## A INTRODUCTION

This manual consists of the following 11 sections:

No.	Section	Description
Α	INDEX	Index of the contents of this manual.
	INTRODUCTION	Brief explanation of each section.
В	HOW TO USE THIS MANUAL	Instructions on how to use this manual.
С	TROUBLE- SHOOTING	Describes the basic inspection procedures for electrical circuits.
D	ABBREVIATIONS	Defines the abbreviations used in this manual.
Е	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.
Н	POWER SOURCE (Current Flow Chart)	Describes power distribution from the power supply to various electrical loads.
	INDEX	Index of the system circuits.
I	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 the parts described in this manual.
К	OVERALL ELECTRICAL WIRING DIAGRAM	Provides circuit diagrams showing the circuit connections.

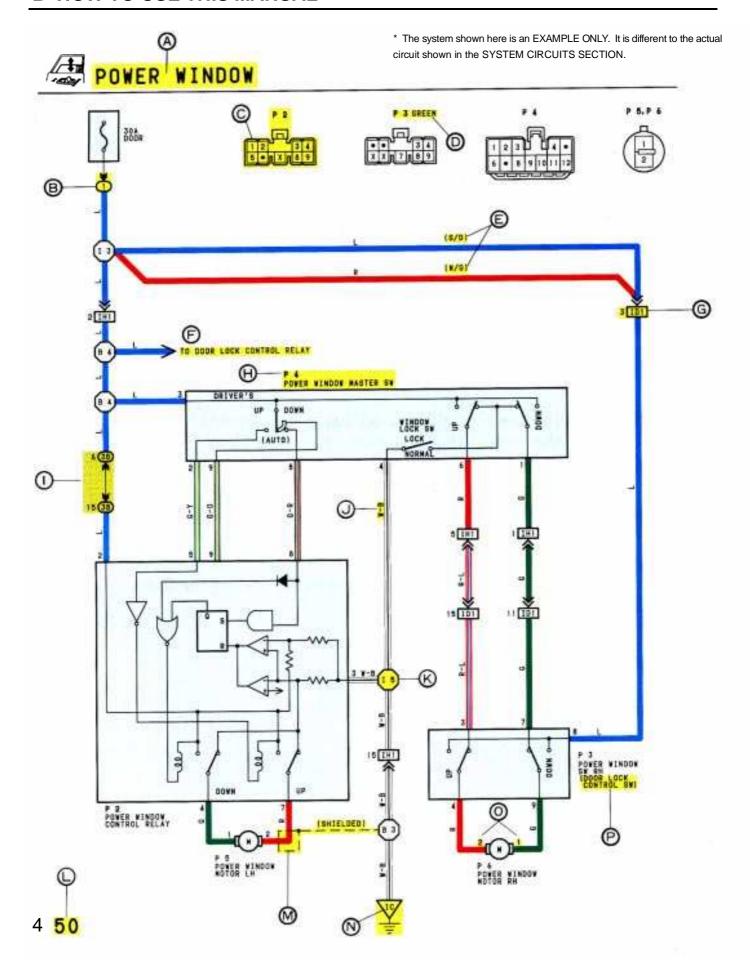
This manual provides information on the electrical circuits installed on vehicles by dividing them into a circuit for each system.

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 Wiring Routing sections to find each part, junction block and wiring harness connectors, wiring harness and wiring harness connectors, splice points, and ground points of each system circuit. Internal wiring for each junction block is also provided for better understanding of connection within a junction block.

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

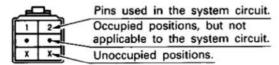


(A): System Title

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

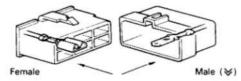
Example: (1) Indicates Relay Block No. 1.

C: 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 ( <sup>∨</sup><sub>V</sub>).

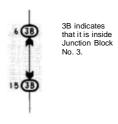


The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area

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

Example:



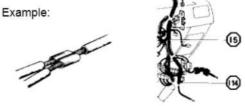
(J): Indicates the wiring color.
Wire colors are indicated by an alphabetical code.

B = Black	L = Black	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 (blue) (yellow)

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



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

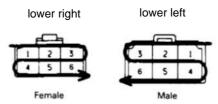
- L: Page No.
- (M): Indicates a shielded cable.



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.

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



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 [ ].

#### **B HOW TO USE THIS MANUAL**

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#### 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. THOUGH **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 3** OF THE RELAY | **TERMINAL 4** OF THE RELAY | **TERMINAL 3** OF THE POWER WINDOW MOTOR | **TERMINAL 4** OF THE RELAY | **TERMINAL 5** OF THE POWER WINDOW MOTOR | **TERMINAL 4** OF THE RELAY | **TERMINAL 5** OF THE POWER WINDOW MOTOR | **TERMINAL 4** OF THE RELAY | **TERMINAL 5** OF THE POWER WINDOW MOTOR | **TERMINAL 4** OF THE RELAY | **TERMINAL 5** OF THE POWER WINDOW MOTOR | **TERMINAL 5** OF THE POWER WINDOW

(FOR THE "MANUAL DOWN" OPERATION, CURRENT FLOWS IN THE REVERSE DIRECTION BECAUSE THE TERMINALS WHERE IT FLOW 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 FLOW 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 1 OF THE POWER WINDOW MOTOR | TERMINAL 1 OF THE POWER WINDOW MOTOR | 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.

(R)

(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 THE IGNITION SW AT **ON** POSITION

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

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

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

#### P 4 POWER WINDOW MASTER SW

4-GROUND: ALWAYS CONTINUITY

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

#### WINDOW LOCK SW

S

OPEN WITH	THE WINDOW LO	OCK SW AT	LOCK POSITION

: PARTS	: PART\$ LOCATION					
-	-					
CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE	
P2	21	P4	21	P6	21	
P3	21	P5	21			

(T) (P3 21

: REL	AY BLOCKS	
CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)

1 16 R/B NO. 1 (INSTRUMENT PANEL LEFT)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR		NESS CONNECTOR
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)

38 14 J/B NO. 3 AND COWL WIRE (INSTRUMENT PANEL LEFT SIDE)

COWL WIRE

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

FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)

: GR DUND POINTS

: Gr	ROUND POINTS	
CODE	SEE PAGE	GROUND POINT LOCATION
IC	24	COWL LEFT

/	$\bigcirc$					
	: SPLICE	POINTS				
	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS

6

15

- Q: Explains the system outline.
- R: Indicates values or explain the function for reference during troubleshooting.
- S: Indicates the reference page showing the position on the vehicle of the parts in the system circuit.

Example: Part "P 4" (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 the letter.

Example: P 4
Part is 4th in order
Power Window Master SW

(T): 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 on this manual and is installed on the left side of the instrument panel.

U: 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.

(V): 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.

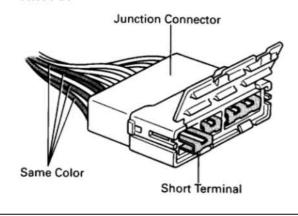
W: Indicates the reference page showing the position of the ground points on the vehicle.

Example: Ground point "IC" is described on page 24 of this manual and is installed on the cowl left side.

(X): 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.

#### HINTS:



Junction connector (code: J1 to J19) 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.)

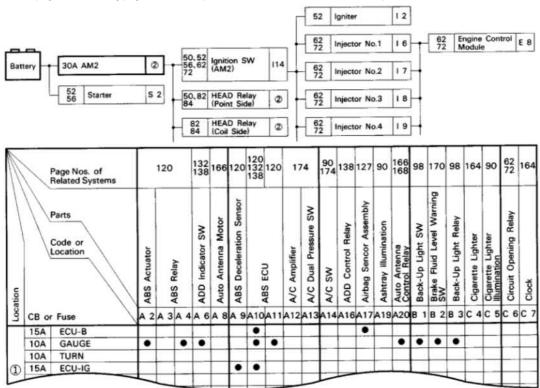
Wire harness sharing the same short terminal grouping have the same color.

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.

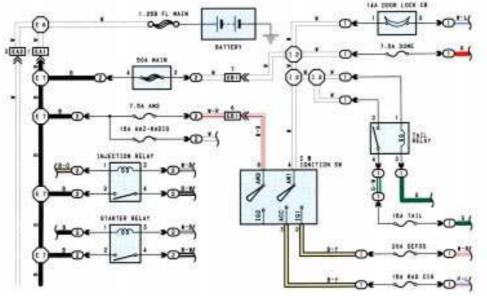
#### H POWER SOURCE (CURRENT FLOW CHART)

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 shown the parts to which each electrical source outputs current.

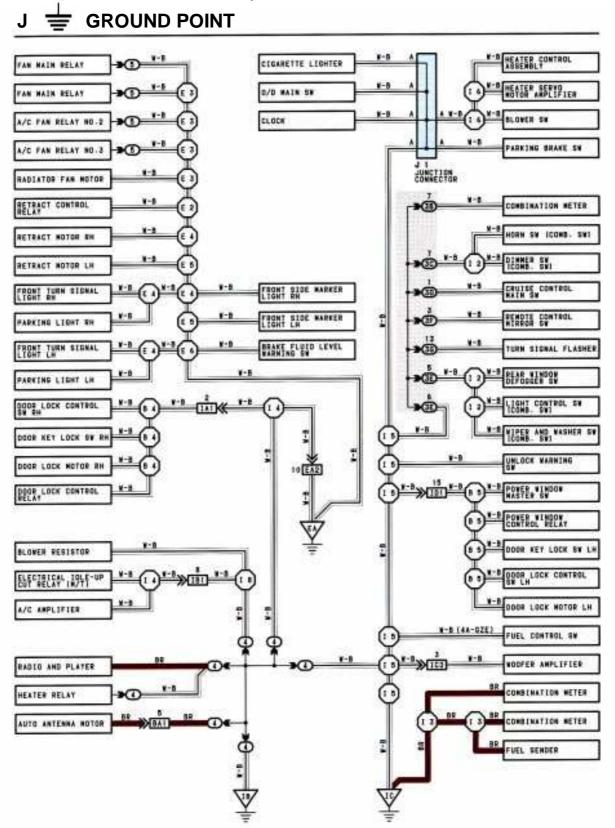


## POWER SOURCE

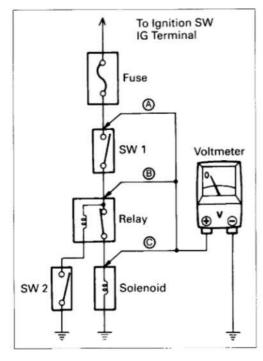


<sup>\*</sup> The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

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 to the respective ground may help you identify the problem ground quickly. The relationship between ground points to the respective ground points. The relationship between ground points to the respective ground points.



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

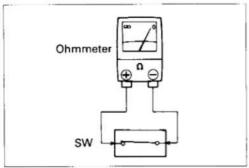


#### **VOLTAGE CHECK**

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

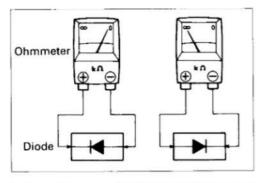
#### Example:

- A Ignition SW on
- B Ignition SW and SW 1 on
- © Ignition SW, SW 1 and Relay on (SW2 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**

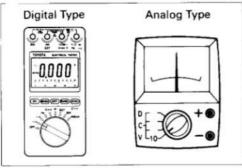
- (a) Disconnect the battery terminal or wire so there is no voltage between the check points.
- (b) Contact the two leads of an ohmmeter to each of the check point.



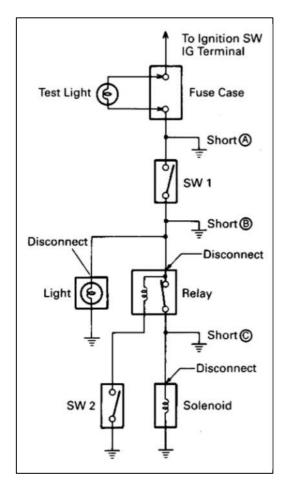
If the circuit has diodes, reverse the two leads and check again.

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 the volt/ohmmeter with high impedance (10 k $\Omega$ /V minimum) for troubleshooting of the electrical circuit.



#### **FINDING A SHORT CIRCUIT**

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

#### Example:

- (A) Ignition SW on
- B Ignition SW and SW 1 on
- C Ignition SW, SW 1 and Relay on (Connect the Relay) and SW 2 off (or Disconnect SW 2)
- (d) Disconnect and reconnect the connectors while watching the test light.

The short lies between the connector where the test light stays lit and the connector where the light goes out.

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

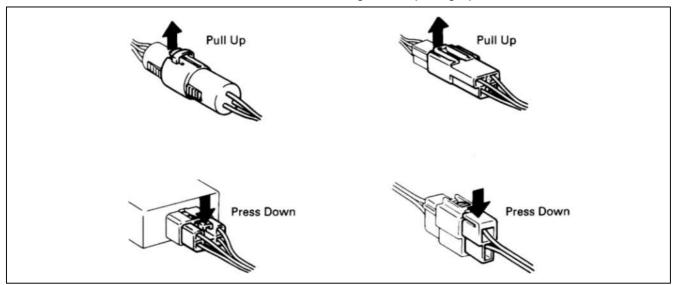
#### **CAUTION:**

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

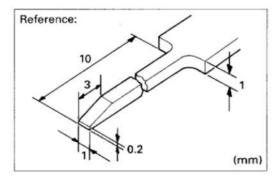
## DISCONNECTION OF MALE AND FEMALE CONNECTORS

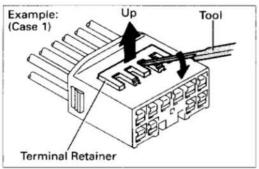
To pull apart the connectors, pull on the connector itself, not the wire harness.

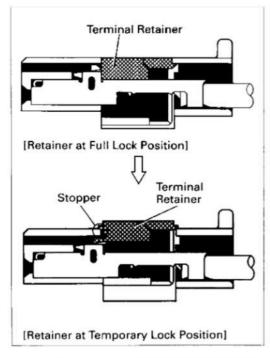
HINT: Check to see what kind of connector you are disconnecting before pulling apart.

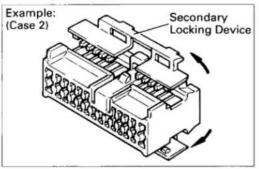


#### **C TROUBLESHOOTING**









## 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.

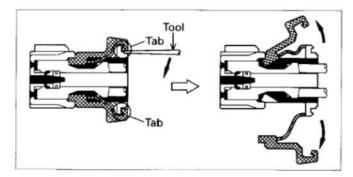
(A) For Non-Waterproof Type Connector

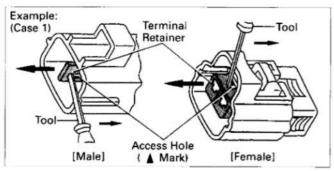
HINT: The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

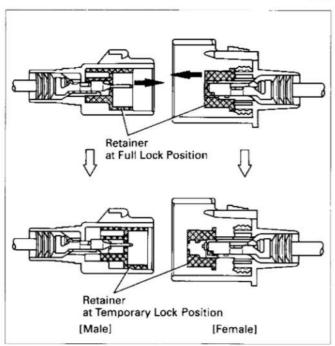
"Case 1"
Raise the terminal retainer up to the temporary lock position.

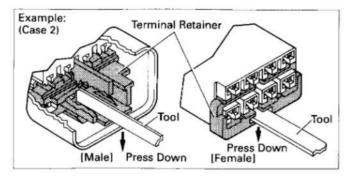
"Case 2"

Open the secondary locking device.









### B For Waterproof Type Connector

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

Example:

<u>Terminal Retainer</u> : Connector Body

Black or White :Gray
Black or White :Dark Gray
Gray or White :Black

#### "Case 1"

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

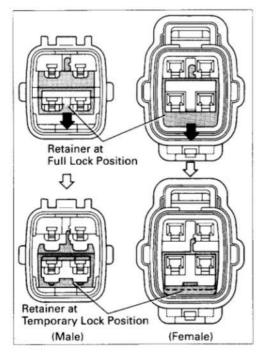
Insert the special tool into the terminal retainer access hole (

Mark) and pull the terminal retainer up to the temporary lock position.

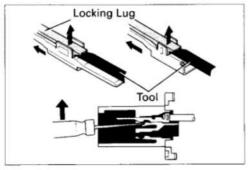
HINT: The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

#### "Case 2"

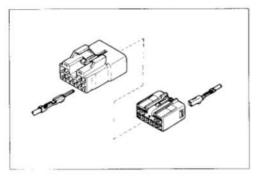
Type which cannot be pulled as far as Power Lock insert the tool straight into the access hole of terminal retainer as shown.



Push the terminal retainer down to the temporary lock position.



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

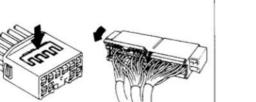


#### 4. INSTALL TERMINAL TO CONNECTOR

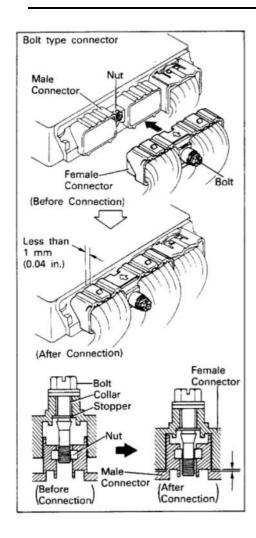
(a) Insert the terminal.

#### HINT:

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



- (b) Push the secondary locking device or terminal retainer into the full lock position.
- 5. CONNECT CONNECTOR



# DISCONNECTION AND CONNECTION OF BOLT TYPE CONNECTORS

For engine control module in this vehicle, connections 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**

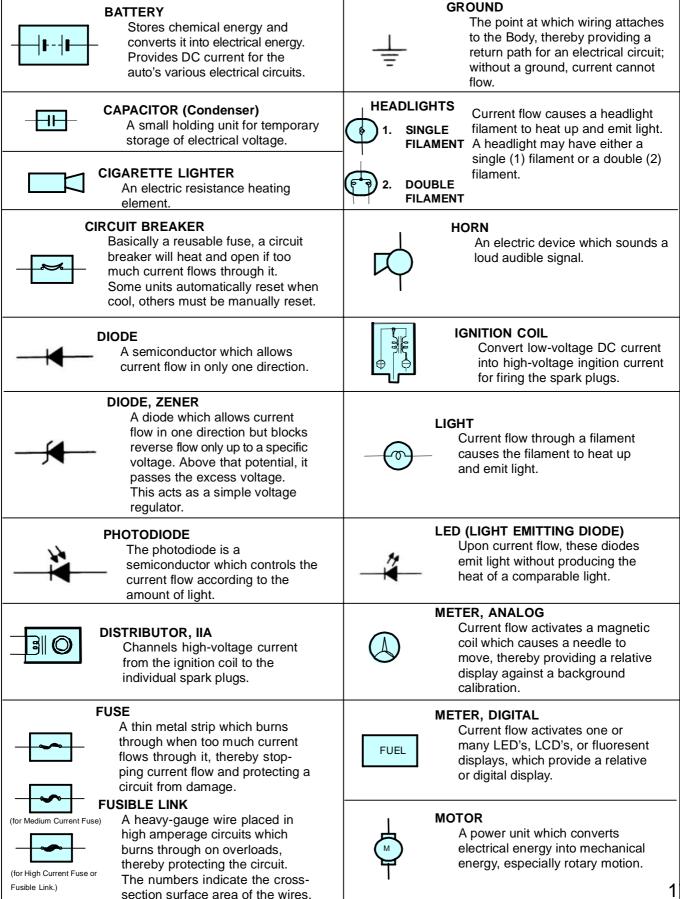
The follow abbreviations are used in this manual.

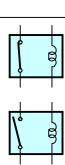
## ABBREVIATIONS D

ABS	= Anti-Lock Brake Systerm	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
EGR	= Exhaust Gas Recirculation	SW	= Switch
ESA	= Electronic Spark Advance	TEMP.	= Temperature
EVAP	= Evaporative Emission	TRAC	= Traction Control
J/B	= Junction Block	VSV	= Vacuum Switching Valve
LH	= Left-Hand	w/	= With
M/T	= Manual Transmission	w/o	= Without

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

#### E GLOSSARY OF TERMS AND SYMBOLS





#### **RELAY**

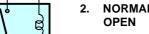
NORMALLY **CLOSED** 

Basically, an electrically operated switch which may be normally closed (1) or open (2). Current



#### **SPEAKER**

An electromechanical device which creates sound waves from current flow.



flow through a small coil creates a magnetic **NORMALLY** field which either opens or closes an attached switch



#### SWITCH, MANUAL

**NORMALLY OPEN** 

Open and closes circuits. thereby stopping (1) or allowing (2) current flow.



#### **RELAY, DOUBLE THROW**

A relay which passes current through one set of contacts or the



## **NORMALLY**

**CLOSED** 

#### **RESISTOR**



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



#### SWITCH, DOUBLE THROW

A switch which continuously passes cureent through one set of contacts or the other.

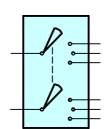


#### **RESISTOR, TAPPED**

**RHEOSTAT** 

RESISTOR, VARIABLE or

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



#### SWITCH. **IGNITION**

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



A controllable resistor with a variable rate of resistance. Also called a potentiometer or rheostat.



#### SENSOR (Thermistor)

A resistor which varies its resistance with temperature.



#### SWITCH, WIPER PARK

Automatically returns wipers to the stop position when the wiper switch is turned off.



#### SENSOR, SPEED

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



#### **TRANSISTOR**

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

Wires are always



(Read Switch Type)

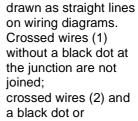
#### SHORT PIN

Used to provide an unbroken connection within a juction block.



#### **WIRES**

(1) NOT CONNECTED

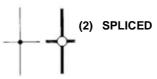


crossed wires (2) and octagonal (O) mark at the juction as spliced (joined) connections.



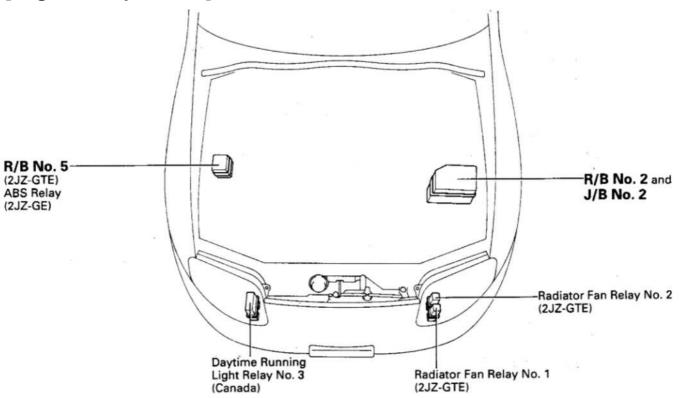


An electromagnetic coil which forms a magnetic field when current flows, to move a plunger,

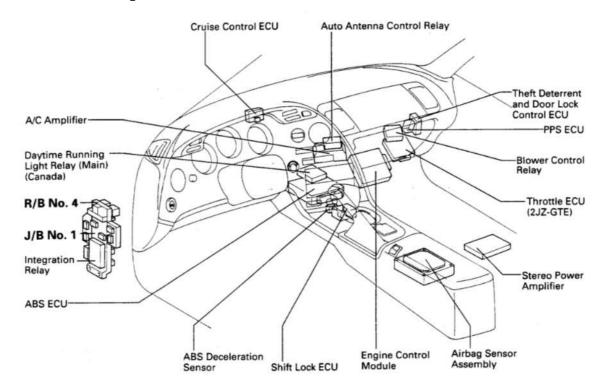


18

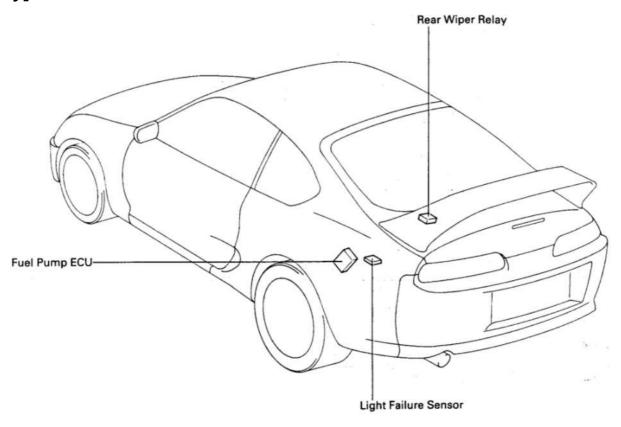
## [Engine Compartment]



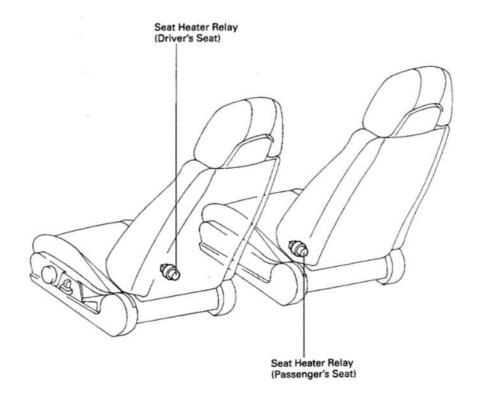
## [Instrument Panel]



## [Body]

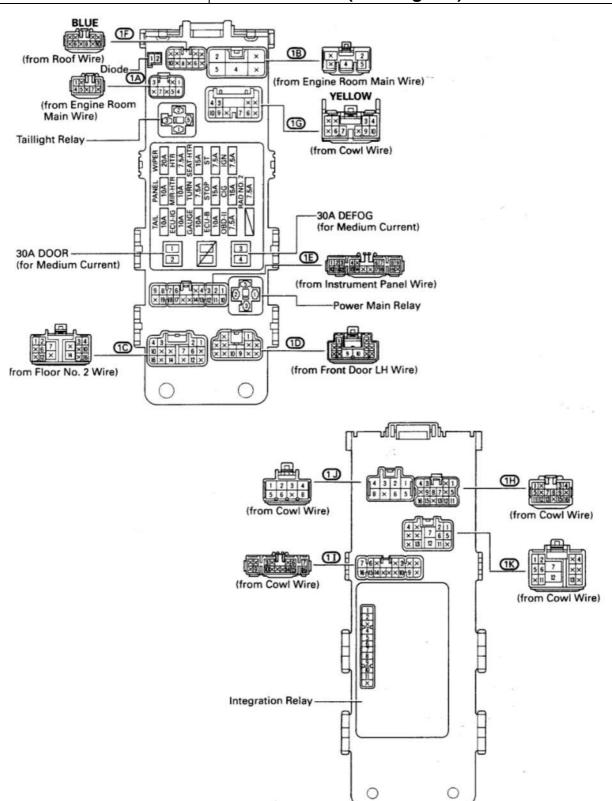


## [Seat]

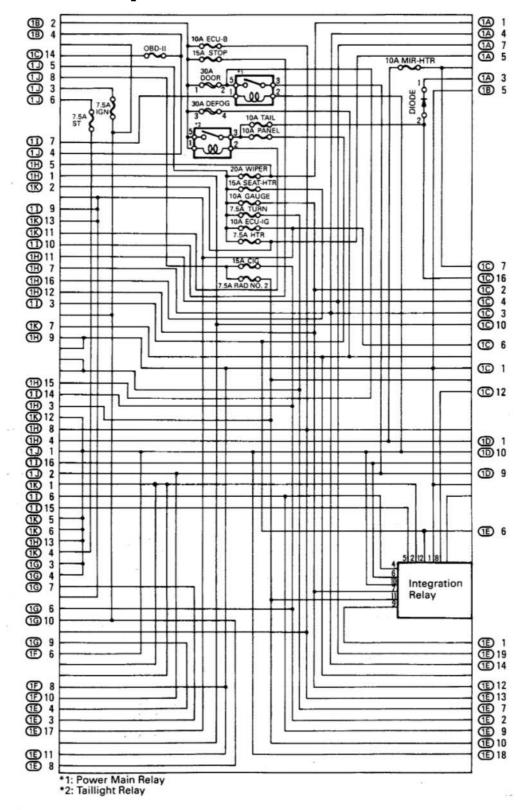


### : J/B No. 1

## Left Kick Panel (See Page 18)

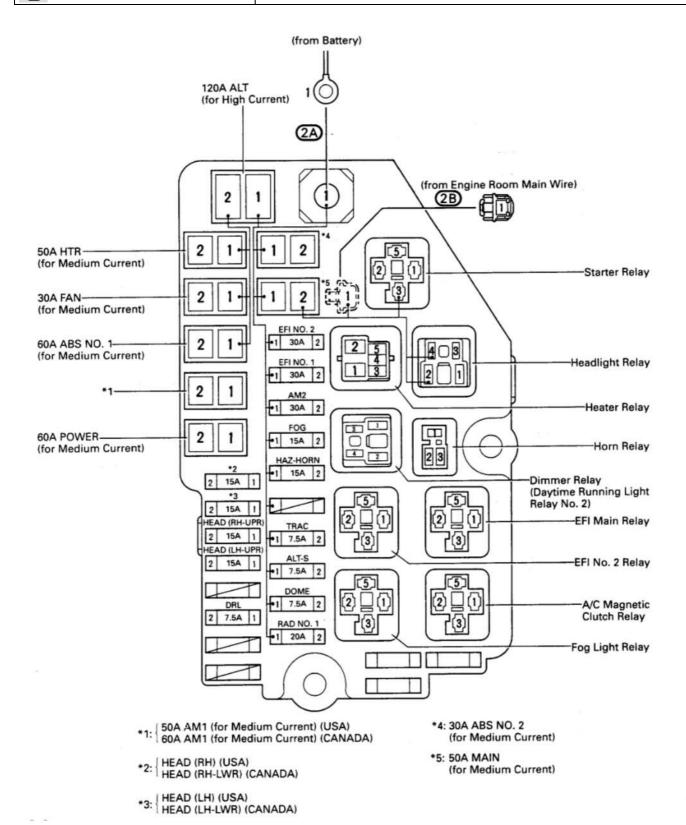


## [J/B No. 1 Inner Circuit]

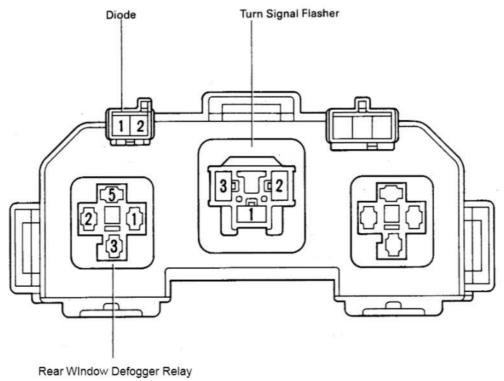


②: R/B No. 2

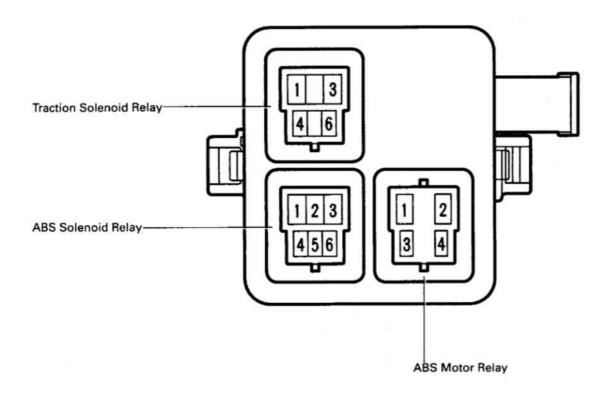
Engine Compartment Left (See Page 18)

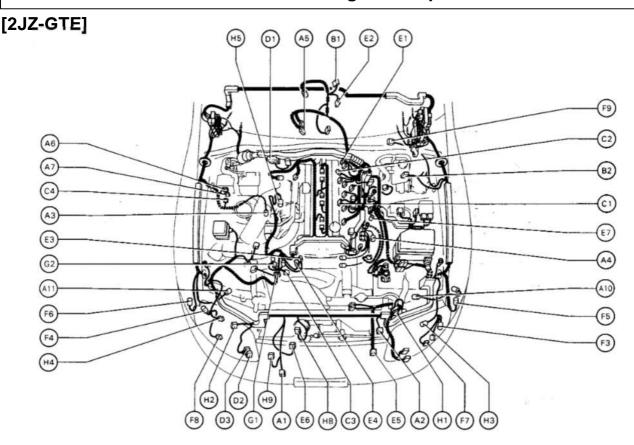


## (4) : R/B No. 4 Left Kick Panel (See Page 18)



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



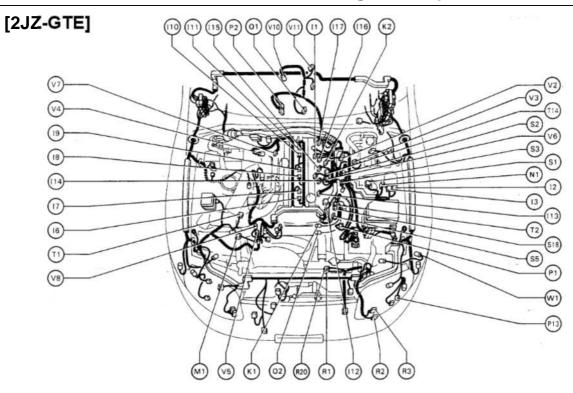


- A 1 A/C Ambient Temp Sensor
- A 2 A/C Condensor Fan Motor
- A 3 A/C Triple Pressure SW

(A/C Dual and Single Pressure SW)

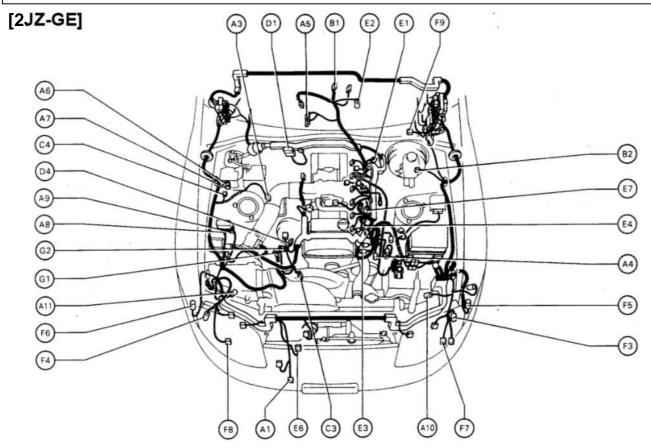
- A 4 A/C Magnetic Clutch and Lock Sensor
- A 5 A/T Fluid Temp. Sensor
- A 6 ABS Actuator
- A 7 ABS Actuator
- A10 ABS Speed Sensor Front LH
- A11 ABS Speed Sensor Front RH
- B 1 Back-Up Light SW (M/T)
- B 2 Brake Fluid Level Warning SW
- C 1 Camshaft Position Sensor No.1
- C 2 Camshaft Position Sensor No.2
- C 3 Crankshaft Position Sensor
- C 4 Cruise Control Actuator
- D 1 Data Link Connector 1
- D 2 Daytime Running Light Relay No.3
- D 3 Daytime Running Light Relay No.3
- E 1 EGR Gas Temp. Sensor
- E 2 Electronically Controlled Transmission Solenoid
- E 3 Engine Coolant Temp. Sensor

- E 4 Engine Coolant Temp. Sender
- E 5 Engine Coolant Temp. SW
- E 6 Engine Hood Courtesy SW
- E 7 Engine Oil Level Sensor
- F 3 Front Fog Light LH
- F 4 Front Fog 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 and Parking Light RH
- F 9 Front Wiper Motor
- G 1 Generator
- G 2 Generator
- H 1 Headlight Hi LH
- H 2 Headlight Hi RH
- H 3 Headlight Lo LH
- H 4 Headlight Lo RH
- H 5 Heated Oxygen Sensor (Bank 1 Sensor 1)
- H 8 Horn LH
- H 9 Horn RH



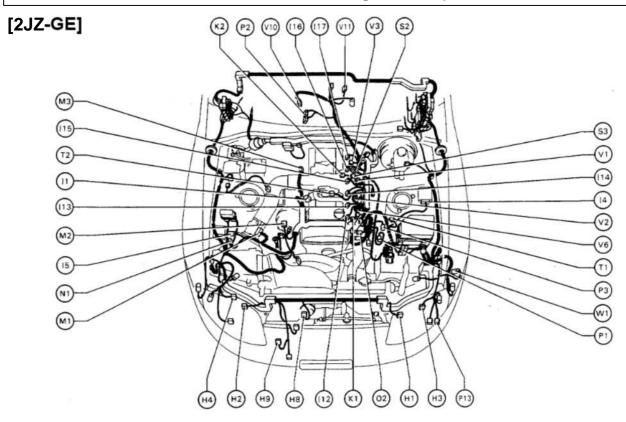
- I 1 Idle Air Control Valve
- I 2 Igniter
- I 3 Igniter
- I 6 Ignition Coil No.1
- I 7 Ignition Coil No.2
- I 8 Ignition Coil No.3
- I 9 Ignition Coil No.4
- I10 Ignition Coil No.5I11 Ignition Coil No.6
- I12 Injector No.1
- I13 Injector No.2
- I14 Injector No.3
- I15 Injector No.4
- I16 Injector No.5
- 117 Injector No.6
- K 1 Knock Sensor (on Front Side)
- K 2 Knock Sensor (on Rear Side)
- M 1 Mass 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, Back-Up Light SW and A/T Indicator Light SW (A/T)
- P13 Parking Light LH

- R 1 Radiator Fan Motor No.1
- R 2 Radiator Fan Relay No.1
- R 3 Radiator Fan Relay No.2
- R20 Radiator Fan Motor No.2
- S 1 SFI Resistor
- S 2 Starter
- S 3 Starter
- S 5 Sub Throttle Position Sensor
- S18 Sub Throttle Valve Motor
- T 1 Theft Deterrent Horn
- T 2 Throttle Position Sensor
- T14 Turbo Pressure Sensor
- V 2 VSV (EGR)
- V 3 VSV (EVAP)
- V 4 VSV (Exhaust Bypass Valve)
- V 5 VSV (Exhaust Gas Control Valve)
- V 6 VSV (Fuel Pressure Up)
- V 7 VSV (Intake Air Control Valve)
- V 8 VSV (Waste Gate Valve)
- V10 Vehicle Speed Sensor No.1 (Combination Meter)
- V11 Vehicle Speed Sensor No.2 (Electronically Controlled Transmission)
- W 1 Washer Motor



- 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
- A10 ABS Speed Sensor Front LH
- A11 ABS Speed Sensor Front RH
- B 1 Back-Up Light SW (M/T)
- B 2 Brake Fluid Level Warning SW
- C 3 Crankshaft Position Sensor
- C 4 Cruise Control Actuator
- D 1 Data Link Connector 1
- D 4 Distributor

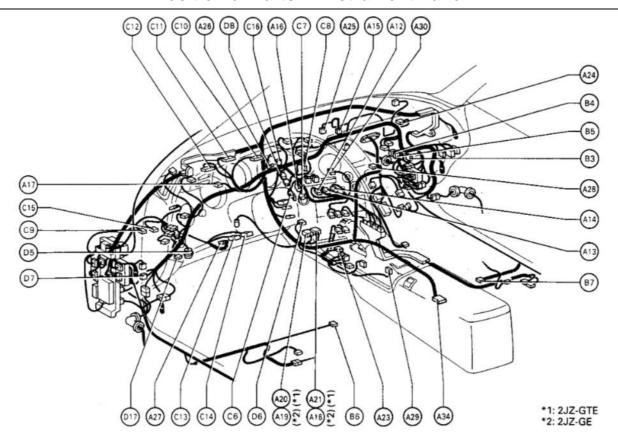
- E 1 EGR Gas Temp. Sensor
- E 2 Electronically Controlled Transmission Solenoid
- E 3 Engine Coolant Temp. Sensor
- E 4 Engine Coolant Temp. Sender
- E 6 Engine Hood Courtesy SW
- E 7 Engine Oil Level Sensor
- F 3 Front Fog Light LH
- F 4 Front Fog Light RH
- F 5 Front Side Marker Light LH
- F 6 Front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



- 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
- 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 1 Mass Air Flow Meter
- M 2 Main Heated Oxygen Sensor (Bank 1 Sensor 1)
- M 3 Main Heated Oxygen Sensor (Bank 2 Sensor 1)
- N 1 Noise Filter

- O 2 Oil Pressure SW
- P 1 PPS Solenoid
- P 2 Park/Neutral Position SW, Back-Up Light SW and A/T Indicator Light SW (A/T)
- P 3 Power Steering Pressure SW
- P13 Parking Light LH
- S 2 Starter
- S 3 Starter
- T 1 Theft Deterrent Horn
- T 2 Throttle Position Sensor
- V 1 VSV (ACIS)
- V 2 VSV (EGR)
- V 3 VSV (EVAP)
- V 6 VSV (Fuel Pressure Up)
- V10 Vehicle Speed Sensor No.1 (Combination Meter)
- V11 Vehicle Speed Sensor No.2 (Electronically
  - Controlled Transmission)
- W 1 Washer Motor

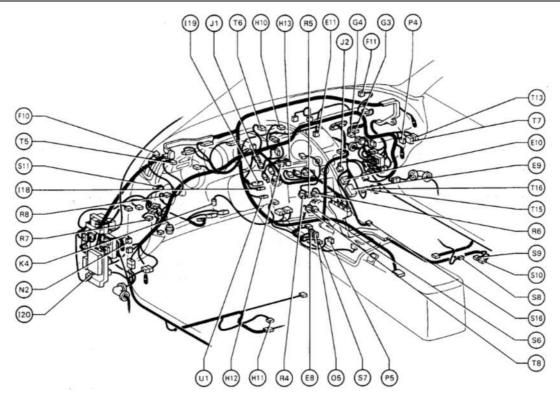
#### **Position of Parts in Instrument Panel**



- A12 A/C Amplifier
- A13 A/C Amplifier
- A14 A/C Amplifier
- A15 A/C Evaporator Temp. Sensor
- A16 A/C Room Temp. Sensor
- A17 A/C Solar Sensor
- A18 ABS ECU
- A19 ABS ECU
- A20 ABS ECU
- A21 ABS ECU
- A23 ABS Deceleration Sensor
- A24 Air Inlet Control Servo Motor
- A25 Air Mix Control Servo Motor
- A26 Air Vent Mode Control Servo Motor
- A27 Airbag Squib (Steering Wheel Pad)
- A28 Airbag Squib (Front Passenger Airbag Assembly)
- A29 Ashtray Illumination
- A30 Auto Antenna Control Relay
- A34 Airbag Sensor
- B 3 Blower Motor
- B 4 Blower Motor Control Relay

- B 5 Blower Motor Control Relay
- B 6 Buckle SW LH
- B 7 Buckle SW RH
- C 6 Cigarette Lighter
- C 7 Cigarette Lighter Illumination
- C 8 Clock
- C 9 Clutch Start SW
- C10 Combination Meter
- C11 Combination Meter
- C12 Combination Meter
- C13 Combination SW
- C14 Combination SW
- C15 Cruise Control Clutch SW
- C16 Cruise Control ECU
- D 5 Data Link Connector 2
- D 6 Daytime Running Light Relay (Main)
- D 7 Diode (Interior Light)
- D 8 Diode (Idle-Up)
- D17 Data Link Connector 3

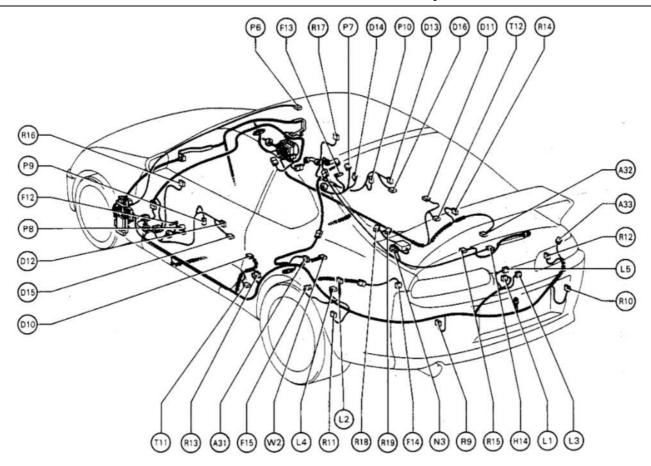
#### **Position of Parts in Instrument Panel**



- E 8 Electronically Controlled Transmission Pattern Select SW
- E 9 Engine Control Module
- E10 Engine Control Module
- E11 Engine Coolant Temp. Sensor (A/C System)
- F10 Front Tweeter (Speaker) LH
- F11 Front Tweeter (Speaker) RH
- G 3 Glove Box Light
- G 4 Glove Box Light SW
- H<sub>10</sub> Hazard SW
- H11 Heated Oxygen Sensor (Bank 1 Sensor 2)
- H12 Heater Control SW
- H13 Heater Control SW
- 118 Ignition Key Cylinder Light
- 119 Ignition SW
- **I20** Integration Relay
- J 1 Junction Connector
- J 2 Junction Connector
- K 4 Kick Down SW
- N 2 Noise Filter

- O 5 O/D Main SW and A/T Indicator Illumination
- P 4 PPS ECU
- P 5 Parking Brake SW
- R 4 Radio and Player (w/o Stereo Power Amplifier)
- R 5 Radio and Player (w/o Stereo Power Amplifier)
- R 6 Radio and Player (w/ Stereo Power Amplifier)
- R 7 Remote Control Mirror SW
- R 8 Rheostat
- S 6 Seat Heater SW
- S 7 Shift Lock ECU
- S 8 Stereo Power Amplifier
- S 9 Stereo Power Amplifier
- S10 Stereo Power Amplifier
- S11 Stop Light SW
- S16 Sub Heated Oxygen Sensor (Bank 1 Sensor 2)
- T 5 Telltale Light LH
- T 6 Telltale Light RH
- T 7 Theft Deterrent and Door Lock Control ECU
- T 8 Traction Control SW
- T13 Theft Deterrent and Door Lock Control ECU
- T15 Throttle ECU
- T16 Throttle ECU
- U 1 Unlock Warning SW

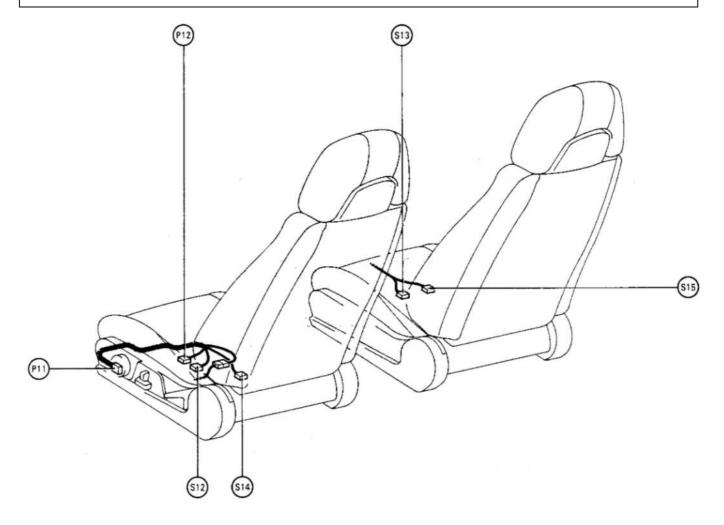
### **Position of Parts in Body**



- A31 ABS Speed Sensor Rear LH
- A32 ABS Speed Sensor Rear RH
- A33 Auto Antenna Motor
- D10 Door Courtesy SW LH
- D11 Door Courtesy SW RH
- D12 Door Key Lock and Unlock SW LH
- D13 Door Key Lock and Unlock SW RH
- D14 Door Lock Control SW RH
- D15 Door Lock Motor and Door Unlock Detection SW LH
- D16 Door Lock Motor and Door Unlock Detection SW RH
- F12 Front Door Speaker LH
- F13 Front Door Speaker RH
- F14 Fuel Pump and Sender
- F15 Fuel Pump ECU
- H14 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
- P10 Power Window Motor RH
- R 9 Rear Combination Light LH
- R10 Rear Combination Light RH
- R11 Rear Side Marker Light LH
- R12 Rear Side Marker Light RH
- R13 Rear Speaker LH
- R14 Rear Speaker RH
- R15 Rear Wiper Motor and Relay
- R16 Remote Control Mirror and Mirror Heater LH
- R17 Remote Control Mirror and Mirror Heater RH
- R18 Rear Window Defogger (+)
- R19 Rear Window Defogger (-)
- T11 Tension Reducer Solenoid LH
- T12 Tension Reducer Solenoid RH
- W2 Woofer (Speaker)

## **Position of Parts in Seat**



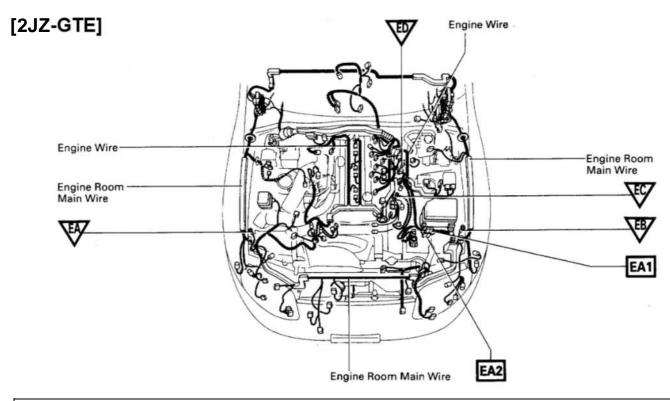
P11 Power Seat Control SW (Driver's Seat) P12 Power Seat Motor (Driver's Seat Slide Control)

S12 Seat Heater (Driver's Seat)

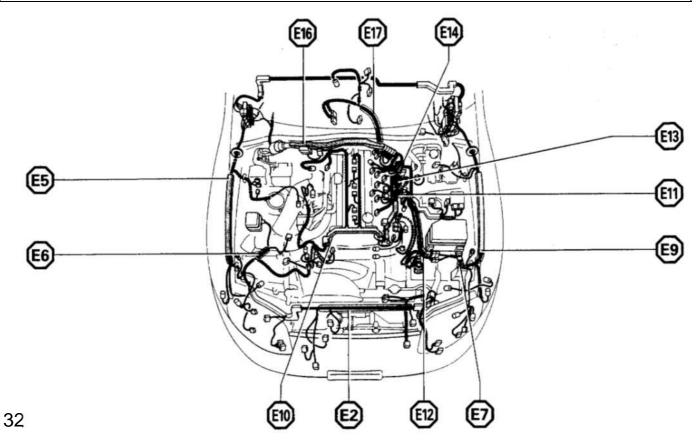
S13 Seat Heater (Front Passenger's Seat)S14 Seat Heater Relay (Driver's Seat)S15 Seat Heater Relay (Front Passenger's Seat)

### **G ELECTRICAL WIRING ROUTING**

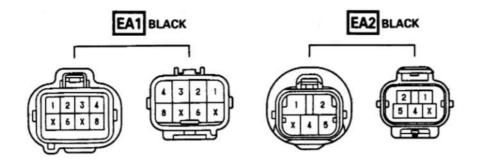
: Location of Connector Joining Wire Harness and Wire Harness



## :Location of Splice Points



## **Connector Joining Wire Harness and Wire Harness**

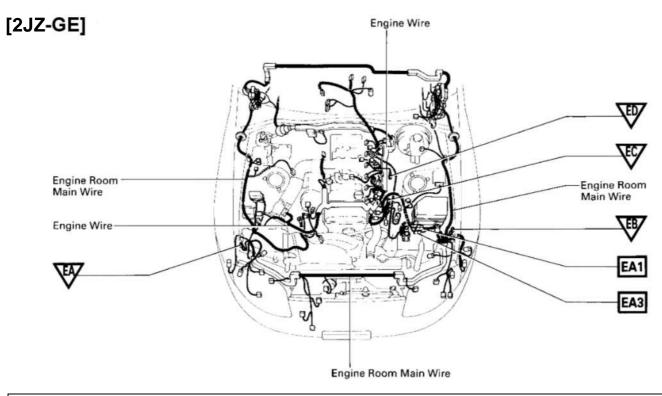


CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	FNOINE MUDE AND ENOINE DOOM MAIN MUDE (NEAD THE D/D NO O)
EA2	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO.2)

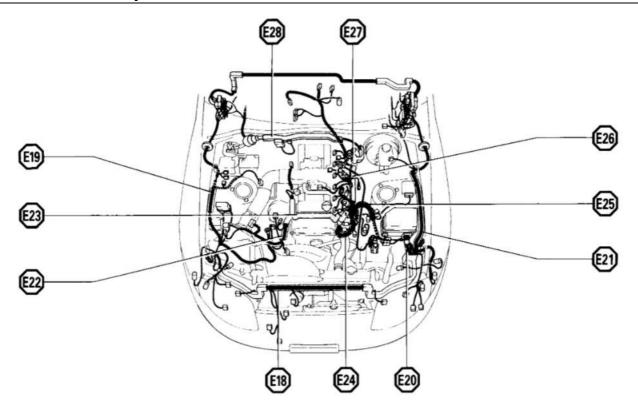
### **G ELECTRICAL WIRING ROUTING**

☐ : Location of Connector Joining Wire Harness and Wire Harness

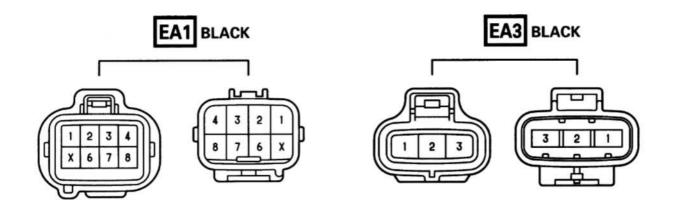
**▽**: Location of Ground Points



## :Location of Splice Points



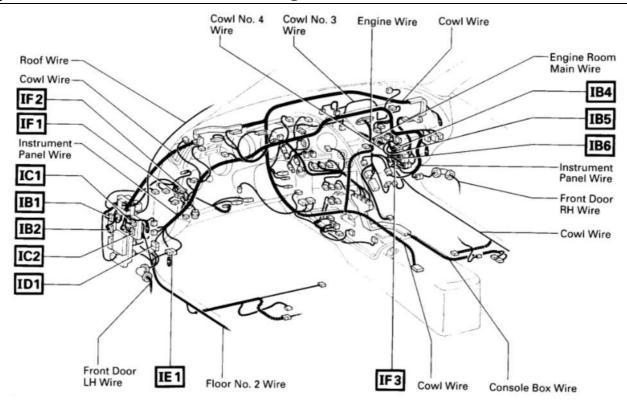
## **Connector Joining Wire Harness and Wire Harness**



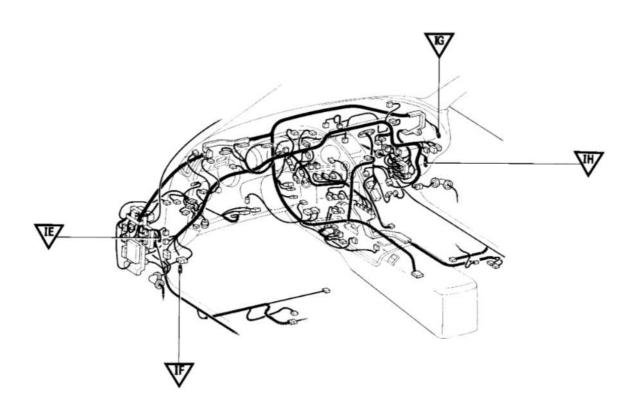
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO.2)
EA3	

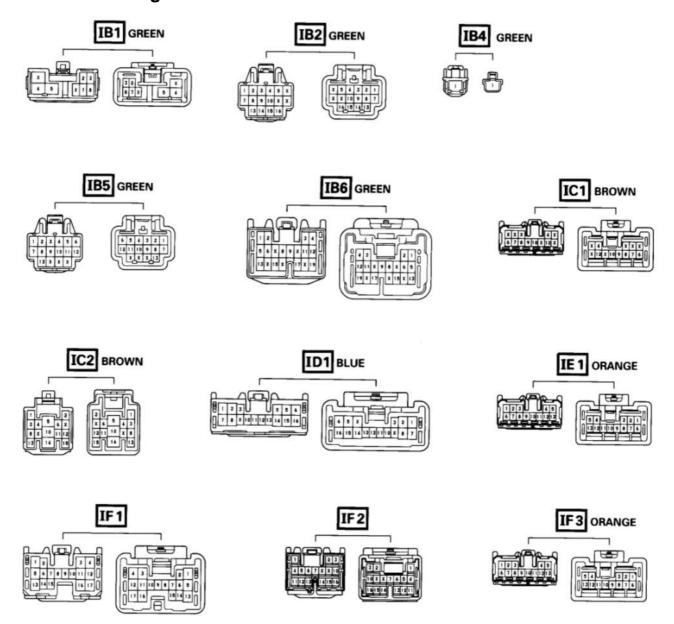
### **G ELECTRICAL WIRING ROUTING**

## : Location of Connector Joining Wire Harness and Wire Harness



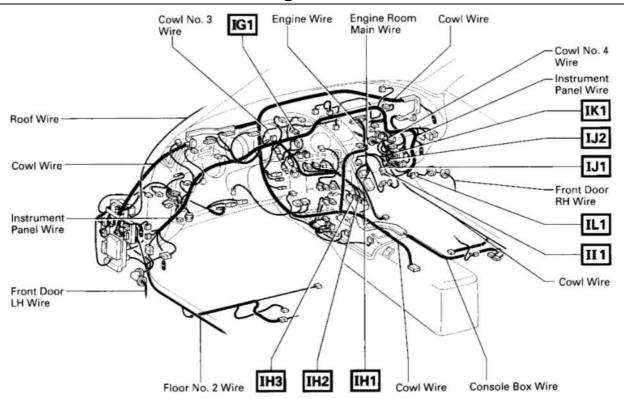
## 



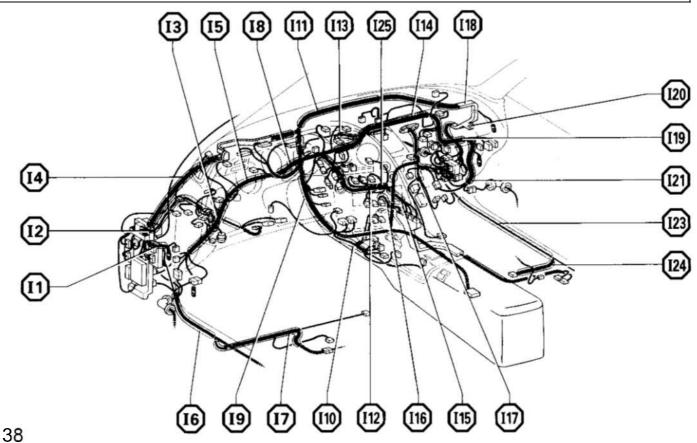


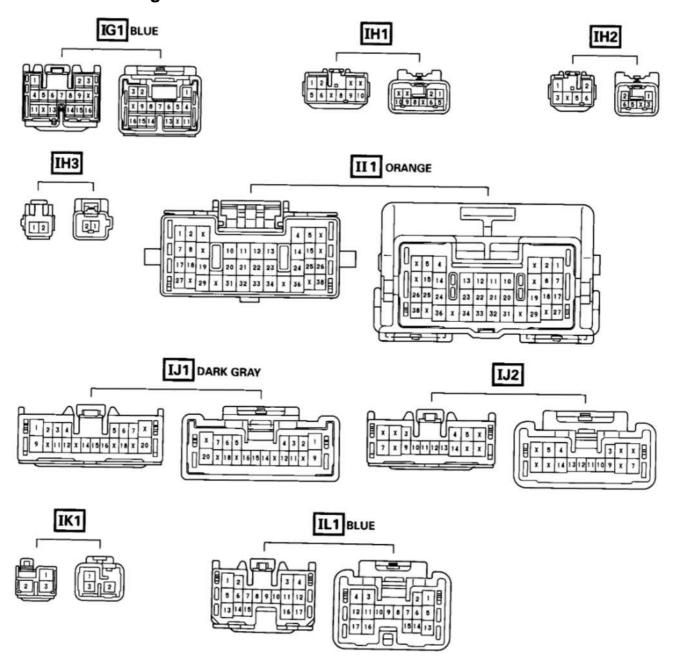
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)						
IB1	ENGINE DOOM MAIN WIDE AND COMIT MIDE (LEET MOK DANEL)						
IB2	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)						
IB4							
IB5	E ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)						
IB6							
IC1	ELOOP NO 2 WIDE AND COMI, WIDE (LEET VICK DANIEL)						
IC2	FLOOR NO.2 WIRE AND COWL WIRE (LEFT KICK PANEL)						
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	INICTELIMENT DANIEL WIDE AND COWL WIDE INICTELIMENT DANIEL DEINICODOEMENT LLIV						
IF2	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)						
IF3	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)						

### 



### :Location of Splice Points



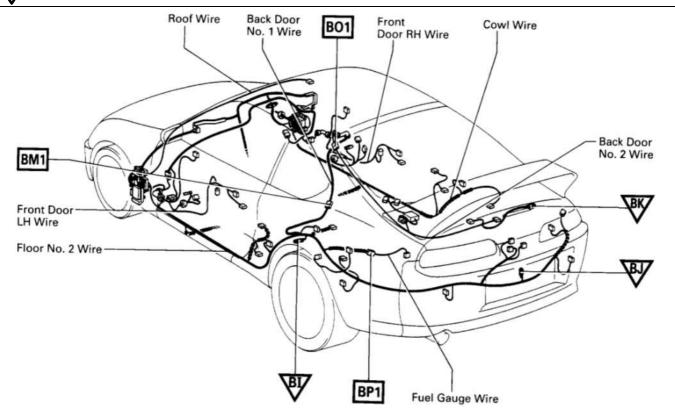


CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IG1	INSTRUMENT PANEL WIRE AND COWL NO.3 WIRE (BEHIND HEATER CONTROL SW)
IH1	
IH2	INSTRUMENT PANEL WIRE AND CONSOLE BOX WIRE (UNDER THE INSTRUMENT PANEL BRACE RH)
IH3	
II1	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
IJ1	ENGINE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

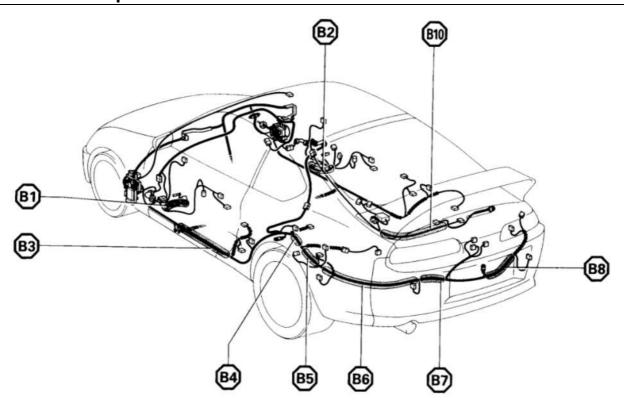
### **G ELECTRICAL WIRING ROUTING**

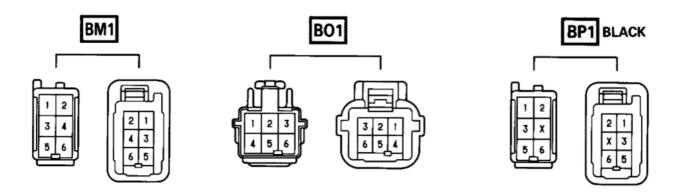
: Location of Connector Joining Wire Harness and Wire Harness

: Location of Ground Points



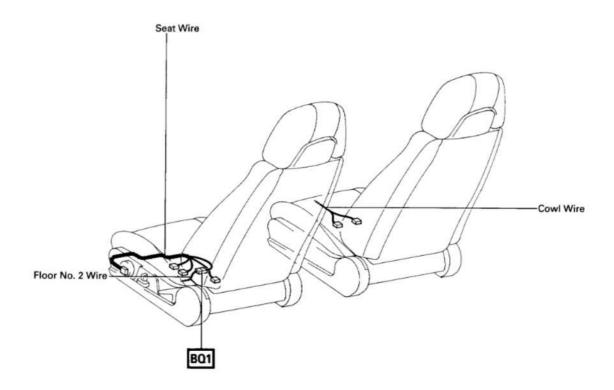
### :Location of Splice Points



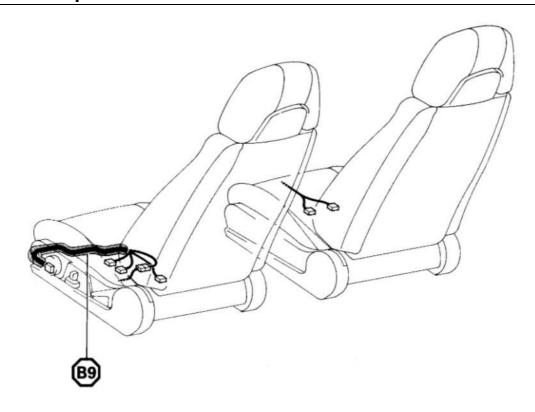


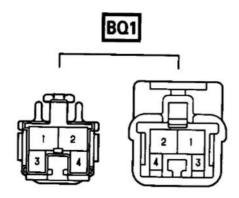
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
BM1	BACK DOOR NO. 1 WIRE AND FLOOR NO.2 WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
BO1	BACK DOOR NO. 2 WIRE AND BACK DOOR NO. 1 WIRE (BACK DOOR UPPER LEFT)
BP1	FUEL GAUGE WIRE AND FLOOR NO.2 WIRE (LUGGAGE ROOM FRONT LH)

# ☐ : Location of Connector Joining Wire Harness and Wire Harness

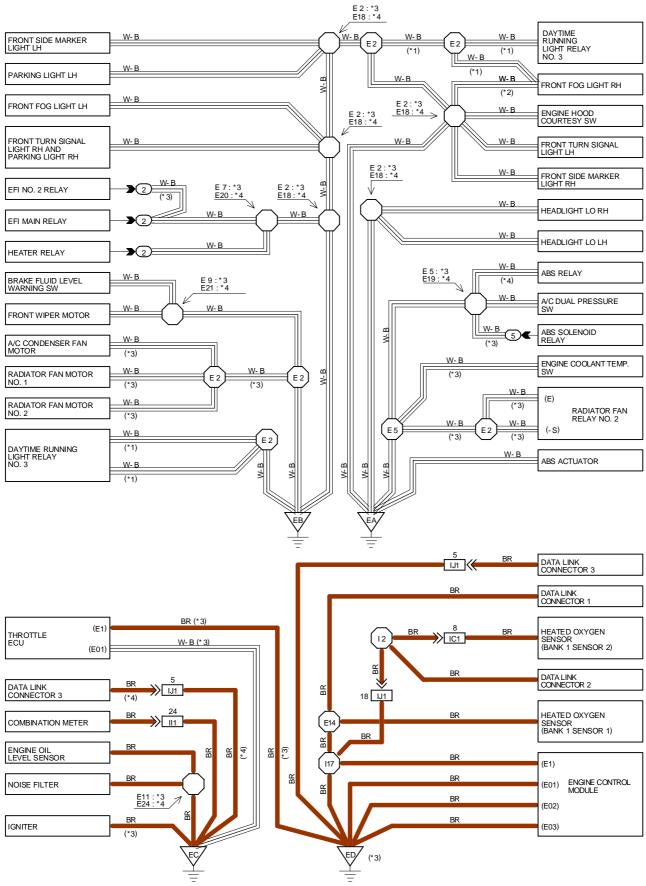


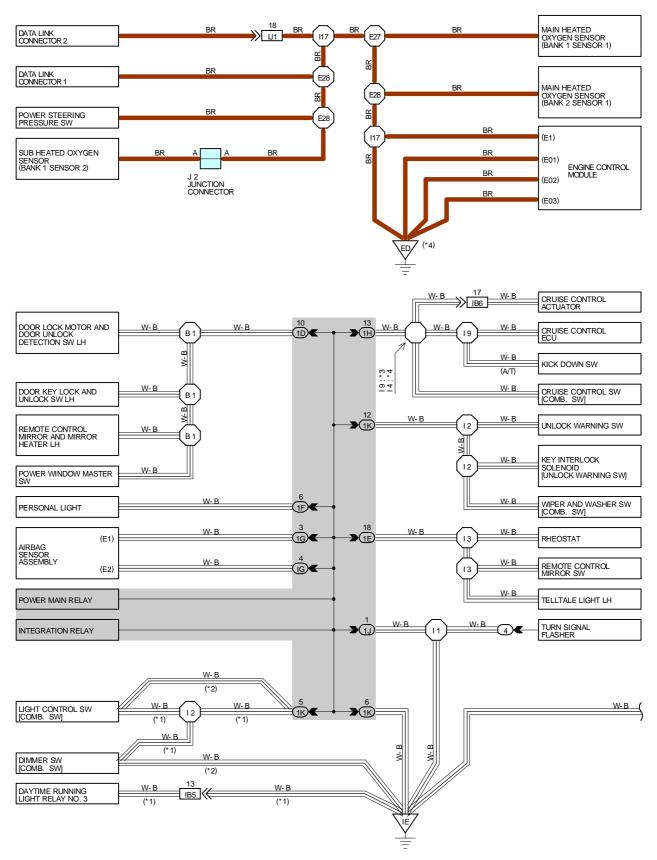
# :Location of Splice Points

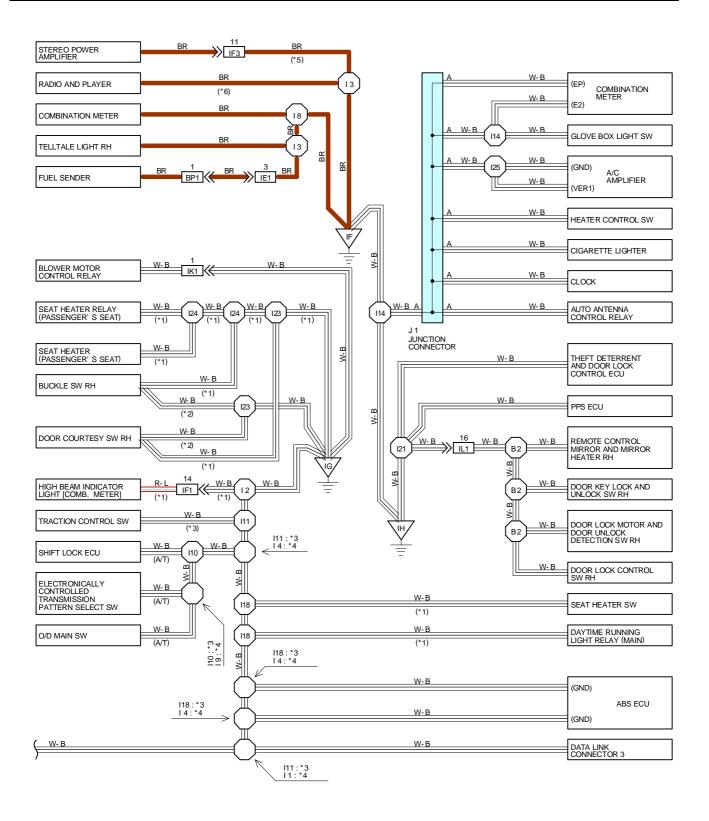


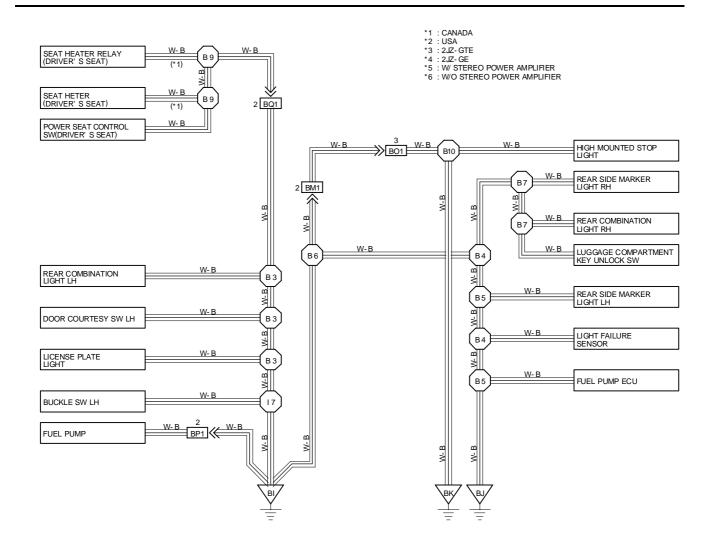


CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
BQ1	FLOOR NO. 2 WIRE AND SEAT WIRE (UNDER THE FRONT LH SEAT)











### : PARTS LOCATION

C	ODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
	J1	29	J2	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								
1H	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)						
1J	20	COVIL WIRE AND JID NO. I (LEFT RICK PAINEL)						
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							
LA	34 (2JZ-GE)	Non-Size of Morris English							
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER							
LD	34 (2JZ-GE)	TRONT SIDE OF LEFT FINDER							
EC	32 (2JZ-GTE)	FRONT SIDE OF INTAKE MANIFOLD							
EC	34 (2JZ-GE)	TRONT SIDE OF INTAKE WANTI CED							
ED	32 (2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD							
ED	34 (2JZ-GE)	CONTROL OF INTERNATIONS							
ΙE	36	LEFT KICK PANEL							
IF	30	LEFT RICK PAINEL							
IG		DIGIT YOU DAYS							
IH	36	RIGHT KICK PANEL							
BI	40	LEFT QUARTER PILLAR							
BJ	40	LOWER BACK PANEL CENTER							
BK	40	RIGHT SIDE OF HIGH MOUNTED STOP LIGHT							

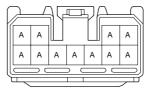
### : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS					
E2			l10	- 38	COMUNATIDE					
E5	00	ENGINE BOOM MAIN WIRE	l11	38	COWL WIRE					
E7	32	ENGINE ROOM MAIN WIRE	l14	38	INSTRUMENT PANEL WIRE					
E9			l17	38	ENGINE WIRE					
E14	32	ENGINE WIRE	l18	38	COWL WIRE					
E18	8		l21	38	INSTRUMENT PANEL WIRE					
E19	]	ENGINE DOOM MAIN WIDE	123	00	COWL WIRE					
E20	34	ENGINE ROOM MAIN WIRE	124	38	COVVL WIRE					
E21			125	38	INSTRUMENT PANEL WIRE					
E24			B1	40	FRONT DOOR LH WIRE					
E27	34	ENGINE WIRE	B2	40	FRONT DOOR RH WIRE					
E28			В3							
I1	00	COMI MIDE	B4							
12	38	COWL WIRE	B5	40	FLOOR NO. 2 WIRE					
13	38	INSTRUMENT PANEL WIRE	B6	1						
14	38	COWL WIRE	B7							
17	38	FLOOR NO. 2 WIRE	B9	42	SEAT WIRE					
18	38	INSTRUMENT PANEL WIRE	B10	40	BACK DOOR NO. 2 WIRE					
19	38	COWL WIRE								



(HINT : SEE PAGE 7)

J 1



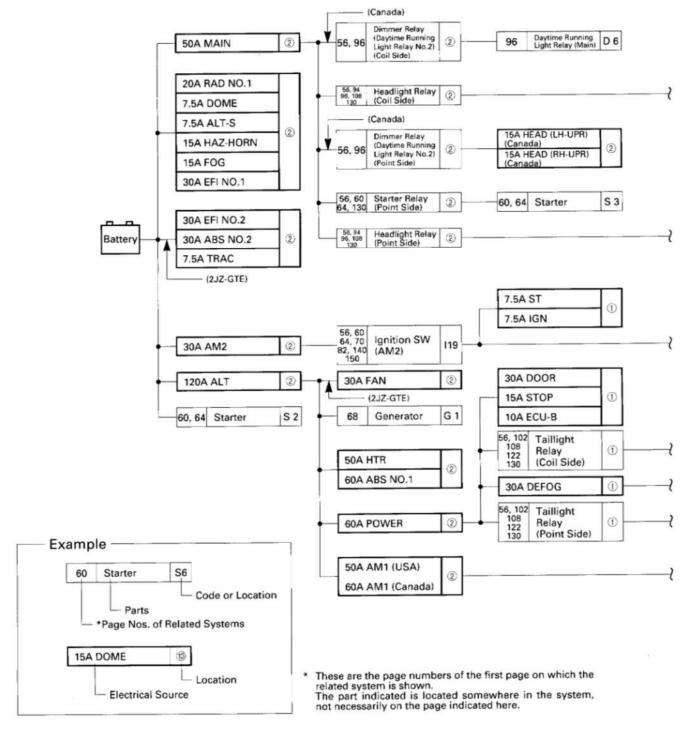
J 2

(HINT : SEE PAGE 7)

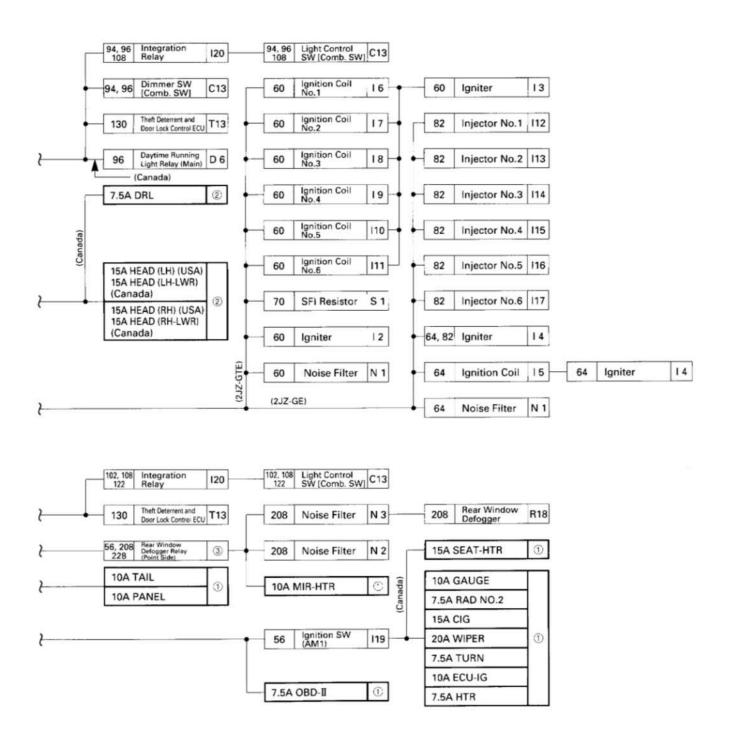
### **H POWER SOURCE (Current Flow Chart)**

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)

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

M	\';	Page Nos. of Related Systems	228	228	228	159 164	159	159	228	208 228	159	159	164	164	228	122	210	210	197	116	220	228	206	206
Location		Parts  Code or Location	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 neiay		AC Ampimer			ABS ECU		Air Inlet Control Servo Motor	Ashtray Illumination	Auto Antenna Control Relay	Auto Antenna Motor	Airbag Sensor Assembly	Back-Up Light SW (M/T)	Brake Fluid Level Warning SW	Blower Motor Control Relay	Buckle SW LH	Buckle SW RH
دّ	(	CB or Fuse	A 2	А3	A 4	A 6	A 8	A 9	A12	A14	A18	A19	A20	A21	A24	A29	A30	A33	A34	B 1	B 2	B 4	B 6	B 7
Г	7.5A	HTR		•	•				•	•					•									
1	7.5A	IGN																	•					
l	7.5A	OBD-II																						
l	7.5A	RAD NO.2															•							
l	7.5A	ST																						
l	7.5A	TURN																						
1	10A	ECU-B								•									•					
ı		ECU-IG									•		•				•						•	•
	10A	GAUGE				•		•		•	•	•	•	•						•	•			
1		MIR-HTR																						
ł	10A	PANEL														•								
	Entire province travel no	TAIL																						
	15A	CIG							•										•					
1	15A	SEAT-HTR								-														
	15A	STOP									•		•											
	20A	WIPER																						
	30A	DEFOG							$\overline{}$															
	30A	DOOR																						177
$\vdash$	7.5A	ALT-S	-																					
	7.5A	DOME																						
	7.5A	DRL																						
	7.5A	TRAC																						
		FOG																						
	15A	HAZ-HORN																						
		HEAD (LH) *2																						
	15A	HEAD (LH-LWR) *1												1-										
		HEAD (LH-UPR) *1																						
2	15A	HEAD (RH) *2															-							
	15A	HEAD (RH-LWR) *1					-	_		-		-												
	mentaciona de la company	HEAD (RH-UPR) *1							-															
	20A	RAD NO.1			-												•	•						
		EFI NO.1							1	_				-			_	Ť						
	30A	EFI NO.2					-		-		-	_												
		FAN	•		-	-		-		_					1				•					
		HTR	-	-		-		-		-				$\vdash$					_			•		
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	60A	ABS NO.1				•	_	_	_			_	_	_	_							_		

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)

186	122	186	60, 64 70, 82 130, 220	140 150 169 174 220	122	70 82 181 228	111	140 150 220	220	94 96	111	94	106	129	111	126	203	174	140 150 174	70, 82 140, 150 159, 164 197	96	96	70 140 169 174 197	96 220	118	70 82
Cigarette Lighter	Cigarette Lighter Illumination	Clock	Clutch Start SW	Combination Meter	uo	Speedometer [Comb. Meter]	Turn Signal Indicator Light [Comb. Meter]	N. S. Sanda	Combination Meter	High Beam Indicator Light [Comb. Meter]	Turn Signal Indicator Light (Comb. Meter)	Dimmer SW [Comb. SW]	Fog Light SW [Comb. SW]	Horn SW [Comb. SW]	Turn Signal SW [Comb. SW]	Front Wiper and Washer SW [Comb. SW]	Rear Wiper and Washer SW [Comb. SW]	Cruise Control Clutch SW	Cruise Control ECU	Data Link Connector 1	Daytime Running Light	Relay No.3	Data Link Connector 2	Daytime Running Light Relay (Main)	Diode (Interior Light)	Diode (Idle-Up)
_	C 7	C 8	C 9		C			C11		C12			C	13			14	C15	C16	D 1	D 2	D 3	D 5	D 6	D 7	D 8
•	•	•	•	•	•	•	•	•	•		•				•	•	•	•	•	•			•	•		•
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<sup>(4):</sup>R/B No. 5 (See page 23)

	*Page Nos. of Related Systems	118	118	70 82	140	220	228	220	122	60, 64 70, 82 140, 150 140, 150 220, 228	106	106	102	102	111	102 111	126	220	70 82
Location	Parts  Code or Location	Door Courtesy SW LH	Door Courtesy SW RH	Data Link Connector 3	Electronically Controlled Transmission Solenoid	Engine Coolant Temp. Sender	Engine Coolant Temp. SW	Engine Oil Level Sensor	Electronically Controlled Transmission Pattern Select SW	Engine Control Module	Front Fog Light LH	Front Fog Light RH	Front Side Marker Light LH	Front Side Marker Light RH	Front Turn Signal Light LH	Front Turn Signal Light RH and Parking Light RH	Front Wiper Motor	Fuel Pump and Sender	Fuel Pump ECU
Loc	CB or Fuse	D10	D11	D17	E 2	E 4	E 5	E 7	E 8	E 9 E10	F3	F4	F5	F6	F7	F8	F9	F14	F15
_	7.5A HTR	1				-	•	-	11 10 10 10 10 10 10 10 10 10 10 10 10 1	•	-					-	_	_	_
	7.5A IGN	+		-	-		_		-									_	
	7.5A OBD-II	+	-	•								_					-		
	7.5A RAD NO.2	+		_	-					1	-	$\neg$							
	7.5A ST	+	-							•	$\neg$								
	7.5A TURN	+		_											•	•			
	10A ECU-B	-											_			-			
	10A ECU-IG	+-	-				-							-			-		
	10A GAUGE	1				•		•		•			-				-	•	
1	10A MIR-HTR	+				_		-		•							101771		
	10A PANEL	+							•										
	10A TAIL	+					-						•	•		•			
	15A CIG	+	- 1																
	15A SEAT-HTR	+										$\neg$							
	15A STOP	+								•	$\neg$	$\neg$							
	20A WIPER	_													-		•		
	30A DEFOG	+			-						$\neg$	$\neg$							
	30A DOOR	_	H		-														
$\vdash$	7.5A ALT-S	+										$\neg$			_				
	7.5A DOME		•																
	7.5A DRL	Ť													-				
	7.5A TRAC	+		-															
1	15A FOG	1							-		•	•		2					
	15A HAZ-HORN									1					•	•			
	15A HEAD (LH) *2	1																	
	15A HEAD (LH-LWR) *																		
	15A HEAD (LH-UPR) *								-	-	-					-			
(2)	15A HEAD (RH) *2	+																	
	15A HEAD (RH-LWR) *1									-	-								
	15A HEAD (RH-UPR) *	1										$\neg$							
	20A RAD NO.1	1							1 1										
1	30A EFI NO.1				•				17										•
	30A EFI NO.2	1																	•
	30A FAN																		
	50A HTR																		
	60A ABS NO.1			-						1				100					

<sup>\*</sup> 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)

68 220	122	122	94 96	94 96	94 96	94 96	70	129	129	111 122	70	122 228	114	70 82	118	102	102 114 220	118	118	70, 82 140, 150	82	82	220	122 140 150	60, 64 70, 82 116, 130 140, 150 174, 220	181
Generator	Glove Box Light	Glove Box Light SW	Headlight Hi LH	Headlight Hi RH	Headlight Lo LH	Headlight Lo RH	Heated Oxygen Sensor (Bank 1 Sensor 1)	Horn LH	Horn RH	Hazard SW	Heated Oxygen Sensor (Bank 1 Sensor 2)	Heater Control SW	High Mounted Stop Light	Idle Air Control Valve	Ignition Key Cylinder Light	License Plate Light	Light Failure Sensor	Luggage Compartment Light	Luggage Compartment Light SW	Mass Air Flow Meter	Main Heated Oxygen Sensor (Bank 1 Sensor 1)	Main Heated Oxygen Sensor (Bank 2 Sensor 1)	Oil Pressure SW	O/D Main SW and A/T Indicator Illumination	Park/Neutral Position SW, Back-Up Light SW and A/T Indicator Light SW (A/T)	PPS ECU
G 2	G 3	G 4	H 1	H 2	Н3	H 4	Н5	Н8	Н9	H10	H11	H12	H14	11	118	L 1	L 2	L 4	L 5	M 1	M 2	М 3	02	05	P 2	P 4
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			•	•	•	•	•				•			•						•	•	•				

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

1		Page Nos. of Related Systems	220	118	136	136	136	136	190	190	102	228	228	228	122 210 218	122	188	122	116	111	114	102	116	111
Location		Parts  Code or Location	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 (Driver's Seat)	Power Seat Motor (Driver's Seat Slide Control)	Parking Light LH	Radiator Fan Motor No.1	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]	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 IRear Comb. Light RH
Š	١.,	CP or Euro	P 5	P 6	P 7	P 8	P 9	P10	P11	P12	P13	R 1	R2	R 3	R 4	R6	R 7	R8		R	9		R	10
_	-	CB or Fuse	-		-	-	_	-	-		-		•	•		-		-	-				_	
	7.5A	HTR	-		-			-	_		-		-	_			_						-	
	7.5A	IGN	-					-	-	-		_		-	-		-	-	-		-			
	7.5A	OBD-II	-		-	-	_	-	-		-		-		•	-	•	$\vdash$	-			-	-	$\vdash$
	7.5A	RAD NO.2	_	-	-	-	-		-		-	-	-	-	•	-	_			-	-		-	
	7.5A	ST		-	-		-		-	-		-	-							•			_	•
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1	10A	GAUGE	•	-		-	-	-	-	-	-		- 1	-		-	-		•		-	-	_	
~	10A	MIR-HTR	-	-	-	-		-	-	-	-	-	-		-	_		•	-		-	-	$\vdash$	-
	10A	PANEL	<u> </u>		_	-	-	-	-	-	_	-	-	-	•	•	-	•		-	-	•		-
	10A	TAIL	-		_	-		-	-		•	-	-	-		_	_	-	-		-	_	-	-
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	15A	FOG								_						ļ.,		_	_	-	-	-	┞	-
	15A	HAZ-HORN						_	_			_		_	_		_	_	1	•	-	-	<u> </u>	•
	15A	HEAD (LH) *2													_								_	_
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(8)	15A	HEAD (LH-UPR) *1																				_		_
2	15A	HEAD (RH) *7																			_		_	
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	15A	HEAD (RH-UPR) *1														1		1_			_	_	1	
	20A	RAD NO.1													•									
	30A	EFI NO.1											1								1		1	
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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)

114	102	102	102	203	188 208	188 208	228	122 192	184	210 214	70, 82 114, 140 150, 159 164, 174 184	192	192	192	192	82	130	159 164	70 82	169 220	68	118	102 114	194	197	70, 82 122, 140 150, 174 181, 220 228
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	Radiator Fan Motor No.2	Seat Heater SW	Shift Lock ECU	Stereo Power Amplifier	Stop Light SW	Seat Heater (Driver's Seat)	Seat Heater (Front Passenger's Seat)	Seat Heater Relay (Driver's Seat)	Seat Heater Relay (Front Passenger's Seat)	Sub Heated Oxygen Sensor (Bank 1 Sensor 2)	Theft Deterrent Horn	ABS Warning Light [Telltale Light LH]	Malfunction Indicator Lamp [Telltale Light LH]	Telltale Light LH	Charge Warning Light [Telltale Light RH]	Open Door Warning Light [Telltale Light RH]	Rear Light Warning Light [Telltale Light RH]	Seat Belt Warning Light [Telitale Light RH]	SRS Warning Light [Telltale Light RH]	Telltale Light RH
	10	R11	R12	R15		R17	R20	S 6	S 7	S 8	S11		S13	S14	S15	S16	T 1		Т5					Т6		
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): R/B No. 5 (See page 23)

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

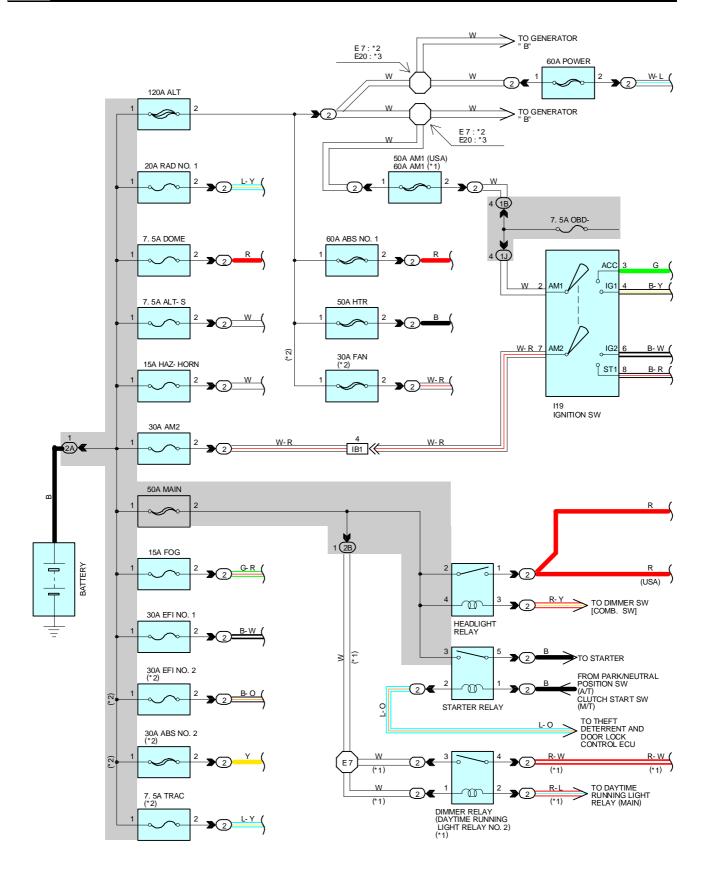
1	*Page Nos. of Related Systems	130 136	122	206	206	60 64 130 136	169	164 169	82	70 82	70 82	70	70	70 82	70	70	70, 82 140, 150 174, 181 220, 228	126 203	102	108 118 194	130 136	130 136
Location	Parts Code or Location	Theft Deterrent and Door Lock Control ECU	Traction Control SW	Tension Reducer Solenoid LH	Tension Reducer Solenoid RH	Theft Deterrent and Door Lock Control ECU	- CU	Inrottle ECO	VSV (ACIS)	VSV (EGR)	VSV (EVAP)	VSV (Exhaust Bypass Valve)	VSV (Exhaust Gas Control Valve)	VSV (Fuel Pressure Up)	VSV (Intake Air Control Valve)	VSV (Waste Gate Valve)	Vehicle Speed Sensor No.1 (Combination Metar)	Washer Motor	Diode	Integration Relay	Power Main Relay (Point Side)	Power Main Relay (Coil Side)
00	CD av Funa	T7	Т8	T11	T12	T13	T15	T16	V 1	V 2	V 3	V 4	V 5	V 6	V 7	V 8	V10	W 1		(1	0	
_	CB or Fuse	1.,	10		1.12	110	110	1.10				-			-			-				
	7.5A HTR	+		-			-	-	-		-	-	-		-						-	-
	7.5A IGN	+	_	-		-	-						-					-				
	7.5A OBD-II	+		-				-	-		-		-	-						•		
	7.5A RAD NO.2	+	_			_	<u> </u>		-		-		-	-	-	-		-		-		
	7.5A ST	-	-	-	-	•	-		_	-		-	-					-	-	-	-	-
	7.5A TURN	+	-	_	-	-	-	_			-	-	-	-	-			-			-	-
	10A ECU-B	+-		-	_	-	-	•	-				-			-	-	-		-	-	•
	10A ECU-IG	•	-	•	•	-	-	_		-	-	-	-	-	-		•		-	•	-	_
Û	10A GAUGE	+	-	-	-		_	•			-	-	-	-					-	-		
	10A MIR-HTR	+	_	-	-	-		-	_	-	-	_	-	-		-			-			-
	10A PANEL	+	•	-	-				-	-	-	-	-		-	_		-	•			-
	10A TAIL	-	_	-		-		<u></u>			-	-	-	-	-	_		-	•			-
	15A CIG	•		-		-	-			-	-	-	-	-		_	-	_	-	-		
	15A SEAT-HTR	-		-	-	_	-				_	_	-	-		-		_	-	-		
	15A STOP	-	-	-	-	-		-			-	-		-		_		_				
	20A WIPER	+	-	-	$\vdash$	_	-					_	-	-		_		•	-	-	-	
	30A DEFOG	-	_	-	-	-	-		-	-		-	-	-		-		_	-	-	•	-
	30A DOOR	•		-	-	_	-	_		-	_	⊢	-	-	-	_			-	$\vdash$	•	_
	7.5A ALT-S	-	-	-		_				-		-		-						_	-	_
	7.5A DOME	+		-	-	•	-		-		-	-	-	-				-		•	-	•
	7.5A DRL	-		_	-		-	_			-	-	-	-					-		-	-
	7.5A TRAC		_	-	-	-	_	•	-	-	-	_	-	-	-				-		-	-
	15A FOG	1		-		_	-	-					-		-	-		-	-		-	-
	15A HAZ-HORN	$\perp$	_	-	<u></u>	•	_	-	_		_	-	-	-	-			_	_	-	-	-
	15A HEAD (LH) *2			_			_				-	-			-					_	-	-
	15A HEAD (LH-LWR) *	_		-		_	_			-		-		_	-			-			-	-
2	15A HEAD (LH-UPR) *	1							_			-								-		-
8/	15A HEAD (RH) *?	1		1				_		_	_	-	-					_	_		_	
	15A HEAD (RH-LWR) *	1		-						_	_	-	-	-				-	-		_	-
	15A HEAD (RH-UPR) *	1	-				-	-		-		-		-	-	_			-	-	-	-
	20A RAD NO.1	_		-	-			_	_	-	_	-	-		_	_		-			-	-
	30A EFI NO.1	_		-		_	•		•	•	•	•	•	•	•	•			-	-	-	-
	30A EFI NO.2	_	-	-	_		_	-				-		-	-	_			-	_	-	
	30A FAN	1				-	_		_					-	-		_		-		_	
	50A HTR		_		L.		L_						-					_	-	-	-	-
	60A ABS NO.1																					1

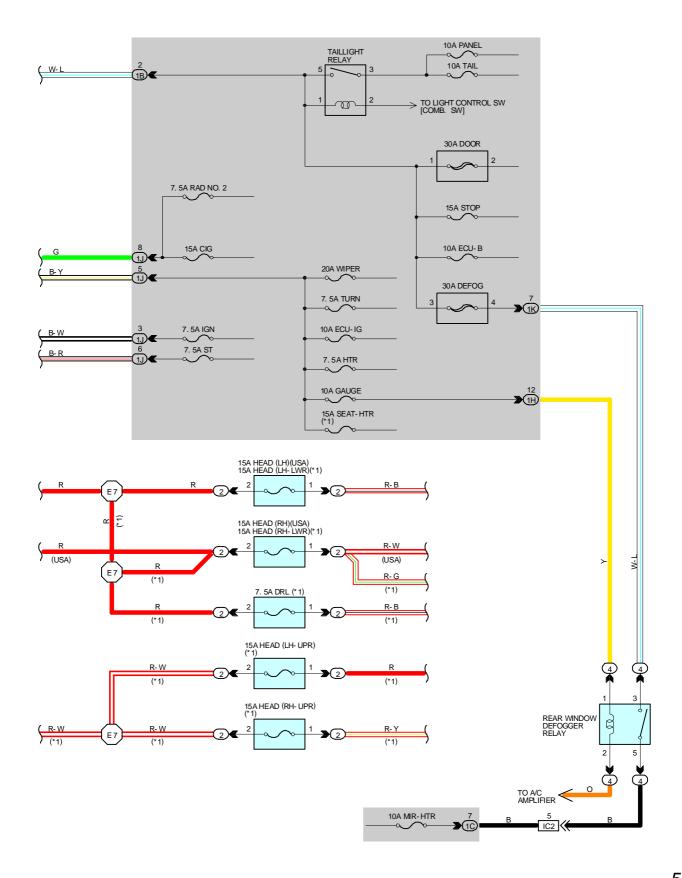
These are the page numbers of the first page on which the related system is shown.
 The part indicated is located somewhere in the system, not necessarily on the page indicated here.

[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)

228	228	70 82 140 150 169	70	70	106	106	228	228	129 130	129 130	60 64 130	220	56 208 228	111	164	164	164	169
A/C Magnetic Clutch Relay (Point Side)	A/C Magnetic Clutch Relay (Coil Side)	EFI Main Relay (Point Side)	EFI No.2 Relay (Point Side)	EFI No.2 Relay (Coil Side)	Fog Light Relay (Point Side)	Fog Light Relay (Coil Side)	Heater Relay (Point Side)	Heater Relay (Coil Side)	Horn Relay (Point Side)	Horn Relay (Coil Side)	Starter Relay (Coil Side)		Rear Window Defogger Relay (Coil Side)	Turn Signal Flasher	or Relay le)	ABS Solenoid Relay (Point Side)	ABS Solenoid Relay (Terminal 5)	Fraction Solenoid Relay
A/C Magnet (Point Side)	A/C Magn (Coil Side	EFI Main	EFI No.2 F	EFI No.2	Fog Light	Fog Light	Heater R	Heater R	Horn Rel	Horn Rel	Starter R	Diode	Rear Window De Relay (Coil Side)	Turn Sig	ABS Motor Relay (Point Side)	(Point Side)	ABS Solenoi (Terminal 5)	Traction So
					(2	2)							(3)			(	4)	
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): R/B No. 5 (See page 23)





### SERVICE HINTS

#### **HEADLIGHT RELAY (USA)**

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

#### **HEADLIGHT RELAY (CANADA)**

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

### **TAILLIGHT RELAY**

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

#### **119 IGNITION SW**

2-3: CLOSED WITH THE IGNITION KEY AT **ACC** OR **ON** POSITION 2-4: CLOSED WITH THE IGNITION KEY AT **ON** OR **ST** POSITION 7-6: CLOSED WITH THE IGNITION KEY AT **ON** OR **ST** POSITION 7-8: CLOSED WITH THE IGNITION KEY AT **ST** POSITION

### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
l19	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		
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

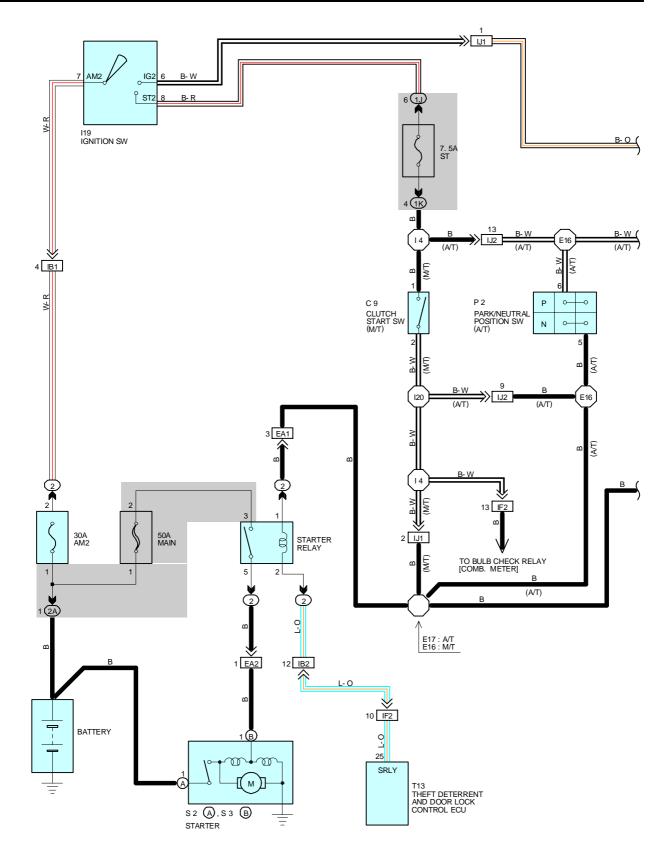
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)

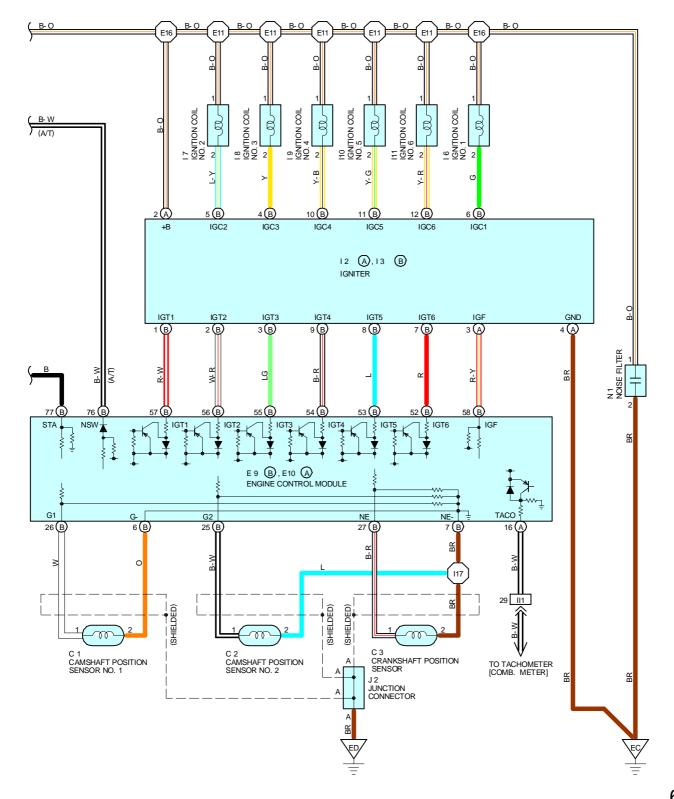
### : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E7	32	ENGINE ROOM MAIN WIRE	E20	34	ENGINE ROOM MAIN WIRE











# B :

### STARTING AND IGNITION (2JZ-GTE)

### SERVICE HINTS -

#### **119 IGNITION SW**

7-8 : CLOSED WITH THE IGNITION SW AT ST POSITION

7-6 : CLOSED WITH THE IGNITION SW AT ON OR ST POSITION

### P2 PARK/NEUTRAL POSITION SW (A/T)

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

### C9 CLUTCH START SW (M/T)

1-2 : CLOSED WITH THE CLUTCH PEDAL FULLY DEPRESSED

### S2 (A), S3 (B) STARTER

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

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

### : PARTS LOCATION

CO	DE	SEE PAGE	CO	DE	SEE PAGE	CO	DE	SEE PAGE
С	:1	24	13	В	25	J	2	29
С	2	24	16	6	25	N	1	25 (2JZ-GTE)
С	:3	24 (2JZ-GTE)	17	7	25	Р	2	25 (2JZ-GTE)
С	9	28	18	3	25	S2	Α	25 (2JZ-GTE)
D	1	24 (2JZ-GTE)	19	9	25	S3	В	25 (2JZ-GTE)
E9	В	29	I1	0	25	T1	13	29
E10	Α	29	I1	1	25			
12	Α	25	I1	9	29			

### ) : RELAY BLOCKS

COL	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 PANEL)				
IK	COWL WIRE AND 3/B NO. 1 (LEFT RICK PAINEL)					
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)				

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

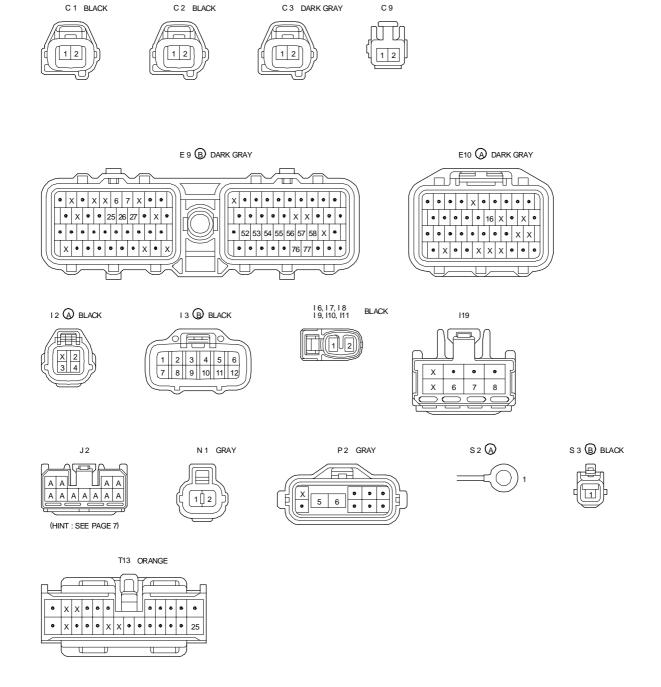
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32(2JZ-GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA2	32	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB2	30	ENGINE ROOM MAIN WIKE AND COWL WIKE (LEFT RICK PAINEL)
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	30	ENGINE WIRE AND COWE WIRE (RIGHT RICK PANEL)

### : GROUND POINTS

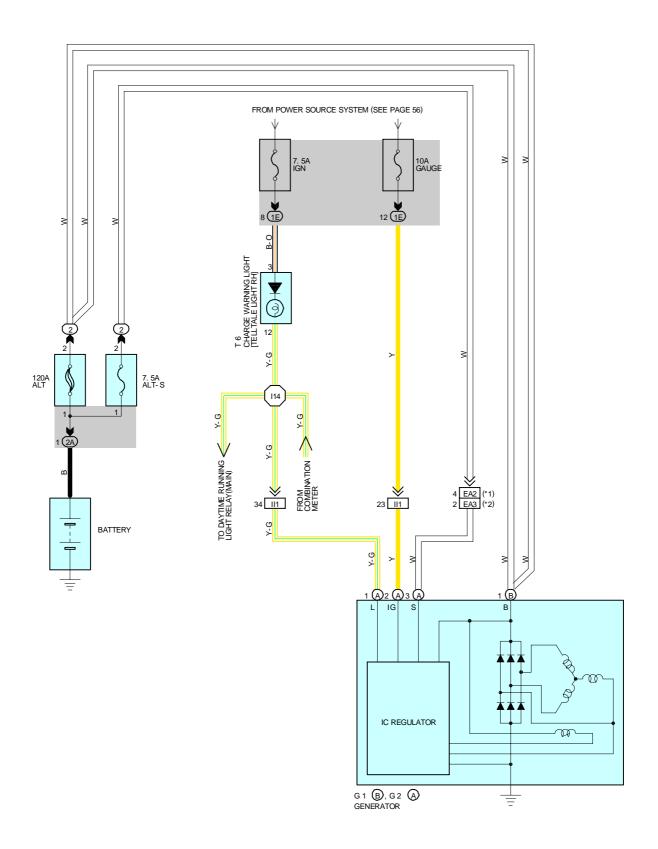
CODE	SEE PAGE	GROUND POINTS LOCATION				
EC	32 (2JZ-GTE)	RONT SIDE OF INTAKE MANIFOLD				
ED	32 (2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD				

### : SPLICE POINTS

_					
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E11			14		
E16	32	ENGINE WIRE	l17	38	COWL WIRE
E17			120		







### SERVICE HINTS

### **G2 (A) GENERATOR**

(A) 3-GROUND: 13.9-15.1 VOLTS WITH THE ENGINE RUNNING AT 2000 RPM AND 25 C (77 F)

13.5-14.3 VOLTS WITH THE ENGINE RUNNING AT 5000 RPM AND 115 • C (239 • F)

(A) 1-GROUND; 0-4 VOLTS WITH THE IGNITION SW AT ON POSITION AND THE ENGINE NOT RUNNING

### : PARTS LOCATION

CO	DE	SEE PAGE	CODE		SEE PAGE	CODE	SEE PAGE
C1	_	24 (2JZ-GTE)	00		24 (2JZ-GTE)	T6	29
G1	В	26 (2JZ-GE)	G2	А	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

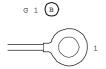
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)			
1E	1E 20 INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)				
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)			

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

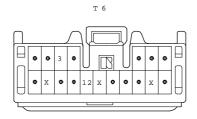
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)				
EA2	32	FAICINE WIDE AND ENGINE DOOM MAIN WIDE (NEAD THE D/D NO. 2)				
EA3	34	NGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)				
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)				

### : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
l14	38	INSTRUMENT PANEL WIRE			







### **ENGINE CONTROL (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. SIGNAL CIRCUIT

THE ENGINE COOLANT TEMP. SENSOR DETECTS THE ENGINE COOLANT TEMP. WHICH IS INPUT INTO **TERMINAL THW** OF THE ENGINE CONTROL MODULE AS A CONTROL SIGNAL.

(2) INTAKE AIR TEMP. SIGNAL CIRCUIT

THE INTAKE AIR TEMP. SENSOR IS INSTALLED IN THE MASS AIR FLOW METER AND DETECTS THE INTAKE AIR TEMP. WHICH IS INPUT AS A CONTROL SIGNAL TO **TERMINAL THA** OF THE ENGINE CONTROL MODULE.

(3) OXYGEN DENSITY SIGNAL CIRCUIT

THE OXYGEN DENSITY IN THE EXHAUST EMISSION IS DETECTED BY THE HEATED OXYGEN SENSOR SIDE AND INPUT AS A CONTROL SIGNAL TO **TERMINAL OX1, OXS** OF THE ENGINE CONTROL MODULE.

(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.

(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. 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 NO. 1 INSTALLED IN THE TRANSMISSION AND THE SIGNAL IS INPUT TO **TERMINAL SP1** OF THE ENGINE CONTROL MODULE VIA THE COMBINATION METER.

(7) NEUTRAL POSITION SIGNAL CIRCUIT

THE PARK/NEUTRAL POSITION 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.

(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 AS A CONTROL SIGNAL.

(9) BATTERY SIGNAL CIRCUIT

VOLTAGE IS CONSTANTLY APPLIED TO **TERMINAL BATT** OF THE ENGINE CONTROL MODULE. WITH THE IGNITION SW TURNED ON, THE VOLTAGE FOR ENGINE CONTROL MODULE START-UP POWER SUPPLY IS APPLIED TO **TERMINAL +B** OF THE ENGINE CONTROL MODULE VIA EFI MAIN RELAY.

THE CURRENT FLOWING THROUGH THE **IGN** FUSE FLOWS TO **TERMINAL IGSW** OF THE ENGINE CONTROL MODULE.

(10) INTAKE AIR VOLUME SIGNAL CIRCUIT

INTAKE AIR VOLUME IS DETECTED BY THE MASS AIR FLOW METER AND THE SIGNAL IS INPUT TO **TERMINAL VG** OF THE ENGINE CONTROL MODULE 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 AS A CONTROL SIGNAL.

(12) STARTER SIGNAL CIRCUIT

TO CONFIRM WHETHER THE ENGINE IS CRANKING THE VOLTAGE APPLIED TO THE STARTER MOTOR DURING CRANKING IS DETECTED AND THE SIGNAL IS INPUT IN **TERMINAL STA** OF THE ENGINE CONTROL MODULE 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 TERMINALS KNK1 AND KNK2 AS A CONTROL SIGNAL.

#### 2. CONTROL SYSTEM

\* SEQUENTIAL MULTIPORT FUEL INJECTION SYSTEM

THE SEQUENTIAL MULTIPORT 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. THE BEST FUEL INJECTION TIMING IS DECIDED BASED ON THIS DATA AND THE PROGRAM MEMORIZED BY THE ENGINE CONTROL MODULE, AND THE CONTROL SIGNAL IS OUTPUT TO **TERMINALS #10**, **#20**, **#30**, **#40**, **#50** AND **#60** OF THE ENGINE CONTROL MODULE TO OPERATE THE INJECTOR (INJECT THE FUEL). THE SEQUENTIAL MULTIPORT FUEL INJECTION SYSTEM PRODUCES CONTROLS OF FUEL INJECTION OPERATION BY THE ENGINE CONTROL MODULE IN RESPONSE TO THE DRIVING CONDITIONS.

\* ESA SYSTEM

THE ESA SYSTEM MONITORS THE ENGINE CONDITION THROUGH THE SIGNALS INPUT TO THE ENGINE CONTROL MODULE 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 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 EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS FROM (1), (2), (4), (9) TO (11) ETC.),
  AND OUTPUTS CURRENT TO TERMINALS HT1, HTS TO CONTROL THE HEATER
- \* IDLE AIR CONTROL SYSTEM

THE IDLE AIR CONTROL 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 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.

- \* 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 OUTPUTS CURRENT TO **TERMINAL FPC** AND CONTROLS THE FUEL PUMP ECU

AND FUEL PUMP DRIVE SPEED IN RESPONSE TO THE DRIVING CONDITIONS

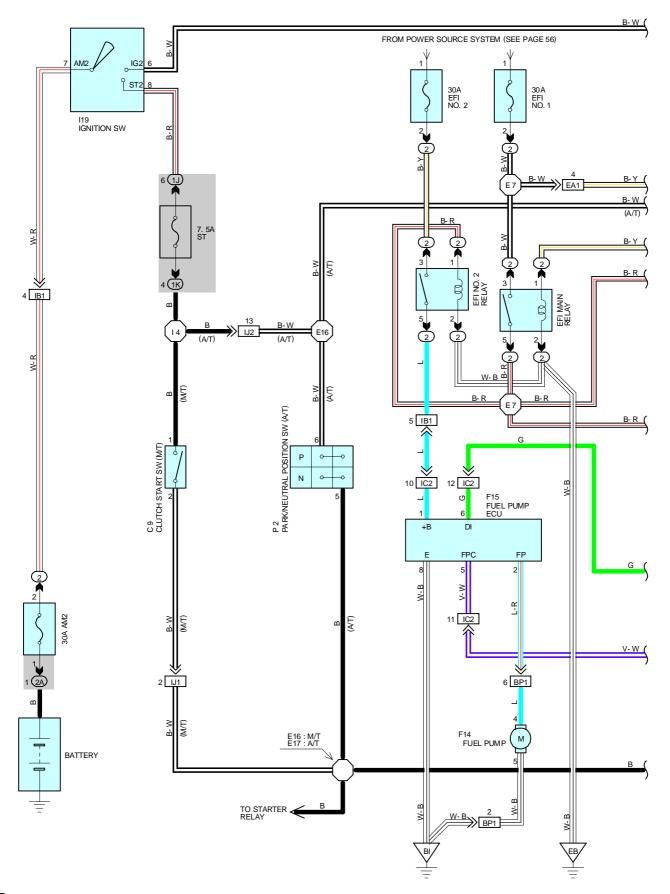
#### 3. DIAGNOSIS SYSTEM

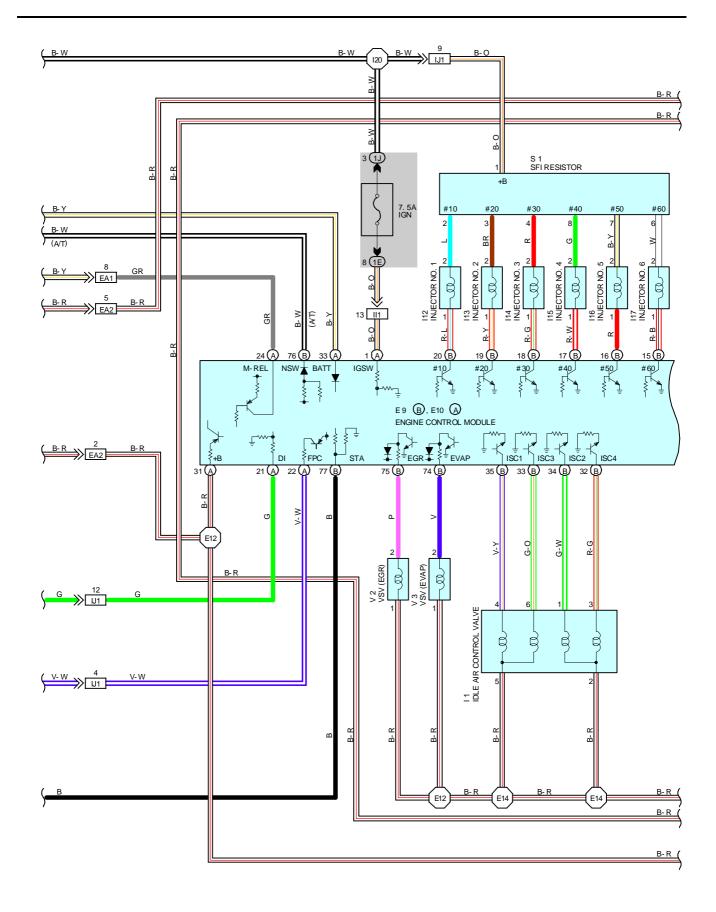
WITH THE DIAGNOSIS SYSTEM, WHEN THERE IS A MALFUNCTION IN THE ENGINE CONTROL MODULE SIGNAL SYSTEM, THE MALFUNCTIONING SYSTEM IS RECORDED IN THE MEMORY. THE MALFUNCTIONING SYSTEM CAN BE FOUND BY READING THE CODE DISPLAYED BY THE MALFUNCTION INDICATOR LAMP.

#### 4. FAIL-SAFE SYSTEM

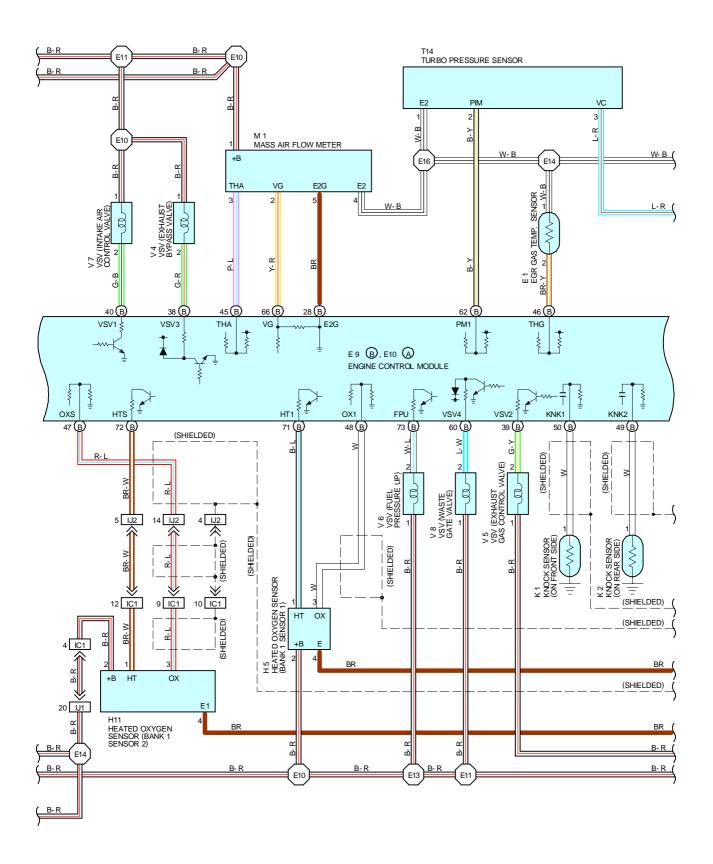
WHEN A MALFUNCTION HAS OCCURRED IN ANY SYSTEM, IF THERE IS A POSSIBILITY OF ENGINE TROUBLE BEING CAUSED BY CONTINUED CONTROL BASED ON THE SIGNALS FROM THAT SYSTEM, THE FAIL-SAFE SYSTEM EITHER CONTROLS THE SYSTEM BY USING DATA (STANDARD VALUES) RECORDED IN THE ENGINE CONTROL MODULE MEMORY OR ELSE STOPS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

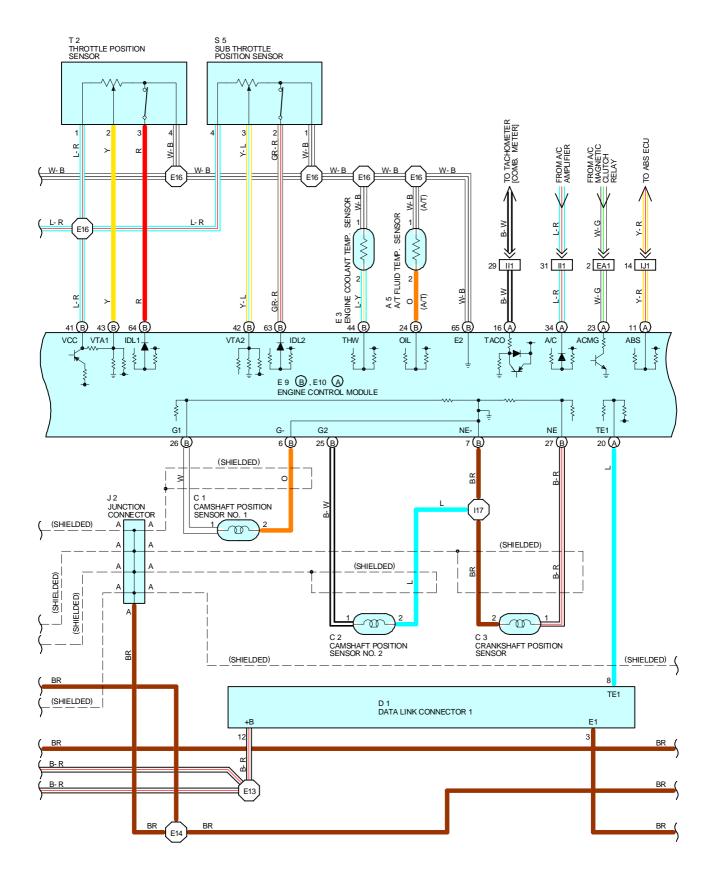




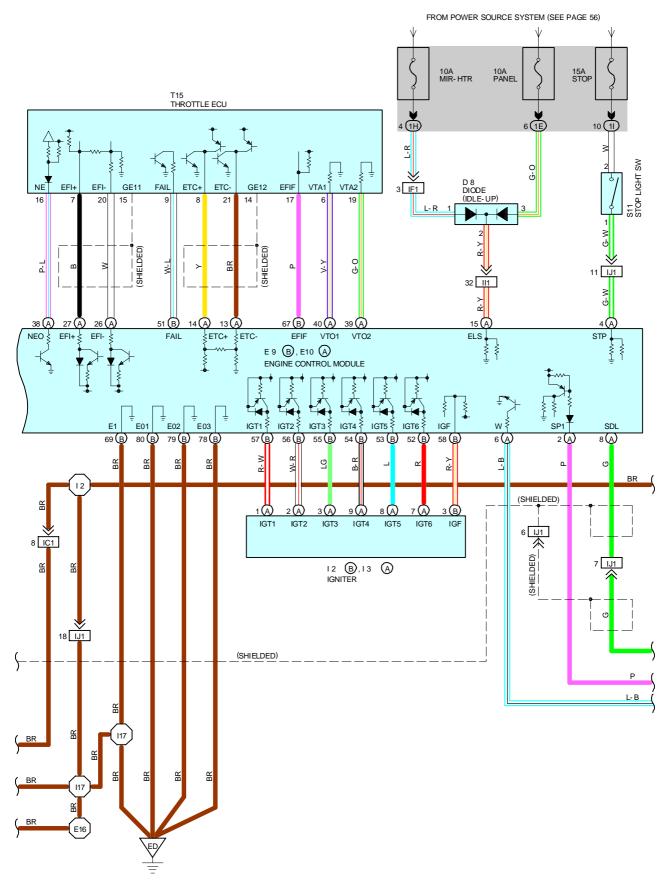


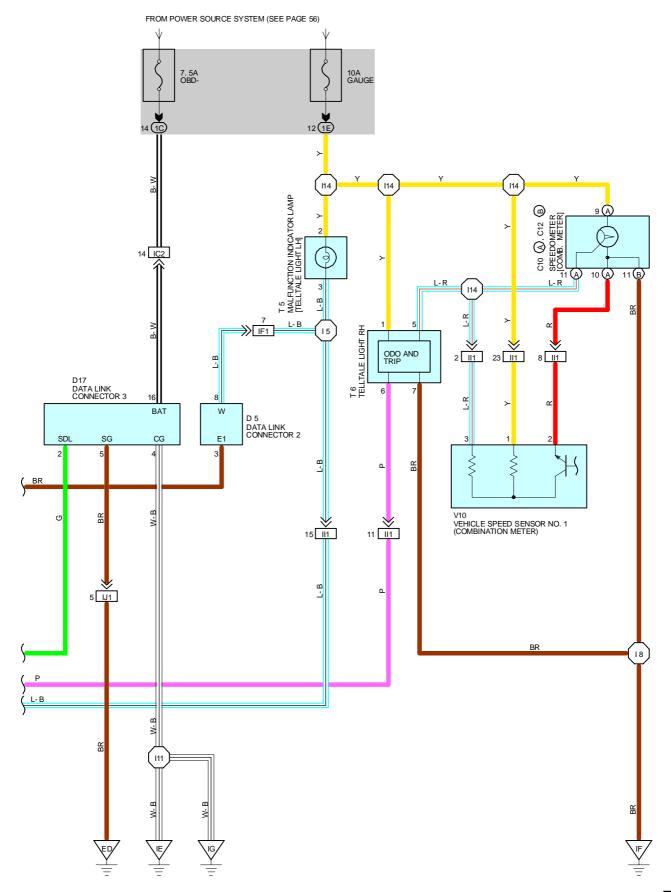














## **ENGINE CONTROL (2JZ-GTE)**

```
SERVICE HINTS
EFI MAIN RELAY
     ②3- ②5: CLOSED WITH THE IGNITION SW AT ON POSITION
EFI NO. 2 RELAY
     ②3- ②5 : CLOSED WITH THE IGNITION SW AT ON POSITION
E3 ENGINE COOLANT TEMP. SENSOR
   1-2 : 10-20 KΩ (-20 •C, -4 •F)
        4-7 KΩ (0•C, 32•F)
        2-3 KΩ (20•C, 68•F)
        0.9-1.3 KΩ (40 · C, 104 · F)
        0.4-0.7 KΩ (60•C, 140•F)
        0.2-0.4 KΩ (80•C, 176•F)
11 IDLE AIR CONTROL VALVE
 1, 3-2 : APPROX. 10-30 \Omega
 4, 6-5 : APPROX. 10-30 Ω
112, 113, 114, 115, 116, 117 INJECTOR
   1-2: APPROX. 13.8 Ω
T2 THROTTLE POSITION SENSOR
   1-4 : APPROX. 4-9 KΩ
   1-3 : 3.3-10.0 \mathbf{K}\Omega WITH THROTTLE VALVE FULLY OPENED POSITION
        0.2-0.8 KΩ WITH CLEARANCE BETWEEN LEVER AND STOP SCREW 0 MM (0 IN.)
   1-2: 0-2.3 KΩ 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.)
E9 (B), E10 (A) ENGINE CONTROL MODULE
(VOLTAGE AT ENGINE CONTROL MODULE WIRING CONNECTORS)
    BATT-E1: ALWAYS 9-14 VOLTS
    IGSW-E1: 9-14 VOLTS WITH THE IGNITION SW ON
   M-REL-E : 9-14 VOLTS WITH THE IGNITION SW ON
      +B-E1: 9-14 VOLTS WITH THE IGNITION SW ON
     IDL1-E2: 9-14 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY OPEN
              0-1.5 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY CLOSED
    VTA1-E2: 0.3-0.8 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY CLOSED
              3.2-4.9 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE OPEN
     THA-E2: 0.5-3.4 VOLTS WITH THE IGNITION SW ON AND THE INTAKE AIR TEMP. 20 C (68 F)
     THW-E2: 0.2-1.0 VOLTS WITH THE IGNITION SW ON AND THE COOLANT TEMP. 80 C (176 F)
     STA-E1: 6-14 VOLTS WITH THE ENGINE CRANKING
       W-E1: 9-14 VOLTS WITH ENGINE IDLING
     IGF-E1: PULSE GENERATION (ENGINE IDLING)
    NSW-E1: 0-3 VOLTS WITH THE IGNITION SW ON AND THE SHIFT LEVER P OR N POSITION
              9-14 VOLTS WITH THE IGNITION SW ON AND THE SHIFT LEVER EXCEPT P OR N POSITION
         SP1: PULSE GENERATION
     TE1-E1: 9-14 VOLTS WITH THE IGNITION SW ON
     A/C-E1: 0-1.5 VOLTS WITH THE IGNITION SW ON AND THE A/C OFF
              7.5-14 VOLTS WITH THE IGNITION SW ON AND THE A/C ON
     ELS-E1: 9-14 VOLTS WITH THE TAILLIGHT ON, DEFOGGER ON
              0-1.5 VOLTS WITH THE TAILLIGHT OFF, DEFOGGER OFF
     STP-E1: 7.5-14 VOLTS WITH THE STOP LIGHT SW ON (BRAKE PEDAL DEPRESSED)
              0-1.5 VOLTS WITH THE STOP LIGHT SW OFF
     ISC1, ISC2, ISC3, ISC4-E1: PULSE GENERATION (ENGINE IDLING)
 #10, #20, #30, #40, #50, #60-E01, E02: PULSE GENERATION (ENGINE IDLING)
(RESISTANCE OF ENGINE CONTROL MODULE WIRING CONNECTORS)
     IDL1-E2: INFINITY WITH THE THROTTLE VALVE OPEN
              0-2.3 \, K\Omega WITH THE THROTTLE VALVE FULLY CLOSED
    VTA1-E2 : 3.3 K\Omega- 10.0 K\Omega WITH THE THROTTLE VALVE FULLY OPEN
              200 \Omega -800 \Omega WITH THE THROTTLE VALVE FULLY CLOSED
     VCC-E2 : 4 KΩ -9 KΩ
     THA-E2 : \mathbf{2} K\Omega -\mathbf{3} K\Omega WITH THE INTAKE AIR TEMP. \mathbf{20} \cdot \mathbf{C} (68\cdot F)
     THW-E2: 200 \Omega -400 \Omega WITH THE 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 LOCA	TION
--------------	------

COI	DE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	5	24 (2JZ-GTE)	H5	24	S1	25
C.	1	24	H11	29	S5	25
C	2	24	I1	25 (2JZ-GTE)	S11	29
C	3	24 (2JZ-GTE)	12 B	25	T2	25 (2JZ-GTE)
C	9	28	13 A	25	T5	29
C10	Α	28	l12	25 (2JZ-GTE)	T6	29
C12	В	28	l13	25 (2JZ-GTE)	T14	25
D.	1	24 (2JZ-GTE)	l14	25 (2JZ-GTE)	T15	29
D:	D5         28         I15           D8         28         I16		25 (2JZ-GTE)	V2	25 (2JZ-GTE)	
D			l16	25 (2JZ-GTE)	V3	25 (2JZ-GTE)
D1	7	28	l17	25 (2JZ-GTE)	V4	25
E,	1	24 (2JZ-GTE)	l19	29	V5	25
E	3	24 (2JZ-GTE)	J2	29	V6	25 (2JZ-GTE)
E9	В	29	K1	25 (2JZ-GTE)	V7	25
E10	E10 A 29		K2	25 (2JZ-GTE)	V8	25
F1	4	30	M1	25	V10	25 (2JZ-GTE)
F1	5	30	P2	25 (2JZ-GTE)		

# : RELAY BLOCKS

CC	DE	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)
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		
11	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J	20	GOWE WINE AND SPINO. I (LET I MONTANCE)
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)		
EA2	32	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)		
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	30	FLOOR NO. 2 WIRE AND GOWL WIRE (LEFT RICK PAINEL)		
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	30	ENGINE WIRE AND COWL WIRE (RIGHT RICK PAINEL)		
BP1	40	FUEL GAUGE WIRE AND FLOOR NO. 2 WIRE (LUGGAGE ROOM FRONT LH)		

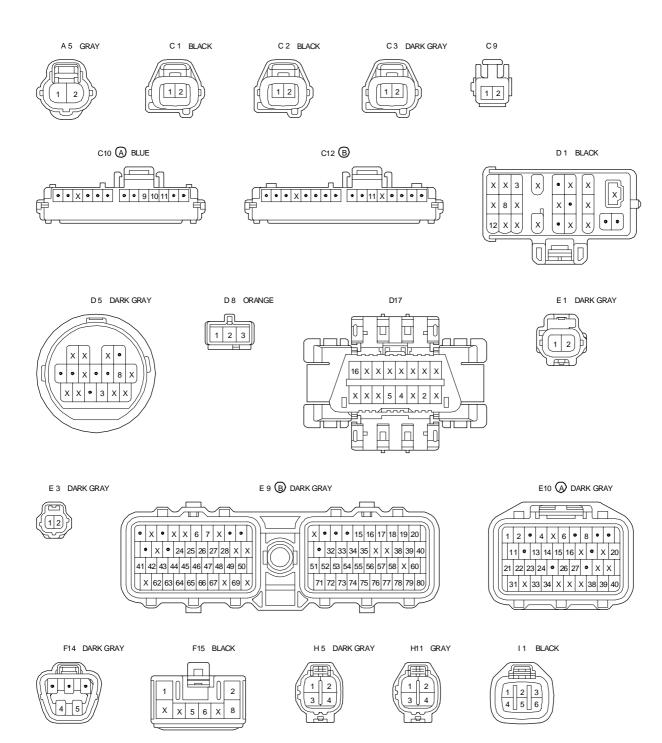
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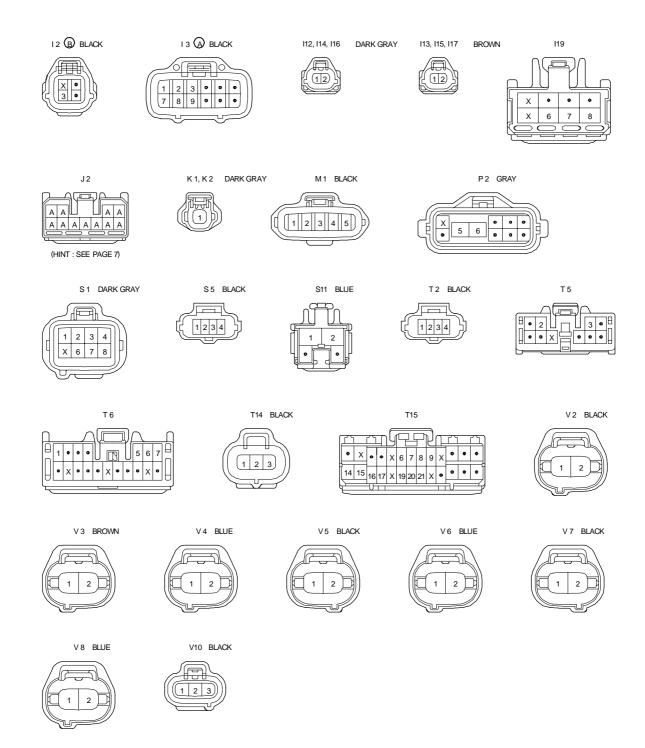
CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
ED	32 (2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD
IE	36	LEFT KICK PANEL
IF	30	LEFT NON FAINEL
IG	36	RIGHT KICK PANEL
BI	40	LEFT QUARTER PILLAR

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E7	32	ENGINE ROOM MAIN WIRE	12	38	COWL WIRE
E10			14	38	INSTRUMENT PANEL WIRE
E11			15	38	INSTRUMENT PANEL WIRE
E12			18	30	INSTROMENT PANEL WIRE
E13	32	ENGINE WIRE	l11	38	COWL WIRE
E14			I14	38	INSTRUMENT PANEL WIRE
E16			l17	38	ENGINE WIRE
E17			120	38	COWL WIRE

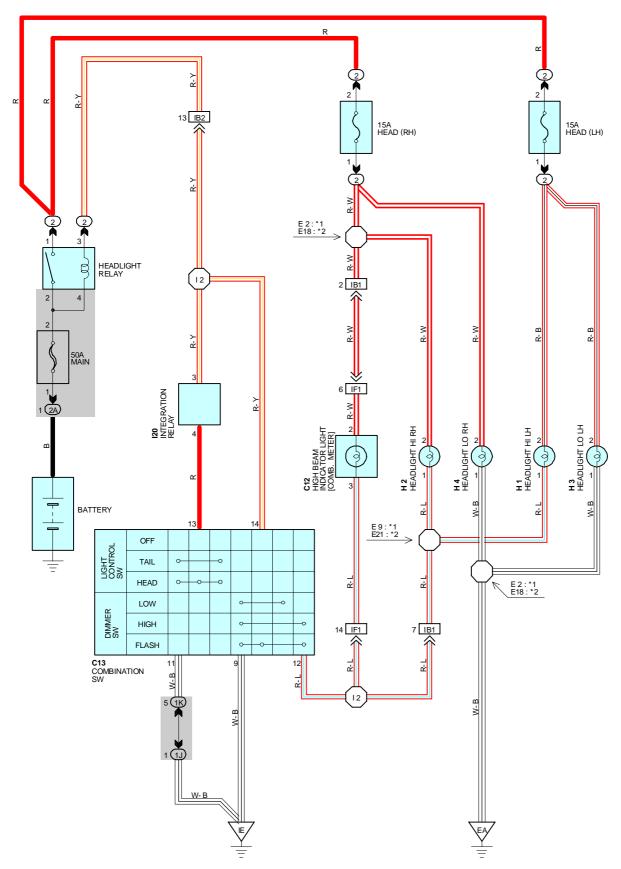


# **ENGINE CONTROL (2JZ-GTE)**









### SERVICE HINTS

#### **HEADLIGHT RELAY**

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

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

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

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

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

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

### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C12	28	110	24 (2JZ-GTE)	114	24 (2JZ-GTE)
C13	28	H2	27 (2JZ-GE)	H4	27 (2JZ-GE)
114	24 (2JZ-GTE)	112	24 (2JZ-GTE)	120	29
H1	27 (2JZ-GE)	H3	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	COMILIMIDE AND UD NO 4 (LEET VIOLEDANIEL)
ſ	1K	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
Ī	2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

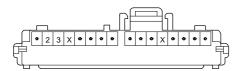
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB2	2 36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT RICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)

#### : GROUND POINTS

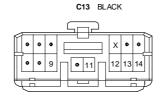
CODE	SEE PAGE	GROUND POINTS LOCATION	
	32 (2JZ-GTE)	EDON'T CIDE OF DIGHT FENDED	
EA	34 (2JZ-GE)	FRONT SIDE OF RIGHT FENDER	
IE	36	LEFT KICK PANEL	

### : SPLICE POINTS

-						
	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
	E2	22	ENGINE ROOM MAIN WIRE	E21	34	ENGINE ROOM MAIN WIRE
	E9	32		12	38	COWL WIRE
Ī	E18	34				



C12











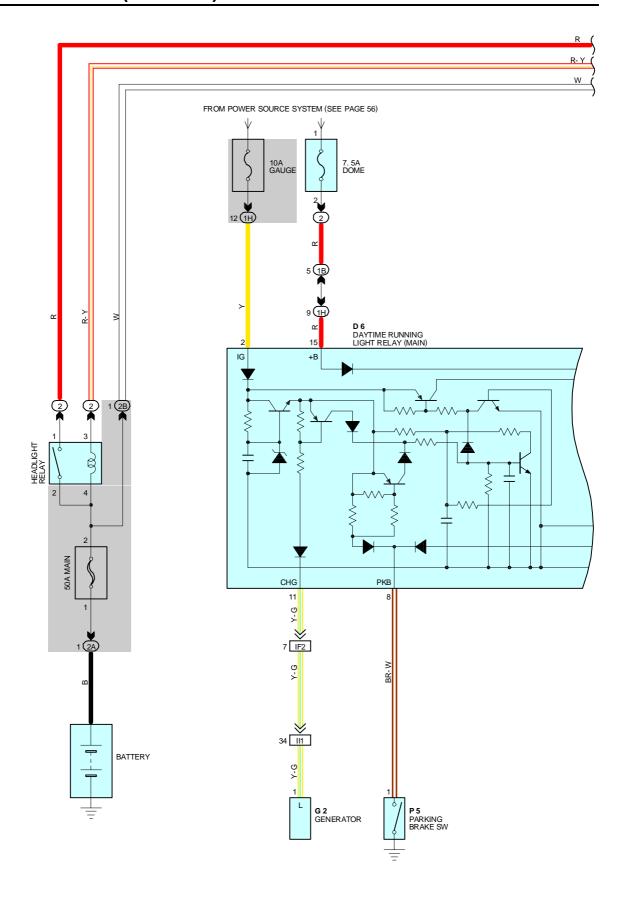


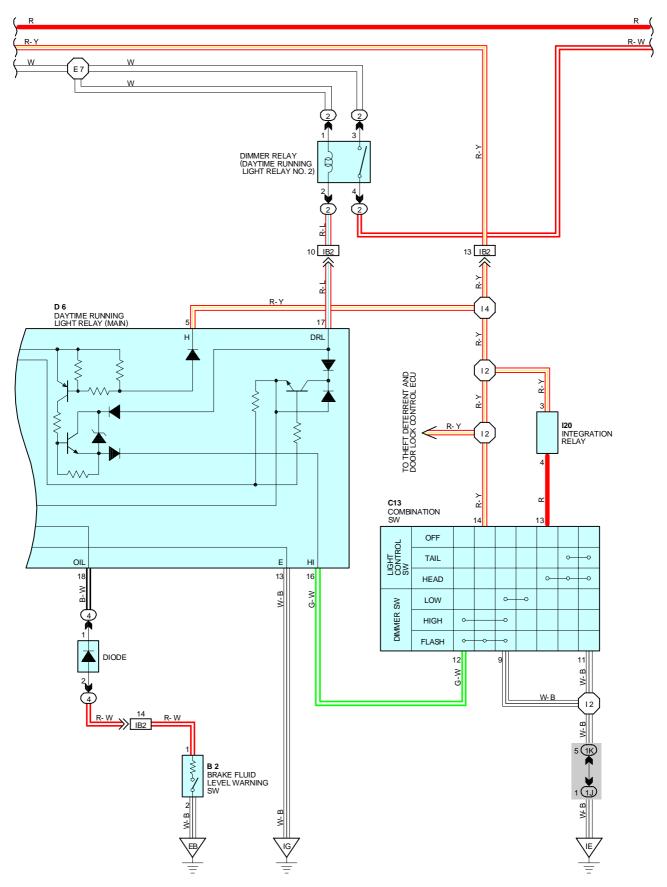




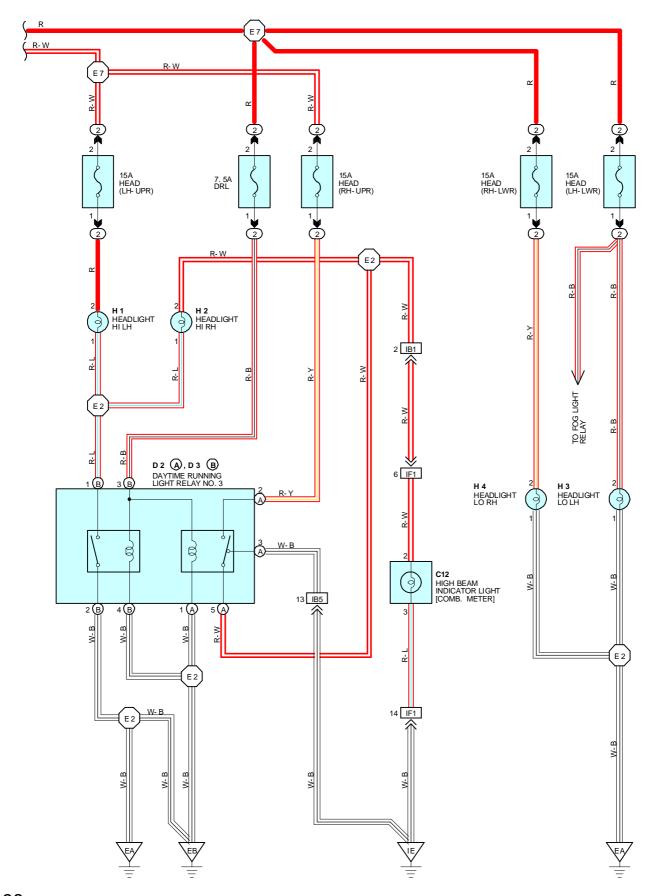












VOLTAGE IS ALWAYS APPLIED FROM THE MAIN FUSE, THROUGH THE HEADLIGHT RELAY (COIL SIDE) TO TERMINAL 5 OF THE DAYTIME RUNNING LIGHT RELAY (MAIN), TERMINAL 6 OF THE INTEGRATION RELAY, TERMINAL 14 OF THE DIMMER SW, DIMMER RELAY (DAYTIME RUNNING LIGHT RELAY NO. 2) (COIL SIDE), TO TERMINAL 17 OF THE DAYTIME 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 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 THE DIMMER RELAY (DAYTIME RUNNING LIGHT RELAY NO. 2) (POINT SIDE)  $\rightarrow$  **HEAD** (LH-UPR) FUSE  $\rightarrow$  HEADLIGHT HI LH  $\rightarrow$  HEADLIGHT HI RH  $\rightarrow$  **TERMINAL (A)5** OF THE DAYTIME RUNNING LIGHT RELAY NO. 3  $\rightarrow$  **TERMINAL (A)3**  $\rightarrow$  **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 3** OF THE INTEGRATION RELAY  $\rightarrow$  **TERMINAL 4**  $\rightarrow$  **TERMINAL 13** OF THE LIGHT CONTROL SW  $\rightarrow$  **TERMINAL 11**  $\rightarrow$  **GROUND**, ACTIVATING THE HEADLIGHT RELAY. THIS CAUSES THE CURRENT TO FLOW FROM THE HEADLIGHT RELAY (POINT SIDE) TO THE **HEAD LWR** FUSE  $\rightarrow$  HEADLIGHT LO  $\rightarrow$  **GROUND**, CAUSING THE HEADLIGHTS TO LIGHT UP AT NORMAL BRIGHTNESS. SIMUTANEOUSLY, CURRENT FLOWS FROM THE **DRL** FUSE  $\rightarrow$  DAYTIME RUNNING LIGHT RELAY NO. 3 (COIL SIDE)  $\rightarrow$  **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 THE DIMMER RELAY (DAYTIME RUNNING LIGHT RELAY NO. 2) (POINT SIDE) TO THE **HEAD (LH-UPR)** FUSE  $\rightarrow$  HEADLIGHT HI LH  $\rightarrow$  DAYTIME RUNNING LIGHT NO. 3 (POINT SIDE)  $\rightarrow$  **GROUND**, AND FROM THE **HEAD (RH-UPR)** FUSE  $\rightarrow$  DAYTIME RUNNING LIGHT RELAY NO. 3 (POINT SIDE)  $\rightarrow$  HEADLIGHT HI RH  $\rightarrow$  DAYTIME RUNNING LIGHT RELAY NO. 3 (POINT SIDE)  $\rightarrow$  **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  $\rightarrow$  **TERMINAL 9**  $\rightarrow$  **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 CURRNET 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 TEH IGNITION SW AT ON POSITION

13-GROUND: ALWAYS CONTINUITY

5-GROUND: APPROX. 12 VOLTS WITH THE DAYTIME RUNNING LIGHT SYSTEM

DOES NOT OPERATE OR THE LIGHT CONTROL SW AT **OFF** OR **TAIL** POSITION (WHEN THE CONNECTOR IS DISCONNECTED, ALWAYS APPROX. **12** VOLTS)

8-GROUND: CONTINUITY WITH THE PARKING BRAKE LEVER RELEASED



# **HEADLIGHT (CANADA)**

### : PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B2		24 (2JZ-GTE)	D6	28	H4	24 (2JZ-GTE)
C12		28	G2	24 (2JZ-GTE)	120	29
C	13	28	H1	24 (2JZ-GTE)	P5	29
D2	Α	24	H2	24 (2JZ-GTE)		
D3	В	24	H3	24 (2JZ-GTE)		

## : RELAY BLOCKS

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

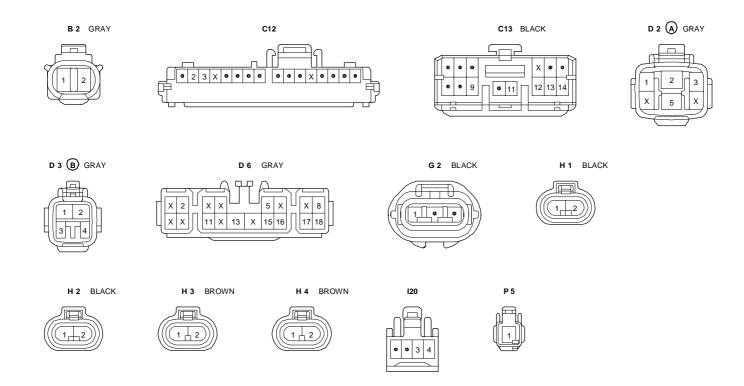
### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

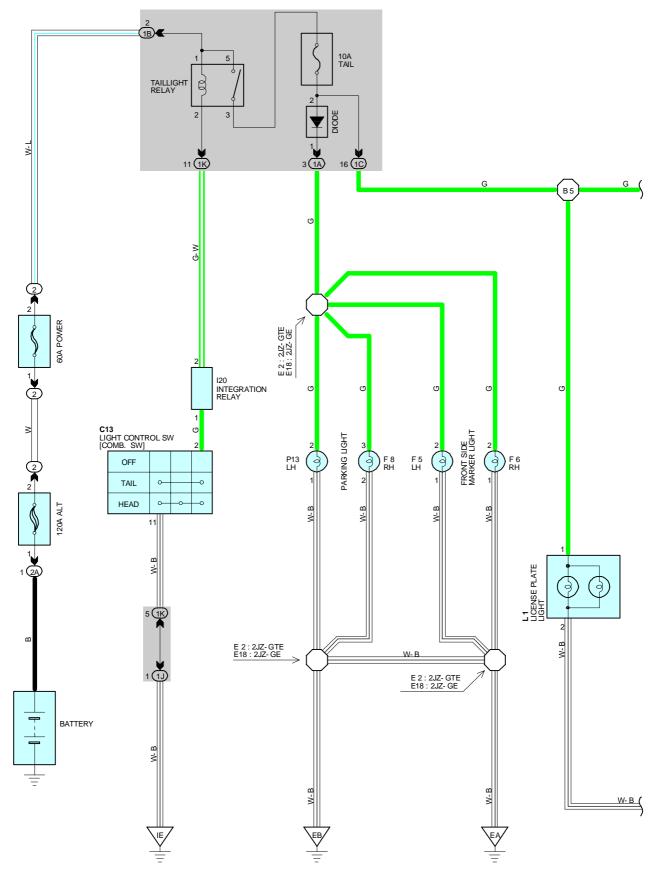
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	00	ENGINE DOOMAANNIMES AND COMUNIDE (LEET VIOV DANEL)
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IB5	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
IF1		INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF2	36	
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

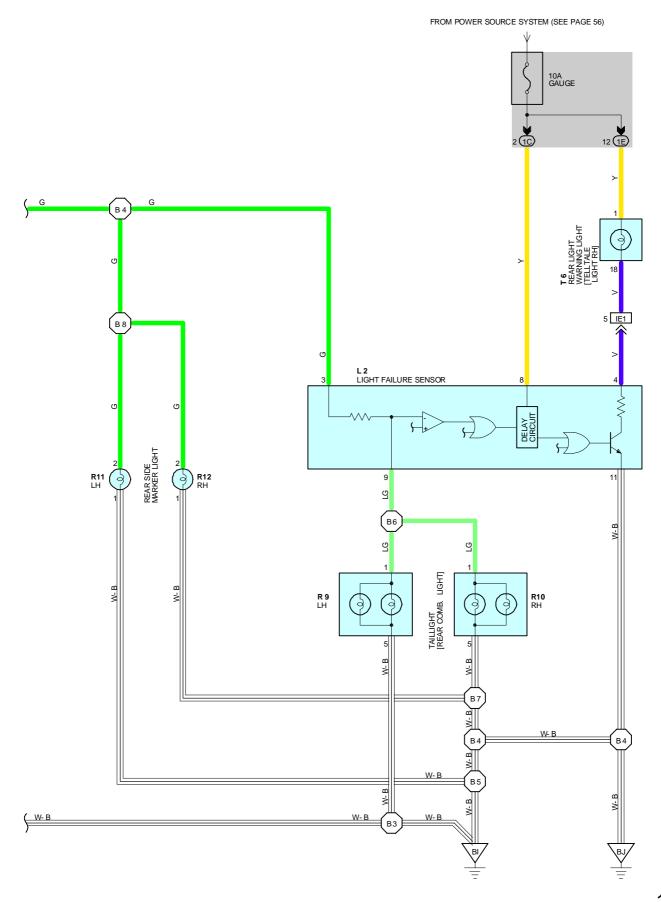
### : GROUND POINTS

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

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E2	20	ENOINE DOOM MAINIMIDE	12	00	COMUNATIDE
E7	32	ENGINE ROOM MAIN WIRE	14	38	COWL WIRE









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  $\rightarrow$  **TERMINAL 11**  $\rightarrow$  **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 THE LIGHT CONTROL SW AT TAIL OR HEAD POSITION

#### **L2 LIGHT FAILURE SENSOR**

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

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

11-GROUND: ALWAYS CONTINUITY

#### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C13	28	F8	26 (2JZ-GE)	R9	30
ГЕ	24 (2JZ-GTE)	120	29	R10	30
F5	26 (2JZ-GE)	L1	30	R11	30
F0	24 (2JZ-GTE)	L2	30	R12	30
F6	26 (2JZ-GE)	P13	24 (2JZ-GTE)	T6	29
F8	24 (2JZ-GTE)		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)
1A	00	ENGINE DOOM MAIN WIDE AND UP NO. 4 // FET L/IO/C PANEL )
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)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1
1J	20	COMI MIDE AND I/P NO. 4 (LEET KICK DANEL)
1K	20	COWL 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)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)

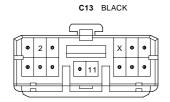
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### : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION	
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER	
LA	34 (2JZ-GE)	FRONT SIDE OF RIGHT FEINDER	
EB	32 (2JZ-GTE)	DON'T CIDE OF LEFT FENDED	
EB	34 (2JZ-GE)	FRONT SIDE OF LEFT FENDER	
IE	36	LEFT KICK PANEL	
BI	40	LEFT QUARTER PILLAR	
BJ	40	LOWER BACK PANEL CENTER	

# $\bigcirc$

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E2	32	ENCINE DOOM MAIN WIDE	B5	40	FLOOR NO. 2 WIRE
E18	34	ENGINE ROOM MAIN WIRE	B6		
В3	40	ELOOP NO OWIPE	B7		
B4	40	FLOOR NO. 2 WIRE	B8		



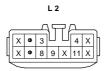












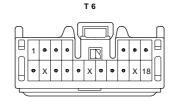




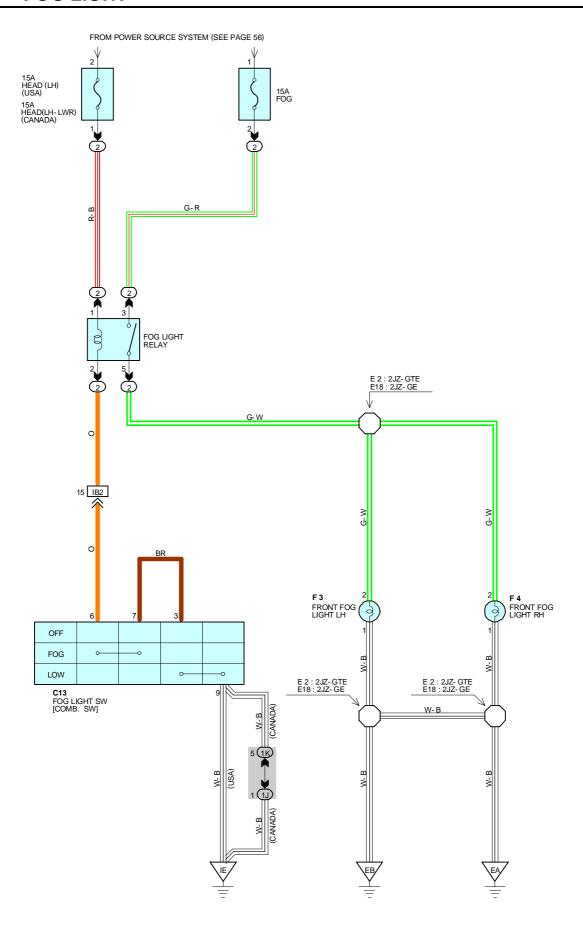












### SERVICE HINTS -

#### **FOG LIGHT RELAY**

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

#### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C13	28	F3	26 (2JZ-GE)	F4	26 (2JZ-GE)
F3	24 (2JZ-GTE)	F4	24 (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

Ī	CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
Ī	1J		COMIL MIDE AND UD NO 4 (LEET MOV DANIEL)
Ī	1K	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

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

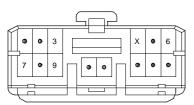
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

### 7 : GROUND POINTS

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

I	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
Ī	E2	32	ENGINE ROOM MAIN WIRE	E18	34	ENGINE ROOM MAIN WIRE

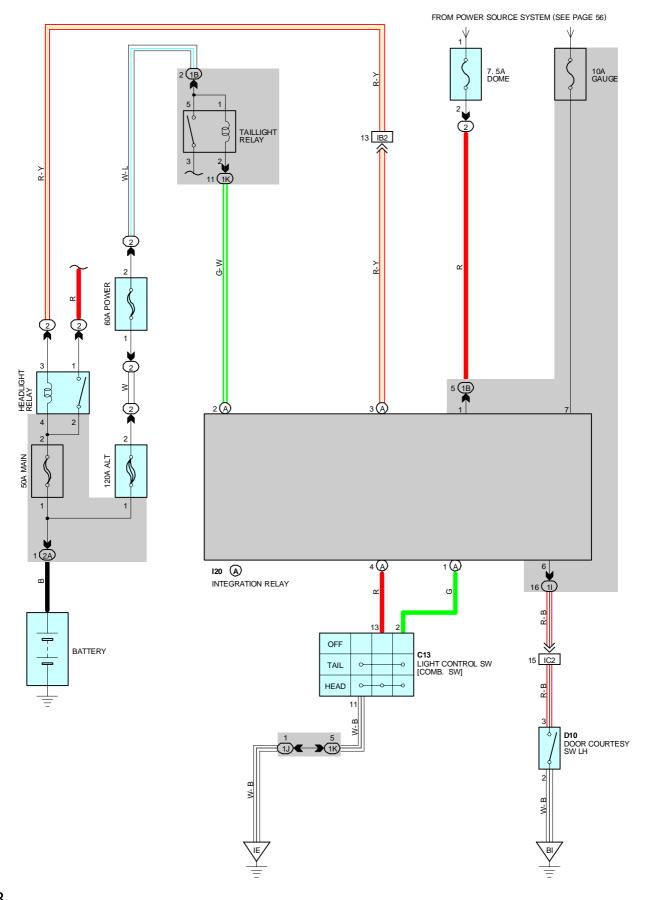












WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS TO **TERMINAL 7** OF THE INTEGRATION RELAY THROUGH **GAUGE** FUSE. VOLTAGE IS APPLIED AT ALL TIMES TO **TERMINAL (A) 2** OF THE INTEGRATION RELAY THROUGH THE TAILLIGHT RELAY COIL SIDE, AND TO **TERMINAL (A) 3** THROUGH THE HEADLIGHT RELAY COIL SIDE.

#### 1. NORMAL LIGHTING OPERATION

#### <TURN TAILLIGHT ON>

WITH THE LIGHT CONTROL SW TURNED TO TAIL POSITION, A SIGNAL IS INPUT INTO **TERMINAL (A) 1** OF THE INTEGRATION RELAY. DUE TO THIS SIGNAL, THE CURRENT FLOWING TO **TERMINAL (A) 2** OF THE RELAY FLOWS TO **TERMINAL (A) 1**  $\rightarrow$  **TERMINAL 2** OF THE LIGHT CONTROL SW  $\rightarrow$  **TERMINAL 11**  $\rightarrow$  TO **GROUND**, AND TAILLIGHT RELAY CAUSES TAILLIGHTS TO TURN ON.

#### <TURN HEADLIGHT ON>

WITH THE LIGHT CONTROL SW TURNED TO HEAD POSITION, A SIGNAL IS INPUT INTO **TERMINALS (A) 1** AND **(A) 4** OF THE INTEGRATION RELAY. DUE TO THIS SIGNAL, THE CURRENT FLOWING TO **TERMINAL (A) 3** OF THE RELAY FLOWS TO **TERMINAL (A) 4**  $\rightarrow$  **TERMINAL 13** OF THE LIGHT CONTROL SW  $\rightarrow$  **TERMINAL 11**  $\rightarrow$  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 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) 2** OF THE RELAY TO **TERMINAL (A) 1** IN TAILLIGHT CIRCUIT AND FROM **TERMINAL (A) 3** TO **TERMINAL (A) 4** IN HEADLIGHT CIRCUIT.

AS A RESULT, ALL LIGHTS ARE TURNED OFF AUTOMATICALLY.

#### SERVICE HINTS

#### **HEADLIGHT RELAY**

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

: CLOSED WITH THE ENGINE RUNNING AND THE PARKING BRAKE LEVER RELEASED (CANADA)

#### **TAILLIGHT RELAY**

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

#### **D10 DOOR COURTESY SW LH**

3-2 : CLOSED WITH THE LH DOOR OPEN

#### **I20 (A) INTEGRATION RELAY**

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

6-GROUND: CONTINUITY WITH THE LH DOOR OPEN

1-GROUND: ALWAYS APPROX. 12 VOLTS (A)2-GROUND: ALWAYS APPROX. 12 VOLTS (A)3-GROUND: ALWAYS APPROX. 12 VOLTS

(A)4-GROUND: CONTINUITY WITH THE LIGHT CONTROL SW AT HEAD POSITION

(A)1-GROUND: CONTINUITY WITH THE LIGHT CONTROL SW AT TAIL OR HEAD POSITION

#### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CO	DE	SEE PAGE
C13	28	D10	30	120	Α	29

#### : RELAY BLOCKS

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



# LIGHT AUTO TURN OFF

### : 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)
11		
1J	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1K		
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)

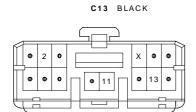
### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

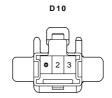
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)

# $\bigvee$

### : GROUND POINTS

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

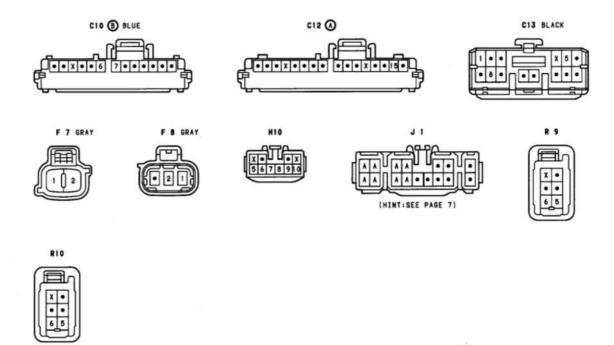




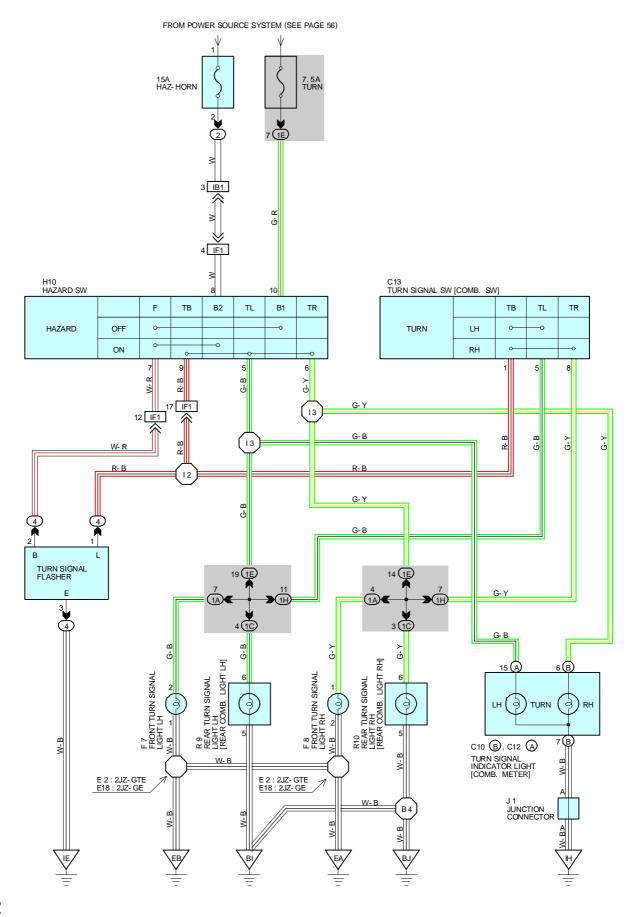


# TURN SIGNAL AND HAZARD WARNING LIGHT









### SERVICE HINTS

#### **TURN SIGNAL FLASHER**

(4) 1-GROUND : CHANGES FROM APPROX. 12 VOLTS TO 0 VOLTS WITH THE IGNITION SW ON AND THE TURN SIGNAL

SW LEFT OR RIGHT, OR WITH THE HAZARD WARNING SW ON.

(4) 2-GROUND : 12 VOLTS WITH THE IGNITION SW ON OR THE HAZARD SW ON

(4) 3-GROUND : ALWAYS CONTINUITY

### : PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C10	В	28	F 7	26 (2JZ-GE)	J 1	29
C12	Α	28	ГО	26 (2JZ-GTE)	R 9	30
C13		28	F8	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

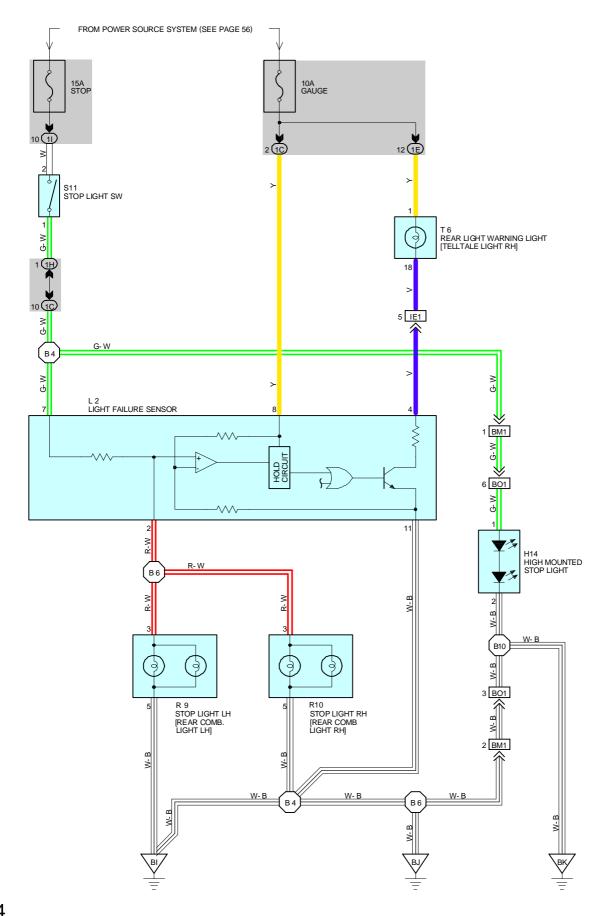
CODE	SEE PAGE	OINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)				
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)				
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)				

### : GROUND POINTS

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

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32	ENGINE ROOM WIRE	13	38	INSTRUMENT PANEL WIRE
E18	34	ENGINE ROOM WIRE	B 4	40	FLOOR NO. 2 WIRE
12	38	COWL WIRE			





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  $\rightarrow$  **TERMINAL 11**  $\rightarrow$  **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 THE BRAKE PEDAL DEPRESSED

#### L 2 LIGHT FAILURE SENSOR

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

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

11 GROUND : ALWAYS CONTINUITY

#### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
H14	30	R 9	30	S11	29
L 2	30	R10	30	Т6	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	00	COMMUNICATION OF A CLEEK MON DANIELY
11	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

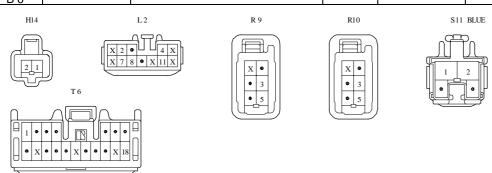
#### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

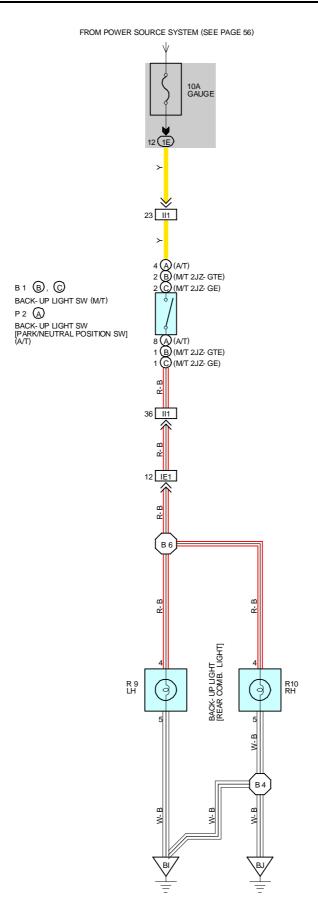
	CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
	IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
	BM1	40	BACK DOOR NO. 1 WIRE AND FLOOR NO. 2 WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
ſ	BO1	40	BACK DOOR NO. 2 WIRE AND BACK DOOR NO. 1 WIRE (BACK DOOR UPPER LEFT)

### : GROUND POINTS

•		
CODE	SEE PAGE	GROUND POINTS LOCATION
BI	40	LEFT QUARTER PILLAR
BJ	40	LOWER BACK PANEL CENTER
BK	40	RIGHT SIDE OF HIGH MOUNTED STOP LIGHT

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
B 4	40	EL GOD NO CAMIDE	B10	40	BACK DOOR NO. 2 WIRE
B 6	40	FLOOR NO. 2 WIRE			





#### SERVICE HINTS -

B 1 (B), (C) BACK-UP LIGHT SW (M/T)

### P 2 (A) BACK-UP LIGHT SW [PARK/NEUTRAL POSITION SW] (A/T)

(B), (C) 2-1, (A) 4-8 : CLOSED WITH THE SHIFT LEVER IN  $\bf R$  POSITION

### : PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE	SEE PAGE
B 1	В	24 (2JZ-GTE)	D 0	P2   A	25 (2JZ-GTE)	R 9	30
	С	26 (2JZ-GE)			27 (2JZ-GE)	R10	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)		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	IE1 36 INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)	
II1	II1 38 ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)	

### 7 : 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 4	40	FLOOR NO. 2 WIRE	B 6	40	FLOOR NO. 2 WIRE



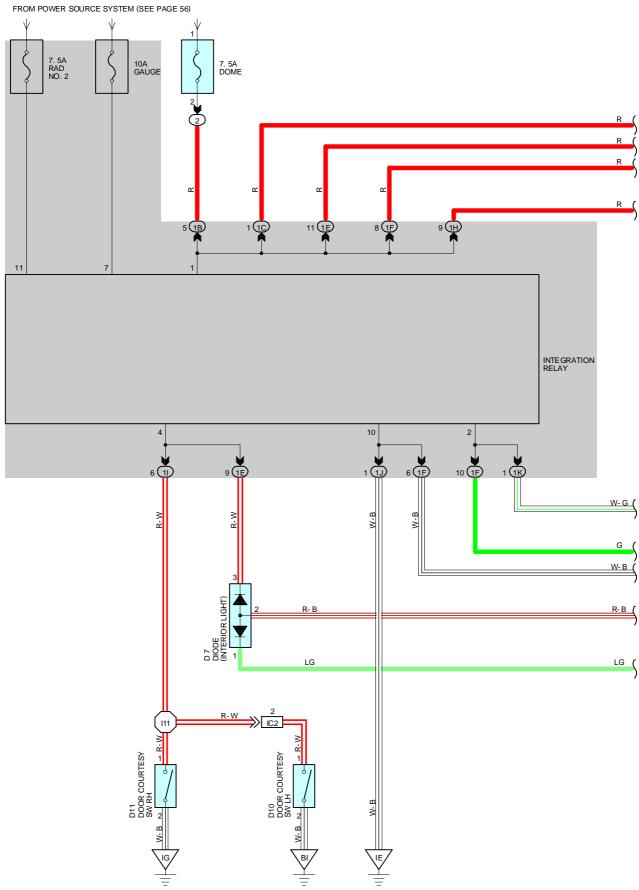


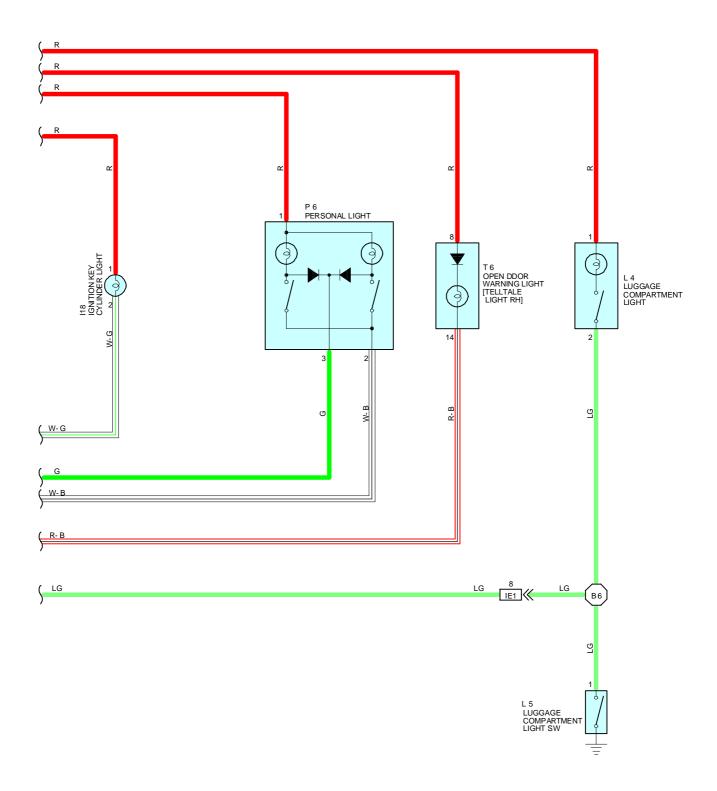


P 2 A GRAY









### SERVICE HINTS -

# **INTERGRATION RELAY (J/B NO. 1)**

1-GROUND : ALWAYS APPROX. 12 VOLTS

4-GROUND : CONTINUITY WITH THE RH DOOR OPEN OR THE LH DOOR OPEN

# **D10, D11 DOOR COURTESY SW LH, RH** 1-2 : CLOSED WITH THE DOOR OPEN

L 5 LUGGAGE COMPARTMENT LIGHT SW

1-GROUND : CLOSED WITH THE LUGGAGE COMPARTMENT DOOR OPEN

### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
D 7	28	l18	29	P 6	30
D10	30	L 4	30	T 6	29
D11	30	L 5	30		

### ) : RELAY BLOCKS

Γ	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		
11	00	COMMUNICE AND ADDAG A (LEET KICK PANEL)
1J	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1K		

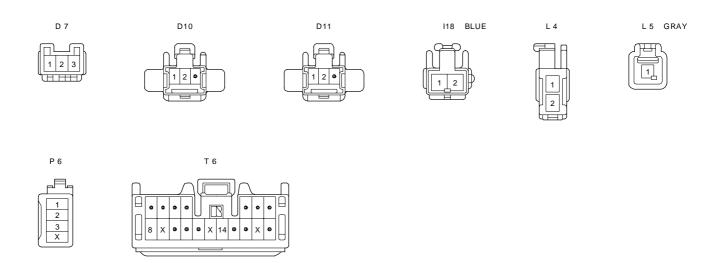
# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

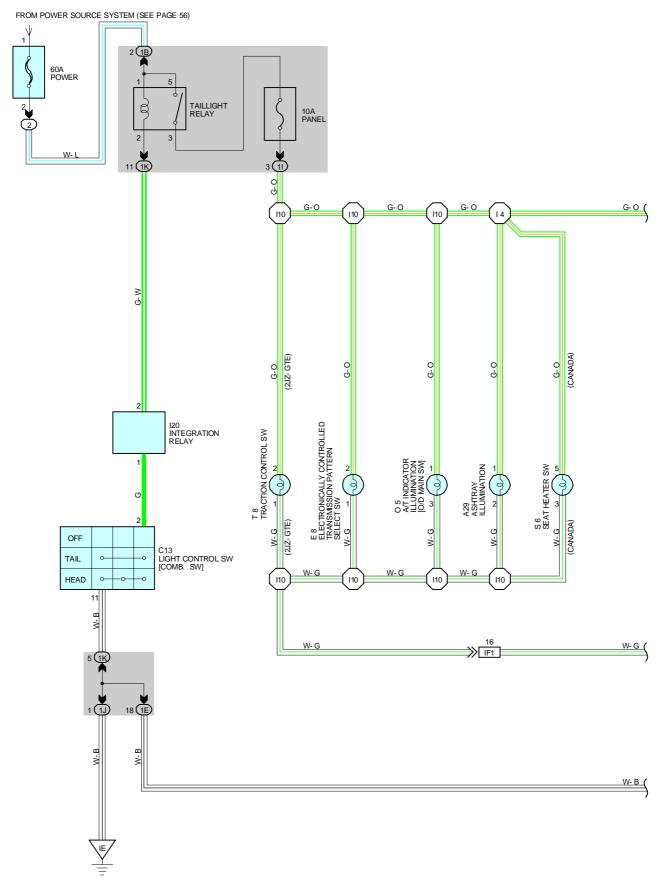
CODE SEE PAGE JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)		
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

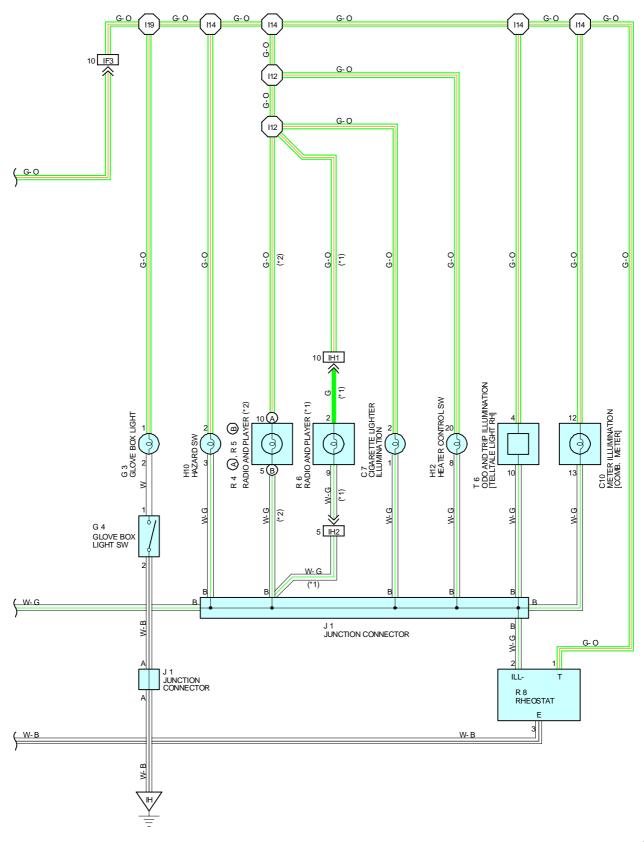
### : GROUND POINTS

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

CODE SEE PAGE WIRE HARNESS WITH SPLICE POINTS		CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	
I11	38	COWL WIRE	B 6	40	FLOOR NO. 2 WIRE









### SERVICE HINTS -

# **TAILLIGHT RELAY**

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

# C13 LIGHT CONTROL SW [COMB. SW]

2-11 : CLOSED WITH THE 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	120	29	S 6	29
C13	28	J 1	29	Т6	29
E 8	29	O 5	29	Т8	29
G 3	29	R4 A	29		
G 4	29	R5 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)			
11					
1J	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)			
1K					

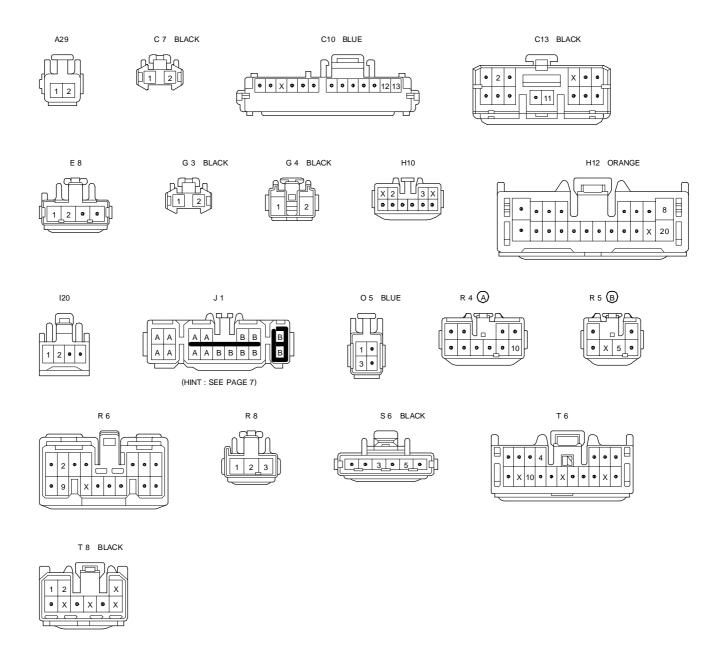
# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)			
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)			
IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)			
IH1	INICITE LIMITED THE PANEL AND CONCOLE BOY MUDE (LINDER THE INICITE LIMITED PANEL BRACE BUY				
IH2	38	INSTRUMENT PANEL AND CONSOLE BOX WIRE (UNDER THE INSTRUMENT PANEL BRACE RH)			

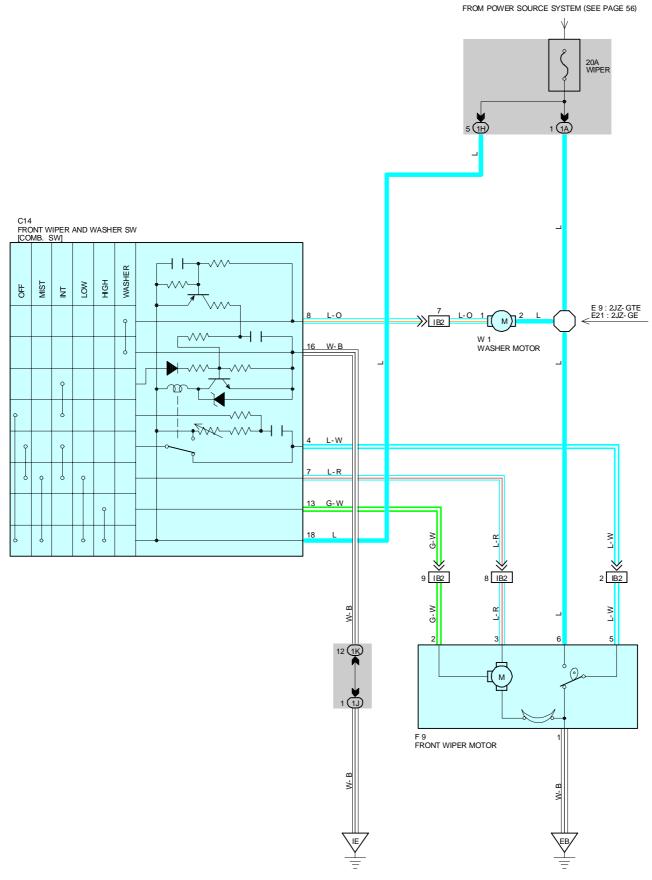
# : GROUND POINTS

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

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
14	38	COWL WIRE	l14	20	INSTRUMENT PANEL WIRE
I10	38	COWL WIRE	l19	38	
l12	38	INSTRUMENT PANEL WIRE			







#### SYSTEM OUTLINE

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

#### 1. LOW SPEED POSITION

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

#### 2. HIGH SPEED POSITION

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

#### 3. INT POSITION

WITH THE WIPER SW TURNED TO INT POSITION, THE RELAY OPERATES AND THE CURRENT WHICH IS CONNECTED BY RELAY FUNCTION FLOWS FROM THE **TERMINAL 18** OF THE FRONT WIPER AND WASHER SW  $\rightarrow$  **TERMINAL 16** $\rightarrow$  TO **GROUND**. THIS FLOWS OF THE CURRENT OPERATES THE INTERMITTENT CIRCUIT AND THE CURRENT FLOWS FROM **TERMINAL 18** OF THE FRONT WIPER AND WASHER SW  $\rightarrow$  **TERMINAL 7**  $\rightarrow$  **TERMINAL 3** OF THE FRONT WIPER MOTOR  $\rightarrow$  **TERMINAL 1**  $\rightarrow$  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 THE WIPER SW TURNED TO MIST POSITION, THE CURRENT FLOWS FROM TERMINAL 18 OF THE FRONT WIPER AND WASHER SW  $\rightarrow$  TERMINAL 7  $\rightarrow$  TERMINAL 3 OF THE FRONT WIPER MOTOR  $\rightarrow$  TERMINAL 1  $\rightarrow$  TO GROUND AND CAUSES THE WIPER MOTOR TO RUN AT LOW SPEED.

#### 5. WASHER CONTINUOUS OPERATION

WITH THE WASHER SW TURNED TO ON, THE CURRENT FLOWS THROUGH **TERMINAL 2** OF THE WASHER MOTOR  $\rightarrow$  **TERMINAL 1**  $\rightarrow$  **TERMINAL 8** OF THE FRONT WIPER AND WASHER SW  $\rightarrow$  **TERMINAL 16**  $\rightarrow$  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 FRONT WIPER AND WASHER SW  $\rightarrow$  **TERMINAL 7**  $\rightarrow$  **TERMINAL 3** OF THE FRONT WIPER MOTOR  $\rightarrow$  **TERMINAL 1**  $\rightarrow$  TO **GROUND** AND FUNCTION.

### SERVICE HINTS

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

16-GROUND: ALWAYS CONTINUITY

18-GROUND: APPROX. 12 VOLTS WITH THE IGNITION SW AT  $\mathbf{ON}$  POSITION

7-GROUND : APPROX. 12 VOLTS WITH THE WIPER AND WASHER SW AT  ${\bf LOW}$  POSITION

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

4-GROUND: APPROX. 12 VOLTS WITH THE IGNITION SW ON UNLESS THE WIPER MOTOR AT STOP POSITION 13-GROUND: APPROX. 12 VOLTS WITH THE IGNITION SW ON AND THE 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
C14	28	F 9	26 (2JZ-GE)	W 2	27 (2JZ-GTE)
F 9	24 (2JZ-GTE)	W 1	25 (2JZ-GTE)		

# : 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)
1H		
1J	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)
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)



# FRONT WIPER AND WASHER

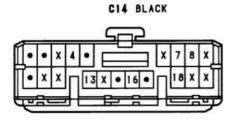
# $\nabla$

# : GROUND POINTS

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



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

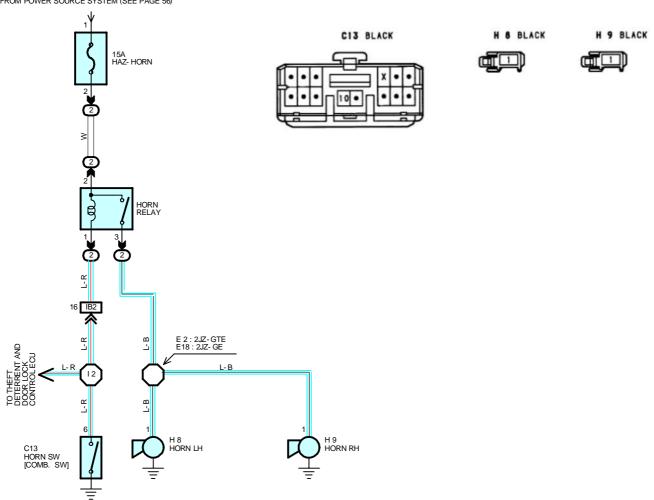












# **SERVICE HINTS**

**HORN RELAY** 

(2) 2- (2) 3: CLOSED WITH THE 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

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

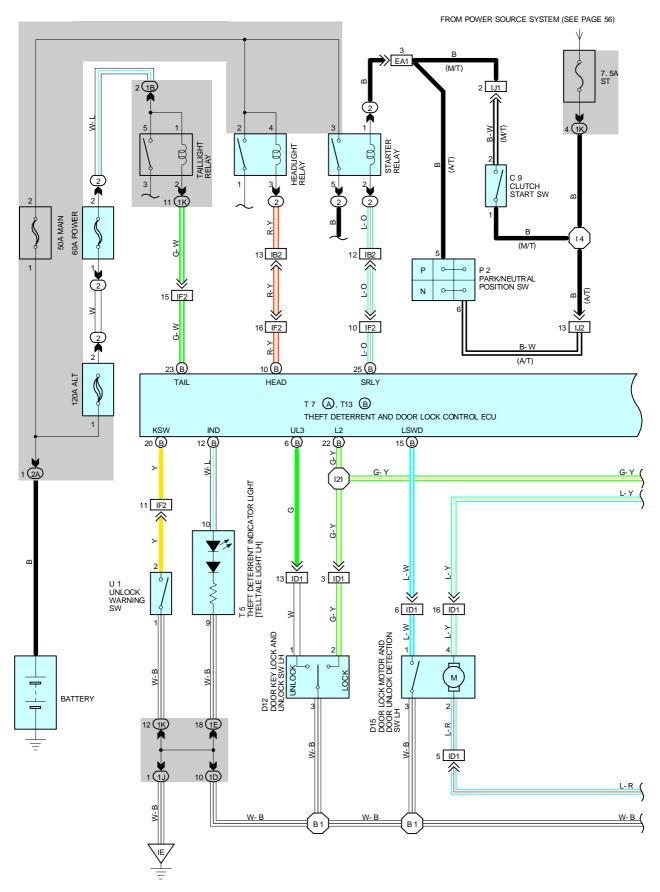
# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

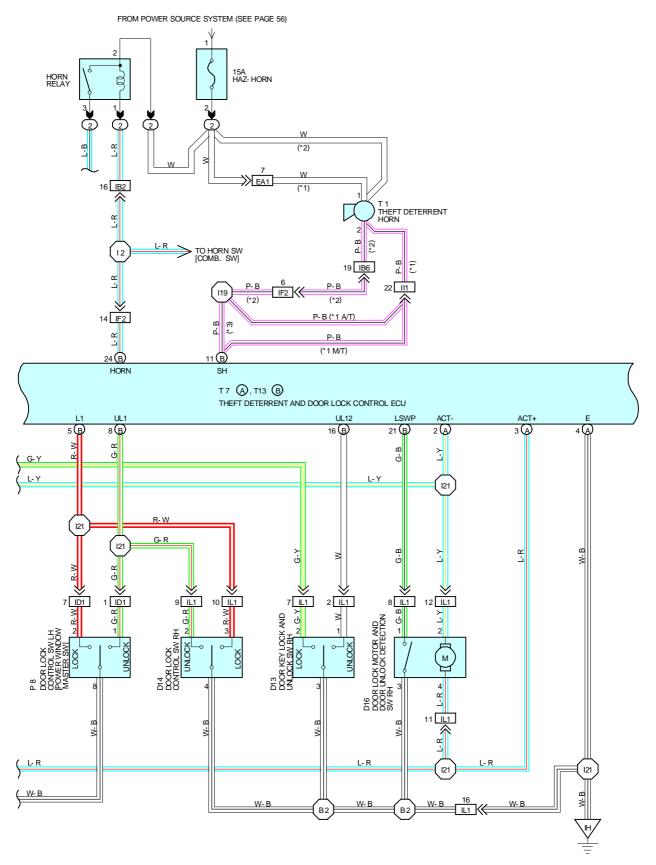
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

_				_	
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32	ENGINE ROOM MAIN WIRE	12	38	COWL WIRE
E18	34	ENGINE ROOM MAIN WIRE			



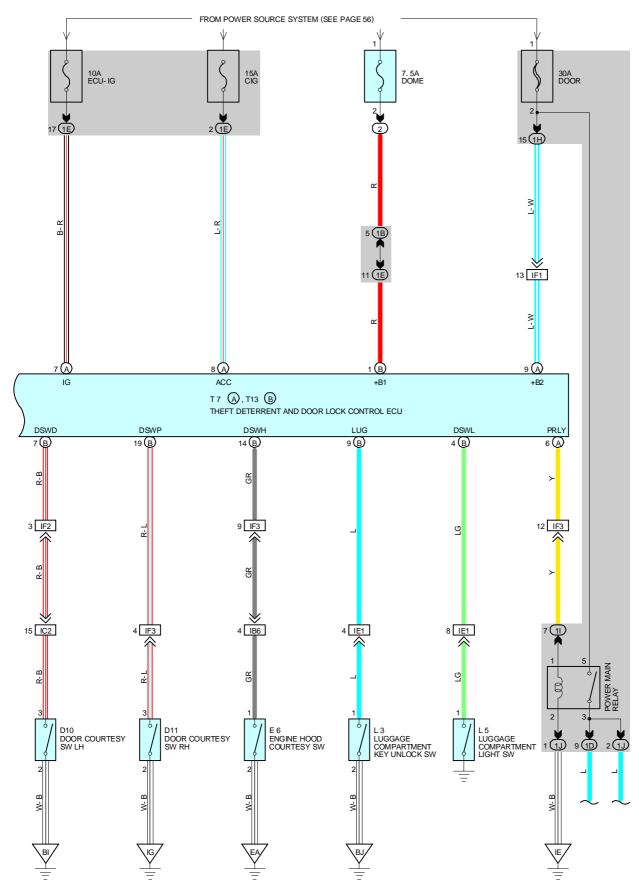
# THEFT DETERRENT AND DOOR LOCK CONTROL







# THEFT DETERRENT AND DOOR LOCK CONTROL



#### SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO **TERMINAL (A) 9** OF THE THEFT DETERRENT AND DOOR LOCK CONTROL 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 LOCK 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 AND DOOR LOCK CONTROL 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 LOCK OPERATION

WHEN THE DOOR LOCK CONTROL SW OR KEY SW ARE PUSHED TO UNLOCK POSITION, AN UNLOCK SIGNAL IS INPUT TO TERMINAL (B) 8, (B) 6 (FOR KEY SW LH) OR (B) 16 (FOR KEY SW RH) OF THE THEFT DETERRENT AND DOOR LOCK CONTROL 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 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 THE DOOR OPEN

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

1-3 : CLOSED WITH THE DOOR LOCK CYLINDER UNLOCKED WITH KEY
2-3 : CLOSED WITH THE 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 THE ENGINE HOOD OPEN

#### **U 1 UNLOCK WARNING SW**

2-1 : CLOSED WITH THE IGNITION KEY IN CYLINDER

#### L 3 LUGGAGE COMPARTMENT KEY UNLOCK SW

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

#### L 5 LUGGAGE COMPARTMENT LIGHT SW

1-GROUND: CLOSED WITH THE DOOR OPEN

#### T 7 (A), T13 (B) THEFT DETERRENT AND DOOR LOCK CONTROL ECU

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

(B) 14-GROUND : CONTINUITY WITH THE ENGINE HOOD OPEN

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

(B) 8-GROUND : CONTINUITY WITH THE DOOR LOCK CONTROL SW TO UNLOCK POSITION
(B) 5-GROUND : CONTINUITY WITH THE DOOR LOCK CONTROL SW TO LOCK POSITION

(B) 25-GROUND : APPROX. 12 VOLTS WITH THE SHIFT LEVER IN N OR P POSITION AND THE IGNITION SW AT ST POSITION (A/T)

: APPROX. 12 VOLTS WITH THE CLUTCH PEDAL FULLY DEPRESSED (M/T)

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

(B) 20-GROUND : CONTINUITY WITH THE IGNITION KEY IN CYLINDER
(B) 15-GROUND : CONTINUITY WITH THE LH DOOR TO UNLOCK POSITION
(B) 21-GROUND : CONTINUITY WITH THE RH DOOR TO UNLOCK POSITION

(B) 6-GROUND : CONTINUITY WITH THE DOOR KEY LOCK AND UNLOCK SW LH TO UNLOCK POSITION
 (B) 16-GROUND : CONTINUITY WITH THE DOOR KEY LOCK AND UNLOCK SW RH TO UNLOCK POSITION
 (B) 22-GROUND : CONTINUITY WITH THE DOOR KEY LOCK AND UNLOCK SW TO LOCK POSITION

(A) 4-GROUND : ALWAYS CONTINUITY(B) 1-GROUND : ALWAYS APPROX. 12 VOLTS

# : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE		SEE PAGE
C 9	28	D16	30	Р	8	30
D10	30	E 6	24 (2JZ-GTE)	т	1	25 (2JZ-GTE)
D11	30	E 0	26 (2JZ-GE)	T 1		27 (2JZ-GE)
D12	30	L 3	30	Т	5	29
D13	30	L 5	30	T 7	Α	29
D14	30	P 2	25 (2JZ-GTE)	T13	В	29
D15	30	F Z	27 (2JZ-GE)	U	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)
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		
11	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J	20	COWL WIRE AND 3/B NO. 1 (LEFT KICK FAINEL)
1K		
2A	22	BATTERY AND J/B NO.2 (ENGINE COMPARTMENT LEFT)

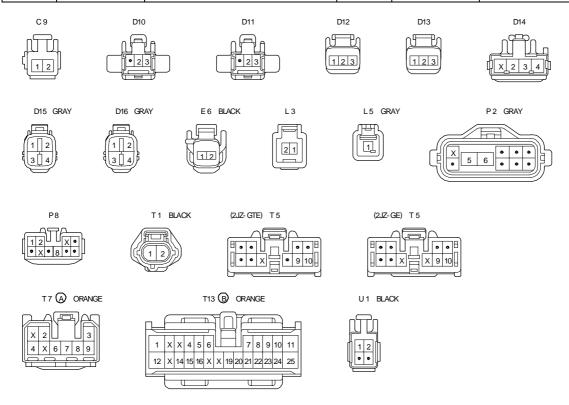
# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

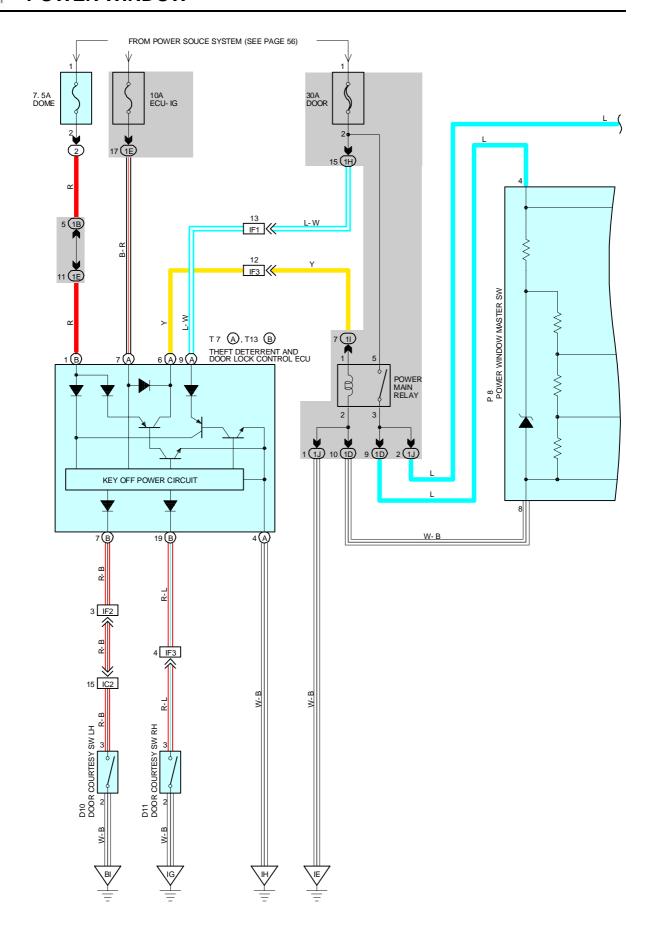
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)	
EA1	32 (2JZ-GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)	
EAI	34 (2JZ-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)	
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)	
IB6	36	ENGINE 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	20	INCTRUMENT DANIEL WIDE AND COME WIDE (INCTRUMENT DANIEL DEINEOROEMENT LU)	
IF2	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	20	FAICINE MUDE AND COMUNUE (DICUT MICH DANIEL)	
IJ2	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)	
IL1	38 FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)		

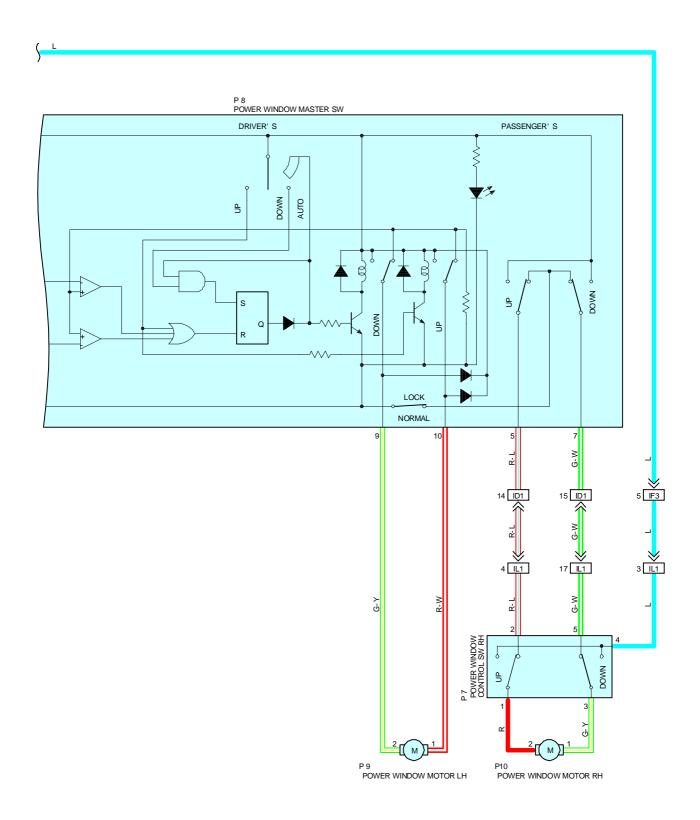
# : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION			
ГЛ	32 (2JZ-GTE)	EDON'T OIDE OF DIGHT FENDED			
EA	34 (2JZ-GE)	FRONT SIDE OF RIGHT FENDER			
IE	36	EFT KICK PANEL			
IG	36	DICHT KICK DANEL			
IH	30	RIGHT KICK PANEL			
BI	40	LEFT QUARTER PILLAR LOWER BACK PANEL CENTER			
BJ	40				

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
12	38	COWL WIRE	I21	38	INSTRUMENT PANEL WIRE
14	30	COWL WIRE	B 1	40	FRONT DOOR LH WIRE
l19	38	INSTRUMENT PANEL WIRE	B 2	40	FRONT DOOR RH WIRE







#### SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS THROUGH THE ECU-IG FUSE TO 

OF THE THEFT DETERRENT AND DOOR LOCK CONTROL 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 CONTROL SW RH.

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

WITH THE IGNITION SW TURNED ON AND WITH THE POWER WINDOW MASTER SW (DRIVER'S) AT **UP** POSITION, THE CURRENT FLOWING TO **TERMINAL 4** OF THE POWER WINDOW MASTER SW FLOWS TO **TERMINAL 10** OF THE MASTER SW  $\Box$  **TERMINAL 1**  $\Box$  OF THE POWER WINDOW MOTOR  $\Box$  **TERMINAL 2**  $\Box$  **TERMINAL 9** OF THE MASTER SW  $\Box$  **TERMINAL 8**  $\Box$  **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 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 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 (UPSIDE) IS ACTIVATED, SO CURRENT FLOWS FROM **TERMINAL 4** OF THE POWER WINDOW MASTER SW  $\ \square$  **TERMINAL 1** OF THE POWER WINDOW MOTOR  $\ \square$  **TERMINAL 2**  $\ \square$  **TERMINAL 9**  $\ \square$  **TERMINAL 8**  $\ \square$  **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 (FRONT RH WINDOW)

WITH POWER WINDOW SW (FRONT RH) 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 (FRONT RH) 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 (FRONT RH) 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 AND **DOOR** LOCK CONTROL ECU AND CURRENT FLOWS FROM DOOR FUSE **TERMINAL (A) 9** OF THE ECU OR DOME FUSE TO **TERMINAL (B) 1** OF THE ECU **TERMINAL (A) 6 TERMINAL 1** OF THE POWER 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. 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 ED) WITHIN ABOUT **60** SECONDS AFTER TURNING THE IGNITION SW TO OFF, A SIGNAL IS INPUT TO **TERMINAL (B) 19, (B) 7 OF THE** THEFT DETERRENT AND DOOR LOCK CONTROL 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 THE IGNITION SW AT ON POSITION

8-GROUND: ALWAYS CONTINUITY

10-GROUND: APPROX. **12** VOLTS WITH THE IGNITION SW **ON** AND MASTER SW (DRIVER'S WINDOW) AT **UP** POSITION 9-GROUND: APPROX. **12** VOLTS WITH THE 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	CO	DE	SEE PAGE
D10	30	P 8	25	Τ7	Α	29
D11	30	P 9	27	T13	В	29
P 7	30	P10	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

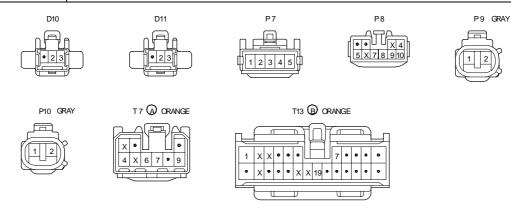
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	20	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1D	20	FRONT DOOR LH WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H		
11	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J		

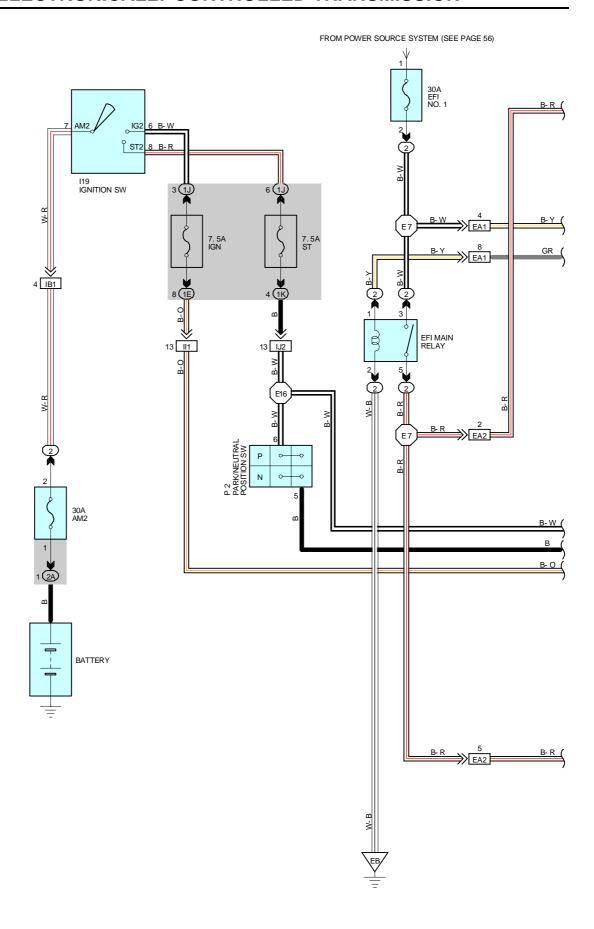
### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

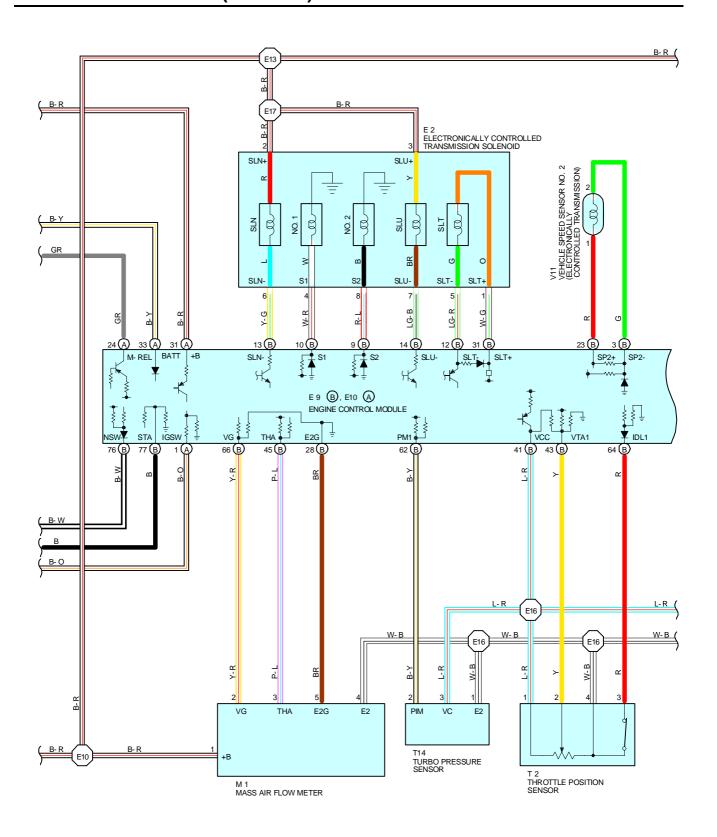
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
ID1	36	FRONT DOOR LH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF2	36	INSTRUMENT PANEL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

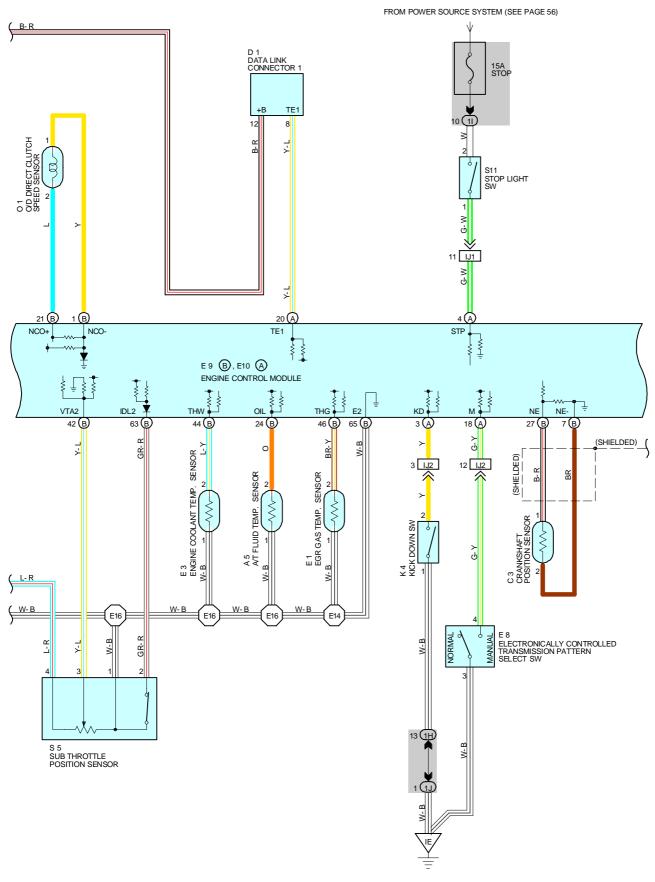
· ·		
CODE	SEE PAGE	GROUND POINTS LOCATION
ΙE	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL
IH	30	NIGHT NICK FAINEL
RI	40	LEFT OLIARTER PILLAR

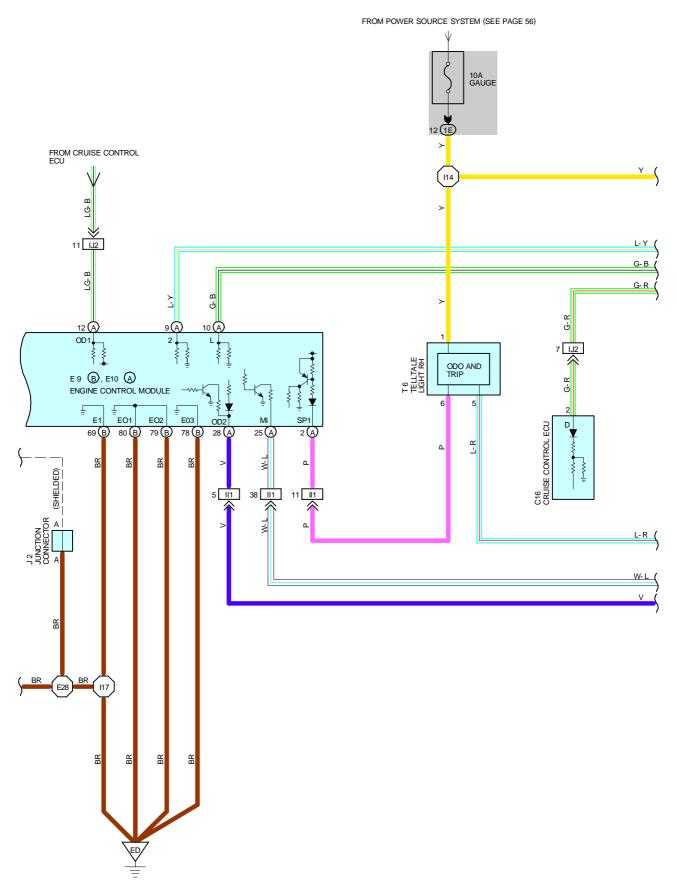


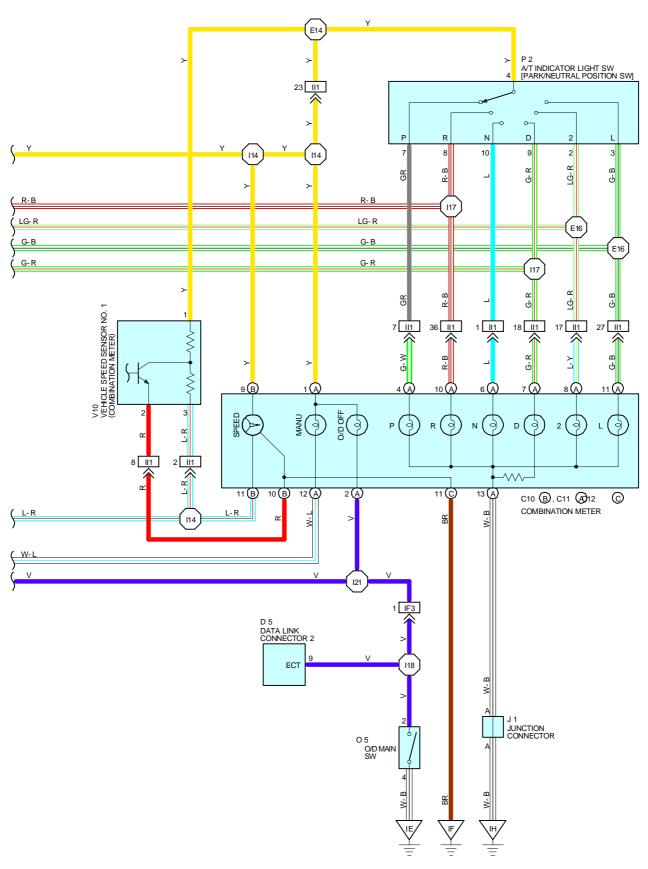




# EGT ELECTRONICALLY CONTROLLED TRANSMISSION







# AND A/T INDICATOR (2JZ-GTE)

#### **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 FROM THE ENGINE COOLANT TEMP. SENSOR AND THE VEHICLE SPEED SIGNAL FROM VEHICLE SPEED SENSOR NO. 2 IS INPUT TO **TERMINAL (B) 23** OF THE ENGINE CONTROL MODULE. 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 AS THROTTLE ANGLE SIGNAL.

BASED ON THESE SIGNALS, THE ENGINE CONTROL 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  $\rightarrow$  **TERMINAL 4** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID  $\rightarrow$  **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  $\rightarrow$  **TERMINAL 8** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID  $\rightarrow$  **GROUND** AND FROM **TERMINAL (B) 10** OF THE ENGINE CONTROL MODULE  $\rightarrow$  **TERMINAL 4** OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID  $\rightarrow$  **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 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  $\rightarrow$  TERMINAL 3 OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID  $\rightarrow$  TERMINAL 7 $\rightarrow$  TERMINAL (B) 14 OF THE ENGINE CONTROL MODULE  $\rightarrow$  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. THE ENGINE CONTROL MODULE 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, 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 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. INPUT OF THIS SIGNAL CAUSES CURRENT TO FLOW FROM THE **GAUGE** FUSE TO **TERMINAL (A) 1** OF THE COMBINATION METER  $\rightarrow$  **TERMINAL (A) 12** $\rightarrow$  **TERMINAL (A) 25** OF THE ENGINE CONTROL MODULE  $\rightarrow$  **GROUND**, LIGHTING UP THE INDICATOR LIGHT. IF THE A/T SHIFT LEVER IS THEN SHIFTED **TO "2"** POSITION, THE ENGINE CONTROL MODULE 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 FROM CRUISE CONTREOL ECU. AS A RESULT, THE ENGINE CONTROL MODULE OPERATES AND CONTROLS OVERDRIVE, LOCK-UP AND SO ON FOR SMOOTH DRIVING.



# SERVICE HINTS

#### **E2 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**

1-2:1- 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

BATT-E1:ALWAYS 9-14 VOLTS

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

IDL1-E1:0-1.5 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY CLOSED 9-14 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY OPEN VTA1-E1: 0.3-0.8 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY CLOSED 3.2-4.9 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY OPEN

STA-E1: 6-14 VOLTS WITH THE ENGINE CRANKING M-REL-E1: 9-14 VOLTS WITH THE IGNITION SW ON VCC-E1:4.5-5.5 VOLTS WITH THE IGNITION SW ON

L-E1:APPROX. 7.5-14 VOLTS WITH THE SHIFT LEVER AT "L" POSITION 2-E1:APPROX. **7.5-14** VOLTS WITH THE SHIFT LEVER AT "2" POSITION R-E1:APPROX. 7.5-14 VOLTS WITH THE SHIFT LEVER AT "R" POSITION

#### 0 1 O/D DIRECT CLUTCH SPEED SENSOR

1-2:APPROX. **620** □:

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

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 0

CC	DE	SEE PAGE	CC	DDE	SEE PAGE	CODE	SEE PAGE
A 5		24(2JZ-GTE)	E	3	24(2JZ-GTE)	0 5	29
C 3		24(2JZ-GTE)		8	29	P2	25(2JZ-GTE)
C10	В	28	E 9	В	29	S 5	25
C11	Α	28	E10	Α	29	S11	29
C12	С	28	ľ	19	29	T 2	25(2JZ-GTE)
С	16	28	J	1	29	Т6	29
D	1	24(2JZ-GTE)	STE)		29	T14	25
D 5		28		( 4	29	V10	25(2JZ-GTE)
E 1		24(2JZ-GTE)	M 1		25	V11	25(2JZ-GTE)
E	2	24(2JZ-GTE)	C	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)	
ΙE	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)	
1H		COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)	
11	20		
1J			
1K	1		
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)	

# AND A/T INDICATOR (2JZ-GTE)

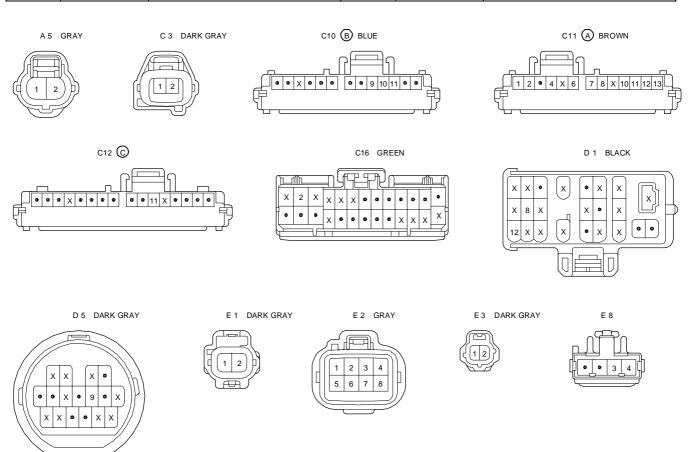
# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

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	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF3	36	INSTRUMENT PANEL AND COWL WIRE (RIGHT KICK PANEL)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL (RIGHT KICK PANEL)
IJ1	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)
IJ2	3	ENGINE WIRE AND COVE WIRE (RIGHT RICK PAINEL)

# : GROUND POINTS

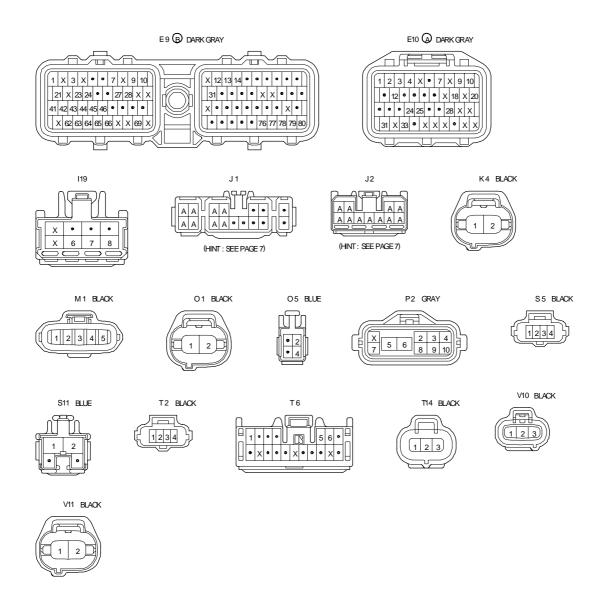
CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32(2JZ-GTE)	FRONT SIDE OF LEFT FENDER
ED	32(2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD
IE	36	LEFT KICK PANEL
IF	30	LEFT NON FAINEL
IH	36	RIGHT KICK PANEL

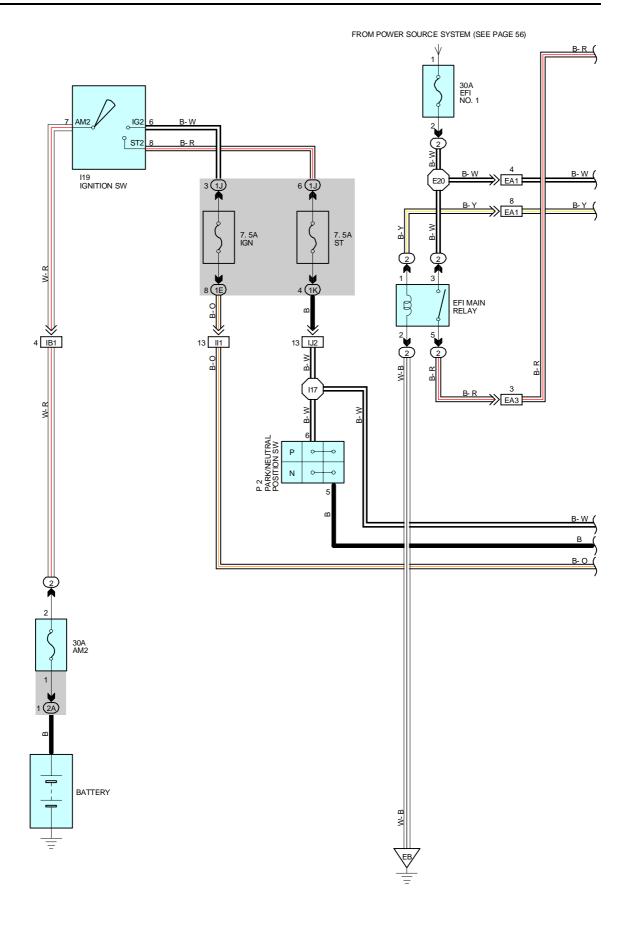
_					
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 7	32	ENGINE ROOM MAIN WIRE	E17	32	ENGINE WIRE
E10	32	ENGINE WIRE	l14	38	INSTRUMENT PANEL WIRE
E13			l17	38	ENGINE WIRE
E14			l18	38	COWL WIRE
E16			I21	38	INSTRUMENT PANEL WIRE

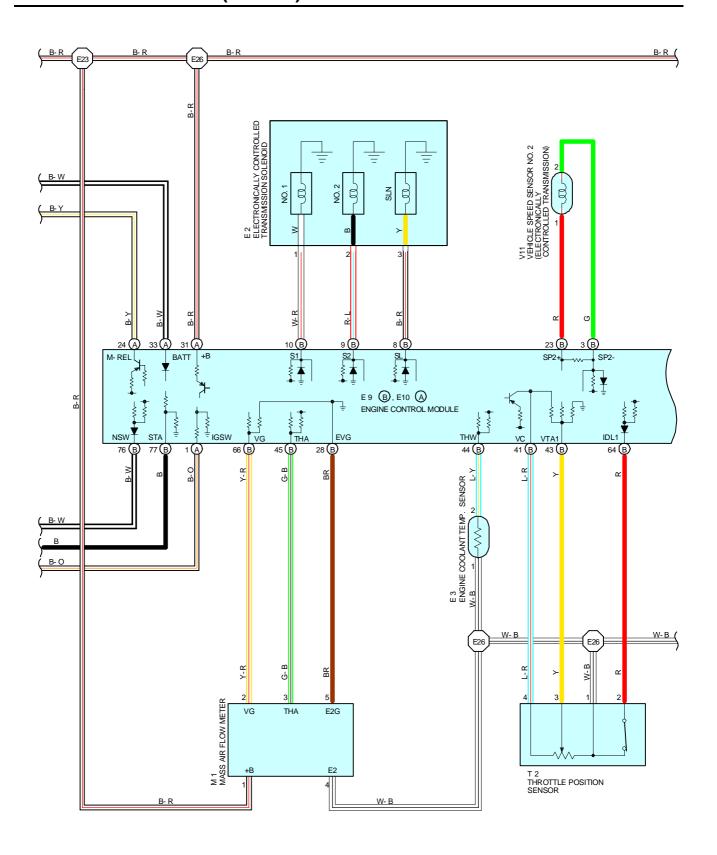


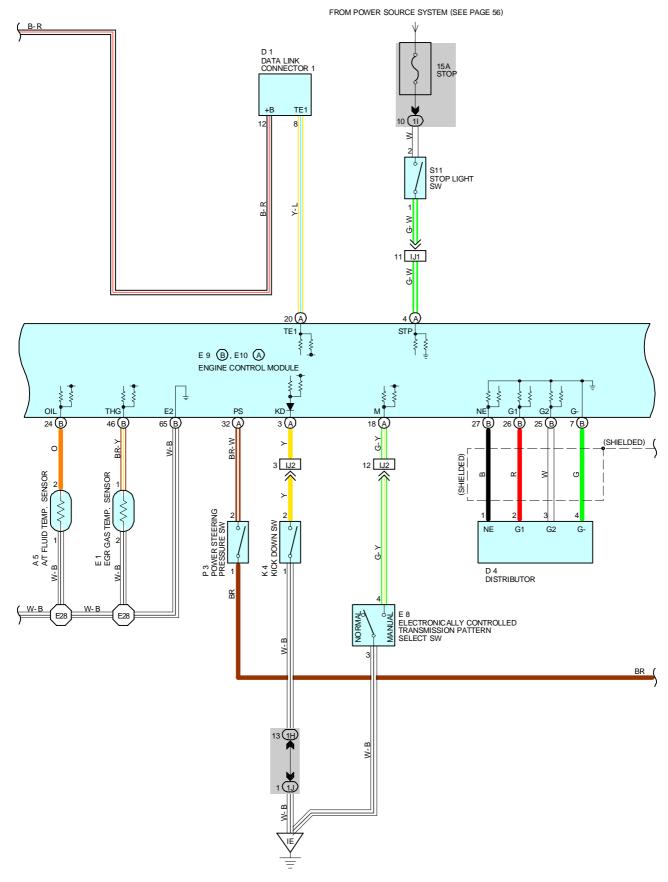


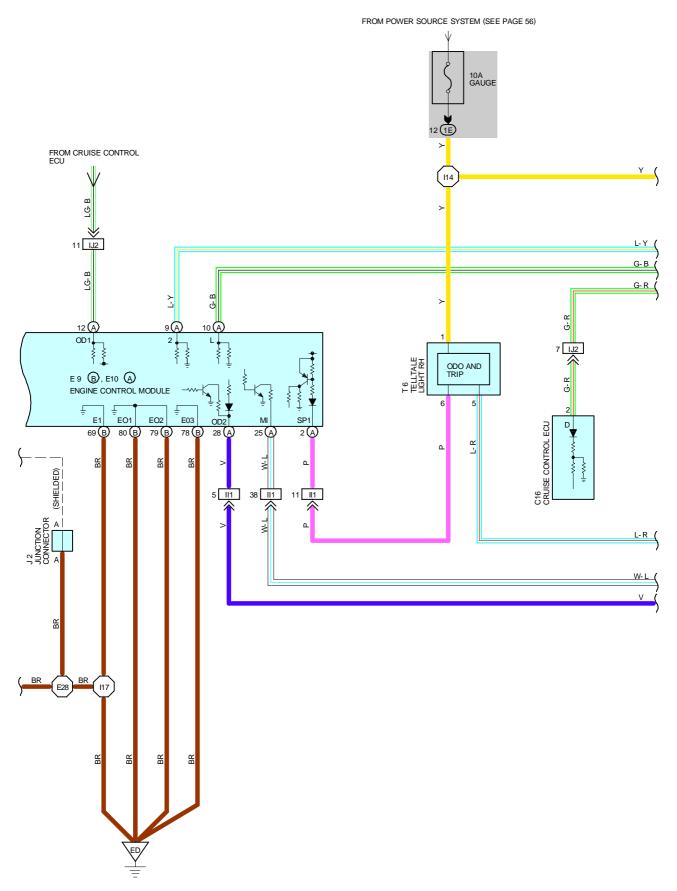
# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (2JZ-GTE)



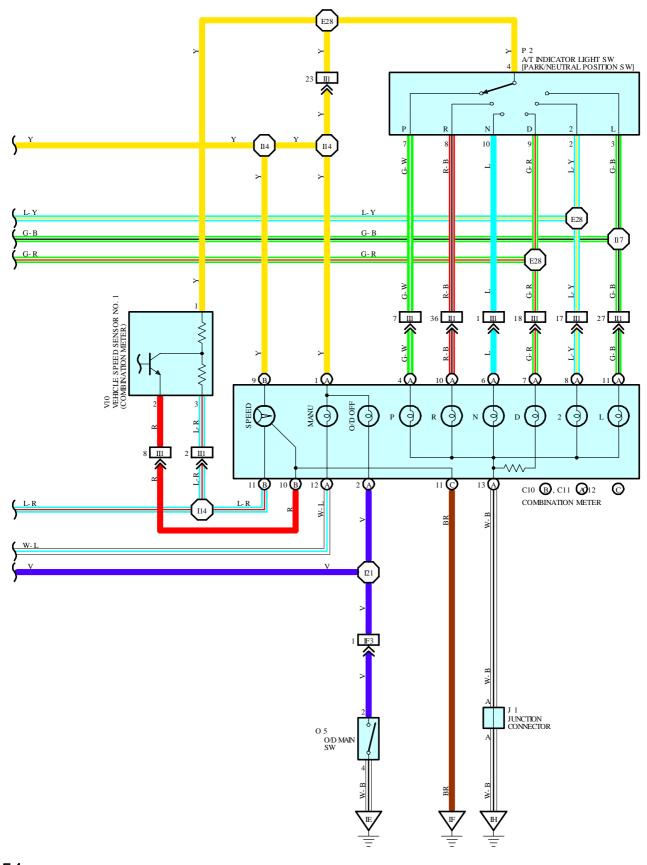












# AND A/T INDICATOR (2JZ-GE)

#### **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 FROM THE ENGINE COOLANT TEMP. SENSOR AND THE VEHICLE SPEED SIGNAL FROM VEHICLE SPEED SENSOR NO. 2 IS INPUT **TERMINAL (B) 23** OF THE ENGINE CONTROL MODULE. 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 AS THROTTLE ANGLE SIGNAL.

BASED ON THESE SIGNALS, THE ENGINE CONTROL MODULE 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 TERMINAL 1 OF THE 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 
TERMINAL 2 OF ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID 
GROUND, AND FROM TERMINAL (B) 10 OF THE ENGINE CONTROL MODULE 
TERMINAL 1 OF THE 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 JUDGES FROM EACH SIGNAL THAT LOCK-UP OPERATION CONDITIONS HAVE BEEN MET, THE CURRENT FLOWS FROM **TERMINAL (B) 8** OF THE ENGINE CONTROL MODULE **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. THE ENGINE CONTROL MODULE 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 AND THE ELECTRONICALLY CONTROLLED TRANSMISSION CAUSES SHIFT TO OVERRIDE 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 THROUGHTHE 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 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. INPUT OF THIS SIGNAL CAUSES CURRENT TO FLOW FROM THE **GAUGE** FUSE TO **TERMINAL (A) 1** OF THE COMBINATION METER TERMINAL (A) 12 TERMINAL (A) 25 OF THE ENGINE CONTROL MODULE GROUND, LIGHTING UP THE INDICATOR LIGHT. IF THE A/T SHIFT LEVER IS THEN SHIFTED TO "2" POSITION, THE ENGINE CONTROL MODULE 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 FROM CRUISE CONTROL ECU. AS A RESULT, THE ENGINE CONTROL MODULE OPERATES AND CONTROLS OVERDRIVE, LOCK-UP AND SO ON FOR SMOOTH DRIVING.

#### **SERVICE HINTS**

#### **E2 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID**

1, 2, 3-GROUND : EACH 11-15  $\Omega$ **E 3 ENGINE COOLANT TEMP. SENSOR** 

> 4-7 K□ □0•C 32•F) 2-3 K 20 C 68 F) 0-9.3 K 40 40 C 104 F 0-4.7 K 60 60 C 140 F)

0-2.4 K 80 80 C 176 F) E 9 (B), E10 (A) ENGINE CONTROL MODULE

BATT-E1:ALWAYS 9-14 VOLTS

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

IDL1-E1:0-1.5 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY CLOSED :9-14 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY OPEN VTA1-E1: 0.3-0.8 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY CLOSED 3.2-4.9 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY OPEN

STA-E1: 6-14 VOLTS WITH THE ENGINE CRANKING M-REL-E1: 9-14 VOLTS WITH THE IGNITION SW ON VCC-E1:4.5-5.5 VOLTS WITH THE IGNITION SW ON

L-E1: **7.5-14** VOLTS WITH THE SHIFT LEVER AT "L" POSITION 2-E1: **7.5-14** VOLTS WITH THE SHIFT LEVER AT "**2**" POSITION

V11 VEHICLE SPEED SENSOR NO. 2 (ELCTRONICALLY CONTROLLED TRANSMISSION)

1-2:APPROX. **620** 

E 8 ELECTRONICALLY CONTROLLED TRANSMISSION PATTERN SELECT SW

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

**POSITION** 

#### O : PARTS LOCATION

CO	DE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
Α	4	26(2JZ-GE)	E 3	26(2JZ-GE)	0 5	29
C10	В	28	E 8	29	P2	27(2JZ-GE)
C11	Α	28	E 9 B	29	Р3	27(2JZ-GE)
C12	С	28	E10 A	29	S11	29
C	16	28	I19	29	T 2	27(2JZ-GE)
D	1	26(2JZ-GE)	J 1	29	T 6	29
D	4	26	J 2	29	V10	27(2JZ-GE)
Е	1	26(2JZ-GE)	K 4	29	V11	27(2JZ-GE)
Е	2	26(2JZ-GE) M 1		29		

#### : RELAY BLOCKS

Ī	CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
Ī	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		
11	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J	20	COWE WIRE AND 3/B NO. 1 (LET 1 RIGHT ANELL)
1K		
2A	22	BATTERY AND J/B NO. 2 (ENGINE COMPARTMENT LEFT)

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

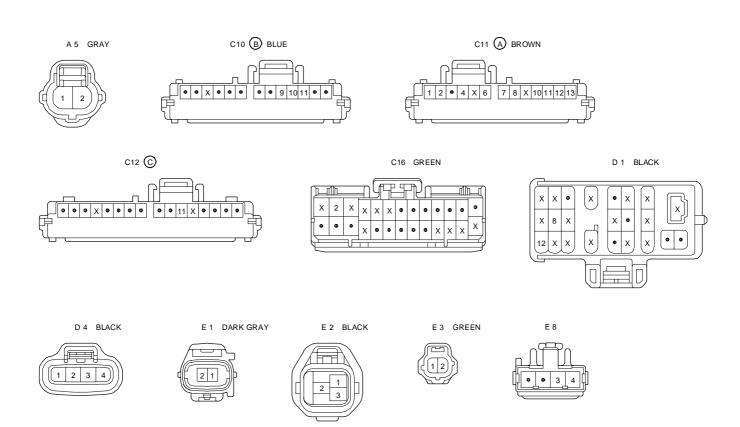
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	34(2JZ-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
EA3	34	TENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF3	36	INSTRUMENT PANEL WIRE 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	30	ENGINE WIRE AND COME WIRE (RIGHT RICK FANLE)

## **AND A/T INDICATOR (2JZ-GE)**

## : GROUND POINTS

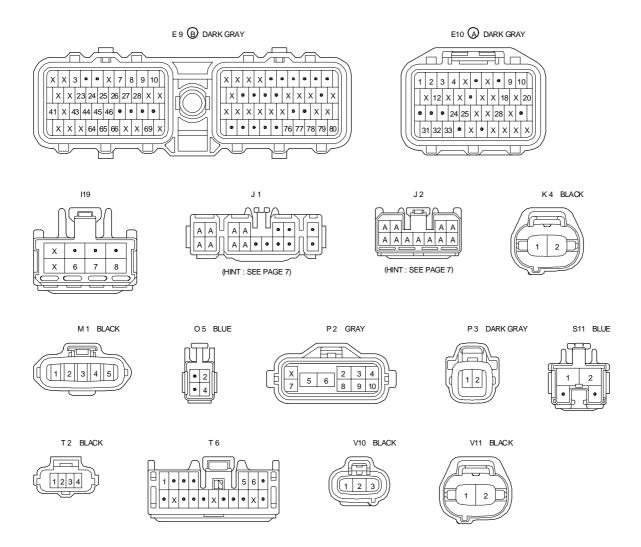
CODE	SEE PAGE	GROUND POINTS LOCATION
EB	34(2JZ-GE)	FRONT SIDE OF LEFT FENDER
ED	34(2JZ-GE)	REAR SIDE OF INTAKE MANIFOLD
IE	36	LEFT KICK PANEL
IF	30	LEFT NOR PAINEL
IH	36	RIGHT KICK PANEL

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E20			l14	38	INSTRUMENT PANEL WIRE
E23	34	ENGINE WIRE	117	38	ENGINE WIRE
E26			I21	38	INSTRUMENT PANEL WIRE
E28					



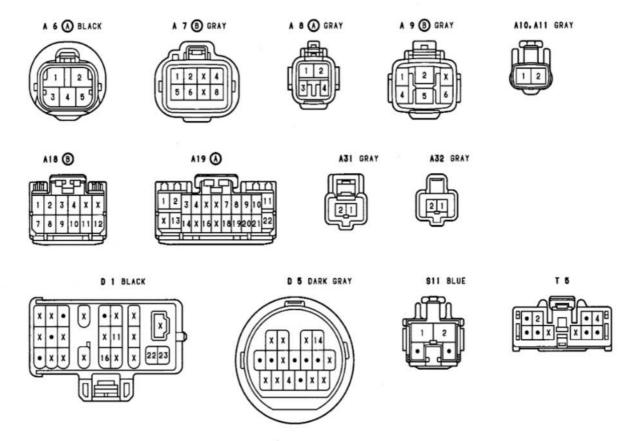


# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR (2JZ-GE)

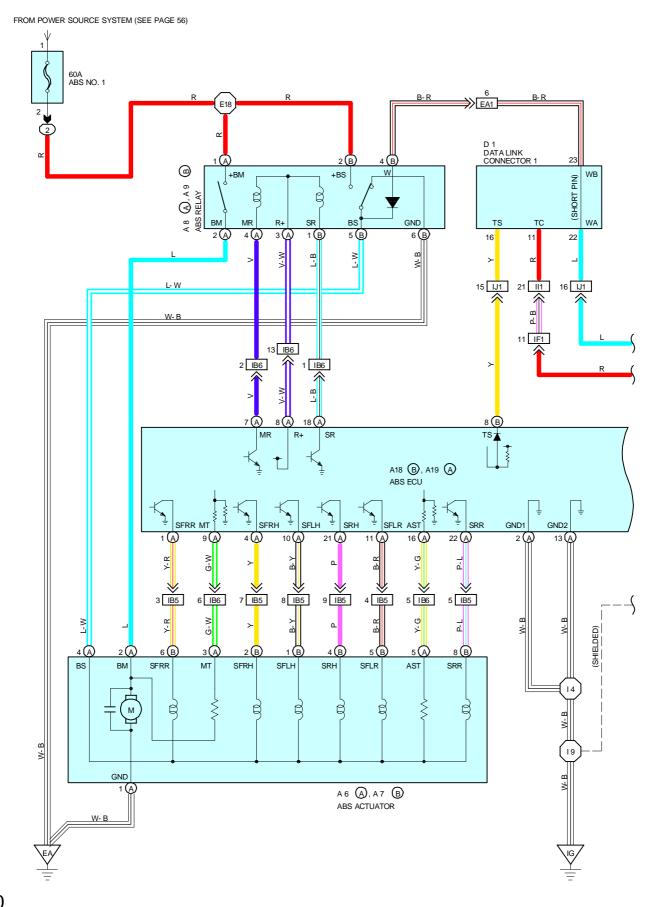


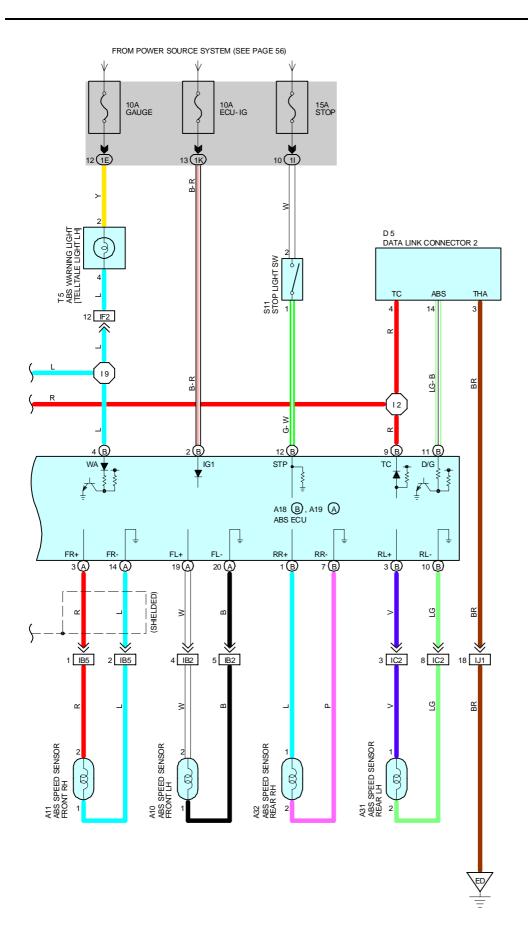
# ABS (W/O TRACTION CONTROL)











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

#### 1. INPUT SIGNALS

(1) SPEED SENSOR SIGNAL

THE SPEED OF THE WHEELS IS DETECTED AND INPUT TO **TERMINALS FL+**, **FR+**, **RL+** AND **RR+** OF THE ABS ECU.

(2) STOP LIGHT SW SIGNAL

A SIGNAL IS INPUT TO TERMINAL STP OF THE ABS ECU WHEN THE BRAKE PEDAL IS DEPRESSED.

#### 2. SYSTEM OPERATION

DURING SUDDEN BRAKING, THE ABS ECU 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 CONTINUITY

(B) 5-(A) 4:33

(B) 1,(B) 2,(B) 4,(A) 4:APPROX. 8.8

(B) 5,(B) 6,(B) 8,(A) 4:APPROX. 4.3

#### A10, A11 ABS SPEED SENSOR FRONT LH, RH

1-2:1.4-1.8 K (20°C, 68°F)

#### A31, A32 ABS SPEED SENSOR REAR LH, RH

1-2:0.9-1.3 K (20°C, 68°F)

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

(B) 2-GROUND :10-14 VOLTS WITH THE IGNITION SW ON

(B)12-GROUND :10-14 VOLTS WITH THE STOP LIGHT SW ON (BRAKE PEDAL DEPRESSED)

(A) 2, (A) 13-GROUND : ALWAYS CONTINUITY

(A) 1, (A) 4, (A) 10, (A) 11, (A) 21, (A) 22-GROUND:10-14 VOLTS WITH THE IGNITION SW ON

#### S11 STOP LIGHT SW

1-2:CLOSED WITH THE BRAKE PEDAL DEPRESSED

#### : PARTS LOCATION

CO	DE	SEE PAGE	CO	DE	SEE PAGE	CODE	SEE PAGE
A 6	Α	26(2JZ-GE)	A1	11	26(2JZ-GE)	D1	26(2JZ-GE)
A 7	В	26(2JZ-GE)	A18	В	28	D 5	28
A 8	Α	26	A19	Α	28	S11	29
A 9	В	26	A3	31	30	T 5	29
A'	10	26(2JZ-GE)	A3	32	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 HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
11	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1K	20	COWL WIRE AND JIB NO. 1 (LEFT NICK PANEL)

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

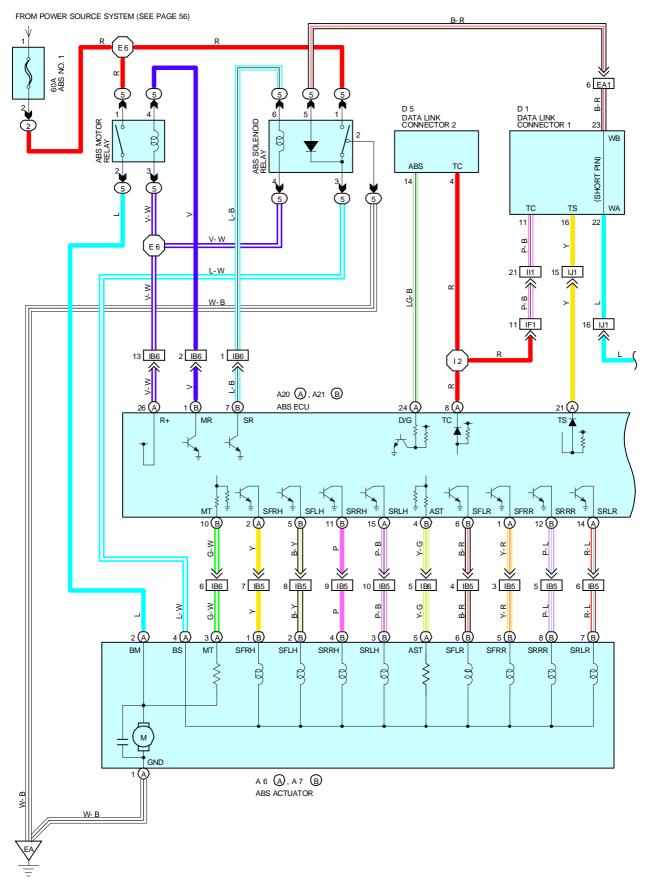
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)			
EA1	34(2JZ-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (NEAR THE R/B NO. 2)			
IB2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)			
IB5	26	FNOINE DOOM MAIN WIDE AND COME WIDE (DICHT VICK DANIEL)			
IB6	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)			
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL))			
IF1	36	INICTOLIMENT DANIEL WIDE AND COWL WIDE (INICTOLIMENT DANIEL DEINICODOEMENT LU)			
IF2	30	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)			

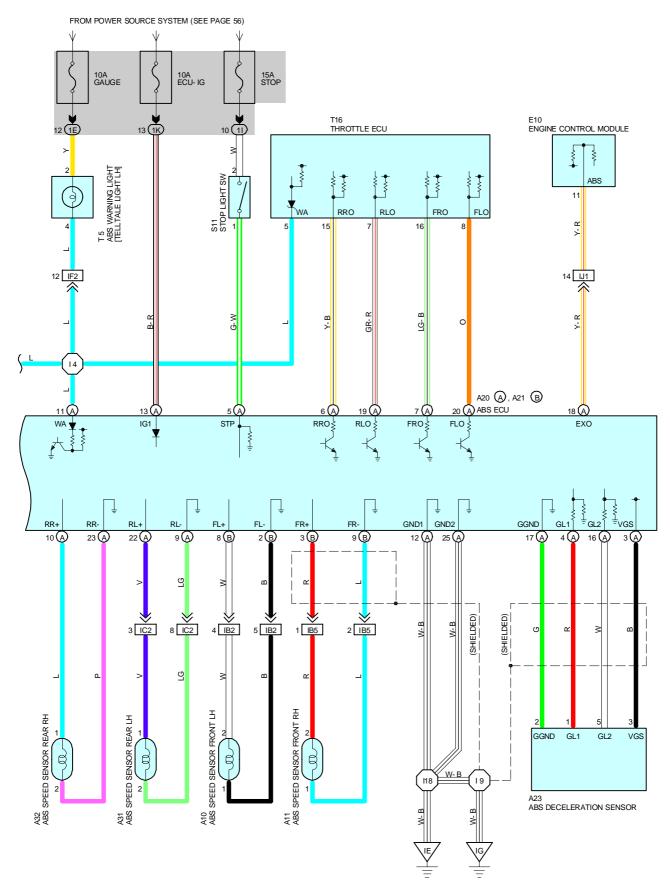
## : GROUND POINTS

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

	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
Γ	E18	34	ENGINE ROOM MAIN WIRE	14	20	COWL WIRE
Γ	12	38	COWL WIRE	19	38	COWL WIRE







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

(3) SPEED SENSOR SIGNAL

THE SPEED OF THE WHEELS IS DETECTED AND INPUT TO **TERMINALS FL+**, **FR+**, **RL+** AND **RR+** OF THE ABS FC.I.

(4) STOP LIGHT SW SIGNAL

A SIGNAL IS INPUT TO TERMINAL STP OF THE ABS ECU WHEN THE BRAKE PEDAL IS DEPRESSED.

(5) DECELERATION SENSOR SIGNAL

LONGITUDINAL AND 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**

#### A20 (A), A21 (B) ABS ECU

(A) 13-GROUND::10-14 VOLTS WITH THE IGNITION SW AT ON POSITION

(A) 5-GROUND:10-14 VOLTS WITH THE STOP LIGHT SW ON

(A) 12,(A) 25-GROUND: ALWAYS CONTINUITY

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

(A) 1-GROUND: ALWAYS CONTINUITY

(A) 5-(A) 4.33 Ω

**(B)** 1, **(B)** 2, **(B)** 3, **(B)** 4- **(A)** 4,:APPROX. **8 8** Ω

(B) 5, (B) 6, (B) 7, (B) 8- (A) 4,:APPROX. 4.3 Ω

#### **S11 STOP LIGHT SW**

2-1:CLOSED WITH THE BRAKE PEDAL DEPRESSED

#### A10, A11 ABS SPEED SENSOR FRONT LH, RH

1-2:0.4-1.8 K Ω (20•C, 68•F)

#### A31, A32 ABS SPEED SENSOR REAR LH, RH

1-2:0.9-1.3 K Ω **(20•C, 68•F)** 

## : PARTS LOCATION

CO	DE	SEE PAGE	CO	DE	SEE PAGE	CODE	SEE PAGE
A 6	Α	24(2JZ-GTE)	A21	В	28	D 5	28
A 7	В	24(2JZ-GTE)	A2	23	28	E10	29
A	10	24(2JZ-GTE)	A31		30	S11	29
A	11	24(2JZ-GTE)	A32		30	T 5	29
A20	Α	28	D	1	24(2JZ-GTE)	T16	29

## : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	22	R/B NO. 2 (ENGINE COMPARTMENT LEFT)
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)
11	20	COWL WIRE AND NO. 1 (LEFT KICK PANEL
1K	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)			
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)			
IB5	26	FNOINE DOOM MAIN WIDE AND COME WIDE (DICHT VICK DANIEL)			
IB6	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)			
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)			
IF1	00	INICITED INTENT PANIEL WIDE AND COME WIDE (NICTED MENT DANIEL DEINICODOEMENT LU)			
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)			

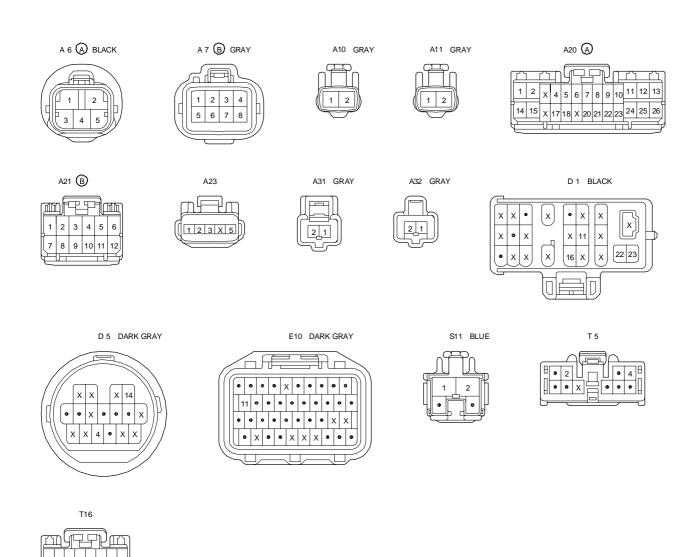
## : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ΙE	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
12	20	COMI MIDE	19	20	COM MIDE
l11	38	COWL WIRE	l18	38	COWL WIRE



## ABS (W/ TRACTION CONTROL)





TRACTION CONTROL IS THE SYSTEM TO REALIZE A FAVORABLE ACCELERATOR CONTROLABILITY BY MAKING THE ENGINE OUTPUT MOST APPROPRIATE FOR THE ACCELERATION UNDER EACH DRIVING CONDITION PROVIDED BY THE THROTTLE ECU.

(TRACTION OFF SW)

THIS IS THE SWITCH TO STOP THE OPERATION OF SLIP CONTROL. AFTER STARTING THE ENGINE, PRESSING THE SWITCH ONE TIME UNDER THE CONDITION THAT THE SNOW INDICATOR DOES NOT LIGHT ON, MAKES IT IN THE OPERATION STOP CONDITION (OFF), AND PRESSING IT ONE MORE TIME MAKES IT IN THE OPERATION WAITING CONDITION. IN ADDITION, RESTARTING AFTER THE ENGINE STOP MAKES IT IN THE OPERATION WAITING CONDITION WITHOUT CONCERNING THE TRACTION OFF SW.

(SNOW MODE SW)

THIS IS THE SWITCH TO FIX LOW DOADS CONTROL AT THE TIME OF DRIVING ON A SLIPPERY ROAD SUCH AS SNOWY ROAD. AFTER STARTING THE ENGINE, PRESSING THE SWITCH MAKES IT FIX AT LOW DOAD CONTROL AND SNOW INDICATOR LIGHT COMES ON. IN ADDITION, RESTARTING AFTER THE ENGINE STOP MAKES IT ALWAYS IN NORMAL CONDITION (AUTO MODE) WITHOUT CONCERNING THE SNOW MODE SW CONDITION. PRESSING THE SNOW MODE SW UNDER OPERATION PROHIBITION CONDITION OF THE TRACITION (TRAC OFF INDICATOR LIGHTS ON.) CANCELS THE OPERATION PROHIBITION OF THE TRACTION AND ALSO FIXES IT AT LOW \( \text{LOAD CONTROL}. \) (TRAC OFF INDICATOR LIGHT)

THIS LIGHT COMES ON BY SELECTING THE OPERATION STOP CONDITION OF THE TRACTION CONTROL WITH TRACTION OFF SW AND ALERTS THE DRIVER TO BE IN OPERATION STOP CONDITION AND ALSO ALERTS THE DRIVER BY BLINKING IN CASE OF THE OCCURANCE OF THE SYSTEM MAULFUCTION.

#### **SERVICE HINTS**

#### T15 (A), T16 (B)THROTTLE ECU

WT-E1: 0.3 VOLTS WITH THE IGNITION SW ON AND THE TRAC OFF INDICATOR LIGHT ON

9-14 VOLTS WITH THE IGNITION SW ON AND THE TRAC OFF INDICATOR LIGHT OFF

IND-E1: 0.3 VOLTS WITH THE IGNITION SW ON AND SLIP INDICATOR LIGHT ON

: 9-14 VOLTS WITH THE IGNITION SW ON AND SLIP INDICATOR LIGHT OFF

CSW-E1: 0.3 VOLTS WITH THE IGNITION SW ON AND THE TRAC OFF SW HOLDED ON PUSHING

: 9-14 VOLTS WITH THE IGNITION SW ON AND THE TRAC OFF SW RELEASED

SIND-E1 0.3 VOLTS WITH THE IGNITION SW ON AND THE SNOW INDICATOR LIGHT ON 9-14 VOLTS WITH THE IGNITION SW ON AND THE SNOW INDICATOR LIGHT OFF

SNOW-E1: 0.3 VOLTS WITH THE IGNITION SW ON AND THE SNOW MODE SW HELD ON PUSHING

: 9-14 VOLTS WITH THE IGNITION SW ON AND THE SNOW MODE SW RELEASED

NE-E1: PULSE GENERATION (ENGINE IDLING)

TC-E1: 4.5-5.5 VOLTS WITH THE IGNITION SW ON AND THE ENGINE NOT RUNNING

WA-E1: 9-14 VOLTS WITH THE IGNITION SW ON AND THE ABS ECU NORMAL CONDITION 0.3 VOLTS WITH THE IGNITION SW ON AND THE ABS ECU ABNORMAL CONDITION

EFIB-E1 9-14 VOLTS WITH THE IGNITION SW ON AND THE ENGINE NOT RUNNING

IDL2-E1: 9-14 VOLTS WITH THE ENGINE RUNNING AND THE SUB THROTTLE VALVE FULLY OPEN 0-3 VOLTS WITH THE ENGINE RUNNING AND THE SUB THROTTLE VALVE FULLY CLOSED

VTA2-E1: 3.2-4.9 VOLTS WITH THE ENGINE RUNNING AND THE SUB THROTTLE VALVE FULLY OPEN 0.3-0.8 VOLTS WITH THE ENGINE RUNNING AND THE SUB THROTTLE VALVE FULLY CLOSED

BATT-E1: ALWAYS 9-14 VOLTS

+B-E1: 9-14 VOLTS WITH THE IGNITION SW ON AND ENGINE NOT RUNNING

IDL1-E1: 9-14 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY OPEN 0-3 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY CLOSED

VTA1-E1: 3.2-4.9 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY OPEN 0.3-0.8 VOLTS WITH THE IGNITION SW ON AND THE THROTTLE VALVE FULLY CLOSED

RLY+-RLY:9-14 VOLTS WITH THE IGNITION SW ON

A,A-,B,B+--EO1: PULSE GENERATION (ENGINE RUNNING AND THE THROTTLE VALVE FULLY CLOSED)

EFI+,EFI-, ETC+,ETC--E1: PULSE GENERATION (IGNITION SW ON)

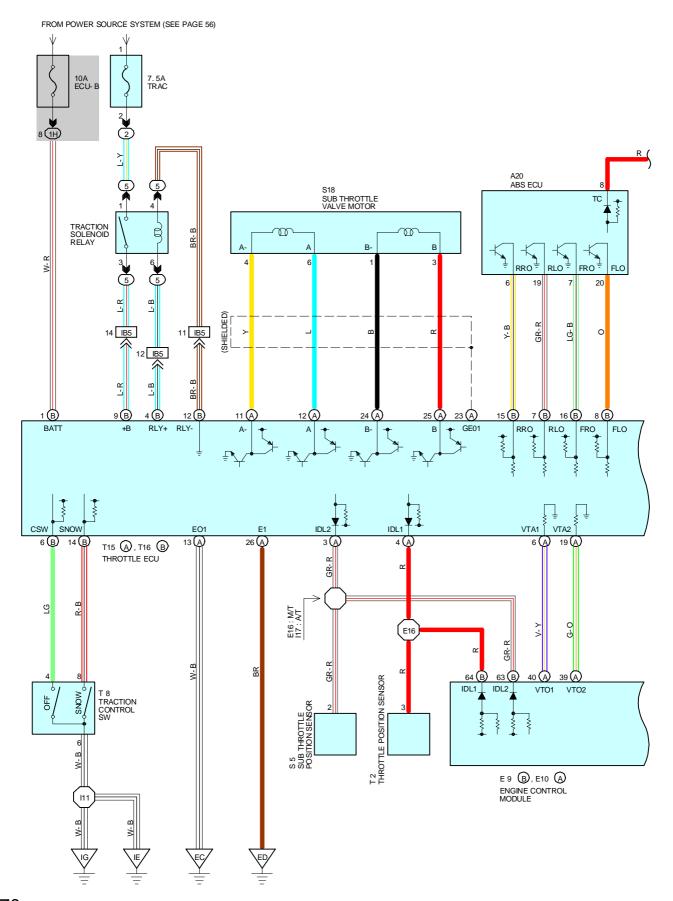
#### **T8 TRACTION CONTROL SW**

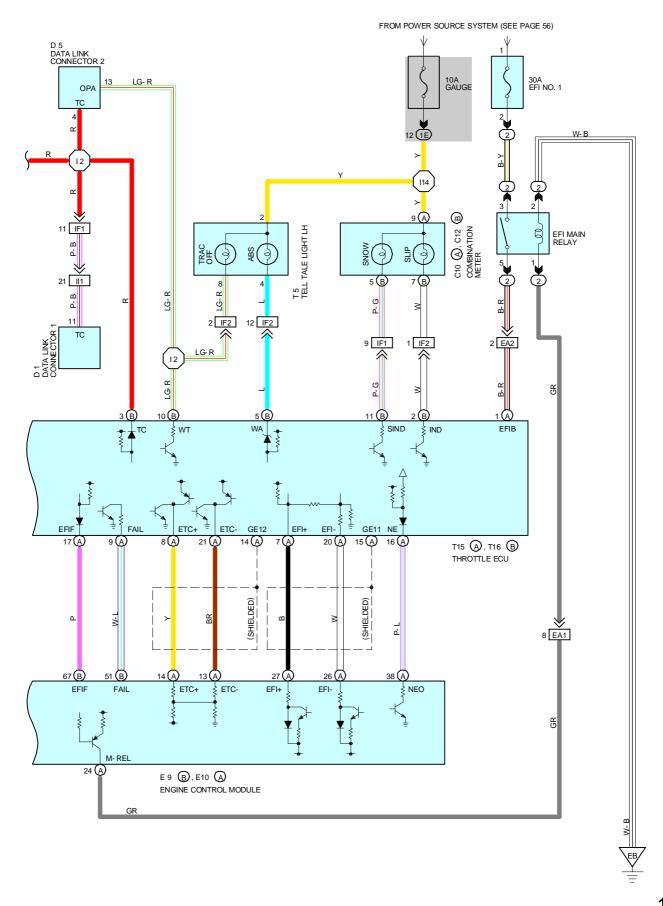
4-6 :CLOSED WITH THE TRACTIOIN CONTROL SW AT OFF POSITION

8-6 :CLOSED WITH THE TRACTIOIN CONTROL SW AT SNOW POSITION

#### **S18 SUB THROTTLE VALVE MOTOR**

**4-6, 3-1**:APPROX. **0.44** Ω





# **TRAC** TRACTION CONTROL

## : PARTS LOCATION

CO	DE	SEE PAGE	CO	DE	SEE PAGE	CO	DE	SEE PAGE
A	20	28	E 9	В	29	Т	5	29
C10	Α	28	E10	Α	29	Т	8	29
C12	В	28	S	5	25(2JZ-GTE)	T15	Α	29
D	1	24(2JZ-GTE)	S	18	25(2JZ-GTE)	T16	В	29
D	5	28	Т	2	25(2JZ-GTE)			

## : RELAY BLOCKS

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

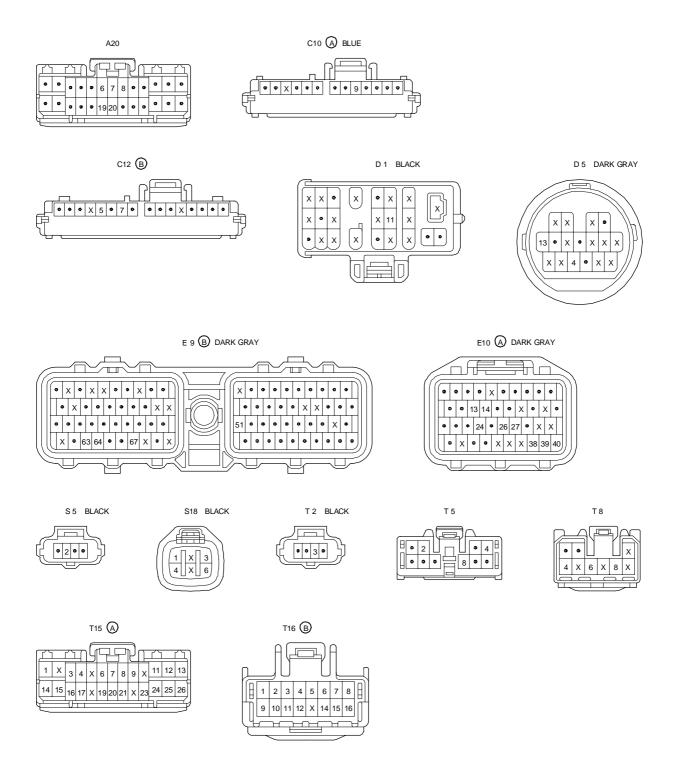
### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOIINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	00(0 IO OTE)	FNOINE WIDE AND ENOINE DOOM MAIN WIDE (NEAD THE DID NO. 0)
EA2	32(2J2-GTE)	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)
IF1	26	INCTUINGNIT DANIEL WIDE AND COWL WIDE (INCTUINGNIT DANIEL DEINEODOGAMENT LLI)
IF2	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

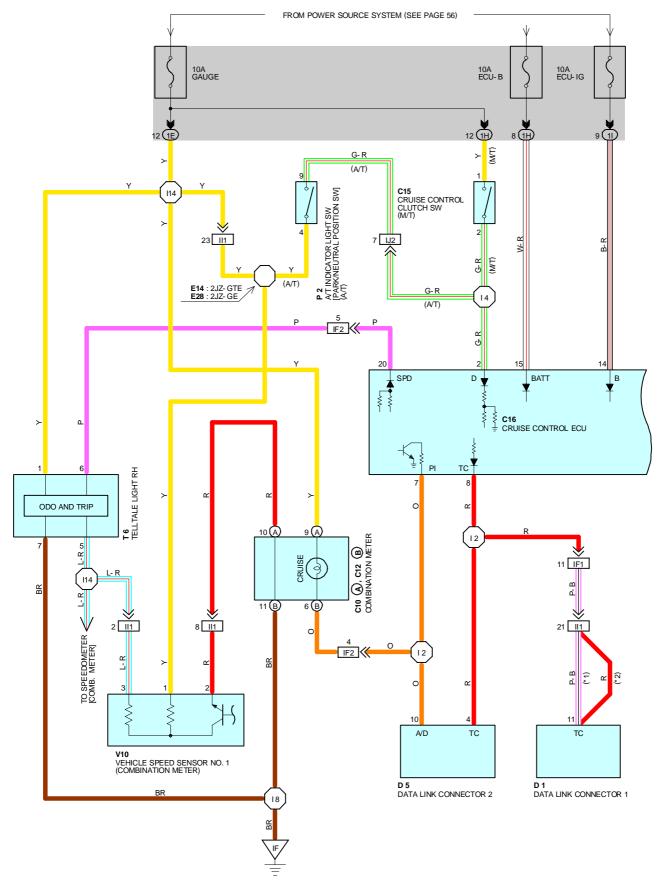
## 7 : GROUND POINTS

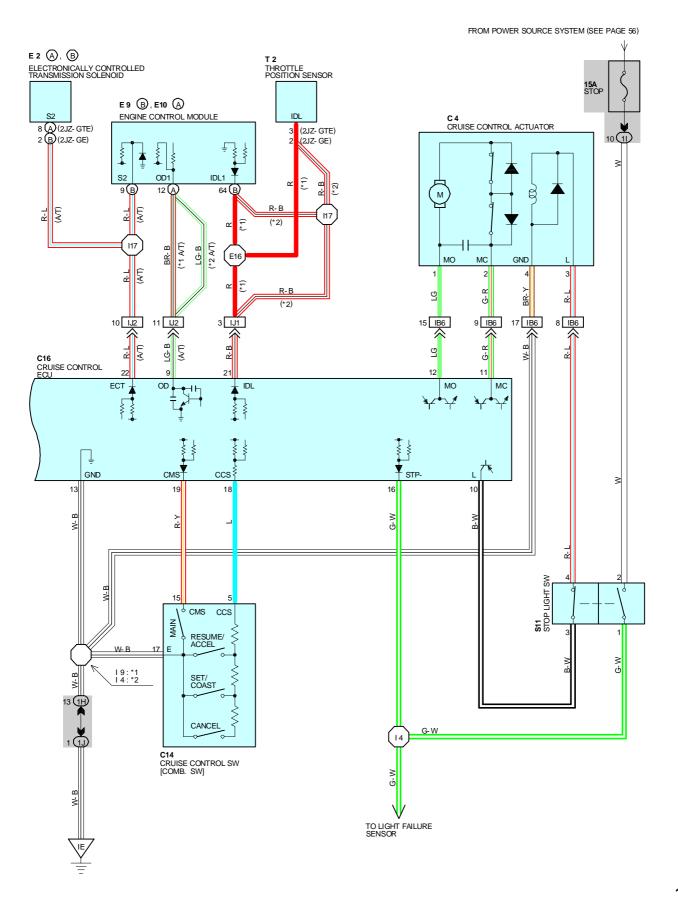
CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32(2JZ-GTE)	FRONT SIDE OF LEFT FENDER
EC	32(2JZ-GTE)	FRONT SIDE OF INTAKE MANIFOLD
ED	32(2JZ-GTE)	REAR SIDE OF INTAKE MANIFOLD
IE	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E16	32	ENGINE WIRE	l14	38	INSTRUMENT PANEL WIRE
12	20	COMI MIRE	l17	38	ENGINE WIRE
I11	38	COWL WIRE			









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

WITH THE IGNITION SW TURNED TO ON, THE CURRENT FLOWS THROUGH GAUGE FUSE TO **TERMINAL (A) 9** OF THE COMBINATION METER AND THE CURRENT THROUGH **ECU-IG** FUSE FLOWS TO **TERMINAL 14** OF THE 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 THE CRUISE CONTROL ECU. AS A RESULT, THE CRUISE CONTROL ECU FUNCTIONS AND THE CURRENT FLOWS THROUGH **TERMINAL 14** OF THE CRUISE CONTROL ECU TO **TERMINAL 13** OF THE CRUISE CONTROL ECU  $\rightarrow$  **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 THE CRUISE CONTROL INDICATOR LIGHT  $\rightarrow$  **TERMINAL (B) 6**  $\rightarrow$  **TERMINAL 7** OF THE CRUISE CONTROL ECU  $\rightarrow$  **TERMINAL 13**  $\rightarrow$  **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 I 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**  $\rightarrow$  **TERMINAL 1** OF THE CRUISE CONTROL ACTUATOR  $\rightarrow$  **TERMINAL 2**  $\rightarrow$  **TERMINAL 11** OF THE 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 THE ECU  $\rightarrow$  **TERMINAL 2** OF THE CRUISE CONTROL ACTUATOR  $\rightarrow$  **TERMINAL 1**  $\rightarrow$  **TERMINAL 12** OF THE CRUISE CONTROL ECU.

THIS CAUSES THE MOTOR IN THE CRUISE CONTROL ACTUATOR TO ROTATE TO CLOSE THE THROTTLE VALVE AND RETURN THE THROTTLE CABLE TO DECREASE THE VEHICLE SPEED.

#### 3. COAST CONTROL

DURING 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 EXCEPT "D" POSITION). "SIGNAL IS NOT INPUT TO **TERMINAL 2** OF THE ECU" (A/T)
- \* DEPRESSING THE BRAKE PEDAL (STOP LIGHT SW ON). "SIGNAL IS INPUT TO TERMINAL 16 OF THE ECU"
- \* PUSHING THE CANCEL SWITCH (CANCEL SW ON). "SIGNAL IS INPUT TO TERMINAL 18 OF THE ECU"
- \* DEPRESSING THE CLUTCH PEDÀL (CRUISE CONTROL CLUTCH SW OFF). "SIGNAL IS NOT INPUT TO **TERMINAL** 2 OF THE 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.

#### 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. UPON RECEIVING THIS SIGNAL, THE ENGINE CONTROL MODULE CHANGES THE SHIFT PATTERN TO NORMAL. TO MAINTAIN SMOOTH CRUISE CONTROL OPERATION (ON A DOWNWARD SLOPE ETC.), 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**

3-4 : APPROX. **38.5** Ω

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

15-17 : CONTINUITY WITH THE MAIN SW ON 5-17 : APPROX. 418  $\Omega$  WITH THE CANCEL SW ON

APPROX. 416  $\Omega$  WITH THE CANCEL SW ON APPROX. 68  $\Omega$  WITH THE RESUME/ACCEL SW ON APPROX. 198  $\Omega$  WITH THE SET/COAST SW ON

#### C16 CRUISE CONTROL ECU

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

15-GROUND: ALWAYS APPROX. 12 VOLTS

20-GROUND: 4 PULSE WITH 1 ROTATION OF ROTOR SHAFT

18-GROUND: APPROX. 418  $\Omega$  WITH THE CANCEL SW ON IN CONTROL SW

APPROX. 198  $\Omega$  WITH THE SET/COAST SW ON IN CONTROL SW

APPROX. 68  $\Omega$  WITH THE RESUME/ACCEL SW ON IN CONTROL SW

13-GROUND: ALWAYS CONTINUITY



## **CRUISE CONTROL**

## : PARTS LOCATION

CO	DE	SEE PAGE	CO	DE	SEE PAGE	CODE	SEE PAGE
C 4		24 (2JZ-GTE)	D 1		26 (2JZ-GE)	S11	29
		26 (2JZ-GE)	D 5		28	Τ.0	25 (2JZ-GTE)
C10	Α	28	E 2	Α	24 (2JZ-GTE)	T 2	27 (2JZ-GE)
C12	В	28	E 2	В	26 (2JZ-GE)	Т6	29
C	14	28	E 9	В	29	V40	25 (2JZ-GTE)
C	15	28	E10	Α	29	V10	27 (2JZ-GE)
C16		28	P 2		25 (2JZ-GTE)		
D	1	24 (2JZ-GTE)		2	17 (2JZ-GE)		

## : 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. (LEFT KICK PANEL)
1H		
11	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J		

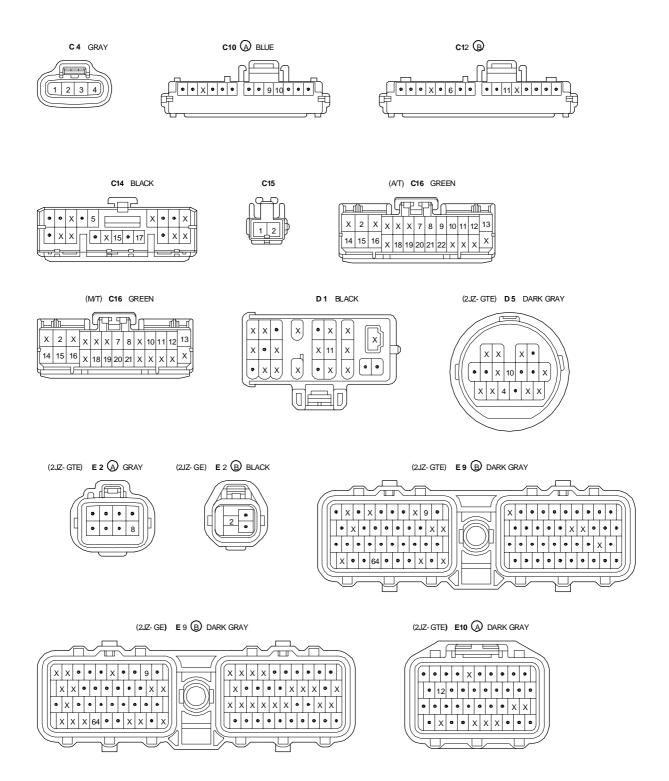
### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)		
IB6	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)		
IF1	36	NOTE INFORMED THE WIDE AND COME WIDE (INCTULINENT DANIEL DEINICODOCIMENT LUI)		
IF2	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)		
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)		
IJ1	20	FAICING MIDE AND COMI, MIDE (DICLIT MICK DANIEL)		
IJ2	38	ENGINE WIRE AND COWL WIRE (RIGHT KICK PANEL)		

## : GROUND POINTS

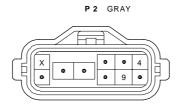
CODE	SEE PAGE	GROUND POINTS LOCATION
IE	20	LEET KIOK DANIEL
IF	36	LEFT KICK PANEL

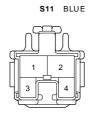
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E14	00			38	COWL WIRE
E16	32	ENGINE WIRE	18	20	INSTRUMENT PANEL WIRE
E28	34			38	INSTRUMENT PANEL WIRE
12	38	COWL WIRE	l17	38	ENGINE WIRE

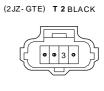


## CRUISE CONTROL



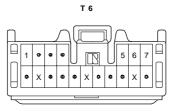






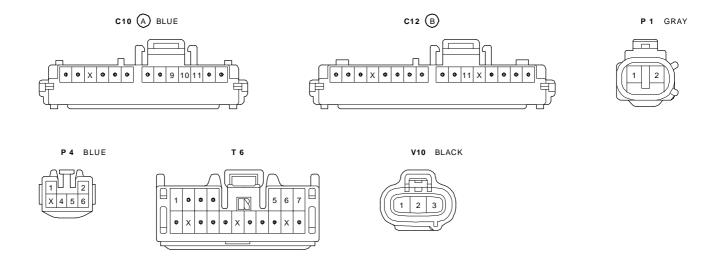
(2JZ-GE) T 2 BLACK

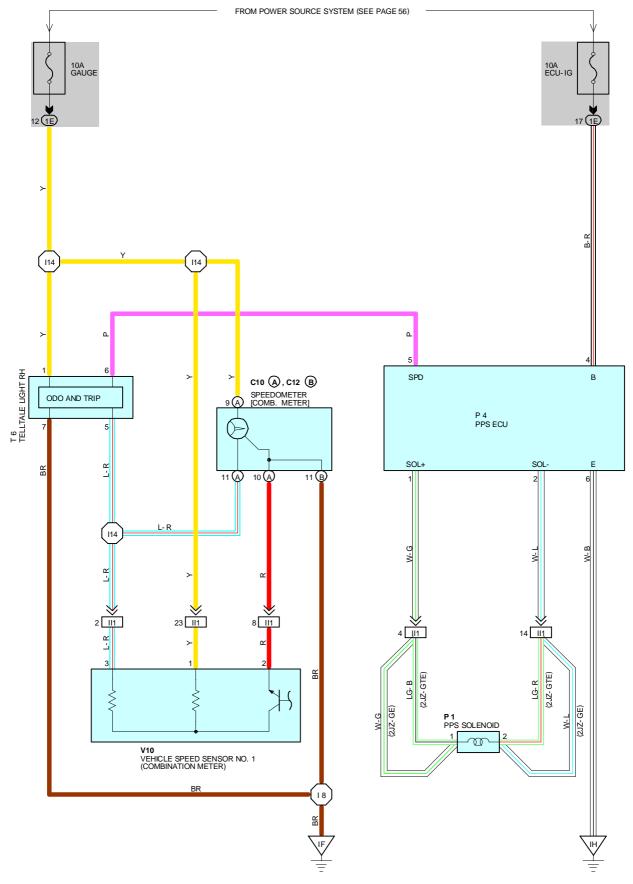












THE PPS (HYDRAULIC REACTION TYPE) CONTROLS THE HYDRAULIC PRESSURE APPLIED TO THE HYDRAULIC REACTION CHAMBER IN THE GEAR BOX CONTROL UNIT USING THE PPS ECU, TO CHANGE THE STEERING FORCE AND PROVIDE OPTIMUM STEERING FEELING AT ANY VEHICLE SPEEDS AND UNDER ANY STEERING CONDITIONS.

#### (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

#### **P1 PPS SOLENOID**

1-2 : APPROX. **7.7** Ω (**25**•C, **77**•F)

#### **P4 PPS ECU**

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

6-GROUND: ALWAYS CONTINUITY

#### : PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C10	Α	28	P1	27 (2JZ-GE)	V10	25 (2JZ-GTE)
C12	В	28	P4	29	V 10	27 (2JZ-GE)
Р	1	25 (2JZ-GTE)	T6	29		

#### : 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)

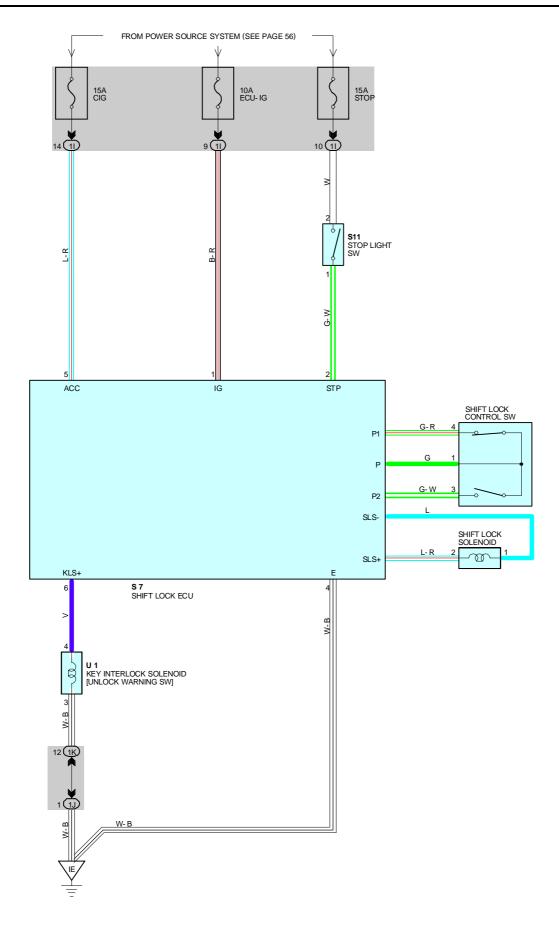
#### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

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

#### : GROUND POINTS

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

	CODE	SEE PAGE	SEE PAGE WIRE HARNESS WITH SPLICE POINTS		SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
ſ	18	38 INSTRUMENT PANEL WIRE		l14	38	INSTRUMENT PANEL WIRE



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 CONTINUITY

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

#### **S11 STOP LIGHT SW**

2-1 : CLOSED WITH THE BRAKE PEDAL DEPRESSED

#### : PARTS LOCATION

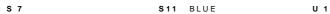
CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
S7	29	S11	29	U1	29

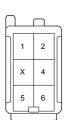
#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

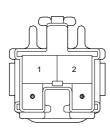
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
11		
1J	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1K		

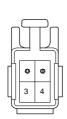
#### : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ΞE	36	LEFT KICK PANEL



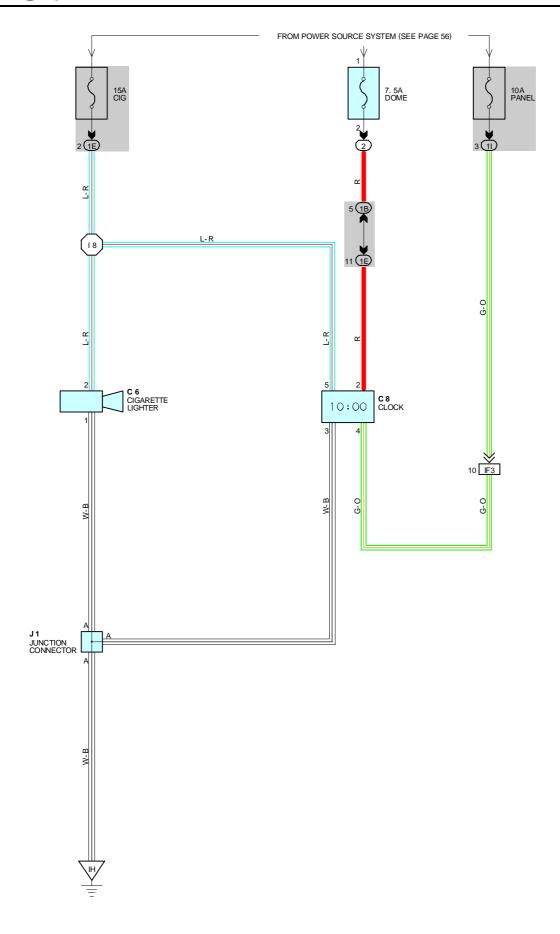








# © CIGARETTE LIGHTER AND CLOCK



#### SERVICE HINTS -

#### **C6 CIGARETTE LIGHTER**

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

1-GROUND: ALWAYS CONTINUITY

#### C8 CL OCK

2-GROUND: ALWAYS 12 VOLTS (POWER FOR CLOCK)

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

(POWER FOR INDICATION)

3-GROUND: ALWAYS CONTINUITY

#### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C6	28	C8	28	J1	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	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)		INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)		
11	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)		SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
ſ	IF3	36	INSTRUMENT PANEL WIRE AND COWL WIRE (RIGHT KICK PANEL)

### : GROUND POINTS

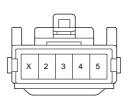
CODE	SEE PAGE	GROUND POINTS LOCATION
Ξ	36	RIGHT KICK PANEL

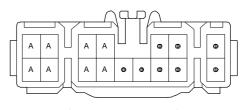
### : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
18	38	INSTRUMENT PANEL WIRE			

C 6 C 8 GRAY J 1

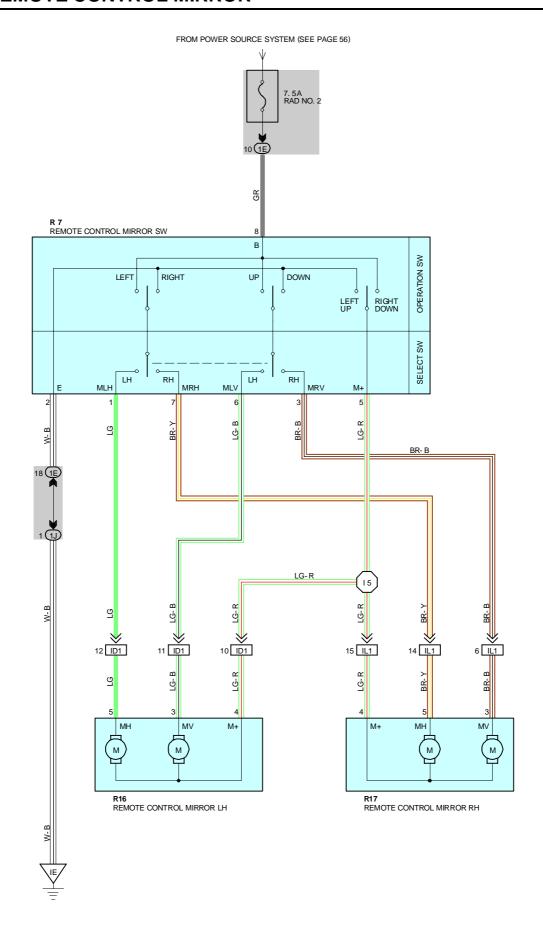






(HINT : SEE PAGE 7)





#### SERVICE HINTS

#### **R7 REMOTE CONTROL MIRROR SW**

8-GROUND: APPROX. 12 VOLTS WITH THE IGNITION SW AT ACC OR ON POSITION 5-2: CONTINUITY WITH THE OPERATION SW AT LEFT OR UP POSITION

8-5 : CONTINUITY WITH THE OPERATION SW AT **RIGHT** OR **DOWN** POSITION

2-GROUND: ALWAYS CONTINUITY

### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
R7	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)		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)				

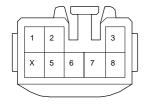
## : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ΙE	36	LEFT KICK PANEL

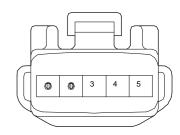
#### : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
15	38	INSTRUMENT PANEL WIRE			

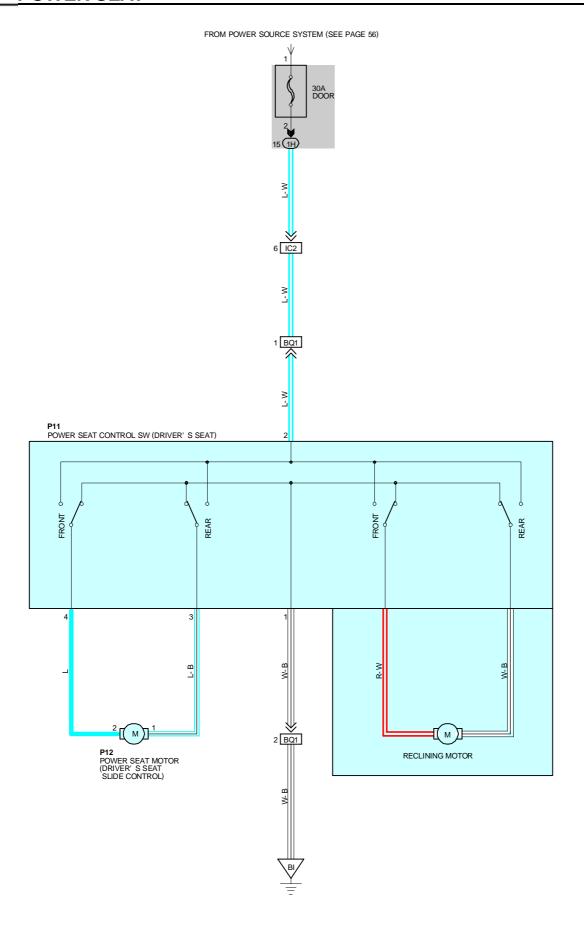
R 7 R 1 6 R 1 7











### — SERVICE HINTS —

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

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

### : 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

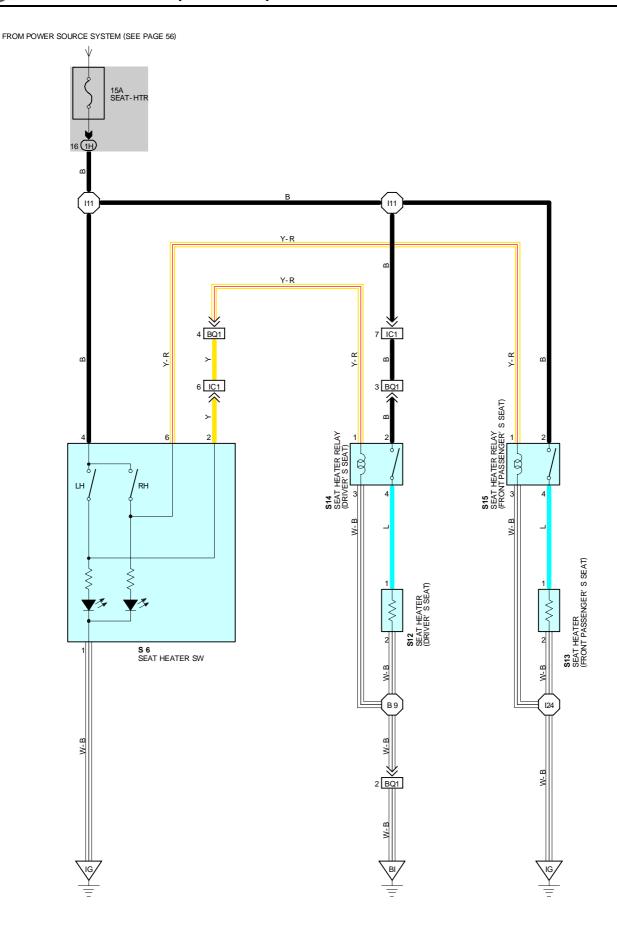
CODE	SEE PAGE	GROUND POINTS LOCATION
B1	40	LEFT QUARTER PILLAR







# **SEAT HEATER (CANADA)**



## SERVICE HINTS -

#### **S6 SEAT HEATER SW**

4-GROUND ; APPROX. 12 VOLTS WITH THE IGNITION SW AT  $\mathbf{ON}$  POSITION

1-GROUND: ALWAYS CONTINUITY

#### : 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

Ī	CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
ſ	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)		FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
BQ1	42	FLOOR NO. 2 WIRE AND SEAT WIRE (UNDER THE FRONT LH SEAT)

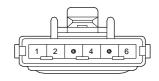
## 7 : GROUND POINTS

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
l11	00	COMUNATIDE	B9	42	SEAT WIRE
124	38	COWL WIRE			

\$ 6 BLACK \$12 BLUE \$13 BLUE \$14 \$15

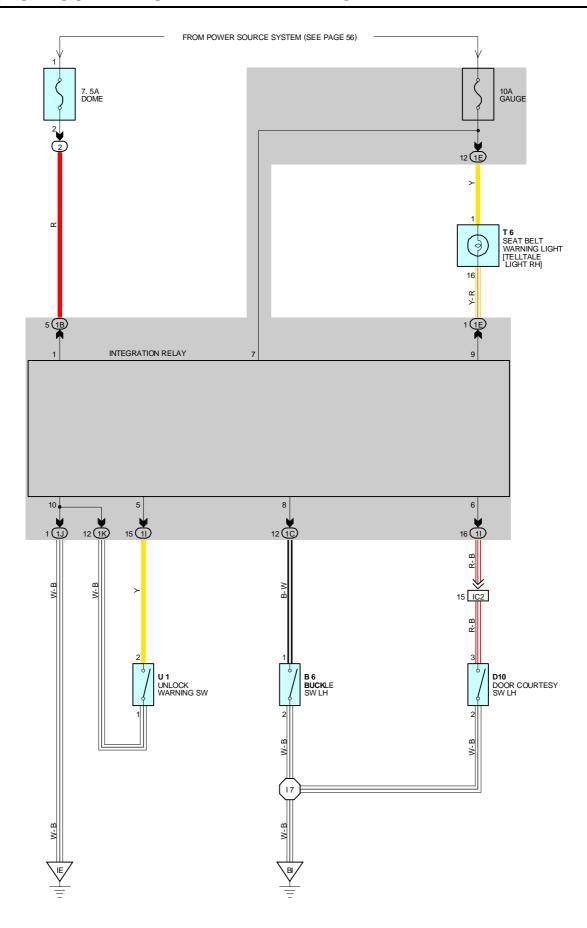












#### SYSTEM OUTLINE

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 FLOW FROM **TERMINAL 9** OF THE RELAY  $\rightarrow$  **TERMINAL 10**  $\rightarrow$  **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**  $\rightarrow$  **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  $\rightarrow$  **TERMINAL 10**  $\rightarrow$  **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  $\rightarrow$  **TERMINAL 10**  $\rightarrow$  **GROUND** AND UNLOCK WARNING BUZZER SOUNDS.

#### SERVICE HINTS

#### **B6 BUCKLE SW LH**

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

#### **D10 DOOR COURTESY SW LH**

3-2 : CLOSED WITH THE LH DOOR OPEN

#### **U1 UNLOCK WARNING SW**

2-1: CLOSED WITH THE IGNITION KEY IN CYLINDER

#### **INTEGRATION RELAY**

10-GROUND: ALWAYS CONTINUITY

6-GROUND: CONTINUITY WITH THE DRIVER'S DOOR OPEN
5-GROUND: CONTINUITY WITH THE IGNITION KEY IN CYLINDER
8-GROUND: CONTINUITY WITH THE DRIVER'S SEAT BELT IN USE
9-GROUND: 0 VOLTS WITH THE IGNITION SW ON AND BUCKLE SW OFF

1-GROUND: ALWAYS APPROX. 12 VOLTS

#### : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B6	28	T6	29		
D10	30	U1	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)
1E	20	INSTRUMENT PANEL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
11		
1J	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)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)

#### : GROUND POINTS

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

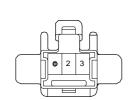
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
17	38	FLOOR NO. 2 WIRE			

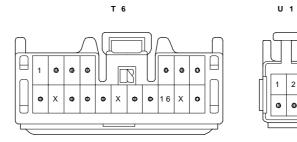


# W UNLOCK AND SEAT BELT WARNING

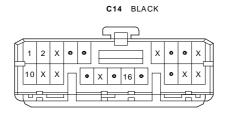
1 2

В 6





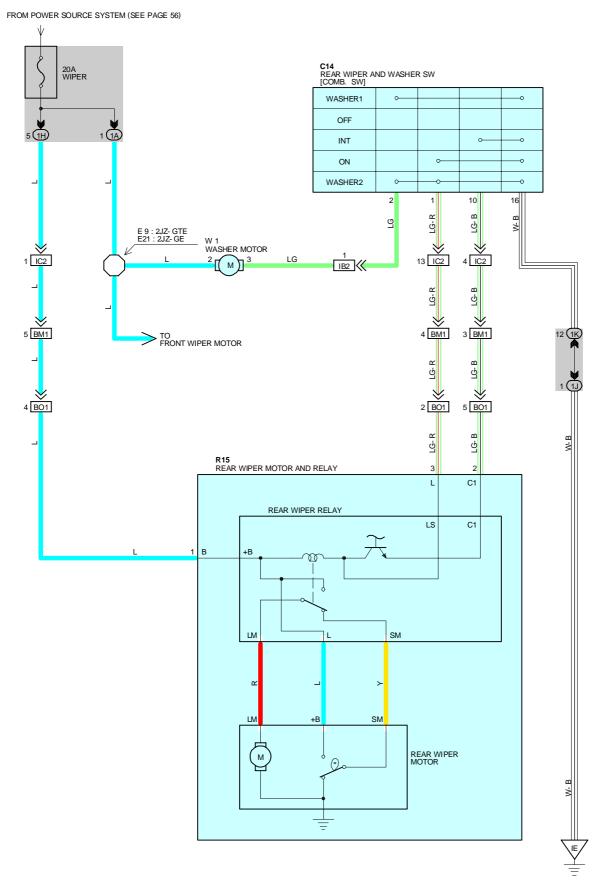








## **REAR WIPER AND WASHER**



#### 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 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  $\rightarrow$  **TERMINAL 1** OF THE REAR WIPER AND WASHER SW  $\rightarrow$  **TERMINAL 16**  $\rightarrow$  TO **GROUND**. THUS, THE RELAY COIL IS ACTIVATED AND THE CURRENT TO **TERMINAL 1** OF THE RELAY FLOWS TO  $\rightarrow$  **TERMINAL LH**  $\rightarrow$  **TERMINAL LH** OF THE REAR WIPER MOTOR  $\rightarrow$  MOTOR  $\rightarrow$  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  $\rightarrow$  TERMINAL 10 OF THE REAR WIPER AND WASHER SW  $\rightarrow$  TERMINAL 16  $\rightarrow$  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  $\rightarrow$  **TERMINAL 2** OF THE REAR WIPER AND WASHER SW  $\rightarrow$  **TERMINAL 16**  $\rightarrow$  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.

#### SERVICE HINTS

#### W1 WASHER MOTOR

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

3-GROUND: CONTINUITY WITH THE WASHER SW TURNED ON

#### **R15 REAR WIPER MOTOR AND RELAY**

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

#### : PARTS LOCATION

	CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
ĺ	C14	28	W1	25 (2JZ-GTE)		
ſ	R15	30	VVI	27 (2JZ-GE)		

## ( :·

#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	UNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)	
1A	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			

#### : 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 (LET KICK PANEL)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT 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
ΙE	36	LEFT KICK PANEL

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E9	32	ENGINE ROOM MAIN WIRE	E21	34	ENGINE ROOM MAIN WIRE

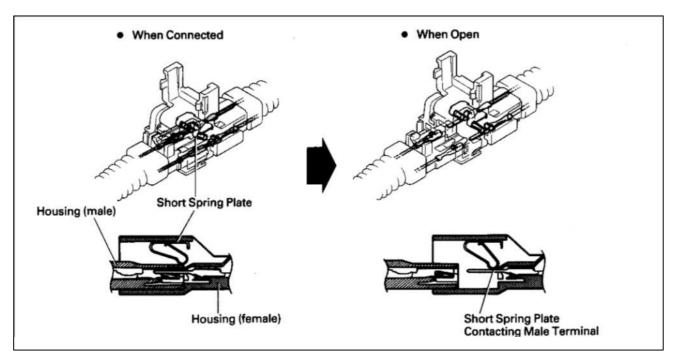
precautionary instructions and the procedure and precautions in the Repair Manual for the applicable model year. □ Malfunction symptoms of the supplemental restraint system are difficult to confirm, so the diagnostic trouble codes become the most important source of information when troubleshooting. 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, airbag sensor assembly. ☐ 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. After evaluating whether the airbag sensor assembly is damaged or not, decide whether or not to reuse it. (See the Repair Manual for the method for evaluating the airbag sensor assembly.)  $\square$  When troubleshooting the supplemental restraint system, use a high-impedance (Min. 10 k $\Omega$ /V) tester. □ The wire harness of the supplemental restraint system is integrated with the cowl 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. □ INFORMATION LABELS (NOTICES) are attached to the periphery of the SRS components. Follow the instructions on the notices.

NOTICE: When inspecting or repairing the SRS, perform the operation in accordance with the following

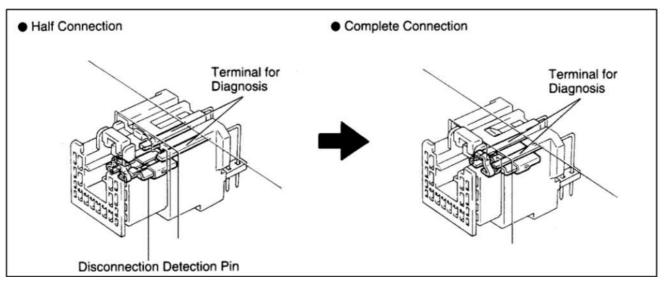


The SRS has connectors which possess the functions described below:

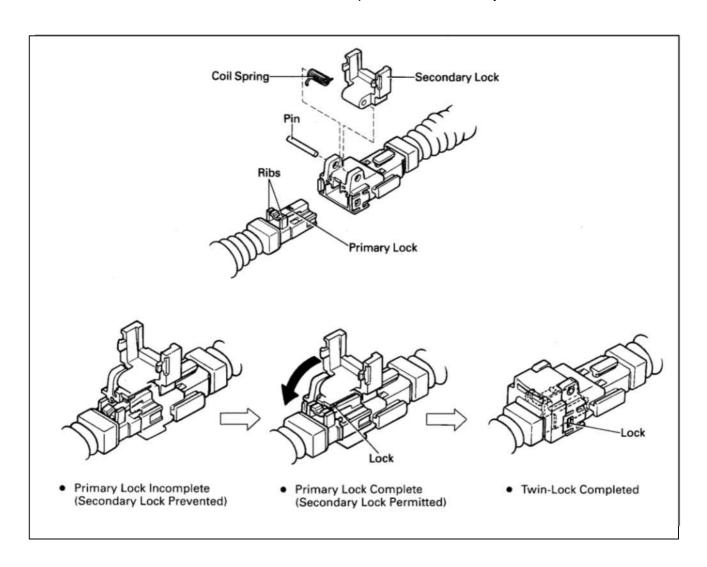
SRS ACTIVATION PREVENTION MECHANISM
 Each connector contains a short spring plate. When the connector is disconnected, the short spring plate automatically connects the power source and grounding terminals of the squib to preclude a potential difference between the terminals.

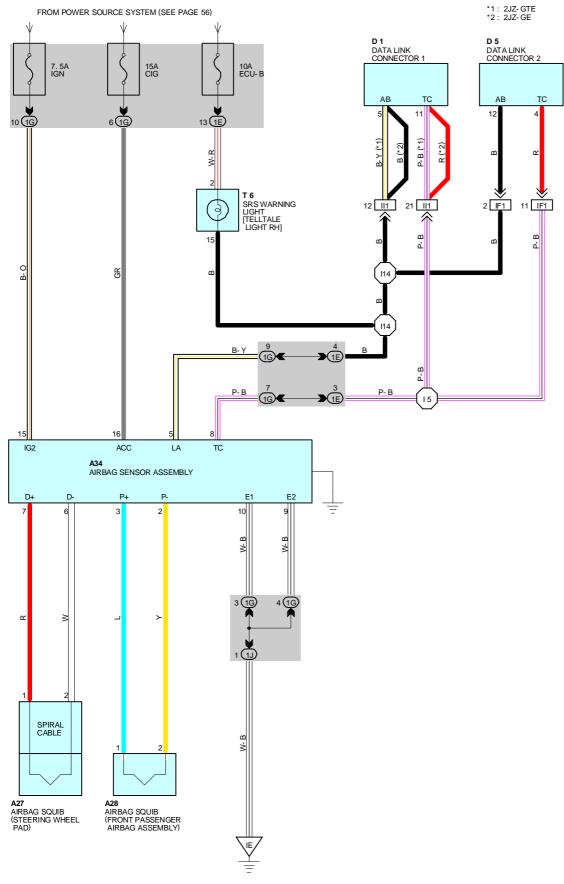


ELECTRICAL CONNECTION CHECK MECHANISM
 This mechanism is designed to electrically checks if connectors are connected correctly and completely.
 The electrical connection check mechanism is designed so that the disconnection detection pin connects with the diagnosis terminals when the connector housing lock is in to 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.





#### SYSTEM OUTLINE

THE SRS IS A DRIVER AND PASSENGER PROTECTION DEVICE WHICH HAS A SUPPLEMENTAL ROLE TO THE SEAT RELTS.

WHEN THE IGNITION SW IS TURNED TO ACC OR ON, THE CURRENT FROM THE CIG FUSE FLOWS TO TERMINAL 16 OF THE AIRBAG SENSOR ASSEMBLY. ONLY WHEN THE IGNITION SW IS ON DOES THE CURRENT FROM THE IGN FUSE FLOW TO TERMINAL 15 OF THE AIRBAG SENSOR ASSEMBLY.

IF AN ACCIDENT OCCURS WHILE DRIVING, DECELERATION CAUSED BY A FRONTAL IMPACT IS DETECTED BY THE SENSOR IN THE AIRBAG SENSOR ASSEMBLY, AND WHEN THE FRONTAL IMPACT EXCEEDS A SET LEVEL (WHEN THE SAFING SENSOR BUILT INTO THE AIRBAG SENSOR ASSEMBLY IS ON, THE FLOOR SENSOR BUILT INTO THE AIRBAG SENSOR ASSEMBLY IS ON, THE CURRENT FROM THE CIG OR THE IGN FUSE FLOWS THROUGH THE AIRBAG SENSOR ASSEMBLY TO TERMINALS 7 AND 3 OF THE AIRBAG SENSOR ASSEMBLY TO TERMINALS 6 AND 2 OF THE AIRBAG SENSOR ASSEMBLY TO TERMINAL 1 OF THE AIRBAG SQUIB  $\rightarrow$  TERMINAL 2  $\rightarrow$  TERMINALS 6 AND 2 OF THE AIRBAG SENSOR ASSEMBLY  $\rightarrow$  THE FLOOR SENSOR BUILT INTO THE AIRBAG SENSOR ASSEMBLY  $\rightarrow$  TERMINAL 9, TERMINAL 10 OR BODY GROUND  $\rightarrow$  GROUND. WHEN THE SAFING SENSOR BUILT INTO THE AIRBAG SENSOR ASSEMBLY IS ON, ONE OF THE ABOVE-MENTIONED CIRCUITS IS ACTIVATED SO THAT THE CURRENT FLOWS TO THE AIRBAG SQUIBS, CAUSING IT TO OPERATE.

THE AIRBAG STORED INSIDE THE STEERING WHEEL PAD IS INSTANTANEOUSLY EXPANDED TO SOFTEN THE SHOCK TO A DRIVER.

SIMULTANEOUSLY, THE AIRBAG STORED INSIDE THE PASSENGER'S INSTRUMENT PANEL IS INSTANTANEOUSLY EXPANDED TO SOFTEN THE SHOCK TO A PASSENGER.

## : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A27	28	D4	24 (2JZ-GTE)	T6	29
A28	28	D1	26 (2JZ-GE)		
A34	28	D5	28		

#### : 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)			
1G	00	COMUNIDE AND UDAIO A (LEET MOV DANEL)			
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)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
II1	38	ENGINE WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)

#### : GROUND POINTS

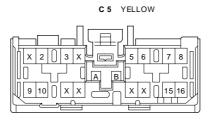
CODE	SEE PAGE	GROUND POINTS LOCATION
IE	36	LEFT KICK PANEL

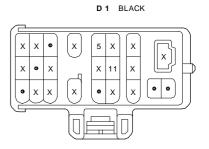
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
15	5 38 INSTRUMENT PANEL WIRE		l14	38	INSTRUMENT WIRE

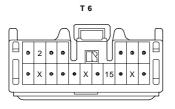


A27 YELLOW











## **ELECTRIC TENSION REDUCER**

FROM POWER SOURCE SYSTEM (SEE PAGE 56) 10A ECU- IG 13 (1K) T11 TENSION REDUCER SOLENOID LH T12 TENSION REDUCER SOLENOID RH 3 B 6 BUCKLE SW LH B7 BUCKLE SW RH

## — SERVICE HINTS —

#### **B6 BUCKLE SW LH**

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

#### **B7 BUCKLE SW RH**

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

## T11, T12 TENSION REDUCER SOLENOID LH, RH

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

## : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B6	28	T11	30		
B7	28	T12	30		

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	UNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)			
1C	20	OOR NO. 2 WIRE AND J/B NO. 1 (LEFT KICK PANEL)			
11	20	COMUNIDE AND UD NO 4 (LEET VICK DANIEL)			
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



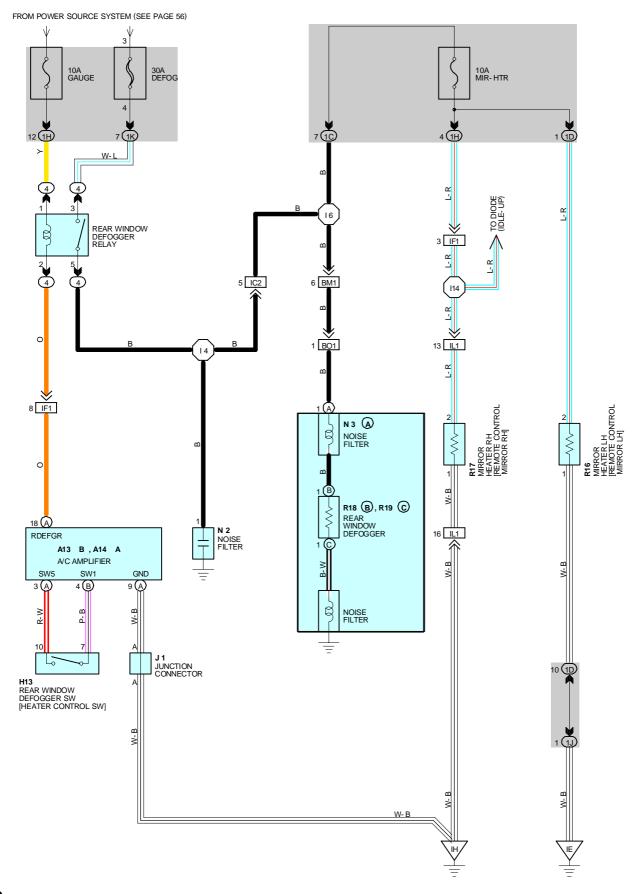








# REAR WINDOW DEFOGGER AND MIRROR HEATER



## - SERVICE HINTS -

## REAR WINDOW DEFOGGER RELAY

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

#### ) : PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CO	DE	SEE PAGE
A13	В	28	N	2	29	R18	В	30
A14	Α	A 28 N3 A		30	R19	С	30	
H	13	29	R	16	30			
J 1		29	R	17	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		
1J	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1K		

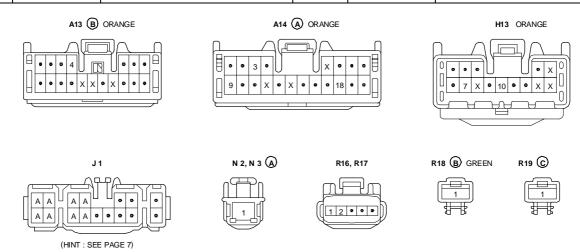
#### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

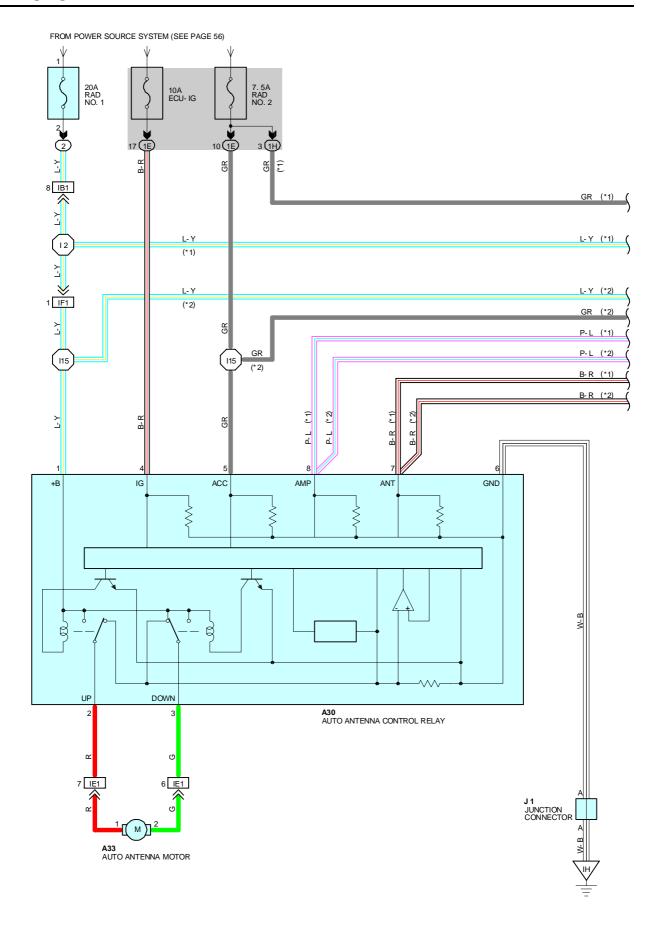
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FLOOR NO. 2 WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IL1	38	FRONT DOOR RH WIRE AND INSTRUMENT PANEL WIRE (RIGHT KICK PANEL)
BM1	40	BACK DOOR NO. 1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

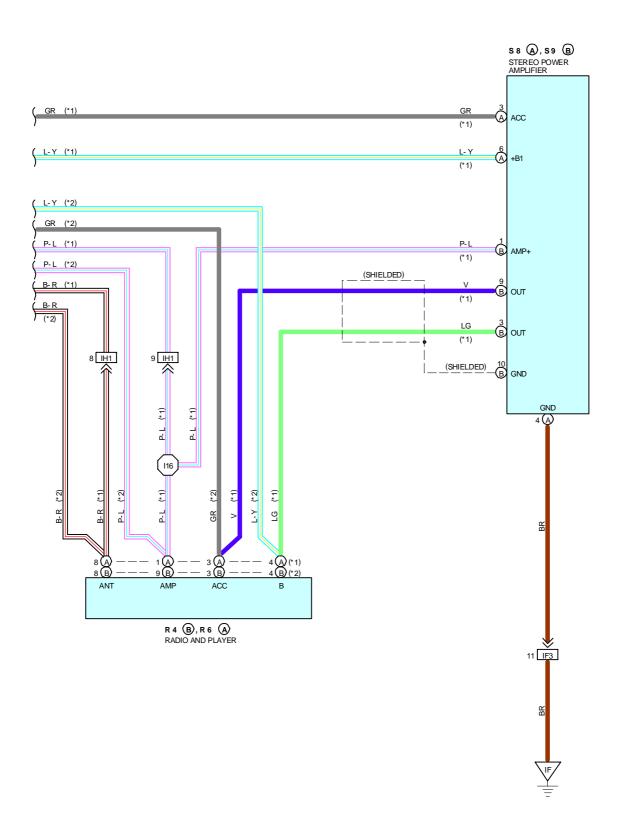
## : GROUND POINTS

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

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
14	38	COWL WIRE	l14	38	INSTRUMENT PANEL WIRE
16	38	FLOOR NO. 2 WIRE			







# **AUTO ANTENNA**

## **SERVICE HINTS**

### A30 AUTO ANTENNA CONTROL RELAY

1-GROUND: ALWAYS APPROX. 12 VOLTS

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

6-GROUND: ALWAYS CONTINUITY

#### : PARTS LOCATION

Ī	CODE	SEE PAGE	CO	CODE SEE PAGE		CODE		SEE PAGE
Ī	A30	28	R 4	В	29	S 9	В	29
ĺ	A33	30	R 6	Α	29			
ſ	J 1	29	S 8	Α	29			

#### : RELAY BLOCKS

Ī	CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
	2	22	R/B NO. 2 (LEFT KICK PANEL)

#### : 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)

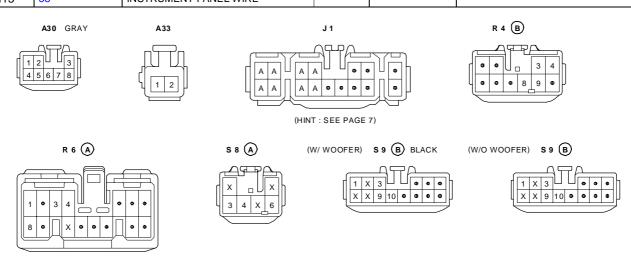
#### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

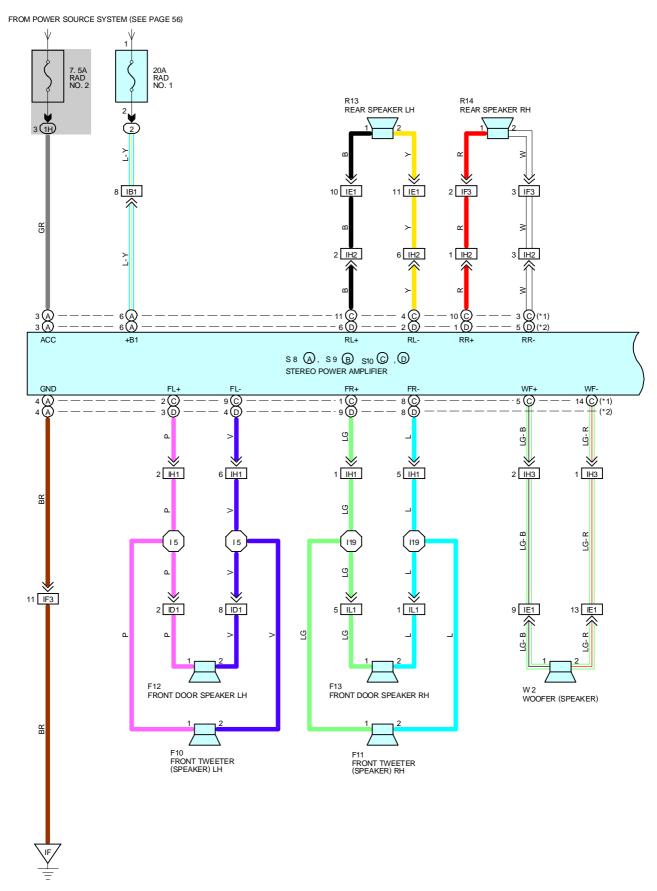
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF1	36	INSTRUMENT PANEL WIRE AND COWL WIRE (INSTRUMENT PANEL REINFORCEMENT LH)
IF3	36	INSTRUMENT PANEL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

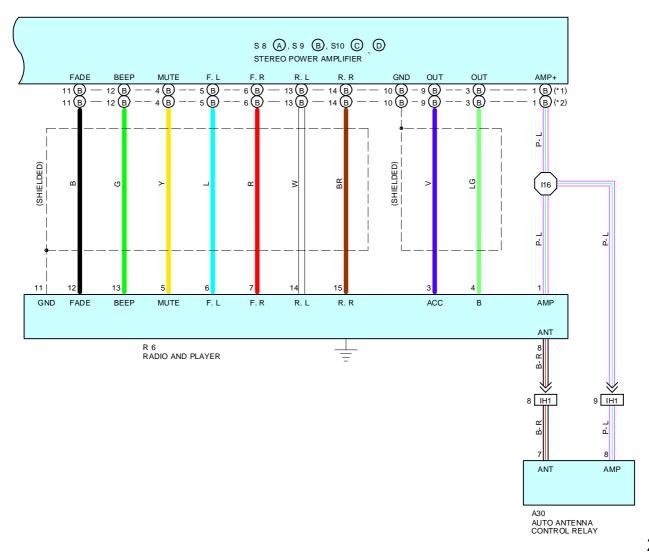
## : GROUND POINTS

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

CODE SEE PAGE W			WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
	12 38 COW		COWL WIRE	l16	38	CONSOLE BOX WIRE
	115	38	INSTRUMENT PANEL WIRE			







#### SERVICE HINTS

#### **S8 (A) STEREO POWER AMPLIFIER**

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

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

(A) 4-GROUND: ALWAYS CONTINUITY

## : PARTS LOCATION

CODE	SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
A30	28	R	6	29	C40	С	29
F10	29	R <sup>-</sup>	13	30	S10	D	29
F11	29	R <sup>-</sup>	14	30	W	2	30
F12	30	S8	Α	29			
F13	30	S9	В	29			

#### : RELAY BLOCKS

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

#### : 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)

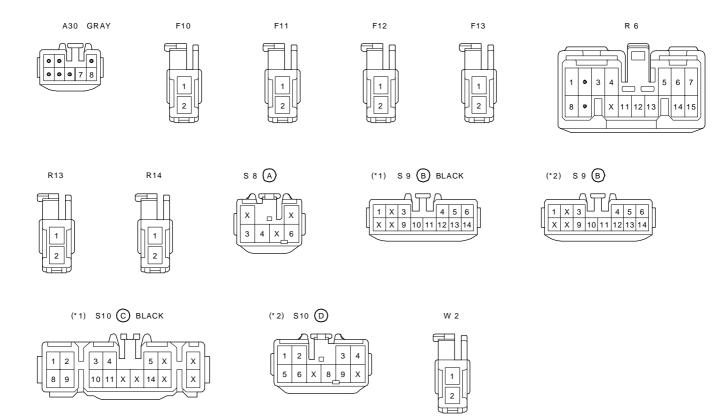
## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

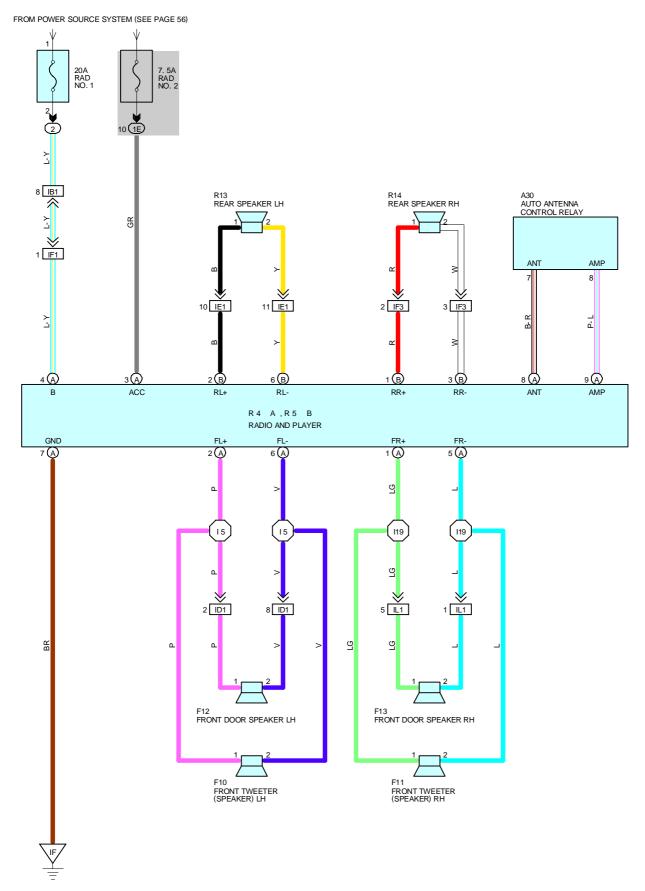
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IB1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
ID1	36	FRONT DOOR LH WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
IE1	36	INSTRUMENT PANEL WIRE AND FLOOR NO. 2 WIRE (LEFT KICK PANEL)
IF3	36	INSTRUMENT PANEL WIRE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

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
15	38	INSTRUMENT PANEL WIRE	l19	38	INSTRUMENT PANEL WIRE
I16	38	CONSOLE BOX WIRE			





## (w/o STEREO POWER AMPLIFIER

## **SERVICE HINTS**

#### **R4(A) RADIO AND PLAYER**

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

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

(A) 7-GROUND: ALWAYS CONTINUITY

#### : PARTS LOCATION

CODE	SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
A30	28	F <sup>2</sup>	12	30	R5	В	29
F10	29	F <sup>2</sup>	13	30	R′	13	30
F11	29	R4	Α	29	R′	14	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

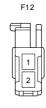
CODE	SEE PAGE	GROUND POINTS LOCATION
IF	36	LEFT KICK PANEL

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
15	38	INSTRUMENT PANEL WIRE	l19	38	INSTRUMENT PANEL WIRE

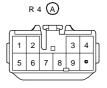




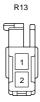




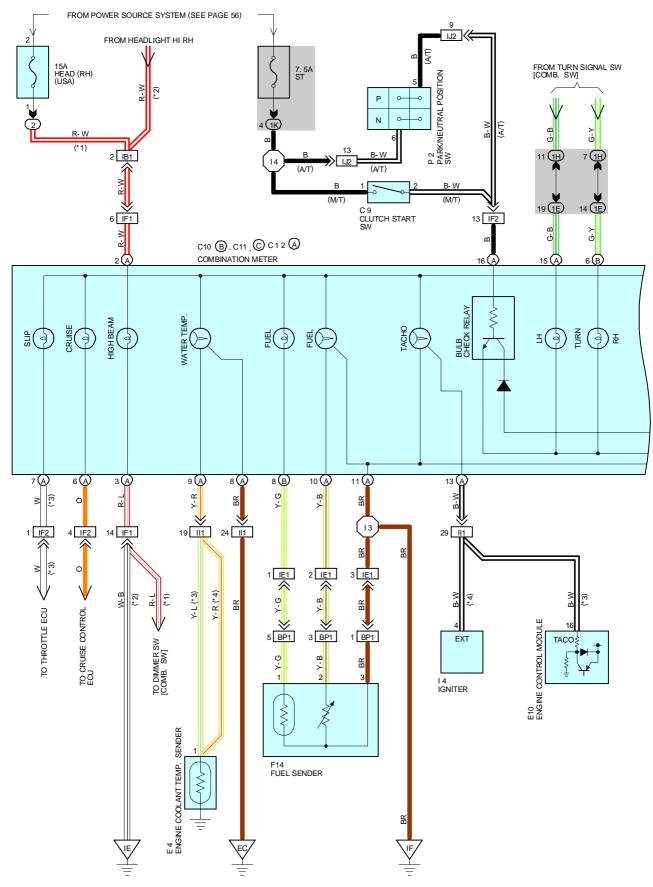


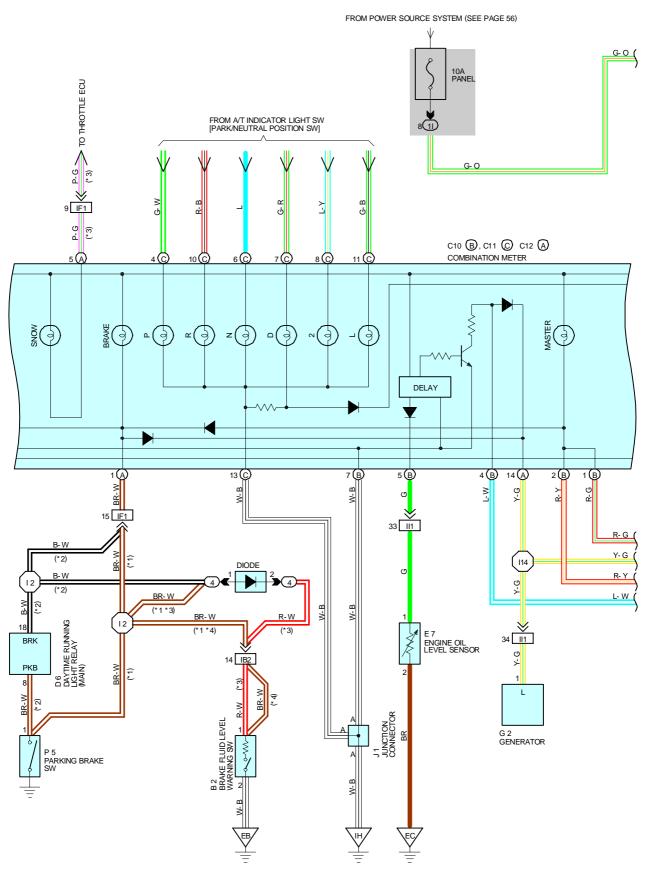


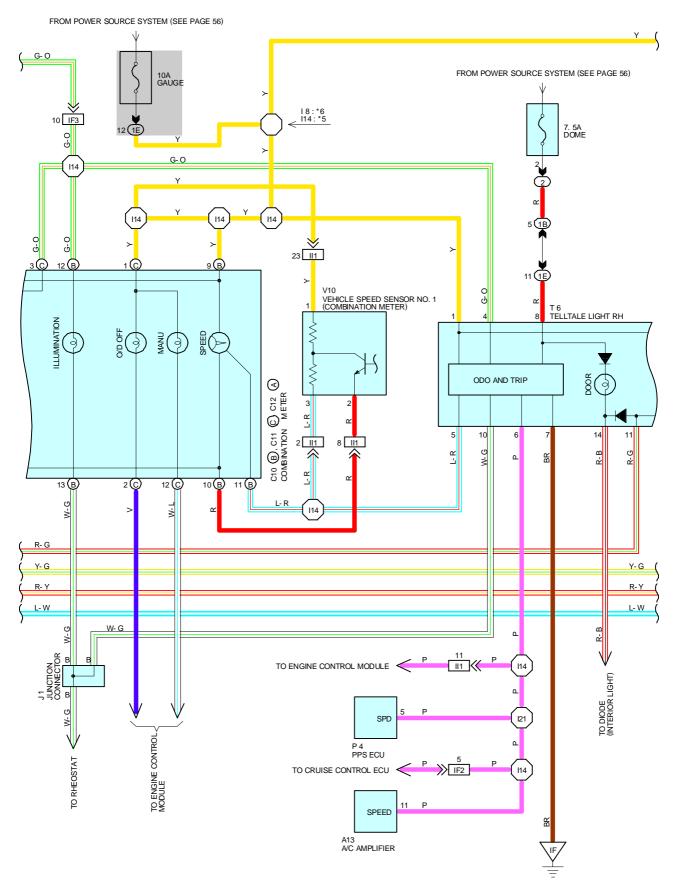


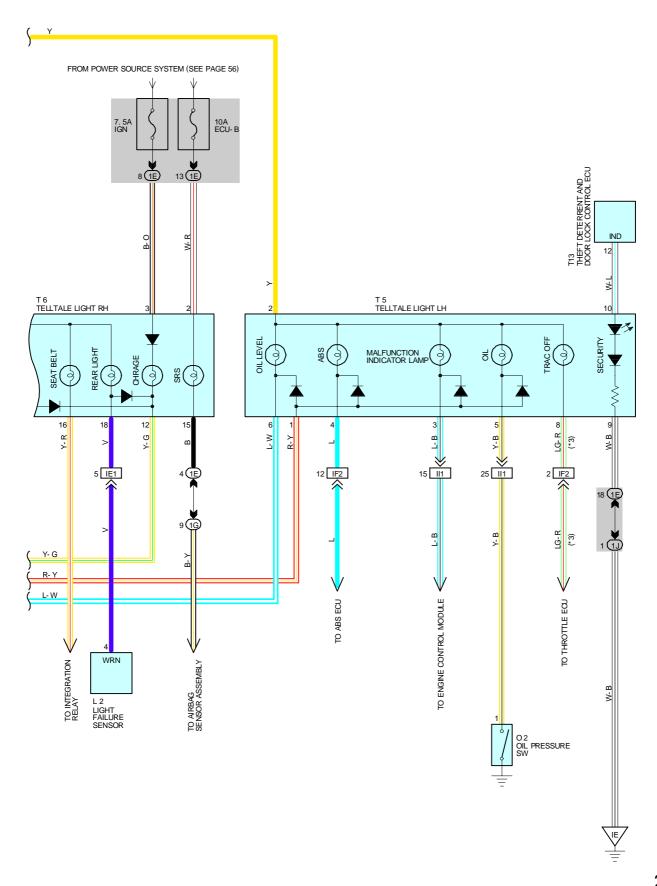












#### **SERVICE HINTS**

#### **B2 BRAKE FLUID LEVEL WARNING SW**

1-2 : CLOSED WITH THE FLOAT DOWN

#### **P5 PARKING BRAKE SW**

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

#### **02 OIL PRESSURE SW**

1-GROUND: CLOSED WITH THE OIL PRESSURE ABOVE APPROX. 20 KPA (2.8 PSI, 0.2 KG/CM2)

## **E4 ENGINE COOLANT TEMP. SENDER**

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

#### **E7 ENGINE OIL LEVEL SENSOR**

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

#### **F14 FUEL SENDER**

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

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

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

(A) 16-GROUND: APPROX. 12 VOLTS WITH THE IGNITION SW AT ST POSITION AND THE SHIFT LEVER AT P OR N

POSITION (A/T)

12 VOLTS WITH THE IGNITION SW AT ST POSITION AND THE CLUTCH PEDAL DEPRESSED

(M/T)

(A) 8-GROUND: ALWAYS CONTINUITY (A) 11-GROUND: ALWAYS CONTINUITY

#### : PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A13	3	28	E7	24 (2JZ-GTE)	02	27 (2JZ-GE)
B2	)	24 (2JZ-GTE)	E1	26 (2JZ-GE)	P2	25 (2JZ-GTE)
BZ	<u>-</u>	26 (2JZ-GE)	E10	29	F2	27 (2JZ-GE)
C9	)	28	F14 30		P4	29
C10	В	28	G2	24 (2JZ-GTE)	P5	29
C11	С	28	G2	26 (2JZ-GE)	T5	29
C12	Α	28	14	27	T6	29
D6		28	J1	29	T13	29
E4		24 (2JZ-GTE)	L2	30	V10	25 (2JZ-GTE)
		26 (2JZ-GE)	02	25 (2JZ-GTE)	V 10	27 (2JZ-GE)

### : RELAY BLOCKS

_		
CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2 22 R/B NO. 2 (ENGINE COMPARTMENT LEFT)		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		
1H	]	
11	20	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1J	1	
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	- 30	ENGINE ROOM MAIN WIRE AND COME WIRE (EEF FRICK FAMEL)			
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	30	INOTIONIENT FANCE WINE AND OOME WINE (INOTIONIENT FANCE REINFORCEMENT ET)			
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 COWL WIRE (RIGHT KICK PANEL)			
BP1	40	FUEL GAUGE WIRE AND FLOOR NO. 2 WIRE (LUGGAGE ROOM FRONT LH)			

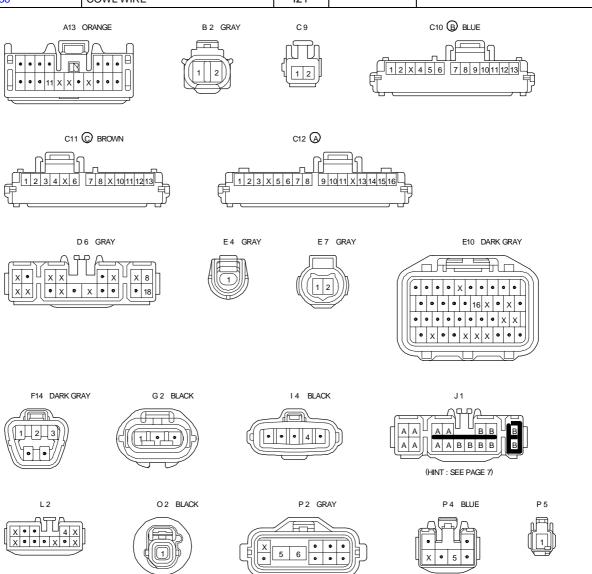
## $\nabla$

## : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION	
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER	
	34 (2JZ-GE)		
EC	32 (2JZ-GTE)	FRONT SIDE OF INTAKE MANIFOLD	
EC	34 (2JZ-GE)		
IE	00	LEET WOW DANIE!	
IF	36	LEFT KICK PANEL	
IH	36	RIGHT KICK PANEL	

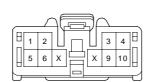
## $\bigcirc$

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
12	38	COWL WIRE	18		
13	38	INSTRUMENT PANEL WIRE	l14	38	INSTRUMENT PANEL WIRE
14	38	COWL WIRE	I21		

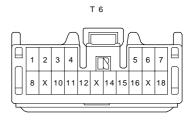


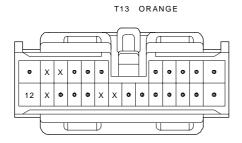






(2JZ- GE) T 5







#### SYSTEM OUTLINE

#### 1. HEATER BLOWER OPERATION

MANUAL 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 THE 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 BASE 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 THE BLOWER MOTOR **TERMINAL 3** OF THE 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 HE BLOWER MOTOR CONTROL RELAY.

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

(SWITCHING FROM FRESH TO RECIRC)

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS FROM HTR FUSE TO TERMINAL 2 OF THE AIR INLET CONTROL SERVO MOTOR 

TERMINAL 5 TERMINAL AIR OF THE A/C AMPLIFIER TERMINAL GND GROUND, THE MOTOR ROTATES AND THE DAMPER STOPS AT RECIRC POSITION.

(SWITCHING FROM RECIRC TO FRESH)

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS FROM HTR FUSE TO TERMINAL 2 OF THE AIR INLET CONTROL SERVO MOTOR DETERMINAL 3 TERMINAL AIF OF THE 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 THE IGNITION SW TURNED ON, THE CURRENT FLOWS FROM  ${\it HTR}$  FUSE TO  ${\it TERMINAL}$  IG OF THE A/C AMPLIFIER

(SWITCHING FROM DEF TO FACE)

THE CURRENT FROM TERMINAL AOF OF THE A/C AMPLIFIER 
TERMINAL 1 OF THE AIR VENT MODE CONTROL SERVO MOTOR 
TERMINAL 2 TERMINAL AOD OF THE 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 THE A/C AMPLIFIER 

TERMINAL 2 OF THE AIR VENT MODE CONTROL SERVO MOTOR 

TERMINAL 1 TERMINAL AOF OF THA 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 THE A/C AMPLIFIER DEPARTMENT TO THE AIR MIX CONTROL SERVO MOTOR DETERMINAL 2 DETERMINAL AMH OF THE A/C AMPLIFIER DEPARTMENT THE DAMPER OPENING ANGLE AT THIS TIME IS INPUT FROM TERMINAL 3 OF SERVO MOTOR TO TERMINAL TP OF THE A/C CONTROL ASSEMBLY, THIS IS USED TO DETERMINE THE DAMPER STOP POSITION AND MAINTAIN THE SET TEMPERATURE.

WHEN THE TEMPERATURE CONTROL SW IS TURNED TO THE "WARM" SIDE, THE CURRENT FLOWS FROM TERMINAL AMH OF THE A/C AMPLIFIER 

TERMINAL 2 OF THE A/R MIX CONTROL SERVO MOTOR 

MOTOR 
TERMINAL 1 TERMINAL AMC OF THE A/C AMPLIFIER, ROTATING THE MOTOR IN REVERSE AND SWITCHING THE DAMPER FROM COOL TO WARM SIDE.

### **AIR CONDITIONING**

#### 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 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 THE A/C MAGNETIC CLUTCH RELAY | TERMINAL 2 | TERMINAL ACMG OF THE ENGINE CONTROL MODULE | TERMINAL A/C | TERMINAL MGC OF THE 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.

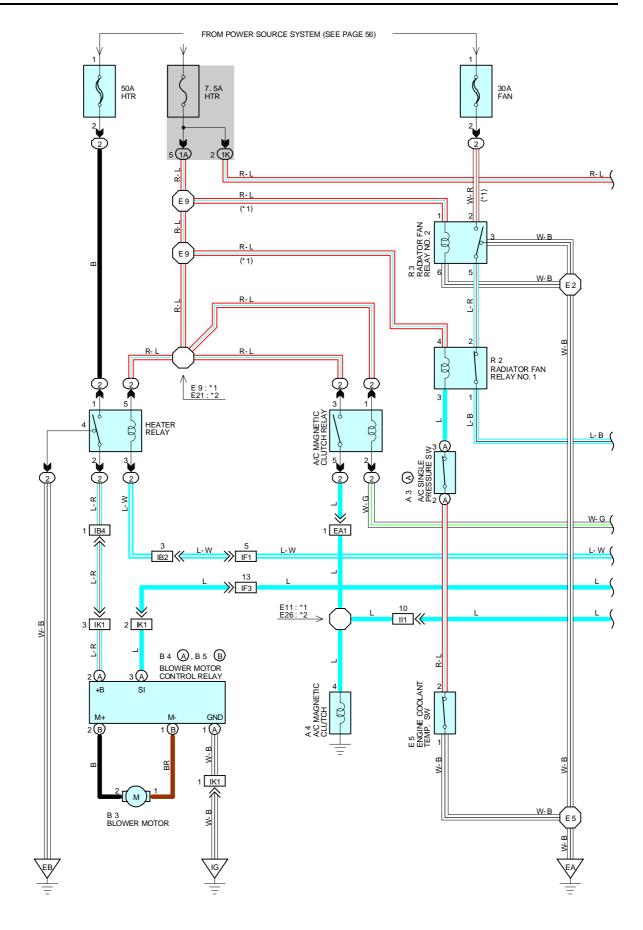
AT THE SAME TIME, THE ENGINE CONTROL MODULE DETECTS THE MAGNETIC CLUTCH IS ON AND THE A/C AMPLIFIER IS OPERATING AND OPENS DIRECTION TO AVOID LOWERING THE ENGINE RPM DURING A/C OPERATING.

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.

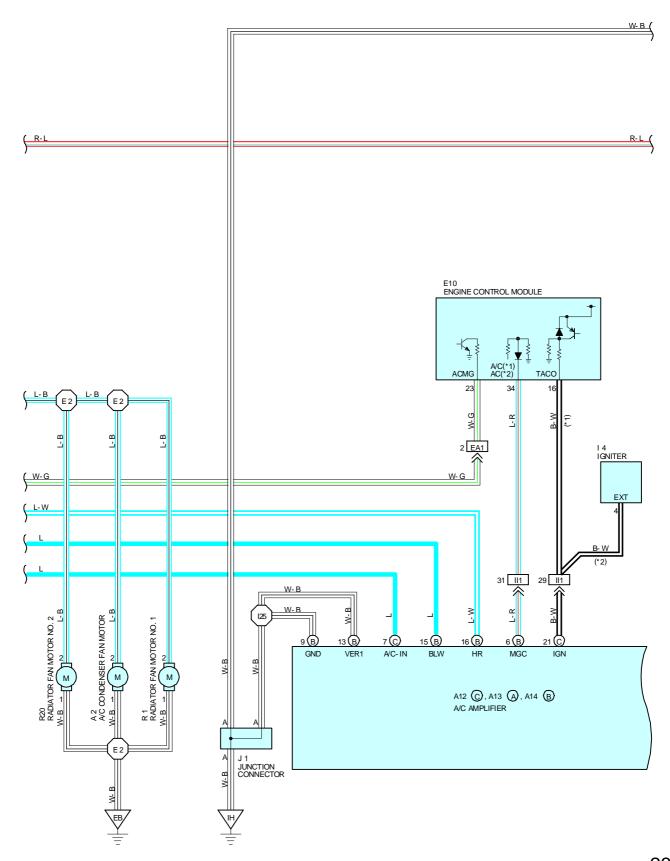


# **RADIATOR FAN AND AUTOMATIC**

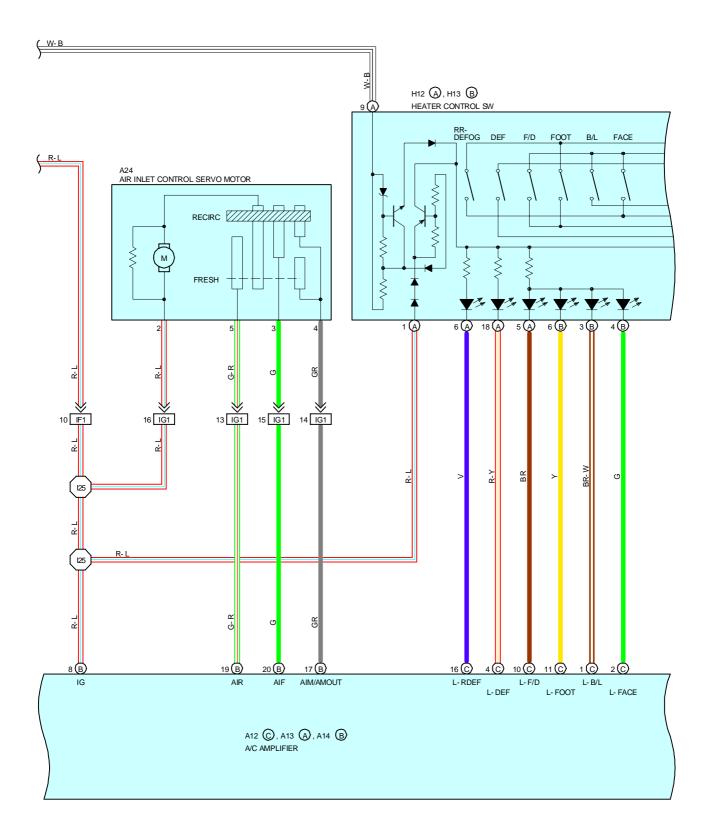


AIR CONDITIONING

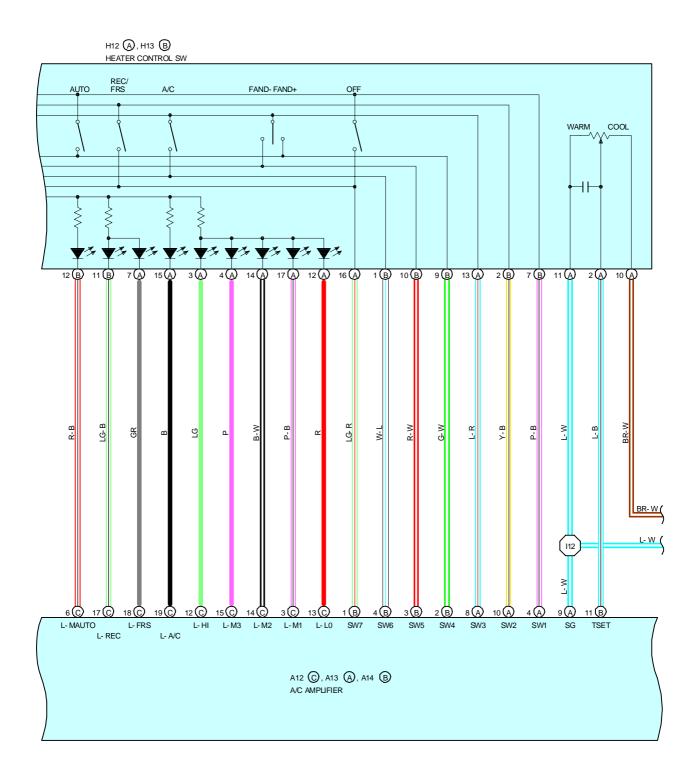
11 : 2JZ- GTE
22 : 2JZ- GE

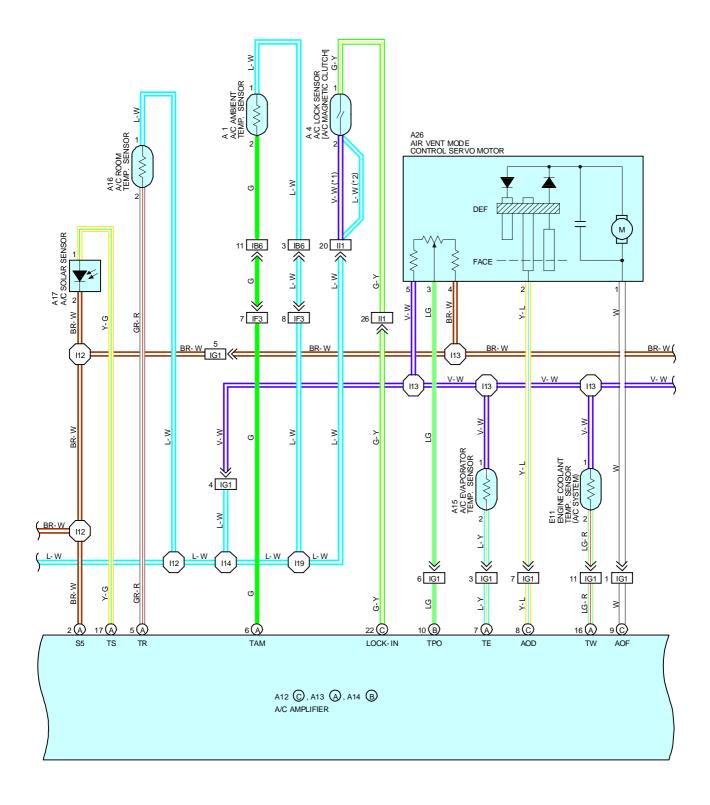




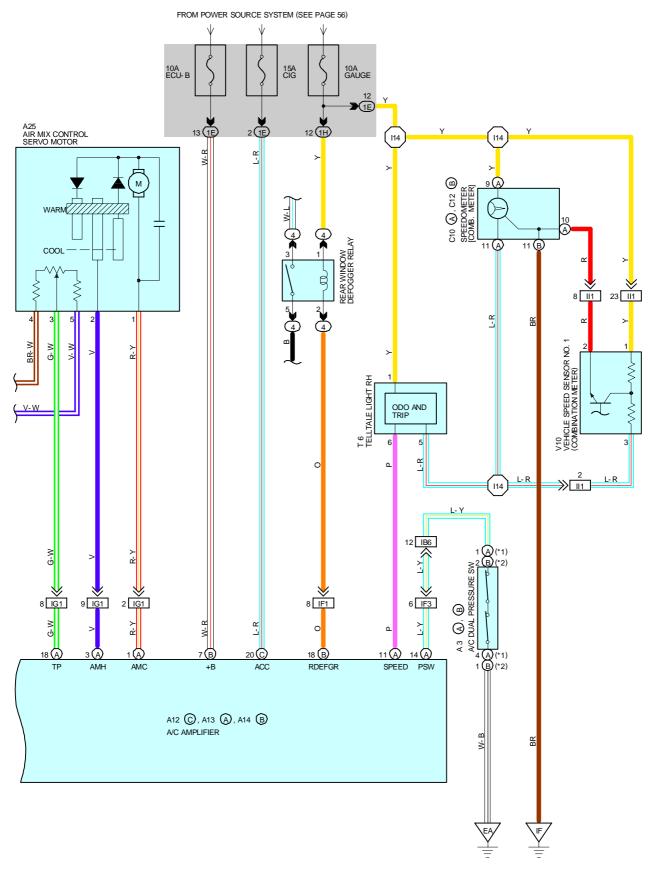


\*1 : 2JZ- GTE \*2 : 2JZ- GE





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





## RADIATOR FAN AND AUTOMATIC

#### **SERVICE HINTS**

A4 A/C MAGNETIC CLUTCH

4-GROUND: APPROX. 3.7 Ω

A3 (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>) OK **3140** KPA (**458** PSI, **32** KG/CM<sup>2</sup>)

A3 (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 THE IGNITION SW AT **ON** POSITION

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

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

MGC-GROUND: 10-14 VOLTS AT START THE ENGINE AND MAX. WARM POSITION OF THE A/C TEMP. CONTROL SW MGC-GROUND: BELOW 1 VOLT AT START THE ENGINE, PUSH THE A/C AUTO SW AND THE A/C SW **ON** POSITION 10-14 VOLTS AT START THE ENGINE, PUSH THE A/C AUTO SW AND THE 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 CONTINUITY

AMH-AMC : 13-19 VOLTS WITH THE IGNITION SW OFF AOF-GROUND: APPROX. 12 VOLTS WITH THE FACE SW ON AOD-GROUND: APPROX. 12 VOLTS WITH THE DEF SW ON

**GND-GROUND: ALWAYS CONTINUITY** 

### : PARTS LOCATION

CO	DE	SEE PAGE	CC	DE	SEE PAGE	CODE	SEE PAGE
Α	1	24 (2JZ-GTE)	A	17	28	H12 A	29
_ A	. 1	26 (2JZ-GE)	A	24	28	H13 B	29
Α	.2	24	A	25	28	14	27
A3	Α	24 (2JZ-GTE)	A	26	28	J1	29
AS	В	26 (2JZ-GE)	E	33	28	R1	25
_	4	24 (2JZ-GTE)	B4	Α	28	R2	25
_ A	4	26 (2JZ-GE)	B5	В	28	R3	25
A12	С	28	C10	Α	28	R20	25
A13	Α	28	C12	В	28	T6	29
A14	В	28	E	5	24	V10	25 (2JZ-GTE)
A.	15	28	E	10	29	7 710	27 (2JZ-GE)
A.	16	28	E	11	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	20	COWL WIRE AND 3/B NO. 1 (LEFT NOR FAMEL)

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

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (2JZ-GTE) 34 (2JZ-GE)	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)
IB4	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (RIGHT KICK PANEL)
IB6	30	ENGINE ROOM MAIN WIKE AND COWL WIKE (RIGHT NICK PANEL)
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)

# **AIR CONDITIONING**

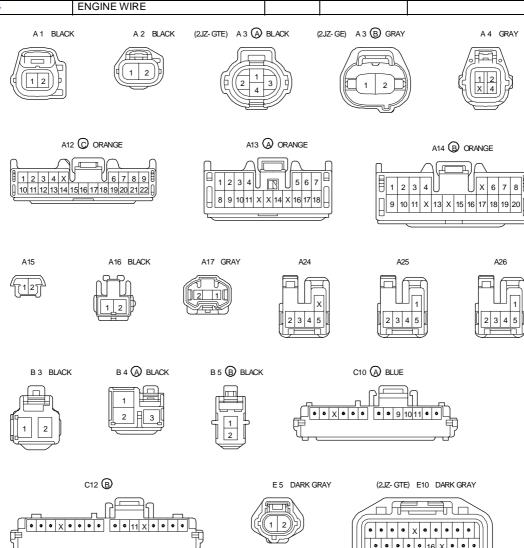
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### : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (2JZ-GTE)	FRONT SIDE OF RIGHT FENDER
LA	34 (2JZ-GE)	TRONT GIBE OF RIGHT LABER
EB	32 (2JZ-GTE)	FRONT SIDE OF LEFT FENDER
EB	34 (2JZ-GE)	TRONT SIDE OF LEFT FLADER
IF	36	LEFT KICK PANEL
IG	36	RIGHT KICK PANEL
IH	30	MOIT MONTANEE

### : SPLICE POINTS

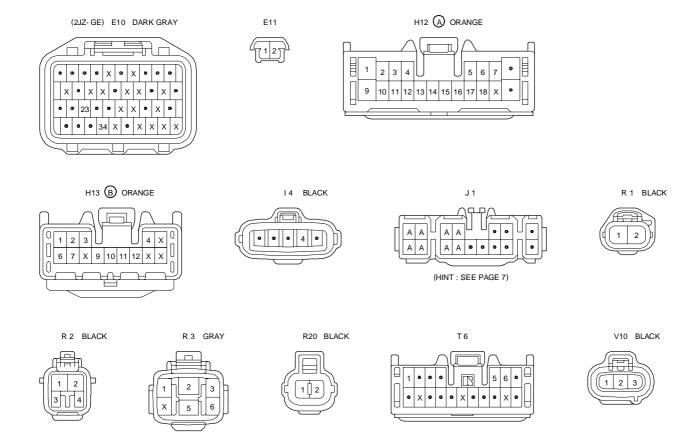
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E2			l12	38	INSTRUMENT PANEL WIRE
E5	32	ENGINE ROOM MAIN WIRE	I13	38	COWL NO. 3 WIRE
E9			l14		
E11	32	ENGINE WIRE	l19	38	INSTRUMENT PANEL WIRE
E21	34	ENGINE ROOM MAIN WIRE	125	]	
E26	34	ENGINE WIRE			

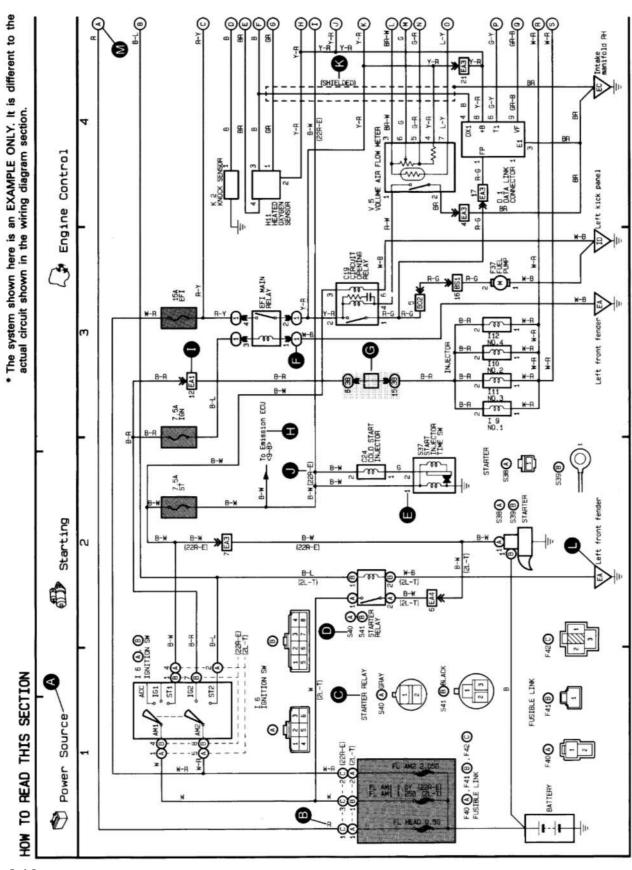


• X • 34 X X X •



# RADIATOR FAN AND AUTOMATIC AIR CONDITIONING



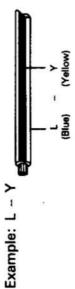


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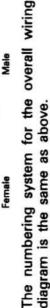
- System Title
- B. Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

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



- O: Indicates the connector to be connected to a part (the numeral indicates the pin No.)
- The position of the parts is the same as shown in the wiring diagram and wire routing.
- Indicates the pin number of the connector.
   The numbering system is different for female and male connectors.

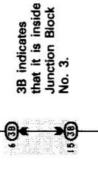


F: Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B.

Example: O Indicates Relay Block No. 1.

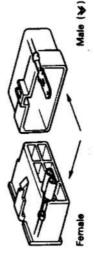
Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts (different junction blocks are shaded differently for further clarification).

Example:



- (1): Indicates related system.
- 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.
- Indicates a shielded cable.



- . Indicates and located on ground point.
- The same code occuring on the next page indicates that the wire harness is continuous.

SYSTEM INDEX	)EX					199	1997 Model (Location No. 1 to 27)	on No. 1 to 27)
SYSTEMS	700	LOCATION	SYSTEMS	007	LOCATION	SYSTEMS	700	LOCATION
ABS		19-3 (w/ Traction Control) 18-3 (w/o Traction Control)	Horn	6	9-4	Seat Heater (Canada)		22-4
Auto Antenna	~ 7	25-4	Ignition	- Silve	2-4 (2JZ-GE) 2-2 (2JZ-GTE)	Shift Lock		22:2
Back-Up Light	4	16-8 (2JZ-GE) 15-8 (2JZ-GTE)	Illumination		8-3	SRS	9	13-3
Charging		4	Interior Light		10-3	Starting		1.2
Cigarette Lighter	8	22 1	Light Auto Turn Off	The second	11-2	Stop Light		7.4
Clock	0	21-3	Power Seat		12-4	Taillight		7.2
Combination Meter	(E003)	26-3	Power Source		1~27-1	Theft Deterrent and ( ) Control ( ) Door Lock Control		14.3
Cruise Control	(5) 40mm	17-3	Power Window	1	12.2	Traction Control	TRAC	20-3
Electric Tension Reducer	A	21-4	PPS		21-3	Turn Signal and Hazard Warning Light	A.	9-2
Electronically Controlled Transmission and A/T Indicator	ECT (PRINTE)	16-3 (2JZ-GE) 15-3 (2JZ-GTE)	Radiator Fan and Automatic Air Conditioning		. 27-3	Unlock and Seat Belt Warning		10-2
Engine Control		4-3 (2JZ-GE) 3-3 (2JZ-GTE)	Radio and Player		24-3 (w/ Stereo Power Amplifier) 25-2 (w/o Stereo Power Amplifier)			
Fog Light	To the second	5-4	Rear Window Defogger and Mirror Heater		21-2			
Front Wiper and Washer	W.	23-4	Rear Wiper and Washer	A	23-2			
Headlight	8	6-3 (Canada) 5-3 (USA)	Remote Control Mirror	Ū.	11-4			

