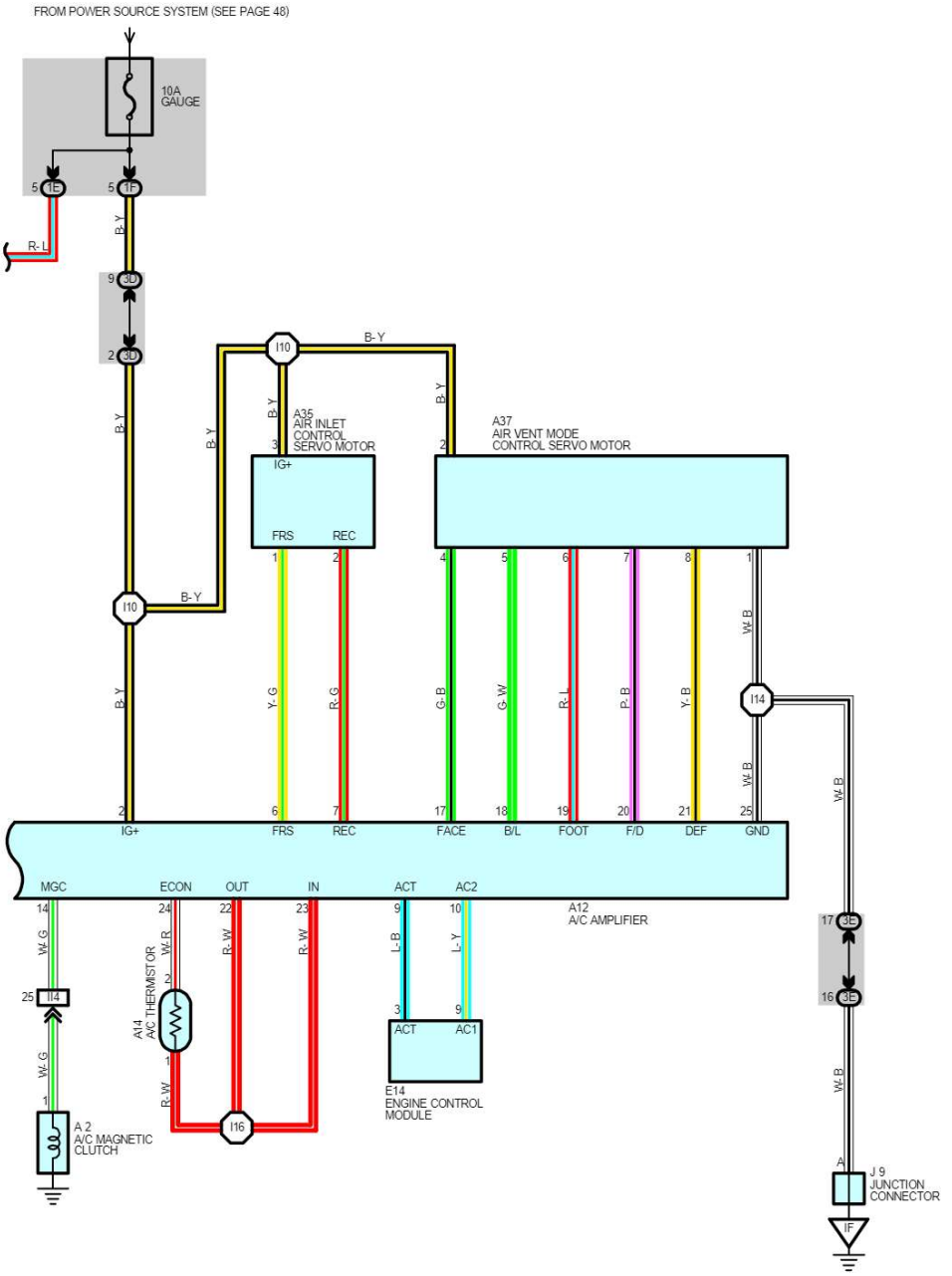
 **: GROUND POINTS**

Code	See Page	Ground Points Location
EB	36	Front Left Fender
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH

 **: SPLICE POINTS**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I10	40	Cowl Wire	I19	40	Cowl Wire
I12			I21		
I14			I22		
I15					


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
50A HEATER
7.5A ECU-B
10A A/C
HEATER RELAY
JUNCTION CONNECTOR
B7 BLOWER RESISTOR
B6 BLOWER MOTOR
B8 BLOWER SW
OFF LO M1 M2 HI
A12 A/C AMPLIFIER
AMC AMH S5 TP SG
A1 A/C DUAL PRESSURE SW
A36 AIR MIX CONTROL SERVO MOTOR
J9 JUNCTION CONNECTOR
EB
IF


FROM POWER SOURCE SYSTEM (SEE PAGE 48)
10A
GAUGE
5
1E
5
1F
R-L
B-Y
9
3D
2
3D
I10
B-Y
B-Y
B-Y
B-Y
A35
AIR INLET
CONTROL
SERVO MOTOR
3
IG+
FRS
REC
A37
AIR VENT MODE
CONTROL SERVO MOTOR
2
1
2
4
5
6
7
8
1
I10
B-Y
B-Y
Y-G
R-G
G-B
G-W
R-L
P-B
Y-B
W-B
I14
W-B
2
6
7
17
18
19
20
21
25
IG+
FRS
REC
FACE
B/L
FOOT
F/D
DEF
GND
MGC
ECON
OUT
IN
ACT
AC2
A12
A/C AMPLIFIER
14
24
22
23
9
10
W-G
W-R
R-W
R-W
L-B
L-Y
17
3E
25
I14
2
3
9
16
3E
A14
A/C THERMISTOR
ACT
AC1
W-G
1
R-W
E14
ENGINE CONTROL
MODULE
W-B
I16
A 2
A/C MAGNETIC
CLUTCH
A
J 9
JUNCTION
CONNECTOR
1F

SYSTEM OUTLINE

1. BLOWER MOTOR OPERATION

With the ignition SW on, current from the GAUGE fuse flows to TERMINAL 5 of the HEATER relay to TERMINAL 3 to TERMINAL 1 of the blower SW.

* Low speed operation

When the blower SW is moved to LO position, the current flows to TERMINAL 1 of the blower SW to TERMINAL 8 to GROUND, causing the HEATER relay to come on. Then the current from HEATER fuse to TERMINAL 1 of the HEATER relay to TERMINAL 2 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 4 of the blower resistor to TERMINAL 1 to GROUND, causing the blower motor to rotate. At this time, the current flows against the full resistance of the blower resistor, so the motor turns slowly at low speed.

* Medium speed operation (Operation at speed M1, M2)

When the blower SW is moved to the M1 position, the current flows to TERMINAL 1 of the blower SW to TERMINAL 8 to GROUND, turning the HEATER relay to on. Then, the same as low speed operation, the current passing through the TERMINAL 2 of the HEATER relay flows to the TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 4 of the blower resistor to TERMINAL 3 to TERMINAL 3 of the blower SW to TERMINAL 8 to GROUND. At this time, the blower resistance of the blower resistor is less than at low speed, so the blower motor rotates at medium low speed.

When the blower SW is moved to M2 position, the current flowing through the blower motor flows from TERMINAL 4 of the blower resistor to TERMINAL 2 to TERMINAL 2 of the blower SW to TERMINAL 8 to GROUND. At this time, blower resistance of the blower resistor is less than at M1 position, so the blower motor rotates at medium high speed.

* High speed operation

When the blower SW is moved to HI position, the current flows to TERMINAL 1 of the blower SW to TERMINAL 8 to GROUND, turning the HEATER relay to on. Then, the same as medium speed operation, the current passing through the blower motor flows from TERMINAL 6 of the blower SW to TERMINAL 8 to GROUND, causing the blower motor to rotates at high speed.

2. AIR CONDITIONING OPERATION

When the blower SW is set to on, current from the HEATER fuse flows through the A.C fuse to TERMINAL 1 of the A/C dual pressure SW to TERMINAL 2 to TERMINAL 3 of the A/C amplifier. The engine speed signal from engine control Module and the evaporator temp. signal from the A/C thermistor are all supplied to the A/C amplifier. When the A/C SW is turned on, the A/C SW on signal is sent to activate the A/C amplifier. Current flows from the A/C amplifier to the magnetic clutch, turning the compressor on. The A/C operation is shut off when a signal indicating low evaporator temp., or abnormally high or low refrigerant pressure, is supplied while the engine high speed signal exists. When one of these signals is received, the amplifier shuts off the A/C operation.

SERVICE HINTS

A1 A/C DUAL PRESSURE SW

1-2 : Open with refrigerant pressure at less than approx. **2.0** kgf/cm^2 (**28.4** psi, **196** kpa) or more than approx. **32** kgf/cm^2 (**455** psi, **3138** kpa)

HEATER RELAY

1-2 : Closed with ignition SW at **ON** position and blower SW on
1-GROUND : Always approx. **12** volts
5-GROUND : Approx. **12** volts with ignition SW at **ON** position
4-GROUND : Always continuity

B8 BLOWER SW

8-1 : Closed with blower SW at **LO** position
8-6, 1 : Closed with blower SW at **M1** position
8-5, 1 : Closed with blower SW at **M2** position
8-4, 1 : Closed with blower SW at **HI** position

A2 A/C MAGNETIC CLUTCH

1-GROUND : Approx. **3.7** Ω

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code		See Page
A1	28	A36	30	E14		31
A2	28	A37	30	J1	A	29
A12	30	B6	30	J2	B	29
A14	30	B7	30	J9		31
A35	30	B8	30			

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	24	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3B	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3D		
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
II4	40	Engine Wire and Cowl Wire (On the Glove Box)

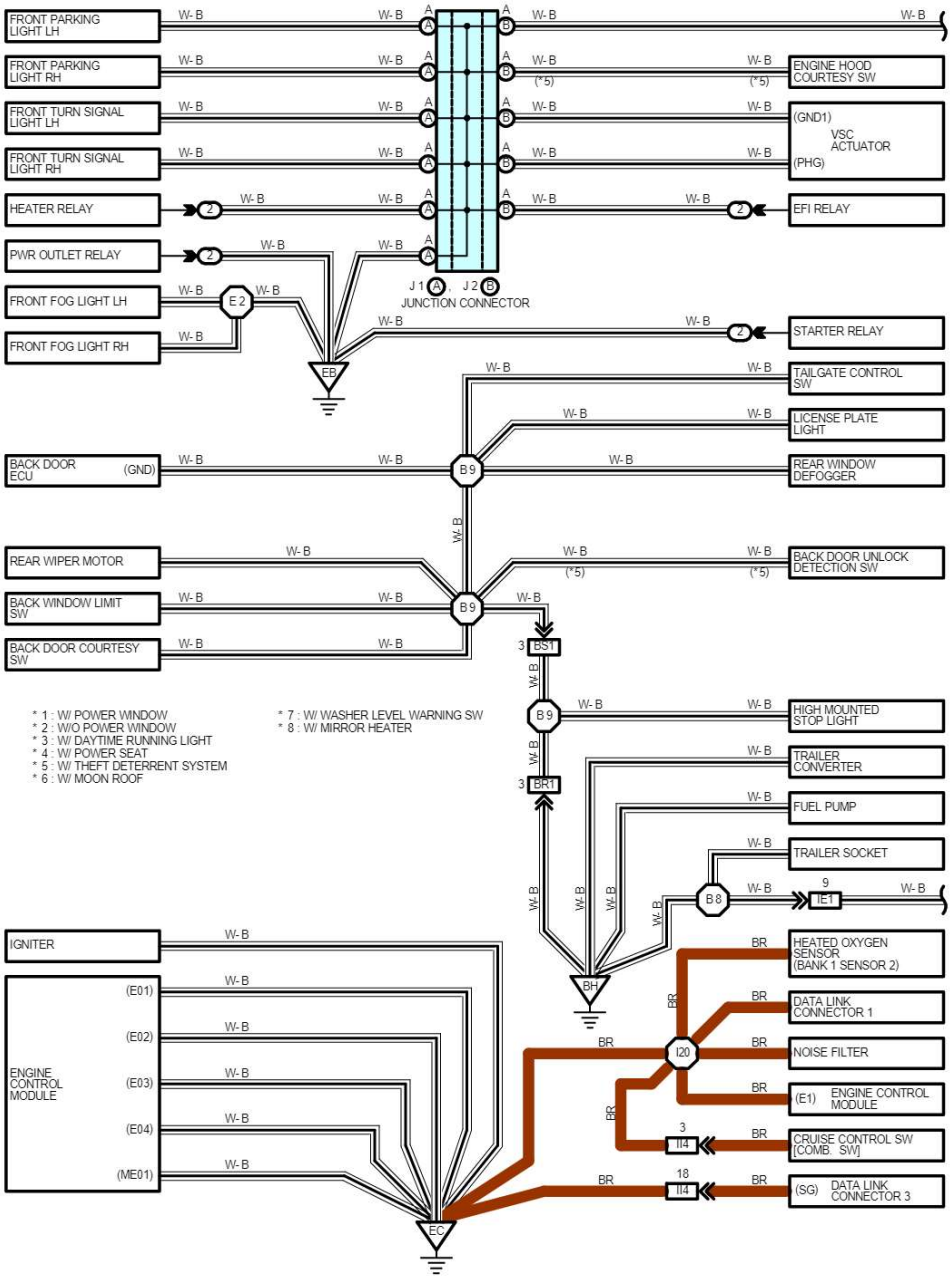
: GROUND POINTS

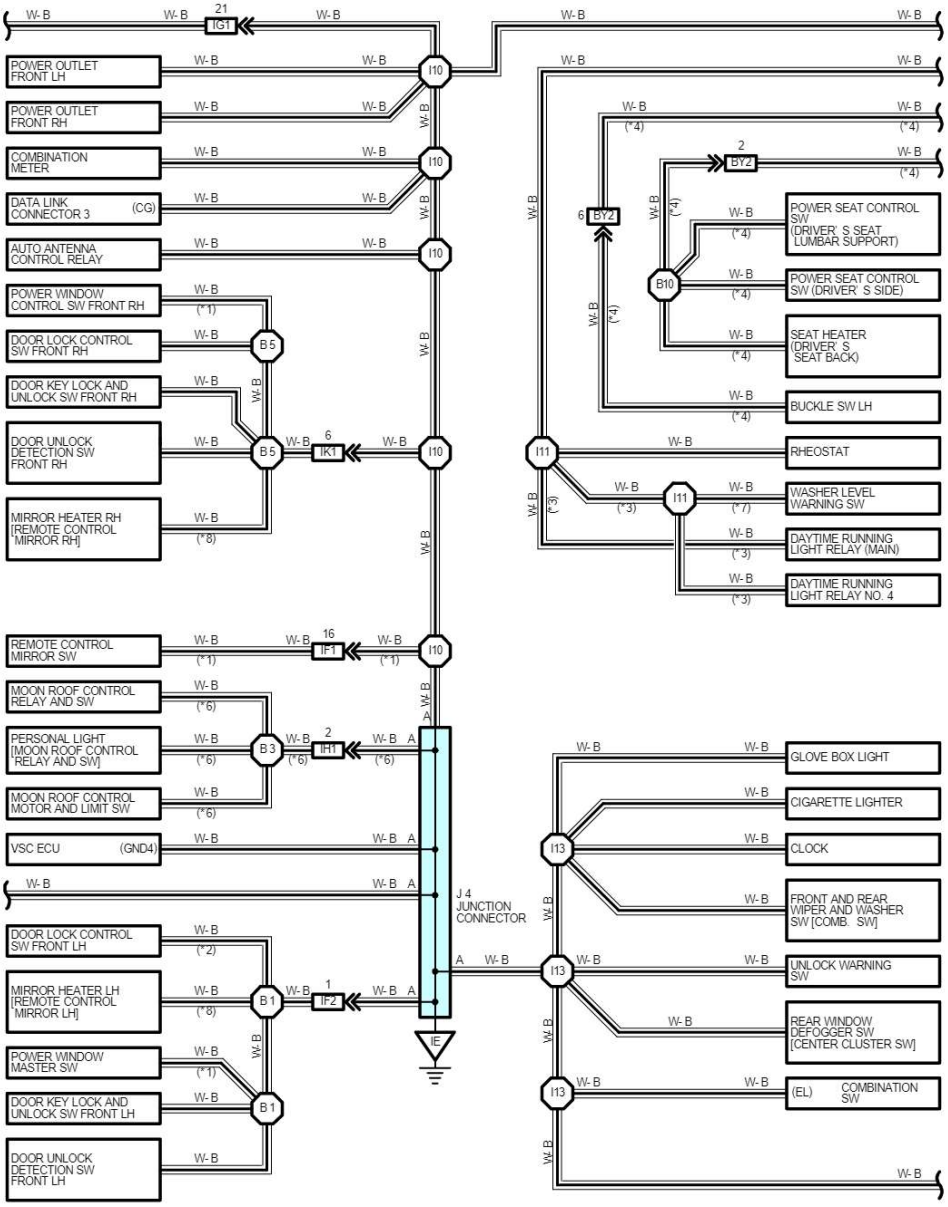
Code	See Page	Ground Points Location
EB	36	Front Left Fender
IF	38	Cowl Side Panel RH

: SPLICE POINTS

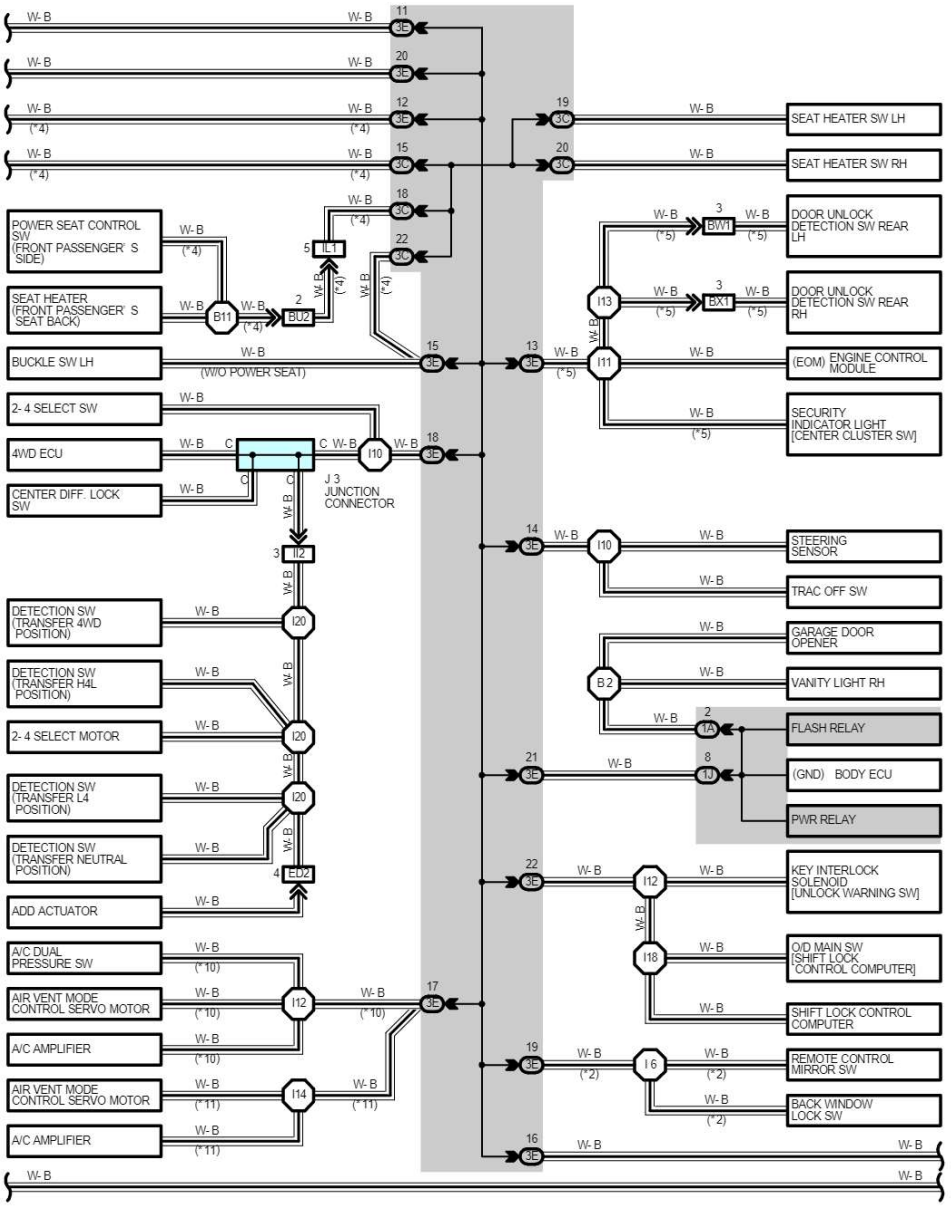
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I3	40	Engine Room Main Wire	I14	40	Cowl Wire
I10	40	Cowl Wire	I16		
I12					

I GROUND POINT

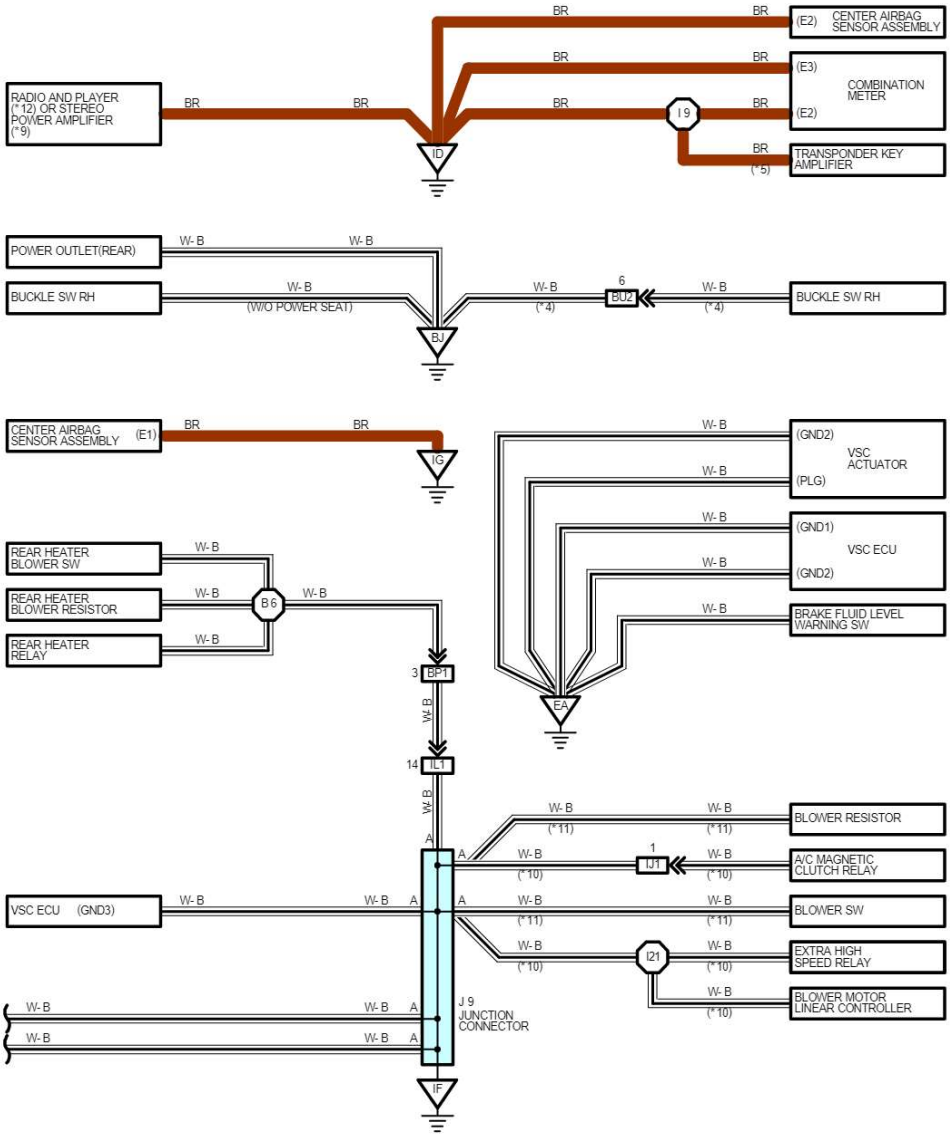



IGT
POWER OUTLET FRONT LH
POWER OUTLET FRONT RH
COMBINATION METER
DATA LINK CONNECTOR 3
(CG)
AUTO ANTENNA CONTROL RELAY
POWER WINDOW CONTROL SW FRONT RH
DOOR LOCK CONTROL SW FRONT RH
DOOR KEY LOCK AND UNLOCK SW FRONT RH
DOOR UNLOCK DETECTION SW FRONT RH
MIRROR HEATER RH [REMOTE CONTROL MIRROR RH]
REMOTE CONTROL MIRROR SW
MOON ROOF CONTROL RELAY AND SW
PERSONAL LIGHT [MOON ROOF CONTROL RELAY AND SW]
MOON ROOF CONTROL MOTOR AND LIMIT SW
VSC ECU
(GND4)
J 4 JUNCTION CONNECTOR
DOOR LOCK CONTROL SW FRONT LH
MIRROR HEATER LH [REMOTE CONTROL MIRROR LH]
POWER WINDOW MASTER SW
DOOR KEY LOCK AND UNLOCK SW FRONT LH
DOOR UNLOCK DETECTION SW FRONT LH
BYZ
POWER SEAT CONTROL SW (DRIVER' S SEAT LUMBAR SUPPORT)
POWER SEAT CONTROL SW (DRIVER' S SIDE)
SEAT HEATER (DRIVER' S SEAT BACK)
BUCKLE SW LH
RHEOSTAT
WASHER LEVEL WARNING SW
DAYTIME RUNNING LIGHT RELAY (MAIN)
DAYTIME RUNNING LIGHT RELAY NO. 4
GLOVE BOX LIGHT
CIGARETTE LIGHTER
CLOCK
FRONT AND REAR WIPER AND WASHER SW [COMB. SW]
UNLOCK WARNING SW
REAR WINDOW DEFOGGER SW [CENTER CLUSTER SW]
(EL)
COMBINATION SW

I GROUND POINT



* 2 : W/O POWER WINDOW
* 4 : W/ POWER SEAT
* 5 : W/ THEFT DETERRENT SYSTEM
* 9 : SEPARATE TYPE AMPLIFIER
*10 : AUTOMATIC AIR CONDITIONING
*11 : MANUAL AIR CONDITIONING
*12 : BUILT- IN TYPE AMPLIFIER



I GROUND POINT

: PARTS LOCATION

Code		See Page	Code	See Page	Code	See Page
J1	A	29	J3	31	J9	31
J2	B	29	J4	31		

: RELAY BLOCKS

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

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	24	Roof Wire and Driver Side J/B (Lower Finish Panel)
1J	24	Cowl Wire and Driver Side J/B (Lower Finish Panel)
3C	26	Cowl Wire and Center J/B (Near the Steering Column Tube)
3E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ED2	36	Engine Wire and Differential Wire (Near the Front Differential)
IE1	38	Cowl Wire and Floor No.2 Wire (Left Kick Panel)
IF1	38	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF2		
IG1	38	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IH1	40	Roof Wire and Cowl Wire (Instrument Panel Reinforcement Left)
II2	40	Engine Wire and Cowl Wire (On the Glove Box)
II4		
IJ1	40	Cowl Wire and A/C Sub Wire (Near the A/C Unit)
IK1	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)
IL1	40	Cowl Wire and Floor Wire (Right Kick Panel)
BP1	42	Floor Wire and Rear Heater Sub Wire (Under the Front Passenger's Seat)
BR1	42	Back Door No.1 Wire and Floor No.2 Wire (Left Rear Side of Roof)
BS1	42	Back Door No.1 Wire and Back Door No.2 Wire (Back Door Left)
BU2	44	Floor Wire and Seat No.2 Wire (Under the Front Passenger's Seat)
BW1	42	Rear Door LH Wire and Cowl Wire (Left Center Pillar)
BX1	42	Rear Door RH Wire and Cowl Wire (Right Center Pillar)
BY2	44	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)

: GROUND POINTS

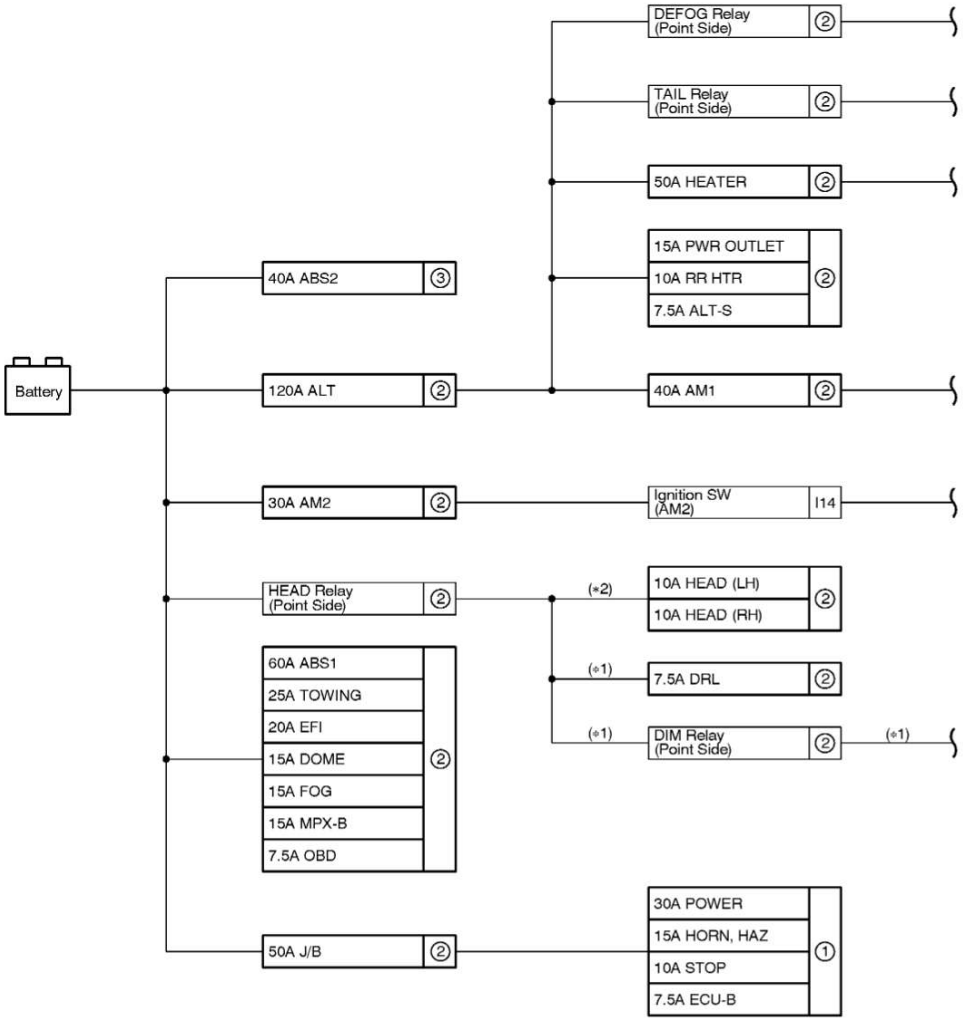
Code	See Page	Ground Points Location
EA	36	Front Right Fender
EB	36	Front Left Fender
EC	36	Intake Manifold Left
ID	38	Left Kick Panel
IE	38	Cowl Side Panel LH
IF	38	Cowl Side Panel RH
IG	38	Right Kick Panel
BH	42	Left Quarter Panel Inner
BJ	42	Right Quarter Panel Inner

: **SPLICE POINTS**

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E2	36	Engine Room Main Wire	I21	40	Cowl Wire
I6	40	Cowl Wire	B1	42	Front Door LH Wire
I9			B2	42	Roof Wire
I10			B3		
I11			B5	42	Front Door RH Wire
I12			B6	42	Rear Heater Sub Wire
I13			B8	42	Floor No.2 Wire
I14			B9	42	Back Door No.2 Wire
I18			B10	44	Seat No.1 Wire
I20	40	Engine Wire	B11	44	Seat No.2 Wire

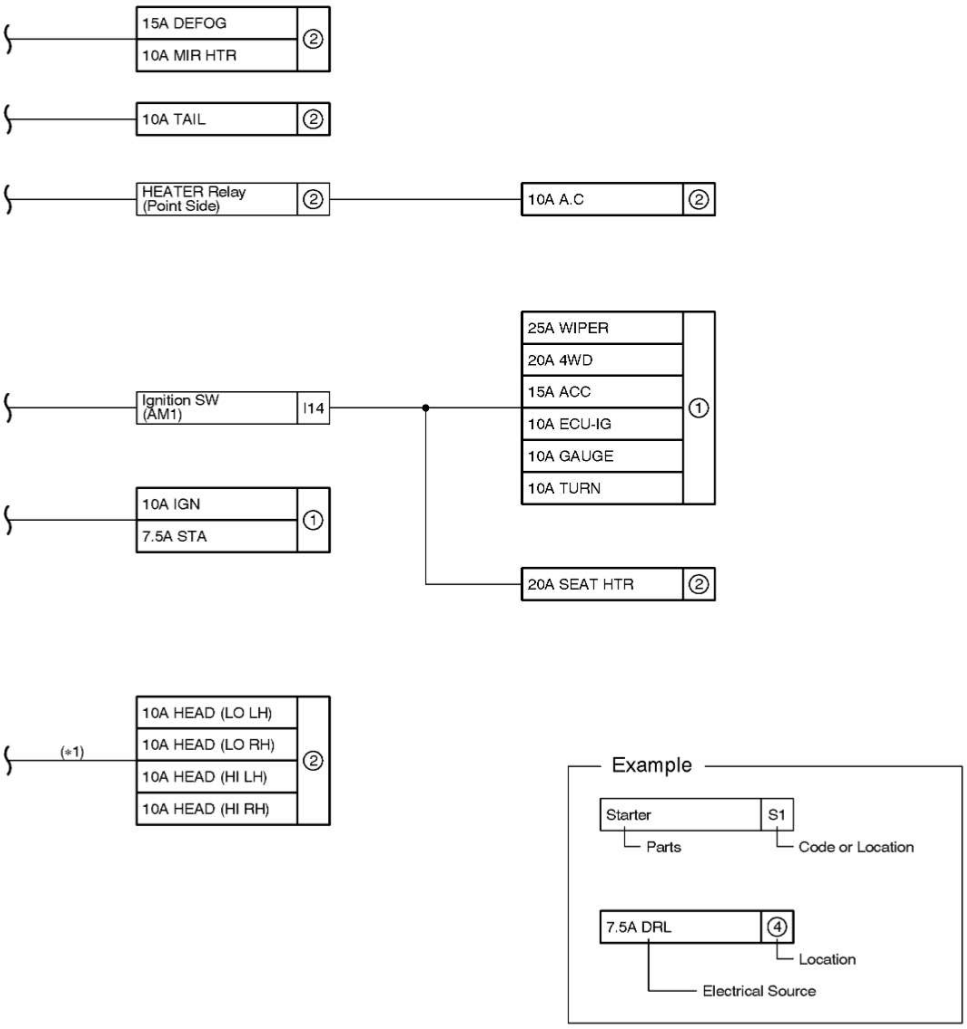
J POWER SOURCE (Current Flow Chart)

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 : Driver Side J/B (See page 24) ② : Engine Room R/B (See page 22)
③ : Fuse Box (See page 22)

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



Engine Room R/B (See Page 22)

Fuse		System	Page
7.5A	ALT-S	Charging	56
7.5A	DRL	Headlight (w/ Daytime Running Light)	84
		Multiplex Communication System	72
7.5A	OBD	Engine Control	58
10A	A.C	Air Conditioning (Manual A/C)	220
10A	HEAD (HI LH)	Headlight (w/ Daytime Running Light)	84
10A	HEAD (HI RH)	Headlight (w/ Daytime Running Light)	84
10A	HEAD (LH)	Headlight (w/o Daytime Running Light)	82
10A	HEAD (LO LH)	Headlight (w/ Daytime Running Light)	84
		Front Fog Light	88
10A	HEAD (LO RH)	Headlight (w/ Daytime Running Light)	84
10A	HEAD (RH)	Headlight (w/o Daytime Running Light)	82
10A	MIR HTR	Multiplex Communication System	72
		Rear Window Defogger and Mirror Heater	200
10A	RR HTR	Rear Heater	210
10A	TAIL	Cigarette Lighter and Clock	186
		Combination Meter	204
		Illumination	98
		Taillight	96
		Trailer Towing	108
15A	DEFOG	Multiplex Communication System	72
		Rear Window Defogger and Mirror Heater	200
15A	DOME	Auto Antenna	196
		Cigarette Lighter and Clock	186
		Combination Meter	204
		Garage Door Opener	110
		Headlight (w/ Daytime Running Light)	84
		Interior Light	92
		Radio and Player	198
15A	FOG	Front Fog Light	88
15A	MPX-B	Door Lock Control	118
		Multiplex Communication System	72
		Power Window (Rear), Rear Wiper and Washer	172
		Rear Window Defogger and Mirror Heater	200
		Theft Deterrent	130
		Wireless Door Lock Control	124
15A	PWR OUTLET	Power Outlet	188
20A	EFI	Cruise Control	142
		Electronically Controlled Transmission and A/T Indicator	136
		Engine Control	58
		Engine Immobiliser System	68

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

Fuse		System	Page
20A	SEAT HTR	Seat Heater	194
25A	TOWING	Trailer Towing	108
30A	AM2	Engine Control	58
		Starting and Ignition	52
40A	AM1	Power Outlet	188
		Starting and Ignition	52
50A	HEATER	Air Conditioning (Manual A/C)	220
		Automatic Air Conditioning	212
60A	ABS1	VSC	146
120A	ALT	Charging	56
		Illumination	98
		Light Auto Turn Off	106
		Multiplex Communication System	72
		Power Outlet	188
		Rear Window Defogger and Mirror Heater	200
		Starting and Ignition	52
		Taillight	96
		Theft Deterrent	130
		Wireless Door Lock Control	124

Driver Side J/B (See Page 24)

Fuse		System	Page
7.5A	ECU-B	Air Conditioning (Manual A/C)	220
		Automatic Air Conditioning	212
7.5A	STA	Electronically Controlled Transmission and A/T Indicator	136
		Engine Control	58
		Starting and Ignition	52
10A	ECU-IG	Auto Antenna	196
		Door Lock Control	118
		Moon Roof	164
		Multiplex Communication System	72
		Power Window	112
		Power Window (Rear), Rear Wiper and Washer	172
		Rear Window Defogger and Mirror Heater	200
		Shift Lock	180
		SRS	153
		Theft Deterrent	130
		VSC	146
		Wireless Door Lock Control	124
10A	GAUGE	Air Conditioning (Manual A/C)	220
		Automatic Air Conditioning	212
		Back-Up Light	104
		Charging	56
		Combination Meter	204

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

J POWER SOURCE (Current Flow Chart)

Fuse		System	Page
10A	GAUGE	Cruise Control	142
		Electronically Controlled Transmission and A/T Indicator	136
		Engine Control	58
		Front Wiper and Washer	168
		Headlight (w/ Daytime Running Light)	84
		Key Reminder and Seat Belt Warning	182
		Light Auto Turn Off	106
		Multiplex Communication System	72
		Rear Heater	210
		Rear Window Defogger and Mirror Heater	200
		SRS	153
		4WD	158
10A	IGN	Charging	56
		Combination Meter	204
		Cruise Control	142
		Electronically Controlled Transmission and A/T Indicator	136
		Engine Control	58
		Engine Immobiliser System	68
		SRS	153
		VSC	146
10A	STOP	Cruise Control	142
		Electronically Controlled Transmission and A/T Indicator	136
		Engine Control	58
		Shift Lock	180
		Stop Light	102
		Trailer Towing	108
		VSC	146
10A	TURN	Trailer Towing	108
		Turn Signal and Hazard Warning Light	90
15A	ACC	Auto Antenna	196
		Cigarette Lighter and Clock	186
		Multiplex Communication System	72
		Power Outlet	188
		Power Window (Rear), Rear Wiper and Washer	172
		Radio and Player	198
		Rear Window Defogger and Mirror Heater	200
		Remote Control Mirror	162
		Shift Lock	180
		Theft Deterrent	130
		Wireless Door Lock Control	124
15A	HORN, HAZ	Horn	184
		Multiplex Communication System	72
		Theft Deterrent	130

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

Fuse		System	Page
15A	HORN, HAZ	Trailer Towing	108
		Turn Signal and Hazard Warning Light	90
20A	4WD	4WD	158
25A	WIPER	Front Wiper and Washer	168
		Multiplex Communication System	72
		Power Window (Rear), Rear Wiper and Washer	172
30A	POWER	Door Lock Control	118
		Moon Roof	164
		Multiplex Communication System	72
		Power Seat	190
		Power Window	112
		Power Window (Rear), Rear Wiper and Washer	172
		Wireless Door Lock Control	124

Fuse Box (See Page 22)

Fuse		System	Page
40A	ABS2	VSC	146

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

K CONNECTOR LIST

A 1
Gray



A 2
Gray



A 3
Gray



A 8
Gray



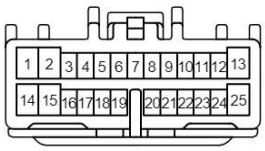
A 9
Gray



A11
Gray



A12



A14
Black



A20
Yellow



A21
Yellow



A22
Black



A23
Gray



A24
Gray



A25
Gray



A26
Black



A27
Dark Gray



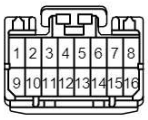
A28
Yellow



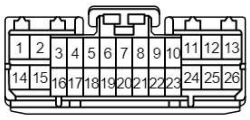
A29
Yellow



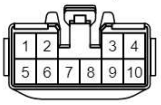
A30



A31



A32
Dark Gray



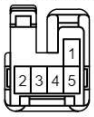
A33
Black



A34
Black



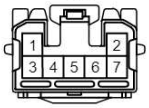
A35
(Automatic A/C)



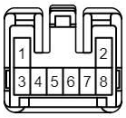
A35
(Manual A/C)



A36
Gray



A37



A38
Black



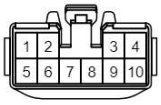
A39
Black



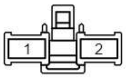
B 2
Dark Gray



B 5
Black



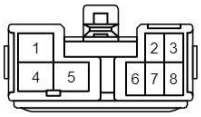
B 6
Black



B 7
Black



B 8



B 9



B10
Black



B11



B12
Gray



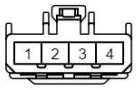
B13
(w/ Power Seat) Black



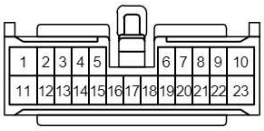
B13
(w/o Power Seat)



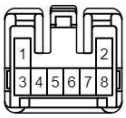
B14
Black



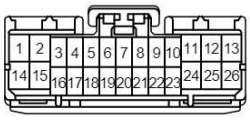
B16



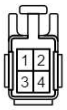
B17



B18



B19



C 1
Black



C 2
Black



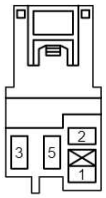
C 4



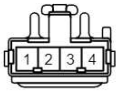
C 5
Gray



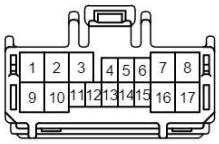
C 6



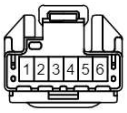
C 7
Black



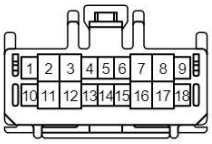
C13
Black



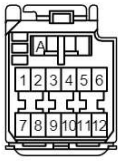
C14
Black



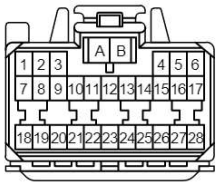
C15
Black



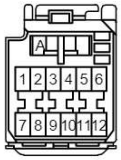
C20
Yellow



C21
Yellow



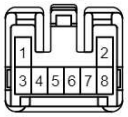
C22
Yellow



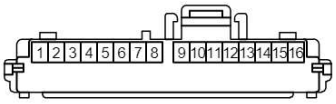
C23



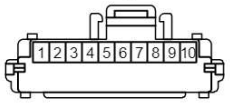
C24
Orange



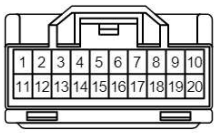
C25



C26
Gray



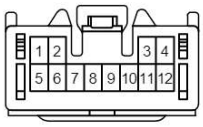
C27



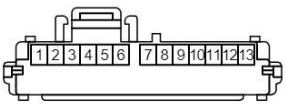
K CONNECTOR LIST

*1 : w/o Power Window
*2 : w/ Power Window

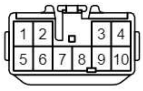
C28
Blue



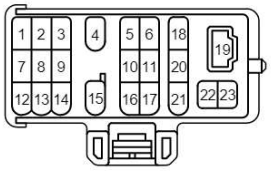
C29
Brown



C30



D 1
Black



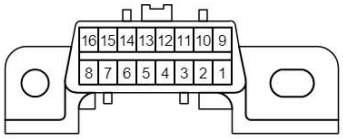
D 4
Blue



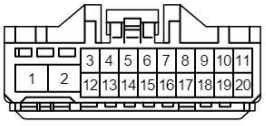
D 5
Gray



D 7
Black



D 8



D 9



D11



D12
Black



D16



D17



D18



D19



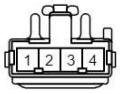
D20
Gray



D21
Gray



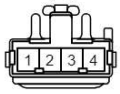
D22
(*1)



D23
(*2)



D23
(*1)



D24
Black



D25
Black



D26
Black



D27
Black



D31
Gray



D32
Gray



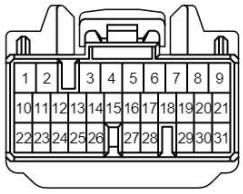
E 2
Gray



E 3
Dark Gray



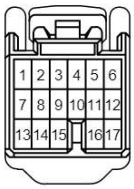
E 9



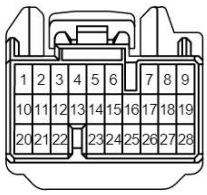
E10



E11



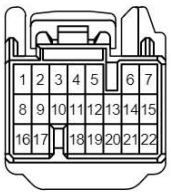
E12
Black



E13
Black



E14



E15



F 1
Gray



F 2
Gray



F 3
Gray



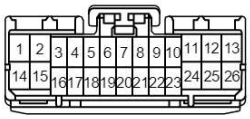
F 4
Gray



F 5
Black



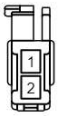
F 7



F 8



F 9



F10
Dark Gray



F11



F12

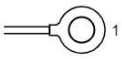


F13
Black
(See Page 22)

G 1
Gray



G 2



G 3
Black



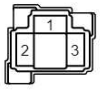
G 4
Blue



H 1
Brown



H 2
Brown



H 4
Dark Gray



H 5
Black

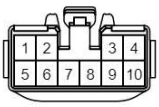


K CONNECTOR LIST

H 6
Black



H 7
Black

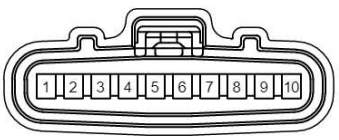


H 8
Brown



I 2
Black

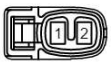
*3 : w/ Engine immobilser System
*4 : w/o Engine immobilser System



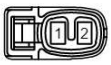
I 3
Black



I 4
Black



I 5
Black



I 6
Brown



I 7
Brown



I 8
Brown



I 9
Brown



I10
Brown



I11
Brown



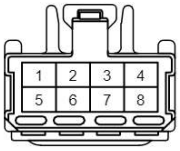
I13
(*3) Gray



I13
(*4)



I14



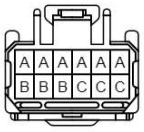
I17



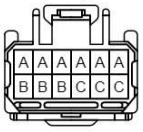
I18



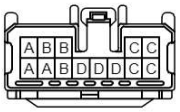
J 1
Gray



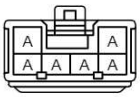
J 2
Gray



J 3
Blue



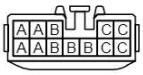
J 4



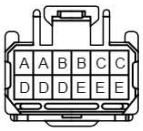
J 5
Black



J 6
Gray



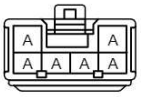
J 7
Black



J 8
Black



J 9



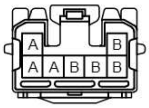
J10
Black



J11
Black



J14



K 2
Black



K 3
Black



K 4
Black



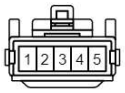
L 1
Gray



M 1
Black



M 2



M 3
Blue



M 4
Gray



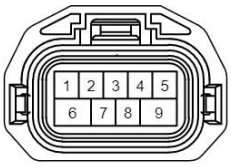
N 1
Gray



O 1
Gray



P 1
Black



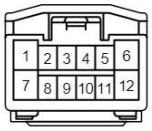
P 2
Black



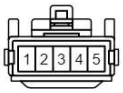
P 3



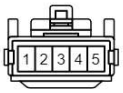
P 4



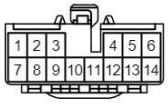
P 5



P 6



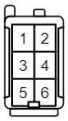
P 7



P 8
Black



P 9
Black



P10



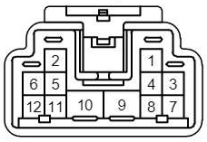
P11



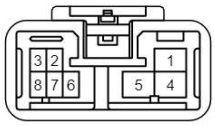
P13



P14
Gray



P15
Blue



P16
Gray



P17



P18



P19



P20



P21



P22
Black



P23



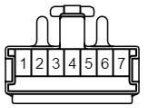
P24
Blue



P25
Blue



P26



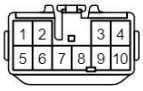
P27
Yellow



P28
Yellow



R 1



R 2



R 5



R 6



R 7



K CONNECTOR LIST

R 8



R11



R12



R13
Black



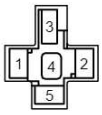
R14



R15



R16



R17
Gray



R18



R19
Black



R20



R21



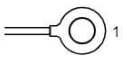
R22



S 1
Black



S 2



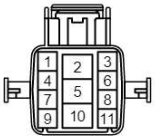
S 3



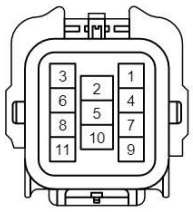
S 4



S 5
Black



S 6
Black



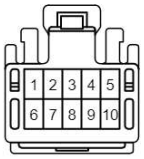
S 7
Black



S 8
Brown



S 9
Gray



S10



S11



S12



S13



T 1
Black



T 2
Black



T 3



T 4
Gray

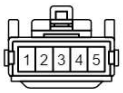


T 5
Black



*5 : w/ Daytime Running Light
*6 : w/o Daytime Running Light

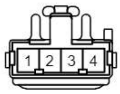
T 6



T 7
Gray



T 8
Black



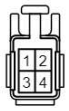
T 9



T10



U 1



V 1
Black



V 3
Black



V 7
Black



V 8
Blue



V 9
Blue



V10



V11
Gray



V12
Black



V13
Gray



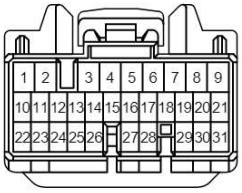
V14
Black



V15
Black



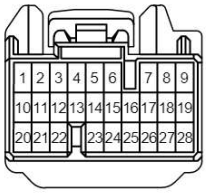
V16



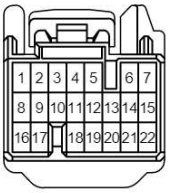
V17
Black



V18



V19
Black



W 1
(*5) Black



W 1
(*6) Dark Gray



W 2



Y 1
Black



L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number
A 1	A/C Dual Pressure SW	90980-11149
A 2	A/C Magnetic Clutch	90980-11271
A 3	A/T Fluid Temp. Sensor	90980-10498
A 8	ABS Speed Sensor Front LH	90980-11075
A 9	ABS Speed Sensor Front RH	
A11	Auto Antenna Motor	90980-11003
A12	A/C Amplifier	90980-11877
A14	A/C Thermistor	90980-10825
A20	Airbag Squib (Front Passenger Airbag Assembly)	90980-11884
A21	Airbag Squib (Steering Wheel Pad)	90980-10850
A22	Ashtray Illumination	-
A23	Auto Antenna Control Relay	90980-10799
A24	ABS Speed Sensor Rear LH	90980-11075
A25	ABS Speed Sensor Rear RH	
A26	A/C Ambient Temp. Sensor	90980-11070
A27	Air Fuel Ratio Sensor	90980-11178
A28	Airbag Sensor Front LH	90980-11856
A29	Airbag Sensor Front RH	
A30	A/C Amplifier	90980-11391
A31	A/C Amplifier	90980-11390
A32	A/C Magnetic Clutch Relay	90980-10801
A33	A/C Room Temp. Sensor	90980-10825
A34	A/C Solar Sensor	90980-11369
A35	Air Inlet Control Servo Motor (Automatic A/C)	90980-11319
	Air Inlet Control Servo Motor (Manual A/C)	90980-11471
A36	Air Mix Control Servo Motor and A/C Water Temp. Sensor	90980-11529
A37	Air Vent Mode Control Servo Motor	90980-11321
A38	Accele Position Sensor	90980-11150
A39	ADD Actuator	90980-11858
B 2	Brake Fluid Level Warning SW	90980-11009
B 5	Back Window Lock SW	90980-10801
B 6	Blower Motor	90980-10385
B 7	Blower Resistor	90980-10171
B 8	Blower SW	90980-10877
B 9	Back Door Courtesy SW	90980-11003
B10	Back Door Lock Motor and Back Door Unlock Detection SW	90980-11150
B11	Back Window Limit SW	90980-11247
B12	Back Window Motor	90980-11003
B13	Buckle SW LH	90980-11212
B14	Blower Motor Linear Controller	90980-11676
B16	Body ECU	90980-10921
B17	Body ECU	90980-11321
B18	Back Door ECU	90980-11423
B19	Buckle SW RH	90980-10795

Code	Part Name	Part Number
C 1	Camshaft Position Sensor	90980-10947
C 2	Crankshaft Position Sensor	
C 4	Cigarette Lighter	90980-10760
C 5	Cigarette Lighter Illumination	90980-11148
C 6	Circuit Opening Relay	82602-35150
C 7	Clock	90980-11013
C13	Combination SW	90980-11672
C14	Combination SW	90980-11616
C15	Combination SW	90980-11594
C20	Center Airbag Sensor Assembly	90980-11873
C21	Center Airbag Sensor Assembly	90980-11872
C22	Center Airbag Sensor Assembly	90980-11871
C23	Center Cluster SW	90980-11923
C24	Center Cluster SW	90980-11321
C25	Combination Meter	90980-11113
C26	Combination Meter	90980-11116
C27	Combination Meter	90980-11974
C28	Combination Meter	90980-11475
C29	Combination Meter	90980-11115
C30	Center Diff. Lock SW	90980-10997
D 1	Data Link Connector 1	90980-11323
D 4	Detection SW (Transfer L4 Position)	90980-11156
D 5	Detection SW (Transfer Neutral Position)	90980-10923
D 7	Data Link Connector 3	90080-98012
D 8	Daytime Running Light Relay (Main)	90980-12034
D 9	Daytime Running Light Relay No.4	90980-10759
D11	Diode (Back Window)	90980-11251
D12	Diode (Daytime Running Light No.1)	90980-10962
D16	Door Courtesy SW Front LH	90980-11097
D17	Door Courtesy SW Front RH	
D18	Door Courtesy SW Rear LH	
D19	Door Courtesy SW Rear RH	
D20	Door Key Lock and Unlock SW Front LH	90980-11245
D21	Door Key Lock and Unlock SW Front RH	
D22	Door Lock Control SW Front LH	90980-11013
D23	Door Lock Control SW Front RH (w/ Power Window)	90980-10797
	Door Lock Control SW Front RH (w/o Power Window)	90980-11013
D24	Door Lock Motor and Door Unlock Detection SW Front LH	90980-11150
D25	Door Lock Motor and Door Unlock Detection SW Front RH	
D26	Door Lock Motor and Door Unlock Detection SW Rear LH	
D27	Door Lock Motor and Door Unlock Detection SW Rear RH	
D31	Detection SW (Transfer 4WD Position)	90980-11250

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

Code	Part Name	Part Number
D32	Detection SW (Transfer H4L Position)	90980-11025
E 2	Electronically Controlled Transmission Solenoid	90980-10891
E 3	Engine Coolant Temp. Sensor	90980-10737
E 9	Engine Control Module	90980-11421
E10	Engine Control Module	90980-11476
E11	Engine Control Module	90980-11586
E12	Engine Control Module	90980-11637
E13	Engine Hood Courtesy SW	90980-11273
E14	Engine Control Module	90980-11638
E15	Extra High Speed Relay	90980-10221
F 1	Front Parking Light LH	90980-11149
F 2	Front Parking Light RH	
F 3	Front Turn Signal Light LH	90980-11019
F 4	Front Turn Signal Light RH	
F 5	Front Wiper Motor	90980-10551
F 7	4WD ECU	90980-11423
F 8	Front Door Speaker LH	90980-10935
F 9	Front Door Speaker RH	
F10	Fuel Sender and Fuel Pump	90980-11077
F11	Front Fog Light LH	90980-11003
F12	Front Fog Light RH	
F13	Fuse Box	82610-35020
G 1	Generator	90980-11349
G 2	Generator	90980-09212
G 3	Glove Box Light	90980-11148
G 4	Garage Door Opener	90980-11368
H 1	Headlight LH	90980-11314
H 2	Headlight RH	
H 4	Heated Oxygen Sensor (Bank 1 Sensor 2)	90980-11028
H 5	Horn LH	90980-10619
H 6	Horn RH	
H 7	Hazard SW	90980-10801
H 8	High Mounted Stop Light	90980-11162
I 2	Igniter	90980-11653
I 3	Ignition Coil No.1	90980-11246
I 4	Ignition Coil No.2	
I 5	Ignition Coil No.3	
I 6	Injector No.1	90980-11153
I 7	Injector No.2	
I 8	Injector No.3	
I 9	Injector No.4	
I10	Injector No.5	
I11	Injector No.6	
I13	Ignition Key Cylinder Light	90980-10906
I14	Ignition SW	90980-11615
I17	Interior Light (Front)	90980-10935

Code	Part Name	Part Number
I18	Interior Light (Rear)	90980-10121
J 1	Junction Connector	90980-11661
J 2	Junction Connector	
J 3	Junction Connector	90980-11714
J 4	Junction Connector	90980-10976
J 5	Junction Connector	90980-10803
J 6	Junction Connector	
J 7	Junction Connector	90980-11661
J 8	Junction Connector	
J 9	Junction Connector	90980-10976
J10	Junction Connector	90980-11661
J11	Junction Connector	
J14	Junction Connector	90980-11529
K 2	Knock Sensor No.1	90980-11166
K 3	Knock Sensor No.2	
K 4	Keyless Buzzer	90980-11156
L 1	License Plate Light	90980-11075
M 1	Mass Air Flow Meter	90980-11317
M 2	Moon Roof Control Motor and Limit SW	90980-10789
M 3	Moon Roof Control Relay and SW	90980-10799
M 4	Master Cylinder Pressure Sensor	90980-11451
N 1	Noise Filter	90980-10843
O 1	Oil Pressure SW	90980-11363
P 1	Park/Neutral Position SW	90980-11784
P 2	Parking Brake SW	90980-10871
P 3	Personal Light	90980-10935
P 4	Power Window Control SW Front RH	90980-11947
P 5	Power Window Control SW Rear LH	90980-10789
P 6	Power Window Control SW Rear RH	
P 7	Power Window Master SW	90980-11791
P 8	Power Window Motor Front LH	90980-11011
P 9	Power Window Motor Front RH	
P10	Power Window Motor Rear LH	90980-10860
P11	Power Window Motor Rear RH	
P13	Power Seat Control SW (Driver's Seat Lumbar Support)	90980-10601
P14	Power Seat Control SW (Driver's Side)	90980-10878
P15	Power Seat Control SW (Front Passenger's Side)	90980-10876
P16	Power Seat Motor (Driver's Seat Lumbar Support)	90980-10825
P17	Power Seat Motor (Driver's Seat Reclining Control)	
P18	Power Seat Motor (Driver's Seat Slide Control)	
P19	Power Seat Motor (Driver's Seat Vertical Control)	
P20	Power Seat Motor (Front Passenger's Seat Reclining Control)	

L PART NUMBER OF CONNECTORS

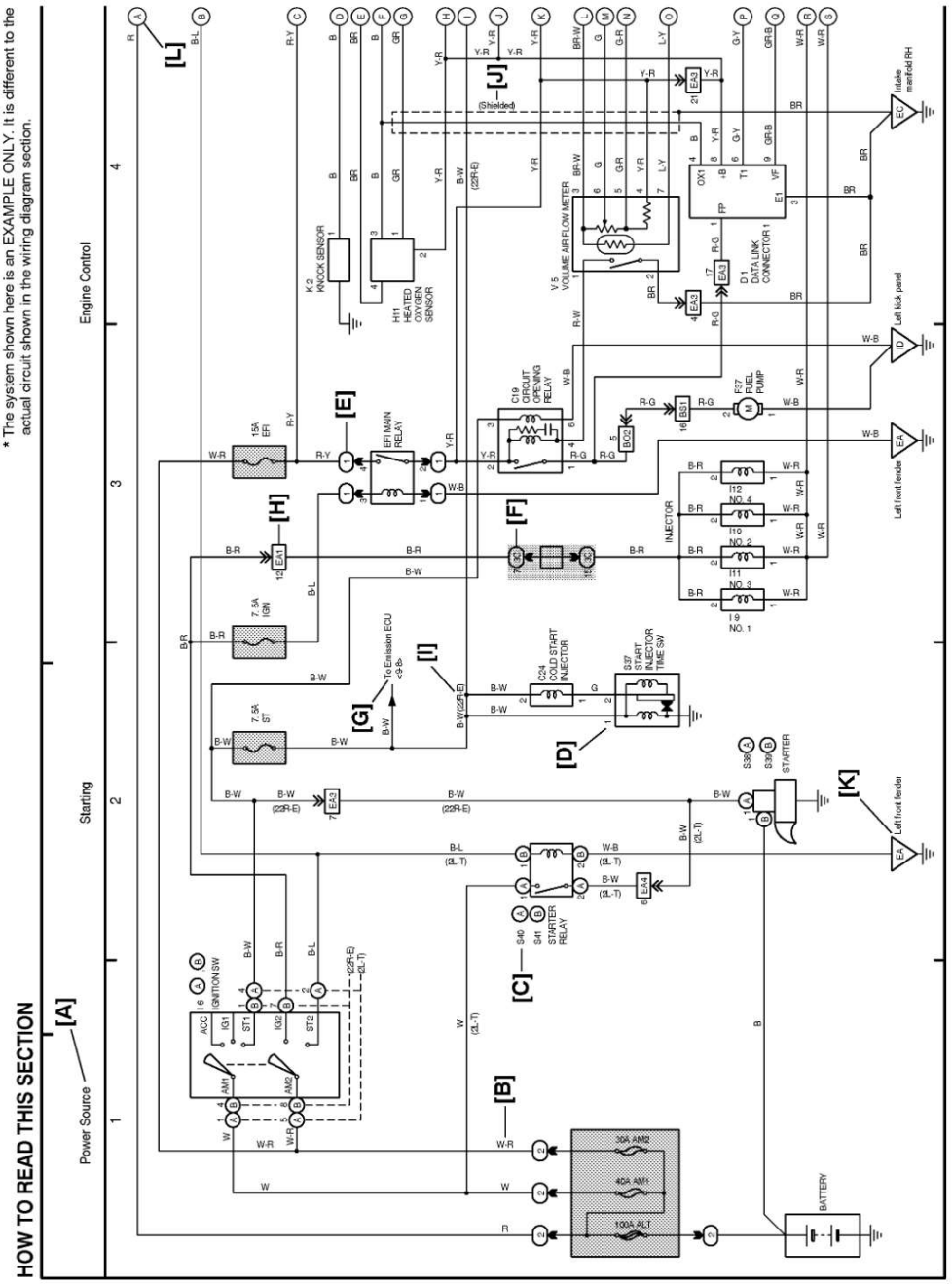
Code	Part Name	Part Number
P21	Power Seat Motor (Front Passenger's Seat Slide Control)	90980-10825
P22	Power Steering Oil Pressure SW	90980-11428
P23	Power Outlet (Rear)	90980-10760
P24	Power Outlet Front LH	
P25	Power Outlet Front RH	
P26	Power Window Master SW	90980-11165
P27	Pretentioner LH	90980-11862
P28	Pretentioner RH	
R 1	Radio and Player (Built-In Type Amplifier) or Stereo Power Amplifier (Separate Type Amplifier)	90980-10997
R 2	Radio and Player (Built-In Type Amplifier) or Stereo Power Amplifier (Separate Type Amplifier)	90980-10996
R 5	Remote Control Mirror SW	90980-11450
R 6	Rheostat	90980-10216
R 7	Rear Combination Light LH	90980-11399
R 8	Rear Combination Light RH	
R11	Rear Door Speaker LH	90980-10935
R12	Rear Door Speaker RH	
R13	Rear Heater Blower Motor	90980-10214
R14	Rear Heater Blower Resistor	90980-10916
R15	Rear Heater Blower SW	90980-11296
R16	Rear Heater Relay	90980-35050
R17	Rear Window Defogger	90980-10359
R18	Rear Window Defogger	
R19	Rear Wiper Motor	90980-11194
R20	Remote Control Mirror LH	90980-11492
R21	Remote Control Mirror RH	
R22	Remote Control Mirror SW	90980-11450
S 1	Starter	90980-11400
S 2	Starter	90980-09584
S 3	Shift Lock Control Computer	90980-11614
S 4	Stop Light SW	90980-11118
S 5	Short Connector (VSC)	90980-11612
S 6	Short Connector (VSC)	90980-11609
S 7	Seat Heater SW LH	90980-10797
S 8	Seat Heater SW RH	90980-10996
S 9	Steering Sensor	90980-11581
S10	Seat Heater (Driver's Seat Back)	90980-10908
S11	Seat Heater (Driver's Seat Cushion)	
S12	Seat Heater (Front Passenger's Seat Back)	
S13	Seat Heater (Front Passenger's Seat Cushion)	
T 1	2-4 Select Motor	90980-11858
T 2	Throttle Position Sensor	90980-10711
T 3	2-4 Select SW	90980-10355

Code	Part Name	Part Number
T 4	Tailgate Control SW	90980-11015
T 5	Theft Deterrent Horn	90980-10619
T 6	Transponder Key Amplifier	90980-10789
T 7	Thrrottle Control Motor and Clutch	90980-10942
T 8	TRAC Off SW	90980-11013
T 9	Trailer Converter	90980-11527
T10	Trailer Socket	90980-10941
U 1	Unlock Warning SW	90980-10795
V 1	Vapor Pressure Sensor	90980-11143
V 3	Vehicle Speed Sensor (Electronically Controlled Transmission)	90980-11156
V 7	VSV (EVAP)	
V 8	VSV (Vapor Pressure Sensor)	90980-11859
V 9	Vanity Light RH	90980-11368
V10	VSC Actuator	90980-11413
V11	VSC Actuator	90980-10895
V12	VSC Actuator	90980-11151
V13	VSV (Canister Closed Valve)	90980-11162
V14	VSC Buzzer	90980-10906
V15	VSC Deceleration Sensor	90980-11182
V16	VSC ECU	90980-11935
V17	VSC ECU	90980-11476
V18	VSC ECU	90980-11637
V19	VSC ECU	90980-11638
W 1	Washer Motor (w/o Daytime Running Light)	90980-11177
	Washer Motor and Washer Level Warning SW (w/ Daytime Running Light)	90980-11194
W 2	Water Temp. Sender	90980-10359
Y 1	Yaw Rate Sensor	90980-11904

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

Code	Part Name	Part Number	Code	Part Name	Part Number

M OVERALL ELECTRICAL WIRING DIAGRAM



[A] : System Title

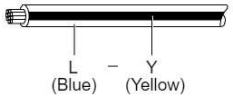
[B] : Indicates the wiring color.

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.

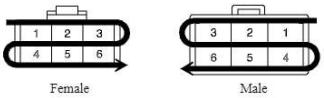
Example: L - Y



[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



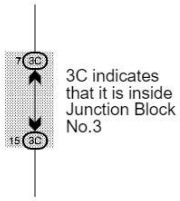
The numbering system for the overall wiring diagram is the same as above

[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

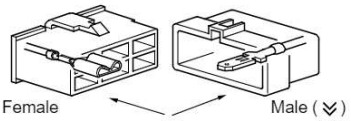
[F] : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

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.

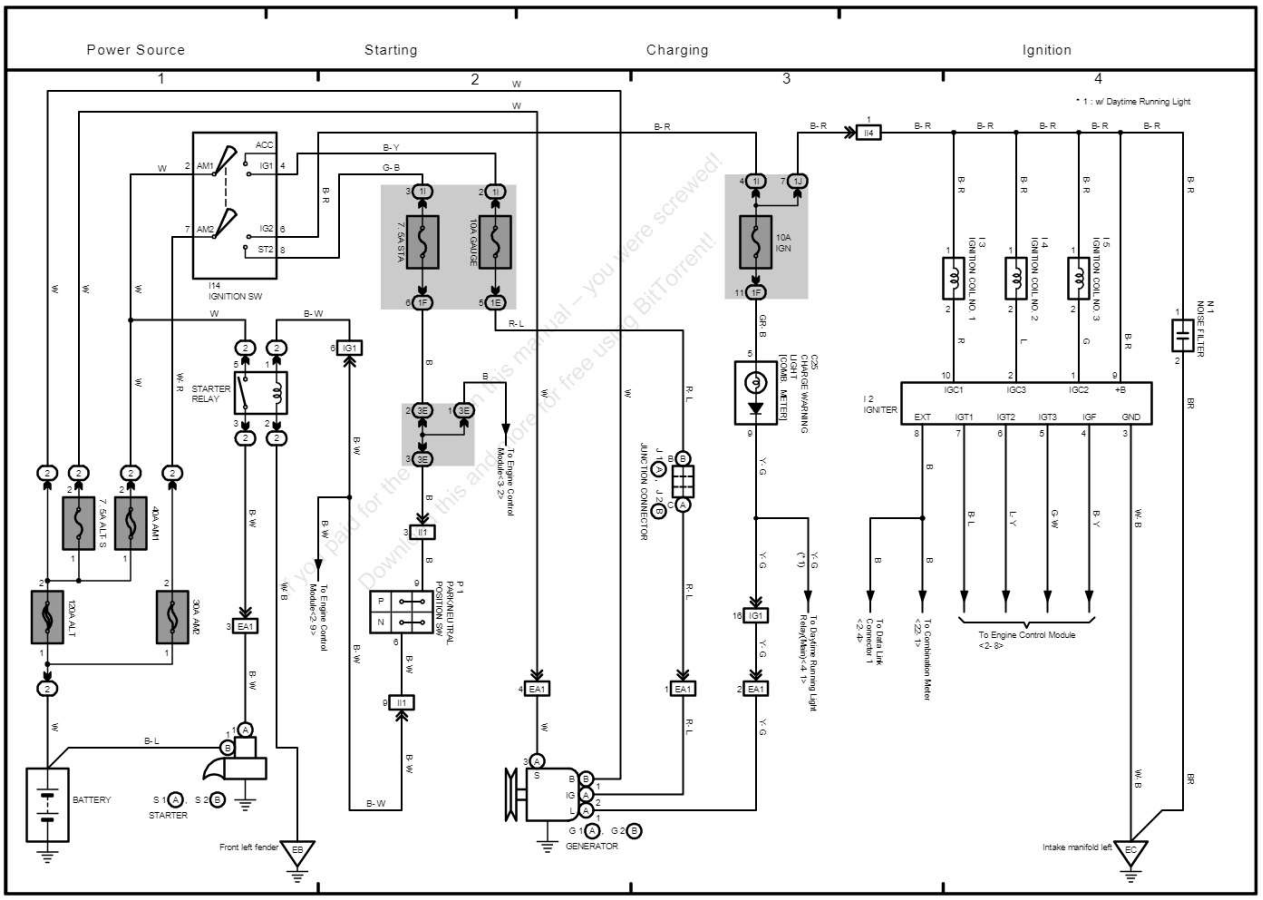
[L] : The same code occuring on the next page indicates that the wire harness is continuous.

SYSTEM INDEX

SYSTEMS	LOCATION
Air Conditioning (Manual A/C)	24-2
Auto Antenna	21-2
Automatic Air Conditioning	23-2
Back-Up Light	6-3
Charging	1-3
Cigarette Lighter	15-4
Clock	15-4
Combination Meter	22-2
Cruise Control	2-9
Electronically Controlled Transmision and A/T Indicator	3-2
Engine Control	2-2
Engine Immobiliser System	2-11
Front Fog Light	4-4
Front Wiper and Washer	16-2
Garage Door Opener	9-4
Headlight (w/ Daytime Running Light)	4-2
Headlight (w/o Daytime Running Light)	5-2
Ignition	1-4
Illumination	7-2
Interior Light	9-3
Key Reminder	9-2
Light Auto Turn Off	17-2
Moon Roof	17-3

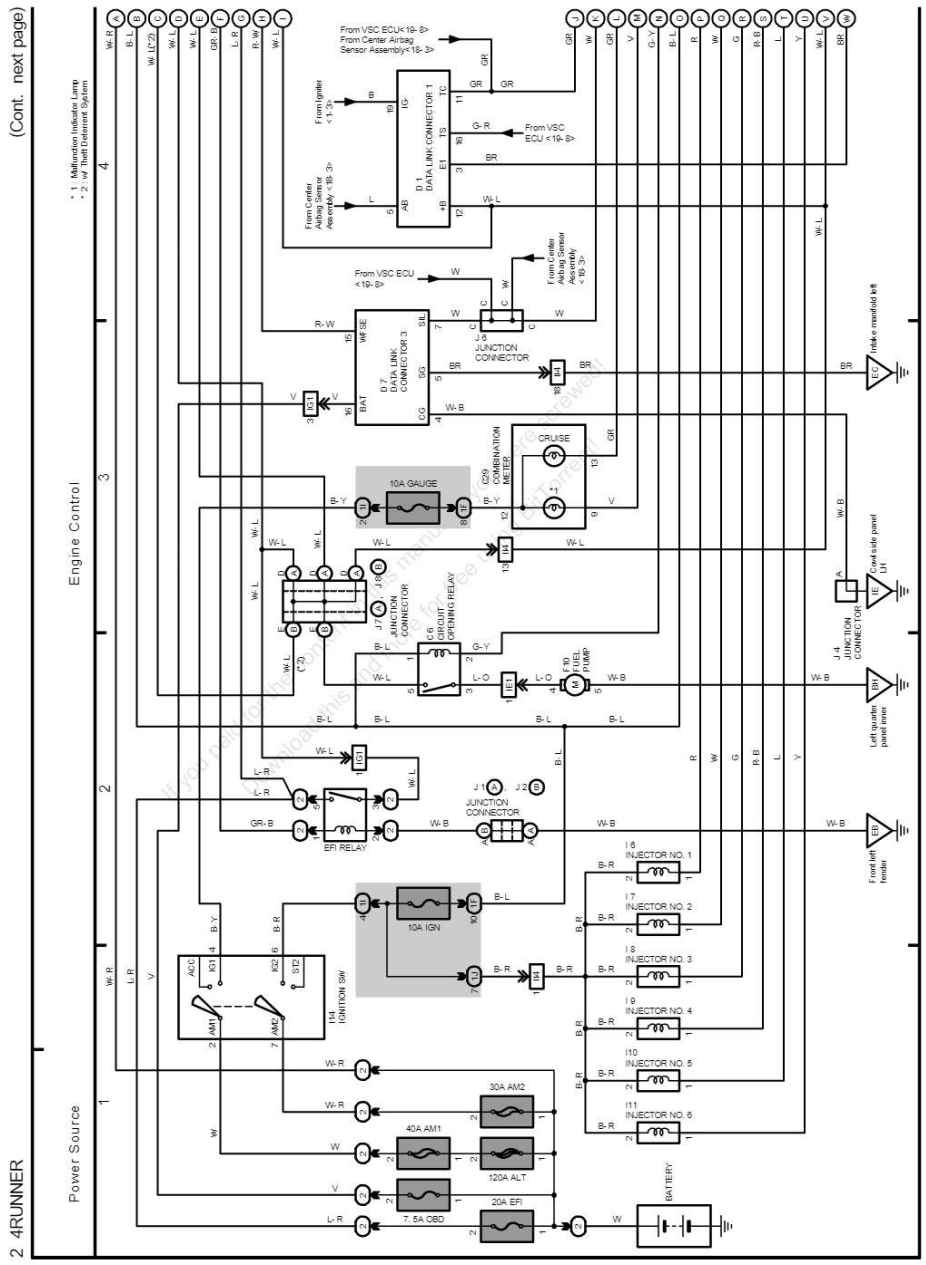
SYSTEMS	LOCATION
Multiplex Communication System * Door Lock Control * Horn * Mirror Heater * Power Window (Rear) * Rear Window Defogger * Rear Wiper and Washer * Theft Deterrent * Wireless Door Lock Control	10-2
Power Outlet	18-4
Power Seat	13-2
Power Source	1~24-1
Power Window	11-2
Radio and Player	21-3
Rear Heater	24-6
Remote Control Mirror	12-2
Seat Belt Warning	9-2
Seat Heater	14-2
Shift Lock	15-2
SRS	18-2
Starting	1-2
Stop Light	5-4
Taillight	6-2
Trailer Towing	14-4
Turn Signal and Hazard Warning Light	8-2
VSC	19-2
4WD	20-2

1 4RUNNER ELECTRICAL WIRING DIAGRAM

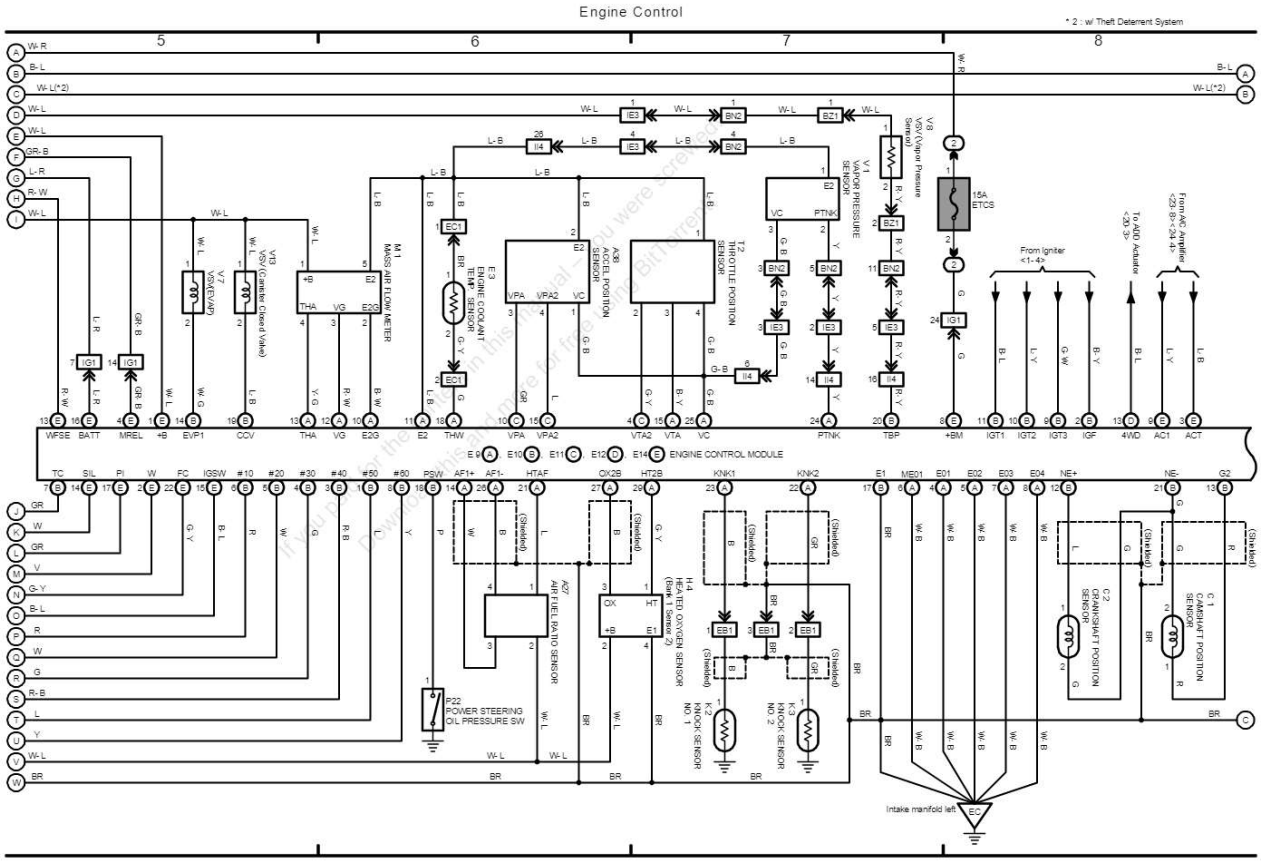


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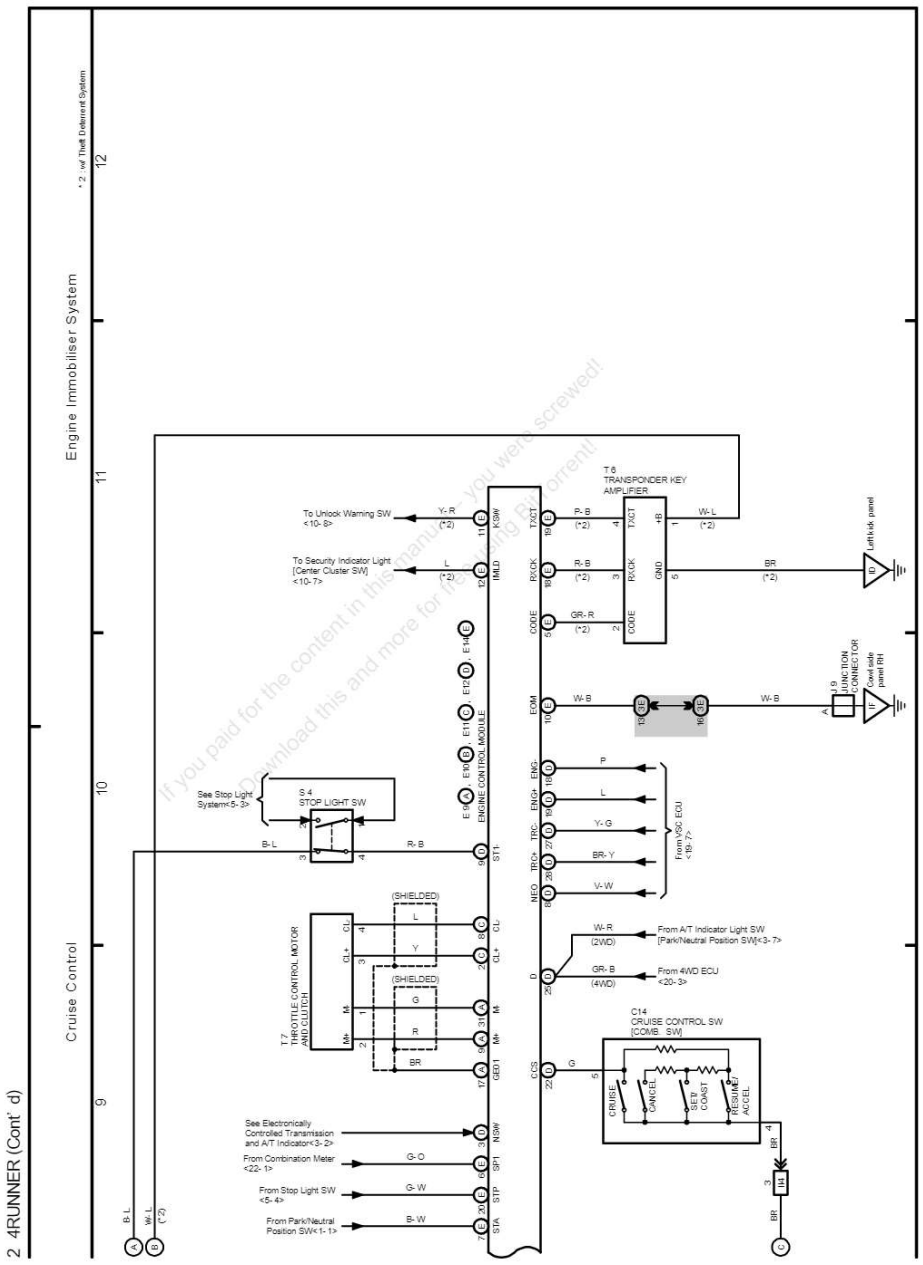


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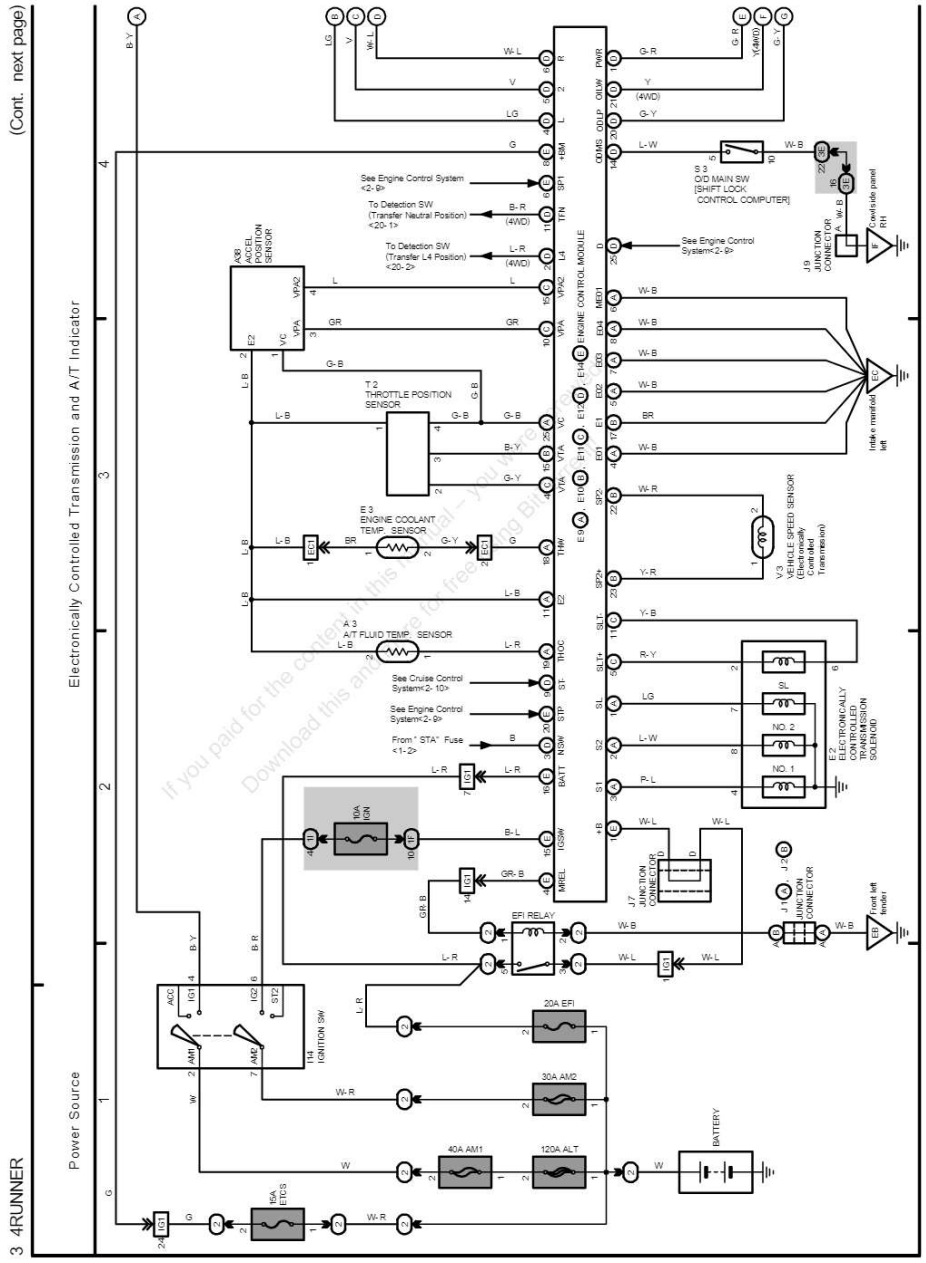
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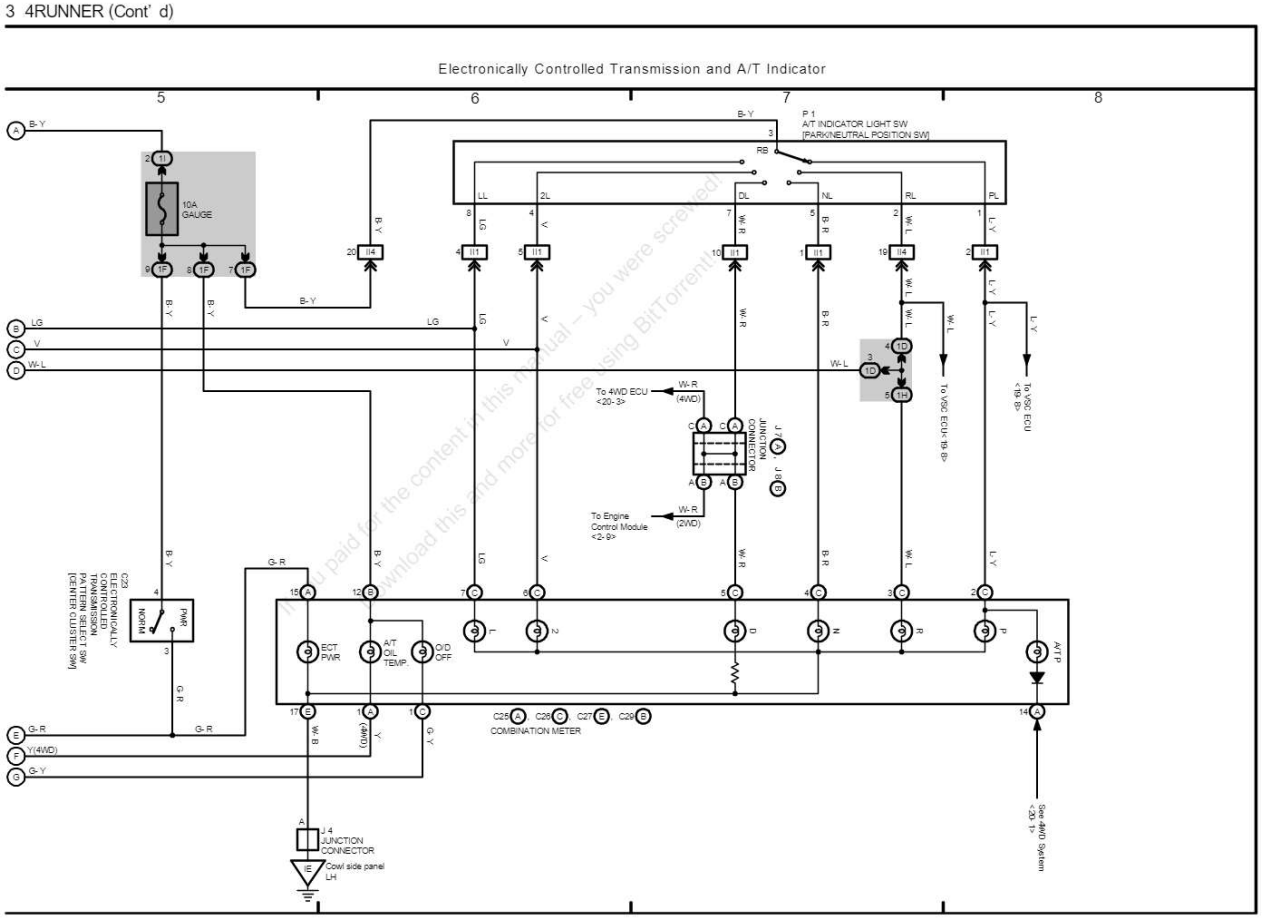


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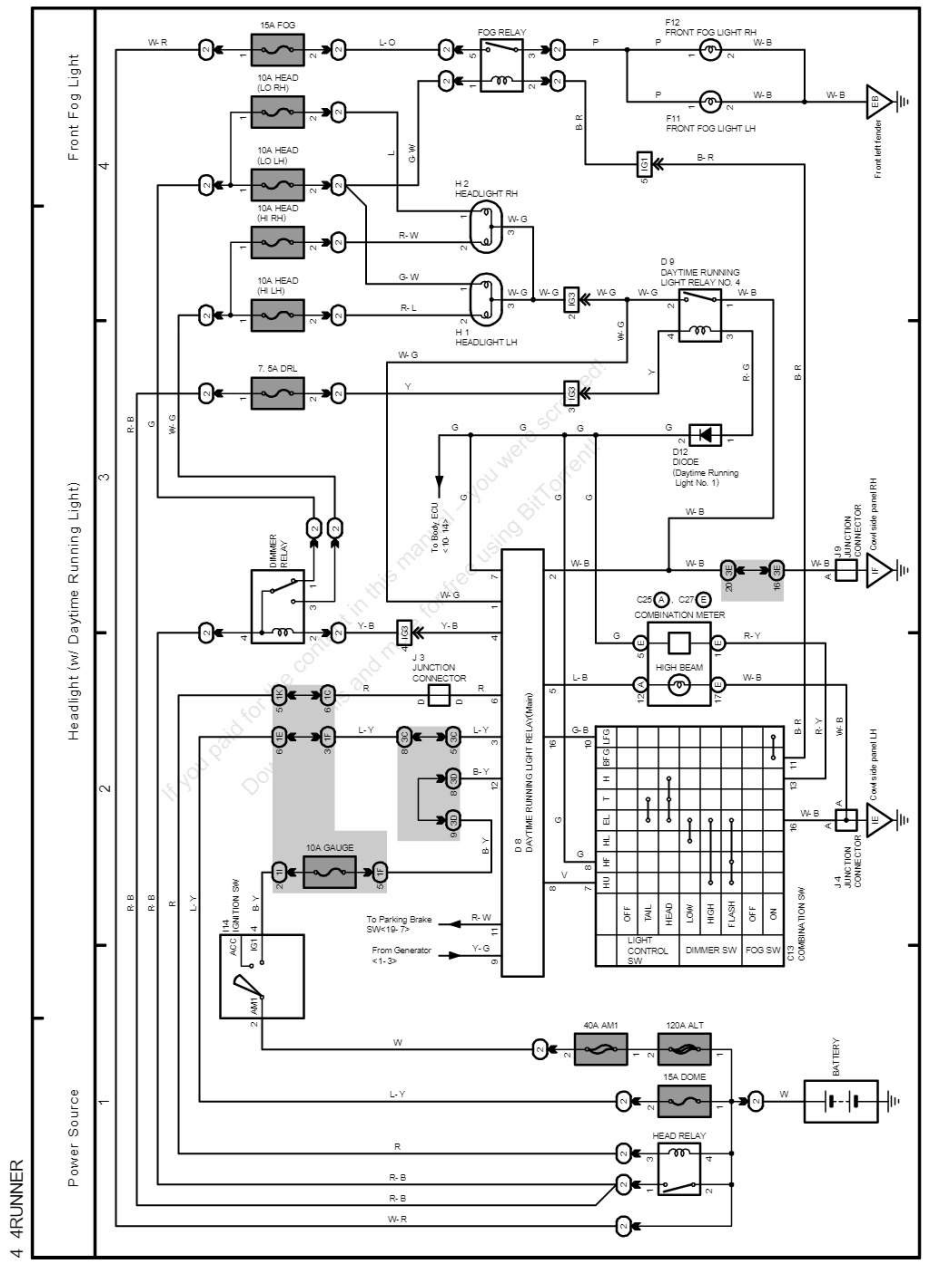
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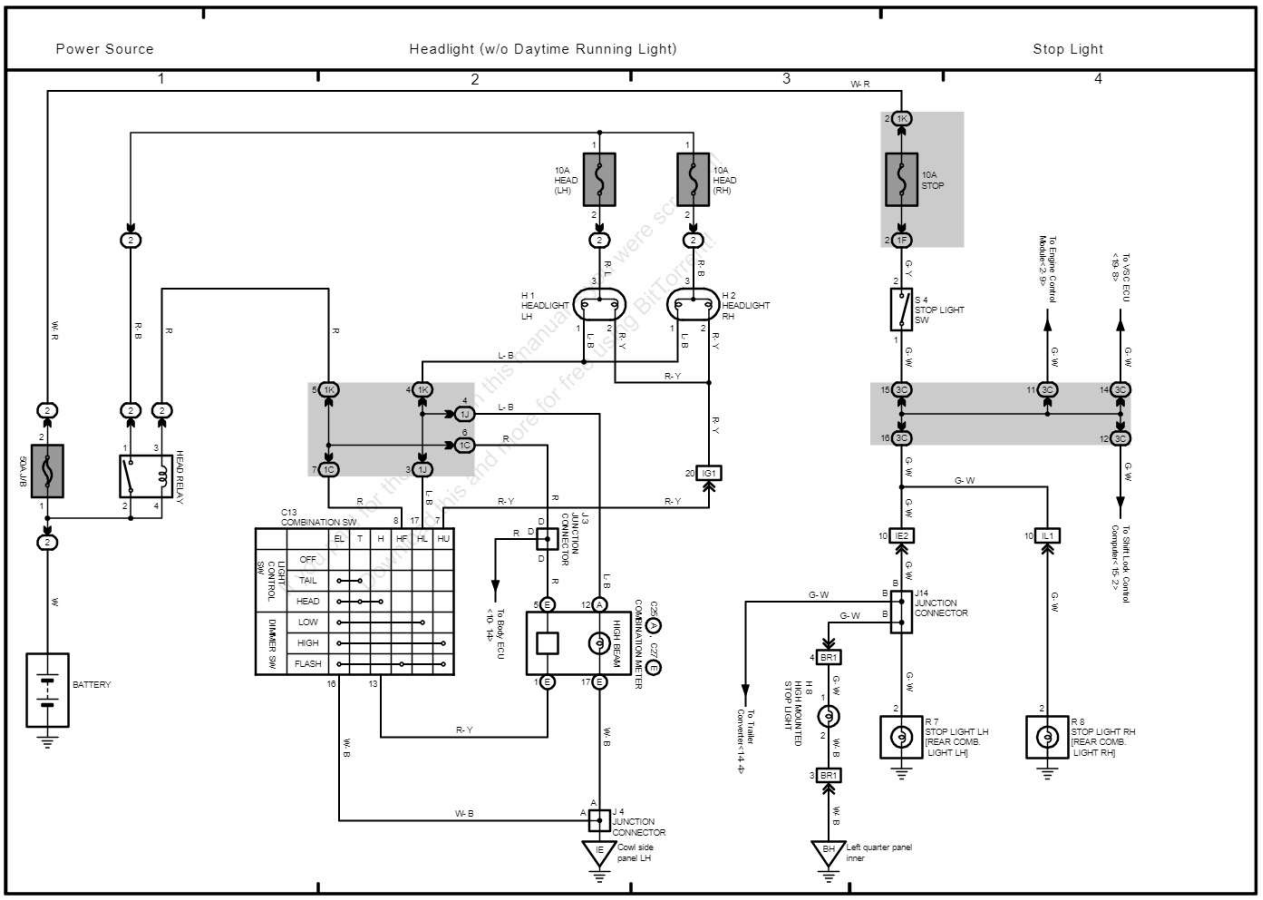


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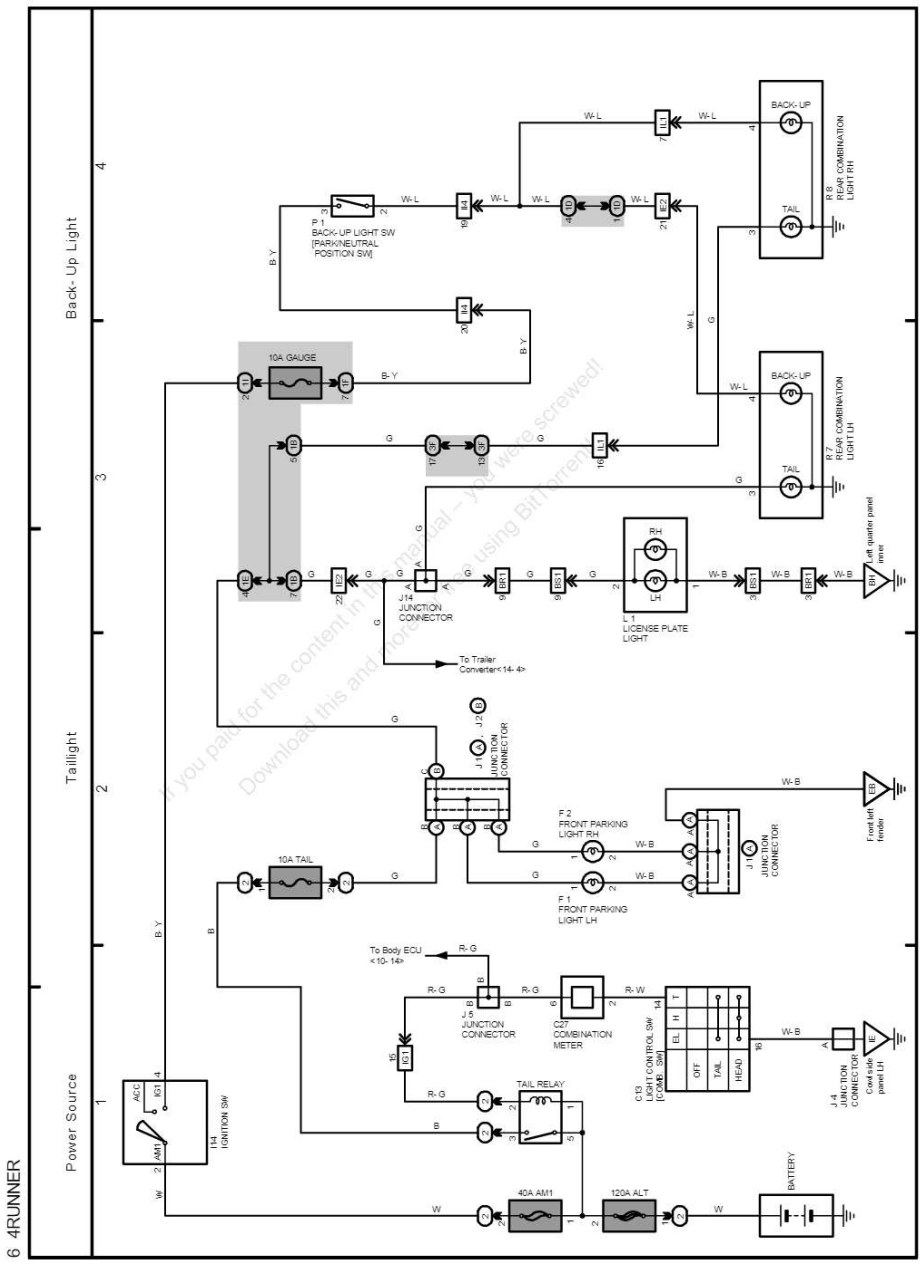
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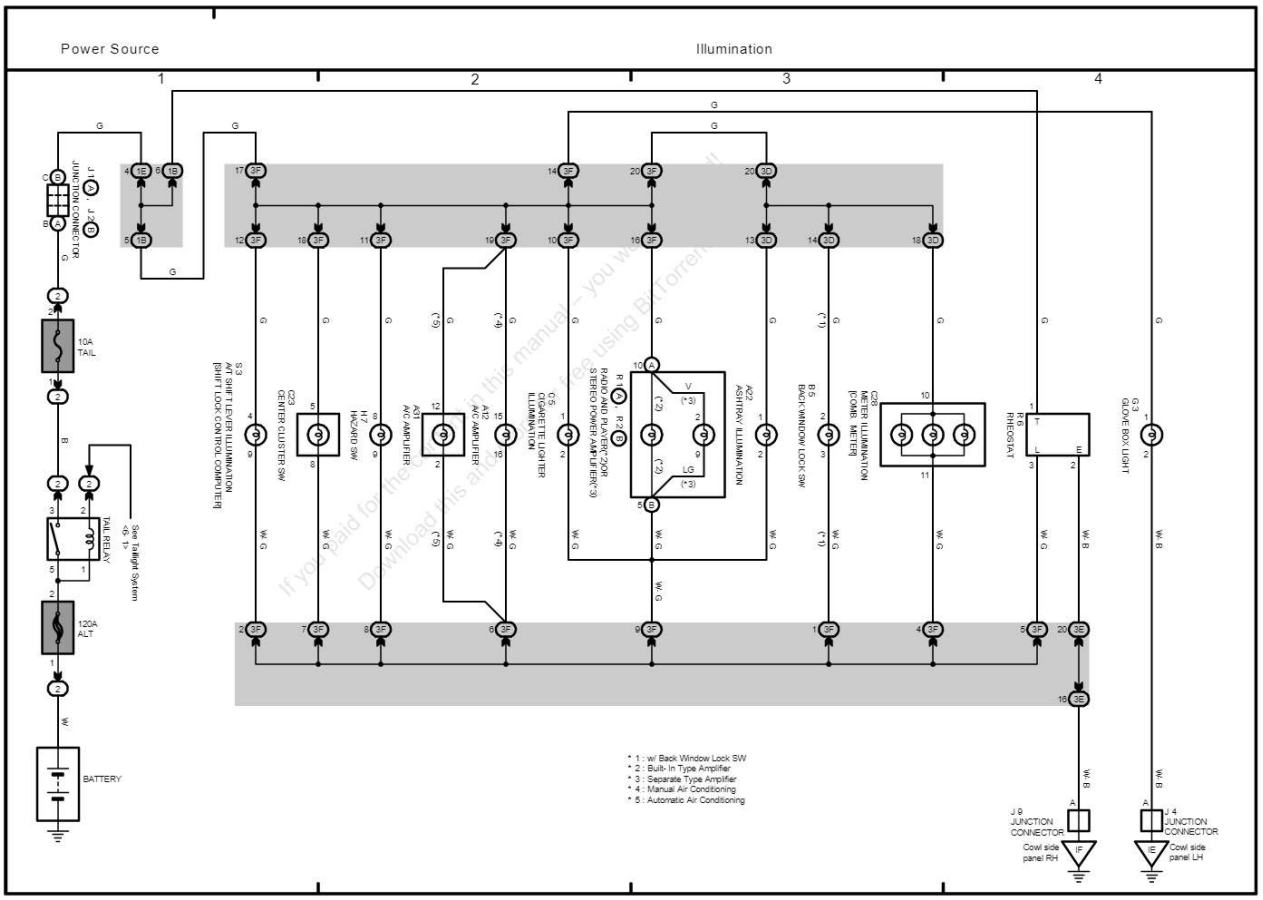
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Power Source
Headlight (w/o Daytime Running Light)
Stop Light
1
2
3
4
W-R
10A HEAD (LH)
10A HEAD (RH)
10A STOP
H1 HEADLIGHT LH
H2 HEADLIGHT RH
S4 STOP LIGHT SW
To Engine Control Module <2-9>
To VSC ECU <5-8>
To Shift Lock Control Computer <5-2>
L-B
R-Y
G-W
R-B
R
W-B
L-B
HEAD RELAY
BATTERY
C13 COMBINATION SW
LIGHT CONTROL SW
DIMMER SW
OFF
TAIL
HEAD
LOW
HIGH
FLASH
EL
T
H
HR
HL
HU
J3 JUNCTION CONNECTOR
To Body ECU <10- 1b>
HIGH BEAM
COMBINATION METER
C25
C27
J4 JUNCTION CONNECTOR
Cowl side panel LH
J14 JUNCTION CONNECTOR
To Trailer Converter <14- 4>
H18 HIGH-MOUNTED STOP LIGHT
R7 STOP LIGHT LH (REAR COMB. LIGHT LH)
R8 STOP LIGHT RH (REAR COMB. LIGHT RH)
Left quarter panel inner

M OVERALL ELECTRICAL WIRING DIAGRAM

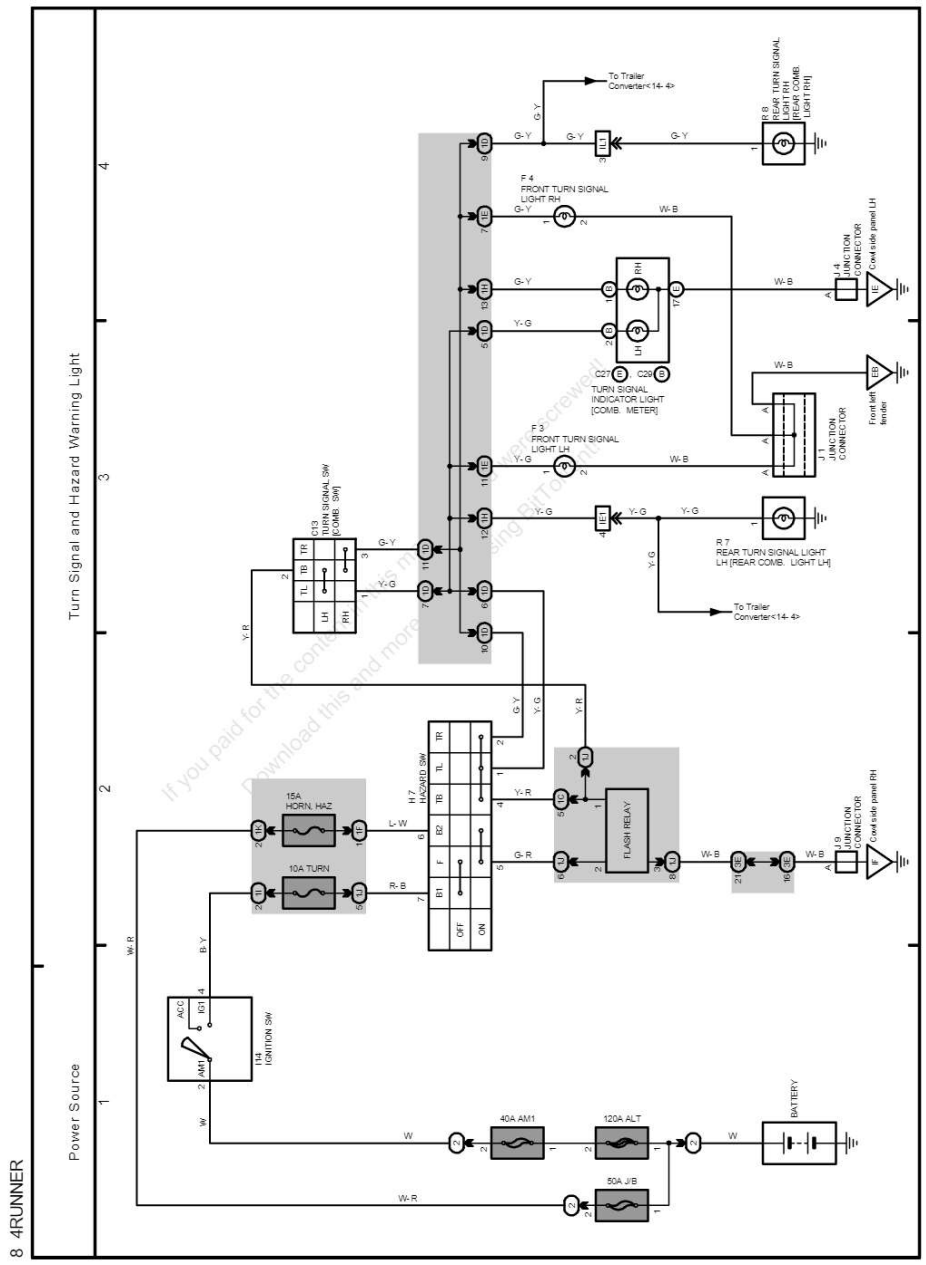


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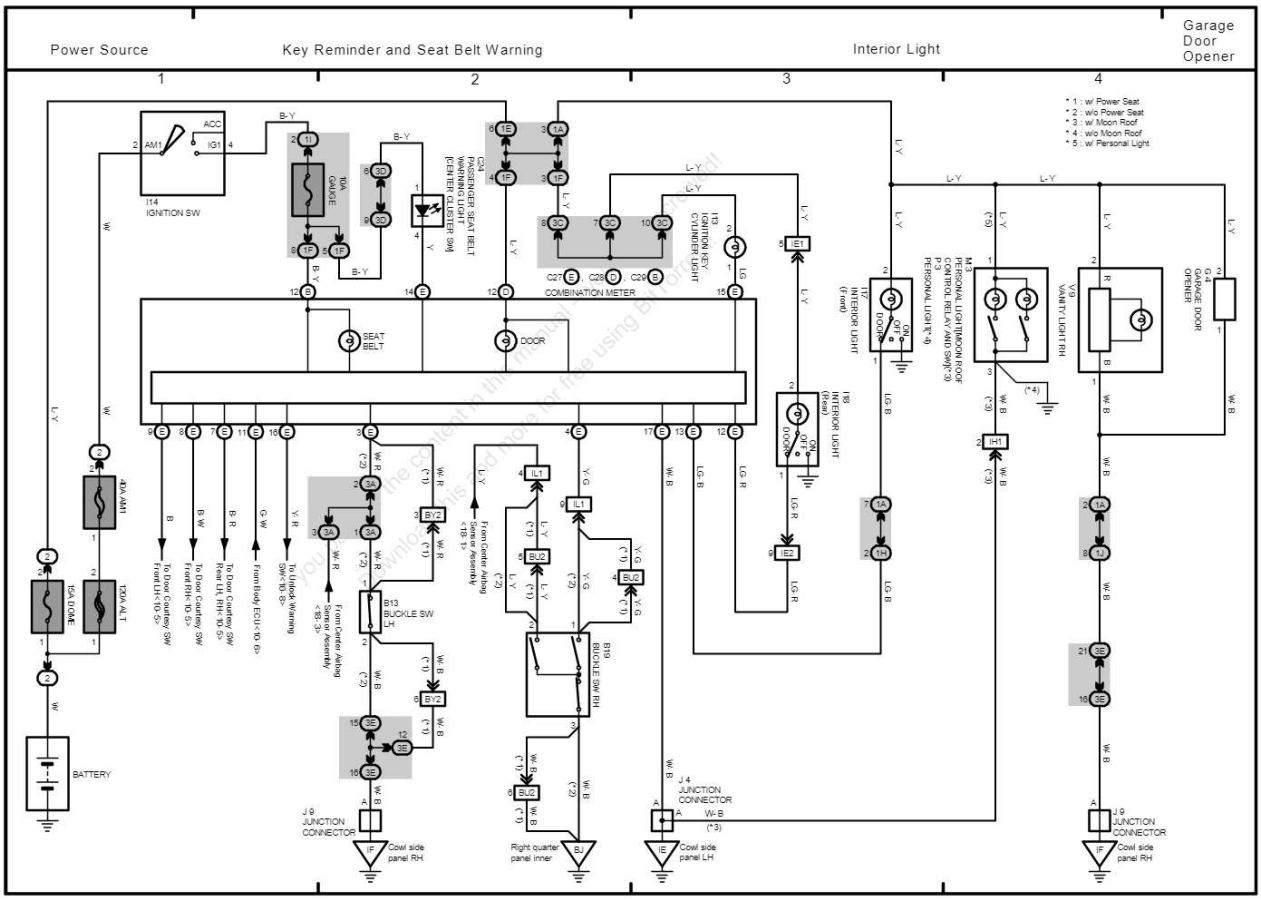


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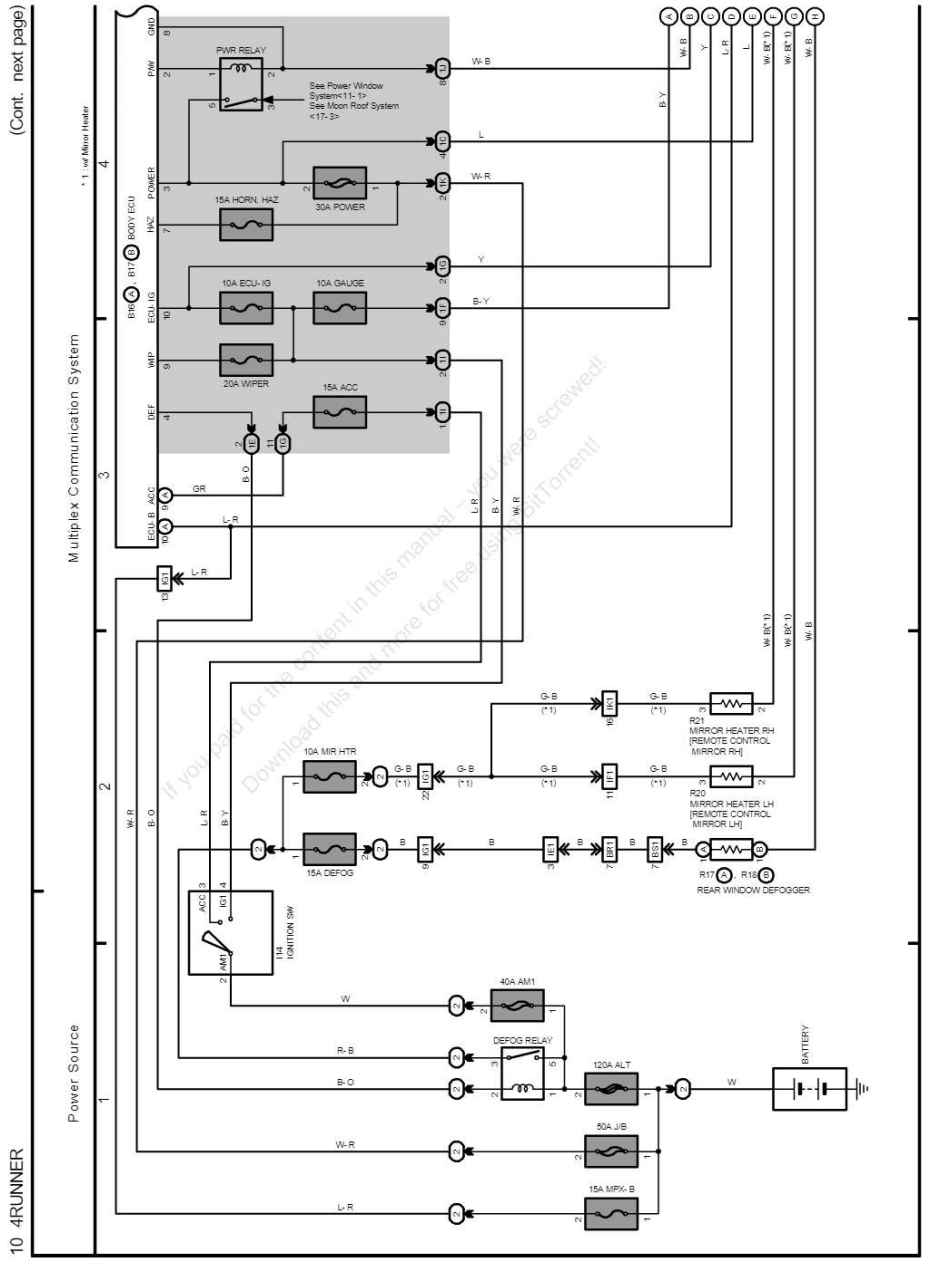


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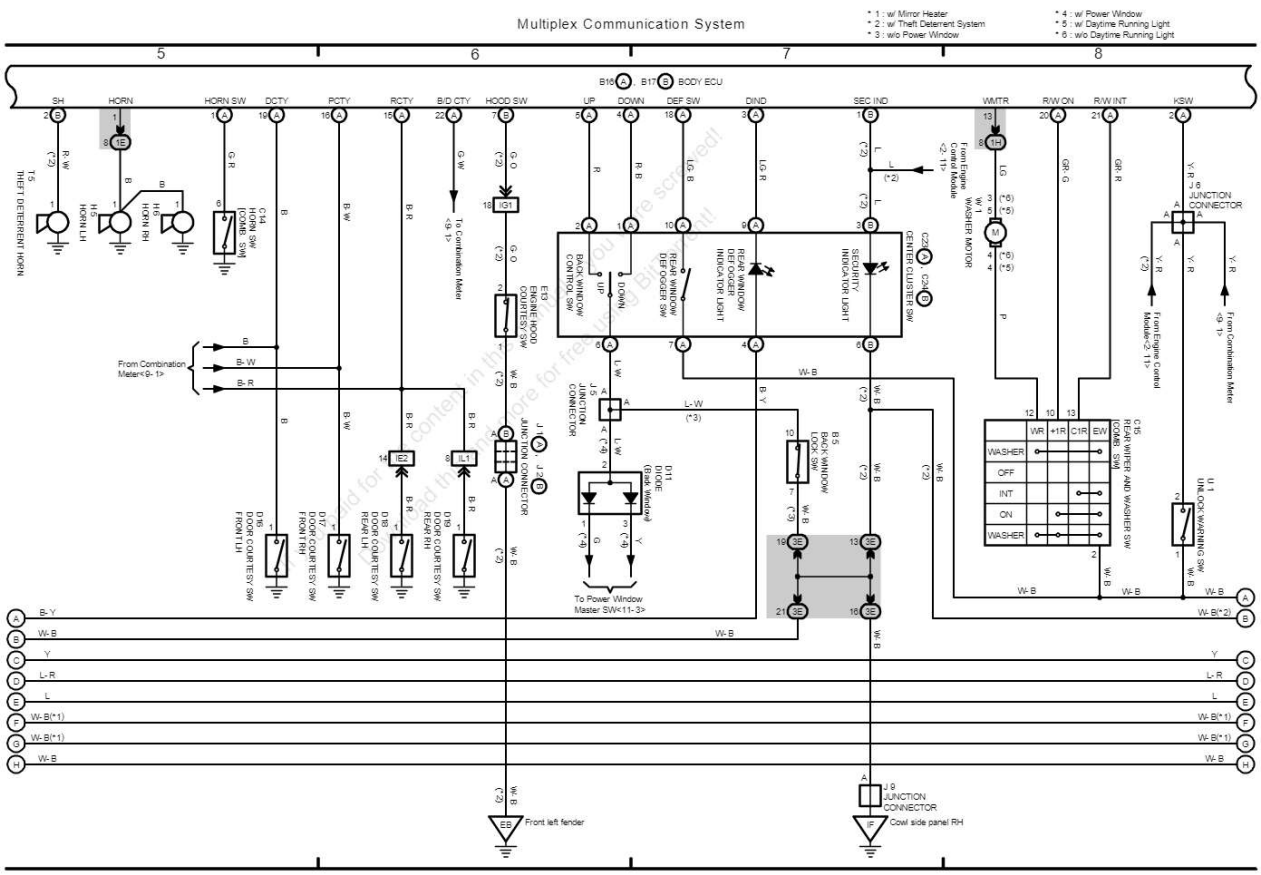


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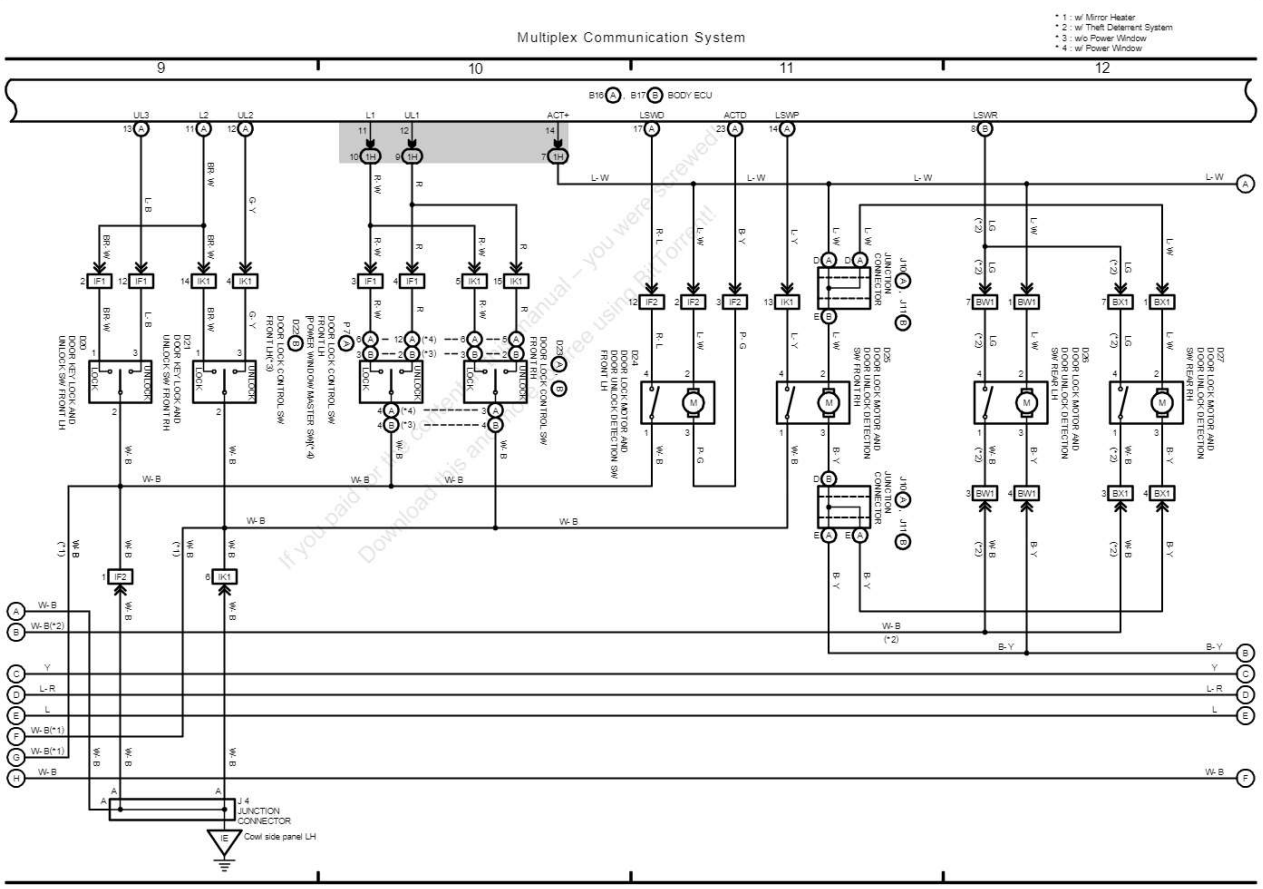
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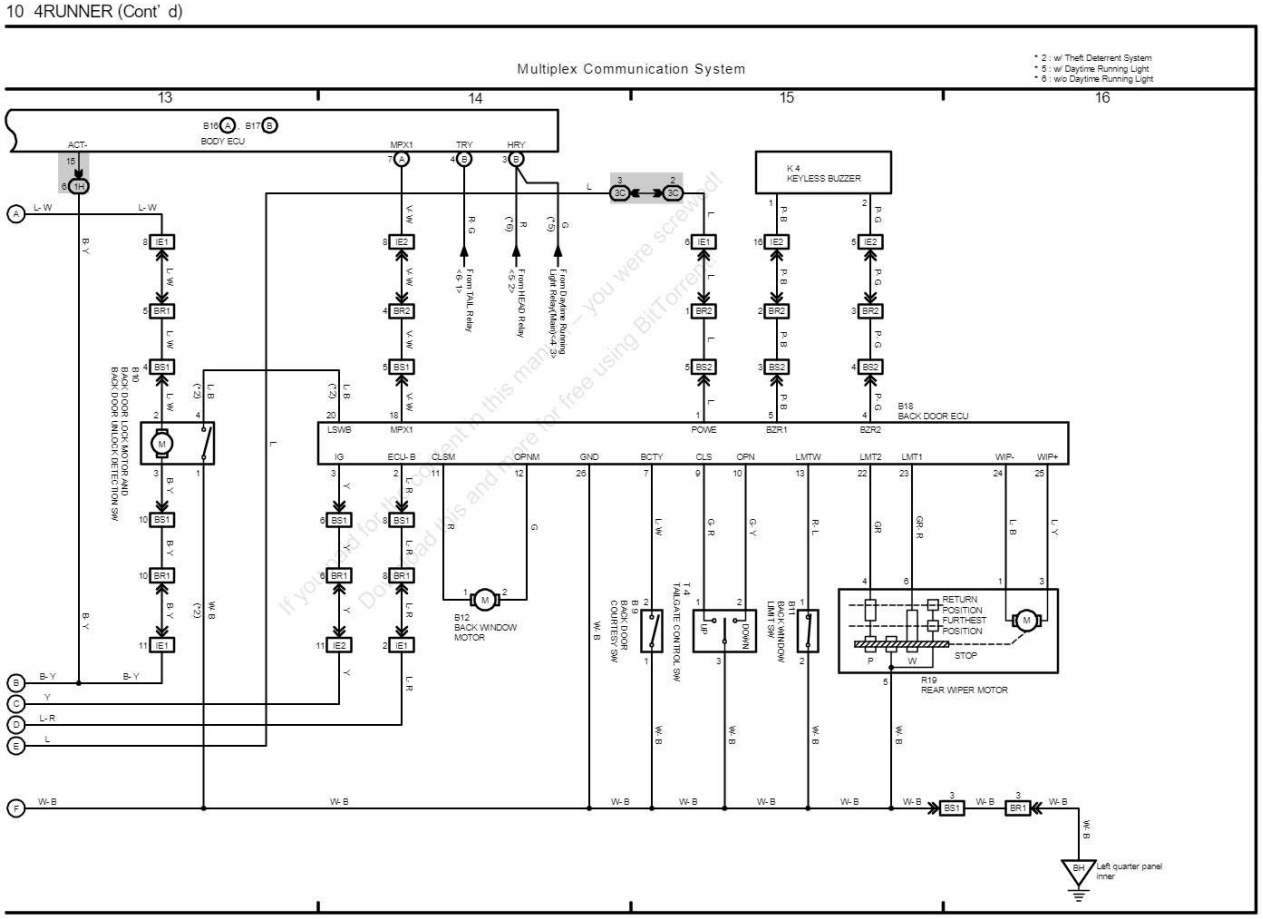
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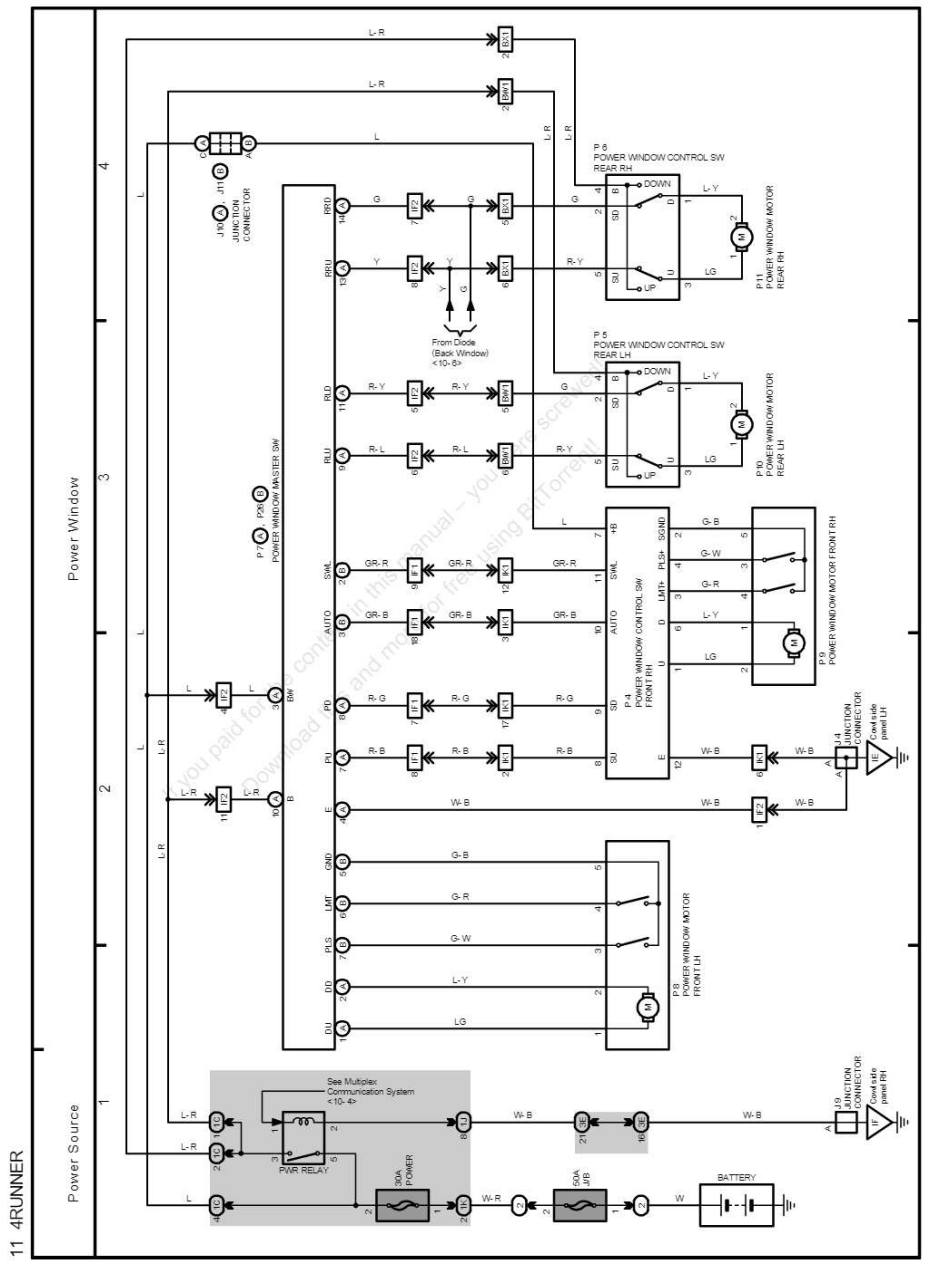


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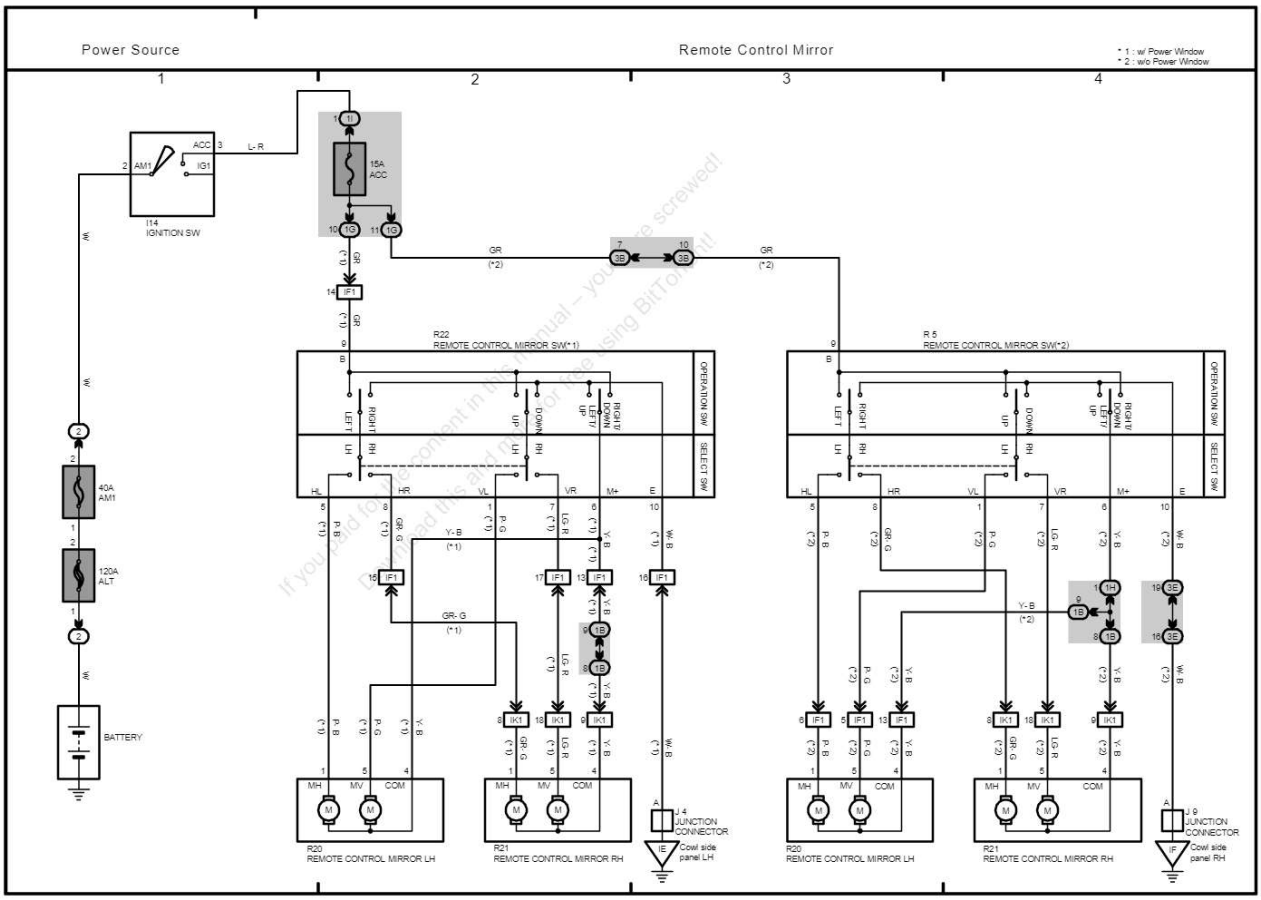


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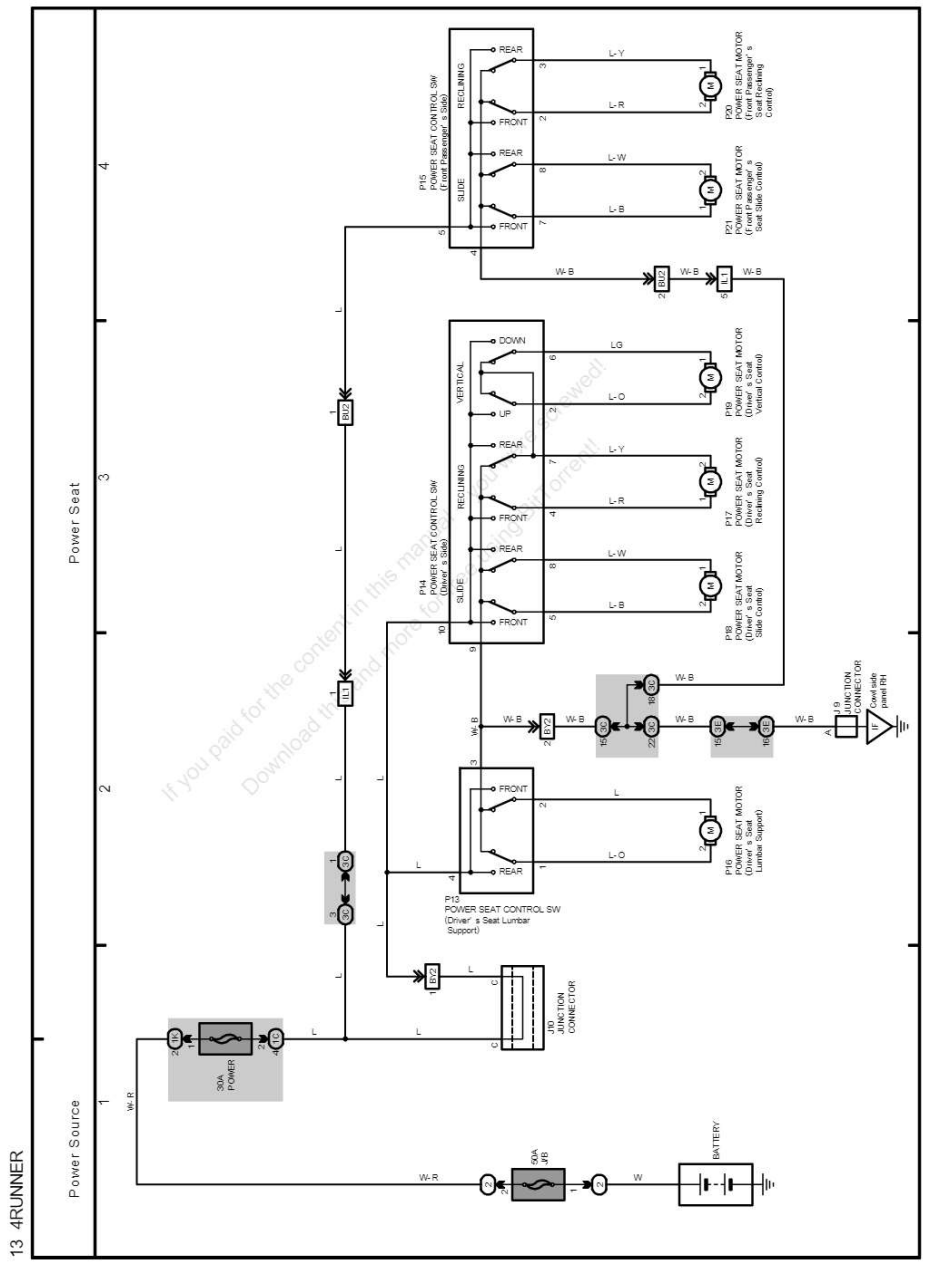


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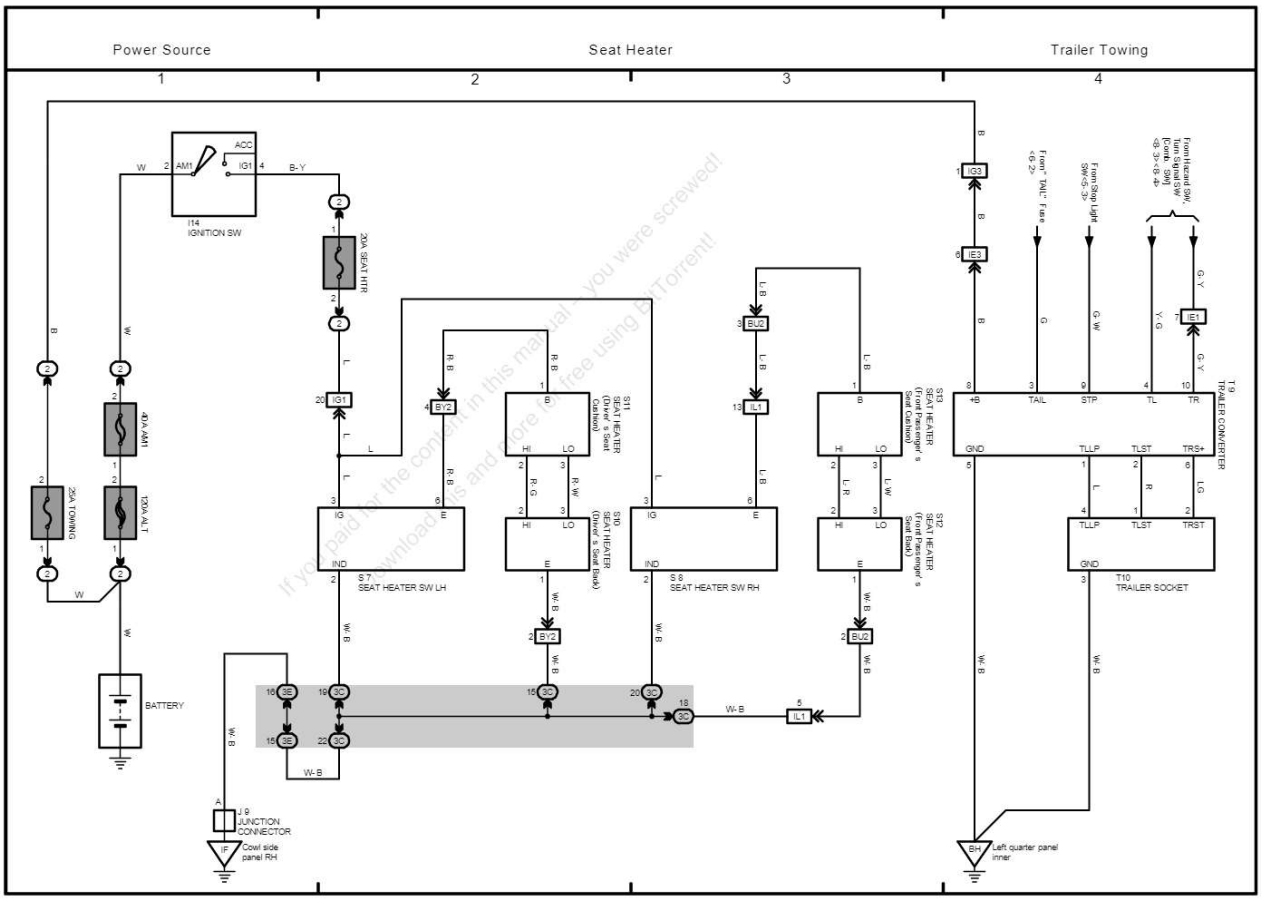


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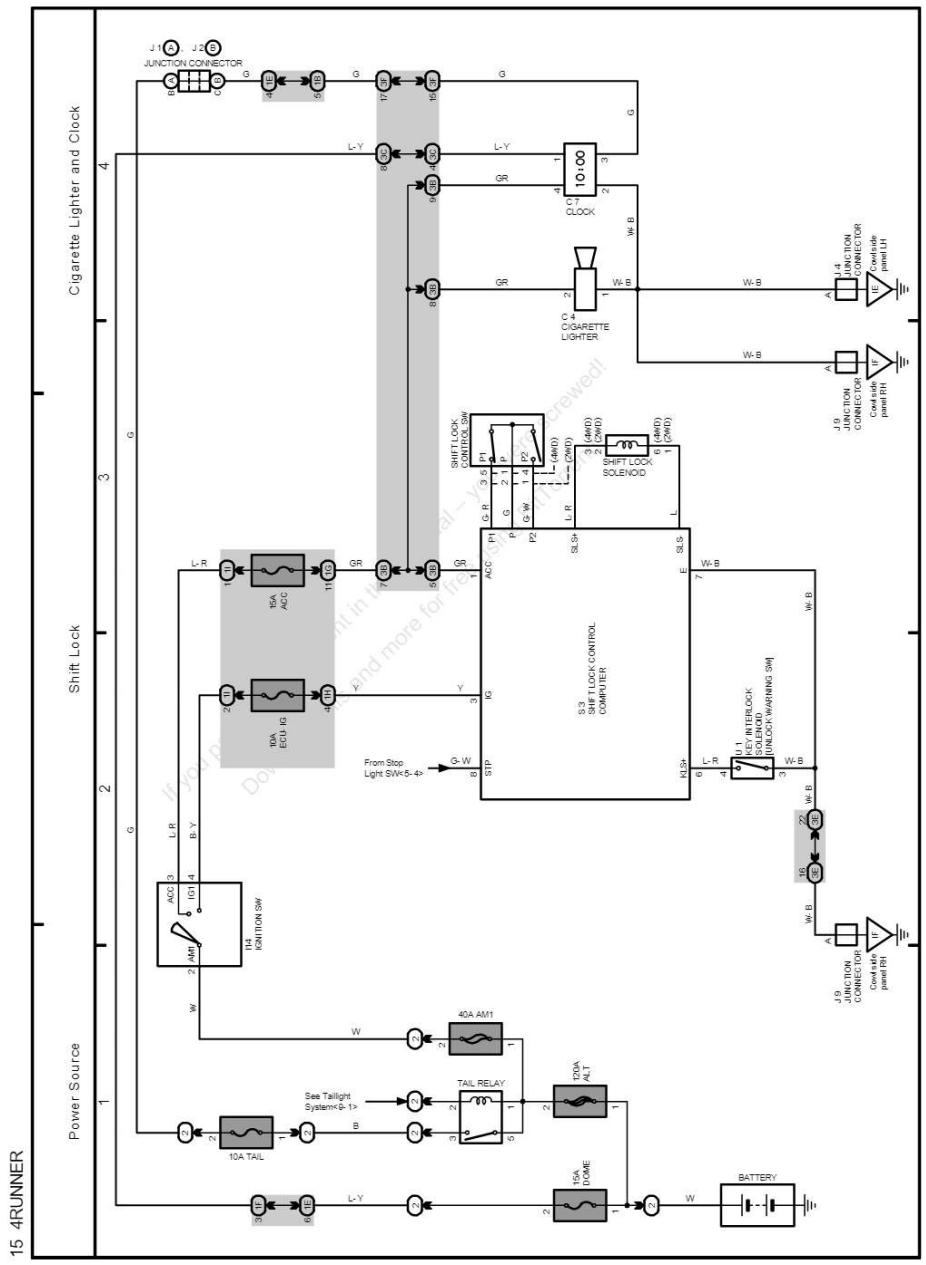


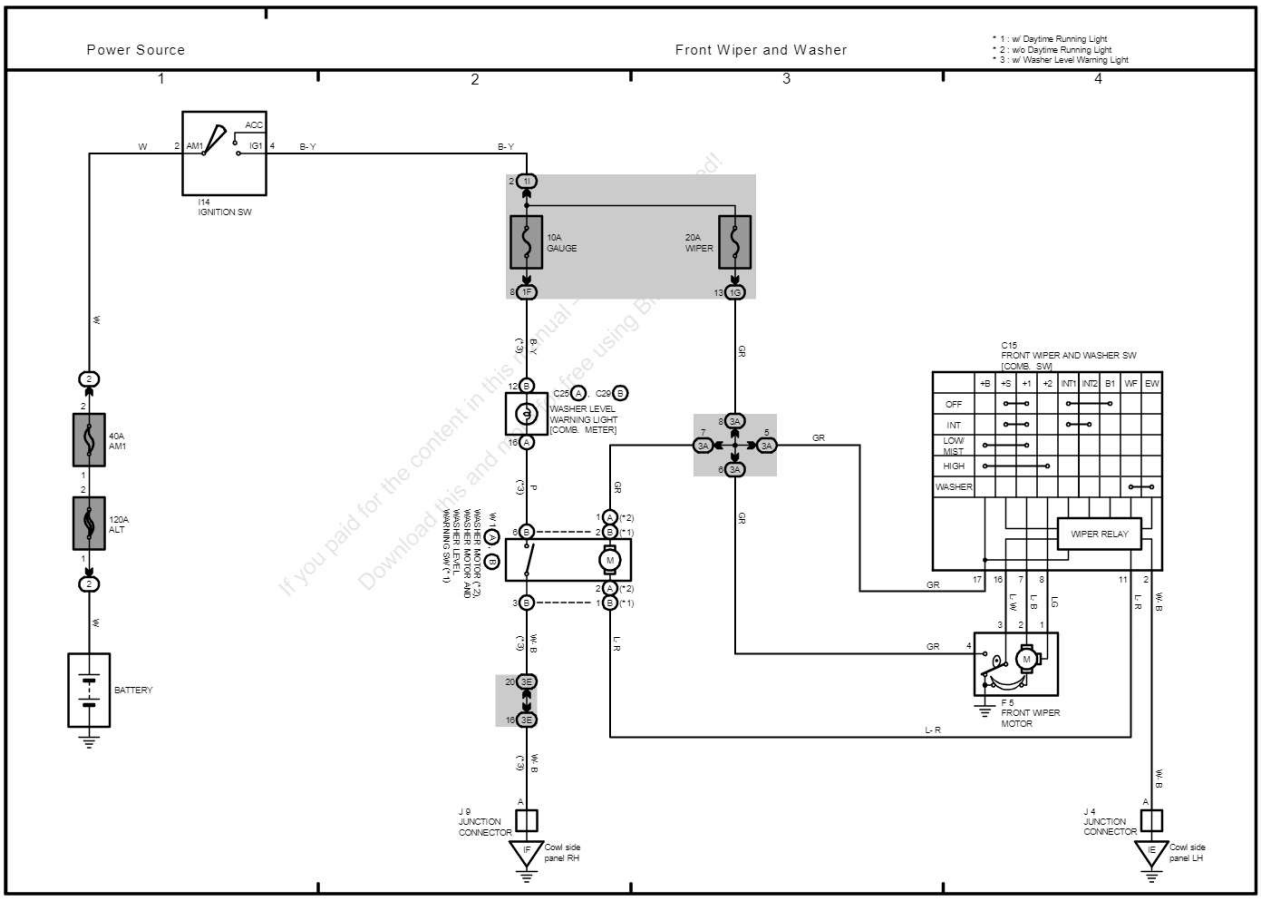
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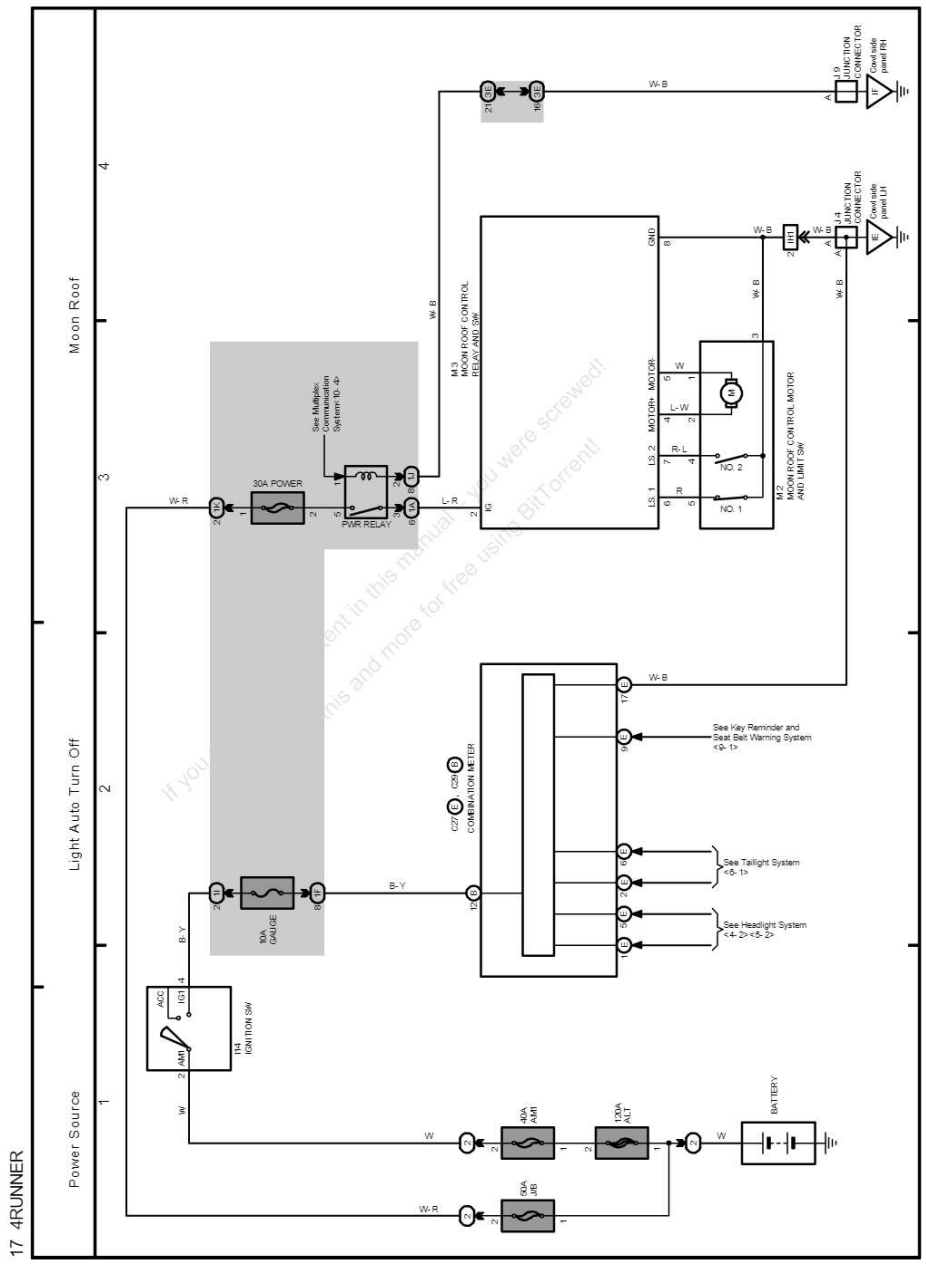
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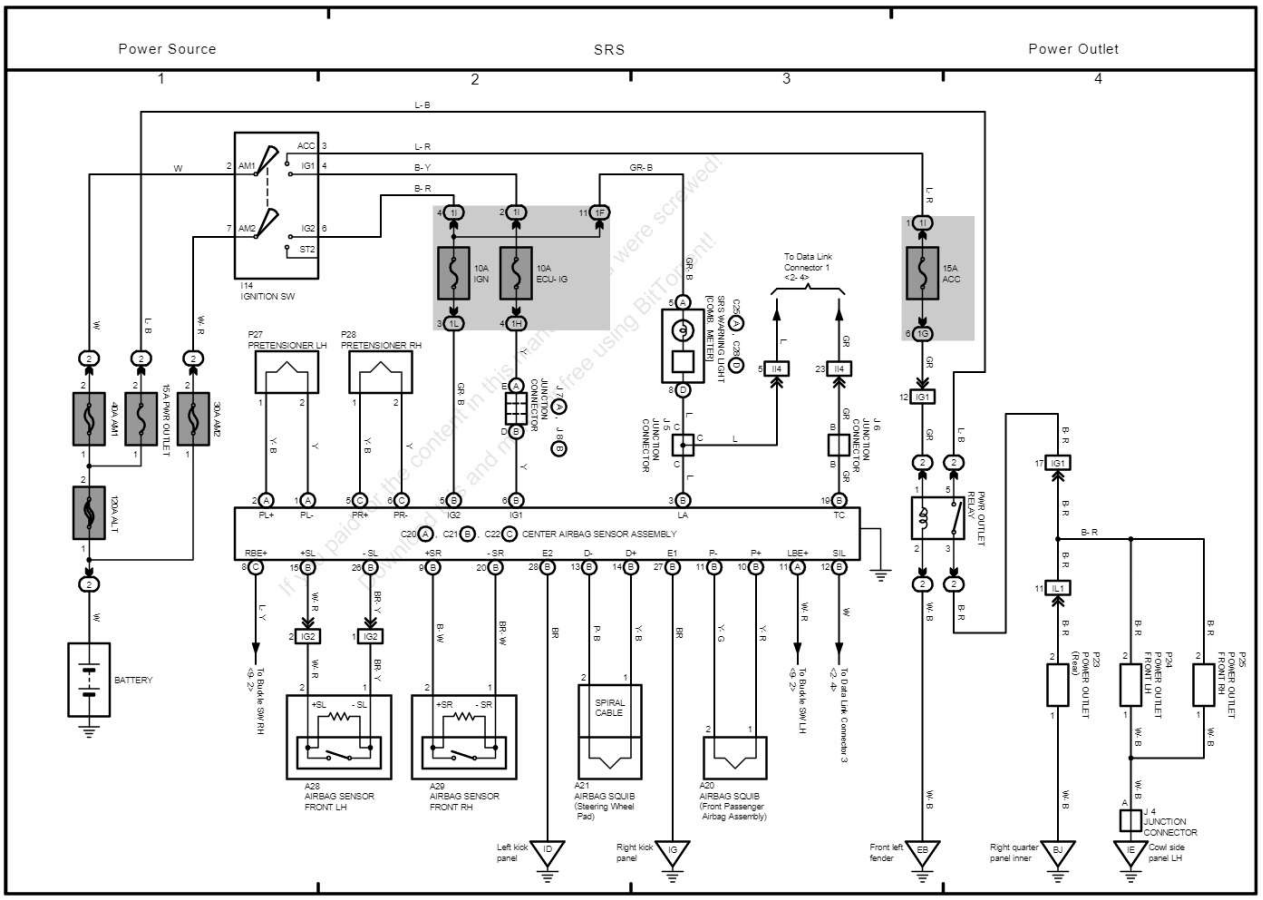


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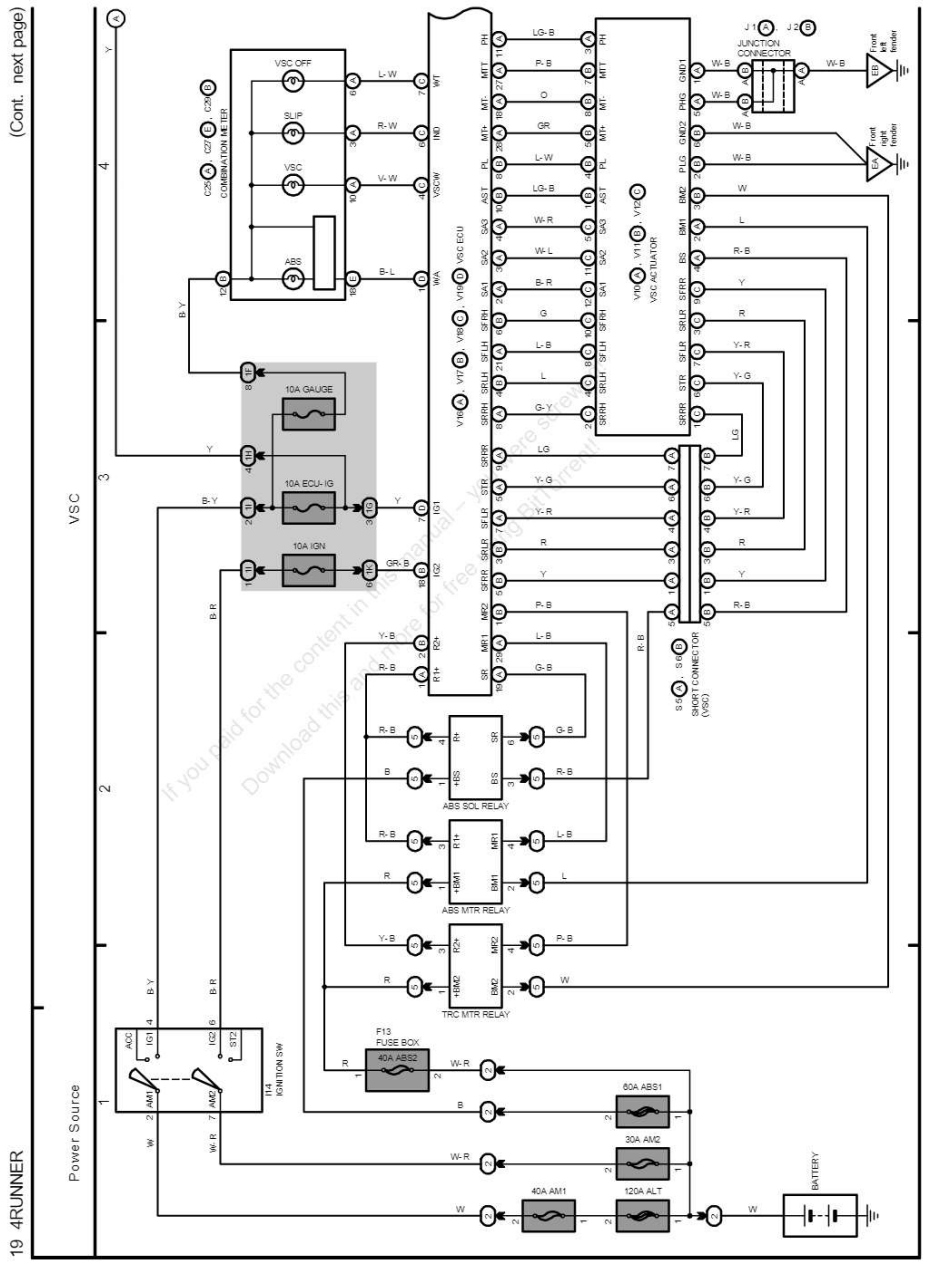


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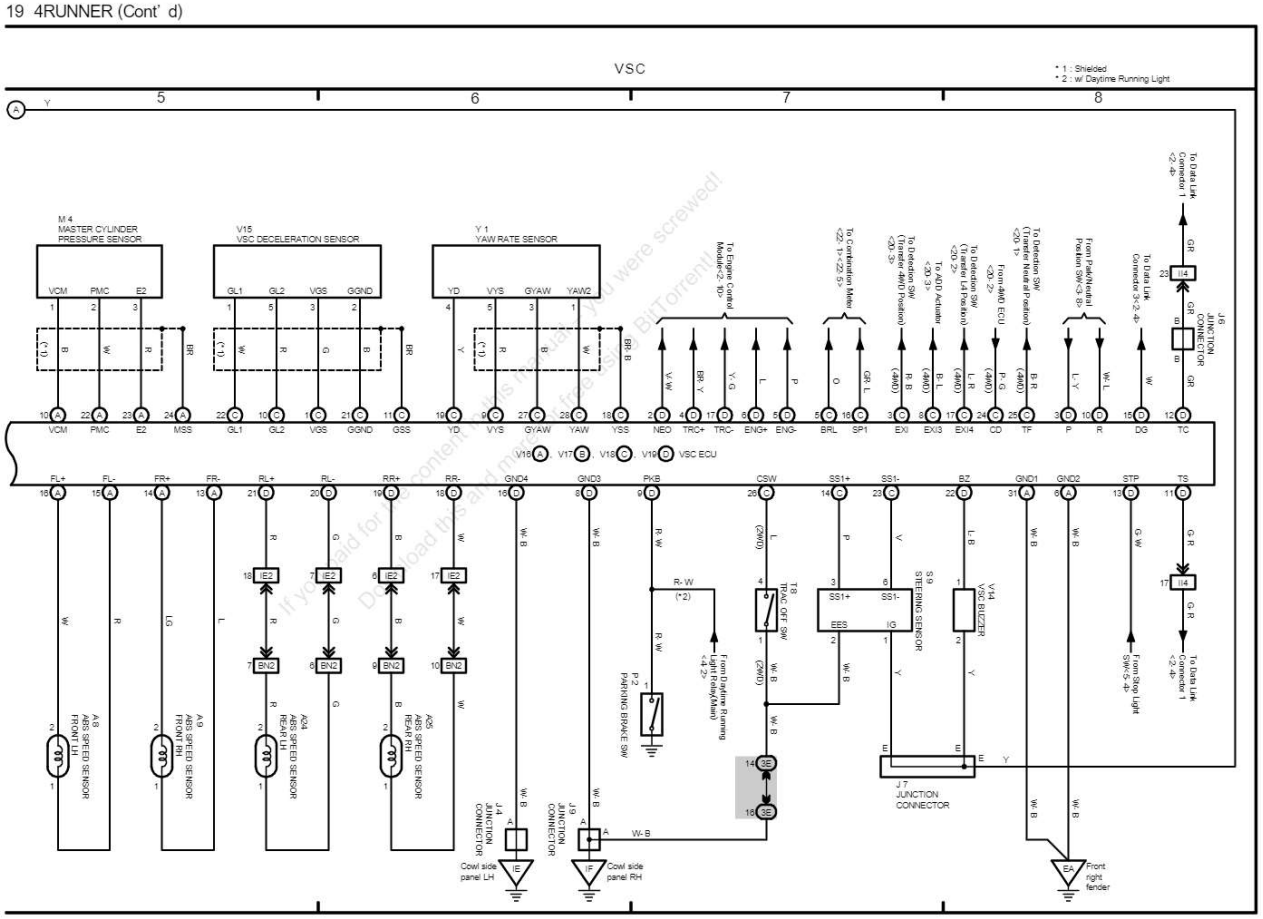


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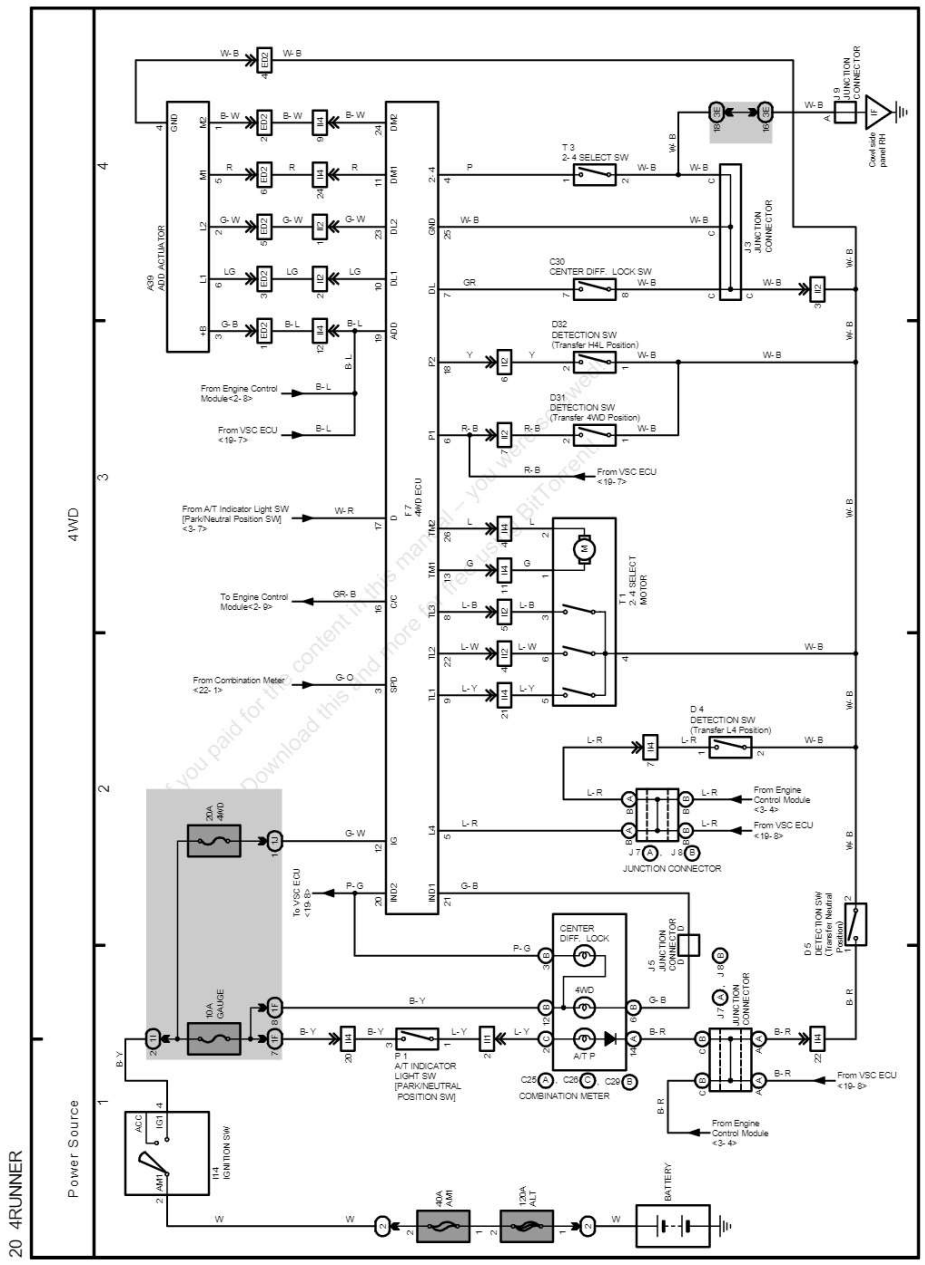


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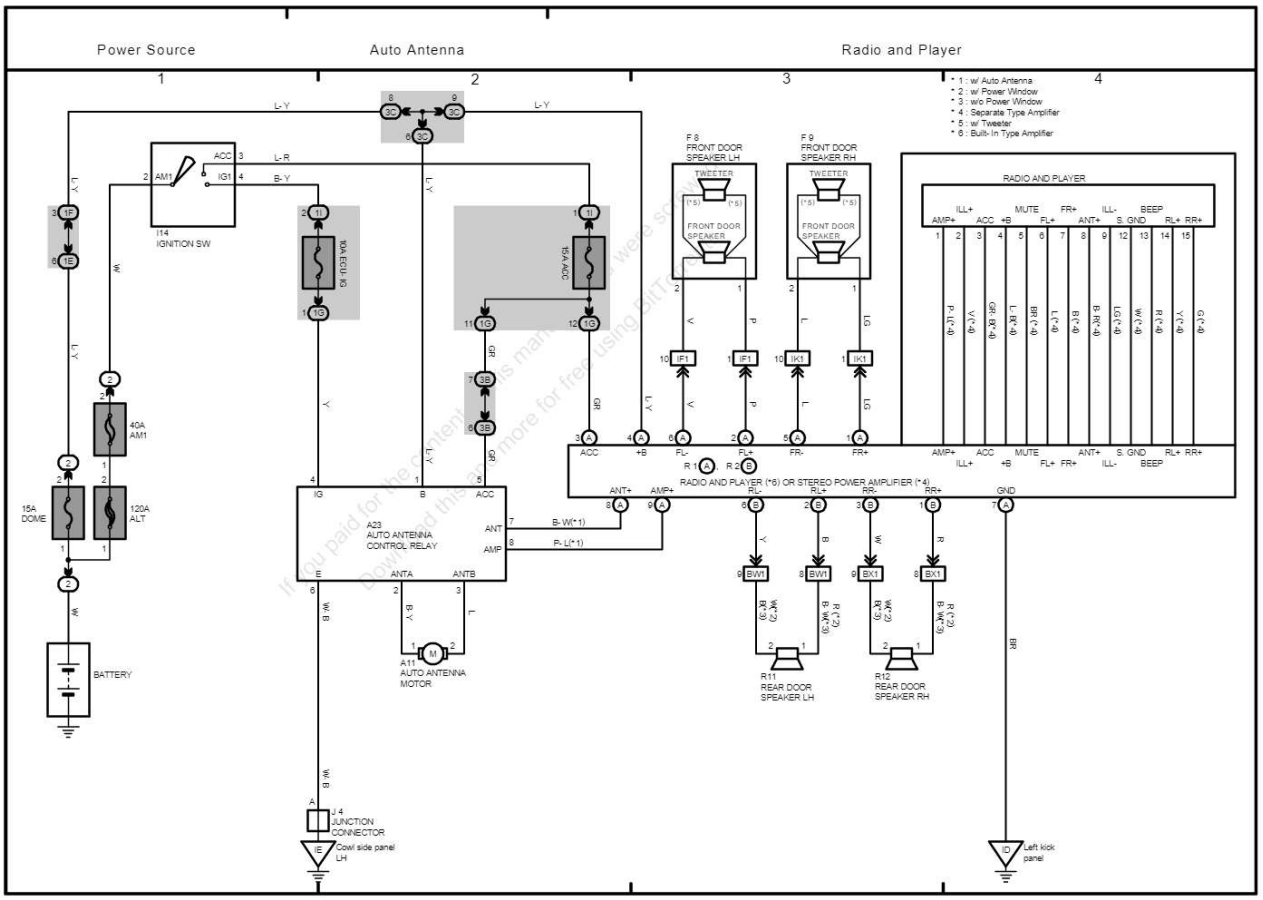


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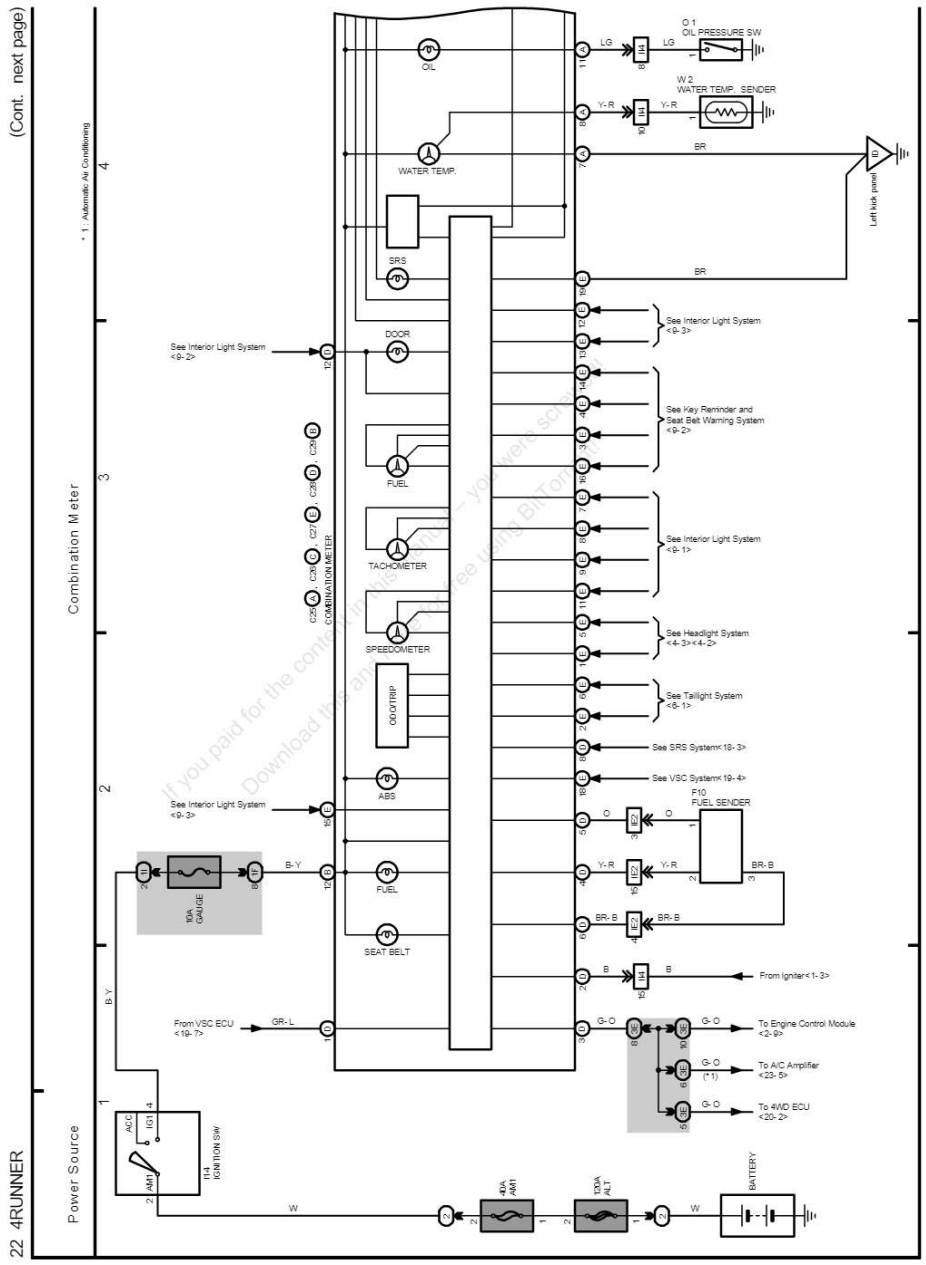


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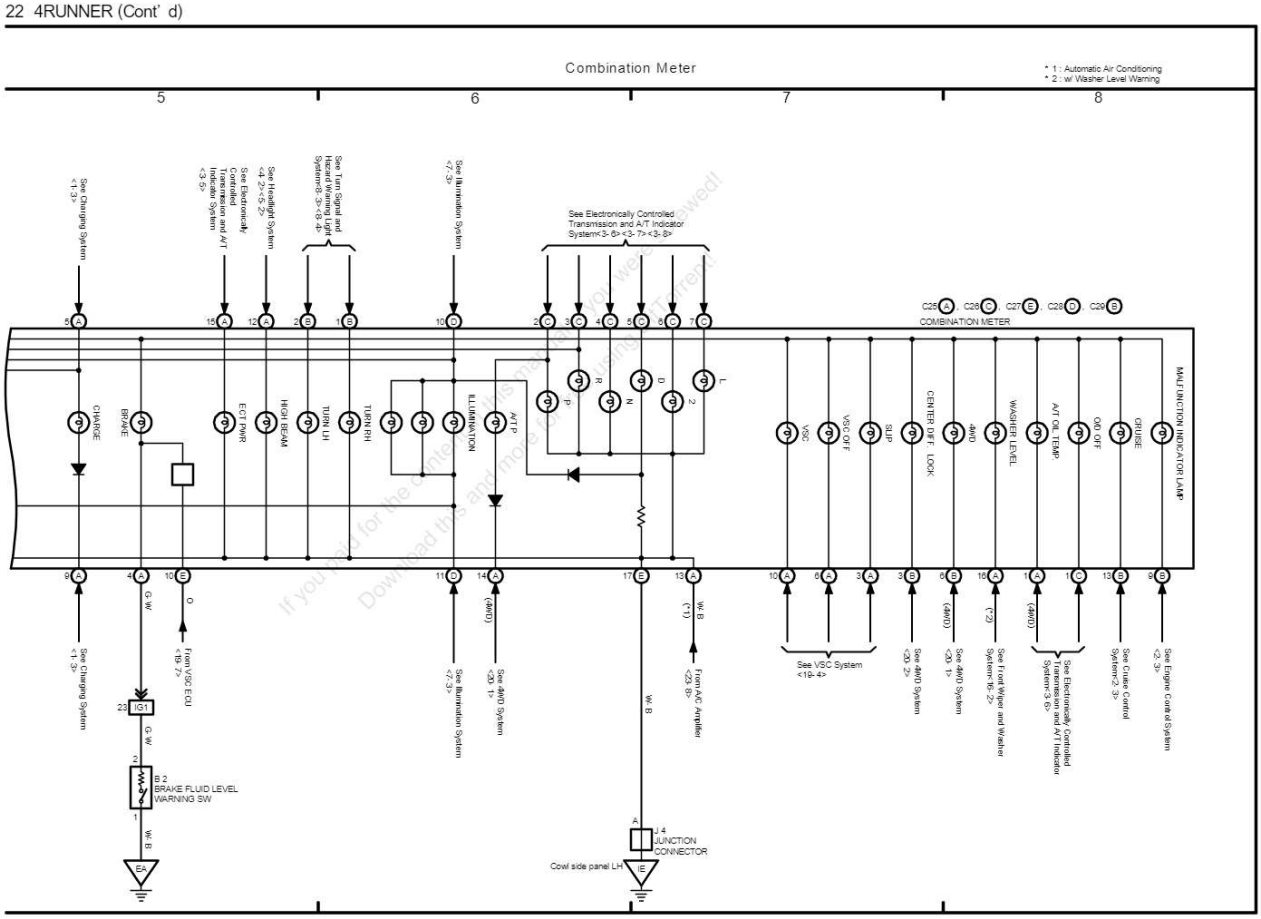


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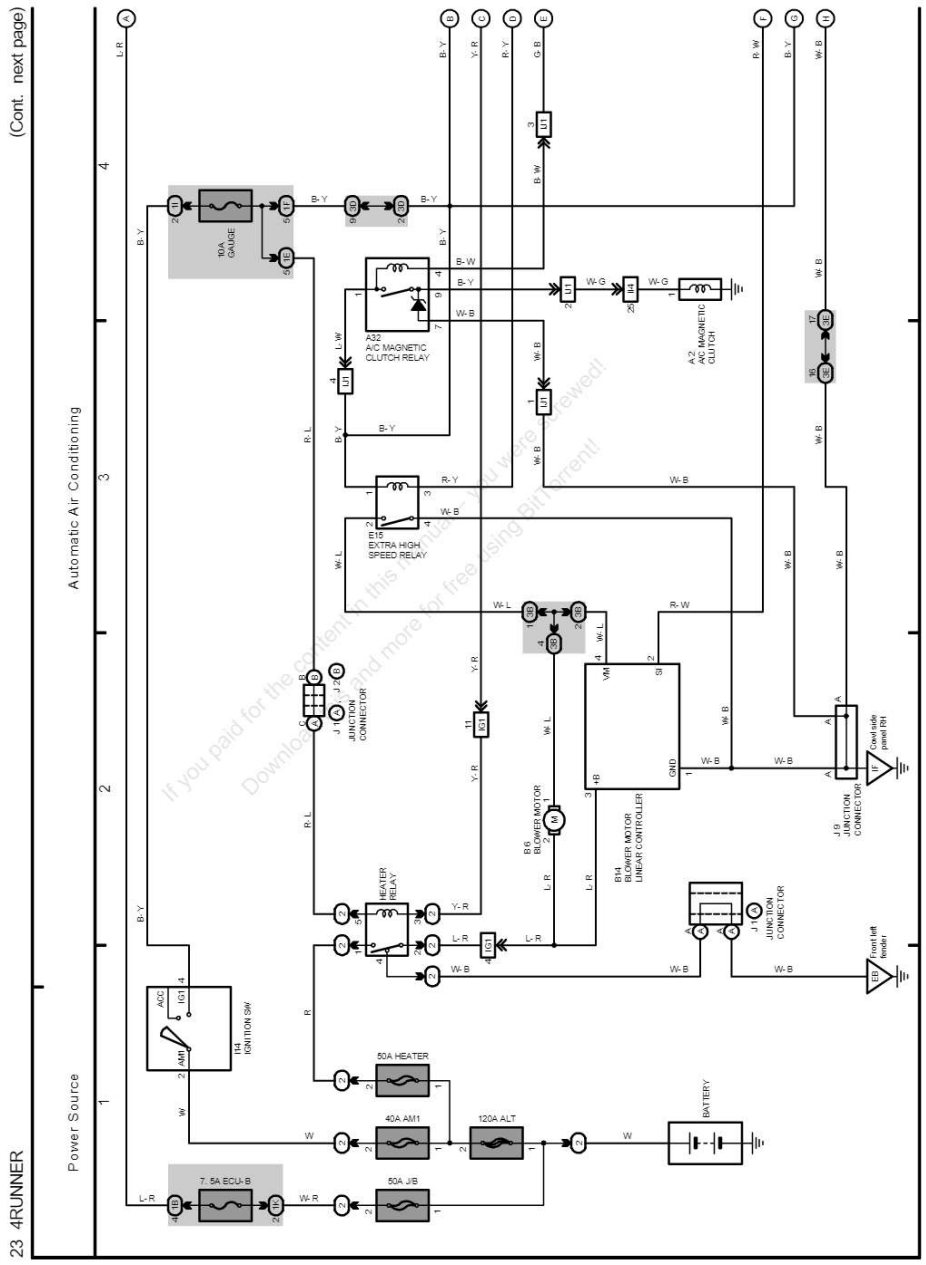


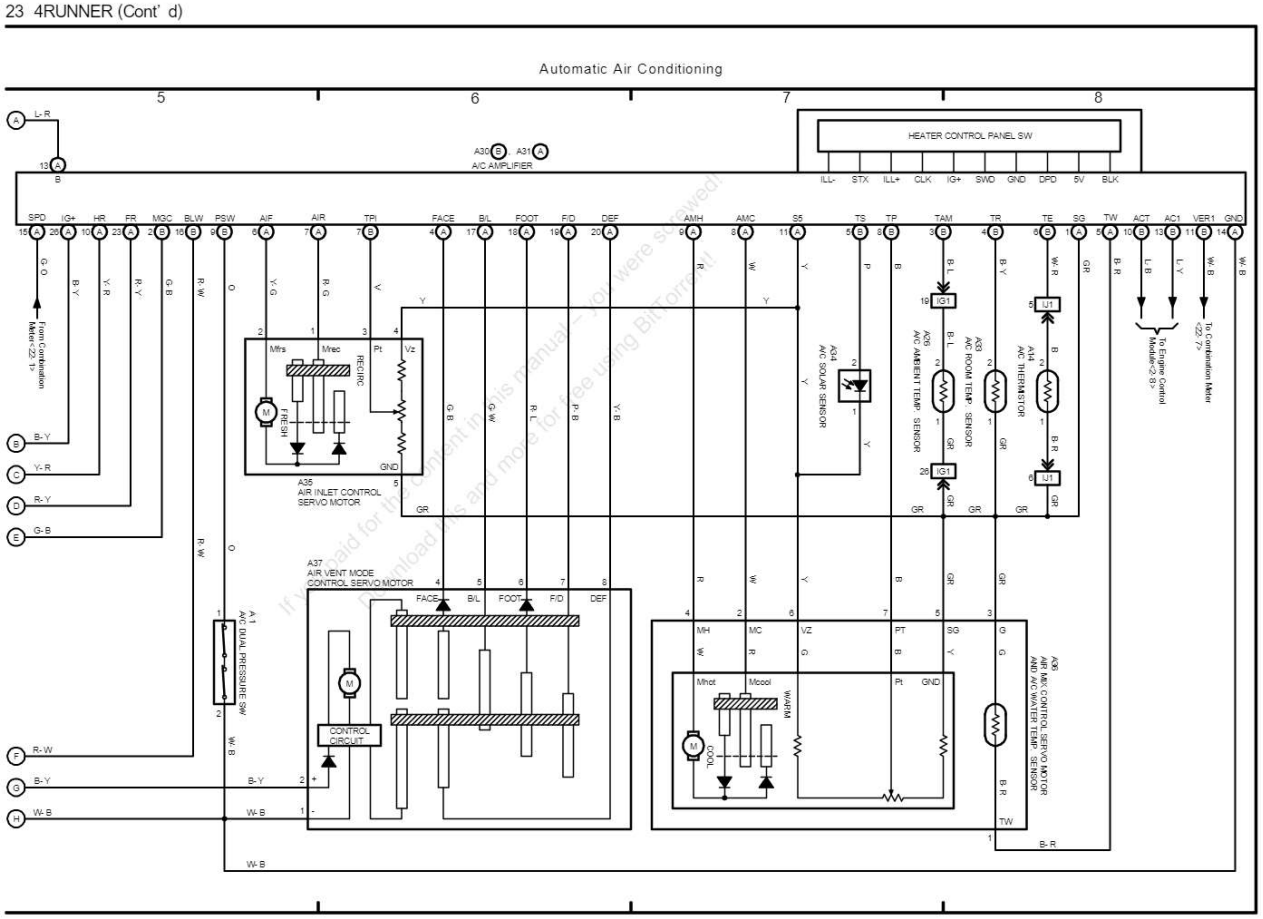
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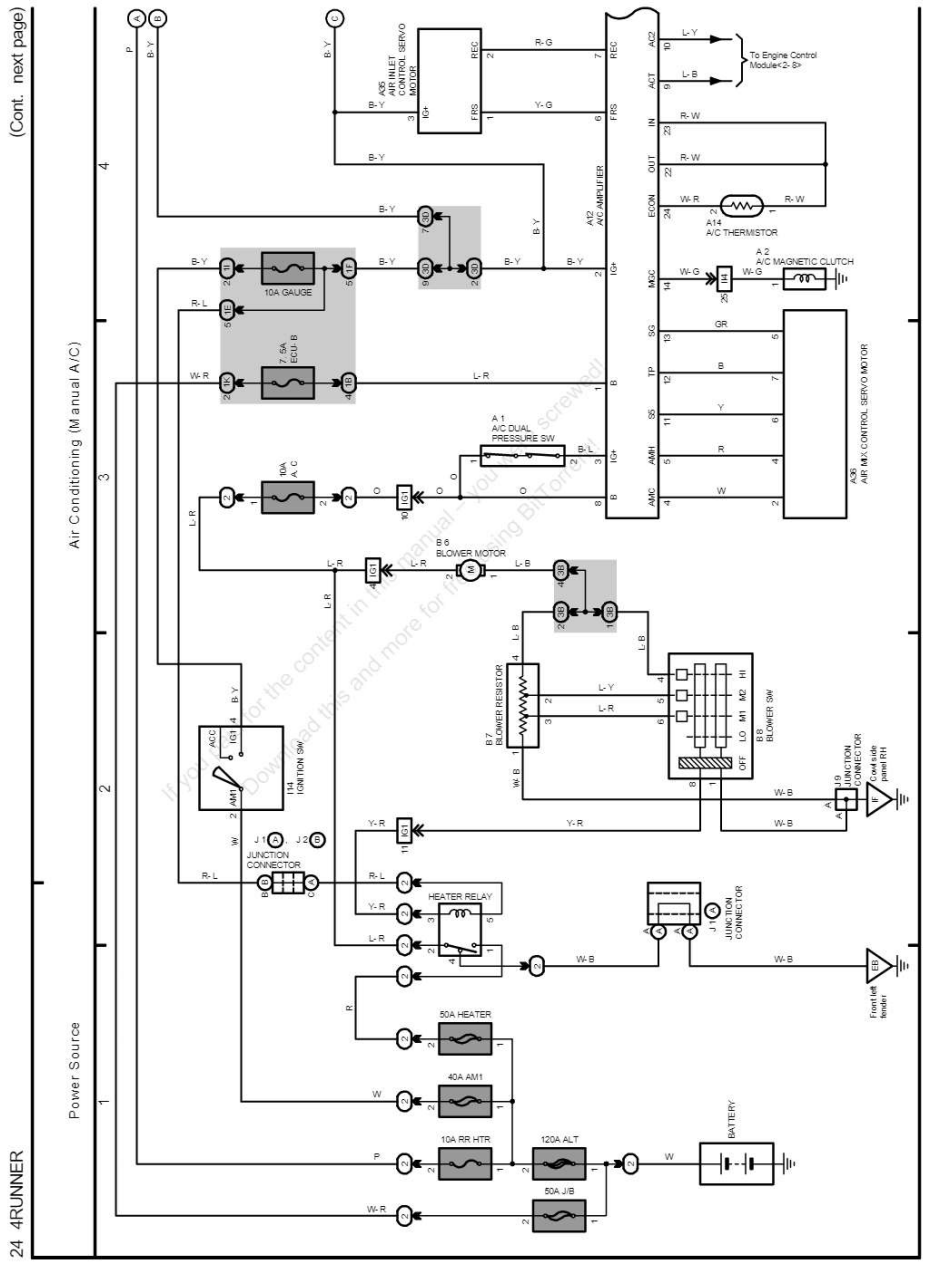
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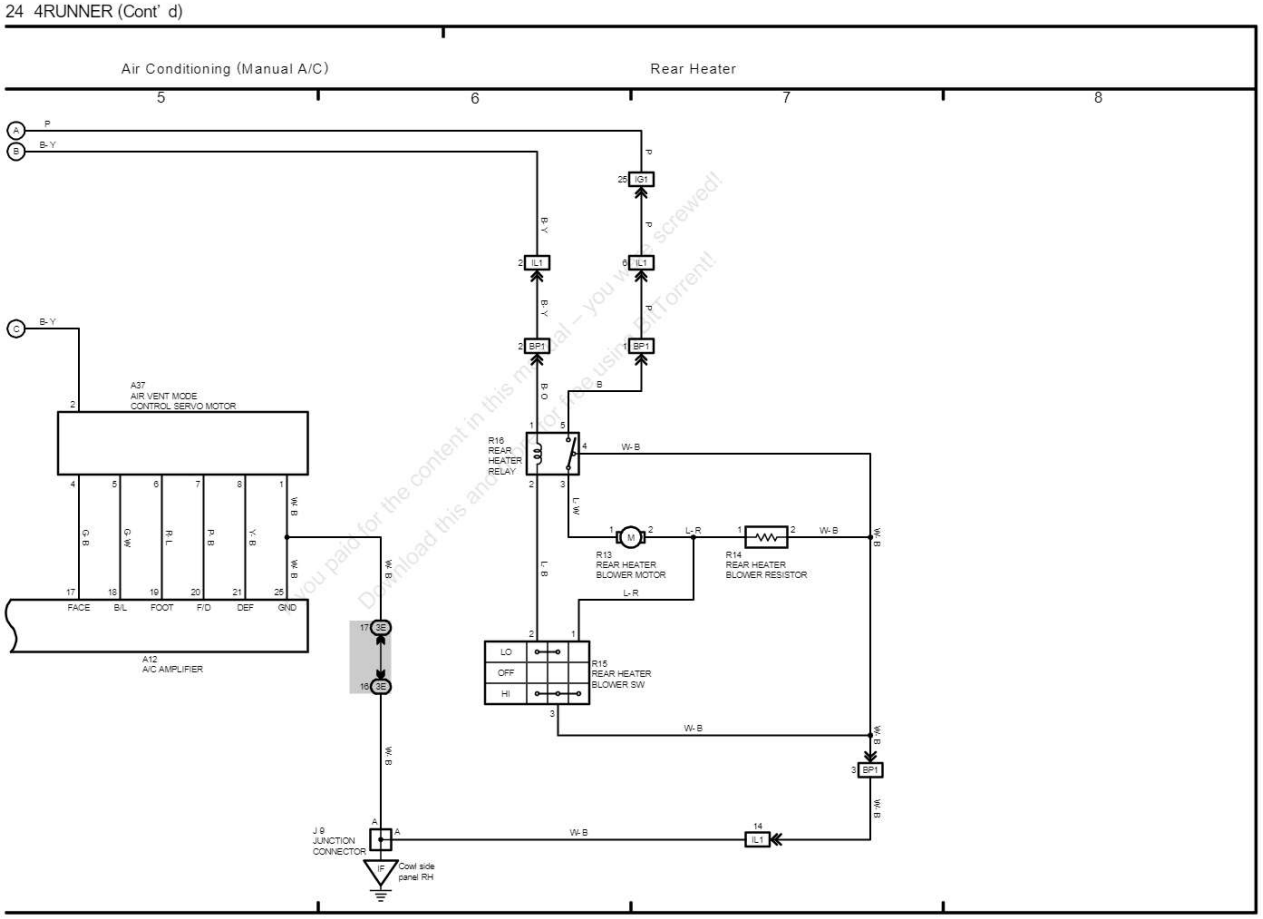


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