## FOREWORD

This wiring diagram manual has been prepared to provide information on the electrical system of the 1999 CAMRY CNG.

Applicable models: SXV 23 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. |
|---|---|
| ° 1999 CAMRY Repair Manual | |
| Volume 1 | RM654U1 |
| Volume 2 | RM654U2 |
| ° 1999 CAMRY CNG Repair Manual Supplement | RM683U |
| ° 1999 CAMRY CNG New Car Features | NCF167U |

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.<br>This section is closely related to the system circuit. |
| G | ELECTRICAL WIRING ROUTING | Describes position of Parts Connectors, Splice points, Ground points, etc.<br>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.<br>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.)

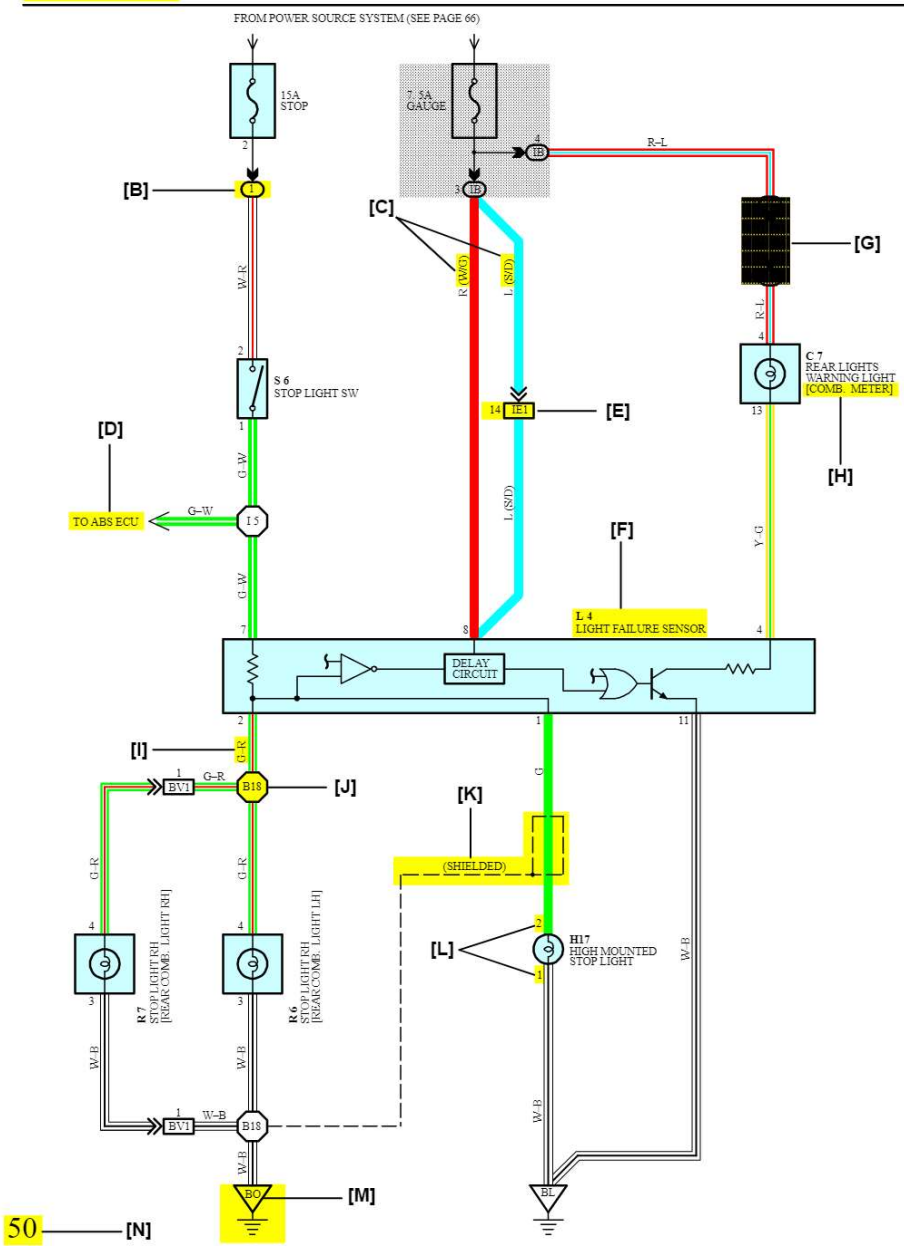
When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Point section). See the System Outline to understand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

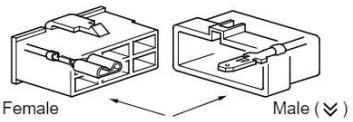
**[B]** : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B

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.

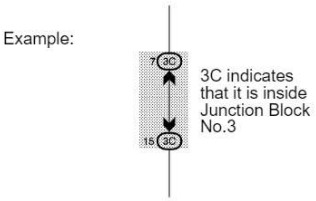



The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

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.



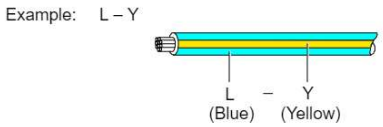

**[H]** : When 2 parts both use one connector in common, the parts connector name used in the wire routing section is shown in square brackets [ ].

**[I]** : Indicates the wiring color.

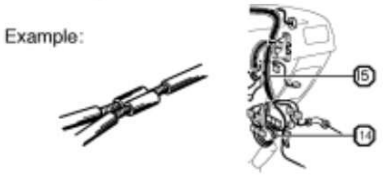
Wire colors are indicated by an alphabetical code.

| | | | | | |
|---|---|---|---|---|---|
| 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).

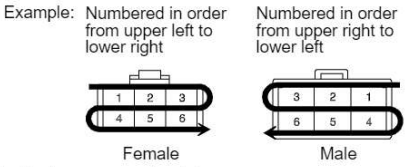



The Location of splice Point I 5 is indicated by the shaded section.

**[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.

# B HOW TO USE THIS MANUAL

[O] **SYSTEM OUTLINE**

Current is applied at all times through the STOP fuse to TERMINAL 2 of the stop light SW.
When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 8 of the light failure sensor, and also flows through the rear lights warning light to TERMINAL 4 of the light failure sensor.

**STOP LIGHT DISCONNECTION WARNING**

When the ignition SW is turned on and the brake pedal is pressed (Stop light SW on), if the stop light circuit is open, the current flowing from TERMINAL 7 of the light failure sensor to TERMINALS 1, 2 changes, so the light failure sensor detects the disconnection and the warning circuit of the light failure sensor is activated.
As a result, the current flows from TERMINAL 4 of the light failure sensor to TERMINAL 11 to GROUND and turns the rear lights warning light on. By pressing the brake pedal, the current flowing to TERMINAL 8 of the light failure sensor keeps the warning circuit on and holds the warning light on until the ignition SW is turned off.

[P] **SERVICE HINTS**

**S6 STOP LIGHT SW**

2–1 : Closed with the brake pedal depressed

**L4 LIGHT FAILURE SENSOR**

1, 2, 7–GROUND : Approx. **12** volts with the stop light SW on
4, 8–GROUND : Approx. **12** volts with the ignition SW at **ON** position
11–GROUND : Always continuity

[Q] ○ : **PARTS LOCATION**

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

[R] ▭ : **RELAY BLOCKS**

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

[S] ▬ : **JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

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

[T] □ : **CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

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

[U] ▽ : **GROUND POINTS**

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

[V] ⬡ : **SPLICE POINTS**

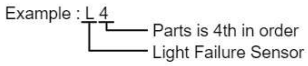
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I5 | 44 | Cowl Wire | B18 | 50 | Luggage Room Wire |

**[O]** : Explains the system outline.

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

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

Example : Part "L4" (Light Failure Sensor) is on page 36 of the manual.
* The letter in the code is from the first letter of the part, and the number indicates its order in parts starting with that letter.




**[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.

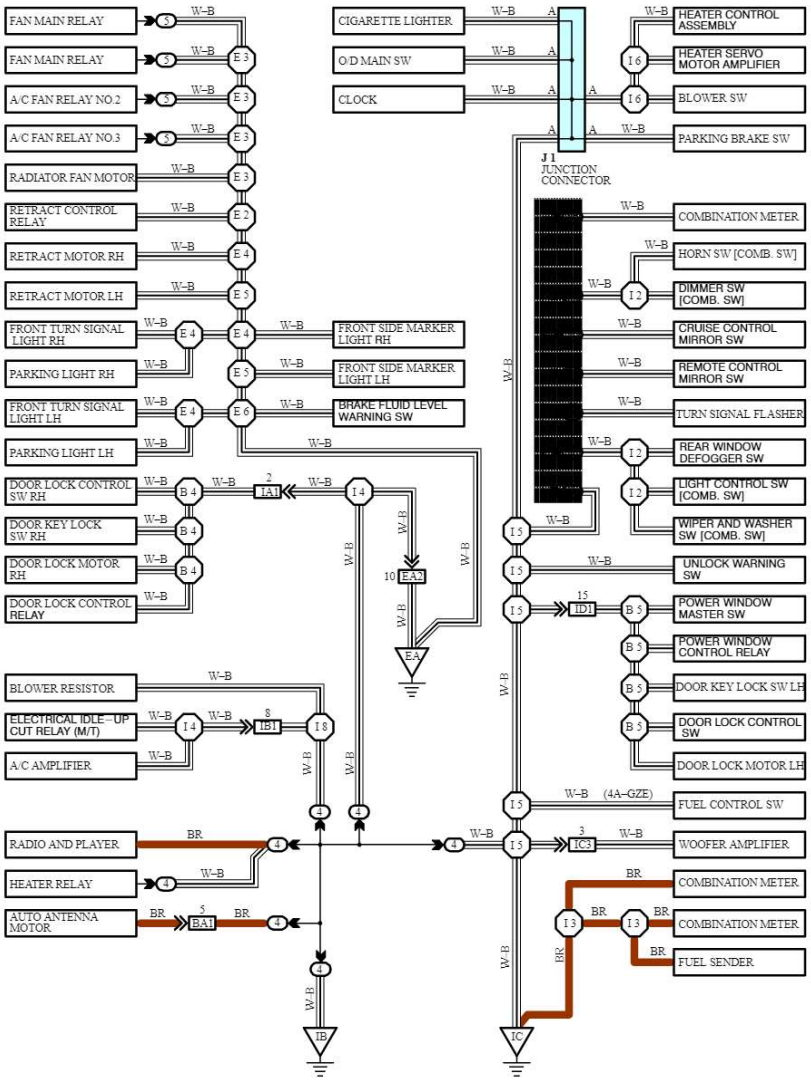
**[V]** : Indicates the reference page showing the position of the splice points on the vehicle.

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

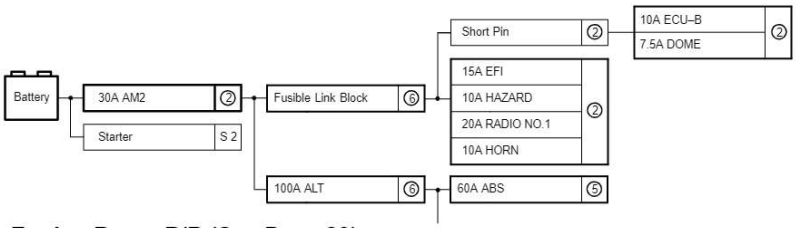



* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

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)

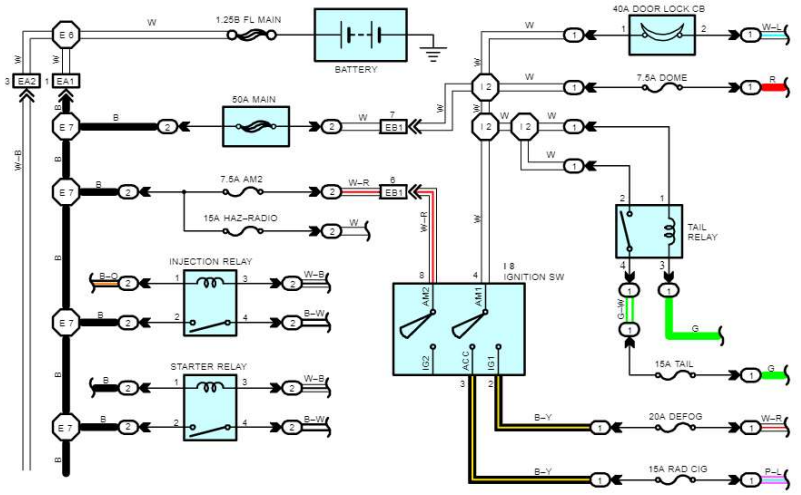
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.




### Engine Room R/B (See Page 20)

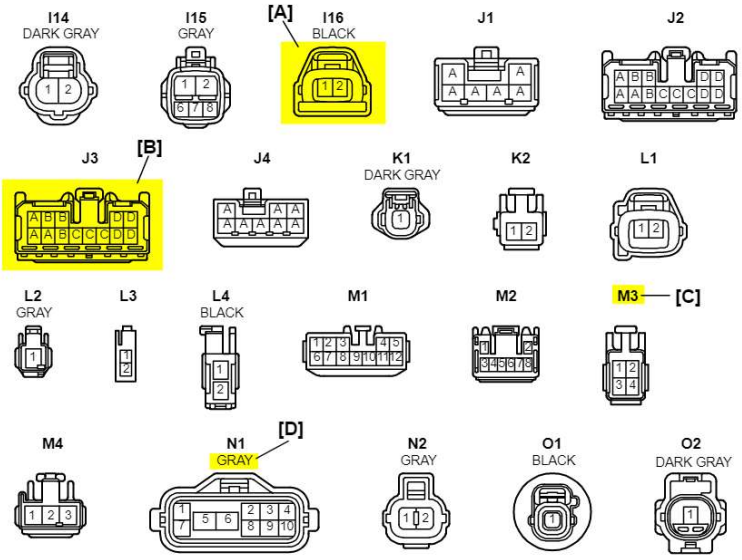
| Fuse | | System | Page |
|---|---|---|---|
| 20A | STOP | ABS<br>ABS and Traction Control<br>Cruise Control<br>Electronically Controlled Transmission and A/T Indicator<br>Multiplex Communication System | 194<br>187<br>180<br>166<br>210 |
| 10A | DOME | Cigarette Lighter and Clock<br>Combination Meter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

## POWER SOURCE



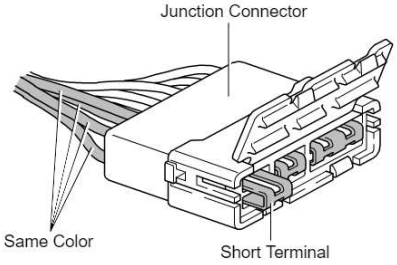

* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

## 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 |

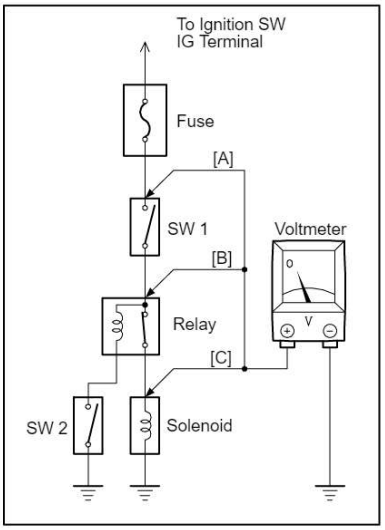
| Code | Part Name | Part Number |
|---|---|---|
| D 4 | Diode (Door Courtesy Light) | 90980–11608 |
| D 5 | Diode (Key Off Operation) | 90980–10962 |
| D 6 | Diode (Luggage Compartment Light) | 90980–11608 |
| D 7 | Door Lock Control Relay | 90980–10848 |
| D 8 | Door Courtesy Light LH | 90980–11148 |
| 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.).

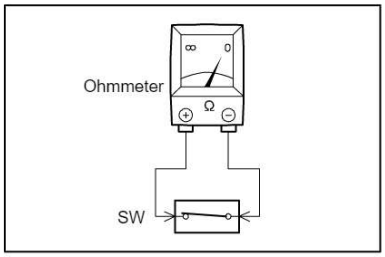



## VOLTAGE CHECK

(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)

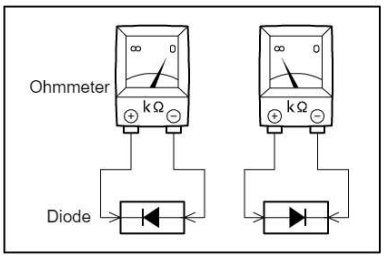
(b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal.
This check can be done with a test light instead of a voltmeter.




## CONTINUITY AND RESISTANCE CHECK

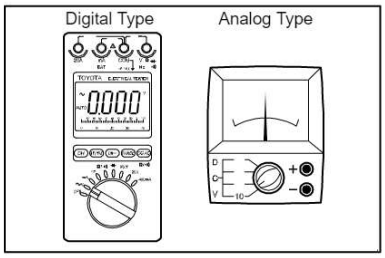
(a) Disconnect the battery terminal or wire so there is no voltage between the check points.

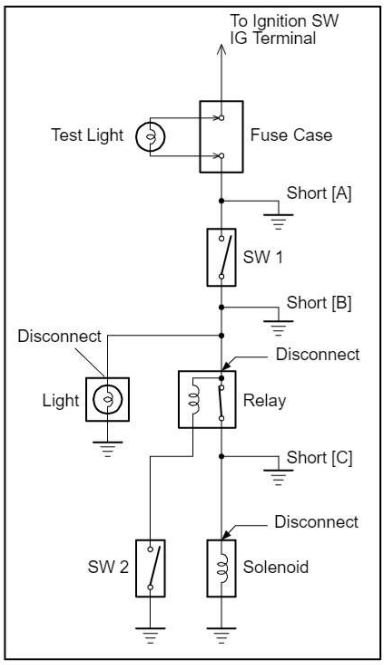
(b) Contact the two leads of an ohmmeter to each of the check points.




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:

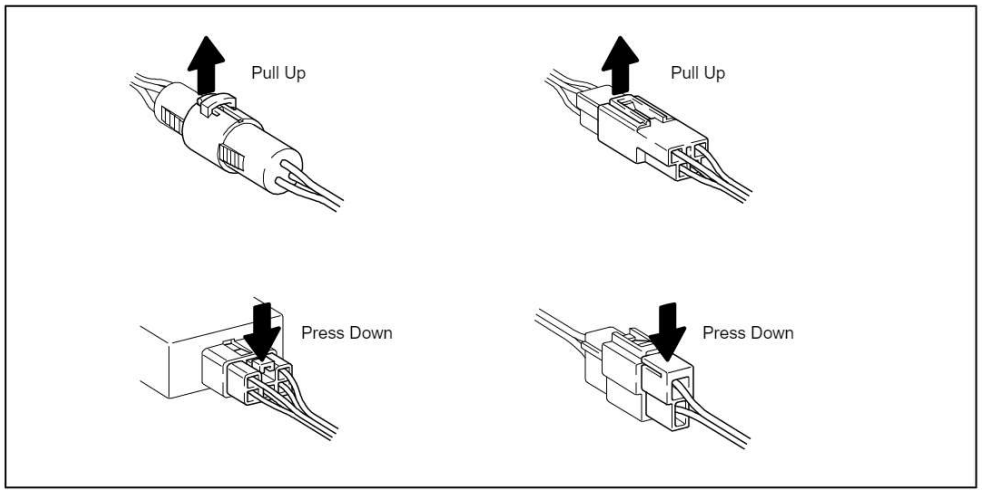
**(a) Do not open the cover or the case of the ECU unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)**

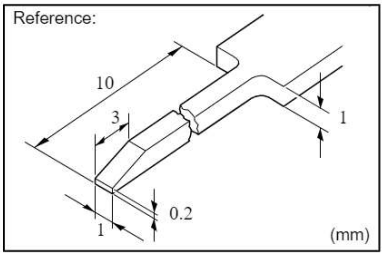
**(b) When replacing the internal mechanism (ECU part) of the digital meter, be careful that no part of your body or clothing comes in contact with the terminals of leads from the IC, etc. of the replacement part (spare part).**

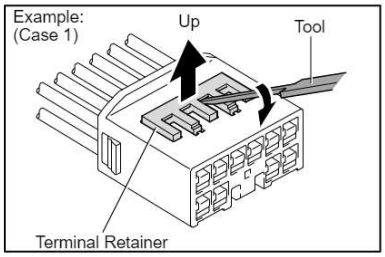
## DISCONNECTION OF MALE AND FEMALE CONNECTORS

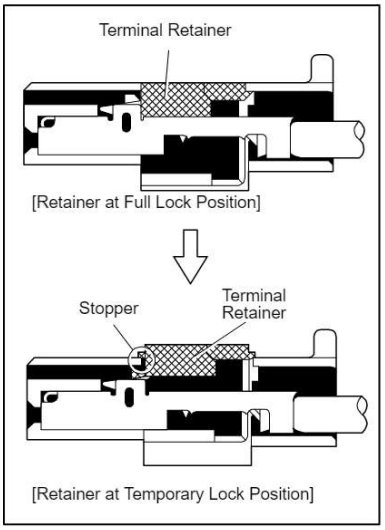
To pull apart the connectors, pull on the connector itself, not the wire harness.

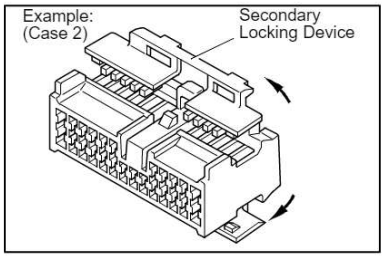
HINT : Check to see what kind of connector you are disconnecting before pulling apart.






## 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

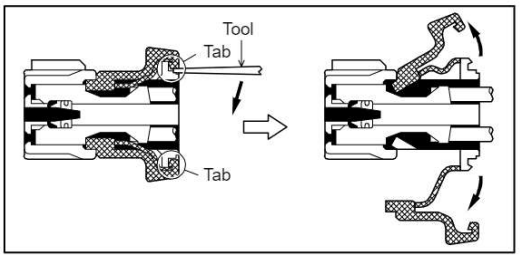
   HINT : The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

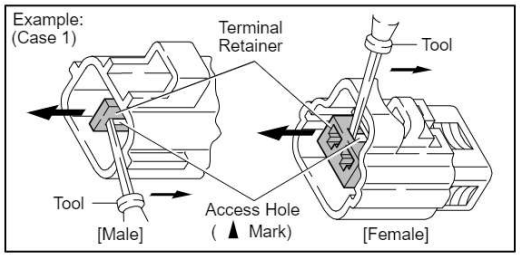
   "Case 1"

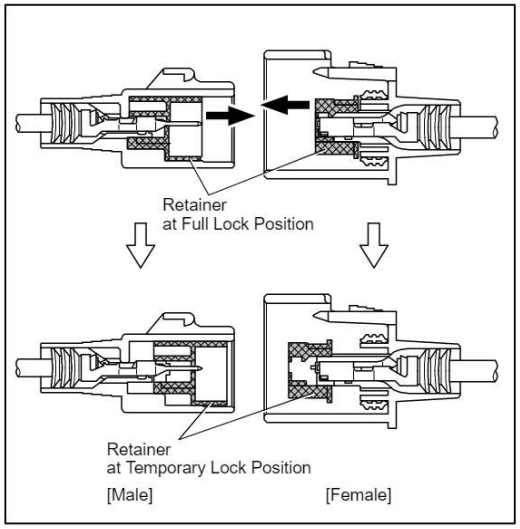
   Raise the terminal retainer up to the temporary lock position.

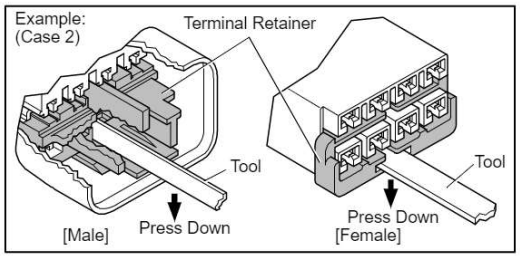
   "Case 2"

   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"

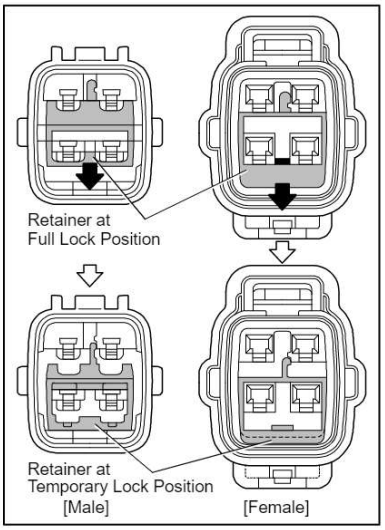
Type where terminal retainer is pulled up to the temporary lock position (Pull Type).

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

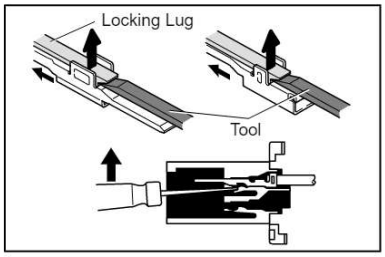
HINT : The needle insertion position varies according to the connector's shape (Number of terminals etc.), so check the position before inserting it.

"Case 2"

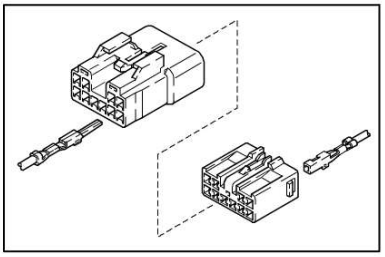
Type which cannot be pulled as far as Power Lock insert the tool straight into the access hole of terminal retainer as shown.




Push the terminal retainer down to the temporary lock position.



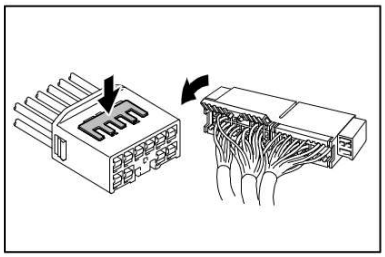

(c) Release the locking lug from terminal and pull the terminal out from rear.



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

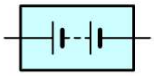
## ABBREVIATIONS

The following abbreviations are used in this manual.

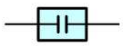
| | | |
|---|---|---|
| ABS | = | Anti–Lock Brake System |
| A/C | = | Air Conditioning |
| A/T | = | Automatic Transaxle |
| COMB. | = | Combination |
| ECU | = | Electronic Control Unit |
| EGR | = | Exhaust Gas Recirculation |
| ESA | = | Electronic Spark Advance |
| EVAP | = | Evaporative Emission |
| FL | = | Fusible Link |
| IAC | = | Idle Air Control |
| 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 |
| VSV | = | Vacuum Switching Valve |
| w/ | = | With |
| w/o | = | Without |

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

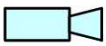
# E GLOSSARY OF TERMS AND SYMBOLS



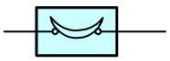
**BATTERY**
Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.



**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.



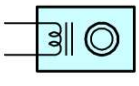
**DIODE**
A semiconductor which allows current flow in only one direction.



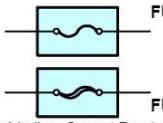
**DIODE, ZENER**
A diode which allows current flow in one direction but blocks reverse flow only up to a specific voltage. Above that potential, it passes the excess voltage. This acts as a simple voltage regulator.



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



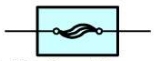
**DISTRIBUTOR, IIA**
Channels high–voltage current from the ignition coil to the individual spark plugs.



**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)

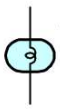
**FUSIBLE LINK**
A heavy–gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit. The numbers indicate the crosssection surface area of the wires.



(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.



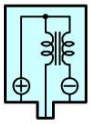
**1. SINGLE FILAMENT**

**2. DOUBLE FILAMENT**

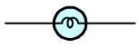
**HEADLIGHTS**
Current flow causes a headlight filament to heat up and emit light. A headlight may have either a single (1) filament or a double (2) filament



**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.

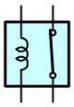


**METER, DIGITAL**
Current flow activates one or many LED's, LCD's, or fluorescent displays, which provide a relative or digital display.




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

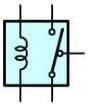
**RELAY**
Basically, an electrically operated switch which may be normally closed (1) or open (2). Current flow through a small coil creates a magnetic field which either opens or closes an attached switch.



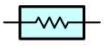
**1. NORMALLY CLOSED**



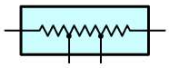
**2. NORMALLY OPEN**



**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.

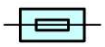


**SENSOR (Thermistor)**
A resistor which varies its resistance with temperature.

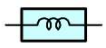


(Reed Switch Type)

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



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

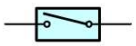


**SOLENOID**
An electromagnetic coil which forms a magnetic field when current flows, to move a plunger, etc.

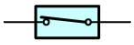


**SPEAKER**
An electromechanical device which creates sound waves from current flow.

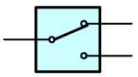
**SWITCH, MANUAL**
Opens and closes circuits, thereby stopping (1) or allowing (2) current flow.



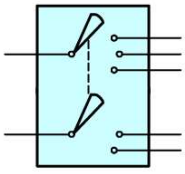
**1. NORMALLY OPEN**



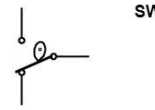
**2. NORMALLY CLOSED**



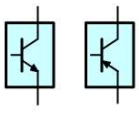
**SWITCH, DOUBLE THROW**
A switch which continuously passes current through one set of contacts or the other.



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

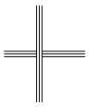


**SWITCH, WIPER PARK**
Automatically returns wipers to the stop position when the wiper switch is turned off.

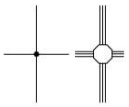


**TRANSISTOR**
A solidstate device typically used as an electronic relay; stops or passes current depending on the voltage applied at "base".

**WIRES**



**(1) NOT CONNECTED**

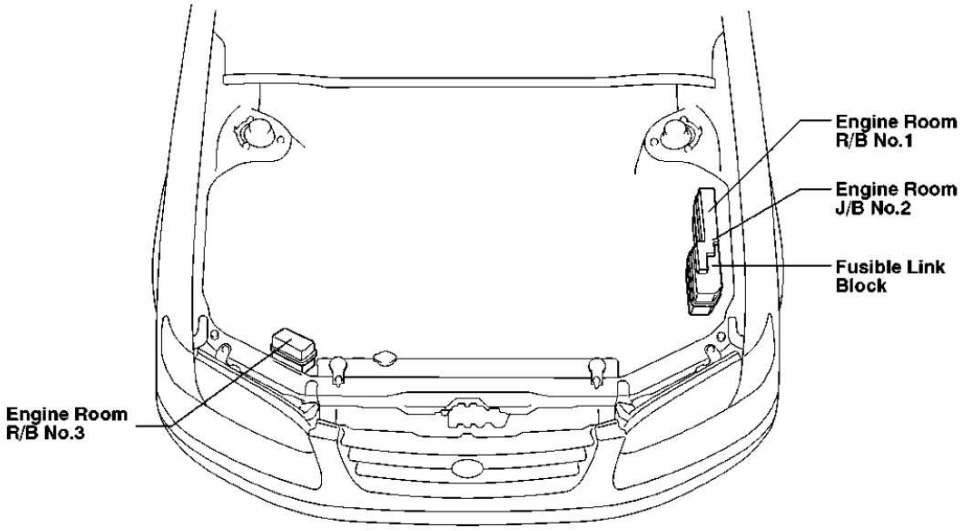


**(2) SPLICED**

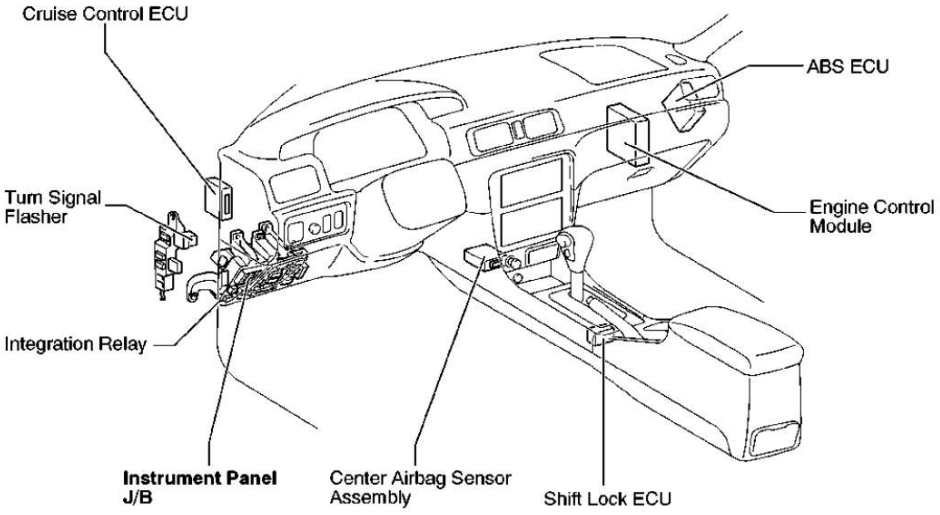
Wires are always drawn as straight lines on wiring diagrams.
Crossed wires (1) without a black dot at the junction are not joined;
crossed wires (2) with a black dot or octagonal ( ) mark at the junction are spliced (joined) connections.

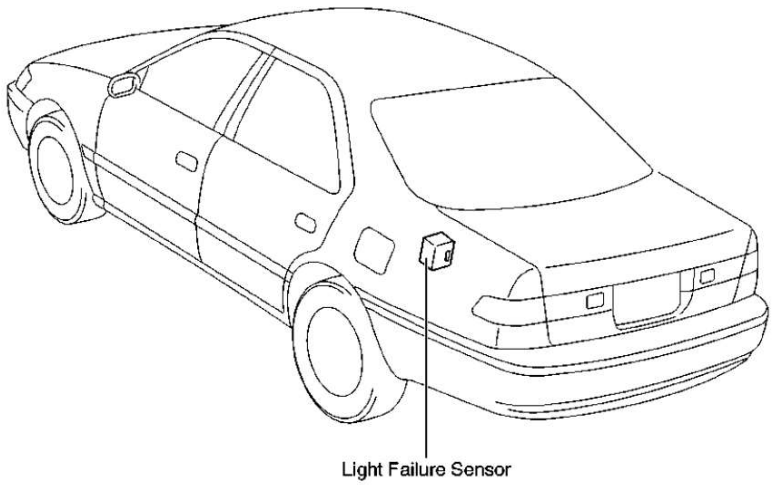
## F RELAY LOCATIONS

### [Engine Compartment]



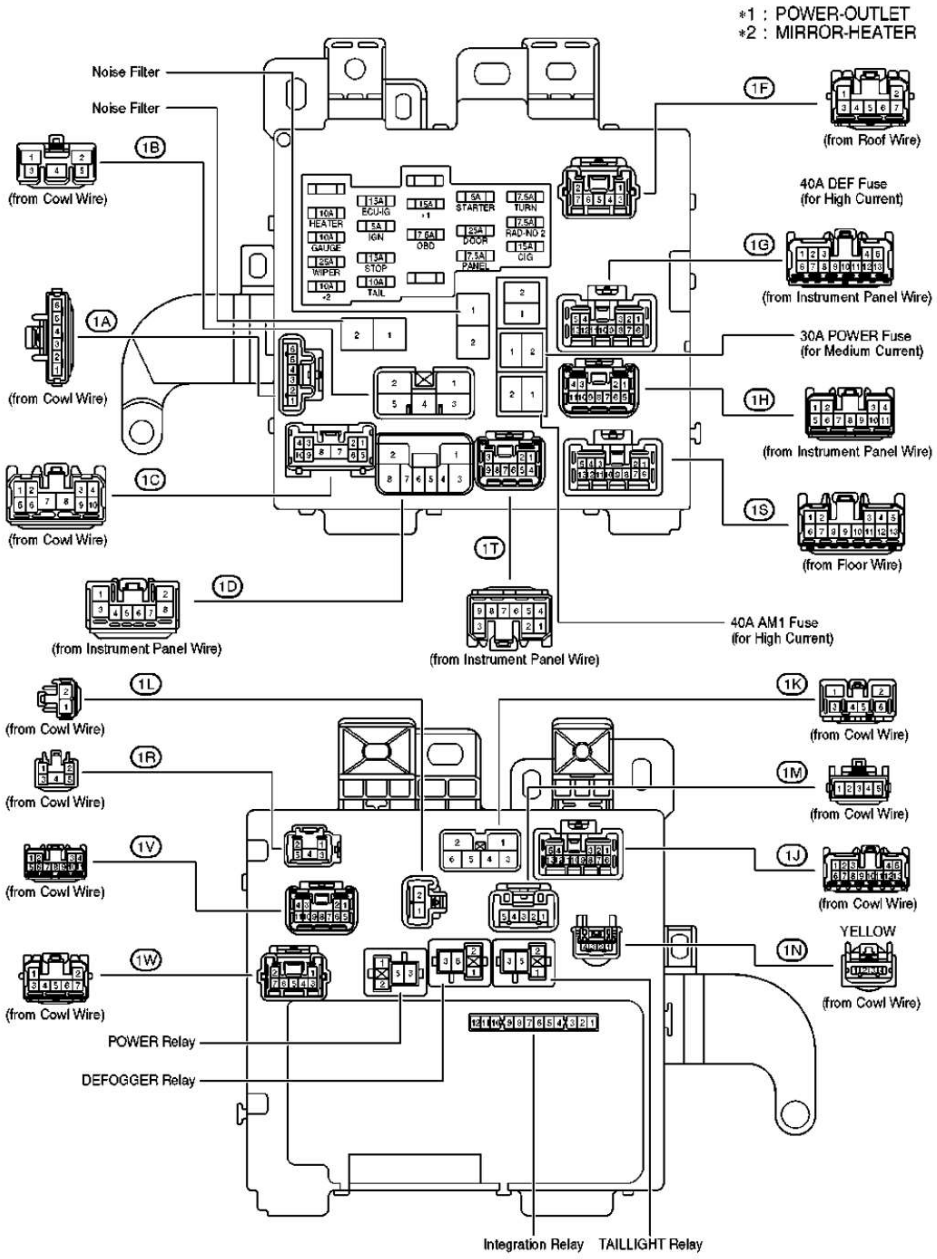

### [Instrument Panel]



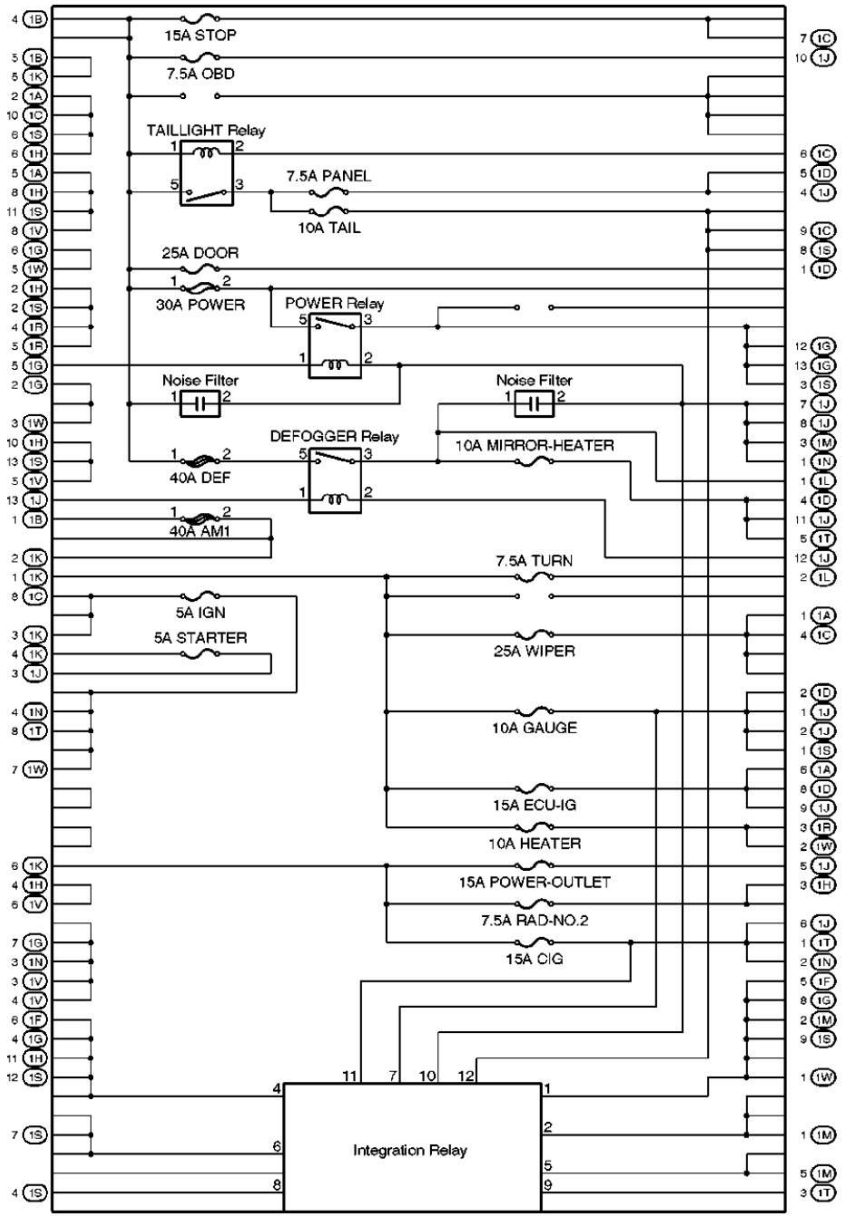

Light Failure Sensor

## F RELAY LOCATIONS

| : Instrument Panel J/B | Lower Finish Panel (See Page 20) |
|---|---|

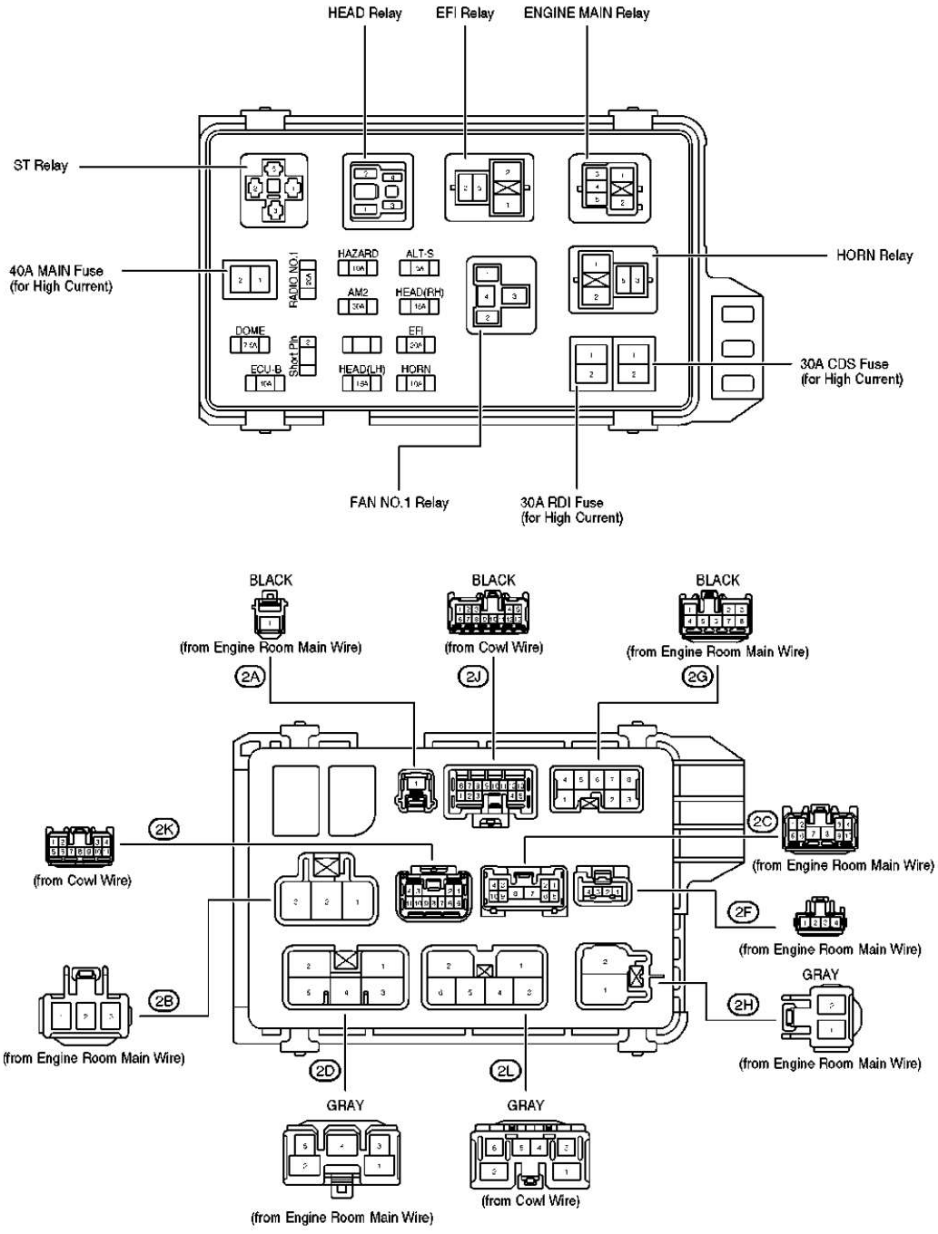


## [Instrument Panel J/B Inner Circuit]

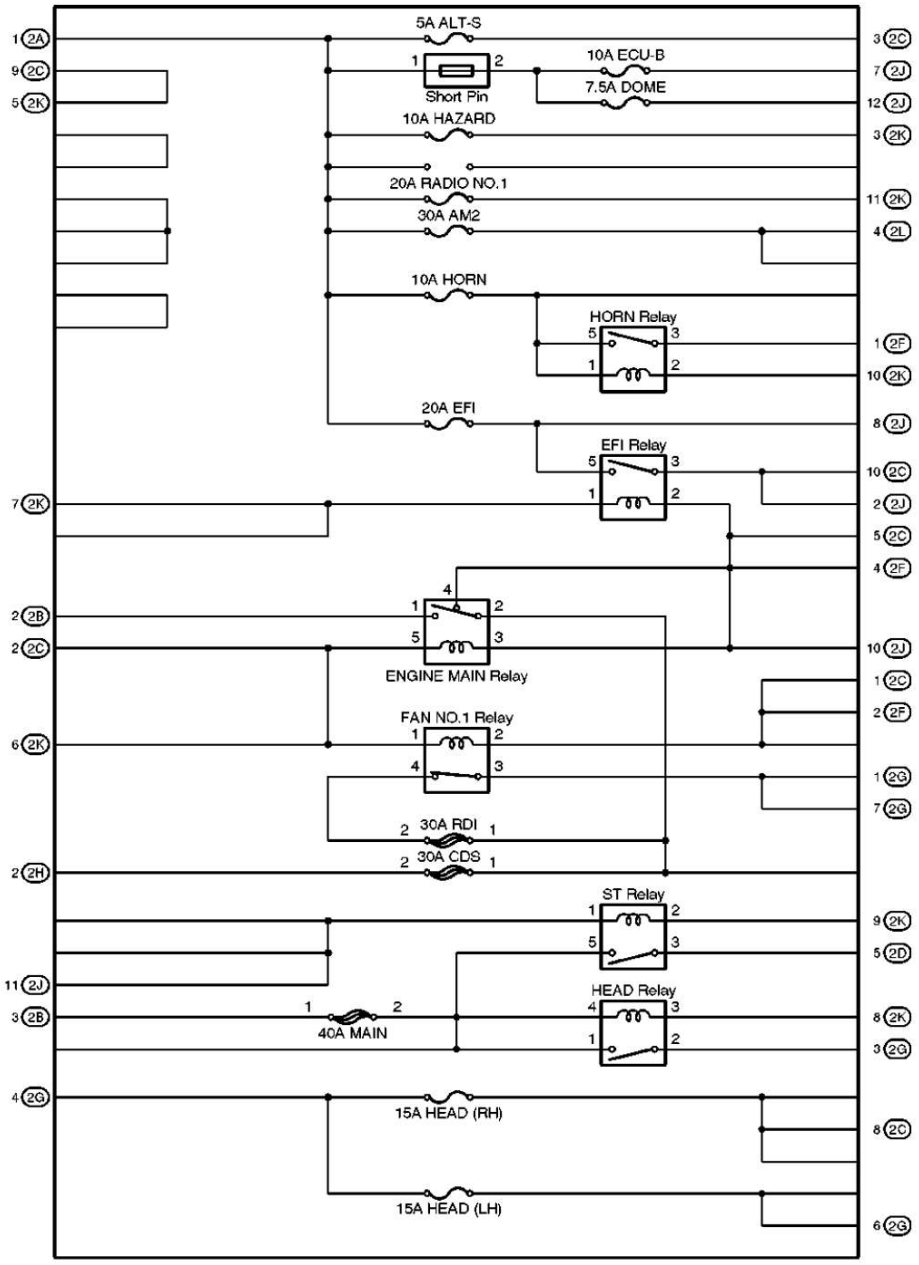


## F RELAY LOCATIONS

| : Engine Room J/B No.2 | Engine Compartment Left (See Page 20) |
|---|---|

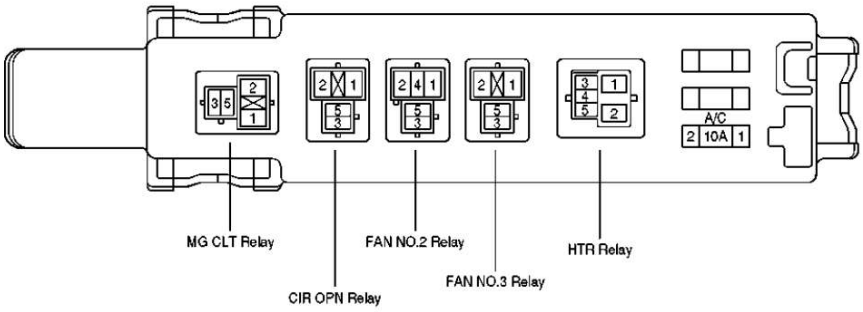


## [Engine Room J/B No.2 Inner Circuit]

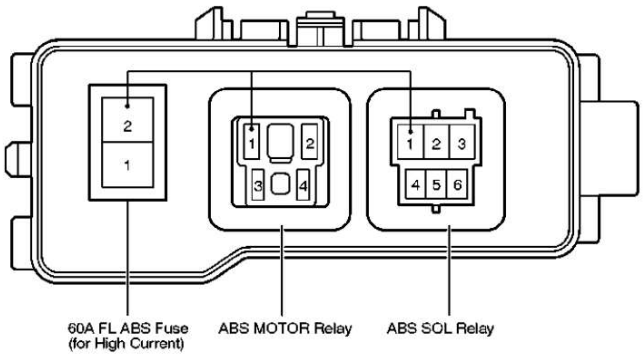


## F RELAY LOCATIONS

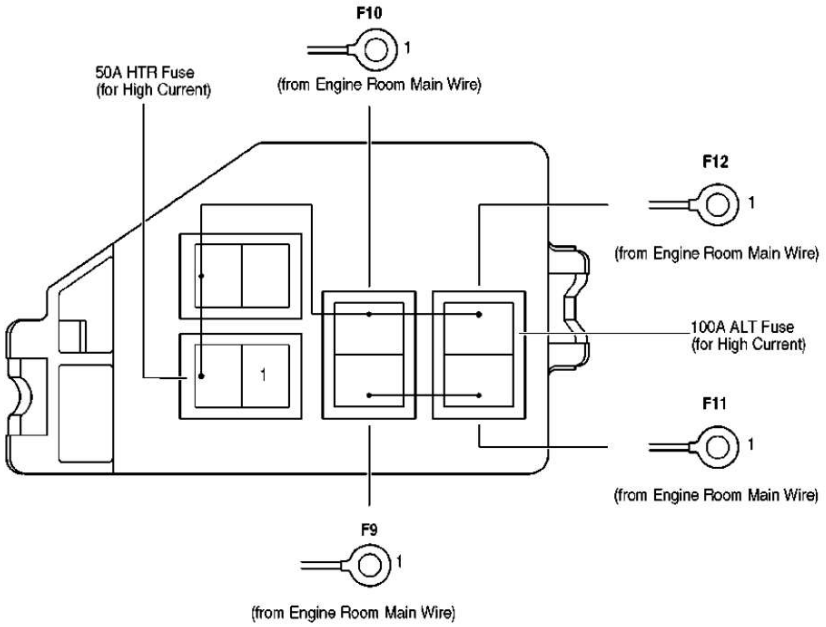
| | |
|---|---|
| ① : Engine Room R/B No.1 | Engine Compartment Left (See Page 20)<br>(Inside Engine Room J/B No.2) |

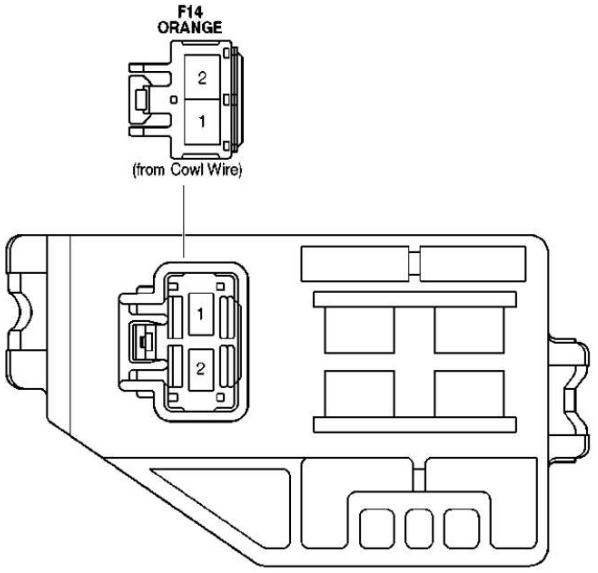



| | |
|---|---|
| ③ : Engine Room R/B No.3 | Radiator Upper Support RH (See Page 20) |



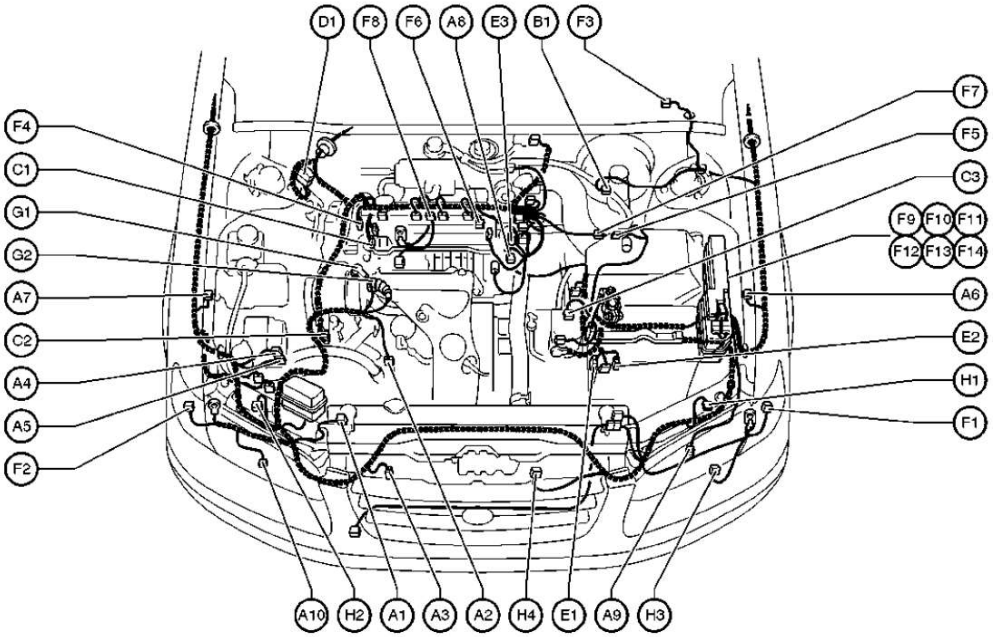
| Fusible Link Block | Engine Compartment Left (See Page 20)<br>(Inside Engine Room J/B No.2) |
|---|---|



# G ELECTRICAL WIRING ROUTING

## Position of Parts in Engine Compartment




A 1 A/C Condenser Fan Motor
A 2 A/C Magnetic Clutch and Lock Sensor
A 3 A/C Triple Pressure SW
(A/C Dual and Single Pressure SW)
A 4 ABS Actuator
A 5 ABS Actuator
A 6 ABS Speed Sensor Front LH
A 7 ABS Speed Sensor Front RH
A 8 Air Fuel Ratio Sensor
A 9 Airbag Sensor Front LH
A10 Airbag Sensor Front RH

B 1 Brake Fluid Level Warning SW

C 1 Camshaft Position Sensor
C 2 Crankshaft Position Sensor
C 3 Cruise Control Actuator

D 1 Data Link Connector 1

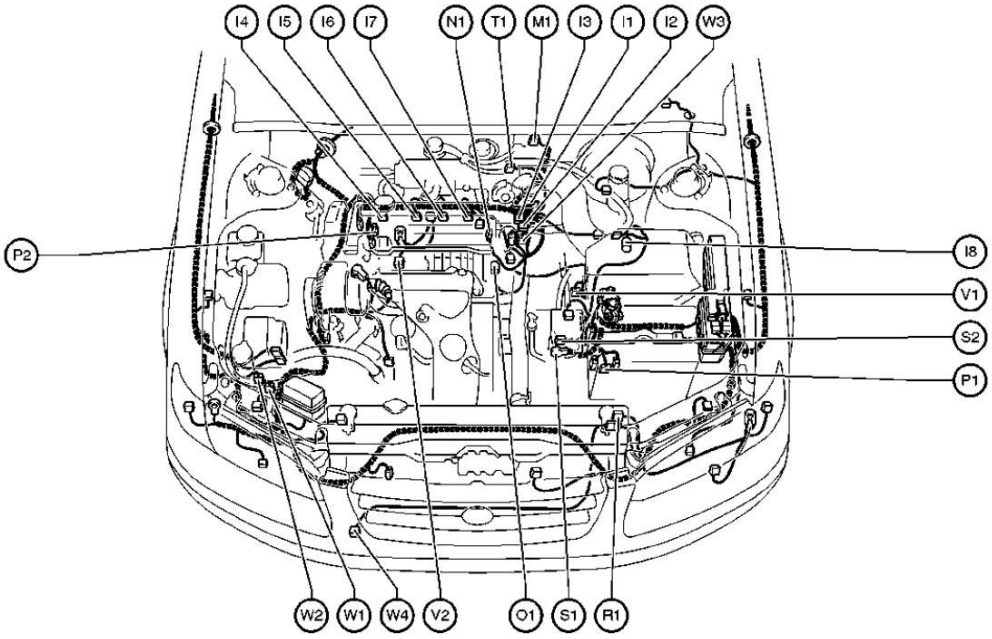
E 1 Electronically Controlled Transmission Solenoid
E 2 Electronically Controlled Transmission Solenoid
E 3 Engine Coolant Temp. Sensor

F 1 Front Turn Signal Light and Parking Light LH
F 2 Front Turn Signal Light and Parking Light RH
F 3 Front Wiper Motor
F 4 Fuel Pressure Sensor (Delivery Pipe)
F 5 Fuel Pressure Sensor (Fuel Pipe)
F 6 Fuel Shutoff Valve (Delivery Pipe)
F 7 Fuel Shutoff Valve (Fuel Pressure Regulator)
F 8 Fuel Temp. Sensor (Delivery Pipe)
F 9 Fusible Link Block
F10 Fusible Link Block
F11 Fusible Link Block
F12 Fusible Link Block
F13 Fusible Link Block
F14 Fusible Link Block

G 1 Generator
G 2 Generator

H 1 Headlight LH
H 2 Headlight RH
H 3 Horn (High)
H 4 Horn (Low)

## Position of Parts in Engine Compartment




I 1 Idle Air Control Valve
I 2 Ignition Coil and Igniter No.1
I 3 Ignition Coil and Igniter No.2
I 4 Injector No.1
I 5 Injector No.2
I 6 Injector No.3
I 7 Injector No.4
I 8 Intake Air Temp. Sensor

M 1 Manifold Absolute Pressure Sensor

N 1 Noise Filter (Ignition)

O 1 Oil Pressure SW

P 1 Park/Neutral Position SW,A/T Indicator Light SW and Back–Up Light SW
P 2 Power Steering Oil Pressure SW

R 1 Radiator Fan Motor

S 1 Starter
S 2 Starter

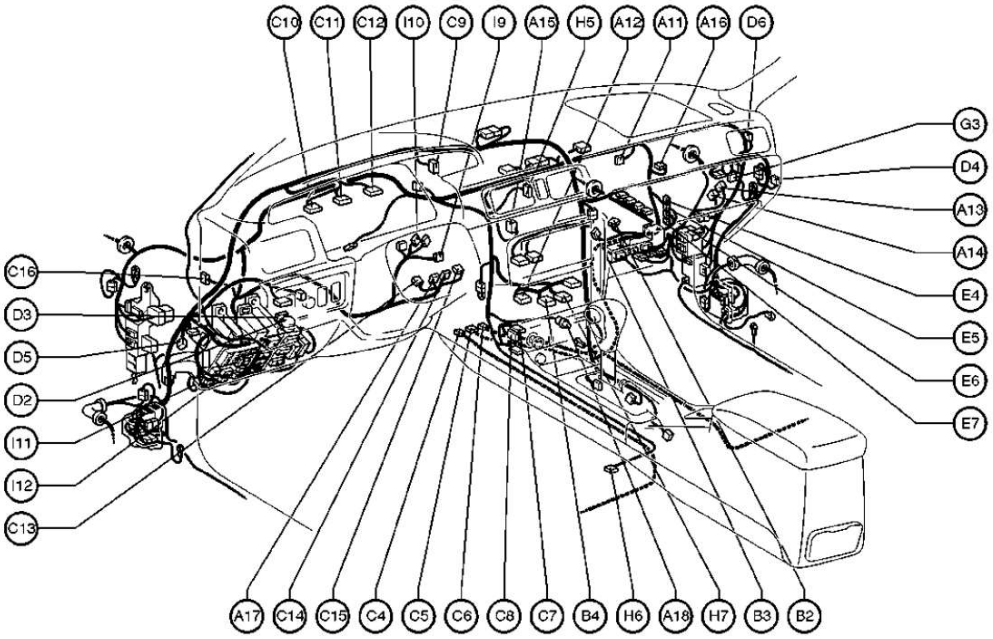
T 1 Throttle Position Sensor

V 1 Vehicle Speed Sensor (Combination Meter)
V 2 VSV (EGR)

W 1 Washer Level Warning SW
W 2 Washer Motor
W 3 Water Temp. Sender
W 4 Water Temp. SW No.1

## G ELECTRICAL WIRING ROUTING

### Position of Parts in Instrument Panel




A 11 A/C Evaporator Temp. Sensor
A 12 A/C SW
A 13 ABS ECU
A 14 ABS ECU
A 15 Air Vent Mode Control Servo Motor
A 16 Airbag Squib (Front Passenger Airbag Assembly)
A 17 Airbag Squib (Steering Wheel Pad)
A 18 Ashtray Illumination

B 2 Blower Motor
B 3 Blower Resistor
B 4 Blower SW

C 4 Center Airbag Sensor Assembly
C 5 Center Airbag Sensor Assembly
C 6 Center Airbag Sensor Assembly
C 7 Cigarette Lighter
C 8 Cigarette Lighter Illumination
C 9 Clock
C 10 Combination Meter
C 11 Combination Meter
C 12 Combination Meter
C 13 Combination SW
C 14 Combination SW
C 15 Combination SW
C 16 Cruise Control ECU

D 2 Data Link Connector 2
D 3 Data Link Connector 3
D 4 Diode (Courtesy)
D 5 Diode (Dome)
D 6 Diode (Idle–Up)

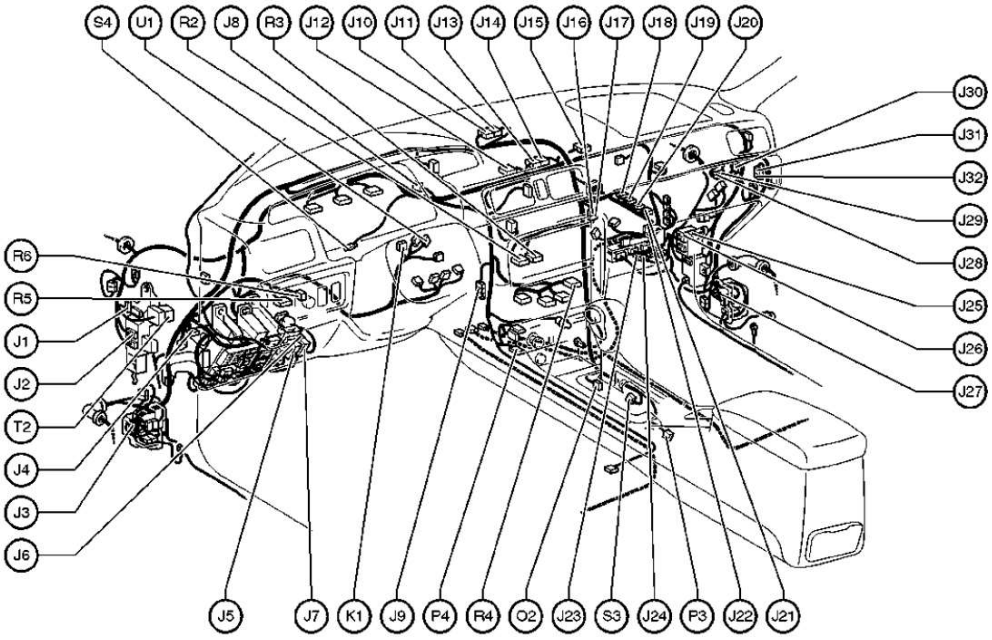
E 4 Engine Control Module
E 5 Engine Control Module
E 6 Engine Control Module
E 7 Engine Control Module

G 3 Glove Box Light and SW

H 5 Hazard SW
H 6 Heated Oxygen Sensor
H 7 Heater Control SW

I 9 Ignition Key Cylinder Light
I 10 Ignition SW
I 11 Integration Relay
I 12 Integration Relay

## Position of Parts in Instrument Panel




J 1 Junction Connector
J 2 Junction Connector
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
J 12 Junction Connector
J 13 Junction Connector
J 14 Junction Connector
J 15 Junction Connector
J 16 Junction Connector
J 17 Junction Connector
J 18 Junction Connector
J 19 Junction Connector
J 20 Junction Connector
J 21 Junction Connector
J 22 Junction Connector
J 23 Junction Connector
J 24 Junction Connector
J 25 Junction Connector
J 26 Junction Connector
J 27 Junction Connector
J 28 Junction Connector
J 29 Junction Connector
J 30 Junction Connector
J 31 Junction Connector
J 32 Junction Connector

K 1 Key Interlock Solenoid

O 2 O/D Main SW and A/T Shift Lever Illumination

P 3 Parking Brake SW
P 4 Power Outlet

R 2 Radio and Player
R 3 Radio and Player
R 4 Rear Window Defogger SW
R 5 Remote Control Mirror SW
R 6 Rheostat

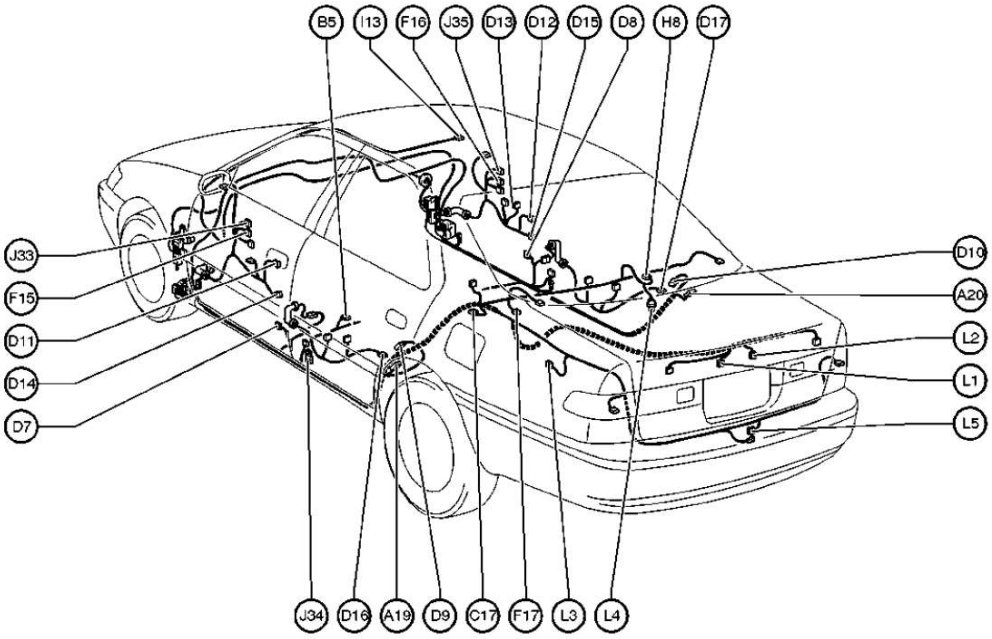
S 3 Shift Lock ECU
S 4 Stop Light SW

T 2 Turn Signal Flasher

U 1 Unlock Warning SW

# G ELECTRICAL WIRING ROUTING

## Position of Parts in Body




A19 ABS Speed Sensor Rear LH
A20 ABS Speed Sensor Rear RH

B 5 Buckle SW LH

C17 Condenser

D 7 Door Courtesy SW Front LH
D 8 Door Courtesy SW Front RH
D 9 Door Courtesy SW Rear LH
D10 Door Courtesy SW Rear RH
D11 Door Key Lock and Unlock SW Front LH
D12 Door Key Lock and Unlock SW Front RH
D13 Door Lock Control SW RH
D14 Door Lock Motor and Door Unlock Detection SW Front LH
D15 Door Lock Motor and Door Unlock Detection SW Front RH
D16 Door Lock Motor and Door Unlock Detection SW Rear LH
D17 Door Lock Motor and Door Unlock Detection SW Rear RH

F15 Front Door Speaker LH
F16 Front Door Speaker RH
F17 Fuel Temp. Sensor and Fuel Shutoff Valve (Fuel Tank)

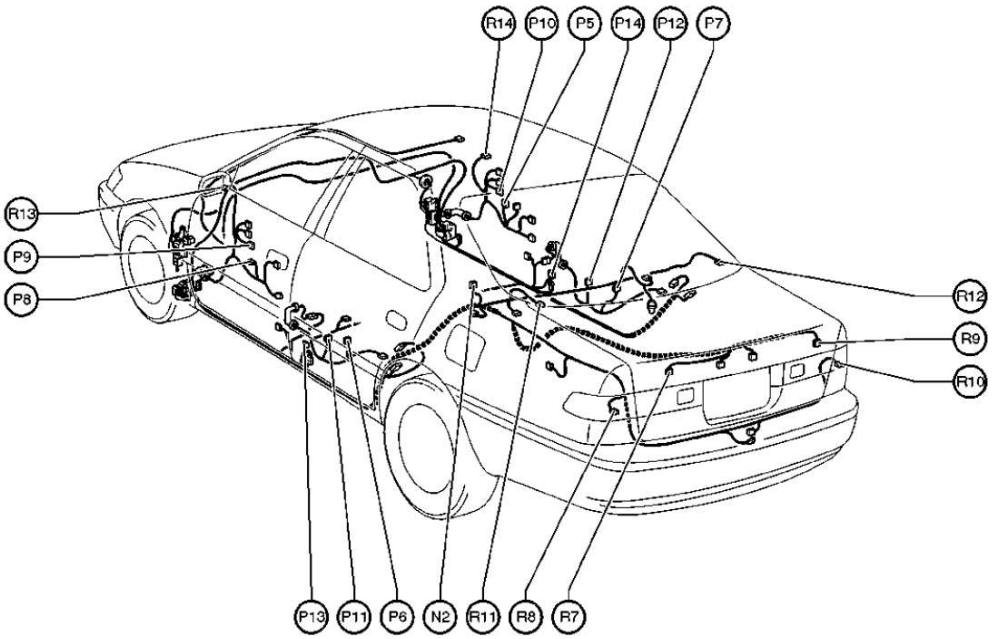
H 8 High Mounted Stop Light

I 13 Interior Light

J 33 Junction Connector
J 34 Junction Connector
J 35 Junction Connector

L 1 License Plate Light LH
L 2 License Plate Light RH
L 3 Light Failure Sensor
L 4 Luggage Compartment Light
L 5 Luggage Compartment Light SW

## Position of Parts in Body



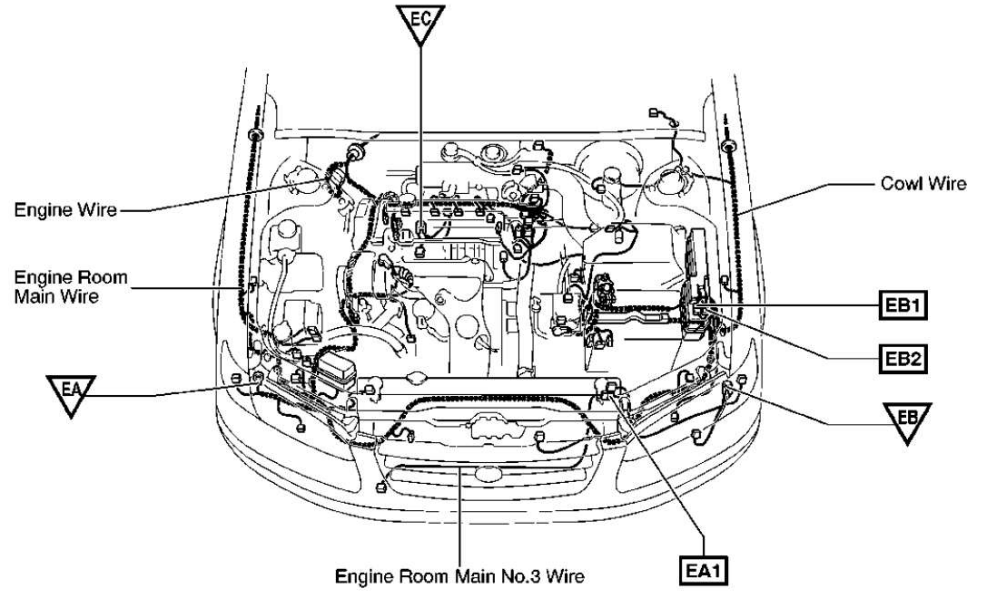

N 2 Noise Filter (Rear Window Defogger)

P 5 Power Window Control SW Front RH
P 6 Power Window Control SW Rear LH
P 7 Power Window Control SW Rear RH
P 8 Power Window Master SW and Door Lock Control SW LH
P 9 Power Window Motor Front LH
P10 Power Window Motor Front RH
P11 Power Window Motor Rear LH
P12 Power Window Motor Rear RH
P13 Pretensioner LH
P14 Pretensioner RH

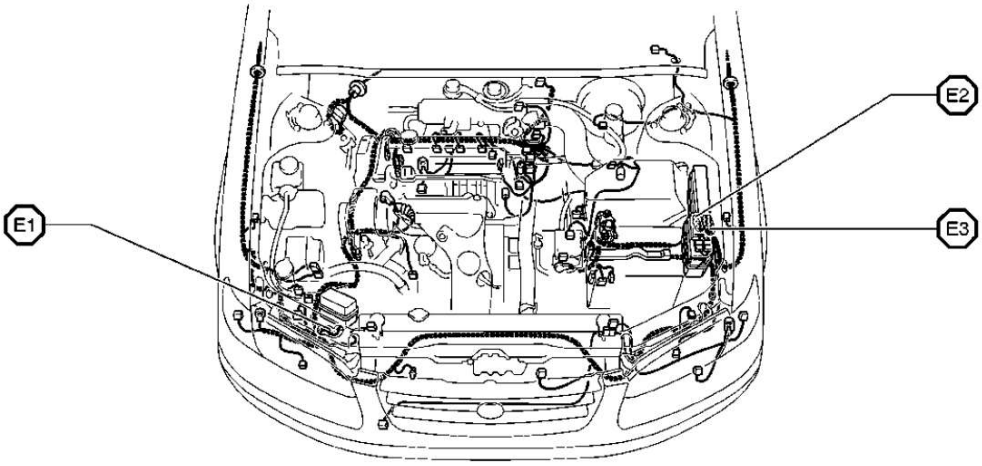
R 7 Rear Combination Light LH
R 8 Rear Combination Light LH
R 9 Rear Combination Light RH
R10 Rear Combination Light RH
R11 Rear Speaker LH
R12 Rear Speaker RH
R13 Remote Control Mirror LH
R14 Remote Control Mirror RH

## G ELECTRICAL WIRING ROUTING

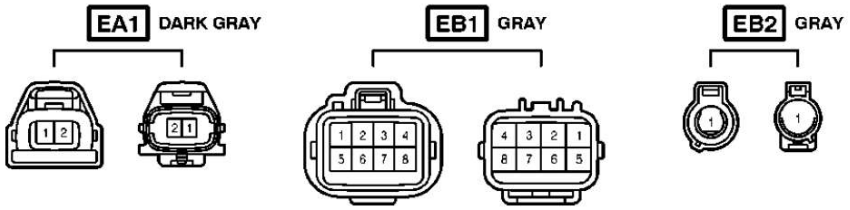
| |
|---|
| ▭ : Location of Connector Joining Wire Harness and Wire Harness |
| ▽ : Location of Ground Points |




| |
|---|
| ◯ : Location of Splice Points |



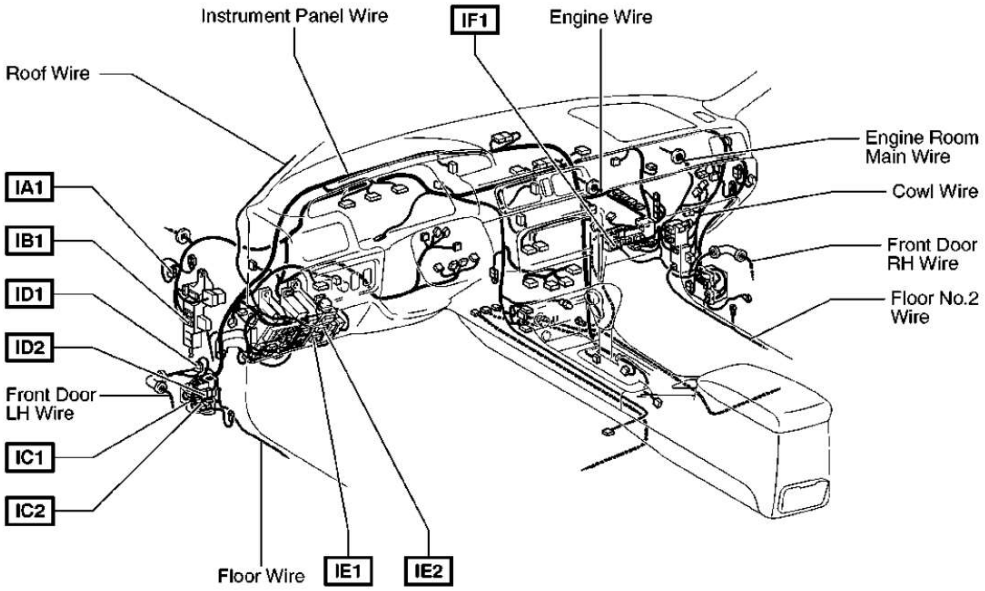
## Connector Joining Wire Harness and Wire Harness



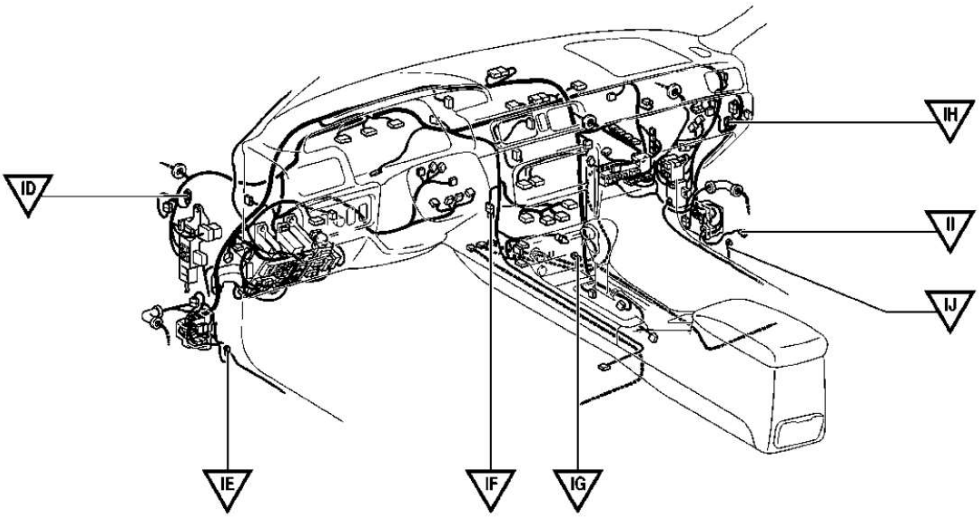

| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| EA1 | Engine Room Main Wire and Engine Room Main No.3 Wire (Radiator LH) |
| EB1 | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| EB2 | |

## G ELECTRICAL WIRING ROUTING

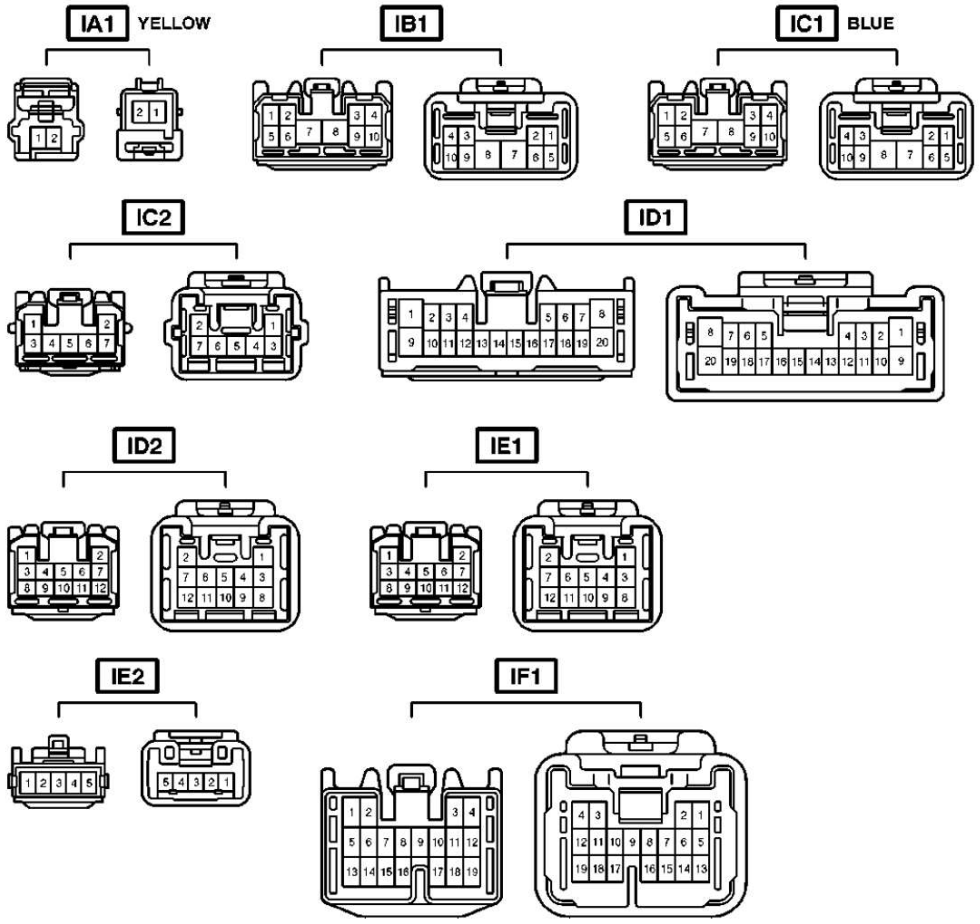
▭ : Location of Connector Joining Wire Harness and Wire Harness




▽ : Location of Ground Points



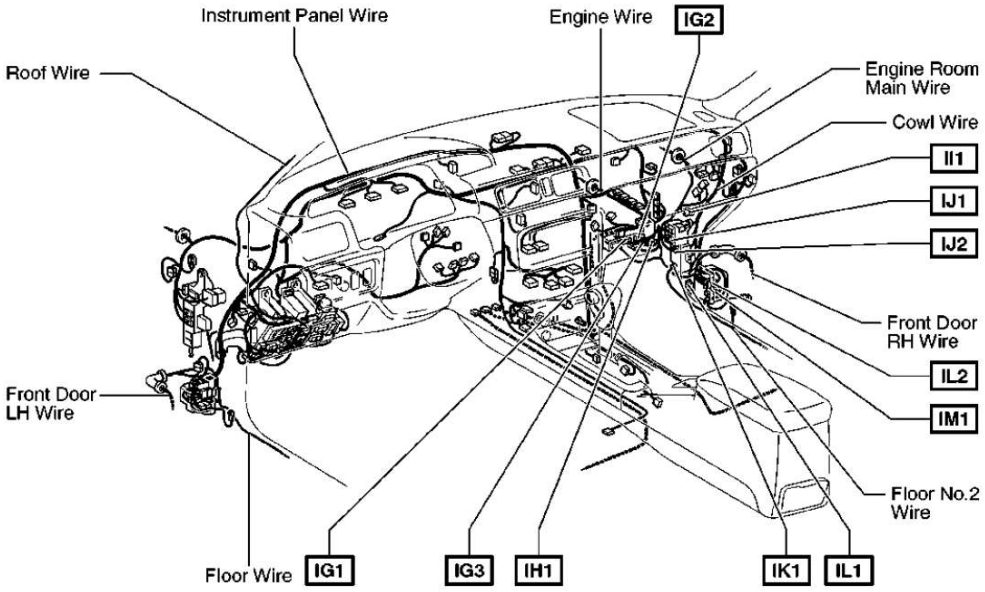
## Connector Joining Wire Harness and Wire Harness



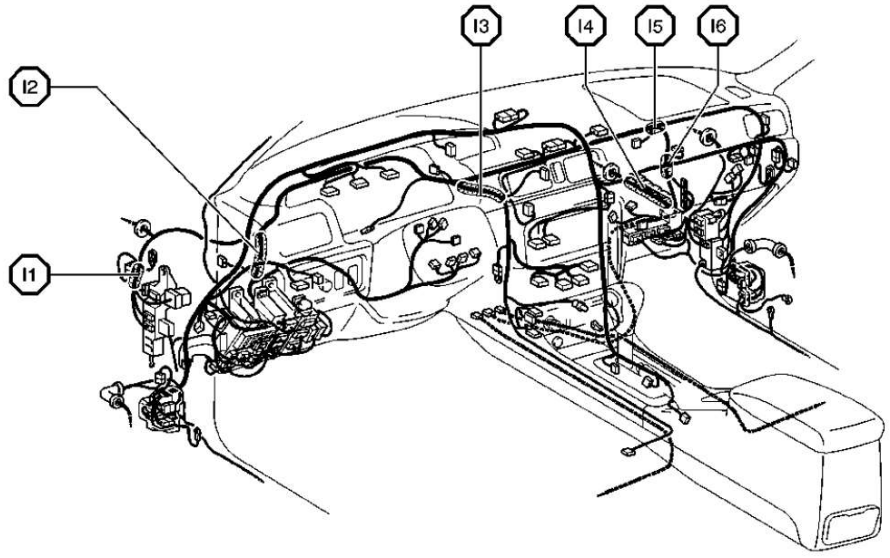

| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| IA1 | Cowl Wire and Cowl Wire (Left Kick Panel) |
| IB1 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IC1 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IC2 | |
| ID1 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| ID2 | |
| IE1 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IE2 | |
| IF1 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |

## G ELECTRICAL WIRING ROUTING

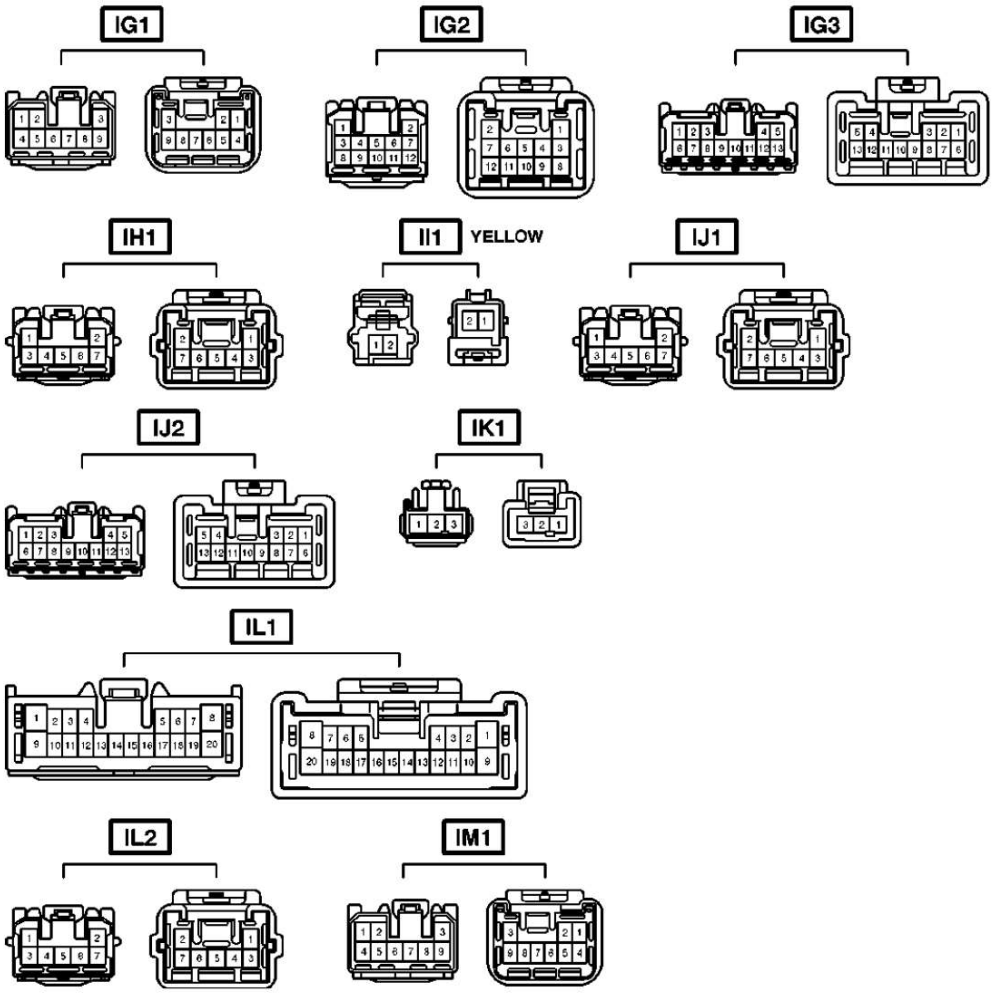
▭ : Location of Connector Joining Wire Harness and Wire Harness




◯ : Location of Splice Points



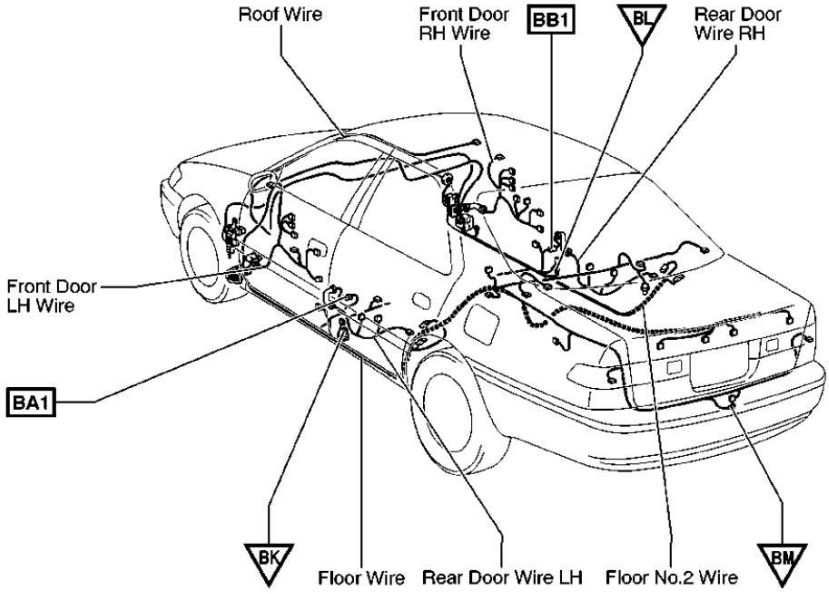
## Connector Joining Wire Harness and Wire Harness



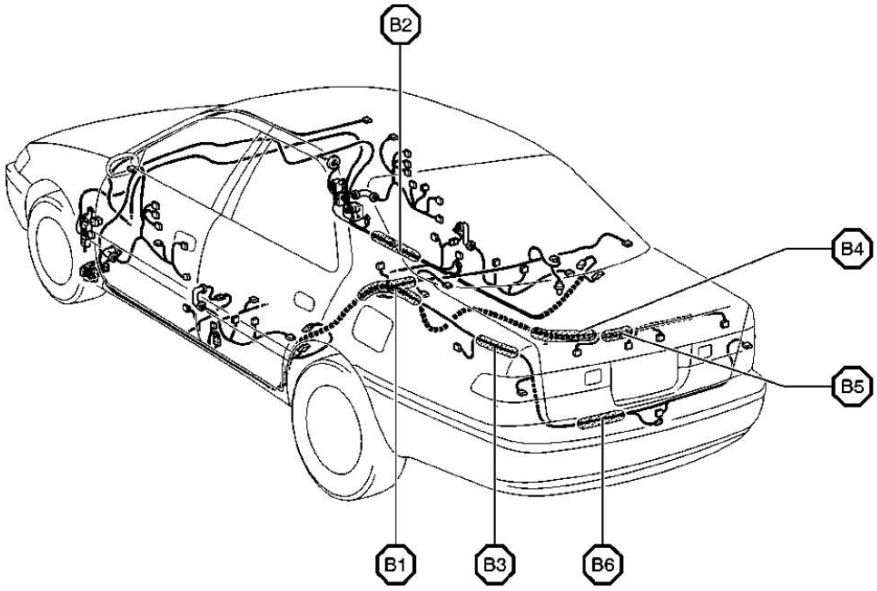

| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| IG1 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG2 | |
| IG3 | |
| IH1 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| II1 | Engine Room Main Wire and Cowl Wire (Cowl Side Panel RH) |
| IJ1 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IJ2 | |
| IK1 | Floor No.2 Wire and Cowl Wire (Right Kick Panel) |
| IL1 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IL2 | |
| IM1 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |

## G ELECTRICAL WIRING ROUTING

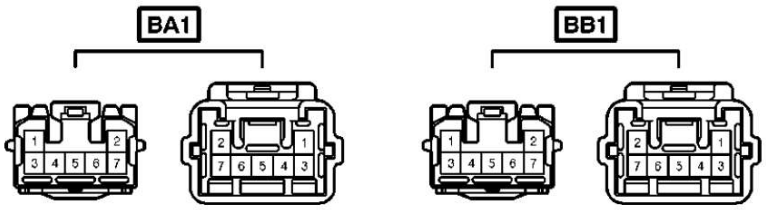
| |
|---|
| ▭ : Location of Connector Joining Wire Harness and Wire Harness |
| ▽ : Location of Ground Points |




| |
|---|
| ○ : Location of Splice Points |

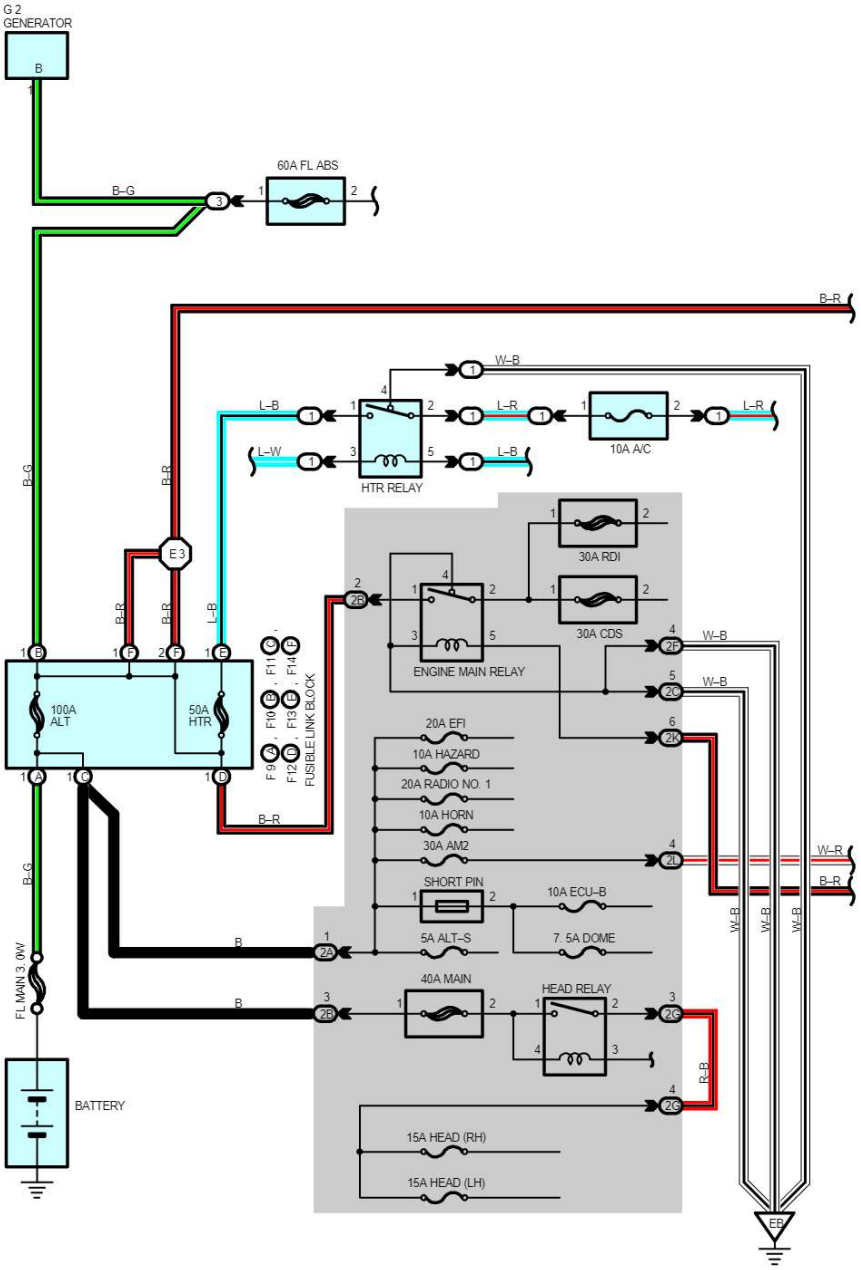


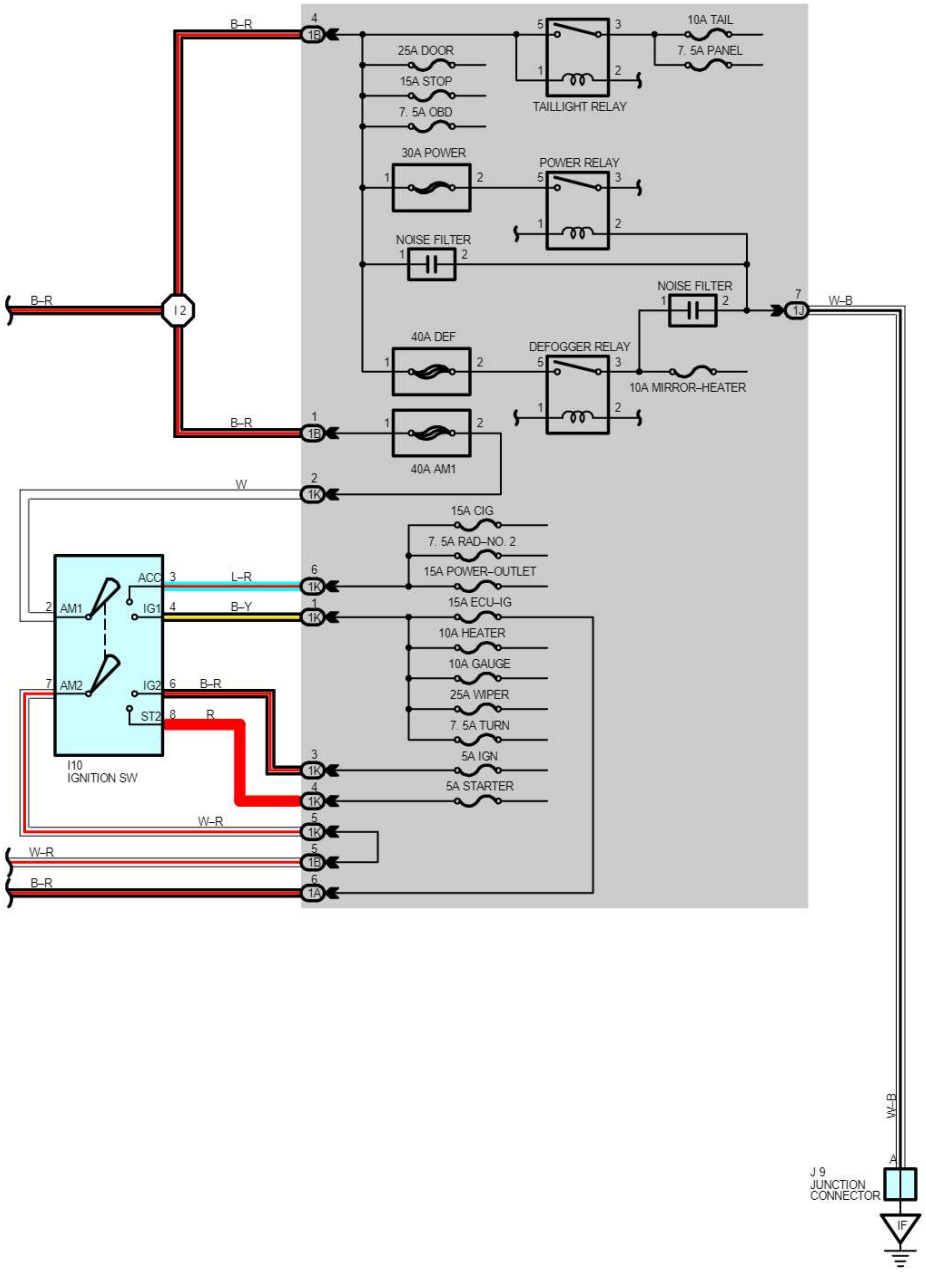
## Connector Joining Wire Harness and Wire Harness




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

## POWER SOURCE




B–R
4
1P
25A DOOR
15A STOP
7. 5A OBD
5
3
1
2
TAILLIGHT RELAY
10A TAIL
7. 5A PANEL
30A POWER
1
2
POWER RELAY
5
3
1
2
NOISE FILTER
1
2
B–R
I 2
NOISE FILTER
1
2
7
1J
W–B
40A DEF
1
2
DEFOGGER RELAY
5
3
1
2
10A MIRROR–HEATER
B–R
1
1B
1
2
40A AM1
W
2
1K
15A CIG
7. 5A RAD–NO. 2
15A POWER–OUTLET
ACC
3
L–R
6
1K
2
AM1
IG1
4
B–Y
1
1K
15A ECU–IG
10A HEATER
10A GAUGE
25A WIPER
7. 5A TURN
7
AM2
IG2
6
B–R
ST2
8
R
I10
IGNITION SW
3
1K
5A IGN
4
1K
5A STARTER
W–R
5
1K
W–R
5
1B
B–R
6
1A
W–B
J 9
JUNCTION
CONNECTOR
1F

# POWER SOURCE

**SERVICE HINTS**

**HEAD RELAY**

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

**TAILLIGHT RELAY**

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

**I10 IGNITION SW**

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

**: PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|---|
| F9 | A | 28 | F12 | D | 28 | G2 | 28 |
| F10 | B | 28 | F13 | E | 28 | I10 | 30 |
| F11 | C | 28 | F14 | F | 28 | J9 | 31 |

**: RELAY BLOCKS**

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 26 | Engine Room R/B No.1 (Engine Compartment Left) |
| 3 | 26 | Engine Room R/B No.3 (Radiator Upper Support RH) |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1A | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1B | | |
| 1J | | |
| 1K | | |
| 2A | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2B | | |
| 2C | | |
| 2F | | |
| 2G | | |
| 2K | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2L | | |

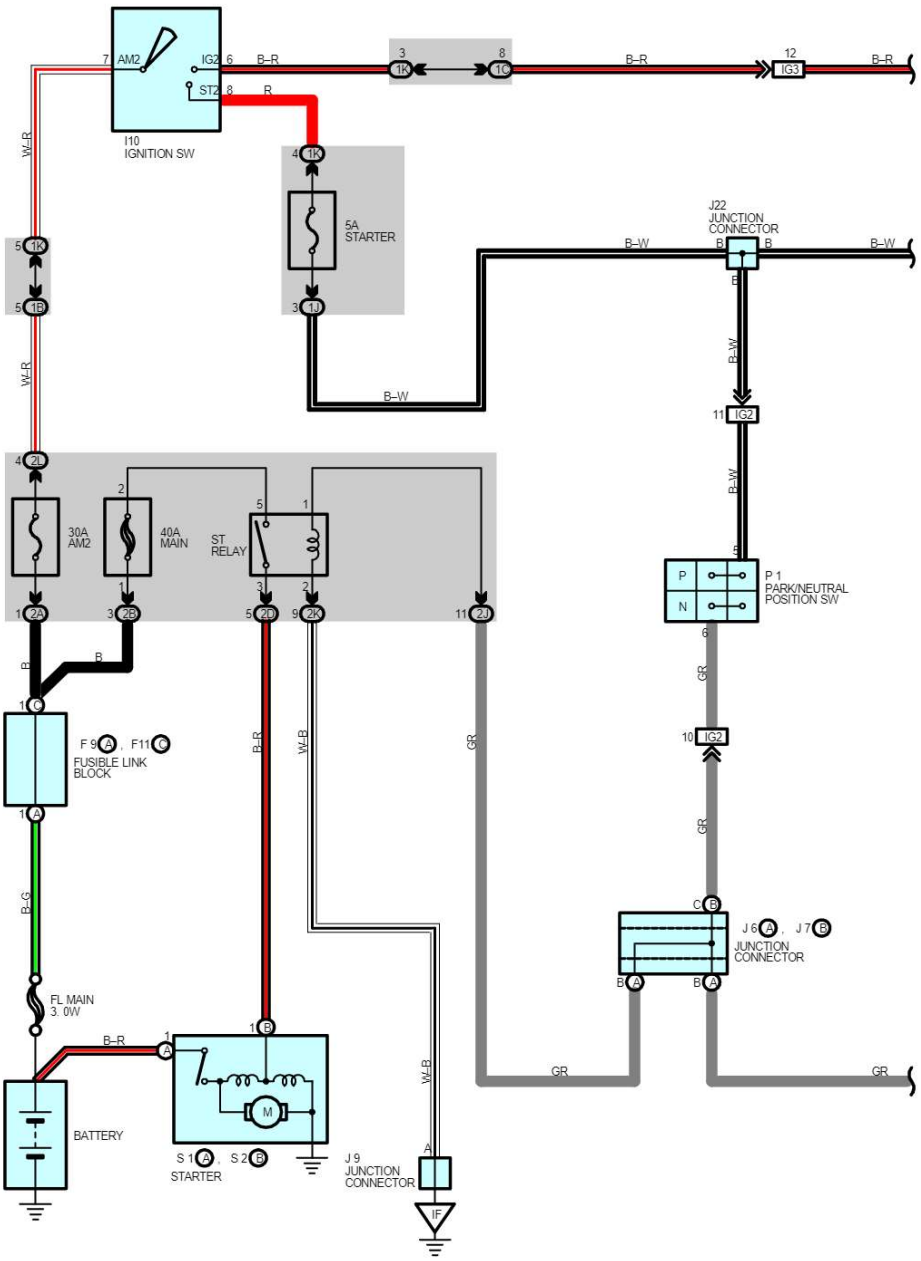
**: GROUND POINTS**

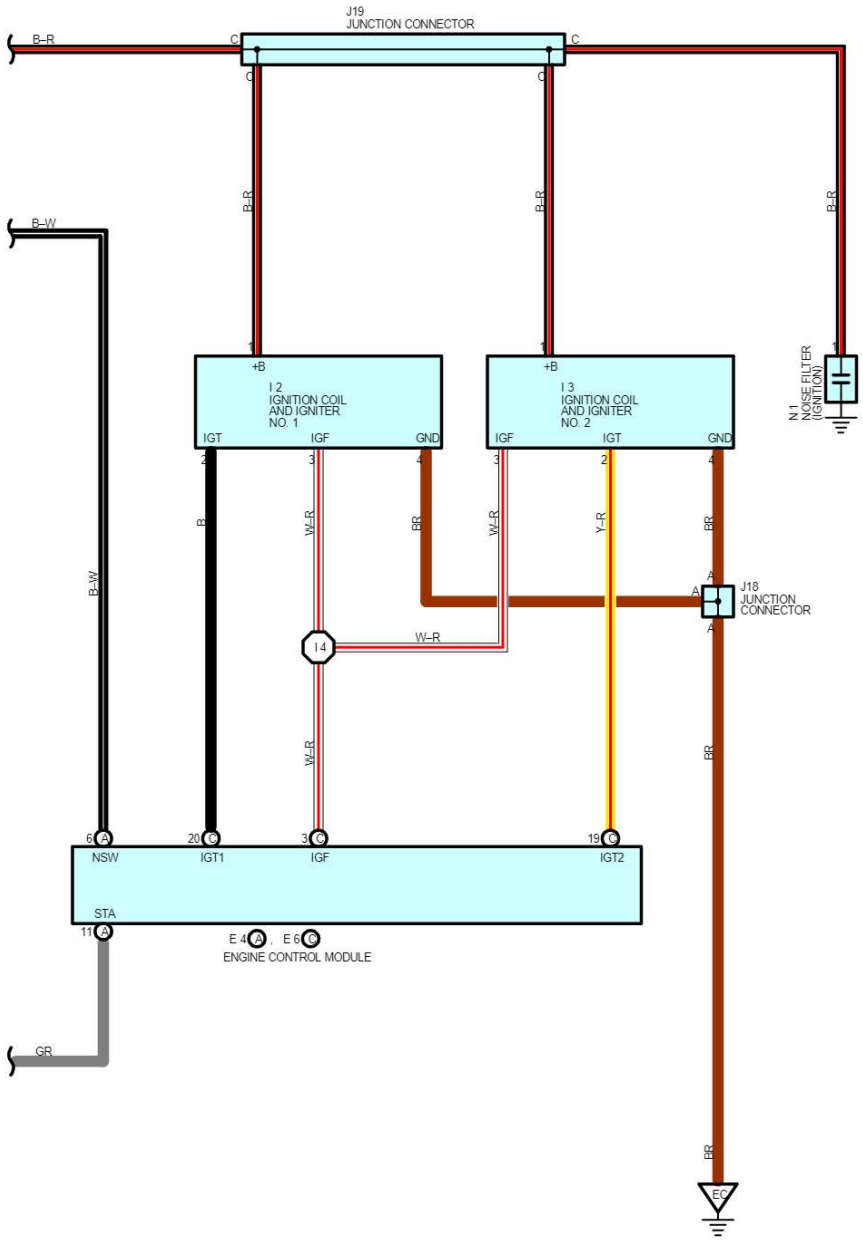
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |
| IF | 36 | Instrument Panel Brace LH |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 34 | Cowl Wire | I2 | 38 | Cowl Wire |

## STARTING AND IGNITION




J19
JUNCTION CONNECTOR
B–R
B–W
+B
I 2
IGNITION COIL
AND IGNITER
NO. 1
IGT
IGF
GND
+B
I 3
IGNITION COIL
AND IGNITER
NO. 2
IGF
IGT
GND
N 1
NOISE FILTER
(IGNITION)
J18
JUNCTION
CONNECTOR
I 4
W–R
B
BR
Y–R
B–W
GR
NSW
IGT1
IGF
IGT2
STA
E 4 , E 6
ENGINE CONTROL MODULE
EC

# STARTING AND IGNITION

**SERVICE HINTS**

**I10 IGNITION SW**

7–6 : Closed with the ignition SW at **ON** or **ST** position
7–8 : Closed with the ignition SW at **ST** position

**P1 PARK/NEUTRAL POSITION SW**

5–6 : Closed with the A/T shift lever in **P** or **N** position

**S1 (A), S2 (B) STARTER**

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

**○ : PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| E4 | A | 30 | I10 | | 30 | J22 | | 31 |
| E6 | C | 30 | J6 | A | 31 | N1 | | 29 |
| F9 | A | 28 | J7 | B | 31 | P1 | | 29 |
| F11 | C | 28 | J9 | | 31 | S1 | A | 29 |
| I2 | | 29 | J18 | | 31 | S2 | B | 29 |
| I3 | | 29 | J19 | | 31 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1J | | |
| 1K | | |
| 2A | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2B | | |
| 2D | | |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |
| 2L | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IG2 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG3 | | |

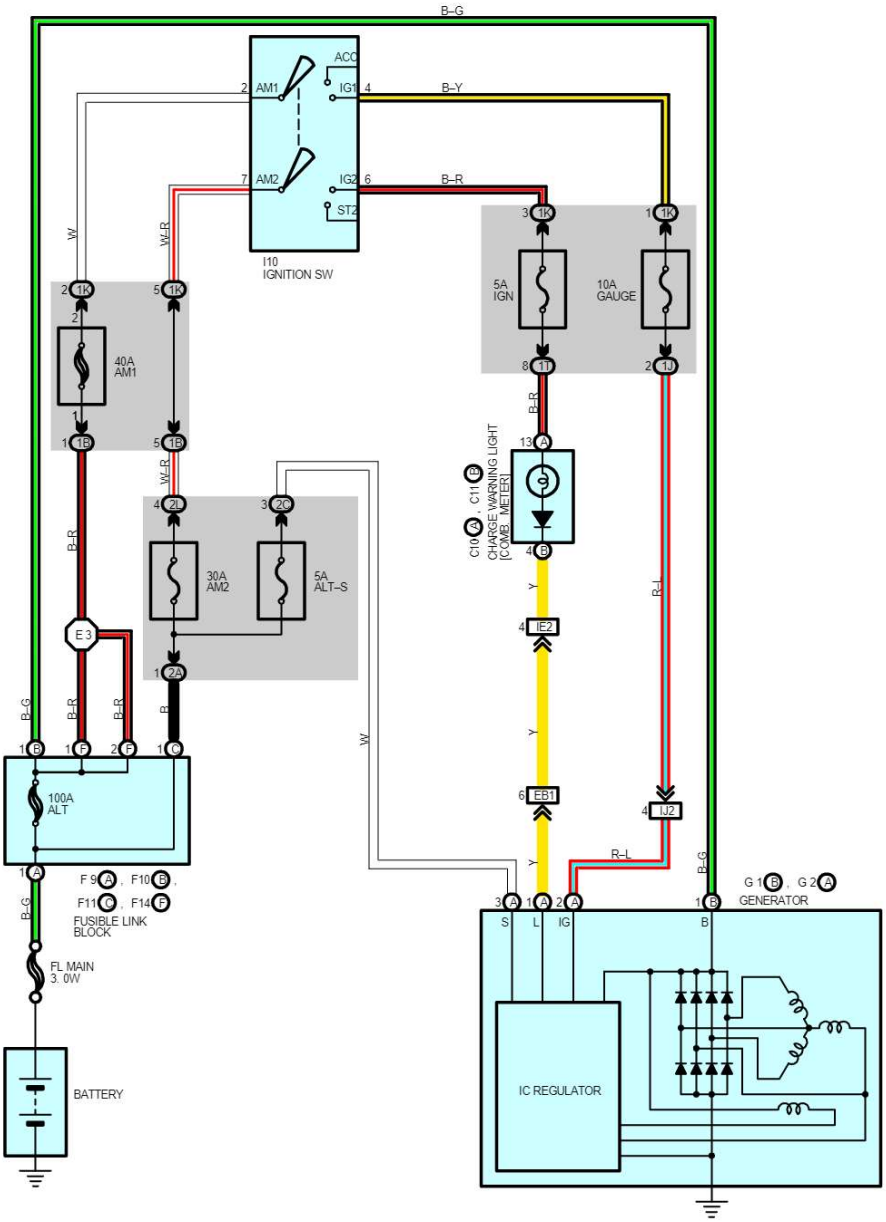
**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| EC | 34 | Intake Manifold |
| IF | 36 | Instrument Panel Brace LH |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I4 | 38 | Engine Wire | | | |

## CHARGING


B–G
ACC
AM1
IG1
B–Y
AM2
IG2
B–R
ST2
I10
IGNITION SW
W
W–R
5A
IGN
10A
GAUGE
40A
AM1
30A
AM2
5A
ALT–S
B–R
C10 , C11
CHARGE WARNING LIGHT
[COMB. METER]
Y
R–L
E 3
IE2
EB1
IJ2
100A
ALT
F 9 , F10 ,
F11 , F14
FUSIBLE LINK
BLOCK
FL MAIN
3. 0W
BATTERY
G 1 , G 2
GENERATOR
S
L
IG
B
IC REGULATOR

**SERVICE HINTS**

**G1 (B), G2 (A) GENERATOR**

(A)3–GROUND : **13.5**–**14.3** volts with the engine running at **5000** rpm and **115**°C (**239**°F)

(B)1–GROUND : Always approx. **12** volts

**○ : PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| C10 | A | 30 | F10 | B | 28 | G1 | B | 28 |
| C11 | B | 30 | F11 | C | 28 | G2 | A | 28 |
| F9 | A | 28 | F14 | F | 28 | I10 | | 30 |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | | |
| 1K | | |
| 1T | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2A | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2L | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

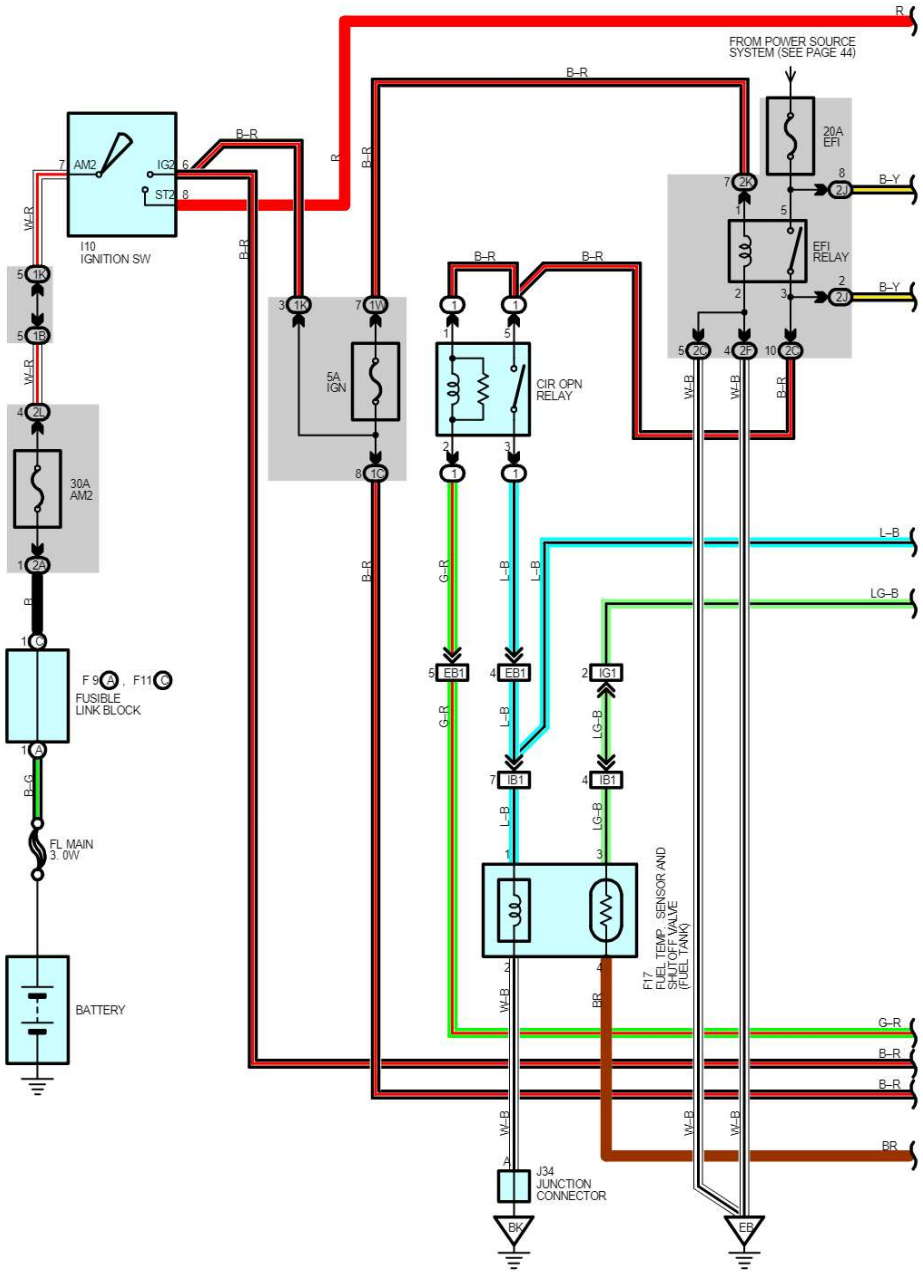
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

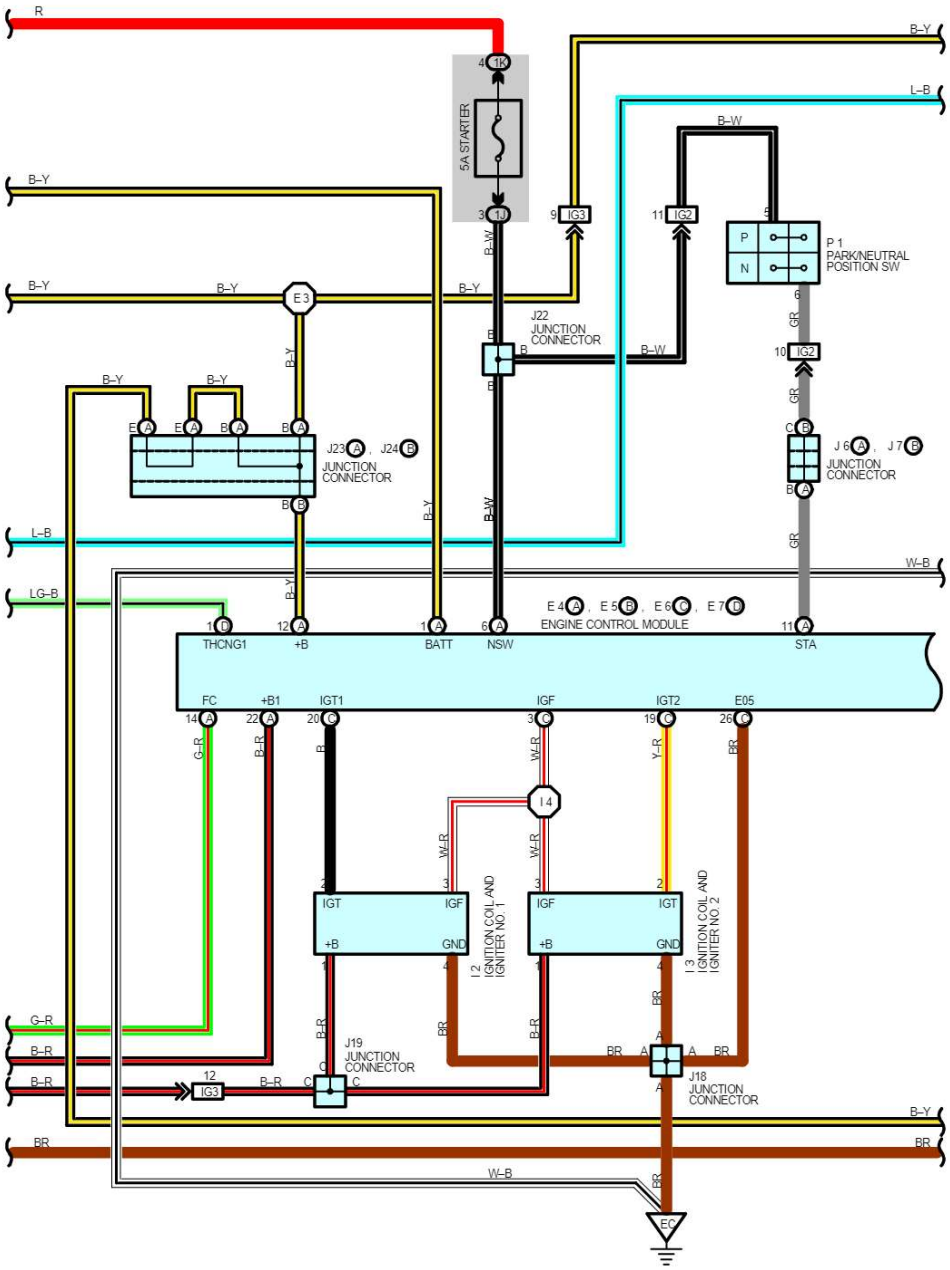
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 34 | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| IE2 | 36 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IJ2 | 38 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

**: SPLICE POINTS**

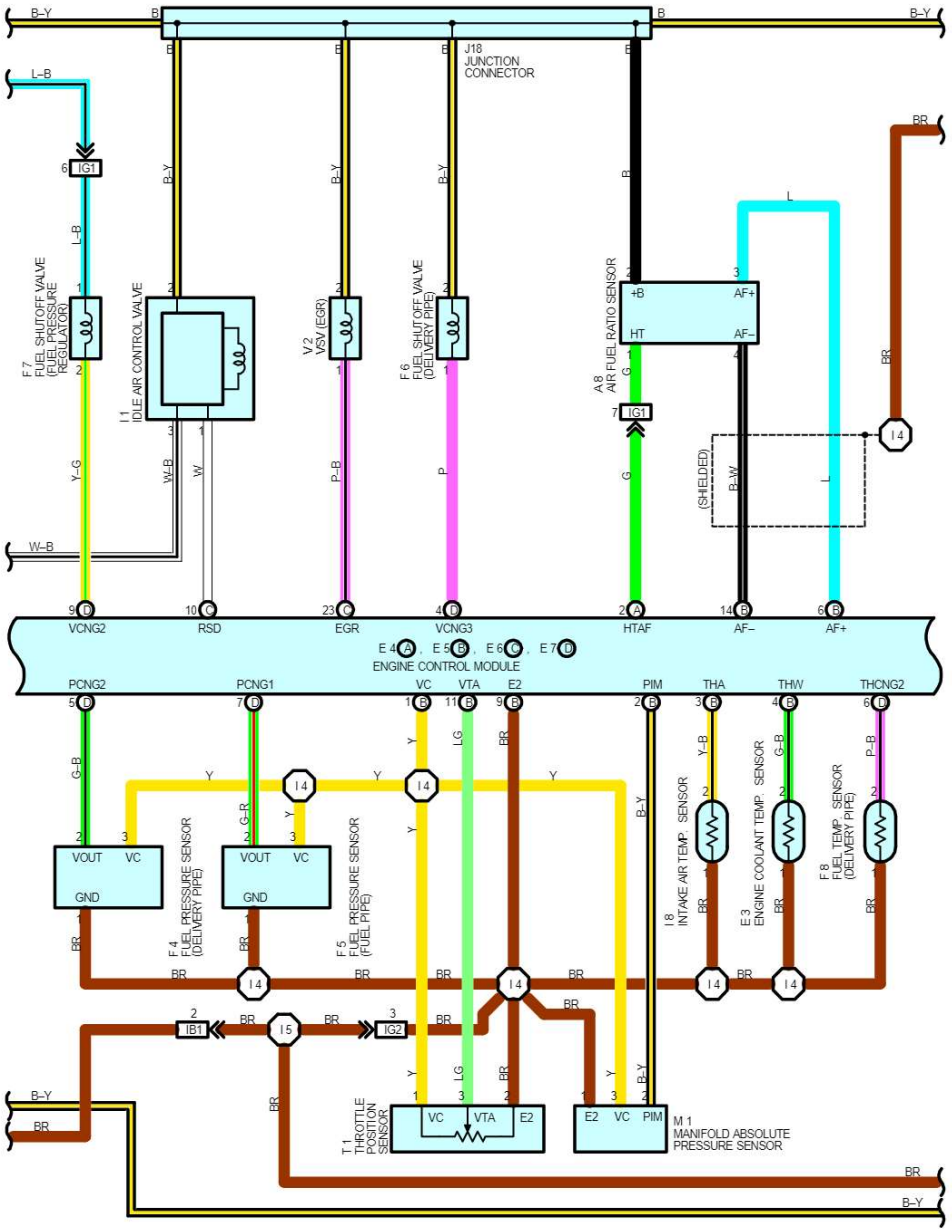
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 34 | Cowl Wire | | | |

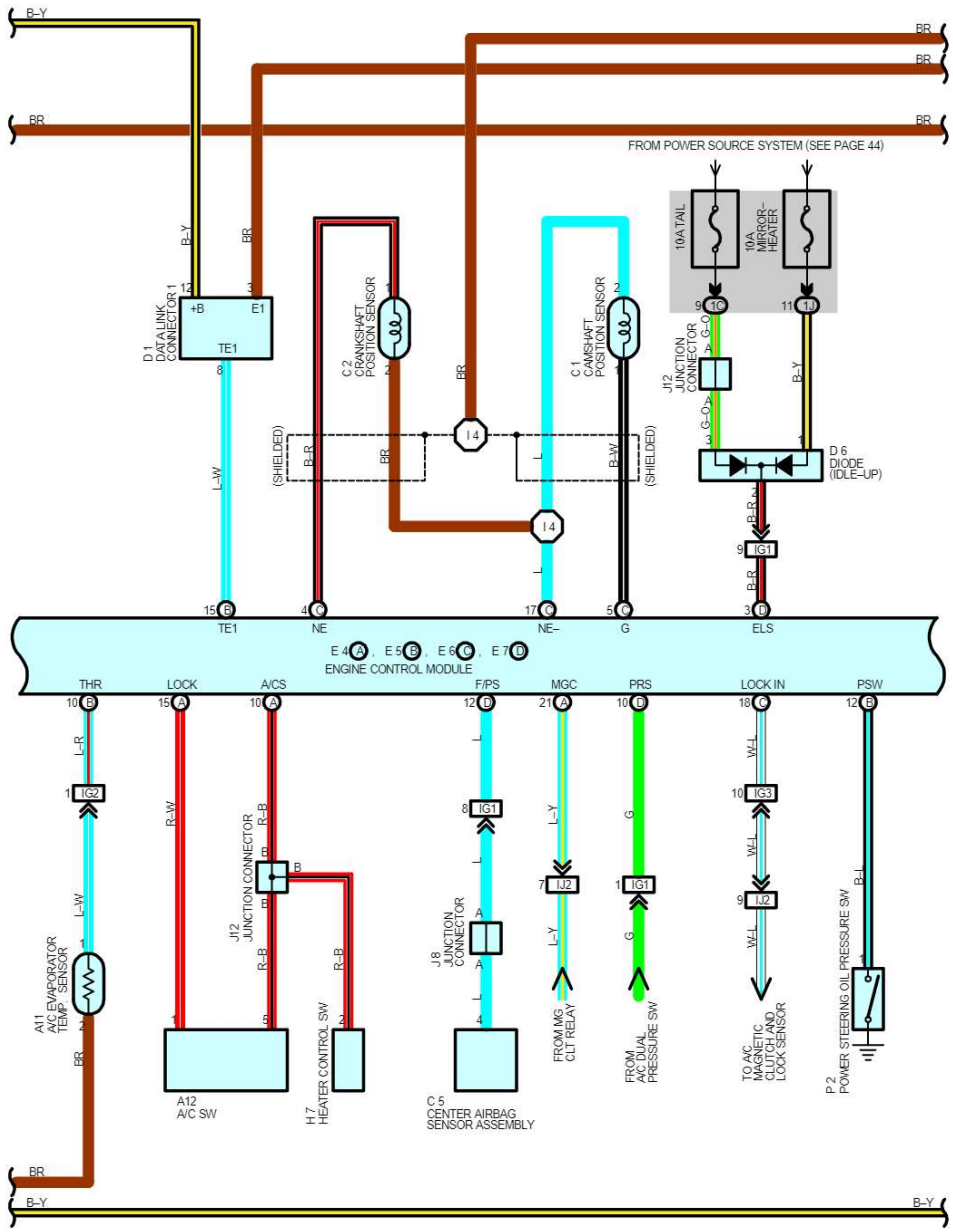
## ENGINE CONTROL

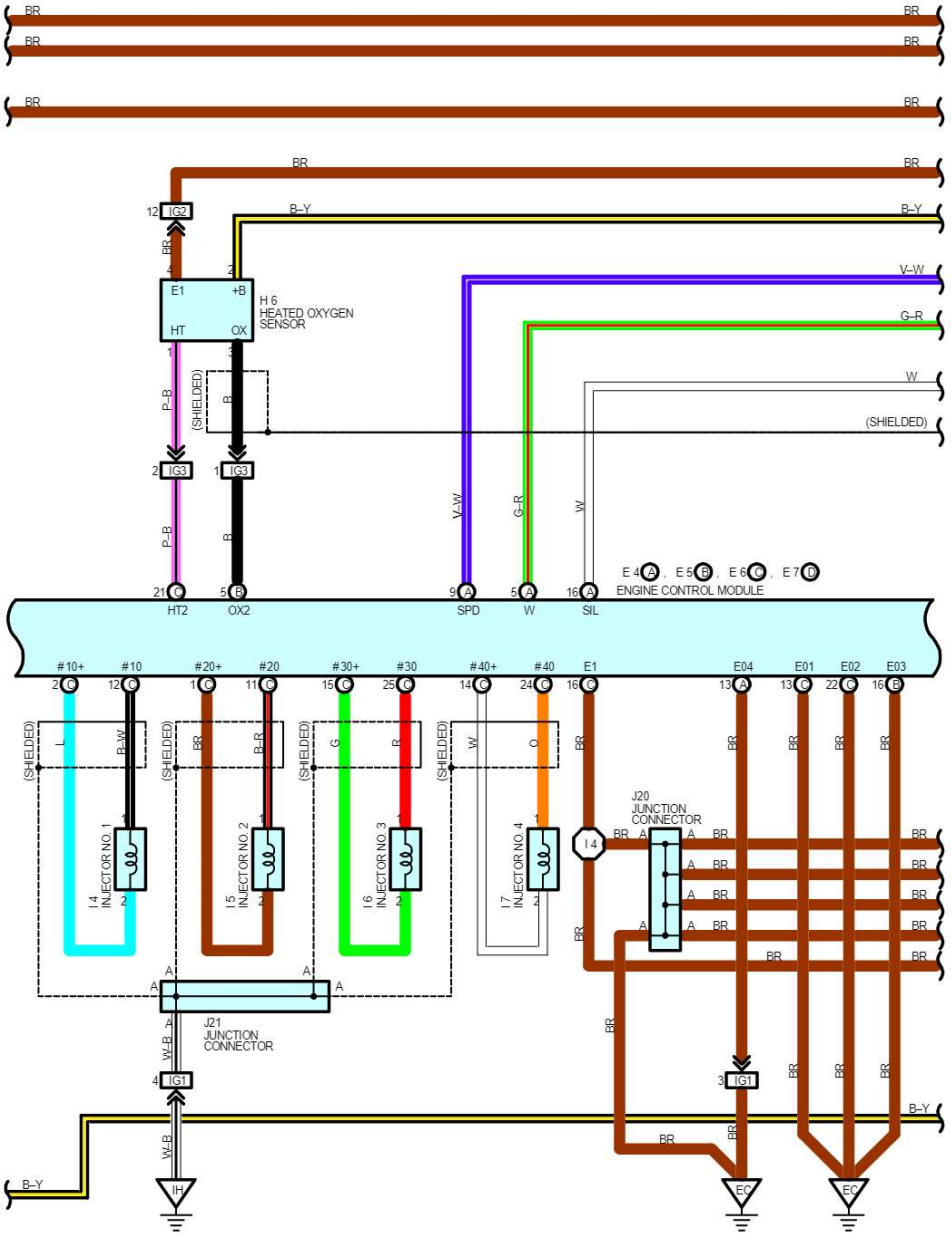


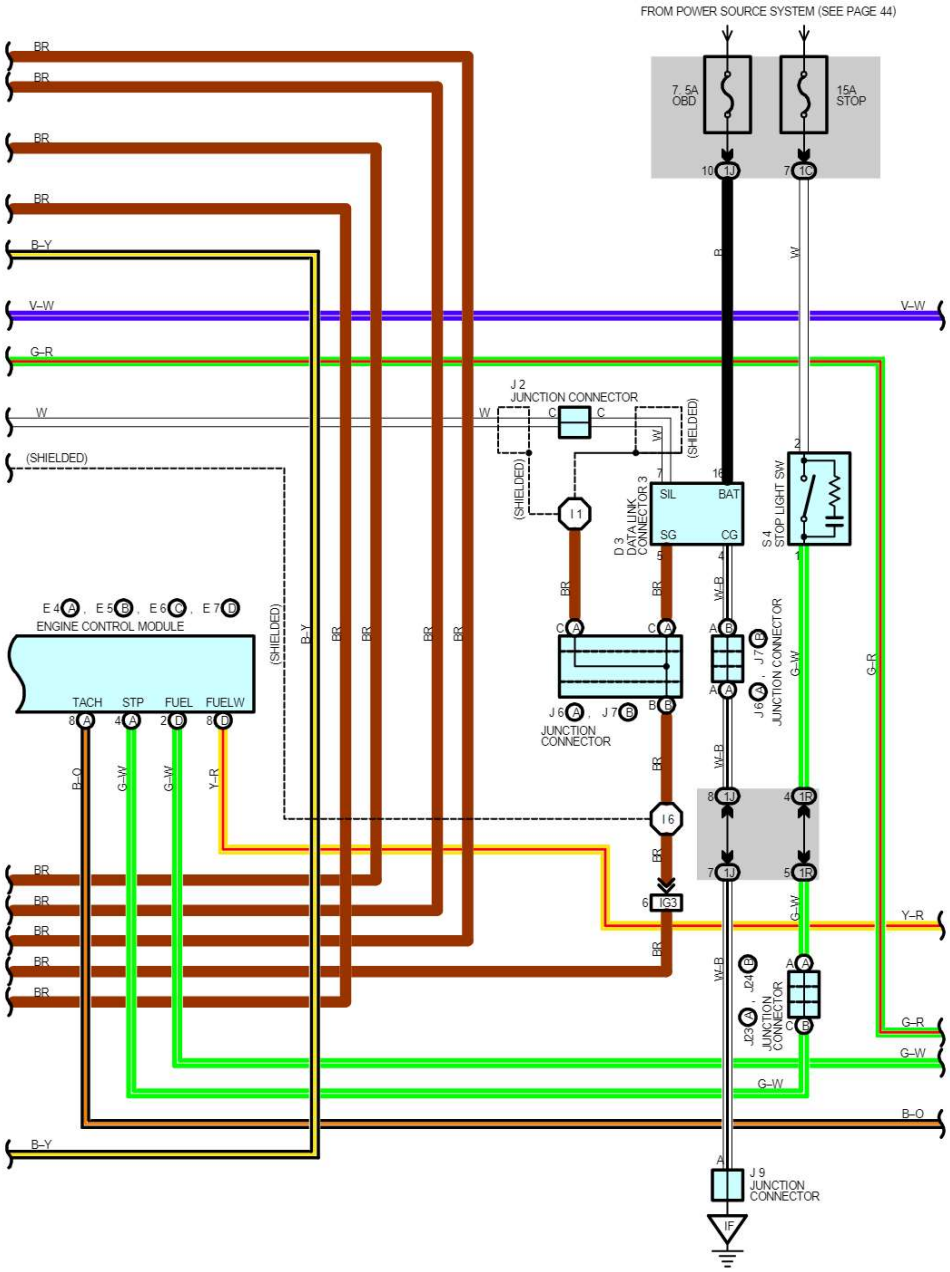

R
B–Y
L–B
B–W
5A STARTER
4 1K
3 1J
9 IG3
11 IG2
P 1
PARK/NEUTRAL
POSITION SW
P
N
E 3
J22
JUNCTION
CONNECTOR
10 IG2
J23 A , J24 B
JUNCTION
CONNECTOR
J 6 A , J 7 B
JUNCTION
CONNECTOR
W–B
LG–B
L–B
E 4 A , E 5 B , E 6 C , E 7 D
ENGINE CONTROL MODULE
1 D THCNG1
12 A +B
1 A BATT
6 A NSW
11 A STA
FC
+B1
IGT1
IGF
IGT2
E05
14 A
22 A
20 C
3 C
19 C
26 C
G–R
B–R
W–B
Y–R
BR
I 4
IGT
IGF
+B
GND
I 2
IGNITION COIL AND
IGNITER NO. 1
I 3
IGNITION COIL AND
IGNITER NO. 2
J19
JUNCTION
CONNECTOR
12
IG3
J18
JUNCTION
CONNECTOR
EC

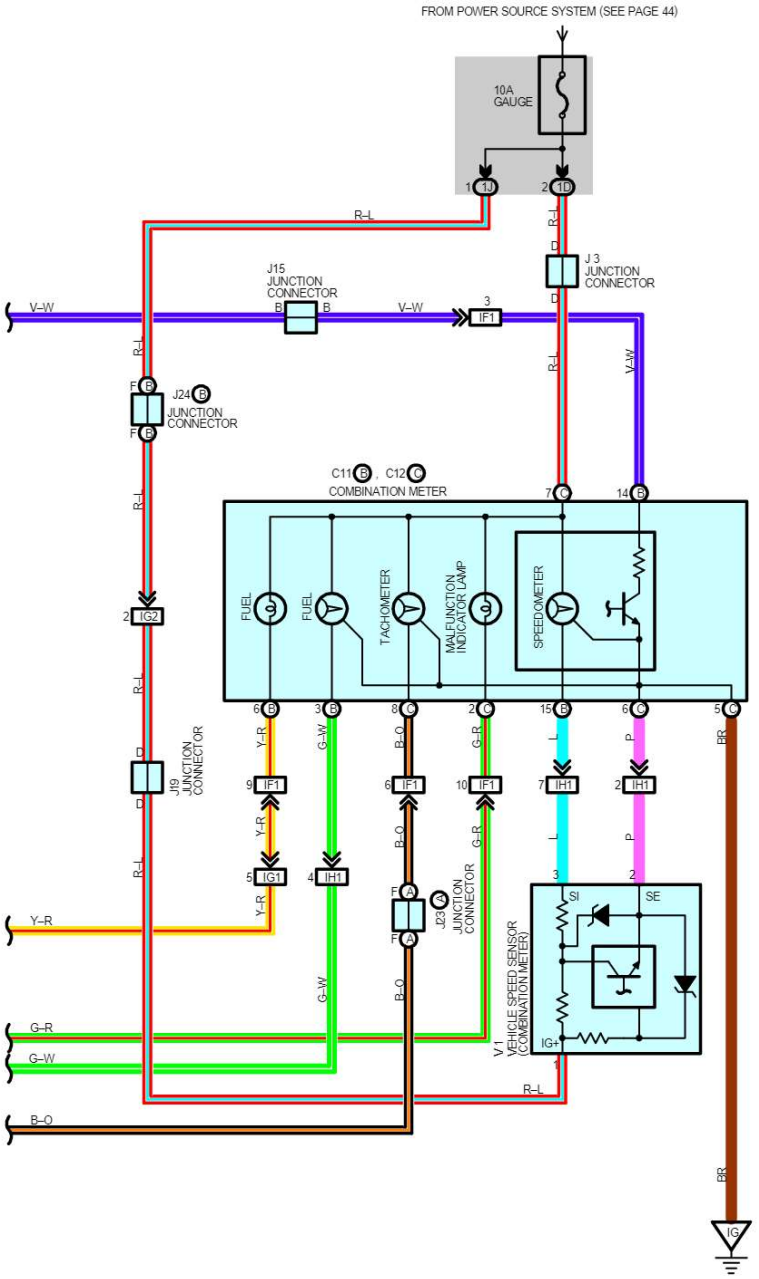
# ENGINE CONTROL




B–Y
BR
FROM POWER SOURCE SYSTEM (SEE PAGE 44)
10A TAIL
10A MIRROR–HEATER
D 1 DATA LINK CONNECTOR 1
+B
E1
TE1
C 2 CRANKSHAFT POSITION SENSOR
C 1 CAMSHAFT POSITION SENSOR
J12 JUNCTION CONNECTOR
D 6 DIODE (IDLE–UP)
(SHIELDED)
I 4
L–W
R–B
B–W
L
B–Y
G–O
IG1
TE1
NE
NE–
G
ELS
E 4 (A) , E 5 (B) , E 6 (C) , E 7 (D)
ENGINE CONTROL MODULE
THR
LOCK
A/CS
F/PS
MGC
PRS
LOCK IN
PSW
L–R
R–W
L–Y
G
W–L
B–L
IG2
IG3
IJ2
A11 A/C EVAPORATOR TEMP. SENSOR
J12 JUNCTION CONNECTOR
J8 JUNCTION CONNECTOR
A12 A/C SW
H 7 HEATER CONTROL SW
C 5 CENTER AIRBAG SENSOR ASSEMBLY
FROM MG CLT RELAY
FROM A/C DUAL PRESSURE SW
TO A/C MAGNETIC CLUTCH AND LOCK SENSOR
P 2 POWER STEERING OIL PRESSURE SW


BR
B–Y
V–W
G–R
W
(SHIELDED)
P–B
IG2
IG3
IG1
H 6
HEATED OXYGEN SENSOR
E1
+B
HT
OX
HT2
OX2
SPD
W
SIL
E 4 , E 5 , E 6 , E 7
ENGINE CONTROL MODULE
#10+
#10
#20+
#20
#30+
#30
#40+
#40
E1
E04
E01
E02
E03
L
B–W
B–R
G
R
W
O
I 4 INJECTOR NO. 1
I 5 INJECTOR NO. 2
I 6 INJECTOR NO. 3
I 7 INJECTOR NO. 4
J20 JUNCTION CONNECTOR
J21 JUNCTION CONNECTOR
IH
EC


FROM POWER SOURCE SYSTEM (SEE PAGE 44)
7.5A OBD
15A STOP
10 1J
7 1G
BR
B–Y
V–W
G–R
W
(SHIELDED)
J 2 JUNCTION CONNECTOR
D 3 DATA LINK CONNECTOR 3
SIL
BAT
SG
CG
S 4 STOP LIGHT SW
I 1
I 6
E 4 A , E 5 B , E 6 C , E 7 D
ENGINE CONTROL MODULE
TACH
STP
FUEL
FUELW
8 A
4 A
2 D
8 E
B–O
G–W
Y–R
W–B
J 6 A , J 7 B
JUNCTION CONNECTOR
J 7 B , J 6 C
JUNCTION CONNECTOR
8 1J
4 1R
7 1J
5 1R
6 IG3
J 24 B , J 23 C
JUNCTION CONNECTOR
J 9 JUNCTION CONNECTOR
IF


FROM POWER SOURCE SYSTEM (SEE PAGE 44)
10A GAUGE
1D
J15 JUNCTION CONNECTOR
J 3 JUNCTION CONNECTOR
IF1
J24 JUNCTION CONNECTOR
C11, C12
COMBINATION METER
FUEL
FUEL
TACHOMETER
MALFUNCTION INDICATOR LAMP
SPEEDOMETER
IG2
J19 JUNCTION CONNECTOR
IG1
IH1
J23 JUNCTION CONNECTOR
V1 VEHICLE SPEED SENSOR (COMBINATION METER)
SI
SE
IG+
V–W
R–L
Y–R
G–W
G–R
B–O
L
P
BR
IG

## SYSTEM OUTLINE

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

### 1. INPUT SIGNALS

(1) Engine coolant temp. signal circuit

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

(2) Intake air temp. signal circuit

The intake air temp. sensor detects the intake air temp. , which is input as a control signal into TERMINAL THA of the engine control module.

(3) Oxygen sensor signal circuit

The oxygen density in the exhaust gases is detected and input as a control signal into TERMINAL OX2 of the engine control module.

(4) RPM signal circuit

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

(5) Throttle signal circuit

The throttle position sensor detects the throttle valve opening angle, which is input as a control signal into TERMINAL VTA of the engine control module.

(6) Vehicle speed signal circuit

The vehicle speed sensor, installed inside the transmission, detects the vehicle speed and inputs a control signal into TERMINAL SPD of the engine control module.

(7) Park/Neutral position SW signal circuit

The Park/Neutral position SW detects whether the shift position are in neutral, parking or not, and inputs a control signal into TERMINAL STA of the engine control module.

(8) A/C SW signal circuit

The A/C amplifier is built in the engine control module. The signal from the A/C SW is input into TERMINAL A/CS of the engine control module.

(9) Battery signal circuit

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

(10) Intake air volume signal circuit

Intake air volume is detected by the manifold absolute pressure sensor (for manifold pressure) and is input as a control signal into TERMINAL PIM of the engine control module.

(11) Starter signal circuit

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

(12) Electrical load signal circuit

The signal when systems such as the rear window defogger, headlights, etc. Which cause a high electrical burden are on is input to TERMINAL ELS as a control signal.

(13) Air fuel ratio signal circuit

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

**2. CONTROL SYSTEM**

- SFI system
  The SFI system monitors the engine condition through the signals, which are input from each sensor to the engine control module. The best fuel injection volume is decided based on this data and the program memorized by the engine control module, and the control signal is output to TERMINALS #10+, #20+, #30+ and #40+ of the engine control module to operate the injector. (Inject the fuel). The SFI system produces control of fuel injection operation by the engine control module in response to the driving conditions.
- ESA system
  The ESA system monitors the engine condition through the signals, which are input to the engine control module from each sensor the best ignition timing is detected according to this data and the memorized data in the engine control module, and the control signal is output to TERMINALS IGT1 and IGT2. This signal controls the igniter to provide the best ignition timing for the driving conditions.
- IAC system
  The IAC system (Step motor type) increases the RPM and provides idling stability for fast idle–up when the engine is cold and when the idle speed has dropped due to electrical load, etc. The engine control module evaluates the signals from each sensor, outputs current to TERMINAL RSD , and controls the idle air control valve.
- Fuel control system
  The engine control module operation outputs to TERMINAL FC and controls the CIR OPN relay. Thus controls the fuel shutoff valve open and close.
- EGR control system
  The EGR control system controls the VSV (EGR) by evaluating the signals from each sensor which are input to the engine control module and by sending output to TERMINAL EGR of the engine control module.
- A/C conditioning operation system
  In addition to the conventional A/C cut control, the engine control module performs the air conditioning operation as well since the A/C amplifier function is built in it.

**3. DIAGNOSIS SYSTEM**

With the diagnosis system, when there is a malfunctioning in the engine control module signal system, the malfunction 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 trouble being caused by continued control based on the signals from that system, the fail–safe system either controls the system by using data (Standard values) recorded in the engine control module memory or else stops the engine.

**SERVICE HINTS**

**E4 (A), E5 (B), E6 (C), E7 (D) ENGINE CONTROL MODULE**

BATT–E1 : Always **9.0–14.0** volts
+B–E1 : **9.0–14.0** volts with the ignition SW at **ON** or **ST** position
VC–E2 : **4.5– 5.5** volts with the ignition SW on
VTA–E2 : **0.3– 0.8** volts with the ignition SW on and throttle valve fully closed
**3.2–4.9** volts with the ignition SW on and throttle valve open
PIM–E2 : **3.3– 3.9** volts with the ignition SW on
THA–E2 : **0.5–3.4** volts with the ignition SW on and intake air temp. **20**˚C (**68**˚F)
THW–E2 : **0.2– 1.0** volts with the ignition SW on and coolant temp. **80**˚C (**176**˚F)
STA–E1 : **6.0–14.0** volts with the engine cranking
W–E1 : **9.0–14.0** volts with the no trouble and engine running
TE1–E1 : **9.0–14.0** volts with the ignition SW on
NSW–E1 : **0– 3.0** volts with the ignition SW on and Park/Neutral position SW position **P** or **N** position
**9.0–14.0** volts with the ignition SW on and except Park/Neutral position SW position **P** or **N** position
IGT1, IGT2–E1 : Pulse generation with the engine cranking or idling
#10+, #20+, #30+, #40+–E01, E02 : **9.0–14.0** volts with the ignition SW on

### : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A8 | 28 | F8 | 28 | J9 | 31 |
| A11 | 30 | F9 A | 28 | J12 | 31 |
| A12 | 30 | F11 C | 28 | J15 | 31 |
| C1 | 28 | F17 | 32 | J18 | 31 |
| C2 | 28 | H6 | 30 | J19 | 31 |
| C5 | 30 | H7 | 30 | J20 | 31 |
| C11 B | 30 | I1 | 29 | J21 | 31 |
| C12 C | 30 | I2 | 29 | J22 | 31 |
| D1 | 28 | I3 | 29 | J23 A | 31 |
| D3 | 30 | I4 | 29 | J24 B | 31 |
| D6 | 30 | I5 | 29 | J34 | 32 |
| E3 | 28 | I6 | 29 | M1 | 29 |
| E4 A | 30 | I7 | 29 | P1 | 29 |
| E5 B | 30 | I8 | 29 | P2 | 29 |
| E6 C | 30 | I10 | 30 | S4 | 31 |
| E7 D | 30 | J2 | 31 | T1 | 29 |
| F4 | 28 | J3 | 31 | V1 | 29 |
| F5 | 28 | J6 A | 31 | V2 | 29 |
| F6 | 28 | J7 B | 31 | | |
| F7 | 28 | J8 | 31 | | |

### : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 26 | Engine Room R/B No.1 (Engine Compartment Left) |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1K | | |
| 1R | | |
| 1W | | |
| 2A | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2F | | |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |
| 2L | | |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 34 | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| IB1 | 36 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IF1 | 36 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IG1 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG2 | | |
| IG3 | | |
| IH1 | 38 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| IJ2 | 38 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

# ENGINE CONTROL

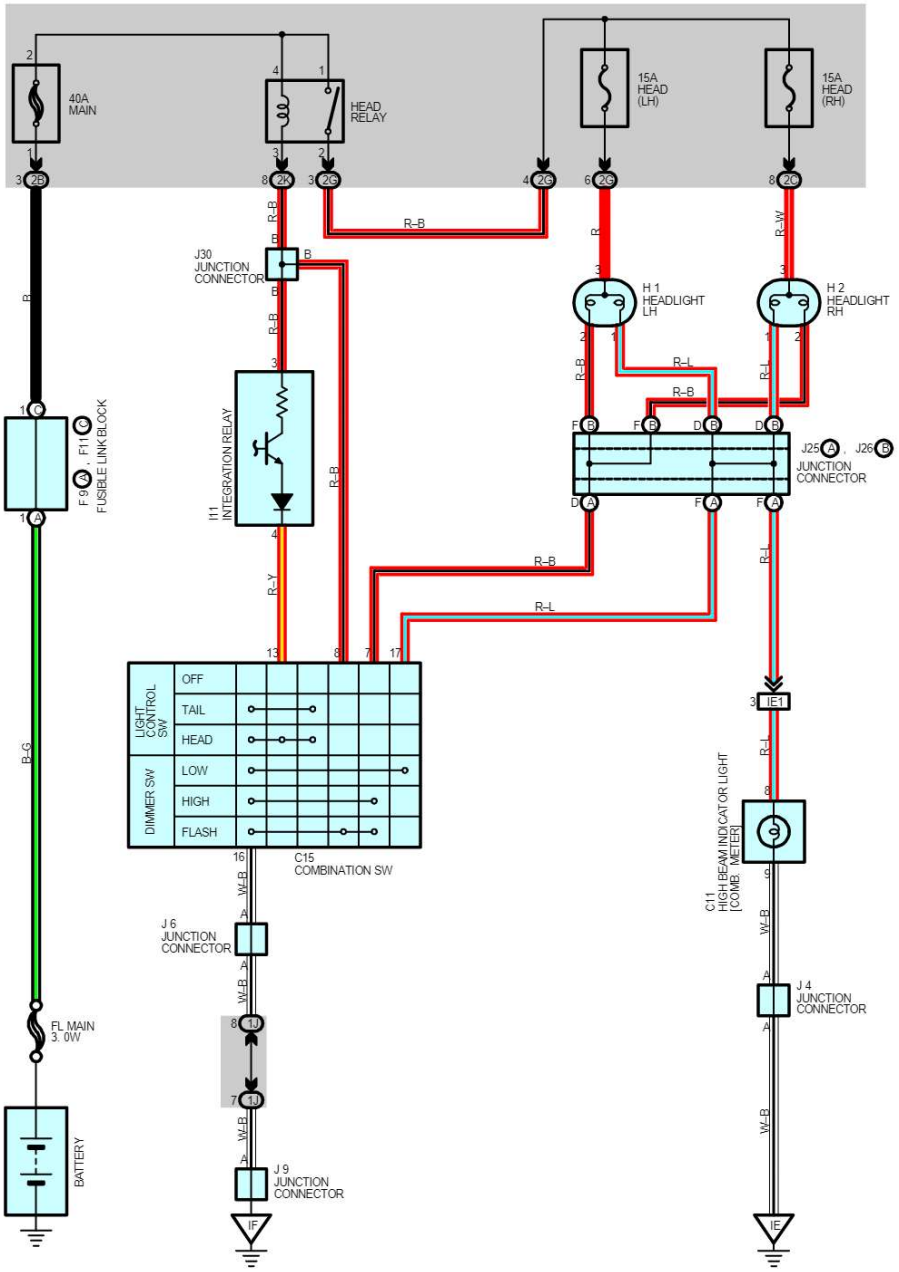
 : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |
| EC | 34 | Intake Manifold |
| IF | 36 | Instrument Panel Brace LH |
| IG | 36 | Instrument Panel Brace RH |
| IH | 36 | Cowl Side Panel RH |
| BK | 40 | Under the Left Center Pillar |

 : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 34 | Cowl Wire | I5 | 38 | Cowl Wire |
| I1 | 38 | Cowl Wire | I6 | | |
| I4 | 38 | Engine Wire | | | |

# HEADLIGHT


40A
MAIN
HEAD
RELAY
15A
HEAD
(LH)
15A
HEAD
(RH)
J30
JUNCTION
CONNECTOR
H 1
HEADLIGHT
LH
H 2
HEADLIGHT
RH
J25 , J26
JUNCTION
CONNECTOR
I11
INTEGRATION RELAY
F11 , F9
FUSIBLE LINK BLOCK
LIGHT
CONTROL
SW
DIMMER SW
OFF
TAIL
HEAD
LOW
HIGH
FLASH
C15
COMBINATION SW
J 6
JUNCTION
CONNECTOR
J 9
JUNCTION
CONNECTOR
J 4
JUNCTION
CONNECTOR
C11
HIGH BEAM INDICATOR LIGHT
[COMB. METER]
FL MAIN
3. 0W
BATTERY
R-B
R-L
R-Y
R-W
W-B
B-G

**SERVICE HINTS**

**HEAD RELAY**

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

**C15 COMBINATION SW**

13–16 : Continuity with the light control SW at **HEAD** position
8–16 : Continuity with the dimmer SW at **FLASH** position
7–16 : Continuity with the dimmer SW at **HIGH** or **FLASH** position

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C11 | 30 | H2 | 28 | J25 A | 31 |
| C15 | 30 | I11 | 30 | J26 B | 31 |
| F9 A | 28 | J4 | 31 | J30 | 31 |
| F11 C | 28 | J6 | 31 | | |
| H1 | 28 | J9 | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2B | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2G | | |
| 2K | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

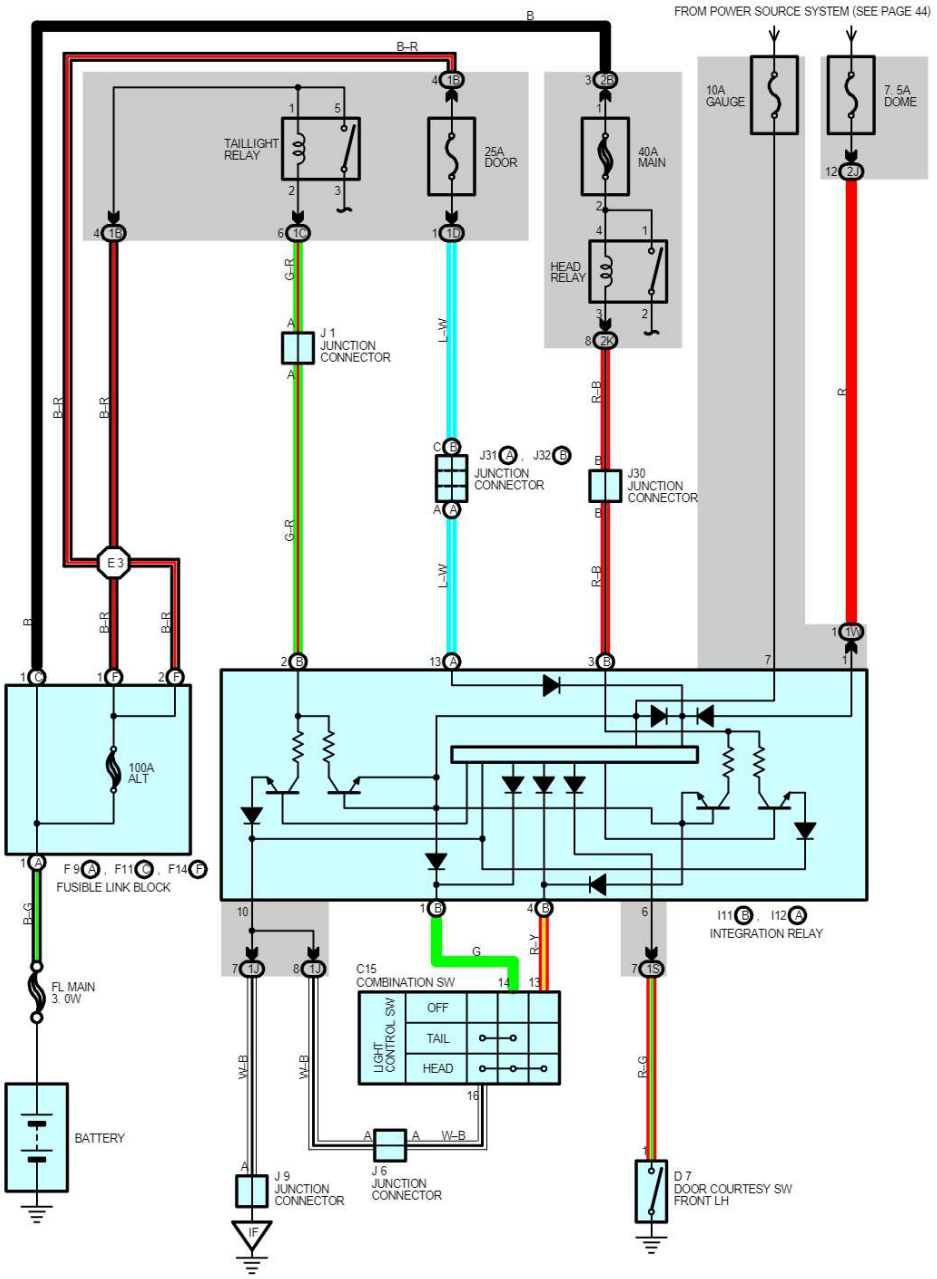
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 36 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 36 | Left Kick Panel |
| IF | 36 | Instrument Panel Brace LH |

# LIGHT AUTO TURN OFF



## SYSTEM OUTLINE

With the ignition SW turned on, the current flows to TERMINAL 7 of the integration relay through GAUGE fuse.
Voltage is applied at all times to TERMINAL (B) 2 of the integration relay through the TAILLIGHT relay coil side, and to TERMINAL (B) 3 through the HEAD relay coil side.

### 1. NORMAL LIGHTING OPERATION

<Turn taillight on>
With the light control SW turned to TAIL position, a signal is input into TERMINAL (B) 1 of the integration relay. Due to this signal, the current flowing to TERMINAL (B) 2 of the relay flows to TERMINAL (B) 1 to TERMINAL 14 of the light control SW to TERMINAL 16 to GROUND, and TAILLIGHT relay causes taillights to turn on.

<Turn headlight on>
With the light control SW turned to HEAD position, a signal is input into TERMINALS (B) 1 and (B) 4 of the integration relay. Due to this signal, the current flowing to TERMINALS (B) 3 and (B) 2 of the relay flows to TERMINALS (B) 4 and (B) 1 to TERMINALS 13 and 14 of the light control SW to TERMINAL 16 to GROUND, and causes TAILLIGHT and HEAD relay to turn the lights on.

### 2. LIGHT AUTO TURN OFF OPERATION

When the driver's door is opened with the lights on and the ignition SW off, the relay is activated, and the current flow from TERMINAL (B) 2 of the relay to TERMINAL (B) 1, and from TERMINAL (B) 3 to TERMINAL (B) 4 are cut, and all the lights are turned off.

## SERVICE HINTS

**HEAD RELAY**

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

**TAILLIGHT RELAY**

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

**D7 DOOR COURTESY SW FRONT LH**

1–GROUND : Continuity with the front LH door open

**I11 (B), I12 (A) INTEGRATION RELAY**

7–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position
6–GROUND : Continuity with the front LH door open
1–GROUND : Always approx. **12** volts
10–GROUND : Always continuity
(A)13–GROUND : Always approx. **12** volts
(B) 2–GROUND : Always approx. **12** volts
(B) 3–GROUND : Always approx. **12** volts
(B) 4–GROUND : Continuity with the light control SW at **HEAD** position
(B) 1–GROUND : Continuity with the light control SW at **TAIL** or **HEAD** position

## ○ : PARTS LOCATION

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| C15 | | 30 | I11 | B | 30 | J30 | | 31 |
| D7 | | 32 | I12 | A | 30 | J31 | A | 31 |
| F9 | A | 28 | J1 | | 31 | J32 | B | 31 |
| F11 | C | 28 | J6 | | 31 | | | |
| F14 | F | 28 | J9 | | 31 | | | |

# LIGHT AUTO TURN OFF

 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2B | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

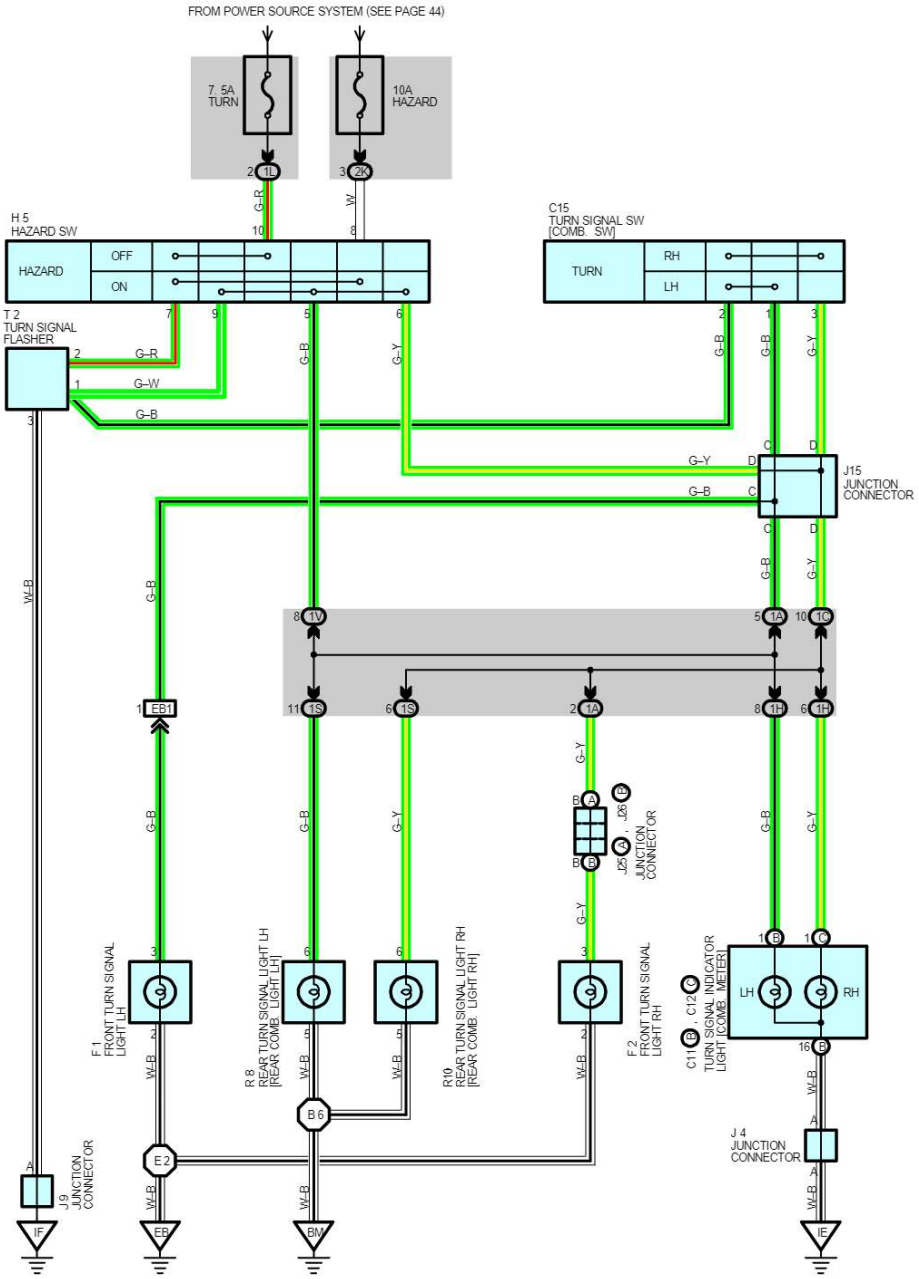
 : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 36 | Instrument Panel Brace LH |

 : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 34 | Cowl Wire | | | |

# TURN SIGNAL AND HAZARD WARNING LIGHT



**SERVICE HINTS**

**T2 TURN SIGNAL FLASHER**

2–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position or the hazard SW on

1–GROUND : Changes from **12** to **0** volts with the ignition SW at **ON** or **ST** position and the turn signal SW **LH** or **RH** position, and with the hazard SW on

3–GROUND : Always continuity

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C11 B | 30 | H5 | 30 | J26 B | 31 |
| C12 C | 30 | J4 | 31 | R8 | 33 |
| C15 | 30 | J9 | 31 | R10 | 33 |
| F1 | 28 | J15 | 31 | T2 | 31 |
| F2 | 28 | J25 A | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1A<br>1C | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1L | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2K | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 34 | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |

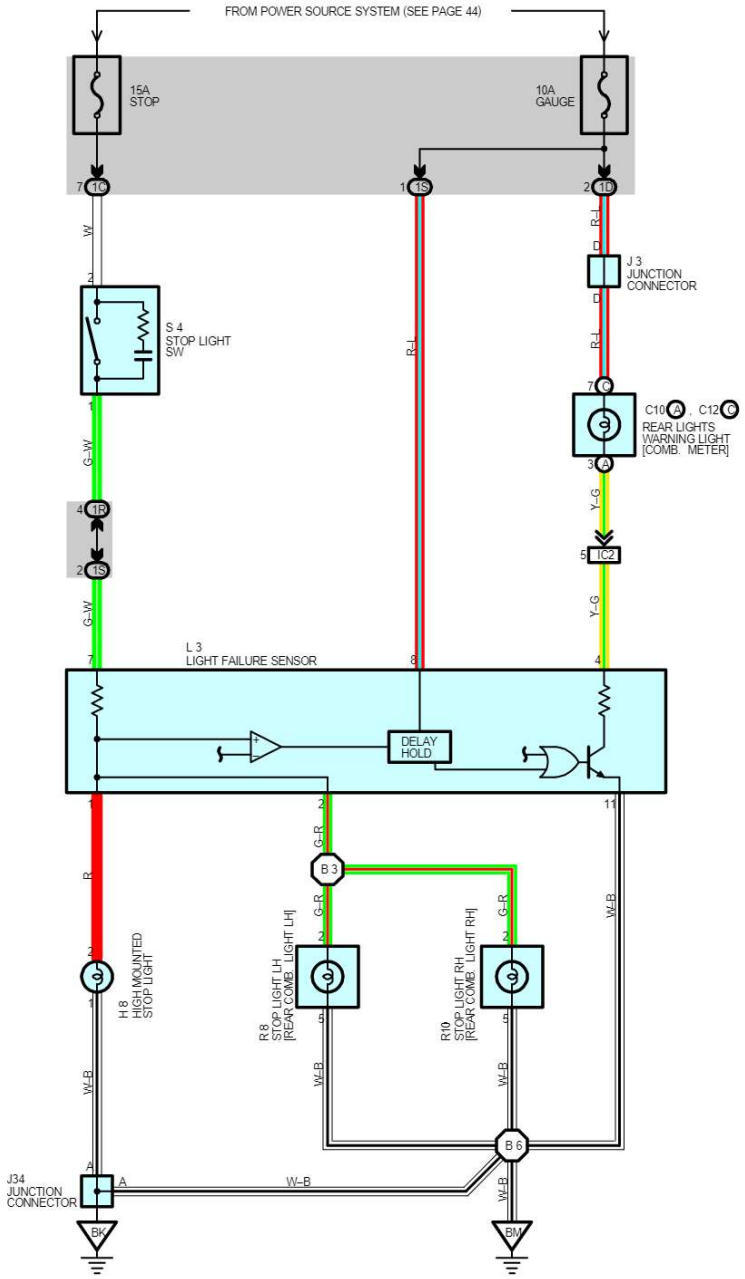
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |
| IE | 36 | Left Kick Panel |
| IF | 36 | Instrument Panel Brace LH |
| BM | 40 | Back Panel Center |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E2 | 34 | Engine Room Main Wire | B6 | 40 | Floor Wire |

## STOP LIGHT


FROM POWER SOURCE SYSTEM (SEE PAGE 44)
15A
STOP
10A
GAUGE
7 1C
1 1S
2 1D
W
R-L
D
J 3
JUNCTION
CONNECTOR
2
S 4
STOP LIGHT
SW
1
G-W
R-L
D
R-L
7 C
C10 A , C12 C
REAR LIGHTS
WARNING LIGHT
[COMB. METER]
3 A
Y-G
4 1R
2 1S
5 1C2
G-W
Y-G
7
L 3
LIGHT FAILURE SENSOR
8
4
DELAY
HOLD
1
2
11
R
G-R
B 3
G-R
G-R
W-B
H 8
HIGH MOUNTED
STOP LIGHT
R 8
STOP LIGHT LH
[REAR COMB. LIGHT LH]
R10
STOP LIGHT RH
[REAR COMB. LIGHT RH]
W-B
W-B
B 6
J34
JUNCTION
CONNECTOR
A
W-B
W-B
BK
BM

## 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 TERMINAL 2 and 1 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 holding and the warning light on until the ignition SW is turned off.

## SERVICE HINTS

**S4 STOP LIGHT SW**

2–1 : Closed with the brake pedal depressed

**L3 LIGHT FAILURE SENSOR**

7–GROUND : Approx. **12** volts with the stop light SW on
4, 8–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position
11–GROUND : Always continuity

### : PARTS LOCATION

| Code | | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|---|
| C10 | A | 30 | J3 | 31 | R8 | 33 |
| C12 | C | 30 | J34 | 32 | R10 | 33 |
| H8 | | 32 | L3 | 32 | S4 | 31 |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IC2 | 36 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |

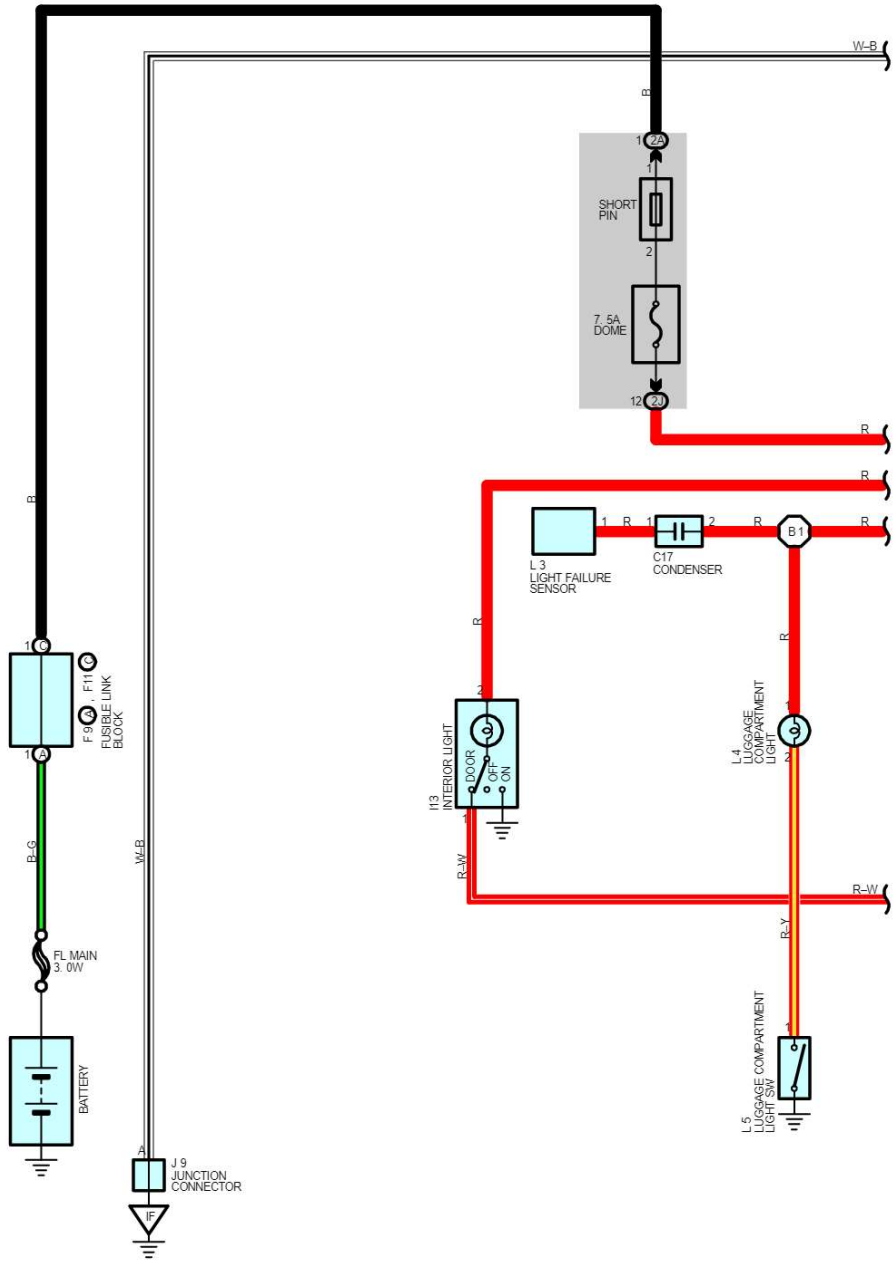
### : GROUND POINTS

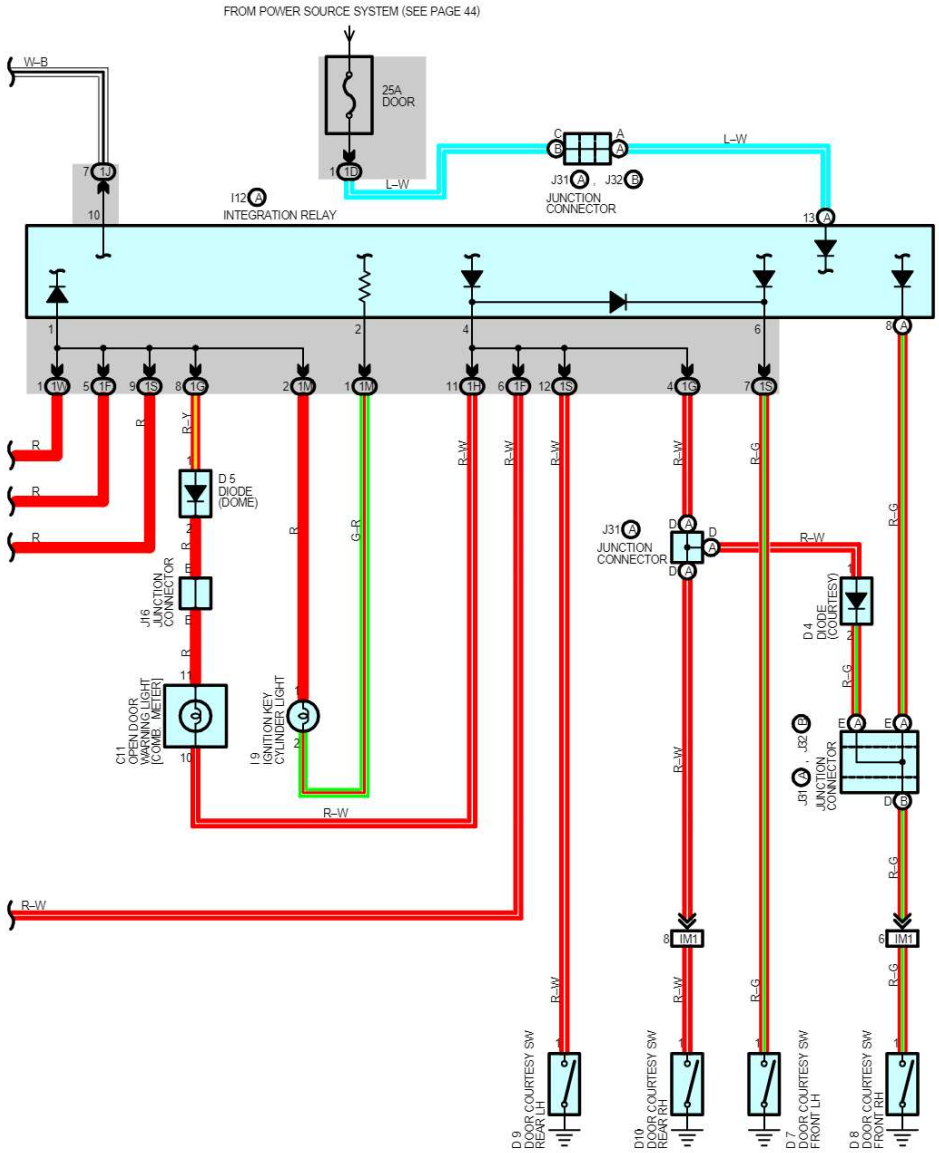
| Code | See Page | Ground Points Location |
|---|---|---|
| BK | 40 | Under the Left Center Pillar |
| BM | 40 | Back Panel Center |

### : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B3 | 40 | Floor Wire | B6 | 40 | Floor Wire |

## INTERIOR LIGHT




FROM POWER SOURCE SYSTEM (SEE PAGE 44)
W–B
25A
DOOR
L–W
I12
INTEGRATION RELAY
J31
J32
JUNCTION
CONNECTOR
L–W
D 5
DIODE
(DOME)
R–Y
R
G–R
R–W
R–G
J16
JUNCTION
CONNECTOR
C11
OPEN DOOR
WARNING LIGHT
[COMB. METER]
I 9
IGNITION KEY
CYLINDER LIGHT
J31
JUNCTION
CONNECTOR
D 4
DIODE
(COURTESY)
J32
J33
JUNCTION
CONNECTOR
IM1
D 9
DOOR COURTESY SW
REAR LH
D10
DOOR COURTESY SW
REAR RH
D 7
DOOR COURTESY SW
FRONT LH
D 8
DOOR COURTESY SW
FRONT RH

# INTERIOR LIGHT

**SERVICE HINTS**

**I12 (A) INTEGRATION RELAY**

1–GROUND : Always approx. **12** volts
4–GROUND : Continuity with the one of each door (Front RH, rear LH and RH) open
6–GROUND : Continuity with the front LH door open
10–GROUND : Always continuity
(A) 8–GROUND : Continuity with the front RH door open

**D7, D8, D9, D10 DOOR COURTESY SW FRONT LH, RH, REAR LH, RH**

1–GROUND : Closed with the door open

**L5 LUGGAGE COMPARTMENT LIGHT SW**

1–GROUND : Closed with the luggage compartment door open

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C11 | 30 | D10 | 32 | J16 | 31 |
| C17 | 32 | F9 A | 28 | J31 A | 31 |
| D4 | 30 | F11 C | 28 | J32 B | 31 |
| D5 | 30 | I9 | 30 | L3 | 32 |
| D7 | 32 | I12 A | 30 | L4 | 32 |
| D8 | 32 | I13 | 32 | L5 | 32 |
| D9 | 32 | J9 | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1F | 22 | Roof Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G<br>1H | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J<br>1M | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2A | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IM1 | 38 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |

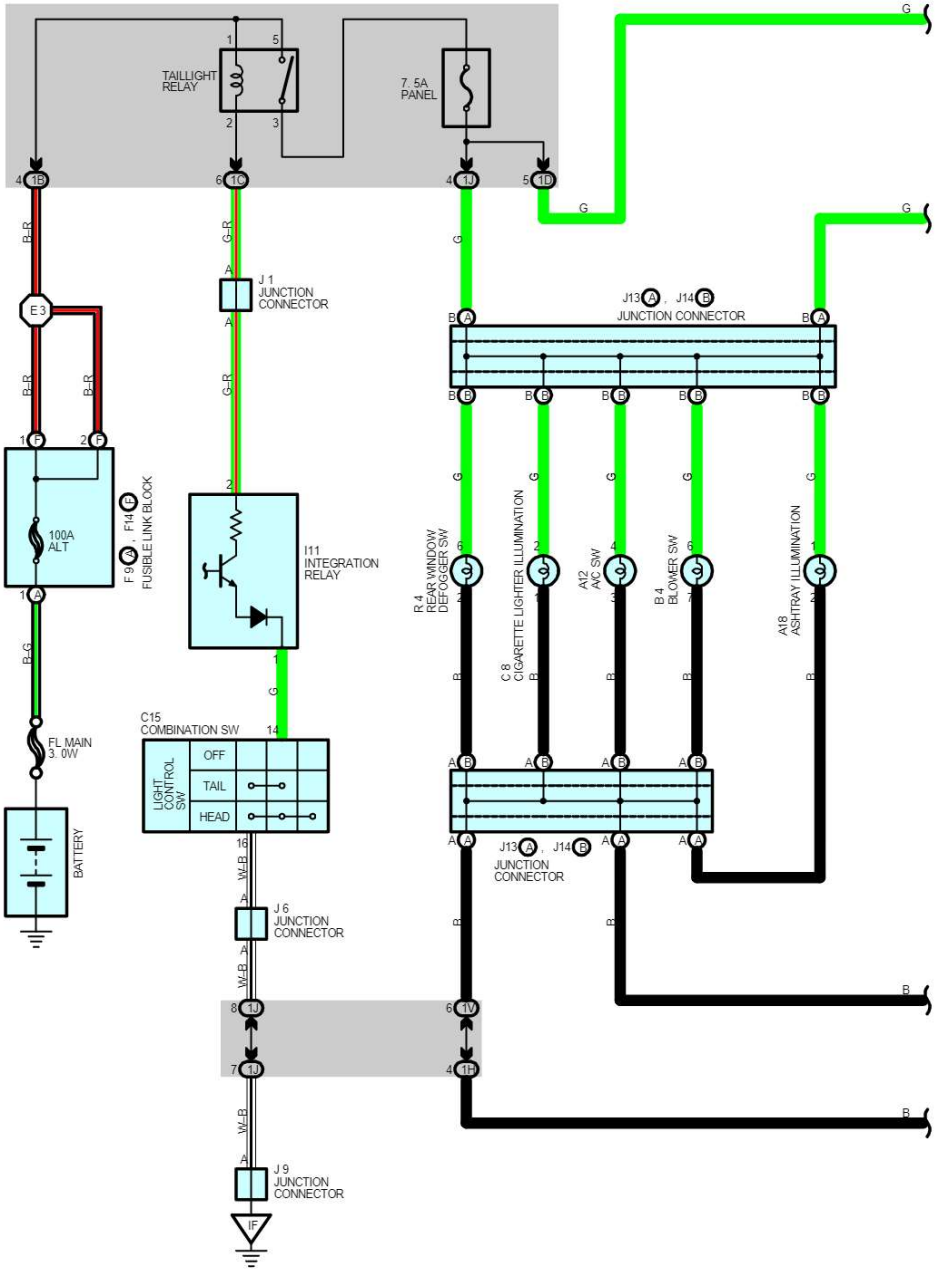
**: GROUND POINTS**

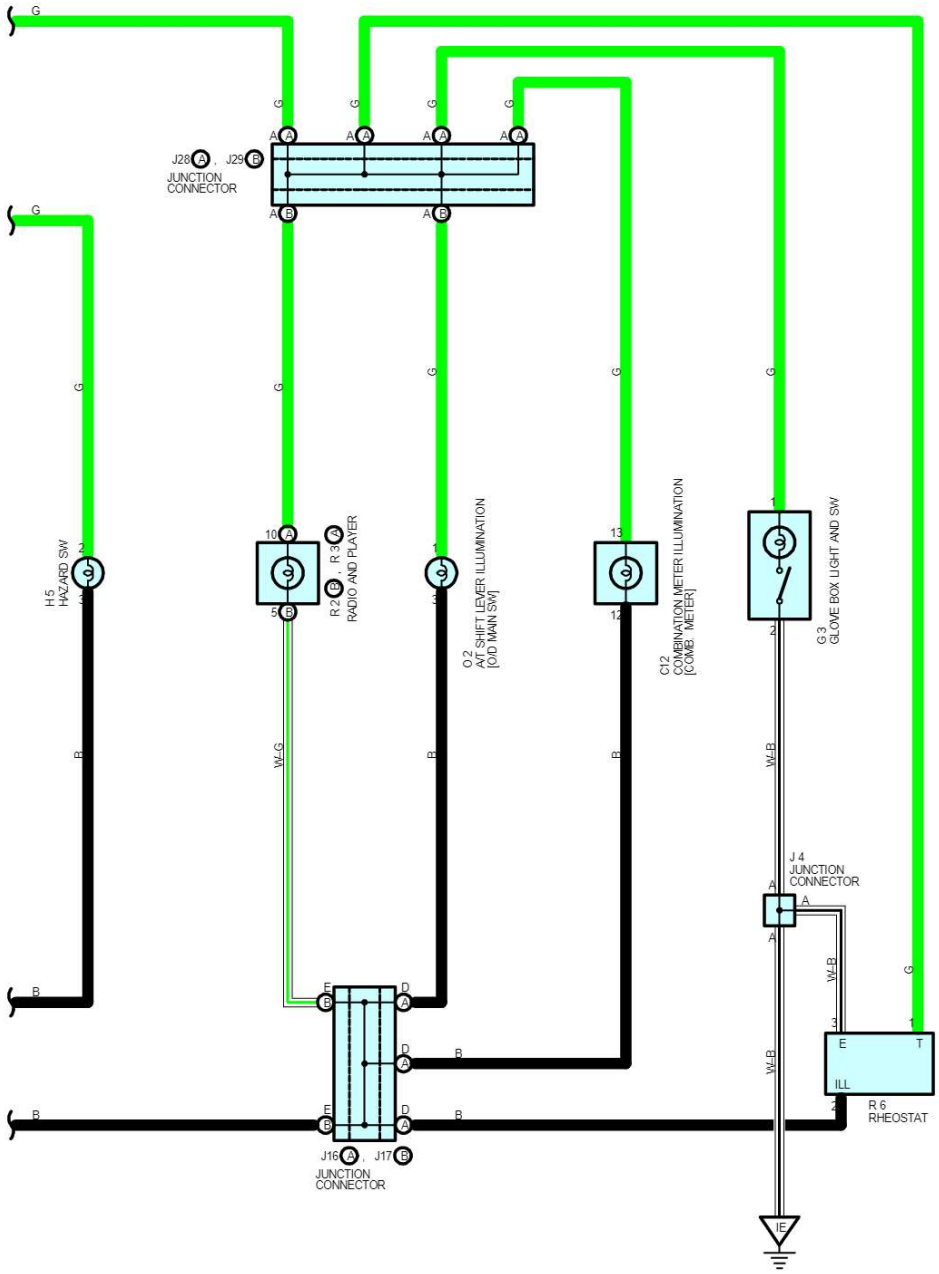
| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 36 | Instrument Panel Brace LH |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B1 | 40 | Floor Wire | | | |

## ILLUMINATION




G
J28 A , J29 B
JUNCTION CONNECTOR
H 5
HAZARD SW
R 3
R 20
RADIO AND PLAYER
O 2
A/T SHIFT LEVER ILLUMINATION [O/D MAIN SW]
C12
COMBINATION METER ILLUMINATION [COMB. METER]
G 3
GLOVE BOX LIGHT AND SW
J 4
JUNCTION CONNECTOR
W-G
W-B
B
E
T
ILL
R 6
RHEOSTAT
J16 A , J17 B
JUNCTION CONNECTOR
IE

# ILLUMINATION

**SERVICE HINTS**

**TAILLIGHT RELAY**

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

**C15 COMBINATION SW**

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

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A12 | 30 | H5 | 30 | J17 B | 31 |
| A18 | 30 | I11 | 30 | J28 A | 31 |
| B4 | 30 | J1 | 31 | J29 B | 31 |
| C8 | 30 | J4 | 31 | O2 | 31 |
| C12 | 30 | J6 | 31 | R2 B | 31 |
| C15 | 30 | J9 | 31 | R3 A | 31 |
| F9 A | 28 | J13 A | 31 | R4 | 31 |
| F14 F | 28 | J14 B | 31 | R6 | 31 |
| G3 | 30 | J16 A | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B<br>1C | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D<br>1H | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J<br>1V | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

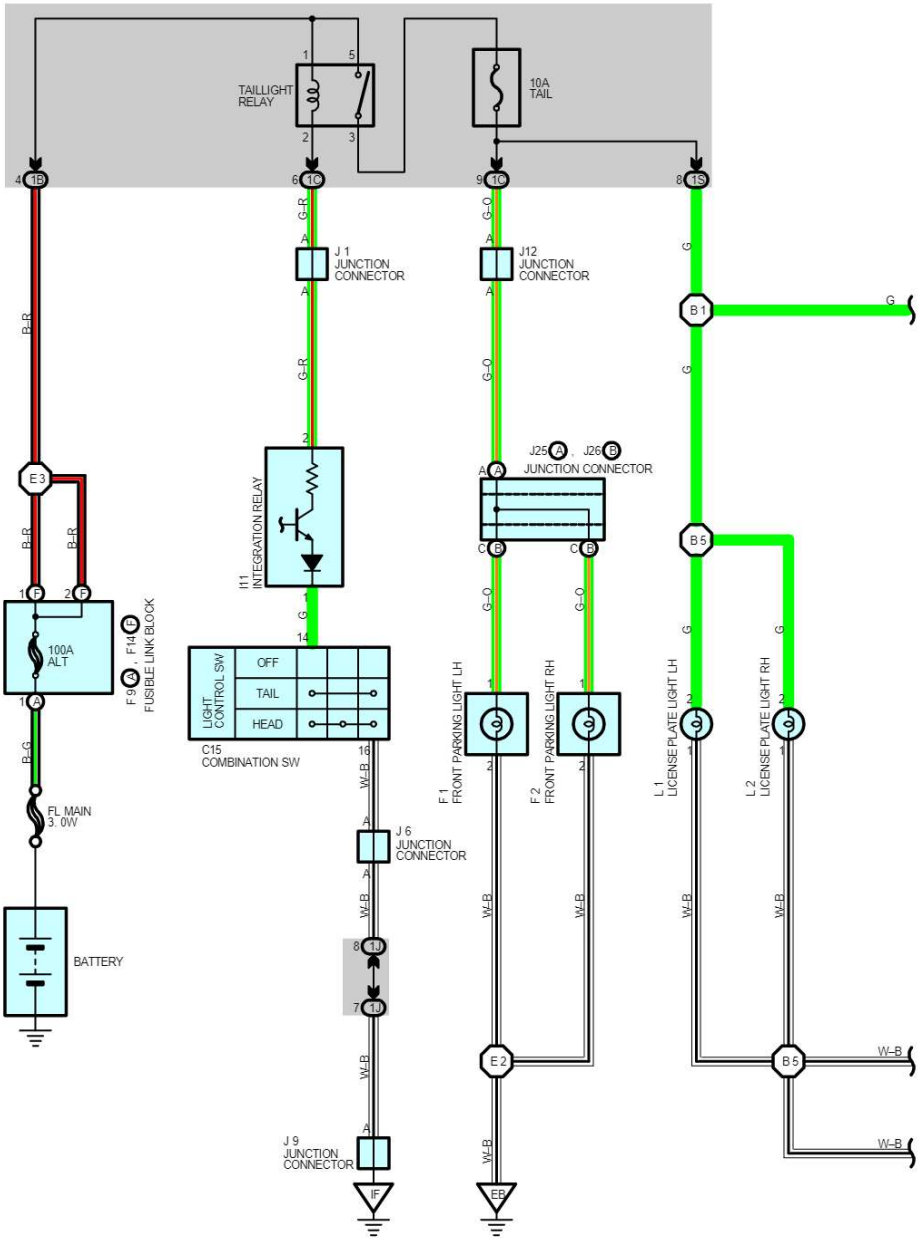
**: GROUND POINTS**

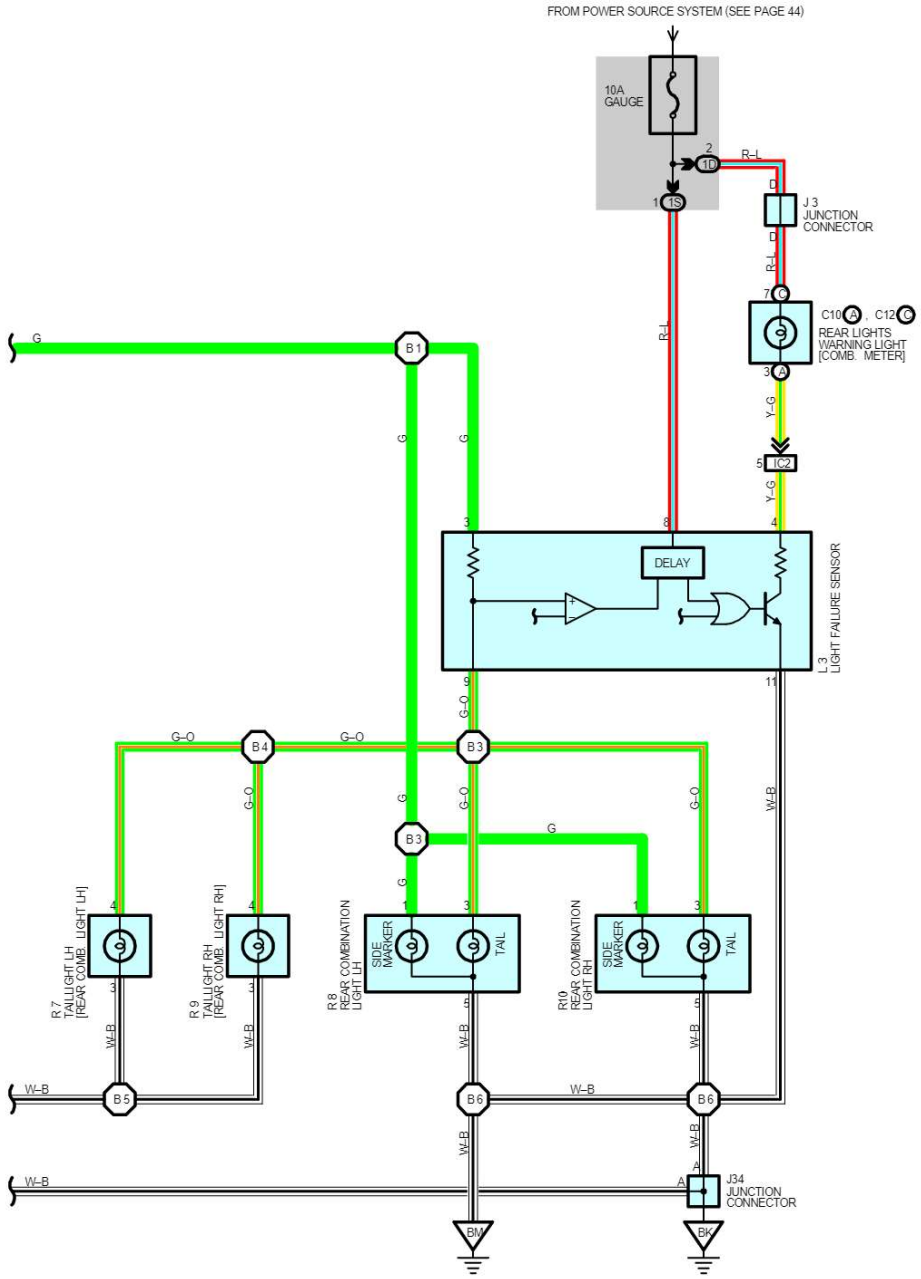
| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 36 | Left Kick Panel |
| IF | 36 | Instrument Panel Brace LH |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 34 | Cowl Wire | | | |

# TAILLIGHT


TAILLIGHT RELAY
10A TAIL
J 1 JUNCTION CONNECTOR
J12 JUNCTION CONNECTOR
J25 , J26 JUNCTION CONNECTOR
I11 INTEGRATION RELAY
100A ALT
FUSIBLE LINK BLOCK
F 9 , F14
FL MAIN 3. 0W
BATTERY
LIGHT CONTROL SW
OFF
TAIL
HEAD
C15 COMBINATION SW
J 6 JUNCTION CONNECTOR
J 9 JUNCTION CONNECTOR
F 1 FRONT PARKING LIGHT LH
F 2 FRONT PARKING LIGHT RH
L 1 LICENSE PLATE LIGHT LH
L 2 LICENSE PLATE LIGHT RH
E 3
E 2
B 1
B 5
W-B
W-B


FROM POWER SOURCE SYSTEM (SEE PAGE 44)
10A GAUGE
2
1D
R–L
1
1S
J 3 JUNCTION CONNECTOR
C10 A , C12 C
REAR LIGHTS WARNING LIGHT [COMB. METER]
Y–G
IC2
DELAY
L3 LIGHT FAILURE SENSOR
G
G–O
W–B
B1
B3
B4
B5
B6
R7 TAILLIGHT LH [REAR COMB. LIGHT LH]
R9 TAILLIGHT RH [REAR COMB. LIGHT RH]
R8 REAR COMBINATION LIGHT LH
R10 REAR COMBINATION LIGHT RH
SIDE MARKER
TAIL
J34 JUNCTION CONNECTOR
BM
BK

# TAILLIGHT

## SYSTEM OUTLINE

When the light control SW is turned to TAIL or HEAD position. The current flows to TERMINAL 3 of the light failure sensor through the TAIL fuse.
When the ignition SW is turned on, the 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.

**TAILLIGHT DISCONNECTION WARNING**

With the ignition SW on and the light control SW turned to TAIL or HEAD position, if the taillight circuit is open, the light failure sensor detects the failure by the change in current flowing from TERMINAL 3 of the light failure sensor to TERMINAL 9, 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, which remains on until the light control SW is turned off

## SERVICE HINTS

**TAILLIGHT RELAY**

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

**L3 LIGHT FAILURE SENSOR**

4, 8–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position
3–GROUND : Approx. **12** volts with the light control SW at **TAIL** or **HEAD** position
11–GROUND : Always continuity

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C10 A | 30 | J1 | 31 | L1 | 32 |
| C12 C | 30 | J3 | 31 | L2 | 32 |
| C15 | 30 | J6 | 31 | L3 | 32 |
| F1 | 28 | J9 | 31 | R7 | 33 |
| F2 | 28 | J12 | 31 | R8 | 33 |
| F9 A | 28 | J25 A | 31 | R9 | 33 |
| F14 F | 28 | J26 B | 31 | R10 | 33 |
| I11 | 30 | J34 | 32 | | |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | 22 | |
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IC2 | 36 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |

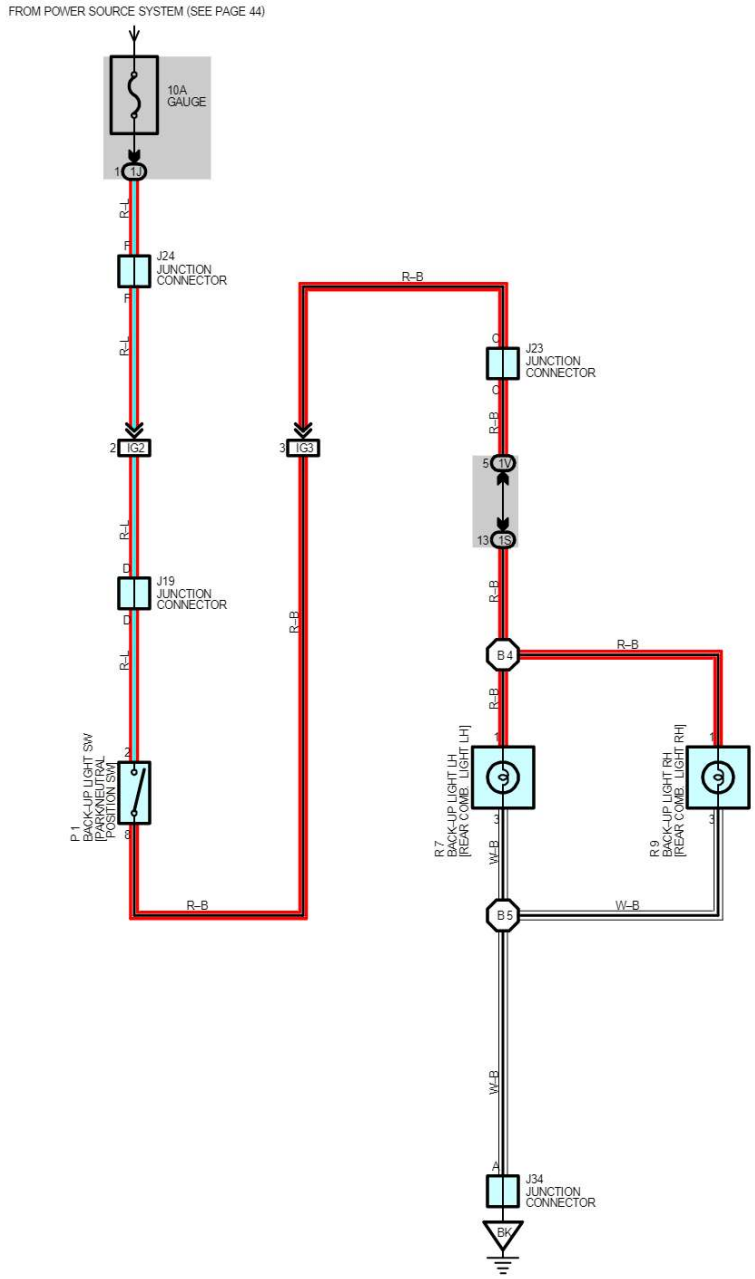
## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |
| IF | 36 | Instrument Panel Brace LH |
| BK | 40 | Under the Left Center Pillar |
| BM | 40 | Back Panel Center |

: **SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E2 | 34 | Engine Room Main Wire | B4 | 40 | Floor Wire |
| E3 | 34 | Cowl Wire | B5 | | |
| B1 | 40 | Floor Wire | B6 | | |
| B3 | | | | | |

# BACK–UP LIGHT



**SERVICE HINTS**

**P1 BACK–UP LIGHT SW [PARK/NEUTRAL POSITION SW]**

2–8 : Closed with the shift lever at **R** position

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| J19 | 31 | J34 | 32 | R9 | 33 |
| J23 | 31 | P1 | 29 | | |
| J24 | 31 | R7 | 33 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IG2 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG3 | | |

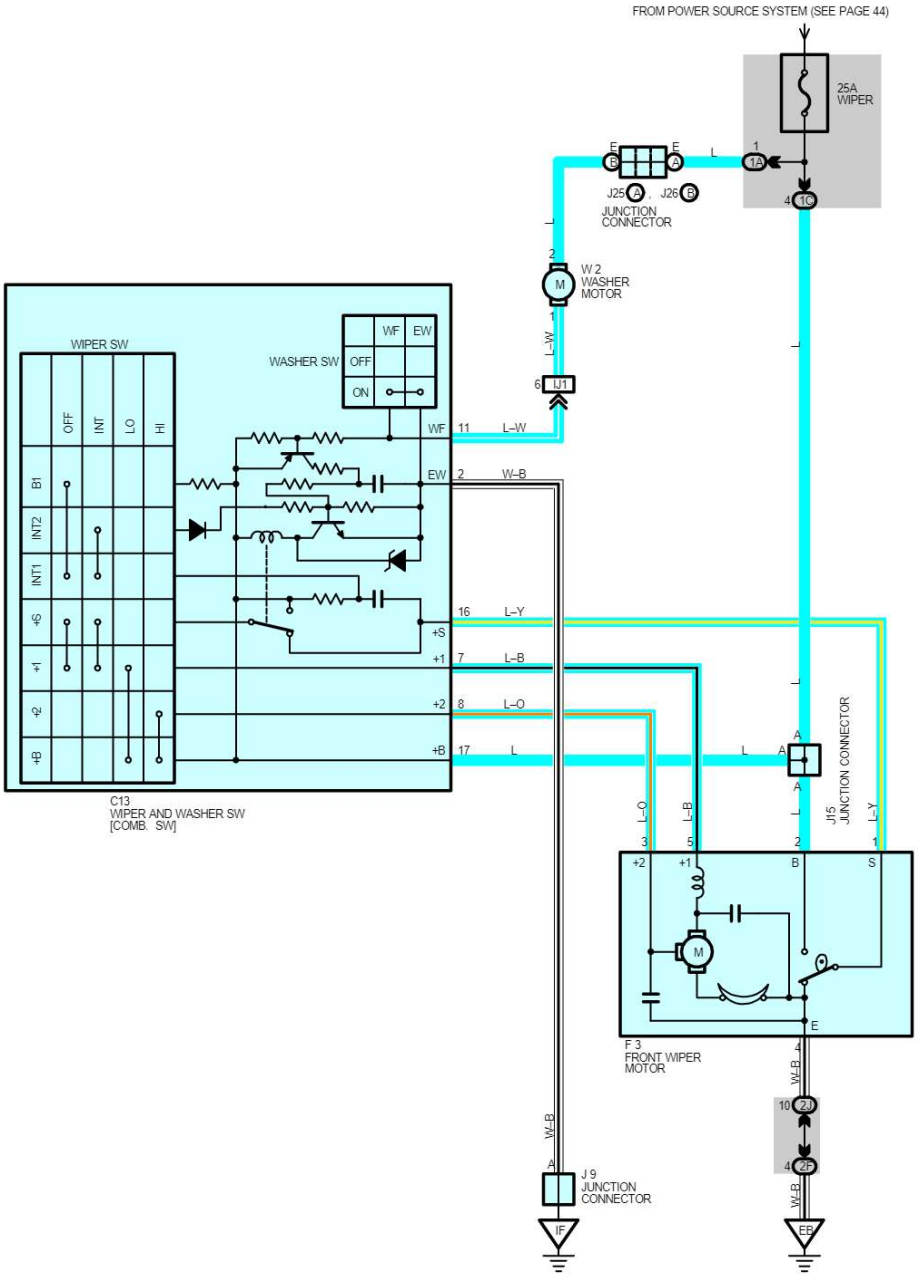
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| BK | 40 | Under the Left Center Pillar |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B4 | 40 | Floor Wire | B5 | 40 | Floor Wire |

# WIPER AND WASHER



## SYSTEM OUTLINE

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

**1. LOW SPEED POSITION**

With the wiper and washer SW turned to LO position, the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND and causes the front wiper motor to run at low speed.

**2. HIGH SPEED POSITION**

With the wiper and washer SW turned to HI position, the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 8 to TERMINAL 3 of the front wiper motor to TERMINAL 4 to GROUND and causes the front wiper motor to run at high speed.

**3. INT POSITION**

With the wiper and washer SW turned to INT position, the wiper relay operates and current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 2 to GROUND. This activates the intermittent circuit and the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND and the wiper operates. Intermittent operation is controlled by a condenser charge and discharge function in the relay.

**4. WASHER CONTINUOUS OPERATION**

With the wiper and washer SW pulled to WASHER position (Washer SW ON position), the current flows from the WIPER fuse to TERMINAL 2 of the washer motor to TERMINAL 1 to TERMINAL 11 of the wiper and washer SW to TERMINAL 2 to GROUND and causes the washer motor to run and the window washer to spray. Simultaneously, current flows from the WIPER fuse to TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND, causing the wiper to function.

## SERVICE HINTS

**C13 WIPER AND WASHER SW [COMB. SW]**

2–GROUND : Always continuity
17–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position
7–GROUND : Approx. **12** volts with the wiper and washer SW at **LO** position
Approx. **12** volts every approx. **1.6** to **10.7** seconds intermittently with the wiper and washer SW at **INT** position
16–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position and unless the front wiper motor at **STOP** position
8–GROUND : Approx. **12** volts with the wiper and washer SW at **HI** position

**F3 FRONT WIPER MOTOR**

1–2 : Closed unless the front wiper motor at **STOP** position

**○ : PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|
| C13 | 30 | J15 | | 31 | W2 | 29 |
| F3 | 28 | J25 | A | 31 | | |
| J9 | 31 | J26 | B | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1A | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 2F | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

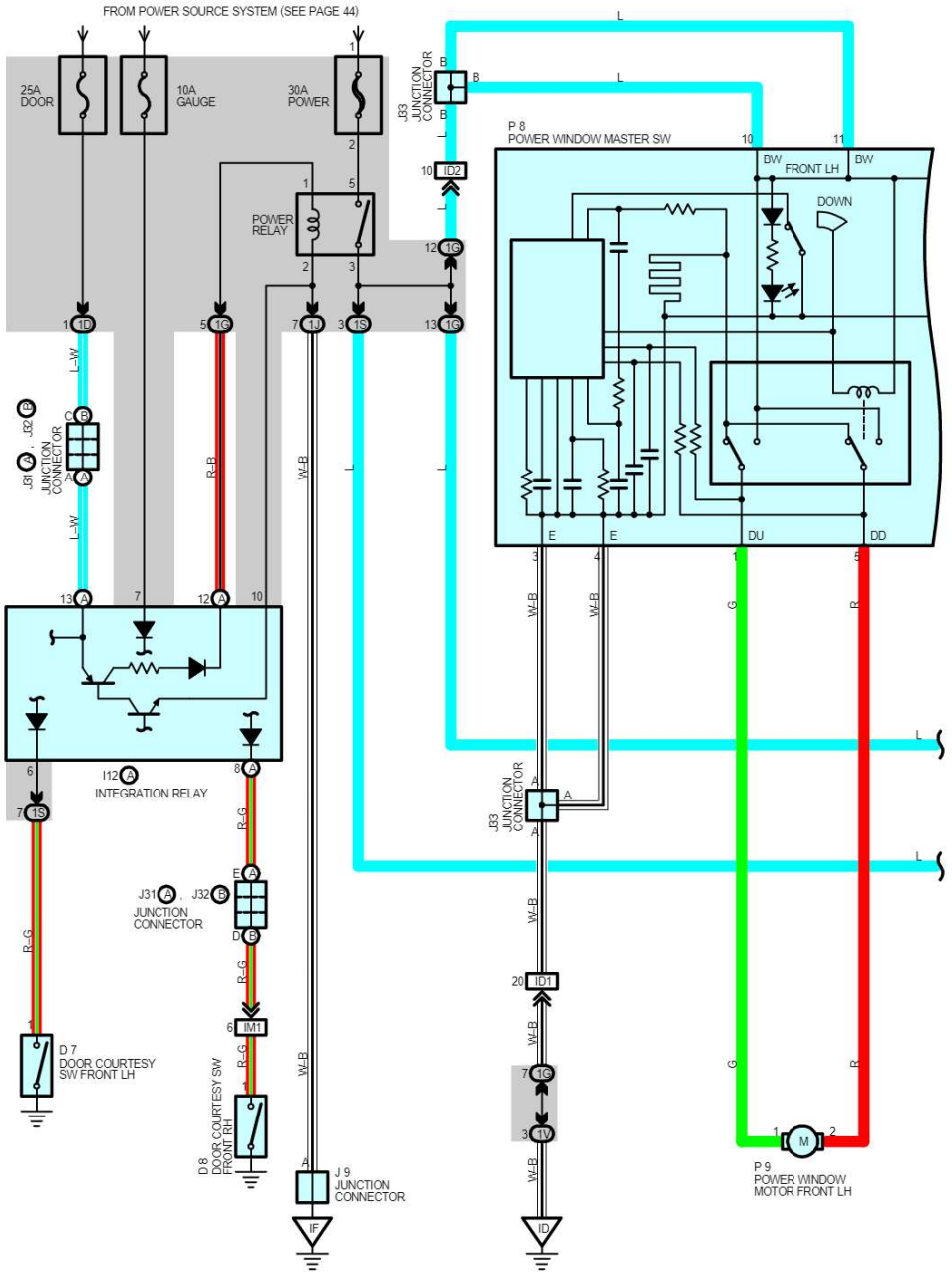
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IJ1 | 38 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

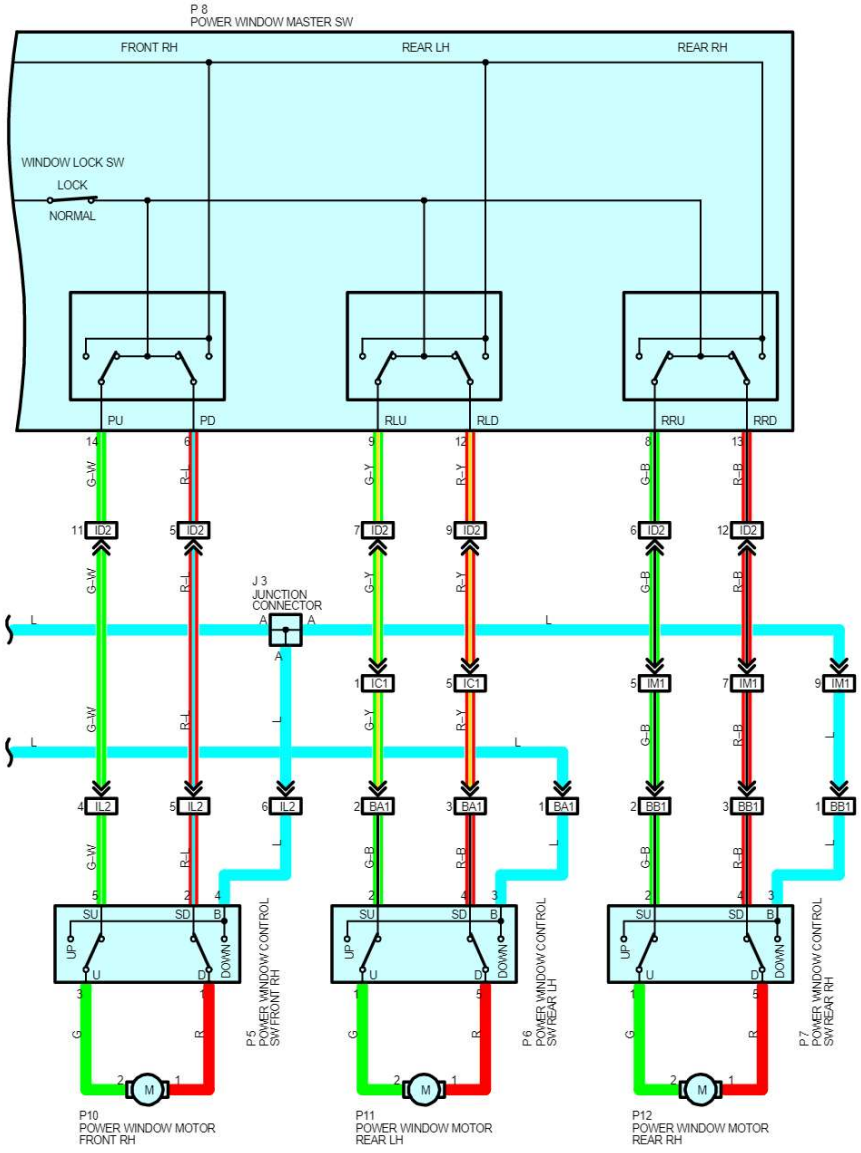
# WIPER AND WASHER

▽ : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |
| IF | 36 | Instrument Panel Brace LH |

# POWER WINDOW




P 8
POWER WINDOW MASTER SW
FRONT RH
REAR LH
REAR RH
WINDOW LOCK SW
LOCK
NORMAL
PU
PD
RLU
RLD
RRU
RRD
J 3
JUNCTION CONNECTOR
P5
POWER WINDOW CONTROL SW FRONT RH
P6
POWER WINDOW CONTROL SW REAR LH
P7
POWER WINDOW CONTROL SW REAR RH
P10
POWER WINDOW MOTOR FRONT RH
P11
POWER WINDOW MOTOR REAR LH
P12
POWER WINDOW MOTOR REAR RH

# POWER WINDOW

## SYSTEM OUTLINE

With the ignition SW turned on, current flows through the GAUGE fuse to TERMINAL 7 of the integration relay to TERMINAL (A) 12 to TERMINAL 1 of the POWER relay to TERMINAL 2 to GROUND, this activates the relay and the current flowing to TERMINAL 5 of the relay from the POWER fuse flows to TERMINAL 3 of the relay to TERMINALS 10 and 11 of the power window master SW.

### 1. MANUAL OPERATION (DRIVER'S WINDOW)

With the ignition SW turned on and with the power window master SW (Driver's) pulled to the up side the current flowing from TERMINALS 10 and 11 of the power window master SW flows to TERMINAL 1 of the master SW to TERMINAL 1 of the power window motor to TERMINAL 2 to TERMINAL 5 of the master SW to TERMINALS 3 and 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.
In down operation, the flow of current from TERMINALS 10 and 11 of the power window master SW to TERMINAL 5 of the master SW causes the flow of current from TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 1 of the master SW to TERMINALS 3 and 4 to GROUND, flowing in the opposite detection to manual up operation and causing the motor to rotate in reverse, lowering the window.

### 2. AUTO DOWN OPERATION (DRIVER'S WINDOW)

When the driver's window SW is pushed strongly to the down side, the current flowing to TERMINALS 10 and 11 of the power window master SW flows to the down contact point and auto down contact point of the driver's SW.
This activates the relay (Down side) inside the power window master SW and the hold circuit also turns on at the same time, so the relay (Down side) remains activated even when the SW is released.
Current flows at this time from TERMINALS 10 and 11 of the power window master SW to TERMINAL 5 to TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 1 of the power window master SW to TERMINALS 3 and 4 to GROUND, so the motor continues to operate until the driver's window is fully down.
When the driver's window finishes down operation and the hold circuit goes off, so the relay (Down side) also turns off. This stops the current flowing from TERMINALS 10 and 11 of the power window master SW to TERMINAL 5 is cut off, so the power window motor stops and auto down operation stops.
When the driver's SW is pulled to the up side during auto down operation, the hold circuit is turned off so the current flowing from TERMINALS 10 and 11 of the power window master SW to TERMINAL 5 is cut off and the power window motor stops.
If the SW remains pulled up the relay (Up side) is activated, so current flows from TERMINALS 10 and 11 of the power window master SW to TERMINAL 1 to TERMINAL 1 of the power window motor to TERMINAL 2 to TERMINAL 5 to TERMINALS 3 and 4 to GROUND, the power window motor rotates in the up direction and manual up operation occurs while the SW is pulled up.

### 3. MANUAL OPERATION (FRONT RH WINDOW)

With the power window control SW front RH pulled to the up side, the current flowing from TERMINAL 4 of the power window control SW flows to TERMINAL 3 of the power window control SW to TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL 6 of the master SW to TERMINALS 3 and 4 to GROUND and causes the power window motor front RH to rotate in the up direction. The up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 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 front RH window becomes open.
As a result, even if Open/Close operation of the front RH window is tried, the current from TERMINALS 3 and 4 of the power window master SW is not grounded and the motor does not rotate, so the front RH window can not be operated and window lock occurs.

### 4. MANUAL OPERATION (REAR LH, RH WINDOW)

With the power window control SW rear LH, RH pulled to the up side, the current flowing from TERMINAL 3 of the power window control SW flows to TERMINAL 1 of the power control SW to TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 5 of the power window control SW to TERMINAL 4 to TERMINAL 12 or 13 of the master SW to TERMINALS 3 and 4 to GROUND and causes the power window motor rear LH, RH to rotate in the up direction. The up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 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 TERMINALS 3 and 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.

**5. KEY OFF POWER WINDOW OPERATION**

With the ignition SW turned from on to off, the integration relay operates and current flows from the DOOR fuse to TERMINAL (A) 13 of the relay to TERMINAL (A) 12 to TERMINAL 1 of the power 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 power relay to TERMINAL 3 to TERMINALS 10 and 11 of the power window master SW and TERMINAL 4 (Front RH) or 3 (Rear LH, RH) of the power window control SW. As a result, for about 43 seconds after the ignition SW is turned off, the functioning of this relay makes it possible to raise and lower the power window. Also, by opening the front doors (Door courtesy SW on) within about 43 seconds after turning the ignition SW to off, a signal is input to TERMINAL 6 or (A) 8 of the integration relay. As a result, the relay turned off, and up and down movement of the power window stops.

**SERVICE HINTS**

**P8 POWER WINDOW MASTER SW**

10, 11–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position or key off power window operation
3, 4–GROUND : Always continuity
1–GROUND : Approx. **12** volts with the power window master SW (Driver's window) at **UP** position
5–GROUND : Approx. **12** volts with the power window master SW (Driver's window) at **DOWN** or **AUTO DOWN** position

**WINDOW LOCK SW**

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

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| D7 | 32 | J32 B | 31 | P9 | 33 |
| D8 | 32 | J33 | 32 | P10 | 33 |
| I12 A | 30 | P5 | 33 | P11 | 33 |
| J3 | 31 | P6 | 33 | P12 | 33 |
| J9 | 31 | P7 | 33 | | |
| J31 A | 31 | P8 | 33 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

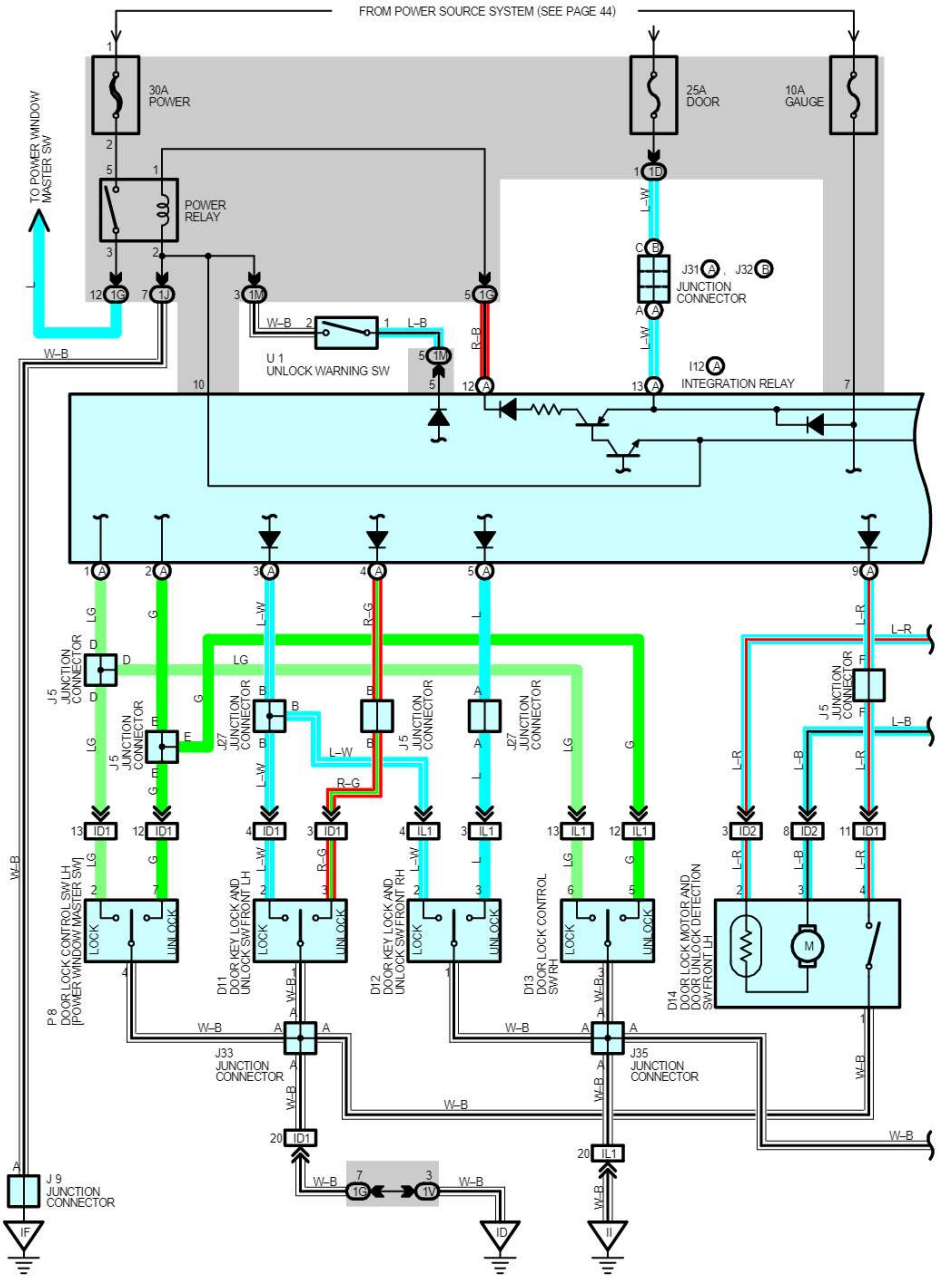
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

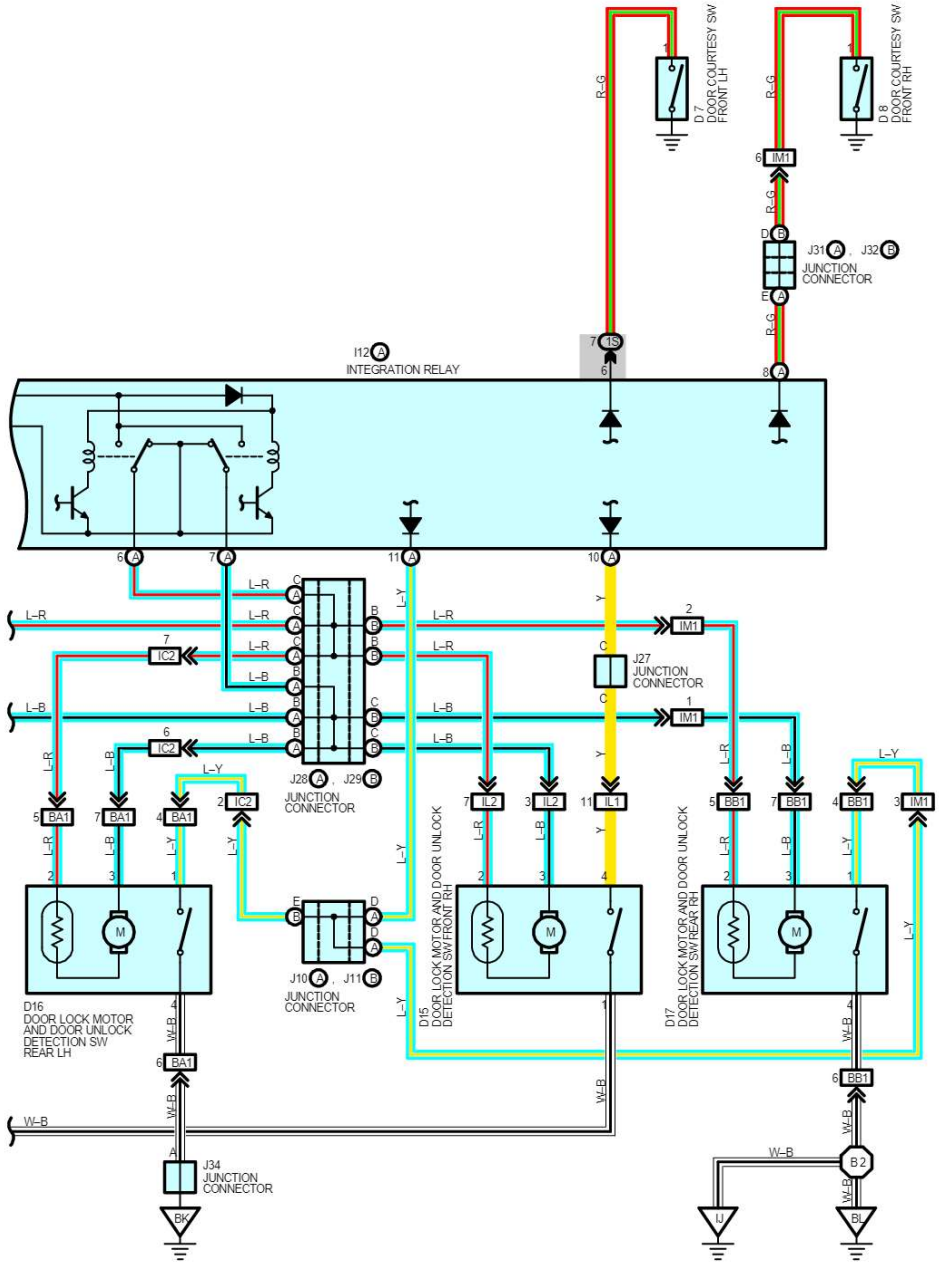
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IC1 | 36 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| ID1 | 36 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| ID2 | | |
| IL2 | 38 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IM1 | 38 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BA1 | 40 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BB1 | 40 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| ID | 36 | Cowl Side Panel LH |
| IF | 36 | Instrument Panel Brace LH |

# DOOR LOCK CONTROL




D 7
DOOR COURTESY SW
FRONT LH
D 8
DOOR COURTESY SW
FRONT RH
R–G
IM1
J31 , J32
JUNCTION
CONNECTOR
I12
INTEGRATION RELAY
IS
L–R
L–B
L–Y
Y
W–B
IC2
J27
JUNCTION
CONNECTOR
J28 , J29
JUNCTION
CONNECTOR
J10 , J11
JUNCTION
CONNECTOR
BA1
IL2
IL1
BB1
D16
DOOR LOCK MOTOR
AND DOOR UNLOCK
DETECTION SW
REAR LH
D15
DOOR LOCK MOTOR AND DOOR UNLOCK
DETECTION SW FRONT RH
D17
DOOR LOCK MOTOR AND DOOR UNLOCK
DETECTION SW REAR RH
J34
JUNCTION
CONNECTOR
BK
B 2
U
BL
M

# DOOR LOCK CONTROL

## SYSTEM OUTLINE

Current always flows to TERMINAL (A) 13 of the integration relay through the DOOR fuse.
When the ignition SW is turned on, the current flowing through the GAUGE Fuse flows to TERMINAL 7 of the integration relay to TERMINAL (A) 12 to the POWER relay (Coil side) to GROUND.

**1. MANUAL LOCK OPERATION**

When the door lock control SW or door key lock and unlock SW are operated to LOCK position, a lock signal is input to TERMINAL (A) 1 or (A) 3 of the integration relay and causes the relay to function. Current flows from TERMINAL (A) 13 of the relay to TERMINAL (A) 6 to TERMINAL 2 of the door lock motors to TERMINAL 3 to TERMINAL (A) 7 of the relay to TERMINAL 10 to GROUND and the door lock motor causes the door to lock.

**2. MANUAL UNLOCK OPERATION**

When the door lock control SW or door key lock and unlock SW are operated to UNLOCK position, an unlock signal is input to TERMINAL (A) 2, (A) 4 or (A) 5 of the integration relay and causes the relay to function. Current flows from TERMINAL (A) 13 of the relay to TERMINAL (A) 7 to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL (A) 6 of the relay to TERMINAL 10 to GROUND and door lock motors causes door to unlock.

**3. 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 to unlock. Turning the door key lock and unlock SW front LH to the unlock side causes a signal to be input to TERMINAL (A) 4 of the relay, and if the signal is input again within 3 seconds by turning the SW to the unlock side again, current flows from TERMINAL (A) 7 of the integration relay to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 of the relay to TERMINAL 10 to GROUND, causing the door lock motors to operate and unlock the doors.

**4. IGNITION KEY REMINDER OPERATION**

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

## SERVICE HINTS

**I12 (A) INTEGRATION RELAY**

10–GROUND : Always continuity
6–GROUND : Continuity with the front LH door open
7–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position
(A)13–GROUND : Always approx. **12** volts
(A) 6–GROUND : Approx. **12** volts **0.2** seconds with following operation
- Door lock control SW locked
- Locking the front LH, RH door cylinder with key

(A) 1–GROUND : Continuity with the door lock control SW locked
(A) 8–GROUND : Continuity with the front RH door open
(A) 2–GROUND : Continuity with the door lock control SW unlocked
(A) 5–GROUND : Continuity with the front RH door lock cylinder unlocked with key
(A) 4–GROUND : Continuity with the front LH door lock cylinder unlocked with key
(A) 3–GROUND : Continuity with the front LH, RH door lock cylinder locked with key
(A) 7–GROUND : Approx. **12** volts **0.2** seconds with following operation
- Door lock control SW unlocked
- Door lock control SW locked with the ignition key in cylinder and the front LH door open (Ignition key reminder function)
- Door lock knob locked with the ignition key in cylinder and the front LH door open (Ignition key reminder function)
- Unlocking the front LH, RH door cylinder with key

**D7, D8 DOOR COURTESY SW FRONT LH,RH**

1–GROUND : Closed with the each door open

**D11, D12 DOOR KEY LOCK AND UNLOCK SW FRONT LH,RH**

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

**D14, D15 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT LH,RH**

1–4 : Closed with the door lock knob **UNLOCK** position

**U1 UNLOCK WARNING SW**

1–2 : Closed with the ignition key in cylinder

### : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| D7 | 32 | D17 | 32 | J29 B | 31 |
| D8 | 32 | I12 A | 30 | J31 A | 31 |
| D11 | 32 | J5 | 31 | J32 B | 31 |
| D12 | 32 | J9 | 31 | J33 | 32 |
| D13 | 32 | J10 A | 31 | J34 | 32 |
| D14 | 32 | J11 B | 31 | J35 | 32 |
| D15 | 32 | J27 | 31 | P8 | 33 |
| D16 | 32 | J28 A | 31 | U1 | 31 |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IC2 | 36 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| ID1 | 36 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| ID2 | | |
| IL1 | 38 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IL2 | | |
| IM1 | 38 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BA1 | 40 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BB1 | 40 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

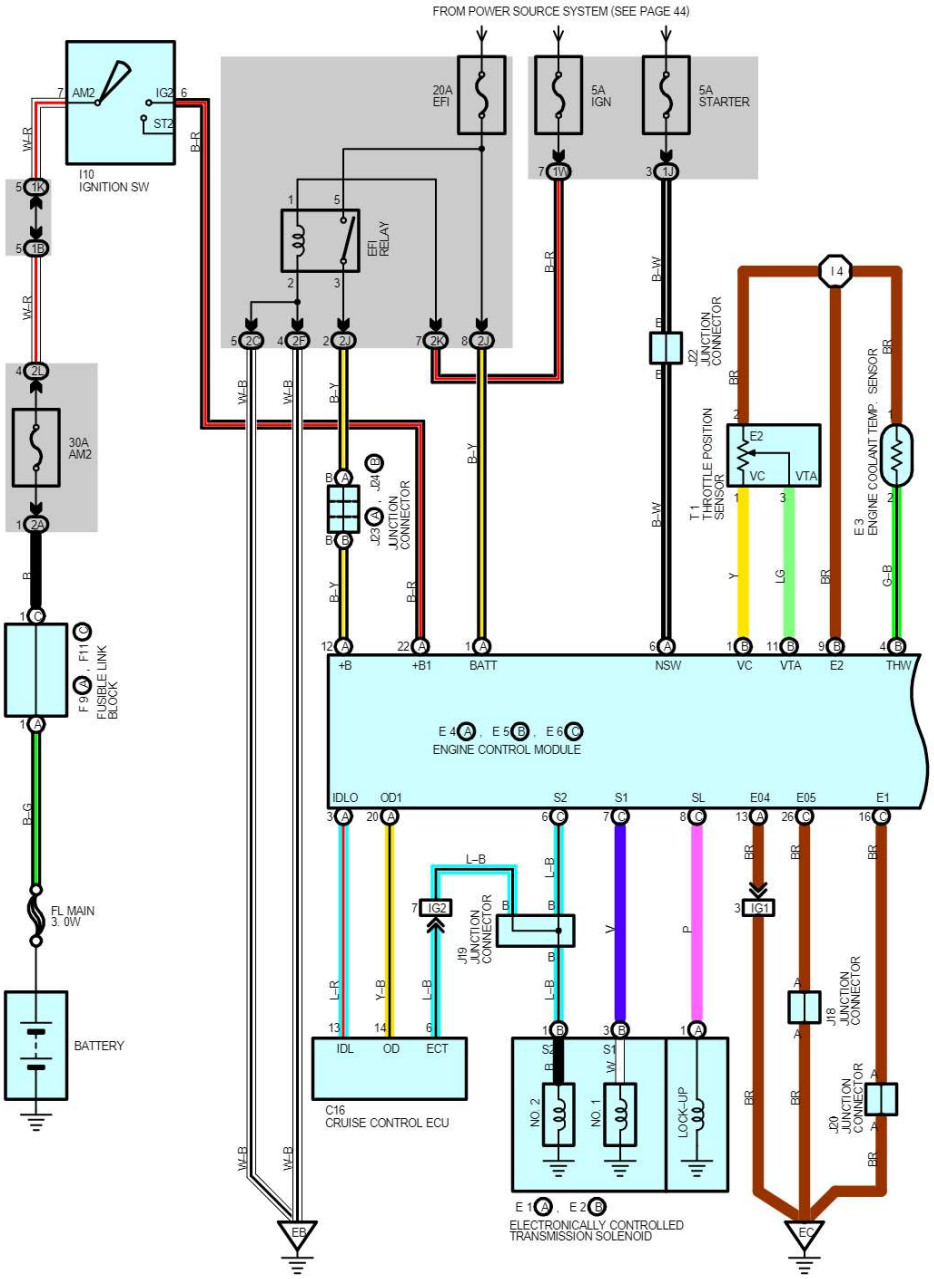
### : GROUND POINTS

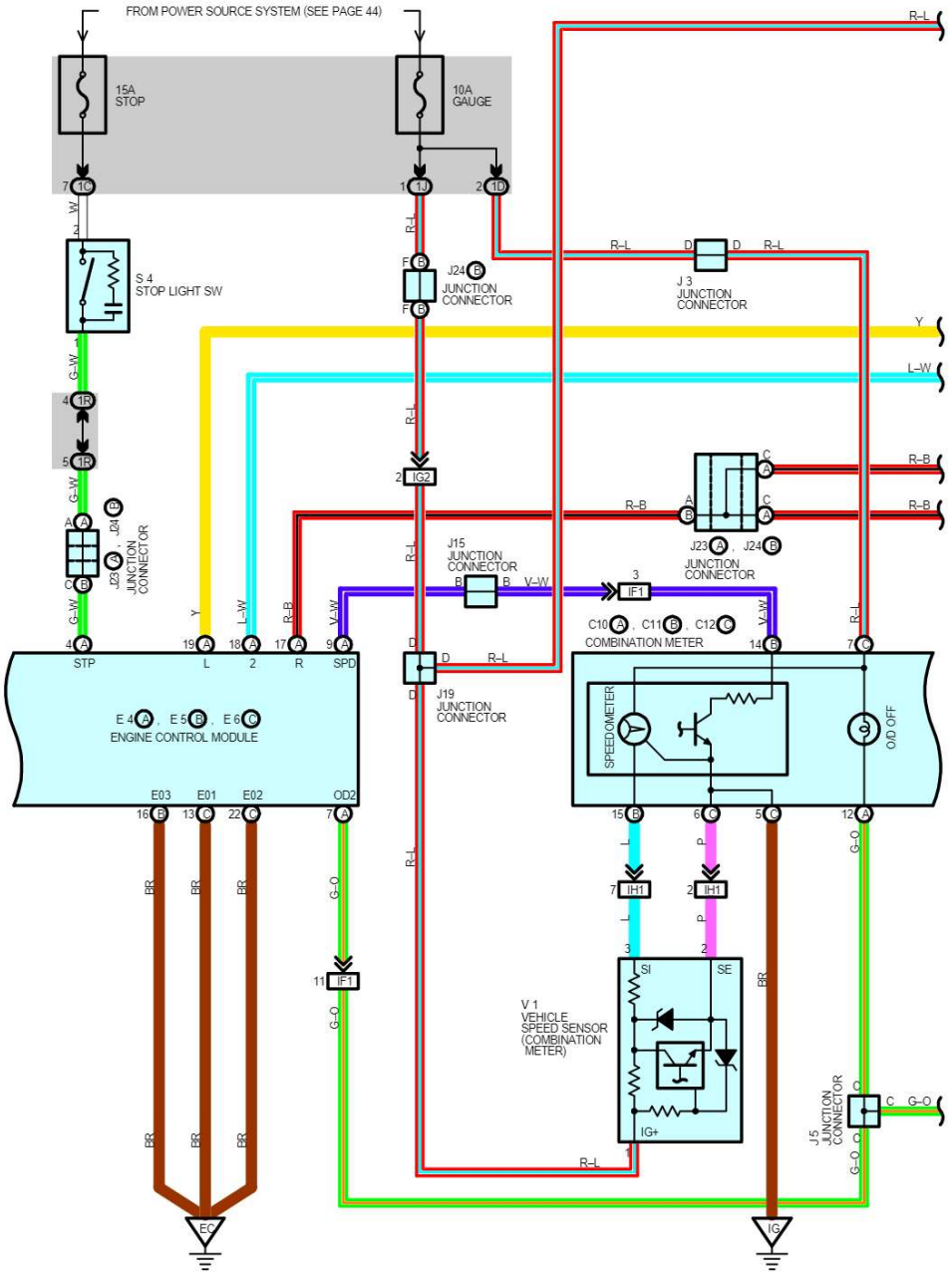
| Code | See Page | Ground Points Location |
|---|---|---|
| ID | 36 | Cowl Side Panel LH |
| IF | 36 | Instrument Panel Brace LH |
| II | 36 | Right Kick Panel |
| IJ | | |
| BK | 40 | Under the Left Center Pillar |
| BL | 40 | Under the Right Center Pillar |

### : SPLICE POINTS

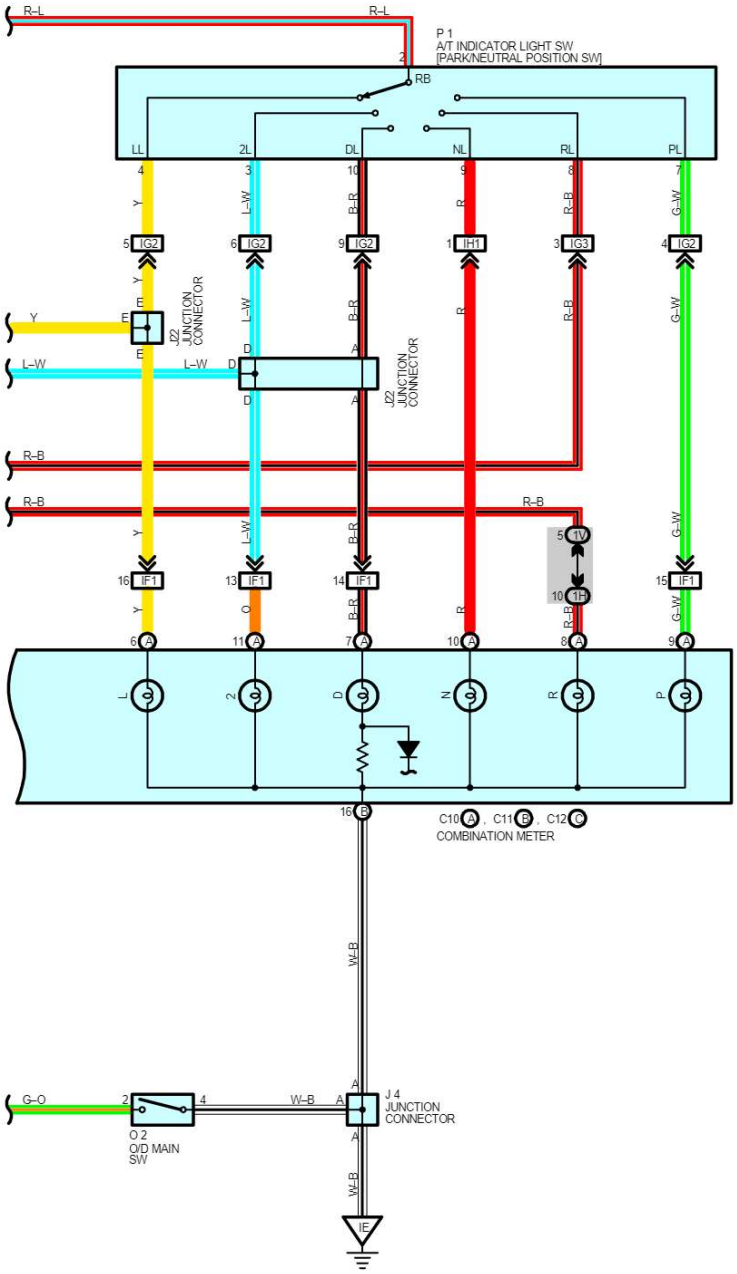
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B2 | 40 | Floor No.2 Wire | | | |

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR




FROM POWER SOURCE SYSTEM (SEE PAGE 44)
15A STOP
10A GAUGE
S 4 STOP LIGHT SW
J24 JUNCTION CONNECTOR
J 3 JUNCTION CONNECTOR
J23 , J24 JUNCTION CONNECTOR
J15 JUNCTION CONNECTOR
J23 , J24 JUNCTION CONNECTOR
J19 JUNCTION CONNECTOR
C10 , C11 , C12 COMBINATION METER
E 4 , E 5 , E 6 ENGINE CONTROL MODULE
SPEEDOMETER
O/D OFF
V 1 VEHICLE SPEED SENSOR (COMBINATION METER)
J5 JUNCTION CONNECTOR
STP
L
2
R
SPD
E03
E01
E02
OD2
SI
SE
IG+
EC
IG
R-L
G-W
L-W
Y
R-B
V-W
BR
G-O
L
P

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR



## SYSTEM OUTLINE

The electronically controlled transmission, however, electrically controls the line pressure and lock–up pressure etc., through the solenoid valve. Engine control module controls of the solenoid valve based on the input signals from each sensor which makes smooth driving possible by shift selection for each gear which 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 SPD 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 gear, current flows from TERMINAL S1 of the engine control module to TERMINAL (B) 3 of the solenoid to GROUND, and continuity to the No.1 solenoid causes the shift.

For 2nd gear, current flows from TERMINAL S1 of the engine control module to TERMINAL (B) 3 of the solenoid to GROUND, and from TERMINAL S2 of the engine control module to TERMINAL (B) 1 of the solenoid to GROUND, and continuity to solenoids No.1 and No.2 causes the shift.

For 3rd gear, there is no continuity to No.1 solenoid, only to No.2, causing the shift.

Shifting into 4th gear (Overdrive) takes place when there is no continuity to 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 (A) 1 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 (O/D off indicator light turns off), a signal is input into TERMINAL OD2 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 to off, the current through the O/D off indicator light flows through the O/D main SW to GROUND, causing the indicator light to light up. At the same time, a signal is input into TERMINAL OD2 of the engine control module and engine control module operation prevents shift into overdrive.

## SERVICE HINTS

**E4 (A), E5 (B), E6 (C) ENGINE CONTROL MODULE**

S1, S2–E1 : **9.0**–**14.0** volts with the solenoid on
**0**–**1.5** volts with the solenoid off
L–E1 : **7.5**–**14.0** volts with the shift lever at **L** position
2–E1 : **7.5**–**14.0** volts with the shift lever at **2** position
R–E1 : **7.5**–**14.0** volts with the shift lever at **R** position
STP–E1 : **9.0**–**14.0** volts with the brake pedal depressed
THW–E2 : **0.2**–**1.0** volts with the ignition SW on and coolant temp. **80**°C (**176**°F)
VTA–E2 : **0.3**–**0.8** volts with the throttle valve fully closed
**3.2**–**4.9** volts with the throttle valve fully opened
VC–E2 : **4.5**–**5.5** volts
OD2–E1 : **9.0**–**14.0** volts with the O/D main SW turned on
**0**–**3.0** volts with the O/D main SW turned off
+B–E1 : **9.0**–**14.0** volts

**O2 O/D MAIN SW**

2–4 : Closed with the O/D main SW off, open with the O/D main SW on

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

**: PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| C10 | A | 30 | F9 | A | 28 | J22 | | 31 |
| C11 | B | 30 | F11 | C | 28 | J23 | A | 31 |
| C12 | C | 30 | I10 | | 30 | J24 | B | 31 |
| C16 | | 30 | J3 | | 31 | O2 | | 31 |
| E1 | A | 28 | J4 | | 31 | P1 | | 29 |
| E2 | B | 28 | J5 | | 31 | S4 | | 31 |
| E3 | | 28 | J15 | | 31 | T1 | | 29 |
| E4 | A | 30 | J18 | | 31 | V1 | | 29 |
| E5 | B | 30 | J19 | | 31 | | | |
| E6 | C | 30 | J20 | | 31 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1K | | |
| 1R | | |
| 1V | | |
| 1W | | |
| 2A | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2F | | |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |
| 2L | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IF1 | 36 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IG1 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG2 | | |
| IG3 | | |
| IH1 | 38 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |

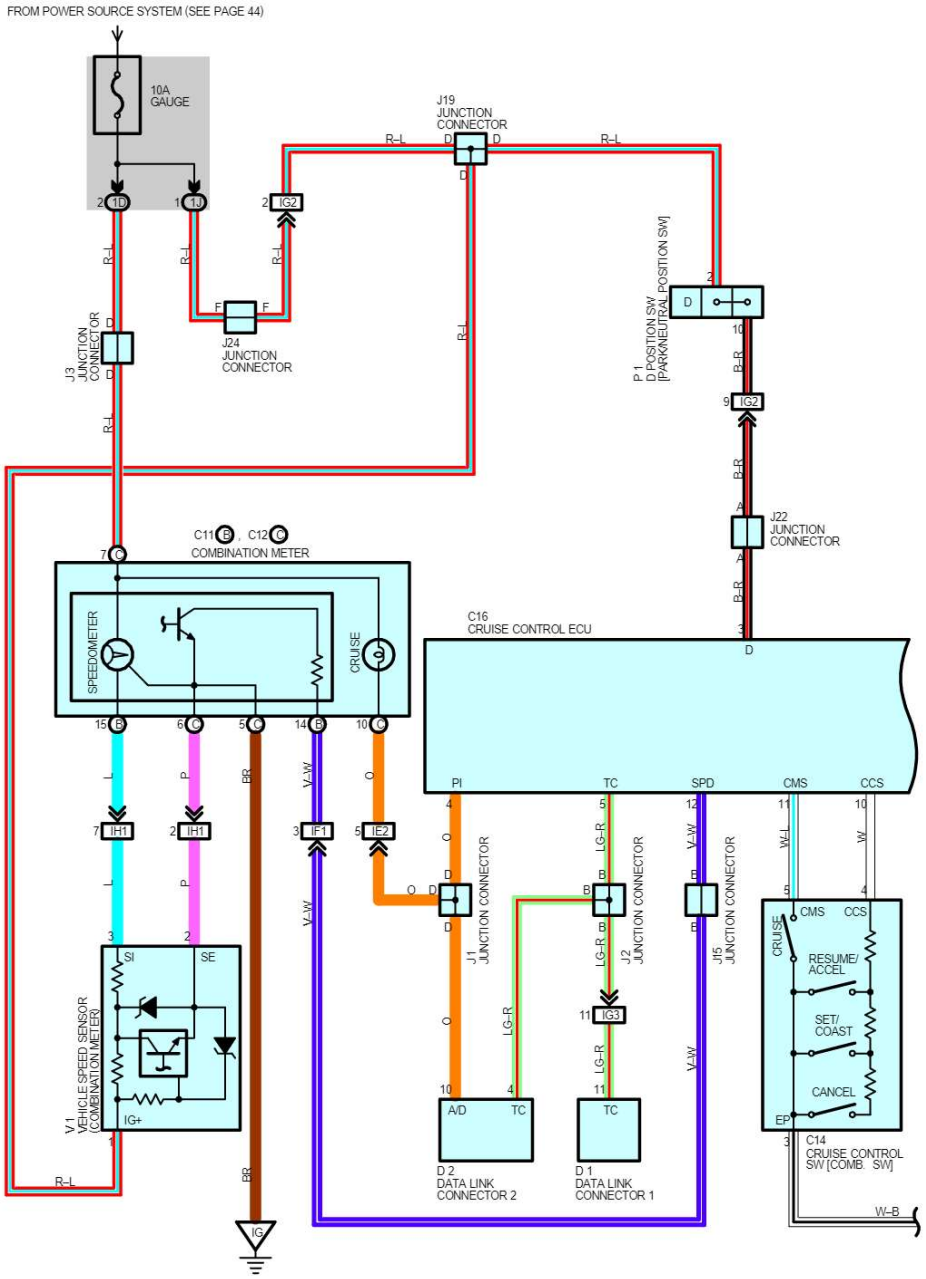
**: GROUND POINTS**

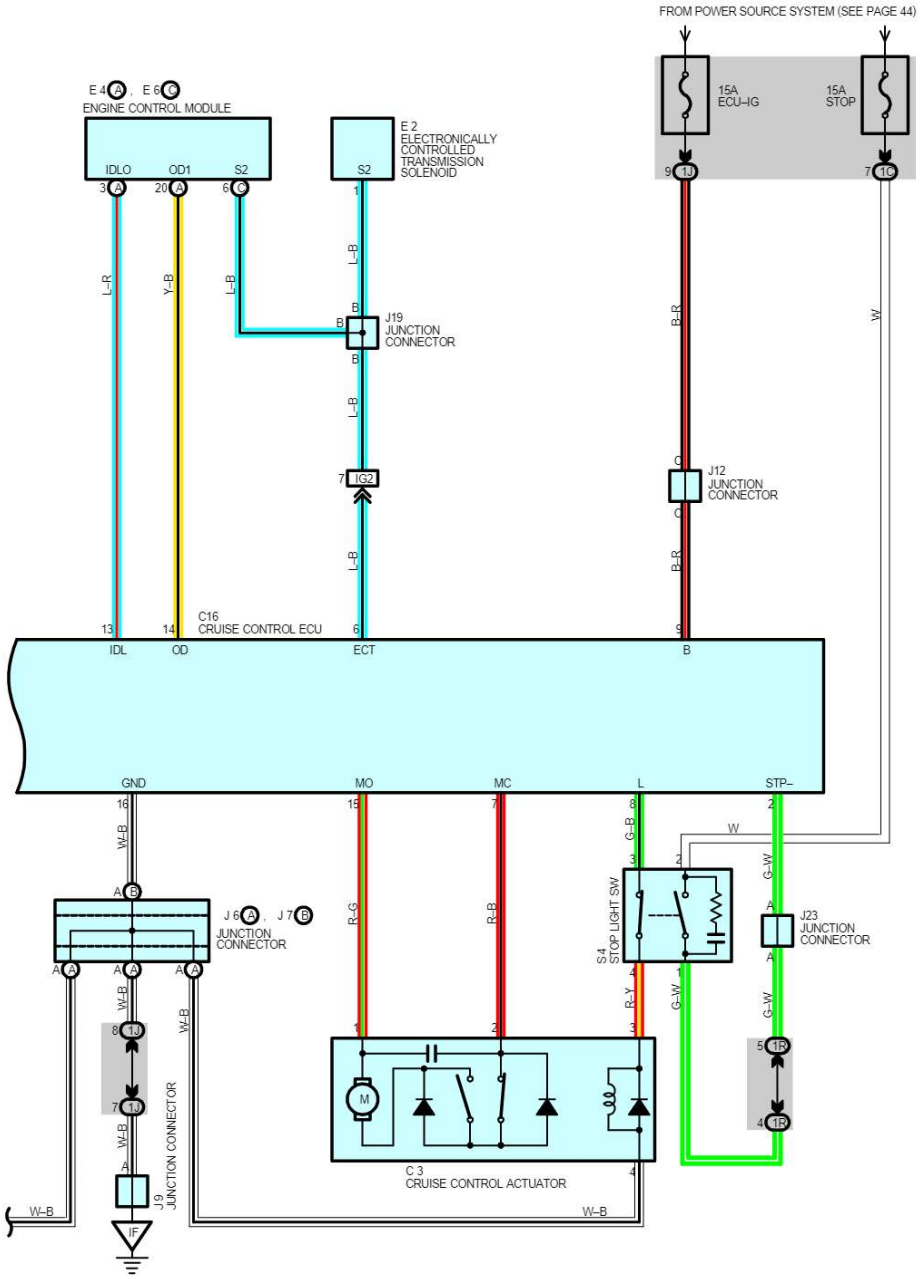
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |
| EC | 34 | Intake Manifold |
| IE | 36 | Left Kick Panel |
| IG | 36 | Instrument Panel Brace RH |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I4 | 38 | Engine Wire | | | |

# CRUISE CONTROL




FROM POWER SOURCE SYSTEM (SEE PAGE 44)
15A ECU–IG
15A STOP
E 4 (A) , E 6 (C)
ENGINE CONTROL MODULE
IDLO
OD1
S2
E 2
ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID
S2
L–R
Y–B
L–B
J19 JUNCTION CONNECTOR
IG2
R–R
J12 JUNCTION CONNECTOR
W
C16
CRUISE CONTROL ECU
IDL
OD
ECT
B
GND
MO
MC
L
STP–
W–B
R–G
R–B
G–B
G–W
W
S4 STOP LIGHT SW
R–Y
J6 (A) , J7 (B)
JUNCTION CONNECTOR
J23 JUNCTION CONNECTOR
J9 JUNCTION CONNECTOR
C 3
CRUISE CONTROL ACTUATOR
M
W–B
W–B
IF

# CRUISE CONTROL

## SYSTEM OUTLINE

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

### SET CONTROL

When the SET/COAST SW is operated while traveling with the CRUISE SW on, the speed when the SET/COAST SW is operated to off is memorized, and the vehicle speed is controlled at that speed.

### 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 SET/COAST 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 (0.9 mph).

### 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 RESUME/ACCEL SW is operated to off is memorized, and the vehicle speed is controlled at that speed.
Furthermore, every time the RESUME/ACCEL SW is operated momentarily (Approx. 0.5 sec.) to on, the memorized vehicle speed is increased by approx. 1.5 km/h (0.9 mph).

### MANUAL CANCEL MECHANISM

While traveling with the cruise control, if the following signal is input, the magnetic clutch of the actuator is cut, the motor is controlled to close the throttle valve, and the cruise control is canceled.

(1) Stop lamp SW is on (Brake pedal is depressed)

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

(3) CRUISE SW is off

### RESUME CONTROL

After canceling the cruise control by the Manual Cancel operation, (Except when the CRUISE SW is off) if the vehicle speed is above the minimum speed limit (Approx. 40km/h, 25mph), operating the RESUME/ACCEL SW to on from off will cause the system to accelerate and resume to the vehicle speed before manual cancellation.

### 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 speed reaches the overdrive resume speed (Set speed minus 2 km/h (1.2 mph) ), and if the system determines that the uphill grade has finished, the overdrive will resume after the overdrive timer operation.

### AUTO CANCEL OPERATION

If any of the following conditions are detected, the set speed is erased and the control is canceled.

(1) Overcurrent to the magnetic clutch traction transistor
(2) The motor does not operate
(3) Short in the magnetic clutch
(4) Disconnection in the magnetic clutch (Includes blown stop lamp fuse)
(5) No vehicle speed signal input
(6) Ground short of the control SW input
(7) The actual vehicle speed becomes slower than the minimum speed limit

**SERVICE HINTS**

**C3 CRUISE CONTROL ACTUATOR**

3–4 : Approx. **38.5** Ω

**C14 CRUISE CONTROL SW [COMB. SW]**

5–3 : Continuity with the CRUISE SW on
4–3 : Approx. **418** Ω with the CANCEL SW on
Approx. **68** Ω with the RESUME/ACCEL SW on
Approx. **198** Ω with the SET/COAST SW on

**C16 CRUISE CONTROL ECU**

9–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position
10–GROUND : Approx. **418** Ω with the CANCEL SW on in the cruise control SW
Approx. **198** Ω with the SET/COAST SW on in the cruise control SW
Approx. **68** Ω with the RESUME/ACCEL SW on in the cruise control SW
16–GROUND : Always continuity

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C3 | 28 | E6 C | 30 | J19 | 31 |
| C11 B | 30 | J1 | 31 | J22 | 31 |
| C12 C | 30 | J2 | 31 | J23 | 31 |
| C14 | 30 | J3 | 31 | J24 | 31 |
| C16 | 30 | J6 A | 31 | P1 | 29 |
| D1 | 28 | J7 B | 31 | S4 | 31 |
| D2 | 30 | J9 | 31 | V1 | 29 |
| E2 | 28 | J12 | 31 | | |
| E4 A | 30 | J15 | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |

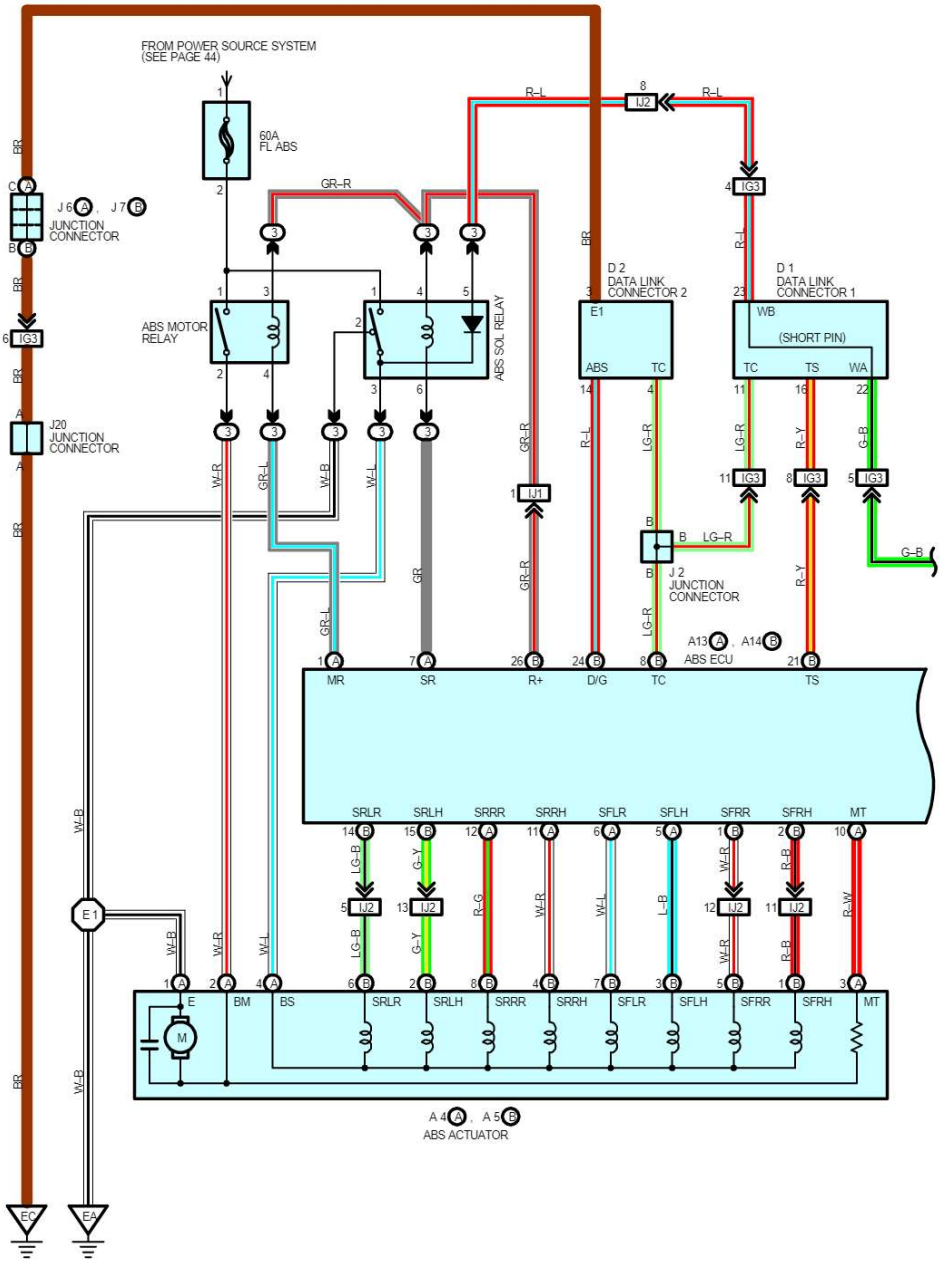
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

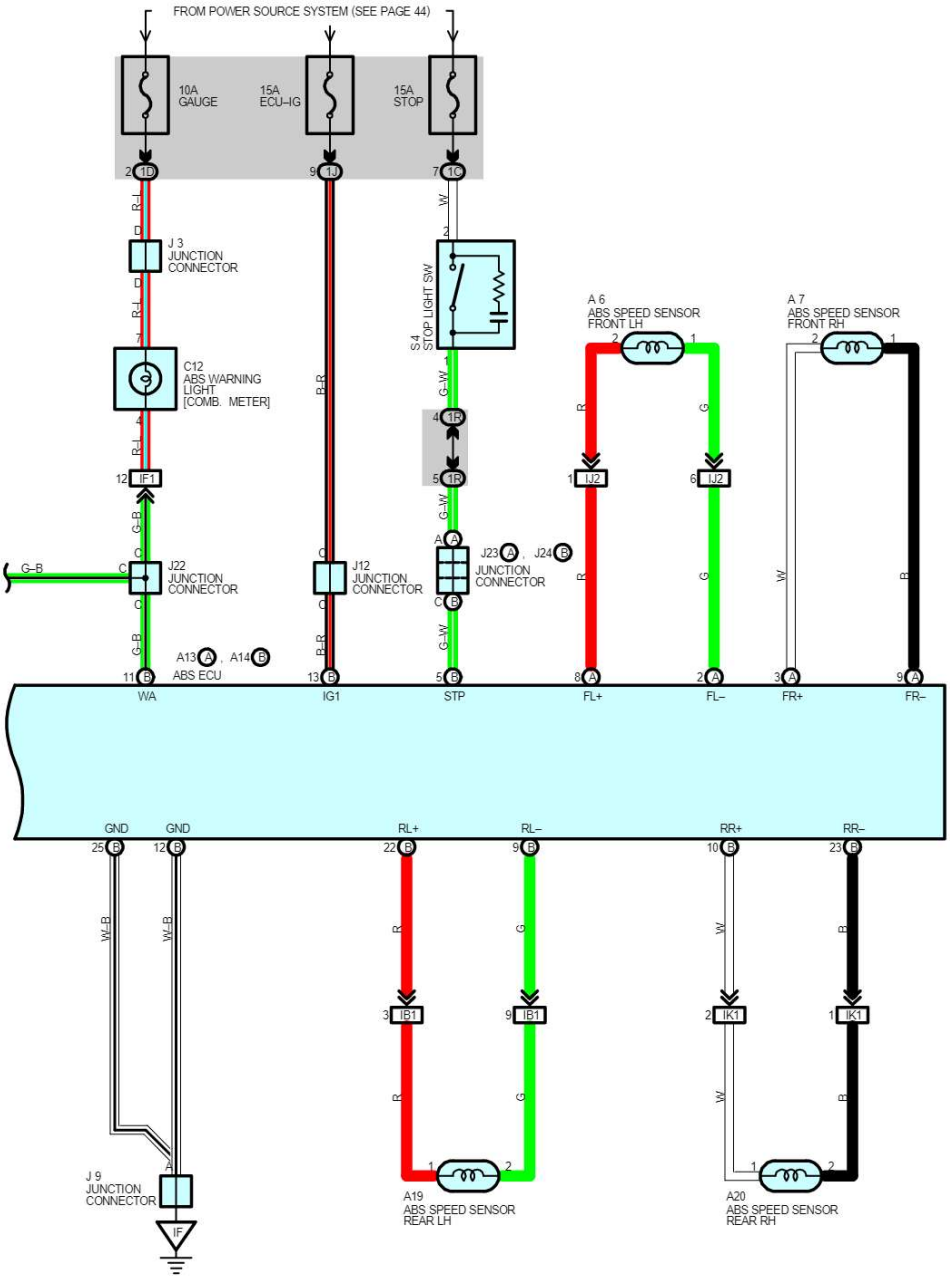
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE2 | 36 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IF1 | 36 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IG2 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG3 | | |
| IH1 | 38 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 36 | Instrument Panel Brace LH |
| IG | 36 | Instrument Panel Brace RH |

# ABS


FROM POWER SOURCE SYSTEM
(SEE PAGE 44)
60A
FL ABS
J6 A, J7 B
JUNCTION
CONNECTOR
J20
JUNCTION
CONNECTOR
ABS MOTOR
RELAY
ABS SOL RELAY
D 2
DATA LINK
CONNECTOR 2
D 1
DATA LINK
CONNECTOR 1
(SHORT PIN)
J 2
JUNCTION
CONNECTOR
A13 A, A14 B
ABS ECU
MR
SR
R+
D/G
TC
TS
SRLR
SRLH
SRRR
SRRH
SFLR
SFLH
SFRR
SFRH
MT
E1
BM
BS
M
A 4 A, A 5 B
ABS ACTUATOR
EC
EA


FROM POWER SOURCE SYSTEM (SEE PAGE 44)
10A GAUGE
15A ECU–IG
15A STOP
J 3 JUNCTION CONNECTOR
C12 ABS WARNING LIGHT [COMB. METER]
S 4 STOP LIGHT SW
A 6 ABS SPEED SENSOR FRONT LH
A 7 ABS SPEED SENSOR FRONT RH
J22 JUNCTION CONNECTOR
J12 JUNCTION CONNECTOR
J23 , J24 JUNCTION CONNECTOR
A13 , A14 ABS ECU
WA
IG1
STP
FL+
FL–
FR+
FR–
GND
GND
RL+
RL–
RR+
RR–
J 9 JUNCTION CONNECTOR
A19 ABS SPEED SENSOR REAR LH
A20 ABS SPEED SENSOR REAR RH

# ABS

## SYSTEM OUTLINE

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

**1. INPUT SIGNALS**

(1) Speed sensor signal
The speed of the wheels is detected and input to TERMINALS FL+, FR+, RL+ and RR+ of the ABS ECU.

(2) Stop light SW signal
A signal is input to TERMINAL STP of the ABS ECU when the brake pedal is depressed.

**2. SYSTEM OPERATION**

During sudden braking the ABS ECU has signals input from each sensor, which controls the current to the solenoid inside the actuator and lets the hydraulic pressure acting on each wheel cylinder escape to the reservoir. The pump inside the actuator is also operating at this time and it returns the brake fluid from the reservoir to the master cylinder, thus preventing locking of the vehicle wheels.
If the ABS ECU judges that the hydraulic pressure acting on the wheel cylinder is insufficient, the current on the solenoid is controlled and the hydraulic pressure is increased. Holding of the hydraulic pressure is also controlled by the ABS ECU, by the same method as above. Pressure reduction, holding and increase are repeated to maintain vehicle stability and to improve steerability during sudden braking.

## SERVICE HINTS

**A6, A7 ABS SPEED SENSOR FRONT LH, RH**
2–1 : Approx. **1.6** kΩ (**20**°C, **68**°F)

**A19, A20 ABS SPEED SENSOR REAR LH, RH**
2–1 : Approx. **1.6** kΩ (**20**°C, **68**°F)

**A14 (B) ABS ECU**
(B)13–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position
(B) 5–GROUND : Approx. **12** volts with the brake pedal depressed
(B)12, (B) 25–GROUND :
Always continuity

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A4 A | 28 | C12 | 30 | J12 | 31 |
| A5 B | 28 | D1 | 28 | J20 | 31 |
| A6 | 28 | D2 | 30 | J22 | 31 |
| A7 | 28 | J2 | 31 | J23 A | 31 |
| A13 A | 30 | J3 | 31 | J24 B | 31 |
| A14 B | 30 | J6 A | 31 | S4 | 31 |
| A19 | 32 | J7 B | 31 | | |
| A20 | 32 | J9 | 31 | | |

**: RELAY BLOCKS**

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 3 | 26 | Engine Room R/B No.3 (Radiator Upper Support RH) |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IB1 | 36 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IF1 | 36 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IG3 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IJ1 | 38 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IJ2 | | |
| IK1 | 38 | Floor No.2 Wire and Cowl Wire (Right Kick Panel) |

: **GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| EA | 34 | Right Radiator Side Support |
| EC | 34 | Intake Manifold |
| IF | 36 | Instrument Panel Brace LH |

: **SPLICE POINTS**

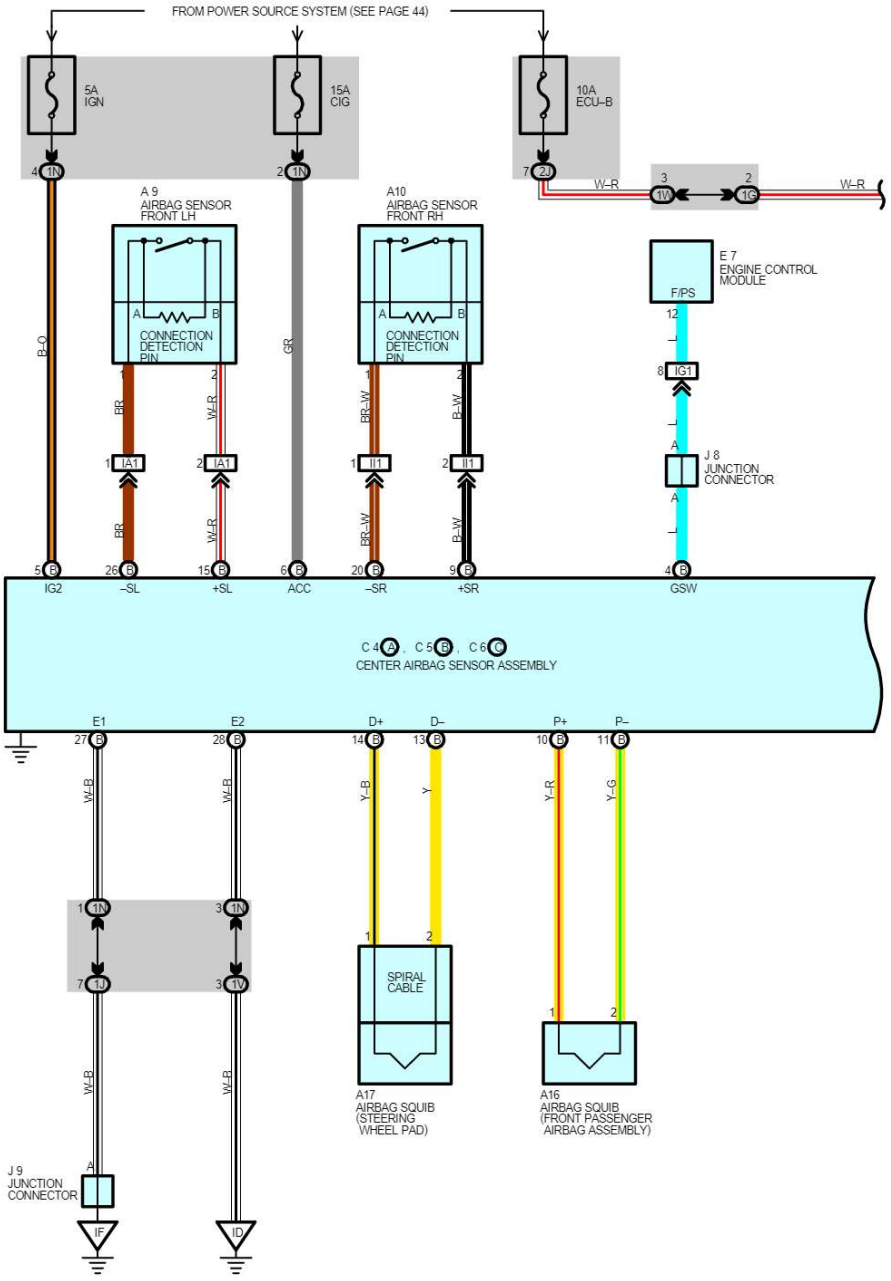
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E1 | 34 | Engine Room Main Wire | | | |

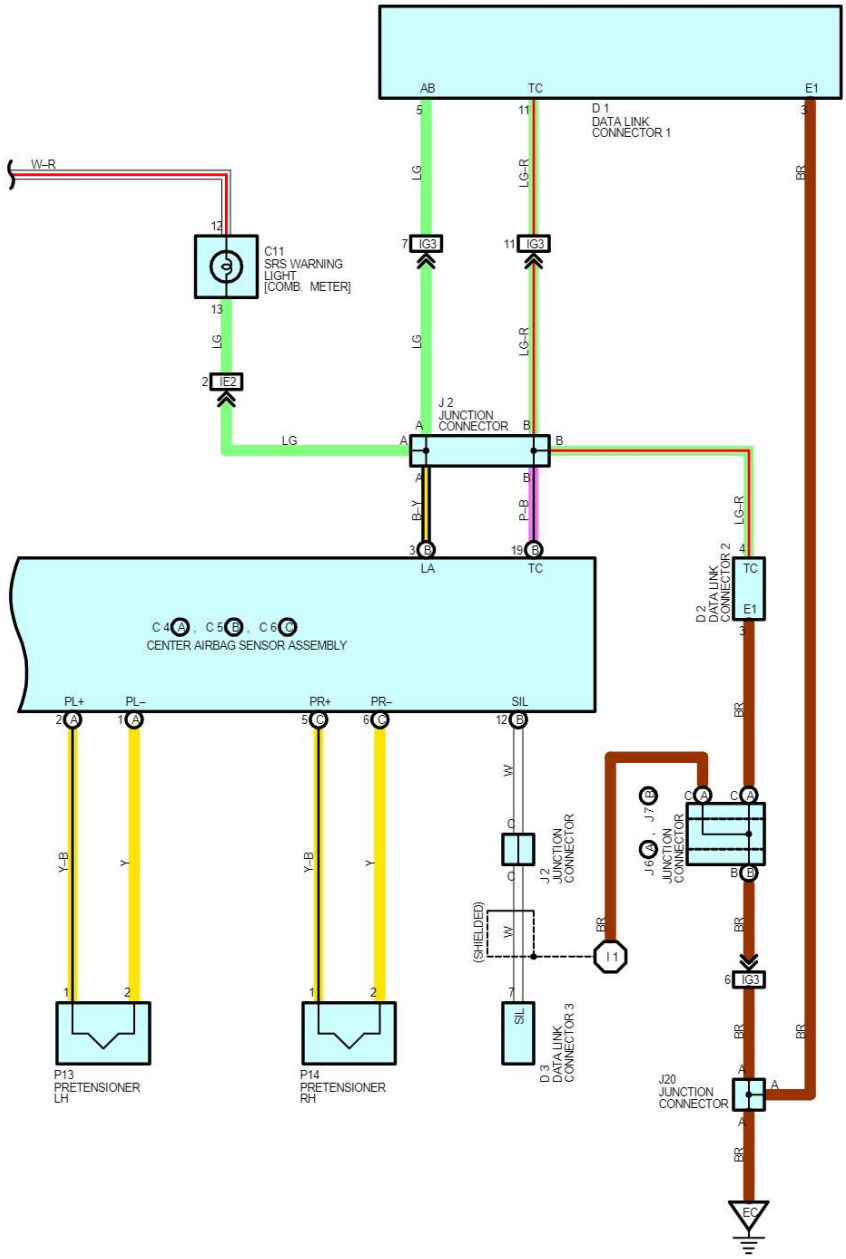
**MEMO**

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. To avoid erasing the memory in each memory system, never use a back–up power supply from outside the vehicle.
- Before repairs, remove the airbag sensor if shocks are likely to be applied to the sensor during repairs.
- Do not expose the steering wheel pad, front passenger airbag assembly, seat belt pretensioner, center airbag sensor assembly or front airbag sensor assembly directly to hot air or flames.
- Even in cases of a minor collision where the SRS does not deploy, the steering wheel pad, front passenger airbag assembly, seat belt pretensioner, center airbag sensor assembly and front airbag sensor assembly should be inspected.
- Never use SRS parts from another vehicle. When replacing parts, replace them with new parts.
- Never disassemble and repair the steering wheel pad, front passenger airbag assembly, seat belt pretensioner, center airbag sensor assembly or front airbag sensor assembly in order to reuse it.
- If the steering wheel pad, front passenger airbag assembly, seat belt pretensioner, center airbag sensor assembly or front 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.

# SRS


FROM POWER SOURCE SYSTEM (SEE PAGE 44)
5A IGN
15A CIG
10A ECU–B
A 9 AIRBAG SENSOR FRONT LH
A10 AIRBAG SENSOR FRONT RH
CONNECTION DETECTION PIN
E 7 ENGINE CONTROL MODULE
F/PS
IG1
J 8 JUNCTION CONNECTOR
W–R
B–O
GR
BR
W–R
BR–W
R–W
IG2
–SL
+SL
ACC
–SR
+SR
GSW
C 4 (A), C 5 (B), C 6 (C)
CENTER AIRBAG SENSOR ASSEMBLY
E1
E2
D+
D–
P+
P–
W–B
Y–B
Y
Y–R
Y–G
SPIRAL CABLE
A17 AIRBAG SQUIB (STEERING WHEEL PAD)
A16 AIRBAG SQUIB (FRONT PASSENGER AIRBAG ASSEMBLY)
J 9 JUNCTION CONNECTOR
1F
1D


AB
TC
E1
D 1
DATA LINK
CONNECTOR 1
W–R
C11
SRS WARNING
LIGHT
[COMB. METER]
IG3
IE2
J 2
JUNCTION
CONNECTOR
LG
LG–R
B–Y
P–B
BR
D 2
DATA LINK
CONNECTOR 2
C 4 , C 5 , C 6
CENTER AIRBAG SENSOR ASSEMBLY
PL+
PL–
PR+
PR–
SIL
LA
Y–B
Y
W
(SHIELDED)
I 1
J 2
JUNCTION
CONNECTOR
J 6 , J 7
JUNCTION
CONNECTOR
D 3
DATA LINK
CONNECTOR 3
J20
JUNCTION
CONNECTOR
P13
PRETENSIONER
LH
P14
PRETENSIONER
RH
EC

# SRS

## 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 ACC or ON, current from the CIG fuse flows to TERMINAL (B) 6 of the center airbag sensor assembly. Only when the ignition SW is on does the current flow from the IGN fuse to TERMINAL (B) 5 of the center airbag sensor assembly.
If an accident occurs while driving, when the frontal impact exceeds a set level, current from the CIG or IGN fuse flows to TERMINALS (B) 14, (B) 10, (A) 2 and (C) 5 of the center airbag sensor assembly to TERMINAL 1 of the airbag squibs and the pretensioners to TERMINAL 2 to TERMINALS (B) 13, (B) 11, (A) 1 and (C) 6 of the center airbag sensor assembly to TERMINAL (B) 27, (B) 28 or BODY GROUND to GROUND, so that current flows to the front airbag squibs and the pretensioners and causes them to operate.
The airbag stored inside the steering wheel pad is instantaneously expanded to soften the shock to the driver.
The airbag stored inside the passenger's instrument panel is instantaneously expanded to soften the shock to the front passenger.

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A9 | 28 | C11 | 30 | J7 B | 31 |
| A10 | 28 | D1 | 28 | J8 | 31 |
| A16 | 30 | D2 | 30 | J9 | 31 |
| A17 | 30 | D3 | 30 | J20 | 31 |
| C4 A | 30 | E7 | 30 | P13 | 33 |
| C5 B | 30 | J2 | 31 | P14 | 33 |
| C6 C | 30 | J6 A | 31 | | |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1G | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1N | | |
| 1V | | |
| 1W | | |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IA1 | 36 | Cowl Wire and Cowl Wire (Left Kick Panel) |
| IE2 | 36 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG1 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG3 | | |
| II1 | 38 | Engine Room Main Wire and Cowl Wire (Cowl Side Panel RH) |

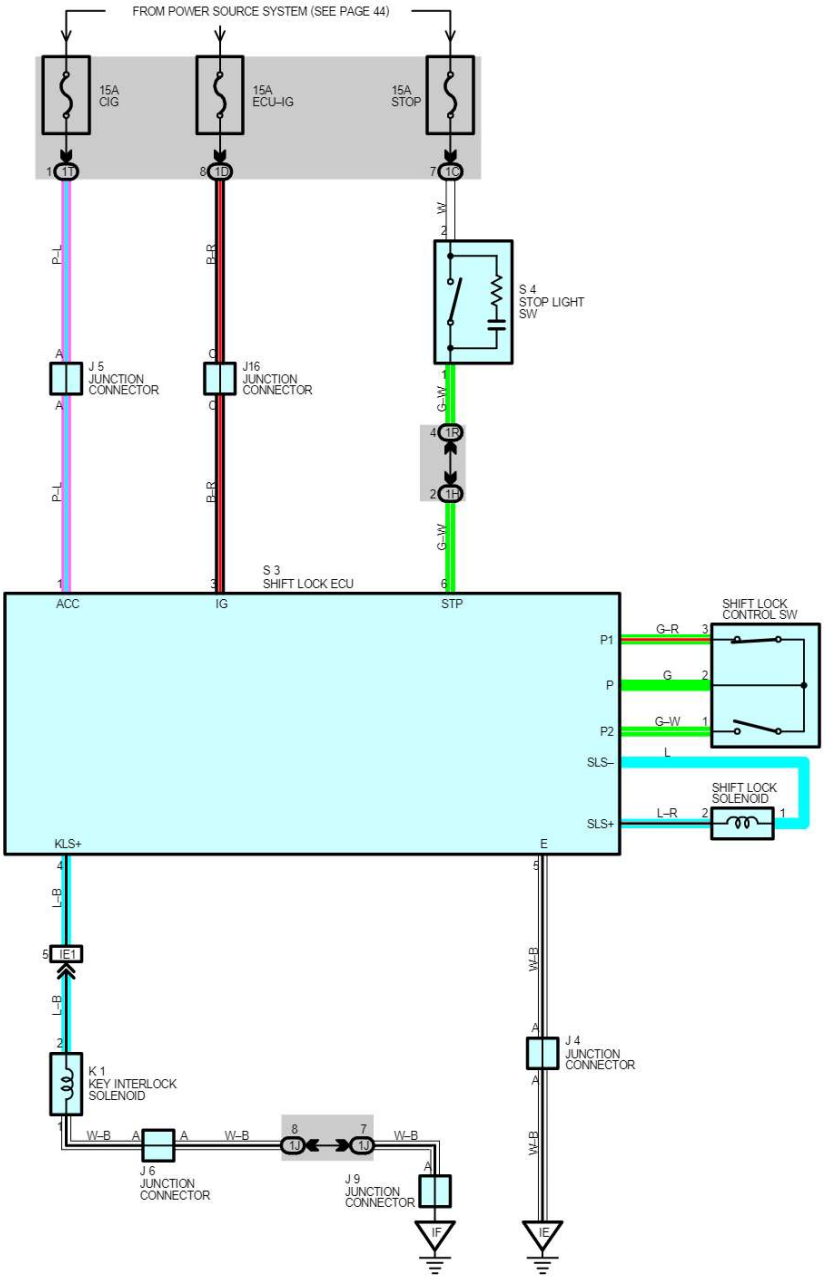
## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EC | 34 | Intake Manifold |
| ID | 36 | Cowl Side Panel LH |
| IF | 36 | Instrument Panel Brace LH |

## : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I1 | 38 | Cowl Wire | | | |

## SHIFT LOCK


FROM POWER SOURCE SYSTEM (SEE PAGE 44)
15A CIG
15A ECU-IG
15A STOP
1T
8T
7T
P–L
B–R
W
S 4 STOP LIGHT SW
J 5 JUNCTION CONNECTOR
J16 JUNCTION CONNECTOR
G–W
4R
2H
S 3 SHIFT LOCK ECU
ACC
IG
STP
SHIFT LOCK CONTROL SW
P1
P
P2
SLS–
SLS+
G–R
G
G–W
L
L–R
SHIFT LOCK SOLENOID
KLS+
E
L–B
5E1
K 1 KEY INTERLOCK SOLENOID
W–B
J 6 JUNCTION CONNECTOR
J 9 JUNCTION CONNECTOR
J 4 JUNCTION CONNECTOR
1F
2F

## SYSTEM OUTLINE

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

**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 (Continuity between P1 and P of the shift lock control SW) is input to the shift lock ECU, the ECU operates and current flows from TERMINAL 3 of the ECU to TERMINAL SLS+ of the shift lock solenoid to solenoid to TERMINAL SLS– to TERMINAL 5 of the ECU to GROUND. This causes the shift lock solenoid to turn on (Plate stopper disengages) and the shift lever can shift into position other than the P.

**2. KEY INTERLOCK MECHANISM**

With the ignition SW ON or ACC position, when the shift lever is put in P position (No continuity between P2 and P of shift lock control SW), the current flowing from TERMINAL 4 of the shift lock ECU to the 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 ECU**

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** or **ST** position
5–GROUND : Always continuity
6–GROUND : Approx. **12** volts with the brake pedal depressed

**S4 STOP LIGHT SW**

2–1 : Closed with the brake pedal depressed

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| J4 | 31 | J9 | 31 | S3 | 31 |
| J5 | 31 | J16 | 31 | S4 | 31 |
| J6 | 31 | K1 | 31 | | |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |
| 1T | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |

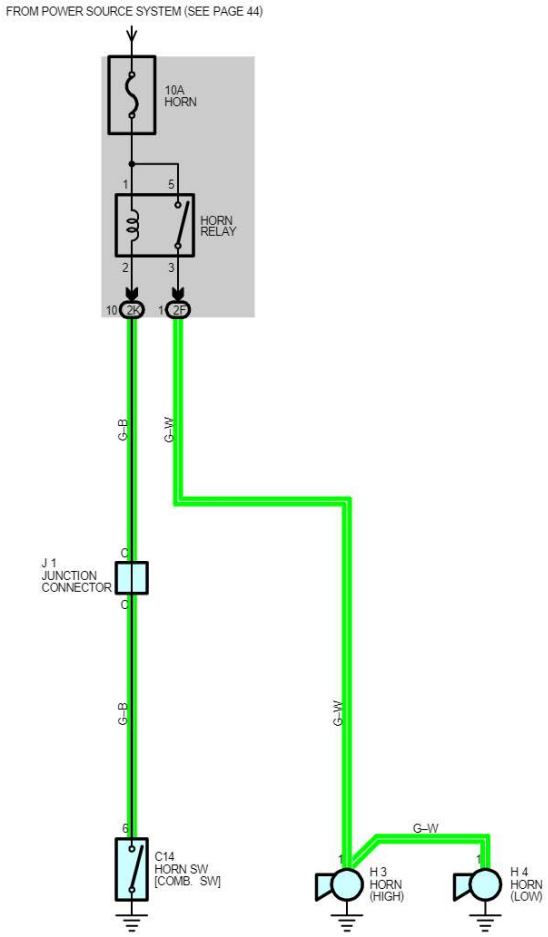
## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 36 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |

## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 36 | Left Kick Panel |
| IF | 36 | Instrument Panel Brace LH |

# HORN


FROM POWER SOURCE SYSTEM (SEE PAGE 44)
10A
HORN
1
5
HORN
RELAY
2
3
10
2A
1
2F
G-B
G-W
J 1
JUNCTION
CONNECTOR
C
C
G-B
G-W
G-W
6
C14
HORN SW
[COMB. SW]
H 3
HORN
(HIGH)
H 4
HORN
(LOW)

**SERVICE HINTS**

**HORN RELAY**

5–3 : Closed with the horn SW on

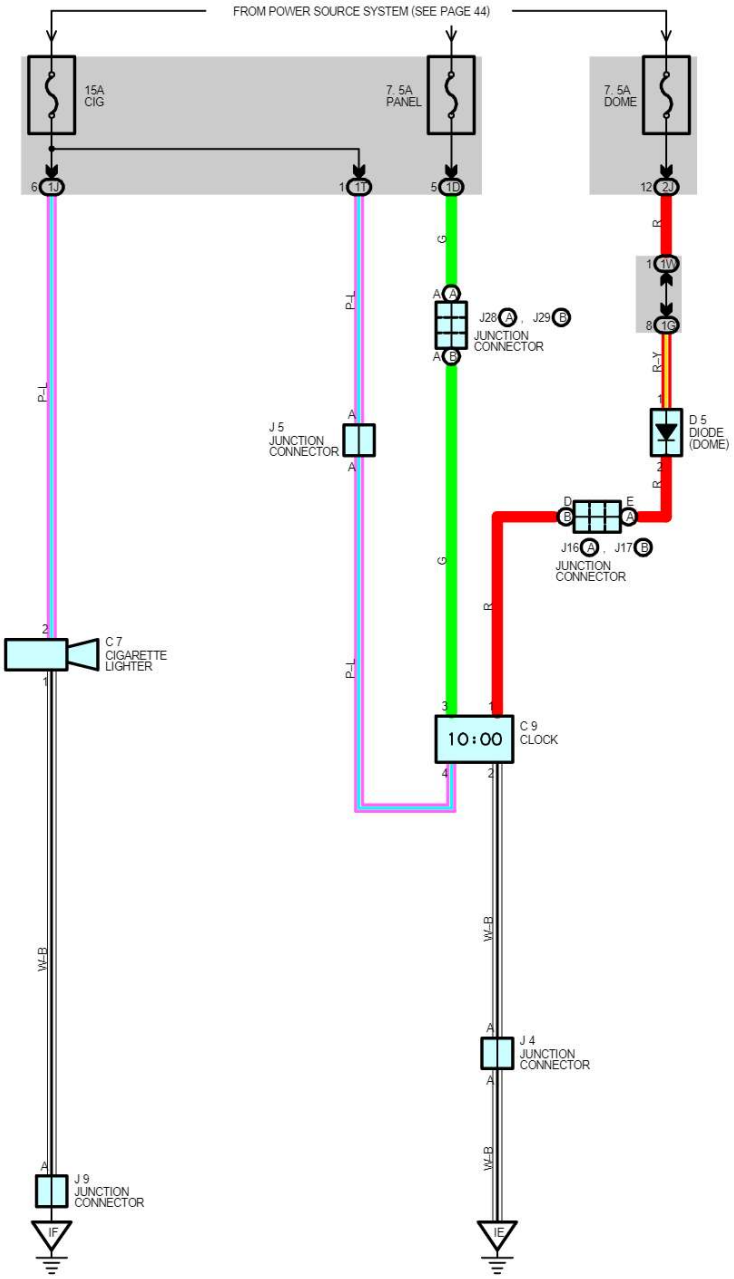
**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C14 | 30 | H4 | 28 | | |
| H3 | 28 | J1 | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 2F | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

## CIGARETTE LIGHTER AND CLOCK



**SERVICE HINTS**

**C7 CIGARETTE LIGHTER**

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

**C9 CLOCK**

4–GROUND : Approx. **12** volts with the ignition SW at **ACC** or **ON** position
1–GROUND : Always approx. **12** volts
2–GROUND : Always continuity
3–GROUND : Approx. **12** volts with the light control SW at **TAIL** or **HEAD** position

**○ : PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|
| C7 | 30 | J5 | | 31 | J28 | A | 31 |
| C9 | 30 | J9 | | 31 | J29 | B | 31 |
| D5 | 30 | J16 | A | 31 | | | |
| J4 | 31 | J17 | B | 31 | | | |

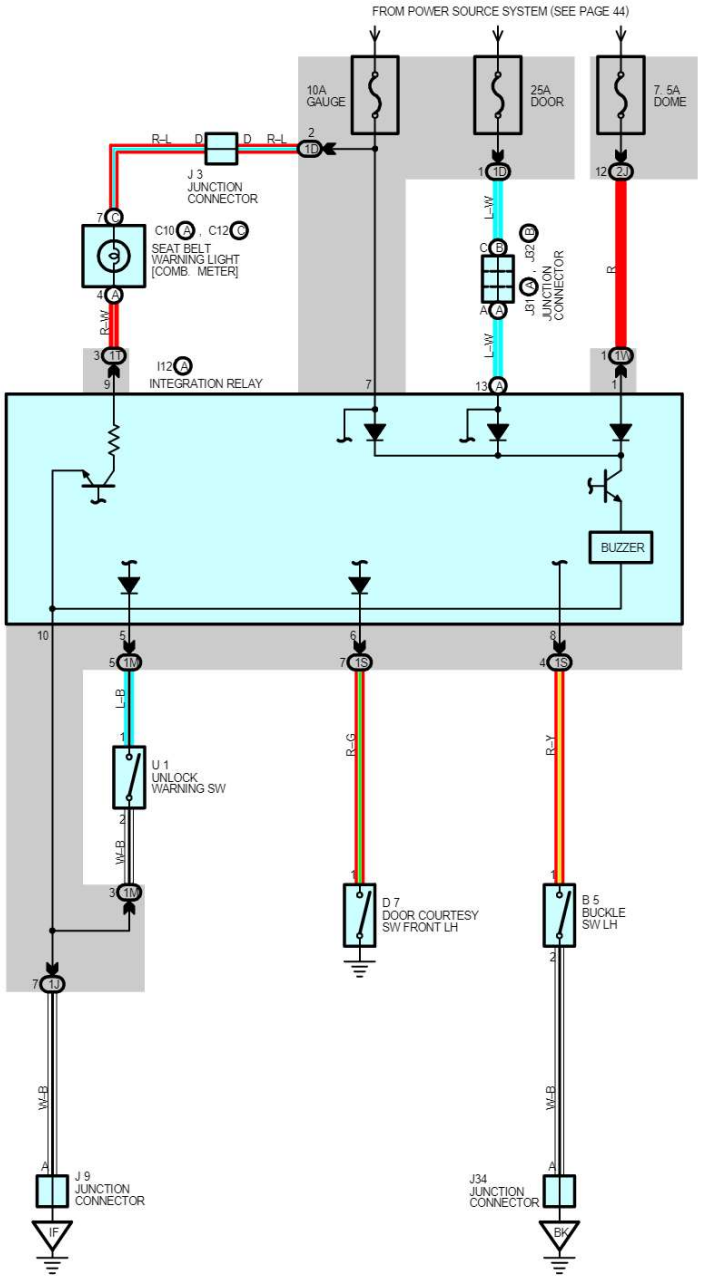
**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1T | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 36 | Left Kick Panel |
| IF | 36 | Instrument Panel Brace LH |

## KEY REMINDER AND SEAT BELT WARNING



## SYSTEM OUTLINE

Current always flows to TERMINAL 1 of the integration relay through the DOME fuse.

**1. SEAT BELT WARNING SYSTEM**

When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 7 of the integration relay. At the same time, current flows to TERMINAL 9 of the relay from the GAUGE fuse through the seat belt warning light. This current activates the relay and the current flowing through the warning light flows from TERMINAL 9 of the relay to TERMINAL 10 to GROUND, causing the warning light to light up. A buckle SW off signal is input to TERMINAL 8 of the relay to TERMINAL 10 to GROUND, causing the warning light to light up. A buckle SW off signal is input to TERMINAL 8 of the relay, the current flowing to TERMINAL 1 of the relay flows from TERMINAL 10 to GROUND and the seat belt warning buzzer sounds for approx. 6 seconds. However, if the seat belt is put on during this period (While the buzzer is sounding), signal input to TERMINAL 8 of the relay stops and the current flow from TERMINAL 1 of the relay to TERMINAL 10 to GROUND is cut, causing the buzzer to stop.

**2. KEY REMINDER SYSTEM**

With the ignition key inserted in the key cylinder (Unlock warning SW on), the ignition SW still off and driver's door open (Door courtesy SW on), when a signal is input to TERMINAL 6 of the integration relay, the relay operates, current flows from TERMINAL 1 of the relay to TERMINAL 10 to GROUND and key reminder buzzer sounds.

## SERVICE HINTS

**B5 BUCKLE SW LH**

1–2 : Closed with driver's seat belt in use

**D7 DOOR COURTESY SW FRONT LH**

1–GROUND : Closed with front LH door open

**U1 UNLOCK WARNING SW**

1–2 : Closed with ignition key in cylinder

**I12 (A) INTEGRATION RELAY**

10–GROUND : Always continuity
6–GROUND : Continuity with the front LH door open
5–GROUND : Continuity with the ignition key in cylinder
8–GROUND : Continuity with the driver's seat belt in use
1–GROUND : Always approx. **12** volts
(A)13–GROUND : Always approx. **12** volts

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| B5 | 32 | I12 A | 30 | J32 B | 31 |
| C10 A | 30 | J3 | 31 | J34 | 32 |
| C12 C | 30 | J9 | 31 | U1 | 31 |
| D7 | 32 | J31 A | 31 | | |

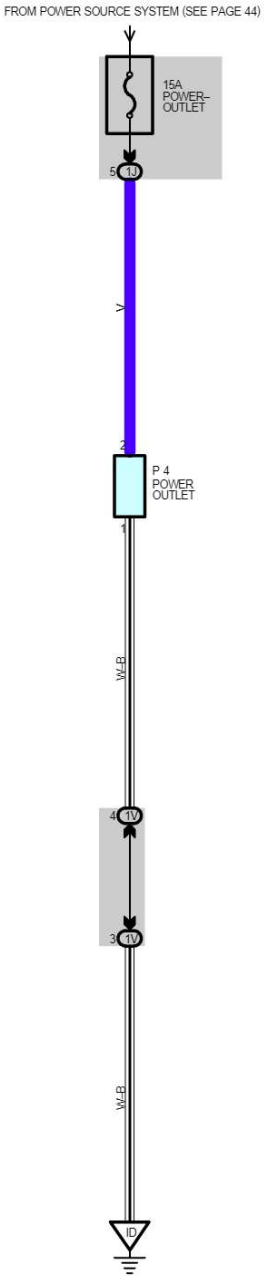
**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 22 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1T | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 36 | Instrument Panel Brace LH |
| BK | 40 | Under the Left Center Pillar |

## POWER OUTLET



**SERVICE HINTS**

**P4 POWER OUTLET**

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

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| P4 | 31 | | | | |

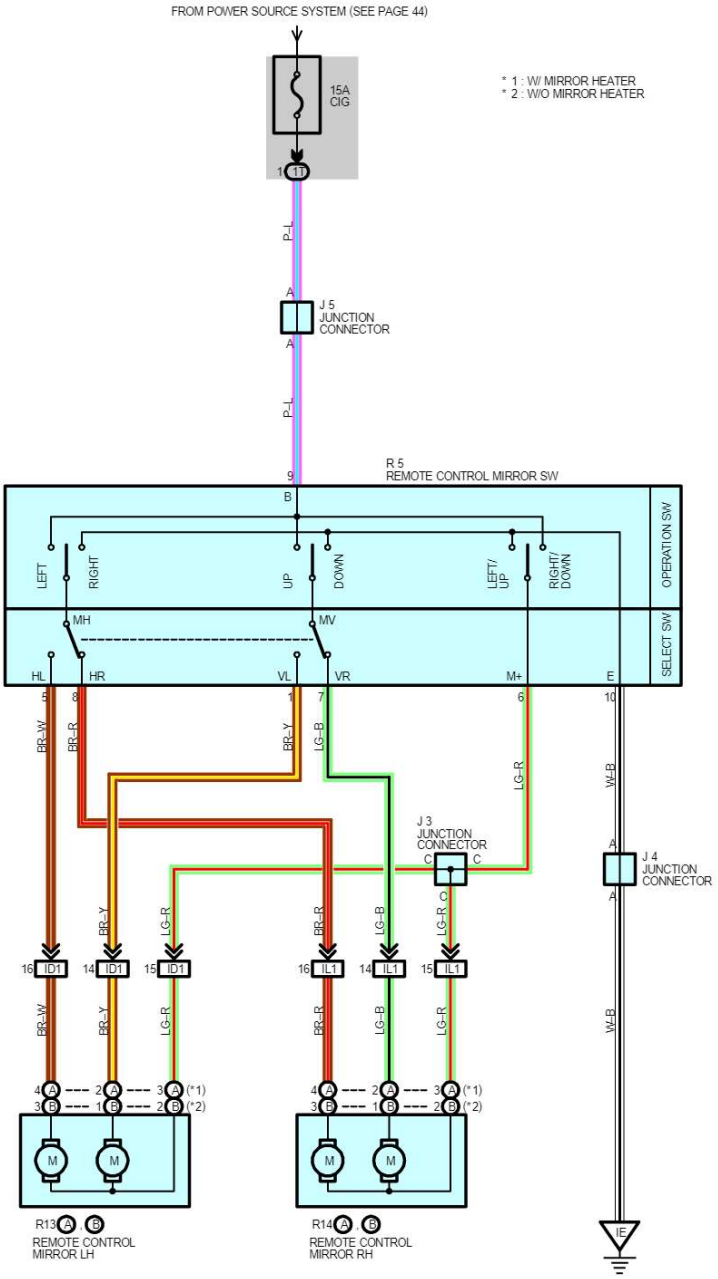
**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | | |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| ID | 36 | Cowl Side Panel LH |

# REMOTE CONTROL MIRROR



**SERVICE HINTS**

**R5 REMOTE CONTROL MIRROR SW**

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

**○ : PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|
| J3 | 31 | R5 | | 31 | R14 | A | 33 |
| J4 | 31 | R13 | A | 33 | | B | 33 |
| J5 | 31 | | B | 33 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1T | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |

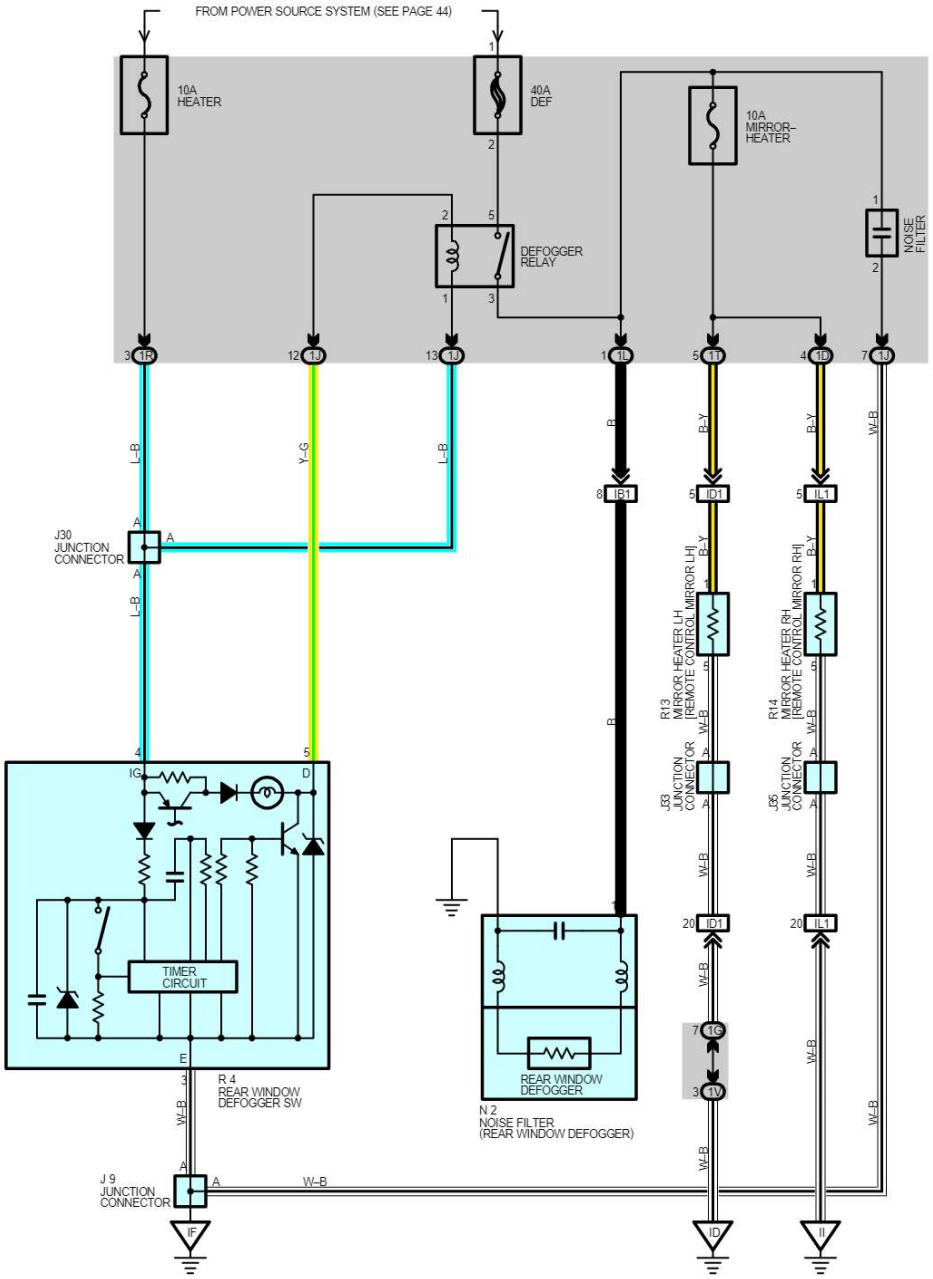
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| ID1 | 36 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IL1 | 38 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 36 | Left Kick Panel |

# REAR WINDOW DEFOGGER AND MIRROR HEATER



**SERVICE HINTS**

**DEFOGGER RELAY**

5–3 : Closed with the ignition SW at **ON** or **ST** position and the rear window defogger SW on

**R4 REAR WINDOW DEFOGGER SW**

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

**R13, R14 MIRROR HEATER LH, RH [REMOTE CONTROL MIRROR LH, RH]**

1–GROUND : Approx. **12** volts with the rear window defogger SW on
5–GROUND : Always continuity

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| J9 | 31 | J35 | 32 | R13 | 33 |
| J30 | 31 | N2 | 33 | R14 | 33 |
| J33 | 32 | R4 | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1L | | |
| 1R | | |
| 1T | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

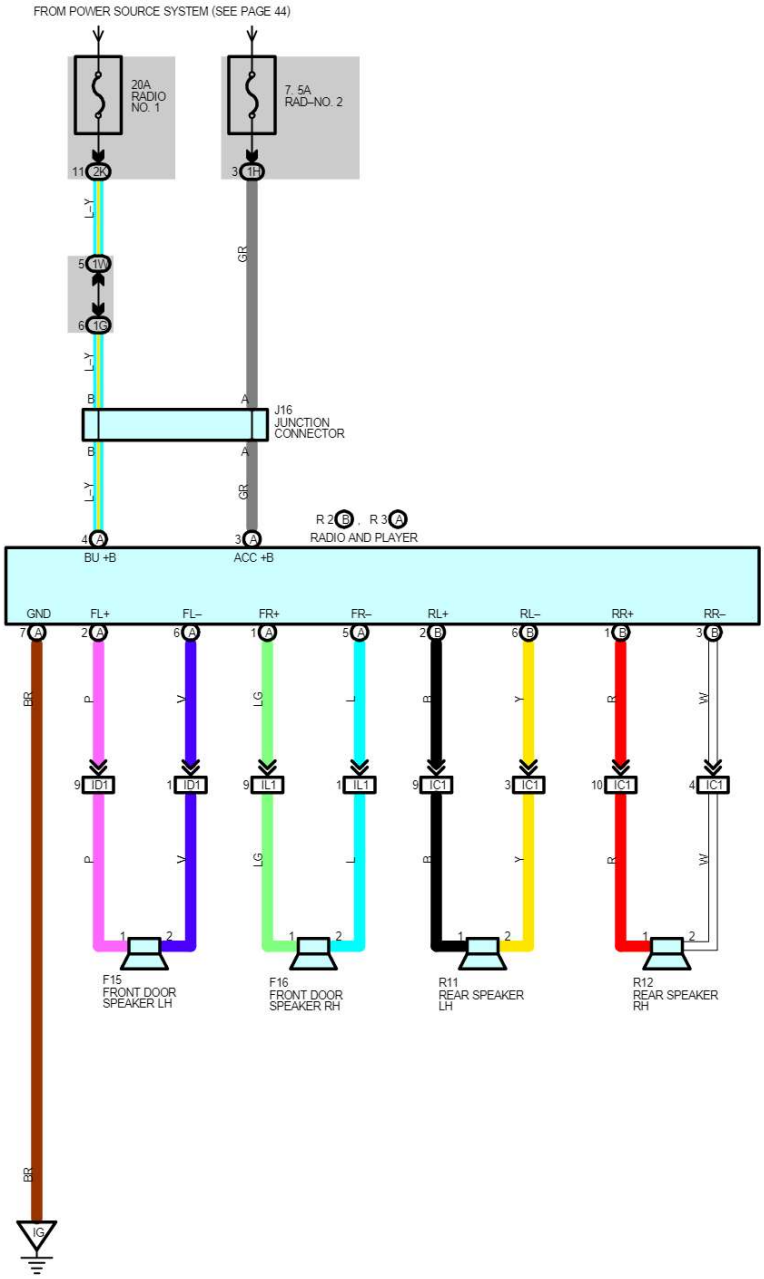
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IB1 | 36 | Floor Wire and Cowl Wire (Left Kick Panel) |
| ID1 | 36 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IL1 | 38 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |

**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| ID | 36 | Cowl Side Panel LH |
| IF | 36 | Instrument Panel Brace LH |
| II | 36 | Right Kick Panel |

## RADIO AND PLAYER



**SERVICE HINTS**

**R3 (A) RADIO AND PLAYER**

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

**○ : PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|
| F15 | 32 | R2 | B | 31 | R12 | 33 |
| F16 | 32 | R3 | A | 31 | | |
| J16 | 31 | R11 | | 33 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1G | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | 22 | |
| 1W | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2K | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

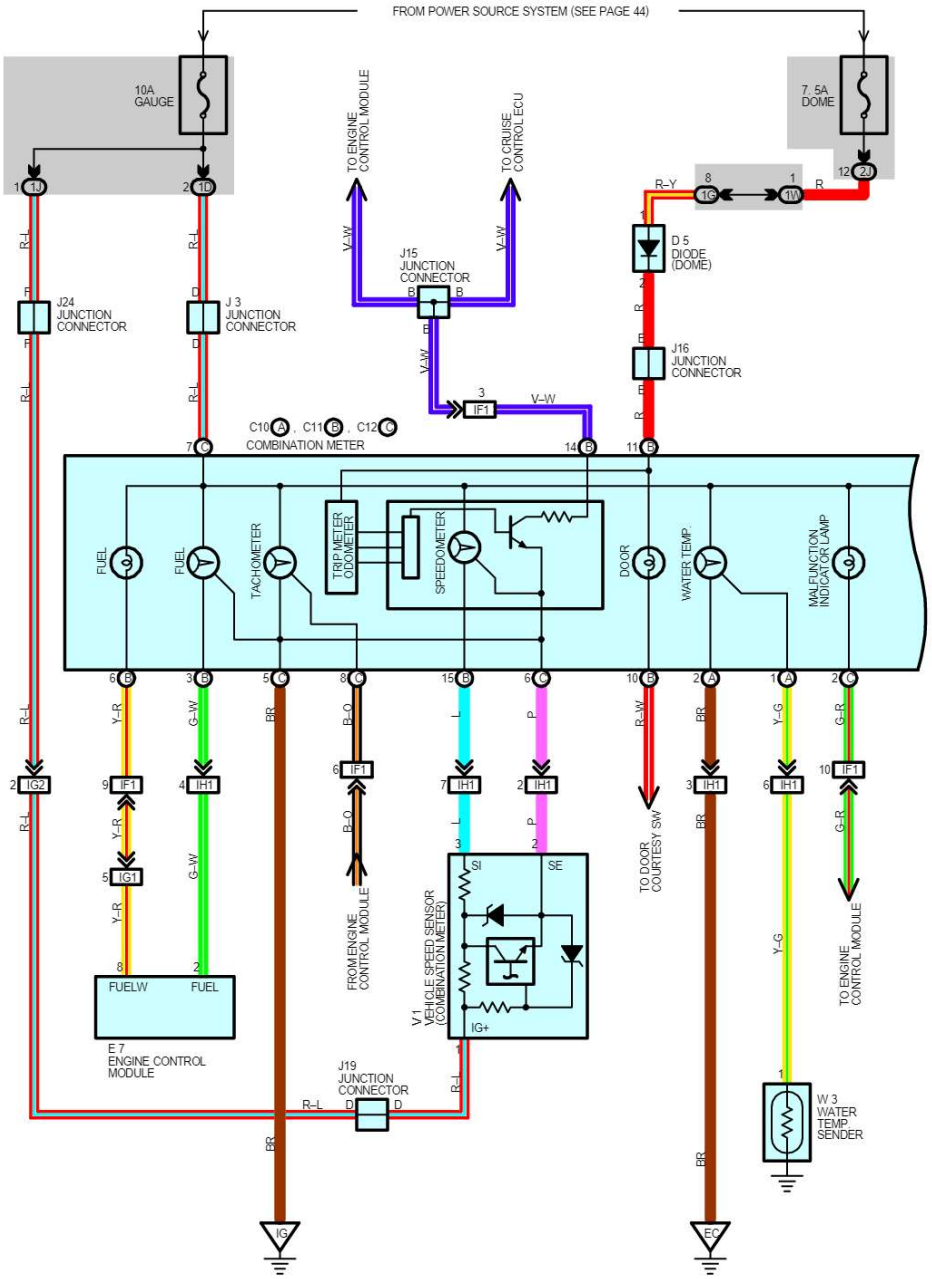
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

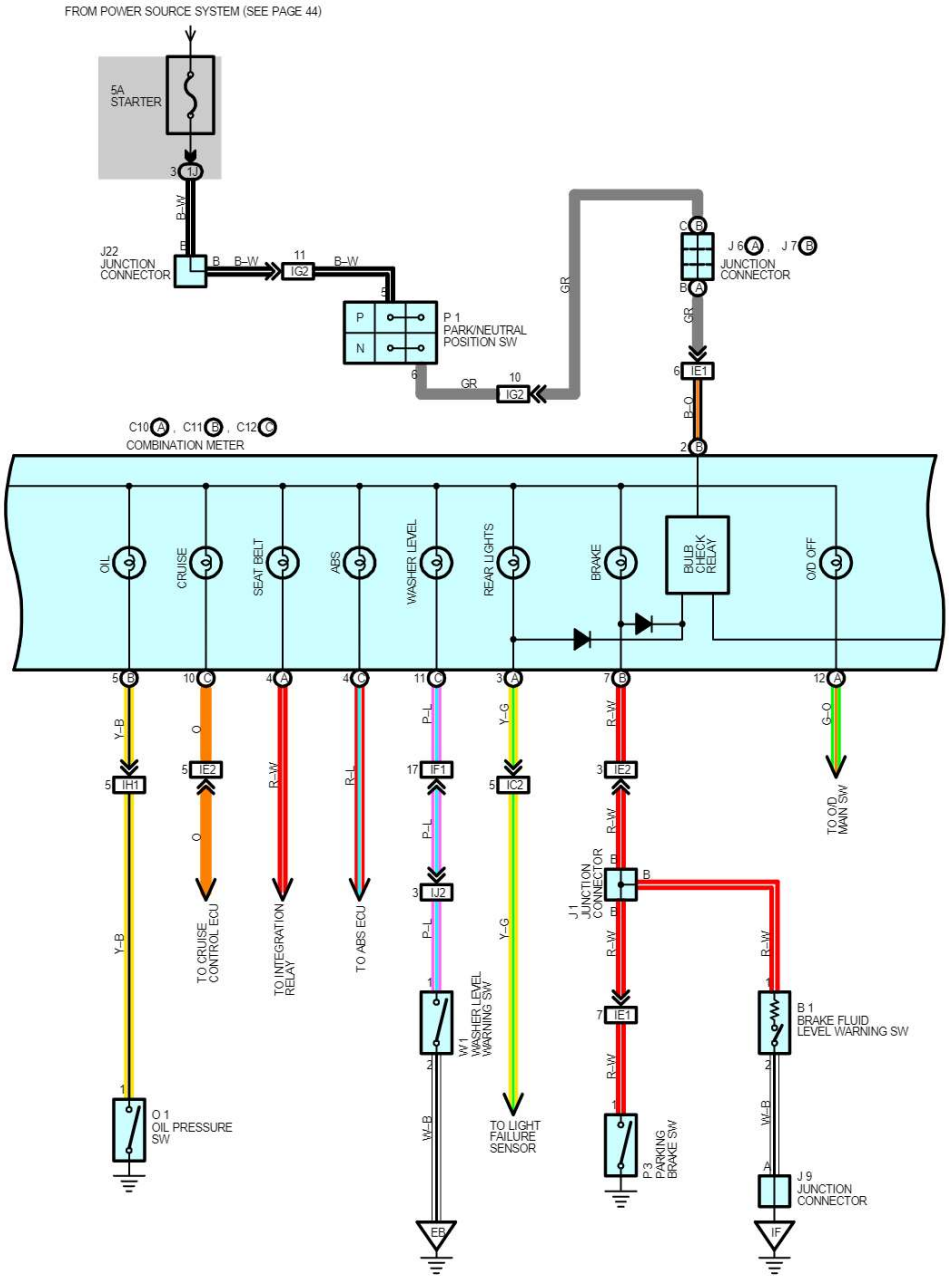
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IC1 | 36 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| ID1 | 36 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IL1 | 38 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |

**▽ : GROUND POINTS**

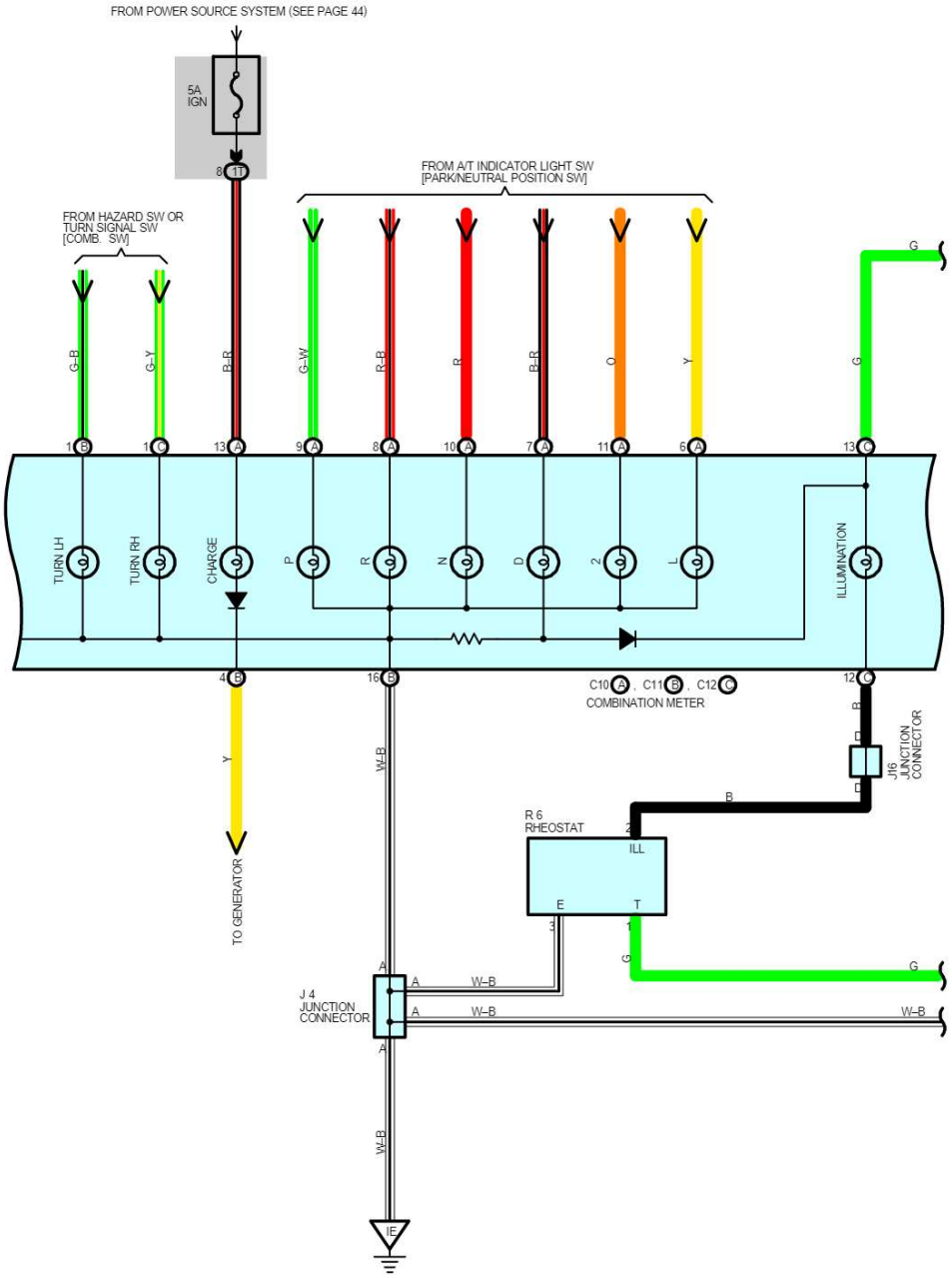
| Code | See Page | Ground Points Location |
|---|---|---|
| IG | 36 | Instrument Panel Brace RH |

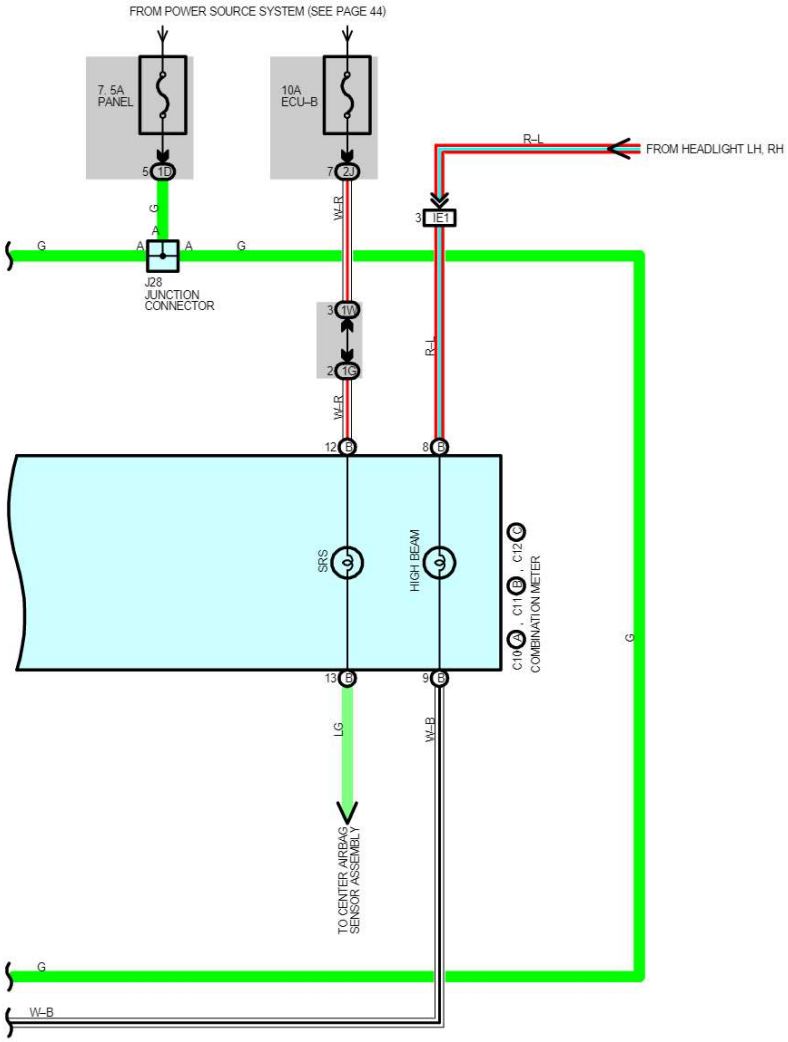
## COMBINATION METER




FROM POWER SOURCE SYSTEM (SEE PAGE 44)
5A
STARTER
J22
JUNCTION
CONNECTOR
P 1
PARK/NEUTRAL
POSITION SW
J 6 , J 7
JUNCTION
CONNECTOR
C10 , C11 , C12
COMBINATION METER
OIL
CRUISE
SEAT BELT
ABS
WASHER LEVEL
REAR LIGHTS
BRAKE
BULB
CHECK
RELAY
O/D OFF
TO O/D
MAIN SW
TO CRUISE
CONTROL ECU
TO INTEGRATION
RELAY
TO ABS ECU
W1
WASHER LEVEL
WARNING SW
TO LIGHT
FAILURE
SENSOR
J1
JUNCTION
CONNECTOR
P3
PARKING
BRAKE SW
B 1
BRAKE FLUID
LEVEL WARNING SW
J 9
JUNCTION
CONNECTOR
O 1
OIL PRESSURE
SW
EB
IF

# COMBINATION METER




FROM POWER SOURCE SYSTEM (SEE PAGE 44)
7.5A
PANEL
10A
ECU-B
5 1D
7 2J
G
W-R
R-L
FROM HEADLIGHT LH, RH
3 IE1
G
A
A
A
G
J28
JUNCTION
CONNECTOR
3 1W
2 1C
W-R
R-L
12 B
8 B
SRS
HIGH BEAM
C10 A , C11 B , C12 C
COMBINATION METER
13 B
9 B
LG
W-B
G
TO CENTER AIRBAG
SENSOR ASSEMBLY
G
W-B

# COMBINATION METER

**SERVICE HINTS**

**B1 BRAKE FLUID LEVEL WARNING SW**

1–2 : Closed with the float down

**C10 (A), C11 (B), C12 (C) COMBINATION METER**

(B) 2–GROUND : Approx. **12** volts with the ignition SW at **ST** position and the shift lever at **P** or **N** position
(A)13, (C) 7–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ST** position
(B)11, (B) 12–GROUND: Always approx. **12** volts
(A) 2, (B) 9, (B) 16, (C) 5–GROUND : Always continuity

**O1 OIL PRESSURE SW**

1–GROUND : Closed with the oil pressure above approx. **19.6** kpa (**2.8** psi, **0.2** kgf/cm$^2$)

**P3 PARKING BRAKE SW**

1–GROUND : Closed with the parking brake lever pulled up

**W3 WATER TEMP. SENDER**

1–GROUND : Approx. **160**–**240** Ω (**50**°C, **122**°F)
Approx. **17.1**–**21.2** Ω (**120**°C, **248**°F)

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| B1 | 28 | J6 A | 31 | O1 | 29 |
| C10 A | 30 | J7 B | 31 | P1 | 29 |
| C11 B | 30 | J9 | 31 | P3 | 31 |
| C12 C | 30 | J15 | 31 | R6 | 31 |
| D5 | 30 | J16 | 31 | V1 | 29 |
| E7 | 30 | J19 | 31 | W1 | 29 |
| J1 | 31 | J22 | 31 | W3 | 29 |
| J3 | 31 | J24 | 31 | | |
| J4 | 31 | J28 | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1T | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

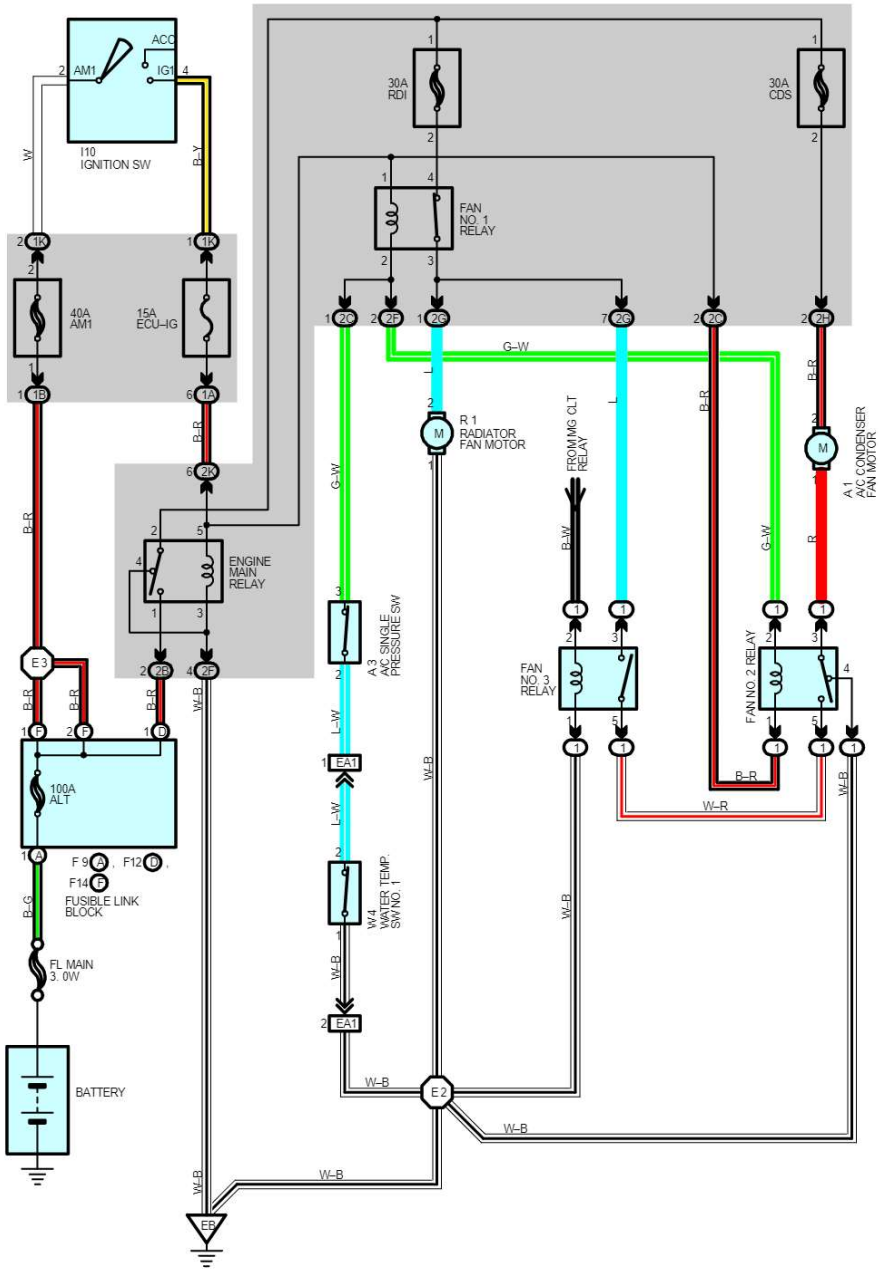
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IC2 | 36 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IE1 | 36 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IE2 | | |
| IF1 | 36 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IG1 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG2 | | |
| IH1 | 38 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| IJ2 | 38 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

▽ : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |
| EC | 34 | Intake Manifold |
| IE | 36 | Left Kick Panel |
| IF | 36 | Instrument Panel Brace LH |
| IG | 36 | Instrument Panel Brace RH |

# RADIATOR FAN AND CONDENSER FAN



## SYSTEM OUTLINE

### FAN MOTOR OPERATION

With the ignition SW turned on, the current through the ECU–IG fuse flows to the FAN NO.1 relay (Coil side), FAN NO.2 relay (Coil side). furthermore, the current through the FAN NO.1 relay (Coil side) or the FAN NO.2 relay (Coil side) flows to TERMINAL 3 of the A/C single pressure SW to TERMINAL 2 to TERMINAL 2 of the water temp. SW no.1 to TERMINAL 1 to GROUND, causing the FAN NO.1 relay to turn off and the FAN NO.2 relay to turn on.

### 1. LOW SPEED OPERATION

When the ignition SW is turned on and the A/C system is activated, the A/C condenser fan motor and the radiator fan motor rotates at low speed.

When the A/C system is activated, the current from MG CLT relay flows to the FAN NO.3 relay (Coil side) to GROUND, causing the FAN NO.3 relay to turn on. As a result, the current through the CDS fuse flows to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to TERMINAL 5 of the FAN NO.3 relay to TERMINAL 3 to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND.

### 2. HIGH SPEED OPERATION

Only when the A/C single pressure SW is turned off or the water temp. SW no.1 is turned off, the A/C condenser fan motor and the radiator fan motor rotate at high speed.

When the A/C single pressure SW is turned off or the water temp. SW no.1 is turned off. the current from the RDI fuse flows to the FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND. At the same time, the current from the CDS fuse flows to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 4 to GROUND.

## SERVICE HINTS

**A3 A/C SINGLE PRESSURE SW**

3–2 : Open above approx. **15.5** kgf/cm$^2$ (**220** psi, **1520** kpa)
Closed below approx. **12.5** kgf/cm$^2$ (**177** psi, **1225** kpa)

**W4 WATER TEMP. SW NO.1**

2–1 : Open above approx. **95**°C (**203**° F)

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A1 | 28 | F12 D | 28 | R1 | 29 |
| A3 | 28 | F14 F | 28 | W4 | 29 |
| F9 A | 28 | I10 | 30 | | |

## : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 26 | Engine Room R/B No.1 (Engine Compartment Left) |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1A | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1B | | |
| 1K | | |
| 2B | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2F | | |
| 2G | | |
| 2H | | |
| 2K | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EA1 | 34 | Engine Room Main Wire and Engine Room Main No.3 Wire (Radiator LH) |

# RADIATOR FAN AND CONDENSER FAN

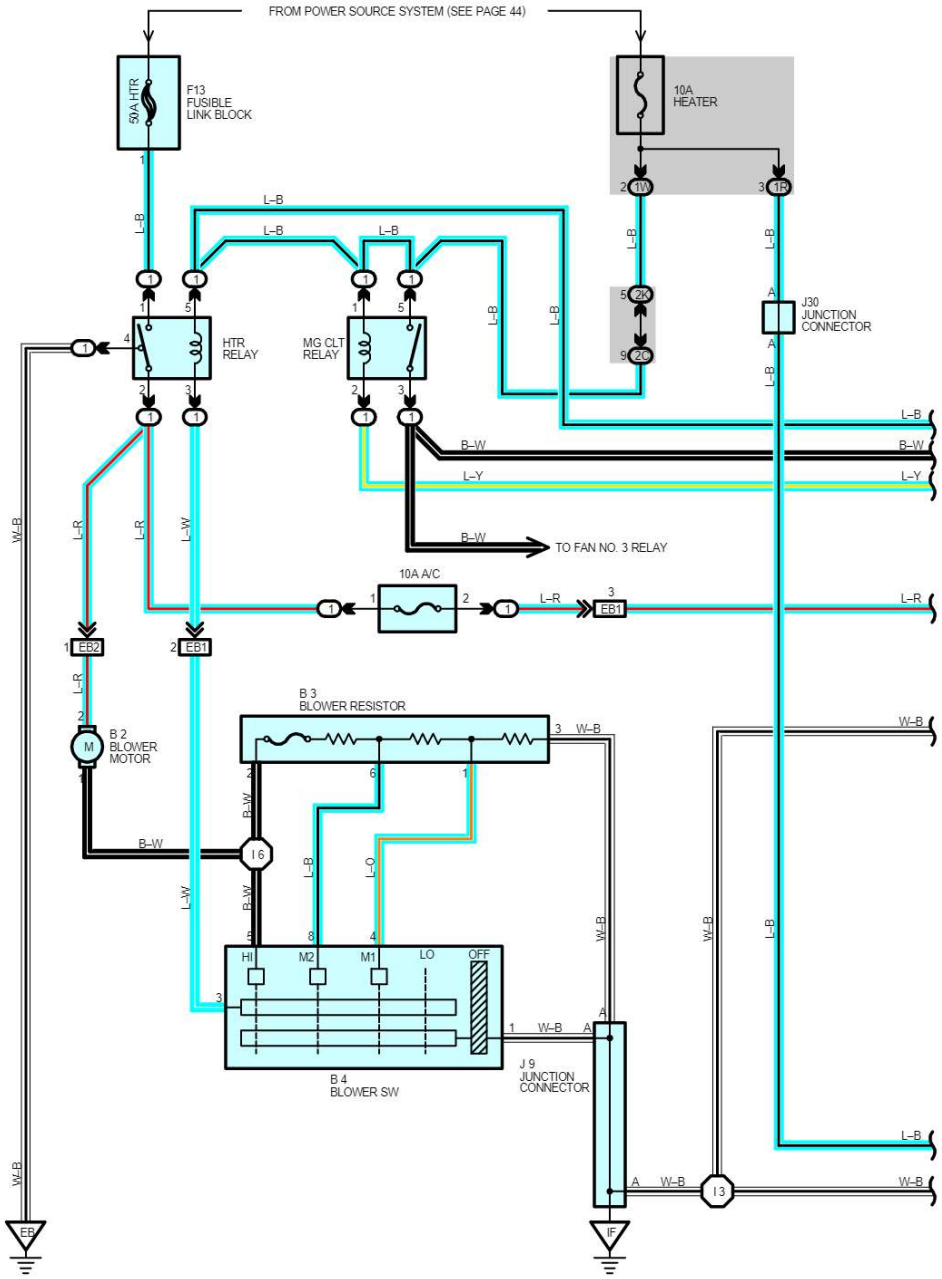
: GROUND POINTS

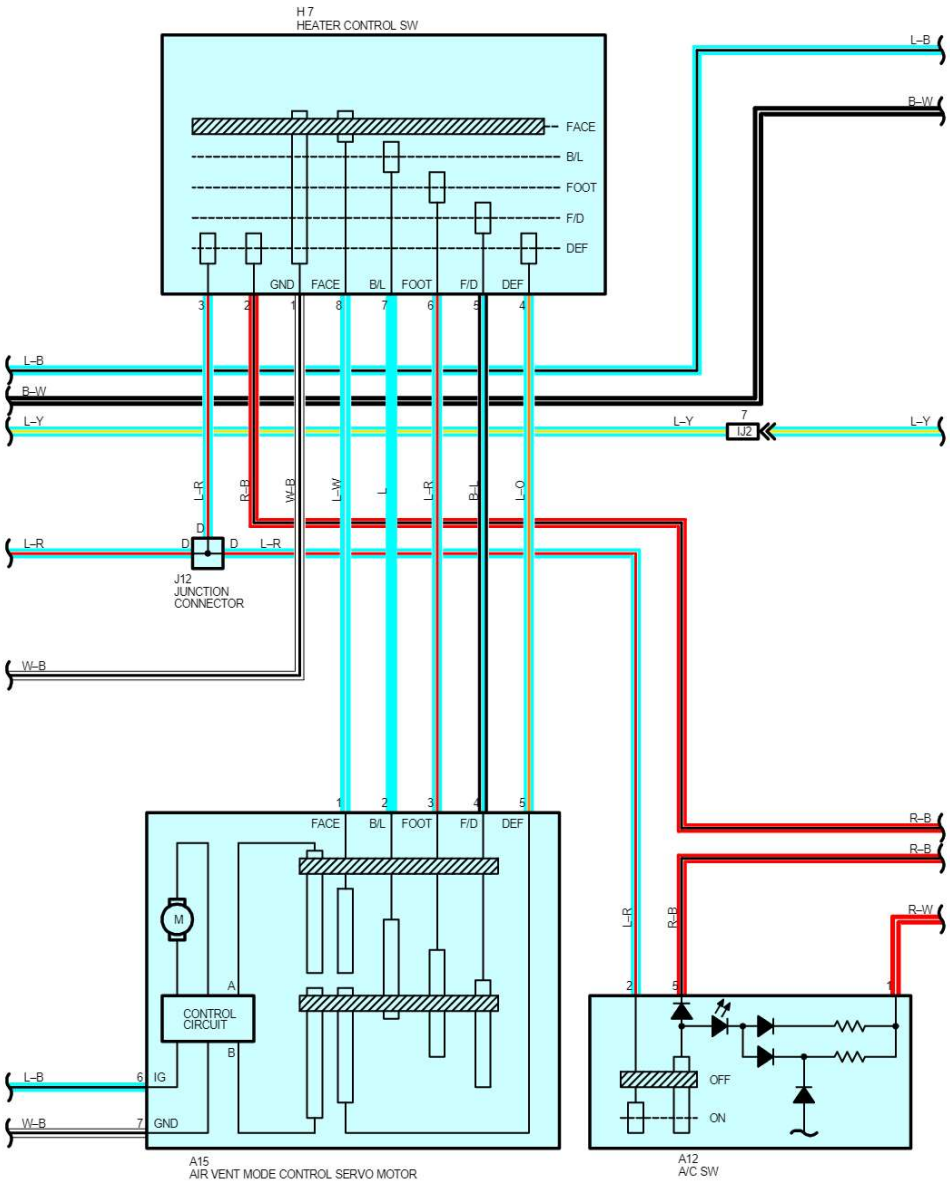
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |

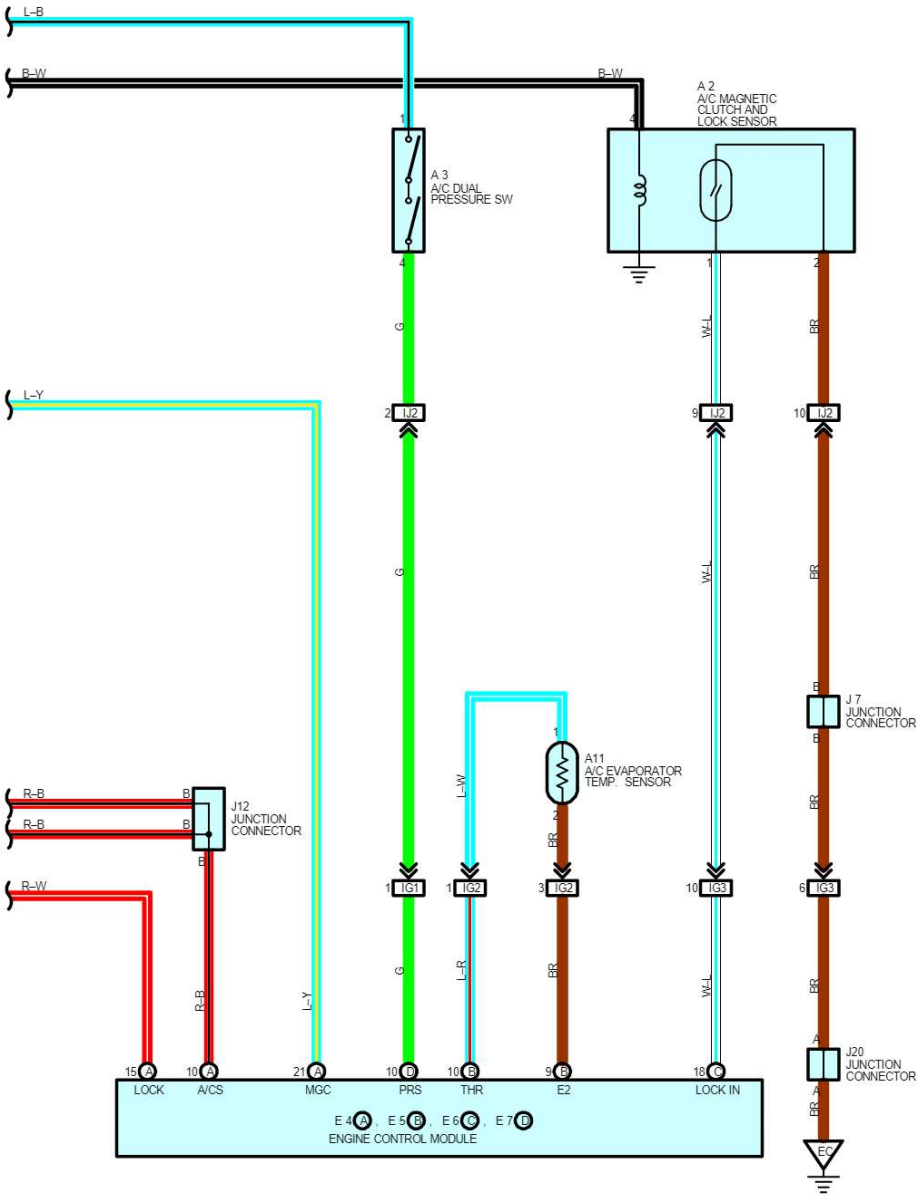
: SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E2 | 34 | Engine Room Main Wire | E3 | 34 | Cowl Wire |

# AIR CONDITIONING




H 7
HEATER CONTROL SW
FACE
B/L
FOOT
F/D
DEF
GND
FACE
B/L
FOOT
F/D
DEF
3
2
1
8
7
6
5
4
L–B
B–W
L–Y
L–Y
7
IJ2
L–Y
L–R
R–B
W–B
L–W
L
L–R
R–L
L–O
D
L–R
D
D
L–R
J12
JUNCTION
CONNECTOR
W–B
1
2
3
4
5
FACE
B/L
FOOT
F/D
DEF
R–B
R–B
R–W
L–R
R–B
M
A
CONTROL
CIRCUIT
B
L–B
6
IG
W–B
7
GND
2
5
1
OFF
ON
A15
AIR VENT MODE CONTROL SERVO MOTOR
A12
A/C SW


L–B
B–W
B–W
A 2
A/C MAGNETIC
CLUTCH AND
LOCK SENSOR
A 3
A/C DUAL
PRESSURE SW
G
W–L
BR
L–Y
IJ2
G
W–L
BR
J 7
JUNCTION
CONNECTOR
A11
A/C EVAPORATOR
TEMP. SENSOR
L–W
BR
R–B
R–B
J12
JUNCTION
CONNECTOR
R–W
IG1
IG2
IG2
IG3
IG3
G
L–R
BR
W–L
BR
L–Y
J20
JUNCTION
CONNECTOR
BR
LOCK
A/CS
MGC
PRS
THR
E2
LOCK IN
E 4 A , E 5 B , E 6 C , E 7 D
ENGINE CONTROL MODULE
EC

## SYSTEM OUTLINE

Current always flows from the HTR fuse to TERMINAL 1 of the HTR relay. When the ignition SW is turned on, the current from the HEATER fuse flows to TERMINAL 6 of the air vent mode control servo motor, and to the MG CLT relay (Coil side) to TERMINAL (A) 21 of the engine control module, and to TERMINAL 1 of the A/C dual pressure SW to TERMINAL 4 to TERMINAL (D) 10 of the engine control module, and to the HTR relay (Coil side) to TERMINAL 3 of the blower SW.

**1. AIR VENT MODE CONTROL SERVO MOTOR OPERATION**

When the damper is in FACE position and B/L mode on the heater control SW is selected, current flows from TERMINAL 7 of the heater control SW to TERMINAL 2 of the air vent mode control serve motor so that a signal that the ground circuit is activated is input into TERMINAL B of the control circuit inside the air vent mode control servo motor. Simultaneously, a signal that the ground circuit is not activated is input into TERMINAL A of the control circuit inside the servo motor. These two signals activate the control circuit so that current flows from the HEATER fuse to the servo motor, causing the servo motor to operate and the damper to move to B/L position. When the damper reaches B/L position. A ground cut signal is input into TERMINAL B of the control circuit, the control circuit operates, the servo motor stops rotating and the damper stops at B/L.
When another mode position is selected, input of signals into TERMINAL A and TERMINAL B of the control circuit that ground is made or not (as explained above) activates the control circuit and moves the serve motor to the desired position.

**2. AIR CONDITIONING OPERATION**

When the blower SW is on, current flows from the HEATER fuse to the HTR relay (Coil side) to TERMINAL 3 of the blower SW to TERMINAL 1 to GROUND, activating the HTR relay. This causes current to flow from the HTR fuse to the HTR relay (Point side) to A/C fuse to TERMINAL 2 of the A/C SW. If the A/C SW is turned on at this time, a signal is input into the engine control module. This activates the engine control module and MG CLT relay so that current flows from the HEATER fuse to the MG CLT relay (Point side) to A/C magnetic clutch. Causing The compressor to operate.
When blower SW is on and heater control SW is at DEF position, it causes A/C to run whether A/C SW is on or not.

## SERVICE HINTS

**HTR RELAY**

1–2 : Closed with the ignition SW at **ON** or **ST** position and the blower SW on

**MG CLT RELAY**

5–3 : Closed with the ignition SW at **ON** or **ST** position,
the blower SW on and the A/C SW on or the heater control SW at **DEF** position

**A3 A/C DUAL PRESSURE SW**

1–4 : Open with pressure less than approx. **2.0** kgf/cm$^2$ (**28** psi, **196** kpa) or above approx. **32** kgf/cm$^2$ (**455** psi, **3138** kpa)

**B3 BLOWER RESISTOR**

2–1 : Approx. **1.64** Ω
2–3 : Approx. **3.24** Ω
2–6 : Approx. **0.47** Ω

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A2 | 28 | B4 | 30 | J7 | 31 |
| A3 | 28 | E4 A | 30 | J9 | 31 |
| A11 | 30 | E5 B | 30 | J12 | 31 |
| A12 | 30 | E6 C | 30 | J20 | 31 |
| A15 | 30 | E7 D | 30 | J30 | 31 |
| B2 | 30 | F13 | 28 | | |
| B3 | 30 | H7 | 30 | | |

## : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 26 | Engine Room R/B No.1 (Engine Compartment Left) |

# AIR CONDITIONING

 **: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1R | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | | |
| 2C | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 34 | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| EB2 | | |
| IG1 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG2 | | |
| IG3 | | |
| IJ2 | 38 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

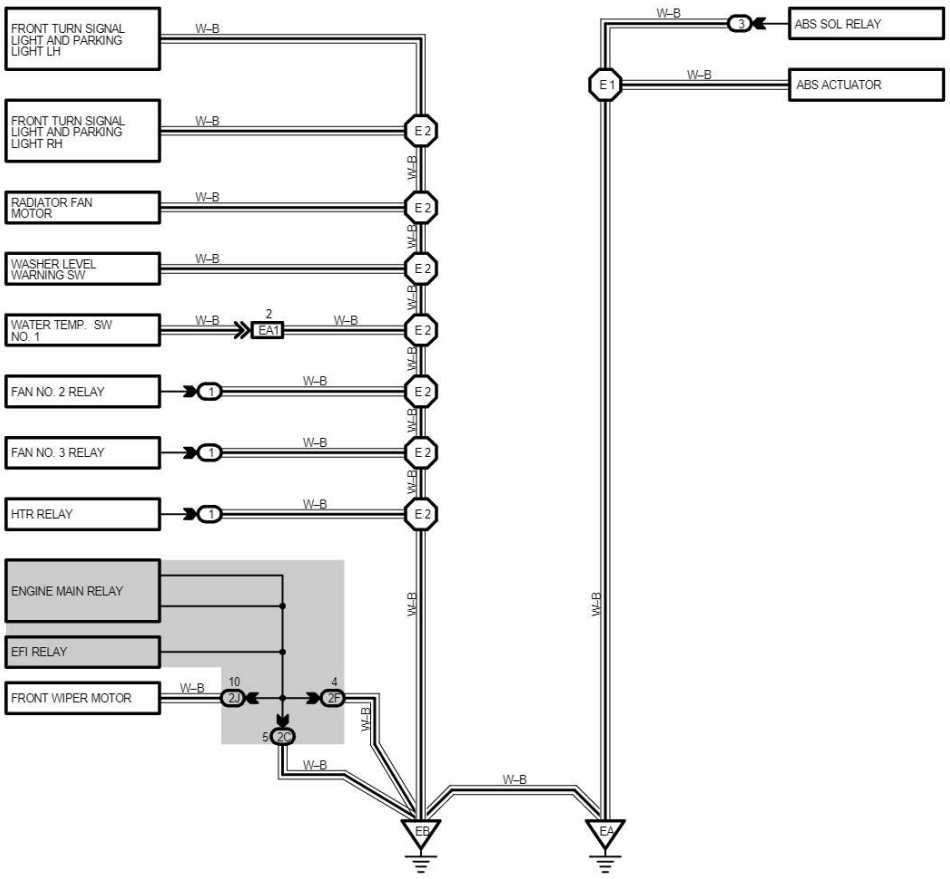
 **: GROUND POINTS**

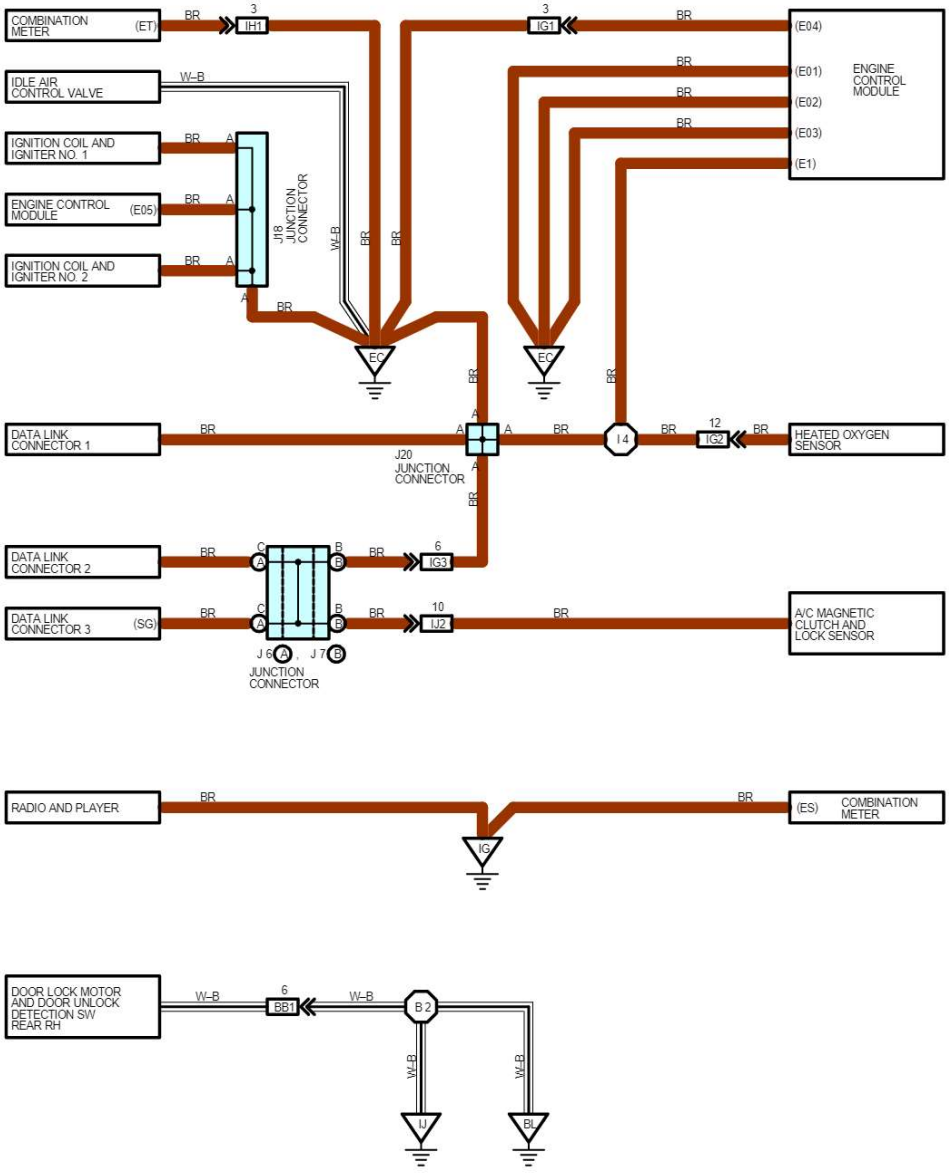
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 34 | Left Radiator Side Support |
| EC | 34 | Intake Manifold |
| IF | 36 | Instrument Panel Brace LH |

 **: SPLICE POINTS**

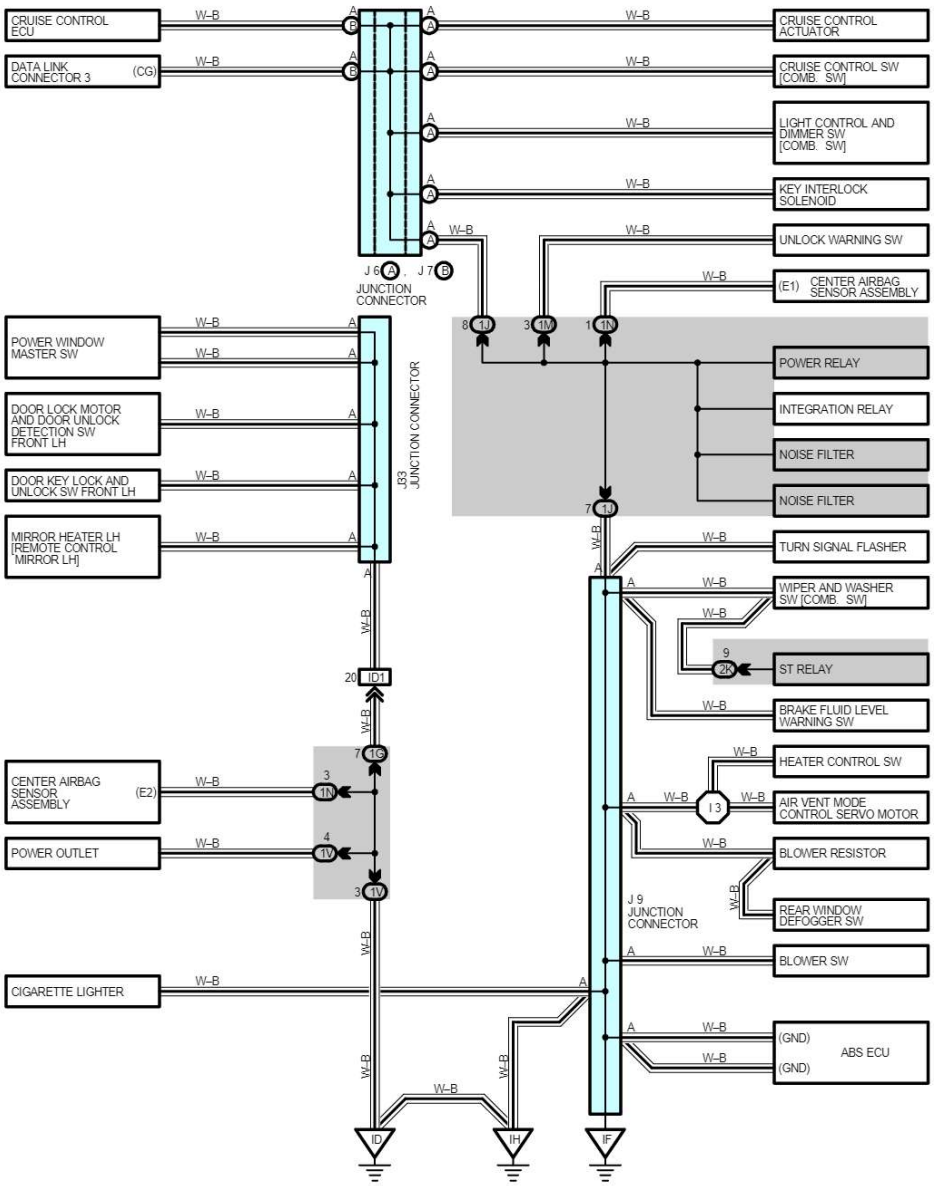
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I3 | 38 | Cowl Wire | I6 | 38 | Cowl Wire |

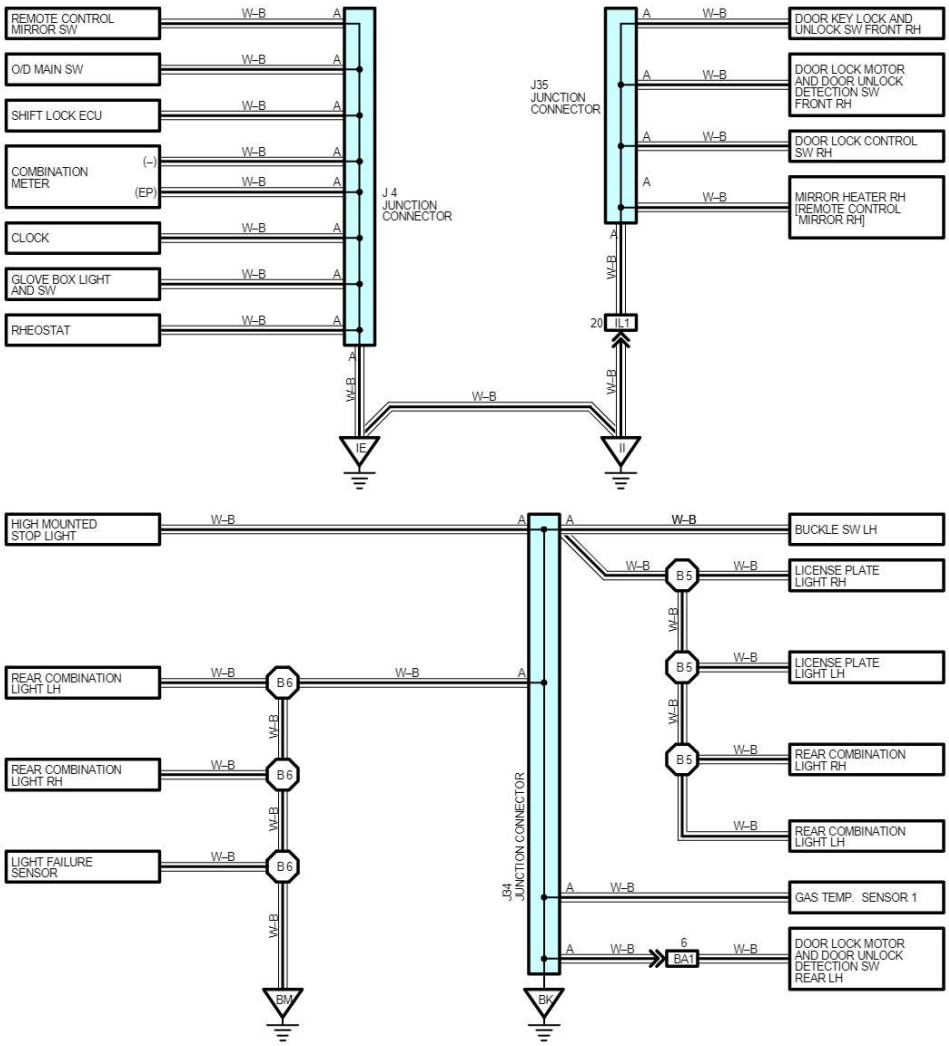
## I GROUND POINT




COMBINATION METER
(ET)
BR
3
IH1
3
IG1
BR
(E04)
BR
(E01)
ENGINE CONTROL MODULE
BR
(E02)
BR
(E03)
(E1)
IDLE AIR CONTROL VALVE
W–B
IGNITION COIL AND IGNITER NO. 1
BR
A
ENGINE CONTROL MODULE
(E05)
IGNITION COIL AND IGNITER NO. 2
J18 JUNCTION CONNECTOR
W–B
BR
BR
A
BR
EC
EC
BR
BR
DATA LINK CONNECTOR 1
BR
A
A
BR
I4
BR
12
IG2
BR
HEATED OXYGEN SENSOR
J20 JUNCTION CONNECTOR
A
BR
DATA LINK CONNECTOR 2
BR
C
A
B
B
BR
6
IG3
DATA LINK CONNECTOR 3
(SG)
BR
C
A
B
B
BR
10
IJ2
BR
A/C MAGNETIC CLUTCH AND LOCK SENSOR
J 6
A
J 7
B
JUNCTION CONNECTOR
RADIO AND PLAYER
BR
BR
(ES)
COMBINATION METER
IG
DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR RH
W–B
6
BB1
W–B
B 2
W–B
W–B
IJ
BL

## I GROUND POINT




REMOTE CONTROL MIRROR SW
O/D MAIN SW
SHIFT LOCK ECU
COMBINATION METER
(–)
(EP)
CLOCK
GLOVE BOX LIGHT AND SW
RHEOSTAT
W–B
A
J 4 JUNCTION CONNECTOR
J35 JUNCTION CONNECTOR
DOOR KEY LOCK AND UNLOCK SW FRONT RH
DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT RH
DOOR LOCK CONTROL SW RH
MIRROR HEATER RH [REMOTE CONTROL MIRROR RH]
20
IL1
IE
IJ
HIGH MOUNTED STOP LIGHT
REAR COMBINATION LIGHT LH
REAR COMBINATION LIGHT RH
LIGHT FAILURE SENSOR
B6
BM
J34 JUNCTION CONNECTOR
BK
BUCKLE SW LH
B5
LICENSE PLATE LIGHT RH
LICENSE PLATE LIGHT LH
REAR COMBINATION LIGHT RH
REAR COMBINATION LIGHT LH
GAS TEMP. SENSOR 1
6
BA1
DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR LH

# I GROUND POINT

## : PARTS LOCATION

| Code | | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|---|
| J4 | | 31 | J9 | 31 | J33 | 32 |
| J6 | A | 31 | J18 | 31 | J34 | 32 |
| J7 | B | 31 | J20 | 31 | J35 | 32 |

## : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 26 | Engine Room R/B No.1 (Engine Compartment Left) |
| 3 | 26 | Engine Room R/B No.3 (Radiater Upper support RH) |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1G | 22 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 22 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1N | | |
| 1V | | |
| 2C | 24 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2F | | |
| 2J | 24 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EA1 | 34 | Engine Room Main Wire and Engine Room Main No.3 Wire (Radiator LH) |
| ID1 | 36 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IG1 | 38 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IG2 | | |
| IG3 | | |
| IH1 | 38 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| IJ2 | 38 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IL1 | 38 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| BA1 | 40 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BB1 | 40 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

## : GROUND POINTS

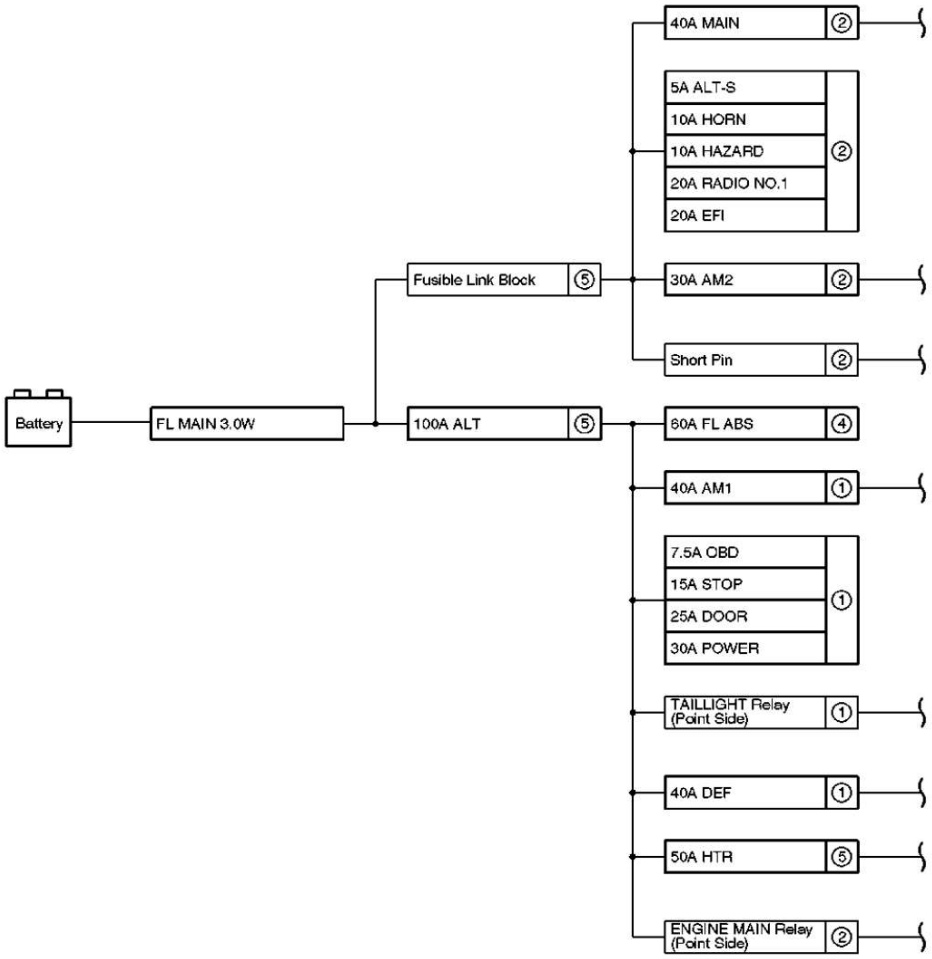
| Code | See Page | Ground Points Location |
|---|---|---|
| EA | 34 | Right Radiator Side Support |
| EB | 34 | Left Radiator Side Support |
| EC | 34 | Intake Manifold |
| ID | 36 | Cowl Side Panel LH |
| IE | 36 | Left Kick Panel |
| IF | 36 | Instrument Panel Brace LH |
| IG | 36 | Instrument Panel Brace RH |
| IH | 36 | Cowl Side Panel RH |
| II | 36 | Right Kick Panel |
| IJ | | |
| BK | 40 | Under the Left Center Pillar |
| BL | 40 | Under the Right Center Pillar |
| BM | 40 | Back Panel Center |

: **SPLICE POINTS**

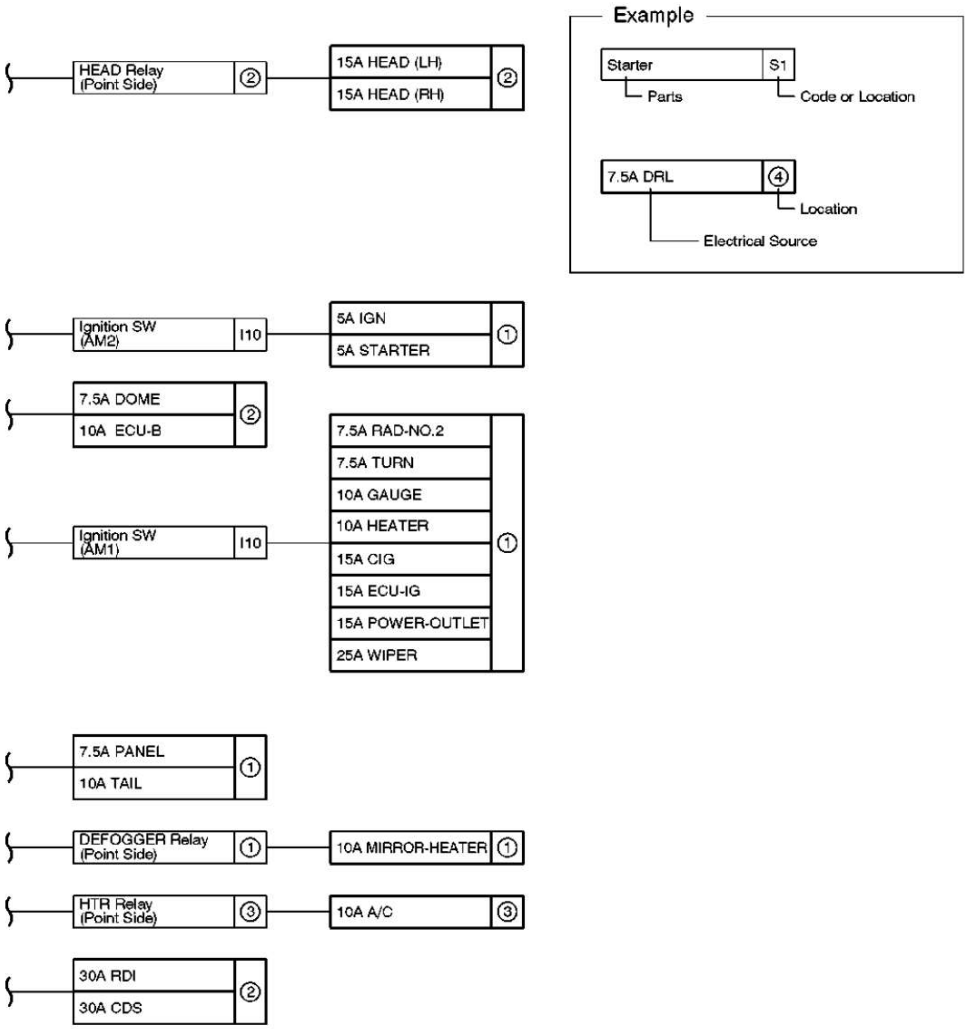
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E1 | 34 | Engine Room Main Wire | B2 | 40 | Floor No.2 Wire |
| E2 | | | B5 | 40 | Floor Wire |
| I3 | 38 | Cowl Wire | B6 | | |
| I4 | 38 | Engine Wire | | | |

## 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 : Instrument Panel J/B (See Page 22) ② : Engine Room J/B No.2 (See Page 24)
⑤ : Fusible Link Block (F13 on See Page 27)




③ : Engine Room R/B No.1 (See Page 26)  ④ : Engine Room R/B No.3 (See Page 26)

## J POWER SOURCE (Current Flow Chart)

### Instrument Panel J/B (See Page 22)

| Fuse | | System | Page |
|---|---|---|---|
| 5A | IGN | Charging | 52 |
| | | Combination Meter | 138 |
| | | Electronically Controlled Transmission and A/T Indicator | 102 |
| | | Engine Control | 54 |
| | | SRS | 117 |
| 5A | STARTER | Combination Meter | 138 |
| | | Electronically Controlled Transmission and A/T Indicator | 102 |
| | | Engine Control | 54 |
| | | Starting and Ignition | 48 |
| 7.5A | OBD | Engine Control | 54 |
| 7.5A | PANEL | Cigarette Lighter and Clock | 126 |
| | | Combination Meter | 138 |
| | | Illumination | 80 |
| 7.5A | RAD–NO.2 | Radio and Player | 136 |
| 7.5A | TURN | Turn Signal and Hazard Warning Light | 72 |
| 10A | GAUGE | ABS | 112 |
| | | Back–Up Light | 88 |
| | | Charging | 52 |
| | | Combination Meter | 138 |
| | | Cruise Control | 108 |
| | | Door Lock Control | 98 |
| | | Electronically Controlled Transmission and A/T Indicator | 102 |
| | | Engine Control | 54 |
| | | Key Reminder and Seat Belt Warning | 128 |
| | | Light Auto Turn Off | 68 |
| | | Power Window | 94 |
| | | Stop Light | 74 |
| | | Taillight | 84 |
| 10A | HEATER | Air Conditioning | 148 |
| | | Rear Window Defogger and Mirror Heater | 134 |
| 10A | MIRROR–HEATER | Engine Control | 54 |
| | | Rear Window Defogger and Mirror Heater | 134 |
| 10A | TAIL | Engine Control | 54 |
| | | Taillight | 84 |
| 15A | CIG | Cigarette Lighter and Clock | 126 |
| | | Remote Control Mirror | 132 |
| | | Shift Lock | 122 |
| | | SRS | 117 |
| 15A | ECU–IG | ABS | 112 |
| | | Cruise Control | 108 |
| | | Radiator Fan and Condenser Fan | 144 |
| | | Shift Lock | 122 |

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

| Fuse | | System | Page |
|---|---|---|---|
| 15A | POWER–OUTLET | Power Outlet | 130 |
| 15A | STOP | ABS | 112 |
| | | Cruise Control | 108 |
| | | Electronically Controlled Transmission and A/T Indicator | 102 |
| | | Engine Control | 54 |
| | | Shift Lock | 122 |
| | | Stop Light | 74 |
| 25A | DOOR | Door Lock Control | 98 |
| | | Interior Light | 76 |
| | | Key Reminder and Seat Belt Warning | 128 |
| | | Light Auto Turn Off | 68 |
| | | Power Window | 94 |
| 25A | WIPER | Wiper and Washer | 90 |
| 30A | POWER | Door Lock Control | 98 |
| | | Power Window | 94 |
| 40A | AM1 | Charging | 52 |
| | | Radiator Fan and Condenser Fan | 144 |
| 40A | DEF | Rear Window Defogger and Mirror Heater | 134 |

## Engine Room J/B No.2 (See Page 24)

| Fuse | | System | Page |
|---|---|---|---|
| 5A | ALT–S | Charging | 52 |
| 7.5A | DOME | Cigarette Lighter and Clock | 126 |
| | | Combination Meter | 138 |
| | | Interior Light | 76 |
| | | Key Reminder and Seat Belt Warning | 128 |
| | | Light Auto Turn Off | 68 |
| 10A | ECU–B | Combination Meter | 66 |
| | | SRS | 68 |
| 10A | HAZARD | Turn Signal and Hazard Warning Light | 48 |
| 10A | HORN | Horn | 52 |
| 15A | HEAD (LH) | Headlight | 144 |
| 15A | HEAD (RH) | Headlight | 144 |
| 20A | EFI | Electronically Controlled Transmission and A/T Indicator | 102 |
| | | Engine Control | 54 |
| 20A | RADIO NO.1 | Radio and Player | 48 |
| 30A | AM2 | Charging | 136 |
| | | Electronically Controlled Transmission and A/T Indicator | 102 |
| | | Engine Control | 54 |
| | | Starting and Ignition | 66 |
| 30A | CDS | Radiator Fan and Condenser Fan | 66 |
| 30A | RDI | Radiator Fan and Condenser Fan | 138 |

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

## J POWER SOURCE (Current Flow Chart)

| Fuse | | System | Page |
|---|---|---|---|
| 40A | MAIN | Headlight | 124 |
| | | Light Auto Turn Off | 117 |
| | | Starting and Ignition | 72 |

### Engine Room R/B No.1 (See Page 26)

| Fuse | | System | Page |
|---|---|---|---|
| 10A | A/C | Air Conditioning | 148 |

### Engine Room R/B No.3 (See Page 26)

| Fuse | | System | Page |
|---|---|---|---|
| 60A | FL ABS | ABS | 112 |

### Fusible Link Block (F8 on See Page 27)

| Fuse | | System | Page |
|---|---|---|---|
| 50A | HTR | Air Conditioning | 148 |
| 100A | ALT | Charging | 52 |
| | | Illumination | 80 |
| | | Light Auto Turn Off | 68 |
| | | Radiator Fan and Condenser Fan | 144 |
| | | Taillight | 84 |

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

## K CONNECTOR LIST

**A1**
GRAY




**A2**
GRAY




**A3**
BLACK




**A4**
GRAY




**A5**
BLACK




**A6**
GRAY




**A7**
GRAY




**A8**
DARK GRAY




**A9**
YELLOW




**A10**
YELLOW



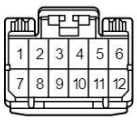

**A11**



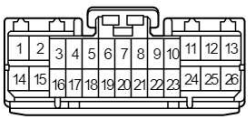

**A12**



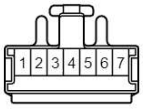

**A13**




**A14**




**A15**




**A16**
YELLOW




**A17**
YELLOW




**A18**
BLACK




**A19**




**A20**



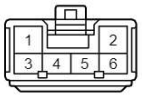

**B1**
GRAY



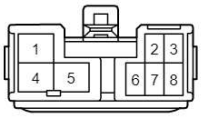

**B2**




**B3**




**B4**




**B5**




**C1**
DARK GRAY



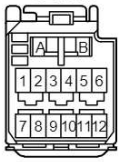

**C2**
DARK GRAY



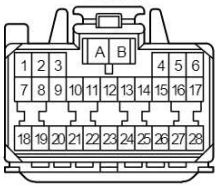

**C3**
BLACK



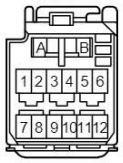

**C4**
YELLOW




**C5**
YELLOW



**C6**
YELLOW



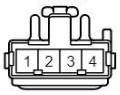

**C7**



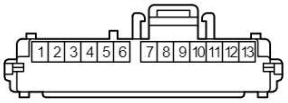

**C8**



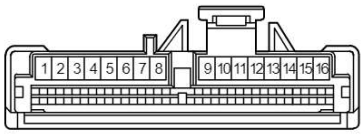

**C9**
BLACK



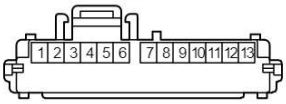

**C10**
BLUE



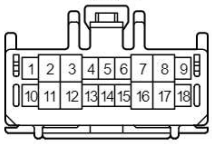

**C11**




**C12**
BROWN



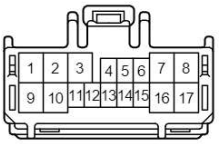

**C13**
BLACK



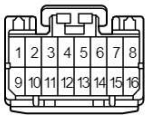

**C14**
BLACK




**C15**



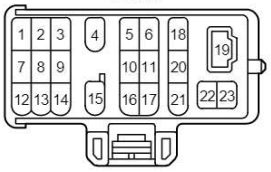

**C16**



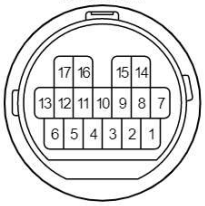

**C17**



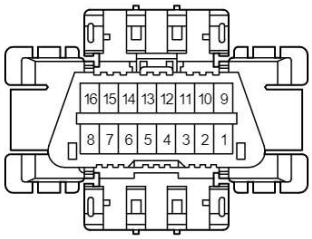

**D1**
BLACK




**D2**
DARK GRAY




**D3**




**D4**
BLACK




**D5**
BLACK




**D6**
ORANGE




**D7**



## K CONNECTOR LIST

**D8**



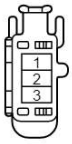

**D9**



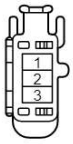

**D10**




**D11**




**D12**




**D13**




**D14**
BLACK




**D15**
BLACK




**D16**
BLACK




**D17**
BLACK




**E1**
BLACK



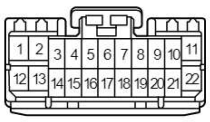

**E2**
BLACK



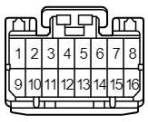

**E3**
GREEN



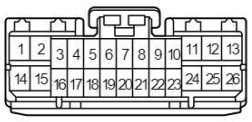

**E4**




**E5**




**E6**




**E7**
DARK GRAY




**F1**
GRAY




**F2**
GRAY




**F3**
GRAY




**F4**
BLACK




**F5**
BLACK




**F6**
BLUE



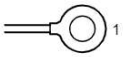

**F7**
GRAY



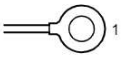

**F8**
GREEN



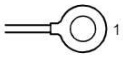

**F9**



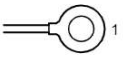

**F10**




**F11**




**F12**




**F13**

(See Page 27)

**F14**
ORANGE



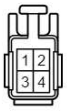
**F15**
BLUE



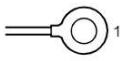

**F16**
BLUE




**F17**




**G1**




**G2**
BLACK




**G3**
BLACK




**H1**
BLACK




**H2**
BLACK



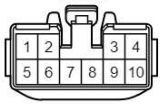

**H3**
BLACK




**H4**
BLACK




**H5**
BLACK




**H6**
DARK GRAY




**H7**




**H8**




**I1**
GRAY




**I2**
GRAY




**I3**
BLACK




**I4**
BROWN




**I5**
GRAY




**I6**
BROWN




**I7**
GRAY



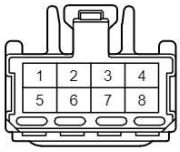

**I8**
BLACK




**I9**



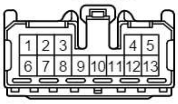

**I10**




**I11**




**I12**
ORANGE



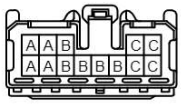

**I13**



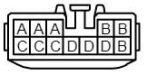

**J1**
BLACK



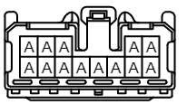

**J2**



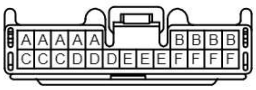

**J3**
BLACK




**J4**
ORANGE




**J5**




**J6**
GRAY



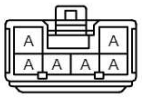

**J7**
GRAY



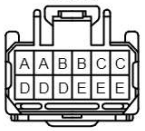

**J8**
BLACK




**J9**




**J10**
BLACK

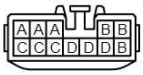



**J11**
BLACK



## K CONNECTOR LIST

**J12**
BLACK




**J13**
BLUE




**J14**
BLUE



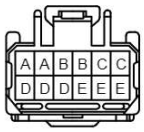

**J15**
BLACK



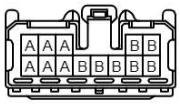

**J16**
BLACK



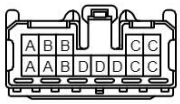

**J17**
BLACK




**J18**
GRAY



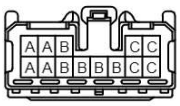

**J19**
BLUE




**J20**



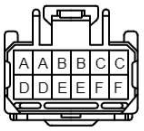

**J21**



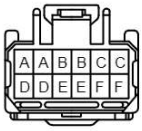

**J22**



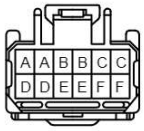

**J23**



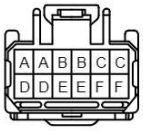

**J24**



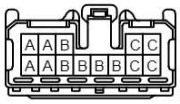

**J25**




**J26**




**J27**



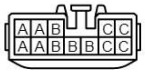

**J28**
GRAY



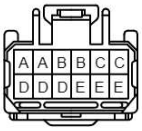

**J29**
GRAY




**J30**
GRAY




**J31**
BLACK



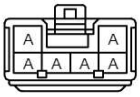

**J32**
BLACK




**J33**

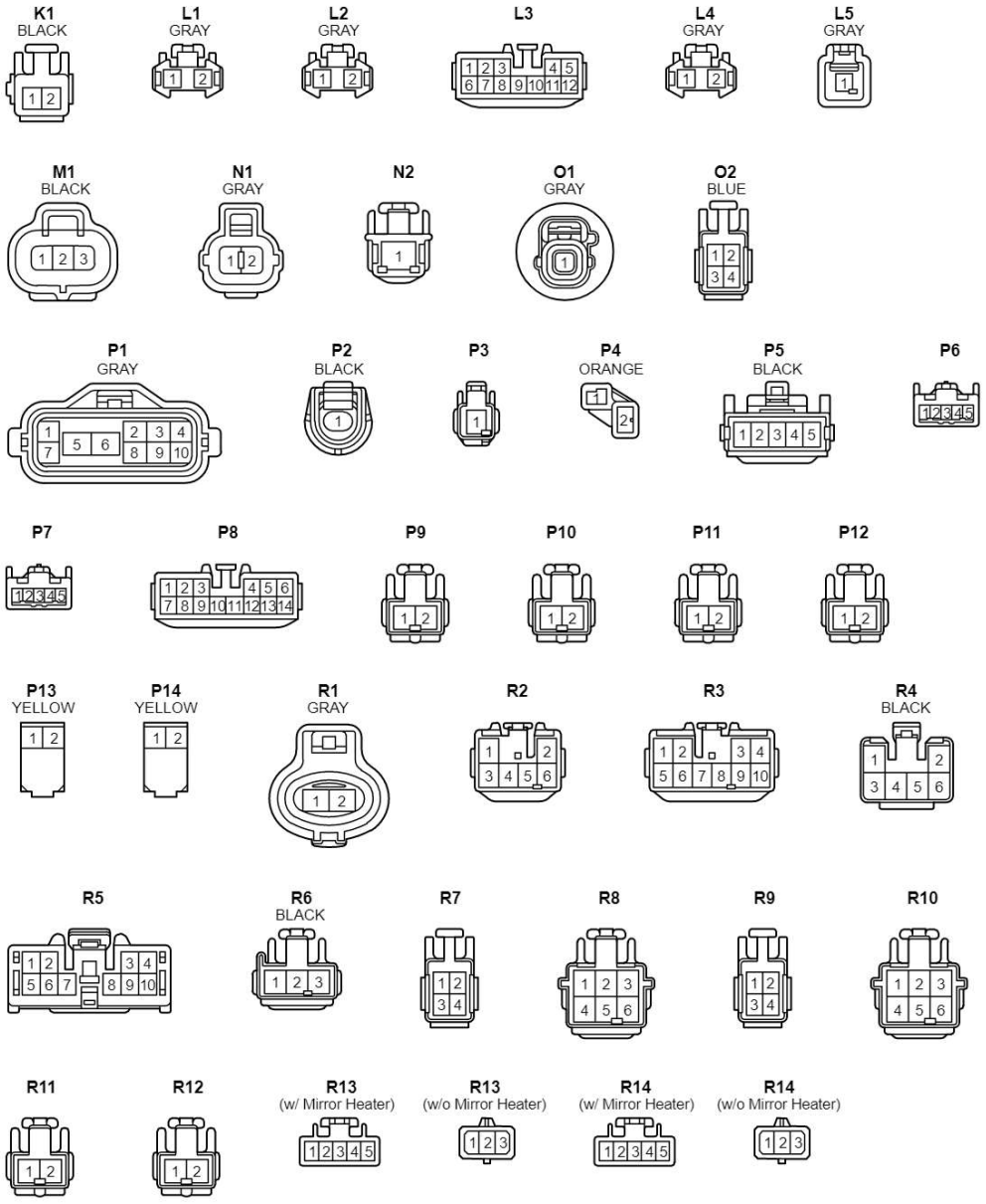



**J34**

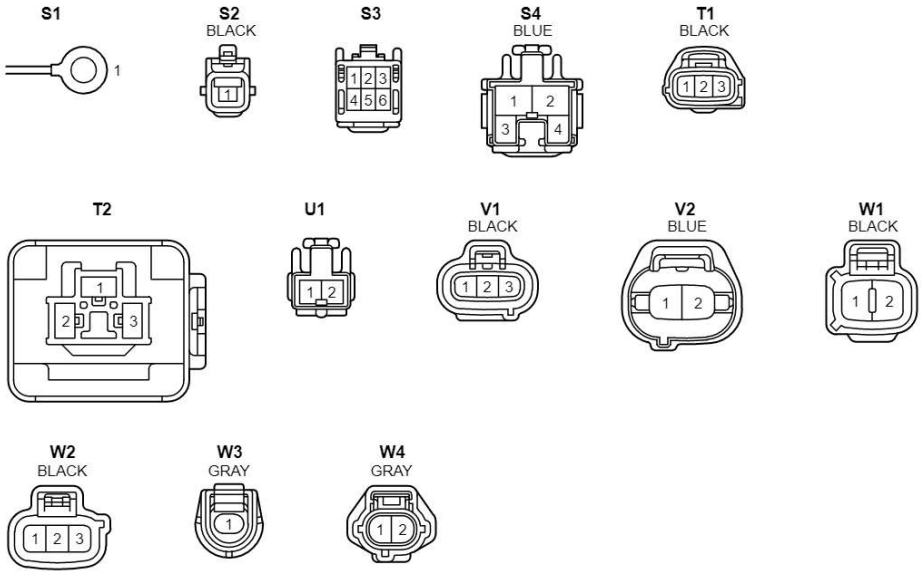



**J35**




K1
BLACK
L1
GRAY
L2
GRAY
L3
L4
GRAY
L5
GRAY
M1
BLACK
N1
GRAY
N2
O1
GRAY
O2
BLUE
P1
GRAY
P2
BLACK
P3
P4
ORANGE
P5
BLACK
P6
P7
P8
P9
P10
P11
P12
P13
YELLOW
P14
YELLOW
R1
GRAY
R2
R3
R4
BLACK
R5
R6
BLACK
R7
R8
R9
R10
R11
R12
R13
(w/ Mirror Heater)
R13
(w/o Mirror Heater)
R14
(w/ Mirror Heater)
R14
(w/o Mirror Heater)

## K CONNECTOR LIST



## L PART NUMBER OF CONNECTORS

| Code | Part Name | Part Number |
|---|---|---|
| A 1 | A/C Condenser Fan Motor | 90980–10928 |
| A 2 | A/C Magnetic Clutch and Lock Sensor | 90980–10942 |
| A 3 | A/C Triple Pressure SW (A/C Dual and Single Pressure SW) | 90980–10943 |
| A 4 | ABS Actuator | 90980–11413 |
| A 5 | ABS Actuator | 90980–10891 |
| A 6 | ABS Speed Sensor Front LH | 90980–11075 |
| A 7 | ABS Speed Sensor Front RH | |
| A 8 | Air Fuel Ratio Sensor | 90980–11178 |
| A 9 | Airbag Sensor Front LH | 90980–11856 |
| A10 | Airbag Sensor Front RH | |
| A11 | A/C Evaporator Temp. Sensor | 90980–10825 |
| A12 | A/C SW | 90980–10631 |
| A13 | ABS ECU | 90980–11424 |
| A14 | ABS ECU | 90980–11390 |
| A15 | Air Vent Mode Control Servo Motor | 90980–11165 |
| A16 | Airbag Squib (Front Passenger Airbag Assembly) | 90980–11884 |
| A17 | Airbag Squib (Steering Wheel Pad) | 90980–10850 |
| A18 | Ashtray Illumination | 81945–33010 |
| A19 | ABS Speed Sensor Rear LH | 90980–11060 |
| A20 | ABS Speed Sensor Rear RH | |
| B 1 | Brake Fluid Level Warning SW | 90980–11207 |
| B 2 | Blower Motor | 90980–10903 |
| B 3 | Blower Resistor | 90980–10976 |
| B 4 | Blower SW | 90980–10877 |
| B 5 | Buckle SW LH | 90980–10825 |
| C 1 | Camshaft Position Sensor | 90980–10947 |
| C 2 | Crankshaft Position Sensor | |
| C 3 | Cruise Control Actuator | 90980–11150 |
| C 4 | Center Airbag Sensor Assembly | 90980–11869 |
| C 5 | Center Airbag Sensor Assembly | 90980–11872 |
| C 6 | Center Airbag Sensor Assembly | 90980–11867 |
| C 7 | Cigarette Lighter | 90980–10760 |
| C 8 | Cigarette Lighter Illumination | 90980–11148 |
| C 9 | Clock | 90980–11013 |
| C10 | Combination Meter | 90980–11114 |
| C11 | Combination Meter | 90080–98046 |
| C12 | Combination Meter | 90980–11115 |
| C13 | Combination SW | 90980–11594 |
| C14 | Combination SW | 90980–11616 |
| C15 | Combination SW | 90980–11672 |
| C16 | Cruise Control ECU | 90980–11391 |
| C17 | Condenser | 90980–10860 |
| D 1 | Data Link Connector 1 | 90980–11323 |
| D 2 | Data Link Connector 2 | 90980–11417 |
| D 3 | Data Link Connector 3 | 90980–11665 |

| Code | Part Name | Part Number |
|---|---|---|
| D 4 | Diode (Courtesy) | 90980–10962 |
| D 5 | Diode (Dome) | |
| D 6 | Diode (Idle–Up) | 90980–11071 |
| D 7 | Door Courtesy SW Front LH | 90980–10871 |
| D 8 | Door Courtesy SW Front RH | |
| D 9 | Door Courtesy SW Rear LH | |
| D10 | Door Courtesy SW Rear RH | |
| D11 | Door Key Lock and Unlock SW Front LH | 90980–11490 |
| D12 | Door Key Lock and Unlock SW Front RH | |
| D13 | Door Lock Control SW RH | 90980–11326 |
| D14 | Door Lock Motor and Door Unlock Detection SW Front LH | 90980–11150 |
| D15 | Door Lock Motor and Door Unlock Detection SW Front RH | |
| D16 | Door Lock Motor and Door Unlock Detection SW Rear LH | |
| D17 | Door Lock Motor and Door Unlock Detection SW Rear RH | |
| E 1 | Electronically Controlled Transmission Solenoid | 90980–11156 |
| E 2 | Electronically Controlled Transmission Solenoid | 90980–11143 |
| E 3 | Engine Coolant Temp. Sensor | 90980–10737 |
| E 4 | Engine Control Module | 90980–11392 |
| E 5 | Engine Control Module | 90980–11391 |
| E 6 | Engine Control Module | 90980–11390 |
| E 7 | Engine Control Module | 90980–11408 |
| F 1 | Front Turn Signal Light and Parking Light LH | 90980–11020 |
| F 2 | Front Turn Signal Light and Parking Light RH | |
| F 3 | Front Wiper Motor | 90980–11599 |
| F 4 | Fuel Pressure Sensor (Delivery Pipe) | 90980–10845 |
| F 5 | Fuel Pressure Sensor (Fuel Pipe) | |
| F 6 | Fuel Shutoff Valve (Delivery Pipe) | 90980–11156 |
| F 7 | Fuel Shutoff Valve (Fuel Pressure Regulator) | 90980–11038 |
| F 8 | Fuel Temp. Sensor (Delivery Pipe) | 90980–10737 |
| F 9 | Fusible Link Block | 90980–09566 |
| F10 | Fusible Link Block | 90980–09567 |
| F11 | Fusible Link Block | 90980–09566 |
| F12 | Fusible Link Block | 99141–13006 |
| F13 | Fusible Link Block | 82620–06010 |
| F14 | Fusible Link Block | 90980–11579 |
| F15 | Front Door Speaker LH | 90980–10825 |
| F16 | Front Door Speaker RH | |
| F17 | Fuel Temp. Sensor and Fuel Shutoff Valve (Fuel Tank) | 90980–10795 |
| G 1 | Generator | 90980–09213 |

Note: 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.).

| Code | Part Name | Part Number |
|---|---|---|
| G 2 | Generator | 90980–11349 |
| G 3 | Glove Box Light and SW | 90980–11098 |
| H 1 | Headlight LH | 90980–11314 |
| H 2 | Headlight RH | |
| H 3 | Horn (High) | 90980–10619 |
| H 4 | Horn (Low) | |
| H 5 | Hazard SW | 90980–10801 |
| H 6 | Heated Oxygen Sensor | 90980–11028 |
| H 7 | Heater Control SW | 90980–10799 |
| H 8 | High Mounted Stop Light | 90980–11148 |
| I 1 | Idle Air Control Valve | 90980–11145 |
| I 2 | Ignition Coil and Igniter No.1 | 90980–11150 |
| I 3 | Ignition Coil and Igniter No.2 | |
| I 4 | Injector No.1 | 90980–11153 |
| I 5 | Injector No.2 | |
| I 6 | Injector No.3 | |
| I 7 | Injector No.4 | |
| I 8 | Intake Air Temp. Sensor | 90980–11163 |
| I 9 | Ignition Key Cylinder Light | 90980–10906 |
| I10 | Ignition SW | 90980–11615 |
| I11 | Integration Relay | 90980–11107 |
| I12 | Integration Relay | 90980–11542 |
| I13 | Interior Light | 90980–10121 |
| J 1 | Junction Connector | 90980–10803 |
| J 2 | Junction Connector | 90980–11542 |
| J 3 | Junction Connector | 90980–10803 |
| J 4 | Junction Connector | 90980–11542 |
| J 5 | Junction Connector | 90980–11502 |
| J 6 | Junction Connector | 90980–11661 |
| J 7 | Junction Connector | |
| J 8 | Junction Connector | 90980–11398 |
| J 9 | Junction Connector | 90980–10976 |
| J10 | Junction Connector | 90980–11661 |
| J11 | Junction Connector | |
| J12 | Junction Connector | 90980–10803 |
| J13 | Junction Connector | 90980–11661 |
| J14 | Junction Connector | |
| J15 | Junction Connector | 90980–10803 |
| J16 | Junction Connector | 90980–11661 |
| J17 | Junction Connector | |
| J18 | Junction Connector | 90980–11542 |
| J19 | Junction Connector | |
| J20 | Junction Connector | 90980–11539 |
| J21 | Junction Connector | 90980–11529 |
| J22 | Junction Connector | 90980–11502 |

| Code | Part Name | Part Number |
|---|---|---|
| J23 | Junction Connector | 90980–11661 |
| J24 | Junction Connector | |
| J25 | Junction Connector | |
| J26 | Junction Connector | |
| J27 | Junction Connector | 90980–11542 |
| J28 | Junction Connector | 90980–11661 |
| J29 | Junction Connector | |
| J30 | Junction Connector | 90980–10803 |
| J31 | Junction Connector | 90980–11661 |
| J32 | Junction Connector | |
| J33 | Junction Connector | 90980–10803 |
| J34 | Junction Connector | 90980–10976 |
| J35 | Junction Connector | 90980–10803 |
| K 1 | Key Interlock Solenoid | 90980–10825 |
| L 1 | License Plate Light LH | 90980–11148 |
| L 2 | License Plate Light RH | |
| L 3 | Light Failure Sensor | 90980–10803 |
| L 4 | Luggage Compartment Light | 90980–11148 |
| L 5 | Luggage Compartment Light SW | 90980–11097 |
| M 1 | Manifold Absolute Pressure Sensor | 90980–10845 |
| N 1 | Noise Filter (Ignition) | 90980–10843 |
| N 2 | Noise Filter (Rear Window Defogger) | 90980–11259 |
| O 1 | Oil Pressure SW | 90980–11363 |
| O 2 | O/D Main SW and A/T Shift Lever Illumination | 90980–10795 |
| P 1 | Park/Neutral Position SW,A/T Indicator Light SW and Back–Up Light SW | 90980–11332 |
| P 2 | Power Steering Oil Pressure SW | 90980–11428 |
| P 3 | Parking Brake SW | 90980–10871 |
| P 4 | Power Outlet | 90980–10760 |
| P 5 | Power Window Control SW Front RH | 90980–10789 |
| P 6 | Power Window Control SW Rear LH | 90980–10631 |
| P 7 | Power Window Control SW Rear RH | |
| P 8 | Power Window Master SW and Door Lock Control SW LH | 90980–10807 |
| P 9 | Power Window Motor Front LH | 90980–10860 |
| P10 | Power Window Motor Front RH | |
| P11 | Power Window Motor Rear LH | |
| P12 | Power Window Motor Rear RH | |
| P13 | Pretensioner LH | 90980–11862 |
| P14 | Pretensioner RH | |
| R 1 | Radiator Fan Motor | 90980–10928 |
| R 2 | Radio and Player | 90980–10996 |
| R 3 | Radio and Player | 90980–10997 |
| R 4 | Rear Window Defogger SW | 90980–11280 |
| R 5 | Remote Control Mirror SW | 90980–11450 |

## L PART NUMBER OF CONNECTORS

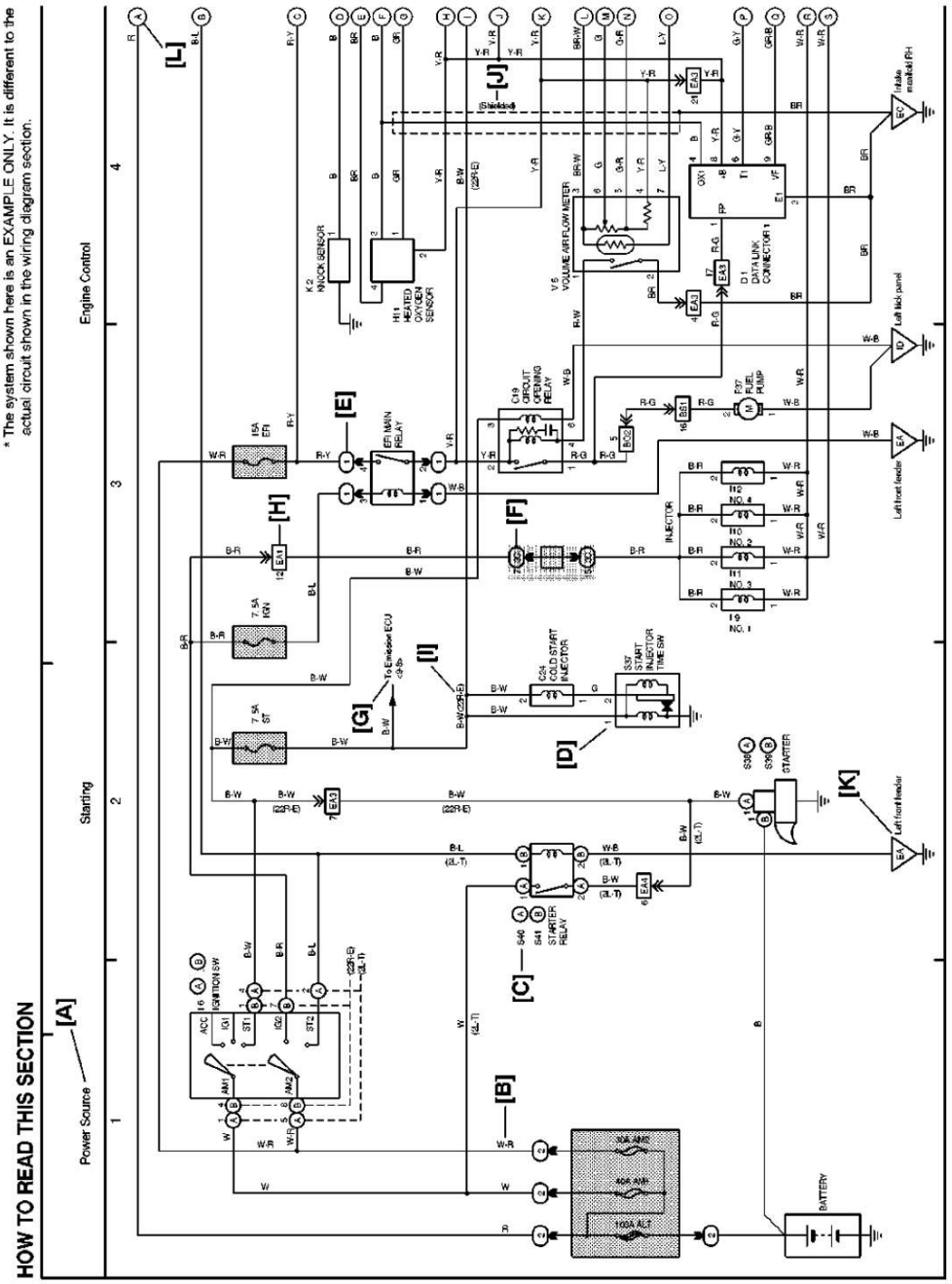
| Code | Part Name | Part Number |
|---|---|---|
| R 6 | Rheostat | 90980–10908 |
| R 7 | Rear Combination Light LH | 90980–10795 |
| R 8 | Rear Combination Light LH | 90980–11001 |
| R 9 | Rear Combination Light RH | 90980–10795 |
| R10 | Rear Combination Light RH | 90980–11001 |
| R11 | Rear Speaker LH | 90980–10860 |
| R12 | Rear Speaker RH | |
| R13 | Remote Control Mirror LH (w/ Mirror Heater) | 90980–10558 |
| | Remote Control Mirror LH (w/o Mirror Heater) | 90980–10395 |
| R14 | Remote Control Mirror RH (w/ Mirror Heater) | 90980–10558 |
| | Remote Control Mirror RH (w/o Mirror Heater) | 90980–10395 |
| S 1 | Starter | 90980–09689 |
| S 2 | Starter | 90980–11400 |
| S 3 | Shift Lock ECU | 90980–11488 |
| S 4 | Stop Light SW | 90980–11118 |
| T 1 | Throttle Position Sensor | 90980–11261 |
| T 2 | Turn Signal Flasher | 82751–50010 |
| U 1 | Unlock Warning SW | 90980–10860 |
| V 1 | Vehicle Speed Sensor (Combination Meter) | 90980–11143 |
| V 2 | VSV (EGR) | 90980–11156 |
| W 1 | Washer Level Warning SW | 90980–11068 |
| W 2 | Washer Motor | 90980–10981 |
| W 3 | Water Temp. Sender | 90980–11428 |
| W 4 | Water Temp. SW No.1 | 90980–11235 |

| Code | Part Name | Part Number |
|---|---|---|

Note: 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.).

| Code | Part Name | Part Number | Code | Part Name | Part Number |
|---|---|---|---|---|---|
| | | | | | |

## M OVERALL ELECTRICAL WIRING DIAGRAM



**[A]** : System Title

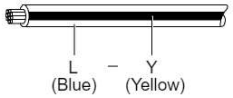
**[B]** : Indicates the wiring color.

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.

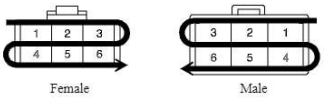
Example: L – Y




**[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



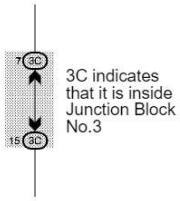

The numbering system for the overall wiring diagram is the same as above

**[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

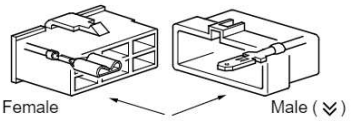
**[F]** : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

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.

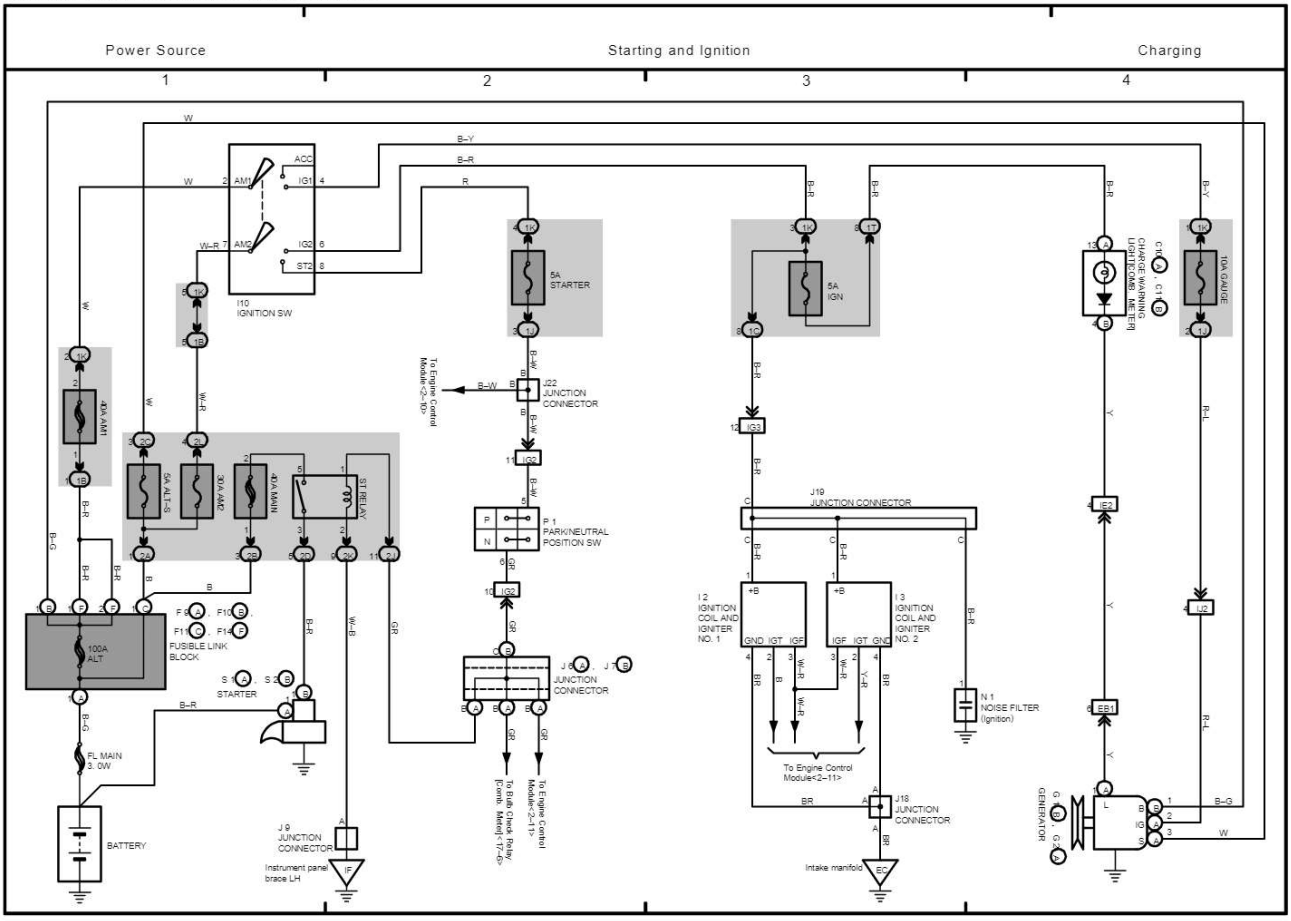
**[L]** : The same code occuring on the next page indicates that the wire harness is continuous.

M

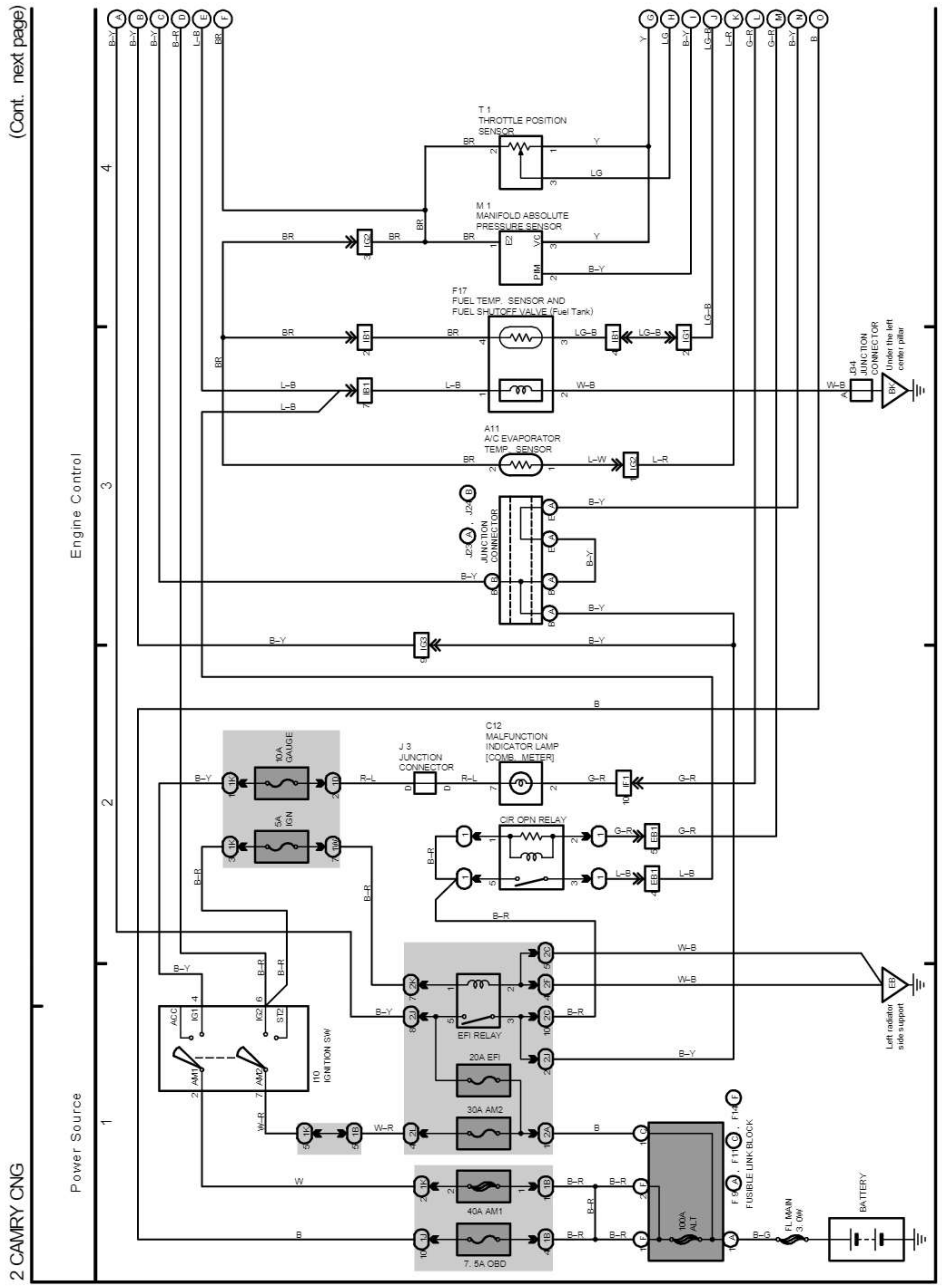
# SYSTEM INDEX


| SYSTEMS | LOCATION | SYSTEMS | LOCATION |
|---|---|---|---|
| ABS | 15–2 | Power Outlet | 12–3 |
| Air Conditioning | 19–2 | Power Source | 1~19–1 |
| Back–Up Light | 5–4 | Power Window | 10–2 |
| Charging | 1–4 | Radiator Fan and Condenser Fan | 18–3 |
| Cigarette Lighter and Clock | 12–4 | Radio and Player | 11–7 |
| Combination Meter | 17–2 | Rear Window Defogger and Mirror Heater | 18–2 |
| Cruse Control | 13–2 | Remote Control Mirror | 9–3 |
| Door Lock Control | 11–2 | Shift Lock | 12–2 |
| Electronically Controlled Transmission and A/T Indicator | 3–2 | SRS | 14–2 |
| Engine Control | 2–2 | Starting and Ignition | 1–2 |
| Headlight | 4–2 | Stop Light | 8–4 |
| Horn | 16–4 | Taillight | 8–2 |
| Illumination | 7–2 | Turn Signal and Hazard Warning Light | 5–2 |
| Interior Light | 6–3 | Wiper and Washer | 9–2 |
| Key Reminder and Seat Belt Warning | 16–2 | | |
| Light Auto Turn Off | 6–2 | | |

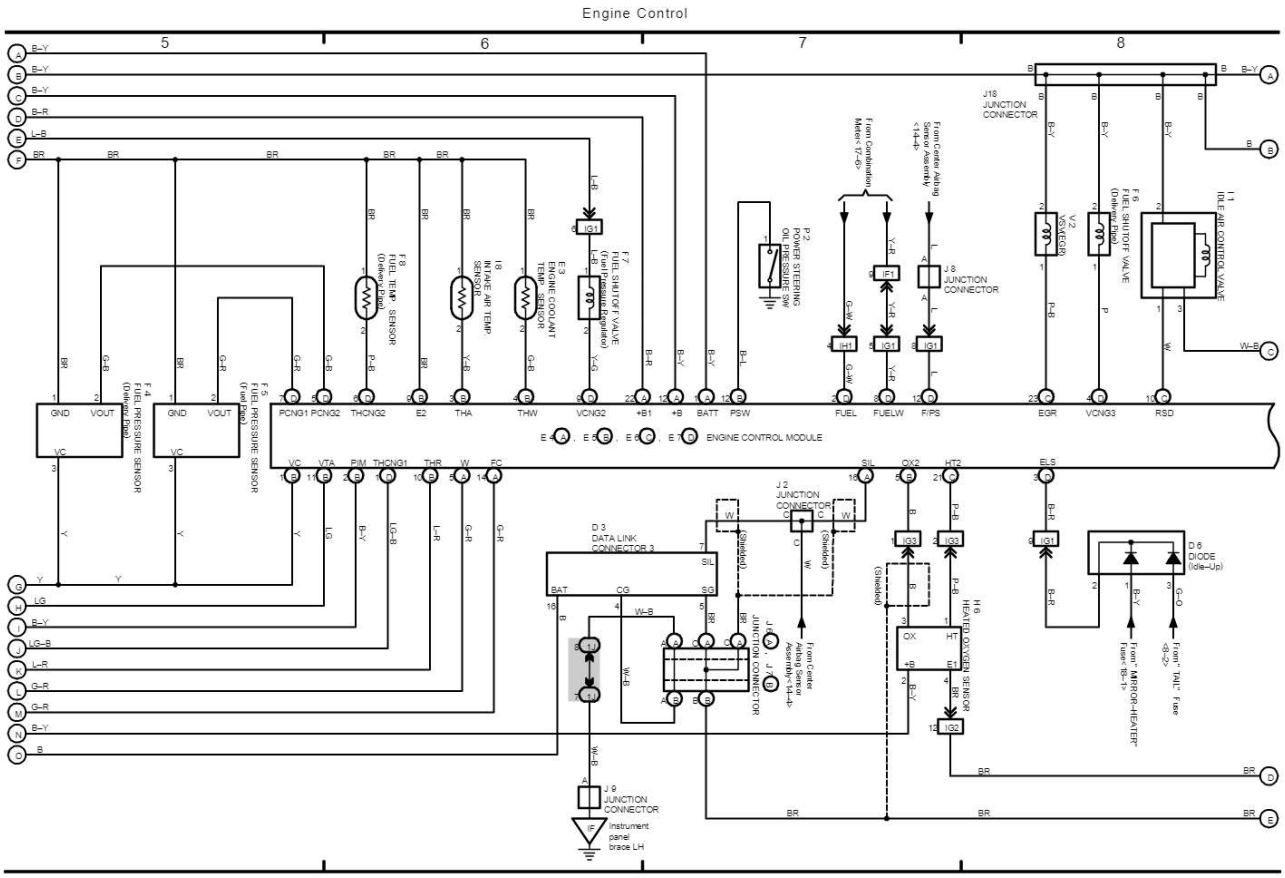
1 CAMRY CNG ELECTRICAL WIRING DIAGRAM



# M OVERALL ELECTRICAL WIRING DIAGRAM

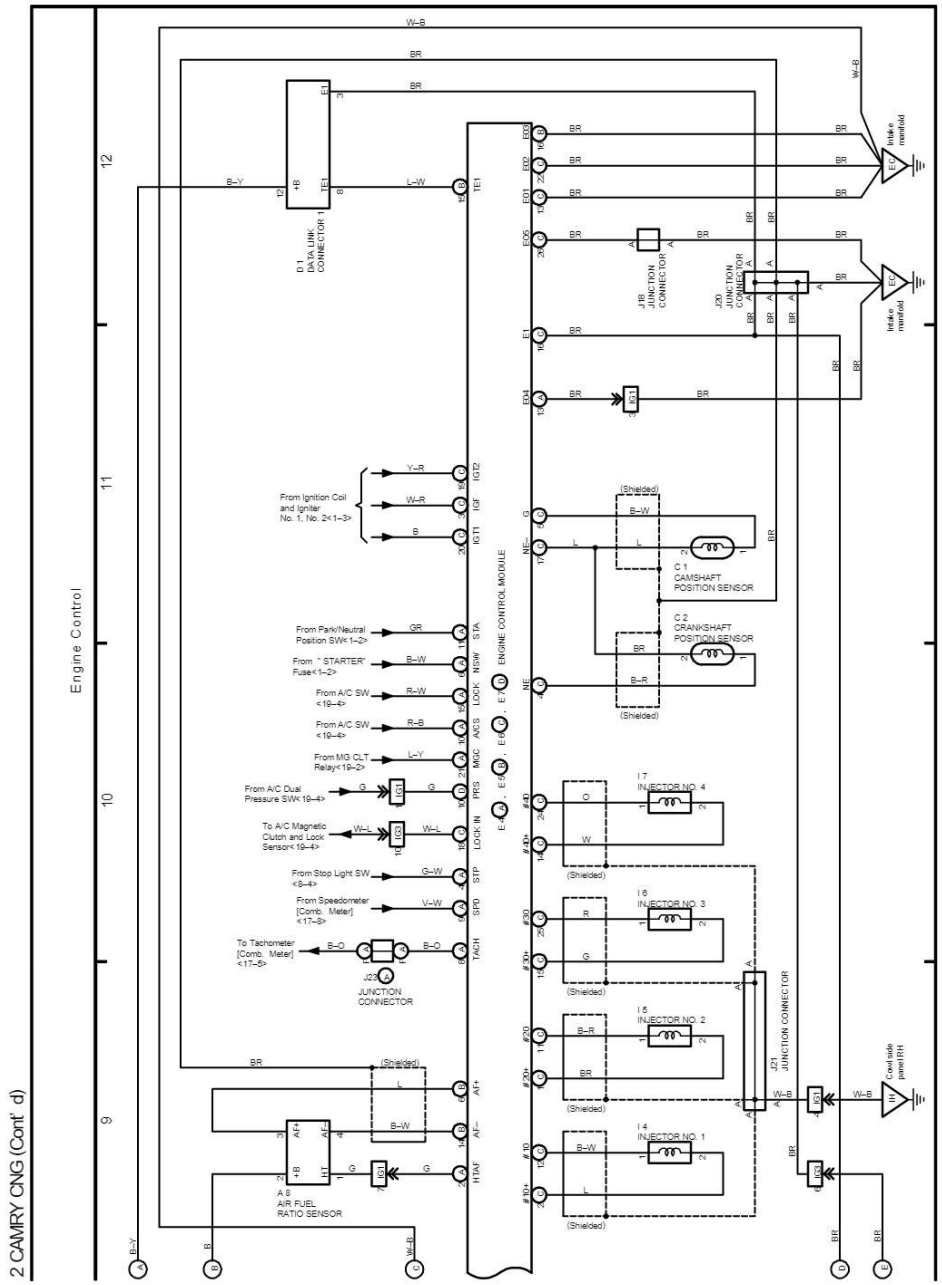


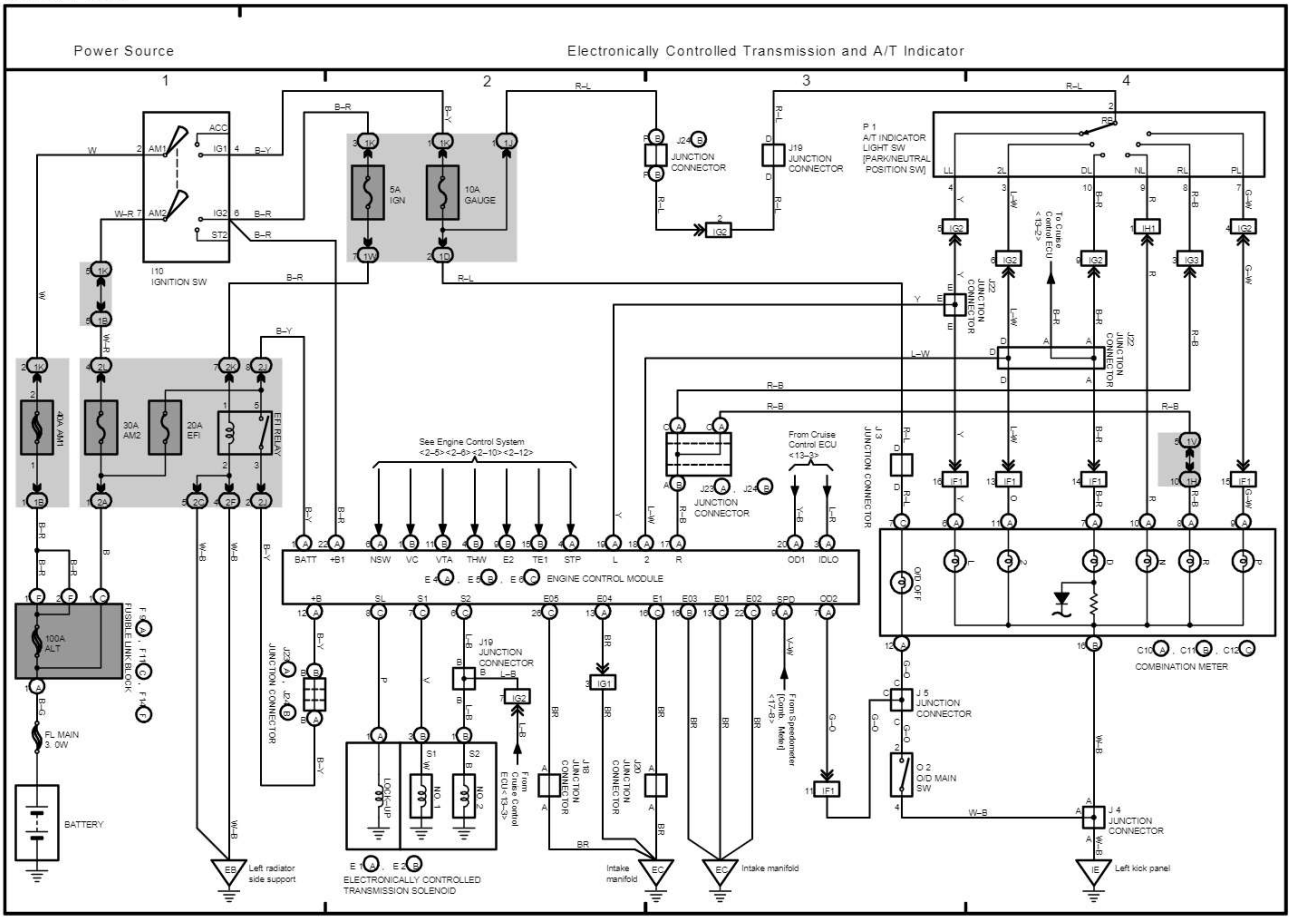
(Cont. next page)




M

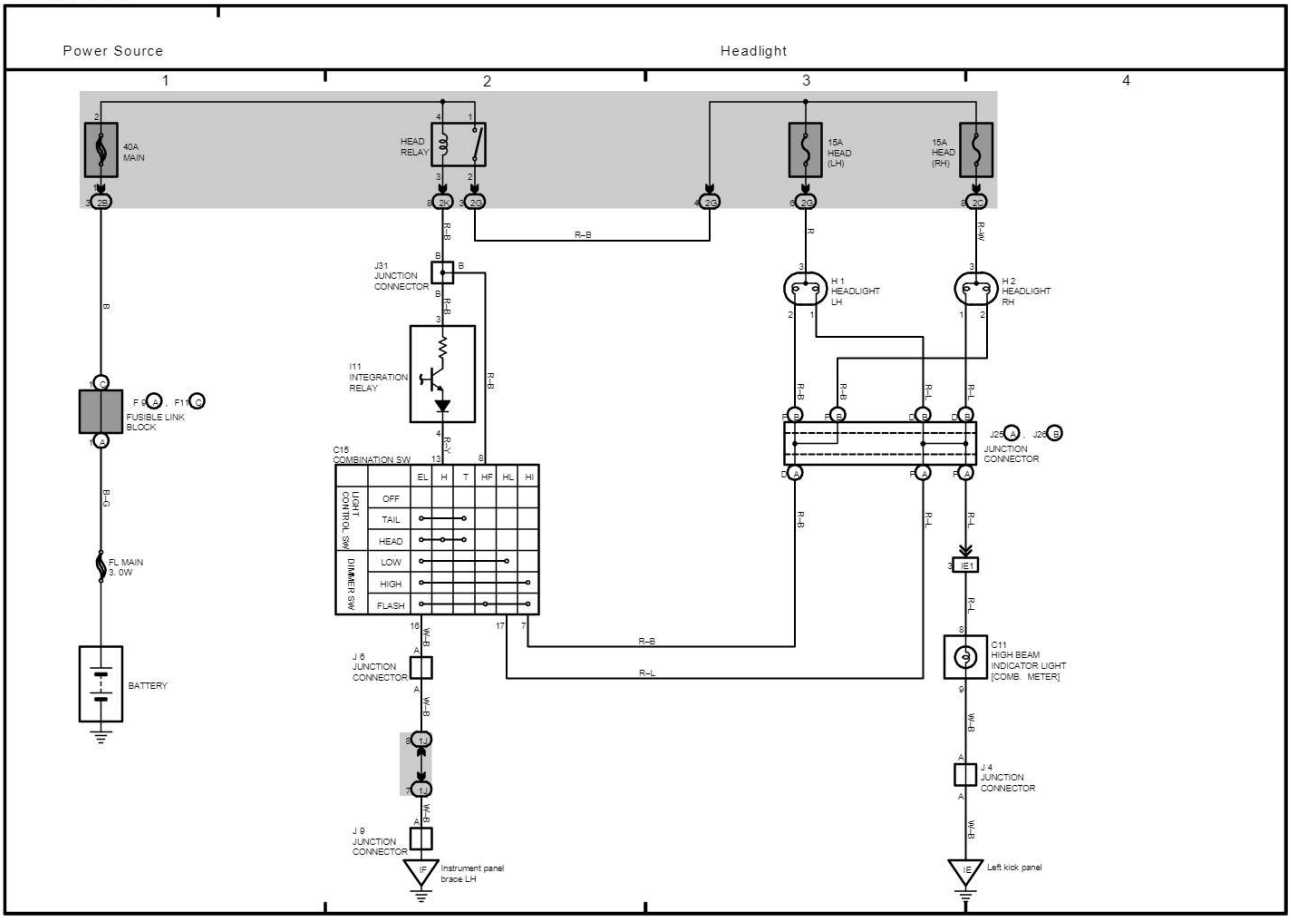
# M OVERALL ELECTRICAL WIRING DIAGRAM

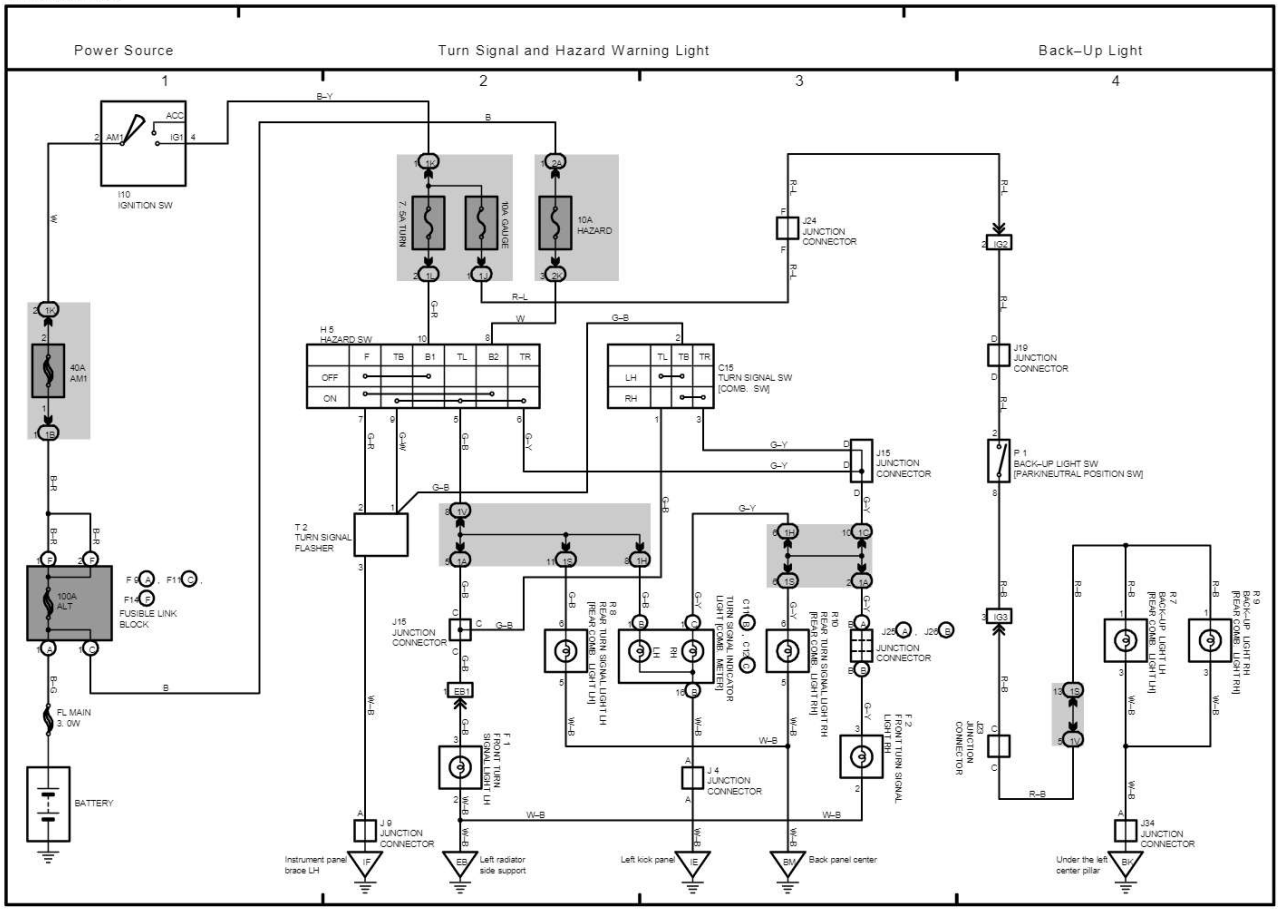



Power Source
Electronically Controlled Transmission and A/T Indicator
1
2
3
4
I10
IGNITION SW
5A
IGN
10A
GAUGE
P 1
A/T INDICATOR
LIGHT SW
(PARK/NEUTRAL
POSITION SW)
J19
JUNCTION
CONNECTOR
JUNCTION
CONNECTOR
J3
JUNCTION CONNECTOR
J22
JUNCTION
CONNECTOR
J23
JUNCTION
CONNECTOR
J24
JUNCTION
CONNECTOR
See Engine Control System
<2-5><2-6><2-10><2-12>
From Cruise
Control ECU
<13-3>
To Cruise
Control ECU
<13-2>
ENGINE CONTROL MODULE
BATT
+B1
NSW
VC
VTA
THW
E2
TE1
STP
L
2
R
OD1
IDLO
OD OFF
COMBINATION METER
100A
ALT
FUSIBLE LINK BLOCK
FL MAIN
3. 0W
BATTERY
30A
AM2
20A
EFI
EFI RELAY
40A
AM1
J 5
JUNCTION
CONNECTOR
O 2
O/D MAIN
SW
J 4
JUNCTION
CONNECTOR
From Speedometer
(Comb. Meter)
<17-9>
From Cruise Control
ECU <13-3>
LOCK-UP
S1
S2
NO. 1
NO. 2
ELECTRONICALLY CONTROLLED
TRANSMISSION SOLENOID
Intake
manifold
Intake manifold
Left radiator
side support
Left kick panel

## M OVERALL ELECTRICAL WIRING DIAGRAM

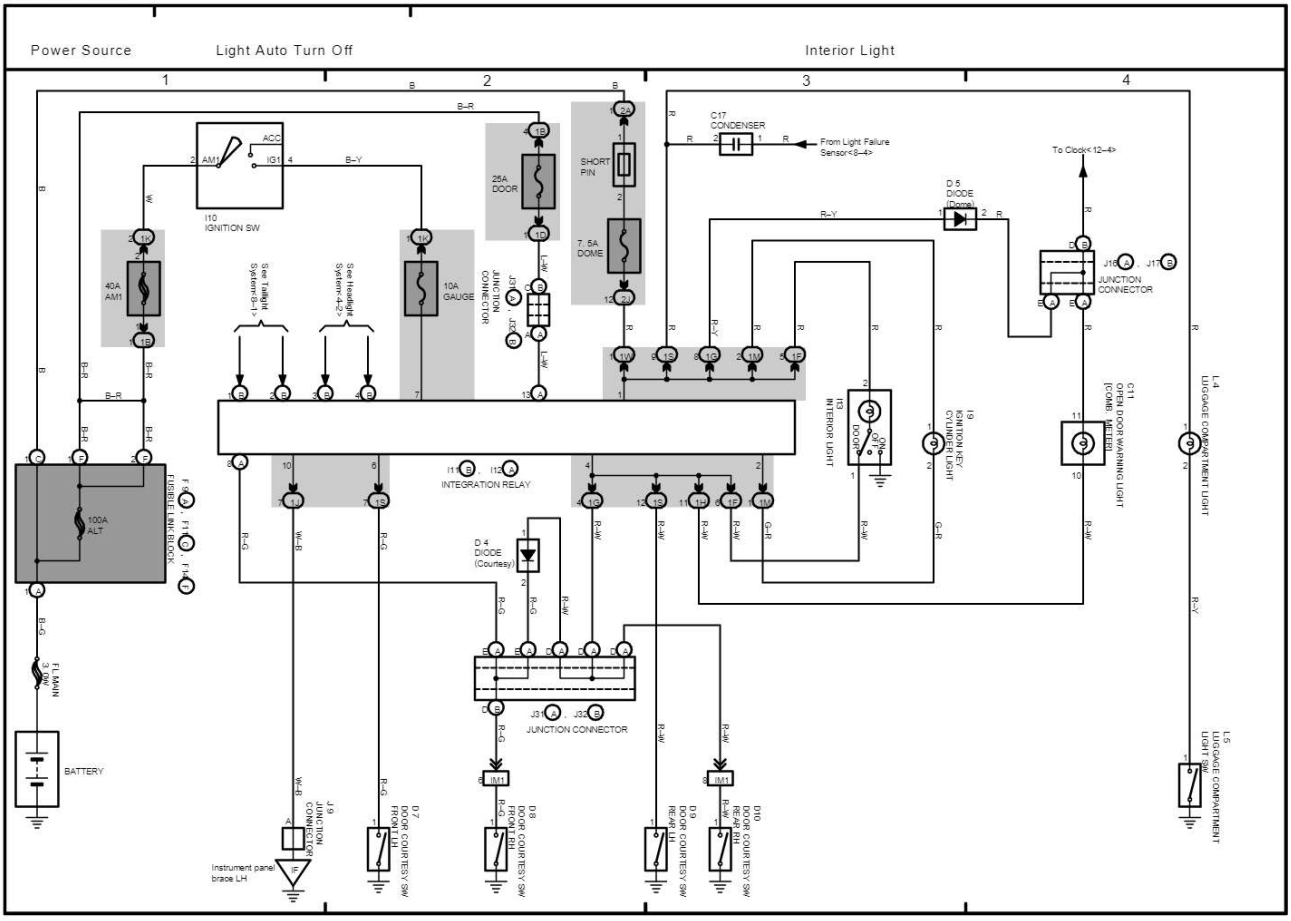
4 CAMRY CNG


Power Source
Headlight
1
2
3
4
40A MAIN
HEAD RELAY
15A HEAD (LH)
15A HEAD (RH)
2B
2A
2C
2D
R–B
R
R–W
J31 JUNCTION CONNECTOR
H1 HEADLIGHT LH
H2 HEADLIGHT RH
I11 INTEGRATION RELAY
R–L
F1 FUSIBLE LINK BLOCK
C15 COMBINATION SW
EL
H
T
HF
HL
HI
LIGHT CONTROL SW
DIMMER SW
OFF
TAIL
HEAD
LOW
HIGH
FLASH
J25 , J26
JUNCTION CONNECTOR
B–G
FL MAIN 3.0W
IE1
BATTERY
W–B
J 6 JUNCTION CONNECTOR
C11 HIGH BEAM INDICATOR LIGHT [COMB. METER]
J 4 JUNCTION CONNECTOR
J 9 JUNCTION CONNECTOR
IF
Instrument panel brace LH
IE
Left kick panel

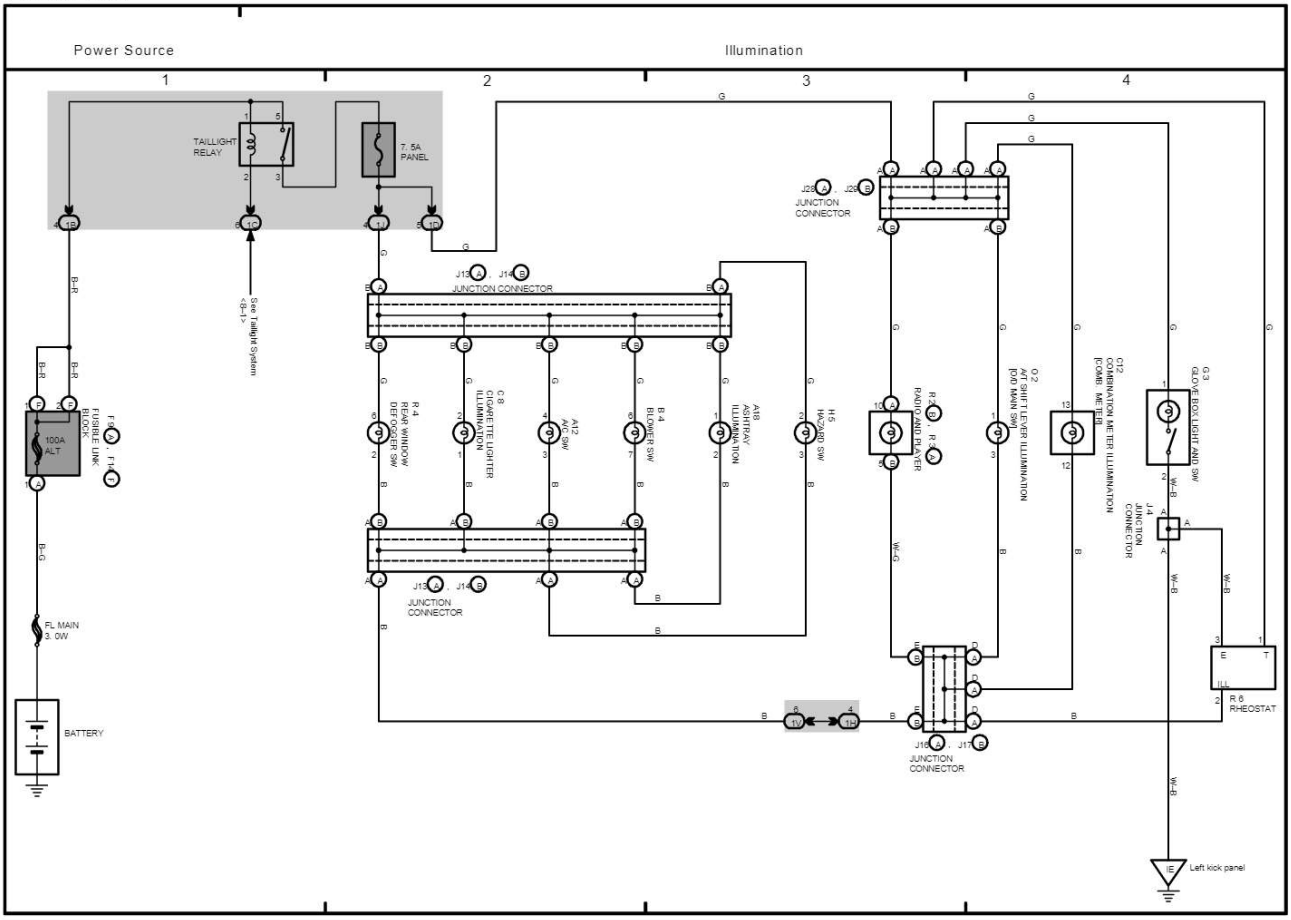

Power Source
Turn Signal and Hazard Warning Light
Back–Up Light
1
2
3
4
I10
IGNITION SW
40A
AM1
100A
ALT
FUSIBLE LINK
BLOCK
FL MAIN
3. 0W
BATTERY
7. 5A TURN
10A GAUGE
10A
HAZARD
H 5
HAZARD SW
C15
TURN SIGNAL SW
[COMB. SW]
T 2
TURN SIGNAL
FLASHER
J24
JUNCTION
CONNECTOR
J19
JUNCTION
CONNECTOR
J15
JUNCTION
CONNECTOR
P 1
BACK–UP LIGHT SW
[PARK/NEUTRAL POSITION SW]
R 8
REAR TURN SIGNAL LIGHT LH
[REAR COMB. LIGHT LH]
R 10
REAR TURN SIGNAL LIGHT RH
[REAR COMB. LIGHT RH]
C16
TURN SIGNAL INDICATOR
LIGHT [COMB. METER]
J25
JUNCTION
CONNECTOR
F 1
FRONT TURN
SIGNAL LIGHT LH
F 2
FRONT TURN SIGNAL
LIGHT RH
J 4
JUNCTION
CONNECTOR
J23
JUNCTION
CONNECTOR
R 7
BACK–UP LIGHT LH
[REAR COMB. LIGHT LH]
R 9
BACK–UP LIGHT RH
[REAR COMB. LIGHT RH]
J34
JUNCTION
CONNECTOR
J9
JUNCTION
CONNECTOR
Instrument panel
brace LH
Left radiator
side support
Left kick panel
Back panel center
Under the left
center pillar

M

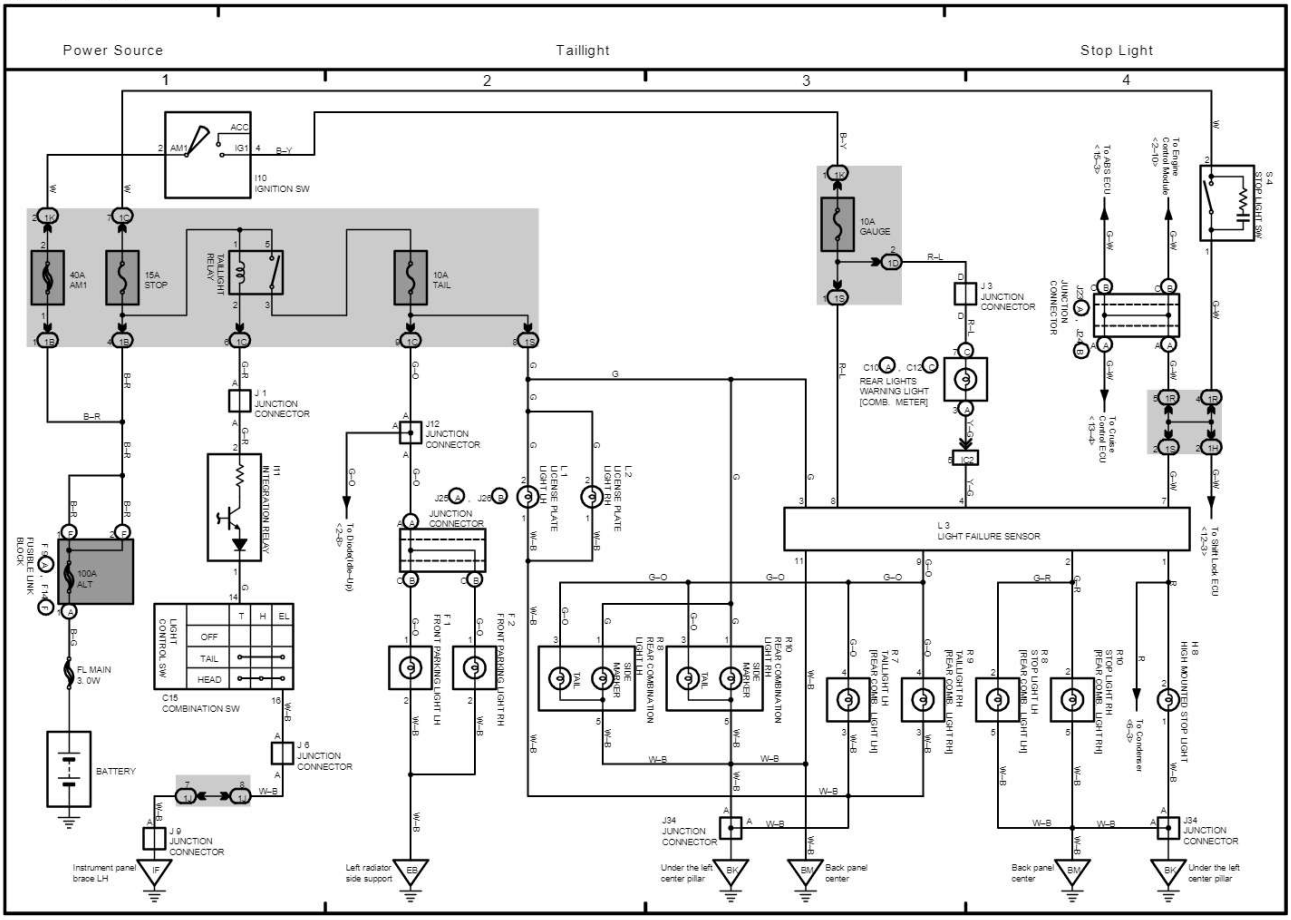
## M OVERALL ELECTRICAL WIRING DIAGRAM

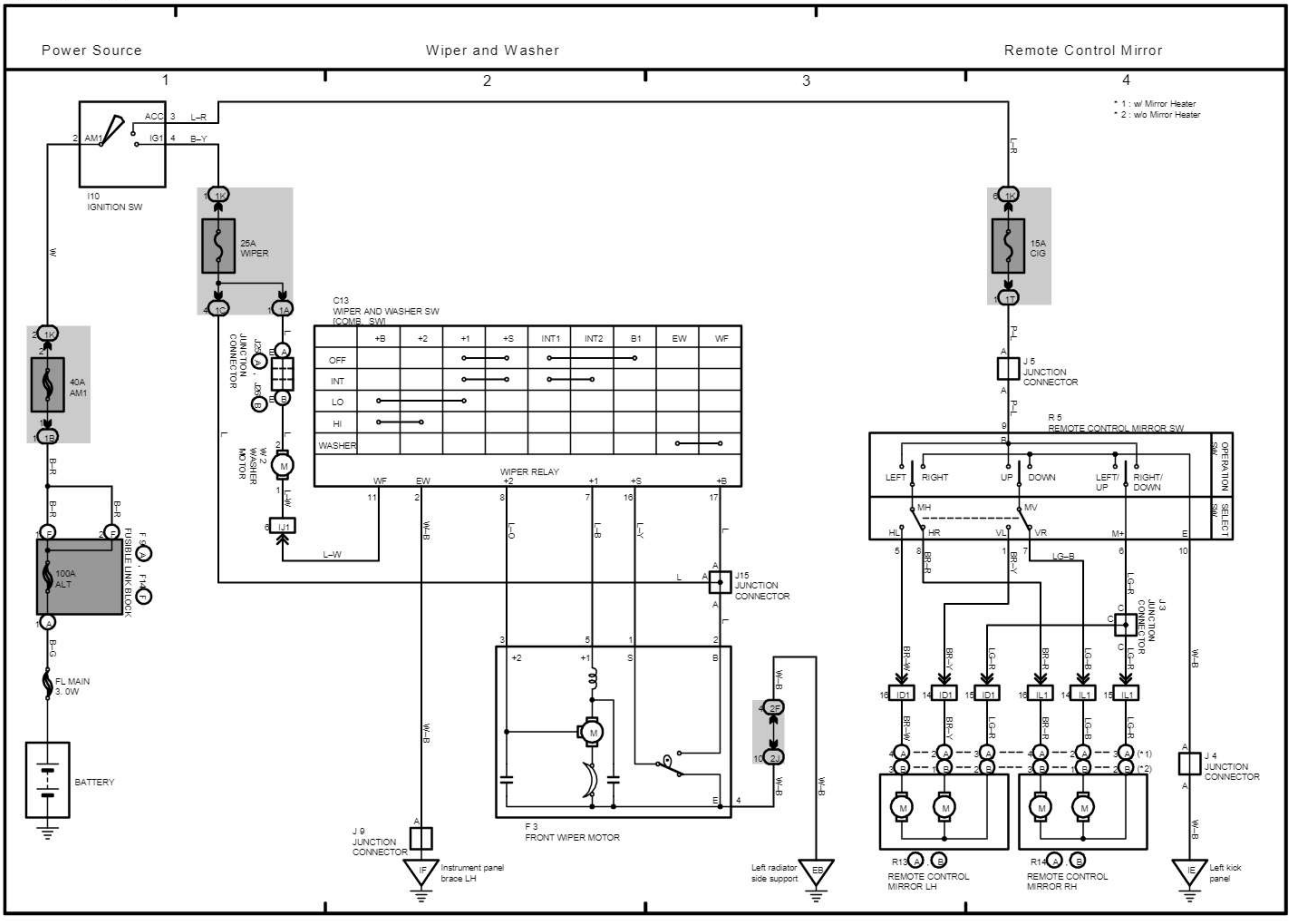

Power Source
Light Auto Turn Off
Interior Light
1
2
3
4
I10
IGNITION SW
ACC
AM1
IG1
B–Y
40A
AM1
10A
GAUGE
25A
DOOR
SHORT
PIN
7. 5A
DOME
C17
CONDENSER
From Light Failure
Sensor<8–4>
To Clock<12–4>
D 5
DIODE
(Diode)
JUNCTION
CONNECTOR
Seat Tailight
System<3×1>
Seat Headlight
System<4×2>
INTEGRATION RELAY
D 4
DIODE
(Courtesy)
INTERIOR LIGHT
IGNITION KEY
CYLINDER LIGHT
OPEN DOOR WARNING LIGHT
[COMB. METER]
LUGGAGE COMPARTMENT LIGHT
100A
ALT
FUSIBLE LINK BLOCK
F1 MAIN
3. 0W
BATTERY
Instrument panel
brace LH
J9
JUNCTION
CONNECTOR
D7
DOOR COURTESY SW
FRONT LH
D8
DOOR COURTESY SW
FRONT RH
D9
DOOR COURTESY SW
REAR LH
D10
DOOR COURTESY SW
REAR RH
LUGGAGE COMPARTMENT
LIGHT SW

7 CAMRY CNG

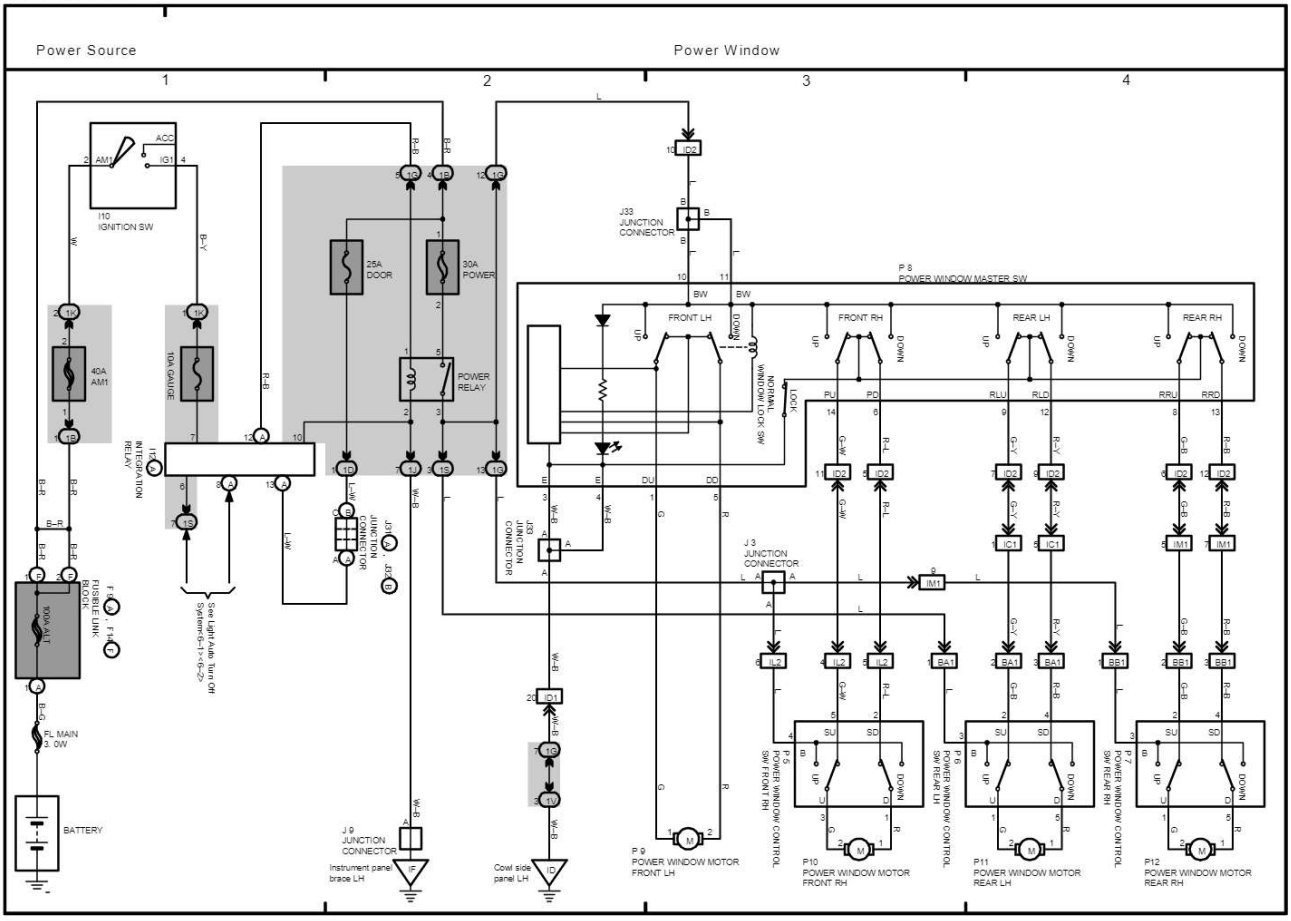

Power Source
Illumination
1
2
3
4
TAIL/LIGHT RELAY
7.5A PANEL
See Taillight System <3B-1>
100A ALT
FUSIBLE LINK BLOCK
FL MAIN 3.0W
BATTERY
JUNCTION CONNECTOR
R-4 REAR WINDOW DEFOGGER SW
C-8 CIGARETTE LIGHTER ILLUMINATION
A-12 A/C SW
B-4 BLOWER SW
A/B ASHTRAY ILLUMINATION
H-5 HAZARD SW
R-2 , R-3 RADIO AND PLAYER
G-2 A/T SHIFT LEVER ILLUMINATION
C-15 COMBINATION METER ILLUMINATION
G-3 GLOVE BOX LIGHT AND SW
J-4 JUNCTION CONNECTOR
R-6 RHEOSTAT
Left kick panel

## M OVERALL ELECTRICAL WIRING DIAGRAM

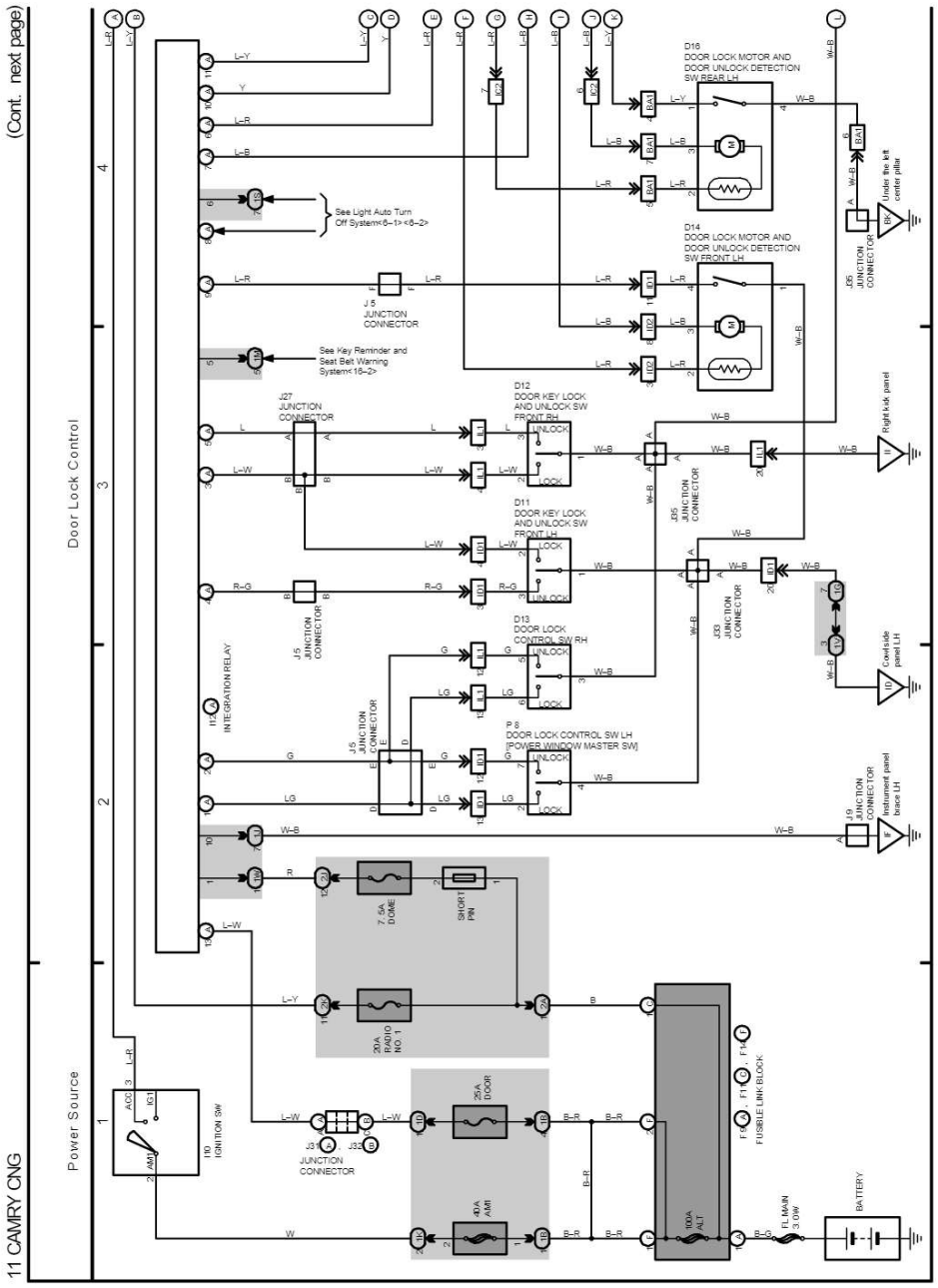

Power Source
Taillight
Stop Light
1
2
3
4
I10 IGNITION SW
ACC
IG1
AM1
B–Y
40A AM1
15A STOP
TAILLIGHT RELAY
10A TAIL
10A GAUGE
J 3 JUNCTION CONNECTOR
REAR LIGHTS WARNING LIGHT [COMB. METER]
S 4 STOP LIGHT SW
To ABS ECU <15–3>
To Engine Control Module <2–10>
To Cruise Control ECU <13–4>
J 1 JUNCTION CONNECTOR
J12 JUNCTION CONNECTOR
I11 INTEGRATION RELAY
100A ALT
FUSIBLE LINK BLOCK
FL MAIN 3. 0W
BATTERY
C15 COMBINATION SW
LIGHT CONTROL SW
OFF
TAIL
HEAD
J 6 JUNCTION CONNECTOR
J 9 JUNCTION CONNECTOR
Instrument panel brace LH
To Diode(No–1)(I) <2–5>
L1 LICENSE PLATE LIGHT LH
L2 LICENSE PLATE LIGHT RH
L 3 LIGHT FAILURE SENSOR
To Shift Lock ECU <12–3>
F1 FRONT PARKING LIGHT LH
F 2 FRONT PARKING LIGHT RH
R6 REAR COMBINATION LIGHT LH
R 5 REAR COMBINATION LIGHT RH
R7 TAILLIGHT LH [REAR COMB. LIGHT LH]
R9 TAILLIGHT RH [REAR COMB. LIGHT RH]
R8 STOP LIGHT LH [REAR COMB. LIGHT LH]
R10 STOP LIGHT RH [REAR COMB. LIGHT RH]
H 8 HIGH MOUNTED STOP LIGHT
To Condenser <6–3>
J34 JUNCTION CONNECTOR
Left radator side support
Under the left center pillar
Back panel center

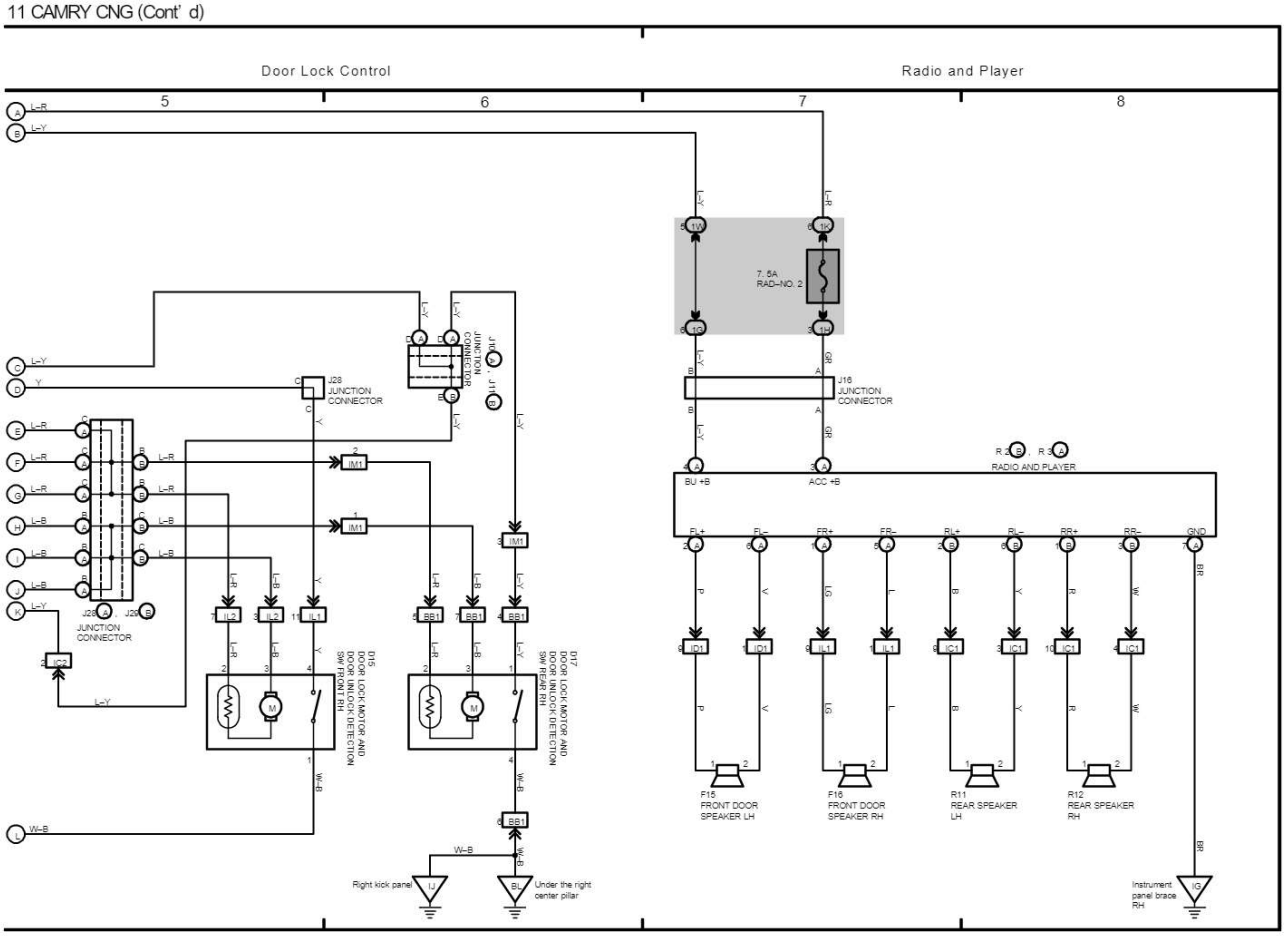

Power Source
Wiper and Washer
Remote Control Mirror
1
2
3
4
* 1 : w/ Mirror Heater
* 2 : w/o Mirror Heater
I10
IGNITION SW
ACC
IG1
AM1
25A
WIPER
15A
CIG
40A
AM1
100A
ALT
FUSIBLE LINK BLOCK
FL MAIN
3.0W
BATTERY
C13
WIPER AND WASHER SW
[COMB. SW]
OFF
INT
LO
HI
WASHER
+B
+2
+1
+S
INT1
INT2
B1
EW
WF
WIPER RELAY
WASHER MOTOR
J 5
JUNCTION CONNECTOR
R 5
REMOTE CONTROL MIRROR SW
LEFT
RIGHT
UP
DOWN
LEFT/ UP
RIGHT/ DOWN
OPERATION SW
SELECT SW
MH
MV
HL
HR
VL
VR
M+
E
J15
JUNCTION CONNECTOR
J 3
JUNCTION CONNECTOR
J 4
JUNCTION CONNECTOR
J 9
JUNCTION CONNECTOR
F 3
FRONT WIPER MOTOR
R13
REMOTE CONTROL MIRROR LH
R14
REMOTE CONTROL MIRROR RH
Instrument panel brace LH
Left radiator side support
Left kick panel

## M OVERALL ELECTRICAL WIRING DIAGRAM


Power Source
Power Window
1
2
3
4
I10
IGNITION SW
ACC
AM1
IG1
40A
AM1
10A GAUGE
I12
INTEGRATION
RELAY
25A
DOOR
30A
POWER
POWER
RELAY
100A ALT
FUSIBLE LINK
BLOCK
FL MAIN
3. 0W
BATTERY
Seat Light Auto Turn Off
System<1>/<2>
J33
JUNCTION
CONNECTOR
P 8
POWER WINDOW MASTER SW
FRONT LH
FRONT RH
REAR LH
REAR RH
UP
DOWN
WINDOW LOCK SW
LOCK
J 3
JUNCTION
CONNECTOR
J 9
JUNCTION
CONNECTOR
Instrument panel
brace LH
J 1
JUNCTION
CONNECTOR
J 2
JUNCTION
CONNECTOR
J3
JUNCTION
CONNECTOR
Cowl side
panel LH
P 9
POWER WINDOW MOTOR
FRONT LH
P10
POWER WINDOW MOTOR
FRONT RH
P11
POWER WINDOW MOTOR
REAR LH
P12
POWER WINDOW MOTOR
REAR RH
P 5
POWER WINDOW CONTROL
SW FRONT RH
P 6
POWER WINDOW CONTROL
SW REAR LH
P 7
POWER WINDOW CONTROL
SW REAR RH

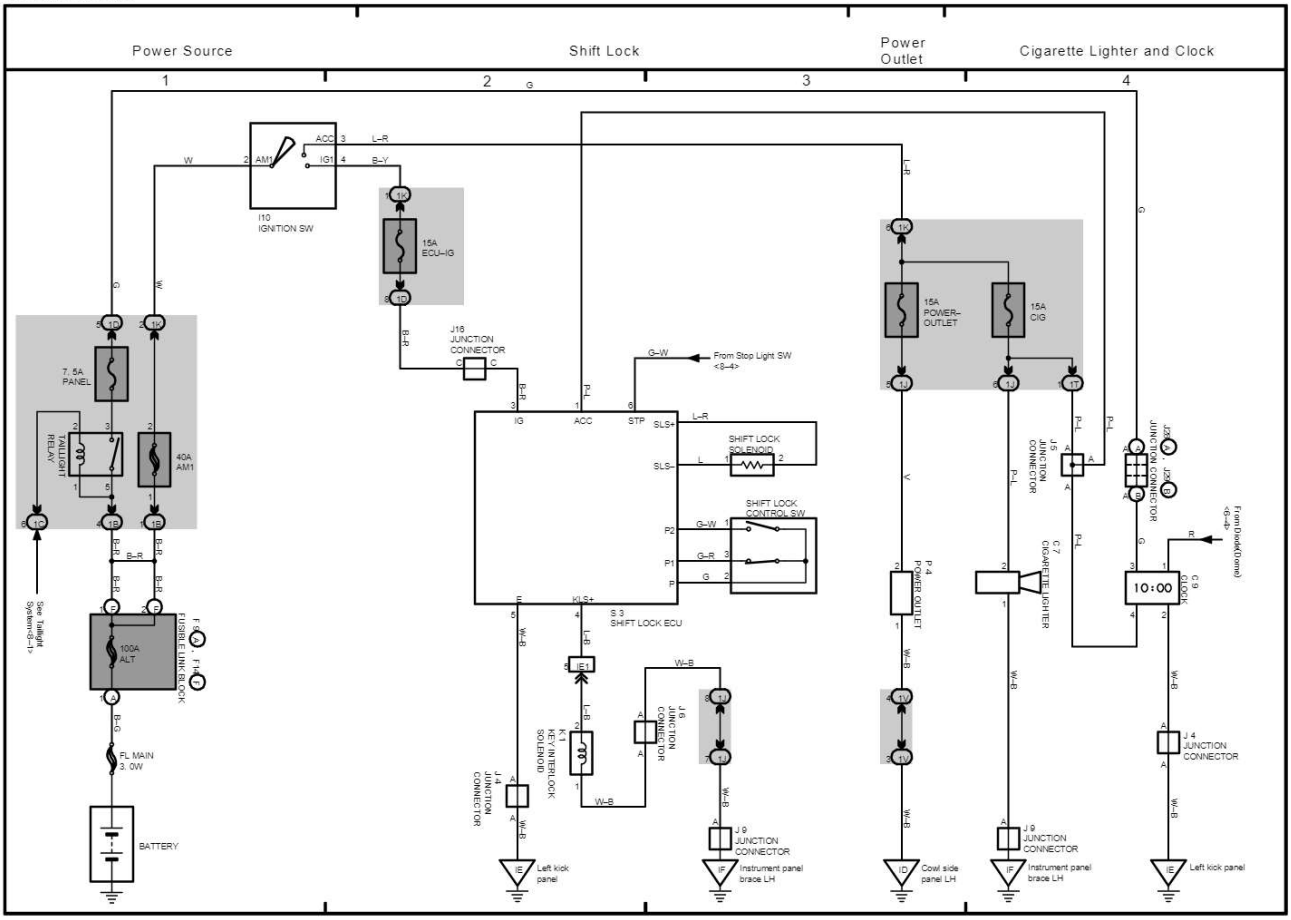
# M OVERALL ELECTRICAL WIRING DIAGRAM

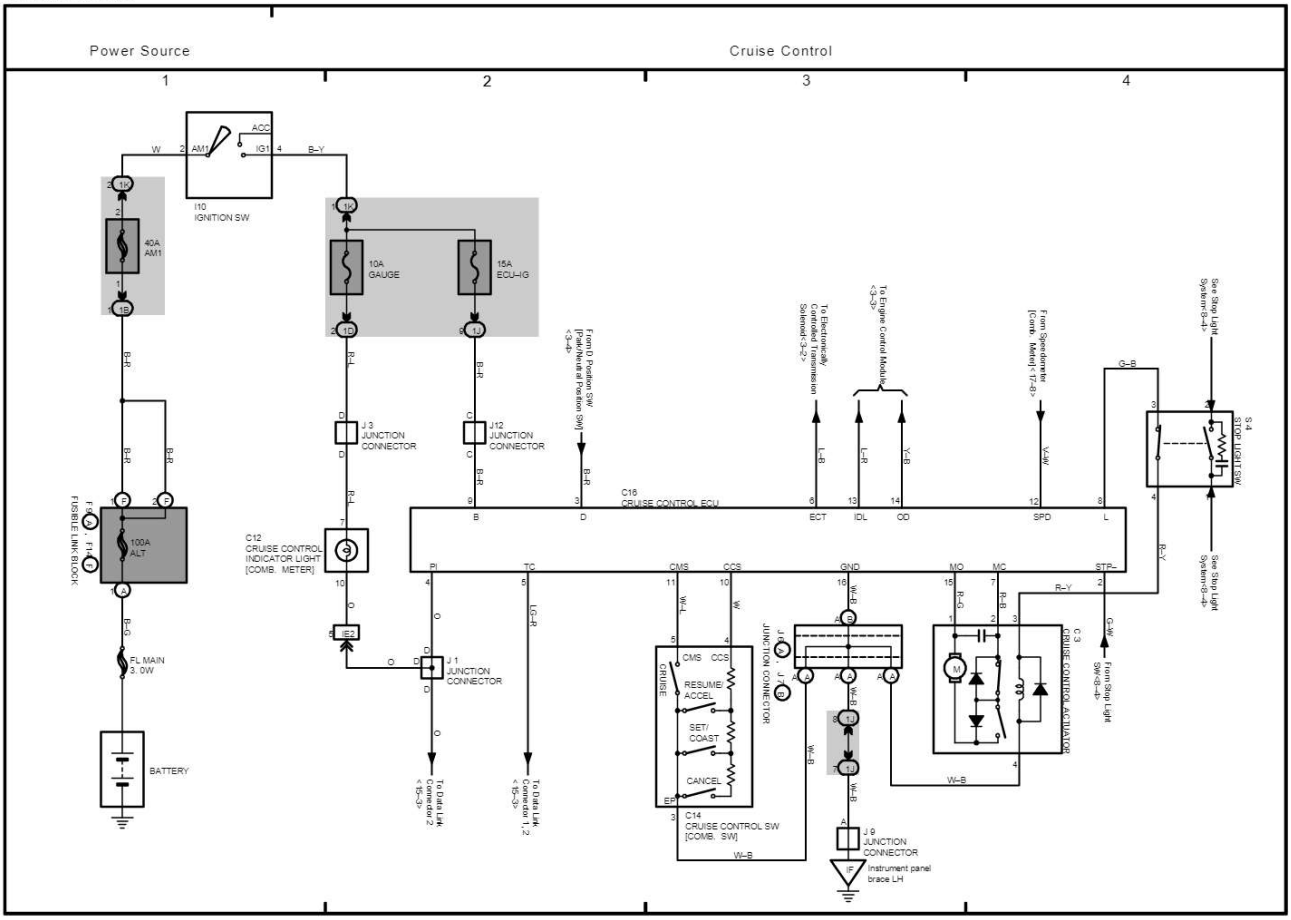



Door Lock Control
Radio and Player
5
6
7
8
7. 5A
RAD–NO. 2
J28
JUNCTION
CONNECTOR
J16
JUNCTION
CONNECTOR
J26 , J26
JUNCTION
CONNECTOR
D15
DOOR LOCK MOTOR AND
DOOR UNLOCK DETECTION
SW FRONT RH
D17
DOOR LOCK MOTOR AND
DOOR UNLOCK DETECTION
SW REAR RH
R 2 , R 3
RADIO AND PLAYER
BU +B
ACC +B
FL+
FL–
FR+
FR–
RL+
RL–
RR+
RR–
GND
F15
FRONT DOOR
SPEAKER LH
F16
FRONT DOOR
SPEAKER RH
R11
REAR SPEAKER
LH
R12
REAR SPEAKER
RH
Right kick panel
Under the right
center pillar
Instrument
panel brace
RH

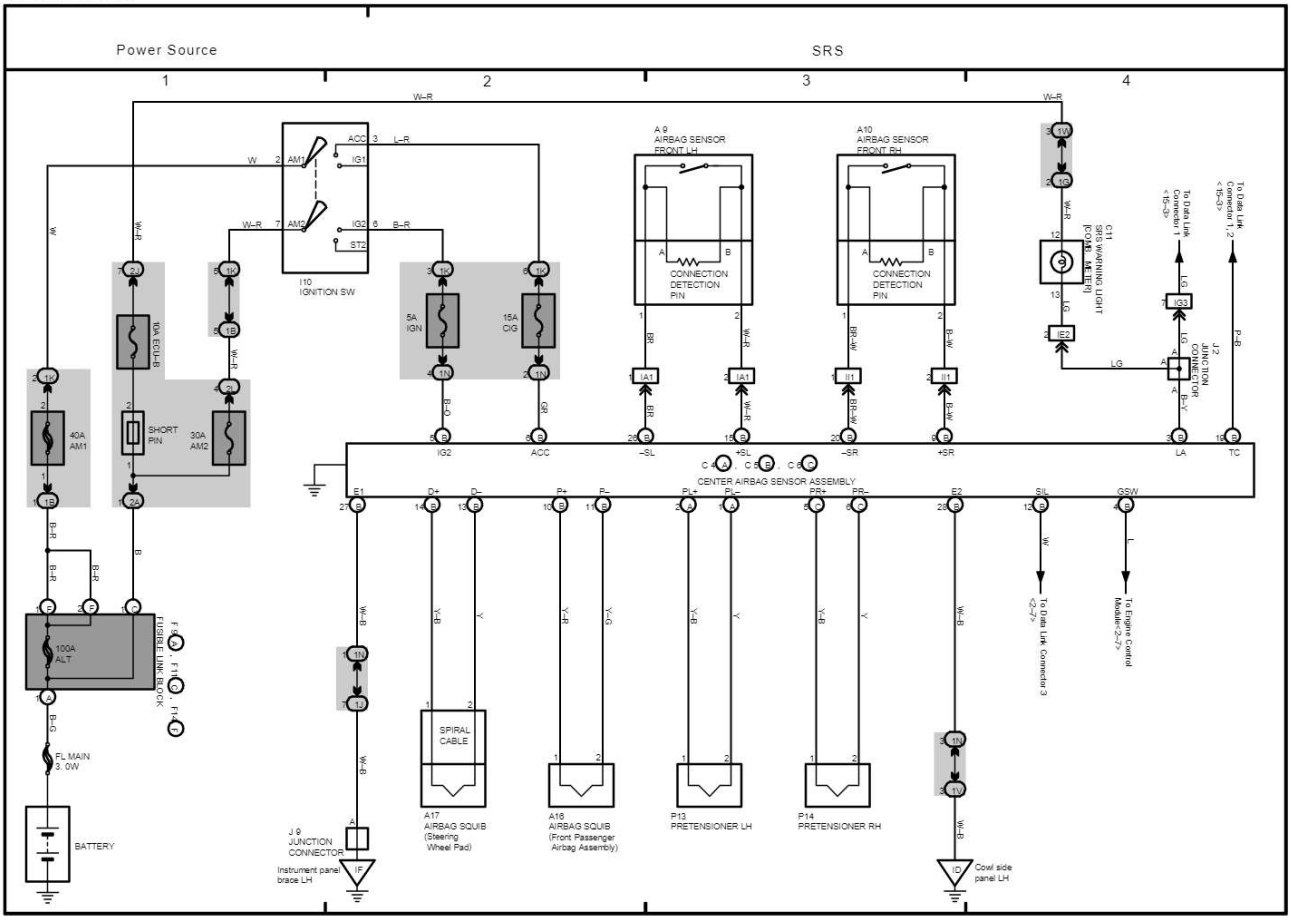
M

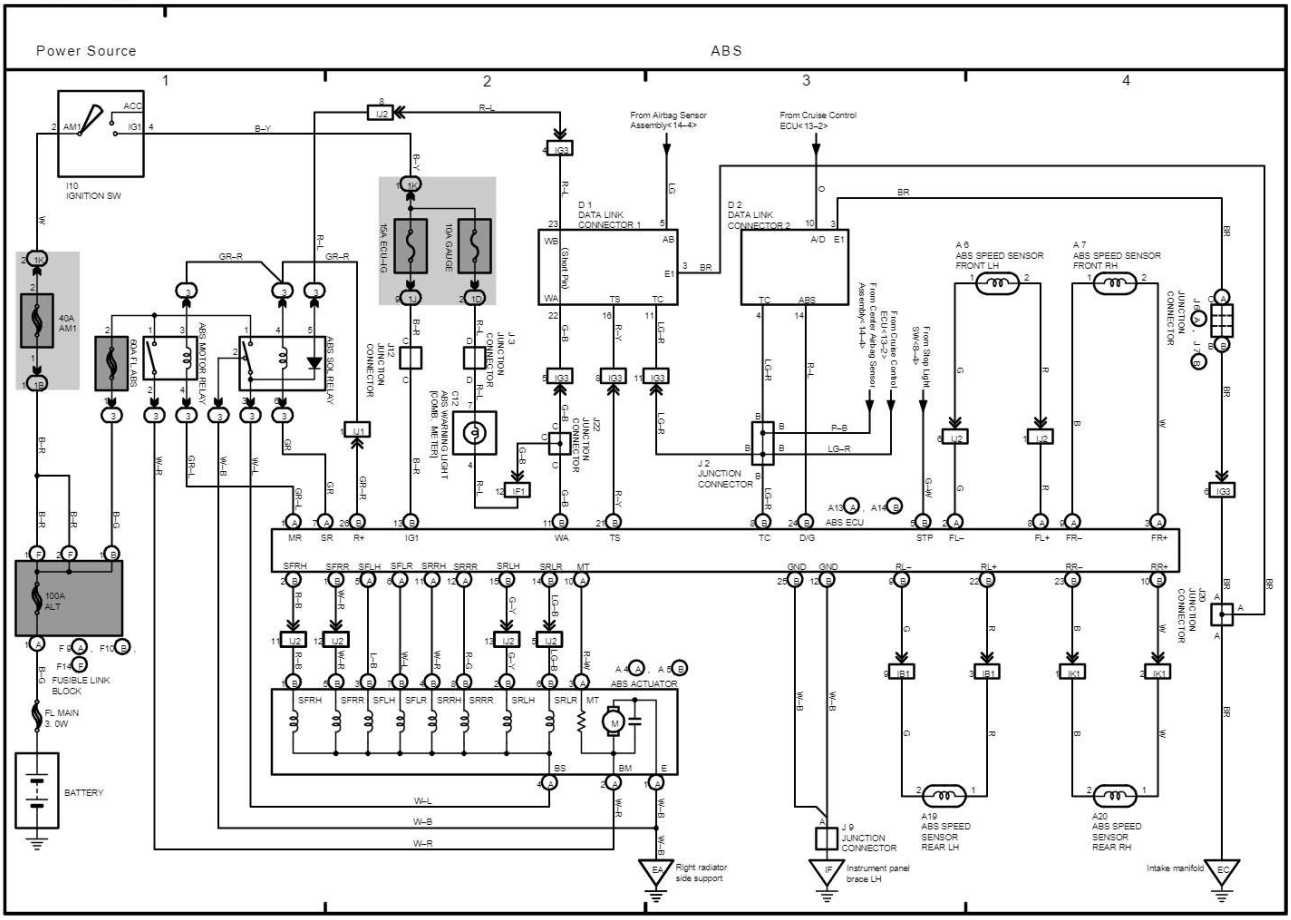
## M OVERALL ELECTRICAL WIRING DIAGRAM


Power Source
Shift Lock
Power Outlet
Cigarette Lighter and Clock
1
2
3
4
I10 IGNITION SW
15A ECU-IG
7.5A PANEL
TAIL LIGHT RELAY
40A AM1
100A ALT
FUSIBLE LINK BLOCK
FL MAIN 3.0W
BATTERY
J16 JUNCTION CONNECTOR
From Stop Light SW <8-4>
SHIFT LOCK SOLENOID
SHIFT LOCK CONTROL SW
S 3 SHIFT LOCK ECU
KEY INTERLOCK SOLENOID
J 6 JUNCTION CONNECTOR
J 4 JUNCTION CONNECTOR
J 9 JUNCTION CONNECTOR
Left kick panel
Instrument panel brace LH
Cowl side panel LH
15A POWER-OUTLET
15A CIG
P 4 POWER OUTLET
J5 JUNCTION CONNECTOR
C 7 CIGARETTE LIGHTER
C 9 CLOCK
J2 JUNCTION CONNECTOR
From Body(Name) <6-4>
See Taillight System<3-1>
10:00

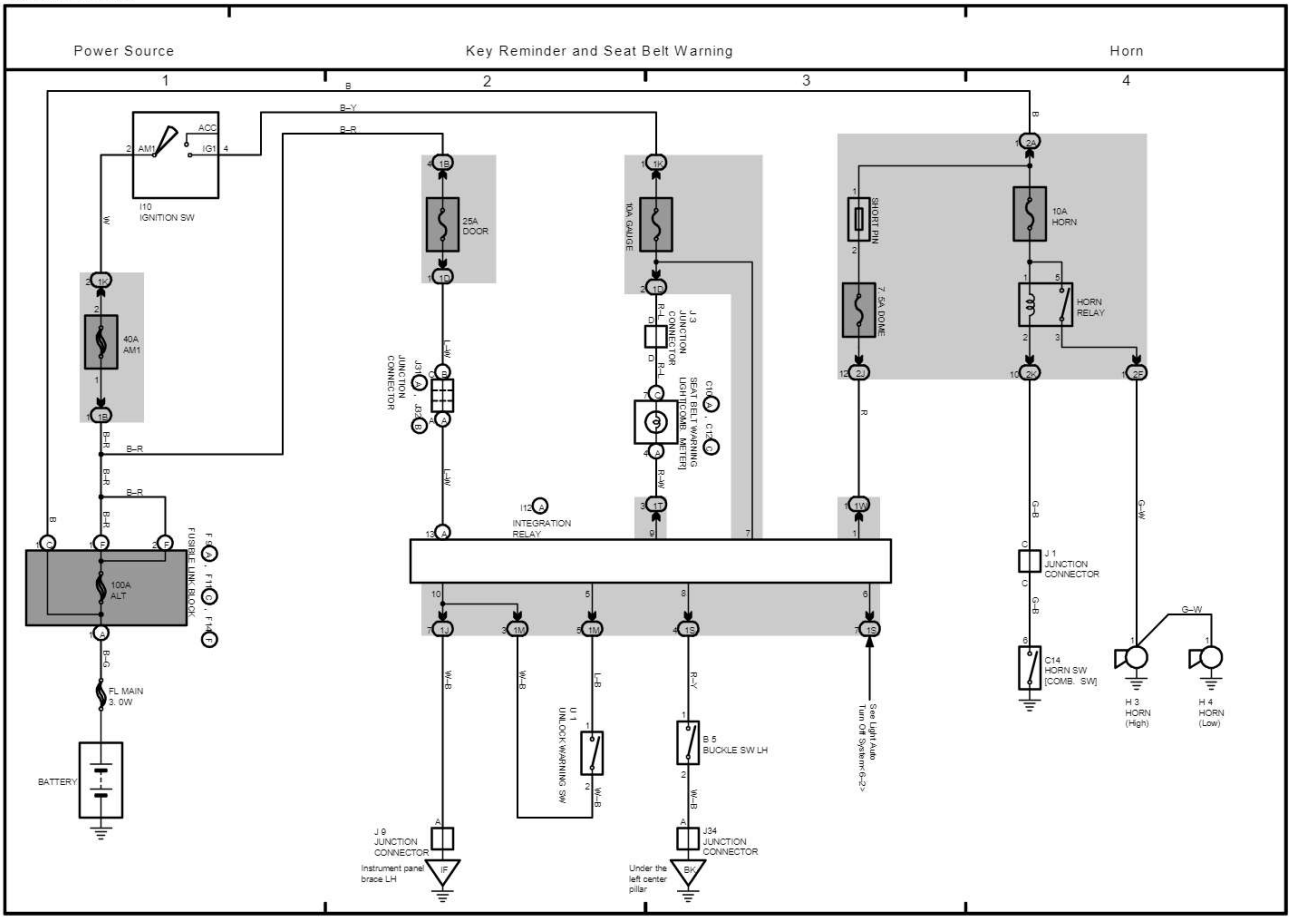

Power Source
Cruise Control
1
2
3
4
ACC
IG1
AM1
I10
IGNITION SW
40A
AM1
10A
GAUGE
15A
ECU–IG
100A
ALT
FUSIBLE LINK BLOCK
FL MAIN
3. 0W
BATTERY
J 3
JUNCTION
CONNECTOR
J12
JUNCTION
CONNECTOR
C12
CRUISE CONTROL
INDICATOR LIGHT
[COMB. METER]
IE2
J 1
JUNCTION
CONNECTOR
To Data Link
Connector 2
<15–3>
To Data Link
Connector 1,2
<15–3>
From D Position SW
[Park/Neutral Position SW]
<3–4>
To Electronically
Controlled Transmission
Solenoid <3-2>
To Engine Control Module
<3–3>
From Speedometer
[Comb. Meter]<17–8>
See Stop Light
System<8–4>
S 4
STOP LIGHT SW
C16
CRUISE CONTROL ECU
ECT
IDL
OD
SPD
PI
TC
CMS
CCS
GND
MO
MC
STP
C14
CRUISE CONTROL SW
[COMB. SW]
CMS CCS
RESUME/
ACCEL
SET/
COAST
CANCEL
CRUISE
EP
J 6
JUNCTION CONNECTOR
J 9
JUNCTION
CONNECTOR
IF
Instrument panel
brace LH
C 3
CRUISE CONTROL ACTUATOR
M
From Stop Light
SW<8–4>
See Stop Light
System<8–4>
B–R
B–Y
W
R–L
L–R
L–B
Y–B
Y–W
G–B
R–Y
R–G
B–B
G–W
W–L
W
W–B
LG–R

## M OVERALL ELECTRICAL WIRING DIAGRAM

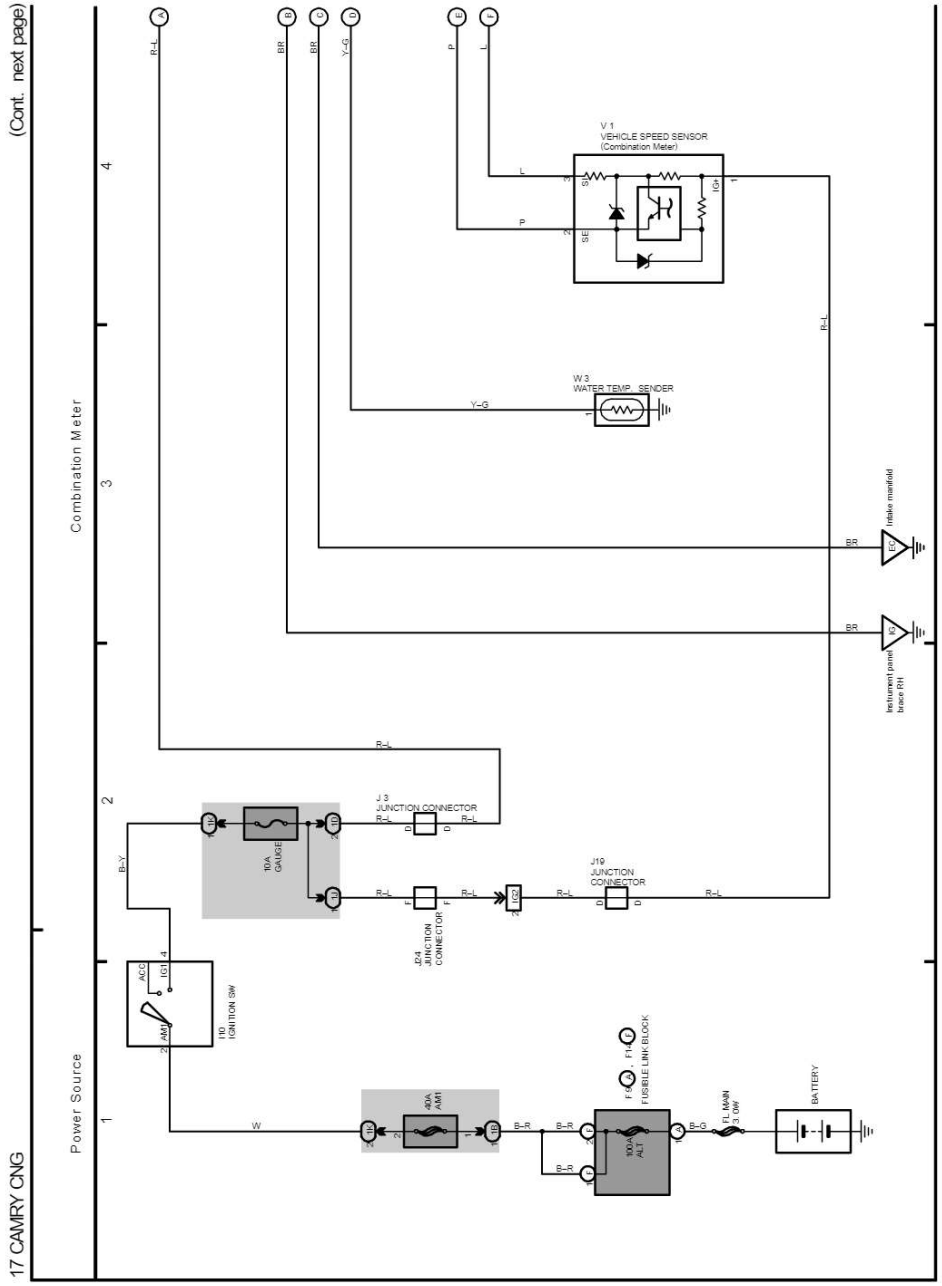

Power Source
SRS
1
2
3
4
W–R
W
I10
IGNITION SW
ACC
IG1
IG2
ST2
AM1
AM2
L–R
B–R
5A
IGN
15A
CIG
10A ECU–B
SHORT
PIN
40A
AM1
30A
AM2
100A
ALT
FUSIBLE LINK BLOCK
FL MAIN
3. 0W
BATTERY
J 9
JUNCTION
CONNECTOR
Instrument panel
brace LH
A9
AIRBAG SENSOR
FRONT LH
A10
AIRBAG SENSOR
FRONT RH
CONNECTION
DETECTION
PIN
C11
SRS WARNING LIGHT
(COMBINATION METER)
To Data Link
Connector 1
<15–3>
To Data Link
Connector 1,2
<15–3>
J2
JUNCTION
CONNECTOR
IG2
ACC
–SL
+SL
–SR
+SR
LA
TC
CENTER AIRBAG SENSOR ASSEMBLY
E1
D+
D–
P+
P–
P1+
P1–
PR+
PR–
E2
SIL
GSW
SPIRAL
CABLE
A17
AIRBAG SQUIB
(Steering
Wheel Pad)
A16
AIRBAG SQUIB
(Front Passenger
Airbag Assembly)
P13
PRETENSIONER LH
P14
PRETENSIONER RH
To Data Link Connector 3
<2–7>
To Engine Control
Module<2–7>
Cowl side
panel LH

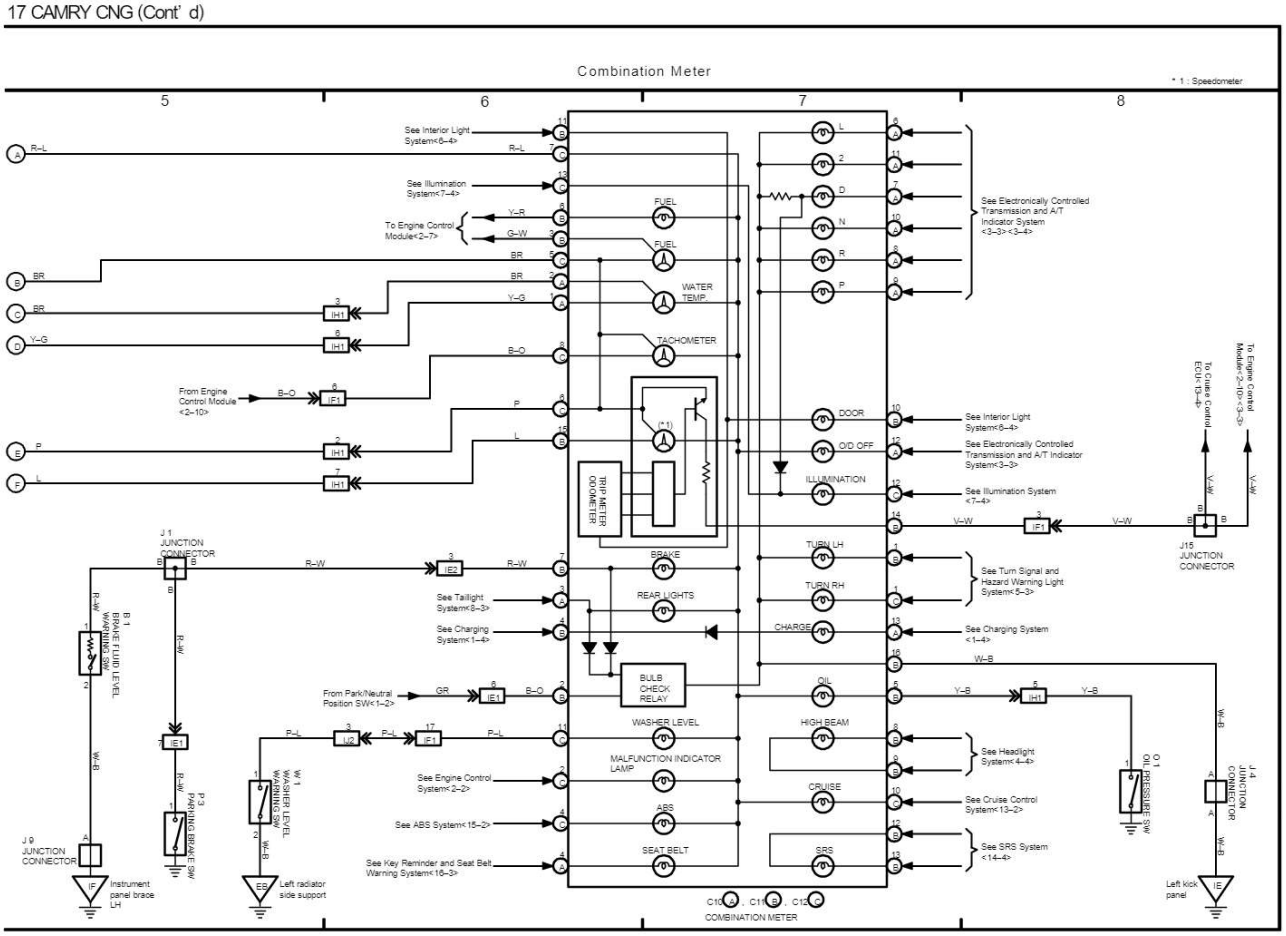

Power Source
ABS
1
2
3
4
I10
IGNITION SW
ACC
IG1
AM1
40A
AM1
60A ETLABS
ABS MOTOR RELAY
ABS SOL RELAY
15A ECU-IG
10A GAUGE
100A
ALT
FUSIBLE LINK
BLOCK
FL MAIN
3. 0W
BATTERY
J1
JUNCTION
CONNECTOR
J3
JUNCTION
CONNECTOR
C12
ABS WARNING LIGHT
(COMB. METER)
J22
JUNCTION
CONNECTOR
D 1
DATA LINK
CONNECTOR 1
D 2
DATA LINK
CONNECTOR 2
From Airbag Sensor
Assembly<14–4>
From Cruise Control
ECU<13–2>
From Center Airbag Sensor
Assembly<14–4>
From Cruise Control
ECU<13–2>
From Stop Light
SW<9–8>
J 2
JUNCTION
CONNECTOR
A 6
ABS SPEED SENSOR
FRONT LH
A 7
ABS SPEED SENSOR
FRONT RH
JUNCTION
CONNECTOR
ABS ECU
ABS ACTUATOR
MR
SR
R+
IG1
WA
TS
TC
D/G
STP
FL–
FL+
FR–
FR+
SFRH
SFRR
SFLH
SFLR
SRRH
SRRR
SRLH
SRLR
MT
BS
BM
GND
RL–
RL+
RR–
RR+
J 9
JUNCTION
CONNECTOR
A19
ABS SPEED
SENSOR
REAR LH
A20
ABS SPEED
SENSOR
REAR RH
Right radiator
side support
Instrument panel
brace LH
Intake manifold

## M OVERALL ELECTRICAL WIRING DIAGRAM


Power Source
Key Reminder and Seat Belt Warning
Horn
1
2
3
4
I10
IGNITION SW
ACC
IG1
AM1
40A
AM1
100A
ALT
FUSIBLE LINK BLOCK
FL MAIN
3.0W
BATTERY
25A
DOOR
10A
GAUGE
J3
JUNCTION
CONNECTOR
SEAT BELT WARNING
LIGHT[COMB. METER]
I12
INTEGRATION
RELAY
J9
JUNCTION
CONNECTOR
Instrument panel
brace LH
U1
UNLOCK WARNING SW
B5
BUCKLE SW LH
J34
JUNCTION
CONNECTOR
Under the
left center
pillar
See Light Auto
Turn Off System<6-2>
SHORT PIN
7.5A
DOME
10A
HORN
HORN
RELAY
J1
JUNCTION
CONNECTOR
C14
HORN SW
[COMB. SW]
H3
HORN
(High)
H4
HORN
(Low)

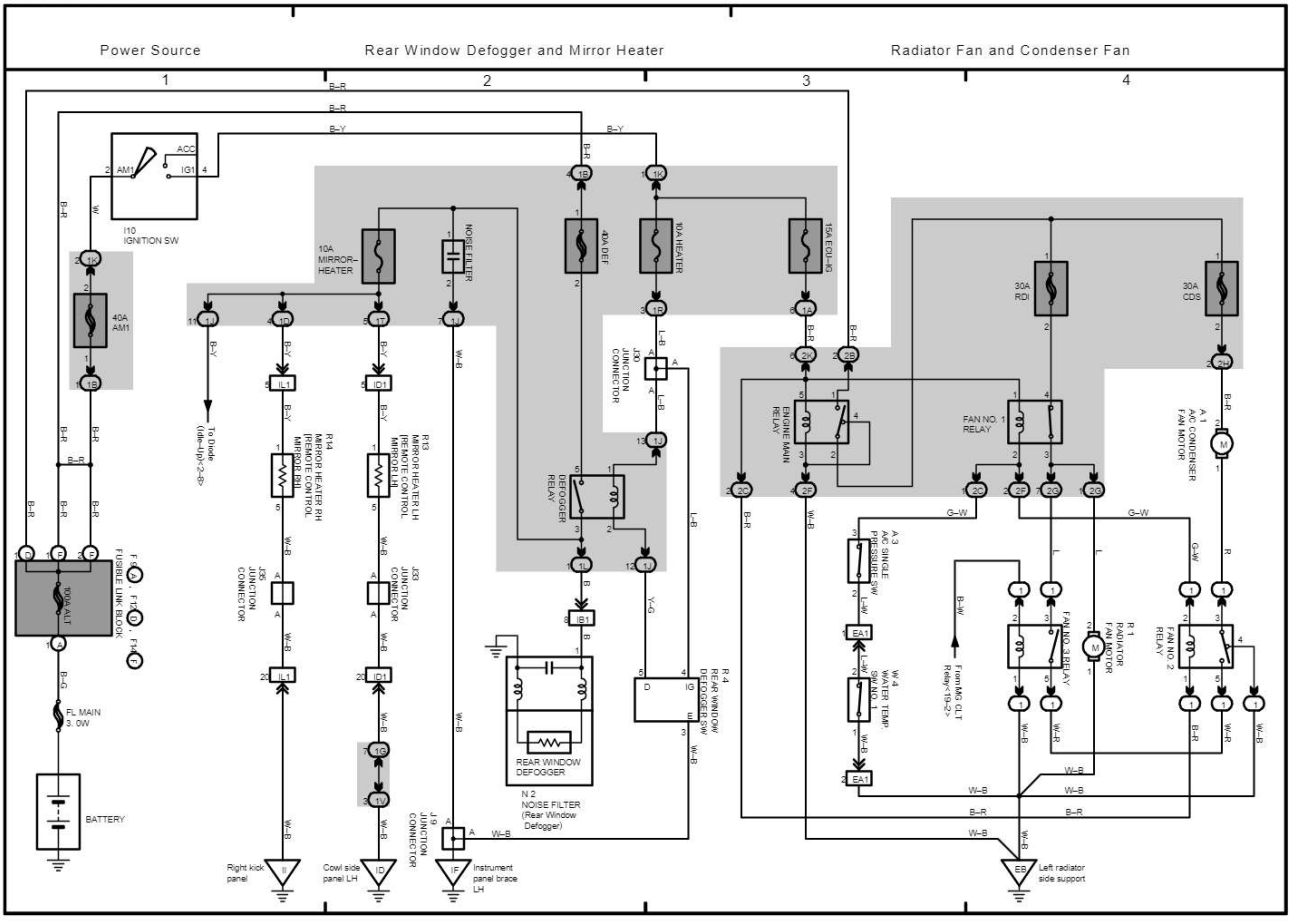
# M OVERALL ELECTRICAL WIRING DIAGRAM

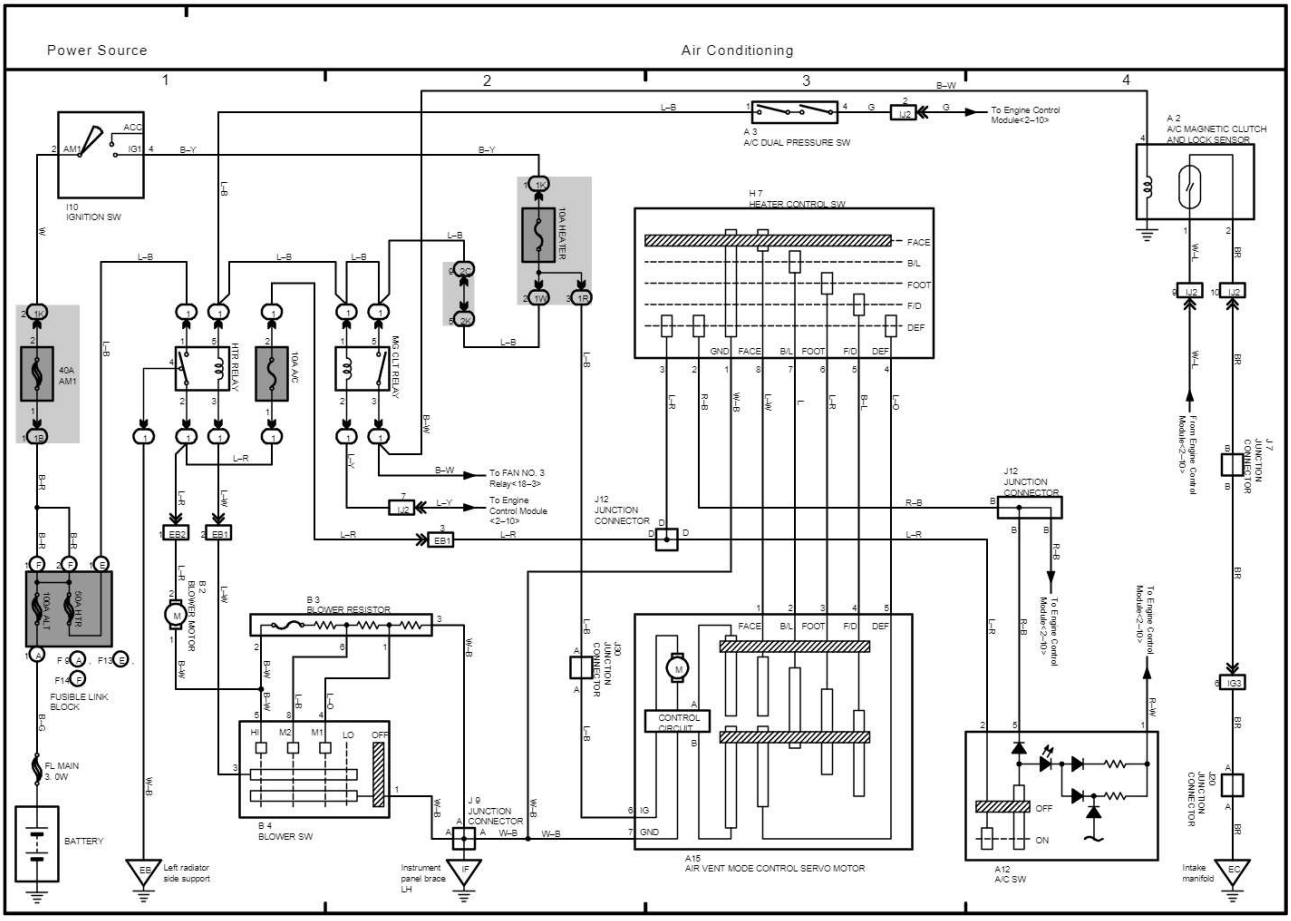



Combination Meter
* 1 : Speedometer
5
6
7
8
See Interior Light System<6–4>
See Illumination System<7–4>
To Engine Control Module<2–7>
From Engine Control Module <2–10>
See Taillight System<8–3>
See Charging System<1–4>
From Park/Neutral Position SW<1–2>
See Engine Control System<2–2>
See ABS System<15–2>
See Key Reminder and Seat Belt Warning System<16–3>
FUEL
WATER TEMP.
TACHOMETER
TRIP METER
ODOMETER
BRAKE
REAR LIGHTS
CHARGE
BULB CHECK RELAY
WASHER LEVEL
MALFUNCTION INDICATOR LAMP
ABS
SEAT BELT
DOOR
O/D OFF
ILLUMINATION
TURN LH
TURN RH
OIL
HIGH BEAM
CRUISE
SRS
See Electronically Controlled Transmission and A/T Indicator System <3–3><3–4>
See Interior Light System<6–4>
See Electronically Controlled Transmission and A/T Indicator System<3–3>
See Illumination System <7–4>
See Turn Signal and Hazard Warning Light System<5–3>
See Charging System <1–4>
See Headlight System<4–4>
See Cruise Control System<13–2>
See SRS System <14–4>
To Cruise Control ECU<13–4>
To Engine Control Module<2–10><3–3>
J15 JUNCTION CONNECTOR
J 1 JUNCTION CONNECTOR
J 9 JUNCTION CONNECTOR
J 4 JUNCTION CONNECTOR
B 1 BRAKE FLUID LEVEL WARNING SW
P 3 PARKING BRAKE SW
W 1 WASHER LEVEL WARNING SW
O 1 OIL PRESSURE SW
Instrument panel brace LH
Left radiator side support
Left kick panel
C10 , C11 , C12
COMBINATION METER

M

## M OVERALL ELECTRICAL WIRING DIAGRAM


Power Source
Rear Window Defogger and Mirror Heater
Radiator Fan and Condenser Fan
1
2
3
4
I10
IGNITION SW
ACC
IG1
AM1
40A
AM1
10A
MIRROR–
HEATER
NOISE FILTER
40A DEF
30A HEATER
15A EGI–NO.1
30A
RDI
30A
CDS
ENGINE MAIN
RELAY
FAN NO. 1
RELAY
A1
CONDENSER
FAN MOTOR
A3
SINGLE
PRESSURE SW
W–1
WATER TEMP.
SW NO. 1
FAN NO. 3 RELAY
R 1
RADIATOR
FAN MOTOR
FAN NO. 2
RELAY
R14
MIRROR HEATER RH
R13
MIRROR HEATER LH
J35
JUNCTION
CONNECTOR
J33
JUNCTION
CONNECTOR
J30
JUNCTION
CONNECTOR
DEFOGGER
RELAY
R 4
REAR WINDOW
DEFOGGER SW
REAR WINDOW
DEFOGGER
N 2
NOISE FILTER
(Rear Window
Defogger)
J31
JUNCTION
CONNECTOR
FUSIBLE LINK BLOCK
100A ALT
FL MAIN
5.0W
BATTERY
To Diode
(18k–1dr–2–B)
From MG CLT
Relay<19–2>
Right kick
panel
Cowl side
panel LH
Instrument
panel brace
LH
Left radiator
side support


Power Source
Air Conditioning
1
2
3
4
I10
IGNITION SW
ACC
AM1
IG1
40A
AM1
HTR RELAY
10A A/C
MG CLT RELAY
10A HEATER
100A ALT
50A HTR
FUSIBLE LINK BLOCK
FL MAIN
3.0W
BATTERY
B 2
BLOWER MOTOR
B 3
BLOWER RESISTOR
B 4
BLOWER SW
HI
M2
M1
LO
OFF
A 3
A/C DUAL PRESSURE SW
To Engine Control Module<2~10>
A 2
A/C MAGNETIC CLUTCH AND LOCK SENSOR
H 7
HEATER CONTROL SW
FACE
B/L
FOOT
F/D
DEF
GND
To FAN NO. 3 Relay<18~3>
To Engine Control Module <2~10>
J12
JUNCTION CONNECTOR
J 9
JUNCTION CONNECTOR
J20
JUNCTION CONNECTOR
J 7
JUNCTION CONNECTOR
CONTROL CIRCUIT
A15
AIR VENT MODE CONTROL SERVO MOTOR
A12
A/C SW
OFF
ON
From Engine Control Module<2~10>
To Engine Control Module<2~10>
Left radiator side support
Instrument panel brace LH
Intake manifold

## FOREWORD

This wiring diagram manual has been prepared to provide information on the electrical system of the 1999 CAMRY.

Applicable models: MCV20 Series
SXV20 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. |
|---|---|
| ° 1999 CAMRY Repair Manual | |
| Volume 1 | RM654U1 |
| Volume 2 | RM654U2 |
| ° 1999 TOYOTA New Car Features | NCF160U |

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 12 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.<br>This section is closely related to the system circuit. |
| G | ELECTRICAL WIRING ROUTING | Describes position of Parts Connectors, Splice points, Ground points, etc.<br>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 POINTS | Shows ground positions of all parts described in this manual. |
| J | OVERALL ELECTRICAL WIRING DIAGRAM | Provides circuit diagrams showing the circuit connections. |
| K | POWER SOURCE (Current Flow Chart) | Describes power distribution from the power supply to various electrical loads. |
| L | PART NUMBER OF CONNECTORS | Indicates the part number of the connectors used in this manual. |

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.)

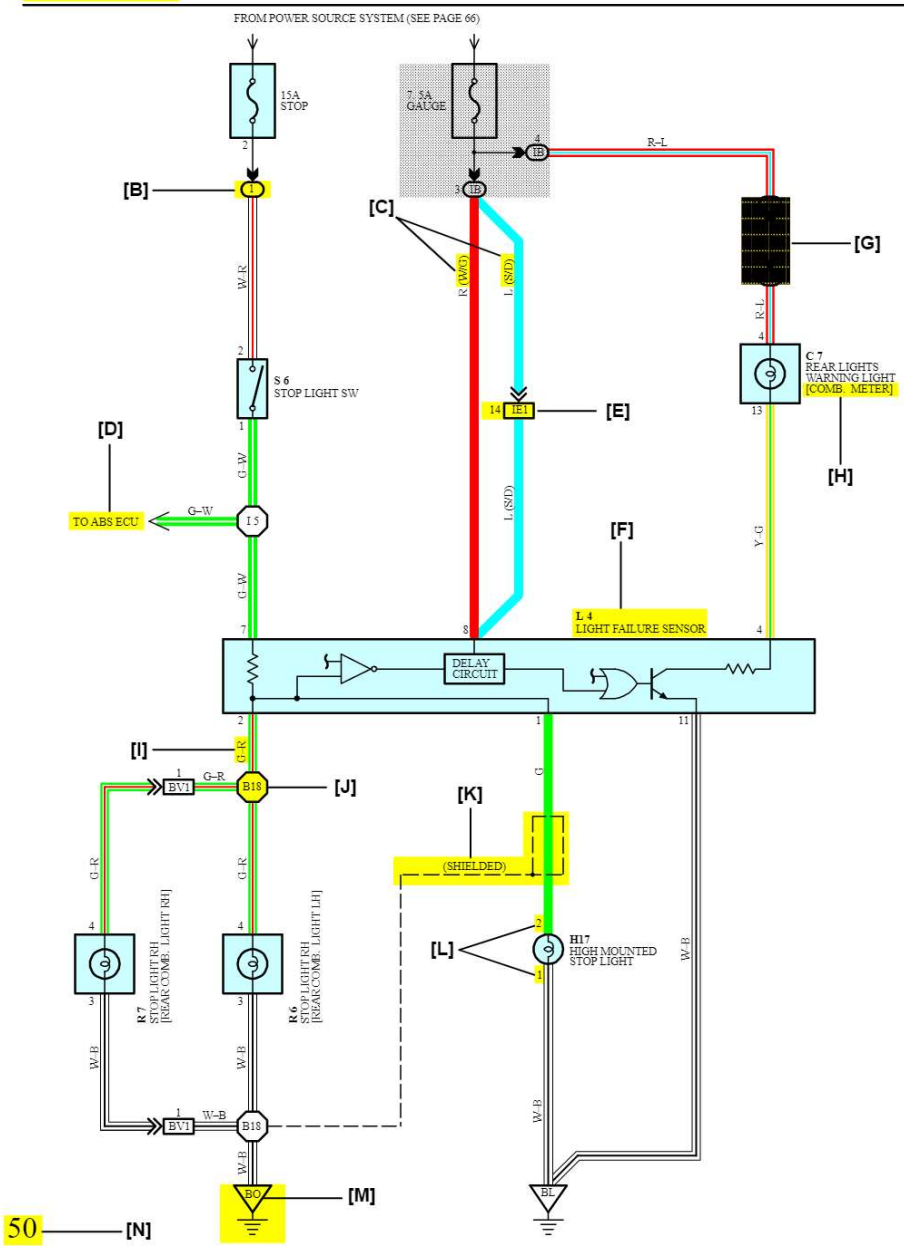
When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Points section). See the System Outline to understand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

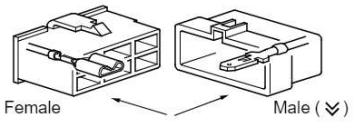
**[B]** : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B

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.



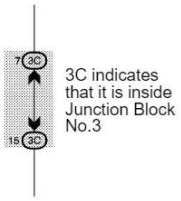

The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

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.

Example:




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

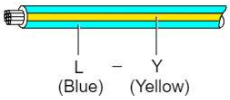
**[I]** : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

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

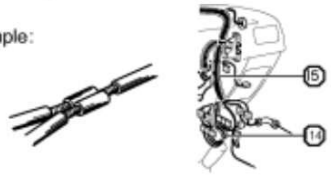
The first letter indicates the basic wire color and the second letter indicates the color of the stripe.

Example: L – Y




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

Example:



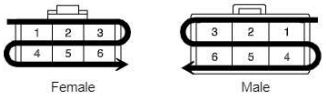

The Location of splice Point I 5 is indicated by the shaded section.

**[K]** : Indicates a shielded cable.



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

Example : Numbered in order from upper left to lower right / Numbered in order from upper right to lower left




**[M]** : Indicates a ground point.

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

**[N]** : Page No.

# B HOW TO USE THIS MANUAL

[O] **SYSTEM OUTLINE**

Current is applied at all times through the STOP fuse to TERMINAL 2 of the stop light SW.
When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 8 of the light failure sensor, and also flows through the rear lights warning light to TERMINAL 4 of the light failure sensor.

**STOP LIGHT DISCONNECTION WARNING**

When the ignition SW is turned on and the brake pedal is pressed (Stop light SW on), if the stop light circuit is open, the current flowing from TERMINAL 7 of the light failure sensor to TERMINALS 1, 2 changes, so the light failure sensor detects the disconnection and the warning circuit of the light failure sensor is activated.
As a result, the current flows from TERMINAL 4 of the light failure sensor to TERMINAL 11 to GROUND and turns the rear lights warning light on. By pressing the brake pedal, the current flowing to TERMINAL 8 of the light failure sensor keeps the warning circuit on and holds the warning light on until the ignition SW is turned off.

[P] **SERVICE HINTS**

**S6 STOP LIGHT SW**

2–1 : Closed with the brake pedal depressed

**L4 LIGHT FAILURE SENSOR**

1, 2, 7–GROUND : Approx. **12** volts with the stop light SW on
4, 8–GROUND : Approx. **12** volts with the ignition SW at **ON** position
11–GROUND : Always continuity

[Q] **: PARTS LOCATION**

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

[R] **: RELAY BLOCKS**

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

[S] **: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

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

[T] **: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

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

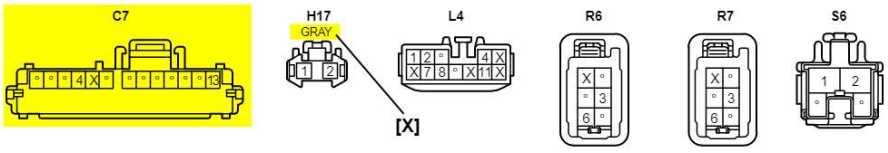
[U] **: GROUND POINTS**

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

[V] **: SPLICE POINTS**

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

[W]



**[O]** : Explains the system outline.

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

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

Example : Part "L4" (Light Failure Sensor) is on page 36 of the manual.
* The letter in the code is from the first letter of the part, and the number indicates its order in parts starting with that letter.

Example : L 4
- Parts is 4th in order
- Light Failure Sensor

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

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

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

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

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

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

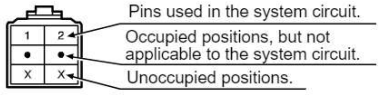
**[U]** : Indicates the reference page showing the position of the ground points on the vehicle.

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

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

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

**[W]**: Indicates connector to be connected to a part (the numeral indicates the pin No.) Explanation of pin use.

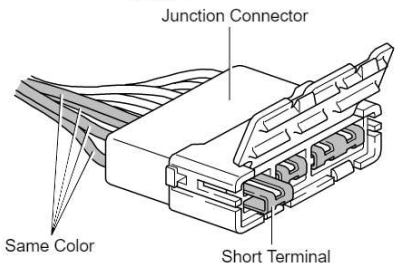



The pins shown are only for the highest grade, or only include those in the specification.

**[X]** : Connector Color

Connectors not indicated are milky white in color.

**HINT :**

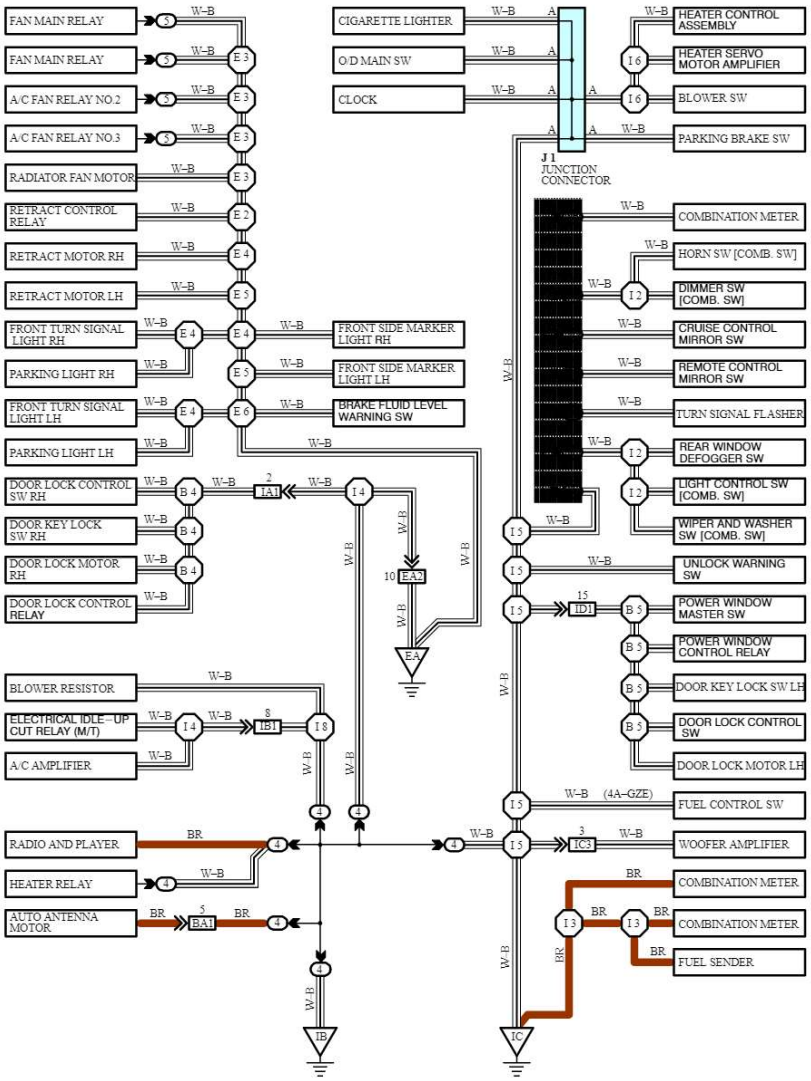



Junction connector (code: J1 to J40) in this manual include a short terminal which is connected to a number of wire harnesses. Always perform inspection with the short terminal installed. (When installing the wire harnesses, the harnesses can be connected to any position within the short terminal grouping. 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.

## 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

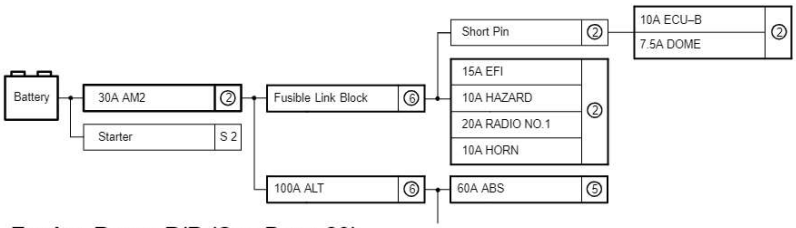



* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

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.

## K POWER SOURCE (Current Flow Chart)

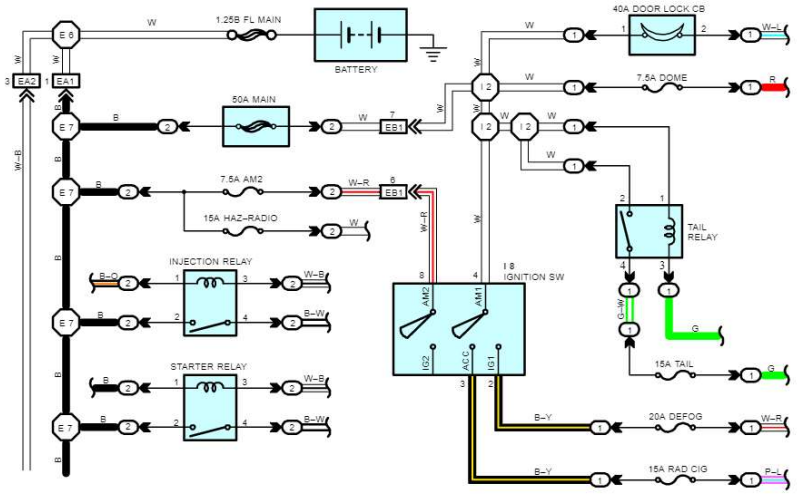
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.



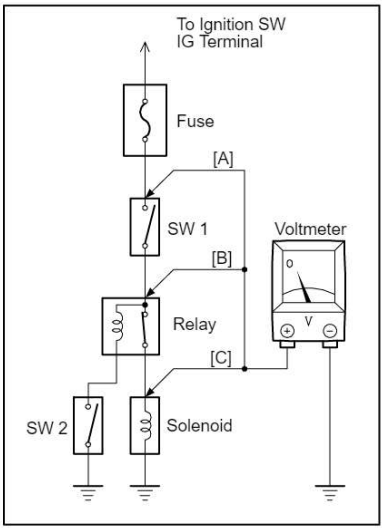

### Engine Room R/B (See Page 20)

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

## POWER SOURCE




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

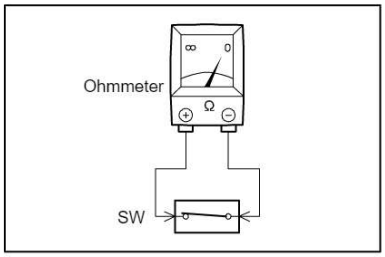



## VOLTAGE CHECK

(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)

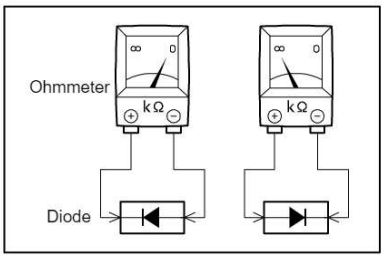
(b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal.
This check can be done with a test light instead of a voltmeter.




## CONTINUITY AND RESISTANCE CHECK

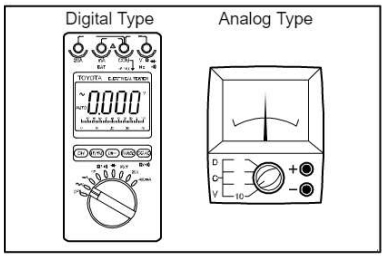
(a) Disconnect the battery terminal or wire so there is no voltage between the check points.

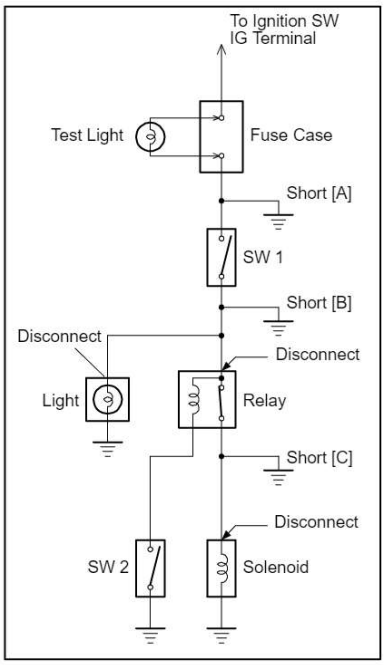
(b) Contact the two leads of an ohmmeter to each of the check points.




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:

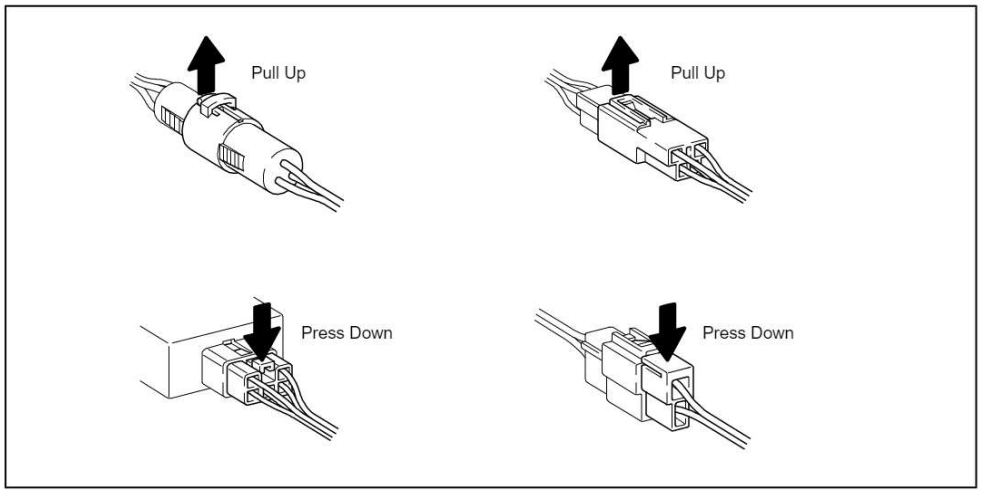
**(a) Do not open the cover or the case of the ECU unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)**

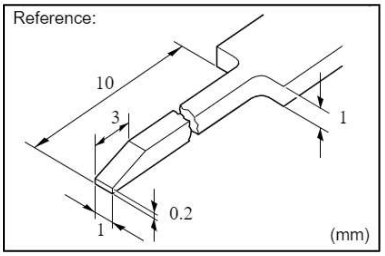
**(b) When replacing the internal mechanism (ECU part) of the digital meter, be careful that no part of your body or clothing comes in contact with the terminals of leads from the IC, etc. of the replacement part (spare part).**

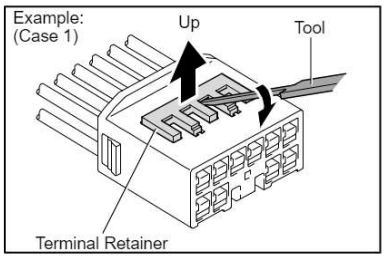
## DISCONNECTION OF MALE AND FEMALE CONNECTORS

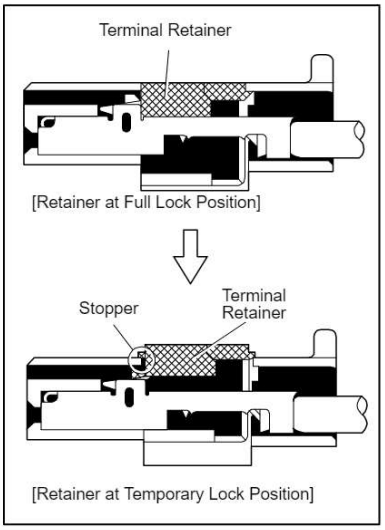
To pull apart the connectors, pull on the connector itself, not the wire harness.

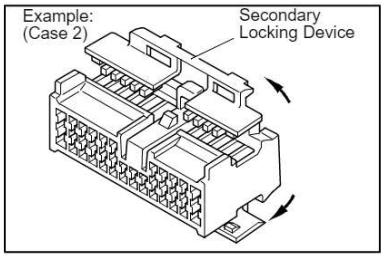
HINT : Check to see what kind of connector you are disconnecting before pulling apart.






## 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

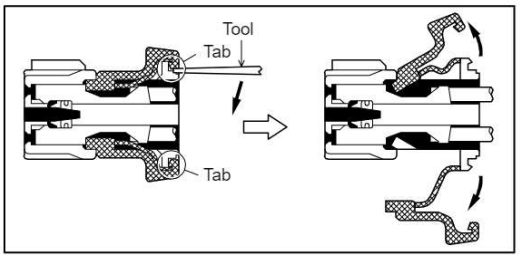
   HINT : The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

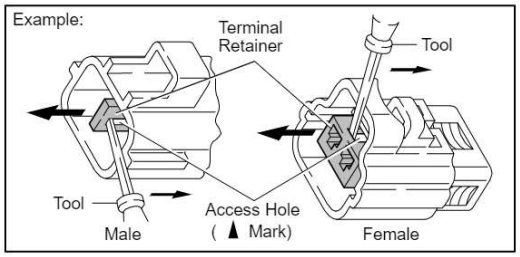
   "Case 1"

   Raise the terminal retainer up to the temporary lock position.

   "Case 2"

   Open the secondary locking device.



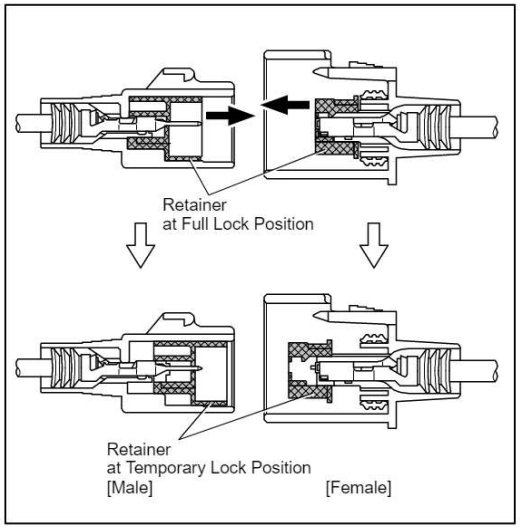




[B] For Waterproof Type Connector

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 |

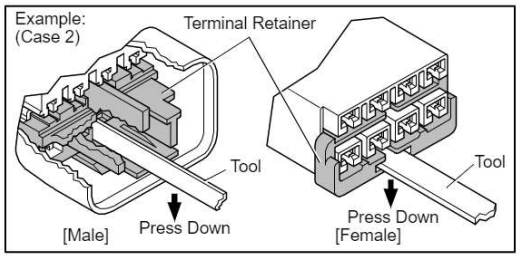



"Case 1"

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

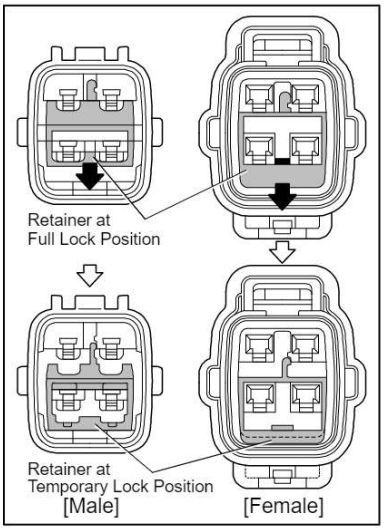
Insert the special tool into the terminal retainer access hole (° Mark) and pull the terminal retainer up to the temporary lock position.

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

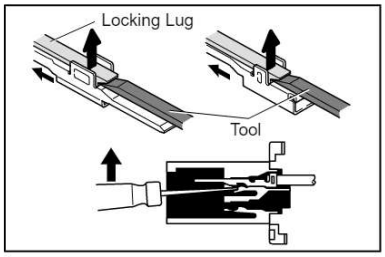



"Case 2"

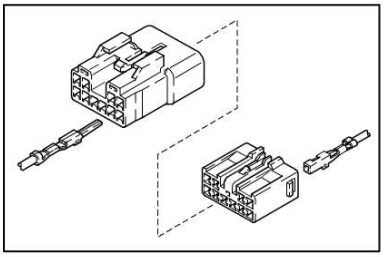
Type which cannot be pulled as far as Power Lock insert the tool straight into the access hole of terminal retainer as shown.




Push the terminal retainer down to the temporary lock position.



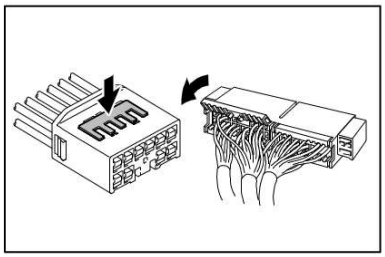

(c) Release the locking lug from terminal and pull the terminal out from rear.



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

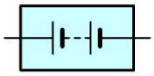
## ABBREVIATIONS

The following abbreviations are used in this manual.

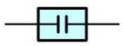
| | | |
|---|---|---|
| ABS | = | Anti–Lock Brake System |
| A/C | = | Air Conditioning |
| ACIS | = | Acoustic Control Induction System |
| A/T | = | Automatic Transaxle |
| COMB. | = | Combination |
| ECU | = | Electronic Control Unit |
| EGR | = | Exhaust Gas Recirculation |
| ESA | = | Electronic Spark Advance |
| EVAP | = | Evaporative Emission |
| FL | = | Fusible Link |
| J/B | = | Junction Block |
| LH | = | Left–Hand |
| M/T | = | Manual Transaxle |
| O/D | = | Overdrive |
| R/B | = | Relay Block |
| RH | = | Right–Hand |
| SFI | = | Sequential Multiport Fuel Injection |
| SRS | = | Supplemental Restraint System |
| SW | = | Switch |
| TEMP. | = | Temperature |
| VSV | = | Vacuum Switching Valve |
| w/ | = | With |
| w/o | = | Without |

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

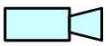
# E GLOSSARY OF TERMS AND SYMBOLS



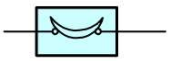
**BATTERY**
Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.



**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.



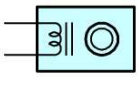
**DIODE**
A semiconductor which allows current flow in only one direction.



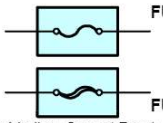
**DIODE, ZENER**
A diode which allows current flow in one direction but blocks reverse flow only up to a specific voltage. Above that potential, it passes the excess voltage. This acts as a simple voltage regulator.



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



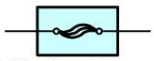
**DISTRIBUTOR, IIA**
Channels high–voltage current from the ignition coil to the individual spark plugs.



**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)

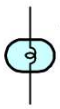
**FUSIBLE LINK**
A heavy–gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit. The numbers indicate the crosssection surface area of the wires.



(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.



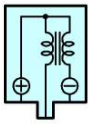
**1. SINGLE FILAMENT**

**2. DOUBLE FILAMENT**

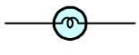
**HEADLIGHTS**
Current flow causes a headlight filament to heat up and emit light. A headlight may have either a single (1) filament or a double (2) filament



**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.

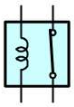


**METER, DIGITAL**
Current flow activates one or many LED's, LCD's, or fluorescent displays, which provide a relative or digital display.




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

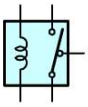
**RELAY**
Basically, an electrically operated switch which may be normally closed (1) or open (2). Current flow through a small coil creates a magnetic field which either opens or closes an attached switch.



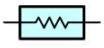
**1. NORMALLY CLOSED**



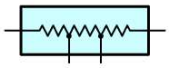
**2. NORMALLY OPEN**



**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.

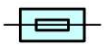


**SENSOR (Thermistor)**
A resistor which varies its resistance with temperature.

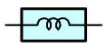


(Reed Switch Type)

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



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

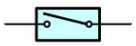


**SOLENOID**
An electromagnetic coil which forms a magnetic field when current flows, to move a plunger, etc.

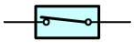


**SPEAKER**
An electromechanical device which creates sound waves from current flow.

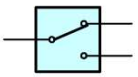
**SWITCH, MANUAL**
Opens and closes circuits, thereby stopping (1) or allowing (2) current flow.



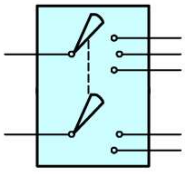
**1. NORMALLY OPEN**



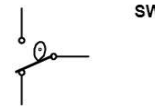
**2. NORMALLY CLOSED**



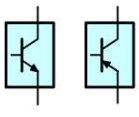
**SWITCH, DOUBLE THROW**
A switch which continuously passes current through one set of contacts or the other.



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

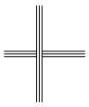


**SWITCH, WIPER PARK**
Automatically returns wipers to the stop position when the wiper switch is turned off.

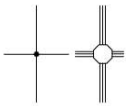


**TRANSISTOR**
A solidstate device typically used as an electronic relay; stops or passes current depending on the voltage applied at "base".

**WIRES**



**(1) NOT CONNECTED**

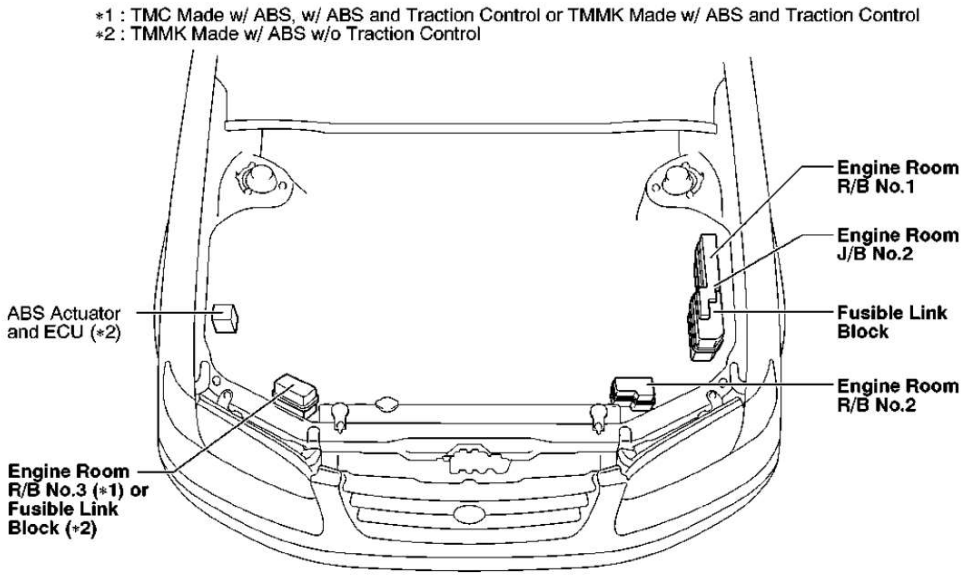


**(2) SPLICED**

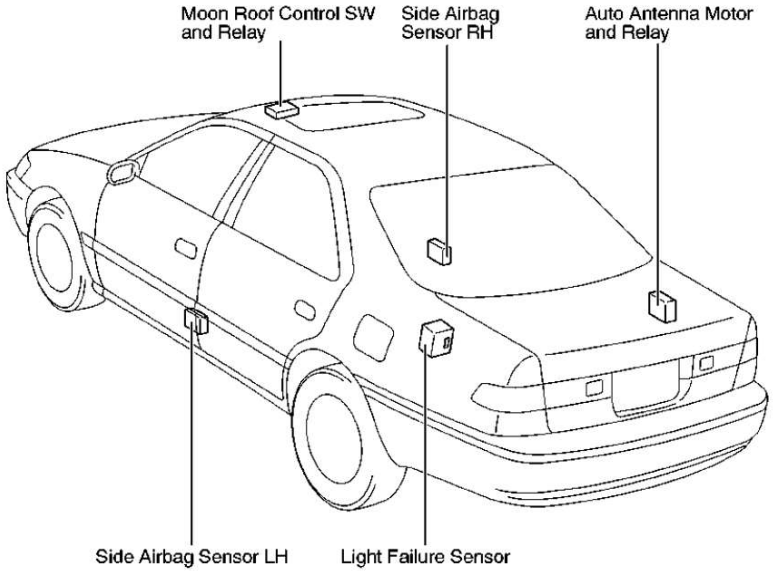
Wires are always drawn as straight lines on wiring diagrams.
Crossed wires (1) without a black dot at the junction are not joined;
crossed wires (2) with a black dot or octagonal ( ) mark at the junction are spliced (joined) connections.

## F RELAY LOCATIONS

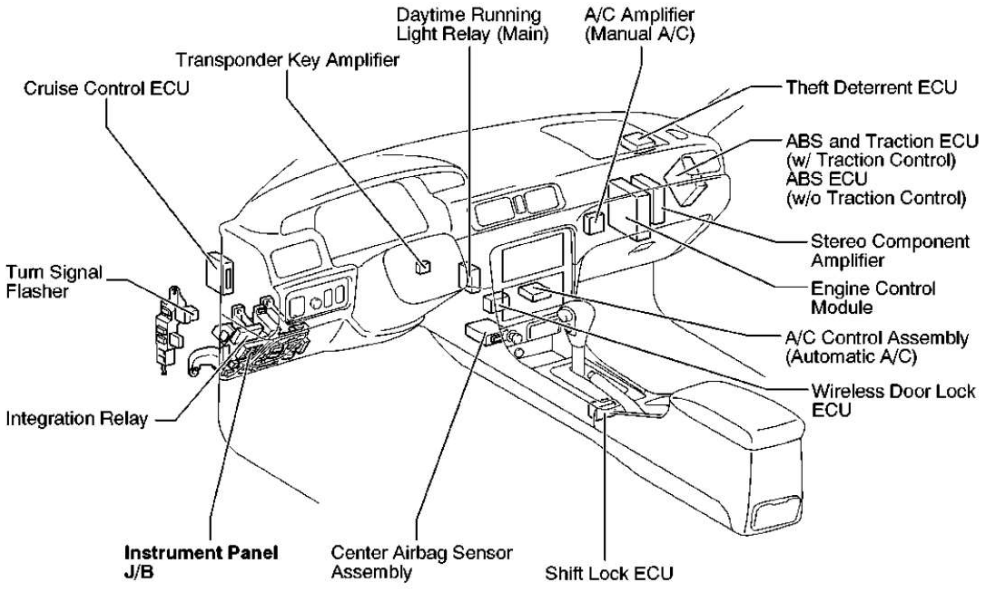
### [Engine Compartment]



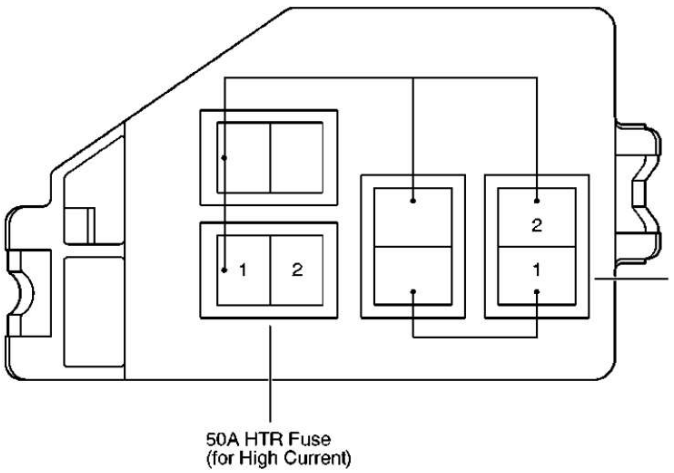

### [Body]



## [Instrument Panel]

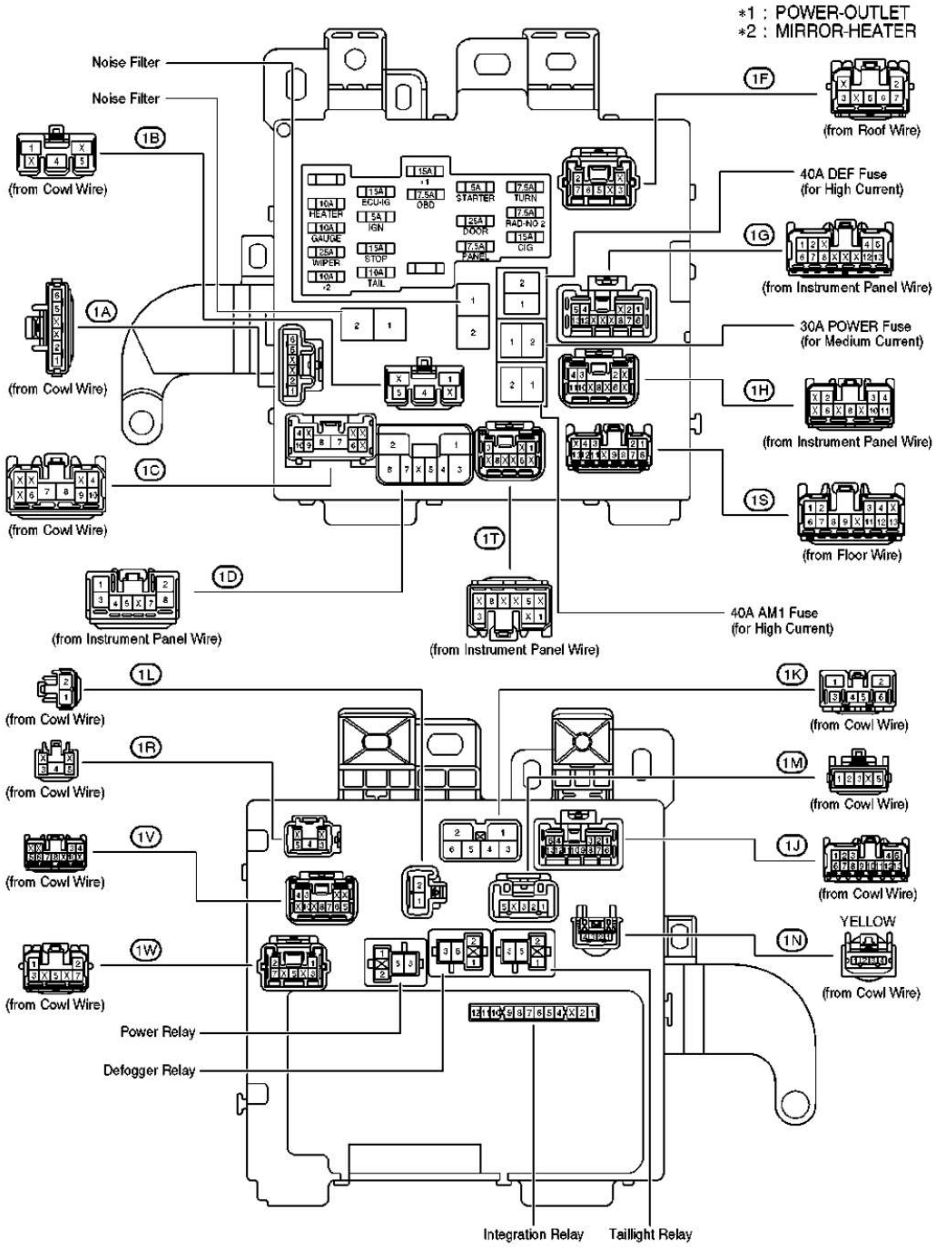



| | |
|---|---|
| **Fusible Link Block** | **Engine Compartment Left (See Page 18) (Inside Engine Room J/B No.2)** |

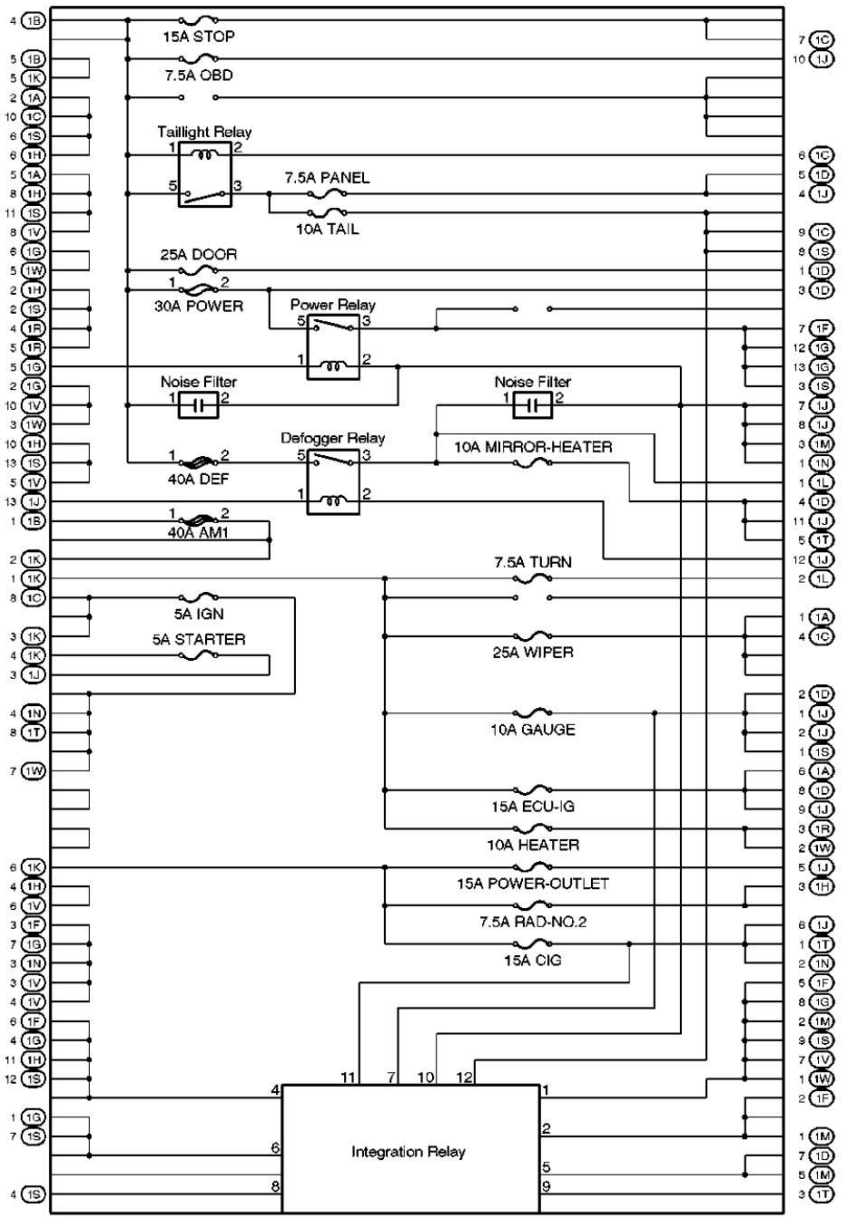


## F RELAY LOCATIONS

| : Instrument Panel J/B | Lower Finish Panel (See Page 19) |
|---|---|

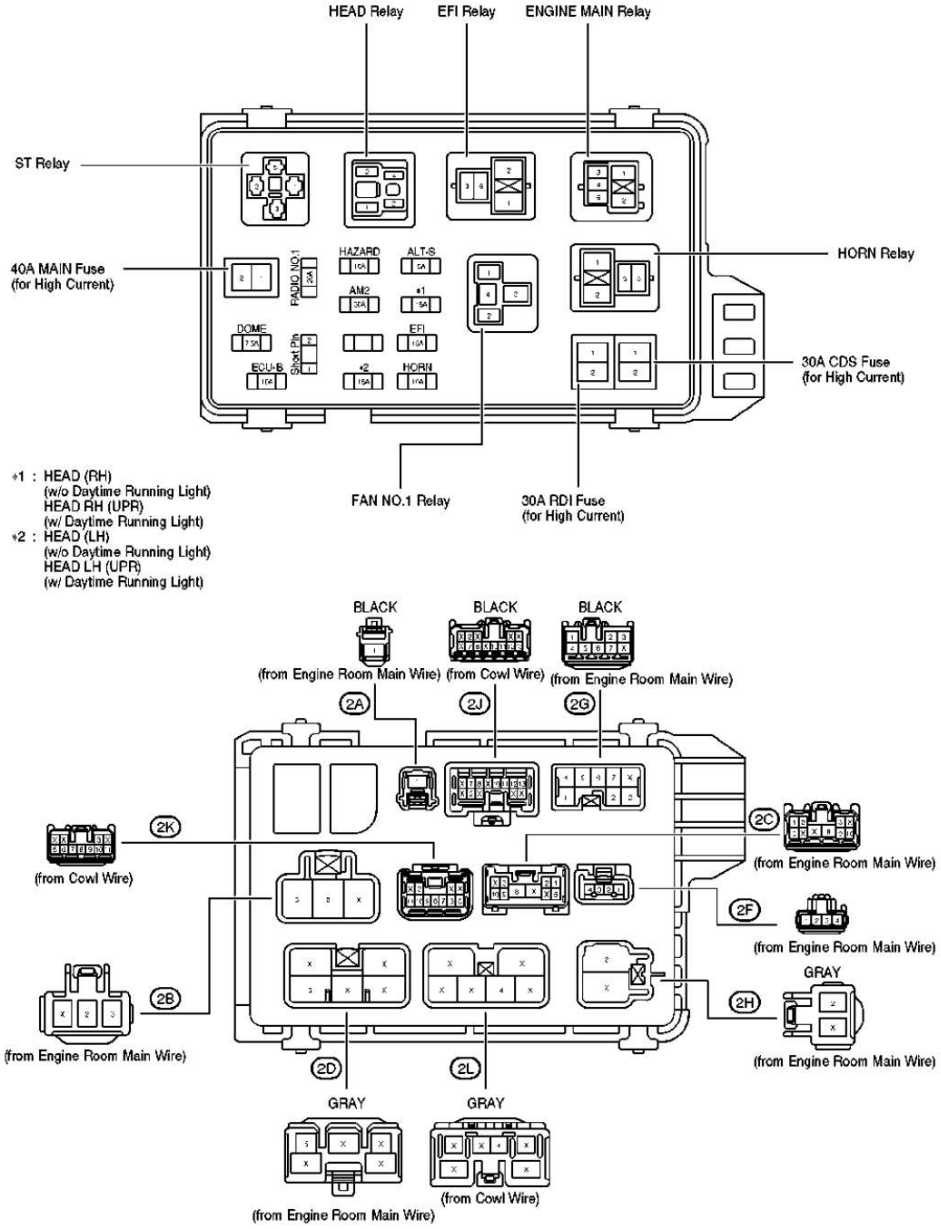


## [Instrument Panel J/B Inner Circuit]

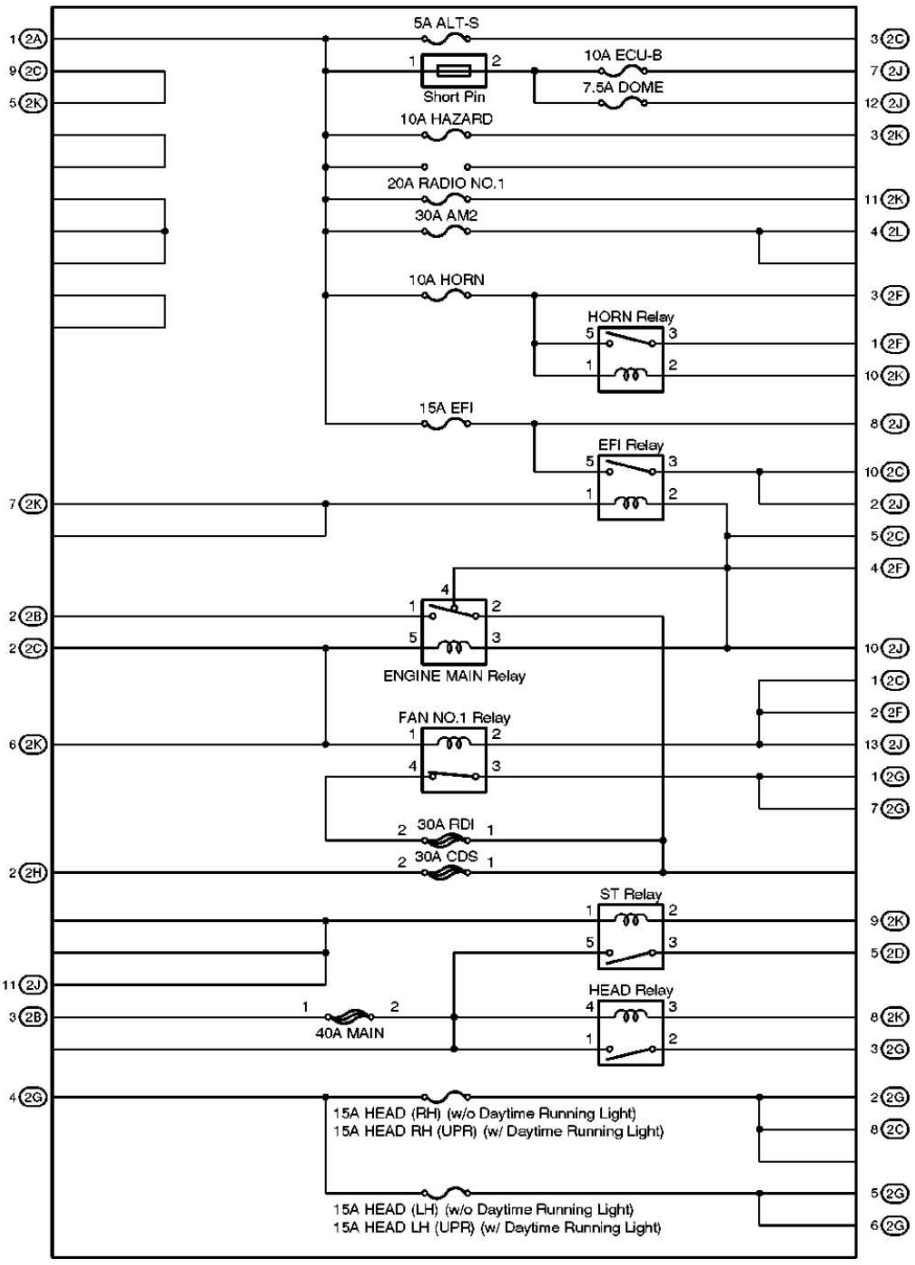


## F RELAY LOCATIONS

| : Engine Room J/B No.2 | Engine Compartment Left (See Page 18) |
|---|---|



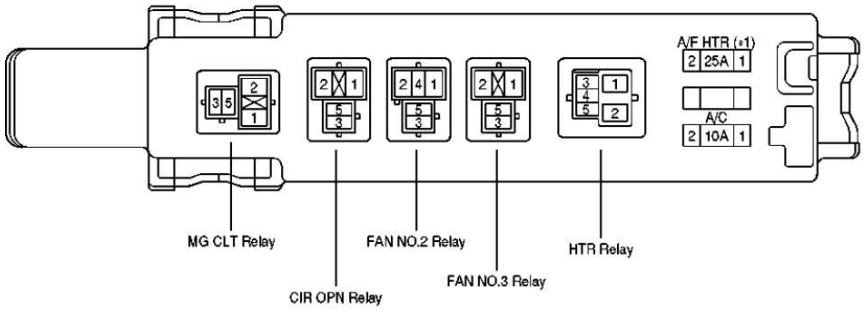
## [Engine Room J/B No.2 Inner Circuit]



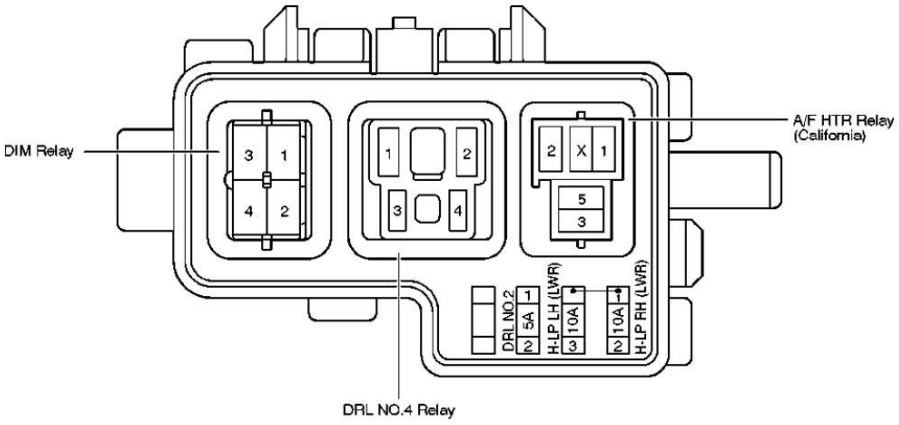
## F RELAY LOCATIONS

| | |
|---|---|
| ① : Engine Room R/B No.1 | Engine Compartment Left (See Page 18)<br>(Inside Engine Room J/B No.2) |

*1 : California

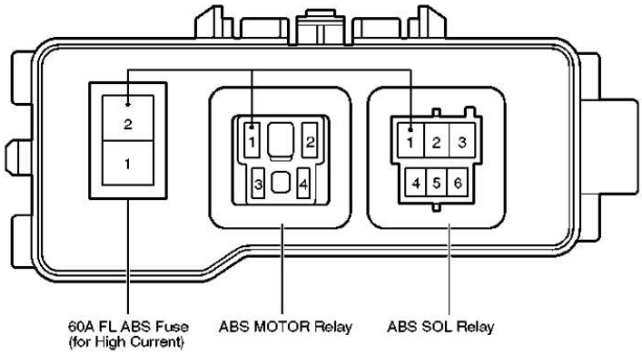



| | |
|---|---|
| ② : Engine Room R/B No.2 | Near the Battery (See Page 18) |



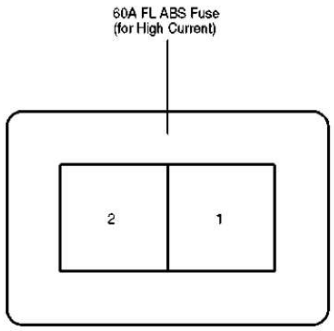
| | |
|---|---|
| ③ : Engine Room R/B No.3 | Radiator Upper Support RH (See Page 18) |

**(TMMK Made w/ ABS and Traction Control)**
**(TMC Made w/ ABS, w/ ABS and Traction Control)**



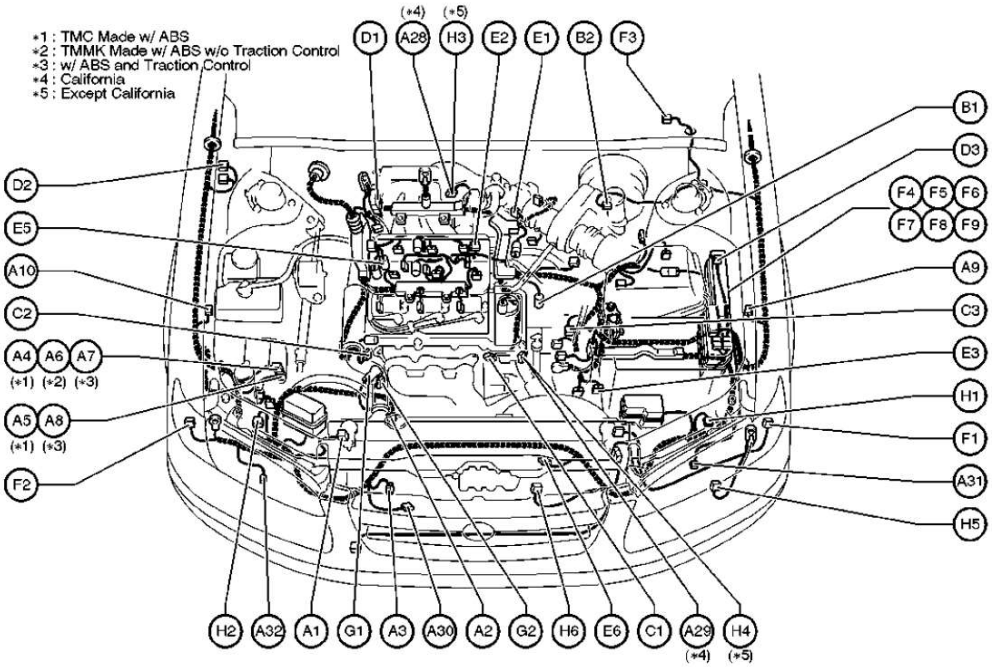

| | |
|---|---|
| ③ : Fusible Link Block | Radiator Upper Support RH (See Page 18) |

**(TMMK Made w/ ABS w/o Traction Control)**



## Position of Parts in Engine Compartment

### [1MZ–FE]




A 1 A/C Condenser Fan Motor
A 2 A/C Magnetic Clutch and Lock Sensor
A 3 A/C Triple Pressure SW
(A/C Dual and Single Pressure SW)
A 4 ABS Actuator
A 5 ABS Actuator
A 6 ABS Actuator and ECU
A 7 ABS and Traction Actuator
A 8 ABS and Traction Actuator
A 9 ABS Speed Sensor Front LH
A10 ABS Speed Sensor Front RH
A28 Air Fuel Ratio Sensor (Bank 1 Sensor 1)
A29 Air Fuel Ratio Sensor (Bank 2 Sensor 1)
A30 A/C Ambient Temp. Sensor
A31 Airbag Sensor Front LH
A32 Airbag Sensor Front RH

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

C 1 Camshaft Position Sensor
C 2 Crankshaft Position Sensor
C 3 Cruise Control Actuator

D 1 Data Link Connector 1
D 2 Daytime Running Light Resistor
D 3 Diode (A/C)

E 1 EGR Gas Temp. Sensor
E 2 EGR Valve Position Sensor
E 3 Electronically Controlled Transmission Solenoid
E 5 Engine Coolant Temp. Sensor
E 6 Engine Hood Courtesy SW

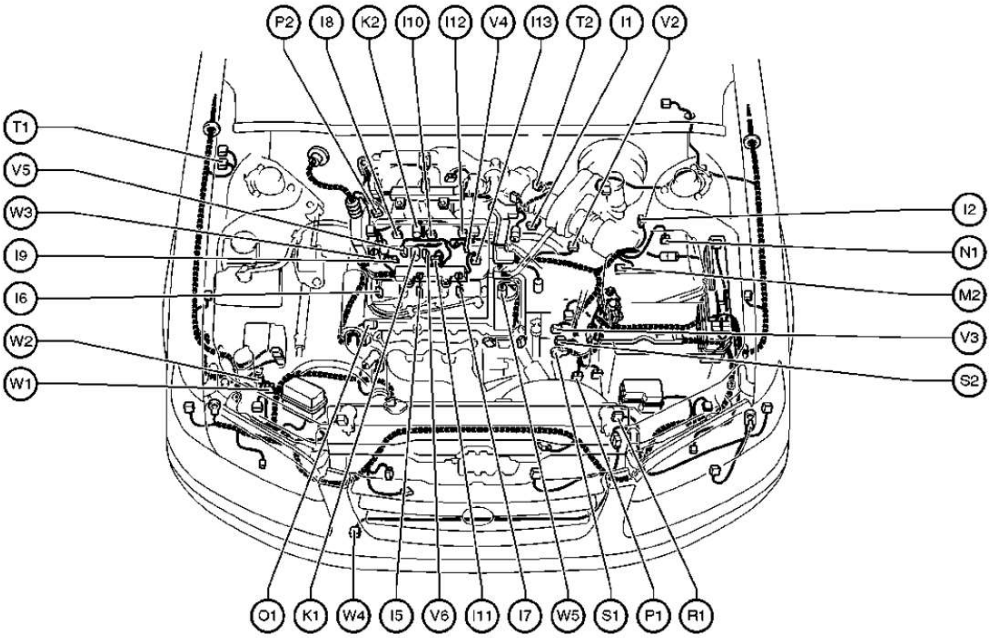
F 1 Front Turn Signal Light and Parking Light LH
F 2 Front Turn Signal Light and Parking Light RH
F 3 Front Wiper Motor
F 4 Fusible Link Block
F 5 Fusible Link Block
F 6 Fusible Link Block
F 7 Fusible Link Block
F 8 Fusible Link Block
F 9 Fusible Link Block

G 1 Generator
G 2 Generator

H 1 Headlight LH
H 2 Headlight RH
H 3 Heated Oxygen Sensor (Bank 1 Sensor 1)
H 4 Heated Oxygen Sensor (Bank 2 Sensor 1)
H 5 Horn (High)
H 6 Horn (Low)

## Position of Parts in Engine Compartment

**[1MZ–FE]**




I 1 Idle Air Control Valve
I 2 Igniter
I 5 Ignition Coil No.1
I 6 Ignition Coil No.2
I 7 Ignition Coil No.3
I 8 Injector No.1
I 9 Injector No.2
I 10 Injector No.3
I 11 Injector No.4
I 12 Injector No.5
I 13 Injector No.6

K 1 Knock Sensor 1
K 2 Knock Sensor 2

M 2 Mass Air Flow Meter

N 1 Noise Filter (Ignition)

O 1 Oil Pressure SW

P 1 Park/Neutral Position SW,A/T Indicator Light SW and Back–Up Light SW
P 2 Power Steering Oil Pressure SW

R 1 Radiator Fan Motor

S 1 Starter
S 2 Starter

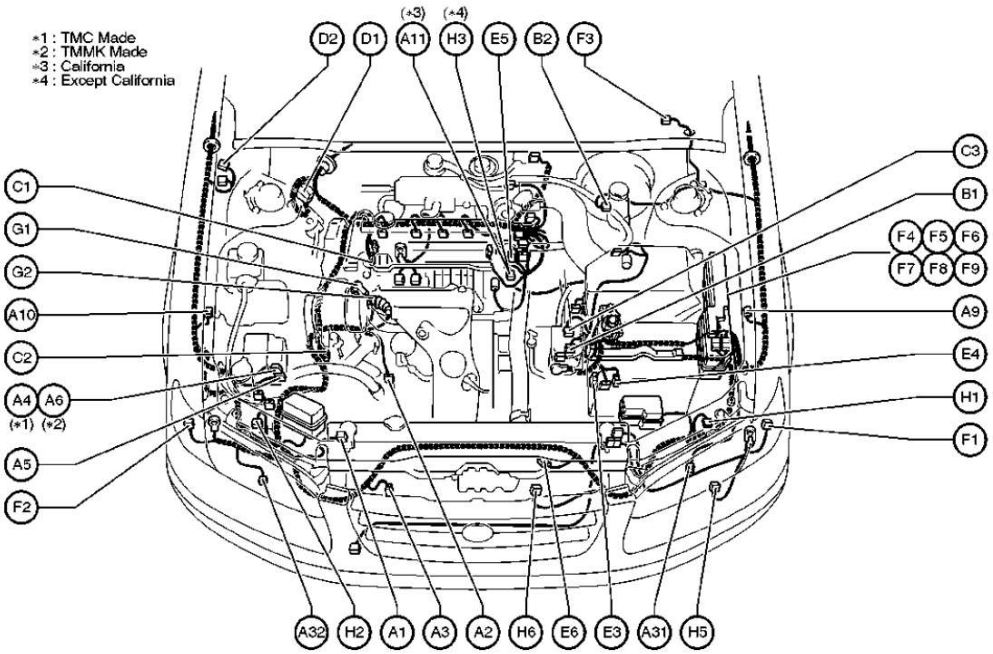
T 1 Theft Deterrent Horn
T 2 Throttle Position Sensor

V 2 Vehicle Speed Sensor (Combination Meter)
V 3 Vehicle Speed Sensor (Electronically Controlled Transmission)
V 4 VSV (EGR)
V 5 VSV (EVAP)
V 6 VSV (Intake Air Control)

W 1 Washer Level Warning SW
W 2 Washer Motor
W 3 Water Temp. Sender
W 4 Water Temp. SW No.1
W 5 Water Temp. SW No.2

## Position of Parts in Engine Compartment

## [5S–FE]




A 1 A/C Condenser Fan Motor
A 2 A/C Magnetic Clutch and Lock Sensor
A 3 A/C Triple Pressure SW
(A/C Dual and Single Pressure SW)
A 4 ABS Actuator
A 5 ABS Actuator
A 6 ABS Actuator and ECU
A 9 ABS Speed Sensor Front LH
A10 ABS Speed Sensor Front RH
A11 Air Fuel Ratio Sensor
A31 Airbag Sensor Front LH
A32 Airbag Sensor Front RH

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

C 1 Camshaft Position Sensor
C 2 Crankshaft Position Sensor
C 3 Cruise Control Actuator

D 1 Data Link Connector 1
D 2 Daytime Running Light Resistor

E 3 Electronically Controlled Transmission Solenoid
E 4 Electronically Controlled Transmission Solenoid
E 5 Engine Coolant Temp. Sensor
E 6 Engine Hood Courtesy SW

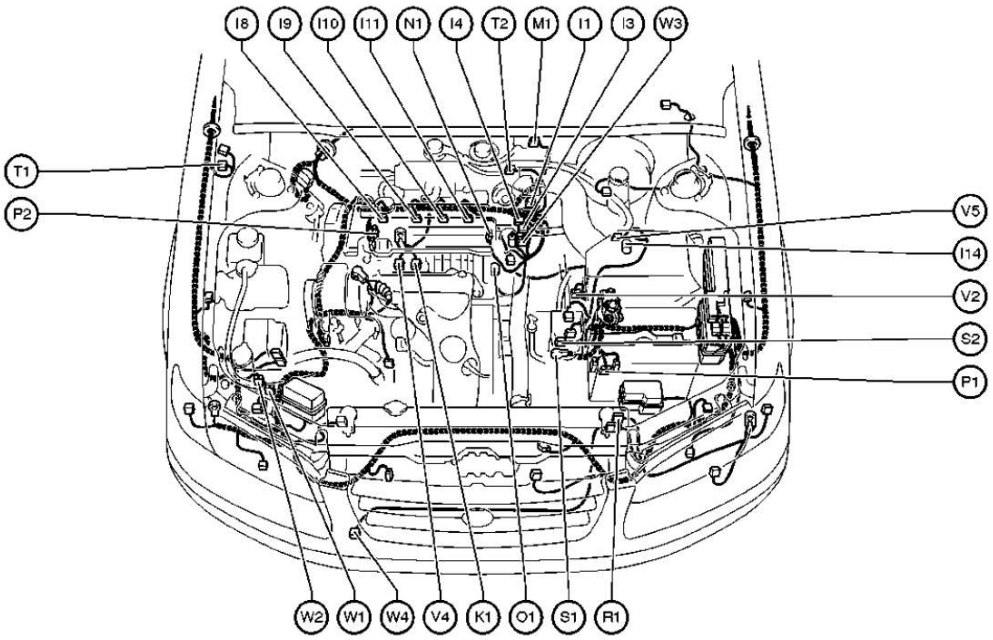
F 1 Front Turn Signal Light and Parking Light LH
F 2 Front Turn Signal Light and Parking Light RH
F 3 Front Wiper Motor
F 4 Fusible Link Block
F 5 Fusible Link Block
F 6 Fusible Link Block
F 7 Fusible Link Block
F 8 Fusible Link Block
F 9 Fusible Link Block

G 1 Generator
G 2 Generator

H 1 Headlight LH
H 2 Headlight RH
H 3 Heated Oxygen Sensor (Bank 1 Sensor 1)
H 5 Horn (High)
H 6 Horn (Low)

## Position of Parts in Engine Compartment

**[5S–FE]**




I 1 Idle Air Control Valve
I 3 Ignition Coil and Igniter No.1
I 4 Ignition Coil and Igniter No.2
I 8 Injector No.1
I 9 Injector No.2
I 10 Injector No.3
I 11 Injector No.4
I 14 Intake Air Temp. Sensor

K 1 Knock Sensor 1

M 1 Manifold Absolute Pressure Sensor

N 1 Noise Filter (Ignition)

O 1 Oil Pressure SW

P 1 Park/Neutral Position SW,A/T Indicator Light SW and Back–Up Light SW
P 2 Power Steering Oil Pressure SW

R 1 Radiator Fan Motor

S 1 Starter
S 2 Starter

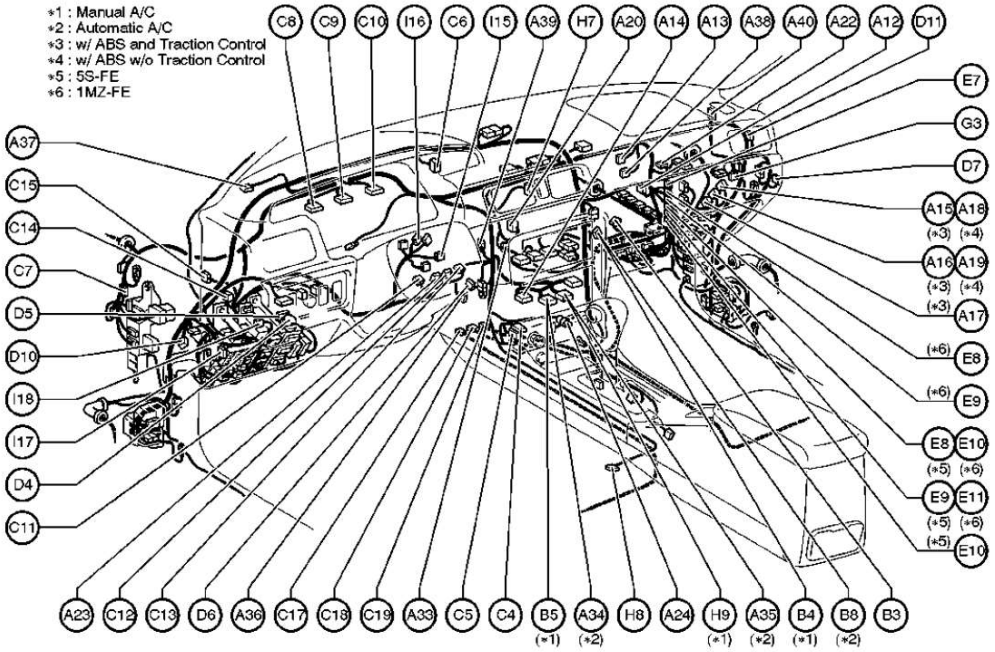
T 1 Theft Deterrent Horn
T 2 Throttle Position Sensor

V 2 Vehicle Speed Sensor (Combination Meter)
V 4 VSV (EGR)
V 5 VSV (EVAP)

W 1 Washer Level Warning SW
W 2 Washer Motor
W 3 Water Temp. Sender
W 4 Water Temp. SW No.1

# G ELECTRICAL WIRING ROUTING

## Position of Parts in Instrument Panel




A 12 A/C Amplifier
A 13 A/C Evaporator Temp. Sensor
A 14 A/C SW
A 15 ABS and Traction ECU
A 16 ABS and Traction ECU
A 17 ABS and Traction ECU
A 18 ABS ECU
A 19 ABS ECU
A 20 Air Vent Mode Control Servo Motor
A 22 Airbag Squib (Front Passenger Airbag Assembly)
A 23 Airbag Squib (Steering Wheel Pad)
A 24 Ashtray Illumination
A 33 A/C Blower Motor Linear Controller
A 34 A/C Control Assembly
A 35 A/C Control Assembly
A 36 A/C Room Temp. Sensor
A 37 A/C Solar Sensor
A 38 Air Inlet Control Servo Motor
A 39 Air Mix Control Servo Motor
A 40 Automatic Light Control Sensor

B 3 Blower Motor
B 4 Blower Resistor
B 5 Blower SW
B 8 Blower Resistor (Low Speed)

C 4 Cigarette Lighter
C 5 Cigarette Lighter Illumination
C 6 Clock
C 7 Clutch Start SW
C 8 Combination Meter
C 9 Combination Meter
C 10 Combination Meter
C 11 Combination SW
C 12 Combination SW
C 13 Combination SW
C 14 Cruise Control Clutch SW
C 15 Cruise Control ECU
C 17 Center Airbag Sensor Assembly
C 18 Center Airbag Sensor Assembly
C 19 Center Airbag Sensor Assembly

D 4 Data Link Connector 2
D 5 Data Link Connector 3
D 6 Daytime Running Light Relay (Main)
D 7 Diode (Courtesy)
D 10 Diode (Dome)
D 11 Diode (Idle–Up)

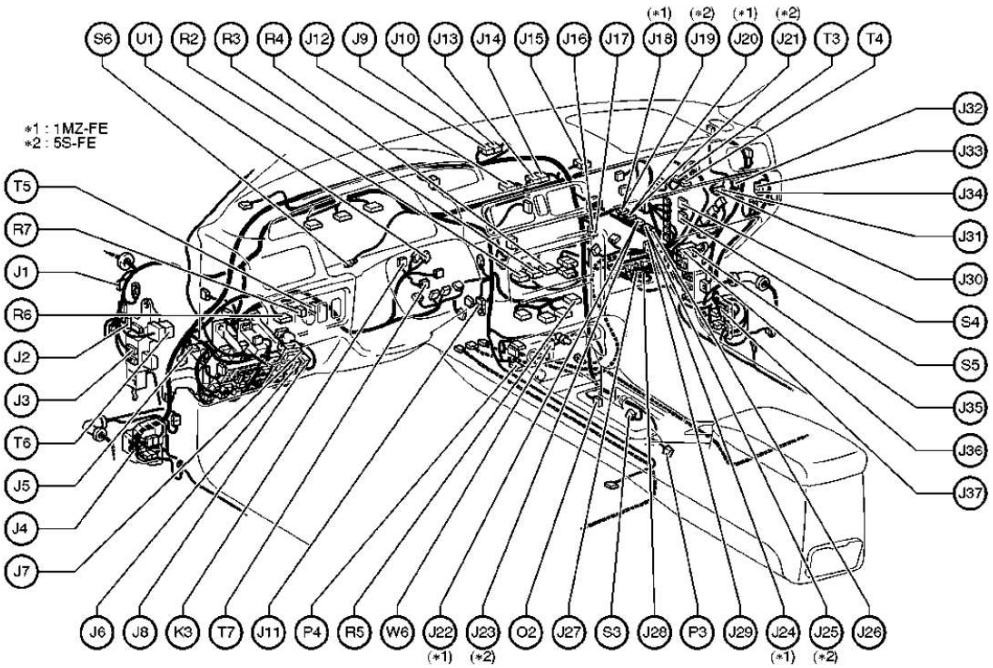
E 7 Engine Control Module
E 8 Engine Control Module
E 9 Engine Control Module
E 10 Engine Control Module
E 11 Engine Control Module

G 3 Glove Box Light and SW

H 7 Hazard SW
H 8 Heated Oxygen Sensor (Bank 1 Sensor 2)
H 9 Heater Control SW

I 15 Ignition Key Cylinder Light
I 16 Ignition SW
I 17 Integration Relay
I 18 Integration Relay

## Position of Parts in Instrument Panel




J 1 Junction Connector
J 2 Junction Connector
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
J 12 Junction Connector
J 13 Junction Connector
J 14 Junction Connector
J 15 Junction Connector
J 16 Junction Connector
J 17 Junction Connector
J 18 Junction Connector
J 19 Junction Connector
J 20 Junction Connector
J 21 Junction Connector
J 22 Junction Connector
J 23 Junction Connector
J 24 Junction Connector
J 25 Junction Connector
J 26 Junction Connector
J 27 Junction Connector
J 28 Junction Connector
J 29 Junction Connector
J 30 Junction Connector
J 31 Junction Connector
J 32 Junction Connector
J 33 Junction Connector
J 34 Junction Connector
J 35 Junction Connector
J 36 Junction Connector
J 37 Junction Connector

K 3 Key Interlock Solenoid

O 2 O/D Main SW and A/T Shift Lever Illumination

P 3 Parking Brake SW
P 4 Power Outlet

R 2 Radio and Player
R 3 Radio and Player
R 4 Radio and Player
R 5 Rear Window Defogger SW
R 6 Remote Control Mirror SW
R 7 Rheostat

S 3 Shift Lock ECU
S 4 Stereo Component Amplifier
S 5 Stereo Component Amplifier
S 6 Stop Light SW

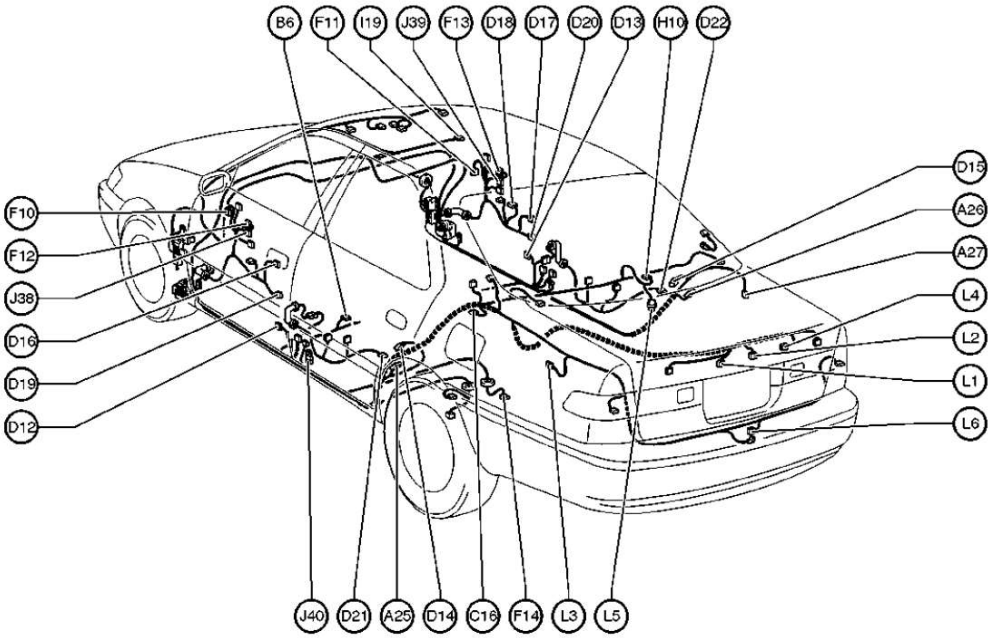
T 3 Theft Deterrent ECU
T 4 Theft Deterrent ECU
T 5 Traction Off SW
T 6 Turn Signal Flasher
T 7 Transponder Key Amplifier

U 1 Unlock Warning SW

W 6 Wireless Door Lock ECU

# G ELECTRICAL WIRING ROUTING

## Position of Parts in Body




A25 ABS Speed Sensor Rear LH
A26 ABS Speed Sensor Rear RH
A27 Auto Antenna Motor and Relay

B 6 Buckle SW LH

C16 Condenser

D12 Door Courtesy SW Front LH
D13 Door Courtesy SW Front RH
D14 Door Courtesy SW Rear LH
D15 Door Courtesy SW Rear RH
D16 Door Key Lock and Unlock SW Front LH
D17 Door Key Lock and Unlock SW Front RH
D18 Door Lock Control SW RH
D19 Door Lock Motor and Door Unlock Detection SW Front LH
D20 Door Lock Motor and Door Unlock Detection SW Front RH
D21 Door Lock Motor and Door Unlock Detection SW Rear LH
D22 Door Lock Motor and Door Unlock Detection SW Rear RH

F 10 Front Door Speaker LH
F 11 Front Door Speaker RH
F 12 Front Tweeter (Speaker) LH
F 13 Front Tweeter (Speaker) RH
F 14 Fuel Pump and Sender

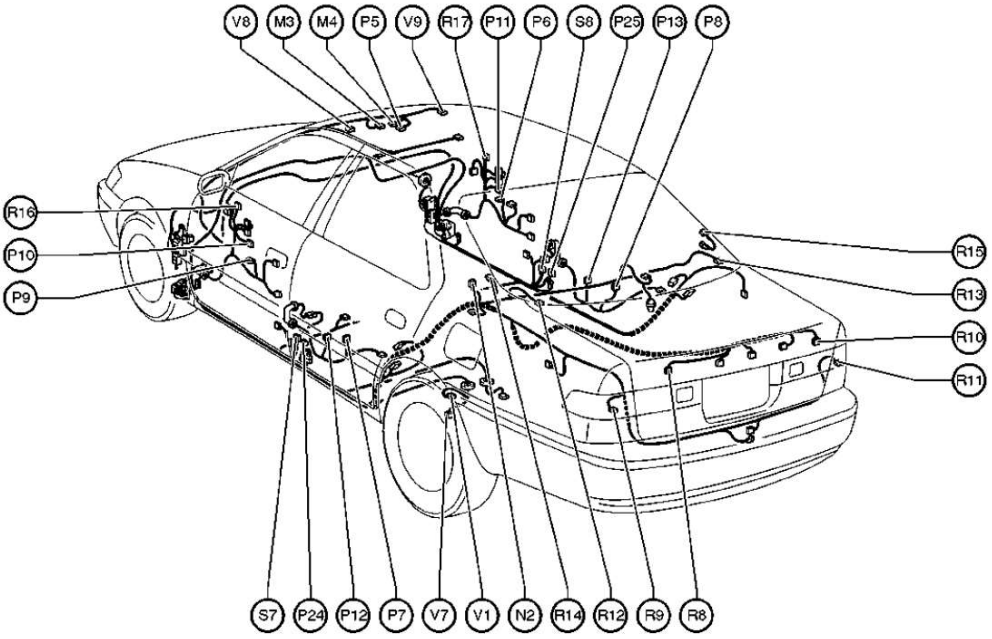
H10 High Mounted Stop Light

I 19 Interior Light

J 38 Junction Connector
J 39 Junction Connector
J 40 Junction Connector

L 1 License Plate Light LH
L 2 License Plate Light RH
L 3 Light Failure Sensor
L 4 Luggage Compartment Key Unlock SW
L 5 Luggage Compartment Light
L 6 Luggage Compartment Light SW

## Position of Parts in Body




M 3 Moon Roof Control SW and Relay
M 4 Moon Roof Motor and Limit SW

N 2 Noise Filter (Rear Window Defogger)

P 5 Personal Light
P 6 Power Window Control SW Front RH
P 7 Power Window Control SW Rear LH
P 8 Power Window Control SW Rear RH
P 9 Power Window Master SW and Door Lock Control SW LH
P10 Power Window Motor Front LH
P11 Power Window Motor Front RH
P12 Power Window Motor Rear LH
P13 Power Window Motor Rear RH
P24 Pretensioner LH
P25 Pretensioner RH

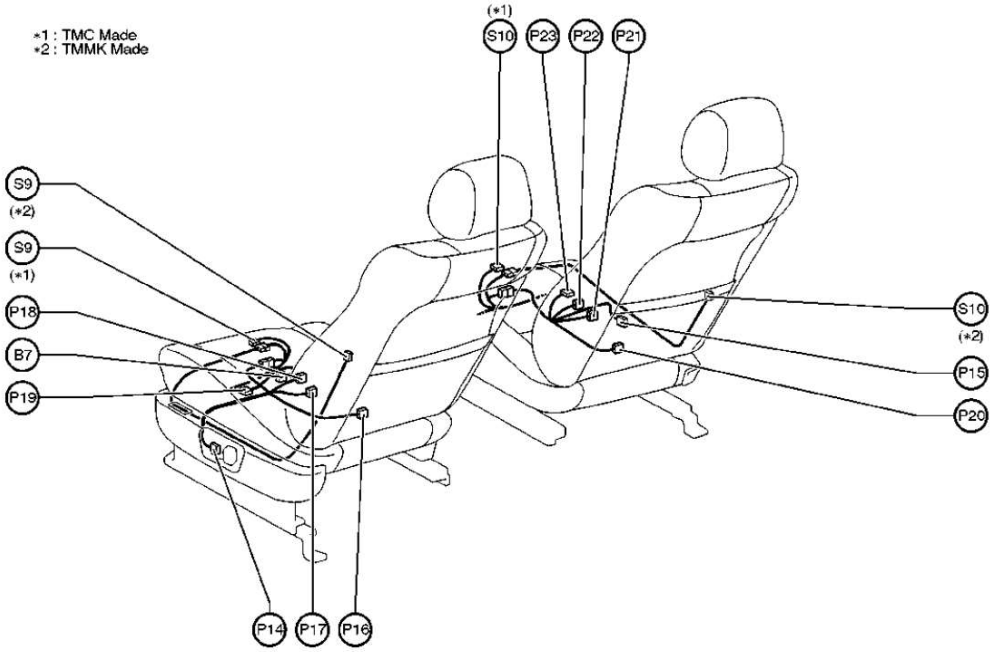
R 8 Rear Combination Light LH
R 9 Rear Combination Light LH
R10 Rear Combination Light RH
R11 Rear Combination Light RH
R12 Rear Speaker LH
R13 Rear Speaker RH
R14 Rear Window Defogger
R15 Rear Window Defogger
R16 Remote Control Mirror LH
R17 Remote Control Mirror RH

S 7 Side Airbag Sensor LH
S 8 Side Airbag Sensor RH

V 1 Vapor Pressure Sensor
V 7 VSV (Vapor Pressure Sensor)
V 8 Vanity Light LH
V 9 Vanity Light RH

## G ELECTRICAL WIRING ROUTING

### Position of Parts in Seat




B 7 Buckle SW LH

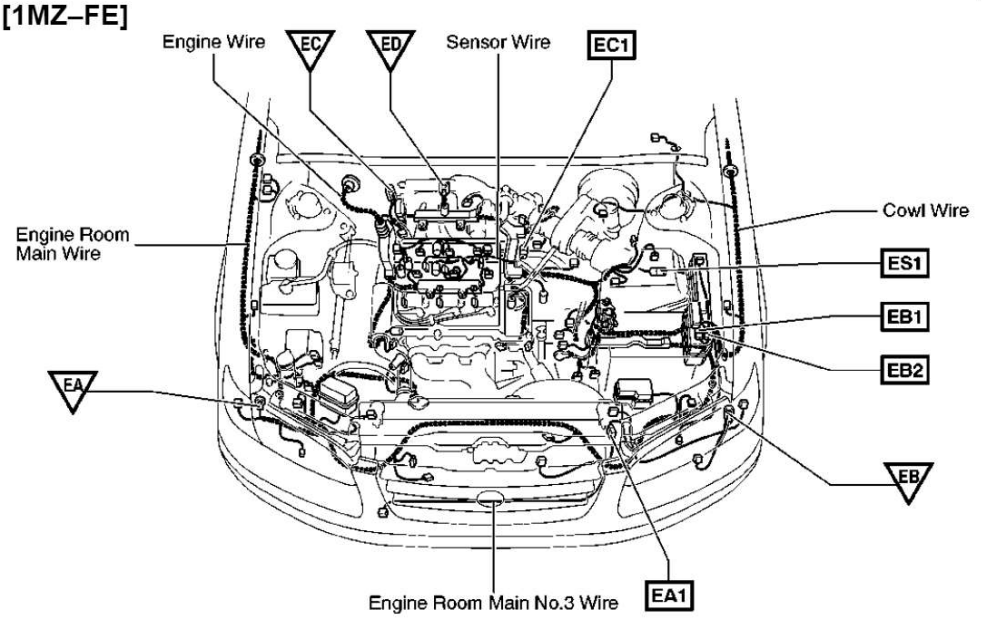
P14 Power Seat Control SW (Driver's Seat)
P15 Power Seat Control SW (Front Passenger's Seat)
P16 Power Seat Motor (Driver's Seat Rear Vertical Control)
P17 Power Seat Motor (Driver's Seat Reclining Control)
P18 Power Seat Motor (Driver's Seat Slide Control)
P19 Power Seat Motors (Driver's Seat)
P20 Power Seat Motor
(Front Passenger's Seat Rear Vertical Control)
P21 Power Seat Motor
(Front Passenger's Seat Reclining Control)
P22 Power Seat Motor (Front Passenger's Seat Slide Control)
P23 Power Seat Motors (Front Passenger's Seat)

S 9 Side Airbag Squib LH
S10 Side Airbag Squib RH

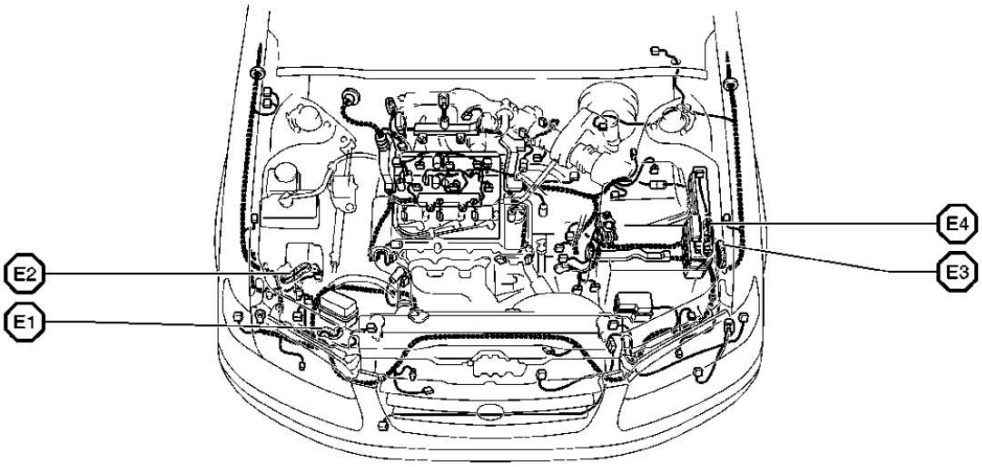
## G ELECTRICAL WIRING ROUTING

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

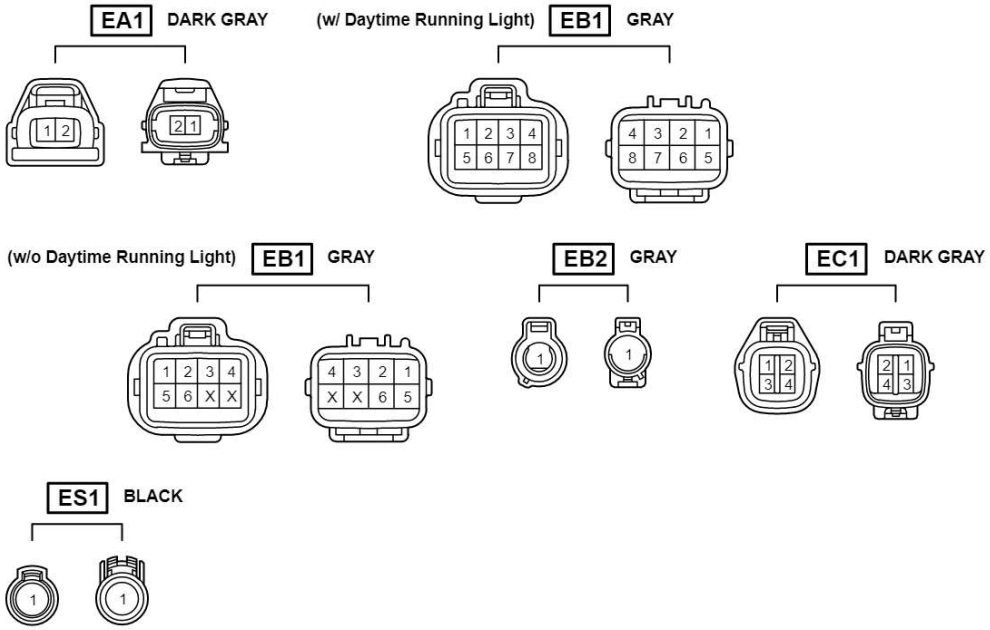
**[1MZ–FE]**




| |
|---|
| ○ : Location of Splice Points |



## Connector Joining Wire Harness and Wire Harness

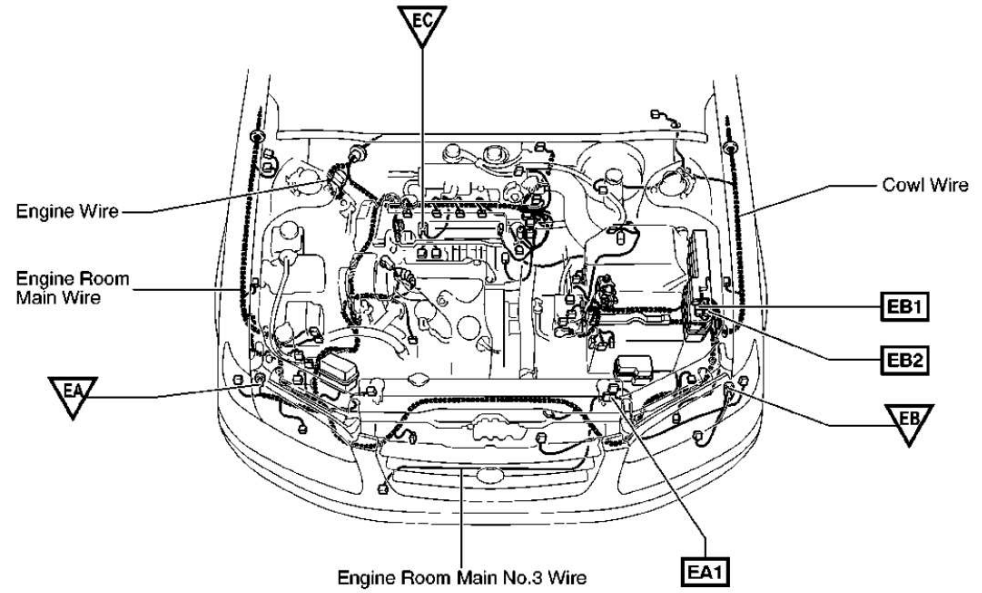



| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| EA1 | Engine Room Main Wire and Engine Room Main No.3 Wire (Radiator LH) |
| EB1 | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| EB2 | |
| EC1 | Engine Wire and Sensor Wire (Head Cover RH) |
| ES1 | Engine Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |

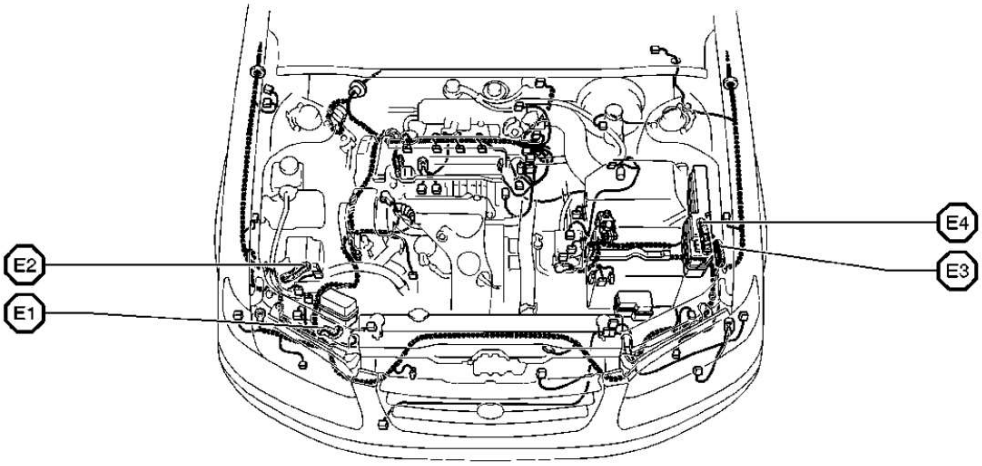
## G ELECTRICAL WIRING ROUTING

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

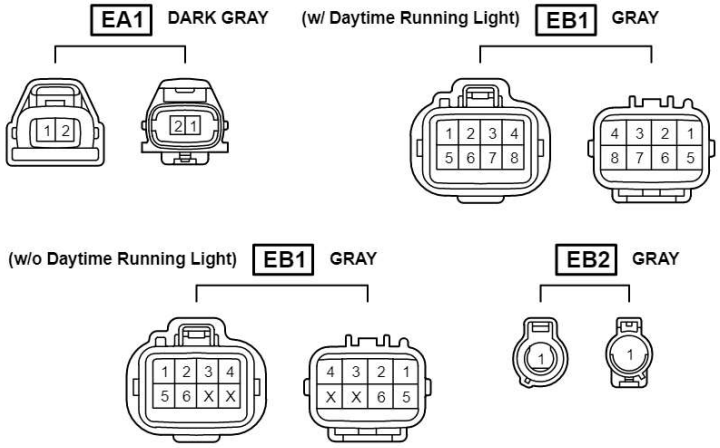
**[5S–FE]**




| |
|---|
| ○ : Location of Splice Points |



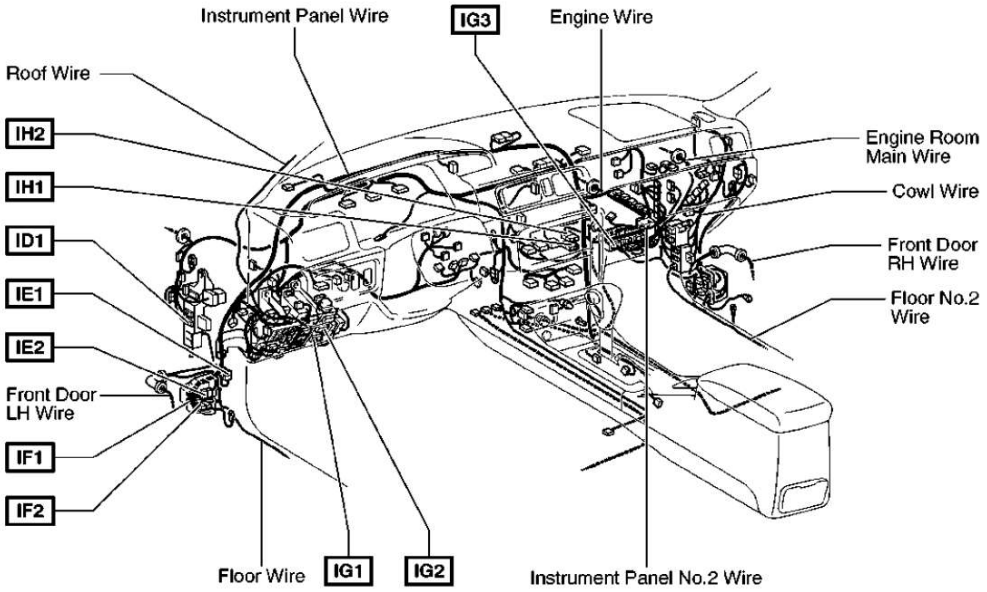
## Connector Joining Wire Harness and Wire Harness



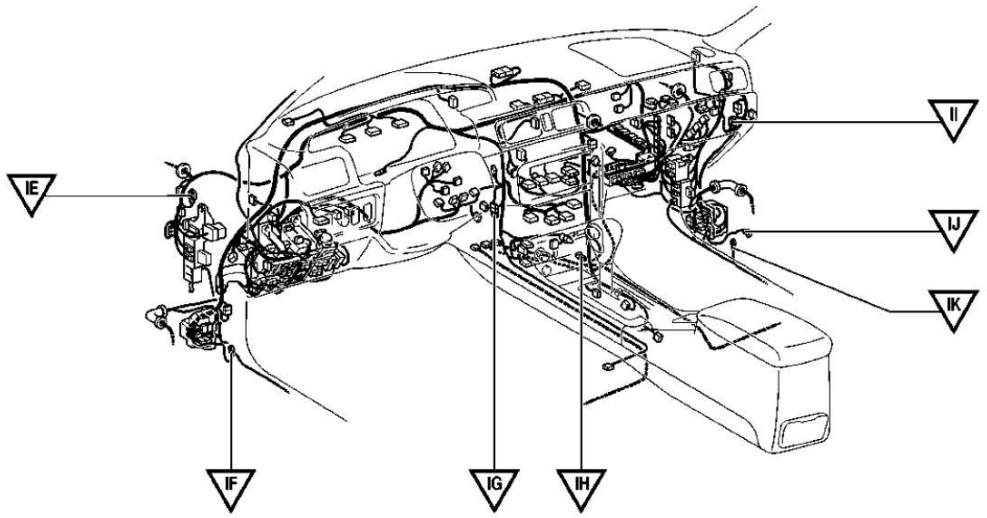

| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| EA1 | Engine Room Main Wire and Engine Room Main No.3 Wire (Radiator LH) |
| EB1 | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| EB2 | |

## G ELECTRICAL WIRING ROUTING

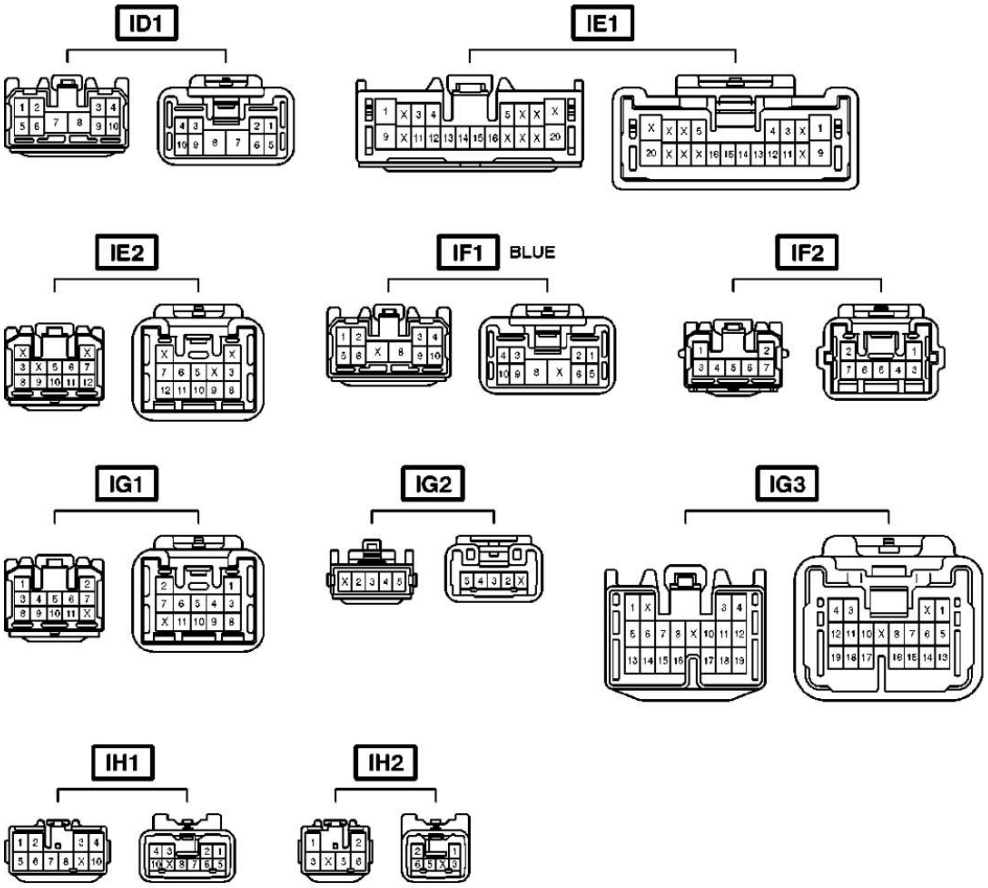
▭ : Location of Connector Joining Wire Harness and Wire Harness




▽ : Location of Ground Points



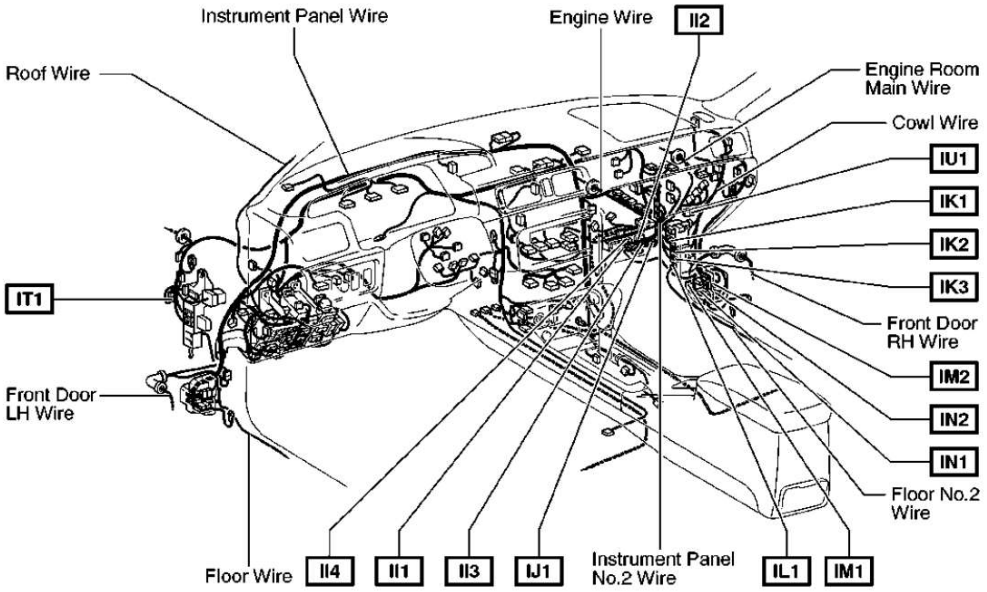
## Connector Joining Wire Harness and Wire Harness



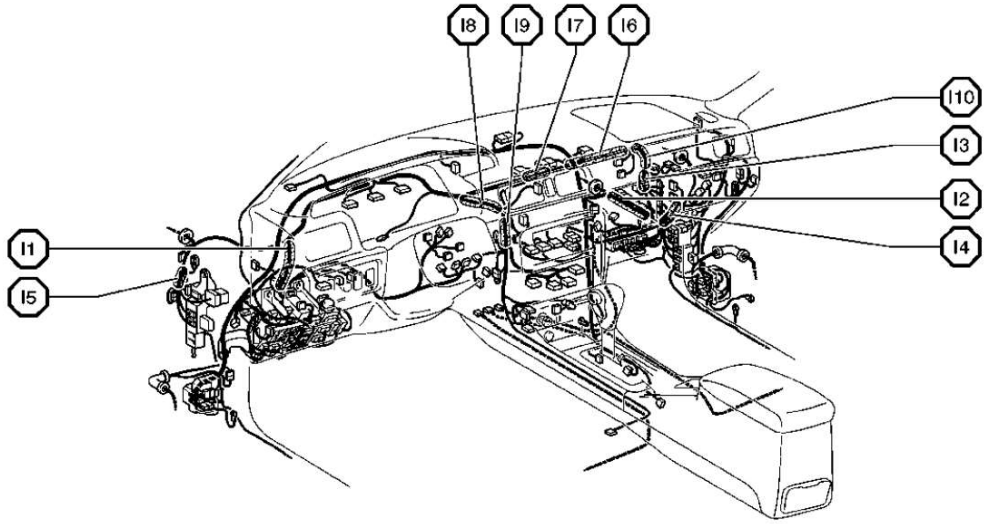

| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| ID1 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IE1 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IE2 | Front Door LH Wire and Cowl Wire (Left Kick Panel) |
| IF1 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IF2 | |
| IG1 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG2 | |
| IG3 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IH1 | Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH) |
| IH2 | |

## G ELECTRICAL WIRING ROUTING

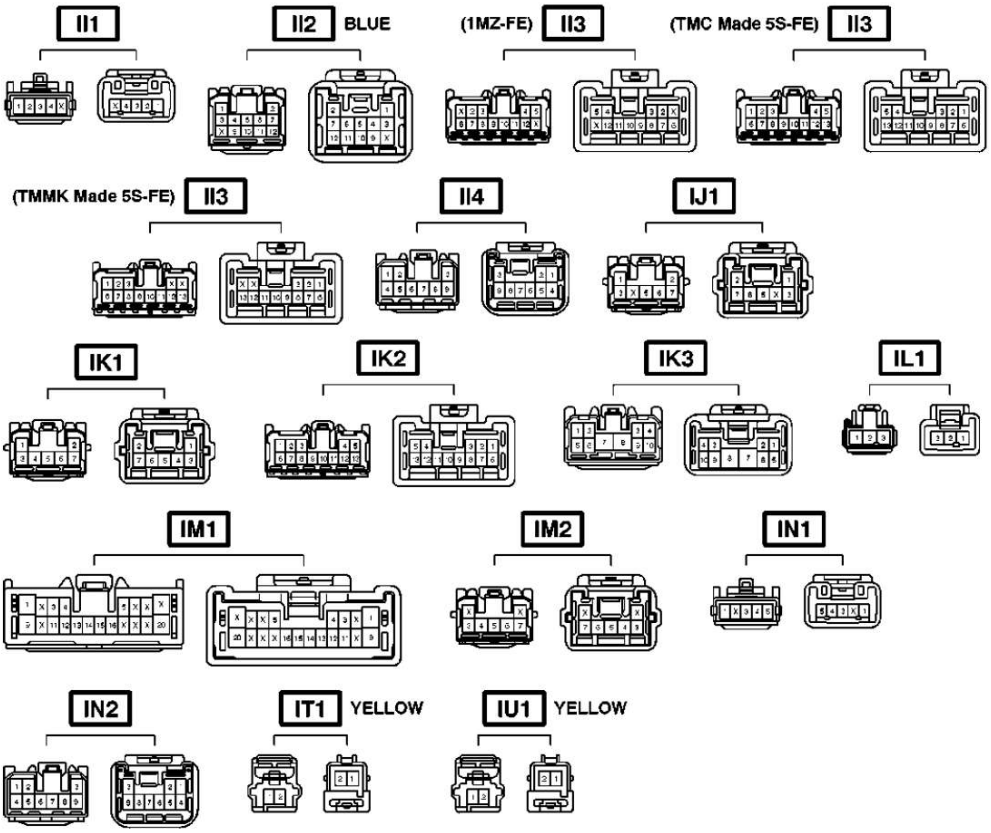
▭ : Location of Connector Joining Wire Harness and Wire Harness




◯ : Location of Splice Points



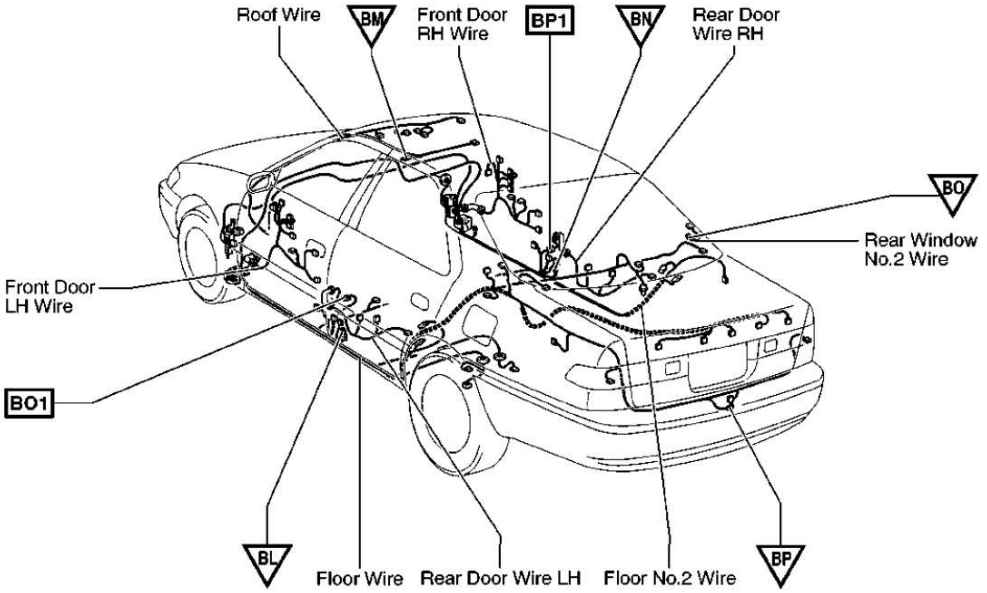
## Connector Joining Wire Harness and Wire Harness



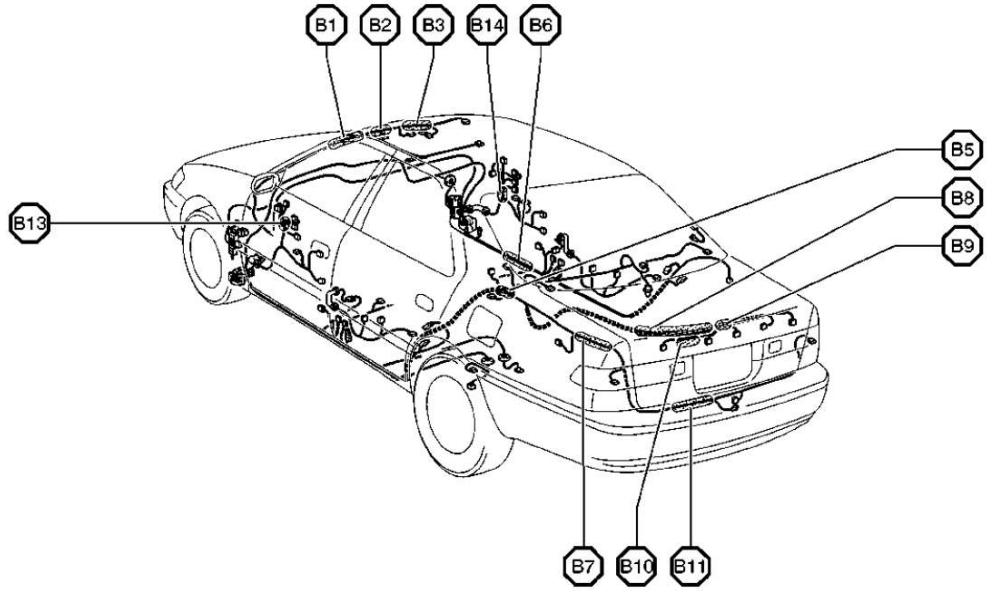

| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| II1 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II2 | |
| II3 | |
| II4 | |
| IJ1 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| IK1 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IK2 | |
| IK3 | |
| IL1 | Floor No.2 Wire and Cowl Wire (Right Kick Panel) |
| IM1 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IM2 | |
| IN1 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| IN2 | |
| IT1 | Cowl Wire and Cowl Wire (Left Kick Panel) |
| IU1 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

## G ELECTRICAL WIRING ROUTING

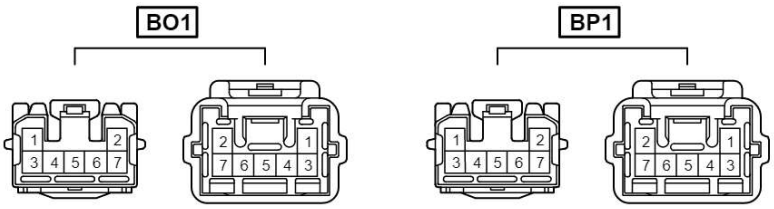
| |
|---|
| ▭ : Location of Connector Joining Wire Harness and Wire Harness |
| ▽ : Location of Ground Points |




| |
|---|
| ○ : Location of Splice Points |



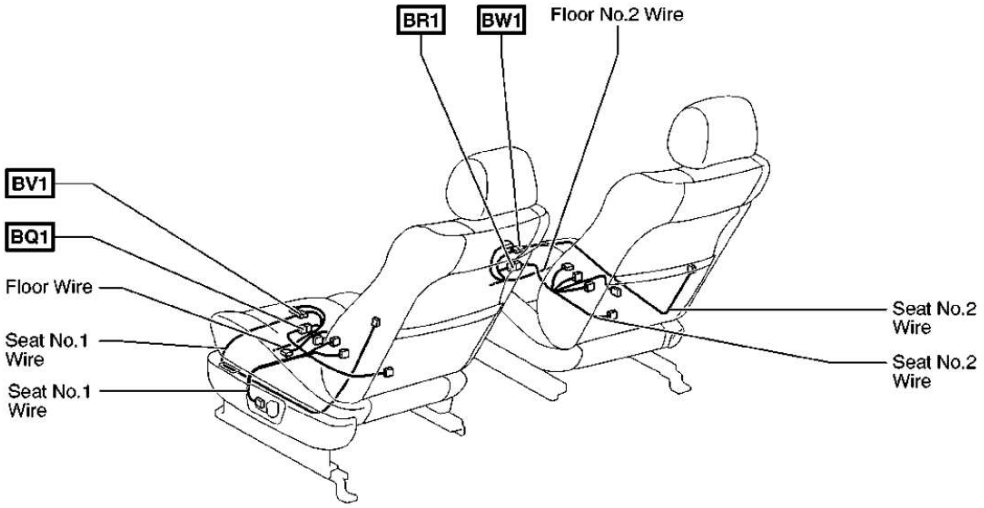
## Connector Joining Wire Harness and Wire Harness



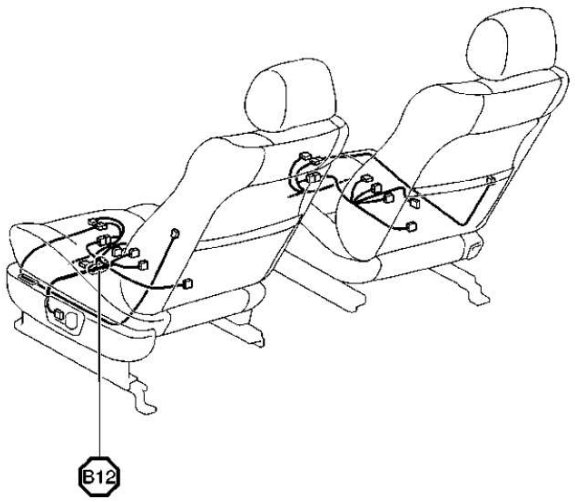

| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| BO1 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

## G ELECTRICAL WIRING ROUTING

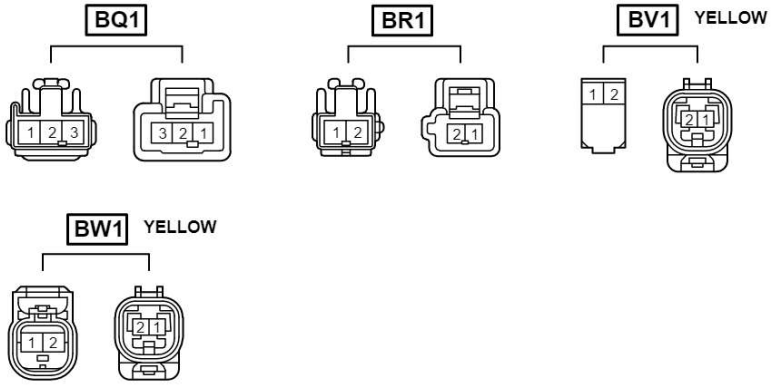
▭ : Location of Connector Joining Wire Harness and Wire Harness




◯ : Location of Splice Points

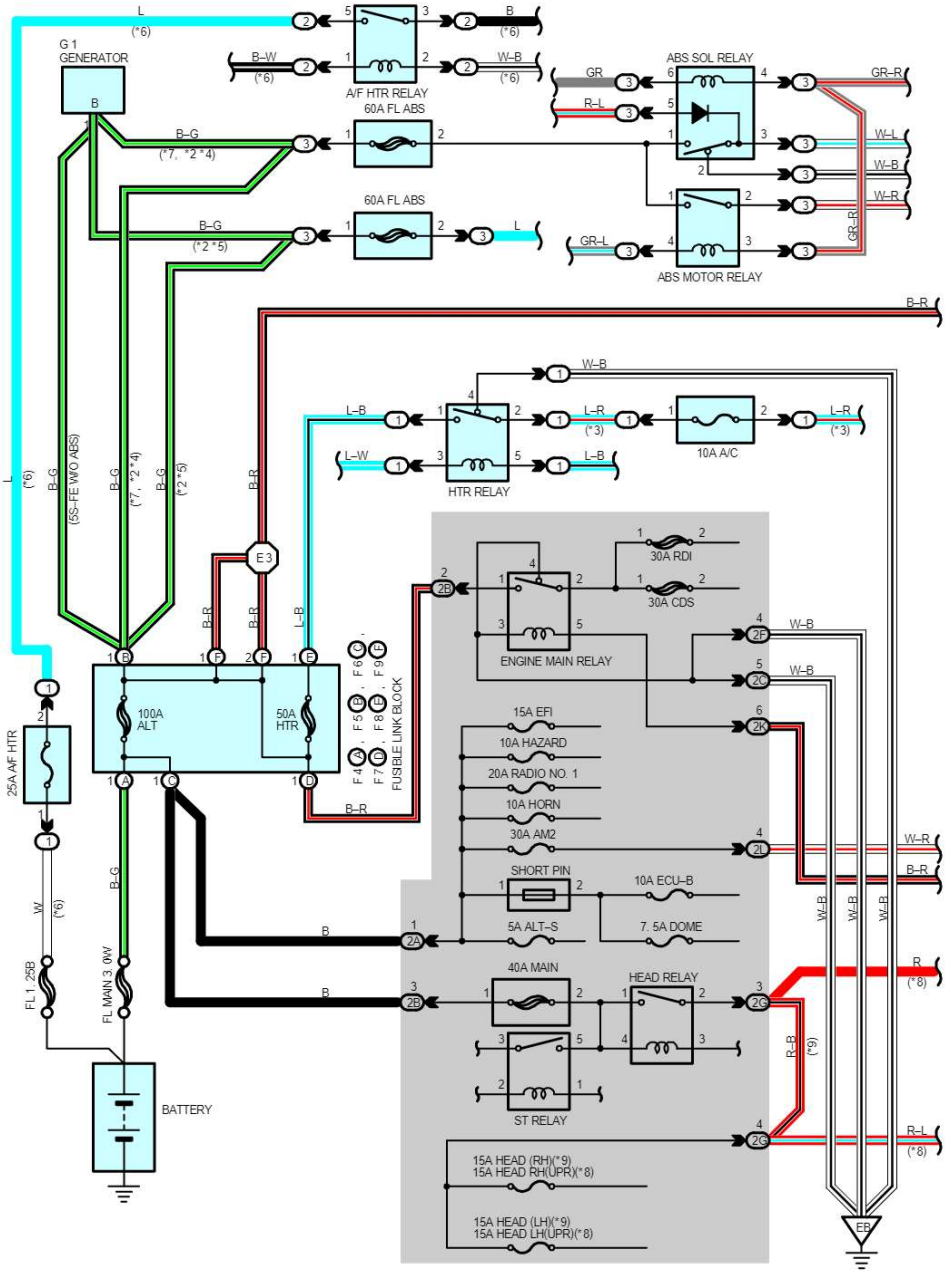


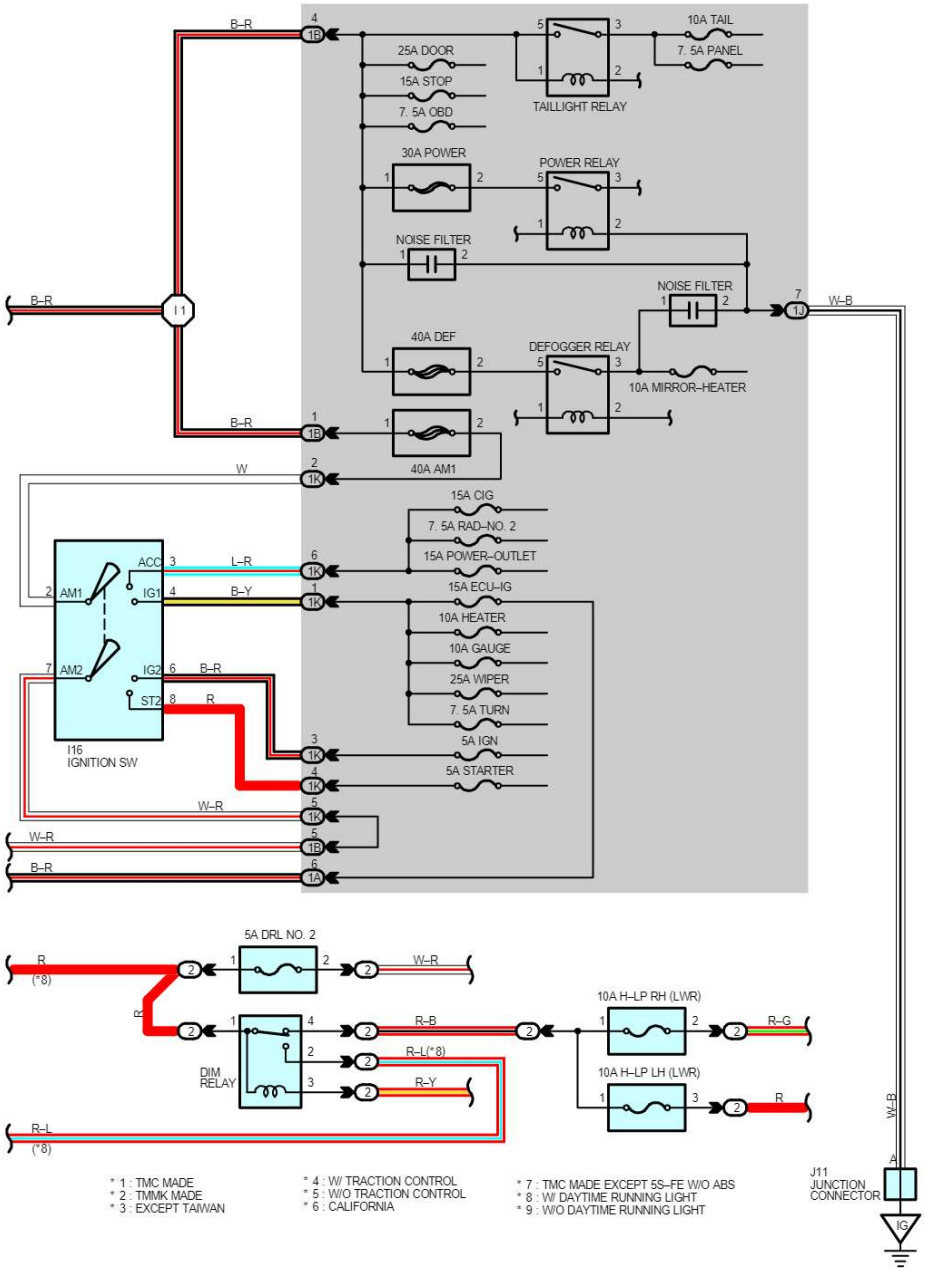
## Connector Joining Wire Harness and Wire Harness




| Code | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|
| BQ1 | Floor Wire and Seat No.1 Wire (Under the Driver's Seat) |
| BR1 | Floor No.2 Wire and Seat No.2 Wire (Under the Passenger's Seat) |
| BV1 | Floor Wire and Seat No.1 Wire (Under the Driver's Seat) |
| BW1 | Floor No.2 Wire and Seat No.2 Wire (Under the Passenger's Seat) |

## POWER SOURCE






* 1 : TMC MADE
* 2 : TMMK MADE
* 3 : EXCEPT TAIWAN
* 4 : W/ TRACTION CONTROL
* 5 : W/O TRACTION CONTROL
* 6 : CALIFORNIA
* 7 : TMC MADE EXCEPT 5S–FE W/O ABS
* 8 : W/ DAYTIME RUNNING LIGHT
* 9 : W/O DAYTIME RUNNING LIGHT

# POWER SOURCE

**SERVICE HINTS**

**HEAD RELAY [ENGINE ROOM J/B NO.2]**

2–1 : Closed with the light control SW at **HEAD** position or the dimmer SW at **FLASH** position
Closed with the engine running and the parking brake pedal released (Parking brake SW off) (w/ Daytime Running Light)

**TAILLIGHT RELAY [INSTRUMENT PANEL J/B]**

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

**I16 IGNITION SW**

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

**: PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|---|
| F4 | A | 26 (1MZ–FE)<br>28 (5S–FE) | F7 | D | 26 (1MZ–FE)<br>28 (5S–FE) | G1 | 26 (1MZ–FE)<br>28 (5S–FE) |
| F5 | B | 26 (1MZ–FE)<br>28 (5S–FE) | F8 | E | 26 (1MZ–FE)<br>28 (5S–FE) | I16<br>J11 | 30<br>31 |
| F6 | C | 26 (1MZ–FE)<br>28 (5S–FE) | F9 | F | 26 (1MZ–FE)<br>28 (5S–FE) | | |

**: RELAY BLOCKS**

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 24 | Engine Room R/B No.1 (Engine Compartment Left) |
| 2 | 24 | Engine Room R/B No.2 (Near the Battery) |
| 3 | 25 | Engine Room R/B No.3 (Radiator Upper Support RH) |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1A | 20 | Cowl Wire and J/B Instrument Panel J/B (Lower Finish Panel) |
| 1B | | |
| 1J | | |
| 1K | | |
| 2A | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2B | | |
| 2C | | |
| 2F | | |
| 2G | | |
| 2K | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2L | | |

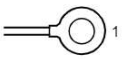
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE)<br>38 (5S–FE) | Left Radiator Side Support |
| IG | 40 | Instrument Panel Brace LH |

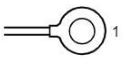
**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE)<br>38 (5S–FE) | Cowl Wire | I1 | 42 | Cowl Wire |

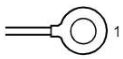
**F4 (A)**



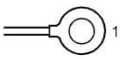

**F5 (B)**



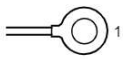

**F6 (C)**




**F7 (D)**




**F8 (E)**



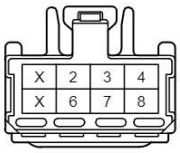

**F9 (F)**
ORANGE



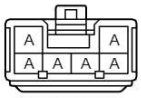

**G1**




**I16**

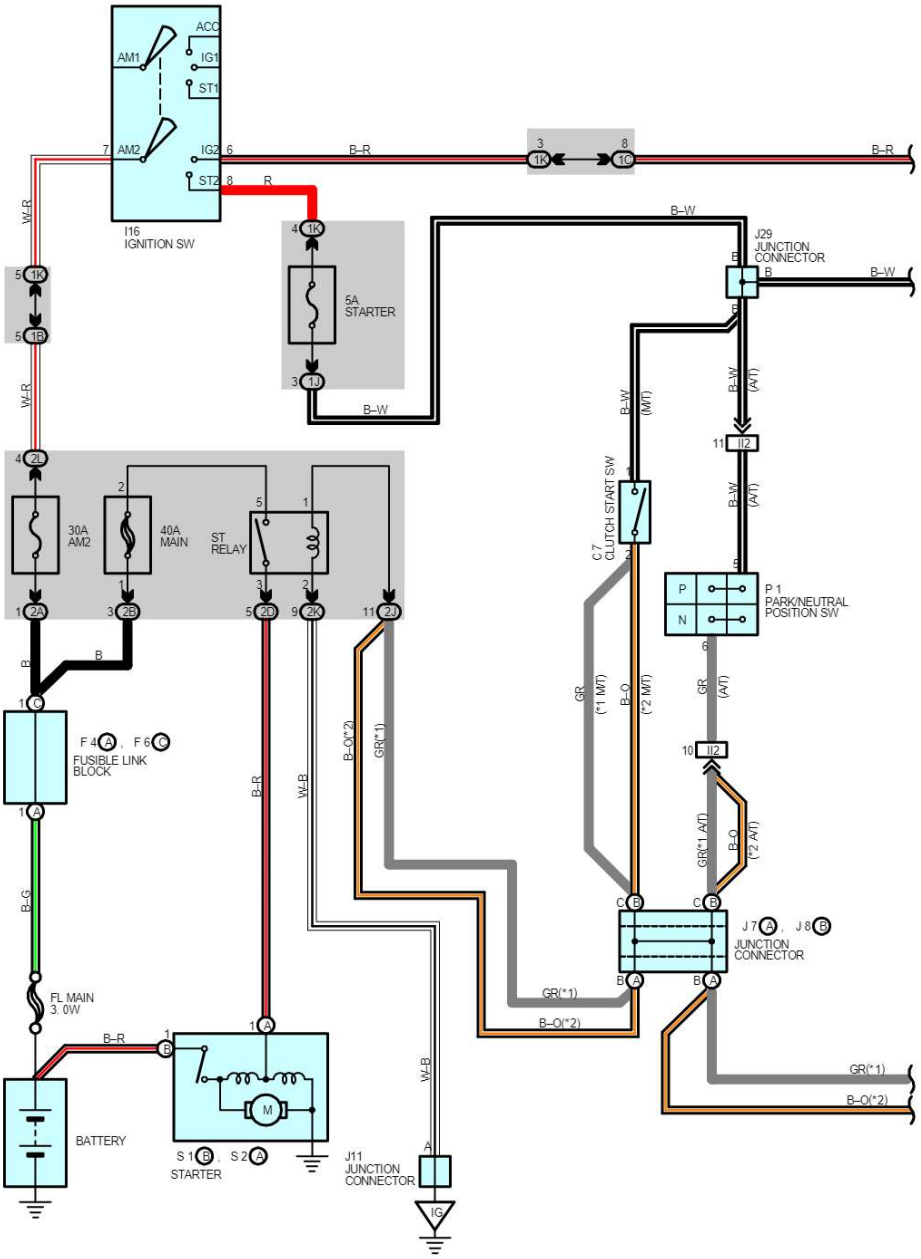



**J11**

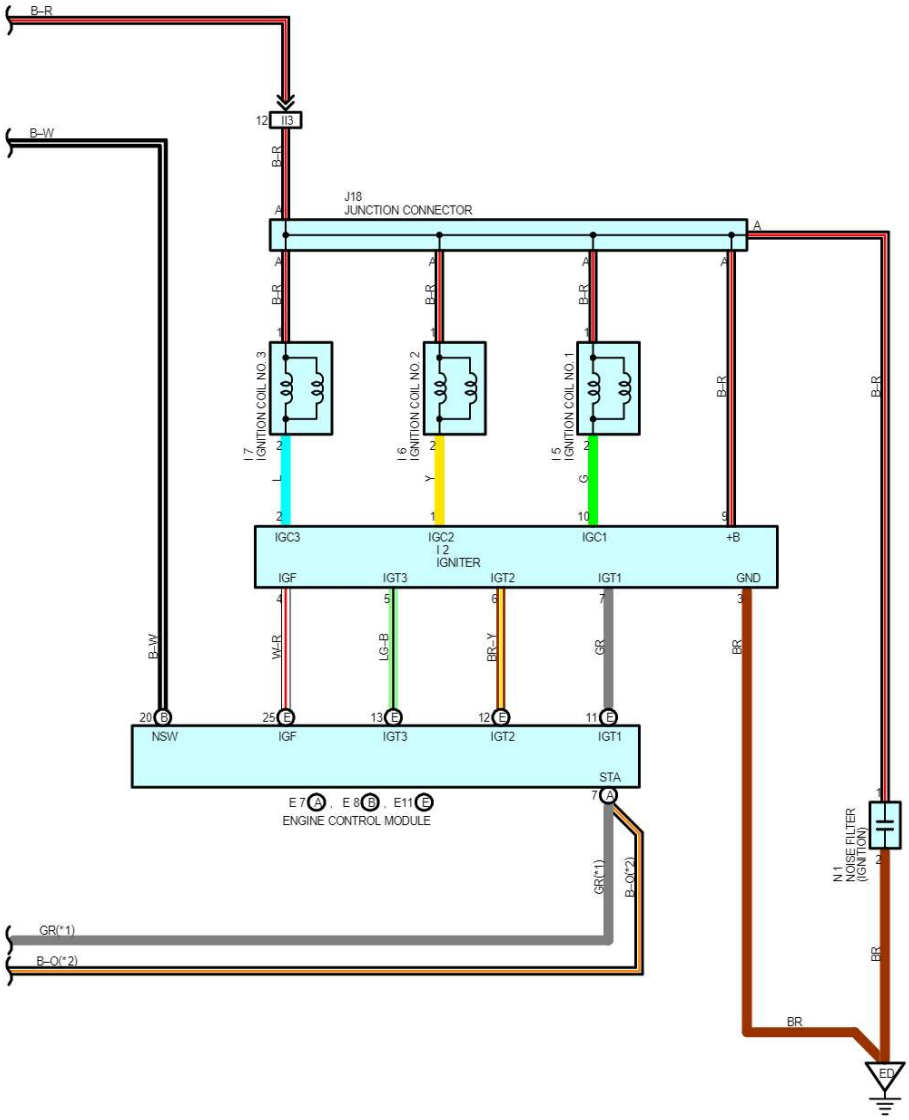



(Hint : See Page 7)

## STARTING AND IGNITION (1MZ–FE)



* 1 : TMC MADE
* 2 : TMMK MADE



# STARTING AND IGNITION (1MZ–FE)

**SERVICE HINTS**

**I16 IGNITION SW**

7–6 : Closed with the ignition SW at **ON** or **ST** position
7–8 : Closed with the ignition SW at **ST** position

**P1 PARK/NEUTRAL POSITION SW**

5–6 : Closed with the A/T shift lever in **P** or **N** position (A/T)

**S1 (B), S2 (A) STARTER**

Points closed with the Park/Neutral position SW at **P** or **N** position and the ignition SW at **ST** position (A/T)
Points closed with the clutch start SW on and the ignition SW at **ST** position (M/T)

**: PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| C7 | | 30 | I5 | | 27 (1MZ–FE) | J18 | | 31 |
| E7 | A | 30 | I6 | | 27 (1MZ–FE) | J29 | | 31 |
| E8 | B | 30 | I7 | | 27 (1MZ–FE) | N1 | | 27 (1MZ–FE) |
| E11 | E | 30 | I16 | | 30 | P1 | | 27 (1MZ–FE) |
| F4 | A | 26 (1MZ–FE) | J7 | A | 31 | S1 | B | 27 (1MZ–FE) |
| F6 | C | 26 (1MZ–FE) | J8 | B | 31 | S2 | A | 27 (1MZ–FE) |
| I2 | | 27 (1MZ–FE) | J11 | | 31 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1J | | |
| 1K | | |
| 2A | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2B | | |
| 2D | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |
| 2L | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II3 | | |

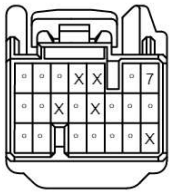
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| ED | 36 (1MZ–FE) | Rear Side of the Surge Tank |
| IG | 40 | Instrument Panel Brace LH |

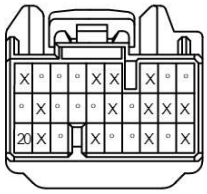
**C7**



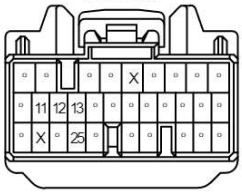

**E7 (A)**



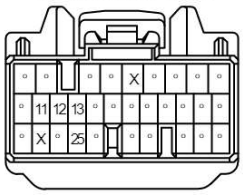

**E8 (B)**



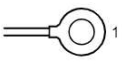

**E11 (E)**
(California)



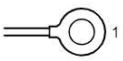
**E11 (E)**
(Except California) BLACK



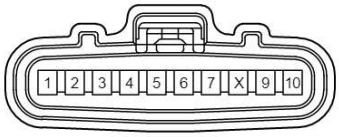

**F4 (A)**



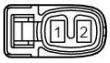

**F6 (C)**



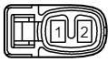

**I2**
BLACK




**I5**
BLACK



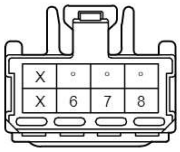

**I6**
BLACK



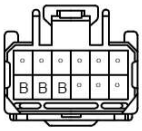

**I7**
BLACK




**I16**

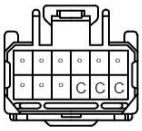



**J7 (A)**
GRAY



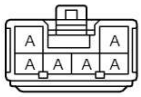

(Hint : See Page 7)

**J8 (B)**
GRAY



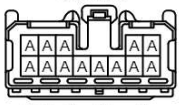

(Hint : See Page 7)

**J11**



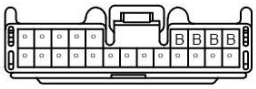

(Hint : See Page 7)

**J18**
ORANGE




(Hint : See Page 7)

**J29**

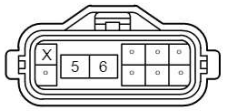



(Hint : See Page 7)

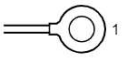
**N1**
GRAY




**P1**
GRAY

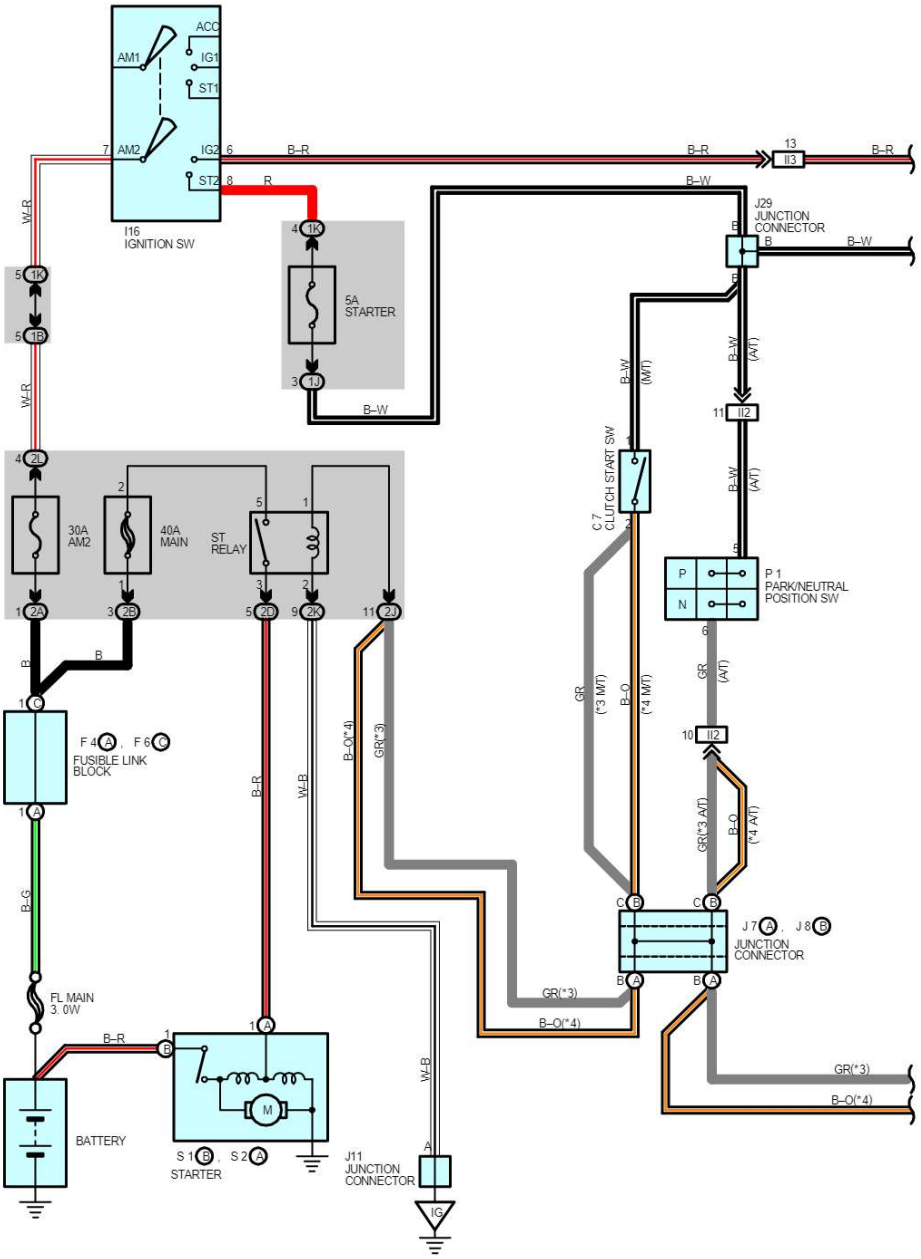



**S1 (B)**

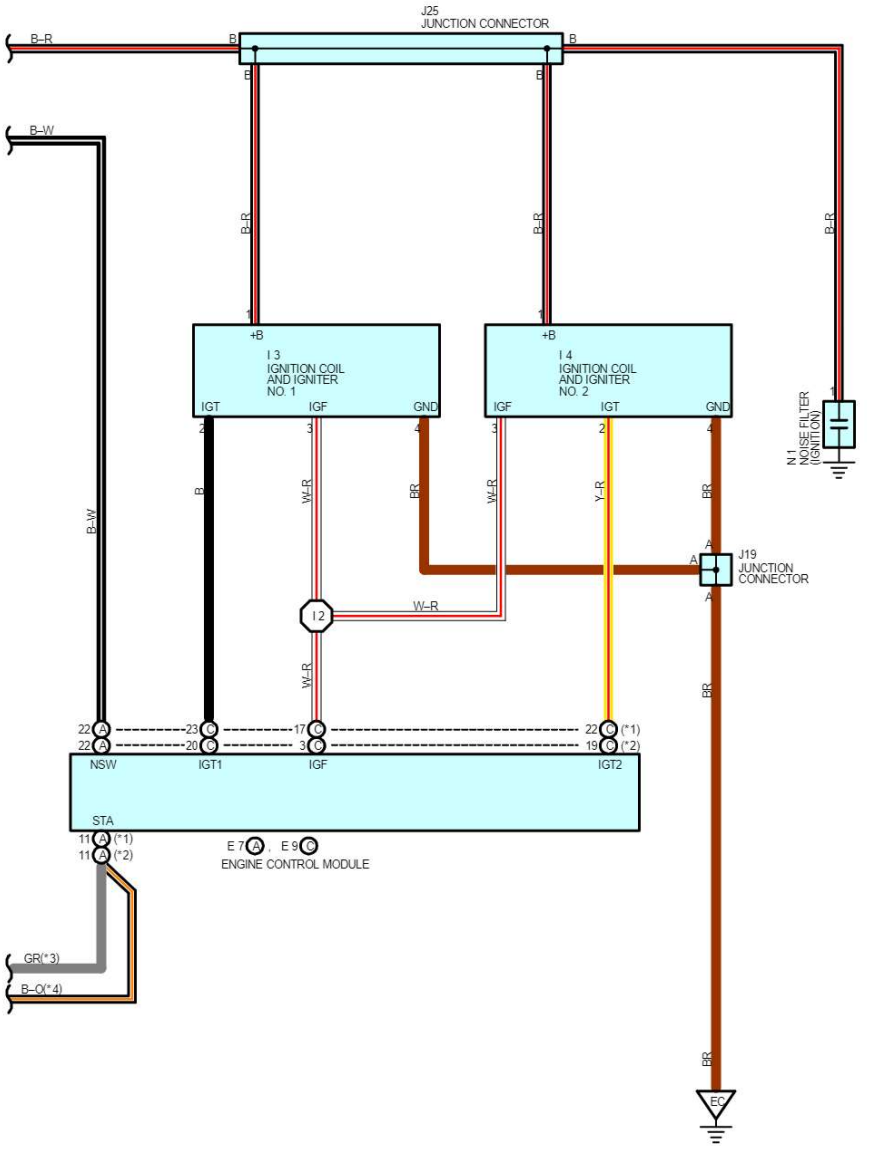



**S2 (A)**
BLACK




I16
IGNITION SW
ACC
IG1
ST1
IG2
ST2
AM1
AM2
5A
STARTER
30A
AM2
40A
MAIN
ST
RELAY
J29
JUNCTION
CONNECTOR
C 7
CLUTCH START SW
P 1
PARK/NEUTRAL
POSITION SW
F 4 , F 6
FUSIBLE LINK
BLOCK
FL MAIN
3. 0W
BATTERY
STARTER
S 1 S 2
J11
JUNCTION
CONNECTOR
J 7 , J 8
JUNCTION
CONNECTOR
B–R
B–W
W–R
W–B
B–O
GR
B–W (M/T)
B–W (A/T)
GR (*3 M/T)
B–O (*4 M/T)
GR (A/T)
GR(*3 A/T)
B–O (*4 A/T)
B–O(*4)
GR(*3)

* 1 : W/ ENGINE IMMOBILISER SYSTEM
* 2 : W/O ENGINE IMMOBILISER SYSTEM
* 3 : TMC MADE
* 4 : TMMK MADE



# STARTING AND IGNITION (5S–FE)

**SERVICE HINTS**

**I16 IGNITION SW**

7–6 : Closed with the ignition SW at **ON** or **ST** position
7–8 : Closed with the ignition SW at **ST** position

**P1 PARK/NEUTRAL POSITION SW**

5–6 : Closed with the A/T shift lever in **P** or **N** position (A/T)

**S1 (B), S2 (A) STARTER**

Points closed with the Park/Neutral position SW at **P** or **N** position and the ignition SW at **ST** position (A/T)
Points closed with the clutch start SW on and the ignition SW at **ST** position (M/T)

**: PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| C7 | | 30 | I16 | | 30 | N1 | | 29 (5S–FE) |
| E7 | A | 30 | J7 | A | 31 | P1 | | 29 (5S–FE) |
| E9 | C | 30 | J8 | B | 31 | S1 | B | 29 (5S–FE) |
| F4 | A | 28 (5S–FE) | J11 | | 31 | S2 | A | 29 (5S–FE) |
| F6 | C | 28 (5S–FE) | J19 | | 31 | | | |
| I3 | | 29 (5S–FE) | J25 | | 31 | | | |
| I4 | | 29 (5S–FE) | J29 | | 31 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | | |
| 1K | | |
| 2A | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2B | | |
| 2D | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |
| 2L | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II3 | | |

**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| EC | 38 (5S–FE) | Surge Tank RH |
| IG | 40 | Instrument Panel Brace LH |

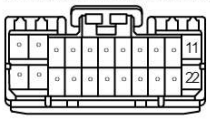
**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I2 | 42 | Engine Wire | | | |

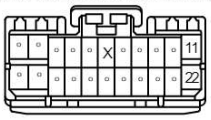
**C7**



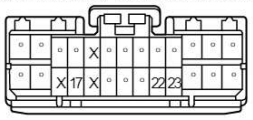

**E7 (A)**
(w/ Engine Immobiliser System)



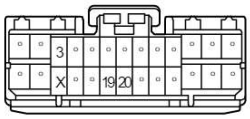

**E7 (A)**
(w/o Engine Immobiliser System)



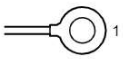

**E9 (C)**
(w/ Engine Immobiliser System) DARK GRAY



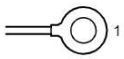

**E9 (C)**
(w/o Engine Immobiliser System)




**F4 (A)**




**F6 (C)**



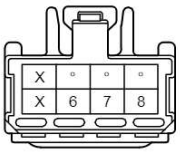

**I3**
GRAY



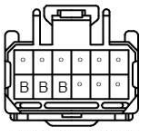

**I4**
BLACK




**I16**

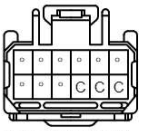



**J7 (A)**
GRAY



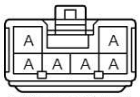

(Hint : See Page 7)

**J8 (B)**
GRAY



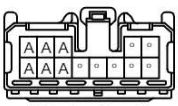

(Hint : See Page 7)

**J11**



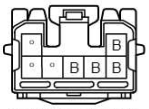

(Hint : See Page 7)

**J19**
GRAY



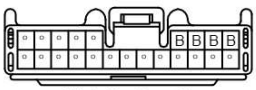

(Hint : See Page 7)

**J25**




(Hint : See Page 7)

**J29**

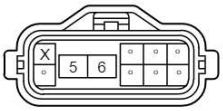



(Hint : See Page 7)

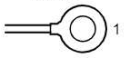
**N1**
GRAY




**P1**
GRAY



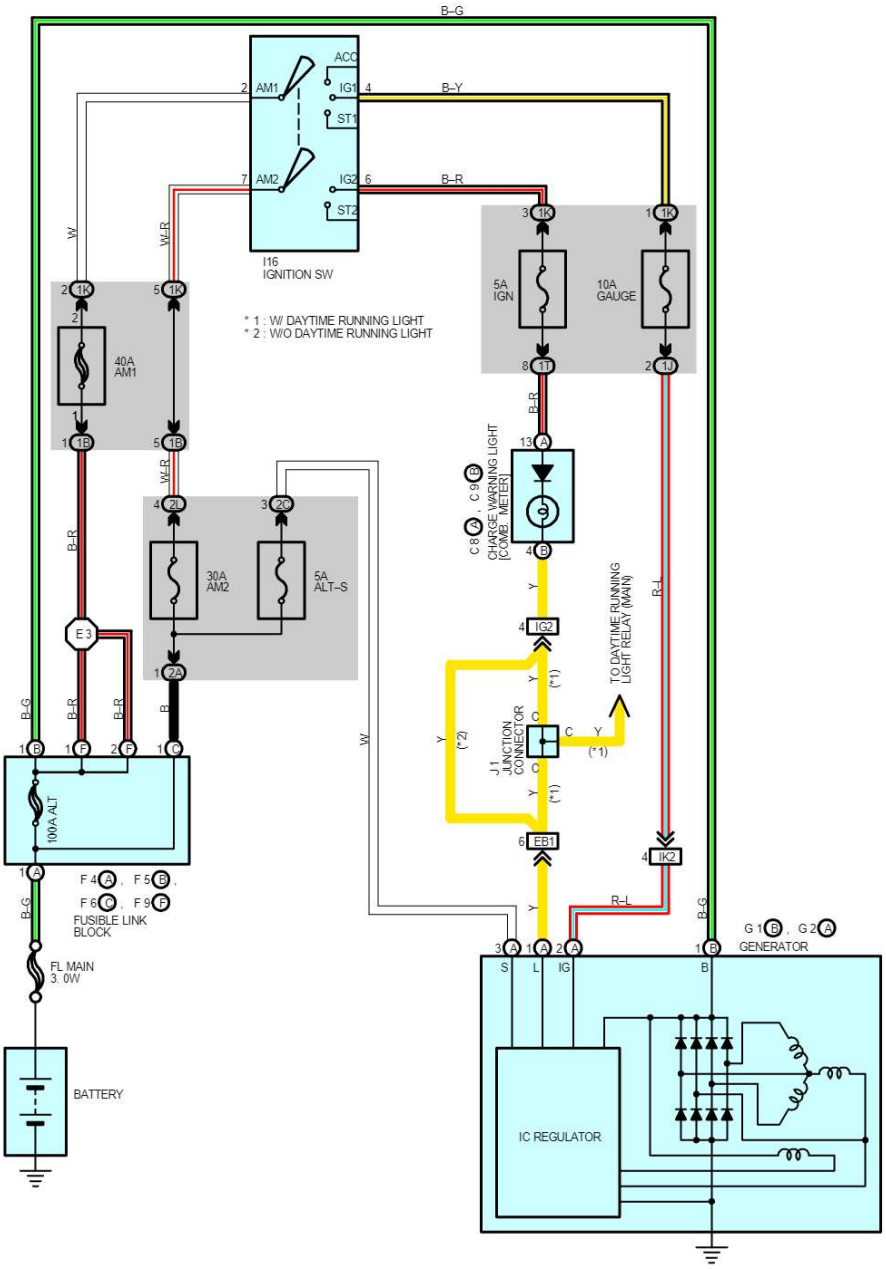

**S1 (B)**
BLACK




**S2 (A)**
BLACK



## CHARGING


B–G
ACC
AM1
IG1
ST1
AM2
IG2
ST2
B–Y
B–R
I16
IGNITION SW
W
W–R
* 1 : W/ DAYTIME RUNNING LIGHT
* 2 : W/O DAYTIME RUNNING LIGHT
5A
IGN
10A
GAUGE
40A
AM1
30A
AM2
5A
ALT–S
B–R
E 3
CHARGE WARNING LIGHT
[COMB. METER]
C 8 , C 9
TO DAYTIME RUNNING
LIGHT RELAY (MAIN)
R–L
IG2
EB1
IK2
J1
JUNCTION
CONNECTOR
(*1)
(*2)
100A ALT
B–G
F 4 , F 5 ,
F 6 , F 9
FUSIBLE LINK
BLOCK
FL MAIN
3. 0W
BATTERY
G 1 , G 2
GENERATOR
S
L
IG
B
IC REGULATOR

**SERVICE HINTS**

**G2 (A) GENERATOR**

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

**○ : PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| C8 | A | 30 | F6 | C | 26 (1MZ–FE) | G2 | A | 26 (1MZ–FE) |
| C9 | B | 30 | | | 28 (5S–FE) | | | 28 (5S–FE) |
| F4 | A | 26 (1MZ–FE) | F9 | F | 26 (1MZ–FE) | I16 | | 30 |
| | | 28 (5S–FE) | | | 28 (5S–FE) | J1 | | 31 |
| F5 | B | 26 (1MZ–FE) | G1 | B | 26 (1MZ–FE) | | | |
| | | 28 (5S–FE) | | | 28 (5S–FE) | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | | |
| 1K | | |
| 1T | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2A | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2L | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

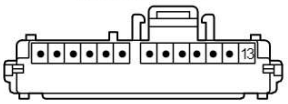
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 36 (1MZ–FE) | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| | 38 (5S–FE) | |
| IG2 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IK2 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

**: SPLICE POINTS**

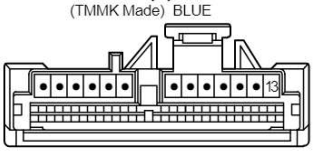
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | E3 | 38 (5S–FE) | Cowl Wire |

## CHARGING

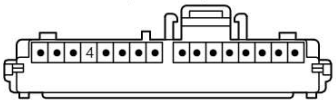
**C8 (A)**
(TMC Made) BLUE



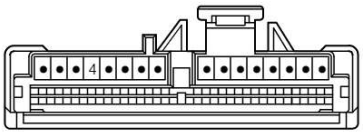

**C8 (A)**
(TMMK Made) BLUE



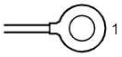

**C9 (B)**
(TMC Made)



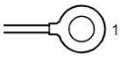

**C9 (B)**



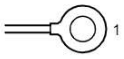

**F4 (A)**




**F5 (B)**



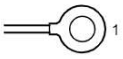

**F6 (C)**




**F9 (F)**
ORANGE



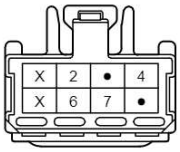

**G1 (B)**



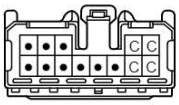

**G2 (A)**
BLACK



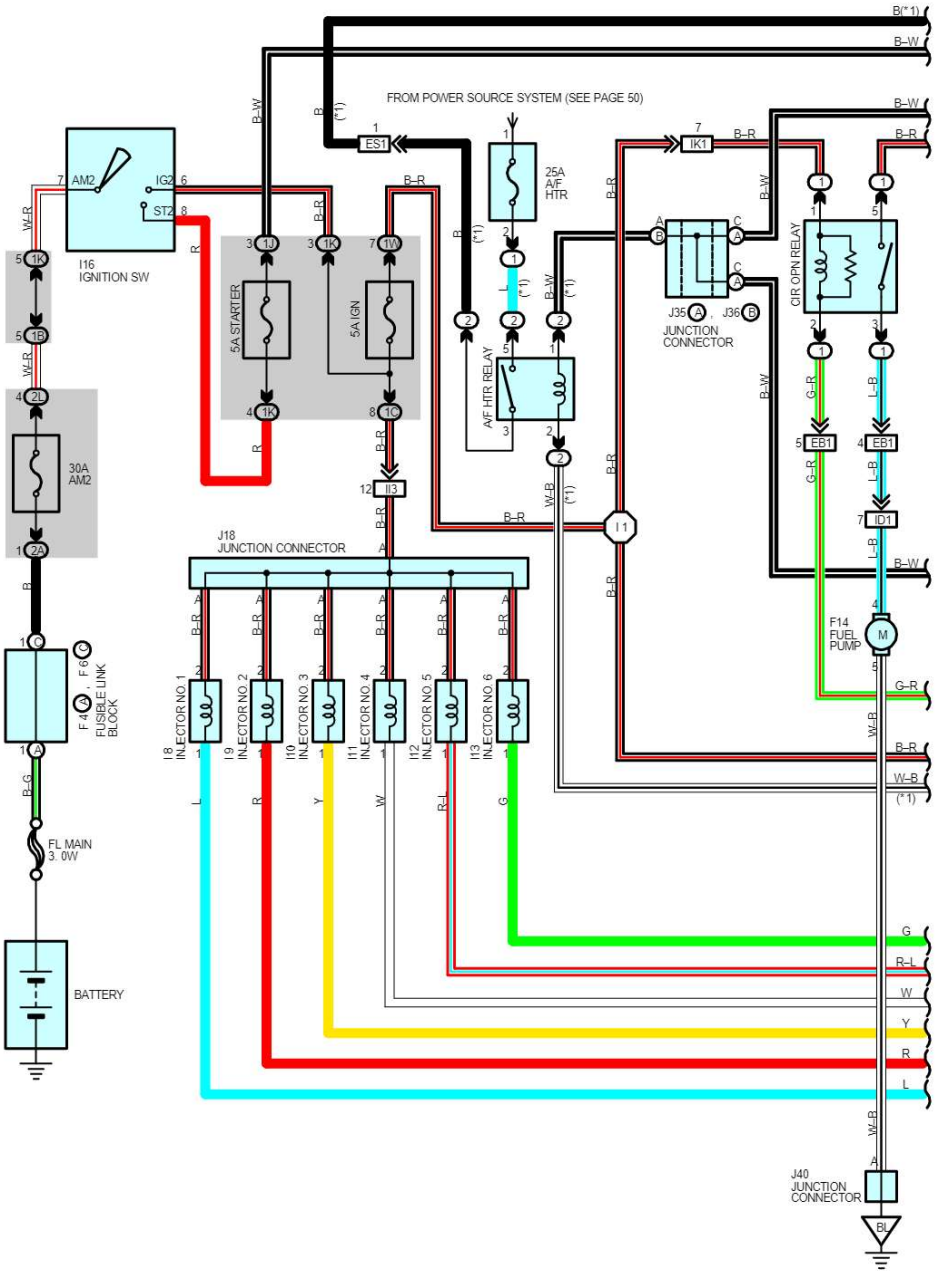

**I16**

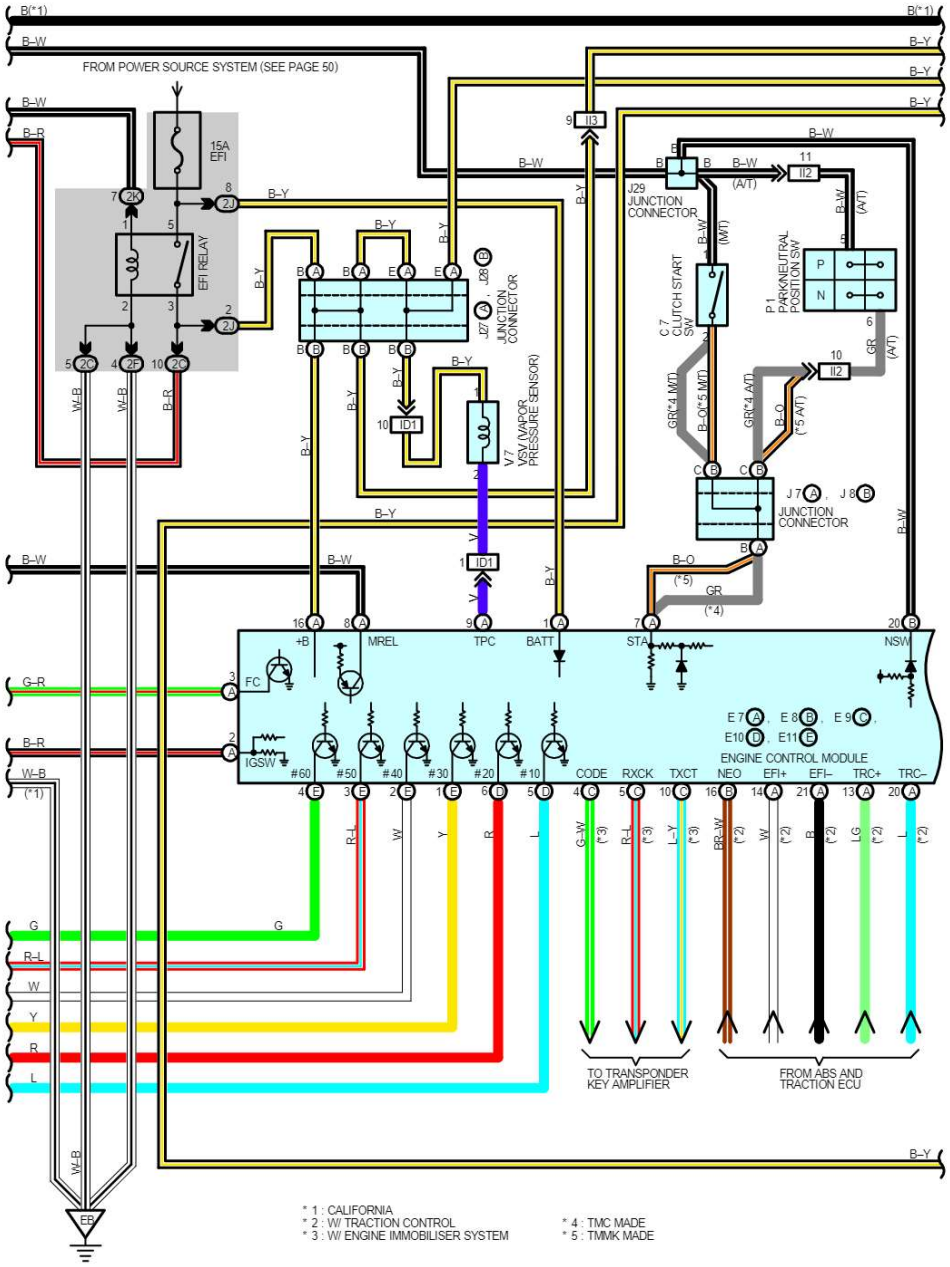



**J1**

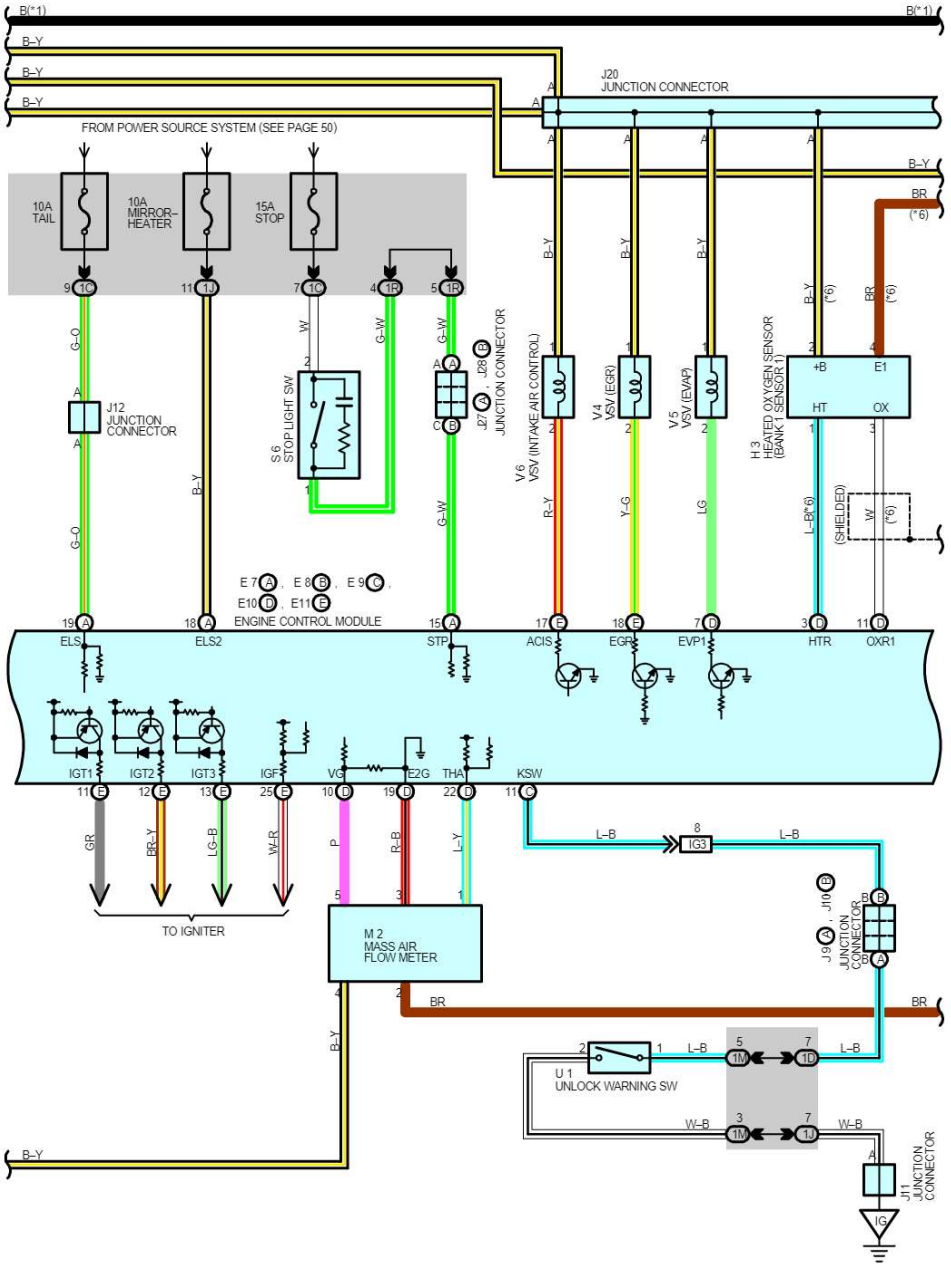


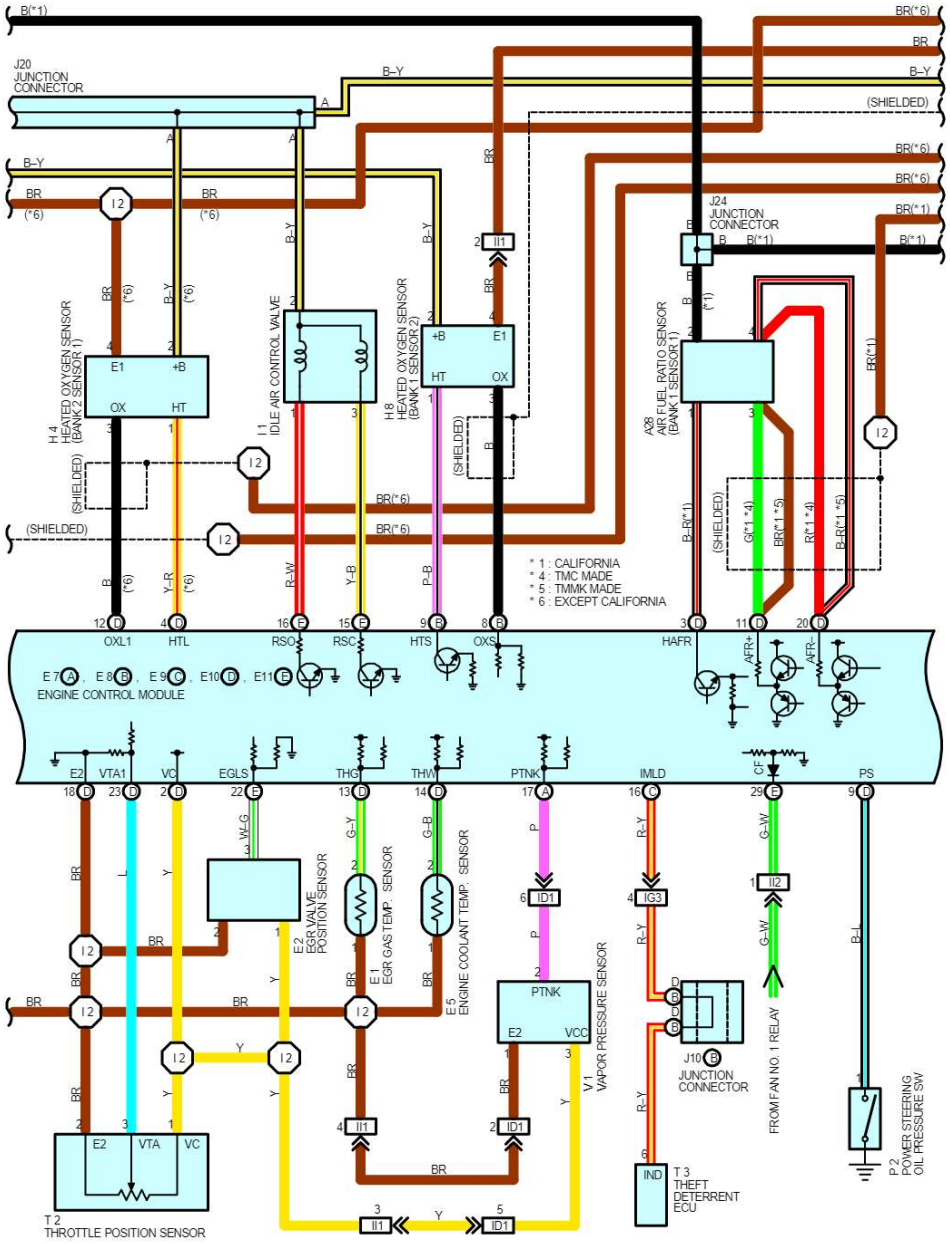

(Hint : See Page 7)


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
I16
IGNITION SW
AM2
IG2
ST2
5A STARTER
5A IGN
30A
AM2
25A
A/F
HTR
A/F HTR RELAY
CIR OPN RELAY
J35
J36
JUNCTION
CONNECTOR
J18
JUNCTION CONNECTOR
F14
FUEL
PUMP
F4 , F6
FUSIBLE LINK
BLOCK
FL MAIN
3.0W
BATTERY
I8
INJECTOR NO. 1
I9
INJECTOR NO. 2
I10
INJECTOR NO. 3
I11
INJECTOR NO. 4
I12
INJECTOR NO. 5
I13
INJECTOR NO. 6
J40
JUNCTION
CONNECTOR
B(*1)
B–W
B–R
W–B
G–R
L–B
G
R–L
W
Y
R
L

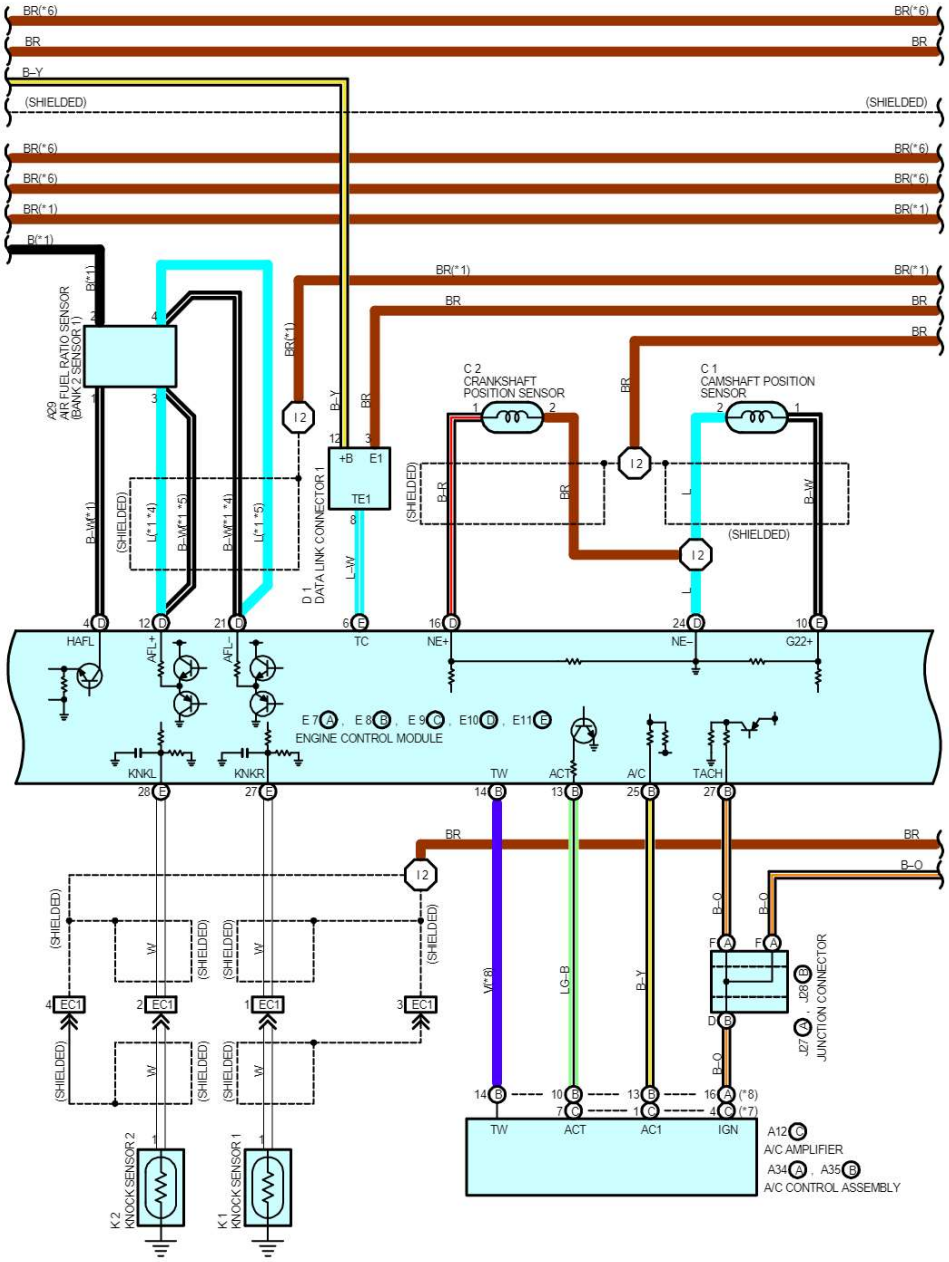

B(*1)
B–W
B–R
B–Y
W–B
G–R
G
R–L
W
Y
R
L
FROM POWER SOURCE SYSTEM (SEE PAGE 50)
15A EFI
EFI RELAY
J29 JUNCTION CONNECTOR
J26, J27 JUNCTION CONNECTOR
J7, J8 JUNCTION CONNECTOR
C7 CLUTCH START SW
P1 PARK/NEUTRAL POSITION SW
V7 VSV (VAPOR PRESSURE SENSOR)
(A/T)
(M/T)
GR (*4 M/T)
B–O (*5 M/T)
GR (*4 A/T)
B–O (*5 A/T)
B–O (*5)
GR (*4)
+B
MREL
TPC
BATT
STA
NSW
FC
IGSW
#60
#50
#40
#30
#20
#10
CODE
RXCK
TXCT
NEO
EFI+
EFI–
TRC+
TRC–
ENGINE CONTROL MODULE
TO TRANSPONDER KEY AMPLIFIER
FROM ABS AND TRACTION ECU
E
* 1 : CALIFORNIA
* 2 : W/ TRACTION CONTROL
* 3 : W/ ENGINE IMMOBILISER SYSTEM
* 4 : TMC MADE
* 5 : TMMK MADE

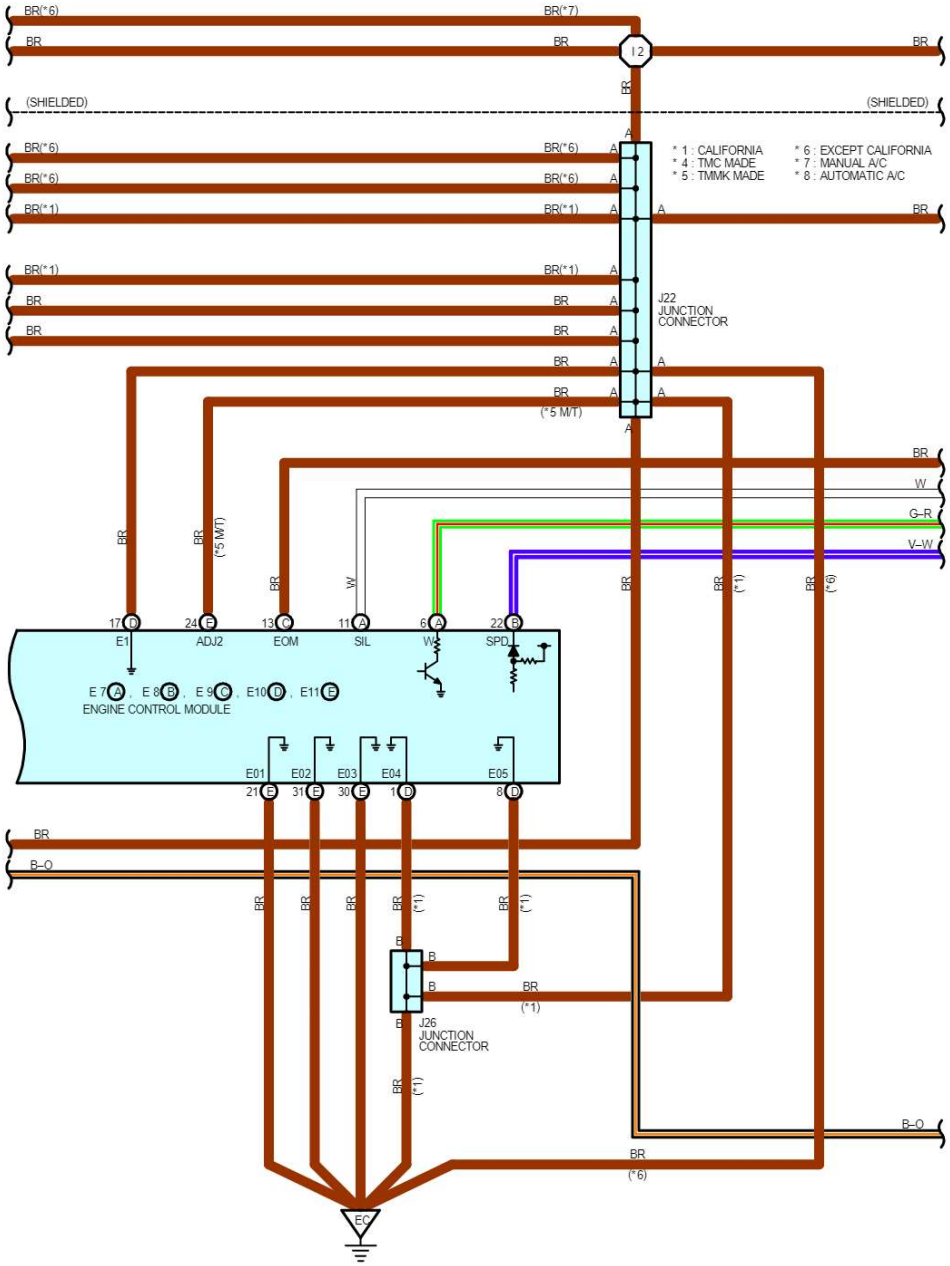
# ENGINE CONTROL (1MZ–FE)



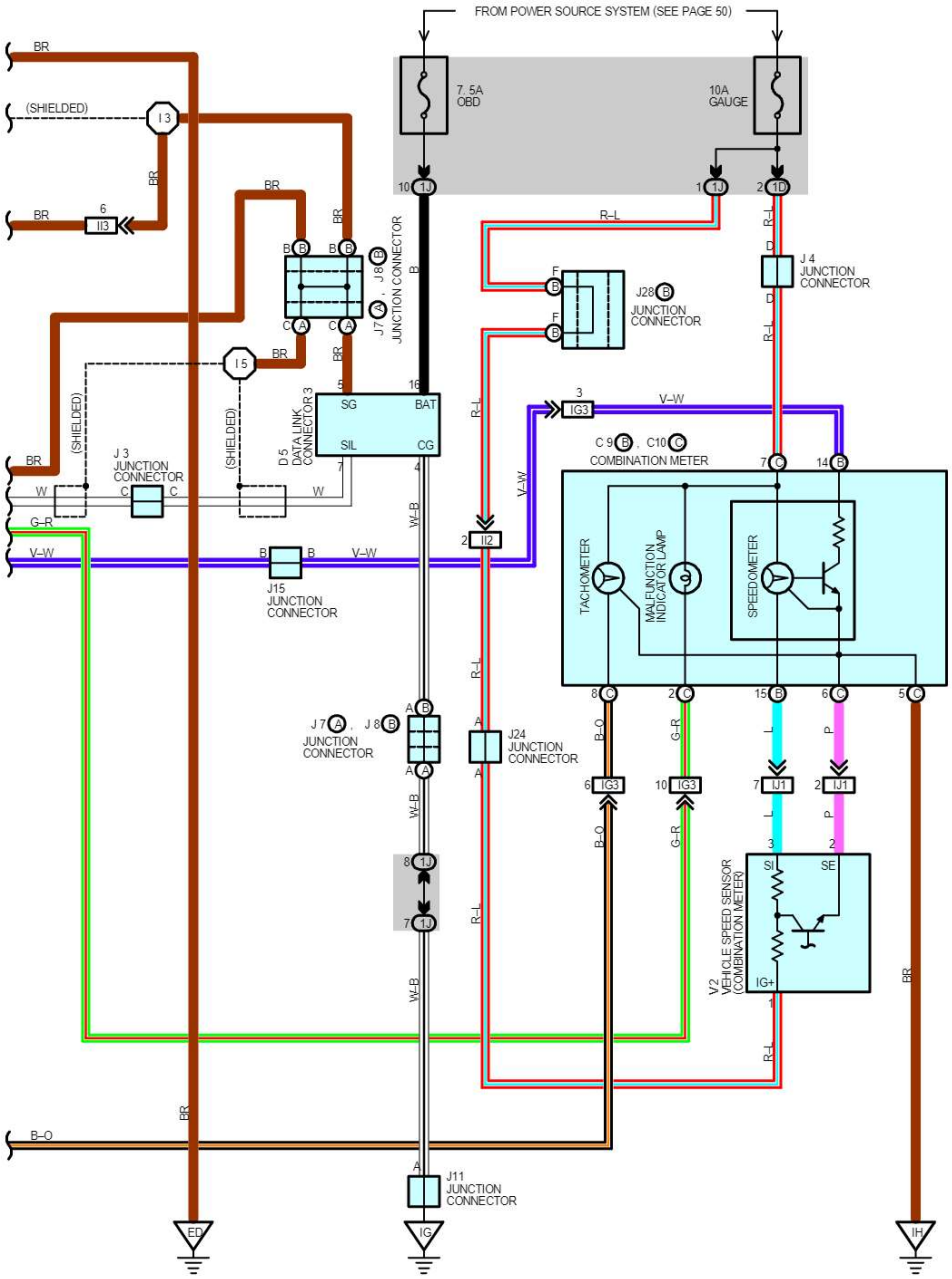

B(*1)
BR(*6)
BR
B–Y
(SHIELDED)
J20
JUNCTION
CONNECTOR
J24
JUNCTION
CONNECTOR
BR(*1)
H4
HEATED OXYGEN SENSOR
(BANK 2 SENSOR 1)
I1
IDLE AIR CONTROL VALVE
H8
HEATED OXYGEN SENSOR
(BANK 1 SENSOR 2)
A28
AIR FUEL RATIO SENSOR
(BANK 1 SENSOR 1)
E1
+B
OX
HT
HTL
OXL1
RSO
RSC
HTS
OXS
HAFR
AFR+
AFR–
* 1 : CALIFORNIA
* 4 : TMC MADE
* 5 : TMMK MADE
* 6 : EXCEPT CALIFORNIA
E7 , E8 , E9 , E10 , E11
ENGINE CONTROL MODULE
E2
VTA1
VC
EGLS
THG
THW
PTNK
IMLD
CF
PS
E2
EGR VALVE
POSITION SENSOR
E1
EGR GAS TEMP. SENSOR
E5
ENGINE COOLANT TEMP. SENSOR
V1
VAPOR PRESSURE SENSOR
PTNK
E2
VCC
J10
JUNCTION
CONNECTOR
FROM FAN NO. 1 RELAY
P 2
POWER STEERING
OIL PRESSURE SW
T 2
THROTTLE POSITION SENSOR
E2
VTA
VC
IND
T 3
THEFT
DETERRENT
ECU

# ENGINE CONTROL (1MZ–FE)




BR(*6)
BR(*7)
BR
I 2
(SHIELDED)
* 1 : CALIFORNIA
* 4 : TMC MADE
* 5 : TMMK MADE
* 6 : EXCEPT CALIFORNIA
* 7 : MANUAL A/C
* 8 : AUTOMATIC A/C
J22
JUNCTION
CONNECTOR
(*5 M/T)
W
G–R
V–W
(*5 M/T)
(*1)
(*6)
E1
ADJ2
EOM
SIL
SPD
E 7 , E 8 , E 9 , E10 , E11
ENGINE CONTROL MODULE
E01
E02
E03
E04
E05
B–O
J26
JUNCTION
CONNECTOR
EC

## ENGINE CONTROL (1MZ–FE)



## SYSTEM OUTLINE

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

### 1. INPUT SIGNALS

(1) Engine coolant temp. signal circuit

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

(2) Intake air temp. signal circuit

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

(3) Oxygen sensor signal circuit

The oxygen density in the exhaust gases is detected and input as a control signal into TERMINALS OXL1, OXR1 (Except California) and OXS of the engine control module. To maintain stable detection performance by the heated oxygen sensor, a heater is used for warming the sensor. The heater is also controlled by the engine control module (HTL, HTR (Except California) and HTS).

(4) RPM signal circuit

Camshaft position and crankshaft position are detected by the camshaft position sensor and crankshaft position sensor. The camshaft position is input as a control signal to TERMINAL G22+ of the engine control module, and the engine RPM is input into TERMINAL NE+.

(5) Throttle signal circuit

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

(6) Vehicle speed signal circuit

The vehicle speed sensor, installed inside the transmission, detects the vehicle speed and inputs a control signal into TERMINAL SPD of the engine control module.

(7) Park/Neutral position SW signal circuit

The Park/Neutral position SW detects whether the shift position is in neutral, parking or not, and inputs a control signal into TERMINAL STA of the engine control module.

(8) A/C SW signal circuit

The A/C control assembly (Automatic A/C) or A/C Amplifier (Manual A/C) inputs the A/C operations into TERMINAL A/C of the engine control module as a control signal.

(9) Battery signal circuit

(California or w/ engine immobiliser and/or traction control)

Voltage is always supplies to TERMINAL BATT of the engine control module.

If you turn on the ignition SW, the current goes from TERMINAL MREL of the engine control module to the EFI relay and put on the relay, and the voltage related to the engine control module operation is supplied to TERMINAL +B of the engine control module through the EFI relay.

(Except California or w/ engine immobiliser and/or traction control)

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

(10) Intake air volume signal circuit

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

(11) NSW signal circuit

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

(12) Engine knock signal circuit

Engine knocking is detected by the knock sensor 1 and 2, then the signals are input into TERMINALS KNKR and KNKL of the engine control module as a control signal.

(13) Air fuel ratio signal circuit (California)

The air fuel ratio is detected and input as a control signal into TERMINALS AFL+, AFR+ of the engine control module.

**2. CONTROL SYSTEM**

- SFI system
  The SFI system monitors the engine condition through the signals, which are input from each sensor (Input signals (1) to (12) ). The best fuel injection volume is decided based on this data and the program memorized by the engine control module, and the control signal is output to TERMINALS #10, #20, #30, #40, #50 and #60 of the engine control module to operate the injector (Inject the fuel). The SFI system produces control of fuel injection operation by the engine control module in response to the driving conditions.
- ESA system
  The ESA system monitors the engine condition through the signals, which are input to the engine control module from each sensor (Input signals from 1, 3, 4, 12). The best ignition timing is decided according to this data and the memorized data in the engine control module and the control signal is output to TERMINALS IGT1, IGT2 and IGT3. This signal controls the igniter to provide the best ignition timing for the driving conditions.
- Heated oxygen sensor heater control system
  The heated oxygen sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emissions is low), and warms up the heated oxygen sensor to improve detection performance of the sensor.
  The engine control module evaluates the signals from each sensor (Input signals from 1, 4, 9, 10), current is output to TERMINALS HTL, HTR and HTS, controlling the heater.
- Idle air control system
  The idle air control system (Rotary solenoid type) increases the RPM and provides idle stability for fast idle–up when the engine is cold, and when the idle speed has dropped due to electrical load and so on, the engine control module evaluates the signals from each sensor (Input signals from 1, 4, 5, 8, 9), current is output to TERMINALS RSO and RSC to control idle air control valve.
- EGR control system
  The EGR control system detects the signal from each sensor (Input signals from 1, 4, 9, 10), and outputs current to TERMINAL EGR to control the VSV (EGR).
  The EGR valve position sensor is mounted on the EGR valve. this sensor converts the EGR valve opening height into a voltage and sends it to the engine control module as the EGR valve position signal.
- ACIS
  ACIS includes a valve in the bulkhead separating the surge tank into two parts. This valve is opened and closed in accordance with the driving conditions to control the intake manifold length in two stages for increased engine output in all ranges from low to high speeds.
  The engine control module judges the engine speed by the signals ( (4), (5) ) from each sensor and outputs signals to the TERMINAL ACIS to control the VSV (Intake air control).

**3. DIAGNOSIS SYSTEM**

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

**4. FAIL–SAFE SYSTEM**

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

**SERVICE HINTS**

**E5 ENGINE COOLANT TEMP. SENSOR**

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

**E7 (A), E8 (B), E9 (C), E10 (D), E11 (E) ENGINE CONTROL MODULE**

Voltage at engine control module wiring connector

BATT–E1 : Always **9.0**–**14.0** volts
+B–E1 : **9.0**–**14.0** volts (Ignition SW at **ON** position)
VC–E2 : Always **4.5**–**5.5** volts (Ignition SW at **ON** position)
VTA1–E2 : **0.3**–**0.8** volts (Ignition SW on and throttle valve fully closed)
: **3.2**–**4.9** volts (Ignition SW on and throttle valve fully open)
VG–E2G : **1.1**–**1.5** volts (Engine idling and A/C SW **OFF** position)
THA–E2 : **0.5**–**3.4** volts (Engine idling and intake air temp. **20**°C, **68**°F)
THW–E2 : **0.2**–**1.0** volts (Engine idling and engine coolant temp. **80**°C, **176**°F)
IGF–E1 : **4.5**–**5.5** volts (Ignition SW at **ON** position)
Pulse generation (Engine idling)
G22+–NE– : Pulse generation (Engine idling)
NE+–NE– : Pulse generation (Engine idling)
NSW–E1 : **9.0**–**14.0** volts (Ignition SW on and other shift position in **P** or **N** position)
Below **3.0** volts (Ignition SW on and shift position in **P** or **N** position)
SPD–E1 : Pulse generation (Ignition SW on and rotate driving wheel slowly)
TC–E1 : **9.0**–**14.0** volts (Ignition SW at **ON** Position)
W–E1 : Below **3.0** volts
A/C–E1 : Below **2.0** volts (Engine idling and A/C SW on)
**9.0**–**14.0** volts (A/C SW off)
ACT–E1 : **9.0**–**14.0** volts (Engine idling and A/C SW on)
Below **2.0** volts (A/C SW off)
ACIS–E01 : **9.0**–**14.0** volts (Ignition SW at **ON** position)
STA–E1 : **6.0** volts or more (Engine cranking)
THG–E2 : **4.5**–**5.5** volts (Ignition SW at **ON** position)
ELS–E1 : **7.5**–**14.0** volts (Taillight SW at **ON** position)
**0**–**1.5** volts (Taillight SW at **OFF** position)
ELS2–E1 : **7.5**–**14.0** volts (Defogger SW at **ON** position)
**0**–**1.5** volts (Defogger SW at **OFF** position)
EGR–E01 : **9.0**–**14.0** volts (Ignition SW at **ON** position)
FC–E1 : **9.0**–**14.0** volts (Ignition SW at **ON** position)
**0**–**3.0** volts (Engine idling)
EVP1–E01 : **9.0**–**14.0** volts (Ignition SW at **ON** position)
CF–E1 : **9.0**–**14.0** volts (Electric cooling fan is operating on high speed)
**0**–**2.0** volts (Electric cooling fan is operating on low speed or off)
TACH–E1 : Pulse generation (Engine idling)
TPC–E1 : **9.0**–**14.0** volts (Ignition SW on and disconnect the vacuum hose from the vapor pressure sensor)
PTNK–E1 : **3.0**–**3.6** volts (Ignition SW at **ON** position)
**1.3**–**2.1** volts (Ignition SW on and apply vacuum **2.0** kpa (**15.0** mmHg, **0.6** in.Hg)
STP–E1 : **7.5**–**14.0** volts (Ignition SW on and brake pedal depressed)
Below **1.5** volts (Ignition SW on and brake pedal released)
SIL–E1 : Pulse generation (During transmission)
RSC, RSO–E01 : **9.0**–**14.0** volts (Ignition SW on and disconnect **E 7** of engine control module connector)
KNKL, KNKR–E1 : Pulse generation (Engine idling)
HTS, HTL, HTR–E03 : **9.0**–**14.0** volts (Ignition SW at **ON** position)
**0**–**3.0** volts (Engine idling)
OXS, OXL, OXR–E1 : Pulse generation (Maintain engine speed at **2500** rpm for two minutes after warning up)
IGT1, IGT2, IGT3–E1 : Pulse generation (Engine idling)
#10, #20, #30, #40, #50, #60–E01 : **9.0**–**14.0** volts (Ignition SW at **ON** position)
Pulse generation (Engine idling)

# ENGINE CONTROL (1MZ–FE)

**I8, I9, I10, I11, I12, I13 INJECTOR**
2–1 : Approx. **13.8** Ω

**CIR OPN RELAY [R/B NO.1]**
3–5 : Closed with starter running

**EFI RELAY [ENGINE ROOM J/B NO.2]**
3–5 : Closed with ignition SW at **ON** or **ST** position

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A12 C | 30 | H8 | 30 | J24 | 31 |
| A28 | 26 (1MZ–FE) | H3 | 26 (1MZ–FE) | J26 | 31 |
| A29 | 26 (1MZ–FE) | H4 | 26 (1MZ–FE) | J27 A | 31 |
| A34 A | 30 | I1 | 27 (1MZ–FE) | J28 B | 31 |
| A35 B | 30 | I8 | 27 (1MZ–FE) | J29 | 31 |
| C1 | 26 (1MZ–FE) | I9 | 27 (1MZ–FE) | J35 A | 31 |
| C2 | 26 (1MZ–FE) | I10 | 27 (1MZ–FE) | J26 B | 31 |
| C7 | 30 | I11 | 27 (1MZ–FE) | J40 | 32 |
| C9 B | 30 | I12 | 27 (1MZ–FE) | K1 | 27 (1MZ–FE) |
| C10 C | 30 | I13 | 27 (1MZ–FE) | K2 | 27 (1MZ–FE) |
| D1 | 26 (1MZ–FE) | I16 | 30 | M2 | 27 (1MZ–FE) |
| D5 | 30 | J3 | 31 | P1 | 27 (1MZ–FE) |
| E1 | 26 (1MZ–FE) | J4 | 31 | P2 | 27 (1MZ–FE) |
| E2 | 26 (1MZ–FE) | J7 A | 31 | S6 | 31 |
| E5 | 26 (1MZ–FE) | J8 B | 31 | T2 | 27 (1MZ–FE) |
| E7 A | 30 | J9 A | 31 | T3 | 31 |
| E8 B | 30 | J10 B | 31 | U1 | 31 |
| E9 C | 30 | J11 | 31 | V1 | 27 (1MZ–FE) |
| E10 D | 30 | J12 | 31 | V2 | 27 (1MZ–FE) |
| E11 E | 30 | J15 | 31 | V4 | 27 (1MZ–FE) |
| F4 A | 26 (1MZ–FE) | J18 | 31 | V5 | 27 (1MZ–FE) |
| F6 C | 26 (1MZ–FE) | J20 | 31 | V6 | 27 (1MZ–FE) |
| F14 | 32 | J22 | 31 | V7 | 27 (1MZ–FE) |

**: RELAY BLOCKS**

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 24 | Engine Room R/B No.1 (Engine Compartment Left) |
| 2 | 24 | Engine Room R/B No.2 (Near the Battery) |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1K | | |
| 1M | | |
| 1R | | |
| 1W | | |
| 2A | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2F | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |
| 2L | | |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 36 (1MZ–FE) | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| EC1 | 36 (1MZ–FE) | Engine Wire and Sensor Wire (Head Cover RH) |
| ES1 | 36 (1MZ–FE) | Engine Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| ID1 | 40 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| II1 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II2 | | |
| II3 | | |
| IJ1 | 42 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| IK3 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

### : GROUND POINTS

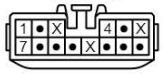
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| EC | 36 (1MZ–FE) | Surge Tank RH |
| ED | 36 (1MZ–FE) | Rear Side of the Surge Tank |
| IG | 40 | Instrument Panel Brace LH |
| IH | 40 | Instrument Panel Brace RH |
| BL | 44 | Under the Left Center Pillar |

### : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I1 | 42 | Cowl Wire | I3 | 42 | Cowl Wire |
| I2 | 42 | Engine Wire | I5 | | |

## ENGINE CONTROL (1MZ–FE)

**A12 (C)**
ORANGE



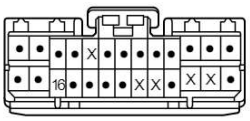

**A28**
DARK GRAY



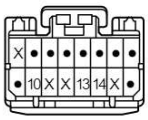

**A29**
DARK GRAY




**A34 (A)**




**A35 (B)**




**C1**
BLACK



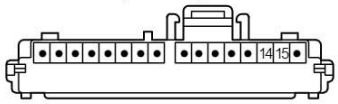

**C2**
BLACK



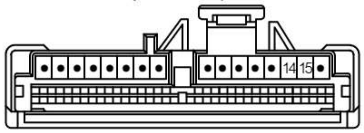

**C7**



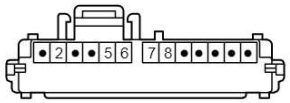

**C9 (B)**
(TMC Made)



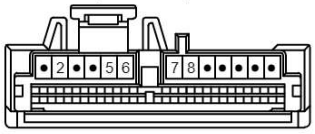

**C9 (B)**
(TMMK Made)



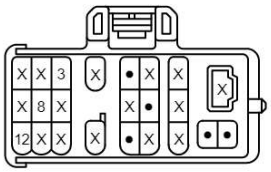

**C10 (C)**
(TMC Made) BROWN



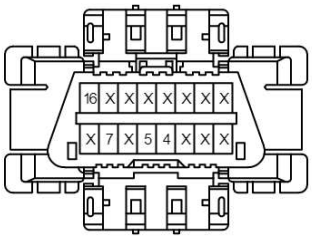

**C10 (C)**
(TMMK Made) BROWN




**D1**
BLACK




**D5**




**E1**
DARK GRAY



**E2**
BLACK



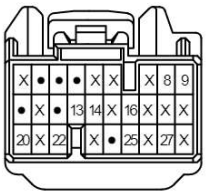

**E5**
DARK GRAY



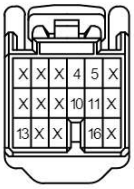

**E7 (A)**




**E8 (B)**




**E9 (C)**



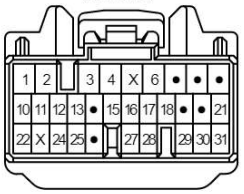

**E10 (D)**
(California)



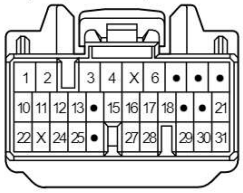

**E10 (D)**
(Except California) BLACK



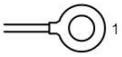

**E11 (E)**
(California)



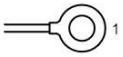

**E11 (E)**
(Except California) BLACK




**F4 (A)**




**F6 (C)**




**F14**




**H3**
DARK GRAY




**H4**
DARK GRAY




**H8**
DARK GRAY




**I1**
GRAY




**I8**
GRAY




**I9**
GRAY




**I10**
GRAY




**I11**
GRAY



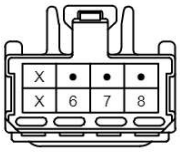

**I12**
GRAY




**I13**
GRAY

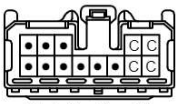



**I16**



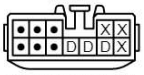
## ENGINE CONTROL (1MZ–FE)

**J3**




(Hint : See Page 7)

**J4**
BLACK




(Hint : See Page 7)

**J7 (A)**
GRAY



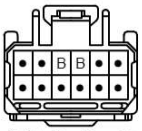

(Hint : See Page 7)

**J8 (B)**
GRAY



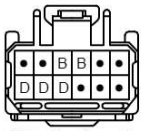

(Hint : See Page 7)

**J9 (A)**
BLACK



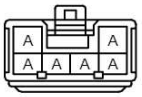

(Hint : See Page 7)

**J10 (B)**
BLACK




(Hint : See Page 7)

**J11**



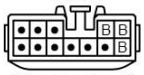

(Hint : See Page 7)

**J12**
BLACK



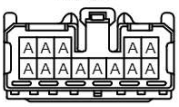

(Hint : See Page 7)

**J15**
BLACK




(Hint : See Page 7)

**J18**
ORANGE




(Hint : See Page 7)

**J20**



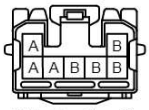

(Hint : See Page 7)

**J22**



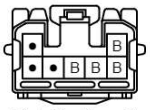

(Hint : See Page 7)

**J24**




(Hint : See Page 7)

**J26**



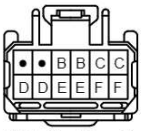

(Hint : See Page 7)

**J27 (A)**



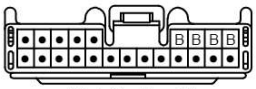

(Hint : See Page 7)

**J28 (B)**



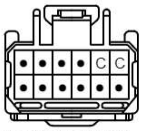

(Hint : See Page 7)

**J29**



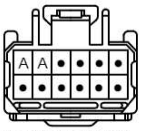

(Hint : See Page 7)

**J35 (A)**



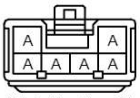

(Hint : See Page 7)

**J36 (B)**




(Hint : See Page 7)

**J40**




(Hint : See Page 7)

**K1**
DARK GRAY




**K2**
DARK GRAY




**M2**
BLACK



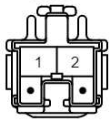

**P1**
GRAY




**P2**
BLACK



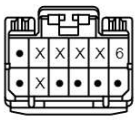
**S6**
BLUE




**T2**
BLACK




**T3**




**U1**




**V1**
BLACK




**V2**
BLACK




**V4**
BROWN




**V5**
BLUE

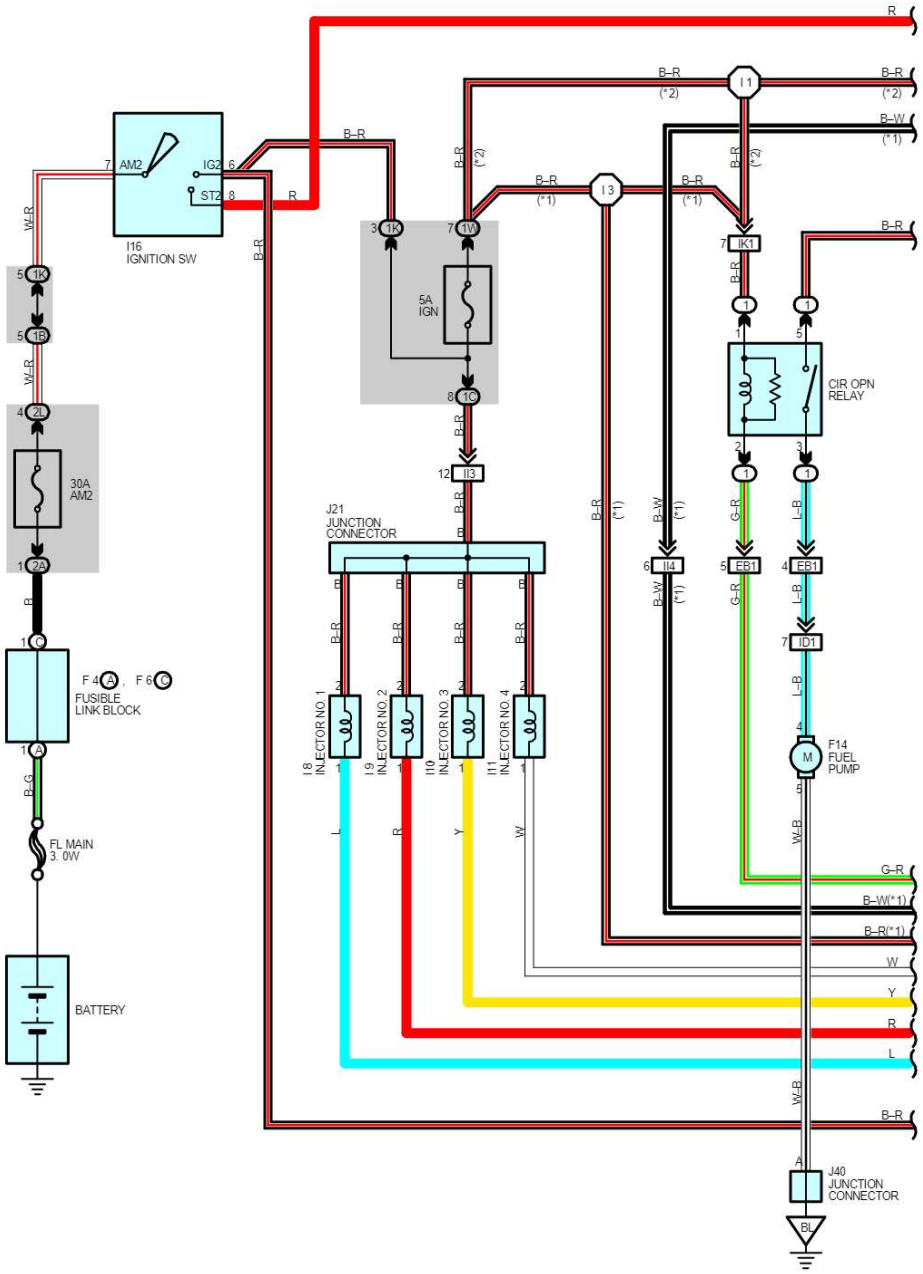


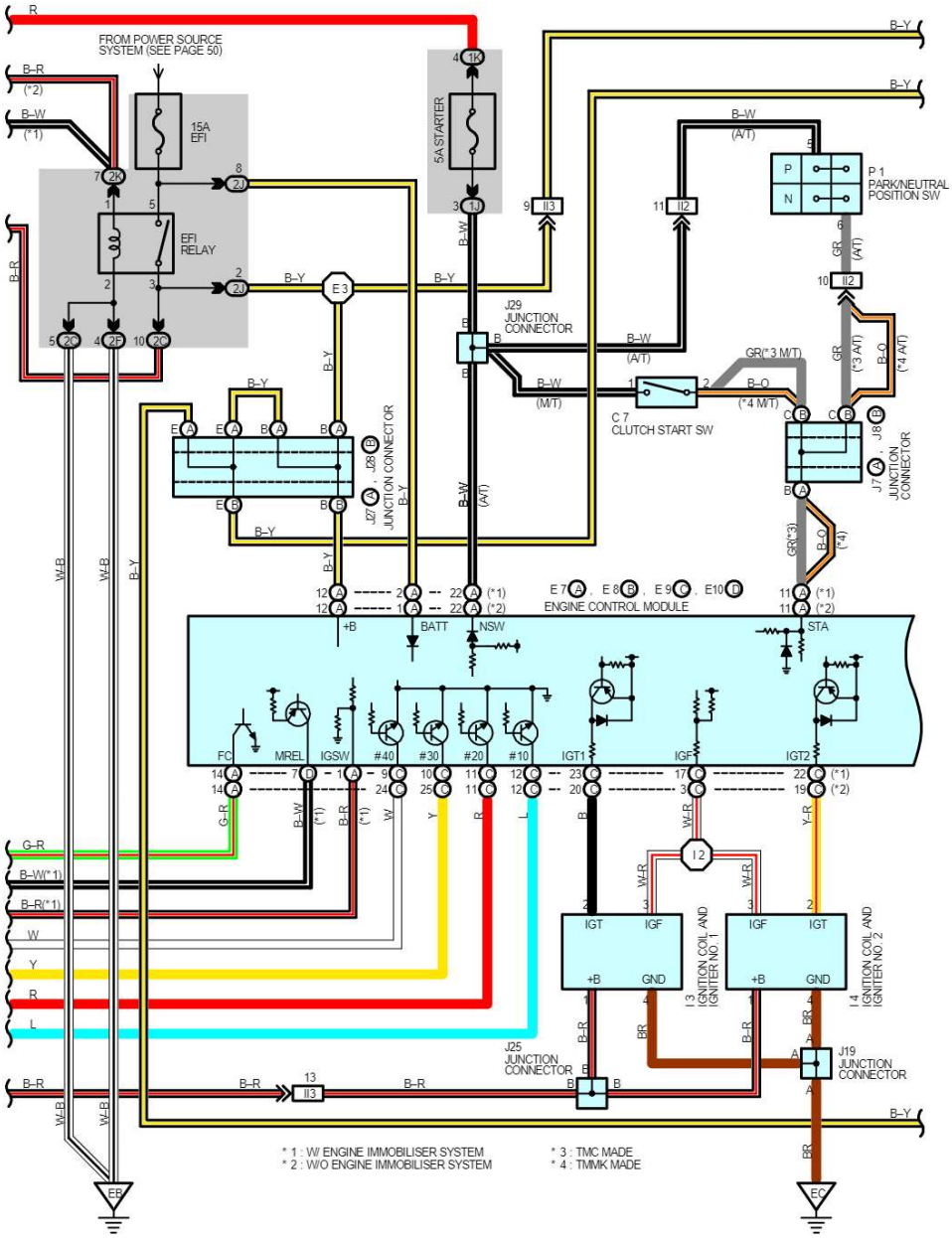

**V6**
BROWN



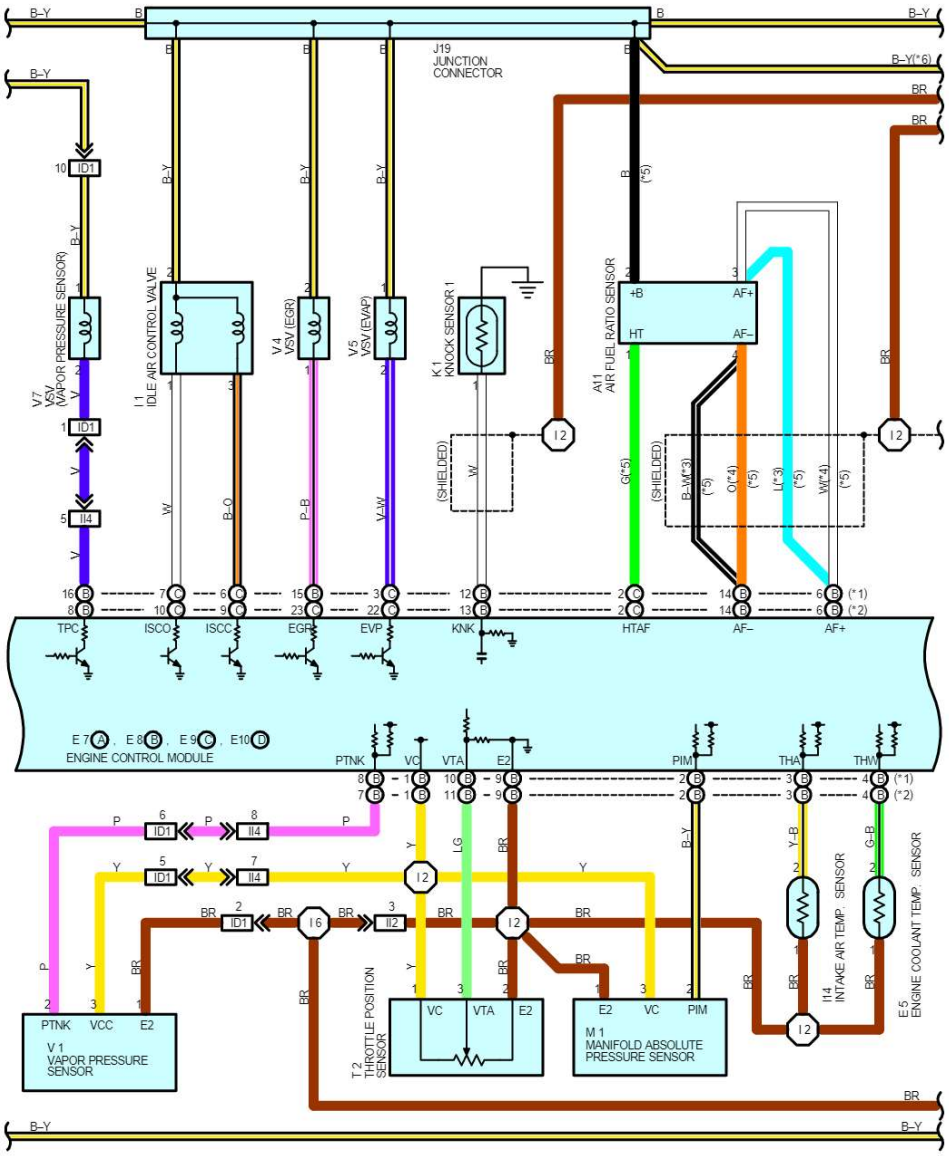

**V7**
BLUE

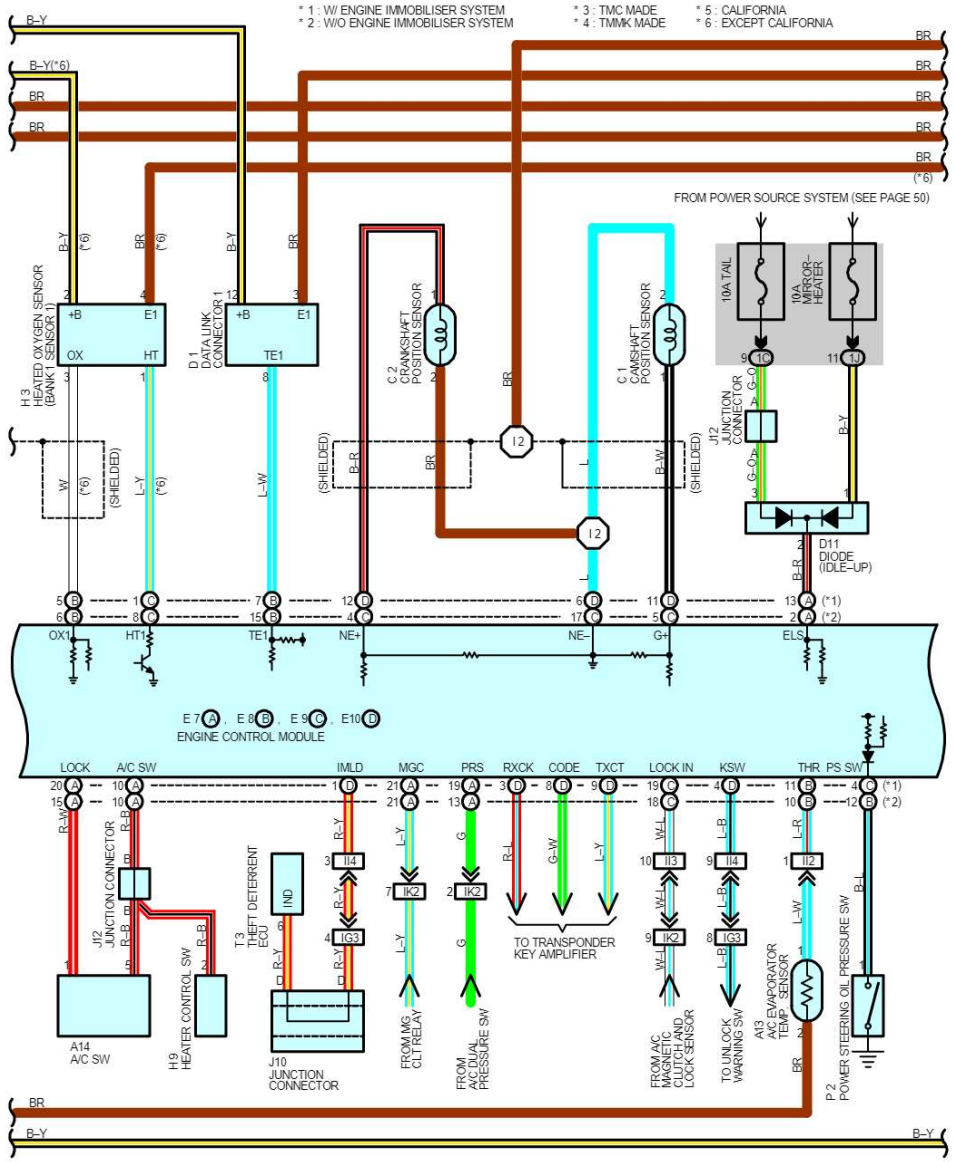


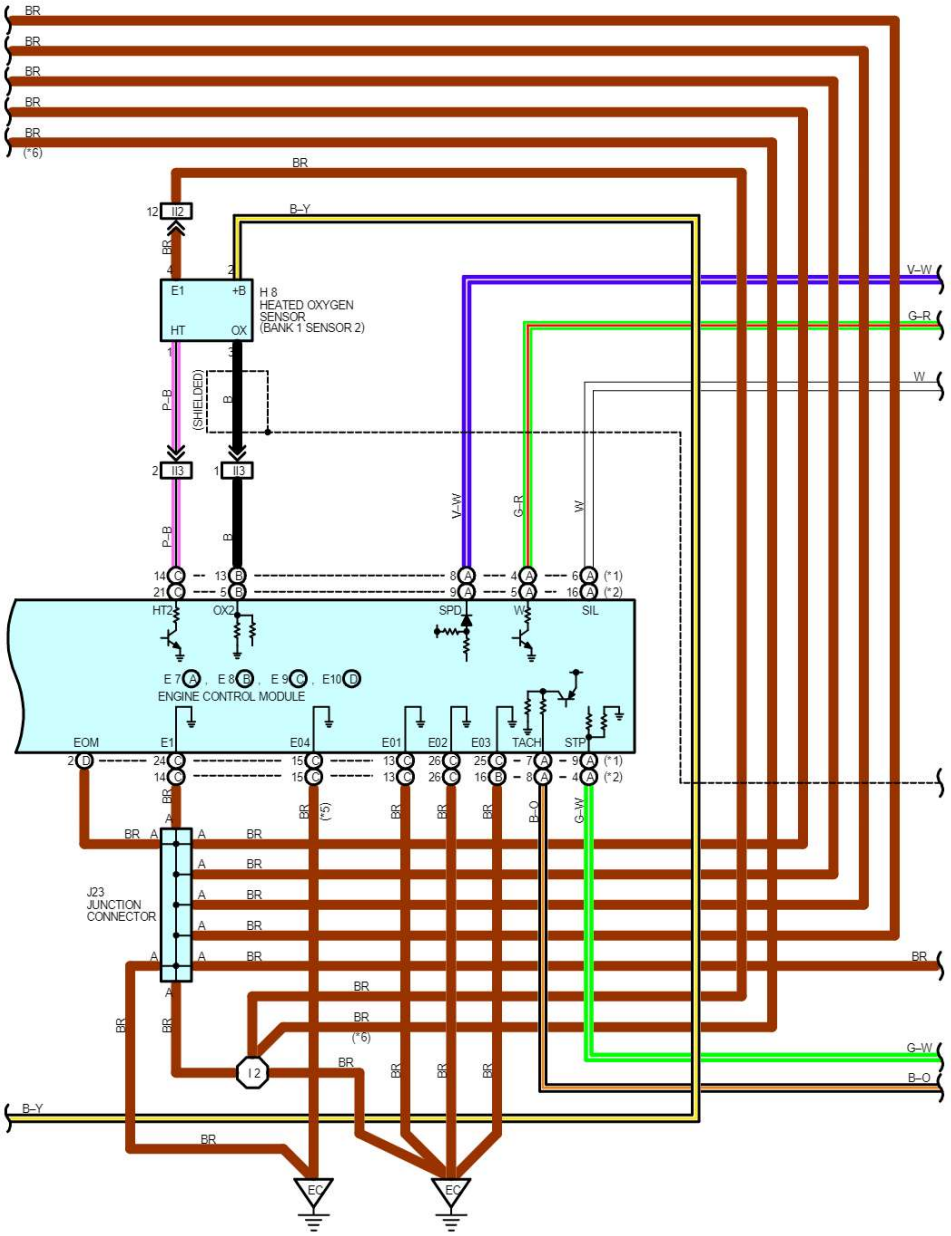

I16
IGNITION SW
AM2
IG2
ST2
5A
IGN
30A
AM2
FUSIBLE
LINK BLOCK
FL MAIN
3. 0W
BATTERY
J21
JUNCTION
CONNECTOR
I8
INJECTOR NO. 1
I9
INJECTOR NO. 2
I10
INJECTOR NO. 3
I11
INJECTOR NO. 4
CIR OPN
RELAY
F14
FUEL
PUMP
J40
JUNCTION
CONNECTOR
BL
R
B–R
B–W
G–R
L–R
W–B
L
Y
W
B–R(*1)
B–W(*1)

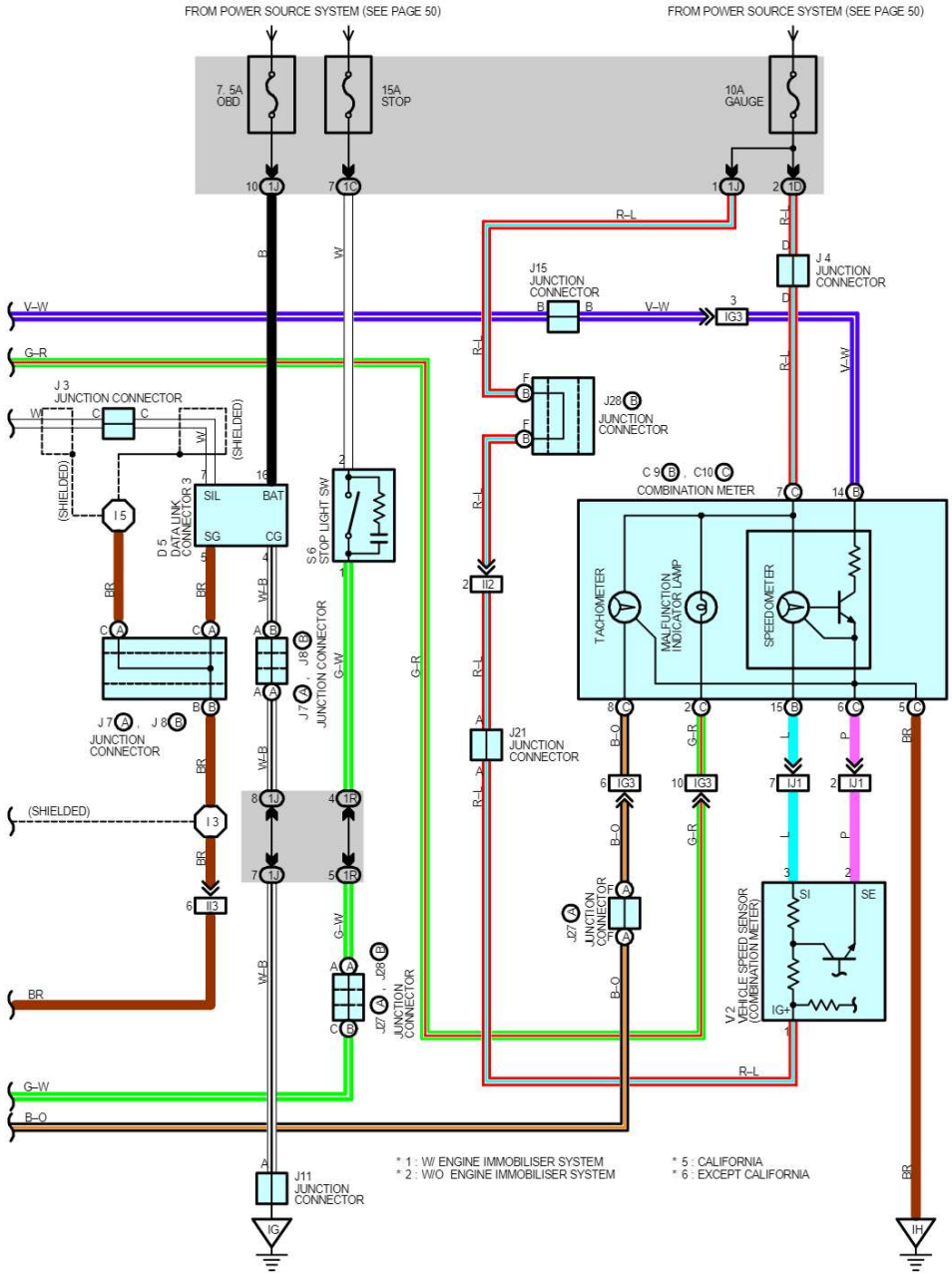

FROM POWER SOURCE SYSTEM (SEE PAGE 50)
15A EFI
5A STARTER
EFI RELAY
P 1 PARK/NEUTRAL POSITION SW
J29 JUNCTION CONNECTOR
C 7 CLUTCH START SW
J7 , J8 JUNCTION CONNECTOR
J27 , J28 JUNCTION CONNECTOR
E 7 , E 8 , E 9 , E10 ENGINE CONTROL MODULE
+B
BATT
NSW
STA
FC
MREL
IGSW
#40
#30
#20
#10
IGT1
IGF
IGT2
I 2
IGT
IGF
+B
GND
I3 IGNITION COIL AND IGNITER NO. 1
I4 IGNITION COIL AND IGNITER NO. 2
J25 JUNCTION CONNECTOR
J19 JUNCTION CONNECTOR
E3
II3
II2
* 1 : W/ ENGINE IMMOBILISER SYSTEM
* 2 : W/O ENGINE IMMOBILISER SYSTEM
* 3 : TMC MADE
* 4 : TMMK MADE

# ENGINE CONTROL (5S–FE)




* 1 : W/ ENGINE IMMOBILISER SYSTEM
* 2 : W/O ENGINE IMMOBILISER SYSTEM
* 3 : TMC MADE
* 4 : TMMK MADE
* 5 : CALIFORNIA
* 6 : EXCEPT CALIFORNIA
FROM POWER SOURCE SYSTEM (SEE PAGE 50)
10A TAIL
10A MIRROR HEATER
H3 HEATED OXYGEN SENSOR (BANK 1 SENSOR 1)
D1 DATA LINK CONNECTOR 1
C2 CRANKSHAFT POSITION SENSOR
C1 CAMSHAFT POSITION SENSOR
J12 JUNCTION CONNECTOR
D11 DIODE (IDLE-UP)
OX1
HT1
TE1
NE+
NE-
G+
ELS
E7 (A), E8 (B), E9 (C), E10 (D)
ENGINE CONTROL MODULE
LOCK
A/C SW
IMLD
MGC
PRS
RXCK
CODE
TXCT
LOCK IN
KSW
THR
PS SW
TO TRANSPONDER KEY AMPLIFIER
A14 A/C SW
H9 HEATER CONTROL SW
T3 THEFT DETERRENT ECU
J10 JUNCTION CONNECTOR
FROM MG CLT RELAY
FROM ACTUAL PRESSURE SW
FROM A/C MAGNETIC CLUTCH AND LOCK SENSOR
TO UNLOCK WARNING SW
A13 A/C EVAPORATOR TEMP SENSOR
P2 POWER STEERING OIL PRESSURE SW


BR
BR
BR
BR
BR
(*6)
BR
12
II2
B–Y
BR
4
3
E1
+B
HT
OX
H 8
HEATED OXYGEN
SENSOR
(BANK 1 SENSOR 2)
V–W
G–R
W
1
3
P–B
B
(SHIELDED)
2
II3
1
II3
P–B
B
V–W
G–R
W
14 C
21 C
13 B
5 B
8 A
9 A
4 A
5 A
6 A (*1)
16 A (*2)
HT2
OX2
SPD
W
SIL
E 7 A , E 8 B , E 9 C , E10 D
ENGINE CONTROL MODULE
EOM
E1
E04
E01
E02
E03
TACH
STP
2 D
24 C
14 C
15 C
15 C
13 C
13 C
26 C
26 C
25 C
16 B
7 A
8 A
9 A (*1)
4 A (*2)
BR
BR
A
BR
(*5)
BR
BR
BR
B–O
G–W
BR A
A
BR
A
BR
A
BR
A
BR
A
A
BR
A
BR
BR
BR
BR
BR
BR
(*6)
BR
BR
BR
BR
J23
JUNCTION
CONNECTOR
I 2
G–W
B–O
B–Y
BR
EC
EC


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
FROM POWER SOURCE SYSTEM (SEE PAGE 50)
7.5A OBD
15A STOP
10A GAUGE
J15 JUNCTION CONNECTOR
J 4 JUNCTION CONNECTOR
J 3 JUNCTION CONNECTOR
J28 JUNCTION CONNECTOR
C 9 , C10
COMBINATION METER
TACHOMETER
MALFUNCTION INDICATOR LAMP
SPEEDOMETER
D 5 DATA LINK CONNECTOR 3
SIL
BAT
SG
CG
S 6 STOP LIGHT SW
J7 , J8 JUNCTION CONNECTOR
J 7 , J 8 JUNCTION CONNECTOR
J21 JUNCTION CONNECTOR
J27 JUNCTION CONNECTOR
V 2 VEHICLE SPEED SENSOR (COMBINATION METER)
SI
SE
IG+
J11 JUNCTION CONNECTOR
IG
IH
* 1 : W/ ENGINE IMMOBILISER SYSTEM
* 2 : W/O ENGINE IMMOBILISER SYSTEM
* 5 : CALIFORNIA
* 6 : EXCEPT CALIFORNIA

## SYSTEM OUTLINE

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

### 1. INPUT SIGNALS

(1) Engine coolant temp. signal circuit

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

(2) Intake air temp. signal circuit

The intake air temp. sensor detects the intake air temp., which is input as a control signal into TERMINAL THA of the engine control module.

(3) Oxygen sensor signal circuit

The oxygen density in the exhaust gases is detected and input as a control signal into TERMINAL OX1 (except California) and OX2 of the engine control module.

(4) RPM signal circuit

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

(5) Throttle signal circuit

The throttle position sensor detects the throttle valve opening angle, which is input as a control signal into TERMINAL VTA of the engine control module.

(6) Vehicle speed signal circuit

The vehicle speed sensor, installed inside the transmission, detects the vehicle speed and inputs a control signal into TERMINAL SPD of the engine control module.

(7) Park/Neutral position SW signal circuit (A/T)

The Park/Neutral position SW detects whether the shift position are in neutral, parking or not, and inputs a control signal into TERMINAL STA of the engine control module.

(8) A/C SW signal circuit

The A/C amplifier function is built in the engine control module. The A/C SW signal inputs into the TERMINAL A/C SW of the engine control module.

(9) Battery signal circuit

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

(10) Intake air volume signal circuit

Intake air volume is detected by the manifold absolute pressure sensor (for manifold pressure) and is input as a control signal into TERMINAL PIN of the engine control module.

(11) Starter signal circuit

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

(12) Engine knock signal circuit

Engine knocking is detected by knock sensor 1 and the signal is input into TERMINAL KNK as a control signal.

(13) Electrical load signal circuit

The signal when systems such as the rear window defogger, headlights, etc. Which cause a high electrical burden are on is input to TERMINAL ELS as a control signal.

(14) Air fuel ratio signal circuit (California)

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

**2. CONTROL SYSTEM**

- SFI system
  The SFI system monitors the engine condition through the signals, which are input from each sensor (Input signals from (1) to (14) etc.) to the engine control module. The best fuel injection volume is decided based on this data and the program memorized by the engine control module, and the control signal is output to TERMINALS #10, #20, #30 and #40 of the engine control module to operate the injector. (Inject the fuel). The SFI system produces control of fuel injection operation by the engine control module in response to the driving conditions.
- ESA system
  The ESA system monitors the engine condition through the signals, which are input to the engine control module from each sensor (Input signals from (1), (2), (4) to (12) etc.) the best ignition timing is detected according to this data and the memorized data in the engine control module, and the control signal is output to TERMINALS IGT1 and IGT2. This signal controls the igniter to provide the best ignition timing for the driving conditions.
- Idle Air Control system
  The IAC system (Step motor type) increases the RPM and provides idling stability for fast idle–up when the engine is cold and when the idle speed has dropped due to electrical load, etc. The engine control module evaluates the signals from each sensor (Input signals (1), (4) to (8), (13) etc.), outputs current to TERMINALS ISCO and ISCC, and controls the idle air control valve.
- Fuel pump control system
  The engine control module operation outputs to TERMINAL FC and controls the CIR OPN relay. Thus controls the fuel pump drive speed in response to conditions.
- EGR control system
  The EGR cut control system controls the VSV (EGR) by evaluating the signals from each sensor which are input to the engine control module (Input signals (1), (5), (6), (9) etc.) and by sending output to TERMINAL EGR of the engine control module.
- A/C conditioning operation system
  In addition to the conventional A/C cut control, the engine control module performs the air conditioning operation as well since the A/C amplifier function is built in it.

**3. DIAGNOSIS SYSTEM**

With the diagnosis system, when there is a malfunctioning in the engine control module signal system, the malfunction 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 trouble being caused by continued control based on the signals from that system, the fail–safe system either controls the system by using data (Standard values) recorded in the engine control module memory or else stops the engine.

**SERVICE HINTS**

**E7 (A), E8 (B), E9 (C), E10 (D) ENGINE CONTROL MODULE**

Voltage at engine control module wiring connector

BATT–E1 : Always **9.0–14.0** volts
+B–E1 : **9.0–14.0** volts (Ignition SW at **ON** position)
VC–E2 : **4.5– 5.5** volts (Ignition SW at **ON** position)
VTA–E2 : **0.3– 0.8** volts (Ignition SW on and throttle valve fully closed)
**3.2–4.9** volts (Ignition SW on and throttle valve open)
PIM–E2 : **3.3– 3.9** volts (Ignition SW at **ON** position)
THA–E2 : **0.5–3.4** volts (Ignition SW on and intake air temp. **20**˚C, **68**˚F)
THW–E2 : **0.2– 1.0** volts (Ignition SW on and coolant temp. **80**˚C, **176**˚F)
STA–E1 : **6.0–14.0** volts (Engine cranking)
W–E1 : **9.0–14.0** volts (No trouble and engine running)
TE1–E1 : **9.0–14.0** volts (Ignition SW at **ON** position)
NSW–E1 : **0– 3.0** volts (Ignition SW on and Park/Neutral position SW position **P** or **N** position)
**9.0–14.0** volts (Ignition SW on and except Park/Neutral position SW position **P** or **N** position)
IGT1, IGT2–E1 : Pulse generation (Engine cranking or idling)
#10, #20, #30, #40–E01, E02 : **9.0–14.0** volts (Ignition SW at **ON** position)

**RESISTANCE AT ENGINE CONTROL MODULE WIRING CONNECTORS**

(Disconnect wiring connector)

VC–E2 : **2.5–5.0** kΩ
THA–E2 : **2.21–2.69** kΩ (Intake air temp. **20**˚C, **68**˚F)
THW–E2 : **0.29–0.354** kΩ (Coolant temp. **80**˚C, **176**˚F)

# ENGINE CONTROL (5S–FE)

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A11 | 28 (5S–FE) | H8 | 30 | J21 | 31 |
| A13 | 30 | H9 | 30 | J23 | 31 |
| A14 | 30 | I1 | 29 (5S–FE) | J25 | 31 |
| C1 | 28 (5S–FE) | I3 | 29 (5S–FE) | J27 A | 31 |
| C2 | 28 (5S–FE) | I4 | 29 (5S–FE) | J28 B | 31 |
| C7 | 30 | I8 | 29 (5S–FE) | J29 | 31 |
| C9 B | 30 | I9 | 29 (5S–FE) | J40 | 32 |
| C10 C | 30 | I10 | 29 (5S–FE) | K1 | 29 (5S–FE) |
| D1 | 28 (5S–FE) | I11 | 29 (5S–FE) | M1 | 29 (5S–FE) |
| D5 | 30 | I14 | 29 (5S–FE) | P1 | 29 (5S–FE) |
| D11 | 30 | I16 | 30 | P2 | 29 (5S–FE) |
| E5 | 28 (5S–FE) | J3 | 31 | S6 | 31 |
| E7 A | 30 | J4 | 31 | T2 | 29 (5S–FE) |
| E8 B | 30 | J7 A | 31 | T3 | 31 |
| E9 C | 30 | J8 B | 31 | V1 | 29 (5S–FE) |
| E10 D | 30 | J10 | 31 | V2 | 29 (5S–FE) |
| F4 A | 28 (5S–FE) | J11 | 31 | V4 | 29 (5S–FE) |
| F6 C | 28 (5S–FE) | J12 | 31 | V5 | 29 (5S–FE) |
| F14 | 32 | J15 | 31 | V7 | 29 (5S–FE) |
| H3 | 28 (5S–FE) | J19 | 31 | | |

**: RELAY BLOCKS**

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 24 | Engine Room R/B No.1 (Engine Compartment Left) |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1K | | |
| 1R | | |
| 1W | | |
| 2A | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2F | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |
| 2L | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 38 (5S–FE) | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| ID1 | 40 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II3 | | |
| II4 | | |
| IJ1 | 42 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IK2 | | |

**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 38 (5S–FE) | Left Radiator Side Support |
| EC | 38 (5S–FE) | Intake Manifold |
| IG | 40 | Instrument Panel Brace LH |
| IH | 40 | Instrument Panel Brace RH |
| BL | 44 | Under the Left Center Pillar |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 38 (5S–FE) | Cowl Wire | I3 | 42 | Cowl Wire |
| I1 | 42 | | I5 | | |
| I2 | 42 | Engine Wire | I6 | | |

**A11**
DARK GRAY




**A13**




**A14**




**C1**
DARK GRAY



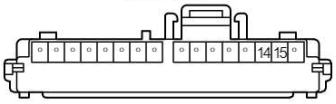

**C2**
DARK GRAY



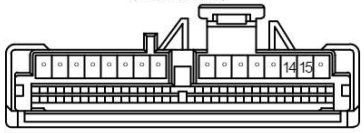

**C7**



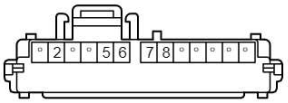

**C9 (B)**
(TMC Made)



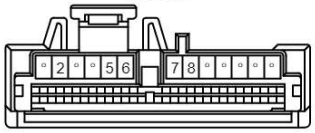

**C9 (B)**
(TMMK Made)




**C10 (C)**
(TMC Made) BROWN

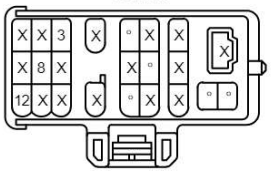



**C10 (C)**
BROWN

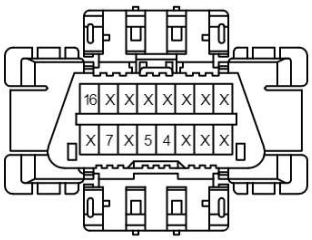


* 1 : w/ Engine Immobiliser System
* 2 : w/o Engine Immobiliser System

**D1**
BLACK



**D5**



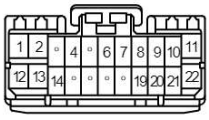
**D11**
ORANGE



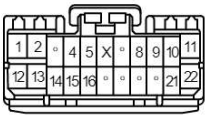
**E5**
GREEN



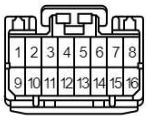
**E7 (A)**
(* 1)



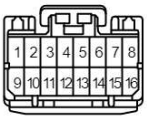
**E7 (A)**
(* 2)



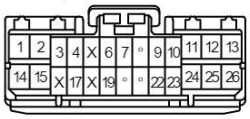
**E8 (B)**
(* 1) DARK GRAY



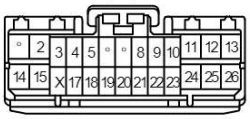
**E8 (B)**
(* 2)



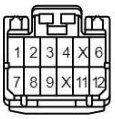
**E9 (C)**
(* 1) DARK GRAY



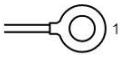
**E9 (C)**
(* 2)



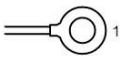
**E10 (D)**
DARK GRAY



**F4 (A)**



**F6 (C)**



**F14**



**H3**
DARK GRAY



**H8**
DARK GRAY



**H9**



**I1**
GRAY



**I3**
GRAY



**I4**
BLACK



**I8**
BROWN



**I9**
GRAY



**I10**
BROWN



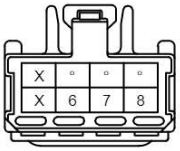
**I11**
GRAY



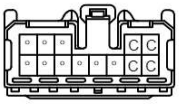
**I14**
BLACK



**I16**

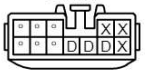


**J3**



(Hint : See Page 7)

**J4**
BLACK



(Hint : See Page 7)

**J7 (A)**
GRAY



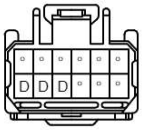

(Hint : See Page 7)

**J8 (B)**
GRAY



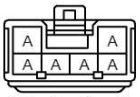

(Hint : See Page 7)

**J10**
BLACK




(Hint : See Page 7)

**J11**



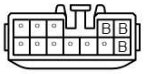

(Hint : See Page 7)

**J12**
BLACK



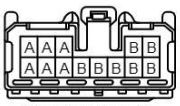

(Hint : See Page 7)

**J15**
BLACK



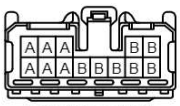

(Hint : See Page 7)

**J19**
GRAY




(Hint : See Page 7)

**J21**
GRAY



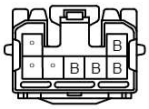

(Hint : See Page 7)

**J23**




(Hint : See Page 7)

**J25**




(Hint : See Page 7)

**J27 (A)**



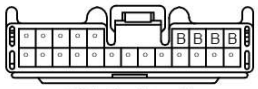

(Hint : See Page 7)

**J28 (B)**



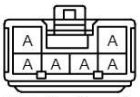

(Hint : See Page 7)

**J29**




(Hint : See Page 7)

**J40**




(Hint : See Page 7)

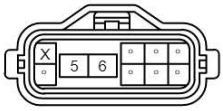
**K1**
DARK GRAY




**M1**
BLACK



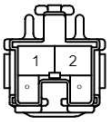

**P1**
GRAY




**P2**
BLACK



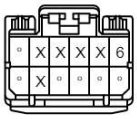

**S6**
BLUE




**T2**
BLACK




**T3**




**V1**
BLACK




**V2**
BLACK




**V4**
BLUE



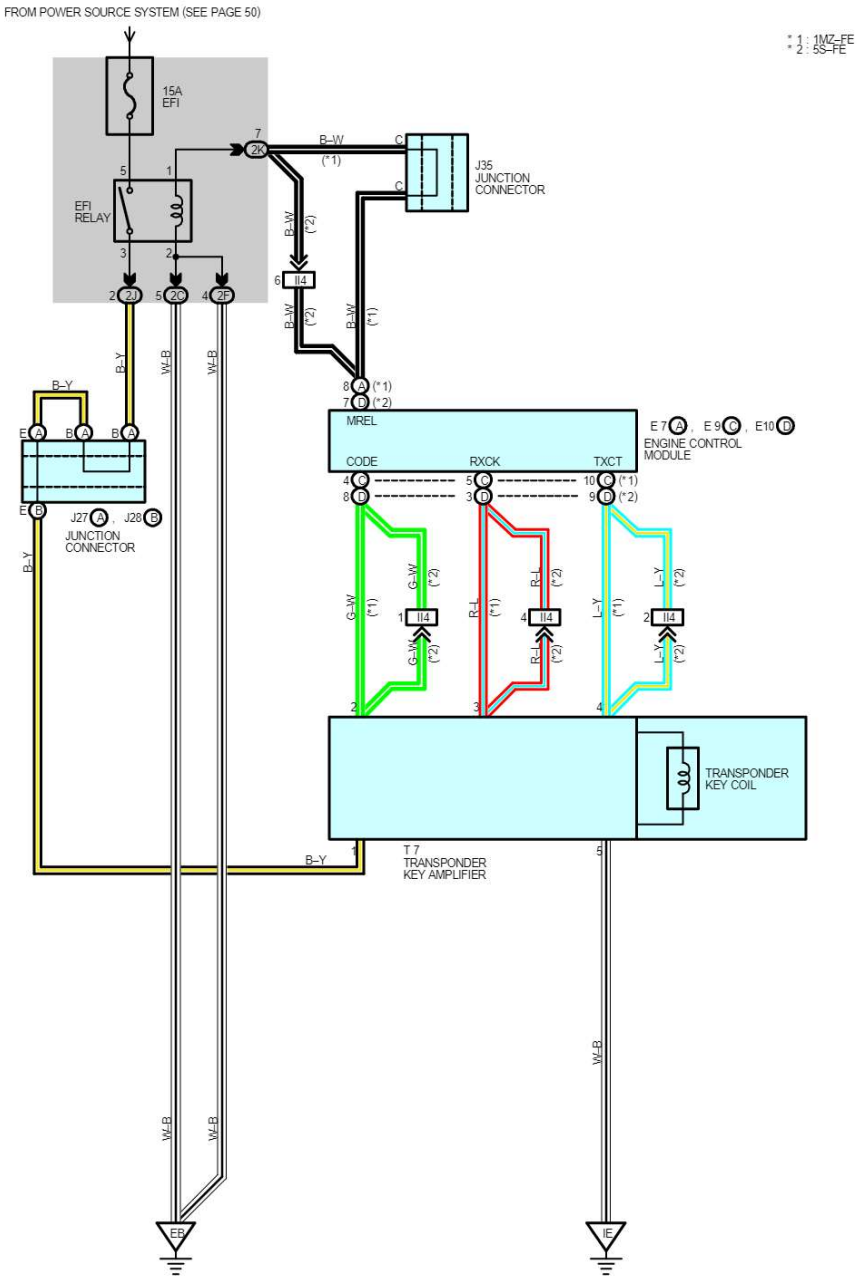

**V5**
BLACK




**V7**
BLUE



# ENGINE IMMOBILISER SYSTEM



### : PARTS LOCATION

| Code | | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|---|
| E7 | A | 30 | J27 | A | 31 | T7 | 31 |
| E9 | C | 30 | J28 | B | 31 | | |
| E10 | D | 30 | J35 | | 31 | | |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 2C<br>2F | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J<br>2K | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

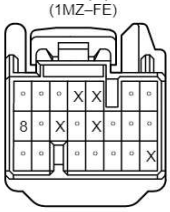
### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| II4 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |

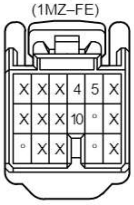
### : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36(1MZ–FE)<br>38(5S–FE) | Left Radiator Side Suport |
| IE | 40 | Cowl Side Panel LH |

**E7 (A)**
(1MZ–FE)




**E9 (C)**
(1MZ–FE)




**E10 (D)**
(5S–FE) DARK GRAY

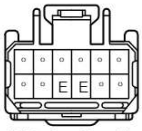



**J27 (A)**



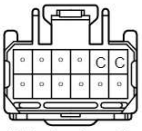

(Hint : See Page 7)

**J28 (B)**




(Hint : See Page 7)

**J35**

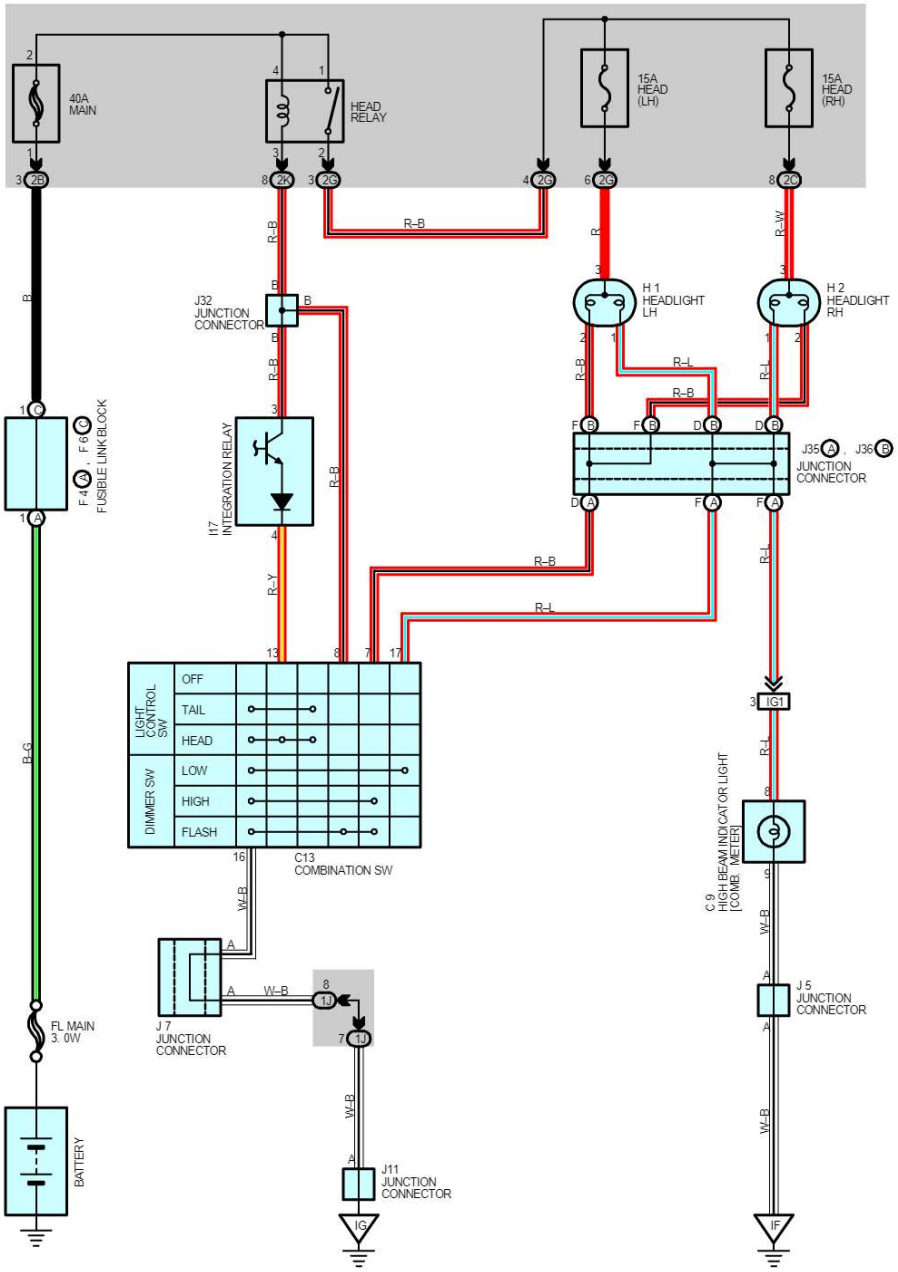



(Hint : See Page 7)

**T7**



## HEADLIGHT (w/o DAYTIME RUNNING LIGHT)



**SERVICE HINTS**

**HEAD RELAY [ENGINE ROOM J/B NO.2]**

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

**C13 COMBINATION SW**

13–16 : Continuity with the light control SW at **HEAD** position
8–16 : Continuity with the dimmer SW at **FLASH** position
7–16 : Continuity with the dimmer SW at **HIGH** or **FLASH** position

**: PARTS LOCATION**

| Code | | See Page | Code | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|
| C9 | | 30 | H1 | 26 (1MZ–FE) | J7 | | 31 |
| C13 | | 30 | | 28 (5S–FE) | J11 | | 31 |
| F4 | A | 26 (1MZ–FE) | H2 | 26 (1MZ–FE) | J32 | | 31 |
| | | 28 (5S–FE) | | 28 (5S–FE) | J35 | A | 31 |
| F6 | C | 26 (1MZ–FE) | I17 | 30 | J36 | B | 31 |
| | | 28 (5S–FE) | J5 | 31 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2B | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2G | | |
| 2K | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

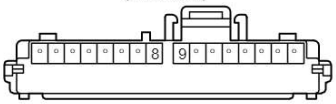
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |

**: GROUND POINTS**

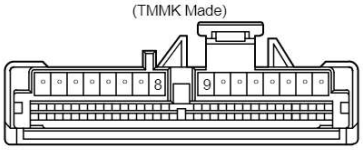
| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |

## HEADLIGHT (w/o DAYTIME RUNNING LIGHT)

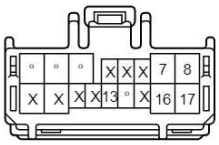
**C9**
(TMC Made)




**C9**
(TMMK Made)



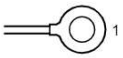

**C13**



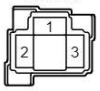

**F4 (A)**




**F6 (C)**




**H1**
BLACK



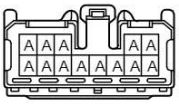

**H2**
BLACK




**I17**

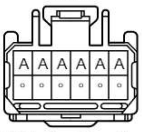



**J5**
ORANGE



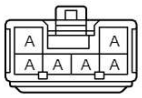

(Hint : See Page 7)

**J7**
GRAY



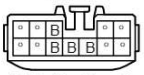

(Hint : See Page 7)

**J11**



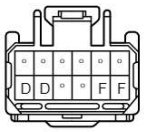

(Hint : See Page 7)

**J32**
GRAY




(Hint : See Page 7)

**J35 (A)**



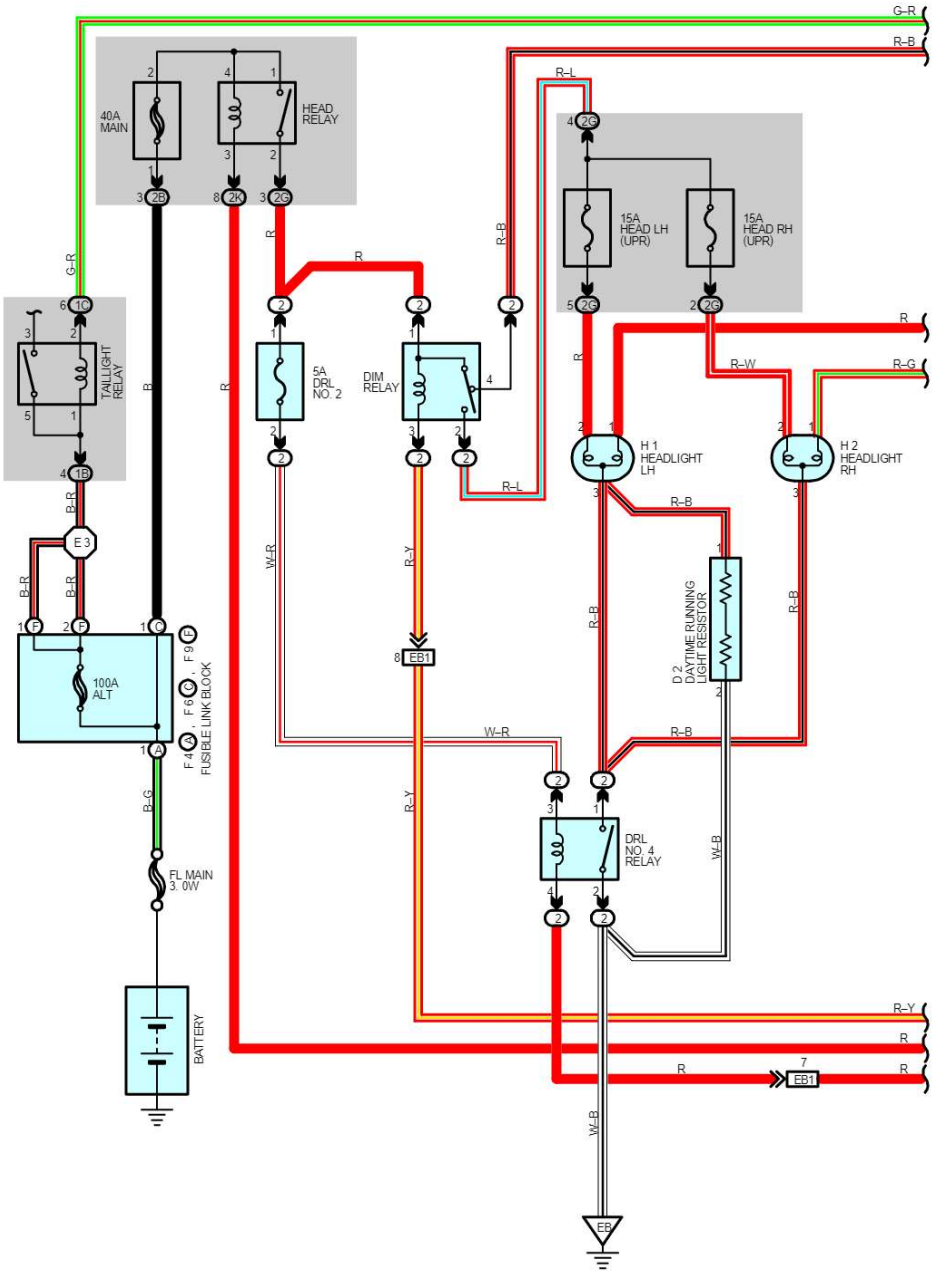

(Hint : See Page 7)

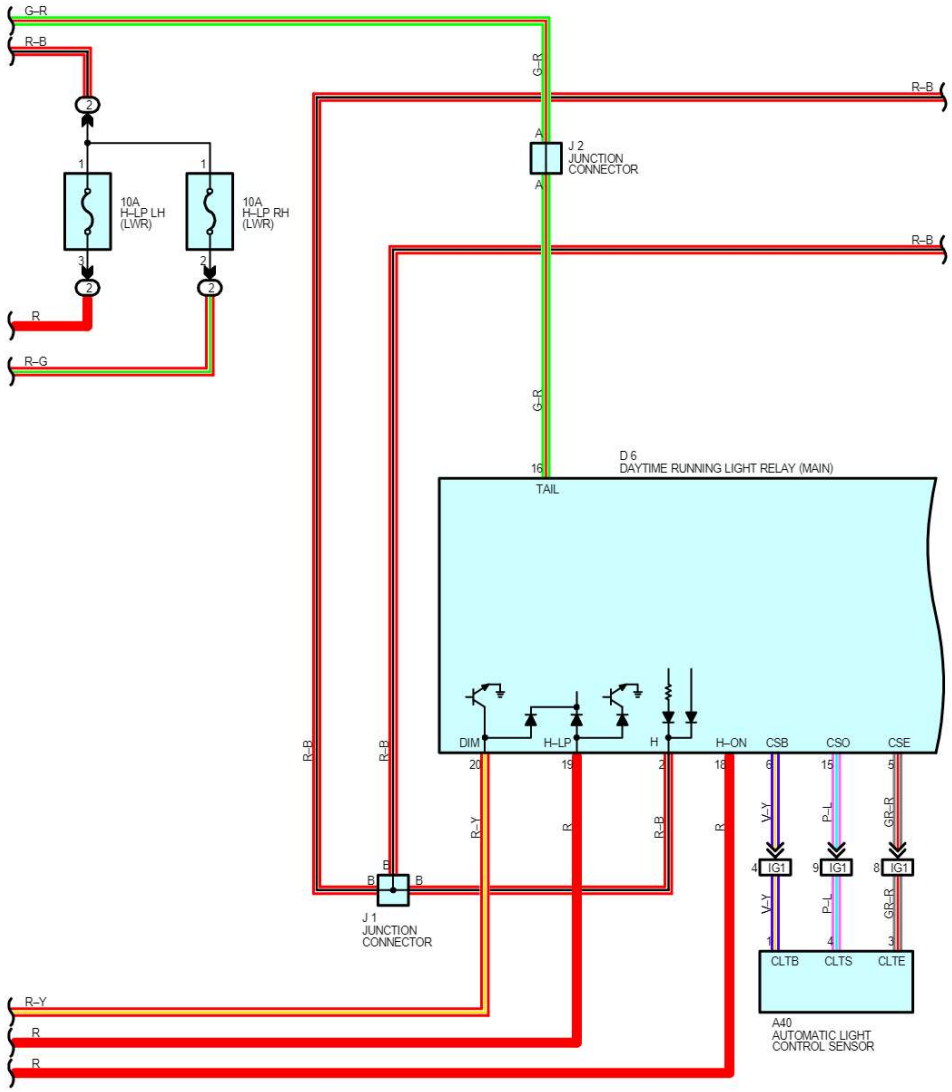
**J36 (B)**



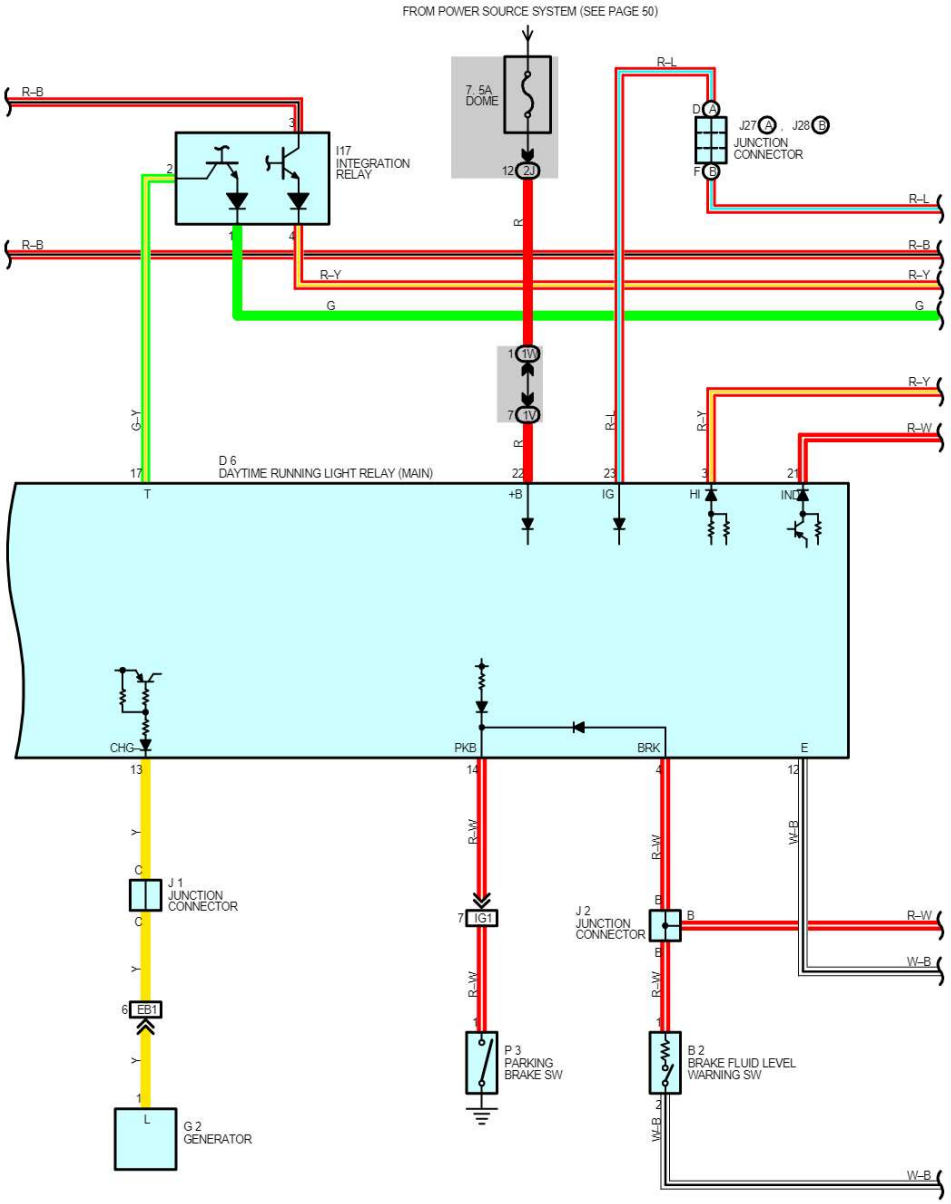

(Hint : See Page 7)

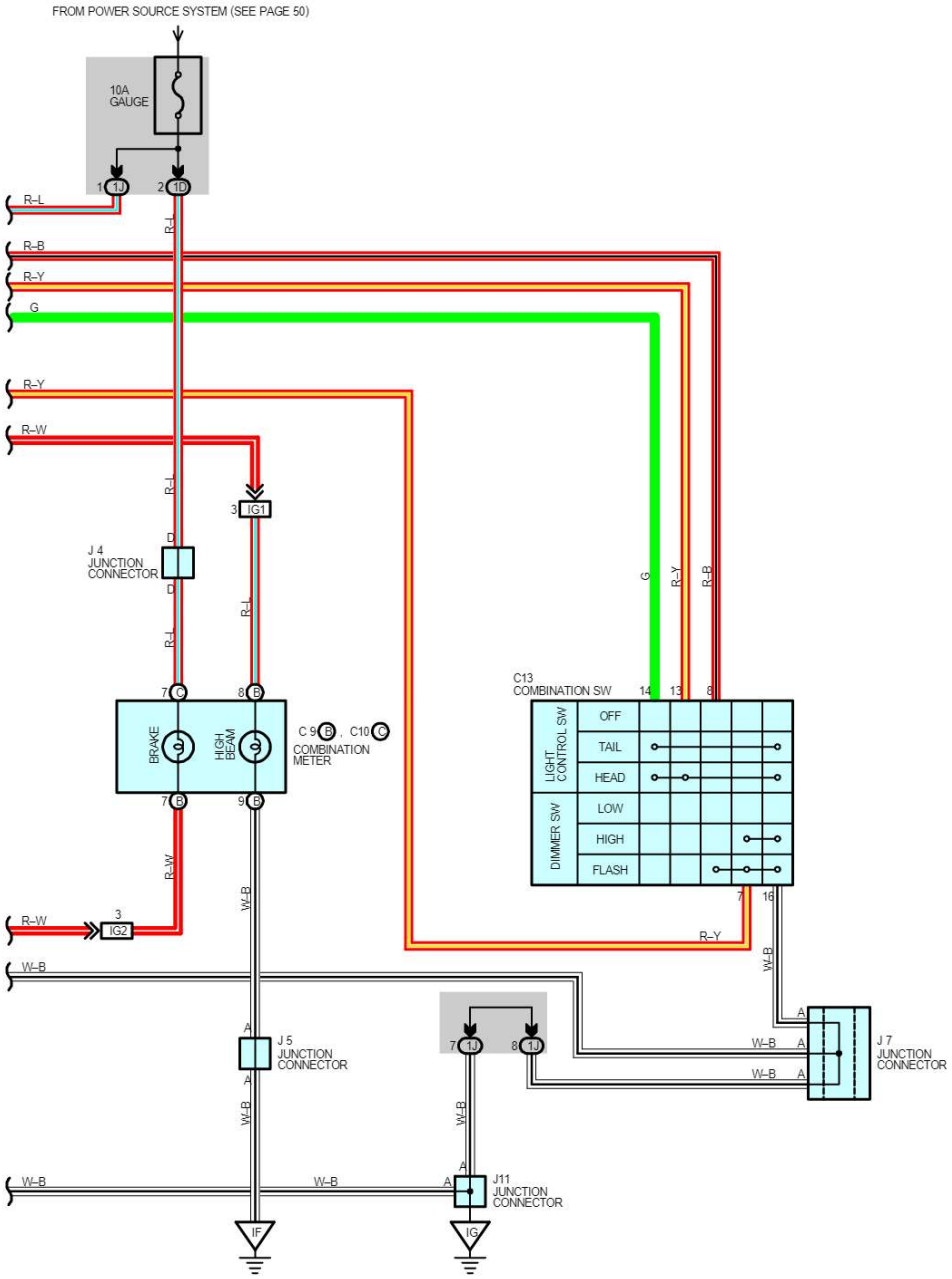
## HEADLIGHT (w/ DAYTIME RUNNING LIGHT)




G–R
R–B
10A
H–LP LH
(LWR)
10A
H–LP RH
(LWR)
R
R–G
G–R
R–B
J 2
JUNCTION
CONNECTOR
R–B
G–R
D 6
DAYTIME RUNNING LIGHT RELAY (MAIN)
TAIL
DIM
H–LP
H
H–ON
CSB
CSO
CSE
R–B
R–B
R–Y
R
R–B
R
V–Y
P–L
GR–R
IG1
IG1
IG1
V–Y
P–L
GR–R
CLTB
CLTS
CLTE
J 1
JUNCTION
CONNECTOR
R–Y
R
R
A40
AUTOMATIC LIGHT
CONTROL SENSOR

# HEADLIGHT (w/ DAYTIME RUNNING LIGHT)




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
10A GAUGE
1 1D
2 1D
R–L
R–B
R–Y
G
R–W
3 IG1
J 4 JUNCTION CONNECTOR
D
7 C
8 B
BRAKE
HIGH BEAM
C 9 B , C10 C
COMBINATION METER
7 B
9 B
C13 COMBINATION SW
14
13
8
LIGHT CONTROL SW
OFF
TAIL
HEAD
DIMMER SW
LOW
HIGH
FLASH
7
16
3 IG2
W–B
J 5 JUNCTION CONNECTOR
A
2
7 1J
8 1J
J 7 JUNCTION CONNECTOR
J11 JUNCTION CONNECTOR
IF
IG

# HEADLIGHT (w/ DAYTIME RUNNING LIGHT)

**SYSTEM OUTLINE**

The current from the FL MAIN is always flowing from the MAIN fuse to HEAD relay (Coil side) to TERMINAL H–LP of the daytime running light relay (Main), from DOME fuse to TERMINAL +B of the daytime running light relay (Main) and from the ALT fuse to Taillight relay (Coil side) to TERMINAL TAIL (TMMK Made) of the daytime running light relay (Main).
When the ignition SW is turned on, the current flowing through the GAUGE fuse flows to TERMINAL IG of the daytime running light relay (Main).

**1. DAYTIME RUNNING LIGHT OPERATION**

When the engine is started, voltage generated at TERMINAL L of the generator is applied to TERMINAL CHG– 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 PKB of the relay.
This activates the daytime running light relay (Main) and the HEAD relay is turned to on, so the current flows from the MAIN fuse to the HEAD relay (Point side) to TERMINAL 1 of the DIM relay to TERMINAL 4 to H–LP LH (LWR), H–LP RH (LWR) fuses to TERMINAL 1 of the headlights to TERMINAL 3 to TERMINAL 1 of the daytime running light resistor to TERMINAL 2 to GROUND, causing the headlights to light up (Headlights light up dimmer than normal brightness.). Once the daytime running light system operates and the headlights light up, the 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, the headlights remain light up even through 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 headlights light up when the engine starts.

**2. HEADLIGHT OPERATION**

When the light control SW is switched to HEAD position and the dimmer SW is set to LOW position, causing the daytime running light relay (Main) and the HEAD relay to turn on, so the current flows from the MAIN fuse to HEAD relay (Point side) to DRL NO.2 fuse to TERMINAL 3 of the DRL NO.4 relay to TERMINAL 4 to TERMINAL H–ON of the daytime running light relay (Main) to TERMINAL H to TERMINAL 3 of the integration relay to TERMINAL 4 to TERMINAL 13 of the light control SW to TERMINAL 16 to GROUND, activating the DRL. NO.4 relay. The current to HEAD relay (Point side) then flows to TERMINAL 1 of the DIM relay to TERMINAL 4 to H–LP LH (LWR), H–LP RH (LWR) fuses to TERMINAL 1 of the headlights to TERMINAL 3 to TERMINAL 1 of the DRL NO.4 relay to TERMINAL 2 to GROUND, causing the headlights to light up at normal intensity.
When the light control SW is switched to HEAD position and the dimmer SW is set to HIGH position, the signal from the dimmer SW is input to the daytime running light relay (Main). This activates the daytime running light relay (Main) and the HEAD relay is turned on, so the current flows from the MAIN fuse to HEAD relay (Point side) to TERMINAL 1 of the DIM relay to TERMINAL 3 to TERMINAL DIM of the daytime running light relay (Main), activating the DIM relay. This causes current to flow from TERMINAL 1 of the DIM relay to TERMINAL 2 to HEAD LH (UPR), HEAD RH (UPR) fuses to TERMINAL 2 of the headlights to TERMINAL 3 to TERMINAL 1 of the DRL NO.4 relay to TERMINAL 2 to GROUND, causing the headlights to light up at high beam and the high beam indicator light to light up.
When the dimmer SW is switched to FLASH position, the signal from the dimmer SW is input to the daytime running light relay (Main). This activates the daytime running light relay (Main) and the HEAD relay is turned on, so the current flows from the MAIN fuse to HEAD relay (Point side) to DRL NO.2 fuse to TERMINAL 3 of the DRL NO.4 relay to TERMINAL 4 to TERMINAL H–ON of the daytime running light relay (Main) to TERMINAL H to TERMINAL 8 of the dimmer SW to TERMINAL 16 to GROUND, activating the DRL NO.4 relay. At the same time, the current flows from the TERMINAL 1 of the DIM relay to TERMINAL 3 to TERMINAL DIM of the daytime running light relay (Main), activating the DIM relay, and also flows from the HEAD LH (UPR), HEAD RH (UPR) fuses to TERMINAL 2 of the headlights to TERMINAL 3 to TERMINAL 1 of the DRL NO.4 relay to TERMINAL 2 to GROUND, causing the headlights to light up at high beam and the high beam indicator light to light up.

### 3. AUTOMATIC LIGHT CONTROL OPERATION

When the daytime running light is operating and the Automatic control sensor detects a decrease in the ambient light (It continues less than approx. 2500 lux over about 20 seconds, and it is less than 1000 lux.), the automatic light control operation starts. At the same time, daytime running light relay (Main) is activated, so current flows from the ALT fuse to the Taillight relay (Coil side) to TERMINAL TAIL of the daytime running light relay (Main), and the DRL NO.2 fuse to the DRL NO.4 relay (Coil side) to TERMINAL H–ON of the daytime running light relay (Main), activating both the Taillight relay and the DRL NO.4 relay, so that the taillights and headlights light up.

When the automatic light control sensor detects an increase in the ambient light (It continues more than approx. 1000 lux over about 20 seconds, and it is more than approx. 2500 lux), the ignition SW is turned to off, the light control SW is turned to HEAD position, and the automatic light control operation stops.

### SERVICE HINTS

**HEAD RELAY [ENGINE ROOM J/B NO.2]**

1–2 : Closed with the light control SW at **HEAD** position or the dimmer SW at **FLASH** position
Closed with the engine running and the parking brake lever is released (Parking brake SW off)

**TAILLIGHT RELAY [INSTRUMENT PANEL J/B]**

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

**D6 DAYTIME RUNNING LIGHT RELAY (MAIN)**

2–GROUND : Approx. **12** volts with the ignition SW at **ON** position
5, 7,17–GROUND : Approx. **12** volts with the light control SW at **HEAD** position or the dimmer SW at **FLASH** position
Approx. **12** volts with the engine running and the parking brake lever is released (Parking brake SW off)
6,15–GROUND : Always approx. **12** volts
8–GROUND : Continuity with the parking brake lever pulled up
11–GROUND : **13.9**–**15.1** volts with the engine running at **2000** rpm **25**°C (**77**°F)
12–GROUND : Approx. **12** volts with the high beam light up
13–GROUND : Always continuity
16–GROUND : Continuity with the dimmer SW at **HIGH** or **FLASH** position
18–GROUND : Continuity with the brake fluid level not enough

**O : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A40 | 30 | F6 C | 26 (1MZ–FE) | J1 | 31 |
| B2 | 26 (1MZ–FE) | | 28 (5S–FE) | J2 | 31 |
| | 28 (5S–FE) | F9 F | 26 (1MZ–FE) | J4 | 31 |
| C9 B | 30 | | 28 (5S–FE) | J5 | 31 |
| C10 C | 30 | G2 | 26 (1MZ–FE) | J7 | 31 |
| C13 | 30 | | 28 (5S–FE) | J11 | 31 |
| D2 | 26 (1MZ–FE) | H1 | 26 (1MZ–FE) | J27 A | 31 |
| | 28 (5S–FE) | | 28 (5S–FE) | J28 B | 31 |
| D6 | 30 | H2 | 26 (1MZ–FE) | P3 | 31 |
| F4 A | 26 (1MZ–FE) | | 28 (5S–FE) | | |
| | 28 (5S–FE) | I17 | 30 | | |

# HEADLIGHT (w/ DAYTIME RUNNING LIGHT)

**: RELAY BLOCKS**

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 2 | 24 | Engine Room R/B No.2 (Near the Battery) |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | | |
| 1W | | |
| 2B | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2G | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 36 (1MZ–FE) | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| | 38 (5S–FE) | |
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG2 | | |

**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| | 38 (5S–FE) | |
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | E3 | 38 (5S–FE) | Cowl Wire |

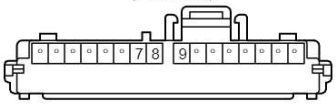
**A40**
BLACK



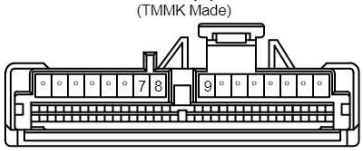

**B2**
GRAY



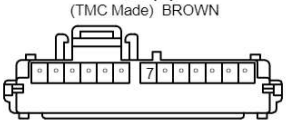

**C9 (B)**
(TMC Made)



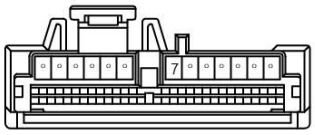

**C9 (B)**
(TMMK Made)



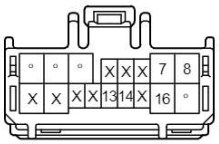

**C10 (C)**
(TMC Made) BROWN




**C10 (C)**
(TMMK Made) BROWN



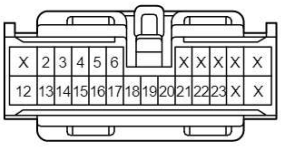

**C13**



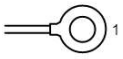

**D2**
GRAY



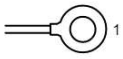

**D6**




**F4 (A)**




**F6 (C)**




**G2**
BLACK




**H1**
BLACK



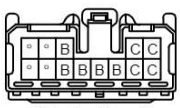

**H2**
BLACK




**I17**

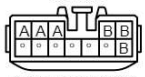



**J1**




(Hint : See Page 7)

**J2**
BLACK



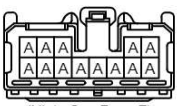

(Hint : See Page 7)

**J4**
BLACK



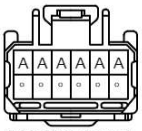

(Hint : See Page 7)

**J5**
ORANGE



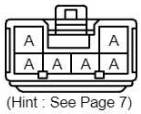

(Hint : See Page 7)

**J7**
GRAY




(Hint : See Page 7)

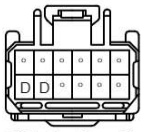
**J11**




(Hint : See Page 7)

## HEADLIGHT (w/ DAYTIME RUNNING LIGHT)

J27 (A)




(Hint : See Page 7)

J28 (B)

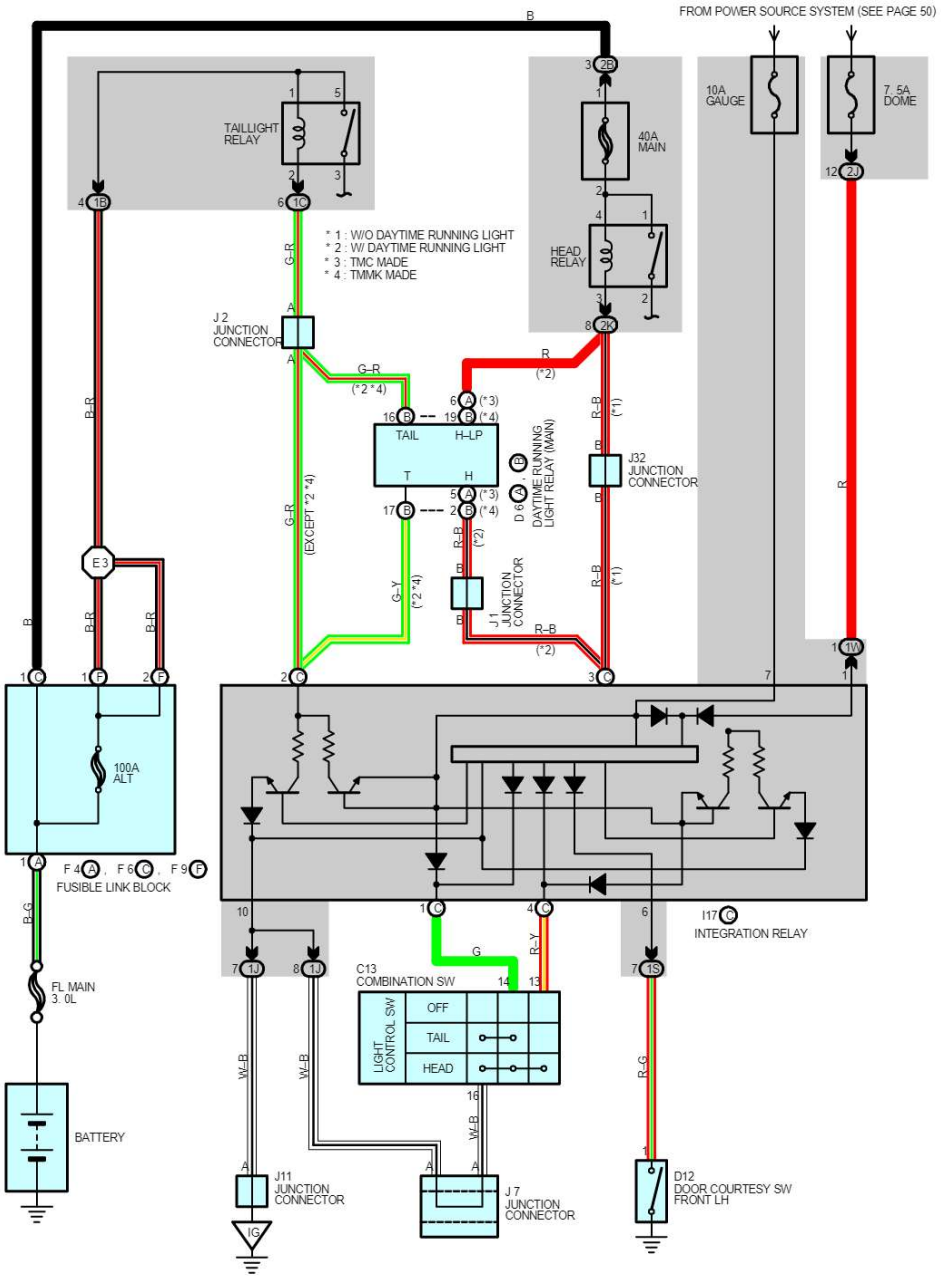



(Hint : See Page 7)

P3



# LIGHT AUTO TURN OFF



## SYSTEM OUTLINE

With the ignition SW turned on, the current flows to TERMINAL 7 of the integration relay through GAUGE fuse.
Voltage is applied at all times to TERMINAL (C) 2 of the integration relay through the taillight relay coil side, and to TERMINAL (C) 3 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 (C) 1 of the integration relay. Due to this signal, the current flowing to TERMINAL (C) 2 of the relay flows to TERMINAL (C) 1 to TERMINAL 14 of the light control SW to TERMINAL 16 to GROUND, and taillight relay causes taillights to turn on.

<Turn headlight on>
With the light control SW turned to HEAD position, a signal is input into TERMINALS (C) 1 and (C) 4 of the integration relay. Due to this signal, the current flowing to TERMINAL (C) 3 of the relay flows to TERMINAL (C) 4 to TERMINAL 13 of the light control SW to TERMINAL 16 to GROUND in the headlight circuit, and causes taillight and HEAD relay to turn the lights on. The taillight circuit is same as above.

### 2. LIGHT AUTO TURN OFF OPERATION

With light on and ignition SW turned off (Input signal goes to TERMINAL 7 of the relay), when the driver's door is opened (Input signal goes to TERMINAL 6 of the relay), the relay operates and the current is cut off which flows from TERMINAL (C) 2 of the relay to TERMINAL (C) 1 In taillight circuit and from TERMINAL (C) 3 to TERMINAL (C) 4 in headlight circuit.
As a result, all lights are turned off automatically.

## SERVICE HINTS

**HEAD RELAY [ENGINE ROOM J/B NO.2]**

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

**TAILLIGHT RELAY [INSTRUMENT PANEL J/B]**

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

**D12 DOOR COURTESY SW FRONT LH**

1–GROUND : Continuity with the front LH door open

**I17 (C) INTEGRATION RELAY**

7–GROUND : Approx. **12** volts with the ignition SW at **ON** position
6–GROUND : Continuity with the front LH door open
1–GROUND : Always approx. **12** volts
10–GROUND : Always continuity
(C) 2–GROUND : Always approx. **12** volts
(C) 3–GROUND : Always approx. **12** volts
(C) 4–GROUND : Continuity with the light control SW at **HEAD** position
(C) 1–GROUND : Continuity with the light control SW at **TAIL** or **HEAD** position

## ○ : PARTS LOCATION

| Code | | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|---|
| C13 | | 30 | F6 | C | 26 (1MZ–FE) | J2 | 31 |
| D6 | A | 30 | | | 28 (5S–FE) | J7 | 31 |
| | B | 30 | F9 | F | 26 (1MZ–FE) | J11 | 31 |
| D12 | | 32 | | | 28 (5S–FE) | J32 | 31 |
| F4 | A | 26 (1MZ–FE) | I17 | C | 30 | | |
| | | 28 (5S–FE) | J1 | | 31 | | |

# LIGHT AUTO TURN OFF

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1J | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2B | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

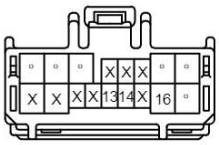
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IG | 40 | Instrument Panel Brace LH |

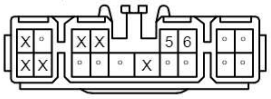
**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | E3 | 38 (5S–FE) | Cowl Wire |

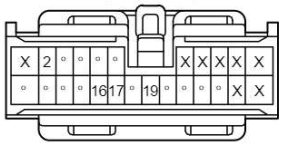
**C13**




**D6 (A)**
(TMC Made) GRAY



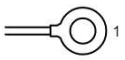

**D6 (B)**
(TMMK Made)



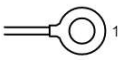

**D12**




**F4 (A)**




**F6 (C)**



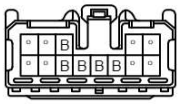

**F9 (F)**
ORANGE




**I17 (C)**




**J1**




(Hint : See Page 7)

**J2**
BLACK



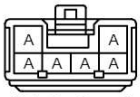

(Hint : See Page 7)

**J7**
GRAY



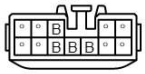

(Hint : See Page 7)

**J11**



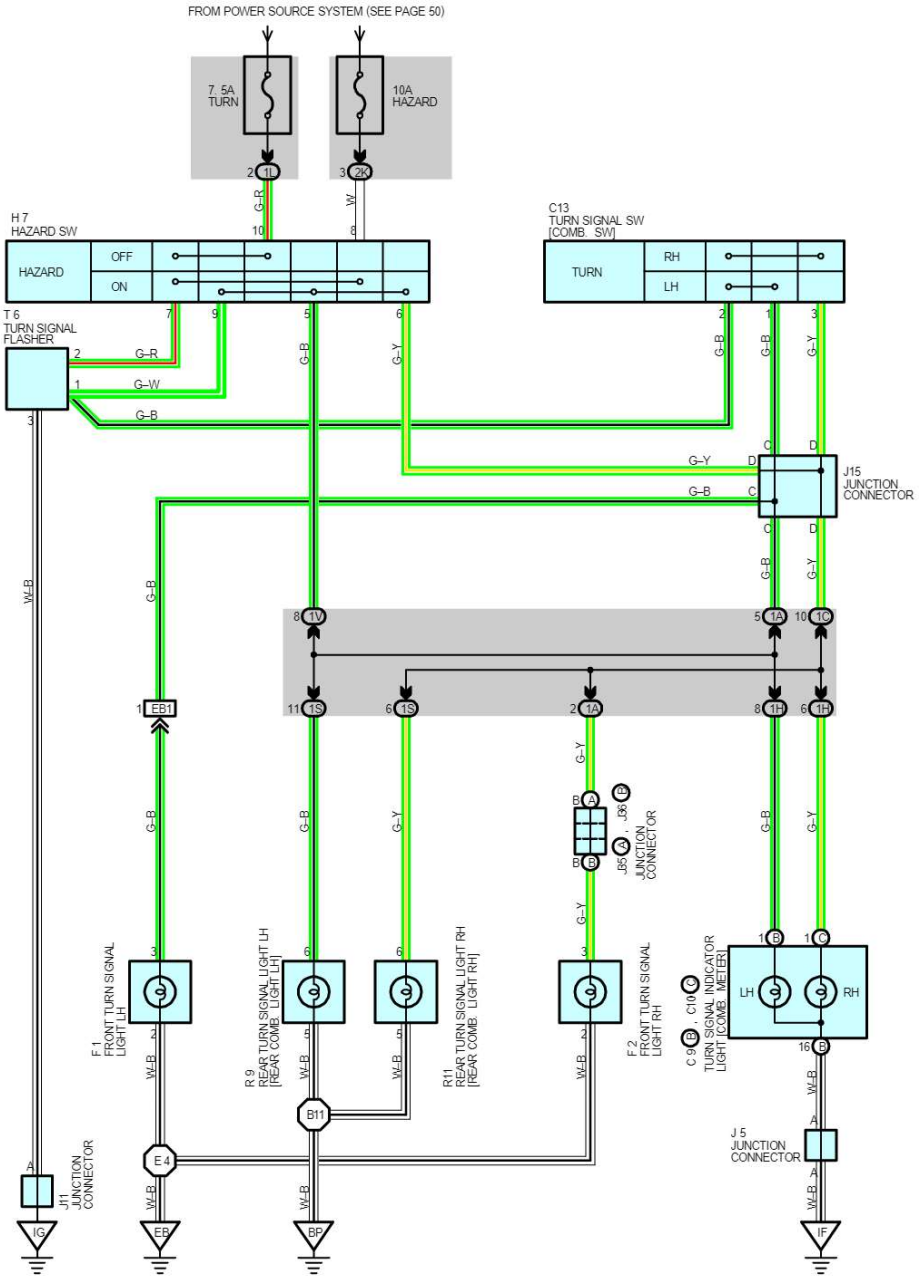

(Hint : See Page 7)

**J32**
GRAY




(Hint : See Page 7)

# TURN SIGNAL AND HAZARD WARNING LIGHT



**SERVICE HINTS**

**T6 TURN SIGNAL FLASHER**

2–GROUND : Approx. **12** volts with the ignition SW on or the hazard SW on
1–GROUND : Changes from **12** to **0** volts with the ignition SW on and the turn signal SW **LEFT** or **RIGHT** position, and with the hazard SW on
3–GROUND : Always continuity

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C9 B | 30 | F2 | 28 (5S–FE) | J36 B | 31 |
| C10 C | 30 | H7 | 30 | R9 | 33 |
| C13 | 30 | J5 | 31 | R11 | 33 |
| F1 | 26 (1MZ–FE) | J11 | 31 | T6 | 31 |
| | 28 (5S–FE) | J15 | 31 | | |
| F2 | 26 (1MZ–FE) | J35 A | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1A | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1H | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1L | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2K | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 36 (1MZ–FE) | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| | 38 (5S–FE) | |

**: GROUND POINTS**

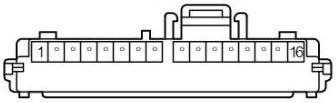
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| | 38 (5S–FE) | |
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |
| BP | 44 | Back Panel Center |

**: SPLICE POINTS**

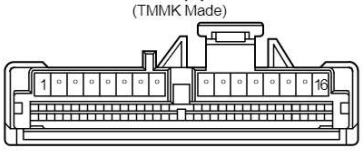
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E4 | 36 (1MZ–FE) | Engine Room Main Wire | B11 | 44 | Floor Wire |
| | 38 (5S–FE) | | | | |

# TURN SIGNAL AND HAZARD WARNING LIGHT

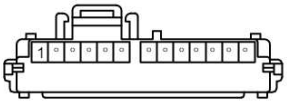
**C9 (B)**
(TMC Made)



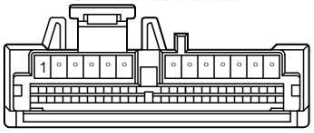

**C9 (B)**
(TMMK Made)



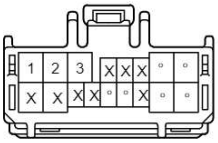

**C10 (C)**
(TMC Made) BROWN




**C10 (C)**
(TMMK Made) BROWN




**C13**



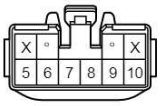

**F1**
GRAY



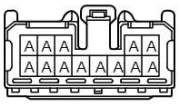

**F2**
GRAY




**H7**
BLACK

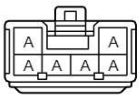



**J5**
ORANGE



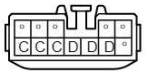

(Hint : See Page 7)

**J11**



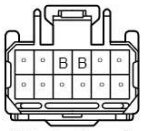

(Hint : See Page 7)

**J15**
BLACK



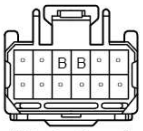

(Hint : See Page 7)

**J35 (A)**




(Hint : See Page 7)

**J36 (B)**




(Hint : See Page 7)

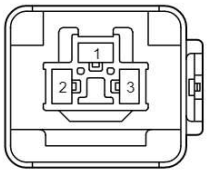
**R9**



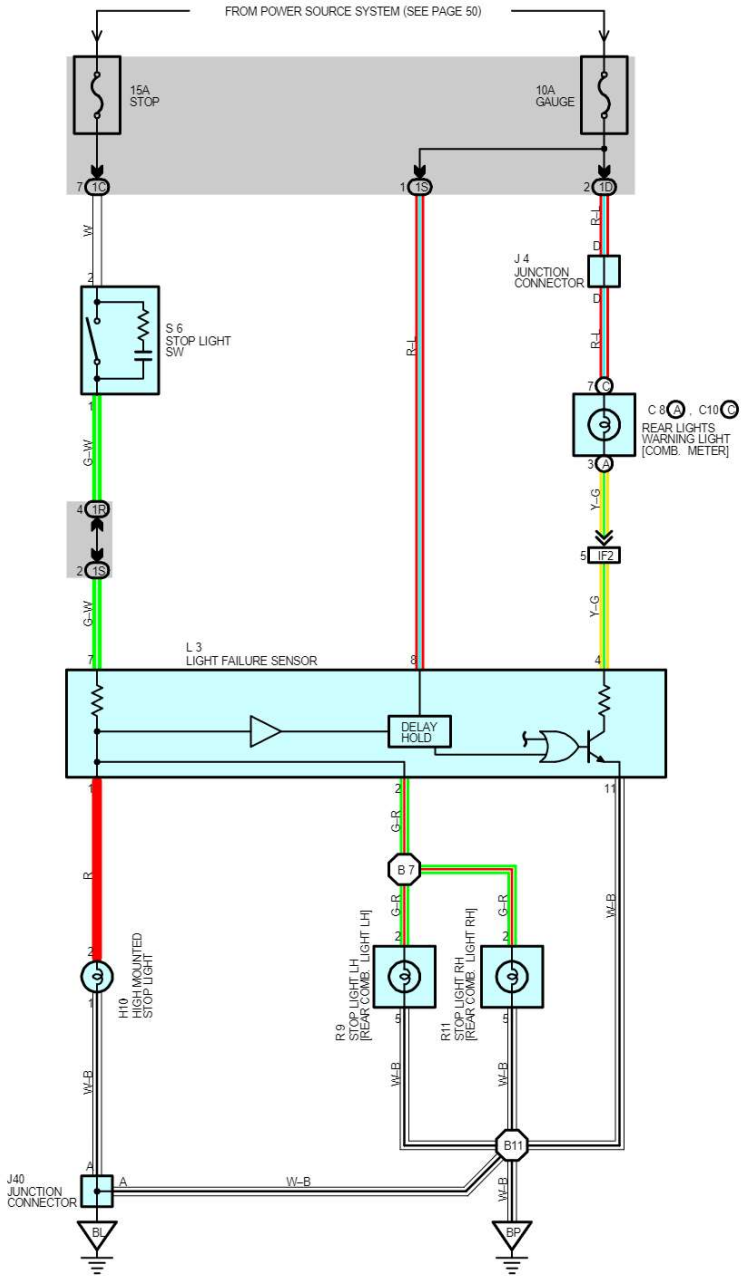

**R11**




**T6**



## STOP LIGHT


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
15A
STOP
10A
GAUGE
7 1C
1 1S
2 1D
W
R-L
D
J 4
JUNCTION
CONNECTOR
D
S 6
STOP LIGHT
SW
R-L
R-L
7 C
C 8 A , C10 C
REAR LIGHTS
WARNING LIGHT
[COMB. METER]
3 A
G-W
Y-G
4 1R
5 IF2
2 1S
G-W
Y-G
7
L 3
LIGHT FAILURE SENSOR
8
4
DELAY
HOLD
1
2
11
G-R
B 7
R
G-R
G-R
W-B
2
H10
HIGH MOUNTED
STOP LIGHT
1
R 9
STOP LIGHT LH
[REAR COMB. LIGHT LH]
R11
STOP LIGHT RH
[REAR COMB. LIGHT RH]
5
5
W-B
W-B
W-B
B11
A
J40
JUNCTION
CONNECTOR
A
W-B
W-B
BL
BP

## 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 TERMINAL 2 and 1 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 holding and the warning light on until the ignition SW is turned off.

## SERVICE HINTS

### S6 STOP LIGHT SW

2–1 : Closed with the brake pedal depressed

### L3 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

## : PARTS LOCATION

| Code | | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|---|
| C8 | A | 30 | J4 | 31 | R9 | 33 |
| C10 | C | 30 | J40 | 32 | R11 | 33 |
| H10 | | 32 | L3 | 32 | S6 | 31 |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IF2 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |

## : GROUND POINTS

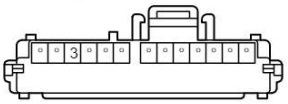
| Code | See Page | Ground Points Location |
|---|---|---|
| BL | 44 | Under the Left Center Pillar |
| BP | 44 | Back Panel Center |

## : SPLICE POINTS

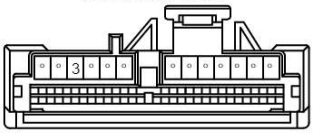
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B7 | 44 | Floor Wire | B11 | 44 | Floor Wire |

## STOP LIGHT

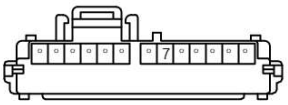
**C8 (A)**
(TMC Made) BLUE



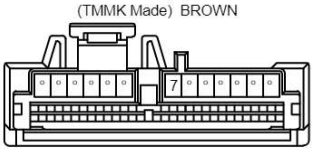

**C8 (A)**
(TMMK Made) BLUE




**C10 (C)**
(TMC Made) BROWN



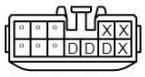

**C10 (C)**
(TMMK Made) BROWN




**H10**

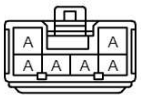



**J4**
BLACK



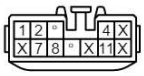

(Hint : See Page 7)

**J40**




(Hint : See Page 7)

**L3**



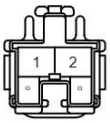

**R9**



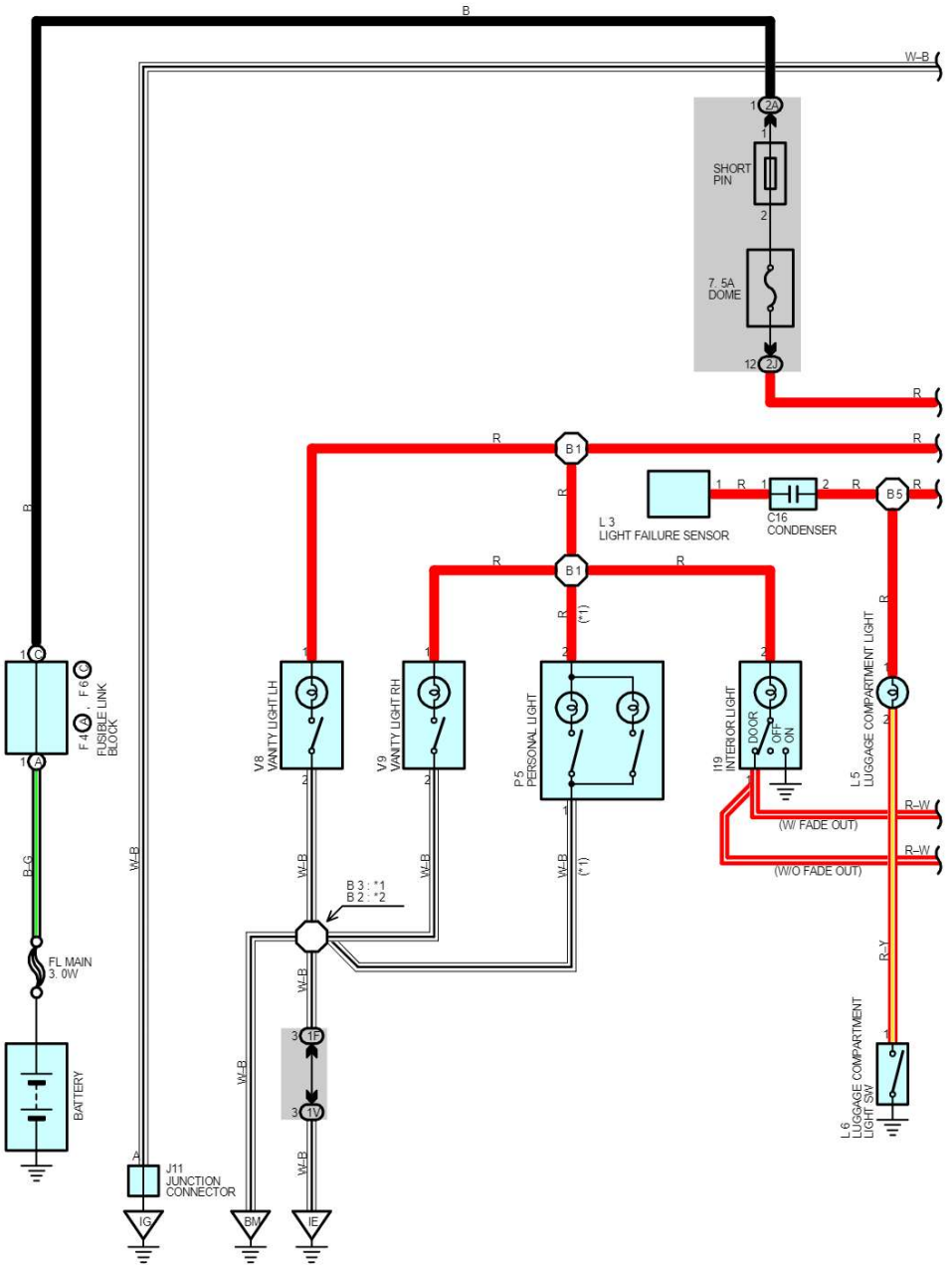

**R11**

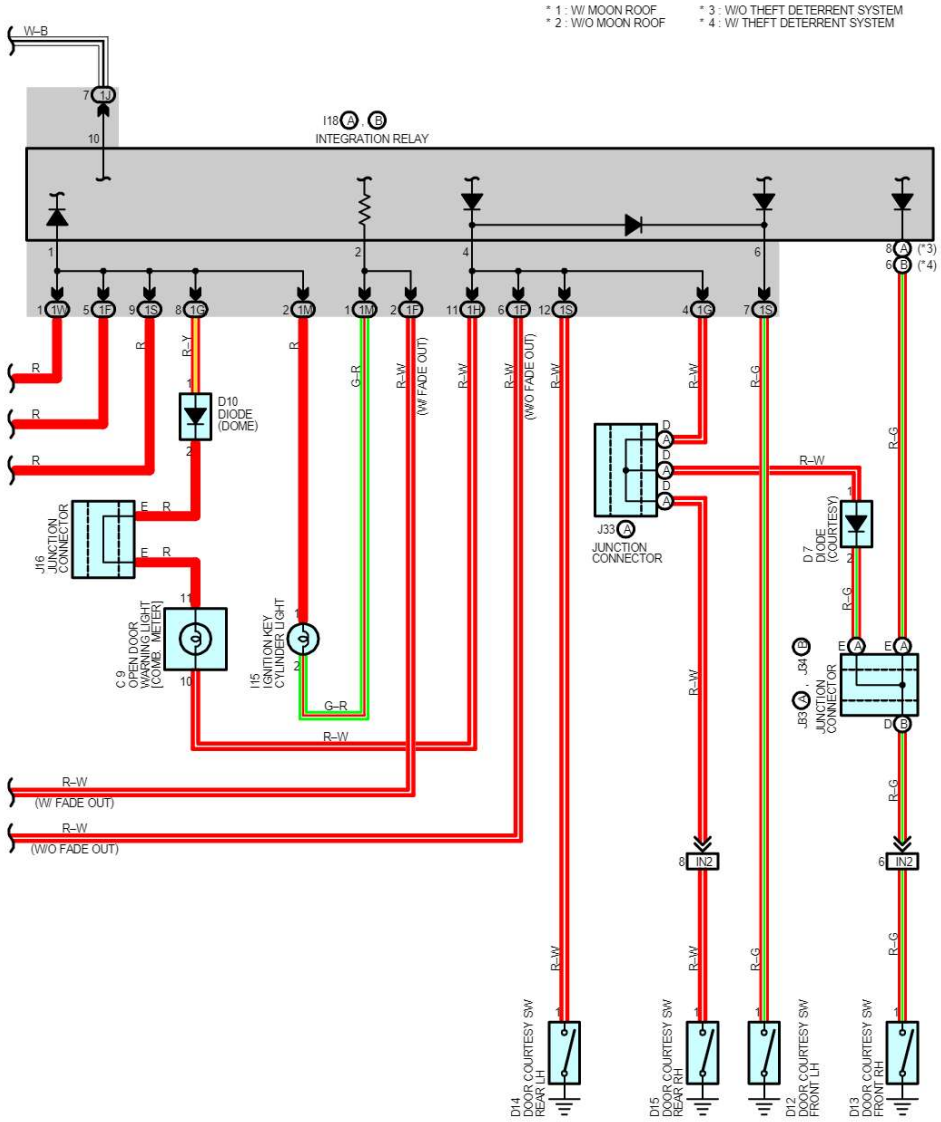



**S6**
BLUE



# INTERIOR LIGHT




* 1 : W/ MOON ROOF
* 2 : W/O MOON ROOF
* 3 : W/O THEFT DETERRENT SYSTEM
* 4 : W/ THEFT DETERRENT SYSTEM
W–B
I18 A B
INTEGRATION RELAY
1W 1F 1S 1G 1M 1M 1F 1H 1F 1S 1G 1S
(*3)
(*4)
D10
DIODE
(DOME)
J16
JUNCTION
CONNECTOR
C 9
OPEN DOOR
WARNING LIGHT
[COMB. METER]
I15
IGNITION KEY
CYLINDER LIGHT
J33 A
JUNCTION
CONNECTOR
D 7
DIODE
(COURTESY)
J34 , J33
JUNCTION
CONNECTOR
IN2
IN2
D14
DOOR COURTESY SW
REAR LH
D15
DOOR COURTESY SW
REAR RH
D12
DOOR COURTESY SW
FRONT LH
D13
DOOR COURTESY SW
FRONT RH
R
R–Y
G–R
R–W
(W/ FADE OUT)
(W/O FADE OUT)
R–G

# INTERIOR LIGHT

**SERVICE HINTS**

**I18 (A), (B) INTEGRATION RELAY**

1–GROUND : Always approx. **12** volts
4–GROUND : Continuity with the one of each door (Front LH, RH, rear LH and RH) open
6–GROUND : Continuity with the front LH door open
10–GROUND : Always continuity

**D12, D13, D14, D15 DOOR COURTESY SW FRONT LH, RH, REAR LH, RH**

1–GROUND : Closed with the door open

**L6 LUGGAGE COMPARTMENT LIGHT SW**

1–GROUND : Closed with the luggage compartment door open

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C9 | 30 | F4 A | 28 (5S–FE) | J33 A | 31 |
| C16 | 32 | F6 C | 26 (1MZ–FE) | J34 B | 31 |
| D7 | 30 | | 28 (5S–FE) | L3 | 32 |
| D10 | 30 | I15 | 30 | L5 | 32 |
| D12 | 32 | I18 A | 30 | L6 | 32 |
| D13 | 32 | I18 B | 30 | P5 | 33 |
| D14 | 32 | I19 | 32 | V8 | 33 |
| D15 | 32 | J11 | 31 | V9 | 33 |
| F4 A | 26 (1MZ–FE) | J16 | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1F | 20 | Roof Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | | |
| 2A | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |

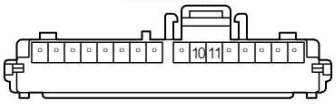
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |
| IG | 40 | Instrument Panel Brace LH |
| BM | 44 | Roof Left |

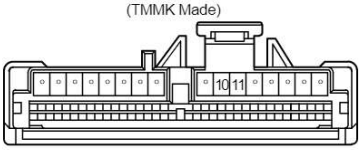
**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B1 | 44 | Roof Wire | B3 | 44 | Roof Wire |
| B2 | | | B5 | 44 | Floor Wire |

**C9**
(TMC Made)




**C9**
(TMMK Made)




**C16**




**D7**
BLACK




**D10**
BLACK




**D12**




**D13**



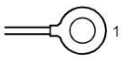

**D14**



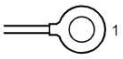

**D15**




**F4 (A)**



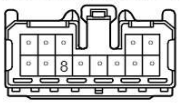

**F6 (C)**



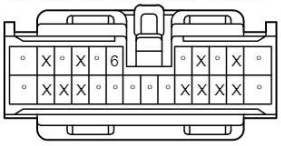

**I15**




**I18 (A)**
(w/o Theft Deterrent System) ORANGE



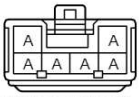

**I18 (B)**
(w/ Theft Deterrent System) ORANGE




**I19**

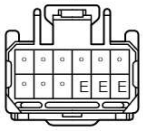



**J11**



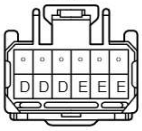

(Hint : See Page 7)

**J16**
BLACK



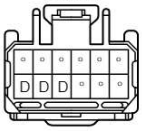

(Hint : See Page 7)

**J33 (A)**
BLACK



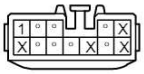

(Hint : See Page 7)

**J34 (B)**
BLACK




(Hint : See Page 7)

**L3**




**L5**
GRAY




**L6**
GRAY




**P5**




**V8**
(TMC Made) BLUE




**V8**
(TMMK Made)



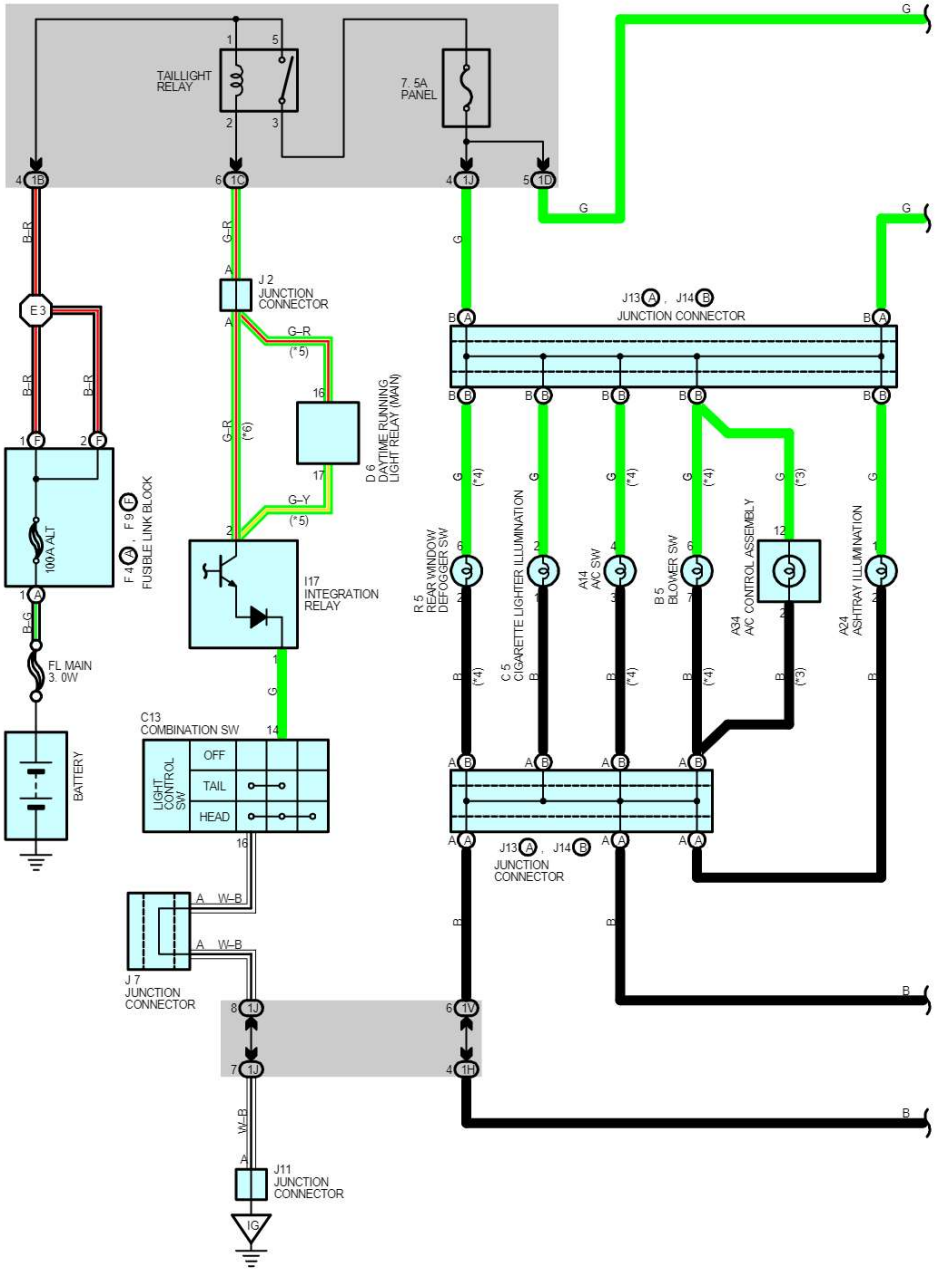

**V9**
(TMC Made) BLUE

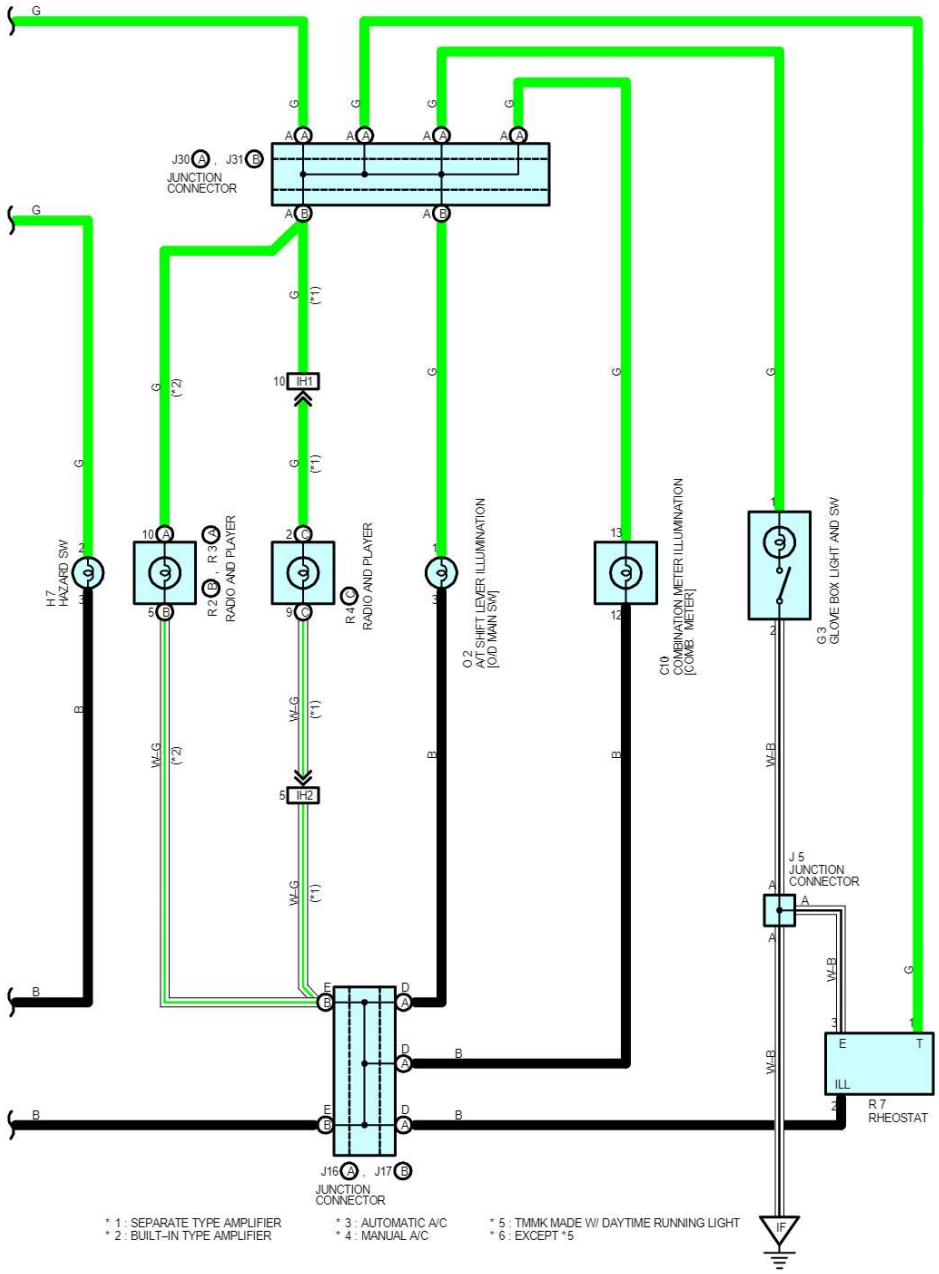



**V9**
(TMMK Made)



# ILLUMINATION




J30 A , J31 B
JUNCTION CONNECTOR
10 IH1
5 IH2
H7 HAZARD SW
R 3 R 2 RADIO AND PLAYER
R 4 RADIO AND PLAYER
O 2 A/T SHIFT LEVER ILLUMINATION [O/D MAIN SW]
C10 COMBINATION METER ILLUMINATION [COMB. METER]
G 3 GLOVE BOX LIGHT AND SW
J 5 JUNCTION CONNECTOR
R 7 RHEOSTAT
ILL
J16 A , J17 B
JUNCTION CONNECTOR
IF
* 1 : SEPARATE TYPE AMPLIFIER
* 2 : BUILT-IN TYPE AMPLIFIER
* 3 : AUTOMATIC A/C
* 4 : MANUAL A/C
* 5 : TMMK MADE W/ DAYTIME RUNNING LIGHT
* 6 : EXCEPT *5

# ILLUMINATION

**SERVICE HINTS**

**TAILLIGHT RELAY [INSTRUMENT PANEL J/B]**

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

**C13 COMBINATION SW**

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

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A14 | 30 | F9 F | 28 (5S–FE) | J17 B | 31 |
| A24 | 30 | G3 | 30 | J30 A | 31 |
| A34 | 30 | H7 | 30 | J31 B | 31 |
| B5 | 30 | I7 | 30 | O2 | 31 |
| C5 | 30 | J2 | 31 | R2 B | 31 |
| C10 | 30 | J5 | 31 | R3 A | 31 |
| C13 | 30 | J7 | 31 | R4 C | 31 |
| D6 | 30 | J11 | 31 | R5 | 31 |
| F4 A | 26 (1MZ–FE) | J13 A | 31 | R7 | 31 |
| | 28 (5S–FE) | J14 B | 31 | | |
| F9 F | 26 (1MZ–FE) | J16 A | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IH1 | 40 | Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH) |
| IH2 | | |

**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | E3 | 38 (5S–FE) | Cowl Wire |

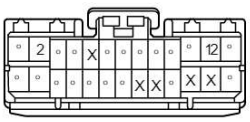
**A14**



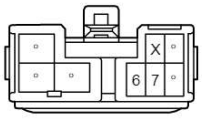

**A24**
BLACK




**A34**



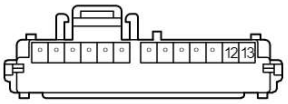

**B5**



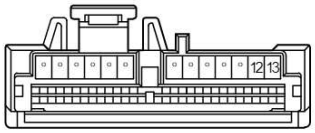

**C5**



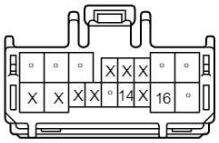

**C10**
(TMC Made) BROWN



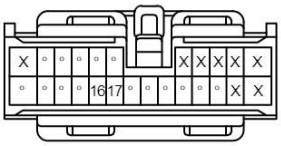

**C10**
(TMMK Made) BROWN



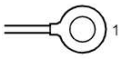

**C13**




**D6**




**F4 (A)**



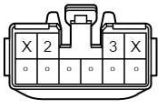

**F9 (F)**
ORANGE




**G3**
BLACK




**H7**
BLACK




**I17**

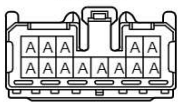



**J2**
BLACK



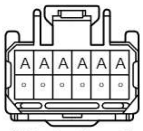

(Hint : See Page 7)

**J5**
ORANGE



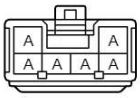

(Hint : See Page 7)

**J7**
GRAY



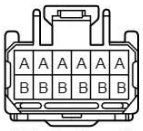

(Hint : See Page 7)

**J11**



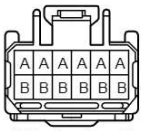

(Hint : See Page 7)

**J13 (A)**
BLUE



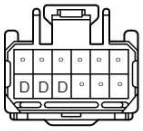

(Hint : See Page 7)

**J14 (B)**
BLUE



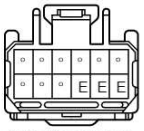

(Hint : See Page 7)

**J16 (A)**
BLACK



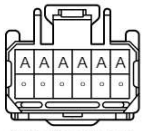

(Hint : See Page 7)

**J17 (B)**
BLACK



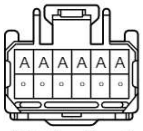

(Hint : See Page 7)

**J30 (A)**
GRAY



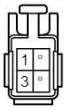

(Hint : See Page 7)

**J31 (B)**
GRAY




(Hint : See Page 7)

**O2**
BLUE

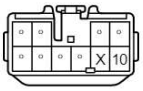


## ILLUMINATION

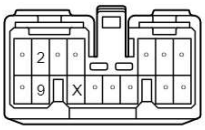
**R2 (B)**




**R3 (A)**




**R4 (C)**



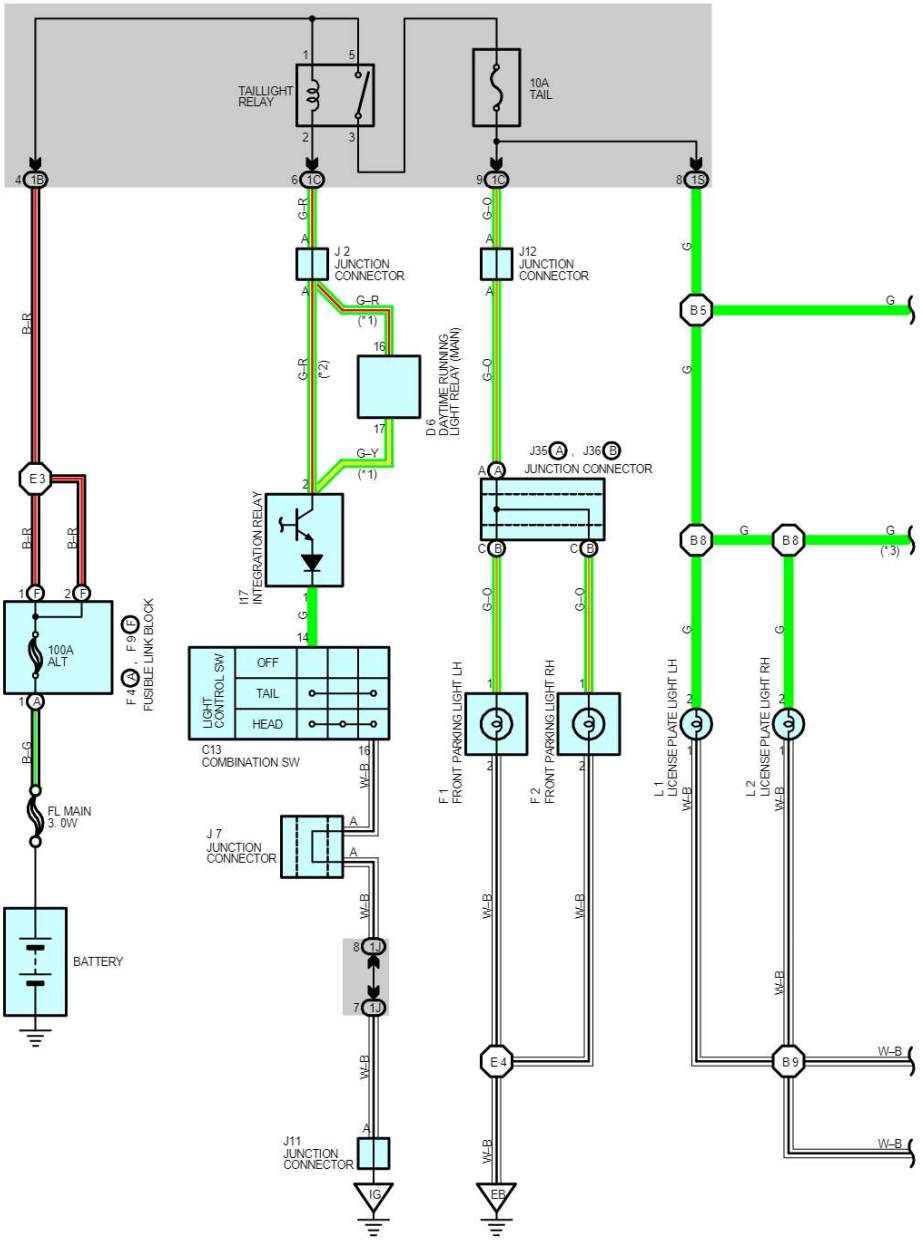

**R5**
BLACK

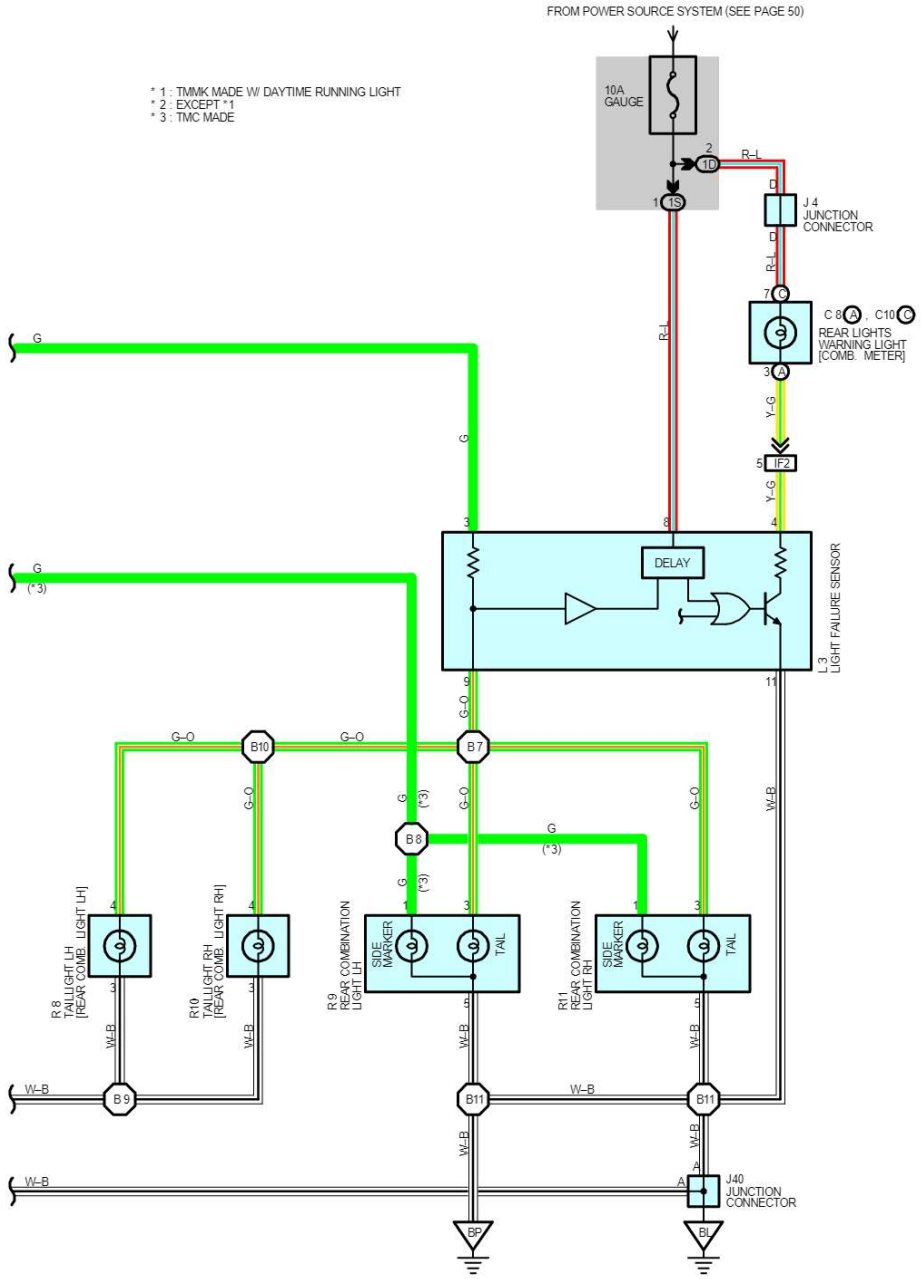



**R7**
BLACK



# TAILLIGHT


TAILLIGHT RELAY
10A TAIL
J 2 JUNCTION CONNECTOR
J12 JUNCTION CONNECTOR
J35 , J36 JUNCTION CONNECTOR
D6 DAYTIME RUNNING LIGHT RELAY (MAIN)
I17 INTEGRATION RELAY
100A ALT
F-4 , F-9 FUSIBLE LINK BLOCK
FL MAIN 3.0W
BATTERY
LIGHT CONTROL SW
OFF
TAIL
HEAD
C13 COMBINATION SW
J 7 JUNCTION CONNECTOR
J11 JUNCTION CONNECTOR
F 1 FRONT PARKING LIGHT LH
F 2 FRONT PARKING LIGHT RH
L 1 LICENSE PLATE LIGHT LH
L 2 LICENSE PLATE LIGHT RH
E 3
E 4
B 5
B 8
B 9
IG
EB
G-R
G-O
G-Y
B-R
B-G
W-B
G
(*1)
(*2)
(*3)


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
* 1 : TMMK MADE W/ DAYTIME RUNNING LIGHT
* 2 : EXCEPT *1
* 3 : TMC MADE
10A GAUGE
2 1D
1 1S
R–L
J 4 JUNCTION CONNECTOR
C 8 (A) , C10 (C)
REAR LIGHTS WARNING LIGHT [COMB. METER]
Y–G
IF2
DELAY
L3 LIGHT FAILURE SENSOR
G
G (*3)
G–O
B10
B7
B8
B9
B11
W–B
R8 TAILLIGHT LH [REAR COMB. LIGHT LH]
R10 TAILLIGHT RH [REAR COMB. LIGHT RH]
R9 REAR COMBINATION LIGHT LH
R11 REAR COMBINATION LIGHT RH
SIDE MARKER
TAIL
J40 JUNCTION CONNECTOR
8P
BL

# TAILLIGHT

## SYSTEM OUTLINE

When the light control SW is turned to TAIL or HEAD position. The current flows to TERMINAL 3 of the light failure sensor through the TAIL fuse.
When the ignition SW is turned on, the 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.

**TAILLIGHT DISCONNECTION WARNING**

With the ignition SW on and the light control SW turned to TAIL or HEAD position, if the taillight circuit is open, the light failure sensor detects the failure by the change in current flowing from TERMINAL 3 of the light failure sensor to TERMINAL 9, 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, which remains on until the light control SW is turned off

## SERVICE HINTS

**TAILLIGHT RELAY [INSTRUMENT PANEL J/B]**

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

**L3 LIGHT FAILURE SENSOR**

4, 8–GROUND : Approx. **12** volts with the ignition SW at **ON** position
3–GROUND : Approx. **12** volts with the light control SW at **TAIL** or **HEAD** position
11–GROUND : Always continuity

### : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C8 A | 30 | F9 F | 26 (1MZ–FE) | J40 | 32 |
| C10 C | 30 | | 28 (5S–FE) | L1 | 32 |
| C13 | 30 | I17 | 30 | L2 | 32 |
| D6 | 30 | J2 | 31 | L3 | 32 |
| F1 | 26 (1MZ–FE) | J4 | 31 | R8 | 33 |
| | 28 (5S–FE) | J7 | 31 | L9 | 33 |
| F2 | 26 (1MZ–FE) | J11 | 31 | R10 | 33 |
| | 28 (5S–FE) | J12 | 31 | R11 | 33 |
| F4 A | 26 (1MZ–FE) | J35 A | 31 | | |
| | 28 (5S–FE) | J36 B | 31 | | |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IF2 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |

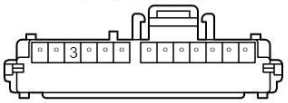
### : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| | 38 (5S–FE) | |
| IG | 40 | Instrument Panel Brace LH |
| BL | 44 | Under the Left Center Pillar |
| BP | 44 | Back Panel Center |

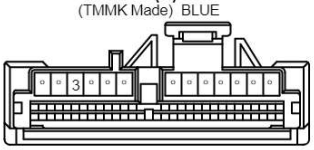
: SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | B7 | 44 | Floor Wire |
| | 38 (5S–FE) | | B8 | | |
| E4 | 36 (1MZ–FE) | Engine Room Main Wire | B9 | | |
| | 38 (5S–FE) | | B10 | | |
| B5 | 44 | Floor Wire | B11 | | |

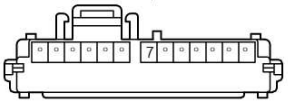
**C8 (A)**
(TMC Made) BLUE



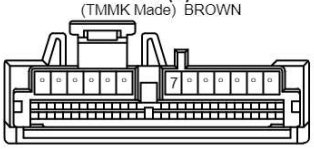
**C8 (A)**
(TMMK Made) BLUE



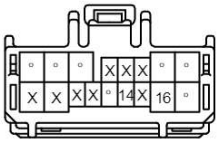
**C10 (C)**
(TMC Made) BROWN



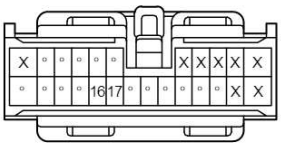
**C10 (C)**
(TMMK Made) BROWN



**C13**



**D6**



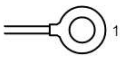
**F1**
GRAY



**F2**
GRAY



**F4 (A)**



**F9 (F)**
ORANGE



**I17**

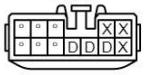


**J2**
BLACK



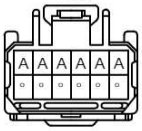
(Hint : See Page 7)

**J4**
BLACK



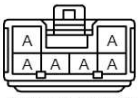
(Hint : See Page 7)

**J7**
GRAY



(Hint : See Page 7)

**J11**



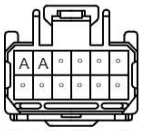
(Hint : See Page 7)

**J12**
BLACK



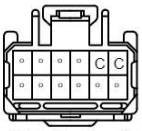
(Hint : See Page 7)

**J35 (A)**



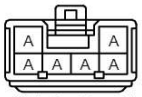
(Hint : See Page 7)

**J36 (B)**



(Hint : See Page 7)

**J40**



(Hint : See Page 7)

**L1**
GRAY

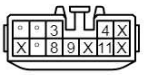


## TAILLIGHT

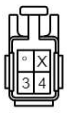
**L2**
GRAY




**L3**



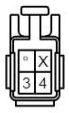

**R8**




**R9**



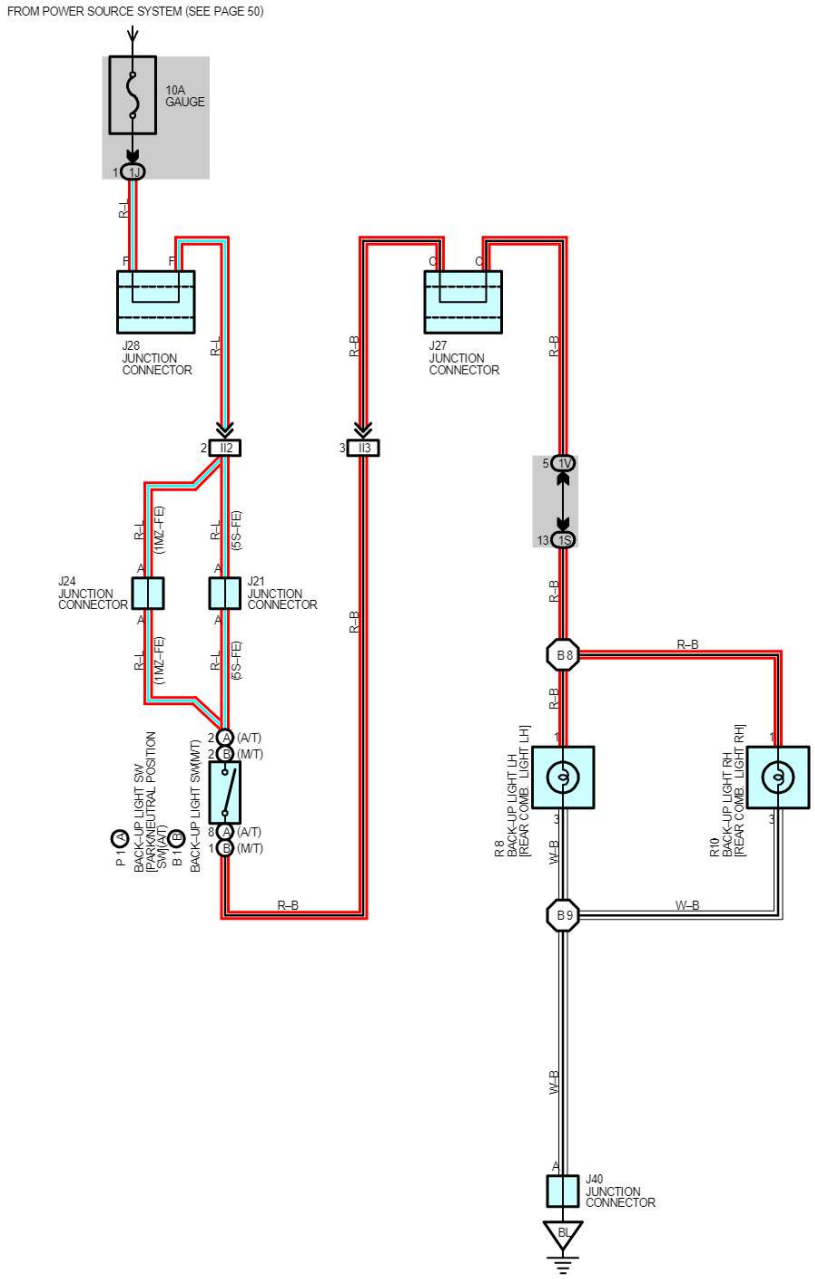

**R10**




**R11**



# BACK–UP LIGHT



**SERVICE HINTS**

**P1 (A) BACK–UP LIGHT SW [PARK/NEUTRAL POSITION SW] (A/T)**

(A) 2–(A) 8 : Closed with the shift lever at **R** position

**B1 (B) BACK–UP LIGHT SW (M/T)**

(B) 2–(B) 1 : Closed with the shift lever at **R** position

### : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| B1 B | 26 (1MZ–FE) | J27 | 31 | P1 A | 29 (5S–FE) |
| | 28 (5S–FE) | J28 | 31 | R 8 | 33 |
| J21 | 31 | J40 | 32 | R10 | 33 |
| J24 | 31 | P1 A | 27 (1MZ–FE) | | |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 20 | Floor Wire And Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II3 | | |

### : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| BL | 44 | Under the Left Center Pillar |

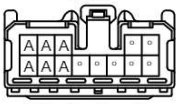
### : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B8 | 44 | Floor Wire | B9 | 44 | Floor Wire |

**B1 (B)**
GRAY

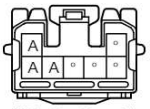



**J21**
GRAY



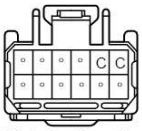

(Hint : See Page 7)

**J24**



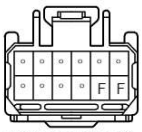

(Hint : See Page 7)

**J27**



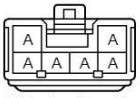

(Hint : See Page 7)

**J28**



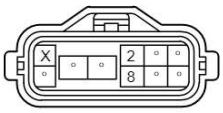

(Hint : See Page 7)

**J40**

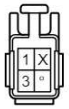



(Hint : See Page 7)

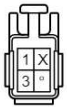
**P1 (A)**
GRAY



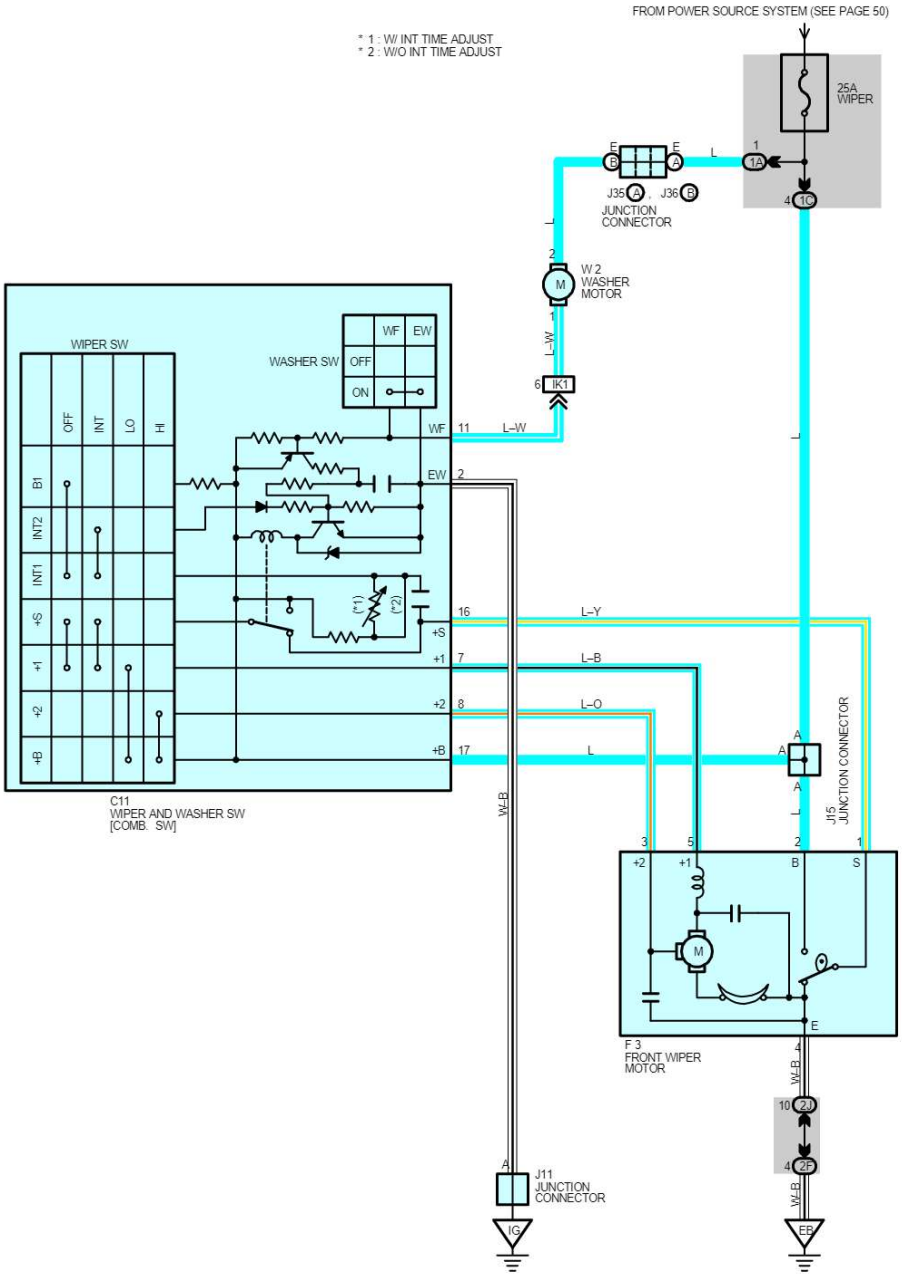

**R8**




**R10**



# WIPER AND WASHER



## SYSTEM OUTLINE

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

**1. LOW SPEED POSITION**

With the wiper and washer SW turned to LO position, the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND and causes the front wiper motor to run at low speed.

**2. HIGH SPEED POSITION**

With the wiper and washer SW turned to HI position, the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 8 to TERMINAL 3 of the front wiper motor to TERMINAL 4 to GROUND and causes the front wiper motor to run at high speed.

**3. INT POSITION**

With the wiper and washer SW turned to INT position, the wiper relay operates and current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 2 to GROUND. This activates the intermittent circuit and the current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND and the wiper operates. Intermittent operation is controlled by a condenser charge and discharge function in the relay.

**4. WASHER CONTINUOUS OPERATION**

With the wiper and washer SW pulled to WASHER position (Washer SW ON position), the current flows from the WIPER fuse to TERMINAL 2 of the washer motor to TERMINAL 1 to TERMINAL 11 of the wiper and washer SW to TERMINAL 2 to GROUND and causes the washer motor to run and the window washer to spray. Simultaneously, current flows from the WIPER fuse to TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the front wiper motor to TERMINAL 4 to GROUND, causing the wiper to function.

## SERVICE HINTS

**C11 WIPER AND WASHER SW [COMB. SW]**

2–GROUND : Always continuity
17–GROUND : Approx. **12** volts with the ignition SW at **ON** position
7–GROUND : Approx. **12** volts with the ignition SW on and the wiper and washer SW at **LO** position
Approx. **12** volts every approx. **1** to **10** seconds intermittently with the ignition SW on and the wiper and washer SW at **INT** position
16–GROUND : Approx. **12** volts with the ignition SW on and unless the front wiper motor at **STOP** position
8–GROUND : Approx. **12** volts with the ignition SW on and the wiper and washer SW at **HI** position

**F3 FRONT WIPER MOTOR**

1–2 : Closed unless the front wiper motor at **STOP** position

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C11 | 30 | J11 | 31 | J36 B | 31 |
| F3 | 26 (1MZ–FE) | J15 | 31 | W2 | 27 (1MZ–FE) |
| | 28 (5S–FE) | J35 A | 31 | | 29 (5S–FE) |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1A | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 2F | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

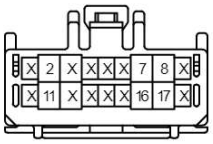
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

# WIPER AND WASHER

▽ : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| | 38 (5S–FE) | |
| IG | 40 | Instrument Panel Brace LH |

**C11**
BLACK




**F3**
GRAY




**J11**




(Hint : See Page 7)

**J15**
BLACK



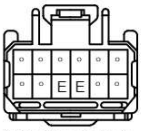

(Hint : See Page 7)

**J35 (A)**




(Hint : See Page 7)

**J36 (B)**

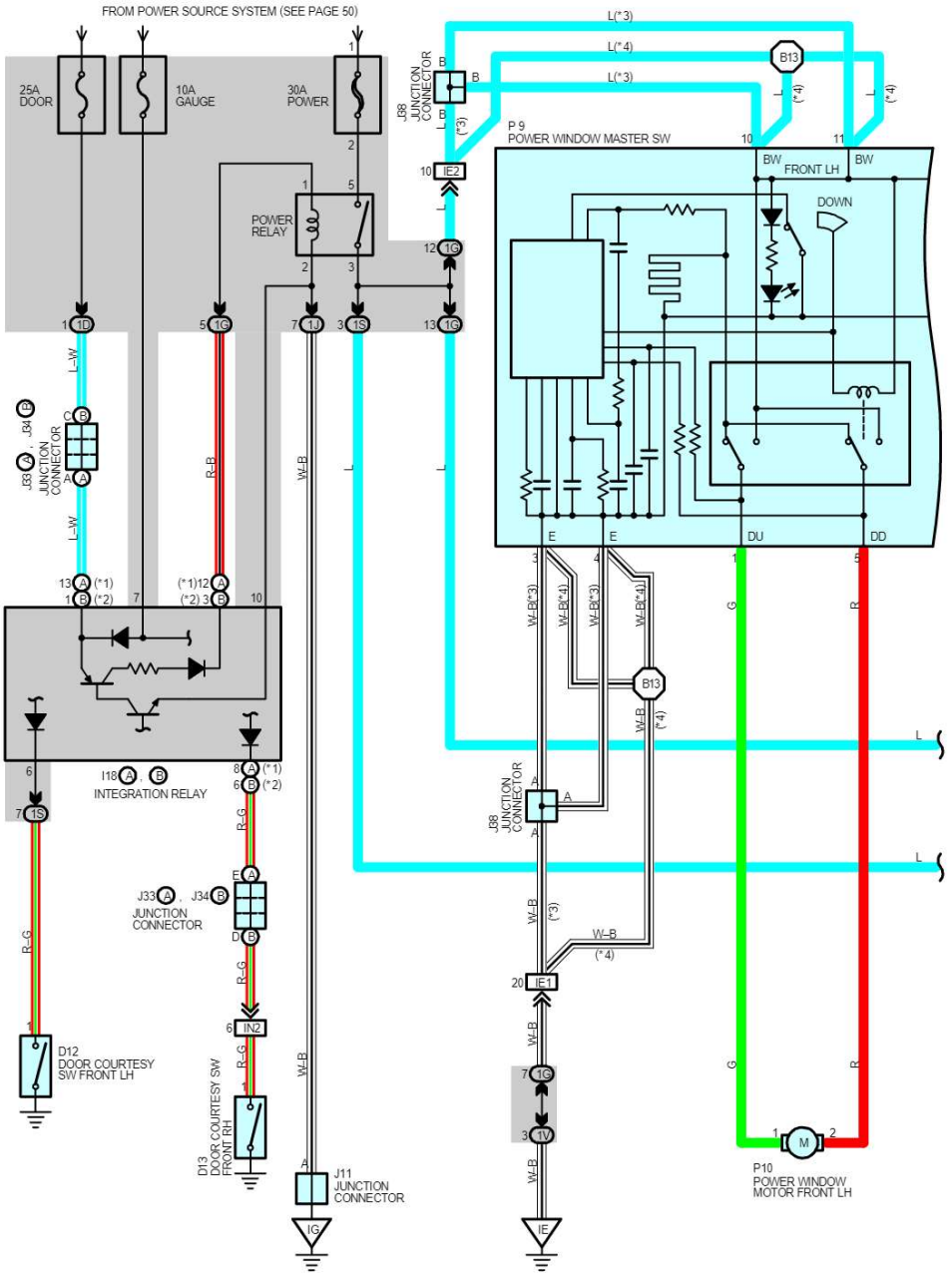



(Hint : See Page 7)

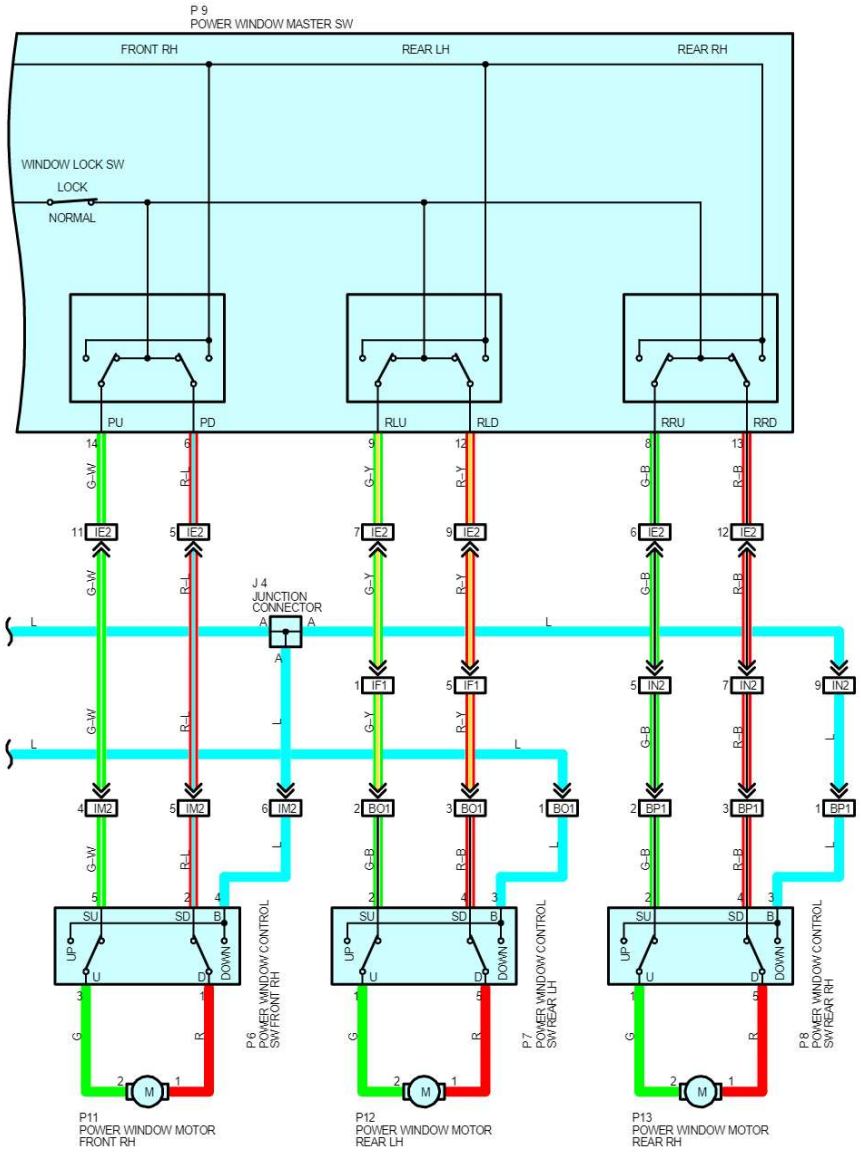
**W2**
BLACK



# POWER WINDOW



* 1 : W/O THEFT DETERRENT SYSTEM
* 2 : W/ THEFT DETERRENT SYSTEM
* 3 : TMC MADE
* 4 : TMMK MADE



# POWER WINDOW

## SYSTEM OUTLINE

With the ignition SW turned on, current flows through the GAUGE fuse to TERMINAL 7 of the integration relay to TERMINAL (A) 12 (w/o theft deterrent system), (B) 3 (w/ theft deterrent system) to TERMINAL 1 of the power relay to TERMINAL 2 to GROUND, this activates the relay and the current flowing to TERMINAL 5 of the relay from the POWER fuse flows to TERMINAL 3 of the relay to TERMINALS 10 and 11 of the power window master SW.

### 1. MANUAL OPERATION (DRIVER'S WINDOW)

With the ignition SW turned on and with the power window master SW (Driver's) in UP position, the current flowing from TERMINALS 10 and 11 of the power window master SW flows to TERMINAL 1 of the master SW to TERMINAL 1 of the power window motor to TERMINAL 2 to TERMINAL 5 of the master SW to TERMINALS 3 and 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.
In down operation, the flow of current from TERMINALS 10 and 11 of the power window master SW to TERMINAL 5 of the master SW causes the flow of current from TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 1 of the master SW to TERMINALS 3 and 4 to GROUND, flowing in the opposite detection to manual up operation and causing the motor to rotate in reverse, lowering the window.

### 2. AUTO DOWN OPERATION (DRIVER'S WINDOW)

When the driver's window SW is pushed strongly to the down side, the current flowing to TERMINALS 10 and 11 of the power window master SW flows to the down contact point and auto down contact point of the driver's SW.
This activates the relay (Down side) inside the power window master SW and the hold circuit also turns on at the same time, so the relay (Down side) remains activated even when the SW is released.
Current flows at this time from TERMINALS 10 and 11 of the power window master SW to TERMINAL 5 to TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 1 of the power window master SW to TERMINALS 3 and 4 to GROUND, so the motor continues to operate until the driver's window is fully down.
When the driver's window finishes down operation and the hold circuit goes off, so the relay (Down side) also turns off. This stops the current flowing from TERMINALS 10 and 11 of the power window master SW to TERMINAL 5 is cut off, so the power window motor stops and auto down operation stops.
When the driver's SW is pulled to the up side during auto down operation, the hold circuit is turned off so the current flowing from TERMINALS 10 and 11 of the power window master SW to TERMINAL 5 is cut off and the power window motor stops.
If the SW remains pulled up the relay (Up side) is activated, so current flows from TERMINALS 10 and 11 of the power window master SW to TERMINAL 1 to TERMINAL 1 of the power window motor to TERMINAL 2 to TERMINAL 5 to TERMINALS 3 and 4 to GROUND, the power window motor rotates in the up direction and manual up operation occurs while the SW is pulled up.

### 3. MANUAL OPERATION (FRONT RH WINDOW)

With the power window control SW front RH pulled to the up side, the current flowing from TERMINAL 4 of the power window control SW flows to TERMINAL 3 of the power window control SW to TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 1 of the power window control SW to TERMINAL 2 to TERMINAL 6 of the master SW to TERMINALS 3 and 4 to GROUND and causes the power window motor front RH to rotate in the up direction. The up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 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 front RH window becomes open.
As a result, even if Open/Close operation of the front RH window is tried, the current from TERMINALS 3 and 4 of the power window master SW is not grounded and the motor does not rotate, so the front RH window can not be operated and window lock occurs.

### 4. MANUAL OPERATION (REAR LH, RH WINDOW)

With the power window control SW rear LH, RH pulled to the up side, the current flowing from TERMINAL 3 of the power window control SW flows to TERMINAL 1 of the power control SW to TERMINAL 2 of the power window motor to TERMINAL 1 to TERMINAL 5 of the power window control SW to TERMINAL 4 to TERMINAL 12 or 13 of the master SW to TERMINALS 3 and 4 to GROUND and causes the power window motor rear LH, RH to rotate in the up direction. The up operation continues only while the power window control SW is pulled to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 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 TERMINALS 3 and 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.

**5. KEY OFF POWER WINDOW OPERATION**

With the ignition SW turned from on to off, the integration relay operates and current flows from the DOOR fuse to TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to TERMINAL (A) 12 (w/o theft deterrent system), (B) 3 (w/ theft deterrent system) to TERMINAL 1 of the power 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 power relay to TERMINAL 3 to TERMINALS 10 and 11 of the power window master SW and TERMINAL 4 (Front RH) or 3 (Rear LH, RH) of the power window control SW. As a result, for about 43 seconds after the ignition SW is turned off, the functioning of this relay makes it possible to raise and lower the power window. Also, by opening the front doors (Door courtesy SW on) within about 43 seconds after turning the ignition SW to off, a signal is input to TERMINAL 6 or (A) 8 (w/o theft deterrent system), (B) 6 (w/ theft deterrent system) of the integration relay. As a result, the relay turned off, and up and down movement of the power window stops.

**SERVICE HINTS**

**P9 POWER WINDOW MASTER SW**

10, 11–GROUND : Approx. **12** volts with the ignition SW at **ON** position or key off power window operation
3, 4–GROUND : Always continuity
1–GROUND : Approx. **12** volts with the ignition SW on and the master SW (Driver's window) at **UP** position
5–GROUND : Approx. **12** volts with the ignition SW on and the master SW (Driver's window) at **DOWN** or **AUTO DOWN** position

**WINDOW LOCK SW**

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

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| D12 | 32 | J33 A | 31 | P9 | 33 |
| D13 | 32 | J34 B | 31 | P10 | 33 |
| I18 A | 30 | J38 | 32 | P11 | 33 |
| I18 B | 30 | P6 | 33 | P12 | 33 |
| J4 | 31 | P7 | 33 | P13 | 33 |
| J11 | 31 | P8 | 33 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IE2 | | |
| IF1 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IM2 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BO1 | 44 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | 44 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |
| IG | 40 | Instrument Panel Brace LH |

# POWER WINDOW

: SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B13 | 44 | Front Door LH Wire | | | |

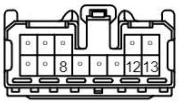
**D12**



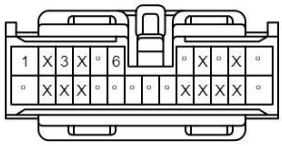

**D13**




**I18 (A)**
(w/o Theft Deterrent System) ORANGE




**I18 (B)**
(w/ Theft Deterrent System) ORANGE

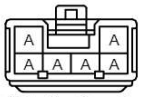



**J4**
BLACK




(Hint : See Page 7)

**J11**



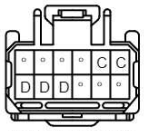

(Hint : See Page 7)

**J33 (A)**
BLACK




(Hint : See Page 7)

**J34 (B)**
BLACK



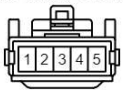

(Hint : See Page 7)

**J38**

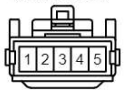



(Hint : See Page 7)

**P6**
(TMC Made) BLACK




**P6**
(TMMK Made)



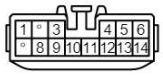

**P7**




**P8**




**P9**




**P10**




**P11**



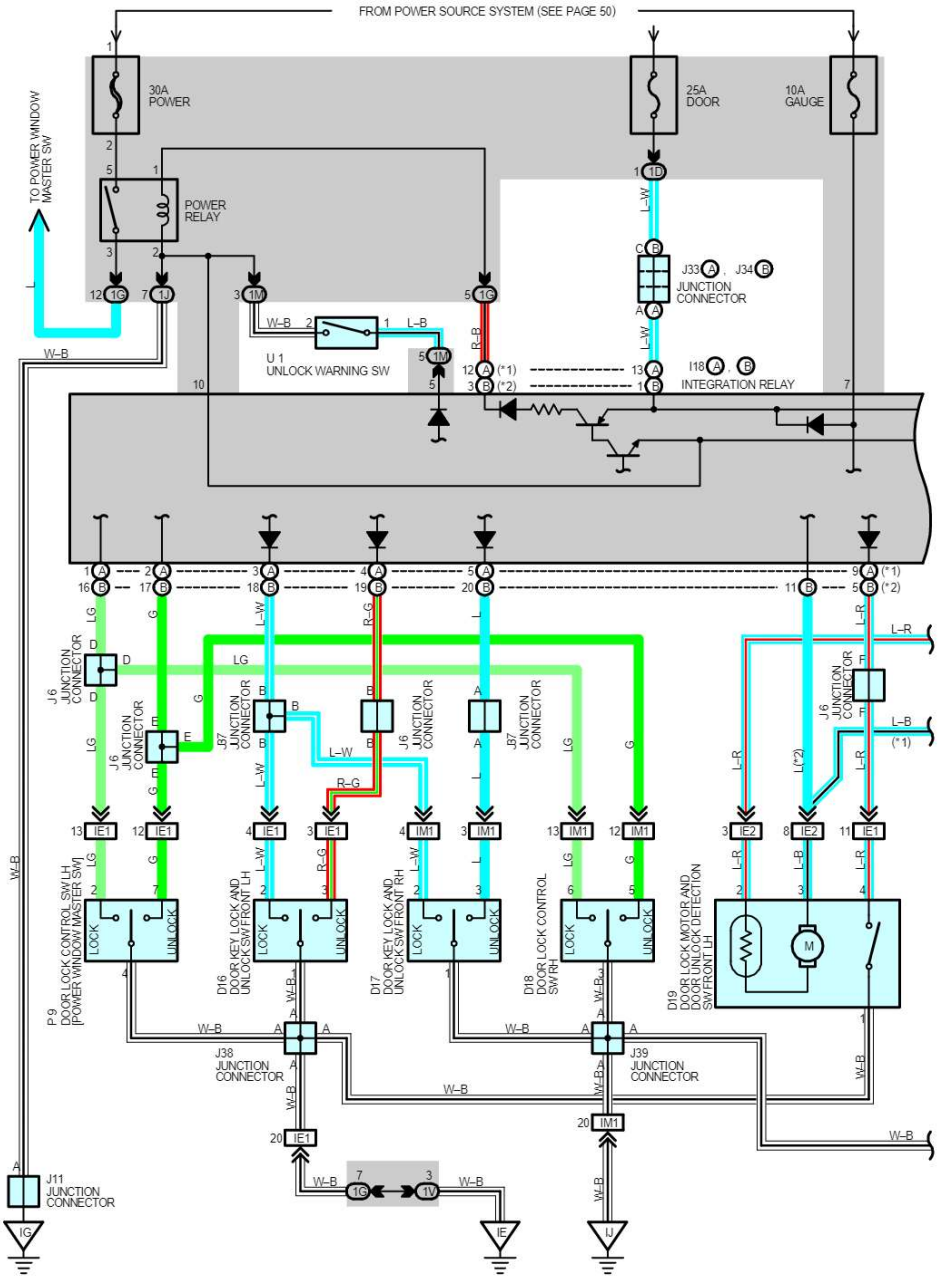

**P12**

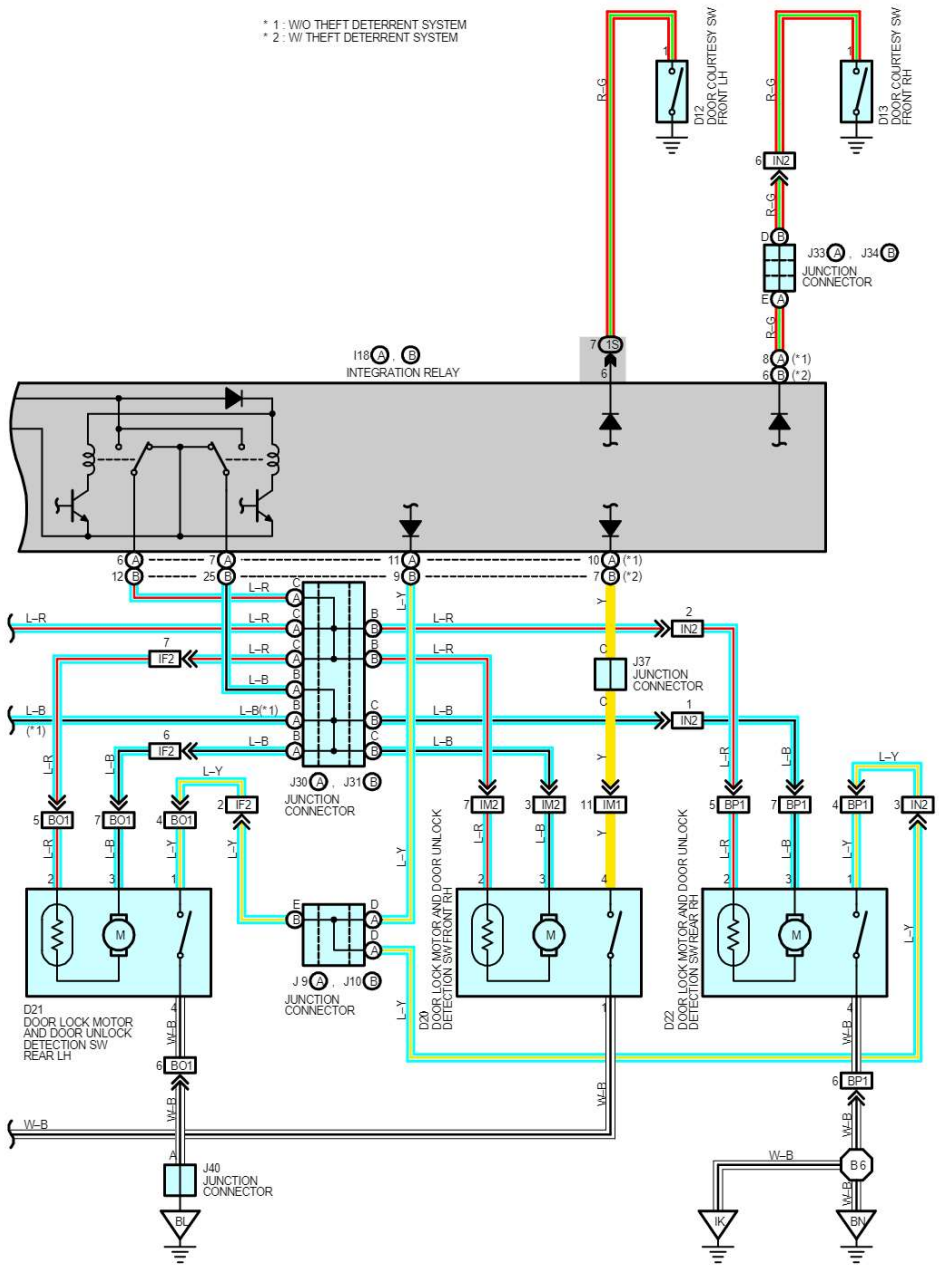



**P13**



# DOOR LOCK CONTROL (TMC MADE)




* 1 : W/O THEFT DETERRENT SYSTEM
* 2 : W/ THEFT DETERRENT SYSTEM
D12 DOOR COURTESY SW FRONT LH
D13 DOOR COURTESY SW FRONT RH
J33 , J34
JUNCTION CONNECTOR
I18 , INTEGRATION RELAY
J37 JUNCTION CONNECTOR
J30 , J31 JUNCTION CONNECTOR
J9 , J10 JUNCTION CONNECTOR
J40 JUNCTION CONNECTOR
D21 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR LH
D20 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT RH
D22 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR RH
B6
BL
IK
BN

# DOOR LOCK CONTROL (TMC MADE)

## SYSTEM OUTLINE

Current always flows to TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the integration relay through the DOOR fuse.
When the ignition SW is turned on, the current flowing through the GAUGE Fuse flows to TERMINAL 7 of the integration relay to TERMINAL (A) 12 (w/o theft deterrent system), (B) 3 (w/ theft deterrent system) to the power relay (Coil side) to GROUND.

### 1. MANUAL LOCK OPERATION

When the door lock control SW or door key lock and unlock SW are operated to LOCK position, a lock signal is input to TERMINAL (A) 1 or (A) 3 (w/o theft deterrent system), (B) 16 or (B) 18 (w/ theft deterrent system) of the integration relay and causes the relay to function. Current flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) to TERMINAL 2 of the door lock motors to TERMINAL 3 to TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and the door lock motor causes the door to lock.

### 2. MANUAL UNLOCK OPERATION

When the door lock control SW or door key lock and unlock SW are operated to UNLOCK position, an unlock signal is input to TERMINAL (A) 2, (A) 4 or (A) 5 (w/o theft deterrent system), (B) 17, (B) 19 or (B) 20 (w/ theft deterrent system) of the integration relay and causes the relay to function. Current flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL (A) 6 (w/o theft Deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and door lock motors causes door to unlock.

### 3. 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 mechanically unlocked. Turning the door key lock and unlock SW front LH to the unlock side causes a signal to be input to TERMINAL (A) 4 (w/o theft deterrent system), (B) 19 (w/ theft deterrent system) of the relay, and if the signal is input again within 3 seconds by turning the SW to the unlock side again, current flows from TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and **(B) 25** (w/ theft deterrent system) of the integration relay to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND, causing the door lock motors to operate and unlock the doors.

### 4. IGNITION KEY REMINDER OPERATION

- Operating door lock knob (Operation of door lock motors)
  With ignition key in cylinder (Unlock warning SW on), when the door is opened and locked using door lock knob (Door lock motor), the door is locked once but each door is unlocked soon by the function of the relay. As a result, the current flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the integration relay to TERMINAL (A) 7 (w/o theft deterrent system),(B) 11 and (B) 25 (w/ theft deterrent system) to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and causes all the doors to unlock.
- 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 and locked using door lock control SW or key SW, the door is locked once but each door is unlock by the function of SW contained in motors, which the signal is input to TERMINAL (A) 9 or (A) 10 (w/o theft deterrent system), (B) 5 or (B) 7 (w/ theft deterrent system) of the relay. According to this input signal, the current in ECU flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and causes all the doors to unlock.
- In case of key less lock
  With ignition key in cylinder (Unlock warning SW on), when the unlock function is disturbed more than 0.2 seconds, for example pushing the door lock knob etc., the door holds on lock condition. Closing the door after, door courtesy SW inputs the signal into TERMINAL 6 or (A) 8 (w/o theft deterrent system), (B) 6 (w/ theft deterrent system) of the integration relay. By this input signal, the ECU works and current flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and causes all the doors to unlock.

**SERVICE HINTS**

**I18 (A), (B) INTEGRATION RELAY**

10–GROUND : Always continuity
6–GROUND : Continuity with driver's door open
7–GROUND : Approx. **12** volts with ignition SW at **ON** position
(A)13 or (B) 1–GROUND: Always approx. **12** volts
(A) 6 or (B)12–GROUND: Approx. **12** volts **0.2** seconds with following operation
∗ Door lock control SW locked
∗ Locking driver's, front passenger's door cylinder with key
(A) 1or (B)16–GROUND : Continuity with door lock control SW locked
(A) 8 or (B) 6–GROUND : Continuity with front passenger's door open
(A) 9 or (B) 5–GROUND : Continuity with driver's door lock knob unlocked
(A)10 or (B) 7–GROUND: Continuity with front passenger's door lock knob unlock
(A) 2 or (B)17–GROUND: Continuity with door lock control SW unlocked
(A) 5 or (B)20–GROUND: Continuity with front passenger's door lock cylinder unlocked with key
(A) 4 or (B)19–GROUND: Continuity with driver's door lock cylinder unlocked with key
(A) 3 or (B)18–GROUND: Continuity with driver's, front passenger's door lock cylinder locked with key
(A) 7 or (B)11, (B)25–GROUND: Approx. **12** volts **0.2** seconds with following operation
∗ 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 driver's, front passenger's door cylinder with key

**D12, D13 DOOR COURTESY SW FRONT LH,RH**

1–GROUND : Closed with each door open

**D16, D17 DOOR KEY LOCK AND UNLOCK SW FRONT LH,RH**

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

**D19, D20 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT LH,RH**

1–4 : Closed with door lock knob **UNLOCK** position

**U1 UNLOCK WARNING SW**

1–2 : Closed with ignition key in cylinder

**○ : PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|
| D12 | 32 | I18 | A | 30 | J34 | B | 31 |
| D13 | 32 | | B | 30 | J37 | | 31 |
| D16 | 32 | J6 | | 31 | J38 | | 32 |
| D17 | 32 | J9 | A | 31 | J39 | | 32 |
| D18 | 32 | J10 | B | 31 | J40 | | 32 |
| D19 | 32 | J11 | | 31 | P9 | | 33 |
| D20 | 32 | J30 | A | 31 | U1 | | 31 |
| D21 | 32 | J31 | B | 31 | | | |
| D22 | 32 | J33 | A | 31 | | | |

**⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

# DOOR LOCK CONTROL (TMC MADE)

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IE2 | | |
| IF2 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IM2 | | |
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BO1 | 44 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | 44 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |
| IG | 40 | Instrument Panel Brace LH |
| IJ | 40 | Right Kick Panel |
| IK | | |
| BL | 44 | Under the Left Center Pillar |
| BN | 44 | Under the Right Center Pillar |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B6 | 44 | Floor No.2 Wire | | | |

**D12**




**D13**




**D16**




**D17**




**D18**




**D19**
BLACK




**D20**
BLACK



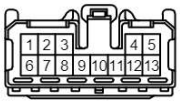

**D21**
BLACK



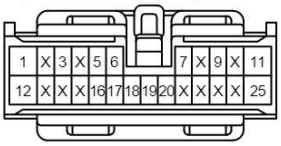

**D22**
BLACK




**I18 (A)**
(w/o Theft Deterrent System) ORANGE




**I18 (B)**
(w/ Theft Deterrent System) ORANGE

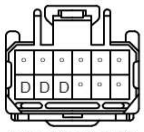



**J6**



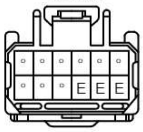

(Hint : See Page 7)

**J9 (A)**
BLACK



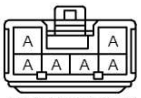

(Hint : See Page 7)

**J10 (B)**
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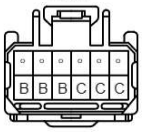

(Hint : See Page 7)

**J11**



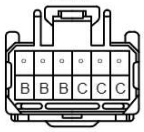

(Hint : See Page 7)

**J30 (A)**
GRAY




(Hint : See Page 7)

**J31 (B)**
GRAY



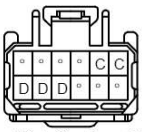

(Hint : See Page 7)

**J33 (A)**
BLACK



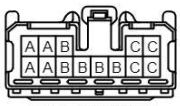

(Hint : See Page 7)

**J34 (B)**
BLACK



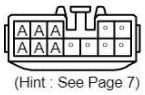

(Hint : See Page 7)

**J37**




(Hint : See Page 7)

**J38**



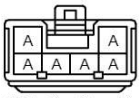

(Hint : See Page 7)

**J39**



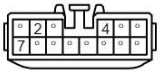

(Hint : See Page 7)

**J40**




(Hint : See Page 7)

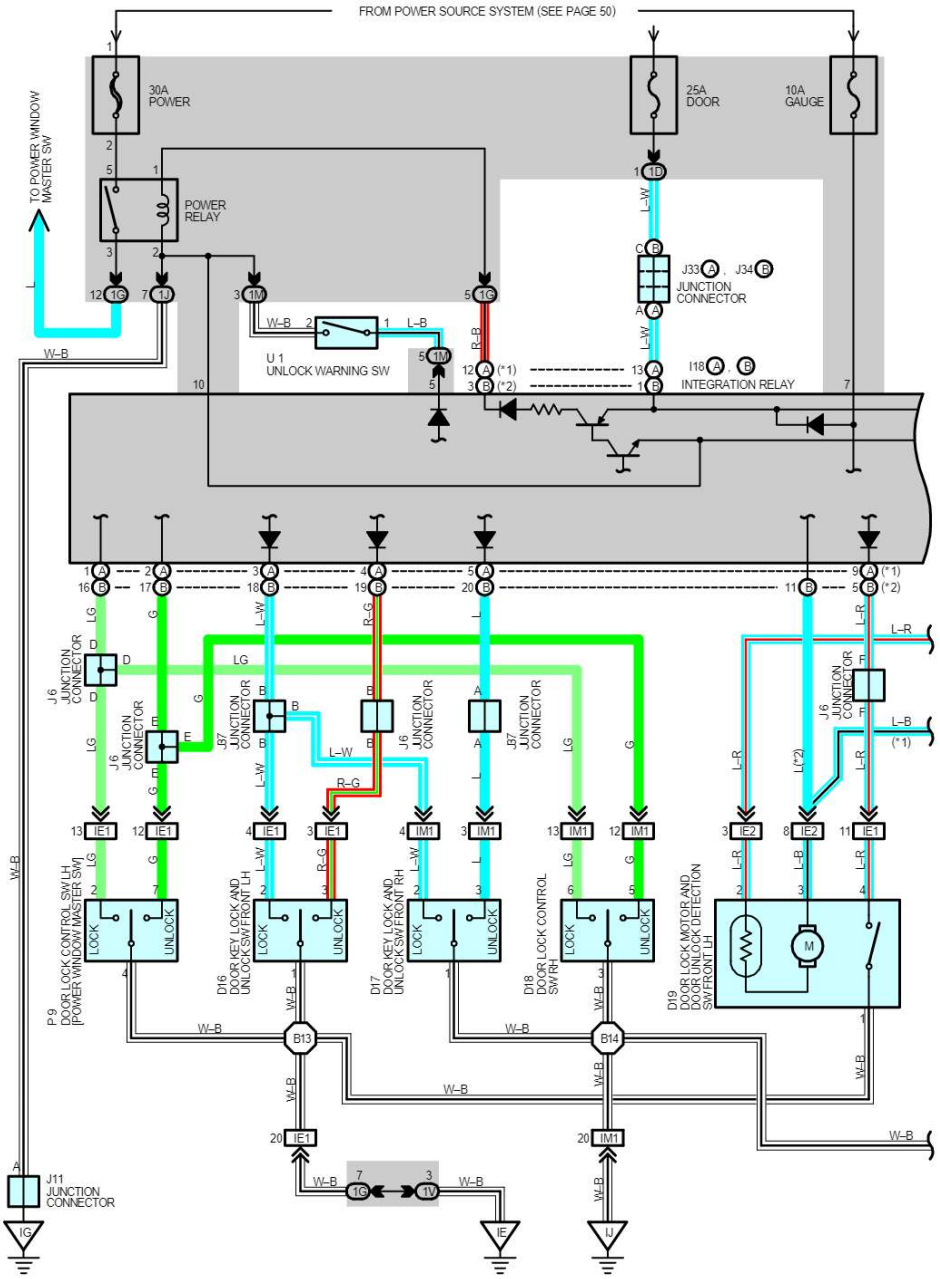
**P9**

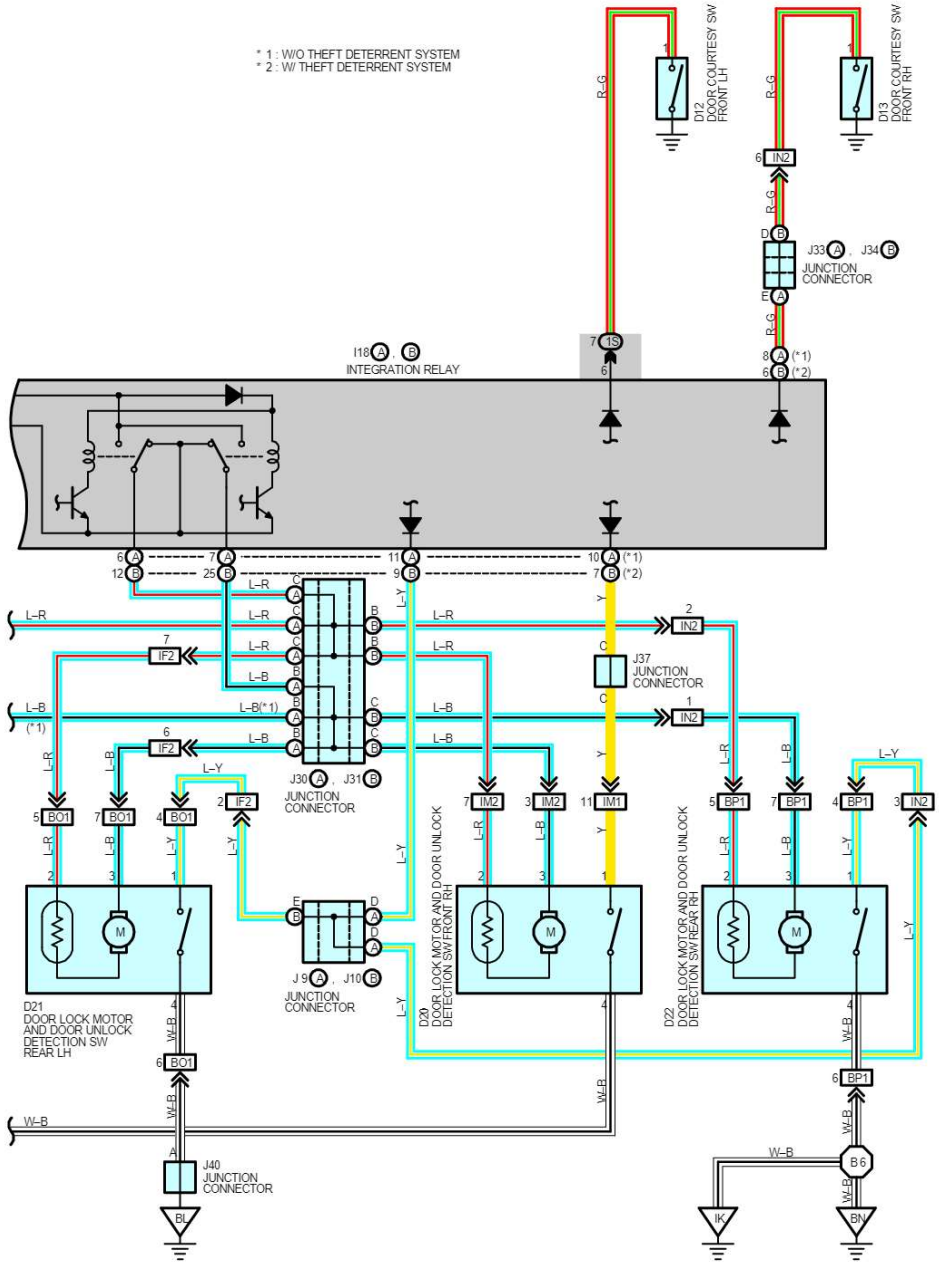



**U1**



# DOOR LOCK CONTROL (TMMK MADE)




* 1 : W/O THEFT DETERRENT SYSTEM
* 2 : W/ THEFT DETERRENT SYSTEM
D12 DOOR COURTESY SW FRONT LH
D13 DOOR COURTESY SW FRONT RH
J33 , J34
JUNCTION CONNECTOR
I18 , INTEGRATION RELAY
J37 JUNCTION CONNECTOR
J30 , J31 JUNCTION CONNECTOR
J9 , J10 JUNCTION CONNECTOR
J40 JUNCTION CONNECTOR
D20 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT RH
D21 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR LH
D22 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR RH
R–G
L–R
L–B
L–Y
W–B
Y
IN2
IF2
BO1
IM1
IM2
BP1
B6
BL
IK
BN

# DOOR LOCK CONTROL (TMMK MADE)

**SYSTEM OUTLINE**

Current always flows to TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the integration relay through the DOOR fuse.
When the ignition SW is turned on, the current flowing through the GAUGE Fuse flows to TERMINAL 7 of the integration relay to TERMINAL (A) 12 (w/o theft deterrent system), (B) 3 (w/ theft deterrent system) to the power relay (Coil side) to GROUND.

**1. MANUAL LOCK OPERATION**

When the door lock control SW or door key lock and unlock SW are operated to LOCK position, a lock signal is input to TERMINAL (A) 1 or (A) 3 (w/o theft deterrent system), (B) 16 or (B) 18 (w/ theft deterrent system) of the integration relay and causes the relay to function. Current flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) to TERMINAL 2 of the door lock motors to TERMINAL 3 to TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and the door lock motor causes the door to lock.

**2. MANUAL UNLOCK OPERATION**

When the door lock control SW or door key lock and unlock SW are operated to UNLOCK position, an unlock signal is input to TERMINAL (A) 2, (A) 4 or (A) 5 (w/o theft deterrent system), (B) 17, (B) 19 or (B) 20 (w/ theft deterrent system) of the integration relay and causes the relay to function. Current flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL (A) 6 (w/o theft Deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and door lock motors causes door to unlock.

**3. 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 mechanically unlocked. Turning the door key lock and unlock SW front LH to the unlock side causes a signal to be input to TERMINAL (A) 4 (w/o theft deterrent system), (B) 19 (w/ theft deterrent system) of the relay, and if the signal is input again within 3 seconds by turning the SW to the unlock side again, current flows from TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) of the integration relay to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND, causing the door lock motors to operate and unlock the doors.

**4. IGNITION KEY REMINDER OPERATION**

* Operating door lock knob (Operation of door lock motors)
  With ignition key in cylinder (Unlock warning SW on), when the door is opened and locked using door lock knob (Door lock motor), the door is locked once but each door is unlocked soon by the function of the relay. As a result, the current flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the integration relay to TERMINAL (A) 7 (w/o theft deterrent system),(B) 11 and (B) 25 (w/ theft deterrent system) to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and causes all the doors to unlock.
* 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 and locked using door lock control SW or key SW, the door is locked once but each door is unlock by the function of SW contained in motors, which the signal is input to TERMINAL (A) 9 or (A) 10 (w/o theft deterrent system), (B) 5 or (B) 7 (w/ theft deterrent system) of the relay. According to this input signal, the current in ECU flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and causes all the doors to unlock.

* In case of key less lock
  With ignition key in cylinder (Unlock warning SW on), when the unlock function is disturbed more than 0.2 seconds, for example pushing the door lock knob etc., the door holds on lock condition. Closing the door after, door courtesy SW inputs the signal into TERMINAL 6 or (A) 8 (w/o theft deterrent system), (B) 6 (w/ theft deterrent system) of the integration relay. By this input signal, the ECU works and current flows from TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to TERMINAL (A) 7 (w/o theft deterrent system), (B) 11 and (B) 25 (w/ theft deterrent system) to TERMINAL 3 of the door lock motors to TERMINAL 2 of the door lock motors to TERMINAL (A) 6 (w/o theft deterrent system), (B) 12 (w/ theft deterrent system) of the relay to TERMINAL 10 to GROUND and causes all the doors to unlock.

**SERVICE HINTS**

**I18 (A), (B) INTEGRATION RELAY**

10–GROUND : Always continuity
6–GROUND : Continuity with driver's door open
7–GROUND : Approx. **12** volts with ignition SW at **ON** position
(A)13 or (B) 1–GROUND: Always approx. **12** volts
(A) 6 or (B)12–GROUND:Approx. **12** volts **0.2** seconds with following operation
∗ Door lock control SW locked
∗ Locking driver's, front passenger's door cylinder with key
(A) 1 or (B)16–GROUND: Continuity with door lock control SW locked
(A) 8 or (B) 6–GROUND : Continuity with front passenger's door open
(A) 9 or (B) 5–GROUND : Continuity with driver's door lock knob unlocked
(A)10 or (B) 7–GROUND: Continuity with front passenger's door lock knob unlock
(A) 2 or (B)17–GROUND: Continuity with door lock control SW unlocked
(A) 5 or (B)20–GROUND: Continuity with front passenger's door lock cylinder unlocked with key
(A) 4 or (B)19–GROUND: Continuity with driver's door lock cylinder unlocked with key
(A) 3 or (B)18–GROUND: Continuity with driver's, front passenger's door lock cylinder locked with key
(A) 7 or (B)11, (B)25–GROUND: Approx. **12** volts **0.2** seconds with following operation
∗ 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 driver's, front passenger's door cylinder with key

**D12, D13 DOOR COURTESY SW FRONT LH,RH**

1–GROUND : Closed with each door open

**D16, D17 DOOR KEY LOCK AND UNLOCK SW FRONT LH,RH**

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

**D19, D20 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT LH,RH**

1–4 : Closed with door lock knob **UNLOCK** position

**U1 UNLOCK WARNING SW**

1–2 : Closed with ignition key in cylinder

**○ : PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|
| D12 | 32 | D22 | | 32 | J31 | B | 31 |
| D13 | 32 | I18 | A | 30 | J33 | A | 31 |
| D16 | 32 | | B | 30 | J34 | B | 31 |
| D17 | 32 | J6 | | 31 | J37 | | 31 |
| D18 | 32 | J9 | A | 31 | J40 | | 32 |
| D19 | 32 | J10 | B | 31 | P9 | | 33 |
| D20 | 32 | J11 | | 31 | U1 | | 31 |
| D21 | 32 | J30 | A | 31 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

# DOOR LOCK CONTROL (TMMK MADE)

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IE2 | | |
| IF2 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IM2 | | |
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BO1 | 44 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | 44 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |
| IG | 40 | Instrument Panel Brace LH |
| IJ | 40 | Right Kick Panel |
| IK | | |
| BL | 44 | Under the Left Center Pillar |
| BN | 44 | Under the Right Center Pillar |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B6 | 44 | Floor No.2 Wire | B14 | 44 | Front Door RH Wire |
| B13 | 44 | Front Door LH Wire | | | |

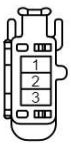
**D12**



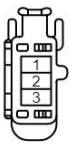

**D13**




**D16**




**D17**




**D18**
BLACK




**D19**
BLACK




**D20**
BLACK



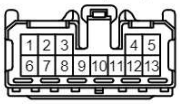

**D21**
BLACK



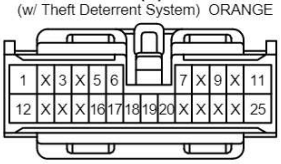

**D22**
BLACK




**I18 (A)**
(w/o Theft Deterrent System) ORANGE




**I18 (B)**
(w/ Theft Deterrent System) ORANGE

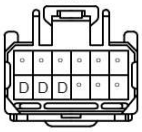



**J6**



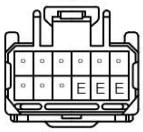

(Hint : See Page 7)

**J9 (A)**
BLACK



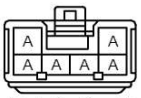

(Hint : See Page 7)

**J10 (B)**
BLACK



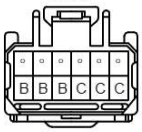

(Hint : See Page 7)

**J11**



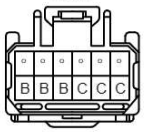

(Hint : See Page 7)

**J30 (A)**
GRAY




(Hint : See Page 7)

**J31 (B)**
GRAY



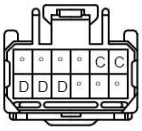

(Hint : See Page 7)

**J33 (A)**
BLACK



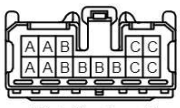

(Hint : See Page 7)

**J34 (B)**
BLACK



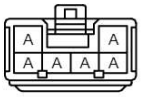

(Hint : See Page 7)

**J37**




(Hint : See Page 7)

**J40**




(Hint : See Page 7)

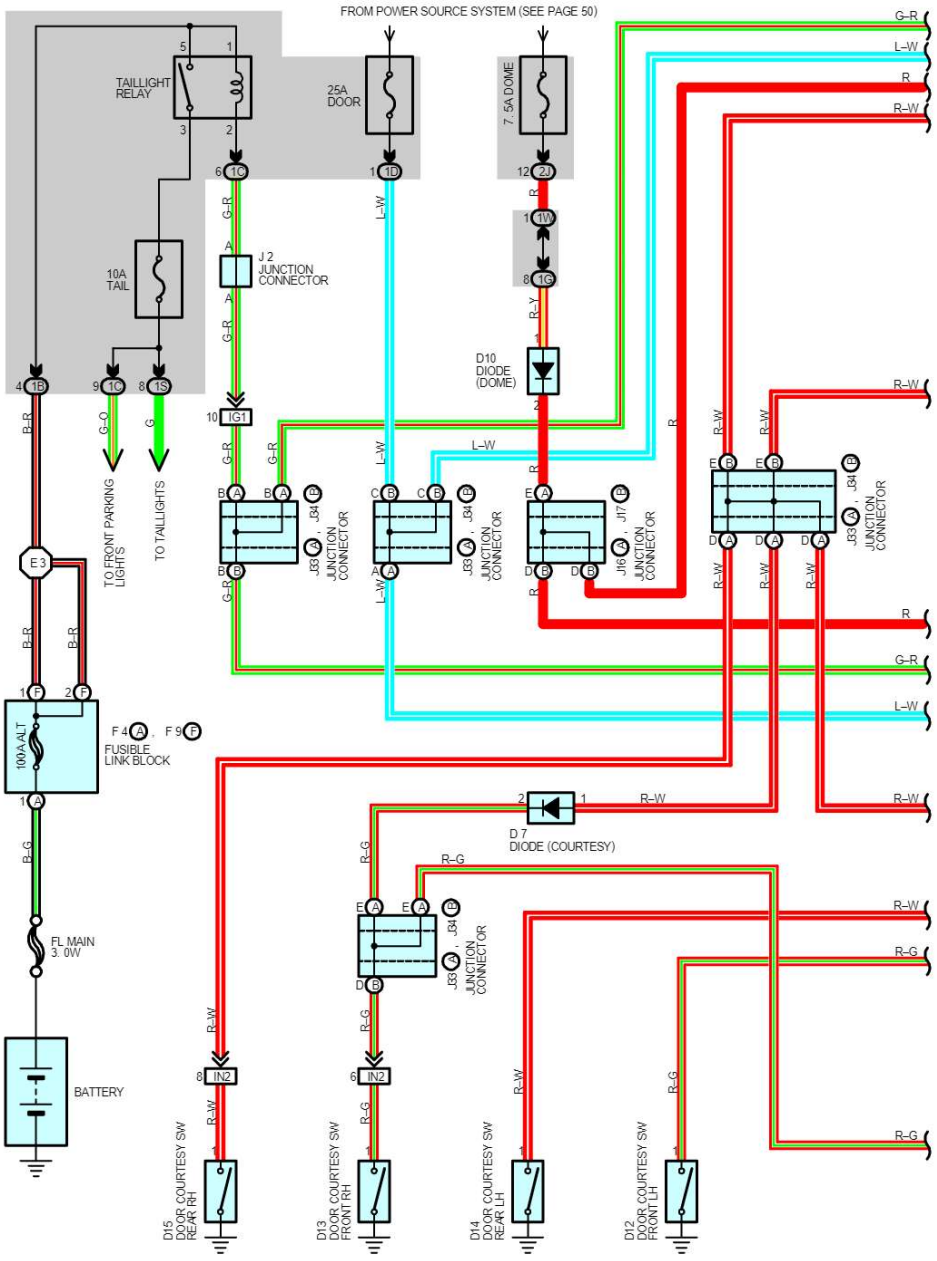
**P9**

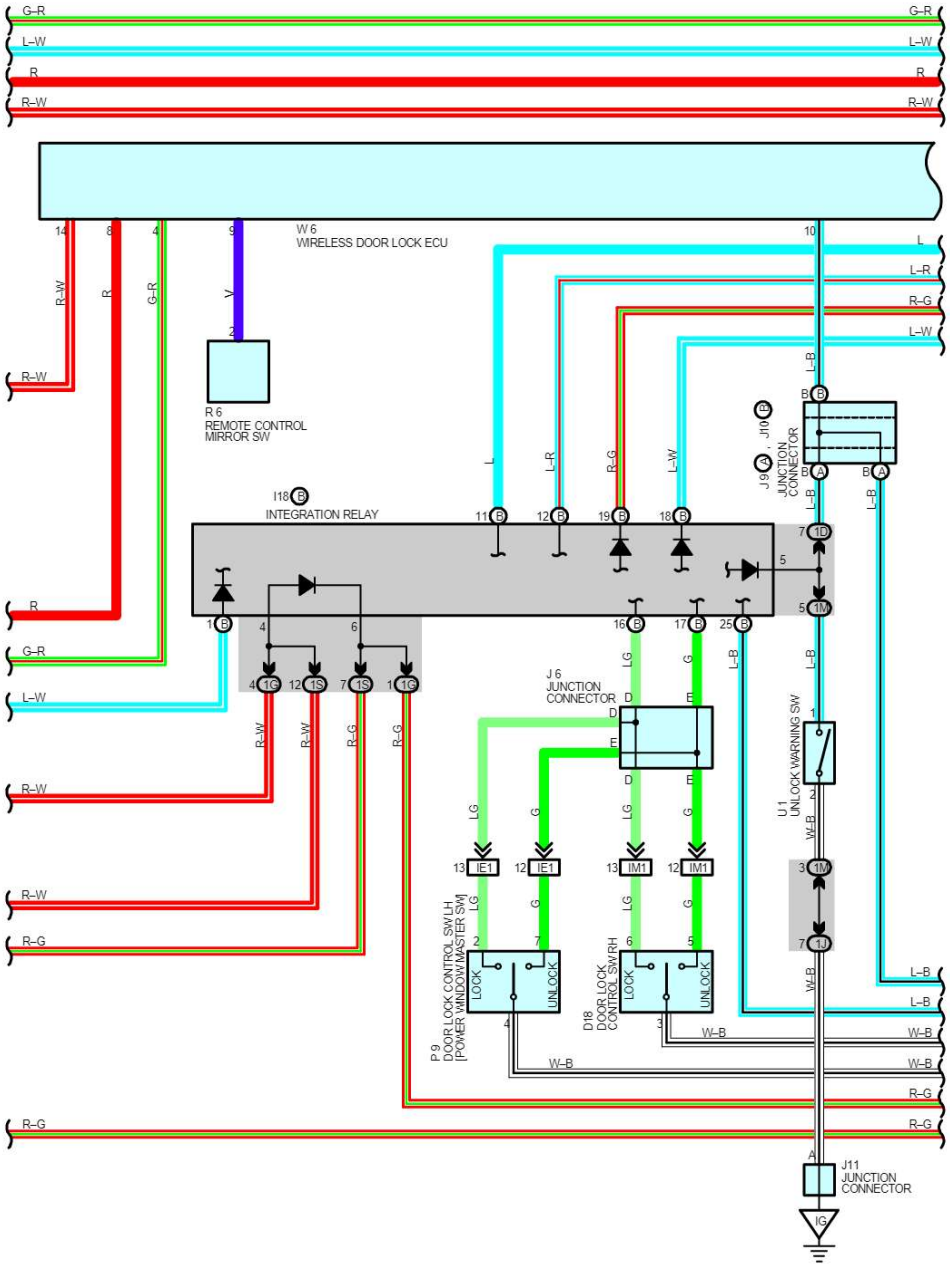



**U1**

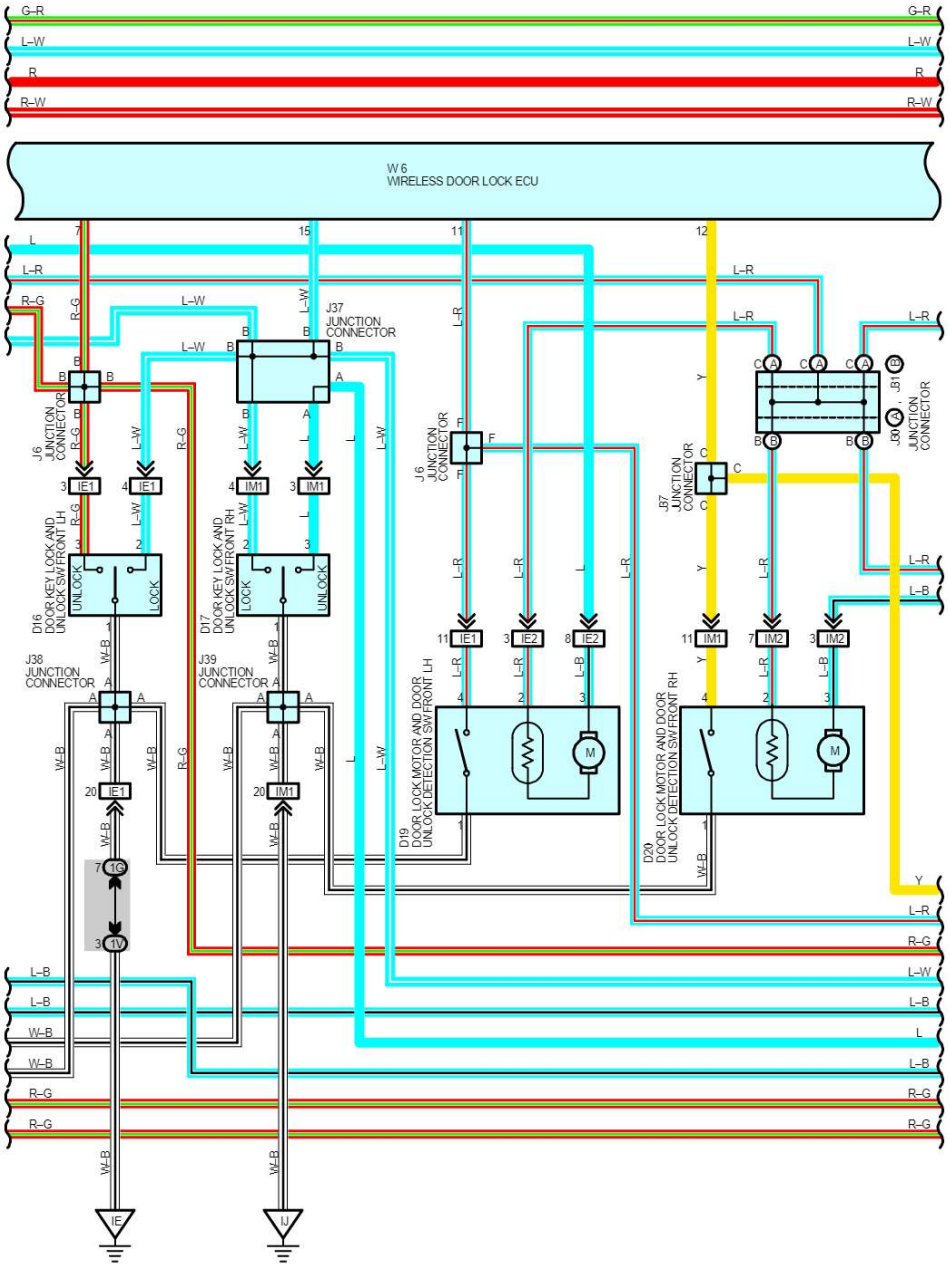


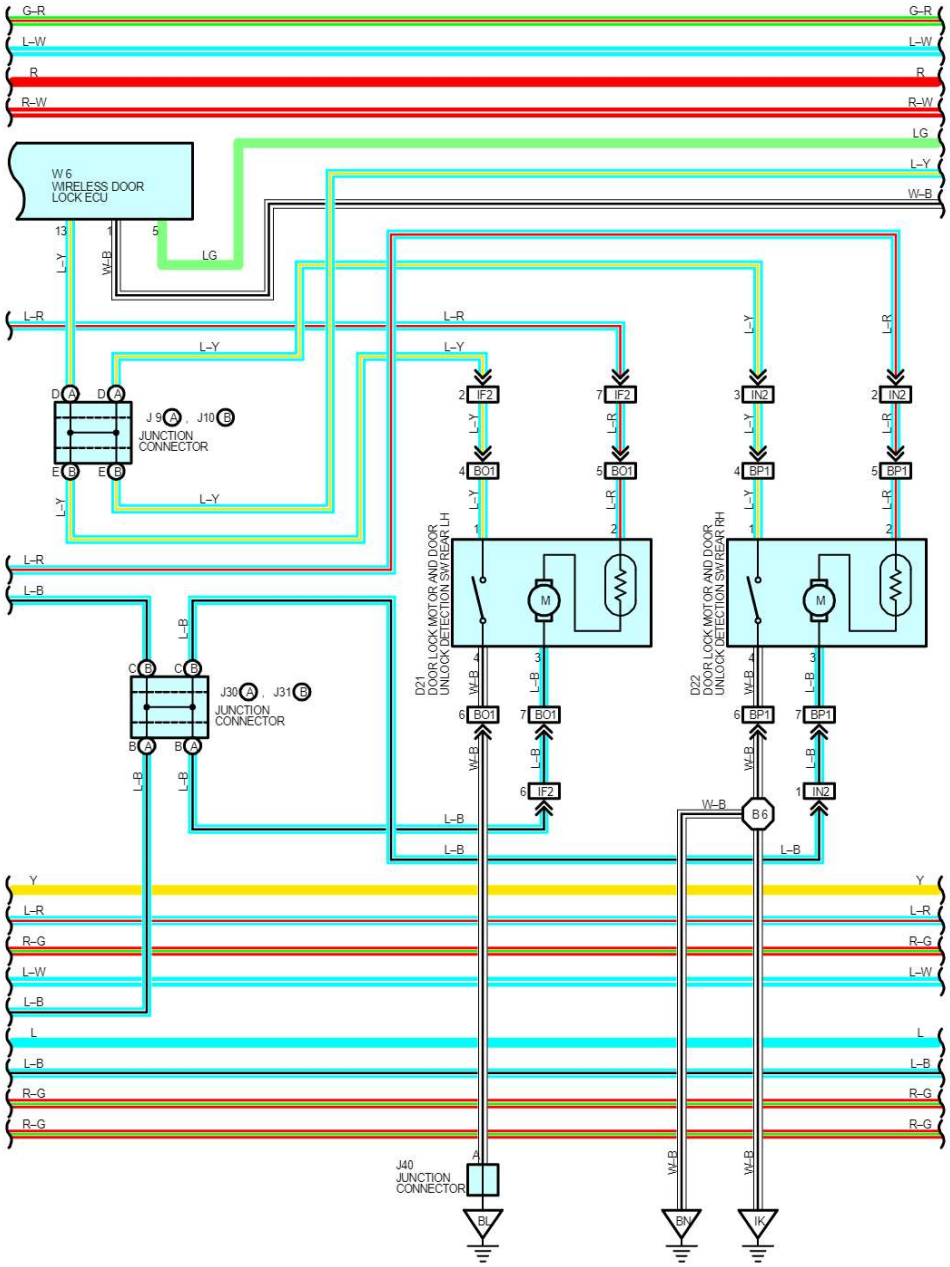
# WIRELESS DOOR LOCK CONTROL (TMC MADE)



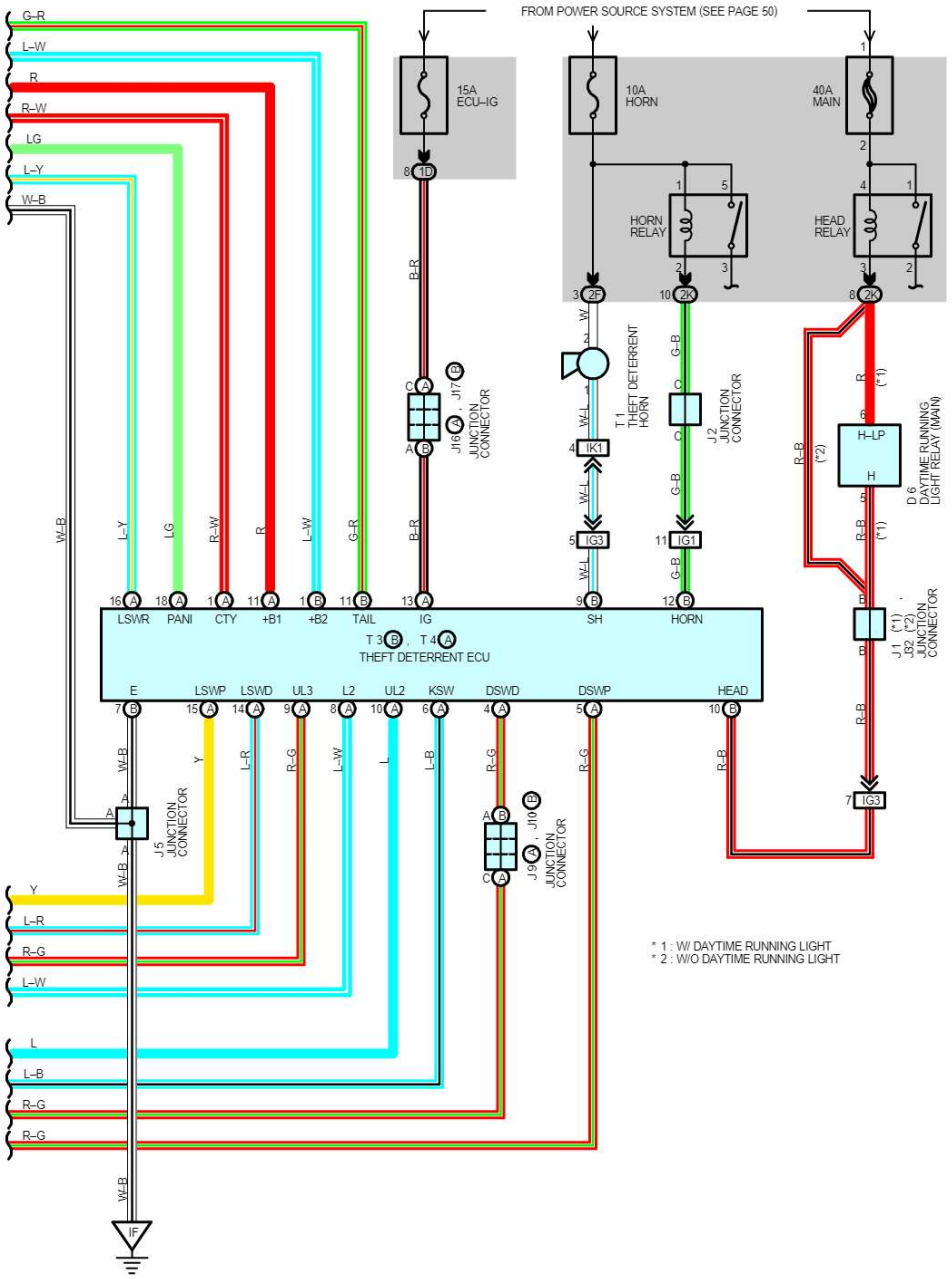

G–R
L–W
R
R–W
W 6
WIRELESS DOOR LOCK ECU
R 6
REMOTE CONTROL
MIRROR SW
I18
INTEGRATION RELAY
J 6
JUNCTION
CONNECTOR
J9 , J10
JUNCTION
CONNECTOR
U 1
UNLOCK WARNING SW
P 9
DOOR LOCK CONTROL SW LH
(POWER WINDOW MASTER SW)
D18
DOOR LOCK
CONTROL SW RH
LOCK
UNLOCK
J11
JUNCTION
CONNECTOR
IG
L
L–R
R–G
L–B
W–B
LG
G

# WIRELESS DOOR LOCK CONTROL (TMC MADE)




G-R
L-W
R
R-W
LG
L-Y
W-B
W 6
WIRELESS DOOR
LOCK ECU
13
1
5
L-R
J 9 A , J10 B
JUNCTION
CONNECTOR
2 IF2
7 IF2
3 IN2
2 IN2
4 BO1
5 BO1
4 BP1
5 BP1
D21
DOOR LOCK MOTOR AND DOOR
UNLOCK DETECTION SW REAR LH
D22
DOOR LOCK MOTOR AND DOOR
UNLOCK DETECTION SW REAR RH
M
6 BO1
7 BO1
6 BP1
7 BP1
6 IF2
1 IN2
J30 A , J31 B
JUNCTION
CONNECTOR
L-B
B 6
Y
R-G
L
J40
JUNCTION
CONNECTOR
BL
BN
IK

# WIRELESS DOOR LOCK CONTROL (TMC MADE)



## SYSTEM OUTLINE

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

**1. WIRELESS DOOR LOCK OR UNLOCK NORMAL OPERATION**

With the ignition key not inserted into the ignition key cylinder (Unlock warning SW off) and all the doors completely closed, when the lock or unlock button (Transmitter) is pushed, the wireless door lock ECU receives the electrical waves from the transmitter, causing it to operate.
As a result, the ECU judges whether the door is locked or unlocked based on the signal from the door lock motor and door unlock detection SW, and sends a signal to the theft deterrent ECU and integration relay to switch the condition from lock to unlock or vice versa, causing the door lock motor to operate.

**2. VISUAL CONFIRMATION OF LOCK OR UNLOCK**

If all doors indicate that they are locked after the lock command, parking lights and taillight will flash once. If any door indicates that it is open after the unlock command, parking lights and taillights will flash twice.

**3. WIRELESS DOOR UNLOCK OPERATION**

Pushing the unlock button (Transmitter) once, driver's door is unlocked. Furthermore, pushing the button again within 3 seconds, the other doors are unlocked.

**4. AUTOMATIC LOCK OPERATION**

With the ignition key not inserted into the ignition key cylinder (Unlock warning SW off) and all the doors completely closed, after pushing the button (Transmitter) to unlock all the doors, if a door is not opened within 30 seconds, all the doors will be automatically relocked.

**5. WIRELESS CONTROL STOP FUNCTION**

If a door is open (Door courtesy SW on), a signal is input from the door courtesy SW to the wireless door lock ECU, stopping wireless door lock or unlock.
If the ignition key is in the ignition key cylinder (Unlock warning SW on), the unlock warning SW inputs a signal to the wireless door lock ECU, stopping wireless door lock or unlock.

**6. DOOR LOCK MOTOR PROTECTIVE FUNCTION**

If the door lock or unlock condition does not change after wireless door lock or unlock operation, 2 seconds later, the integration relay ECU sends current three times to the door lock motor. If the door lock condition still has not changed as a result, the wireless door lock ECU stops reception and stops door lock and unlock function.

**7. REMOTE PANIC OPERATION**

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

## SERVICE HINTS

**D12, D13, D14, D15 DOOR COURTESY SW FRONT LH, RH, REAR LH, RH**

1–GROUND : Continuity with the door open

**U1 UNLOCK WARNING SW**

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

**W6 WIRELESS DOOR LOCK ECU**

8–GROUND : Always approx. **12** volts
1–GROUND : Always continuity
14–GROUND : Continuity with each of the door open
10–GROUND : Continuity with the ignition key in the cylinder

# WIRELESS DOOR LOCK CONTROL (TMC MADE)

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| D6 | 30 | F4 A | 28 (5S–FE) | J32 | 31 |
| D7 | 30 | F9 F | 26 (1MZ–FE) | J33 A | 31 |
| D10 | 30 | | 28 (5S–FE) | J34 B | 31 |
| D12 | 32 | I18 B | 30 | J37 | 31 |
| D13 | 32 | J1 | 31 | J38 | 32 |
| D14 | 32 | J2 | 31 | J39 | 32 |
| D15 | 32 | J5 | 31 | J40 | 32 |
| D16 | 32 | J6 | 31 | P9 | 33 |
| D17 | 32 | J9 A | 31 | R6 | 31 |
| D18 | 32 | J10 B | 31 | T1 | 27 (1MZ–FE) |
| D19 | 32 | J11 | 31 | | 29 (5S–FE) |
| D20 | 32 | J16 A | 31 | T3 B | 31 |
| D21 | 32 | J17 B | 31 | T4 A | 31 |
| D22 | 32 | J30 A | 31 | U1 | 31 |
| F4 A | 26 (1MZ–FE) | J31 B | 31 | W6 | 31 |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | | |
| 2F | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IE2 | | |
| IF2 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IM2 | | |
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BO1 | 44 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | 44 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

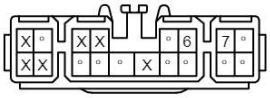
## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |
| IJ | 40 | Right Kick Panel |
| IK | | |
| BL | 44 | Under the Left Center Pillar |
| BN | 44 | Under the Right Center Pillar |

## : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | B6 | 44 | Floor No.2 Wire |
| | 38 (5S–FE) | | | | |

**D6**
GRAY



**D7**
BLACK



**D10**
BLACK



**D12**



**D13**



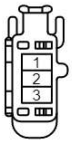
**D14**



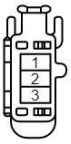
**D15**



**D16**



**D17**



**D18**



**D19**
BLACK



**D20**
BLACK



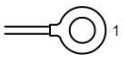
**D21**
BLACK



**D22**
BLACK



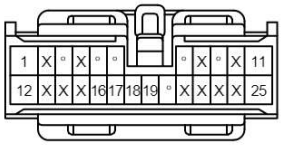
**F4 (A)**



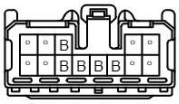
**F9 (F)**
ORANGE



**I18 (B)**
ORANGE



**J1**



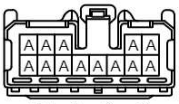
(Hint : See Page 7)

**J2**
BLACK



(Hint : See Page 7)

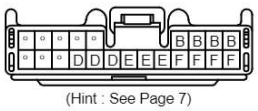
**J5**
ORANGE



(Hint : See Page 7)

# WIRELESS DOOR LOCK CONTROL (TMC MADE)

**J6**




(Hint : See Page 7)

**J9 (A)**
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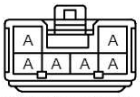

(Hint : See Page 7)

**J10 (B)**
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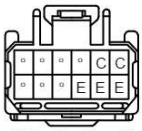

(Hint : See Page 7)

**J11**




(Hint : See Page 7)

**J16 (A)**
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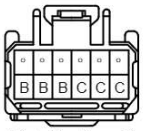

(Hint : See Page 7)

**J17 (B)**
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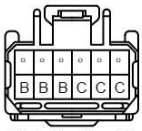

(Hint : See Page 7)

**J30 (A)**
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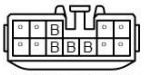

(Hint : See Page 7)

**J31 (B)**
GRAY




(Hint : See Page 7)

**J32**
GRAY




(Hint : See Page 7)

**J33 (A)**
BLACK



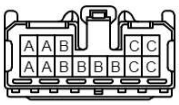

(Hint : See Page 7)

**J34 (B)**
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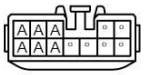

(Hint : See Page 7)

**J37**




(Hint : See Page 7)

**J38**



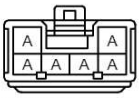

(Hint : See Page 7)

**J39**



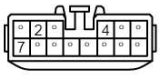

(Hint : See Page 7)

**J40**

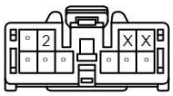



(Hint : See Page 7)

**P9**




**R6**



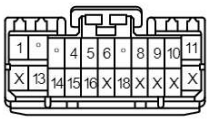

**T1**
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**T3 (B)**



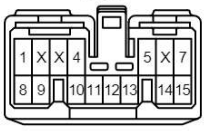

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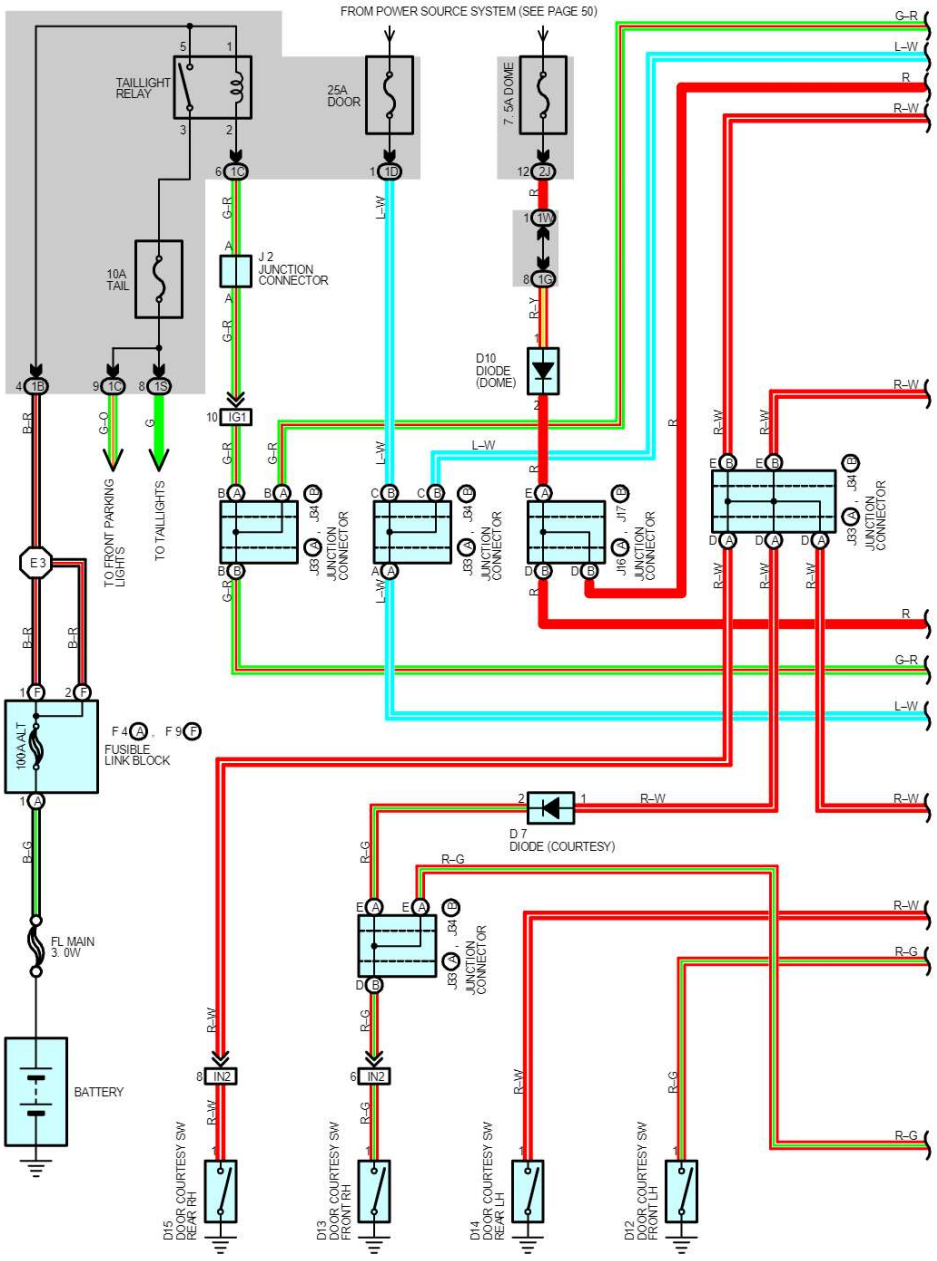

**U1**

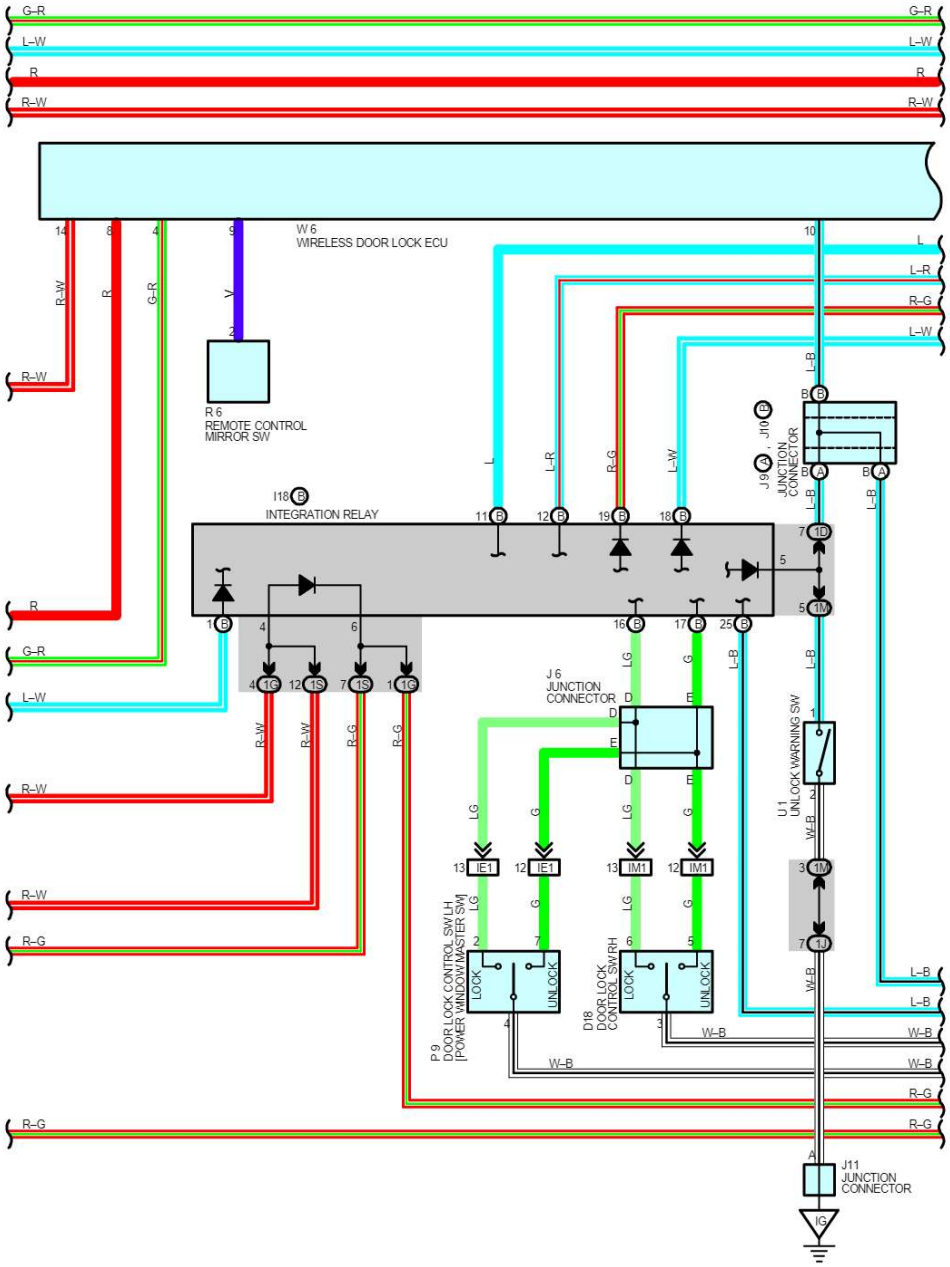



**W6**
BLUE

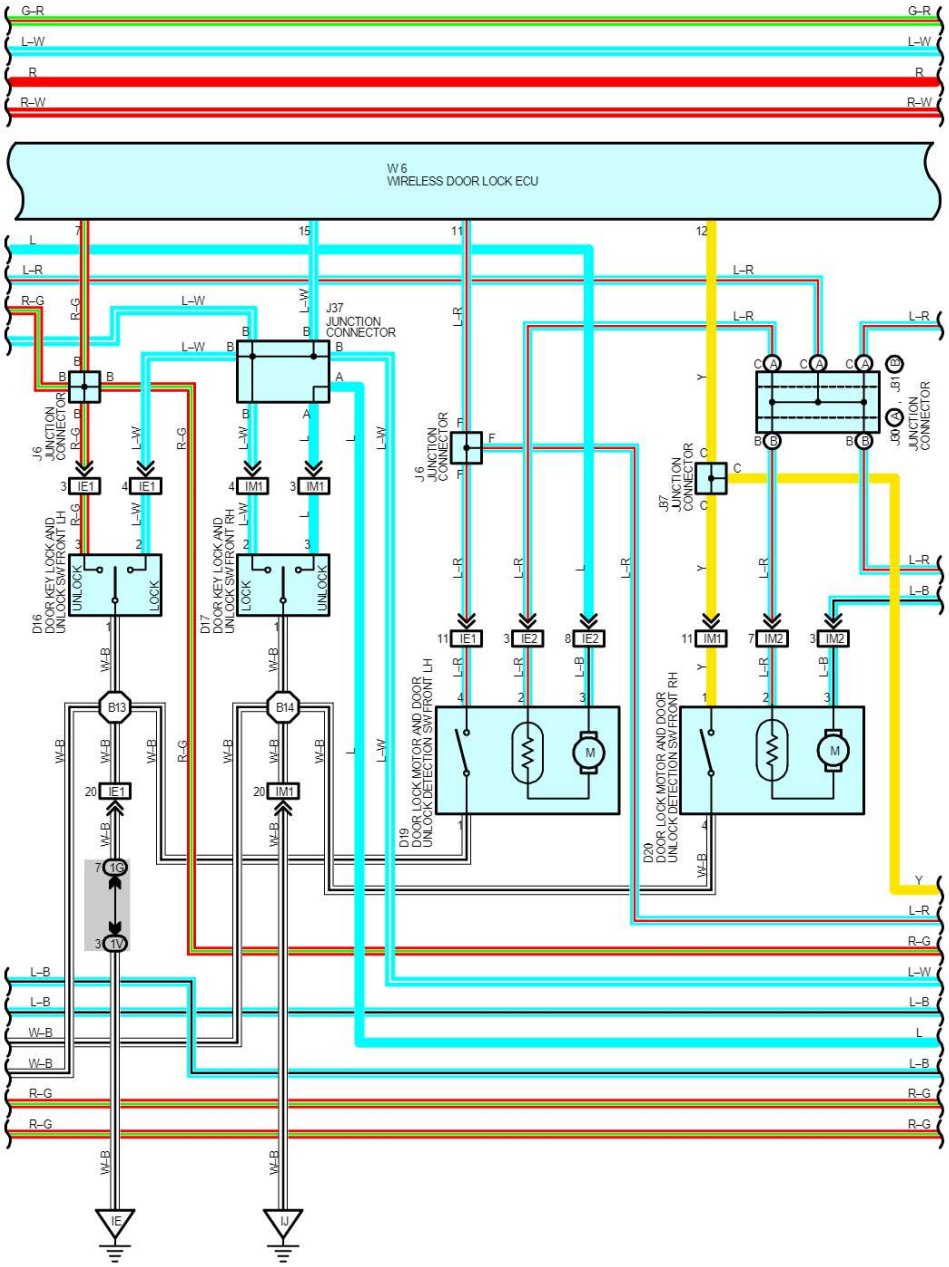


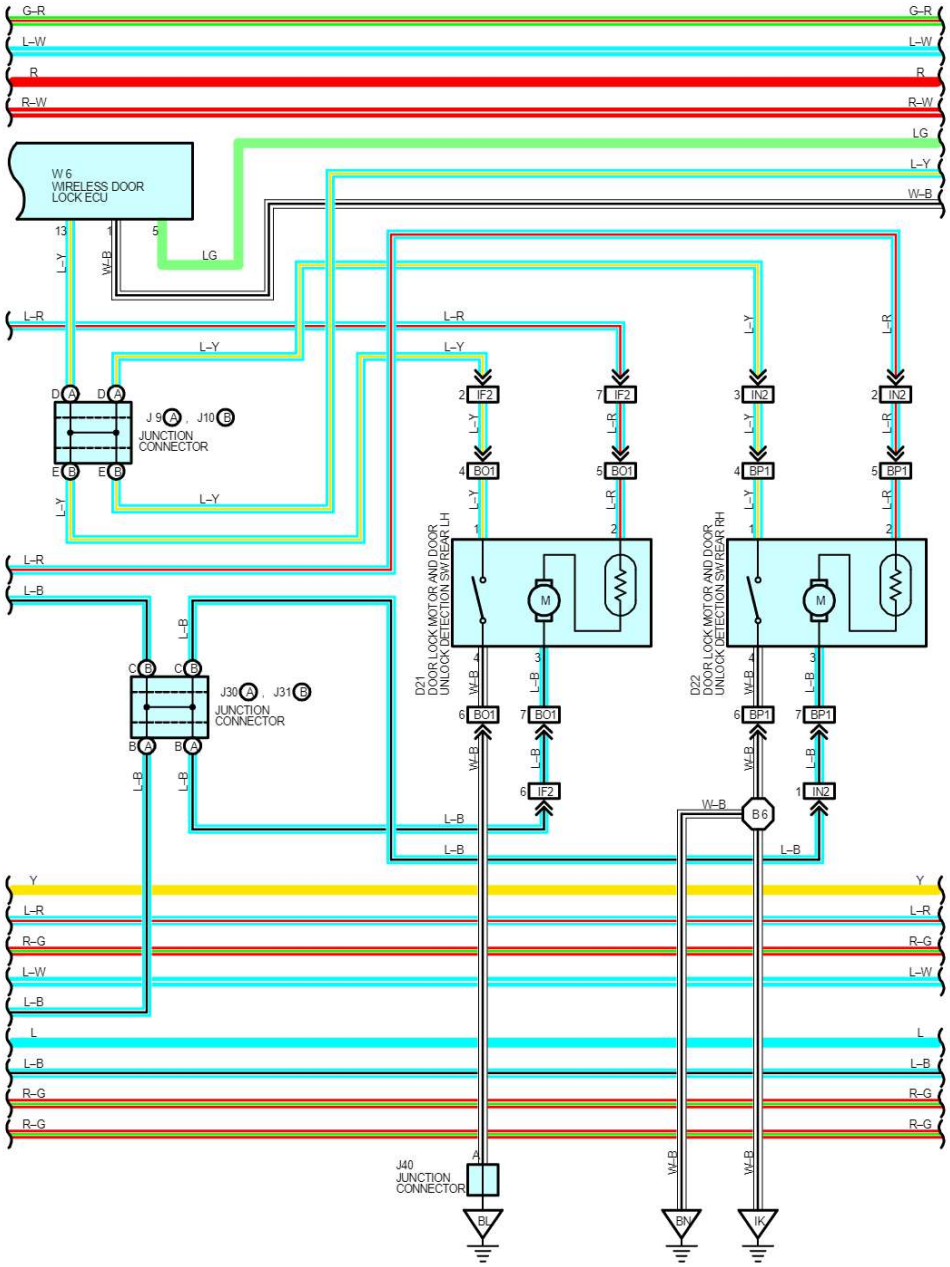
# WIRELESS DOOR LOCK CONTROL (TMMK MADE)



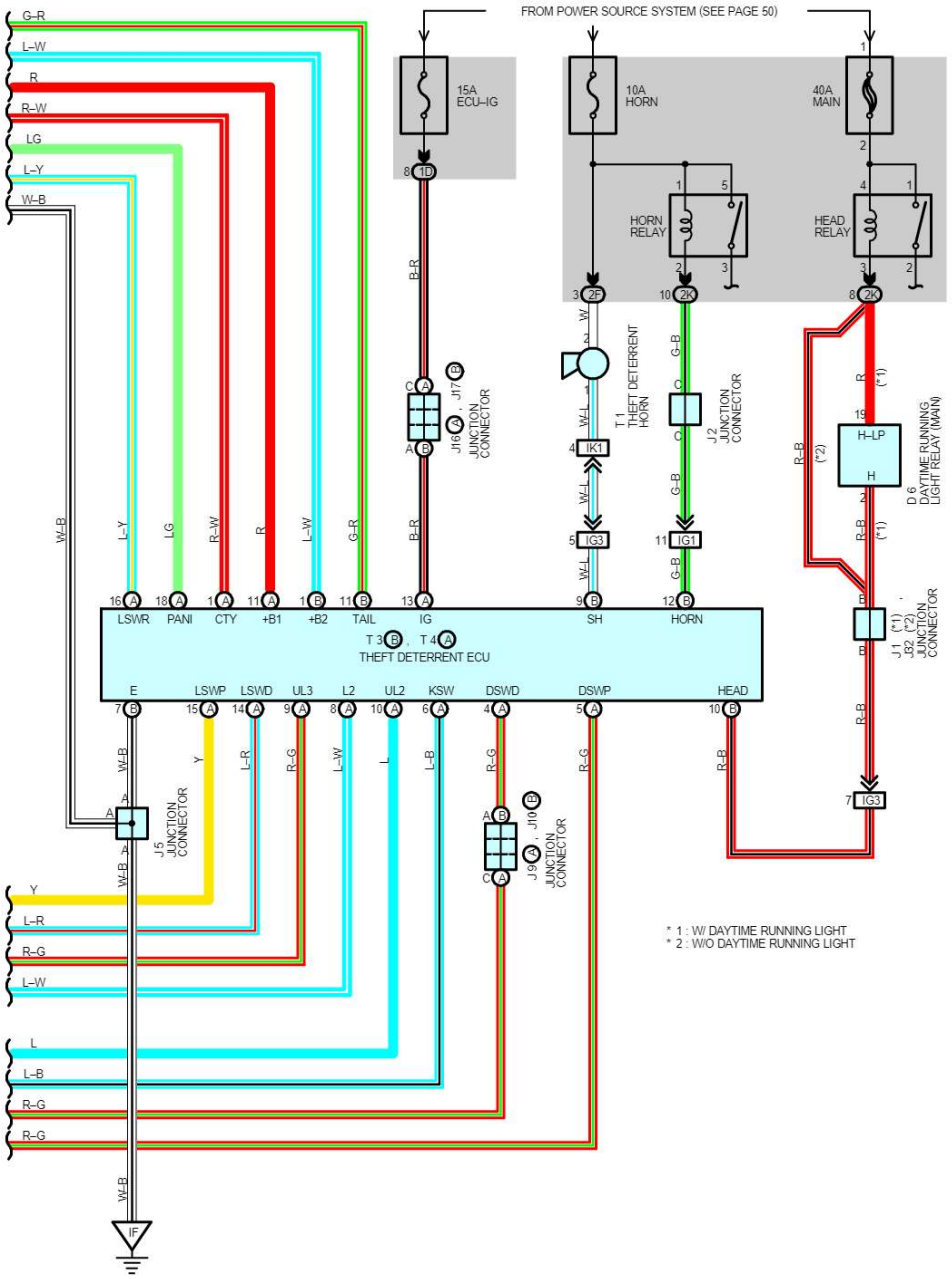

G–R
L–W
R
R–W
W 6
WIRELESS DOOR LOCK ECU
R 6
REMOTE CONTROL
MIRROR SW
I18
INTEGRATION RELAY
J 6
JUNCTION
CONNECTOR
J9 , J10
JUNCTION
CONNECTOR
U 1
UNLOCK WARNING SW
P 9
DOOR LOCK CONTROL SW LH
(POWER WINDOW MASTER SW)
D18
DOOR LOCK
CONTROL SW RH
LOCK
UNLOCK
J11
JUNCTION
CONNECTOR
IG
L
L–R
R–G
L–B
W–B
LG
G

# WIRELESS DOOR LOCK CONTROL (TMMK MADE)




G-R
L-W
R
R-W
LG
L-Y
W-B
W 6
WIRELESS DOOR
LOCK ECU
13
1
5
L-R
J 9 A , J10 B
JUNCTION
CONNECTOR
2 IF2
7 IF2
3 IN2
2 IN2
4 BO1
5 BO1
4 BP1
5 BP1
D21
DOOR LOCK MOTOR AND DOOR
UNLOCK DETECTION SW REAR LH
D22
DOOR LOCK MOTOR AND DOOR
UNLOCK DETECTION SW REAR RH
M
6 BO1
7 BO1
6 BP1
7 BP1
6 IF2
1 IN2
J30 A , J31 B
JUNCTION
CONNECTOR
L-B
B 6
Y
R-G
L
J40
JUNCTION
CONNECTOR
BL
BN
IK

# WIRELESS DOOR LOCK CONTROL (TMMK MADE)



## SYSTEM OUTLINE

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

**1. WIRELESS DOOR LOCK OR UNLOCK NORMAL OPERATION**

With the ignition key not inserted into the ignition key cylinder (Unlock warning SW off) and all the doors completely closed, when the lock or unlock button (Transmitter) is pushed, the wireless door lock ECU receives the electrical waves from the transmitter, causing it to operate.
As a result, the ECU judges whether the door is locked or unlocked based on the signal from the door lock motor and door unlock detection SW, and sends a signal to the theft deterrent ECU and integration relay to switch the condition from lock to unlock or vice versa, causing the door lock motor to operate.

**2. VISUAL CONFIRMATION OF LOCK OR UNLOCK**

If all doors indicate that they are locked after the lock command, parking lights and taillight will flash once. If any door indicates that it is open after the unlock command, parking lights and taillights will flash twice.

**3. WIRELESS DOOR UNLOCK OPERATION**

Pushing the unlock button (Transmitter) once, driver's door is unlocked. Furthermore, pushing the button again within 3 seconds, the other doors are unlocked.

**4. AUTOMATIC LOCK OPERATION**

With the ignition key not inserted into the ignition key cylinder (Unlock warning SW off) and all the doors completely closed, after pushing the button (Transmitter) to unlock all the doors, if a door is not opened within 30 seconds, all the doors will be automatically relocked.

**5. WIRELESS CONTROL STOP FUNCTION**

If a door is open (Door courtesy SW on), a signal is input from the door courtesy SW to the wireless door lock ECU, stopping wireless door lock or unlock.
If the ignition key is in the ignition key cylinder (Unlock warning SW on), the unlock warning SW inputs a signal to the wireless door lock ECU, stopping wireless door lock or unlock.

**6. DOOR LOCK MOTOR PROTECTIVE FUNCTION**

If the door lock or unlock condition does not change after wireless door lock or unlock operation, 2 seconds later, the integration relay ECU sends current three times to the door lock motor. If the door lock condition still has not changed as a result, the wireless door lock ECU stops reception and stops door lock and unlock function.

**7. REMOTE PANIC OPERATION**

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

## SERVICE HINTS

**D12, D13, D14, D15 DOOR COURTESY SW FRONT LH, RH, REAR LH, RH**

1–GROUND : Continuity with the door open

**U1 UNLOCK WARNING SW**

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

**W6 WIRELESS DOOR LOCK ECU**

8–GROUND : Always approx. **12** volts
1–GROUND : Always continuity
14–GROUND : Continuity with each of the door open
10–GROUND : Continuity with the ignition key in the cylinder

# WIRELESS DOOR LOCK CONTROL (TMMK MADE)

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| D6 | 30 | F4 A | 28 (5S–FE) | J32 | 31 |
| D7 | 30 | F9 F | 26 (1MZ–FE) | J33 A | 31 |
| D10 | 30 | | 28 (5S–FE) | J34 B | 31 |
| D12 | 32 | I18 B | 30 | J37 | 31 |
| D13 | 32 | J1 | 31 | J40 | 32 |
| D14 | 32 | J2 | 31 | P9 | 33 |
| D15 | 32 | J5 | 31 | R6 | 31 |
| D16 | 32 | J6 | 31 | T1 | 27 (1MZ–FE) |
| D17 | 32 | J9 A | 31 | | 29 (5S–FE) |
| D18 | 32 | J10 B | 31 | T3 B | 31 |
| D19 | 32 | J11 | 31 | T4 A | 31 |
| D20 | 32 | J16 A | 31 | U1 | 31 |
| D21 | 32 | J17 B | 31 | W6 | 31 |
| D22 | 32 | J30 A | 31 | | |
| F4 A | 26 (1MZ–FE) | J31 B | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | | |
| 2F | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IE2 | | |
| IF2 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IM2 | | |
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BO1 | 44 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | 44 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

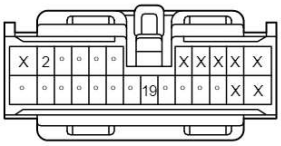
## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |
| IJ | 40 | Right Kick Panel |
| IK | | |
| BL | 44 | Under the Left Center Pillar |
| BN | 44 | Under the Right Center Pillar |

## : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | B13 | 44 | Front Door LH Wire |
| | 38 (5S–FE) | | B14 | 44 | Front Door RH Wire |
| B6 | 44 | Floor No.2 Wire | | | |

**D6**



**D7**
BLACK



**D10**
BLACK



**D12**



**D13**



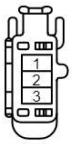
**D14**



**D15**



**D16**



**D17**



**D18**
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**D19**
BLACK



**D20**
BLACK



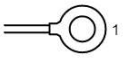
**D21**
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**D22**
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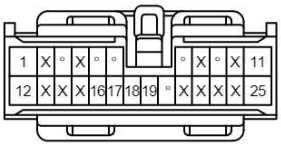
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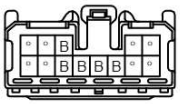
**F9 (F)**
ORANGE



**I18 (B)**
ORANGE



**J1**



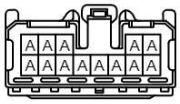
(Hint : See Page 7)

**J2**
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(Hint : See Page 7)

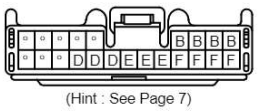
**J5**
ORANGE



(Hint : See Page 7)

# WIRELESS DOOR LOCK CONTROL (TMMK MADE)

**J6**




(Hint : See Page 7)

**J9 (A)**
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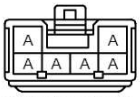

(Hint : See Page 7)

**J10 (B)**
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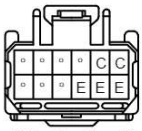

(Hint : See Page 7)

**J11**




(Hint : See Page 7)

**J16 (A)**
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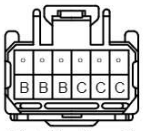

(Hint : See Page 7)

**J17 (B)**
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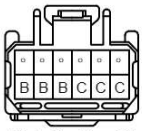

(Hint : See Page 7)

**J30 (A)**
GRAY



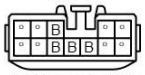

(Hint : See Page 7)

**J31 (B)**
GRAY




(Hint : See Page 7)

**J32**
GRAY



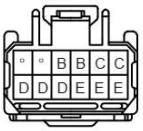

(Hint : See Page 7)

**J33 (A)**
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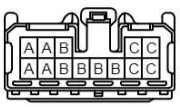

(Hint : See Page 7)

**J34 (B)**
BLACK



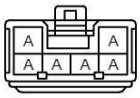

(Hint : See Page 7)

**J37**



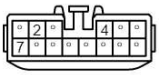

(Hint : See Page 7)

**J40**

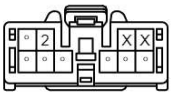



(Hint : See Page 7)

**P9**



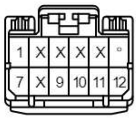

**R6**



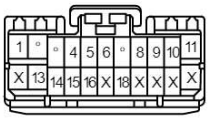

**T1**
BLACK




**T3 (B)**



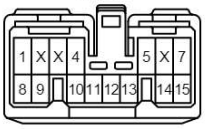

**T4 (A)**



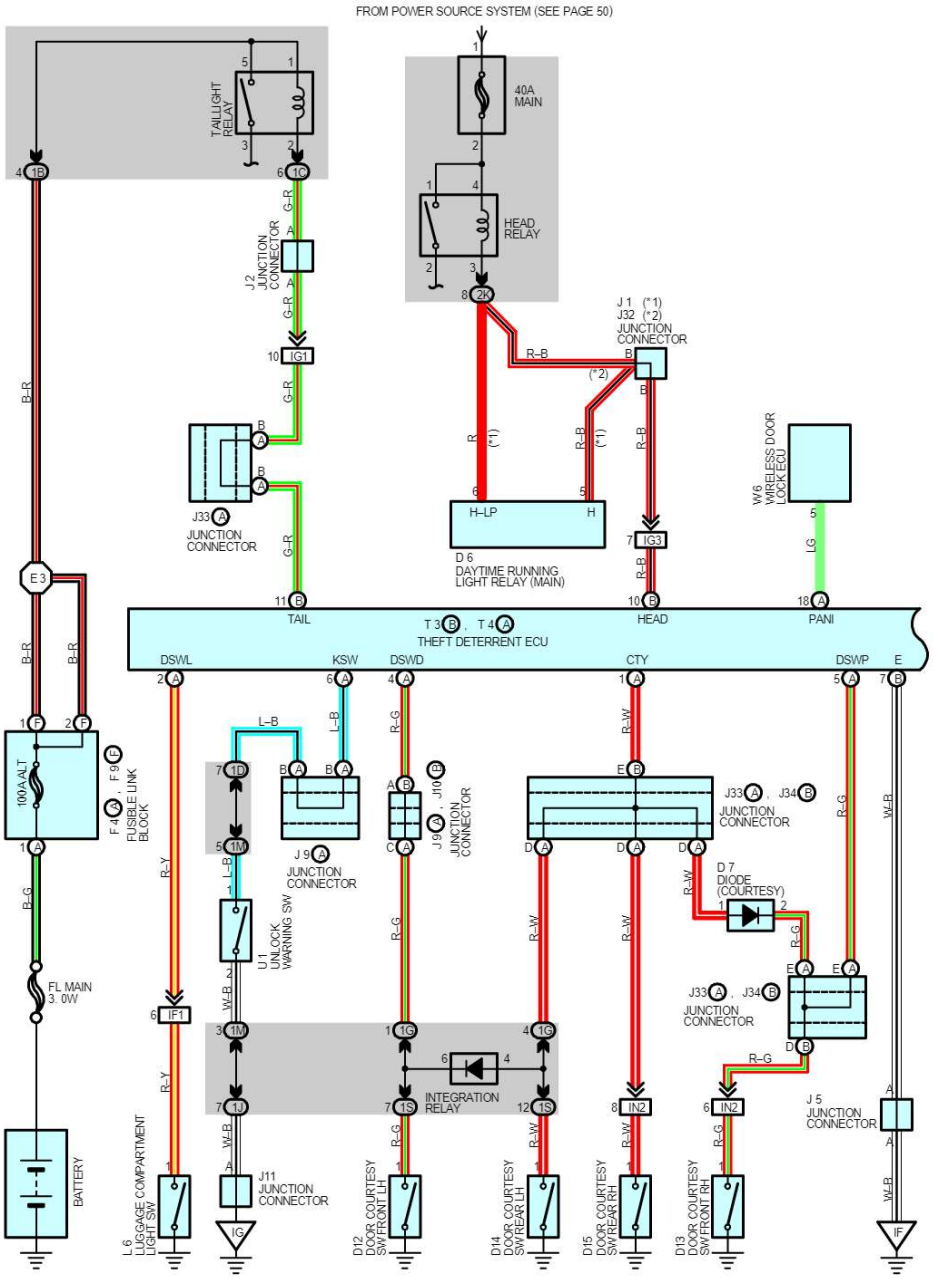

**U1**

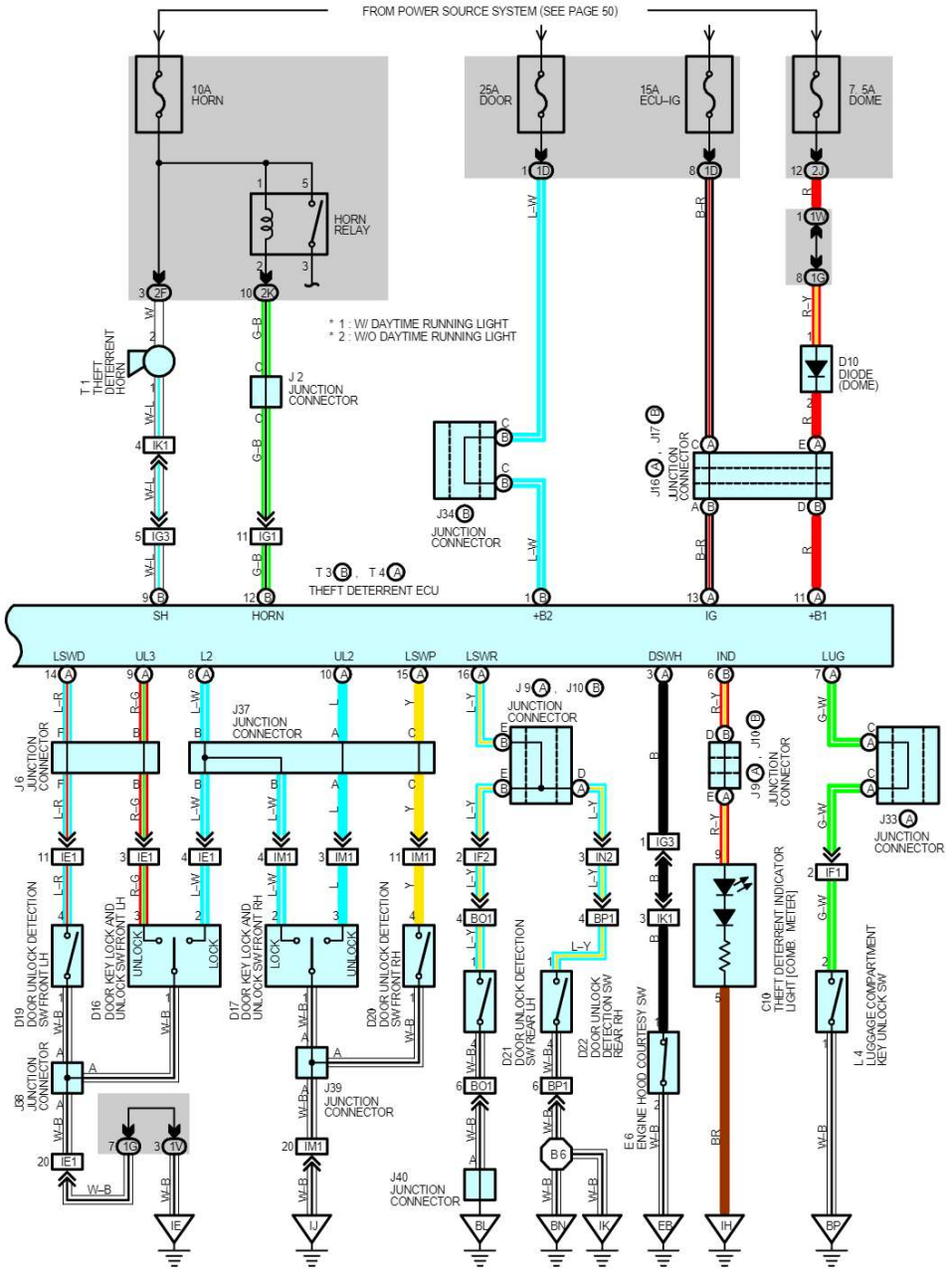



**W6**
BLUE



# THEFT DETERRENT (TMC MADE)




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
10A HORN
25A DOOR
15A ECU–IG
7.5A DOME
HORN RELAY
* 1 : W/ DAYTIME RUNNING LIGHT
* 2 : W/O DAYTIME RUNNING LIGHT
T1 THEFT DETERRENT HORN
J2 JUNCTION CONNECTOR
J34 JUNCTION CONNECTOR
J7 JUNCTION CONNECTOR
J16 JUNCTION CONNECTOR
D10 DIODE (DOME)
T3, T4 THEFT DETERRENT ECU
SH
HORN
+B2
IG
+B1
LSWD
UL3
L2
UL2
LSWP
LSWR
DSWH
IND
LUG
J6 JUNCTION CONNECTOR
J37 JUNCTION CONNECTOR
J9, J10 JUNCTION CONNECTOR
J33 JUNCTION CONNECTOR
D19 DOOR UNLOCK DETECTION SW FRONT LH
D16 DOOR KEY LOCK AND UNLOCK SW FRONT LH
D17 DOOR KEY LOCK AND UNLOCK SW FRONT RH
D20 DOOR UNLOCK DETECTION SW FRONT RH
D21 DOOR UNLOCK DETECTION SW REAR LH
D22 DOOR UNLOCK DETECTION SW REAR RH
E6 ENGINE HOOD COURTESY SW
C10 THEFT DETERRENT INDICATOR LIGHT [COMB. METER]
L4 LUGGAGE COMPARTMENT KEY UNLOCK SW
J8 JUNCTION CONNECTOR
J39 JUNCTION CONNECTOR
J40 JUNCTION CONNECTOR
B6
IE
IJ
BL
BN
IK
EB
IH
BP

# THEFT DETERRENT (TMC MADE)

**SERVICE HINTS**

**D16, D17 DOOR KEY LOCK AND UNLOCK SW FRONT LH, RH**
1–3 : Closed with door lock cylinder unlocked with key
1–2 : Closed with door lock cylinder locked with key

**E6 ENGINE HOOD COURTESY SW**
2–1 : Open with engine hood open

**U1 UNLOCK WARNING SW**
2–1 : Closed with ignition key in cylinder

**L4 LUGGAGE COMPARTMENT KEY UNLOCK SW**
2–1 : Closed with luggage compartment door lock cylinder unlock

**L6 LUGGAGE COMPARTMENT LIGHT SW**
1–GROUND : Closed with luggage compartment door open

**T3 (B), T4 (A) THEFT DETERRENT ECU**
(A) 6–GROUND : Continuity with ignition key in cylinder
(A)15–GROUND : Continuity with front RH door unlocked
(A)14–GROUND : Continuity with front LH door unlocked
(A) 5–GROUND : Continuity with front RH door open
(A) 4–GROUND : Continuity with front LH door open
(A) 8–GROUND : Continuity with door key lock and unlock SW to **LOCK** position
(B) 7–GROUND : Always continuity
(A) 7–GROUND : Continuity with luggage compartment door unlocked
(A) 1–GROUND : Continuity with each door opened
(A) 3–GROUND : Continuity with engine hood close
(A) 2–GROUND : Continuity with luggage compartment door open
(A)16–GROUND : Continuity with rear door unlocked
(A) 9, (A) 10–GROUND : Continuity with door key lock and unlock SW to **UNLOCK** position
(B) 1, (B) 12, (B) 11, (B) 10, (A) 11–GROUND : Always approx. **12** volts

○ : **PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C10 | 30 | E6 | 28 (5S–FE) | J33 A | 31 |
| D6 | 30 | F4 A | 26 (1MZ–FE) | J34 B | 31 |
| D7 | 30 | | 28 (5S–FE) | J37 | 31 |
| D10 | 30 | F9 F | 26 (1MZ–FE) | J38 | 32 |
| D12 | 32 | | 28 (5S–FE) | J39 | 32 |
| D13 | 32 | J1 | 31 | J40 | 32 |
| D14 | 32 | J2 | 31 | L4 | 32 |
| D15 | 32 | J5 | 31 | L6 | 32 |
| D16 | 32 | J6 | 31 | T1 | 27 (1MZ–FE) |
| D17 | 32 | J9 A | 31 | | 29 (5S–FE) |
| D19 | 32 | J10 B | 31 | T3 B | 31 |
| D20 | 32 | J11 | 31 | T4 A | 31 |
| D21 | 32 | J16 A | 31 | U1 | 31 |
| D22 | 32 | J17 B | 31 | W6 | 31 |
| E6 | 26 (1MZ–FE) | J32 | 31 | | |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | | |
| 2F | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IF1 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IF2 | | |
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BO1 | 44 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | 44 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

### : GROUND POINTS

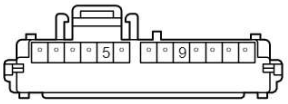
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| | 38 (5S–FE) | |
| IE | 40 | Cowl Side Panel LH |
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |
| IH | 40 | Instrument Panel Brace RH |
| IJ | 40 | Right Kick Panel |
| IK | | |
| BL | 44 | Under the Left Center Pillar |
| BN | 44 | Under the Right Center Pillar |
| BP | 44 | Back Panel Center |

### : SPLICE POINTS

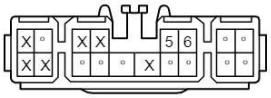
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | B6 | 44 | Floor No.2 Wire |
| | 38 (5S–FE) | | | | |

## THEFT DETERRENT (TMC MADE)

**C10**
BROWN




**D6**
GRAY




**D7**
BLACK




**D10**
BLACK




**D12**




**D13**



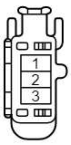

**D14**



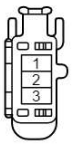

**D15**




**D16**




**D17**




**D19**
BLACK




**D20**
BLACK




**D21**
BLACK



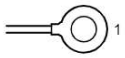

**D22**
BLACK




**E6**
BLACK



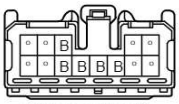

**F4 (A)**




**F9 (F)**
ORANGE

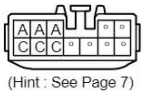



**J1**



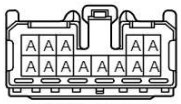

(Hint : See Page 7)

**J2**
BLACK



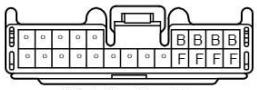

(Hint : See Page 7)

**J5**
ORANGE




(Hint : See Page 7)

**J6**



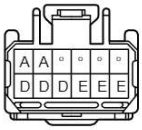

(Hint : See Page 7)

**J9 (A)**
BLACK



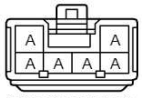

(Hint : See Page 7)

**J10 (B)**
BLACK



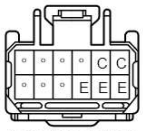

(Hint : See Page 7)

**J11**



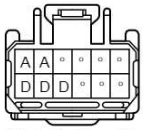

(Hint : See Page 7)

**J16 (A)**
BLACK



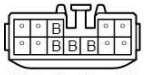

(Hint : See Page 7)

**J17 (B)**
BLACK



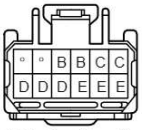

(Hint : See Page 7)

**J32**
GRAY



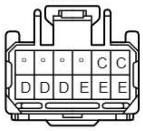

(Hint : See Page 7)

**J33 (A)**
BLACK



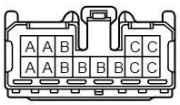

(Hint : See Page 7)

**J34 (B)**
BLACK




(Hint : See Page 7)

**J37**




(Hint : See Page 7)

**J38**



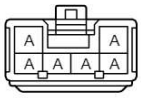

(Hint : See Page 7)

**J39**




(Hint : See Page 7)

**J40**




(Hint : See Page 7)

**L4**




**L6**
GRAY



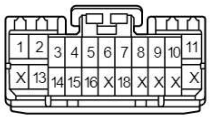

**T1**
BLACK




**T3 (B)**



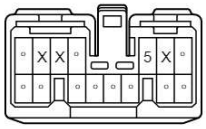

**T4 (A)**



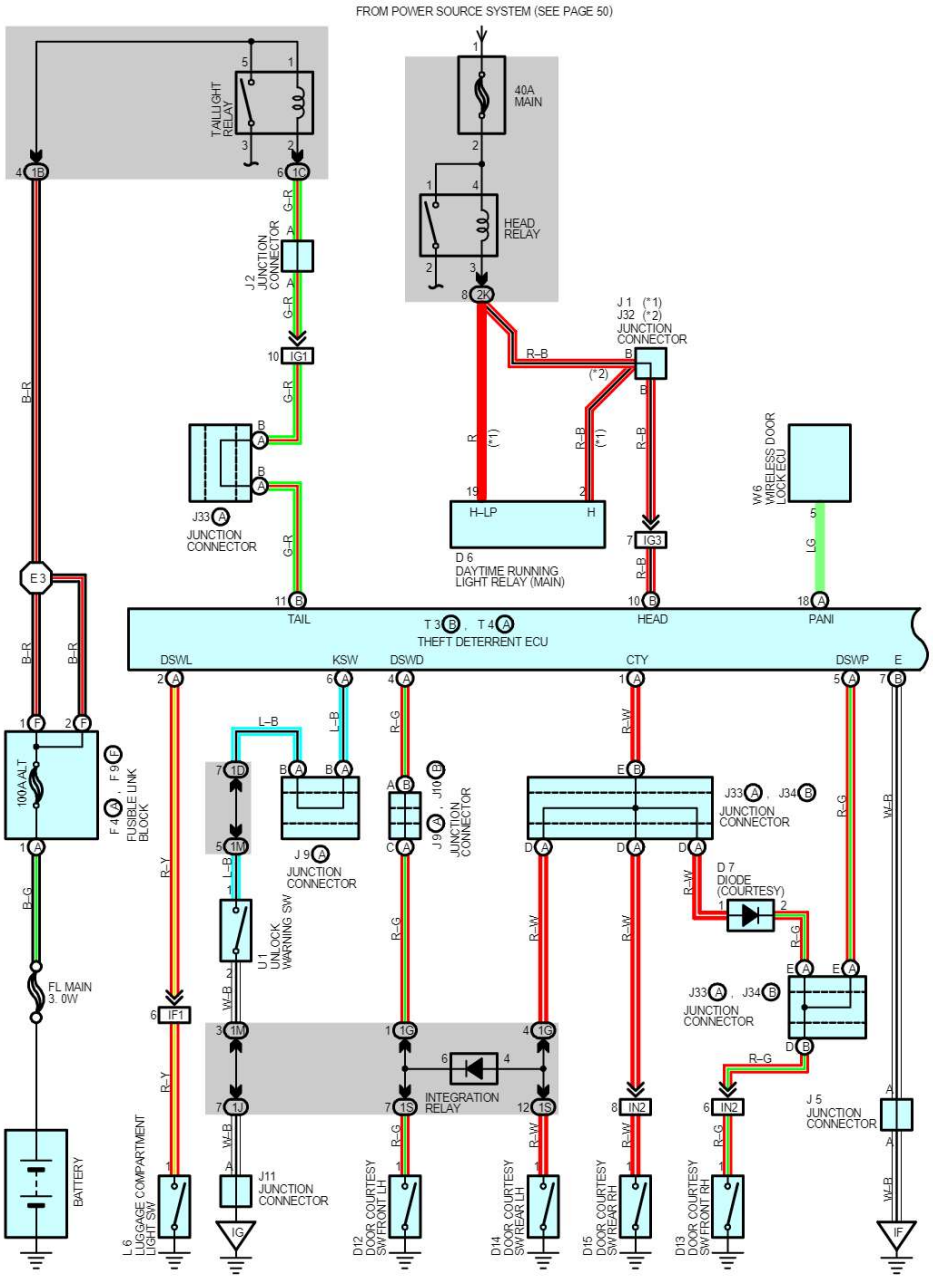

**U1**

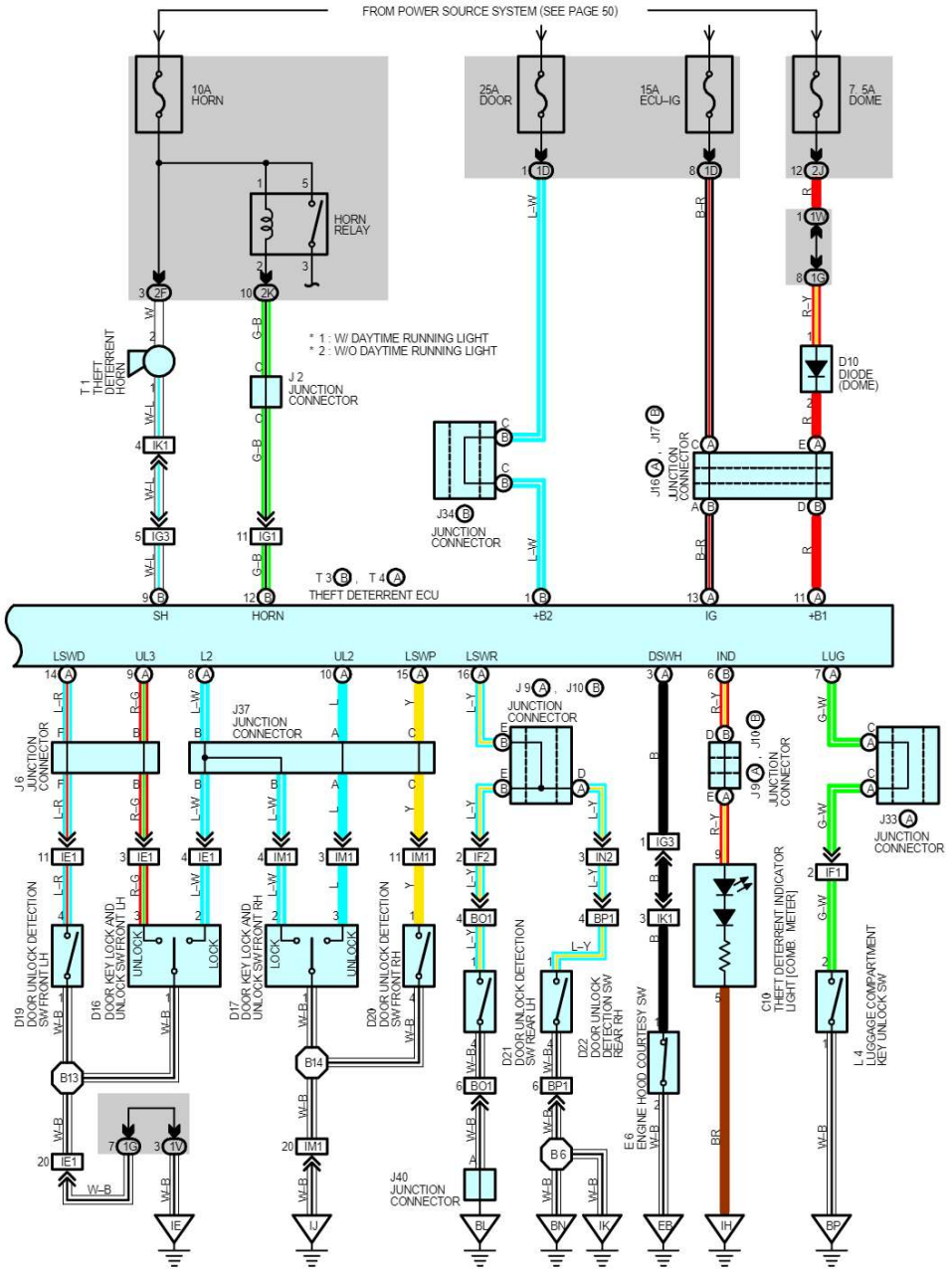



**W6**
BLUE



# THEFT DETERRENT (TMMK MADE)




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
10A HORN
HORN RELAY
25A DOOR
15A ECU–IG
7.5A DOME
* 1 : W/ DAYTIME RUNNING LIGHT
* 2 : W/O DAYTIME RUNNING LIGHT
T1 THEFT DETERRENT HORN
J2 JUNCTION CONNECTOR
J34 JUNCTION CONNECTOR
J7 JUNCTION CONNECTOR
J16 JUNCTION CONNECTOR
D10 DIODE (DOME)
T3, T4 THEFT DETERRENT ECU
SH
HORN
+B2
IG
+B1
LSWD
UL3
L2
UL2
LSWP
LSWR
DSWH
IND
LUG
J6 JUNCTION CONNECTOR
J37 JUNCTION CONNECTOR
J9, J10 JUNCTION CONNECTOR
J33 JUNCTION CONNECTOR
D19 DOOR UNLOCK DETECTION SW FRONT LH
D16 DOOR KEY LOCK AND UNLOCK SW FRONT LH
D17 DOOR KEY LOCK AND UNLOCK SW FRONT RH
D20 DOOR UNLOCK DETECTION SW FRONT RH
D21 DOOR UNLOCK DETECTION SW REAR LH
D22 DOOR UNLOCK DETECTION SW REAR RH
E6 ENGINE HOOD COURTESY SW
C10 THEFT DETERRENT INDICATOR LIGHT [COMB. METER]
L4 LUGGAGE COMPARTMENT KEY UNLOCK SW
J40 JUNCTION CONNECTOR
B13
B14
B6

# THEFT DETERRENT (TMMK MADE)

**SERVICE HINTS**

**D16, D17 DOOR KEY LOCK AND UNLOCK SW FRONT LH, RH**

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

**E6 ENGINE HOOD COURTESY SW**

2–1 : Open with engine hood open

**U1 UNLOCK WARNING SW**

2–1 : Closed with ignition key in cylinder

**L4 LUGGAGE COMPARTMENT KEY UNLOCK SW**

2–1 : Closed with luggage compartment door lock cylinder unlock

**L6 LUGGAGE COMPARTMENT LIGHT SW**

1–GROUND : Closed with luggage compartment door open

**T3 (B), T4 (A) THEFT DETERRENT ECU**

(A) 6–GROUND : Continuity with ignition key in cylinder
(A)15–GROUND : Continuity with front RH door unlocked
(A)14–GROUND : Continuity with front LH door unlocked
(A) 5–GROUND : Continuity with front RH door open
(A) 4–GROUND : Continuity with front LH door open
(A) 8–GROUND : Continuity with door key lock and unlock SW to **LOCK** position
(B) 7–GROUND : Always continuity
(A) 7–GROUND : Continuity with luggage compartment door unlocked
(A) 1–GROUND : Continuity with each door opened
(A) 3–GROUND : Continuity with engine hood close
(A) 2–GROUND : Continuity with luggage compartment door open
(A)16–GROUND : Continuity with rear door unlocked
(A) 9, (A) 10–GROUND : Continuity with door key lock and unlock SW to **UNLOCK** position
(B) 1, (B) 12, (B) 11, (B) 10, (A) 11–GROUND : Always approx. **12** volts

○ : **PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C10 | 30 | E6 | 26 (1MZ–FE) | J17 B | 31 |
| D6 | 30 | E6 | 28 (5S–FE) | J32 | 31 |
| D7 | 30 | F4 A | 26 (1MZ–FE) | J33 A | 31 |
| D10 | 30 | F4 A | 28 (5S–FE) | J34 B | 31 |
| D12 | 32 | F9 F | 26 (1MZ–FE) | J37 | 31 |
| D13 | 32 | F9 F | 28 (5S–FE) | J40 | 32 |
| D14 | 32 | J1 | 31 | L4 | 32 |
| D15 | 32 | J2 | 31 | L6 | 32 |
| D16 | 32 | J5 | 31 | T1 | 27 (1MZ–FE) |
| D17 | 32 | J6 | 31 | T1 | 29 (5S–FE) |
| D19 | 32 | J9 A | 31 | T3 B | 31 |
| D20 | 32 | J10 B | 31 | T4 A | 31 |
| D21 | 32 | J11 | 31 | U1 | 31 |
| D22 | 32 | J16 A | 31 | W6 | 31 |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1B | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1C | | |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | | |
| 2F | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IF1 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IF2 | | |
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BO1 | 44 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | 44 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |

### : GROUND POINTS

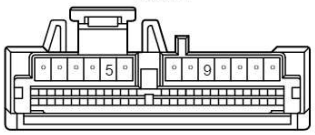
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| | 38 (5S–FE) | |
| IE | 40 | Cowl Side Panel LH |
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |
| IH | 40 | Instrument Panel Brace RH |
| IJ | 40 | Right Kick Panel |
| IK | | |
| BL | 44 | Under the Left Center Pillar |
| BN | 44 | Under the Right Center Pillar |
| BP | 44 | Back Panel Center |

### : SPLICE POINTS

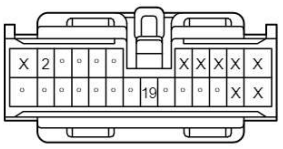
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE) | Cowl Wire | B13 | 44 | Front Door LH Wire |
| | 38 (5S–FE) | | B14 | 44 | Front Door RH Wire |
| B6 | 44 | Floor No.2 Wire | | | |

## THEFT DETERRENT (TMMK MADE)

**C10**
BROWN




**D6**




**D7**
BLACK




**D10**
BLACK




**D12**




**D13**



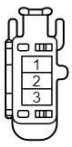

**D14**



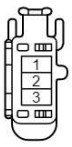

**D15**




**D16**




**D17**




**D19**
BLACK




**D20**
BLACK




**D21**
BLACK



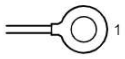

**D22**
BLACK




**E6**
BLACK



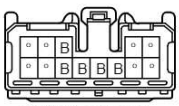

**F4 (A)**




**F9 (F)**
ORANGE




**J1**



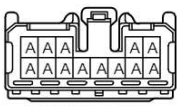

(Hint : See Page 7)

**J2**
BLACK



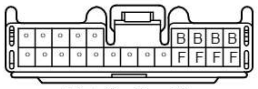

(Hint : See Page 7)

**J5**
ORANGE



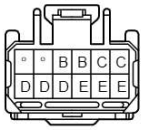

(Hint : See Page 7)

**J6**



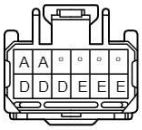

(Hint : See Page 7)

**J9 (A)**
BLACK



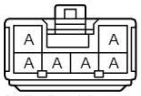

(Hint : See Page 7)

**J10 (B)**
BLACK



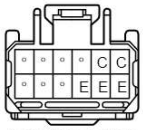

(Hint : See Page 7)

**J11**



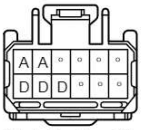

(Hint : See Page 7)

**J16 (A)**
BLACK



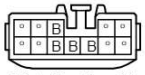

(Hint : See Page 7)

**J17 (B)**
BLACK



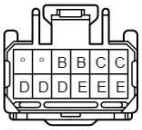

(Hint : See Page 7)

**J32**
GRAY



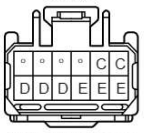

(Hint : See Page 7)

**J33 (A)**
BLACK



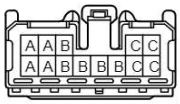

(Hint : See Page 7)

**J34 (B)**
BLACK



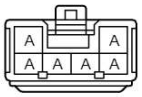

(Hint : See Page 7)

**J37**




(Hint : See Page 7)

**J40**




(Hint : See Page 7)

**L4**



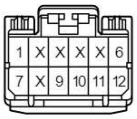

**L6**
GRAY



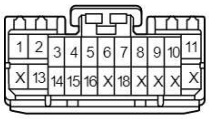

**T1**
BLACK




**T3 (B)**



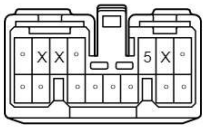

**T4 (A)**



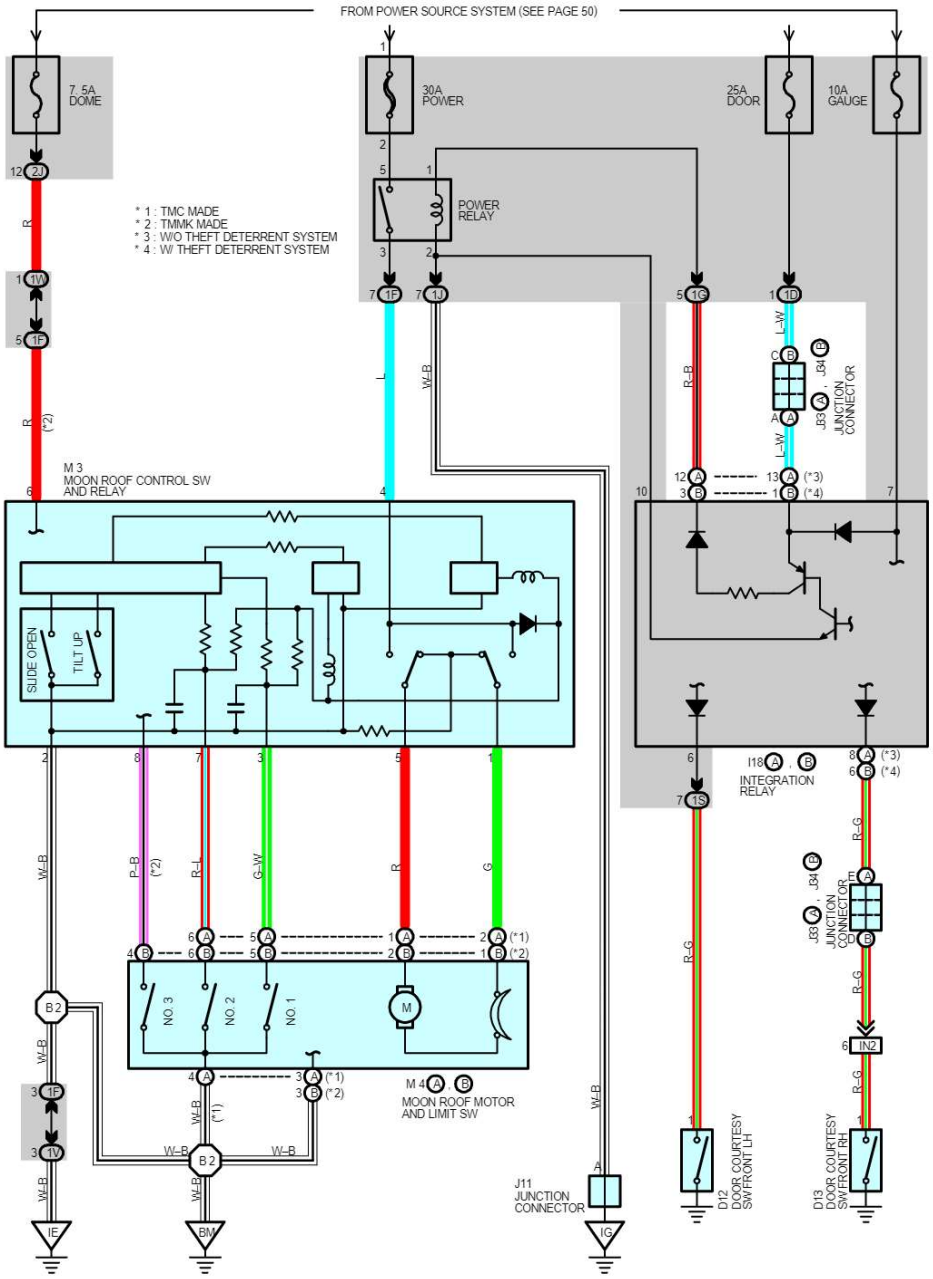

**U1**




**W6**
BLUE



# MOON ROOF


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
7.5A DOME
30A POWER
25A DOOR
10A GAUGE
POWER RELAY
* 1 : TMC MADE
* 2 : TMMK MADE
* 3 : W/O THEFT DETERRENT SYSTEM
* 4 : W/ THEFT DETERRENT SYSTEM
M 3
MOON ROOF CONTROL SW AND RELAY
SLIDE OPEN
TILT UP
NO. 3
NO. 2
NO. 1
M
M 4
MOON ROOF MOTOR AND LIMIT SW
J11 JUNCTION CONNECTOR
J33 , J34 JUNCTION CONNECTOR
I18 INTEGRATION RELAY
IN2
D12 DOOR COURTESY SW FRONT LH
D13 DOOR COURTESY SW FRONT RH
B2
IE
BM
IG

## SYSTEM OUTLINE

Current is applied at all times through the POWER fuse to TERMINAL 5 of the power relay. With the ignition SW turned on, the current flows through the GAUGE fuse to TERMINAL 7 of the integration relay to TERMINAL (A) 12 (w/o theft deterrent system), (B) 3 (w/ theft deterrent system) to TERMINAL 1 of the power relay to TERMINAL 2 to GROUND, as a result, power relay is activated and the current to TERMINAL 5 of the power relay flows from TERMINAL 3 of the power relay to TERMINAL 4 of the moon roof control relay.

**1. SLIDE OPEN OPERATION**

Only when the slide open switch is valid and actuated the moon roof motor continually will operate towards the open direction of the roof panel.
Releasing and again depressing the open switch, or depressing another operation switch shall cancel this express open function. The relay shall only operate the moon roof motor continually for approx. 20 seconds per actuation.

**2. SLIDE CLOSE OPERATION**

Only when the tilt up switch is valid and actuated the moon roof motor will operate towards the close direction of the roof panel.
When the moon roof reaches about 120 mm short of the fully closed position, the limit switch No.2 is turned from on to off. Thereby signaling the moon roof control relay to stop the motor. The motor can not continue to operate until the close switch is released and again depressed.

**3. TILT UP OPERATION**

Only when the tilt up switch is valid and actuated the moon roof motor will operate towards the closed direction of the roof panel.

**4. TILT DOWN OPERATION**

Only when the slide open switch is valid and actuated the moon roof motor will operate towards the open direction of the roof panel.

**5. KEY OFF MOON ROOF OPERATION**

With the ignition SW turned from on to off, the integration relay operates and current flows from the DOOR fuse to TERMINAL (A) 13 (w/o theft deterrent system), (B) 1 (w/ theft deterrent system) of the relay to TERMINAL (A) 12 (w/o theft deterrent system), (B) 3 (w/ theft deterrent system) to TERMINAL 1 of the power relay to TERMINAL 2 to GROUND for about 43 seconds. In the same way as normal operation, the current flows from the POWER fuse to TERMINAL 5 of the power relay to TERMINAL 3 to TERMINAL 4 of the moon roof control relay. As a result, for about 43 seconds after the ignition SW is turned off, the functioning of this relay makes it possible to open and close the moon roof. Also, by opening the front door (Door courtesy SW on) within about 43 seconds after turning the ignition SW to off, a signal is input to TERMINALS 6 or (A) 8 (w/o theft deterrent system), (B) 6 (w/ theft deterrent system) of the integration relay. As a result, the relay turns off and open close movement of the moon roof stops.

## SERVICE HINTS

**POWER RELAY [INSTRUMENT PANEL J/B]**

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

**M3 MOON ROOF CONTROL SW AND RELAY**

2–GROUND : Always continuity
4–GROUND : Approx. **12** volts with the ignition SW at **ON** position or key off moon roof operation

## ○ : PARTS LOCATION

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| D12 | | 32 | J11 | | 31 | M4 | A | 33 |
| D13 | | 32 | J33 | A | 31 | | B | 33 |
| I18 | A | 30 | J34 | B | 31 | | | |
| | B | 30 | M3 | | 33 | | | |

# MOON ROOF

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1F | 20 | Roof Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |

## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |
| IG | 40 | Instrument Panel Brace LH |
| BM | 44 | Roof Left |

## : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B2 | 44 | Roof Wire | | | |

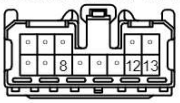
**D12**



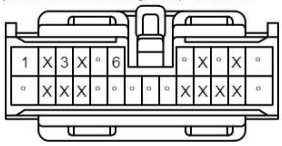

**D13**



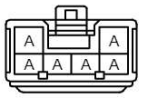

**I18 (A)**
(w/o Theft Deterrent System) ORANGE




**I18 (B)**
(w/ Theft Deterrent System) ORANGE




**J11**



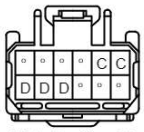

(Hint : See Page 7)

**J33 (A)**
BLACK




(Hint : See Page 7)

**J34 (B)**
BLACK




(Hint : See Page 7)

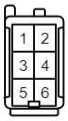
**M3**
(TMC Made)



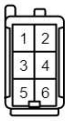

**M3**
(TMMK Made)



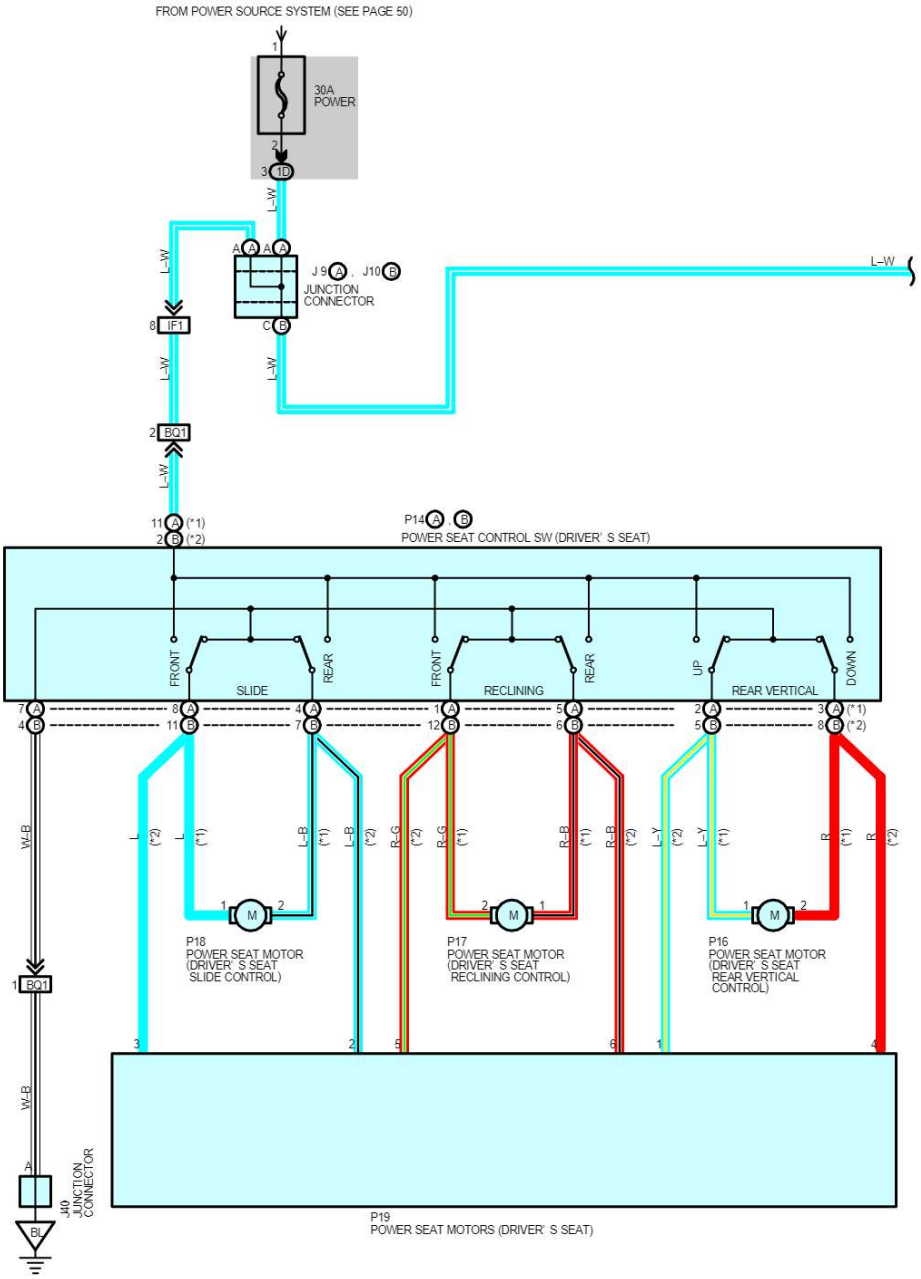

**M4 (A)**
(TMC Made)



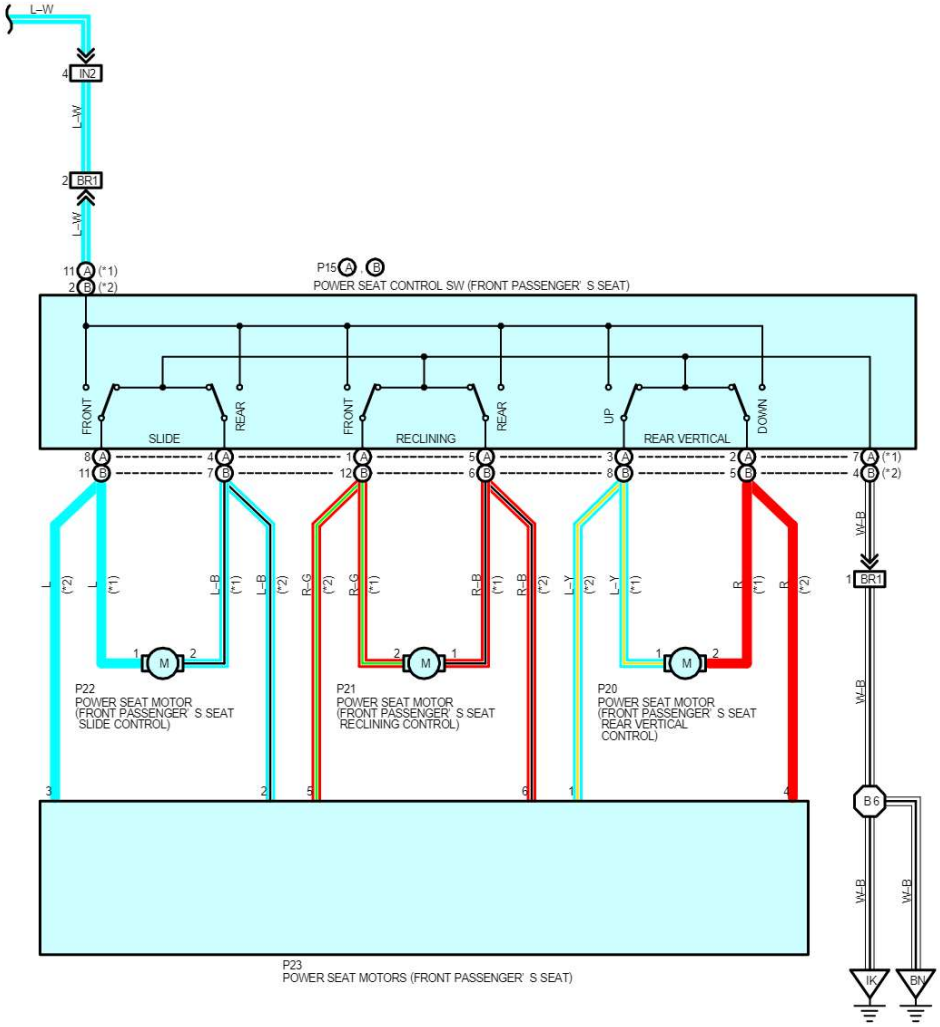

**M4 (B)**
(TMMK Made)



# POWER SEAT


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
30A POWER
3D
L–W
J9 A , J10 B
JUNCTION CONNECTOR
8 IF1
2 BQ1
11 A (*1)
2 B (*2)
P14 A , B
POWER SEAT CONTROL SW (DRIVER' S SEAT)
FRONT
SLIDE
REAR
FRONT
RECLINING
REAR
UP
REAR VERTICAL
DOWN
W–B
P18
POWER SEAT MOTOR (DRIVER' S SEAT SLIDE CONTROL)
P17
POWER SEAT MOTOR (DRIVER' S SEAT RECLINING CONTROL)
P16
POWER SEAT MOTOR (DRIVER' S SEAT REAR VERTICAL CONTROL)
1 BQ1
J40 JUNCTION CONNECTOR
B1
P19
POWER SEAT MOTORS (DRIVER' S SEAT)

* 1 : TMC MADE
* 2 : TMMK MADE



# POWER SEAT

**SERVICE HINTS**

**P14 (A), (B) POWER SEAT CONTROL SW (DRIVER'S SEAT)**

(A) 11, (B) 2–GROUND : Always approx. **12** volts
(A) 7, (B) 4–GROUND : Always continuity

**P15 (A), (B) POWER SEAT CONTROL SW (FRONT PASSENGER'S SEAT)**

(A) 11, (B) 2–GROUND : Always approx. **12** volts
(A) 7, (B) 4–GROUND : Always continuity

**: PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|---|
| J9 | A | 31 | P15 | A | 34 | P19 | 34 |
| J10 | B | 31 | | B | 34 | P20 | 34 |
| J40 | | 32 | P16 | | 34 | P21 | 34 |
| P14 | A | 34 | P17 | | 34 | P22 | 34 |
| | B | 34 | P18 | | 34 | P23 | 34 |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IF1 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IN2 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |
| BQ1 | 46 | Floor Wire and Seat No.1 Wire (Under the Driver's Seat) |
| BR1 | 46 | Floor No.2 Wire and Seat No.2 Wire (Under the Passenger's Seat) |

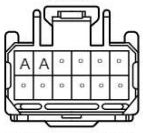
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IK | 40 | Right Kick Panel |
| BL | 44 | Under the Left Center Pillar |
| BN | 44 | Under the Right Center Pillar |

**: SPLICE POINTS**

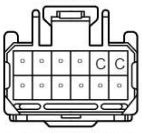
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B6 | 44 | Floor No.2 Wire | | | |

**J9 (A)**
BLACK



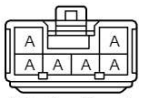

(Hint : See Page 7)

**J10 (B)**
BLACK



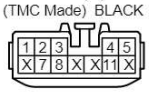

(Hint : See Page 7)

**J40**

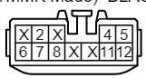



(Hint : See Page 7)

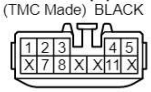
**P14 (A)**
(TMC Made) BLACK



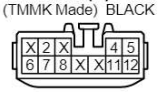

**P14 (B)**
(TMMK Made) BLACK




**P15 (A)**
(TMC Made) BLACK




**P15 (B)**
(TMMK Made) BLACK




**P16**




**P17**




**P18**




**P19**




**P20**




**P21**



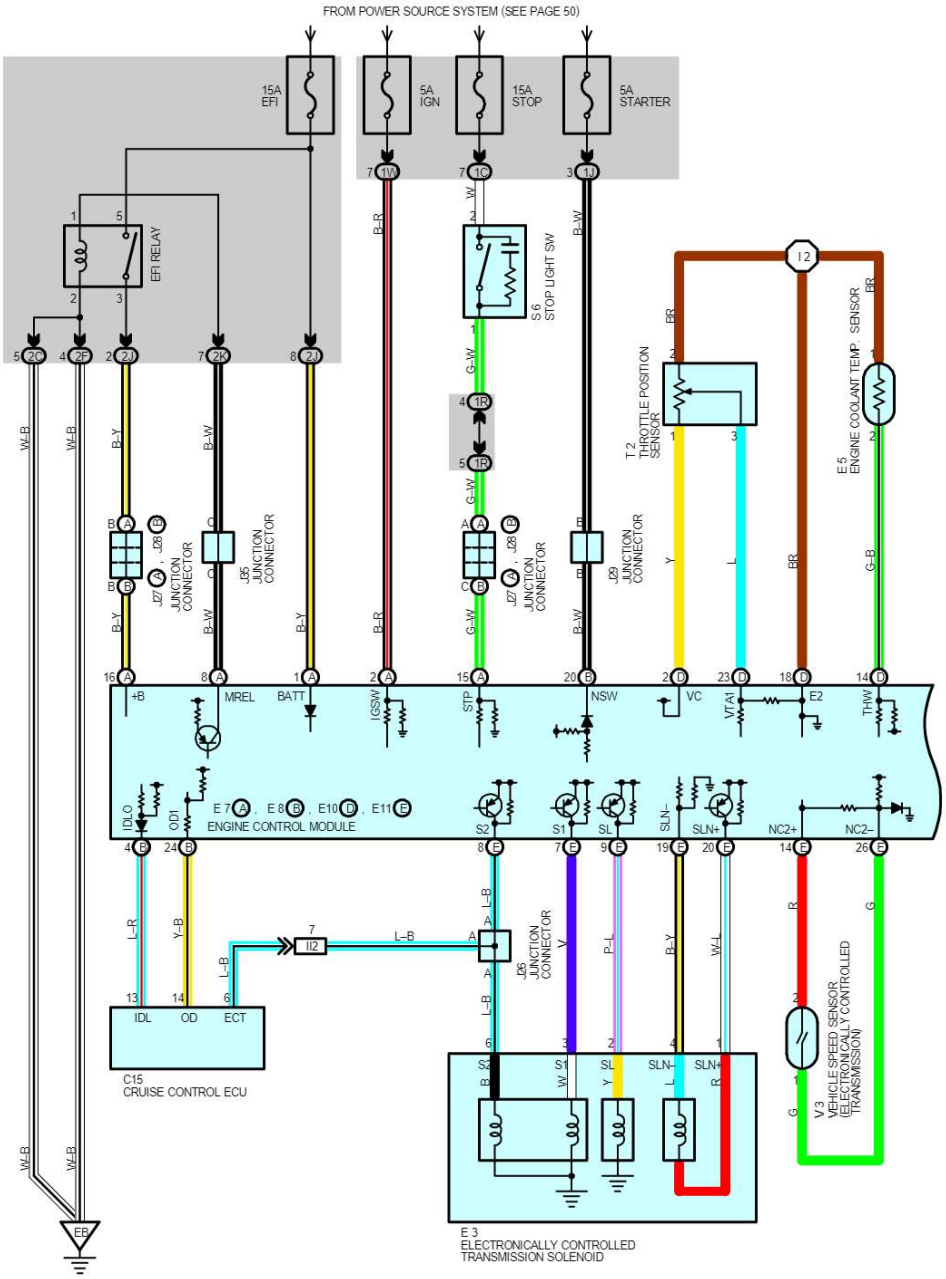

**P22**

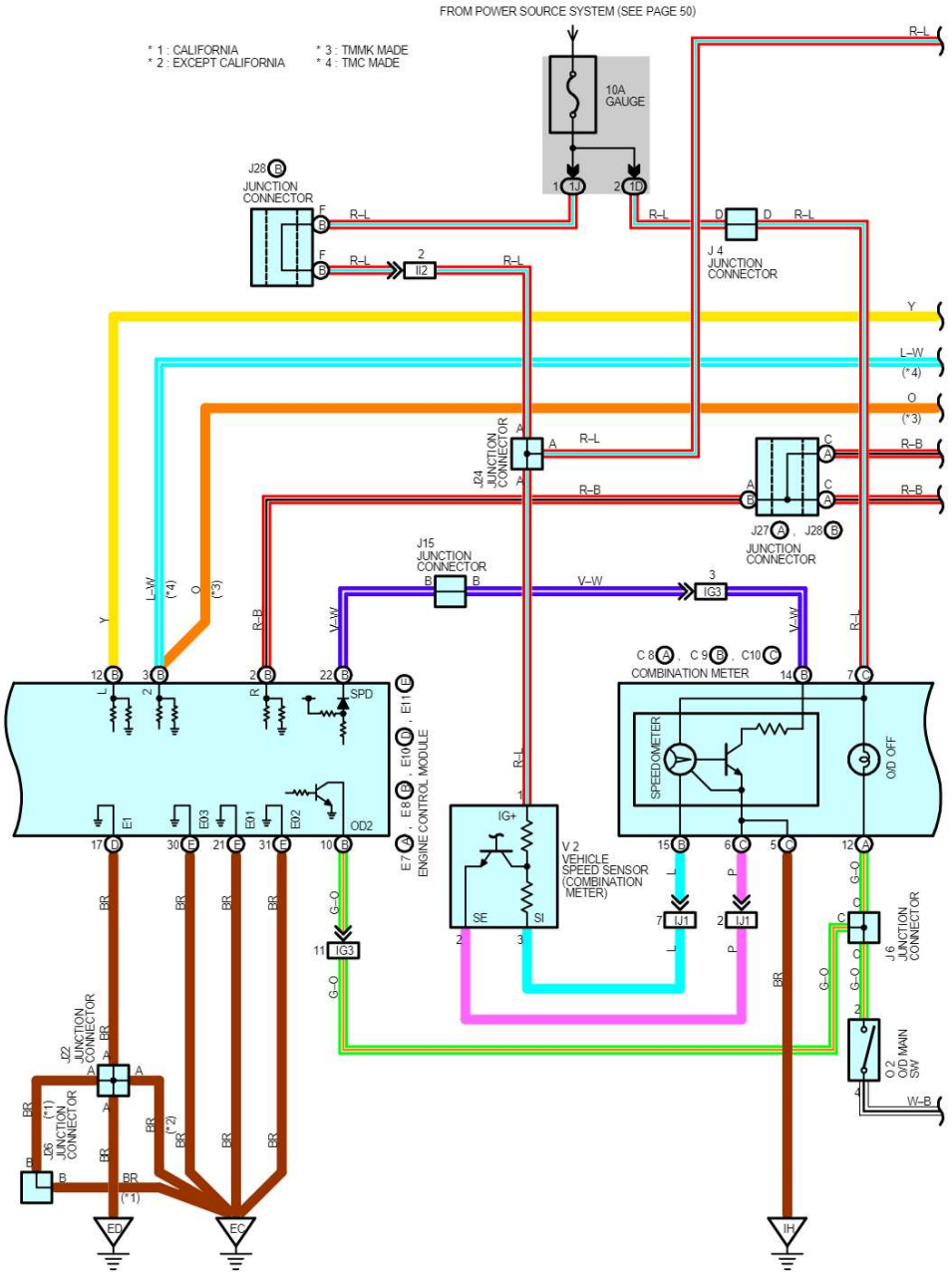



**P23**

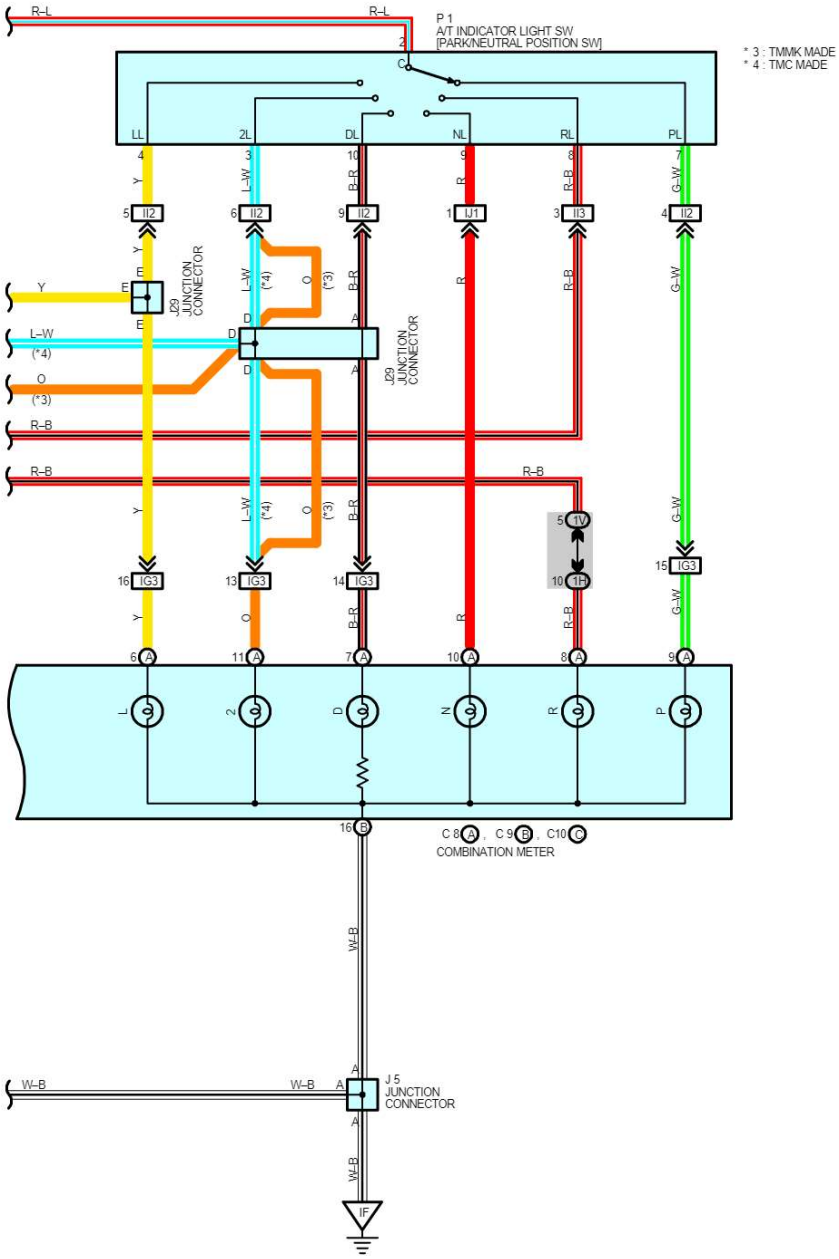


# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
* 1 : CALIFORNIA
* 2 : EXCEPT CALIFORNIA
* 3 : TMMK MADE
* 4 : TMC MADE
10A GAUGE
J28 JUNCTION CONNECTOR
J 4 JUNCTION CONNECTOR
J24 JUNCTION CONNECTOR
J27 , J28 JUNCTION CONNECTOR
J15 JUNCTION CONNECTOR
C 8 , C 9 , C10 COMBINATION METER
SPEEDOMETER
O/D OFF
SPD
OD2
E1
E03
E01
E02
E8 , E10 , E11
E7
ENGINE CONTROL MODULE
IG+
SE
SI
V 2 VEHICLE SPEED SENSOR (COMBINATION METER)
J6 JUNCTION CONNECTOR
O 2 O/D MAIN SW
J2 JUNCTION CONNECTOR
J26 JUNCTION CONNECTOR
ED
EC
IH
R–L
L–W
(*4)
O
(*3)
Y
R–B
V–W
G–O
BR
L
P
W–B

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR



## SYSTEM OUTLINE

Previous automatic transaxle have selected each gear shift using the mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock–up hydraulic pressure. The electronically controlled transmission, however, electrically controls the line pressure and lock–up pressure etc., through the solenoid valve. Engine control module control of the solenoid valve based on the input signals from each sensor makes smooth driving possible by shift selection for each gear which 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 NC2+ of the engine control module from the vehicle speed sensor devoted to the O/D direct clutch. 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 3 of the electronically controlled transmission solenoid to GROUND, and continuity to the No.1 solenoid causes the shift.
For the 2nd speed, current flows from TERMINAL S1 of the engine control module to TERMINAL 3 of the electronically controlled transmission solenoid to GROUND, and from TERMINAL S2 of the engine control module to TERMINAL 6 of the electronically controlled transmission solenoid to GROUND, and continuity to solenoids No.1 and No.2 causes the shift.
For the 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 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 2 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

* Overdrive on
  When the O/D main SW is turned on (O/D off indicator light turns off), a signal is input to TERMINAL OD2 of the engine control module and engine control module operation causes gear shift when the conditions for overdrive are met.
* Overdrive off
  When the O/D main SW is turned to off (O/D off indicator light turns on), the current flowing through the O/D off indicator light flows through the O/D main SW to GROUND. Causing the indicator light to light up. At the same time, a signal is input to TERMINAL OD2 of the engine control module and engine control module operation prevents shift into overdrive.

## SERVICE HINTS

**E7 (A), E8 (B), E10 (D), E11 (E) ENGINE CONTROL MODULE (TURN ON THE IGNITION SW)**

S1, S2–E1 : **9.0**–**14.0** volts with the solenoid on
**0**–**1.5** volts with the solenoid off
L–E1 : **7.5**–**14.0** volts with the shift lever at **L** position
2–E1 : **7.5**–**14.0** volts with the shift lever at **2** position
R–E1 : **7.5**–**14.0** volts with the shift lever at **R** position
STP–E1 : **7.5**–**14.0** volts with the brake pedal depressed
THW–E2 : **0.2**–**1.0** volts with the engine coolant temp. **80**°C (**176**°F)
VAT1–E2 : **0.3**–**0.8** volts with the throttle valve fully closed
**3.2**–**4.9** volts with the throttle valve fully opened
VC–E2 : **4.5**–**5.5** volts
OD2–E1 : **9.0**–**14.0** volts with the O/D main SW turned off
**0**–**3.0** volts with the O/D main SW turned on
+B–E1 : **9.0**–**14.0** volts
OD1–E1 : **9.0**–**14.0** volts

**E3 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID**

2, 3, 6–GROUND : Each **11**–**15** Ω

**O2 O/D MAIN SW**

2–4 : Closed with the O/D main SW off, open with the O/D main SW on

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C8 A | 30 | E11 E | 30 | J28 B | 31 |
| C9 B | 30 | J4 | 31 | J29 | 31 |
| C10 C | 30 | J5 | 31 | J35 | 31 |
| C15 | 30 | J6 | 31 | O2 | 31 |
| E3 | 26 (1MZ–FE) | J15 | 31 | P1 | 27 (1MZ–FE) |
| E5 | 26 (1MZ–FE) | J22 | 31 | S6 | 31 |
| E7 A | 30 | J24 | 31 | T2 | 27 (1MZ–FE) |
| E8 B | 30 | J26 | 31 | V2 | 27 (1MZ–FE) |
| E10 D | 30 | J27 A | 31 | V3 | 27 (1MZ–FE) |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |
| 1V | | |
| 1W | | |
| 2C | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2F | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II3 | | |
| IJ1 | 42 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |

## : GROUND POINTS

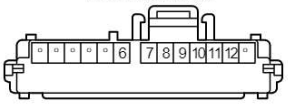
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| EC | 36 (1MZ–FE) | Surge Tank RH |
| ED | 36 (1MZ–FE) | Rear Side of the Surge Tank |
| IF | 40 | Left Kick Panel |
| IH | 40 | Instrument Panel Brace RH |

## : SPLICE POINTS

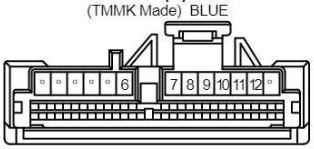
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I2 | 42 | Engine Wire | | | |

## (1MZ–FE)

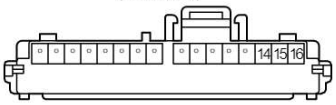
**C8 (A)**
(TMC Made) BLUE



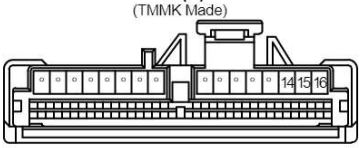

**C8 (A)**
(TMMK Made) BLUE



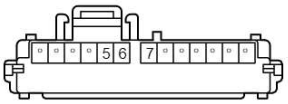

**C9 (B)**
(TMC Made)



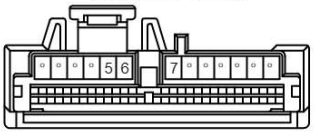

**C9 (B)**
(TMMK Made)



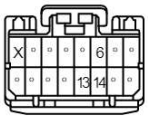

**C10 (C)**
(TMC Made) BROWN




**C10 (C)**
(TMMK Made) BROWN




**C15**



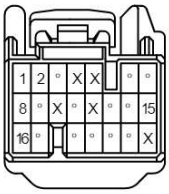

**E3**
GRAY



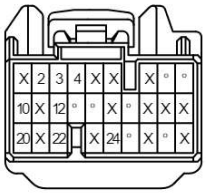

**E5**
DARK GRAY




**E7 (A)**




**E8 (B)**



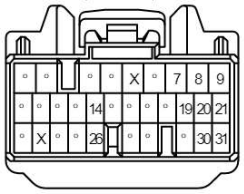

**E10 (D)**
(California)




**E10 (D)**
(Except California) BLACK

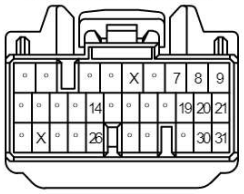



**E11 (E)**
(California)

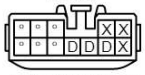


# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (1MZ–FE)

**E11 (E)**
(Except California) BLACK

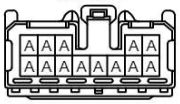



**J4**
BLACK




(Hint : See Page 7)

**J5**
ORANGE



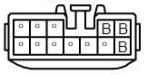

(Hint : See Page 7)

**J6**




(Hint : See Page 7)

**J15**
BLACK



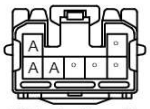

(Hint : See Page 7)

**J22**



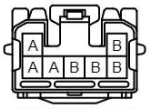

(Hint : See Page 7)

**J24**




(Hint : See Page 7)

**J26**




(Hint : See Page 7)

**J27 (A)**




(Hint : See Page 7)

**J28 (B)**



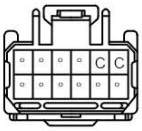

(Hint : See Page 7)

**J29**



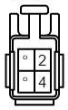

(Hint : See Page 7)

**J35**

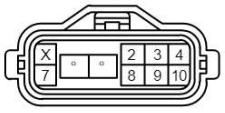



(Hint : See Page 7)

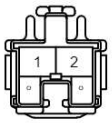
**O2**
BLUE




**P1**
GRAY




**S6**
BLUE




**T2**
BLACK



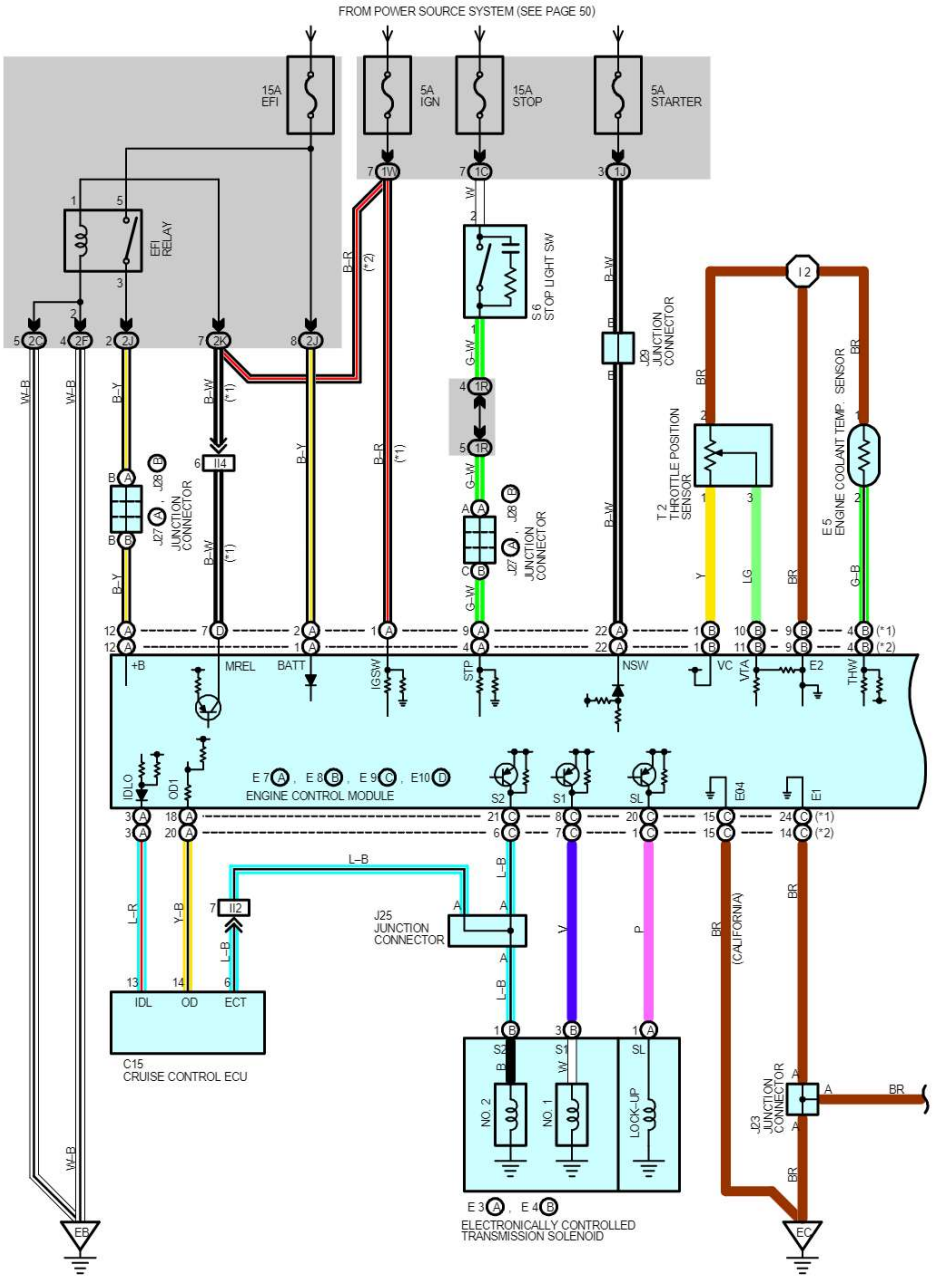

**V2**
BLACK

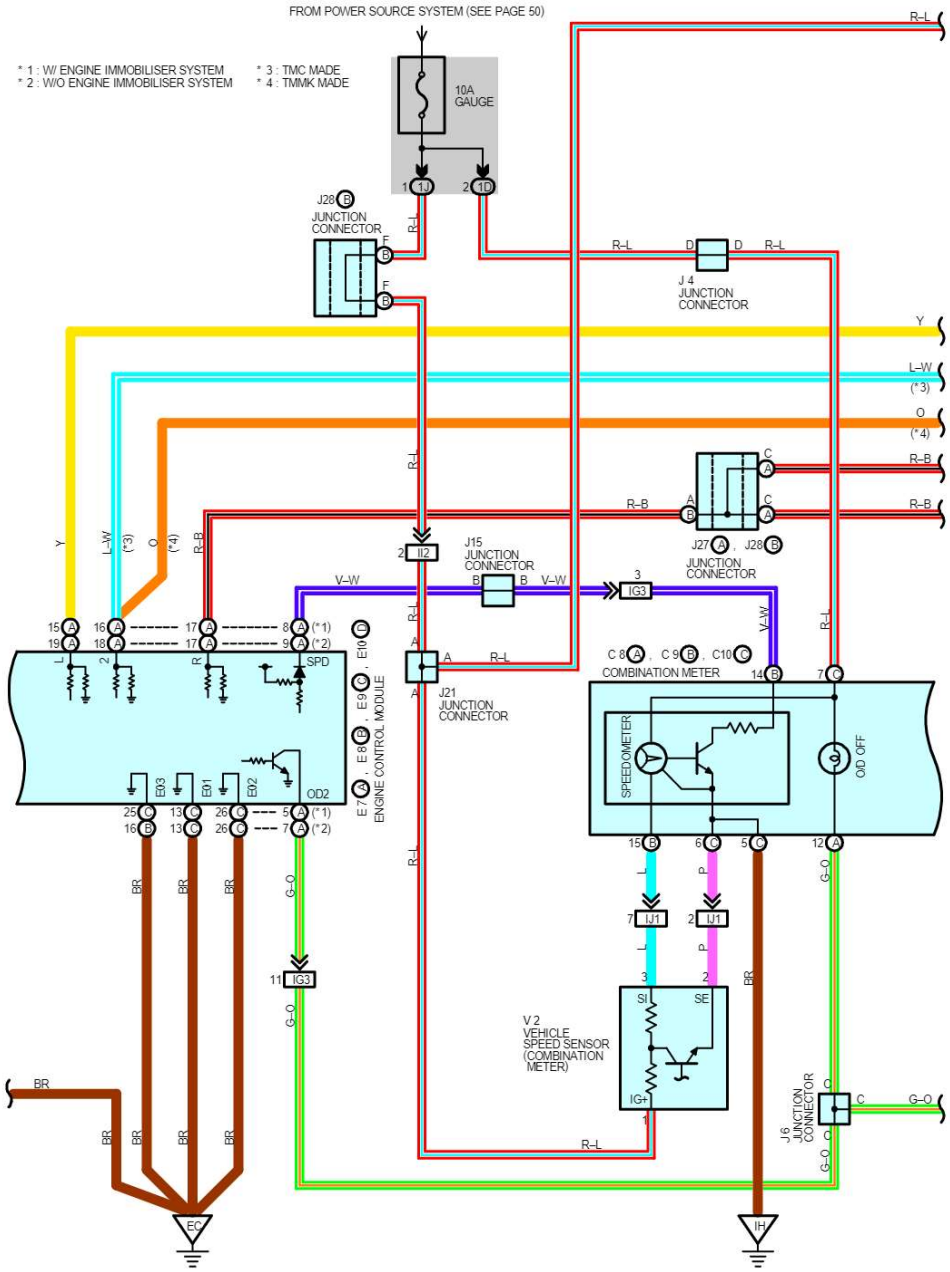



**V3**
BLACK

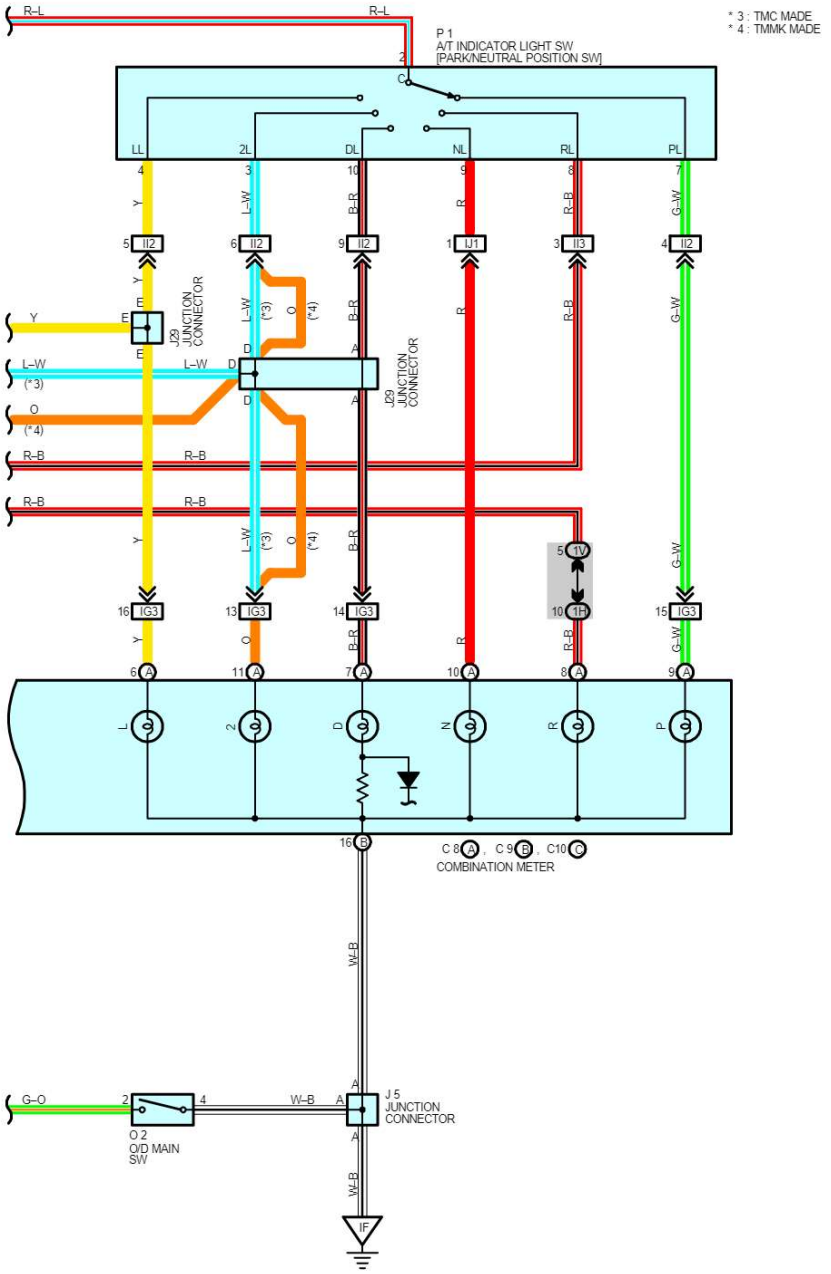


# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
* 1 : W/ ENGINE IMMOBILISER SYSTEM
* 2 : W/O ENGINE IMMOBILISER SYSTEM
* 3 : TMC MADE
* 4 : TMMK MADE
10A GAUGE
J28 JUNCTION CONNECTOR
J 4 JUNCTION CONNECTOR
J15 JUNCTION CONNECTOR
J27 , J28 JUNCTION CONNECTOR
J21 JUNCTION CONNECTOR
C 8 , C 9 , C10 COMBINATION METER
SPEEDOMETER
O/D OFF
SPD
OD2
E03
E01
E02
E7 , E8 , E9 , E10 ENGINE CONTROL MODULE
V 2 VEHICLE SPEED SENSOR (COMBINATION METER)
J6 JUNCTION CONNECTOR
IG3
IJ1
IJ2
SI
SE
IG+
EC
IH
R–L
L–W
(*3)
O
(*4)
R–B
Y
V–W
BR
G–O

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR



**SYSTEM OUTLINE**

Previous automatic transaxle have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock–up hydraulic pressure. The electronically controlled transmission, however, electrically controls the line pressure and lock–up pressure etc., through the solenoid valve. Engine control module controls of the solenoid valve based on the input signals from each sensor which makes smooth driving possible by shift selection for each gear which 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 SPD 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 (B) 3 of the 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 (B) 3 of the solenoid to GROUND, and from TERMINAL S2 of the engine control module to TERMINAL (B) 1 of the solenoid to GROUND, and continuity to solenoids 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 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 (A) 1 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 (O/D off indicator light turns off), a signal is input into TERMINAL OD2 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 to off, the current through the O/D off indicator light flows through the O/D main SW to GROUND, causing the indicator light to light up. At the same time, a signal is input into TERMINAL OD2 of the engine control module and engine control module operation prevents shift into overdrive.

**SERVICE HINTS**

**E7 (A), E8 (B), E9 (C) ENGINE CONTROL MODULE (TURN ON THE IGNITION SW)**

S1, S2–E1 : **9.0**–**14.0** volts with the solenoid on
**0**–**1.5** volts with the solenoid off
L–E1 : **7.5**–**14.0** volts with the shift lever at **L** position
2–E1 : **7.5**–**14.0** volts with the shift lever at **2** position
R–E1 : **7.5**–**14.0** volts with the shift lever at **R** position
STP–E1 : **9.0**–**14.0** volts with the brake pedal depressed
THW–E2 : **0.2**–**1.0** volts with the engine coolant temp. **60**°C (**140**°F) – **120**°C (**248**°F)
VTA–E2 : **0.3**–**0.8** volts with the throttle valve fully closed
**3.2**–**4.9** volts with the throttle valve fully opened
VC–E2 : **4.5**–**5.5** volts
OD2–E1 : **9.0**–**14.0** volts with the O/D main SW turned on
**0**–**3.0** volts with the O/D main SW turned off
+B–E1 : **9.0**–**14.0** volts

**E3 (A), E4 (B) ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID**

(A) 1, (B) 1, (B) 3–GROUND : Each **11**–**15** Ω

**O2 O/D MAIN SW**

2–4 : Closed with the O/D main SW off, open with the O/D main SW on

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

**: PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| C8 | A | 30 | E9 | C | 30 | J27 | A | 31 |
| C9 | B | 30 | E10 | D | 30 | J28 | B | 31 |
| C10 | C | 30 | J4 | | 31 | J29 | | 31 |
| C15 | | 30 | J5 | | 31 | O2 | | 31 |
| E3 | A | 28 (5S–FE) | J6 | | 31 | P1 | | 29 (5S–FE) |
| E4 | B | 28 (5S–FE) | J15 | | 31 | S6 | | 31 |
| E5 | | 28 (5S–FE) | J21 | | 31 | T2 | | 29 (5S–FE) |
| E7 | A | 30 | J23 | | 31 | V2 | | 29 (5S–FE) |
| E8 | B | 30 | J25 | | 31 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |
| 1V | | |
| 1W | | |
| 2C | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2F | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II3 | | |
| II4 | | |
| IJ1 | 42 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |

**: GROUND POINTS**

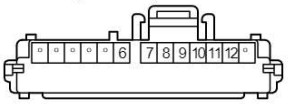
| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 38 (5S–FE) | Left Radiator Side Support |
| EC | 38 (5S–FE) | Intake Manifold |
| IF | 40 | Left Kick Panel |
| IH | 40 | Instrument Panel Brace RH |

**: SPLICE POINTS**

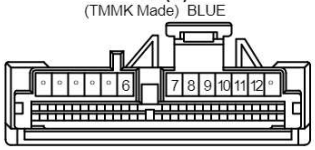
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I2 | 42 | Engine Wire | | | |

* 1 : w/ Engine Immobiliser System
* 2 : w/o Engine Immobiliser System

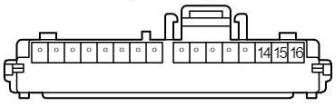
**C8 (A)**
(TMC Made) BLUE



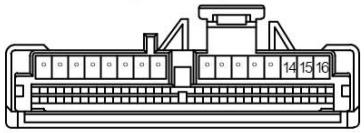

**C8 (A)**
(TMMK Made) BLUE



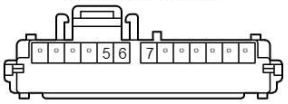

**C9 (B)**
(TMC Made)



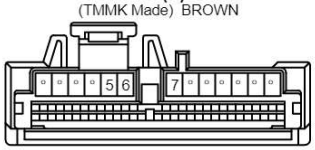

**C9 (B)**
(TMMK Made)



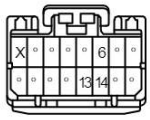

**C10 (C)**
(TMC Made) BROWN




**C10 (C)**
(TMMK Made) BROWN




**C15**




**E3 (A)**
BLACK



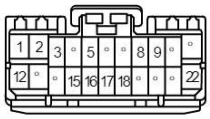

**E4 (B)**
BLACK



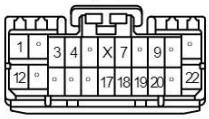

**E5**
GREEN



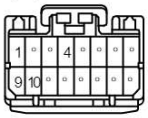

**E7 (A)**
(* 1)



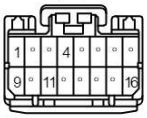

**E7 (A)**
(* 2)



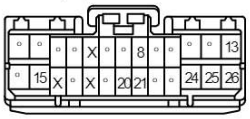

**E8 (B)**
(* 1) DARK GRAY



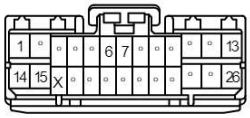

**E8 (B)**
(* 2)




**E9 (C)**
(* 1) DARK GRAY



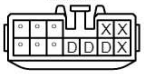

**E9 (C)**
(* 2)




**E10 (D)**
(* 1) DARK GRAY

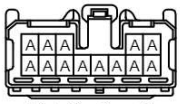



**J4**
BLACK




(Hint : See Page 7)

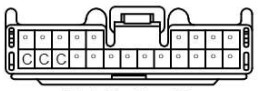
**J5**
ORANGE




(Hint : See Page 7)

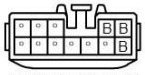
# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (5S–FE)

**J6**



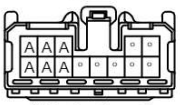

(Hint : See Page 7)

**J15**
BLACK




(Hint : See Page 7)

**J21**
GRAY




(Hint : See Page 7)

**J23**



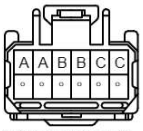

(Hint : See Page 7)

**J25**




(Hint : See Page 7)

**J27 (A)**




(Hint : See Page 7)

**J28 (B)**



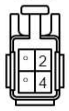

(Hint : See Page 7)

**J29**

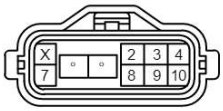



(Hint : See Page 7)

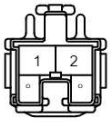
**O2**
BLUE




**P1**
GRAY




**S6**
BLUE



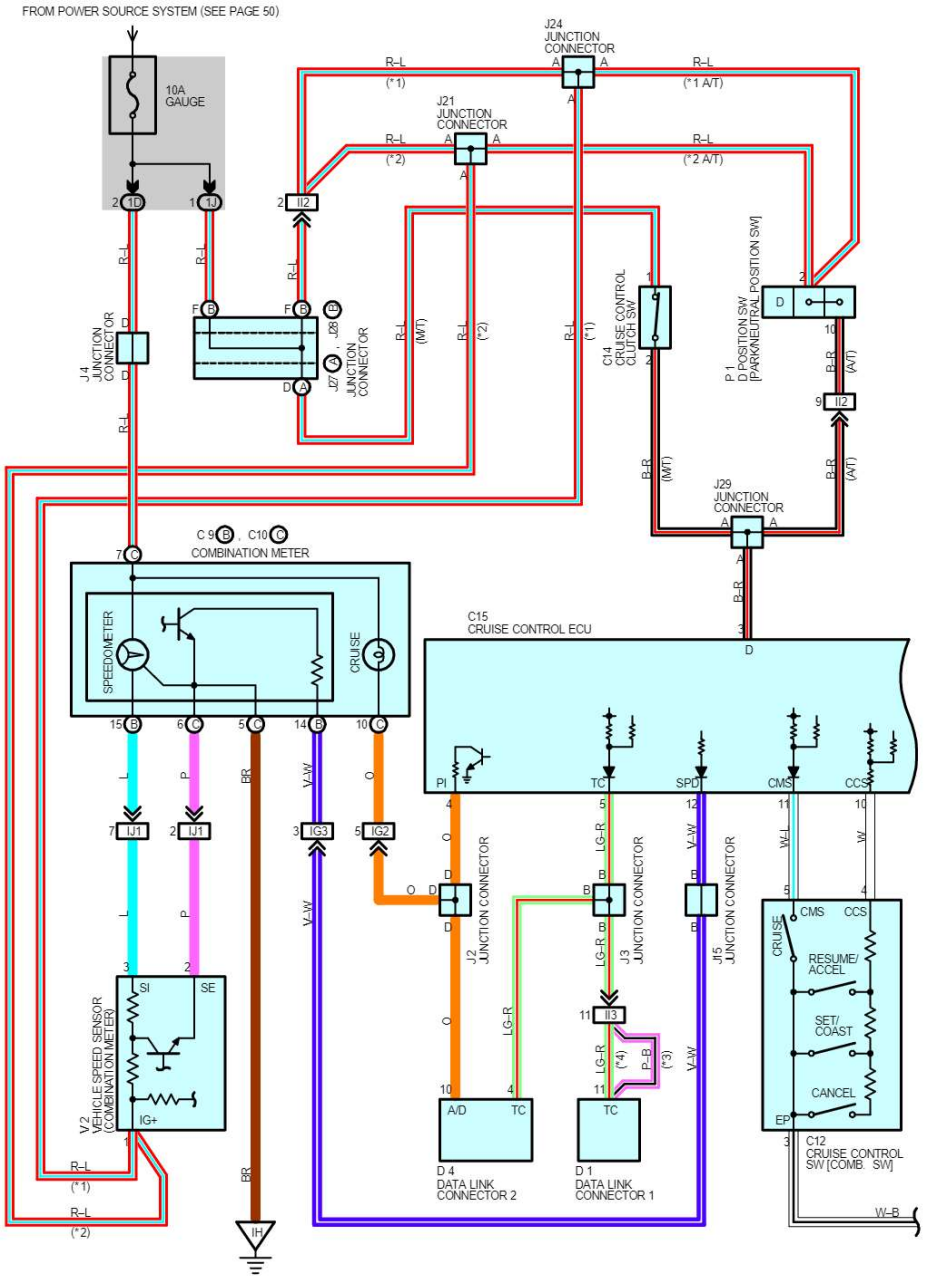

**T2**
BLACK

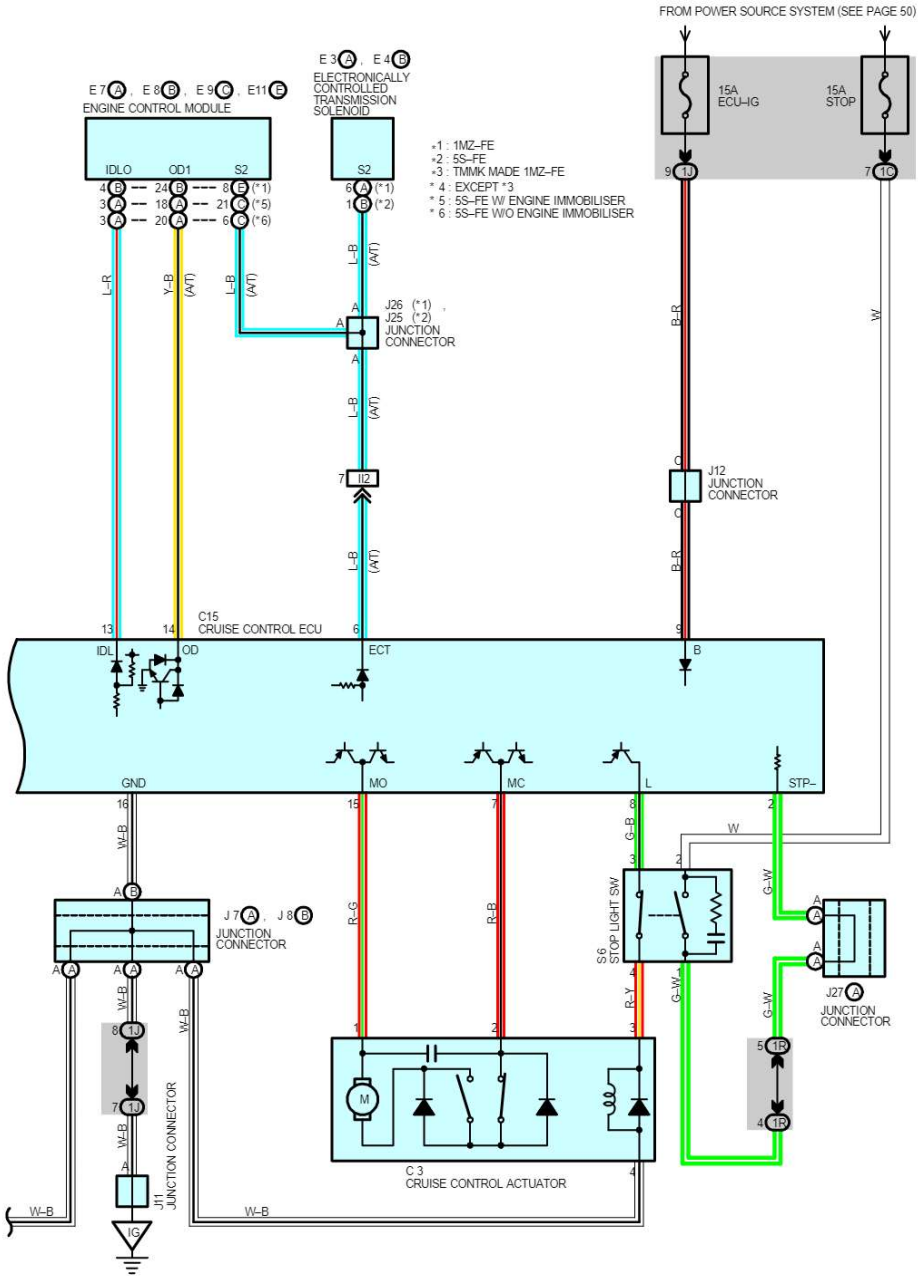



**V2**
BLACK



# CRUISE CONTROL




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
15A ECU–IG
15A STOP
E7 A , E8 B , E9 C , E11 E
ENGINE CONTROL MODULE
IDLO
OD1
S2
E3 A , E4 B
ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID
S2
*1 : 1MZ–FE
*2 : 5S–FE
*3 : TMMK MADE 1MZ–FE
* 4 : EXCEPT *3
* 5 : 5S–FE W/ ENGINE IMMOBILISER
* 6 : 5S–FE W/O ENGINE IMMOBILISER
J26 (*1) , J25 (*2) JUNCTION CONNECTOR
J12 JUNCTION CONNECTOR
C15 CRUISE CONTROL ECU
IDL
OD
ECT
B
GND
MO
MC
L
STP–
J7 A , J8 B JUNCTION CONNECTOR
S6 STOP LIGHT SW
J27 A JUNCTION CONNECTOR
C 3 CRUISE CONTROL ACTUATOR
J11 JUNCTION CONNECTOR
IG
W–B
L–R
Y–B
L–B
R–R
W
G–B
G–W
R–G
R–B
R–Y
(A/T)

# CRUISE CONTROL

## SYSTEM OUTLINE

Current is applied at all times through the STOP fuse to TERMINAL 2 of the stop light SW.
With the ignition SW turned to on, current flows through the GAUGE fuse to TERMINAL (C) 7 of the combination meter and the current through the ECU–IG fuse flows to TERMINAL 9 of the cruise control ECU.
When the ignition SW is on and the cruise control SW is turned on, a signal is input from TERMINAL 5 of the cruise control SW to TERMINAL 11 of the cruise control ECU. As a result, the cruise control ECU functions and the current flows from the ECU–IG fuse to TERMINAL 9 of the cruise control ECU to TERMINAL 16 to GROUND, and the cruise control system is in a condition ready for operation.
At the same time, the current through the GAUGE fuse flows to TERMINAL (C) 7 of the cruise control indicator light to TERMINAL (C) 10 to TERMINAL 4 of the cruise control ECU to TERMINAL 16 to GROUND, causing the cruise control indicator light to light up, indicating that cruise control is ready for operation.

### 1. SET OPERATION

When the cruise control SW is turned on and the set SW is pushed with the vehicle speed within the set limit (Approx. 40 km/h, 25 mph to 200 km/h, 124 mph), a signal is input to TERMINAL 10 of the cruise control ECU and the vehicle speed at the time the set SW is released is memorized in the ECU as the set speed.

### 2. SET SPEED CONTROL

During cruise control driving, the cruise control ECU compares the set speed memorized in the cruise control ECU with the actual vehicle speed input into TERMINAL 12 of the cruise control ECU from the speed sensor, and controls the cruise control actuator to maintain the set speed.
When the actual speed is lower than the set speed, the ECU causes the current to the cruise control actuator to flow from TERMINAL 15 of the cruise control ECU to TERMINAL 1 of the cruise control actuator to TERMINAL 2 to TERMINAL 7 of the cruise control ECU. As a result, the motor in the cruise control actuator is rotated to open the than the set speed, the current to the cruise control actuator flows from TERMINAL 7 of the cruise control ECU to TERMINAL 2 of the cruise control actuator to TERMINAL 1 to TERMINAL 15 of the cruise control ECU.
This causes the motor in the cruise control actuator to rotate to close the throttle valve and return the throttle cable to decrease the vehicle speed.

### 3. COAST CONTROL

During cruise control driving, while the coast SW is on, the cruise control actuator returns the throttle cable to close the throttle valve and decrease the driving speed. The vehicle speed when the coast SW is turned off is memorized and the vehicle continues at the new set speed.

### 4. ACCEL CONTROL

During cruise control driving, while the accel SW is turned on, the cruise control actuator pulls the throttle cable to open the throttle valve and increase the driving speed.
The vehicle speed when the accel SW is turned off is memorized and the vehicle continues at the new set speed.

### 5. RESUME CONTROL

Unless the vehicle speed falls below the minimum speed limit (Approx. 40km/h, 25mph) after canceling the set speed by the cancel SW, pushing the resume SW will cause the vehicle to resume the speed set before cancellation.

### 6. MANUAL CANCEL MECHANISM

If any of the following operations occurs during cruise control operation, the magnetic clutch of the actuator turns off and the motor rotates to close the throttle valve and the cruise control is released.

- Placing the shift lever except D position (Park/Neutral position SW except D position). "Signal is not input to TERMINAL 3 of the cruise control ECU" (A/T)
- Depressing the clutch pedal (Cruise control clutch SW off). "Signal input to TERMINAL 3 of the cruise control ECU" (M/T)
- Depressing the brake pedal (Stop light SW on). "Signal input to TERMINAL 2 of the cruise control ECU"
- Pushing the cancel switch (Cancel SW on). "Signal input to TERMINAL 10 of the cruise control ECU"
- Pushing the cruise switch off "signal input to TERMINAL 11 of the cruise control ECU".

**7. TAP–UP CONTROL FUNCTION**

When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be increased 1.6 km/h (1 mph) each time by operation the RESUME/ACCEL SW quickly within 0.6 seconds.

**8. TAP–DOWN CONTROL FUNCTION**

When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be lowered 1.6 km/h (1 mph) each time by operating the SET/COAST SW quickly within 0.6 seconds.

**9. AUTO CANCEL FUNCTION**

A) If any of the following operating conditions occurs during cruise control operation, the set speed is erased, the current flow to the magnetic clutch is stopped and the cruise control is released. (Cruise SW turns off).
When this occurs, the ignition SW must be turned off once before the cruise SW will turn on.
- When current continued to flow to the motor inside the actuator in the throttle valve "OPEN" direction.
- The motor does not operate despite the motor drive signal being output.

B) If any of the following operating conditions occurs during cruise control operation, the set speed is erased, the current flow to the magnetic clutch is stopped and the cruise control is released. (Cruise SW turn off).
When this occurs, the cancel state is cleared as the cruise SW will turn on again.
- Over current to transistor driving the motor and/or the magnetic clutch.
- Open circuit in the magnetic clutch.
- Momentary interruption of vehicle speed signal.
- Short circuit in the cruise control SW.
- When the vehicle speed falls more than 16 km/h (10 mph) below the set speed, E.G. on an upward slope.

C) If any of the following conditions occurs during cruise control operation, the set speed is erased and the cruise control is released. (The power to the magnetic clutch is cut off until the set SW is ON again.)
- When the vehicle speed falls below the minimum speed limit, approx. 40 km/h (25 mph).
- When power to the cruise control system is momentarily cut off.

D) If any of the following conditions occurs during cruise control operation, the cruise control is released.
- Open the circuit for TERMINAL 2 of the stop light SW.

**10. AUTOMATIC TRANSAXLE CONTROL FUNCTION**

- In overdrive. If the vehicle speed becomes lower than the overdrive cut speed (Set speed minus approx. 4 km/h, 2.5 mph) during cruise control operation, such as driving up a hill, the overdrive is released and the power increased to prevent a reduction in vehicle speed.
- After releasing the overdrive, vehicle speed becomes higher than the overdrive return speed (Set speed minus approx. 2 km/h, 1.2 mph) and the cruise control ECU judges by the signals from the actuator's potentiometer that the upward slope has finished, the overdrive is resumed after approximately 2 seconds.
- During cruise control driving, the cruise control operation signal is output from the cruise control ECU to the engine control module. Upon receiving this signal, the engine control module changes the shift pattern to normal.
To maintain smooth cruise control operation (on a downward slope etc.), the lock–up release of the transmission when the idling point of the throttle position is ON is forbidden.

**SERVICE HINTS**

**C3 CRUISE CONTROL ACTUATOR**

3–4 : Approx. **38.5** Ω

**C12 CRUISE CONTROL SW [COMB. SW]**

5–3 : Continuity with the CRUISE SW on
4–3 : Approx. **418** Ω with the CANCEL SW on
Approx. **68** Ω with the RESUME/ACCEL SW on
Approx. **198** Ω with the SET/COAST SW on

**C15 CRUISE CONTROL ECU**

9–GROUND : **10**–**14** volts with the ignition SW at **ON** position
12–GROUND : **4** pulses with **1** rotation of rotor shaft
10–GROUND : Approx. **418** Ω with the CANCEL SW on in the cruise control SW
Approx. **198** Ω with the SET/COAST SW on in the cruise control SW
Approx. **68** Ω with the RESUME/ACCEL SW on in the cruise control SW
16–GROUND : Always continuity

# CRUISE CONTROL

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C3 | 26 (1MZ–FE) | E7 A | 30 | J21 | 31 |
| | 28 (5S–FE) | E8 B | 30 | J24 | 31 |
| C9 B | 30 | E9 C | 30 | J25 | 31 |
| C10 C | 30 | E11 E | 30 | J26 | 31 |
| C12 | 30 | J2 | 31 | J27 A | 31 |
| C14 | 30 | J3 | 31 | J28 B | 31 |
| C15 | 30 | J4 | 31 | J29 | 31 |
| D1 | 26 (1MZ–FE) | J7 A | 31 | P1 | 27 (1MZ–FE) |
| | 28 (5S–FE) | J8 B | 31 | | 29 (5S–FE) |
| D4 | 30 | J11 | 31 | S6 | 31 |
| E3 A | 26 (1MZ–FE) | J12 | 31 | V2 | 27 (1MZ–FE) |
| E4 B | 28 (1S–FE) | J15 | 31 | | 29 (5S–FE) |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IG2 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II3 | | |
| IJ1 | 42 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |

## : GROUND POINTS

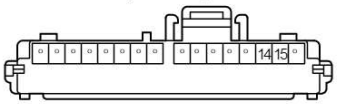
| Code | See Page | Ground Points Location |
|---|---|---|
| IG | 40 | Instrument Panel Brace LH |
| IH | 40 | Instrument Panel Brace RH |

∗ 1 : 5S–FE w/ Engine Immobiliser System
∗ 2 : 5S–FE w/o Engine Immobiliser System

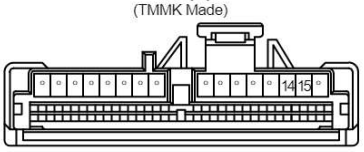
**C3**
BLACK



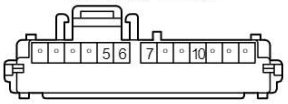

**C9 (B)**
(TMC Made)



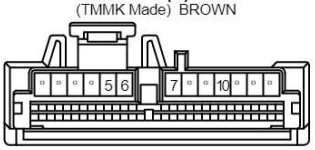

**C9 (B)**
(TMMK Made)



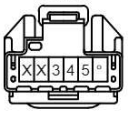

**C10 (C)**
(TMC Made) BROWN




**C10 (C)**
(TMMK Made) BROWN



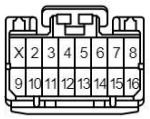

**C12**
BLACK



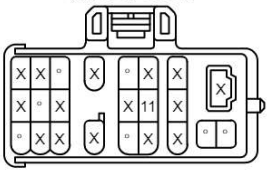

**C14**



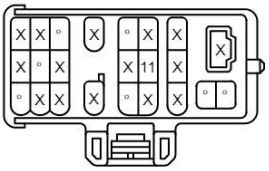

**C15**



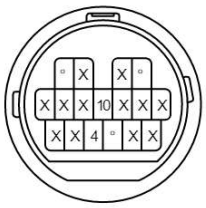

**D1**
(1MZ–FE) BLACK




**D1**
(5S–FE) BLACK




**D4**
DARK GRAY



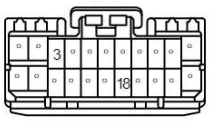

**E3 (A)**
GRAY



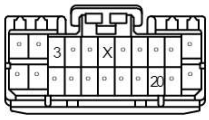

**E4 (B)**
BLACK



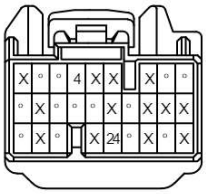

**E7 (A)**
(∗ 1)



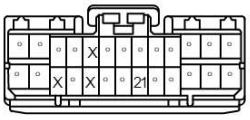

**E7 (A)**
(∗ 2)




**E8 (B)**
(1MZ–FE)

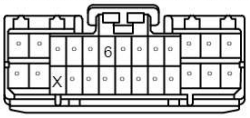



**E9 (C)**
(∗ 1) DARK GRAY

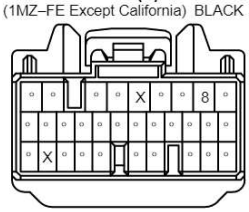


## CRUISE CONTROL

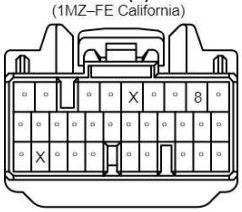
**E9 (C)**
(5S–FE w/o Engine Immobiliser System)



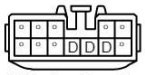

**E11 (E)**
(1MZ–FE Except California) BLACK




**E11 (E)**
(1MZ–FE California)

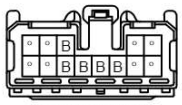



**J2**
BLACK



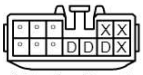

(Hint : See Page 7)

**J3**




(Hint : See Page 7)

**J4**
BLACK



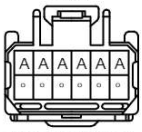

(Hint : See Page 7)

**J7 (A)**
GRAY



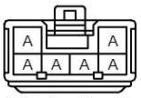

(Hint : See Page 7)

**J8 (B)**
GRAY



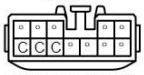

(Hint : See Page 7)

**J11**



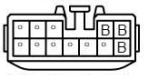

(Hint : See Page 7)

**J12**
BLACK



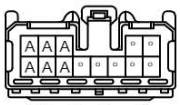

(Hint : See Page 7)

**J15**
BLACK



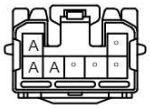

(Hint : See Page 7)

**J21**
GRAY



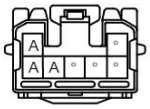

(Hint : See Page 7)

**J24**



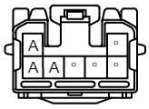

(Hint : See Page 7)

**J25**



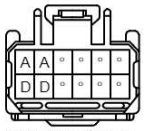

(Hint : See Page 7)

**J26**




(Hint : See Page 7)

**J27 (A)**



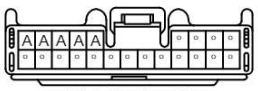

(Hint : See Page 7)

**J28 (B)**




(Hint : See Page 7)

**J29**

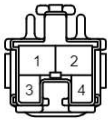



(Hint : See Page 7)

**P1**
GRAY



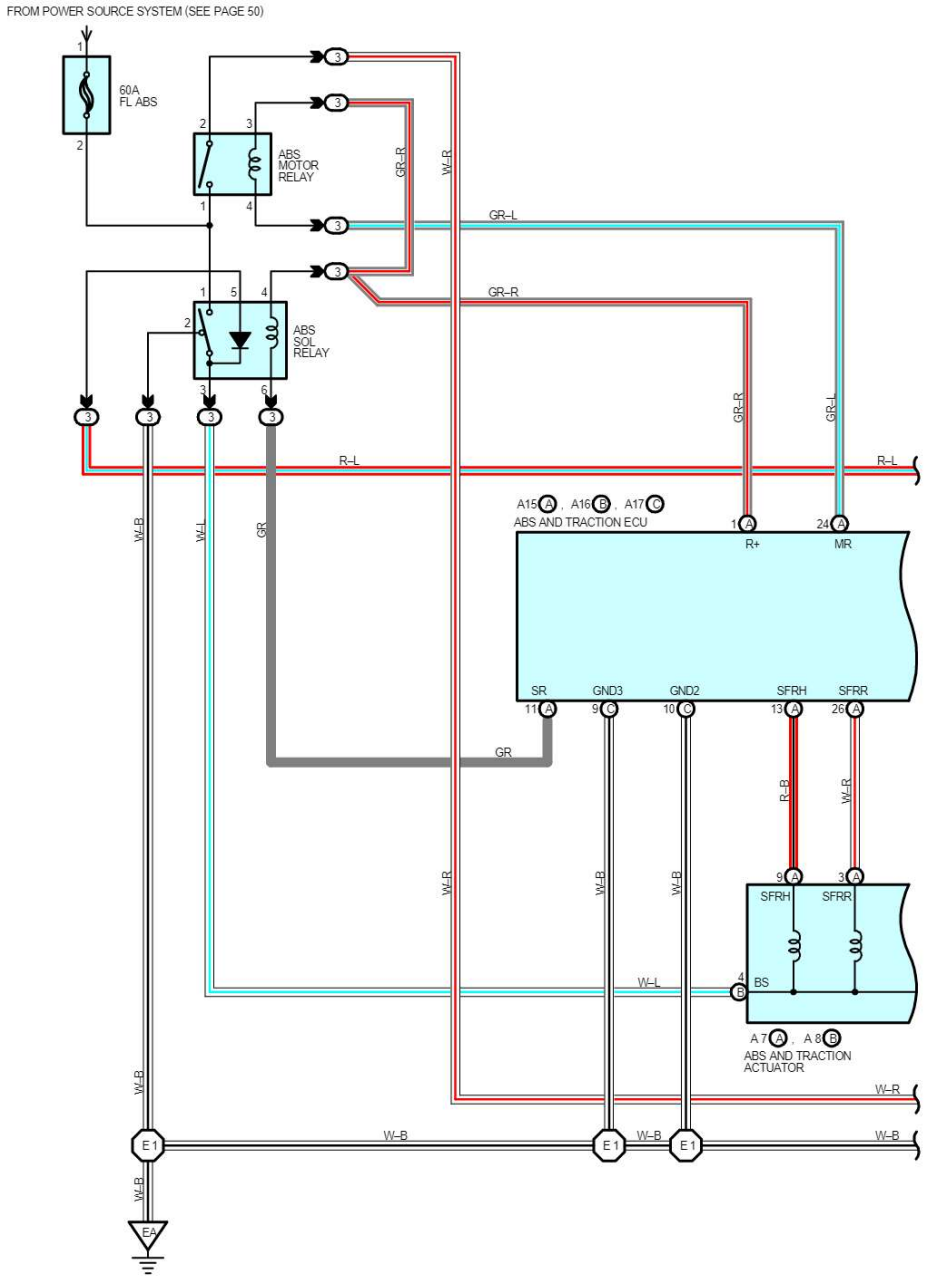

**S6**
BLUE

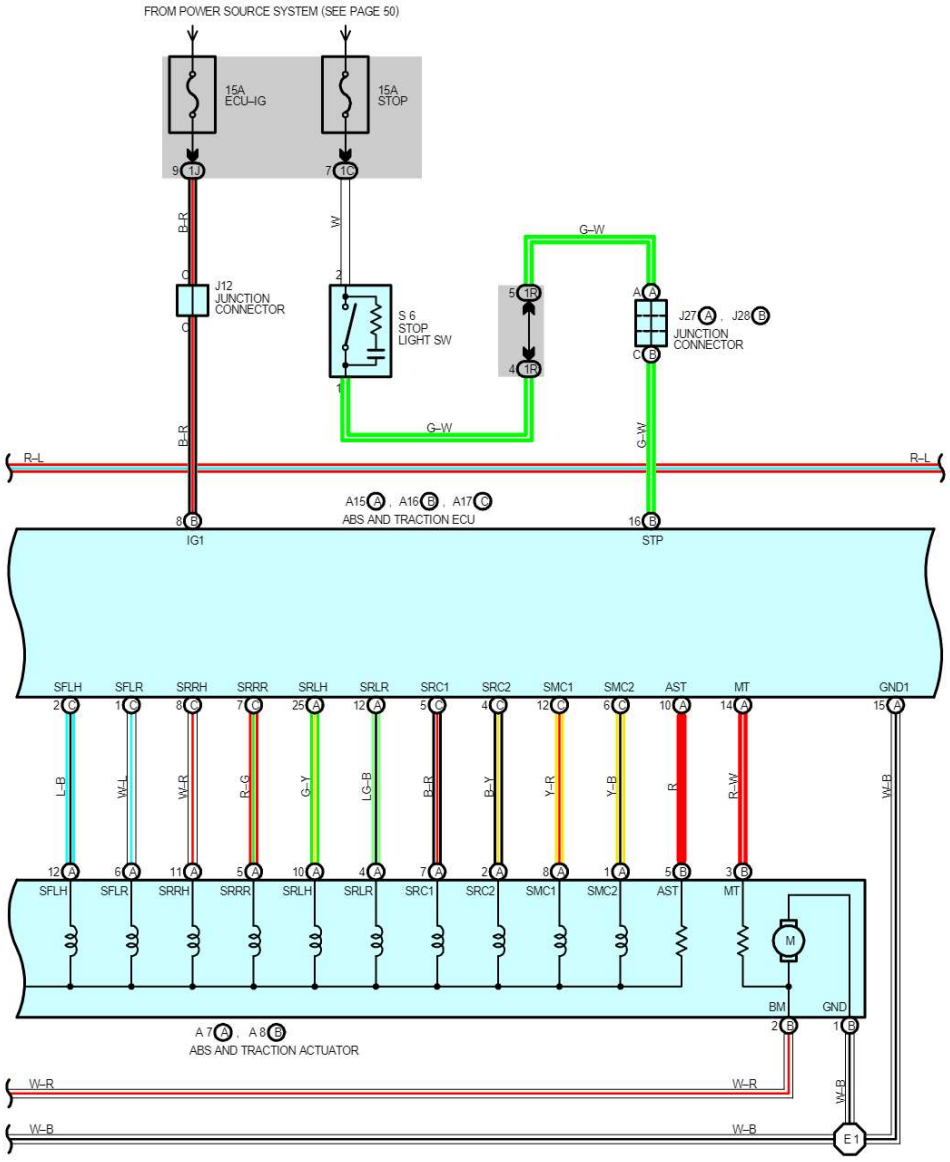



**V2**
BLACK

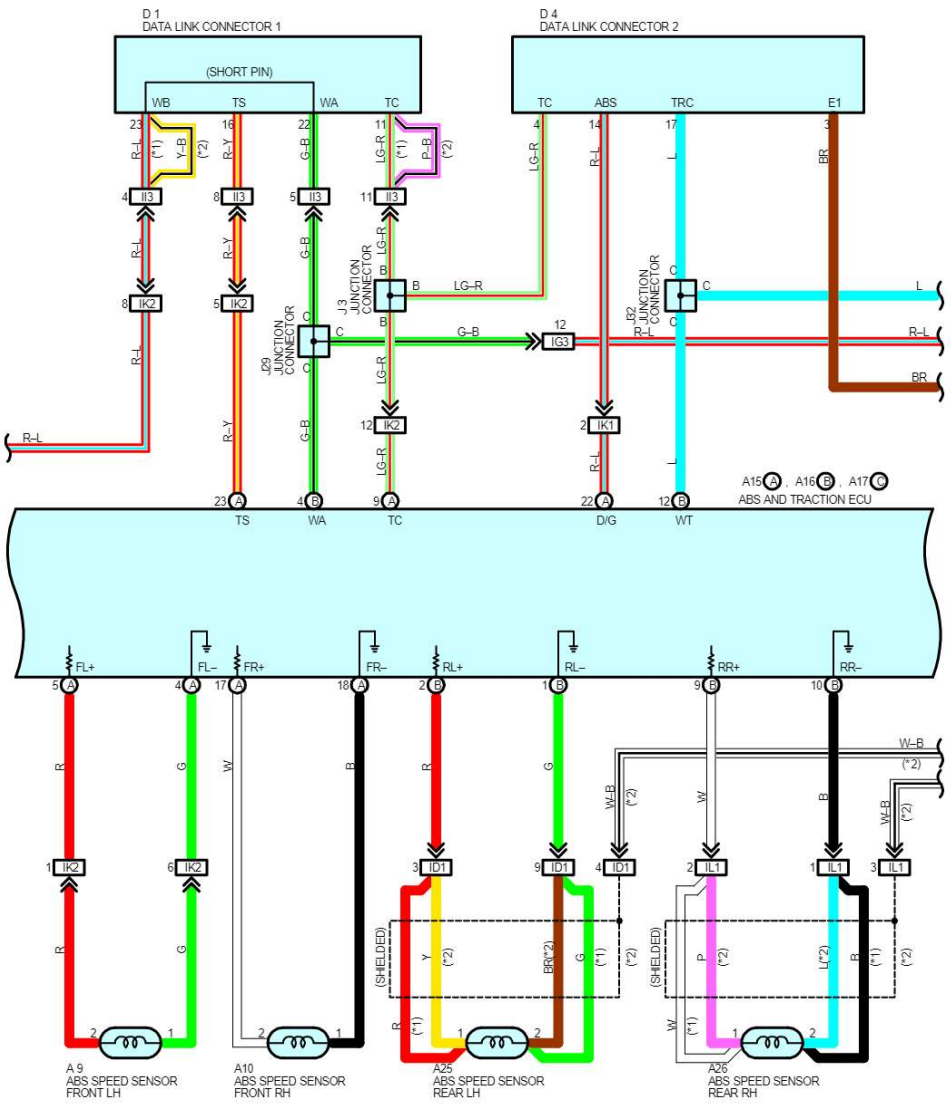


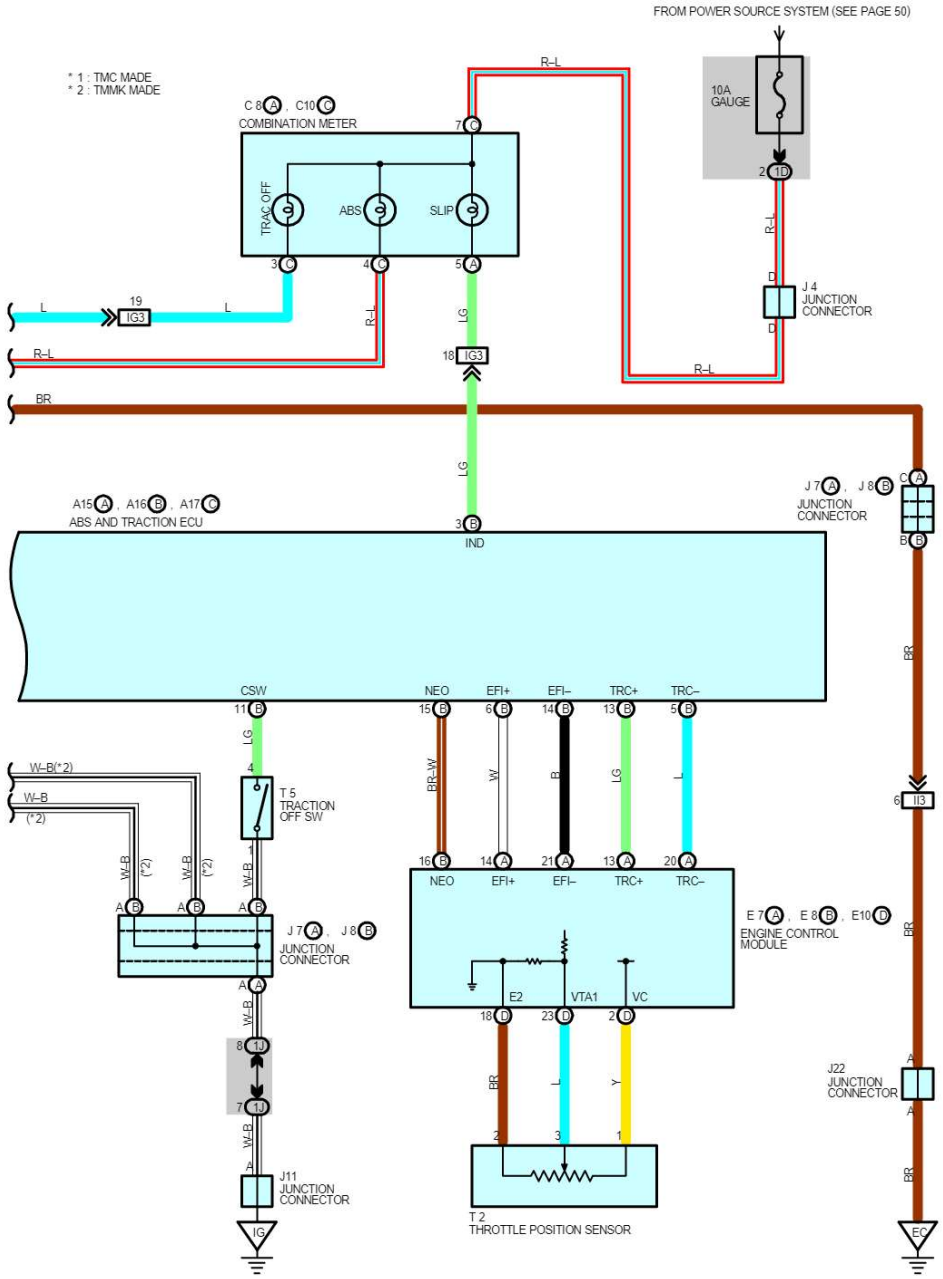
# ABS AND TRACTION CONTROL




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
15A
ECU-IG
15A
STOP
9 1J
7 1C
B-R
W
G-W
C
J12
JUNCTION
CONNECTOR
C
2
S 6
STOP
LIGHT SW
1
5 1R
4 1R
A A
J27 A , J28 B
JUNCTION
CONNECTOR
C B
G-W
G-W
B-R
R-L
R-L
A15 A , A16 B , A17 C
ABS AND TRACTION ECU
8 B
IG1
16 B
STP
SFLH
SFLR
SRRH
SRRR
SRLH
SRLR
SRC1
SRC2
SMC1
SMC2
AST
MT
GND1
2 C
1 C
8 C
7 C
25 A
12 A
5 C
4 C
12 C
6 C
10 A
14 A
15 A
L-B
W-L
W-R
R-G
G-Y
LG-B
B-R
B-Y
Y-R
Y-B
R
R-W
W-B
12 A
6 A
11 A
5 A
10 A
4 A
7 A
2 A
8 A
1 A
5 B
3 B
SFLH
SFLR
SRRH
SRRR
SRLH
SRLR
SRC1
SRC2
SMC1
SMC2
AST
MT
M
BM
GND
2 B
1 B
A 7 A , A 8 B
ABS AND TRACTION ACTUATOR
W-R
W-R
W-B
W-B
W-B
E 1

# ABS AND TRACTION CONTROL




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
* 1 : TMC MADE
* 2 : TMMK MADE
C 8 (A) , C10 (C)
COMBINATION METER
TRAC OFF
ABS
SLIP
R–L
10A GAUGE
J 4 JUNCTION CONNECTOR
L
IG3
R–L
LG
BR
A15 (A) , A16 (B) , A17 (C)
ABS AND TRACTION ECU
IND
J 7 (A) , J 8 (B) JUNCTION CONNECTOR
CSW
NEO
EFI+
EFI–
TRC+
TRC–
W–B(*2)
W–B
(*2)
T 5 TRACTION OFF SW
BR–W
W
B
J 7 (A) , J 8 (B) JUNCTION CONNECTOR
E 7 (A) , E 8 (B) , E10 (D) ENGINE CONTROL MODULE
E2
VTA1
VC
J11 JUNCTION CONNECTOR
IG
T 2 THROTTLE POSITION SENSOR
J22 JUNCTION CONNECTOR
EC

# ABS AND TRACTION CONTROL

## SYSTEM OUTLINE

(ABS)
ABS is a brake system designed for the purpose to improve the operating ability securing the stability of the vehicle by preventing the looking–up of the vehicle controlling the wheel cylinder pressure of all the four wheels at the time of sudden braking.

### 1. INPUT SIGNALS

(1) Speed sensor signal
The speed of the wheels is detected and input to TERMINALS FL+, FR+, RL+, and RR+ of the ABS and traction ECU.
(2) Stop light SW signal
A signal is input to TERMINAL STP of the ABS and traction ECU when brake pedal is depressed.

### 2. SYSTEM OPERATION

When the wheels are to be locked–up, the solenoid inside the actuator will be controlled by the signal from the ABS and traction ECU and the brake fluid in the wheel cylinder will flow through the reservoir and reduce the hydraulic pressure.
While the ABS is in operation, as the ABS and traction ECU always outputs the operation signal to the pump inside the actuator, brake fluid stored inside the reservoir will be suctioned up by the pump inside the actuator and returned to the master cylinder.
When the hydraulic pressure of the wheel cylinder is decompressed or increased until the necessary hydraulic pressure, the solenoid inside the actuator is controlled by the control signal from the ABS and traction ECU and as a result, hydraulic pressure of the wheel cylinder will be closed at both routes of the master cylinder and reservoir sides and the hydraulic pressure of the wheel cylinder will become to be in the holding condition.
If the increase of hydraulic pressure volume of the wheel cylinder becomes necessary, with the control signal from the ABS and traction ECU, the solenoid inside the actuator will be controlled and become the same condition as usual and the brake fluid of the master cylinder will be sent to the wheel cylinder and will increase the hydraulic pressure of the wheel cylinder. At this time, in the case that the brake fluid stays left in the reservoir, it will be sucked up by the pump inside the actuator and will be sent to the wheel cylinder.
Also, increasing speed of the hydraulic pressure is controlled by outputting the increasing and the said holding one after another.
(Traction control)
Traction control system is designed to perform the engine output control by the fuel cut and hydraulic pressure control of driving wheel brake and control the spinning of the driving wheels. By doing this, it improves starting acceleration and operating ability of the vehicle securing the driving ability in accordance with the road surface condition.

### 3. TRACTION CONTROL OPERATION

Estimating the vehicle speed from the rear wheel speed, comparing it with the front, driving wheel speed and judging the grip condition of the driving wheels. From the estimated vehicle speed, target speed of the driving speed will be set. When the front, driving wheel speed exceeds the control starting speed, it judges that the tire slip is occurred and performs the fuel cut cylinder number control and brake control and then adjust to make the front wheel speed become the traction control target speed. Controlling of the traction control will be completed when the vehicle move onto the road where the driving wheels will not have a tire slip or when the driver decelerate.

## SERVICE HINTS

**ABS MOTOR RELAY [R/B NO.3]**
3–4 : Approx. **62** Ω
**ABS SOL RELAY [R/B NO.3]**
4–6 : Approx. **80** Ω
**A9, A10 ABS SPEED SENSOR FRONT LH, RH**
1–2 : **0.6** kΩ–**2.5** kΩ
**A15 (A), A16 (B), A17 (C) ABS AND TRACTION ECU**
(B) 8–GROUND : Approx. **12** volts with the ignition SW at **ON** position
(B)11–GROUND : Continuity with the ignition SW on and the traction off SW on (Traction control off)
(B)16–GROUND : Approx. **12** volts with the brake pedal depressed
(A)15, (C) 9, (C) 10–GROUND : Always continuity
**A25, A26 ABS SPEED SENSOR REAR LH, RH**
1–2 : **1.2** kΩ–**2.3** kΩ
**T2 THROTTLE POSITION SENSOR**
1–2 : **3.5** kΩ–**5.0** kΩ

### : PARTS LOCATION

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| A7 | A | 26 (1MZ–FE) | C10 | C | 30 | J11 | | 31 |
| A8 | B | 26 (1MZ–FE) | D1 | | 26 (1MZ–FE) | J12 | | 31 |
| A9 | | 26 (1MZ–FE) | D4 | | 30 | J22 | | 31 |
| A10 | | 26 (1MZ–FE) | E7 | A | 30 | J27 | A | 31 |
| A15 | A | 30 | E8 | B | 30 | J28 | B | 31 |
| A16 | B | 30 | E10 | D | 30 | J29 | | 31 |
| A17 | C | 30 | J3 | | 31 | J32 | | 31 |
| A25 | | 32 | J4 | | 31 | S6 | | 31 |
| A26 | | 32 | J7 | A | 31 | T2 | | 27 (1MZ–FE) |
| C8 | A | 30 | J8 | B | 31 | T5 | | 31 |

### : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 3 | 25 | Engine Room R/B No.3 (Radiator Upper Support RH) |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| ID1 | 40 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| II3 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IK2 | | |
| IL1 | 42 | Floor No.2 Wire and Cowl Wire (Right Kick Panel) |

### : GROUND POINTS

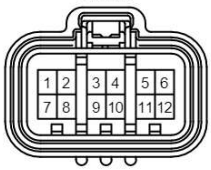
| Code | See Page | Ground Points Location |
|---|---|---|
| EA | 36 (1MZ–FE) | Right Radiator Side Support |
| EC | 36 (1MZ–FE) | Surge Tank RH |
| IG | 40 | Instrument Panel Brace LH |

### : SPLICE POINTS

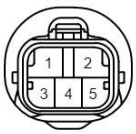
| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E1 | 36 (1MZ–FE) | Engine Room Main Wire | | | |

## ABS AND TRACTION CONTROL

**A7 (A)**
BLACK




**A8 (B)**
GRAY



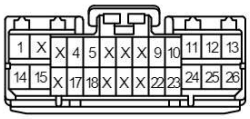

**A9**
GRAY



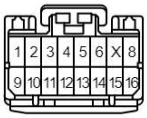

**A10**
GRAY




**A15 (A)**




**A16 (B)**




**A17 (C)**



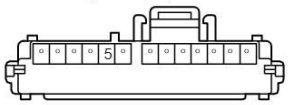

**A25**



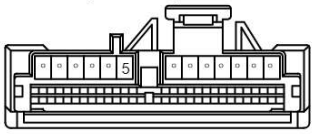

**A26**



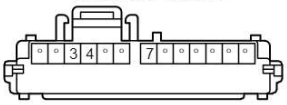

**C8 (A)**
(TMC Made) BLUE



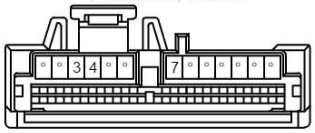

**C8 (A)**
(TMMK Made) BLUE



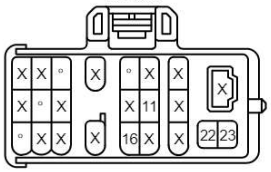

**C10 (C)**
(TMC Made) BROWN



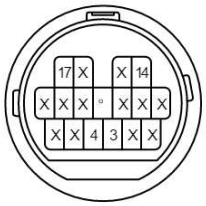

**C10 (C)**
(TMMK Made) BROWN



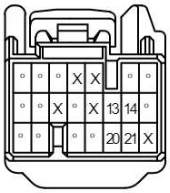

**D1**
BLACK



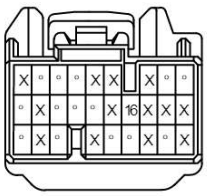

**D4**
DARK GRAY




**E7 (A)**



**E8 (B)**



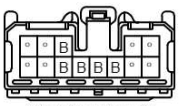

**E10 (D)**
(California)




**E10 (D)**
(Except California) BLACK

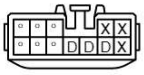



**J3**



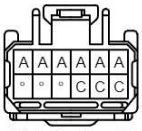

(Hint : See Page 7)

**J4**
BLACK



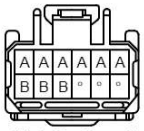

(Hint : See Page 7)

**J7 (A)**
GRAY



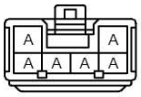

(Hint : See Page 7)

**J8 (B)**
GRAY



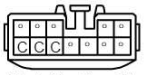

(Hint : See Page 7)

**J11**




(Hint : See Page 7)

**J12**
BLACK



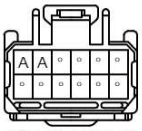

(Hint : See Page 7)

**J22**



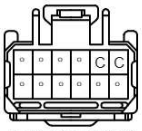

(Hint : See Page 7)

**J27 (A)**




(Hint : See Page 7)

**J28 (B)**



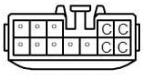

(Hint : See Page 7)

**J29**



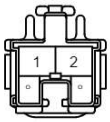

(Hint : See Page 7)

**J32**
GRAY




(Hint : See Page 7)

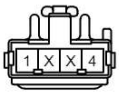
**S6**
BLUE



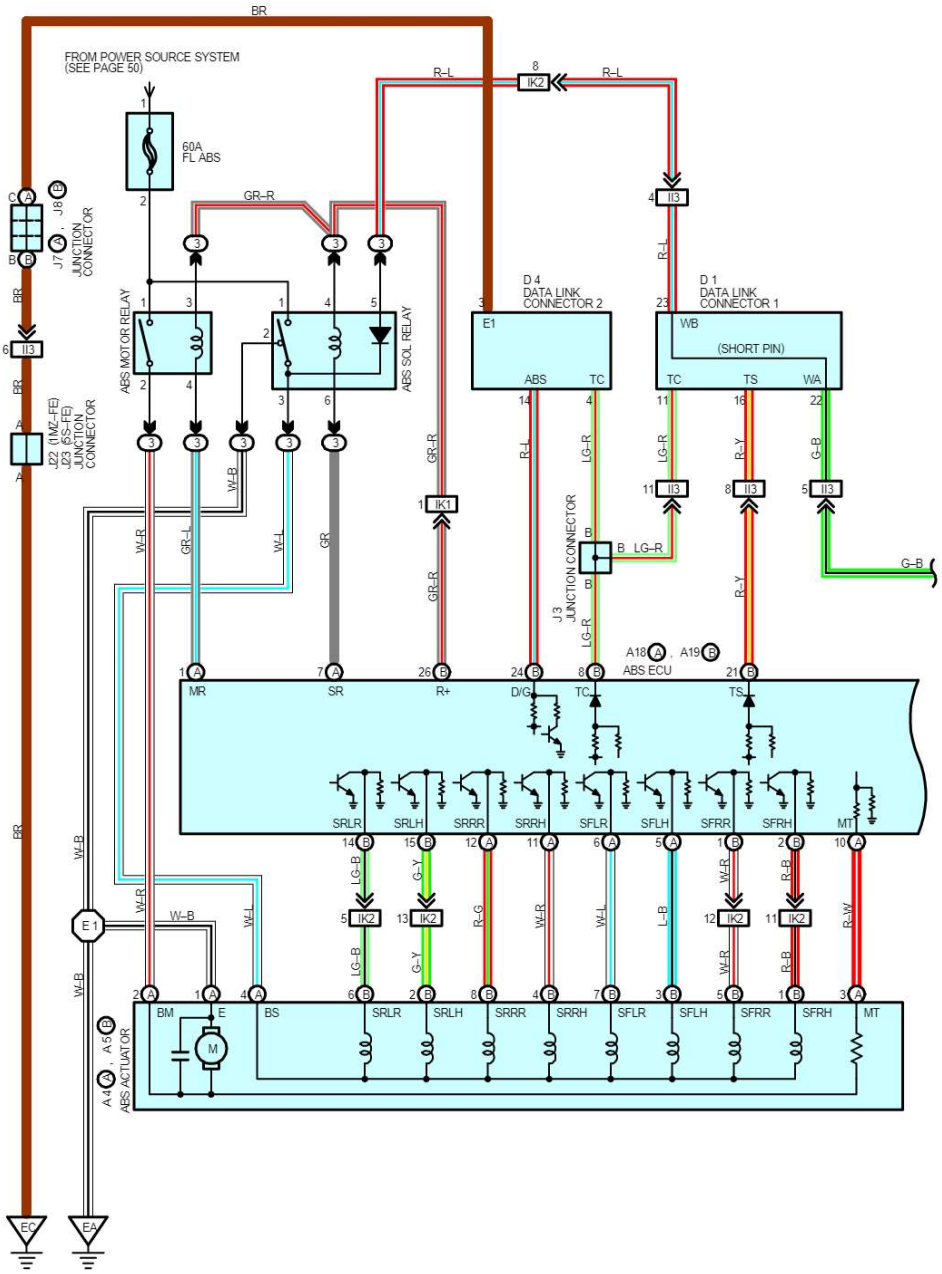

**T2**
BLACK

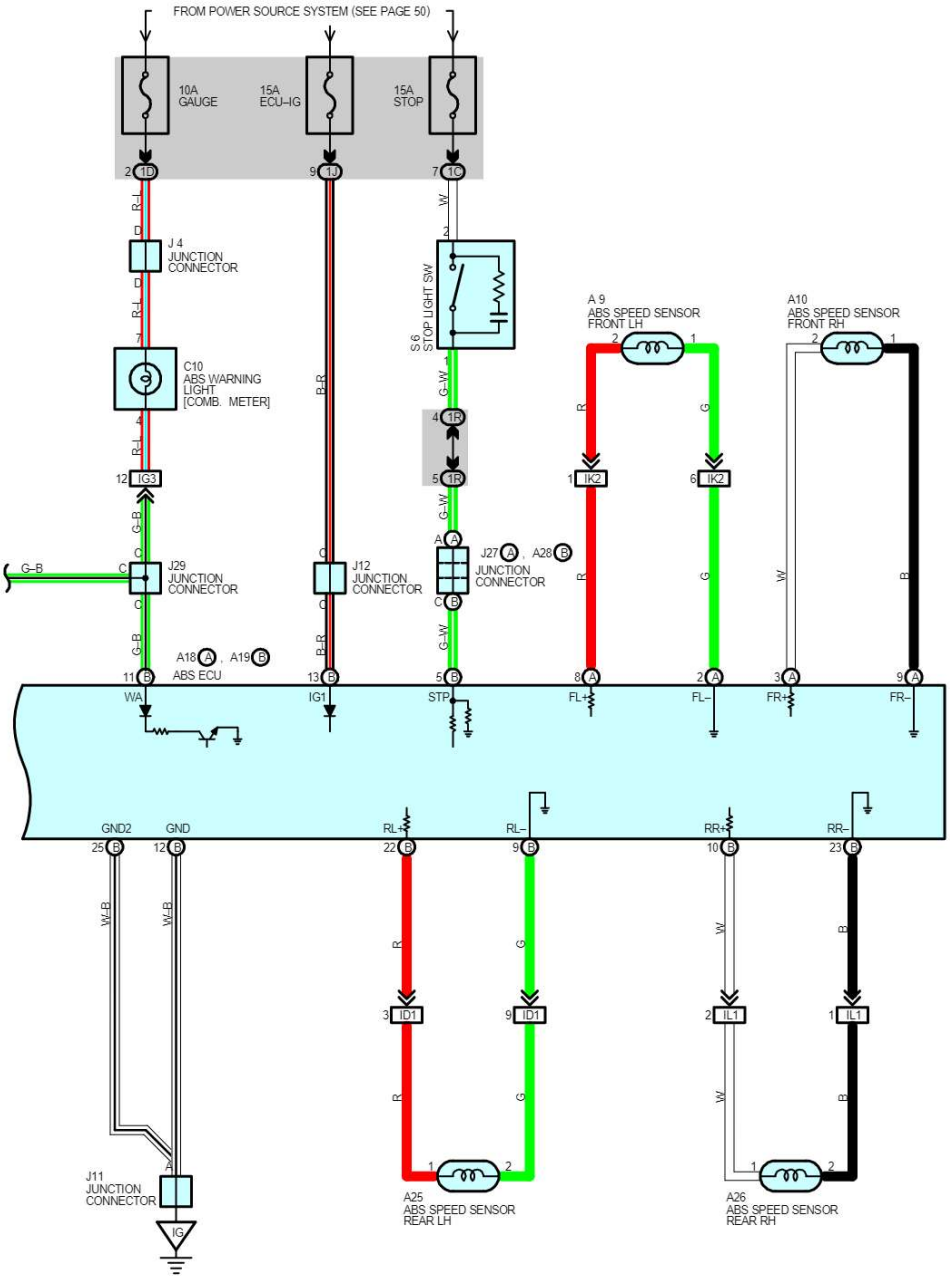



**T5**
BLACK



# ABS (TMC MADE)


BR
FROM POWER SOURCE SYSTEM
(SEE PAGE 50)
60A
FL ABS
R-L
GR-R
ABS MOTOR RELAY
ABS SOL RELAY
D 4
DATA LINK
CONNECTOR 2
D 1
DATA LINK
CONNECTOR 1
(SHORT PIN)
J2 (1MZ-FE)
J23 (5S-FE)
JUNCTION
CONNECTOR
J3
JUNCTION CONNECTOR
ABS ECU
MR
SR
R+
D/G
TC
TS
SRLR
SRLH
SRRR
SRRH
SFLR
SFLH
SFRR
SFRH
MT
BM
E
BS
M
ABS ACTUATOR
E1
EC
EA
W-B
W-R
GR-L
W-L
GR
LG-R
R-Y
G-B
LG-B
G-Y
R-G
L-B
R-B
R-W


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
10A GAUGE
15A ECU-IG
15A STOP
J 4 JUNCTION CONNECTOR
C10 ABS WARNING LIGHT [COMB. METER]
S 6 STOP LIGHT SW
A 9 ABS SPEED SENSOR FRONT LH
A10 ABS SPEED SENSOR FRONT RH
J29 JUNCTION CONNECTOR
J12 JUNCTION CONNECTOR
J27 , A28 JUNCTION CONNECTOR
A18 , A19 ABS ECU
WA
IG1
STP
FL+
FL–
FR+
FR–
GND2
GND
RL+
RL–
RR+
RR–
J11 JUNCTION CONNECTOR
IG
A25 ABS SPEED SENSOR REAR LH
A26 ABS SPEED SENSOR REAR RH

# ABS (TMC MADE)

## SYSTEM OUTLINE

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

### 1. INPUT SIGNALS

(1) Speed sensor signal

The speed of the wheels is detected and input to TERMINALS FL+, FR+, RL+ and RR+ of the ABS ECU.

(2) Stop light SW signal

A signal is input to TERMINAL STP of the ABS ECU when the brake pedal is depressed.

### 2. SYSTEM OPERATION

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

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

## SERVICE HINTS

**A9, A10 ABS SPEED SENSOR FRONT LH, RH**

2–1 : **0.6** kΩ–**2.5** kΩ

**A25, A26 ABS SPEED SENSOR REAR LH, RH**

2–1 : **1.2** kΩ–**2.3** kΩ

**A18 (A), A19 (B) ABS ECU**

(Connect the ABS ECU connectors)

(B)21–GROUND : Approx. **12** volts with the ignition SW at **ON** position and the data link connector 1 TS–E1, TC–E1 not connected

(B) 8–GROUND : Approx. **12** volts with the ignition SW at **ON** position and the data link connector 1 TS–E1, TC–E1 not connected

(B)13–GROUND : Approx. **12** volts with the ignition SW at **ON** position

(B) 5–GROUND : Approx. **12** volts with the brake pedal depressed

(B)12, (B) 25–GROUND :

Always continuity

**○ : PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| A4 | A | 26 (1MZ–FE) | A25 | | 32 | J11 | | 31 |
| | | 28 (5S–FE) | A26 | | 32 | J12 | | 31 |
| A5 | B | 26 (1MZ–FE) | C10 | | 30 | J22 | | 31 |
| | | 28 (5S–FE) | D1 | | 26 (1MZ–FE) | J23 | | 31 |
| A9 | | 26 (1MZ–FE) | | | 28 (5S–FE) | J27 | A | 31 |
| | | 28 (5S–FE) | D4 | | 30 | J28 | B | 31 |
| A10 | | 26 (1MZ–FE) | J3 | | 31 | J29 | | 31 |
| | | 28 (5S–FE) | J4 | | 31 | S6 | | 31 |
| A18 | A | 30 | J7 | A | 31 | | | |
| A19 | B | 30 | J8 | B | 31 | | | |

**⬭ : RELAY BLOCKS**

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 3 | 25 | Engine Room R/B No.3 (Radiator Upper Support RH) |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| ID1 | 40 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| II3 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IK2 | | |
| IL1 | 42 | Floor No.2 Wire and Cowl Wire (Right Kick Panel) |

### : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EA | 36 (1MZ–FE) | Right Radiator Side Support |
| | 38 (5S–FE) | |
| EC | 36 (1MZ–FE) | Surge Tank RH |
| | 38 (5S–FE) | Intake Manifold |
| IG | 40 | Instrument Panel Brace LH |

### : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E1 | 36 (1MZ–FE) | Engine Room Main Wire | E1 | 38 (5S–FE) | Engine Room Main Wire |

**A4 (A)**
GRAY




**A5 (B)**
BLACK



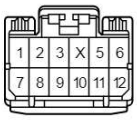

**A9**
GRAY



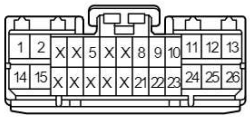

**A10**
GARY




**A18 (A)**




**A19 (B)**



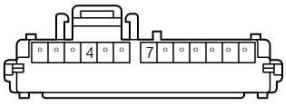

**A25**




**A26**

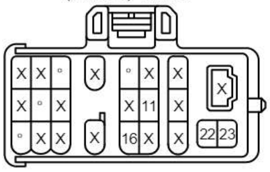



**C10**
BROWN

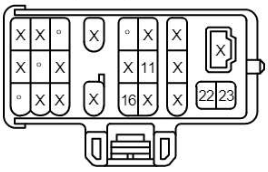


# ABS (TMC MADE)

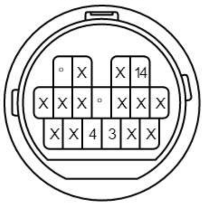
**D1**
(1MZ–FE) BLACK



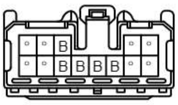

**D1**
(5S–FE) BLACK




**D4**
DARK GRAY

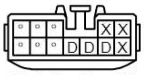



**J3**



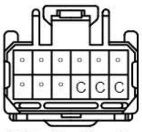
(Hint : See Page 7)

**J4**
BLACK



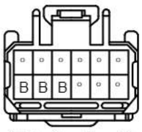
(Hint : See Page 7)

**J7 (A)**
GRAY



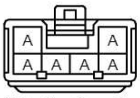
(Hint : See Page 7)

**J8 (B)**
GRAY



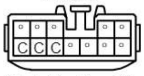
(Hint : See Page 7)

**J11**



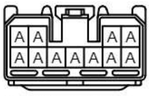
(Hint : See Page 7)

**J12**
BLACK



(Hint : See Page 7)

**J22**



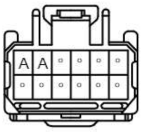
(Hint : See Page 7)

**J23**



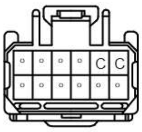
(Hint : See Page 7)

**J27 (A)**



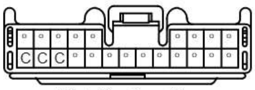
(Hint : See Page 7)

**J28 (B)**



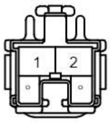
(Hint : See Page 7)

**J29**

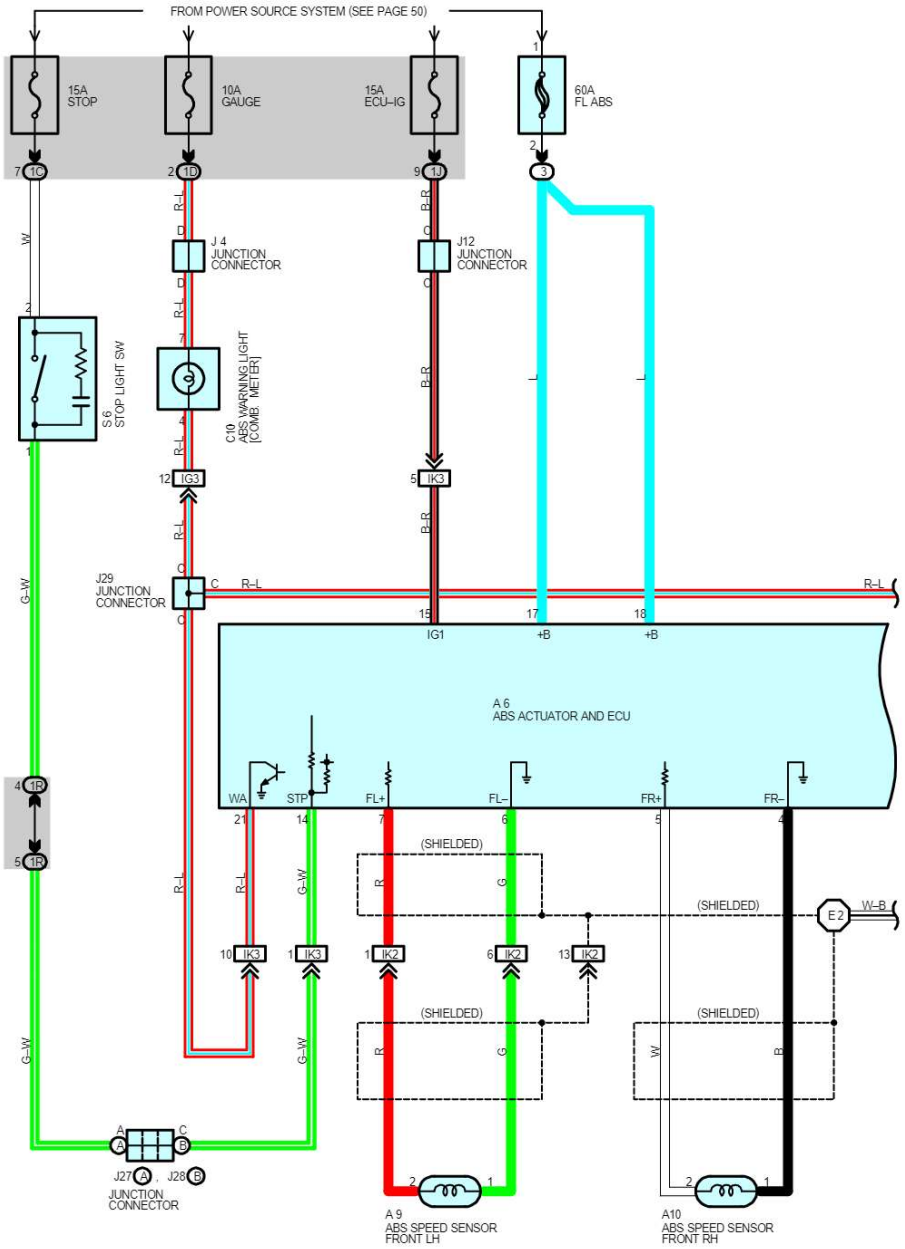


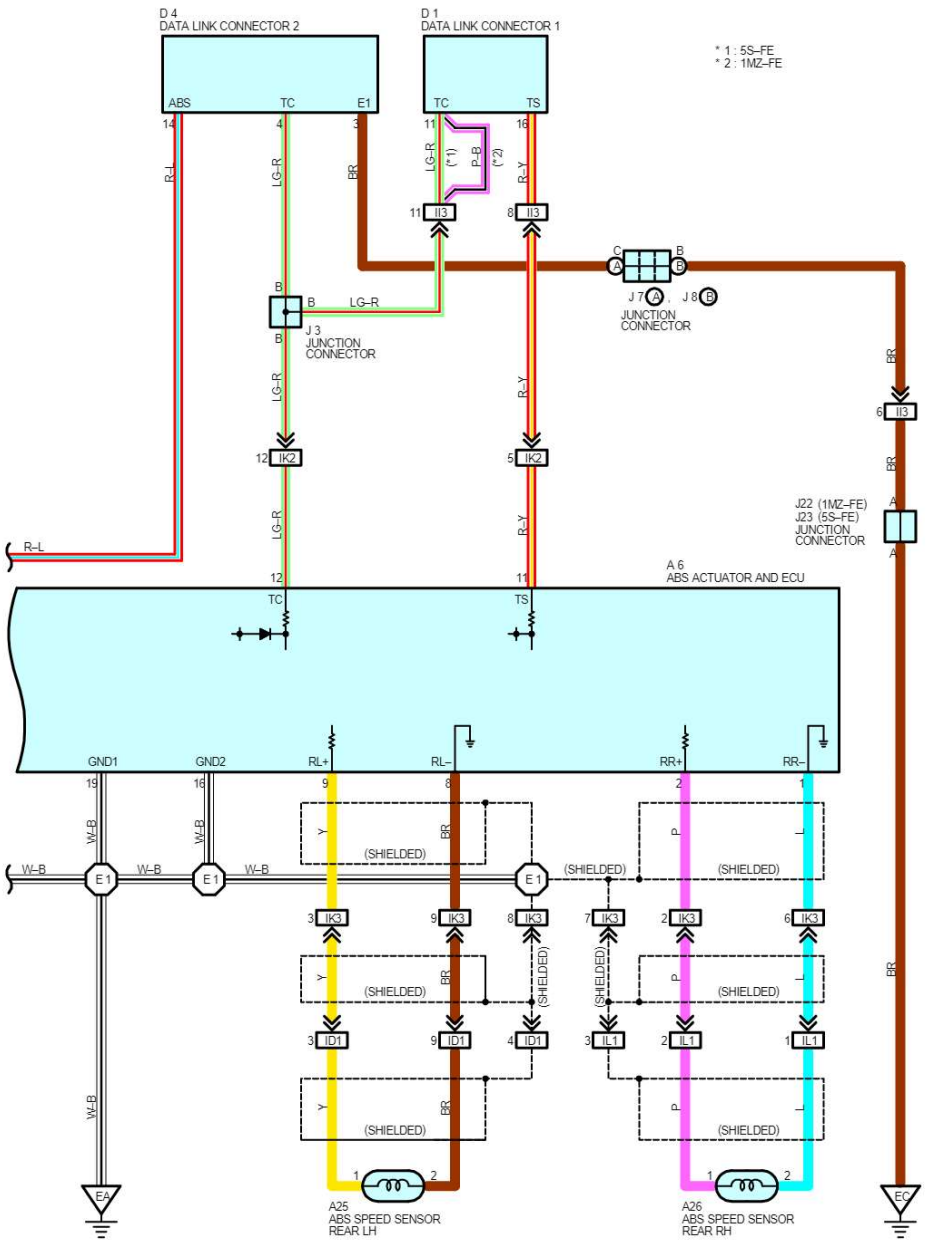
(Hint : See Page 7)

**S6**
BLUE



# ABS (TMMK MADE)




D 4
DATA LINK CONNECTOR 2
ABS
TC
E1
14
4
3
D 1
DATA LINK CONNECTOR 1
TC
TS
11
16
* 1 : 5S–FE
* 2 : 1MZ–FE
R–L
LG–R
BR
LG–R
(*1)
P–B
(*2)
R–Y
11
II3
8
II3
C
B
A
B
J 7
A
,
J 8
B
JUNCTION
CONNECTOR
B
B
LG–R
B
J 3
JUNCTION
CONNECTOR
LG–R
R–Y
BR
6
II3
12
IK2
5
IK2
BR
J22 (1MZ–FE)
J23 (5S–FE)
JUNCTION
CONNECTOR
A
A
LG–R
R–Y
R–L
A 6
ABS ACTUATOR AND ECU
12
TC
11
TS
GND1
GND2
RL+
RL–
RR+
RR–
19
16
9
8
2
1
W–B
W–B
Y
BR
P
L
(SHIELDED)
W–B
W–B
W–B
E 1
E 1
E 1
(SHIELDED)
(SHIELDED)
3
IK3
9
IK3
8
IK3
7
IK3
2
IK3
6
IK3
Y
BR
P
L
(SHIELDED)
(SHIELDED)
(SHIELDED)
(SHIELDED)
(SHIELDED)
(SHIELDED)
3
ID1
9
ID1
4
ID1
3
IL1
2
IL1
1
IL1
Y
BR
P
L
(SHIELDED)
(SHIELDED)
W–B
1
2
1
2
EA
EC
A25
ABS SPEED SENSOR
REAR LH
A26
ABS SPEED SENSOR
REAR RH

# ABS (TMMK MADE)

## SYSTEM OUTLINE

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

**1. INPUT SIGNALS**

(1) Speed sensor signal

The speed of the wheels is detected and input to TERMINALS FL+, FR+, RL+ and RR+ of the ABS actuator and ECU.

(2) Stop light SW signal

A signal is input to TERMINAL STP of the ABS actuator and ECU when the brake pedal is depressed.

**2. SYSTEM OPERATION**

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

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

## SERVICE HINTS

**A9, A10 ABS SPEED SENSOR FRONT LH, RH**

2–1 : Approx. **1.6** kΩ

**A25, A26 ABS SPEED SENSOR REAR LH, RH**

2–1 : Approx. **1.6** kΩ

**A6 ABS ACTUATOR AND ECU**

(Connect the ABS actuator and ECU connectors)

12–GROUND : Approx. **12** volts with the ignition SW at **ON** position and the data link connector 1 TS–E1, TC–E1 not connected

11–GROUND : Approx. **12** volts with the ignition SW at **ON** position and the data link connector 1 TS–E1, TC–E1 not connected

16, 19–GROUND : Always continuity

15–GROUND : Approx. **12** volts with the ignition SW at **ON** position

14–GROUND : Approx. **12** volts with the brake pedal depressed

17, 18–GROUND : Always approx. **12** volts

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A6 | 26 (1MZ–FE) | C10 | 30 | J12 | 31 |
| | 28 (5S–FE) | D1 | 26 (1MZ–FE) | J22 | 31 |
| A9 | 26 (1MZ–FE) | | 28 (5S–FE) | J23 | 31 |
| | 28 (5S–FE) | D4 | 30 | J27 A | 31 |
| A10 | 26 (1MZ–FE) | J3 | 31 | J28 B | 31 |
| | 28 (5S–FE) | J4 | 31 | J29 | 31 |
| A25 | 32 | J7 A | 31 | S6 | 31 |
| A26 | 32 | J8 B | 31 | | |

## : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 3 | 25 | Fusible Link Block (Radiator Upper Support RH) |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| ID1 | 40 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under the Blower Motor) |
| II3 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IK2 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IK3 | 42 | |
| IL1 | 42 | Floor No.2 Wire and Cowl Wire (Right Kick Panel) |

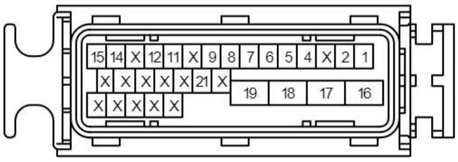
## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EA | 36 (1MZ–FE) | Right Radiator Side Support |
| | 38 (5S–FE) | |
| EC | 36 (1MZ–FE) | Surge Tank RH |
| | 38 (5S–FE) | Intake Manifold |

## : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E1 | 36 (1MZ–FE) | Engine Room Main Wire | E2 | 36 (1MZ–FE) | Engine Room Main Wire |
| | 38 (5S–FE) | | | 38 (5S–FE) | |

**A6**
BLACK




**A9**
GRAY




**A10**
GRAY



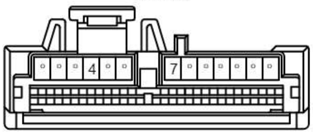

**A25**



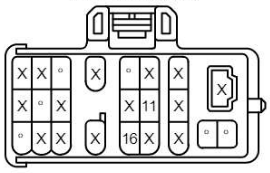

**A26**




**C10**
BROWN

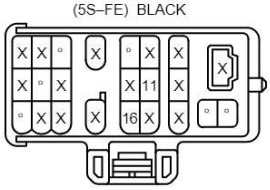



**D1**
(1MZ–FE) BLACK

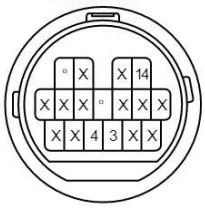


## ABS (TMMK MADE)

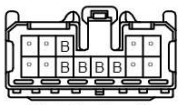
**D1**
(5S–FE) BLACK



**D4**
DARK GRAY

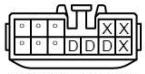


**J3**



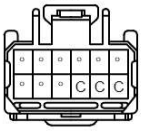
(Hint : See Page 7)

**J4**
BLACK



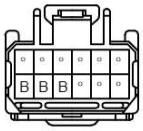
(Hint : See Page 7)

**J7 (A)**
GRAY



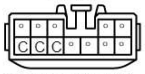
(Hint : See Page 7)

**J8 (B)**
GRAY



(Hint : See Page 7)

**J12**
BLACK



(Hint : See Page 7)

**J22**



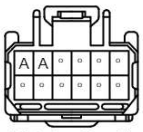
(Hint : See Page 7)

**J23**



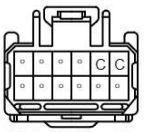
(Hint : See Page 7)

**J27 (A)**



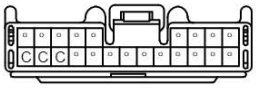
(Hint : See Page 7)

**J28 (B)**



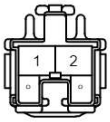
(Hint : See Page 7)

**J29**



(Hint : See Page 7)

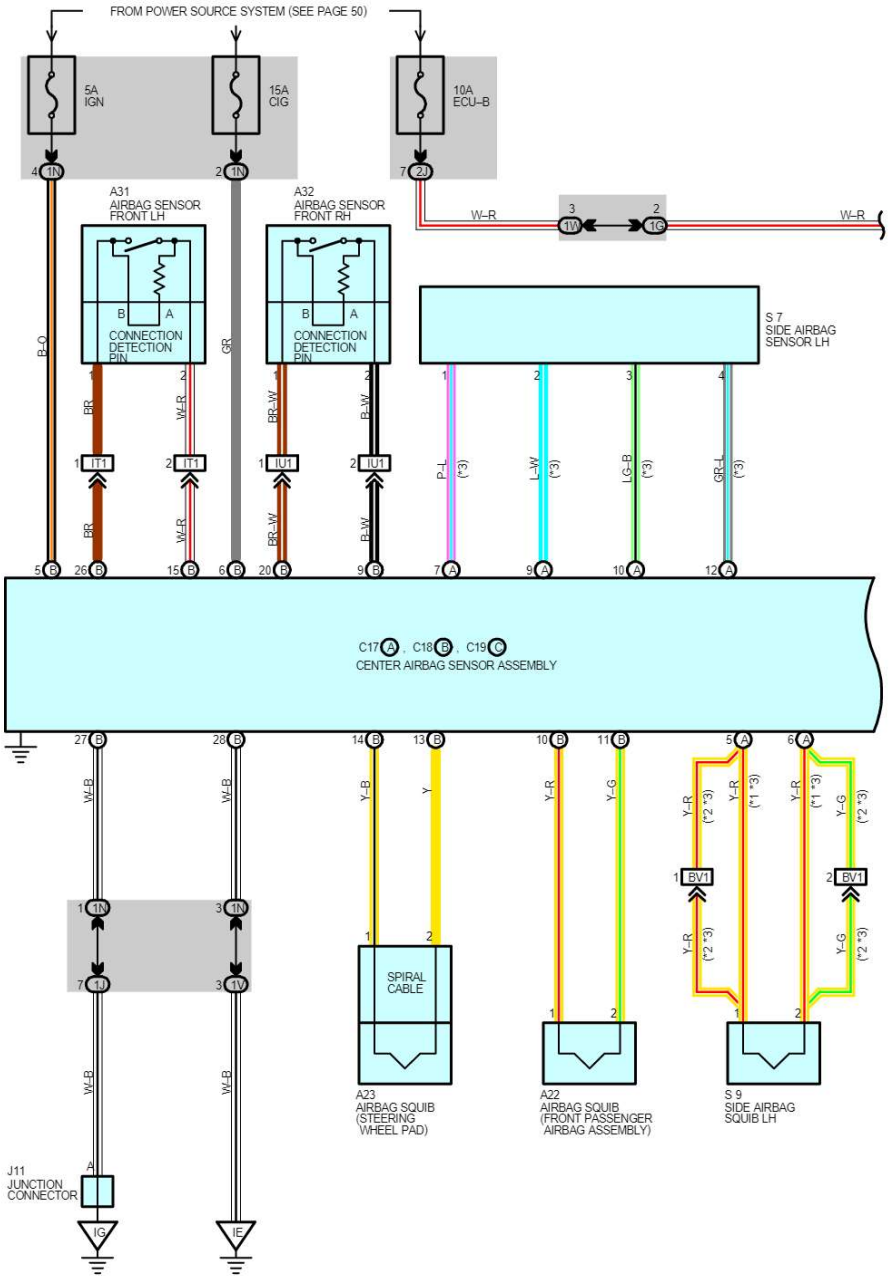
**S6**
BLUE

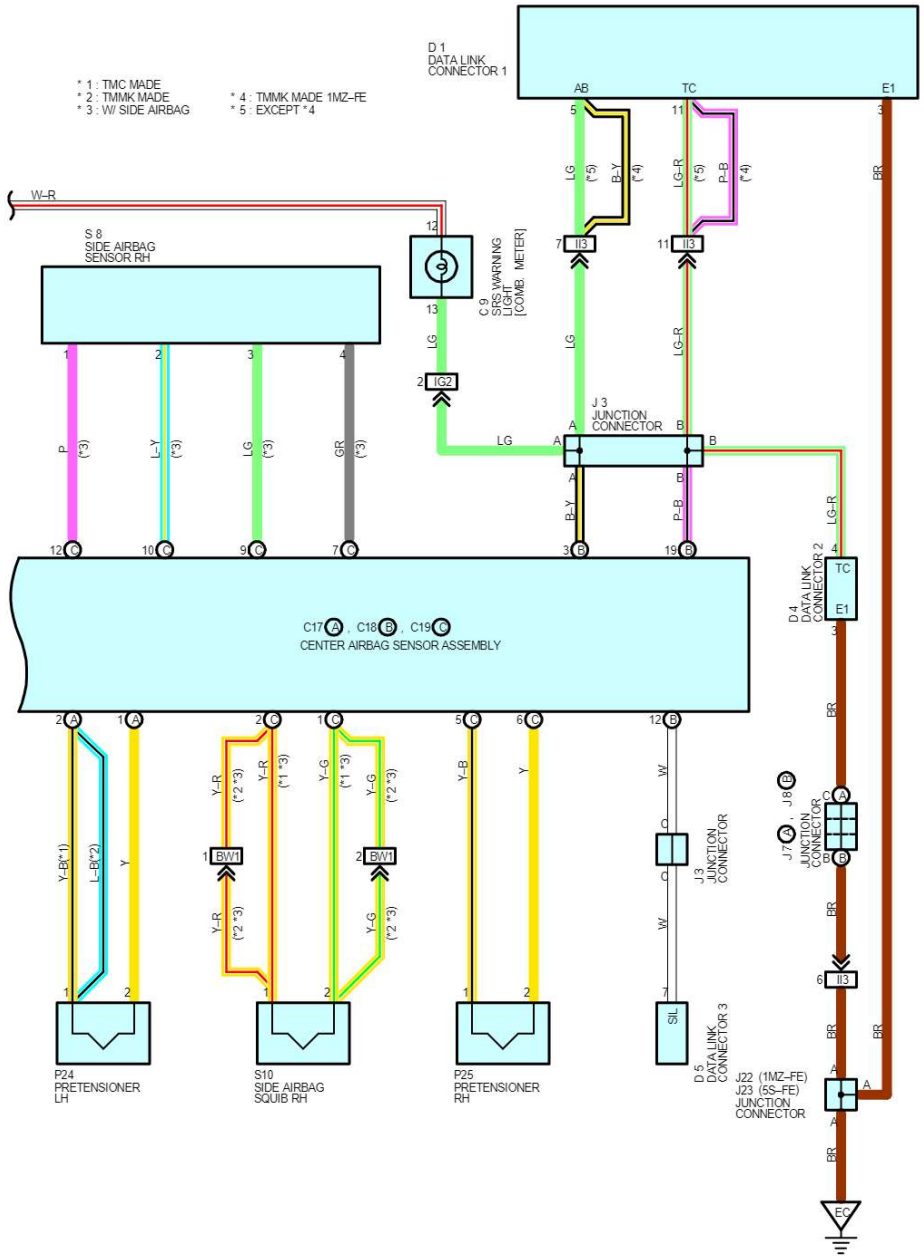


NOTICE: When inspecting or repairing the SRS, perform the operation in accordance with the following precautionary instructions and the procedure and precautions in the Repair Manual for the applicable model year.

- 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. To avoid erasing the memory in each memory system, never use a back–up power supply from outside the vehicle.
- Before repairs, remove the airbag sensor if shocks are likely to be applied to the sensor during repairs.
- Do not expose the steering wheel pad, front passenger airbag assembly, side airbag assembly, seat belt pretensioner, center airbag sensor assembly, front airbag sensor assembly or side airbag sensor assembly directly to hot air or flames.
- Even in cases of a minor collision where the SRS does not deploy, the steering wheel pad, front passenger airbag assembly, side airbag assembly, seat belt pretensioner, center airbag sensor assembly, front airbag sensor assembly and side airbag sensor assembly should be inspected.
- Never use SRS parts from another vehicle. When replacing parts, replace them with new parts.
- Never disassemble and repair the steering wheel pad, front passenger airbag assembly, side airbag assembly, seat belt pretensioner, center airbag sensor assembly, front airbag sensor assembly or side airbag sensor assembly in order to reuse it.
- If the steering wheel pad, front passenger airbag assembly, side airbag assembly, seat belt pretensioner, center airbag sensor assembly, front airbag sensor assembly or side airbag sensor assembly has been dropped, or if there are cracks, dents or other defects in the case, bracket or connector, replace them with new ones.
- Use a volt/ohmmeter with high impedance (10 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.

# SRS


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
5A IGN
15A CIG
10A ECU-B
A31 AIRBAG SENSOR FRONT LH
A32 AIRBAG SENSOR FRONT RH
CONNECTION DETECTION PIN
W-R
S 7 SIDE AIRBAG SENSOR LH
B-O
GR
BR
W-R
BR-W
R-W
P-L (*3)
L-W (*3)
LG-B (*3)
GR-L (*3)
C17 (A), C18 (B), C19 (C)
CENTER AIRBAG SENSOR ASSEMBLY
W-B
Y-B
Y
Y-R
Y-G
(*1 *3)
(*2 *3)
SPIRAL CABLE
A23 AIRBAG SQUIB (STEERING WHEEL PAD)
A22 AIRBAG SQUIB (FRONT PASSENGER AIRBAG ASSEMBLY)
S 9 SIDE AIRBAG SQUIB LH
J11 JUNCTION CONNECTOR
IG
IE


* 1 : TMC MADE
* 2 : TMMK MADE
* 3 : W/ SIDE AIRBAG
* 4 : TMMK MADE 1MZ–FE
* 5 : EXCEPT *4
D 1
DATA LINK
CONNECTOR 1
AB
TC
E1
W–R
S 8
SIDE AIRBAG
SENSOR RH
C 9
SRS WARNING
LIGHT
[COMBI METER]
IG2
J 3
JUNCTION
CONNECTOR
C17 A , C18 B , C19 C
CENTER AIRBAG SENSOR ASSEMBLY
D 4
DATA LINK
CONNECTOR 2
J7 , J8
JUNCTION
CONNECTOR
BW1
J 3
JUNCTION
CONNECTOR
D 5
DATA LINK
CONNECTOR 3
SIL
J22 (1MZ–FE)
J23 (5S–FE)
JUNCTION
CONNECTOR
EC
P24
PRETENSIONER
LH
S10
SIDE AIRBAG
SQUIB RH
P25
PRETENSIONER
RH

# SRS

## 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 ACC or ON, current from the CIG fuse flows to TERMINAL (B) 6 of the center airbag sensor assembly. Only when the ignition SW is on does the current flow from the IGN fuse to TERMINAL (B) 5 of the center airbag sensor assembly.
If an accident occurs while driving, when the frontal impact exceeds a set level, current from the CIG or IGN fuse flows to TERMINALS (B) 14, (B) 10, (A) 2 and (C) 5 of the center airbag sensor assembly to TERMINAL 1 of the airbag squibs and the pretensioners to TERMINAL 2 to TERMINALS (B) 13, (B) 11, (A) 1 and (C) 6 of the center airbag sensor assembly to TERMINAL (B) 27, (B) 28 or BODY GROUND to GROUND, so that current flows to the front airbag squibs and the pretensioners and causes them to operate.
When the side impact also exceeds a set level, current from the CIG or IGN fuse flows to TERMINALS (A) 5, (C) 2, (A) 2 and (C) 5 of the center airbag sensor assembly to TERMINAL 1 of the side airbag squibs and the pretensioners to TERMINAL 2 to TERMINALS (A) 6, (C) 1, (A) 1 and (C) 6 of the center airbag sensor assembly to TERMINAL (B) 27, (B) 28 or BODY GROUND to GROUND, causing side airbag squibs and the pretensioners to operate.
The airbag stored inside the steering wheel pad is instantaneously expanded to soften the shock to the driver.
The airbag stored inside the passenger's instrument panel is instantaneously expanded to soften the shock to the front passenger.
Side airbags are instantaneously expanded to soften the shock of side to the driver and front passenger.
The pretensioners make sure of the seat belt restrainability.

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A22 | 30 | D4 | 30 | P24 | 33 |
| A23 | 30 | D5 | 30 | P25 | 33 |
| C9 | 30 | J3 | 31 | S7 | 33 |
| C17 A | 30 | J7 A | 31 | S8 | 33 |
| C18 B | 30 | J8 B | 31 | S9 | 34 |
| C19 C | 30 | J11 | 31 | S10 | 34 |
| D1 | 26 (1MZ–FE) | J22 | 31 | | |
| | 28 (5S–FE) | J23 | 31 | | |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1G | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1N | | |
| 1V | | |
| 1W | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

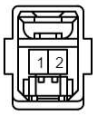
## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IG2 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| II3 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IT1 | 42 | Cowl Wire and Cowl Wire (Left Kick Panel) |
| IU1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| BV1 | 46 | Floor Wire and Seat No.1 Wire (Under the Driver's Seat) |
| BW1 | 46 | Floor No.2 Wire and Seat No.2 Wire (Under the Front Passenger's Seat) |

## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EC | 36 (1MZ–FE) | Surge Tank RH |
| | 38 (5S–FE) | Intake Manifold |
| IE | 40 | Cowl Side Panel LH |
| IG | 40 | Instrument Panel Brace LH |

**A22**
YELLOW




**A23**
YELLOW



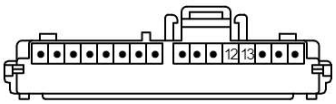

**A31**
YELLOW



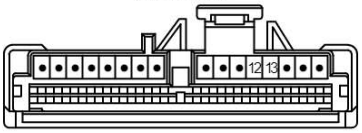

**A32**
YELLOW




**C9**
(TMC Made)



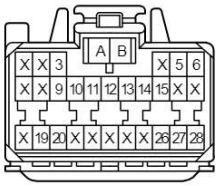

**C9**
(TMMK Made)



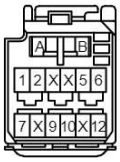

**C17 (A)**
YELLOW



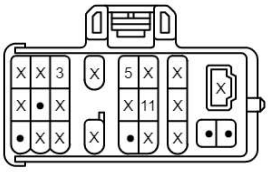

**C18 (B)**
YELLOW



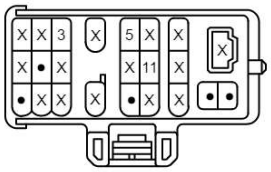

**C19 (C)**
YELLOW



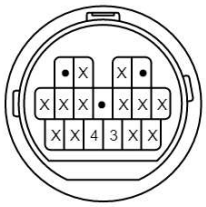

**D1**
(1MZ–FE) BLACK



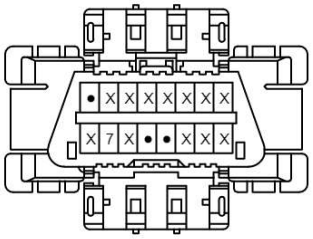

**D1**
(5S–FE) BLACK



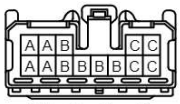

**D4**
DARK GRAY




**D5**

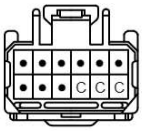



**J3**



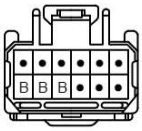

(Hint : See Page 7)

**J7 (A)**
GRAY



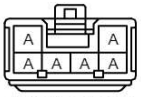

(Hint : See Page 7)

**J8 (B)**
GRAY




(Hint : See Page 7)

**J11**




(Hint : See Page 7)

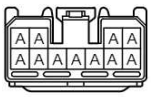
## SRS

**J22**




(Hint : See Page 7)

**J23**




(Hint : See Page 7)

**P24**
YELLOW




**P25**
YELLOW




**S7**
YELLOW




**S8**
YELLOW



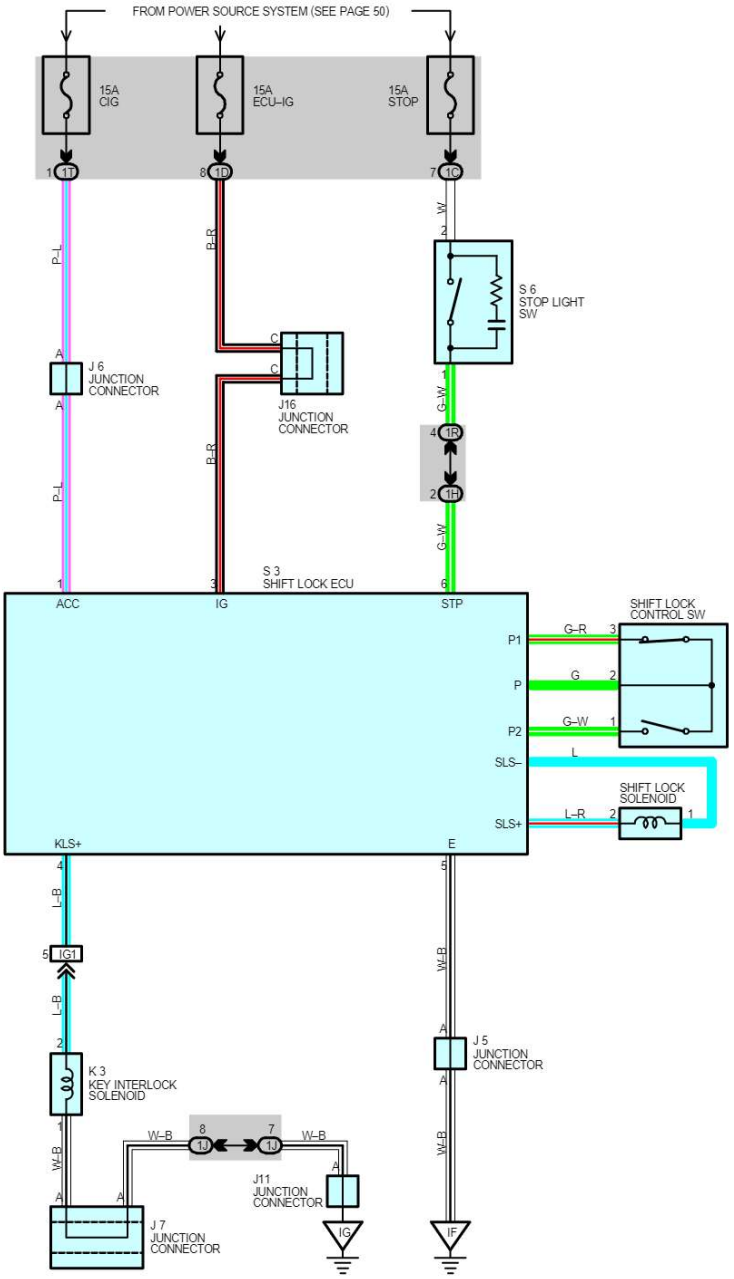

**S9**
YELLOW




**S10**
YELLOW



## SHIFT LOCK


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
15A CIG
15A ECU–IG
15A STOP
1T
1D
1C
P–L
B–R
W
S 6 STOP LIGHT SW
J 6 JUNCTION CONNECTOR
J16 JUNCTION CONNECTOR
G–W
1R
1H
S 3 SHIFT LOCK ECU
ACC
IG
STP
SHIFT LOCK CONTROL SW
P1
P
P2
SLS–
SLS+
G–R
G
G–W
L
L–R
SHIFT LOCK SOLENOID
KLS+
E
L–B
IG1
K 3 KEY INTERLOCK SOLENOID
W–B
1J
J11 JUNCTION CONNECTOR
J 7 JUNCTION CONNECTOR
J 5 JUNCTION CONNECTOR
IG
IF

## SYSTEM OUTLINE

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

**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 (Continuity between P1 and P of the shift lock control SW) is input to the shift lock ECU, the ECU operates and current flows from TERMINAL 3 of the ECU to TERMINAL SLS+ of the shift lock solenoid to solenoid to TERMINAL SLS– to TERMINAL 5 of the ECU to GROUND. This causes the shift lock solenoid to turn on (Plate stopper disengages) and the shift lever can shift into position other than the P.

**2. KEY INTERLOCK MECHANISM**

With the ignition SW ON or ACC position, when the shift lever is put in P position (No continuity between P2 and P of shift lock control SW), the current flowing from TERMINAL 4 of the shift lock ECU to the 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 ECU**

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
5–GROUND : Always continuity
6–GROUND : Approx. **12** volts with the brake pedal depressed

**S6 STOP LIGHT SW**

2–1 : Closed with the brake pedal depressed

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| J5 | 31 | J11 | 31 | S3 | 31 |
| J6 | 31 | J16 | 31 | S6 | 31 |
| J7 | 31 | K3 | 31 | | |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1C | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1R | | |
| 1T | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

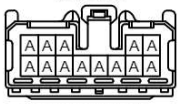
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |

## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |

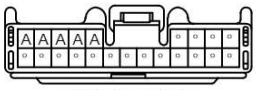
## SHIFT LOCK

**J5**
ORANGE




(Hint : See Page 7)

**J6**



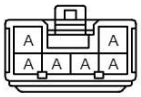

(Hint : See Page 7)

**J7**
GRAY



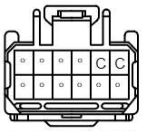

(Hint : See Page 7)

**J11**




(Hint : See Page 7)

**J16**
BLACK




(Hint : See Page 7)

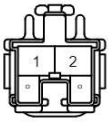
**K3**
BLACK



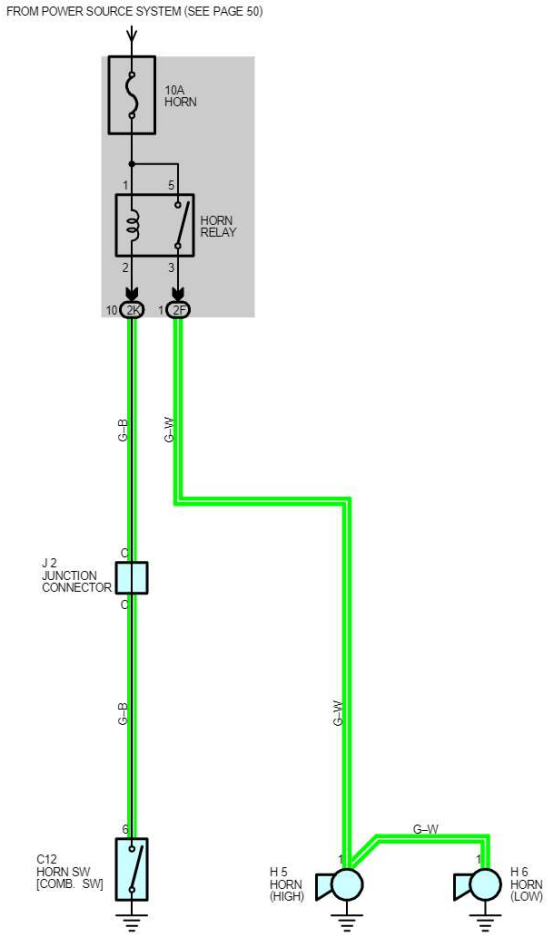

**S3**




**S6**
BLUE



# HORN


FROM POWER SOURCE SYSTEM (SEE PAGE 50)
10A
HORN
1
5
HORN
RELAY
2
3
10
2K
1
2F
G-B
G-W
J 2
JUNCTION
CONNECTOR
C
C
G-B
G-W
G-W
6
C12
HORN SW
[COMB. SW]
1
H 5
HORN
(HIGH)
1
H 6
HORN
(LOW)

**SERVICE HINTS**

**HORN RELAY [ENGINE ROOM J/B NO.2]**

5–3 : Closed with the horn SW on

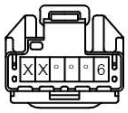
**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C12 | 30 | H5 | 28 (5S–FE) | H6 | 28 (5S–FE) |
| H5 | 26 (1MZ–FE) | H6 | 26 (1MZ–FE) | J2 | 31 |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 2F | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | 22 | Cowl Wire And Engine Room J/B No.2 (Engine Compartment Left) |

**C12**
BLACK



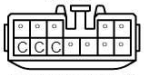

**H5**
BLACK




**H6**
BLACK

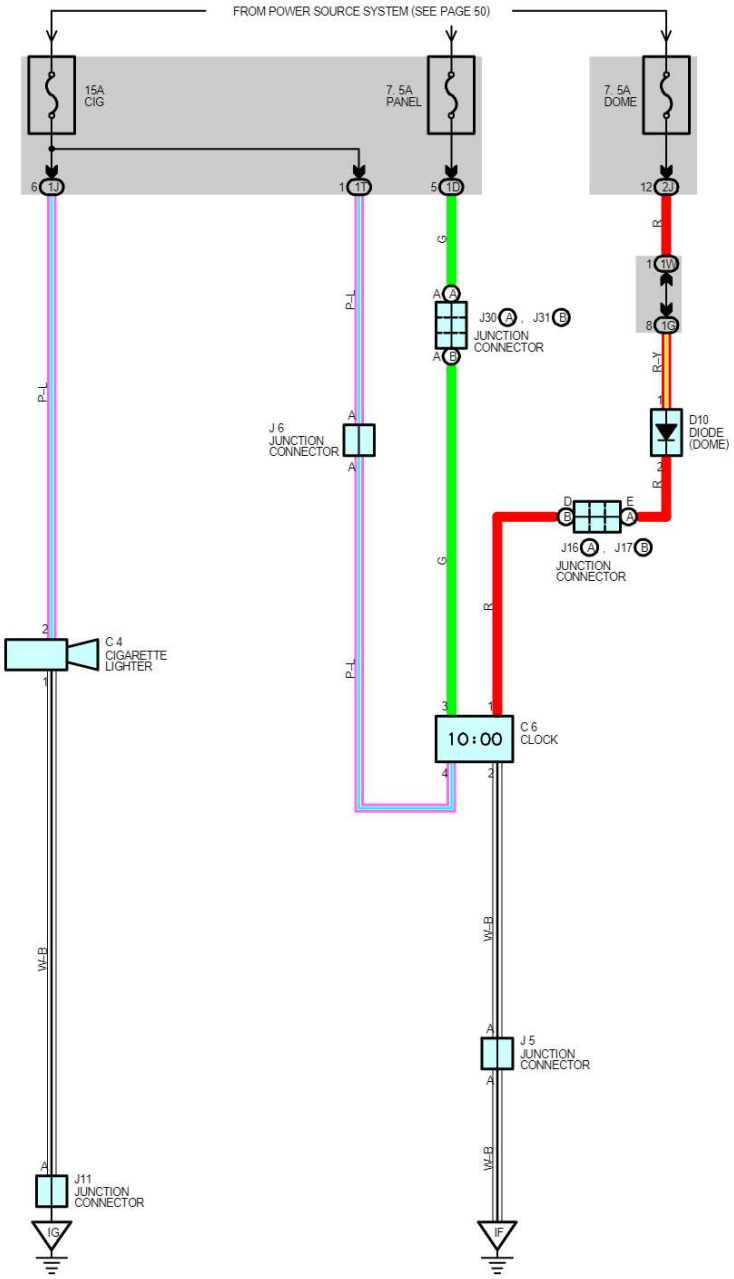



**J2**
BLACK




(Hint : See Page 7)

## CIGARETTE LIGHTER AND CLOCK



**SERVICE HINTS**

**C4 CIGARETTE LIGHTER**

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

**C6 CLOCK**

4–GROUND : Approx. **12** volts with the ignition SW at **ACC** or **ON** position
1–GROUND : Always approx. **12** volts
2–GROUND : Always continuity
3–GROUND : Approx. **12** volts with the light control SW at **TAIL** or **HEAD** position

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| C4 | 30 | J6 | 31 | J30 A | 31 |
| C6 | 30 | J11 | 31 | J31 B | 31 |
| D10 | 30 | J16 A | 31 | | |
| J5 | 31 | J17 B | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1T | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

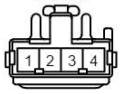
**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |

**C4**



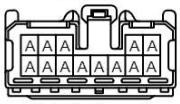

**C6**
BLACK




**D10**
BLACK

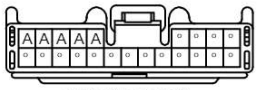



**J5**
ORANGE




(Hint : See Page 7)

**J6**



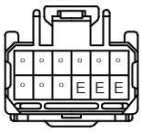

(Hint : See Page 7)

**J11**



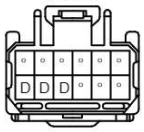

(Hint : See Page 7)

**J16 (A)**
BLACK



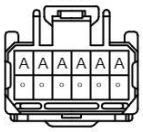

(Hint : See Page 7)

**J17 (B)**
BLACK




(Hint : See Page 7)

**J30 (A)**
GRAY



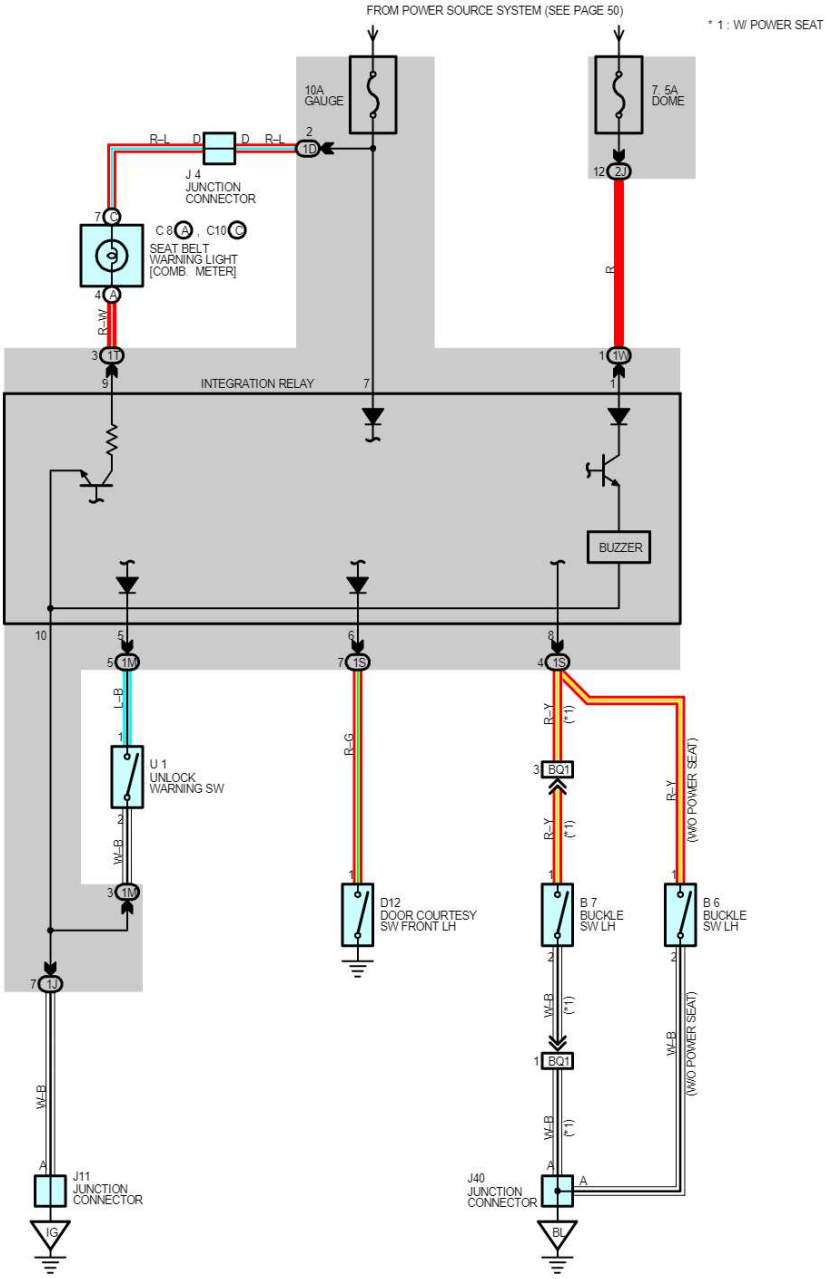

(Hint : See Page 7)

**J31 (B)**
GRAY




(Hint : See Page 7)

# KEY REMINDER AND SEAT BELT WARNING



## SYSTEM OUTLINE

Current always flows to TERMINAL 1 of the integration relay through the DOME fuse.

**1. SEAT BELT WARNING SYSTEM**

When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 7 of the integration relay. At the same time, current flows to TERMINAL 9 of the relay from the GAUGE fuse through the seat belt warning light. This current activates the relay and the current flowing through the warning light flows from TERMINAL 9 of the relay to TERMINAL 10 to GROUND, causing the warning light to light up. A buckle SW off signal is input to TERMINAL 8 of the relay to TERMINAL 10 to GROUND, causing the warning light to light up. A buckle SW off signal is input to TERMINAL 8 of the relay, the current flowing to TERMINAL 1 of the relay flows from TERMINAL 10 to GROUND and the seat belt warning buzzer sounds for approx. 6 seconds. However, if the seat belt is put on during this period (While the buzzer is sounding), signal input to TERMINAL 8 of the relay stops and the current flow from TERMINAL 1 of the relay to TERMINAL 10 to GROUND is cut, causing the buzzer to stop.

**2. KEY REMINDER SYSTEM**

With the ignition key inserted in the key cylinder (Unlock warning SW on), the ignition SW still off and driver's door open (Door courtesy SW on), when a signal is input to TERMINAL 6 of the integration relay, the relay operates, current flows from TERMINAL 1 of the relay to TERMINAL 10 to GROUND and key reminder buzzer sounds.

## SERVICE HINTS

**B6, B7 BUCKLE SW LH**

1–2 : Closed with driver's seat belt in use

**D12 DOOR COURTESY SW FRONT LH**

1–GROUND : Closed with front LH door open

**U1 UNLOCK WARNING SW**

1–2 : Closed with ignition key in cylinder

**INTEGRATION RELAY [INSTRUMENT PANEL J/B]**

10–GROUND : Always continuity
6–GROUND : Continuity with the driver's door open
5–GROUND : Continuity with the ignition key in cylinder
8–GROUND : Continuity with the driver's seat belt in use
1–GROUND : Always approx. **12** volts

**○ : PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| B6 | 32 | C10 C | 30 | J11 | 31 |
| B7 | 34 | D12 | 32 | J40 | 32 |
| C8 A | 30 | J4 | 31 | U1 | 31 |

**⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1S | 20 | Floor Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1T | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| BQ1 | 46 | Floor Wire and Seat No.1 Wire (Under the Driver's Seat) |

# KEY REMINDER AND SEAT BELT WARNING

▽ : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| IG | 40 | Instrument Panel Brace LH |
| BL | 44 | Under the Left Center Pillar |

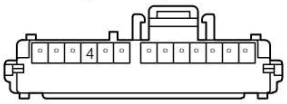
**B6**



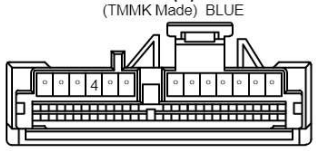

**B7**



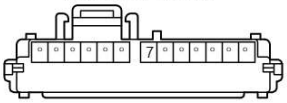

**C8 (A)**
(TMC Made) BLUE



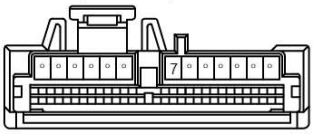

**C8 (A)**
(TMMK Made) BLUE




**C10 (C)**
(TMC Made) BROWN



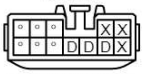

**C10 (C)**
(TMMK Made) BROWN




**D12**

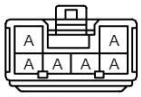



**J4**
BLACK



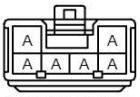

(Hint : See Page 7)

**J11**




(Hint : See Page 7)

**J40**

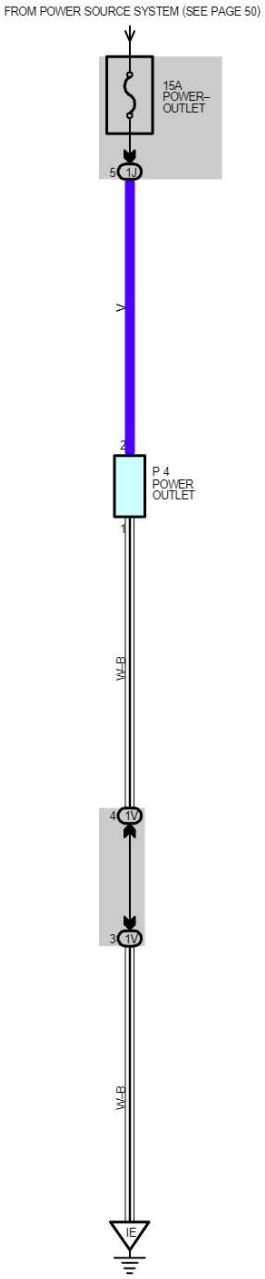



(Hint : See Page 7)

**U1**



## POWER OUTLET



**SERVICE HINTS**

**P4 POWER OUTLET**

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

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| P4 | 31 | | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | | |

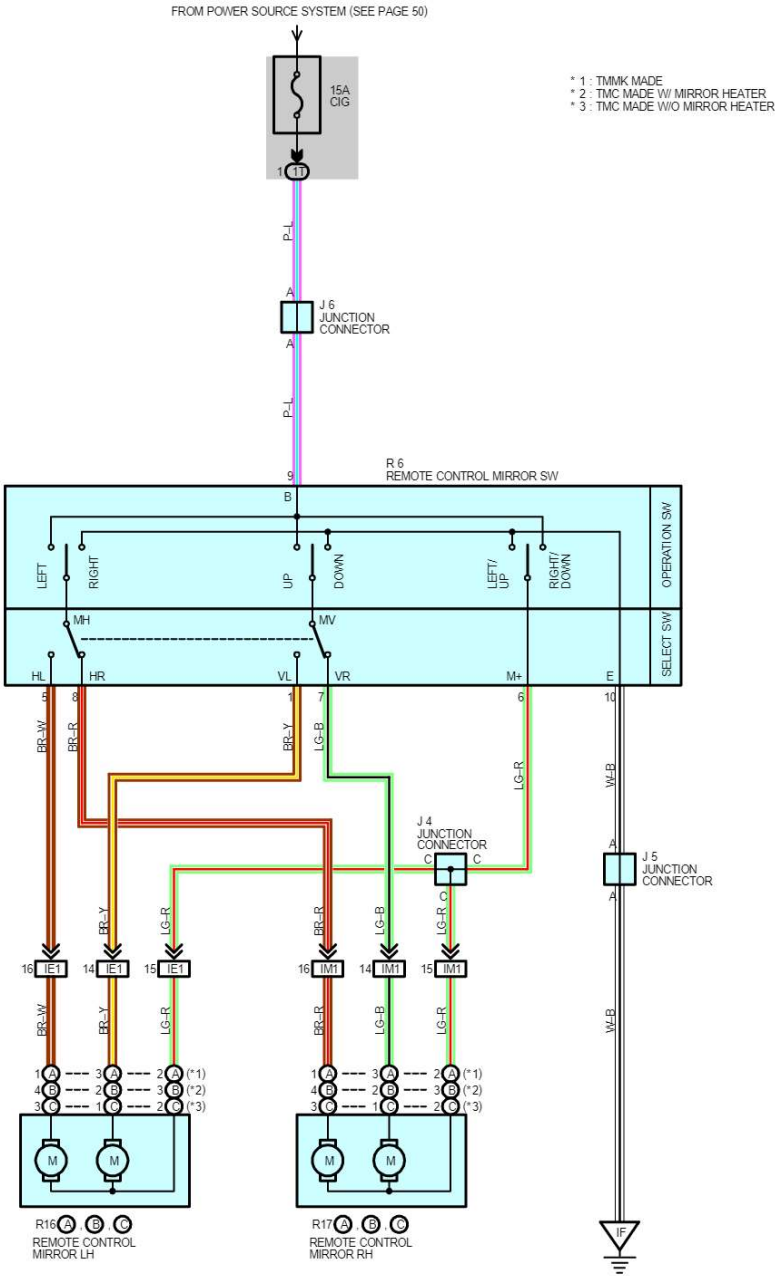
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |

**P4**
ORANGE



# REMOTE CONTROL MIRROR



**SERVICE HINTS**

**R6 REMOTE CONTROL MIRROR SW**

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

**○ : PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|
| J4 | 31 | R16 | A | 33 | R17 | B | 33 |
| J5 | 31 | | B | 33 | | C | 33 |
| J6 | 31 | | C | 33 | | | |
| R6 | 31 | R17 | A | 33 | | | |

**⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1T | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |

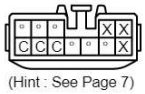
**▭ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |

**▽ : GROUND POINTS**

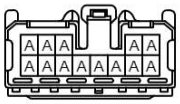
| Code | See Page | Ground Points Location |
|---|---|---|
| IF | 40 | Left Kick Panel |

**J4**
BLACK




(Hint : See Page 7)

**J5**
ORANGE




(Hint : See Page 7)

**J6**




(Hint : See Page 7)

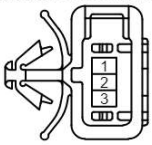
**R6**




**R16 (A), R17 (A)**
(TMMK Made w/ Mirror Heater)




**R16 (A), R17 (A)**
(TMMK Made w/o Mirror Heater)



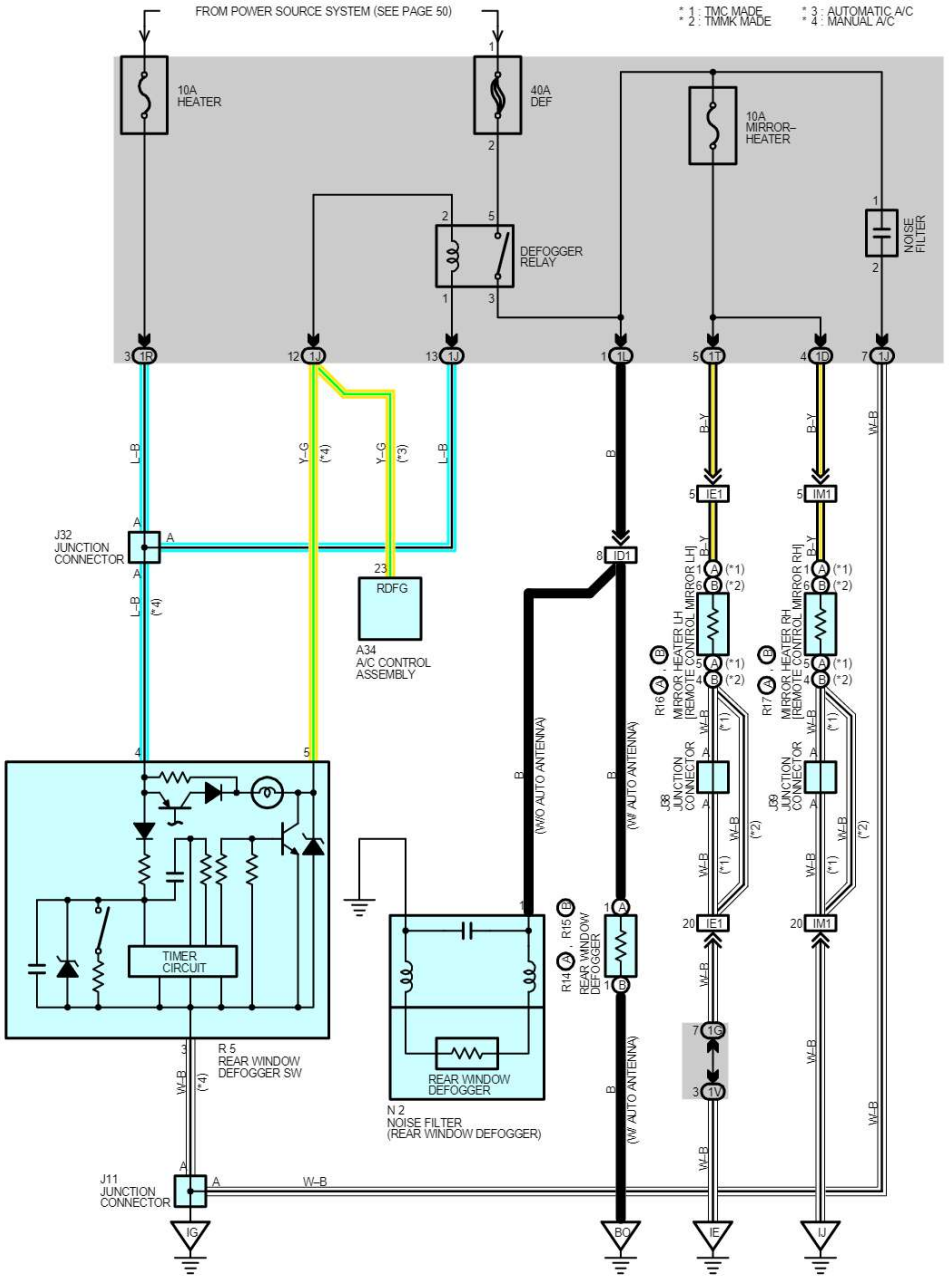

**R16 (B), R17 (B)**
(TMC Made w/ Mirror Heater)




**R16 (C), R17 (C)**
(TMC Made w/o Mirror Heater)



# REAR WINDOW DEFOGGER AND MIRROR HEATER



**SERVICE HINTS**

**DEFOGGER RELAY [INSTRUMENT PANEL J/B]**

5–3 : Closed with the ignition SW on and the rear window defogger SW on

**R5 REAR WINDOW DEFOGGER SW**

4–GROUND : Approx. **12** volts with the ignition SW on
3–GROUND : Always continuity
5–GROUND : Continuity with the rear window defogger SW on and approx. **15** minutes thereafter

**R16 (A), (B), R17 (A), (B) MIRROR HEATER LH, RH [REMOTE CONTROL MIRROR LH, RH]**

(A)1, (B) 6–GROUND : Approx. **12** volts with the rear window defogger SW on
(A)5, (B) 4–GROUND : Always continuity

**: PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|
| A34 | 30 | N2 | | 33 | R16 | B | 33 |
| J11 | 31 | R5 | | 31 | R17 | A | 33 |
| J32 | 31 | R14 | A | 33 | | B | 33 |
| J38 | 32 | R15 | B | 33 | | | |
| J39 | 32 | R16 | A | 33 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1L | | |
| 1R | | |
| 1T | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |

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

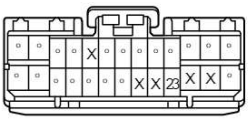
| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| ID1 | 40 | Floor Wire and Cowl Wire (Left Kick Panel) |
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |

**: GROUND POINTS**

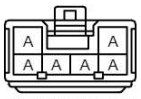
| Code | See Page | Ground Points Location |
|---|---|---|
| IE | 40 | Cowl Side Panel LH |
| IG | 40 | Instrument Panel Brace LH |
| IJ | 40 | Right Kick Panel |
| BO | 44 | Right Quarter Pillar |

# REAR WINDOW DEFOGGER AND MIRROR HEATER

**A34**

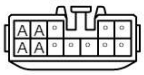


**J11**



(Hint : See Page 7)

**J32**
GRAY



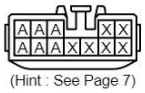
(Hint : See Page 7)

**J38**



(Hint : See Page 7)

**J39**



(Hint : See Page 7)

**N2**



**R5**
BLACK



**R14 (A)**
BLACK



**R15 (B)**
BLACK



**R16 (A)**
(TMC Made)



**R16 (B)**
(TMMK Made)



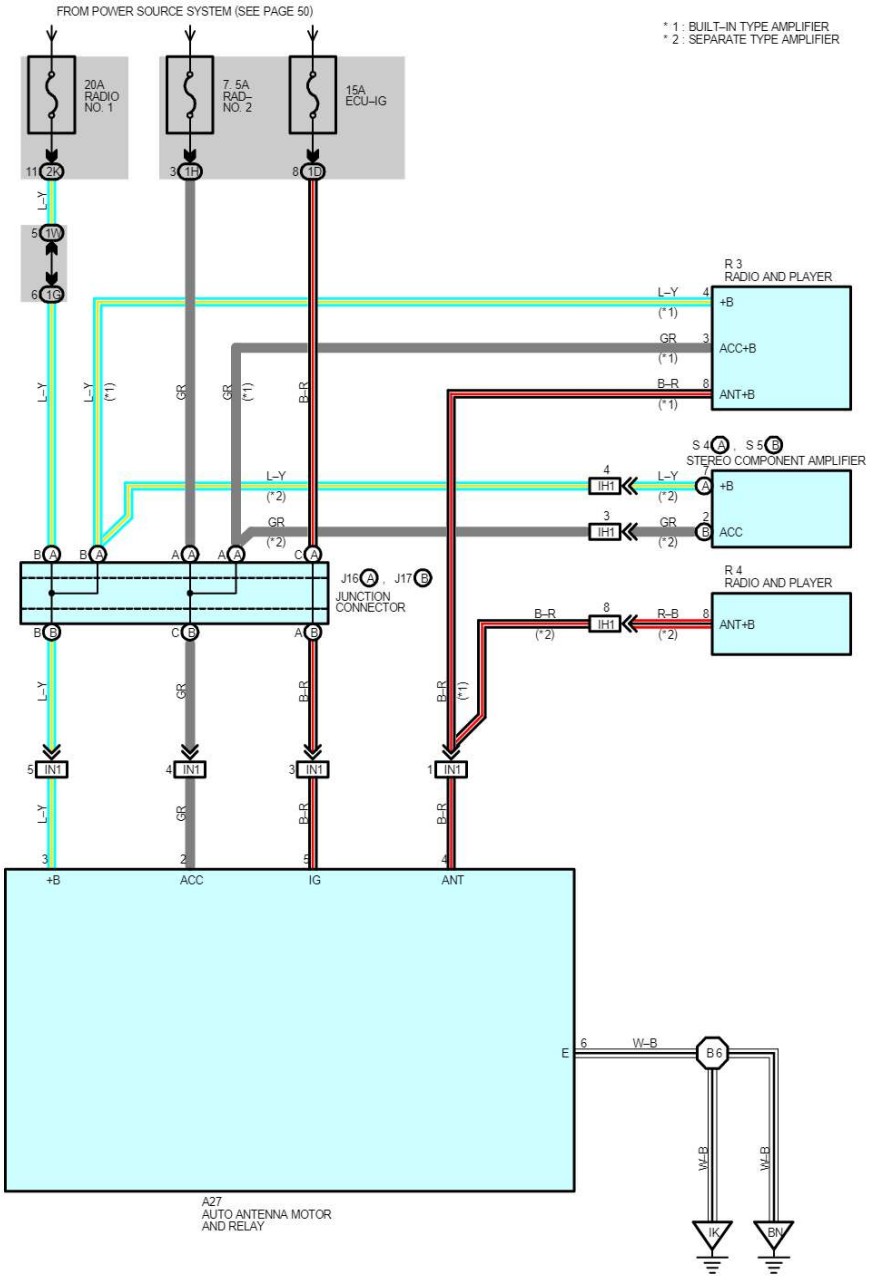
**R17 (A)**
(TMC Made)



**R17 (B)**
(TMMK Made)



# AUTO ANTENNA



**SERVICE HINTS**

**A27 AUTO ANTENNA MOTOR AND RELAY**

3–GROUND : Always approx. **12** volts
5–GROUND : Approx. **12** volts with the ignition SW at **ON** position
2–GROUND : Approx. **12** volts with the ignition SW at **ACC** or **ON** position
6–GROUND : Always continuity

**: PARTS LOCATION**

| Code | | See Page | Code | | See Page | Code | | See Page |
|---|---|---|---|---|---|---|---|---|
| A27 | | 32 | R3 | | 31 | S5 | B | 31 |
| J16 | A | 31 | R4 | | 31 | | | |
| J17 | B | 31 | S4 | A | 31 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1H | | |
| 1W | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2K | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IH1 | 40 | Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH) |
| IN1 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |

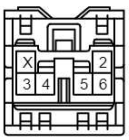
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IK | 40 | Right Kick Panel |
| BN | 44 | Under the Right Center Pillar |

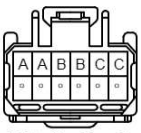
**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| B6 | 44 | Floor No.2 Wire | | | |

**A27**

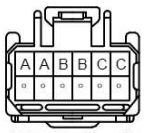



**J16 (A)**
BLACK



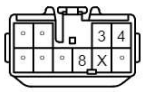

(Hint : See Page 7)

**J17 (B)**
BLACK

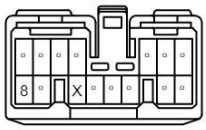



(Hint : See Page 7)

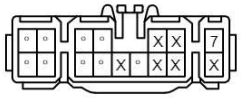
**R3**



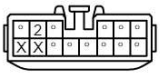

**R4**



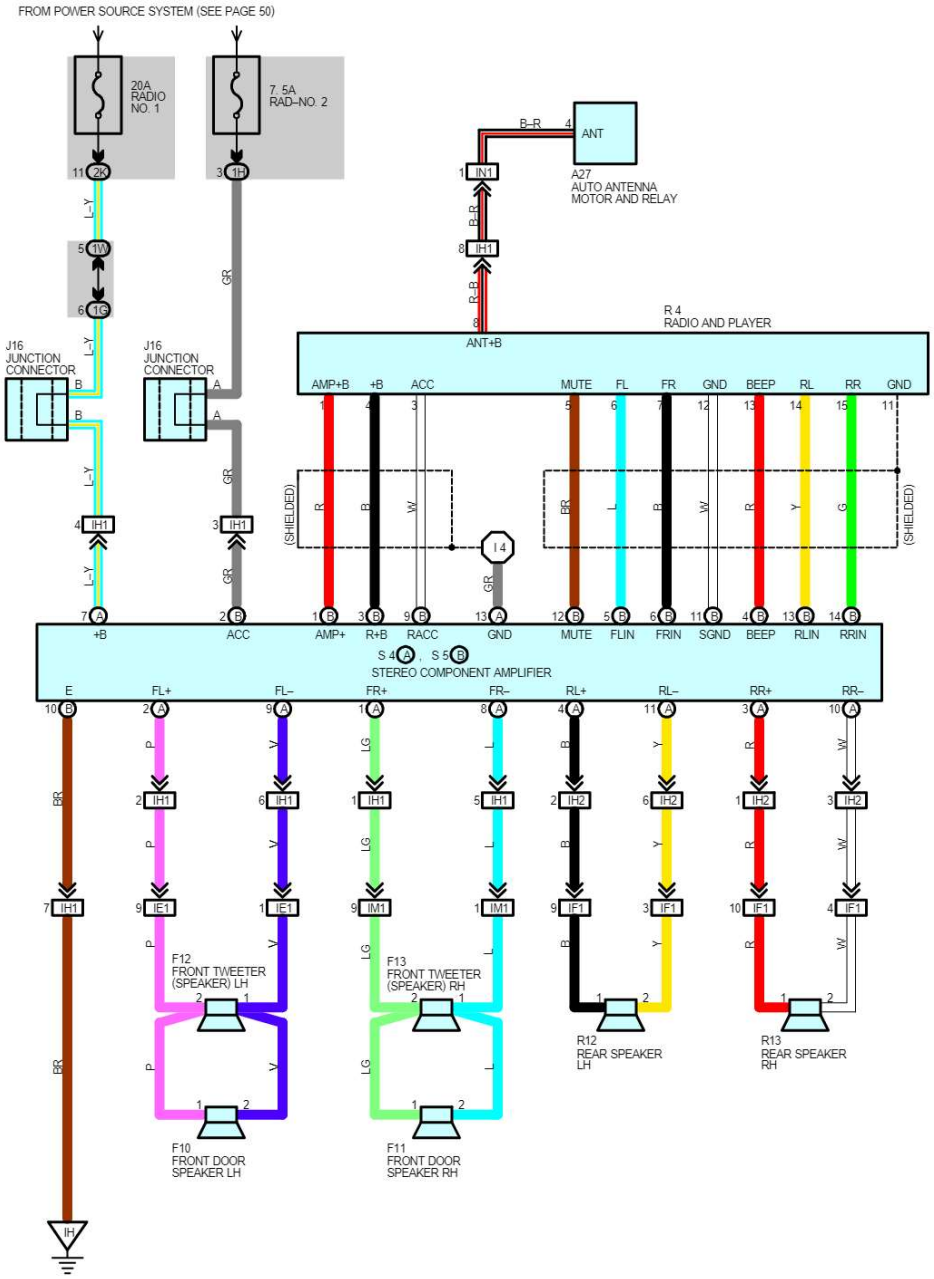

**S4 (A)**




**S5 (B)**



# RADIO AND PLAYER (SEPARATE TYPE AMPLIFIER)



**SERVICE HINTS**

**S4 (A), S5 (B) STEREO COMPONENT AMPLIFIER**

(A) 7–GROUND : Always approx. **12** volts
(B) 2–GROUND : Approx. **12** volts with the ignition SW at **ON** or **ACC** position
(B)10–GROUND : Always continuity

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | | See Page |
|---|---|---|---|---|---|---|
| A27 | 32 | F13 | 32 | R13 | | 33 |
| F10 | 32 | J16 | 31 | S4 | A | 31 |
| F11 | 32 | R4 | 31 | S5 | B | 31 |
| F12 | 32 | R12 | 33 | | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1G | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1W | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2K | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IF1 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IH1 | 40 | Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH) |
| IH2 | | |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IN1 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |

**: GROUND POINTS**

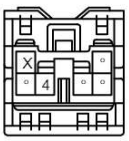
| Code | See Page | Ground Points Location |
|---|---|---|
| IH | 40 | Instrument Panel Brace RH |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I4 | 42 | Instrument Panel No.2 Wire | | | |

## RADIO AND PLAYER (SEPARATE TYPE AMPLIFIER)

**A27**




**F10**
BLUE




**F11**
BLUE




**F12**




**F13**

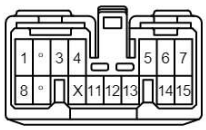



**J16**
BLACK




(Hint : See Page 7)

**R4**



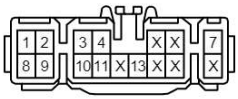

**R12**



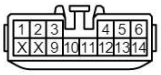

**R13**



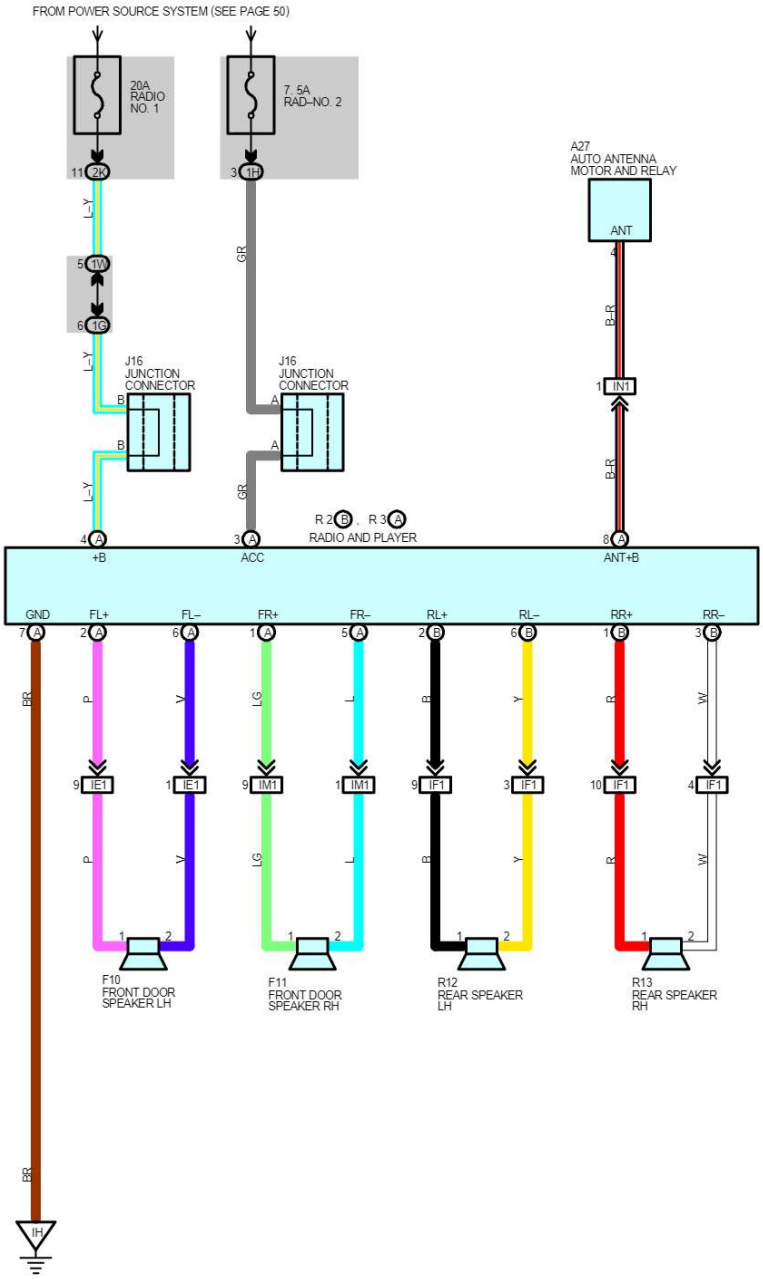

**S4 (A)**




**S5 (B)**



# RADIO AND PLAYER (BUILT–IN TYPE AMPLIFIER)



**SERVICE HINTS**

**R3 (A) RADIO AND PLAYER**

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

**○ : PARTS LOCATION**

| Code | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|
| A27 | 32 | J16 | | 31 | R12 | 33 |
| F10 | 32 | R2 | B | 31 | R13 | 33 |
| F11 | 32 | R3 | A | 31 | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1G | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1H | | |
| 1W | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2K | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

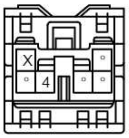
**: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS**

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IF1 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| IN1 | 42 | Floor No.2 Wire and Instrument Panel Wire (Right Kick Panel) |

**▽ : GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| IH | 40 | Instrument Panel Brace RH |

**A27**



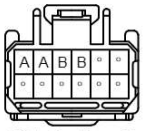

**F10**
BLUE




**F11**
BLUE




**J16**
BLACK

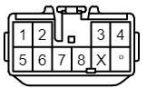



(Hint : See Page 7)

**R2 (B)**




**R3 (A)**



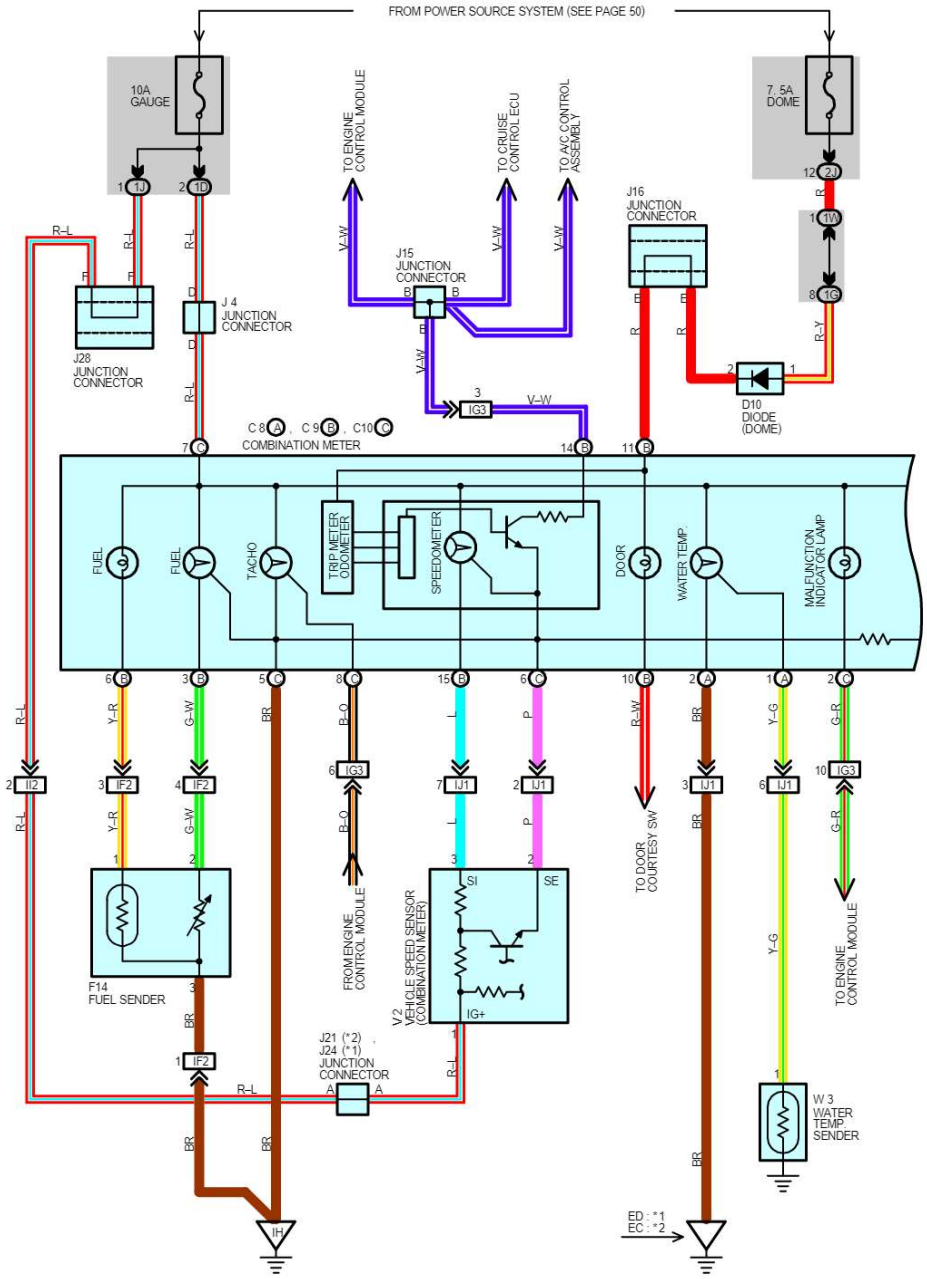

**R12**

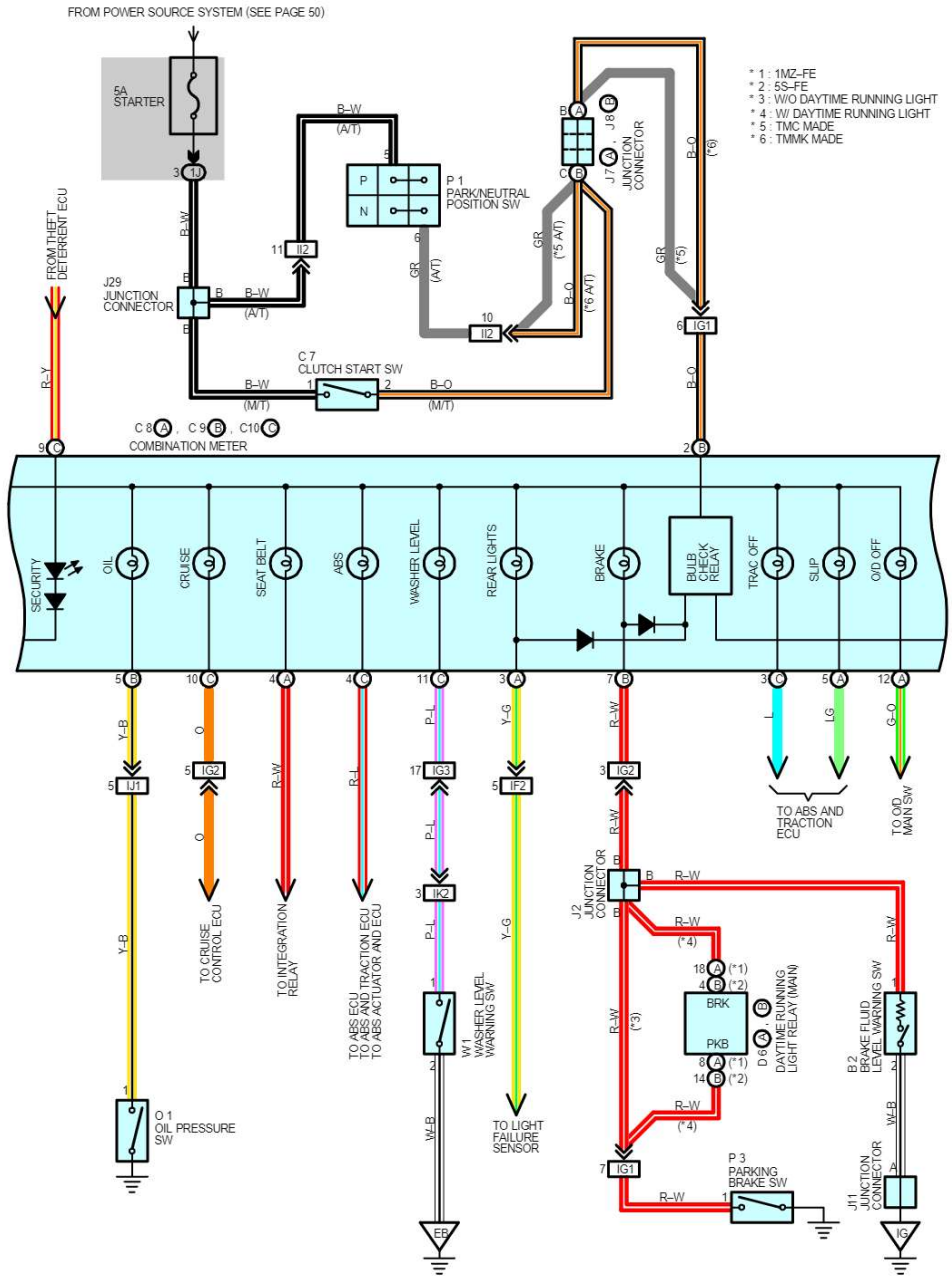



**R13**

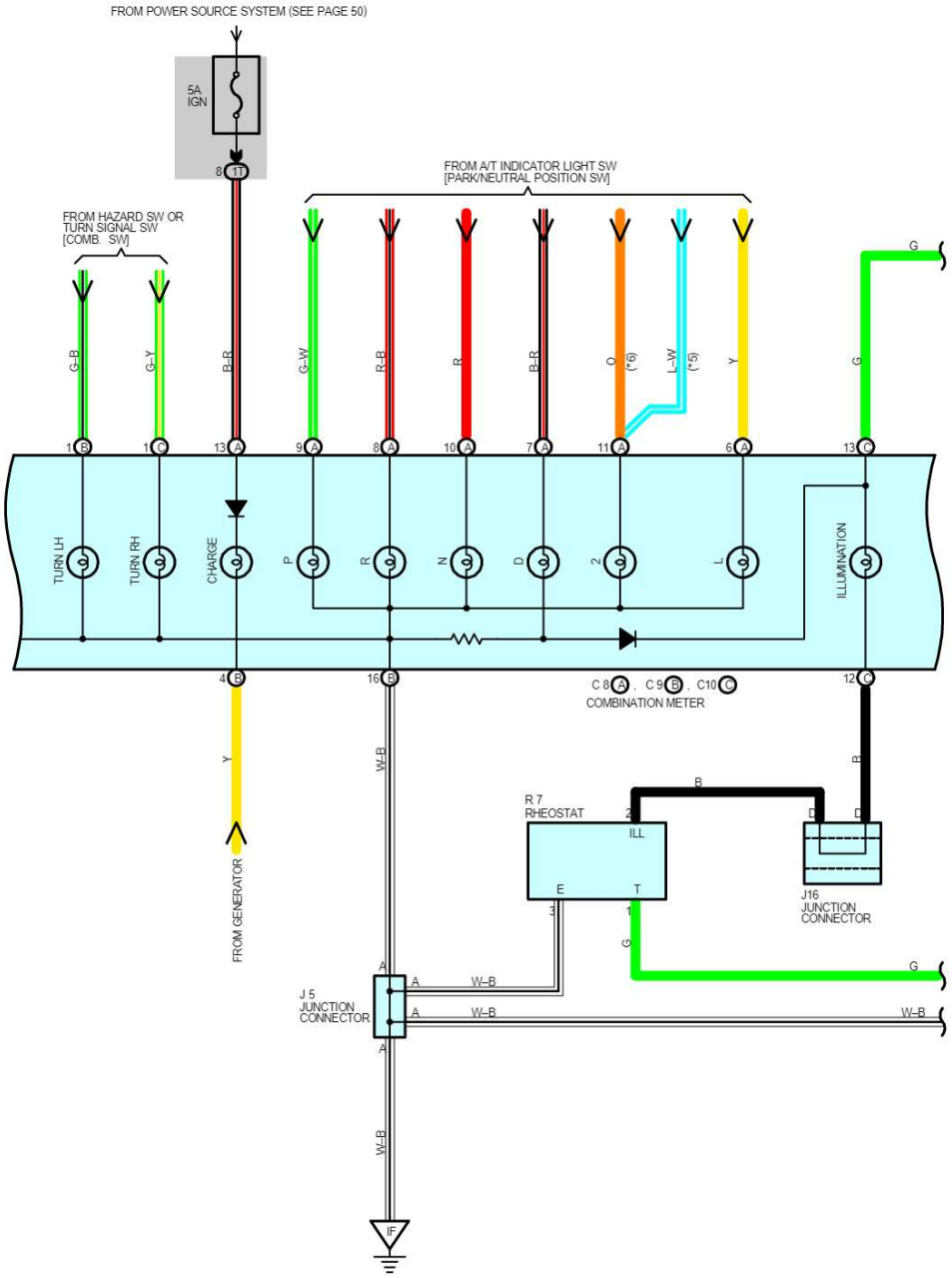


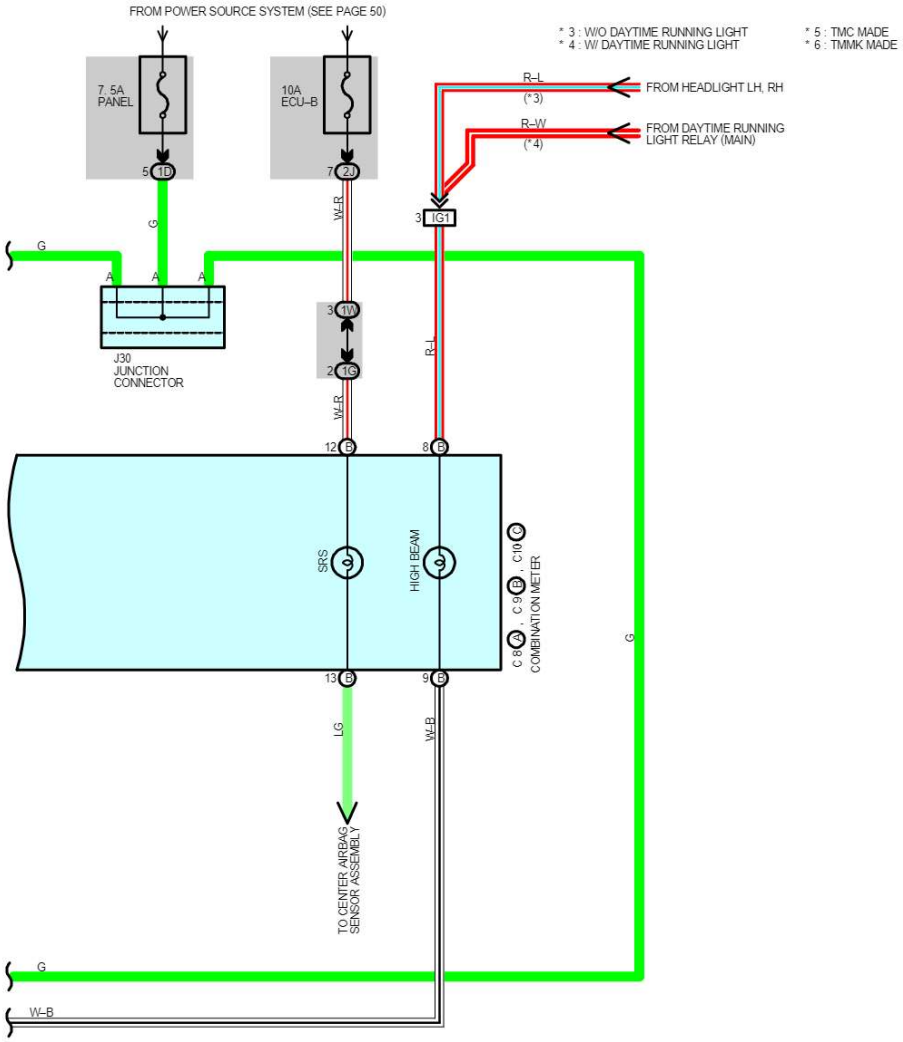
## COMBINATION METER




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
5A STARTER
B–W (A/T)
P 1 PARK/NEUTRAL POSITION SW
J7 , J8 JUNCTION CONNECTOR
B–O (*6)
GR (*5)
GR (*5 A/T)
B–O (*6 A/T)
GR (A/T)
* 1 : 1MZ–FE
* 2 : 5S–FE
* 3 : W/O DAYTIME RUNNING LIGHT
* 4 : W/ DAYTIME RUNNING LIGHT
* 5 : TMC MADE
* 6 : TMMK MADE
FROM THEFT DETERRENT ECU
R–Y
J29 JUNCTION CONNECTOR
B–W (A/T)
C 7 CLUTCH START SW
B–W (M/T)
B–O (M/T)
C 8 , C 9 , C10 COMBINATION METER
SECURITY
OIL
CRUISE
SEAT BELT
ABS
WASHER LEVEL
REAR LIGHTS
BRAKE
BULB CHECK RELAY
TRAC OFF
SLIP
O/D OFF
Y–B
O
R–W
R–L
P–L
Y–G
L
LG
G–O
TO CRUISE CONTROL ECU
TO INTEGRATION RELAY
TO ABS ECU
TO ABS AND TRACTION ECU
TO ABS ACTUATOR AND ECU
TO ABS AND TRACTION ECU
TO LIGHT FAILURE SENSOR
TO O/D MAIN SW
O 1 OIL PRESSURE SW
W1 WASHER LEVEL WARNING SW
W–B
J2 JUNCTION CONNECTOR
R–W (*4)
R–W (*3)
BRK
PKB
DAYTIME RUNNING LIGHT RELAY (MAIN)
B 2 BRAKE FLUID LEVEL WARNING SW
P 3 PARKING BRAKE SW
J11 JUNCTION CONNECTOR
EB
IG

# COMBINATION METER




FROM POWER SOURCE SYSTEM (SEE PAGE 50)
* 3 : W/O DAYTIME RUNNING LIGHT
* 4 : W/ DAYTIME RUNNING LIGHT
* 5 : TMC MADE
* 6 : TMMK MADE
7.5A PANEL
10A ECU-B
5 1D
7 2J
R-L
(*3)
FROM HEADLIGHT LH, RH
R-W
(*4)
FROM DAYTIME RUNNING LIGHT RELAY (MAIN)
3 IG1
G
W-R
A A A
3 1M
2 1G
J30 JUNCTION CONNECTOR
R-L
W-R
12 B
8 B
SRS
HIGH BEAM
C8 A , C9 B , C10 C
COMBINATION METER
G
13 B
9 B
LG
W-B
TO CENTER AIRBAG SENSOR ASSEMBLY
G
W-B

# COMBINATION METER

**SERVICE HINTS**

**B2 BRAKE FLUID LEVEL WARNING SW**

1–2 : Closed with the float down

**C8 (A), C9 (B), C10 (C) COMBINATION METER**

(B) 2–GROUND : Approx. **12** volts with the ignition SW at **ST** position and the shift lever at **P** or **N** position (A/T)
Approx. **12** volts with the ignition SW at **ST** position and the clutch pedal depressed (M/T)
(A)13, (C) 7–GROUND : Approx. **12** volts with the ignition SW at **ON** position
(B)11, (B) 12–GROUND: Always approx. **12** volts
(A) 2, (B) 9, (B) 16, (C) 5–GROUND : Always continuity

**O1 OIL PRESSURE SW**

1–GROUND : Closed with the oil pressure above approx. **20** kpa (**2.8** psi, **0.2** kgf/cm$^2$)

**P3 PARKING BRAKE SW**

1–GROUND : Closed with the parking brake lever pulled up

**W3 WATER TEMP. SENDER**

1–GROUND : Approx. **160**–**240** Ω (**50**°C, **122**°F)
Approx. **17.1**–**21.2** Ω (**120**°C, **248**°F)

**: PARTS LOCATION**

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| B2 | 26 (1MZ–FE) | J5 | 31 | O1 | 29 (5S–FE) |
| | 28 (5S–FE) | J7 A | 31 | P1 | 27 (1MZ–FE) |
| C7 | 30 | J8 B | 31 | | 29 (5S–FE) |
| C8 A | 30 | J11 | 31 | P3 | 31 |
| C9 B | 30 | J15 | 31 | R7 | 31 |
| C10 C | 30 | J16 | 31 | V2 | 27 (1MZ–FE) |
| D6 A | 30 | J21 | 31 | | 29 (5S–FE) |
| B | 30 | J24 | 31 | W1 | 27 (1MZ–FE) |
| D10 | 30 | J28 | 31 | | 29 (5S–FE) |
| F14 | 32 | J29 | 31 | W3 | 27 (1MZ–FE) |
| J2 | 31 | J30 | 31 | | 29 (5S–FE) |
| J4 | 31 | O1 | 27 (1MZ–FE) | | |

**: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR**

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1D | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | | |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1T | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

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

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| IF2 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IG2 | 40 | |
| IG3 | 40 | Instrument Panel Wire and Cowl Wire (Under The Blower Motor) |
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| IJ1 | 42 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| IK2 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

▽ : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE)<br>38 (5S–FE) | Left Radiator Side Support |
| EC | 38 (5S–FE) | Intake Manifold |
| ED | 36 (1MZ–FE) | Rear Side of the Surge Tank |
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |
| IH | 40 | Instrument Panel Brace RH |

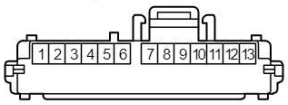
**B2**
GRAY



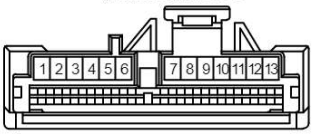

**C7**



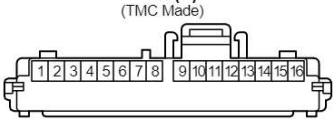

**C8 (A)**
(TMC Made) BLUE



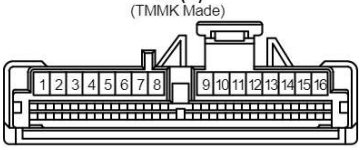

**C8 (A)**
(TMMK Made) BLUE



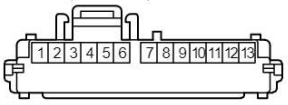

**C9 (B)**
(TMC Made)



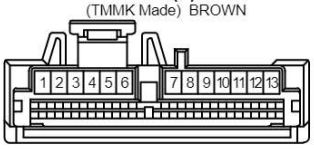

**C9 (B)**
(TMMK Made)



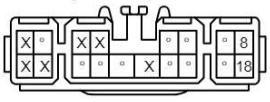

**C10 (C)**
(TMC Made) BROWN



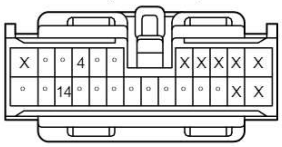

**C10 (C)**
(TMMK Made) BROWN




**D6 (A)**
(TMC Made) GRAY




**D6 (B)**
(TMMK Made)



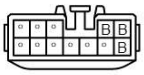

**D10**
BLACK




**F14**

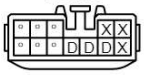



**J2**
BLACK



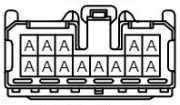

(Hint : See Page 7)

**J4**
BLACK



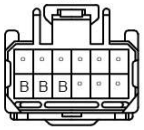

(Hint : See Page 7)

**J5**
ORANGE




(Hint : See Page 7)

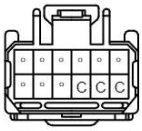
**J7 (A)**
GRAY




(Hint : See Page 7)

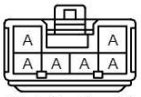
## COMBINATION METER

**J8 (B)**
GRAY



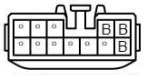

(Hint : See Page 7)

**J11**



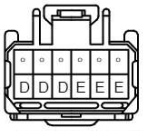

(Hint : See Page 7)

**J15**
BLACK



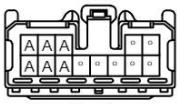

(Hint : See Page 7)

**J16**
BLACK



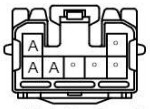

(Hint : See Page 7)

**J21**
GRAY



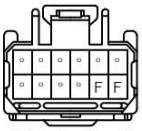

(Hint : See Page 7)

**J24**



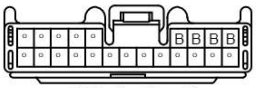

(Hint : See Page 7)

**J28**




(Hint : See Page 7)

**J29**




(Hint : See Page 7)

**J30**
GRAY

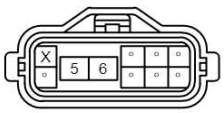



(Hint : See Page 7)

**O1**
GRAY




**P1**
GRAY




**P3**




**R7**
BLACK




**V2**
BLACK




**W1**
BLACK



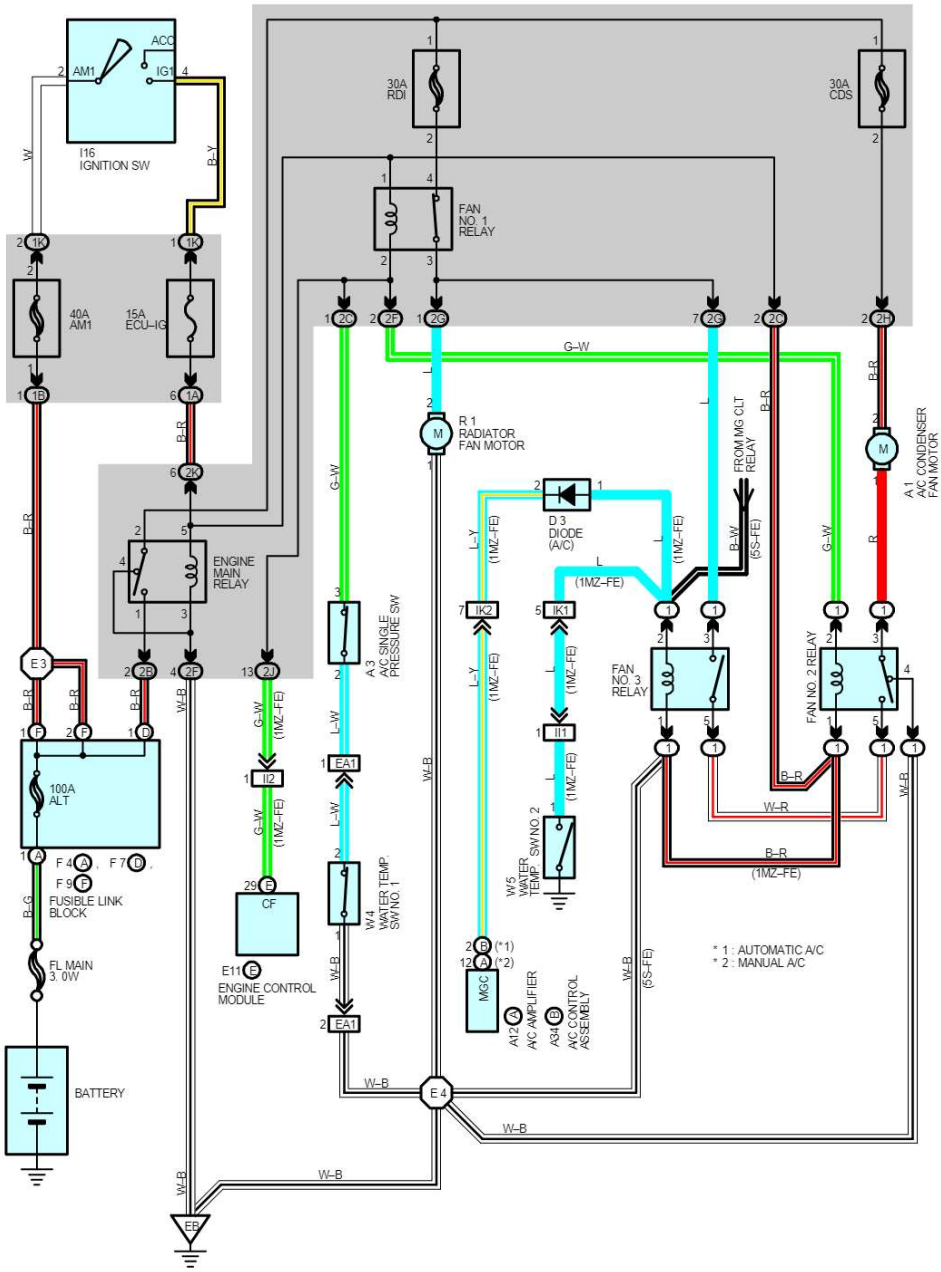

**W3**
(1MZ–FE) DARK GRAY




**W3**
(5S–FE) GRAY



# RADIATOR FAN AND CONDENSER FAN



## SYSTEM OUTLINE

**FAN MOTOR OPERATION (1MZ–FE)**

With the ignition SW turned on, the current through the ECU–IG fuse flows to the FAN NO.1 relay (Coil side), FAN NO.2 relay (Coil side) and FAN NO.3 relay (Coil side). Furthermore, the current through the FAN NO.1 relay (Coil side) or the FAN NO.2 relay (Coil side) flows to TERMINAL 3 of the A/C single pressure SW to TERMINAL 2 to TERMINAL 2 of the water temp. SW No.1 to TERMINAL 1 to GROUND, causing the FAN NO.1 relay to turn off and the FAN NO.2 relay to turn on.

**1. LOW SPEED OPERATION**

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

When the A/C system is activated, the current from ECU–IG fuse flows to the FAN NO.3 relay (Coil side) to TERMINAL 1 of the diode (A/C) to TERMINAL 2 to TERMINAL (A)12 of the A/C amplifier (Manual A/C) or (B) 2 of the A/C control assembly (Automatic A/C) causing the FAN NO.3 relay to turn on. As a result, the current through the CDS fuse flows to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 5 to TERMINAL 5 of the FAN NO.3 relay to TERMINAL 3 to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND. As this flowing in series for the motors, the motors rotate at low speed.

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

**2. HIGH SPEED OPERATION**

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

When the A/C single pressure SW is turned off, the current from the RDI fuse flows to the FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND. At the same time, the current from the CDS fuse flows to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 4 to GROUND.

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

**FAN MOTOR OPERATION (5S–FE)**

With the ignition SW turned on, the current through the ECU–IG fuse flows to the FAN NO.1 relay (Coil side), FAN NO.2 relay (Coil side). furthermore, the current through the FAN NO.1 relay (Coil side) or the FAN NO.2 relay (Coil side) flows to TERMINAL 3 of the A/C single pressure SW to TERMINAL 2 to TERMINAL 2 of the water temp. SW No.1 to TERMINAL 1 to GROUND, causing the FAN NO.1 relay to turn off and the FAN NO.2 relay to turn on.

**1. LOW SPEED OPERATION**

When the ignition SW is turned on and the A/C system is activated, the A/C condenser fan motor and the radiator fan motor rotates at low speed.

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

**2. HIGH SPEED OPERATION**

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

When the A/C single pressure SW is turned off, the current from the RDI fuse flows to the FAN NO.1 relay (Point side) to TERMINAL 2 of the radiator fan motor to TERMINAL 1 to GROUND. At the same time, the current from the CDS fuse flows to TERMINAL 2 of the A/C condenser fan motor to TERMINAL 1 to TERMINAL 3 of the FAN NO.2 relay to TERMINAL 4 to GROUND.

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

## SERVICE HINTS

**A3 A/C SINGLE PRESSURE SW**

3–2 : Open above approx. **15.5** kgf/cm$^2$ (**224** psi, **1520** kpa)
Closed below approx. **12.5** kgf/cm$^2$ (**181** psi, **1225** kpa)

**W4 WATER TEMP. SW NO.1**

2–1 : Open above approx. **95**°C (**203**° F)

**W5 WATER TEMP. SW NO.2 (1MZ–FE)**

1–GROUND : Closed above approx. **90**°C (**194**°F)

# RADIATOR FAN AND CONDENSER FAN

## : PARTS LOCATION

| Code | | See Page | Code | | See Page | Code | See Page |
|---|---|---|---|---|---|---|---|
| A1 | | 26 (1MZ–FE) | E11 | E | 30 | I16 | 30 |
| | | 28 (5S–FE) | F4 | A | 26 (1MZ–FE) | R1 | 27 (1MZ–FE) |
| A3 | | 26 (1MZ–FE) | | | 28 (5S–FE) | | 29 (5S–FE) |
| | | 28 (5S–FE) | F7 | D | 26 (1MZ–FE) | W4 | 27 (1MZ–FE) |
| A12 | A | 30 | | | 28 (5S–FE) | | 29 (5S–FE) |
| A34 | B | 30 | F9 | F | 26 (1MZ–FE) | W5 | 27 (1MZ–FE) |
| D3 | | 26 (1MZ–FE) | | | 28 (5S–FE) | | |

## : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 24 | Engine Room R/B No.1 (Engine Compartment Left) |

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1A | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1B | | |
| 1K | | |
| 2B | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2C | | |
| 2F | | |
| 2G | | |
| 2H | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EA1 | 36 (1MZ–FE)<br>38 (5S–FE) | Engine Room Main Wire and Engine Room Main No.3 Wire (Radiator LH) |
| II1 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II2 | | |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IK2 | | |

## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE)<br>38 (5S–FE) | Left Radiator Side Support |

## : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E3 | 36 (1MZ–FE)<br>38 (5S–FE) | Cowl Wire | E4 | 36 (1MZ–FE)<br>38 (5S–FE) | Engine Room Main Wire |

∗ 1 : 1MZ–FE Except California

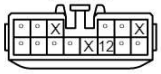
**A1**
GRAY



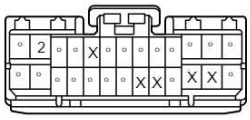

**A3**
BLACK




**A12 (A)**
ORANGE



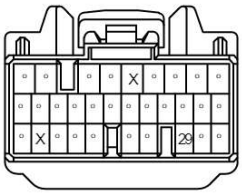

**A34 (B)**



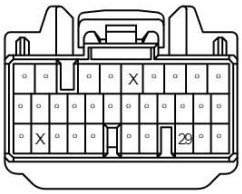

**D3**
ORANGE



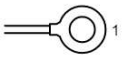

**E11 (E)**
(∗ 1) BLACK



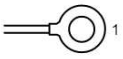

**E11 (E)**
(1MZ–FE California)




**F4 (A)**



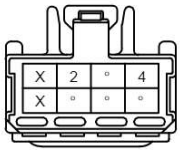

**F7 (D)**




**F9 (F)**
ORANGE




**I16**




**R1**
GRAY




**W4**
(1MZ–FE) GRAY



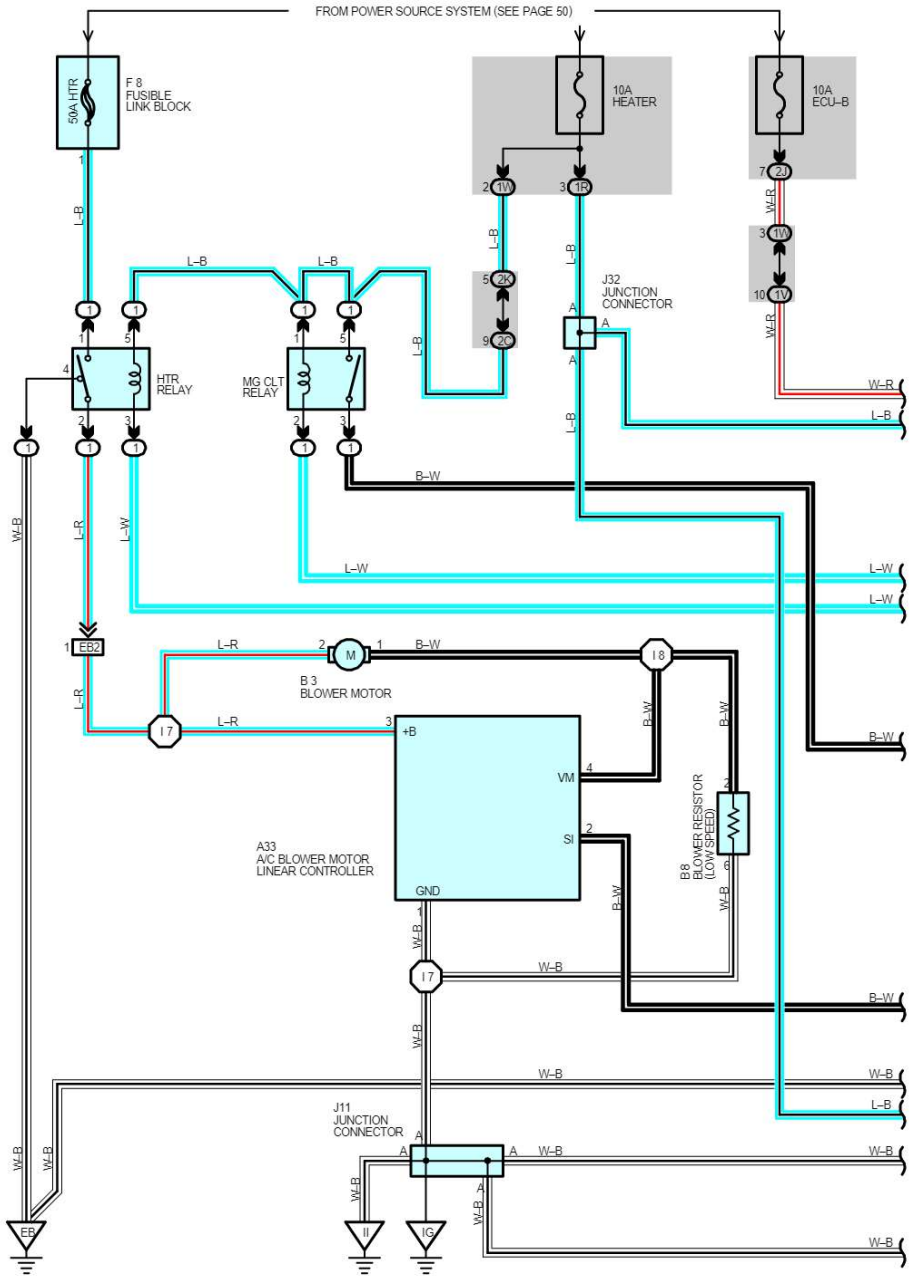

**W4**
(5S–FE)

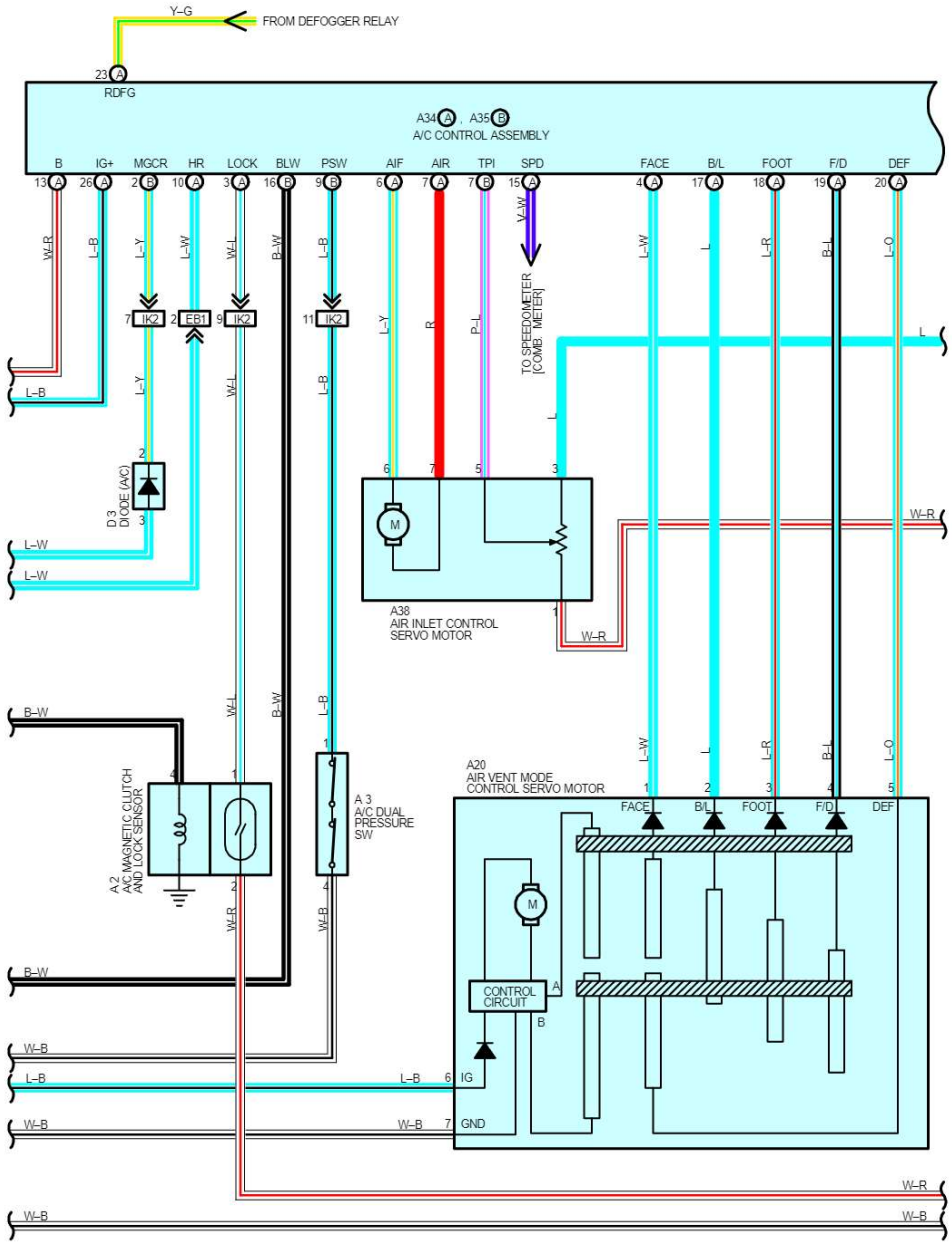



**W5**
GRAY

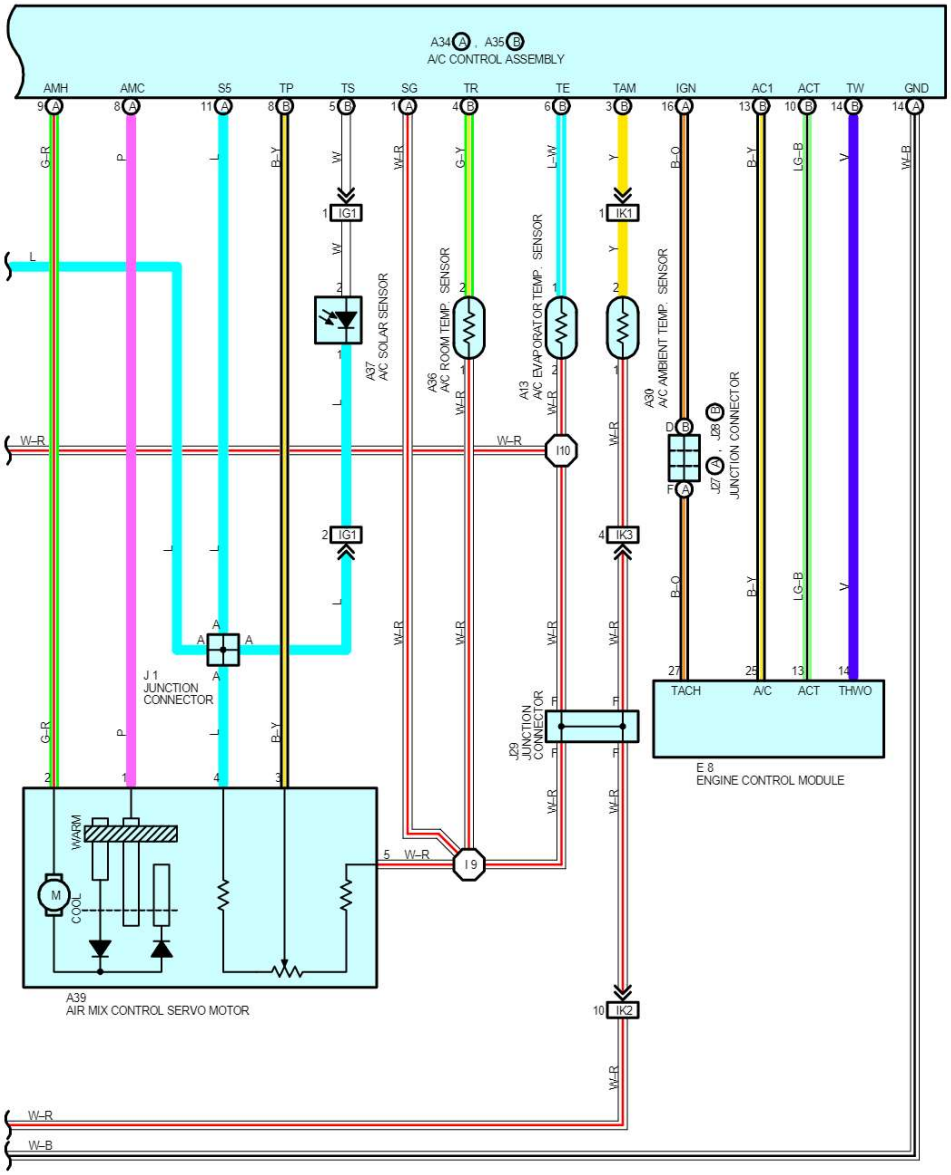


## AIR CONDITIONING (AUTOMATIC A/C)




Y–G
FROM DEFOGGER RELAY
23 A
RDFG
A34 A , A35 B
A/C CONTROL ASSEMBLY
B
IG+
MGCR
HR
LOCK
BLW
PSW
AIF
AIR
TPI
SPD
FACE
B/L
FOOT
F/D
DEF
V–W
TO SPEEDOMETER (COMB. METER)
IK2
EB1
D 3
DIODE (A/C)
A38
AIR INLET CONTROL SERVO MOTOR
A 2
A/C MAGNETIC CLUTCH AND LOCK SENSOR
A 3
A/C DUAL PRESSURE SW
A20
AIR VENT MODE CONTROL SERVO MOTOR
CONTROL CIRCUIT
IG
GND

# AIR CONDITIONING (AUTOMATIC A/C)



## SYSTEM OUTLINE

### 1. HEATER BLOWER MOTOR OPERATION

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

* Low speed operation
  When the blower SW (A/C control assembly) is pushed to LOW SPEED position, the current to TERMINAL HR of the A/C control assembly flows to TERMINAL GND of the A/C control assembly to GROUND and turns the HTR relay on. As a result, the current to TERMINAL 1 of the HTR 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 to TERMINAL 6 to GROUND and causes the blower motor to rotate at low speed.

* High speed operation
  When the blower SW (A/C control assembly) is pushed to HIGH SPEED position, the current to TERMINAL HR of the A/C control assembly flows to TERMINAL GND of the A/C control assembly to GROUND and turns the HTR relay on. As a result, the current to TERMINAL 1 of the HTR relay flows to TERMINAL 2 to TERMINAL 2 of the blower motor to TERMINAL 1 to TERMINAL 4 of the A/C blower motor linear controller to TERMINAL 2 to TERMINAL BLW of the A/C control assembly (Which is activated when the blower SW is pushed to high speed position) to TERMINAL GND to GROUND without passing through the blower resistor, 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 HEATER fuse to TERMINAL IG+ of the A/C control assembly to TERMINAL AIR to TERMINAL 7 of the air inlet control servo motor to TERMINAL 6 to TERMINAL AIF of the A/C control assembly to TERMINAL GND to GROUND, the motor rotates and the damper moves to the RECIRC side. when the damper operates with the A/C SW at RECIRC position, the damper position signal is input from TERMINAL 5 of the servo motor to TERMINAL TPI of the A/C control assembly. As a result, current to the servo motor circuit is cut off by the A/C control assembly, so the damper stops at that position.
(Switching from RECIRC to FRESH)
With the ignition SW turned on, when the RECIRC/FRESH SW is switched to the FRESH side, the current flows from TERMINAL IG+ of the A/C control assembly to TERMINAL AIF to TERMINAL 6 of the air inlet control servo motor to TERMINAL 7 to TERMINAL AIR of the A/C control assembly 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 HEATER fuse to TERMINAL IG+ of the A/C control assembly.
(Switching from DEF to FACE)
The current flows from TERMINAL FACE of the A/C control assembly to TERMINAL 1 of the air vent mode control servo motor to TERMINAL 5 to TERMINAL DEF of the A/C control assembly to TERMINAL GND to GROUND. The motor rotates and the damper moves to the FACE side. When the damper operates with the A/C SW at FACE position, the damper position signal is input from TERMINAL 5 of the servo motor to the TERMINAL DEF of the A/C control assembly. As a result, current to the servo motor circuit is cut off by the A/C control assembly, so the damper stops at that position.
(Switching from FACE to DEF)
The current flows from TERMINAL DEF of the A/C control assembly to TERMINAL 5 of the air vent control servo motor to TERMINAL 1 to TERMINAL FACE of the A/C control assembly 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 (A/C control assembly) is turned to the "COOL" side the current flows from TERMINAL AMC of the A/C control assembly to TERMINAL 1 of the air mix control servo motor to motor to TERMINAL 2 to TERMINAL AMH of the A/C control assembly to GROUND and the motor rotates. The damper opening angle at this time is input from TERMINAL 3 of the servo motor to TERMINAL TP of the A/C control assembly, this is used to determine the DAMPER STOP position and maintain the set temperature.
When the temperature control SW (A/C control assembly) is turned to the "HOT" side, the current flows from servo motor to TERMINAL AMH of the A/C control assembly to TERMINAL 2 of the air mix control servo motor to motor to TERMINAL 1 to TERMINAL AMC of the A/C control assembly, rotating the motor in reverse and switching the damper from "COOL" to "HOT" side.

**5. AIR CONDITIONING OPERATION**

The A/C control assembly receives various signals, I.E., the engine RPM from the engine control module, out side air temperature signal from the A/C ambient temp. sensor, coolant temperature from the engine control module and the lock signal from the A/C compressor, etc.
When the engine is started and the A/C SW (A/C control assembly) is on, a signal is input to the A/C control assembly.
As a result, the ground circuit in A/C control assembly is closed and current flows from HEATER fuse to TERMINAL 1 of the MG CLT relay to TERMINAL 2 to TERMINAL 3 of the diode (A/C) to TERMINAL 2 to TERMINAL MGCR of the A/C control assembly to TERMINAL GND to GROUND, turning the MG CLT relay on, so that the magnetic clutch is on and the A/C compressor operates.
At the same time, the engine control module. Detects the magnetic clutch is on and the A/C compressor operates.
If the A/C control assembly detects the following conditions, it stops the air conditioning:

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

**SERVICE HINTS**

**A3 A/C DUAL PRESSURE SW**

4–1 : Open above approx. **2.0** kgf/cm$^2$ (**29** psi, **196** kpa) or **32** kgf/cm$^2$ (**464** psi, **3138** kpa)

**A2 A/C MAGNETIC CLUTCH AND LOCK SENSOR**

4–GROUND : Approx. **3.7** Ω

**A34 (A), A35 (B) A/C CONTROL ASSEMBLY**

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 |
|---|---|---|---|---|---|
| A2 | 26 (1MZ–FE) | A36 | 30 | F8 | 26 (1MZ–FE) |
| A3 | 26 (1MZ–FE) | A37 | 30 | J1 | 31 |
| A13 | 30 | A38 | 30 | J11 | 31 |
| A20 | 30 | A39 | 30 | J27 A | 31 |
| A30 | 26 (1MZ–FE) | B3 | 30 | J28 B | 31 |
| A33 | 30 | B8 | 30 | J29 | 31 |
| A34 A | 30 | D3 | 30 | J32 | 31 |
| A35 B | 30 | E8 | 30 | | |

**: RELAY BLOCKS**

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 24 | Engine Room R/B No.1 (Engine Compartment Left) |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1R | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1V | | |
| 1W | | |
| 2C | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB2 | 36 (1MZ–FE) | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| IG1 | 40 | Instrument Panel Wire and Cowl Wire (Lower Finish Panel) |
| IK1 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IK2 | | |
| IK3 | | |

### : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| IG | 40 | Instrument Panel Brace LH |
| II | 40 | Cowl Side Panel RH |

### : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I7 | 42 | Cowl Wire | I9 | 42 | Cowl Wire |
| I8 | | | I10 | | |

**A2**
GRAY



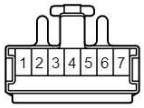

**A3**
BLACK




**A13**



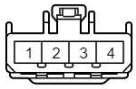

**A20**



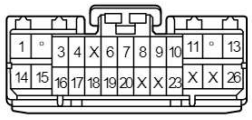

**A30**
DARK GRAY



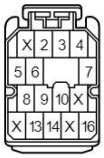

**A33**
BLACK




**A34 (A)**




**A35 (B)**



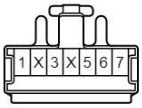

**A36**
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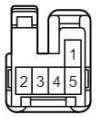

**A37**
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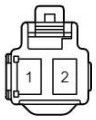

**A38**
BLACK



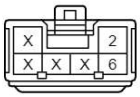

**A39**




**B3**




**B8**

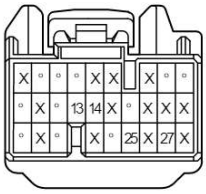



**D3**
ORANGE

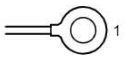


## AIR CONDITIONING (AUTOMATIC A/C)

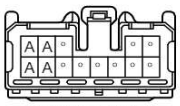
**E8**




**F8**

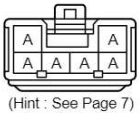



**J1**



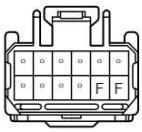
(Hint : See Page 7)

**J11**



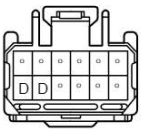
(Hint : See Page 7)

**J27 (A)**



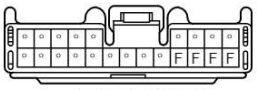
(Hint : See Page 7)

**J28 (B)**



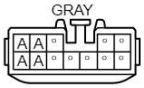
(Hint : See Page 7)

**J29**



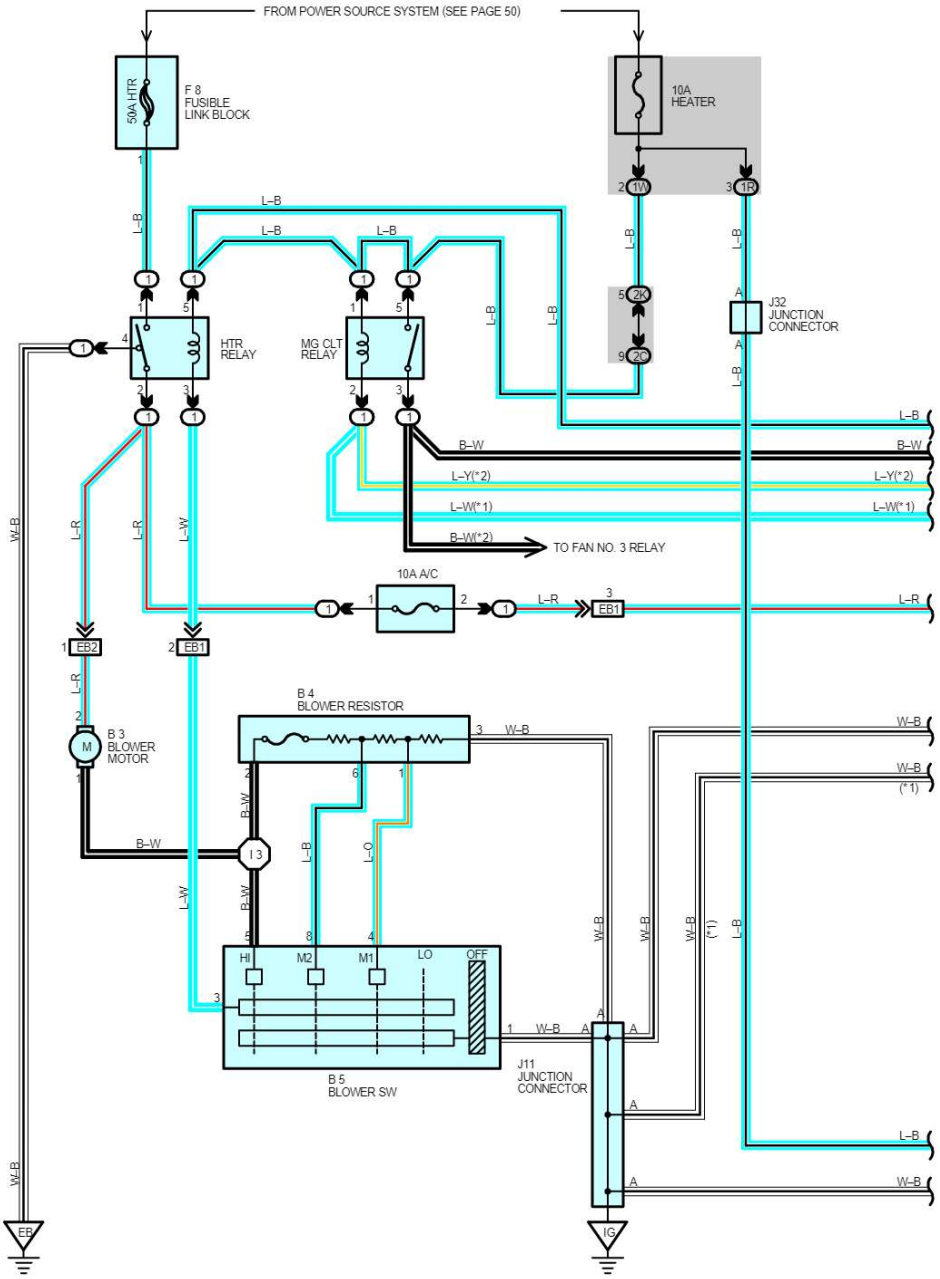
(Hint : See Page 7)

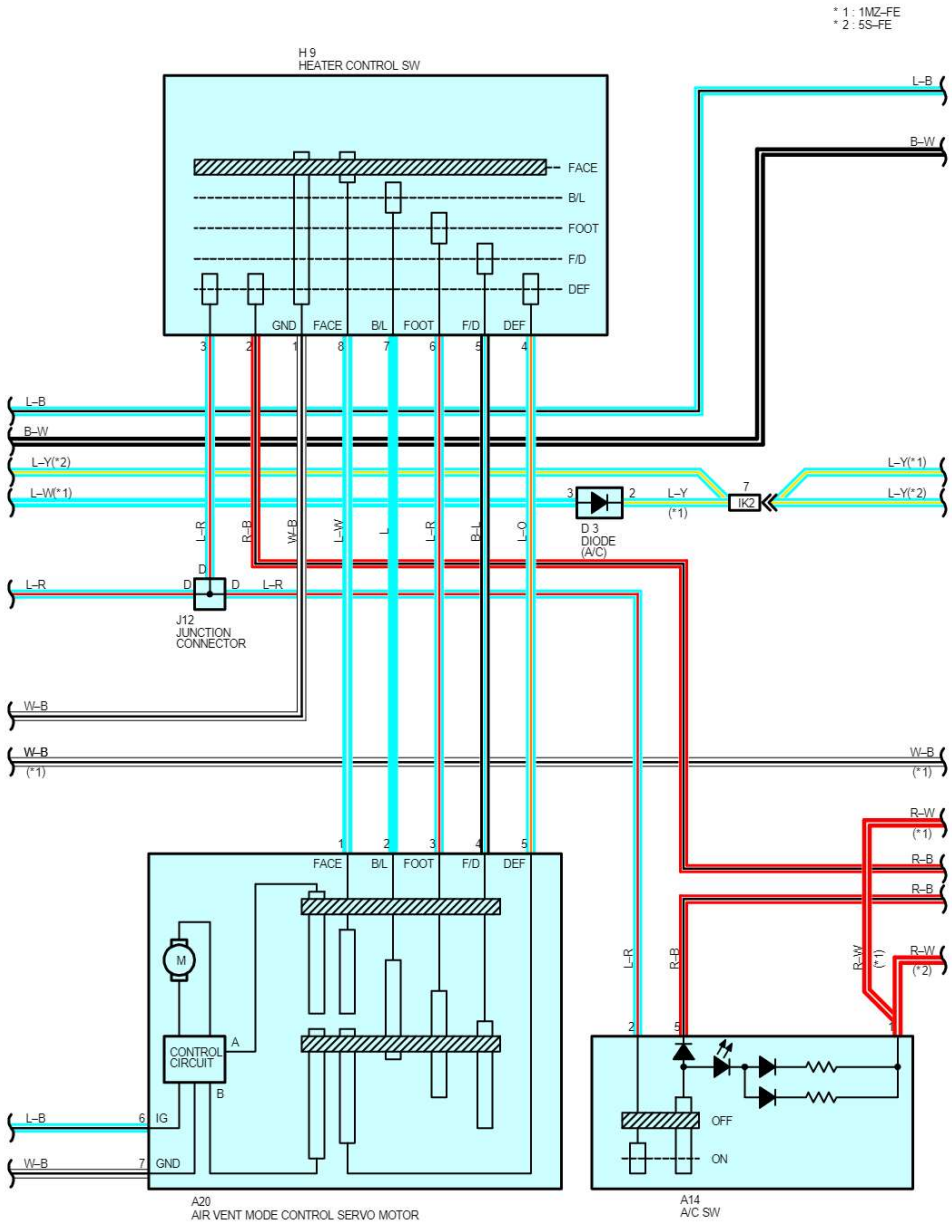
**J32**
GRAY



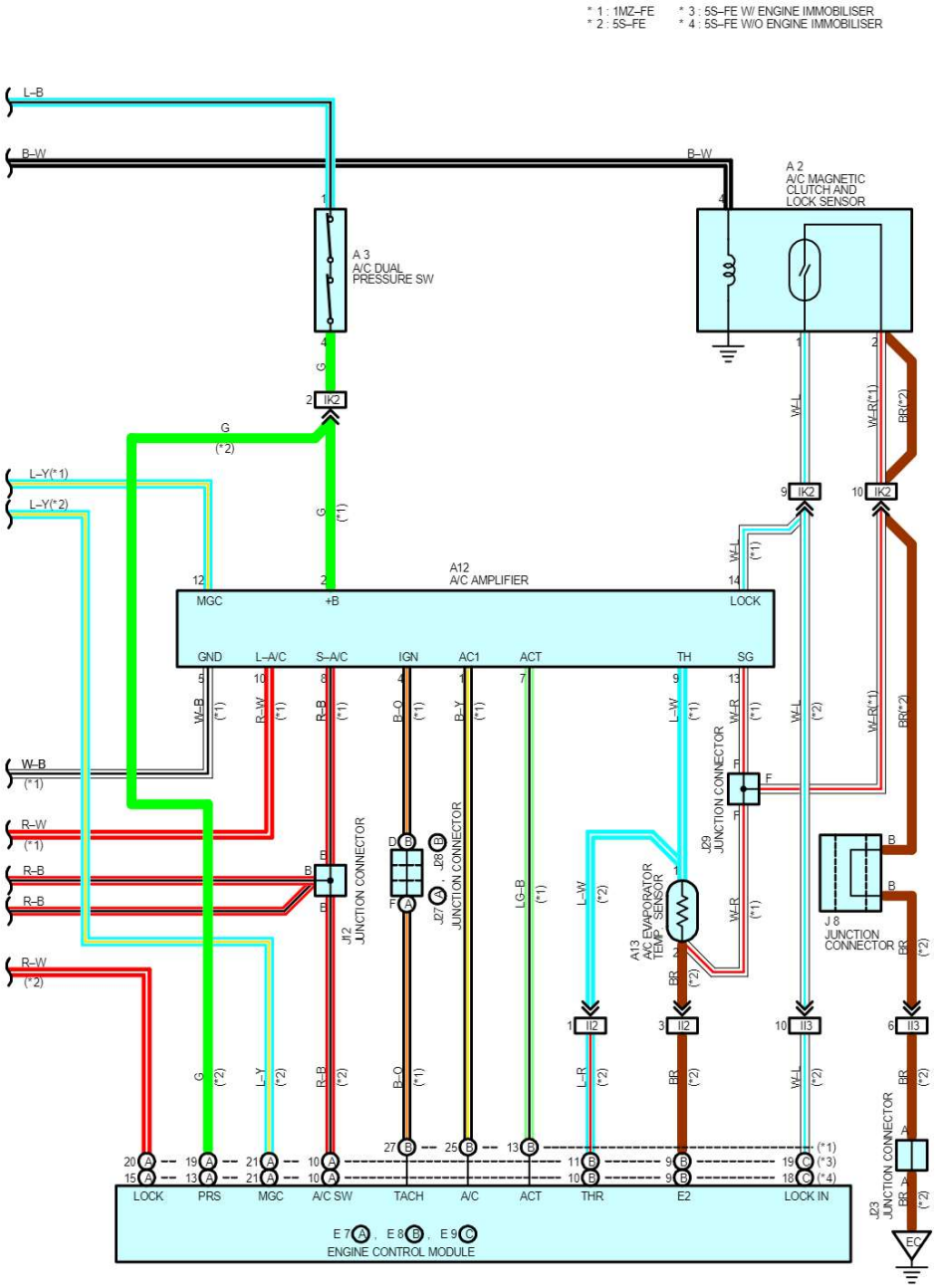
(Hint : See Page 7)

# AIR CONDITIONING (MANUAL A/C)




* 1 : 1MZ–FE
* 2 : 5S–FE
H 9
HEATER CONTROL SW
FACE
B/L
FOOT
F/D
DEF
GND
FACE
B/L
FOOT
F/D
DEF
L–B
B–W
L–Y(*2)
L–W(*1)
L–Y(*1)
L–Y(*2)
L–Y
(*1)
IK2
D 3
DIODE
(A/C)
L–R
R–B
W–B
L–W
L
L–R
R–L
L–O
J12
JUNCTION
CONNECTOR
W–B
(*1)
R–W
(*1)
R–B
R–W
(*2)
CONTROL
CIRCUIT
M
IG
GND
A20
AIR VENT MODE CONTROL SERVO MOTOR
OFF
ON
A14
A/C SW

# AIR CONDITIONING (MANUAL A/C)



## SYSTEM OUTLINE

Current always flows from the HTR fuse to TERMINAL 1 of the HTR relay. When the ignition SW is turned on, the current from the HEATER fuse flows to TERMINAL 6 of the air vent mode control servo motor, to the MG CLT relay (Coil side) to TERMINAL MGC of the A/C amplifier (1MZ–FE) or TERMINAL MGC of the engine control module (5S–FE), to TERMINAL 1 of the A/C dual pressure SW to TERMINAL 4 to TERMINAL +B of the A/C amplifier (1MZ–FE) or TERMINAL PRS of the engine control module (5S–FE), current also to the HTR relay (Coil side) to TERMINAL 3 of the blower SW.

### 1. AIR VENT MODE CONTROL SERVO MOTOR OPERATION

When the damper is in FACE position and B/L mode on the heater control SW is selected, current flows from TERMINAL 7 of the heater control SW to TERMINAL 2 of the air vent mode control serve motor so that a signal that the ground circuit is activated is input into TERMINAL B of the control circuit inside the air vent mode control servo motor. Simultaneously, a signal that the ground circuit is not activated is input into TERMINAL A of the control circuit inside the servo motor. These two signals activate the control circuit so that current flows from the HEATER fuse to the servo motor, causing the servo motor to operate and the damper to move to B/L position. When the damper reaches B/L position. A ground cut signal is input into TERMINAL B of the control circuit, the control circuit operates, the servo motor stops rotating and the damper stops at B/L.
When another mode position is selected, input of signals into TERMINAL A and TERMINAL B of the control circuit that ground is made or not (as explained above) activates the control circuit and moves the serve motor to the desired position.

### 2. AIR CONDITIONING OPERATION

When the blower SW is on, current flows from the HEATER fuse to the HTR relay (Coil side) to TERMINAL 3 of the blower SW to TERMINAL 1 to GROUND, activating the HTR relay. This causes current to flow from the HTR fuse to the HTR relay (Point side) to A/C fuse to TERMINAL 2 of the A/C SW. If the A/C SW is turned on at this time, a signal is input into the A/C amplifier (1MZ–FE) or engine control module (5S–FE). This activates the A/C amplifier (1MZ–FE) or engine control module (5S–FE) and MG CLT relay so that current flows from the HEATER fuse to the MG CLT relay (Point side) to A/C magnetic clutch. Causing The compressor to operate.
When blower SW is on and heater control SW is at DEF position, it causes A/C to run whether A/C SW is on or not.

## SERVICE HINTS

**HTR RELAY [R/B NO.1]**

1–2 : Closed with the ignition SW on and the blower SW on

**MG CLT RELAY [R/B NO.1]**

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

**A3 A/C DUAL PRESSURE SW**

1–4 : Open with pressure **2.0** kgf/cm$^2$ (**29** psi, **196** kpa) or above **32** kgf/cm$^2$ (**464** psi, **3138** kpa)

**B4 BLOWER RESISTOR**

6–1 : Approx. **0.62** Ω
1–3 : Approx. **1.46** Ω
2–6 : Approx. **0.38** Ω

## : PARTS LOCATION

| Code | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|
| A2 | 26 (1MZ–FE) | B4 | 30 | J8 | 31 |
| | 28 (5S–FE) | B5 | 30 | J11 | 31 |
| A3 | 26 (1MZ–FE) | D3 | 26 (1MZ–FE) | J12 | 31 |
| | 28 (5S–FE) | E7 A | 30 | J23 | 31 |
| A12 | 30 | E8 B | 30 | J27 A | 31 |
| A13 | 30 | E9 C | 30 | J28 B | 31 |
| A14 | 30 | F8 | 26 (1MZ–FE) | J29 | 31 |
| A20 | 30 | | 28 (5S–FE) | J32 | 31 |
| B3 | 30 | H9 | 30 | | |

## : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 24 | Engine Room R/B No.1 (Engine Compartment Left) |

# AIR CONDITIONING (MANUAL A/C)

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1R | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1W | | |
| 2C | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EB1 | 36 (1MZ–FE) | Cowl Wire and Engine Room Main Wire (Under the Engine Room J/B No.2) |
| | 38 (5S–FE) | |
| EB2 | 36 (1MZ–FE) | |
| | 38 (5S–FE) | |
| II2 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II3 | | |
| IK2 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |

## : GROUND POINTS

| Code | See Page | Ground Points Location |
|---|---|---|
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| | 38 (5S–FE) | |
| EC | 38 (5S–FE) | Intake Manifold |
| IG | 40 | Instrument Panel Brace LH |

## : SPLICE POINTS

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| I3 | 42 | Cowl Wire | | | |

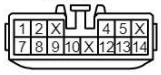
**A2**
GRAY




**A3**
BLACK




**A12**
ORANGE



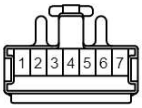

**A13**




**A14**



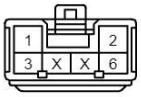

**A20**



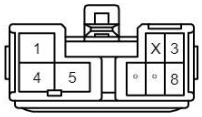

**B3**




**B4**




**B5**

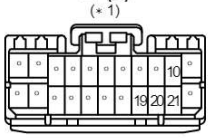



**D3**
ORANGE

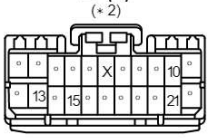


∗ 1 : 5S–FE w/ Engine Immobiliser System
∗ 2 : 5S–FE w/o Engine Immobiliser System

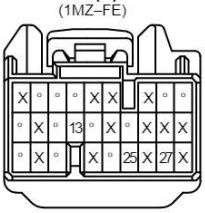
**E7 (A)**
(∗ 1)



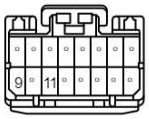

**E7 (A)**
(∗ 2)



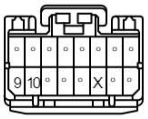

**E8 (B)**
(1MZ–FE)



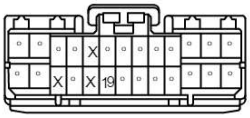

**E8 (B)**
(∗ 1) DARK GRAY



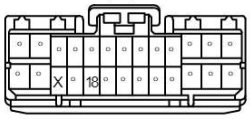

**E8 (B)**
(∗ 2)



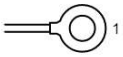

**E9 (C)**
(∗ 1) DARK GRAY




**E9 (C)**
(∗ 2)



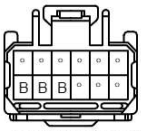

**F8**




**H9**

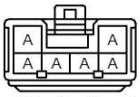



**J8**
GRAY



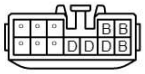

(Hint : See Page 7)

**J11**




(Hint : See Page 7)

**J12**
BLACK



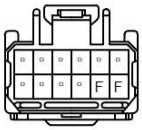

(Hint : See Page 7)

**J23**



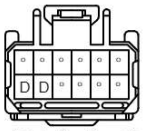

(Hint : See Page 7)

**J27(A)**



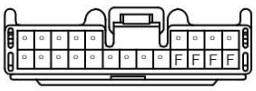

(Hint : See Page 7)

**J28 (B)**



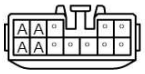

(Hint : See Page 7)

**J29**



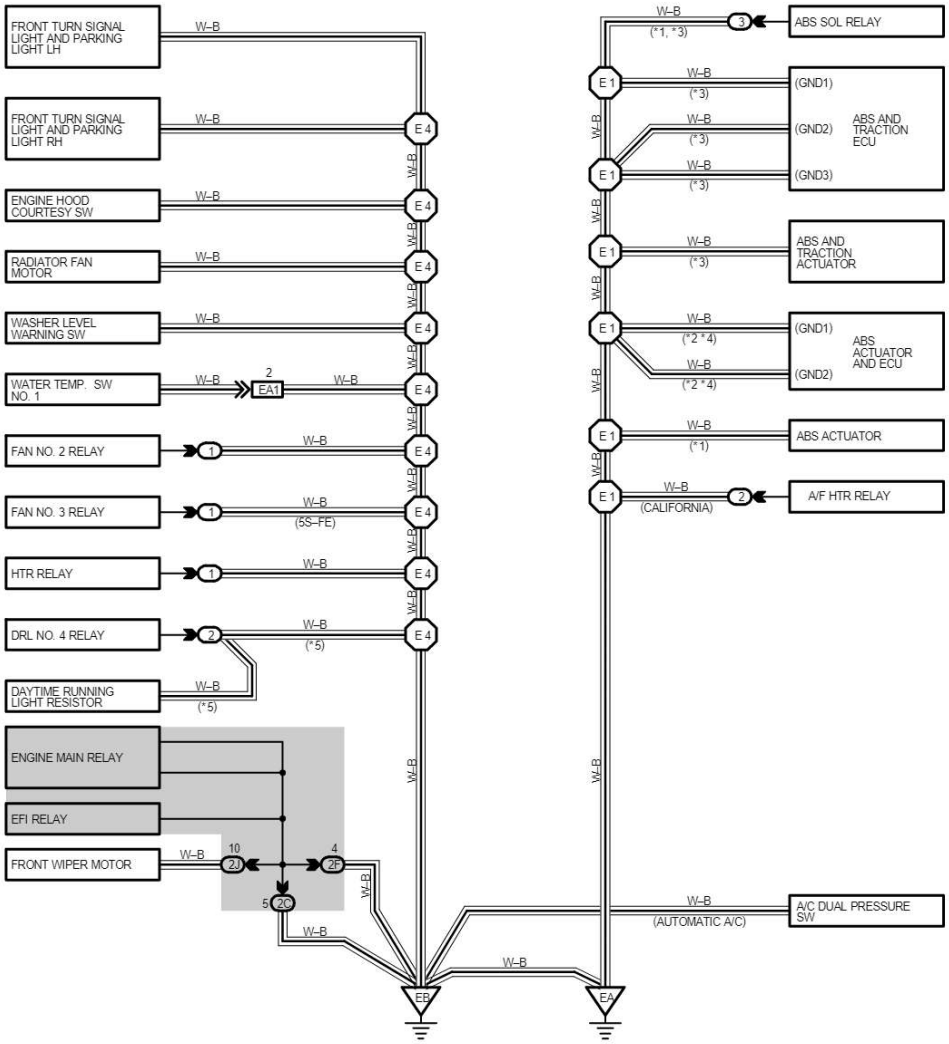

(Hint : See Page 7)

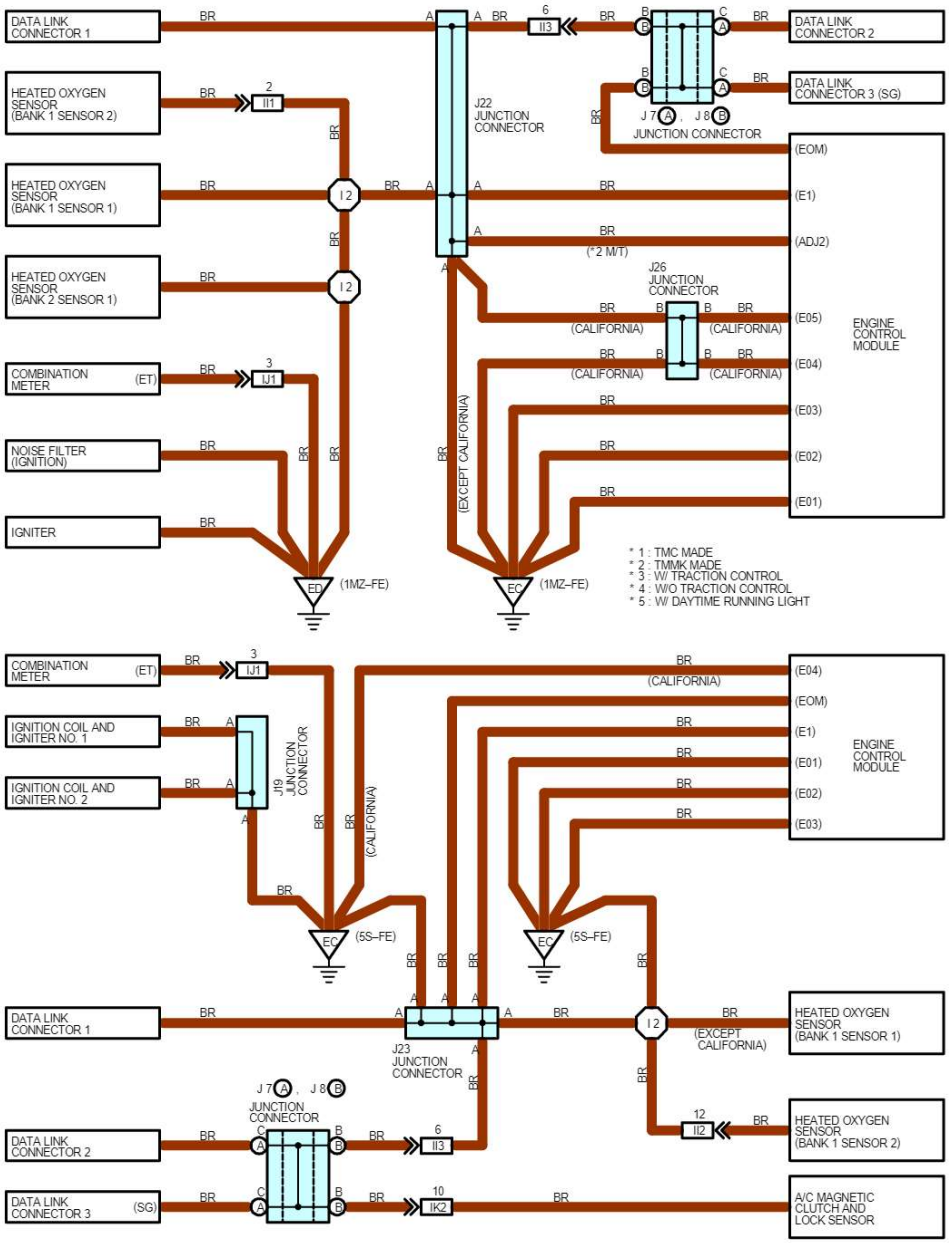
**J32**
GRAY



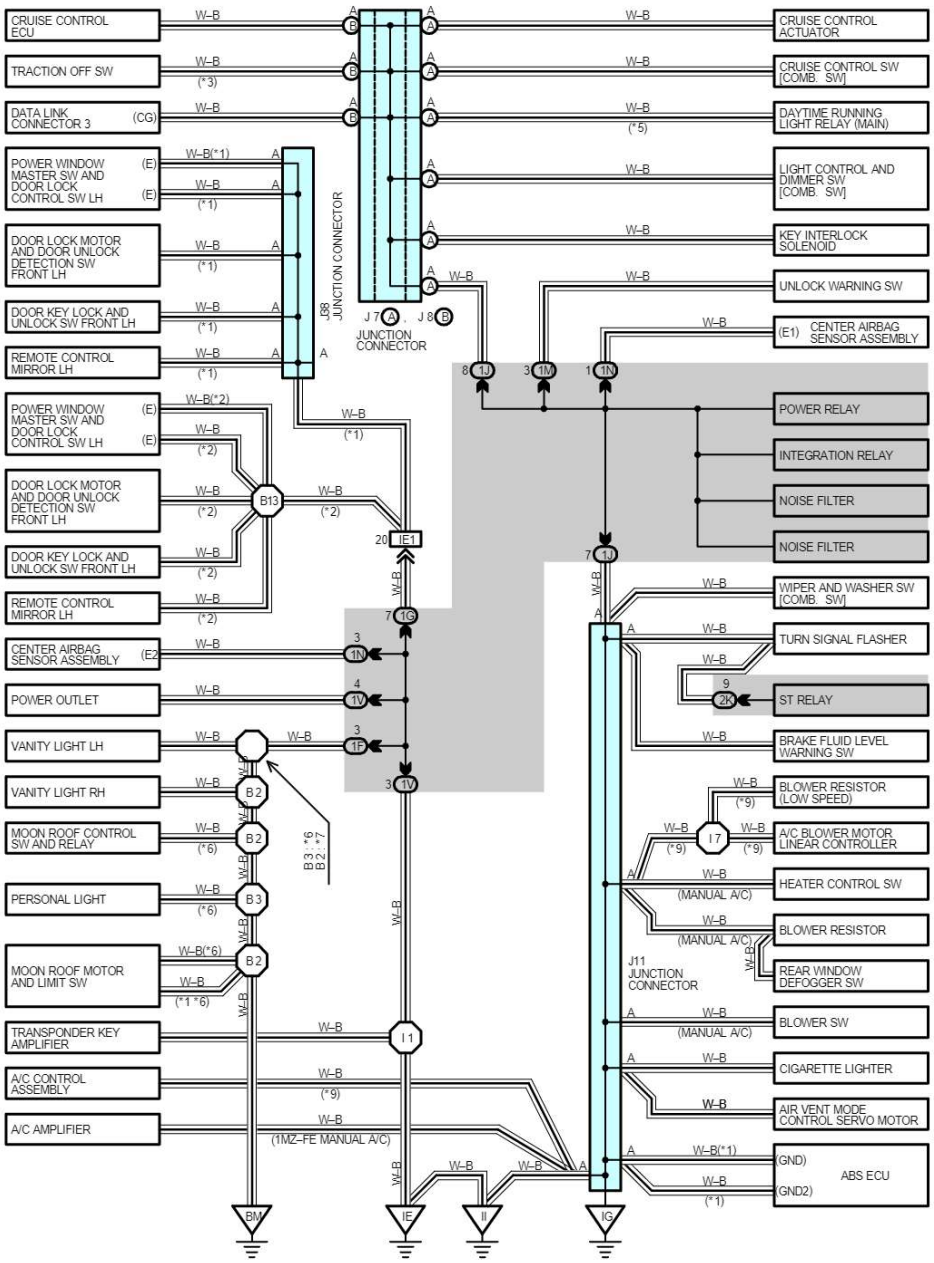

(Hint : See Page 7)

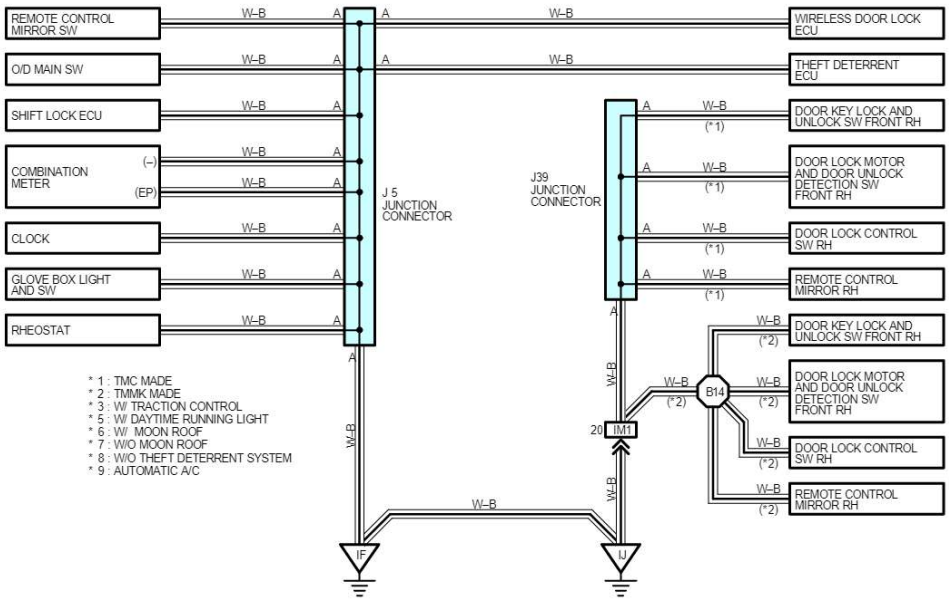
## I GROUND POINT



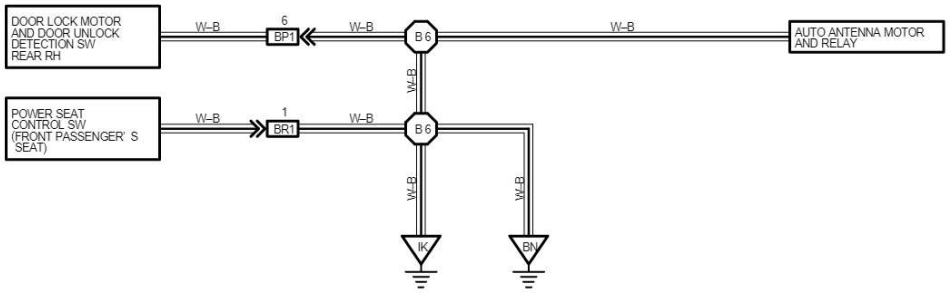

DATA LINK CONNECTOR 1
HEATED OXYGEN SENSOR (BANK 1 SENSOR 2)
HEATED OXYGEN SENSOR (BANK 1 SENSOR 1)
HEATED OXYGEN SENSOR (BANK 2 SENSOR 1)
COMBINATION METER (ET)
NOISE FILTER (IGNITION)
IGNITER
J22 JUNCTION CONNECTOR
J26 JUNCTION CONNECTOR
J 7 , J 8 JUNCTION CONNECTOR
DATA LINK CONNECTOR 2
DATA LINK CONNECTOR 3 (SG)
(EOM)
(E1)
(ADJ2)
(E05)
(E04)
(E03)
(E02)
(E01)
ENGINE CONTROL MODULE
(*2 M/T)
(CALIFORNIA)
(EXCEPT CALIFORNIA)
(1MZ–FE)
* 1 : TMC MADE
* 2 : TMMK MADE
* 3 : W/ TRACTION CONTROL
* 4 : W/O TRACTION CONTROL
* 5 : W/ DAYTIME RUNNING LIGHT
IGNITION COIL AND IGNITER NO. 1
IGNITION COIL AND IGNITER NO. 2
J19 JUNCTION CONNECTOR
(5S–FE)
J23 JUNCTION CONNECTOR
HEATED OXYGEN SENSOR (BANK 1 SENSOR 1)
(EXCEPT CALIFORNIA)
HEATED OXYGEN SENSOR (BANK 1 SENSOR 2)
A/C MAGNETIC CLUTCH AND LOCK SENSOR

# I GROUND POINT

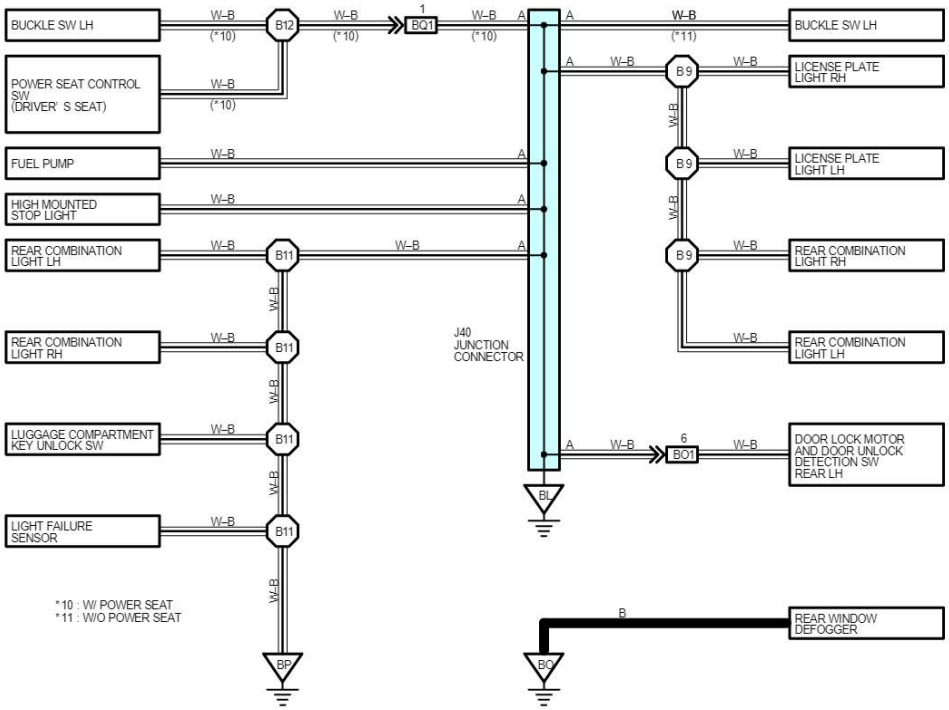



REMOTE CONTROL MIRROR SW
O/D MAIN SW
SHIFT LOCK ECU
COMBINATION METER
(–)
(EP)
CLOCK
GLOVE BOX LIGHT AND SW
RHEOSTAT
W–B
A
J 5 JUNCTION CONNECTOR
J39 JUNCTION CONNECTOR
WIRELESS DOOR LOCK ECU
THEFT DETERRENT ECU
DOOR KEY LOCK AND UNLOCK SW FRONT RH
DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW FRONT RH
DOOR LOCK CONTROL SW RH
REMOTE CONTROL MIRROR RH
(*1)
(*2)
B14
20
IM1
IF
IJ
* 1 : TMC MADE
* 2 : TMMK MADE
* 3 : W/ TRACTION CONTROL
* 5 : W/ DAYTIME RUNNING LIGHT
* 6 : W/ MOON ROOF
* 7 : W/O MOON ROOF
* 8 : W/O THEFT DETERRENT SYSTEM
* 9 : AUTOMATIC A/C


STEREO COMPONENT AMPLIFIER
RADIO AND PLAYER
BR
7
IH1
1
IF2
FUEL SENDER
(ES)
COMBINATION METER
IH


DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW REAR RH
POWER SEAT CONTROL SW (FRONT PASSENGER' S SEAT)
W–B
6
BP1
1
BR1
B 6
AUTO ANTENNA MOTOR AND RELAY
IK
BN

## I GROUND POINT



### : PARTS LOCATION

| Code | | See Page | Code | See Page | Code | See Page |
|---|---|---|---|---|---|---|
| J5 | | 31 | J19 | 31 | J38 | 32 |
| J7 | A | 31 | J22 | 31 | J39 | 32 |
| J8 | B | 31 | J23 | 31 | J40 | 32 |
| J11 | | 31 | J26 | 31 | | |

### : RELAY BLOCKS

| Code | See Page | Relay Blocks (Relay Block Location) |
|---|---|---|
| 1 | 24 | Engine Room R/B No.1 (Engine Comportment Left) |
| 2 | 24 | Engine Room R/B No.2 (Near The Battery) |
| 3 | 25 | Engine Room R/B No.3 (Radiator Upper Support RH) |

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

| Code | See Page | Junction Block and Wire Harness (Connector Location) |
|---|---|---|
| 1F | 20 | Roof Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1G | 20 | Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1J | 20 | Cowl Wire and Instrument Panel J/B (Lower Finish Panel) |
| 1M | | |
| 1N | | |
| 1V | | |
| 2C | 22 | Engine Room Main Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2F | | |
| 2J | 22 | Cowl Wire and Engine Room J/B No.2 (Engine Compartment Left) |
| 2K | | |

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

| Code | See Page | Joining Wire Harness and Wire Harness (Connector Location) |
|---|---|---|
| EA1 | 36 (1MZ–FE)<br>38 (5S–FE) | Engine Room Main Wire and Engine Room Main No.3 Wire (Radiator LH) |
| IE1 | 40 | Front Door LH Wire and Instrument Panel Wire (Left Kick Panel) |
| IF2 | 40 | Floor Wire and Instrument Panel Wire (Left Kick Panel) |
| IH1 | 40 | Instrument Panel Wire and Instrument Panel No.2 Wire (Instrument Panel Brace RH) |
| II1 | 42 | Engine Wire and Cowl Wire (Under the Blower Motor) |
| II2 | | |
| II3 | | |
| IJ1 | 42 | Engine Wire and Instrument Panel Wire (Under the Blower Motor) |
| IK2 | 42 | Engine Room Main Wire and Cowl Wire (Right Kick Panel) |
| IM1 | 42 | Front Door RH Wire and Instrument Panel Wire (Right Kick Panel) |
| BO1 | 44 | Rear Door Wire LH and Floor Wire (Under the Left Center Pillar) |
| BP1 | 44 | Rear Door Wire RH and Floor No.2 Wire (Under the Right Center Pillar) |
| BQ1 | 46 | Floor Wire and Seat No.1 Wire (Under the Driver's Seat) |
| BR1 | 46 | Floor No.2 Wire and Seat No.2 Wire (Under the Passenger's Seat) |

# I GROUND POINT

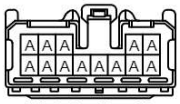
**: GROUND POINTS**

| Code | See Page | Ground Points Location |
|---|---|---|
| EA | 36 (1MZ–FE) | Right Radiator Side Support |
| | 38 (5S–FE) | |
| EB | 36 (1MZ–FE) | Left Radiator Side Support |
| | 38 (5S–FE) | |
| EC | 36 (1MZ–FE) | Surge Tank RH |
| | 38 (5S–FE) | Intake Manifold |
| ED | 36 (1MZ–FE) | Rear Side of the Surge Tank |
| IE | 40 | Cowl Side Panel LH |
| IF | 40 | Left Kick Panel |
| IG | 40 | Instrument Panel Brace LH |
| IH | 40 | Instrument Panel Brace RH |
| II | 40 | Cowl Side Panel RH |
| IJ | 40 | Right Kick Panel |
| IK | | |
| BL | 44 | Under the Left Center Pillar |
| BM | 44 | Roof Left |
| BN | 44 | Under the Right Center Pillar |
| BO | 44 | Right Quarter Pillar |
| BP | 44 | Back Panel Center |

**: SPLICE POINTS**

| Code | See Page | Wire Harness with Splice Points | Code | See Page | Wire Harness with Splice Points |
|---|---|---|---|---|---|
| E1 | 36 (1MZ–FE) | Engine Room Main Wire | B3 | 44 | Roof Wire |
| | 38 (5S–FE) | | B6 | 44 | Floor No.2 Wire |
| E4 | 36 (1MZ–FE) | | B9 | 44 | Floor Wire |
| | 38 (5S–FE) | | B11 | | |
| I1 | 42 | Cowl Wire | B12 | 46 | Seat No.1 Wire |
| I2 | 42 | Engine Wire | B13 | 44 | Front Door LH Wire |
| I7 | 42 | Cowl Wire | B14 | 44 | Front Door RH Wire |
| B2 | 44 | Roof Wire | | | |

**J5**
ORANGE



(Hint : See Page 7)

**J7 (A)**
GRAY



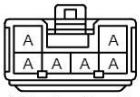
(Hint : See Page 7)

**J8 (B)**
GRAY



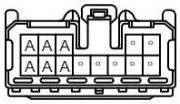
(Hint : See Page 7)

**J11**



(Hint : See Page 7)

**J19**
GRAY



(Hint : See Page 7)

**J22**



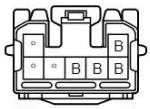
(Hint : See Page 7)

**J23**



(Hint : See Page 7)

**J26**



(Hint : See Page 7)

**J38**



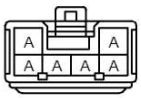

(Hint : See Page 7)

**J39**



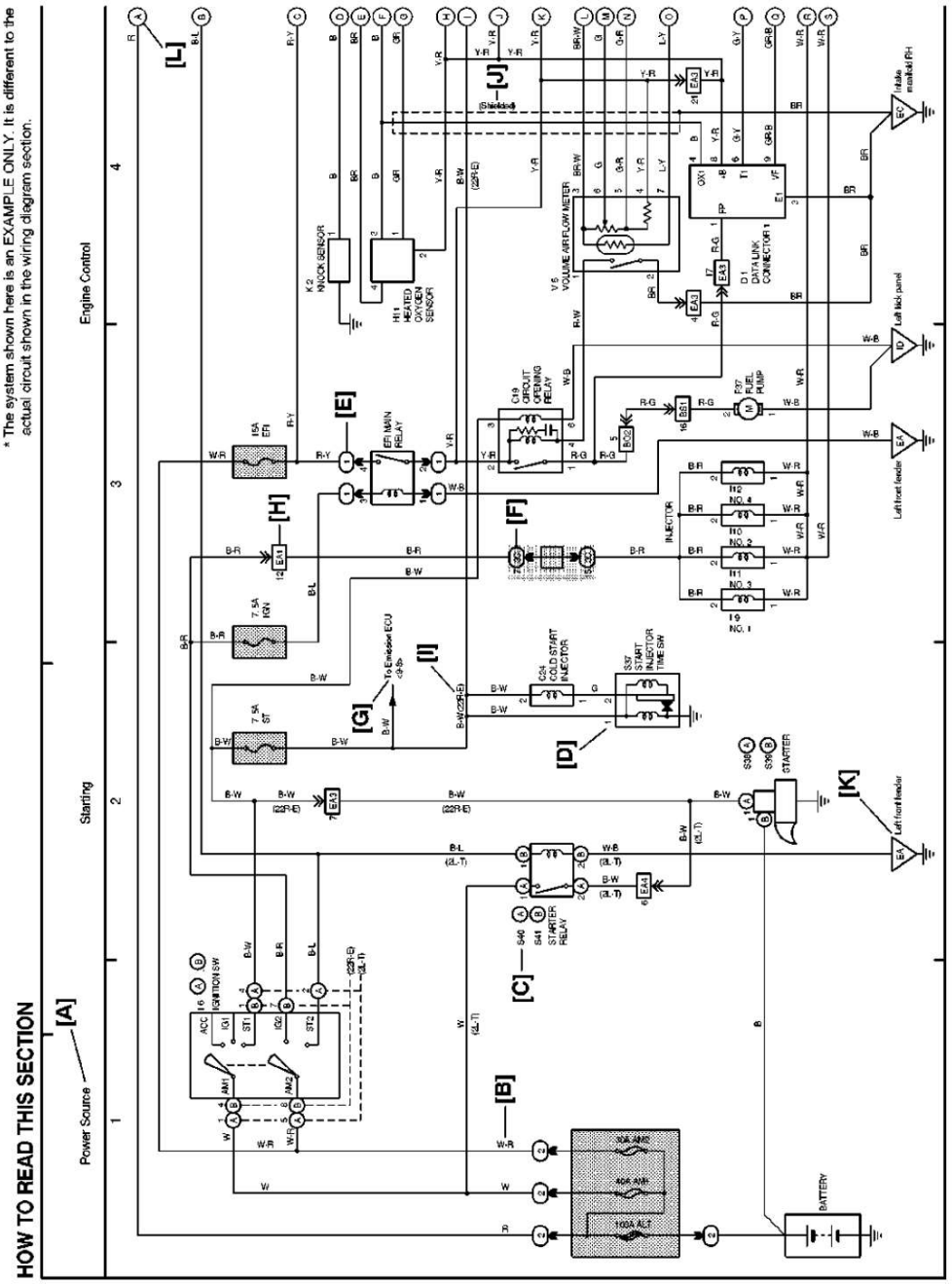

(Hint : See Page 7)

**J40**




(Hint : See Page 7)

## J OVERALL ELECTRICAL WIRING DIAGRAM



**[A]** : System Title

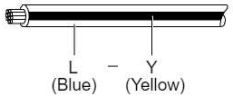
**[B]** : Indicates the wiring color.

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.

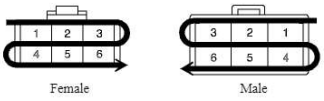
Example: L – Y




**[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



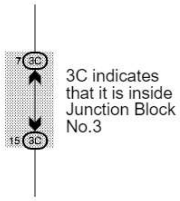

The numbering system for the overall wiring diagram is the same as above

**[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

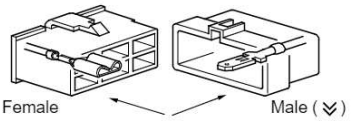
**[F]** : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

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.

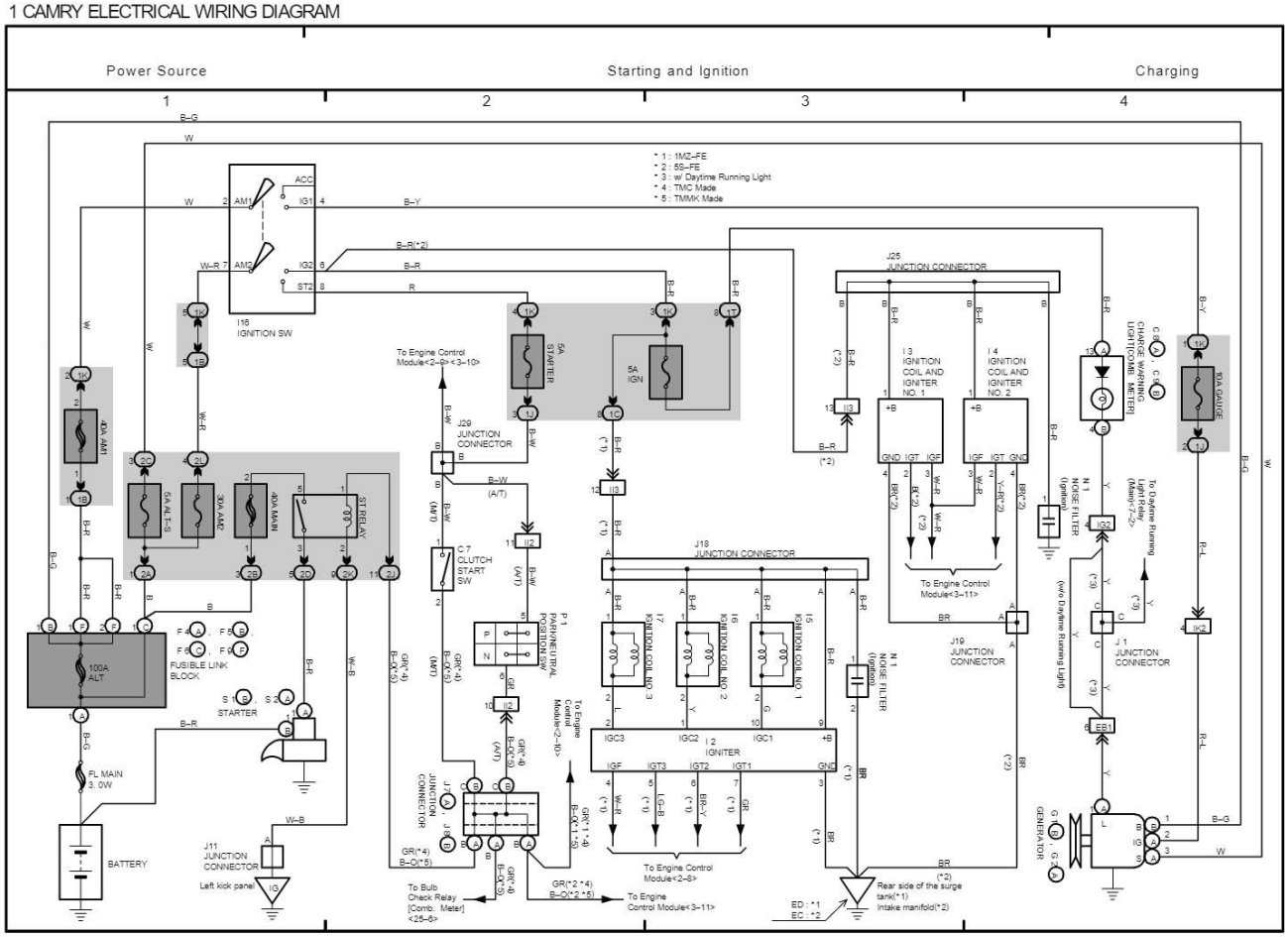
**[L]** : The same code occuring on the next page indicates that the wire harness is continuous.

# SYSTEM INDEX

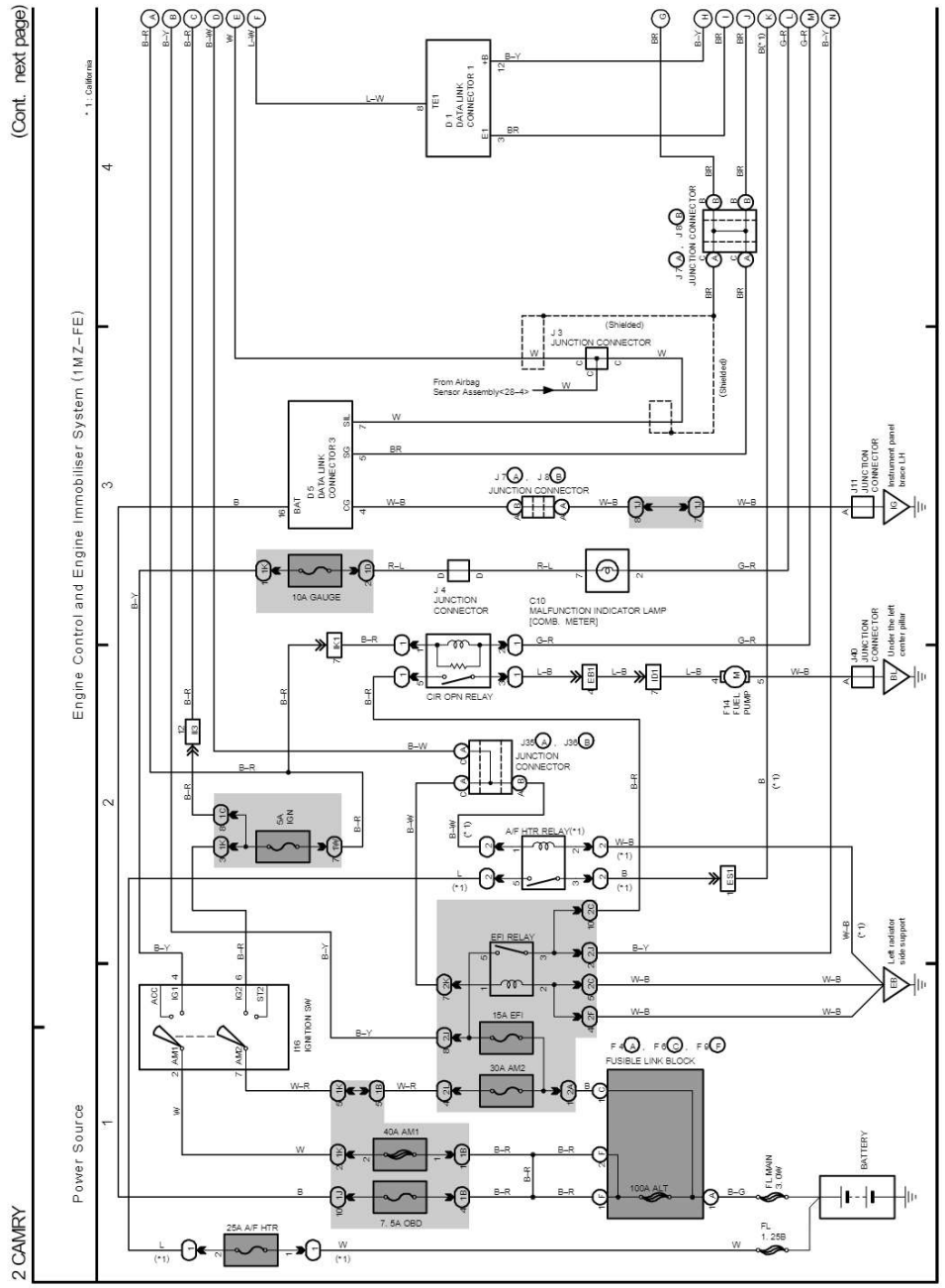

| SYSTEMS | LOCATION |
|---|---|
| ABS | |
| TMC Made | 19–2 |
| TMMK Made | 20–2 |
| ABS and Traction Control | 18–2 |
| Air Conditioning | |
| Automatic A/C | 29–2 |
| Manual A/C | 27–2 |
| Auto Antenna | 24–2 |
| Back–Up Light | 8–4 |
| Charging | 1–4 |
| Cigarette Lighter and Clock | 16–4 |
| Combination Meter | 25–2 |
| Cruise Control | 17–2 |
| Door Lock Control | 14–2 |
| Electronically Controlled Transmission and A/T Indicator | |
| 1MZ–FE | 4–2 |
| 5S–FE | 5–2 |
| Engine Control and Engine Immobiliser System | |
| 1MZ–FE | 2–2 |
| 5S–FE | 3–2 |
| Headlight | |
| w/ Daytime Running Light | 7–2 |
| w/o Daytime Running Light | 6–2 |
| Horn | 21–4 |
| Illumination | 10–2 |
| Interior Light | 9–3 |
| Key Reminder and Seat Belt Warning | 21–3 |

| SYSTEMS | LOCATION |
|---|---|
| Light Auto Turn Off | 9–1 |
| Moon Roof | 21–2 |
| Power Outlet | 16–3 |
| Power Seat | 22–2 |
| Power Source | 1~29–1 |
| Power Window | 13–2 |
| Radiator Fan and Condenser Fan | 26–3 |
| Radio and Player | |
| Built–In Type Amplifier | 24–3 |
| Separate Type Amplifier | 23–2 |
| Rear Window Defogger and Mirror Heater | 26–2 |
| Remote Control Mirror | 12–4 |
| Shift Lock | 16–2 |
| SRS | 28–2 |
| Starting and Ignition | 1–2 |
| Stop Light | 11–4 |
| Taillight | 11–2 |
| Theft Deterrent | 15–2 |
| Turn Signal and Hazard Warning Light | 8–2 |
| Wiper and Washer | 12–2 |
| Wireless Door Lock Control | 14–5 |

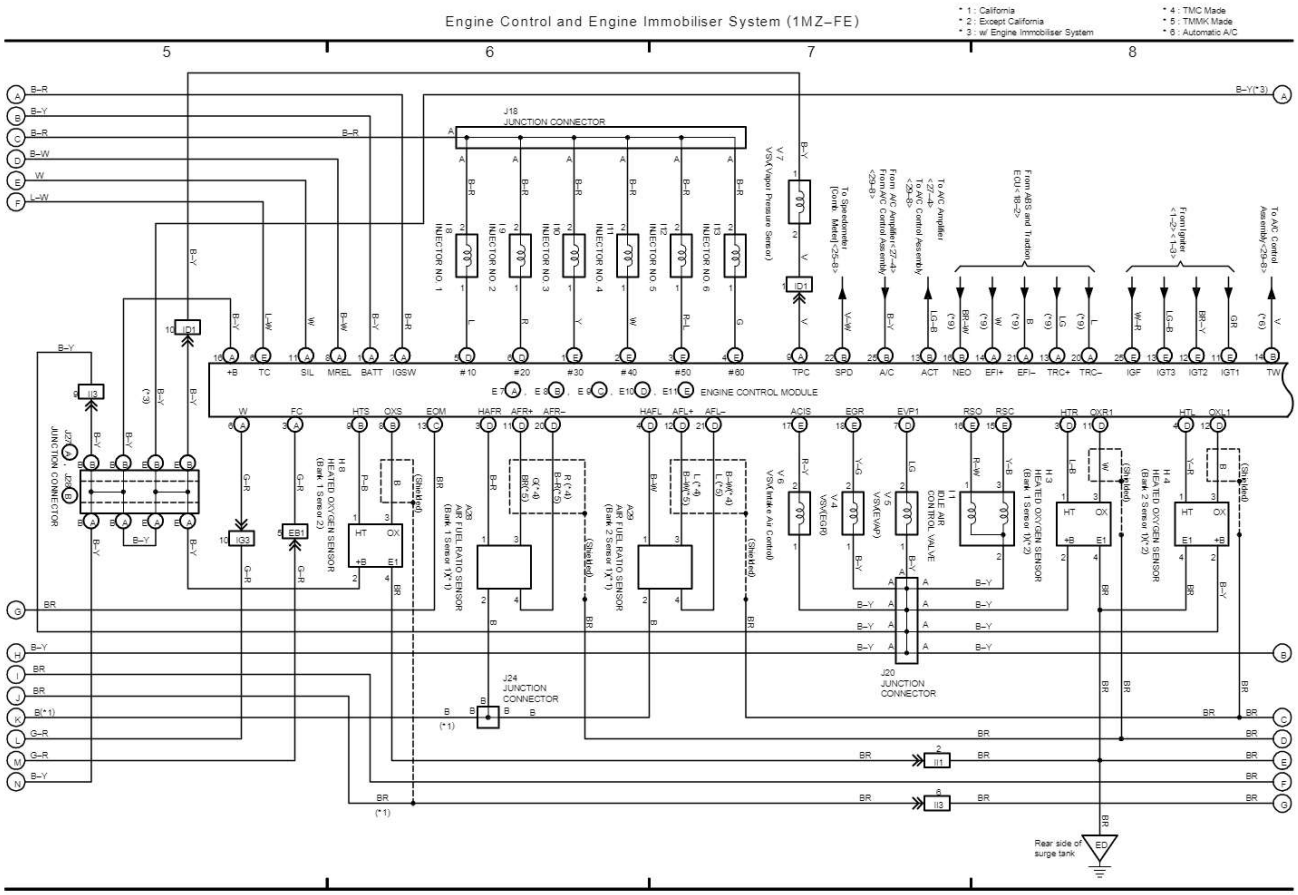
1 CAMRY ELECTRICAL WIRING DIAGRAM



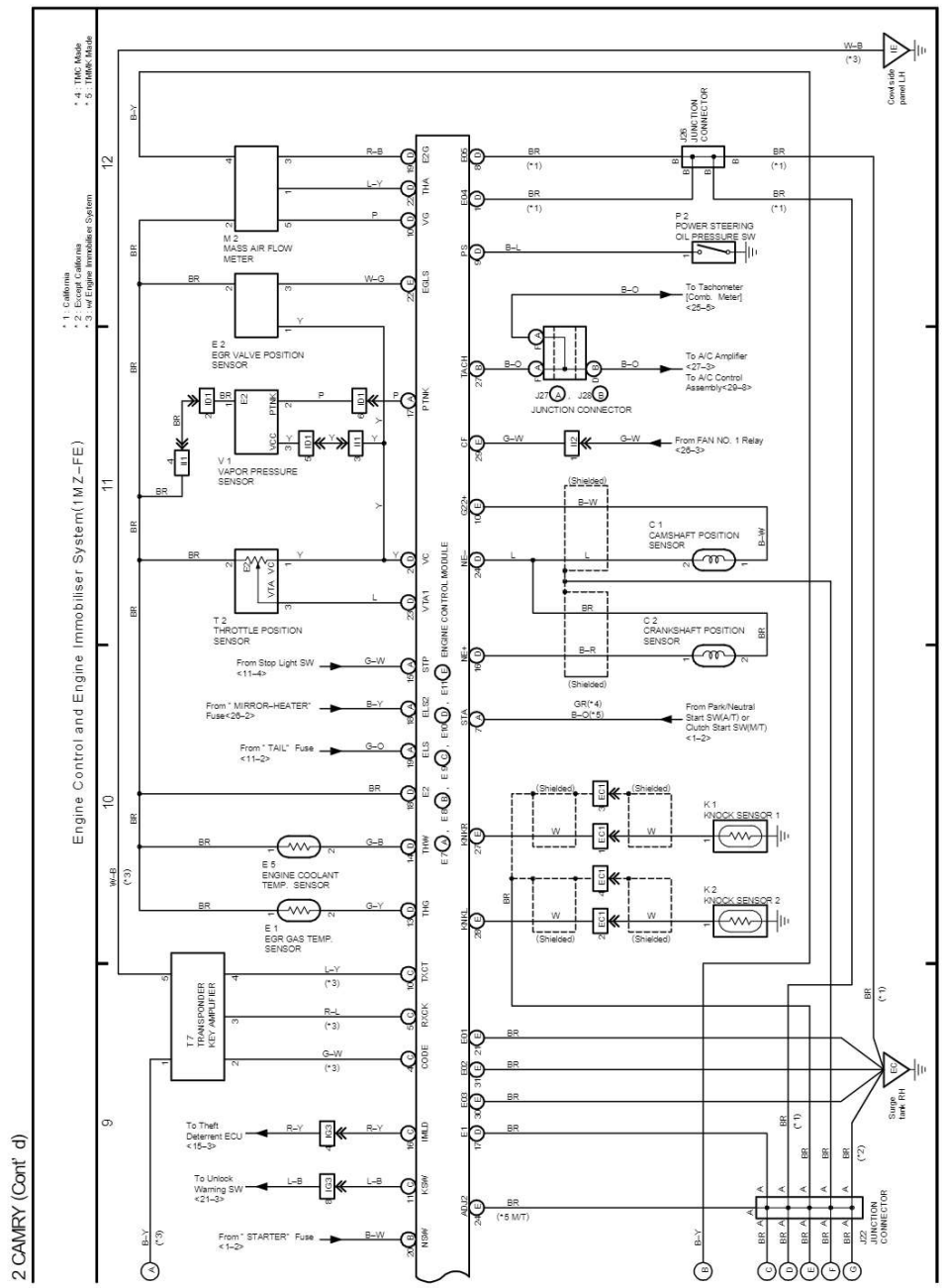
# J OVERALL ELECTRICAL WIRING DIAGRAM



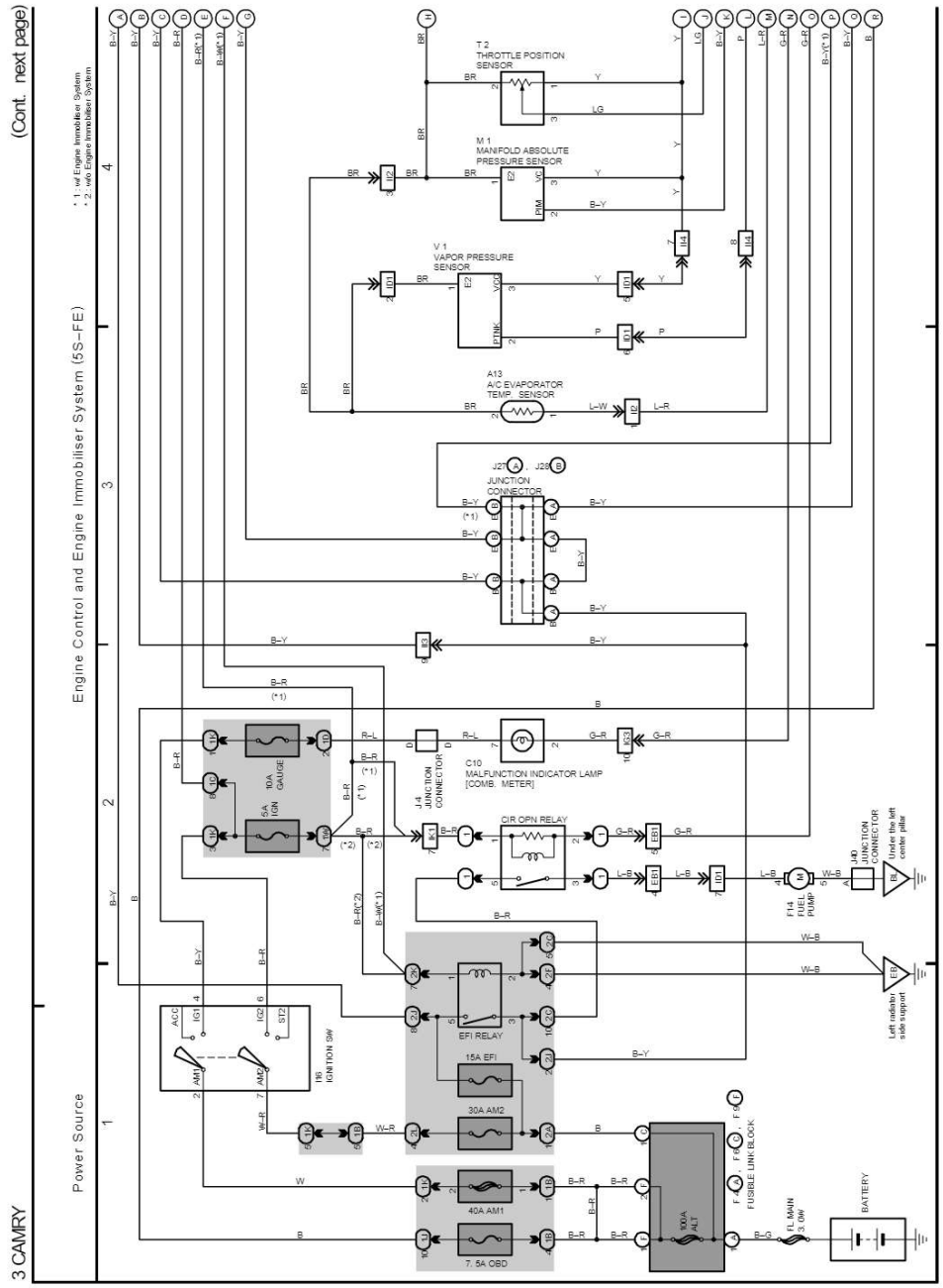
(Cont. next page)



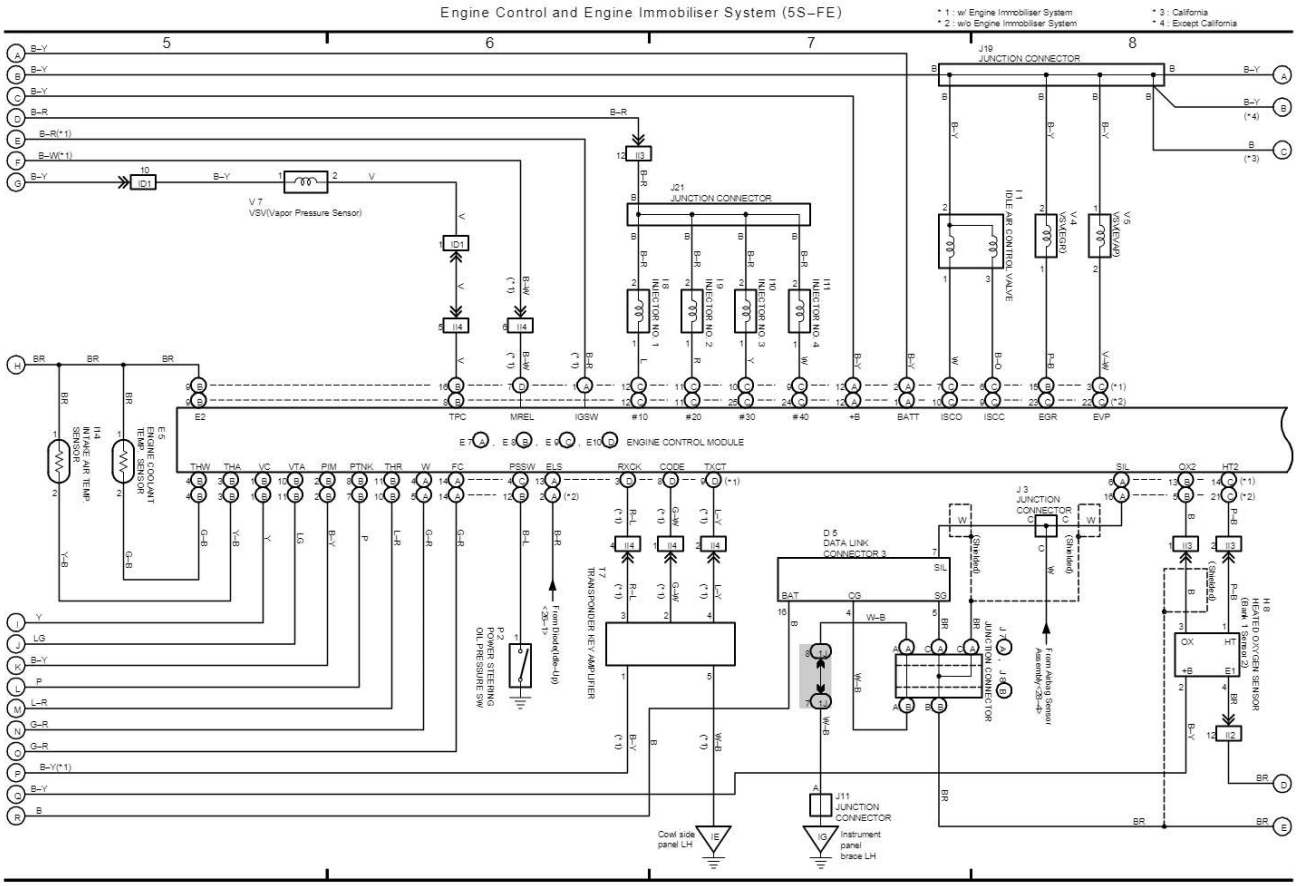
# J OVERALL ELECTRICAL WIRING DIAGRAM



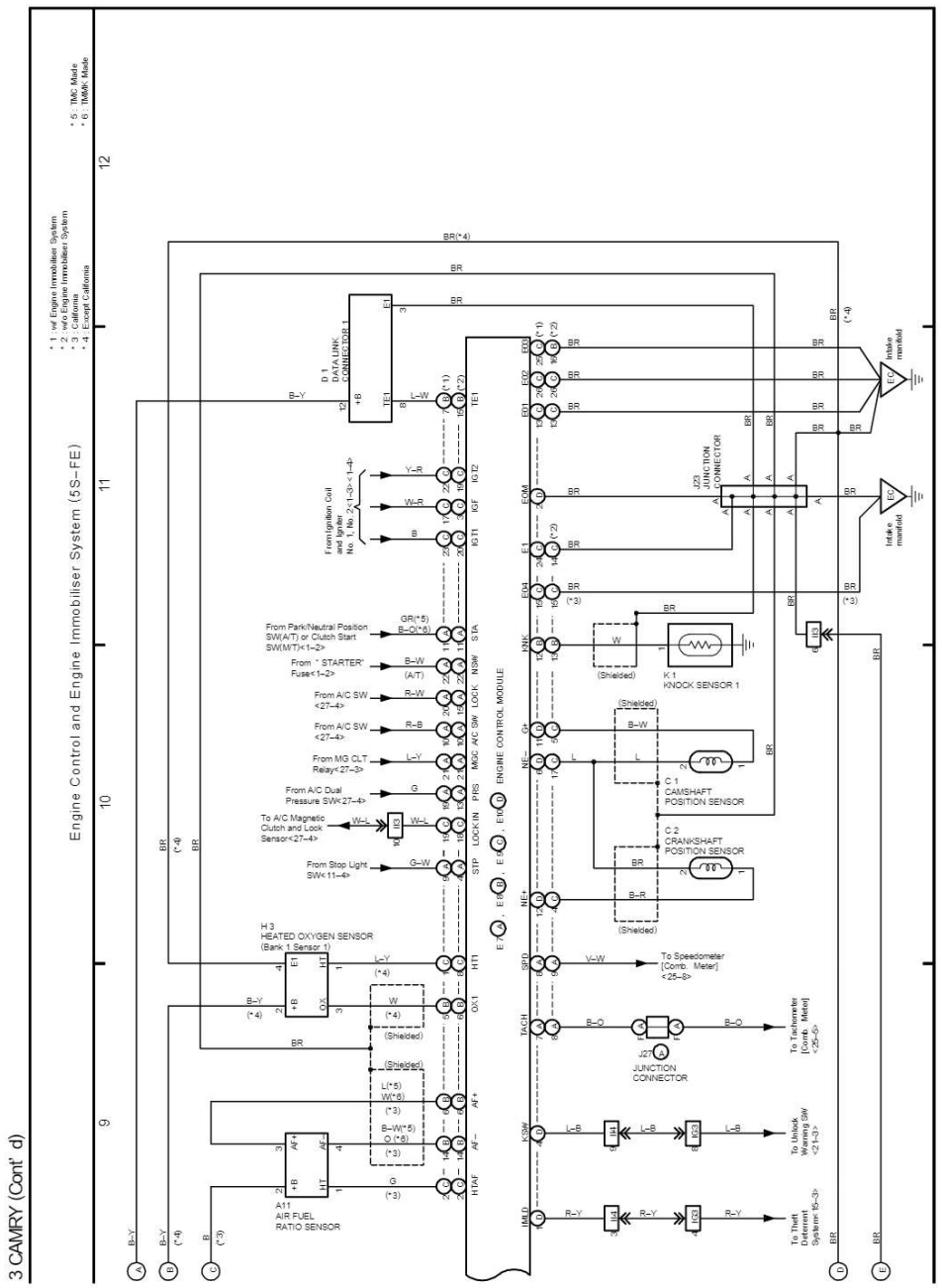
# J OVERALL ELECTRICAL WIRING DIAGRAM

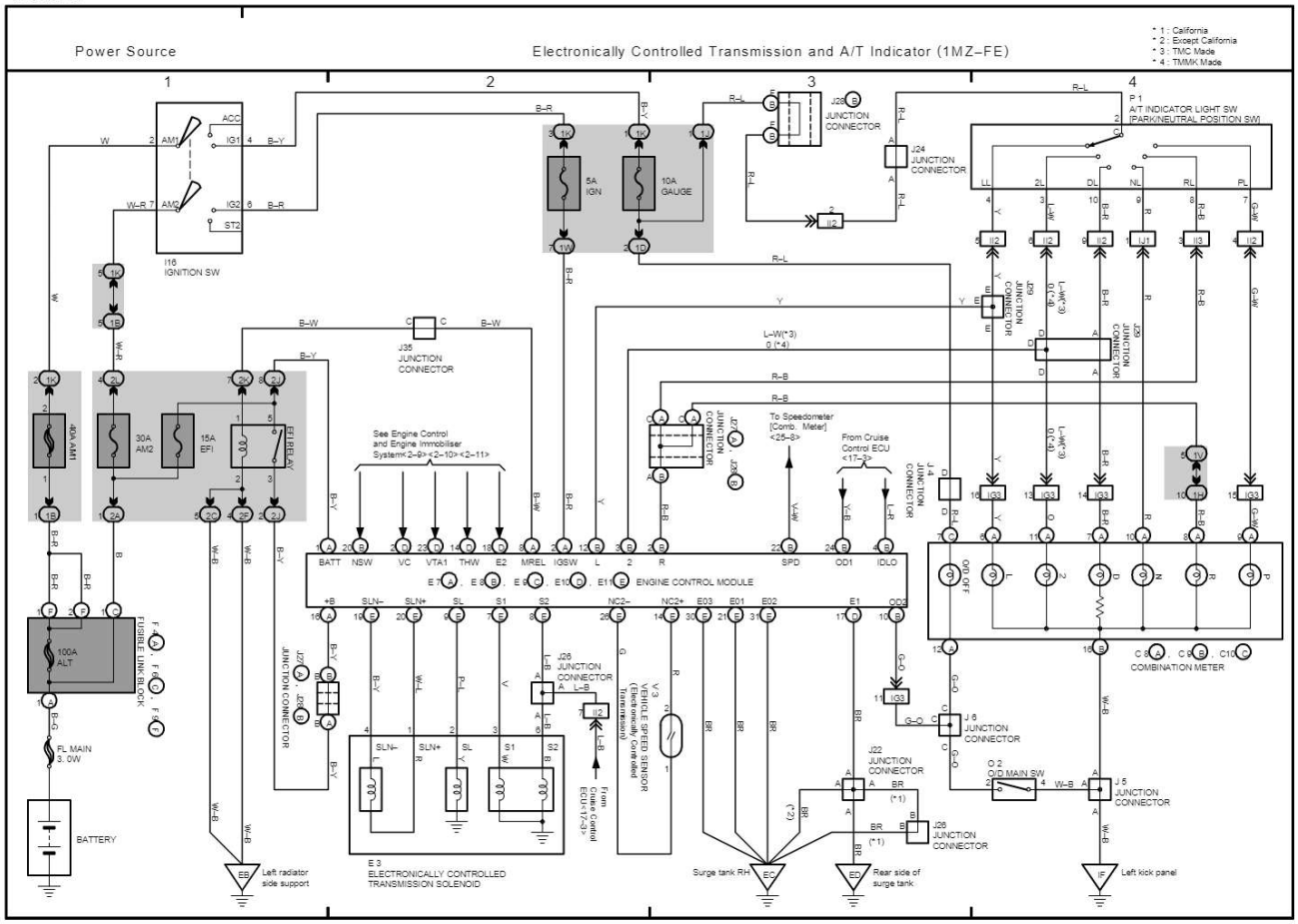


(Cont. next page)

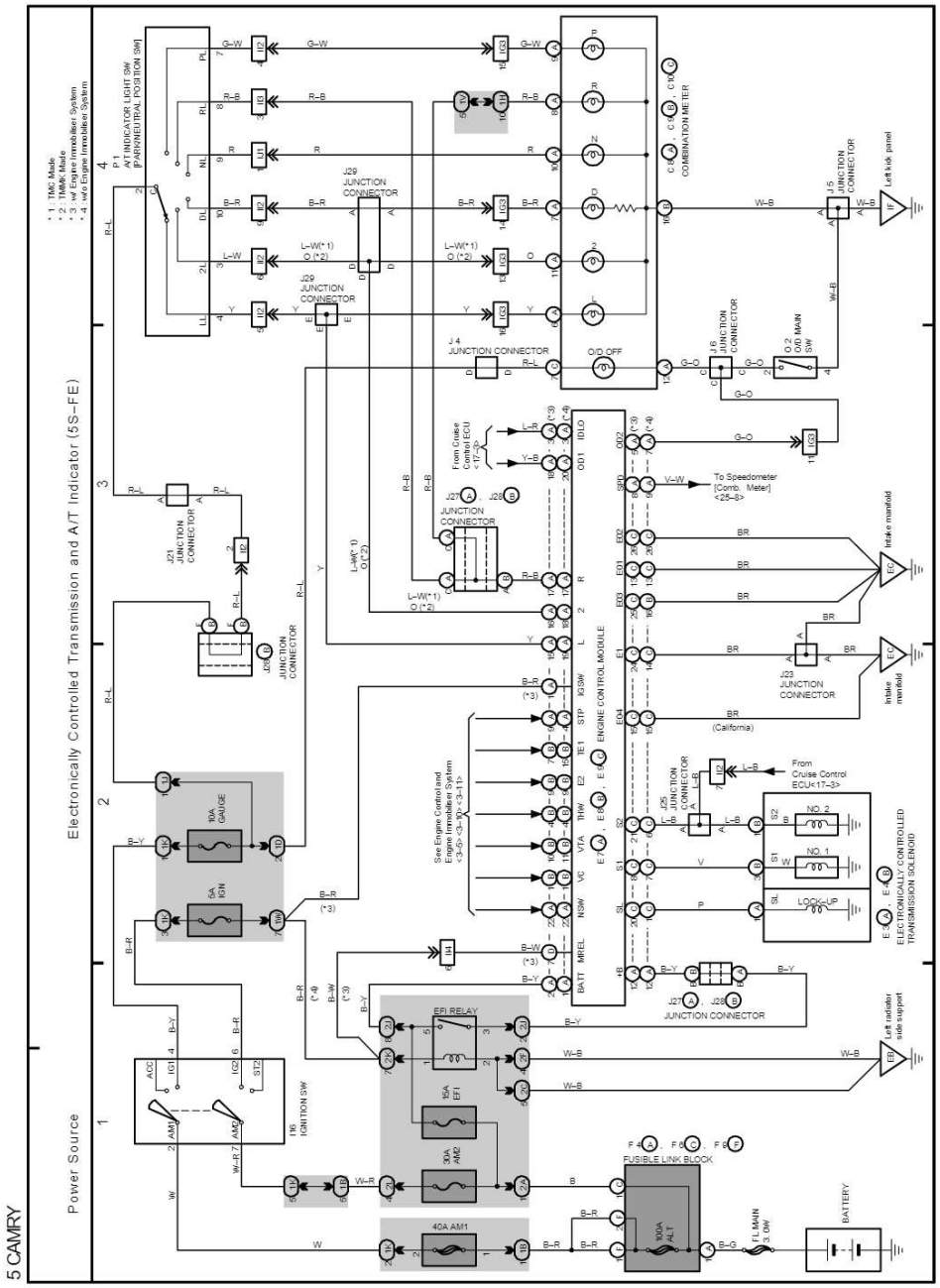


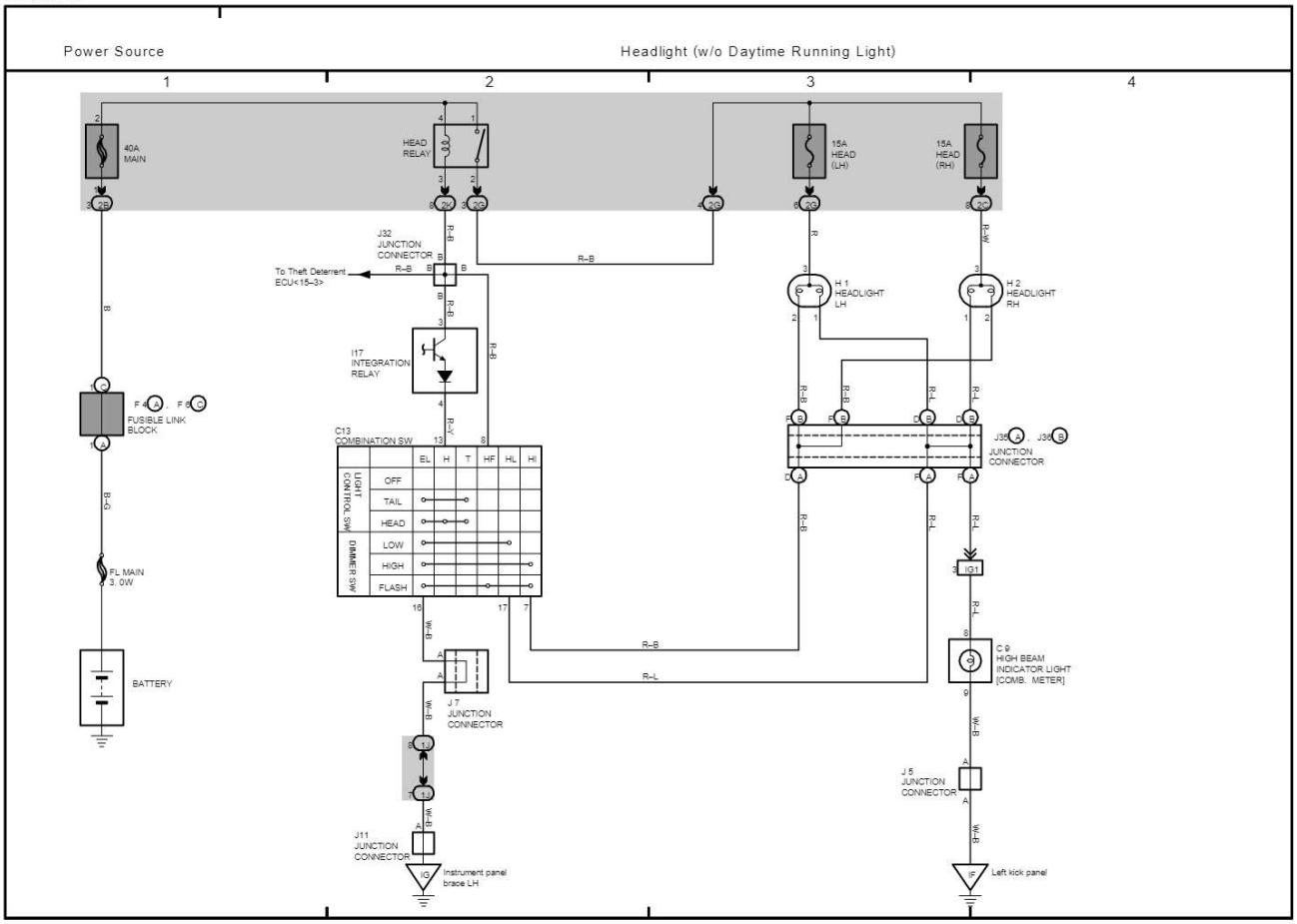
# J OVERALL ELECTRICAL WIRING DIAGRAM



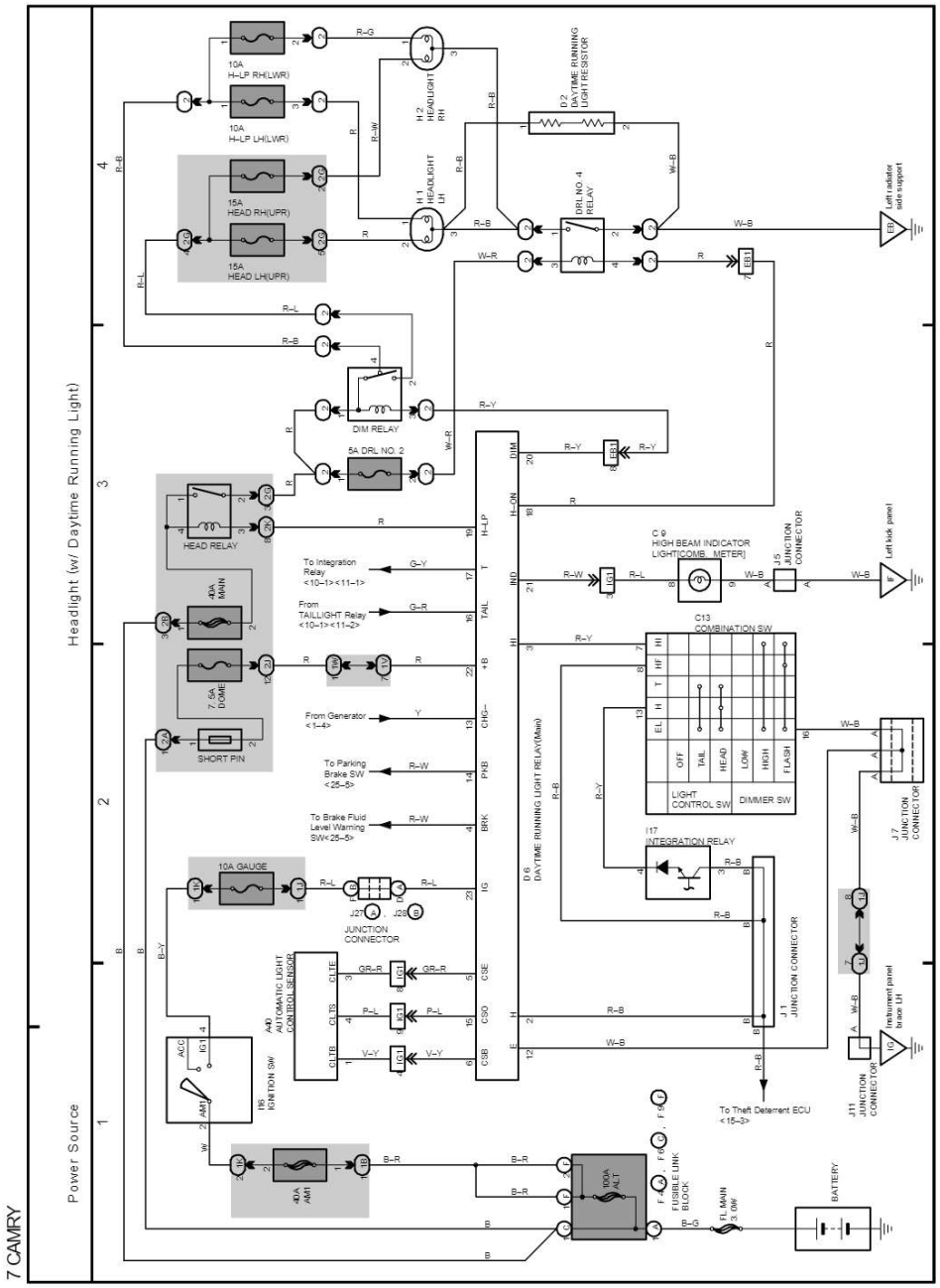

Power Source
Electronically Controlled Transmission and A/T Indicator (1MZ–FE)
* 1 : California
* 2 : Except California
* 3 : TMC Made
* 4 : TMMK Made
I16 IGNITION SW
5A IGN
10A GAUGE
J28 JUNCTION CONNECTOR
J24 JUNCTION CONNECTOR
P 1 A/T INDICATOR LIGHT SW [PARK/NEUTRAL POSITION SW]
J35 JUNCTION CONNECTOR
J29 JUNCTION CONNECTOR
J27 JUNCTION CONNECTOR
J 4 JUNCTION CONNECTOR
40A MAIN
30A AM2
15A EFI
EFI RELAY
See Engine Control and Engine Immobiliser System<2–9><2–10><2–11>
To Speedometer [Comb. Meter] <25–8>
From Cruise Control ECU <17–3>
BATT NSW VC VTA1 THW E2 MREL IGSW L 2 R SPD OD1 IDLO
ENGINE CONTROL MODULE
COMBINATION METER
100A ALT
FUSIBLE LINK BLOCK
FL MAIN 3.0W
BATTERY
J23 JUNCTION CONNECTOR
J26 JUNCTION CONNECTOR
V 3 VEHICLE SPEED SENSOR (Electronically Controlled Transmission)
From Engine Control ECU <17–3>
E 3 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID
J22 JUNCTION CONNECTOR
J 6 JUNCTION CONNECTOR
O 2 O/D MAIN SW
J 5 JUNCTION CONNECTOR
J36 JUNCTION CONNECTOR
Left radiator side support
Surge tank RH
Rear side of surge tank
Left kick panel

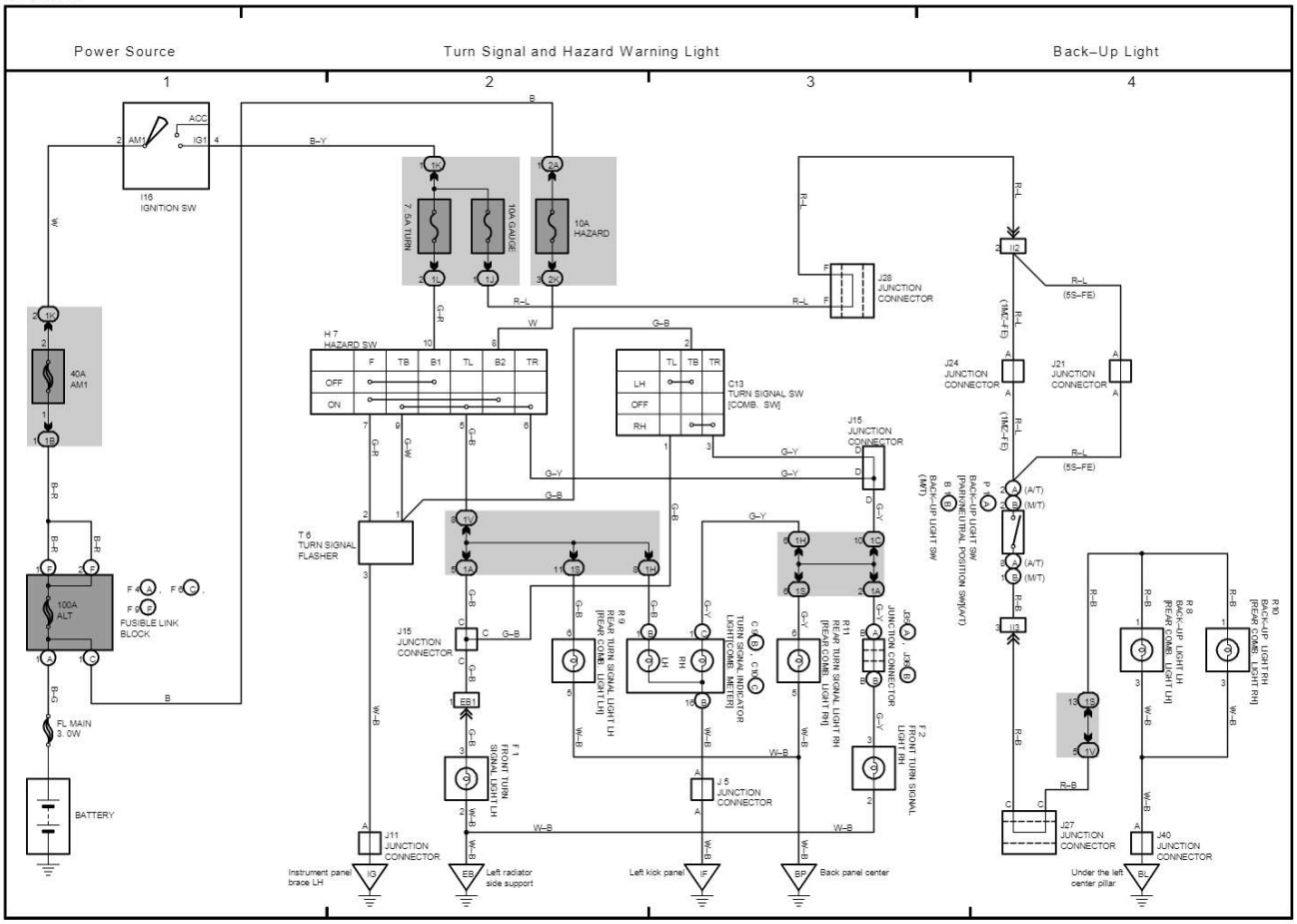
# J OVERALL ELECTRICAL WIRING DIAGRAM



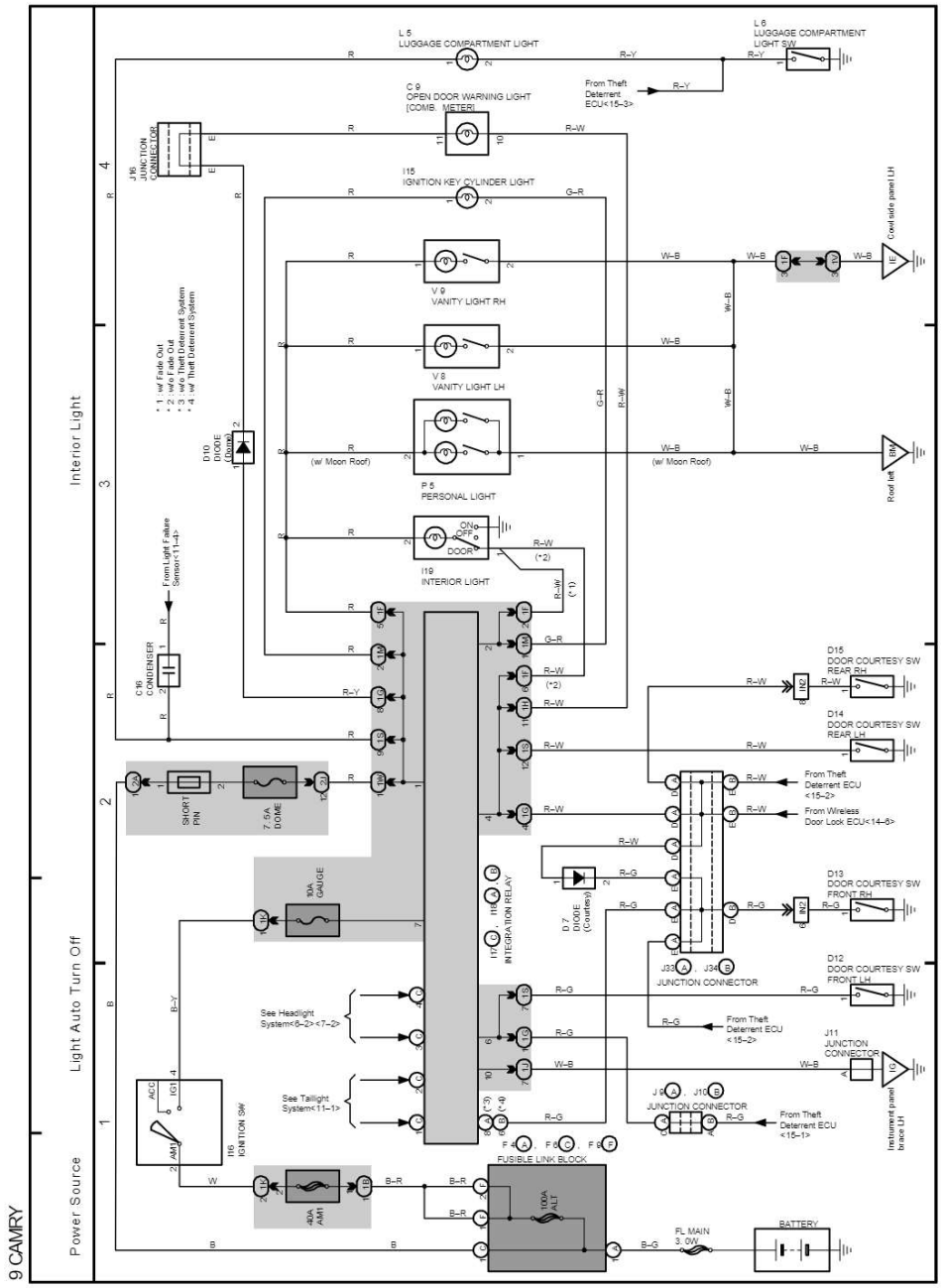

Power Source
Headlight (w/o Daytime Running Light)
1
2
3
4
40A MAIN
HEAD RELAY
15A HEAD (LH)
15A HEAD (RH)
J32 JUNCTION CONNECTOR
To Theft Deterrent ECU<15-3>
I17 INTEGRATION RELAY
H1 HEADLIGHT LH
H2 HEADLIGHT RH
FUSIBLE LINK BLOCK
C13 COMBINATION SW
LIGHT CONTROL SW
DIMMER SW
OFF
TAIL
HEAD
LOW
HIGH
FLASH
J35, J36 JUNCTION CONNECTOR
FL MAIN 3.0W
BATTERY
J7 JUNCTION CONNECTOR
J11 JUNCTION CONNECTOR
J5 JUNCTION CONNECTOR
C9 HIGH BEAM INDICATOR LIGHT [COMB. METER]
IG1
Instrument panel brace LH
Left kick panel

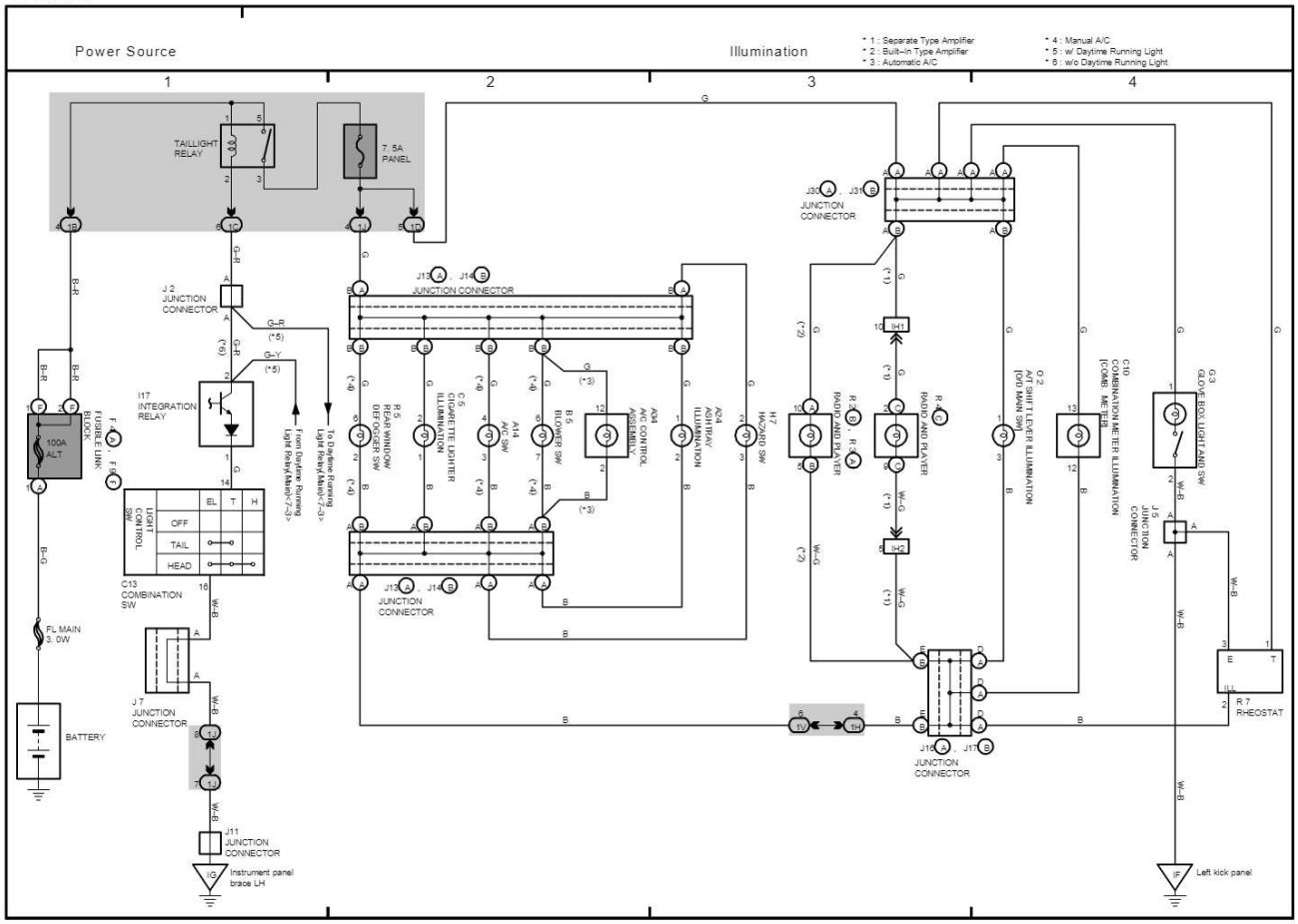
# J OVERALL ELECTRICAL WIRING DIAGRAM



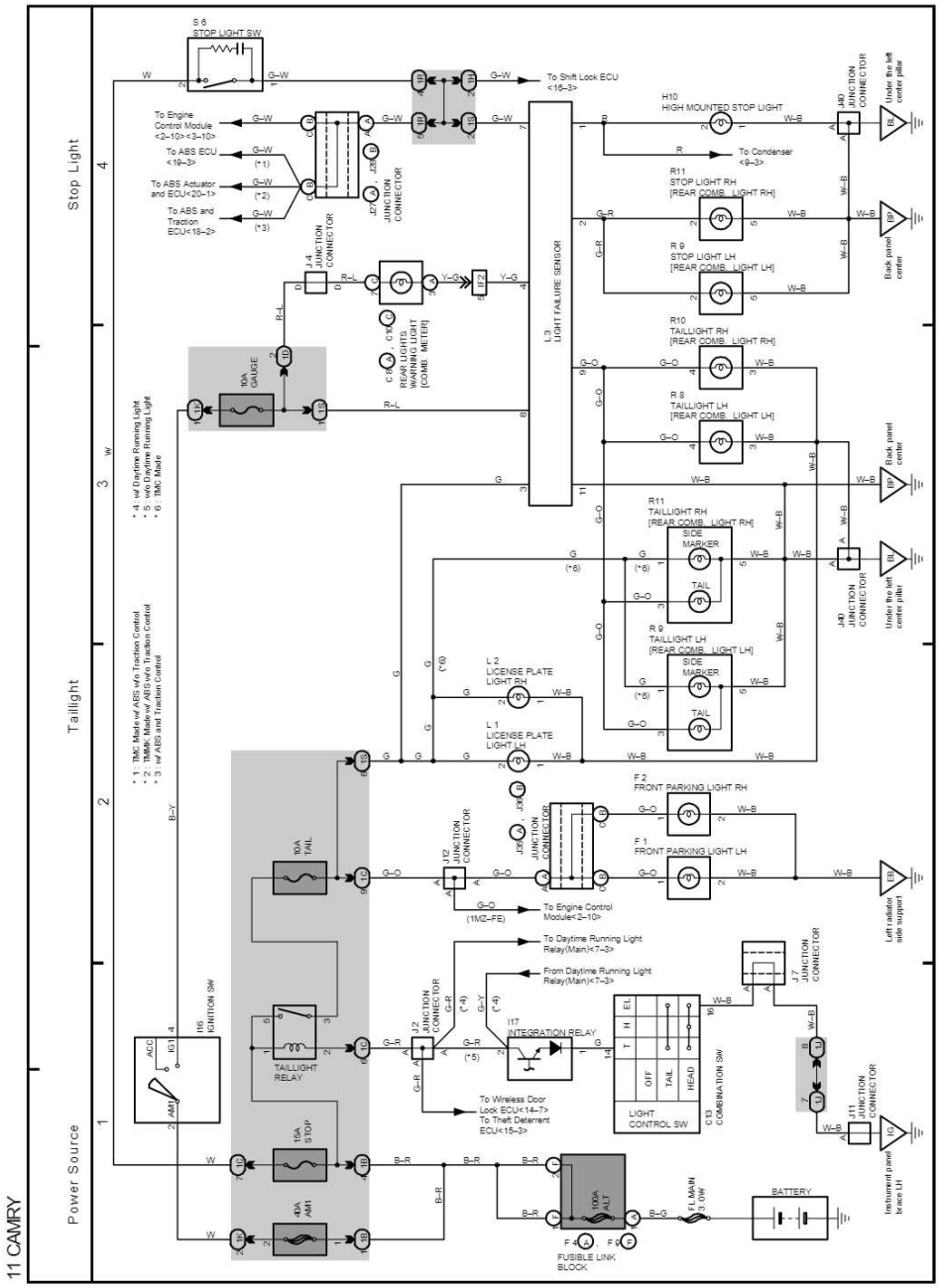

Power Source
Turn Signal and Hazard Warning Light
Back–Up Light
1
2
3
4
I16
IGNITION SW
ACC
IG1
AM1
40A
AM1
100A
ALT
FUSIBLE LINK
BLOCK
FL MAIN
3.0W
BATTERY
7.5A TURN
10A GAUGE
10A
HAZARD
H 7
HAZARD SW
T 6
TURN SIGNAL
FLASHER
C13
TURN SIGNAL SW
[COMB. SW]
J28
JUNCTION
CONNECTOR
J15
JUNCTION
CONNECTOR
J24
JUNCTION
CONNECTOR
J21
JUNCTION
CONNECTOR
BACK–UP LIGHT SW
[PARK/NEUTRAL POSITION SW](A/T)
BACK–UP LIGHT SW
(M/T)
R 9
REAR TURN SIGNAL LIGHT LH
[REAR COMB. LIGHT LH]
C 1
TURN SIGNAL INDICATOR
LIGHT[COMB. METER]
R11
REAR TURN SIGNAL LIGHT RH
[REAR COMB. LIGHT RH]
J26
JUNCTION CONNECTOR
F 2
FRONT TURN SIGNAL
LIGHT RH
F 1
FRONT TURN
SIGNAL LIGHT LH
J 5
JUNCTION
CONNECTOR
J11
JUNCTION
CONNECTOR
J27
JUNCTION
CONNECTOR
J40
JUNCTION
CONNECTOR
R 8
BACK–UP LIGHT LH
[REAR COMB. LIGHT LH]
R10
BACK–UP LIGHT RH
[REAR COMB. LIGHT RH]
Instrument panel
brace LH
Left radiator
side support
Left kick panel
Back panel center
Under the left
center pillar

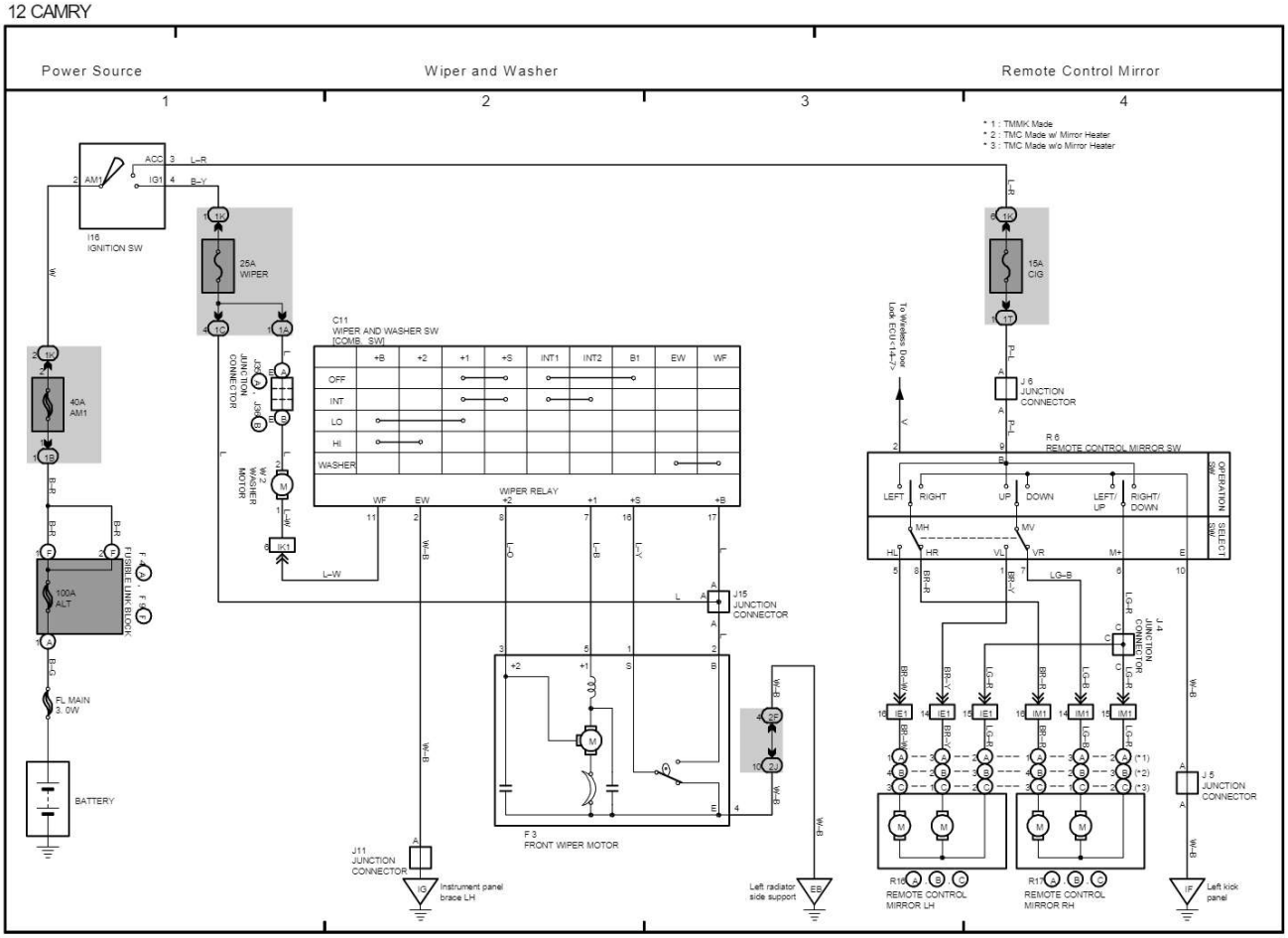
# J OVERALL ELECTRICAL WIRING DIAGRAM



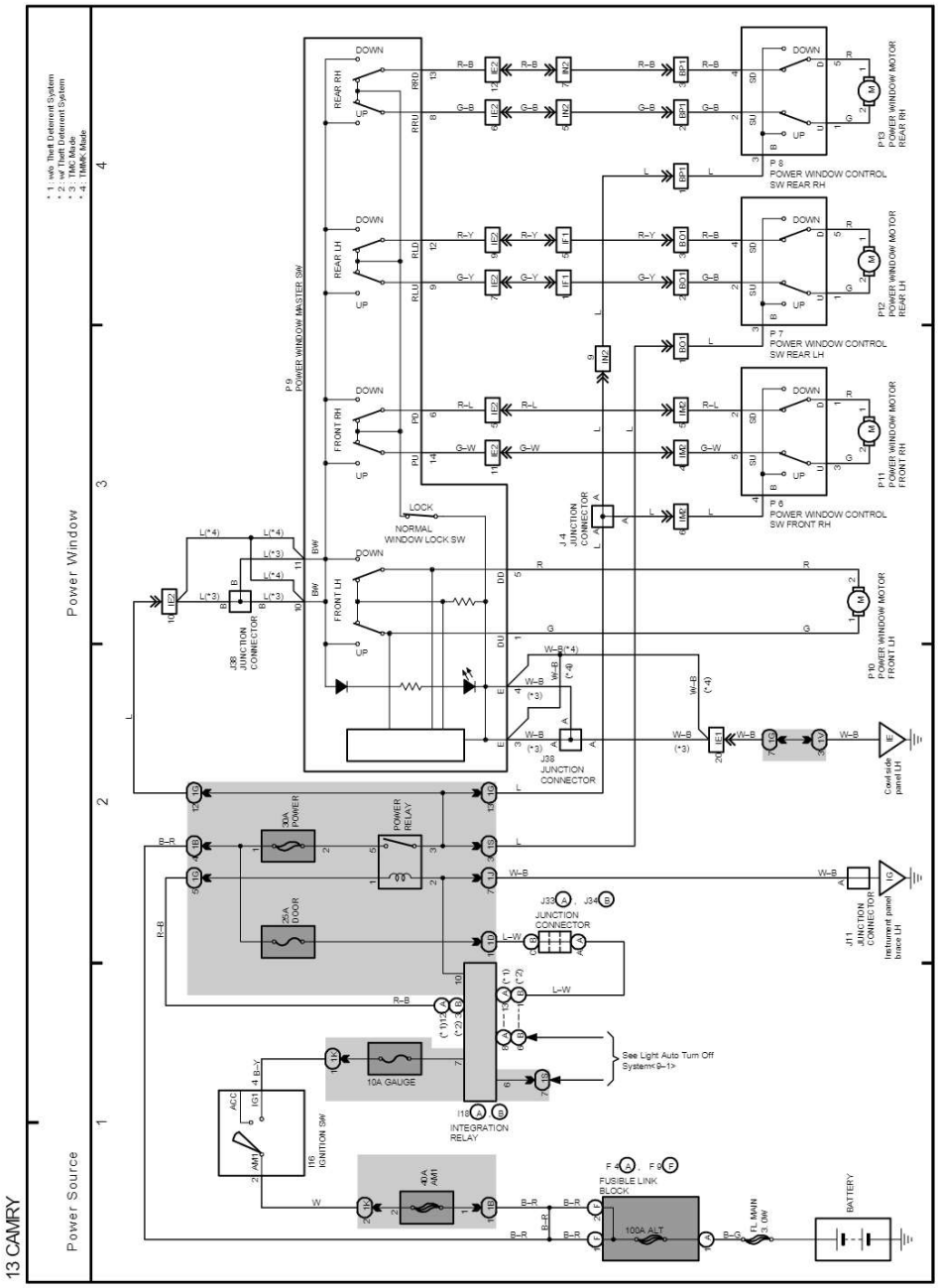

Power Source
Illumination
* 1 : Separate Type Amplifier
* 2 : Built-In Type Amplifier
* 3 : Automatic A/C
* 4 : Manual A/C
* 5 : w/ Daytime Running Light
* 6 : w/o Daytime Running Light
1
2
3
4
TAILLIGHT RELAY
7.5A PANEL
J2 JUNCTION CONNECTOR
I17 INTEGRATION RELAY
100A ALT
FUSIBLE LINK BLOCK
C13 COMBINATION SW
LIGHT CONTROL SW
OFF
TAIL
HEAD
FL MAIN 3.0W
BATTERY
J7 JUNCTION CONNECTOR
J11 JUNCTION CONNECTOR
Instrument panel brace LH
J13 , J14 JUNCTION CONNECTOR
R 5 REAR WINDOW DEFOGGER SW
C 5 CIGARETTE LIGHTER ILLUMINATION
A14 A/C SW
R 5 BLOWER SW
A34 A/C CONTROL ASSEMBLY
A24 ASHTRAY ILLUMINATION
H7 HAZARD SW
J30 , J31 JUNCTION CONNECTOR
IH1
IH2
R 4 RADIO AND PLAYER
O 2 A/T SHIFT LEVER ILLUMINATION [O/D MAIN SW]
C10 COMBINATION METER [COMB. METER]
COMBINATION METER ILLUMINATION
G 3 GLOVE BOX LIGHT AND SW
J5 JUNCTION CONNECTOR
R 7 RHEOSTAT
J16 , J17 JUNCTION CONNECTOR
Left kick panel
To Daytime Running Light Relay(Mono)<2-3>
From Daytime Running Light Relay(Mono)<2-3>
F 4 , F 5
F 6 , F 7

# J OVERALL ELECTRICAL WIRING DIAGRAM

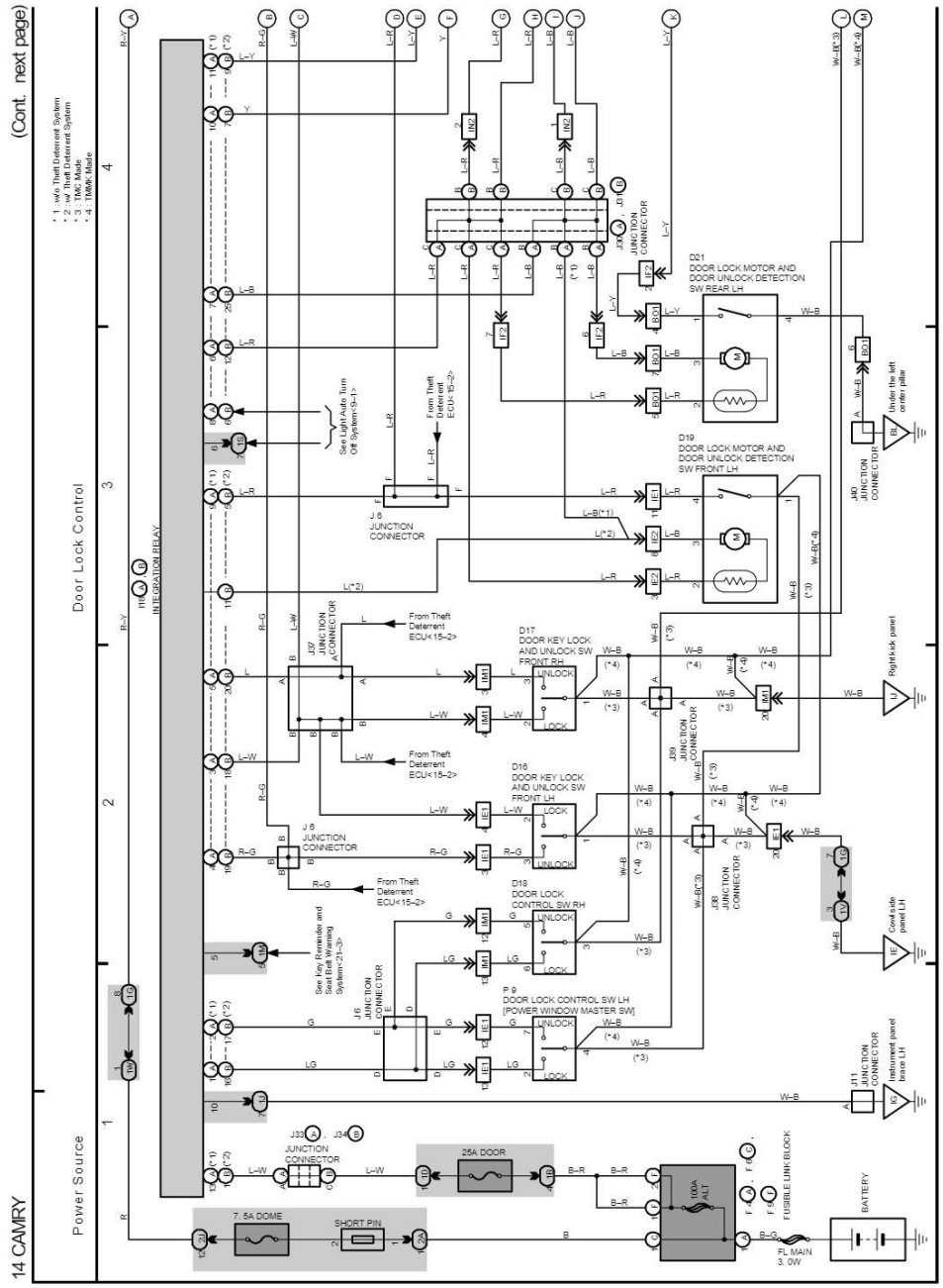


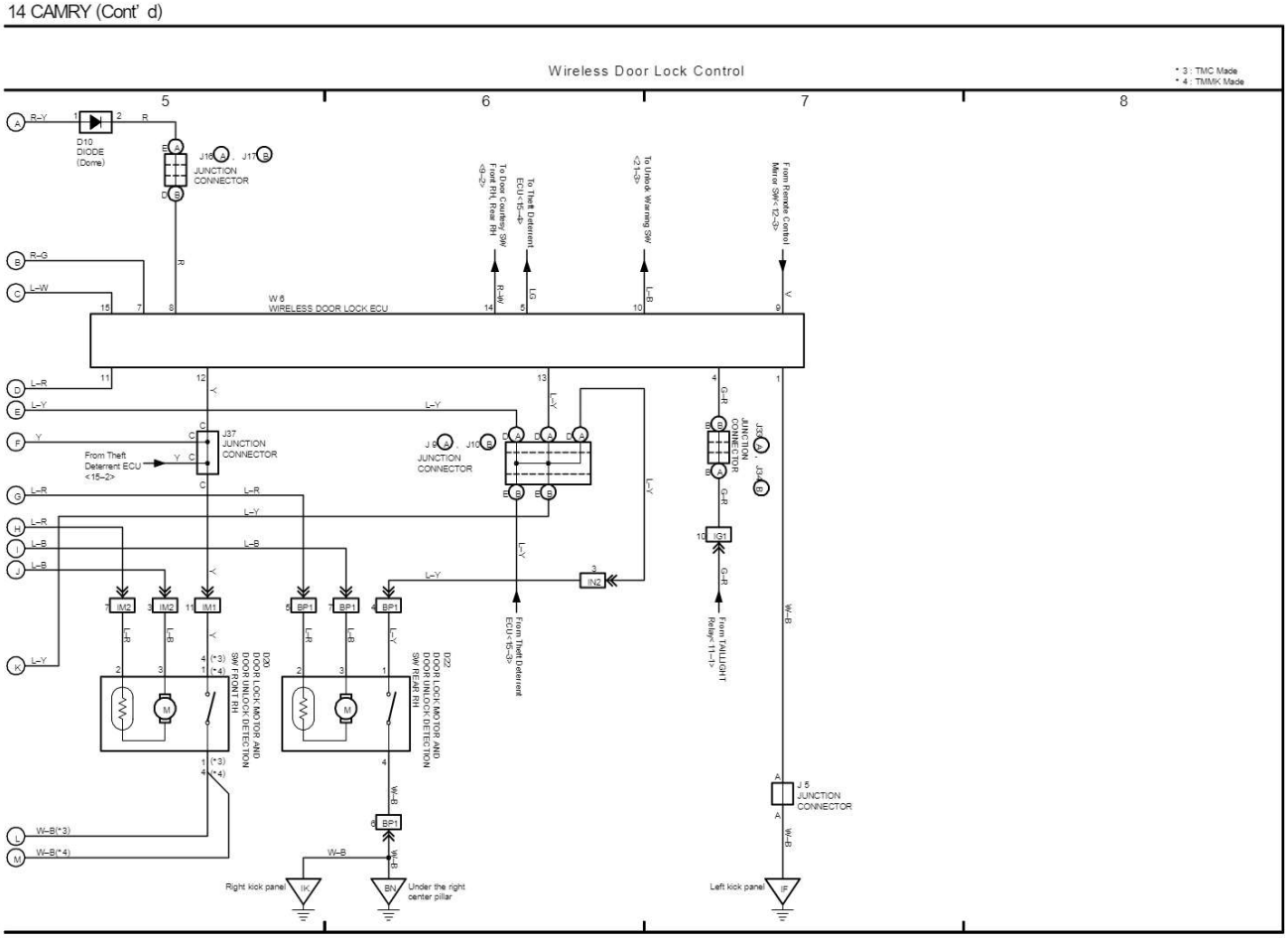

Power Source
Wiper and Washer
Remote Control Mirror
1
2
3
4
* 1 : TMMK Made
* 2 : TMC Made w/ Mirror Heater
* 3 : TMC Made w/o Mirror Heater
I16
IGNITION SW
25A
WIPER
40A
AM1
100A
ALT
FUSIBLE LINK BLOCK
FL MAIN
3.0W
BATTERY
C11
WIPER AND WASHER SW
[COMB. SW]
OFF
INT
LO
HI
WASHER
WIPER RELAY
J 2
JUNCTION
CONNECTOR
W.
WASHER
MOTOR
J15
JUNCTION
CONNECTOR
F 3
FRONT WIPER MOTOR
J11
JUNCTION
CONNECTOR
Instrument panel
brace LH
Left radiator
side support
15A
CIG
To Wireless Door
Lock ECU <1>, <7>
J 6
JUNCTION
CONNECTOR
R 6
REMOTE CONTROL MIRROR SW
OPERATION
SW
SELECT
SW
LEFT
RIGHT
UP
DOWN
LEFT/
UP
RIGHT/
DOWN
J 4
JUNCTION
CONNECTOR
J 5
JUNCTION
CONNECTOR
R16
REMOTE CONTROL
MIRROR LH
R17
REMOTE CONTROL
MIRROR RH
Left kick
panel

# J OVERALL ELECTRICAL WIRING DIAGRAM

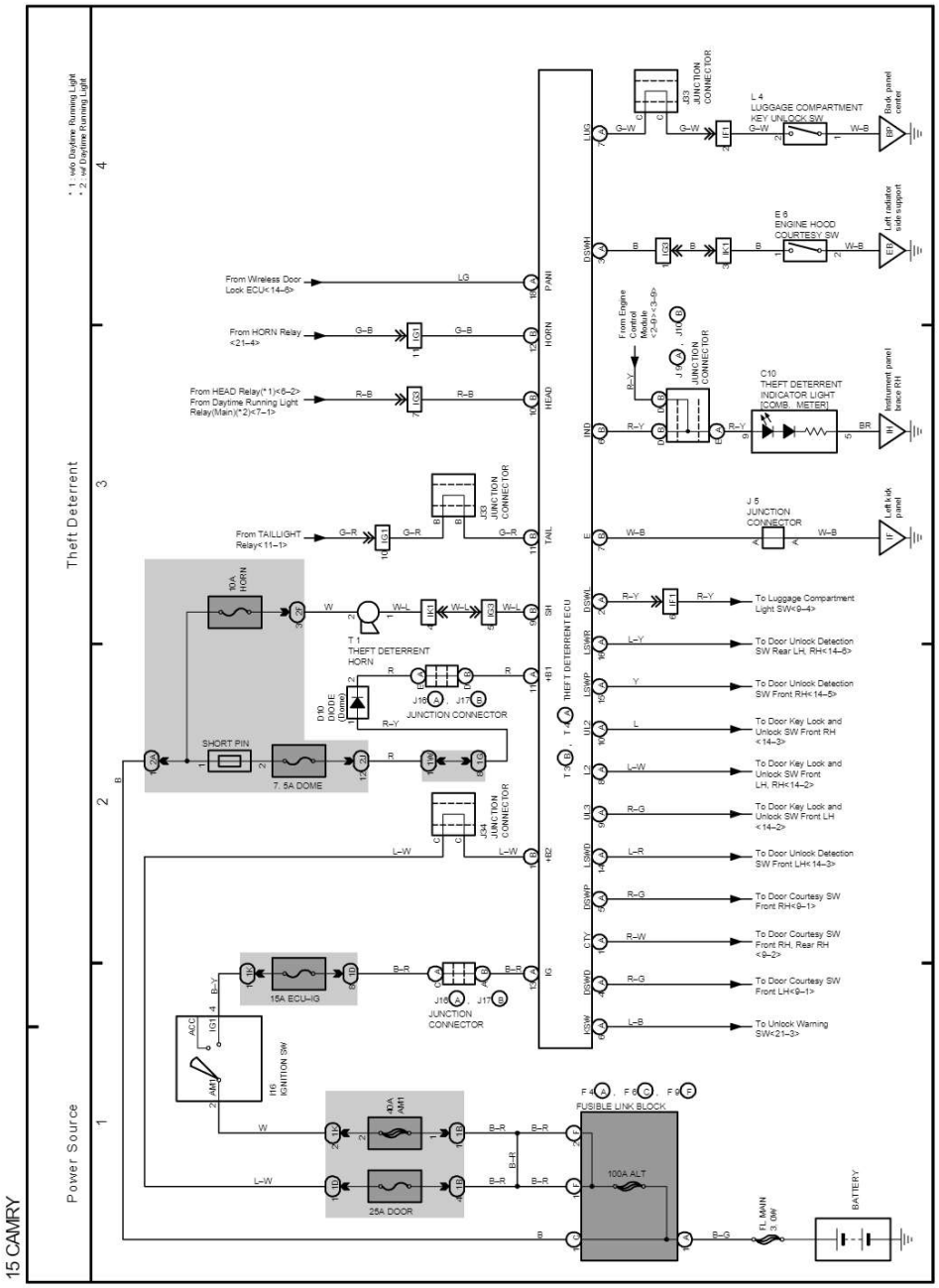


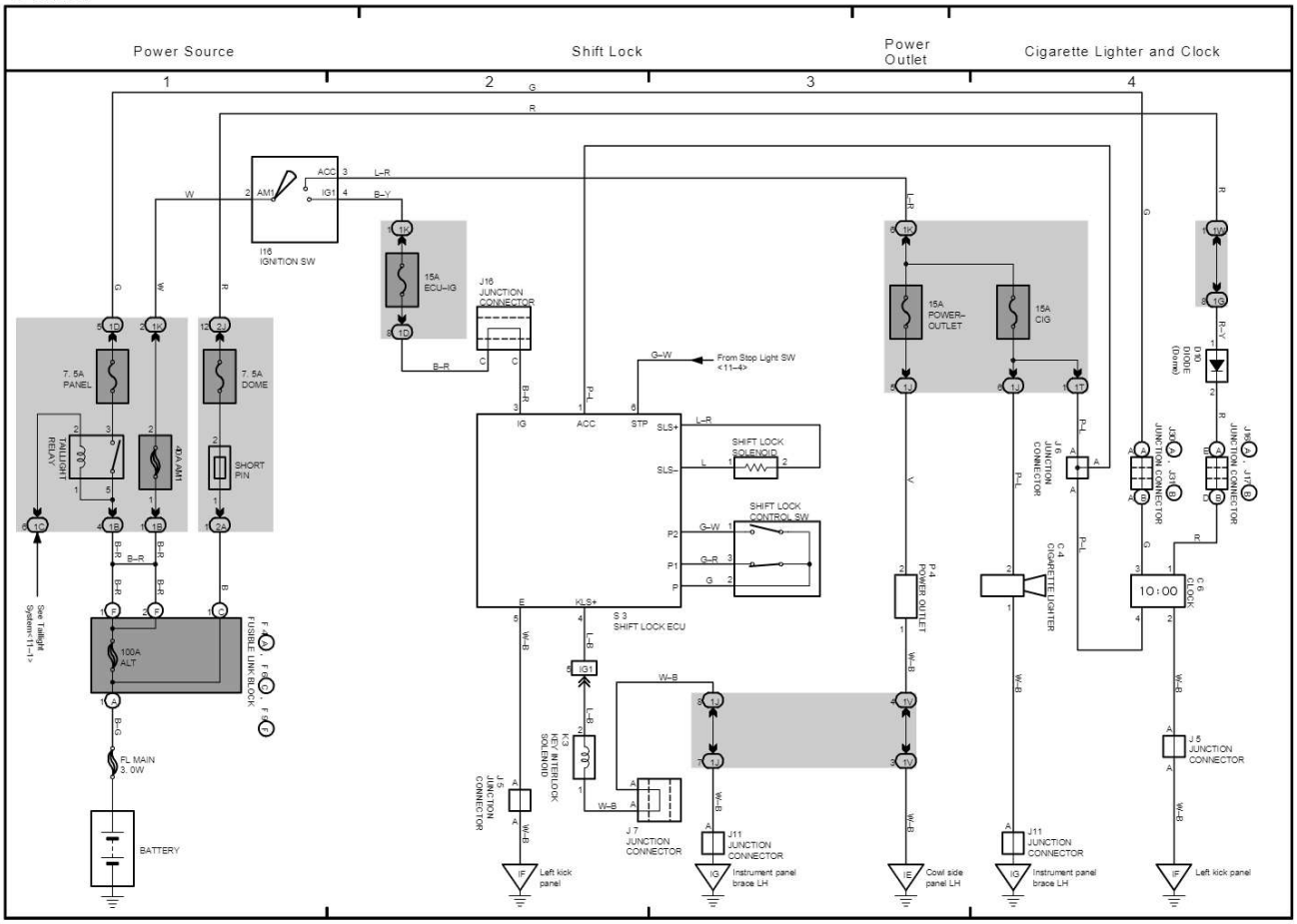
# J OVERALL ELECTRICAL WIRING DIAGRAM



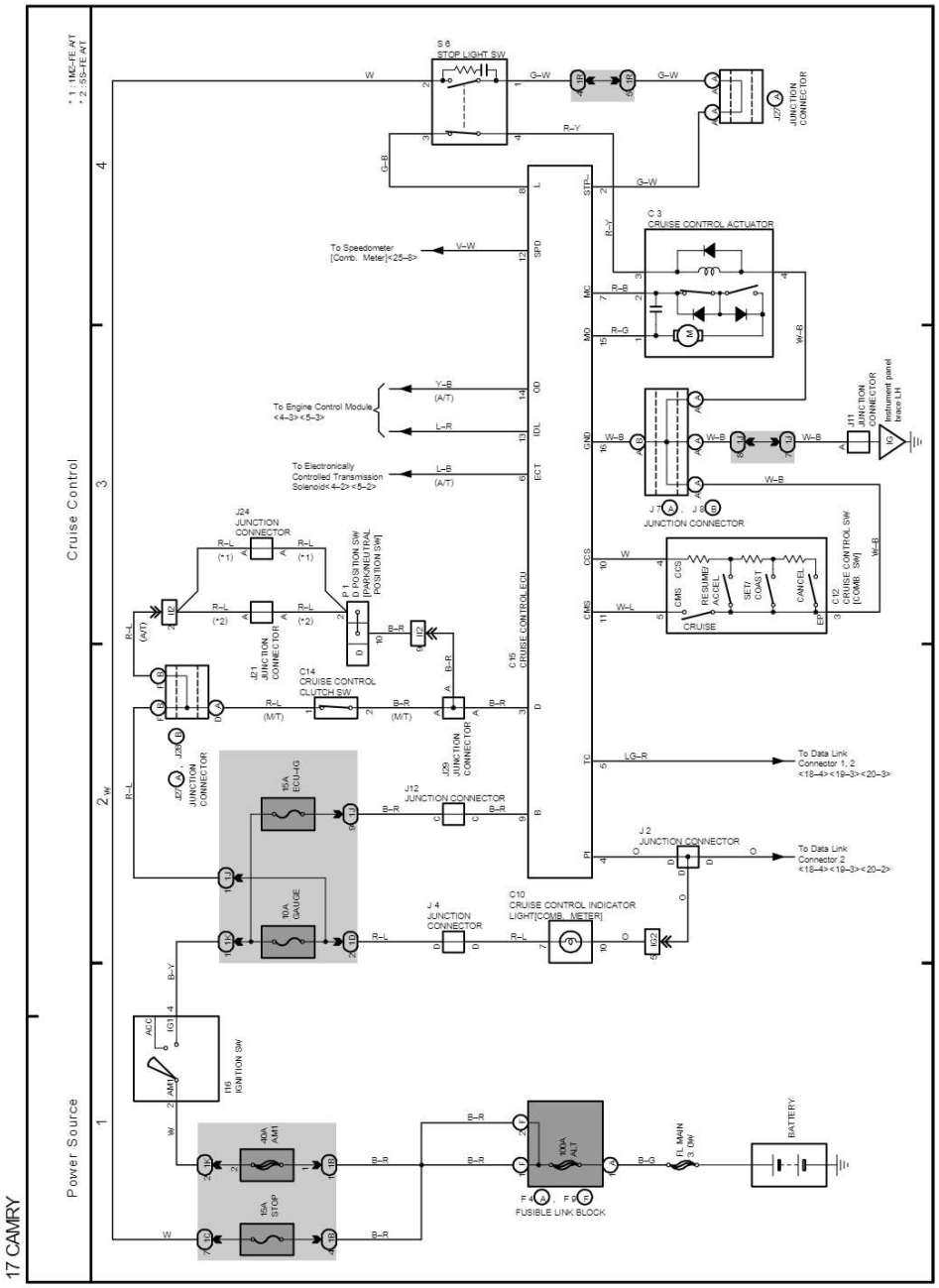

Wireless Door Lock Control
* 3 : TMC Made
* 4 : TMMK Made
5
6
7
8
D10
DIODE
(Dome)
JUNCTION
CONNECTOR
W 6
WIRELESS DOOR LOCK ECU
From Theft
Deterrent ECU
<15-2>
J37
JUNCTION
CONNECTOR
J 9
JUNCTION
CONNECTOR
J 5
JUNCTION
CONNECTOR
From Theft Deterrent
ECU <15-3>
From TAILLIGHT
Relay <11-1>
DOOR LOCK MOTOR AND
DOOR UNLOCK DETECTION
SW FRONT RH
DOOR LOCK MOTOR AND
DOOR UNLOCK DETECTION
SW REAR RH
Right kick panel
Under the right
center pillar
Left kick panel

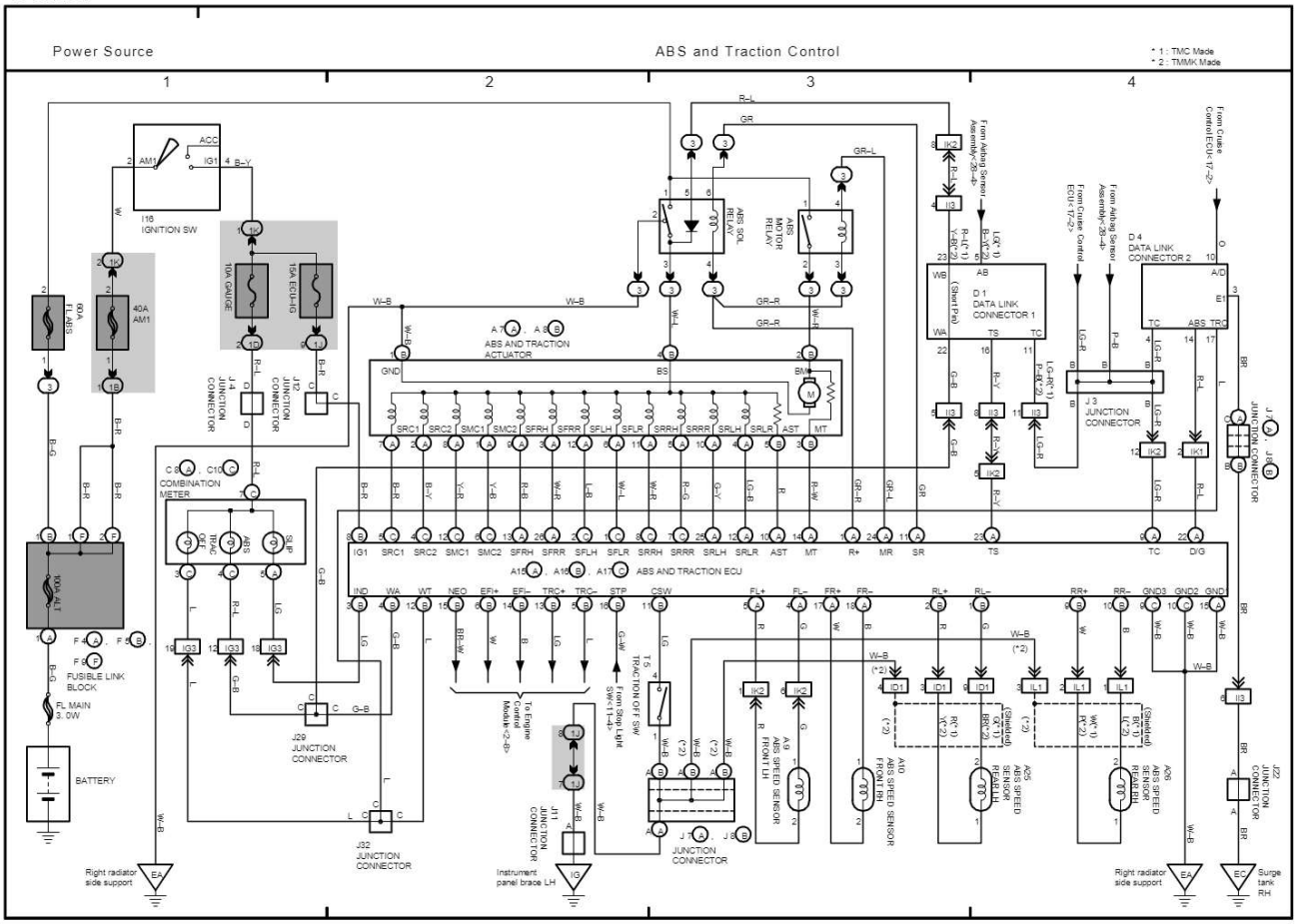
# J OVERALL ELECTRICAL WIRING DIAGRAM



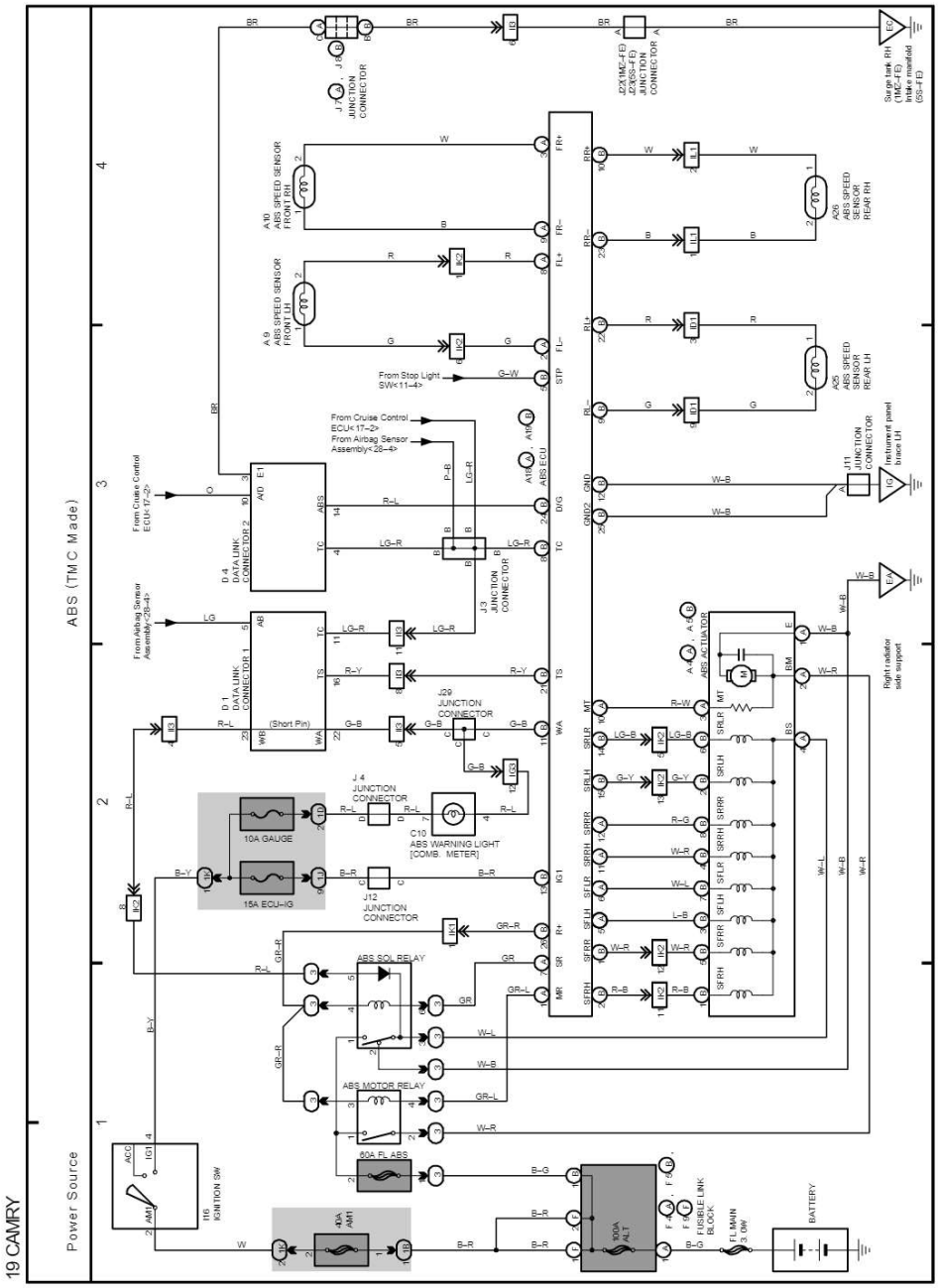

Power Source
Shift Lock
Power Outlet
Cigarette Lighter and Clock
1
2
3
4
ACC
IG1
AM1
I16 IGNITION SW
15A ECU–IG
J16 JUNCTION CONNECTOR
7.5A PANEL
7.5A DOME
TAIL LIGHT RELAY
40A AM1
SHORT PIN
100A ALT
FUSIBLE LINK BLOCK
FL MAIN 3.0W
BATTERY
See Taillight System <11–1>
From Stop Light SW <11–4>
SHIFT LOCK SOLENOID
SHIFT LOCK CONTROL SW
S 3 SHIFT LOCK ECU
K3 KEY INTERLOCK SOLENOID
J 7 JUNCTION CONNECTOR
J5 JUNCTION CONNECTOR
J11 JUNCTION CONNECTOR
15A POWER–OUTLET
15A CIG
P 4 POWER OUTLET
J6 JUNCTION CONNECTOR
C 4 CIGARETTE LIGHTER
DIODE
C 6 CLOCK
10:00
Left kick panel
Instrument panel brace LH
Cowl side panel LH
Instrument panel brace LH
Left kick panel

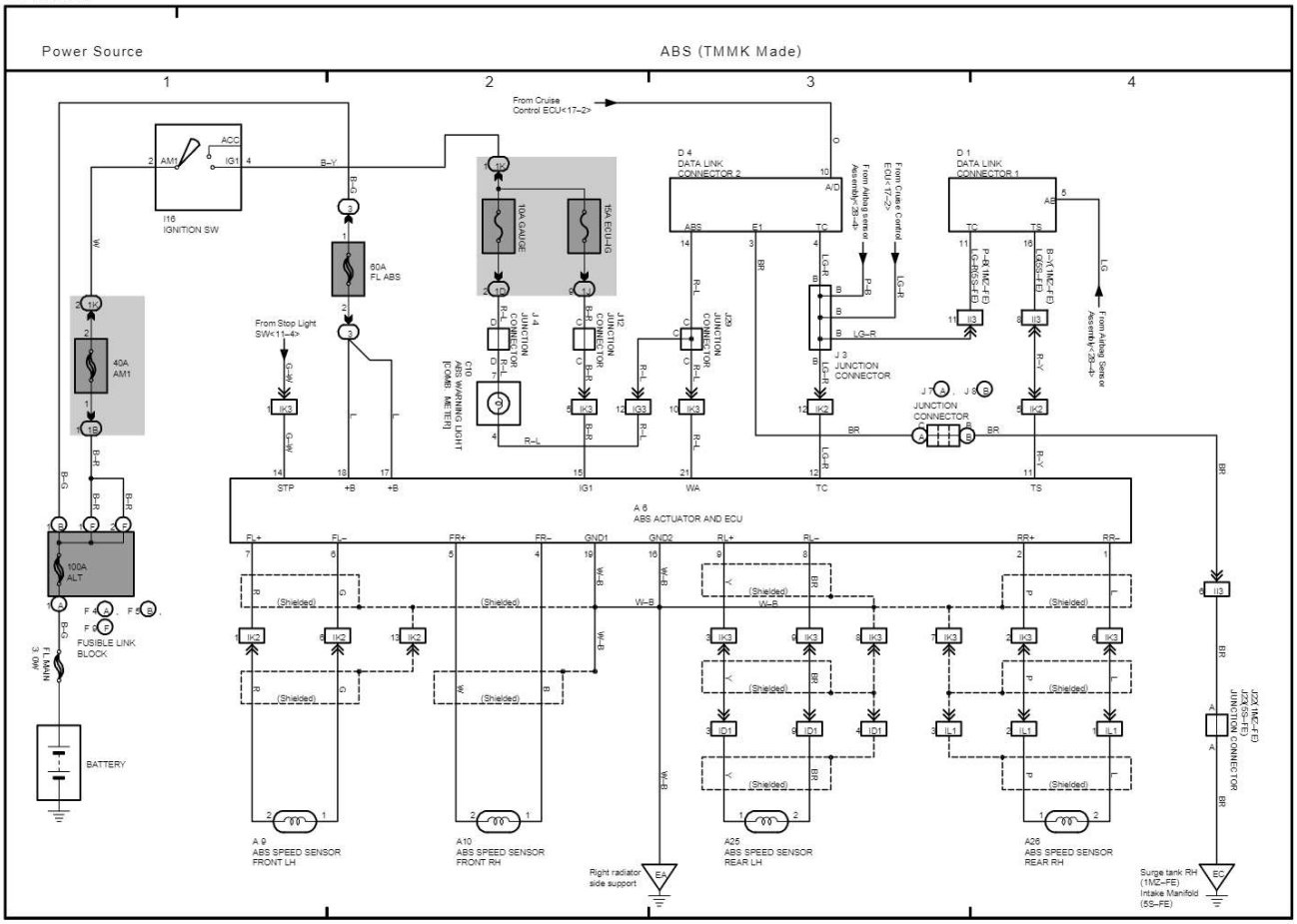
# J OVERALL ELECTRICAL WIRING DIAGRAM



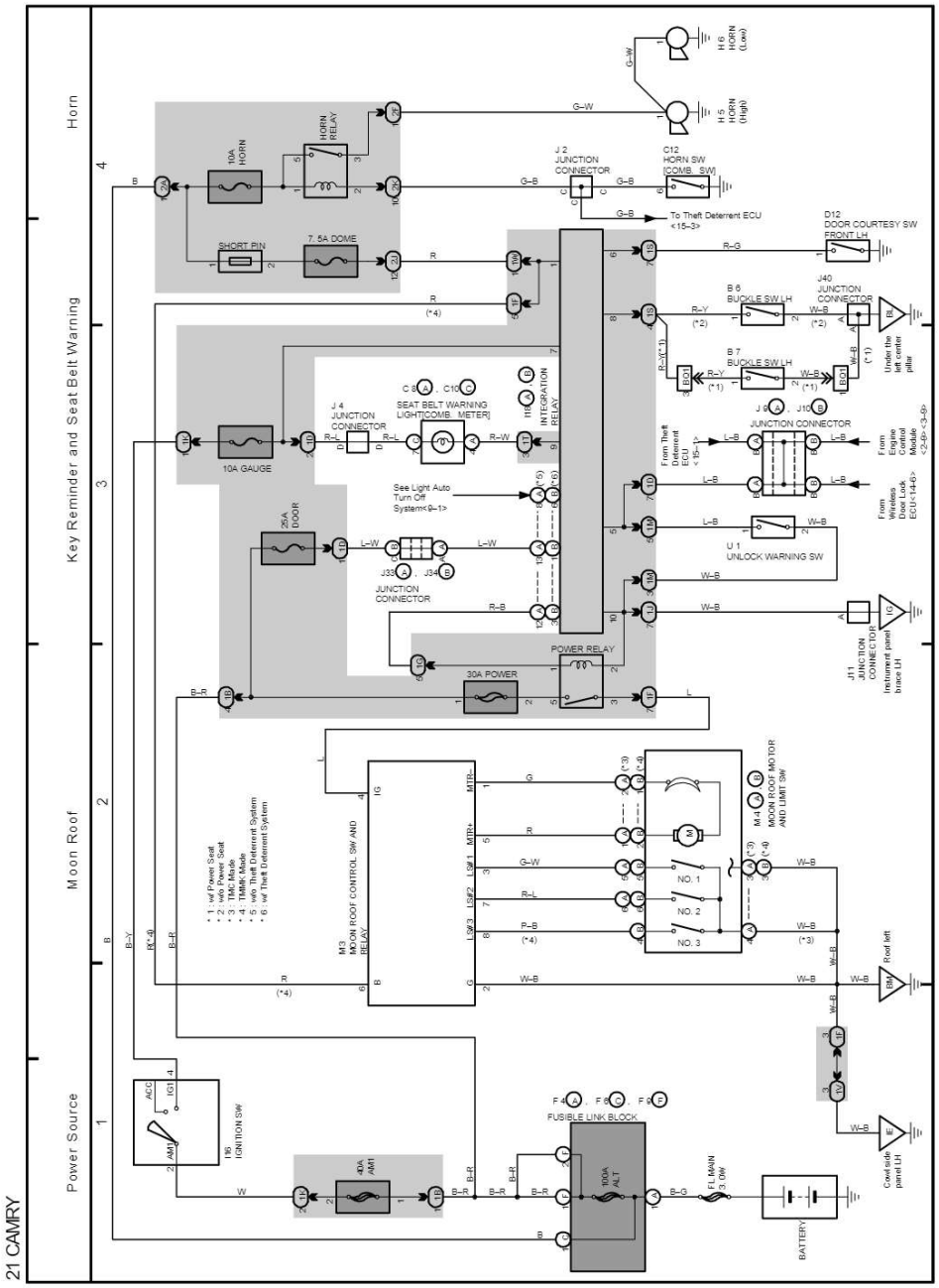

Power Source
ABS and Traction Control
* 1 : TMC Made
* 2 : TMMK Made
1
2
3
4
I16
IGNITION SW
ACC
AM1
IG1
B–Y
60A
ALT–S
40A
AM1
10A GAUGE
15A ECU–IG
J4
JUNCTION
CONNECTOR
J5
JUNCTION
CONNECTOR
C9 , C10
COMBINATION
METER
TRC
OFF
VSC
OFF
ABS
SLIP
100A
ALT
F4 , F5 , F6
FUSIBLE LINK
BLOCK
FL MAIN
3.0W
BATTERY
J29
JUNCTION
CONNECTOR
J32
JUNCTION
CONNECTOR
Right radiator
side support
EA
A7 , A8
ABS AND TRACTION
ACTUATOR
ABS SOL
RELAY
ABS
MOTOR
RELAY
GND
BS
BM
M
SRC1
SRC2
SMC1
SMC2
SFRH
SFRR
SFLH
SFLR
SRRH
SRRR
SRLH
SRLR
AST
MT
A15 , A16 , A17
ABS AND TRACTION ECU
IG1
SRC1
SRC2
SMC1
SMC2
SFRH
SFRR
SFLH
SFLR
SRRH
SRRR
SRLH
SRLR
AST
MT
R+
MR
SR
TS
TC
DG
IND
WA
WT
NEO
EFI+
EFI–
TRC+
TRC–
STP
CSW
FL+
FL–
FR+
FR–
RL+
RL–
RR+
RR–
GND3
GND2
GND
To Engine
Control
Module <2–B>
From Stop Light
Switch <1–4>
TRACTION OFF SW
J11
JUNCTION
CONNECTOR
Instrument
panel brace LH
IG
J33 , J34
JUNCTION
CONNECTOR
A10
ABS SPEED SENSOR
FRONT RH
A9
ABS SPEED SENSOR
FRONT LH
A25
ABS SPEED
SENSOR
REAR LH
A26
ABS SPEED
SENSOR
REAR RH
J22
JUNCTION
CONNECTOR
Surge
tank
RH
EC
From Airbag Sensor
Assembly <2B–4>
From Cruise Control
ECU <17–2>
From Cabin
Control ECU <17–2>
D1
DATA LINK
CONNECTOR 1
D4
DATA LINK
CONNECTOR 2
J3
JUNCTION
CONNECTOR
(Shielded)
(*1)
(*2)

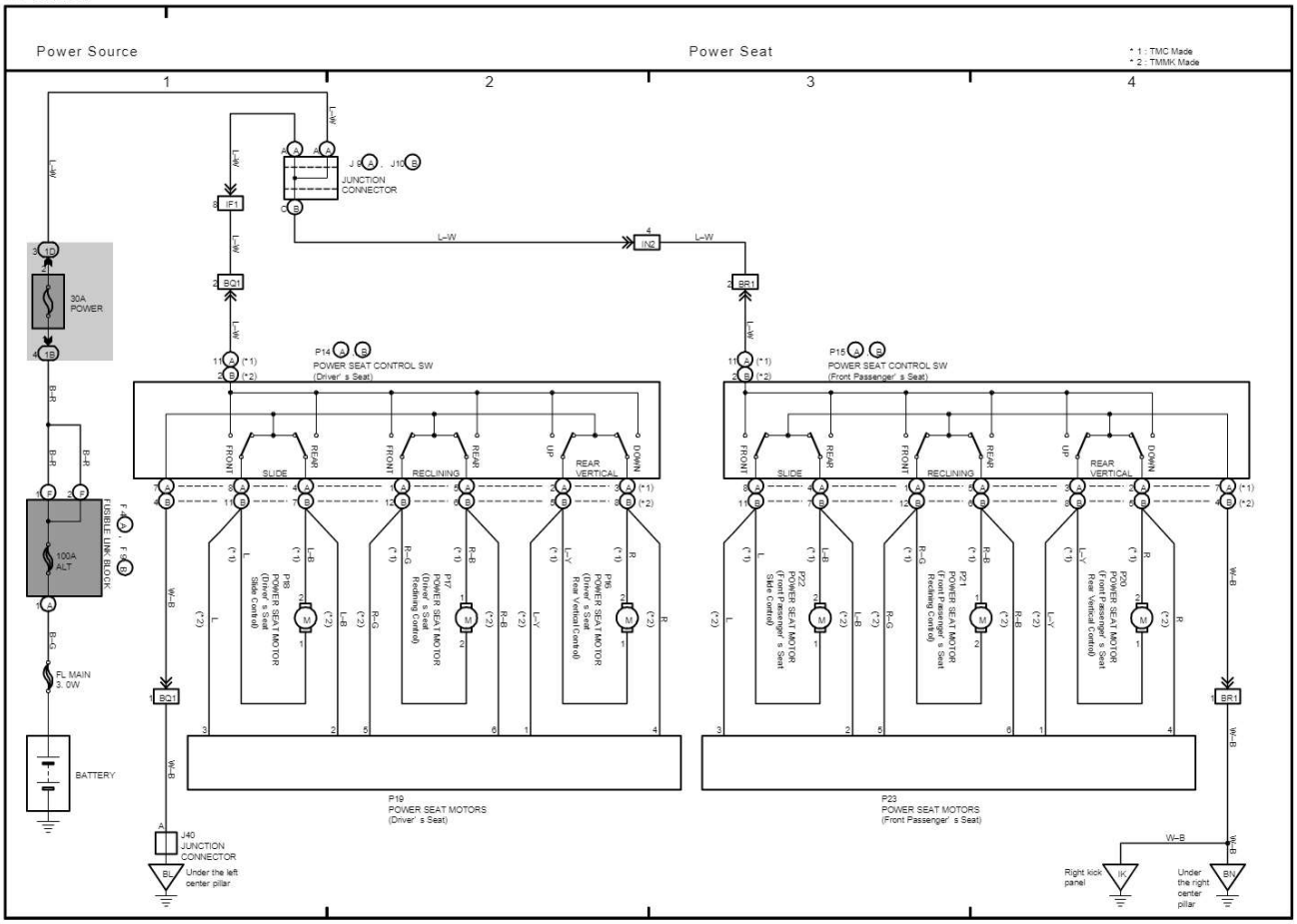
# J OVERALL ELECTRICAL WIRING DIAGRAM



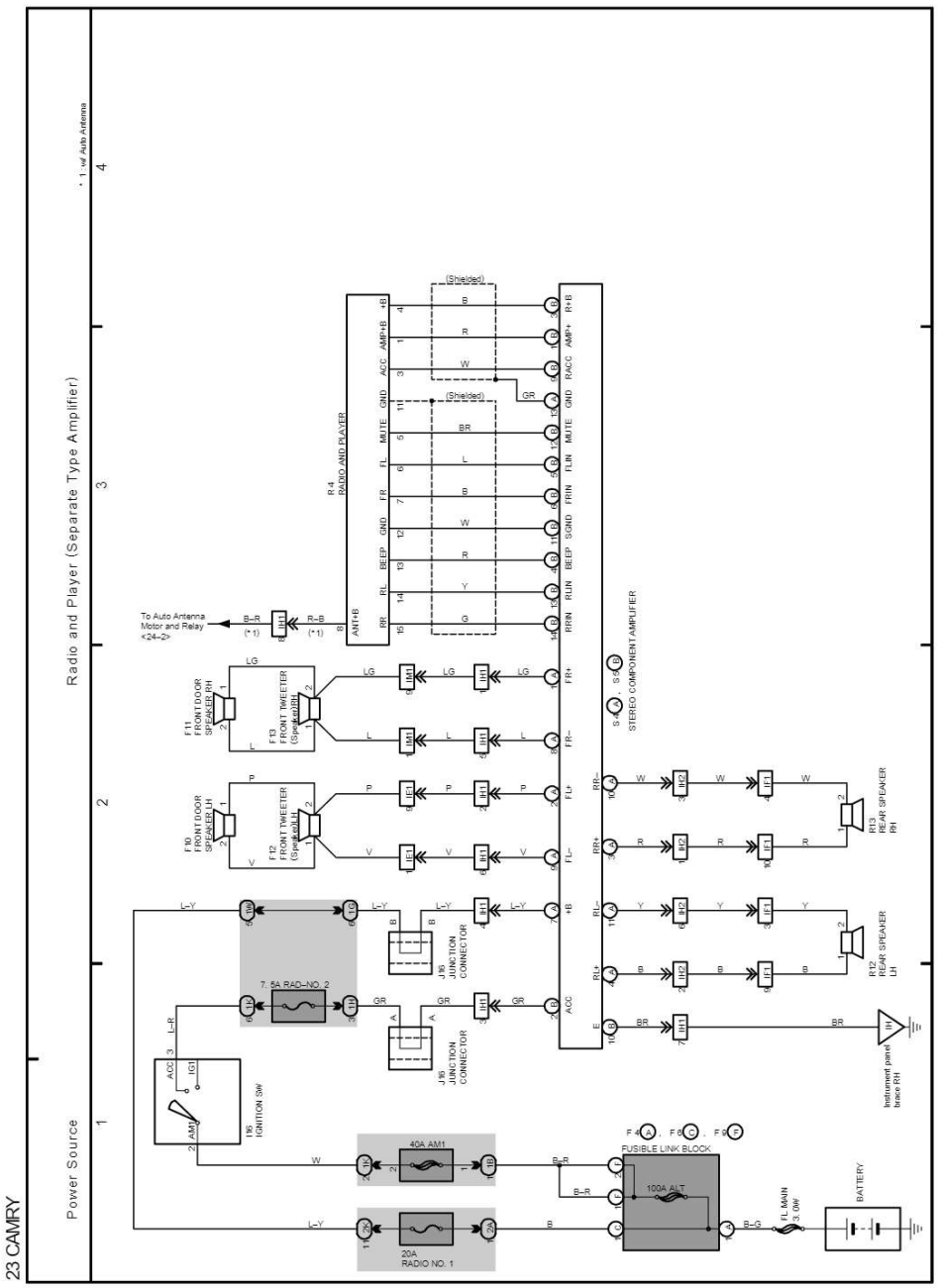

Power Source
ABS (TMMK Made)
1
2
3
4
From Cruise Control ECU<17–2>
I16
IGNITION SW
ACC
AM1
IG1
B–Y
60A
FL ABS
10A GAUGE
15A ECU–IG
40A
AM1
100A
ALT
FUSIBLE LINK BLOCK
BATTERY
From Stop Light SW<11–4>
J 4
JUNCTION CONNECTOR
J12
JUNCTION CONNECTOR
J29
JUNCTION CONNECTOR
C10
ABS WARNING LIGHT [COMB. METER]
D 4
DATA LINK CONNECTOR 2
D 1
DATA LINK CONNECTOR 1
From Airbag sensor Assembly<28–4>
From Cruise Control ECU<17–2>
J 3
JUNCTION CONNECTOR
JUNCTION CONNECTOR
From Airbag Sensor Assembly<28–4>
A 6
ABS ACTUATOR AND ECU
STP
+B
+B
IG1
WA
TC
TS
FL+
FL–
FR+
FR–
GND1
GND2
RL+
RL–
RR+
RR–
(Shielded)
A 9
ABS SPEED SENSOR FRONT LH
A10
ABS SPEED SENSOR FRONT RH
A25
ABS SPEED SENSOR REAR LH
A26
ABS SPEED SENSOR REAR RH
Right radiator side support
EA
Surge tank RH (1MZ–FE)
Intake Manifold (5S–FE)
EC
J2X (1MZ–FE)
J2X(5S–FE)
JUNCTION CONNECTOR

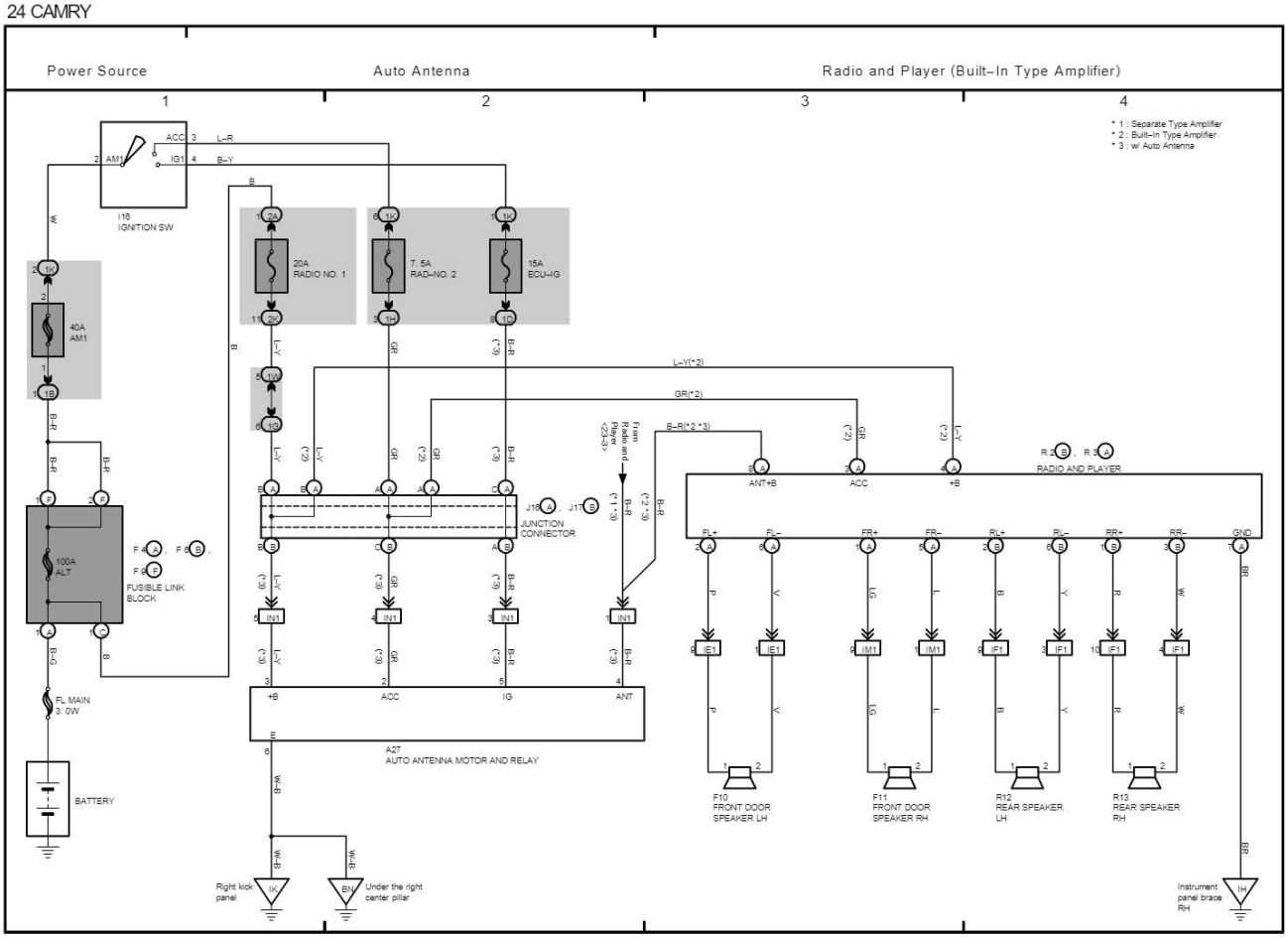
# J OVERALL ELECTRICAL WIRING DIAGRAM



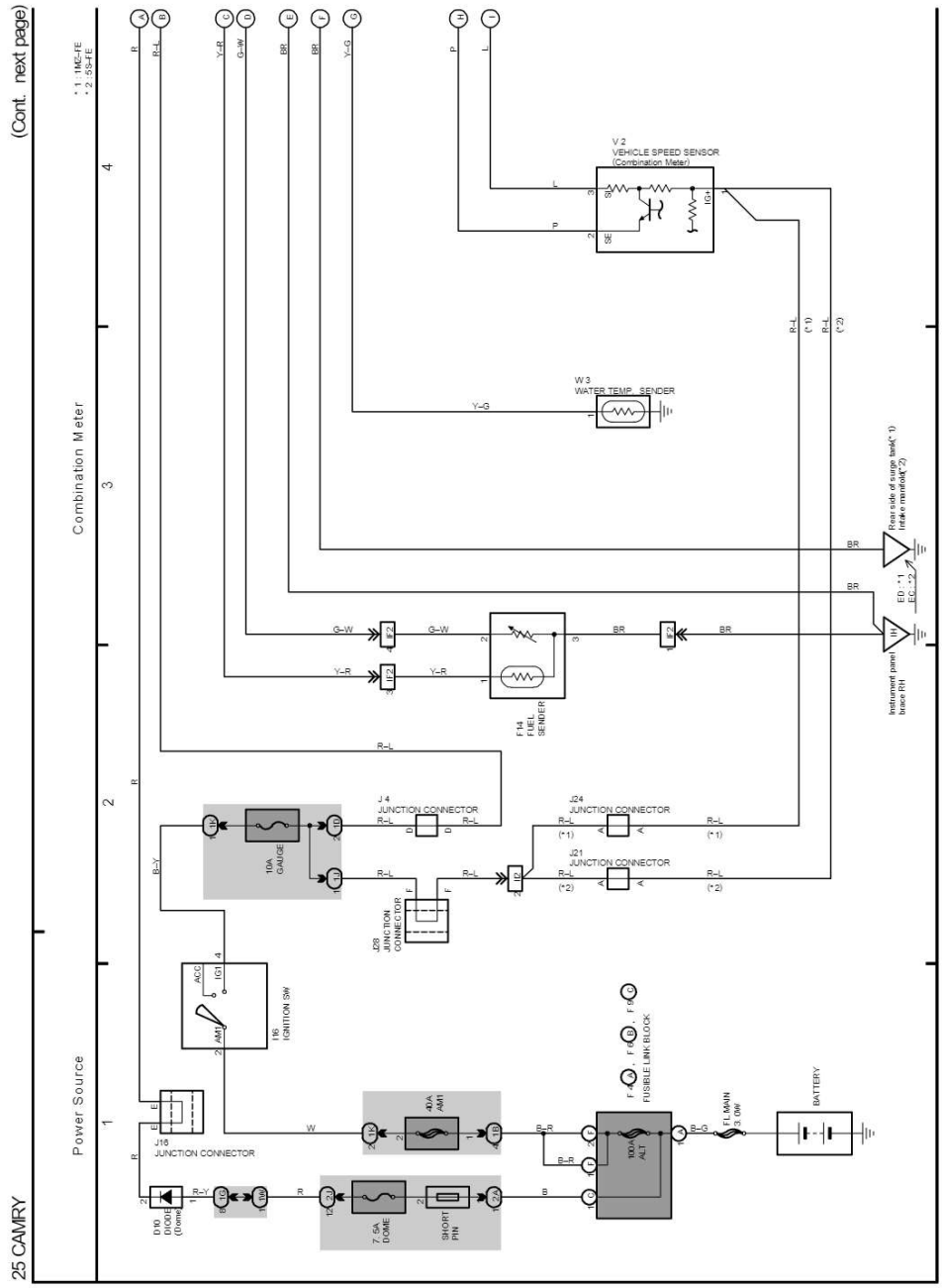

Power Source
Power Seat
* 1 : TMC Made
* 2 : TMMK Made
1
2
3
4
JUNCTION CONNECTOR
30A POWER
100A ALT
FUSIBLE LINK BLOCK
FL MAIN 3.0W
BATTERY
P14 POWER SEAT CONTROL SW (Driver's Seat)
P15 POWER SEAT CONTROL SW (Front Passenger's Seat)
SLIDE
RECLINING
REAR VERTICAL
P19 POWER SEAT MOTORS (Driver's Seat)
P23 POWER SEAT MOTORS (Front Passenger's Seat)
J40 JUNCTION CONNECTOR
Under the left center pillar
Right kick panel
Under the right center pillar

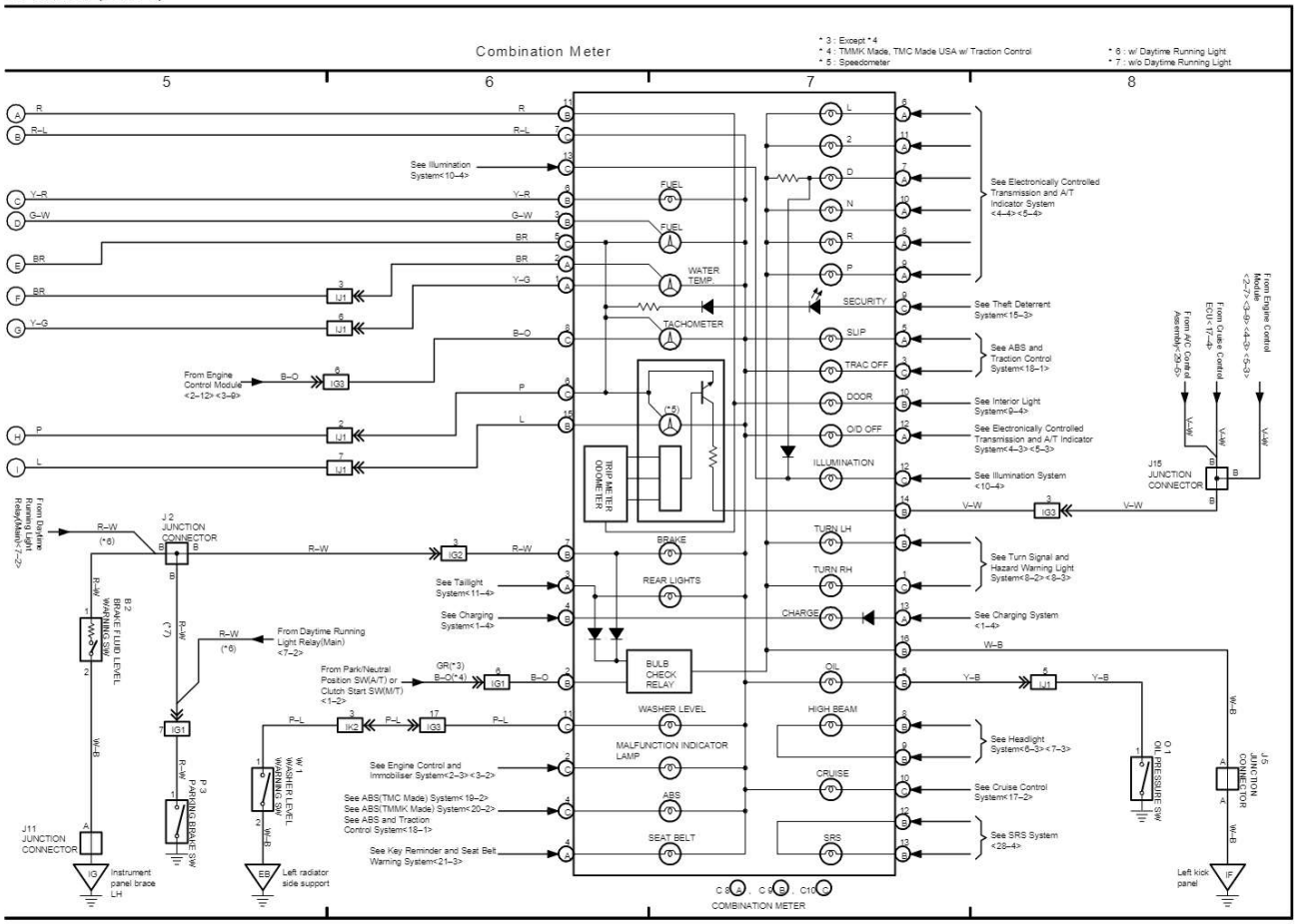
# J OVERALL ELECTRICAL WIRING DIAGRAM



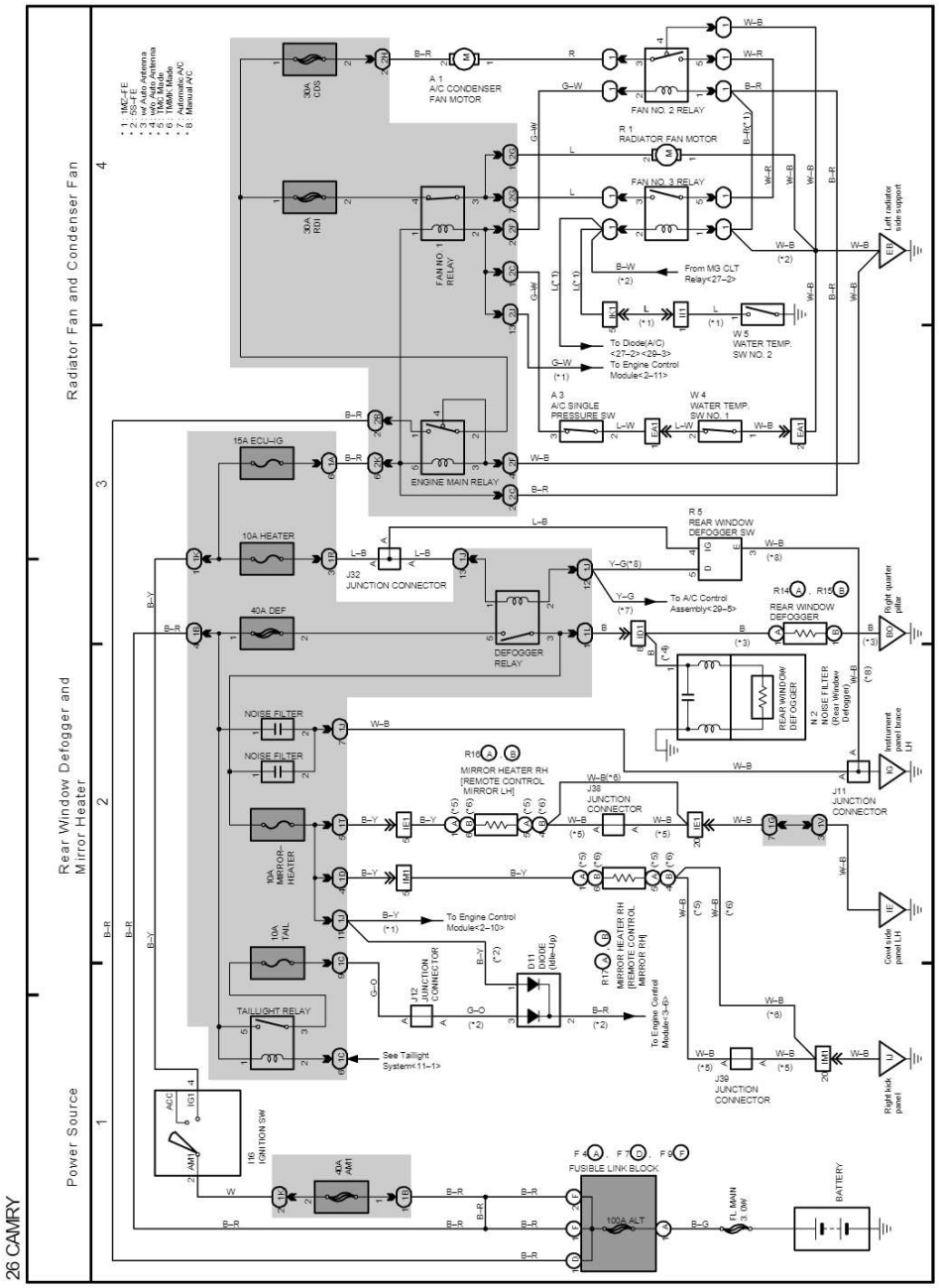

Power Source
Auto Antenna
Radio and Player (Built–In Type Amplifier)
1
2
3
4
* 1 : Separate Type Amplifier
* 2 : Built–In Type Amplifier
* 3 : w/ Auto Antenna
I16
IGNITION SW
ACC
IG1
AM1
L–R
B–Y
20A
RADIO NO. 1
7. 5A
RAD–NO. 2
15A
ECU–IG
40A
AM1
100A
ALT
FUSIBLE LINK
BLOCK
FL MAIN
3. 0W
BATTERY
L–Y(*2)
GR(*2)
B–R(*2 *3)
JUNCTION
CONNECTOR
A27
AUTO ANTENNA MOTOR AND RELAY
+B
ACC
IG
ANT
ANT+B
ACC
+B
RADIO AND PLAYER
FL+
FL–
FR+
FR–
RL+
RL–
RR+
RR–
GND
F10
FRONT DOOR
SPEAKER LH
F11
FRONT DOOR
SPEAKER RH
R12
REAR SPEAKER
LH
R13
REAR SPEAKER
RH
Right kick
panel
Under the right
center pillar
Instrument
panel brace
RH

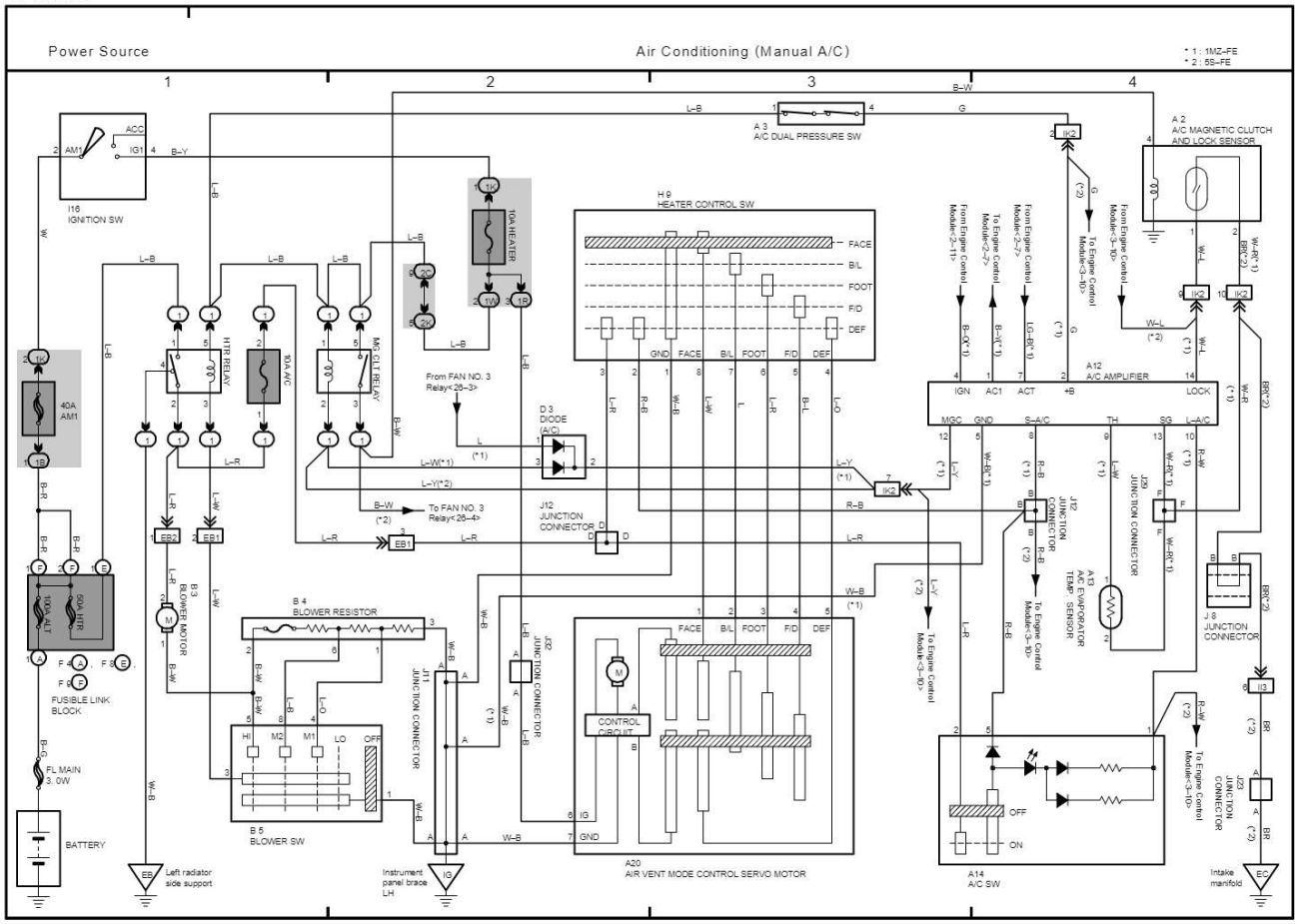
## J OVERALL ELECTRICAL WIRING DIAGRAM



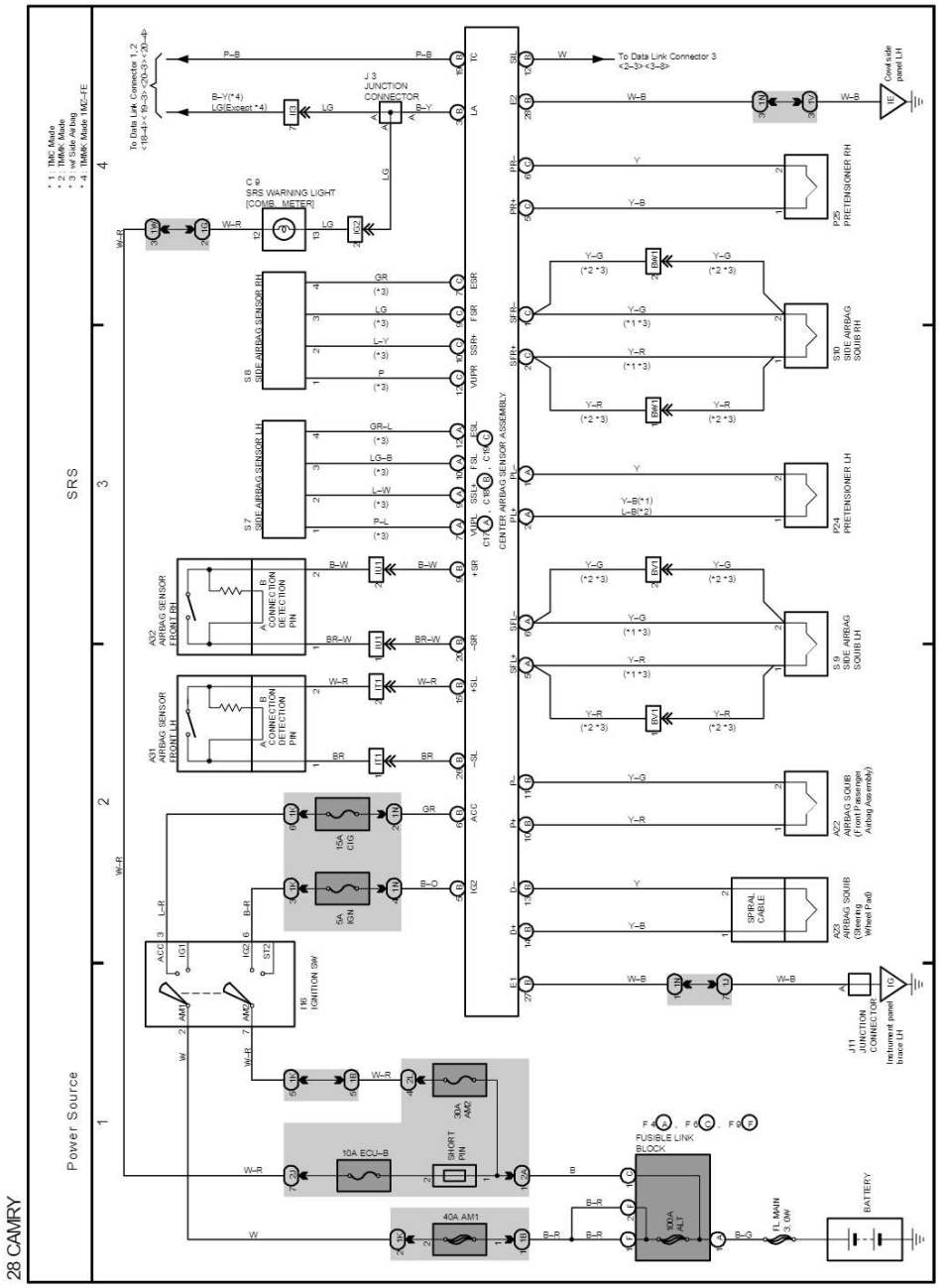

Combination Meter
* 3 : Except * 4
* 4 : TMMK Made, TMC Made USA w/ Traction Control
* 5 : Speedometer
* 6 : w/ Daytime Running Light
* 7 : w/o Daytime Running Light
5
6
7
8
FUEL
WATER TEMP.
TACHOMETER
TRIP METER
ODOMETER
BRAKE
REAR LIGHTS
BULB CHECK RELAY
WASHER LEVEL
MALFUNCTION INDICATOR LAMP
ABS
SEAT BELT
TURN LH
TURN RH
CHARGE
OIL
HIGH BEAM
CRUISE
SRS
SECURITY
SLIP
TRAC OFF
DOOR
O/D OFF
ILLUMINATION
See Illumination System<10–4>
See Electronically Controlled Transmission and A/T Indicator System <4–4><5–4>
See Theft Deterrent System<15–3>
See ABS and Traction Control System<18–1>
See Interior Light System<9–4>
See Electronically Controlled Transmission and A/T Indicator System<4–3><5–3>
See Illumination System <10–4>
See Turn Signal and Hazard Warning Light System<8–2><8–3>
See Charging System <1–4>
See Headlight System<6–3><7–3>
See Cruise Control System<17–2>
See SRS System <28–4>
From Engine Control Module <2–7><3–8><4–3><5–3>
From A/C Control Assembly<29–5>
From Cruise Control ECU<17–4>
J15 JUNCTION CONNECTOR
From Daytime Running Light Relay(Main)<7–2>
J2 JUNCTION CONNECTOR
B2 BRAKE FLUID LEVEL WARNING SW
P3 PARKING BRAKE SW
W1 WASHER LEVEL WARNING SW
J11 JUNCTION CONNECTOR
IG
Instrument panel brace LH
EB
Left radiator side support
From Park/Neutral Position SW(A/T) or Clutch Start SW(M/T) <1–2>
See Taillight System<11–4>
See Charging System<1–4>
See Engine Control and Immobiliser System<2–3><3–2>
See ABS(TMC Made) System<19–2>
See ABS(TMMK Made) System<20–2>
See ABS and Traction Control System<18–1>
See Key Reminder and Seat Belt Warning System<21–3>
O1 OIL PRESSURE SW
J5 JUNCTION CONNECTOR
Left kick panel
IF
C8, C9, C10
COMBINATION METER

# J OVERALL ELECTRICAL WIRING DIAGRAM

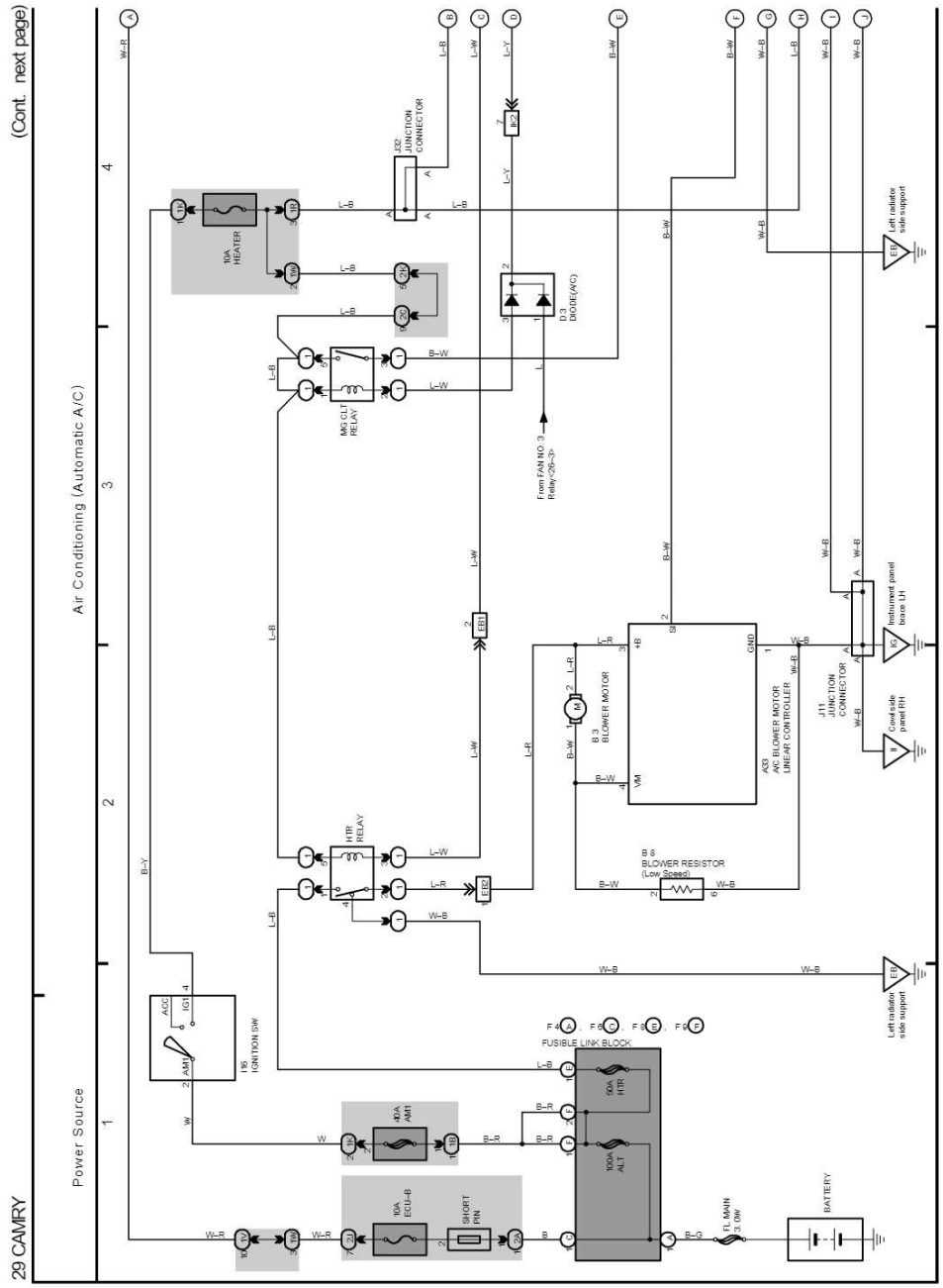


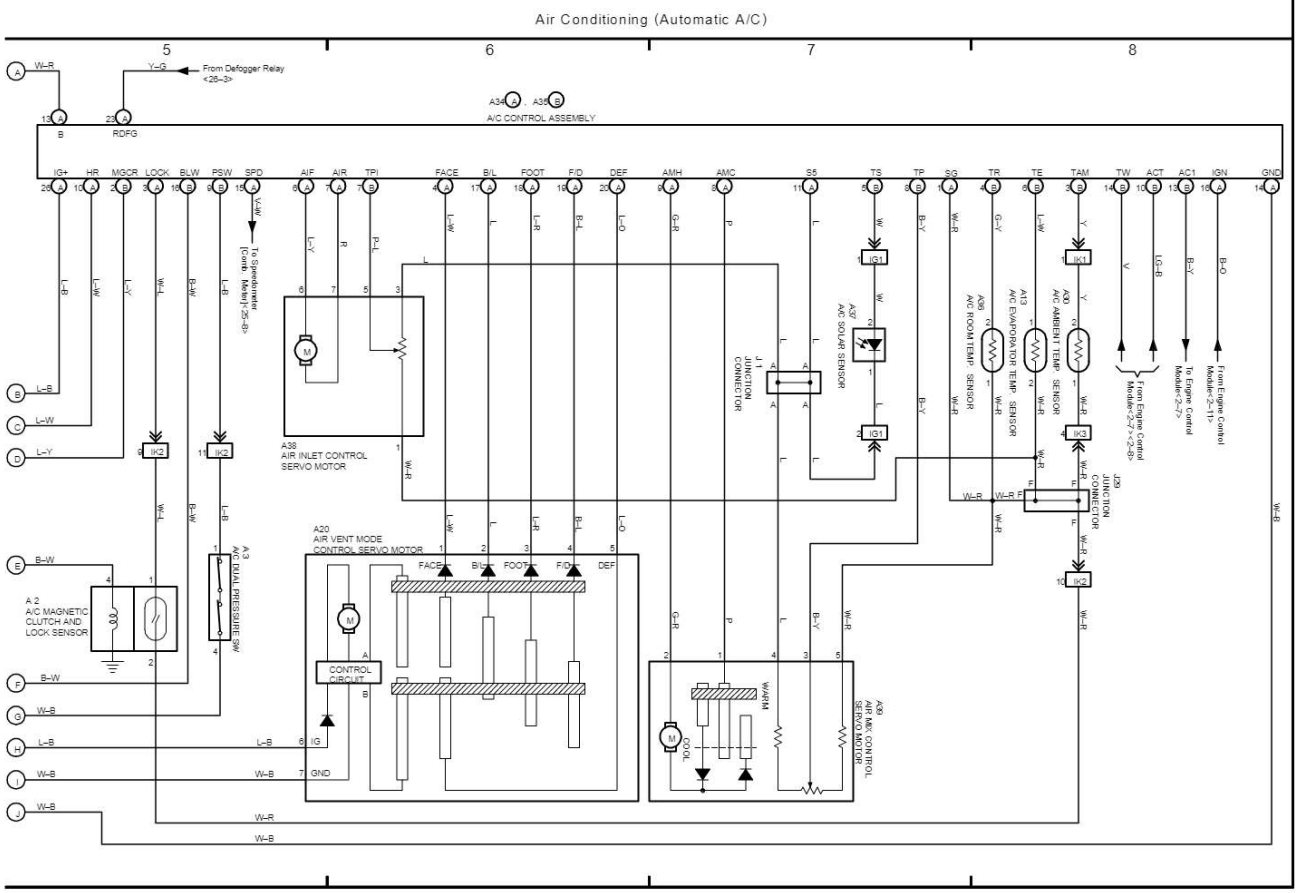

Power Source
Air Conditioning (Manual A/C)
* 1 : 1MZ-FE
* 2 : 5S-FE
1
2
3
4
I16
IGNITION SW
A 3
A/C DUAL PRESSURE SW
A 2
A/C MAGNETIC CLUTCH AND LOCK SENSOR
H 9
HEATER CONTROL SW
FACE
B/L
FOOT
F/D
DEF
10A HEATER
40A AM1
HTR RELAY
10A A/C
MG CLT RELAY
From FAN NO. 3 Relay<26-3>
D 3
DIODE (A/C)
To FAN NO. 3 Relay<26-4>
J12
JUNCTION CONNECTOR
A12
A/C AMPLIFIER
IGN
AC1
ACT
+B
LOCK
MGC
GND
S-A/C
TH
SG
L-A/C
J29
JUNCTION CONNECTOR
J12
JUNCTION CONNECTOR
A13
A/C EVAPORATOR TEMP. SENSOR
J 8
JUNCTION CONNECTOR
100A ALT
50A ETR
FUSIBLE LINK BLOCK
FL MAIN 3.0W
BATTERY
B 3
BLOWER MOTOR
B 4
BLOWER RESISTOR
B 5
BLOWER SW
HI
M2
M1
LO
OFF
J11
JUNCTION CONNECTOR
J22
JUNCTION CONNECTOR
CONTROL CIRCUIT
A20
AIR VENT MODE CONTROL SERVO MOTOR
A14
A/C SW
OFF
ON
J23
JUNCTION CONNECTOR
Intake manifold
Left radiator side support
Instrument panel brace LH
To Engine Control Module<3-10>
To Engine Control Module<2-11>
To Engine Control Module<2-2>
From Engine Control Module<3-10>
From Engine Control Module<2-11>
From Engine Control Module<2-2>
From Engine Control Module<3-10>

# J OVERALL ELECTRICAL WIRING DIAGRAM



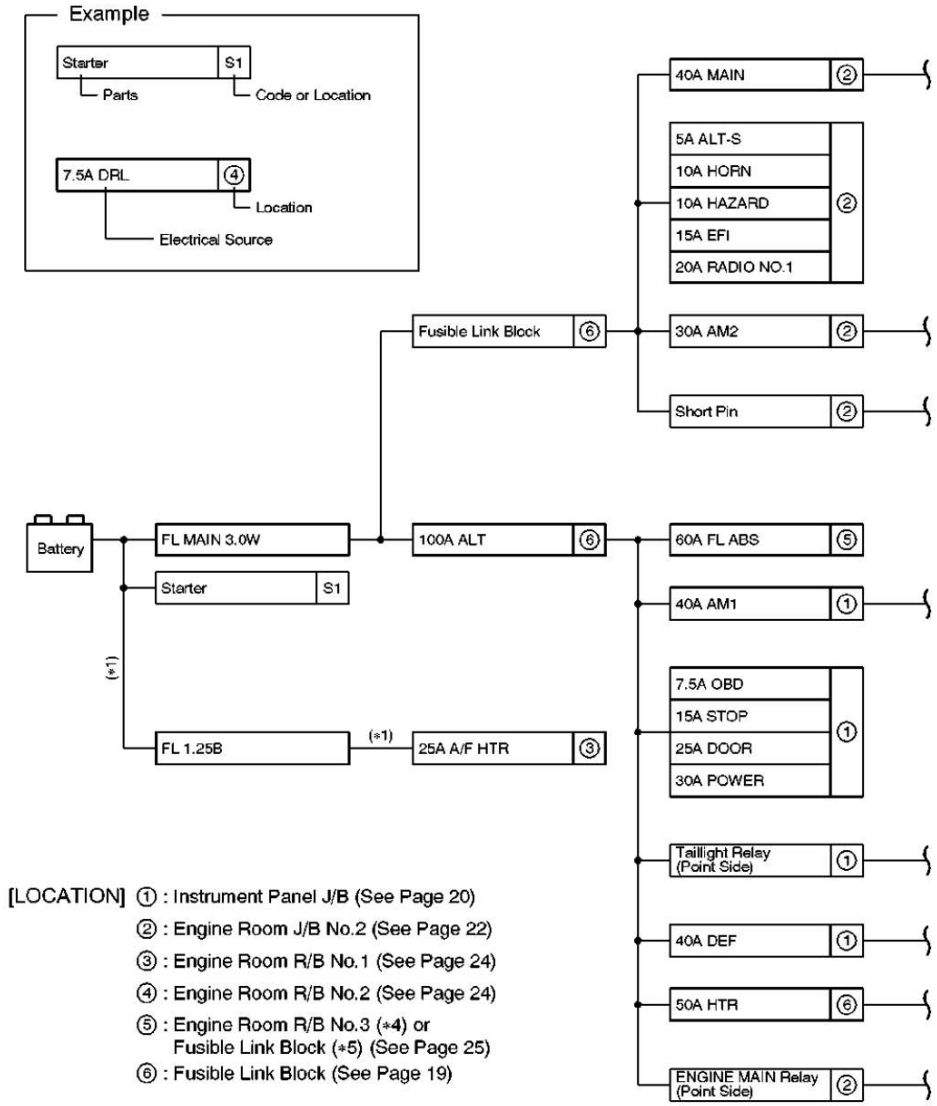
## J OVERALL ELECTRICAL WIRING DIAGRAM




Air Conditioning (Automatic A/C)
5
6
7
8
From Defogger Relay <26-3>
A34, A35
A/C CONTROL ASSEMBLY
RDFG
IG+ HR MGCR LOCK BLW PSW SPD AIF AIR TPI FACE B/L FOOT F/D DEF AMH AMC S5 TS TP SG TR TE TAM TW ACT AC1 IGN GND
To Speedometer <24-8>
A38 AIR INLET CONTROL SERVO MOTOR
A20 AIR VENT MODE CONTROL SERVO MOTOR
FACE B/L FOOT F/D DEF
CONTROL CIRCUIT
A-2 A/C MAGNETIC CLUTCH AND LOCK SENSOR
A-3 A/C DUAL PRESSURE SW
A37 A/C SOLAR SENSOR
A36 A/C ROOM TEMP. SENSOR
A13 A/C EVAPORATOR TEMP. SENSOR
A32 A/C AMBIENT TEMP. SENSOR
J1 JUNCTION CONNECTOR
J29 JUNCTION CONNECTOR
A39 AIR MIX CONTROL SERVO MOTOR
WARM
COOL
IG1
IK1
IK2
IK3
From Engine Control Module<2-7><2-8>
To Engine Control Module<2-7>
From Engine Control Module<2-11>
IG
GND

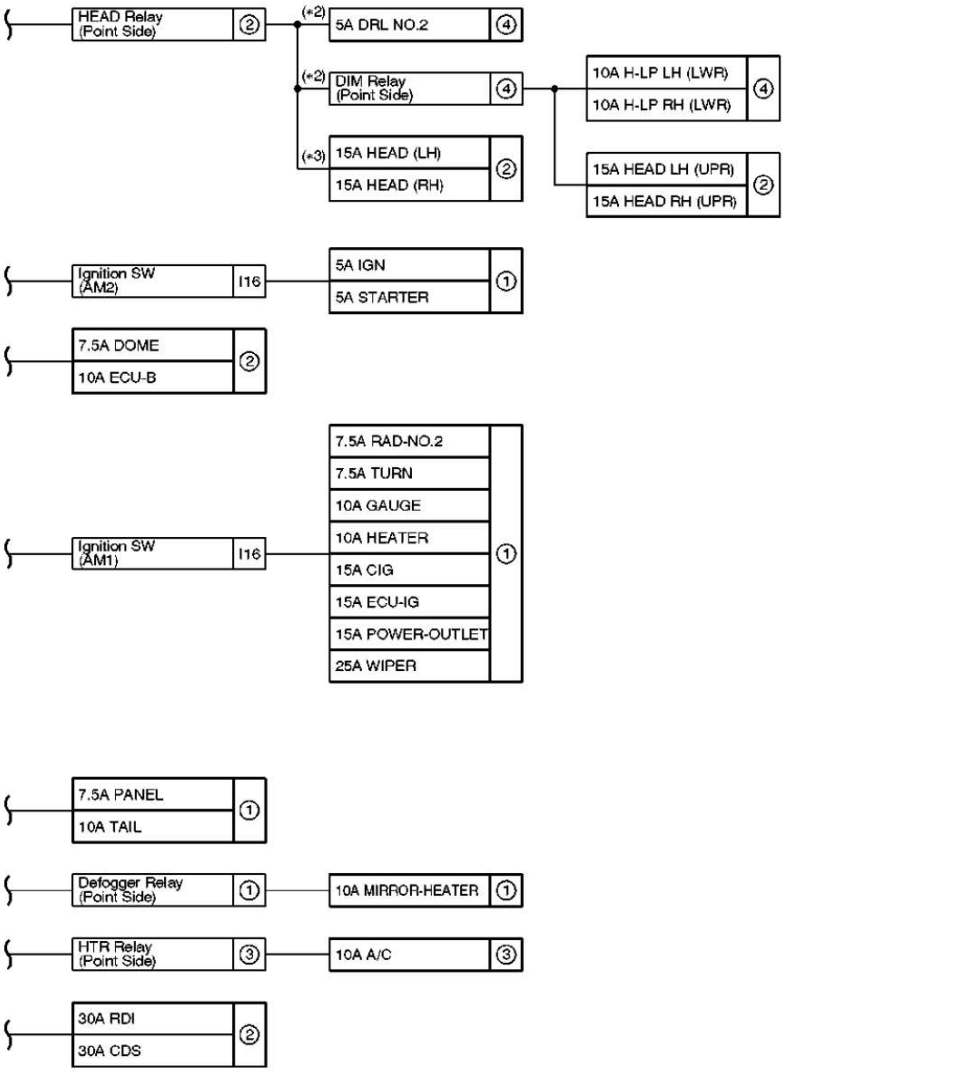
## K POWER SOURCE (Current Flow Chart)

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 : Instrument Panel J/B (See Page 20)
② : Engine Room J/B No.2 (See Page 22)
③ : Engine Room R/B No.1 (See Page 24)
④ : Engine Room R/B No.2 (See Page 24)
⑤ : Engine Room R/B No.3 (*4) or Fusible Link Block (*5) (See Page 25)
⑥ : Fusible Link Block (See Page 19)

*1 : California
*2 : w/ Daytime Running Light
*3 : w/o Daytime Running Light
*4 : TMMK Made w/ ABS and Traction Control, TMC Made w/ ABS, w/ ABS and Tranction Control
*5 : TMMK Made w/ ABS w/o Tranction Control



## K POWER SOURCE (Current Flow Chart)

### Fusible Link Block (See Page 19)

| Fuse | | System | Page |
|---|---|---|---|
| 50A | HTR | Air Conditioning (Automatic A/C) | 292 |
| | | Air Conditioning (Manual A/C) | 300 |
| 100A | ALT | Charging | 62 |
| | | Headlight (w/ Daytime Running Light) | 100 |
| | | Illumination | 126 |
| | | Light Auto Turn Off | 110 |
| | | Radiator Fan and Condenser Fan | 288 |
| | | Taillight | 132 |
| | | Theft Deterrent (TMC Made) | 182 |
| | | Theft Deterrent (TMMK Made) | 188 |
| | | Wireless Door Lock Control (TMC Made) | 162 |
| | | Wireless Door Lock Control (TMMK Made) | 172 |

### Instrument Panel J/B (See Page 20)

| Fuse | | System | Page |
|---|---|---|---|
| 5A | IGN | Charging | 62 |
| | | Combination Meter | 280 |
| | | Electronically Controlled Transmission and A/T Indicator (1MZ–FE) | 202 |
| | | Electronically Controlled Transmission and A/T Indicator (5S–FE) | 210 |
| | | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| | | SRS | 245 |
| 5A | STARTER | Combination Meter | 280 |
| | | Electronically Controlled Transmission and A/T Indicator (1MZ–FE) | 202 |
| | | Electronically Controlled Transmission and A/T Indicator (5S–FE) | 210 |
| | | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| | | Starting and Ignition (1MZ–FE) | 54 |
| | | Starting and Ignition (5S–FE) | 58 |
| 7.5A | OBD | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| 7.5A | PANEL | Cigarette Lighter and Clock | 258 |
| | | Combination Meter | 280 |
| | | Illumination | 126 |
| 7.5A | RAD–NO.2 | Auto Antenna | 272 |
| | | Radio and Player (Built–In Type Amplifier) | 278 |
| | | Radio and Player (Separate Type Amplifier) | 274 |
| 7.5A | TURN | Turn Signal and Hazard Warning Light | 114 |
| 10A | GAUGE | ABS (TMC Made) | 234 |
| | | ABS (TMMK Made) | 240 |
| | | ABS and Traction Control | 226 |
| | | Back–Up Light | 138 |
| | | Charging | 62 |

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

| Fuse | | System | Page |
|---|---|---|---|
| 10A | GAUGE | Combination Meter | 280 |
| | | Cruise Control | 218 |
| | | Door Lock Control (TMC Made) | 150 |
| | | Door Lock Control (TMMK Made) | 156 |
| | | Electronically Controlled Transmission and A/T Indicator (1MZ–FE) | 202 |
| | | Electronically Controlled Transmission and A/T Indicator (5S–FE) | 210 |
| | | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| | | Headlight (w/ Daytime Running Light) | 100 |
| | | Key Reminder and Seat Belt Warning | 260 |
| | | Light Auto Turn Off | 110 |
| | | Moon Roof | 194 |
| | | Power Window | 144 |
| | | Stop Light | 118 |
| | | Taillight | 132 |
| 10A | HEATER | Air Conditioning (Automatic A/C) | 292 |
| | | Air Conditioning (Manual A/C) | 300 |
| | | Rear Window Defogger and Mirror Heater | 268 |
| 10A | MIRROR–HEATER | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| | | Rear Window Defogger and Mirror Heater | 268 |
| 10A | TAIL | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| | | Taillight | 132 |
| | | Wireless Door Lock Control (TMC Made) | 162 |
| | | Wireless Door Lock Control (TMMK Made) | 172 |
| 15A | CIG | Cigarette Lighter and Clock | 258 |
| | | Remote Control Mirror | 266 |
| | | Shift Lock | 252 |
| | | SRS | 245 |
| 15A | ECU–IG | ABS (TMC Made) | 234 |
| | | ABS (TMMK Made) | 240 |
| | | ABS and Traction Control | 226 |
| | | Auto Antenna | 272 |
| | | Cruise Control | 218 |
| | | Radiator Fan and Condenser Fan | 288 |
| | | Shift Lock | 252 |
| | | Theft Deterrent (TMC Made) | 182 |
| | | Theft Deterrent (TMMK Made) | 188 |
| | | Wireless Door Lock Control (TMC Made) | 162 |
| | | Wireless Door Lock Control (TMMK Made) | 172 |
| 15A | POWER–OUTLET | Power Outlet | 264 |

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

## K POWER SOURCE (Current Flow Chart)

| Fuse | | System | Page |
|---|---|---|---|
| 15A | STOP | ABS (TMC Made) | 234 |
| | | ABS (TMMK Made) | 240 |
| | | ABS and Traction Control | 226 |
| | | Cruise Control | 218 |
| | | Electronically Controlled Transmission and A/T Indicator (1MZ–FE) | 202 |
| | | Electronically Controlled Transmission and A/T Indicator (5S–FE) | 210 |
| | | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| | | Shift Lock | 252 |
| | | Stop Light | 118 |
| 25A | WIPER | Wiper and Washer | 140 |
| 25A | DOOR | Door Lock Control (TMC Made) | 150 |
| | | Door Lock Control (TMMK Made) | 156 |
| | | Moon Roof | 194 |
| | | Power Window | 144 |
| | | Theft Deterrent (TMC Made) | 182 |
| | | Theft Deterrent (TMMK Made) | 188 |
| | | Wireless Door Lock Control (TMC Made) | 162 |
| | | Wireless Door Lock Control (TMMK Made) | 172 |
| 30A | POWER | Door Lock Control (TMC Made) | 150 |
| | | Door Lock Control (TMMK Made) | 156 |
| | | Moon Roof | 194 |
| | | Power Seat | 198 |
| | | Power Window | 144 |
| 40A | AM1 | Charging | 62 |
| | | Radiator Fan and Condenser Fan | 288 |
| 40A | DEF | Rear Window Defogger and Mirror Heater | 268 |

## Engine Room J/B No.2 (See Page 22)

| Fuse | | System | Page |
|---|---|---|---|
| 5A | ALT–S | Charging | 62 |
| 7.5A | DOME | Cigarette Lighter and Clock | 258 |
| | | Combination Meter | 280 |
| | | Headlight (w/ Daytime Running Light) | 100 |
| | | Interior Light | 122 |
| | | Key Reminder and Seat Belt Warning | 260 |
| | | Light Auto Turn Off | 110 |
| | | Moon Roof | 194 |
| | | Theft Deterrent (TMC Made) | 182 |
| | | Theft Deterrent (TMMK Made) | 188 |
| | | Wireless Door Lock Control (TMC Made) | 162 |
| | | Wireless Door Lock Control (TMMK Made) | 172 |

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

| Fuse | | System | Page |
|---|---|---|---|
| 10A | ECU–B | Air Conditioning (Automatic A/C) | 292 |
| | | Combination Meter | 280 |
| | | SRS | 245 |
| 10A | HAZARD | Turn Signal and Hazard Warning Light | 114 |
| 10A | HORN | Horn | 256 |
| | | Theft Deterrent (TMC Made) | 182 |
| | | Theft Deterrent (TMMK Made) | 188 |
| | | Wireless Door Lock Control (TMC Made) | 162 |
| | | Wireless Door Lock Control (TMMK Made) | 172 |
| 15A | EFI | Electronically Controlled Transmission and A/T Indicator (1MZ–FE) | 202 |
| | | Electronically Controlled Transmission and A/T Indicator (5S–FE) | 210 |
| | | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| | | Engine Immobiliser System | 94 |
| 15A | HEAD (LH) | Headlight (w/o Daytime Running Light) | 96 |
| 15A | HEAD (RH) | Headlight (w/o Daytime Running Light) | 96 |
| 15A | HEAD LH (UPR) | Headlight (w/ Daytime Running Light) | 100 |
| 15A | HEAD RH (UPR) | Headlight (w/ Daytime Running Light) | 100 |
| 20A | RADIO NO.1 | Auto Antenna | 272 |
| | | Radio and Player (Built–In Type Amplifier) | 278 |
| | | Radio and Player (Separate Type Amplifier) | 274 |
| 30A | AM2 | Charging | 62 |
| | | Engine Control (1MZ–FE) | 66 |
| | | Engine Control (5S–FE) | 82 |
| | | Starting and Ignition (1MZ–FE) | 54 |
| | | Starting and Ignition (5S–FE) | 58 |
| 30A | CDS | Radiator Fan and Condenser Fan | 288 |
| 30A | RDI | Radiator Fan and Condenser Fan | 288 |
| 40A | MAIN | Headlight (w/ Daytime Running Light) | 100 |
| | | Headlight (w/o Daytime Running Light) | 96 |
| | | Light Auto Turn Off | 110 |
| | | Starting and Ignition (1MZ–FE) | 54 |
| | | Starting and Ignition (5S–FE) | 58 |
| | | Theft Deterrent (TMC Made) | 182 |
| | | Theft Deterrent (TMMK Made) | 188 |
| | | Wireless Door Lock Control (TMC Made) | 162 |
| | | Wireless Door Lock Control (TMMK Made) | 172 |

## Engine Room R/B No.1 (See Page 24)

| Fuse | | System | Page |
|---|---|---|---|
| 10A | A/C | Air Conditioning (Manual A/C) | 300 |
| 25A | A/F HTR | Engine Control (1MZ–FE) | 66 |

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

## K POWER SOURCE (Current Flow Chart)

### Engine Room R/B No.2 (See Page 24)

| Fuse | | System | Page |
|---|---|---|---|
| 5A | DRL NO.2 | Headlight (w/ Daytime Running Light) | 100 |
| 10A | H–LP LH (LWR) | Headlight (w/ Daytime Running Light) | 100 |
| 10A | H–LP RH (LWR) | Headlight (w/ Daytime Running Light) | 100 |

### Engine Room R/B No.3 (TMMK Made w/ ABS and Traction Control) (TMC Made w/ ABS, w/ ABS and Traction Control) or Fusible Link Block (TMMK Made w/ ABS w/o Traction Control) (See Page 25)

| Fuse | | System | Page |
|---|---|---|---|
| 60A | FL ABS | ABS (TMC Made) | 234 |
| | | ABS (TMMK Made) | 240 |
| | | ABS and Traction Control | 226 |

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

## L PART NUMBER OF CONNECTORS

| Code | Part Name | Part Number |
|---|---|---|
| A 1 | A/C Condenser Fan Motor | 90980–10928 |
| A 2 | A/C Magnetic Clutch and Lock Sensor | 90980–10942 |
| A 3 | A/C Triple Pressure SW (A/C Dual and Single Pressure SW) | 90980–10943 |
| A 4 | ABS Actuator | 90980–11413 |
| A 5 | ABS Actuator | 90980–10891 |
| A 6 | ABS Actuator and ECU | 90080–98070 |
| A 7 | ABS and Traction Actuator | 90980–11698 |
| A 8 | ABS and Traction Actuator | 90980–11413 |
| A 9 | ABS Speed Sensor Front LH | 90980–11075 |
| A10 | ABS Speed Sensor Front RH | |
| A11 | Air Fuel Ratio Sensor | 90980–11178 |
| A12 | A/C Amplifier | 90980–10807 |
| A13 | A/C Evaporator Temp. Sensor | 90980–10825 |
| A14 | A/C SW | 90980–10631 |
| A15 | ABS and Traction ECU | 90980–11390 |
| A16 | ABS and Traction ECU | 90980–11391 |
| A17 | ABS and Traction ECU | 90980–11424 |
| A18 | ABS ECU | |
| A19 | ABS ECU | 90980–11390 |
| A20 | Air Vent Mode Control Servo Motor | 90980–11165 |
| A22 | Airbag Squib (Front Passenger Airbag Assembly) | 90980–11884 |
| A23 | Airbag Squib (Steering Wheel Pad) | 90980–10850 |
| A24 | Ashtray Illumination | 81945–33010 |
| A25 | ABS Speed Sensor Rear LH | 90980–11060 |
| A26 | ABS Speed Sensor Rear RH | |
| A27 | Auto Antenna Motor and Relay | 90980–11697 |
| A28 | Air Fuel Ratio Sensor (Bank 1 Sensor 1) | 90980–11178 |
| A29 | Air Fuel Ratio Sensor (Bank 2 Sensor 1) | |
| A30 | A/C Ambient Temp. Sensor | 90980–11070 |
| A31 | Airbag Sensor Front LH | 90980–11856 |
| A32 | Airbag Sensor Front RH | |
| A33 | A/C Blower Motor Linear Controller | 90980–11676 |
| A34 | A/C Control Assembly | 90980–11390 |
| A35 | A/C Control Assembly | 90980–11391 |
| A36 | A/C Room Temp. Sensor | 90980–10825 |
| A37 | A/C Solar Sensor | 90980–11918 |
| A38 | Air Inlet Control Servo Motor | 90980–11165 |
| A39 | Air Mix Control Servo Motor | 90980–11319 |
| A40 | Automatic Light Control Sensor | 90980–11107 |
| B 1 | Back–Up Light SW | 90980–11250 |
| B 2 | Brake Fluid Level Warning SW | 90980–11207 |
| B 3 | Blower Motor | 90980–10903 |

| Code | Part Name | Part Number |
|---|---|---|
| B 4 | Blower Resistor | 90980–10976 |
| B 5 | Blower SW | 90980–10877 |
| B 6 | Buckle SW LH | 90980–10825 |
| B 7 | Buckle SW LH | |
| B 8 | Blower Resistor (Low Speed) | 90980–10976 |
| C 1 | Camshaft Position Sensor | 90980–10947 |
| C 2 | Crankshaft Position Sensor | |
| C 3 | Cruise Control Actuator | 90980–11150 |
| C 4 | Cigarette Lighter | 90980–10760 |
| C 5 | Cigarette Lighter Illumination | 90980–11148 |
| C 6 | Clock | 90980–11013 |
| C 7 | Clutch Start SW | 90980–10825 |
| C 8 | Combination Meter (TMC Made) | 90980–11114 |
| | Combination Meter (TMMK Made) | 90980–98048 |
| C 9 | Combination Meter (TMC Made) | 90980–11113 |
| | Combination Meter (TMMK Made) | 90980–98046 |
| C10 | Combination Meter (TMC Made) | 90980–11115 |
| | Combination Meter (TMMK Made) | 90980–98047 |
| C11 | Combination SW | 90980–11594 |
| C12 | Combination SW | 90980–11616 |
| C13 | Combination SW | 90980–11672 |
| C14 | Cruise Control Clutch SW | 90980–10906 |
| C15 | Cruise Control ECU | 90980–11391 |
| C16 | Condenser | 90980–10860 |
| C17 | Center Airbag Sensor Assembly | 90980–11869 |
| C18 | Center Airbag Sensor Assembly | 90980–11872 |
| C19 | Center Airbag Sensor Assembly | 90980–11867 |
| D 1 | Data Link Connector 1 (1MZ–FE) | 90980–11195 |
| | Data Link Connector 1 (5S–FE) | 90980–11323 |
| D 2 | Daytime Running Light Resistor | 90980–10928 |
| D 3 | Diode (A/C) | 90980–11071 |
| D 4 | Data Link Connector 2 | 90980–11417 |
| D 5 | Data Link Connector 3 | 90980–11665 |
| D 6 | Daytime Running Light Relay (Main) | 90980–11058 |
| D 7 | Diode (Courtesy) | 90980–10962 |
| D10 | Diode (Dome) | |
| D11 | Diode (Idle–Up) | 90980–11071 |
| D12 | Door Courtesy SW Front LH | 90980–10871 |
| D13 | Door Courtesy SW Front RH | |
| D14 | Door Courtesy SW Rear LH | |
| D15 | Door Courtesy SW Rear RH | |
| D16 | Door Key Lock and Unlock SW Front LH | 90980–11490 |
| D17 | Door Key Lock and Unlock SW Front RH | |

Note: 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.).

| Code | Part Name | Part Number |
|---|---|---|
| D18 | Door Lock Control SW RH (TMC Made) | 90980–11326 |
| | Door Lock Control SW RH (TMMK Made) | 90980–10797 |
| D19 | Door Lock Motor and Door Unlock Detection SW Front LH | 90980–11150 |
| D20 | Door Lock Motor and Door Unlock Detection SW Front RH | |
| D21 | Door Lock Motor and Door Unlock Detection SW Rear LH | |
| D22 | Door Lock Motor and Door Unlock Detection SW Rear RH | |
| E 1 | EGR Gas Temp. Sensor | 90980–10899 |
| E 2 | EGR Valve Position Sensor | 90980–11143 |
| E 3 | Electronically Controlled Transmission Solenoid (1MZ–FE) | 90980–10854 |
| | Electronically Controlled Transmission Solenoid (5S–FE) | 90980–11156 |
| E 4 | Electronically Controlled Transmission Solenoid | 90980–11143 |
| E 5 | Engine Coolant Temp. Sensor | 90980–10737 |
| E 6 | Engine Hood Courtesy SW | 90980–11189 |
| E 7 | Engine Control Module (1MZ–FE) | 90980–11638 |
| | Engine Control Module (5S–FE) | 90980–11392 |
| E 8 | Engine Control Module (1MZ–FE) | 90980–11637 |
| | Engine Control Module (5S–FE) | 90980–11391 |
| E 9 | Engine Control Module (1MZ–FE) | 90980–11586 |
| | Engine Control Module (5S–FE) | 90980–11390 |
| E10 | Engine Control Module (1MZ–FE) | 90980–11476 |
| | Engine Control Module (5S–FE) | 90980–11408 |
| E11 | Engine Control Module | 90980–11421 |
| F 1 | Front Turn Signal Light and Parking Light LH | 90980–11020 |
| F 2 | Front Turn Signal Light and Parking Light RH | |
| F 3 | Front Wiper Motor | 90980–11599 |
| F 4 | Fusible Link Block | – |
| F 5 | Fusible Link Block | |
| F 6 | Fusible Link Block | |
| F 7 | Fusible Link Block | |
| F 8 | Fusible Link Block | |
| F 9 | Fusible Link Block | 90980–11579 |
| F10 | Front Door Speaker LH | 90980–10825 |
| F11 | Front Door Speaker RH | |
| F12 | Front Tweeter (Speaker) LH | 90980–10916 |
| F13 | Front Tweeter (Speaker) RH | |
| F14 | Fuel Pump and Sender | 90980–11077 |
| G 1 | Generator | 90980–09213 |
| G 2 | Generator | 90980–11349 |
| G 3 | Glove Box Light and SW | 90980–11098 |

| Code | Part Name | Part Number |
|---|---|---|
| H 1 | Headlight LH | 90980–11314 |
| H 2 | Headlight RH | |
| H 3 | Heated Oxygen Sensor (Bank 1 Sensor 1) | 90980–11028 |
| H 4 | Heated Oxygen Sensor (Bank 2 Sensor 1) | |
| H 5 | Horn (High) | 90980–10619 |
| H 6 | Horn (Low) | |
| H 7 | Hazard SW | 90980–10801 |
| H 8 | Heated Oxygen Sensor (Bank 1 Sensor 2) | 90980–11028 |
| H 9 | Heater Control SW | 90980–10799 |
| H10 | High Mounted Stop Light | 90980–11148 |
| I 1 | Idle Air Control Valve | 90980–11145 |
| I 2 | Igniter | 90980–11653 |
| I 3 | Ignition Coil and Igniter No.1 | 90980–11150 |
| I 4 | Ignition Coil and Igniter No.2 | |
| I 5 | Ignition Coil No.1 | 90980–11246 |
| I 6 | Ignition Coil No.2 | |
| I 7 | Ignition Coil No.3 | |
| I 8 | Injector No.1 | 90980–11153 |
| I 9 | Injector No.2 | |
| I10 | Injector No.3 | |
| I11 | Injector No.4 | |
| I12 | Injector No.5 | |
| I13 | Injector No.6 | |
| I14 | Intake Air Temp. Sensor | 90980–11163 |
| I15 | Ignition Key Cylinder Light | 90980–10906 |
| I16 | Ignition SW | 90980–11615 |
| I17 | Integration Relay | 90980–11107 |
| I18 | Integration Relay (w/ Theft Deterrent) | 90980–11058 |
| | Integration Relay (w/o Theft Deterrent) | 90980–11542 |
| I19 | Interior Light | 90980–10121 |
| J 1 | Junction Connector | 90980–11542 |
| J 2 | Junction Connector | 90980–10803 |
| J 3 | Junction Connector | 90980–11542 |
| J 4 | Junction Connector | 90980–10803 |
| J 5 | Junction Connector | 90980–11542 |
| J 6 | Junction Connector | 90980–11502 |
| J 7 | Junction Connector | 90980–11661 |
| J 8 | Junction Connector | |
| J 9 | Junction Connector | |
| J10 | Junction Connector | |
| J11 | Junction Connector | 90980–10976 |
| J12 | Junction Connector | 90980–10803 |
| J13 | Junction Connector | 90980–11661 |
| J14 | Junction Connector | |

## L PART NUMBER OF CONNECTORS

| Code | Part Name | Part Number |
|---|---|---|
| J15 | Junction Connector | 90980–10803 |
| J16 | Junction Connector | 90980–11661 |
| J17 | Junction Connector | |
| J18 | Junction Connector | 90980–11542 |
| J19 | Junction Connector | |
| J20 | Junction Connector | 90980–11539 |
| J21 | Junction Connector | 90980–11542 |
| J22 | Junction Connector | 90980–11539 |
| J23 | Junction Connector | |
| J24 | Junction Connector | 90980–11529 |
| J25 | Junction Connector | |
| J26 | Junction Connector | |
| J27 | Junction Connector | 90980–11661 |
| J28 | Junction Connector | |
| J29 | Junction Connector | 90980–11502 |
| J30 | Junction Connector | 90980–11661 |
| J31 | Junction Connector | |
| J32 | Junction Connector | 90980–10803 |
| J33 | Junction Connector | 90980–11661 |
| J34 | Junction Connector | |
| J35 | Junction Connector | |
| J36 | Junction Connector | |
| J37 | Junction Connector | 90980–11542 |
| J38 | Junction Connector | 90980–10803 |
| J39 | Junction Connector | |
| J40 | Junction Connector | 90980–10976 |
| K 1 | Knock Sensor 1 | 90980–11166 |
| K 2 | Knock Sensor 2 | |
| K 3 | Key Interlock Solenoid | 90980–10825 |
| L 1 | License Plate Light LH | 90980–11148 |
| L 2 | License Plate Light RH | |
| L 3 | Light Failure Sensor | 90980–10803 |
| L 4 | Luggage Compartment Key Unlock SW | 90980–11212 |
| L 5 | Luggage Compartment Light | 90980–11148 |
| L 6 | Luggage Compartment Light SW | 90980–11097 |
| M 1 | Manifold Absolute Pressure Sensor | 90980–10845 |
| M 2 | Mass Air Flow Meter | 90980–11317 |
| M 3 | Moon Roof Control SW and Relay | 90980–10799 |
| M 4 | Moon Roof Motor and Limit SW | 90980–11011 |
| N 1 | Noise Filter (Ignition) | 90980–10843 |
| N 2 | Noise Filter (Rear Window Defogger) | 90980–11259 |
| O 1 | Oil Pressure SW | 90980–11363 |
| O 2 | O/D Main SW and A/T Shift Lever Illumination | 90980–10795 |

| Code | Part Name | Part Number |
|---|---|---|
| P 1 | Park/Neutral Position SW,A/T Indicator Light SW and Back–Up Light SW | 90980–11332 |
| P 2 | Power Steering Oil Pressure SW | 90980–11428 |
| P 3 | Parking Brake SW | 90980–10871 |
| P 4 | Power Outlet | 90980–10760 |
| P 5 | Personal Light | 90980–10825 |
| P 6 | Power Window Control SW Front RH | 90980–10789 |
| P 7 | Power Window Control SW Rear LH | 90980–10631 |
| P 8 | Power Window Control SW Rear RH | |
| P 9 | Power Window Master SW and Door Lock Control SW LH | 90980–10807 |
| P10 | Power Window Motor Front LH | 90980–10860 |
| P11 | Power Window Motor Front RH | |
| P12 | Power Window Motor Rear LH | |
| P13 | Power Window Motor Rear RH | |
| P14 | Power Seat Control SW (Driver's Seat) | 90980–10803 |
| P15 | Power Seat Control SW (Front Passenger's Seat) | |
| P16 | Power Seat Motor (Driver's Seat Rear Vertical Control) | 90980–10825 |
| P17 | Power Seat Motor (Driver's Seat Reclining Control) | |
| P18 | Power Seat Motor (Driver's Seat Slide Control) | |
| P19 | Power Seat Motors (Driver's Seat) | 90980–11001 |
| P20 | Power Seat Motor (Front Passenger's Seat Rear Vertical Control) | 90980–10825 |
| P21 | Power Seat Motor (Front Passenger's Seat Reclining Control) | |
| P22 | Power Seat Motor (Front Passenger's Seat Slide Control) | |
| P23 | Power Seat Motors (Front Passenger's Seat) | 90980–11001 |
| P24 | Pretensioner LH | 90980–11862 |
| P25 | Pretensioner RH | |
| R 1 | Radiator Fan Motor | 90980–10928 |
| R 2 | Radio and Player | 90980–10996 |
| R 3 | Radio and Player | 90980–10997 |
| R 4 | Radio and Player | 90980–11264 |
| R 5 | Rear Window Defogger SW | 90980–11280 |
| R 6 | Remote Control Mirror SW | 90980–11450 |
| R 7 | Rheostat | 90980–10908 |
| R 8 | Rear Combination Light LH | 90980–10795 |
| R 9 | Rear Combination Light LH | 90980–11001 |
| R10 | Rear Combination Light RH | 90980–10795 |
| R11 | Rear Combination Light RH | 90980–11001 |

Note: 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.).

| Code | Part Name | Part Number |
|---|---|---|
| R12 | Rear Speaker LH | 90980–10860 |
| R13 | Rear Speaker RH | |
| R14 | Rear Window Defogger | 90980–10792 |
| R15 | Rear Window Defogger | |
| R16 | Remote Control Mirror LH (TMC Made w/ Mirror Heater) | 90980–10558 |
| | Remote Control Mirror LH (TMC Made w/o Mirror Heater) | 90980–10395 |
| | Remote Control Mirror LH (TMMK Made w/ Mirror Heater) | 90980–11487 |
| | Remote Control Mirror LH (TMMK Made w/o Mirror Heater) | 90980–11489 |
| R17 | Remote Control Mirror RH (TMC Made w/ Mirror Heater) | 90980–10558 |
| | Remote Control Mirror RH (TMC Made w/o Mirror Heater) | 90980–10395 |
| | Remote Control Mirror RH (TMMK Made w/ Mirror Heater) | 90980–11487 |
| | Remote Control Mirror RH (TMMK Made w/o Mirror Heater) | 90980–11489 |
| S 1 | Starter | 90980–09689 |
| S 2 | Starter | 90980–11400 |
| S 3 | Shift Lock ECU | 90980–11488 |
| S 4 | Stereo Component Amplifier | 90980–10848 |
| S 5 | Stereo Component Amplifier | 90980–10807 |
| S 6 | Stop Light SW | 90980–11118 |
| S 7 | Side Airbag Sensor LH | 90980–11857 |
| S 8 | Side Airbag Sensor RH | |
| S 9 | Side Airbag Squib LH | 90980–11864 |
| S10 | Side Airbag Squib RH | |

| Code | Part Name | Part Number |
|---|---|---|
| T 1 | Theft Deterrent Horn | 90980–11235 |
| T 2 | Throttle Position Sensor | 90980–11261 |
| T 3 | Theft Deterrent ECU | 90980–11424 |
| T 4 | Theft Deterrent ECU | 90980–11392 |
| T 5 | Traction Off SW | 90980–11013 |
| T 6 | Turn Signal Flasher | 82751–50010 |
| T 7 | Transponder Key Amplifier | 90980–10789 |
| U 1 | Unlock Warning SW | 90980–10860 |
| V 1 | Vapor Pressure Sensor | 90980–11860 |
| V 2 | Vehicle Speed Sensor (Combination Meter) | 90980–11143 |
| V 3 | Vehicle Speed Sensor (Electronically Controlled Transmission) | 90980–11156 |
| V 4 | VSV (EGR)(1MZ–FE) | 90980–11149 |
| | VSV (EGR)(5S–FE) | 90980–11156 |
| V 5 | VSV (EVAP) | |
| V 6 | VSV (Intake Air Control) | 90980–11149 |
| V 7 | VSV (Vapor Pressure Sensor) | 90980–11859 |
| V 8 | Vanity Light LH | 90980–10621 |
| V 9 | Vanity Light RH | |
| W 1 | Washer Level Warning SW | 90980–11068 |
| W 2 | Washer Motor | 90980–10981 |
| W 3 | Water Temp. Sender | 90980–11428 |
| W 4 | Water Temp. SW No.1 | 90980–11235 |
| W 5 | Water Temp. SW No.2 | 90980–11243 |
| W 6 | Wireless Door Lock ECU | 90980–11264 |