

FOREWORD

This wiring diagram manual has been prepared to provide information on the electrical system of the 2007 CAMRY.

Applicable models: GSV40 Series
ACV40 Series

Refer to the following manuals for additional service specifications and repair procedures for these models:

Manual Name	Pub. No.
● 2007 CAMRY Repair Manual	RM0250U
● 2007 CAMRY New Car Features	NM0250U

All information in this manual is based on the latest product information at the time of publication. However, specifications and procedures are subject to change without notice.

TOYOTA MOTOR CORPORATION

NOTICE

Always follow the directions given in the above repair manuals when handling supplemental restraint system components (such as removal, installation, inspection, etc.) in order to prevent accidents and supplemental restraint system malfunction.

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2007 CAMRY ELECTRICAL WIRING DIAGRAM

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A INTRODUCTION

This manual consists of the following 13 sections:

No.	Section	Description
A	INDEX	Index of the contents of this manual.
	INTRODUCTION	Brief explanation of each section.
B	HOW TO USE THIS MANUAL	Instructions on how to use this manual.
C	TROUBLE-SHOOTING	Describes the basic inspection procedures for electrical circuits.
D	ABBREVIATIONS	Defines the abbreviations used in this manual.
E	GLOSSARY OF TERMS AND SYMBOLS	Defines the symbols and functions of major parts.
F	RELAY LOCATIONS	Shows position of the Electronic Control Unit, Relays, Relay Block, etc. This section is closely related to the system circuit.
G	ELECTRICAL WIRING ROUTING	Describes position of Parts Connectors, Splice points, Ground points, etc. This section is closely related to the system circuit.
H	INDEX	Index of the system circuits.
	SYSTEM CIRCUITS	Electrical circuits of each system are shown from the power supply through ground points. Wiring connections and their positions are shown and classified by code according to the connection method. (Refer to the section, "How to use this manual"). The "System Outline" and "Service Hints" useful for troubleshooting are also contained in this section.
I	GROUND POINT	Shows ground positions of all parts described in this manual.
J	POWER SOURCE (Current Flow Chart)	Describes power distribution from the power supply to various electrical loads.
K	CONNECTOR LIST	Describes the form of the connectors for the parts appeared in this book. This section is closely related to the system circuit.
L	PART NUMBER OF CONNECTORS	Indicates the part number of the connectors used in this manual.
M	OVERALL ELECTRICAL WIRING DIAGRAM	Provides circuit diagrams showing the circuit connections.

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

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

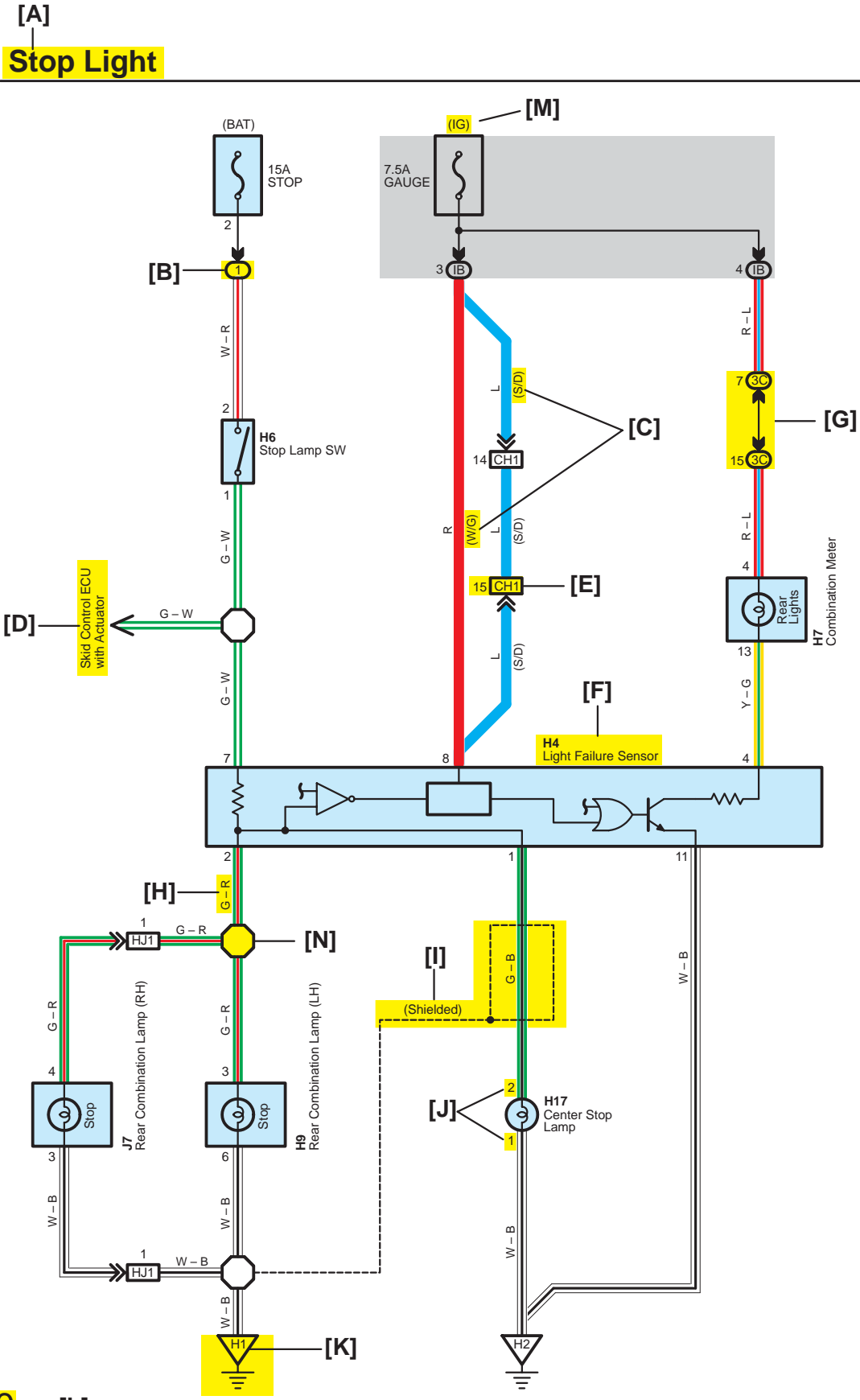
When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Point section). See the System Outline to understand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

When the circuit operation is understood, begin troubleshooting of the problem circuit to isolate the cause. Use Relay Location and Electrical Wiring Routing sections to find each part, junction block and wiring harness connectors, wiring harness and wiring harness connectors 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.

B HOW TO USE THIS MANUAL

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



[A] : System Title

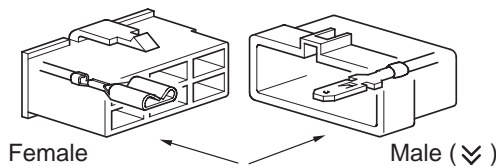
[B] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B

Example: 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 code for the (male and female) connectors which are used to join two wire harnesses. The connector code consists of two alphabetical and one numerical characters.



The first character of the connector code indicates the alphabetical code allocated to the wire harness which has the female connector, and the second shows that of the wire harness which has the male connector.

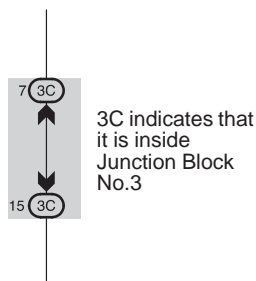
The third character indicates a serial number used to distinguish between the wire harness combinations in cases when more than one of the same combination of wire harnesses exist (e.g. CH1 and CH2).

Symbol (∨) indicates the male terminal connector. Numbers outside connector codes indicate the pin numbers of both male and female connectors.

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

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

Example:



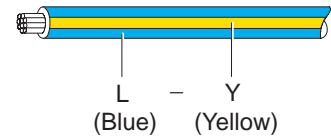
[H] : Indicates the wiring color.

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.

Example: L - Y



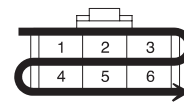
[I] : Indicates a shielded cable.



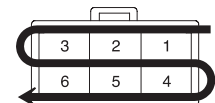
[J] : Indicates the pin number of the connector. The numbering system is different for female and male connectors.

Example: Numbered in other from upper left to lower right

Numbered in other from upper right to lower left



Female



Male

[K] : Indicates the ground point. The code consists of the two characters: A letter and number.

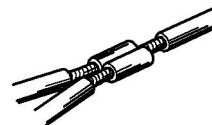
The first character of the code indicates the alphabetical code allocated to the wire harness. The second character indicates a serial number used to distinguish between the ground points in cases when more than one ground point exist on the same wire harness.

[L] : Page No.

[M] : Indicates the ignition key position(s) when the power is supplied to the fuse(s).

[N] : Indicates a wiring Splice Point.

Example:



B HOW TO USE THIS MANUAL

[O] System Outline

Current is applied at all times through the STOP fuse to TERMINAL 2 of the stop lamp 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 lamp 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] : Parts Location

Code	See Page	Code	See Page	Code	See Page
H4	36	H7	36	H17	38
H6	36	H9	38	J7	38

[Q] : Relay Blocks

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

[R] : Junction Block and Wire Harness Connector

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

[S] : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
CH1	42	Engine Room Main Wire and Instrument Panel Wire (Left Kick Panel)
HJ1	50	Instrument Panel Wire and Floor Wire (Right Kick Panel)

[T] : Ground Points

Code	See Page	Ground Points Location
H1	50	Under the Left Center Pillar
H2	50	Back Panel Center

[O] : Explains the system outline.

[P] : Indicates reference pages showing the parts locations in the system circuit on the vehicle.

Example : Code "H4" (Light Failure Sensor) is on page 36 of the manual.

* The first character of the code indicates the alphabetical code allocated to the wire harness, and the second character indicates the serial number of the parts connected to the wire harness.

Example : H 4
 └──┬── Serial number for the connected parts
 └── Code for the wire harness

[Q] : 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.

[R] : 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.

[S] : 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 "CH1" connects the Engine Room Main 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.

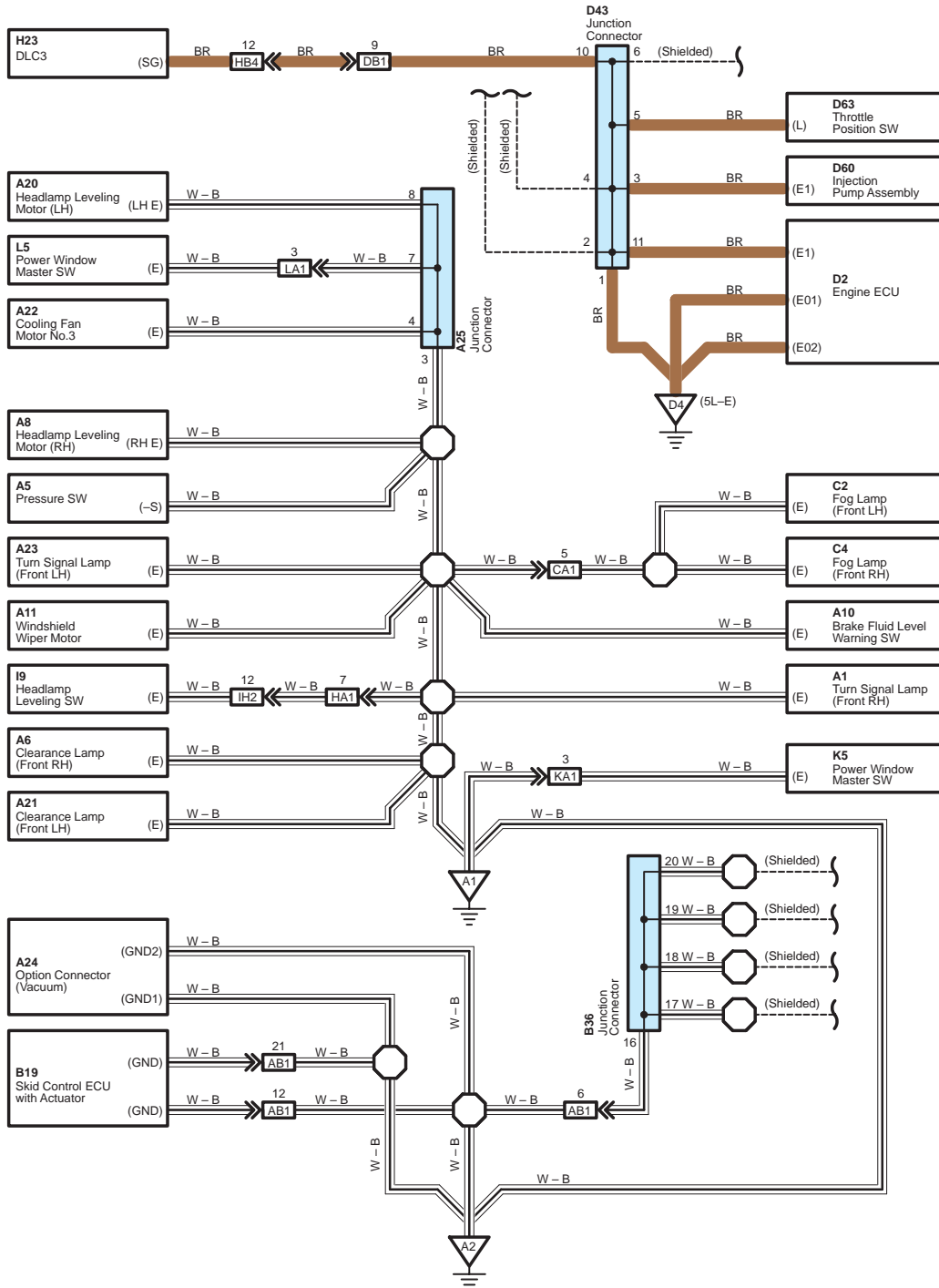
[T] : Indicates the reference page showing the position of the ground points on the vehicle.

Example : Ground point "H2" is described on page 50 of this manual and is installed on the back panel center.

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 ($\nabla A1$, $\nabla A2$ and $\nabla D4$ shown below) can also be checked this way.

I GROUND POINT

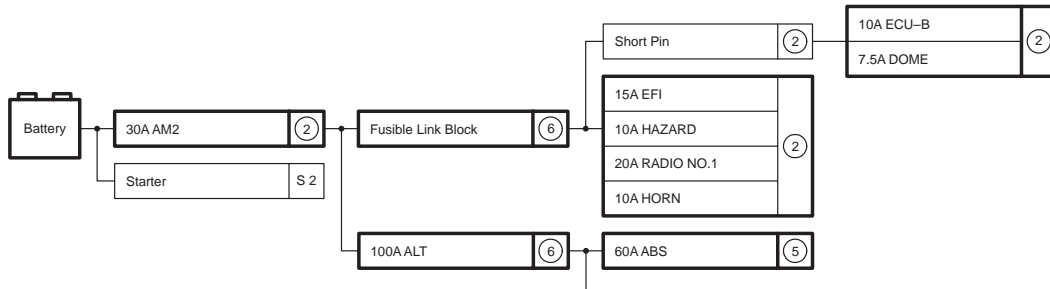


* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

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)

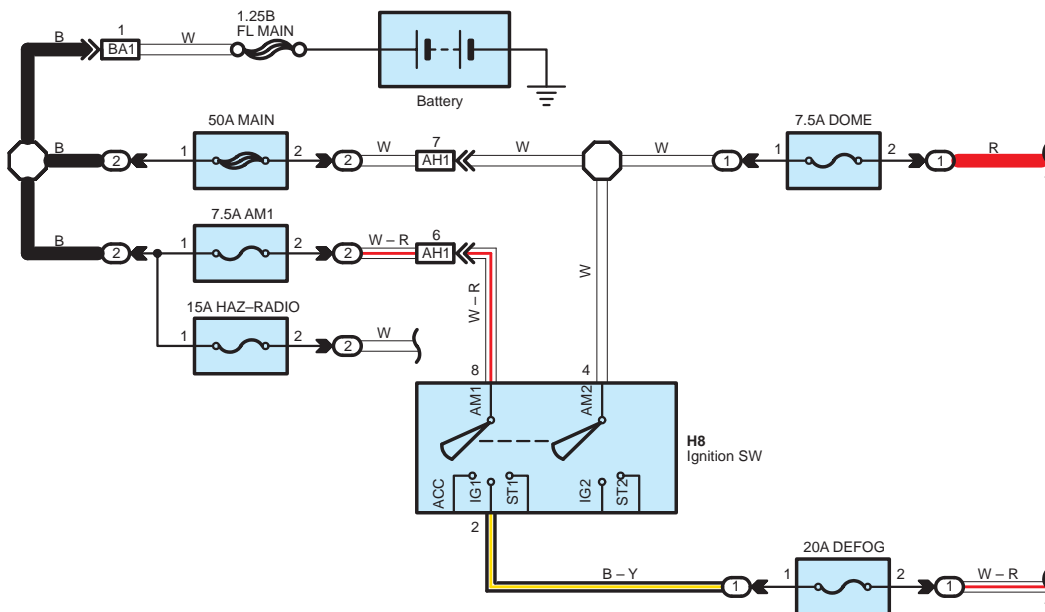
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuses, etc.) and other parts



Engine Room R/B (See Page 20)

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

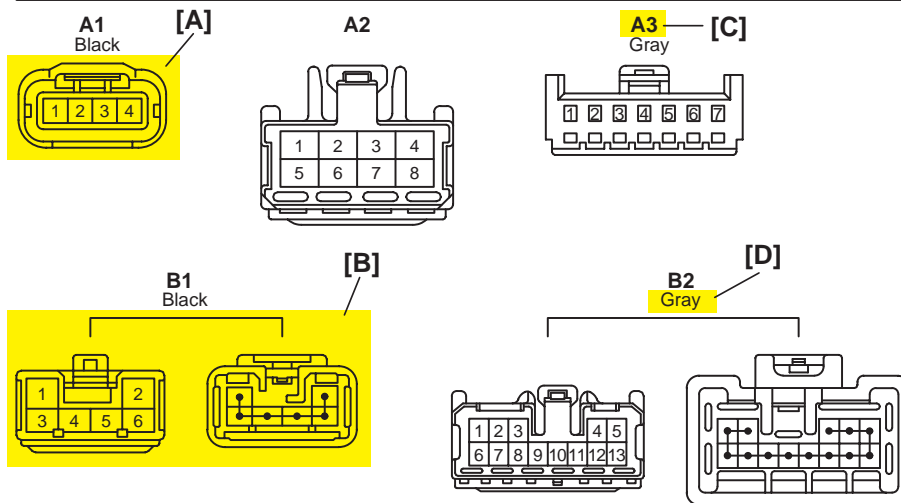
Power Source



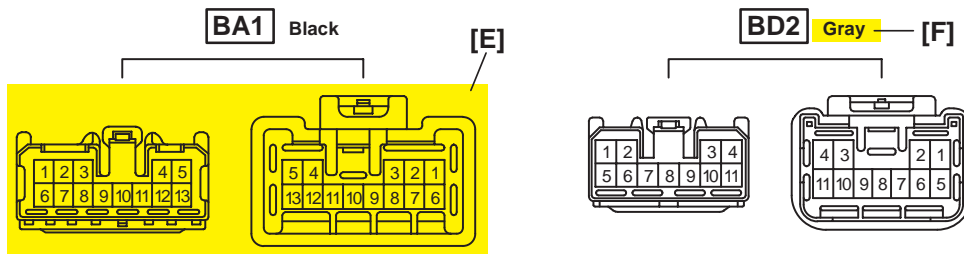
* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

B HOW TO USE THIS MANUAL

K CONNECTOR LIST

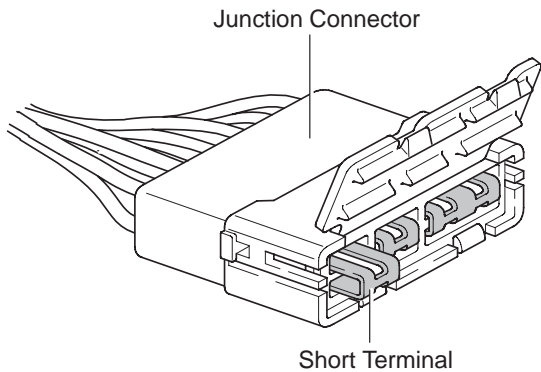


K CONNECTOR LIST



[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.

[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.

[E] : Indicates the connector shapes which are used to join wire harnesses.
On Left : Female connector shapes
On Right : Male connector shapes
Numbers indicate pin numbers.

[F] : Indicates connector colors. (Connectors with not indicated colors are white)

L PART NUMBER OF CONNECTORS

Code	Part Name	Part Number	Code	Part Name	Part Number
A1	Turn Signal Lamp (Front RH)	90980-11019	B22	Door Courtesy SW (Front LH)	90980-12470
A2	Inlet Air Temp. Sensor	90980-11163	B23	Front Seat Outer Belt (LH)	90980-12253
A3	Air Flow Meter	90980-12292	B24	Blower SW (Rear Heater)	90980-10463
A4	A/C Pressure Sensor	90980-10845	B25	Front Seat Outer Belt (RH)	90980-12253
A5	Pressure SW	90980-10943	B26	Door Courtesy SW (Front RH)	90980-12470
A6	Clearance Lamp (Front RH)	90980-11156	B27	Cooling Fan ECU No.1	90980-10841
[A]	Headlamp [B] (LH)	909-[C] 314	B28	Cooling Fan ECU No.2	
A8	Headlamp Leveling Motor (RH)	90980-11016	B29	Water Temp. Sensor (Radiator)	90980-10735
A9	Brake Vacuum Warning SW	90980-11252	B30	Fuel Filter Warning SW	90980-11003
A10	Brake Fluid Level Warning SW	90980-11207	B32	Door Control Relay (LH)	90980-10789
A11	Windshield Washer Motor	90980-11599	B33	Step Lamp (LH)	90980-10121
A12	Airbag Sensor (Front RH)	90980-11856	B34	Junction Connector	
A13	Airbag Sensor (Front LH)	90980-12490	B35	Junction Connector	90980-11398

[A] : Part Code

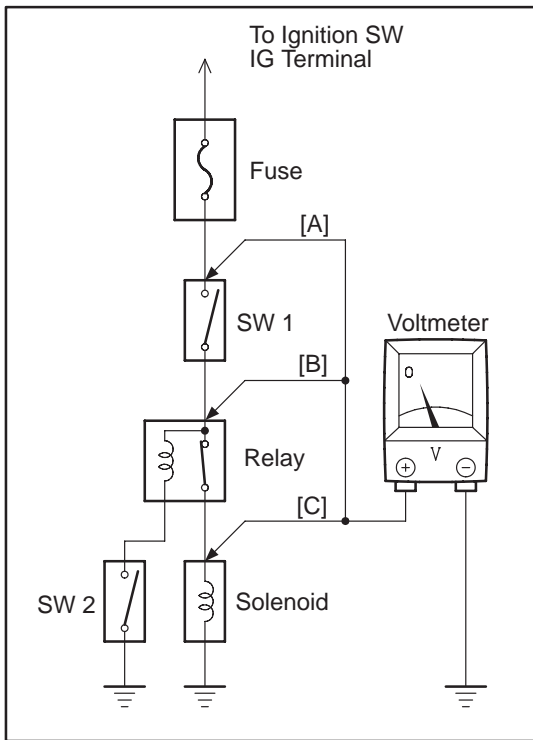
[B] : Part Name

[C] : Part Number

Toyota Part Number are indicated.

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

C TROUBLESHOOTING



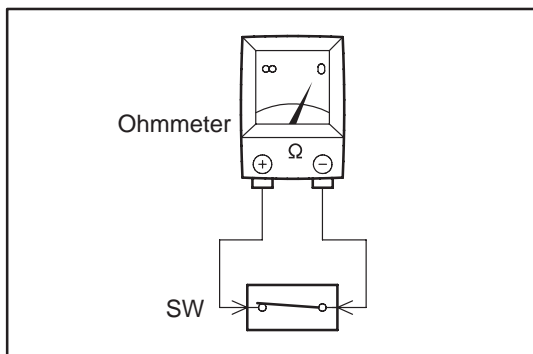
VOLTAGE CHECK

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

Example:

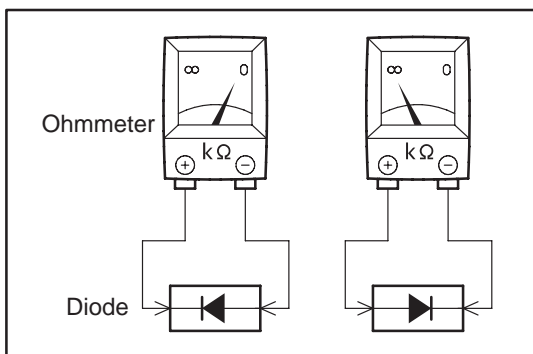
- [A] – Ignition SW on
- [B] – Ignition SW and SW 1 on
- [C] – Ignition SW, SW 1 and Relay on (SW 2 off)

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



CONTINUITY AND RESISTANCE CHECK

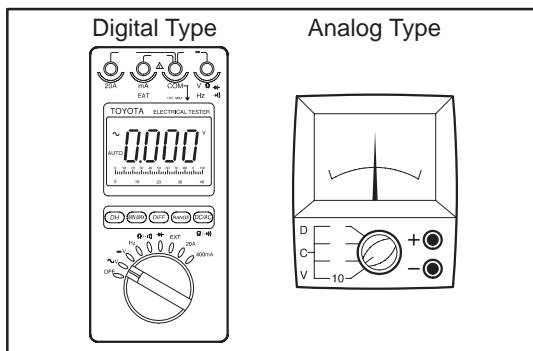
- (a) Disconnect the battery terminal or wire so there is no voltage between the check points.
- (b) Contact the two leads of an ohmmeter to each of the check points.



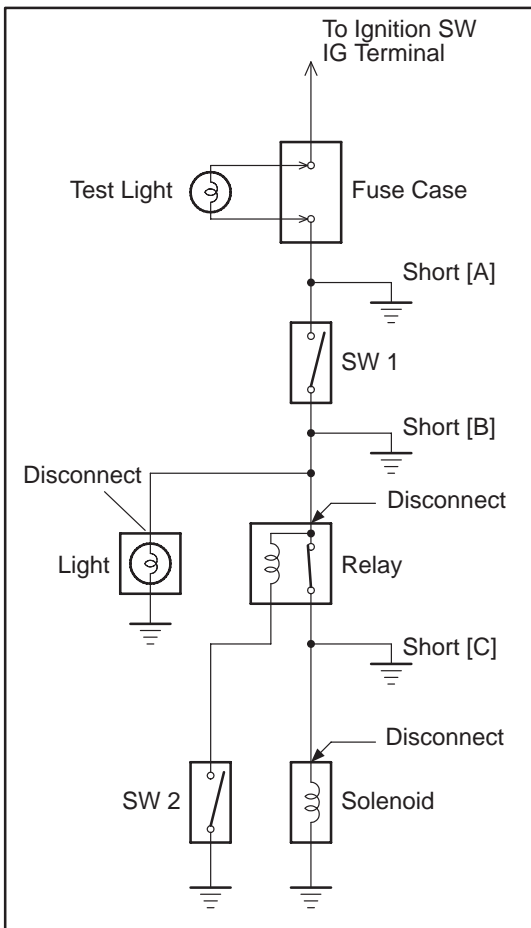
If the circuit has diodes, reverse the two leads and check again.

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

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



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



FINDING A SHORT CIRCUIT

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

Example:

- [A] – Ignition SW on
- [B] – Ignition SW and SW 1 on
- [C] – Ignition SW, SW 1 and Relay on (Connect the Relay) and SW 2 off (or Disconnect SW 2)

- Disconnect and reconnect the connectors while watching the test light.
The short lies between the connector where the test light stays lit and the connector where the light goes out.
- Find the exact location of the short by lightly shaking the problem wire along the body.

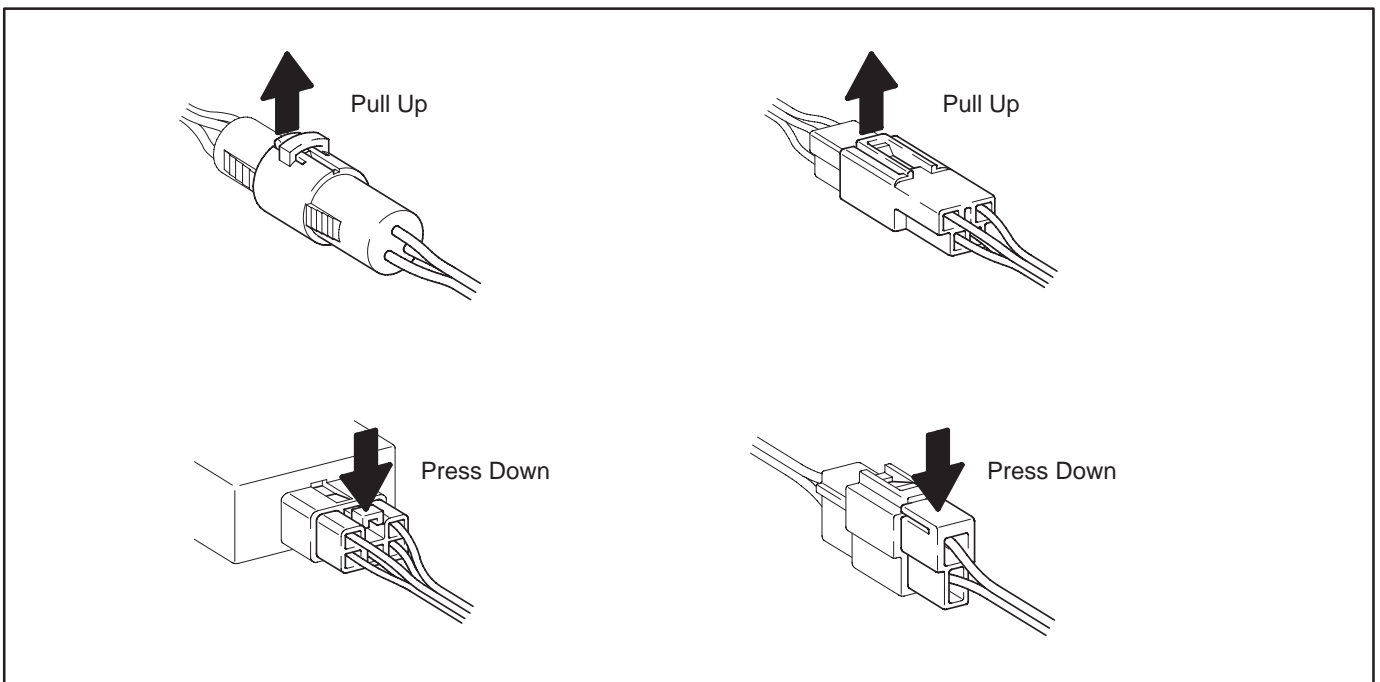
CAUTION:

- 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.)
- 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).

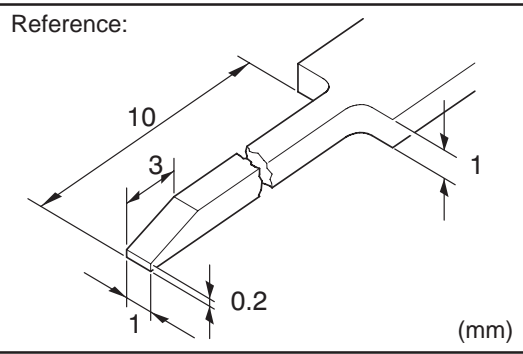
DISCONNECTION OF MALE AND FEMALE CONNECTORS

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

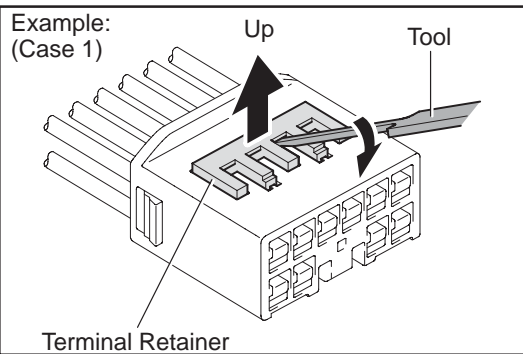
3. DISENGAGE THE SECONDARY LOCKING DEVICE OR TERMINAL RETAINER.

(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.

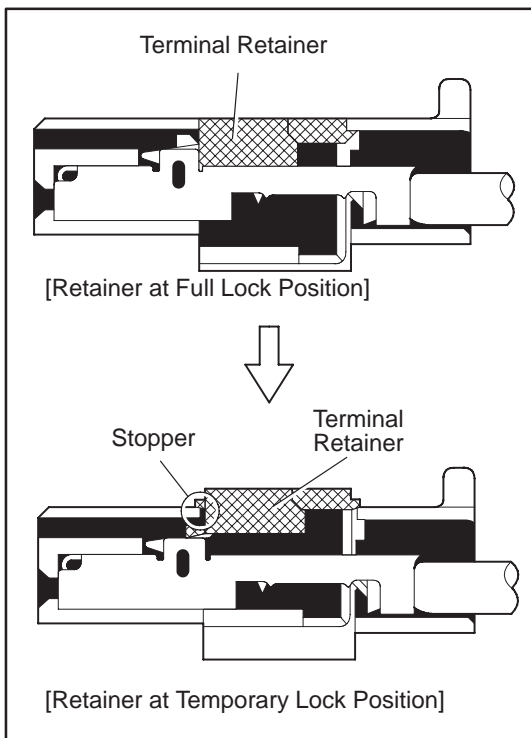


[A] For Non-Waterproof Type Connector

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

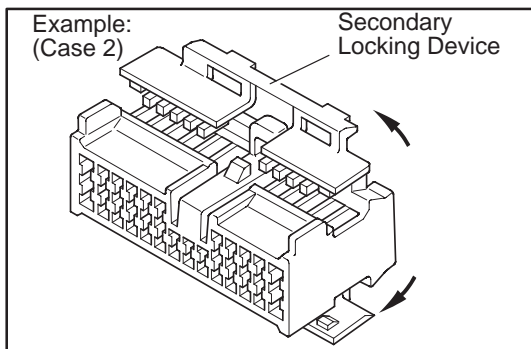
"Case 1"

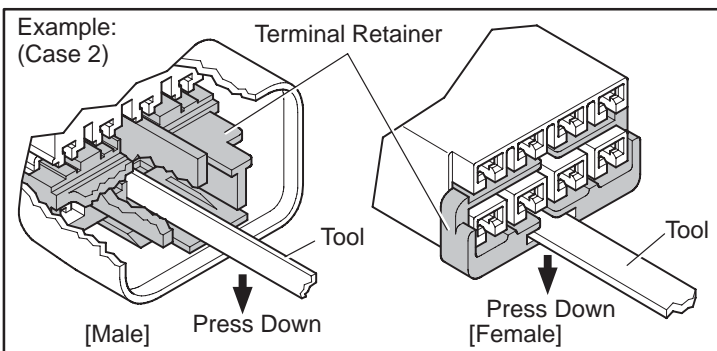
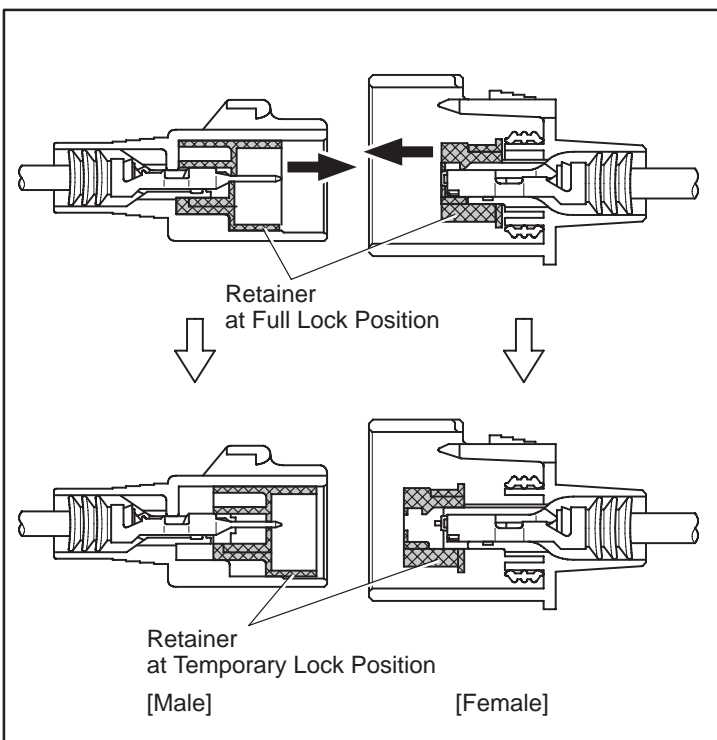
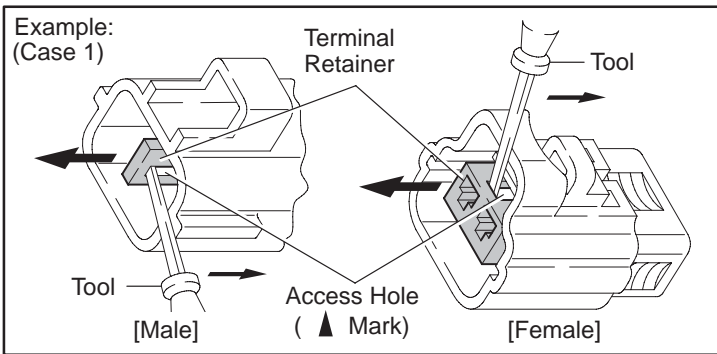
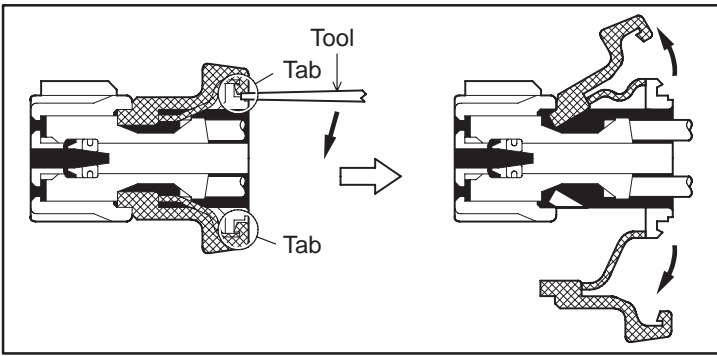
Raise the terminal retainer up to the temporary lock position.



"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).

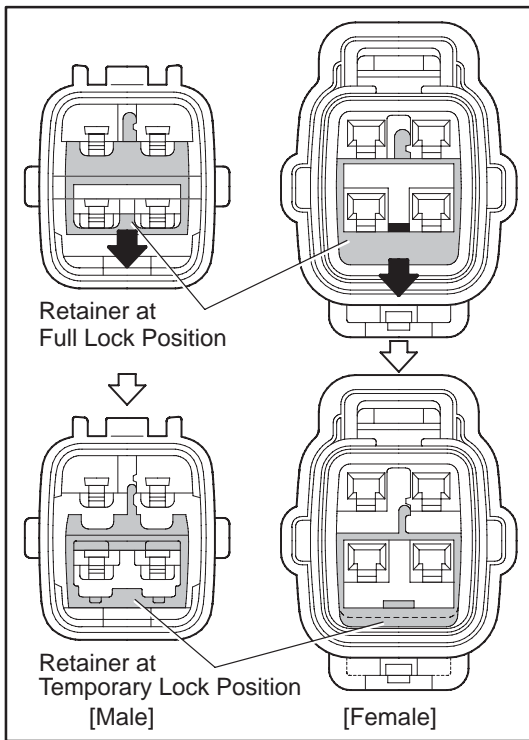
Insert the special tool into the terminal retainer access hole (▲Mark) and pull the terminal retainer up to the temporary lock position.

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

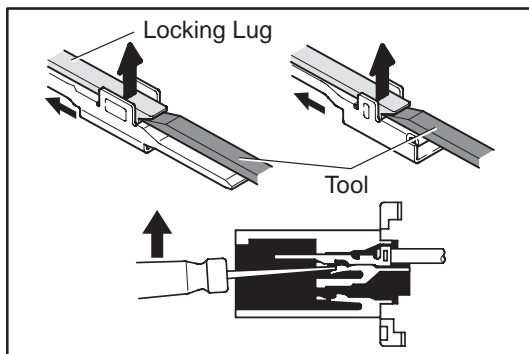
"Case 2"

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

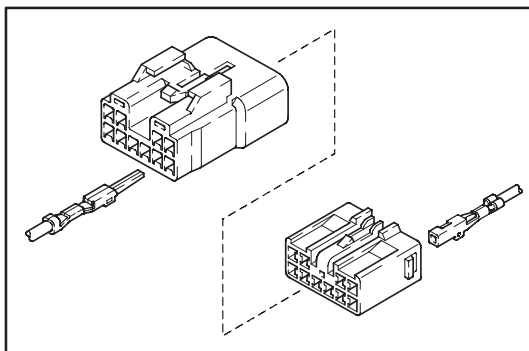
C TROUBLESHOOTING



Push the terminal retainer down to the temporary lock position.



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

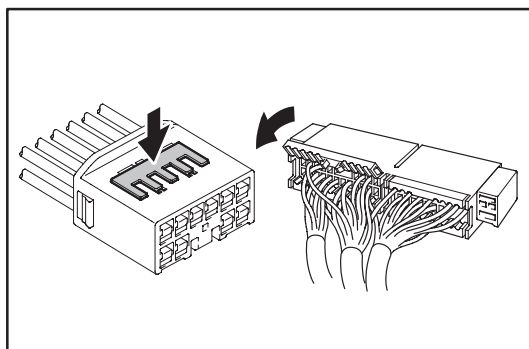


4. INSTALL TERMINAL TO CONNECTOR

(a) Insert the terminal.

HINT:

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



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

5. CONNECT CONNECTOR

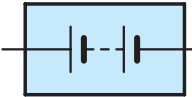

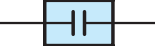



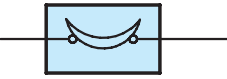


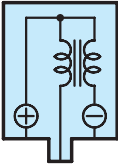




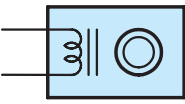

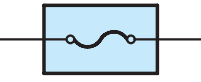


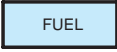

ABBREVIATIONS

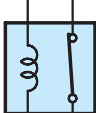
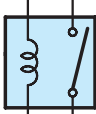

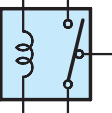

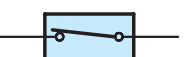

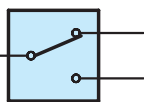
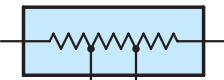
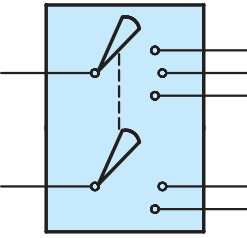

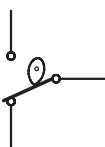

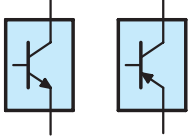

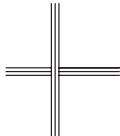
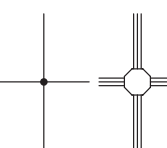

The following abbreviations are used in this manual.

A/C	=	Air Conditioning
A/T	=	Automatic Transaxle
ABS	=	Anti-Lock Brake System
ACIS	=	Acoustic Control Induction System
ACM	=	Active Control Engine Mount
CAN	=	Controller Area Network
EC	=	Electrochromic
ECU	=	Electronic Control Unit
ESA	=	Electronic Spark Advance
ETCS-i	=	Electronic Throttle Control System-intelligent
FL	=	Fusible Link
IC	=	Integrated Circuit
J/B	=	Junction Block
LCD	=	Liquid Crystal Display
LH	=	Left-Hand
M/T	=	Manual Transaxle
R/B	=	Relay Block
RH	=	Right-Hand
SFI	=	Sequential Multiport Fuel Injection
SRS	=	Supplemental Restraint System
SW	=	Switch
TEMP.	=	Temperature
TRAC	=	Traction Control
VSC	=	Vehicle Stability Control
VSV	=	Vacuum Switching Valve
VVT	=	Variable Valve Timing
VVT-i	=	Variable Valve Timing-intelligent
w/	=	With
w/o	=	Without

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

E GLOSSARY OF TERMS AND SYMBOLS

 <p>BATTERY Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.</p>	 <p>GROUND The point at which wiring attaches to the Body, thereby providing a return path for an electrical circuit; without a ground, current cannot flow.</p>
 <p>CAPACITOR (Condenser) A small holding unit for temporary storage of electrical voltage.</p>	<p>HEADLIGHTS Current flow causes a headlight filament to heat up and emit light. A headlight may have either a single (1) filament or a double (2) filament</p> <p>1. SINGLE FILAMENT </p> <p>2. DOUBLE FILAMENT </p>
 <p>CIGARETTE LIGHTER An electric resistance heating element.</p>	
 <p>CIRCUIT BREAKER Basically a reusable fuse, a circuit breaker will heat and open if too much current flows through it. Some units automatically reset when cool, others must be manually reset.</p>	 <p>HORN An electric device which sounds a loud audible signal.</p>
 <p>DIODE A semiconductor which allows current flow in only one direction.</p>	 <p>IGNITION COIL Converts low-voltage DC current into high-voltage ignition current for firing the spark plugs.</p>
 <p>DIODE, ZENER A diode which allows current flow in one direction but blocks reverse flow only up to a specific voltage. Above that potential, it passes the excess voltage. This acts as a simple voltage regulator.</p>	 <p>LIGHT Current flow through a filament causes the filament to heat up and emit light.</p>
 <p>PHOTODIODE The photodiode is a semiconductor which controls the current flow according to the amount of light.</p>	 <p>LED (LIGHT EMITTING DIODE) Upon current flow, these diodes emit light without producing the heat of a comparable light.</p>
 <p>DISTRIBUTOR, IIA Channels high-voltage current from the ignition coil to the individual spark plugs.</p>	 <p>METER, ANALOG Current flow activates a magnetic coil which causes a needle to move, thereby providing a relative display against a background calibration.</p>
 <p>FUSE A thin metal strip which burns through when too much current flows through it, thereby stopping current flow and protecting a circuit from damage.</p>  <p>FUSIBLE LINK (for Medium Current Fuse) A heavy-gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit. The numbers indicate the crosssection surface area of the wires.</p>  <p>(for High Current Fuse or Fusible Link)</p>	 <p>METER, DIGITAL Current flow activates one or many LED's, LCD's, or fluorescent displays, which provide a relative or digital display.</p>
	 <p>MOTOR A power unit which converts electrical energy into mechanical energy, especially rotary motion.</p>

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