

# FOREWORD

This wiring diagram manual has been prepared to provide information on the electrical system of the 1995 SUPRA.

Applicable models: JZA 80 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.
<ul style="list-style-type: none"><li>1995 SUPRA Repair Manual Volume 1 Volume 2</li></ul>	RM408U1 RM408U2
<ul style="list-style-type: none"><li>1995 TOYOTA New Car Features</li></ul>	NCF109U

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.**

# INTRODUCTION

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This manual consists of the following 11 sections:

No.	Section	Description
A	INDEX	Index of the contents of this manual.
	INTRODUCTION	Brief explanation of each section.
B	HOW TO USE THIS MANUAL	Instructions on how to use this manual.
C	TROUBLE-SHOOTING	Describes the basic inspection procedures for electrical circuits.
D	ABBREVIATIONS	Defines the abbreviations used in this manual.
E	GLOSSARY OF TERMS AND SYMBOLS	Defines the symbols and functions of major parts.
F	RELAY LOCATIONS	Shows position of the Electronic Control Unit, Relays, Relay Block, etc. This section is closely related to the system circuit.
G	ELECTRICAL WIRING ROUTING	Describes position of Parts Connectors, Splice points, Ground points, etc. This section is closely related to the system circuit.
H	POWER SOURCE (Current Flow Chart)	Describes power distribution from the power supply to various electrical loads.
I	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.
J	GROUND POINTS	Shows ground positions of all parts described in this manual.
K	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.)

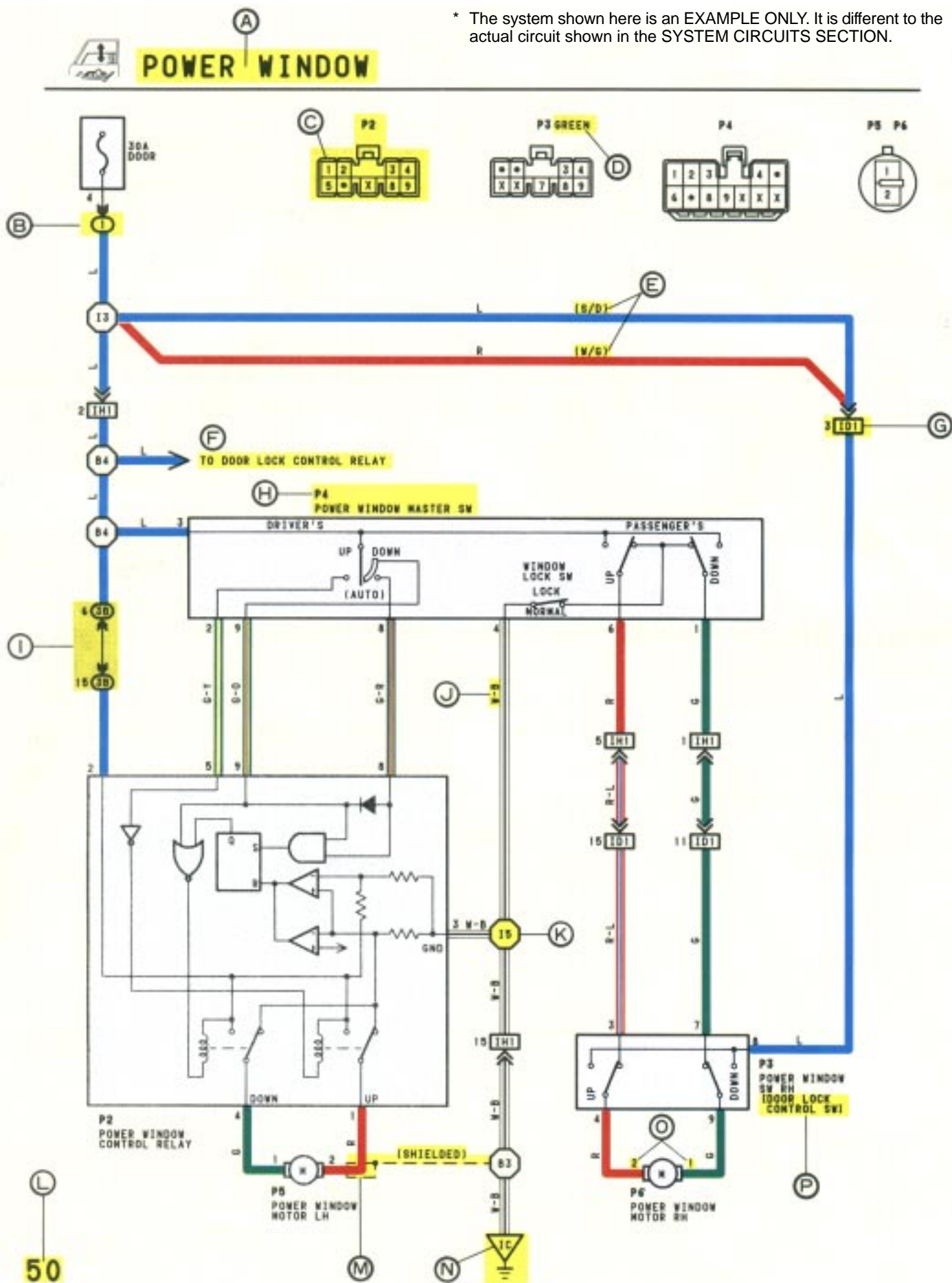
When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Points section). See the System Outline to understand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

When the circuit operation is understood, begin troubleshooting of the problem circuit to isolate the cause. Use Relay Location and Electrical Wire 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 Wiring Diagram at the end of this manual.

# HOW TO USE THIS MANUAL

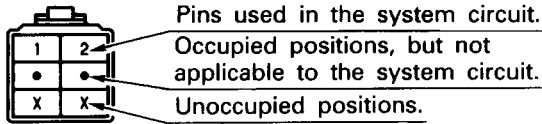
\* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.



- (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:  Indicates Relay Block No. 1.

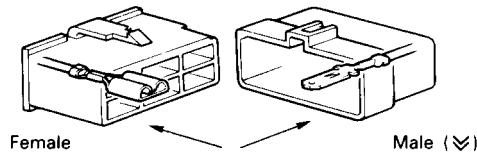
- (C) : Indicates the connector to be connected to a part (the numeral indicates the pin No.)
- Explanation of pin use.



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

- (D) : Connector Color  
Connectors not indicated are milky white in color.
- (E) : ( ) is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.
- (F) : Indicates related system.
- (G) : Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (↗).

Outside numerals are pin numbers.

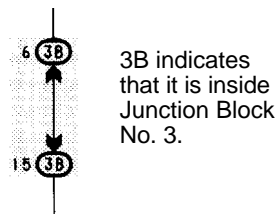


The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g., "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

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.

- (H) : Represents a part (all parts are shown in sky blue). The code is the same as the code used in parts position.
- (I) : 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 (different junction blocks are shaded differently for further clarification).

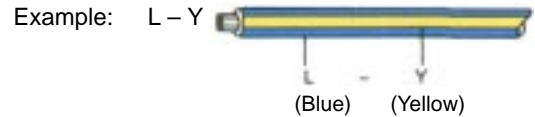
Example:



- (J) : Indicates the wiring color.  
Wire colors are indicated by an alphabetical code.

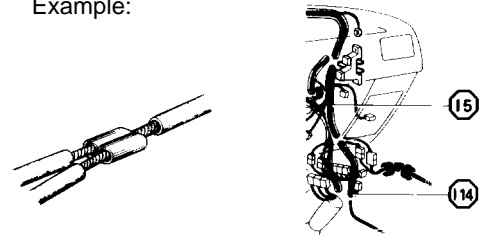
B = Black    L = Blue    R = Red  
BR = Brown    LG = Light Green    V = Violet  
G = Green    O = Orange    W = White  
GR = Gray    P = Pink    Y = Yellow

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



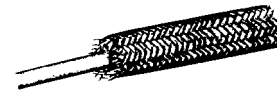
- (K) : Indicates a wiring Splice Point (Codes are "E" for the Engine Room, "I" for the Instrument Panel, and "B" for the Body).

Example:



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

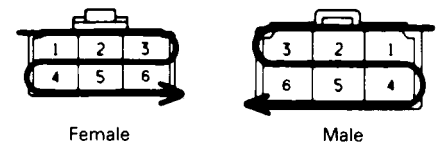
- (L) : Page No.
- (M) : Indicates a shielded cable.



- (N) : 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.

- (O) : 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



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

# HOW TO USE THIS MANUAL



## SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS TO TERMINAL 3 OF THE POWER WINDOW MASTER SW, TERMINAL 2 OF THE POWER WINDOW CONTROL RELAY AND TERMINAL 8 OF THE POWER WINDOW SW THROUGH THE DOOR FUSE.

### 1. DRIVER'S WINDOW "MANUAL UP" OPERATION BY MASTER SW

HOLDING MANUAL SW (DRIVER'S) ON "UP" POSITION LOCATED IN POWER WINDOW MASTER SW, THE CURRENT FLOWS TO TERMINAL 5 OF THE POWER WINDOW CONTROL RELAY THROUGH TERMINAL 3 OF THE MASTER SW → TERMINAL 2 TO OPERATE A POWER WINDOW CONTROL RELAY. THUS THE CURRENT INSIDE THE RELAY FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 1 → TERMINAL 2 OF THE POWER WINDOW MOTOR → TERMINAL 1 → TERMINAL 4 OF THE RELAY → TERMINAL 3 → TO GROUND. THE MOTOR TURNS TO ASCENT THE WINDOW. RELEASING THIS SW, THE ROTATION OF MOTOR IS STOPPED AND THE WINDOWS CAN STOP AT WILL POINT.

(FOR THE "MANUAL DOWN" OPERATION, CURRENT FLOWS IN THE REVERSE DIRECTION BECAUSE THE TERMINALS WHERE IT FLOWS ARE CHANGED).

### 2. DRIVER'S WINDOW "AUTO DOWN" OPERATION BY MASTER SW

ONCE THE "AUTO DOWN" BUTTON OF THE MASTER SW IS PUSHED, THE CURRENT FLOWS TERMINAL 9 OF THE POWER WINDOW CONTROL RELAY THROUGH TERMINAL 3 OF THE MASTER SW → TERMINALS 8 AND 9 TO OPERATE THE RELAY. THUS THE CURRENT INSIDE THE POWER WINDOW CONTROL RELAY FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 4 → TERMINAL 1 OF THE POWER WINDOW MOTOR → TERMINAL 2 → TERMINAL 1 OF THE RELAY → TERMINAL 3 → TO GROUND. THE MOTOR CONTINUES THE ROTATION ENABLING TO DESCENT THE WINDOW.

THE WINDOW DESCENDS TO THE END POSITION. THE CURRENT WILL BE CUT OFF TO RELEASE THE AUTO DOWN FUNCTION BASED ON THE INCREASING CURRENT BETWEEN TERMINAL 2 OF THE RELAY AND TERMINAL 1 IN RELAY.

### 3. DRIVER'S WINDOW AUTO DOWN RELEASE OPERATION BY MASTER SW

HOLDING THE MANUAL SW (DRIVER'S) ON "UP" POSITION IN OPERATING AUTO DOWN. THE CURRENT FROM TERMINAL 3 OF THE MASTER SW PASSING TERMINAL 2 FLOWS TERMINAL 5 OF THE RELAY AND RELEASES THE AUTO DOWN FUNCTION IN THE POWER WINDOW CONTROL RELAY. RELEASING THE HAND FROM SW, WINDOW STOPS AND CONTINUING ON TOUCHING SW, THE FUNCTION SWITCHES TO MANUAL UP OPERATION.

### 4. PASSENGER'S WINDOW UP OPERATION (MASTER SW) AND WINDOW LOCK SW OPERATION

HOLDING PASSENGER'S WINDOW SW (MASTER SW) ON "UP", THE CURRENT FLOWS FROM TERMINAL 3 OF THE MASTER SW PASSING TERMINAL 6 TO TERMINAL 3 OF THE POWER WINDOW SW (PASSENGER'S) → TERMINAL 4 → TERMINAL 2 OF THE MOTOR → TERMINAL 1 → TERMINAL 9 OF THE POWER WINDOW SW → TERMINAL 7 → TERMINAL 1 OF THE MASTER SW → TERMINAL 4 TO GROUND. THE MOTOR RUNS TO ASCENT THE WINDOW. RELEASING THIS SW, THE ROTATION OF MOTOR IS STOPPED AND WINDOW CAN STOP AT WILL PLACE.

SWITCHING THE WINDOW LOCK SW IN "LOCK" POSITION, THE CIRCUIT IS OPENED AND STOPPED THE MOTOR ROTATION.

(FOR THE DOWN OPERATION, CURRENT FLOWS IN THE REVERSE DIRECTION BECAUSE THE TERMINALS WHERE IT FLOWS ARE CHANGED).



## SERVICE HINTS

### P 2 POWER WINDOW CONTROL RELAY

3-GROUND: ALWAYS CONTINUITY

2-GROUND: APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION

5-GROUND: APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION AND MASTER SW AT UP POSITION

8-GROUND: APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION AND MASTER SW AT AUTO DOWN POSITION

9-GROUND: APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION AND MASTER SW AT DOWN OR AUTO DOWN POSITION

### P 4 POWER WINDOW MASTER SW

4-GROUND: ALWAYS CONTINUITY

3-GROUND: APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION

### WINDOW LOCK SW

OPEN WITH THE WINDOW LOCK SW AT LOCK POSITION



## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
P 2	21	P 4	21	P 6	21
P 3	21	P 5	21		



## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	16	R/B NO. 1 (INSTRUMENT PANEL LEFT SIDE)



## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
3B	14	J/B NO. 3 AND COWL WIRE (INSTRUMENT PANEL LEFT SIDE)



## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
ID1	26	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
IH1	26	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)



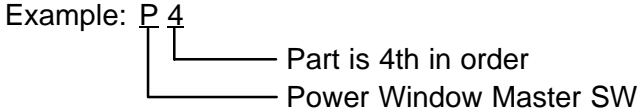
## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
IC	24	COWL LEFT

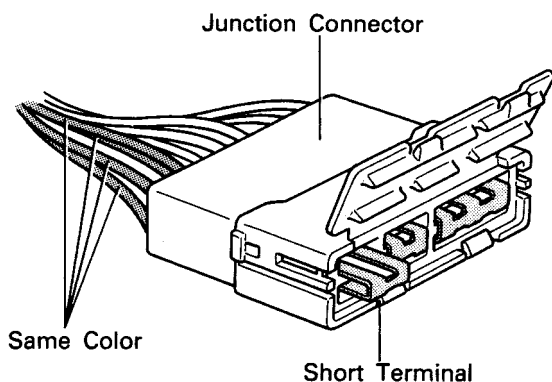


## ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESSES WITH SPLICE POINTS
I 5	24	COWL WIRE

- Ⓚ : Explains the system outline.
- Ⓡ : Indicates values or explains the function for reference during troubleshooting.
- Ⓢ : Indicates the reference page showing the position on the vehicle of the parts in the system circuit.  
 Example: Part “P4” (Power Window Master SW) is on page 21 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: P 4  

- Ⓣ : 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 16 of this manual and is installed on the left side of the instrument panel.
- Ⓤ : Indicates the reference page showing the position on the vehicle of J/B and Wire Harness in the system circuit.  
 Example: Connector “3B” connects the Cowl Wire and J/B No. 3. It is described on page 14 of this manual, and is installed on the instrument panel left side.
- Ⓥ : 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 “ID1” connects the front door RH wire (female) and cowl wire (male). It is described on page 26 of this manual, and is installed on the right side kick panel.
- Ⓦ : Indicates the reference page showing the position of the ground points on the vehicle.  
 Example: Ground point “IC” is described on page 24 of this manual and is installed on the cowl left side.
- Ⓧ : Indicates the reference page showing the position of the splice points on the vehicle.  
 Example: Splice point “I 5” is on the Cowl Wire Harness and is described on page 24 of this manual.

**HINT:**



Junction connector (code: J1, J2, J3, J4, J5, J6, J7, J8, J9) 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.

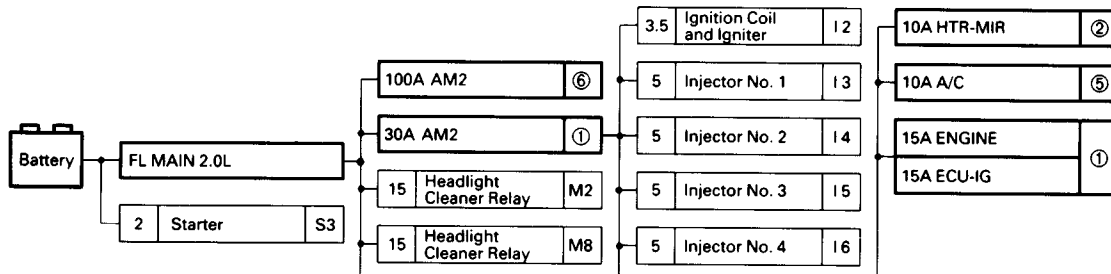
# HOW TO USE THIS MANUAL

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.

## POWER SOURCE (Current Flow Chart)

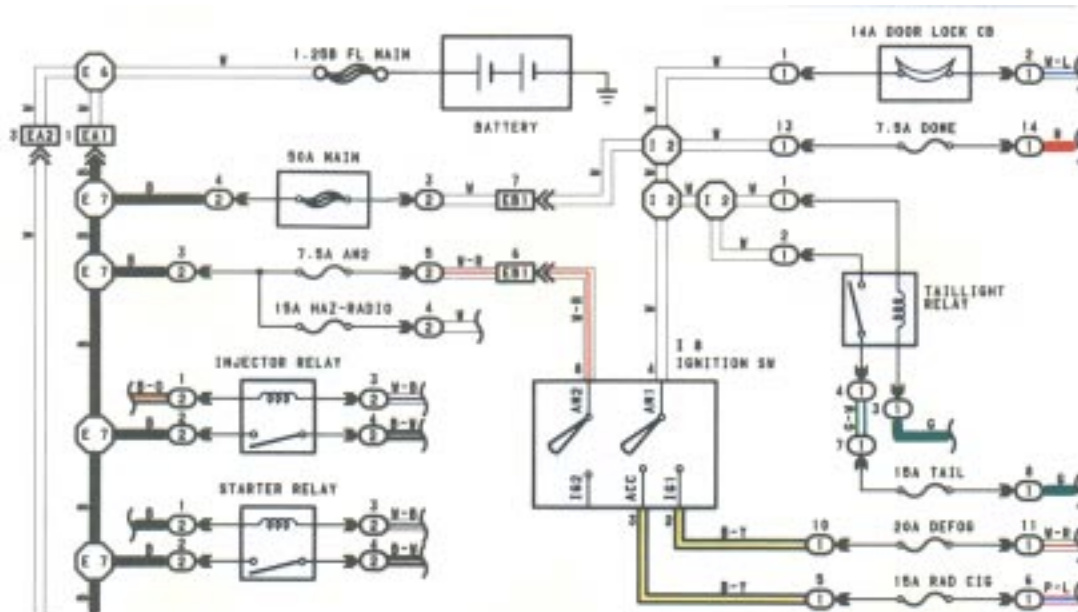
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.

The next page and following pages show the parts to which each electrical source outputs current.



Location	Page Nos. of Related Systems																
	Parts																
	Code or Location																
CB or Fuse	A1	A8	A9	A10	A11	A12	O9	B1	B3	B4	B5	R5	R6	C2	C8	C8	C9
10A ENGINE																	
20A WIPER																	
10A TURN																	
10A GAMES																	

## POWER SOURCE

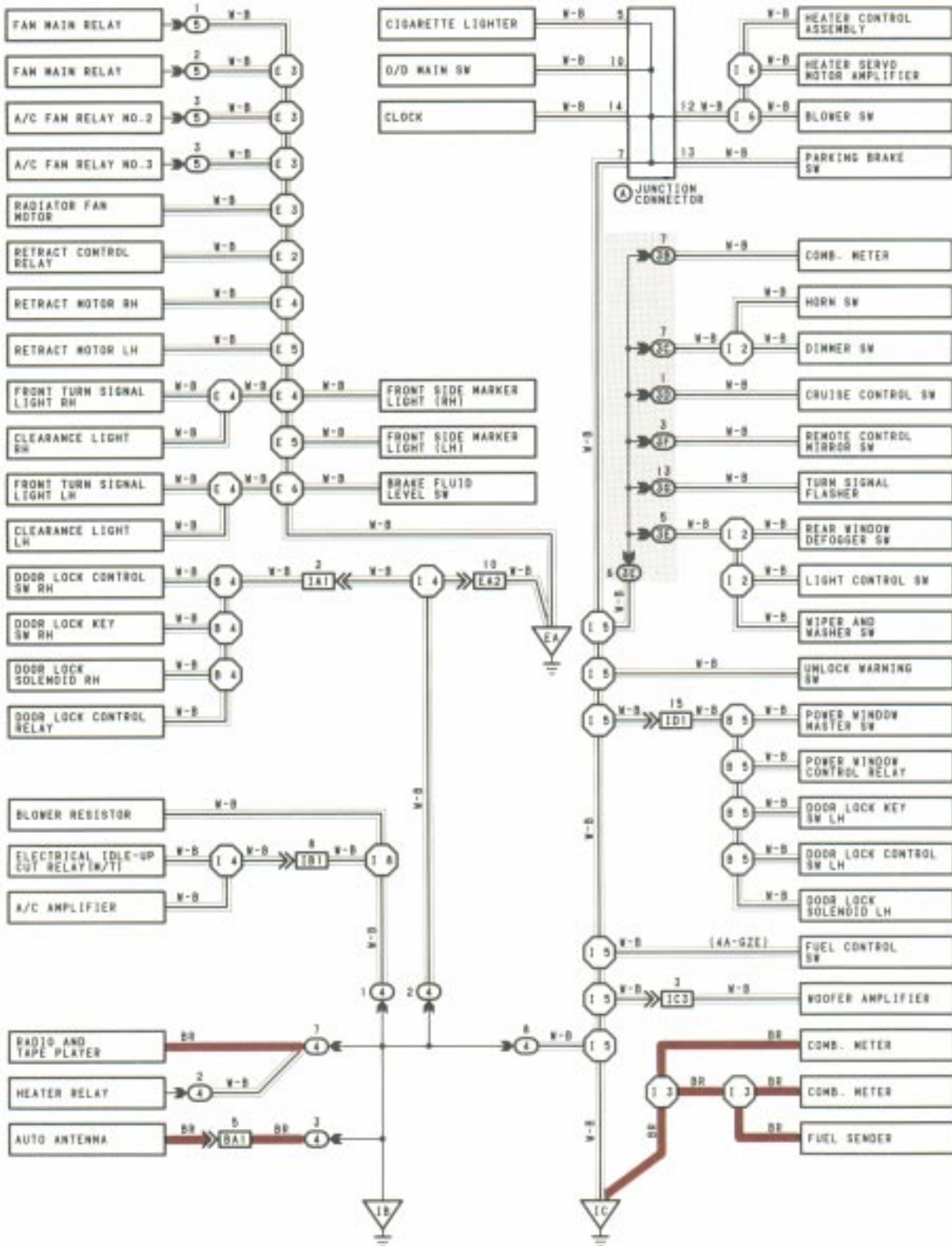


\* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.



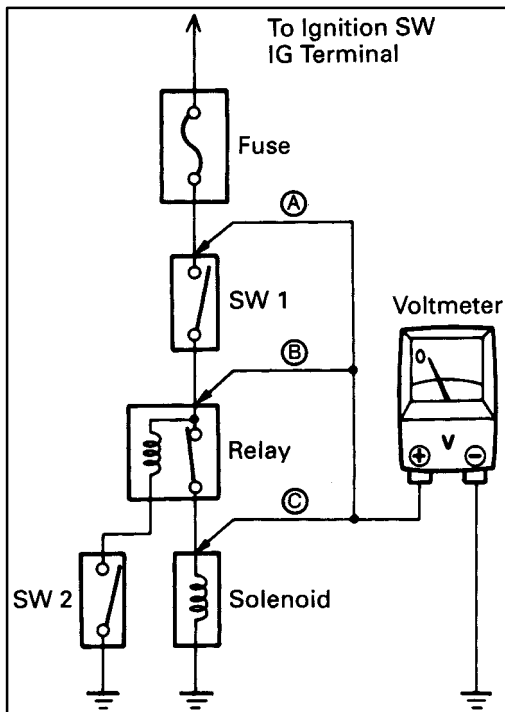
The ground points circuit diagram shows the connections from all major parts to the respective ground points. When troubleshooting a faulty ground point, checking the system circuits which use a common ground may help you identify the problem ground quickly. The relationship between ground points ( 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

## GROUND POINTS



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

# TROUBLESHOOTING

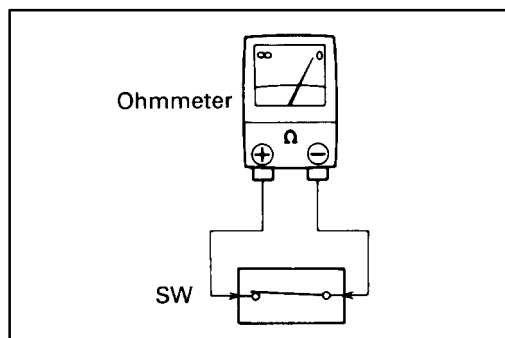


## VOLTAGE CHECK

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

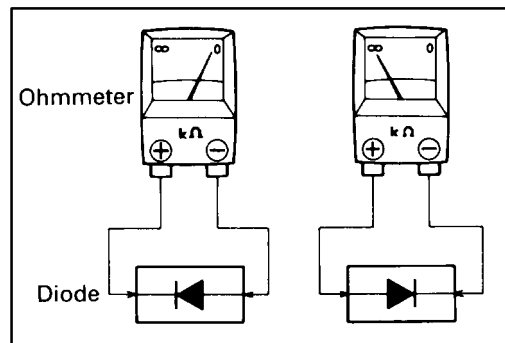
Example:

- Ⓐ – Ignition SW on
  - Ⓑ – Ignition SW and SW 1 on
  - Ⓒ – 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

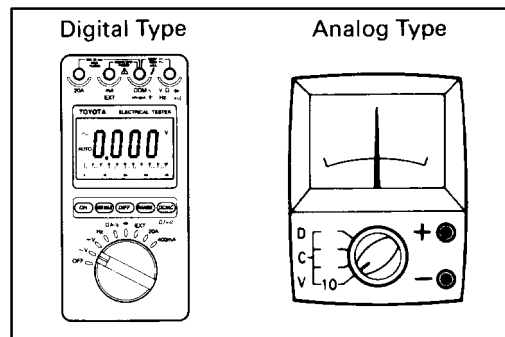
- (a) Disconnect the battery terminal or wire so there is no voltage between the check points.
- (b) Contact the two leads of an ohmmeter to each of the check points.



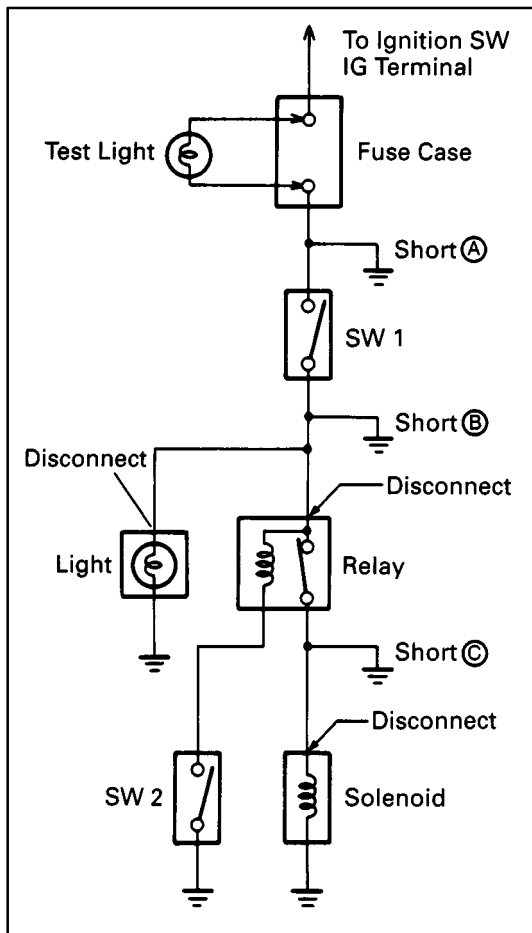
If the circuit has diodes, reverse the two leads and check again.

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:

- Ⓐ – Ignition SW on
  - Ⓑ – Ignition SW and SW 1 on
  - Ⓒ – 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.

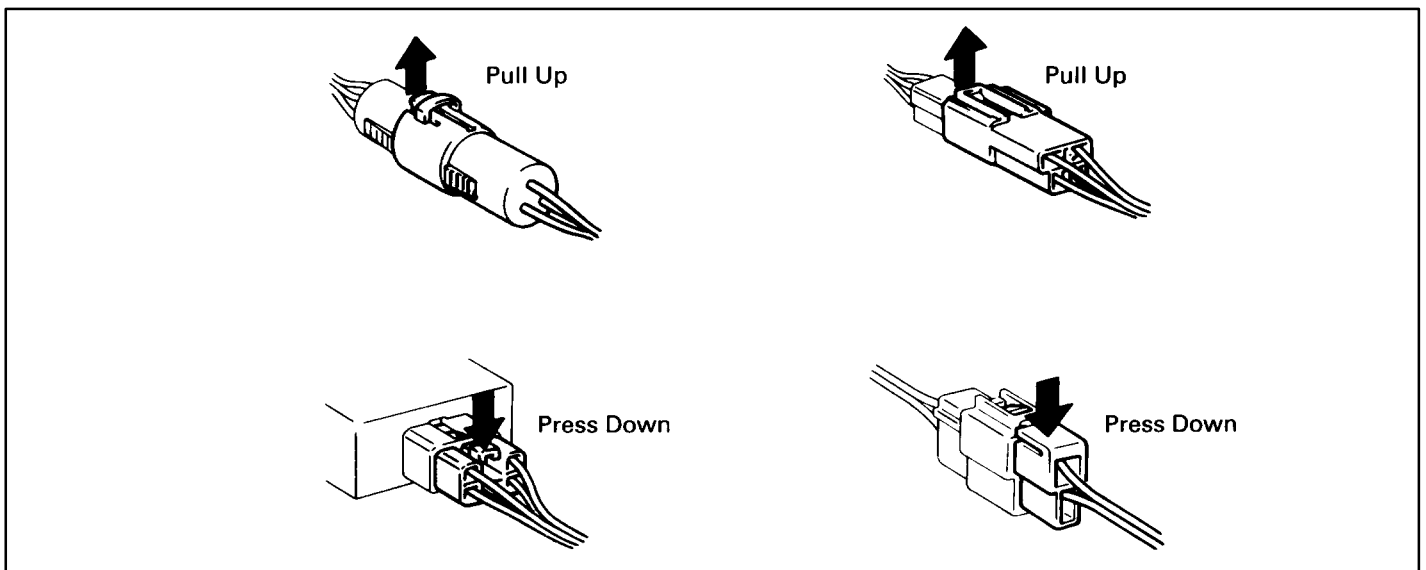
## CAUTION:

- (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).**

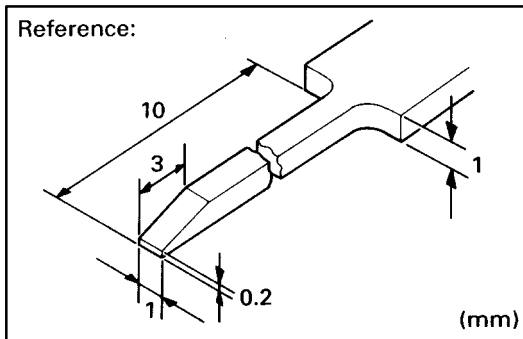
## DISCONNECTION OF MALE AND FEMALE CONNECTORS

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.



# TROUBLESHOOTING



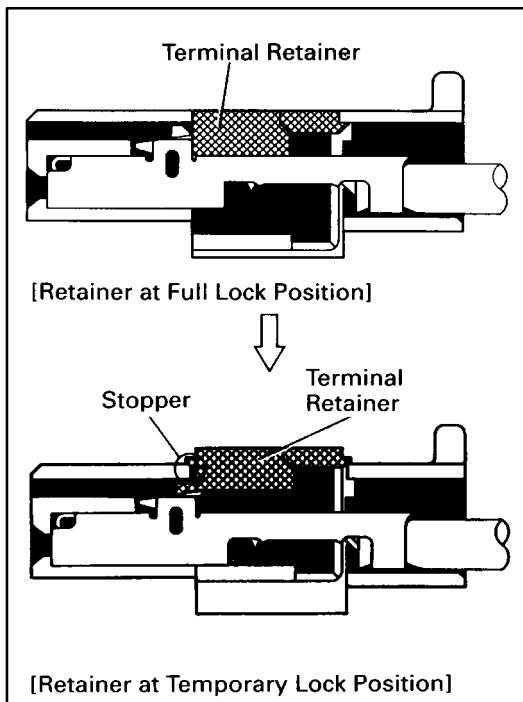
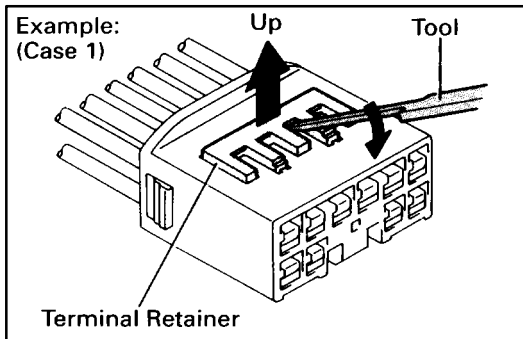
## HOW TO REPLACE TERMINAL

### (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.**



- Ⓐ For Non-Waterproof Type Connector

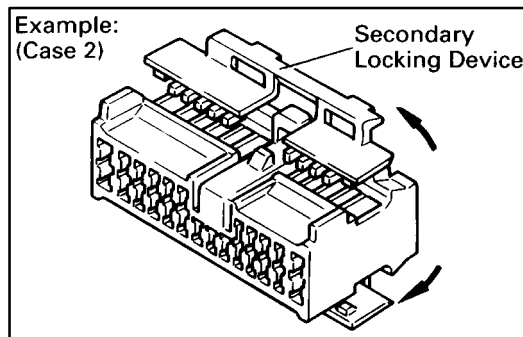
HINT: The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

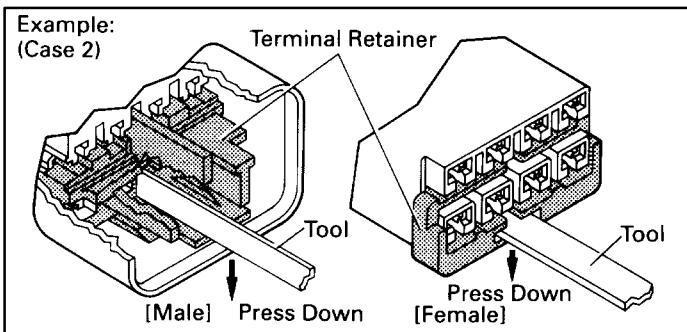
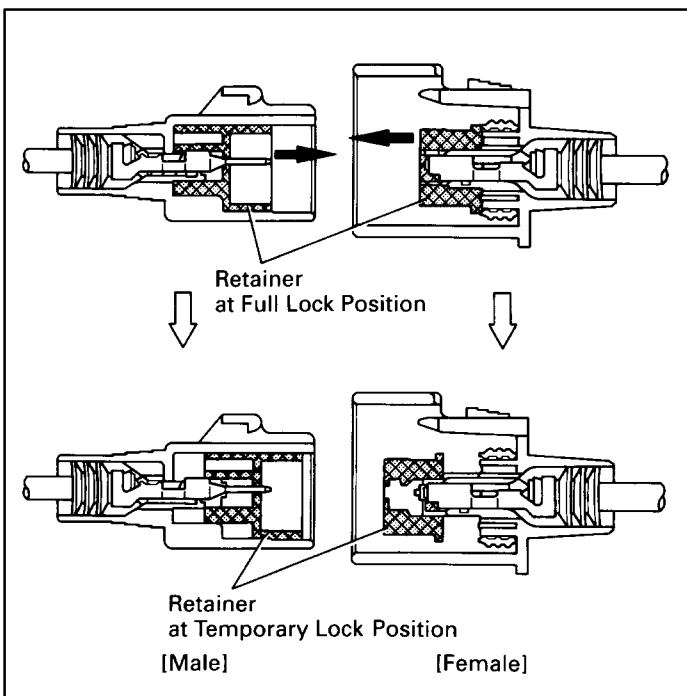
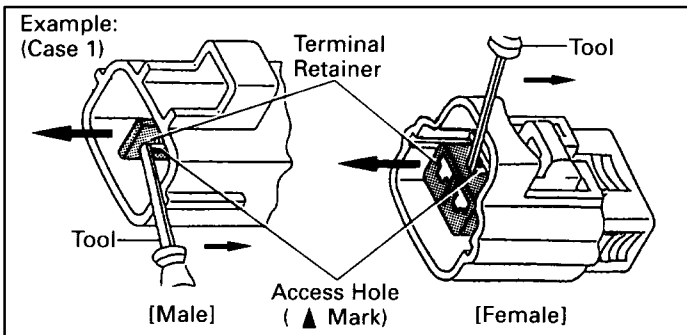
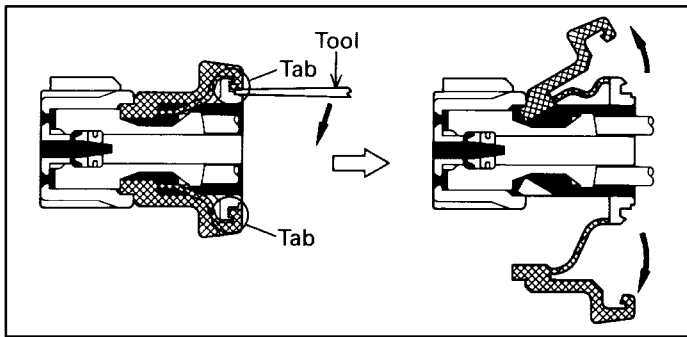
“Case 1”

Raise the terminal retainer up to the temporary lock position.

“Case 2”

Open the secondary locking device.





② 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”

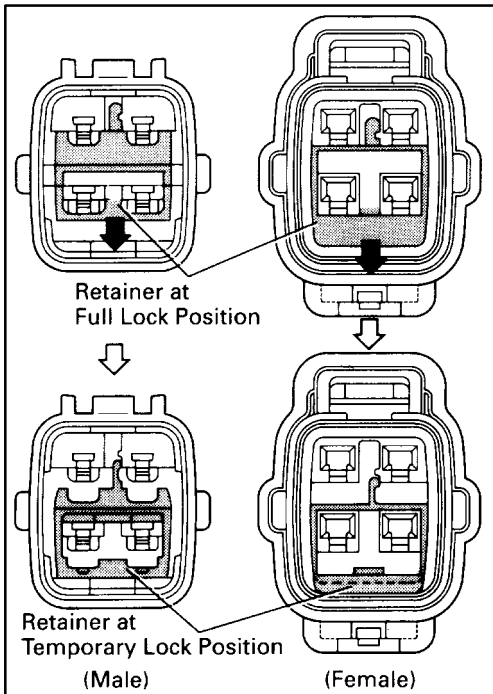
Type where terminal retainer is pulled up to the temporary lock position (Pull Type). Insert the special tool into the terminal retainer access hole (▲ Mark) and pull the terminal retainer up to the temporary lock position.

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

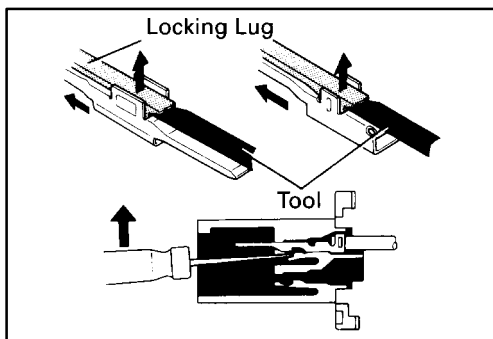
“Case 2”

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

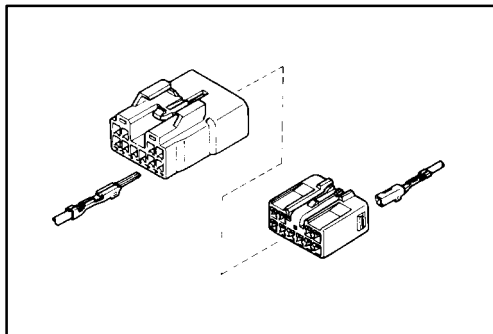
# TROUBLESHOOTING



Push the terminal retainer down to the temporary lock position.



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

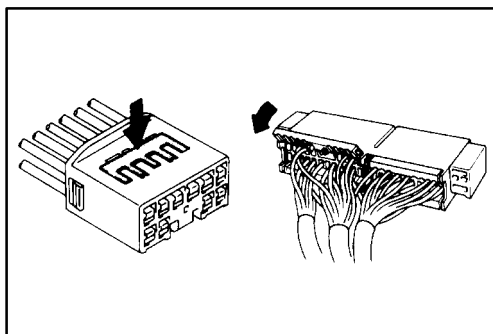


## 4. INSTALL TERMINAL TO CONNECTOR

(a) Insert the terminal.

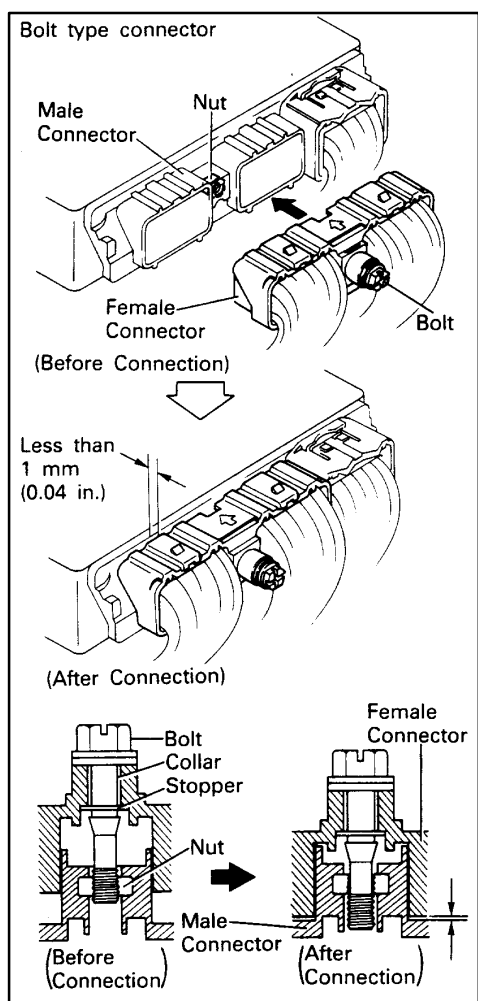
### HINT:

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



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

## 5. CONNECT CONNECTOR



## DISCONNECTION AND CONNECTION OF BOLT TYPE CONNECTORS

For engine control module (engine and electronically controlled transmission ECU) in this vehicle, connectors are used which require a bolt built into the connector to be screwed down to securely connect the connector.

1. Disconnect the connector  
After completely loosening the bolt, the two parts of the connector can be separated.

### NOTICE:

**Do not pull the wire harness when disconnecting the connector.**

2. Connect the connector

### NOTICE:

**Before connecting the connector, always check that the terminals are not bent or damaged.**

- (a) Match the guide section of the male connector correctly with the female connector, then press them together.
- (b) Tighten the bolt.

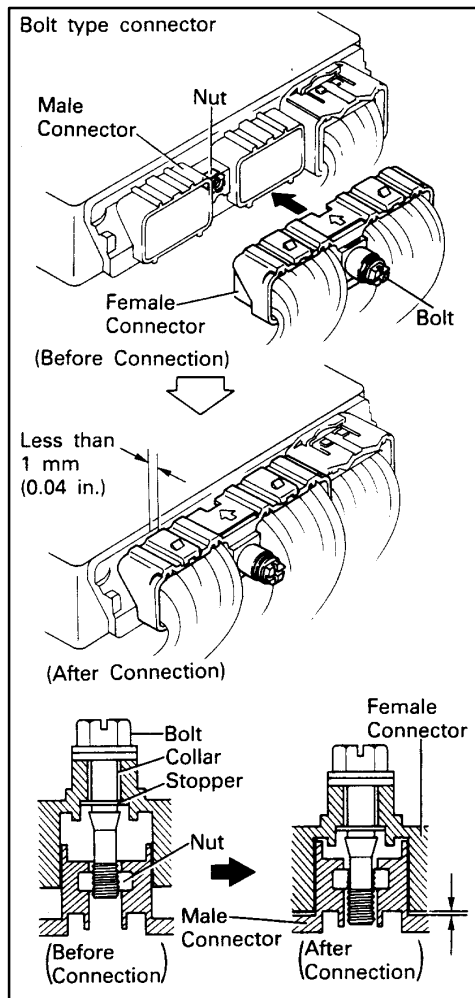
Make sure the connectors are completely connected, by tightening the bolt until there is a clearance of less than 1 mm (0.04 in.) between the bottom of male connector and the end of female connector.

## ABBREVIATIONS

The following abbreviations are used in this manual.

ABS	= Anti-Lock Brake System	O/D	= Overdrive
A/C	= Air Conditioning	PPS	= Progressive Power Steering
ACIS	= Acoustic Control Induction System	R/B	= Relay Block
A/T	= Automatic Transmission	RH	= Right-Hand
COMB.	= Combination	SFI	= Sequential Multiport Fuel Injection
ECU	= Electronic Control Unit	SRS	= Supplemental Restraint System
EFI	= Electronic Fuel Injection	SW	= Switch
EGR	= Exhaust Gas Recirculation	TDCL	= Total Diagnostic Communication Link
EVAP	= Evaporative Emission	TEMP.	= Temperature
ISC	= Idle Speed Control	TRAC	= Traction Control System
J/B	= Junction Block	VSV	= Vacuum Switching Valve
LH	= Left-Hand	w/	= With
M/T	= Manual Transmission	w/o	= Without

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



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## ABBREVIATIONS

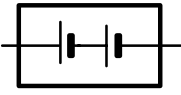















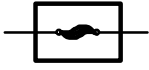



The following abbreviations are used in this manual.

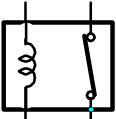
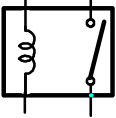

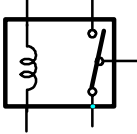

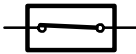

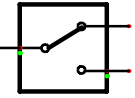
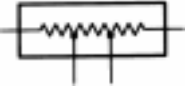
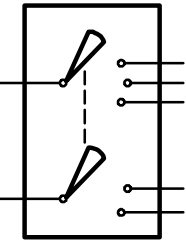
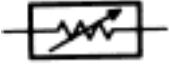
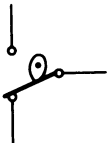

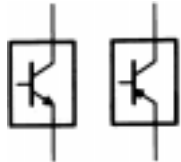



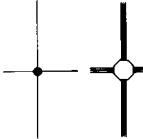
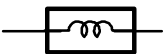
ABS	= Anti-Lock Brake System	O/D	= Overdrive
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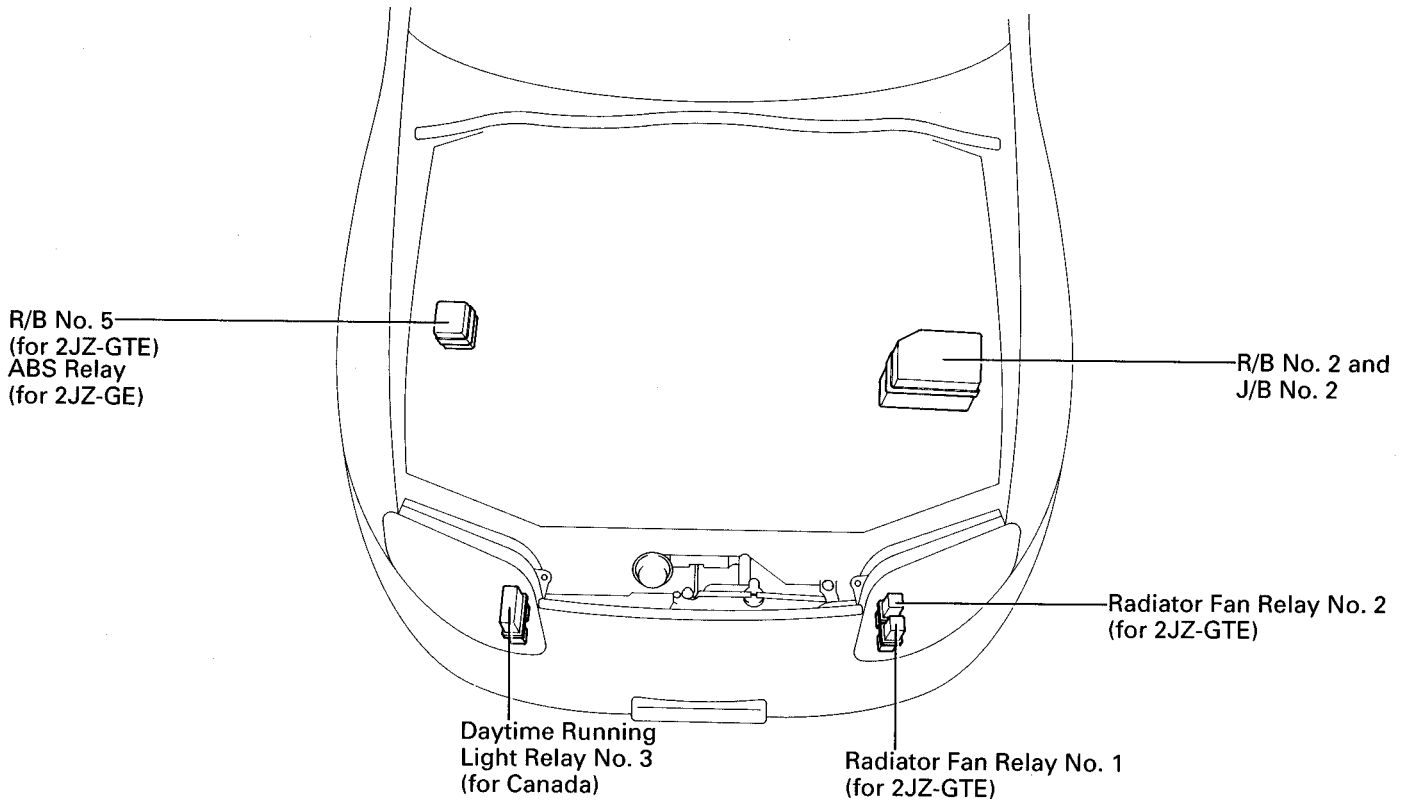
# GLOSSARY OF TERMS AND SYMBOLS

 <p><b>BATTERY</b> Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.</p>	<p><b>HEADLIGHTS</b> 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.</p> <p><b>1. SINGLE FILAMENT</b></p>  <p><b>2. DOUBLE FILAMENT</b></p> 
 <p><b>CAPACITOR (Condenser)</b> A small holding unit for temporary storage of electrical voltage.</p>	<p><b>HORN</b> An electric device which sounds a loud audible signal.</p> 
<p><b>CIGARETTE LIGHTER</b> An electric resistance heating element.</p> 	<p><b>IGNITION COIL</b> Converts low-voltage DC current into high-voltage ignition current for firing the spark plugs.</p> 
<p><b>CIRCUIT BREAKER</b> 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.</p> 	<p><b>DIODE</b> A semiconductor which allows current flow in only one direction.</p> 
<p><b>DIODE, ZENER</b> 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.</p> 	<p><b>LIGHT</b> Current flow through a filament causes the filament to heat up and emit light.</p> 
<p><b>DISTRIBUTOR, IIA</b> Channels high-voltage current from the ignition coil to the individual spark plugs.</p> 	<p><b>LED (LIGHT EMITTING DIODE)</b> Upon current flow, these diodes emit light without producing the heat of a comparable light.</p> 
<p><b>FUSE</b> A thin metal strip which burns through when too much current flows through it, thereby stopping current flow and protecting a circuit from damage.</p> 	<p><b>METER, ANALOG</b> Current flow activates a magnetic coil which causes a needle to move, thereby providing a relative display against a background calibration.</p> 
<p><b>FUSIBLE LINK</b> A heavy-gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit. The numbers indicate the cross-section surface area of the wires.</p>  <p>(for Medium Current Fuse)</p>  <p>(for High Current Fuse or Fusible Link.)</p>	<p><b>METER, DIGITAL</b> Current flow activates one or many LED's, LCD's, or fluorescent displays, which provide a relative or digital display.</p> 
<p><b>GROUND</b> The point at which wiring attaches to the Body, thereby providing a return path for an electrical circuit; without a ground, current cannot flow.</p> 	<p><b>MOTOR</b> A power unit which converts electrical energy into mechanical energy, especially rotary motion.</p> 

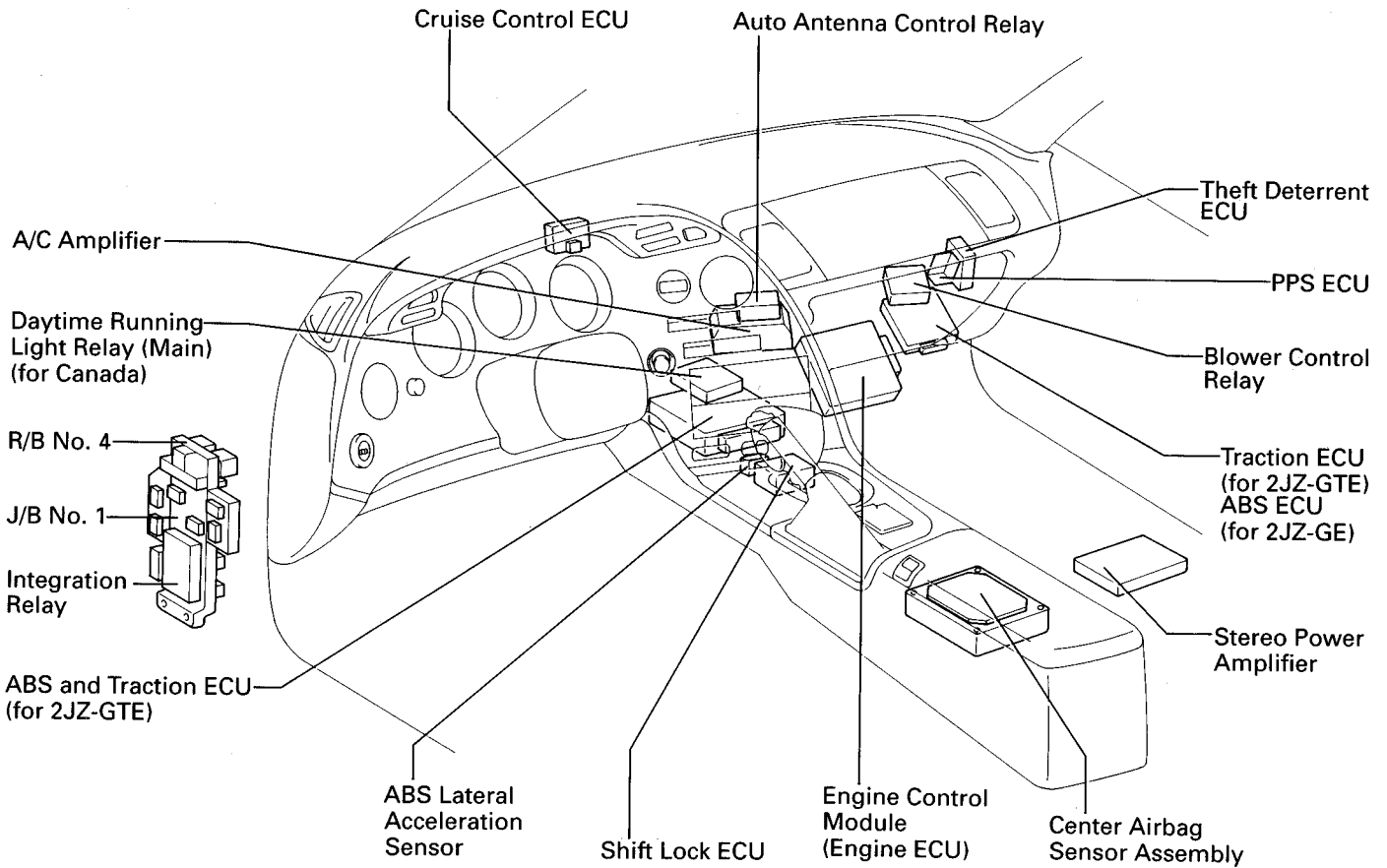
<p><b>RELAY</b></p>  <p><b>1. NORMALLY CLOSED</b></p>  <p><b>2. NORMALLY OPEN</b></p> <p>Basically, an electrically operated switch which may be normally closed (1) or open (2). Current flow through a small coil creates a magnetic field which either opens or closes an attached switch.</p>	<p><b>SPEAKER</b></p>  <p>An electromechanical device which creates sound waves from current flow.</p>
<p><b>RELAY, DOUBLE THROW</b></p>  <p>A relay which passes current through one set of contacts or the other.</p>	<p><b>SWITCH, MANUAL</b></p>  <p><b>1. NORMALLY OPEN</b></p>  <p><b>2. NORMALLY CLOSED</b></p> <p>Opens and closes circuits, thereby stopping (1) or allowing (2) current flow.</p>
<p><b>RESISTOR</b></p>  <p>An electrical component with a fixed resistance, placed in a circuit to reduce voltage to a specific value.</p>	<p><b>SWITCH, DOUBLE THROW</b></p>  <p>A switch which continuously passes current through one set of contacts or the other.</p>
<p><b>RESISTOR, TAPPED</b></p>  <p>A resistor which supplies two or more different non adjustable resistance values.</p>	<p><b>SWITCH, IGNITION</b></p>  <p>A key operated switch with several positions which allows various circuits, particularly the primary ignition circuit, to become operational.</p>
<p><b>RESISTOR, VARIABLE or RHEOSTAT</b></p>  <p>A controllable resistor with a variable rate of resistance. Also called a potentiometer or rheostat.</p>	<p><b>SWITCH, WIPER PARK</b></p>  <p>Automatically returns wipers to the stop position when the wiper switch is turned off.</p>
<p><b>SENSOR (Thermistor)</b></p>  <p>A resistor which varies its resistance with temperature.</p>	<p><b>TRANSISTOR</b></p>  <p>A solidstate device typically used as an electronic relay; stops or passes current depending on the voltage applied at "base."</p>
<p><b>SENSOR, ANALOG SPEED</b></p>  <p>Uses magnetic impulses to open and close a switch to create a signal for activation of other components.</p>	<p><b>WIRES</b></p> <p>(1) <b>NOT CONNECTED</b></p>  <p>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 (O) mark at the junction are spliced (joined) connections.</p>
<p><b>SHORT PIN</b></p>  <p>Used to provide an unbroken connection within a junction block.</p>	<p>(2) <b>SPLICED</b></p> 
<p><b>SOLENOID</b></p>  <p>An electromagnetic coil which forms a magnetic field when current flows, to move a plunger, etc.</p>	

# RELAY LOCATIONS

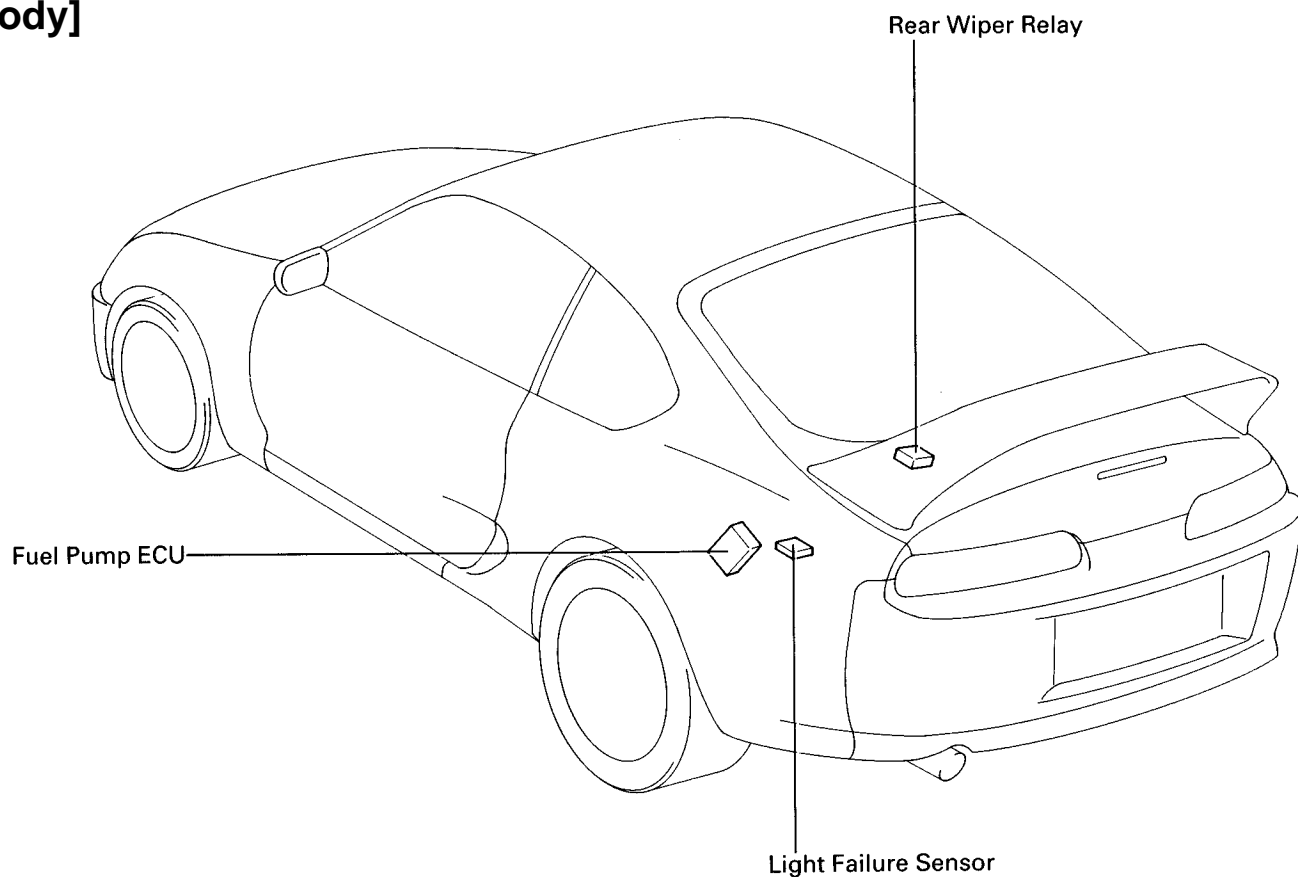
## [Engine Compartment]



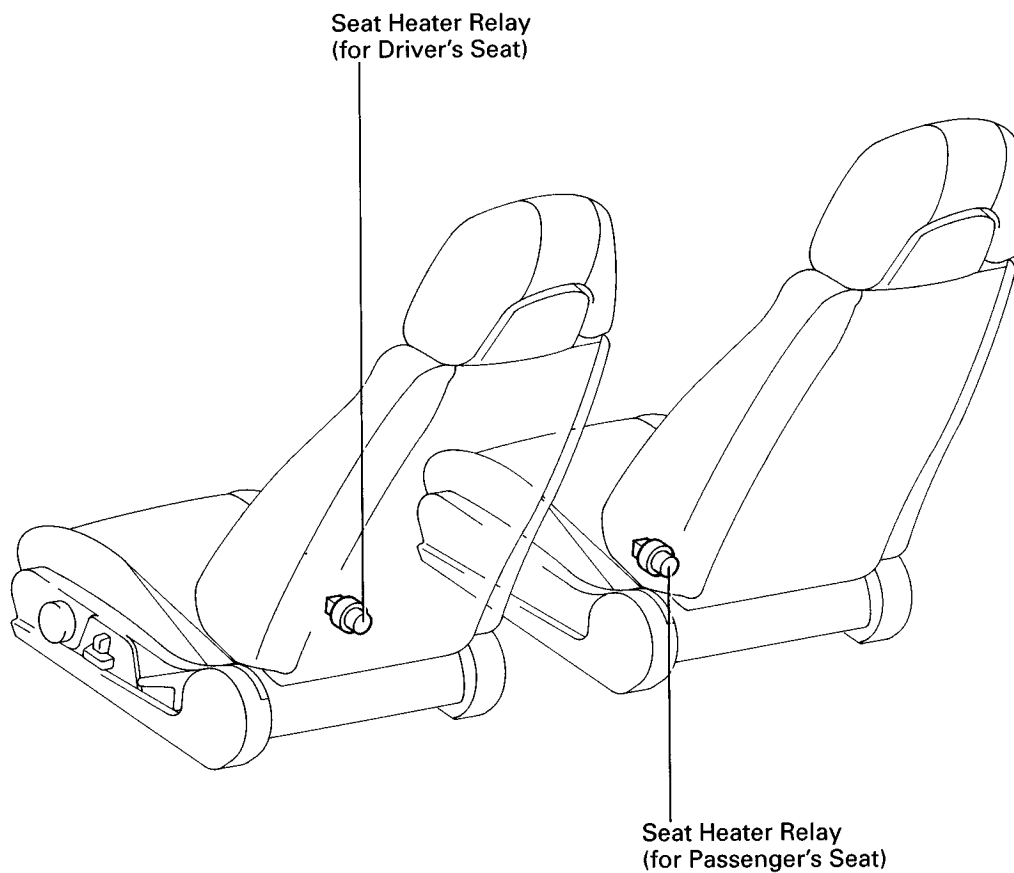
## [Instrument Panel]



**[Body]**

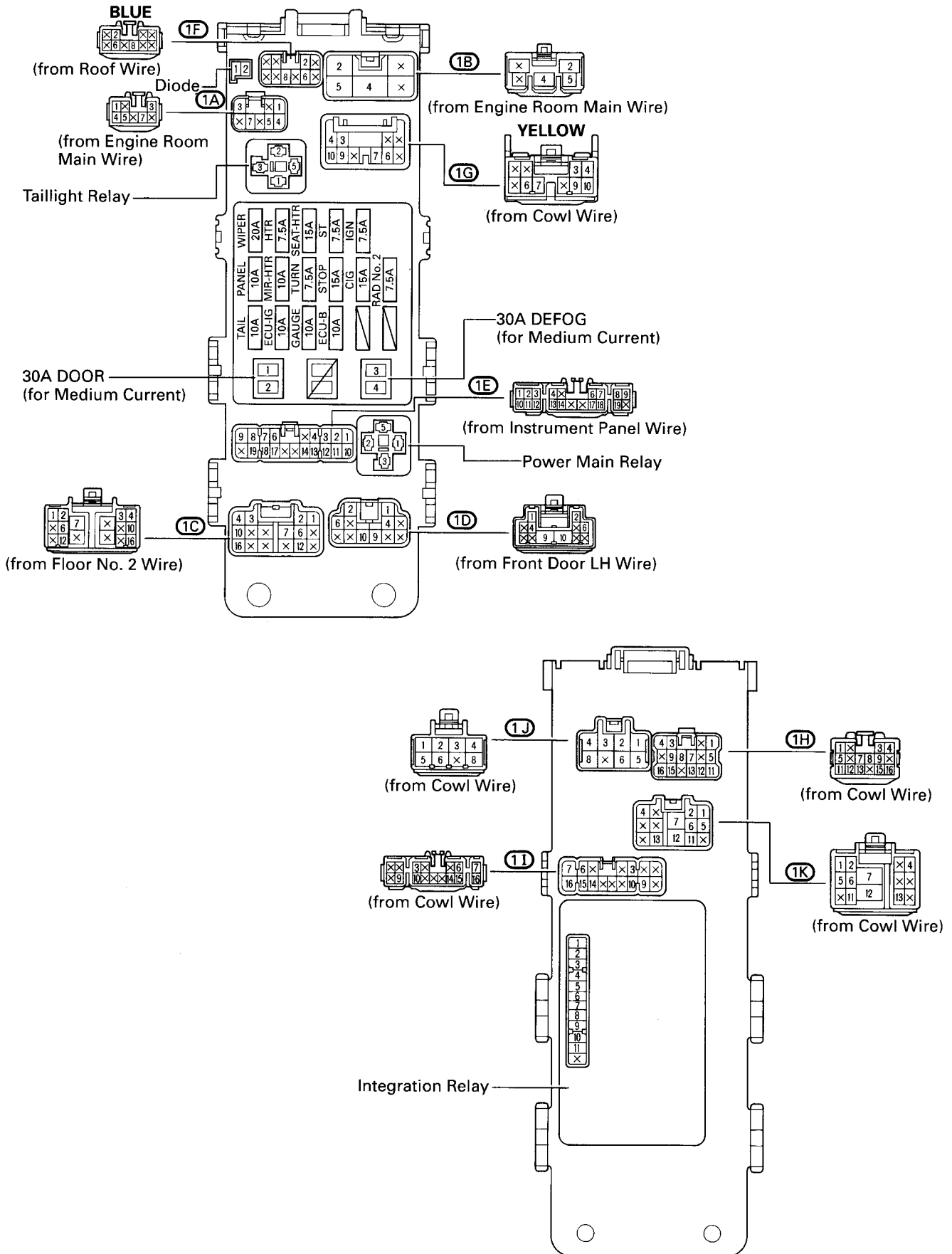


**[Seat]**

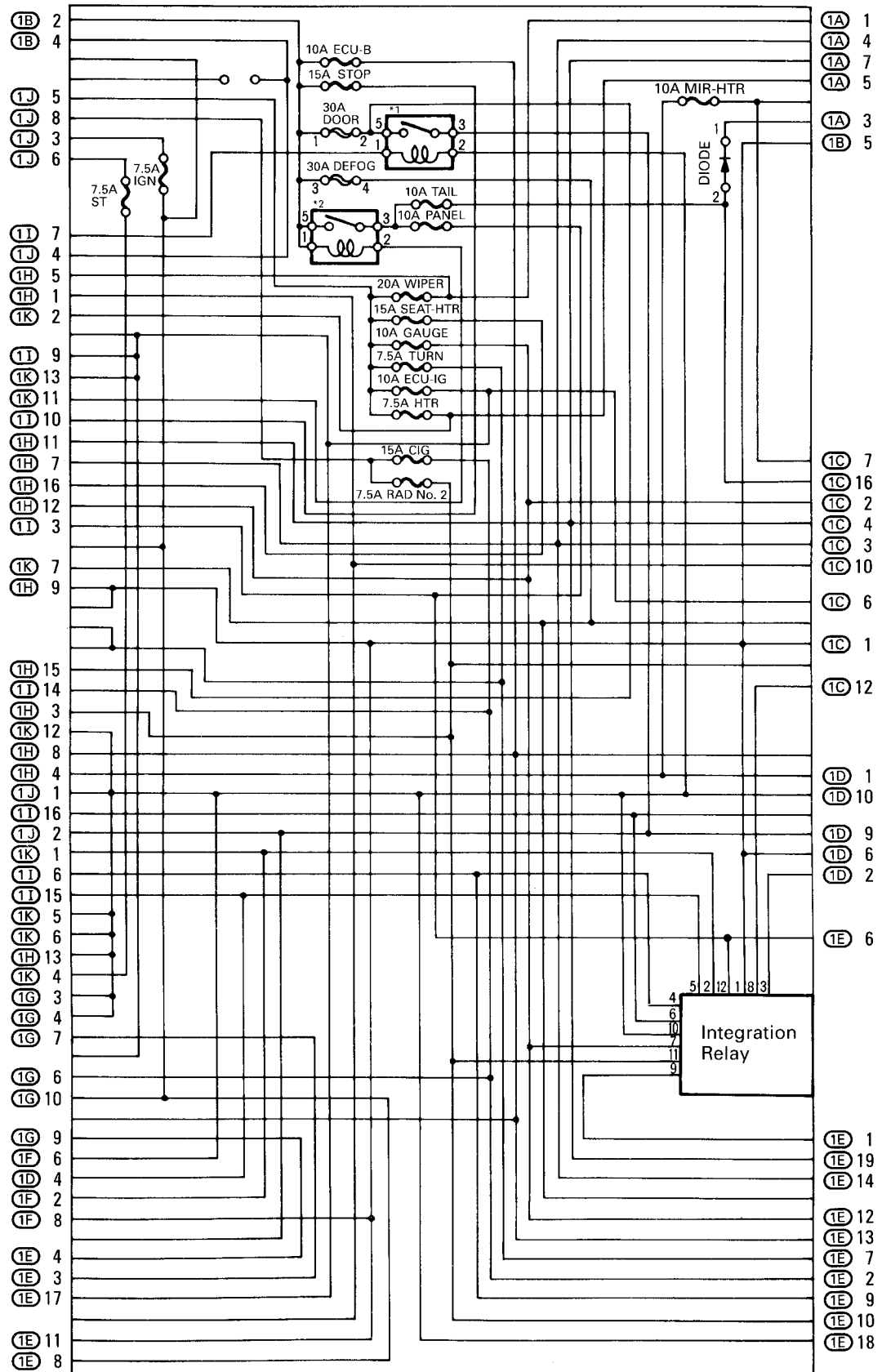


# RELAY LOCATIONS

○ : J/B No. 1      **Left Kick Panel** (See Page 18)



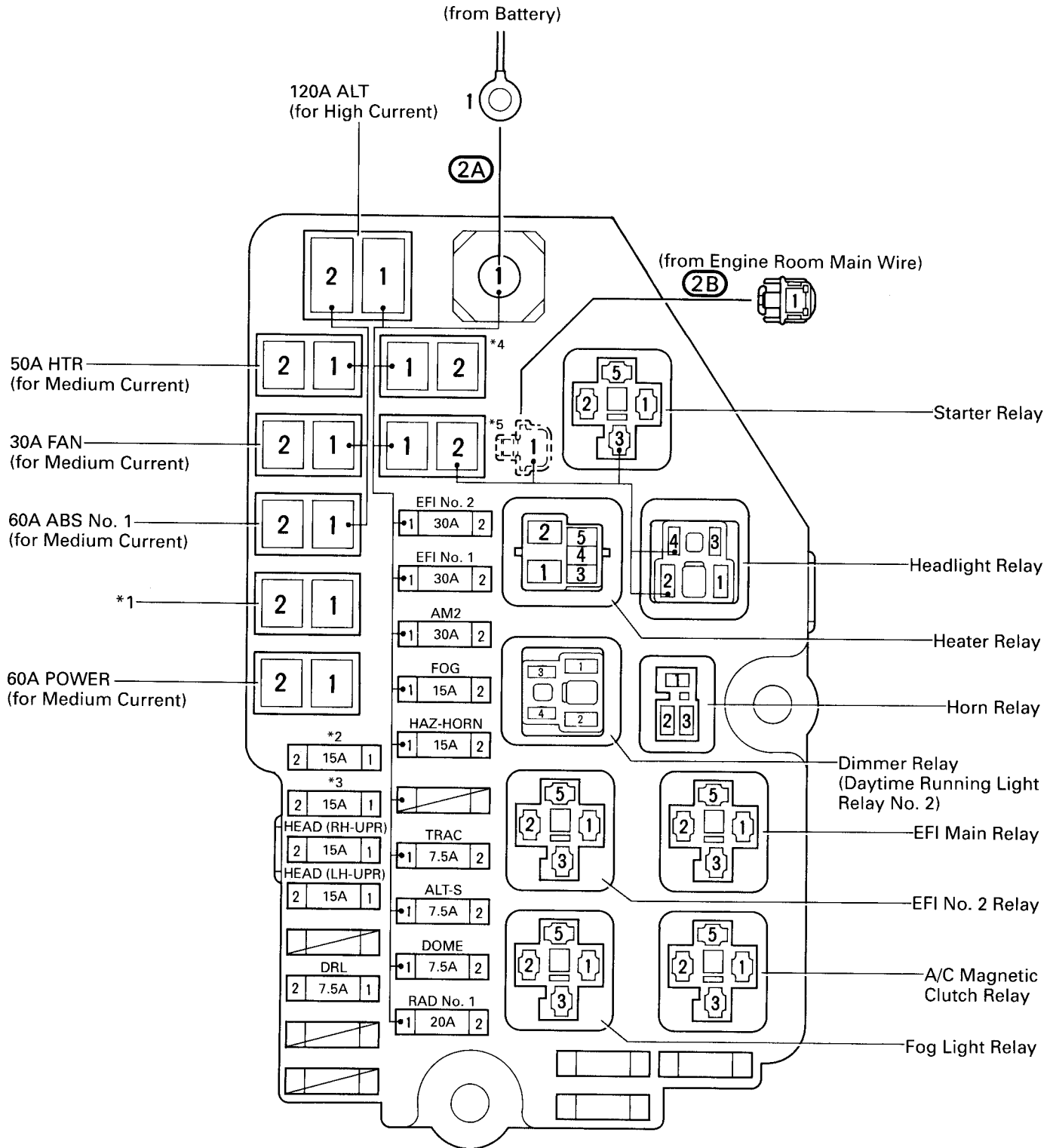
# [J/B No. 1 Inner Circuit]



\*1: Power Main Relay  
 \*2: Taillight Relay

# RELAY LOCATIONS

② : R/B No. 2	<b>Engine Compartment Left</b> (See Page 18)
○ : J/B No. 2	



\*1: { 50A AM1 (for Medium Current) (for USA)  
 { 60A AM1 (for Medium Current) (for CANADA)

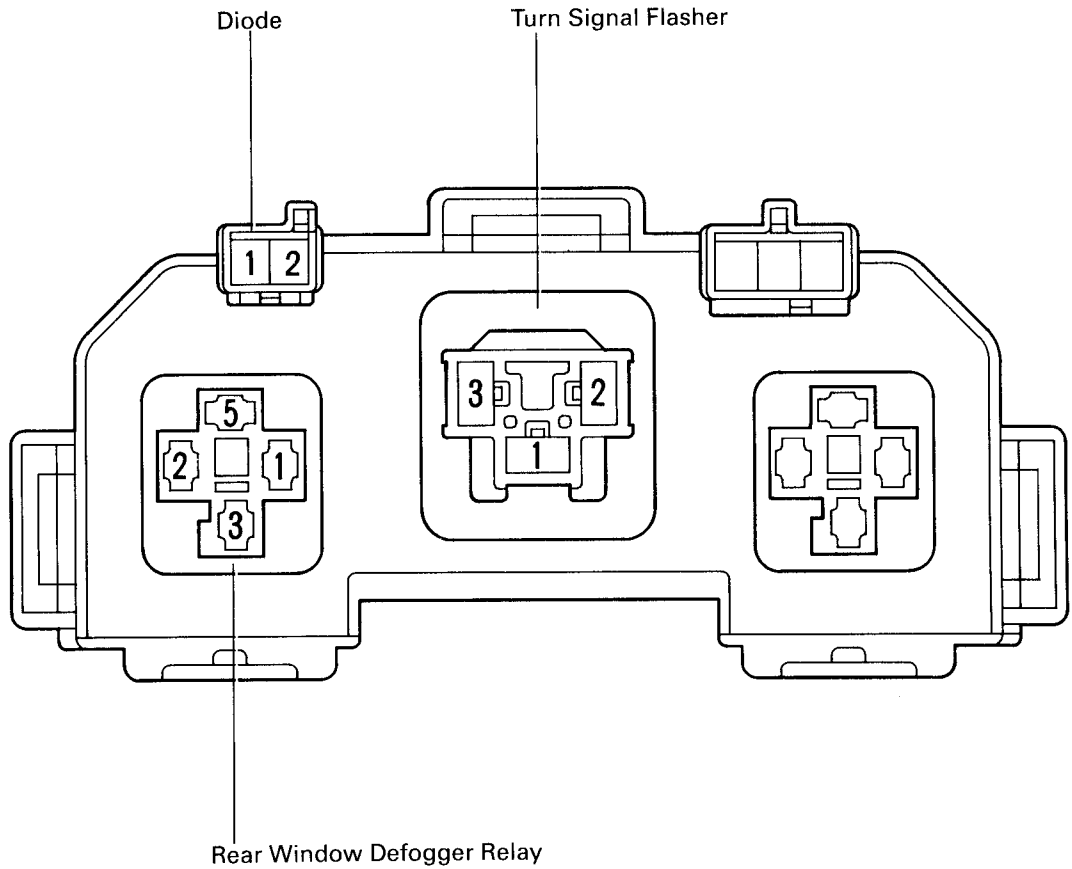
\*2: { HEAD (RH) (for USA)  
 { HEAD (RH-LWR) (for CANADA)

\*3: { HEAD (LH) (for USA)  
 { HEAD (LH-LWR) (for CANADA)

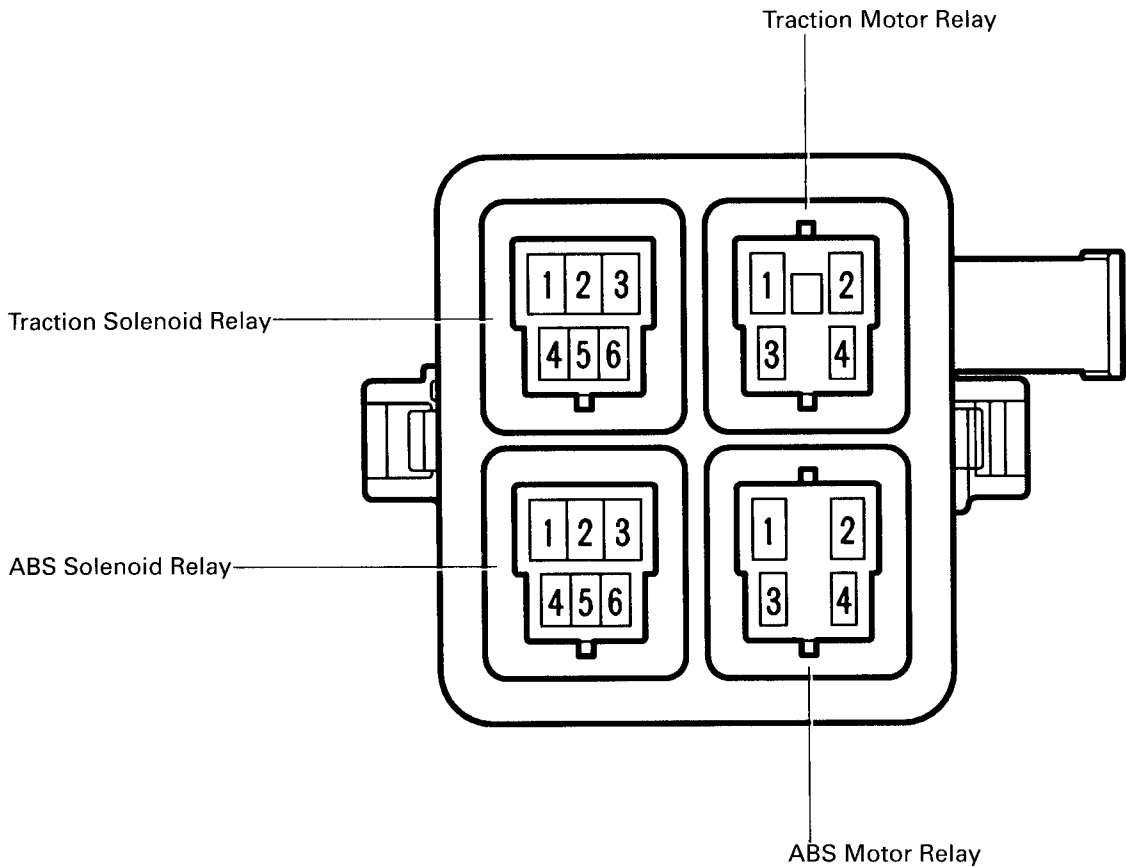
\*4: 30A ABS No. 2  
 (for Medium Current)

\*5: 50A MAIN  
 (for Medium Current)

**④ : R/B No. 4      Left Kick Panel      (See Page 18)**



**⑤ : R/B No. 5      Engine Compartment Right      (See Page 18)**

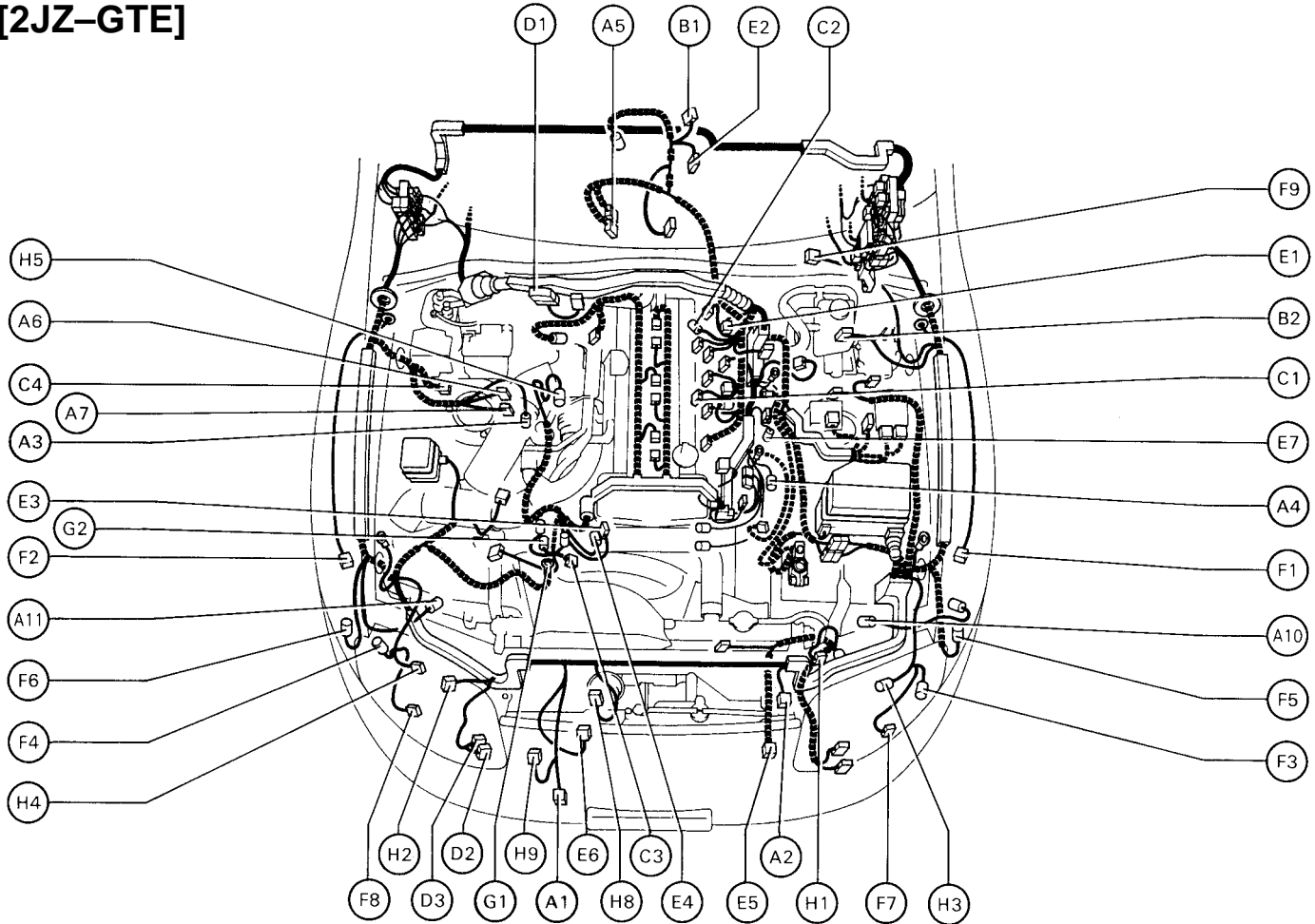




# ELECTRICAL WIRING ROUTING

## Position of Parts in Engine Compartment

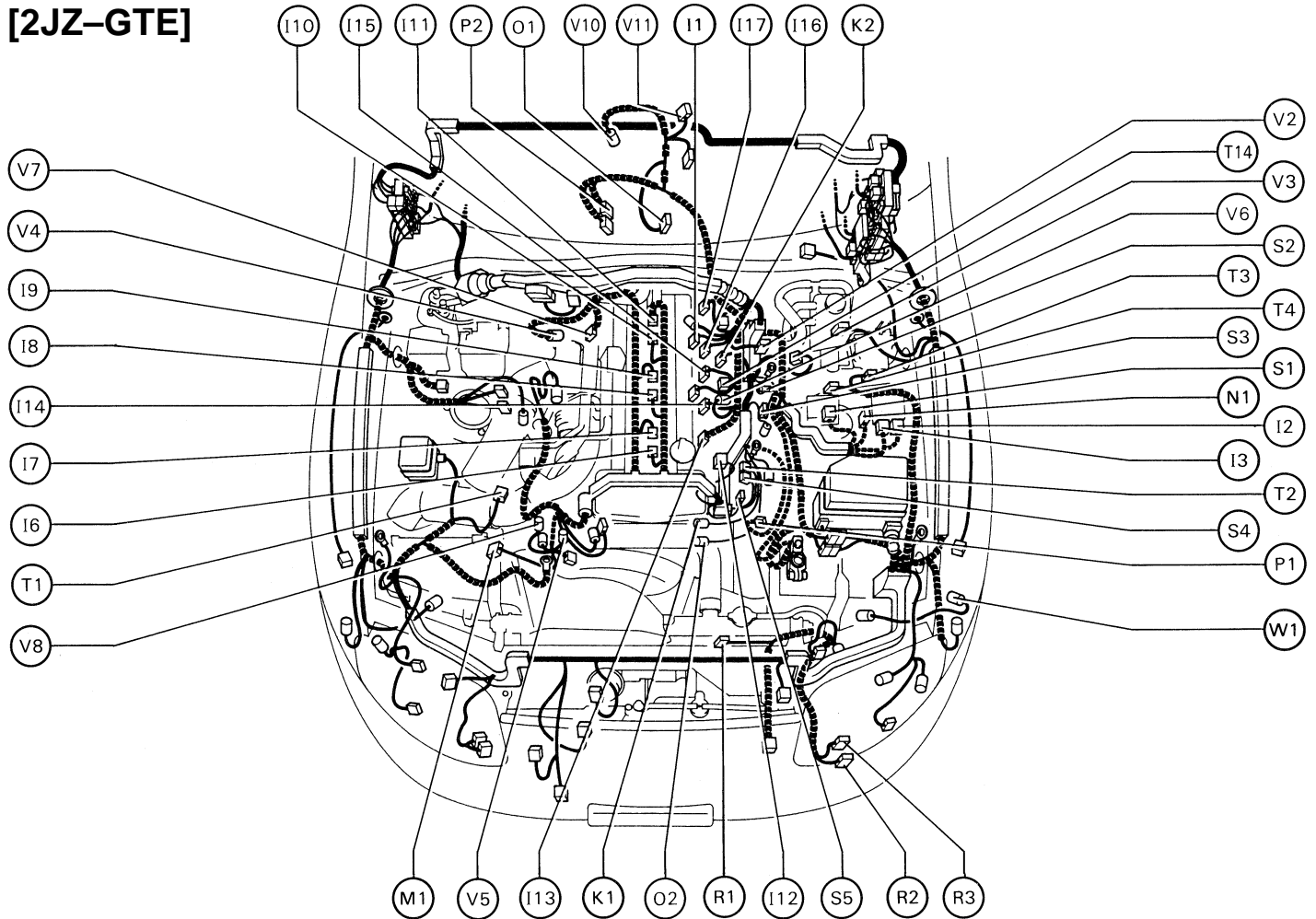
[2JZ-GTE]



- |      |   |     |  |
|------|---|-----|--|
| A 1  | A/C Ambient Temp. Sensor                                    | E 4 | Engine Coolant Temp. Sender (Water Temp. Sender) |
| A 2  | A/C Condenser Fan Motor                                     | E 5 | Engine Coolant Temp. SW (Water Temp. SW)         |
| A 3  | A/C Triple Pressure SW<br>(A/C Dual and Single Pressure SW) | E 6 | Engine Hood Courtesy SW                          |
| A 4  | A/C Magnetic Clutch and Lock Sensor                         | E 7 | Engine Oil Level Sensor                          |
| A 5  | A/T Fluid Temp. Sensor                                      | F 1 | Front Airbag Sensor LH                           |
| A 6  | ABS Actuator  | F 2 | Front Airbag Sensor RH                           |
| A 7  | ABS Actuator  | F 3 | Front Fog Light and Parking Light LH             |
| A 10 | ABS Speed Sensor Front LH                                   | F 4 | Front Fog Light and Parking Light RH             |
| A 11 | ABS Speed Sensor Front RH                                   | F 5 | Front Side Marker Light LH                       |
| B 1  | Back-Up Light SW (for M/T)                                  | F 6 | Front Side Marker Light RH                       |
| B 2  | Brake Fluid Level Warning SW                                | F 7 | Front Turn Signal Light LH                       |
| C 1  | Camshaft Position Sensor No. 1                              | F 8 | Front Turn Signal Light RH                       |
| C 2  | Camshaft Position Sensor No. 2                              | F 9 | Front Wiper Motor                                |
| C 3  | Crankshaft Position Sensor                                  | G 1 | Generator (Alternator)                           |
| C 4  | Cruise Control Actuator                                     | G 2 | Generator (Alternator)                           |
| D 1  | Data Link Connector 1 (Check Connector)                     | H 1 | Headlight Hi LH                                  |
| D 2  | Daytime Running Light Relay No. 3                           | H 2 | Headlight Hi RH                                  |
| D 3  | Daytime Running Light Relay No. 3                           | H 3 | Headlight Lo LH                                  |
| E 1  | EGR Gas Temp. Sensor  | H 4 | Headlight Lo RH                                  |
| E 2  | Electronically Controlled Transmission Solenoid             | H 5 | Heated Oxygen Sensor (Main)                      |
| E 3  | Engine Coolant Temp. Sensor (EFI Water Temp. Sensor)        | H 8 | Horn LH  |
|      |   | H 9 | Horn RH  |

## Position of Parts in Engine Compartment

**[2JZ-GTE]**



- I 1 Idle Air Control Valve (ISC Valve)
- I 2 Igniter
- I 3 Igniter
- I 6 Ignition Coil No. 1
- I 7 Ignition Coil No. 2
- I 8 Ignition Coil No. 3
- I 9 Ignition Coil No. 4
- I 10 Ignition Coil No. 5
- I 11 Ignition Coil No. 6
- I 12 Injector No. 1
- I 13 Injector No. 2
- I 14 Injector No. 3
- I 15 Injector No. 4
- I 16 Injector No. 5
- I 17 Injector No. 6

- K 1 Knock Sensor (on Front Side)
- K 2 Knock Sensor (on Rear Side)

- M 1 Mass Air Flow (Air Flow Meter)

- N 1 Noise Filter

- O 1 O/D Direct Clutch Speed Sensor
- O 2 Oil Pressure SW

- P 1 PPS Solenoid
- P 2 Park/Neutral Position SW (Neutral Start SW),  
Back-Up Light SW and A/T Indicator Light SW  
(for A/T)

- R 1 Radiator Fan Motor
- R 2 Radiator Fan Relay No. 1
- R 3 Radiator Fan Relay No. 2

- S 1 SFI Resistor (EFI Resistor)
- S 2 Starter
- S 3 Starter
- S 4 Sub Throttle Actuator
- S 5 Sub Throttle Position Sensor

- T 1 Theft Deterrent Horn
- T 2 Throttle Position Sensor
- T 3 Traction Brake Actuator
- T 4 Traction Pump and Motor
- T 14 Turbo Pressure Sensor

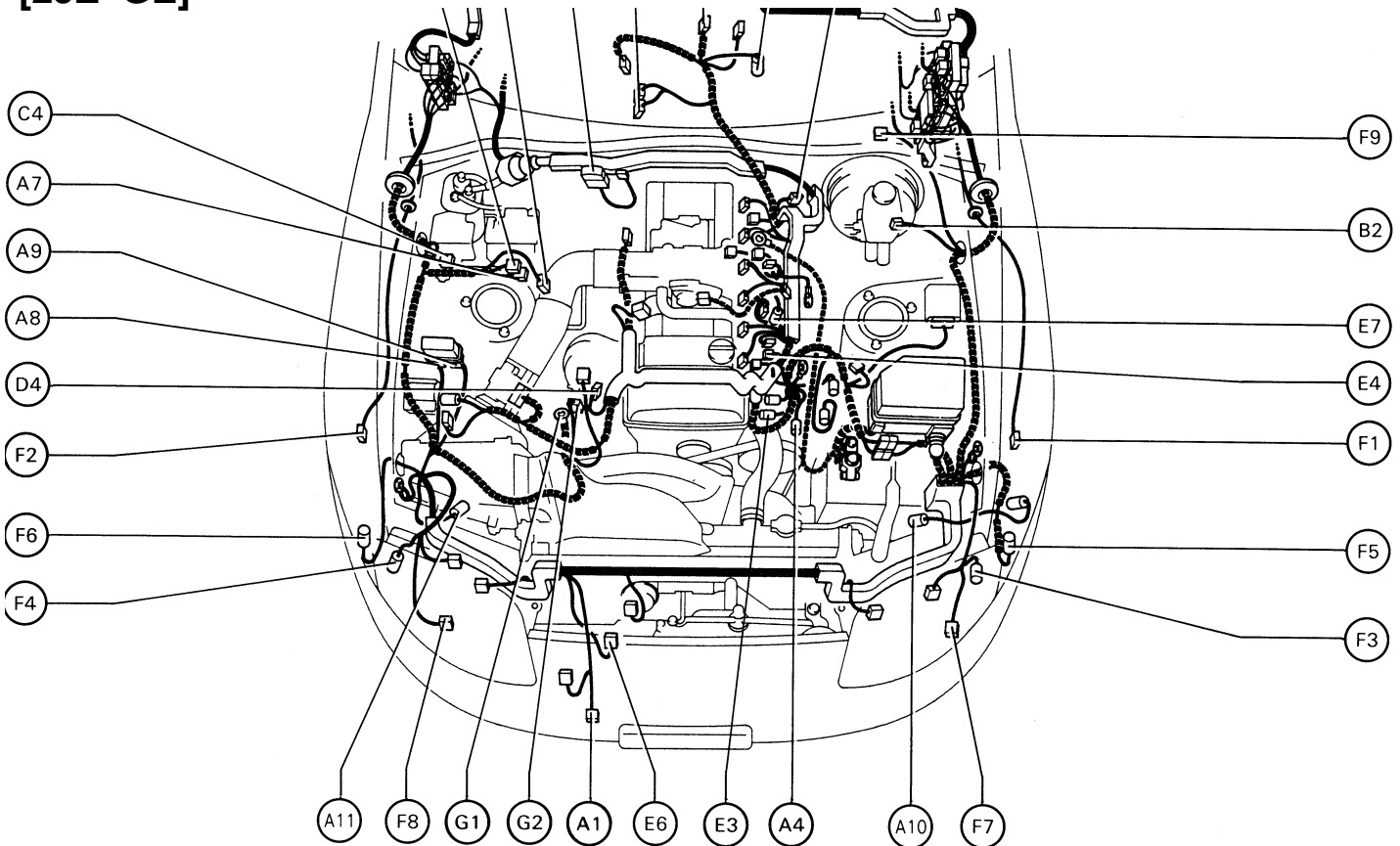
- V 2 VSV (for EGR)
- V 3 VSV (for EVAP)
- V 4 VSV (for Exhaust Bypass Valve)
- V 5 VSV (for Exhaust Gas Control Valve)
- V 6 VSV (for Fuel Pressure Up)
- V 7 VSV (for Intake Air Control Valve)
- V 8 VSV (for Waste Gate Valve)
- V 10 Vehicle Speed Sensor (Speed Sensor) No. 1 (for  
Combination Meter)
- V 11 Vehicle Speed Sensor (Speed Sensor) No. 2 (for  
Electronically Controlled Transmission)

- W 1 Washer Motor

# ELECTRICAL WIRING ROUTING

## Position of Parts in Engine Compartment

[2JZ-GE]

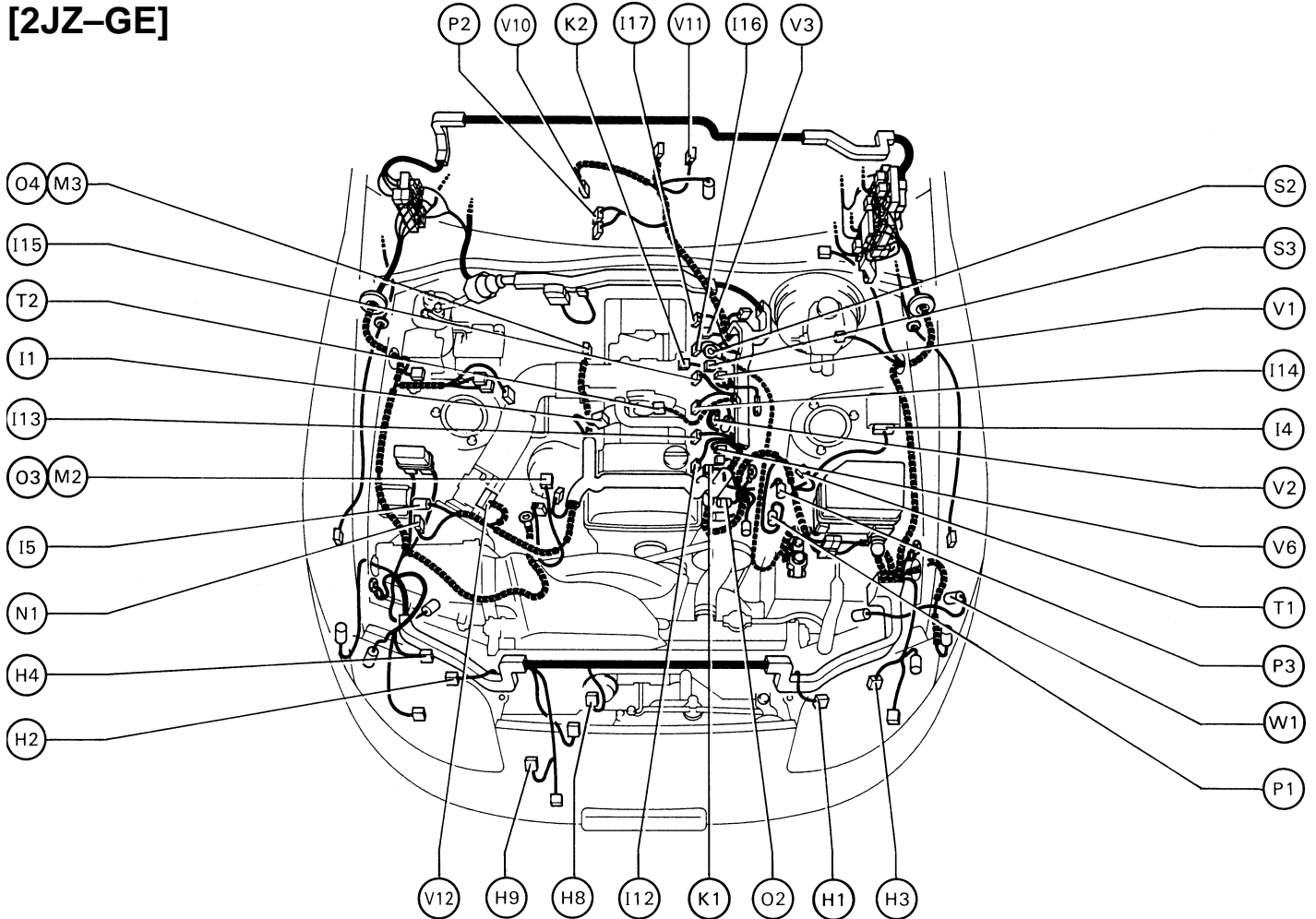


- A 1 A/C Ambient Temp. Sensor
- A 3 A/C Dual Pressure SW
- A 4 A/C Magnetic Clutch and Lock Sensor
- A 5 A/T Fluid Temp. Sensor
- A 6 ABS Actuator
- A 7 ABS Actuator
- A 8 ABS Relay
- A 9 ABS Relay
- A 10 ABS Speed Sensor Front LH
- A 11 ABS Speed Sensor Front RH
- B 1 Back-Up Light SW (for M/T)
- B 2 Brake Fluid Level Warning SW
- C 4 Cruise Control Actuator
- D 1 Data Link Connector 1 (Check Connector)
- D 4 Distributor
- E 1 EGR Gas Temp. Sensor

- E 2 Electronically Controlled Transmission Solenoid
- E 3 Engine Coolant Temp. Sensor (EFI Water Temp. Sensor)
- E 4 Engine Coolant Temp. Sender (Water Temp. Sender)
- E 6 Engine Hood Courtesy SW
- E 7 Engine Oil Level Sensor
- F 1 Front Airbag Sensor LH
- F 2 Front Airbag Sensor RH
- F 3 Front Fog Light and Parking Light LH
- F 4 Front Fog Light and Parking Light RH
- F 5 Front Side Marker Light LH
- F 6 Front Side Marker Light RH
- F 7 Front Turn Signal Light LH
- F 8 Front Turn Signal Light RH
- F 9 Front Wiper Motor
- G 1 Generator (Alternator)
- G 2 Generator (Alternator)

## Position of Parts in Engine Compartment

**[2JZ-GE]**



- H 1 Headlight Hi LH
- H 2 Headlight Hi RH
- H 3 Headlight Lo LH
- H 4 Headlight Lo RH
- H 8 Horn LH
- H 9 Horn RH

- I 1 Idle Air Control Valve (ISC Valve)
- I 4 Igniter
- I 5 Ignition Coil
- I 12 Injector No. 1
- I 13 Injector No. 2
- I 14 Injector No. 3
- I 15 Injector No. 4
- I 16 Injector No. 5
- I 17 Injector No. 6

- K 1 Knock Sensor (on Front Side)
- K 2 Knock Sensor (on Rear Side)

- M 2 Main Heated Oxygen Sensor (for California on Front Side)
- M 3 Main Heated Oxygen Sensor (for California on Rear Side)

- N 1 Noise Filter

- O 2 Oil Pressure SW
- O 3 Oxygen Sensor (Except California on Front Side)
- O 4 Oxygen Sensor (Except California on Rear Side)

- P 1 PPS Solenoid
- P 2 Park/Neutral Position SW (Neutral Start SW), Back-Up Light SW and A/T Indicator Light SW (for A/T)
- P 3 Power Steering Pressure SW

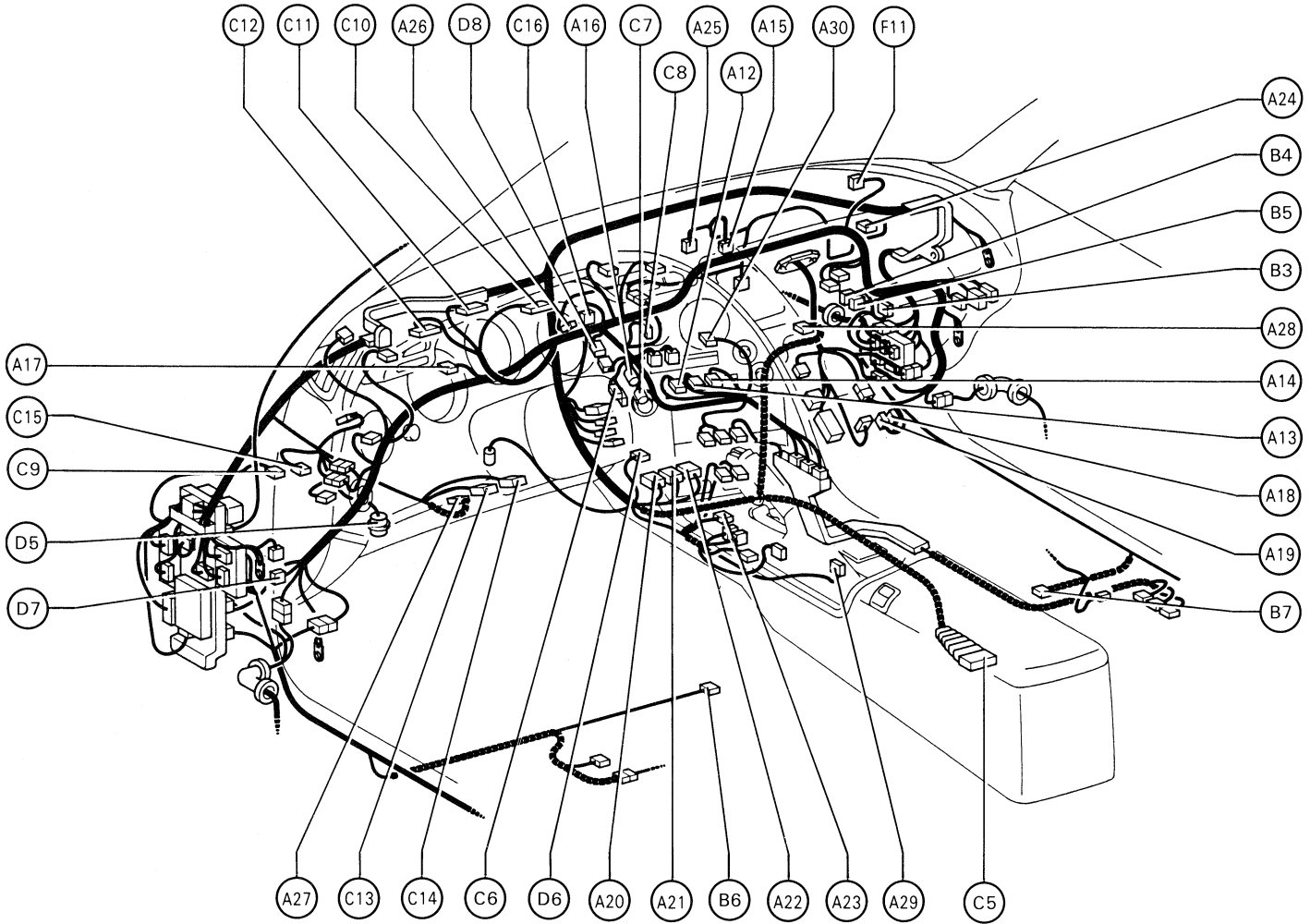
- S 2 Starter
- S 3 Starter
- T 1 Theft Deterrent Horn
- T 2 Throttle Position Sensor

- V 1 VSV (for ACIS)
- V 2 VSV (for EGR)
- V 3 VSV (for EVAP)
- V 6 VSV (for Fuel Pressure Up)
- V 10 Vehicle Speed Sensor (Speed Sensor) No. 1 (for Combination Meter)
- V 11 Vehicle Speed Sensor (Speed Sensor) No. 2 (for Electronically Controlled Transmission)
- V 12 Volume Air Flow (Air Flow Meter)

- W 1 Washer Motor

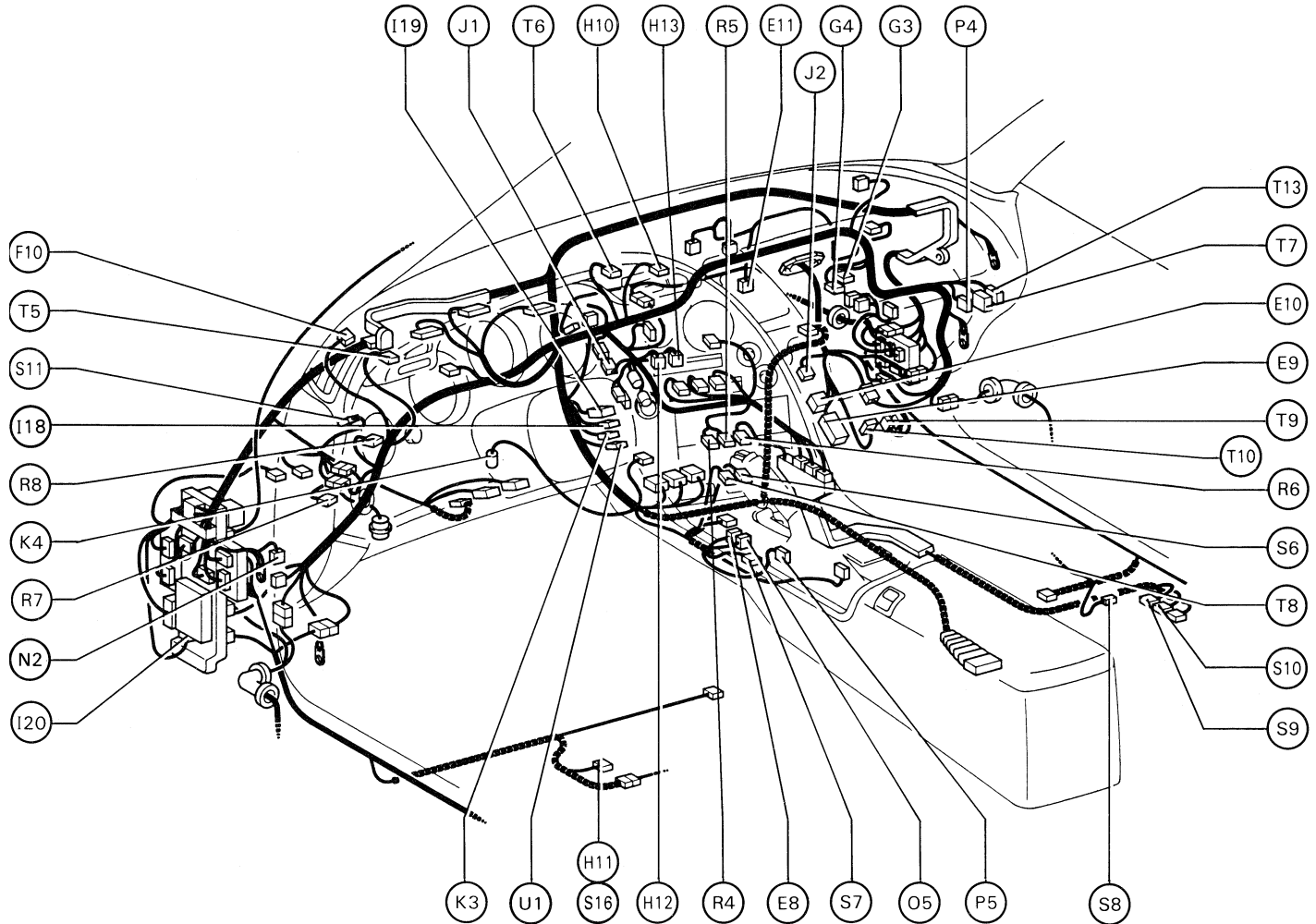
# ELECTRICAL WIRING ROUTING

## Position of Parts in Instrument Panel



- |      |  |      |                                    |
|------|--|------|------------------------------------|
| A 12 | A/C Amplifier                                  | B 5  | Blower Motor Control Relay         |
| A 13 | A/C Amplifier                                  | B 6  | Buckle SW LH                       |
| A 14 | A/C Amplifier                                  | B 7  | Buckle SW RH                       |
| A 15 | A/C Evaporator Temp. Sensor                    | C 5  | Center Airbag Sensor Assembly      |
| A 16 | A/C Room Temp. Sensor                          | C 6  | Cigarette Lighter                  |
| A 17 | A/C Solar Sensor                               | C 7  | Cigarette Lighter Illumination     |
| A 18 | ABS ECU  | C 8  | Clock                              |
| A 19 | ABS ECU  | C 9  | Clutch Start SW                    |
| A 20 | ABS and Traction ECU                           | C 10 | Combination Meter                  |
| A 21 | ABS and Traction ECU                           | C 11 | Combination Meter                  |
| A 22 | ABS and Traction ECU                           | C 12 | Combination Meter                  |
| A 23 | ABS Lateral Acceleration Sensor                | C 13 | Combination SW                     |
| A 24 | Air Inlet Control Servo Motor                  | C 14 | Combination SW                     |
| A 25 | Air Mix Control Servo Motor                    | C 15 | Cruise Control Clutch SW           |
| A 26 | Air Vent Mode Control Servo Motor              | C 16 | Cruise Control ECU                 |
| A 27 | Airbag Squib (Steering Wheel Pad)              | D 5  | Data Link Connector 2 (TDCL)       |
| A 28 | Airbag Squib (Front Passenger Airbag Assembly) | D 6  | Daytime Running Light Relay (Main) |
| A 29 | Ashtray Illumination                           | D 7  | Diode (for Interior Light)         |
| A 30 | Auto Antenna Control Relay                     | D 8  | Diode (for Idle-Up)                |
| B 3  | Blower Motor                                   |      |                                    |
| B 4  | Blower Motor Control Relay                     |      |                                    |

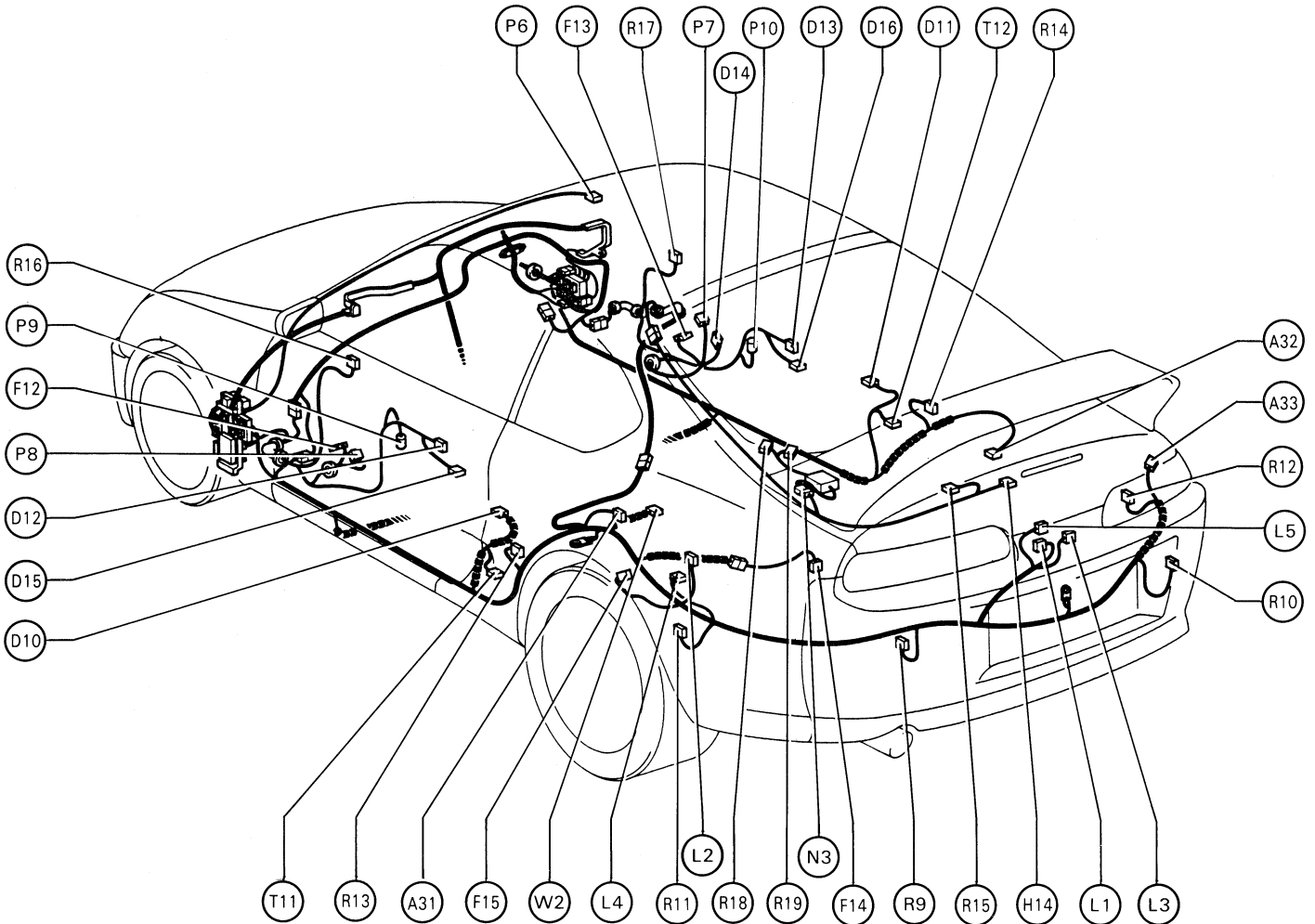
## Position of Parts in Instrument Panel



- |  |  |
|--|--|
| <p>E 8 Electronically Controlled Transmission Pattern Select SW</p> <p>E 9 Engine Control Module (Engine and Electronically Controlled Transmission ECU)</p> <p>E 10 Engine Control Module (Engine and Electronically Controlled Transmission ECU)</p> <p>E 11 Engine Coolant Temp. Sensor (Water Temp. Sensor) (for A/C System)</p> <p>F 10 Front Tweeter (Speaker) LH</p> <p>F 11 Front Tweeter (Speaker) RH</p> <p>G 3 Glove Box Light</p> <p>G 4 Glove Box Light SW</p> <p>H 10 Hazard SW</p> <p>H 11 Heated Oxygen Sensor (Sub)</p> <p>H 12 Heater Control SW</p> <p>H 13 Heater Control SW</p> <p>I 18 Ignition Key Cylinder Light</p> <p>I 19 Ignition SW</p> <p>I 20 Integration Relay</p> <p>J 1 Junction Connector</p> <p>J 2 Junction Connector</p> <p>K 3 Key Interlock Solenoid</p> <p>K 4 Kick Down SW</p> <p>N 2 Noise Filter</p> | <p>O 5 O/D Main SW and A/T Indicator Light (for Shift Lever)</p> <p>P 4 PPS ECU</p> <p>P 5 Parking Brake SW</p> <p>R 4 Radio and Player (w/o Stereo Power Amplifier)</p> <p>R 5 Radio and Player (w/o Stereo Power Amplifier)</p> <p>R 6 Radio and Player (w/ Stereo Power Amplifier)</p> <p>R 7 Remote Control Mirror SW</p> <p>R 8 Rheostat</p> <p>S 6 Seat Heater SW</p> <p>S 7 Shift Lock ECU</p> <p>S 8 Stereo Power Amplifier</p> <p>S 9 Stereo Power Amplifier</p> <p>S 10 Stereo Power Amplifier</p> <p>S 11 Stop Light SW</p> <p>S 16 Sub Heated Oxygen Sensor (for California)</p> <p>T 5 Telltale Light LH</p> <p>T 6 Telltale Light RH</p> <p>T 7 Theft Deterrent ECU</p> <p>T 8 TRAC Off SW</p> <p>T 9 Traction ECU</p> <p>T 10 Traction ECU</p> <p>T 13 Theft Deterrent ECU</p> <p>U 1 Unlock Warning SW</p> |
|--|--|

# ELECTRICAL WIRING ROUTING

## Position of Parts in Body



A 31 ABS Speed Sensor Rear LH  
 A 32 ABS Speed Sensor Rear RH  
 A 33 Auto Antenna Motor

D 10 Door Courtesy SW LH  
 D 11 Door Courtesy SW RH  
 D 12 Door Key Lock and Unlock SW LH  
 D 13 Door Key Lock and Unlock SW RH  
 D 14 Door Lock Control SW RH  
 D 15 Door Lock Motor and Door Unlock Detection SW LH  
 D 16 Door Lock Motor and Door Unlock Detection SW RH

F 12 Front Door Speaker LH  
 F 13 Front Door Speaker RH  
 F 14 Fuel Pump and Sender  
 F 15 Fuel Pump ECU

H 14 High Mounted Stop Light

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

N 3 Noise Filter

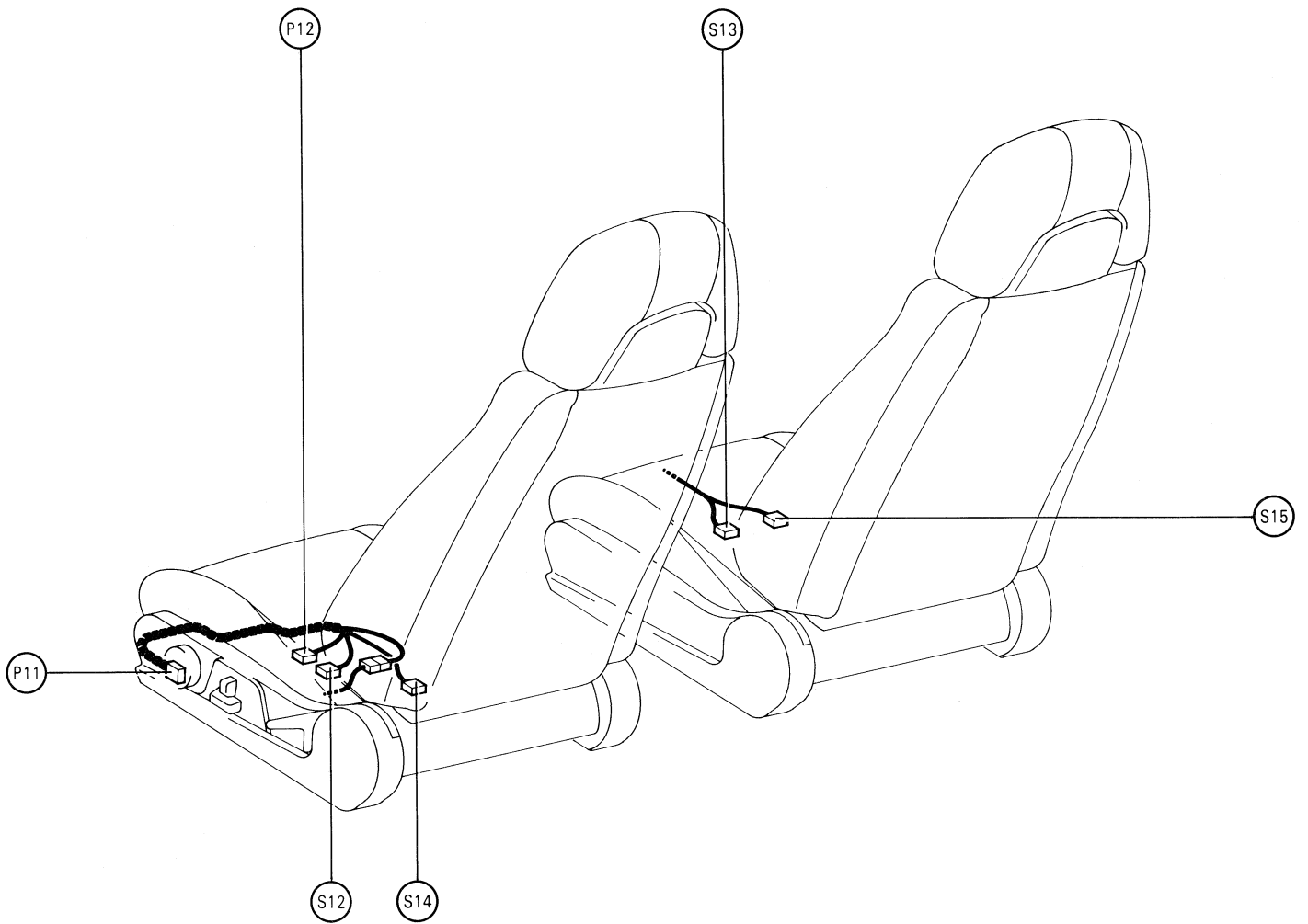
P 6 Personal Light  
 P 7 Power Window Control SW RH  
 P 8 Power Window Master SW and Door Lock Control SW LH  
 P 9 Power Window Motor LH  
 P 10 Power Window Motor RH

R 9 Rear Combination Light LH  
 R 10 Rear Combination Light RH  
 R 11 Rear Side Marker Light LH  
 R 12 Rear Side Marker Light RH  
 R 13 Rear Speaker LH  
 R 14 Rear Speaker RH  
 R 15 Rear Wiper Motor and Relay  
 R 16 Remote Control Mirror and Mirror Heater LH  
 R 17 Remote Control Mirror and Mirror Heater RH  
 R 18 Rear Window Defogger (+)  
 R 19 Rear Window Defogger (-)

T 11 Tension Reducer Solenoid LH  
 T 12 Tension Reducer Solenoid RH

W 2 Woofer (Speaker)

## Position of Parts in Seat



- P 11 Power Seat Control SW (for Driver's Seat)
- P 12 Power Seat Motor (for Driver's Seat Slide Control)
- S 12 Seat Heater (for Driver's Seat)

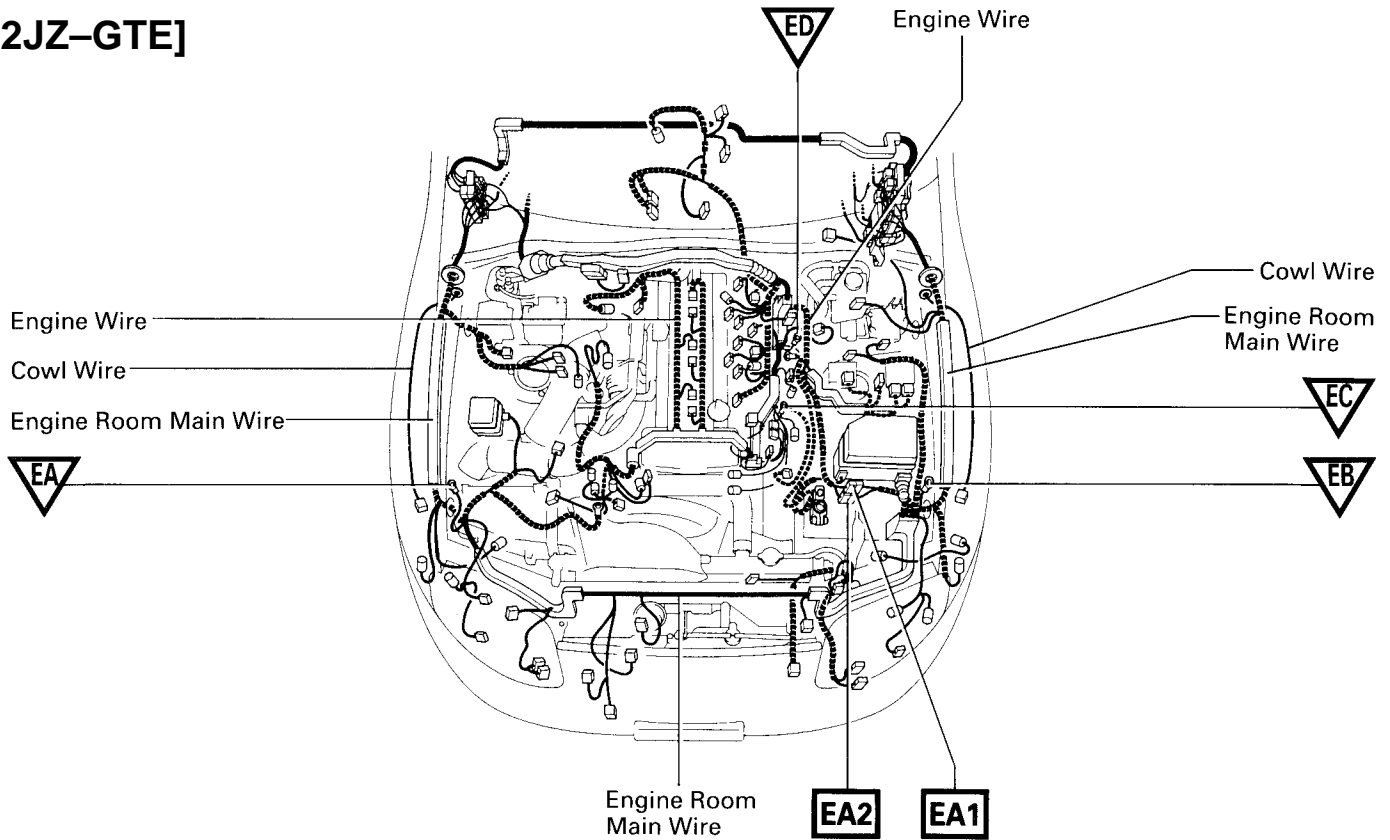
- S 13 Seat Heater (for Passenger's Seat)
- S 14 Seat Heater Relay (for Driver's Seat)
- S 15 Seat Heater Relay (for Passenger's Seat)



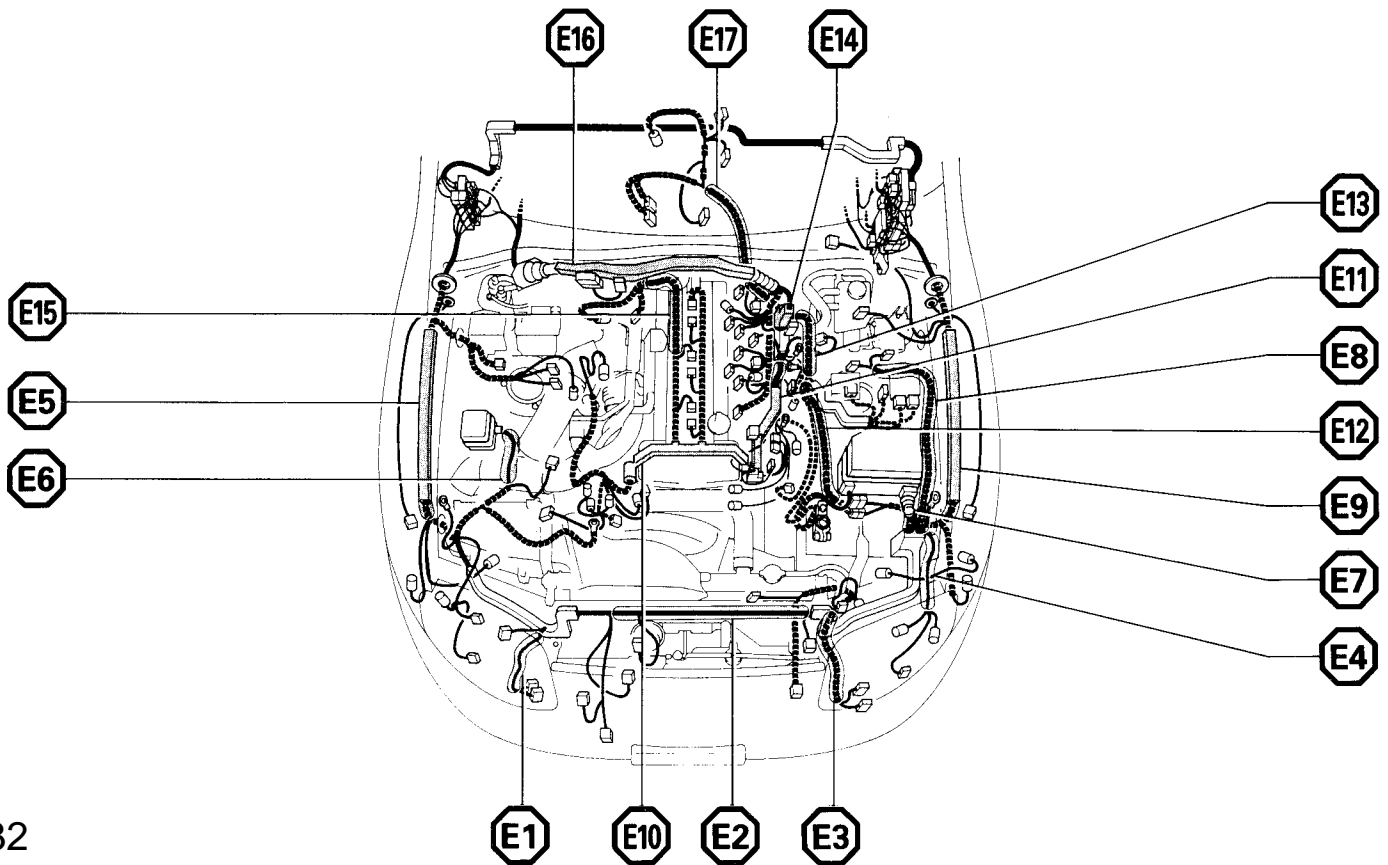
# ELECTRICAL WIRING ROUTING

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

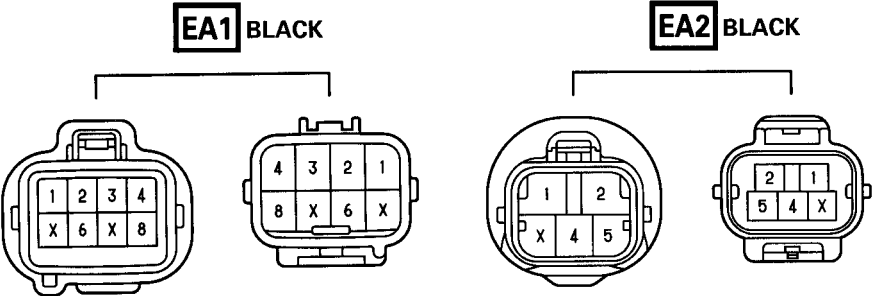
[2JZ-GTE]



- : Location of Splice Points



# Connector Joining Wire Harness and Wire Harness



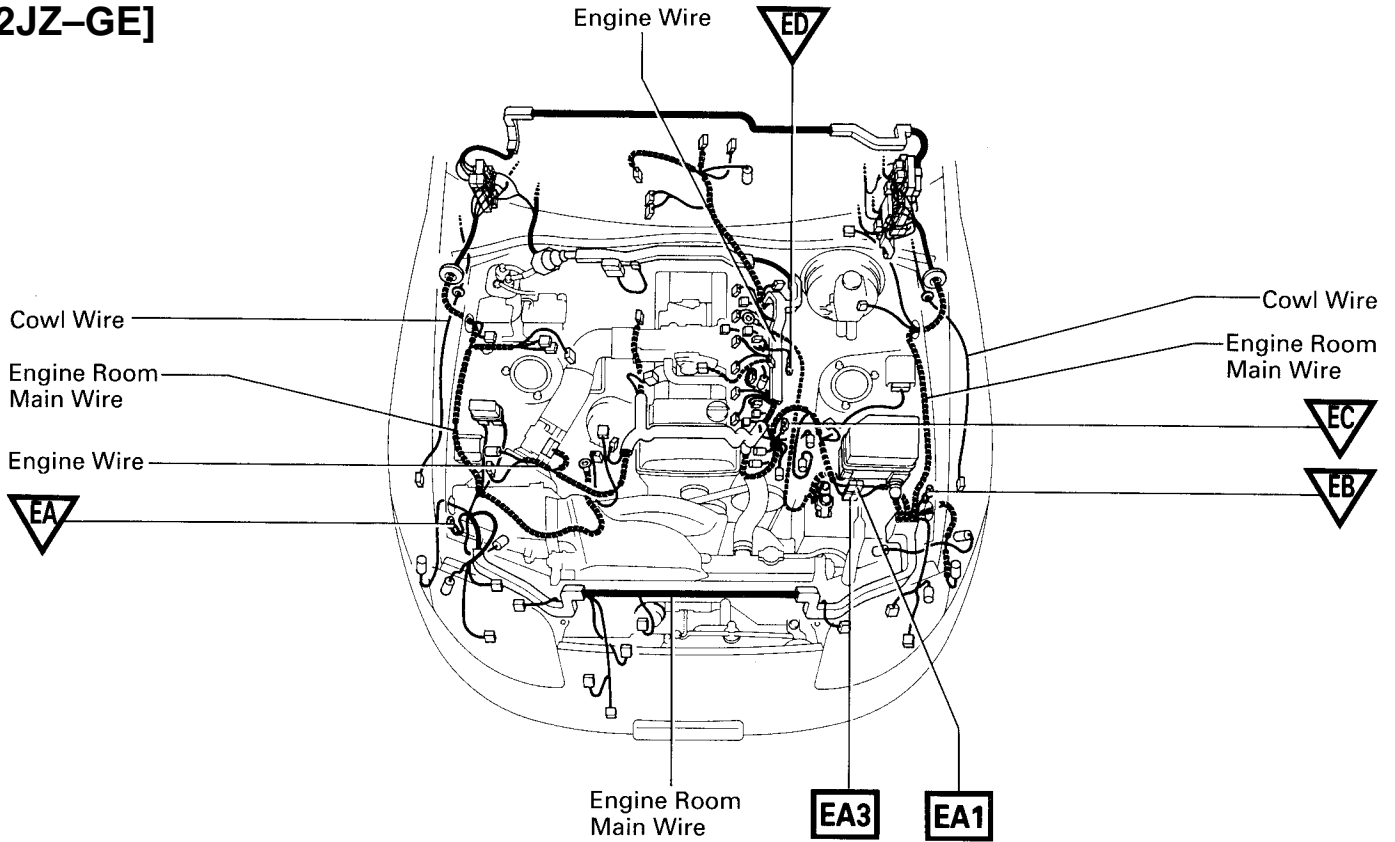
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA2	

# ELECTRICAL WIRING ROUTING

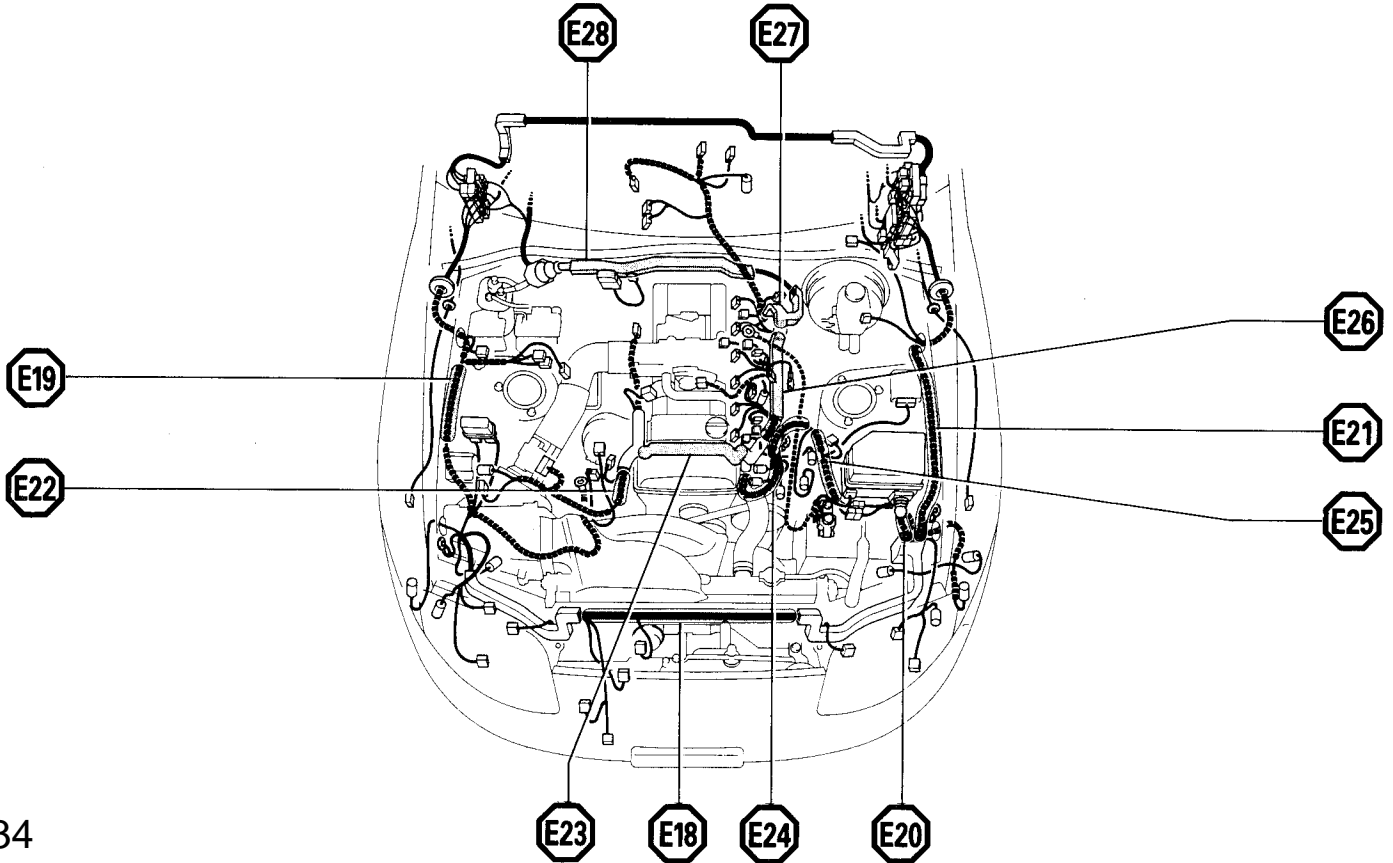
□ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

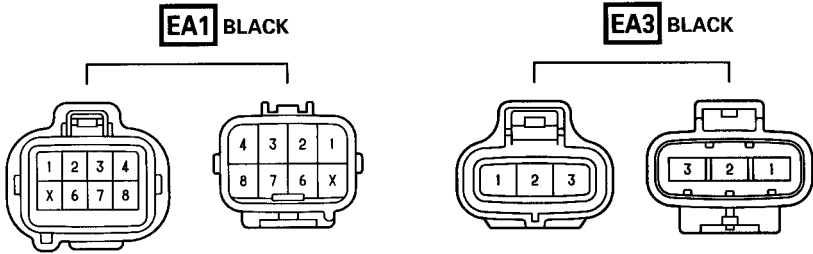
[2JZ-GE]



○ : Location of Splice Points



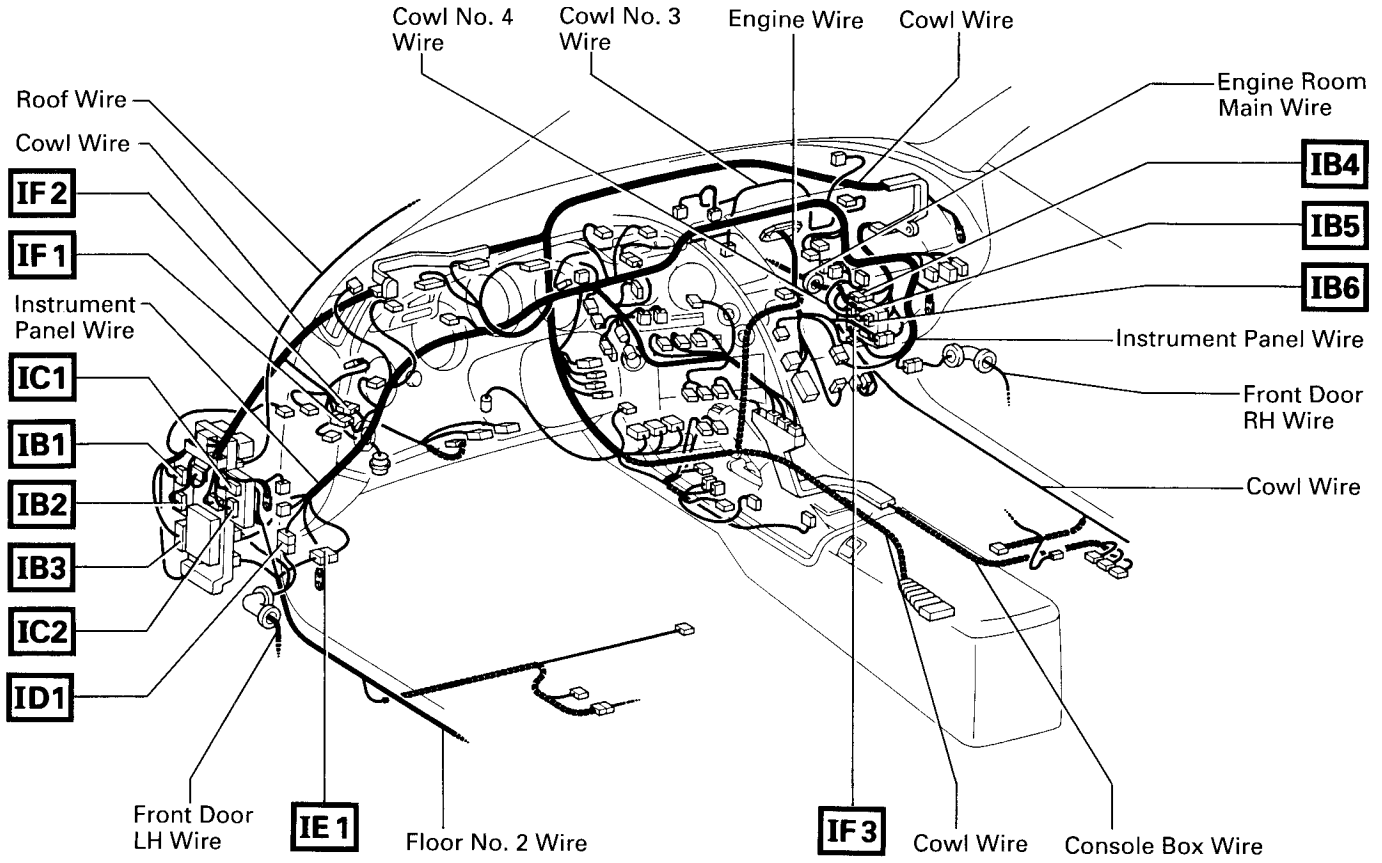
# Connector Joining Wire Harness and Wire Harness



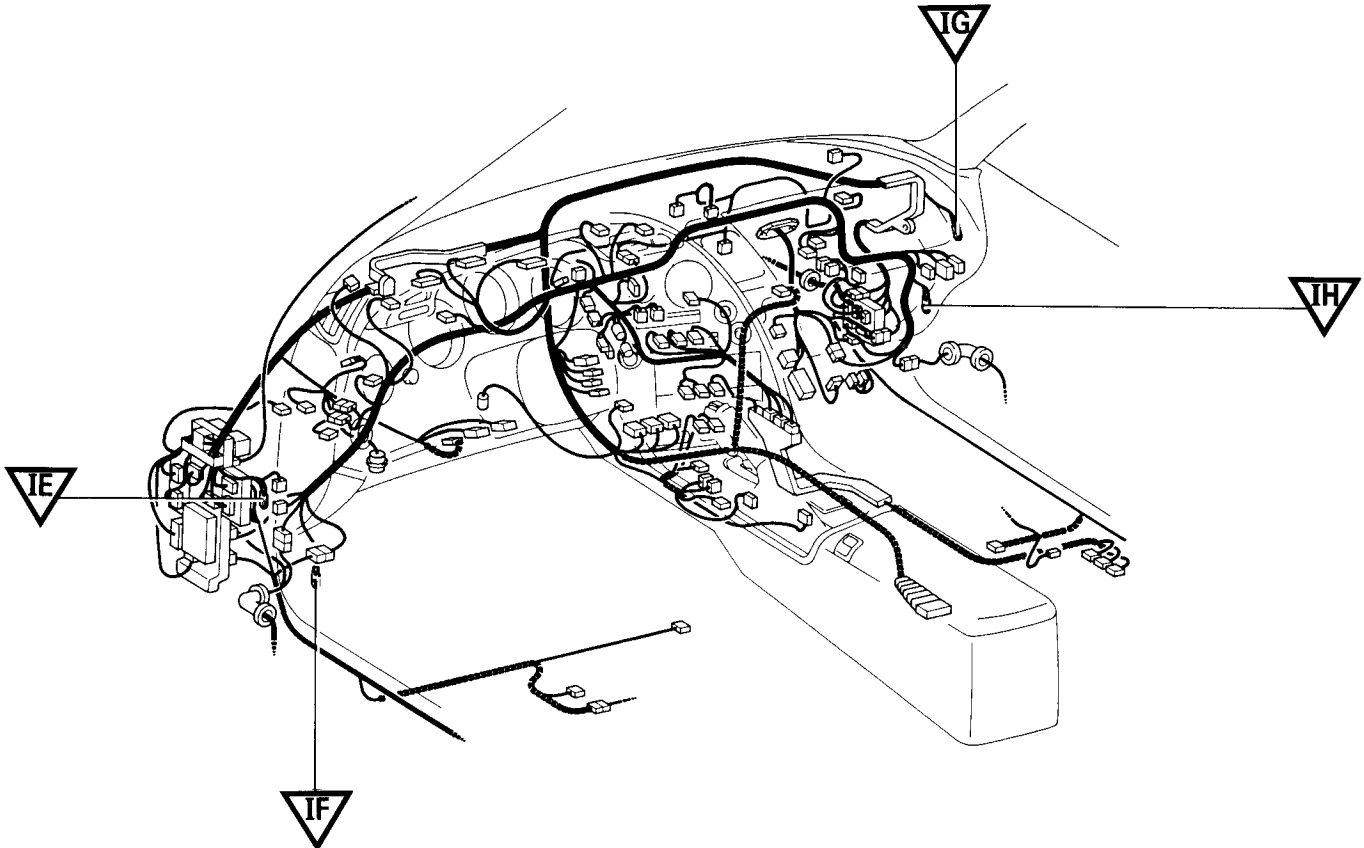
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA3	

# ELECTRICAL WIRING ROUTING

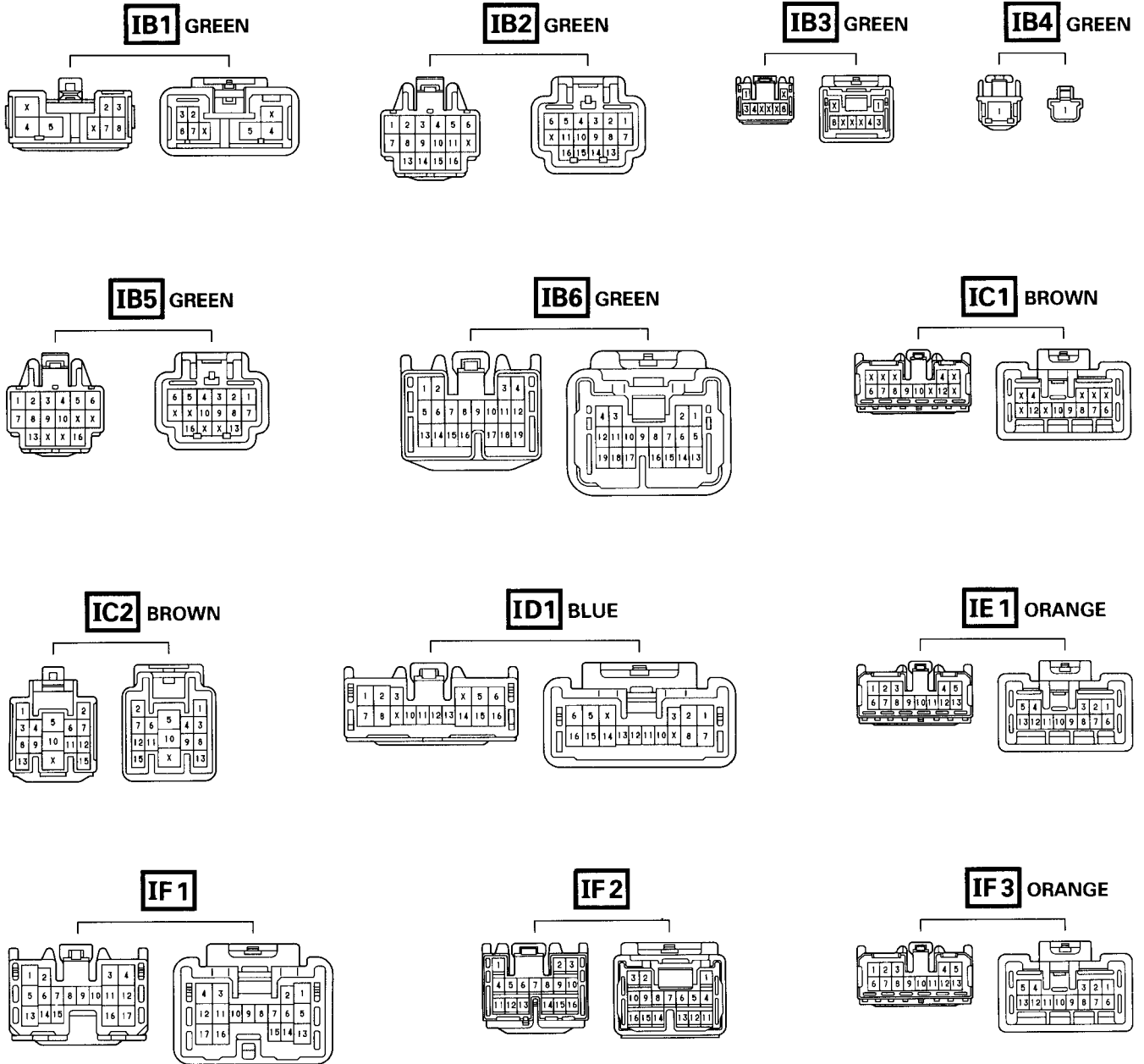
□ : Location of Connector Joining Wire Harness and Wire Harness



▽ : Location of Ground Points



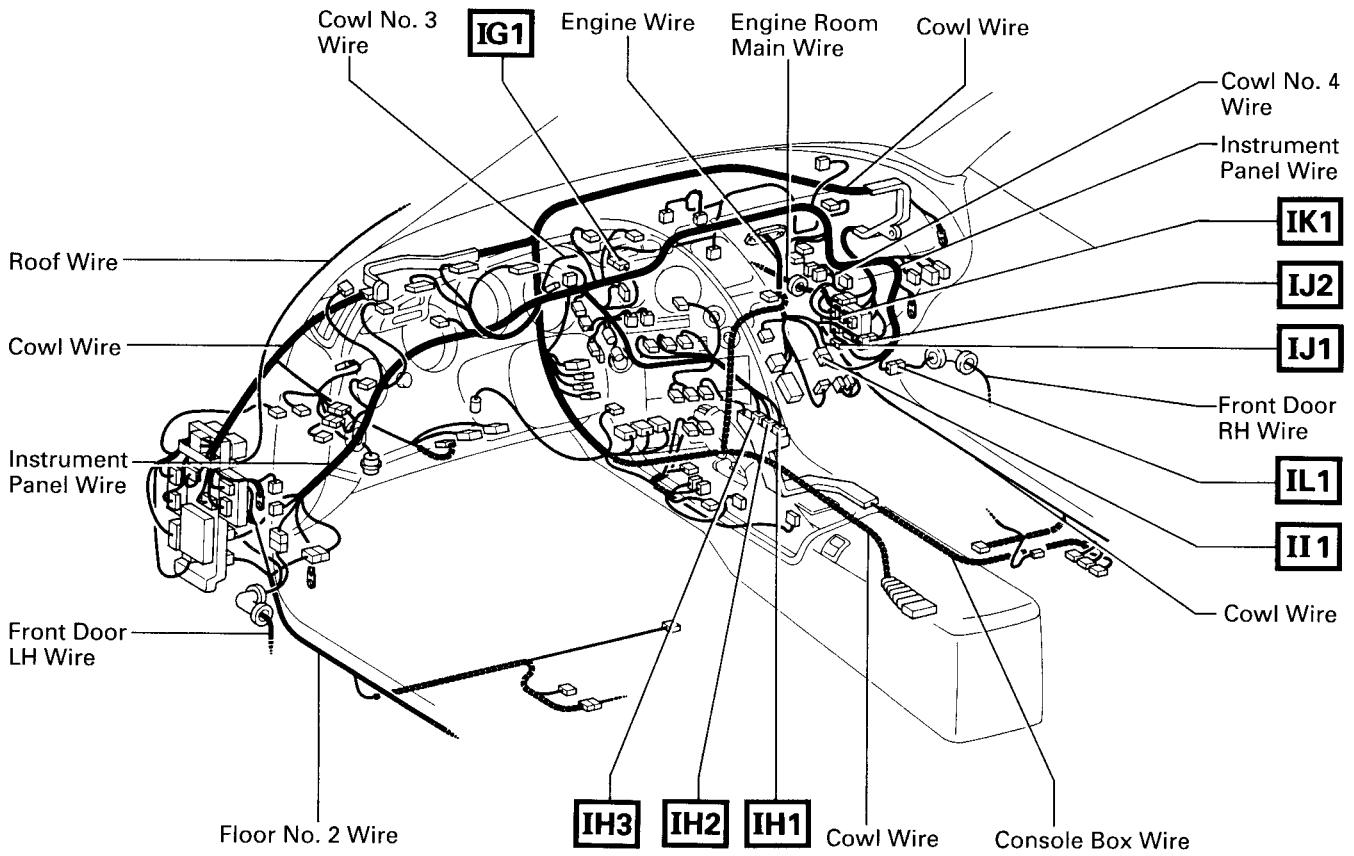
# Connector Joining Wire Harness and Wire Harness



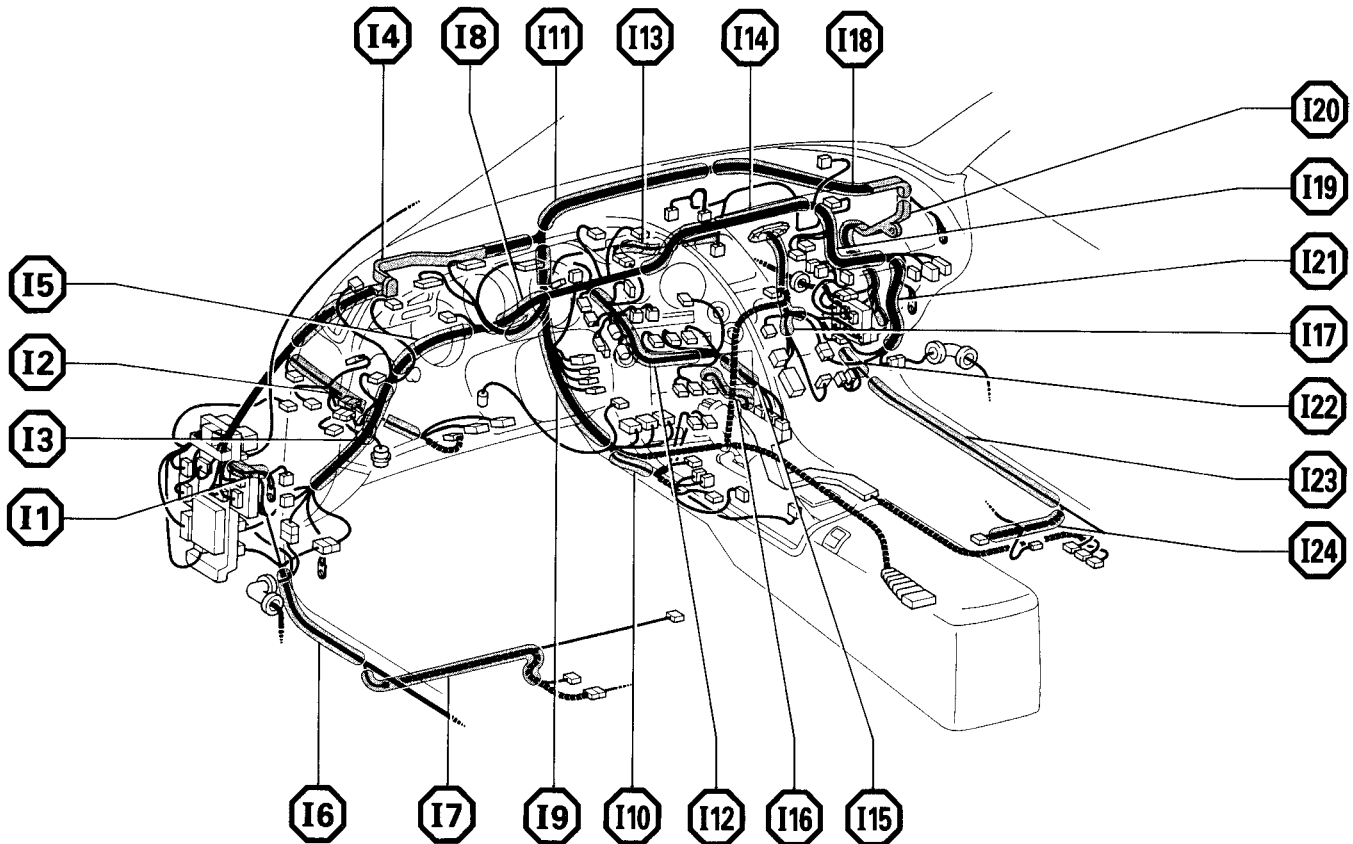
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB2	
IB3	
IB4	
IB5	
IB6	
IC1	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IC2	
ID1	FRONT DOOR LH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
IE1	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF1	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF2	
IF3	

# ELECTRICAL WIRING ROUTING

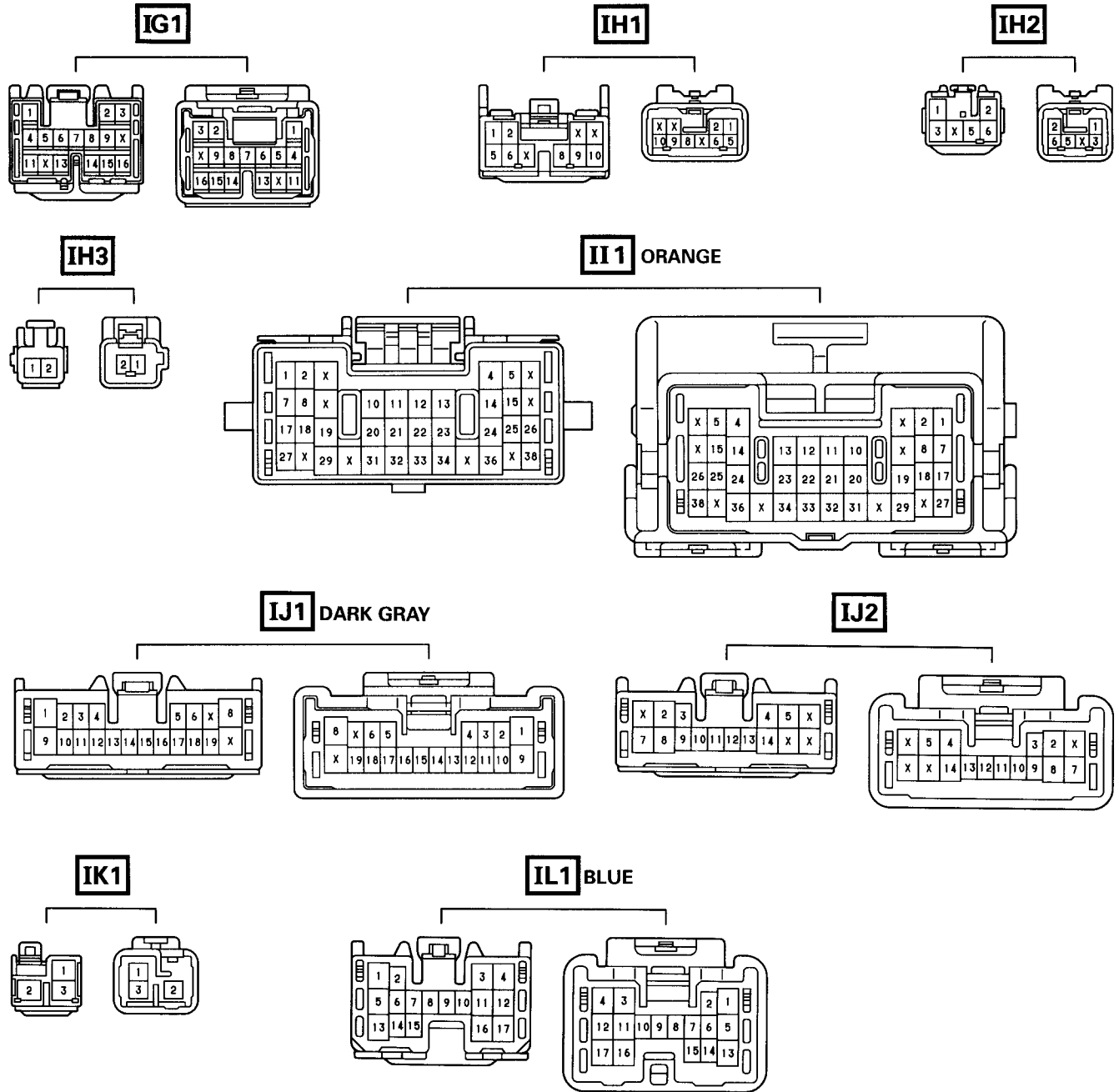
□ : Location of Connector Joining Wire Harness and Wire Harness



○ : Location of Splice Points



# Connector Joining Wire Harness and Wire Harness

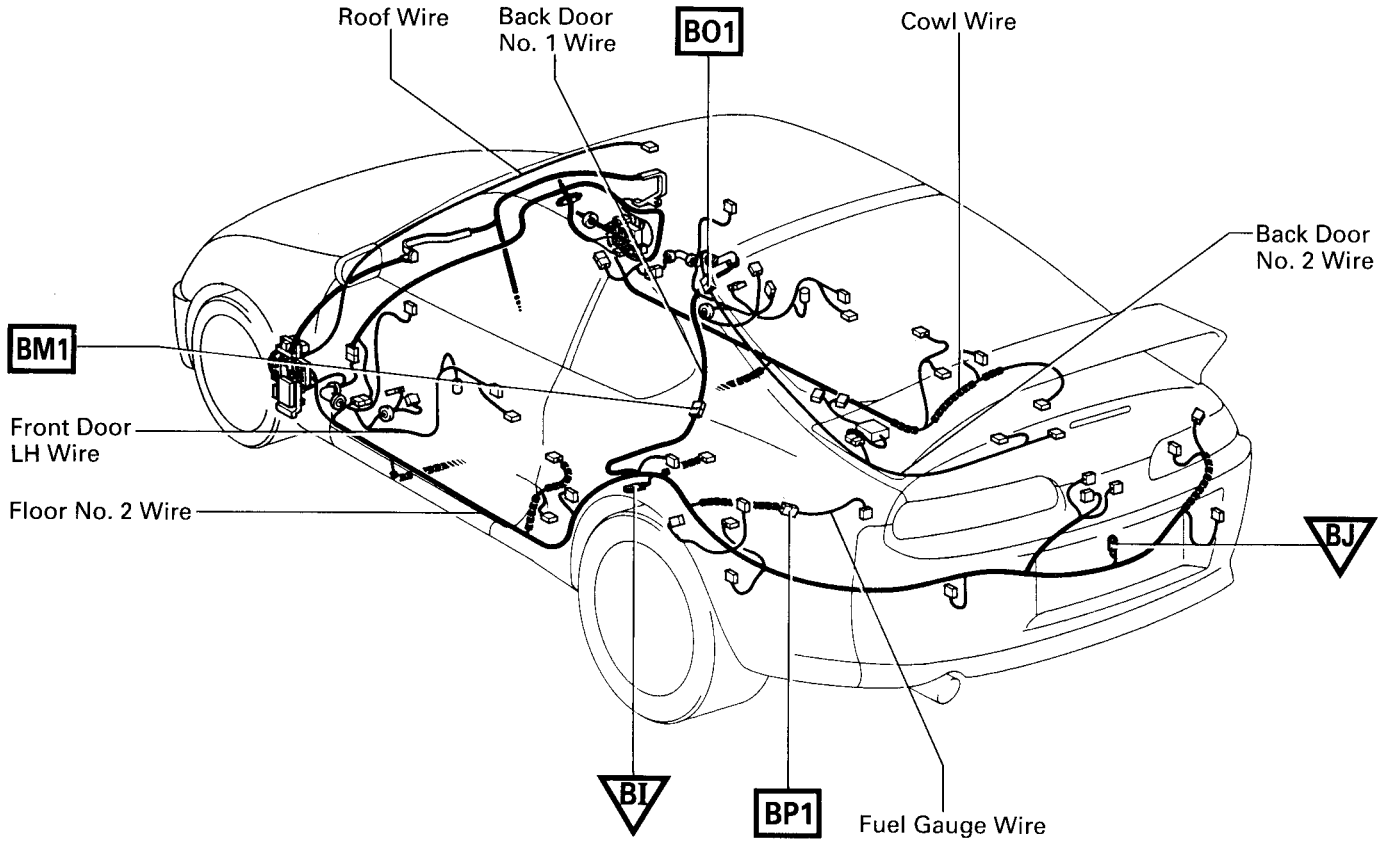


CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IG1	INSTRUMENT PANEL WIRE AND COWL NO. 3 WIRE (BEHIND HEATER CONTROL SW)
IH1	INSTRUMENT PANEL WIRE AND CONSOLE BOX WIRE (UNDER THE INSTRUMENT PANEL BRACE RH)
IH2	
IH3	
II1	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2	
IK1	COWL NO. 4 WIRE AND COWL WIRE (RIGHT KICK PANEL)
IL1	FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

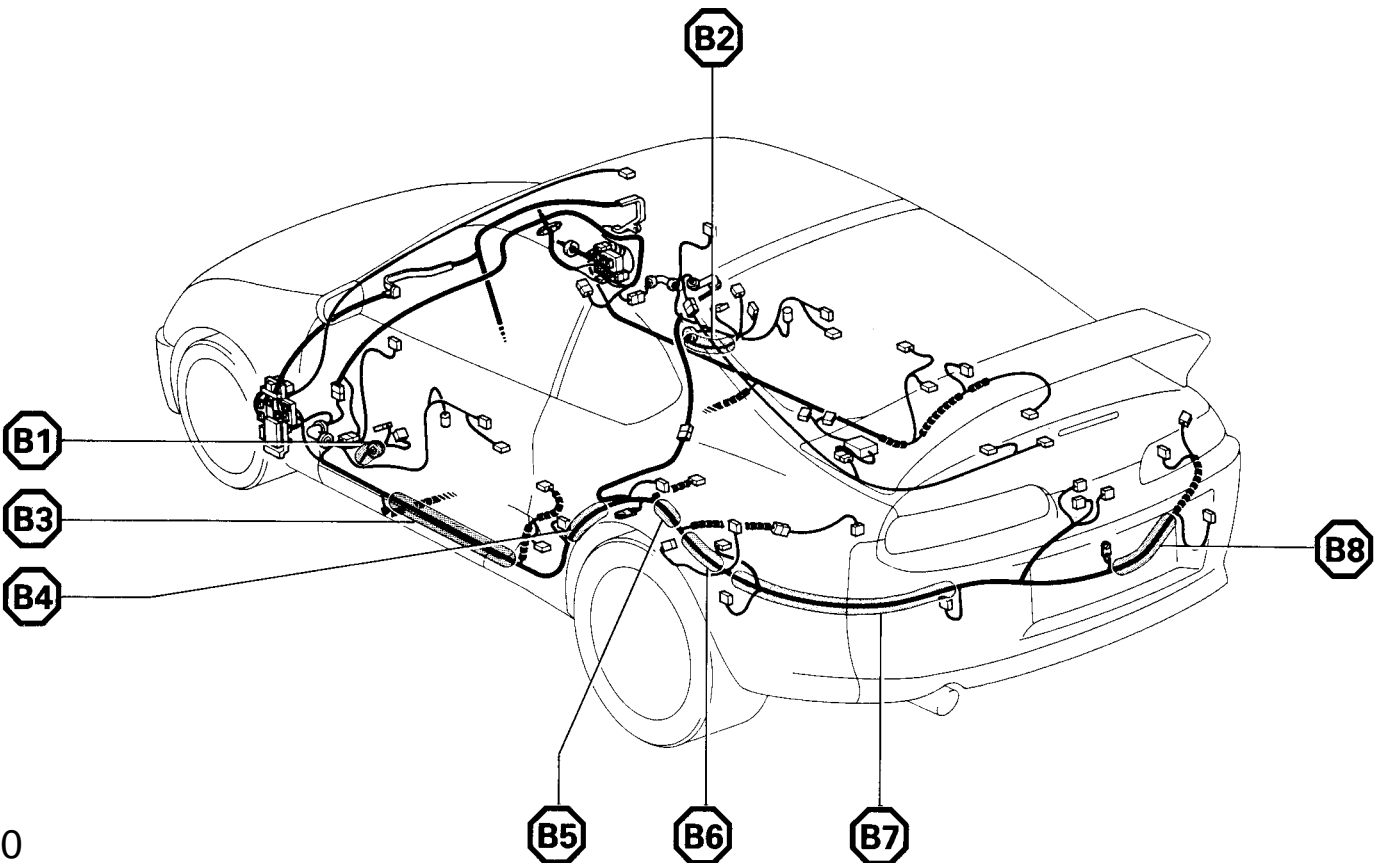


# ELECTRICAL WIRING ROUTING

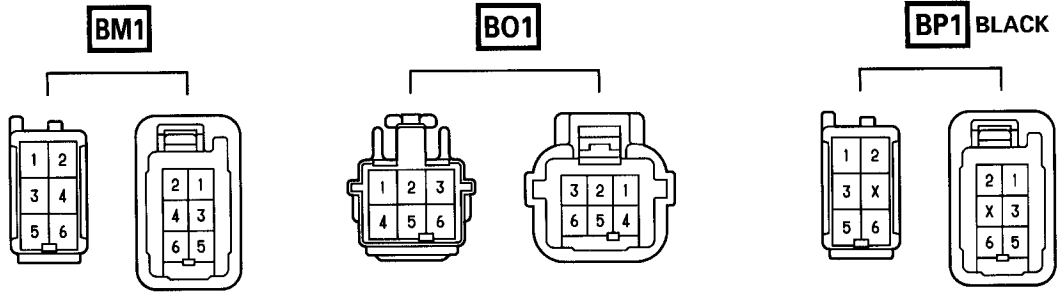
- : Location of Connector Joining Wire Harness and Wire Harness
- ▽ : Location of Ground Points



- : Location of Splice Points



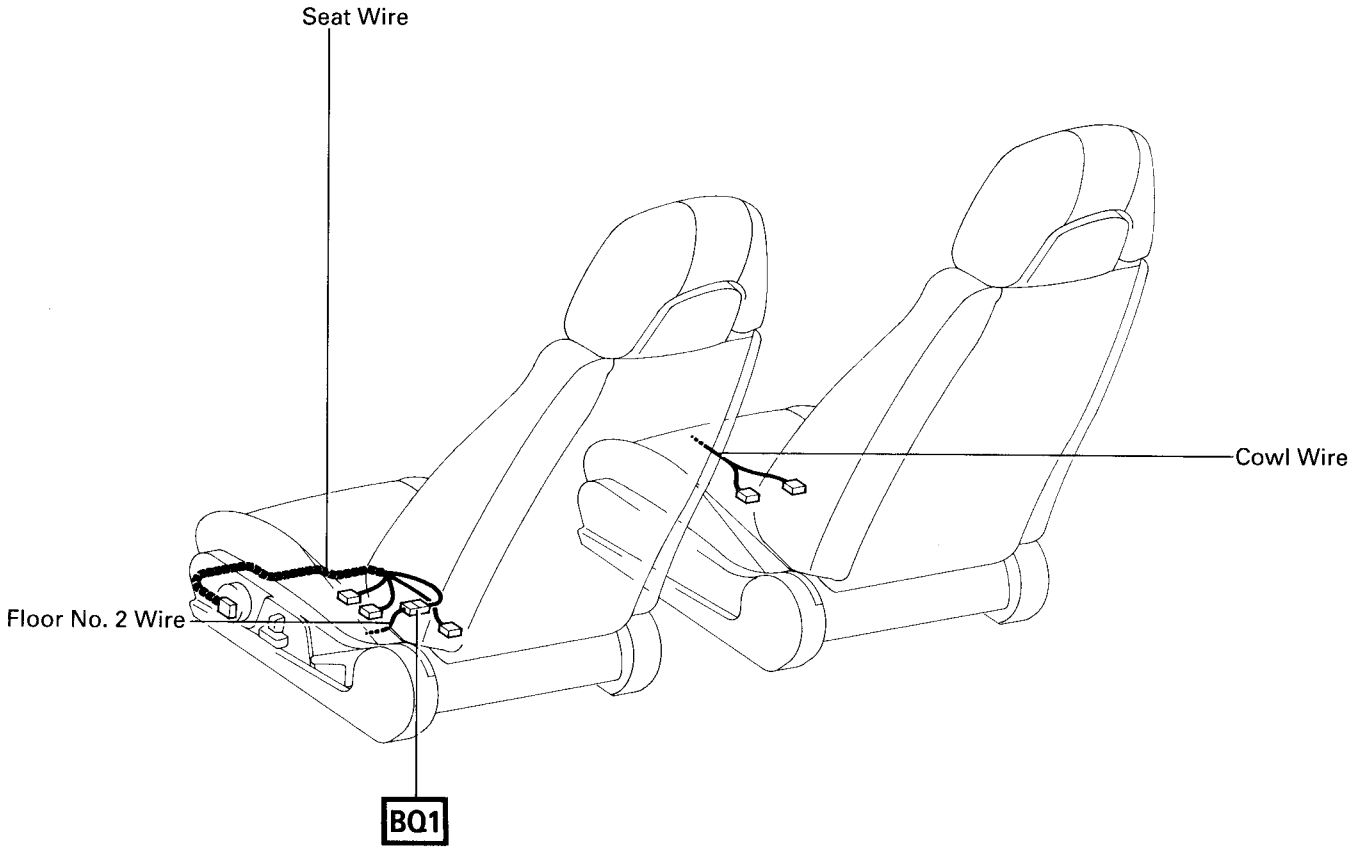
## Connector Joining Wire Harness and Wire Harness



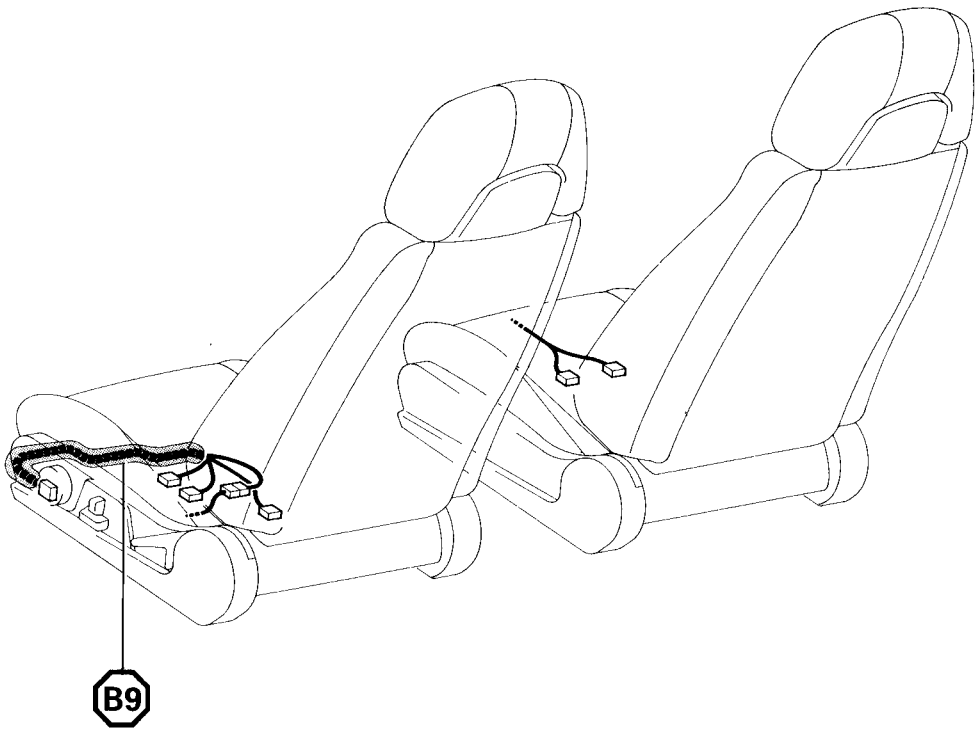
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>BM1</b>	BACK DOOR NO. 1 WIRE AND FLOOR NO. 2 WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
<b>B01</b>	BACK DOOR NO. 2 WIRE AND BACK DOOR NO. 1 WIRE (BACK DOOR UPPER LEFT)
<b>BP1</b>	FUEL GAUGE WIRE AND FLOOR NO. 2 WIRE (LUGGAGE ROOM FRONT LH)

# ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness

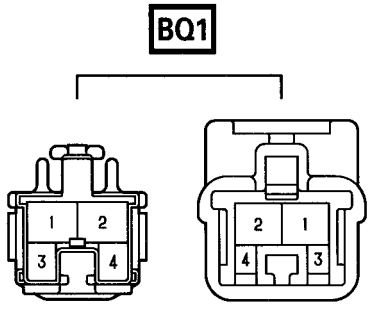


○ : Location of Splice Points



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# Connector Joining Wire Harness and Wire Harness

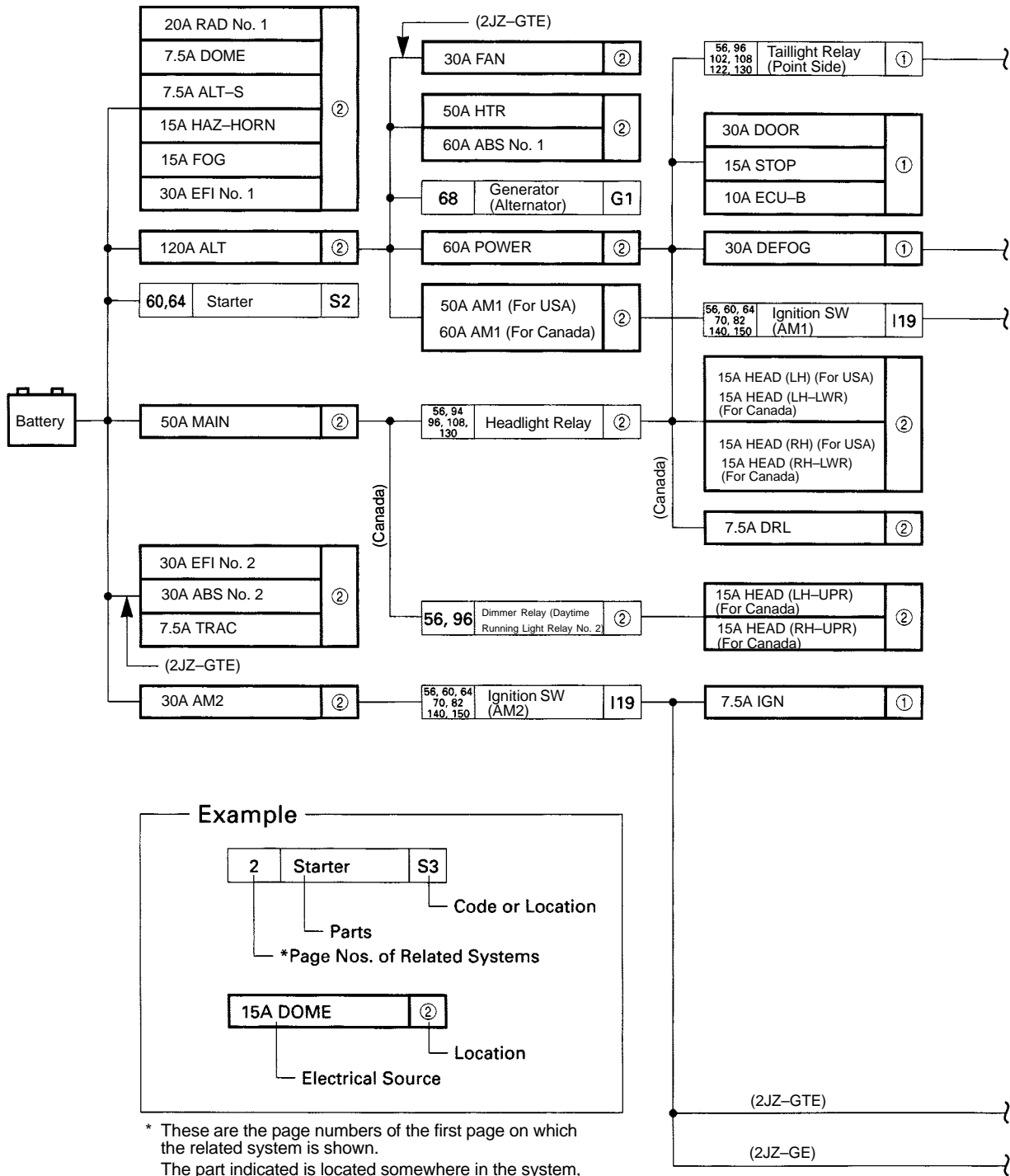


CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>BQ1</b>	FLOOR NO. 2 WIRE AND SEAT WIRE (UNDER THE FRONT LH SEAT)

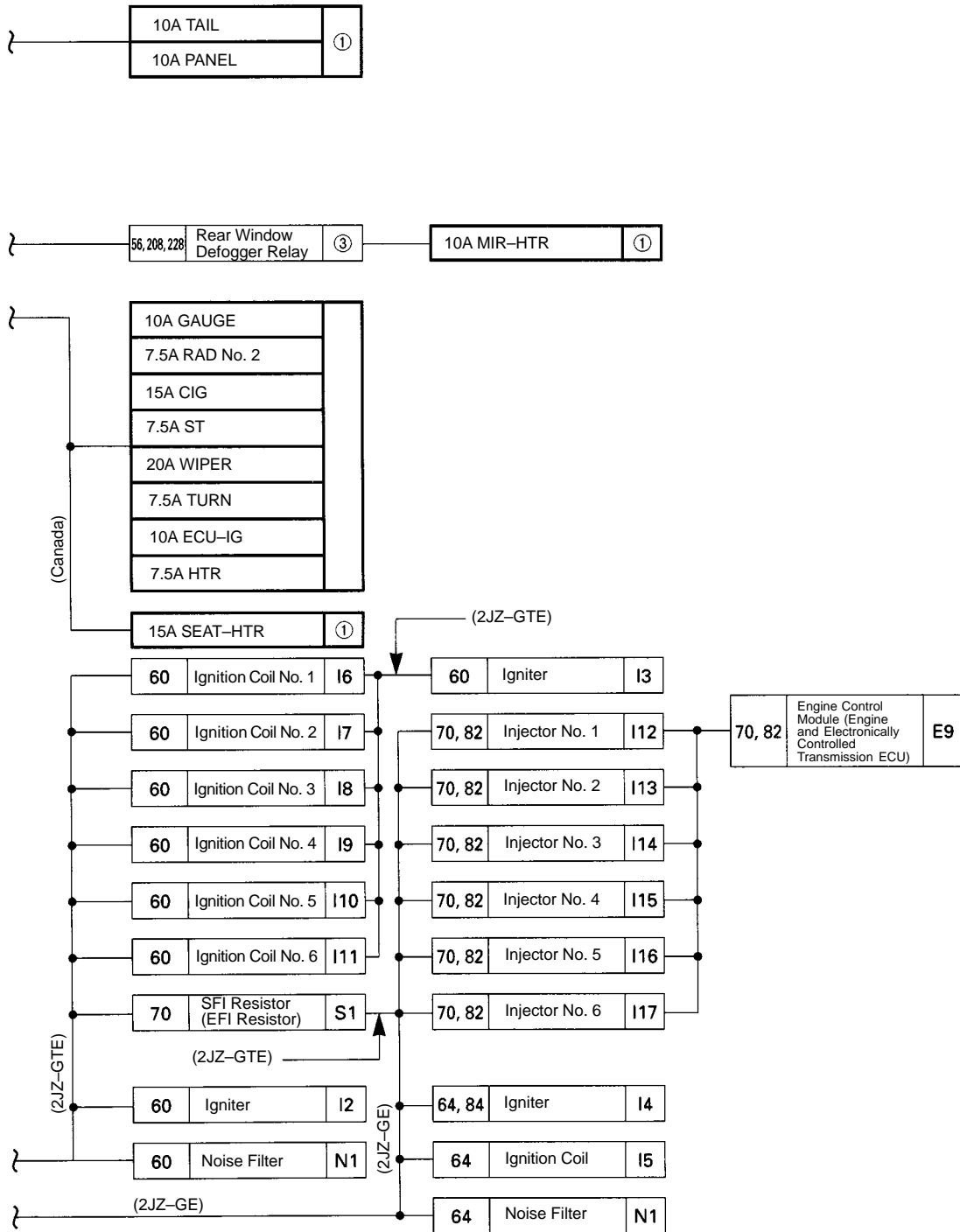
# POWER SOURCE (Current Flow Chart)

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.

The next page and following pages show the parts to which each electrical source outputs current.



[LOCATION] (1) : J/B No. 1 (See page 20) (2) : R/B No. 2 (See page 22) (3) : R/B No. 4 (See page 23)



(4) : R/B No. 5 (See page 23)

# POWER SOURCE (Current Flow Chart)

\*1: (FOR CANADA)  
\*2: (FOR USA)

Location	CB or Fuse	*Page Nos. of Related Systems		Parts		Code or Location																		
		228	228	228	159 164	159	159	228	208 228	159	159	164	164	159 164	228	122	210	210	116	164 220	228	206	206	
		A/C Condenser Fan Motor	A/C Single Pressure SW [A/C Triple Pressure SW]	A/C Magnetic Clutch and Lock Sensor	ABS Actuator	ABS Relay	A/C Amplifier	ABS ECU	ABS and Traction ECU	ABS Lateral Acceleration Sensor	Air Inlet Control Servo Motor	Ashtray Illumination	Auto Antenna Control Relay	Auto Antenna Motor	Back-Up Light SW (for M/T)	Brake Fluid Level Warning SW	Blower Motor Control Relay	Buckle SW LH	Buckle SW RH					
		A2	A3	A4	A6	A8	A9	A12	A14	A18	A19	A20	A22	A23	A24	A29	A30	A33	B1	B2	B4	B6	B7	
①	7.5A HTR		●	●				●	●						●									
	7.5A IGN																●							
	7.5A RAD No. 2																	●						
	7.5A ST																							
	7.5A TURN																							
	10A ECU-B									●		●	●											
	10A ECU-IG										●	●	●	●	●			●					●	●
	10A GAUGE					●		●		●	●	●	●	●					●	●				
	10A MIR-HTR																							
	10A PANEL																●							
	10A TAIL																							
	15A CIG								●															
	15A SEAT-HTR																							
	15A STOP										●			●										
	20A WIPER																							
	30A DEFOG																							
	30A DOOR																							
②	7.5A ALT-S																							
	7.5A DOME																							
	7.5A DRL																							
	7.5A TRAC																							
	15A FOG																							
	15A HAZ-HORN																							
	15A HEAD (LH) *2																							
	15A HEAD (LH-LWR) *1																							
	15A HEAD (LH-UPR) *1																							
	15A HEAD (RH) *2																							
	15A HEAD (RH-LWR) *1																							
	15A HEAD (RH-UPR) *1																							
	20A RAD No. 1																	●	●					
	30A ABS No. 2													●										
	30A EFI No. 1																							
	30A EFI No. 2																							
	30A FAN		●																					
50A HTR																						●		
50A MAIN																								
60A ABS No. 1					●	●	●				●	●	●											
60A POWER																								

\* These are the page numbers of the first page on which the related system is shown.  
The part indicated is located somewhere in the system, not necessarily on the page indicated here.

[LOCATION] (1) : J/B No. 1 (See page 20) (2) : R/B No. 2 (See page 22) (3) : R/B No. 4 (See page 23)





# POWER SOURCE (Current Flow Chart)

\*1: (FOR CANADA)  
\*2: (FOR USA)

Location	CB or Fuse	*Page Nos. of Related Systems																				
		96 164 220	118	70 82	118	118	118	140	220	228	220	112	60 70 140	64 82 150	70 82 140 150 228	102 106	102 106	102	102	111	111	126
Parts		Daytime Running Light Relay (Main)	Diode (for Interior Light)	Diode (for Idle-Up)	Door Courtesy SW LH	Door Courtesy SW RH	Door Key Lock and Unlock SW LH	Electronically Controlled Transmission Solenoid	Engine Coolant Temp. Sender (Water Temp. Sender)	Engine Coolant Temp. SW (Water Temp. SW)	Engine Oil Level Sensor	Electronically Controlled Transmission Pattern Select SW	Engine Control Module (Engine and Electronically Controlled Transmission ECU)		Front Fog Light and Parking Light LH	Front Fog Light and Parking Light RH	Front Side Marker Light LH	Front Side Marker Light RH	Front Turn Signal Light LH	Front Turn Signal Light RH	Front Wiper Motor	
Code or Location		D6	D7	D8	D10	D11	D12	E2	E4	E5	E7	E8	E9	E10	F3	F4	F5	F6	F7	F8	F9	
①	7.5A HTR									●				●								
	7.5A IGN									●				●								
	7.5A RAD No. 2																					
	7.5A ST												●									
	7.5A TURN																			●	●	
	10A ECU-B																					
	10A ECU-IG																					
	10A GAUGE	●							●		●			●	●							
	10A MIR-HTR			●											●							
	10A PANEL			●								●			●							
	10A TAIL														●	●	●	●				
	15A CIG																					
	15A SEAT-HTR																					
	15A STOP														●							
	20A WIPER																					●
	30A DEFOG																					
	30A DOOR																					
②	7.5A ALT-S	●	●		●	●	●															
	7.5A DOME																					
	7.5A DRL																					
	7.5A TRAC																					
	15A FOG														●	●						
	15A HAZ-HORN																			●	●	
	15A HEAD (LH) *2																					
	15A HEAD (LH-LWR) *1																					
	15A HEAD (LH-UPR) *1																					
	15A HEAD (RH) *2																					
	15A HEAD (RH-LWR) *1																					
	15A HEAD (RH-UPR) *1																					
	20A RAD No. 1																					
	30A ABS No. 2																					
	30A EFI No. 1								●					●	●							
	30A EFI No. 2																					
	30A FAN																					
	50A HTR																					
	50A MAIN	●																				
60A ABS No. 1																						
60A POWER	●																					

\* These are the page numbers of the first page on which the related system is shown.  
The part indicated is located somewhere in the system, not necessarily on the page indicated here.

[LOCATION] (1) : J/B No. 1 (See page 20) (2) : R/B No. 2 (See page 22) (3) : R/B No. 4 (See page 23)

	220	70 82	68	122	122	94 96	94 96	94 96	94 96	70	129	129	111 122	70	122 228	114	70 82	118	94 102 96 108 122	184	102	102 114	118	118	70 140	82	82	208
	F14	F15	G2	G3	G4	H1	H2	H3	H4	H5	H8	H9	H10	H11	H12	H14	I1	I18	I20	K3	L1	L2	L4	L5	M1	M2	M3	N2
Fuel Pump and Sender																												
Fuel Pump ECU																												
Generator (Alternator)			●																									
Glove Box Light																												
Glove Box Light SW				●	●																							
Headlight Hi LH						●																						
Headlight Hi RH						●																						
Headlight Lo LH							●																					
Headlight Lo RH								●																				
Heated Oxygen Sensor (Main)																												
Horn LH											●																	
Horn RH											●																	
Hazard SW													●															
Heated Oxygen Sensor (Sub)															●													
Heater Control SW																												
High Mounted Stop Light																												
Idle Air Control Valve (ISC Valve)																●												
Ignition Key Cylinder Light																		●										
Integration Relay																												
Key Interlock Solenoid																												
License Plate Light																												
Light Failure Sensor																												
Luggage Compartment Light																												
Luggage Compartment Light SW																												
Mass Air Flow (Air Flow Meter)																												
Main Heated Oxygen Sensor (for California, on Front Side)																												
Main Heated Oxygen Sensor (for California, on Rear Side)																												
Noise Filter																												

(4) : R/B No. 5 (See page 23)

# POWER SOURCE (Current Flow Chart)

\*1: (FOR CANADA)  
\*2: (FOR USA)

Location	*Page Nos. of Related Systems		Parts		Code or Location		CB or Fuse														
	208	220	122 140 150	60 70 116 140 174	64 82 130 150 220	181	159 164 220	118	136	136	136	190	190	228	228	228	122 210 218	122	188	122	116
	Noise Filter	Oil Pressure SW	O/D Main SW	Park/Neutral Position SW (Neutral Start SW), Back-Up Light SW and A/T Indicator Light SW (for A/T)	PPS ECU	Parking Brake SW	Personal Light	Power Window Control SW RH	Power Window Master SW and Door Lock Control SW LH	Power Window Motor LH	Power Window Motor RH	Power Seat Control SW (for Driver's Seat)	Power Seat Motor (for Driver's Seat Slide Control)	Radiator Fan Motor	Radiator Fan Relay No. 1	Radiator Fan Relay No. 2	Radio and Player (w/o Stereo Power Amplifier)	Radio and Player (w/ Stereo Power Amplifier)	Remote Control Mirror SW	Rheostat	Back-Up Light LH [Rear Comb. Light LH]
	N3	O2	O5	P2	P4	P5	P6	P7	P8	P9	P10	P11	P12	R1	R2	R3	R4	R6	R7	R8	R9
①	7.5A HTR														●	●					
	7.5A IGN																				
	7.5A RAD No. 2																●		●		
	7.5A ST				●																
	7.5A TURN																				
	10A ECU-B					●															
	10A ECU-IG						●										●	●			
	10A GAUGE	●	●	●			●														●
	10A MIR-HTR																				
	10A PANEL			●														●	●		●
	10A TAIL																				
	15A CIG																				
	15A SEAT-HTR																				
	15A STOP																				
	20A WIPER																				
	30A DEFOG	●																			
30A DOOR								●	●	●	●	●	●								
②	7.5A ALT-S																				
	7.5A DOME							●													
	7.5A DRL																				
	7.5A TRAC																				
	15A FOG																				
	15A HAZ-HORN																				
	15A HEAD (LH) *2																				
	15A HEAD (LH-LWR) *1																				
	15A HEAD (LH-UPR) *1																				
	15A HEAD (RH) *2																				
	15A HEAD (RH-LWR) *1																				
	15A HEAD (RH-UPR) *1																				
	20A RAD No. 1																	●			
	30A ABS No. 2																				
	30A EFI No. 1																				
	30A EFI No. 2																				
	30A FAN													●	●	●					
	50A HTR																				
50A MAIN																					
60A ABS No. 1																					
60A POWER																					

\* These are the page numbers of the first page on which the related system is shown.  
The part indicated is located somewhere in the system, not necessarily on the page indicated here.

[LOCATION] (1) : J/B No. 1 (See page 20) (2) : R/B No. 2 (See page 22) (3) : R/B No. 4 (See page 23)

111	114	102	116	111	114	102	102	102	203	188 208	188 208	208	60 64	122 192	184	210 214	210	70 114 150 164 184	82 140 159 174	192	192	192	192	82	130	164	164	159
Rear Turn Signal Light LH [Rear Comb. Light LH]	Stop Light LH [Rear Comb. Light LH]	Taillight LH [Rear Comb. Light LH]	Back-Up Light RH [Rear Comb. Light RH]	Rear Turn Signal Light RH [Rear Comb. Light RH]	Stop Light RH [Rear Comb. Light RH]	Taillight RH [Rear Comb. Light RH]	Rear Side Marker Light LH	Rear Side Marker Light RH	Rear Wiper Motor and Relay	Remote Control Mirror and Mirror Heater LH	Remote Control Mirror and Mirror Heater RH	Rear Window Defogger (+)	Starter	Seat Heater SW	Shift Lock ECU	Stereo Power Amplifier	Stereo Power Amplifier	Stop Light SW	Seat Heater (for Driver's Seat)	Seat Heater (for Passenger's Seat)	Seat Heater Relay (for Driver's Seat)	Seat Heater Relay (for Passenger's Seat)	Sub Heated Oxygen Sensor (for California)	Theft Deterrent Horn	Traction Brake Actuator	Traction Pump and Motor	ABS Indicator Light [Teillite Light LH]	
R9	R10					R11	R12	R15	R16	R17	R18	S3	S6	S7	S8	S9	S11	S12	S13	S14	S15	S16	T1	T3	T4	T5		
•				•					•	•					•													
	•		•							•	•			•														
		•				•	•		•					•	•													
					•			•							•			•										
									•																			
•																												
													•															

(4) : R/B No. 5 (See page 23)

# POWER SOURCE (Current Flow Chart)

\*1: (FOR CANADA)  
\*2: (FOR USA)

Location	*Page Nos. of Related Systems		70	164	68	118	102	194	197	70	82	60	122	164	206	206	82	70	70	70	70	70	70
	Parts	Code or Location	82	220			114			150	140	64	130					82	82	82			
CB or Fuse			T5	T6						T7	T8	T9	T11	T12	V1	V2	V3	V4	V5	V6	V7		
7.5A	HTR																						
7.5A	IGN				●						●												
7.5A	RAD No. 2																						
7.5A	ST											●											
7.5A	TURN																						
10A	ECU-B								●		●												
10A	ECU-IG											●		●	●	●							
10A	GAUGE	●	●				●	●			●			●									
10A	MIR-HTR																						
10A	PANEL										●												
10A	TAIL												●										
15A	CIG												●										
15A	SEAT-HTR																						
15A	STOP														●								
20A	WIPER																						
30A	DEFOG																						
30A	DOOR												●										
7.5A	ALT-S																						
7.5A	DOME				●						●		●										
7.5A	DRL																						
7.5A	TRAC														●								
15A	FOG																						
15A	HAZ-HORN												●										
15A	HEAD (LH) *2																						
15A	HEAD (LH-LWR) *1																						
15A	HEAD (LH-UPR) *1																						
15A	HEAD (RH) *2																						
15A	HEAD (RH-LWR) *1																						
15A	HEAD (RH-UPR) *1																						
20A	RAD No. 1																						
30A	ABS No. 2																						
30A	EFI No. 1																●	●	●	●	●	●	●
30A	EFI No. 2																						
30A	FAN																						
50A	HTR																						
50A	MAIN												●										
60A	ABS No. 1												●										
60A	POWER												●										

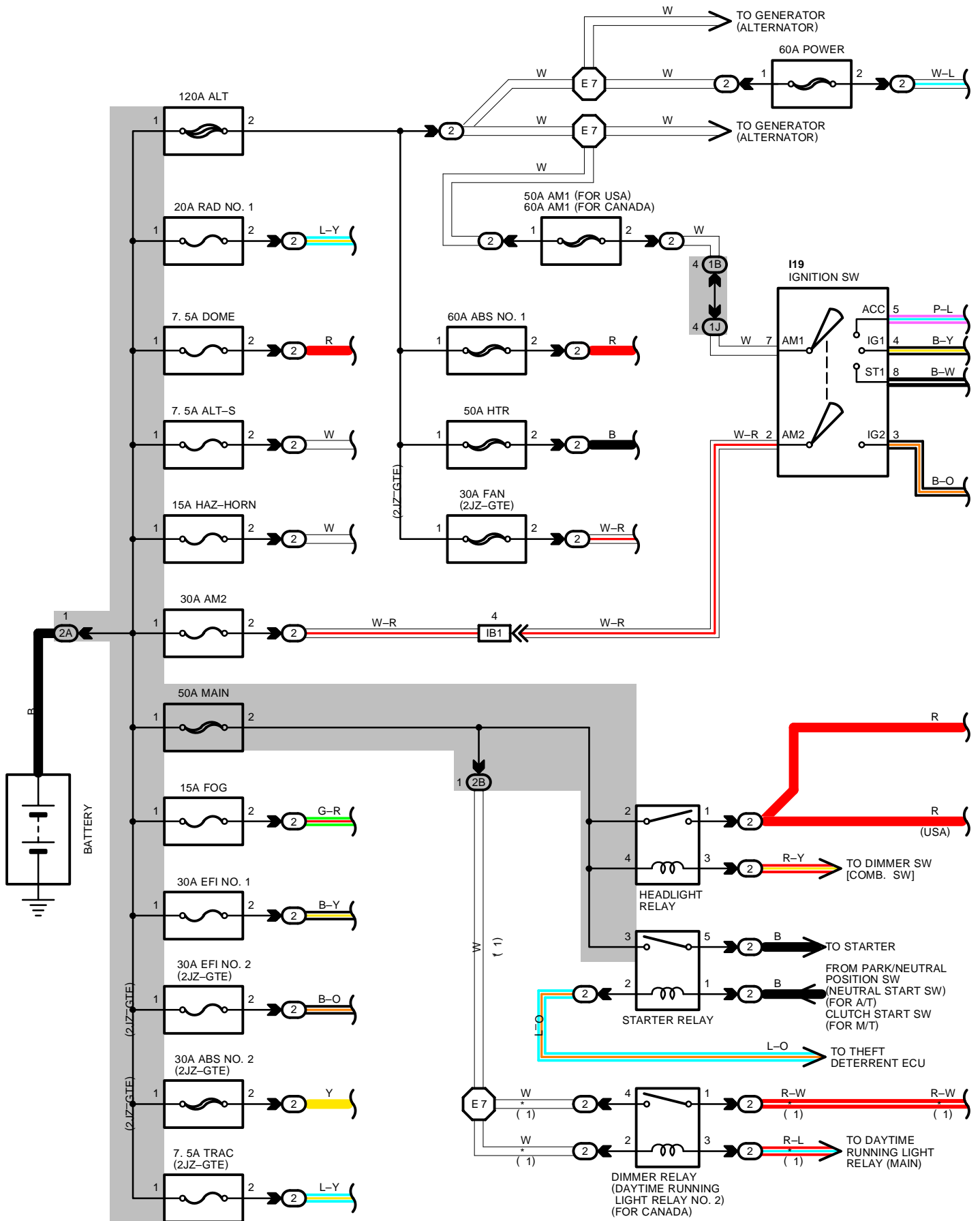
\* These are the page numbers of the first page on which the related system is shown.  
The part indicated is located somewhere in the system, not necessarily on the page indicated here.

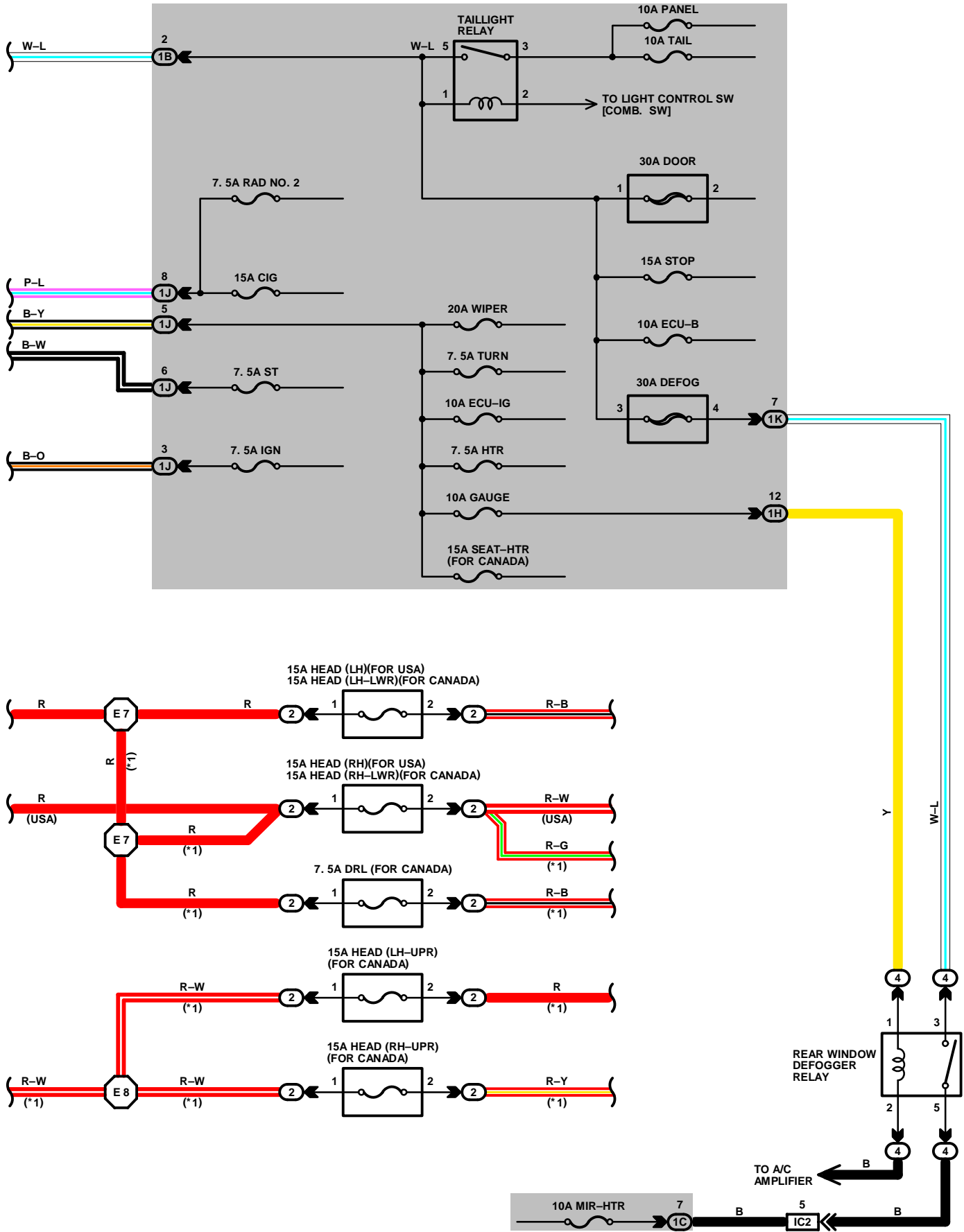
[LOCATION] (1) : J/B No. 1 (See page 20) (2) : R/B No. 2 (See page 22) (3) : R/B No. 4 (See page 23)

70	70 82 140 150 174 181 220 228	126 203	108 118 194	136	102 108 122 130	228	70 82 140 150	70	106	94 96 108 130	228	129 130	60 64 130	164 220	208 228	111	164	164	164	164	
V8	V10	W1	①				②						③			④					
VSV (for Waste Gate Valve)	Vehicle Speed Sensor (Speed Sensor) No. 1 (For Combination Meter)	Washer Motor	Integration Relay	Power Main Relay	Taillight Relay	A/C Magnetic Clutch Relay	EFI Main Relay	EFI No. 2 Relay	Fog Light Relay	Headlight Relay	Heater Relay	Horn Relay	Starter Relay	Diode	Rear Window Defogger Relay	Turn Signal Flasher	ABS Motor Relay	ABS Solenoid Relay	Traction Motor Relay	Traction Solenoid Relay	
						●					●										
			●										●								
																●					
	●		●	●										●	●				●		●
		●																			
			●	●											●						
									●												
									●			●									
									●												
									●												
	●						●	●												●	
								●													
											●										
					●								●								
																	●	●			●

: R/B No. 5 (See page 23)

# POWER SOURCE







# POWER SOURCE

## SERVICE HINTS

### HEADLIGHT RELAY (FOR USA)

2-1 : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION OR DIMMER SW AT **FLASH** POSITION

### HEADLIGHT RELAY (FOR CANADA)

2-1 : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION OR DIMMER SW AT **FLASH** POSITION  
 : CLOSED WITH ENGINE RUNNING AND PARKING BRAKE LEVER RELEASED (PARKING BRAKE SW OFF)

### TAILLIGHT RELAY

5-3: CLOSED WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

### I19 IGNITION SW

7-5 : CLOSED WITH IGNITION KEY AT **ACC** OR **ON** POSITION

7-4 : CLOSED WITH IGNITION KEY AT **ON** OR **ST** POSITION

2-3 : CLOSED WITH IGNITION KEY AT **ON** OR **ST** POSITION

7-8 : CLOSED WITH IGNITION KEY AT **ST** POSITION

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
I19	29				

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)
4	23	R/B NO. 4 (LEFT KICK PANEL)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1C	20	FLOOR NO. 2 WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J		
1K		
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)
2B	22	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)

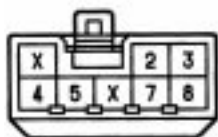
## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)

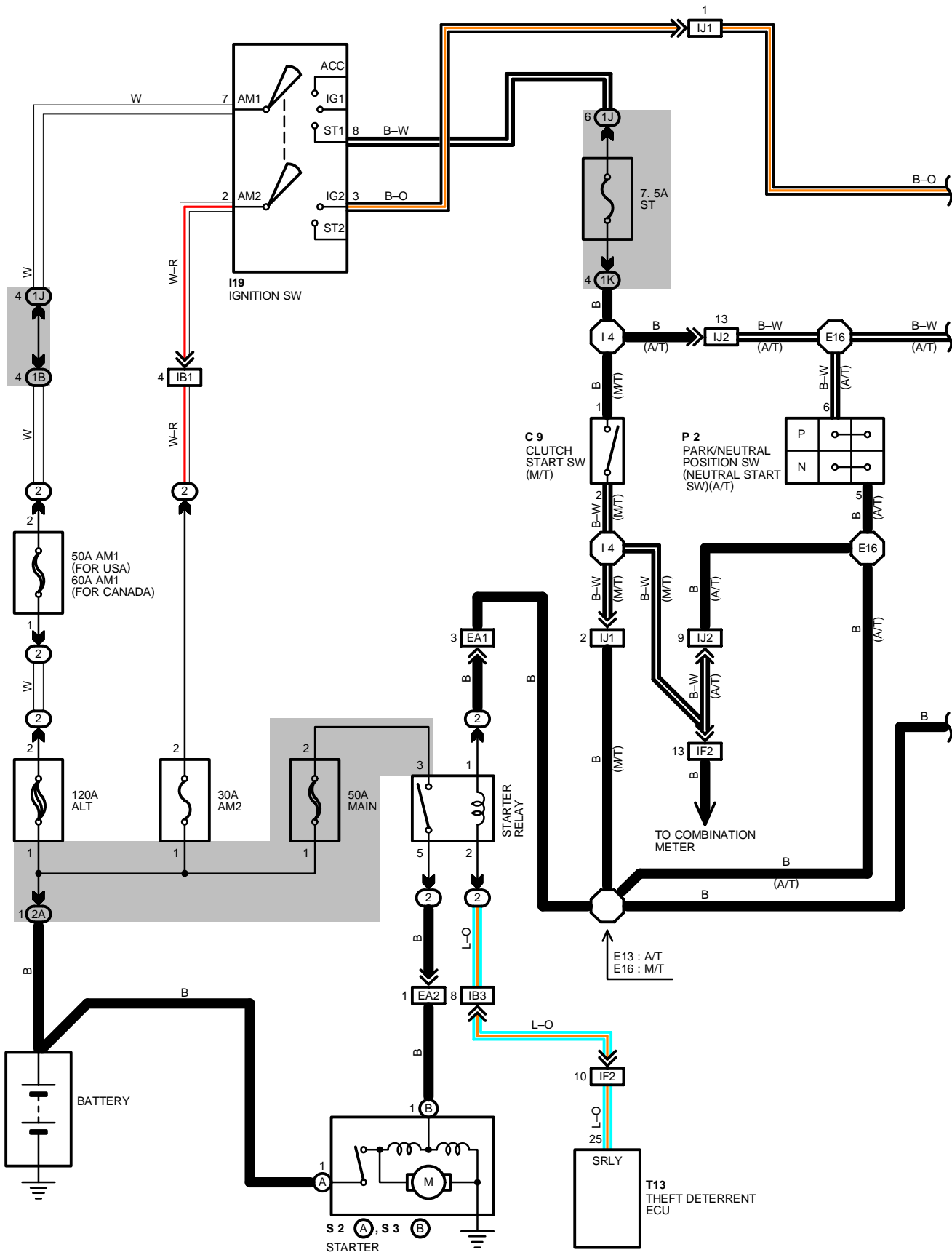
## ○ : SPLICE POINTS

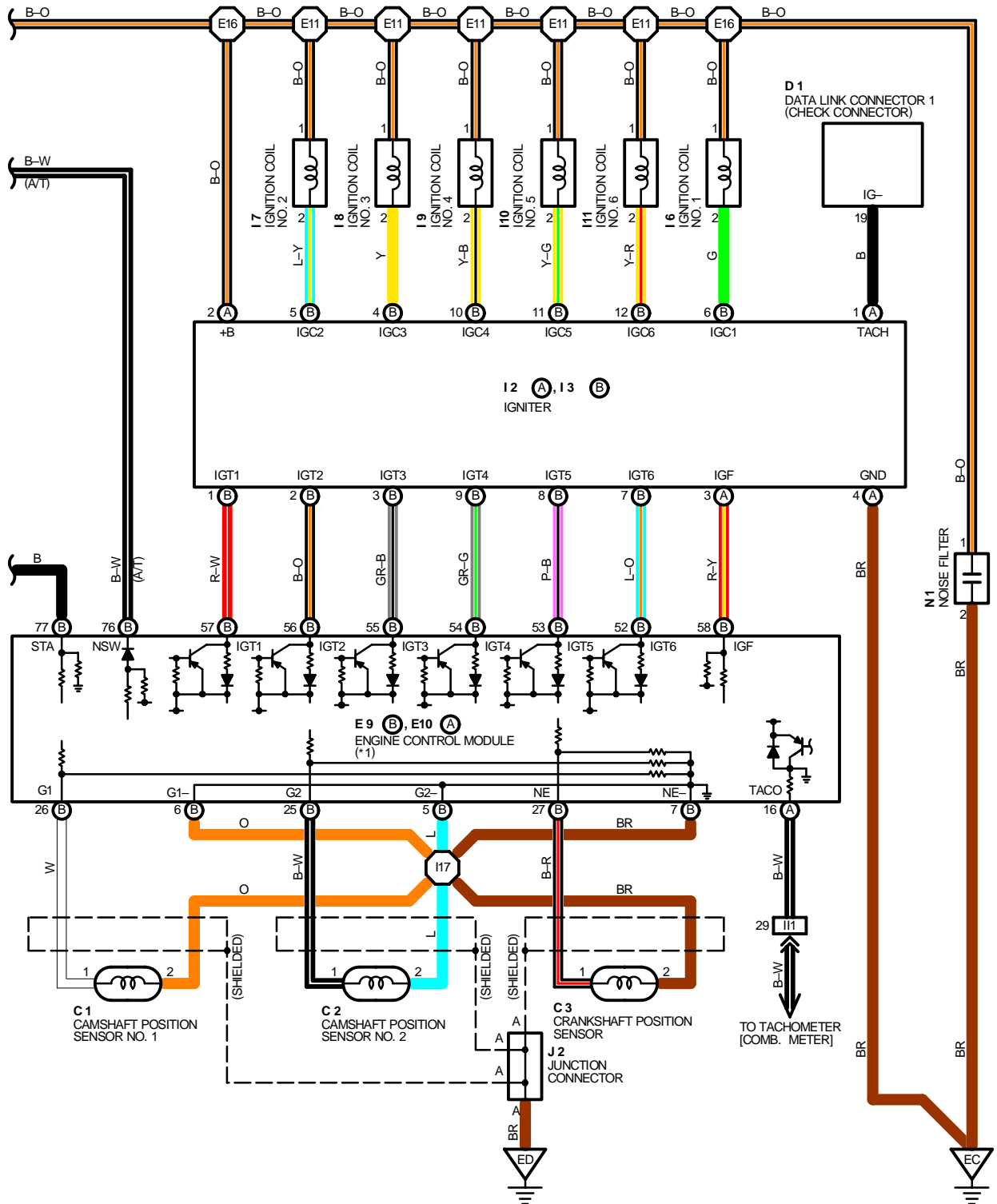
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 7	32	ENGINE ROOM MAIN WIRE	E 8	32	ENGINE ROOM MAIN WIRE

I19



# STARTING AND IGNITION (FOR 2JZ-GTE)





# STARTING AND IGNITION (FOR 2JZ-GTE)

## SERVICE HINTS

### I19 IGNITION SW

7-8 : CLOSED WITH IGNITION SW AT **ST** POSITION  
 2-3 : CLOSED WITH IGNITION SW AT **ON** OR **ST** POSITION

### P 2 PARK/NEUTRAL POSITION SW (NEUTRAL START SW) (A/T)

6-5 : CLOSED WITH A/T SHIFT LEVER IN **P** OR **N** POSITION

### C 9 CLUTCH START SW (M/T)

1-2 : CLOSED WITH CLUTCH PEDAL FULLY DEPRESSED

### S 2(A), S 3(B) STARTER

POINTS CLOSED WITH PARK/NEUTRAL POSITION SW (NEUTRAL START SW) ON AND IGNITION SW AT **ST** POSITION (A/T)

POINTS CLOSED WITH CLUTCH START SW ON AND IGNITION SW AT **ST** POSITION (M/T)

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 1	24	I 3	B 25	J 2	29
C 2	24	I 6	25	N 1	25 (2JZ-GTE)
C 3	24	I 7	25	P 2	25 (2JZ-GTE)
C 9	28	I 8	25	S 2	A 25 (2JZ-GTE)
D 1	24 (2JZ-GTE)	I 9	25	S 3	B 25 (2JZ-GTE)
E 9	B 29	I10	25	T13	29
E10	A 29	I11	25		
I 2	A 25	I19	29		

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1K		
2A	22	BATTERY AND 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	32 (2JZ-GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA2	32	
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB3		
IF2	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2		

## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EC	32 (2JZ-GTE)	FRONT SIDE OF INTAKE MANIFOLD
ED	32 (2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD

## ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E11	32	ENGINE WIRE	I 4	38	COWL WIRE
E13			I17	38	ENGINE WIRE
E16					

C 1 BLACK



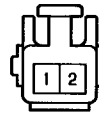
C 2 BLACK



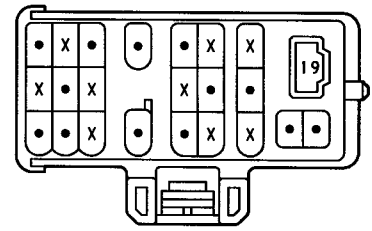
C 3 DARK GRAY



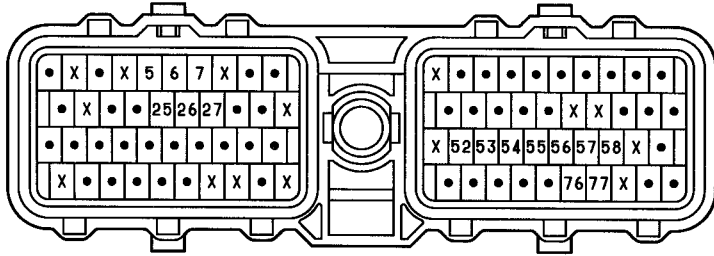
C 9



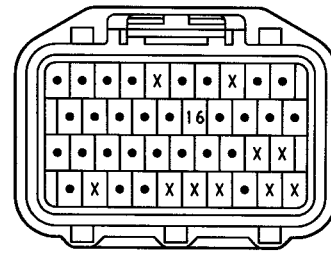
D 1 BLACK



E 9 (B) DARK GRAY



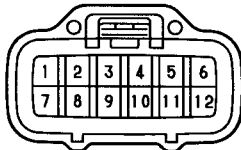
E10 (A) DARK GRAY



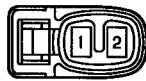
I 2 (A) BLACK



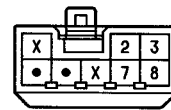
I 3 (B) BLACK



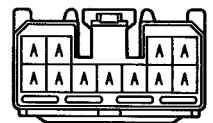
I 6, I 7, I 8  
I 9, I 10, I 11 BLACK



I 19



J 2

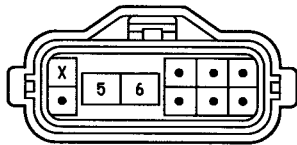


(HINT:SEE PAGE 7)

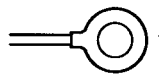
N 1 GRAY



P 2 GRAY



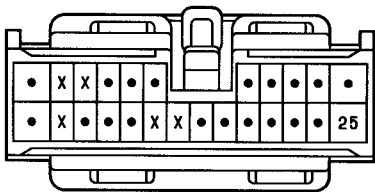
S 2 (A)



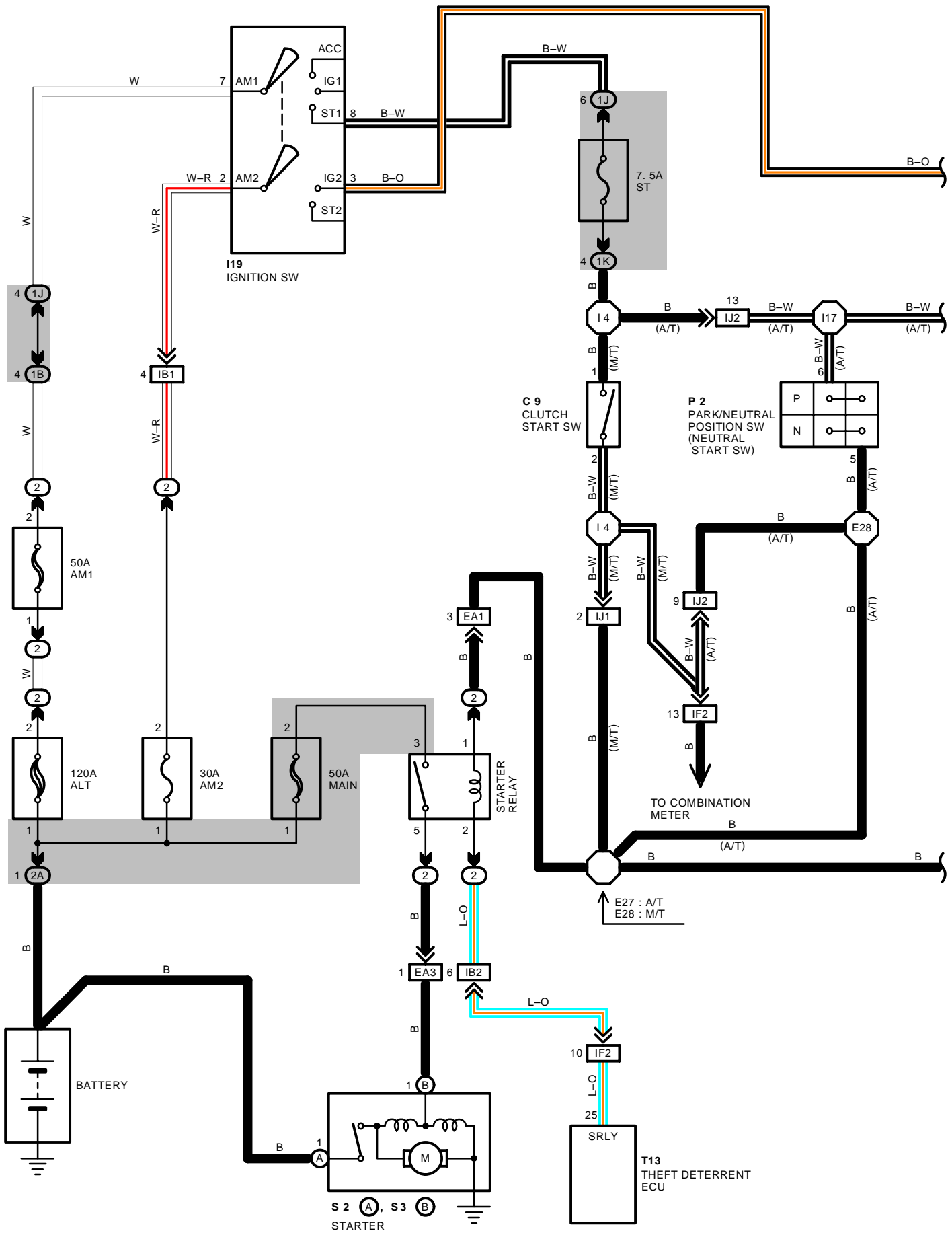
S 3 (B) BLACK

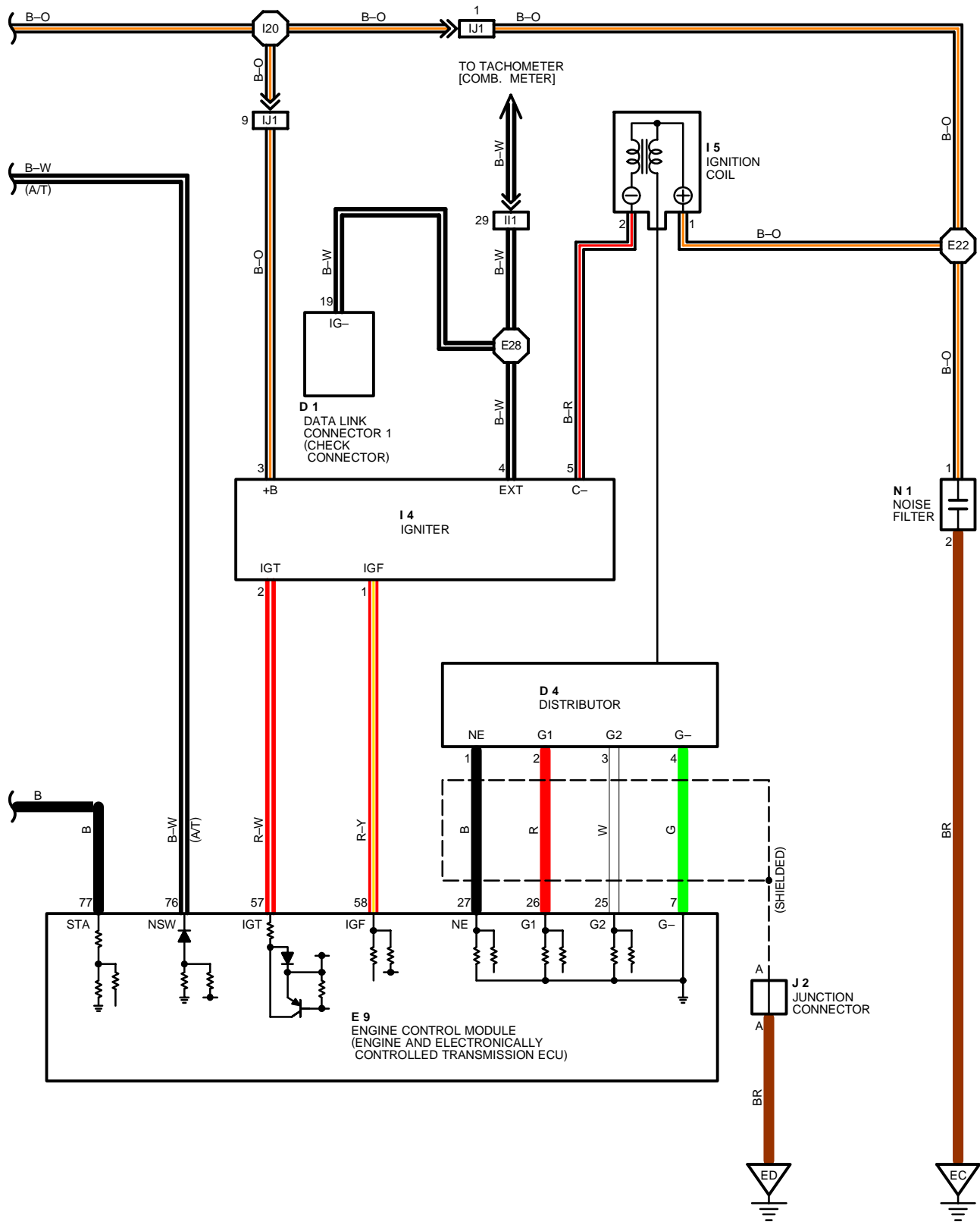


T13 ORANGE



# STARTING AND IGNITION (FOR 2JZ-GE)





# STARTING AND IGNITION (FOR 2JZ-GE)

## SERVICE HINTS

### I19 IGNITION SW

- 7-8 : CLOSED WITH IGNITION SW AT **ST** POSITION
- 2-3 : CLOSED WITH IGNITION SW AT **ON** OR **ST** POSITION

### P 2 PARK/NEUTRAL POSITION SW (NEUTRAL START SW) (A/T)

- 6-5 : CLOSED WITH A/T SHIFT LEVER IN **P** OR **N** POSITION

### C 9 CLUTCH START SW

- 1-2 : CLOSED WITH CLUTCH PEDAL FULLY DEPRESSED

### S 2(A), S 3(B) STARTER

- POINTS CLOSED WITH PARK/NEUTRAL POSITION SW (NEUTRAL START SW) ON AND IGNITION SW AT **ST** POSITION (A/T)
- POINTS CLOSED WITH CLUTCH START SW ON AND IGNITION SW AT **ST** POSITION (M/T)

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>C 9</b>	28	<b>I 5</b>	27	<b>S 2</b>	A 27 (2JZ-GE)
<b>D 1</b>	26 (2JZ-GE)	<b>I19</b>	29	<b>S 3</b>	B 27 (2JZ-GE)
<b>D 4</b>	26	<b>J 2</b>	29	<b>T13</b>	29
<b>E 9</b>	29	<b>N 1</b>	27 (2JZ-GE)		
<b>I 4</b>	27	<b>P 2</b>	27 (2JZ-GE)		

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
<b>2</b>	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
<b>1B</b>	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1J</b>	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1K</b>		
<b>2A</b>	22	BATTERY AND 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)
<b>EA1</b>	34 (2JZ-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
<b>EA3</b>	34	
<b>IB1</b>	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
<b>IB2</b>		
<b>IF2</b>	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
<b>II1</b>	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
<b>IJ1</b>	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
<b>IJ2</b>		

## ▽ : GROUND POINTS

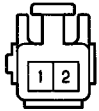
CODE	SEE PAGE	GROUND POINTS LOCATION
<b>EC</b>	34 (2JZ-GE)	FRONT SIDE OF INTAKE MANIFOLD
<b>ED</b>	34 (2JZ-GE)	REAR SIDE OF INTAKE MANIFOLD

## ○ : SPLICE POINTS

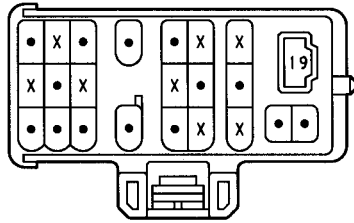
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
<b>E22</b>	34	ENGINE WIRE	<b>I 4</b>	38	COWL WIRE
<b>E27</b>			<b>I17</b>	38	ENGINE WIRE
<b>E28</b>			<b>I20</b>	38	COWL WIRE



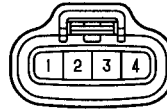
C 9



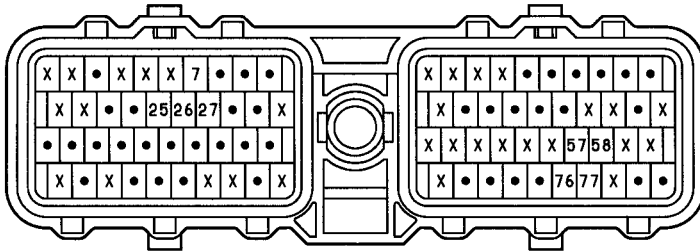
D 1 BLACK



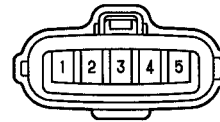
D 4 BLACK



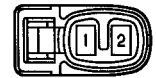
E 9 DARK GRAY



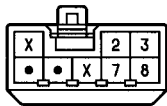
I 4 BLACK



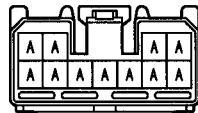
I 5 BLACK



I 19



J 2

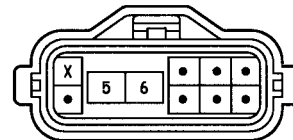


(HINT:SEE PAGE 7)

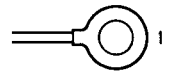
N 1 GRAY



P 2 GRAY



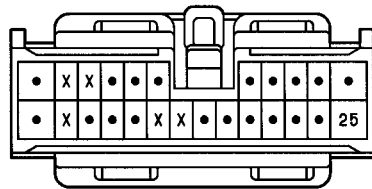
S 2 (A)



S 3 (B) BLACK

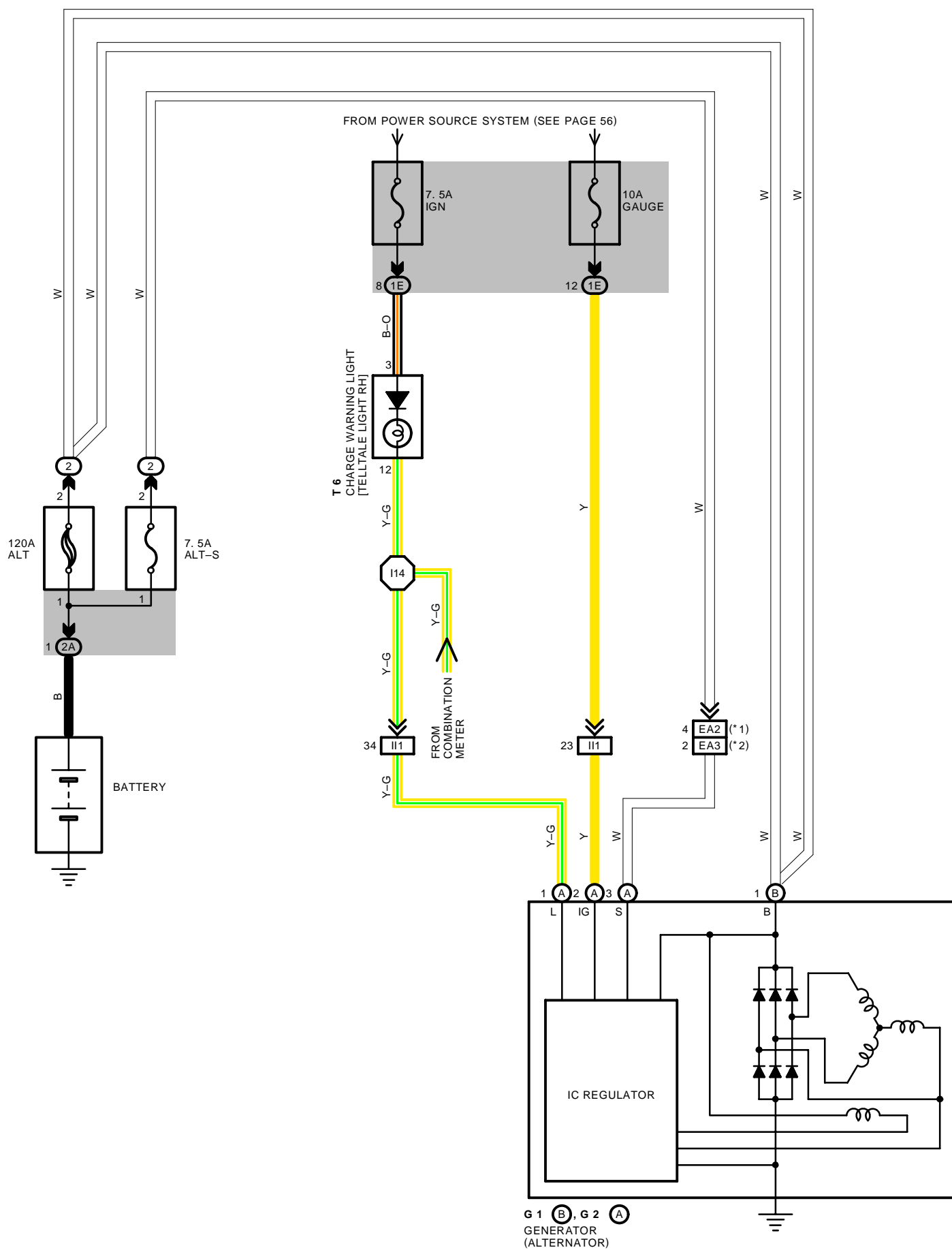


T 13 ORANGE



# CHARGING

\*1 : 2JZ-GTE  
\*2 : 2JZ-GE



## SERVICE HINTS

### G 2(A) GENERATOR (ALTERNATOR)

- (A) 3-GROUND: 13.9–15.1 VOLTS WITH ENGINE RUNNING AT 2000 RPM AND 25°C (77°F)  
 13.5–14.3 VOLTS WITH ENGINE RUNNING AT 5000 RPM AND 115°C (239°F)  
 (A) 1-GROUND: 0–4 VOLTS WITH IGNITION SW AT ON POSITION AND ENGINE NOT RUNNING

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
G 1	B	G 2	A	T 6	29
	24 (2JZ-GTE)		24 (2JZ-GTE)		
	26 (2JZ-GE)		26 (2JZ-GE)		

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

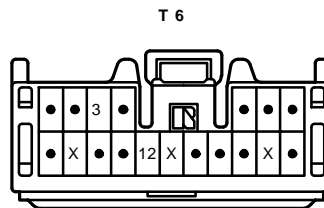
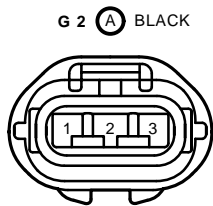
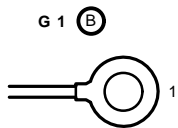
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA2	32	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA3	34	
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I14	38	INSTRUMENT PANEL WIRE			



# ENGINE CONTROL (FOR 2JZ-GTE)

## SYSTEM OUTLINE

THE ENGINE CONTROL SYSTEM UTILIZES A MICROCOMPUTER AND MAINTAINS OVERALL CONTROL OF THE ENGINE, TRANSMISSION ETC. AN OUTLINE OF THE ENGINE CONTROL IS GIVEN HERE.

### 1. INPUT SIGNALS

- (1) ENGINE COOLANT TEMP. (WATER TEMP.) SIGNAL CIRCUIT  
THE ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR) DETECTS THE ENGINE COOLANT TEMP. (WATER TEMP.) AND HAS A BUILT-IN THERMISTOR WITH A RESISTANCE, WHICH VARIES ACCORDING TO THE ENGINE COOLANT TEMP. (WATER TEMP.) WHICH IS INPUT INTO **TERMINAL THW** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (2) INTAKE AIR TEMP. SIGNAL CIRCUIT  
THE INTAKE AIR TEMP. SENSOR IS INSTALLED IN THE MASS AIR FLOW (AIR FLOW METER) AND DETECTS THE INTAKE AIR TEMP. WHICH IS INPUT AS A CONTROL SIGNAL TO **TERMINAL THA** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (3) OXYGEN DENSITY SIGNAL CIRCUIT  
THE OXYGEN DENSITY IN THE EXHAUST EMISSION IS DETECTED BY THE HEATED OXYGEN SENSORS SIDE AND INPUT AS A CONTROL SIGNAL TO **TERMINALS OX1, OX2** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (4) RPM SIGNAL CIRCUIT  
CRANKSHAFT POSITION IS DETECTED BY THE CRANKSHAFT POSITION SENSOR. CRANKSHAFT POSITION IS INPUT AS A CONTROL SIGNAL TO **TERMINAL NE** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (5) THROTTLE POSITION 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 (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). WHEN THE VALVE IS COMPLETELY CLOSED, THE CONTROL SIGNAL IS INPUT INTO **TERMINAL IDL1**.
- (6) VEHICLE SPEED CIRCUIT  
THE VEHICLE SPEED IS DETECTED BY VEHICLE SPEED SENSOR (SPEED SENSOR) NO.1 INSTALLED IN THE TRANSMISSION AND THE SIGNAL IS INPUT TO **TERMINAL SP1** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) VIA THE COMBINATION METER.
- (7) NEUTRAL POSITION SIGNAL CIRCUIT  
THE PARK/NEUTRAL POSITION SW (NEUTRAL START SW) DETECTS WHETHER THE SHIFT POSITION IS IN "N" AND "P" OR NOT, AND THE SIGNAL IS INPUT INTO **TERMINAL NSW** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (8) A/C SW SIGNAL CIRCUIT  
THE OPERATING VOLTAGE OF THE A/C MAGNETIC CLUTCH IS DETECTED AND THE SIGNAL IS INPUT INTO **TERMINAL ACMG** OF ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (9) BATTERY SIGNAL CIRCUIT  
VOLTAGE IS CONSTANTLY APPLIED TO **TERMINAL BATT** OF THE ENGINE CONTROL MODULE. (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). WITH THE IGNITION SW TURNED ON, THE VOLTAGE FOR ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) START-UP POWER SUPPLY IS APPLIED TO **TERMINAL +B** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) VIA EFI MAIN RELAY.  
THE CURRENT FLOWING THROUGH THE **IGN** FUSE FLOWS TO **TERMINAL IGSW** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (10) INTAKE AIR VOLUME SIGNAL CIRCUIT  
INTAKE AIR VOLUME IS DETECTED BY THE MASS AIR FLOW (AIR FLOW METER) AND THE SIGNAL IS INPUT TO **TERMINAL VG** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (11) STOP LIGHT SW SIGNAL CIRCUIT  
THE STOP LIGHT SW IS USED TO DETECT WHETHER THE VEHICLE IS BRAKING OR NOT AND THE SIGNAL IS INPUT INTO **TERMINAL STP** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (12) STARTER SIGNAL CIRCUIT  
TO CONFIRM WHETHER THE ENGINE IS CRANKING, THE VOLTAGE IS APPLIED TO THE STARTER MOTOR DURING CRANKING IS DETECTED AND THE SIGNAL IS INPUT INTO **TERMINAL STA** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (13) ENGINE KNOCK SIGNAL CIRCUIT  
ENGINE KNOCKING IS DETECTED BY KNOCK SENSOR FRONT AND REAR SIDE AND THE SIGNAL IS INPUT INTO **TERMINALS KNK1 AND KNK2** AS A CONTROL SIGNAL.

## 2. CONTROL SYSTEM

### \* SEQUENTIAL MULTIPOINT FUEL INJECTION (ELECTRONIC FUEL INJECTION) SYSTEM

THE SEQUENTIAL MULTIPOINT FUEL INJECTION (ELECTRONIC FUEL INJECTION) SYSTEM MONITORS THE ENGINE CONDITION THROUGH THE SIGNALS INPUT FROM EACH SENSOR (INPUT SIGNALS FROM (1) TO (13) ETC.) TO THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). THE BEST FUEL INJECTION TIMING IS DECIDED BASED ON THIS DATA AND THE PROGRAM MEMORIZED BY THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU), AND THE CONTROL SIGNAL IS OUTPUT TO **TERMINALS #10, #20, #30, 40, #50 AND #60** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) TO OPERATE THE INJECTOR (INJECT THE FUEL). THE SEQUENTIAL MULTIPOINT FUEL INJECTION (ELECTRONIC FUEL INJECTION) SYSTEM PRODUCES CONTROLS OF FUEL INJECTION OPERATION BY THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) IN RESPONSE TO THE DRIVING CONDITIONS.

### \* ESA (ELECTRONIC SPARK ADVANCE) SYSTEM

THE ESA SYSTEM MONITORS THE ENGINE CONDITION THROUGH THE SIGNALS INPUT TO THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) FROM EACH SENSOR (INPUT SIGNALS FROM (1), (2), (4) TO (13) ETC.). THE BEST IGNITION TIMING IS DECIDED ACCORDING TO THIS DATA AND THE MEMORIZED DATA IN THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AND THE CONTROL SIGNAL IS OUTPUT TO **TERMINALS IGT1, IGT2, IGT3, IGT4, IGT5 AND IGT6** THESE SIGNALS CONTROL THE IGNITER TO PROVIDE THE BEST IGNITION TIMING FOR THE DRIVING CONDITIONS.

### \* HEATED OXYGEN SENSOR HEATER CONTROL SYSTEM

THE MAIN HEATED OXYGEN SENSOR, SUB 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 OXYGEN SENSOR TO IMPROVE DETECTION PERFORMANCE OF THE SENSOR. THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS FROM (1), (2), (4), (9) TO (11) ETC.), AND OUTPUTS CURRENT TO **TERMINALS HT1, HT2** TO CONTROL THE HEATER.

### \* IDLE AIR CONTROL (IDLE SPEED CONTROL) SYSTEM

THE IDLE AIR CONTROL (ISC) SYSTEM (STEP MOTOR TYPE) INCREASES THE ENGINE SPEED AND PROVIDES IDLING 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 (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) EVALUATE THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS FROM (1), (4), (5), (8), (9), (11) ETC.), OUTPUTS CURRENT TO **TERMINALS ISC1, ISC2, ISC3 AND ISC4** TO CONTROL THE IDLE AIR CONTROL VALVE (ISC VALVE).

### \* EGR CONTROL SYSTEM

THE EGR CONTROL SYSTEM DETECTS THE SIGNAL FROM EACH SENSOR (INPUT SIGNALS FROM (1), (4), (9), (10) ETC.), AND OUTPUTS CURRENT TO **TERMINAL EGR** TO CONTROL THE EGR VALVE.

### \* FUEL PUMP CONTROL SYSTEM

THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) OUTPUTS CURRENT TO **TERMINAL FPC** AND CONTROLS THE FUEL PUMP ECU AND FUEL PUMP DRIVE SPEED IN RESPONSE TO THE DRIVING CONDITIONS.

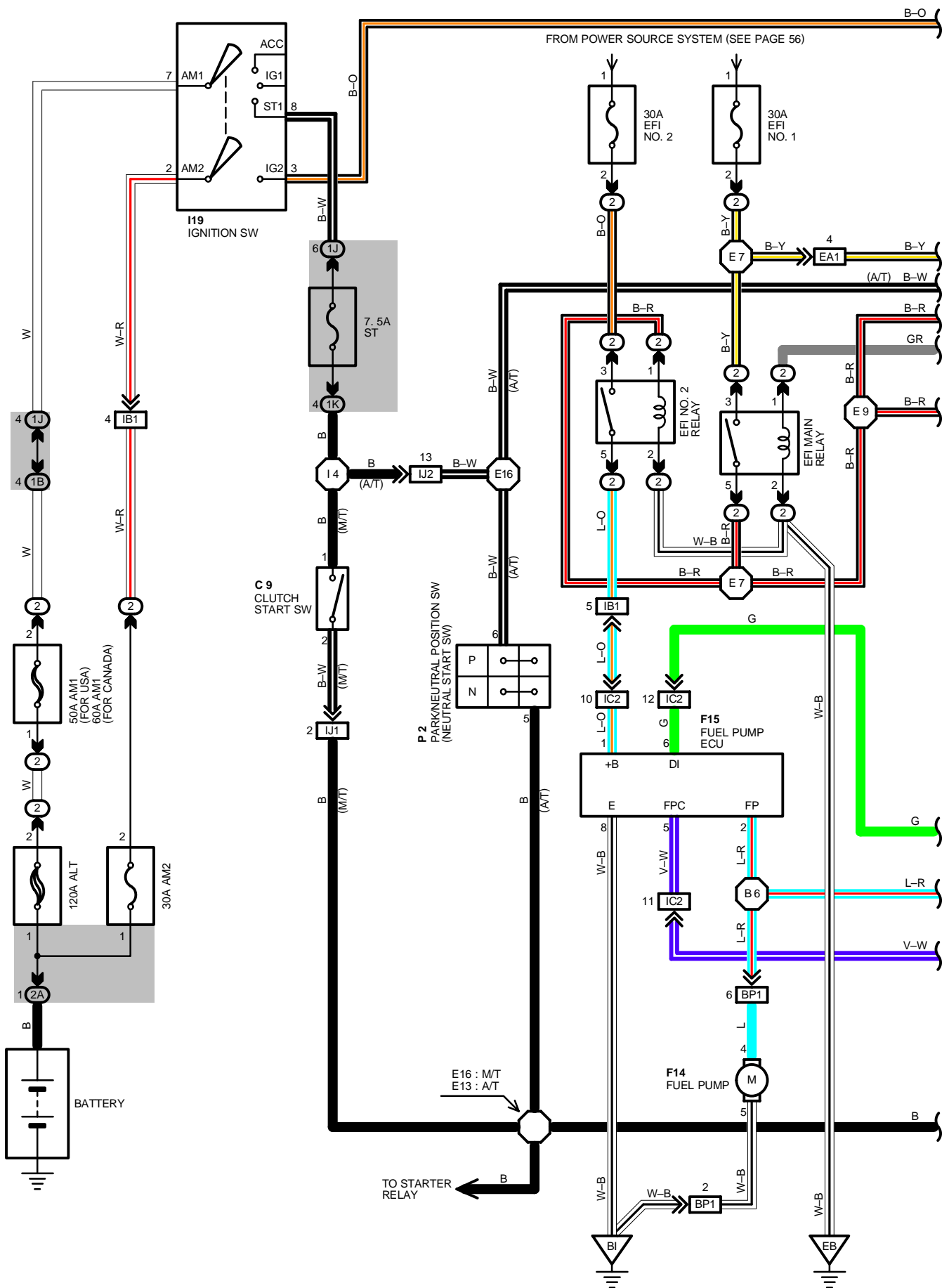
## 3. DIAGNOSIS SYSTEM

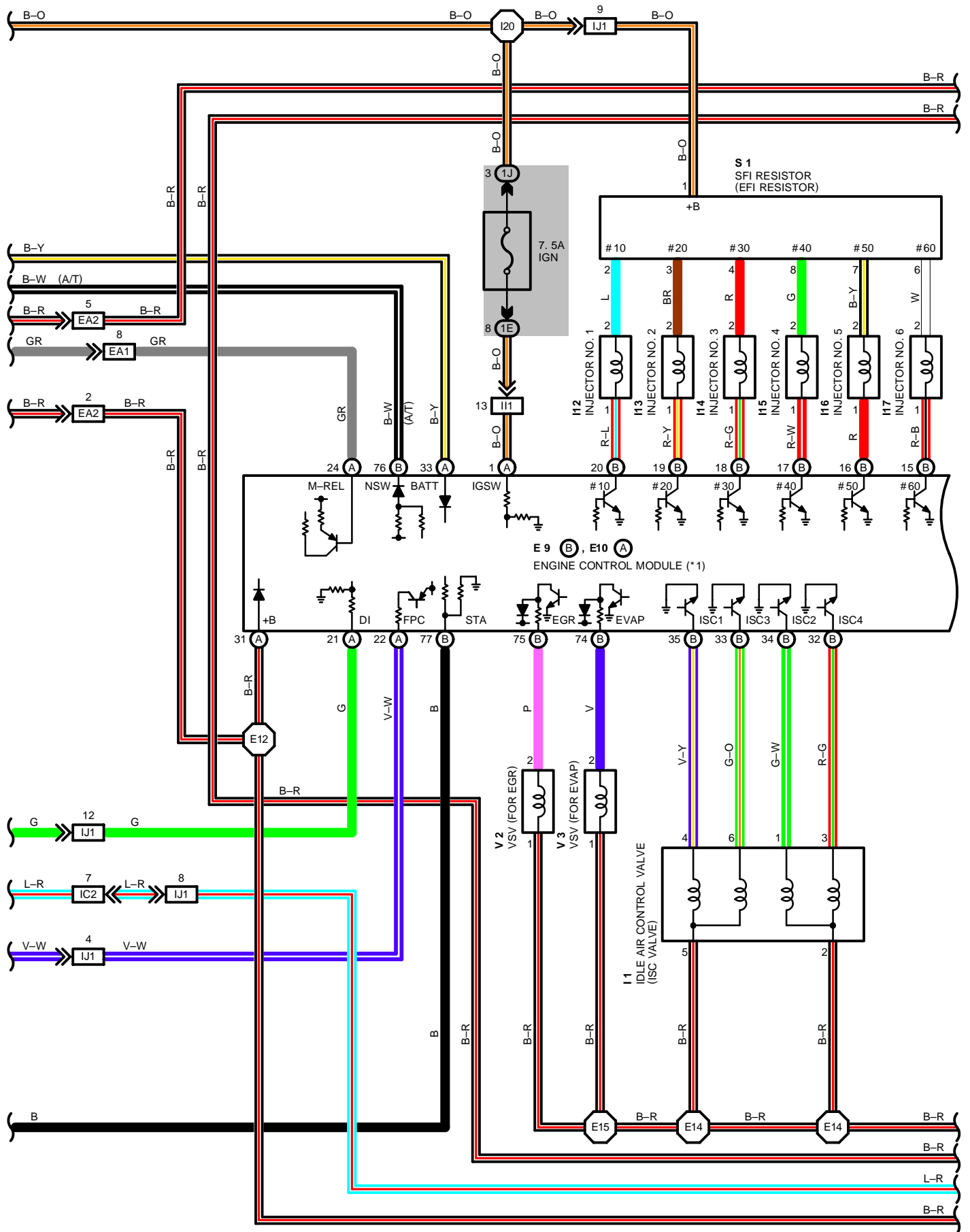
WITH THE DIAGNOSIS SYSTEM, WHEN THERE IS A MALFUNCTION IN THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) SIGNAL SYSTEM, THE MALFUNCTIONING SYSTEM IS RECORDED IN THE MEMORY. THE MALFUNCTIONING SYSTEM CAN BE FOUND BY READING THE CODE DISPLAYED BY THE MALFUNCTION INDICATOR LAMP (CHECK ENGINE WARNING LIGHT).

## 4. FAIL-SAFE SYSTEM

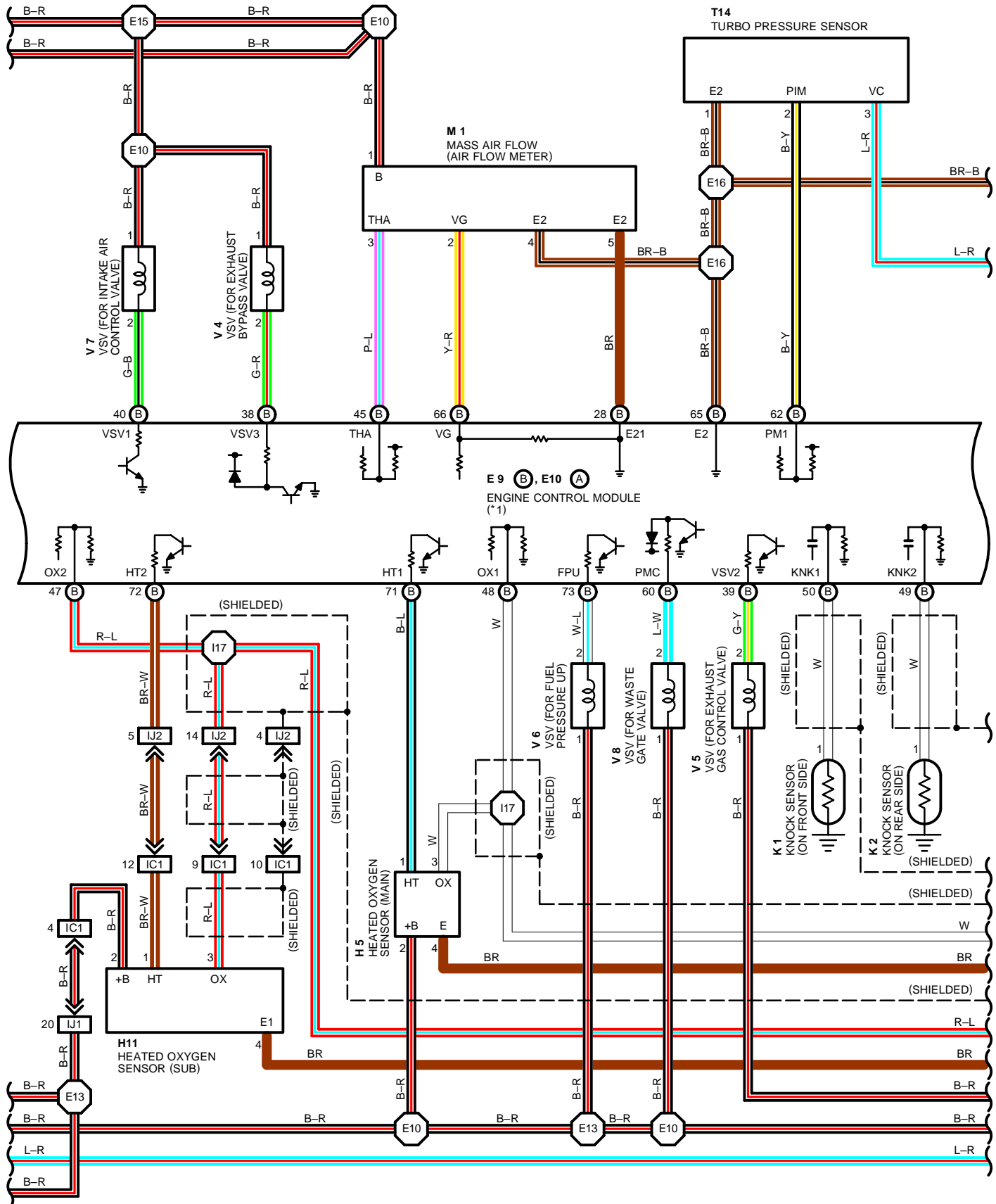
WHEN A MALFUNCTION HAS OCCURRED IN ANY SYSTEM, IF THERE IS A POSSIBILITY OF ENGINE TROUBLE BEING CAUSED BY CONTINUED CONTROL BASED ON THE SIGNALS FROM THAT SYSTEM, THE FAIL-SAFE SYSTEM EITHER CONTROLS THE SYSTEM BY USING DATA (STANDARD VALUES) RECORDED IN THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) MEMORY OR ELSE STOPS THE ENGINE.

# ENGINE CONTROL (FOR 2JZ-GTE)

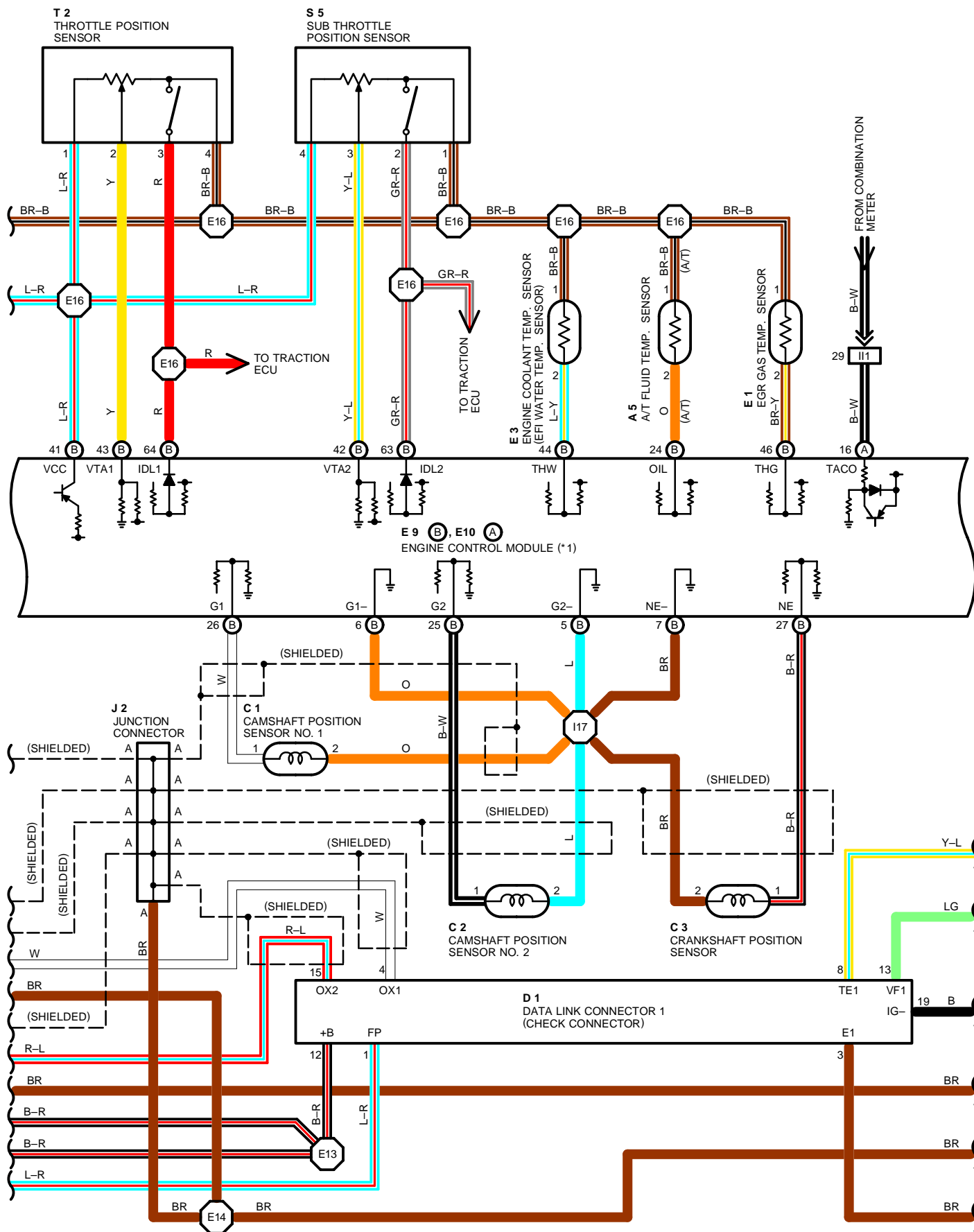




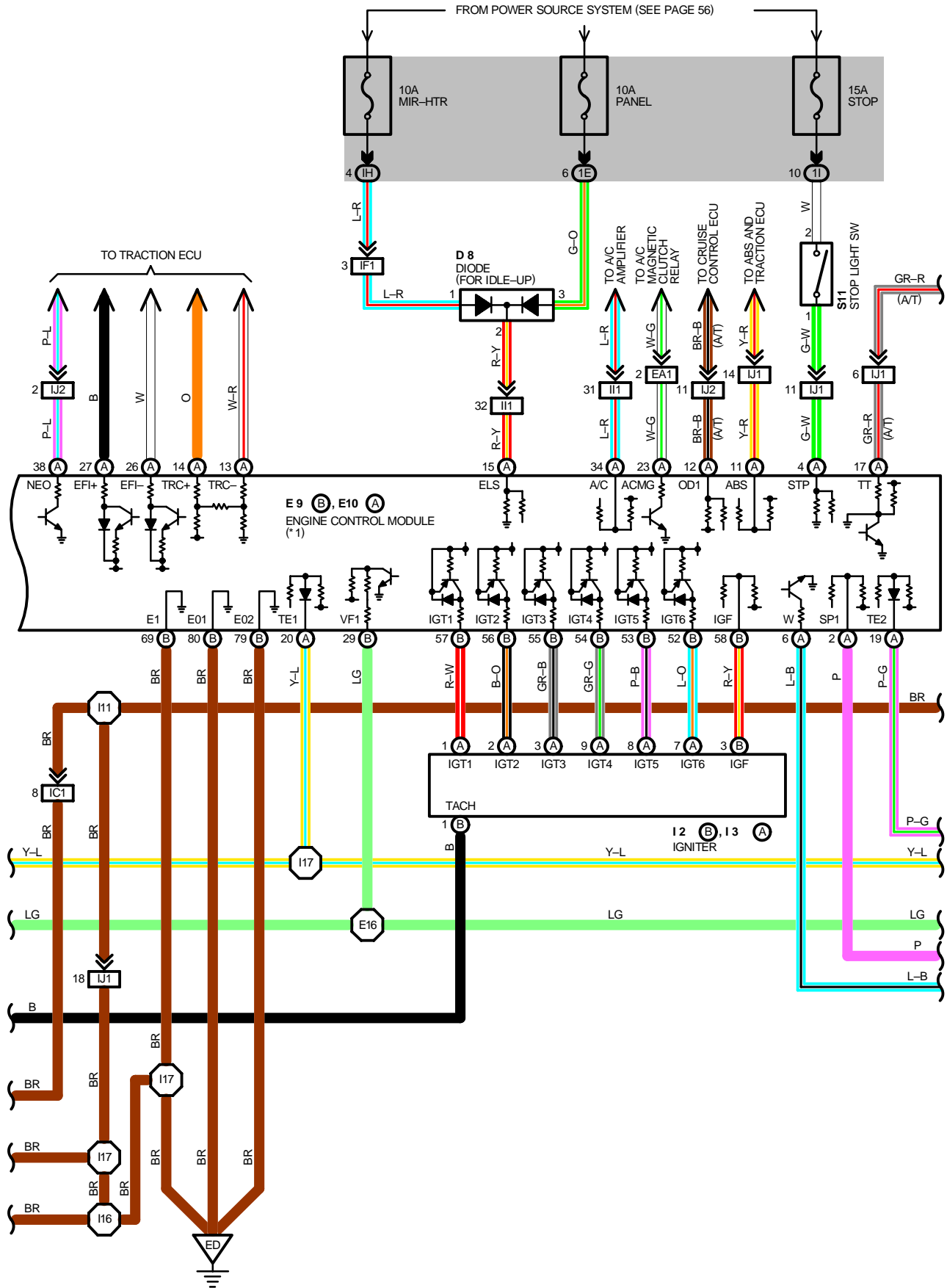
# ENGINE CONTROL (FOR 2JZ-GTE)



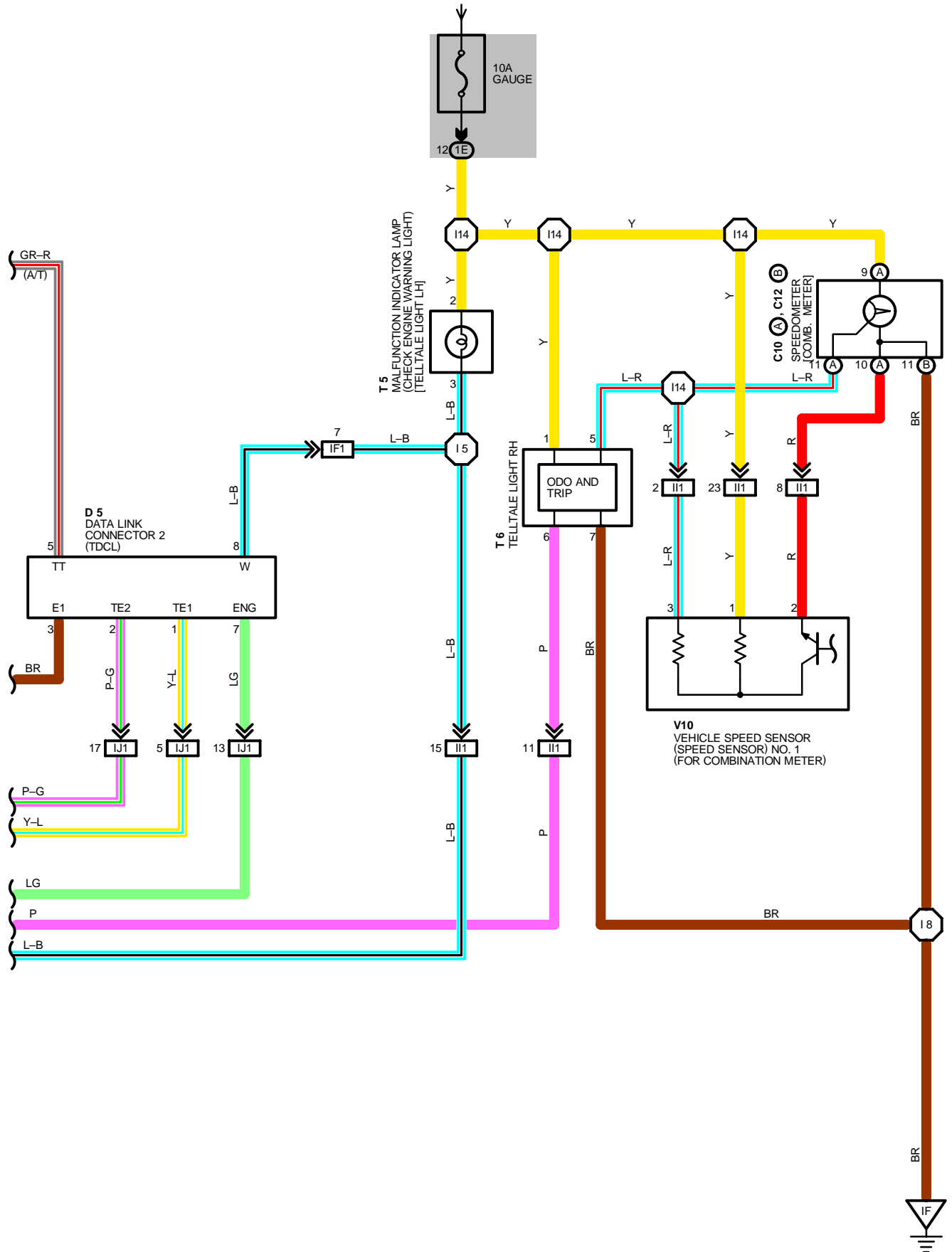




# ENGINE CONTROL (FOR 2JZ-GTE)



FROM POWER SOURCE SYSTEM (SEE PAGE 56)



# ENGINE CONTROL (FOR 2JZ-GTE)

## SERVICE HINTS

### EFI MAIN RELAY

(2) 3- (2) 5 : CLOSED WITH IGNITION SW AT **ON** POSITION

### EFI NO. 2 RELAY

(2) 3- (2) 5 : CLOSED WITH IGNITION SW AT **ON** POSITION

### E 3 ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR)

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

### I 1 IDLE AIR CONTROL VALVE (ISC VALVE)

1, 3- 2: APPROX. **10-30  $\Omega$**   
4, 6- 5: APPROX. **10-30  $\Omega$**

### I12, I13, I14, I15, I16, I17 INJECTOR

1- 2: APPROX. **13-8  $\Omega$**

### T 2 THROTTLE POSITION SENSOR

1- 4: APPROX. **4-9 K $\Omega$**   
1- 3: **3.3- 10.0 K $\Omega$**  WITH THROTTLE VALVE FULLY **OPENED** POSITION  
**0.2- 0.8 K $\Omega$**  WITH CLEARANCE BETWEEN LEVER AND STOP SCREW **0 MM (0 IN.)**  
1- 2: **0-2.3 K $\Omega$**  WITH CLEARANCE BETWEEN LEVER AND STOP SCREW **0.45 MM (0.0177 IN.)**  
INFINITY WITH CLEARANCE BETWEEN LEVER AND STOP SCREW **0.55 MM (0.0216 IN.)**

### E 9(B), E10(A) ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU)

(VOLTAGE AT ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) WIRING CONNECTORS)

BATT-E1 : ALWAYS **9-14 VOLTS**  
IGSW-E1 : **9-14 VOLTS** WITH IGNITION SW ON  
M-REL-E1 : **9-14 VOLTS** WITH IGNITION SW ON  
+B-E1 : **9-14 VOLTS** WITH IGNITION SW ON  
IDL1-E2 : **9-14 VOLTS** WITH IGNITION SW ON AND THROTTLE VALVE FULLY OPEN  
: **0 -1.5 VOLTS** WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED  
VTA1-E2 : **0.3- 0.8 VOLTS** WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED  
: **3.2-4.9 VOLTS** WITH IGNITION SW ON AND THROTTLE VALVE OPEN  
#10, #20, #30-E01, E02 : PULSE GENERATION (ENGINE IDLING)  
#40, #50, #60-E01, E02 : PULSE GENERATION (ENGINE IDLING)  
THA-E2 : **0.5-3.4 VOLTS** WITH IGNITION SW ON AND INTAKE AIR TEMP. **20°C (68°F)**  
THW-E2 : **0.2-1.0 VOLTS** WITH IGNITION SW ON AND COOLANT TEMP. **80°C (176°F)**  
STA-E1 : **6-14 VOLTS** WITH ENGINE CRANKING  
ISC1, ISC2, ISC3, ISC4-E1 : PULSE GENERATION (ENGINE IDLING)  
W-E1 : **9-14 VOLTS** WITH ENGINE IDLING  
IGF-E1 : PULSE GENERATION (ENGINE IDLING)  
NSW-E1 : **0-3 VOLTS** WITH IGNITION SW ON AND SHIFT LEVER **P** OR **N** POSITION  
: **9-14 VOLTS** WITH IGNITION SW ON AND SHIFT LEVER EXCEPT **P** OR **N** POSITION  
SP1 : PULSE GENERATION  
TE1, TE2-E1 : **9-14 VOLTS** WITH IGNITION SW ON  
A/C-E1 : **0-1.5 VOLTS** WITH IGNITION SW ON AND A/C OFF  
: **7.5-14 VOLTS** WITH IGNITION SW ON AND A/C ON  
ELS-E1 : **9-14 VOLTS** WITH TAILLIGHT ON, DEFOGGER ON  
: **0-1.5 VOLTS** WITH TAILLIGHT OFF, DEFOGGER OFF  
STP-E1 : **7.5-14 VOLTS** WITH STOP LIGHT SW ON (BRAKE PEDAL DEPRESSED)  
: **0-1.5 VOLTS** WITH STOP LIGHT SW OFF

(RESISTANCE OF ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) WIRING CONNECTORS)

IDL1-E2 : INFINITY WITH THROTTLE VALVE OPEN  
: **0-2.3 K $\Omega$**  WITH THROTTLE VALVE FULLY CLOSED  
VTA1-E2 : **3.3 K $\Omega$ -10.0 K $\Omega$**  WITH THROTTLE VALVE FULLY OPEN  
: **200  $\Omega$ -800  $\Omega$**  WITH THROTTLE VALVE FULLY CLOSED  
VCC-E2 : **4 K $\Omega$ -9 K $\Omega$**   
THA-E2 : **2 K $\Omega$ -3 K $\Omega$**  WITH INTAKE AIR TEMP. **20°C (68°F)**  
THW-E2 : **200  $\Omega$ -400  $\Omega$**  WITH COOLANT TEMP. **80°C (176°F)**  
ISC1, ISC2, ISC3, ISC4- +B : **10-30  $\Omega$**   
#10, #20, #30, #40, #50, #60- +B : **13.2-14.2  $\Omega$**

 : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 5	24 (2JZ-GTE)	H 5	24	P 2	25 (2JZ-GTE)
C 1	24	H11	29	S 1	25
C 2	24	I 1	25 (2JZ-GTE)	S 5	25
C 3	24	I 2	B 25	S11	29
C 9	28	I 3	A 25	T 2	25 (2JZ-GTE)
C10	A 28	I12	25 (2JZ-GTE)	T 5	29
C12	B 28	I13	25 (2JZ-GTE)	T 6	29
D 1	24 (2JZ-GTE)	I14	25 (2JZ-GTE)	T14	25
D 5	28	I15	25 (2JZ-GTE)	V 2	25 (2JZ-GTE)
D 8	28	I16	25 (2JZ-GTE)	V 3	25 (2JZ-GTE)
E 1	24 (2JZ-GTE)	I17	25 (2JZ-GTE)	V 4	25
E 3	24 (2JZ-GTE)	I19	29	V 5	25
E 9	B 29	J 2	29	V 6	25 (2JZ-GTE)
E10	A 29	K 1	25 (2JZ-GTE)	V 7	25
F14	30	K 2	25 (2JZ-GTE)	V 8	25
F15	30	M 1	25	V10	25 (2JZ-GTE)

 : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1I		
1J		
1K		
2A	22	BATTERY AND 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	32 (2JZ-GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA2	32	
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IC1	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IC2		
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2		
BP1	40	FUEL GAUGE WIRE AND FLOOR NO. 2 WIRE (LUGGAGE ROOM FRONT LH)

 : GROUND POINTS

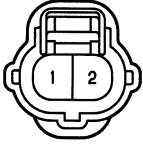
CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
ED	32 (2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD
IF	36	LEFT KICK PANEL
BI	40	LEFT QUARTER PILLAR

 : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 7	32	ENGINE ROOM MAIN WIRE	I 5	38	INSTRUMENT PANEL WIRE
E 9			I 8		
E10			I11		COWL WIRE
E12			I14		INSTRUMENT PANEL WIRE
E13			I16		CONSOLE BOX WIRE
E14			I17		ENGINE WIRE
E15			I20		COWL WIRE
E16			B 6		FLOOR NO. 2 WIRE
I 4	38	COWL WIRE			

# ENGINE CONTROL (FOR 2JZ-GTE)

A 5 GRAY



C 1 BLACK



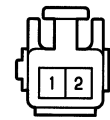
C 2 BLACK



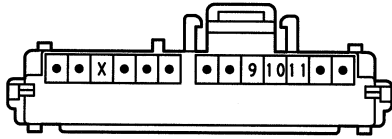
C 3 DARK GRAY



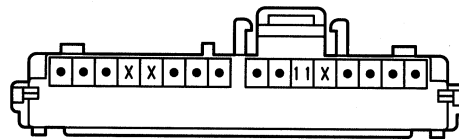
C 9



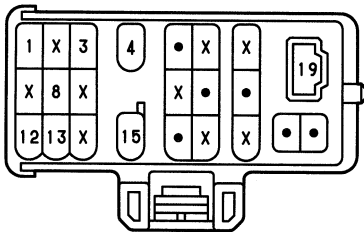
C10 (A) BLUE



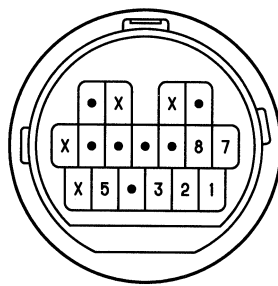
C12 (B)



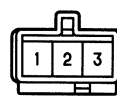
D 1 BLACK



D 5 DARK GRAY



D 8 ORANGE



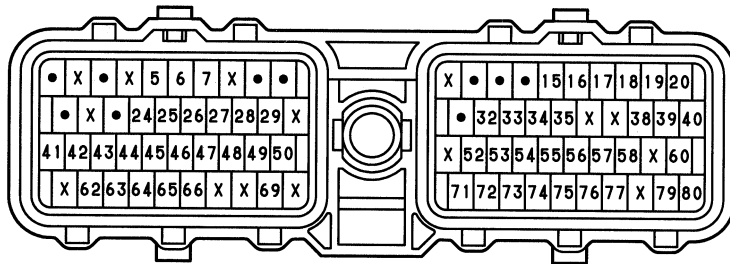
E 1 DARK GRAY



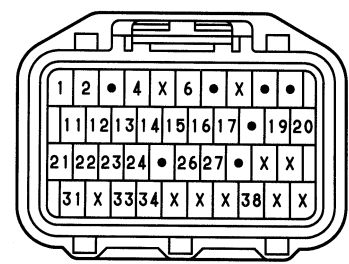
E 3 DARK GRAY



E 9 (B) DARK GRAY



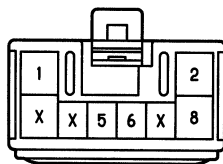
E10 (A) DARK GRAY



F14 DARK GRAY



F15 BLACK



H 5 DARK GRAY



H11 DARK GRAY



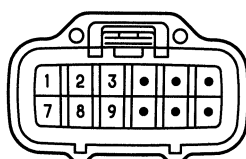
I 1 BLACK



I 2 (B) BLACK



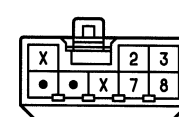
I 3 (A) BLACK



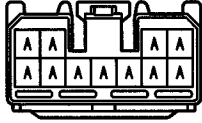
I12, I14, I16 DARK GRAY I13, I15, I17 BROWN



I19



J 2

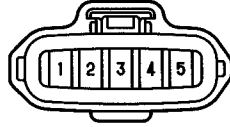


(HINT:SEE PAGE 7)

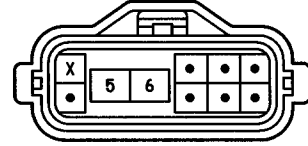
K 1.K 2 DARK GRAY



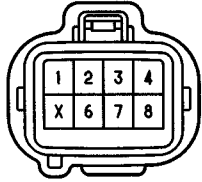
M 1 BLACK



P 2 GRAY



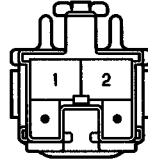
S 1 DARK GRAY



S 5 BLACK



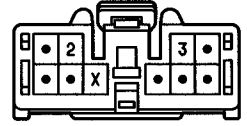
S11 BLUE



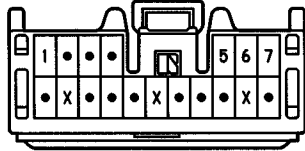
T 2 BLACK



T 5



T 6



T14 BLACK



V 2 BLACK



V 3 BROWN



V 4 BLUE



V 5 BLACK



V 6 BLUE



V 7 BLACK



V 8 BLUE



V10 BLACK



# ENGINE CONTROL (FOR 2JZ-GE)

## SYSTEM OUTLINE

THE ENGINE CONTROL SYSTEM UTILIZES A MICROCOMPUTER AND MAINTAINS OVERALL CONTROL OF THE ENGINE, TRANSMISSION ETC. AN OUTLINE OF THE ENGINE CONTROL IS GIVEN HERE.

### 1. INPUT SIGNALS

- (1) ENGINE COOLANT TEMP. (WATER TEMP.) SIGNAL CIRCUIT  
THE ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR) DETECTS THE ENGINE COOLANT TEMP. (WATER TEMP.) AND HAS A BUILT-IN THERMISTOR WITH A RESISTANCE, WHICH VARIES ACCORDING TO THE ENGINE COOLANT TEMP. (WATER TEMP.) WHICH IS INPUT INTO **TERMINAL THW** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (2) INTAKE AIR TEMP. SIGNAL CIRCUIT  
THE INTAKE AIR TEMP. SENSOR IS INSTALLED IN THE VOLUME AIR FLOW (AIR FLOW METER) AND DETECTS THE INTAKE AIR TEMP. WHICH IS INPUT AS A CONTROL SIGNAL TO **TERMINAL THA** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (3) OXYGEN DENSITY SIGNAL CIRCUIT  
(EXCEPT CALIFORNIA)  
THE OXYGEN DENSITY IN THE EXHAUST EMISSION IS DETECTED BY THE OXYGEN SENSOR FRONT AND REAR SIDE AND INPUT AS A CONTROL SIGNAL TO **TERMINALS OX1, OX2** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).  
(FOR CALIFORNIA)  
THE OXYGEN DENSITY IN THE EXHAUST EMISSION IS DETECTED BY THE HEATED OXYGEN SENSOR FRONT AND REAR SIDE AND INPUT AS A CONTROL SIGNAL TO **TERMINALS OX1, OX2, OX3** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (4) RPM SIGNAL CIRCUIT  
CRANKSHAFT POSITION IS DETECTED BY THE PICK-UP COIL INSTALLED INSIDE THE DISTRIBUTOR. CRANKSHAFT POSITION IS INPUT AS A CONTROL SIGNAL TO **TERMINALS G1** AND **G2** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU), AND ENGINE SPEED IS INPUT TO **TERMINAL NE**.
- (5) THROTTLE POSITION SIGNAL CIRCUIT  
THE THROTTLE POSITION SENSOR DETECTS THE THROTTLE VALVE OPENING ANGLE AS A CONTROL SIGNAL, WHICH IS INPUT INTO **TERMINAL VTA1** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). WHEN THE VALVE IS COMPLETELY CLOSED, THE CONTROL SIGNAL IS INPUT INTO **TERMINAL IDL1**.
- (6) VEHICLE SPEED CIRCUIT  
THE VEHICLE SPEED IS DETECTED BY VEHICLE SPEED SENSOR (SPEED SENSOR) NO.1 INSTALLED IN THE TRANSMISSION AND THE SIGNAL IS INPUT TO **TERMINAL SP1** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) VIA THE COMBINATION METER.
- (7) NEUTRAL POSITION SIGNAL CIRCUIT  
THE PARK/NEUTRAL POSITION SW (NEUTRAL START SW) DETECTS WHETHER THE SHIFT POSITION IS IN "N" OR "P" OR NOT, AND THE SIGNAL IS INPUT INTO **TERMINAL NSW** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (8) A/C SW SIGNAL CIRCUIT  
THE OPERATING VOLTAGE OF THE A/C MAGNETIC CLUTCH IS DETECTED AND THE SIGNAL IS INPUT INTO **TERMINAL ACMG** OF ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (9) BATTERY SIGNAL CIRCUIT  
VOLTAGE IS CONSTANTLY APPLIED TO **TERMINAL BATT** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). WITH THE IGNITION SW TURNED ON, THE VOLTAGE FOR ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) START-UP POWER SUPPLY IS APPLIED TO **TERMINALS +B** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) VIA EFI MAIN RELAY.  
THE CURRENT FLOWING THROUGH THE **IGN** FUSE FLOWS TO **TERMINAL IGSW** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU).
- (10) INTAKE AIR VOLUME SIGNAL CIRCUIT  
INTAKE AIR VOLUME IS DETECTED BY THE VOLUME AIR FLOW (AIR FLOW METER) AND THE SIGNAL IS INPUT TO **TERMINAL KS** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (11) STOP LIGHT SW SIGNAL CIRCUIT  
THE STOP LIGHT SW IS USED TO DETECT WHETHER THE VEHICLE IS BRAKING OR NOT AND THE SIGNAL IS INPUT INTO **TERMINAL STP** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.
- (12) STARTER SIGNAL CIRCUIT  
TO CONFIRM WHETHER THE ENGINE IS CRANKING, THE VOLTAGE IS APPLIED TO THE STARTER MOTOR DURING CRANKING IS DETECTED AND THE SIGNAL IS INPUT INTO **TERMINAL STA** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS A CONTROL SIGNAL.



(13) ENGINE KNOCK SIGNAL CIRCUIT

ENGINE KNOCKING IS DETECTED BY KNOCK SENSOR FRONT AND REAR SIDE AND THE SIGNAL IS INPUT INTO **TERMINALS KNK1 AND KNK2** AS A CONTROL SIGNAL.

## 2. CONTROL SYSTEM

\* SEQUENTIAL MULTIPOINT FUEL INJECTION (ELECTRONIC FUEL INJECTION) SYSTEM

THE SEQUENTIAL MULTIPOINT FUEL INJECTION (ELECTRONIC FUEL INJECTION) SYSTEM MONITORS THE ENGINE CONDITION THROUGH THE SIGNALS INPUT FROM EACH SENSOR (INPUT SIGNALS FROM (1) TO (13) ETC.) TO THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). THE BEST FUEL INJECTION TIMING IS DECIDED BASED ON THIS DATA AND THE PROGRAM MEMORIZED BY THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU), AND THE CONTROL SIGNAL IS OUTPUT TO **TERMINALS #10, #20, #30, 40, #50 AND #60** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) TO OPERATE THE INJECTOR (INJECT THE FUEL). THE SEQUENTIAL MULTIPOINT FUEL INJECTION (ELECTRONIC FUEL INJECTION) SYSTEM PRODUCES CONTROLS OF FUEL INJECTION OPERATION BY THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) IN RESPONSE TO THE DRIVING CONDITIONS.

\* ESA (ELECTRONIC SPARK ADVANCE) SYSTEM

THE ESA SYSTEM MONITORS THE ENGINE CONDITION THROUGH THE SIGNALS INPUT TO THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) FROM EACH SENSOR (INPUT SIGNALS FROM (1), (2), (4) TO (13) ETC.). THE BEST IGNITION TIMING IS DECIDED ACCORDING TO THIS DATA AND THE MEMORIZED DATA IN THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AND THE CONTROL SIGNAL IS OUTPUT TO **TERMINAL IGT**. THIS SIGNAL CONTROLS THE IGNITER TO PROVIDE THE BEST IGNITION TIMING FOR THE DRIVING CONDITIONS.

\* HEATED OXYGEN SENSOR HEATER CONTROL SYSTEM (FOR CALIFORNIA)

THE MAIN HEATED OXYGEN SENSOR FRONT AND REAR SIDE, SUB 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 OXYGEN SENSOR TO IMPROVE DETECTION PERFORMANCE OF THE SENSOR. THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS FROM (1), (2), (4), (9) TO (11) ETC.), AND OUTPUTS CURRENT TO **TERMINALS HT1, HT2, HT3** TO CONTROL THE HEATER.

\* IDLE AIR CONTROL (IDLE SPEED CONTROL) SYSTEM

THE IDLE AIR CONTROL (ISC) SYSTEM (STEP MOTOR TYPE) INCREASES THE ENGINE SPEED AND PROVIDES IDLING 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 (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS FROM (1), (4), (5), (8), (9), (11) ETC.), OUTPUTS CURRENT TO **TERMINALS ISC1, ISC2, ISC3 AND ISC4** TO CONTROL THE IDLE AIR CONTROL VALVE (ISC VALVE).

\* EGR CONTROL SYSTEM

THE EGR CONTROL SYSTEM DETECTS THE SIGNAL FROM EACH SENSOR (INPUT SIGNALS FROM (1), (4), (9), (10) ETC.), AND OUTPUTS CURRENT TO **TERMINAL EGR** TO CONTROL THE EGR VALVE.

\* FUEL PUMP CONTROL SYSTEM

THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) OUTPUTS CURRENT TO **TERMINAL FPC** AND CONTROLS THE FUEL PUMP ECU AND FUEL PUMP DRIVE SPEED IN RESPONSE TO THE DRIVING CONDITIONS.

\* ACIS (ACOUSTIC CONTROL INDUCTION SYSTEM)

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 (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) JUDGES THE VEHICLE SPEED BY THE SIGNALS ((4), (5)) FROM EACH SENSOR AND OUTPUTS SIGNALS TO THE **TERMINAL ACIS** TO CONTROL THE VSV (FOR INTAKE CONTROL VALVE).

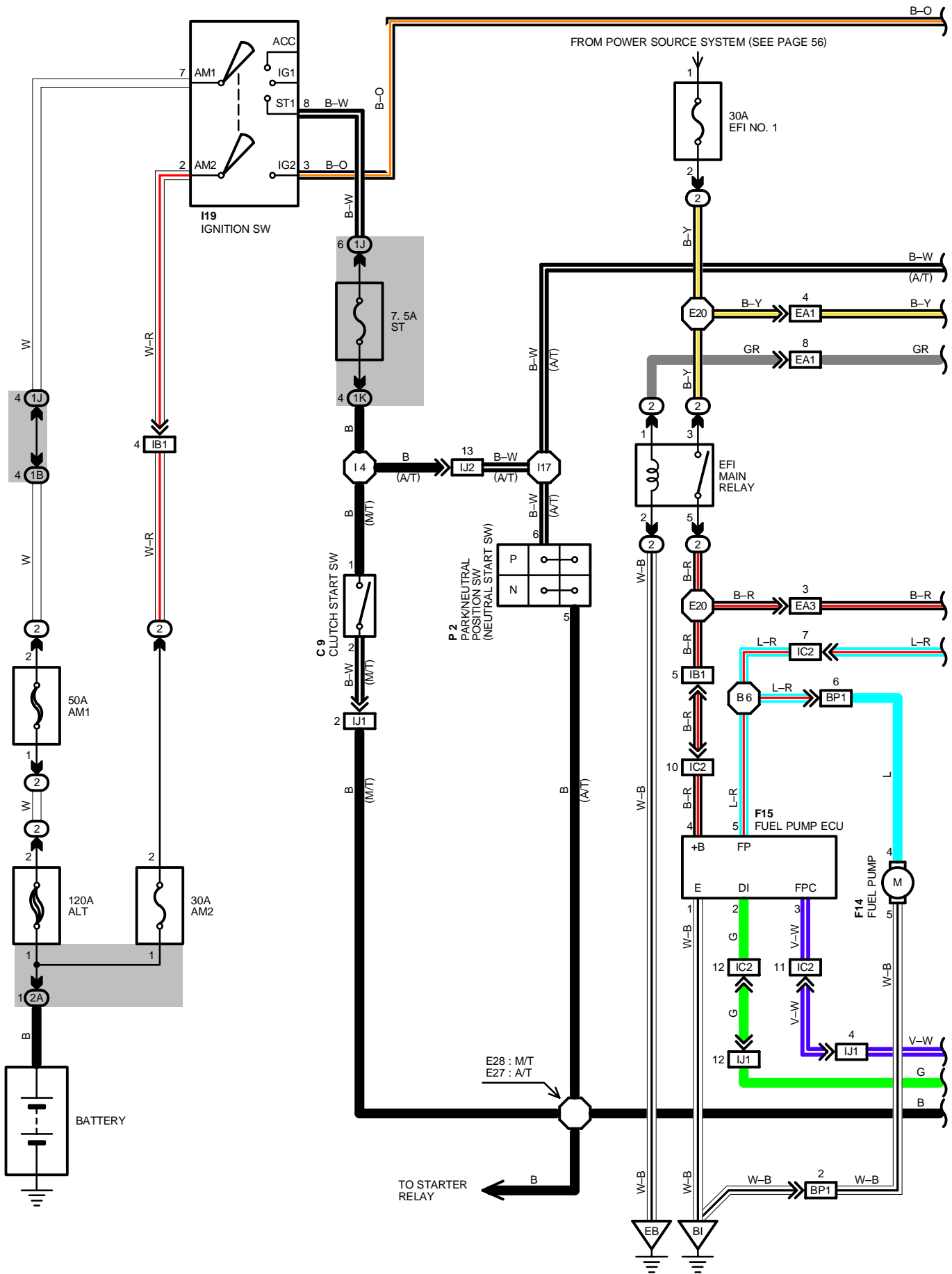
## 3. DIAGNOSIS SYSTEM

WITH THE DIAGNOSIS SYSTEM, WHEN THERE IS A MALFUNCTION IN THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) SIGNAL SYSTEM, THE MALFUNCTIONING SYSTEM IS RECORDED IN THE MEMORY. THE MALFUNCTIONING SYSTEM CAN BE FOUND BY READING THE CODE DISPLAYED BY THE MALFUNCTION INDICATOR LAMP (CHECK ENGINE WARNING LIGHT).

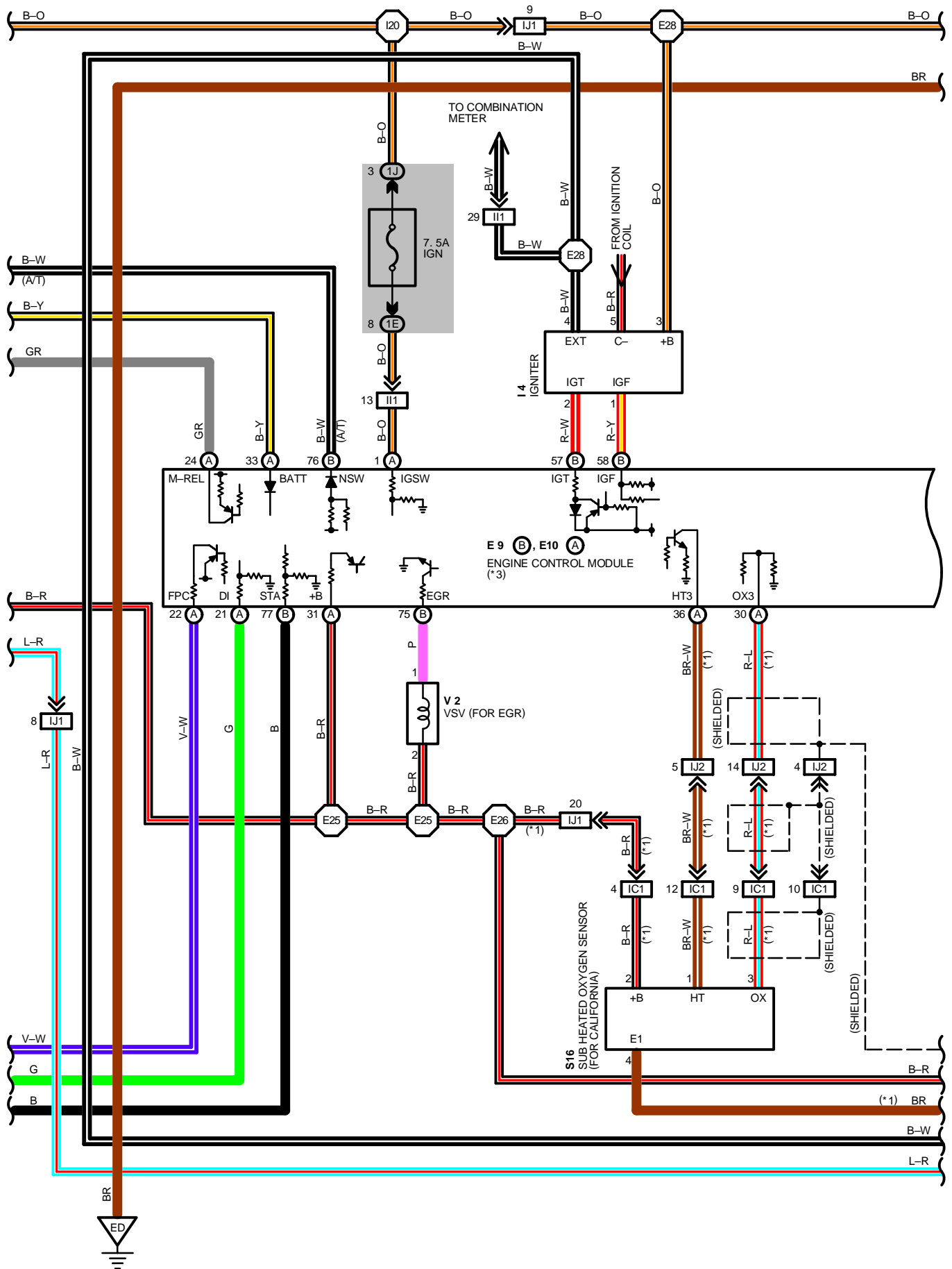
## 4. FAIL-SAFE SYSTEM

WHEN A MALFUNCTION HAS OCCURRED IN ANY SYSTEM, IF THERE IS A POSSIBILITY OF ENGINE TROUBLE BEING CAUSED BY CONTINUED CONTROL BASED ON THE SIGNALS FROM THAT SYSTEM, THE FAIL-SAFE SYSTEM EITHER CONTROLS THE SYSTEM BY USING DATA (STANDARD VALUES) RECORDED IN THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) MEMORY OR ELSE STOPS THE ENGINE.

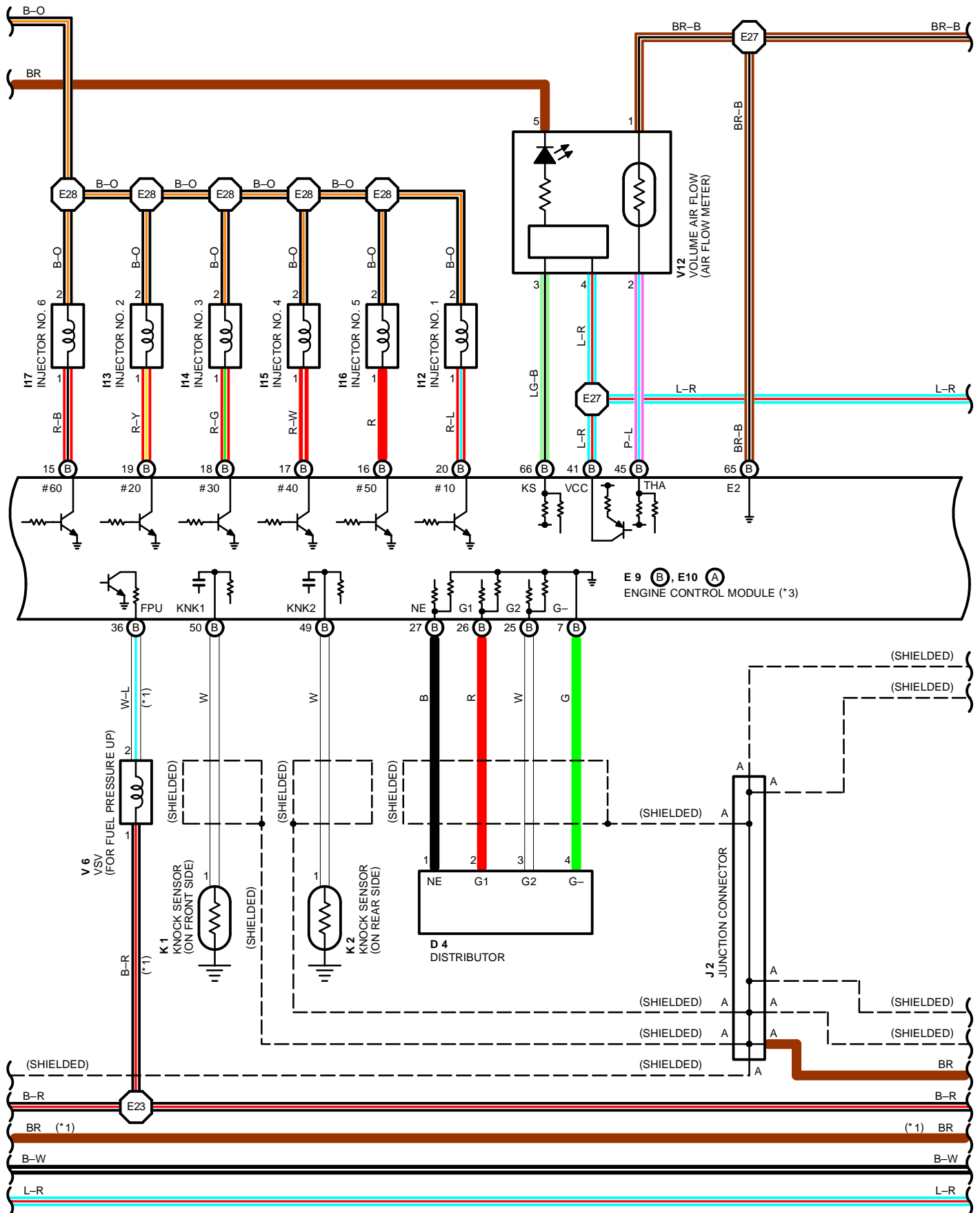
# ENGINE CONTROL (FOR 2JZ-GE)



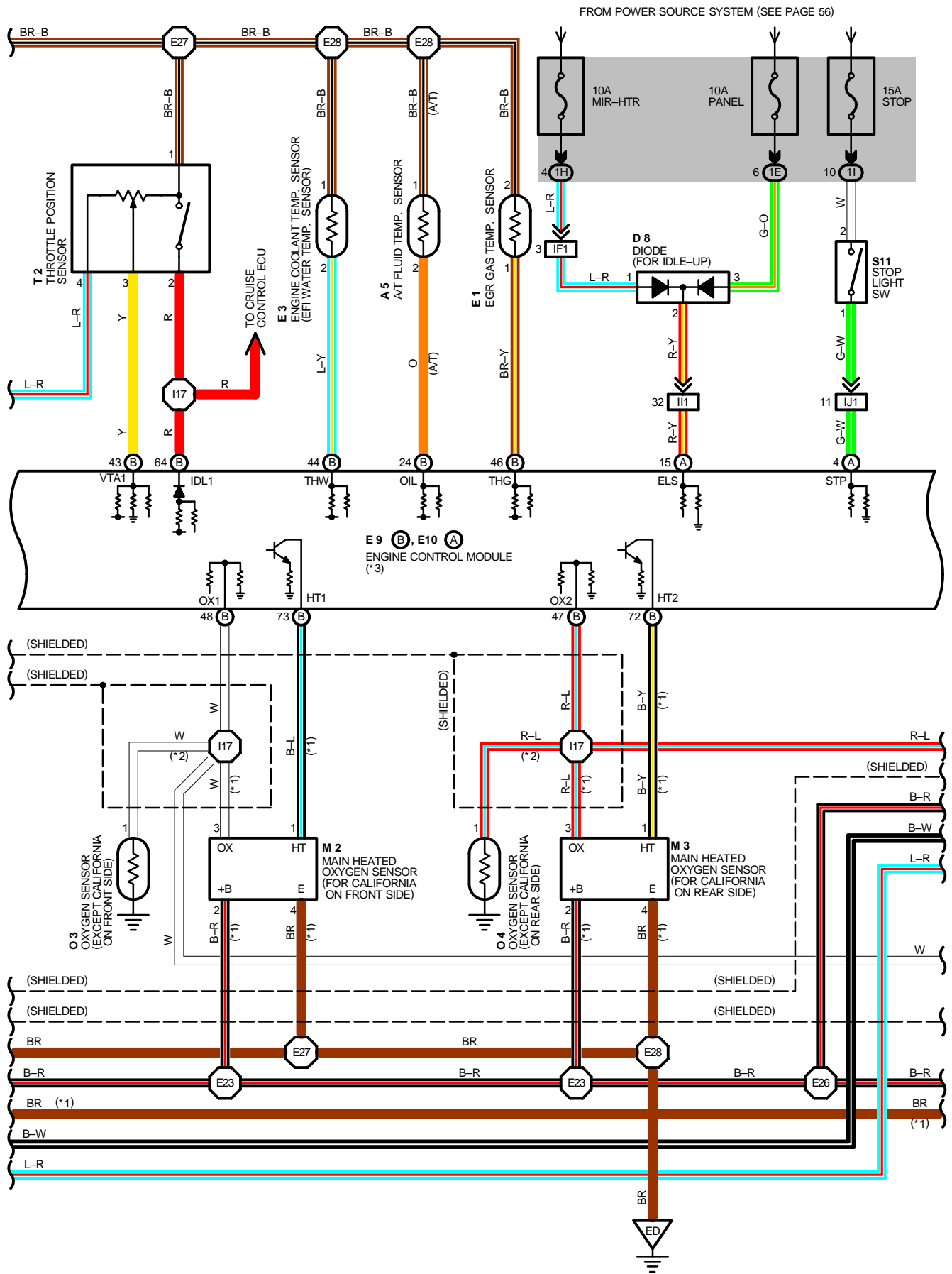
\*1 : CALIFORNIA  
 \*2 : EXCEPT CALIFORNIA  
 \*3 : ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU



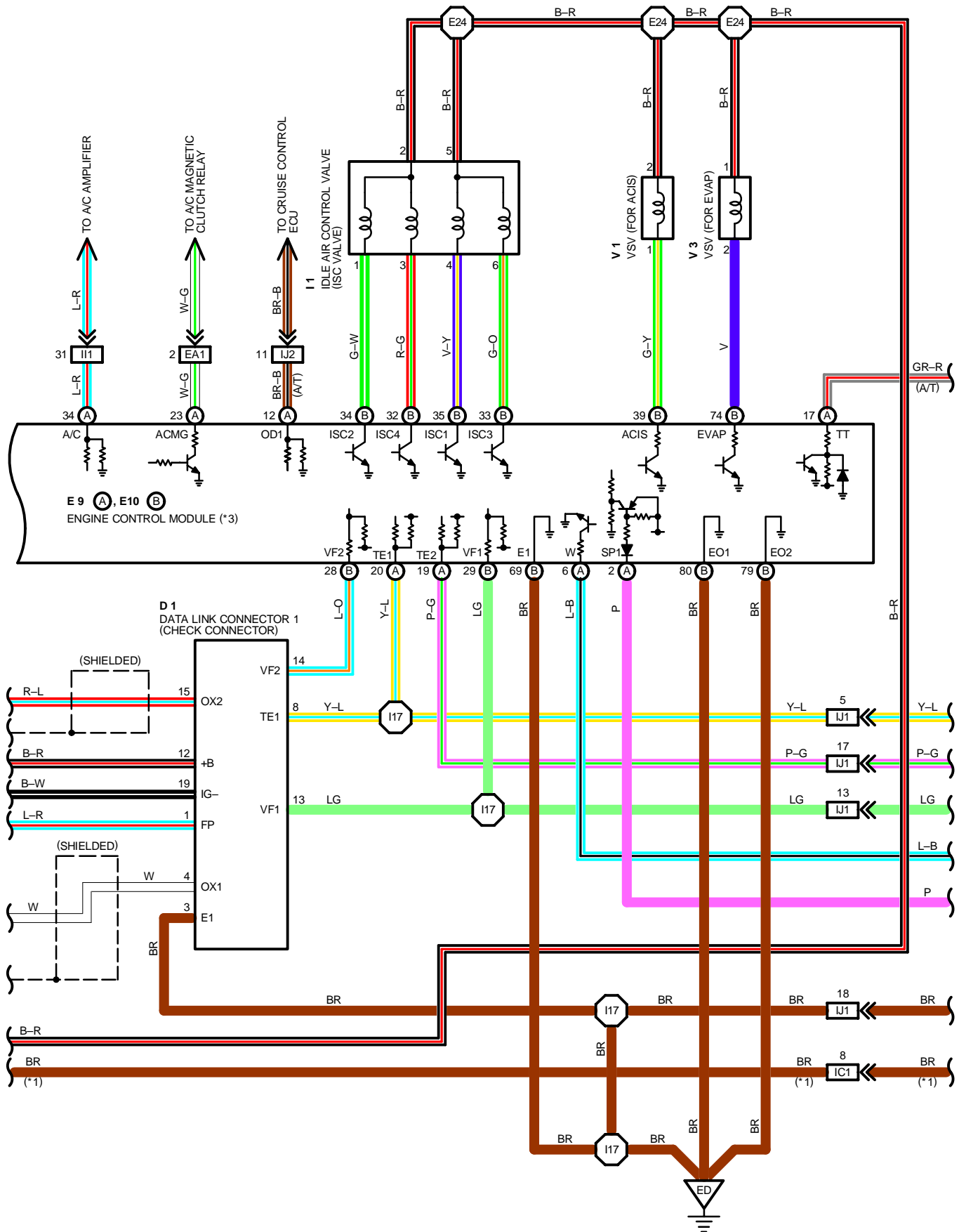
# ENGINE CONTROL (FOR 2JZ-GE)



- \*1 : CALIFORNIA
- \*2 : EXCEPT CALIFORNIA
- \*3 : ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU

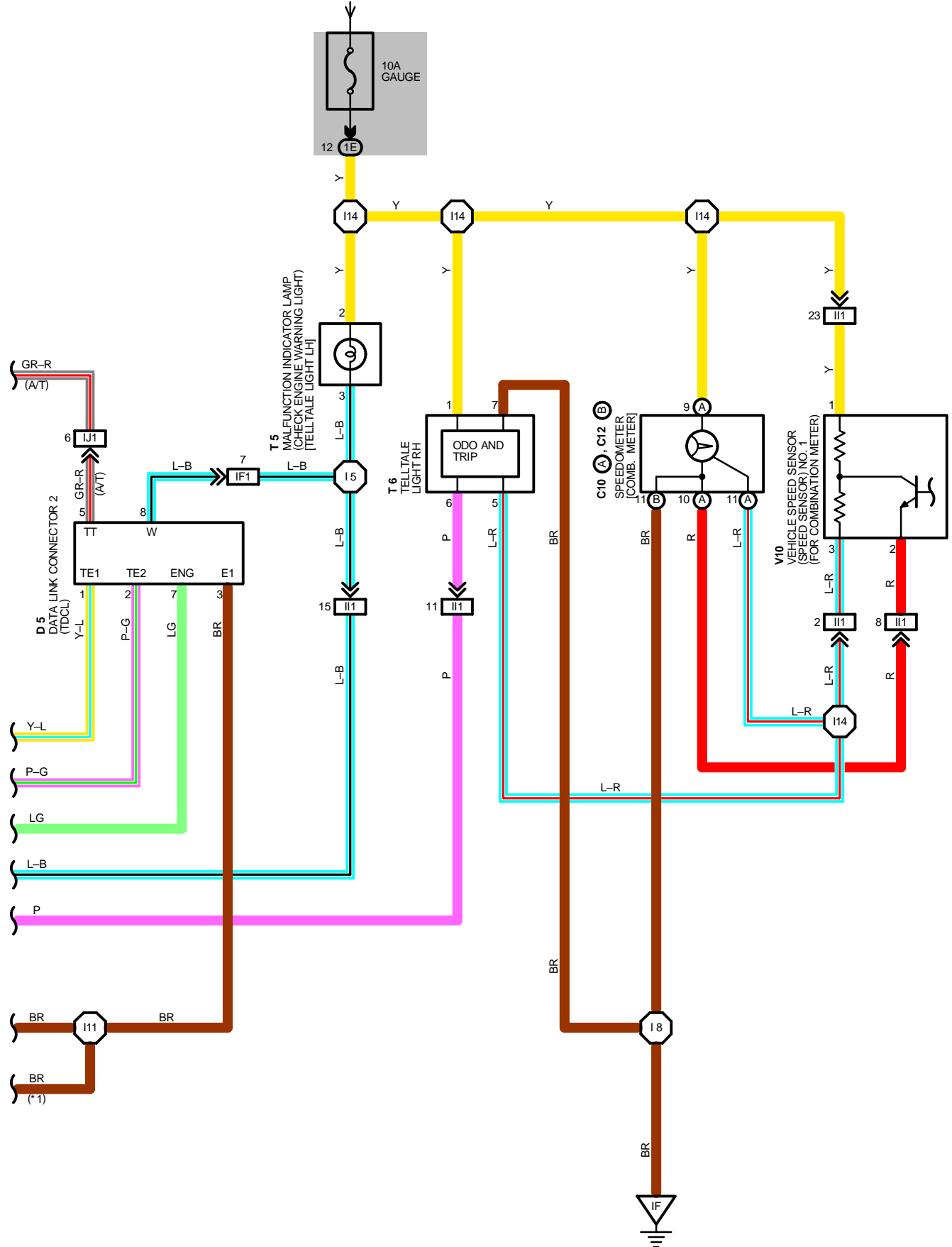


# ENGINE CONTROL (FOR 2JZ-GE)



\*1 : CALIFORNIA  
 \*2 : EXCEPT CALIFORNIA  
 \*3 : ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



# ENGINE CONTROL (FOR 2JZ-GE)

## SERVICE HINTS

### EFI MAIN RELAY

(2) 3- (2) 5 : CLOSED WITH IGNITION SW AT ON POSITION

### E 3 ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR)

1- 2: **10-20 K $\Omega$**  (-20°C, -4°F)

**4- 7 K $\Omega$**  ( 0°C, 32°F)

**2- 3 K $\Omega$**  (20°C, 68°F)

**0.9-1.3 K $\Omega$**  (40°C, 104°F)

**0.4-0.7 K $\Omega$**  (60°C, 140°F)

**0.2-0.4 K $\Omega$**  (80°C, 176°F)

### I 1 IDLE AIR CONTROL VALVE (ISC VALVE)

1, 3- 2: APPROX. **10-30  $\Omega$**

4, 6- 5: APPROX. **10-30  $\Omega$**

### I12, I13, I14, I15, I16, I17 INJECTOR

1- 2: APPROX. **13-8  $\Omega$**

### T 2 THROTTLE POSITION SENSOR

1- 4: APPROX. **4-9 K $\Omega$**

1- 3: **3.3- 10.0 K $\Omega$**  WITH THROTTLE VALVE FULLY OPENED POSITION

**0.2- 0.8 K $\Omega$**  WITH CLEARANCE BETWEEN LEVER AND STOP SCREW **0 MM (0 IN.)**

1- 2: **0-2.3 K $\Omega$**  WITH CLEARANCE BETWEEN LEVER AND STOP SCREW **0.45 MM (0.0177 IN.)**

INFINITY WITH CLEARANCE BETWEEN LEVER AND STOP SCREW **0.55 MM (0.0216 IN.)**

### E 9(B), E10(A) ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU)

(VOLTAGE AT ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) WIRING CONNECTORS)

BATT-E1 : ALWAYS **9-14 VOLTS**

IGSW-E1 : **9-14 VOLTS** WITH IGNITION SW ON

M-REL-E1 : **9-14 VOLTS** WITH IGNITION SW ON

+B-E1 : **9-14 VOLTS** WITH IGNITION SW ON

IDL1-E2 : **9-14 VOLTS** WITH IGNITION SW ON AND THROTTLE VALVE FULLY OPEN

: **0-1.5 VOLTS** WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED

VTA1-E2 : **0.3- 0.8 VOLTS** WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED

: **3.2-4.9 VOLTS** WITH IGNITION SW ON AND THROTTLE VALVE OPEN

#10, #20, #30-E01, E02 : PULSE GENERATION (ENGINE IDLING)

#40, #50, #60-E01, E02 : PULSE GENERATION (ENGINE IDLING)

THA-E2 : **0.5-3.4 VOLTS** WITH IGNITION SW ON AND INTAKE AIR TEMP. **20°C (68°F)**

THW-E2 : **0.2-1.0 VOLTS** WITH IGNITION SW ON AND COOLANT TEMP. **80°C (176°F)**

STA-E1 : **6-14 VOLTS** WITH ENGINE CRANKING

ISC1, ISC2, ISC3, ISC4-E1 : PULSE GENERATION (ENGINE IDLING)

W-E1 : **9-14 VOLTS** WITH ENGINE IDLING

IGF-E1 : PULSE GENERATION (ENGINE IDLING)

NSW-E1 : **0.3 VOLTS** WITH IGNITION SW ON AND SHIFT LEVER **P** OR **N** POSITION

**9-14 VOLTS** WITH IGNITION SW ON AND SHIFT LEVER EXCEPT **P** OR **N** POSITION

SP1 : PULSE GENERATION

TE1, TE2-E1 : **9-14 VOLTS** WITH IGNITION SW ON

A/C-E1 : **0-1.5 VOLTS** WITH IGNITION SW ON AND A/C OFF

**7.5-14 VOLTS** WITH IGNITION SW ON AND A/C ON

ELS-E1 : **9-14 VOLTS** WITH TAILLIGHT ON, DEFOGGER ON

**0-1.5 VOLTS** WITH TAILLIGHT OFF, DEFOGGER OFF

STP-E1 : **7.5-14 VOLTS** WITH STOP LIGHT SW ON (BRAKE PEDAL DEPRESSED)

**0-1.5 VOLTS** WITH STOP LIGHT SW OFF

(RESISTANCE OF ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) CONNECTORS)

IDL1-E2 : INFINITY WITH THROTTLE VALVE OPEN

: **0-2.3 K $\Omega$**  WITH THROTTLE VALVE FULLY CLOSED

VTA1-E2 : **3.3 K $\Omega$ -10.0 K $\Omega$**  WITH THROTTLE VALVE FULLY OPEN

: **200  $\Omega$ -800  $\Omega$**  WITH THROTTLE VALVE FULLY CLOSED

VCC-E2 : **4 K $\Omega$ -9 K $\Omega$**

THA-E2 : **2 K $\Omega$ -3 K $\Omega$**  WITH INTAKE AIR TEMP. **20°C (68°F)**

THW-E2 : **200  $\Omega$ -400  $\Omega$**  WITH COOLANT TEMP. **80°C (176°F)**

ISC1, ISC2, ISC3, ISC4- +B : **10-30  $\Omega$**

#10, #20, #30, #40, #50, #60- +B : **13.2-14.2  $\Omega$**

ACIS- +B : **38.5-44.5  $\Omega$**



 : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 5	26 (2JZ-GE)	I 1	27 (2JZ-GE)	O 3	27
C 9	28	I 4	27	O 4	27
C10	A 28	I12	27 (2JZ-GE)	P 2	27 (2JZ-GE)
C12	B 28	I13	27 (2JZ-GE)	S11	29
D 1	26 (2JZ-GE)	I14	27 (2JZ-GE)	S16	29
D 4	26	I15	27 (2JZ-GE)	T 2	27 (2JZ-GE)
D 5	28	I16	27 (2JZ-GE)	T 5	29
D 8	28	I17	27 (2JZ-GE)	T 6	29
E 1	26 (2JZ-GE)	I19	29	V 1	27
E 3	26 (2JZ-GE)	J 2	29	V 2	27 (2JZ-GE)
E 9	B 29	K 1	27 (2JZ-GE)	V 3	27 (2JZ-GE)
E10	A 29	K 2	27 (2JZ-GE)	V 6	27 (2JZ-GE)
F14	30	M 2	27	V10	27 (2JZ-GE)
F15	30	M 3	27	V12	27

 : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1I		
1J		
1K		
2A	22	BATTERY AND 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 (2JZ-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA3	34	
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IC1	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IC2		
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2		
BP1	40	FUEL GAUGE WIRE AND FLOOR NO. 2 WIRE (LUGGAGE ROOM FRONT LH)

 : GROUND POINTS

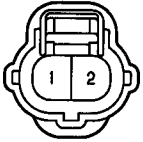
CODE	SEE PAGE	GROUND POINTS LOCATION
EB	34 (2JZ-GE)	FRONT SIDE OF LEFT FENDER
ED	34 (2JZ-GE)	REAR SIDE OF INTAKE MANIFOLD
IF	36	LEFT KICK PANEL
BI	40	LEFT QUARTER PILLAR

 : SPLICE POINTS

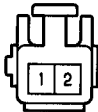
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS		
E20	34	ENGINE ROOM MAIN WIRE	I 5	38	INSTRUMENT PANEL WIRE		
E23	34	ENGINE WIRE	I 8				
E24			I11			38	COWL WIRE
E25			I14			38	INSTRUMENT PANEL WIRE
E26			I17			38	ENGINE WIRE
E27			I20			38	COWL WIRE
E28			B 6	40	FLOOR NO. 2 WIRE		
I 4	38	COWL WIRE					

# ENGINE CONTROL (FOR 2JZ-GE)

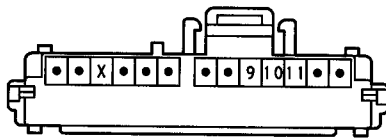
A 5 GRAY



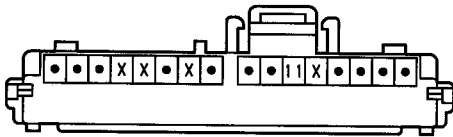
C 9



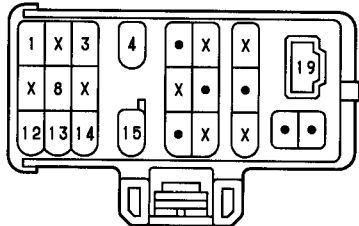
C10 (A) BLUE



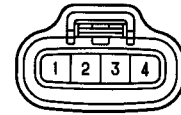
C12 (B)



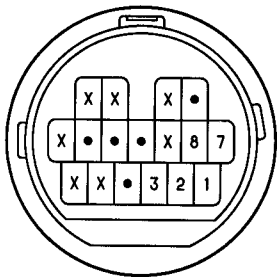
D 1 BLACK



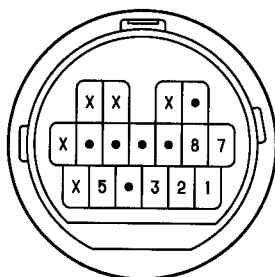
D 4 BLACK



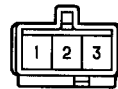
(M/T) D 5 DARK GRAY



(A/T) D 5 DARK GRAY



D 8 ORANGE



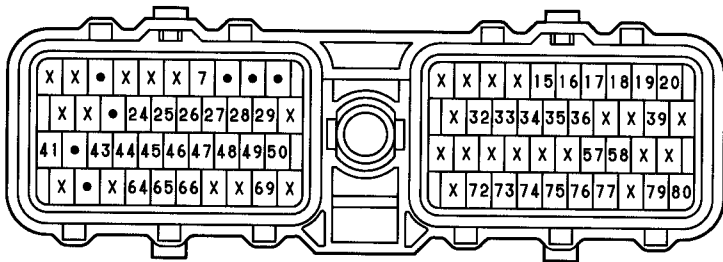
E 1 DARK GRAY



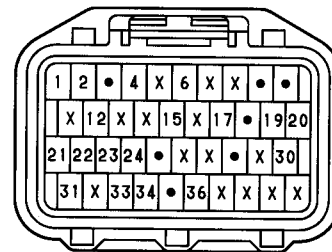
E 3 GREEN



E 9 (B) DARK GRAY



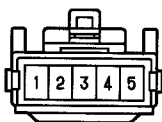
E10 (A) DARK GRAY



F14 DARK GRAY



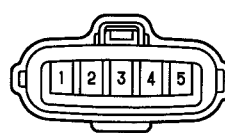
F15 BLACK



I 1 BLACK



I 4 BLACK



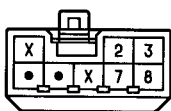
I12, I14, I16 DARK GRAY



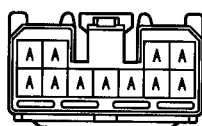
I13, I15, I17 BROWN



I19



J 2



(HINT: SEE PAGE 7)

K 1, K 2 DARK GRAY



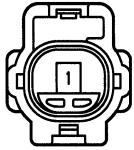
M 2 DARK GRAY



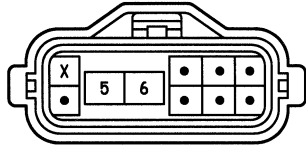
M 3 DARK GRAY



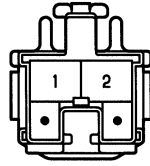
O 3.0 4 DARK GRAY



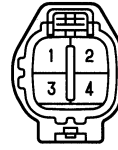
P 2 GRAY



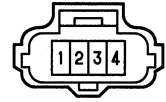
S11 BLUE



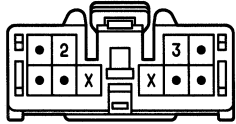
S16 GRAY



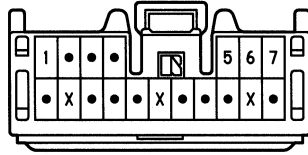
T 2 BLACK



T 5



T 6



V 1 BROWN



V 2 BLACK



V 3 BLUE



V 6 BLUE



V10 BLACK

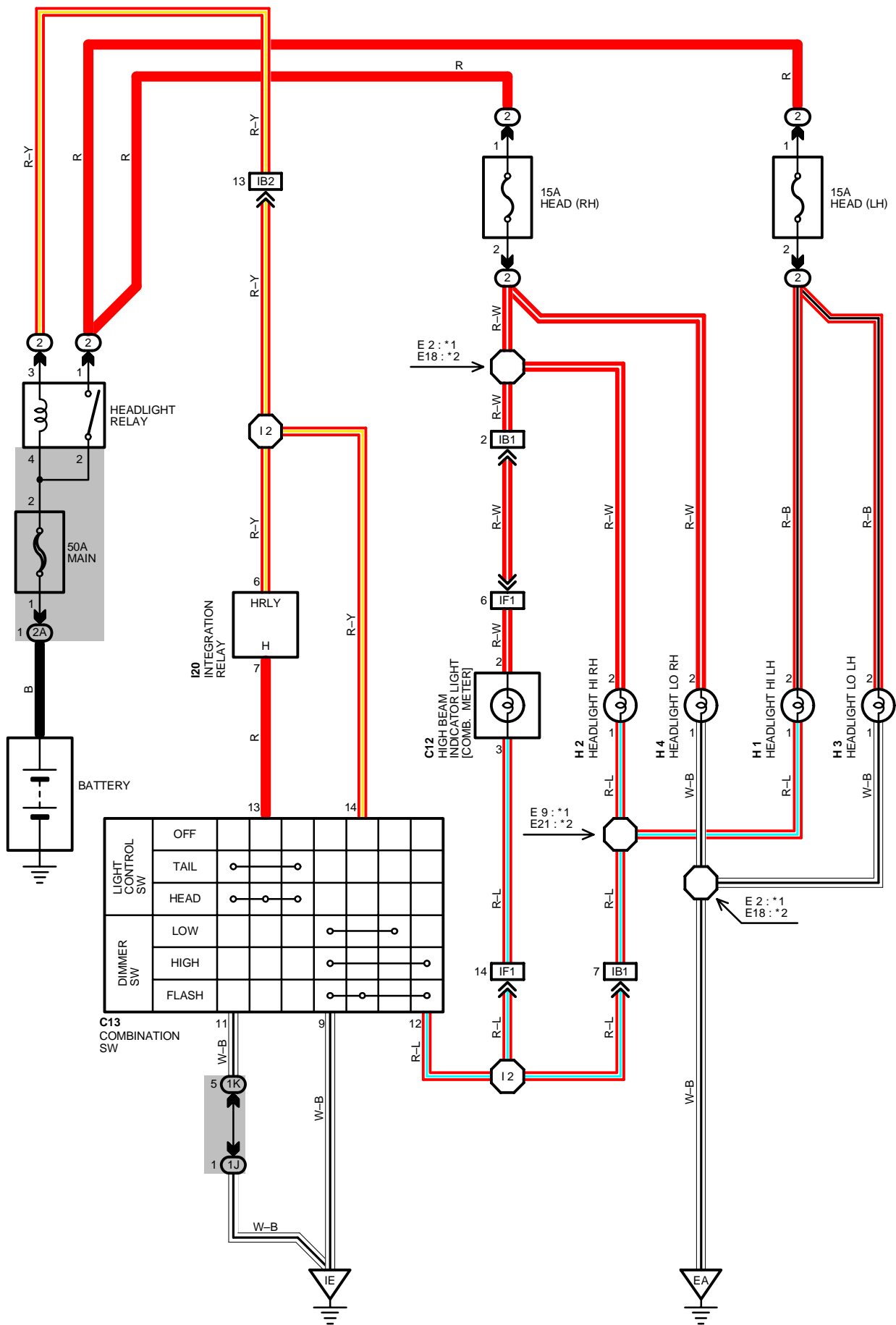


V12 BLACK



# HEADLIGHT (FOR USA)

\*1 : 2JZ-GTE  
\*2 : 2JZ-GE



## SERVICE HINTS

### HEADLIGHT RELAY

2 1- : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION OR DIMMER SW AT **FLASH** POSITION

### C13 LIGHT CONTROL SW [COMB. SW]

13-11 : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION

### C13 DIMMER SW [COMB. SW]

14-9 : CLOSED WITH DIMMER SW AT **FLASH** POSITION

12-9 : CLOSED WITH DIMMER SW AT **HIGH** OR **FLASH** POSITION

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C12	28	H 2	24 (2JZ-GTE)	H 4	27 (2JZ-GTE)
C13	28		27 (2JZ-GE)		27 (2JZ-GE)
H 1	24 (2JZ-GTE)	H 3	24 (2JZ-GTE)	I20	29
	27 (2JZ-GE)		27 (2JZ-GE)		

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1J	20	COWL WIRE AND J/B NO. 1 (LEFT KICK LEFT)
1K		
2A	22	BATTERY AND 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)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB2		
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)

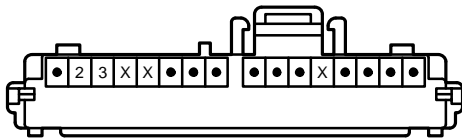
### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
	34 (2JZ-GE)	
IE	36	LEFT KICK PANEL

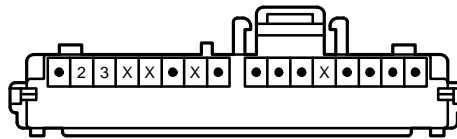
### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32	ENGINE ROOM MAIN WIRE	E21	34	ENGINE ROOM MAIN WIRE
E 9			I 2	38	COWL WIRE
E18	34				

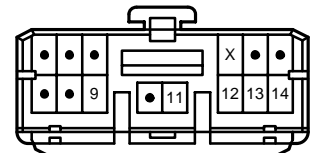
(2JZ-GTE) C12



(2JZ-GE) C12



C13 BLACK



H 1 BLACK



H 2 BLACK



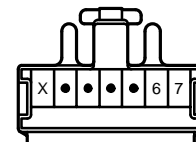
H 3 BROWN



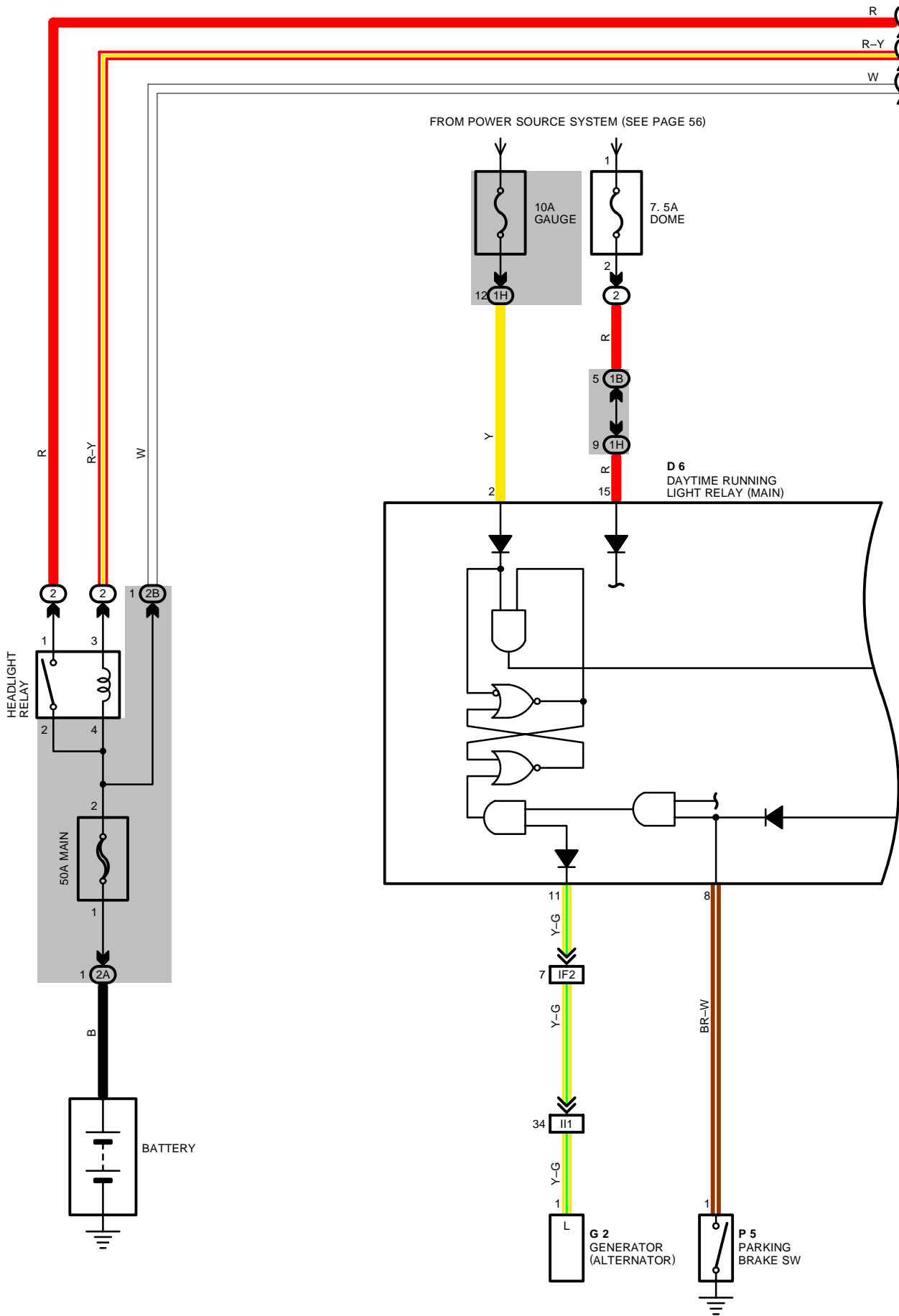
H 4 BROWN

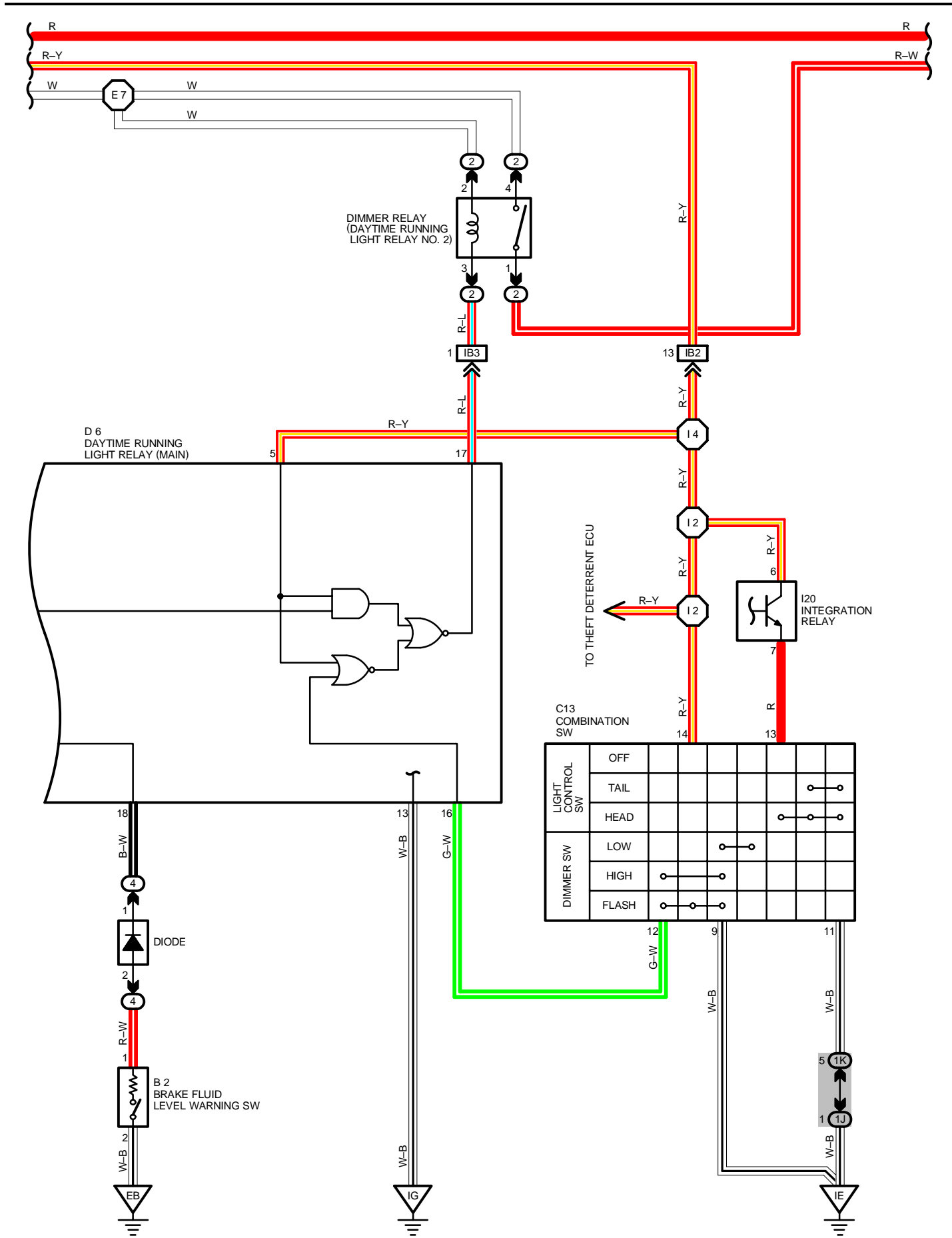


I20

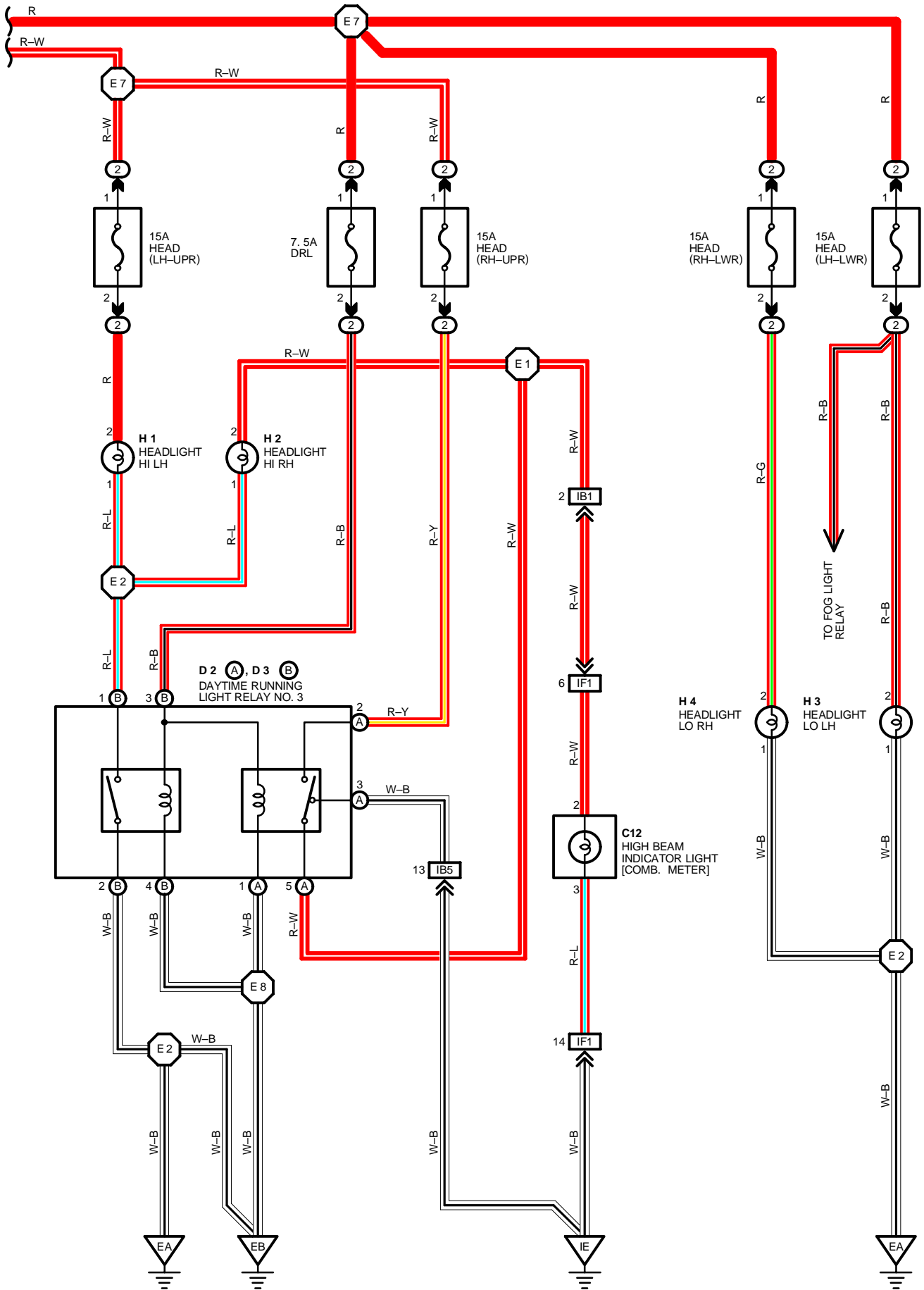


# HEADLIGHT (FOR CANADA)





# HEADLIGHT (FOR CANADA)





## SYSTEM OUTLINE

VOLTAGE IS ALWAYS APPLIED FROM THE **MAIN** FUSE, THROUGH THE HEADLIGHT RELAY (COIL SIDE) TO **TERMINAL 5** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN), **TERMINAL 6** OF INTEGRATION RELAY, **TERMINAL 14** OF DIMMER SW, DIMMER RELAY (DAYTIME RUNNING LIGHT RELAY NO. 2) (COIL SIDE), TO **TERMINAL 17** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN). WHEN THE IGNITION SW IS TURNED ON, VOLTAGE FROM THE **GAUGE** FUSE IS APPLIED TO **TERMINAL 2** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN).

### 1. DAYTIME RUNNING LIGHT OPERATION

WHEN THE ENGINE STARTS, VOLTAGE FROM **TERMINAL "L"** OF THE GENERATOR (ALTERNATOR) IS APPLIED TO **TERMINAL 11** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN). IF THE PARKING BRAKE LEVER IS PULLED UP (PARKING BRAKE SW ON) AT THIS TIME, THE DAYTIME RUNNING LIGHT SYSTEM DOES NOT OPERATE. WHEN THE PARKING BRAKE IS RELEASED (PARKING BRAKE SW OFF), A SIGNAL IS OUTPUT FROM **TERMINAL 1** OF THE PARKING BRAKE SW TO **TERMINAL 8** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN). THIS ACTIVATES THE DAYTIME RUNNING LIGHT RELAY (MAIN), TURNING ON THE DIMMER RELAY (DAYTIME RUNNING LIGHT RELAY NO. 2). CURRENT ALSO FLOWS FROM THE MAIN FUSE TO DIMMER RELAY (DAYTIME RUNNING LIGHT RELAY NO. 2) (POINT SIDE) → **HEAD (LH-UPR)** FUSE → HEADLIGHT HI LH → HEADLIGHT HI RH → **TERMINAL (A)5** OF DAYTIME RUNNING LIGHT RELAY NO. 3 → **TERMINAL (A)3** → **GROUND**, CAUSING THE HEADLIGHTS TO LIGHT UP AT APPROX. **20 %** OF THEIR NORMAL BRIGHTNESS.

ONCE THE DAYTIME RUNNING LIGHT RELAY (MAIN) HAS BEEN ACTIVATED AND THE HEADLIGHTS LIGHT UP, THE HEADLIGHTS REMAIN ON EVEN IF THE PARKING BRAKE LEVER IS ENGAGED AGAIN (PARKING BRAKE SW ON).

### 2. HEADLIGHT OPERATION

WHEN THE LIGHT CONTROL SW IS AT **HEAD** POSITION AND THE DIMMER SW AT **LOW** POSITION, CURRENT FLOWS FROM THE HEADLIGHT RELAY (COIL SIDE) TO **TERMINAL 6** OF THE INTEGRATION RELAY → **TERMINAL 7** → **TERMINAL 13** OF LIGHT CONTROL SW → **TERMINAL 11** → **GROUND**, ACTIVATING THE HEADLIGHT RELAY.

THIS CAUSES CURRENT TO FLOW FROM THE HEADLIGHT RELAY (POINT SIDE) TO THE **HEAD LWR** FUSE → HEADLIGHT LO → **GROUND**, CAUSING THE HEADLIGHTS TO LIGHT UP AT NORMAL BRIGHTNESS. SIMULTANEOUSLY, CURRENT FLOWS FROM THE **DRL** FUSE → DAYTIME RUNNING LIGHT RELAY NO. 3 (COIL SIDE) → **GROUND**, ACTIVATING RELAY NO. 3.

WHEN THE DIMMER SW IS AT **HIGH** POSITION, **TERMINAL 12** OF THE DIMMER SW OUTPUTS A SIGNAL TO **TERMINAL 16** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN) TO ACTIVATE IT. THIS TURNS ON DIMMER RELAY (DAYTIME RUNNING LIGHT RELAY NO. 2). SO CURRENT FLOWS FROM DIMMER RELAY (DAYTIME RUNNING LIGHT RELAY NO. 2) (POINT SIDE) TO THE **HEAD (LH-UPR)** FUSE → HEADLIGHT HI LH → DAYTIME RUNNING LIGHT RELAY NO. 3 (POINT SIDE) → **GROUND**, AND FROM THE **HEAD (RH-UPR)** FUSE → DAYTIME RUNNING LIGHT RELAY NO. 3 (POINT SIDE) → HEADLIGHT HI RH → DAYTIME RUNNING LIGHT RELAY NO. 3 (POINT SIDE) → **GROUND**, CAUSING THE HEADLIGHTS TO OPERATE AT HI.

WHEN THE DIMMER SW IS AT **FLASH** POSITION, CURRENT FROM THE HEADLIGHT RELAY (COIL SIDE) FLOWS TO **TERMINAL 14** OF THE DIMMER SW → **TERMINAL 9** → **GROUND**, ACTIVATING THE RELAY. SIMULTANEOUSLY, CURRENT FROM THE HEADLIGHT RELAY (POINT SIDE) FLOWS TO HEADLIGHT LO, LIGHTING UP HEADLIGHT LO AND ACTIVATING DAYTIME RUNNING LIGHT RELAY NO. 3. THEN **TERMINAL 12** OF THE DIMMER SW OUTPUTS A SIGNAL TO **TERMINAL 16** OF THE DAYTIME RUNNING LIGHT RELAY (MAIN), ACTIVATING THE DAYTIME RUNNING LIGHT RELAY (MAIN) SO THAT CURRENT FLOWS TO HEADLIGHT HI LIKE IT DOES FOR **HIGH** POSITION. THIS CAUSES ALL HEADLIGHTS TO LIGHT UP.

## SERVICE HINTS

### D6 DAYTIME RUNNING LIGHT RELAY (MAIN)

- 15-GROUND : ALWAYS APPROX. 12 VOLTS
- 2-GROUND : APPROX. 12 VOLTS WITH THE IGNITION SW AT **ON** POSITION
- 13-GROUND : ALWAYS CONTINUOUS
- 5-GROUND : APPROX. 12 VOLTS WITH THE DAYTIME RUNNING LIGHT SYSTEM  
DOES NOT OPERATE OR LIGHT CONTROL SW AT **OFF** OR **TAIL** POSITION  
(WITH THE CONNECTOR IS DISCONNECTED, ALWAYS APPROX. 12 VOLTS)
- 8-GROUND : CONTINUOUS WITH THE PARKING BRAKE LEVER RELEASED

# HEADLIGHT (FOR CANADA)

## : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B 2	24 (2JZ-GTE)	D 6	28	H 4	24 (2JZ-GTE)
C12	28	G 2	24 (2JZ-GTE)	I20	29
C13	28	H 1	24 (2JZ-GTE)	P 5	29
D 2	A 24	H 2	24 (2JZ-GTE)		
D 3	B 24	H 3	24 (2JZ-GTE)		

## : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)
4	23	R/B NO. 4 (LEFT KICK PANEL)

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H		
1J	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1K		
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)
2B	22	ENGINE ROOM MAIN WIRE AND 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)
IB1		
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB3		
IB5	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
IF1		
IF2	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
II1	36	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

## : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
IE	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL

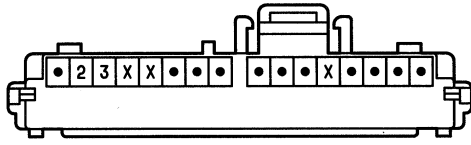
## : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 1			E 8	32	ENGINE ROOM MAIN WIRE
E 2	32	ENGINE ROOM MAIN WIRE	I 2		
E 7			I 4	38	COWL WIRE

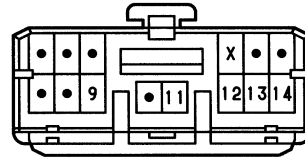
B 2 GRAY



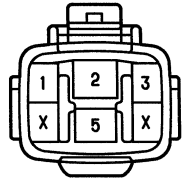
C12



C13 BLACK



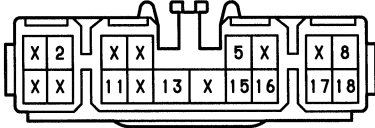
D 2 (A) GRAY



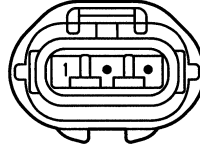
D 3 (B) GRAY



D 6 GRAY



G 2 BLACK



H 1 BLACK



H 2 BLACK



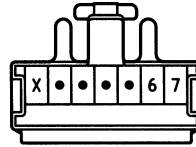
H 3 BROWN



H 4 BROWN



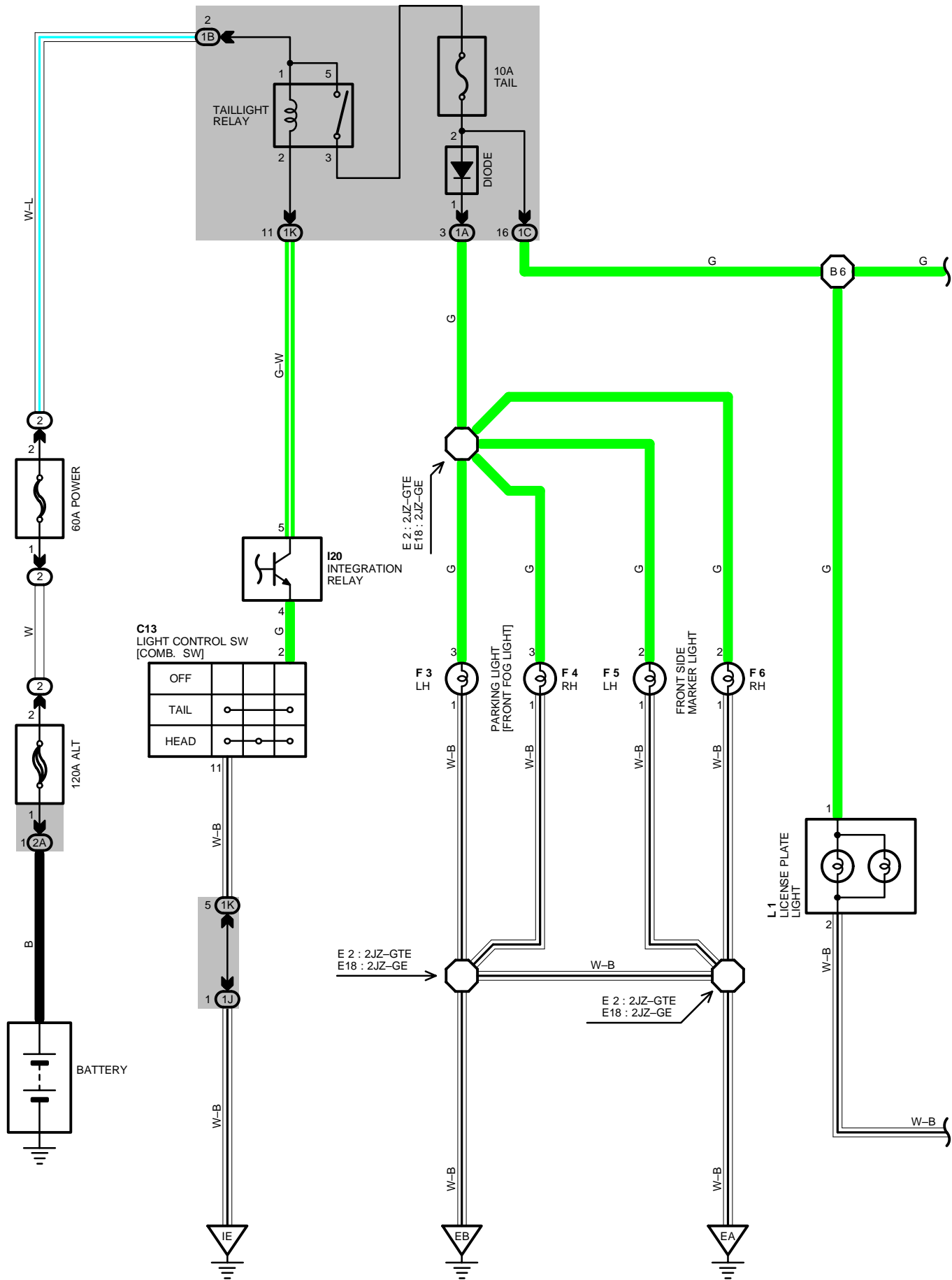
I20

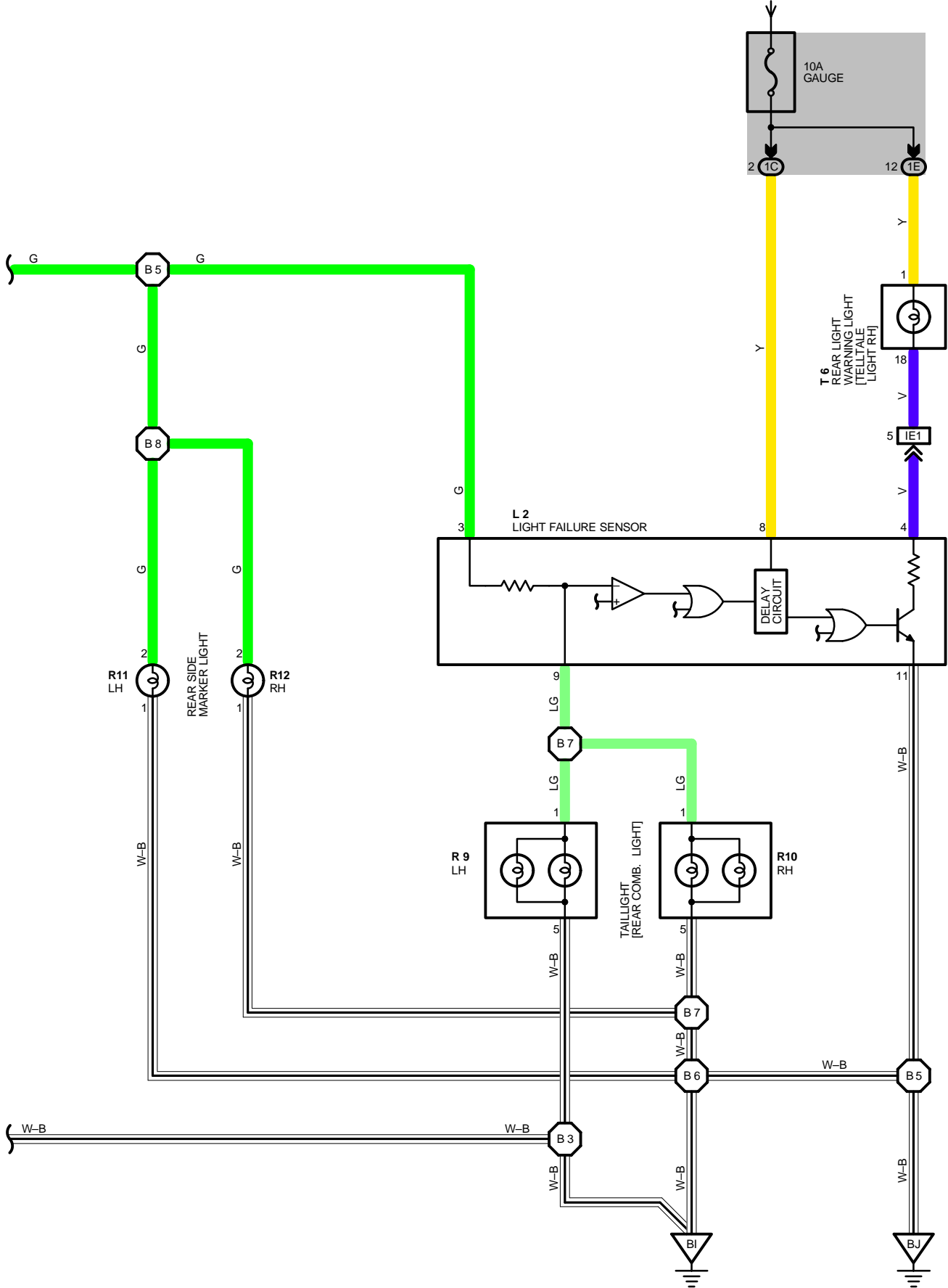


P 5



# TAILLIGHT





# 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 LIGHT 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 → **TERMINAL 11** → **GROUND** AND TURNS THE REAR LIGHT WARNING LIGHT ON, WHICH REMAINS ON UNTIL THE LIGHT CONTROL SW IS TURNED OFF.

## SERVICE HINTS

### TAILLIGHT RELAY

5-3: CLOSED WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

### L 2 LIGHT FAILURE SENSOR

4, 8-GROUND: APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION

3-GROUND: APPROX. **12** VOLTS WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

11-GROUND: ALWAYS CONTINUOUS

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>C13</b>	28	<b>F 5</b>	26 (2JZ-GE)	<b>R 9</b>	30
<b>F 3</b>	24 (2JZ-GTE)	<b>F 6</b>	24 (2JZ-GTE)	<b>R10</b>	30
	26 (2JZ-GE)		26 (2JZ-GE)	<b>R11</b>	30
<b>F 4</b>	24 (2JZ-GTE)	<b>I20</b>	29	<b>R12</b>	30
	26 (2JZ-GE)	<b>L 1</b>	30	<b>T 6</b>	29
<b>F 5</b>	24 (2JZ-GTE)	<b>L 2</b>	30		

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
<b>2</b>	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
<b>1A</b>	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1B</b>		
<b>1C</b>	20	FLOOR NO. 2 WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1E</b>	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1J</b>	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1K</b>		
<b>2A</b>	22	BATTERY AND 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)
<b>IE1</b>	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)

## ▽ : GROUND POINTS

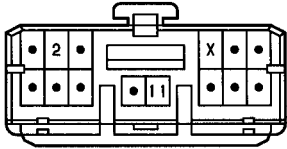
CODE	SEE PAGE	GROUND POINTS LOCATION
<b>EA</b>	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
	34 (2JZ-GE)	
<b>EB</b>	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
	34 (2JZ-GE)	
<b>IE</b>	36	LEFT KICK PANEL
<b>BI</b>	40	LEFT QUARTER PILLAR
<b>BJ</b>	40	LOWER BACK PANEL CENTER



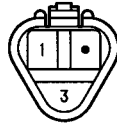
**: SPLICE POINTS**

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32	ENGINE ROOM MAIN WIRE	B 6	40	FLOOR NO. 2 WIRE
E18	34		B 7		
B 3	40	FLOOR NO. 2 WIRE	B 8		
B 5					

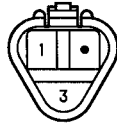
**C13 BLACK**



**F 3 GRAY**



**F 4 GRAY**



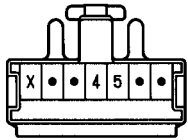
**F 5 GRAY**



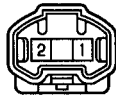
**F 6 GRAY**



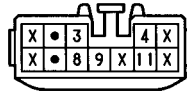
**I20**



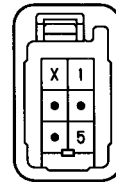
**L 1 GRAY**



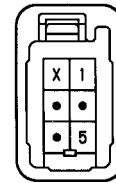
**L 2**



**R 9**



**R10**



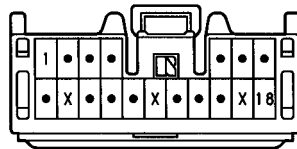
**R11 GRAY**



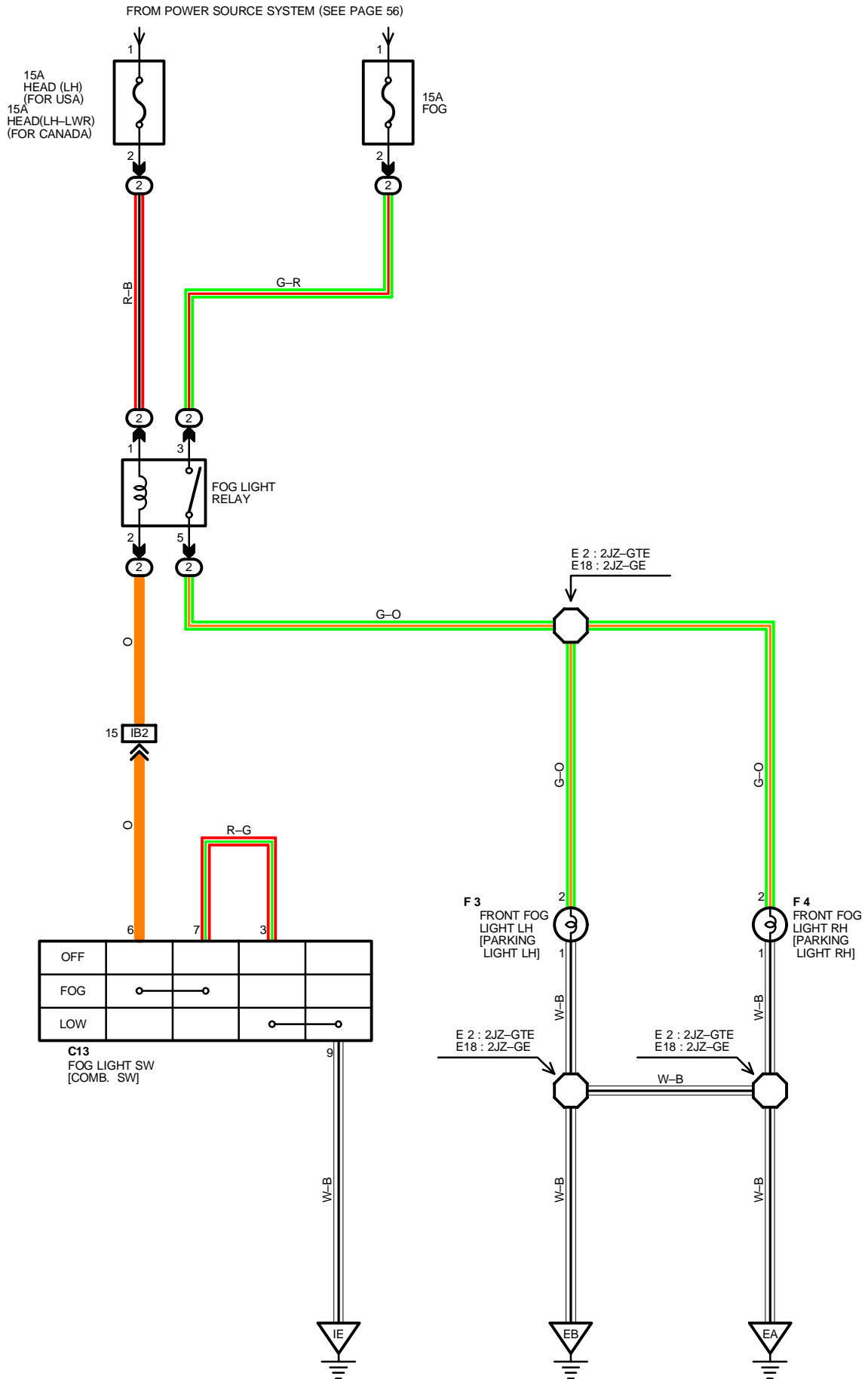
**R12 GRAY**



**T 6**



# FOG LIGHT





## SERVICE HINTS

### FOG LIGHT RELAY

(2) 3-(2) 5 : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION, DIMMER SW AT **LOW** POSITION AND FOG LIGHT SW **ON** POSITION

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>C13</b>	28	<b>F 3</b>	26 (2JZ-GE)	<b>F 4</b>	26 (2JZ-GE)
<b>F 3</b>	24 (2JZ-GTE)	<b>F 4</b>	24 (2JZ-GTE)		

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
<b>2</b>	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>IB2</b>	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

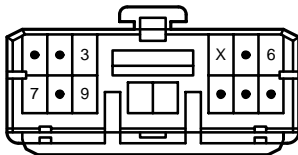
### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
<b>EA</b>	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
	34 (2JZ-GE)	
<b>EB</b>	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
	34 (2JZ-GE)	
<b>IE</b>	36	LEFT KICK PANEL

### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
<b>E 2</b>	32	ENGINE ROOM MAIN WIRE	<b>E18</b>	34	ENGINE ROOM MAIN WIRE

C13 BLACK



F 3 GRAY



F 4 GRAY





## 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 (A) 5** OF THE INTEGRATION RELAY THROUGH THE TAILLIGHT RELAY COIL, AND TO **TERMINAL (A) 6** THROUGH THE HEADLIGHT RELAY COIL.

### 1. NORMAL LIGHTING OPERATION

(TURN TAILLIGHT ON)

WITH LIGHT CONTROL SW TURNED TO **TAIL** POSITION, A SIGNAL IS INPUT INTO **TERMINAL (A) 4** OF THE INTEGRATION RELAY. DUE TO THIS SIGNAL, THE CURRENT FLOWING TO **TERMINAL (A) 5** OF THE RELAY FLOWS TO **TERMINAL (A) 4** → **TERMINAL 2** OF THE LIGHT CONTROL SW → **TERMINAL 11** → TO **GROUND**, AND TAILLIGHT RELAY CAUSES TAILLIGHTS TO TURN ON.

(TURN HEADLIGHT ON)

WITH LIGHT CONTROL SW TURNED TO **HEAD** POSITION, A SIGNAL IS INPUT INTO **TERMINAL (A) 4** AND **(A) 7** OF THE INTEGRATION RELAY. DUE TO THIS SIGNAL, THE CURRENT FLOWING TO **TERMINAL (A) 6** OF THE RELAY FLOWS TO **TERMINAL (A) 7** → **TERMINAL 13** OF THE LIGHT CONTROL SW → **TERMINAL 11** → TO **GROUND** IN THE HEADLIGHT CIRCUIT, AND CAUSES TAILLIGHT AND HEADLIGHT RELAY TO TURN THE LIGHTS ON. THE TAILLIGHT CIRCUIT IS SAME AS ABOVE.

### 2. LIGHT AUTO TURN OFF OPERATION

WITH LIGHT ON AND THE 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 (A) 5** OF THE RELAY TO **TERMINAL (A) 4** IN TAILLIGHT CIRCUIT AND FROM **TERMINAL (A) 6** TO **TERMINAL (A) 7** IN HEADLIGHT CIRCUIT.

AS A RESULT, ALL LIGHTS ARE TURNED OFF AUTOMATICALLY.

## SERVICE HINTS

### HEADLIGHT RELAY

2 1- : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION OR DIMMER SW AT **FLASH** POSITION (FOR USA)  
: CLOSED WITH ENGINE RUNNING AND PARKING BRAKE LEVER RELEASED (FOR CANADA)

### TAILLIGHT RELAY

3-5 : CLOSED WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

### D10 DOOR COURTESY SW LH

3-2 : CLOSED WITH LH DOOR OPEN

### I20(A) INTEGRATION RELAY

7-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION

6-GROUND : CONTINUOUS WITH LH DOOR OPEN

1-GROUND : ALWAYS APPROX. 12 VOLTS

(A) 5-GROUND : ALWAYS APPROX. 12 VOLTS

(A) 6-GROUND : ALWAYS APPROX. 12 VOLTS

(A) 7-GROUND : CONTINUOUS WITH LIGHT CONTROL SW AT **HEAD** POSITION

(A) 4-GROUND : CONTINUOUS WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C13	28	D10	30	I20 A	29

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1I	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J		
1K		
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)

# LIGHT AUTO TURN OFF

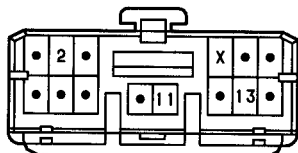
 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>IB2</b>	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
<b>IC2</b>	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)

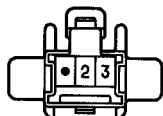
 : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
<b>IE</b>	36	LEFT KICK PANEL
<b>BI</b>	40	LEFT QUARTER PILLAR

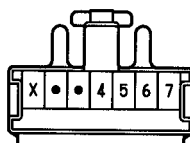
**C13 BLACK**



**D10**

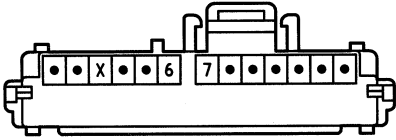


**120 (A)**

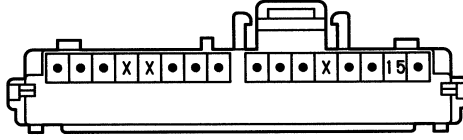


# TURN SIGNAL AND HAZARD WARNING LIGHT

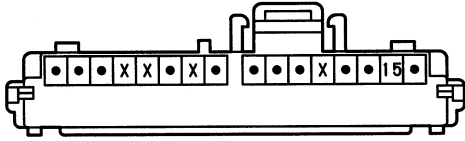
C10 (B) BLUE



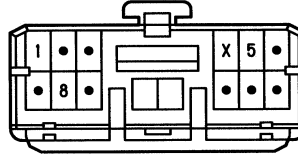
(2JZ-GTE) C12 (A)



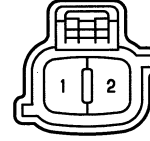
(2JZ-GE) C12 (A)



C13 BLACK



F 7 GRAY



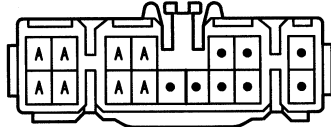
F 8 GRAY



H10 BLACK

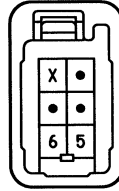


J 1

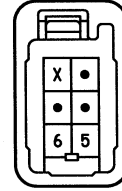


(HINT:SEE PAGE 7)

R 9

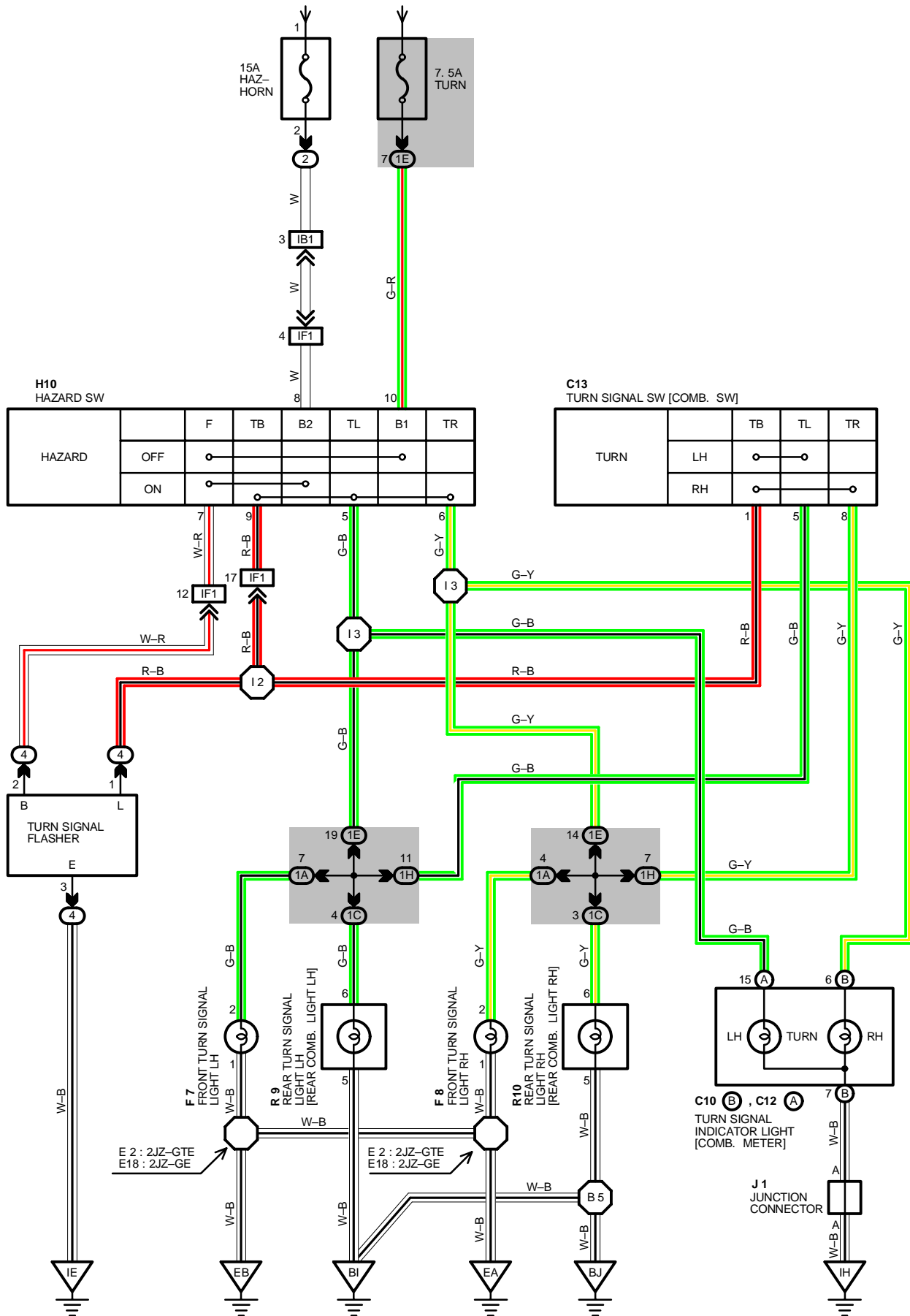


R10



# TURN SIGNAL AND HAZARD WARNING LIGHT

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



## SERVICE HINTS

### TURN SIGNAL FLASHER

- (4) 1-GROUND : CHANGES FROM APPROX. 12 VOLTS TO 0 VOLTS WITH IGNITION SW ON AND TURN SIGNAL SW LEFT OR RIGHT, OR WITH HAZARD WARNING SW ON
- (4) 2-GROUND : APPROX. 12 VOLTS WITH IGNITION SW ON OR HAZARD WARNING SW ON
- (4) 3-GROUND: ALWAYS CONTINUOUS

### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE	
C10	B	28	F 7	26 (2JZ-GE)	J 1	29
C12	A	28	F 8	24 (2JZ-GTE)	R 9	30
C13		28		26 (2JZ-GE)	R10	30
F 7		24 (2JZ-GTE)	H10	29		

### : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)
4	23	R/B NO. 4 (LEFT KICK PANEL)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1C	20	FLOOR NO. 2 WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)

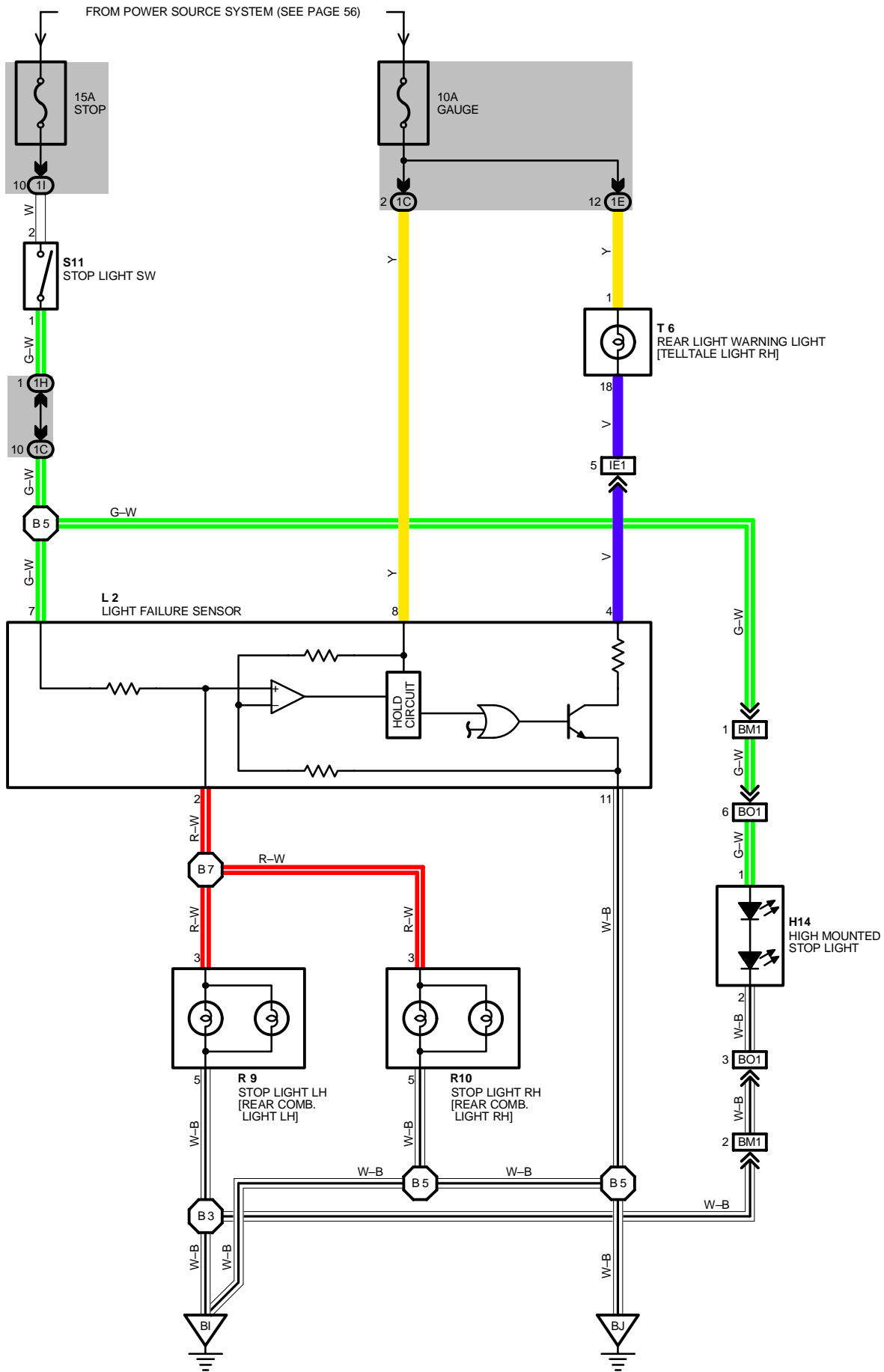
### : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
	34 (2JZ-GE)	
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
	34 (2JZ-GE)	
IE	36	LEFT KICK PANEL
IH	36	RIGHT KICK PANEL
BI	40	LEFT QUARTER PILLAR
BJ	40	LOWER BACK PANEL CENTER

### : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32	ENGINE ROOM MAIN WIRE	I 3	38	INSTRUMENT PANEL WIRE
E18	34		B 5	40	FLOOR NO. 2 WIRE
I 2	38	COWL WIRE			

# STOP LIGHT





## 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 LIGHT 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** 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 → **TERMINAL 11** → **GROUND** AND TURNS THE REAR LIGHT 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

### S11 STOP LIGHT SW

2-1 : CLOSED WITH BRAKE PEDAL DEPRESSED

### L 2 LIGHT FAILURE SENSOR

2, 7-GROUND : APPROX. 12 VOLTS WITH STOP LIGHT SW ON

4, 8-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION

11-GROUND : ALWAYS CONTINUOUS

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
H14	30	R 9	30	S11	29
L 2	30	R10	30	T 6	29

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1C	20	FLOOR NO. 2 WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1I		

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
BM1	40	BACK DOOR NO. 1 WIRE AND FLOOR NO. 2 WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
B01	40	BACK DOOR NO. 2 WIRE AND BACK DOOR NO. 1 WIRE (BACK DOOR UPPER LEFT)

## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
BI	40	LEFT QUARTER PILLAR
BJ	40	LOWER BACK PANEL CENTER

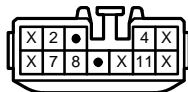
## ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
B 3	40	FLOOR NO. 2 WIRE	B 7	40	FLOOR NO. 2 WIRE
B 5					

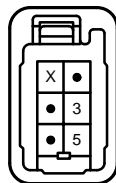
H14



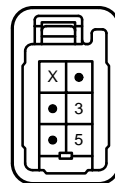
L 2



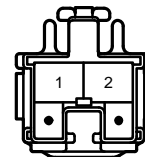
R 9



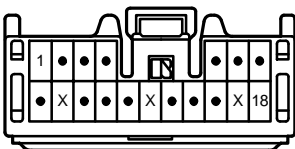
R10



S11 BLUE



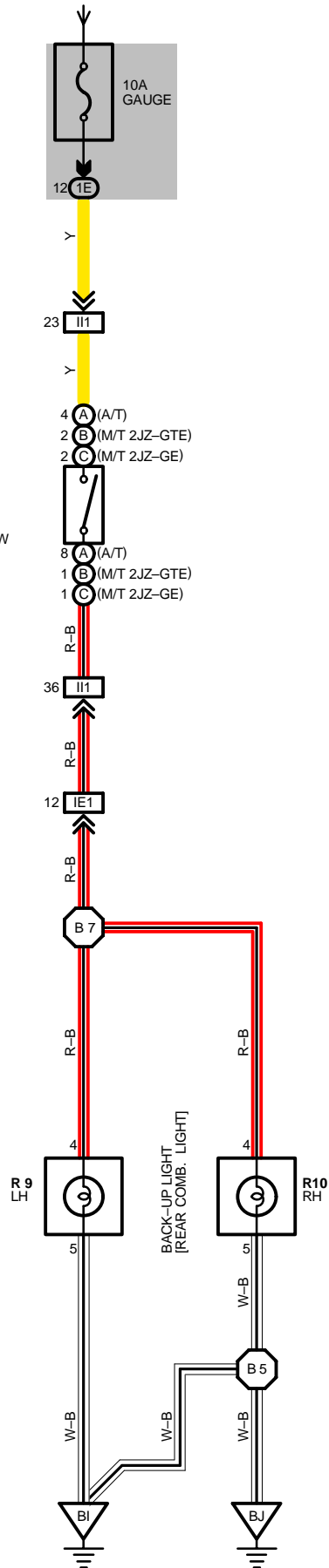
T 6



# BACK-UP LIGHT

FROM POWER SOURCE SYSTEM (SEE PAGE 56)

**B 1** **B** **C**  
 BACK-UP LIGHT SW (M/T)  
**P 2** **A**  
 BACK-UP LIGHT SW  
 [PARK/NEUTRAL POSITION SW  
 (NEUTRAL START SW)] (A/T)



## SERVICE HINTS

**B 1 (B), (C) BACK-UP LIGHT SW (M/T)**  
**P 2 (A) BACK-UP LIGHT SW [PARK/NEUTRAL POSITION SW (NEUTRAL START SW)] (A/T)**  
**(B), (C) 2-1, (A) 4-8 : CLOSED WITH SHIFT LEVER IN R POSITION**

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B 1	B	24 (2JZ-GTE)	P 2	A	25 (2JZ-GTE)
	C	26 (2JZ-GE)		R 9	30
				R 10	30

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK 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 FLOOR NO. 2 WIRE (LEFT KICK PANEL)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

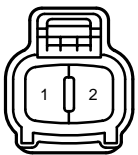
### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
BI	40	LEFT QUARTER PILLAR
BJ	40	LOWER BACK PANEL CENTER

### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
B 5	40	FLOOR NO. 2 WIRE	B 7	40	FLOOR NO. 2 WIRE

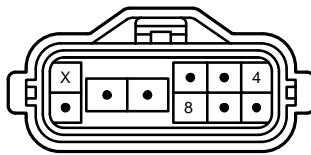
B 1 (B) GRAY



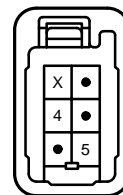
B 1 (C) GRAY



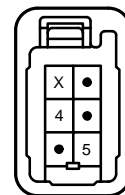
P 2 (A) GRAY



R 9

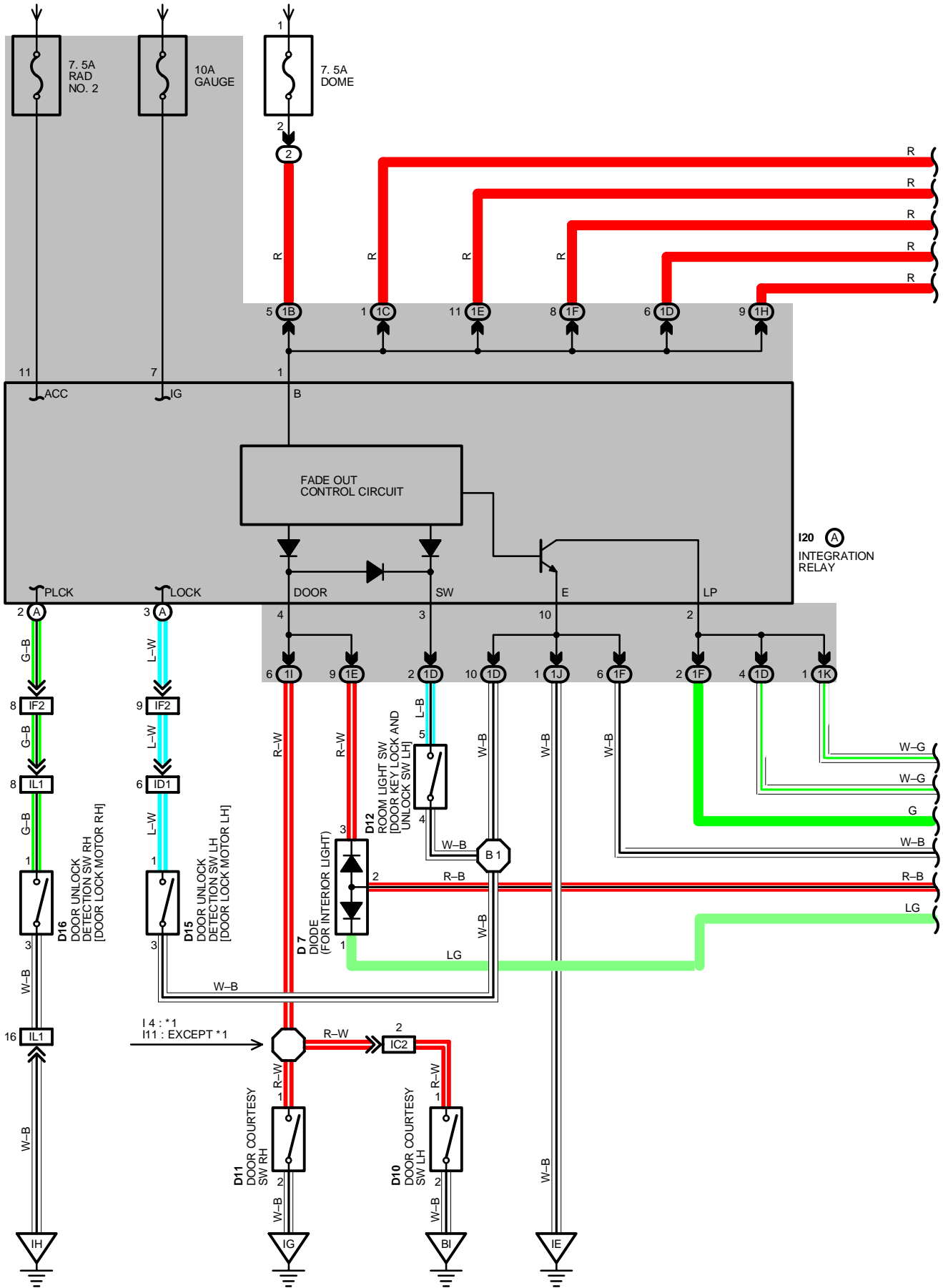


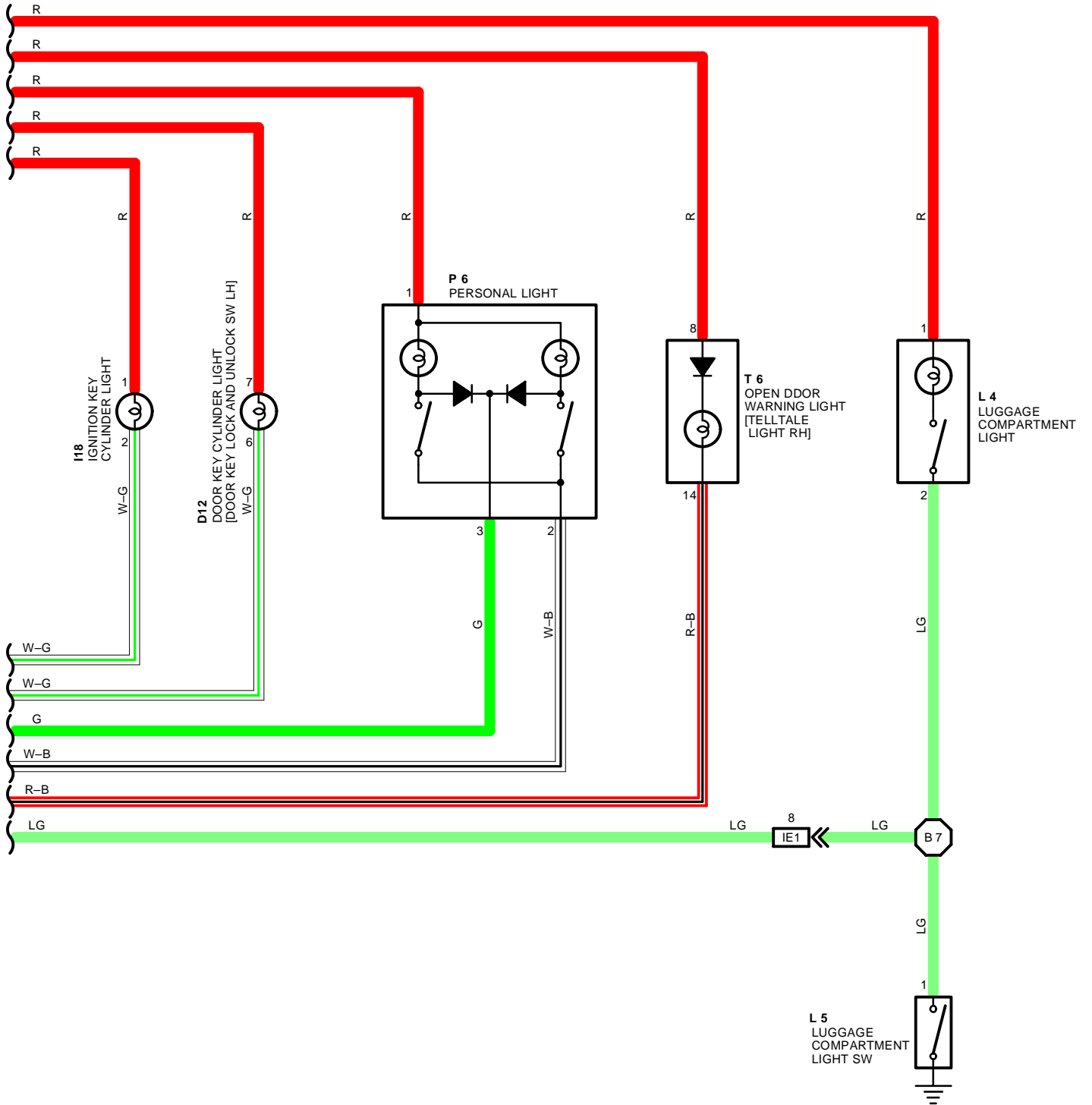
R 10



# INTERIOR LIGHT

FROM POWER SOURCE SYSTEM (SEE PAGE 56)





# INTERIOR LIGHT

## SERVICE HINTS

### INTEGRATION RELAY (J/B NO.1)

- 1-GROUND : ALWAYS APPROX. 12 VOLTS
- 4-GROUND : CONTINUOUS WITH RH DOOR OPEN OR LH DOOR OPEN

### D10, D11 DOOR COURTESY SW LH, RH

- 1-2 : CLOSED WITH DOOR OPEN

### L 5 LUGGAGE COMPARTMENT LIGHT SW

- 1-GROUND : CLOSED WITH LUGGAGE COMPARTMENT DOOR OPEN

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
D 7	28	D15	30	L 4	30
D10	30	D16	30	L 5	30
D11	30	I18	29	P 6	30
D12	30	I20	A 29	T 6	29

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1C	20	FLOOR NO. 2 WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1D	20	FRONT DOOR LH WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1F	20	ROOF WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK LEFT)
1I		
1J		
1K		

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

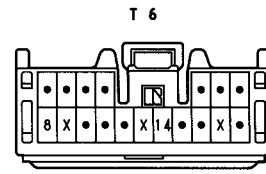
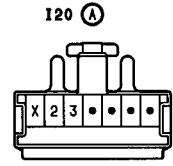
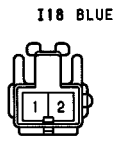
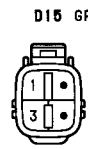
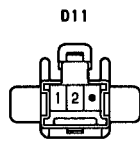
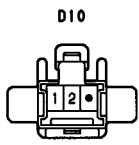
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
ID1	36	FRONT DOOR LH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF2	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
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
IG	36	RIGHT KICK PANEL
IH		
BI	40	LEFT QUARTER PILLAR

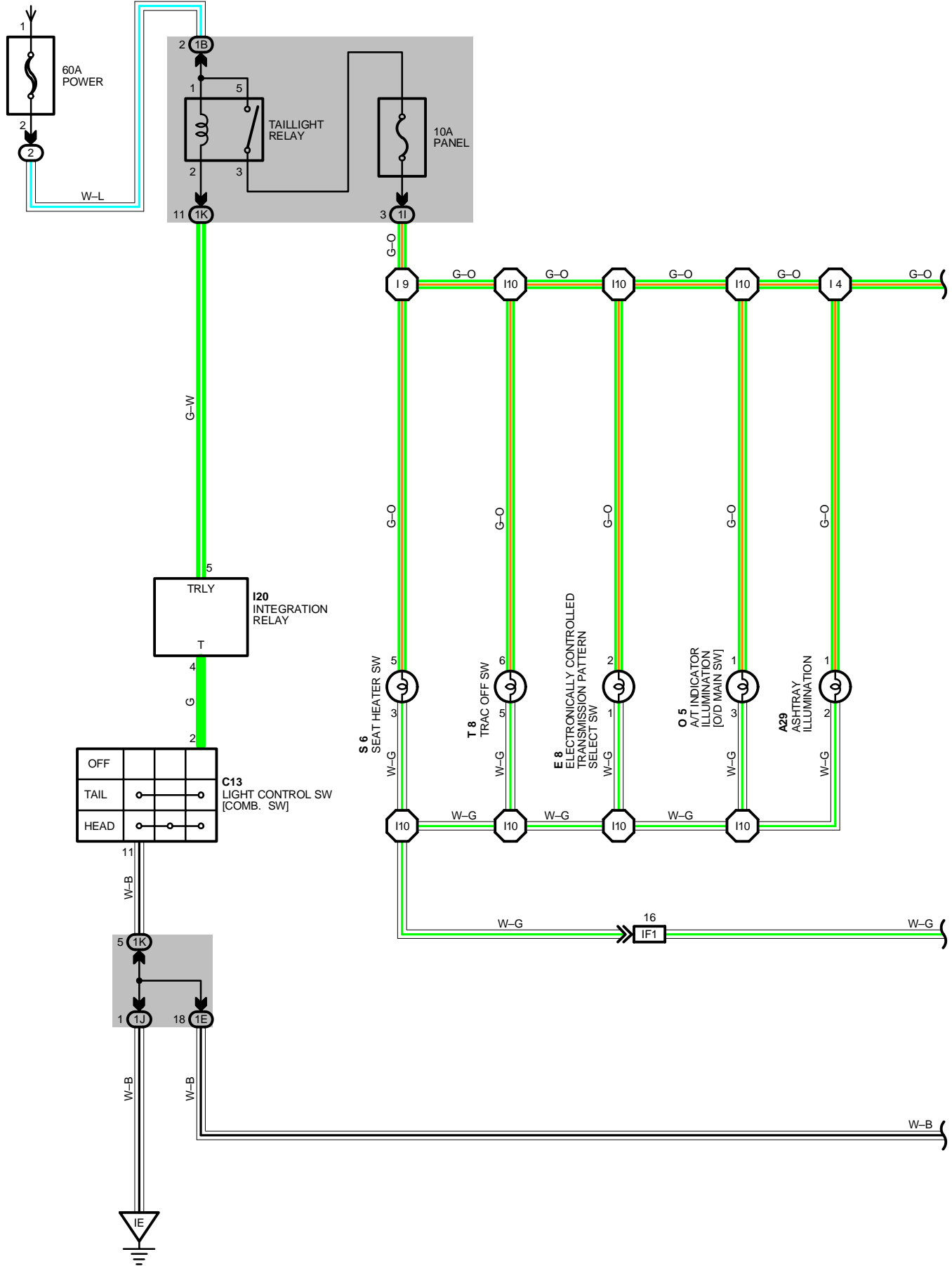
## ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 4	38	COWL WIRE	B 1	40	FRONT DOOR LH WIRE
I11			B 7	40	FLOOR NO. 2 WIRE

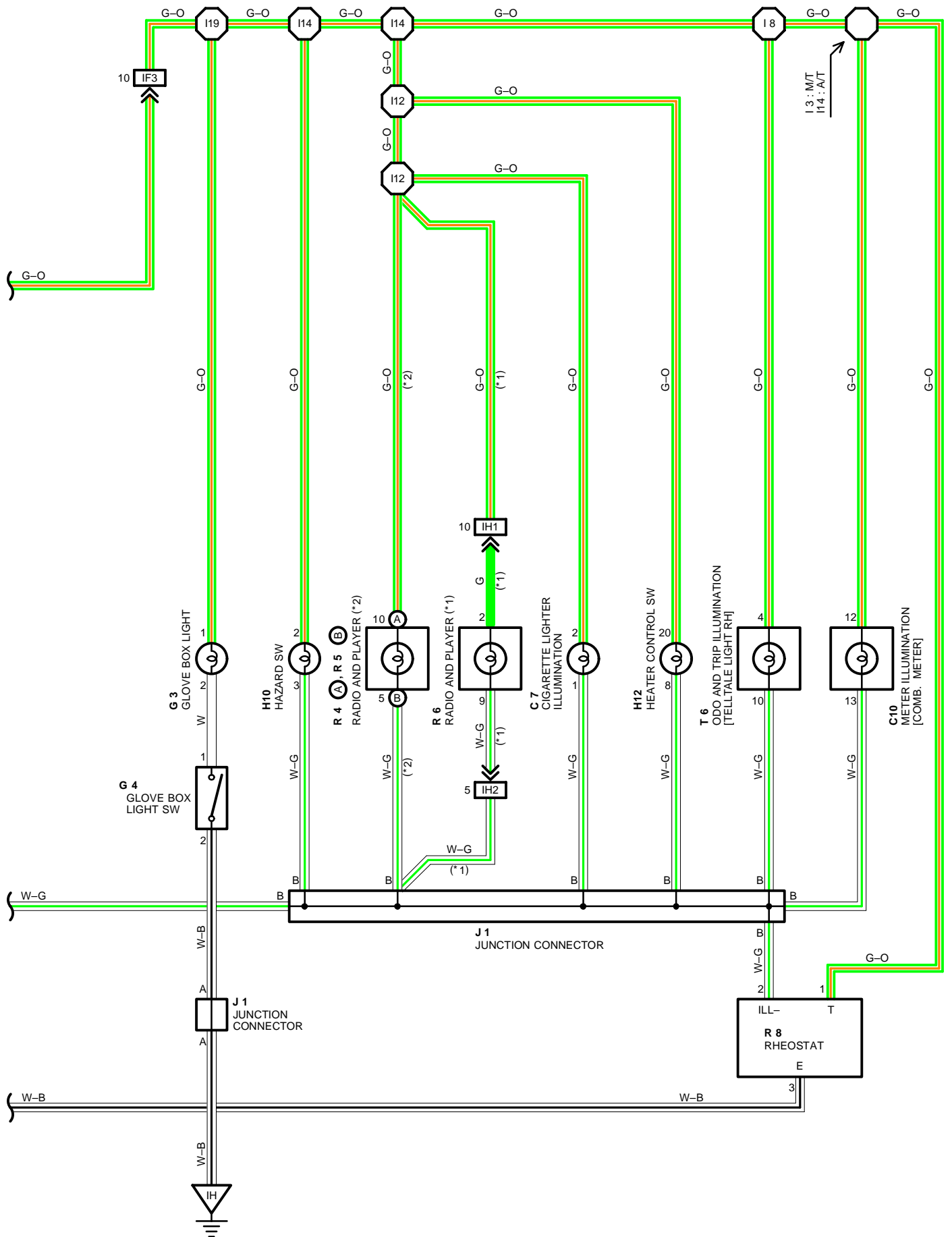


# ILLUMINATION

FROM POWER SOURCE SYSTEM (SEE PAGE 56)







# ILLUMINATION

## SERVICE HINTS

### TAILLIGHT RELAY

5-3 : CLOSED WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

### C13 LIGHT CONTROL SW [COMB. SW]

2-11 : CLOSED WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A29	28	H10	29	R 6	29
C 7	28	H12	29	R 8	29
C10	28	I20	29	S 6	29
C13	28	J 1	29	T 6	29
E 8	29	O 5	29	T 8	29
G 3	29	R 4	A	29	
G 4	29	R 5	B	29	

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1I	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J		
1K		

## □ : 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 (INSTRUMENT PANEL REINFORCEMENT LH)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
IH1		INSTRUMENT PANEL WIRE AND CONSOLE BOX WIRE (UNDER THE INSTRUMENT PANEL BRACE RH)
IH2	38	

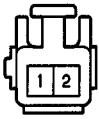
## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IE	36	LEFT KICK PANEL
IH	36	RIGHT KICK PANEL

## ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 3	38	INSTRUMENT PANEL WIRE	I10	38	COWL WIRE
I 4	38	COWL WIRE	I12	38	INSTRUMENT PANEL WIRE
I 8	38	INSTRUMENT PANEL WIRE	I14		
I 9	38	COWL WIRE	I19		

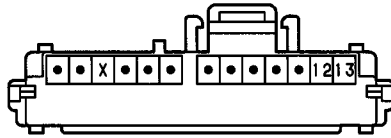
A29



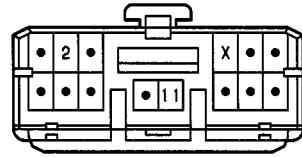
C 7 GRAY



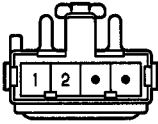
C10 BLUE



C13 BLACK



E 8



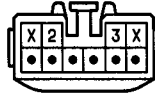
G 3 BLACK



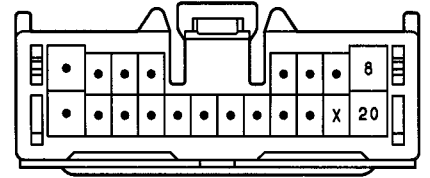
G 4 BLACK



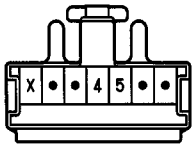
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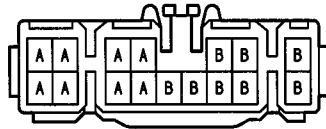
H12 ORANGE



I20

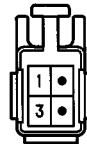


J 1

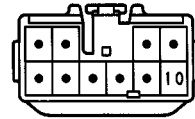


(HINT:SEE PAGE 7)

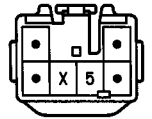
O 5 BLUE



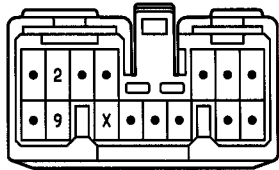
R 4 (A)



R 5 (B)



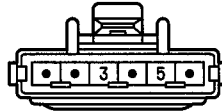
R 6



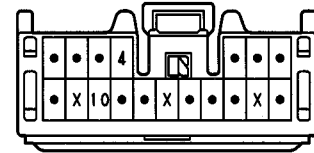
R 8 BLUE



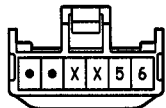
S 6 BLACK



T 6

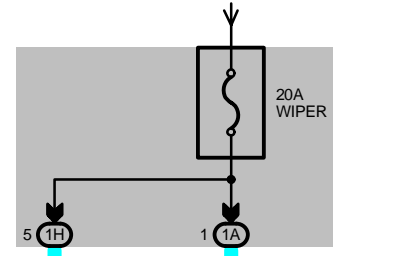


T 8 BLACK

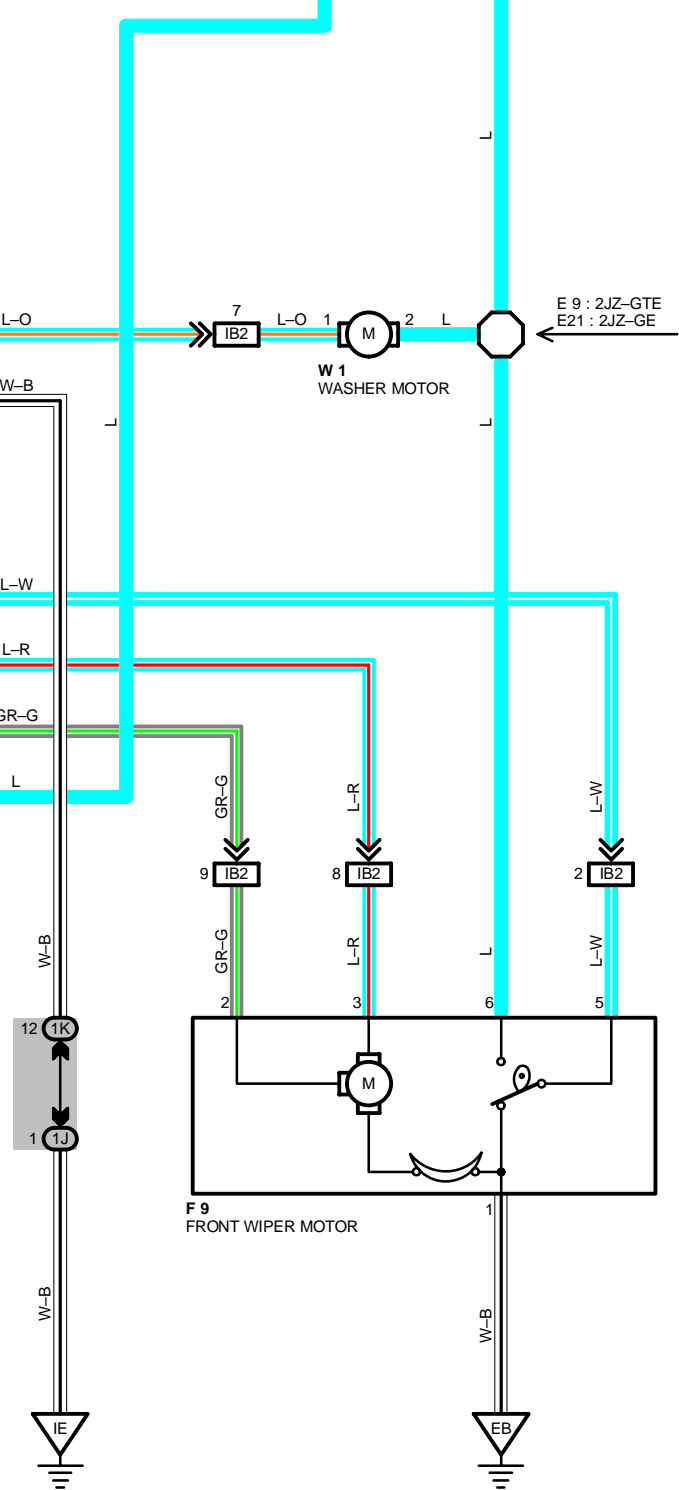
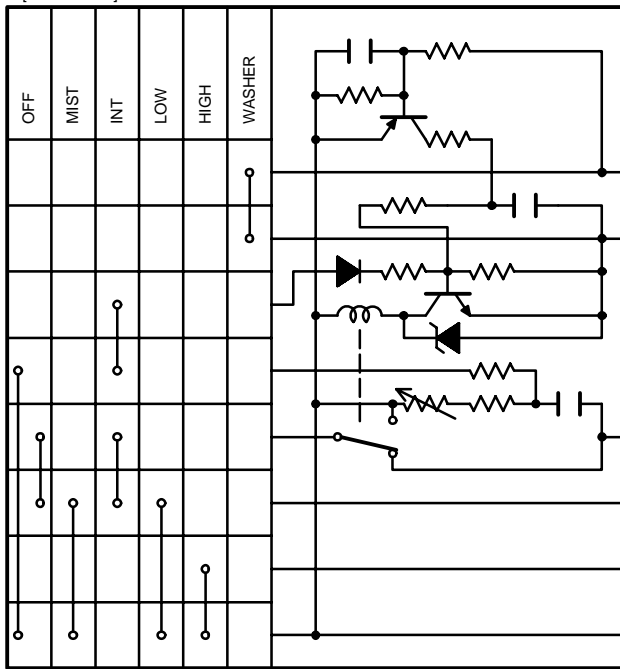


# FRONT WIPER AND WASHER

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



**C14**  
FRONT WIPER AND WASHER SW  
[COMB. SW]



## SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS TO **TERMINAL 18** OF THE WIPER AND WASHER SW, **TERMINAL 2** OF THE WASHER MOTOR AND **TERMINAL 6** OF THE FRONT WIPER MOTOR THROUGH THE **WIPER FUSE**.

### 1. LOW SPEED POSITION

WITH WIPER SW TURNED TO **LOW** POSITION, THE CURRENT FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 7** → **TERMINAL 3** OF THE FRONT WIPER MOTOR → **TERMINAL 1** → TO **GROUND** AND CAUSES TO THE WIPER MOTOR TO RUN AT LOW SPEED.

### 2. HIGH SPEED POSITION

WITH WIPER SW TURNED TO **HIGH** POSITION, THE CURRENT FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 13** → **TERMINAL 2** OF THE FRONT WIPER MOTOR → **TERMINAL 1** → TO **GROUND** AND CAUSES TO THE WIPER MOTOR TO RUN AT HIGH SPEED.

### 3. INT POSITION

WITH WIPER SW TURNED TO **INT** POSITION, THE RELAY OPERATES AND THE CURRENT WHICH IS CONNECTED BY RELAY FUNCTION FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 16** → TO **GROUND**. THIS FLOWS OF CURRENT OPERATES THE INTERMITTENT CIRCUIT AND THE CURRENT FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 7** → **TERMINAL 3** OF THE FRONT WIPER MOTOR → **TERMINAL 1** → TO **GROUND** AND FUNCTIONS.

THE INTERMITTENT OPERATION IS CONTROLLED BY A CONDENSER'S CHARGED AND DISCHARGED FUNCTION INSTALLED IN RELAY AND INTERMITTENT TIME IS CONTROLLED BY A TIME CONTROL SW TO CHARGE THE CHARGING TIME OF THE CONDENSER.

### 4. MIST POSITION

WITH WIPER SW TURNED TO **MIST** POSITION, THE CURRENT FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 7** → **TERMINAL 3** OF THE FRONT WIPER MOTOR → **TERMINAL 1** → TO **GROUND** AND CAUSES THE WIPER MOTOR TO RUN AT LOW SPEED.

### 5. WASHER CONTINUOUS OPERATION

WITH WASHER SW TURNED TO ON, THE CURRENT FLOWS FROM **TERMINAL 2** OF THE WAHSEY MOTOR → **TERMINAL 1** → **TERMINAL 8** OF THE WIPER AND WASHER SW → **TERMINAL 16** → TO **GROUND** AND CAUSES TO THE WASHER MOTOR TO RUN, AND WINDOW WASHER IS JET. THIS CAUSES THE CURRENT TO FLOW WASHER CONTINUOUS OPERATION CIRCUIT IN **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 7** → **TERMINAL 3** OF THE FRONT WIPER MOTOR → **TERMINAL 1** → TO **GROUND** AND FUNCTION.

## SYSTEM OUTLINE

### C14 FRONT WIPER AND WASHER SW (COMB. SW)

16-GROUND : ALWAYS CONTINUOUS

18-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION

7-GROUND : APPROX. 12 VOLTS WITH WIPER AND WASHER SW AT **LOW** POSITION

APPROX. 12 VOLTS EVERY APPROX. 1 TO 10 SECONDS INTERMITTENTLY WITH WIPER SW AT **INT** POSITION

4-GROUND : APPROX. 12 VOLTS WITH IGNITION SW ON UNLESS WIPER MOTOR AT **STOP** POSITION

13-GROUND : APPROX. 12 VOLTS WITH IGNITION SW ON AND WIPER AND WASHER SW AT **HIGH** POSITION

### F 9 FRONT WIPER MOTOR

5-6 : CLOSED UNLESS WIPER MOTOR AT **STOP** POSITION

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>C14</b>	<a href="#">28</a>	<b>F 9</b>	<a href="#">26 (2JZ-GE)</a>	<b>W 1</b>	<a href="#">27 (2JZ-GE)</a>
<b>F 9</b>	<a href="#">24 (2JZ-GTE)</a>	<b>W 1</b>	<a href="#">25 (2JZ-GTE)</a>		

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
<b>1A</b>	<a href="#">20</a>	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1H</b>	<a href="#">20</a>	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1J</b>		
<b>1K</b>		

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>IB2</b>	<a href="#">36</a>	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

# FRONT WIPER AND WASHER

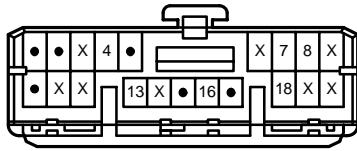
 : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	<a href="#">32 (2JZ-GTE)</a>	FRONT SIDE OF LEFT FENDER
	<a href="#">34 (2JZ-GE)</a>	
IE	<a href="#">36</a>	LEFT KICK PANEL

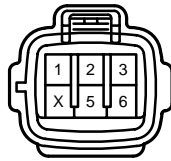
 : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 9	<a href="#">32</a>	ENGINE ROOM MAIN WIRE	E21	<a href="#">34</a>	ENGINE ROOM MAIN WIRE

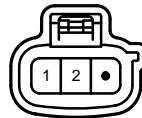
C14 BLACK



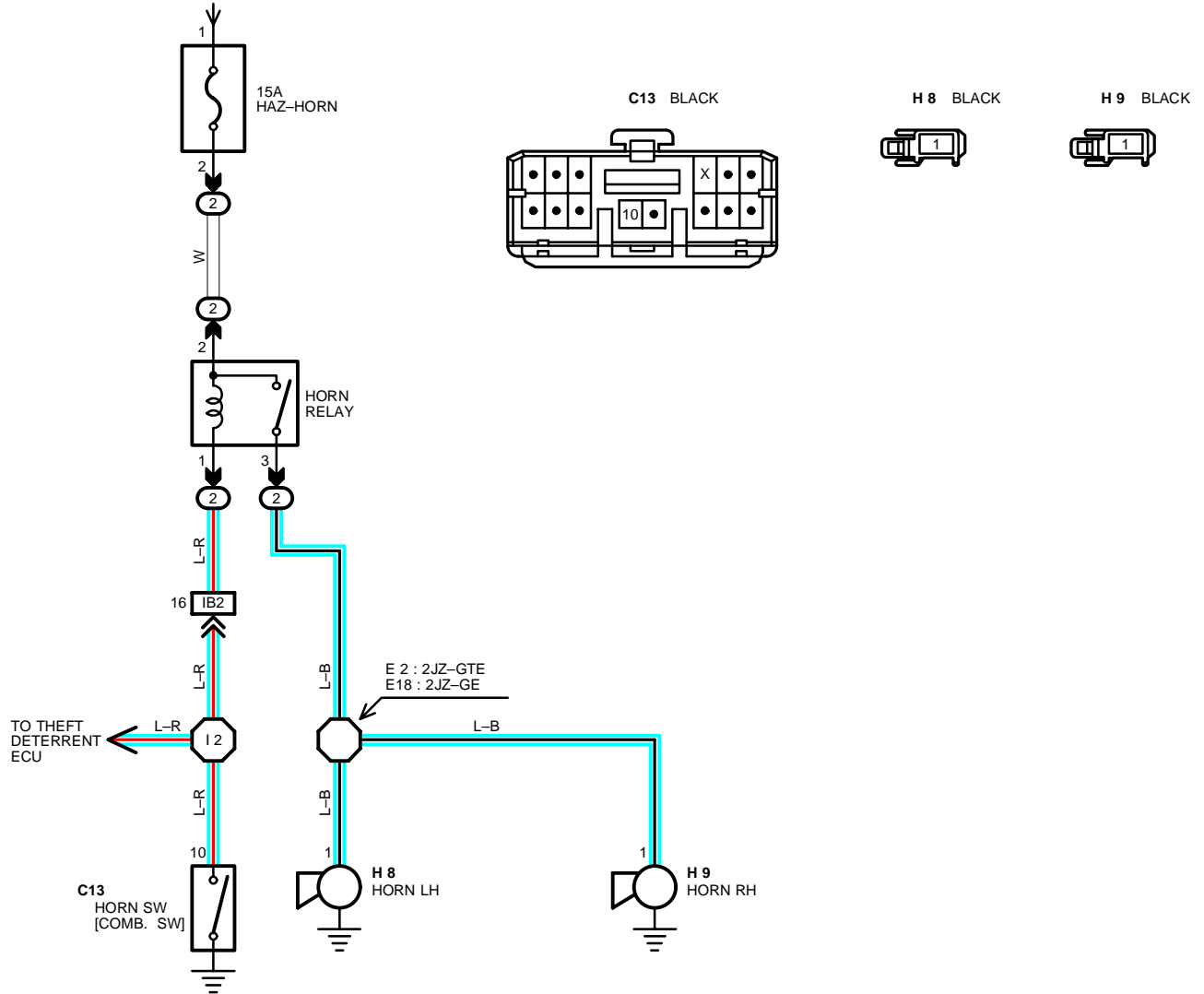
F 9 BLACK



W 1 BLACK



FROM POWER SOURCE SYSTEM (SEE PAGE 56)



## SERVICE HINTS

### HORN RELAY

(2) 2-(2) 3 : CLOSED WITH HORN SW ON

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C13	28	H 8	27 (2JZ-GE)	H 9	27 (2JZ-GE)
H 8	24 (2JZ-GTE)	H 9	24 (2JZ-GTE)		

### □ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

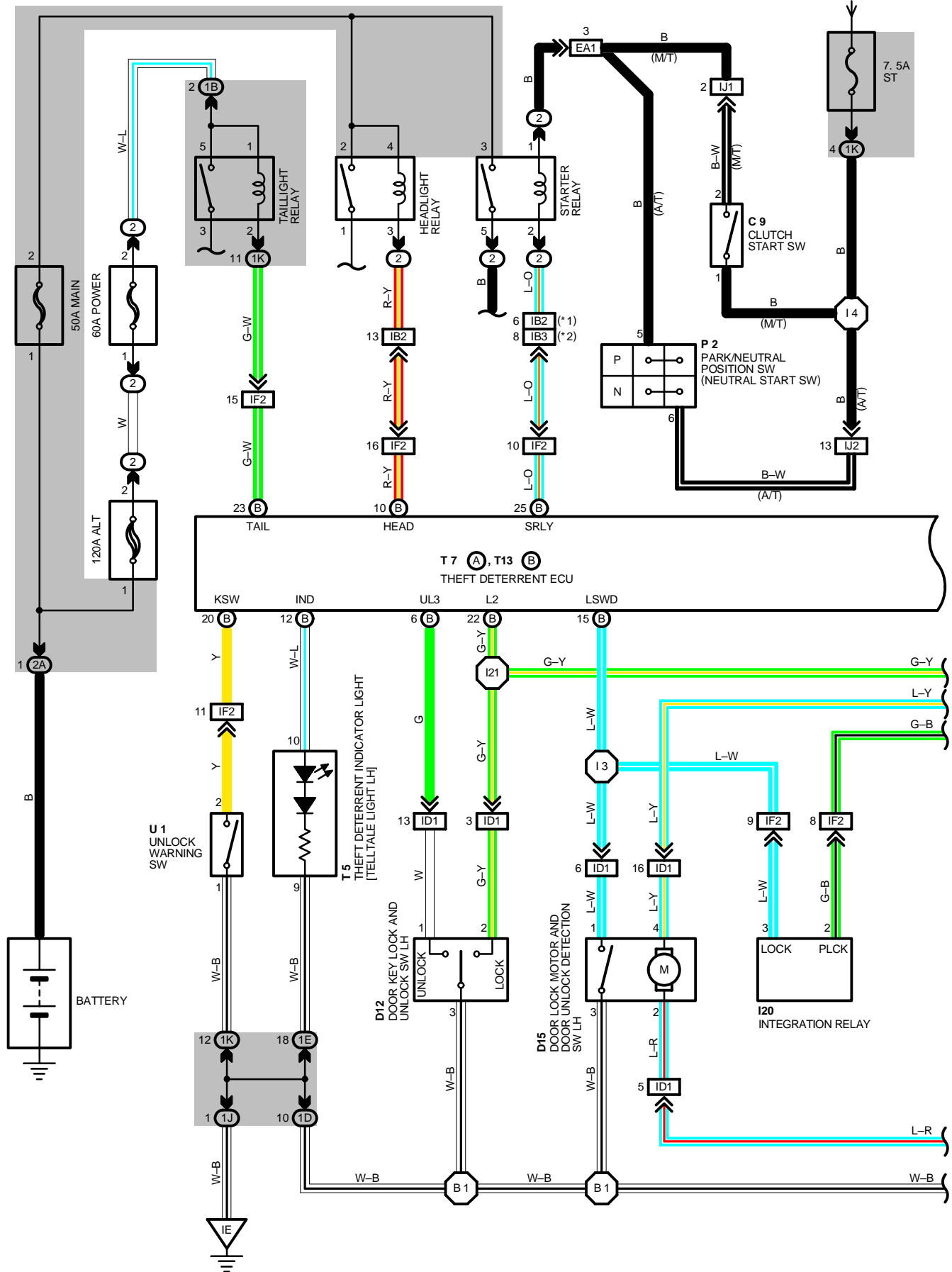
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32	ENGINE ROOM MAIN WIRE	I 2	38	COWL WIRE
E 18	34				

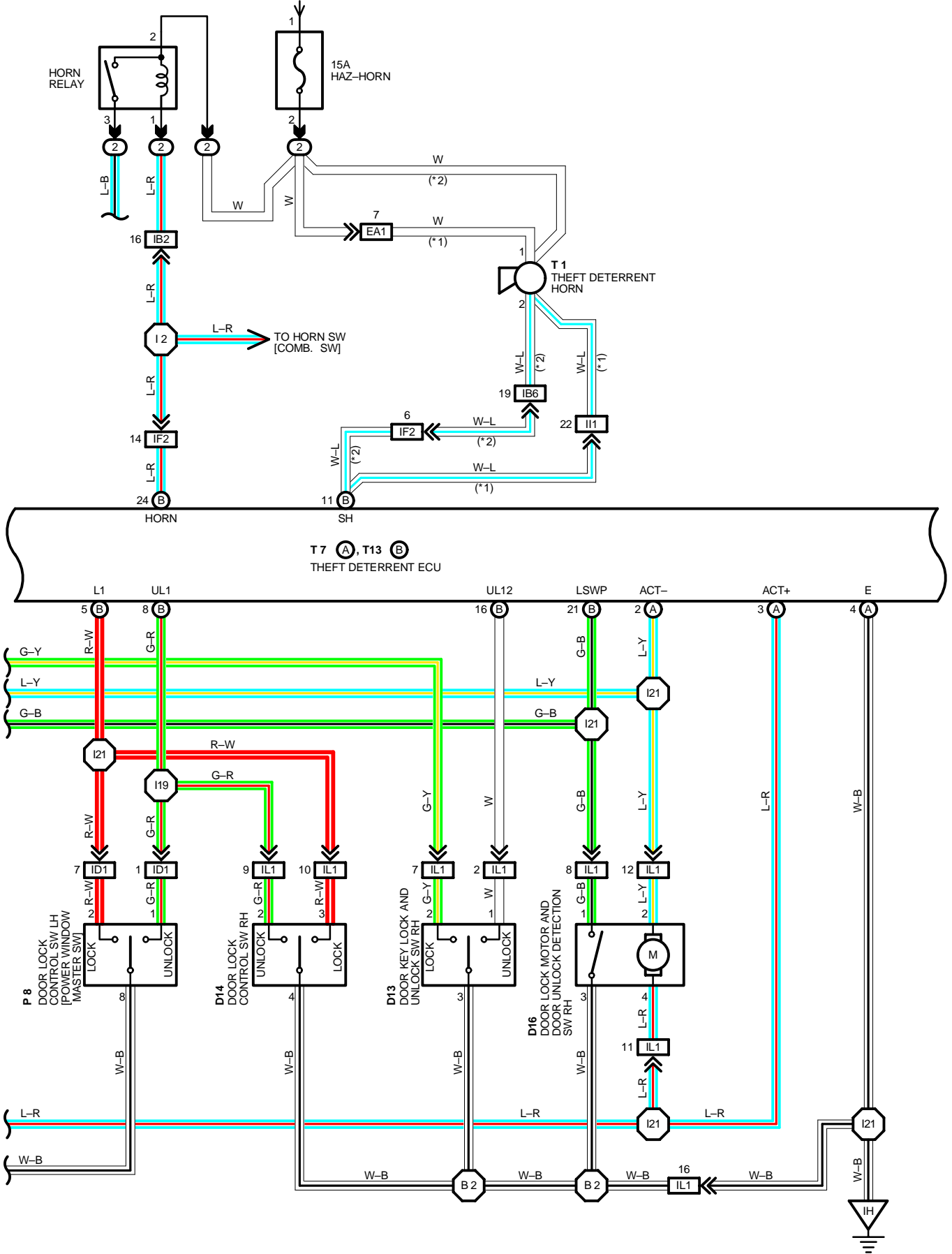
# THEFT DETERRENT AND DOOR LOCK CONTROL

FROM POWER SOURCE SYSTEM (SEE PAGE 56)

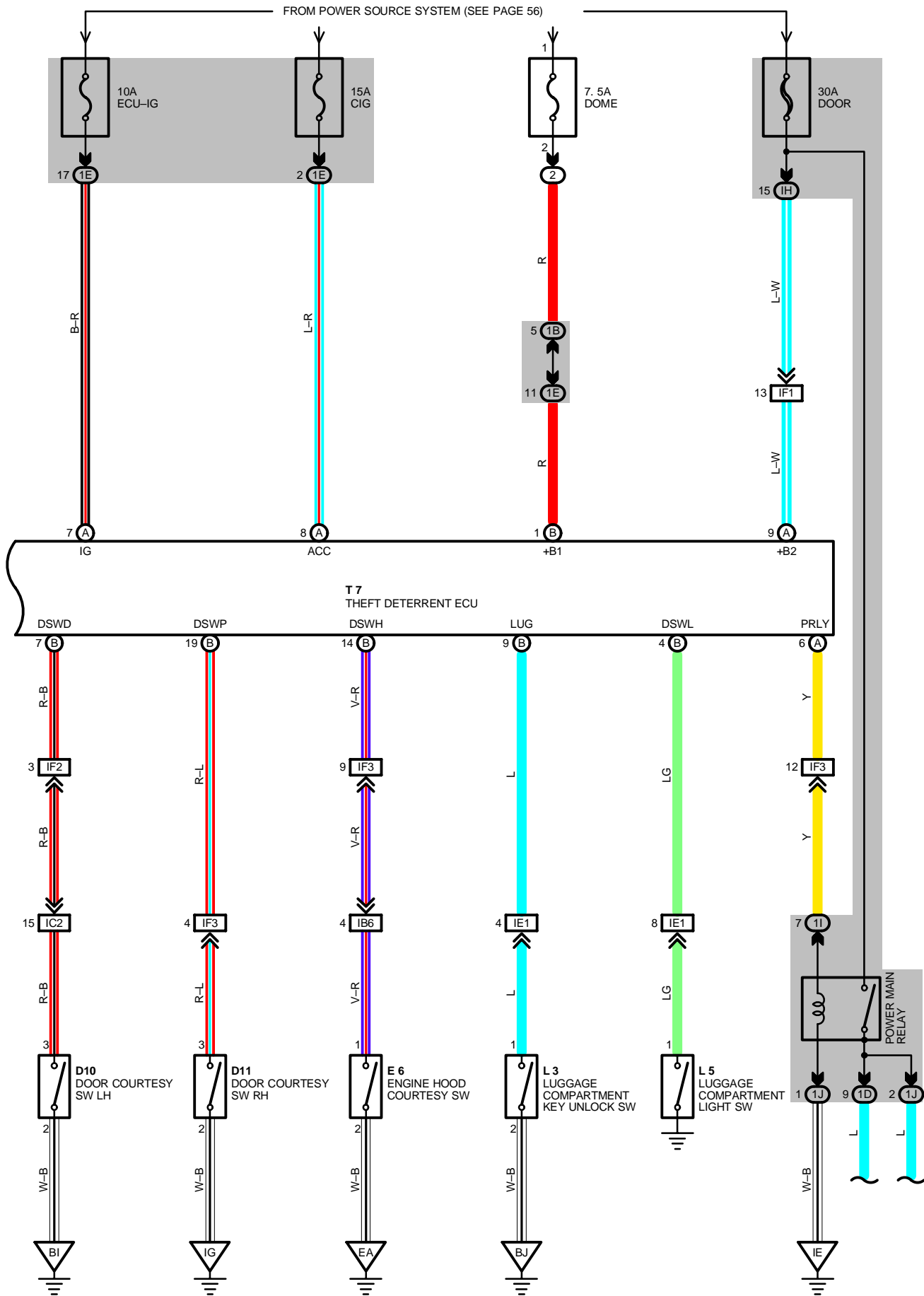




FROM POWER SOURCE SYSTEM (SEE PAGE 56)



# THEFT DETERRENT AND DOOR LOCK CONTROL



## SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO **TERMINAL (A)9** OF THE THEFT DETERRENT ECU THROUGH THE **DOOR FUSE**, AND TO **TERMINAL (B)1** THROUGH THE **DOME FUSE**.

WHEN THE IGNITION SW TURNED ON, THE CURRENT FLOWING THROUGH THE **ECU-IG FUSE** → **TERMINAL (A)7** OF THE ECU → **TERMINAL (A)6** FLOWS THROUGH THE COIL SIDE OF THE POWER MAIN RELAY TO **GROUND**, CAUSING THE RELAY TO OPERATE. THE CURRENT FLOWING THROUGH THE **DOOR FUSE** FLOWS TO THE DOOR LOCK CONTROL SWITCHES, CAUSING THE INDICATOR LIGHT TO LIGHT UP.

### 1. MANUAL LOCK OPERATION

WHEN THE DOOR CONTROL SW OR KEY SW ARE PUSHED TO **LOCK** POSITION, A LOCK SIGNAL IS INPUT TO **TERMINAL (B)5, (B)22** (FOR KEY SW) OF THE THEFT DETERRENT ECU AND CAUSES THE ECU TO FUNCTION. CURRENT FLOWS FROM **TERMINAL (A)9** OF THE ECU → **TERMINAL (A)3** → **TERMINAL 2 (LH), TERMINAL 4 (RH)** OF THE DOOR LOCK MOTORS → **TERMINAL 4 (LH), TERMINAL 2 (RH)** → **TERMINAL (A)2** OF THE ECU → **TERMINAL (A)4** → **GROUND** AND THE DOOR LOCK MOTOR CAUSES THE DOOR TO LOCK.

### 2. MANUAL UNLOCK OPERATION

WHEN THE DOOR LOCK CONTROL SW OR KEY SW ARE PUSHED TO **UNLOCK** POSITION, AN UNLOCK SIGNAL IS INPUT TO **TERMINAL (A)8, (B)6** (FOR KEY SW LH) OR **(B)16** (FOR KEY SW RH) OF THE THEFT DETERRENT ECU AND CAUSES TO FUNCTION. CURRENT FLOWS FROM **TERMINAL (A)9** OF THE ECU → **TERMINAL (A)2** → **TERMINAL 4 (LH), TERMINAL 2 (RH)** OF THE DOOR LOCK MOTORS → **TERMINAL 2 (LH), TERMINAL 4 (RH)** → **TERMINAL (A)3** OF THE ECU → **TERMINAL (A)4** → **GROUND** AND THE DOOR LOCK MOTOR CAUSES THE DOOR TO UNLOCK.

WHEN UNLOCK OPERATION OCCURS USING THE LH DOOR KEY SW, DOING THE UNLOCK OPERATION ONCE UNLOCKS ONLY THE DRIVER'S DOOR. TO UNLOCK ALL THE OTHER DOORS TOGETHER, UNLOCK OPERATION MUST BE DONE AGAIN WITHIN 3 SECONDS OF THE FIRST OPERATION.

### 3. IGNITION KEY REMINDER OPERATION

\* OPERATION OF DOOR LOCK BUTTON (OPERATION OF DOOR LOCK MOTORS)

WHEN THE IGNITION KEY IS IN THE CYLINDER (UNLOCK WARNING SW ON) AND THE DOOR IS OPENED AND LOCKED USING DOOR LOCK BUTTON (DOOR LOCK MOTOR), THE DOOR IS LOCKED ONCE BUT EACH DOOR IS UNLOCKED SOON BY THE OPERATION OF THE ECU. AS A RESULT OF ECU ACTIVATION, THE CURRENT FLOWS FROM **TERMINAL (A)9** OF THE ECU → **TERMINAL (A)2** → **TERMINAL 4 (LH), TERMINAL 2 (RH)** OF THE DOOR LOCK MOTORS → **TERMINAL 2 (LH), TERMINAL 4 (RH)** → **TERMINAL (A)3** OF THE ECU → **TERMINAL (A)4** → **GROUND** AND CAUSES ALL THE DOOR LOCK CONTROL SW AND DOOR LOCK KEY SW.

\* KEY LESS LOCK OPERATION

WHEN THE IGNITION KEY IS STILL INSERTED IN THE CYLINDER (UNLOCK WARNING SW ON), THE DOOR IS OPEN AND UNLOCK OPERATION IS PREVENTED BY KEEPING THE DOOR LOCK BUTTON PRESSED TO THE LOCK SIDE, THE DOOR IS KEPT IN THE LOCK CONDITION. IF THE DOOR IS THEN CLOSED, A SIGNAL IS INPUT TO THE ECU FROM THE DOOR COURTESY SW. THIS ACTIVATES THE ECU AND EACH DOOR IS UNLOCKED.

# THEFT DETERRENT AND DOOR LOCK CONTROL

## SERVICE HINTS

### D10, D11 DOOR COURTESY SW LH, RH

3-2 : CLOSED WITH DOOR OPEN

### D12, D13 DOOR KEY LOCK AND UNLOCK SW LH, RH

1-3 : CLOSED WITH DOOR LOCK CYLINDER UNLOCKED WITH KEY

2-3 : CLOSED WITH DOOR LOCK CYLINDER LOCKED WITH KEY

### D15, D16 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW LH, RH

1-3 : CLOSED WITH UNLOCK POSITION

### E 6 ENGINE HOOD COURTESY SW

1-2 : CLOSED WITH ENGINE HOOD OPEN

### U 1 UNLOCK WARNING SW

2-1 : CLOSED WITH IGNITION KEY IN CYLINDER

### L 3 LUGGAGE COMPARTMENT KEY UNLOCK SW

2-1 : CLOSED WITH DOOR LOCK CYLINDER UNLOCKED WITH KEY

### L 5 LUGGAGE COMPARTMENT LIGHT SW

1-GROUND: CLOSED WITH DOOR OPEN

### T 7(A), T13(B) THEFT DETERRENT ECU

(B) 9-GROUND: CONTINUOUS WITH LUGGAGE COMPARTMENT DOOR TO UNLOCK POSITION

(B)14-GROUND: CONTINUOUS WITH ENGINE HOOD OPEN

(B) 4-GROUND: CONTINUOUS WITH LUGGAGE COMPARTMENT DOOR OPEN

(B) 8-GROUND: CONTINUOUS WITH DOOR LOCK CONTROL SW TO UNLOCK POSITION

(B) 5-GROUND: CONTINUOUS WITH DOOR LOCK CONTROL SW TO LOCK POSITION

(B)25-GROUND: APPROX. 12 VOLTS WITH SHIFT LEVER IN N OR P POSITION AND IGNITION SW AT ST POSITION (A/T)  
; APPROX. 12 VOLTS WITH CLUTCH PEDAL FULLY DEPRESSED (M/T)

(A) 7-GROUND: APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION

(B)20-GROUND: CONTINUOUS WITH IGNITION KEY IN CYLINDER

(B)15-GROUND: CONTINUOUS WITH LH DOOR TO UNLOCK POSITION

(B)21-GROUND: CONTINUOUS WITH RH DOOR TO UNLOCK POSITION

(B) 6-GROUND: CONTINUOUS WITH DOOR KEY LOCK AND UNLOCK SW LH TO UNLOCK POSITION

(B)16-GROUND: CONTINUOUS WITH DOOR KEY LOCK AND UNLOCK SW RH TO UNLOCK POSITION

(B)22-GROUND: CONTINUOUS WITH DOOR KEY LOCK AND UNLOCK SW TO LOCK POSITION

(A) 4-GROUND: ALWAYS CONTINUOUS

(B) 1-GROUND: ALWAYS APPROX. 12 VOLTS

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 9	28	E 6	24 (2JZ-GTE)	T 1	25 (2JZ-GTE)
D10	30		26 (2JZ-GE)		27 (2JZ-GE)
D11	30	I20	29	T 5	29
D12	30	L 3	30	T 7	A 29
D13	30	L 5	30	T13	B 29
D14	30	P 2	25 (2JZ-GTE)	U 1	29
D15	30		27 (2JZ-GE)		
D16	30	P 8	30		

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1D	20	FRONT DOOR LH WIRE AND J/B NO.1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO.1(LEFT KICK PANEL)
1I		
1J		
1K		
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)

 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

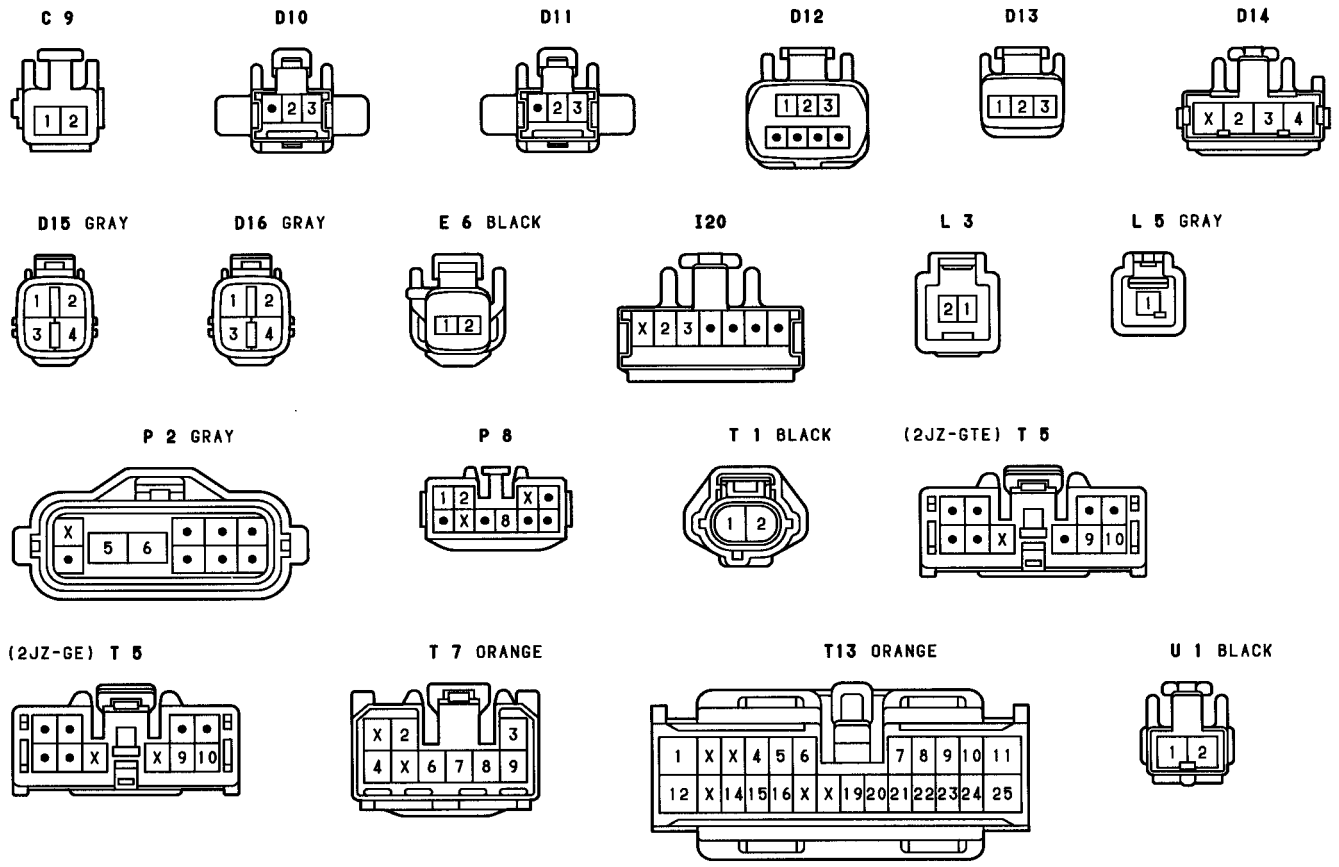
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (2JZ-GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
	34 (2JZ-GE)	
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB3		
IB6	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
ID1	36	FRONT DOOR LH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF2		
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2		
IL1	38	FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

 : GROUND POINTS

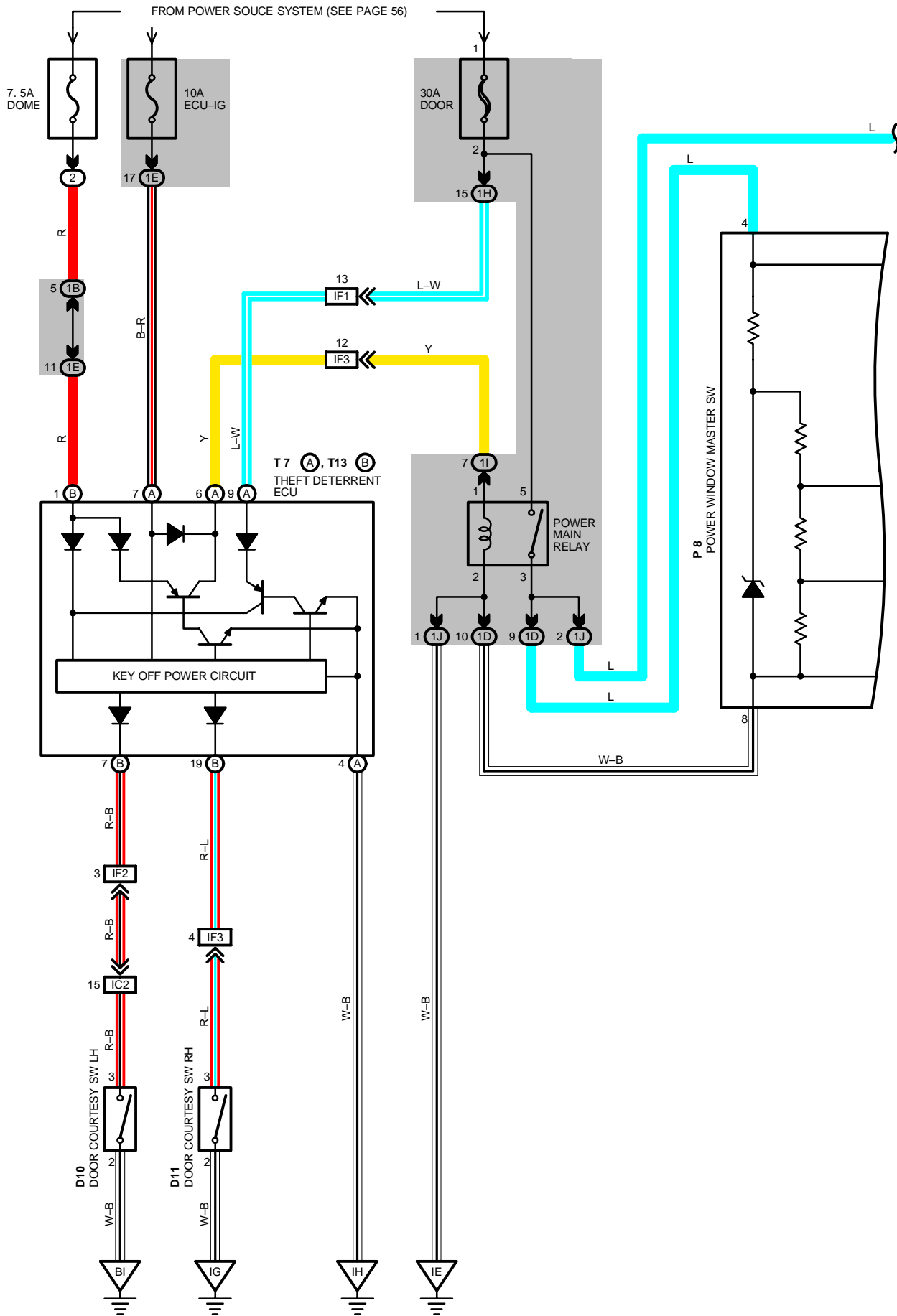
CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
	34 (2JZ-GE)	
IE	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL
IH		
BI	40	LEFT QUARTER PILLAR
BJ	40	LOWER BACK PANEL CENTER

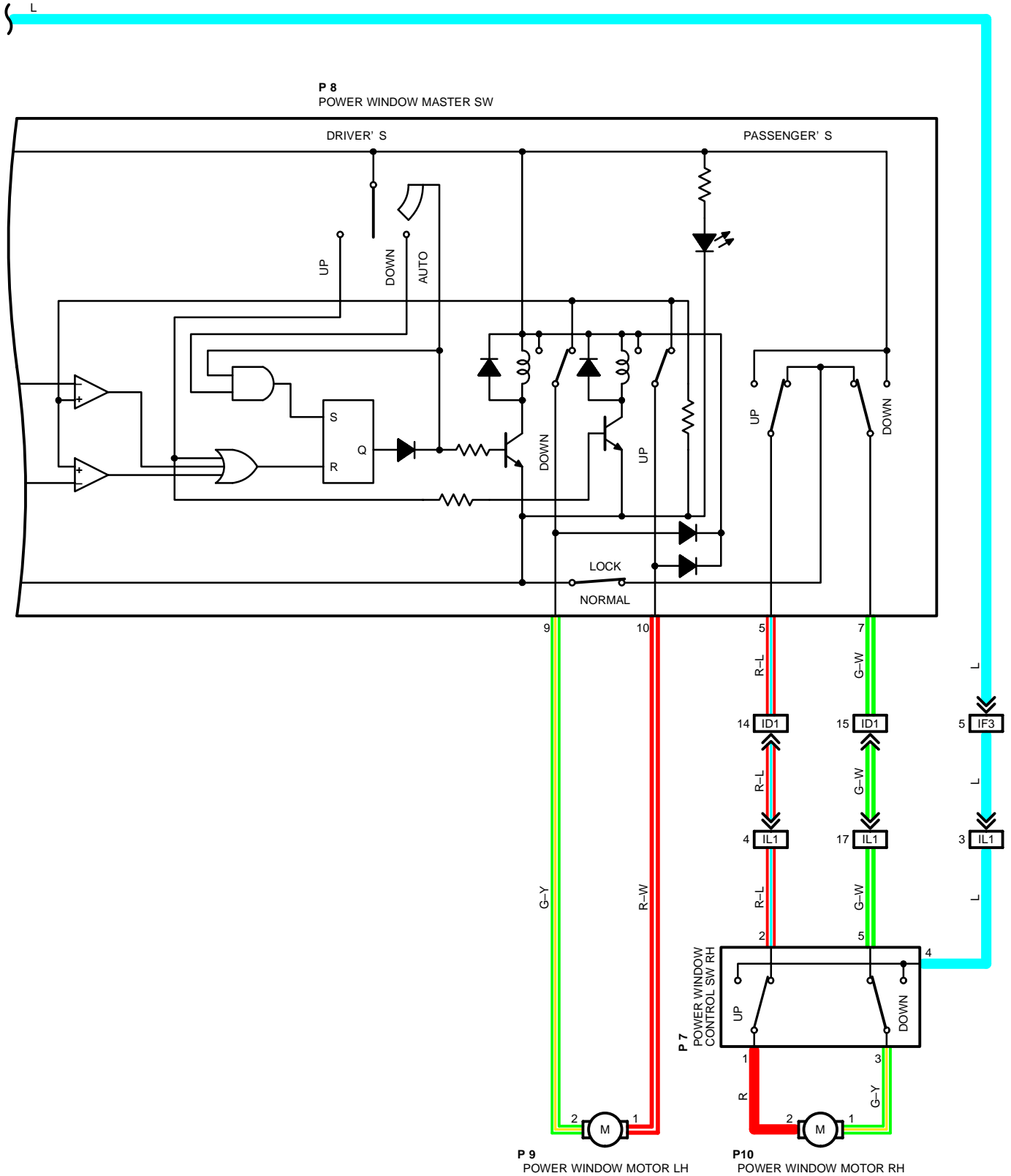
 : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 2	38	COWL WIRE	I21	38	INSTRUMENT PANEL WIRE
I 3	38	INSTRUMENT PANEL WIRE	B 1	40	FRONT DOOR LH WIRE
I 4	38	COWL WIRE	B 2	40	FRONT DOOR RH WIRE
I19	38	INSTRUMENT PANEL WIRE			



# POWER WINDOW





# POWER WINDOW

## SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, CURRENT FLOWS THROUGH THE **ECU-IG FUSE** → **TERMINAL (A)7** OF THE THEFT DETERRENT ECU → **TERMINAL (A)6** → **TERMINAL 1** OF THE POWER MAIN RELAY → **TERMINAL 2** → **GROUND**, THIS ACTIVATES THE RELAY AND THE CURRENT FLOWING TO **TERMINAL 5** OF THE RELAY FROM **DOOR FUSE** FLOWS TO **TERMINAL 3** OF THE RELAY → **TERMINAL 4** OF THE POWER WINDOW MASTER SW AND **TERMINAL 4** OF THE POWER WINDOW CONTROL SW RH.

### 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 TO **TERMINAL 4** OF THE POWER WINDOW MASTER SW FLOWS TO **TERMINAL 10** OF THE MASTER SW → **TERMINAL 1** OF THE POWER WINDOW MOTOR → **TERMINAL 2** → **TERMINAL 9** OF THE MASTER SW → **TERMINAL 8** → **GROUND** AND CAUSES THE POWER WINDOW MOTOR TO ROTATE IN THE UP DIRECTION. THE WINDOW ASCENDS ONLY WHILE THE SW IS BEING PUSHED.

IN DOWN OPERATION, THE FLOW OF CURRENT FROM **TERMINAL 4** OF THE POWER WINDOW MASTER SW TO **TERMINAL 9** OF THE MASTER SW CAUSES THE FLOW OF CURRENT FROM **TERMINAL 2** OF THE POWER WINDOW MOTOR → **TERMINAL 1** → **TERMINAL 10** OF THE MASTER SW → **TERMINAL 8** → **GROUND**, FLOWING IN THE OPPOSITE DIRECTION TO MANUAL UP OPERATION AND CAUSING THE MOTOR TO ROTATE IN REVERSE, LOWERING THE WINDOW.

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

WHEN THE DRIVER'S WINDOW SW IS PUSHED STRONGLY ON THE DOWN SIDE, THE CURRENT FLOWING TO **TERMINAL 4** OF THE POWER WINDOW MASTER SW FLOWS TO THE DOWN CONTACT POINT AND AUTO DOWN CONTACT POINT OF THE DRIVER'S SW.

THIS ACTIVATES THE RELAY (DOWN SIDE) INSIDE THE POWER WINDOW MASTER SW, AND THE HOLD CIRCUIT ALSO TURNS ON AT THE SAME TIME, SO THE RELAY (DOWN SIDE) REMAINS ACTIVATED EVEN WHEN THE SW IS RELEASED.

CURRENT FLOWS AT THIS TIME FROM **TERMINAL 4** OF THE POWER WINDOW MASTER SW → **TERMINAL 9** → **TERMINAL 2** OF POWER WINDOW MOTOR → **TERMINAL 1** → **TERMINAL 10** OF POWER WINDOW MASTER SW → **TERMINAL 8** → **GROUND**, SO THE MOTOR CONTINUES TO OPERATE UNTIL THE DRIVER'S WINDOW IS FULLY DOWN.

WHEN THE DRIVER'S WINDOW FINISHES DOWN OPERATION THE HOLD CIRCUIT GOES OFF, SO THE RELAY (DOWN SIDE) ALSO TURNS OFF. THIS STOPS THE CURRENT FLOWING FROM **TERMINAL 4** OF THE POWER WINDOW MASTER SW TO **TERMINAL 9**, SO THE POWER WINDOW MOTOR STOPS AND AUTO DOWN OPERATION STOPS.

WHEN THE DRIVER'S SW IS PULLED ON THE UP SIDE DURING AUTO DOWN OPERATION, THE HOLD CIRCUIT IS TURNED OFF SO CURRENT FLOWS FROM **TERMINAL 4** OF THE POWER WINDOW MASTER SW TO **TERMINAL 9** IS CUT OFF AND THE POWER WINDOW MOTOR STOPS. IF THE SW REMAINS PULLED UP, THE RELAY (UP SIDE) IS ACTIVATED, SO CURRENT FLOWS FROM **TERMINAL 4** OF THE POWER WINDOW MASTER SW → **TERMINAL 10** → **TERMINAL 1** OF POWER WINDOW MOTOR → **TERMINAL 2** → **TERMINAL 9** → **TERMINAL 8** → **GROUND**, THE POWER WINDOW MOTOR ROTATES IN THE UP DIRECTION AND MANUAL UP OPERATION OCCURS WHILE THE SW IS PULLED UP.

### 3. MANUAL OPERATION BY POWER WINDOW SW (PASSENGER'S WINDOW)

WITH POWER WINDOW SW (PASSENGER'S) PULLED TO THE UP SIDE, CURRENT FLOWING FROM **TERMINAL 4** OF THE POWER WINDOW CONTROL SW FLOWS TO **TERMINAL 1** OF THE POWER WINDOW SW → **TERMINAL 2** OF THE POWER WINDOW MOTOR → **TERMINAL 1** → **TERMINAL 3** OF THE POWER WINDOW SW → **TERMINAL 5** → **TERMINAL 7** OF THE MASTER SW → **TERMINAL 8** → **GROUND** AND CAUSES THE POWER WINDOW MOTOR (PASSENGER'S) TO ROTATE IN THE UP DIRECTION. UP OPERATION CONTINUES ONLY WHILE THE POWER WINDOW SW IS PULLED TO THE UP SIDE. WHEN THE POWER WINDOW SW (PASSENGER'S) IS PULLED TO THE DOWN SIDE, 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 PASSENGER'S WINDOW BECOMES OPEN.

AS A RESULT, EVEN IF OPEN/CLOSE OPERATION OF THE PASSENGER'S WINDOW IS TRIED, THE CURRENT FROM **TERMINAL 8** OF THE POWER WINDOW MASTER SW IS NOT GROUNDED AND THE MOTOR DOES NOT ROTATE, SO THE PASSENGER'S WINDOW CANNOT BE OPERATED AND WINDOW LOCK OCCURS. FURTHERMORE, REAR LH, RH WINDOW OPERATE THE SAME AS THE ABOVE CIRCUIT.

### 4. KEY OFF POWER WINDOW OPERATION

WITH THE IGNITION SW TURNED FROM ON TO OFF, THE THEFT DETERRENT ECU OPERATES AND CURRENT FLOWS FROM **DOOR FUSE** TO **TERMINAL (A)9** OF THE ECU OR **DOOR FUSE** TO **TERMINAL (B)1** OF THE ECU → **TERMINAL (A)6** → **TERMINAL 1** OF POWER MAIN RELAY → **TERMINAL 2** → **GROUND** FOR ABOUT **60** SECONDS. THE SAME AS NORMAL OPERATION, THE CURRENT FLOWS FROM **DOOR FUSE** → **TERMINAL 5** OF THE POWER MAIN RELAY → **TERMINAL 3** → **TERMINAL 4** OF THE POWER WINDOW MASTER SW AND **TERMINAL 4** OF THE POWER WINDOW CONTROL SW RH. AS A RESULT, FOR ABOUT **60** 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 DOOR (DOOR OPEN DETECTION SW ON) WITHIN ABOUT **60** SECONDS AFTER TURNING THE IGNITION SW TO OFF, A SIGNAL IS INPUT TO **TERMINAL (B)19**, **(B)7** OF THEFT DETERRENT ECU. AS A RESULT, THE ECU TURNED OFF AND UP AND DOWN MOVEMENT OF THE POWER WINDOW STOPS.



## SERVICE HINTS

### P 8 POWER WINDOW MASTER SW

4-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION

8-GROUND : ALWAYS CONTINUOUS

10-GROUND : APPROX. 12 VOLTS WITH IGNITION SW **ON** AND MASTER SW (DRIVER'S WINDOW) AT **UP** POSITION

9-GROUND : APPROX. 12 VOLTS WITH IGNITION SW **ON** AND 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
D10	30	P 8	30	T 7	A 29
D11	30	P 9	30	T13	B 29
P 7	30	P10	30		

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1D	20	FRONT DOOR LH WIRE AND J/B NO.1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		
1J		

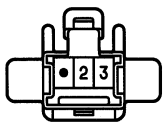
### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
ID1	36	FRONT DOOR LH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF2		
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
IL1	38	FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)

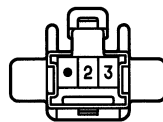
### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IE	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL
IH		
BI	40	LEFT QUATER PILLER

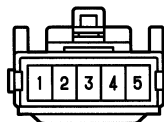
D10



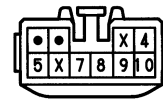
D11



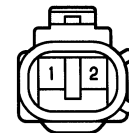
P 7



P 8



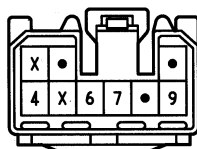
P 9 GRAY



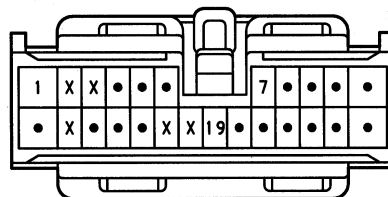
P10 GRAY



T 7 Ⓐ ORANGE

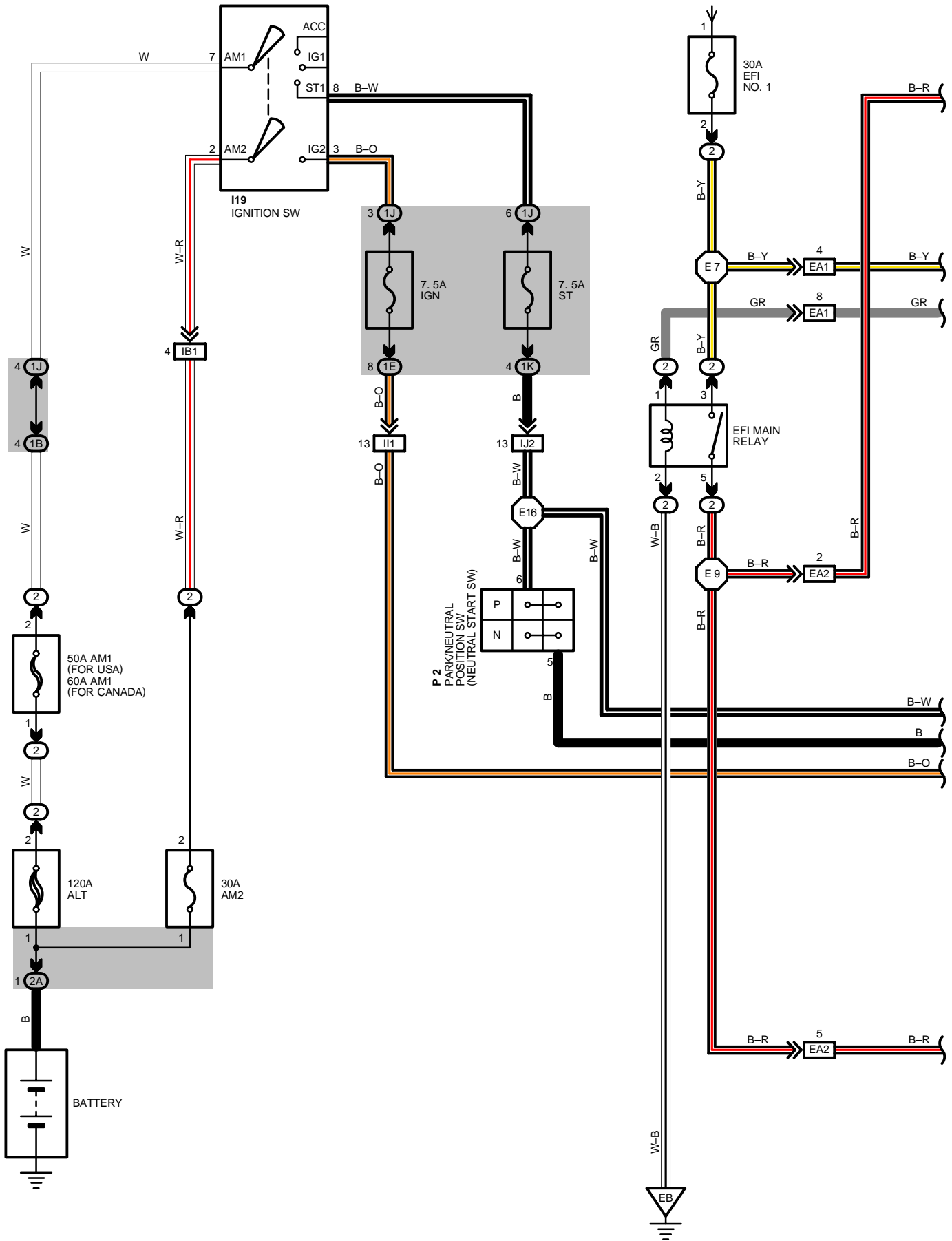


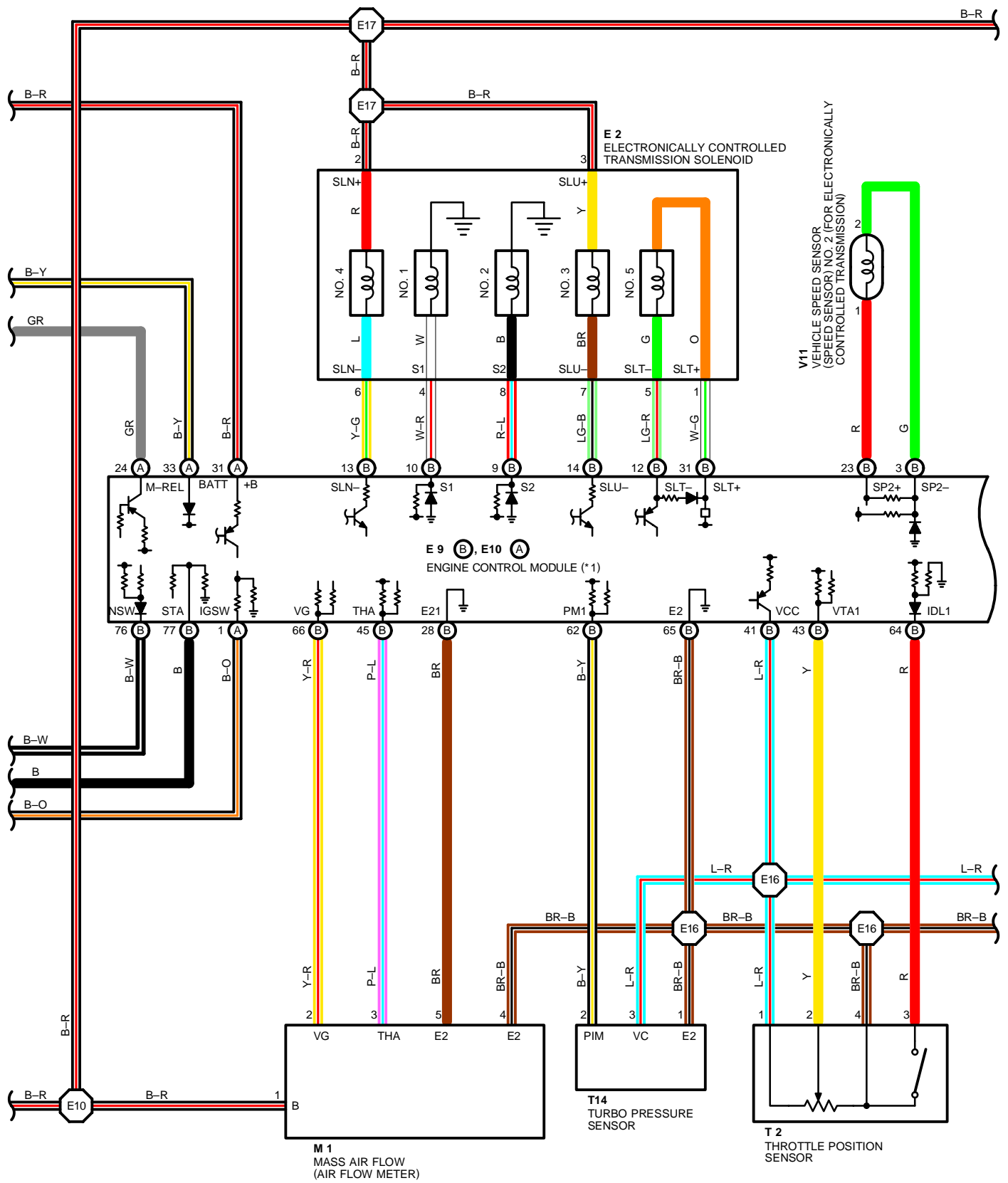
T13 Ⓑ ORANGE



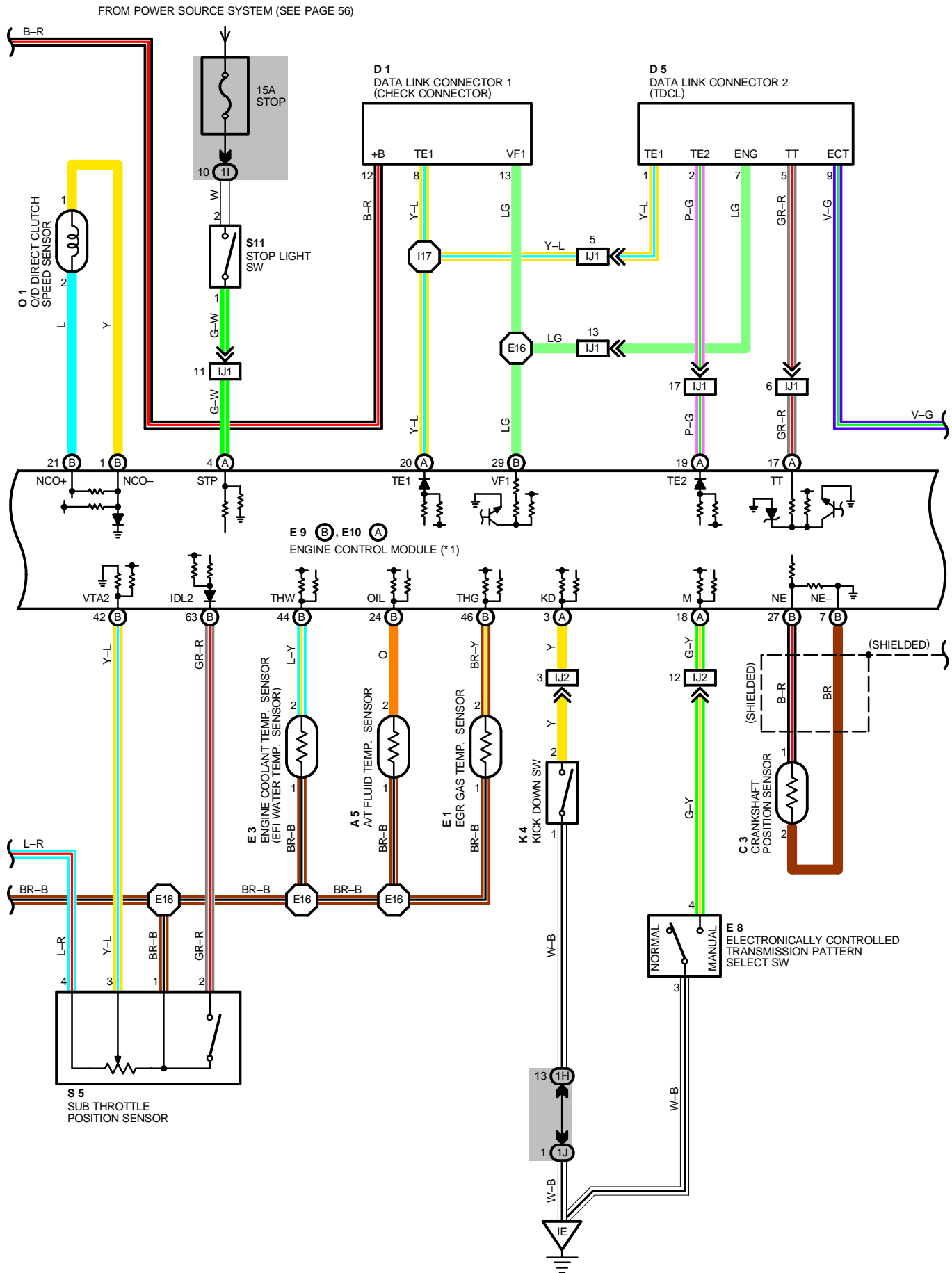
# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GTE)

FROM POWER SOURCE SYSTEM (SEE PAGE 56)

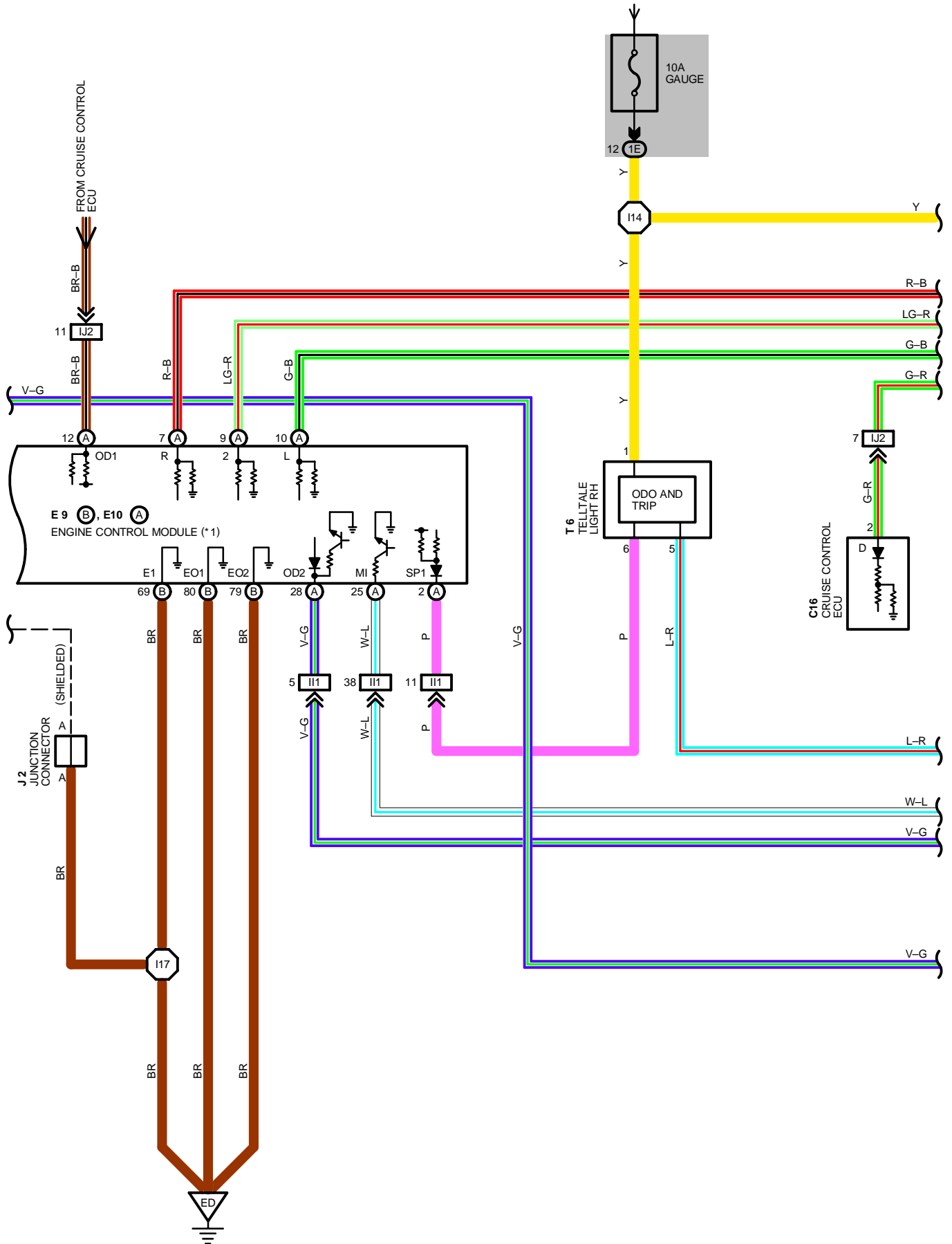




# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GTE)



FROM POWER SOURCE SYSTEM (SEE PAGE 56)





## SYSTEM OUTLINE

THIS SYSTEM ELECTRICALLY CONTROLS THE LINE PRESSURE, THROTTLE PRESSURE, LOCK-UP PRESSURE AND ACCUMULATOR PRESSURE ETC. THROUGH THE SOLENOID VALVE. THE ELECTRONICALLY CONTROLLED TRANSMISSION IS A SYSTEM WHICH PRECISELY CONTROLS GEAR SHIFT TIMING AND LOCK-UP TIMING IN RESPONSE TO THE VEHICLE'S DRIVING CONDITIONS AND THE ENGINE OPERATING CONDITIONS DETECTED BY VARIOUS SENSORS, MAKING SMOOTH DRIVING POSSIBLE BY SHIFT SELECTION FOR EACH GEAR WHICH IS THE MOST APPROPRIATE TO THE DRIVING CONDITIONS AT THAT TIME, AND CONTROLS THE ENGINE TORQUE DURING SHIFTING TO ACHIEVE OPTIMUM SHIFT FEELING.

### 1. GEAR SHIFT OPERATION

WHEN DRIVING, THE ENGINE WARM UP CONDITION IS INPUT AS A SIGNAL TO **TERMINAL (B)44** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) FROM THE ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR) AND THE VEHICLE SPEED SIGNAL FROM VEHICLE SPEED SENSOR (SPEED SENSOR) NO.2 IS INPUT TO **TERMINAL (B) 23** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). AT THE SAME TIME, THE THROTTLE VALVE OPENING SIGNAL FROM THE THROTTLE POSITION SENSOR (MAIN) IS INPUT TO **TERMINAL (B)43** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS THROTTLE ANGLE SIGNAL.

BASED ON THESE SIGNALS, THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) SELECTS THE BEST SHIFT POSITION FOR DRIVING CONDITIONS AND SENDS CURRENT TO THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOIDS.

WHEN SHIFTING TO 1ST SPEED, THE CURRENT FLOWS FROM **TERMINAL (B)10** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **TERMINAL 4** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND** AND CONTINUITY TO NO. 1 SOLENOID CAUSES THE SHIFT (NO. 2 SOLENOID DOES NOT HAVE CONTINUITY AT THIS TIME).

FOR 2ND SPEED, THE CURRENT FLOWS SIMULTANEOUSLY FROM **TERMINAL (B)9** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **TERMINAL 8** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND**, AND FROM **TERMINAL (B)10** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **TERMINAL 4** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND**, AND CONTINUITY TO NO. 1 AND NO. 2 SOLENOIDS CAUSES THE SHIFT.

FOR 3RD SPEED, THERE IS NO CONTINUITY TO NO. 1 SOLENOID, ONLY TO NO. 2 SOLENOID, CAUSING THE SHIFT.

SHIFTING INTO THE 4TH SPEED (OVERDRIVE) OCCURS WHEN NO CURRENT FLOWS TO NO. 1 AND NO. 2 SOLENOIDS. THE NO. 4 SOLENOID (FOR ACCUMULATOR BACK PRESSURE MODULATION) IS INSTALLED TO ADJUST THE BACK PRESSURE ON THE ACCUMULATOR AND CONTROLS THE HYDRAULIC PRESSURE DURING SHIFTING AND LOCK-UP IN ORDER TO PROVIDE SMOOTH SHIFTING WITH LITTLE SHIFT SHOCK.

### 2. LOCK-UP OPERATION

WHEN THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) DECIDES, BASED ON EACH SIGNAL, THAT THE LOCK-UP CONDITION HAS BEEN MET, THE CURRENT THROUGH **EFI NO. 1** FUSE FLOWS FROM THE EFI MAIN RELAY → **TERMINAL 3** OF THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **TERMINAL 7** → **TERMINAL (B)14** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **GROUND**, SO CONTINUITY TO NO. 3 (FOR LOCK-UP) CAUSES LOCK-UP.

### 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 (A)4** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) OPERATES AND CUTS THE CURRENT TO THE SOLENOID TO RELEASE LOCK-UP.

### 4. OVERDRIVE CIRCUIT

#### \* O/D MAIN SW ON

WHEN THE O/D MAIN SW IS TURNED ON (SW POINT IS OPEN), A SIGNAL IS INPUT TO **TERMINAL (A)28** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AND THE ELECTRONICALLY CONTROLLED TRANSMISSION CAUSES SHIFT TO OVERDRIVE WHEN THE CONDITIONS FOR OVERDRIVE ARE MET.

#### \* O/D MAIN SW OFF

WHEN THE O/D MAIN SW IS TURNED OFF (SW POINT IS CLOSED), THE CURRENT FLOWING THROUGH THE O/D OFF INDICATOR LIGHT FLOWS TO **GROUND** BY WAY OF THE O/D MAIN SW AND CAUSES THE O/D OFF INDICATOR LIGHT TO LIGHT UP. AT THE SAME TIME, A SIGNAL IS INPUT TO **TERMINAL (A)28** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AND THE ELECTRONICALLY CONTROLLED TRANSMISSION PREVENTS SHIFT INTO OVERDRIVE.

### 5. ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW CIRCUIT

WHEN THE ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW IS SWITCHED FROM NORMAL TO MANUAL, A SIGNAL IS INPUT TO **TERMINAL (A)18** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). INPUT OF THIS SIGNAL CAUSES CURRENT TO FLOW FROM THE **GAUGE** FUSE TO **TERMINAL (A)1** OF COMBINATION METER → **TERMINAL (A)12** → **TERMINAL (A)25** OF ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **GROUND**, LIGHTING UP THE INDICATOR LIGHT. IF THE A/T SHIFT LEVER IS THEN SHIFTED TO "2" POSITION, THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) ENABLES THE VEHICLE TO START OFF WITH THE TRANSMISSION IS 2ND GEAR, THUS PERMITTING EASING STARTING OFF AND DRIVING ON SLIPPERY ROADS.

### 6. CRUISE CONTROL

WHEN CRUISE CONTROL OPERATION IS SELECTED A SIGNAL IS INPUT TO **TERMINAL (A)12** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) FROM CRUISE CONTROL. ECU. AS A RESULT, THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) OPERATES AND CONTROLS OVERDRIVE, LOCK-UP AND SO ON FOR SMOOTH DRIVING.

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GTE)

## SERVICE HINTS

### E 2 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID

- 8- GROUND : APPROX. 13.2
- 4- GROUND : APPROX. 13.2
- 6-2 : APPROX. 8.3
- 7-3 : APPROX. 3.8
- 1-5 : APPROX. 3.8

### E 3 ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR)

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

### E 9(B), E10(A) ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU)

- BATT-E1 : ALWAYS 9-14 VOLTS
- IGSW-E1 : 9-14 VOLTS WITH IGNITION SW ON
- +B-E1 : 9-14 VOLTS WITH IGNITION SW ON
- IDL1-E1 : 0-1.5 VOLTS WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED
- 9-14 VOLTS WITH IGNITION SW ON AND THROTTLE VALVE FULLY OPEN
- VTA1-E1 : 0.3-0.8 VOLTS WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED
- 3.2-4.9 VOLTS WITH IGNITION SW ON AND THROTTLE VALVE FULLY OPEN
- STA-E1 : 6-14 VOLTS WITH ENGINE CRANKING
- M-REL-E1 : 9-14 VOLTS WITH IGNITION SW ON
- VCC-E1 : 4.5-5.5 VOLTS WITH IGNITION SW ON
- L-E1 : APPROX. 7.5- 14.0 VOLTS WITH SHIFT LEVER AT "L" POSITION
- 2-E1 : APPROX. 7.5- 14.0 VOLTS WITH SHIFT LEVER AT "2" POSITION
- R-E1 : APPROX. 7.5- 14.0 VOLTS WITH SHIFT LEVER AT "R" POSITION

### O 1 O/D DIRECT CLUTCH SPEED SENSOR

- 1-2 : APPROX. 620

### V11 VEHICLE SPEED SENSOR (SPEED SENSOR) NO. 2 (FOR ELECTRONICALLY CONTROLLED TRANSMISSION)

- 1-2 : APPROX. 620

### E 8 ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW

- 4-3 : CLOSED WITH ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW AT MANUAL POSITION

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 5	24 (2JZ-GTE)	E 3	24 (2JZ-GTE)	O 5	29
C 3	24	E 8	29	P 2	25 (2JZ-GTE)
C10	B 28	E 9	B 29	S 5	25
C11	A 28	E10	A 29	S11	29
C12	C 28	I19	29	T 2	25 (2JZ-GTE)
C16	28	J 1	29	T 6	29
D 1	24 (2JZ-GTE)	J 2	29	T14	25
D 5	28	K 4	29	V10	25 (2JZ-GTE)
E 1	24 (2JZ-GTE)	M 1	25	V11	25 (2JZ-GTE)
E 2	24 (2JZ-GTE)	O 1	25		

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		
1J		
1K		
2A	22	BATTERY AND 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	32 (2JZ-GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2))
EA2	32	
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
IH1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2		

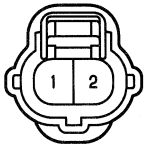
**▽ : GROUND POINTS**

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
ED	32 (2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD
IE	36	LEFT KICK PANEL
IF		
IH	36	RIGHT KICK PANEL

**○ : SPLICE POINTS**

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E7	32	ENGINE ROOM MAIN WIRE	I8	38	INSTRUMENT PANEL WIRE
E9			I11	38	COWL WIRE
E10	32	ENGINE WIRE	I14	38	INSTRUMENT PANEL WIRE
E14			I17	38	ENGINE WIRE
E16			I21	38	INSTRUMENT PANEL WIRE
E17					

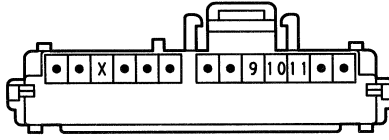
A 5 GRAY



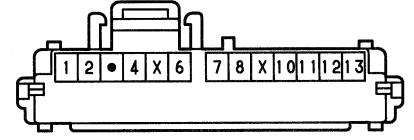
C 3 DARK GRAY



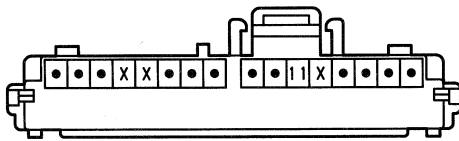
C10 B BLUE



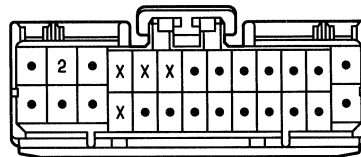
C11 A BROWN



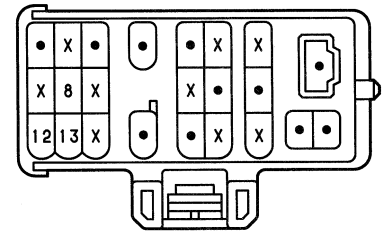
C12 C



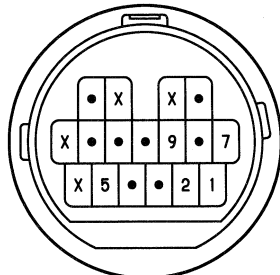
C16 GREEN



D 1 BLACK



D 5 DARK GRAY



E 1 DARK GRAY



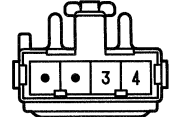
E 2 GRAY



E 3 DARK GRAY

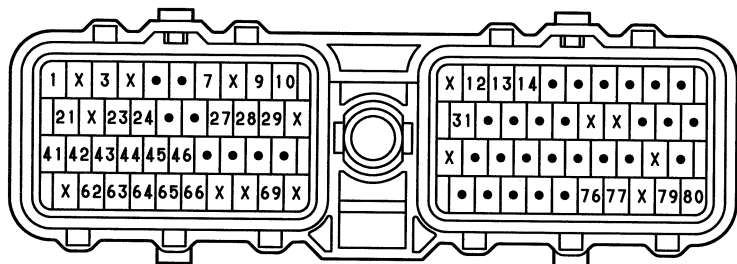


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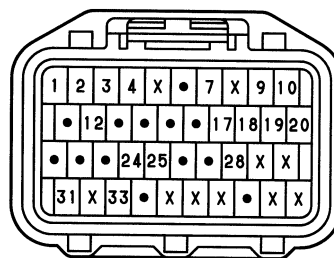


# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GTE)

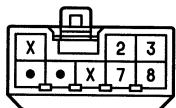
E 9 **B** DARK GRAY



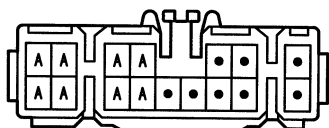
E10 **A** DARK GRAY



I 19

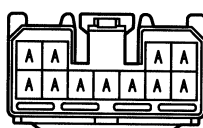


J 1



(HINT:SEE PAGE 7)

J 2

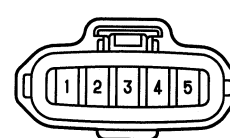


(HINT:SEE PAGE 7)

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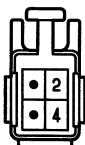
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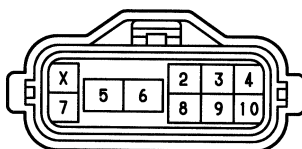
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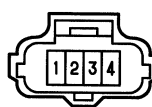
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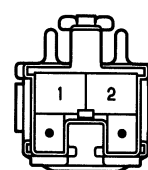
P 2 GRAY



S 5 BLACK



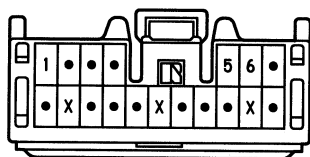
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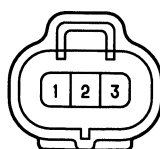
T 2 BLACK



T 6



T14 BLACK



V10 BLACK

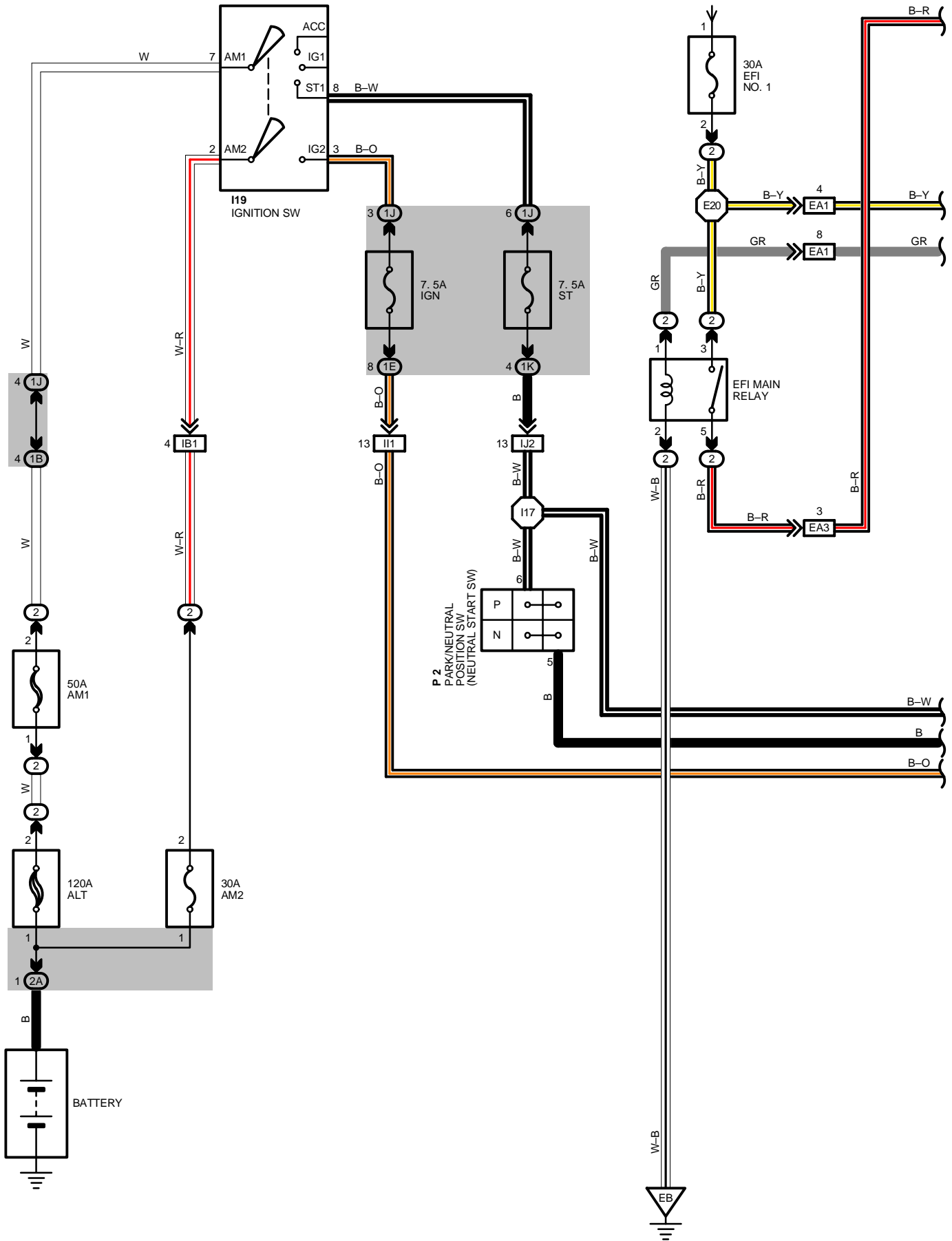


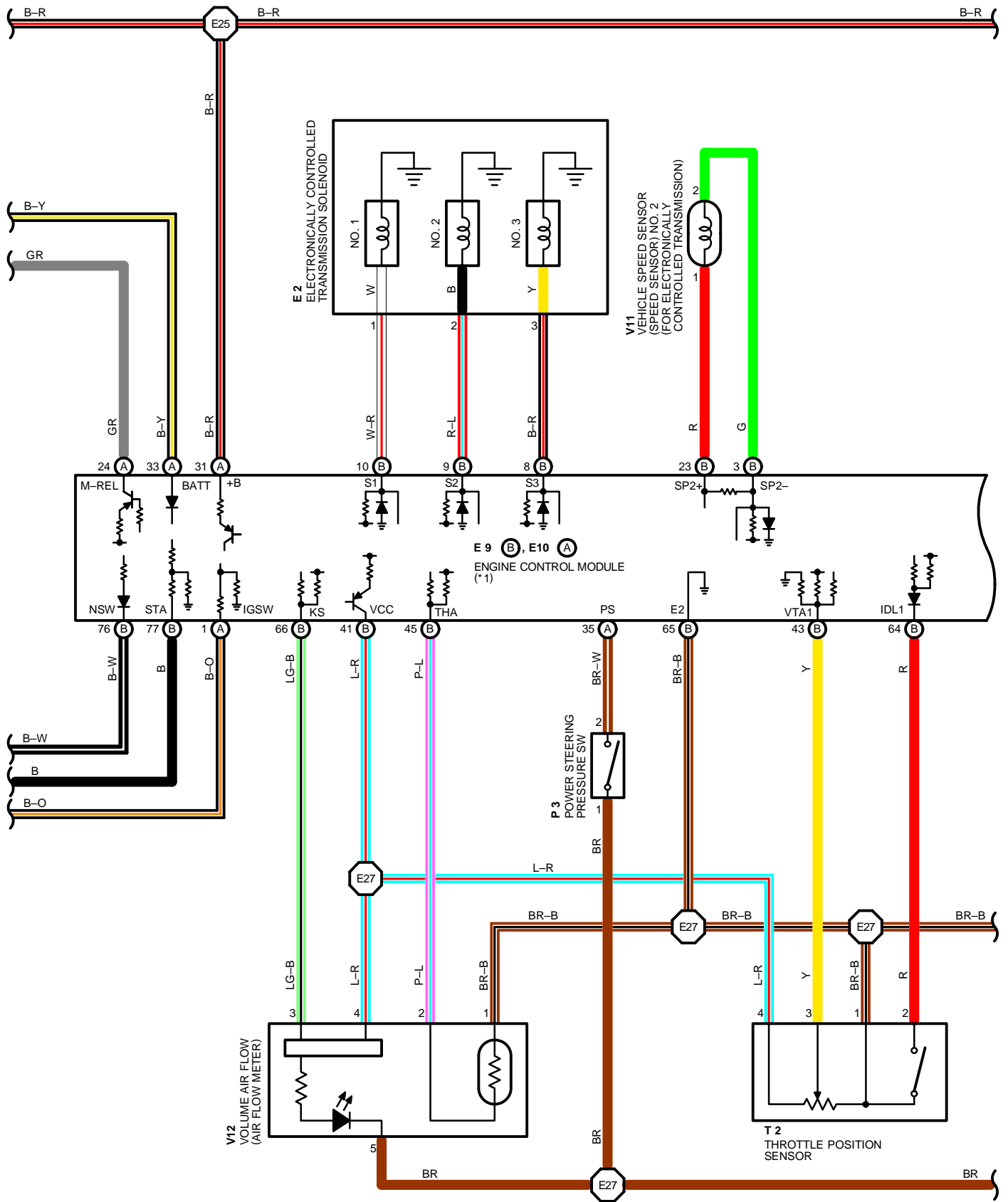
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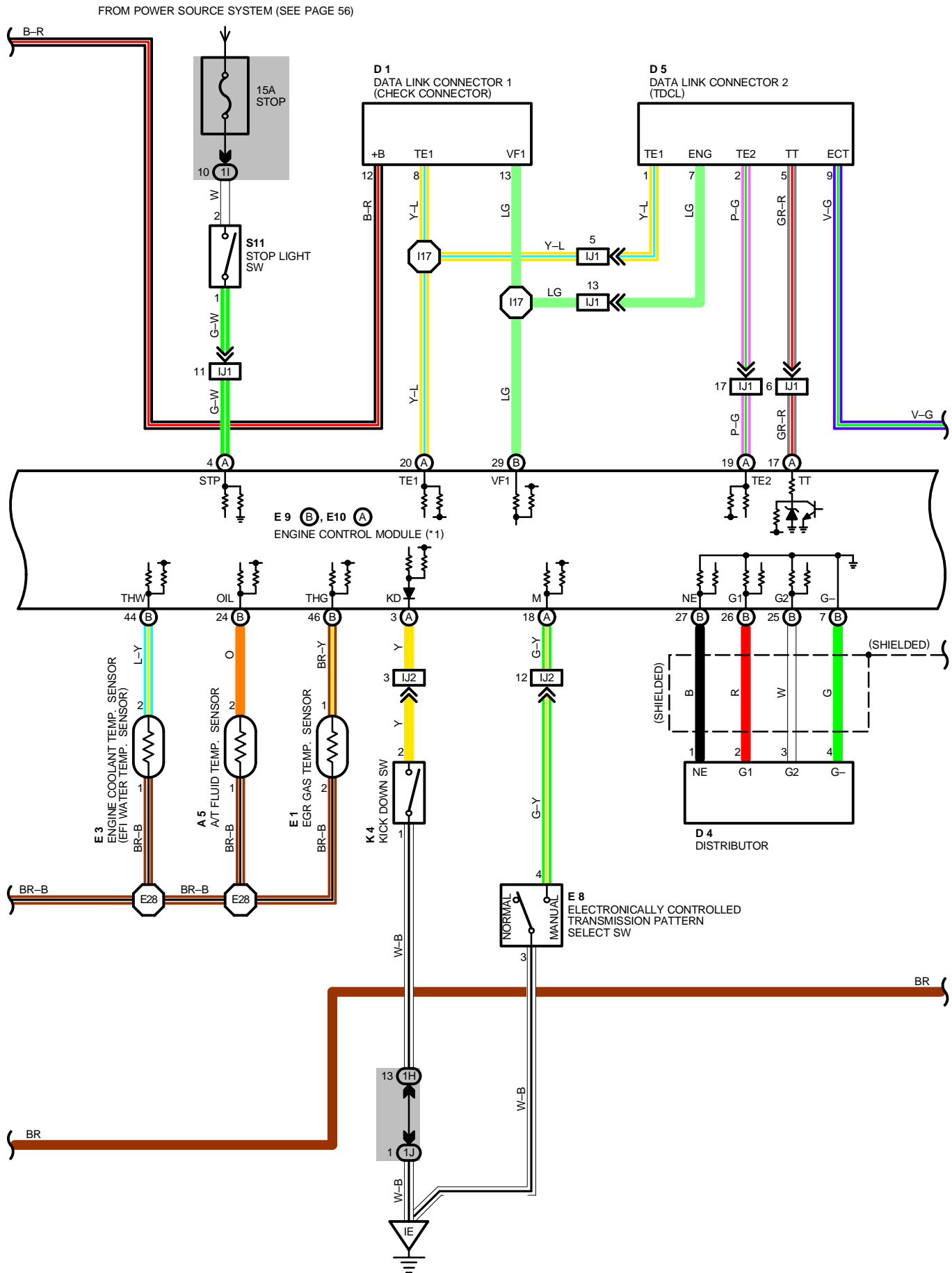
# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GE)

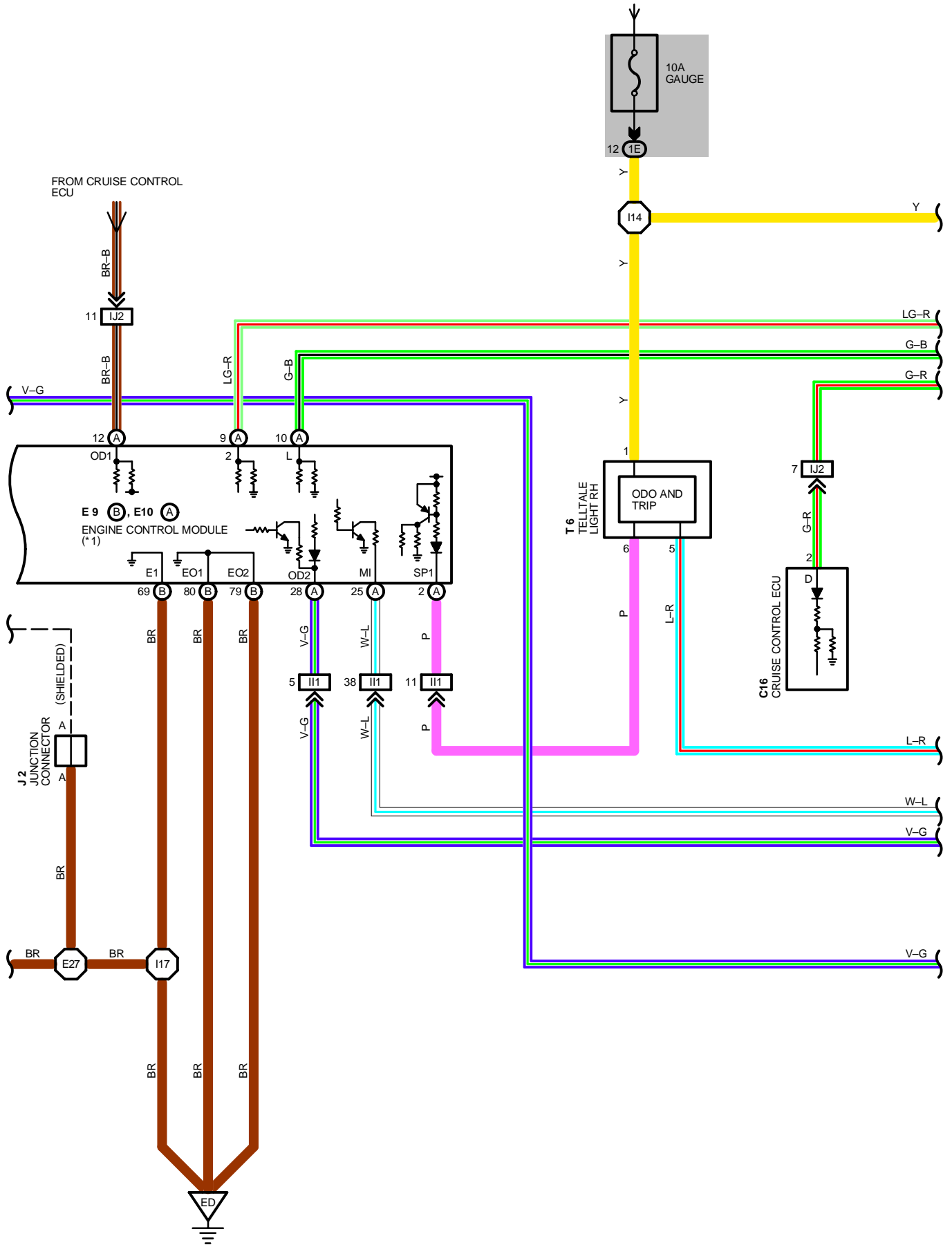
FROM POWER SOURCE SYSTEM (SEE PAGE 56)



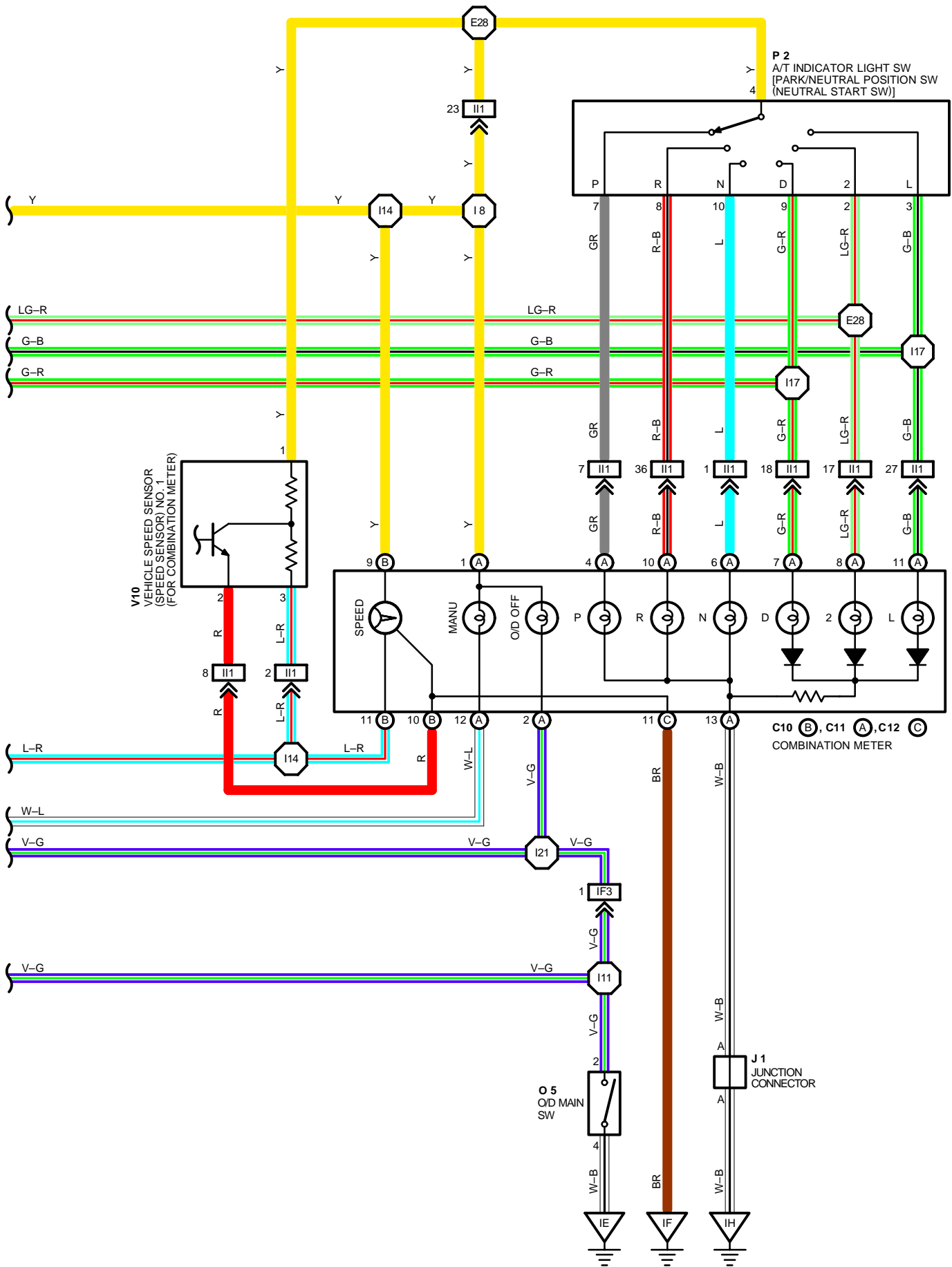


# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GE)





# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GE)



## SYSTEM OUTLINE

THIS SYSTEM ELECTRICALLY CONTROLS THE LINE PRESSURE, THROTTLE PRESSURE, LOCK-UP PRESSURE AND ACCUMULATOR PRESSURE ETC. THROUGH THE SOLENOID VALVE. THE ELECTRONICALLY CONTROLLED TRANSMISSION IS A SYSTEM WHICH PRECISELY CONTROLS GEAR SHIFT TIMING AND LOCK-UP TIMING IN RESPONSE TO THE VEHICLE'S DRIVING CONDITIONS AND THE ENGINE OPERATING CONDITIONS DETECTED BY VARIOUS SENSORS, MAKING SMOOTH DRIVING POSSIBLE BY SHIFT SELECTION FOR EACH GEAR WHICH IS THE MOST APPROPRIATE TO THE DRIVING CONDITIONS AT THAT TIME, AND CONTROLS THE ENGINE TORQUE DURING SHIFTING TO ACHIEVE OPTIMUM SHIFT FEELING.

### 1. GEAR SHIFT OPERATION

WHEN DRIVING, THE ENGINE WARM UP CONDITION IS INPUT AS A SIGNAL TO **TERMINAL (B)44** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) FROM THE ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR) AND THE VEHICLE SPEED SIGNAL FROM VEHICLE SPEED SENSOR (SPEED SENSOR) NO.2 IS INPUT TO **TERMINAL (B)23** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). AT THE SAME TIME, THE THROTTLE VALVE OPENING SIGNAL FROM THE THROTTLE POSITION SENSOR IS INPUT TO **TERMINAL (B)43** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AS THROTTLE ANGLE SIGNAL.

BASED ON THESE SIGNALS, THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) SELECTS THE BEST SHIFT POSITION FOR DRIVING CONDITIONS AND SENDS CURRENT TO THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOIDS. WHEN SHIFTING TO 1ST SPEED, THE CURRENT FLOWS FROM **TERMINAL (B)10** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **TERMINAL 1** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND** AND CONTINUITY TO NO. 1 SOLENOID CAUSES THE SHIFT (NO. 2 SOLENOID DOES NOT HAVE CONTINUITY AT THIS TIME).

FOR 2ND SPEED, THE CURRENT FLOWS SIMULTANEOUSLY FROM **TERMINAL (B)9** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **TERMINAL 2** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND**, AND FROM **TERMINAL (B)10** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **TERMINAL 1** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **GROUND**, AND CONTINUITY TO NO. 1 AND NO. 2 SOLENOIDS CAUSES THE SHIFT.

FOR 3RD SPEED, THERE IS NO CONTINUITY TO NO. 1 SOLENOID, ONLY TO NO. 2 SOLENOID, CAUSING THE SHIFT.

SHIFTING INTO THE 4TH SPEED (OVERDRIVE) OCCURS WHEN NO CURRENT FLOWS TO NO. 1 AND NO. 2 SOLENOIDS.

### 2. LOCK-UP OPERATION

WHEN THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) JUDGES FROM EACH SIGNAL THAT LOCK-UP OPERATION CONDITIONS HAVE BEEN MET, CURRENT FLOWS FROM **TERMINAL (B)8** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **TERMINAL 3** OF THE ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID → **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 (A)4** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) OPERATES AND CUTS THE CURRENT TO THE SOLENOID TO RELEASE LOCK-UP.

### 4. OVERDRIVE CIRCUIT

\* O/D MAIN SW ON

WHEN THE O/D MAIN SW IS TURNED ON (SW POINT IS OPEN), A SIGNAL IS INPUT TO **TERMINAL (A)28** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AND THE ELECTRONICALLY CONTROLLED TRANSMISSION CAUSES SHIFT TO OVERDRIVE WHEN THE CONDITIONS FOR OVERDRIVE ARE MET.

\* O/D MAIN SW OFF

WHEN THE O/D MAIN SW IS TURNED OFF (SW POINT IS CLOSED), THE CURRENT FLOWING THROUGH THE O/D OFF INDICATOR LIGHT FLOWS TO **GROUND** BY WAY OF THE O/D MAIN SW AND CAUSES THE O/D OFF INDICATOR LIGHT TO LIGHT UP. AT THE SAME TIME, A SIGNAL IS INPUT TO **TERMINAL (A)28** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) AND THE ELECTRONICALLY CONTROLLED TRANSMISSION PREVENTS SHIFT INTO OVERDRIVE.

### 5. ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW CIRCUIT

WHEN THE ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW IS SWITCHED FROM NORMAL TO MANUAL, A SIGNAL IS INPUT TO **TERMINAL (A)18** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). INPUT OF THIS SIGNAL CAUSES CURRENT TO FLOW FROM THE **GAUGE FUSE** TO **TERMINAL (A)1** OF COMBINATION METER → **TERMINAL (A)12** → **TERMINAL (A)25** OF ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) → **GROUND**, LIGHTING UP THE INDICATOR LIGHT. IF THE A/T SHIFT LEVER IS THEN SHIFTED TO "2" POSITION, THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) ENABLES THE VEHICLE TO START OFF WITH THE TRANSMISSION IN 2ND GEAR, THUS PERMITTING EASING STARTING OFF AND DRIVING ON SLIPPERY ROADS.

### 6. CRUISE CONTROL

WHEN CRUISE CONTROL OPERATION IS SELECTED A SIGNAL IS INPUT TO **TERMINAL (A)12** OF THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) FROM CRUISE CONTROL ECU. AS A RESULT, THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) OPERATES AND CONTROLS OVERDRIVE, LOCK-UP AND SO ON FOR SMOOTH DRIVING.



# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GE)

## SERVICE HINTS

### E 2 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID

1, 2, 3- GROUND : EACH 11-15

### E 3 ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR)

1-2 : 10-20 K (-20°C, -4°F)

4-7 K (0°C, 32°F)

2-3 K (20°C, 68°F)

0.9-1.3 K (40°C, 104°F)

0.4-0.7 K (60°C, 140°F)

0.2-0.4 K (80°C, 176°F)

### E 9(B), E10(A) ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU)

BATT-E1 : ALWAYS 9-14 VOLTS

IGSW-E1 : 9-14 VOLTS WITH IGNITION SW ON

+B-E1 : 9-14 VOLTS WITH IGNITION SW ON

IDL1-E1 : 0-1.5 VOLTS WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED

9-14 VOLTS WITH IGNITION SW ON AND THROTTLE VALVE FULLY OPEN

VTA1-E1: 0.3- 0.8 VOLTS WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED

3.2-4.9 VOLTS WITH IGNITION SW ON AND THROTTLE VALVE FULLY OPEN

STA-E1: 6-14 VOLTS WITH ENGINE CRANKING

M-REL-E1 : 9-14 VOLTS WITH IGNITION SW ON

VCC-E1: 4.5-5.5 VOLTS WITH IGNITION SW ON

L-E1 : APPROX. 7.5- 14.0 VOLTS WITH SHIFT LEVER AT "L" POSITION

2-E1 : APPROX. 7.5- 14.0 VOLTS WITH SHIFT LEVER AT "2" POSITION

### V11 VEHICLE SPEED SENSOR (SPEED SENSOR) NO. 2 (FOR ELECTRONICALLY CONTROLLED TRANSMISSION)

1-2 : APPROX. 620

### E 8 ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW

4-3 : CLOSED WITH ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW AT MANUAL POSITION

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 5	26 (2JZ-GE)	E 2	26 (2JZ-GE)	O 5	29
C10	B 28	E 3	26 (2JZ-GE)	P 2	27 (2JZ-GE)
C11	A 28	E 8	29	P 3	27 (2JZ-GE)
C12	C 28	E 9	B 29	S11	29
C16	28	E10	A 29	T 2	27 (2JZ-GE)
D 1	26 (2JZ-GE)	I19	29	T 6	29
D 4	26	J 1	29	V10	27 (2JZ-GE)
D 5	28	J 2	29	V11	27 (2JZ-GE)
E 1	26 (2JZ-GE)	K 4	29	V12	27

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		
1J		
1K		
2A	22	BATTERY AND 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 (2JZ-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA3	34	
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
IH1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2		

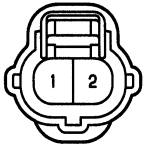
**▽ : GROUND POINTS**

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	34 (2JZ-GE)	FRONT SIDE OF LEFT FENDER
ED	34 (2JZ-GE)	REAR SIDE OF INTAKE MANIFOLD
IE	36	LEFT KICK PANEL
IF		
IH	36	RIGHT KICK PANEL

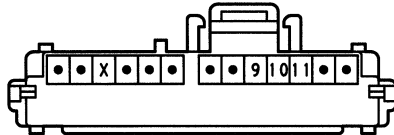
**○ : SPLICE POINTS**

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E20	34	ENGINE WIRE	I11	38	COWL WIRE
E25			I14	38	INSTRUMENT PANEL WIRE
E27			I17	38	ENGINE WIRE
E28			I21	38	INSTRUMENT PANEL WIRE
18	38	INSTRUMENT PANEL WIRE			

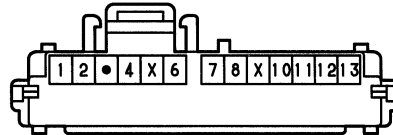
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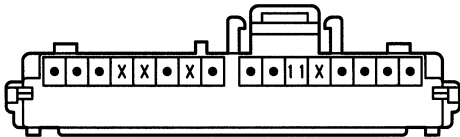
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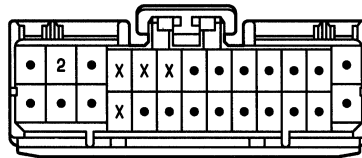
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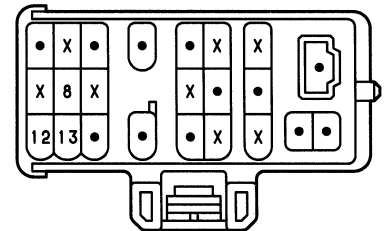
C12 C



C16 GREEN



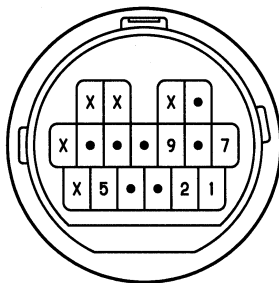
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D 4 BLACK



D 5 DARK GRAY



E 1 DARK GRAY



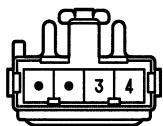
E 2 BLACK



E 3 GREEN

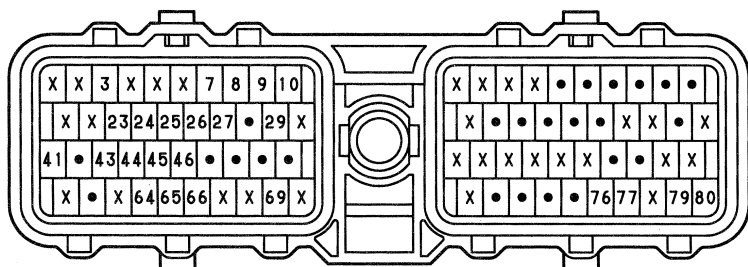


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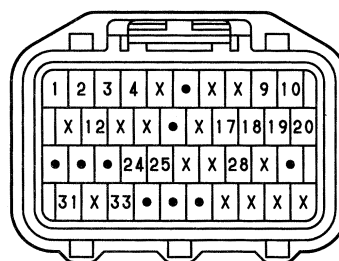


# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (FOR 2JZ-GE)

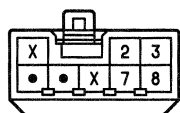
E 9 **B** DARK GRAY



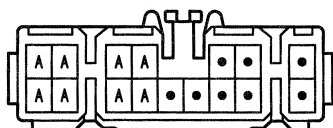
E10 **A** DARK GRAY



I19



J 1



(HINT:SEE PAGE 7)

J 2

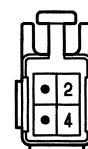


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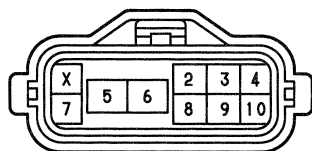
K 4 BLACK



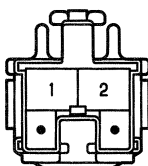
O 5 BLUE



P 2 GRAY



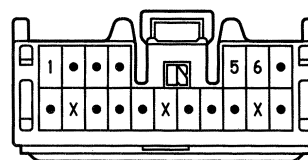
S11 BLUE



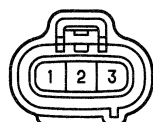
T 2 BLACK



T 6



V10 BLACK



V11 BLACK



V12 BLACK



# ABS (ANTI-LOCK BRAKE SYSTEM)

A 6 (A) BLACK



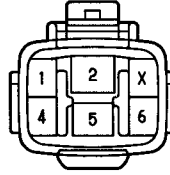
A 7 (B) GRAY



A 8 (A) GRAY



A 9 (B) GRAY



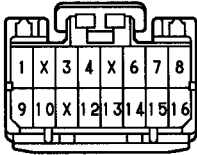
A10 GRAY



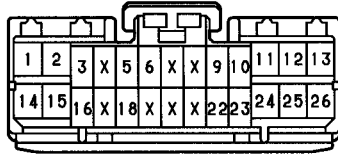
A11 GRAY



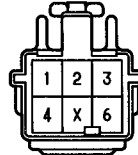
A18 (B)



A19 (A)



A23



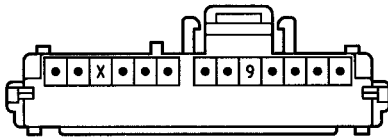
A31 GRAY



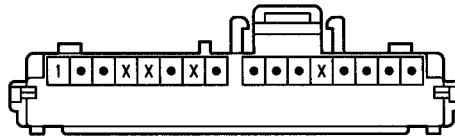
A32 GRAY



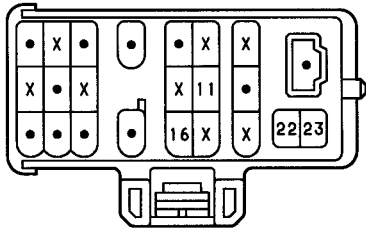
C10 (A) BLUE



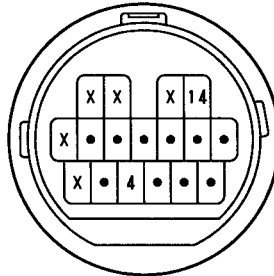
C12 (B)



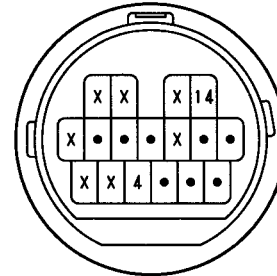
D 1 BLACK



(A/T) D 5 DARK GRAY



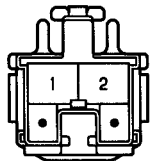
(M/T) D 5 DARK GRAY



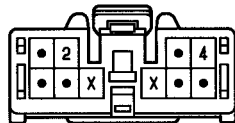
P 5



S11 BLUE

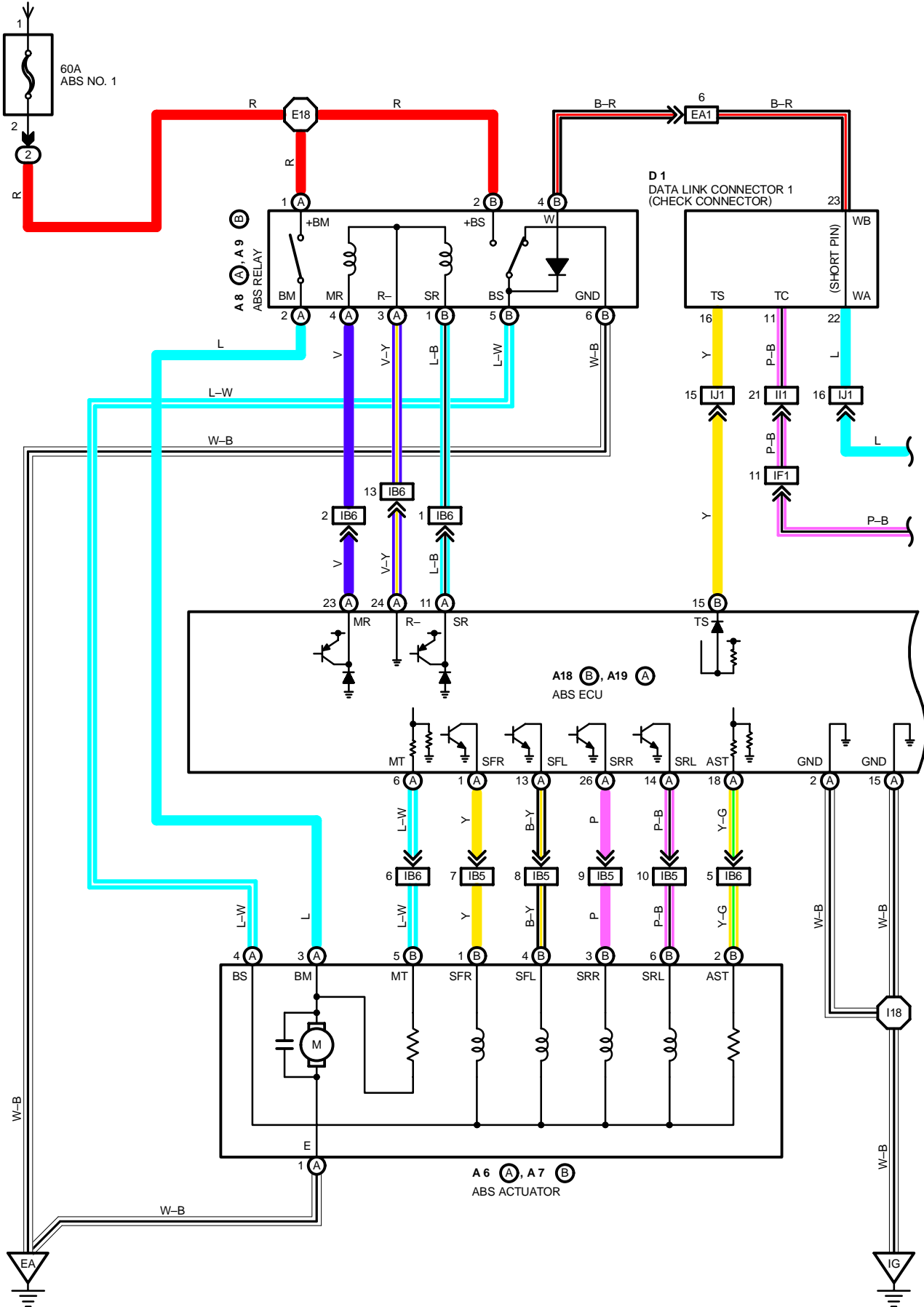


T 5



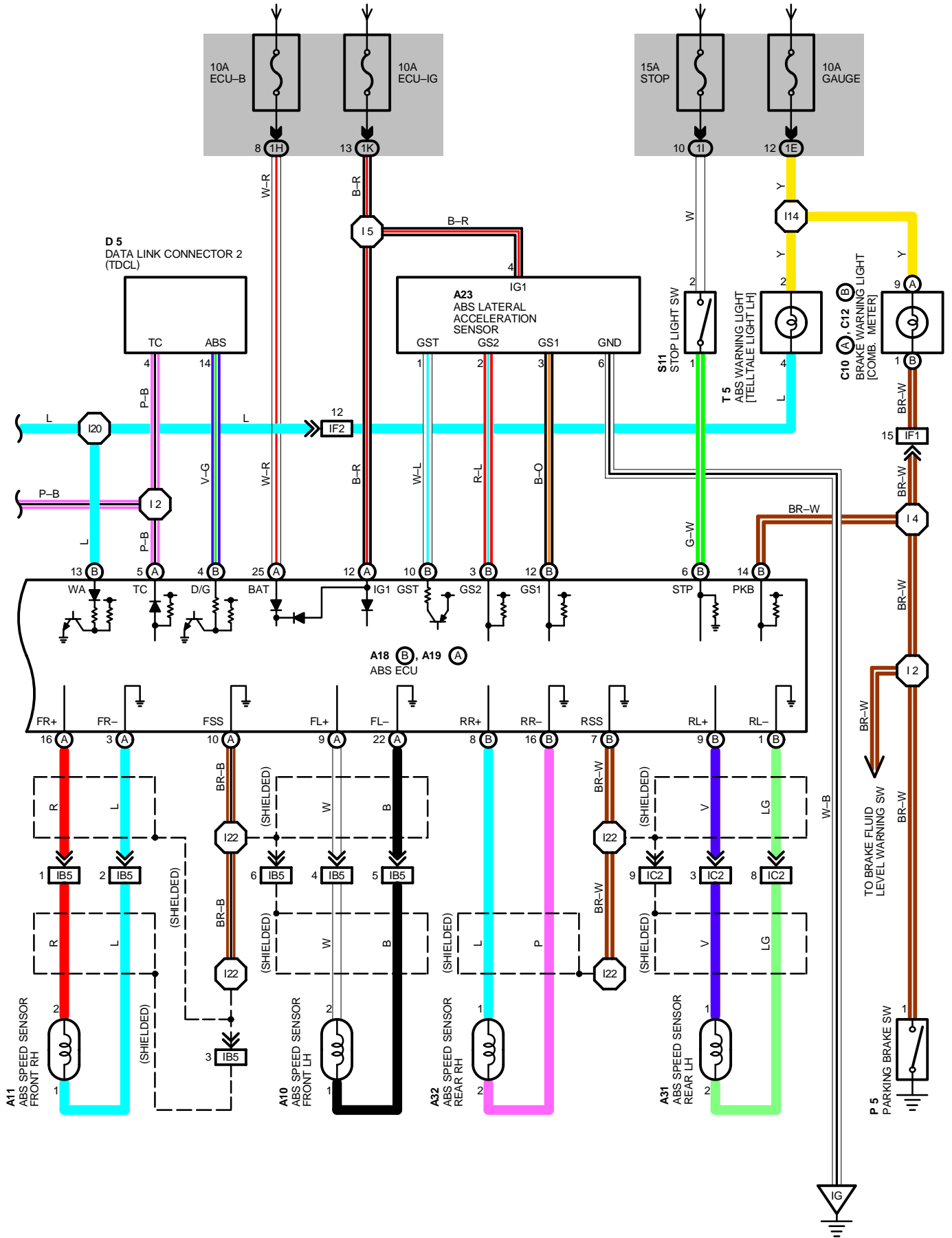
# ABS (ANTI-LOCK BRAKE SYSTEM)

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



FROM POWER SOURCE SYSTEM (SEE PAGE 56)

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



# ABS (ANTI-LOCK BRAKE SYSTEM)

## SYSTEM OUTLINE

THIS SYSTEM CONTROLS THE RESPECTIVE BRAKE FLUID PRESSURES ACTING ON THE DISC BRAKE CYLINDERS OF THE RIGHT FRONT WHEEL, LEFT FRONT WHEEL, RIGHT REAR WHEEL AND LEFT REAR WHEEL 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.
- (3) PARKING BRAKE SW SIGNAL  
A SIGNAL IS INPUT TO **TERMINAL PKB** OF THE ABS ECU WHEN THE PARKING BRAKE LEVER IS PULLED UP.
- (4) DECELERATION SENSOR SIGNAL  
LATERAL ACCELERATION IS DETECTED AND INPUT TO THE ABS ECU.

### 2. SYSTEM OPERATION

DURING SUDDEN BRAKING, THE ABS ECU WHICH HAS SIGNALS INPUT FROM EACH SENSOR CONTROLS THE CURRENT FLOWING 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 ECU JUDGES THAT THE HYDRAULIC PRESSURE ACTING ON THE WHEEL CYLINDER IS INSUFFICIENT, THE CURRENT ACTING ON SOLENOID IS CONTROLLED AND THE HYDRAULIC PRESSURE IS INCREASED.

HOLDING OF THE HYDRAULIC PRESSURE IS ALSO CONTROLLED BY THE ECU, BY THE SAME METHOD AS ABOVE. BY REPEATED PRESSURE REDUCTION, HOLDING AND INCREASE ARE REPEATED TO MAINTAIN VEHICLE STABILITY AND TO IMPROVE STEERABILITY DURING SUDDEN BRAKING.

## SERVICE HINTS

### A 6(A), A 7(B) ABS ACTUATOR

- (A) 1-GROUND : ALWAYS CONTINUOUS
- (B) 1, (B) 3, (B) 4, (B) 6-GROUND : APPROX. 1.20 (IGNITION SW OFF)
- (B) 2-(A) 4: 4-6 (IGNITION SW OFF)

### A10, A11, A31, A32 ABS SPEED SENSOR FRONT LH, RH, REAR LH, RH

- 1-2: 0.8-1.3 K (20°C, 68°F)

### A18 (B), A19(A) ABS ECU

- (A)12-GROUND : 10-14 VOLTS WITH IGNITION SW ON
- (A) 2, (A)15-GROUND: ALWAYS CONTINUOUS
- (A)25-GROUND : ALWAYS 10-14 VOLTS
- (A)1, (A)13, (A)14,(A)26,-GROUND: 10-14 VOLTS WITH IGNITION SW ON
- (B)14-GROUND : CONTINUITY WITH PARKING BRAKE LEVEL PULLED UP
- (B) 6-GROUND :10-14 VOLTS WITH STOP LIGHT SW ON (BRAKE PEDAL DEPRESSED)

### P 5 PARKING BRAKE SW

- 1-GROUND: CLOSED WITH PARKING BRAKE LEVER PULLED UP

### S11 STOP LIGHT SW

- 1-2: CLOSED WITH BRAKE PEDAL DEPRESSED

 : PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
A 6	A	26 (2JZ-GE)	A18	B	28	C12	B	28
A 7	B	26 (2JZ-GE)	A19	A	28	D 1		26 (2JZ-GE)
A 8	A	26	A23		28	D 5		28
A 9	B	26	A31		30	P 5		29
A10		26 (2JZ-GE)	A32		30	S11		29
A11		26 (2JZ-GE)	C10	A	28	T 5		29

 : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H		
1I	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1K		

 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	34 (2JZ-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
IB5	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
IB6		
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF2		
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)

 : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	34 (2JZ-GE)	FRONT SIDE OF RIGHT FENDER
IG	36	RIGHT KICK PANEL

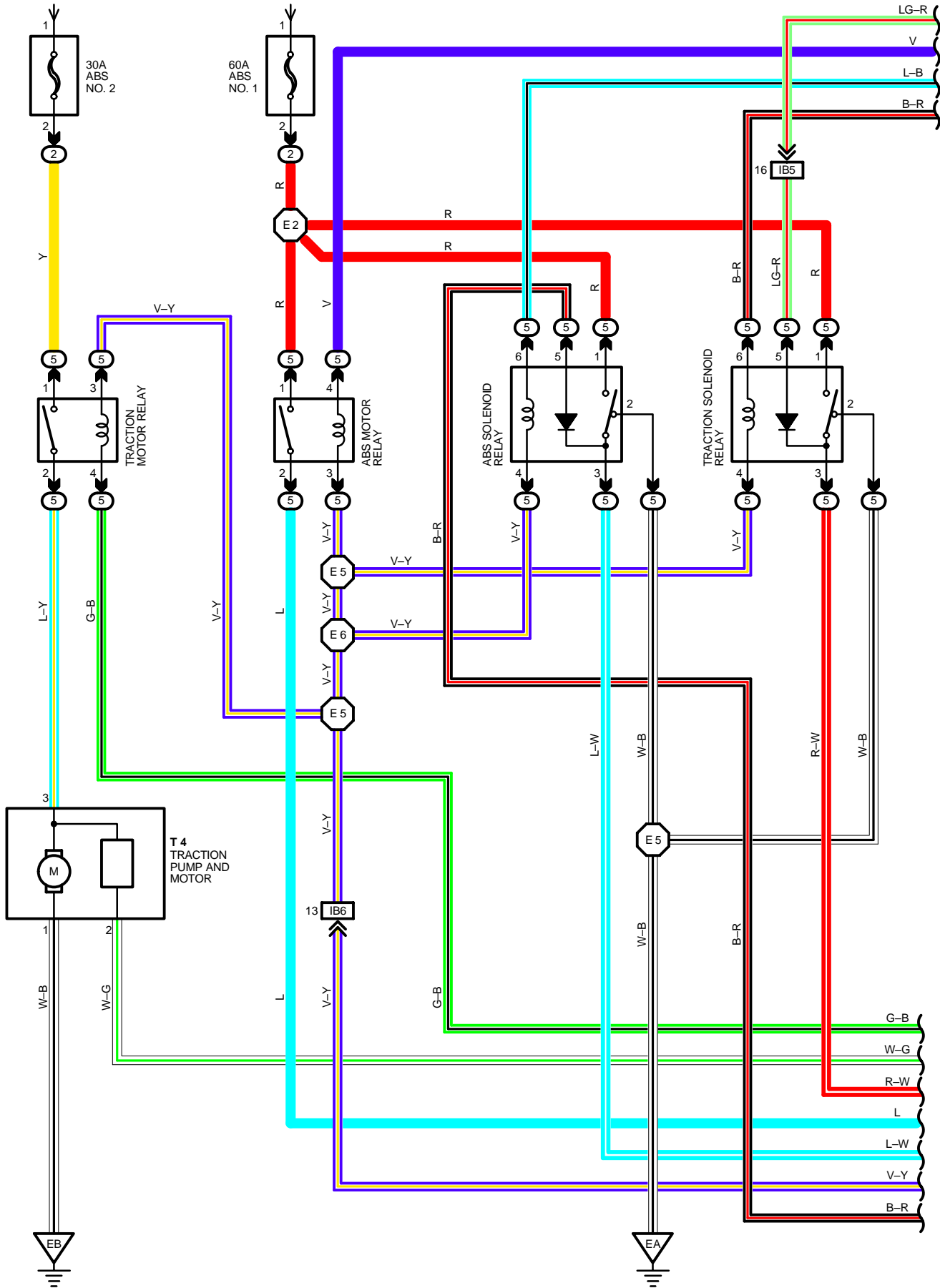
 : SPLICE POINTS

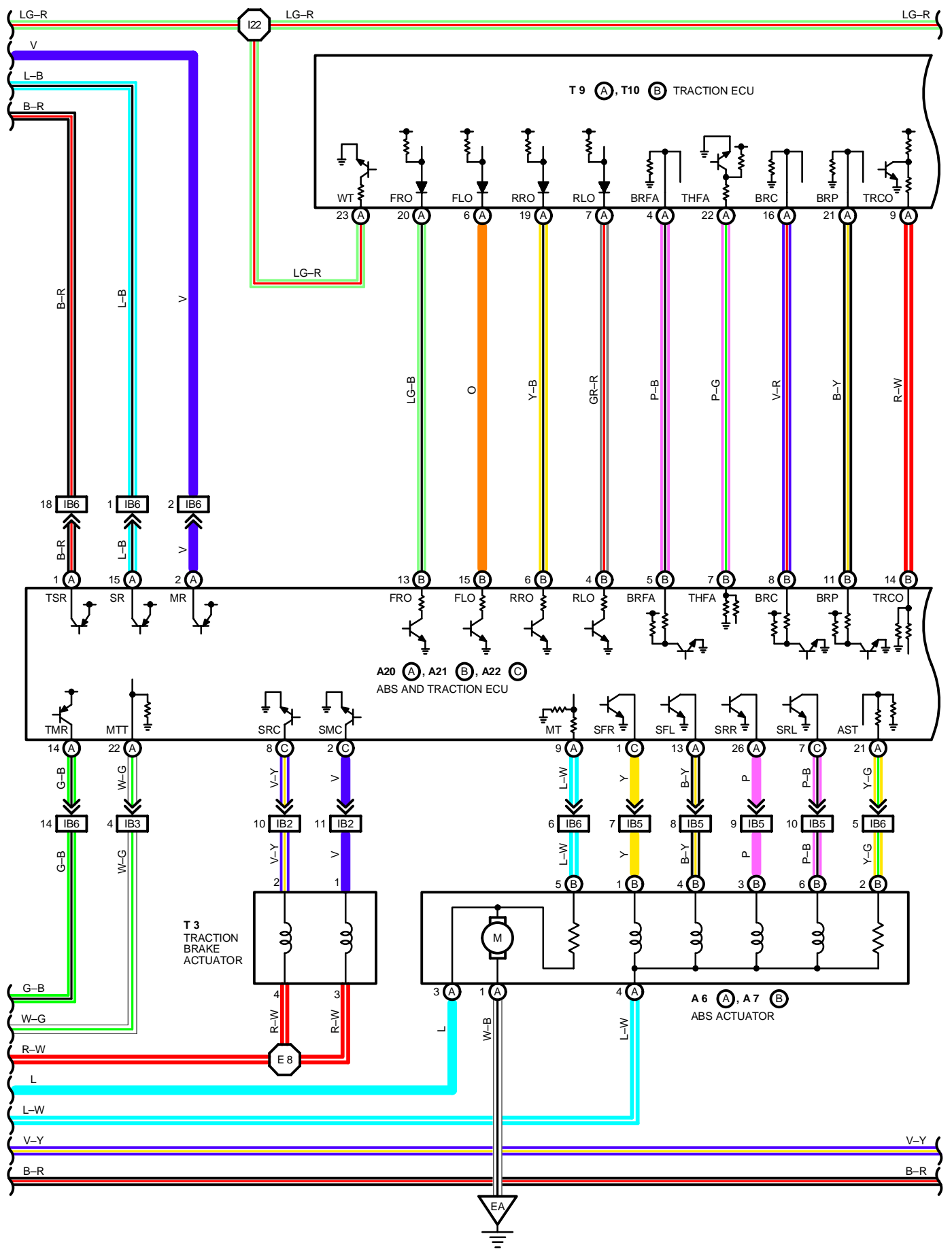
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E18	34	ENGINE ROOM MAIN WIRE	I14	38	INSTRUMENT PANEL WIRE
I 2	38	COWL WIRE	I18	38	COWL WIRE
I 4					
I 5	38	INSTRUMENT PANEL WIRE	I22		



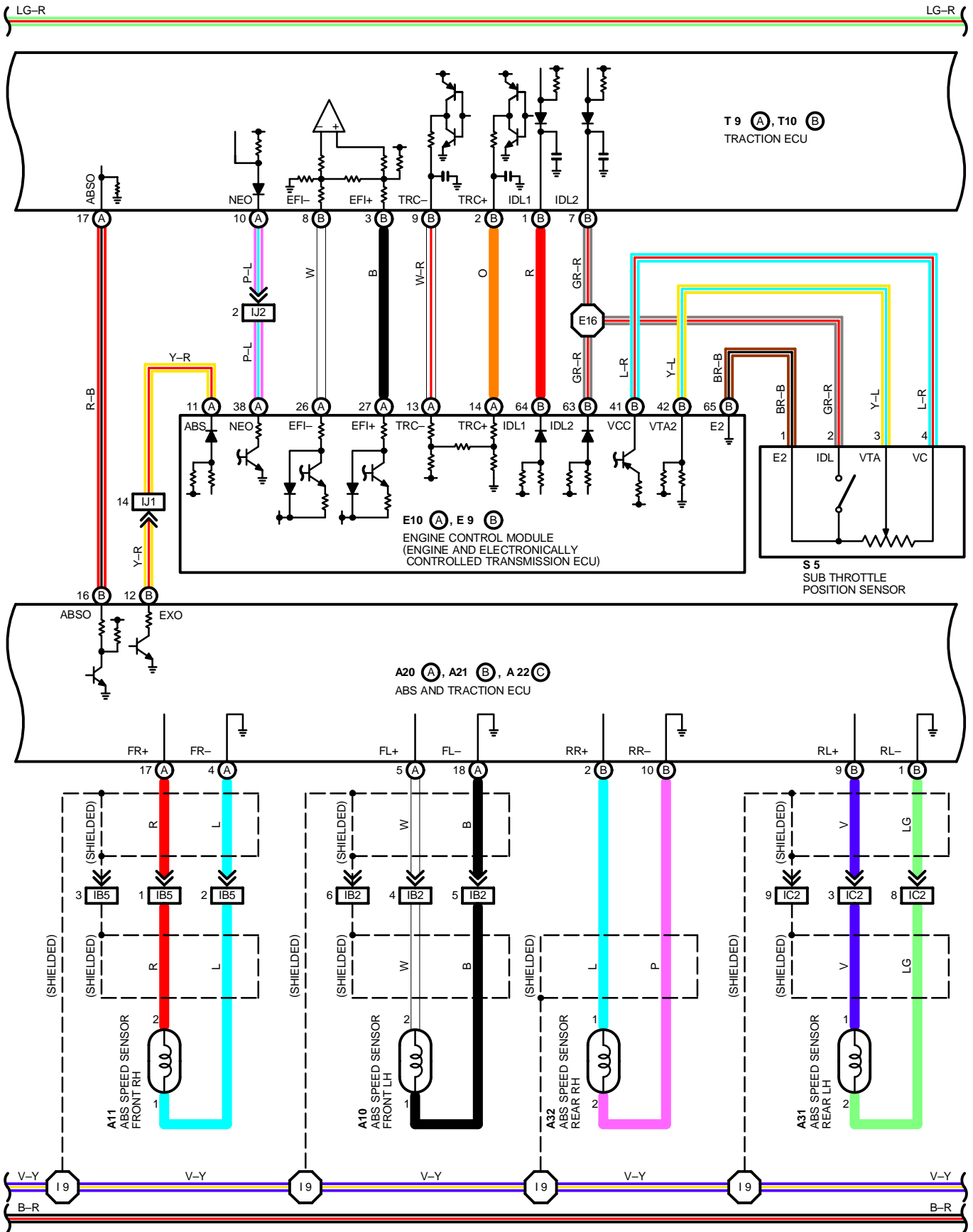
# ABS AND TRACTION CONTROL

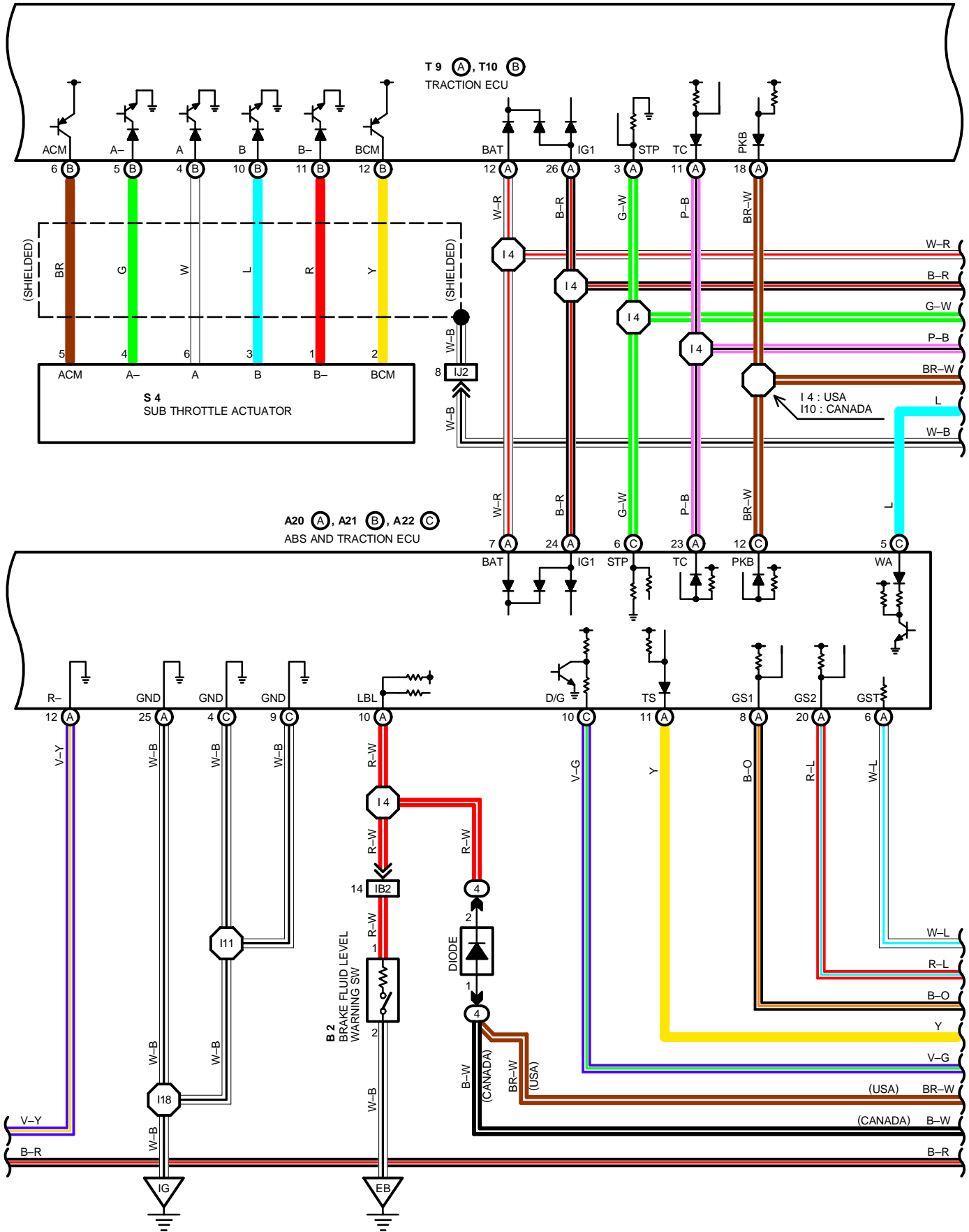
FROM POWER SOURCE SYSTEM (SEE PAGE 56)



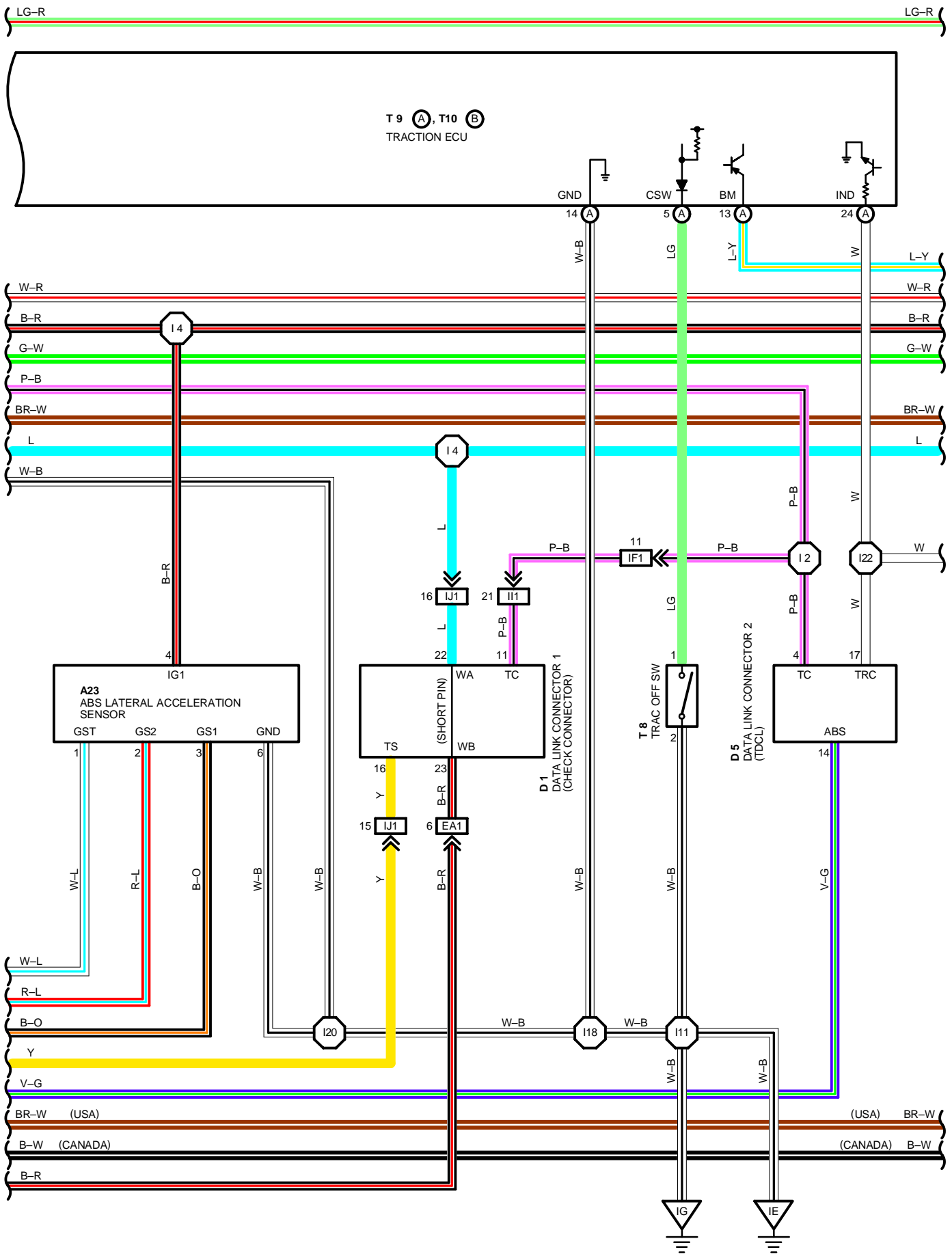


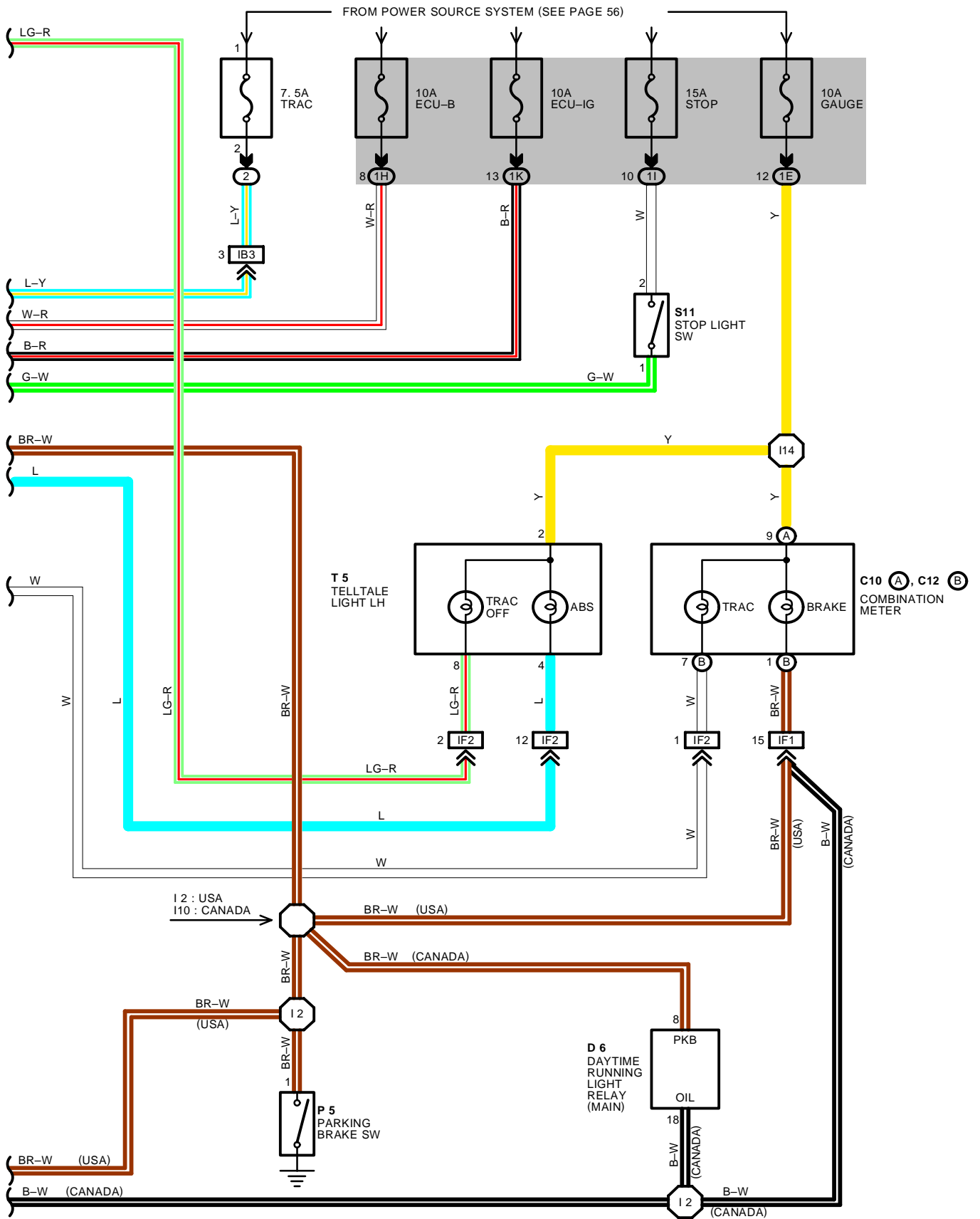
# ABS AND TRACTION CONTROL





# ABS AND TRACTION CONTROL





# ABS AND TRACTION CONTROL

## SYSTEM OUTLINE

(FOR ABS)

THIS SYSTEM CONTROLS THE RESPECTIVE BRAKE FLUID PRESSURES ACTING ON THE DISC BRAKE CYLINDERS OF THE RIGHT FRONT WHEEL, LEFT FRONT WHEEL, RIGHT REAR WHEEL AND LEFT REAR WHEEL WHEN THE BRAKES ARE APPLIED IN A PANIC STOP SO THAT THE WHEELS DO NOT LOCK.

THIS RESULTS IN IMPROVED DIRECTIONALLY 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 AND TRACTION ECU.
- (2) STOP LIGHT SW SIGNAL  
A SIGNAL IS INPUT TO **TERMINAL STP** OF THE ABS AND TRACTION ECU WHEN THE BRAKE PEDAL IS DEPRESSED.
- (3) PARKING BRAKE SW SIGNAL  
A SIGNAL IS INPUT TO **TERMINAL PKB** OF THE ABS AND TRACTION ECU WHEN THE PARKING BRAKE LEVER IS PULLED UP.
- (4) DECELERATION SENSOR SIGNAL  
LATERAL ACCELERATION IS DETECTED AND INPUT TO THE ABS AND TRACTION ECU.

### 2. SYSTEM OPERATION

DURING SUDDEN BRAKING, THE ABS AND TRACTION ECU WHICH HAS SIGNALS INPUT FROM EACH SENSOR CONTROLS THE CURRENT FLOWING 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 ECU JUDGES THAT THE HYDRAULIC PRESSURE ACTING ON THE WHEEL CYLINDER IS INSUFFICIENT, THE CURRENT ACTING ON SOLENOID IS CONTROLLED AND THE HYDRAULIC PRESSURE IS INCREASED, HOLDING OF THE HYDRAULIC PRESSURE IS ALSO CONTROLLED BY THE ECU, BY THE SAME METHOD AS ABOVE. BY REPEATED PRESSURE REDUCTION, HOLDING AND INCREASE ARE REPEATED TO MAINTAIN VEHICLE STABILITY AND TO IMPROVE STEERABILITY DURING SUDDEN BRAKING.

(FOR TRACTION CONTROL)

THE TRACTION CONTROL SYSTEM IS A SYSTEM WHEREBY THE "ABS AND TRACTION ECU" AND "TRACTION ECU" CONTROLS THE ENGINE TORQUE AND THE HYDRAULIC PRESSURE OF THE WHEEL CYLINDER OF THE DRIVING WHEELS IN ORDER TO CONTROL SPINNING OF THE DRIVING WHEELS WHEN STARTING OFF AND ACCELERATING, AND PROVIDE THE MOST APPROPRIATE DRIVING FORCE IN RESPONSE TO THE ROAD CONDITIONS FOR VEHICLE STABILITY.

#### TRACTION CONTROL OPERATION

VEHICLE SPEED SIGNALS FROM THE SPEED SENSOR INSTALLED ON EACH WHEEL ARE INPUT TO THE ABS AND TRACTION ECU.

WHEN THE ACCELERATOR PEDAL IS DEPRESSED WHILE DRIVING ON A SLIPPERY ROAD AND THE DRIVING WHEEL (REAR WHEEL) SLIPS, IF THE ROTATION OF THE REAR WHEEL EXCEEDS THE ROTATION OF THE FRONT WHEELS FOR A SPECIFIED PERIOD, THE ECU JUDGES THAT THE REAR WHEEL IS SLIPPING.

WHEN THIS OCCURS, CURRENT FLOWS FROM TRACTION ECU TO SUB THROTTLE ACTUATOR TO CLOSE THE SUB THROTTLE VALVE. AT THE SAME TIME, OPERATION OF THE ABS AND TRACTION ECU CAUSE THE TRACTION BRAKE ACTUATORS (MASTER CYLINDER CUT, RESERVOIR CUT SOLENOID) TO TURN ON TO SWITCH THE HYDRAULIC CIRCUIT TO "TRACTION" MODE.

IN THIS CASE, SIGNALS ARE INPUT FROM **TERMINAL SRR** OF ABS AND TRACTION ECU TO **TERMINAL (B)3** OF ABS ACTUATOR, AND FROM **TERMINAL SRL** OF ABS AND TRACTION ECU TO **TERMINAL (B)6** OF ABS ACTUATOR, CONTROLLING THE REAR WHEEL SOLENOID IN THE ABS ACTUATOR AND INCREASING THE HYDRAULIC PRESSURE OF THE WHEEL CYLINDER IN ORDER TO PREVENT SLIP.

TO MAINTAIN THE HYDRAULIC PRESSURE OF THE REAR WHEELS, THE REAR WHEEL SOLENOID INSIDE THE ABS ACTUATOR IS PUT IN "HOLD" MODE AND KEEPS THE HYDRAULIC PRESSURE TO THE WHEEL CYLINDER CONSTANT.

WHEN THE AMOUNT OF SLIP HAS DECREASED, THE HYDRAULIC PRESSURE IN THE WHEEL CYLINDER DECREASES.

## SERVICE HINTS

### A20 (A), A21 (B), A22 (C) ABS AND TRACTION ECU

- (A) 7-GROUND : ALWAYS 10-14 VOLTS
- (A) 24-GROUND : 10-14 VOLTS WITH IGNITION SW AT ON POSITION
- (C) 6-GROUND : 10-14 VOLTS WITH STOP LIGHT SW ON
- (A) 25, (C) 4, (C) 9-GROUND : ALWAYS CONTINUOUS
- (C) 12-GROUND : 10-14 VOLTS WITH PARKING BRAKE LEVER PULLED UP (PARKING BRAKE SW ON)

### A 6 (A), A 7 (B) ABS ACTUATOR

- (A) 1-GROUND : ALWAYS CONTINUOUS
- (B) 1, (B) 3, (B) 4, (B) 6-GROUND : APPROX. 1.2 (IGNITION SW OFF)
- (B) 2-GROUND : 4-6 (IGNITION SW OFF)

### T 3 TRACTION BRAKE ACTUATOR

- 1-3 : APPROX. 2.1
- 2-4 : APPROX. 2.1

### S11 STOP LIGHT SW

- 2-1: CLOSED WITH BRAKE PEDAL DEPRESSED

### A10, A11, A31, A32 ABS SPEED SENSOR FRONT LH, RH, REAR LH, RH

- 1-2: 0.8- 1.3 K (20°C, 68°F)

### T 9(A), T10(B) TRACTION ECU

- (A)26-GROUND: 10-14 VOLTS WITH IGNITION SW AT ON POSITION
- (A)13-GROUND: ALWAYS 10-14 VOLTS
- (A)14-GROUND: ALWAYS BELOW 1 VOLTS
- (A)18-GROUND: 10-14 VOLTS WITH IGNITION SW ON PARKING BRAKE LEVER RELEASED (PARKING BRAKE SW OFF)
- (A) 3-GROUND: 10-14 VOLTS WITH STOP LIGHT SW ON
- (A) 5-GROUND: 10-14 VOLTS WITH TRAC OFF SW RELEASED
- (A)12-GROUND: ALWAYS 10-14 VOLTS

### P 5 PARKING BRAKE SW

- 1-GROUND : CLOSED WITH PARKING BRAKE LEVER DEPRESSED

### S 4 SUB THROTTLE ACTUATOR

- 2-1, 2-3 : APPROX. 1.1
- 5-4, 5-6 : APPROX. 1.1

## ○ : PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
A 6	A	24 (2JZ-GTE)	B 2		24 (2JZ-GTE)	S 5		25
A 7	B	24 (2JZ-GTE)	C10	A	28	S11		29
A10		24 (2JZ-GTE)	C12	B	28	T 3		25
A11		24 (2JZ-GTE)	D 1		24 (2JZ-GTE)	T 4		25
A20	A	28	D 5		28	T 5		29
A21	B	28	D 6		28	T 8		29
A22	C	28	E 9	B	29	T 9	A	29
A23		28	E10	A	29	T10	B	29
A31		30	P 5		29			
A32		30	S 4		25			



# ABS AND TRACTION CONTROL

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)
4	23	R/B NO. 4 (LEFT KICK PANEL)
5	23	R/B NO. 5 (ENGINE COMPARTMENT RIGHT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		
1K		

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (2JZ-GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB3		
IB5	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
IB6		
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF2		
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2		

## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
IE	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL

## ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32	ENGINE ROOM MAIN WIRE	19	38	COWL WIRE
E 5			110		
E 6			111		
E 8			114		
E16	32	ENGINE WIRE	118	38	COWL WIRE
1 2	38	COWL WIRE	120		
1 4			122		

A 6 (A) BLACK



A 7 (B) GRAY



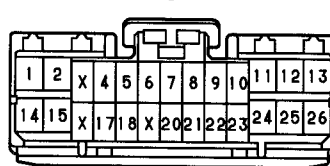
A10 GRAY



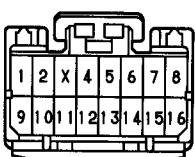
A11 GRAY



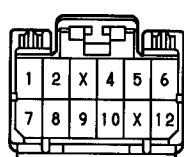
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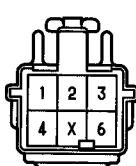
A21 (B)



A22 (C)



A23



A31 GRAY



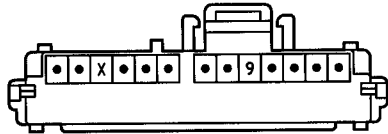
A32 GRAY



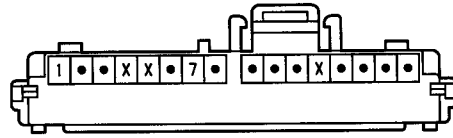
B 2 GRAY



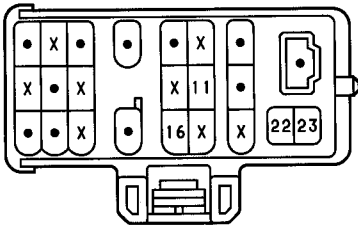
C10 (A) BLUE



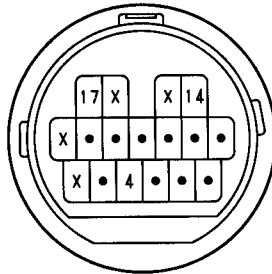
C12 (B)



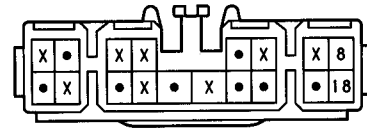
D 1 BLACK



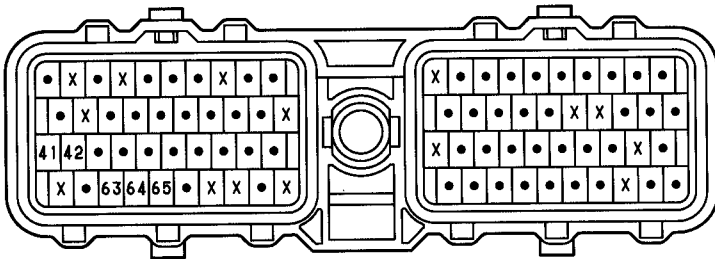
D 5 DARK GRAY



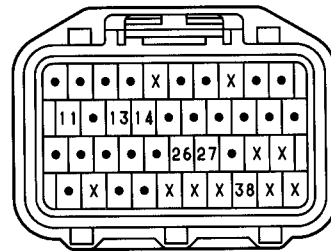
D 6 GRAY



E 9 (B) DARK GRAY



E10 (A) DARK GRAY



P 5



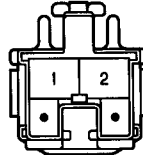
S 4 BLACK



S 5 BLACK



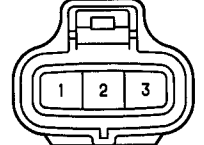
S11 BLUE



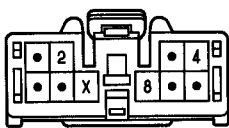
T 3 GRAY



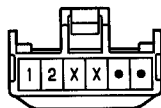
T 4 GRAY



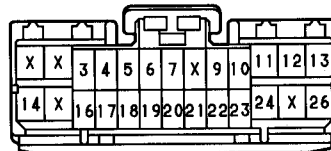
T 5



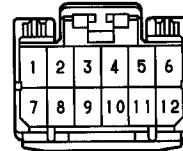
T 8 BLACK



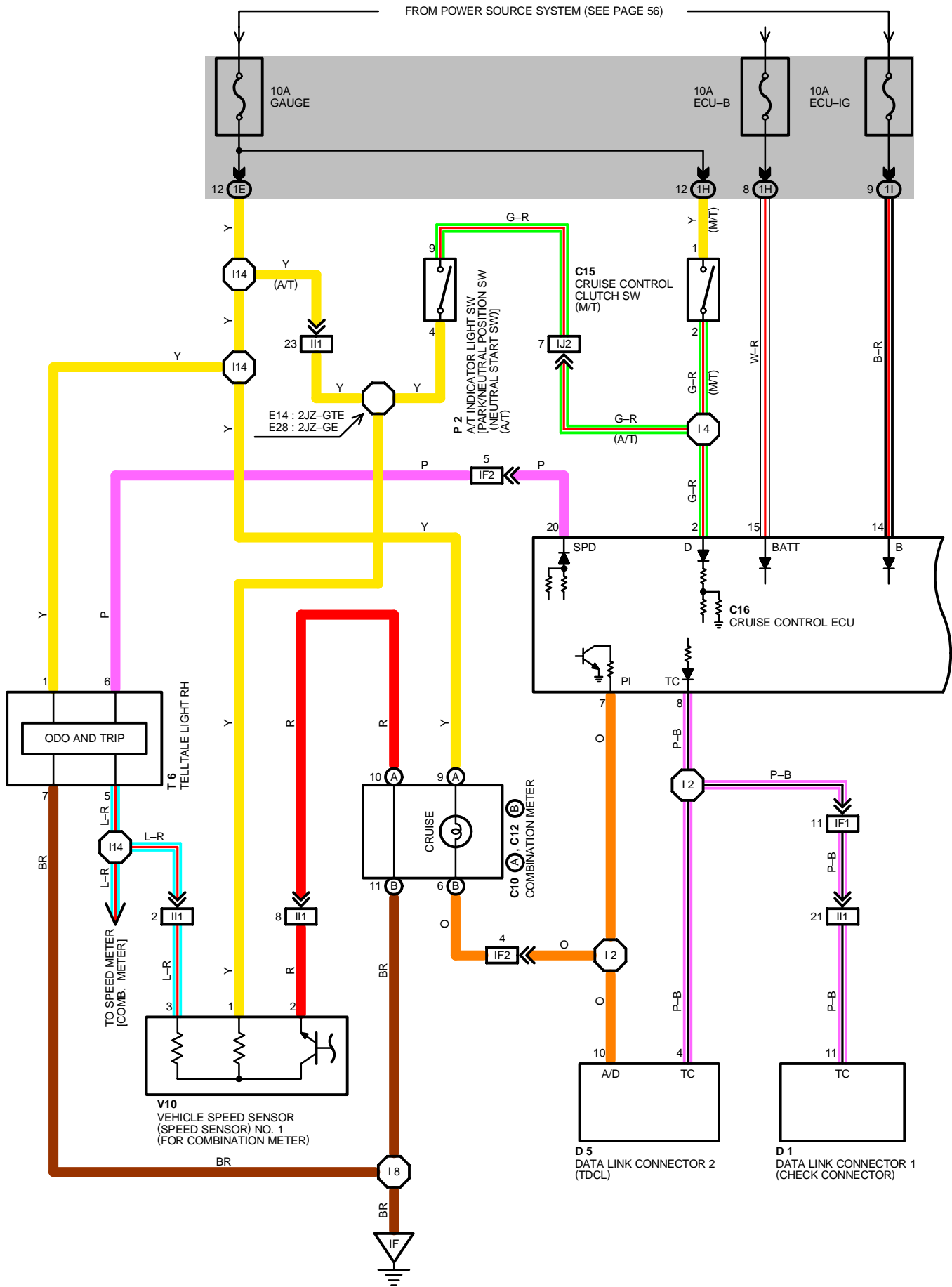
T 9 (A)

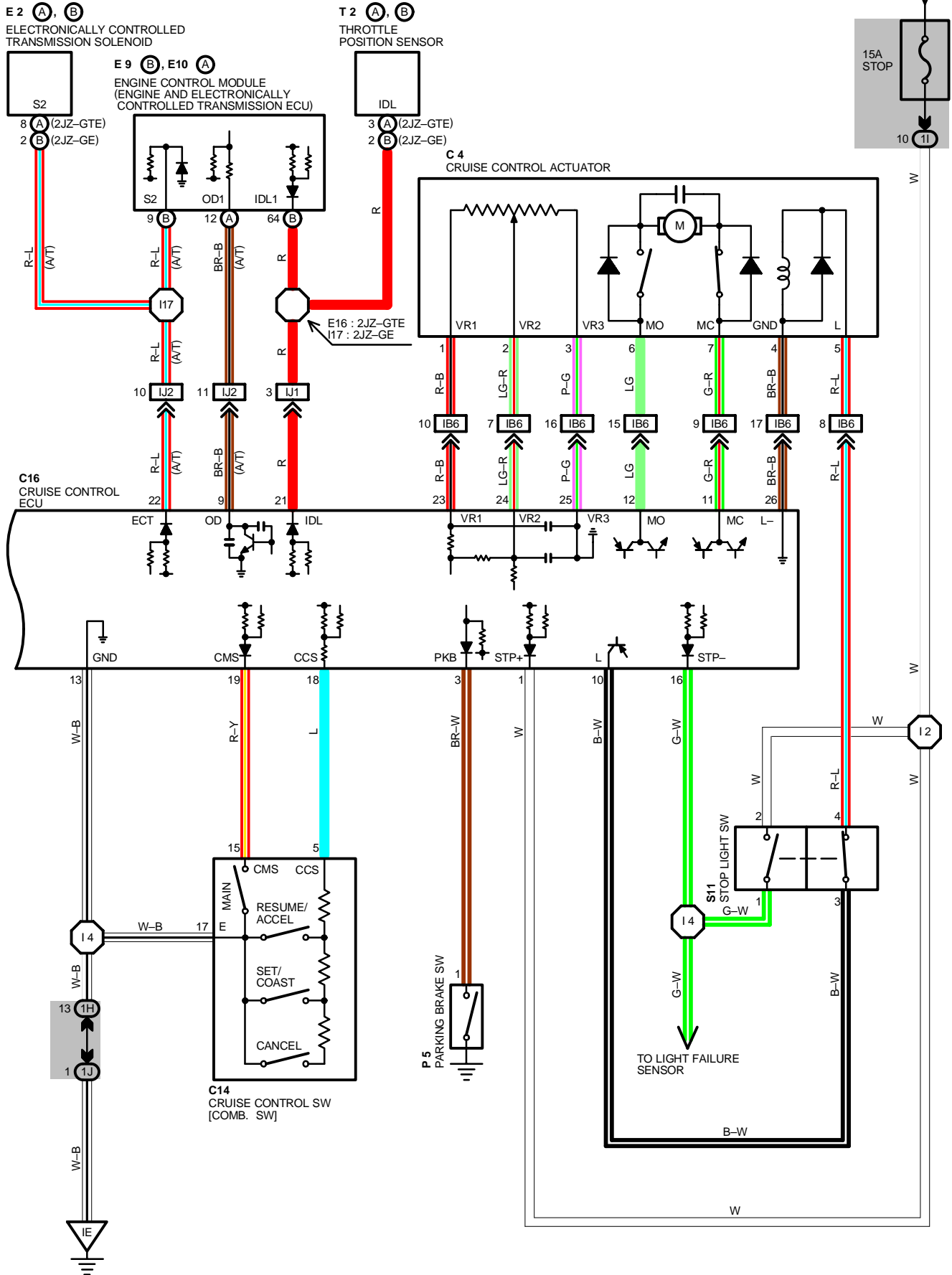


T10 (B)



# CRUISE CONTROL





# CRUISE CONTROL

## SYSTEM OUTLINE

CURRENT IS APPLIED AT ALL TIMES THROUGH **STOP FUSE** TO **TERMINAL 1** OF THE CRUISE CONTROL ECU, **TERMINAL 2** OF STOP LIGHT SW, AND ALSO THROUGH THE **ECU-B FUSE** TO **TERMINAL 15** OF CRUISE CONTROL ECU.

WITH THE IGNITION SW TURNED TO ON, THE CURRENT FLOWS THROUGH **GAUGE FUSE** TO **TERMINAL (A)9** OF COMBINATION METER AND THE CURRENT THROUGH **ECU-IG FUSE** FLOWS TO **TERMINAL 14** OF CRUISE CONTROL ECU.

WHEN THE IGNITION SW IS ON AND THE CRUISE CONTROL MAIN SWITCH IS TURNED ON, A SIGNAL IS INPUT FROM **TERMINAL 15** OF CRUISE CONTROL MAIN SW TO **TERMINAL 19** OF CRUISE CONTROL ECU. AS A RESULT, THE CRUISE CONTROL ECU FUNCTIONS AND THE CURRENT FLOWS THROUGH **TERMINAL 14** OF CRUISE CONTROL ECU TO **TERMINAL 13** OF CRUISE CONTROL ECU → **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 (A)9** OF CRUISE CONTROL INDICATOR LIGHT → **TERMINAL (B)6** → **TERMINAL 7** OF CRUISE CONTROL ECU → **TERMINAL 13** → **GROUND**. CAUSING THE CRUISE CONTROL INDICATOR LIGHT TO LIGHT UP, INDICATING THAT THE CRUISE CONTROL IS READY FOR OPERATION.

### 1. SET OPERATION

WHEN THE CRUISE CONTROL MAIN 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 18** OF THE CRUISE CONTROL ECU AND THE VEHICLE SPEED AT THE TIME THE SET SW IS RELEASED, WHICH IS MEMORIZED IN THE ECU AS THE SET SPEED.

### 2. SET SPEED CONTROL

DURING CRUISE CONTROL DRIVING, THE ECU COMPARES THE SET SPEED MEMORIZED IN THE ECU WITH THE ACTUAL VEHICLE SPEED INPUTS INTO **TERMINAL 20** 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 12** → **TERMINAL 6** OF CRUISE CONTROL ACTUATOR → **TERMINAL 7** → **TERMINAL 11** OF CRUISE CONTROL ECU. AS A RESULT, THE MOTOR IN THE CRUISE CONTROL ACTUATOR IS ROTATED TO OPEN THE THROTTLE VALVE AND THE THROTTLE CABLE IS PULLED TO INCREASE THE VEHICLE SPEED. WHEN THE ACTUAL DRIVING SPEED IS HIGHER THAN THE SET SPEED, THE CURRENT TO CRUISE CONTROL ACTUATOR FLOWS FROM **TERMINAL 11** OF ECU → **TERMINAL 7** OF CRUISE CONTROL ACTUATOR → **TERMINAL 6** → **TERMINAL 12** OF 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 THE 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 SWITCH 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. **40 KM/H, 25 MPH**) AFTER CANCELING THE SET SPEED BY THE CANCEL SW, PUSHING THE RESUME SW WILL CAUSE THE VEHICLE TO RESUME THE SPEED SET BEFORE THE CANCELLATION.

### 6. MANUAL CANCEL MECHANISM

IF ANY OF THE FOLLOWING OPERATIONS OCCUR 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 IN EXCEPT "D" POSITION (PARK/NEUTRAL POSITION SW (NEUTRAL START SW EXCEPT "D" POSITION)). "SIGNAL IS NOT INPUT TO **TERMINAL 2** OF ECU" (A/T).
- \* DEPRESSING THE BRAKE PEDAL (STOP LIGHT SW ON). "SIGNAL IS INPUT TO **TERMINAL 16** OF ECU"
- \* PULLING THE PARKING BRAKE LEVER (PARKING BRAKE SW ON). "SIGNAL INPUT TO **TERMINAL 3** OF ECU"
- \* PUSHING THE CANCEL SWITCH (CANCEL SW ON). "SIGNAL IS INPUT TO **TERMINAL 18** OF ECU"
- \* DEPRESSING THE CLUTCH PEDAL (CRUISE CONTROL CLUTCH SW OFF). "SIGNAL IS NOT INPUT TO **TERMINAL 2** OF ECU"

## 7. AUTO CANCEL FUNCTION

A) IF ANY OF THE FOLLOWING OPERATING CONDITIONS OCCUR DURING CRUISE CONTROL OPERATION, THE SET SPEED IS ERASED, CURRENT FLOW TO MAGNETIC CLUTCH IS STOPPED AND THE CRUISE CONTROL IS RELEASED. (MAIN SW TURNS OFF). WHEN THIS OCCURS, THE IGNITION SW MUST BE TURNED OFF ONCE BEFORE THE MAIN SW WILL TURN ON.

- \* OVER CURRENT TO TRANSISTOR DRIVING MOTOR AND/OR MAGNETIC CLUTCH.
- \* WHEN CURRENT CONTINUED TO FLOW TO THE MOTOR INSIDE THE ACTUATOR IN THE THROTTLE VALVE "OPEN" DIRECTION.
- \* OPEN CIRCUIT IN MAGNETIC CLUTCH.
- \* MOMENTARY INTERRUPTION OF VEHICLE SPEED SIGNAL.
- \* SHORT CIRCUIT IN CRUISE CONTROL SW.
- \* MOTOR DOES NOT OPERATE DESPITE THE MOTOR DRIVE SIGNAL BEING OUTPUT.

B) IF ANY OF THE FOLLOWING CONDITIONS OCCUR DURING CRUISE CONTROL OPERATION, THE SET SPEED IS ERASED AND THE CRUISE CONTROL IS RELEASED. (THE POWER OF 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 THE VEHICLE SPEED FALLS MORE THAN **16 KM/H (10 MPH)** BELOW THE SET SPEED, E.G. ON AN UPWARD SLOPE.
- \* WHEN POWER TO THE CRUISE CONTROL SYSTEM IS MOMENTARILY CUT OFF.

C) IF ANY OF THE FOLLOWING CONDITIONS OCCUR DURING CRUISE CONTROL OPERATION, THE CRUISE CONTROL IS RELEASED.

- \* OPEN CIRCUIT FOR **TERMINAL 1** OF CRUISE CONTROL ECU AND **TERMINAL 2** OF STOP LIGHT SW.

## 8. AUTOMATIC TRANSMISSION 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 ECU JUDGES BY THE SIGNALS FROM POTENTIOMETER OF THE ACTUATOR THAT THE UPWARD SLOPE HAS FINISHED, 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 (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU). UPON RECEIVING THIS SIGNAL, THE ENGINE CONTROL MODULE (ENGINE AND ELECTRONICALLY CONTROLLED TRANSMISSION ECU) CHANGES THE SHIFT PATTERN TO NORMAL.

TO MAINTAIN SMOOTH CRUISE CONTROL OPERATION (ON A DOWNWARD SLOPE ETC.), LOCK-UP RELEASE OF THE TRANSMISSION WHEN THE IDLING POINT OF THE THROTTLE POSITION IS "ON" IS FORBIDDEN.

## SERVICE HINTS

### C 4 CRUISE CONTROL ACTUATOR

- 1-3 : APPROX. **2 K**
- 5-4 : APPROX. **38.5**

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

- 15-17 : CONTINUOUS WITH MAIN SW ON
- 5-17 : APPROX. **418** WITH CANCEL SW ON
- : APPROX. **68** WITH RESUME/ACCEL SW ON
- : APPROX. **198** WITH SET/COAST SW ON

### C16 CRUISE CONTROL ECU

- 14-GROUND : APPROX. **12 VOLTS** WITH IGNITION SW AT **ON** POSITION
- 1, 15-GROUND : ALWAYS APPROX. **12 VOLTS**
- 3-GROUND : CONTINUOUS WITH PARKING BRAKE LEVER PULLED UP (ONE OF THE CANCEL SW)
- 20-GROUND : **4 PULSE** WITH **1 ROTATION** OF ROTOR SHAFT
- 18-GROUND : APPROX. **418** WITH CANCEL SW ON IN CONTROL SW
- : APPROX. **198** WITH SET/COAST SW ON IN CONTROL SW
- : APPROX. **68** WITH RESUME/ACCEL SW ON IN CONTROL SW
- 13-GROUND : ALWAYS CONTINUOUS

# CRUISE CONTROL

## : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>C 4</b>	<a href="#">24 (2JZ-GTE)</a>	<b>D 1</b>	<a href="#">26 (2JZ-GE)</a>	<b>P 5</b>	<a href="#">29</a>
	<a href="#">26 (2JZ-GE)</a>	<b>D 5</b>	<a href="#">28</a>	<b>S11</b>	<a href="#">29</a>
<b>C10</b>	A <a href="#">28</a>	<b>E 2</b>	A <a href="#">24 (2JZ-GTE)</a>	<b>T 2</b>	A <a href="#">25 (2JZ-GTE)</a>
<b>C12</b>	B <a href="#">28</a>		B <a href="#">26 (2JZ-GE)</a>		B <a href="#">27 (2JZ-GE)</a>
<b>C14</b>	<a href="#">28</a>	<b>E 9</b>	B <a href="#">29</a>	<b>T 2</b>	<a href="#">29</a>
<b>C15</b>	<a href="#">28</a>	<b>E10</b>	A <a href="#">29</a>	<b>V10</b>	<a href="#">25 (2JZ-GTE)</a>
<b>C16</b>	<a href="#">28</a>	<b>P 2</b>	<a href="#">25 (2JZ-GTE)</a>		<a href="#">27 (2JZ-GE)</a>
<b>D 1</b>	<a href="#">24 (2JZ-GTE)</a>		<a href="#">27 (2JZ-GE)</a>		

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
<b>1E</b>	<a href="#">20</a>	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
<b>1H</b>	<a href="#">20</a>	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
<b>1I</b>		
<b>1J</b>		

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>IB6</b>	<a href="#">36</a>	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
<b>IF1</b>	<a href="#">36</a>	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
<b>IF2</b>		
<b>II1</b>	<a href="#">38</a>	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
<b>IJ1</b>	<a href="#">38</a>	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
<b>IJ2</b>		

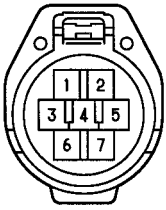
## : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
<b>IE</b>	<a href="#">36</a>	LEFT KICK PANEL
<b>IF</b>		

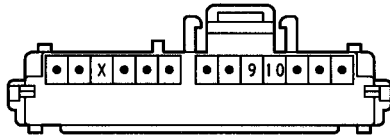
## : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
<b>E14</b>	<a href="#">32</a>	ENGINE WIRE	<b>I 4</b>	<a href="#">38</a>	COWL WIRE
<b>E16</b>			<b>I 8</b>	<a href="#">38</a>	INSTRUMENT PANEL WIRE
<b>E28</b>			<b>I14</b>		
<b>I 2</b>	<a href="#">38</a>	COWL WIRE	<b>I17</b>	<a href="#">38</a>	ENGINE WIRE

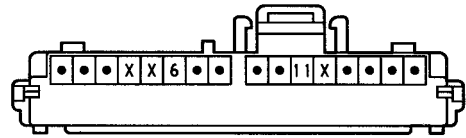
C 4 GRAY



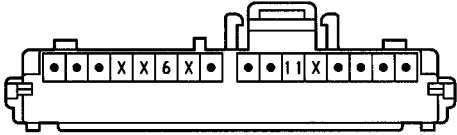
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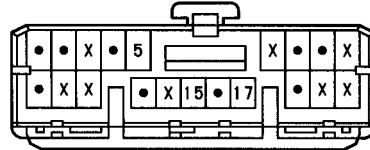
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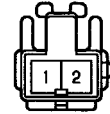
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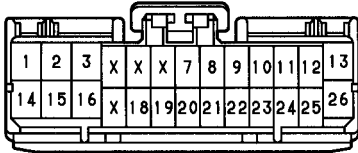
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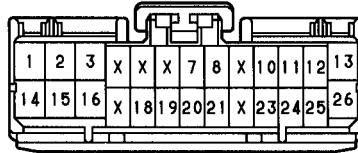
C15



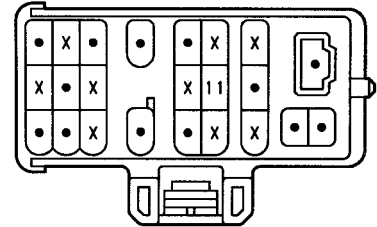
(A/T) C16 GREEN



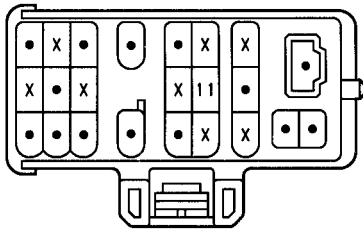
(M/T) C16 GREEN



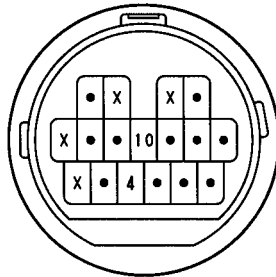
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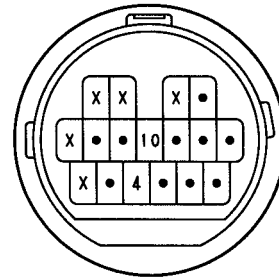
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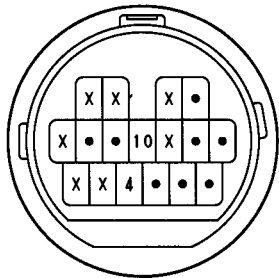
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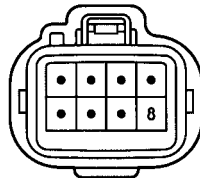
(2JZ-GE A/T) D 5 DARK GRAY



(2JZ-GE M/T) D 5 DARK GRAY



(2JZ-GTE) E 2 (A) GRAY



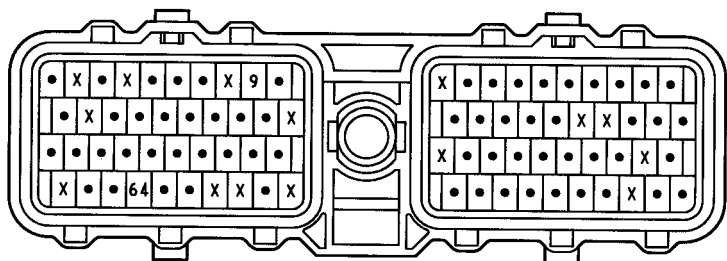
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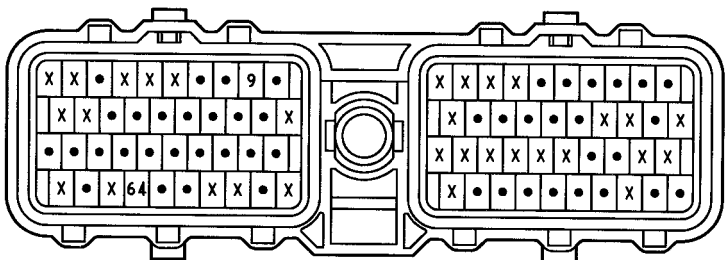


# CRUISE CONTROL

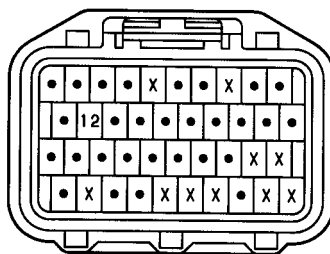
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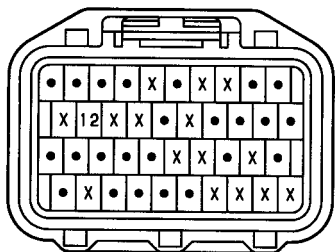
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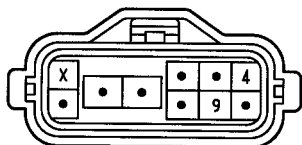
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(2JZ-GE) E10 (A) DARK GRAY



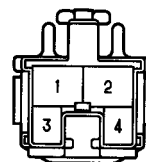
P 2 GRAY



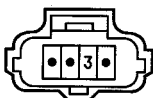
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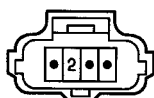
S11 BLUE



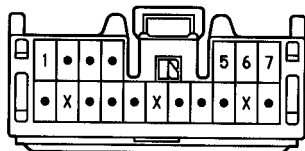
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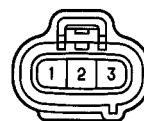
T 2 (B) BLACK



T 6

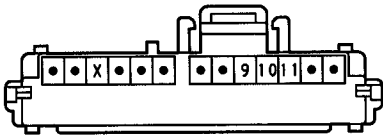


V10 BLACK

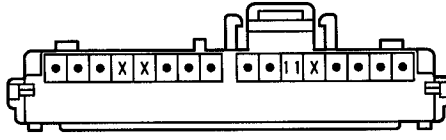


# PPS (PROGRESSIVE POWER STEERING)

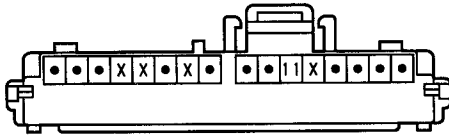
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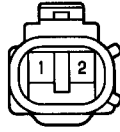
(2JZ-GTE) C12 (B)



(2JZ-GE) C12 (B)



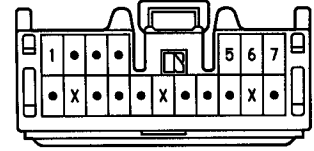
P 1 GRAY



P 4 BLUE



T 6



V10 BLACK





## SYSTEM OUTLINE

THE PPS (HYDRAULIC REACTION TYPE) CONTROLS THE HYDRAULIC PRESSURE APPLIED TO THE HYDRAULIC REACTION CHAMBER IN THE GEAR BOX CONTROL UNIT USING THE PPS ECU, TO CHANGE THE STEERING FORCE AND PROVIDE OPTIMUM STEERING FEELING AT ANY VEHICLE SPEEDS AND UNDER ANY STEERING CONDITIONS.

(PPS OPERATION)

WHEN THE IGNITION SW IS TURNED ON THE STARTING CURRENT FLOWS FROM THE **ECU-IG** FUSE TO **TERMINAL 4** OF THE PPS ECU. THE PPS ECU MONITORS VEHICLE SPEED, INPUT SIGNAL TO **TERMINAL 5** OF THE ECU. WHEN THE VEHICLE SPEED IS LOW, THE PPS ECU SENDS A HIGHER-CURRENT FROM **TERMINAL 1** OF THE ECU → **TERMINAL 1** OF THE SOLENOID VALVE → **TERMINAL 2** → **TERMINAL 2** OF THE ECU → **TERMINAL 6** → **GROUND**, INCREASING THE SOLENOID VALVE OPENING ANGLE TO PROVIDE COMFORTABLE STEERING OPERATION. WHEN THE VEHICLE SPEED IS HIGH, THE PPS ECU DECREASES THE SOLENOID VALVE OPENING ANGLE BY REDUCING THE CURRENT TO THE VALVE TO PROVIDE RESPONSIVE STEERING FEELING.

## SERVICE HINTS

### P 1 PPS SOLENOID

1-2 : APPROX. 7.7 (25°C, 77°F)

### P 4 PPS ECU

4-GROUND : APPROX. 12 VOLTS WITH THE IGNITION SW AT **ON** POSITION

6-GROUND : ALWAYS CONTINUOUS

## ○ : PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>C10</b>	A	28	<b>P 1</b>	27 (2JZ-GE)	<b>V10</b>	25 (2JZ-GTE)
<b>C12</b>	B	28	<b>P 4</b>	29		27 (2JZ-GE)
<b>P 1</b>		25 (2JZ-GTE)	<b>T 6</b>	29		

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
<b>1E</b>	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>II1</b>	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

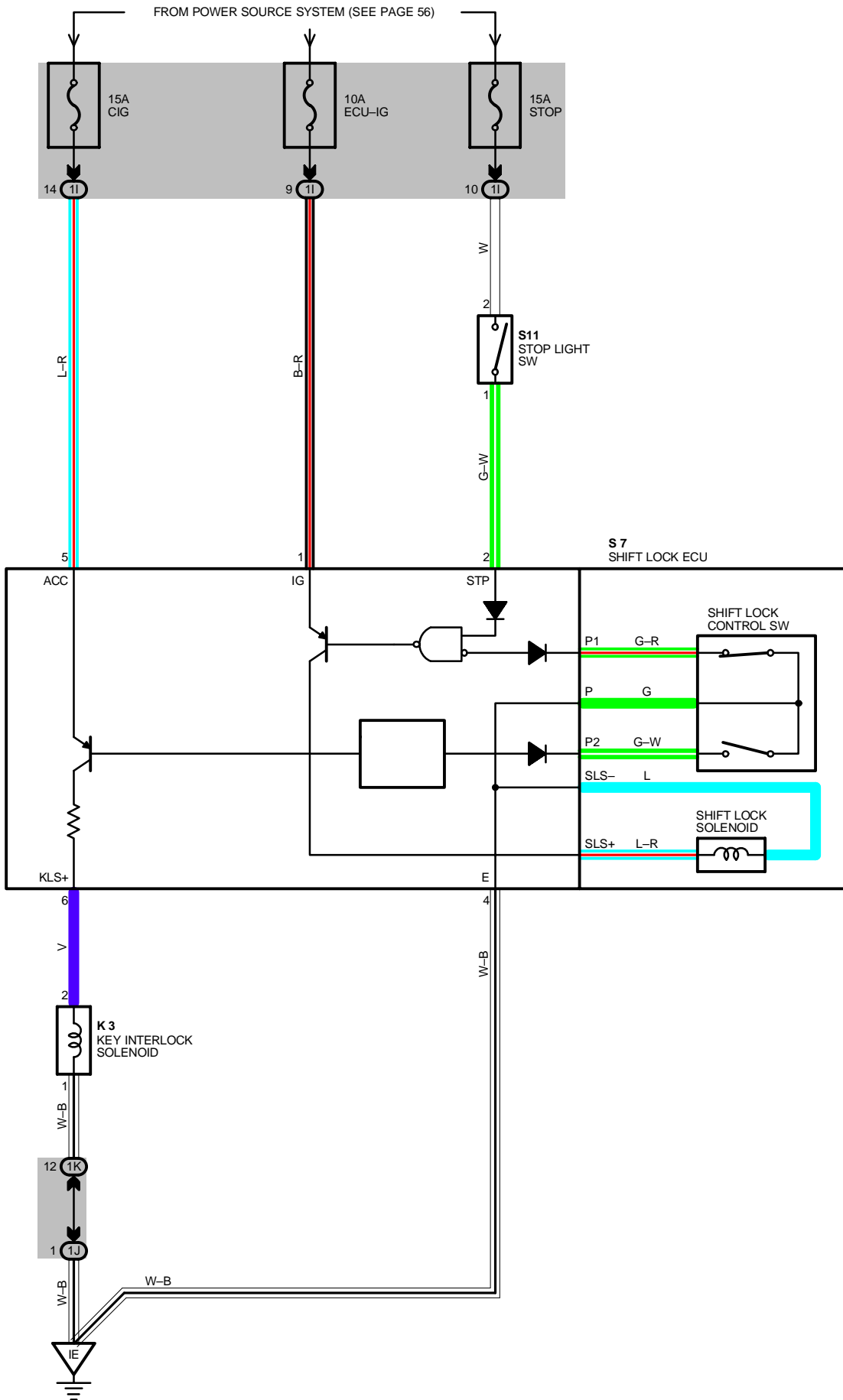
## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
<b>IF</b>	36	LEFT KICK PANEL
<b>IH</b>	36	RIGHT KICK PANEL

## ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
<b>I 8</b>	38	INSTRUMENT PANEL WIRE	<b>I 8</b>	38	INSTRUMENT PANEL WIRE

# SHIFT LOCK



## SYSTEM OUTLINE

WHEN THE IGNITION SW IS TURNED TO **ACC** POSITION THE CURRENT FROM THE **CIG** FUSE FLOWS TO **TERMINAL 5** OF THE SHIFT LOCK ECU, IN THE **ON** POSITION, THE CURRENT FROM THE **ECU-IG** FUSE FLOWS TO **TERMINAL 1** 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 ECU, THE ECU OPERATES AND CURRENT FLOWS FROM **TERMINAL 1** OF THE ECU → **TERMINAL 'SLS+'** OF THE SHIFT LOCK SOLENOID → SOLENOID → **TERMINAL 'SLS-'** → **TERMINAL 4** OF THE ECU → **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 6** OF THE ECU → 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

### S7 SHIFT LOCK ECU

5-GROUND : APPROX. 12 VOLTS WITH THE IGNITION SW AT **ACC** OR **ON** POSITION

1-GROUND : APPROX. 12 VOLTS WITH THE IGNITION SW AT **ON** POSITION

4-GROUND : ALWAYS CONTINUOUS

2-GROUND : APPROX. 12 VOLTS WITH THE BRAKE PEDAL DEPRESSED

### S11 STOP LIGHT SW

2-1 : CLOSED WITH THE BRAKE PEDAL DEPRESSED

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
K 3	29	S 7	29	S11	29

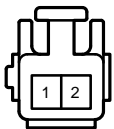
## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1I		
1J	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1K		

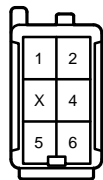
## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IE	36	LEFT KICK PANEL

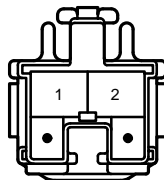
K 3



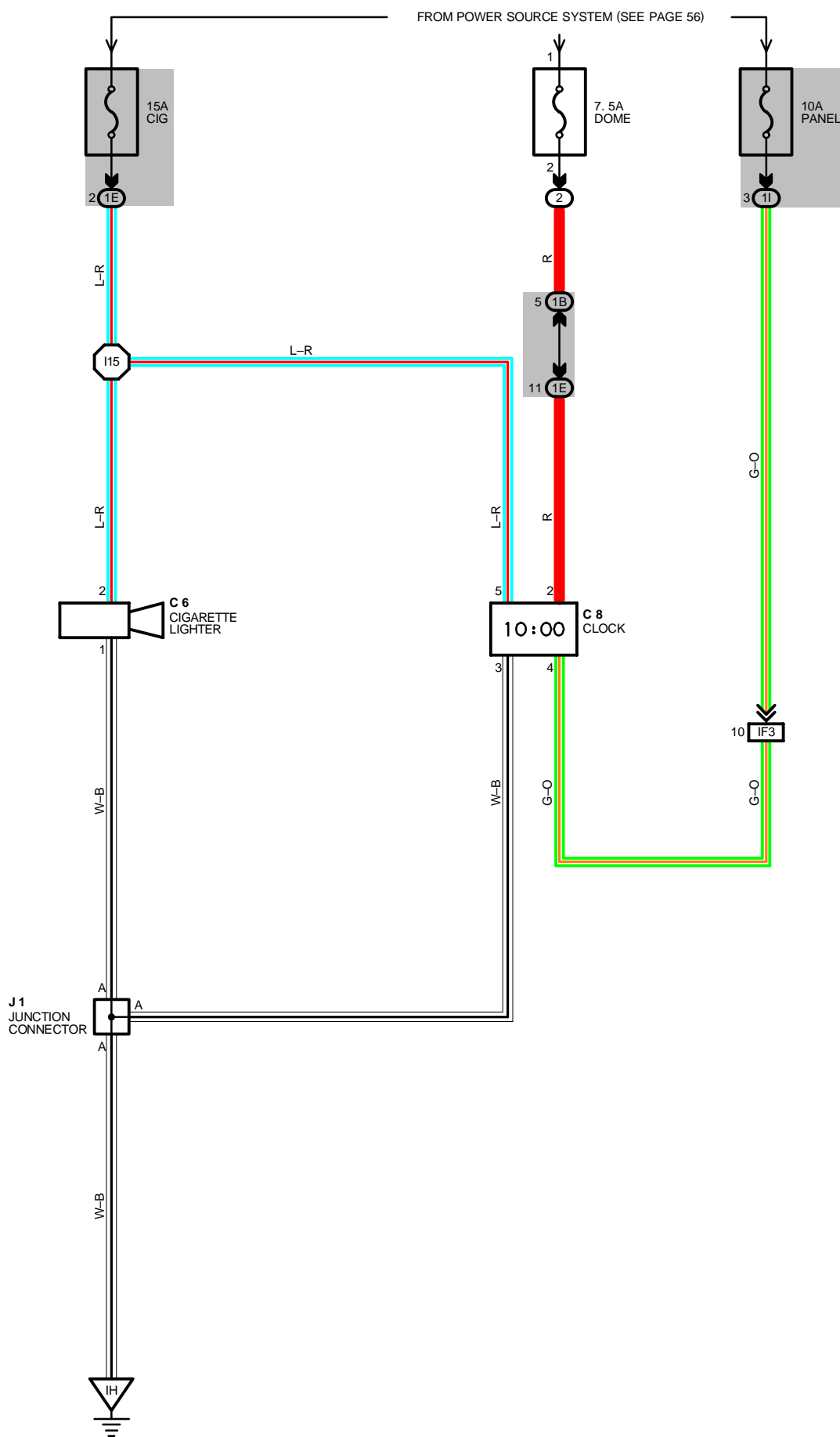
S 7



S11 BLUE



# CIGARETTE LIGHTER AND CLOCK



## SERVICE HINTS

### C 6 CIGARETTE LIGHTER

- 2-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION
- 1-GROUND : ALWAYS CONTINUOUS

### C 8 CLOCK

- 2-GROUND : ALWAYS 12 VOLTS (POWER FOR CLOCK)
- 5-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION  
(POWER FOR INDICATION)
- 3-GROUND : ALWAYS CONTINUOUS

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 6	28	C 8	28	J 1	29

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)

### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IH	36	RIGHT KICK PANEL

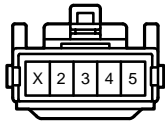
### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I15	38	INSTRUMENT PANEL WIRE			

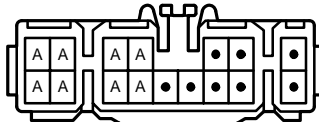
C 6



C 8 BLACK



J 1

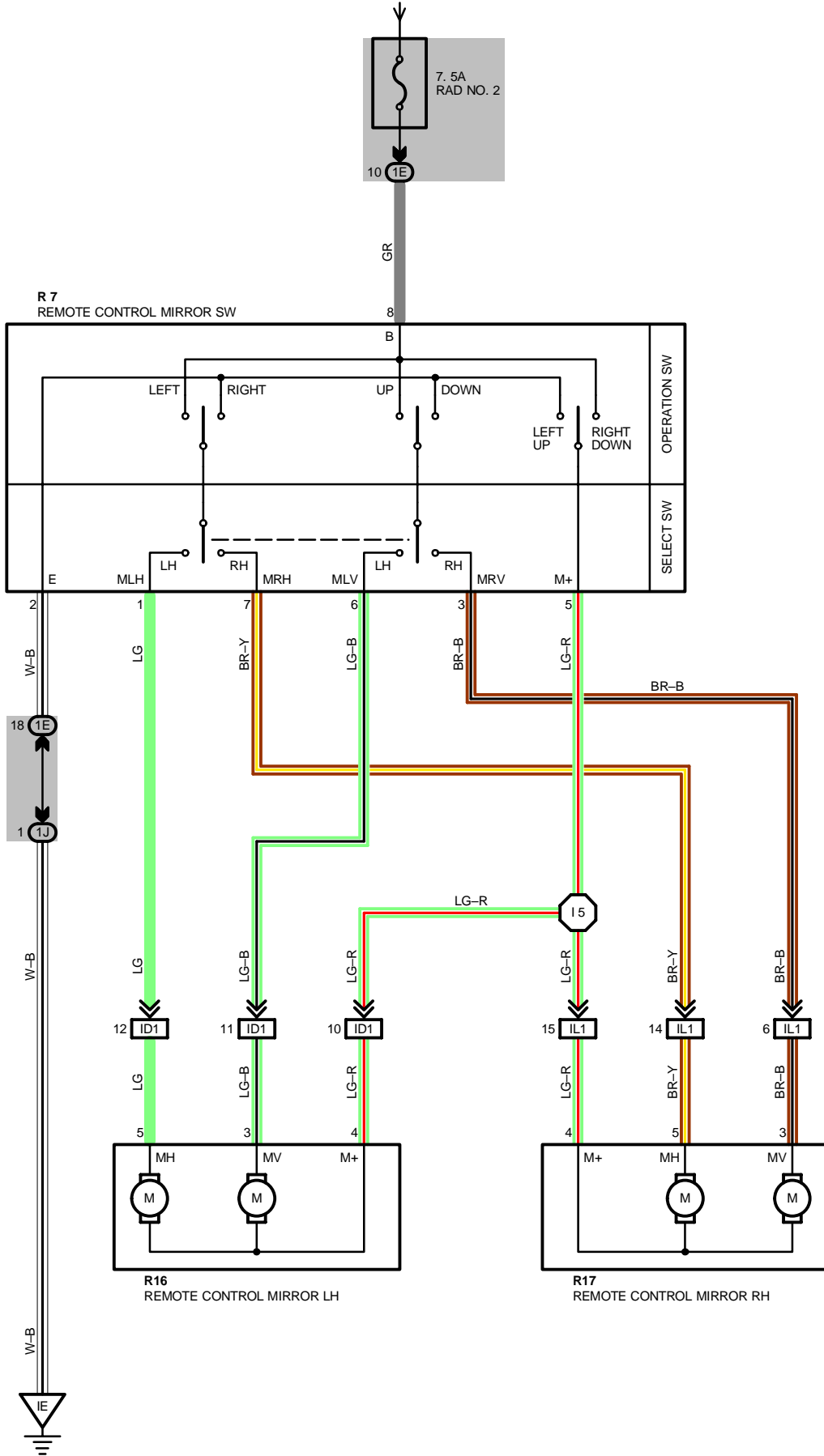


(HINT : SEE PAGE 7)



# REMOTE CONTROL MIRROR

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



## SERVICE HINTS

### R 7 REMOTE CONTROL MIRROR SW

- 8-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION
- 5-2 : CONTINUOUS WITH OPERATION SW AT **LEFT** OR **UP** POSITION
- 8-5 : CONTINUOUS WITH OPERATION SW AT **RIGHT** OR **DOWN** POSITION
- 2-GROUND : ALWAYS CONTINUOUS

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
R 7	29	R16	30	R17	30

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1J	20	COWL WIRE AND J/B NO.1 (LEFT KICK 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)

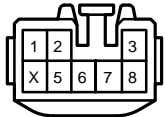
### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IE	36	LEFT KICK PANEL

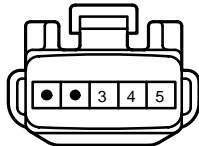
### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 5	38	INSTRUMENT PANEL WIRE			

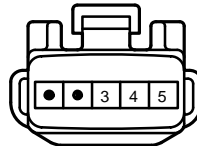
R 7



R 16

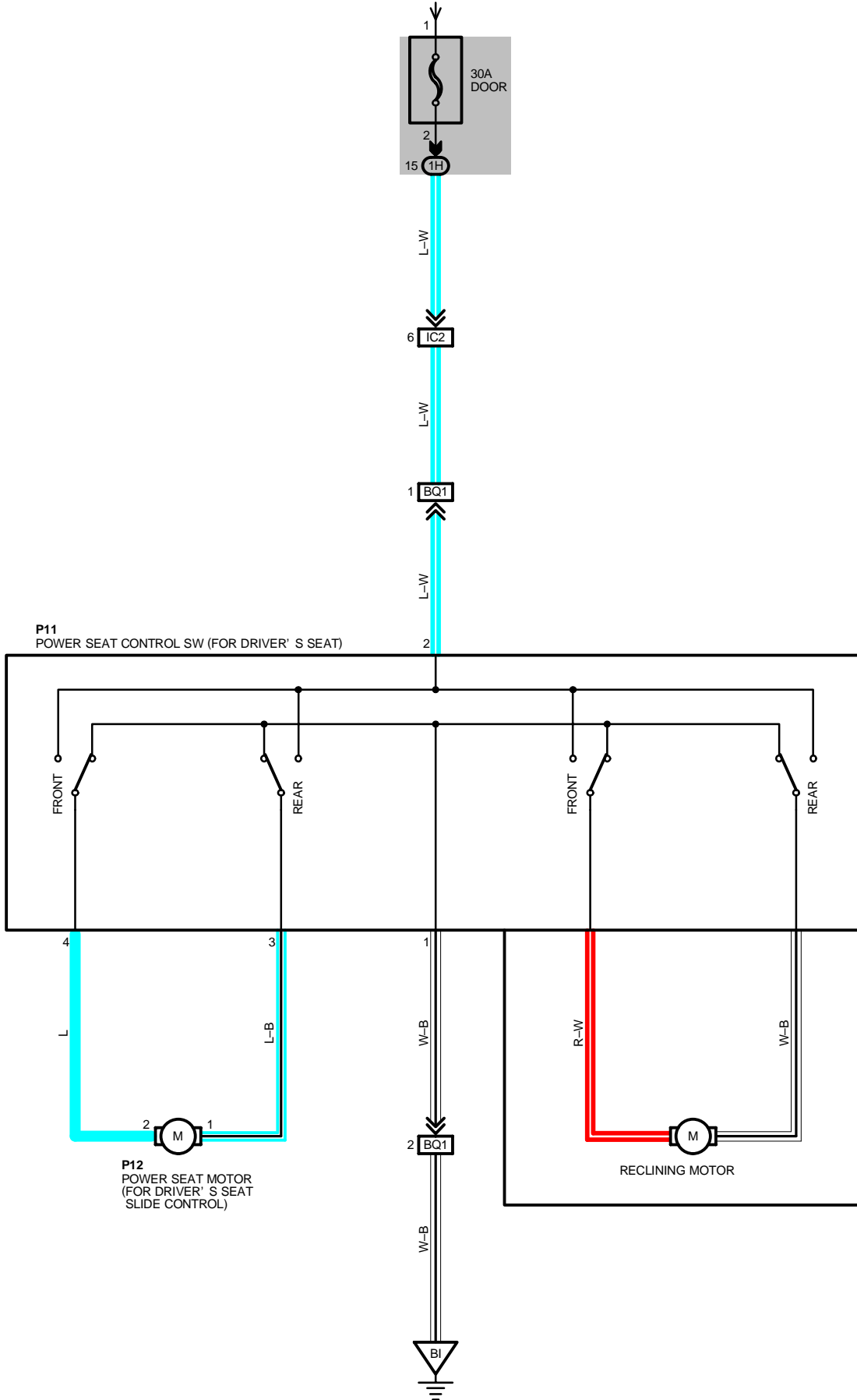


R 17



# POWER SEAT

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



## SERVICE HINTS

### P11 POWER SEAT CONTROL SW (FOR DRIVER'S SEAT)

- 2- GROUND: ALWAYS APPROX. 12 VOLTS
- 1- GROUND: ALWAYS CONTINUOUS

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
P11	31	P12	31		

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1H	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)

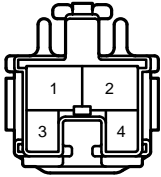
### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
BQ1	42	FLOOR NO. 2 WIRE AND SEAT WIRE (UNDER THE FRONT LH SEAT)

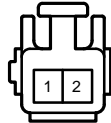
### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
BI	40	LEFT QUARTER PILLAR

P11



P12





## SERVICE HINTS

### S6 SEAT HEATER SW

4-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION  
 1-GROUND : ALWAYS CONTINUOUS

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
S6	29	S13	31	S15	31
S12	31	S14	31		

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC1	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
BQ1	42	FLOOR NO. 2 WIRE AND SEAT WIRE (UNDER THE FRONT LH SEAT)

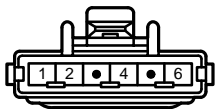
### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IG	36	RIGHT KICK PANEL
BI	40	LEFT QUARTER PILLAR

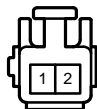
### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I11	38	COWL WIRE	B9	42	SEAT WIRE
I24					

S6 BLACK



S12 BLUE



S13 BLUE



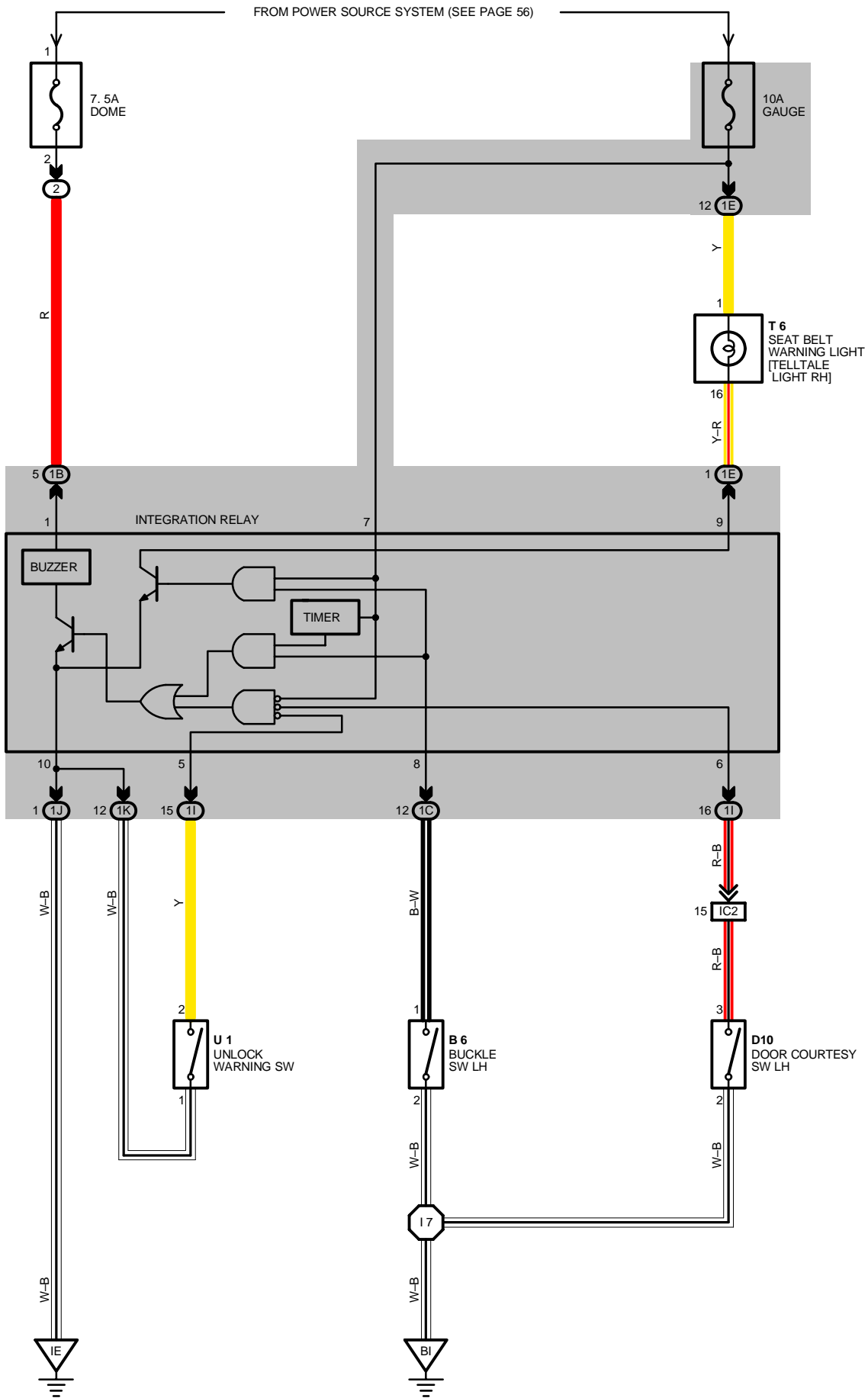
S14



S15



# UNLOCK AND SEAT BELT WARNING



## SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO **TERMINAL 1** OF THE INTEGRATION RELAY THROUGH **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 INTEGRATION RELAY AND CURRENT FLOWING THROUGH THE WARNING LIGHT FLOWS FROM **TERMINAL 9** OF THE RELAY → **TERMINAL 10** → **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 7** OF THE RELAY FLOWS THROUGH **TERMINAL 10** → **GROUND** AND THE SEAT BELT WARNING BUZZER SOUNDS FOR APPROX. **4-8 SECONDS**. HOWEVER, IF THE SEAT BELT IS PUT ON DURING THIS PERIOD (WHILE THE BUZZER IS SOUNDING), SIGNAL INPUT TO **TERMINAL 8** OF RELAY STOPS AND THE CURRENT FLOW FROM **TERMINAL 7** OF THE RELAY → **TERMINAL 10** → **GROUND** IS CUT, CAUSING THE BUZZER TO STOP.

### 2. UNLOCK WARNING SYSTEM

WITH THE IGNITION KEY INSERTED IN THE KEY CYLINDER (UNLOCK SW ON), THE IGNITION SW STILL OFF AND DRIVER'S DOOR OPENS (DOOR COURTESY SW ON), WHEN A SIGNAL IS INPUT TO **TERMINAL 6** OF THE RELAY, THE INTEGRATION RELAY OPERATES, CURRENT FLOWS FROM **TERMINAL 7** OF THE RELAY → **TERMINAL 10** → **GROUND** AND UNLOCK WARNING BUZZER SOUNDS.

## SERVICE HINTS

### B 6 BUCKLE SW LH

1-2 : CLOSED WITH DRIVER'S SEAT BELT IN USE

### D10 DOOR COURTESY SW LH

3-2 : CLOSED WITH LH DOOR OPEN

### U 1 UNLOCK WARNING SW

2-1 : CLOSED WITH IGNITION KEY IN CYLINDER

### INTEGRATION RELAY

10-GROUND : ALWAYS CONTINUOUS

6-GROUND : CONTINUOUS WITH DRIVER'S DOOR OPEN

5-GROUND : CONTINUOUS WITH IGNITION KEY IN CYLINDER

8-GROUND : CONTINUOUS WITH DRIVER'S SEAT BELT IN USE

9-GROUND : 0 VOLTS WITH IGNITION SW ON AND BUCKLE SW OFF

1-GROUND : ALWAYS APPROX. 12 VOLTS

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>B 6</b>	<a href="#">28</a>	<b>T 6</b>	<a href="#">29</a>		
<b>D10</b>	<a href="#">30</a>	<b>U 1</b>	<a href="#">29</a>		

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
<b>2</b>	<a href="#">22</a>	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
<b>1B</b>	<a href="#">20</a>	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1C</b>	<a href="#">20</a>	FLOOR NO. 2 WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1E</b>	<a href="#">20</a>	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1I</b>	<a href="#">20</a>	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1J</b>		
<b>1K</b>		

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>IC2</b>	<a href="#">36</a>	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)

## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
<b>IE</b>	<a href="#">36</a>	LEFT KICK PANEL
<b>BI</b>	<a href="#">40</a>	LEFT QUARTER PILLAR

## ○ : SPLICE POINTS

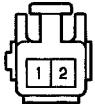
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
<b>I 7</b>	<a href="#">38</a>	FLOOR NO. 2 WIRE			



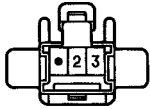
# UNLOCK AND SEAT BELT WARNING

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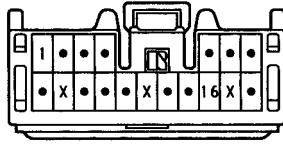
B 6



D10



T 6



U 1 BLACK



## SRS (SUPPLEMENTAL RESTRAINT SYSTEM)

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

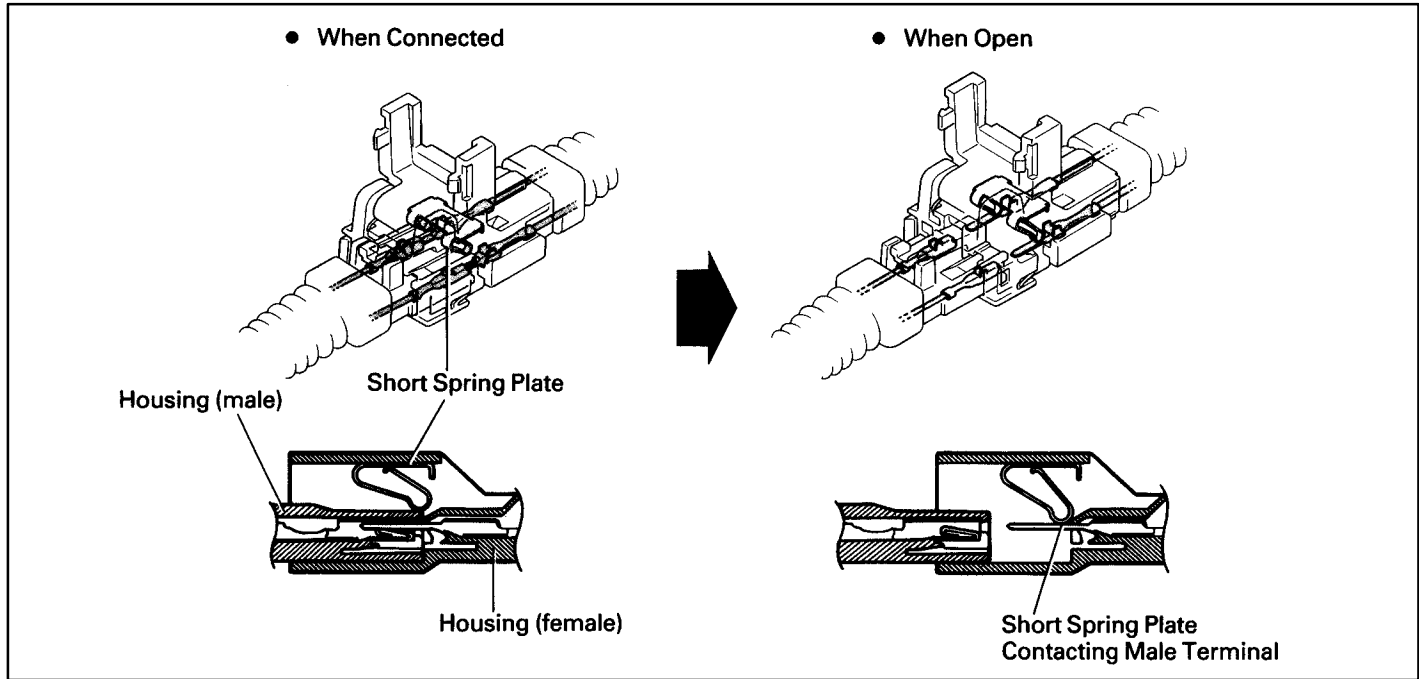
- ▼ Malfunction symptoms of the supplemental restraint system are difficult to confirm, so the diagnostic trouble codes become the most important source of information when troubleshooting.  
When troubleshooting the supplemental restraint system, always inspect the diagnostic trouble codes before disconnecting the battery.
- ▼ Work must be started after 90 seconds from the time the Ignition SW is set to the “LOCK” position and the negative (–) terminal cable is disconnected from the battery.  
(The supplemental restraint system is equipped with a back-up power source so that if work is started within 90 seconds of disconnecting the negative (–) terminal cable of the battery, the SRS may be activated.)  
When the negative (–) terminal cable is disconnected from the battery, memory of the clock and audio systems will be cancelled. So before starting work, make a record of the contents memorized by each memory system. When work is finished, reset the clock and audio system as before and adjust the clock.  
To avoid erasing the memory of each memory system, never use a back-up power supply from outside the vehicle.
- ▼ When removing the steering wheel pad or handling a new steering wheel pad, keep the pad upper surface facing upward. Also, lock the lock lever of the twin lock type connector at the rear of the pad and take care not to damage the connector.  
(Storing the pad with its metallic surface up may lead to a serious accident if the SRS inflates for some reason.)
- ▼ Always store a removed or new front passenger airbag assembly with the airbag door facing up. Storing the airbag assembly with the airbag door facing down could cause a serious accident if the airbag inflates.
- ▼ Store the steering wheel pad where the ambient temperature remains below 93°C (200°F), without high humidity and away from electrical noise.
- ▼ Never use SRS parts from another vehicle. When replacing SRS parts, replace them with new parts.
- ▼ Never disassemble and repair the steering wheel pad, front passenger airbag assembly, center airbag sensor assembly or front airbag sensors.
- ▼ Before repairing the body, remove the airbag sensors if during repair shocks are likely to be applied to the sensors due to vibration of the body or direct tapping with tools or other parts.
- ▼ Do not reuse a steering wheel pad or front airbag sensors.  
After evaluating whether the center airbag sensor assembly is damaged or not, decide whether or not to reuse it. (See the Repair Manual for the method for evaluating the center airbag sensor assembly.)
- ▼ When troubleshooting the supplemental restraint system, use a high-impedance (Min. 10k  $\Omega$ ) tester.
- ▼ The wire harness of the supplemental restraint system is integrated with the cowl No. 2 wire harness assembly.  
The vehicle wiring harness exclusively for the airbag system is distinguished by corrugated yellow tubing, as are the connectors.
- ▼ Do not measure the resistance of the airbag squibs.  
(It is possible this will deploy the airbag and is very dangerous.)
- ▼ If the wire harness used in the supplemental restraint system is damaged, replace the whole wire harness assembly.  
When the connector to the front airbag sensors can be repaired alone (when there is no damage to the wire harness), use the repair wire specially designed for the purpose.  
(Refer to the Repair Manual for the applicable Model year for details of the replacement method.)
- ▼ INFORMATION LABELS (NOTICES) are attached to the periphery of the SRS components. Follow the instructions on the notices.

# SRS (SUPPLEMENTAL RESTRAINT SYSTEM)

The supplemental restraint system has connectors which possess the functions described below:

## 1. SRS ACTIVATION PREVENTION MECHANISM

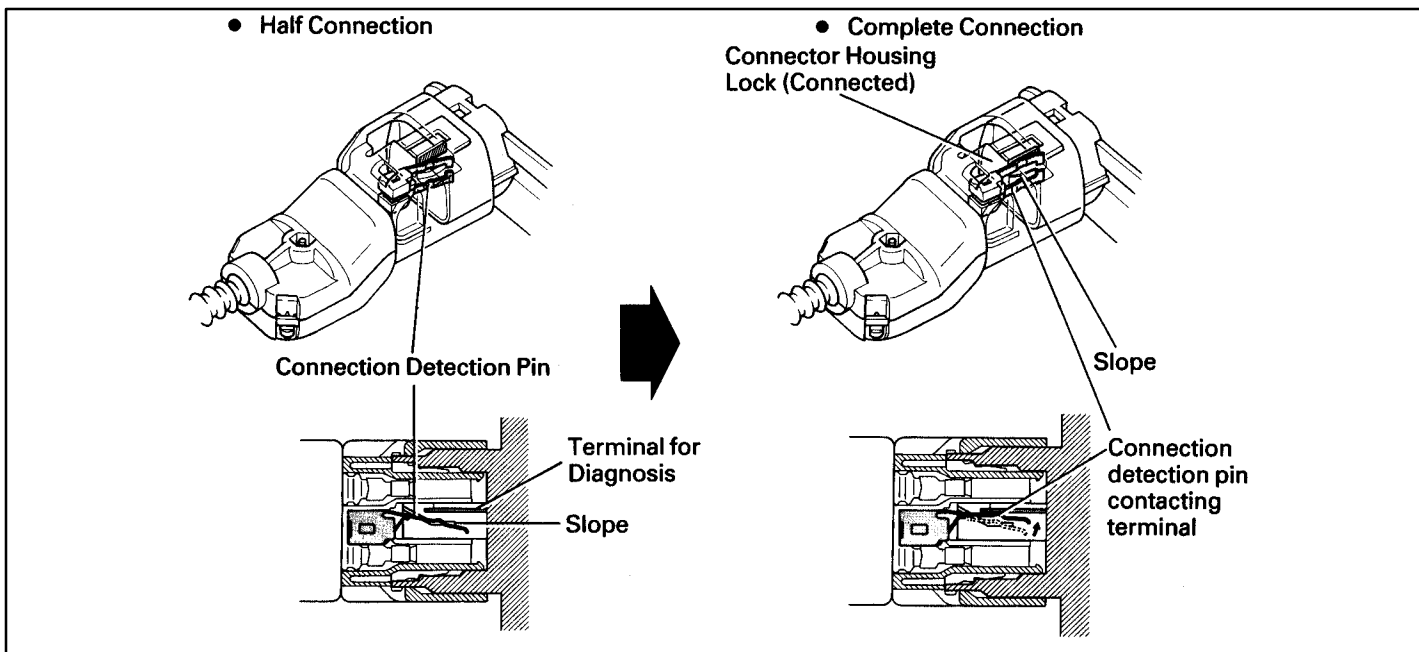
Each connector contains a short spring plate. When the connector is disconnected, the short spring plate automatically connects the power source and grounding terminals of the squib to preclude a potential difference between the terminals.



## 2. ELECTRICAL CONNECTION CHECK MECHANISM

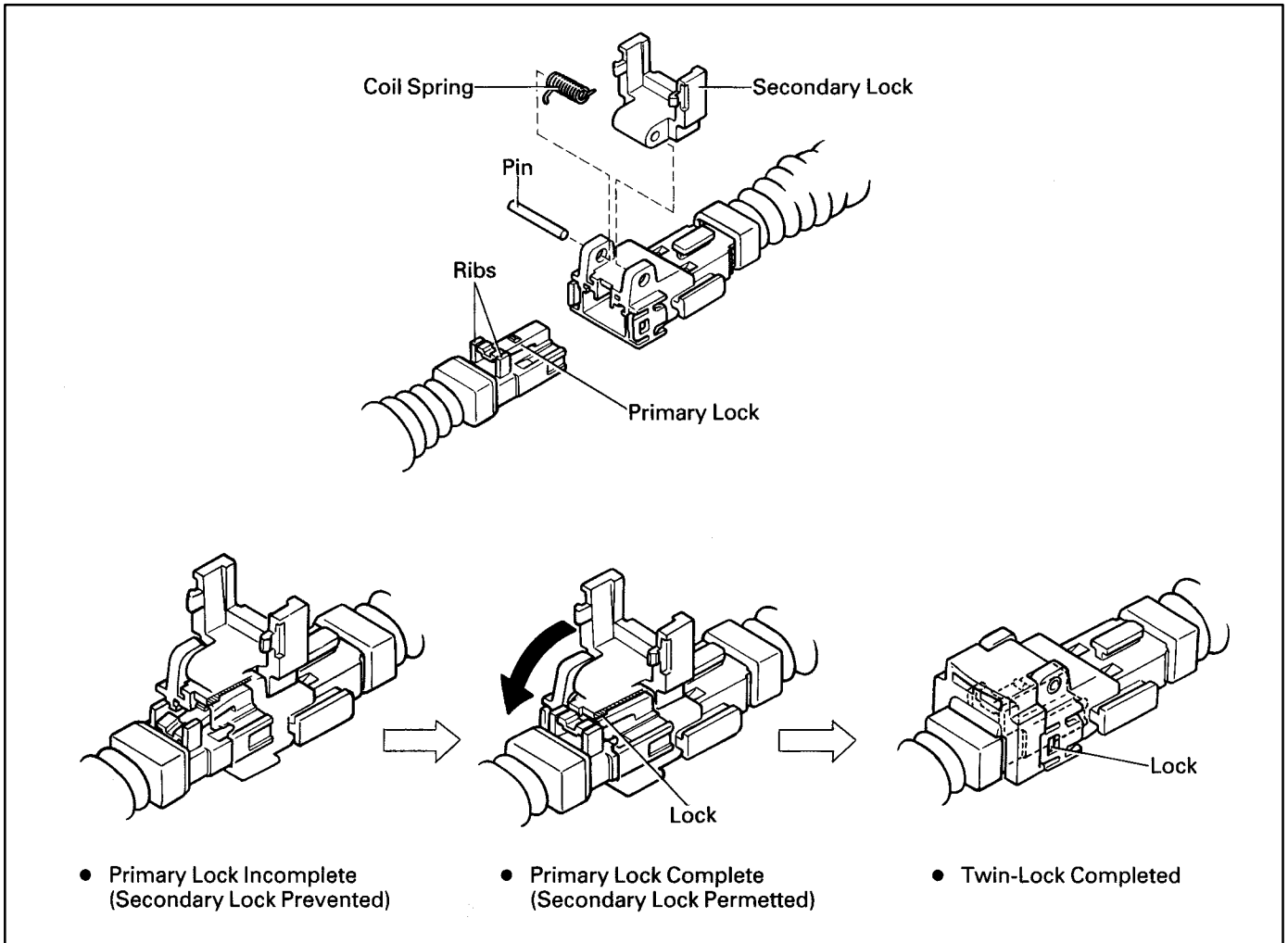
This mechanism is designed to electrically check if connectors are connected correctly and completely.

The electrical connection check mechanism is designed so that the connection detection pin connects with the diagnosis terminals when the connector housing lock is in the locked condition.

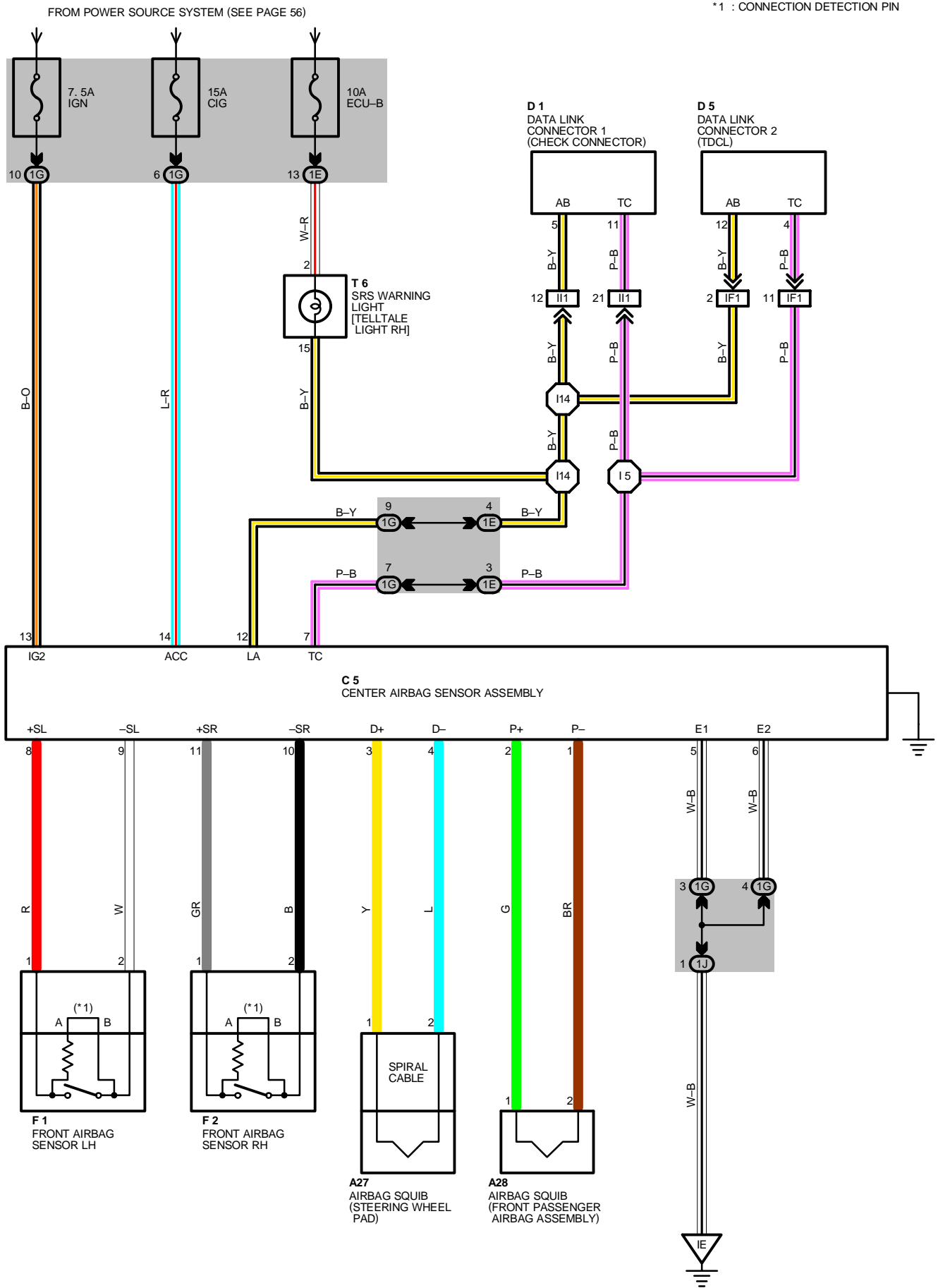


### 3. CONNECTOR TWIN-LOCK MECHANISM

With this mechanism connectors (male and female connectors) are locked by two locking devices to increase connection reliability. If the primary lock is incomplete, ribs interfere and prevent the secondary lock.



# SRS (SUPPLEMENTAL RESTRAINT SYSTEM)



## SYSTEM OUTLINE

\* THE SRS (SUPPLEMENTAL RESTRAINT SYSTEM) 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 14** OF THE CENTER AIRBAG SENSOR ASSEMBLY. ONLY WHEN THE IGNITION SW IS ON, THE CURRENT FLOWS FROM THE **IGN** FUSE TO **TERMINAL 13**.

IF AN ACCIDENT OCCURS WHILE DRIVING, WHEN DECELERATION CAUSED BY A FRONTAL IMPACT IS DETECTED BY EACH SENSOR AND SWITCH, AND THE FRONTAL IMPACT EXCEEDS A SET LEVEL (WHEN THE SAFING SENSOR BUILT INTO THE CENTER AIRBAG SENSOR ASSEMBLY IS ON AND THE CENTER AIRBAG SENSOR IS ON, FRONT AIRBAG SENSORS ARE OFF), CURRENT FROM THE **CIG** OR **IGN** FUSE FLOWS TO **TERMINALS 3, 2**, OF THE CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 1** OF THE AIRBAG SQUIB → **TERMINAL 2** → **TERMINALS 4, 1**, OF THE CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 5, TERMINAL 6** OR **BODY GROUND** → **GROUND**.

WHEN THE SAFING SENSOR BUILT INTO THE CENTER AIRBAG SENSOR ASSEMBLY IS ON AND THE FRONT AIRBAG SENSOR LH OR RH IS ON, CENTER AIRBAG SENSOR IS OFF AND CURRENT FROM THE **CIG** OR **IGN** FUSE FLOWS TO **TERMINALS 3, 2**, OF THE CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 1** OF THE AIRBAG SQUIB → **TERMINAL 2** → **TERMINALS 4, 1**, OF THE CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 8** OR **11** → **TERMINAL 1** OF THE FRONT AIRBAG SENSOR → **TERMINAL 2** → **TERMINAL 9** OR **10** OF THE CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 5, TERMINAL 6** OR **BODY GROUND** → **GROUND**, WHEN THE SAFING SENSOR BUILT INTO THE CENTER AIRBAG SENSOR ASSEMBLY IS ON, AND THE FRONT AIRBAG SENSOR LH OR RH IS ON AND CENTER AIRBAG SENSOR IS ON ONE OF THE ABOVE-MENTIONED CIRCUITS IS ACTIVATED SO THAT CURRENT FLOWS TO THE AIRBAG SQUIBS 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 PASSENGER.

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>A27</b>	28	<b>D 1</b>	26 (2JZ-GE)	<b>F 2</b>	24 (2JZ-GTE)
<b>A28</b>	28	<b>D 5</b>	28		26 (2JZ-GE)
<b>C 5</b>	28	<b>F 1</b>	24 (2JZ-GTE)	<b>T 6</b>	29
<b>D 1</b>	24 (2JZ-GTE)		26 (2JZ-GE)		

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
<b>1E</b>	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1G</b>	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1J</b>		

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>IF1</b>	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
<b>II1</b>	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

### ▽ : GROUND POINTS

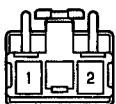
CODE	SEE PAGE	GROUND POINTS LOCATION
<b>IE</b>	36	LEFT KICK PANEL

### ○ : SPLICE POINTS

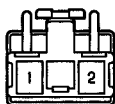
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
<b>I5</b>	38	INSTRUMENT PANEL WIRE	<b>I14</b>	38	INSTRUMENT PANEL WIRE

# SRS (SUPPLEMENTAL RESTRAINT SYSTEM)

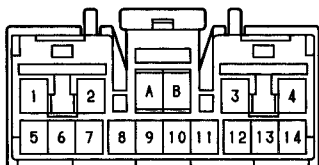
A27 YELLOW



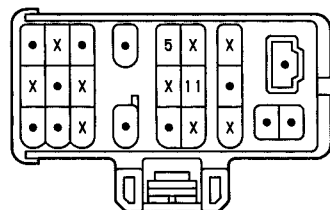
A28 YELLOW



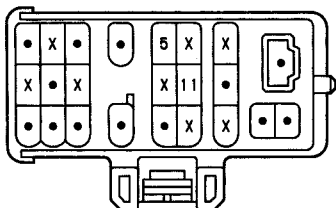
C 5 YELLOW



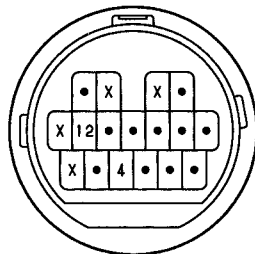
(2JZ-GTE) D 1 BLACK



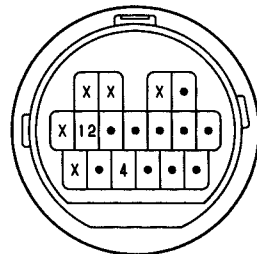
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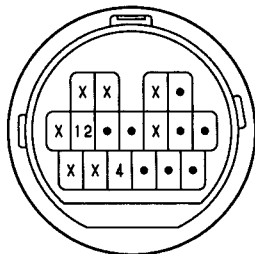
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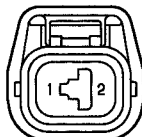
(2JZ-GE A/T) D 5 DARK GRAY



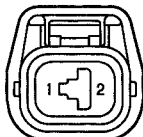
(2JZ-GE M/T) D 5 DARK GRAY



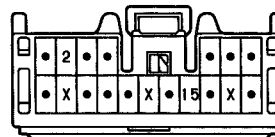
F 1 YELLOW



F 2 YELLOW

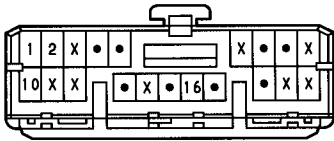


T 6

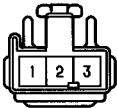


# REAR WIPER AND WASHER

C14 BLACK



R15



W 1 BLACK







## SYSTEM OUTLINE

WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS TO **TERMINAL 2** OF THE WASHER MOTOR, **TERMINAL 1** OF THE REAR WIPER MOTOR AND RELAY THROUGH THE WIPER FUSE.

### 1. REAR WIPER NORMAL OPERATION

WITH THE IGNITION SW TURNED ON AND THE REAR WIPER AND WASHER SW TURNED ON, THE CURRENT FLOWING TO **TERMINAL 1** OF THE REAR WIPER RELAY FLOWS TO **TERMINAL 3** OF THE RELAY → **TERMINAL 1** OF THE REAR WIPER AND WASHER SW → **TERMINAL 16** → TO **GROUND**. THUS, THE RELAY COIL IS ACTIVATED AND THE CURRENT TO **TERMINAL 1** OF THE REALY FLOWS TO **TERMINAL LM** → **TERMINAL LM** OF THE REAR WIPER MOTOR → MOTOR → TO **GROUND** AND CAUSES THE MOTOR TO OPERATE THE WIPER.

### 2. REAR WIPER INTERMITTENT OPERATION

WHEN THE IGNITION SW IS ON AND THE REAR WIPER AND WASHER SW IS TURNED TO **INT** POSITION, CURRENT FLOWING TO **TERMINAL 1** OF THE REAR WIPER MOTOR AND RELAY FLOWS TO **TERMINAL 2** OF THE RELAY → **TERMINAL 10** OF THE REAR WIPER AND WASHER SW → **TERMINAL 16** → **GROUND**.

THIS CAUSES THE MOTOR TO OPERATE (THE POINT CHANGES) AND THE INTERMITTENT CIRCUIT OF THE RELAY OPERATES. INTERMITTENT OPERATION OF THE CIRCUIT IS CONTROLLED BY THE CHANGING AND DISCHARGING OF THE CONDENSER INSTALLED INSIDE THE RELAY.

### 3. WASHER OPERATION

WITH THE IGNITION SW TURNED ON AND THE REAR WIPER AND WASHER SW TURNED TO **ON** POSITION, WHEN THE WIPER SW IS TURNED FURTHER, THE CURRENT FLOWING TO **TERMINAL 2** OF THE WASHER MOTOR FLOWS TO **TERMINAL 3** OF THE MOTOR → **TERMINAL 2** OF THE REAR WIPER AND WASHER SW → **TERMINAL 16** → TO **GROUND**, SO THAT THE WASHER MOTOR ROTATES AND THE WINDOW WASHER EJECTS THE SPRAY, ONLY WHILE THE SWITCH IS FULLY TURNED.

WHEN THE WIPER SW IS OFF AND THEN TURNED TO WASHER ON (WIPER OFF SIDE), ONLY THE WASHER OPERATES.

## SYSTEM OUTLINE

### W 1 WASHER MOTOR

- 2-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION
- 3-GROUND : CONTINUOUS WITH WASHER SW TURNED ON

### R15 REAR WIPER MOTOR AND RELAY

- 1-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION
- 2-GROUND : CONTINUOUS WITH REAR WIPER SW AT **INT** POSITION
- 3-GROUND : CONTINUOUS WITH REAR WIPER SW AT **ON** POSITION



### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
<b>C14</b>	28	<b>W 1</b>	25 (2JZ-GTE)		
<b>R15</b>	30		27 (2JZ-GE)		



### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
<b>1A</b>	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1H</b>	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
<b>1J</b>		
<b>1K</b>		



### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
<b>IB2</b>	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
<b>IC2</b>	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
<b>BM1</b>	40	BACK DOOR NO. 1 WIRE AND FLOOR NO. 2 WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
<b>BO1</b>	40	BACK DOOR NO. 2 WIRE AND BACK DOOR NO. 1 WIRE (BACK DOOR UPPER LEFT)



### : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
<b>IE</b>	36	LEFT KICK PANEL

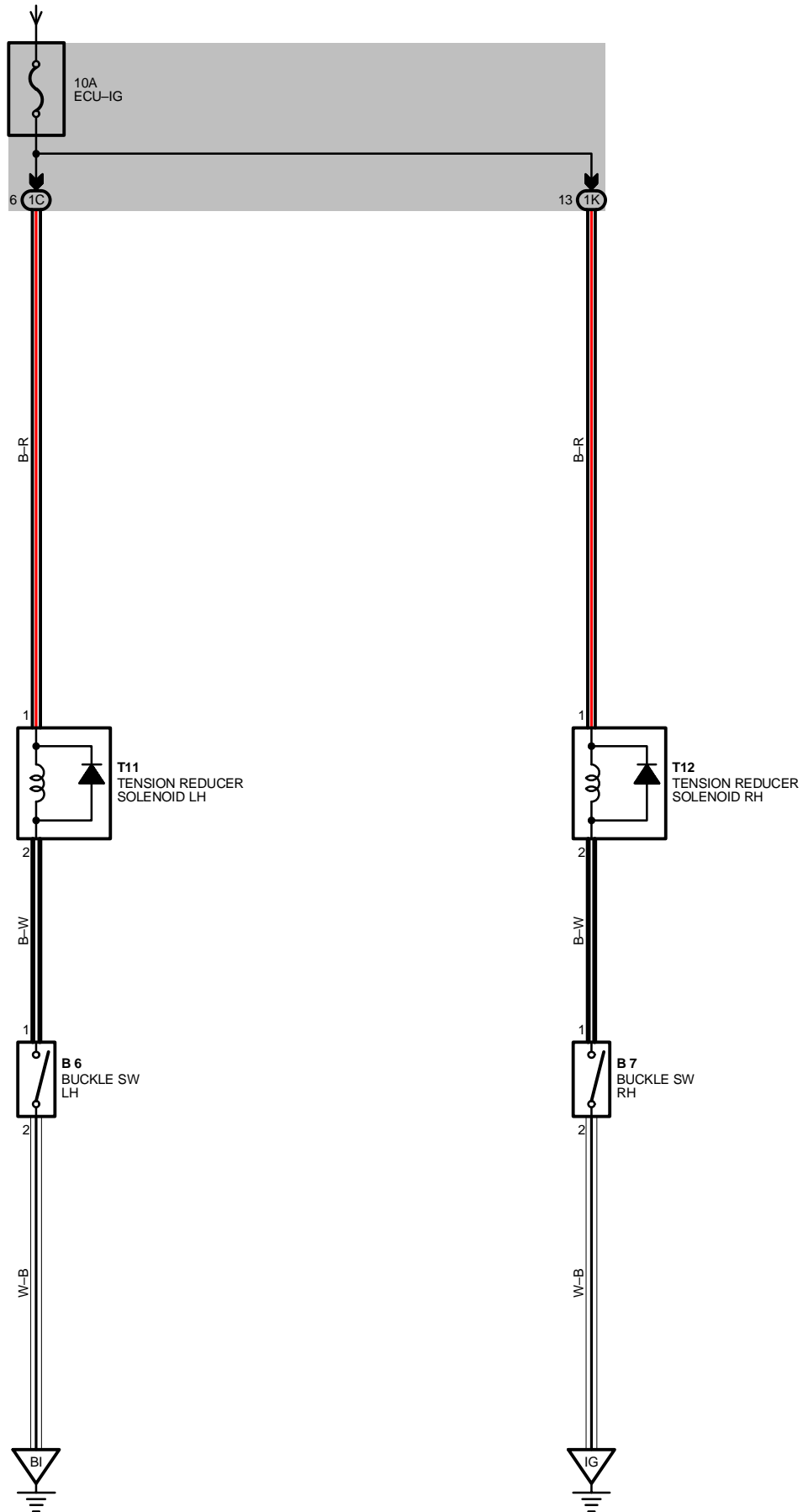


### : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
<b>E 9</b>	32	ENGINE ROOM MAIN WIRE	<b>E21</b>	34	ENGINE ROOM MAIN WIRE

# ELECTRIC TENSION REDUCER

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



## SERVICE HINTS

### B 6 BUCKLE SW LH

1-2 : CLOSED WITH DRIVER'S SEAT BELT IN USE

### B 7 BUCKLE SW RH

1-2 : CLOSED WITH PASSENGER'S SEAT BELT IN USE

### T11, T12 TENSION REDUCER SOLENOID LH, RH

1-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B 6	28	T11	30		
B 7	28	T12	30		

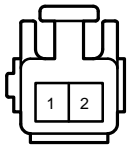
## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1C	20	FLOOR NO. 2 WIRE AND J/B NO.1 (LEFT KICK PANEL)
1K	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)

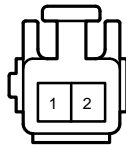
## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IG	36	RIGHT KICK PANEL
BI	40	LEFT QUARTER PILLAR

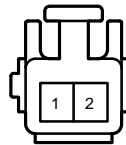
B 6



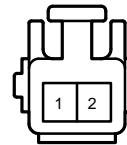
B 7



T11

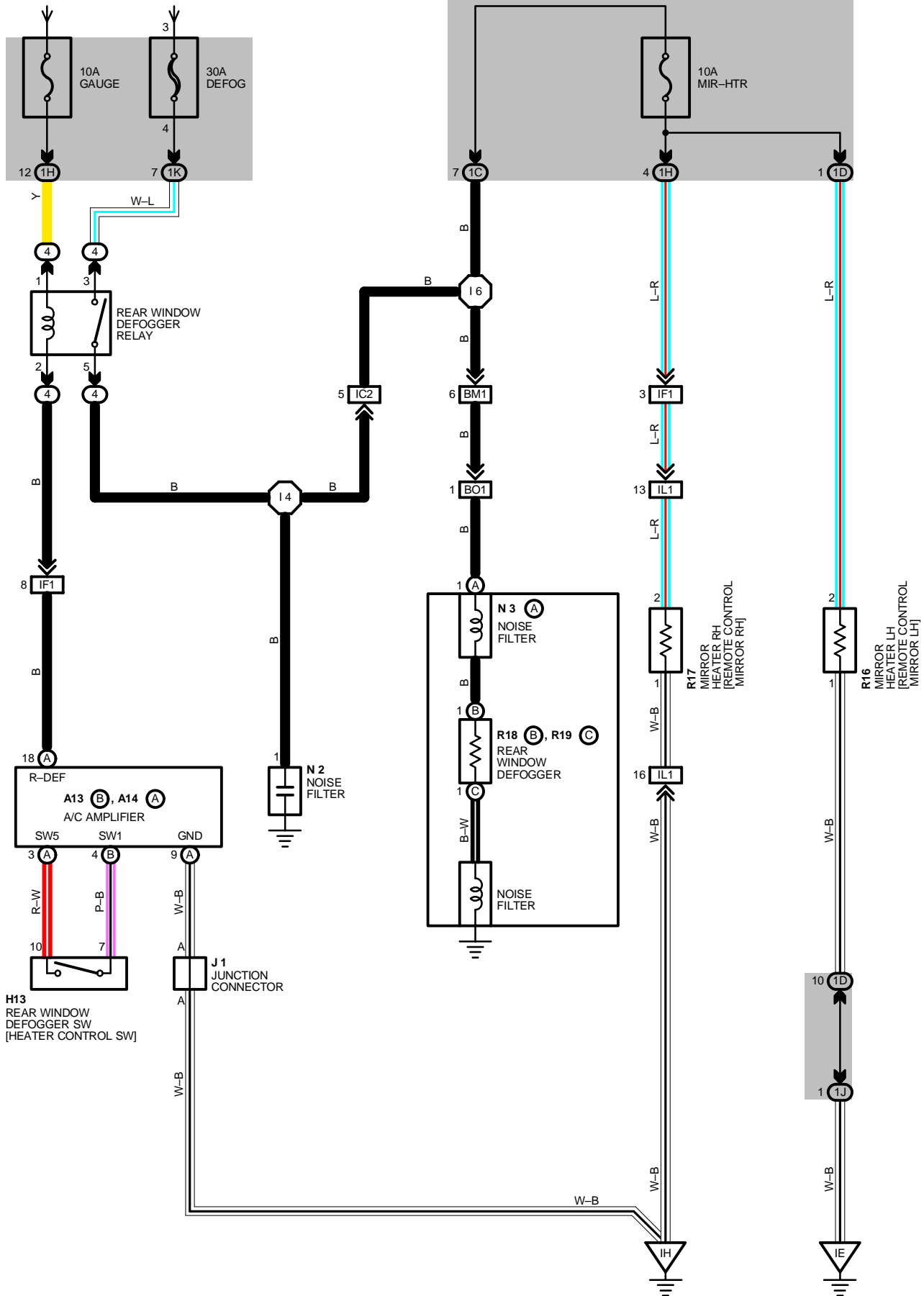


T12



# REAR WINDOW DEFOGGER AND MIRROR HEATER

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



## SERVICE HINTS

### REAR WINDOW DEFOGGER RELAY

(4) 3-(4) 5 : CLOSED WITH IGNITION SW AT **ON** POSITION AND REAR WINDOW DEFOGGER SW [HEATER CONTROL SW] **ON**

### ○ : PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
A13	B	28	N 2		29	R18	B	30
A14	A	28	N 3	A	30	R19	C	30
H13		29	R16		30			
J 1		29	R17		30			

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	23	R/B NO. 4 (LEFT KICK PANEL)

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1C	20	FLOOR NO. 2 WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D	20	FRONT DOOR LH WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1J		
1K		

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IL1	38	FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
BM1	40	BACK DOOR NO. 1 WIRE AND FLOOR NO. 2 WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
BO1	40	BACK DOOR NO. 2 WIRE AND BACK DOOR NO. 1 WIRE (BACK DOOR UPPER LEFT)

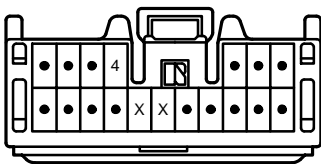
### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IE	36	LEFT KICK PANEL
IH	36	RIGHT KICK PANEL

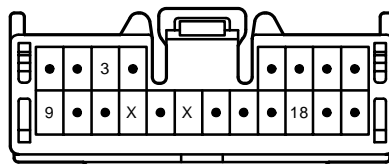
### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 4	38	COWL WIRE	I 6	38	FLOOR NO. 2 WIRE

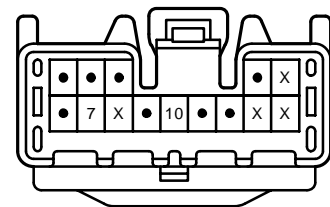
A13 (B) ORANGE



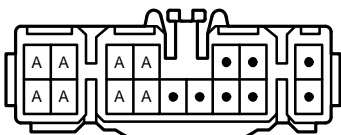
A14 (A) ORANGE



H13 ORANGE



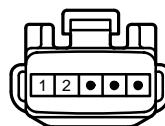
J 1



N 2, N 3 (A)



R16, R17



R18 (B) GREEN

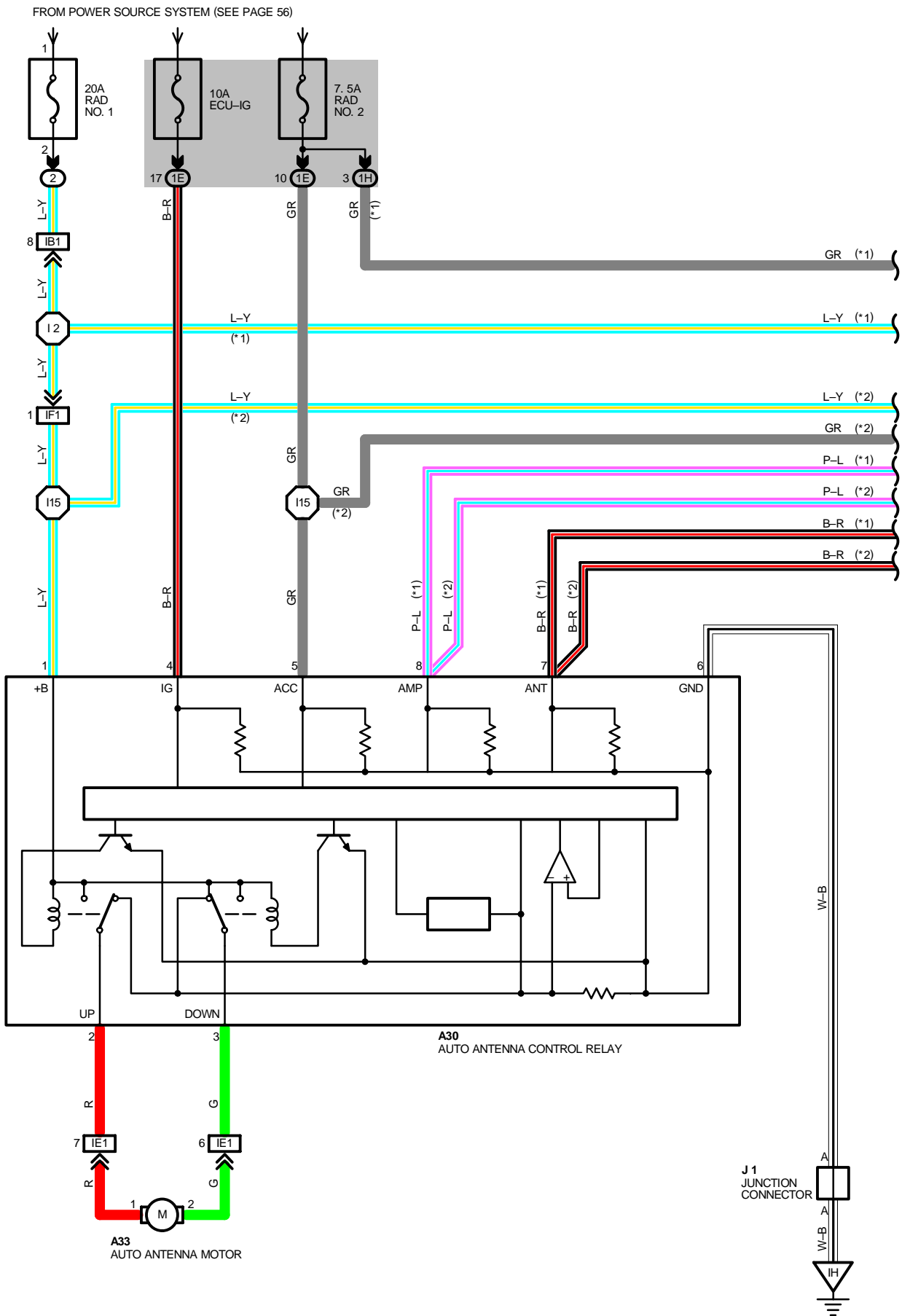


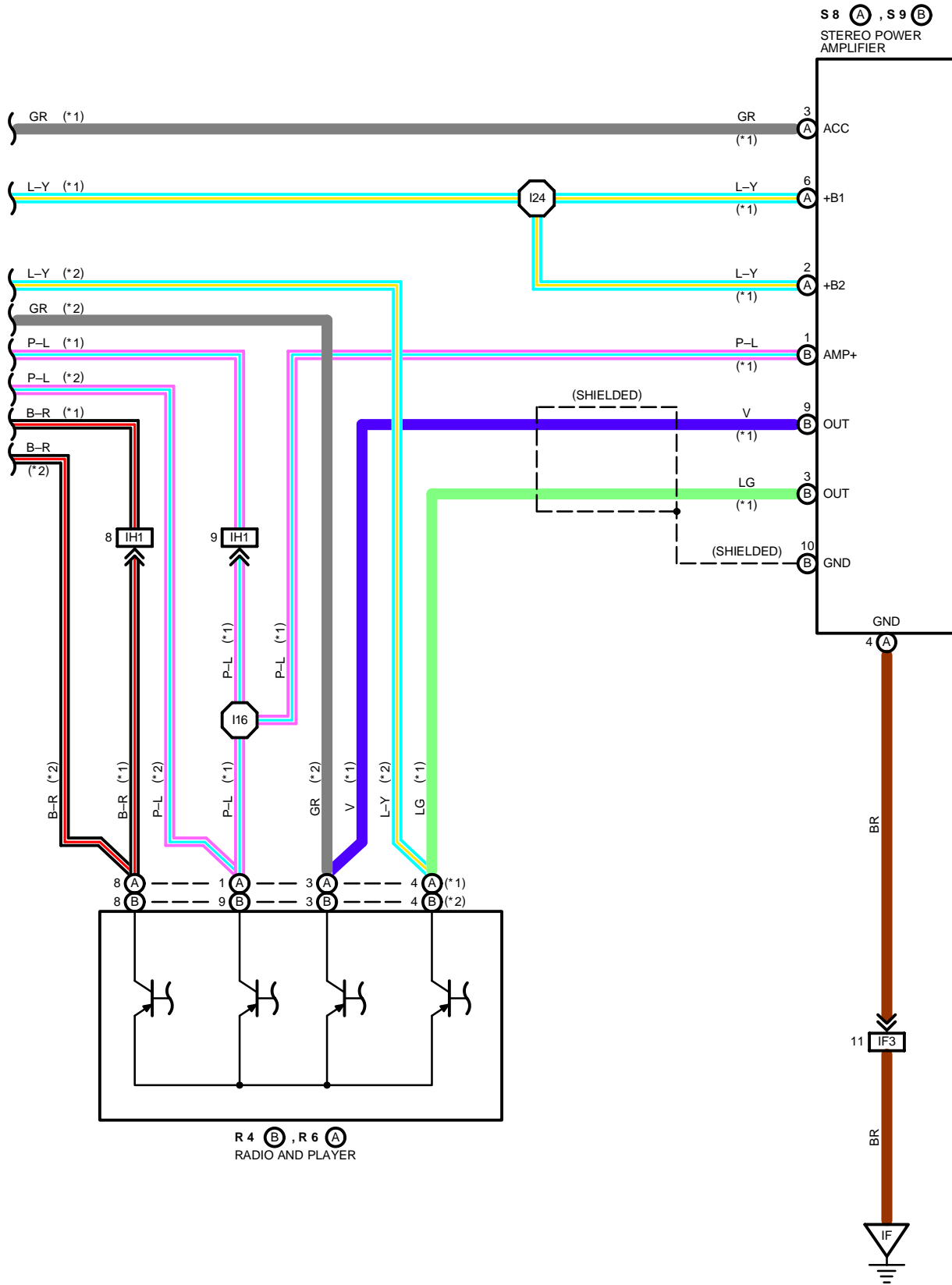
R19 (C)



(HINT : SEE PAGE 7)

# AUTO ANTENNA







# AUTO ANTENNA

## SERVICE HINTS

### A30 AUTO ANTENNA CONTROL RELAY

- 1-GROUND : ALWAYS APPROX. 12 VOLTS
- 4-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION
- 5-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION
- 6-GROUND : ALWAYS CONTINUOUS

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A30	28	R 4	B 29	S 9	B 29
A33	30	R 6	A 29		
J 1	29	S 8	A 29		

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

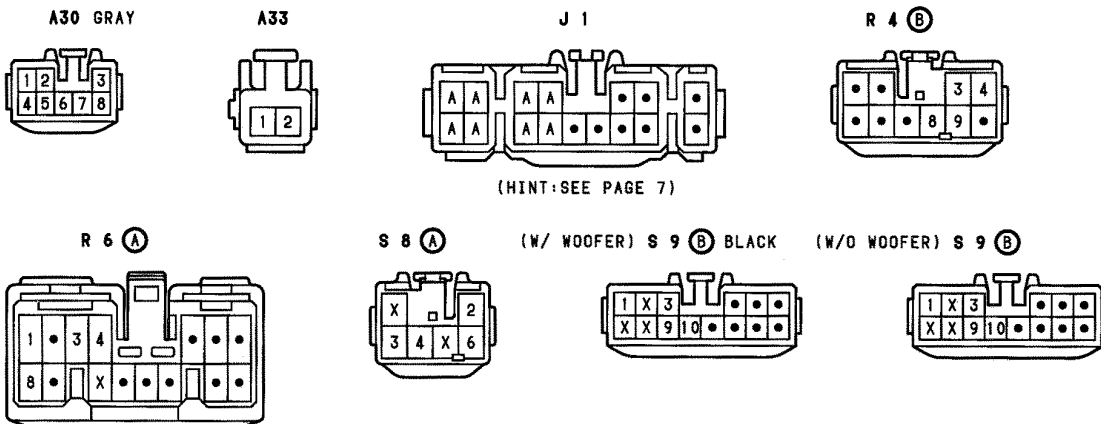
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
IH1	38	INSTRUMENT PANEL WIRE AND CONSOLE BOX WIRE (UNDER THE INSTRUMENT PANEL BRACE RH)

### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IF	36	LEFT KICK PANEL
IH	36	RIGHT KICK PANEL

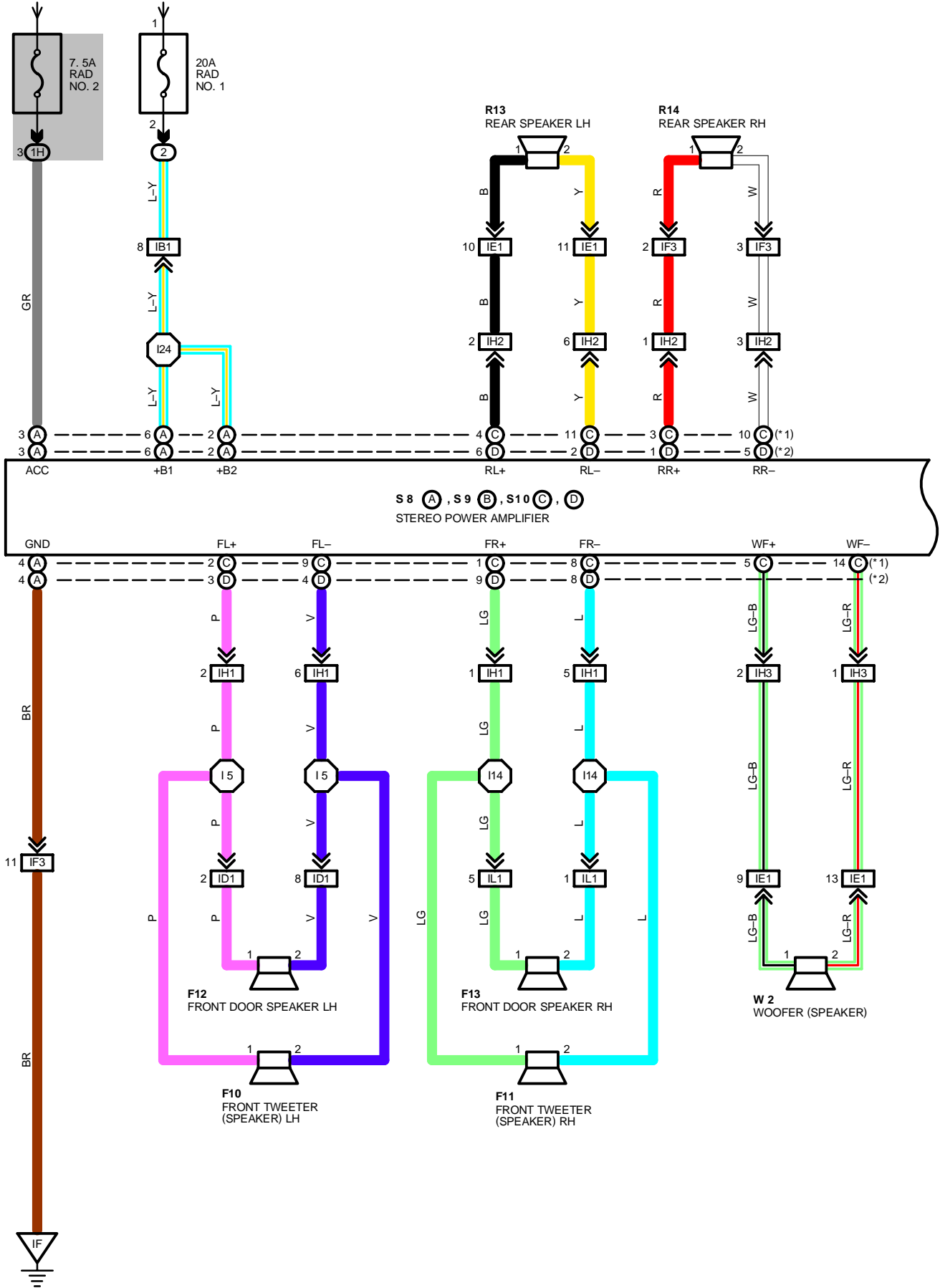
### ○ : SPLICE POINTS

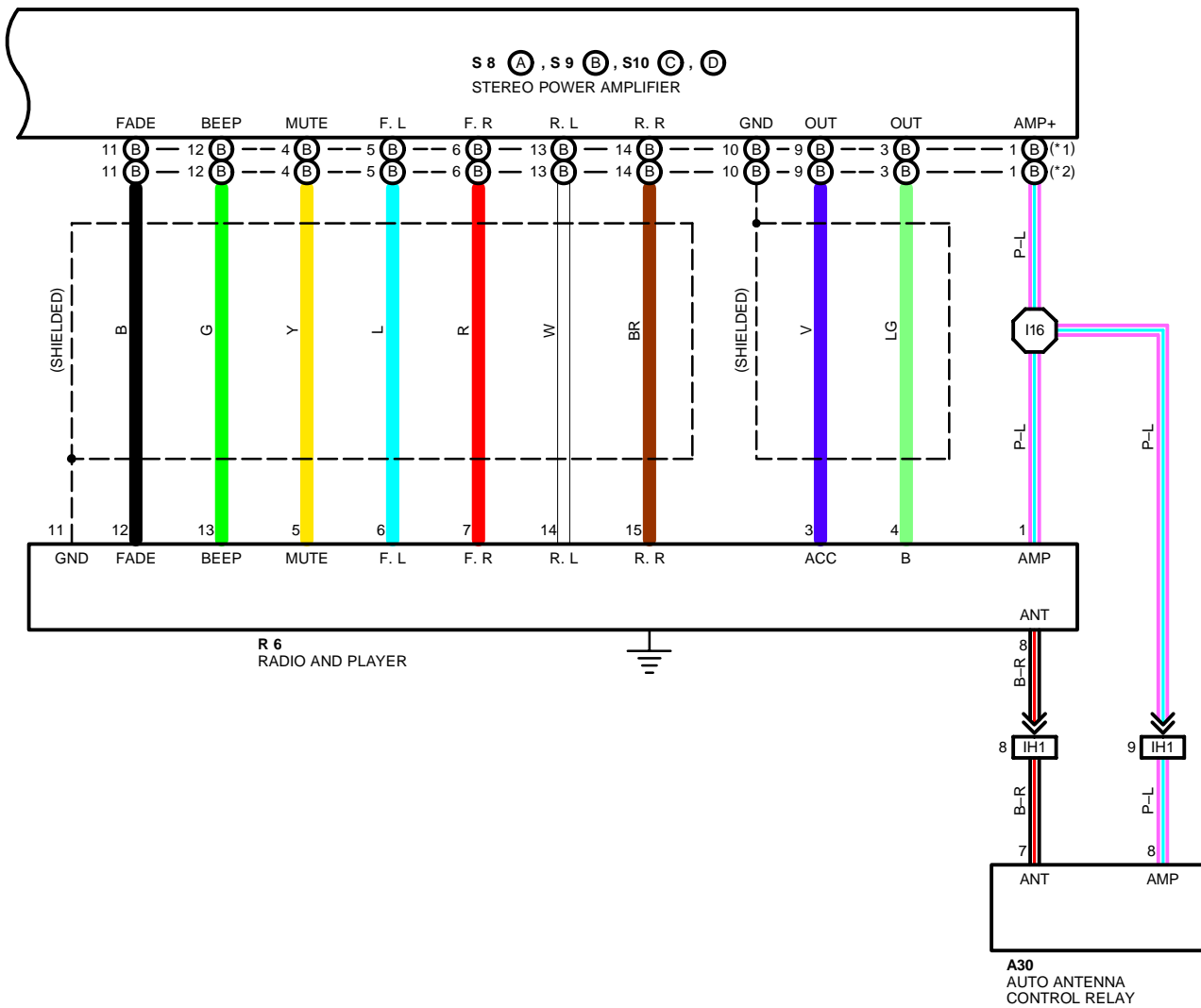
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 2	38	COWL WIRE	I16	38	CONSOLE BOX WIRE
I15	38	INSTRUMENT PANEL WIRE	I24	38	COWL WIRE



# RADIO AND PLAYER (w/ STEREO POWER AMPLIFIER)

FROM POWER SOURCE SYSTEM (SEE PAGE 56)





# RADIO AND PLAYER (w/ STEREO POWER AMPLIFIER)

## SERVICE HINTS

### S 8(A) STEREO POWER AMPLIFIER

(A) 6, (A)2-GROUND : ALWAYS APPROX. 12 VOLTS

(A) 3-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT ON OR ACC POSITION

(A) 4-GROUND : ALWAYS CONTINUOUS

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A30	28	R 6	29	S10	C 29
F10	29	R13	30		D 29
F11	29	R14	30	W 2	30
F12	30	S 8	A 29		
F13	30	S 9	B 29		

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

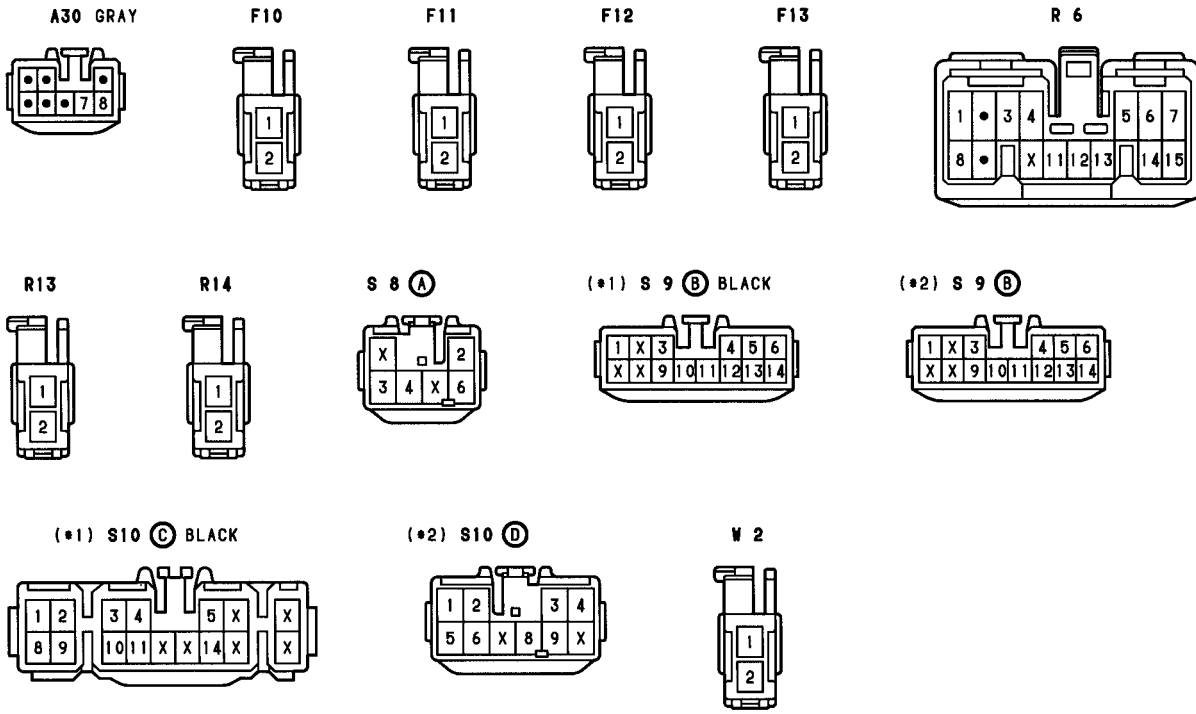
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
ID1	36	FRONT DOOR LH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
IH1	38	INSTRUMENT PANEL WIRE AND CONSOLE BOX WIRE (UNDER THE INSTRUMENT PANEL BRACE RH)
IH2		
IH3		
IL1	38	FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

## ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IF	36	LEFT KICK PANEL

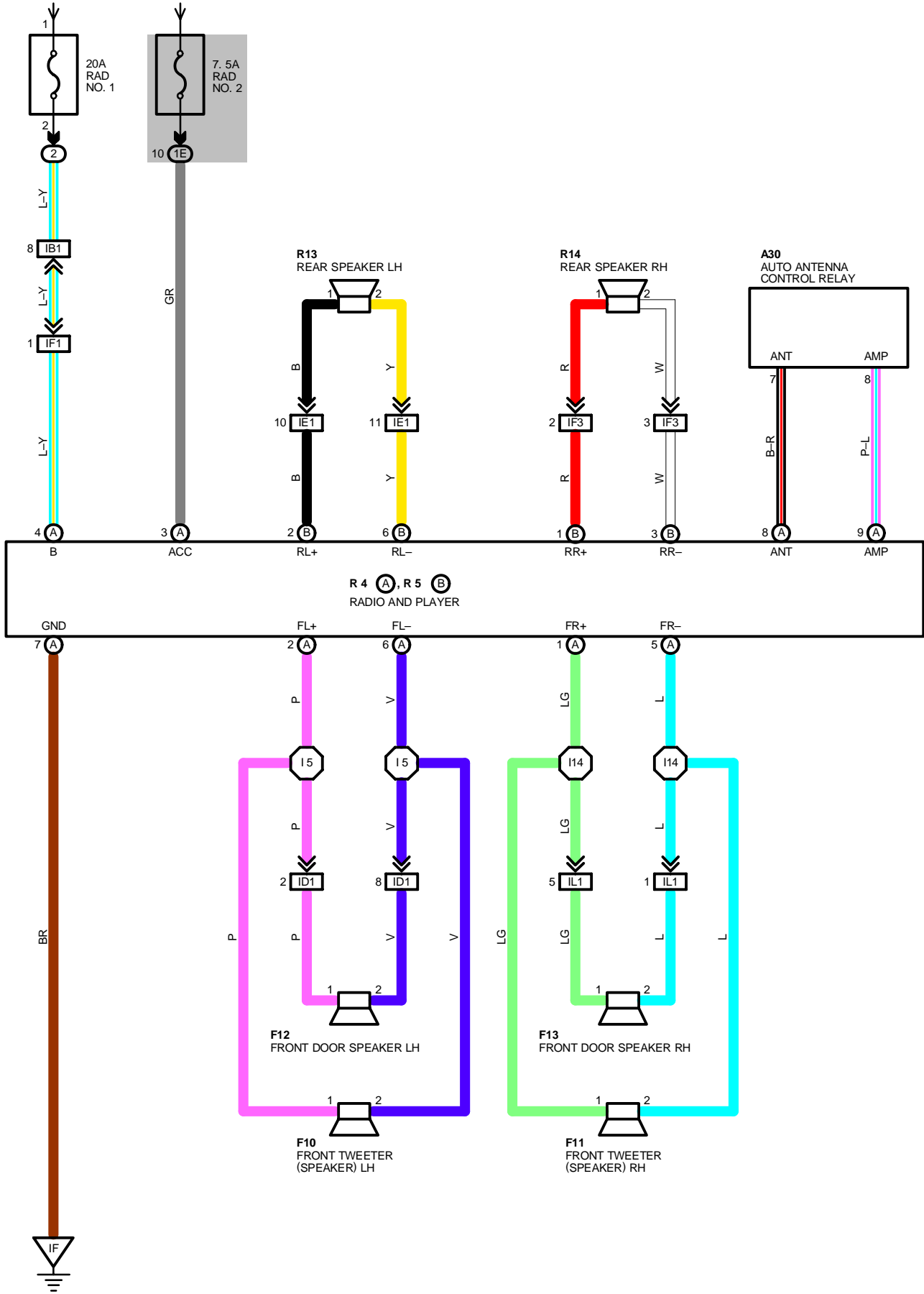
## ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 5	38	INSTRUMENT PANEL WIRE	I16	38	CONSOLE BOX WIRE
I14			I24	38	COWL WIRE



# RADIO AND PLAYER (w/o STEREO POWER AMPLIFIER)

FROM POWER SOURCE SYSTEM (SEE PAGE 56)



## SERVICE HINTS

### R 4(A) RADIO AND PLAYER

(A) 4-GROUND : ALWAYS APPROX. 12 VOLTS

(A) 3-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT ON OR ACC POSITION

(A) 7-GROUND : ALWAYS CONTINUOUS

### ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A30	28	F12	30	R 5	B 29
F10	29	F13	30	R13	30
F11	29	R 4	A 29	R14	30

### ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)

### ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

### □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
ID1	36	FRONT DOOR LH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
IL1	38	FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

### ▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IF	36	LEFT KICK PANEL

### ○ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 5	38	INSTRUMENT PANEL WIRE	I14	38	INSTRUMENT PANEL WIRE

A30 GRAY



F10



F11



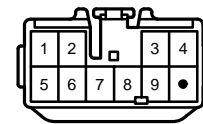
F12



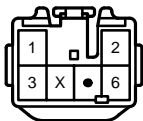
F13



R 4 (A)



R 5 (B)



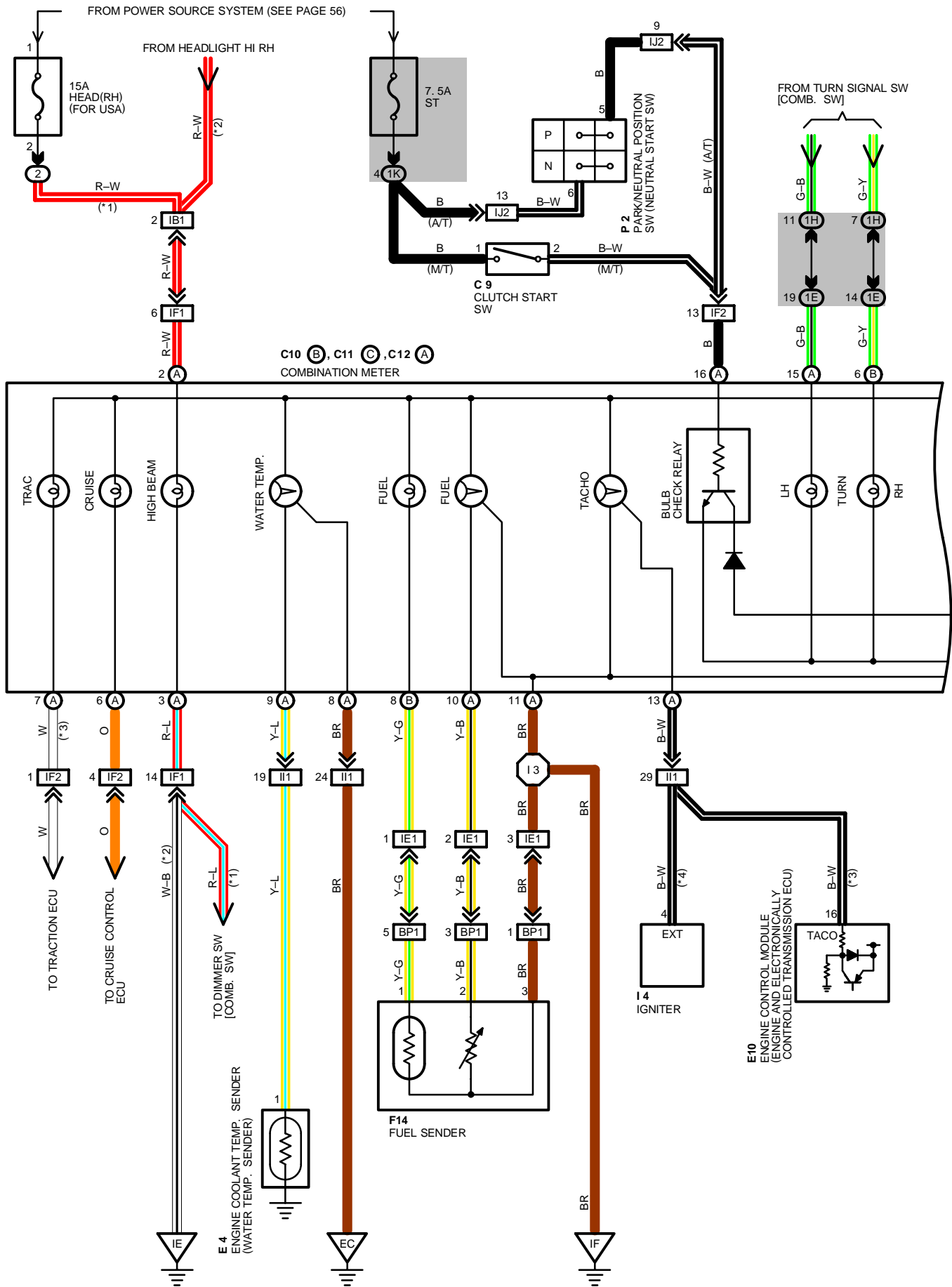
R13



R14

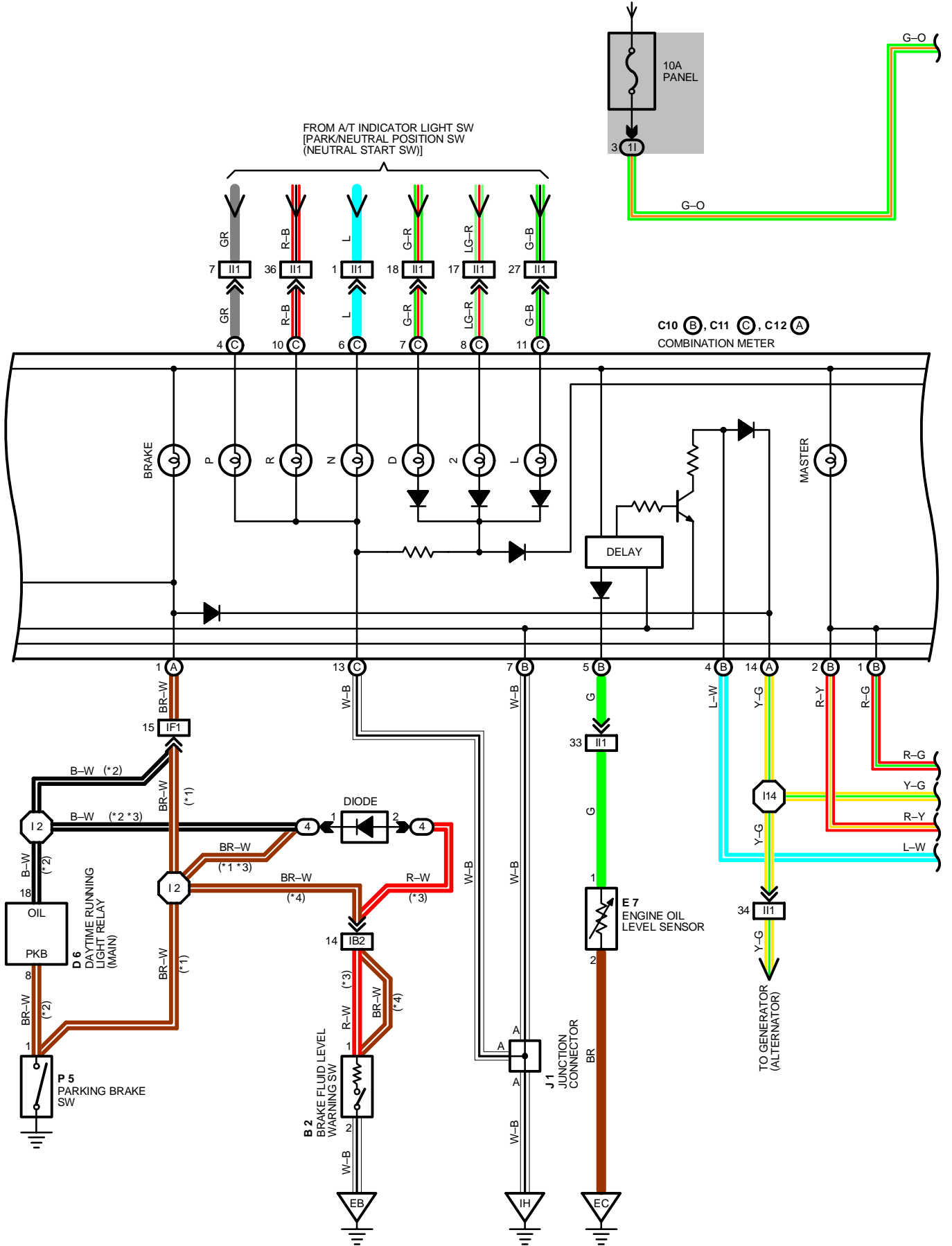


# COMBINATION METER

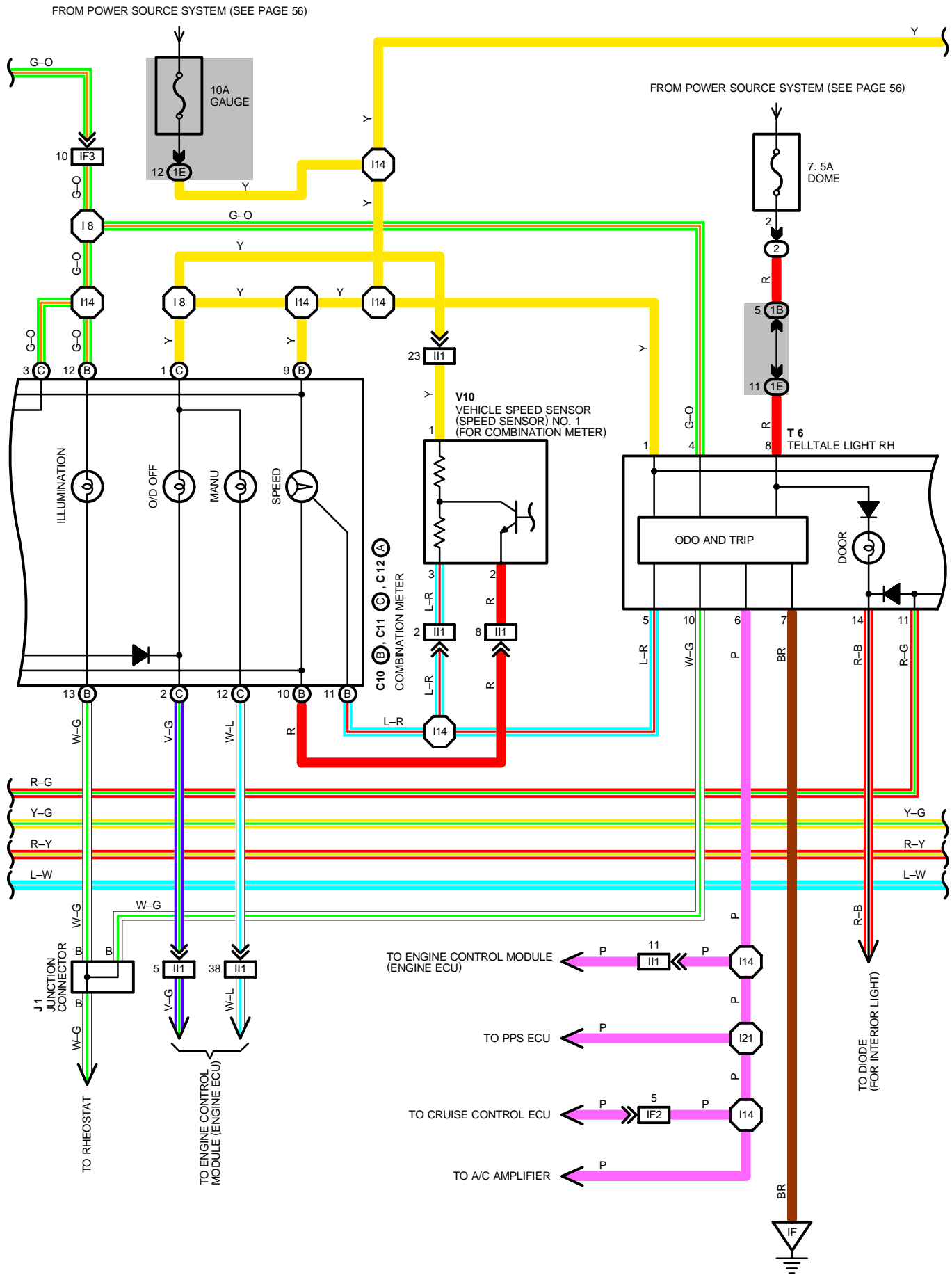


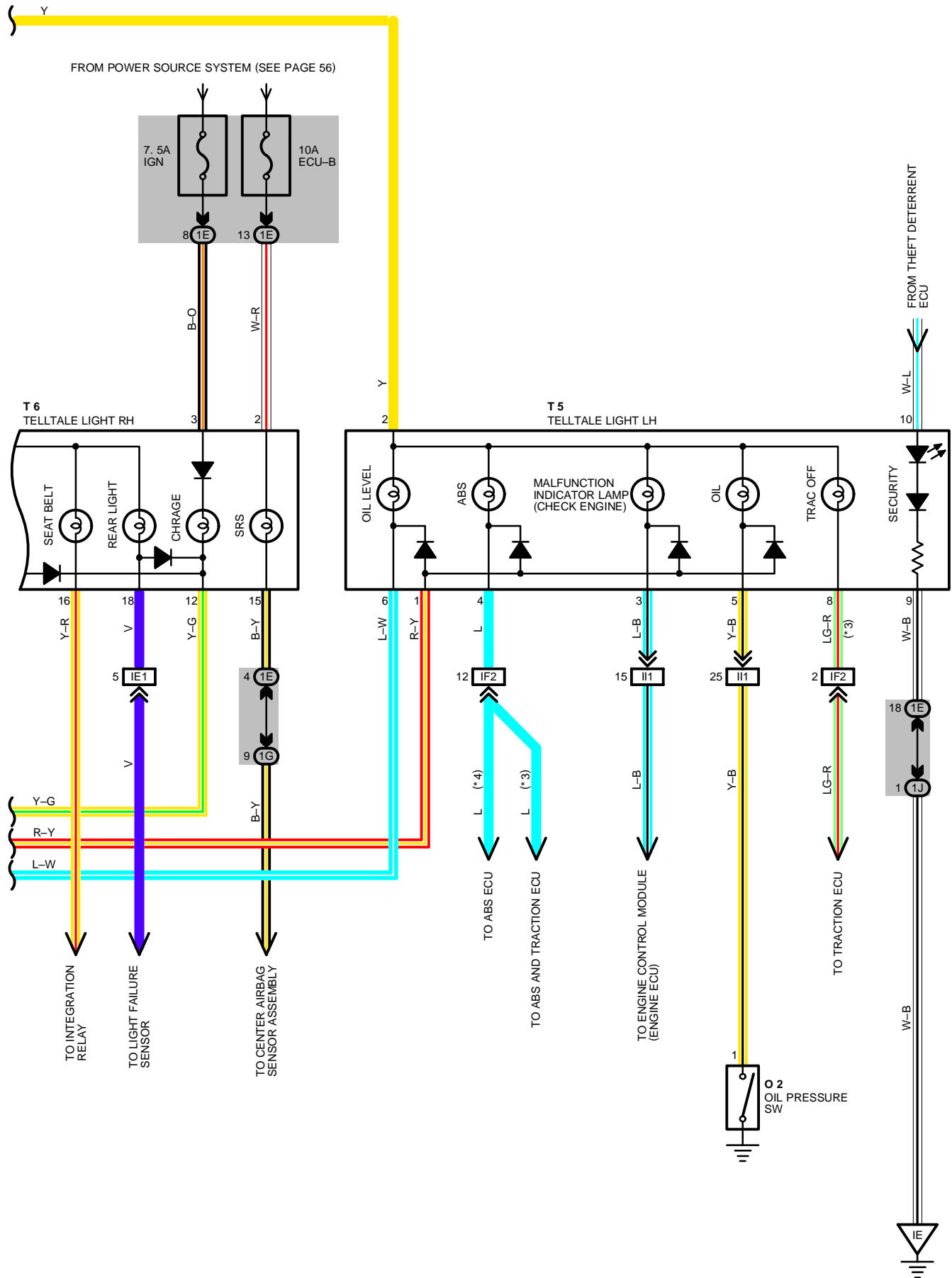


FROM POWER SOURCE SYSTEM (SEE PAGE 56)



# COMBINATION METER





# COMBINATION METER

## SERVICE HINTS

### B 2 BRAKE FLUID LEVEL WARNING SW

1-2 : CLOSED WITH FLOAT DOWN

### P 5 PARKING BRAKE SW

1-GROUND : CLOSED WITH PARKING BRAKE LEVER PULLED UP

### O 2 OIL PRESSURE SW

1-GROUND : CLOSED WITH OIL PRESSURE ABOVE APPROX. 20 KPA (2.8 PSI, 0.2 KG/CM<sup>2</sup>)

### E 4 ENGINE COOLANT TEMP. SENDER (WATER TEMP. SENDER)

1-GROUND : APPROX. 160-240 (50°C, 122°F)  
: APPROX. 17.1-20.4 (120°C, 288°F)

### E 7 ENGINE OIL LEVEL SENSOR

1-2 : CLOSED WITH FLOAT UP AND ENGINE OIL TEMP. AT BELOW APPROX. 55°C (131°F)  
OPEN WITH FLOAT DOWN AND ENGINE OIL TEMP. AT BELOW APPROX. 60°C (140°F)

### F14 FUEL SENDER

1-2 : APPROX. 3 AT FUEL FULL  
: APPROX. 110 AT FUEL EMPTY

### C10(B), C12(A) COMBINATION METER

(B) 9-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT ON POSITION

(A)16-GROUND : APPROX. 12 VOLTS WITH IGNITION SW AT ST POSITION AND SHIFT LEVER AT P OR N POSITION (A/T)  
12 VOLTS WITH IGNITION SW AT ST POSITION AND CLUTCH PEDAL DEPRESSED (M/T)

(A) 8-GROUND : ALWAYS CONTINUOUS

(A)11-GROUND : ALWAYS CONTINUOUS

(A) 2-GROUND : ALWAYS APPROX. 12 VOLTS

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE	
B 2	24 (2JZ-GTE)	E 4	26 (2JZ-GE)	O 2	27 (2JZ-GE)	
	26 (2JZ-GE)		24 (2JZ-GTE)		25 (2JZ-GTE)	
C 9	28	E 7	26 (2JZ-GE)	P 2	27 (2JZ-GE)	
			29		29	
C10	B	28	E10	29	P 5	29
C11	C	28	F14	30	T 5	29
C12	A	28	I 4	27	T 6	29
D 6	28	J 1	29	V10	25 (2JZ-GTE)	
E 4	24 (2JZ-GTE)	O 2	25 (2JZ-GTE)		27 (2JZ-GE)	

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)
4	23	R/B NO. 4 (LEFT KICK PANEL)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1G	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H		
1I		
1J		
1K		

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB2		
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF2		
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ2	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
BP1	40	FUEL GAUGE WIRE AND FLOOR NO. 2 WIRE (LUGGAGE ROOM FRONT LH)

**▽ : GROUND POINTS**

CODE	SEE PAGE	GROUND POINTS LOCATION
<b>EB</b>	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
	34 (2JZ-GE)	
<b>EC</b>	32 (2JZ-GTE)	FRONT SIDE OF INTAKE MANIFOLD
	34 (2JZ-GE)	
<b>IE</b>	36	LEFT KICK PANEL
<b>IF</b>		
<b>IH</b>	36	RIGHT KICK PANEL

**○ : SPLICE POINTS**

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
<b>I2</b>	38	COWL WIRE	<b>I14</b>	38	INSTRUMENT PANEL WIRE
<b>I3</b>		INSTRUMENT PANEL WIRE	<b>I21</b>		
<b>I8</b>					

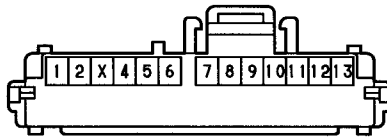
**B 2 GRAY**



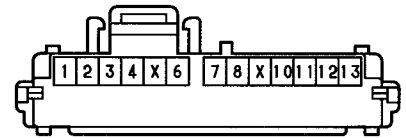
**C 9**



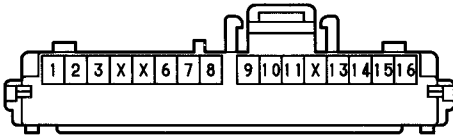
**C10 (B) BLUE**



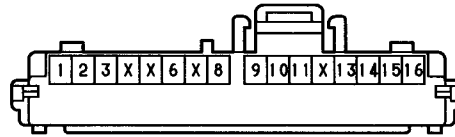
**C11 (C) BROWN**



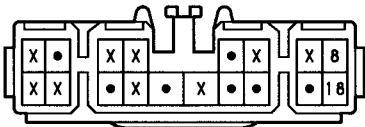
**(2JZ-GTE) C12 (A)**



**(2JZ-GE) C12 (A)**



**D 6 GRAY**



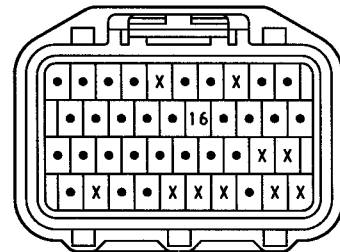
**E 4 GRAY**



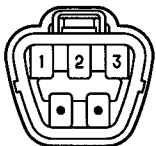
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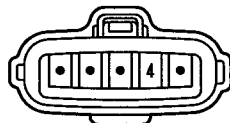
**E10 DARK GRAY**



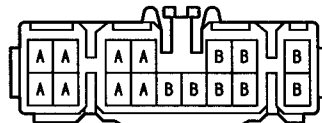
**F14 DARK GRAY**



**I 4 BLACK**

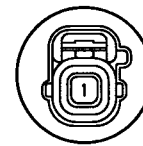


**J 1**



(HINT:SEE PAGE 7)

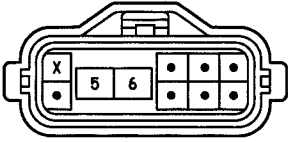
**O 2 BLACK**



# COMBINATION METER

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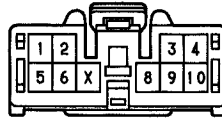
P 2 GRAY



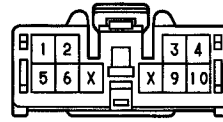
P 5



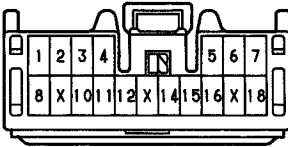
(2JZ-GTE) T 5



(2JZ-GE) T 5



T 6



V10 BLACK



# RADIATOR FAN AND AUTOMATIC AIR CONDITIONING

## SYSTEM OUTLINE

### 1. HEATER BLOWER OPERATION

#### MANNAL BLOWER OPERATION

WHEN THE BLOWER CONTROL SW IS SET TO ANY BLOWER SPEEDS, THE A/C AMPLIFIER OPERATES AND THE CURRENT TO DRIVE THE BLOWER MOTOR FLOWS FROM **TERMINAL BLW** OF THE A/C AMPLIFIER TO **TERMINAL SI** OF THE BLOWER MOTOR CONTROL RELAY. THE CURRENT ACTIVATES THE RELAY AND THE VOLTAGE APPLIED TO **TERMINAL +B** OF THE BLOWER MOTOR CONTROL RELAY IS OUTPUT AT **TERMINAL M+** AS THE VOLTAGE FOR THE SELECTED BLOWER SPEED. THE CURRENT THEN FLOWS FROM **TERMINAL M+** OF THE BLOWER MOTOR CONTROL RELAY TO **TERMINAL 2** → **TERMINAL 1** → **TERMINAL M-** OF BLOWER MOTOR CONTROL RELAY → **TERMINAL GND** → **GROUND**, AND THE BLOWER MOTOR OPERATES AT THE BLOWER SPEED SELECTED.

#### AUTO FUNCTION

WHEN THE AUTO SW IS TURNED ON, THE A/C AMPLIFIER CALCULATES THE REQUIRED VENT TEMPERATURE BASED ON THE SET TEMPERATURE AND INPUT FROM EACH SENSOR. THEN **TERMINAL BLW** OF THE A/C AMPLIFIER INPUTS CURRENT TO **TERMINAL SI** OF THE BLOWER MOTOR CONTROL RELAY IN CONFORMITY WITH THE REQUIRED VENT OUTPUT. THIS CURRENT ACTIVATES THE BLOWER MOTOR CONTROL RELAY SO THAT CURRENT FLOWS FROM **TERMINAL M+** OF THE BLOWER MOTOR CONTROL RELAY → **TERMINAL 2** OF BLOWER MOTOR → **TERMINAL 1** → **TERMINAL M-** OF BLOWER MOTOR CONTROL RELAY → **TERMINAL GND** → **GROUND**, ACTIVATING THE BLOWER MOTOR. THE BLOWER MOTOR THEN OPERATES AT DIFFERENT STEPS IN CONFORMITY WITH VARIABLE CURRENT FLOW OUTPUT FROM **TERMINAL BLW** OF THE A/C AMPLIFIER TO **TERMINAL SI** OF THE BLOWER MOTOR CONTROL RELAY.

### 2. OPERATION OF AIR INLET CONTROL SERVO MOTOR

#### (SWITCHING FROM FRESH TO RECIRC)

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM **HTR** FUSE TO **TERMINAL 2** OF AIR INLET CONTROL SERVO MOTOR → **TERMINAL 5** → **TERMINAL AIR** OF A/C AMPLIFIER → **TERMINAL GND** → **GROUND**, THE MOTOR ROTATES AND THE DAMPER STOPS AT **RECIRC** POSITION.

#### (SWITCH(NG FROM RECIRC TO FRESH)

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM **HTR** FUSE TO **TERMINAL 2** OF AIR INLET CONTROL SERVO MOTOR → **TERMINAL 3** → **TERMINAL AIF** OF A/C AMPLIFIER → **TERMINAL GND** → **GROUND**, THE MOTOR ROTATES AND THE DAMPER STOPS AT **FRESH** POSITION.

### 3. OPERATION OF AIR VENT MODE CONTROL SERVO MOTOR

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM **HTR** FUSE TO **TERMINAL IG** OF A/C AMPLIFIER

#### (SWITCHING FROM DEF TO FACE)

THE CURRENT FROM **TERMINAL AOF** OF A/C AMPLIFIER → **TERMINAL 1** OF AIR VENT MODE CONTROL SERVO MOTOR → **TERMINAL 2** → **TERMINAL AOD** OF A/C AMPLIFIER → **TERMINAL GND** → **GROUND**. THE MOTOR ROTATES AND THE DAMPER MOVES TO FACE SIDE. WHEN THE DAMPER OPERATES WITH THE A/C SW AT **FACE** POSITION, THE DAMPER POSITION SIGNAL IS INPUT FROM **TERMINAL 3** OF THE SERVO MOTOR TO THE **TERMINAL TPO** OF THE A/C AMPLIFIER. AS A RESULT, CURRENT TO THE SERVO MOTOR CIRCUIT IS CUT OFF BY THE AMPLIFIER, SO THE DAMPER STOPS AT THAT POSITION.

#### (SWITCHING FROM FACE TO DEF)

THE CURRENT FLOWS FROM **TERMINAL AOD** OF A/C AMPLIFIER → **TERMINAL 2** OF AIR VENT MODE CONTROL SERVO MOTOR → **TERMINAL 1** → **TERMINAL AOF** OF A/C AMPLIFIER → **TERMINAL GND** → **GROUND**, THE MOTOR ROTATES AND THE DAMPER STOPS AT THAT POSITION.

### 4. OPERATION OF AIR MIX CONTROL SERVO MOTOR

WHEN THE TEMPERATURE SW IS TURNED TO THE "COOL" SIDE, THE CURRENT FLOWS FROM **TERMINAL AMC** OF A/C AMPLIFIER → **TERMINAL 1** OF AIR MIX CONTROL SERVO MOTOR → MOTOR → **TERMINAL 2** → **TERMINAL AMH** OF A/C AMPLIFIER → **TERMINAL GND** → **GROUND** AND THE MOTOR ROTATES. THE DAMPER OPENING ANGLE AT THIS TIME IS INPUT FROM **TERMINAL 3** OF SERVO MOTOR TO **TERMINAL TP** OF A/C CONTROL ASSEMBLY, THIS IS USED TO DETERMINE THE DAMPER STOP POSITION AND MAINTAIN THE SET TEMPERATURE.

WHEN THE TEMPERATURE CONTROL SW IS TURNED TO THE "WARM" SIDE, THE CURRENT FLOWS FROM **TERMINAL AMH** OF A/C AMPLIFIER → **TERMINAL 2** OF AIR MIX CONTROL SERVO MOTOR → MOTOR → **TERMINAL 1** → **TERMINAL AM1** OF A/C AMPLIFIER, ROTATING THE MOTOR IN REVERSE AND SWITCHING THE DAMPER FROM COOL TO WARM SIDE.

## 5. AIR CONDITIONING OPERATION

THE A/C AMPLIFIER RECEIVES VARIOUS SIGNALS, I.E., THE ENGINE RPM FROM THE IGNITER, OUTLET TEMPERATURE SIGNAL FROM THE A/C THERMISTOR, COOLANT TEMPERATURE FROM THE ENGINE COOLANT TEMP. SENSOR (EFI WATER TEMP. SENSOR) AND THE LOCK SIGNAL FROM THE A/C COMPRESSOR, ETC.

WHEN THE ENGINE IS STARTED AND THE A/C SW (HEATER CONTROL SW) IS ON, A SIGNAL IS INPUT TO THE A/C AMPLIFIER. AS A RESULT, THE GROUND CIRCUIT IN A/C AMPLIFIER IS CLOSED AND CURRENT FLOWS FROM **HTR** FUSE TO **TERMINAL 1** OF A/C MAGNETIC CLUTCH RELAY → **TERMINAL 2** → **TERMINAL ACMG** OF ENGINE CONTROL MODULE (ENGINE ECU) → **TERMINAL A/C** → **TERMINAL MGC** OF A/C AMPLIFIER → **TERMINAL GND** → **GROUND**, TURNING THE RELAY ON, SO THAT THE A/C MAGNETIC CLUTCH IS ON AND THE A/C AMPLIFIER OPERATES.

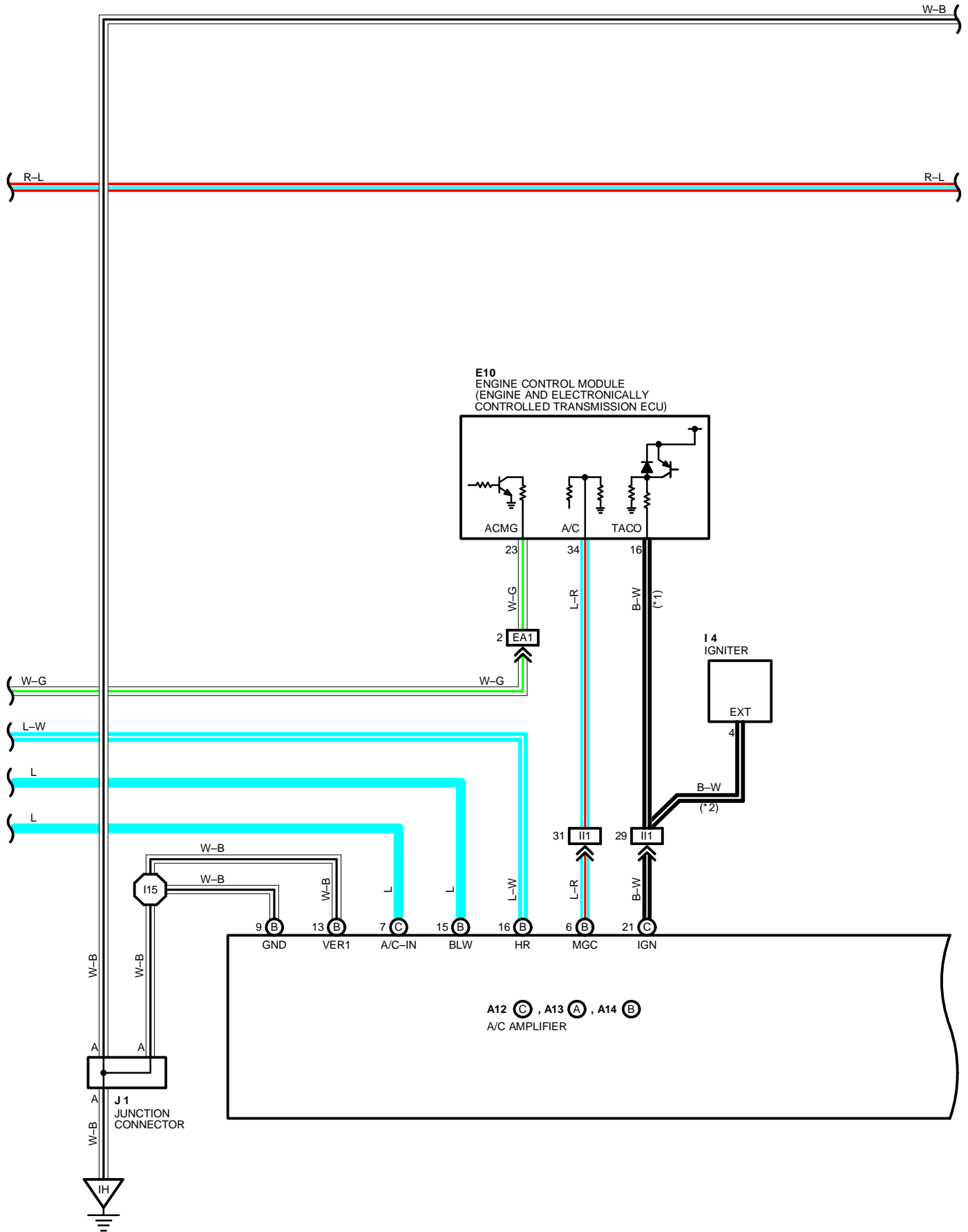
AT THE SAME TIME, THE ENGINE CONTROL MODULE (ENGINE ECU) DETECTS THE MAGNETIC CLUTCH IS ON AND THE A/C AMPLIFIER IS OPERATING AND OPENS DIRECTION TO AVOID LOWERING THE ENGINE RPM DURING A/C OPERATING.

WHEN ANY OF THE FOLLOWING SIGNALS ARE INPUT TO THE A/C AMPLIFIER, THE A/C AMPLIFIER OPERATES TO TURN OFF THE AIR CONDITIONING.

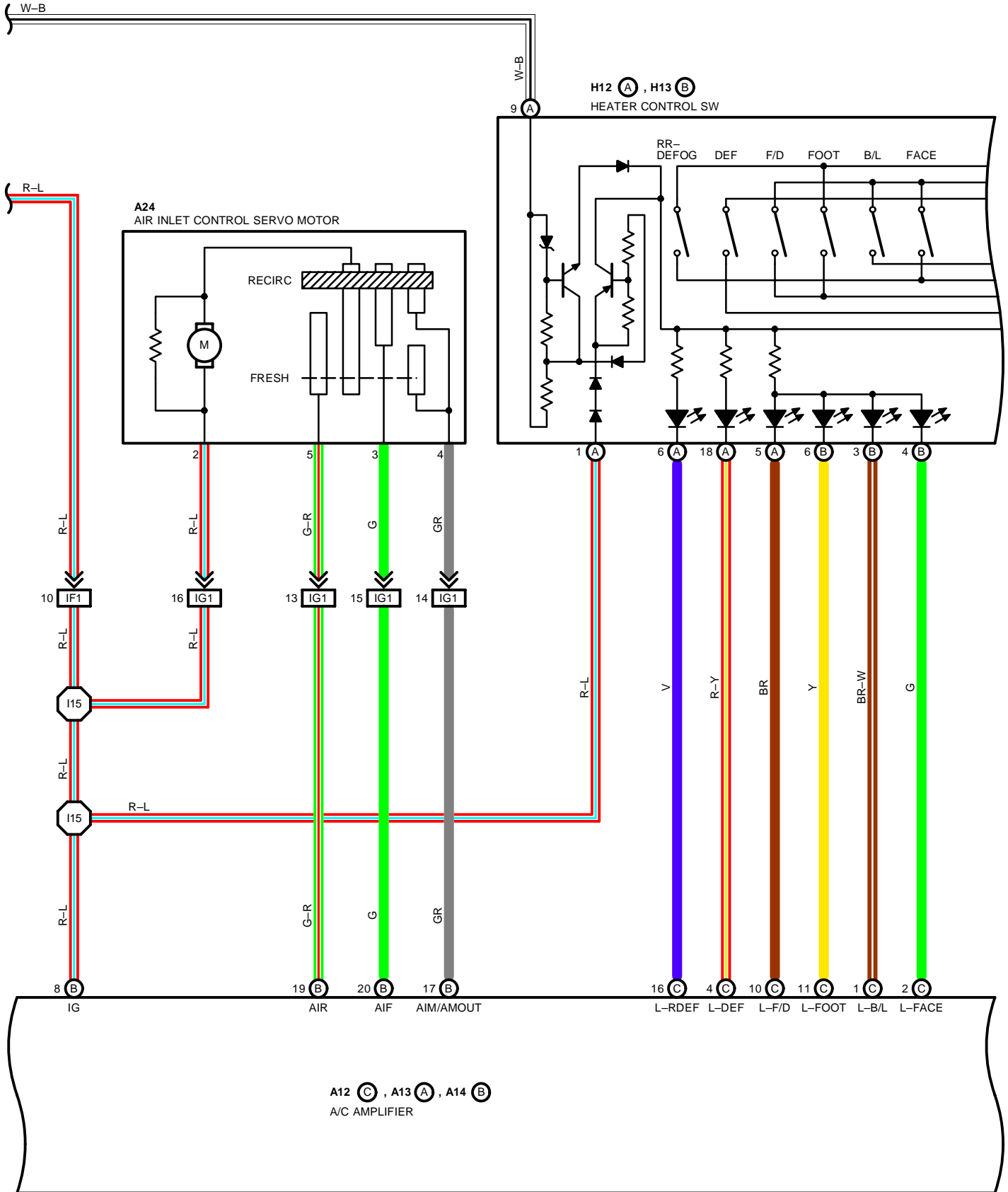
- \* ENGINE RPM SIGNAL IS HIGH.
- \* COOLANT TEMP. SIGNAL IS HIGH.
- \* A SIGNAL THAT THE TEMPERATURE AT THE AIR OUTLET IS LOW.
- \* A SIGNAL THAT THERE IS A LARGE DIFFERENCE BETWEEN ENGINE SPEED AND COMPRESSOR SPEED.
- \* A SIGNAL THAT THE REFRIGERANT PRESSURE IS ABNORMALLY HIGH OR LOW.

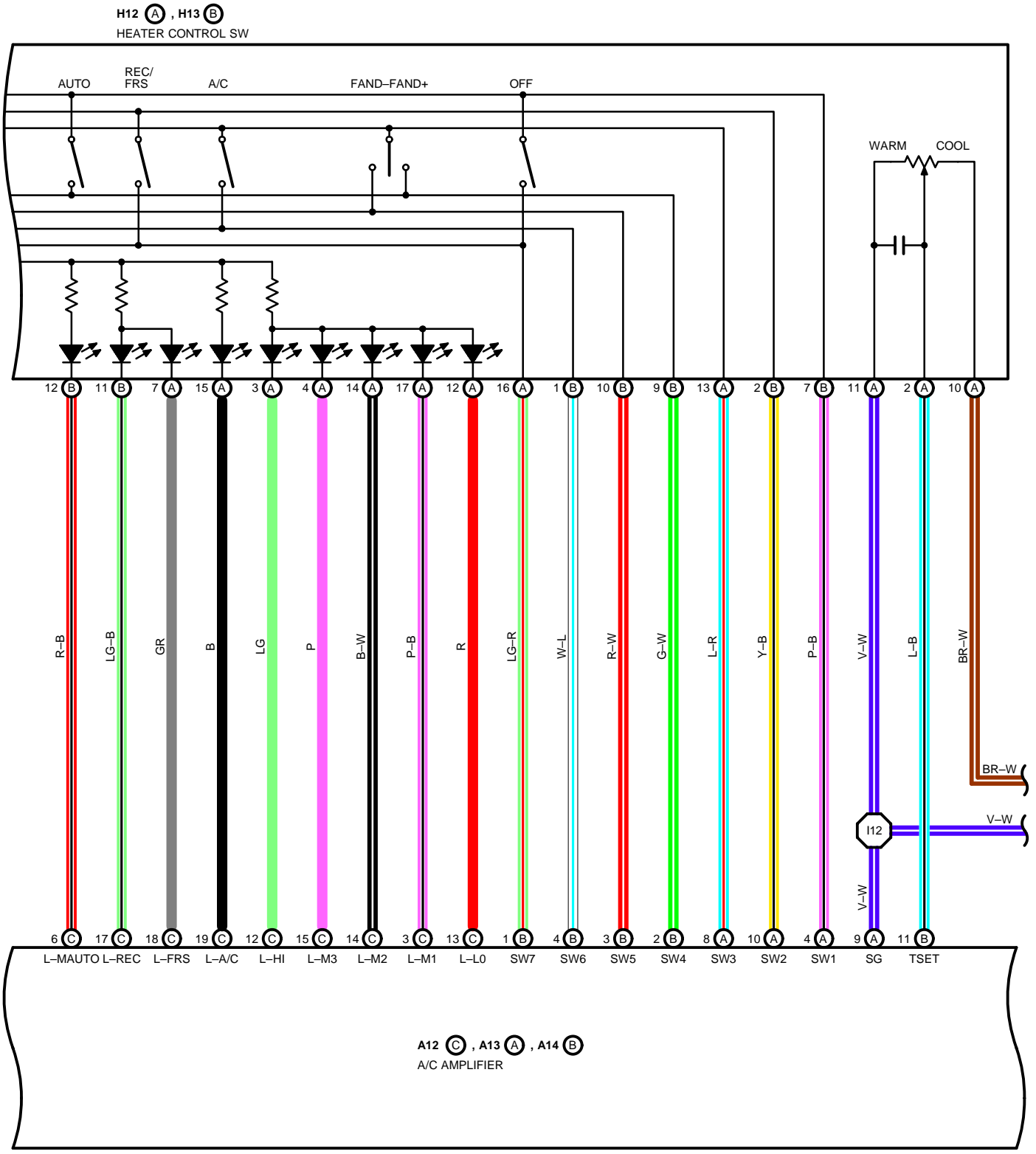




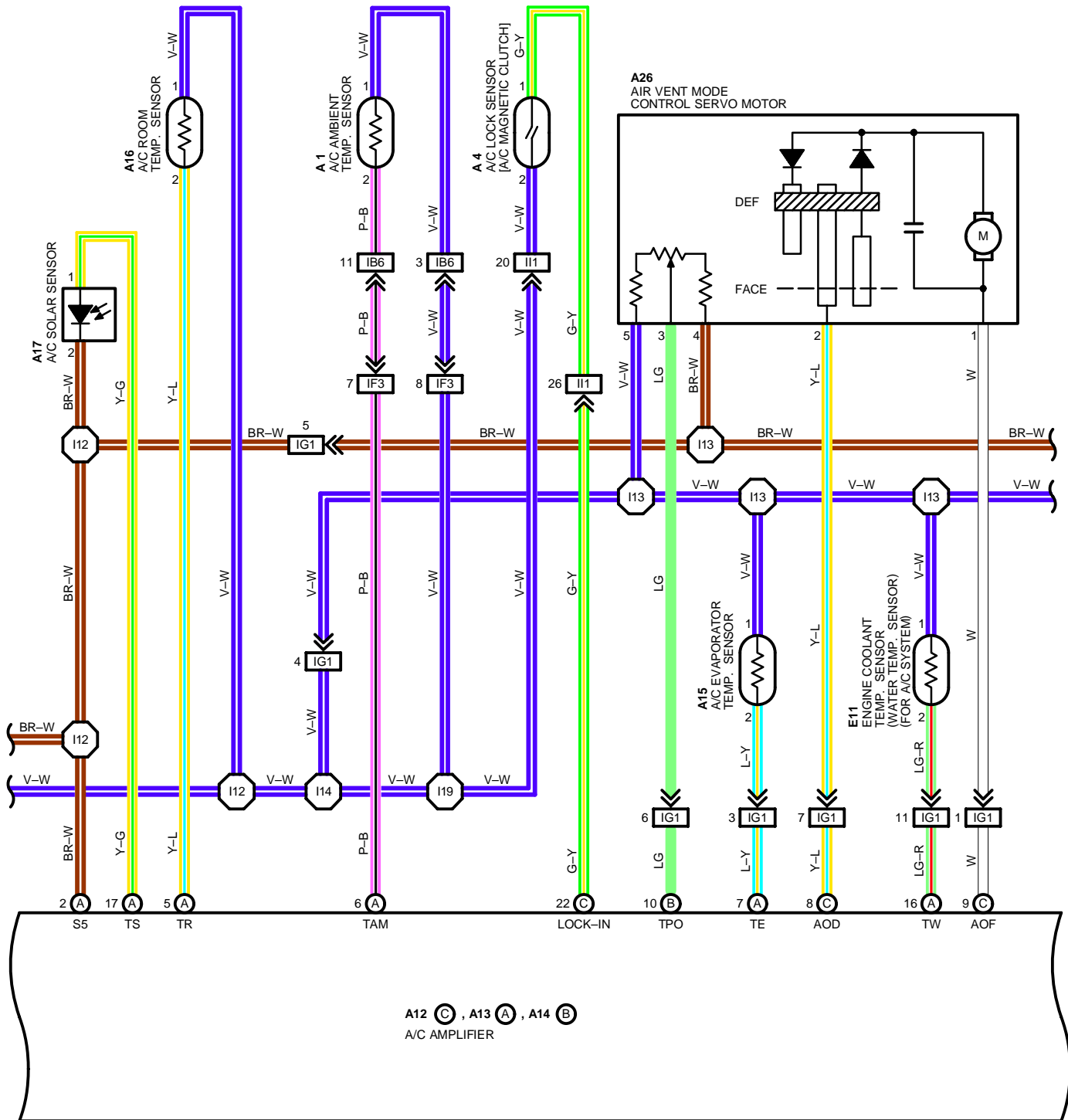


# RADIATOR FAN AND AUTOMATIC AIR CONDITIONING





# RADIATOR FAN AND AUTOMATIC AIR CONDITIONING





# RADIATOR FAN AND AUTOMATIC AIR CONDITIONING

## SERVICE HINTS

### A 4 A/C MAGNETIC CLUTCH

4 – GROUND: APPROX. 3.7

### A 3(A) A/C DUAL PRESSURE SW [A/C TRIPLE PRESSURE SW] (2JZ–GTE)

(A) 1–(A) 4 : OPEN ABOVE APPROX. 225 KPA (33 PSI, 2.3 KG/CM<sup>2</sup>) OR 3140 KPA (458 PSI, 32 KG/CM<sup>2</sup>)

### A 3(B) A/C DUAL PRESSURE SW (2JZ–GE)

(B) 1–(B) 2 : OPEN ABOVE APPROX. 225 KPA (33 PSI, 2.3 KG/CM<sup>2</sup>) OR 3140 KPA (458 PSI, 32 KG/CM<sup>2</sup>)

### A12(C), A13(A), A14(B) A/C AMPLIFIER

+B – GROUND: ALWAYS APPROX. 10–14 VOLTS

IG – GROUND: APPROX. 10–14 VOLTS WITH IGNITION SW AT **ON** POSITION

HR – GROUND: APPROX. 10–14 VOLTS WITH IGNITION SW AT **ON** POSITION AND DO NOT TURN THE BLOWER MOTOR BELOW 1 VOLTS WITH IGNITION SW AT **ON** POSITION AND TURN THE BLOWER MOTOR

ACC – GROUND: APPROX. 10–14 VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION

TW – GROUND: 10–14 VOLTS AT START THE ENGINE AND MAX. COLD POSITION OF A/C TEMP. CONTROL SW BELOW 1 VOLTS AT START THE ENGINE AND MAX. WARM POSITION OF A/C TEMP. CONTROL SW

MGC – GROUND: BELOW 1 VOLTS AT START THE ENGINE, PUSH THE A/C AUTO SW AND A/C SW **ON** POSITION 10–14 VOLTS AT START THE ENGINE, PUSH THE A/C AUTO SW AND A/C SW **OFF** POSITION

BLW – GROUND: 1.0–3.0 VOLTS WITH THE IGNITION SW ON AND TURN THE BLOWER MOTOR

S5 – GROUND: 4–6 VOLTS WITH THE IGNITION SW ON

SG – GROUND: ALWAYS CONTINUOUS

AMH – AMC 13–19 VOLTS WITH IGNITION SW OFF

AOF – GROUND: APPROX. 12 VOLTS WITH FACE SW ON

AOD – GROUND: APPROX. 12 VOLTS WITH DEF SW ON

GND – GROUND: ALWAYS CONTINUOUS

## ○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 1	24 (2JZ–GTE)	A17	28	H12	A 29
	26 (2JZ–GE)	A24	28	H13	B 29
A 2	24	A25	28	I 4	27
A 3	A 24 (2JZ–GTE)	A26	28	J 1	29
	B 26 (2JZ–GE)	B 3	28	R 1	25
A 4	24 (2JZ–GTE)	B 4	A 28	R 2	25
	26 (2JZ–GE)	B 5	B 28	R 3	25
A12	C 28	C10	A 28	T 6	29
A13	A 28	C12	B 28	V10	25 (2JZ–GTE)
A14	B 28	E 5	24		27 (2JZ–GE)
A15	28	E10	29		
A16	28	E11	29		

## ○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)
4	23	R/B NO. 4 (LEFT KICK PANEL)

## ○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1K		

## □ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (2JZ–GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
	34 (2JZ–GE)	
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB4	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
IB6		
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
IG1	38	INSTRUMENT PANEL WIRE AND COWL NO. 3 WIRE (BEHIND HEATER CONTROL SW)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IK1	38	COWL NO. 4 WIRE AND COWL WIRE (RIGHT KICK PANEL)

**▽ : GROUND POINTS**

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
	34 (2JZ-GE)	
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
	34 (2JZ-GE)	
IF	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL
IH		

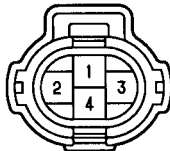
**○ : SPLICE POINTS**

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32	ENGINE ROOM MAIN WIRE	E26	34	ENGINE WIRE
E 3			I12	38	INSTRUMENT PANEL WIRE
E 5			I13	38	COWL NO. 3 WIRE
E 9			I14	38	INSTRUMENT PANEL WIRE
E11			32		
E20	34	ENGINE ROOM MAIN WIRE	I19		

A 1 BLACK



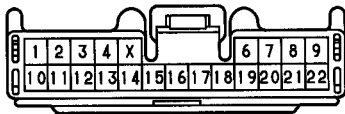
A 2 BLACK (2JZ-GTE) A 3 (A) BLACK (2JZ-GE) A 3 (B) GRAY



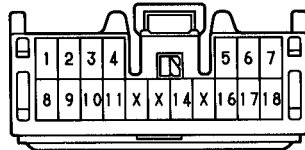
A 4 GRAY



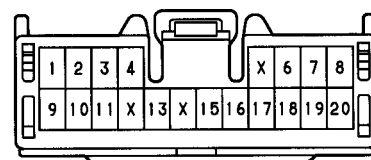
A12 (C) ORANGE



A13 (A) ORANGE



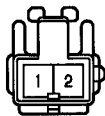
A14 (B) ORANGE



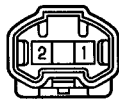
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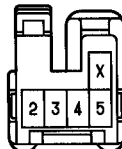
A16 BLACK



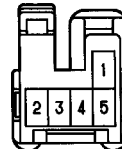
A17 GRAY



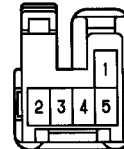
A24



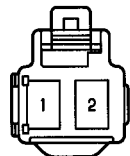
A25



A26



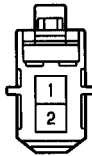
B 3 BLACK



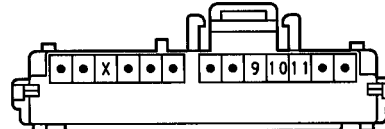
B 4 (A) BLACK



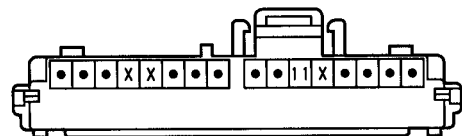
B 5 (B) BLACK



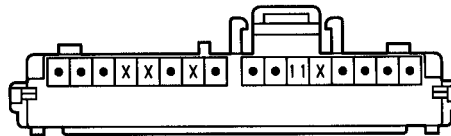
C10 (A) BLUE



(2JZ-GTE) C12 (B)



(2JZ-GE) C12 (B)



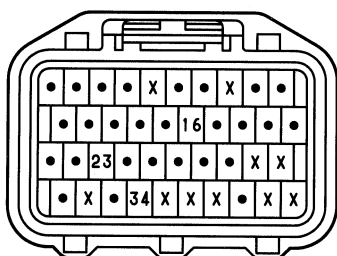


# RADIATOR FAN AND AUTOMATIC AIR CONDITIONING

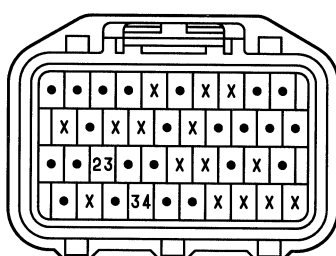
E 5 DARK GRAY



(2JZ-GTE) E10 DARK GRAY



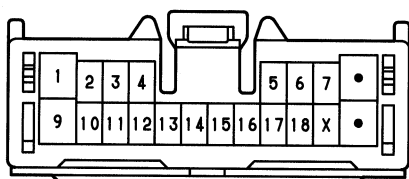
(2JZ-GE) E10 DARK GRAY



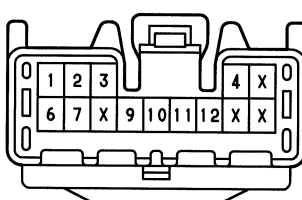
E11



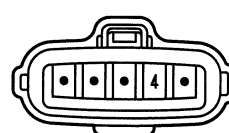
H12 (A) ORANGE



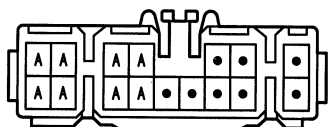
H13 (B) ORANGE



I 4 BLACK



J 1



(HINT:SEE PAGE 7)

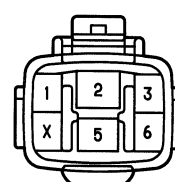
R 1 BLACK



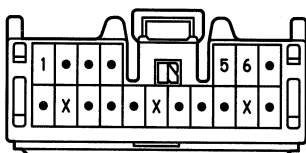
R 2 BLACK



R 3 GRAY



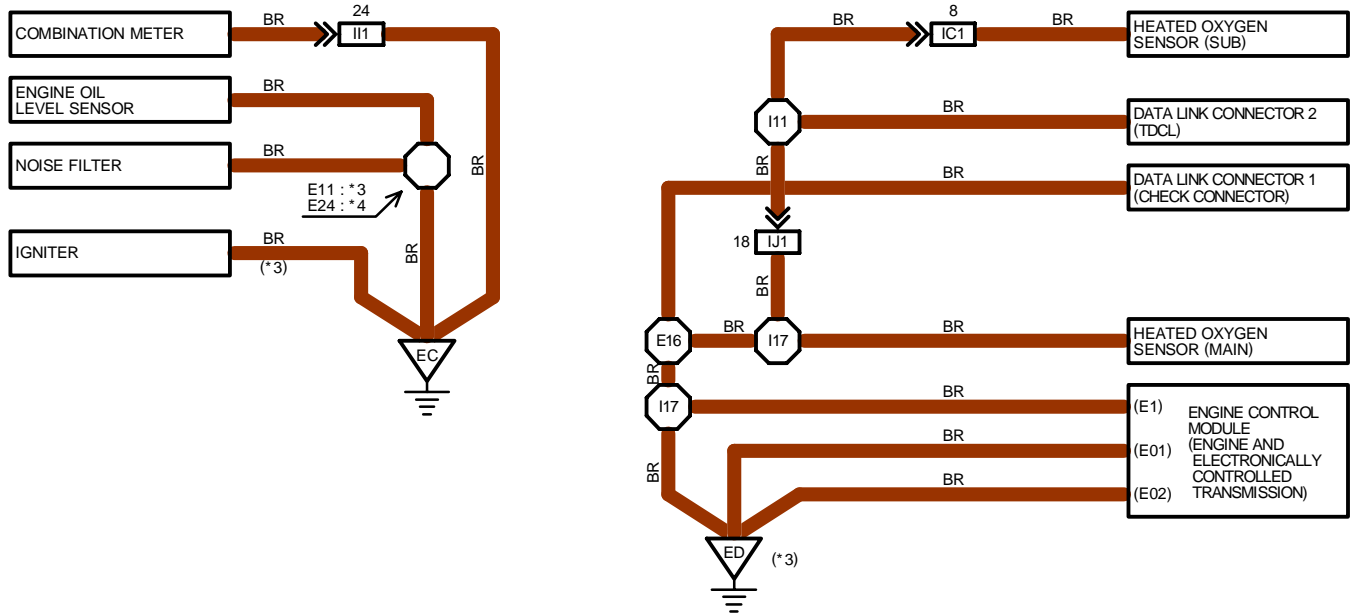
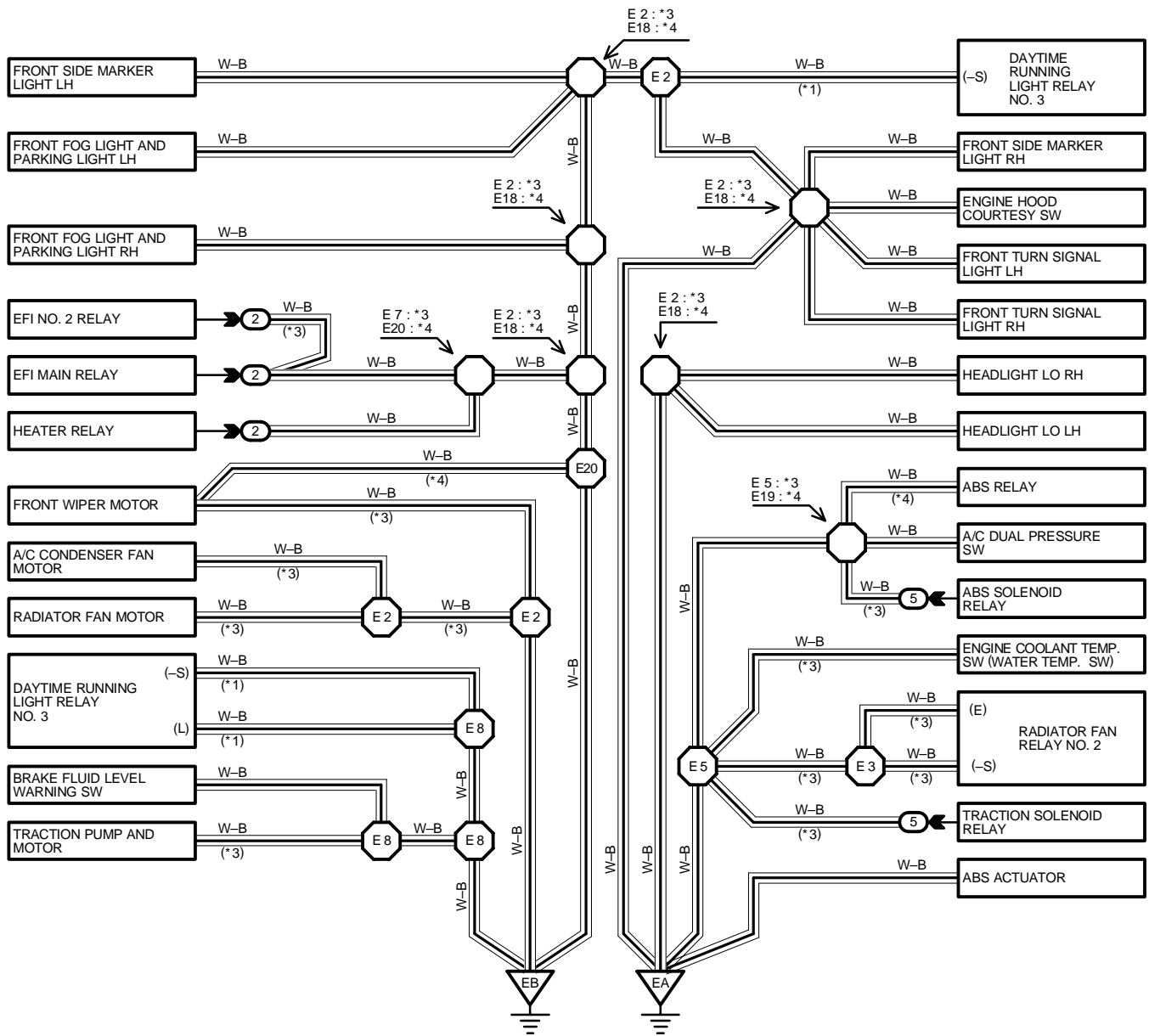
T 6

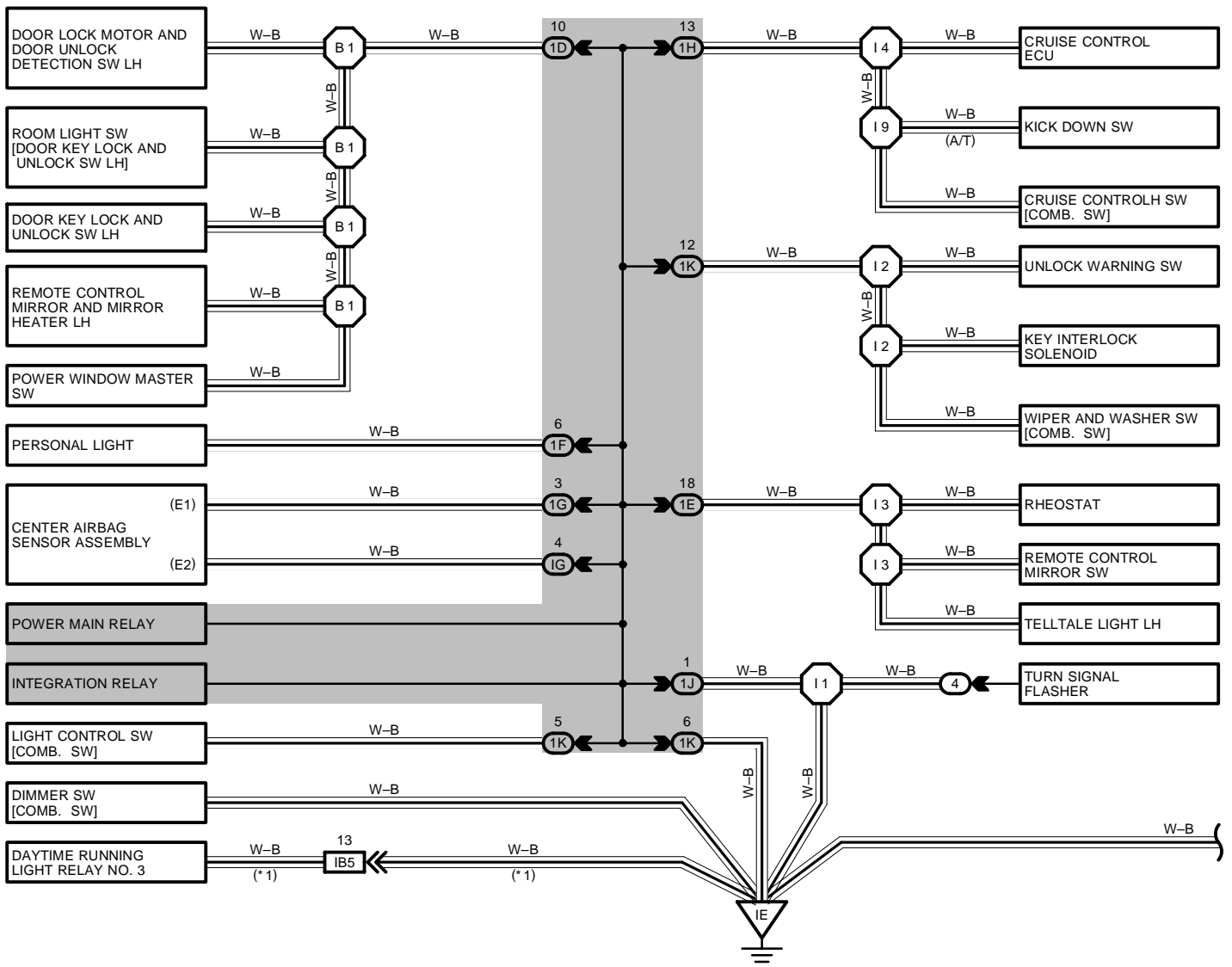
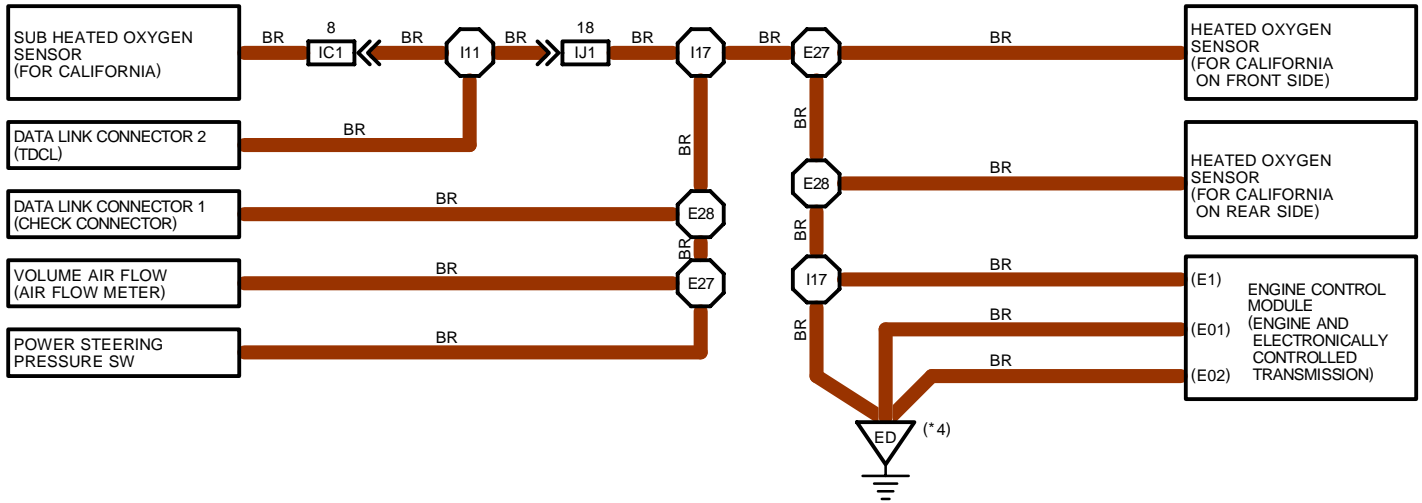


V10 BLACK

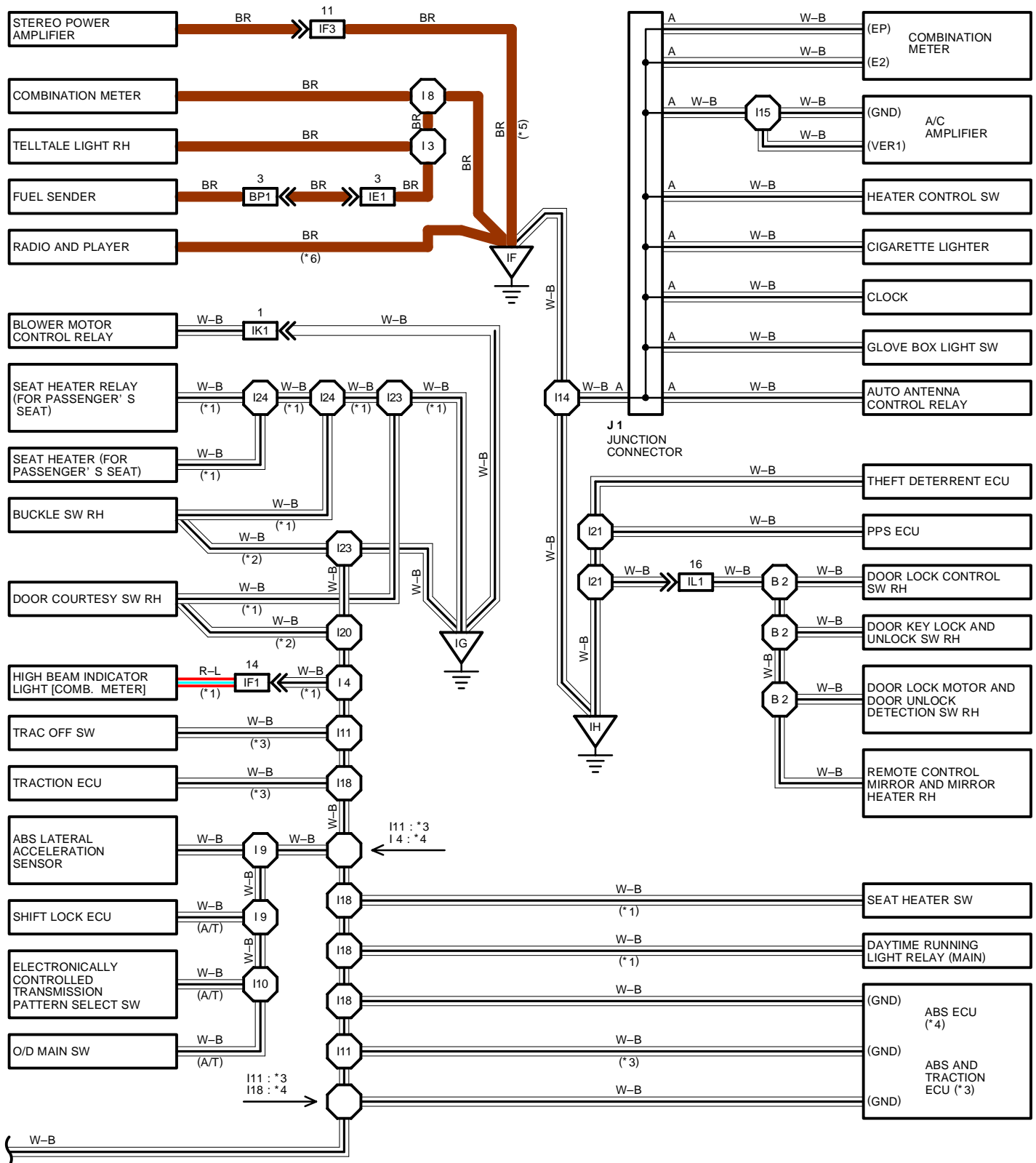


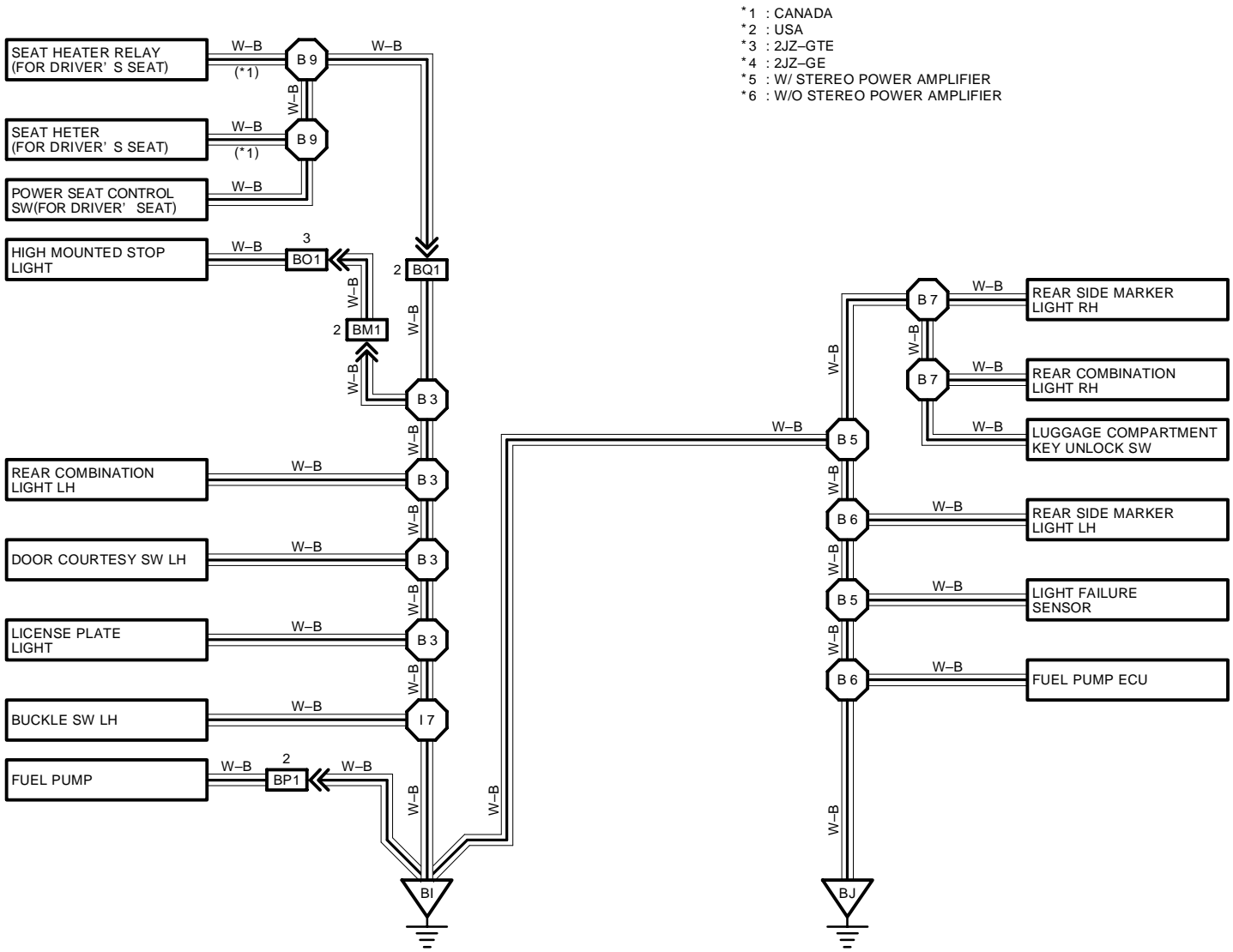
# GROUND POINT





# GROUND POINT





# GROUND POINT

## : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
J 1	29				

## : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)
4	23	R/B NO. 4 (LEFT KICK PANEL)
5	23	R/B NO. 5 (ENGINE COMPARTMENT RIGHT)

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	20	FRONT DOOR LH WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1F	20	ROOF WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1G	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H		
1J		
1K		

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB5	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
IC1	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IK1	38	COWL NO. 4 WIRE AND COWL WIRE (RIGHT KICK PANEL)
IL1	38	FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE
BM1	40	BACK DOOR NO. 1 WIRE AND FLOOR NO. 2 WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
BO1	40	BACK DOOR NO. 2 WIRE AND BACK DOOR NO. 1 WIRE
BP1	40	FUEL GAUGE WIRE AND FLOOR NO. 2 WIRE (LUGGAGE ROOM FRONT LH)
BQ1	42	FLOOR NO. 2 WIRE AND SEAT WIRE (UNDER THE FRONT LH SEAT)

## : GROUND POINTS

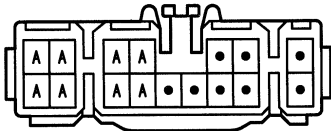
CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
	34 (2JZ-GE)	
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
	34 (2JZ-GE)	
EC	32 (2JZ-GTE)	FRONT SIDE OF INTAKE MANIFOLD
	34 (2JZ-GE)	
ED	32 (2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD
	34 (2JZ-GE)	
IE	36	LEFT KICK PANEL
IF		
IG	36	RIGHT KICK PANEL
IH		
BI	40	LEFT QUARTER PILLAR
BJ	40	LOWER BACK PANEL CENTER



**: SPLICE POINTS**

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS		
E 2	32	ENGINE ROOM MAIN WIRE	I 9	38	COWL WIRE		
E 3			I 10				
E 5			I 11				
E 7			I 14				
E 8			I 15				
E11	32	ENGINE WIRE	I16	38	CONSOLE BOX WIRE		
E16			I17	38	ENGINE WIRE		
E18	34	ENGINE ROOM MAIN WIRE	I18	38	COWL WIRE		
E19			I20	38	COWL WIRE		
E20			I21	38	INSTRUMENT PANEL WIRE		
E24			I23	38	COWL WIRE		
E27	I24	COWL WIRE					
E28	38	COWL WIRE	B 1	40	FRONT DOOR LH WIRE		
I 1			B 2	40	FRONT DOOR RH WIRE		
I 2			B 3	40	FLOOR NO. 2 WIRE		
I 3			B 5				
I 4			B 6				
I 7			B 7				
I 8			38	INSTRUMENT PANEL WIRE	B 9	42	SEAT WIRE

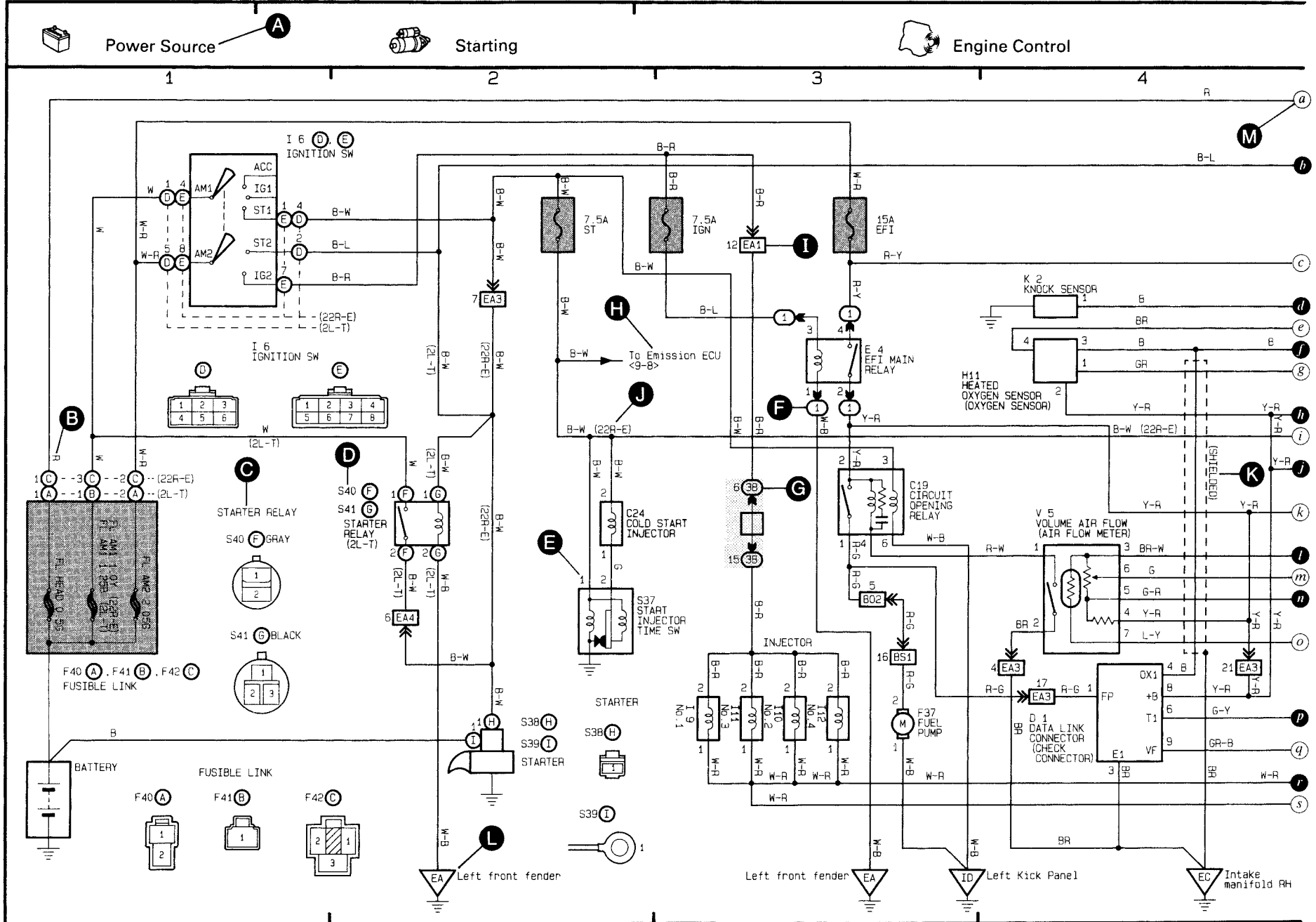
**J 1**



(HINT:SEE PAGE 7)

# HOW TO USE THIS MANUAL

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



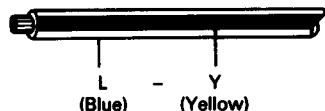


- A**: System Title
- B**: Indicates the wiring color.  
Wire colors are indicated by an alphabetical code.

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

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

Example: L - Y



- C**: Indicates the connector to be connected to a part (the numeral indicates the pin No.)
- D**: The position of the parts is the same as shown in the wiring diagram and wire routing.
- E**: 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**



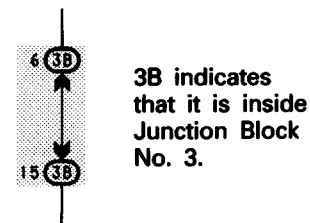
The numbering system for the overall wiring diagram is the same as above.

- F**: Indicates a Relay Block. No Shading is used and only the Relay Block No. is shown to distinguish it from the J/B.

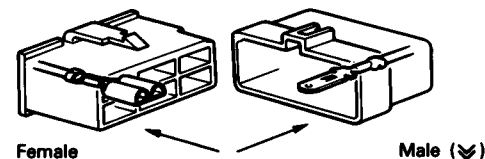
Example: **①** Indicates Relay Block No. 1.

- G**: Junction Block (The number in the circle is the J/B No. and connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts (different junction blocks are shaded differently for further clarification.).

Example:



- H**: Indicates related system.
- I**: Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (↘). Outside numerals are pin numbers.



- J**: ( ) is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.
- K**: Indicates a shielded cable.

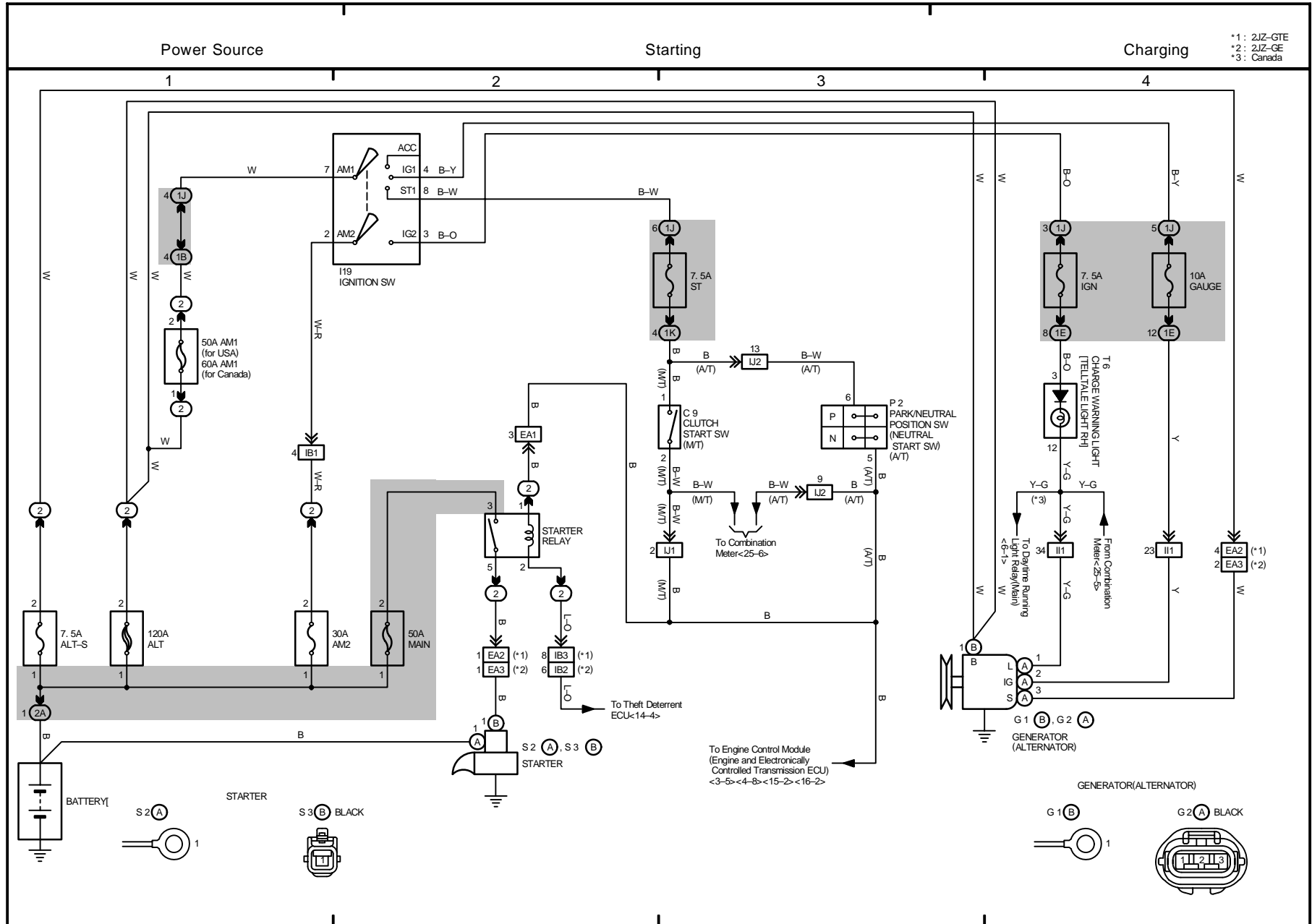


- L**: Indicates and located on ground point.
- M**: The same code occurring on the next page indicates that the wire harness is continuous.

## SYSTEM INDEX

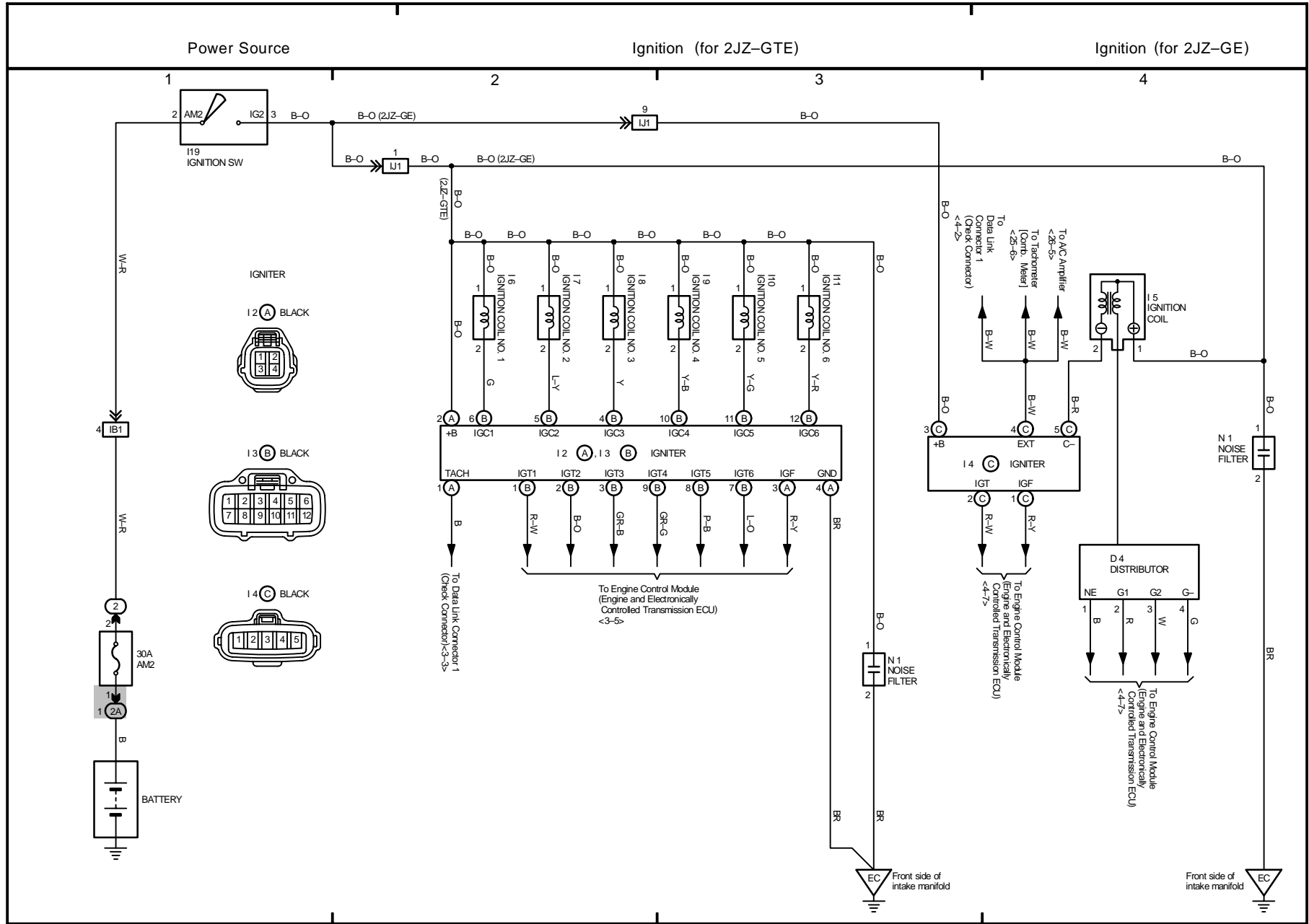
SYSTEMS	LOCATION	SYSTEMS	LOCATION	SYSTEMS	LOCATION
ABS (Anti-Lock Brake System)	18-3	Headlight	6-3 (for Canada) 5-3 (for USA)	Remote Control Mirror	11-4
ABS and Traction Control	19-3	Horn	9-4	Seat Heater (for Canada)	21-4
Auto Antenna	24-4	Ignition	2-4 (for 2JZ-GE) 2-2 (for 2JZ-GTE)	Shift Lock	21-2
Back-Up Light	16-8 (for 2JZ-GE) 15-8 (for 2JZ-GTE)	Illumination	8-3	SRS (Supplemental Restraint System)	13-3
Charging	1-4	Interior Light	10-3	Starting	1-2
Cigarette Lighter	21-1	Light Auto Turn Off	11-2	Stop Light	7-4
Clock	20-3	Power Seat	12-4	Taillight	7-2
Combination Meter	25-3	Power Source	1-26-1	Theft Deterrent and Door Lock Control	14-3
Cruise Control	17-3	Power Window	12-2	Turn Signal and Hazard Warning Light	9-2
Electric Tension Reducer	20-4	PPS (Progressive Power Steering)	20-3	Unlock and Seat Belt Warning	10-2
Electronically Controlled Transmission and A/T Indicator	16-3 (for 2JZ-GE) 15-3 (for 2JZ-GTE)	Radiator Fan and Automatic Air Conditioning	26-3		
Engine Control	4-3 (for 2JZ-GE) 3-3 (for 2JZ-GTE)	Radio and Player	23-3 (w/ Stereo Power Amplifier) 24-2 (w/o Stereo Power Amplifier)		
Fog Light	5-4	Remote Window Defogger and Mirror Heater	20-2		
Front Wiper and Washer	22-4	Rear Wiper and Washer	22-2		

# 1 SUPRA ELECTRICAL WIRING DIAGRAM

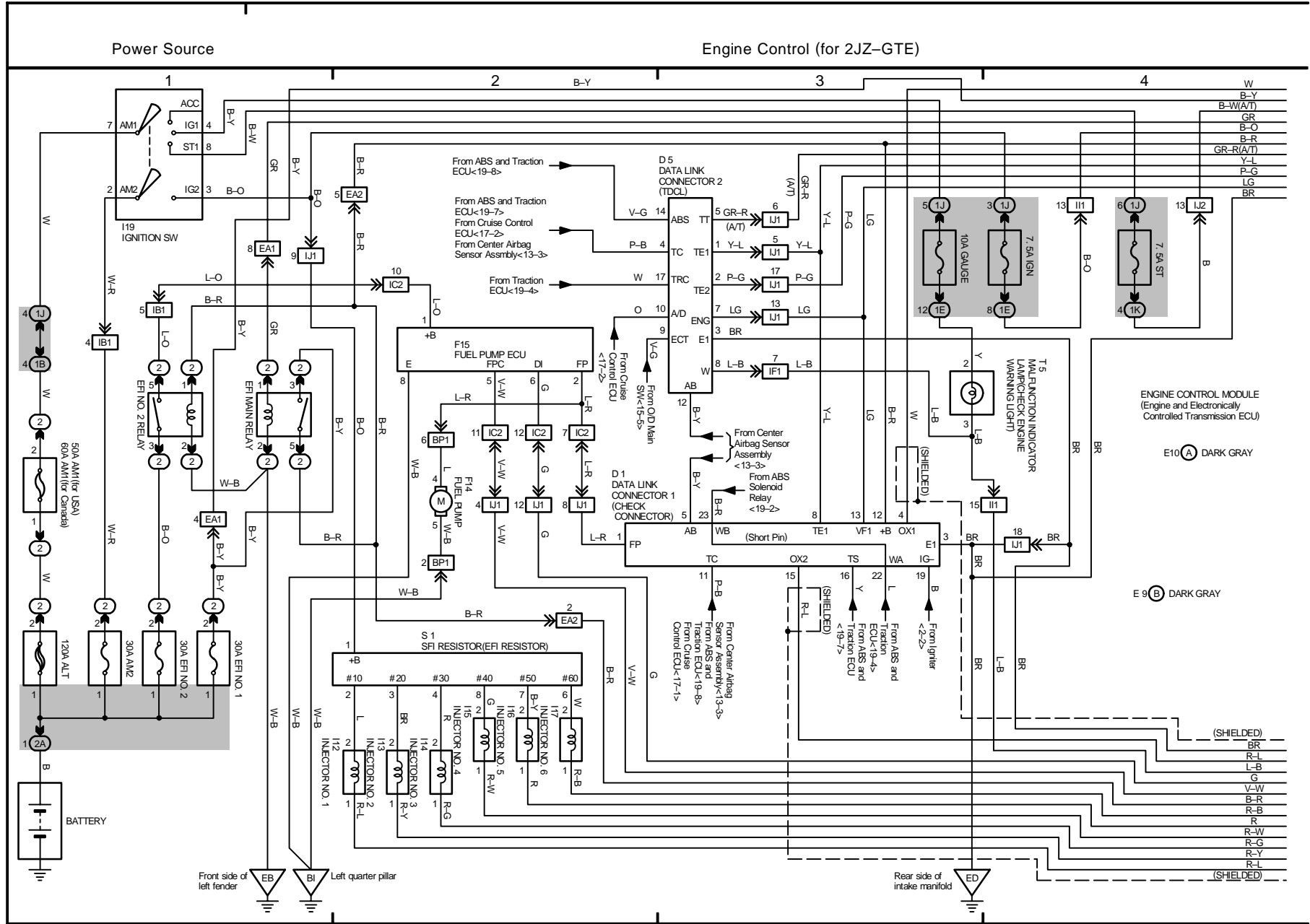


# 2 SUPRA

# OVERALL ELECTRICAL WIRING DIAGRAM



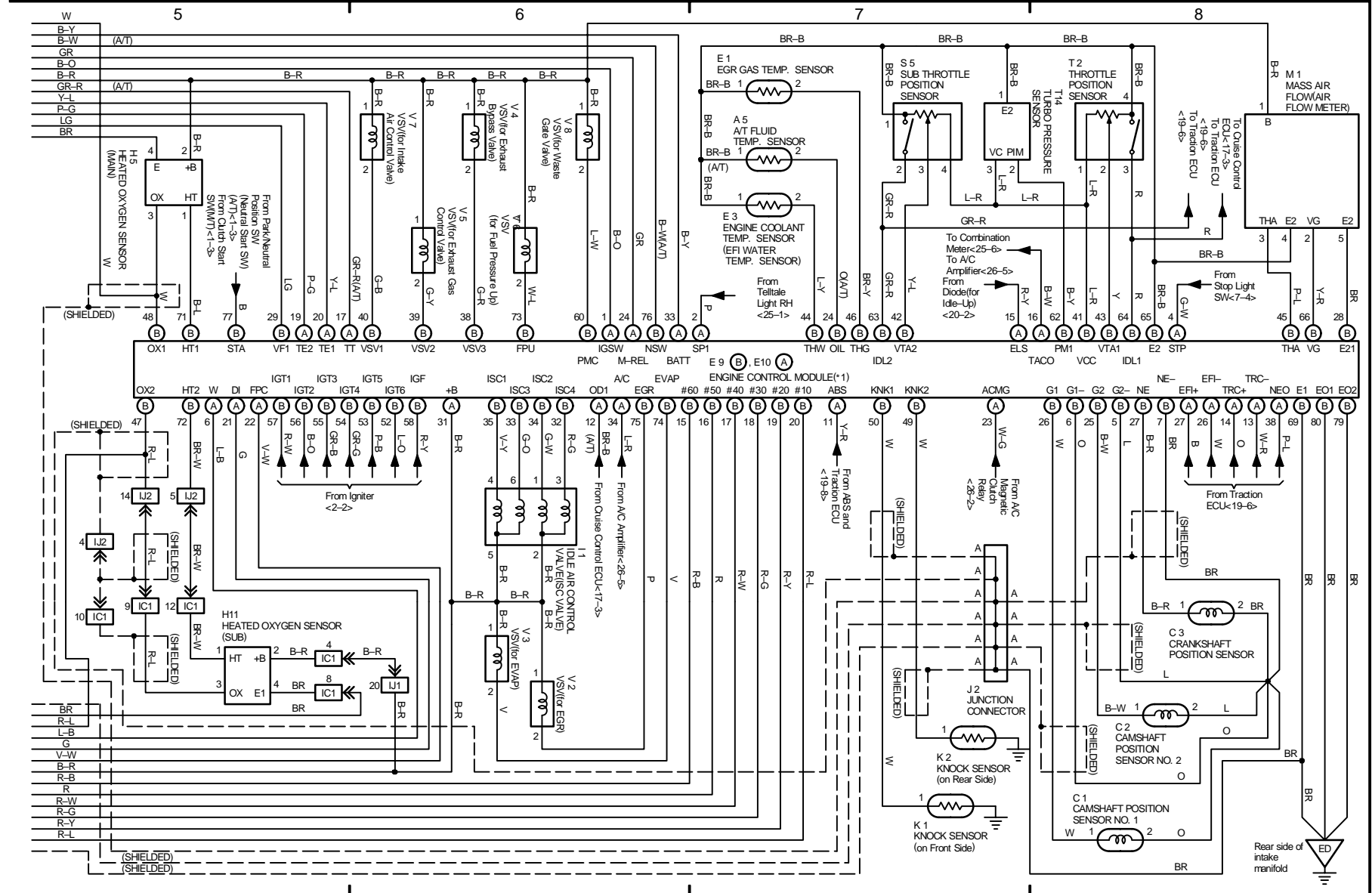


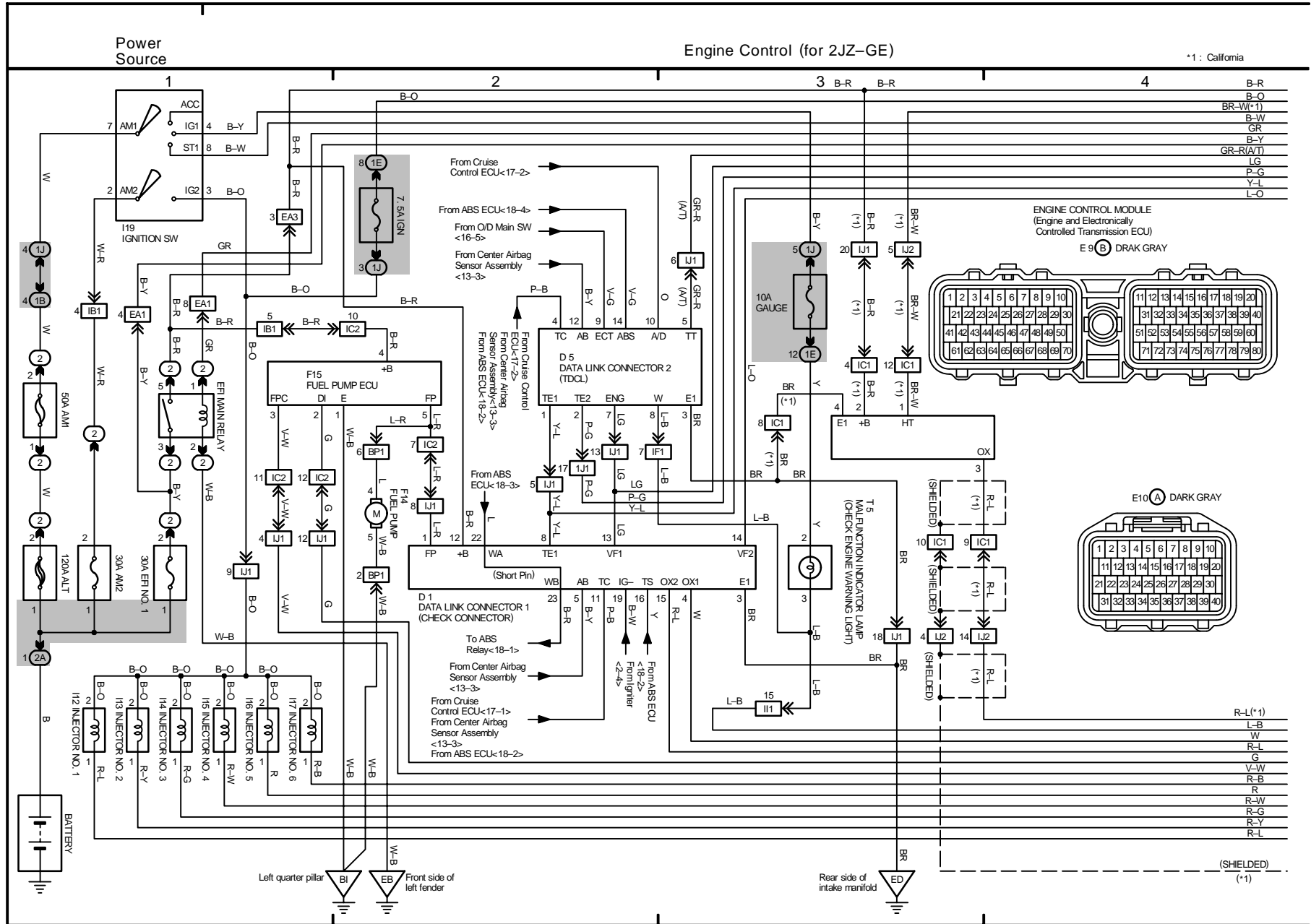


### 3 SUPRA (Cont' d)

#### Engine Control (for 2JZ-GTE)

\*1: Engine and Electronically Controlled Transmission ECU







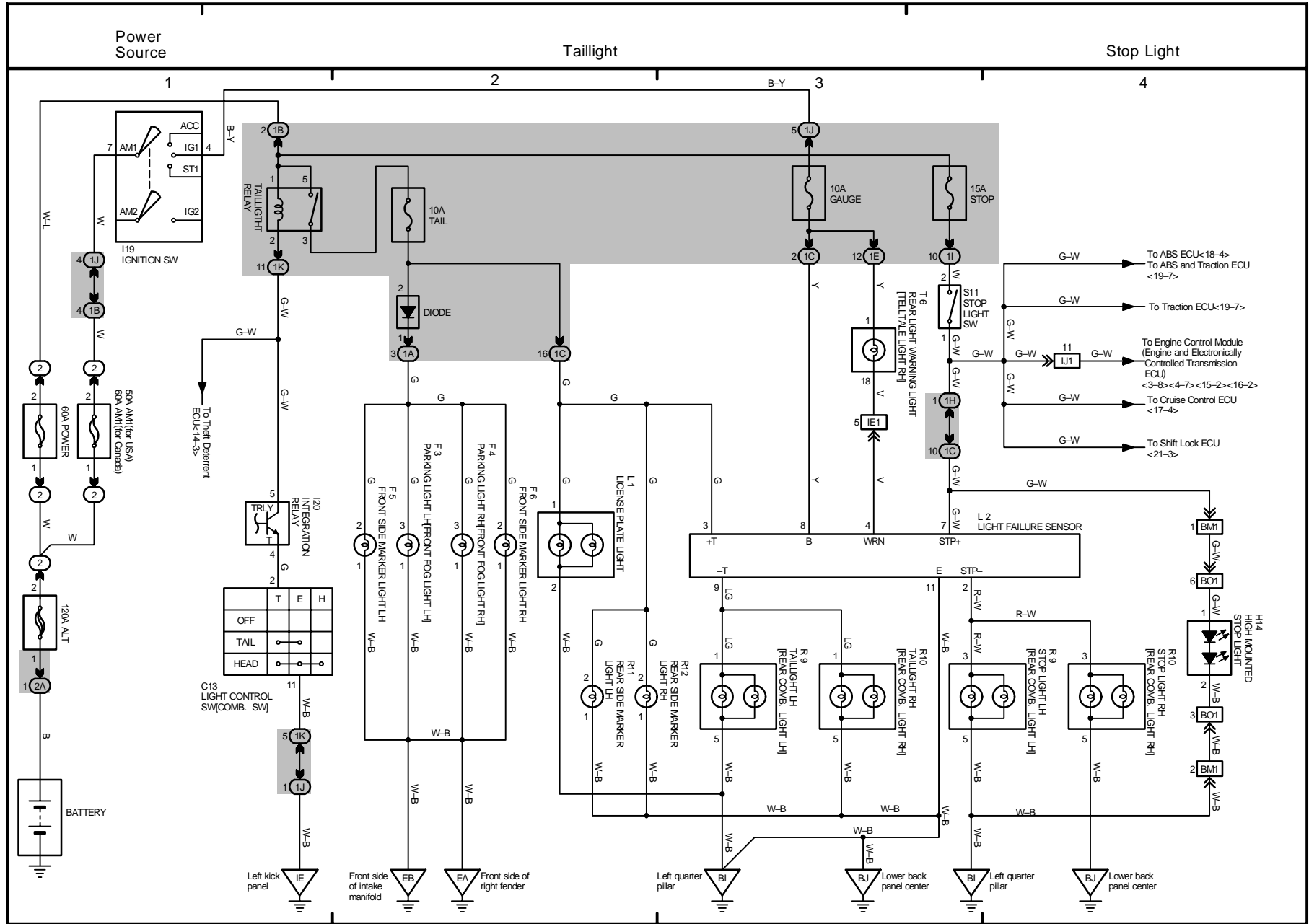






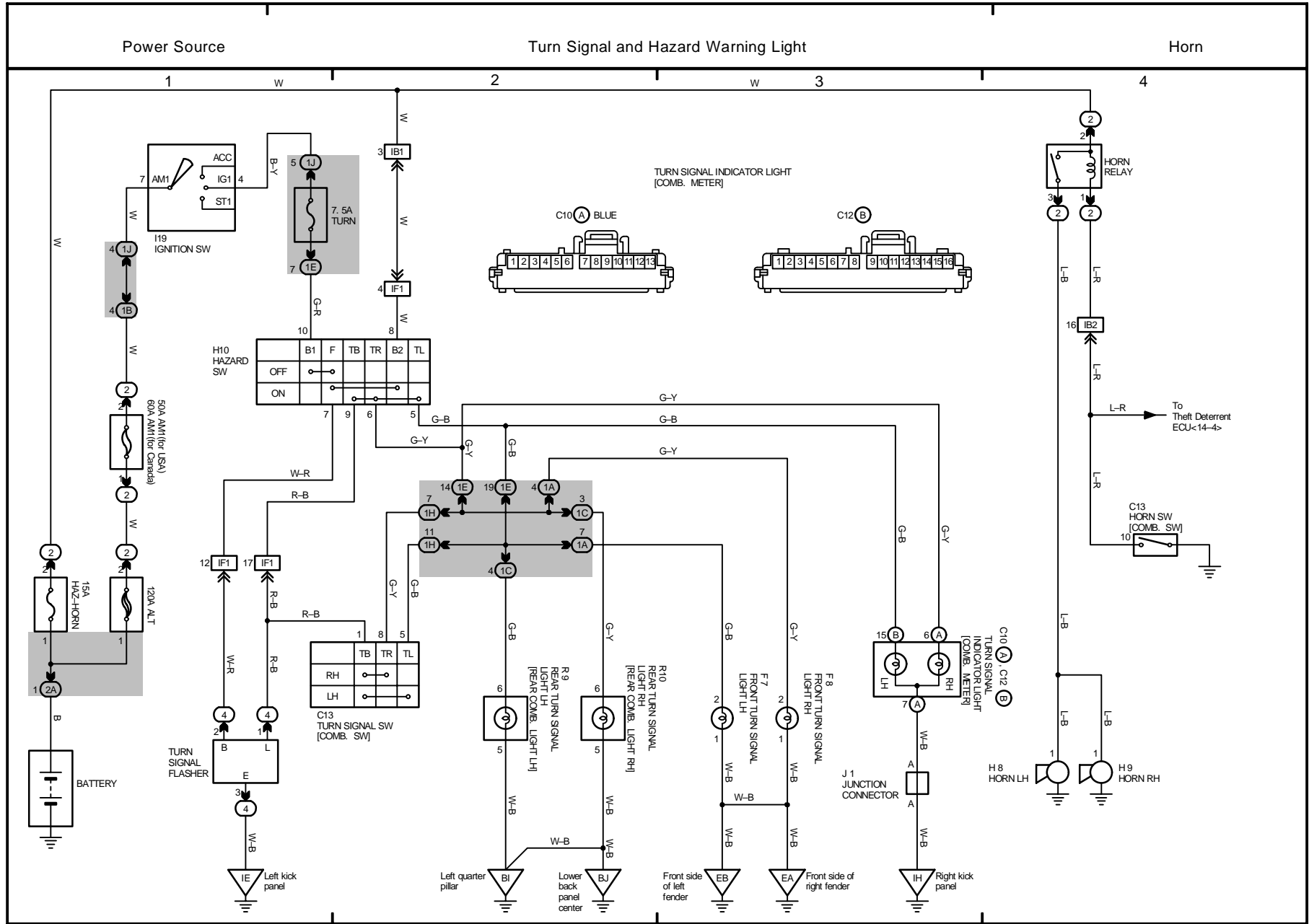
# 7 SUPRA

# OVERALL ELECTRICAL WIRING DIAGRAM

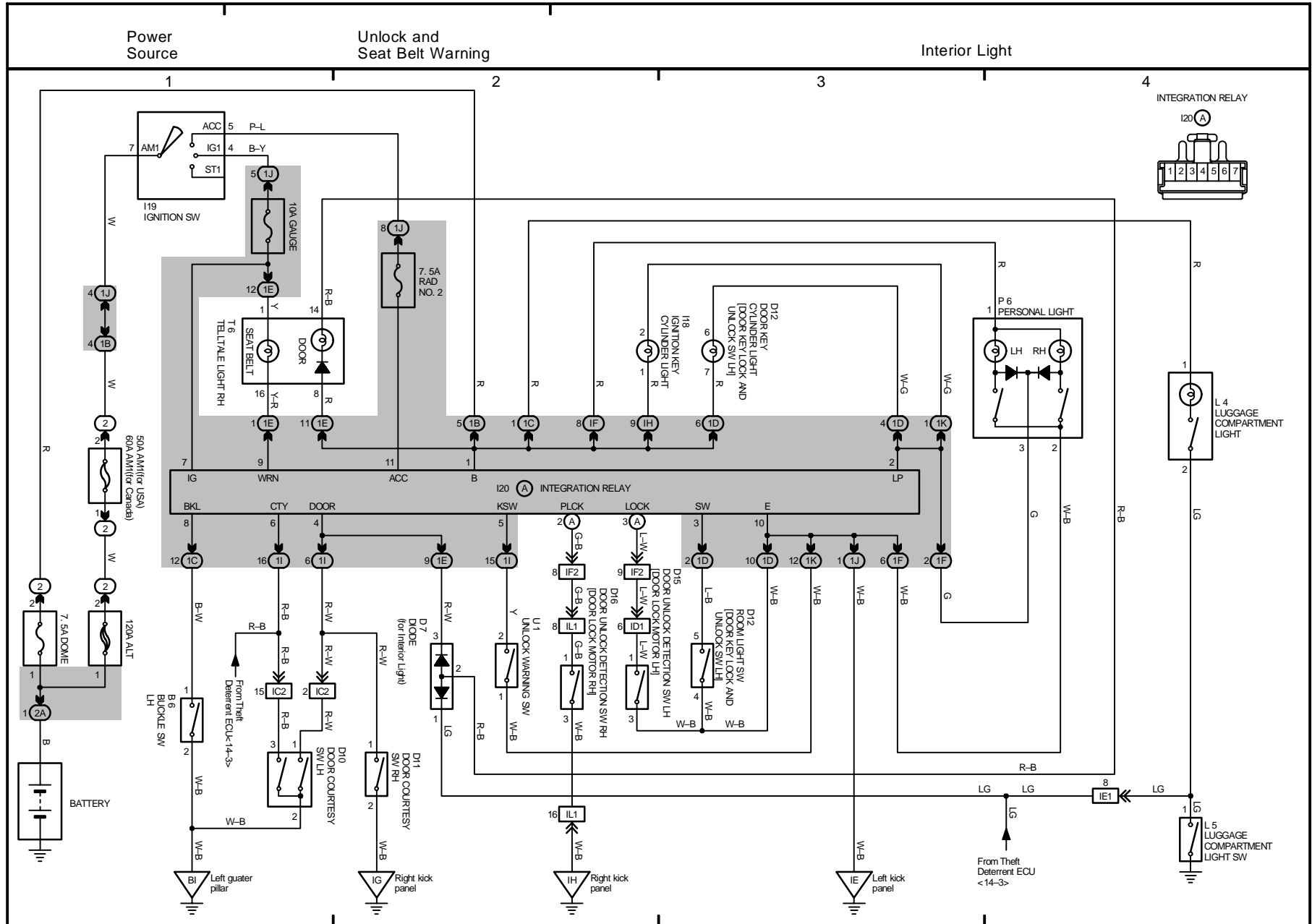




# 9 SUPRA



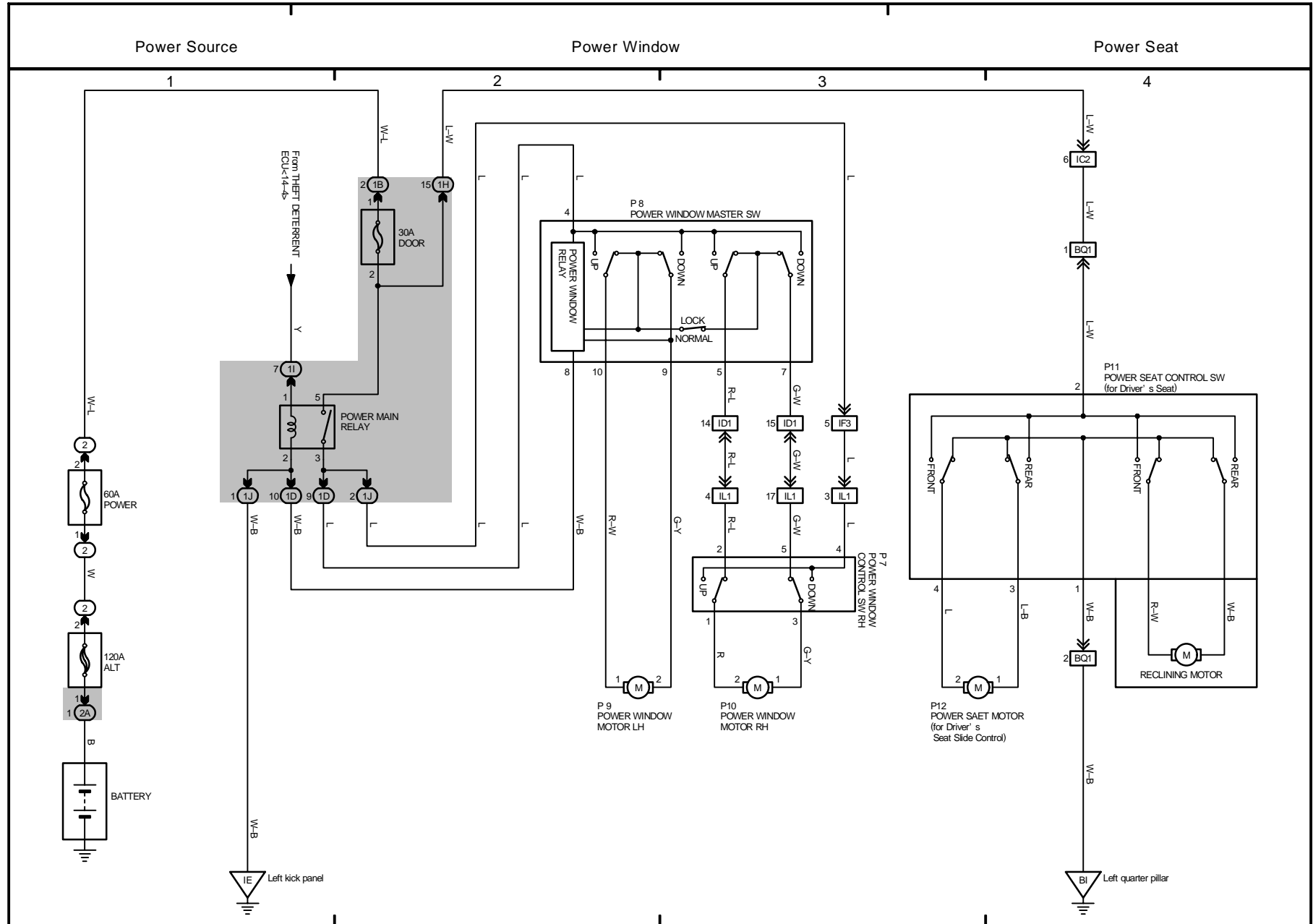
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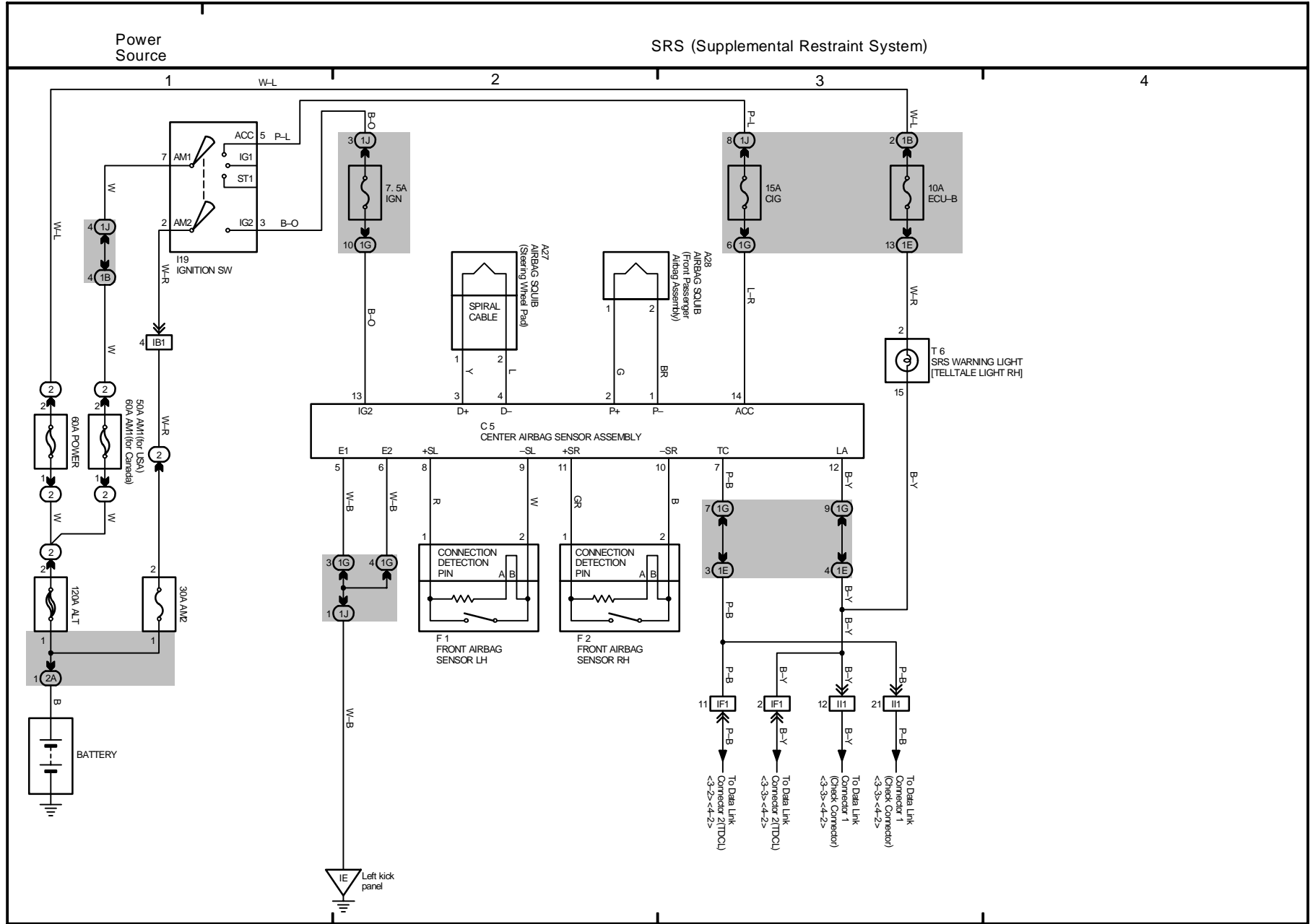


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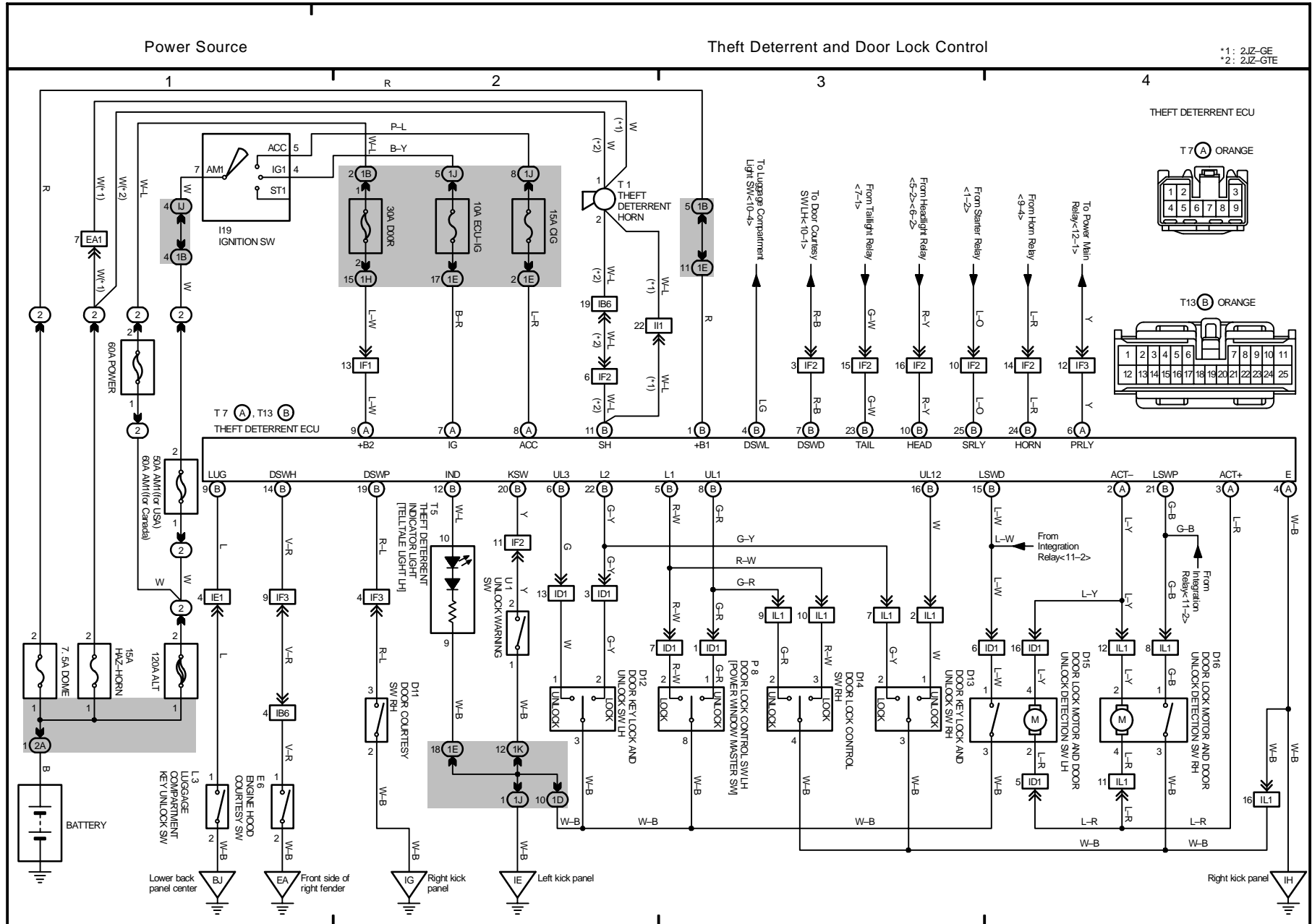


# 13 SUPRA

# OVERALL ELECTRICAL WIRING DIAGRAM



# 14 SUPRA

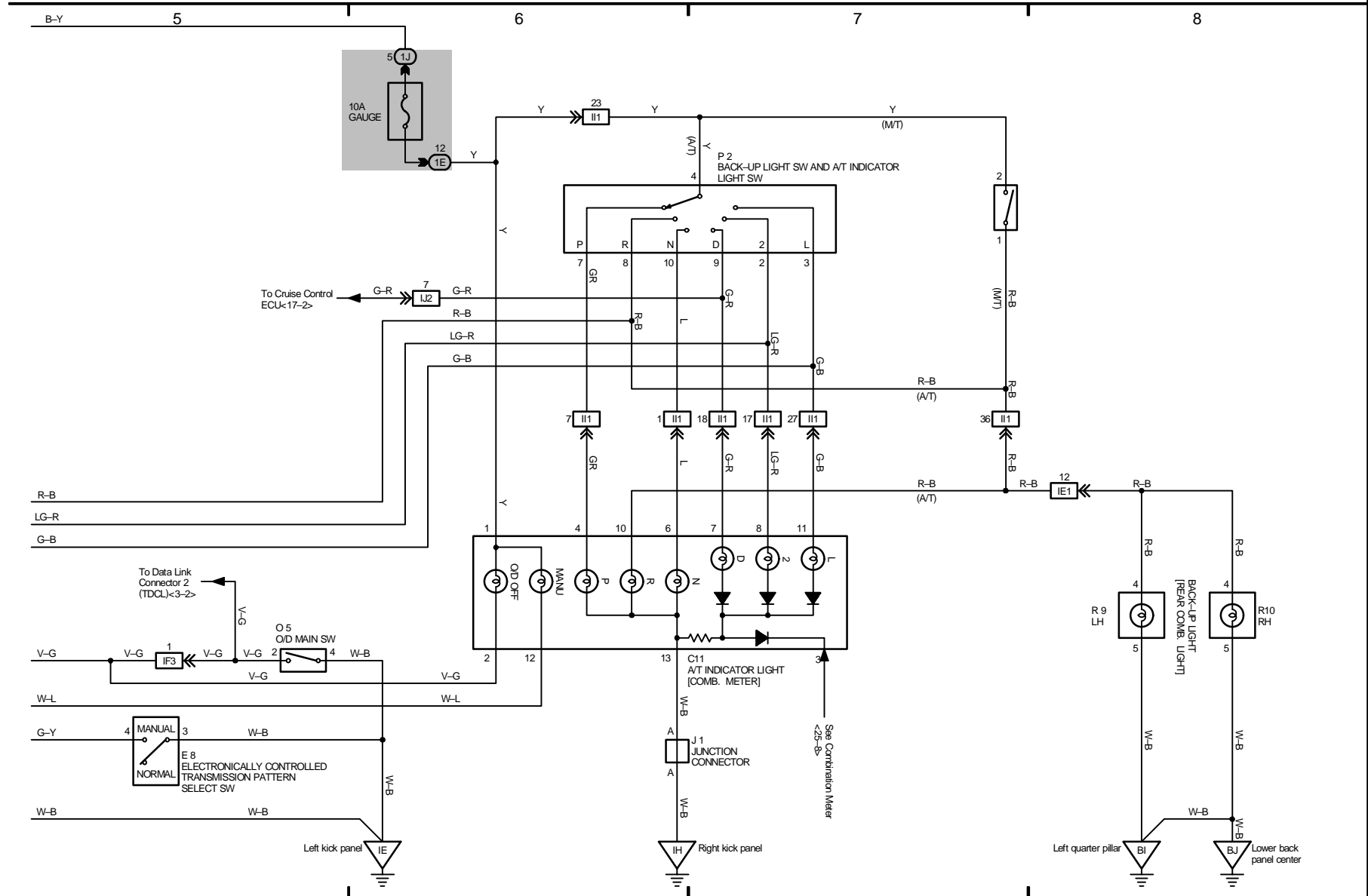




15 SUPRA (Cont' d)

Electronically Controlled Transmission and A/T Indicator  
(for 2JZ-GTE)

Back-Up Light (for 2JZ-GTE)

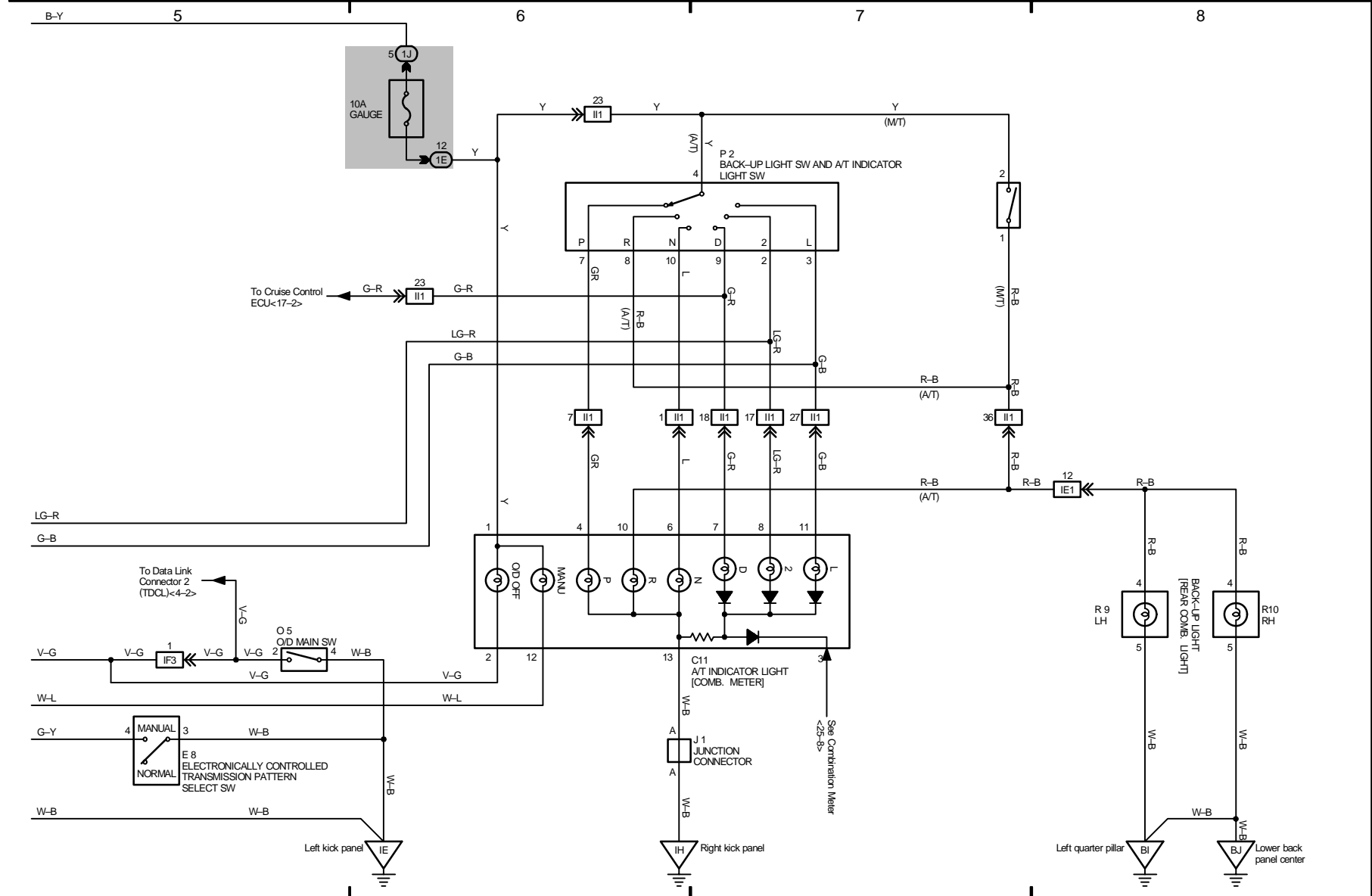




# 16 SUPRA (Cont' d)

## Electronically Controlled Transmission and A/T Indicator (for 2JZ-GE)

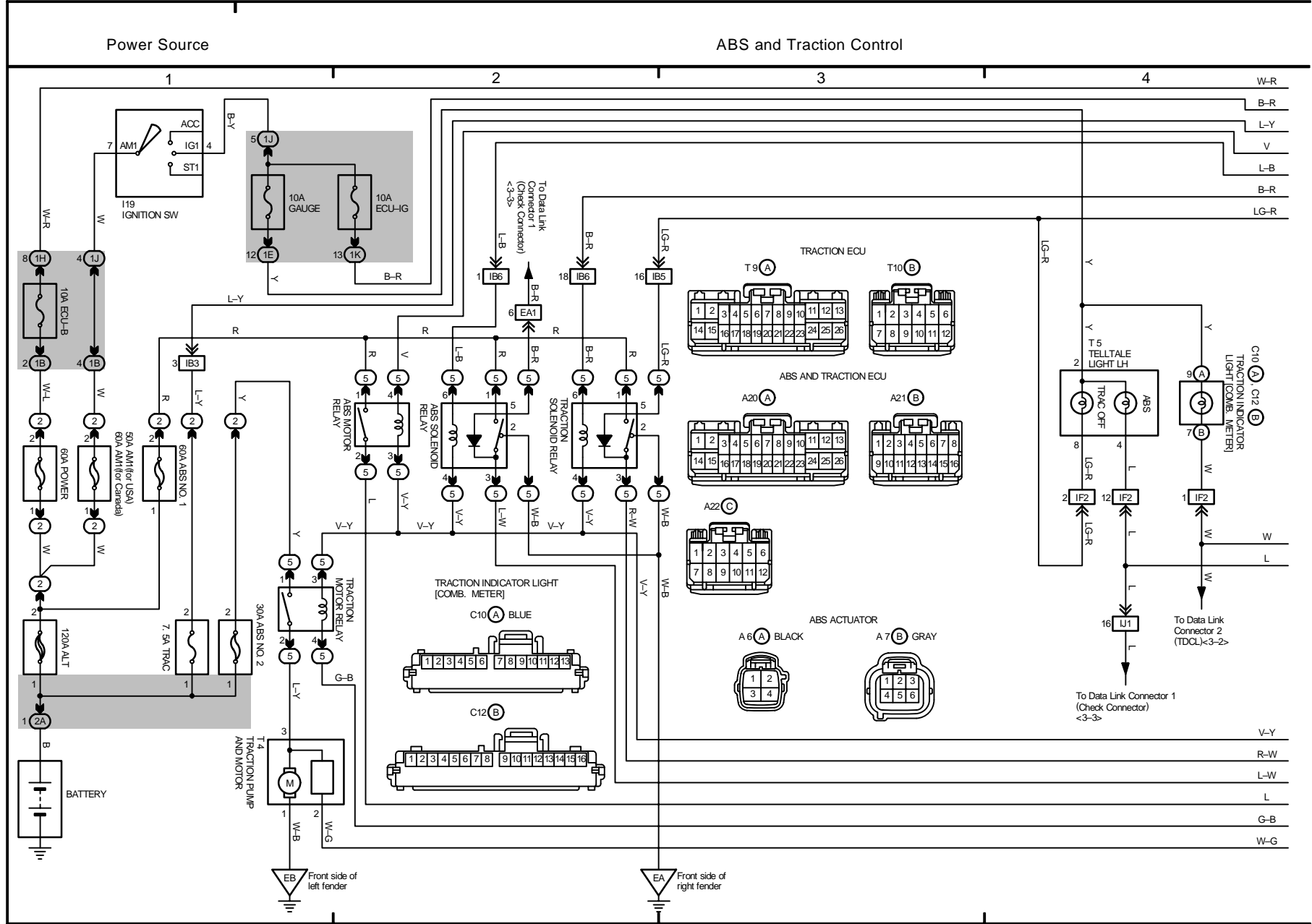
## Back-Up Light (for 2JZ-GE)





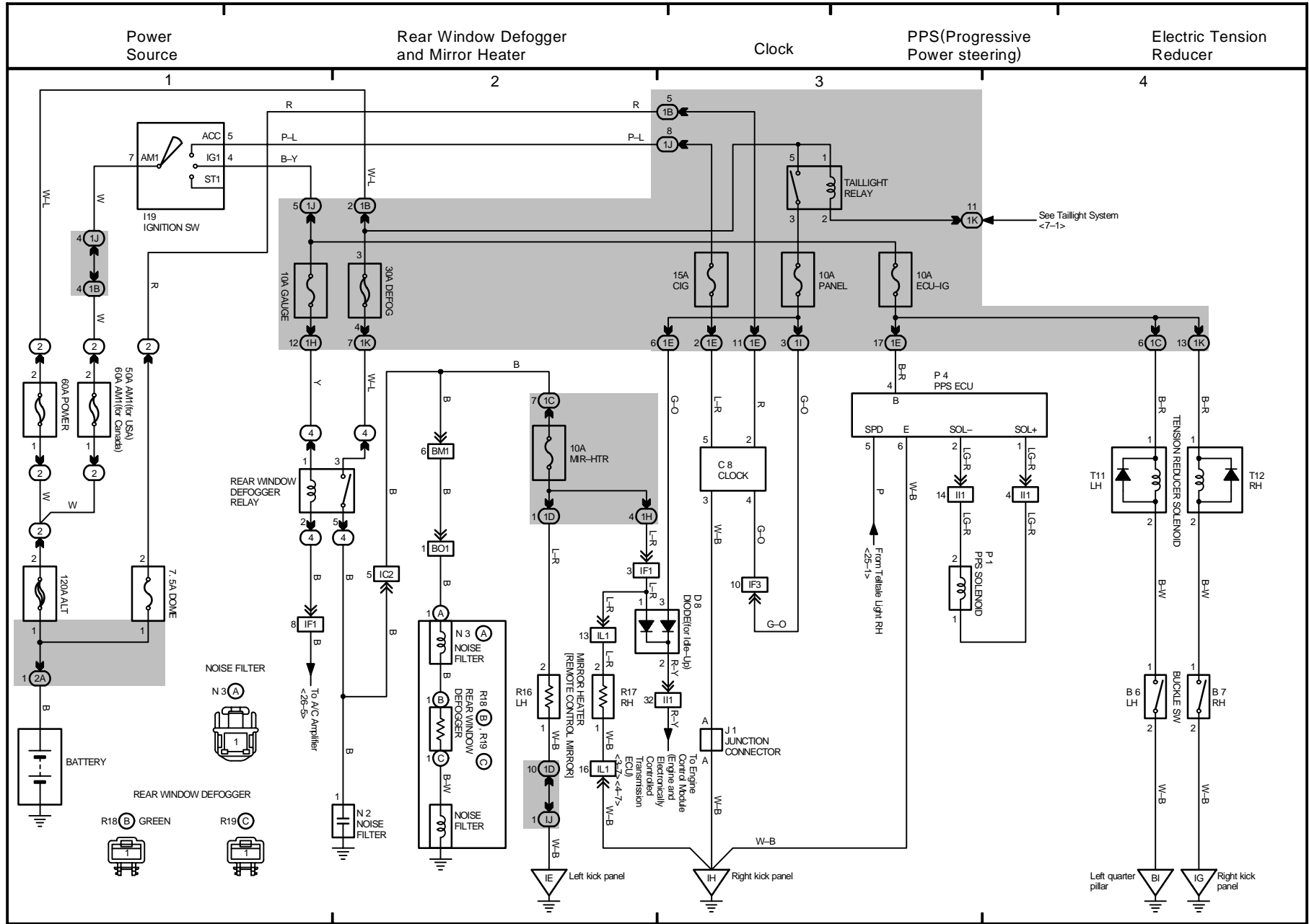




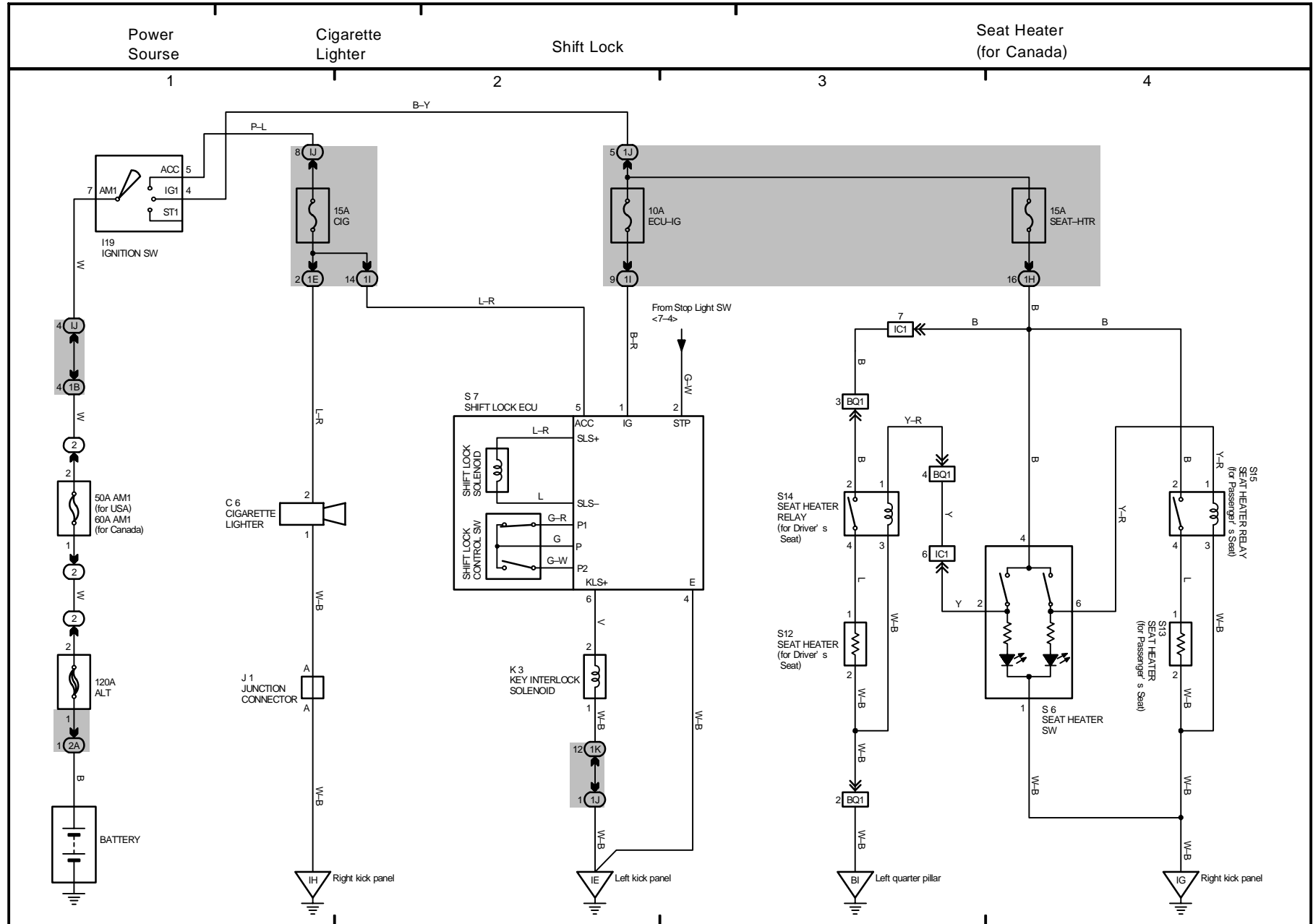




# 20 SUPRA

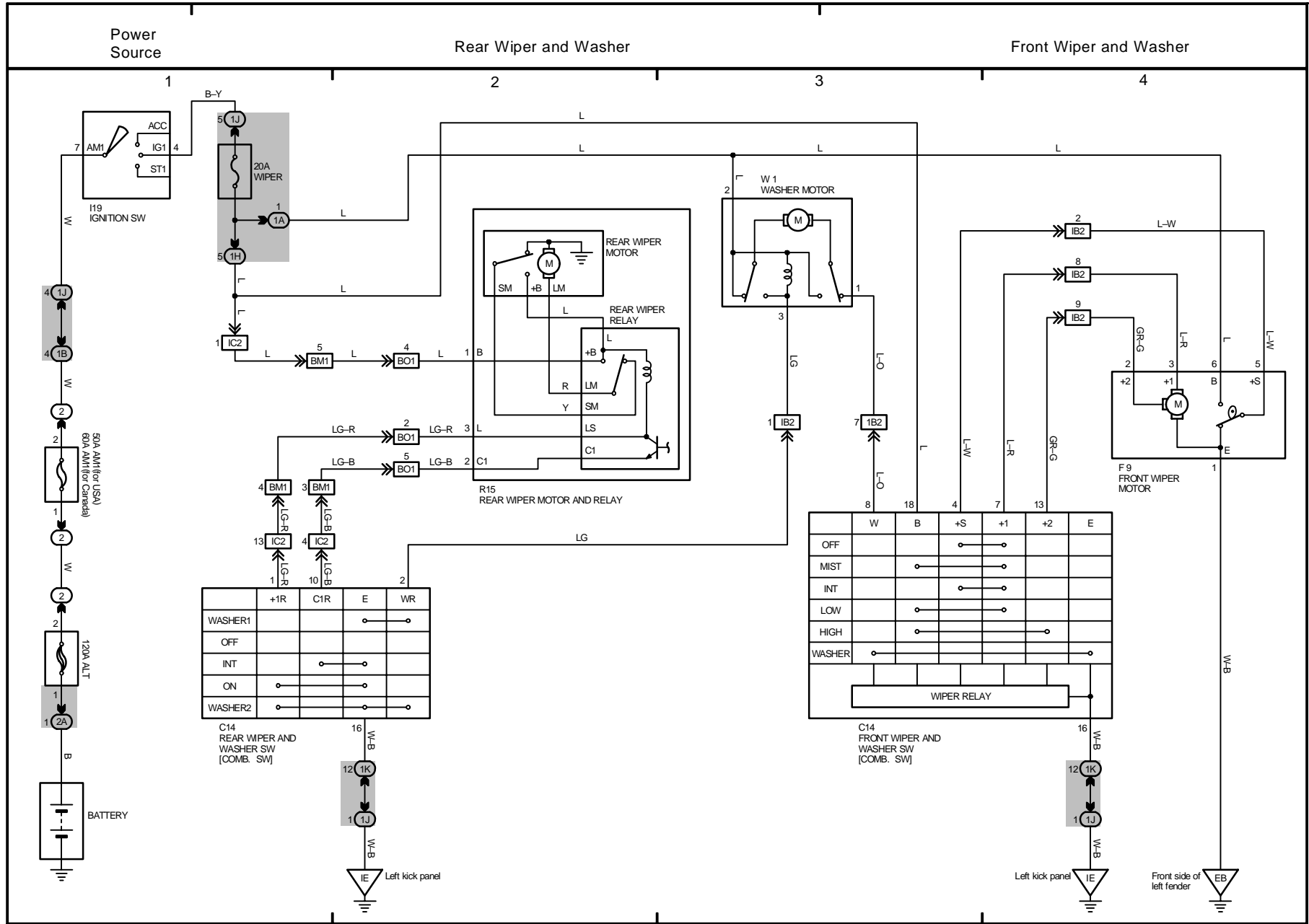


# 21 SUPRA

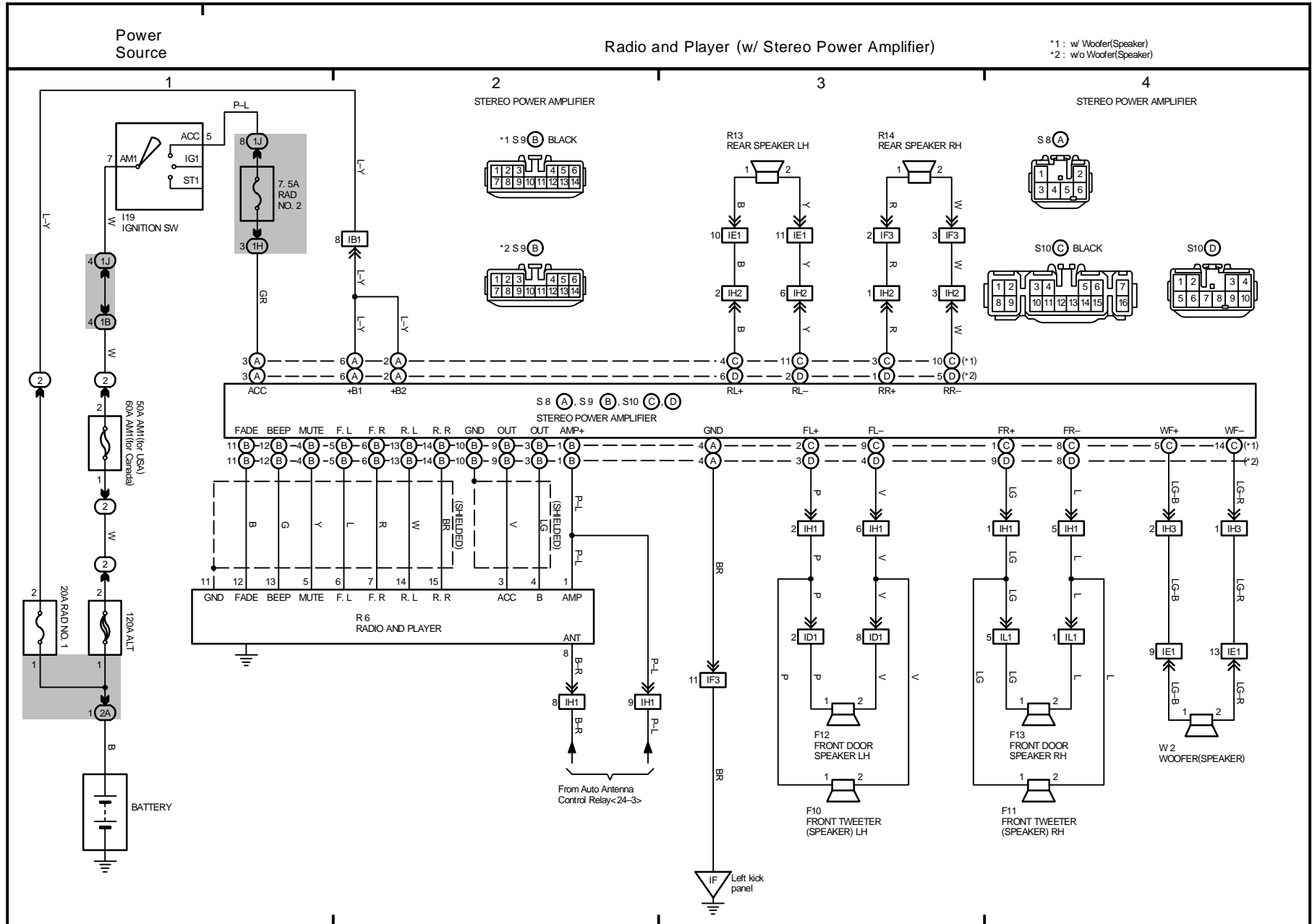


# 22 SUPRA

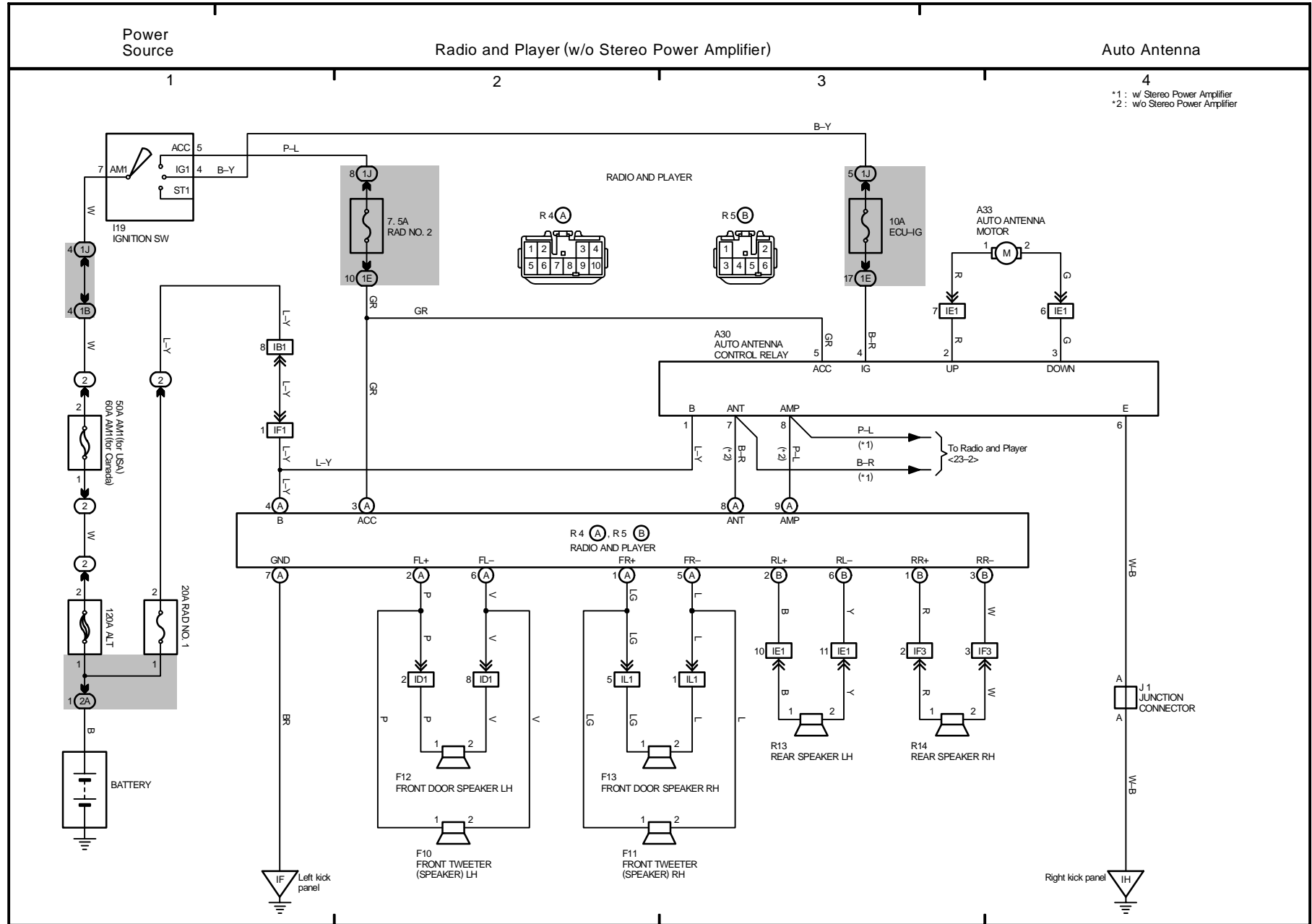
# OVERALL ELECTRICAL WIRING DIAGRAM



# 23 SUPRA

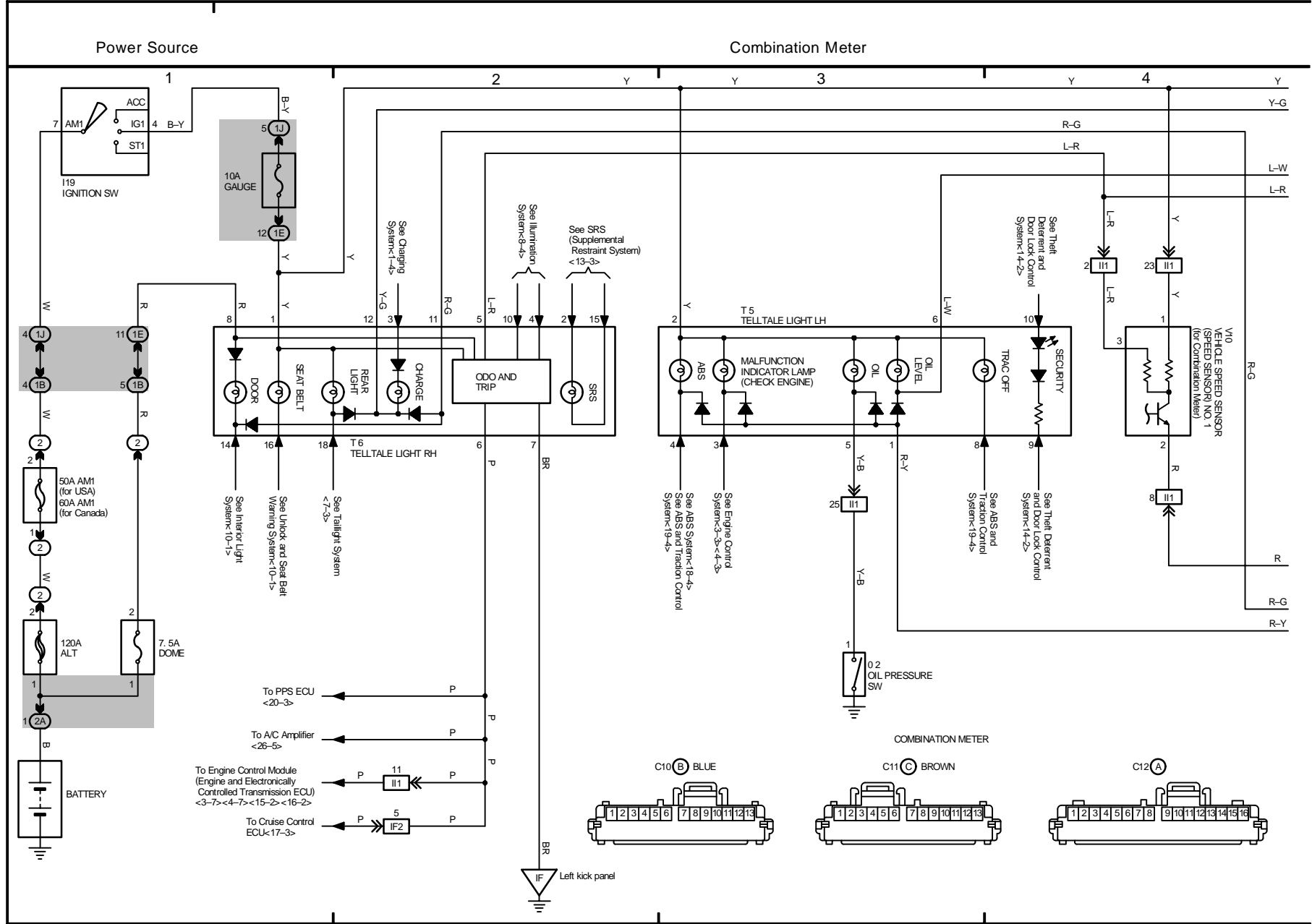


# 24 SUPRA









# 25 SUPRA (Cont' d)

## Combination Meter

\*1: 2JZ-GTE  
\*2: 2JZ-GE

