# **2003 TOYOTA TUNDRA ELECTRICAL WIRING DIAGRAM**

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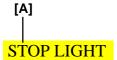
This manual provides information on the electrical circuits installed on vehicles by dividing them into a circuit for each system.

The actual wiring of each system circuit is shown from the point where the power source is received from the battery as far as each ground point. (All circuit diagrams are shown with the switches in the OFF position.)

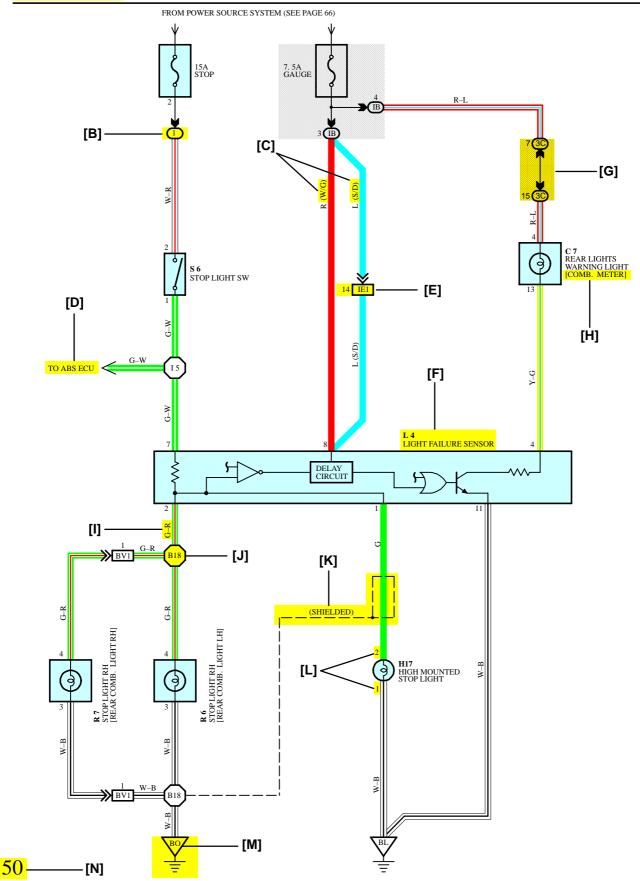
When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Point section). See the System Outline to understand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

When the circuit operation is understood, begin troubleshooting of the problem circuit to isolate the cause. Use Relay Location and Electrical Wiring Routing sections to find each part, junction block and wiring harness connectors, wiring harness and wiring harness connectors, splice points, and ground points of each system circuit. Internal wiring for each junction block is also provided for better understanding of connection within a junction block.

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



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



[A] : System Title

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

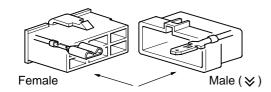
Example: 1 Indicates Relay Block No.1

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

[D] : Indicates related system.

**[E]** : Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (  $\bowtie$  ).

Outside numerals are pin numbers.

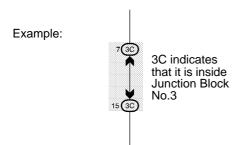


The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

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

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

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



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

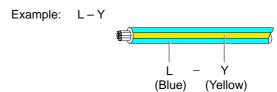
[I] : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

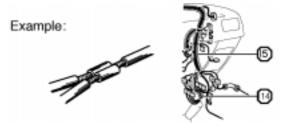
B = Black W = White BR = Brown
L = Blue V = Violet SB = Sky Blue
R = Red G = Green LG = Light Green
P = Pink Y = Yellow GR = Gray

O = Orange

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



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

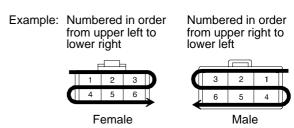


The Location of splice Point I 5 is indicated by the shaded section.

[K] : Indicates a shielded cable.



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



[M] : Indicates a ground point.

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

[N] : Page No.

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

#### [0]

#### SYSTEM OUTLINE

Current is applied at all times through the STOP fuse to TERMINAL 2 of the stop light SW.

When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 8 of the light failure sensor, and also flows through the rear lights warning light to TERMINAL 4 of the light failure sensor.

#### STOP LIGHT DISCONNECTION WARNING

When the ignition SW is turned on and the brake pedal is pressed (Stop light SW on), if the stop light circuit is open, the current flowing from TERMINAL 7 of the light failure sensor to TERMINALS 1, 2 changes, so the light failure sensor detects the disconnection and the warning circuit of the light failure sensor is activated.

As a result, the current flows from TERMINAL 4 of the light failure sensor to TERMINAL 11 to GROUND and turns the rear lights warning light on. By pressing the brake pedal, the current flowing to TERMINAL 8 of the light failure sensor keeps the warning circuit on and holds the warning light on until the ignition SW is turned off.

#### [P]

#### SERVICE HINTS

#### S6 STOP LIGHT SW

2-1: Closed with the brake pedal depressed

#### L4 LIGHT FAILURE SENSOR

1, 2, 7-GROUND: Approx. 12 volts with the stop light SW on

4, 8-GROUND: Approx. 12 volts with the ignition SW at ON position

11-GROUND: Always continuity

#### [Q] : PARTS LOCATION

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

#### : RELAY BLOCKS

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

#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

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

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

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

#### : GROUND POINTS

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



#### : SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
15	44	Cowl Wire	B18	50	Luggage Room Wire

[O]: Explains the system outline.

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

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

Example: Part "L4" (Light Failure Sensor) is on page 36 of the manual.

\* The letter in the code is from the first letter of the part, and the number indicates its order in parts starting with that letter.

Example: L4
Parts is 4th in order
Light Failure Sensor

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

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

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

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

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

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

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

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

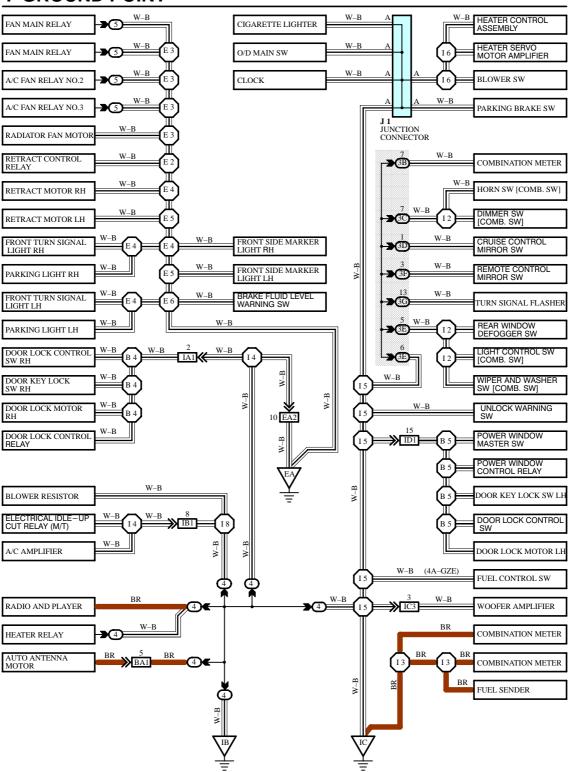
[V]: Indicates the reference page showing the position of the splice points on the vehicle.

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

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

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

#### I GROUND POINT

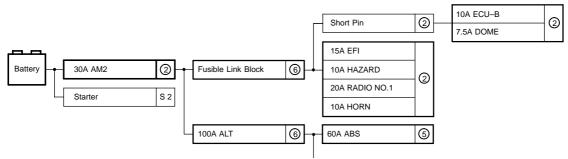


\* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

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

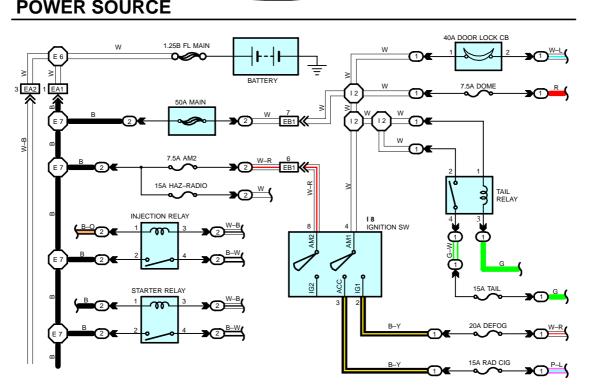
## J POWER SOURCE (Current Flow Chart)

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



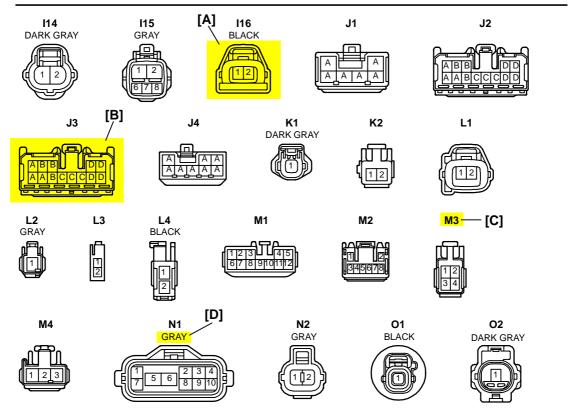
#### **Engine Room R/B (See Page 20)**

	Fuse	System	Page			
		ABS	194			
		ABS and Traction Control	187			
20A	STOP	Cruise Control	180			
		Electronically Controlled Transmission and A/T Indicator	166			
		Multiplex Communication System	210			
		Cigarette Lighter and Clock	214			
		Combination Meter	230			
		Headlight	112			
10A	DOME	Interior Light	122			
	Key Reminder and Seat Belt Warning					
	Light Auto Turn Off					
DO14/	POLICE COLLEGE					



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

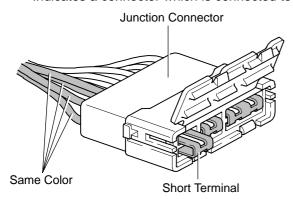
#### K CONNECTOR LIST



[A]: Indicates connector to be connected to a part. (The numeral indicates the pin No.)

#### [B]: Junction Connector

Indicates a connector which is connected to a short terminal.



Junction connector in this manual include a short terminal which is connected to a number of wire harnesses. Always perform inspection with the short terminal installed. (When installing the wire harnesses, the harnesses can be connected to any position within the short terminal grouping. Accordingly, in other vehicles, the same position in the short terminal may be connected to a wire harness from a different part.)

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

#### [C]: Parts Code

The first letter of the code is taken from the first letter of part, and the numbers indicates its order in parts which start with the same letter.

#### [D]: Connector Color

Connectors not indicated are milky white in color.

# L PART NUMBER OF CONNECTORS

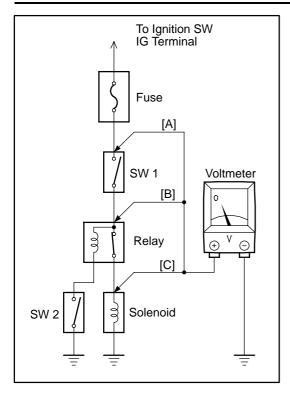
Code	Part Name	Part Number	Code	Part Name	Part Number
A 1	A/C Ambient Temp. Sensor	90980–11070	D 4	Diode (Door Courtesy Light)	90980-11608
A 2	A/C Condenser Fan Motor	90980–11237	D 5	Diode (Key Off Operation)	90980–10962
А3	A/C Condenser Fan Relay	90980–10940	D 6	Diode (Luggage Compartment Light)	90980-11608
	A/C Triple Pressure SW (A/C Dual and	00000 40040	D 7	Door Lock Control Relay	90980-10848
A 4	Single Pressure SW)	90980-10943	D 8	Door Courtesy Light LH	
[A]	A/T Oil Temp. Sensor [B]	909 [C] <sub>413</sub>	D 9	Door Courtesy Light RH	90980–11148
A 6	ABS Actuator	90980–11151	D10	Door Courtesy SW LH	00000 44007
A 7	ABS Actuator	90980-11009	D11	Door Courtesy SW RH	90980–11097
A 8	ABS Speed Sensor Front LH	90980-10941	D12	Door Courtesy SW Front LH	
A 9	ABS Speed Sensor Front RH	90980-11002	D13	Door Courtesy SW Front RH	
A10	Airbag Sensor Front LH	00000 44050	D14	Door Courtesy SW Rear LH	90980–11156
A11	Airbag Sensor Front RH	90980–11856	D15	Door Courtesy SW Rear RH	
A12-		90980–11194	Dia	Unlock SW LH	
-		90980		TOH.	90980–11170

[A]: Part Code[B]: Part Name[C]: Part Number

Toyota Part Number are indicated.

Not all of the above part numbers of the connector are established for the supply. In case of ordering a connector or terminal with wire, please confirm in advance if there is supply for it using "Parts Catalog News" (published by Parts Engineering Administration Dept.).

## TROUBLESHOOTING



#### **VOLTAGE CHECK**

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

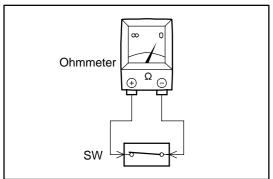
Example:

- Ignition SW on

Ignition SW and SW 1 onIgnition SW, SW 1 and Relay on (SW 2 off)

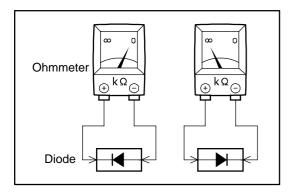
(b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal.

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



#### CONTINUITY AND RESISTANCE CHECK

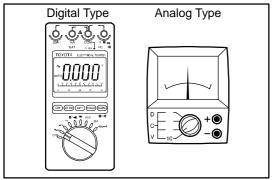
- (a) Disconnect the battery terminal or wire so there is no voltage between the check points.
- (b) Contact the two leads of an ohmmeter to each of the check points.



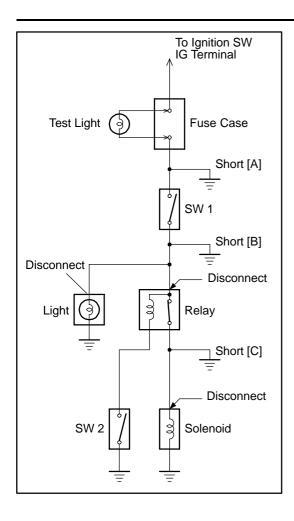
If the circuit has diodes, reverse the two leads and check again.

When contacting the negative lead to the diode positive side and the positive lead to the negative side, there should be continuity.

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



(c) Use a volt/ohmmeter with high impedance (10 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] [C]

Ignition SW on
Ignition SW and SW 1 on
Ignition SW, SW 1 and Relay on (Connect the Relay) and SW 2 off (or Disconnect SW 2)

(d) Disconnect and reconnect the connectors while watching the

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.

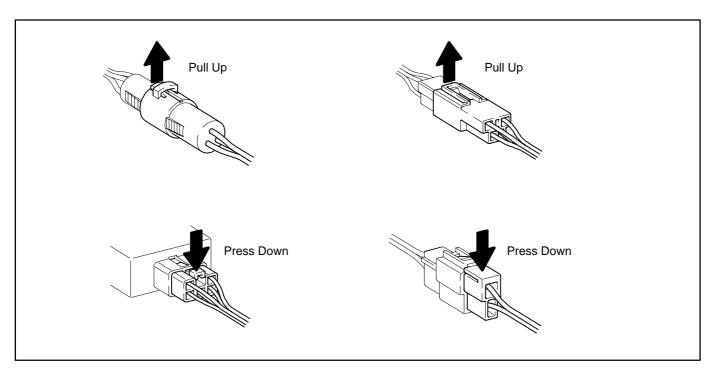
#### **CAUTION:**

- (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).

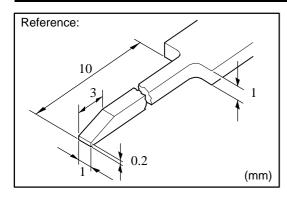
#### DISCONNECTION OF MALE AND FEMALE CONNECTORS

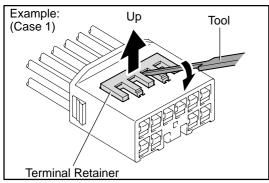
To pull apart the connectors, pull on the connector itself, not the wire harness.

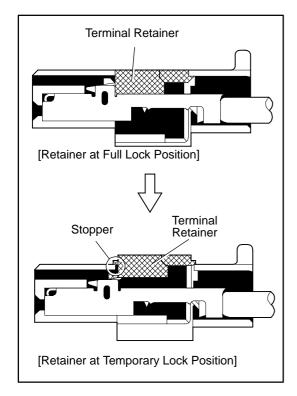
HINT: Check to see what kind of connector you are disconnecting before pulling apart.

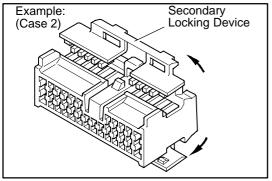


### **C TROUBLESHOOTING**









# 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

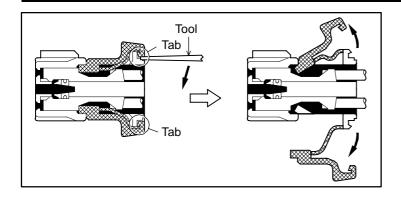
HINT: The needle insertion position varies according to the connector's shape (number of terminals etc.), so check the position before inserting it.

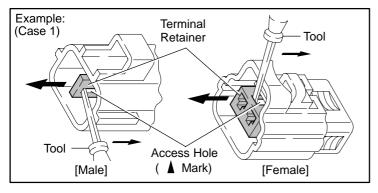
"Case 1"

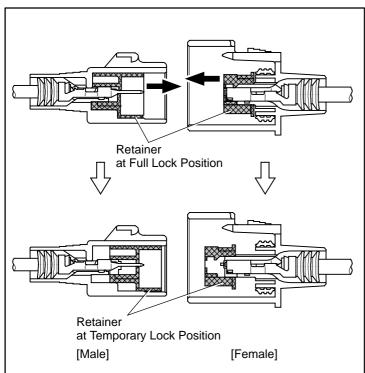
Raise the terminal retainer up to the temporary lock position.

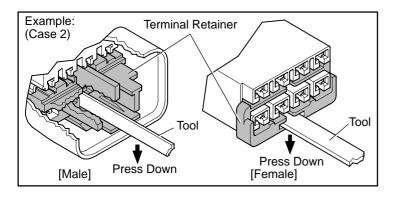
"Case 2"

Open the secondary locking device.









#### [B] For Waterproof Type Connector

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

#### Example:

Terminal Retainer: Connector Body

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

#### "Case 1"

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

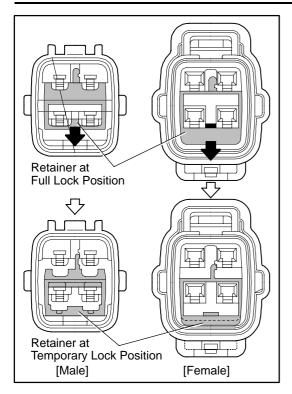
Insert the special tool into the terminal retainer access hole ( Mark) and pull the terminal retainer up to the temporary lock position.

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

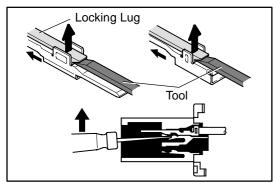
#### "Case 2"

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

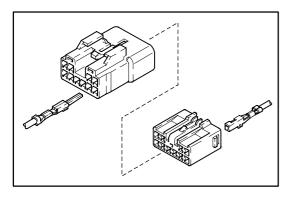
## C TROUBLESHOOTING



Push the terminal retainer down to the temporary lock position.



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

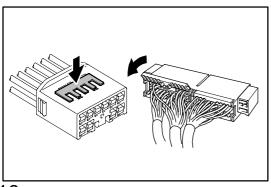


#### 4. INSTALL TERMINAL TO CONNECTOR

(a) Insert the terminal.

#### HINT:

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



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

#### **ABBREVIATIONS**

The following abbreviations are used in this manual.

2WD = Two Wheel Drive Vehicles

4WD = Four Wheel Drive Vehicles

A/C = Air Conditioning

A/T = Automatic Transmission

ABS = Anti-Lock Brake System

ACIS = Acoustic Control Induction System

ADD = Automatic Disconnecting Differential

COMB. = Combination

ECU = Electronic Control Unit

ESA = Electronic Spark Advance

ETCS-i = Electronic Throttle Control System-intelligent

EVAP = Evaporative Emission

J/B = Junction Block

LH = Left-Hand

M/T = Manual Transmission

O/D = Overdrive

R/B = Relay Block

RH = Right-Hand

SFI = Sequential Multiport Fuel Injection

SRS = Supplemental Restraint System

SW = Switch

TEMP. = Temperature

TVIP = TOYOTA Vehicle Intrusion Protection

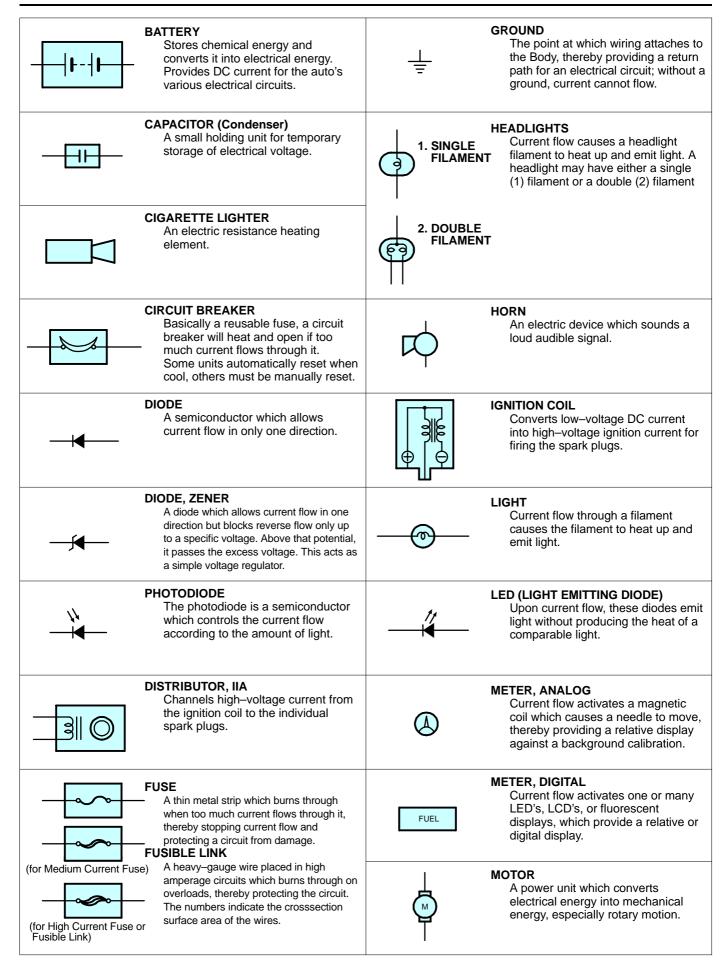
VSV = Vacuum Switching Valve

w/ = With

w/o = Without

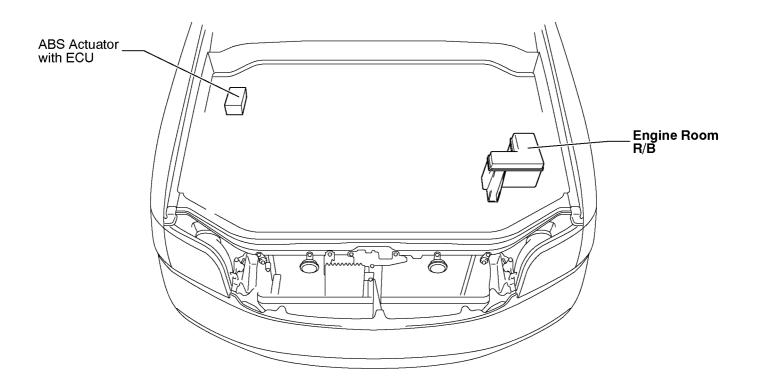
<sup>\*</sup> The titles given inside the components are the names of the terminals (terminal codes) and are not treated as being abbreviations.

### E GLOSSARY OF TERMS AND SYMBOLS

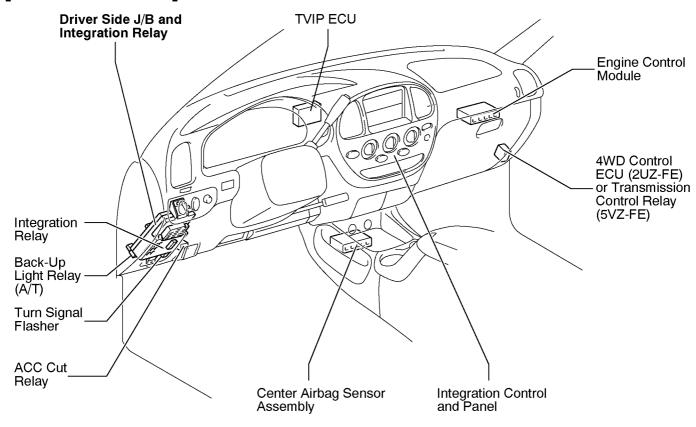


#### **SPEAKER RELAY** An electromechanical device which Basically, an electrically operated creates sound waves from current 1. NORMALLY switch which may be normally **CLOSED** flow. closed (1) or open (2). Current flow through a small coil creates a magnetic field which either opens or closes an attached switch. 2. NORMALLY SWITCH, MANUAL Opens and closes **OPEN** circuits, thereby 1. NORMALLY stopping (1) or **OPEN** allowing (2) current flow. **RELAY, DOUBLE THROW** A relay which passes current 2. NORMALLY through one set of contacts or the **CLOSED** SWITCH, DOUBLE THROW **RESISTOR** A switch which continuously passes An electrical component with a fixed current through one set of contacts resistance, placed in a circuit to reduce voltage to a specific value. or the other. **RESISTOR, TAPPED SWITCH, IGNITION** A resistor which supplies two or A key operated switch with several more different non adjustable positions which allows various resistance values. circuits, particularly the primary ignition circuit, to become operational. **RESISTOR, VARIABLE or RHEOSTAT** A controllable resistor with a variable rate of resistance. Also called a potentiometer or rheostat. **SENSOR (Thermistor)** SWITCH, WIPER PARK A resistor which varies its resistance Automatically returns wipers to the with temperature. stop position when the wiper switch is turned off. SENSOR, SPEED TRANSISTOR A solidstate device typically used as Uses magnetic impulses to open an electronic relay; stops or passes and close a switch to create a signal for activation of other components. current depending on the voltage (Reed Switch Type) applied at "base". **SHORT PIN WIRES** Used to provide an unbroken Wires are always drawn as connection within a junction block. (1) NOT straight lines on wiring **CONNECTED** diagrams. Crossed wires (1) without a black dot at the junction are not joined; **SOLENOID** crossed wires (2) with a An electromagnetic coil which forms black dot or octagonal (mark at the junction are a magnetic field when current flows, (2) SPLICED to move a plunger, etc. spliced (joined) connections.

# [Engine Compartment]

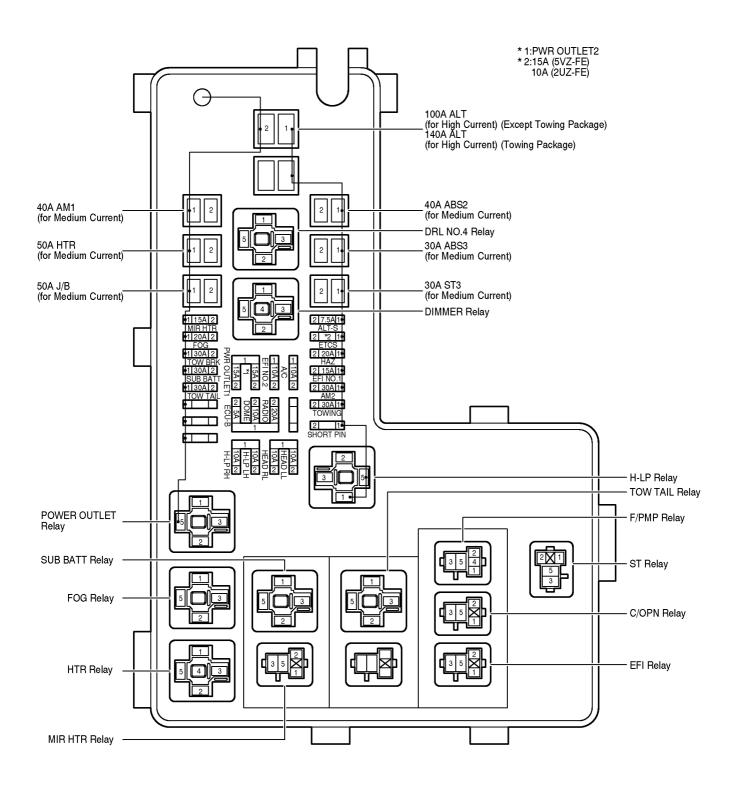


# [Instrument Panel]



# ②: Engine Room R/B

gine Compartment Left (See Page 20)

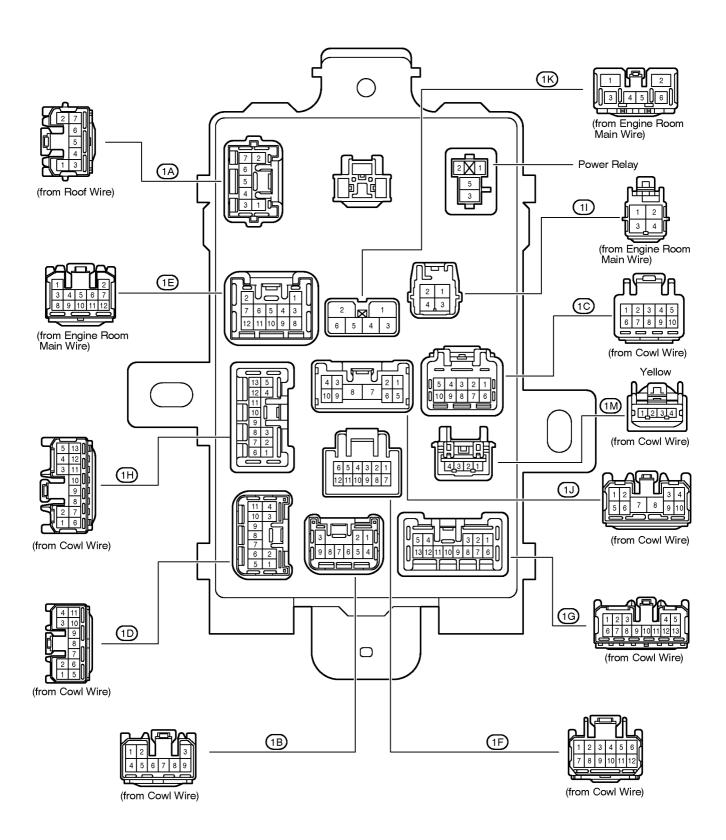


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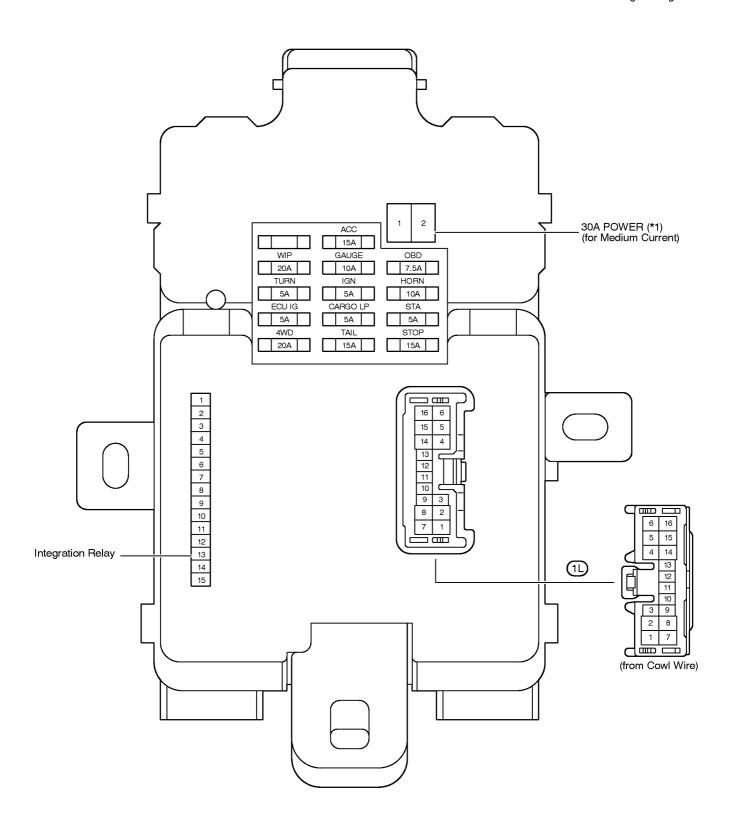
Driver Side J/B and Integration Relay

Lower Fields Panel (See Page 20)

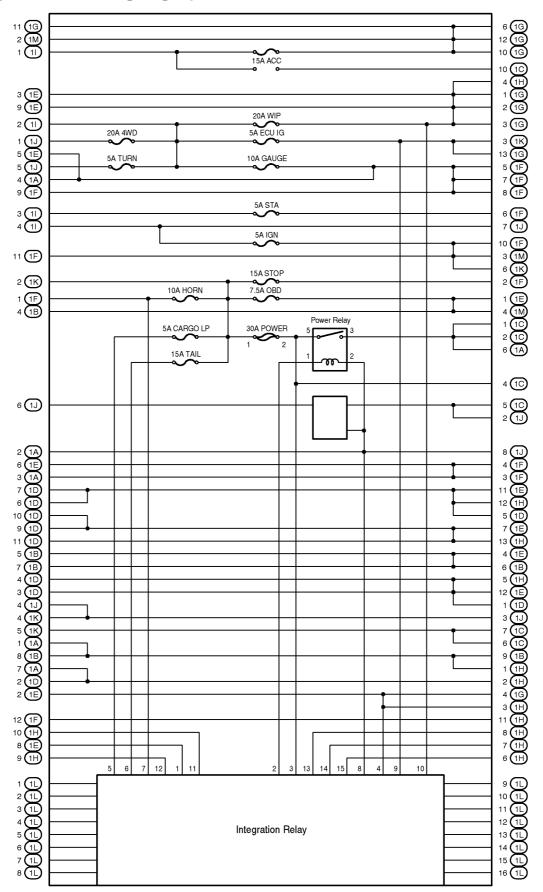
# [w/o Daytime Running Light]



\* 1:Towing Package



# [Driver Side J/B and Integration Relay Inner Circuit] (w/o Daytime Running Light)

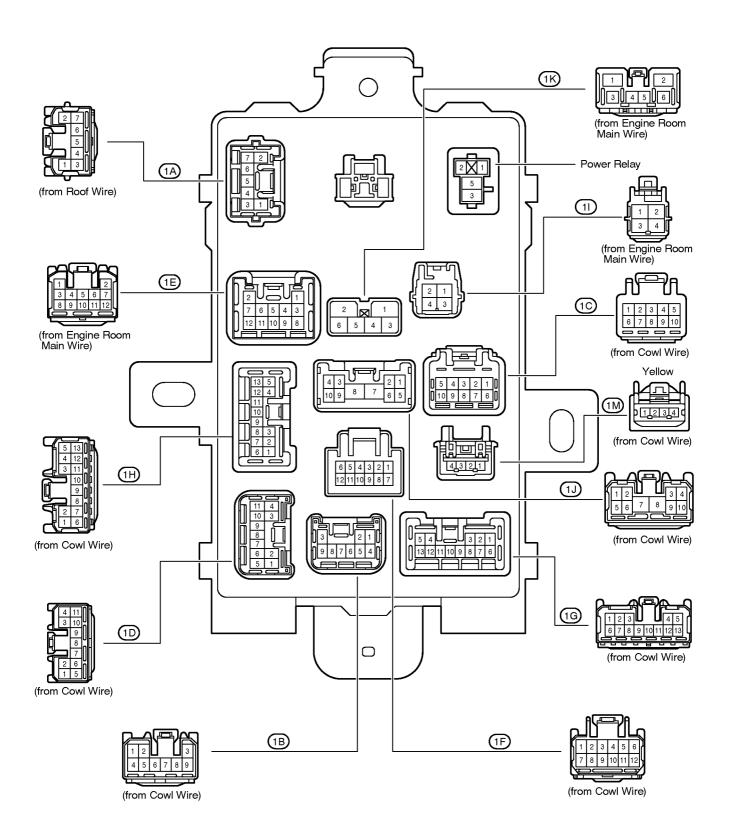


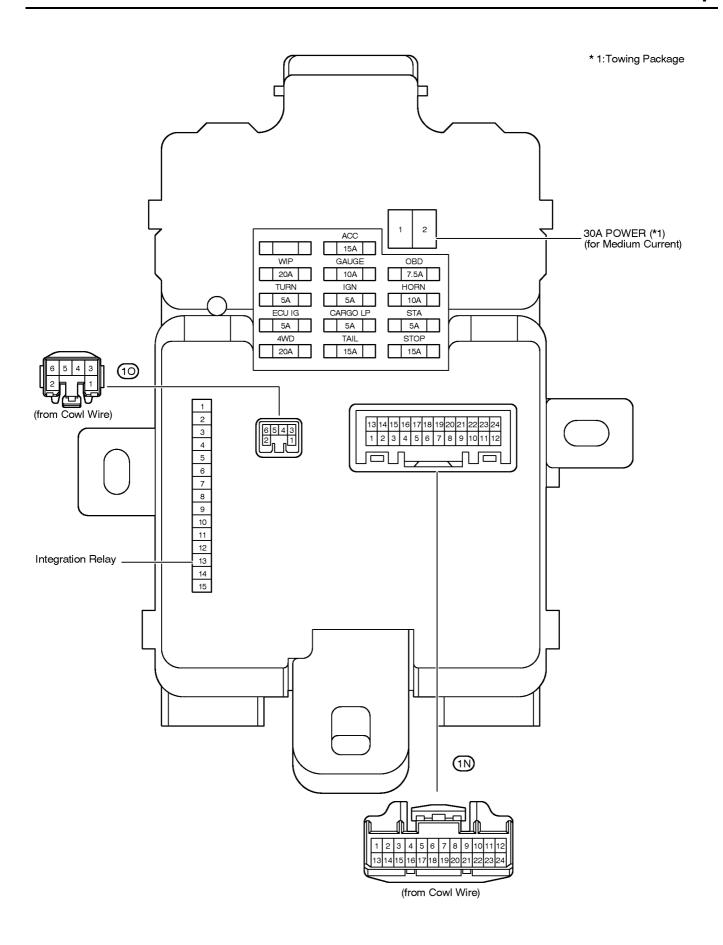
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Driver Side J/B and Integration Relay

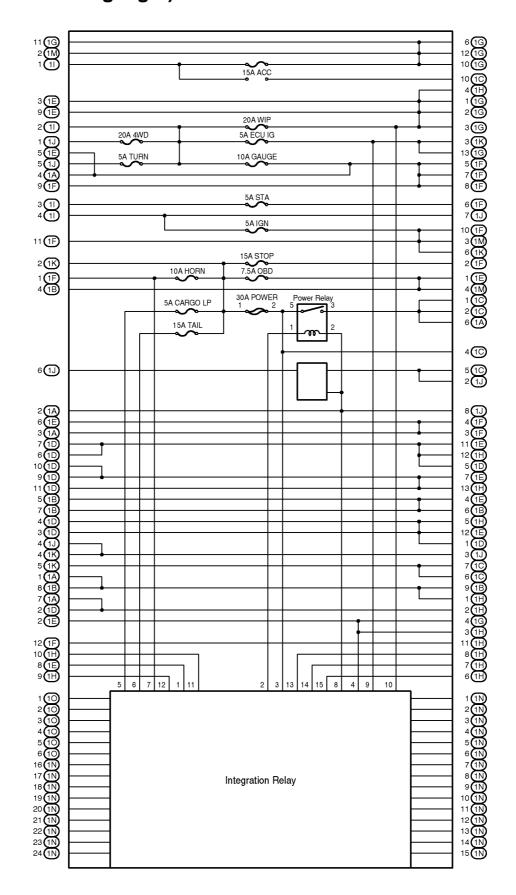
Lower Fisish Panel (See Page 20)

# [w/ Daytime Running Light]





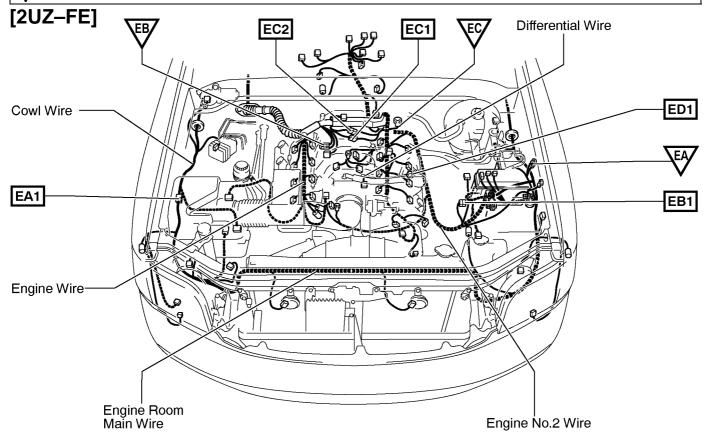
# [Driver Side J/B and Integration Relay Inner Circuit] (w/ Daytime Running Light)



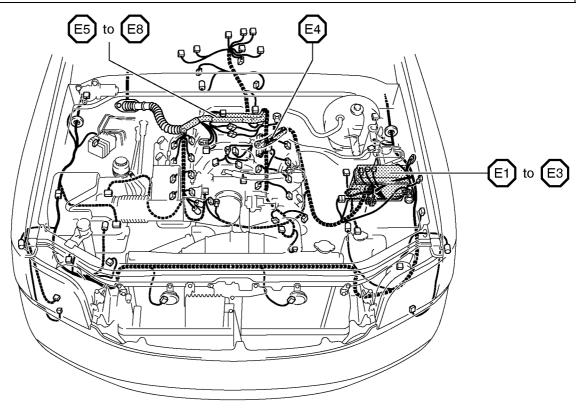
## **G ELECTRICAL WIRING ROUTING**

☐ : Location of Connector Joining Wire Harness and Wire Harness

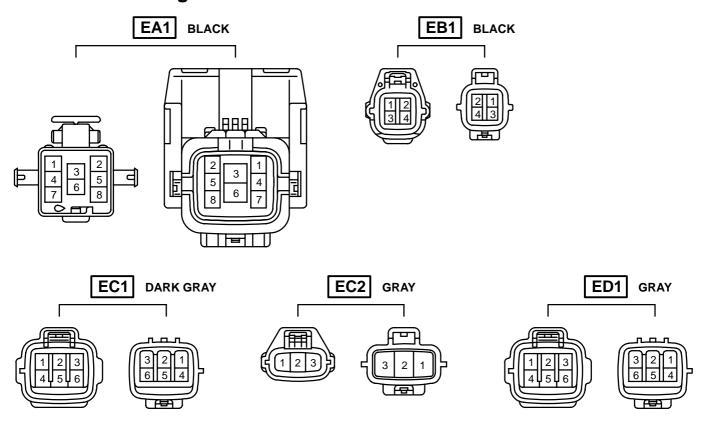
: Location of Ground Points



# : Location of Splice Points



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

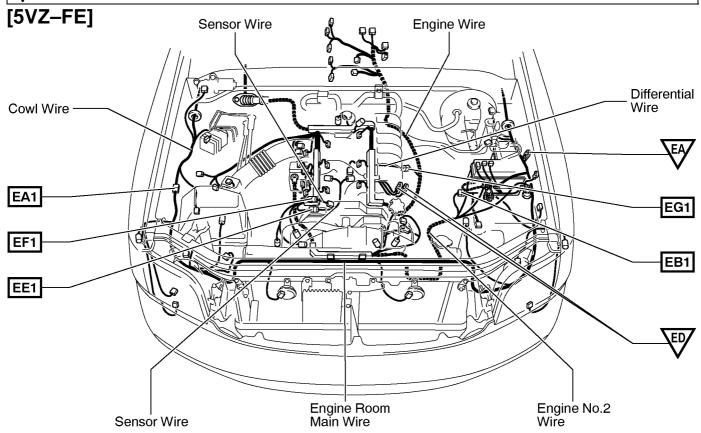


Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Cowl Wire and Engine Room Main Wire (Right Fender)
EB1	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EC1	Facing No 2 Wire and Facing Wire (Near the Starter)
EC2	Engine No.2 Wire and Engine Wire (Near the Starter)
ED1	Engine No.2 Wire and Differential Wire (Near the Transmission)

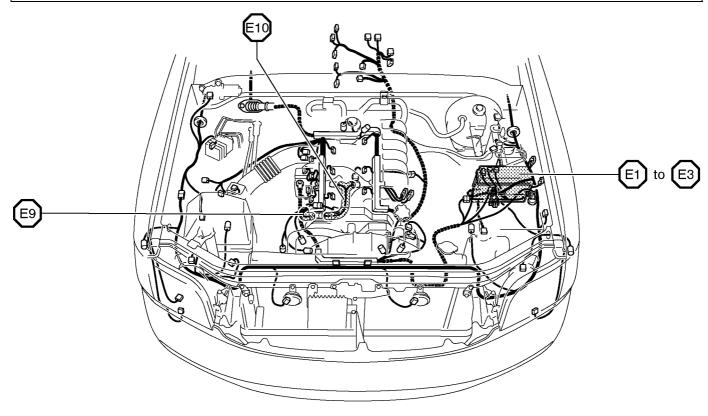
## **G ELECTRICAL WIRING ROUTING**

☐ : Location of Connector Joining Wire Harness and Wire Harness

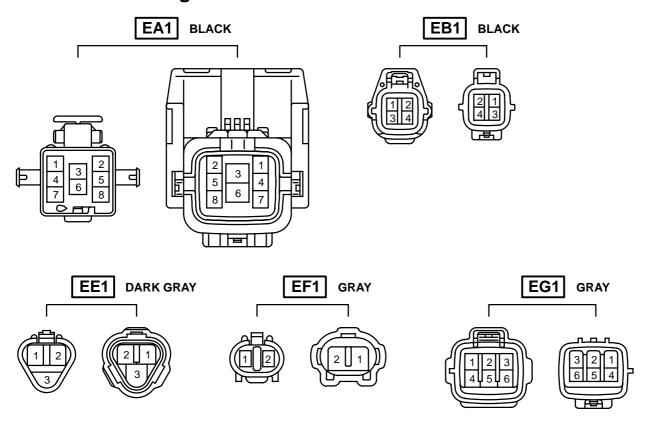
**▽**: Location of Ground Points



# : Location of Splice Points



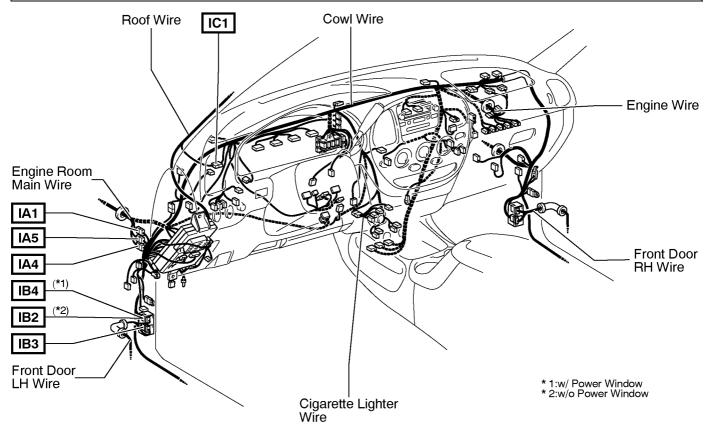
# **Connector Joining Wire Harness and Wire Harness**



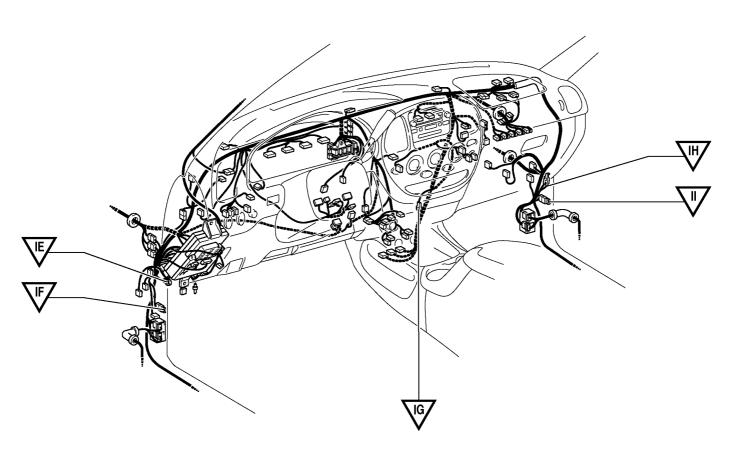
Code	Joining Wire Harness and Wire Harness (Connector Location)
EA1	Cowl Wire and Engine Room Main Wire (Right Fender)
EB1	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
EE1	Sensor Wire and Engine Wire (Over the Cylinder Head)
EF1	Engine Wire and Sensor Wire (Over the Cylinder Head)
EG1	Engine Wire and Differential Wire (Front Differential Upper Side)

## **G ELECTRICAL WIRING ROUTING**

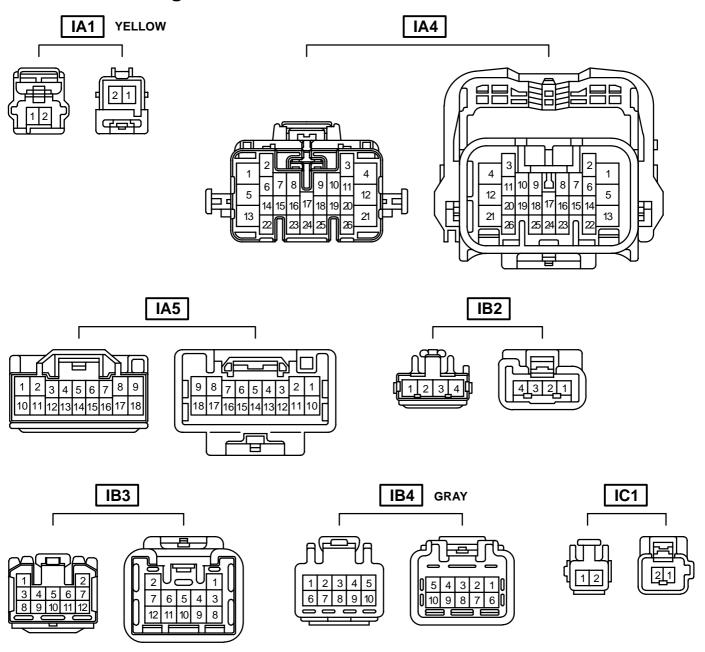
# ☐ : Location of Connector Joining Wire Harness and Wire Harness



# 

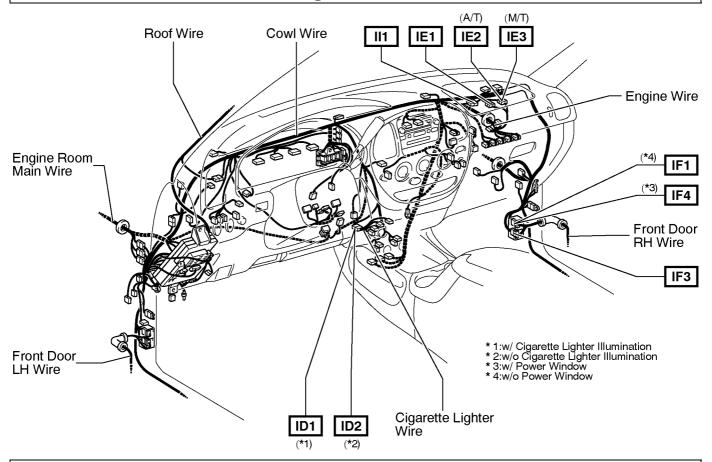


# **Connector Joining Wire Harness and Wire Harness**

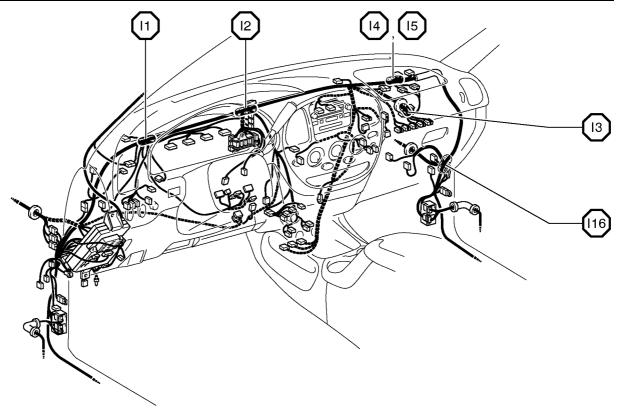


Code	Joining Wire Harness and Wire Harness (Connector Location)
IA1	
IA4	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IA5	
IB2	
IB3	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IB4	
IC1	Cowl Wire and Roof Wire (Left Side of Instrument Panel)

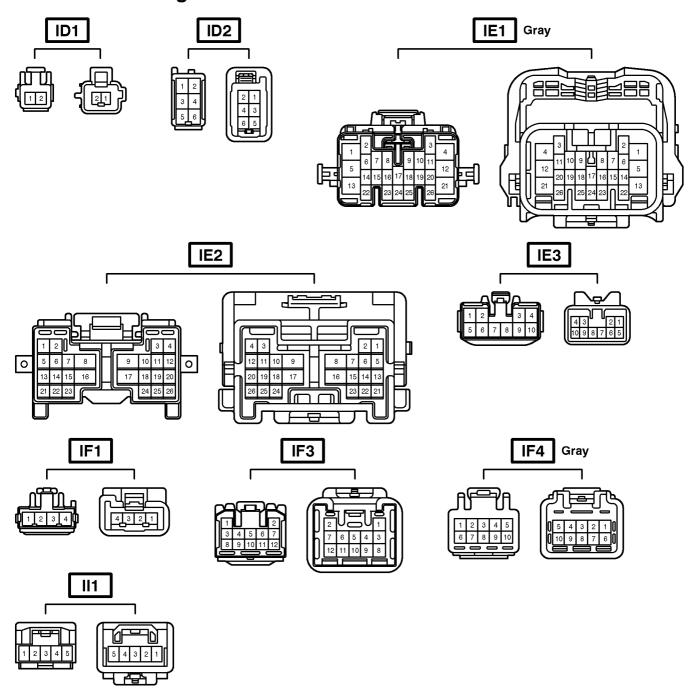
# □ : Location of Connector Joining Wire Harness and Wire Harness



# : Location of Splice Points



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

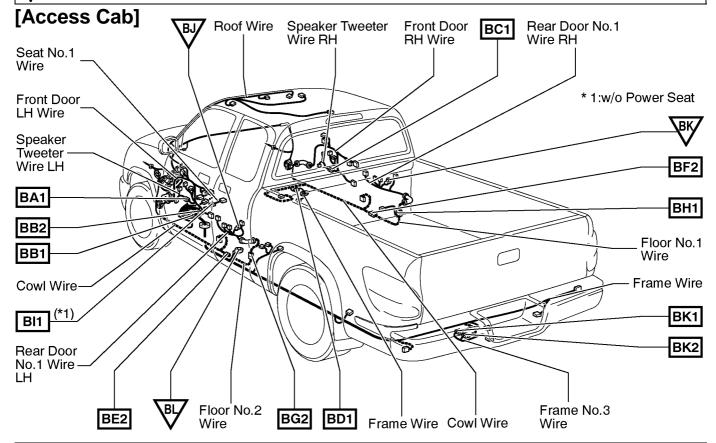


Code	Joining Wire Harness and Wire Harness (Connector Location)
ID1	Cigarette Lighter Wire and Cowl Wire (Instrument Panel Brace LH)
ID2	
IE1	Engine Wire and Cowl Wire (Right Side of Instrument Panel)
IE2	
IE3	
IF1	Front Door RH Wire and Cowl Wire (Right Kick Panel)
IF3	
IF4	
II1	Cowl Wire and Cowl Wire (Instrument Panel Reinforcement RH)

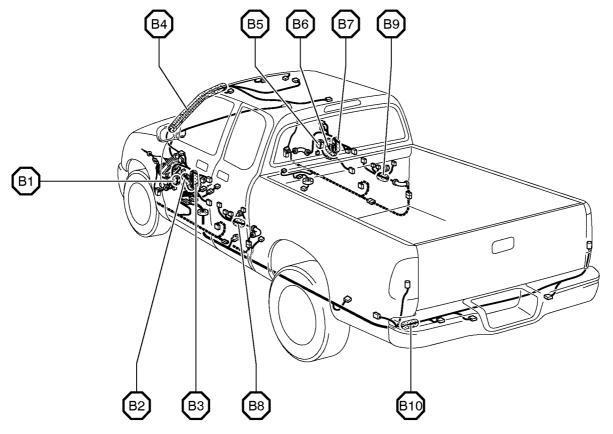
## **G ELECTRICAL WIRING ROUTING**

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

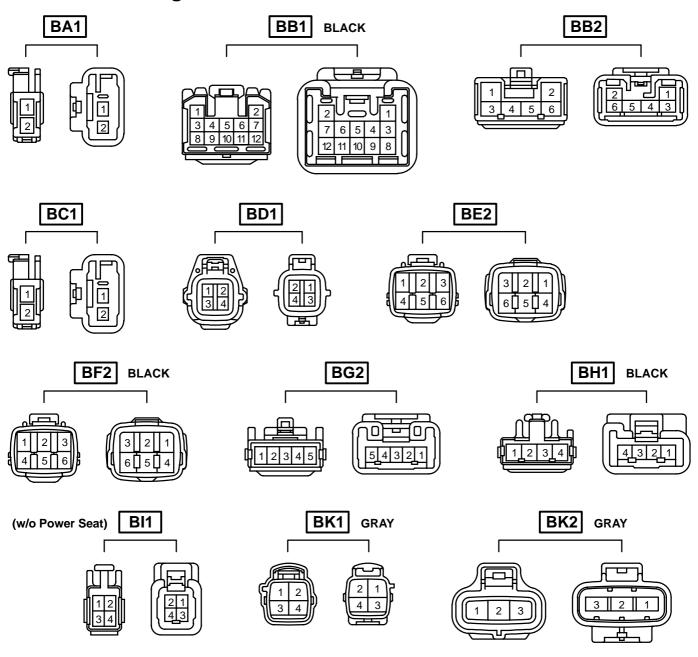
# $\nabla$ : Location of Ground Points



# : Location of Splice Points



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

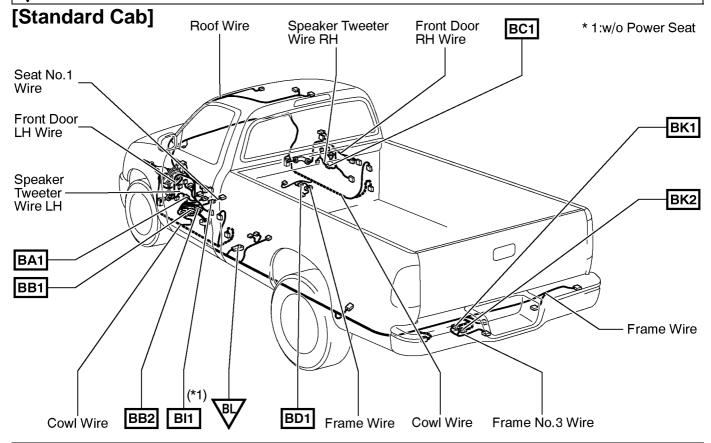


Code	Joining Wire Harness and Wire Harness (Connector Location)			
BA1	Front Door LH Wire and Speaker Tweeter Wire LH (Inside of Front Door LH)			
BB1	From Mire and Coul Mire (Lindor the Driver's Cost)			
BB2	Frame Wire and Cowl Wire (Under the Driver's Seat)			
BC1	Front Door RH Wire and Speaker Tweeter Wire RH (Inside of Front Door RH)			
BD1 Frame Wire and Cowl Wire (Under the Front Passenger's Seat)				
BE2	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)			
BF2	Floor No.1 Wire and Cowl Wire (Center of Right Rocker Panel)			
BG2	Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)			
BH1	Floor No.1 Wire and Rear Door No.1 Wire RH (Under the Right Quarter Panel)			
BI1	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)			
BK1	Frame Wire and Frame No.3 Wire (Near the License Plate Light)			
BK2	Traine ville and Frame No.5 ville (Near the License Frate Light)			

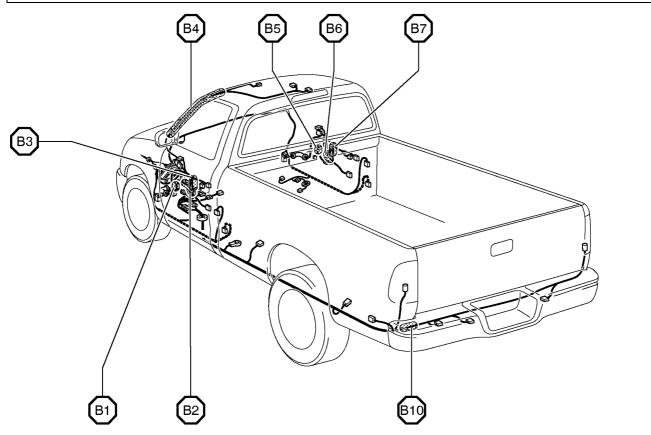
## **G ELECTRICAL WIRING ROUTING**

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

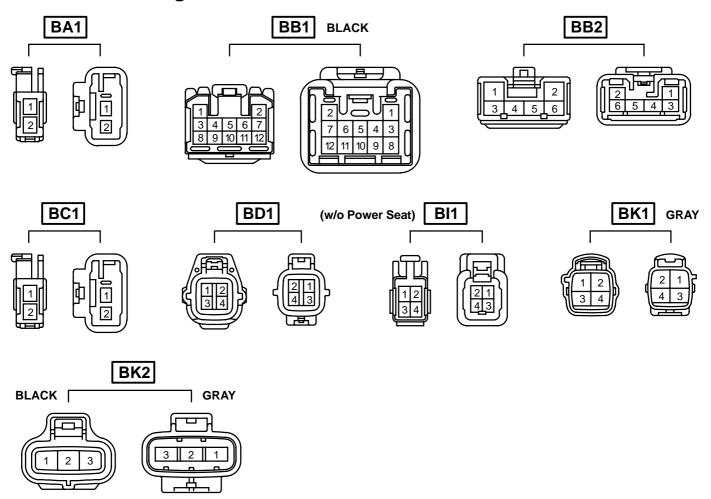
# $\nabla$ : Location of Ground Points



# : Location of Splice Points

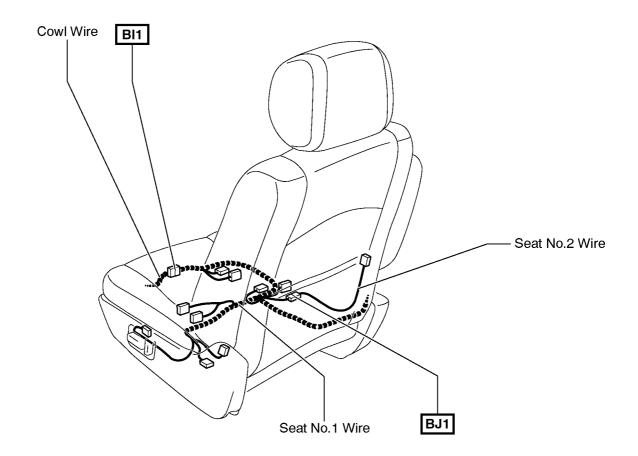


# **Connector Joining Wire Harness and Wire Harness**

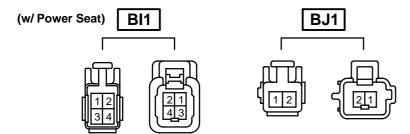


Code	Joining Wire Harness and Wire Harness (Connector Location)		
BA1	Front Door LH Wire and Speaker Tweeter Wire LH (Inside of Front Door LH)		
	Front Door En Wire and Speaker Tweeter Wire En (Inside or Front Door En)		
BB1	France Wise and Could Wise (Under the Private Cost)		
BB2	Frame Wire and Cowl Wire (Under the Driver's Seat)		
BC1	Front Door RH Wire and Speaker Tweeter Wire RH (Inside of Front Door RH)		
BD1	Frame Wire and Cowl Wire (Under the Front Passenger's Seat)		
BI1 Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)			
BK1	Frame Wire and Frame No. 2 Wire (Near the License Plate Light)		
BK2	Frame Wire and Frame No.3 Wire (Near the License Plate Light)		

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



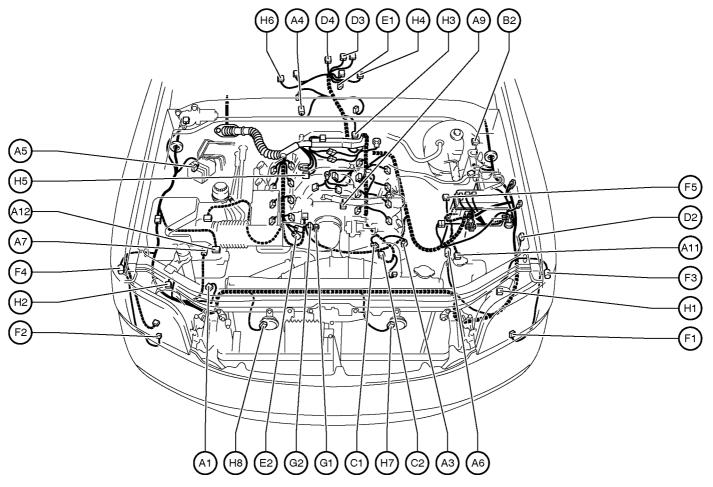
# **Connector Joining Wire Harness and Wire Harness**



Code Joining Wire Harness and Wire Harness (Connector Location)				
BI1	BI1 Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)			
BJ1	BJ1 Seat No.1 Wire and Seat No.2 Wire (Under the Driver's Seat)			

# **MEMO**

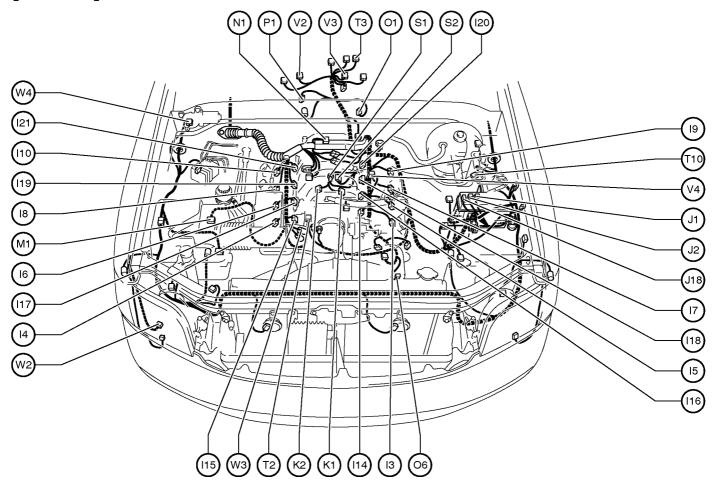
# [2UZ-FE]



- A 1 A/C Dual Pressure SW
- A 3 A/C Magnetic Clutch and Lock Sensor
- A 4 A/T Oil Temp. Sensor
- A 5 ABS Actuator with ECU
- A 6 ABS Speed Sensor Front LH
- A 7 ABS Speed Sensor Front RH
- A 9 ADD Actuator
- A 11 Airbag Sensor Front LH
- A12 Airbag Sensor Front RH
- B 2 Brake Fluid Level Warning SW
- C 1 Camshaft Position Sensor
- C 2 Crankshaft Position Sensor
- D 2 Daytime Running Light Resistor
- D 3 Detection SW (Transfer 4WD Position)
- D 4 Detection SW (Transfer L4 Position)
- E 1 Electronically Controlled Transmission Solenoid
- E 2 Engine Coolant Temp. Sensor

- F 1 Front Fog Light LH
- F 2 Front Fog Light RH
- F 3 Front Turn Signal Light and Parking Light LH
- F 4 Front Turn Signal Light and Parking Light RH
- F 5 Fuel Pump Resistor
- G 1 Generator
- G 2 Generator
- H 1 Headlight LH
- H 2 Headlight RH
- H 3 Heated Oxygen Sensor (Bank 1 Sensor 1)
- H 4 Heated Oxygen Sensor (Bank 1 Sensor 2)
- H 5 Heated Oxygen Sensor (Bank 2 Sensor 1)
- H 6 Heated Oxygen Sensor (Bank 2 Sensor 2)
- H 7 Horn LH
- H 8 Horn RH

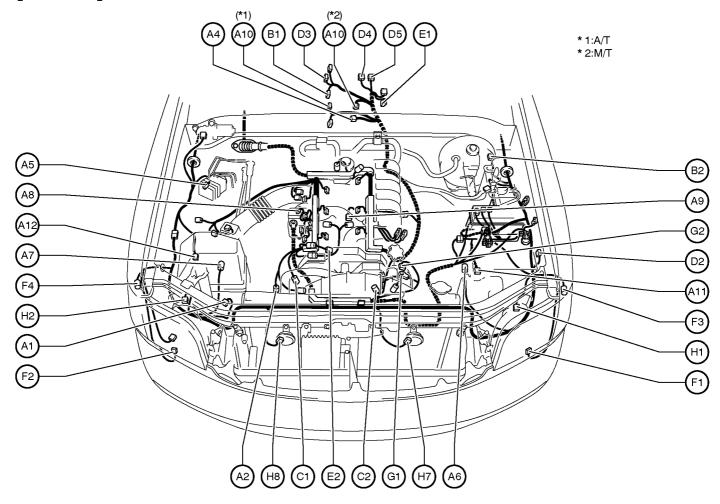
# [2UZ-FE]



- I 3 Igniter and Ignition Coil No.1
- I 4 Igniter and Ignition Coil No.2
- I 5 Igniter and Ignition Coil No.3
- I 6 Igniter and Ignition Coil No.4
- 7 Igniter and Ignition Coil No.5
- I 8 Igniter and Ignition Coil No.6
- I 9 Igniter and Ignition Coil No.7
- I 10 Igniter and Ignition Coil No.8
- I 14 Injector No.1
- I 15 Injector No.2
- I 16 Injector No.3
- I 17 Injector No.4
- I 18 Injector No.5
- I 19 Injector No.6
- I 20 Injector No.7
- I 21 Injector No.8
- J 1 Junction Connector
- J 2 Junction Connector
- J 18 Junction Connector
- K 1 Knock Sensor 1
- K 2 Knock Sensor 2

- M 1 Mass Air Flow Meter
- N 1 Noise Filter
- O 1 O/D Direct Clutch Speed Sensor
- O 6 Oil Pressure Sender
- P 1 Park/Neutral Position SW
- S 1 Starter
- S 2 Starter
- T 2 Throttle Position Sensor
- T 3 Transfer Shift Actuator
- T10 TVIP Buzzer
- V 2 Vehicle Speed Sensor (Combination Meter)
- V 3 Vehicle Speed Sensor (Electronically Controlled Transmission)
- V 4 VSV (EVAP)
- W 2 Washer Motor and Washer Level Sensor
- W 3 Water Temp. Sender
- W 4 Wiper Motor

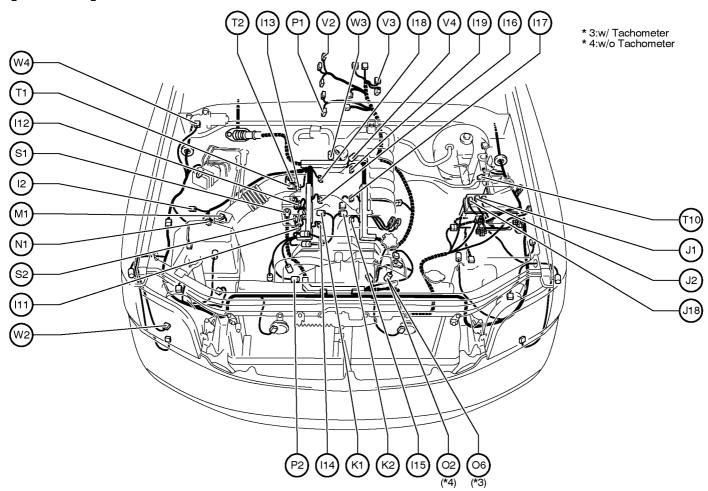
# [5VZ-FE]



- A 1 A/C Dual Pressure SW
- A 2 A/C Magnetic Clutch
- A 4 A/T Oil Temp. Sensor
- A 5 ABS Actuator with ECU
- A 6 ABS Speed Sensor Front LH
- A 7 ABS Speed Sensor Front RH
- A 8 Accel Position Sensor
- A 9 ADD Actuator
- A10 Air Fuel Ratio Sensor (Bank 1 Sensor 1)
- A 11 Airbag Sensor Front LH
- A12 Airbag Sensor Front RH
- B 1 Back-Up Light SW
- B 2 Brake Fluid Level Warning SW
- C 1 Camshaft Position Sensor
- C 2 Crankshaft Position Sensor
- D 2 Daytime Running Light Resistor
- D 3 Detection SW (Transfer 4WD Position)
- D 4 Detection SW (Transfer L4 Position)
- D 5 Detection SW (Transfer Neutral Position)

- E 1 Electronically Controlled Transmission Solenoid
- E 2 Engine Coolant Temp. Sensor
- F 1 Front Fog Light LH
- F 2 Front Fog Light RH
- F 3 Front Turn Signal Light and Parking Light LH
- F 4 Front Turn Signal Light and Parking Light RH
- G 1 Generator
- G 2 Generator
- H 1 Headlight LH
- H 2 Headlight RH
- H 7 Horn LH
- H 8 Horn RH

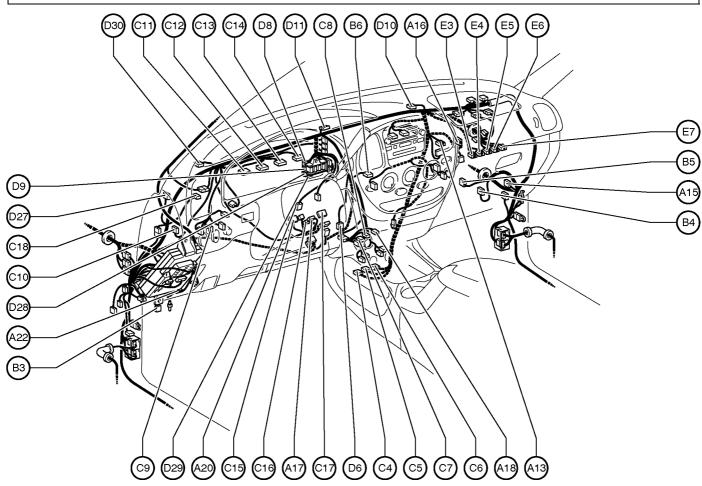
# [5VZ-FE]



- I 2 Igniter
- I 11 Ignition Coil No.1
- I 12 Ignition Coil No.2
- I 13 Ignition Coil No.3
- I 14 Injector No.1
- I 15 Injector No.2
- I 16 Injector No.3
- I 17 Injector No.4
- I 18 Injector No.5
- I 19 Injector No.6
- J 1 Junction Connector
- J 2 Junction Connector
- J 18 Junction Connector
- K 1 Knock Sensor 1
- K 2 Knock Sensor 2
- M 1 Mass Air Flow Meter
- N 1 Noise Filter

- O 2 Oil Pressure SW
- O 6 Oil Pressure Sender
- P 1 Park/Neutral Position SW
- P 2 Power Steering Oil Pressure SW
- S 1 Starter
- S 2 Starter
- T 1 Throttle Control Motor
- T 2 Throttle Position Sensor
- T10 TVIP Buzzer
- V 2 Vehicle Speed Sensor (Combination Meter)
- V 3 Vehicle Speed Sensor
  - (Electronically Controlled Transmission)
- V 4 VSV (EVAP)
- W 2 Washer Motor and Washer Level Sensor
- W 3 Water Temp. Sender
- W 4 Wiper Motor

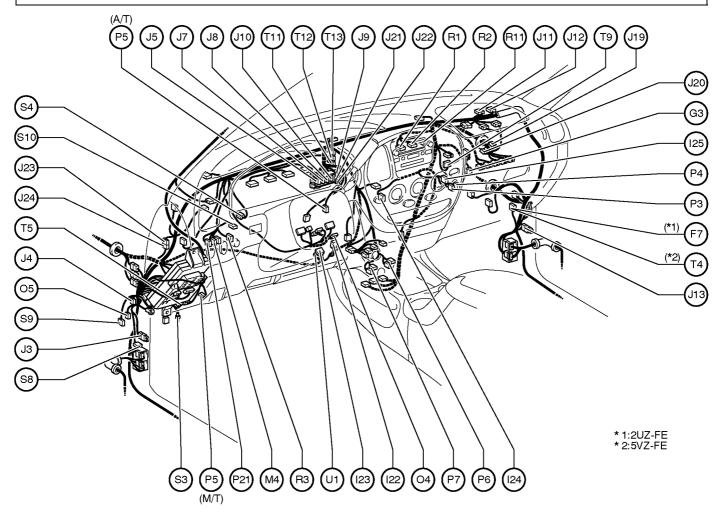
# **Position of Parts in Instrument Panel**



- A13 A/C Thermistor
- A15 Air Inlet Control Servo Motor
- A16 Airbag Squib (Front Passenger Airbag Assembly)
- A17 Airbag Squib (Steering Wheel Pad)
- A18 Ashtray Illumination
- A20 Accelerator Pedal Position Sensor
- A22 ACC Cut Relay
- B 3 Back-UP Light Relay
- B 4 Blower Motor
- B 5 Blower Resistor
- B 6 Blower SW and Defroster Mode SW
- C 4 Center Airbag Sensor Assembly
- C 5 Center Airbag Sensor Assembly
- C 6 Center Airbag Sensor Assembly
- C 7 Cigarette Lighter
- C 8 Cigarette Lighter Illumination
- C 9 Clutch Start Cancel SW
- C10 Clutch Start SW
- C11 Combination Meter
- C12 Combination Meter

- C13 Combination Meter
- C14 Combination Meter
- C15 Combination SW
- C16 Combination SW
- C17 Combination SW
- C18 Cruise Control Clutch SW
- D 6 Data Link Connector 3
- D 8 Diode (A/T)
- D 9 Diode (Door Courtesy)
- D10 Diode (Idle-Up)
- D11 Diode (Power Window System)
- D27 Diode (Step Light)
- D28 Diode (Door Lock)
- D29 Diode (TVIP)
- D30 Diode (Unlock Warning)
- E 3 Engine Control Module
- E 4 Engine Control Module
- E 5 Engine Control Module
- E 6 Engine Control Module
- E 7 Engine Control Module

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

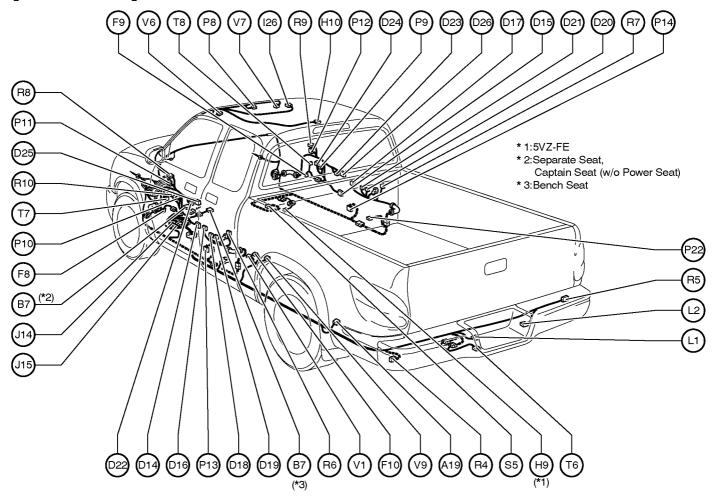


- F 7 4WD Control ECU
- G 3 Glove Box Light
- I 22 Ignition Key Cylinder Light
- I 23 Ignition SW
- I 24 Integration Control and Panel
- I 25 Integration Control and Panel
- 3 Junction Connector
- Junction Connector
- 5 Junction Connector
- Junction Connector 7
- J 8 Junction Connector J 9 Junction Connector
- J 10 Junction Connector
- J 11 Junction Connector
- J 12 Junction Connector
- J 13 Junction Connector
- J 19 Junction Connector
- J 20 Junction Connector J 21 Junction Connector
- J 22 Junction Connector
- J 23 Junction Connector
- J 24 Junction Connector
- M 4 Mirror Heater SW

- O 4 O/D Main SW
- O 5 Option Connector
- 3 Passenger Airbag Manual On-Off SW
- Ρ 4 Passenger Airbag Manual On-Off SW
- Ρ 5 Parking Brake SW
- P 6 Power Outlet
- P 7 Power Outlet
- P21 Power Window Control SW (Back Window)
- R 1 Radio and Player
- R 2 Radio and Player
- R 3 Rheostat
- R11 Radio and Player
- S 3 Step Light
- S 4 Stop Light SW
- S 8 Short Pin
- S 9 Short Connector (TVIP)
- S10 Security Indicator and
  - Grass Brakeage Sensor Microphone
- 4 Transmission Control Relay
- Т 5 Turn Signal Flasher
- T 9 Trailer Converter
- T 11 TVIP ECU
- T12 TVIP ECU
- T13 TVIP ECU
- U 1 Unlock Warning SW

# **Position of Parts in Body**

# [Access Cab]



- A19 ABS Speed Sensor Rear
- B 7 Buckle SW LH

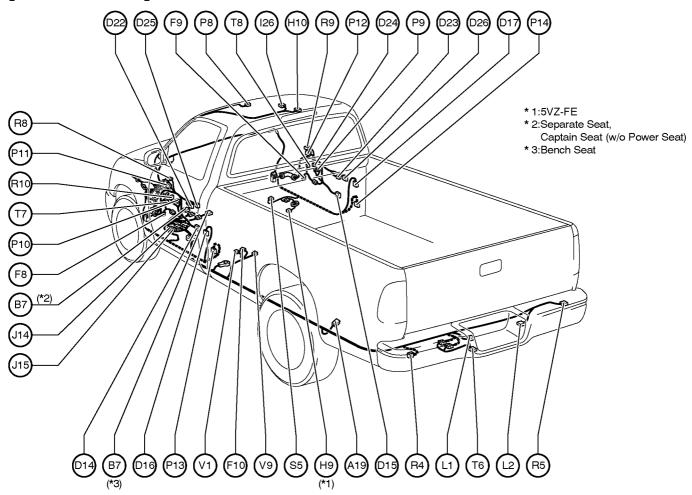
- D14 Door Courtesy Light LH
  D15 Door Courtesy Light RH
  D16 Door Courtesy SW Front LH
  D17 Door Courtesy SW Front RH
  D18 Door Courtesy SW Rear LH Lipper
- D19 Door Courtesy SW Rear LH Upper D20 Door Courtesy SW Rear RH Lower D21 Door Courtesy SW Rear RH Upper

- D22 Door Key Lock and Unlock SW LH D23 Door Key Lock and Unlock SW RH
- D24 Door Lock Control SW RH
- D25 Door Lock Motor and Door Unlock Detection SW LH
- D26 Door Lock Motor and Door Unlock Detection SW RH
- 8 Front Door Speaker LH9 Front Door Speaker RH
- F10 Fuel Pump and Sender
- H 9 Heated Oxygen Sensor (Bank 1 Sensor 2)
- H10 High Mounted Stop Light and Cargo Light
- I 26 Interior Light
- J 14 Junction Connector
- J 15 Junction Connector

- 1 License Plate Light LH
- L 2 License Plate Light RH
- P 8 Personal Light P 9 Power Window Control SW RH
- P10 Power Window Master\_SW
- P11 Power Window Motor Front LH
- P12 Power Window Motor Front RH
- P13 Pretensioner LH
- P14 Pretensioner RH
- P22 Power Window Motor (Back Window)
- R 4 Rear Combination Light LH R 5 Rear Combination Light RH
- R 6 Rear Door Speaker LH
- 7 Rear Door Speaker RH
- R 8 Remote Control Mirror LH
- R 9 Remote Control Mirror RH
- R10 Remote Control Mirror SW
- S 5 Seat Belt Warning Occupant Detection Sensor
- **Trailer Socket**
- Tweeter LH
- 8 Tweeter RH
- V 1 Vapor Pressure Sensor
- V 6 Vanity Light LH V 7 Vanity Light RH
- V 9 VSV (Canister Closed Valve)

# **Position of Parts in Body**

# [Standard Cab]



- A19 ABS Speed Sensor Rear
- B 7 Buckle SW LH
- D14 Door Courtesy Light LH
- D15 Door Courtesy Light RH
- D16 Door Courtesy SW Front LH
- D17 Door Courtesy SW Front RH
- D22 Door Key Lock and Unlock SW LH
- D23 Door Key Lock and Unlock SW RH
- D24 Door Lock Control SW RH
- D25 Door Lock Motor and Door Unlock Detection SW LH
- D26 Door Lock Motor and Door Unlock Detection SW RH
- F 8 Front Door Speaker LH
- F 9 Front Door Speaker RH
- F10 Fuel Pump and Sender
- H 9 Heated Oxygen Sensor (Bank 1 Sensor 2)
- H10 High Mounted Stop Light and Cargo Light
- I 26 Interior Light
- J 14 Junction Connector
- J 15 Junction Connector

- L 1 License Plate Light LH
- L 2 License Plate Light RH
- P 8 Personal Light
- P 9 Power Window Control SW RH
- P10 Power Window Master SW
- P 11 Power Window Motor Front LH
- P12 Power Window Motor Front RH
- P13 Pretensioner LH
- P14 Pretensioner RH
- R 4 Rear Combination Light LH
- R 5 Rear Combination Light RH
- R 8 Remote Control Mirror LH
- R 9 Remote Control Mirror RH
- R10 Remote Control Mirror SW
- S 5 Seat Belt Warning Occupant Detection Sensor
- T 6 Trailer Socket
- T 7 Tweeter LH
- T 8 Tweeter RH
- V 1 Vapor Pressure Sensor
- V 9 VSV (Canister Closed Valve)

# **G ELECTRICAL WIRING ROUTING**

# 

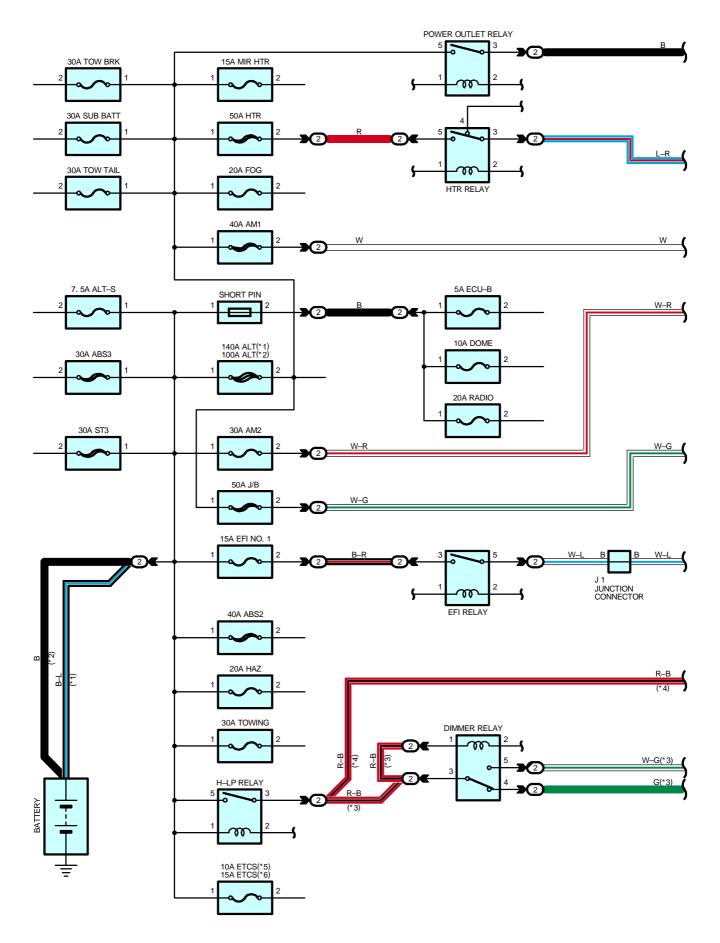
- B 7 Buckle SW LH
- J 16 Junction Connector
- J 17 Junction Connector
- L 3 Lumber Support Control SW (Driver's Seat)

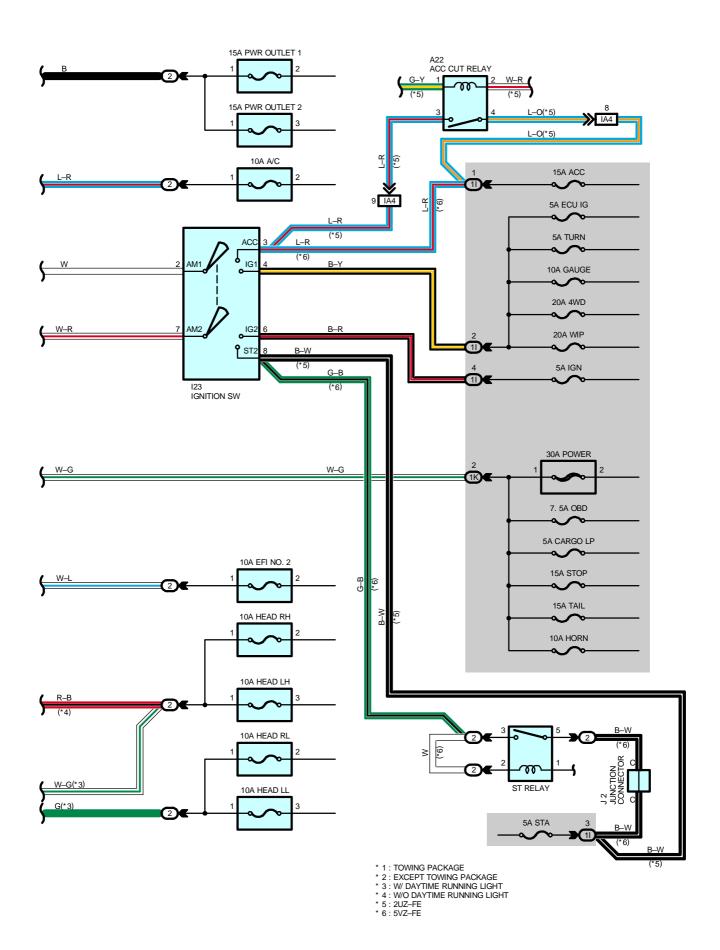
- P15 Power Seat Motor (Driver's Seat Front Vertical Control)
- P16 Power Seat Control SW (Driver's Seat)
- P17 Power Seat Motor (Driver's Seat Rear Vertical Control)
- P18 Power Seat Motor (Driver's Seat Reclining Control)
- P19 Power Seat Motor (Driver's Seat Slide Control)
- P20 Power Seat Motor

(Driver's Seat Lumber Support Control)

# 2003 TOYOTA TUNDRA ELECTRICAL WIRING DIAGRAM SYSTEM CIRCUITS

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TURN SIGNAL AND HAZARD WARNING LIGHT	120
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WIPER AND WASHER (w/o INT TIME SW MECHANISM)	224
WIRELESS DOOR LOCK CONTROL	196
4WD (2UZ–FE)	174
AND (E) (7 EE)	400





## **POWER SOURCE**

#### **SERVICE HINTS**

#### **HEATER RELAY**

5-3: Closed with ignition SW on and heater blower SW on

#### **H-LP RELAY**

5–3 : Closed with light control SW at **HEAD** position or dimmer SW at **FLASH** position Closed with engine running and parking brake lever released (w/ daytime running light)

#### **I23 IGNITION SW**

2-3 : Closed with ignition key at ACC or ON position

2-4: Closed with ignition key at ON or ST position

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

#### **DIMMER RELAY (w/ DAYTIME RUNNING LIGHT)**

3-5 : Closed with HEAD relay on and dimmer SW at HIGH or FLASH position

# : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A22	34	14	31 (2UZ-FE)	lo.	31 (2UZ-FE)
123	35	JI	33 (5VZ-FE)	J2	33 (5VZ-FE)

#### : RELAY BLOCKS

Cod	de	See Page	Relay Blocks (Relay Block Location)	
2	2 21 Engine Room R/B (Engine Compartment Left)			

#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)					
41	22 (*2)						
11	26 (*1)	Engine Deem Main Wire and Driver Side I/D (Leurer Finish Dene)					
41/	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)					
1K	26 (*1)						

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

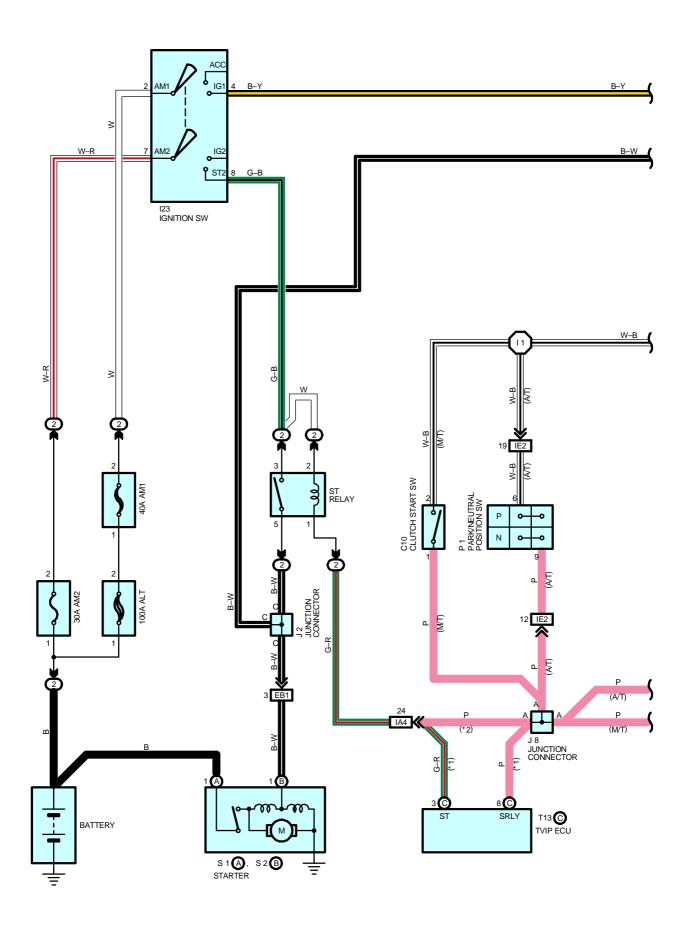
Code See Page Joining Wire Harness and Wire Harness (Connector Location)		
IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

<sup>\* 1 :</sup> w/ Daytime Running Light

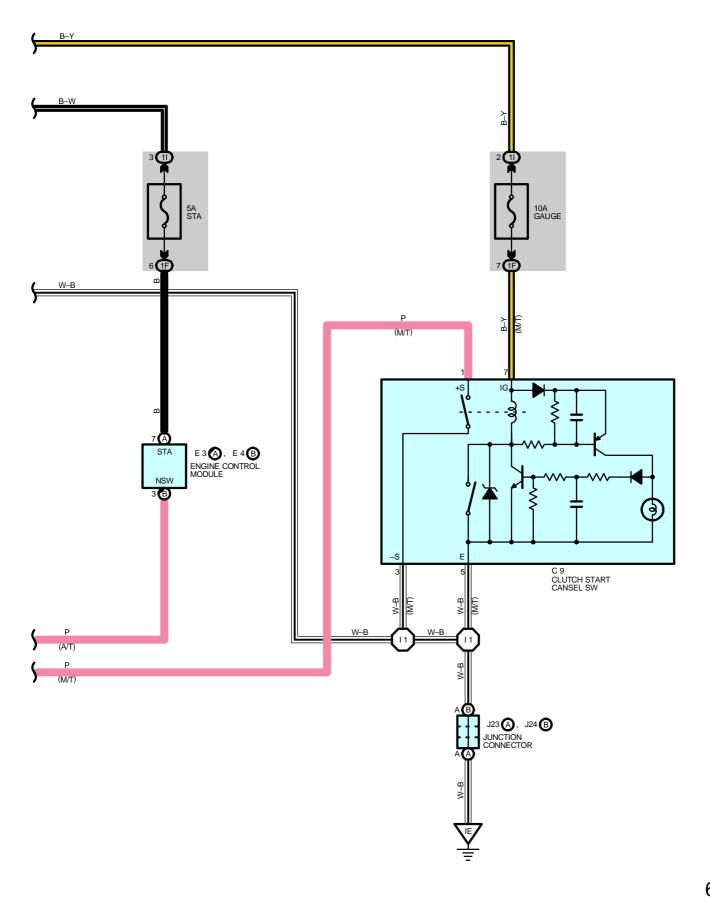
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



- \* 1 : W/ WIRELESS DOOR LOCK CONTROL \* 2 : W/O WIRELESS DOOR LOCK CONTROL



# **STARTING (5VZ-FE)**

#### **SERVICE HINTS**

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

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

#### **I23 IGNITION SW**

2-4 : Closed with ignition SW at ON or ST position

7-8: Closed with ignition SW at ST position

#### P1 PARK/NEUTRAL POSITION SW (A/T)

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

#### ST RELAY

5-3 : Closed with Park/Neutral position SW at P or N position and ignition SW at ST position (A/T)

5-3: Closed with clutch start SW or clutch start cancel SW on and ignition SW at ST position (M/T)

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

1-3: Closed with ignition SW on and cancel SW on

#### C10 CLUTCH START SW (M/T)

1-2: Closed with clutch pedal fully depressed

#### : PARTS LOCATION

Code		See Page	Code		See Page	Code		See Page
C9		34	J	2	33 (5VZ-FE)	S1	Α	33 (5VZ-FE)
C10		34	J8		35	S2	В	33 (5VZ-FE)
E3	Α	34	J23	Α	35	T13	С	35
E4	В	34	J24	В	35			
123		35	Р	1	33 (5VZ-FE)			

#### : RELAY BLOCKS

Code See Page Relay Blocks (Relay Block Location)		Relay Blocks (Relay Block Location)
2 21 Engine Room R/B (Engine Compartment Left)		Engine Room R/B (Engine Compartment Left)

#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)			
1F	22 (*2)	Coull Wire and Driver Cide I/P / eyer Finish Banel)			
117	26 (*1)	owl Wire and Driver Side J/B (Lower Finish Panel)			
22 (*2)		Engine Deem Main Wire and Driver Side 1/D (Leurer Finish Dene)			
11	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)			

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

Code See Page Joining Wire Harness and Wire Harness (Connector Location)		Joining Wire Harness and Wire Harness (Connector Location)
EB1 42 (5VZ–FE) Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)		Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)
IA4 44 Engine Room Main Wire and Cowl Wire (Left Kick Panel)		
IE2 46 Engine Wire and Cowl Wire (Right Side of Instrument Panel)		Engine Wire and Cowl Wire (Right Side of Instrument Panel)

#### : GROUND POINTS

Code	See Page	Ground Points Location
IE	44	Left Kick Panel

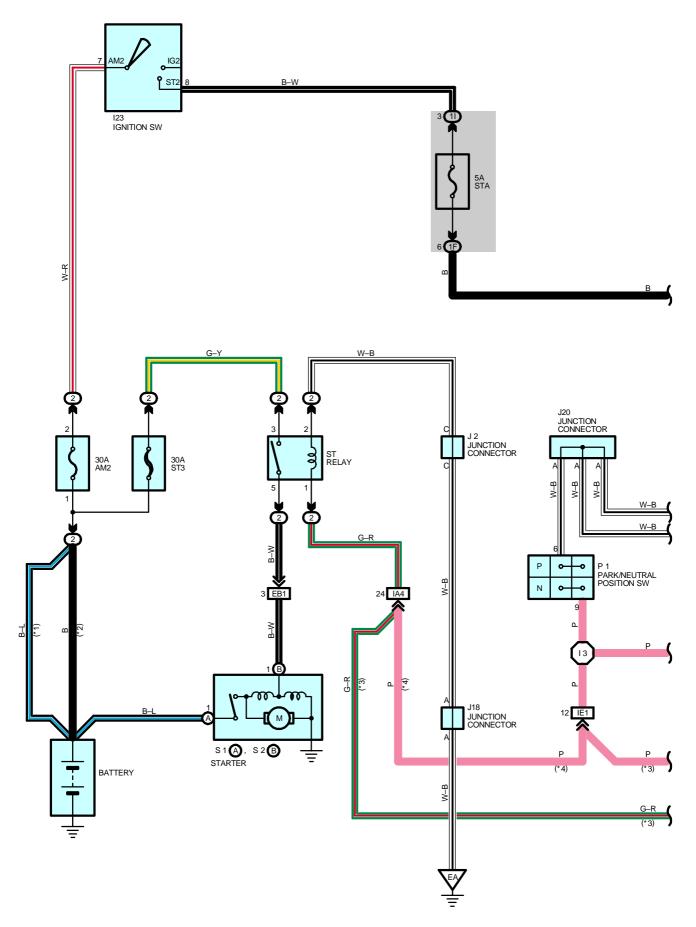
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	46	Cowl Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

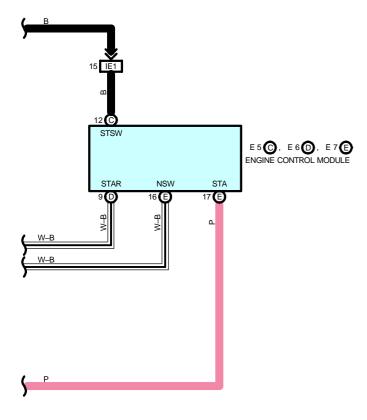
<sup>\* 2 :</sup> w/o Daytime Running Light

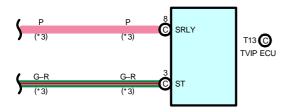
<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



- \* 1 : TOWING PACKAGE
  \* 2 : EXCEPT TOWING PACKAGE
  \* 3 : W/ WIRELESS DOOR LOCK CONTROL
  \* 4 : W/O WIRELESS DOOR LOCK CONTROL





# STARTING (2UZ-FE)

#### **SERVICE HINTS**

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

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

#### **I23 IGNITION SW**

7-8 : Closed with ignition SW at ST position

#### P1 PARK/NEUTRAL POSITION SW

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

#### **ST RELAY**

5-3 : Closed with Park/Neutral position SW at P or N position and ignition SW at ST position

#### : PARTS LOCATION

Co	de	See Page	Code	See Page	Co	de	See Page
E5	С	34	J2	31 (2UZ-FE)	S1	Α	31 (2UZ-FE)
E6	D	34	J18	31 (2UZ-FE)	S2	В	31 (2UZ-FE)
E7	Е	34	J20	35	T13	С	35
12	23	35	P1	31 (2UZ-FE)			

#### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)			
1F	22 (*2)	and Mire and Driver Cide I/D // aver Finish Decally			
I IF	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
41	22 (*2)	Engine Deem Main Wire and Driver Cide I/D (Leurer Finish Dene)			
11	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)			

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)	
EB1	40 (2UZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)	
IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)	
IE1	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)	

# : GROUND POINTS

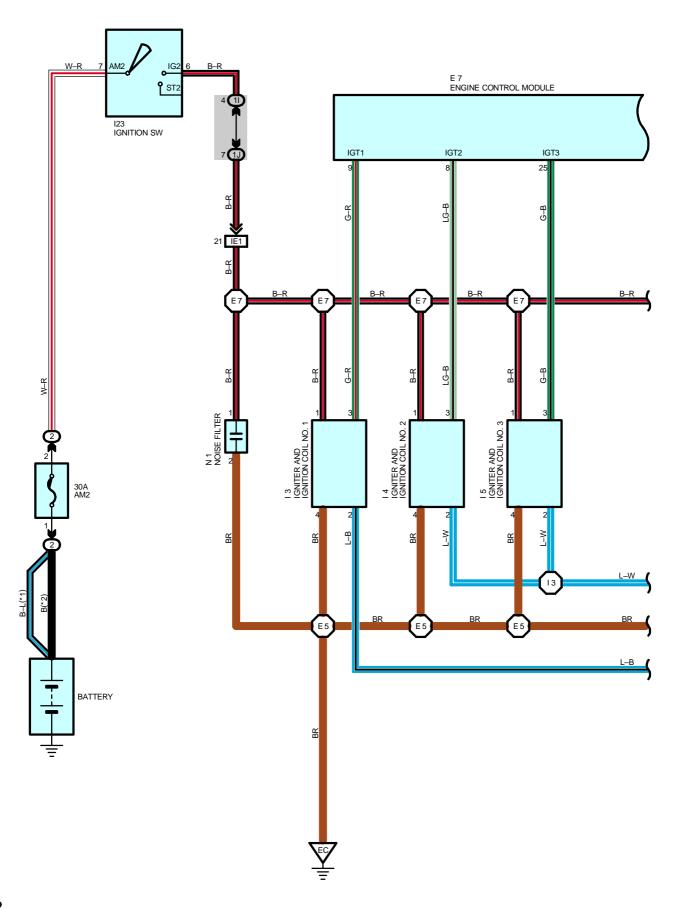
Code	See Page	Ground Points Location
EA	40 (2UZ-FE)	Front Left Fender

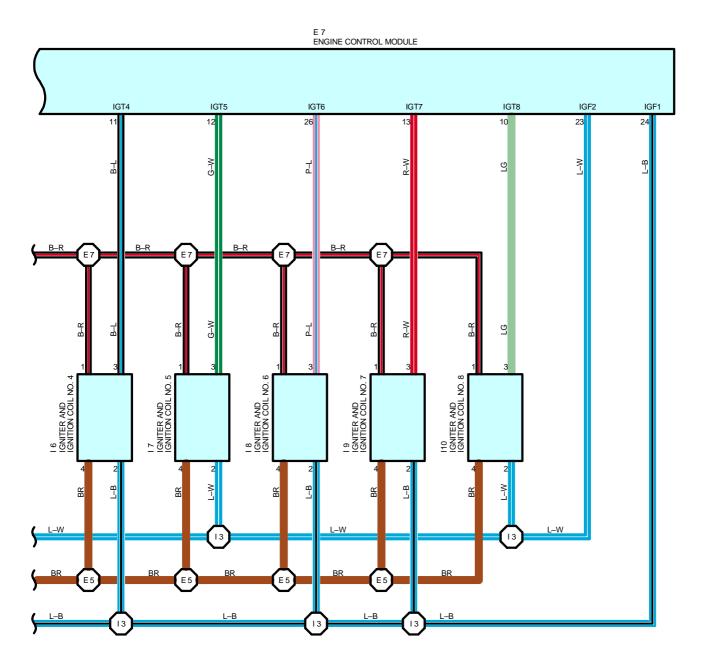
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
13	46	Engine Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light \* 3 : Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)





# **IGNITION (2UZ-FE)**

#### SERVICE HINTS

#### **I23 IGNITION SW**

7–6 : Closed with ignition SW at  $\mathbf{ON}$  or  $\mathbf{ST}$  position

#### : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
E7	34	16	31 (2UZ-FE)	I10	31 (2UZ-FE)
13	31 (2UZ-FE)	17	31 (2UZ-FE)	123	35
14	31 (2UZ-FE)	18	31 (2UZ-FE)	N1	31 (2UZ-FE)
15	31 (2UZ-FE)	19	31 (2UZ-FE)		

#### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)		
41	22 (*2)	Ingine Room Main Wire and Driver Side J/B (Lower Finish Panel)		
"	26 (*1)	igine Room Main Wire and Driver Side 3/B (Lower Finish Parier)		
4.1	22 (*2)	Coult Wise and Driver Cide I/D /Leurer Finish Banel)		
1J	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)		

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)

## 7 : GROUND POINTS

Code	See Page	Ground Points Location
EC	40 (2UZ-FE)	Rear Bank of Left Cylinder Head

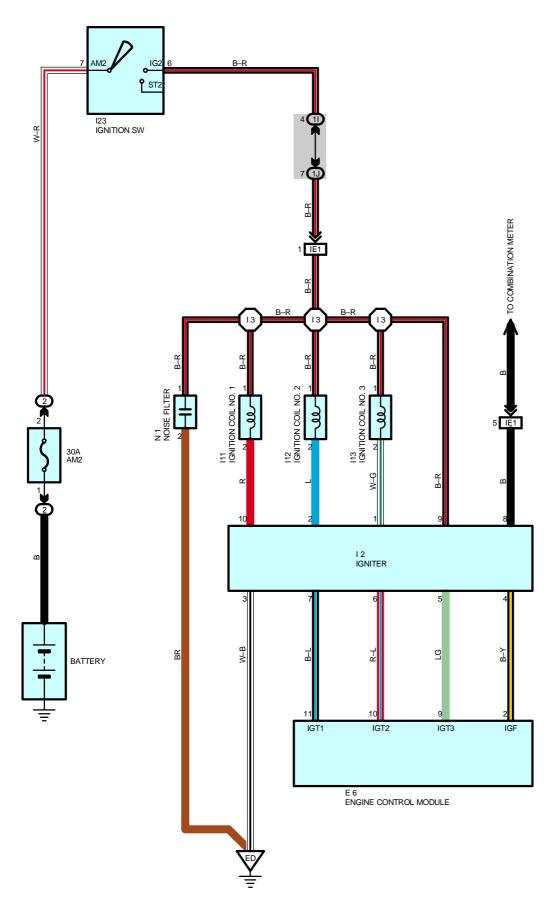
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E5	40 (2UZ EE)	Engine Wire	13	46	Engine Wire
E7	40 (2UZ–FE)	Engine wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light \* 3

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



#### **SERVICE HINTS**

#### **I23 IGNITION SW**

7–6 : Closed with ignition SW at  $\mathbf{ON}$  or  $\mathbf{ST}$  position

## : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
E6	34	l12	33 (5VZ-FE)	N1	33 (5VZ-FE)
12	33 (5VZ-FE)	I13	33 (5VZ-FE)		
l11	33 (5VZ-FE)	123	35		

#### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	2 21 Engine Room R/B (Engine Compartment Left)	

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)		
41	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)		
"	26 (*1)			
4.1	22 (*2)	Could Miles and Driver Cide 1/D // access Finish Denally		
1J	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)		

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

Ī	Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1 46 Engine Wire and Cowl Wire (Right Side of Instrument Panel)		Engine Wire and Cowl Wire (Right Side of Instrument Panel)	

## : GROUND POINTS

Code	See Page	Ground Points Location
ED	42 (5VZ-FE)	Intake Manifold Left

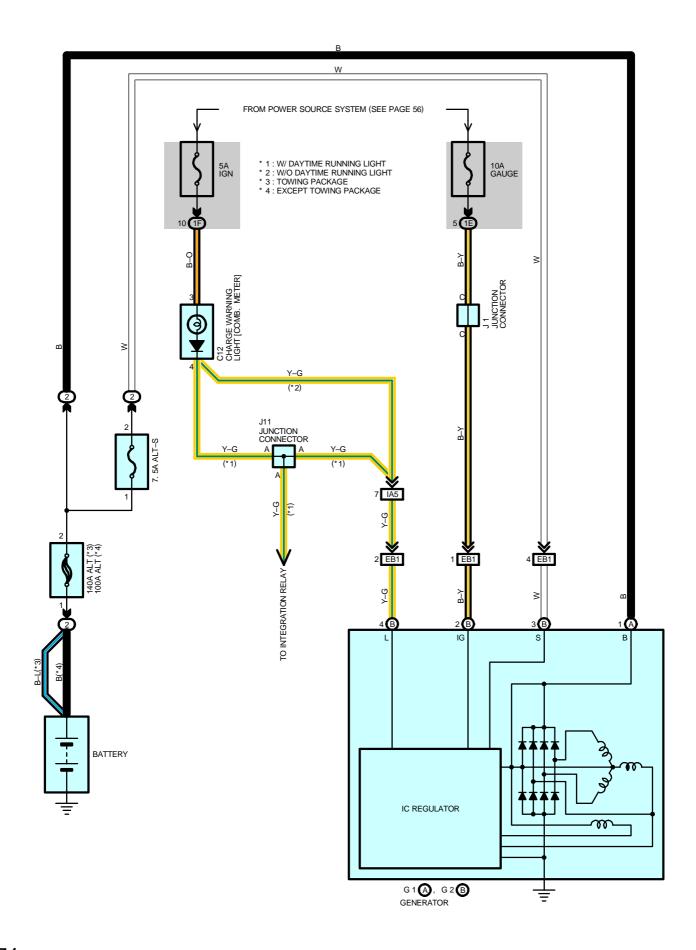
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
13	46	Engine Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



#### G2 (B) GENERATOR

(B) 3-GROUND: 13.9-15.1 volts with engine running at 2000 rpm and 25°C (77°F)

13.5–14.3 volts with engine running at 2000 rpm and 115°C (239°F)

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

### : PARTS LOCATION

Co	Code See Page		Code		See Page	Code	See Page
C	12	34	00	0	30 (2UZ-FE)	J1	33 (5VZ-FE)
G1	۸	30 (2UZ-FE)	G2		32 (5VZ-FE)	J11	35
GT	Α	32 (5VZ-FE)	J	1	31 (2UZ-FE)		

#### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)	
2	21	Engine Room R/B (Engine Compartment Left)	

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)					
15	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)					
'-	26 (*1)	Ingine Room Main Wire and Driver Side 3/B (Lower Finish Panel)					
45	22 (*2)	Coul Wire and Driver Cide 1/D // awar Finish Banel)					
1F	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)					

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

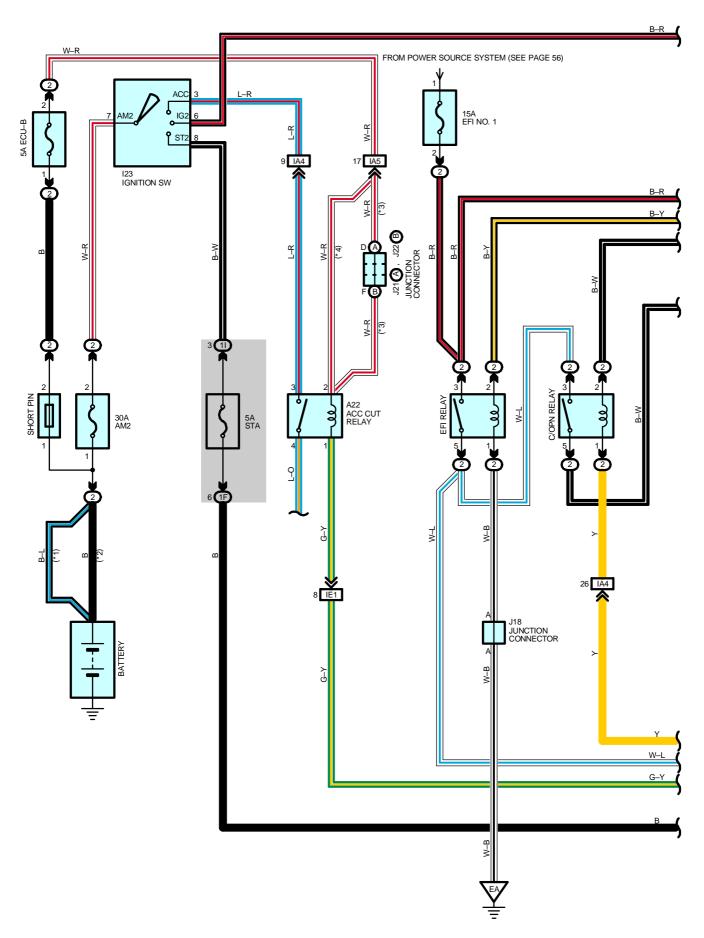
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
EB1	40 (2UZ-FE)	Engine No 2 Wire and Engine Doom Main Wire (Under the Engine Doom B/D)			
EDI	42 (5VZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)			
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)			

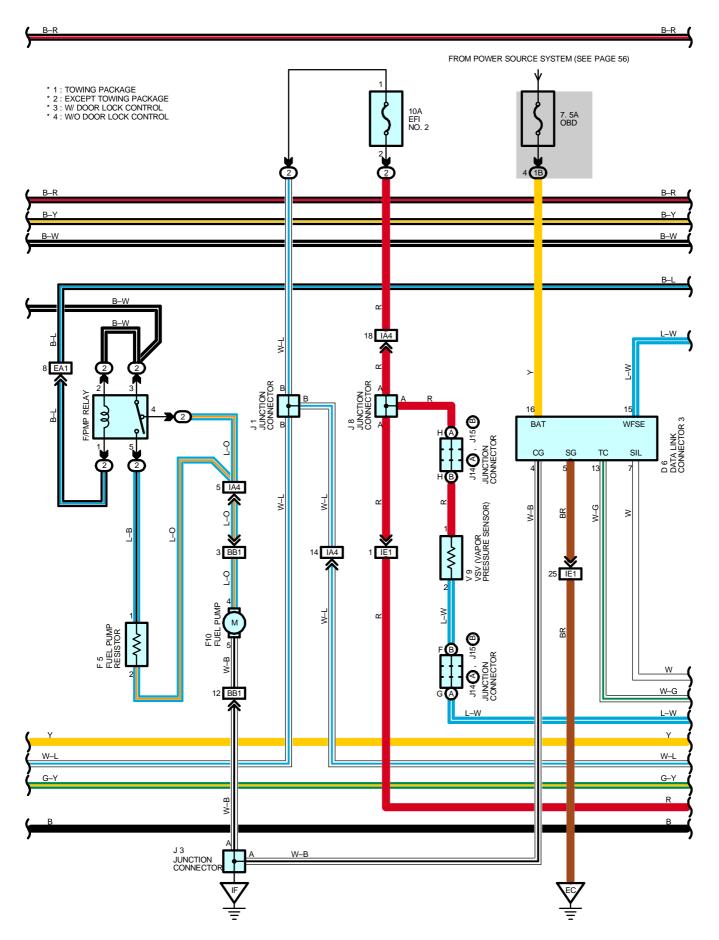
<sup>\* 1 :</sup> w/ Daytime Running Light

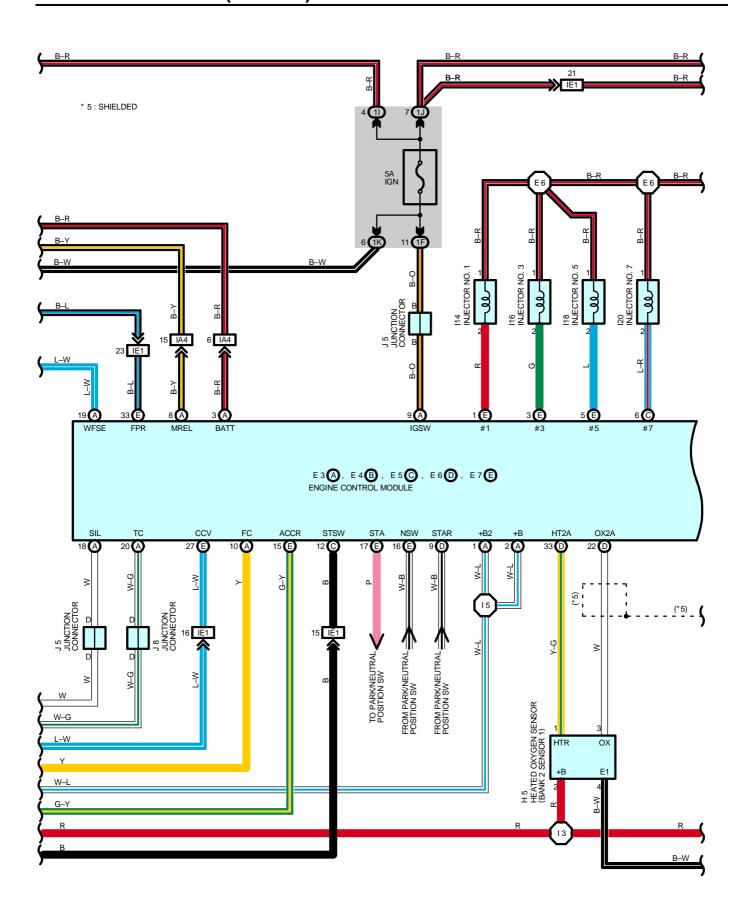
<sup>\* 2 :</sup> w/o Daytime Running Light

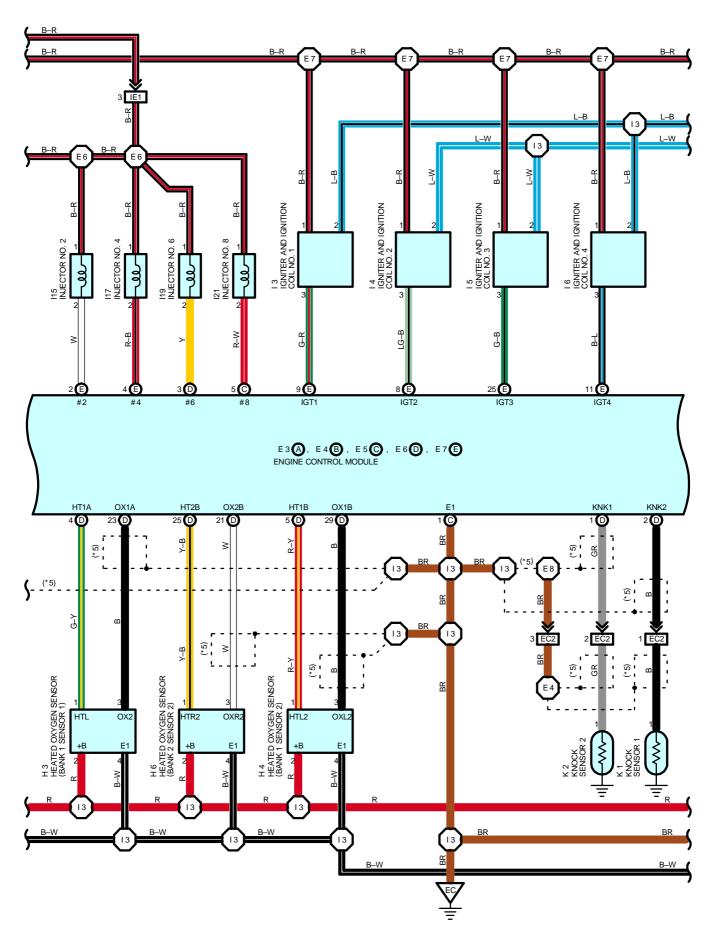
<sup>\* 3 :</sup> Bench Seat

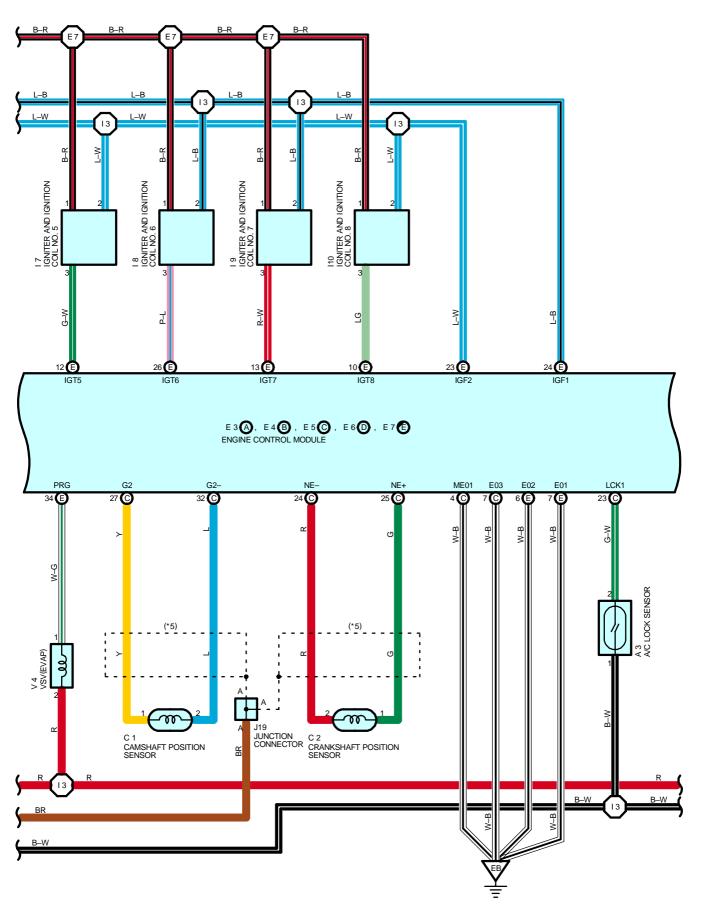
<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

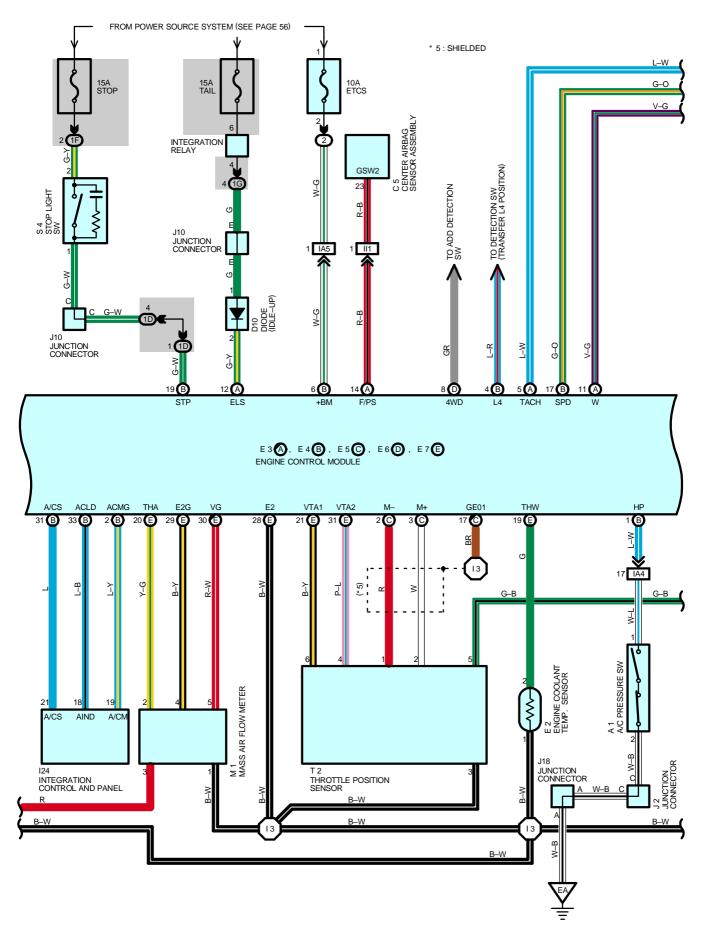


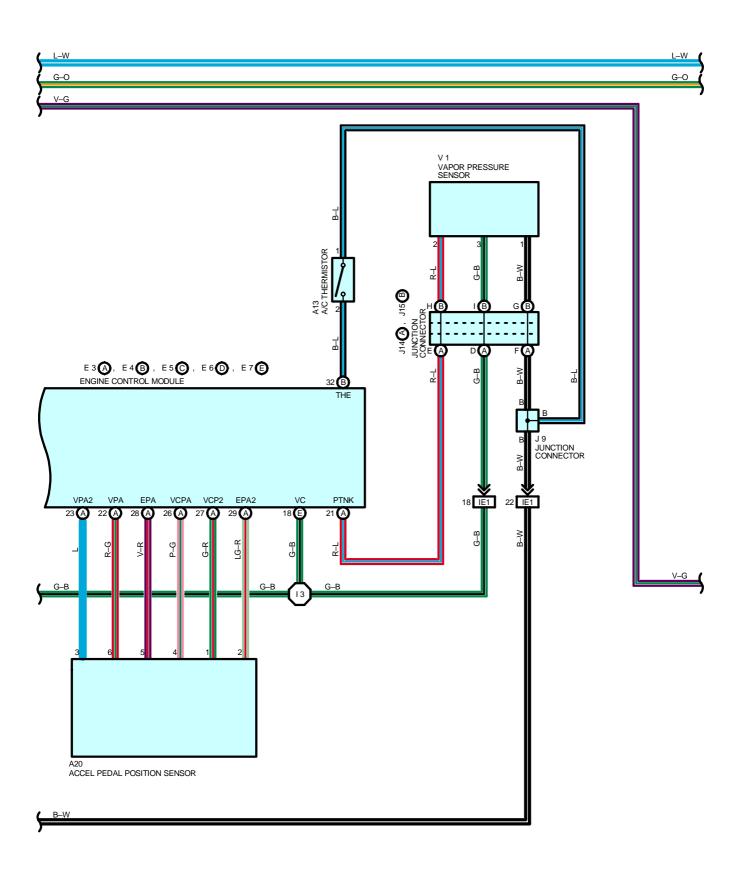


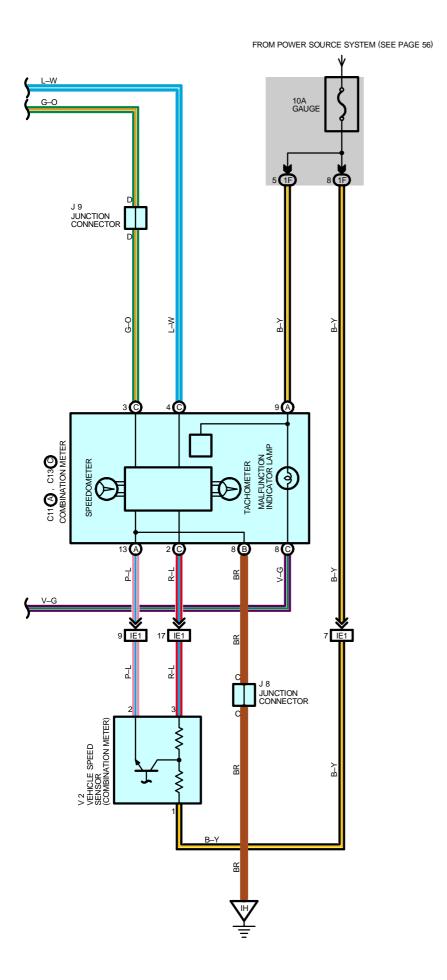












## **ENGINE CONTROL (2UZ-FE)**

#### SYSTEM OUTLINE

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

#### 1. INPUT SIGNALS

(1) Engine coolant temp. signal circuit

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

(2) Intake air temp. signal circuit

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

(3) Oxygen sensor signal circuit

The oxygen density in the exhaust emission is detected and is input as a control signal from the heated oxygen sensors to TERMINALS OX1A, OX2A, OX1B, OX2B of the engine control module.

(4) RPM signal circuit

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

(5) Throttle position sensor signal circuit

The throttle position sensor detects the throttle valve opening angle as a control signal, which is input into TERMINALS VTA1, VTA2 of the engine control module.

(6) Vehicle speed circuit

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

(7) Battery signal circuit

Voltage is constantly applied to TERMINAL BATT of the engine control module. When the ignition SW is turned on, the voltage for engine control module start up power supply is applied through the EFI relay, to TERMINALS +B, +B2 of the engine control module. The current from the IGN fuse flows to TERMINAL IGSW of the engine control module, and voltage is constantly applied to TERMINAL +BM.

(8) Intake air volume signal circuit

The intake air volume is detected by the mass air flow meter, and is input as a control signal to TERMINAL VG of the engine control module.

(9) Stop light SW signal circuit

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

(10) Starter signal circuit

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

(11) Engine knock signal circuit

Engine knocking is detected by the knock sensors, and is input into TERMINALS KNK1, KNK2 of the engine control module as a control signal.

#### 2. CONTROL SYSTEM

#### \* SFI system

The SFI system monitors the engine condition through the signals input from each sensors to the engine control module. The control signal is sent to the engine control module TERMINALS #1, #2, #3, #4, #5, #6, #7, #8 to operate the injector (Fuel injection). The SFI system controls the fuel injection by the engine control module in response to the driving conditions.

#### \* ESA system

The ESA system monitors the engine condition through the signals input from each sensors to the engine control module. The best ignition timing is decided according to this data and the data memorized in the engine control module. The control signal is output to TERMINALS IGT1, IGT2, IGT3, IGT4, IGT5, IGT6, IGT7, IGT8, and these signals control the igniter to provide the best ignition timing.

\* Heated oxygen sensor heater control system

The heated oxygen sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emission is low), and warms up the heated oxygen sensors to improve their detection performance. The engine control module evaluates the signals from each sensors, and outputs current to TERMINALS HT1A, HT2A, HT1B, HT2B to control the heater.

\* Fuel pump control system

The engine control module supplies current to TERMINAL FPR, and controls the operation speed of the fuel pump with the F/PMP relay.

\* ETCS-i

The ETCS—i controls the engine output at its optimal level in accordance with the opening of the accelerator pedal, under all driving conditions.

#### 3. DIAGNOSIS SYSTEM

When there is a malfunction in the engine control module signal system, the malfunctioning system is recorded in the memory. The malfunctioning system can be found by reading the code displayed on the malfunction indicator lamp.

#### 4. FAIL-SAFE SYSTEM

When a malfunction has occurred in any system, there is a possibility of causing engine trouble due to continued control based on that system. In that case, the fail—safe system either controls the system using the data (Standard values) recorded in the engine control module memory, or else stops the engine.

## **ENGINE CONTROL (2UZ-FE)**

#### **SERVICE HINTS**

#### **EFI RELAY**

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

#### C/OPN RELAY

5-3: Closed with starter cranking or engine cranking

#### **E2 ENGINE COOLANT TEMP. SENSOR**

1–2 : Approx. **16.2**  $k\Omega$  (**–20**°C, **–4**°F) : Approx. **2.45**  $k\Omega$  (**20**°C, **68**°F) : Approx. **0.32**  $k\Omega$  (**80**°C, **176**°F)

#### E3 (A), E4 (B), E5 (C), E6 (D), E7 (E) ENGINE CONTROL MODULE

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

IGSW-E1: **9.0–14.0** volts with ignition SW at **ON** or **ST** position +B, +B2-E1: **9.0–14.0** volts with ignition SW at **ON** or **ST** position VC-E1: **4.5–5.5** volts with ignition SW at **ON** or **ST** position

VC-E1: **4.5**–**5.5** volts with ignition SW at **ON** or **ST** position
VTA2-E1: **2.0**–**2.9** volts with ignition SW on and throttle valve fully closed
: **4.7**–**5.1** volts with ignition SW on and throttle valve fully open
VTA1-E1: **0.4**–**1.0** volts with ignition SW on and throttle valve fully closed

: 3.2–4.8 volts with ignition SW on and throttle valve fully open VPA–E1: 0.3–0.9 volts with ignition SW on and throttle valve fully closed : 3.2–4.8 volts with ignition SW on and throttle valve fully open

VPA2–E1: **1.8–2.7** volts with ignition SW on and throttle valve fully closed: **4.7–5.1** volts with ignition SW on and throttle valve fully open

THA-E1 : 0.5-3.4 volts with idling, intake air temp.  $0^{\circ}$ C ( $32^{\circ}$ F)  $-80^{\circ}$ C ( $176^{\circ}$ F)

THW-E1: 0.2-1.0 volts with idling, engine coolant temp. 60°C (140°F) -120°C (248°F)

STA-E1: 6.0 volts or more with engine cranking

W-E1: 9.0-14.0 volts with idling and malfunction indicator lamp off

SPD-E1 : Pulse generation with vehicle moving STP-E1 : **7.5-14.0** volts with brake pedal depressed

#### : PARTS LOCATION

Co	de	See Page	Code	See Page	Со	de	See Page
Α	.1	30 (2UZ-FE)	H5	30 (2UZ-FE)	J:	5	35
А	.3	30 (2UZ-FE)	H6	30 (2UZ-FE)	J	8	35
A	13	34	13	31 (2UZ-FE)	J	9	35
A	20	34	14	31 (2UZ-FE)	J1	0	35
A:	22	34	15	31 (2UZ-FE)	J14	۸	36 (Access Cab)
C	:1	30 (2UZ-FE)	16	31 (2UZ-FE)	J14	Α	37 (Standard Cab)
С	2	30 (2UZ-FE)	17	31 (2UZ-FE)	14.5	В	36 (Access Cab)
С	5	34	18	31 (2UZ-FE)	J15	Б	37 (Standard Cab)
C11	Α	34	19	31 (2UZ-FE)	J1	8	31 (2UZ-FE)
C13	С	34	I10	31 (2UZ-FE)	J1	9	35
D	6	34	l14	31 (2UZ-FE)	J21	Α	35
D	10	34	l15	31 (2UZ-FE)	J22	В	35
Е	2	30 (2UZ-FE)	I16	31 (2UZ-FE)	K	1	31 (2UZ-FE)
E3	Α	34	l17	31 (2UZ-FE)	K	2	31 (2UZ-FE)
E4	В	34	l18	31 (2UZ-FE)	M	1	31 (2UZ–FE)
E5	С	34	l19	31 (2UZ-FE)	S	4	35
E6	D	34	120	31 (2UZ-FE)	T	2	31 (2UZ-FE)
E7	Е	34	I21	31 (2UZ-FE)	.,	4	36 (Access Cab)
F5		30 (2UZ-FE)	123	35	v	I	37 (Standard Cab)
г.	10	36 (Access Cab)	124	35	V	2	31 (2UZ-FE)
F.	10	37 (Standard Cab)	J1	31 (2UZ-FE)	V	4	31 (2UZ-FE)
Н	3	30 (2UZ-FE)	J2	31 (2UZ–FE)	١,,	^	36 (Access Cab)
Н	4	30 (2UZ-FE)	J3	35	v	9	37 (Standard Cab)

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)	
2	21	Engine Room R/B (Engine Compartment Left)	

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
40	22 (*2)	
1B	26 (*1)	
1D	22 (*2)	
טו	26 (*1)	Could Miss and Driver Cide 1/D // court Finish Dane)
45	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1F	26 (*1)	
1G	22 (*2)	
16	26 (*1)	
41	22 (*2)	Facina Daora Maia Wire and Driver Cida I/D / Javana Finish Dana)
11	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
4.1	22 (*2)	Overland to a set Driver Oids 1/D (Leaves Finish Decel)
1J	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
417	22 (*2)	Facina Daga Mair Wire and Driver Cide VD (Laurer Finish Daga))
1K	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)				
EA1	40 (2UZ-FE)	Cowl Wire and Engine Room Main Wire (Right Fender)				
EC2	40 (2UZ-FE)	ngine No.2 Wire and Engine Wire (Near the Starter)				
IA4	44	Engine Deem Main Wire and Coud Wire // of Viels Denelly				
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)				
IE1	46	ngine Wire and Cowl Wire (Right Side of Instrument Panel)				
II1	46	Cowl Wire and Cowl Wire (Instrument Panel Reinforcement RH)				
BB1	48 (Access Cab)	France Wire and Could Wire (Under the Driverte Cont)				
DDI	50 (Standard Cab)	rame Wire and Cowl Wire (Under the Driver's Seat)				

### : GROUND POINTS

Code	See Page	Ground Points Location			
EA	40 (2UZ-FE)	ont Left Fender			
EB	40 (2UZ-FE)	Rear Bank of Right Cylinder Head			
EC	40 (2UZ-FE)	r Bank of Left Cylinder Head			
IF	44	Left Kick Panel			
IH	44	Right Kick Panel			

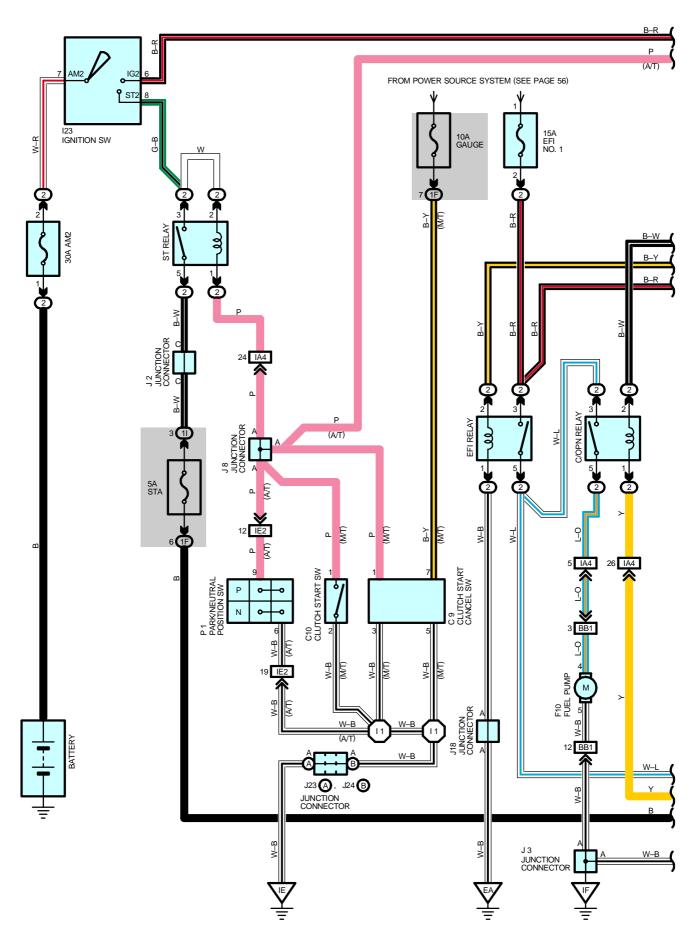
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E4	40 (2UZ-FE)	Engine No.2 Wire	E8	40 (2UZ-FE)	Engine Wire
E6	40 (2UZ–FE)	Engine Wire	13	46	Engine Wire
E7	40 (20Z-FE)	Engine wire	15	46	Cowl Wire

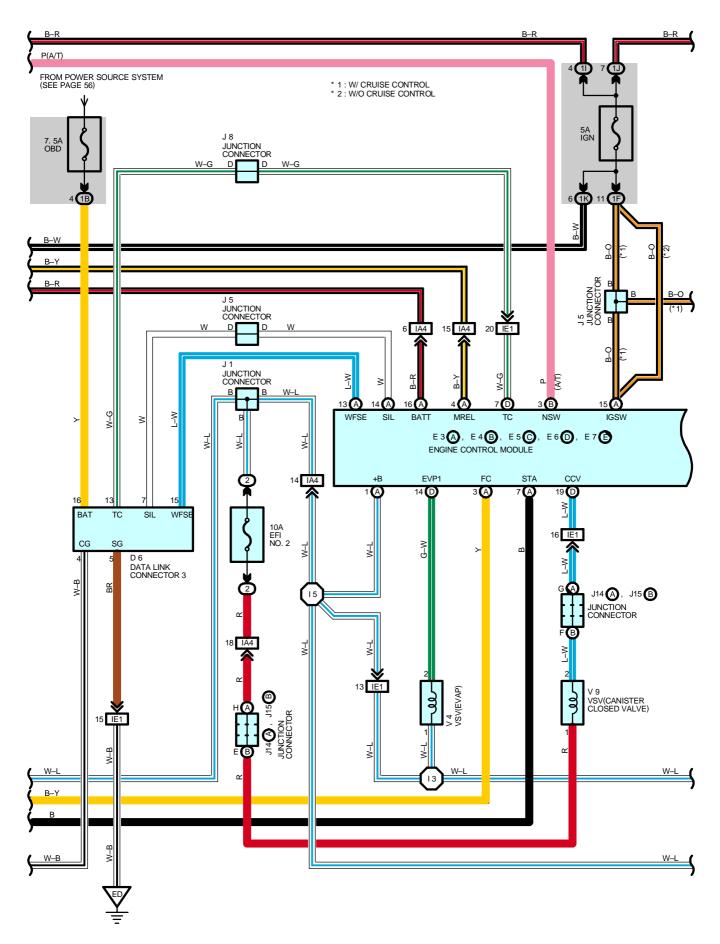
<sup>\* 1 :</sup> w/ Daytime Running Light

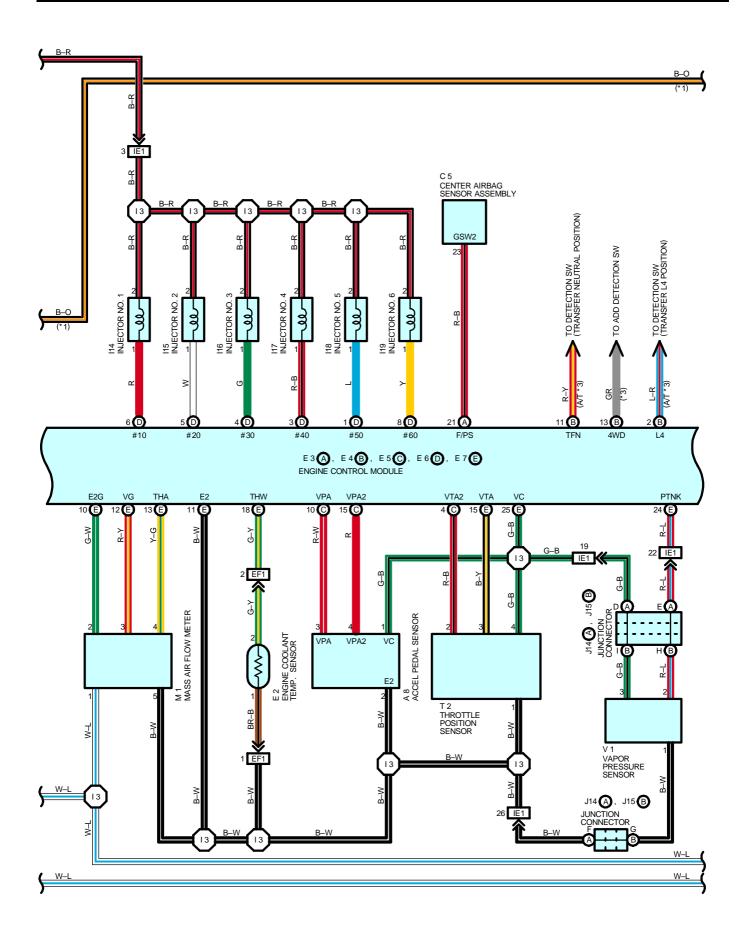
<sup>\* 2 :</sup> w/o Daytime Running Light

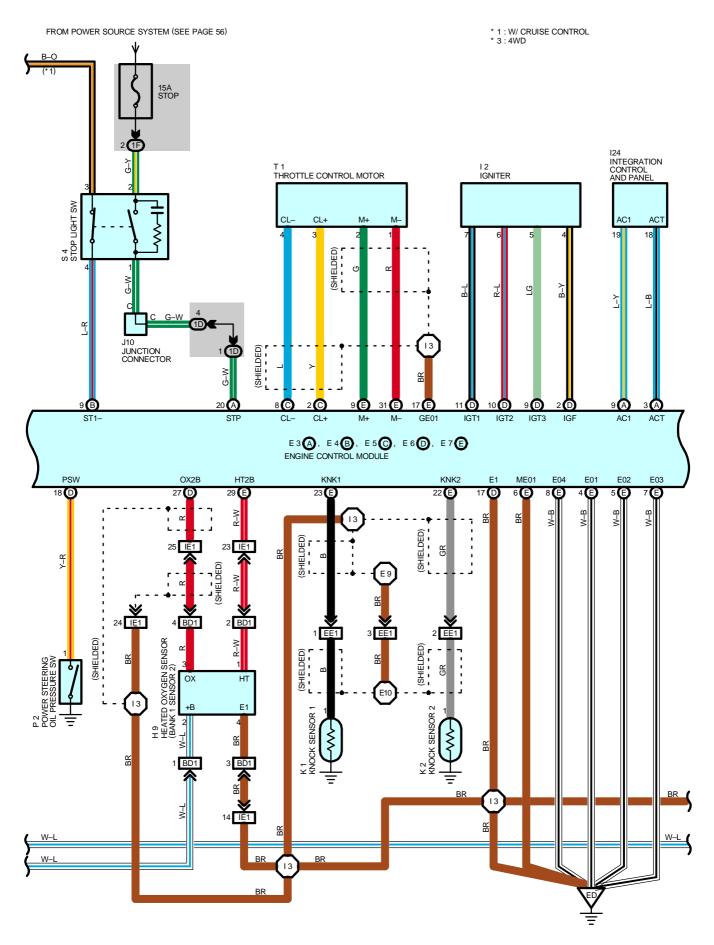
<sup>\* 3 :</sup> Bench Seat

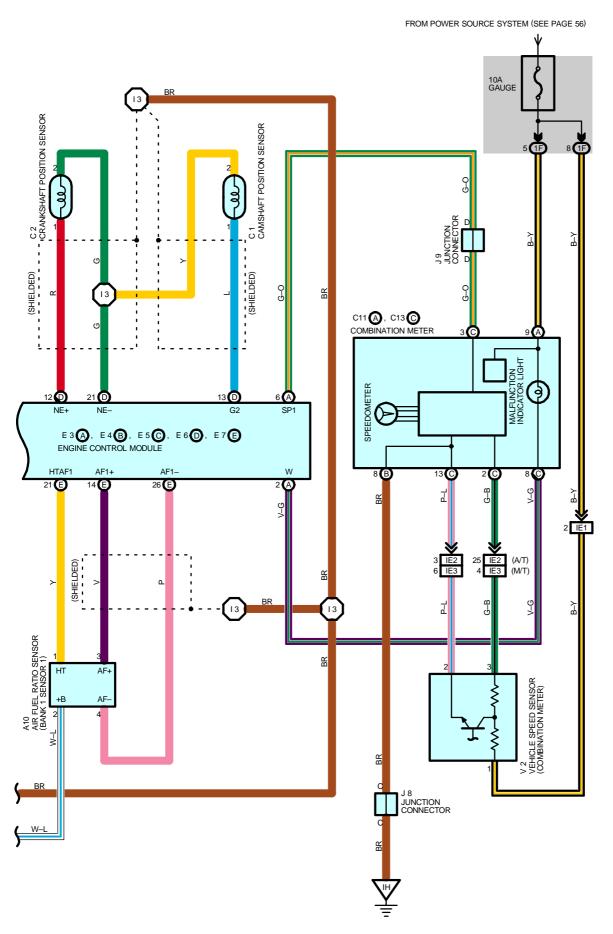
<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)











#### SYSTEM OUTLINE

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

#### 1. INPUT SIGNALS

(1) Engine coolant temp. signal circuit

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

(2) Intake air temp. signal circuit

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

(3) Oxygen sensor signal circuit

The oxygen density in the exhaust emission is detected and is input as a control signal from the heated oxygen sensors to TERMINAL OX2B of the engine control module.

(4) RPM signal circuit

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

(5) Throttle position sensor signal circuit

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

(6) Vehicle speed circuit

The vehicle speed sensor (Combination meter) detects the vehicle speed, and the signal is input into TERMINAL SP1 of the engine control module via the combination meter.

(7) Battery signal circuit

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

(8) Intake air volume signal circuit

The intake air volume is detected by the mass air flow meter, and is input as a control signal to TERMINAL VG of the engine control module.

(9) Stop light SW signal circuit

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

(10) Starter signal circuit

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

(11) Engine knock signal circuit

Engine knocking is detected by the knock sensors, and is input into TERMINALS KNK1, KNK2 of the engine control module as a control signal.

(12) A/C SW signal system

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

(13)4WD signal system

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

(14) Air fuel ratio signal system

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

## **ENGINE CONTROL (5VZ-FE)**

#### 2. CONTROL SYSTEM

#### \* SFI system

The SFI system monitors the engine condition through the signals input from each sensors to the engine control module. The control signal is sent to the engine control module TERMINALS #10, #20, #30, #40, #50, #60 to operate the injector (Fuel injection). The SFI system controls the fuel injection by the engine control module in response to the driving conditions.

#### \* ESA system

The ESA system monitors the engine condition through the signals input from each sensors to the engine control module. The best ignition timing is decided according to this data and the data memorized in the engine control module. The control signal is output to TERMINALS IGT1, IGT2, IGT3 and these signals control the igniter to provide the best ignition timing.

\* Heated oxygen sensor heater control system

The heated oxygen sensor heater control system turns the heater on when the intake air volume is low (Temp. of exhaust emission is low), and warms up the heated oxygen sensors to improve their detection performance. The engine control module evaluates the signals from each sensors, and outputs current to TERMINAL HT2B to control the heater.

#### 3. DIAGNOSIS SYSTEM

When there is a malfunction in the engine control module signal system, the malfunctioning system is recorded in the memory. The malfunctioning system can be found by reading the code displayed on the malfunction indicator lamp.

#### 4. FAIL-SAFE SYSTEM

When a malfunction has occurred in any system, there is a possibility of causing engine trouble due to continued control based on that system. In that case, the fail—safe system either controls the system using the data (Standard values) recorded in the engine control module memory, or else stops the engine.

#### SERVICE HINTS

#### **EFI RELAY**

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

#### **C/OPN RELAY**

5-3: Closed with starter cranking or engine cranking

#### **T2 THROTTLE POSITION SENSOR**

2–1 : Approx. **2.5–6.0**  $k\Omega$ 

#### **E2 ENGINE COOLANT TEMP. SENSOR**

1–2 : Approx. **15.0** k $\Omega$  (**–20**°C, **–4**°F) Approx. **2.45** k $\Omega$  (**20**°C, **68**°F) Approx. **0.32** k $\Omega$  (**80**°C, **176**°F)

#### E3 (A), E4 (B), E5 (C), E6 (D), E7 (E) ENGINE CONTROL MODULE

BATT-E1: Always 9.0-14.0 volts

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

VC-E1: 4.5-5.5 volts

VTA-E1: **0.3-1.0** volts with ignition SW on and throttle valve fully closed : **3.2-4.9** volts with ignition SW on and throttle valve fully open

THA-E1 : 0.5-3.4 volts with idling, intake air temp.  $0^{\circ}$ C ( $32^{\circ}$ F)  $-80^{\circ}$ C ( $176^{\circ}$ F)

THW-E1: 0.2-1.0 volts with idling, engine coolant temp. 60°C (140°F) -120°C (248°F)

STA-E1: 6.0 volts or more with engine cranking

 $\label{eq:W-E1: 9.0-14.0} W-E1: \textbf{9.0-14.0} \text{ volts with idling and malfunction indicator lamp off}$ 

SP1–E1 : Pulse generation with vehicle moving STP–E1 : **7.5–14.0** volts with brake pedal depressed

### : PARTS LOCATION

Co	de	See Page	Co	de	See Page	Co	de	See Page
Α	8	32 (5VZ–FE)		9	37 (Standard Cab)	14.5	В	36 (Access Cab)
A.	10	32 (5VZ-FE)	l:	2	33 (5VZ-FE)	J15	В	37 (Standard Cab)
С	1	32 (5VZ–FE)	I1	4	33 (5VZ-FE)	J1	8	33 (5VZ-FE)
С	2	32 (5VZ-FE)	I1	5	33 (5VZ-FE)	J23	Α	35
С	5	34	I1	6	33 (5VZ-FE)	J24	В	35
С	9	34	I1	7	33 (5VZ-FE)	K	1	33 (5VZ-FE)
C.	10	34	I1	8	33 (5VZ-FE)	K	2	33 (5VZ-FE)
C11	Α	34	I1	9	33 (5VZ-FE)	M	1	33 (5VZ-FE)
C13	С	34	12	23	35	Р	1	33 (5VZ-FE)
D	6	34	12	24	35	Р	2	33 (5VZ-FE)
E	2	32 (5VZ–FE)	J	1	33 (5VZ-FE)	S	4	35
E3	Α	34	J	2	33 (5VZ-FE)	Т	1	33 (5VZ-FE)
E4	В	34	J	3	35	Т	2	33 (5VZ-FE)
E5	С	34	J	5	35		4	36 (Access Cab)
E6	D	34	J	8	35	V	1	37 (Standard Cab)
E7	Е	34	J	9	35	V	2	33 (5VZ-FE)
	10	36 (Access Cab)	J.	10	35	V	4	33 (5VZ-FE)
F	10	37 (Standard Cab)	14.4		36 (Access Cab)		^	36 (Access Cab)
Н	9	36 (Access Cab)	J14	Α	37 (Standard Cab)	] v	9	37 (Standard Cab)

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)				
1B	22 (*2)					
ID	26 (*1)					
10	22 (*2)	Coud Mire and Driver Side I/D /I ower Finish Bonel				
1D	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
1F	22 (*2)					
115	26 (*1)					
41	22 (*2)	Facility Decay Main Wiles and Driver Cide I/D // over Finish Decay)				
11	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				
4.1	22 (*2)	Court Mire and Driver Cide I/D /I away Fiziely Basely				
1J	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
417	22 (*2)	Engine Deep Main Wise and Driver Cide 1/D (Leaves Finish Deep)				
1K	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)				
EE1	42 (5VZ-FE)	Sensor Wire and Engine Wire (Over the Cylinder Head)				
EF1	42 (5VZ-FE)	Engine Wire and Sensor Wire (Over the Cylinder Head)				
IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)				
IE1						
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)				
IE3						
DD4	48 (Access Cab)	Frame Wire and Coul Wire / Indon'the Driver's Coat)				
BB1 50 (Standard Cab		Frame Wire and Cowl Wire (Under the Driver's Seat)				
BD1	48 (Access Cab)	Frame Mire and Coul Mire / Index the Frant December's Cost)				
ועם	50 (Standard Cab)	Frame Wire and Cowl Wire (Under the Front Passenger's Seat)				

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

# **ENGINE CONTROL (5VZ-FE)**

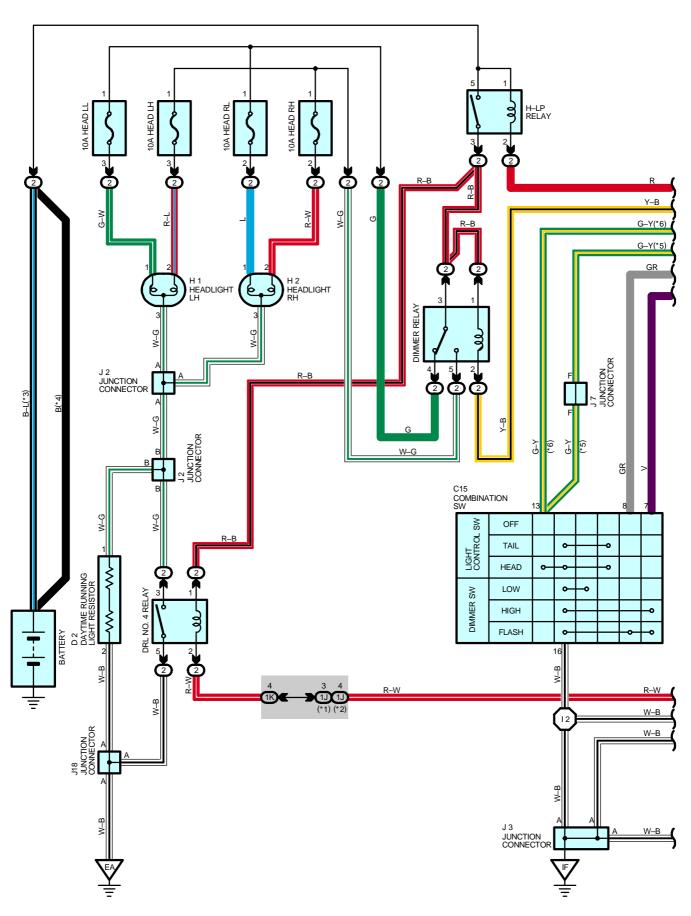
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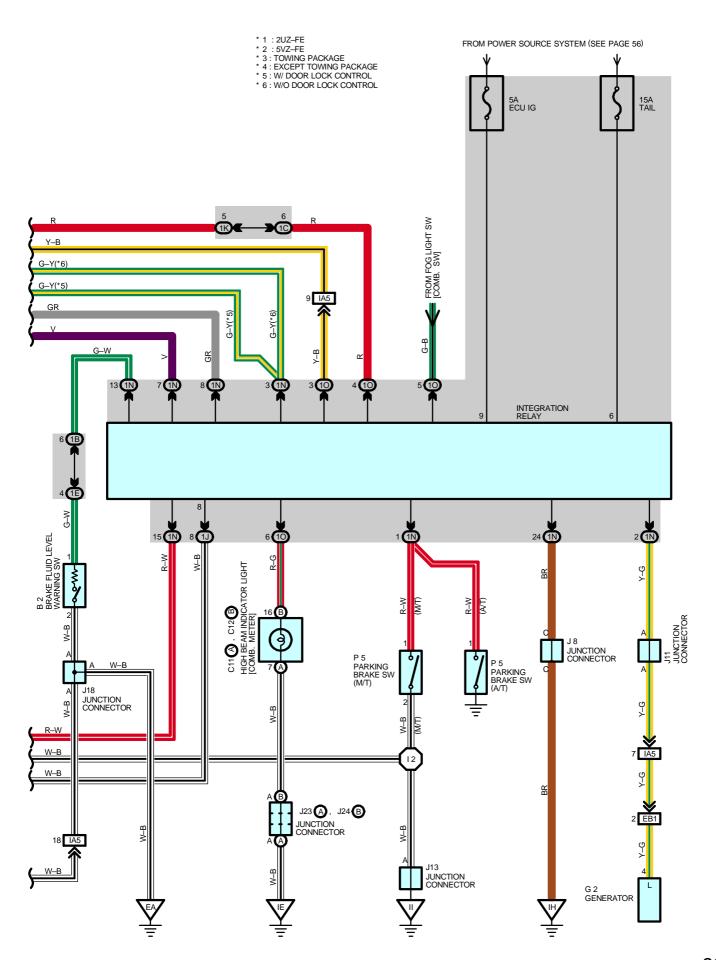
### : GROUND POINTS

Code	See Page	Ground Points Location
EA	42 (5VZ-FE)	Front Left Fender
ED	42 (5VZ-FE)	Intake Manifold Left
IE	44	Left Viels Danel
IF	44	Left Kick Panel
IH	44	Right Kick Panel



Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points	
E9	42 (5VZ-FE)	Engine Wire	13	46	Engine Wire	
E10	42 (5VZ-FE)	Sensor Wire	15	46	Cowl Wire	
I1	46	Cowl Wire				





## **HEADLIGHT (w/ DAYTIME RUNNING LIGHT)**

#### **SYSTEM OUTLINE**

When the following conditions are met while the ignition SW is ON, and if the light control SW is at OFF or TAIL position, the daytime running light is controlled.

- \* Parking brake lever is released (Parking brake SW is OFF)
- \* Input signal from the generator

If any of the following conditions are met, the daytime running light control is canceled.

- \* Ignition SW is turned OFF.
- \* Light control SW is at HEAD position.

#### SERVICE HINTS

#### H-LP RELAY

5–3 : Closed with light control SW at **HEAD** position or dimmer SW at **FLASH** position Closed with engine running and parking brake lever released

#### **DIMMER RELAY**

3-5: Closed with HEAD relay on and dimmer SW at HIGH or FLASH position

### : PARTS LOCATION

Code		See Page	Code	See Page	Code		See Page
B2		30 (2UZ-FE)	H1	30 (2UZ-FE)	J11		35
	2	32 (5VZ-FE)	] "'	32 (5VZ-FE)	J13		35
C11	Α	34 30 (2UZ–FE)		31 (2UZ-FE)			
C12	В	34 H2 32 (5VZ–F		32 (5VZ-FE)	J18		33 (5VZ-FE)
C.	15	34	J2	31 (2UZ-FE)	J23	Α	35
,		30 (2UZ-FE)	J2	33 (5VZ-FE)	J24	В	35
D2		32 (5VZ-FE)	J3	35	P5		35
G2		30 (2UZ-FE)	J7	35			
"	12	32 (5VZ-FE)	J8	35			

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)	
2	21	ingine Room R/B (Engine Compartment Left)	

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)			
1B	00 (*4)	Overland and Driver Cities 1/D (Leaves Finish Devel)			
1C	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
1E	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)			
1J	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
1K	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)			
1N	07 (*4)	Could Wine and Driver Cide 1/D // acces Finish Banel)			
10	27 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			

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

Code	See Page	oining Wire Harness and Wire Harness (Connector Location)				
ED4	40 (2UZ-FE)	Facing No 2 Wire and Facing Doom Main Wire (Lindor the Facing Doom B/D)				
EB1	42 (5VZ-FE)	Engine No.2 Wire and Engine Room Main Wire (Under the Engine Room R/B)				
IA5	44	ngine Room Main Wire and Cowl Wire (Left Kick Panel)				

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

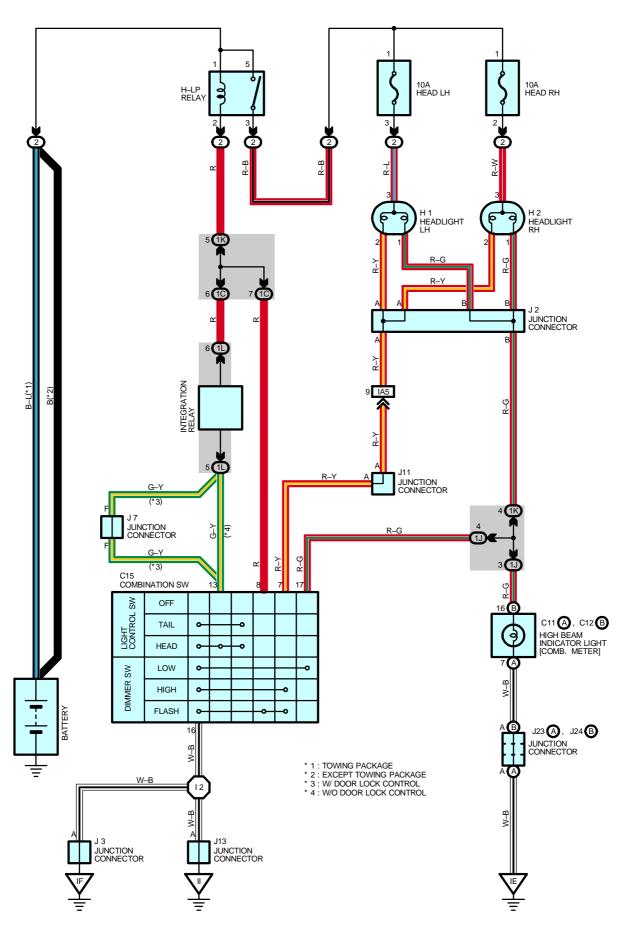


## : GROUND POINTS

Code	See Page	Ground Points Location	
EA	40 (2UZ-FE)	Front Left Fender	
EA	42 (5VZ-FE)	TIL LEIL FEIIUEI	
IE	44	Left Kick Panel	
IF	44	Left Nick Parier	
IH	44	Dight Viels Danel	
II	44	Right Kick Panel	



Code	See Page Wire Harness with Splice Points		Code	See Page	Wire Harness with Splice Points
12	46	Cowl Wire			



#### **H-LP RELAY**

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

### : PARTS LOCATION

Code		See Page	Code	See Page	Code		See Page
C11	Α	34	LIO	30 (2UZ-FE)	J	7	35
C12	В	34	H2	32 (5VZ-FE)	J11		35
C1	15	34	J2	31 (2UZ-FE)	J	13	35
<b>U</b> 4		30 (2UZ-FE)	J2	33 (5VZ-FE)	J23	Α	35
H1		32 (5VZ-FE)	J3	35	J24	В	35

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)	
2	21	Engine Room R/B (Engine Compartment Left)	

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)	
1C	22 (*2)	Could Wise and Driver Cide I/D // away Finish Banel)	
1J	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)	
1K	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)	
1L	23 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)	

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

### : GROUND POINTS

Code	See Page	Ground Points Location
IE	44	Lett Vista Danel
IF		Left Kick Panel
П	44	Right Kick Panel

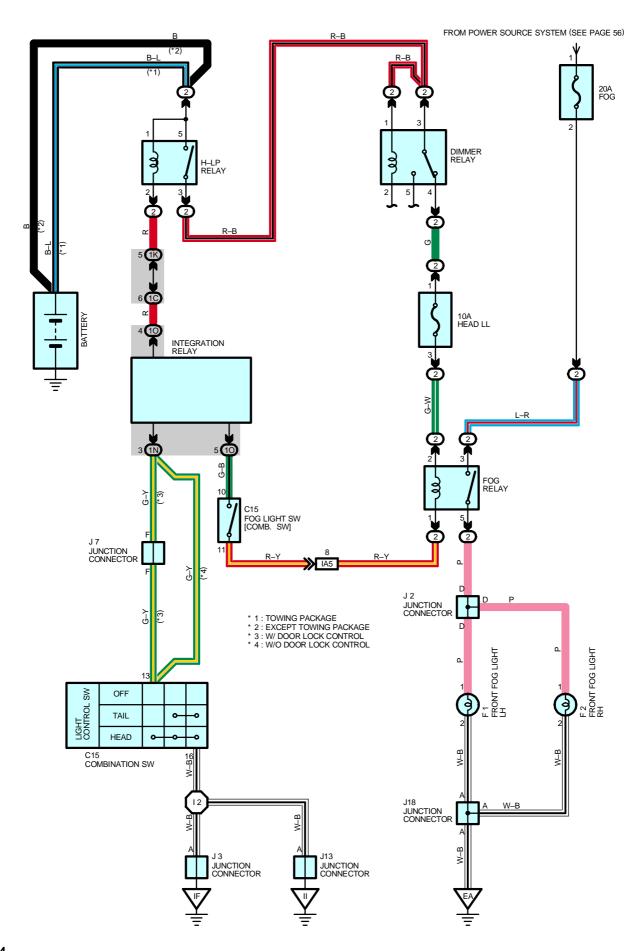
_			_		
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
12	46	Cowl Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



#### **FOG RELAY**

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

### : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C15	34	F2	32 (5VZ-FE)	J7	35
<b>-</b>	30 (2UZ-FE)	IO.	31 (2UZ-FE)	J13	35
F1	32 (5VZ-FE)	J2	33 (5VZ-FE)	14.0	31 (2UZ-FE)
F2	30 (2UZ-FE)	J3	35	J18	33 (5VZ-FE)

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)	
1C	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)	
1K	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)	
1N	27 (*4)	Coul Wire and Driver Cide I/D // ower Finish Bonel)	
10	27 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)	

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

### : GROUND POINTS

Code	See Page	Ground Points Location	
EA	40 (2UZ-FE)	Front Left Fender	
EA	42 (5VZ-FE)	Front Left Fender	
IF	44	Left Kick Panel	
II	44	Right Kick Panel	

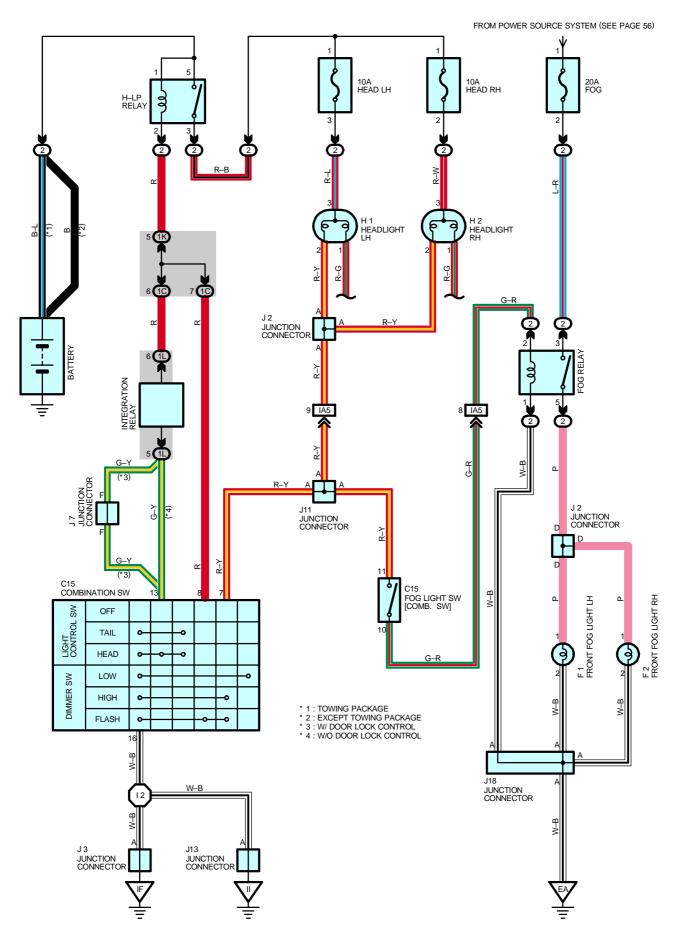
		1			
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
12	46	Cowl Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



#### **FOG RELAY**

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

### : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C15	34	H1	32 (5VZ-FE)	J7	35
F4	30 (2UZ-FE)	H2 +	30 (2UZ-FE)	J11	35
F1	32 (5VZ-FE)		32 (5VZ-FE)	J13	35
Ε0	30 (2UZ-FE)	10	31 (2UZ–FE)	14.0	31 (2UZ-FE)
F2	32 (5VZ-FE)	- J2	33 (5VZ-FE)	J18	33 (5VZ–FE)
H1	30 (2UZ-FE)	J3	35		

### : RELAY BLOCKS

Ī	Code	See Page	Relay Blocks (Relay Block Location)
	2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)			
1C	1C 22 (*2) Cowl Wire and Driver Side J/B (Lower Finish Panel)				
1K	22 (*2)	gine Room Main Wire and Driver Side J/B (Lower Finish Panel)			
1L	23 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)	
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)	

### : GROUND POINTS

Code	See Page	Ground Points Location	
	40 (2UZ-FE)	French of French	
EA	42 (5VZ-FE)	Front Left Fender	
IF	44	eft Kick Panel	
II	44	Right Kick Panel	

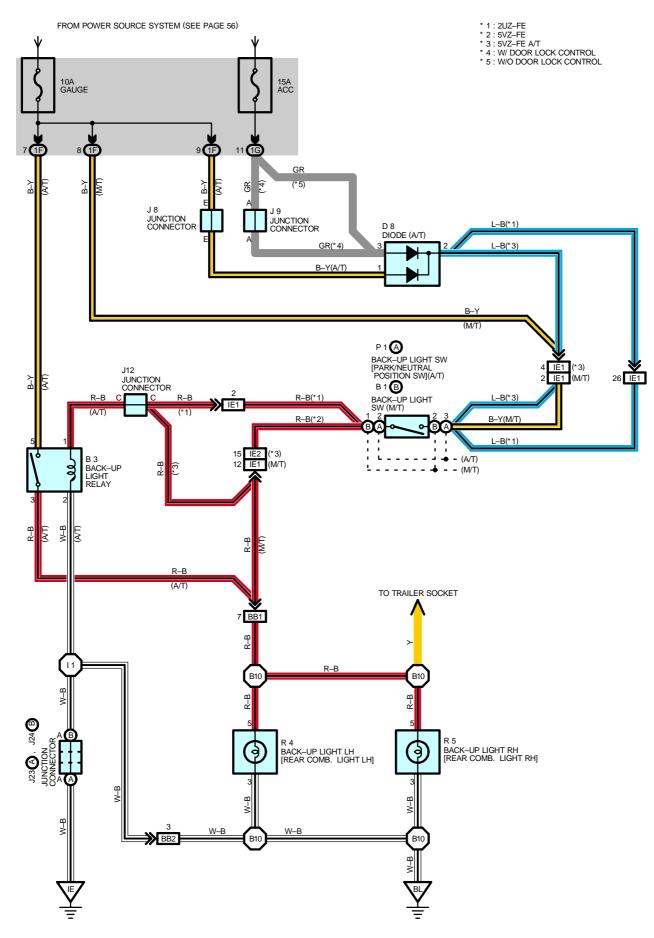
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
12	I2 46 Cowl Wire				

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



### P1 (A) BACK-UP LIGHT SW [PARK/NEUTRAL POSITION SW] (A/T),

### B1 (B) BACK-UP LIGHT SW (M/T)

(A) 3–(A) 2, (B) 2–(B) 1 : Closed with shift lever in  $\boldsymbol{R}$  position

#### **B3 BACK-UP LIGHT RELAY (A/T)**

5-3 : Closed with shift level in R position and ignition SW at ON position

### : PARTS LOCATION

Code		See Page	Code		See Page	Code	See Page
B1	В	32 (5VZ-FE)	J1	2	35	R4	36 (Access Cab)
В	3	34	J23	Α	35	K4	37 (Standard Cab)
D	8	34	J24		35	R5	36 (Access Cab)
J	8	35	P1	Α	31 (2UZ-FE)	КЭ	37 (Standard Cab)
J	9	35	Fi		33 (5VZ-FE)		

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)			
1F	22 (*2)				
i r	26 (*1)	Could Wire and Driver Cide I/D // awar Finish Banel)			
1G	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
15	26 (*1)				

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
IE1	46	Facing Wire and Coul Wire (Dight Cide of Instrument Panel)			
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)			
DD4	48 (Access Cab)				
BB1	50 (Standard Cab)	France Mire and Could Mire (Haday the Drivarie Coat)			
BB2	48 (Access Cab)	Frame Wire and Cowl Wire (Under the Driver's Seat)			
	50 (Standard Cab)				

### : GROUND POINTS

Code	See Page	See Page Ground Points Location			
IE	44	Left Kick Panel			
DI	BL 48 (Access Cab) 50 (Standard Cab) Surrounding of the Front of the	Currounding of the Frent of the Fuel Took			
DL		Surrounding of the Front of the Fuel Tank			

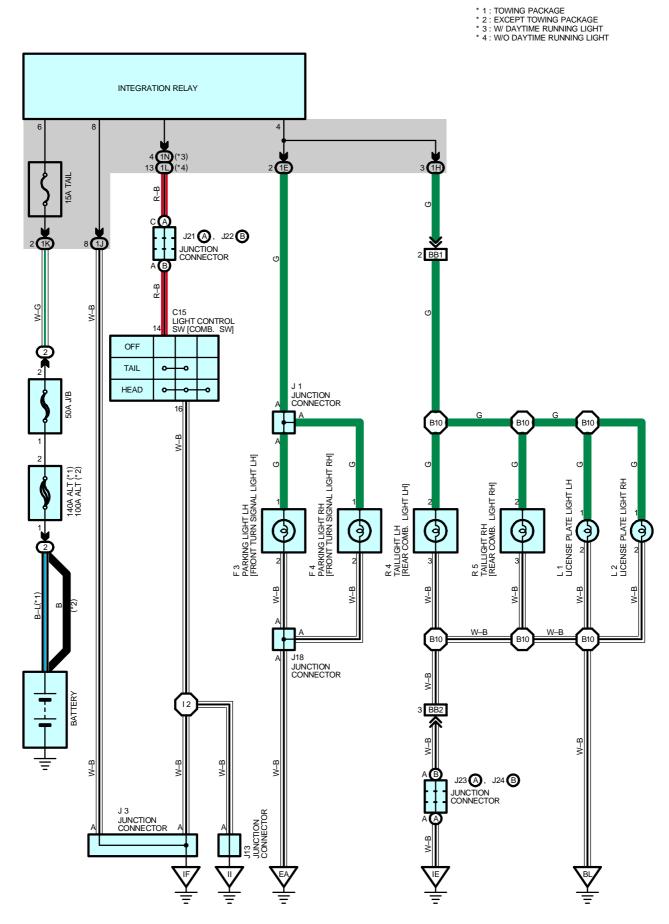
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
l1	46	Cowl Wire	B10	50 (Standard Cab)	Frame Wire
B10	48 (Access Cab)	Frame Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



### C15 LIGHT CONTROL SW [COMB. SW]

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

## : PARTS LOCATION

Code	See Page	Co	ode	See Page	Code	See Page
C15	34	J.	13	35	L1	37 (Standard Cab)
F3	30 (2UZ-FE)	1/	18	31 (2UZ-FE)	L2	36 (Access Cab)
гэ	32 (5VZ-FE)	J	10	33 (5VZ-FE)	L2	37 (Standard Cab)
F4	30 (2UZ-FE)	J21	Α	35	D.4	36 (Access Cab)
F4	32 (5VZ-FE)	J22	В	35	R4	37 (Standard Cab)
14	31 (2UZ-FE)	J23	Α	35	DE	36 (Access Cab)
J1	33 (5VZ-FE)	J24	В	35	R5	37 (Standard Cab)
J3	35	L	.1	36 (Access Cab)		

## : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)					
1E	22 (*2)	Facing Room Main Wire and Driver Side I/R (Louise Finish Rone)					
I E	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)					
1H	22 (*2)						
"	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)					
1J	22 (*2)						
13	26 (*1)						
1K	22 (*2)	Facing Doom Main Wise and Driver Cide I/D /Lawer Finish Bonel\					
i i K	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)					
1L	23 (*2)	Could Wise and Driver Cide 1/D // away Finish Banel)					
1N	27 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)					

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)				
BB1	48 (Access Cab)					
BBI	50 (Standard Cab)	Frame Wire and Coul Wire (Under the Driver's Seet)				
DDO	48 (Access Cab)	Frame Wire and Cowl Wire (Under the Driver's Seat)				
BB2	50 (Standard Cab)					

### : GROUND POINTS

Code	See Page	round Points Location					
EA	40 (2UZ-FE)	ent left Candor					
EA	42 (5VZ-FE)	Front Left Fender					
IE	44	Let Viel Desel					
IF	44	Left Kick Panel					
II	44	Right Kick Panel					
BL	48 (Access Cab)	Surrounding of the Front of the Fuel Took					
BL	50 (Standard Cab)	Surrounding of the Front of the Fuel Tank					

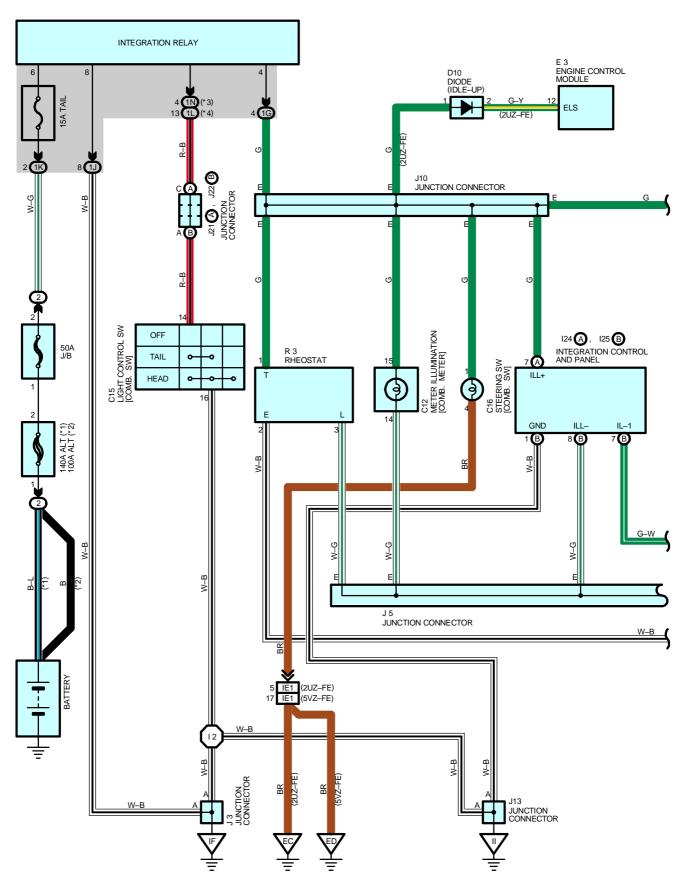
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
12	46	Cowl Wire	B10	50 (Standard Cab)	Frame Wire
B10	48 (Access Cab)	Frame Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

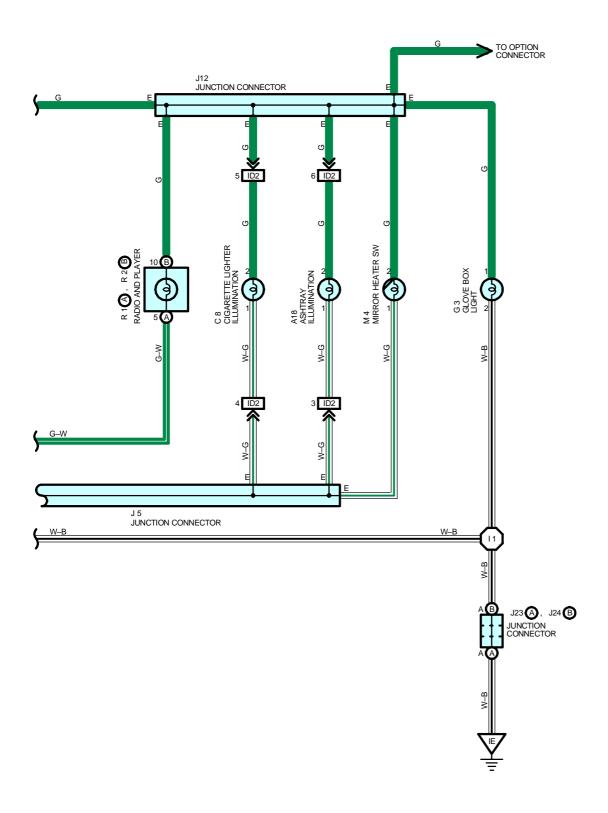
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



- \* 1 : TOWING PACKAGE
  \* 2 : EXCEPT TOWING PACKAGE
  \* 3 : W/ DAYTIME RUNNING LIGHT
  \* 4 : W/O DAYTIME RUNNING LIGHT



## **ILLUMINATION**

### SERVICE HINTS

### C15 LIGHT CONTROL SW [COMB. SW]

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

## : PARTS LOCATION

Code	See Page	Code		See Page	Code		See Page
A18	34	124	Α	35	J22	В	35
C8	34	125	В	35	J23	Α	35
C12	34	J3		35	J24	В	35
C15	34	J5		35	M4		35
C16	34	J1	10	35	R1	Α	35
D10	34	J1	12	35	R2	В	35
E3	34	J13		35	R3		35
G3	35	J21	Α	35			

## : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)	
1G	22 (*2)		
16	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)	
4.1	22 (*2)	Cowi Wile and Driver Side 3/B (Lower Finish Parier)	
1J	26 (*1)		
1K	22 (*2)	Engine Deem Main Wire and Driver Cide I/D / Lawer Cinich Denall	
IK	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)	
1L	23 (*2)	Coul Mire and Driver Side I/D / over Finish Denelly	
1N	27 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)	

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ID2	46	Cigarette Lighter Wire and Cowl Wire (Instrument Panel Brace LH)
IE1	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)

## 7 : GROUND POINTS

	_					
Code	See Page	Ground Points Location				
EC	40 (2UZ-FE)	ar Bank of Left Cylinder Head				
ED	42 (5VZ-FE)	Intake Manifold Left				
IE	44	Left Kick Panel				
IF	44	Left Nick Parier				
П	44	Right Kick Panel				

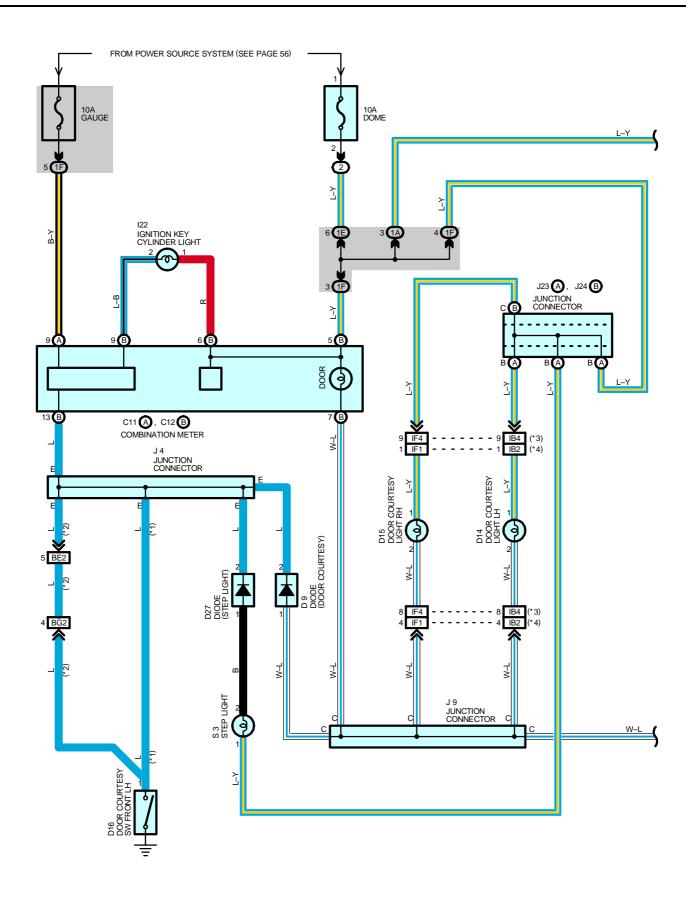
Code	See Page Wire Harness with Splice Points		Code	See Page	Wire Harness with Splice Points
11	46	Cowl Wire	12	46	Cowl Wire

<sup>\* 1 :</sup> w/ Daytime Running Light

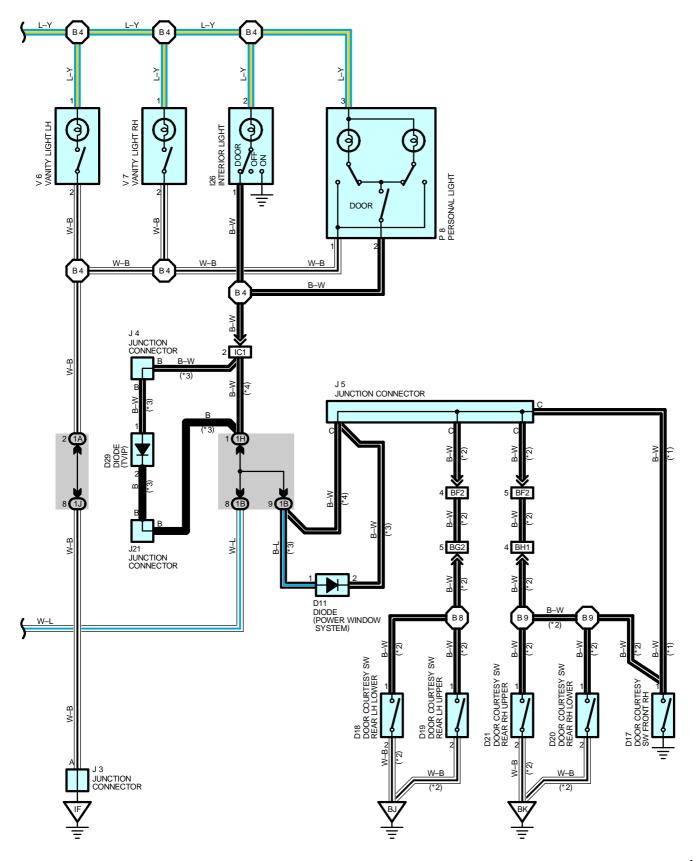
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



- \* 1 : STANDARD CAB \* 2 : ACCESS CAB \* 3 : W/ DOOR LOCK CONTROL \* 4 : W/O DOOR LOCK CONTROL



## **INTERIOR LIGHT**

### SERVICE HINTS

### C11 (A), C12 (B) COMBINATION METER

(A) 9-GROUND : Approx. 12 volts with ignition SW at ON or ST position

(B) 5–GROUND : Always approx. 12 volts(B) 7–GROUND : Continuity with each door open(B)13–GROUND : Continuity with front LH door open

## : PARTS LOCATION

Code		See Page	Code	See Page	Co	de	See Page
C11	Α	34	D17	37 (Standard Cab)	J.	4	35
C12	В	34	D18	36 (Access Cab)	J.	5	35
D	9	34	D19	36 (Access Cab)	J:	9	35
D	11	34	D20	36 (Access Cab)	J2	21	35
D14		36 (Access Cab)	D21	36 (Access Cab)	J23	Α	35
0	14	37 (Standard Cab)	D27	34	J24	В	35
-	15	36 (Access Cab)	D29	34	Р	0	36 (Access Cab)
0	15	37 (Standard Cab)	122	35		0	37 (Standard Cab)
D16		36 (Access Cab)	loc	36 (Access Cab)	S	3	35
		37 (Standard Cab)	l26	37 (Standard Cab)	V	6	36 (Access Cab)
D.	17	36 (Access Cab)	J3	35	V	7	36 (Access Cab)

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)			
1A	22 (*2)	Roof Wire and Driver Side J/B (Lower Finish Panel)			
IA	26 (*1)	Roof Wife and Driver Side 3/B (Lower Finish Fairer)			
1B	22 (*2)	Coul Mira and Driver Side I/P (Lower Finish Danel)			
ID	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
1E	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)			
1 =	26 (*1)	- Engine Room Main Wire and Driver Side 3/B (Lower Finish Panel)			
1F	22 (*2)				
IF	26 (*1)				
411	22 (*2)	Could Mire and Driver Cide 1/D // cours Finish Dens)			
1H	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
4.1	22 (*2)				
1J	26 (*1)	]			

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
IB2	44	Front Door LLI Wire and Count Wire (Left Kiels Door)			
IB4	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)			
IC1	44	Cowl Wire and Roof Wire (Left Side of Instrument Panel)			
IF1	46	Front Door RH Wire and Cowl Wire (Right Kick Panel)			
IF4	40	Front Door KH Wile and Cowi Wile (Right Rick Faller)			
BE2	48 (Access Cab)	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)			
BF2	48 (Access Cab)	Floor No.1 Wire and Cowl Wire (Center of Right Rocker Panel)			
BG2	48 (Access Cab)	Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)			
BH1	48 (Access Cab)	Floor No.1 Wire and Rear Door No.1 Wire RH (Under the Right Quarter Panel)			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

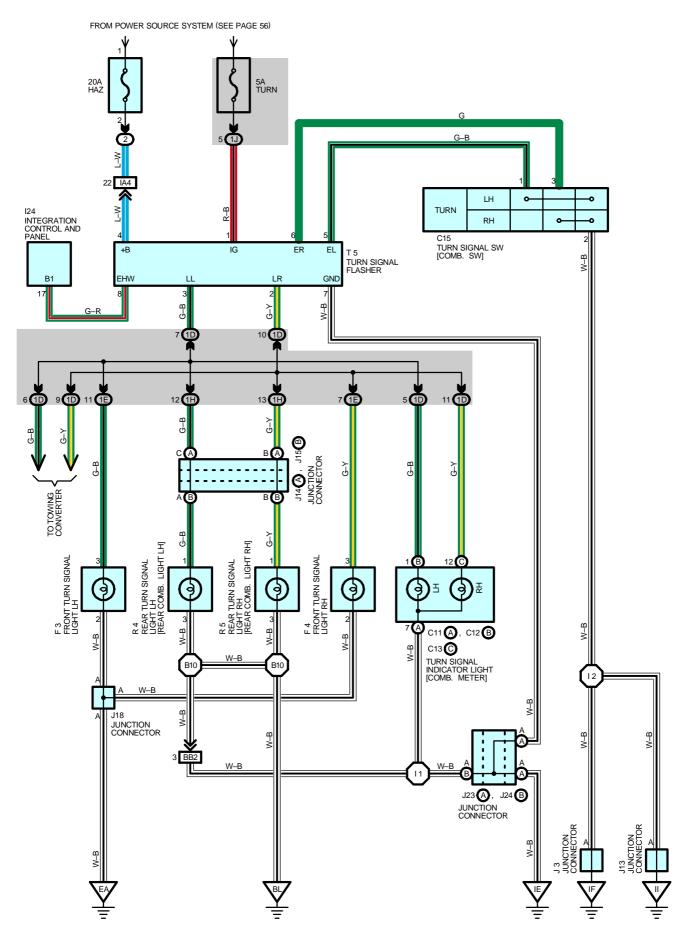


# : GROUND POINTS

Code	See Page	Ground Points Location
IF	44	Left Kick Panel
BJ	48 (Access Cab)	Inside of Rear Door LH
BK	48 (Access Cab)	Inside of Rear Door RH



Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B4	48 (Access Cab)	Doof Wire	B8	48 (Access Cab)	Rear Door No.1 Wire LH
	50 (Standard Cab)	Roof Wire	B9	48 (Access Cab)	Rear Door No.1 Wire RH



### **T5 TURN SIGNAL FLASHER**

4-GROUND : Always approx. 12 volts

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

7-GROUND : Always continuity

## : PARTS LOCATION

Co	de	See Page	Code		See Page	Code		See Page
C11	Α	34	124		35	J18		33 (5VZ-FE)
C12	В	34	J	3	35	J23	Α	35
C13	С	34		13	35	J24	В	35
C	15	34	14.4	Α	36 (Access Cab)	R4		36 (Access Cab)
	'n	30 (2UZ-FE)	J14		37 (Standard Cab)			37 (Standard Cab)
-	3	32 (5VZ-FE)	14.5	-	36 (Access Cab)	R5		36 (Access Cab)
	·4	30 (2UZ-FE)	J15	В	37 (Standard Cab)			37 (Standard Cab)
-	4	32 (5VZ-FE)	J1	18	31 (2UZ-FE)			35

## : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
ID	26 (*1)	Cowi vvire and Driver Side 3/B (Lower Finish Paner)
1E	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
	26 (*1)	Engine Room Main Wile and Driver Side 3/B (Lower Finish Panel)
1H	22 (*2)	
I I I	26 (*1)	Coul Wire and Driver Cide I/D /Lourer Finish Bonel
1J	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
	26 (*1)	

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)					
IA4	44	ingine Room Main Wire and Cowl Wire (Left Kick Panel)					
BB2	48 (Access Cab)	Frame Wire and Cowl Wire (Under the Driver's Seat)					
DDZ	50 (Standard Cab)	Frame wire and Cowi wire (Onder the Driver's Seat)					

## : GROUND POINTS

Code	See Page	Ground Points Location			
EA	40 (2UZ-FE)	Front Left Fender			
EA	42 (5VZ-FE)	Front Left Ferider			
IE	44	Left Kick Panel			
IF	44	Leit Nick Fallei			
II	44	Right Kick Panel			
BL	48 (Access Cab)	Course and the Court of the Court Test.			
	50 (Standard Cab)	Surrounding of the Front of the Fuel Tank			

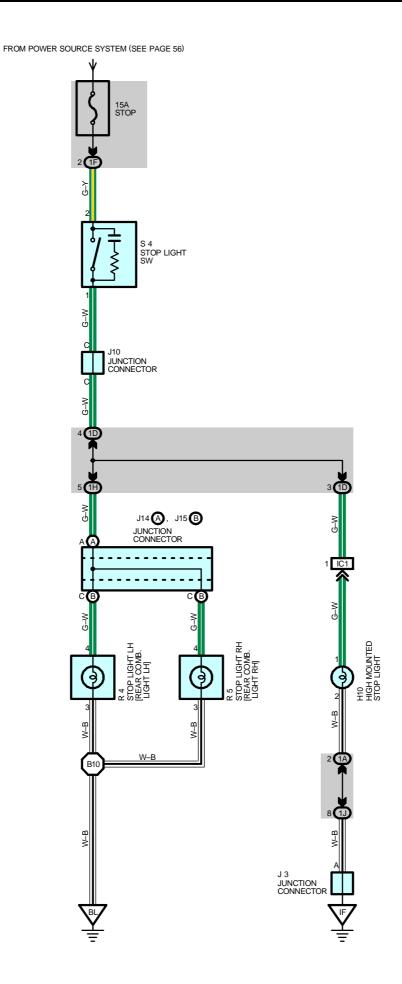
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points	
I1	46	Cowl Wire	B10	48 (Access Cab)	France Mine	
12	40			50 (Standard Cab)	Frame Wire	

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



### **S4 STOP LIGHT SW**

2-1: Closed with brake pedal depressed

## : PARTS LOCATION

Code		See Page	Code		See Page	Code	See Page
1.14	^	36 (Access Cab)	J14	Α	37 (Standard Cab)		36 (Access Cab)
H1	U	37 (Standard Cab)	14.5	В	36 (Access Cab)	R5	37 (Standard Cab)
J:	3	35	J15		37 (Standard Cab)	S4	35
J10		35	-	4	36 (Access Cab)		
J14	Α	36 (Access Cab)	R	4	37 (Standard Cab)		

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
4.0	22 (*2)	Book Wire and Driver Cide I/D /Leurer Finish Bone)
1A	26 (*1)	Roof Wire and Driver Side J/B (Lower Finish Panel)
1D	22 (*2)	
טו	26 (*1)	
1F	22 (*2)	
I IF	26 (*1)	Coul Mira and Driver Cide 1/D / awar Finish Danel)
411	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1H	26 (*1)	
4.1	22 (*2)	
1J	26 (*1)	

### : 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)
IC1 44 Cowl Wire and Roof Wire (Left Side of Instrument Panel)		44	Cowl Wire and Roof Wire (Left Side of Instrument Panel)

## : GROUND POINTS

Code	See Page	Ground Points Location
IF	44	Left Kick Panel
BL	48 (Access Cab) 50 (Standard Cab)	Currounding of the Front of the Fuel Took
BL		Surrounding of the Front of the Fuel Tank

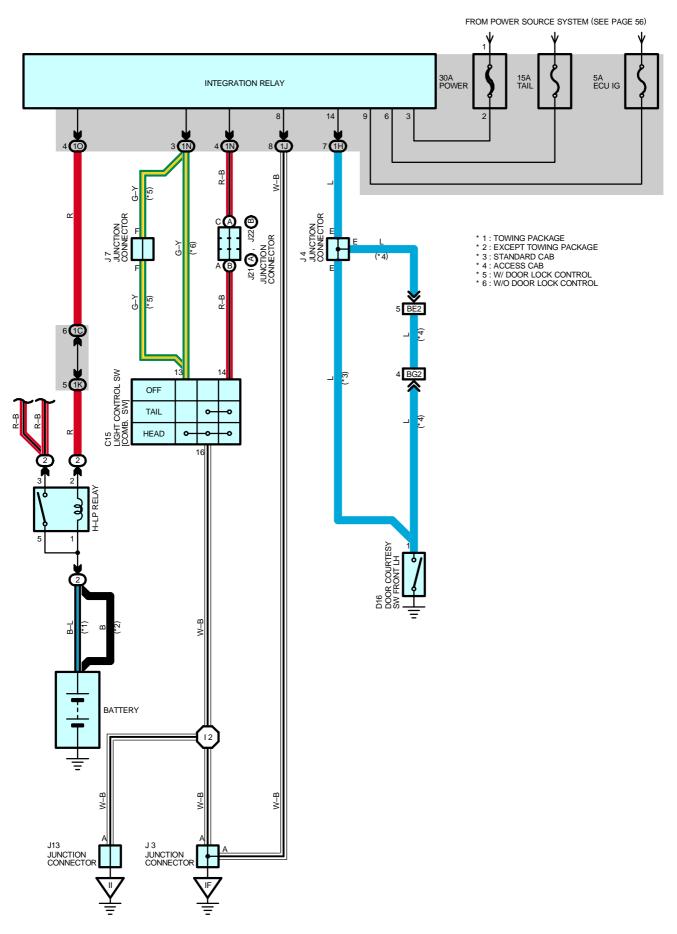
_					
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B10	48 (Access Cab)	Frame Wire	B10	50 (Standard Cab)	Frame Wire

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



#### **SYSTEM OUTLINE**

With the ignition SW turned on, the current flows to TERMINAL 9 of the integration relay through ECU IG fuse.

Voltage is applied at all times to TERMINAL 6 of the integration relay through the TAIL fuse, and through the H–LP relay coil side.

### 1. NORMAL LIGHTING OPERATION

### <Turn taillight on>

With the light control SW turned to TAIL position, a signal is input into the integration relay. Due to this signal, the current flowing to TERMINAL 6 of the relay flows to TERMINAL 14 of the light control SW to TERMINAL 16 to GROUND, and taillights to turn on.

### <Turn headlight on>

With the light control SW turned to HEAD position, a signal is input into the integration relay. Due to this signal, the current flowing to the relay flows to TERMINAL 13 of the light control SW to TERMINAL 16 to GROUND in the headlight circuit, and causes taillight and H–LP 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 9 of the relay), when the driver's door is opened (Input signal goes to TERMINAL 14 of the relay), the relay operates and the current is cut off which flows from TERMINAL 6 and through the H–LP relay coil side of the relay to taillight circuit and headlight circuit.

As a result, all lights are turned off automatically.

### SERVICE HINTS

### H-LP RELAY

5–3 : 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

### C15 LIGHT CONTROL SW [COMB. SW]

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

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

### D16 DOOR COURTESY SW FRONT LH

1-GROUND: Continuity with the front LH door open

### **INTEGRATION RELAY**

9-GROUND : Approx. 12 volts with the ignition SW at ON position

14-GROUND : Continuity with the front LH door open

3, 6–GROUND : Always approx. **12** volts 8–GROUND : Always continuity

### : PARTS LOCATION

Code	See Page	Code	See Page	Code		See Page
C15	34	J3	35	J	13	35
D16	36 (Access Cab)	J4	35	J21	Α	35
D16	37 (Standard Cab)	J7	35	J22	В	35

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C		
1H	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J		
1K	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1N	07 (*4)	Coult Wire and Driver Cide 1/D // awar Finish Banel)
10	27 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

# LIGHT AUTO TURN OFF (w/ DAYTIME RUNNING LIGHT)

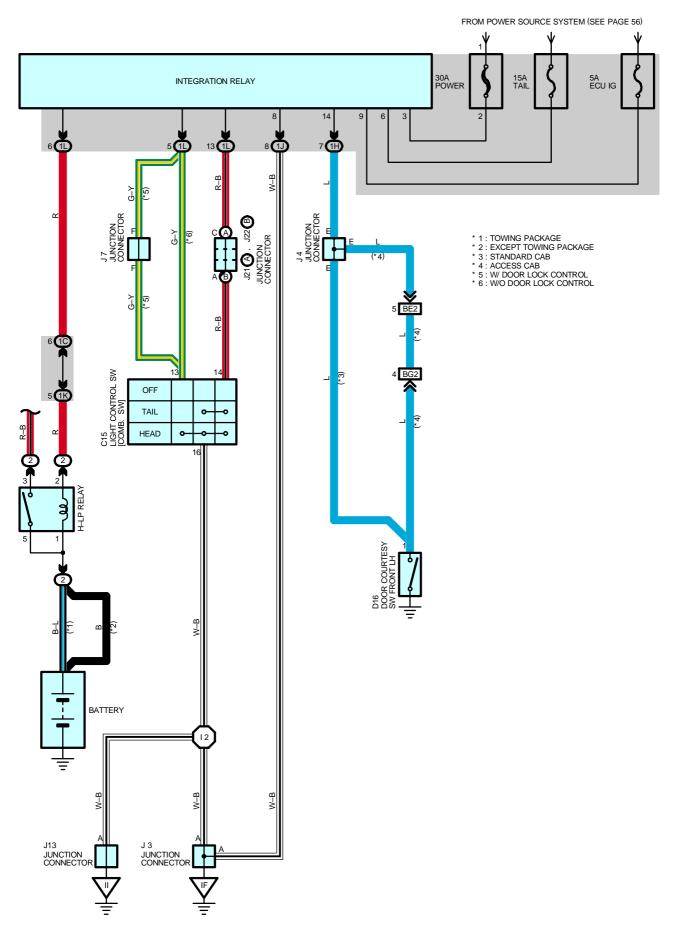
## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)	
BE2	48 (Access Cab)	b) Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)	
BG2 48 (Access Cab) Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)		Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)	

# : GROUND POINTS

Code	See Page	Ground Points Location
IF	44	Left Kick Panel
II	44	Right Kick Panel

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
12	I2 46 Cowl Wire				



#### SYSTEM OUTLINE

With the ignition SW turned on, the current flows to TERMINAL 9 of the integration relay through ECU IG fuse.

Voltage is applied at all times to TERMINAL 6 of the integration relay through the TAIL fuse, and through the H–LP relay coil side.

### 1. NORMAL LIGHTING OPERATION

### <Turn taillight on>

With the light control SW turned to TAIL position, a signal is input into the integration relay. Due to this signal, the current flowing to TERMINAL 6 of the relay flows to TERMINAL 14 of the light control SW to TERMINAL 16 to GROUND, and taillights to turn on.

### <Turn headlight on>

With the light control SW turned to HEAD position, a signal is input into the integration relay. Due to this signal, the current flowing to the relay flows to TERMINAL 13 of the light control SW to TERMINAL 16 to GROUND in the headlight circuit, and causes taillight and H–LP 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 9 of the relay), when the driver's door is opened (Input signal goes to TERMINAL 14 of the relay), the relay operates and the current is cut off which flows from TERMINAL 6 and through the H–LP relay coil side of the relay to taillight circuit and headlight circuit.

As a result, all lights are turned off automatically.

### SERVICE HINTS

### H-LP RELAY

5-3: Closed with the light control SW at **HEAD** position or the dimmer SW at **FLASH** position

### C15 LIGHT CONTROL SW [COMB. SW]

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

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

### **D16 DOOR COURTESY SW FRONT LH**

1-GROUND: Continuity with the front LH door open

### INTEGRATION RELAY

9-GROUND : Approx. 12 volts with the ignition SW at ON position

14-GROUND: Continuity with the front LH door open

3, 6–GROUND : Always approx. **12** volts 8–GROUND : Always continuity

### : PARTS LOCATION

Code	See Page	Code	See Page	Code		See Page
C15	34	J3	35	J1	3	35
D46	36 (Access Cab)	J4	35	J21	Α	35
D16	37 (Standard Cab)	J7	35	J22	В	35

### : RELAY BLOCKS

	Code	See Page	Relay Blocks (Relay Block Location)	
2 21 Engine Room R/B (Engine Compartment Left)		Engine Room R/B (Engine Compartment Left)		

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)			
1C					
1H	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
1J					
1K	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)			
1L	23 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

# LIGHT AUTO TURN OFF (w/o DAYTIME RUNNING LIGHT)

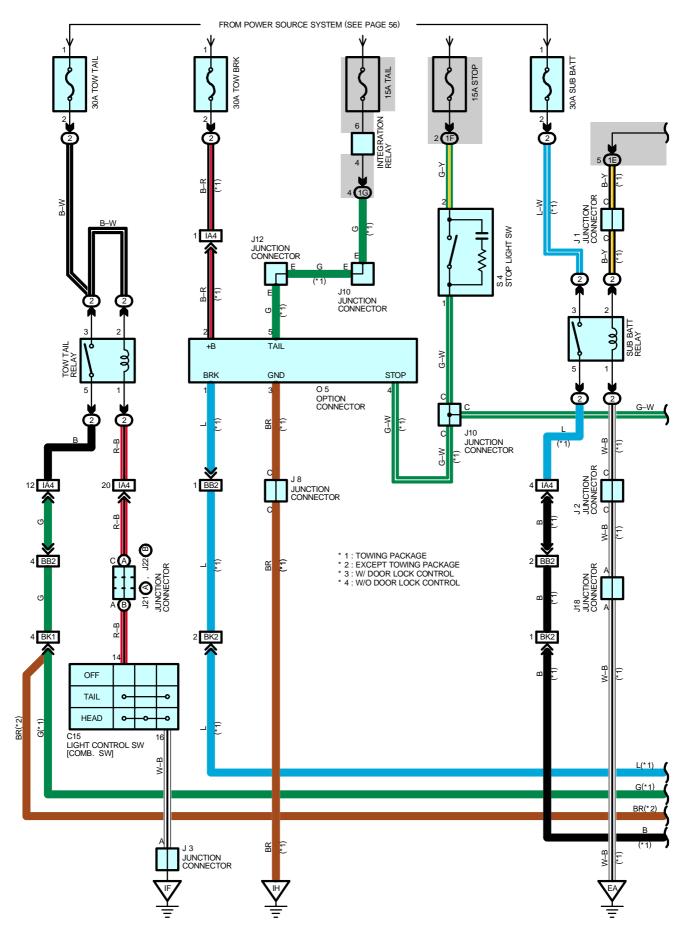
## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

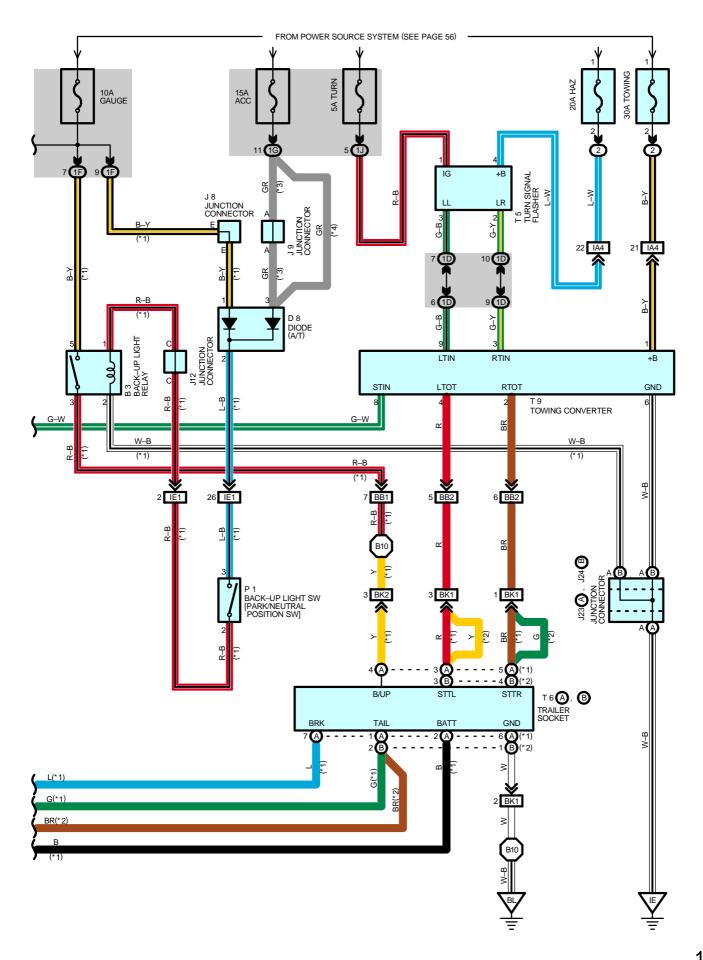
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)		
BE2 48 (Access Cab) Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)				
BG2 48 (Access Cab) Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)		Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)		

# : GROUND POINTS

Code	See Page	Ground Points Location
IF	44	Left Kick Panel
II	44	Right Kick Panel

Ī	Code See Page		Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
Ī	12	I2 46 Cowl Wire				





## TRAILER TOWING

### SERVICE HINTS

### **T9 TOWING CONVERTER**

1–GROUND : Always approx. **12** volts 6–GROUND : Always continuity

### : PARTS LOCATION

Code	See Page	Co	de	See Page	Co	de	See Page
В3	34	J <sup>,</sup>	10	35	Р	1	33 (5VZ-FE)
C15	34	J <sup>*</sup>	12	35	S	4	35
D8	34	14	10	31 (2UZ-FE)	Т	5	35
14	31 (2UZ-FE)	J.	18	33 (5VZ-FE)		۸	36 (Access Cab)
J1	33 (5VZ-FE)	J21	Α	35	Te	Α	37 (Standard Cab)
J2	31 (2UZ-FE)	J22	В	35	T6	В	36 (Access Cab)
J2	33 (5VZ-FE)	J23	Α	35			37 (Standard Cab)
J3	35	J24	В	35	Т	9	35
J8	35	О	5	35			
J9	35	Р	1	31 (2UZ-FE)			

### : RELAY BLOCKS

C	Code	See Page	Relay Blocks (Relay Block Location)
2 21 Engine Room R/B (Engine Compartment Left)		Engine Room R/B (Engine Compartment Left)	

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
40	22 (*2)	Could Mire and Driver Cide 1/D // outer Finish Denelly
1D	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1E	22 (*2)	Facing Deers Main Wire and Driver Cide 1/D /Leurer Fiziels Deers)
16	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F	22 (*2)	
IF	26 (*1)	
1G	22 (*2)	Could Mire and Driver Side I/D (Laurer Finish Dene)
16	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J	22 (*2)	
13	26 (*1)	

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
IA4	IA4 44 Engine Room Main Wire and Cowl Wire (Left Kick Panel)				
IE1	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)			
DD4	48 (Access Cab)				
BB1	50 (Standard Cab)	Frame Mire and Coul Mire / Index the Driver's Cost			
BB2	48 (Access Cab)	rame Wire and Cowl Wire (Under the Driver's Seat)			
DDZ	50 (Standard Cab)				
BK1	48 (Access Cab)				
DNI	50 (Standard Cab)	Frame Wire and Frame No. 2 Wire (Near the License Dista Light)			
BK2	48 (Access Cab)	Frame Wire and Frame No.3 Wire (Near the License Plate Light)			
DNZ	50 (Standard Cab)				

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

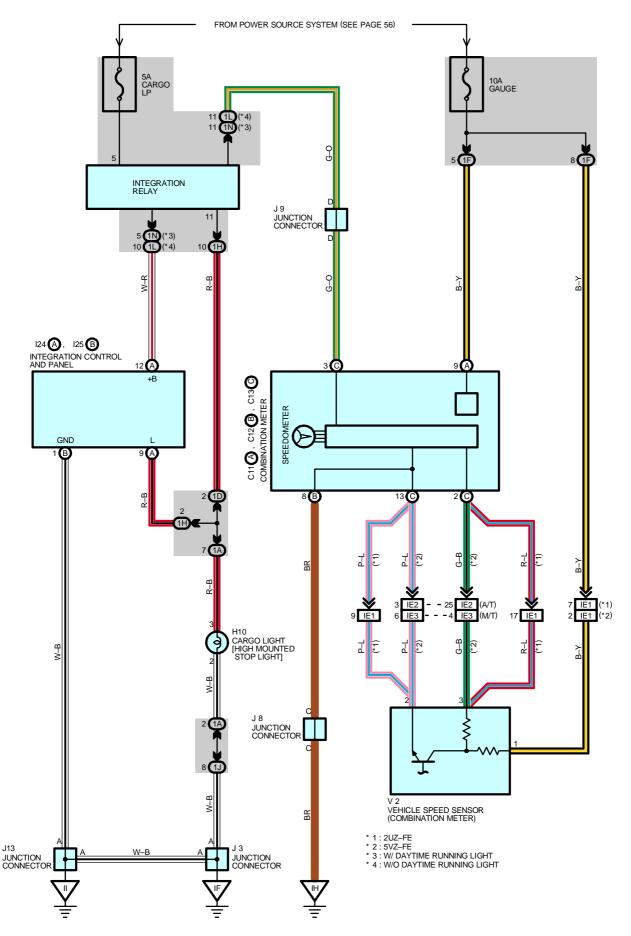


# : GROUND POINTS

Code	See Page	Ground Points Location			
EA	40 (2UZ-FE)	Front Left Fender			
EA	42 (5VZ-FE)	Florit Left Ferider			
IE	44	Left Kick Panel			
IF	44	Lett Nick Fallet			
IH	44	Right Kick Panel			
BL	48 (Access Cab)	Course and in a set the Frent of the Fire Took			
DL	50 (Standard Cab)	Surrounding of the Front of the Fuel Tank			



Code	Code See Page Wire Harness with Splice Points		Code	See Page	Wire Harness with Splice Points
B10	48 (Access Cab)	Frame Wire	B10	50 (Standard Cab)	Frame Wire



### 124 (A), 125 (B) INTEGRATION CONTROL AND PANEL

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

## : PARTS LOCATION

Code		See Page	Code		See Page	Code	See Page
C11	Α	34	124	Α	35	J13	35
C12	В	34	125	В	35	\/2	31 (2UZ-FE)
C13 C		34	J3		35	V2	33 (5VZ-FE)
H10		36 (Access Cab)	J	8	35		
"	10	37 (Standard Cab)	J	9	35		

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1A	22 (*2)	Boot Wire and Driver Cide I/D / away Finish Bone)
IA	26 (*1)	Roof Wire and Driver Side J/B (Lower Finish Panel)
1D	22 (*2)	
ID	26 (*1)	
1F	22 (*2)	
I I F	26 (*1)	
1H	22 (*2)	Coul Mire and Driver Side I/D (Louise Finish Denel)
In	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J	22 (*2)	
13	26 (*1)	
1L	23 (*2)	
1N	27 (*1)	

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

0-4-	Can Dama	Lairing Wine Hamana and Wine Hamana (Connector)			
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
IE1					
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)			
	-	1			
IE3					

### : GROUND POINTS

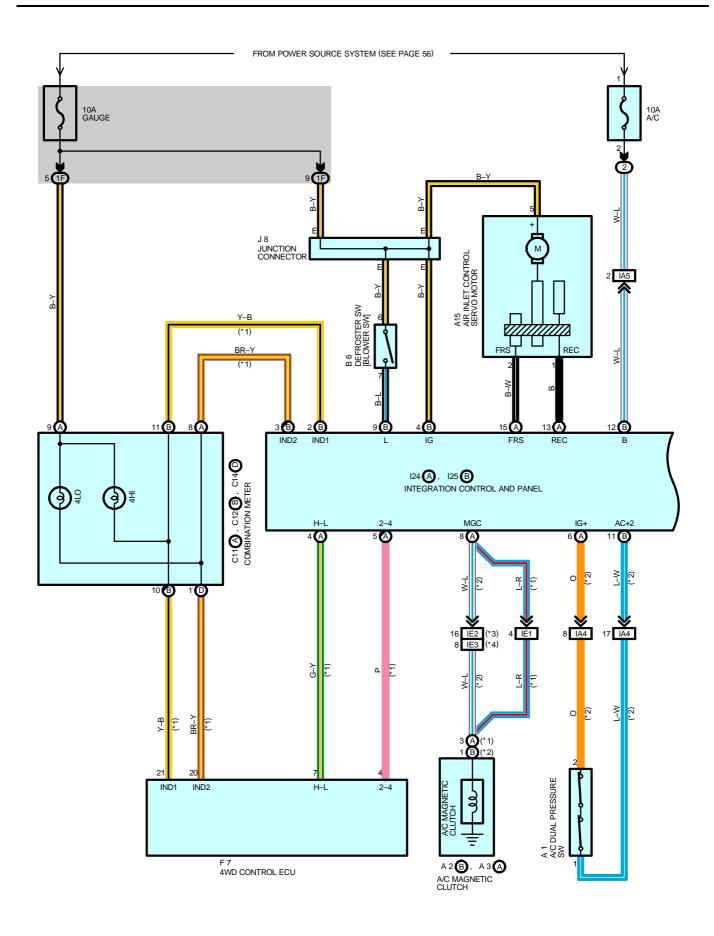
Code	See Page	Ground Points Location	
IF	44	Left Kick Panel	
IH	44	Pight Viel Donal	
II	44	Right Kick Panel	

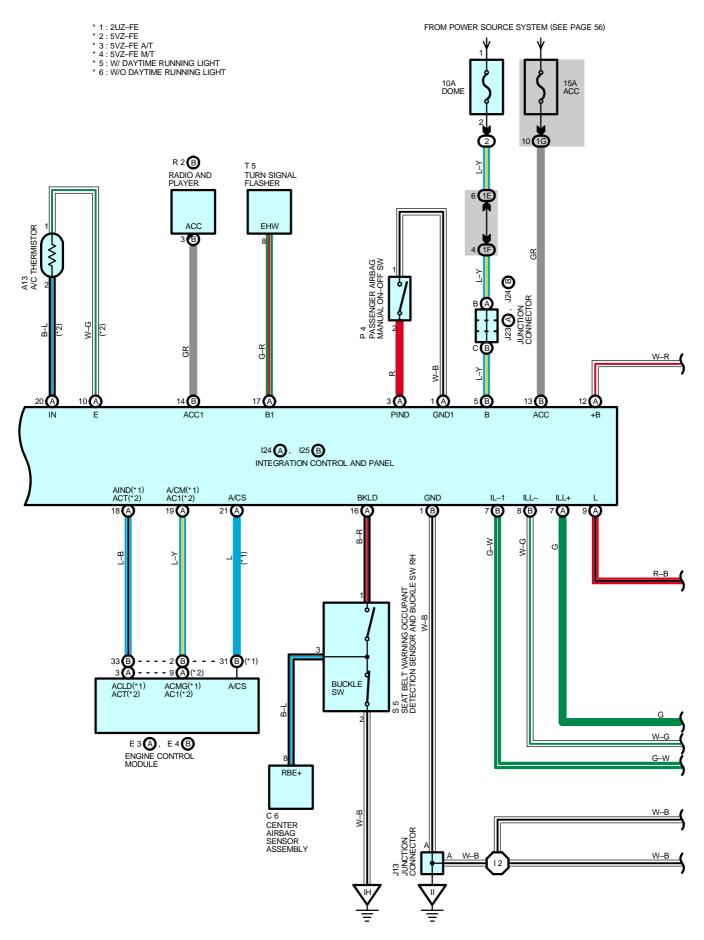
<sup>\* 1 :</sup> w/ Daytime Running Light

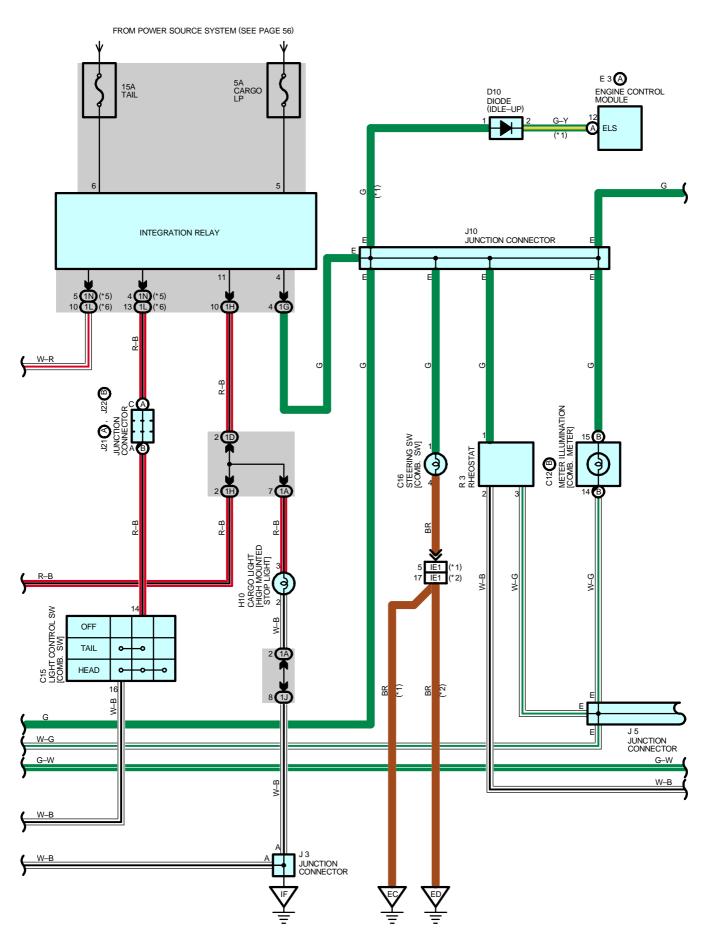
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

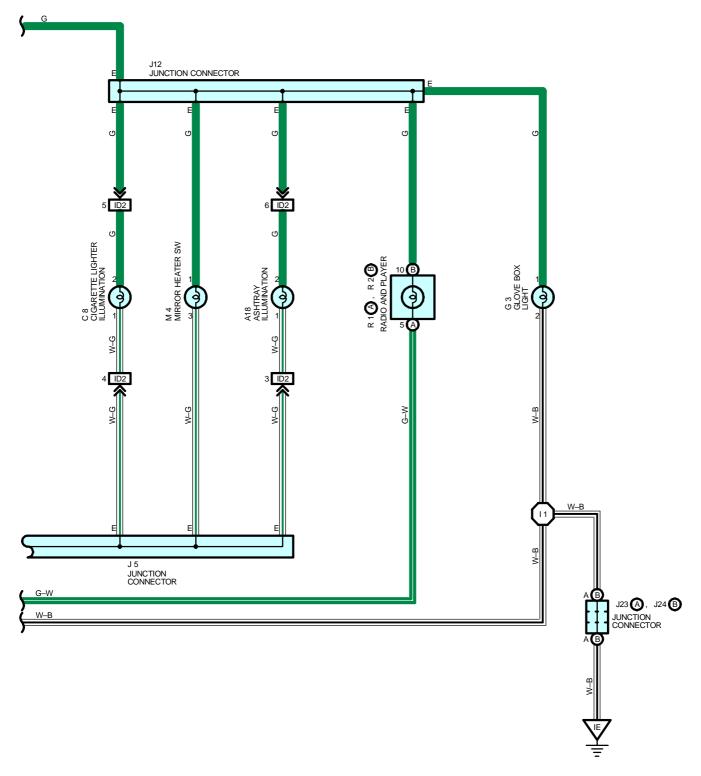
<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)







- \* 1 : 2UZ-FE
  \* 2 : 5VZ-FE
  \* 5 : W/ DAYTIME RUNNING LIGHT
  \* 6 : W/O DAYTIME RUNNING LIGHT



## INTEGRATION CONTROL AND PANEL

### **SYSTEM OUTLINE**

The integration control panel is composed by design components such as the cluster, resistor, heater control panel, and SW. The integration control panel controls systems such as the air conditioning, cargo light, 4WD (2UZ–FE) and hazard warning light, clock, and the SRS.

### SERVICE HINTS

### 124 (A), 125 (B) INTEGRATION CONTROL AND PANEL

(B)12–GROUND : Approx. 12 volts with ignition SW on and blower SW on (B) 4–GROUND : Approx. 12 volts with ignition SW at  $\bf ON$  or  $\bf ST$  position

(B) 5-GROUND: Always approx. 12 volts

(B)13-GROUND: Approx. 12 volts with ignition SW at ACC or ON position

(B) 1-GROUND: Always continuity

### : PARTS LOCATION

Co	de	See Page	Co	de	See Page	Co	de	See Page
A1		30 (2UZ-FE)	C16		34	J.	12	35
		32 (5VZ-FE)	D10		34	J13		35
A2	В	32 (5VZ-FE)	E3	Α	34	J21	Α	35
A3	Α	30 (2UZ-FE)	E4	В	34	J22	В	35
A <sup>-</sup>	13	34	F	7	35	J23	Α	35
A.	15	34	G	3	35	J24	В	35
A18		34	H10		36 (Access Cab)	M4		35
В	6	34	H	10	37 (Standard Cab)	Р	4	35
С	6	34	124	Α	35	R1	Α	35
С	8	34	125	В	35	R2	В	35
C11	Α	34	J	3	35	R	3	35
C12	В	34	J5		35	0.5		36 (Access Cab)
C14	D	34	J	8	35	<b>S</b> 5		37 (Standard Cab)
C15		34	J10		35	T5		35

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21 Engine Room R/B (Engine Compartment Left)	

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page Junction Block and Wire Harness (Connector Location)				
1A	22 (*2)	Roof Wire and Driver Side J/B (Lower Finish Panel)			
IA	26 (*1)	Roof Wife and Driver Side 3/B (Lower Fillish Faller)			
1D	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
טו	26 (*1)	Sowi wile alia dilvel Side 3/d (Lowel Fillish Fallel)			
1E	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)			
I L	26 (*1)	Lingine Room Main Wire and Driver Side 3/B (Lower Fillish Faher)			
1F	22 (*2)				
11	26 (*1)				
1G	22 (*2)				
16	26 (*1)				
1H	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			
1111	26 (*1)	Cowi Wire and Driver Side 3/b (Lower Finish Farier)			
1J	22 (*2)				
IJ	26 (*1)				
1L	23 (*2)				
1N	27 (*1)				

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

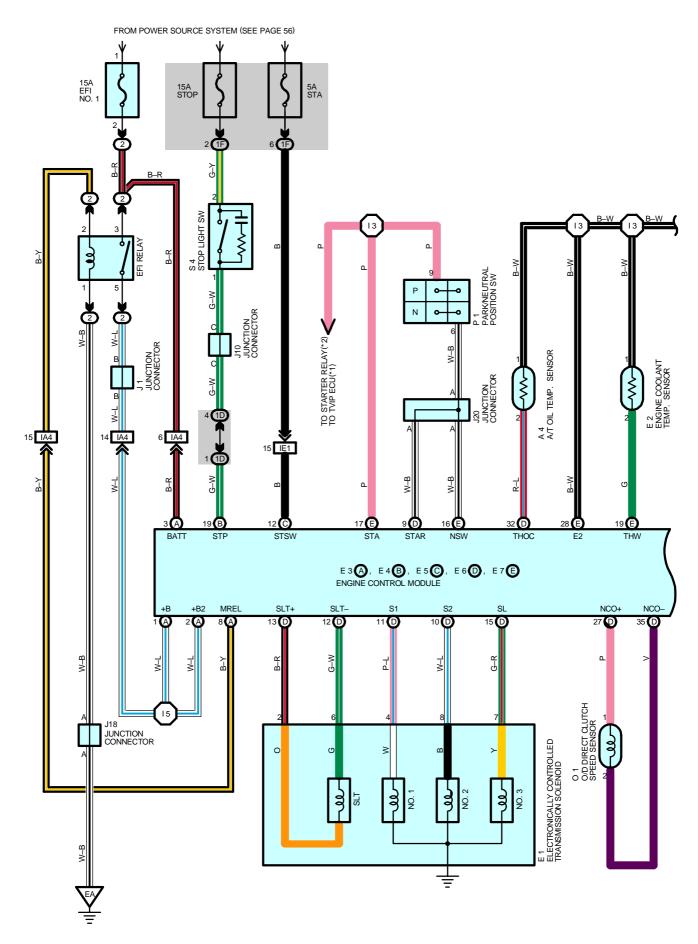
## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

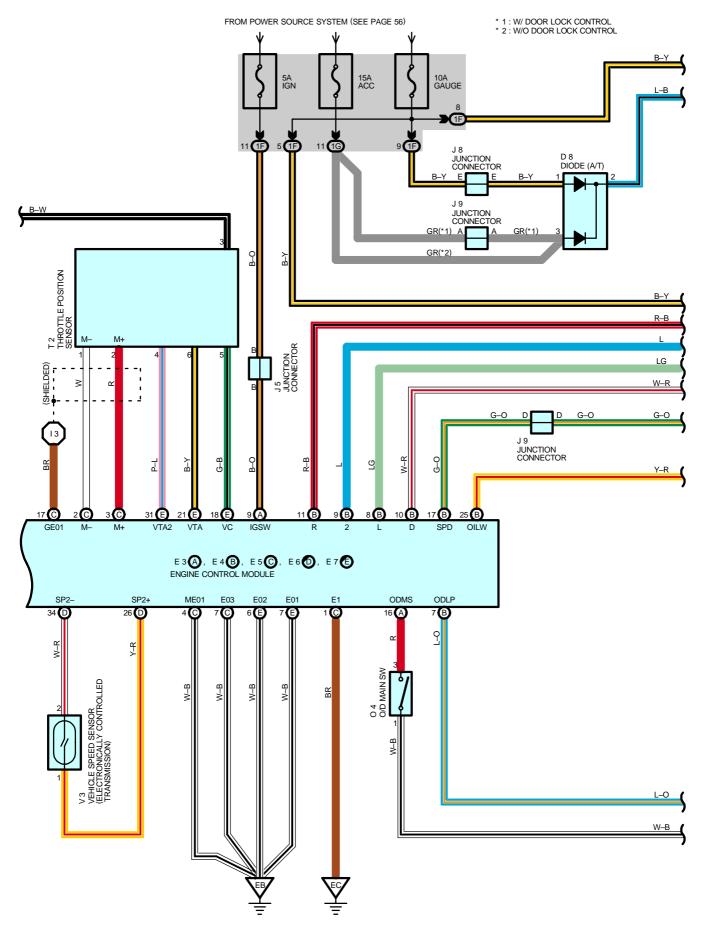
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
IA4	44	Facility Decay Main Wiles and Octob Wiles (Left Mark Decay)			
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)			
ID2	46	Cigarette Lighter Wire and Cowl Wire (Instrument Panel Brace LH)			
IE1					
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)			
IE3	1				

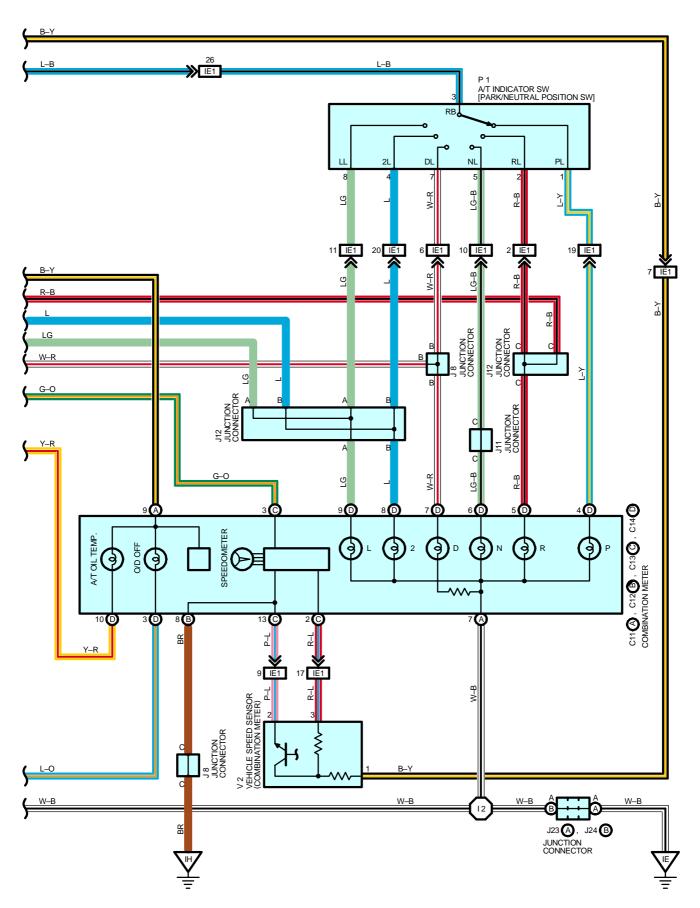
# : GROUND POINTS

Code	See Page	Ground Points Location	
EC	40 (2UZ-FE)	Rear Bank of Left Cylinder Head	
ED	42 (5VZ-FE)	Intake Manifold Left	
IE	44	Left Kick Panel	
IF	44	Left Nick Panel	
IH	44	Right Kick Panel	
II	44		

ĺ	Code	See Page	See Page Wire Harness with Splice Points		See Page	Wire Harness with Splice Points
ĺ	<b>I</b> 1	46	Cowl Wire	12	46	Cowl Wire







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

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

#### 1. GEAR SHIFT OPERATION

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

#### 2. LOCK-UP OPERATION

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

#### 3. STOP LIGHT SW CIRCUIT

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

#### 4. OVERDRIVE CIRCUIT

- \* O/D main SW on
  - When the O/D main SW is switched to ON position, a signal is input to TERMINAL ODMS of the engine control module, and enables shift change to the overdrive range, through the control of the engine control module.
- \* O/D main SW off
  - When the O/D main SW is switched to OFF position, a signal is input to TERMINAL ODMS of the engine control module, and prohibits shift change to the overdrive range through the control of the engine control module. When in the overdrive range already, shift down is made.

# **ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR**

#### SERVICE HINTS

#### **E1 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID**

4, 7, 8-GROUND : Approx. 13  $\Omega$ 

#### O4 O/D MAIN SW

3–1 : Open with O/D main SW at **ON** position Closed with O/D main SW at **OFF** position

#### **S4 STOP LIGHT SW**

1-2: Closed with brake pedal depressed

#### E3(A), E4 (B), E5 (C), E6 (D), E7 (E) ENGINE CONTROL MODULE

S1-E1: 9-14 volts with vehicle not move and shift lever in D position

S2, SL-E1: 0-1.5 volts with vehicle not move

STP-E1: 7.5-14 volts with brake pedal depressed

: **0–1.5** volts with brake pedal released

THW-E1: 0.2-1.0 volts with idling, engine coolant temp. 60°C (140°F)-120°C (248°F)

THOC-E1: Below 1.0 volts with fluid temp. 110°C (230°F)

VTA-E1: 0.4-1.0 volts with ignition SW on and throttle valve fully closed

: 3.2-4.8 volts with ignition SW on and throttle valve fully open

VC-E1: **4.5-5.5** volts with ignition SW at **ON** or **ST** position

ODMS-E1: 9-14 volts with O/D main SW turned on

: 0-3 volts with O/D main SW turned off

SPD-E1: Pulse generation with vehicle moving 2-E1: **7.5-14** volts with shift lever at **2** position

. 7.5–14 voits with shift level at 2 position

: 0-1.5 volts with shift lever at except 2 position

L-E1: 7.5-14 volts with shift lever at L position

: 0-1.5 volts with shift lever at except  $\boldsymbol{L}$  position

+B-E1: 9-14 volts with ignition SW at ON or ST position

BATT-E1 : Always 9-14 volts

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

3-1: Closed with shift lever in P position

3-2: Closed with shift lever in R position

3-5: Closed with shift lever in N position

3–7 : Closed with shift lever in  ${\bf D}$  position

3-4 : Closed with shift lever in 2 position

3-8: Closed with shift lever in L position

### : PARTS LOCATION

Co	de	See Page	Co	de	See Page	Co	de	See Page
Α	4	30 (2UZ-FE)	E6	D	34	J23	Α	35
C11	Α	34	E7	Е	34	J24	В	35
C12	В	34	J1		31 (2UZ-FE)	O1		31 (2UZ-FE)
C13	С	34		5	35	O4		35
C14	D	34	J8		35	P1		31 (2UZ-FE)
D	8	34	J	9	35	S	4	35
Е	1	30 (2UZ-FE)	J1	0	35	T	2	31 (2UZ-FE)
Е	2	30 (2UZ-FE)	J1	1	35	V	2	31 (2UZ-FE)
E3	Α	34	J1	2	35	V	3	31 (2UZ-FE)
E4	В	34	J1	8	31 (2UZ-FE)			
E5	С	34	J2	20	35			

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

# (2UZ-FE)

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	22 (*2)	
טו	26 (*1)	
1F	22 (*2)	Coul Wire and Driver Cide I/D // awar Finish Banel)
IF.	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G	22 (*2)	
16	26 (*1)	

# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

	Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4 44 Engine Room Main Wire and Cowl Wire (Left Kick Panel)			
	IE1	Engine Wire and Cowl Wire (Right Side of Instrument Panel)	

# : GROUND POINTS

Code	See Page	Ground Points Location
EA	40 (2UZ-FE)	Front Left Fender
EB	40 (2UZ-FE)	Rear Bank of Right Cylinder Head
EC	40 (2UZ-FE)	Rear Bank of Left Cylinder Head
IE	44	Left Kick Panel
IH	44	Right Kick Panel



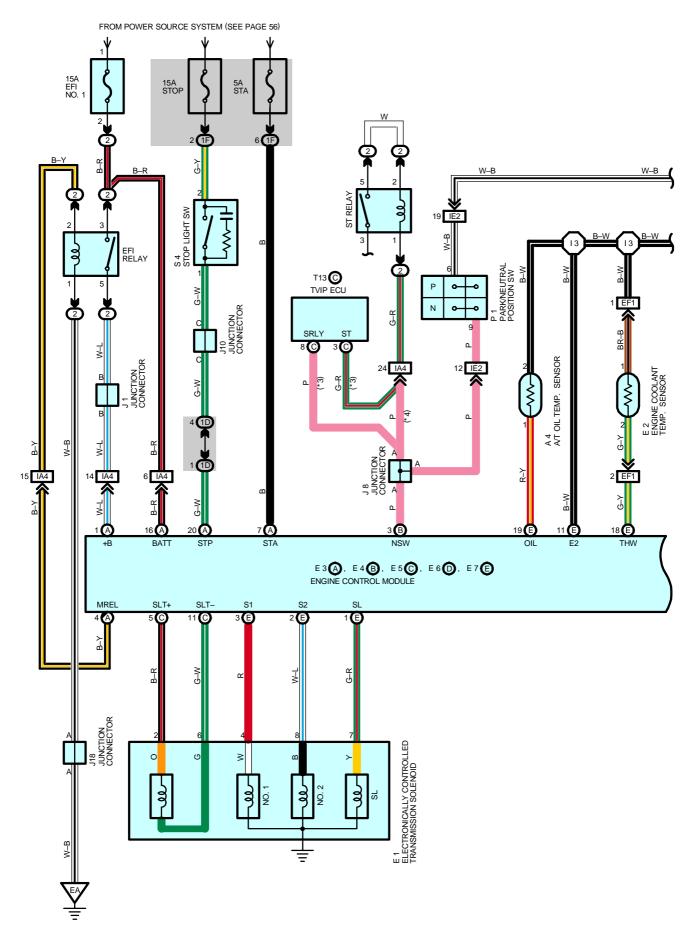
Code	See Page	Wire Harness with Splice Points		See Page	Wire Harness with Splice Points
12	46	Cowl Wire	15	46	Cowl Wire
13	46	Engine Wire			

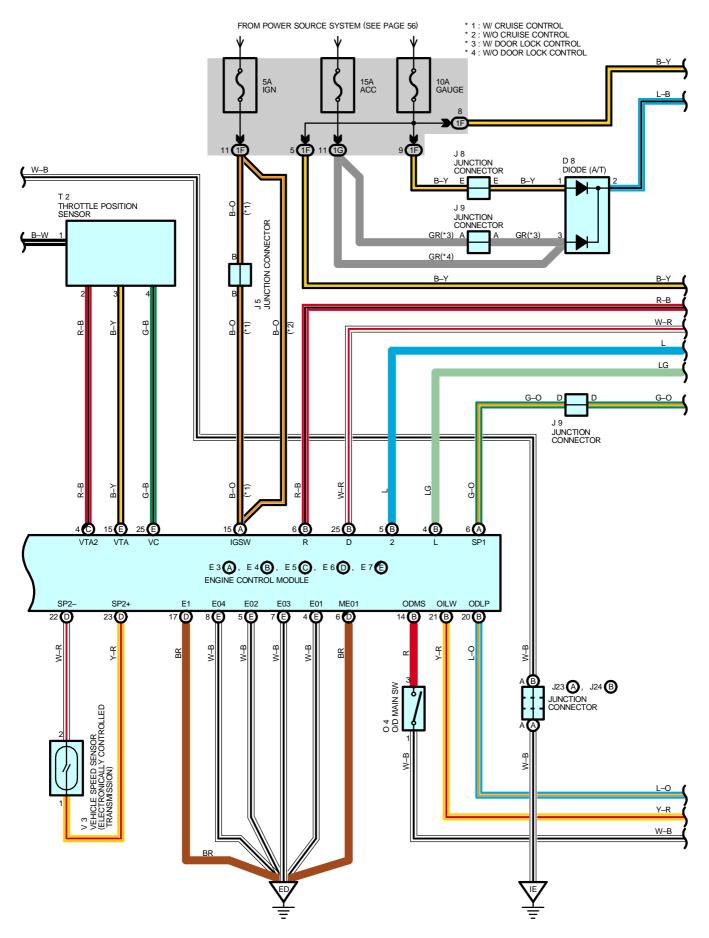
<sup>\* 1 :</sup> w/ Daytime Running Light

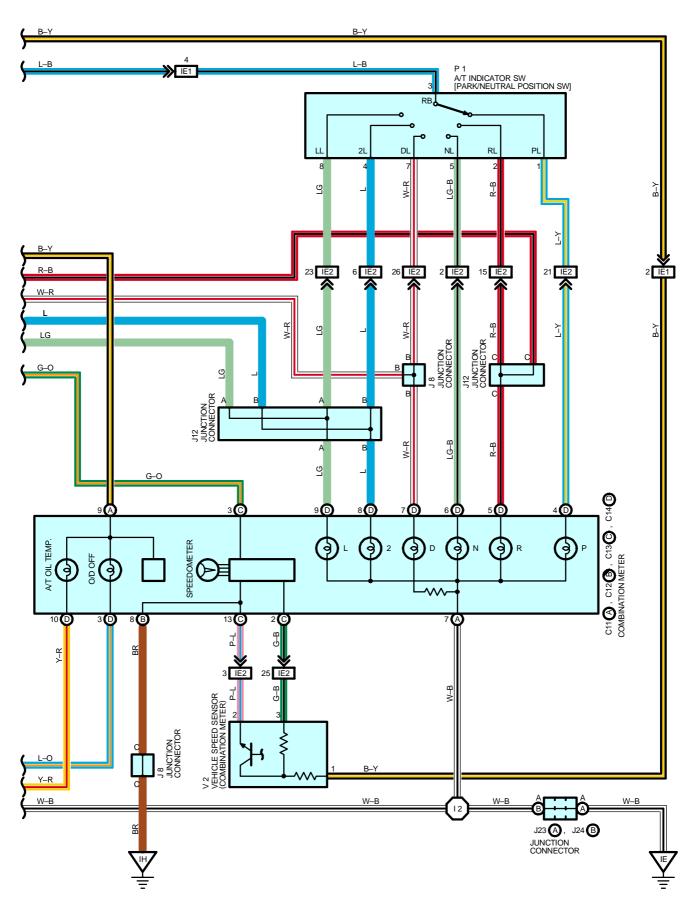
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)







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

#### 1. GEAR SHIFT OPERATION

During driving, the engine control module selects the shift for each gear which is most appropriate to the driving conditions, based on input signals from the engine coolant temp. sensor to TERMINAL THW of the engine control module and also the input signals to TERMINAL SP2+ of the engine control module from the vehicle speed sensor devoted to the electronically controlled transmission. Current is then output to the electronically controlled transmission solenoid. When shifting to 1st speed, current flows from TERMINAL S1 of the engine control module to TERMINAL 4 of the electronically controlled transmission solenoid to GROUND, and continuity to the No.1 solenoid causes the shift.

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

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

#### 2. LOCK-UP OPERATION

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

#### 3. STOP LIGHT SW CIRCUIT

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

#### 4. OVERDRIVE CIRCUIT

\* O/D main SW on

When the O/D main SW is switched to ON position, a signal is input to TERMINAL ODMS of the engine control module, and enables shift change to the overdrive range, through the control of the engine control module.

\* O/D main SW off

When the O/D main SW is switched to OFF position, a signal is input to TERMINAL ODMS of the engine control module, and prohibits shift change to the overdrive range through the control of the engine control module. When in the overdrive range already, shift down is made.

# ELECTRONICALLY CONTROLLED TRANSMISSION AND A/T INDICATOR

#### SERVICE HINTS

#### **E1 ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID**

4, 7, 8-GROUND : Approx. 13  $\Omega$ 

#### O4 O/D MAIN SW

3-1 : Open with O/D main SW at ON position Closed with O/D main SW at OFF position

#### **S4 STOP LIGHT SW**

1-2: Closed with brake pedal depressed

### E3(A), E4 (B), E6 (C), E7 (D) ENGINE CONTROL MODULE

S1-E1: 9-14 volts with vehicle not move and shift lever in **D** position

S2, SL-E1: 0-1.5 volts with vehicle not move

STP-E1: 7.5-14 volts with brake pedal depressed

: 0-1.5 volts with brake pedal released

THW-E1: 0.2-1.0 volts with idling, engine coolant temp. 60°C (140°F)-120°C (248°F)

VTA-E1: 0.3-1.0 volts with ignition SW on and throttle valve fully closed

: 3.2-4.9 volts with ignition SW on and throttle valve fully open

VC-E1: 4.5-5.5 volts with ignition SW at ON or ST position

ODMS-E1: 9-14 volts with O/D main SW turned on

: 0-3 volts with O/D main SW turned off SP1-E1: Pulse generation with vehicle moving

2-E1: 7.5-14 volts with shift lever at 2 position

: 0-1.5 volts with shift lever at except 2 position

L-E1: 7.5-14 volts with shift lever at L position : 0-1.5 volts with shift lever at except L position

+B-E1: 9-14 volts with ignition SW at ON or ST position

BATT-E1 : Always 9-14 volts

OIL-E2: 0.1-0.9 volts after engine warm up

OILW-E1: 0-1.5 volts with engine cranking at 400 rpm or more

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

3-1: Closed with shift lever in P position

3-2: Closed with shift lever in R position

3-5: Closed with shift lever in N position

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

3-4: Closed with shift lever in 2 position 3-8: Closed with shift lever in L position

### : PARTS LOCATION

Co	de	See Page	Co	de	See Page	Co	de	See Page
Α	4	32 (5VZ–FE)	E5	С	34	J23	Α	35
C11	Α	34	E6	D	34	J24	В	35
C12	В	34	E7	Е	34	O4		35
C13	С	34	J	1	33 (5VZ-FE)	Р	1	33 (5VZ-FE)
C14	D	34	J5		35	S4		35
D	D8 34		J8		35	Т	2	33 (5VZ-FE)
Е	1	32 (5VZ–FE)	J	9	35	T13	С	35
E2		32 (5VZ-FE)	J10		35	V2		33 (5VZ-FE)
E3	Α	34	J.	12	35	V	3	33 (5VZ-FE)
E4	В	34	J.	18	33 (5VZ-FE)			

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

# (5VZ-FE)

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	22 (*2)	
10	26 (*1)	
1F	22 (*2)	Could Wire and Driver Cide I/D // awar Finish Banel)
i r	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G	22 (*2)	
16	26 (*1)	

# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
EF1 42 (5VZ–FE) Engine Wire and Sensor Wire (Over the Cylinder Head)					
IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)			
IE1	46	Engine Mire and Coud Mire (Dight Side of Instrument Dane))			
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)			

# : GROUND POINTS

Code	See Page	Ground Points Location
EA	42 (5VZ-FE)	Front Left Fender
ED	42 (5VZ-FE)	Intake Manifold Left
IE	44	Left Kick Panel
IH	44	Right Kick Panel

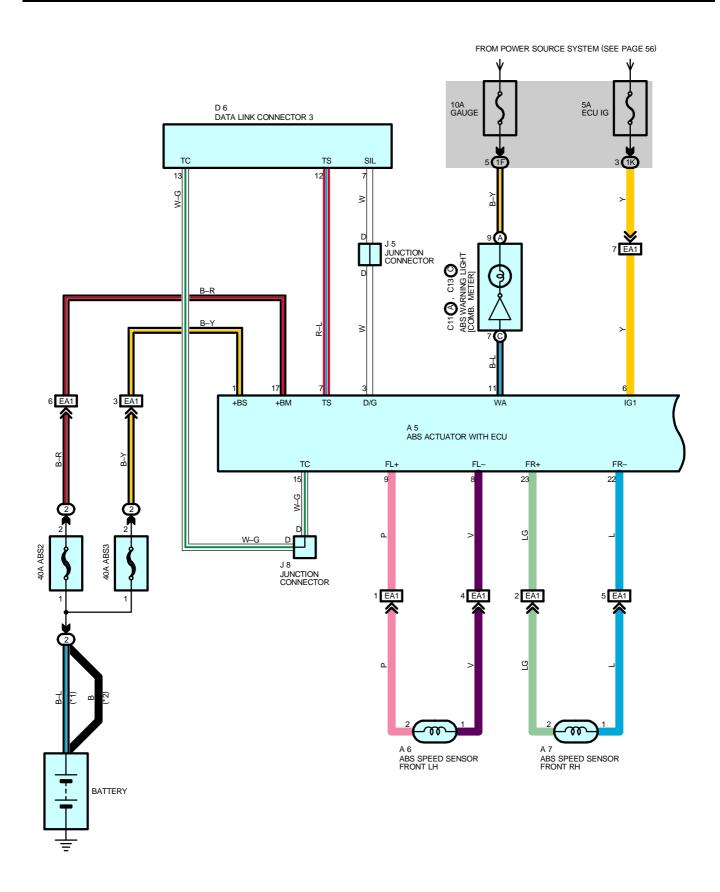
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
12	46	Cowl Wire	13	46	Engine Wire

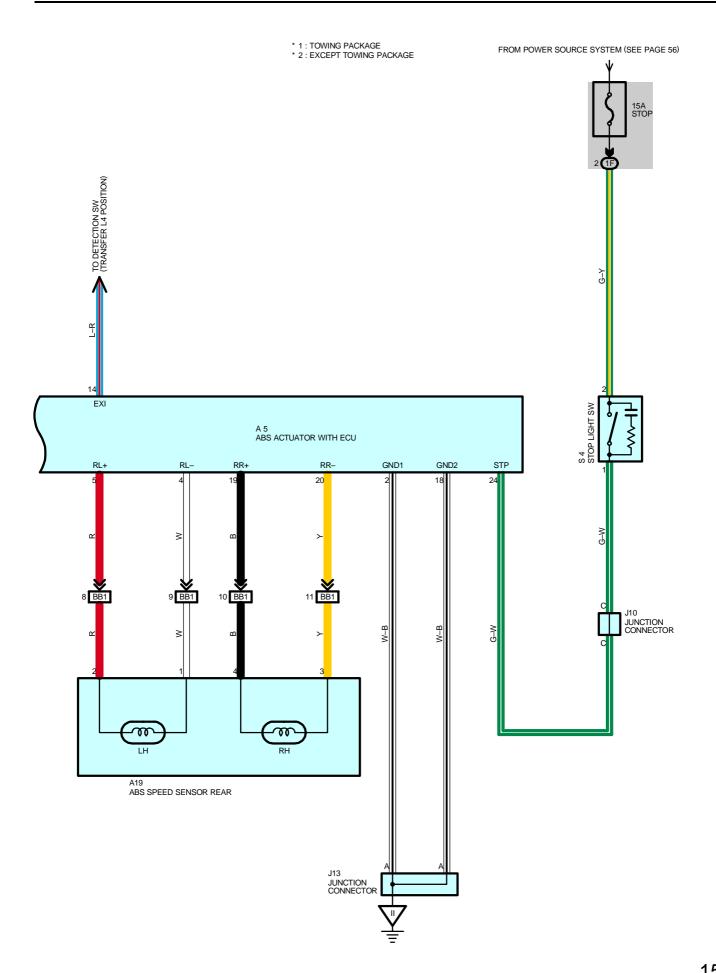
<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)





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 SIGNAL

(1) Speed sensor signal

The speed of the wheels is detected and input to TERMINALS FL+, FR+, RL+ and RR+ of the ABS actuator with ECU.

(2) Stop light SW signal

A signal is input to TERMINAL STP of the ABS actuator with ECU when the brake pedal is depressed.

#### 2. SYSTEM OPERATION

During sudden braking, the ABS actuator with ECU which has signals input from each sensor lets the hydraulic pressure acting on each wheel cylinder escape to the reservoir.

The pump inside the ABS actuator with ECU is also operating at this time and it returns the brake fluid from the reservoir to the master cylinder, thus preventing locking of vehicle wheels.

If the ABS actuator with ECU judges that the hydraulic pressure acting on the wheel cylinder is insufficient, the current acting on the 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**

#### A6, A7 ABS SPEED SENSOR FRONT LH, RH

1–2 : **0.92–1.22** kΩ (**20**°C, **68**°F)

#### A19 ABS SPEED SENSOR REAR

1–2 : **0.89–1.29** k $\Omega$  (**20**°C, **68**°F) 3–4 : **0.89–1.29** k $\Omega$  (**20**°C, **68**°F)

#### **A5 ABS ACTUATOR WITH ECU**

6-GROUND: 10-14 volts with ignition SW at ON or ST position

24-GROUND: 10-14 volts with stop light SW on (Brake pedal depressed)

2, 18-GROUND: Always continuity

#### **S4 STOP LIGHT SW**

2-1: Closed with brake pedal depressed

### : PARTS LOCATION

Code	See Page	Co	de	See Page	Code	See Page
45	30 (2UZ-FE)		10	36 (Access Cab)	J8	35
A5	32 (5VZ-FE)	A19		37 (Standard Cab)	J10	35
46	30 (2UZ-FE)	C11	Α	34	J13	35
A6	32 (5VZ-FE)	C13	С	34	S4	35
A-7	30 (2UZ-FE)	D	6	34		
A7	32 (5VZ-FE)	J	5	35		

## : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)				
1F	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
117	26 (*1)	Cow wife and Driver Side 3/B (Lower Fillish Failer)				
1K	22 (*2)	Engine Deem Main Mire and Driver Cide I/D / away Finish Denal)				
I I K	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Davtime Running Light

<sup>\* 3 :</sup> Bench Seat

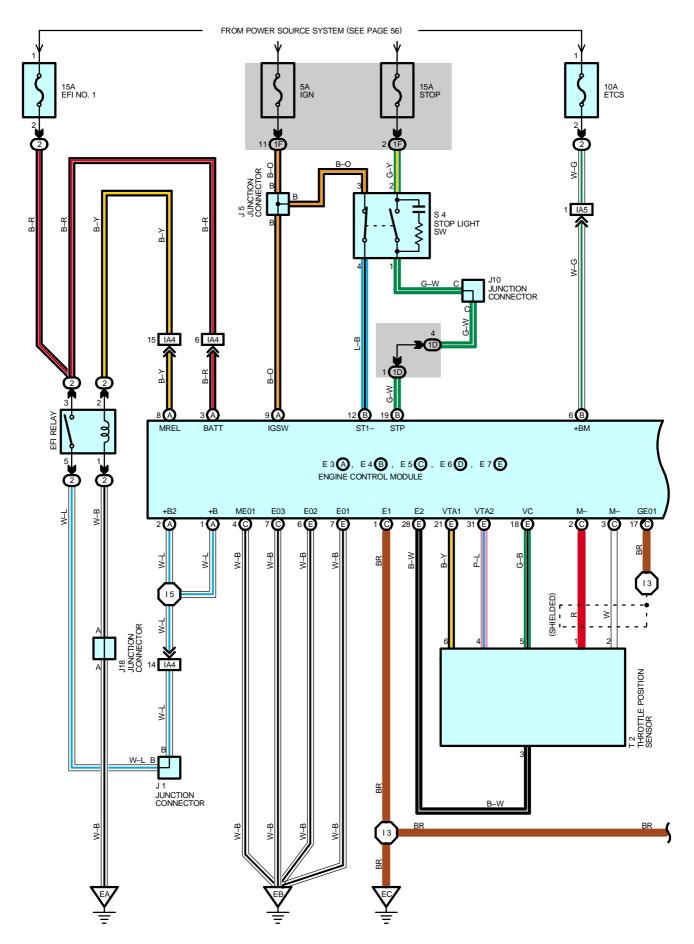
<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

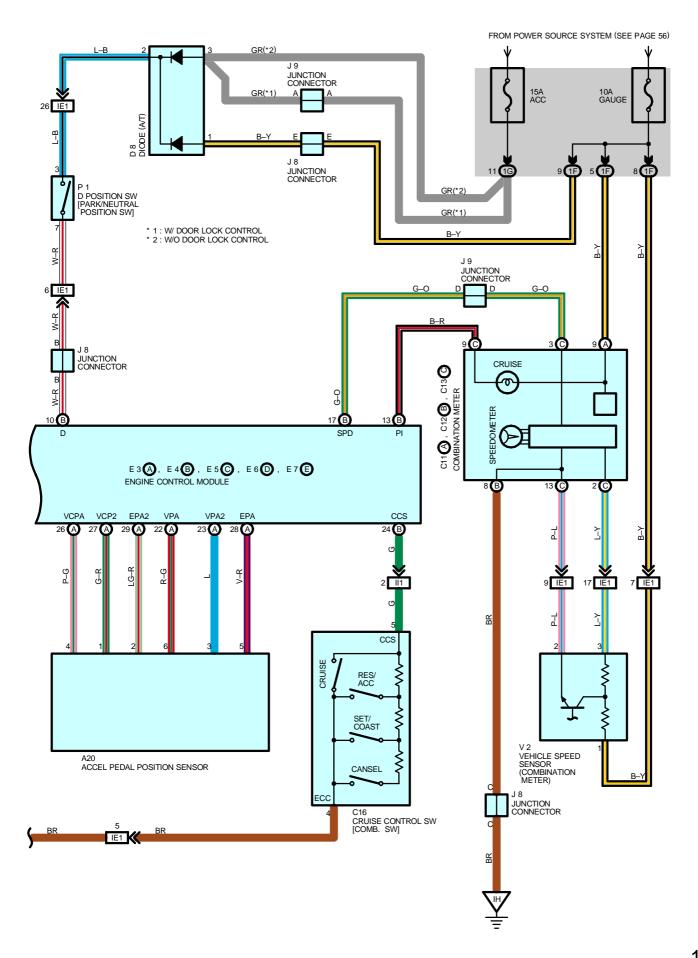
# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)				
E 4.4	40 (2UZ-FE)	Coul Wire and Engine Doom Main Wire (Dight Fonder)				
EA1	42 (5VZ-FE)	Cowl Wire and Engine Room Main Wire (Right Fender)				
BB1	48 (Access Cab)	Frame Mire and Coul Mire (Under the Driver's Cost)				
	50 (Standard Cab)	Frame Wire and Cowl Wire (Under the Driver's Seat)				

# : GROUND POINTS

Code	See Page	Ground Points Location
II	44	Right Kick Panel





# **CRUISE CONTROL (2UZ-FE)**

#### SYSTEM OUTLINE

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

#### SET CONTROL

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

#### **COAST CONTROL**

When the SET/COAST SW is operated to on, the cruise control opening angle requirement is turned to 0 to decrease the vehicle speed, and the speed when the SET/COAST SW is operated to off is memorized, and the vehicle speed is controlled at that speed.

Furthermore, every time the SET/COAST SW is operated momentarily (Approx. 0.5 sec.) to on, the memorized vehicle speed is decreased by approx. 1.6 km/h (1.0 mph).

#### **ACCEL CONTROL**

When the RES/ACC SW is operated to on, the throttle motor rotates the throttle valve to open direction to increase the vehicle speed, and the speed when the RES/ACC SW is operated to off is memorized, and the vehicle speed is controlled at that speed.

Furthermore, every time the RES/ACC SW is operated momentarily (Approx. 0.5 sec.) to on, the memorized vehicle speed is increased by approx. 1.6 km/h (1.0 mph).

#### MANUAL CANCEL MECHANISM

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

- (1) Stop lamp SW is on (Brake pedal is depressed)
- (2) The CANCEL SW of the control SW is on
- (3) CRUISE SW is off

#### **RESUME CONTROL**

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

#### **OVERDRIVE FUNCTION**

The overdrive may be cut on an uphill grade, while traveling with the cruise control.

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

### **AUTO CANCEL OPERATION**

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

- (1) Disconnection and/or short in the stop light SW
- (2) Malfunction in the vehicle speed signal
- (3) Malfunction in the electronic throttle parts
- (4) Malfunction in the stop light SW input circuit
- (5) Malfunction in the cancel circuit
- (6) The actual vehicle speed becomes slower than the minimum speed limit
- (7) The actual vehicle speed becomes -16 km/h (10 mph) slower than the set speed

#### **SERVICE HINTS**

### E3 (A), E4 (B), E6 (D), E7 (E) ENGINE CONTROL MODULE

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

BATT-E1: Always 9.0-14.0 volts

STP-E1: **7.5-14.0** volts with brake pedal depressed: Below **1.5** volts with brake pedal released

### C16 CRUISE CONTROL SW [COMB. SW]

5–3 : Approx. **1540** $\Omega$  with CANCEL SW on Approx. **240** $\Omega$  with RES/ACC SW on Approx. **630** $\Omega$  with SET/COAST SW on

# : PARTS LOCATION

Code		See Page	Code		See Page	Code	See Page
A20		34	E4	В	34	J9	35
C11	Α	34	E5	С	34	J10	35
C12	В	34	E6	D	34	J18	31 (2UZ–FE)
C13	С	34	E7	Е	34	P1	31 (2UZ-FE)
C	16	34	J	1	31 (2UZ-FE)	S4	35
D8		34	J	5	35	T2	31 (2UZ-FE)
E3 A		34	J	8	35	V2	31 (2UZ-FE)

## : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1D	22 (*2)	
טו	26 (*1)	
1F	22 (*2)	Coul Wire and Driver Cide I/D // awar Finish Banel)
i r	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1G	22 (*2)	
	26 (*1)	

# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)	
IA4	44	Engine Deem Main Wire and Coul Wire // of Viels Denelly	
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)	
IE1	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)	
II1	46	Cowl Wire and Cowl Wire (Instrument Panel Reinforcement RH)	

# : GROUND POINTS

Code	See Page	Ground Points Location			
EA	40 (2UZ-FE)	Front Left Fender			
EB	40 (2UZ-FE)	Rear Bank of Right Cylinder Head			
EC	40 (2UZ-FE)	Rear Bank of Left Cylinder Head			
IH	44	Right Kick Panel			

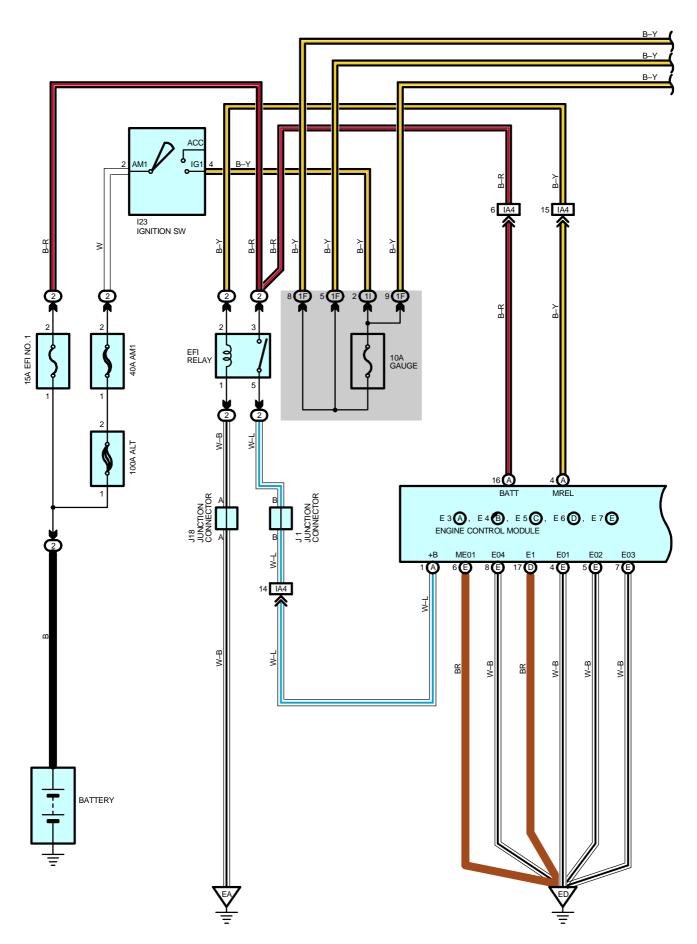
Code	ode See Page Wire Harness with Splice Points		Code	See Page	Wire Harness with Splice Points
13	46	Engine Wire	15	46	Cowl Wire

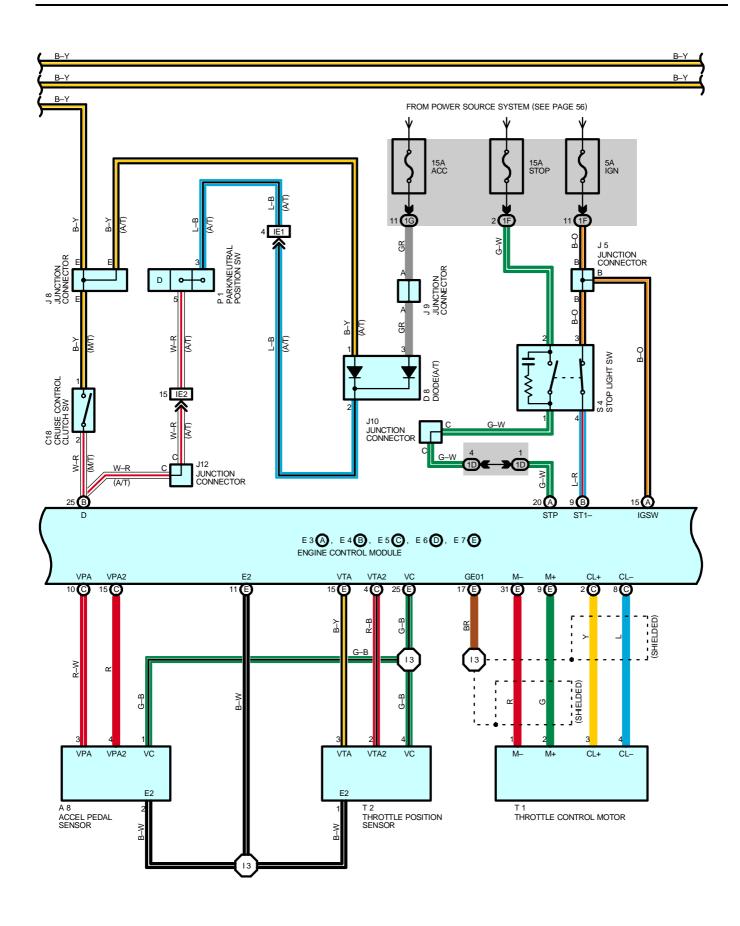
<sup>\* 1 :</sup> w/ Daytime Running Light

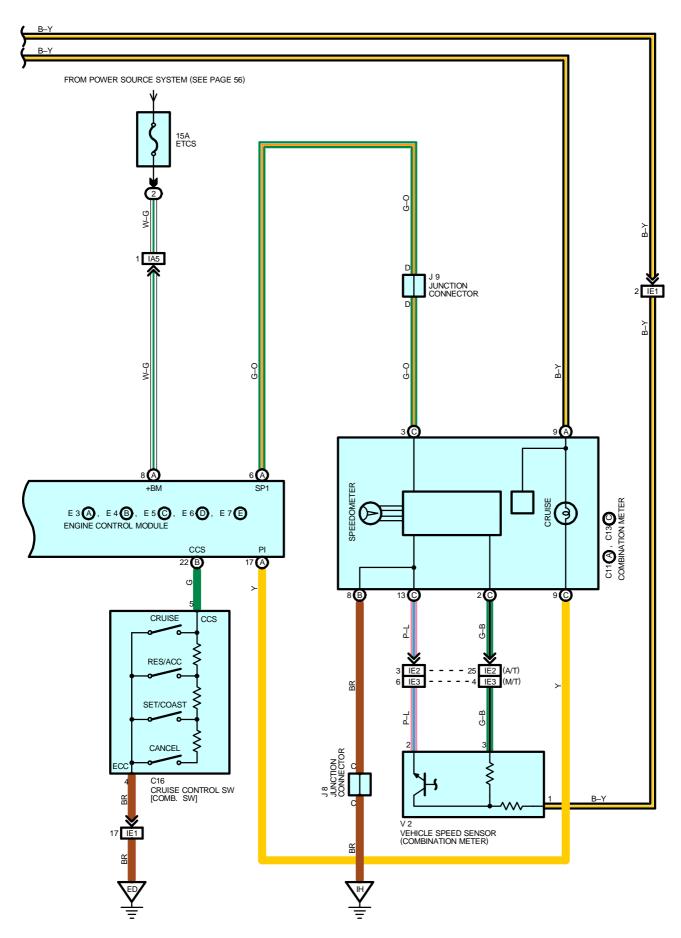
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)







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

#### SET CONTROL

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

#### **COAST CONTROL**

When the SET/COAST SW is operated to on, the cruise control opening angle requirement is turned to 0 to decrease the vehicle speed, and the speed when the SET/COAST SW is operated to off is memorized, and the vehicle speed is controlled at that speed.

Furthermore, every time the SET/COAST SW is operated momentarily (Approx. 0.5 sec.) to on, the memorized vehicle speed is decreased by approx. 1.6 km/h (1.0 mph).

#### **ACCEL CONTROL**

When the RES/ACC SW is operated to on, the throttle motor rotates the throttle valve to open direction to increase the vehicle speed, and the speed when the RES/ACC SW is operated to off is memorized, and the vehicle speed is controlled at that speed.

Furthermore, every time the RES/ACC SW is operated momentarily (Approx. 0.5 sec.) to on, the memorized vehicle speed is increased by approx. 1.6 km/h (1.0 mph).

#### MANUAL CANCEL MECHANISM

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

- (1) Stop lamp SW is on (Brake pedal is depressed)
- (2) The CANCEL SW of the control SW is on
- (3) CRUISE SW is off

#### RESUME CONTROL

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

#### **OVERDRIVE FUNCTION**

The overdrive may be cut on an uphill grade, while traveling with the cruise control.

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

### **AUTO CANCEL OPERATION**

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

- (1) Disconnection and/or short in the stop light SW
- (2) Malfunction in the vehicle speed signal
- (3) Malfunction in the electronic throttle parts
- (4) Malfunction in the stop light SW input circuit
- (5) Malfunction in the cancel circuit
- (6) The actual vehicle speed becomes slower than the minimum speed limit
- (7) The actual vehicle speed becomes -16 km/h (10 mph) slower than the set speed

#### SERVICE HINTS

## E3 (A), E4 (B), E6 (D), E7 (E) ENGINE CONTROL MODULE

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

BATT-E1: Always 9.0-14.0 volts

STP-E1: **7.5-14.0** volts with brake pedal depressed : Below **1.5** volts with brake pedal released

### C16 CRUISE CONTROL SW [COMB. SW]

5–3 : Approx. **1540** $\Omega$  with CANCEL SW on Approx. **240** $\Omega$  with RES/ACC SW on Approx. **630** $\Omega$  with SET/COAST SW on

# **CRUISE CONTROL (5VZ-FE)**

# : PARTS LOCATION

Co	de	See Page	See Page Code		See Page	Code	See Page
Α	.8	32 (5VZ-FE)	E5 C		34	J10	35
C11	Α	34	E6	D	34	J12	35
C13	С	34	E7	Е	34	J18	33 (5VZ-FE)
С	16	34	123		35	P1	33 (5VZ-FE)
С	18	34	J	1	33 (5VZ-FE)	S4	35
	8	34	J5		35	T1	33 (5VZ-FE)
E3	Α	34	J	8	35	T2	33 (5VZ-FE)
E4	В	34	J	9	35	V2	33 (5VZ-FE)

# : RELAY BLOCKS

Code	See Page	elay Blocks (Relay Block Location)				
2	21	Engine Room R/B (Engine Compartment Left)				

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)					
1D	22 (*2)						
טו	26 (*1)						
1F	22 (*2)	Could Wire and Driver Cide I/D /Laurer Finish Bonelly					
115	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)					
1G	22 (*2)						
16	26 (*1)						
11	22 (*2)	Fasing Boom Main Wire and Driver Cide 1/D /Leurer Finish Bonel					
11	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)					

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)					
IA4	44	Engine Deem Main Wire and Coull Wire // off Viels Denall					
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)					
IE1							
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)					
IE3							

# : GROUND POINTS

Code	See Page	Ground Points Location
EA	42 (5VZ-FE)	Front Left Fender
ED	42 (5VZ-FE)	Intake Manifold Left
IH	44	Right Kick Panel

Cod	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
13	46	Engine Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

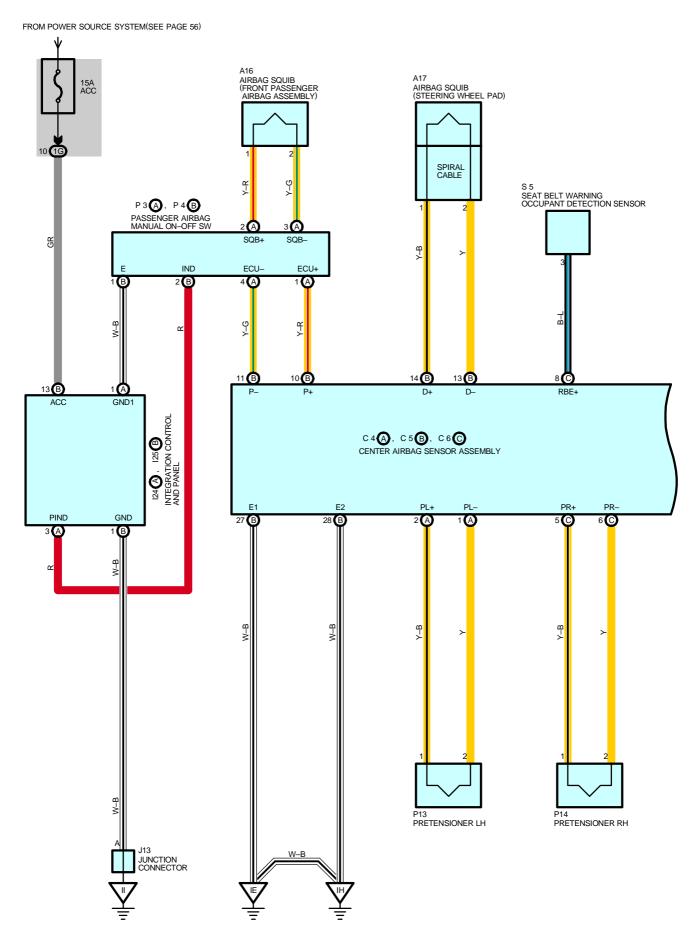
<sup>\* 2 :</sup> w/o Daytime Running Light

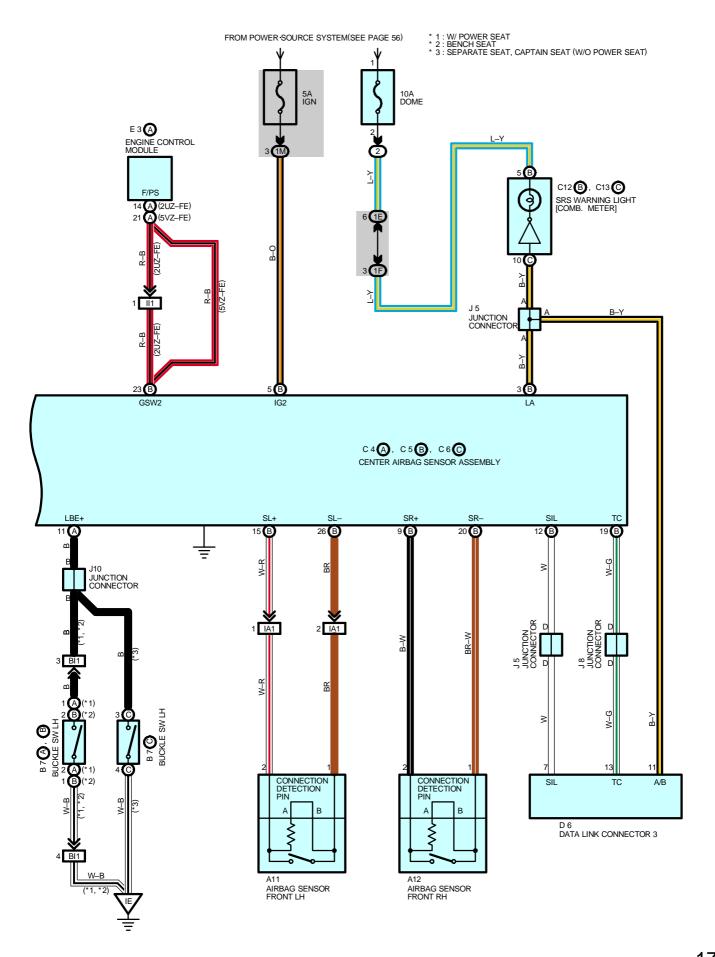
<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

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

- Malfunction symptoms of the SRS are difficult to confirm, so the DTCs become the most important source of information
  when troubleshooting. When troubleshooting the SRS, always inspect the DTCs before disconnecting the battery.
- Work must be started after 90 seconds from when the ignition switch is turned to the "LOCK" position and the
  negative (–) terminal cable is disconnected from the battery.
   (The SRS is equipped with a back-up power source so that if work is started within 90 seconds from
  disconnecting the negative (–) terminal cable of the battery, the SRS may be deployed.)
- When the negative (-) terminal cable is disconnected from the battery, the memory of the clock and audio system will be
  canceled. So before starting work, make a record of the contents memorized in the audio memory system. When work is
  finished, reset the audio systems as they were before and adjust the clock. To avoid erasing the memory in each
  memory system, never use a back-up power supply from outside the vehicle.
- Before repairs, remove the airbag sensor if shocks are likely to be applied to the sensor during repairs.
- Do not expose the steering wheel pad, front passenger airbag assembly, seat belt pretensioner, center airbag sensor assembly or front airbag sensor assembly directly to hot air or flames.
- Even in cases of a minor collision where the SRS does not deploy, the steering wheel pad, front passenger airbag
  assembly, seat belt pretensioner, center airbag sensor assembly and front airbag sensor assembly should be inspected.
- Never use SRS parts from another vehicle. When replacing parts, replace them with new parts.
- Never disassemble and repair the steering wheel pad, front passenger airbag assembly, seat belt pretensioner, center airbag sensor assembly or front airbag sensor assembly in order to reuse it.
- If the steering wheel pad, front passenger airbag assembly, seat belt pretensioner, center airbag sensor assembly or
  front airbag sensor assembly has been dropped, or if there are cracks, dents or other defects in the case, bracket or
  connector, replace them with new ones.
- Use a volt/ohmmeter with high impedance (10 kΩ/V minimum) for troubleshooting the system's electrical circuits.
- Information labels are attached to the periphery of the SRS components. Follow the instructions on the notices.
- After work on the SRS is completed, perform the SRS warning light check.
- If the vehicle is equipped with a mobile communication system, refer to the precaution in the IN section of the Repair Manual.





The SRS is a driver protection device which has a supplemental role to the seat belts.

When the ignition SW on, the current from the IGN fuse flows to TERMINAL (B) 5 of the center airbag sensor assembly. If an accident occurs while driving, deceleration caused by a frontal impact is detected (by sensor) and when the frontal impact exceeds a set level, the current from the IGN fuse flows to TERMINAL (B) 5 of the center airbag sensor assembly. This current flows to TERMINAL (B) 14, (A) 2, (C) 5 to TERMINAL 1 of the airbag squib (Steering wheel pad) and Pretensioners to TERMINAL 2 to TERMINAL (B) 13, (A) 1, (C) 6 of the center airbag sensor assembly, and also flows to TERMINAL (B) 11 of the center airbag sensor assembly to TERMINAL (A) 4 of the passenger airbag manual On–Off SW to TERMINAL (A) 2 to TERMINAL 1 of the airbag squib (Front passenger airbag assembly) to TERMINAL 2 to TERMINAL (A) 3 of the passenger airbag manual On–Off SW to TERMINAL (B) 10 of the center airbag sensor assembly. Furthermore, the current flows to TERMINAL (B) 27 or (B) 28 to GROUND, causing the center airbag squibs to expand.

When the safing sensor built into the center airbag sensor assembly is on, airbag sensor is off and the current from the IGN fuse flows same as above—mentioned flowing, causing the airbag squibs to expand. When the safing sensor built into the center airbag sensor assembly is on, the airbag sensor on one of the above-mentioned circuits is activated so that current flows to the airbag squibs and causes them to operate.

The airbag stored inside the steering wheel pad is instantaneously expanded to soften the shock to the driver.

The airbag stored inside the passenger's instrument panel is instantaneously expanded to soften the shock to the passenger.

#### 1. FRONT PASSENGER AIRBAG ON/OFF OPERATION

When the passenger airbag manual On–Off SW is on, the current flowing from the IGN fuse to the airbag squib (Front passenger airbag assembly) is same as above, causing the airbag squib (Front passenger airbag assembly) to expand in an accident.

If the passenger airbag manual On–Off SW is turned to off, the current flows from the ACC fuse to TERMINAL (B) 13 of the passenger airbag OFF indicator (Integration control and panel) to TERMINAL (A) 3 to TERMINAL (B) 2 of the airbag manual On–Off SW to TERMINAL (B) 1 to TERMINAL (A) 1 of the integration control and panel to TERMINAL (B) 1 to GROUND, lighting the indicator up. Then the current between TERMINAL (B) 11 of the airbag sensor assembly and the airbag squib (Front passenger airbag assembly) is cut off, so that it does not expand the airbag squib (Front passenger airbag assembly) in an accident.

## : PARTS LOCATION

Co	de	See Page	Co	ode	See Page	Code		See Page
	44	30 (2UZ-FE)		Α	34	J10		35
A.	11	32 (5VZ–FE)	C5	C5 B 34		J1	13	35
	40	30 (2UZ-FE)	C6	С	34	P3	Α	35
A	12	32 (5VZ-FE)	C12	В	34	P4	В	35
A.	16	34	C13	С	34	D42		36 (Access Cab)
A.	17	34	D6		34	P13		37 (Standard Cab)
	Α	38 (w/ Power Seat)	E3	Α	34	P14		36 (Access Cab)
	В	36 (Access Cab *3)	124	Α	35	P.	14	37 (Standard Cab)
B7	В	37 (Standard Cab *3)	125	В	35	_	5	36 (Access Cab)
		36 (Access Cab *4)	J	5	35	]	ວ	37 (Standard Cab)
	С	37 (Standard Cab *4)	J	8	35			

#### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)						
1E	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)						
IL	26 (*1)	Lingine Room Main Wile and Driver Side 3/b (Lower Fillish Faller)						
1F	22 (*2)							
IF	26 (*1)							
10	22 (*2)	Coul Wire and Driver Cide 1/D // awar Finish Banel)						
1G	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)						
414	22 (*2)							
1M	26 (*1)							

# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)					
IA1	44	ngine Room Main Wire and Cowl Wire (Left Kick Panel)					
II1	46	Cowl Wire and Cowl Wire (Instrument Panel Reinforcement RH)					
	48 (Access Cab)						
BI1	50 (Standard Cab)	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)					
	52						

# : GROUND POINTS

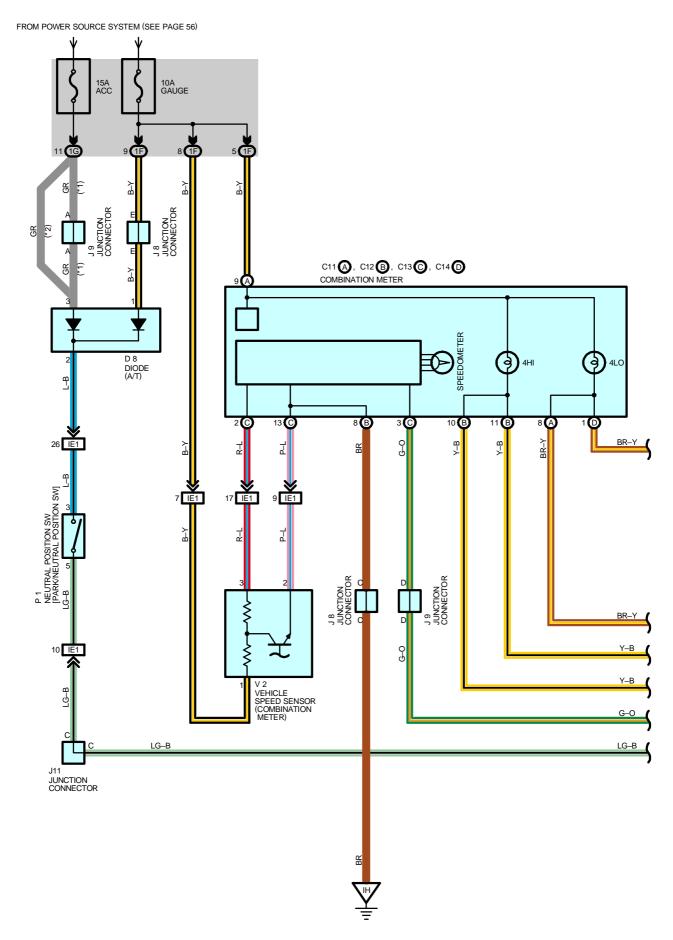
Code	See Page	Ground Points Location				
IE	44	Left Kick Panel				
IH	44	Dight Kiek Danel				
II	44	Right Kick Panel				

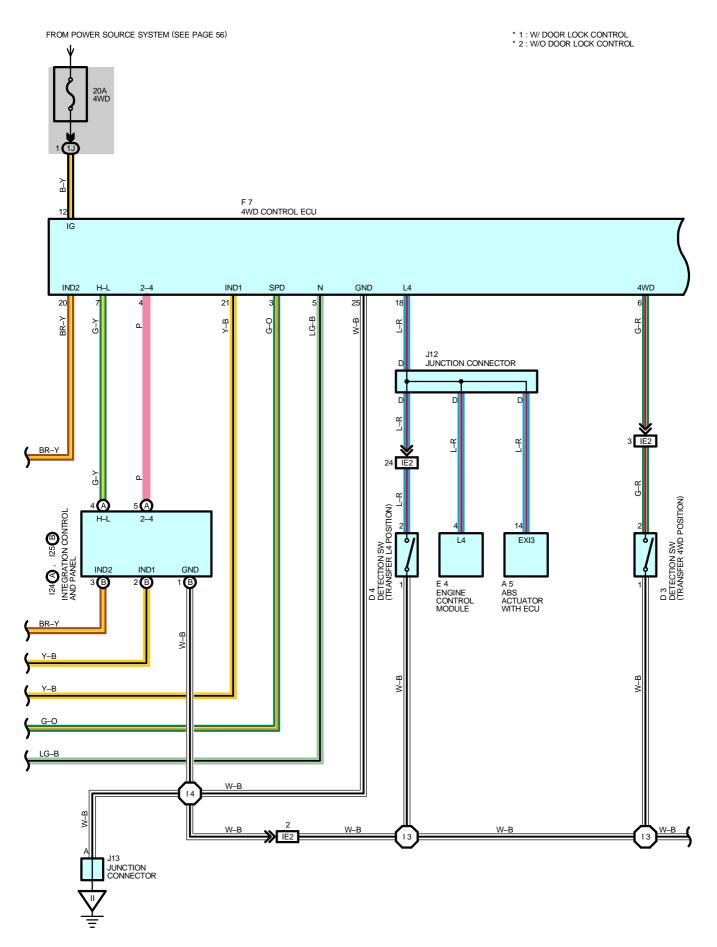
<sup>\* 1 :</sup> w/ Daytime Running Light

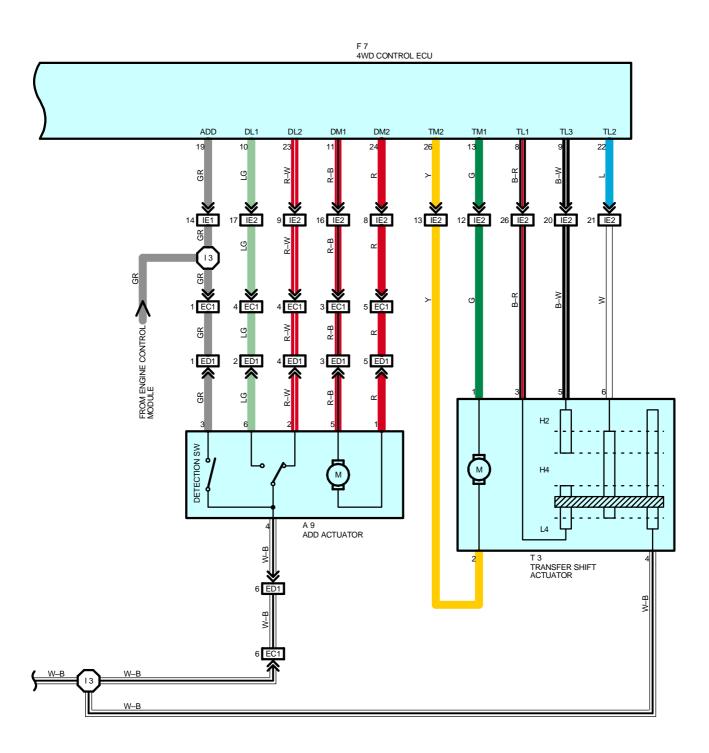
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)







In the conventional system, the 2–4 select SW and the transfer shift lever was used to shift the mode between H–L. In this system, the transfer shift lever is not used, and the H–L mode shift can be done by the transfer shift actuator.

The mode can be changed by the touch select 2-4 SW and touch select high-low in the integration control and panel.

The shift range is controlled according to the vehicle speed sensor and Park/Neutral position SW, and the indicator light is turned ON to inform the driver if any of the following conditions are detected:

- \* The shift is not completed even though 3 seconds have elapsed after transfer operation.
- \* The vehicle speed is above approximately 100 km/h (63 mph) when shifting from H2 to H4.
- \* The vehicle speed is below approximately 5 km/h (3 mph) or the A/T shift lever is in a position other than N position, when shifting from H4 to L4 or visa versa, and from L4 to H2.

#### TRANSFER OPERATION

H2 to H4

When the touch select 2–4 SW in the integration control and panel is turned ON, a signal is input into TERMINAL 4 of the 4WD control ECU.

The 4WD control ECU is activated by this, and the current flows from the 4WD control ECU TERMINAL 13 to transfer shift actuator TERMINAL 1 to motor to TERMINAL 2 to 4WD control ECU TERMINAL 26 to GROUND, and the transfer shifts to 4WD (H4 position.)

When the system shifts to 4WD, the detection SW (Transfer 4WD position) is turned ON, and the current flows from 4WD control ECU TERMINAL 11 to ADD actuator TERMINAL 5 to motor to TERMINAL 1 to 4WD control ECU TERMINAL 24 to GROUND, and the ADD actuator is activated, and the ADD is connected. When the ADD is connected, the detection SW (ADD position SW) is turned ON, and the 4HI Indicator light comes ON.

H4 to H2

When the touch select 2–4 SW in the integration control and panel is turned OFF, a signal is input into TERMINAL 4 of the 4WD control ECU.

The 4WD control ECU is activated by this, and the current flows from the 4WD control ECU TERMINAL 26 to transfer shift actuator TERMINAL 2 to motor to TERMINAL 1 to 4WD control ECU TERMINAL 13 to GROUND, and the transfer shifts to 2WD (H2 position.)

When the system shifts to 2WD, the detection SW (Transfer 4WD position) is turned OFF, and the current flows from 4WD control ECU TERMINAL 24 to ADD actuator TERMINAL 1 to motor to TERMINAL 5 to 4WD control ECU TERMINAL 11 to GROUND, and the ADD actuator is activated, and the ADD is disconnected. When the ADD is disconnected, the detection SW (ADD position SW) is turned OFF, and the 4HI indicator Light turns OFF.

H4 to L4

When the touch select high-low SW in the integration control and panel is turned ON, a signal is input into TERMINAL 7 of the 4WD control ECU.

The 4WD control ECU is activated by this, and the current flows from the 4WD control ECU TERMINAL 13 to transfer shift actuator TERMINAL 1 to motor to TERMINAL 2 to 4WD control ECU TERMINAL 26 to GROUND, and the transfer shifts to 4WD LO position (L4 position.)

The 4HI Indicator is turned OFF and the 4LO indicator is turned ON.

L4 to H4

When the touch select high-low SW in the integration control and panel is turned OFF, a signal is input into TERMINAL 7 of the 4WD control ECU.

The 4WD control ECU is activated by this, and the current flows from the 4WD control ECU TERMINAL 26 to transfer shift actuator TERMINAL 2 to motor to TERMINAL 1 to 4WD control ECU TERMINAL 13 to GROUND, and the transfer shifts to 4WD HI position (H4 Position.)

The 4HI indicator is turned ON and the 4LO indicator is turned OFF.

The shift is not completed even though 3 seconds have elapsed after transfer operation.

- \* The vehicle speed is above approximately 100 km/h (63 mph) when shifting from H2 to H4.
- \* The vehicle speed is below approximately 5 km/h (3 mph) or the A/T Shift Lever is in a position other than N position, when shifting from H4 to L4 or visa versa, and from L4 to H2.

L4 to H2

When the touch select 2–4 SW in the integration control and panel is turned OFF, a signal is input into TERMINAL 4 of the 4WD control ECU.

The 4WD control ECU is activated by this, and the current flows from the 4WD control ECU TERMINAL 26 to transfer shift actuator TERMINAL 2 to motor to TERMINAL 1 to 4WD control ECU TERMINAL 13 to GROUND, and the detection SW (Transfer L4 position) is turned OFF.

Furthermore, the motor rotates to shift the transfer to 2WD (H2 position.)

When the system shifts to 2WD, the detection SW (Transfer 4WD position) is turned OFF, and the current flows from 4WD control ECU TERMINAL 24 to ADD actuator TERMINAL 1 to motor to TERMINAL 5 to 4WD control ECU TERMINAL 11 to GROUND, and the ADD actuator is activated, and the ADD is disconnected. When the ADD is disconnected, the detection SW (ADD position SW) is turned OFF, and the 4LO indicator light turns OFF.

# 4WD (2UZ-FE)

#### H2 to L4

When the touch select 2–4 SW in the integration control and panel is turned ON, and the touch select high–low SW is turned ON, a signal is input into TERMINAL 4 of the 4WD control ECU.

The 4WD control ECU is activated by this, and the current flows from the 4WD control ECU TERMINAL 13 to transfer shift actuator TERMINAL 1 to motor to TERMINAL 2 to 4WD control ECU TERMINAL 26 to GROUND, and the transfer shifts to 4WD (H4 position.)

When the system shifts to 4WD, the detection SW (Transfer 4WD position) is turned ON, and the current flows from 4WD control ECU TERMINAL 11 to ADD actuator TERMINAL 5 to motor to TERMINAL 1 to 4WD control ECU TERMINAL 24 to GROUND, and the ADD actuator is activated, and the ADD is connected. Then a signal is input into TERMINAL 7 of the 4WD control ECU and the 4WD control ECU is activated by this, so the current flows from the 4WD control ECU TERMINAL 13 to transfer shift actuator TERMINAL 1 to motor to TERMINAL 2 to 4WD control ECU TERMINAL 26 to GROUND. The transfer shifts to 4WD LO position (L4 position), and the 4LO indicator light comes ON.

#### **SERVICE HINTS**

#### **F7 4WD CONTROL ECU**

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

25–GROUND : Always continuity 3–GROUND : **4** pulses with **1** rotation

4-GROUND: 2 volts or less with touch select 2-4 SW on

18-GROUND: 2 volts or less with detection SW (Transfer L4 position) on and transfer shift lever at L4 position

#### 124 (A), 125 (B) INTEGRATION CONTROL AND PANEL

(A) 5-(B) 1: Closed with touch select 2-4 SW on

#### P1 NEUTRAL POSITION SW [PARK/NEUTRAL POSITION SW]

3-5: Closed with A/T shift lever at N position

## : PARTS LOCATION

Co	de	See Page	Code		See Page	Code	See Page
А	A5 30 (2UZ–FE) D4 30		30 (2UZ-FE)	J9	35		
А	A9 30 (2UZ–FE) D8		34	J11	35		
C11	Α	34	Е	4	34	J12	35
C12	В	34	F	7	35	J13	35
C13	С	34	124	Α	35	P1	31 (2UZ-FE)
C14	D	34	125	В	35	T3	31 (2UZ-FE)
D	3	30 (2UZ-FE)	J	8	35	V2	31 (2UZ-FE)

#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)							
1F	22 (*2)								
i F	26 (*1)								
10	22 (*2)	Coult Miss and Driver Cide 1/D // avver Finish Banelly							
1G	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)							
4.1	22 (*2)								
1J	26 (*1)								

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)		
EC1	40 (2UZ-FE)	Engine No.2 Wire and Engine Wire (Near the Starter)		
ED1	40 (2UZ-FE)	Engine No.2 Wire and Differential Wire (Near the Transmission)		
IE1	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)		
IE2	40	Engine Wile and Cowi Wile (Right Side of Institutient Pariet)		

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

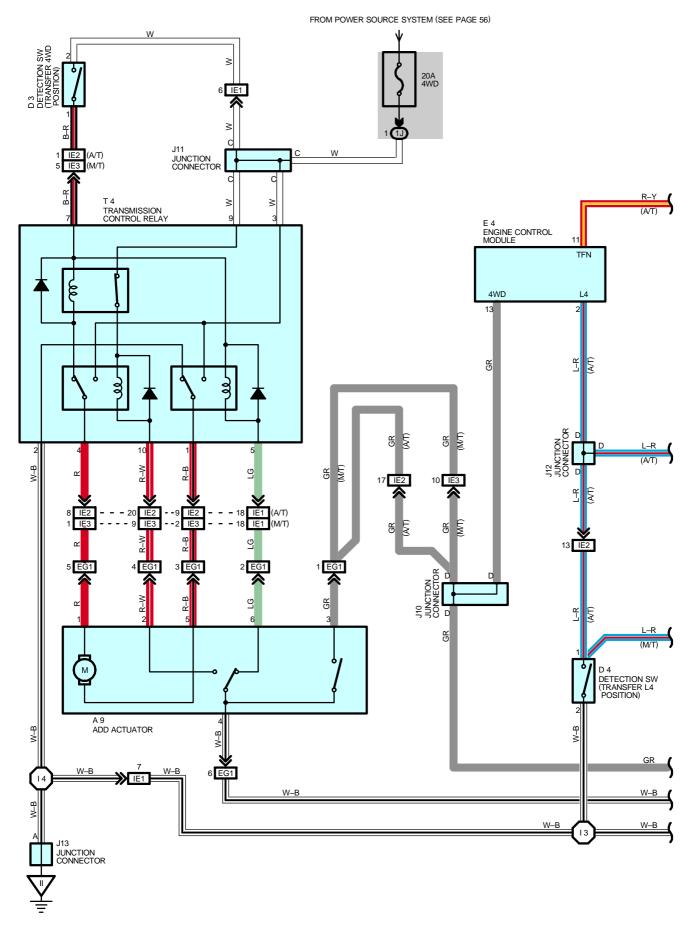


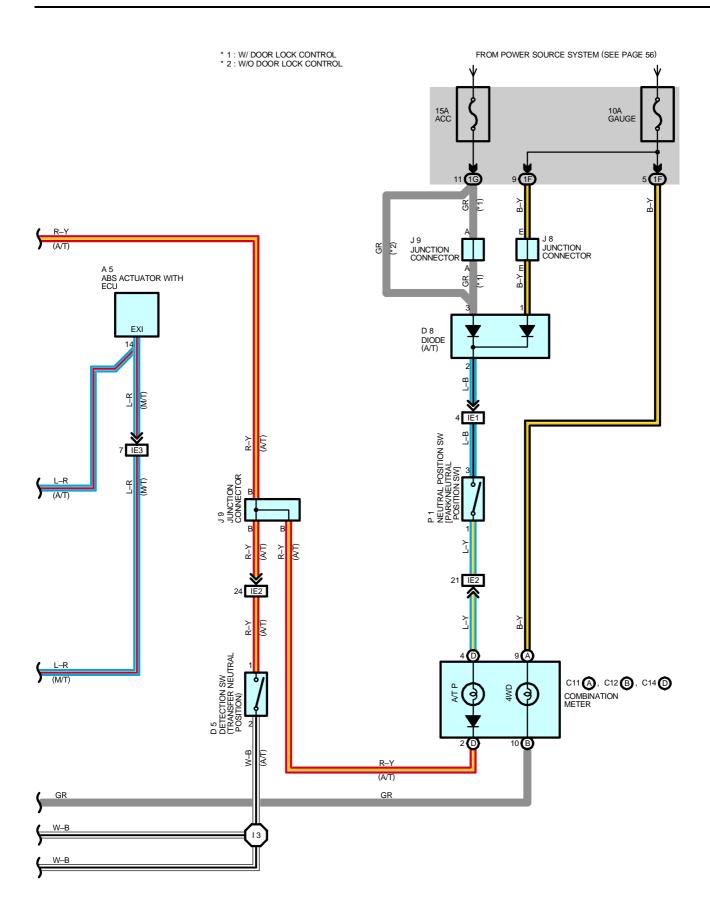
# : GROUND POINTS

Code	See Page	Ground Points Location
IH	44	Right Kick Panel
II		Night Nick Pariet



Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
13	46	Engine Wire	14	46	Cowl Wire





### P1 NEUTRAL POSITION SW [PARK/NEUTRAL POSITION SW]

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

### **D5 DETECTION SW (TRANSFER NEUTRAL POSITION)**

1-2: Closed with transfer position at N position

## : PARTS LOCATION

Code		See Page	Code	See Page	Code	See Page
A5		32 (5VZ-FE)	D4	32 (5VZ-FE)	J10	35
Α	9	32 (5VZ-FE)	D5	32 (5VZ-FE)	J11	35
C11	Α	34	D8	34	J12	35
C12	В	34	E4	34	J13	35
C14	D	34	J8	35	P1	33 (5VZ-FE)
D	3	32 (5VZ-FE)	J9	35	T4	35

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1F	22 (*2)	
i F	26 (*1)	
1G	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
16	26 (*1)	Cowi Wire and Driver Side 3/B (Lower Fillish Parier)
1J	22 (*2)	
IJ	26 (*1)	

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

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
EG1	42 (5VZ-FE)	Engine Wire and Differential Wire (Front Differential Upper Side)
IE1		
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)
IE3		

## : GROUND POINTS

Code	See Page	Ground Points Location
П	44	Right Kick Panel

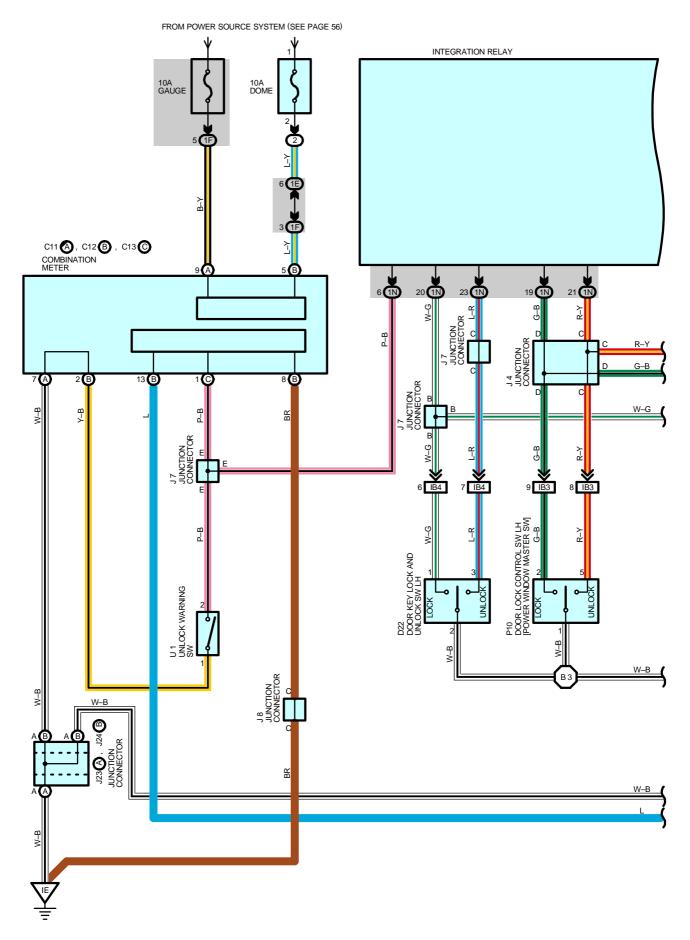
Γ	Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
	13	46	Engine Wire	14	46	Cowl Wire

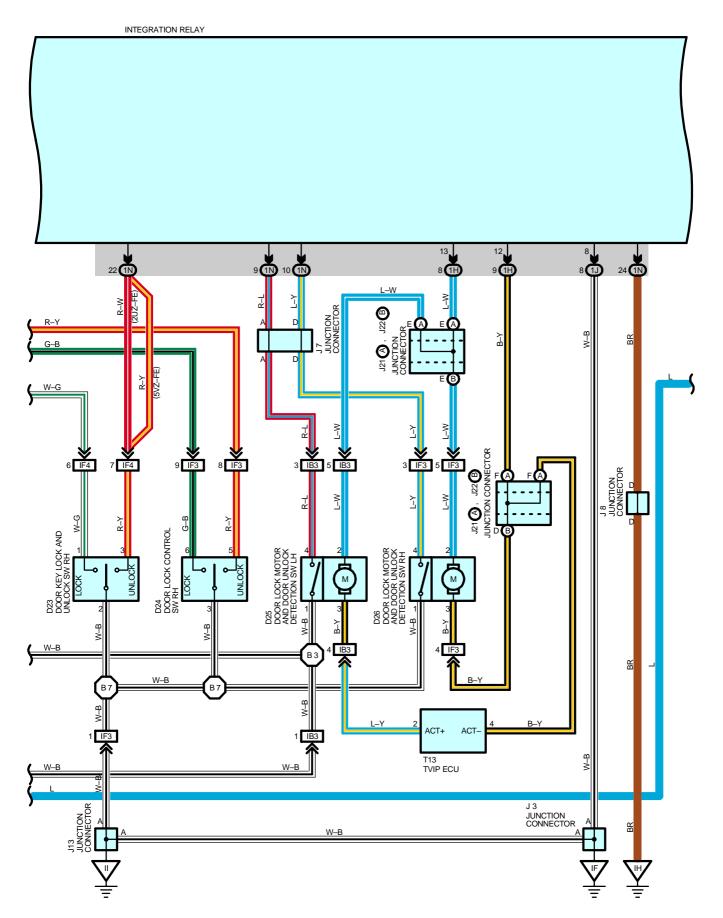
<sup>\* 1 :</sup> w/ Daytime Running Light

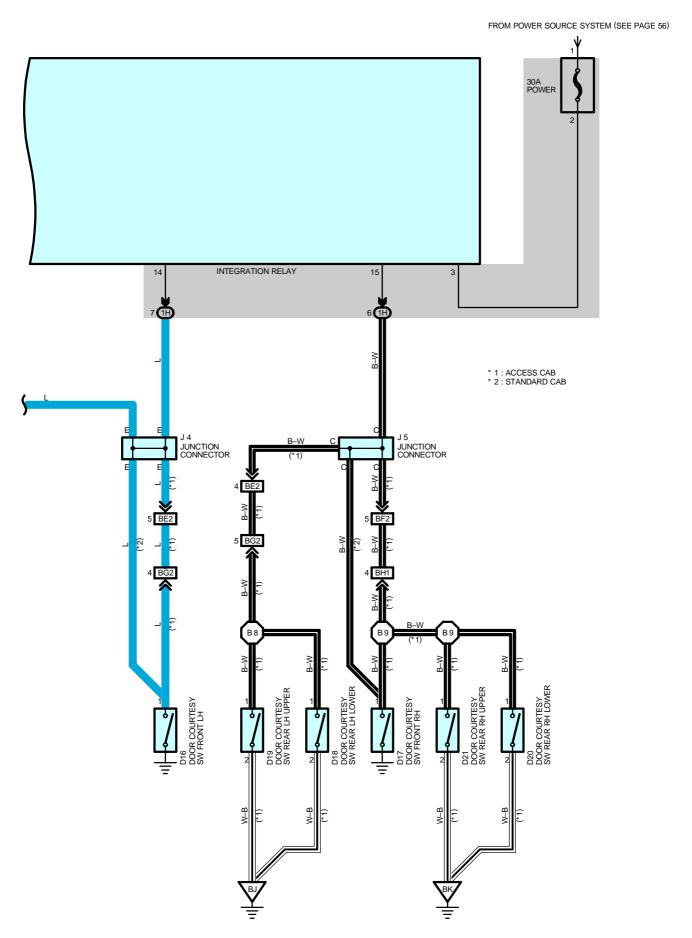
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)







#### **SYSTEM OUTLINE**

Current always flows to TERMINAL 3 of the integration relay through the POWER fuse.

#### 1. MANUAL LOCK OPERATION

To push the door lock control SW or door key lock and unlock SW to LOCK position, a lock signal is input to the integration relay and causes the relay to function. Current flows from TERMINAL 3 of the relay to TERMINAL 13 to TERMINAL 2 of the door lock motors to TERMINAL 3 to TERMINAL 12 of the relay to TERMINAL 8 to GROUND and the door lock motor causes the door to lock.

#### 2. MANUAL UNLOCK OPERATION

To push the door lock control SW or door key lock and unlock SW to UNLOCK position, an unlock signal is input to the integration relay and causes the relay to function. Current flows from TERMINAL 3 of the relay to TERMINAL 12 to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL 13 of the relay to TERMINAL 8 to GROUND and the door lock motor causes the door to unlock.

#### 3. DOUBLE OPERATION UNLOCK OPERATION

When the door key lock and unlock SW LH is turned to unlock position, only the front LH door is mechanically unlocked. Turning the door key lock and unlock SW LH to the unlock side causes a signal to be input to the relay, and if the signal is input again within 3 seconds by turning the door key lock and unlock SW LH to the unlock side again, current flows from TERMINAL 12 of the integration relay to TERMINAL 3 of the door lock motors, TERMINAL 2 to TERMINAL 13 of the integration relay to TERMINAL 8 to GROUND, causing the door lock motors to operate and unlock the doors.

#### 4. KEY CONFINE PREVENTION FUNCTION

\* Operating door lock knob (In door lock motor operation)

With ignition key in cylinder (Unlock warning SW on), when any door is opened and locked using door lock knob (Door lock motor), the door is locked once but each door is unlocked soon by the function of the integration relay. As a result, current flows from TERMINAL 3 of the relay to TERMINAL 12 to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL 13 of the relay to TERMINAL 8 to GROUND and causes all the doors to unlock.

\* Operating door lock control SW or door key lock and unlock SW
With ignition key in cylinder (Unlock warning SW on), when any door is opened and locked using the door lock control
SW or door key lock and unlock SW, all doors are locked once but each door is unlocked by the function of the SW
contained in motor, which inputs the signal to the integration relay. According to this input signal, current flows from
TERMINAL 3 of the relay to TERMINAL 12 to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL 13 of
the relay to TERMINAL 8 to GROUND and causes all the doors to unlock.

#### SERVICE HINTS

#### **INTEGRATION RELAY**

8–GROUND : Always continuity

3-GROUND : Always approx. 12 volts

12-GROUND: Approx. 12 volts for 0.2 seconds with following operations

\* Door lock control SW unlocked

\* Door lock control SW locked with ignition key in cylinder and LH or RH door open

(Ignition key reminder function)

\* Door lock knob locked with ignition key in cylinder and LH or RH door open. (Ignition key reminder function)

\* Unlocking the LH, RH door cylinder with key

13-GROUND: Approx. 12 volts for 0.2 seconds with following operations

\* Door lock control SW locked

\* Locking the LH, RH door cylinder with key

14-GROUND: Continuity with front LH door open

15-GROUND: Continuity with front RH door open (Standard cab)

15-GROUND : Continuity with front RH, rear LH, RH door open (Access cab)

#### D16, D17 DOOR COURTESY SW FRONT LH, RH

1-GROUND: Closed with door open

### D22, D23 DOOR KEY LOCK AND UNLOCK SW LH, RH

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

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

### D25, D26 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW LH, RH

4-1 : Closed with door lock knob **UNLOCK** position

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

1–2: Closed with key in cylinder

# DOOR LOCK CONTROL (w/ DAYTIME RUNNING LIGHT)

## : PARTS LOCATION

Co	de	See Page	Code	See Page	Co	de	See Page
C11	Α	34	D22	37 (Standard Cab)	J	7	35
C12	В	34	Doo	36 (Access Cab)	J	8	35
C13	С	34	D23	37 (Standard Cab)	J1	13	35
-	10	36 (Access Cab)	D04	36 (Access Cab)	J21	Α	35
J D	16	37 (Standard Cab)	D24	37 (Standard Cab)	J22	В	35
-	4-7	36 (Access Cab)	Dos	36 (Access Cab)	J23	Α	35
D.	17	37 (Standard Cab)	D25	37 (Standard Cab)	J24	В	35
D.	18	36 (Access Cab)	Doc	36 (Access Cab)	D	10	36 (Access Cab)
D.	19	36 (Access Cab)	D26	37 (Standard Cab)	P.	10	37 (Standard Cab)
D:	20	36 (Access Cab)	J3	35	T1	13	35
D:	21	36 (Access Cab)	J4	35	U	1	35
D:	22	36 (Access Cab)	J5	35			

## : RELAY BLOCKS

Ī	Code	See Page	Relay Blocks (Relay Block Location)
Ī	2	21	Engine Room R/B (Engine Compartment Left)

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
1F		
1H	26 (*1)	Coul Wire and Driver Cide I/D // awar Finish Banel)
1J		Cowl Wire and Driver Side J/B (Lower Finish Panel)
1N	27 (*1)	

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)		
IB3	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)		
IB4	44			
IF3	46	Treat Dear DI I Wire and Coud Wire (Dight Wiel, Dear)		
IF4	46	Front Door RH Wire and Cowl Wire (Right Kick Panel)		
BE2	48 (Access Cab)	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)		
BF2	48 (Access Cab)	Floor No.1 Wire and Cowl Wire (Center of Right Rocker Panel)		
BG2	48 (Access Cab)	Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)		
BH1	48 (Access Cab)	Floor No.1 Wire and Rear Door No.1 Wire RH (Under the Right Quarter Panel)		

## : GROUND POINTS

Code	See Page	Ground Points Location		
IE	44	Let Viel Devel		
IF	44	Left Kick Panel		
IH	4.4	Disht Kish Danel		
II	44	Right Kick Panel		
BJ	48 (Access Cab)	Inside of Rear Door LH		
BK	48 (Access Cab)	Inside of Rear Door RH		

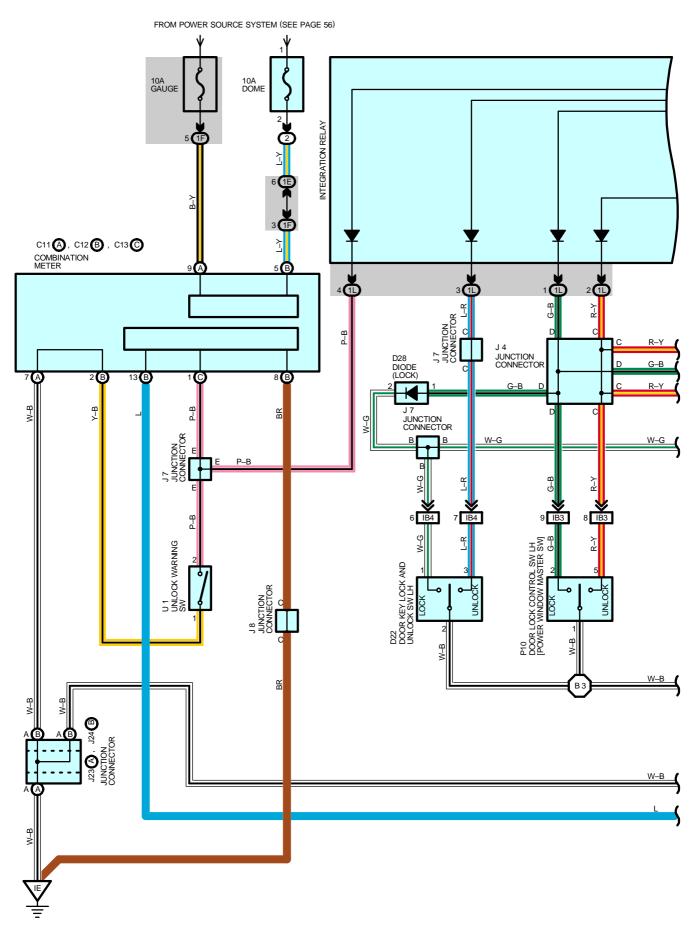
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
В3	48 (Access Cab)	Front Door LH Wire	B7	50 (Standard Cab)	Front Door RH Wire
БЭ	50 (Standard Cab)	FIGUR DOOLEH WITE	B8	48 (Access Cab)	Rear Door No.1 Wire LH
B7	48 (Access Cab)	Front Door RH Wire	B9	48 (Access Cab)	Rear Door No.1 Wire RH

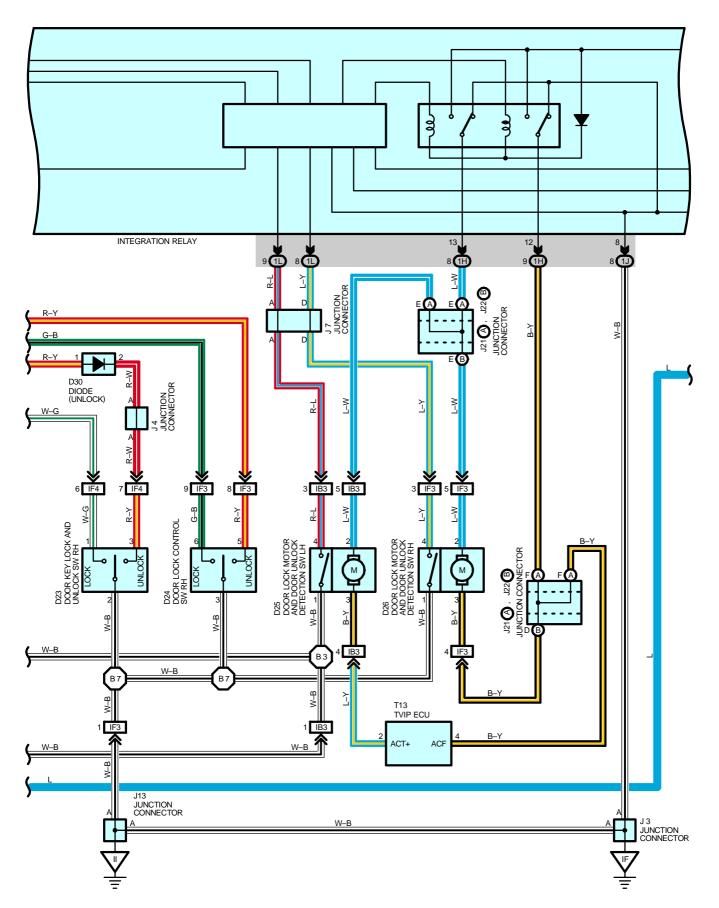
<sup>\* 1 :</sup> w/ Daytime Running Light

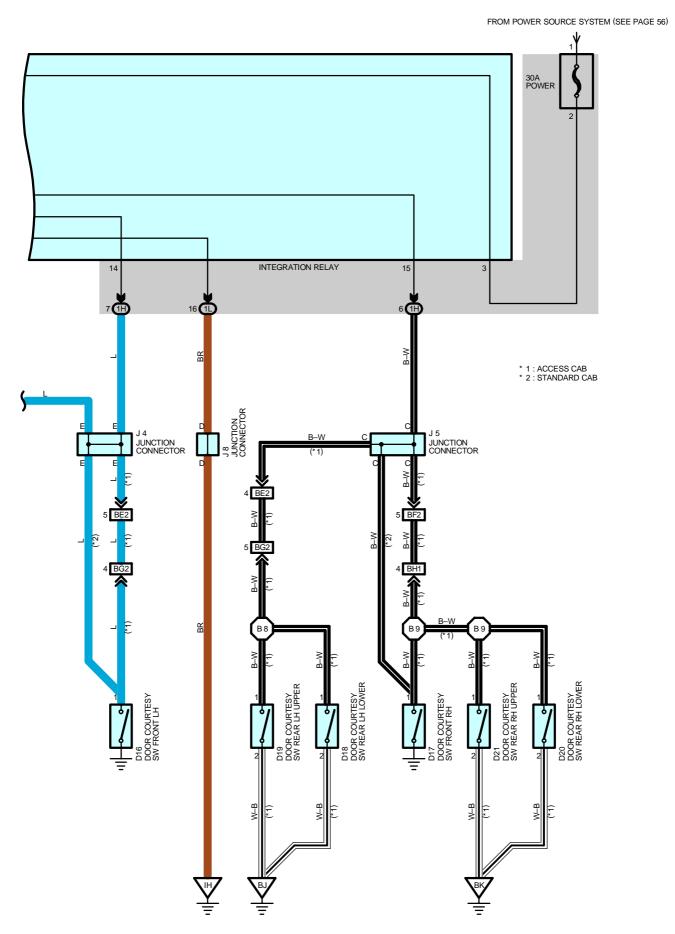
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)







#### **SYSTEM OUTLINE**

Current always flows to TERMINAL 3 of the integration relay through the POWER fuse.

#### 1. MANUAL LOCK OPERATION

To push the door lock control SW or door key lock and unlock SW to LOCK position, a lock signal is input to the integration relay and causes the relay to function. Current flows from TERMINAL 3 of the relay to TERMINAL 13 to TERMINAL 2 of the door lock motors to TERMINAL 3 to TERMINAL 12 of the relay to TERMINAL 8 to GROUND and the door lock motor causes the door to lock.

#### 2. MANUAL UNLOCK OPERATION

To push the door lock control SW or door key lock and unlock SW to UNLOCK position, an unlock signal is input to the integration relay and causes the relay to function. Current flows from TERMINAL 3 of the relay to TERMINAL 12 to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL 13 of the relay to TERMINAL 8 to GROUND and the door lock motor causes the door to unlock.

#### 3. DOUBLE OPERATION UNLOCK OPERATION

When the door key lock and unlock SW LH is turned to unlock position, only the front LH door is mechanically unlocked. Turning the door key lock and unlock SW LH to the unlock side causes a signal to be input to the relay, and if the signal is input again within 3 seconds by turning the door key lock and unlock SW LH to the unlock side again, current flows from TERMINAL 12 of the integration relay to TERMINAL 3 of the door lock motors, TERMINAL 2 to TERMINAL 13 of the integration relay to TERMINAL 8 to GROUND, causing the door lock motors to operate and unlock the doors.

#### 4. KEY CONFINE PREVENTION FUNCTION

\* Operating door lock knob (In door lock motor operation)

With ignition key in cylinder (Unlock warning SW on), when any door is opened and locked using door lock knob (Door lock motor), the door is locked once but each door is unlocked soon by the function of the integration relay. As a result, current flows from TERMINAL 3 of the relay to TERMINAL 12 to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL 13 of the relay to TERMINAL 8 to GROUND and causes all the doors to unlock.

\* Operating door lock control SW or door key lock and unlock SW With ignition key in cylinder (Unlock warning SW on), when any door is opened and locked using the door lock control SW or door key lock and unlock SW, all doors are locked once but each door is unlocked by the function of the SW contained in motor, which inputs the signal to the integration relay. According to this input signal, current flows from TERMINAL 3 of the relay to TERMINAL 12 to TERMINAL 3 of the door lock motors to TERMINAL 2 to TERMINAL 13 of the relay to TERMINAL 8 to GROUND and causes all the doors to unlock.

#### SERVICE HINTS

#### **INTEGRATION RELAY**

8–GROUND : Always continuity

3-GROUND : Always approx. 12 volts

12-GROUND: Approx. 12 volts for 0.2 seconds with following operations

\* Door lock control SW unlocked

\* Door lock control SW locked with ignition key in cylinder and LH or RH door open

(Ignition key reminder function)

\* Door lock knob locked with ignition key in cylinder and LH or RH door open. (Ignition key reminder function)

\* Unlocking the LH, RH door cylinder with key

13-GROUND: Approx. 12 volts for 0.2 seconds with following operations

\* Door lock control SW locked

\* Locking the LH, RH door cylinder with key

14-GROUND: Continuity with front LH door open

15-GROUND: Continuity with front RH door open (Standard cab)

15-GROUND : Continuity with front RH, rear LH, RH door open (Access cab)

#### D16, D17 DOOR COURTESY SW FRONT LH, RH

1-GROUND: Closed with door open

### D22, D23 DOOR KEY LOCK AND UNLOCK SW LH, RH

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

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

### D25, D26 DOOR LOCK MOTOR AND DOOR UNLOCK DETECTION SW LH, RH

4-1 : Closed with door lock knob UNLOCK position

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

1–2: Closed with key in cylinder

## DOOR LOCK CONTROL (w/o DAYTIME RUNNING LIGHT)

## : PARTS LOCATION

Co	de	See Page	Code	See Page	Co	de	See Page
C11	Α	34	Doo	36 (Access Cab)	J	7	35
C12	В	34	D23	37 (Standard Cab)	J	8	35
C13	С	34	D24	36 (Access Cab)	J1	13	35
D16		36 (Access Cab)	D24	37 (Standard Cab)	J21	Α	35
U	10	37 (Standard Cab)	D25	36 (Access Cab)	J22	В	35
Б.	17	36 (Access Cab)	D25	37 (Standard Cab)	J23	Α	35
יט	17	37 (Standard Cab)	Doc	36 (Access Cab)	J24	В	35
D	18	36 (Access Cab)	D26	37 (Standard Cab)	D	10	36 (Access Cab)
D	19	36 (Access Cab)	D28	34	P	10	37 (Standard Cab)
D:	20	36 (Access Cab)	D30	34	T.	13	35
D:	21	36 (Access Cab)	J3	35	U	11	35
D.	22	36 (Access Cab)	J4	35			
D22		37 (Standard Cab)	J5	35			

## : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)					
1E	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)					
1F							
1H	22 (*2)	Outd Mire and Driver Oids 1/D // cours Fields David					
1J		Cowl Wire and Driver Side J/B (Lower Finish Panel)					
1L	23 (*2)						

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)				
IB3	4.4	Trant Dear LLI Mire and Coul Mire (Left Kiels Banel)				
IB4	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)				
IF3	40	Front Door RH Wire and Cowl Wire (Right Kick Panel)				
IF4	46					
BE2	48 (Access Cab)	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)				
BF2	48 (Access Cab)	Floor No.1 Wire and Cowl Wire (Center of Right Rocker Panel)				
BG2	48 (Access Cab)	Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)				
BH1	48 (Access Cab)	Floor No.1 Wire and Rear Door No.1 Wire RH (Under the Right Quarter Panel)				

## : GROUND POINTS

Code	See Page	Ground Points Location			
IE	44	Left Viels Danel			
IF	44	Left Kick Panel			
IH	4.4	Disht Kish Danel			
II	44	Right Kick Panel			
BJ	48 (Access Cab)	Inside of Rear Door LH			
BK	48 (Access Cab)	Inside of Rear Door RH			

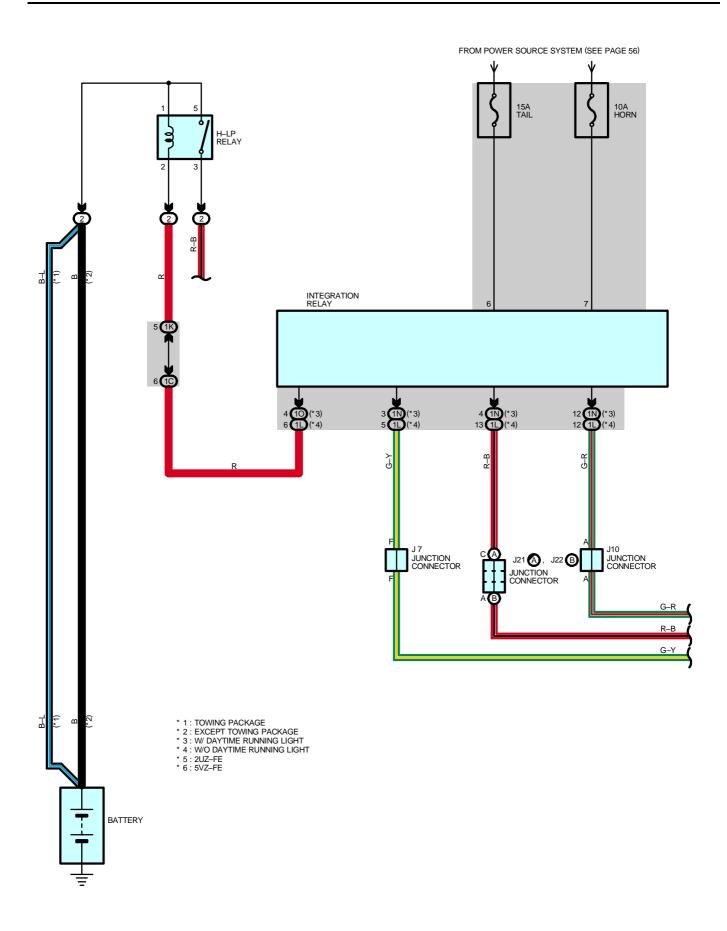
Code See Page		Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
В3	48 (Access Cab)	Front Donald LIANG	В7	50 (Standard Cab)	Front Door RH Wire
	50 (Standard Cab)	Front Door LH Wire	B8	48 (Access Cab)	Rear Door No.1 Wire LH
B7	48 (Access Cab)	Front Door RH Wire	B9	48 (Access Cab)	Rear Door No.1 Wire RH

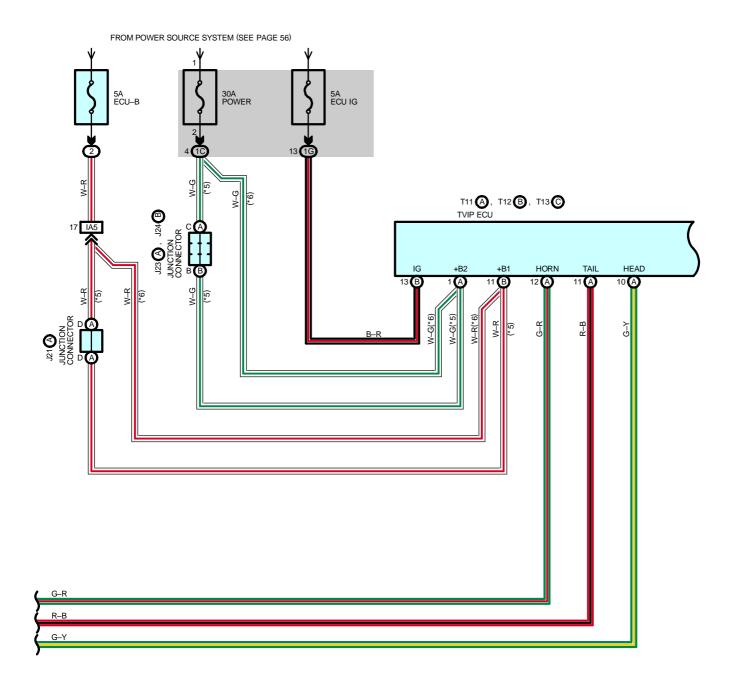
<sup>\* 1 :</sup> w/ Daytime Running Light

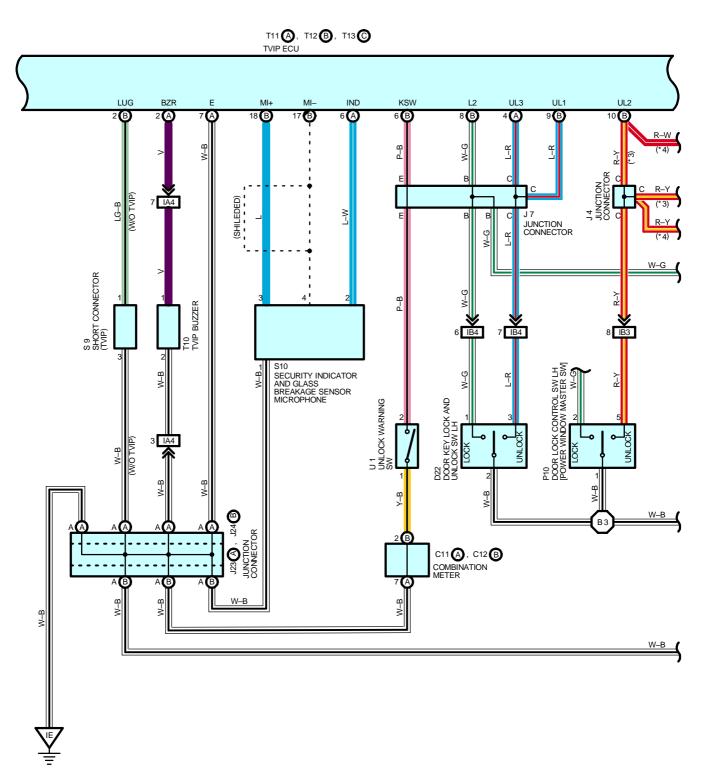
<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

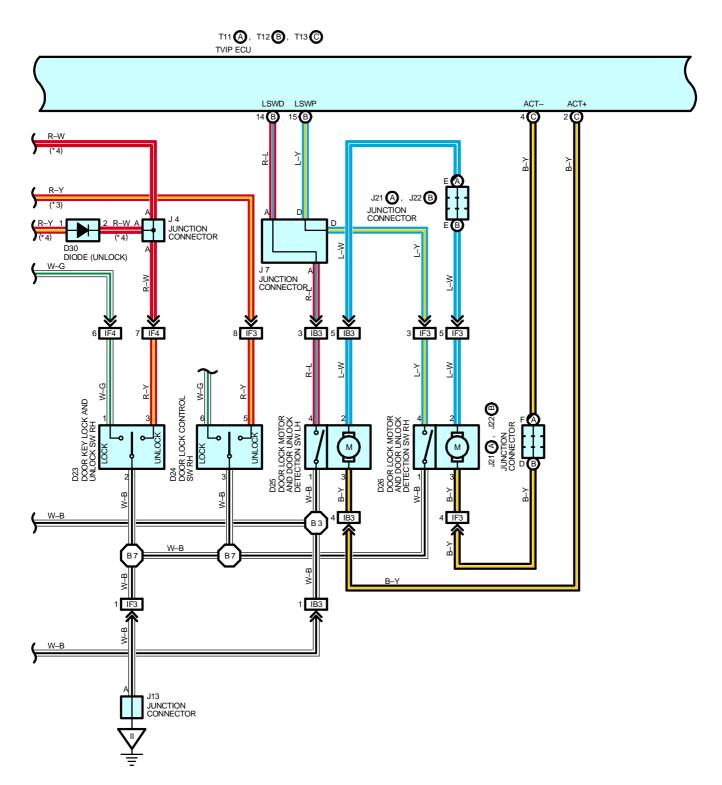
<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

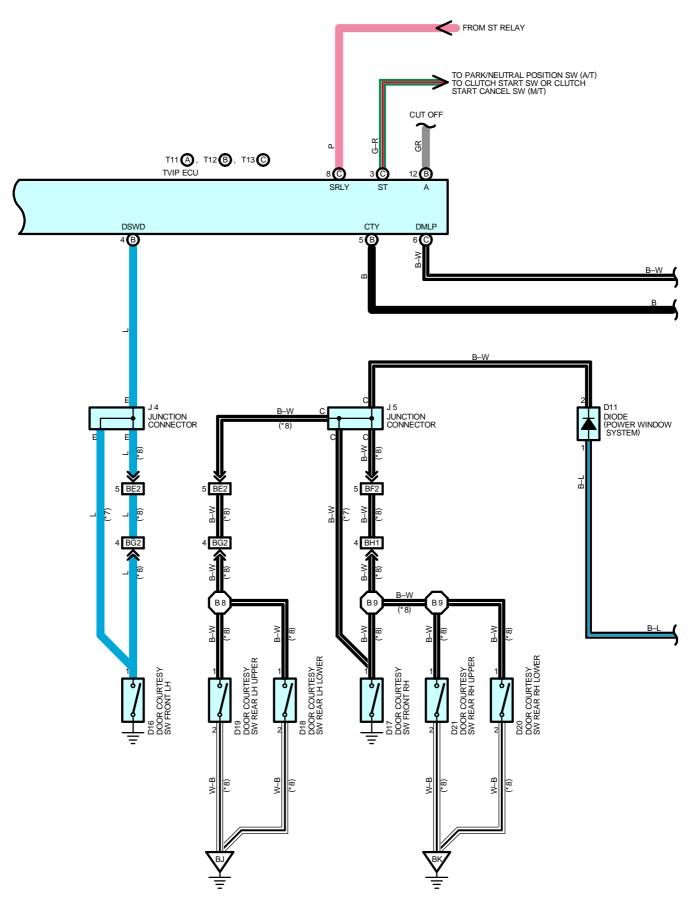


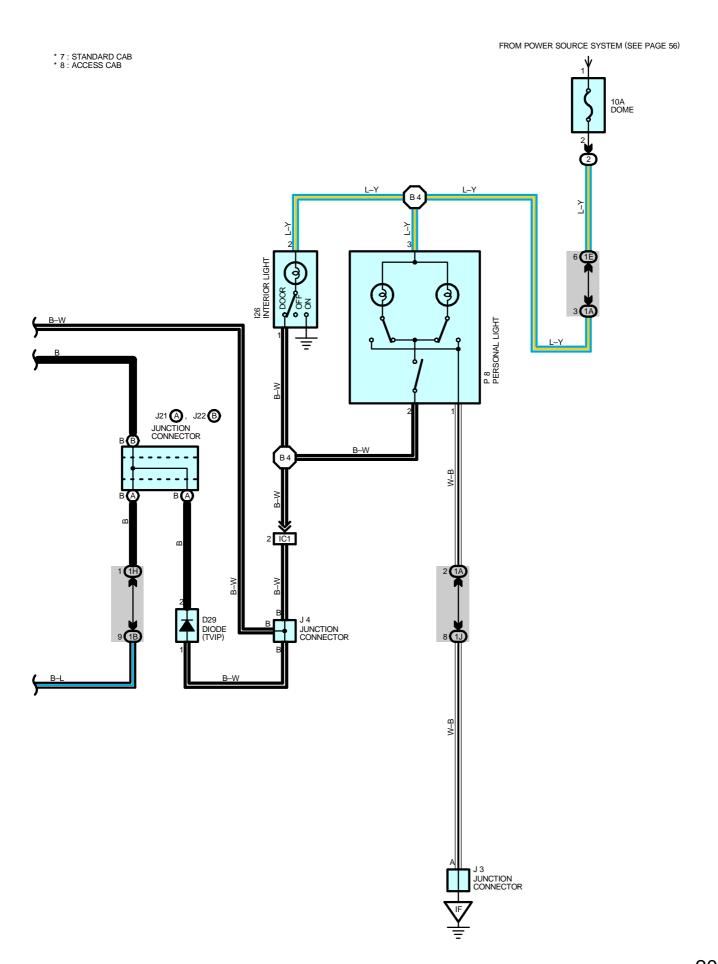




- \* 3 : W/ DAYTIME RUNNING LIGHT \* 4 : W/O DAYTIME RUNNING LIGHT







## TVIP AND WIRELESS DOOR LOCK CONTROL

## SERVICE HINTS

## T11 (A), T12 (B), T13 (C) TVIP ECU

(B) 3–GROUND : Approx. 12 volts with the ignition SW at  ${\bf ON}$  position

(A) 1, (B) 11–GROUND : Always approx. 12 volts (A) 7–GROUND : Always continuity

## : PARTS LOCATION

Code		See Page	Co	ode	See Page	Co	de	See Page
C11	Α	34	D:	24	37 (Standard Cab)	J22	В	35
C12	В	B 34		25	36 (Access Cab)	J23	Α	35
D	11	34	D,	25	37 (Standard Cab)	J24	В	35
	40	36 (Access Cab)	5	00	36 (Access Cab)		8	36 (Access Cab)
0	16	37 (Standard Cab)	D,	26	37 (Standard Cab)		8	37 (Standard Cab)
	17	36 (Access Cab)	D:	29	34	P10		36 (Access Cab)
"	17	37 (Standard Cab)	D30		34		10	37 (Standard Cab)
D	18	36 (Access Cab)	10	20	36 (Access Cab)	S	9	35
D	19	36 (Access Cab)	12	26	37 (Standard Cab)	S <sup>r</sup>	10	35
D:	20	36 (Access Cab)	J	3	35	т.	10	31 (2UZ-FE)
D:	21	36 (Access Cab)	J	4	35	'	10	33 (5VZ-FE)
-	00	36 (Access Cab)	J	5	35	T11	Α	35
D.	22	37 (Standard Cab)	J	7	35	T12	В	35
	22	36 (Access Cab)	J,	10	35	T13	С	35
D.	23	37 (Standard Cab)	J,	13	35	U	1	35
D24		36 (Access Cab)	J21	Α	35			

## : RELAY BLOCKS

Ī	Code	See Page	Relay Blocks (Relay Block Location)
ĺ	2	21	Engine Room R/B (Engine Compartment Left)

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)				
1.0	22 (*2)	Doef Wire and Driver Cide I/D / over Finish Done)				
1A	26 (*1)	Roof Wire and Driver Side J/B (Lower Finish Panel)				
1B	22 (*2)					
ID	26 (*1)	Coul Mire and Driver Side I/D (Lours Finish Dane)				
1C	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
10	26 (*1)					
45	22 (*2)	Facine Deem Main Wire and Driver Cide I/D /Lawer Finish Bonel\				
1E	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				
1G	22 (*2)					
16	26 (*1)					
411	22 (*2)	Coul Mire and Driver Side I/D (Louise Finish Bone)				
1H	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
1J	22 (*2)					
13	26 (*1)					
41/	22 (*2)	Facine Doom Main Wise and Driver Cide I/D /Lawer Finish Bonel\				
1K	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				
1L	23 (*2)					
1N	07 (*4)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
10	27 (*1)					

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

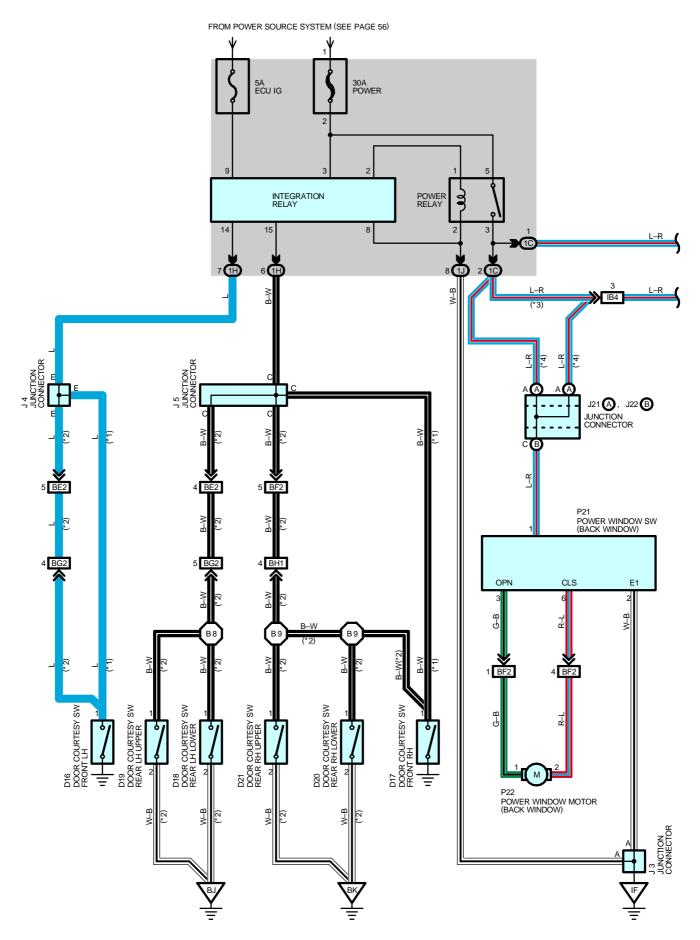
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
IA4	44	Engine Deem Main Wire and Coul Wire // of Viels Denelly			
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)			
IB3	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)			
IB4	44				
IC1	44	Cowl Wire and Roof Wire (Left Side of Instrument Panel)			
IF3	46	Front Door DI I Wire and Coul Wire (Dight Viels Done)			
IF4	46	Front Door RH Wire and Cowl Wire (Right Kick Panel)			
BE2	48 (Access Cab)	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)			
BF2	48 (Access Cab)	Floor No.1 Wire and Cowl Wire (Center of Right Rocker Panel)			
BG2	48 (Access Cab)	Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)			
BH1	48 (Access Cab)	Floor No.1 Wire and Rear Door No.1 Wire RH (Under the Right Quarter Panel)			

## : GROUND POINTS

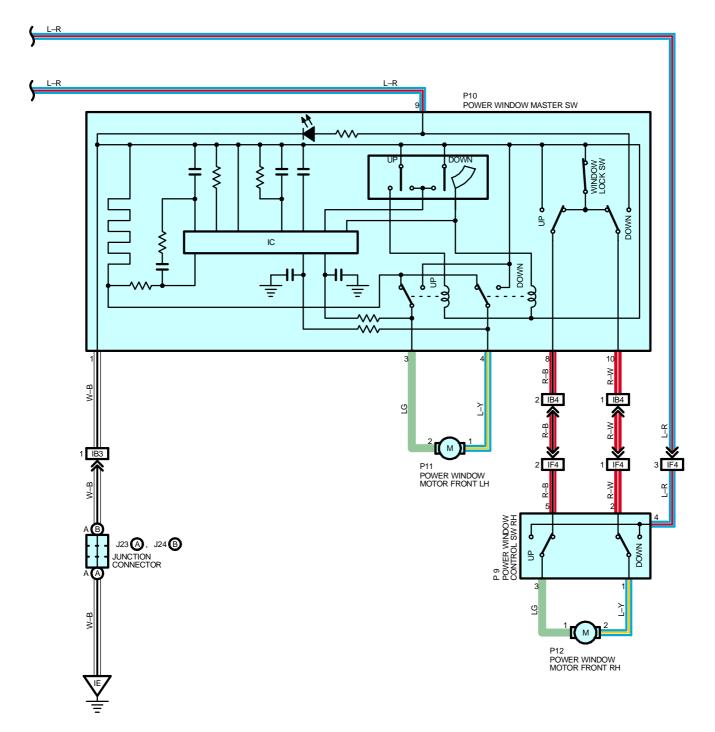
Code	See Page	Ground Points Location			
IE	4.4	Left Kick Panel			
IF	44				
II	44	Right Kick Panel			
BJ	48 (Access Cab)	Inside of Rear Door LH			
BK	48 (Access Cab)	Inside of Rear Door RH			



Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
В3	48 (Access Cab)	Front Door LH Wire	В7	48 (Access Cab)	Front Door RH Wire
БЗ	50 (Standard Cab)	FIOUR DOOF LA VVIIIE	D/	50 (Standard Cab)	
D4	48 (Access Cab)	Doof Wire	B8	48 (Access Cab)	Rear Door No.1 Wire LH
B4	50 (Standard Cab)	Roof Wire	B9	48 (Access Cab)	Rear Door No.1 Wire RH



- \* 1 : STANDARD CAB
  \* 2 : ACCESS CAB
  \* 3 : 5VZ-FE W/O DAYTIME RUNNING LIGHT M/T
  \* 4 : EXCEPT \*3



## POWER WINDOW

#### SYSTEM OUTLINE

With the ignition SW turned on, current flows through the ECU IG fuse to TERMINAL 9 of the integration relay to TERMINAL 2 to TERMINAL 1 of the power relay to TERMINAL 2 to GROUND, activating the power relay, and the current flowing from TERMINAL 5 of the power relay flows to TERMINAL 3 to TERMINAL 9 of the power window master SW and TERMINAL 4 of the power window control SW RH.

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

With the ignition SW turned on and with the power window master SW (Manual SW) in UP position, the current flowing to TERMINAL 9 of the power window master SW flows to TERMINAL 3 to TERMINAL 2 of the power window motor LH to TERMINAL 1 to TERMINAL 4 of the master SW to TERMINAL 1 to GROUND and causes the power window motor to rotate in the up direction. The window ascends only while the SW is being pushed.

In down operation, the current flowing from TERMINAL 9 of the power window master SW to TERMINAL 4 flows to TERMINAL 1 of the motor LH to TERMINAL 2 to TERMINAL 3 of the master SW to TERMINAL 1 to GROUND, flowing in the opposite direction to manual up operation, causing the motor to rotate in reverse and lowering the window.

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

With the ignition SW on and with the auto SW of the power window master SW in DOWN position, the current flowing to TERMINAL 9 of the master SW flows to TERMINAL 4 of the master SW to TERMINAL 1 of the power window motor LH to TERMINAL 2 to TERMINAL 3 of the master SW to TERMINAL 1 to GROUND, causing the motor to rotate towards the down side

Then the solenoid in the master SW is activated and it locks the auto SW being pushed, causing the motor to continue to rotate in auto down operation.

When the window has completely descended, the current flowing between TERMINAL 3 of the master SW and TERMINAL 1 increases. As a result, the solenoid stops operating, the auto SW turns off and the flowing from TERMINAL 9 of the master SW to TERMINAL 4 is cut off, stopping the motor so that auto stop occurs.

#### 3. STOPPING OF AUTO DOWN AT DRIVER'S WINDOW

When the manual SW (Driver's) is pushed to the up side during auto down operation, a ground circuit opens in the master SW and current does not flow from TERMINAL 3 of the master SW to TERMINAL 1, so the motor stops, causing auto down operation to stop. If the manual SW is pushed continuously, the motor rotates in the up direction in manual up operation.

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

With the power window control SW RH is pushed to the up side, the current flowing from TERMINAL 4 of the power window control SW RH flows to TERMINAL 3 of the power window control SW RH to TERMINAL 1 of the power window motor RH to TERMINAL 2 to TERMINAL 1 of the power window control SW RH to TERMINAL 2 to TERMINAL 10 of the master SW to TERMINAL 1 to GROUND. This causes the power window motor RH to rotate in the up direction. Up operation is continuous only while the power window control SW RH is pushed to the up side. When the window descends, the current flowing to the motor flows in the opposite direction, from TERMINAL 1 to TERMINAL 2, and the motor rotates in revers.

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 9 of the power window master SW is not grounded and the motor does not rotate, so the passenger's window can not be operated and window lock occurs.

### 5. KEY OFF POWER WINDOW OPERATION

With the ignition SW turned from on to off, the integration relay operates for about 43 seconds and current flows from TERMINAL 1 of the power relay to TERMINAL 2 to GROUND. For this period, current also flows TERMINAL 5 to TERMINAL 3. This current flows to TERMINAL 9 of the power window master SW and to TERMINAL 4 of the power window control SW RH. As a result, for about 43 seconds after the ignition SW is turned off, it is possible to raise and lower the power window by the functioning of the integration relay. Also, by opening the door (Door courtesy SW on) within about 43 seconds after turning the ignition SW to off, a signal is input to TERMINAL 3, 14 or 15 of the integration relay. As a result, the integration relay turns off, and up and down movement of the window stops.

#### D16, D17 DOOR COURTESY SW LH, RH

1-GROUND: Continuity with door open

#### INTEGRATION RELAY

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

3-GROUND: Always approx. 12 volts

14-GROUND: Continuity with front LH door open

15-GROUND: Continuity with front RH door open (Standard cab)

15-GROUND: Continuity with front RH, rear LH, RH door open (Access cab)

#### P9 POWER WINDOW CONTROL SW RH

4–GROUND : Approx. **12** volts with ignition SW on and stays at **12** volts for **41.5** –**44.5** seconds after the ignition SW is turned off, but if a door is open in the **45** seconds period, voltage will drop to **0** volts

### P10 POWER WINDOW MASTER SW

1-GROUND: Always continuity

9-GROUND : Approx. 12 volts with ignition SW on and stays at 12 volts for 41.5 -44.5 seconds after the ignition SW is turned

off, but if a door is opened in this **41.5** –**44.5** seconds period, voltage will drop to **0** volts 3–GROUND: Approx. **12** volts with ignition SW at **ON** position and master SW at **UP** position

4-GROUND : Approx. 12 volts with ignition SW at ON position and master SW at DOWN or AUTO DOWN position

#### **WINDOW LOCK SW**

Open with window lock SW at LOCK position

#### ) : PARTS LOCATION

Code	See Page	Co	de	See Page	Code	See Page
D40	36 (Access Cab)	J	4	35	P10	37 (Standard Cab)
D16	37 (Standard Cab)	J	5	35	D44	36 (Access Cab)
D47	36 (Access Cab)	J21	Α	35	P11	37 (Standard Cab)
D17	37 (Standard Cab)	J22	В	35	D40	36 (Access Cab)
D18	36 (Access Cab)	J23	Α	35	P12	37 (Standard Cab)
D19	36 (Access Cab)	J24	В	35	P21	35
D20	36 (Access Cab)			36 (Access Cab)	P22	36 (Access Cab)
D21	36 (Access Cab)	P	9	37 (Standard Cab)		
J3	35	P <sup>-</sup>	10	36 (Access Cab)		

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1C	22 (*2)	
10	26 (*1)	
411	22 (*2)	Could Wire and Driver Cide I/D // awar Finish Banel)
1H	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1J	22 (*2)	
	26 (*1)	

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
IB3	44	Front Door I I I Mire and Coul Mire / of Kiels Done)			
IB4	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)			
IF4	46	Front Door RH Wire and Cowl Wire (Right Kick Panel)			
BE2	48 (Access Cab)	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)			
BF2	48 (Access Cab)	Floor No.1 Wire and Cowl Wire (Center of Right Rocker Panel)			
BG2	48 (Access Cab)	Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)			
BH1	48 (Access Cab)	Floor No.1 Wire and Rear Door No.1 Wire RH (Under the Right Quarter Panel)			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

## **POWER WINDOW**

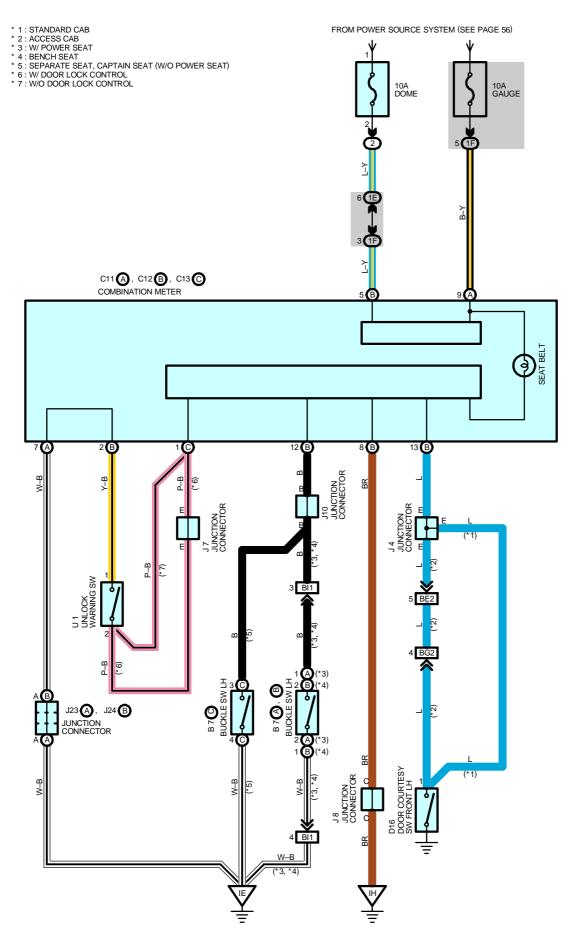


## : GROUND POINTS

Code	See Page	Ground Points Location
IE	44	Left Kick Panel
IF		
BJ	48 (Access Cab)	Inside of Rear Door LH
BK	48 (Access Cab)	Inside of Rear Door RH



Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
B8	48 (Access Cab)	b) Rear Door No.1 Wire LH		48 (Access Cab)	Rear Door No.1 Wire RH



#### SYSTEM OUTLINE

Current always flows to TERMINAL (B) 5 of the combination meter through the DOME fuse.

#### 1. SEAT BELT WARNING SYSTEM

When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL (A) 9 of the combination meter. This current activates the combination meter and the current flowing through the seat belt warning light flows from TERMINAL (B) 8 to GROUND, causing the warning light to light up. A buckle SW off signal is input to TERMINAL (B) 12 of the combination meter to TERMINAL (B) 8 to GROUND, causing the warning light to light up. A buckle SW off signal is input to TERMINAL (B) 12 of the combination meter, the current flowing to TERMINAL (B) 5 of the combination meter flows from TERMINAL (B) 8 to GROUND and the seat belt warning buzzer sounds. However, if the seat belt is put on during this period (While the buzzer is sounding), signal input to TERMINAL (B) 12 of the combination meter stops and the current flow from TERMINAL (B) 5 of the combination meter to TERMINAL (B) 8 to GROUND is cut, causing the buzzer to stop.

#### 2. KEY REMINDER SYSTEM

With the ignition key inserted in the key cylinder (Unlock warning SW on), the ignition SW still off and driver's door open (Door courtesy SW on), when a signal is input to TERMINAL (B) 13 of the combination meter, the combination meter operates, current flows from TERMINAL (B) 5 of the combination meter to TERMINAL (B) 8 to GROUND and key reminder buzzer sounds.

#### SERVICE HINTS

## B7 (A), (B) BUCKLE SW LH

(A) 1-(A) 2, (B) 2-(B) 1: Closed with driver's seat belt in use

#### **D16 DOOR COURTESY SW FRONT LH**

1-GROUND: Closed with front LH door open

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

1-2: Closed with ignition key in cylinder

#### C11 (A), C12 (B), C13 (C) COMBINATION METER

(A) 7, (B) 8-GROUND: Always continuity

(B)13–GROUND : Continuity with the front LH door open (C) 1–GROUND : Continuity with the ignition key in cylinder

(B)12-GROUND: Continuity with the driver's seat belt in use

(B) 5-GROUND: Always approx. 12 volts

(A) 9-GROUND: Approx. 12 volts with eignition SW at ON or ST position

### : PARTS LOCATION

Code		See Page	Co	de	See Page	Co	de	See Page
	Α	38 (w/ Power Seat)	C12	В	34	J	8	35
	В	36 (Access Cab *3)	C13	С	34	J1	10	35
B7		37 (Standard Cab *3)	-	10	36 (Access Cab)	J23	Α	35
	С	36 (Access Cab *4)	D16		37 (Standard Cab)	J24	В	35
		37 (Standard Cab *4)	J	4	35	U	1	35
C11	Α	34	J	7	35			

#### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

#### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)				
45	22 (*2)	Engine Beem Main Wire and Driver Side 1/P / Lewer Finish Benell				
1E	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				
1F	22 (*2) 26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
115		Cowi vvile and Driver Side 3/D (Lower Fillish Farier)				

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

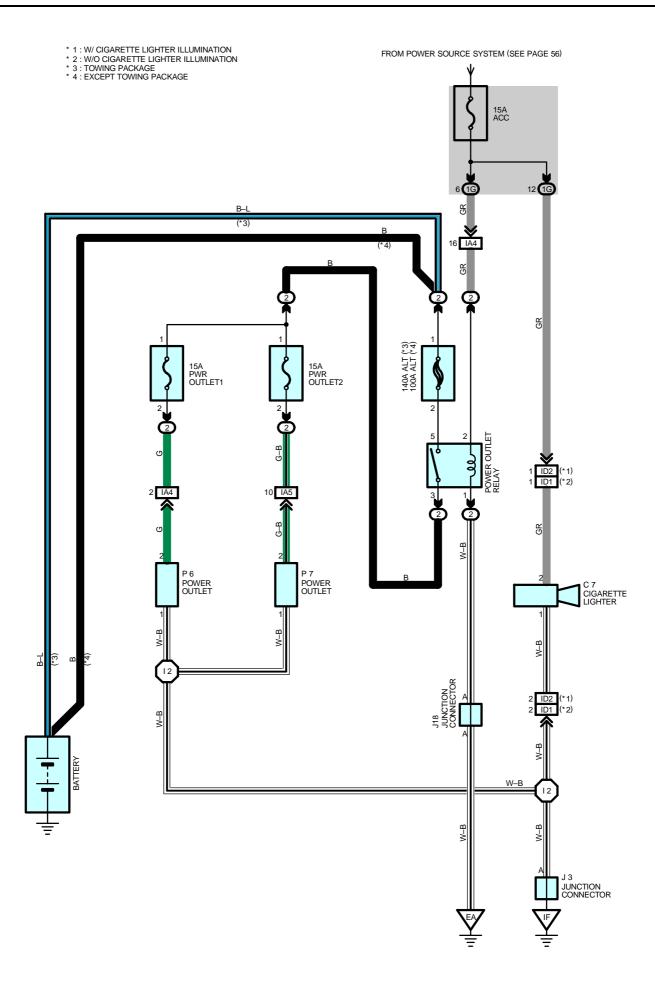
## **KEY REMINDER AND SEAT BELT WARNING**

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
BE2	48 (Access Cab)	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)			
BG2	48 (Access Cab)	oor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)			
	48 (Access Cab)				
BI1	50 (Standard Cab)	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)			
	52				

## : GROUND POINTS

	Code	See Page	Ground Points Location
ſ	ΙE	44	Left Kick Panel
	H	44	Right Kick Panel



#### **C7 CIGARETTE LIGHTER**

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

1-GROUND : Always continuity

#### P6, P7 POWER OUTLET

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

1-GROUND : Always continuity

## : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C7	34	140	31 (2UZ-FE)	P6	35
J3	35	J18	33 (5VZ-FE)	P7	35

## : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)			
1G	22 (*2)	Coul Wire and Driver Cide I/D /Louise Finish Bonel)			
	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)			

## : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)		
IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)		
IA5	44			
ID1	40	Circumsta Limbton Minn and Could Minn (Instrument Daniel Daniel Daniel LII)		
ID2	40	Cigarette Lighter Wire and Cowl Wire (Instrument Panel Brace LH)		

## : GROUND POINTS

Code	See Page	Ground Points Location
EA	40 (2UZ-FE)	Front Left Fender
EA	42 (5VZ-FE)	FIORIL Left Ferider
IF	44	Left Kick Panel

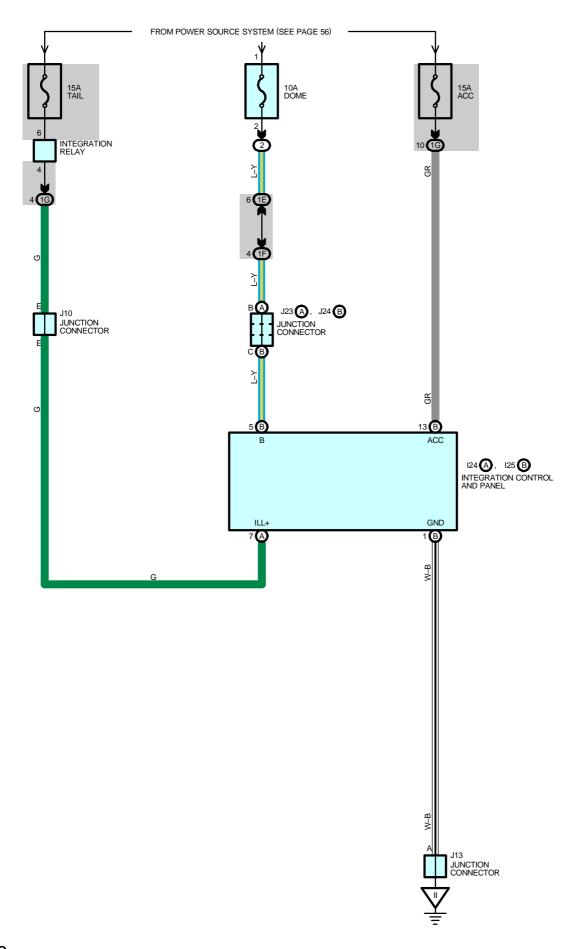
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
12	46	Cowl Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



### 124 (A), 125 (B) INTEGRATION CONTROL AND PANEL

(B) 5-GROUND : Always approx. 12 volts (Power for clock)

(B)13-GROUND: Approx. 12 volts with ignition SW at ON or ACC position (Power for indication)

(A) 7-GROUND: Approx. 12 volts with light control SW at TAIL or HEAD position (Signal of indication)

(B) 1-GROUND : Always continuity

### : PARTS LOCATION

Code			See Page	Code	See Page	Code		See Page
124	. /	Α	35	J10	35	J23	Α	35
125	; E	В	35	J13	35	J24	В	35

## ) : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21 Engine Room R/B (Engine Compartment Left)	

## : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)		
1E	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)		
'	26 (*1)			
1F	22 (*2)			
I IF	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)		
1G	22 (*2)			
	26 (*1)			

## : GROUND POINTS

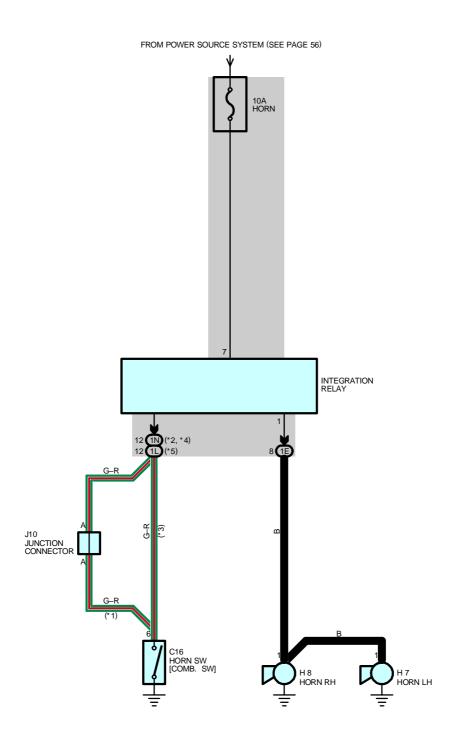
Ī	Code	See Page	Ground Points Location
		44	Right Kick Panel

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



- \* 1 : 5VZ-FE W/ DOOR LOCK CONTROL, 2UZ-FE
  \* 2 : 5VZ-FE W/O DOOR LOCK CONTROL W/ DAYTIME RUNNING LIGHT
  \* 3 : 5VZ-FE W/O DOOR LOCK CONTROL W/O DAYTIME RUNNING LIGHT
  \* 4 : 5VZ-FE W/ DOOR LOCK CONTROL W/ DAYTIME RUNNING LIGHT,
  2UZ-FE W/ DAYTIME RUNNING LIGHT
  \* 5 : 5VZ-FE W/ DOOR LOCK CONTROL W/O DAYTIME RUNNING LIGHT,
  2UZ-FE W/O DAYTIME RUNNING LIGHT

# C16 HORN SW [COMB. SW]

 $6 ext{-}\mathsf{GROUND}$  : Continuity with horn SW on

# : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C16	34	H7	32 (5VZ-FE)	H8	32 (5VZ–FE)
H7	30 (2UZ-FE)	H8	30 (2UZ-FE)	J10	35

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

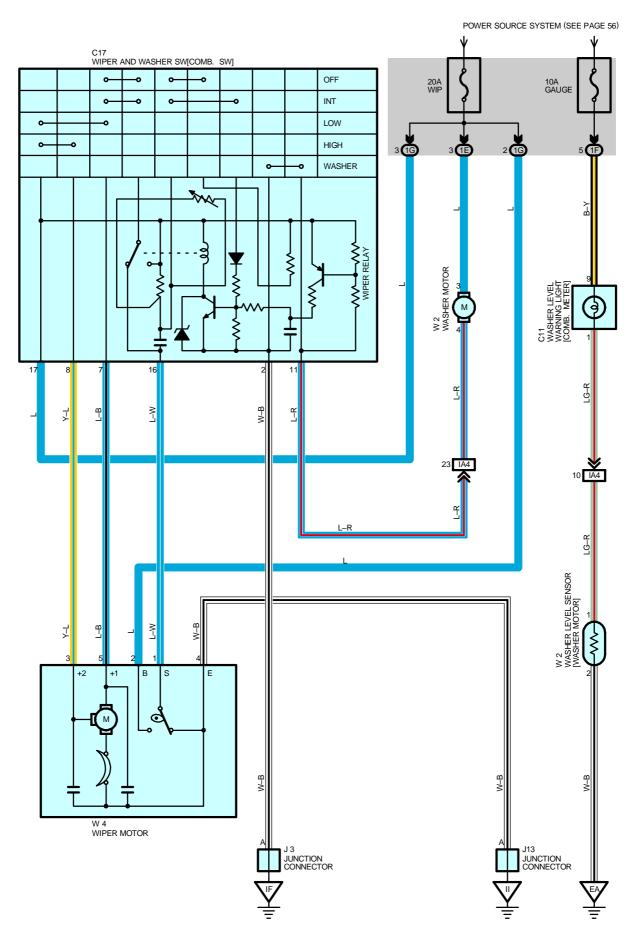
Code	See Page	Junction Block and Wire Harness (Connector Location)				
45	22 (*2)	ering Doom Main Wire and Driver Cide 1/D // ower Finish Done)				
1E	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				
1L	23 (*2)	Coul Wire and Driver Side I/P / awar Finish Banal)				
1N	27 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



#### **SYSTEM OUTLINE**

With the ignition SW turned on, current flows to TERMINAL 17 of the wiper and washer SW, TERMINAL 3 of the washer motor and TERMINAL 2 of the wiper motor through the WIP fuse.

#### 1. LOW SPEED POSITION

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

### 2. HIGH SPEED POSITION

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

#### 3 INT POSITION

With wiper SW turned to INT position, the relay operates and the current which is connected by relay function flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 2 to GROUND. This flowing the intermittent circuit and current flows from TERMINAL 17 of the wiper and washer SW to TERMINAL 7 to TERMINAL 5 of the wiper motor to TERMINAL 4 to GROUND and the wiper functions.

The intermittent operation is controlled by charging and discharging of the condenser installed in the relay and the intermittent time is controlled by a time control SW to change the charging time of the condenser.

### 4. WASHER INTERLOCKING OPERATION

With the washer SW turned to on, current flows from TERMINAL 3 of the washer motor to TERMINAL 4 to TERMINAL 11 of the wiper and washer SW to TERMINAL 2 to GROUND and causes to the washer motor to run, and the window washer is jetted.

This causes current to flow to washer continuous operation circuit in TERMINAL 17 of the wiper and washer SW to TERMINAL 5 of the wiper motor to TERMINAL 4 to GROUND and the wiper functions.

### **SERVICE HINTS**

### C17 WIPER AND WASHER SW [COMB. SW]

2-GROUND : Always continuity

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

7-GROUND : Approx. 12 volts with wiper and washer SW at LOW position

Approx. 12 volts every approx. 1.6 to 10.7 seconds intermittently with wiper SW at INT position

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

8-GROUND : Approx. 12 volts with ignition SW on and wiper and washer SW at HIGH position

11-2: Continuity with washer SW on

### W4 WIPER MOTOR

1-2: Closed unless wiper motor at **STOP** position

# : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C11	34	J13	35	10/4	31 (2UZ-FE)
C17	34	14/0	31 (2UZ-FE)	W4	33 (5VZ-FE)
J3	35	W2	33 (5VZ-FE)		

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)				
1E	22 (*2)	Engine Beem Main Wire and Driver Side I/P (Lewer Finish Benel)				
15	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				
1F	22 (*2)					
I IF	26 (*1)	Coul Wire and Driver Cide I/D // awar Finish Banel)				
1G	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
16	26 (*1)					

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

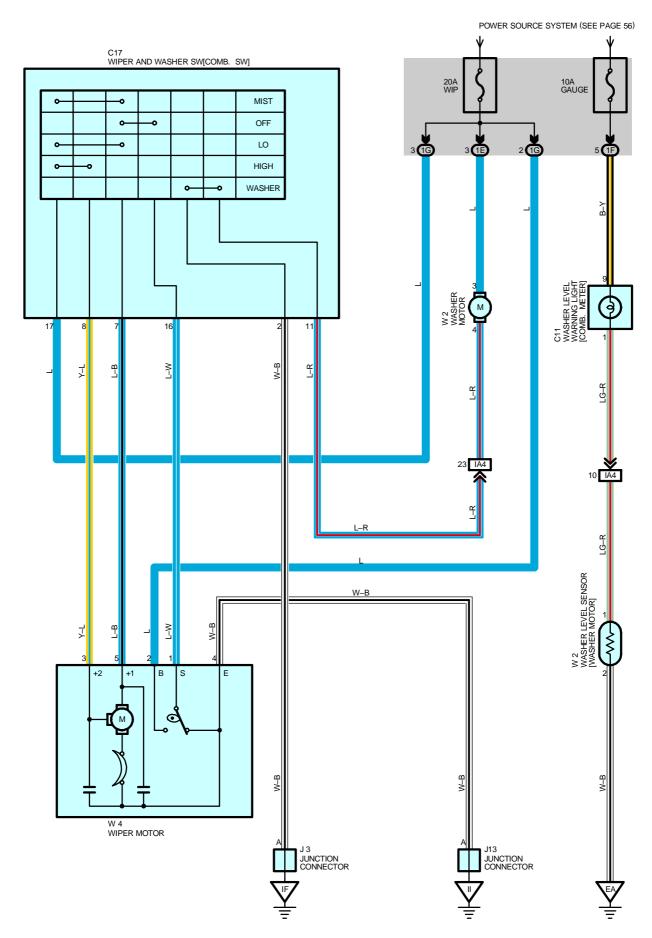
<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

# WIPER AND WASHER (w/ INT TIME SW MECHANISM)

# $\bigvee$

# : GROUND POINTS

Code	See Page	Ground Points Location		
EA	40 (2UZ-FE)	Front Left Fender		
EA	42 (5VZ-FE)			
IF	44	Left Kick Panel		
II	44	Right Kick Panel		



#### **SYSTEM OUTLINE**

With the ignition SW turned on, current flows to TERMINAL 17 of the wiper and washer SW, TERMINAL 3 of the washer motor and TERMINAL 2 of the wiper motor through the WIP fuse.

### 1. LOW SPEED POSITION

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

### 2. HIGH SPEED POSITION

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

#### 3. MIST POSITION

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

### 4. WASHER INTERLOCKING OPERATION

With the washer SW turned to on, current flows from TERMINAL 3 of the washer motor to TERMINAL 4 to TERMINAL 11 of the wiper and washer SW to TERMINAL 2 to GROUND and causes to the washer motor to run, and the window washer is jetted.

#### **SERVICE HINTS**

### C17 WIPER AND WASHER SW [COMB. SW]

2-GROUND : Always continuity

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

7–GROUND: Approx. **12** volts with wiper and washer SW at **LOW** or **MIST** position 16–GROUND: Approx. **12** volts with ignition SW on unless wiper motor at **STOP** position 8–GROUND: Approx. **12** volts with ignition SW on and wiper and washer SW at **HIGH** position

11-GROUND: Continuity with washer SW on

### **W4 WIPER MOTOR**

1-2: Closed unless wiper motor at STOP position

# : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
C11	34	J13	35	10/4	31 (2UZ-FE)
C17	34	WO	31 (2UZ-FE)	W4	33 (5VZ-FE)
J3	35	W2	33 (5VZ-FE)		

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)				
1E	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)				
IE	26 (*1)	Engine Room Main Wire and Driver Side 3/6 (Lower Finish Paner)				
1F	22 (*2)					
117	26 (*1)	Coul Mire and Driver Cide I/D // ower Finish Denelly				
1G	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)				
16	26 (*1)					

# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)

# : GROUND POINTS

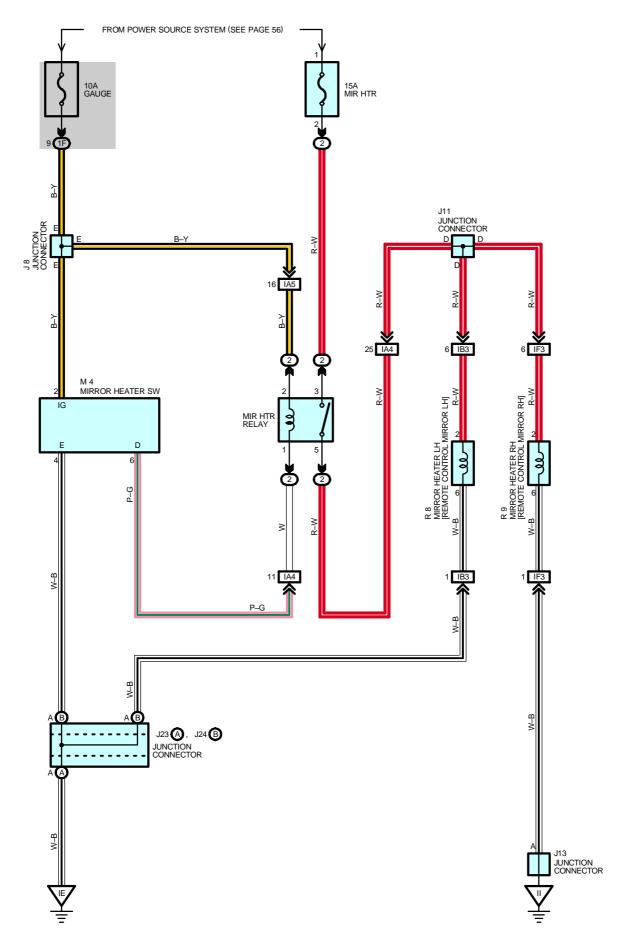
Code	See Page	Ground Points Location		
EA	40 (2UZ-FE)	Front Left Fender		
EA	42 (5VZ-FE)			
IF	44	Left Kick Panel		
II	44	Right Kick Panel		

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



### **MIR HTR RELAY**

5-3: Closed with the ignition SW on and the mirror heater SW on

### **M2 MIRROR HEATER SW**

2-GROUND: Approx. 12 volts with the ignition SW on

4-GROUND : Always continuity

### R8, R9 MIRROR HEATER LH, RH [REMOTE CONTROL MIRROR LH, RH]

2-GROUND: Approx. 12 volts with the ignition SW on and the mirror heater SW on

6-GROUND : Always continuity

# : PARTS LOCATION

Co	de	See Page	Code		See Page	Code	See Page
J	8	35			35	DO.	36 (Access Cab)
J.	11	35			35	R9	37 (Standard Cab)
J	13	35	_	0	36 (Access Cab)		
J23	Α	35	R	8	37 (Standard Cab)		

# ) : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)			
2	21	Engine Room R/B (Engine Compartment Left)			

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
45	22 (*2)	Coul Wire and Driver Cide I/D // awar Finish Danel)
1⊦	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)

# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

	Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
ſ	IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
ſ	IA5	44	
Ī	IB3	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)
Ī	IF3	46	Front Door RH Wire and Cowl Wire (Right Kick Panel)

# : GROUND POINTS

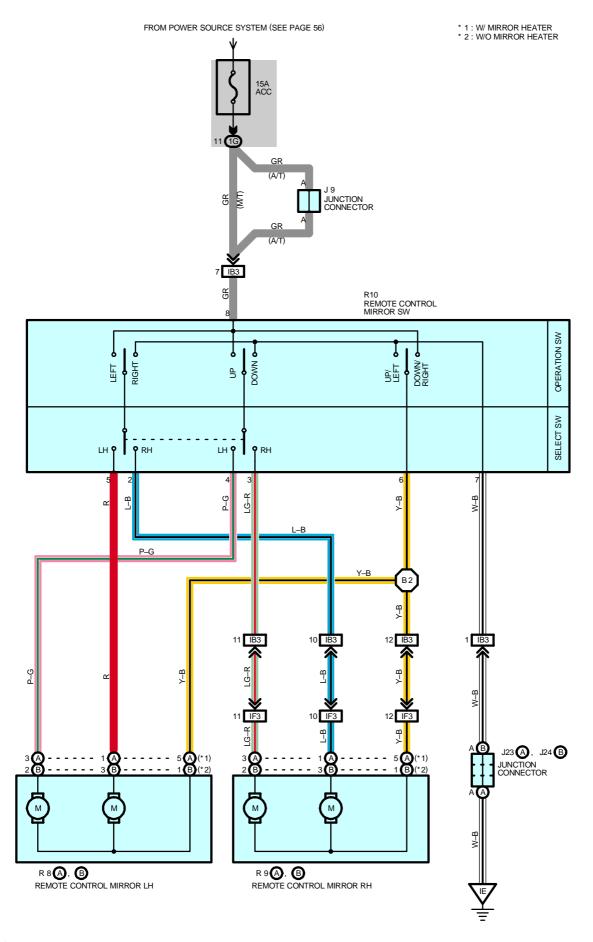
Code	See Page	Ground Points Location
IE	44	Left Kick Panel
II	44	Right Kick Panel

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



### **R10 REMOTE CONTROL MIRROR SW**

8–GROUND : Approx. **12** volts with ignition SW at **ACC** or **ON** position 6–7 : Continuity with operation SW at **UP** or **LEFT** position 8–6 : Continuity with operation SW at **DOWN** or **RIGHT** position

# : PARTS LOCATION

Code		See Page	Code		See Page	Code		See Page
J9		35			37 (Standard Cab)	R9	В	37 (Standard Cab)
J23	Α	35	R8	В	37 (Standard Cab)			36 (Access Cab)
J24	В	35		۸	36 (Access Cab)	R10		37 (Standard Cab)
Do	Α	36 (Access Cab)	R9	Α	37 (Standard Cab)			
R8	В	36 (Access Cab)		В	36 (Access Cab)			

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
10	22 (*2)	Coul Wire and Driver Cide I/D /I ower Finish Bonel
1G	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)

# : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	Code See Page Joining Wire Harness and Wire Harness (Connector Location)	
IB3	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF3	46	Front Door RH Wire and Cowl Wire (Right Kick Panel)

# : GROUND POINTS

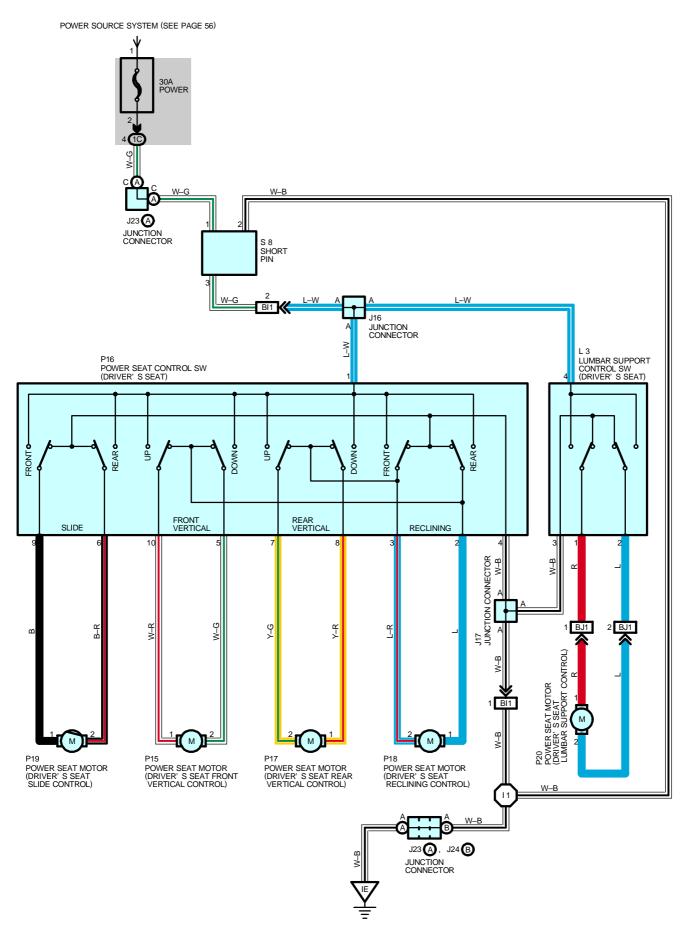
Code	See Page	Ground Points Location
IE	44	Left Kick Panel

Ī	Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
ĺ	B2	48 (Access Cab)	Front Door LH Wire	B2	50 (Standard Cab)	Front Door LH Wire

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light \* 3 : Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



### P16 POWER SEAT CONTROL SW (DRIVER'S SEAT)

- 1-9: Closed with driver's seat at front slide operation
- 1-6: Closed with driver's seat at rear slide operation
- 1-3 : Closed with driver's seat at front reclining operation
- 1–2 : Closed with driver's seat at rear reclining operation
- 1-10 : Closed with driver's seat at front vertical up operation
- 1–5 : Closed with driver's seat at front vertical down operation
- 1–7 : Closed with driver's seat at rear vertical up operation
- 1-8: Closed with driver's seat at rear vertical down operation
- 4-GROUND : Always continuity

# : PARTS LOCATION

Co	ode	See Page	Code	See Page	Code	See Page
J16		38	L3	38	P18	38
J17		38	P15	38	P19	38
J23	Α	35	P16	38	P20	38
J24	В	35	P17	38	S8	35

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
10	22 (*2)	Could Wise and Driver Cide I/D // away Finish Banel)
10	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)	
	48 (Access Cab)		
BI1	50 (Standard Cab)	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)	
	52		
BJ1	52	Seat No.1 Wire and Seat No.2 Wire (Under the Driver's Seat)	

# : GROUND POINTS

Code	See Page	Ground Points Location
IE	44	Left Kick Panel

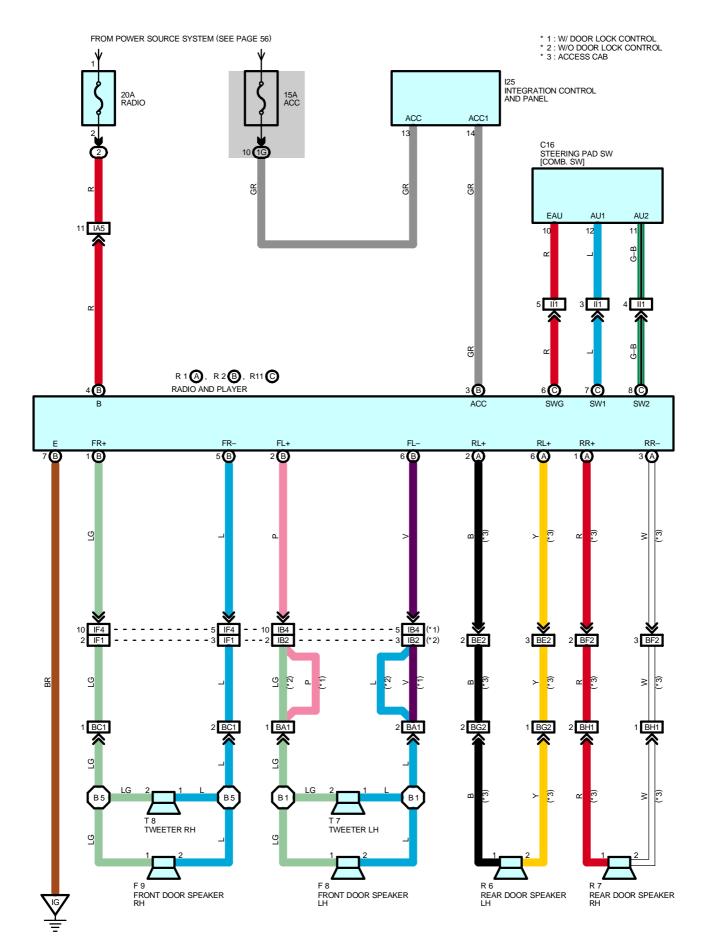
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
l1	46	Cowl Wire			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



### R2 (B) RADIO AND PLAYER

(B) 3-GROUND : Approx. 12 volts with ignition SW at ON or ACC position

(B) 4–GROUND : Always approx. 12 volts(B) 7–GROUND : Always continuity

### S7 (D) STEREO COMPONENT AMPLIFIER

(D) 3-GROUND : Approx. 12 volts with ignition SW at ON or ACC position

(D) 4–GROUND : Always approx. 12 volts(D) 7–GROUND : Always continuity

# : PARTS LOCATION

Code	See Page	Co	ode	See Page	Co	de	See Page
C16	34	12	25	35	R11	С	35
Ε0.	36 (Access Cab)	R1	Α	35	_	7	36 (Access Cab)
F8	37 (Standard Cab)	R2	В	35	T	/	37 (Standard Cab)
Ε0.	36 (Access Cab)	R	86	36 (Access Cab)	_	0	36 (Access Cab)
F9	37 (Standard Cab)	R	R7	36 (Access Cab)	Т	8	37 (Standard Cab)

# ) : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1G	22 (*2) 26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IB2	44	Front Door I I I Mire and Could Mire (Left Viels Done)
IB4	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IF1	40	Front Door DI I Wire and Could Wire (Dight Wide Door)
IF4	46	Front Door RH Wire and Cowl Wire (Right Kick Panel)
II1	46	Cowl Wire and Cowl Wire (Instrument Panel Reinforcement RH)
DA4	48 (Access Cab)	Freet Personal III Mirror and Organization Mirror III (Incide of Freet Personal III)
BA1	50 (Standard Cab)	Front Door LH Wire and Speaker Tweeter Wire LH (Inside of Front Door LH)
BC1	48 (Access Cab)	Front Door DI I Wire and Cooker Trunter Wire DI I (Incide of Front Door DI I)
ВСТ	50 (Standard Cab)	Front Door RH Wire and Speaker Tweeter Wire RH (Inside of Front Door RH)
BE2	48 (Access Cab)	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)
BF2	48 (Access Cab)	Floor No.1 Wire and Cowl Wire (Center of Right Rocker Panel)
BG2	48 (Access Cab)	Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)
BH1	48 (Access Cab)	Floor No.1 Wire and Rear Door No.1 Wire RH (Under the Right Quarter Panel)

### : GROUND POINTS

Code	See Page	Ground Points Location
IG	44	Instrument Panel Brace RH

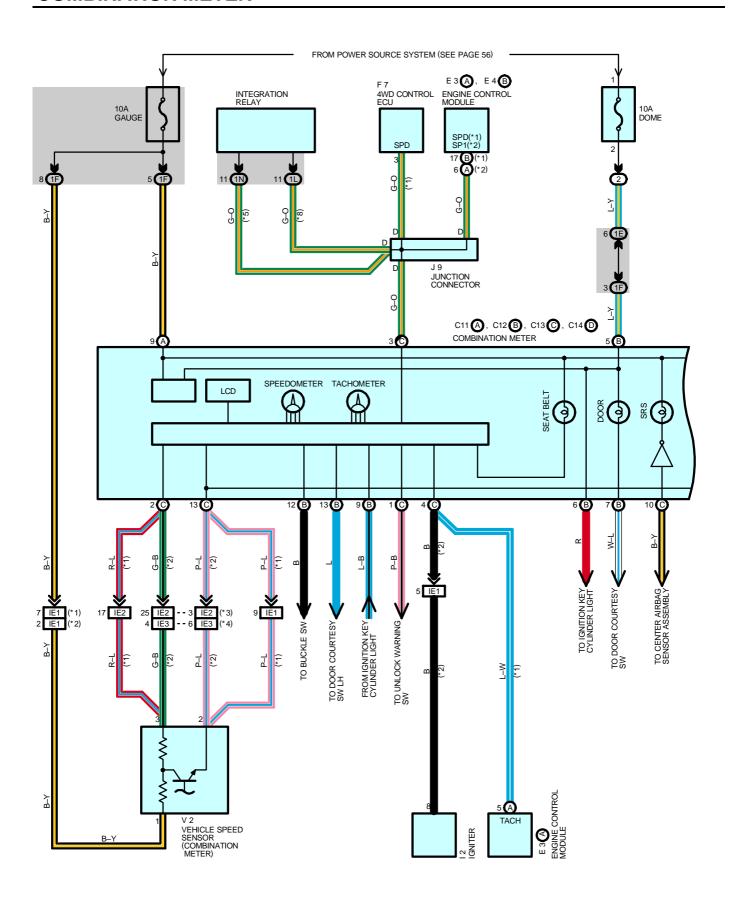
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
D4	48 (Access Cab)	Speaker Tweeter Wire LH	B5	48 (Access Cab)	Speaker Tweeter Wire RH
БІ	50 (Standard Cab)	Speaker Tweeter Wile LH		50 (Standard Cab)	

<sup>\* 1 :</sup> w/ Daytime Running Light

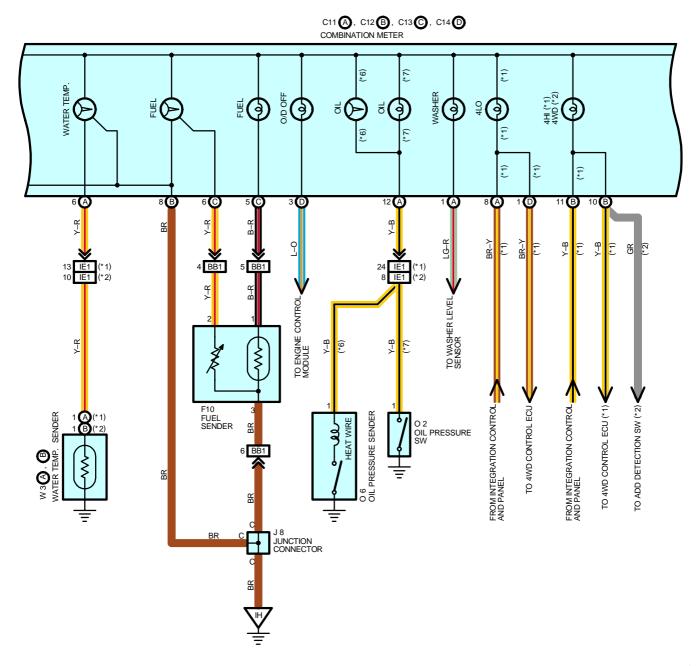
<sup>\* 2 :</sup> w/o Daytime Running Light

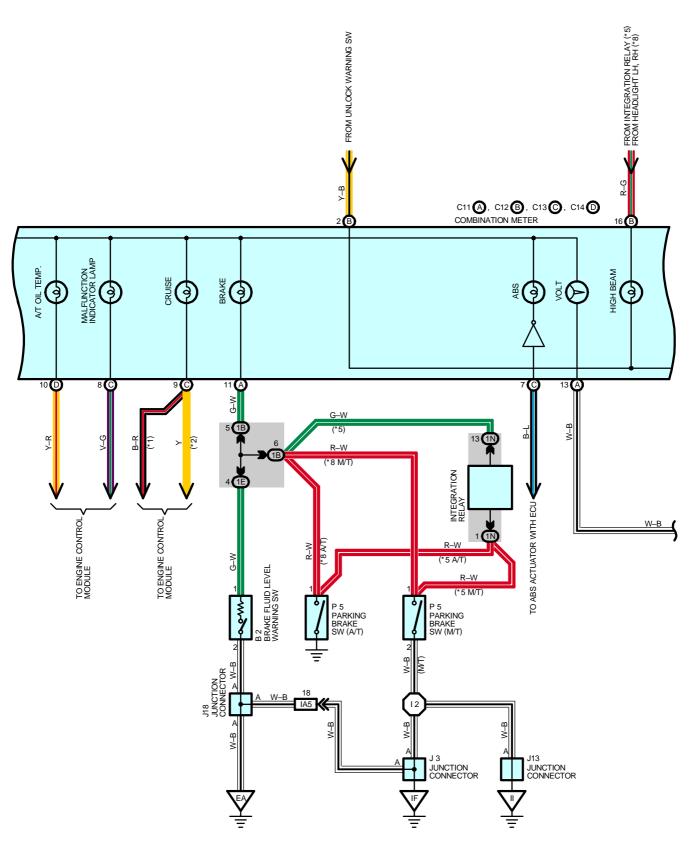
<sup>\* 3 :</sup> Bench Seat

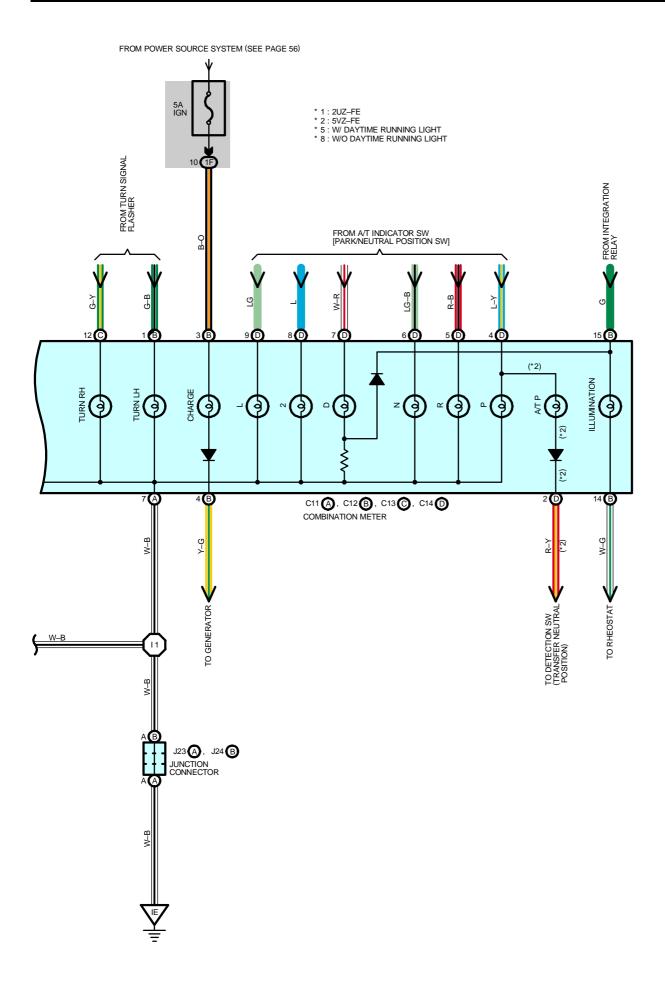
<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



- \* 1 : 2UZ-FE
  \* 2 : 5VZ-FE
  \* 3 : 5VZ-FE AT
  \* 4 : 5VZ-FE MT
  \* 5 : W/ DAYTIME RUNNING LIGHT
  \* 6 : W/ TACHOMETER
  \* 7 : W/O TACHOMETER
  \* 8 : W/O DAYTIME RUNNING LIGHT







# **COMBINATION METER**

### SERVICE HINTS

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

1-2: Closed with float down

### **P5 PARKING BRAKE SW**

1-GROUND: Closed with parking brake lever pulled up

### C11 (A), C12 (B), C13 (C) COMBINATION METER

(B) 5-GROUND : Always approx. 12 volts

(A) 9, (B) 3-GROUND: Approx. 12 volts with ignition SW at ON or ST position

(A) 7, (A)13, (B) 8-GROUND : Always continuity

### W3 (A), (B) WATER TEMP. SENDER

(A) 1, (B) 1-GROUND : Approx. **160–240**  $\Omega$  (**50**°C, **122**°F) : Approx. **17.1–21.2**  $\Omega$  (**120**°C, **248**°F)

# : PARTS LOCATION

Co	de	See Page	Code	See Page	Co	de	See Page
	2	30 (2UZ-FE)	F10	36 (Access Cab)	J23	Α	35
	2	32 (5VZ-FE)	FIU	37 (Standard Cab)	J24	В	35
C11	Α	34	12	33 (5VZ-FE)			31 (2UZ-FE)
C12	В	34	J3	35	O2		33 (5VZ-FE)
C13	С	34	J8	35	P5		35
C14	D	34	J9	35		2	31 (2UZ-FE)
E3	Α	34	J13	35	ľ	2	33 (5VZ-FE)
E4	В	34	J18	31 (2UZ-FE)	W3	Α	31 (2UZ-FE)
F	7	35	310	33 (5VZ-FE)	VV3	В	33 (5VZ-FE)

### : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

### : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1B	22 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
ID	26 (*1)	Cowi Wire and Driver Side 3/B (Lower Fillish Parier)
1E	22 (*2)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)
I E	26 (*1)	Eligille Rooth Main Wile and Driver Side 3/6 (Lower Finish Parier)
1F	22 (*2)	
IF	26 (*1)	Coult Wire and Driver Cide I/D /Louise Finish Banel)
1L	23 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)
1N	27 (*1)	

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)
IE1		
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)
IE3		
BB1	48 (Access Cab)	Frame Wire and Cowl Wire (Under the Driver's Seat)
DDI	50 (Standard Cab)	Frame wife and Cowf wife (Onder the Driver's Seat)

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light

<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)

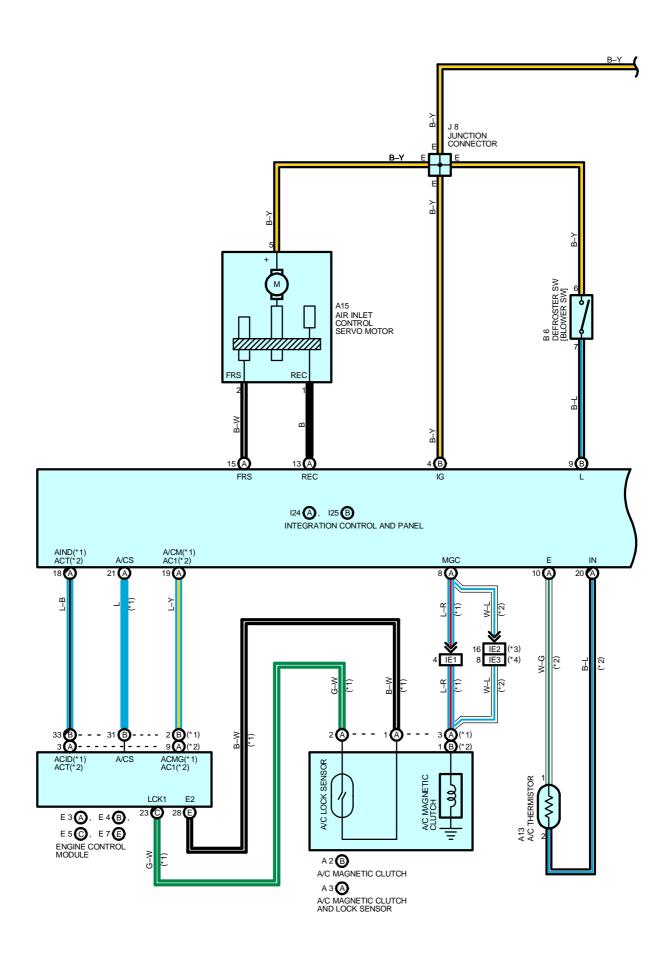


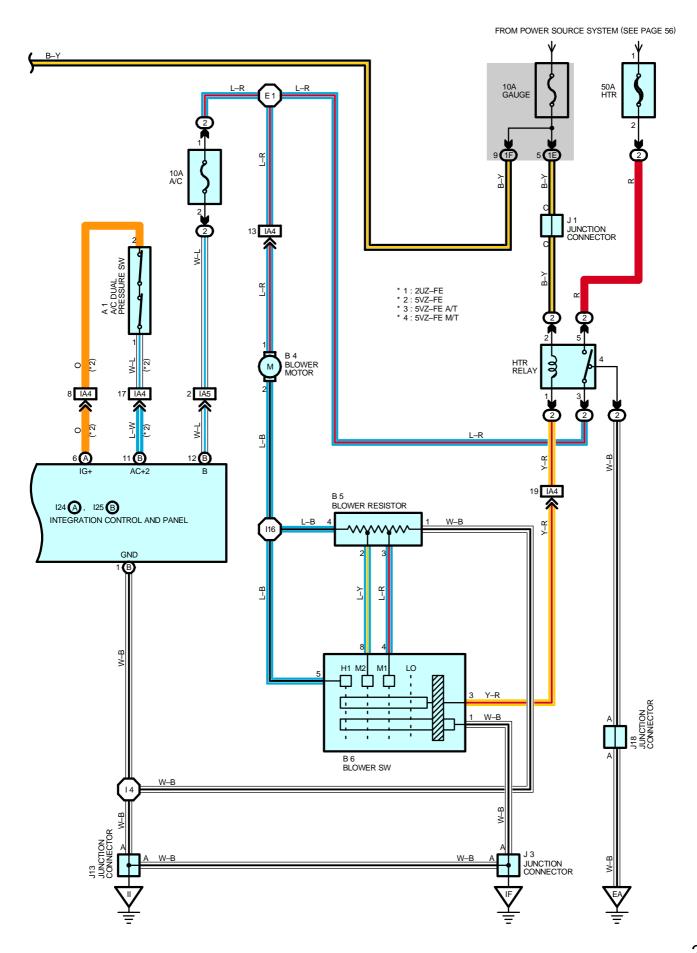
# : GROUND POINTS

Code	See Page	Ground Points Location
EA	40 (2UZ-FE)	Front Left Fender
EA	42 (5VZ-FE)	Florit Left Ferider
IE	44	Left Kick Panel
IF	44	Left Nick Parier
IH	44	Dight Viels Danel
II	44	Right Kick Panel



Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
I1	46	Cowl Wire	12	46	Cowl Wire





# AIR CONDITIONING

#### SYSTEM OUTLINE

### 1. HEATER BLOWER MOTOR OPERATION

Current is applied at all times through the HTR fuse to TERMINAL 5 of the HTR relay.

When the ignition SW is turned on, current flows through the GAUGE fuse to TERMINAL 2 of the HTR relay to the coil side to TERMINAL 1 to TERMINAL 3 of the blower SW.

### Low speed operation

When the blower SW is moved to LO position, current flows to TERMINAL 3 of the blower SW to TERMINAL 1 to GROUND, causing the HTR relay to switch on. This causes the current to flow from the HTR fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 1 of the blower motor to TERMINAL 2 to TERMINAL 4 of the blower resistor to TERMINAL 1 to GROUND, causing the blower motor to rotate at low speed.

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

When the blower SW is moved to M1 position, current flows to TERMINAL 3 of the blower SW to TERMINAL 1 to GROUND, turning the HTR relay to switch on. This causes the current to flow from the HTR fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 1 of the blower motor to TERMINAL 2 to TERMINAL 4 of the blower resistor to TERMINAL 3 to TERMINAL 4 of the blower SW to TERMINAL 1 to GROUND. At this time, the blower resistance of the blower resistor is less than at low speed, so the blower motor rotates at medium low speed.

When the blower SW is moved to M2 position, current flows through the motor flows from TERMINAL 4 of the blower resistor to TERMINAL 2 to TERMINAL 8 of the blower SW to TERMINAL 1 to GROUND. At this time, resistance of the blower resistor is less than at M1 position, so the blower motor rotates at medium high speed.

#### \* High speed operation

When the blower SW is moved to HIGH position, current flows to TERMINAL 3 of the blower SW to TERMINAL 1 to GROUND, turning the HTR relay to switch on.

This causes the current to flow from the HTR fuse to TERMINAL 5 of the HTR relay to TERMINAL 3 to TERMINAL 1 of the blower motor to TERMINAL 2 to TERMINAL 5 of the blower SW to TERMINAL 1 to GROUND, causing the blower motor to rotate at high speed.

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

### \* Switching from FRESH to RECIRC

With the ignition SW turned on, current flows from the GAUGE fuse to TERMINAL 5 of the air inlet control servo motor. When the RECIRC/FRESH SW is switched to the RECIRC side, current flows from TERMINAL 5 of the air inlet control servo motor to TERMINAL 1 to TERMINAL (A) 13 of the integration control and panel to TERMINAL (B) 1 to GROUND. The motor rotates and the damper moves to the RECIRC side. When it is in the RECIRC position, current is cut inside the servo motor and the damper stops at that position.

### \* Switching from RECIRC to FRESH

With the ignition SW turned on, when the RECIRC/FRESH SW is switched to the FRESH side, current flows from TERMINAL 5 of the air inlet control servo motor to TERMINAL 2 to TERMINAL (A) 15 of the integration control and panel to TERMINAL (B) 1 to GROUND, the motor rotates and the damper moves to the FRESH side. when it is in the FRESH position, current is cut inside the servo motor and the damper stops at that position. When the ignition SW turned on, and mode SW (Integration control and panel) is at DEF or F/DEF position, it causes the damper to move to the FRESH side. Whether the RECIRC/FRESH SW (Integration control and panel) is on or not.

### 3. AIR CONDITIONING OPERATION

When the blower SW is on, current flows from the GAUGE fuse to the HEATER relay (Coil side) to TERMINAL 3 of the blower SW to TERMINAL 1 to GROUND, activating the HTR relay. This causes current to flow from the HTR fuse to the HTR relay (Point side) to A/C fuse to TERMINAL (B) 12 of the A/C SW (Integration control and panel). When the A/C SW (Integration Control and panel) is turned on. Current flows from the A/C fuse to TERMINAL (B) 12 of the integration control and panel to TERMINAL (A) 8 to A/C magnetic clutch. Causing The compressor to operate.

When blower SW is on and mode SW (Integration control and panel) is at DEF or F/DEF position, it causes A/C to run whether A/C SW (Integration control and panel) is on or not.

### **HTR RELAY**

5-3: Closed with ignition SW on and heater blower SW on

### A1 A/C DUAL PRESSURE SW

1–2 : Open with refrigerant pressure at less than approx. **2.0** kgf/cm<sup>2</sup> (**196.1** kpa, **28.4** psi) or more than approx. **32.0** kgf/cm<sup>2</sup> (**3138.1** kpa, **455** psi)

### 124 (A), 125 (B) INTEGRATION CONTROL AND PANEL

(B) 4–GROUND : Approx. **12** volts with ignition SW at **ON** or **ST** position (B)12–GROUND : Approx. **12** volts with ignition SW on and blower SW on

(B) 1-GROUND : Always continuity

# : PARTS LOCATION

Co	ode	See Page	Code		See Page	Code	See Page
_		30 (2UZ-FE)	B6		34	J1	33 (5VZ-FE)
	11	32 (5VZ-FE)	E3	Α	34	J3	35
A2	В	32 (5VZ-FE)	E4	В	34	J8	35
A3	Α	30 (2UZ-FE)	E5	С	34	J13	35
А	13	34	E7	Е	34	14.0	31 (2UZ–FE)
А	15	34	124	Α	35	J18	33 (5VZ-FE)
Е	34	34	125	В	35		
Е	35	34	J	1	31 (2UZ-FE)		

# : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)		
45	22 (*2)	Fasing Pages Main Wire and Driver Cide 1/D (Laurer Finish Pages)		
1E	26 (*1)	Engine Room Main Wire and Driver Side J/B (Lower Finish Panel)		
45	22 (*2)	Coult Wire and Driver Cide I/D /Leurer Finish Denell		
1F	26 (*1)	Cowl Wire and Driver Side J/B (Lower Finish Panel)		

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)	
IA4	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)	
IA5	44	Engline Room Main Wile and Cowi Wile (Lett Rick Fallet)	
IE1			
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)	
IE3			

### : GROUND POINTS

Code	See Page	Ground Points Location	
^	40 (2UZ-FE)	French of French	
EA	42 (5VZ-FE)	ront Left Fender	
IF	44	Left Kick Panel	
II	44	Right Kick Panel	

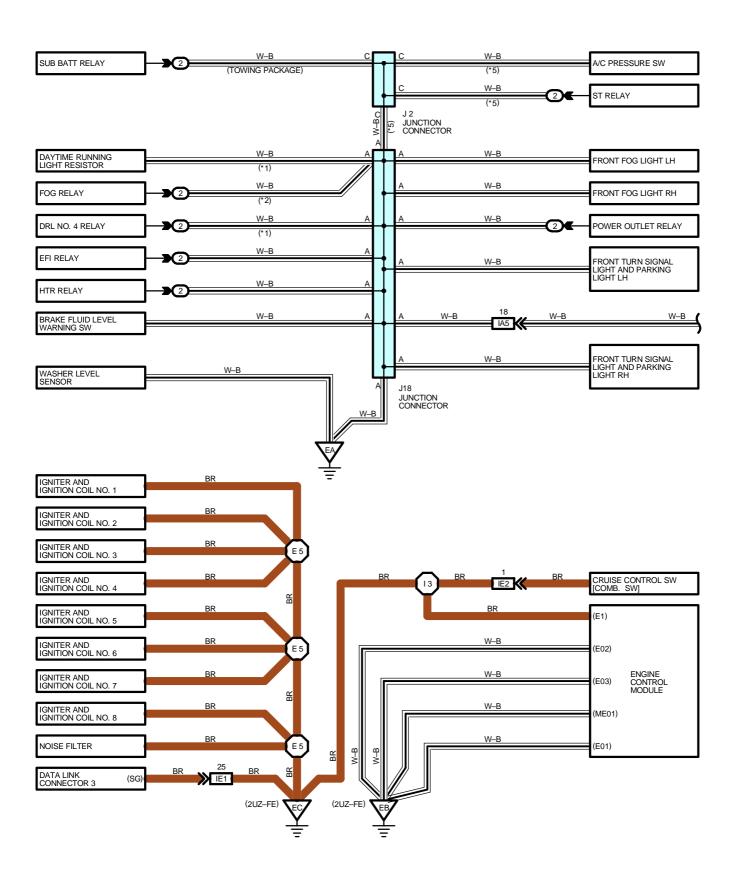
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
F4	40 (2UZ-FE)	Engine Doom Main Wire	14	40	Cavel Mina
	42 (5VZ-FE)	Engine Room Main Wire	I16	46	Cowl Wire

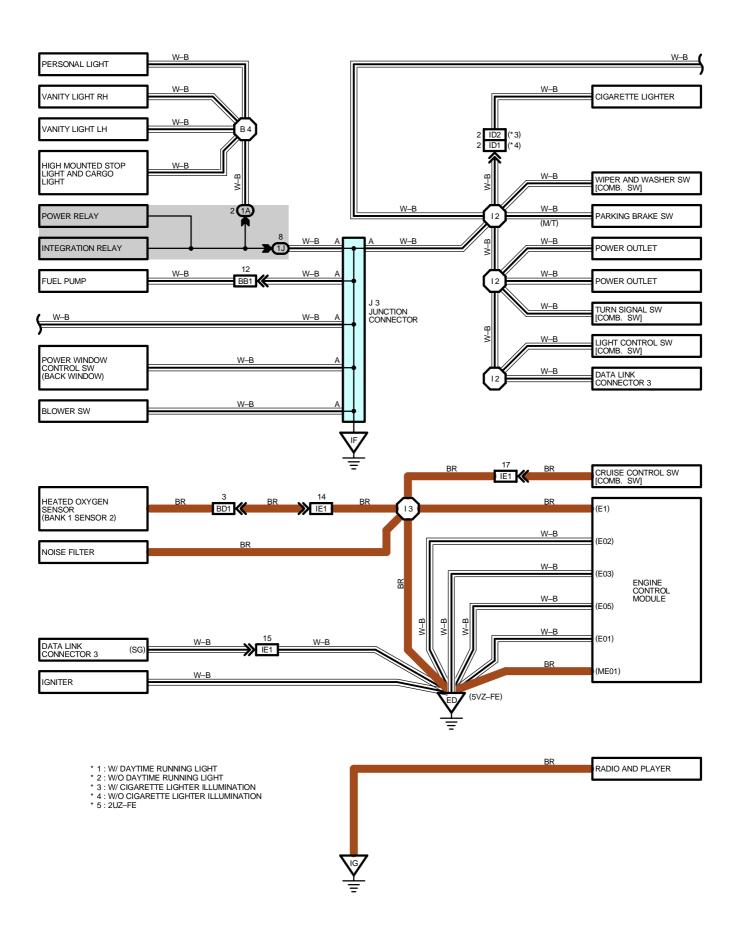
<sup>\* 1 :</sup> w/ Daytime Running Light

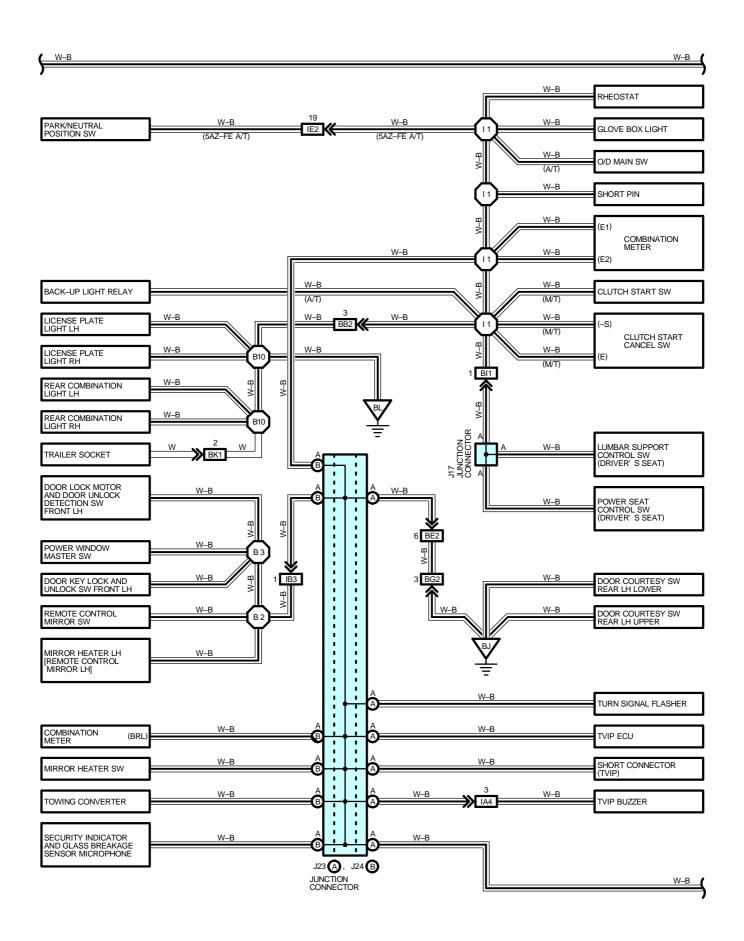
<sup>\* 2 :</sup> w/o Daytime Running Light

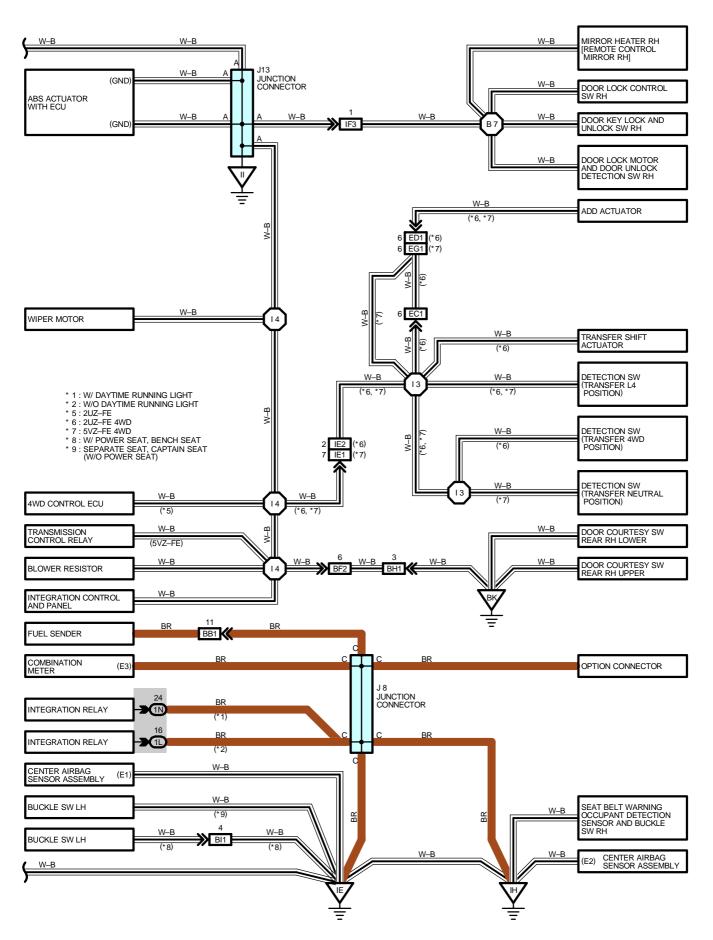
<sup>\* 3 :</sup> Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)









# I GROUND POINT

# : PARTS LOCATION

Code	See Page	Code	See Page	Co	de	See Page
10	31 (2UZ-FE)	J13	35	J23	Α	35
J2	33 (5VZ-FE)	J17	38	J24	В	35
J3	35	140				
J8	35 J18		33 (5VZ-FE)			

# : RELAY BLOCKS

Code	See Page	Relay Blocks (Relay Block Location)
2	21	Engine Room R/B (Engine Compartment Left)

# : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)	
1A	22 (*2)	Roof Wire and Driver Side J/B (Lower Finish Panel)	
I IA	26 (*1)	Roof Wile and Driver Side 3/B (Lower Fillish Faller)	
4.1	22 (*2)		
1J	26 (*1)	Coult Wise and Driver Cide I/D /Louise Finish Banel)	
1L	23 (*2)	Cowl Wire and Driver Side J/B (Lower Finish Panel)	
1N	27 (*1)		

### : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

ш					
Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)			
EC1	40 (2UZ-FE)	Engine No.2 Wire and Engine Wire (Near the Starter)			
ED1	40 (2UZ-FE)	Engine No.2 Wire and Differential Wire (Near the Transmission)			
EG1	42 (5VZ–FE)	Engine Wire and Differential Wire (Front Differential Upper Side)			
IA4	44	Forther Donne Main With and Occal Miles (Left World Donne)			
IA5	44	Engine Room Main Wire and Cowl Wire (Left Kick Panel)			
IB3	44	Front Door LH Wire and Cowl Wire (Left Kick Panel)			
ID1	40	Cinquetta Limbton Wire and Count Wire (Instrument Bonel Bross LI)			
ID2	46	Cigarette Lighter Wire and Cowl Wire (Instrument Panel Brace LH)			
IE1	40	Facine Mine and Coud Mine (Dickt Cide of Instrument Date))			
IE2	46	Engine Wire and Cowl Wire (Right Side of Instrument Panel)			
IF3	46	Front Door RH Wire and Cowl Wire (Right Kick Panel)			
DD4	48 (Access Cab)				
BB1	50 (Standard Cab)	Frame Wire and Coul Wire (Under the Driver's Coat)			
BB2	48 (Access Cab)	Frame Wire and Cowl Wire (Under the Driver's Seat)			
DDZ	50 (Standard Cab)				
DD4	48 (Access Cab)	France Military and Count Military (I landout the France Passaurant's Coats)			
BD1	50 (Standard Cab)	Frame Wire and Cowl Wire (Under the Front Passenger's Seat)			
BE2	48 (Access Cab)	Floor No.2 Wire and Cowl Wire (Center of Left Rocker Panel)			
BF2	48 (Access Cab)	Floor No.1 Wire and Cowl Wire (Center of Right Rocker Panel)			
BG2	48 (Access Cab)	Floor No.2 Wire and Rear Door No.1 Wire LH (Under the Left Quarter Panel)			
BH1	48 (Access Cab)	Floor No.1 Wire and Rear Door No.1 Wire RH (Under the Right Quarter Panel)			
BI1	52	Cowl Wire and Seat No.1 Wire (Under the Driver's Seat)			
DIZA	48 (Access Cab)	France Wine and France No. 2 Wine (Noorthallianne Distalliable)			
BK1	50 (Standard Cab)	Frame Wire and Frame No.3 Wire (Near the License Plate Light)			

<sup>\* 1 :</sup> w/ Daytime Running Light

<sup>\* 2 :</sup> w/o Daytime Running Light \* 3 : Bench Seat

<sup>\* 4 :</sup> Separate Seat, Captain Seat (w/o Power Seat)



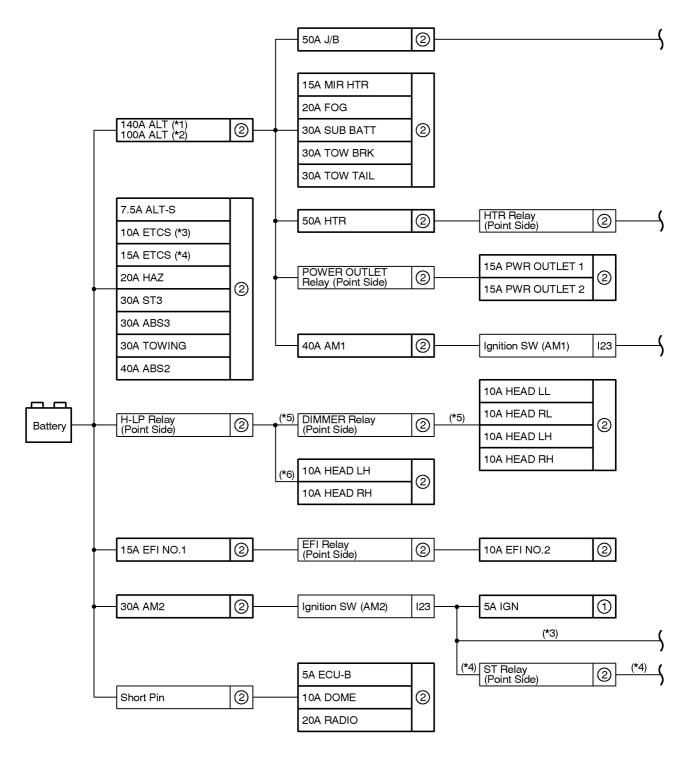
# : GROUND POINTS

Code	See Page	Ground Points Location	
EA	40 (2UZ-FE)	Front Left Fender	
EA	42 (5VZ-FE)	Front Left Ferider	
EB	40 (2UZ-FE)	Rear Bank of Right Cylinder Head	
EC	40 (2UZ-FE)	Rear Bank of Left Cylinder Head	
ED	42 (5VZ-FE)	Intake Manifold Left	
IE	44	Left Kiek Bonel	
IF	IF 44	Left Kick Panel	
IG	44	Instrument Panel Brace RH	
IH	44	Disht Kish Danel	
II	44	Right Kick Panel	
BJ	48 (Access Cab)	Inside of Rear Door LH	
BK	48 (Access Cab)	Inside of Rear Door RH	
DI	48 (Access Cab)	Currounding of the Frent of the Fuel Tools	
BL	50 (Standard Cab)	Surrounding of the Front of the Fuel Tank	



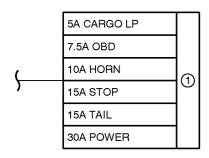
Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points	
E5	40 (2UZ-FE)	Engine Wire	В3	50 (Standard Cab)	Front Door LH Wire	
I1	46	Cowl Wire	B4	48 (Access Cab)	Roof Wire	
12				50 (Standard Cab)		
13	46	Engine Wire	D7	48 (Access Cab)	48 (Access Cab)	Front Door RH Wire
14	46	Cowl Wire	B7	50 (Standard Cab)	Front Door RH Wife	
DO	48 (Access Cab)	Front Door LH Wire	B10	48 (Access Cab)	Frame Wire	
B2	50 (Standard Cab)			50 (Standard Cab)		
В3	48 (Access Cab)					

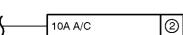
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.

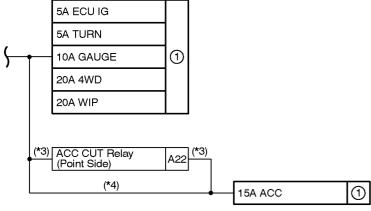


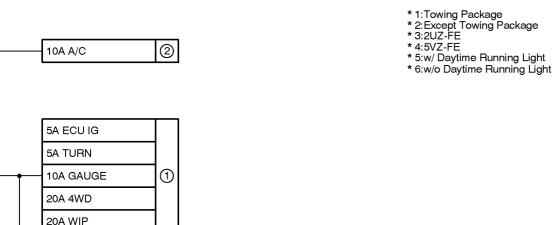
[LOCATION] ①: Driver Side J/B and Integration Relay (See page 22 (\*6), 26 (\*5))

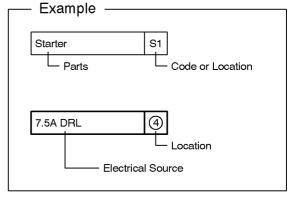
2 : Engine Room R/B (See page 21)











# J POWER SOURCE (Current Flow Chart)

#### DriverSide JB (See Page 22 (w/o Daytime Running Light

See Page 25 Iw/ Daytime Running Light

Fuse		System	Page	
5A	CARGO LP	Cargo Light		
071	Of IROO LI	Integration Control and Panel	138	
		ABS	156	
		Headlight (w/ Daytime Running Light)		
- A	FOLLIC	Light Auto Turn Off (w/ Daytime Running Light)		
5A	ECU IG	Light Auto Turn Off (w/o Daytime Running Light)		
		Power Window	204	
		TVIP and Wireless Door Lock Control	196	
		Charging	74	
		Combination Mater	234	
		Cruise Control (2UZ–FE)	160	
		Cruise Control (5VZ–FE)	164	
5A	IGN	Electronically Controlled Transmission and A/T Indicator (2UZ–FE)	144	
		Electronically Controlled Transmission and A/T Indicator (5VZ–FE)	150	
		Engine Control (2UZ–FE)	76	
		Engine Control (5VZ–FE)	88	
		SRS	169	
		Electronically Controlled Transmission and A/T Indicator (2UZ–FE)	144	
		Electronically Controlled Transmission and A/T Indicator (5VZ-FE)	150	
<b>-</b> ^	CTA	Engine Control (2UZ-FE)	<b>76</b>	
5A	STA	Engine Control (5VZ–FE)	88	
		Starting (2UZ-FE)	64	
		Starting (5VZ–FE)	60	
5A	TURN	Trailer Towing	132	
Turn Sigr	Turn Signal and Hazard Warning Light	120		
7.5A	OBD	Engine Control (2UZ–FE)	76	
7.5	OBD	Engine Control (5VZ–FE)	88	
		ABS	156	
		Air Conditioning	240	
		Back-Up Light	108	
		Cargo Light	136	
	GAUGE	Charging	74	
		Combination Mater	234	
1404		Cruise Control (2UZ-FE)	160	
10A		Cruise Control (5VZ–FE)	164	
		Door Lock Control (w/ Daytime Running Light)	184	
		Door Lock Control (w/o Daytime Running Light)	190	
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	144	
		Electronically Controlled Transmission and A/T Indicator (5VZ-FE)	150	
		Engine Control (2UZ–FE)	76	
		Engine Control (5VZ–FE)	88	

<sup>\*</sup> These are the page numbers of the first page on which the related system is shown.

	Fuse	System	Page
		Integration Control and Panel	
		Interior Light	116
		Key Reminder and Seat Belt Warning	
		Mirror Heater	226
10A	GAUGE	Starting (5VZ–FE)	
IUA	GAUGE	Trailer Towing	
		Wiper and Washer (w/ Int Time SW Mechanism)	220
		Wiper and Washer (w/o Int Time SW Mechanism)	224
		4WD (2UZ–FE)	
		4WD (5VZ–FE)	180
10A	HORN	Horn	218
TUA	TIOKIN	TVIP and Wireless Door Lock Control	196
		Back-Up Light	108
		Cigarette Lighter and Power Outlet	214
		Clock	216
		Cruise Control (2UZ–FE)	160
		Cruise Control (5VZ–FE)	164
		Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	144
15A	ACC	Electronically Controlled Transmission and A/T Indicator (5VZ-FE)	150
ISA	ACC	Integration Control and Panel	138
		Radio and Player	232
		Remote Control Mirror	228
		SRS	169
		Trailer Towing	132
		4WD (2UZ–FE)	174
		4WD (5VZ–FE)	180
		ABS	156
		Cruise Control (2UZ–FE)	160
		Cruise Control (5VZ–FE)	164
	STOP	Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	144
15A		Electronically Controlled Transmission and A/T Indicator (5VZ-FE)	150
		Engine Control (2UZ–FE)	76
		Engine Control (5VZ–FE)	88
		Stop Light	122
		Trailer Towing	132
		Clock	216
		Engine Control (2UZ–FE)	76
15A		Headlight (w/ Daytime Running Light)	98
	TAIL	Illumination	112
	IAIL	Integration Control and Panel	138
		Light Auto Turn Off (w/ Daytime Running Light)	124
		Light Auto Turn Off (w/o Daytime Running Light)	128
		Taillight	110

<sup>\*</sup> These are the page numbers of the first page on which the related system is shown.

# J POWER SOURCE (Current Flow Chart)

	Fuse	System	Page
15A	TAIL	Trailer Towing	132
ISA	IAIL	TVIP and Wireless Door Lock Control	196
20A	WIP	Wiper and Washer (w/ Int Time SW Mechanism)	220
20A	VVIE	Wiper and Washer (w/o Int Time SW Mechanism)	224
20A	4WD	4WD (2UZ-FE)	174
204	4000	4WD (5VZ-FE)	180
	POWER	Door Lock Control (w/ Daytime Running Light)	184
		Door Lock Control (w/o Daytime Running Light)	190
		Light Auto Turn Off (w/ Daytime Running Light)	124
30A		Light Auto Turn Off (w/o Daytime Running Light)	128
		Power Seat	230
		Power Window	204
		TVIP and Wireless Door Lock Control	196

# **Engine Room R/B (See Page 21)**

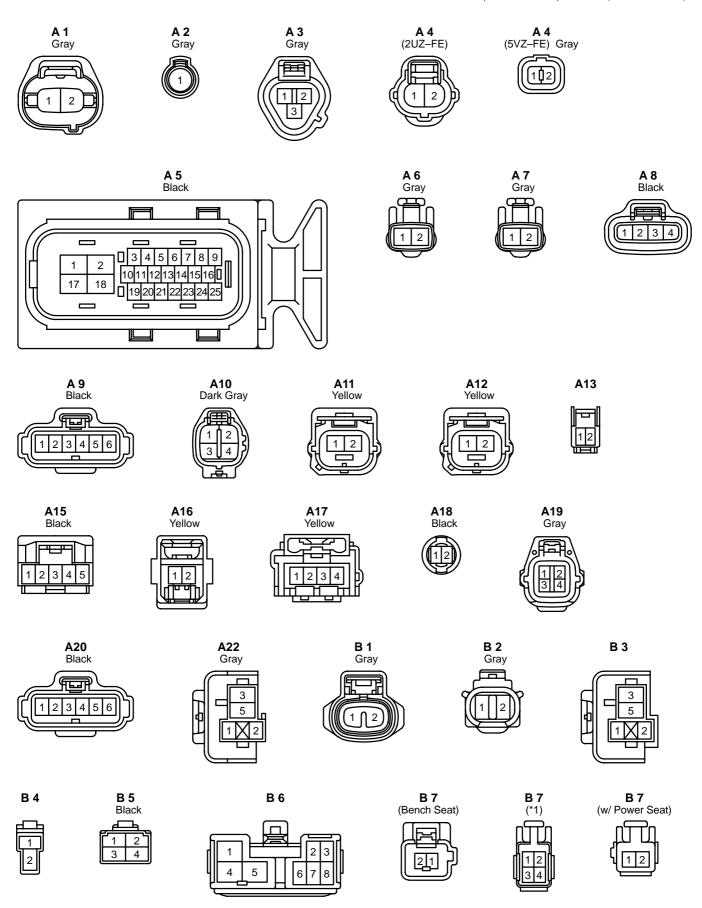
Fuse		System	Page	
5A	ECU-B Engine Control (2UZ-FE) TVIP and Wireless Door Lock Control		76 196	
7.5A	ALT-S	Charging	74	
10A	A/C	Air Conditioning	240	
TUA	AC	Integration Control and Panel	138	
		Clock	216	
		Combination Mater	234	
		Door Lock Control (w/ Daytime Running Light)	184	
		Door Lock Control (w/o Daytime Running Light)	190	
10A	DOME	Integration Control and Panel	138	
		Interior Light	116	
		Key Reminder and Seat Belt Warning	210	
		SRS	169	
		TVIP and Wireless Door Lock Control	196	
10A	EFI NO.2	Engine Control (2UZ–FE)	76	
TUA	LITINO.2	Engine Control (5VZ–FE)	88	
10A	ETCS (2UZ-FE)	Cruise Control (2UZ-FE)	160	
TUA		Engine Control (2UZ–FE)	76	
		Fog Light (w/o Daytime Running Light)	106	
10A	HEAD LH	Headlight (w/ Daytime Running Light)	98	
		Headlight (w/o Daytime Running Light)	102	
10A	HEAD LL	Fog Light (w/ Daytime Running Light)	104	
TUA	HEAD LL	Headlight (w/ Daytime Running Light)	98	
		Fog Light (w/o Daytime Running Light)	106	
10A	HEAD RH	Headlight (w/ Daytime Running Light)	98	
		Headlight (w/o Daytime Running Light)	102	
10A	HEAD RL	Headlight (w/ Daytime Running Light)	98	

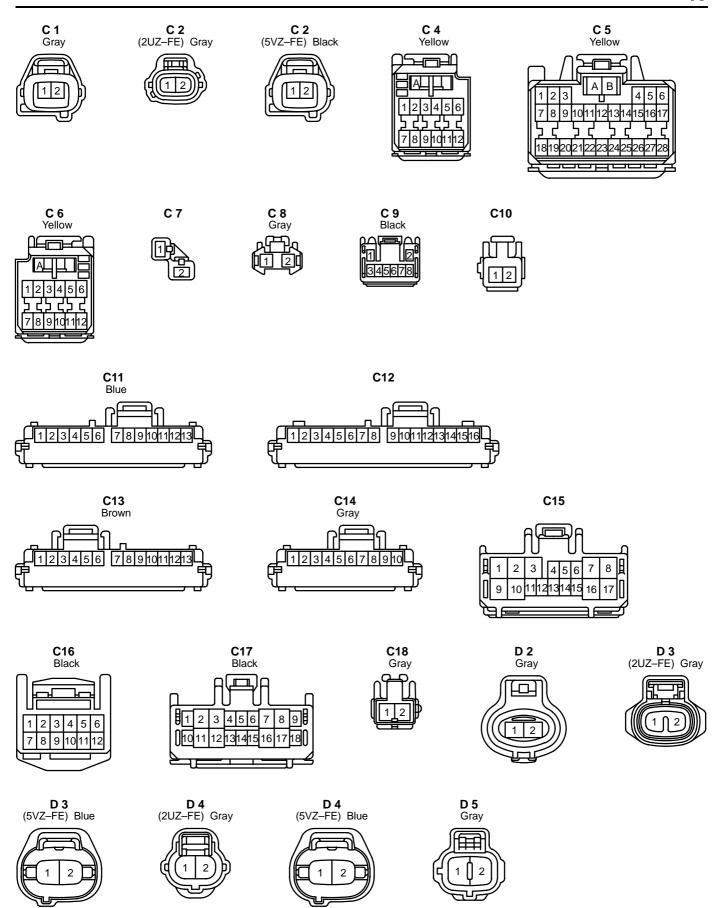
<sup>\*</sup> These are the page numbers of the first page on which the related system is shown.

	Fuse	System	Page
		Cruise Control (2UZ-FE)	160
15A		Cruise Control (5VZ–FE)	164
	EFI NO.1	Electronically Controlled Transmission and A/T Indicator (2UZ-FE)	144
	EFINO.1	Electronically Controlled Transmission and A/T Indicator (5VZ–FE)	150
		Engine Control (2UZ-FE)	76
		Engine Control (5VZ–FE)	88
15A	ETCS (5VZ-FE)	Cruise Control (5VZ–FE)	164
15A	MIR HTR	Mirror Heater	226
15A	PWR OUTLET1	Cigarette Lighter and Power Outlet	214
15A	PWR OUTLET2	Cigarette Lighter and Power Outlet	214
20A	FOG	Fog Light (w/ Daytime Running Light)	104
20A	FOG	Fog Light (w/o Daytime Running Light)	106
20A	HAZ	Trailer Towing	132
20A	ITAL	Turn Signal and Hazard Warning Light	120
20A	RADIO	Radio and Player	232
		Engine Control (2UZ-FE)	76
		Engine Control (5VZ–FE)	88
30A	AM2	Ignition (2UZ–FE)	68
307		Ignition (5VZ–FE)	72
		Starting (2UZ-FE)	64
		Starting (5VZ–FE)	60
30A	ST3	Starting (2UZ-FE)	64
30A	SUB BATT	Trailer Towing	132
30A	TOW BRK	Trailer Towing	132
30A	TOW TAIL	Trailer Towing	132
30A	TOWING	Trailer Towing	132
40A	ABS2	ABS	156
40A	ABS3	ABS	156
40A	AM1	Cruise Control (5VZ–FE)	164
40/1	AWIT	Starting (5VZ–FE)	60
50A	HTR	Air Conditioning	240
50A	J/B	Illumination	112
307	J/D	Taillight	110
		Charging	74
	ALT (Except Towing Package)	Cigarette Lighter and Power Outlet	214
100A		Cruise Control (5VZ–FE)	164
100/4		Illumination	112
		Starting (5VZ–FE)	60
		Taillight	110
		Charging	74
140A	ALT (Towing Package)	Cigarette Lighter and Power Outlet	214
	(1311	Illumination	112
		Taillight	110

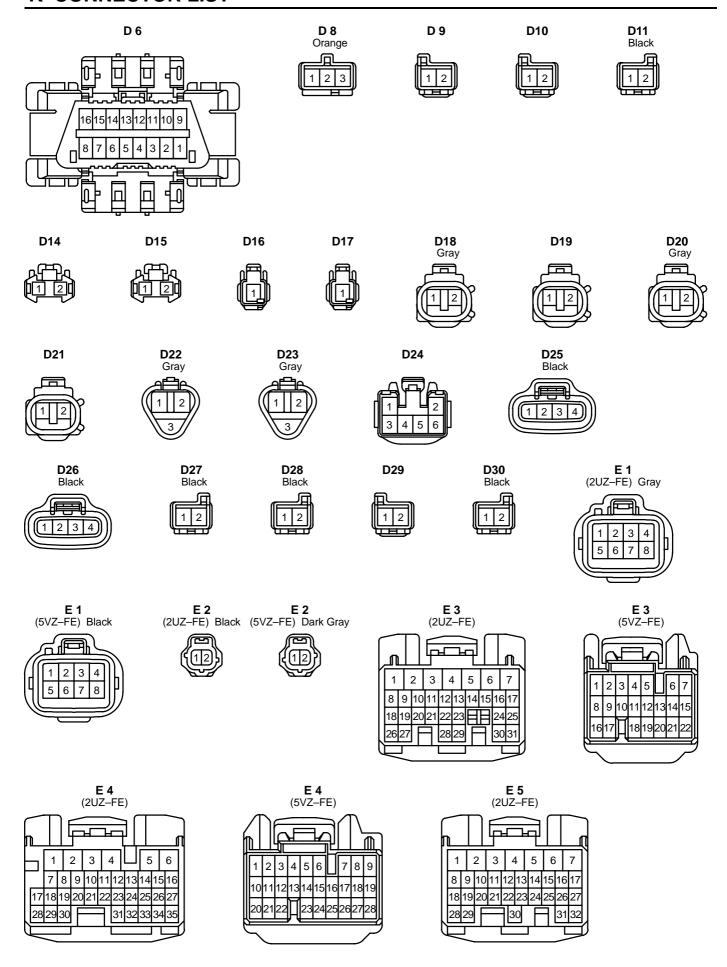
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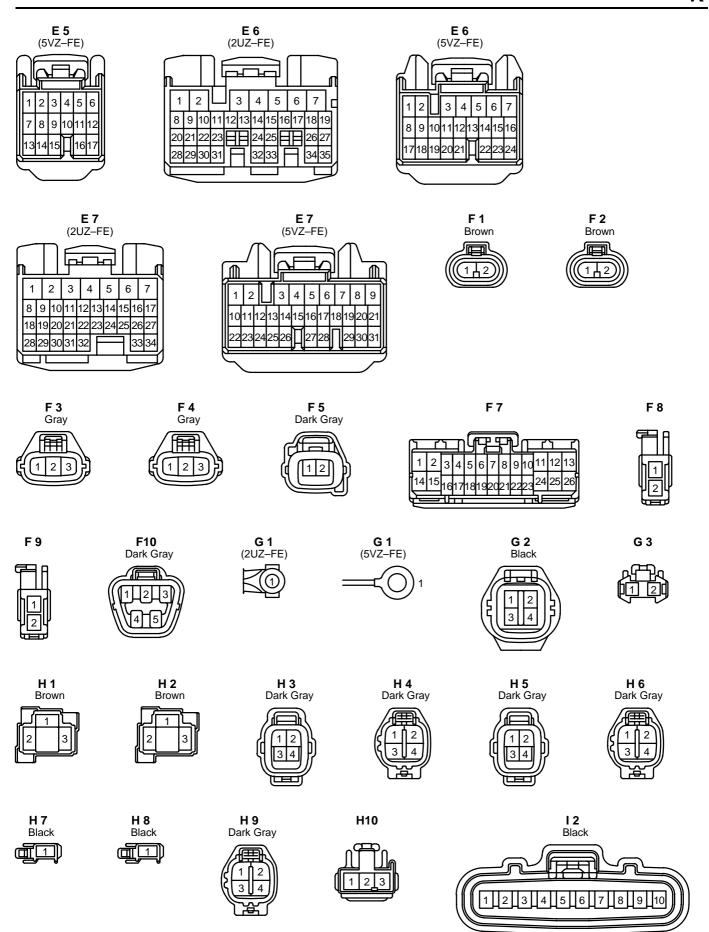
\*1 : Separate Seat, Captain Seat (w/o Power Seat)



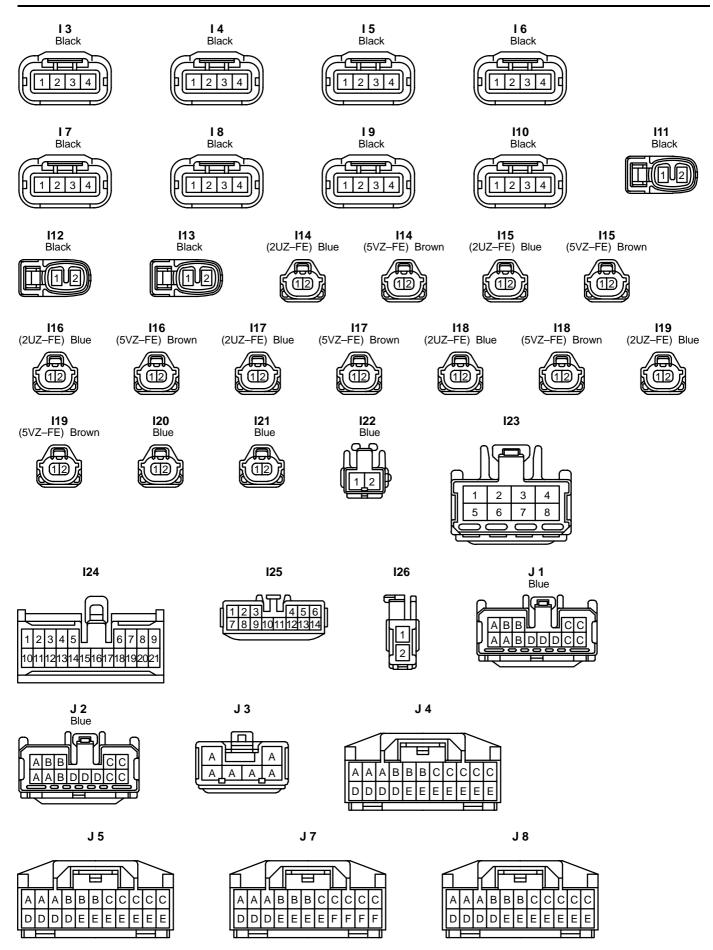


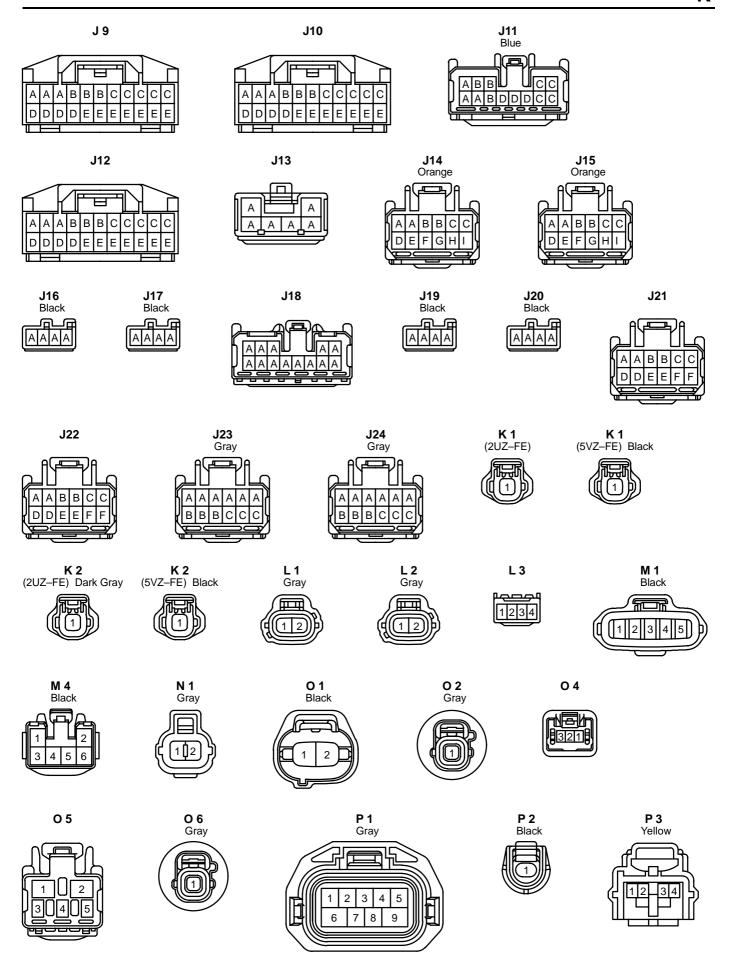
#### K CONNECTOR LIST



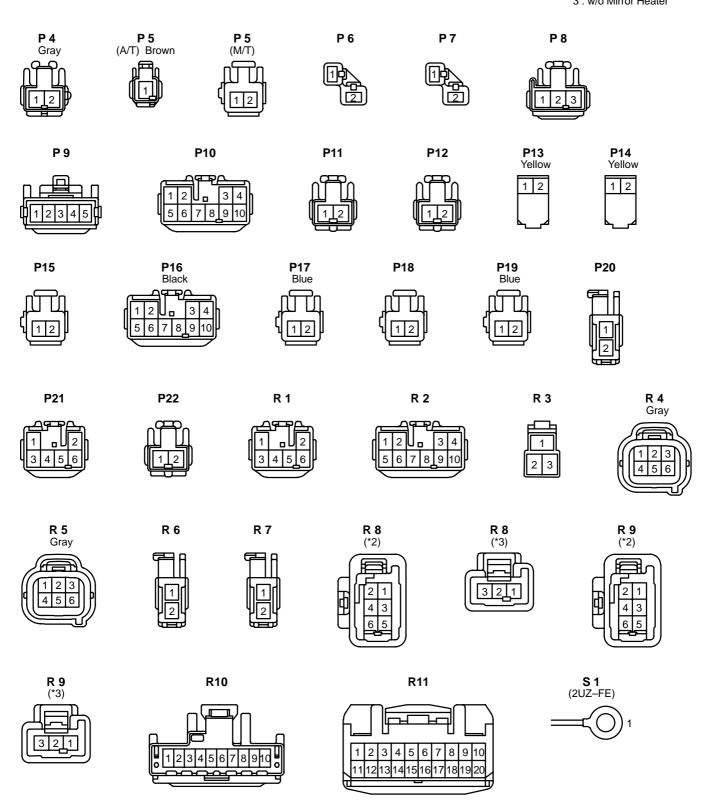


#### K CONNECTOR LIST





\*2 : w/ Mirror Heater \*3 : w/o Mirror Heater

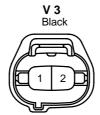


\*4 : w/ Cruise Control \*5 : w/o Cruise Control \*6 : Except Towing Package S 2 Black S 3 Black **S 4** (\*4) Blue **S 1** (2UZ–FE) **S 1** (5VZ–FE) **S10** Black **S 4** (\*5) Brown S 5 S 8 S 9 **T 1** Gray T 2 (2UZ-FE) Black **T 2** (5VZ-FE) Black T 3 Black **T 6** (\*6) Black T 4 T 5 123 T 6 (Towing Package) Black T 7 T 8 T 9 T10 Gray T13 Black U 1 T11 T12

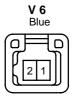
### **K CONNECTOR LIST**

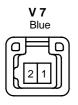






















### L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number	Code	Part Name	Part Number
A 1	A/C Dual Pressure SW	90980–11149	C16	Combination SW	90980–12183
A 2	A/C Magnetic Clutch	90980–11271	C17	Combination SW	90980–11594
A 3	A/C Magnetic Clutch and Lock Sensor	90980–11016	C18	Cruise Control Clutch SW	90980–10906
	A/T Oil Temp. Sensor (2UZ–FE)	90980–11025	D 2	Daytime Running Light Resistor	90980–10928
A 4	A/T Oil Temp. Sensor (5VZ–FE)	90980–10498		Detection SW (Transfer 4WD Position)	
A 5	ABS Actuator with ECU	90980–11861	D 3	(2UZ–FE)	90980–11250
A 6	ABS Speed Sensor Front LH			Detection SW (Transfer 4WD Position) (5VZ–FE)	90980-11156
A 7	ABS Speed Sensor Front RH	90980–11075		Detection SW (Transfer L4 Position)	<del> </del>
A 8	Accel Position Sensor	90980–11150		(2UZ–FE)	90980–11025
A 9	ADD Actuator	90980–11858	D 4	Detection SW (Transfer L4 Position)	90980–11156
A10	Air Fuel Ratio Sensor (Bank 1 Sensor 1)	90980–11178		(5VZ–FE)	
A11	Airbag Sensor Front LH		D 5	Detection SW (Transfer Neutral Position)	90980–10923
A12	Airbag Sensor Front RH	90980–11898	D 6	Data Link Connector 3	90980–11665
A13	A/C Thermistor	90980–11918	D 8	Diode (A/T)	90980–11071
A15	Air Inlet Control Servo Motor	90980–11909	D 9	Diode (Door Courtesy)	90980–11608
A16	Airbag Squib (Front Passenger Airbag	90980–11884	D10	Diode (Idle–Up)	
	Assembly)		D11	Diode (Power Window System)	90980–10962
A17	Airbag Squib (Steering Wheel Pad)	90980–12160	D14	Door Courtesy Light LH	90980–11148
A18	Ashtray Illumination	-	D15	Door Courtesy Light RH	
A19	ABS Speed Sensor Rear	90980–10942	D16	Door Courtesy SW Front LH	90980–10871
A20	Accelerator Pedal Position Sensor	90980–11858	D17	Door Courtesy SW Front RH	
A22	ACC Cut Relay	82660–53010	D18	Door Courtesy SW Rear LH Lower	_
B 1	Back-Up Light SW	90980–11250	D19	Door Courtesy SW Rear LH Upper	90980–11003
B 2	Brake Fluid Level Warning SW	90980–11207	D20	Door Courtesy SW Rear RH Lower	_
В3	Back-UP Light Relay	82660–20340	D21	Door Courtesy SW Rear RH Upper	
B 4	Blower Motor	90980–10214	D22	Door Key Lock and Unlock SW LH	90980–11245
B 5	Blower Resistor	90980–10171	D23	Door Key Lock and Unlock SW RH	
B 6	Blower SW and Defroster Mode SW	90980–10877	D24	Door Lock Control SW RH	90980–10797
	Buckle SW LH (Bench Seat)	90980–10824	D25	Door Lock Motor and Door Unlock Detection SW LH	
В7	Buckle SW LH (Separate Seat, Captain Seat (w/o Power Seat))	90980–10795	D26	Door Lock Motor and Door Unlock Detection SW RH	90980–11150
	Buckle SW LH (w/ Power Seat)	90980–10825	D27	Diode (Step Light)	
C 1	Camshaft Position Sensor	90980–10947	D28	Diode (Door Lock)	90980–10962
C 2	Crankshaft Position Sensor (2UZ–FE)	90980–11162	D29	Diode (TVIP)	90980–11608
	Crankshaft Position Sensor (5VZ–FE)	90980–10947	D30	Diode (Unlock Warning)	90980–10962
C 4	Center Airbag Sensor Assembly	90980–11873		Electronically Controlled Transmission	
C 5	Center Airbag Sensor Assembly	90980–11872	E 1	Solenoid	90980–10891
C 6	Center Airbag Sensor Assembly	90980–11871	Ea	Engine Coolant Temp. Sensor (2UZ-FE)	90980-10736
C 7	Cigarette Lighter	90980–10760	E 2	Engine Coolant Temp. Sensor (5VZ–FE)	90980–10737
C 8	Cigarette Lighter Illumination	90980–11148	E 3	Engine Control Module (2UZ-FE)	90980–12142
C 9	Clutch Start Cancel SW	90980–11533	E3	Engine Control Module (5VZ–FE)	90980-11638
C10	Clutch Start SW	90980–10825	E 4	Engine Control Module (2UZ–FE)	90980–12146
C11	Combination Meter	90980–11114	E 4	Engine Control Module (5VZ–FE)	90980-11637
C12	Combination Meter	90980–11113	E F	Engine Control Module (2UZ-FE)	90980–12143
C13	Combination Meter	90980–11115	E 5	Engine Control Module (5VZ–FE)	90980-11586
C14	Combination Meter	90980–11116			
C15	Combination SW	90980-11672			

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

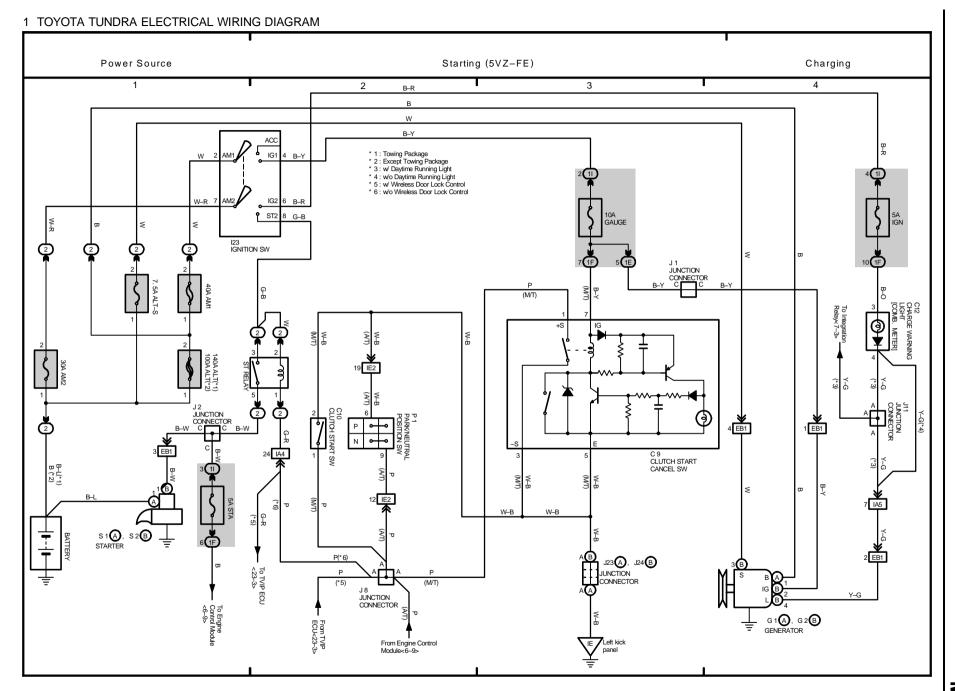
Code	Part Name	Part Number	Code	Part Name	Part Number	
E 6	Engine Control Module (2UZ-FE)	90980–12145	120	Injector No.7	90980–11153	
	Engine Control Module (5VZ–FE)	90980–11476	I21	Injector No.8	30000 11100	
E 7	Engine Control Module (2UZ-FE)	90980–12144	122	Ignition Key Cylinder Light	90980–10906	
	Engine Control Module (5VZ–FE)	90980–11421	123	Ignition SW	90980–11615	
F 1	Front Fog Light LH	90980–11096	124	Integration Control and Panel	90980–11125	
F 2	Front Fog Light RH		125	Integration Control and Panel	90980–10807	
F3	Front Turn Signal Light and Parking Light LH		126	Interior Light	90980–10935	
		90980–11020	J 1	Junction Connector	90980–11714	
F 4	Front Turn Signal Light and Parking Light RH		J 2	Junction Connector	90980-11714	
F 5	Fuel Pump Resistor	90980–10901	J 3	Junction Connector	90980–10976	
F 7	4WD Control ECU	90980-11423	J 4	Junction Connector		
F 8	Front Door Speaker LH		J 5	Junction Connector		
F 9	Front Door Speaker RH	90980–10935	J 7	Junction Connector	90980–11915	
F10	Fuel Pump and Sender	90980–11077	J 8	Junction Connector	30300 11313	
	Generator (2UZ–FE)	90980-09365	J 9	Junction Connector		
G 1	Generator (5VZ–FE)	90980-09212	J10	Junction Connector		
G 2	Generator	90980–11964	J11	Junction Connector	90980-11714	
G 3	Glove Box Light	90980–11148	J12	Junction Connector	90980-11915	
H 1	Headlight LH		J13	Junction Connector	90980–10976	
H 2	Headlight RH	90980–11314	J14	Junction Connector	00090 11661	
H 3	Heated Oxygen Sensor (Bank 1 Sensor 1)	90980–10869	J15	Junction Connector	90980–11661	
H 4	Heated Oxygen Sensor (Bank 1 Sensor 2)	90980–11028	J16	Junction Connector	90980-11398	
H 5	Heated Oxygen Sensor (Bank 2 Sensor 1)	90980–10869	J17	Junction Connector	90960-11396	
H 6	Heated Oxygen Sensor (Bank 2 Sensor 2)	90980–11028	J18	Junction Connector	90980-11542	
H 7	Horn LH		J19	Junction Connector	90980–11398	
H 8	Horn RH	90980–10619	J20	Junction Connector	90960-11396	
H 9	Heated Oxygen Sensor (Bank 1 Sensor 2)	90980–11028	J21	Junction Connector		
H10	High Mounted Stop Light and Cargo Light	90980–11296	J22	Junction Connector	90980–11661	
12	Igniter	90980–11653	J23	Junction Connector	90960-11661	
13	Igniter and Ignition Coil No.1		J24	Junction Connector		
14	Igniter and Ignition Coil No.2	-	K 1	Knock Sensor 1	00090 11166	
15	Igniter and Ignition Coil No.3	-	K 2	Knock Sensor 2	90980–11166	
16	Igniter and Ignition Coil No.4	-	L 1	License Plate Light LH	00000 44460	
17	Igniter and Ignition Coil No.5	90980–11885	L 2	License Plate Light RH	90980–11162	
18	Igniter and Ignition Coil No.6	-	L 3	Lumber Support Control SW (Driver's Seat)	90980-10601	
19	Igniter and Ignition Coil No.7	-	M 1	Mass Air Flow Meter	90980-11317	
I10	Igniter and Ignition Coil No.8	-	M 4	Mirror Heater SW	90980–10797	
I11	Ignition Coil No.1		N 1	Noise Filter	90980-10843	
l12	Ignition Coil No.2	90980–11246	01	O/D Direct Clutch Speed Sensor	90980–11156	
113	Ignition Coil No.3	-	02	Oil Pressure SW	90980-11363	
I14	Injector No.1		04	O/D Main SW	90980-11470	
I15	Injector No.2	1	O 5	Option Connector	90980-11603	
I16	Injector No.3	1	06	Oil Pressure Sender	90980-11363	
	•	90980-11153	P 1	Park/Neutral Position SW	90980-11784	
	Injector No 4		11			
I17 I18	Injector No.4 Injector No.5		P 2	Power Steering Oil Pressure SW	90980-11428	

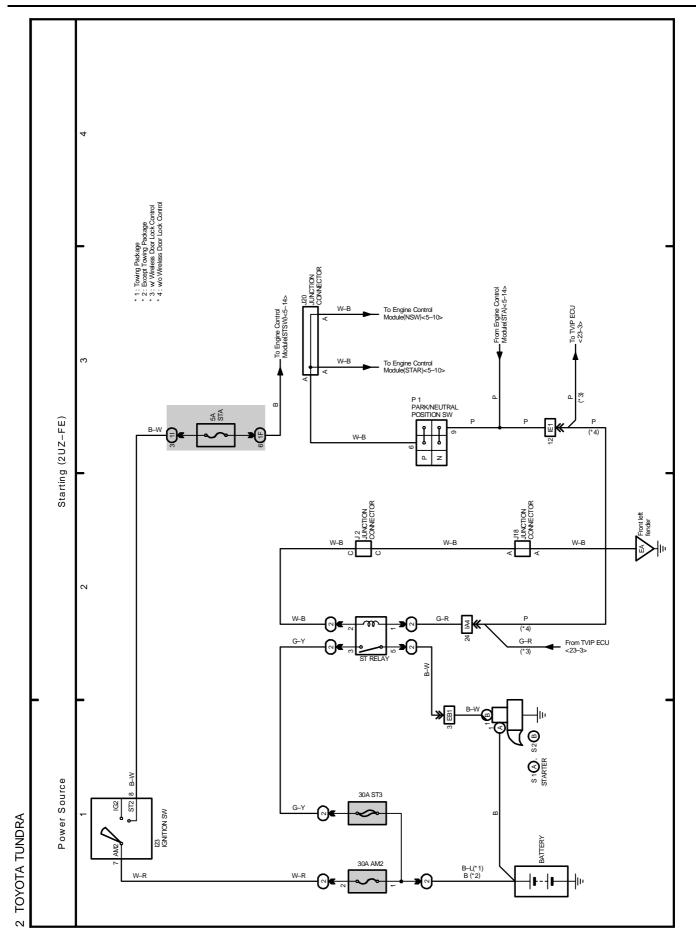
## L PART NUMBER OF CONNECTORS

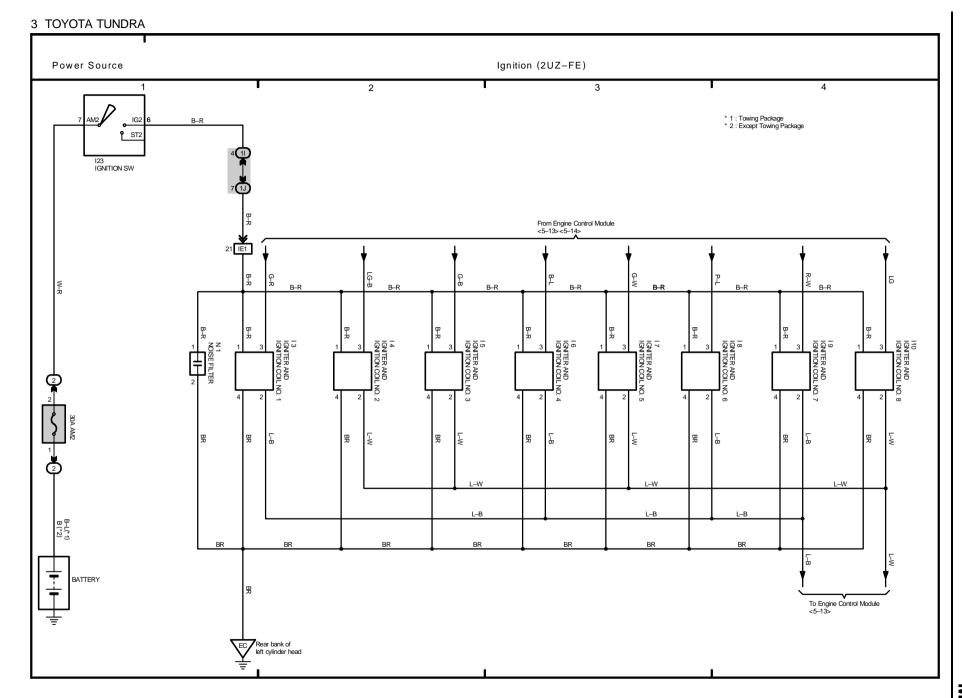
Code	Part Name	Part Number	Code	Part Name	Part Number
P 4	Passenger Airbag Manual On-Off SW	90980-10906	S10	Security Indicator and Glass Breakage	90980–11013
D.5	Parking Brake SW (A/T)	90980–10871	310	Sensor Microphone	90980-11013
P 5	Parking Brake SW (M/T)	90980-10825	T 1	Throttle Control Motor	90980–10942
P 6	Power Outlet		T 2	Throttle Position Sensor (2UZ–FE)	90980–11858
P 7	Power Outlet	90980–10760		Throttle Position Sensor (5VZ–FE)	90980–10711
P 8	Personal Light	90980-10908	Т3	Transfer Shift Actuator	90980–11858
P 9	Power Window Control SW RH	90980-10789	T 4	Transmission Control Relay	90980–10801
P10	Power Window Master SW	90980–10997	T 5	Turn Signal Flasher	90980–10799
P11	Power Window Motor Front LH		T 6	Trailer Socket (Except Towing Package)	82824–34040
P12	Power Window Motor Front RH	90980–10860		Trailer Socket (Towing Package)	82824–34030
P13	Pretensioner LH	20000 44000	T 7	Tweeter LH	90980–10906
P14	Pretensioner RH	90980–11862	T 8	Tweeter RH	
P15	Power Seat Motor (Driver's Seat Front	90980–10825	Т9	Trailer Converter	90980–11535
1 13	Vertical Control)	30300 10023	T10	TVIP Buzzer	90980–11051
P16	Power Seat Control SW (Driver's Seat)	90980–10997	T11	TVIP ECU	90980–11424
P17	Power Seat Motor (Driver's Seat Rear Vertical Control)		T12	TVIP ECU	90980–11392
	Power Seat Motor (Driver's Seat Reclining		T13	TVIP ECU	90980–10799
P18	Control)	90980–10825	U 1	Unlock Warning SW	90980–10860
P19	Power Seat Motor (Driver's Seat Slide		V 1	Vapor Pressure Sensor	90980–11143
FIB	Control)		V 2	Vehicle Speed Sensor (Combination Meter)	000000
P20	Power Seat Motor (Driver's Seat Lumber Support Control)	90980–10935	V 3	Vehicle Speed Sensor (Electronically Controlled Transmission)	90980–11156
P21	Power Window Control SW (Back Window)	90980–10996	V 4	VSV (EVAP)	
P22	Power Window Motor (Back Window)	90980–10860	V 6	Vanity Light LH	90980–11368
R 1	Radio and Player	90980–10996	V 7	Vanity Light RH	90900-11300
R 2	Radio and Player	90980–10997	V 9	VSV (Canister Closed Valve)	90980–11859
R 3	Rheostat	90980–10216	W 2	Washer Motor and Washer Level Sensor	90980–11177
R 4	Rear Combination Light LH	90980–10988	W 3	Water Temp. Sender (2UZ-FE)	90980–11428
R 5	Rear Combination Light RH	30300 10300	VV S	Water Temp. Sender (5VZ–FE)	90980–10359
R 6	Rear Door Speaker LH	90980–10935	W 4	Wiper Motor	90980–11599
R 7	Rear Door Speaker RH	30000 10000			
	Remote Control Mirror LH (w/ Mirror Heater)	90980–11452			
R 8	Remote Control Mirror LH (w/o Mirror Heater)	90980-10907			
	Remote Control Mirror LH (w/ Mirror Heater)	90980-11452	<b></b>		
R 9	Remote Control Mirror RH (w/o Mirror Heater)	90980–10907			
R10	Remote Control Mirror SW	90980-11657			
R11	Radio and Player	90980-12259			
S 1	Starter (2UZ–FE)	90980-09585			
31	Starter (5VZ–FE)	90980-09507			
S 2	Starter	90980-11400			
S 3	Step Light	81945–33010			
S 4	Stop Light SW	90980–11118			
S 5	Seat Belt Warning Occupant Detection Sensor	90980–11296			
S 8	Short Pin	90980-10907			
S 9	Short Connector (TVIP)	90980-10908			•

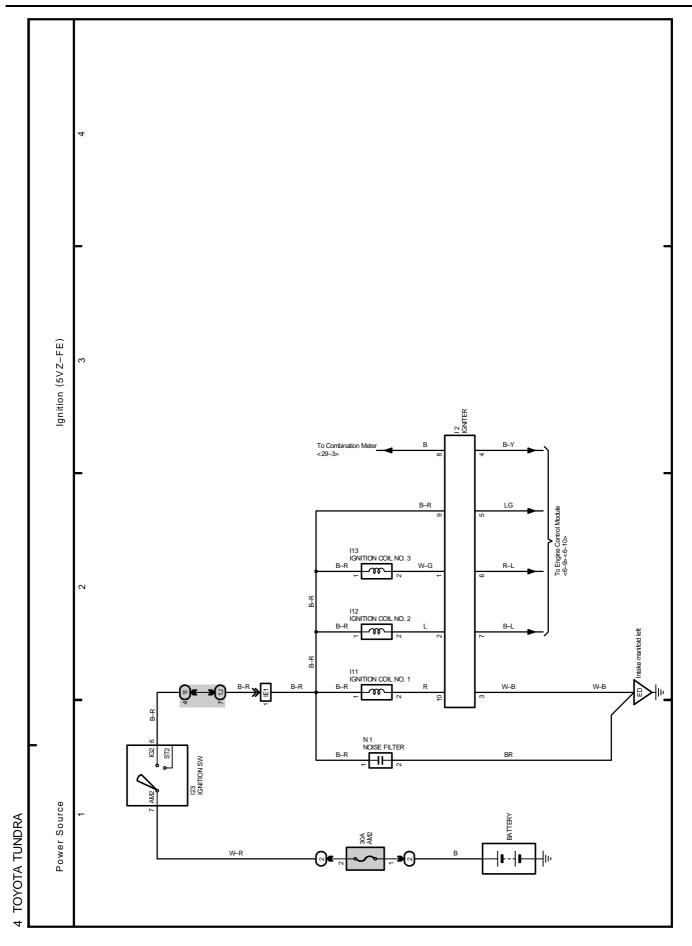
Note: Not all of the above part numbers of the connector are established for the supply.

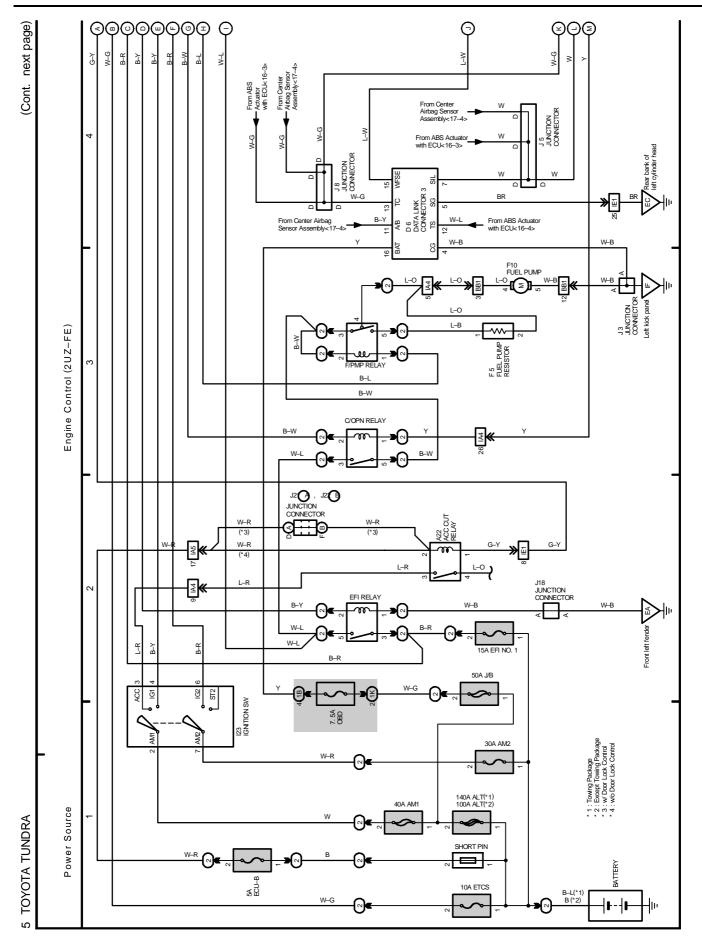
Code	Part Name	Part Number	Code	Part Name	Part Number
		_			
					1

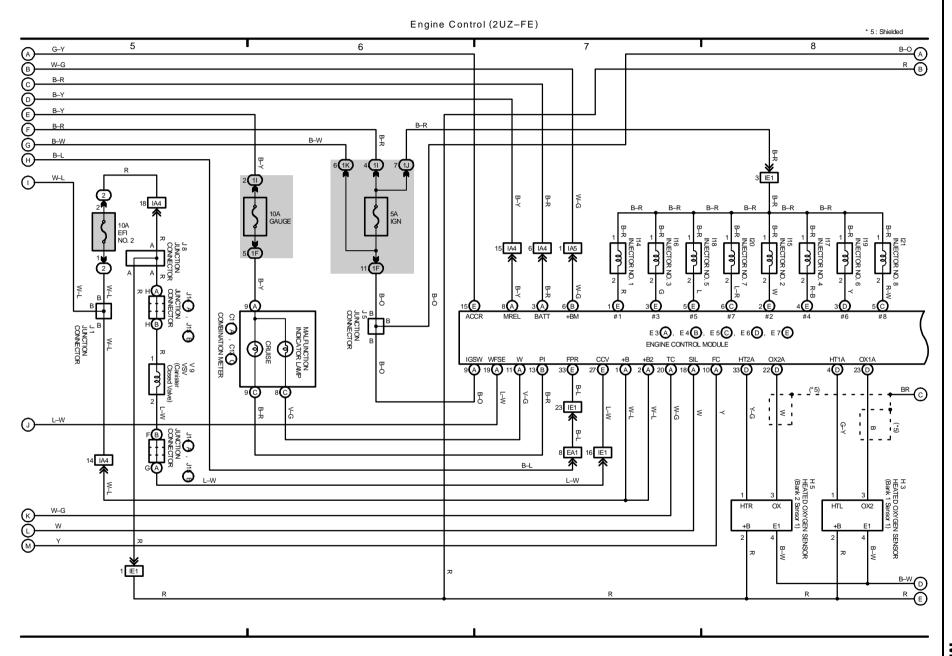


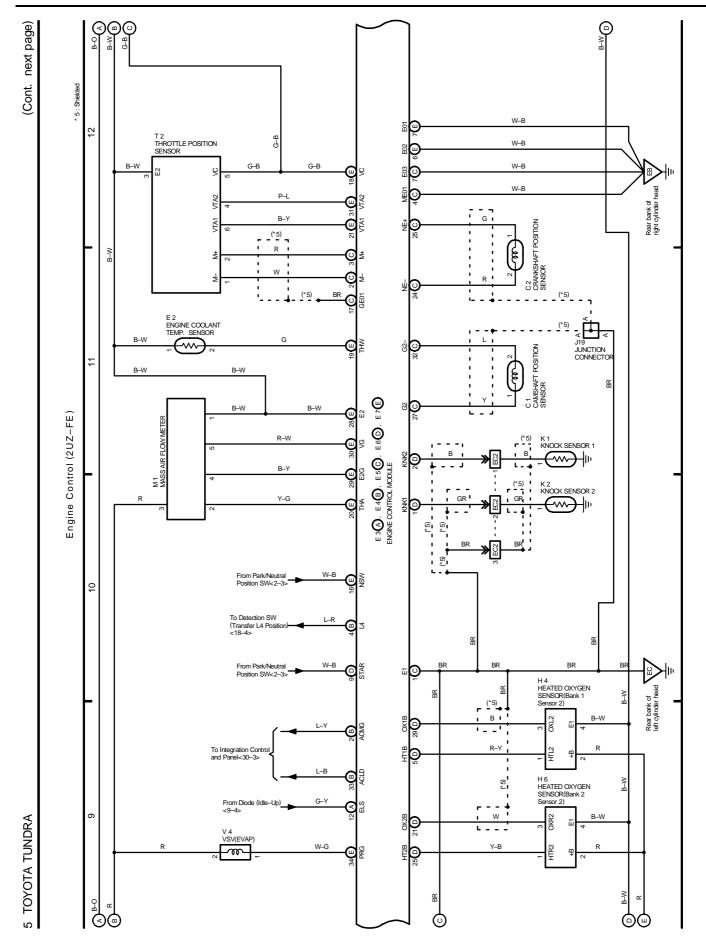


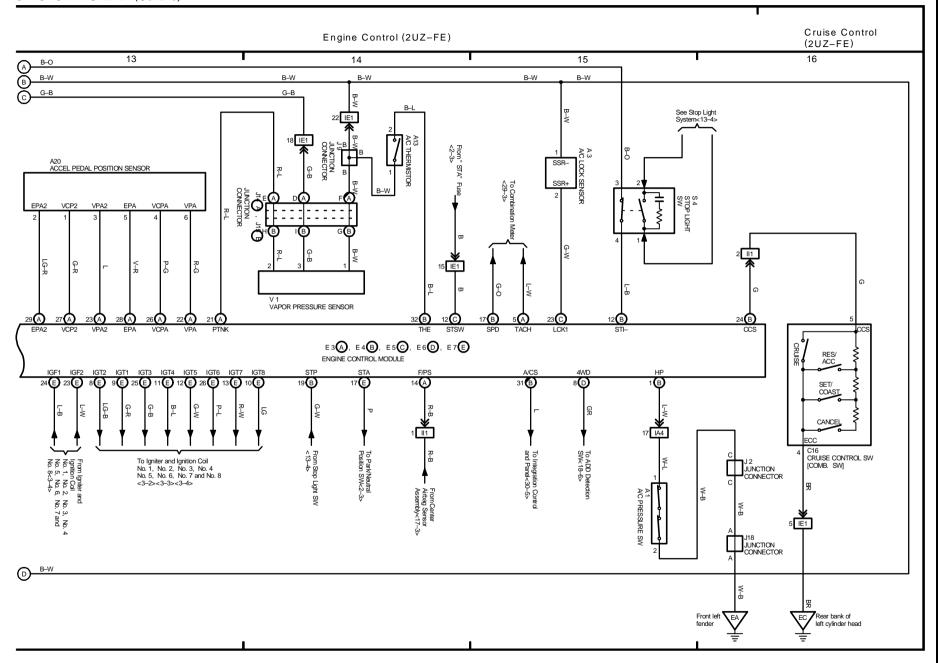


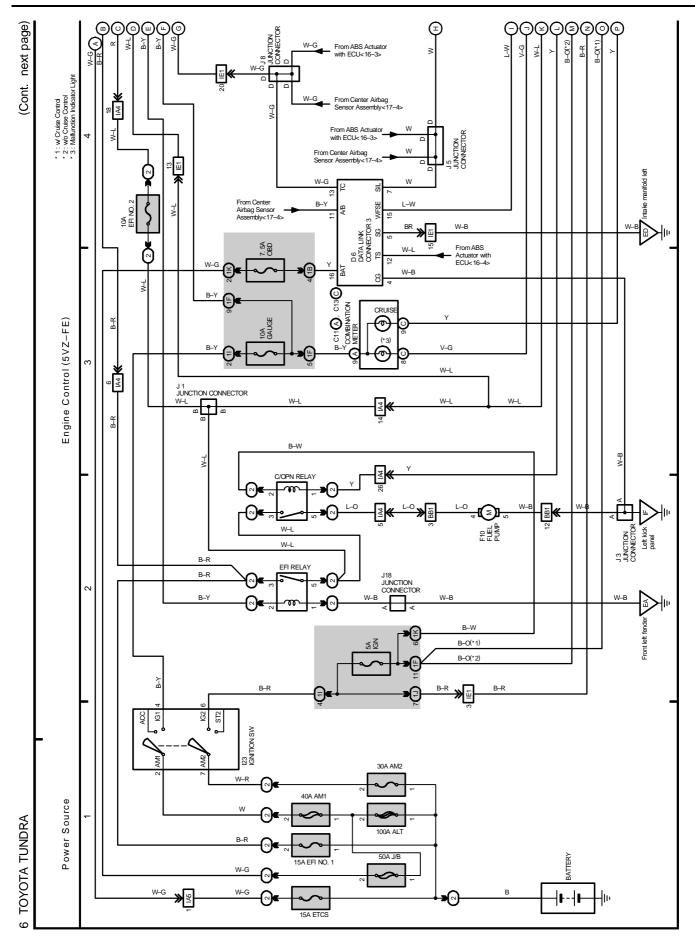


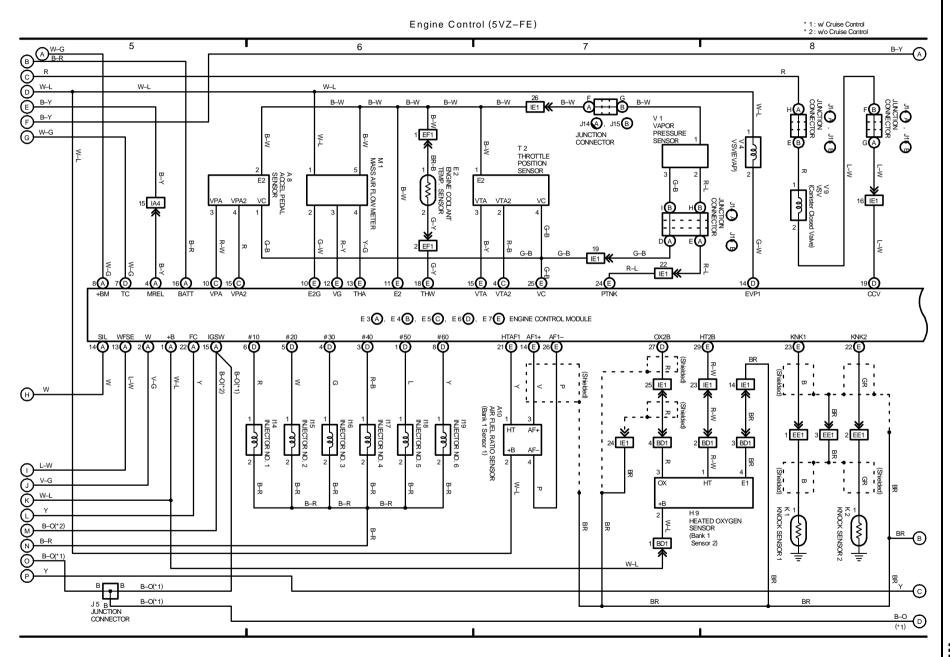


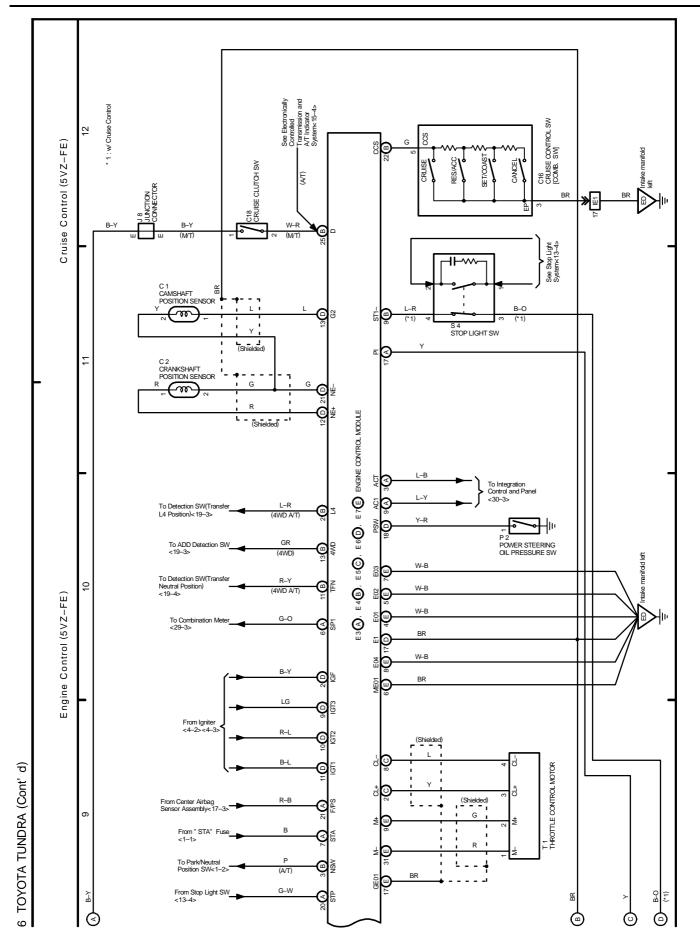


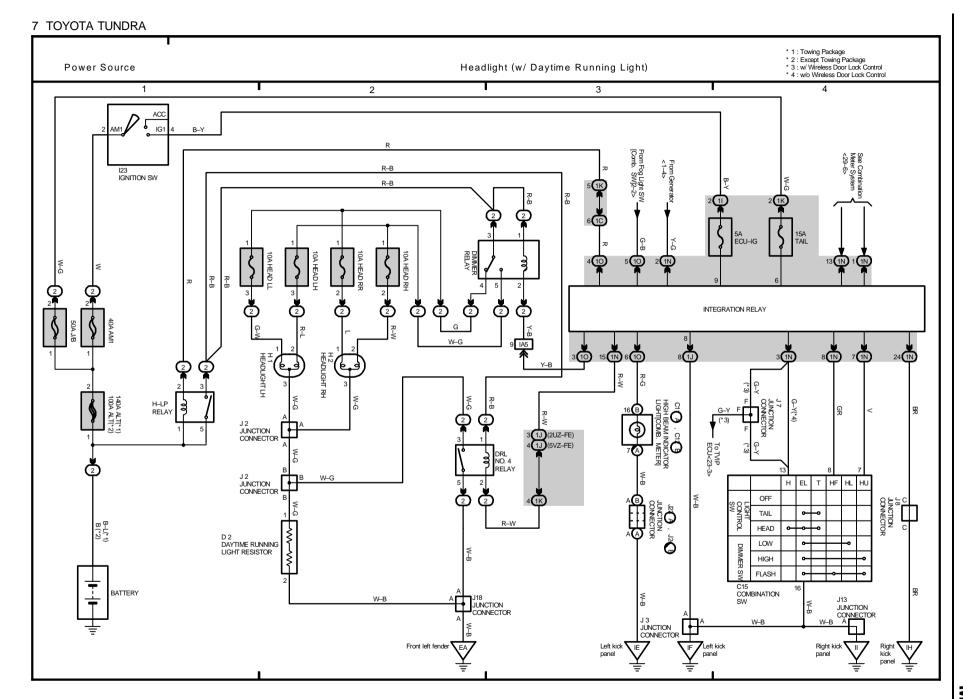


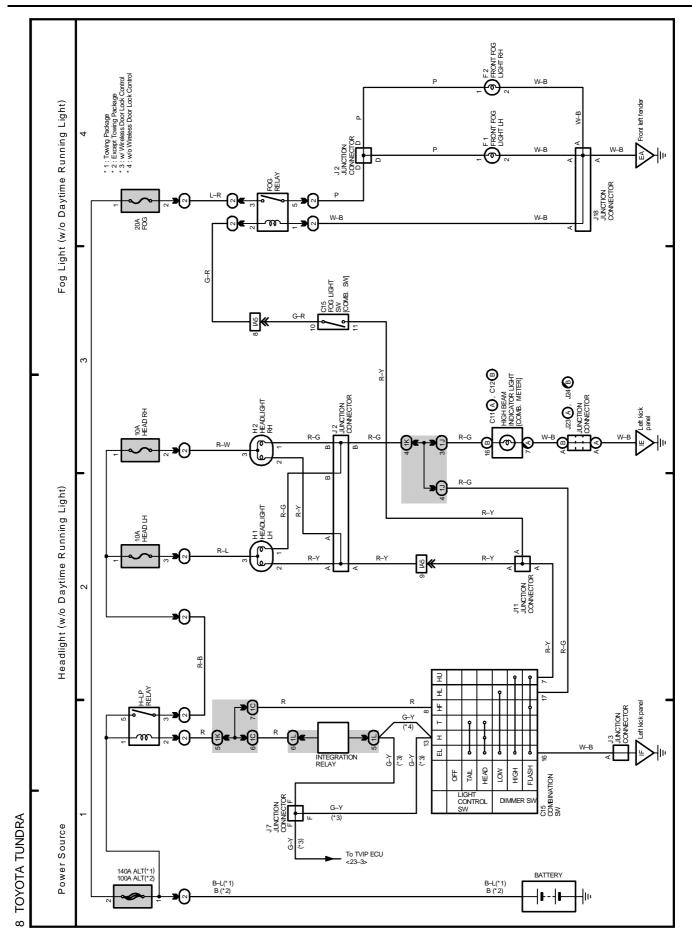


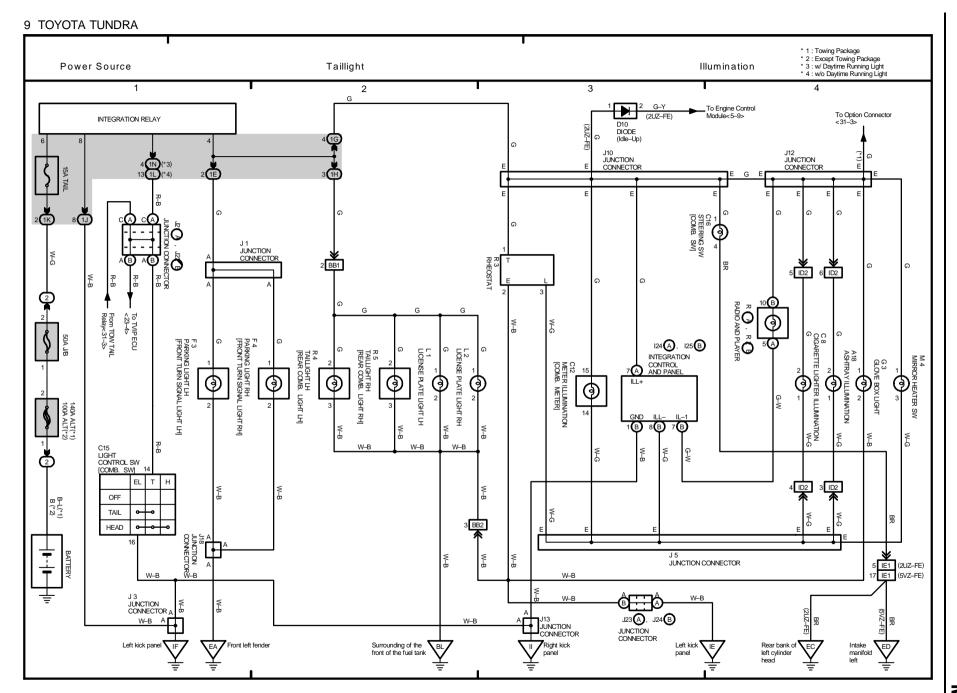


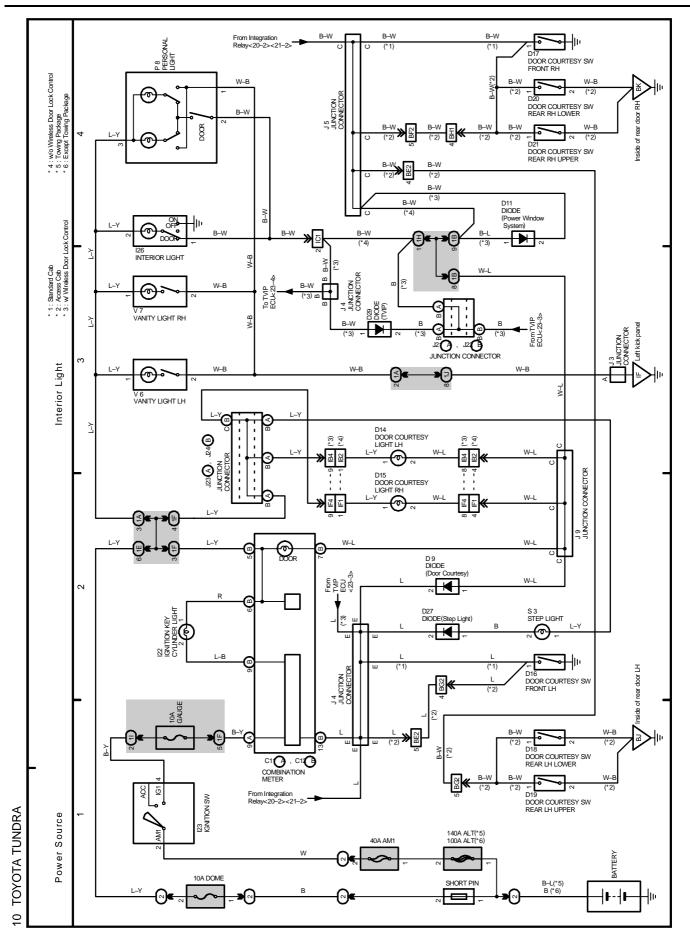


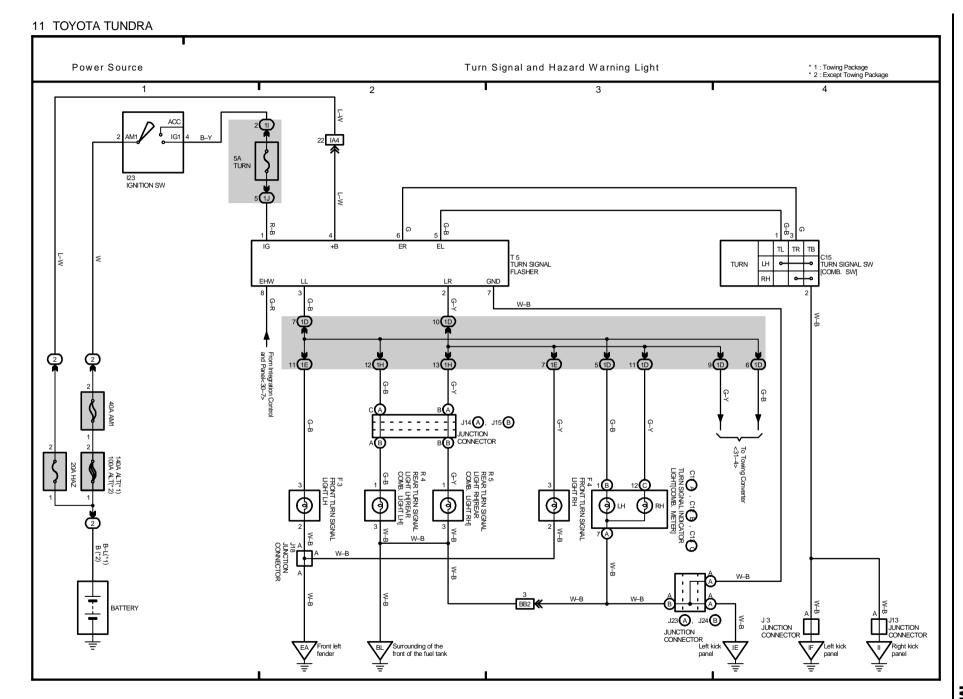


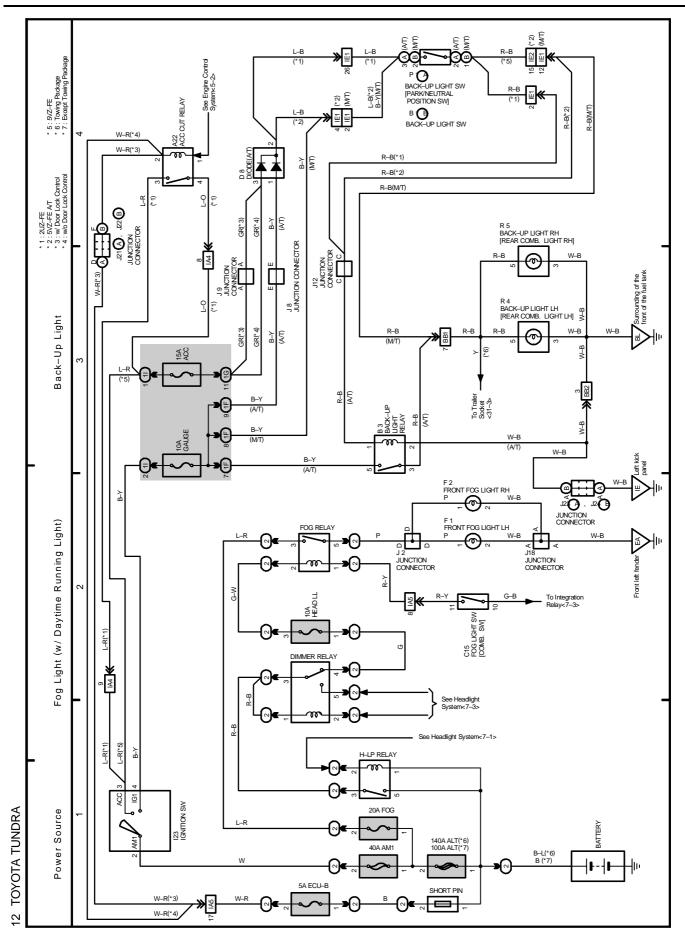


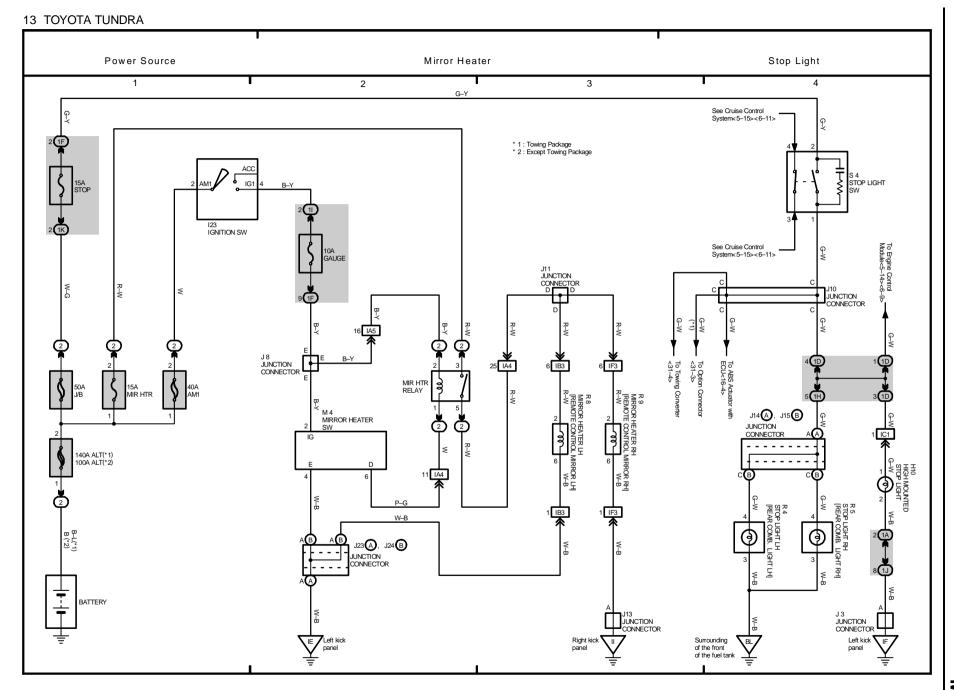


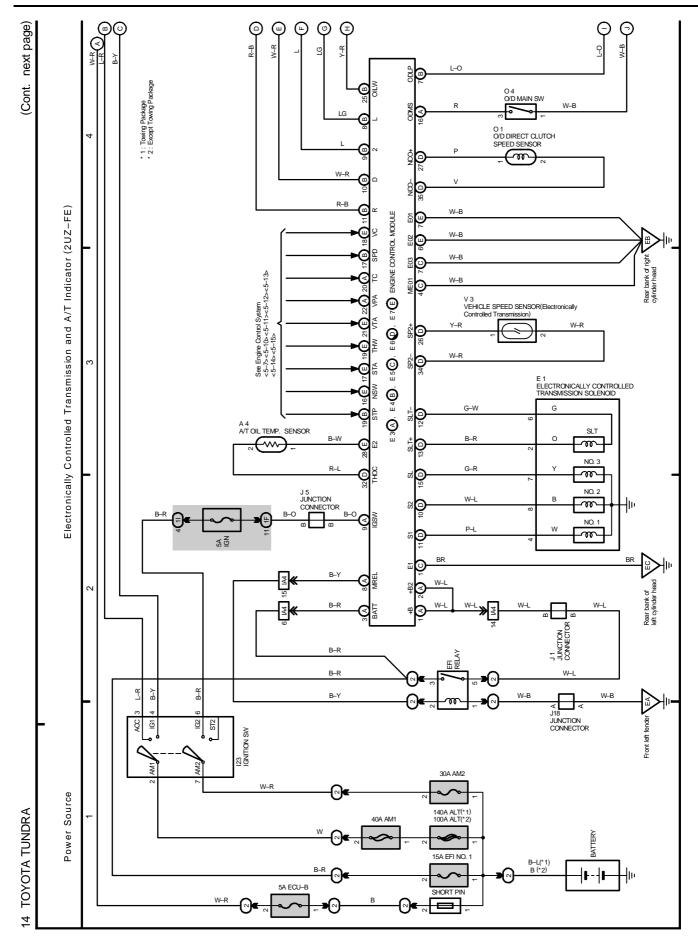


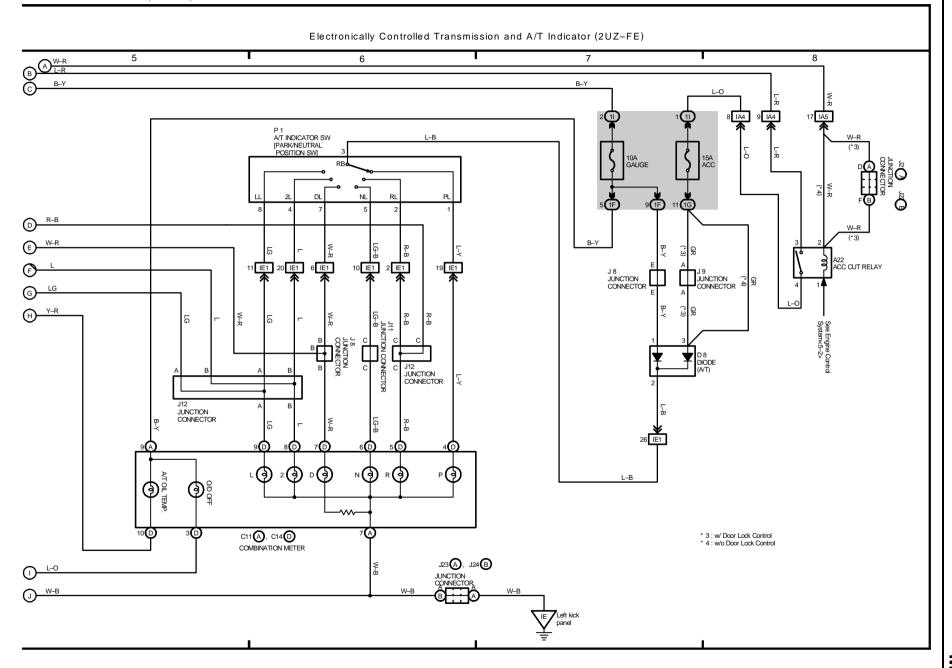


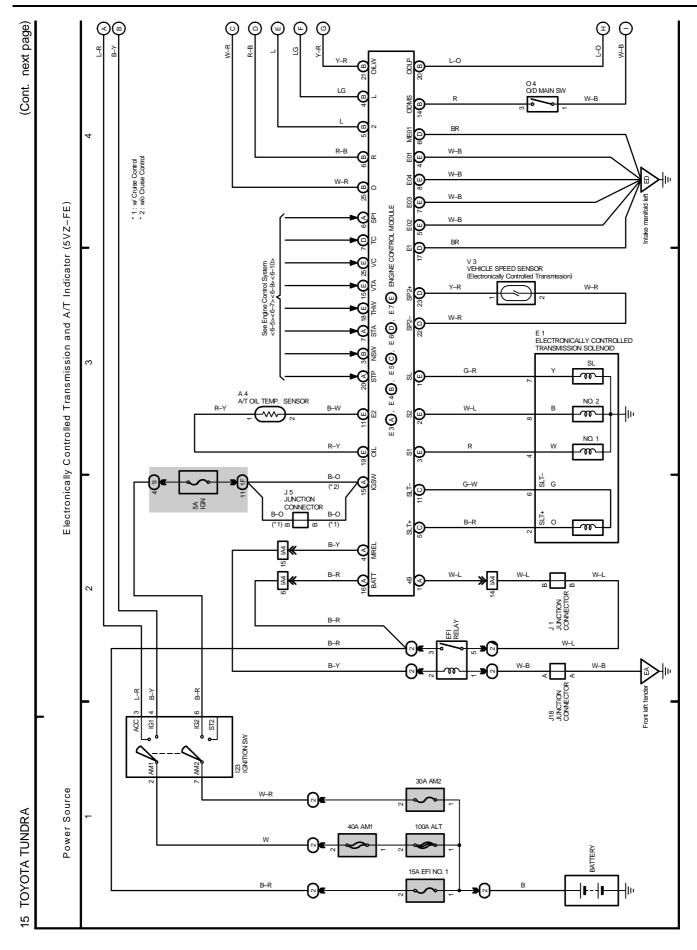


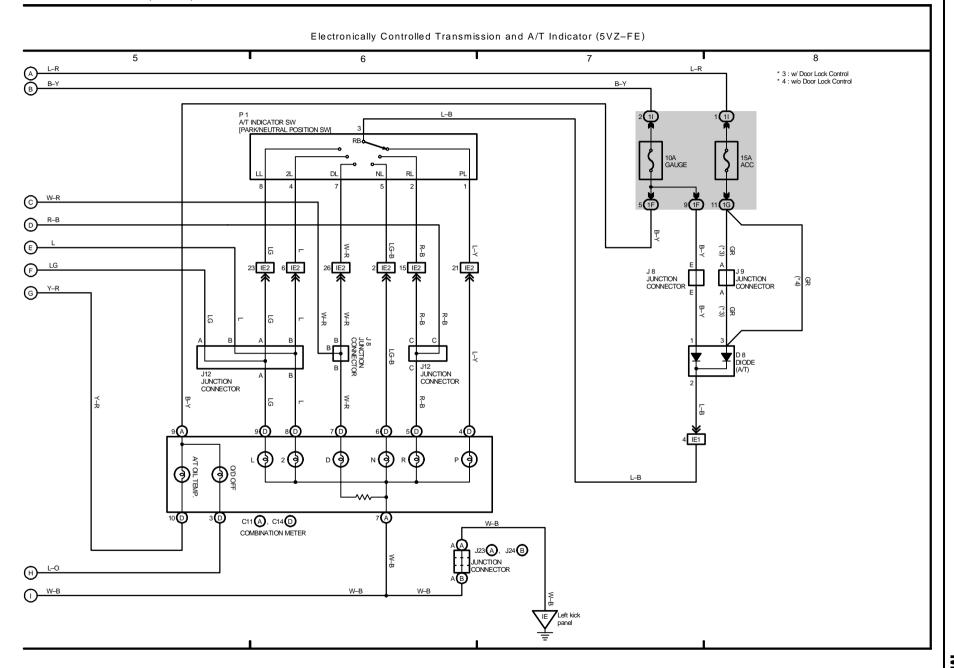


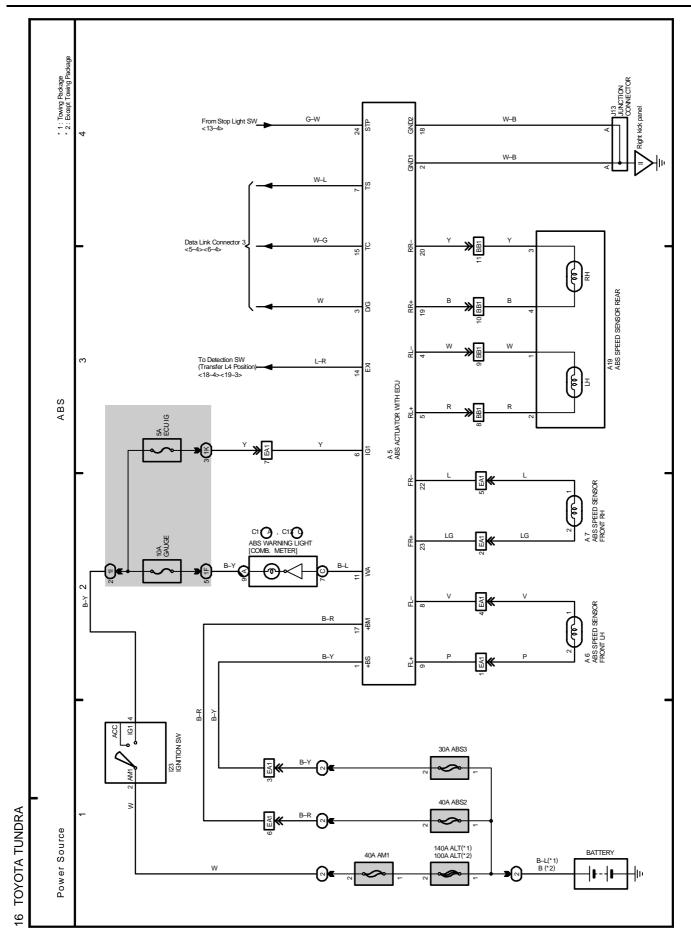


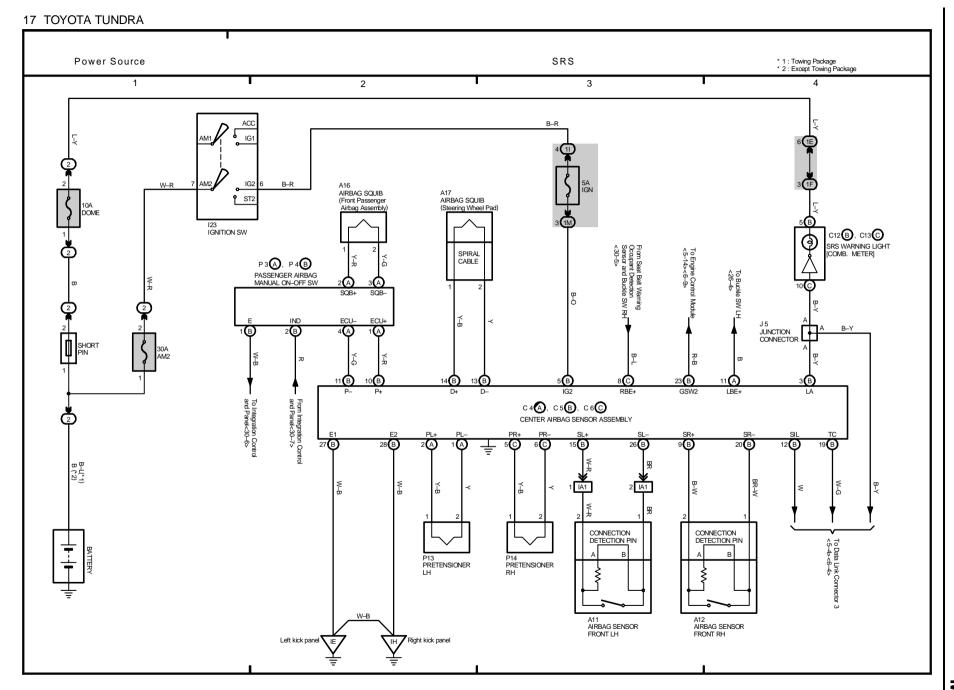


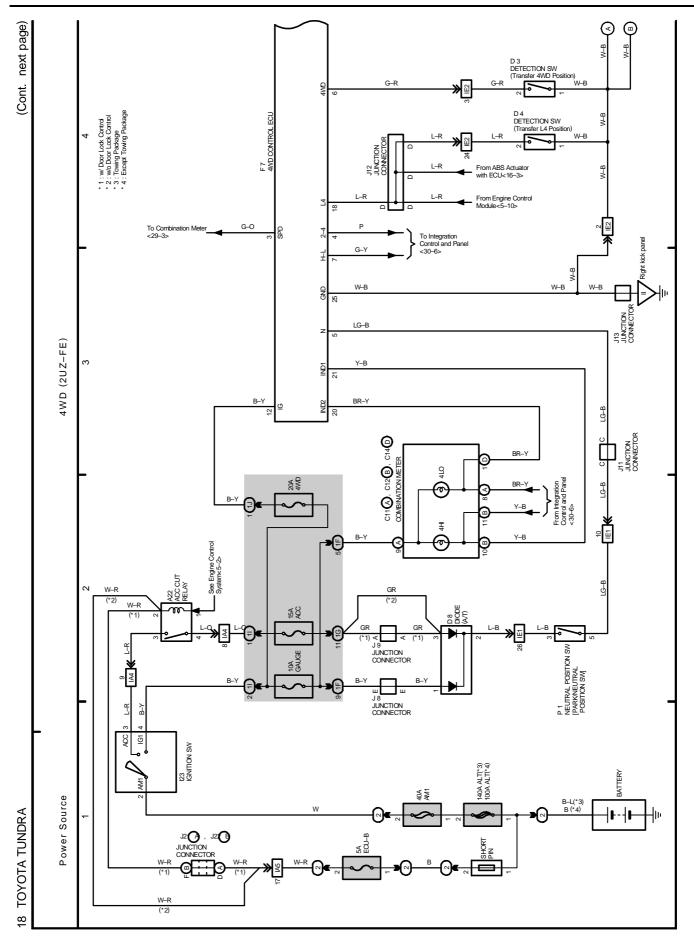


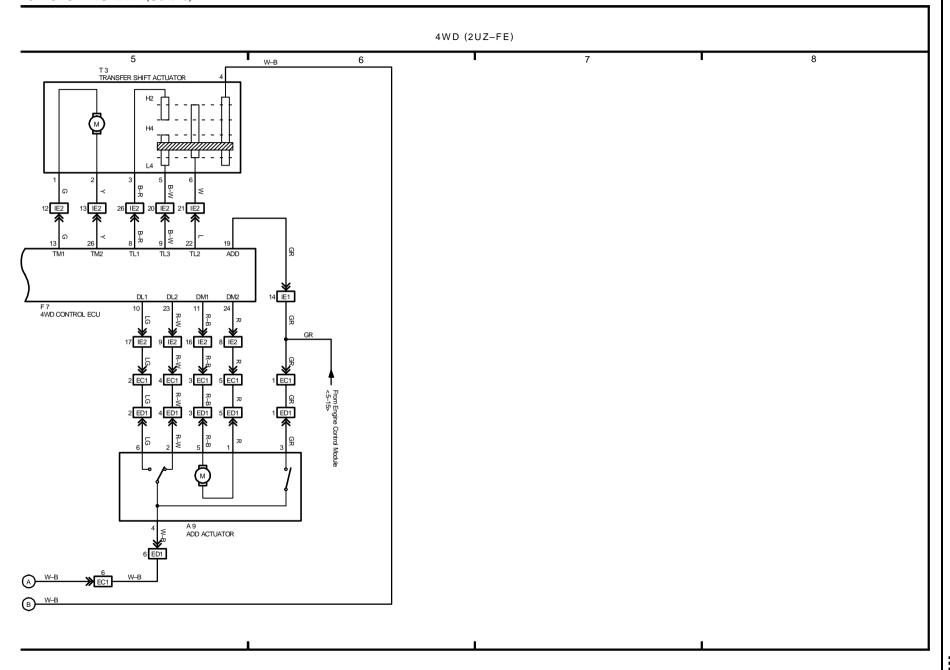


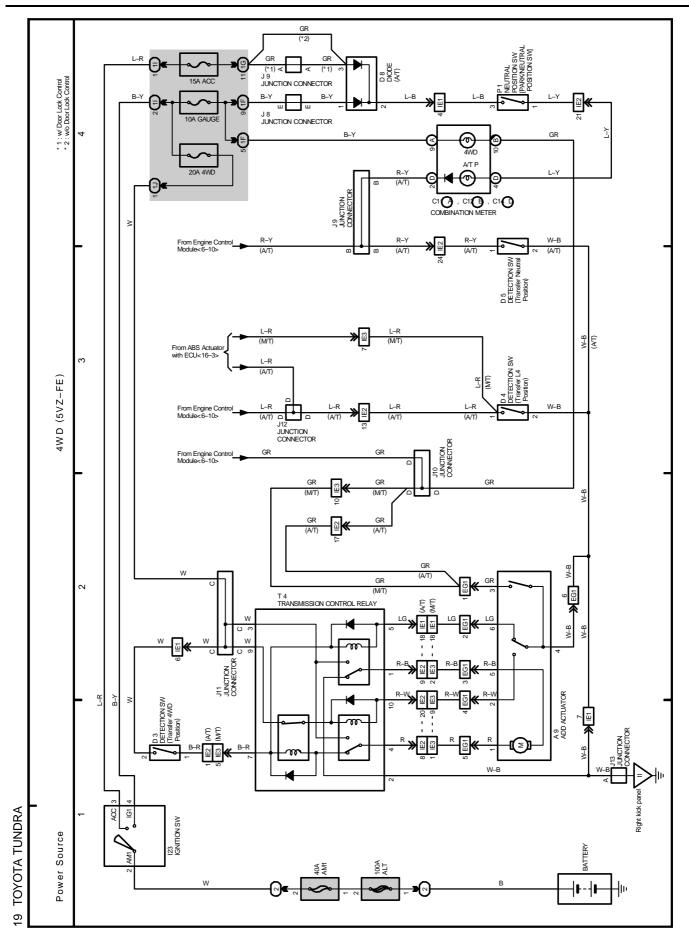


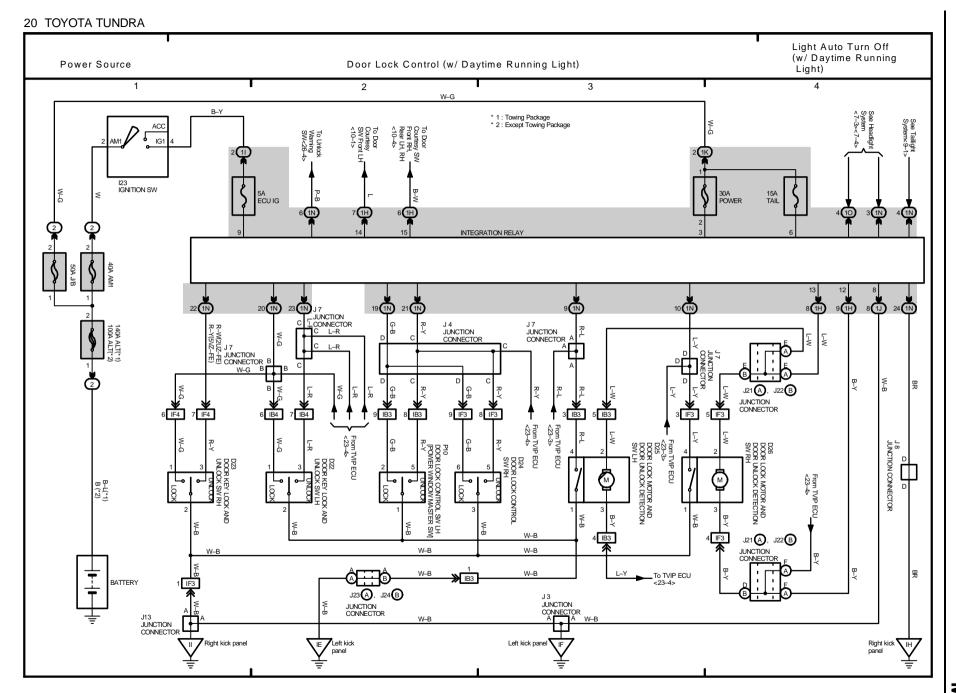


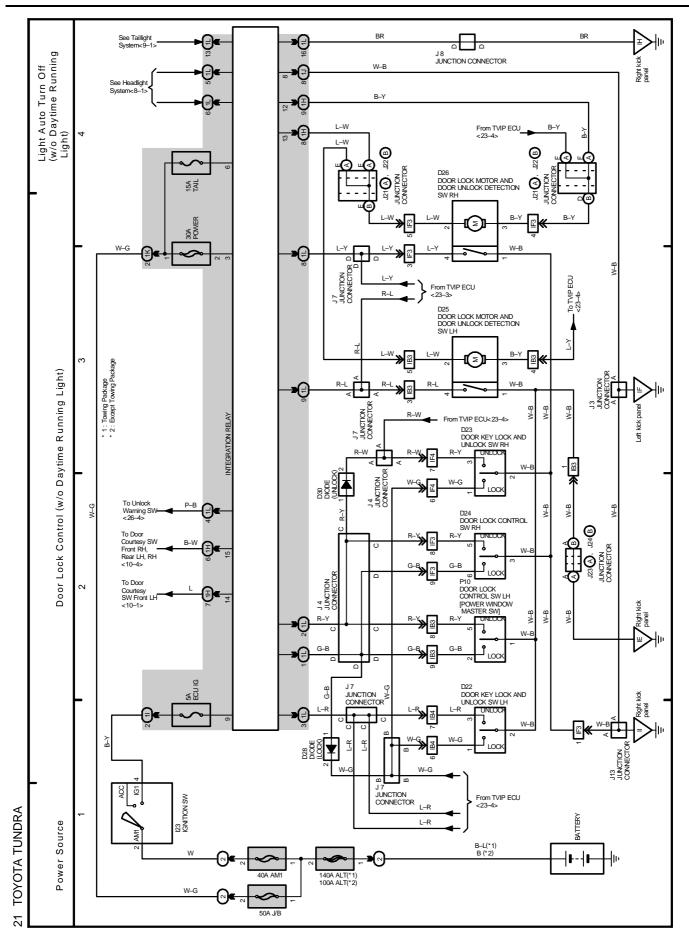


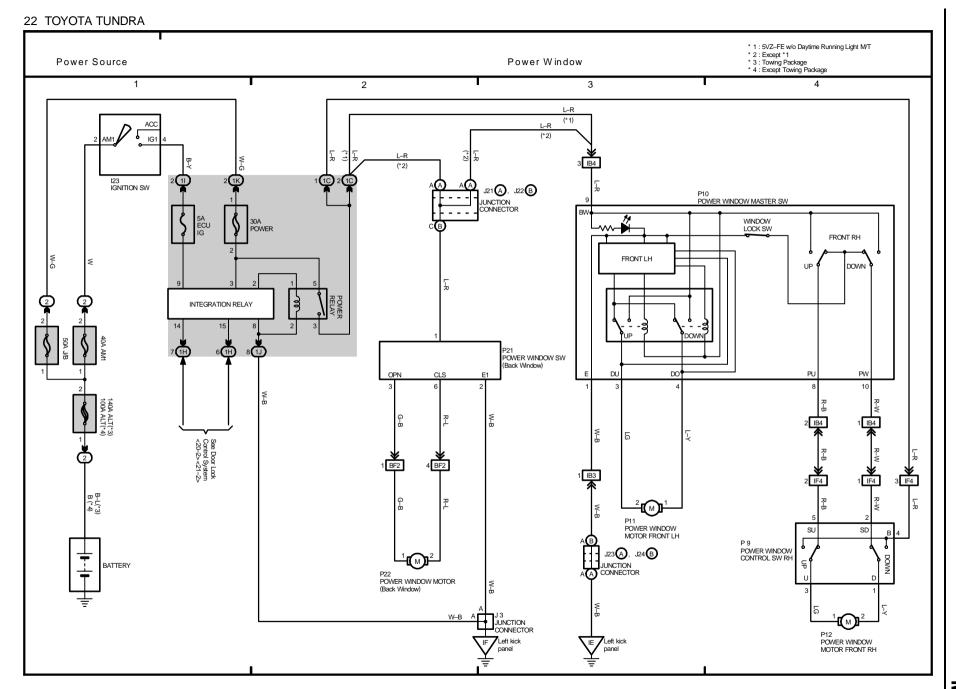


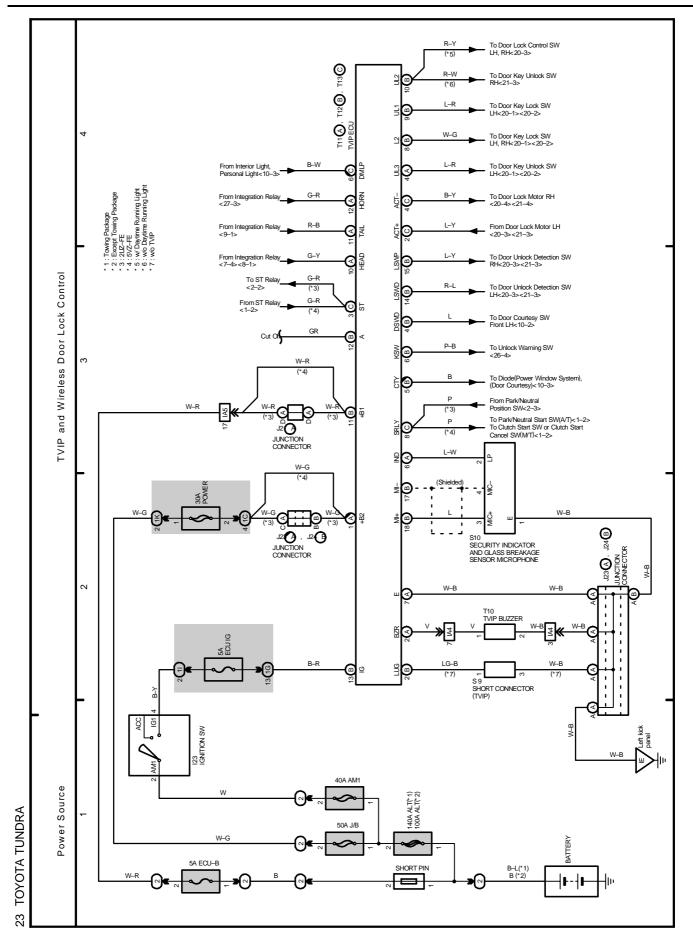


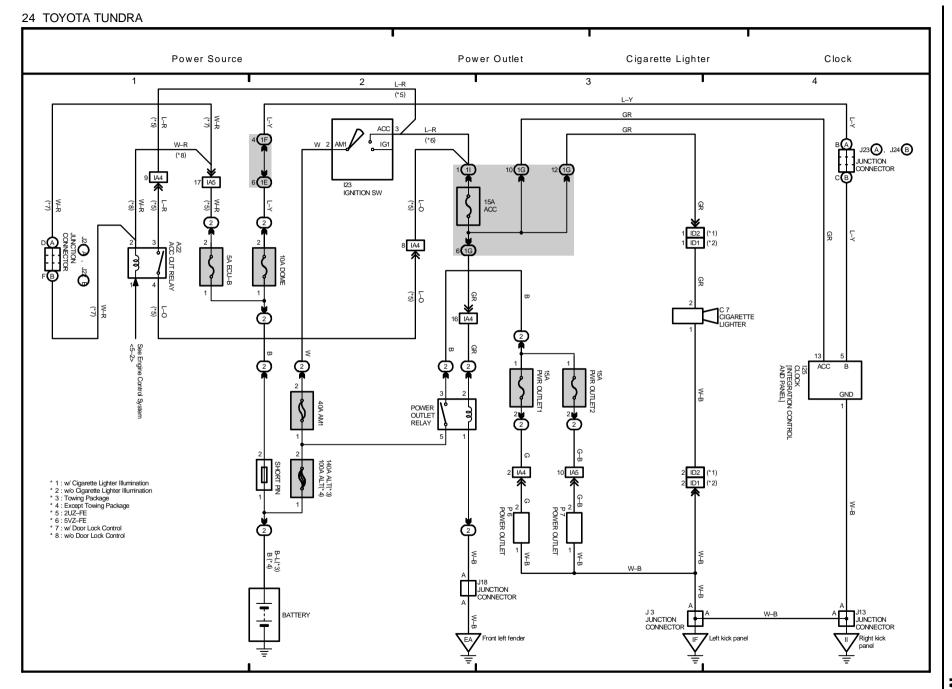


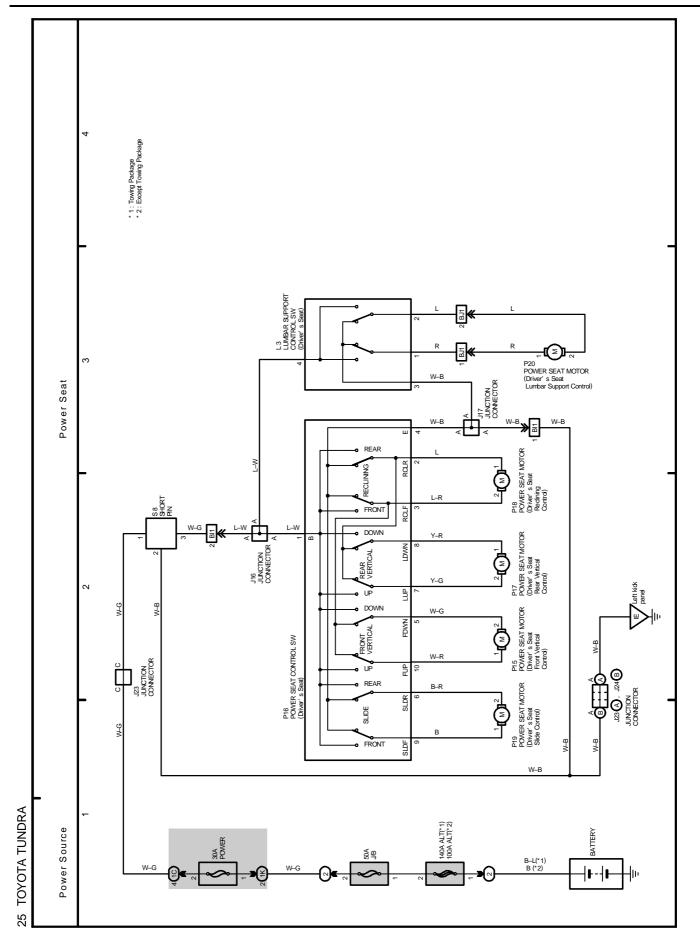


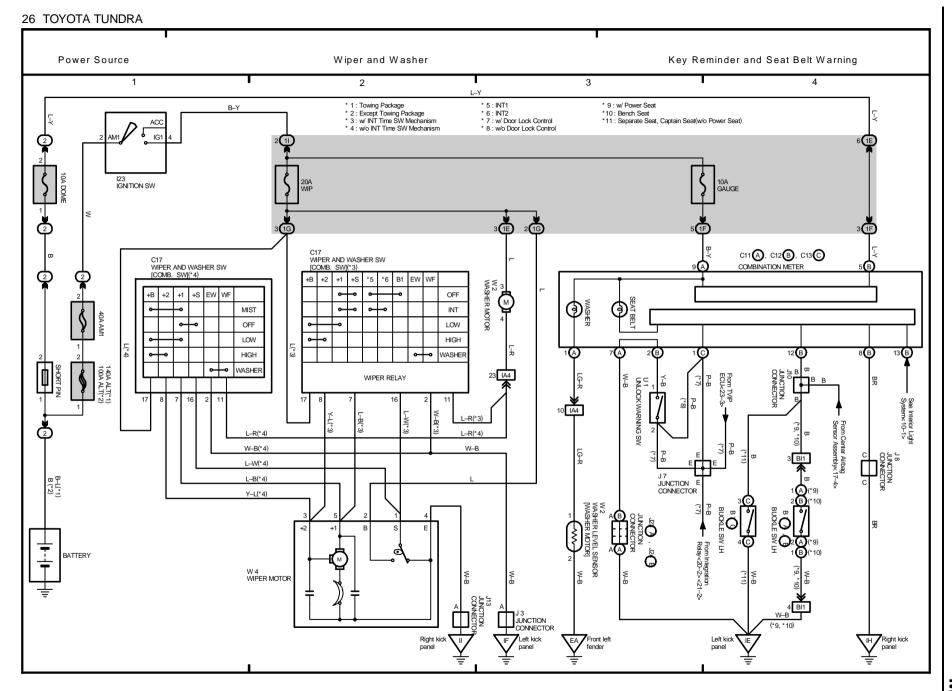


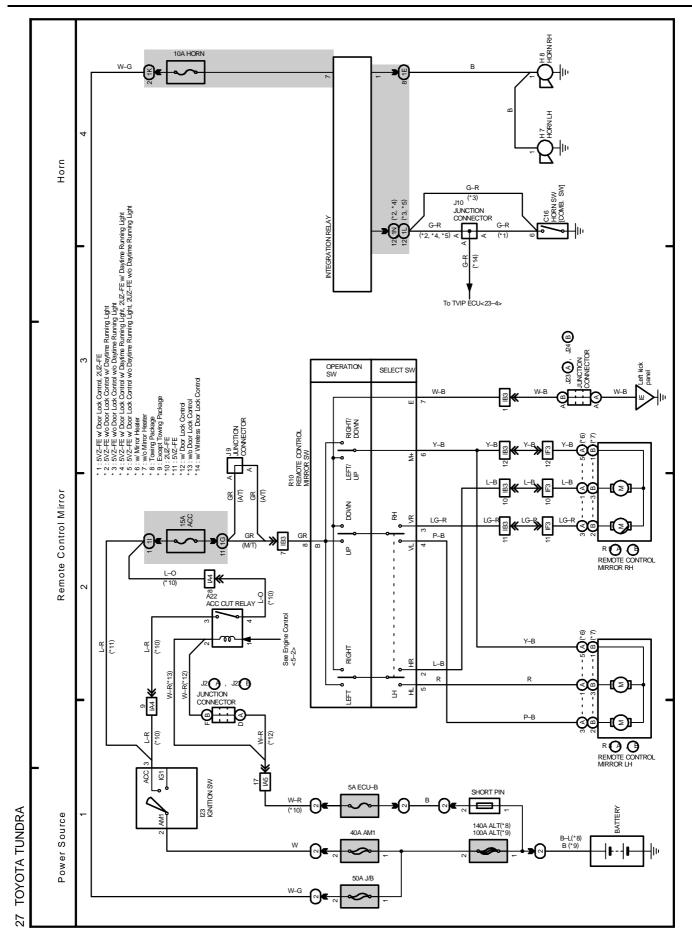


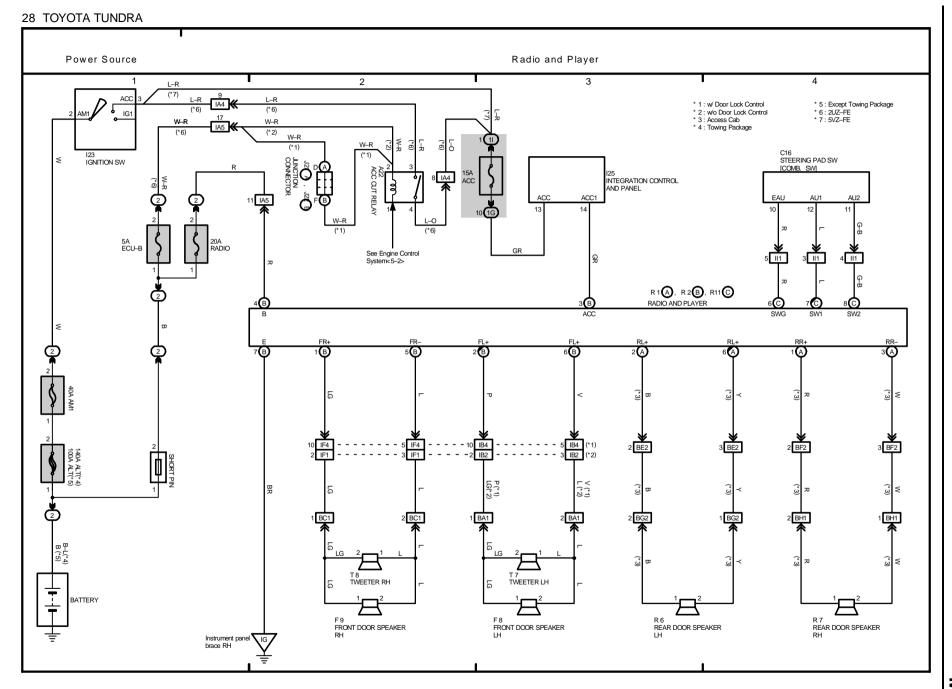


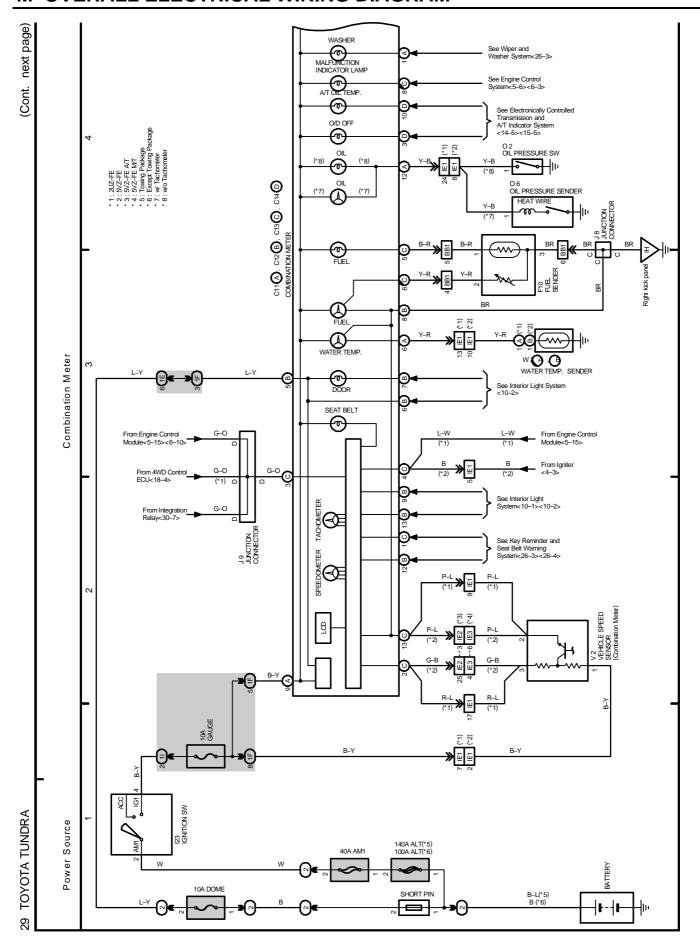


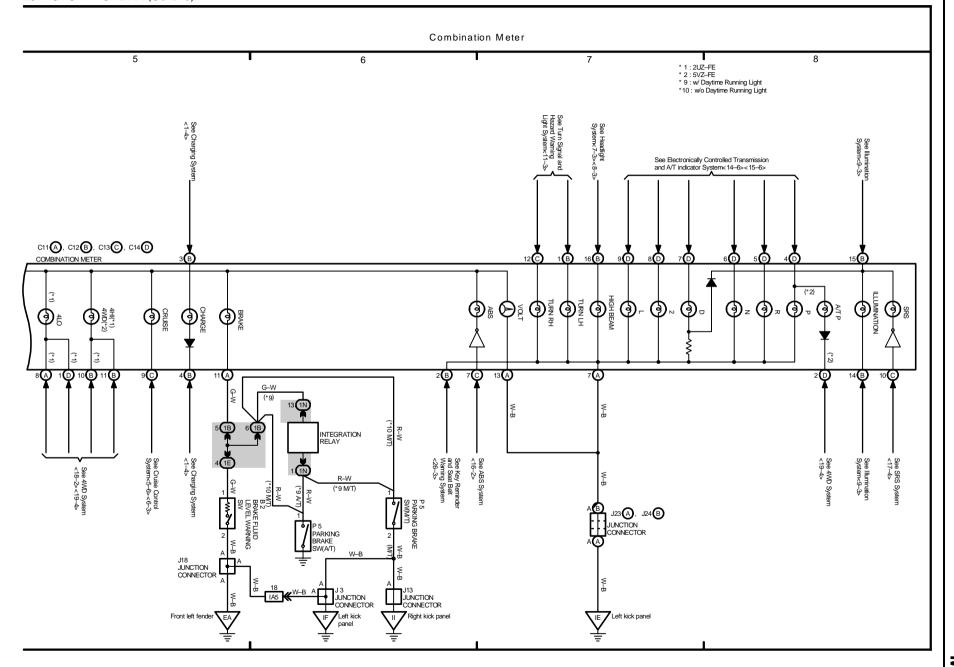


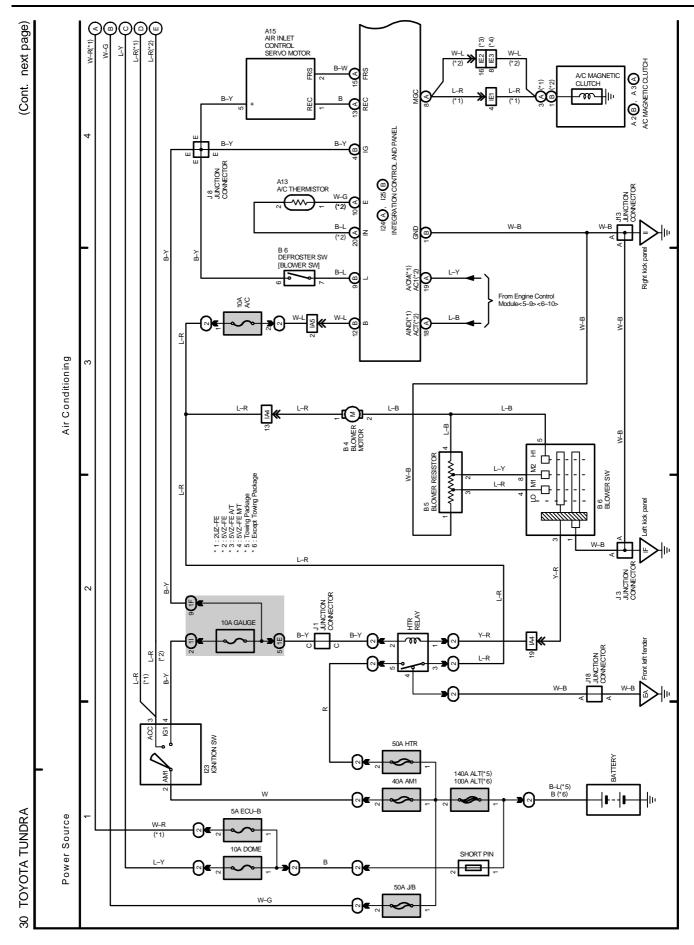


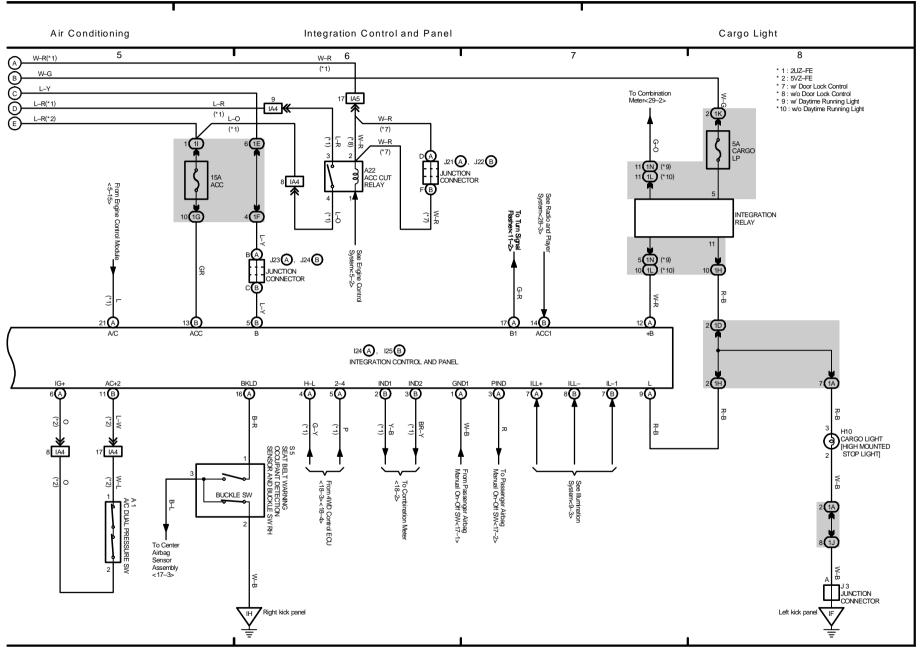


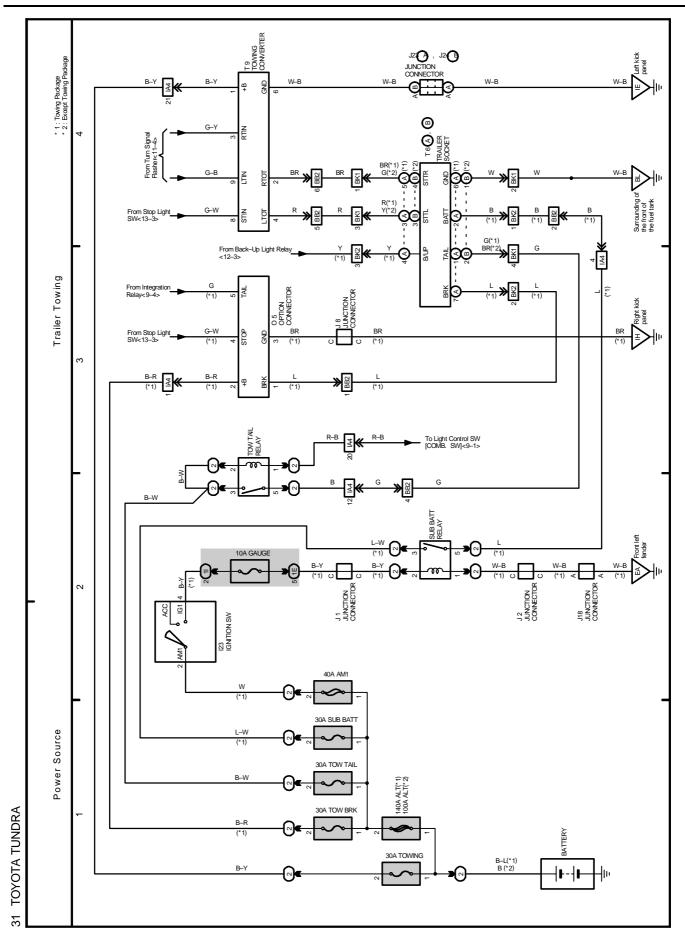


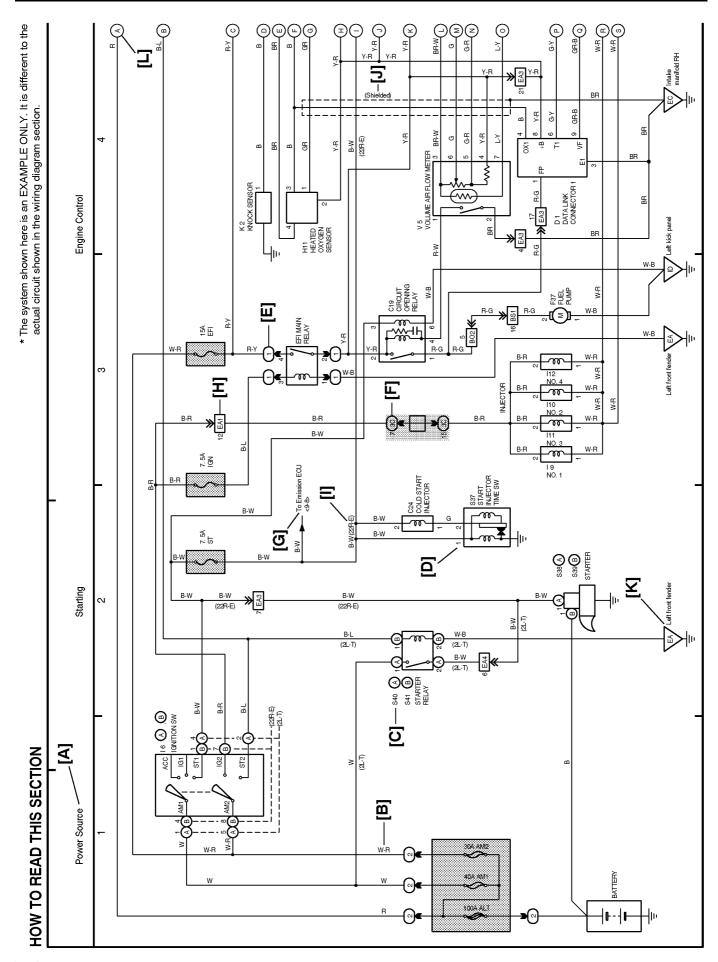












[A] : System Title

[B] : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

B = Black W = White BR = Brown

L = Blue V = Violet SB = Sky Blue

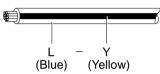
R = Red O = Orange LG = Light Green

P = Pink Y = Yellow GR = Gray

G = Green

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

Example: L-Y

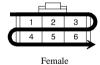


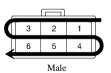
- [C] : The position of the parts is the same as shown in the wiring diagram and wire routing.
- [D] : Indicates the pin number of the connector.

  The numbering system is different for female and male connectors.

Example : Numbered in order from upper left to lower right

Numbered in order from upper right to lower left



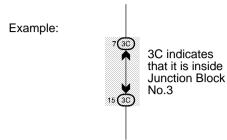


The numbering system for the overall wiring diagram is the same as above

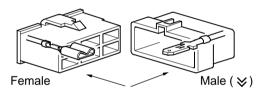
[E]: Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B.

Example: 1 Indicates Relay Block No.1

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



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



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



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

3

## **LOCATION SYSTEMS LOCATION SYSTEMS** Combination Meter 29–2 Power Seat 25–4 Electronically Controlled Transmission and A/T Indicator (2UZ–FE) ..... 14–2 SRS ...... 17–2 Electronically Controlled Transmission and A/T Indicator Fog Light (w/o Daytime Running Light) .....8–3 Headlight (w/ Daytime Running Light) ......7–2 Headlight (w/o Daytime Running Light) ......8–2