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TOYOTA

ELECTRICAL WIRING DIAGRAM

CELICA

1989 MODEL

For USA & Canada Pub. No. EWD057U

FOREWORD

This wiring diagram has been prepared to provide information on the electrical system of the 1989 TOYOTA CELICA.

Applicable models: ST162, 165 series

For service specifications and repair procedures of the above models other than those listed in this manual, refer to the following manuals:

Manual Name	Pub No.
• 1989 Celica Repair Manual	RM114U
• TCCS (3S-GE) Diagnosis Manual	DM002U
• TCCS (3S-FE) Diagnosis Manual	DM011U
• ECT (A140E) Diagnosis Manual	DM013U
• 1989 Model New Car Features	NCF046U

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

QUALITY ASSURANCE

1989 TOYOTA CELICA ELECTRICAL WIRING DIAGRAM

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 tion.

A INTRODUCTION

This manual consists of the following 12 sections:

No.	Section	Description
1	INDEX	Index of the contents of this manual.
2	INTRODUCTION	Brief explanation of each section.
3	HOW TO USE THIS MANUAL	Instructions on how to use this manual.
4	TROUBLE-SHOOTING	Describes the basic inspection procedures for electrical circuits.
5	ABBREVIATIONS	Defines the abbreviations used in this manual.
6	GLOSSARY OF TERMS AND SYMBOLS	Defines the symbols and functions of major parts.
7	RELAY LOCATIONS	Shows position of the Electronic Control Unit, Computer, Relays, Junction Block, etc. This section is closely related to the system circuit.
8	ELECTRICAL WIRE ROUTING	Describes position of the Parts Connectors, Ground points, etc. This section is closely related to the system circuit.
9	POWER SOURCE (POWER - LOAD, Reference)	Describes power distribution from the power supply to various electrical loads.
10	INDEX	Index of the system circuits.
11	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.
	GROUND POINTS	Shows ground positions of all parts described in this manual.
12	OVERALL WIRING DIAGRAM	Provides circuit diagrams showing the circuit connections.

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

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

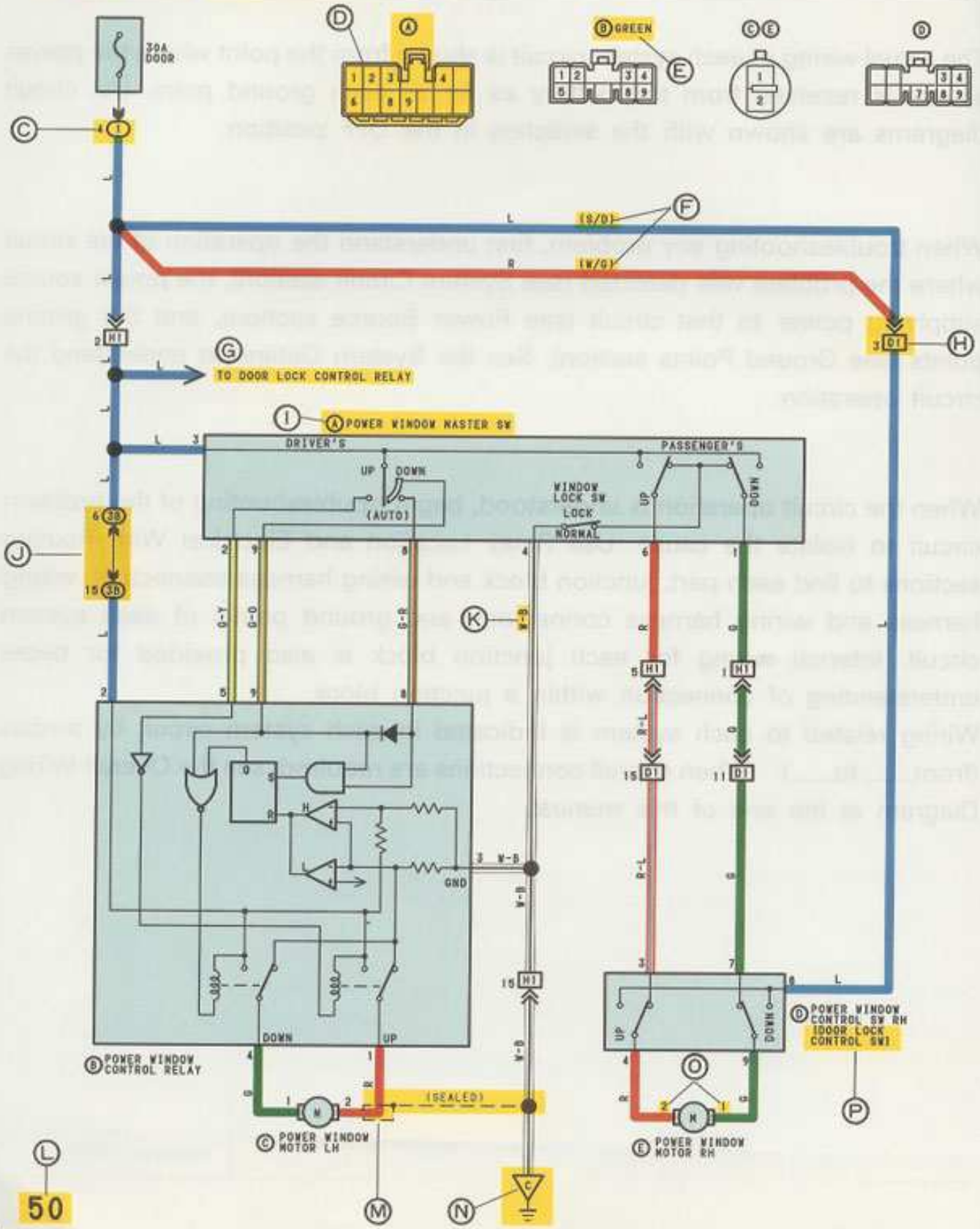
When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Points section). See the System Outline to understand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

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

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

B HOW TO USE THIS MANUAL

20 POWER WINDOW



(A): System No.
(Subsystems are indicated with a number, such as ** -1, or ** -2.)

(B): System Title

(C): 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.

(D): Indicates the connector to be connected to a part (the numeral indicates the pin No.)

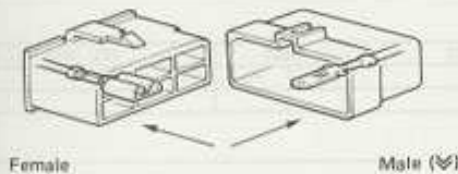
(E): Connector Color
Connectors not indicated are milky white in color.

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

(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.

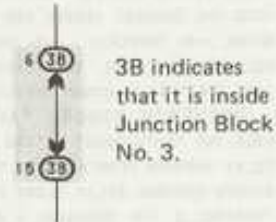
- All connectors are shown from the open end, and the lock is on top.



(I): Represents a part (all parts are shown in sky blue). The code (e.g. ○) is the same as the code used in parts location.

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

Example:

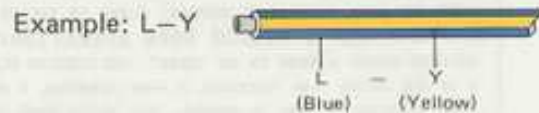


(K): Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

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

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



(L): Page No.

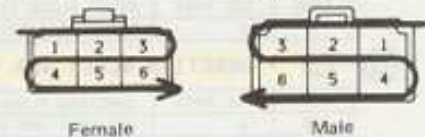
(M): Indicates a sealed wiring harness.



(N): Indicates a ground point.

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

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



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

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

Q

SYSTEM OUTLINE

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

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

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

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

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

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

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

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

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

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

HOLDING PASSENGER'S WINDOW SW(MASTER SW) ON "UP", THE CURRENT FLOWS FROM TERMINAL 3 OF THE MASTER SW THROUGH TERMINAL 6 TO TERMINAL 3 OF THE POWER WINDOW SW(PASSENGER'S) → TERMINAL 4 → TERMINAL 2 OF THE MOTOR → TERMINAL 1 → TERMINAL 5 OF THE POWER WINDOW SW → TERMINAL 7 → TERMINAL 1 OF THE MASTER SW → TERMINAL 4 TO GROUND. THE MOTOR RUNS TO RAISE THE WINDOW. RELEASING THIS SW, THE ROTATION OF MOTOR IS STOPPED AND WINDOW STOPS AT THE DESIRED POINT. SWITCHING THE WINDOW LOCK SW IN "LOCK" POSITION, THE CIRCUIT IS OPENED AND STOPS THE MOTOR ROTATION.

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

5. PASSENGER'S WINDOW DOWN OPERATION(POWER WINDOW SW)

HOLDING POWER WINDOW SW ON "DOWN", THE CURRENT FLOWS FROM TERMINAL 8 OF THE POWER WINDOW SW → TERMINAL 9 → TERMINAL 1 OF THE MOTOR → TERMINAL 2 → TERMINAL 4 OF THE POWER WINDOW SW → TERMINAL 3 → TERMINAL 6 OF THE MASTER SW → TERMINAL 4 → TO GROUND. THE MOTOR RUNS TO LOWER THE WINDOW.

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

R

SERVICE HINTS

Ⓐ POWER WINDOW MASTER SW

4-GROUND-ALWAYS CONTINUITY
3-GROUND-APPROX. 12VOLTS WITH IGNITION SW AT ON POSITION

Ⓑ POWER WINDOW CONTROL RELAY

3-GROUND-ALWAYS CONTINUITY
2-GROUND-APPROX. 12VOLTS WITH IGNITION SW AT ON POSITION
5-GROUND-APPROX. 12VOLTS WITH IGNITION SW AT ON POSITION AND MASTER SW AT UP POSITION
6-GROUND-APPROX. 12VOLTS WITH IGNITION SW AT ON POSITION AND MASTER SW AT AUTO DOWN POSITION
9-GROUND-APPROX. 12VOLTS 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

S

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	P4 21	C	P5 21	E	P6 21
B	P2 21	D	P3 21		

T

○ : RELAY BLOCKS

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

U

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

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

V

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
D1	24	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
H1	24	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)

W

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	24	COWL LEFT


Ⓚ: Explains the system outline.

Ⓡ: Indicates values or explains the function for reference during troubleshooting.

Ⓢ: Indicates the reference page showing the position on the vehicle of the parts in the system circuit.

Example: Part A (Power Window Master SW) represents code P4 on page 21 of the manual.

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

Example: P 4


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

Example: Connector 1 is described on page 16 of this manual and is installed on the left side of the instrument panel.

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

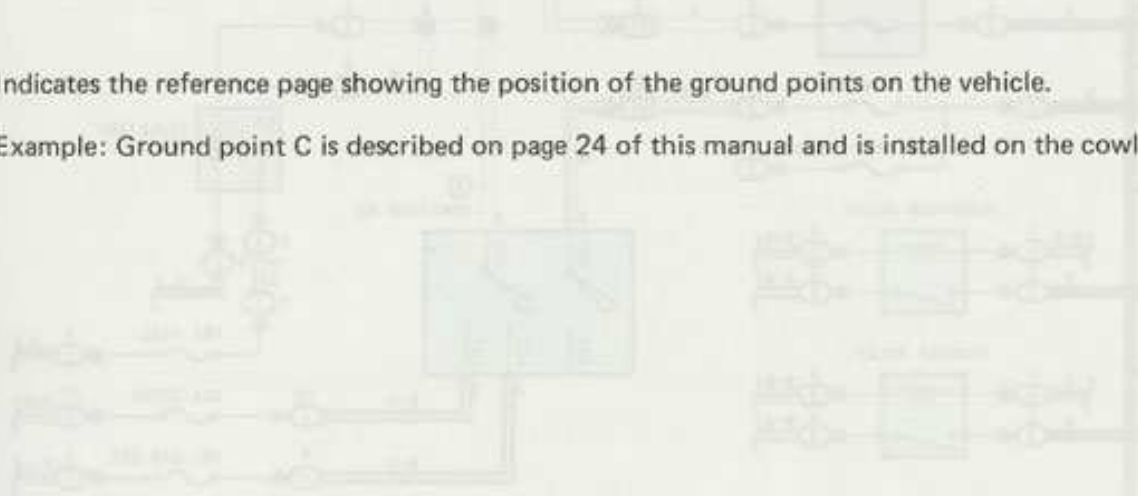
Example: Connector 3B connects the Cowl Wire and J/B No. 3. It is described on page 14 of this manual, and is installed on the instrument panel left side.

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

Example: Connector D1 connects the front door RH wire (female) and cowl wire (male). It is described on page 26 of this manual, and is installed on the right side kick panel.

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

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



B HOW TO USE THIS MANUAL

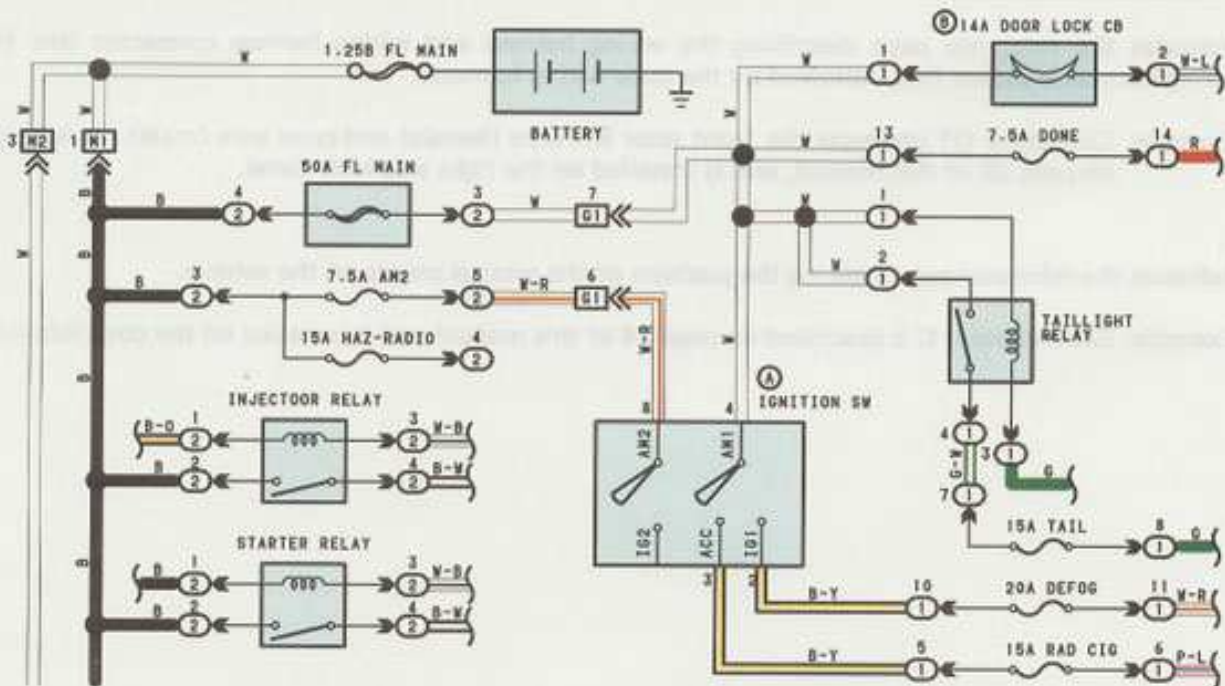
The Power – Load section, describes which parts each power source (fuses, fusible links, and circuit breakers) transmits current to. In the Power Source circuit diagram, the conditions when battery power is supplied to each system are explained. Since all System Circuit diagrams start from the power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

H POWER SOURCE (Power-Load, Reference)

R/B No. 1 (Left Kick Panel)

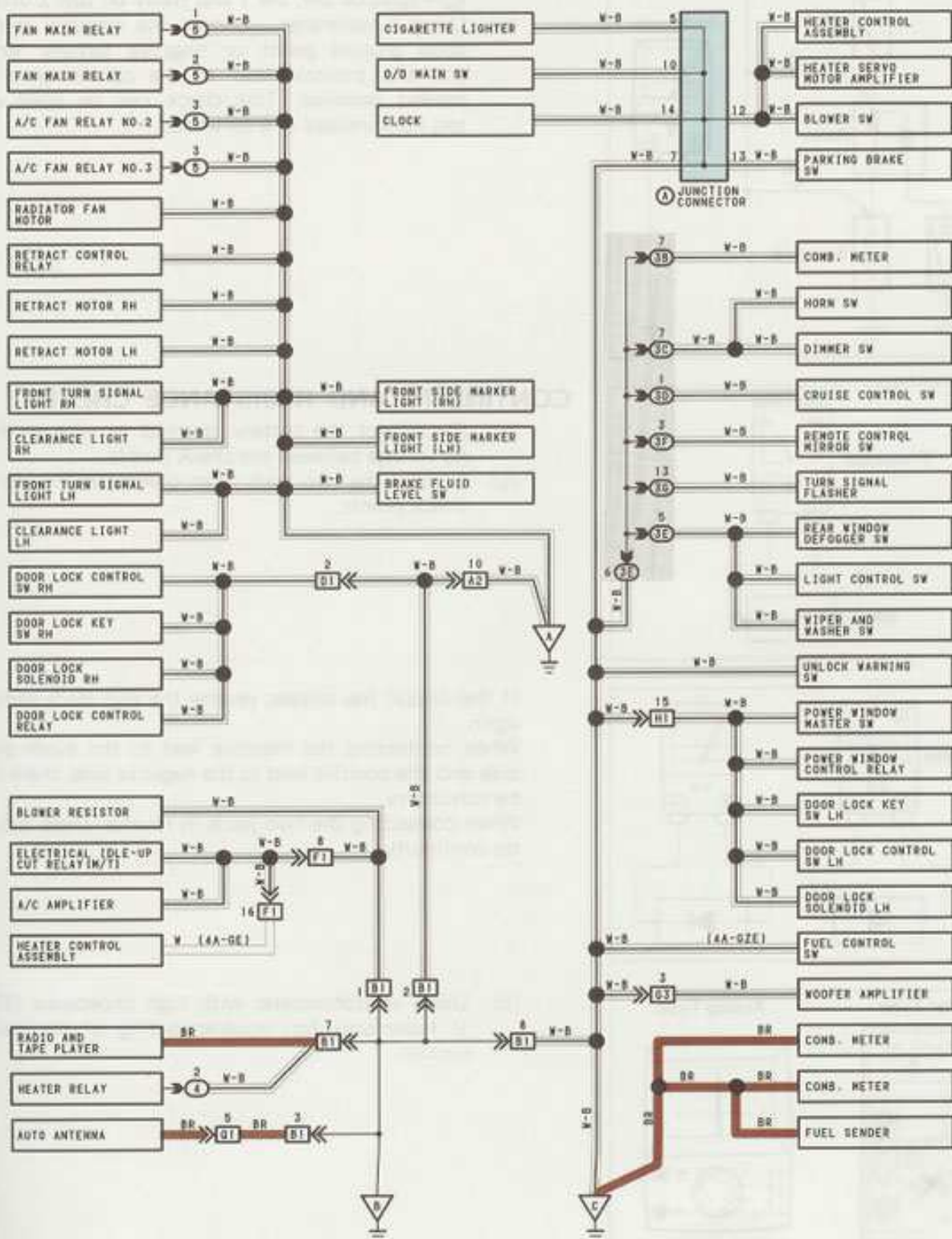
Power	Load	System No.	
7.5A	TURN-GAG	Check Engine Warning Light, Fuel Control SW, Super Charger Warning Light (4A-GZE)	4
		Cooling Fan Warning Light	7
		Turn Signal Flasher	12
		Light Retainer Relay	13
		Seat Belt Warning Light	22
		ECT Computer, Pattern Indicator	23
		Cruise Control Computer	24
		Auto Antenna Control Relay and Motor	26
		Combination Meter	27
		A/C Amplifier, Recirc/Fresh Control Servo Motor, Air Vent Mode Control Servo Motor, Heater Control Assembly, Heater Relay	28
20A	WIPER	Washer Motor, Wiper Control SW, Wiper Motor	21
30A	DOOR	Power Window Control Relay, Power Window Motor	18
15A	RAD-CIG	Remote Control Mirror	17
		Cigarette Lighter, Clock	16
		Radio and Tape Player	25, 26
		Auto Antenna Control Relay and Motor	26

1 POWER SOURCE

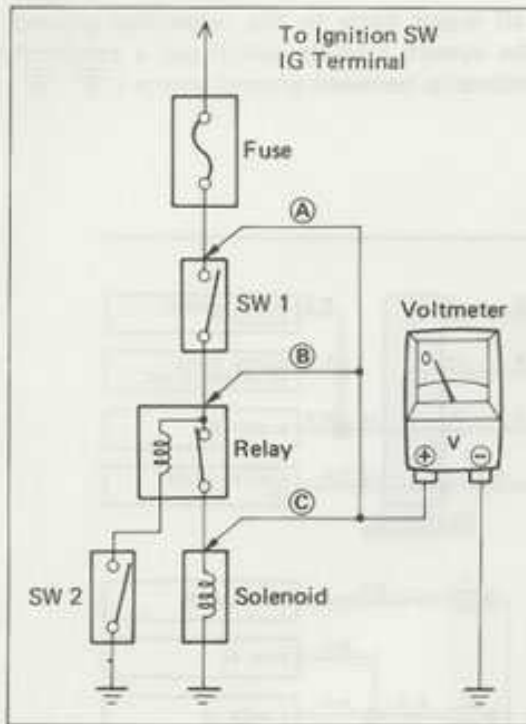


The ground points circuit diagram shows the connections from all major parts to the respective ground points. When troubleshooting a faulty ground point, checking the system circuits which use a common ground may help you identify the problem ground quickly. The relationship between ground points (∇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

J \equiv GROUND POINTS



C TROUBLESHOOTING

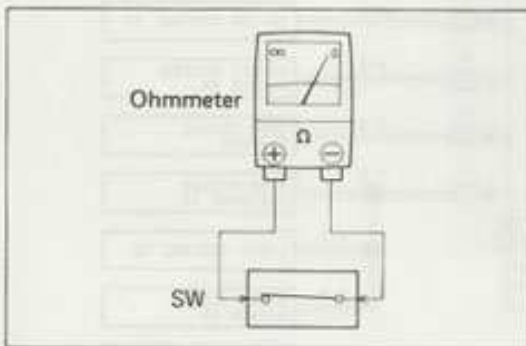


VOLTAGE CHECK

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

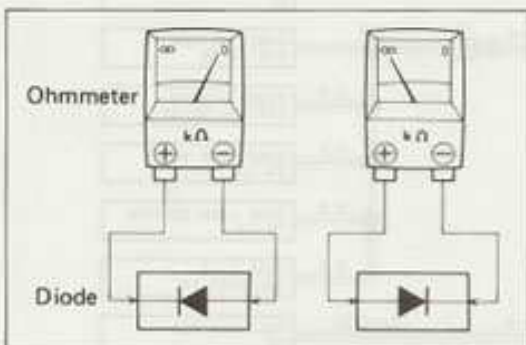
Example:

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

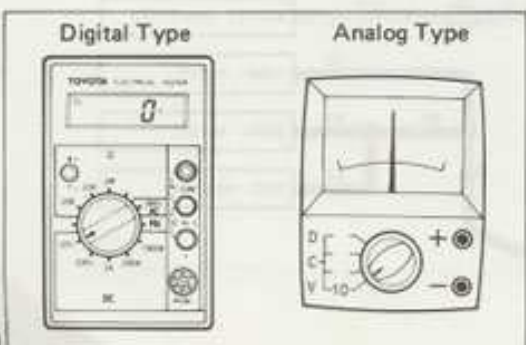


CONTINUITY AND RESISTANCE CHECK

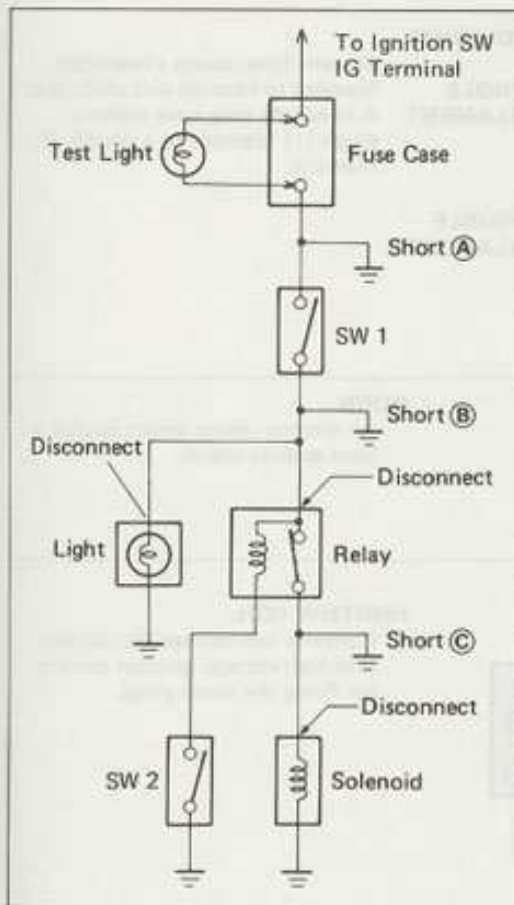
- Disconnect the battery terminal or wire so there is no voltage between the check points.
- Contact the two leads of an ohmmeter to each of the check points.



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.



- Use a volt/ohmmeter with high impedance ($10 \text{ k}\Omega/\text{V}$ 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:
 - 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)
- 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 and various computer unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)

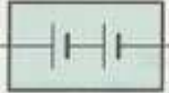






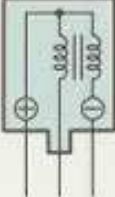












ABBREVIATIONS D

ABBREVIATIONS


The following abbreviations are used in this manual.

A.B.S. = Anti-Lock Brake System	LH = Left-Hand
A/C = Air Conditioner	M/T = Manual Transmission
A/T = Automatic Transmission	O/D = Overdrive
CB = Circuit Breaker	OX = Oxygen
COMB. = Combination	PWR = Power
C/P = Coupe Type	R/B = Relay Block
ECT = Electronic Controlled Transmission	RH = Right-Hand
ECU = Electronic Control Unit	SW = Switch
EFI = Electronic Fuel Injection	TCCS = Toyota Computer Controlled System
EGR = Exhaust Gas Recirculation	TEMP. = Temperature
EX. = Except	T-VIS = Toyota Variable Induction System
FL = Fusible Link	VSV = Vacuum Switching Valve
FWD = Front Wheel Drive	W/ = With
ISC = Idle Speed Control	W/O = Without
J/B = Junction Block	4WD = Four Wheel Drive
L/B = Liftback Type	


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>HEADLIGHTS</p> <p>1. SINGLE FILAMENT 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>CAPACITOR (Condenser) A small holding unit for temporary storage of electrical voltage.</p>	<p>2. DOUBLE FILAMENT</p> 
 <p>CIGARETTE LIGHTER An electric resistance heating element.</p>	<p>HORN An electric device which sounds a loud audible signal.</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>IGNITION COIL Converts low-voltage DC current into high-voltage ignition current for firing the spark plugs.</p> 
 <p>DIODE A semiconductor which allows current flow in only one direction.</p>	
<p>DIODE, ZENER</p>  <p>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>DISTRIBUTOR, IIA Channels high-voltage current from the ignition coil to the individual spark plugs.</p>	<p>LED (LIGHT EMITTING DIODE) Upon current flow, these diodes emit light without producing the heat of a comparable light.</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>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>FUSIBLE LINK A heavy-gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit.</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>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>MOTOR A power unit which converts electrical energy into mechanical energy, especially rotary motion.</p> 

RELAY



1. NORMALLY CLOSED

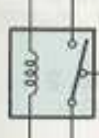


2. NORMALLY OPEN

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.




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





RELAY, DOUBLE THROW
A relay which passes current through one set of contacts or the other.

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

1. NORMALLY OPEN

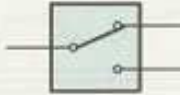
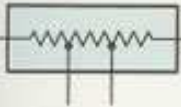


2. NORMALLY CLOSED

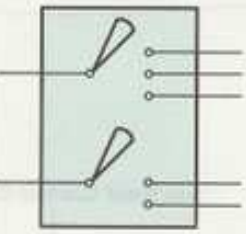
RESISTOR
An electrical component with a fixed resistance, placed in a circuit to reduce voltage to a specific value.

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

RESISTOR, TAPPED
A resistor which supplies two or more different non-adjustable resistance values.

SWITCH, IGNITION
A key operated switch with several positions which allow various 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.



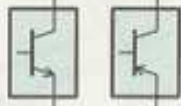
SENSOR (Thermistor)
A resistor which varies its resistance with temperature.

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




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


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





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

WIRES

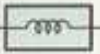
1. NOT CONNECTED



2. SPLICED



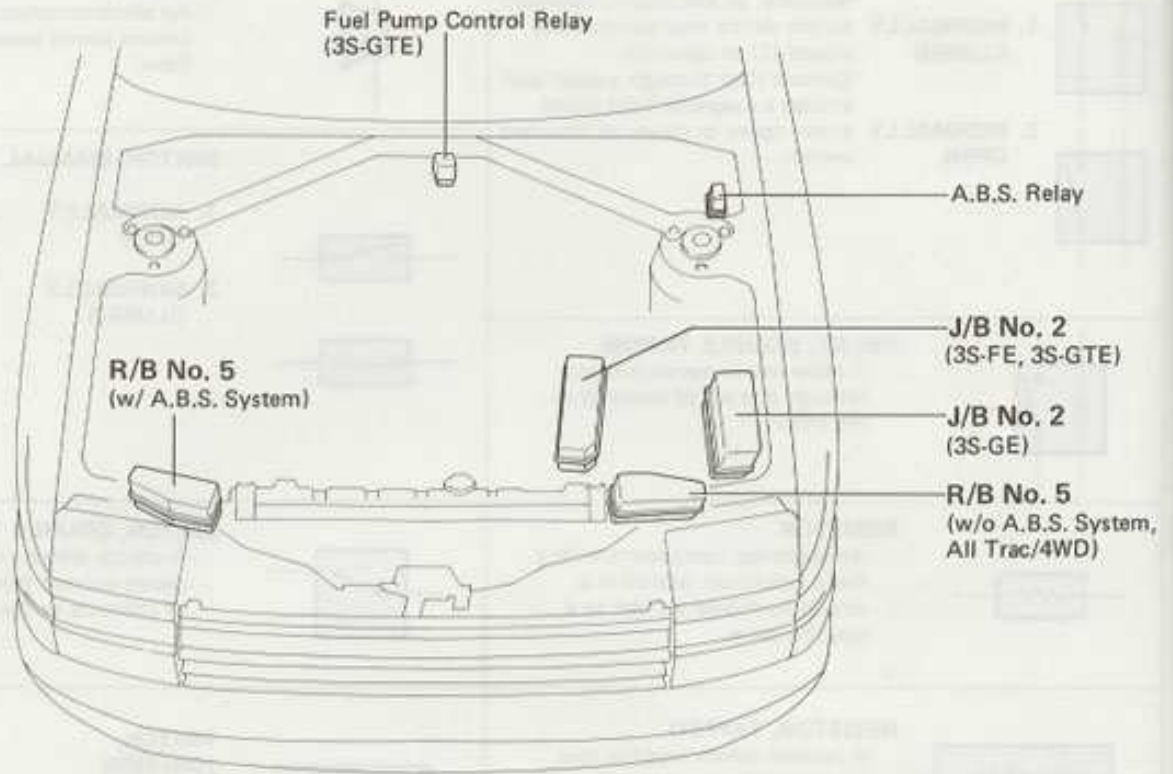
Wires are always drawn as straight lines on wiring diagrams. Crossed wires (1) without a black dot at the junction are not joined; crossed wires (2) with a black dot at the junction are spliced (joined) connections.



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

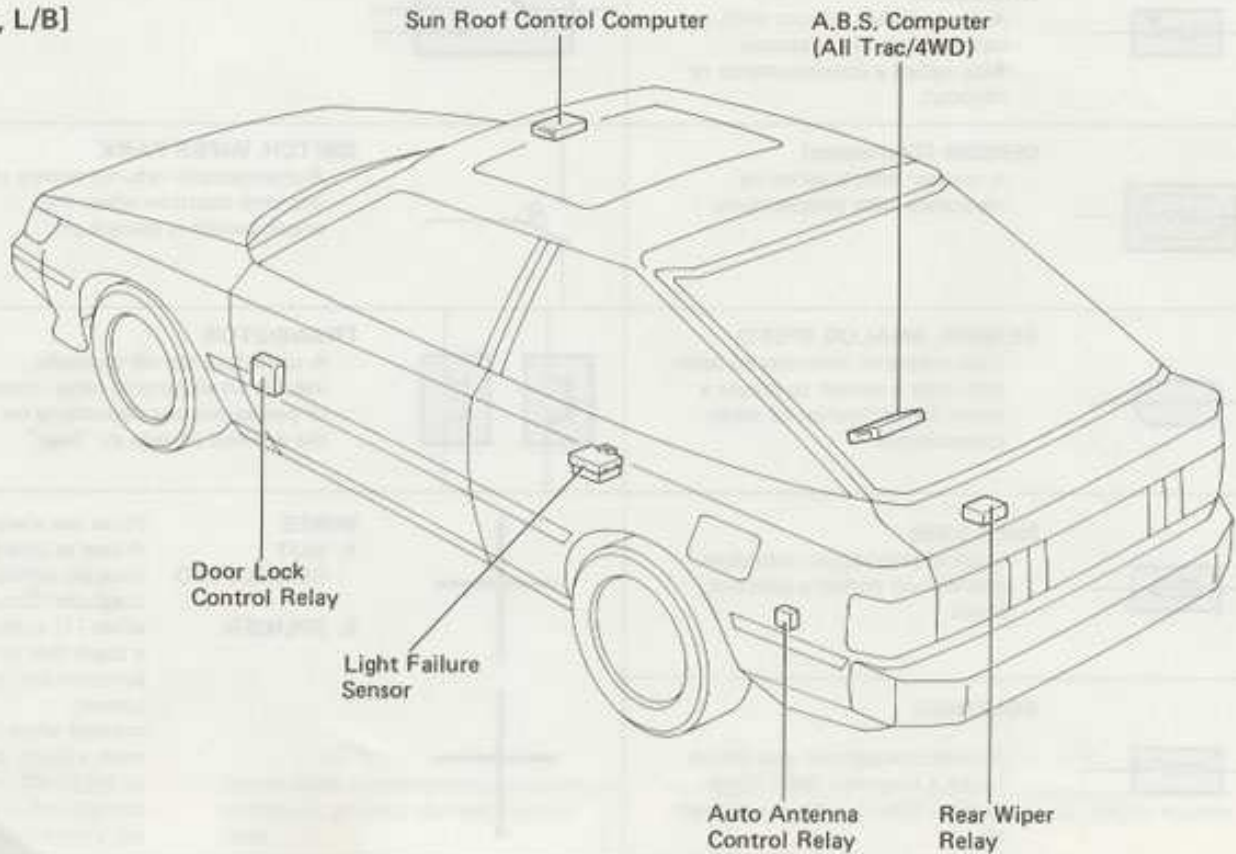
F RELAY LOCATIONS

[Engine Compartment]

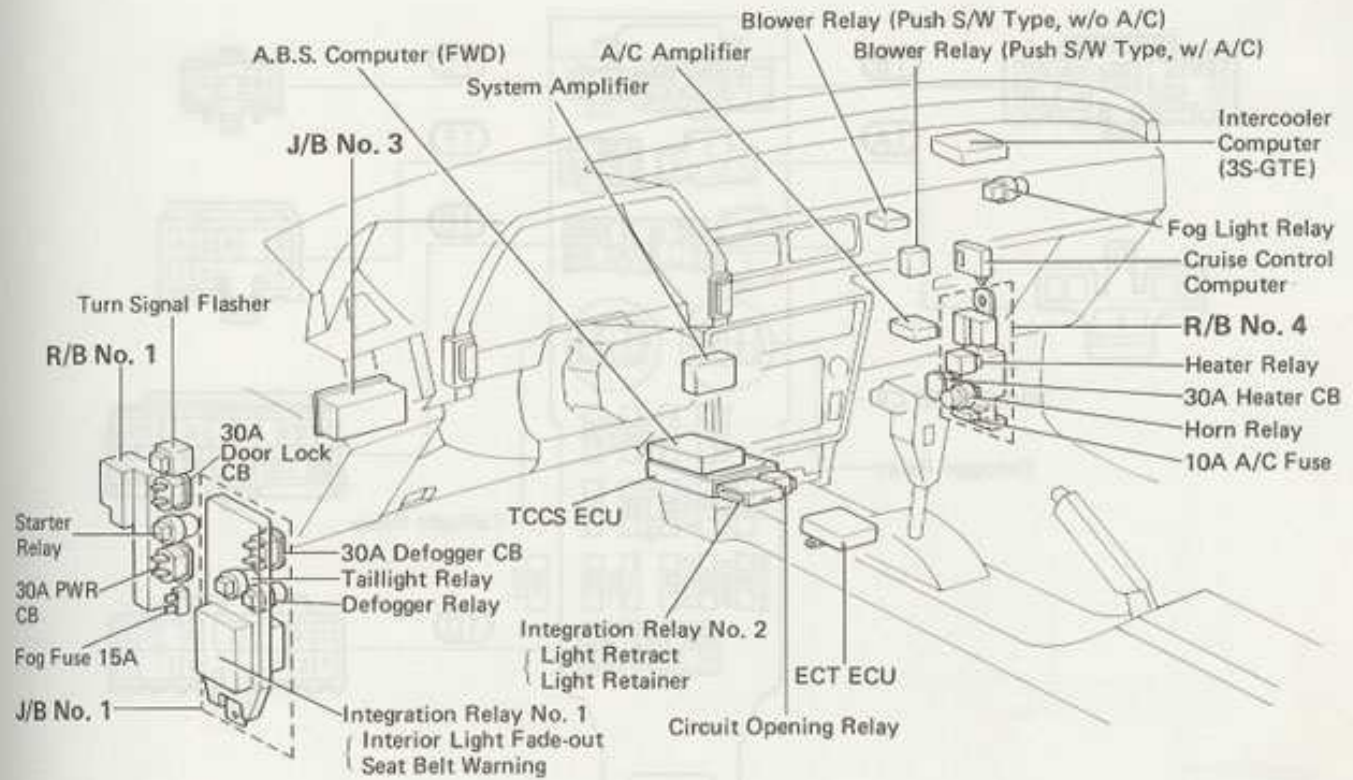


[Body]

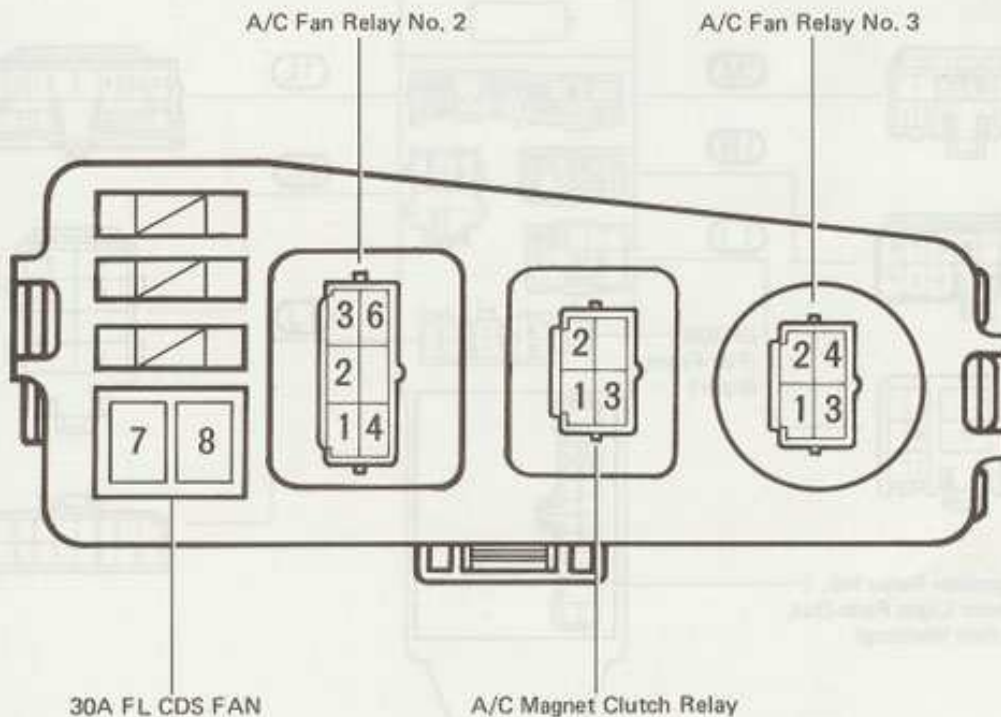
[C/P, L/B]



[Instrument Panel]

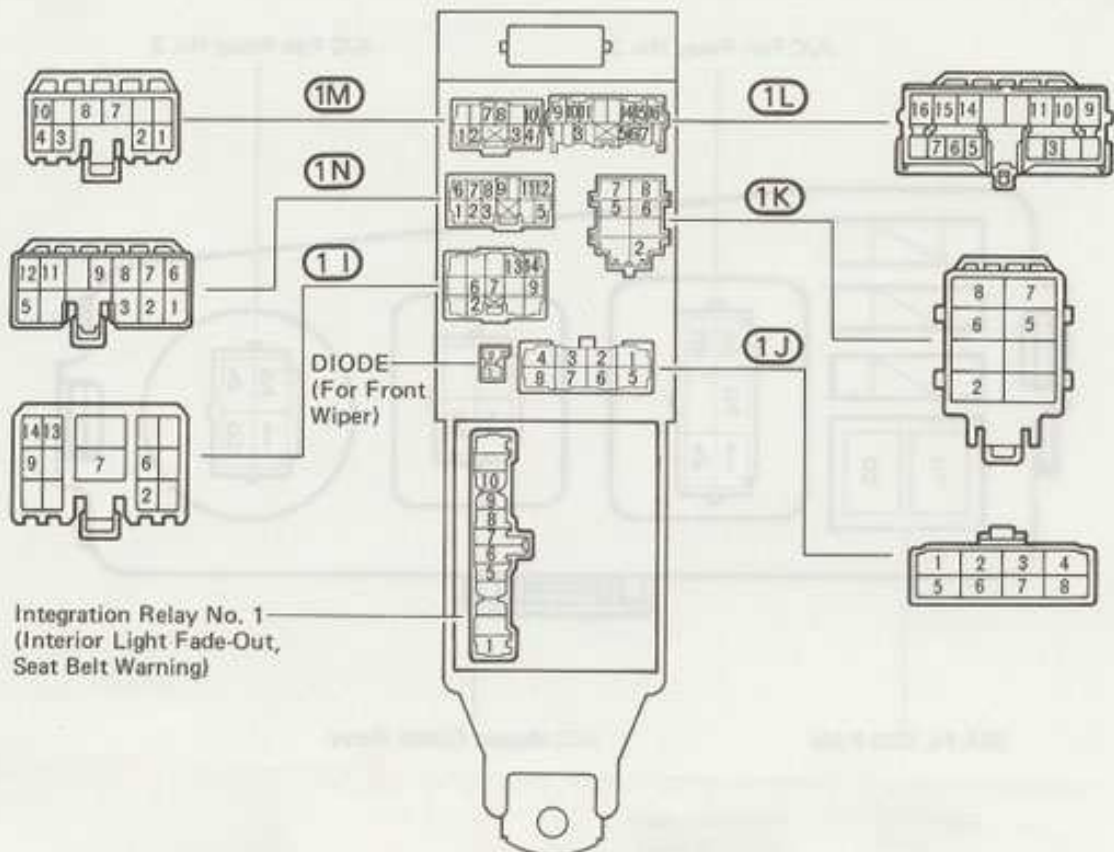
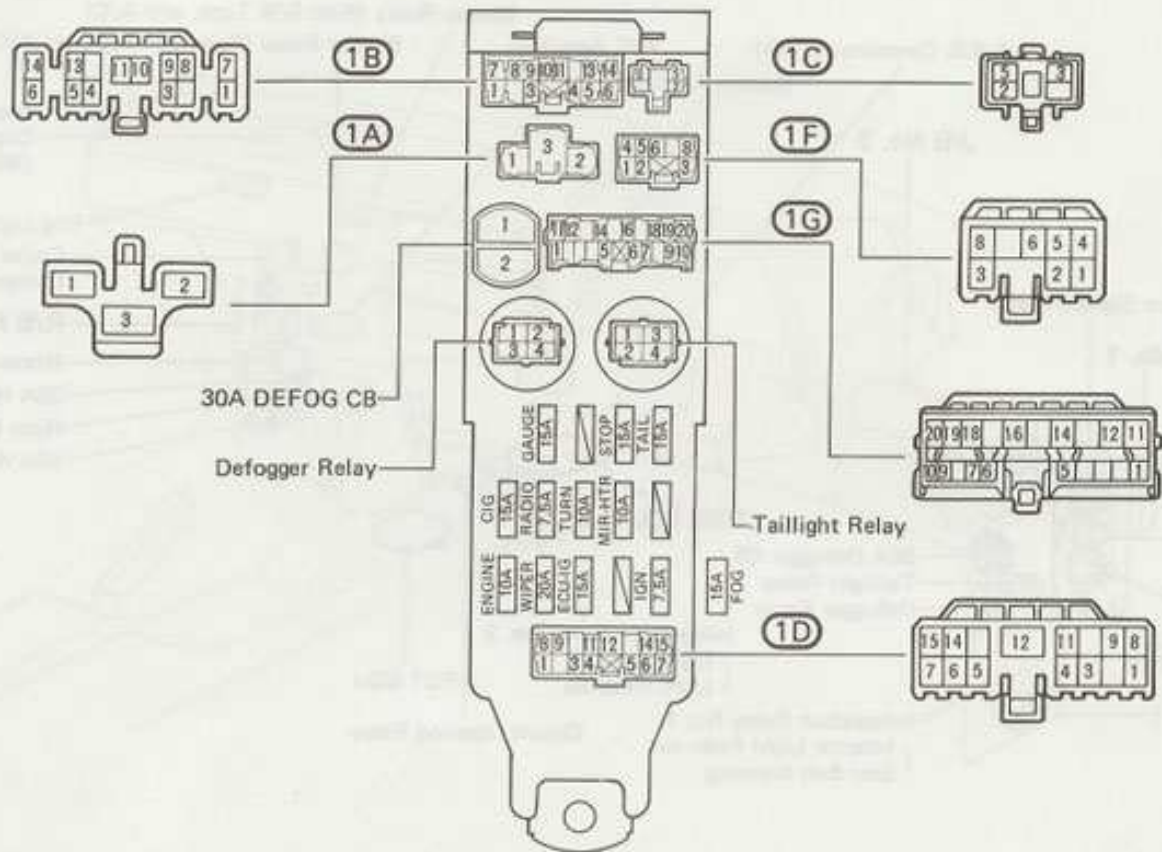


⑤ : R/B No. 5 Radiator Side (See Page 14)

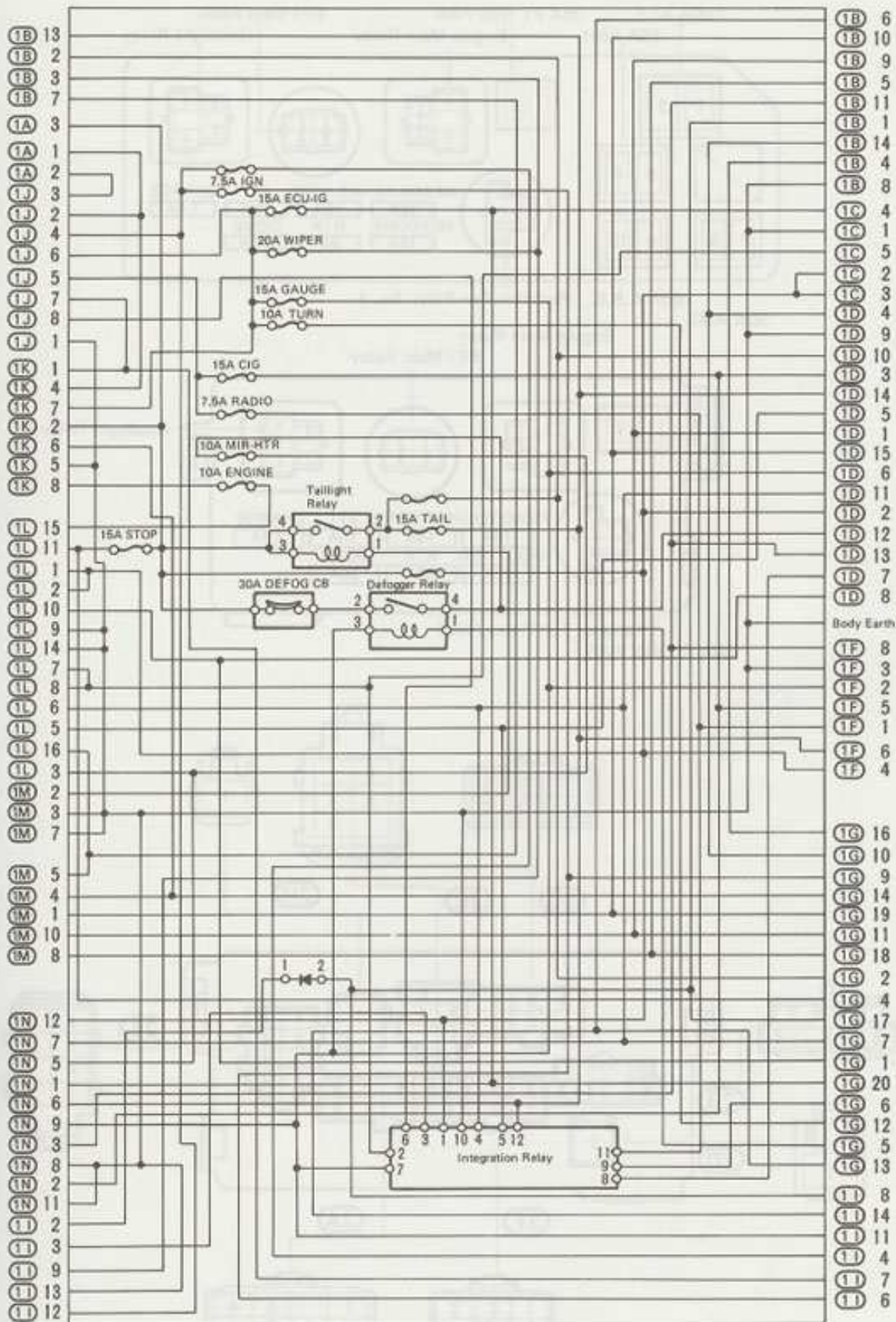


F RELAY LOCATIONS

○ : J/B No. 1 Left Kick Panel (See Page 15)

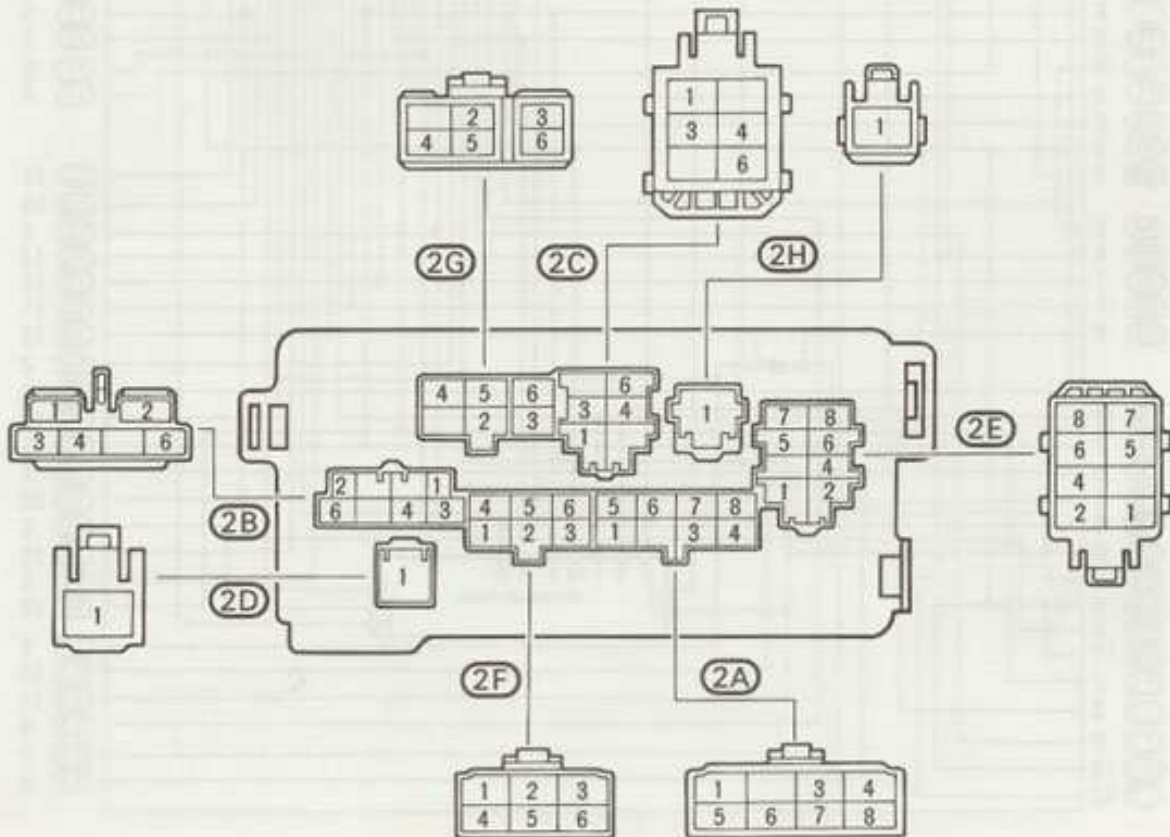
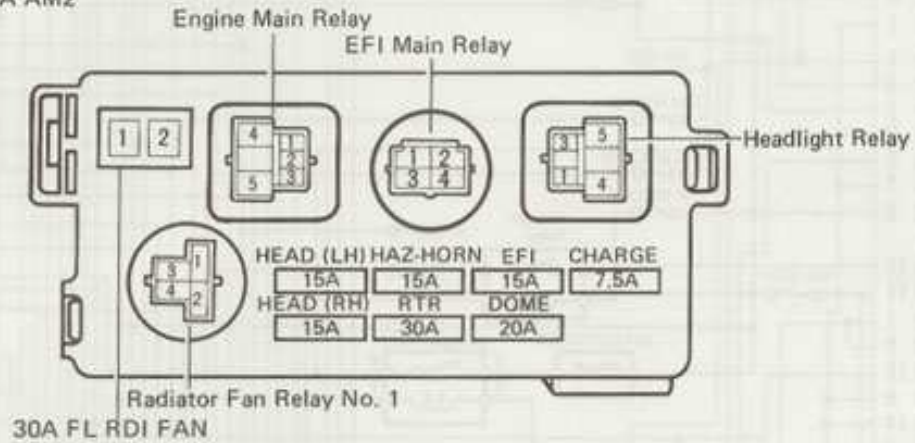
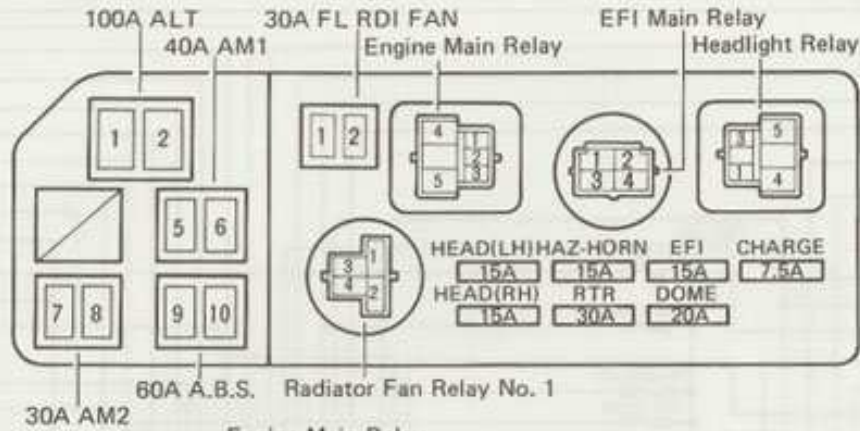


[J/B No. 1 Inner Circuit]

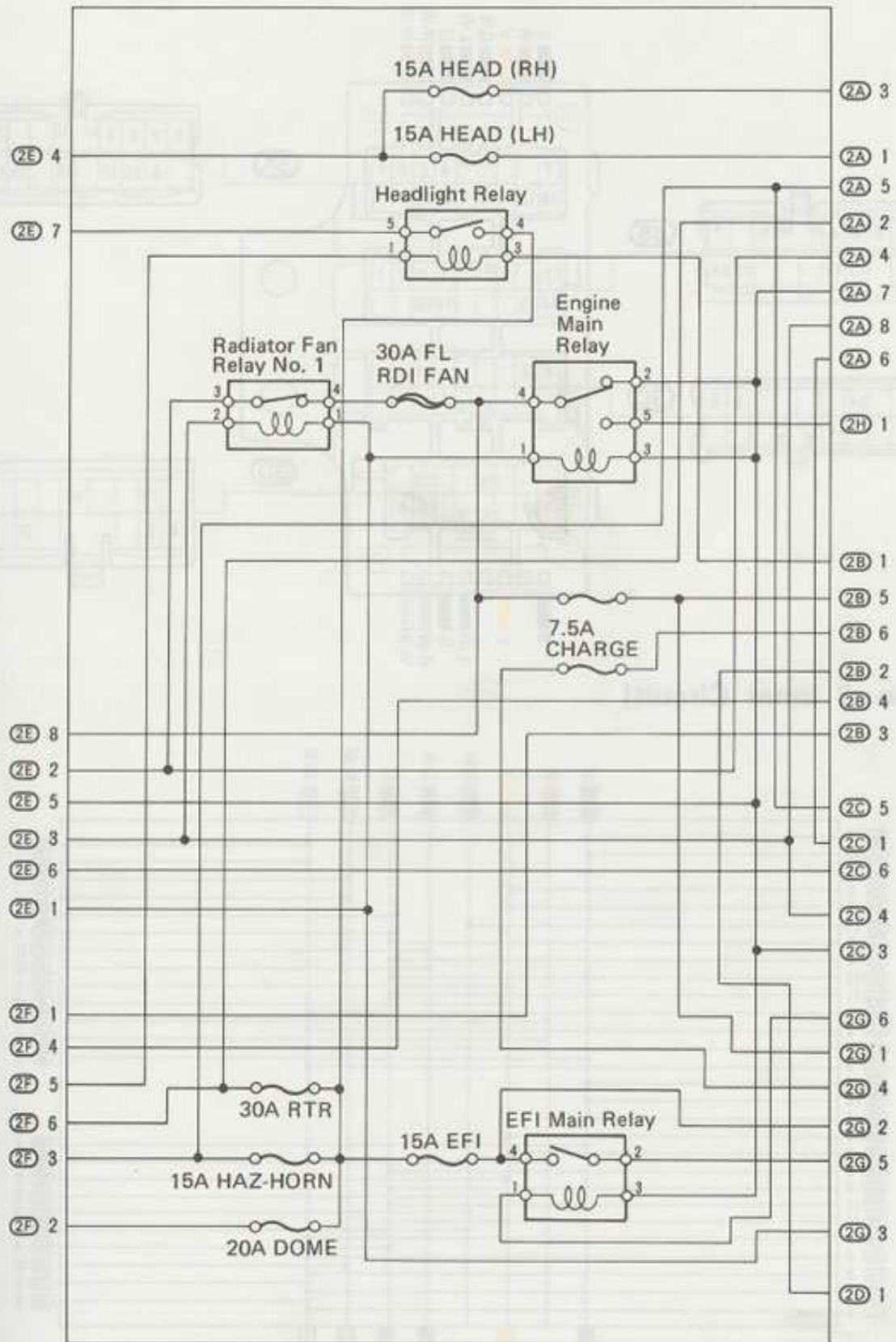


F RELAY LOCATIONS

○ : J/B No. 2 Engine Compartment Left (See Page 14)

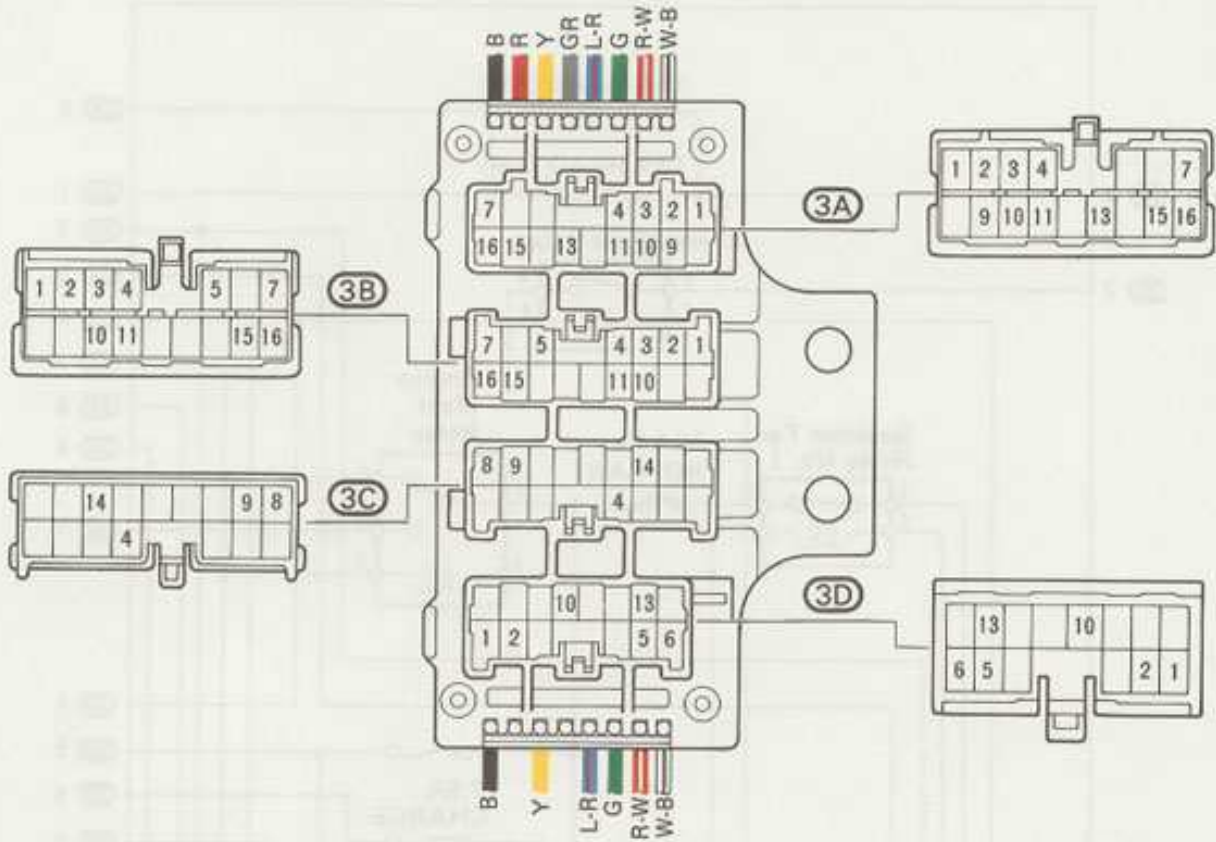


[J/B No. 2 Inner Circuit]

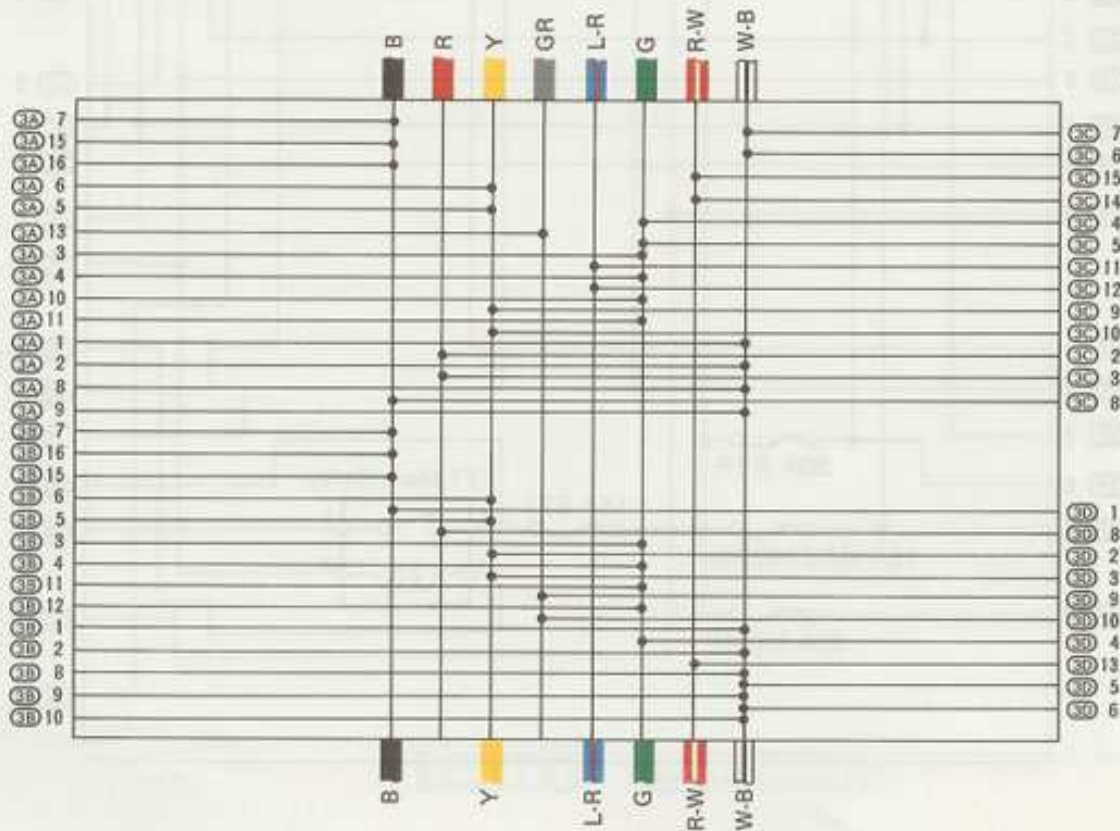


F RELAY LOCATIONS

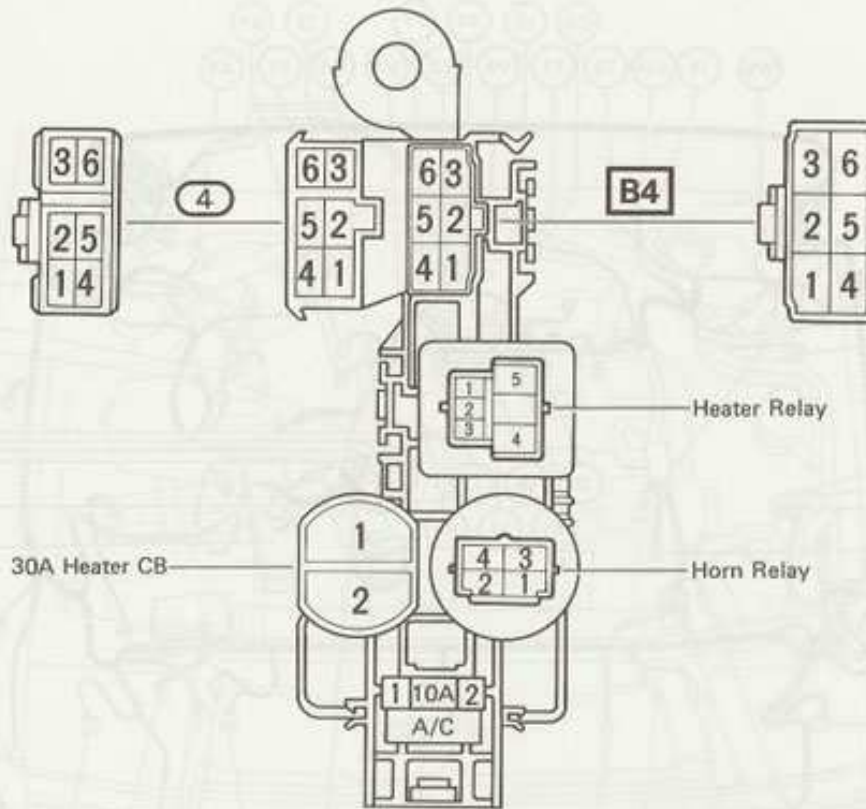
○ : J/B No. 3 Instrument Panel Left (See Page)



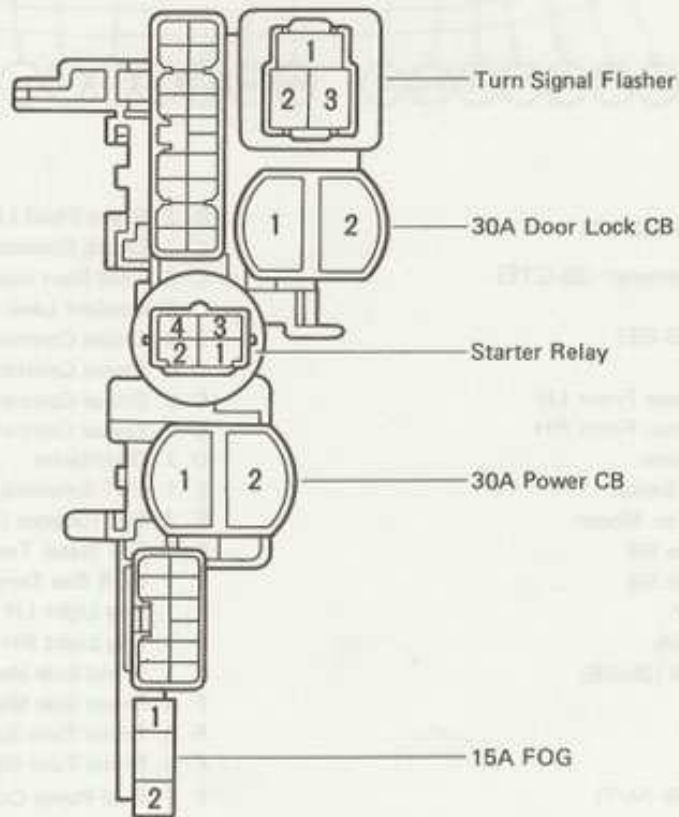
[J/B No. 3 Inner Circuit]



④ : R/B No. 4 Right Kick Panel (See Page 15)



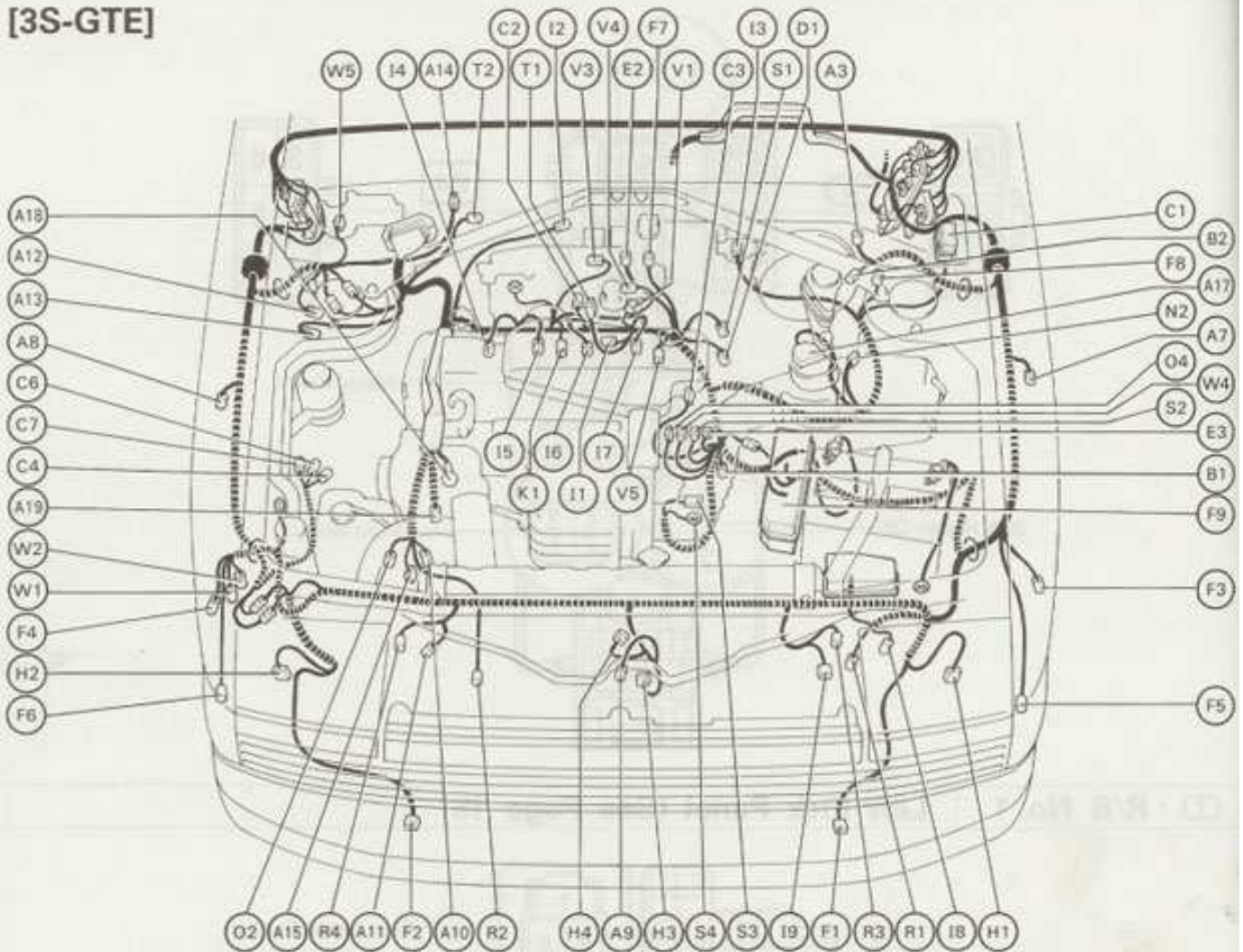
① : R/B No. 1 Left Kick Panel (See Page 15)



G ELECTRICAL WIRING ROUTING

Position of Parts in Engine Compartment

[3S-GTE]

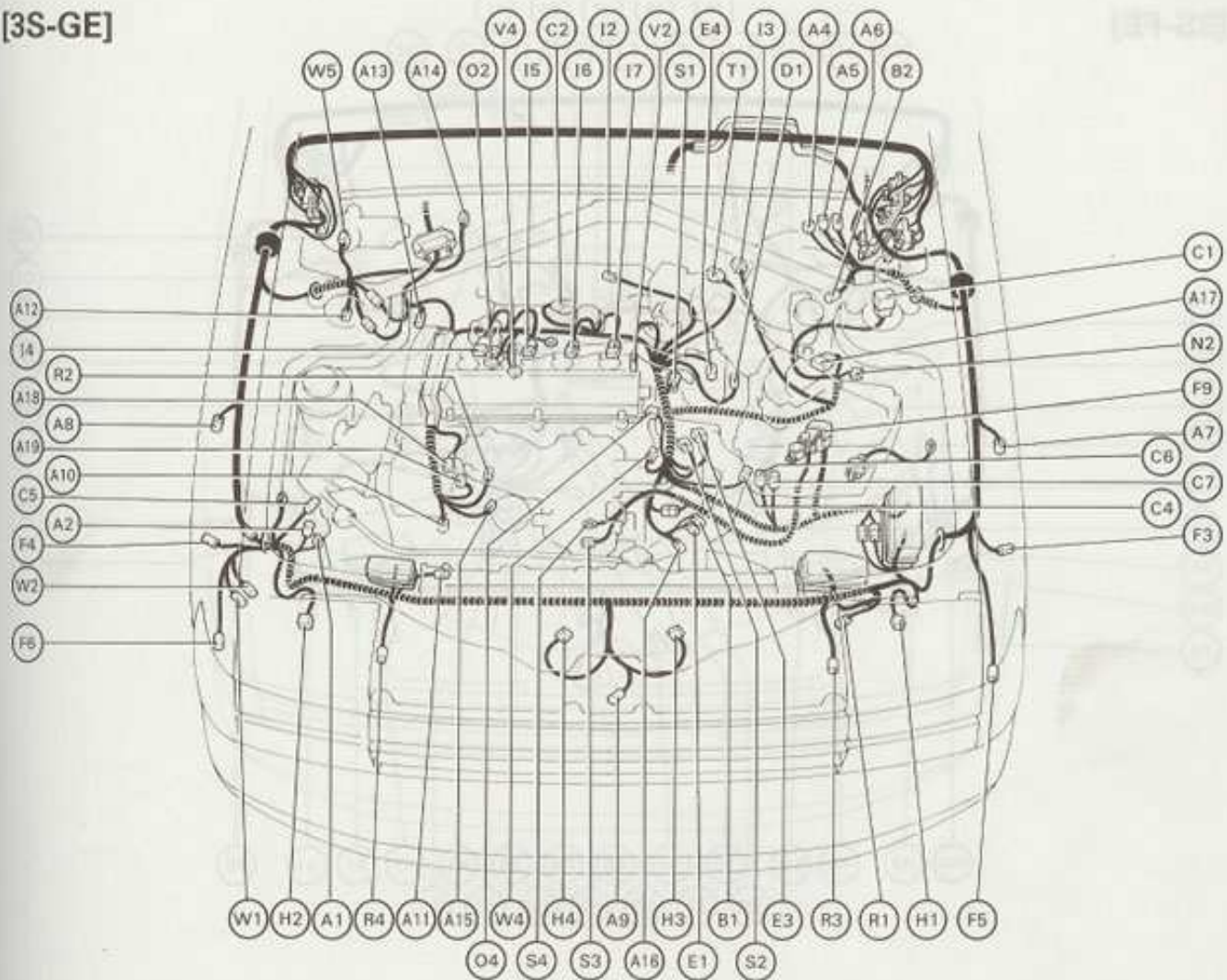


- A 1 } A.B.S. Actuator (3S-GE)
- A 2 } A.B.S. Actuator (3S-GE)
- A 3 A.B.S. Check Connector (3S-GTE)
- A 4 } A.B.S. Relay (3S-GE)
- A 5 } A.B.S. Relay (3S-GE)
- A 6 } A.B.S. Relay (3S-GE)
- A 7 A.B.S. Speed Sensor Front LH
- A 8 A.B.S. Speed Sensor Front RH
- A 9 A/C Ambient Sensor
- A10 A/C Compressor Sensor
- A11 A/C Condenser Fan Motor
- A12 A/C Dual Pressure SW
- A13 A/C High Pressure SW
- A14 A/C Idle-Up VSV
- A15 A/C Magnet Clutch
- A16 A/T Indicator SW (3S-GE)
- A17 Air Flow Meter
- A18 } Alternator
- A19 } Alternator
- B 1 Back-Up Light SW (M/T)

- B 2 Brake Fluid Level SW
- C 1 Check Connector
- C 2 Cold Start Injector
- C 3 Coolant Level SW (3S-GTE)
- C 4 Cruise Control Actuator (w/ A.B.S.)
- C 5 Cruise Control Actuator (w/o A.B.S.)
- C 6 Cruise Control Vacuum Pump (w/ A.B.S.)
- C 7 Cruise Control Vacuum SW (w/ A.B.S.)
- D 1 Distributor
- E 1 ECT Solenoid and Neutral Start SW (3S-GE)
- E 2 EFI Resistor (3S-GTE)
- E 3 EFI Water Temp. Sensor
- E 4 EGR Gas Temp. Sensor (for California)
- F 1 Fog Light LH (3S-GTE)
- F 2 Fog Light RH (3S-GTE)
- F 3 Front Side Marker Light LH
- F 4 Front Side Marker Light RH
- F 5 Front Turn Signal and Clearance Light LH
- F 6 Front Turn Signal and Clearance Light RH
- F 7 Fuel Pump Control Relay (3S-GTE)

Position of Parts in Engine Compartment

[3S-GE]

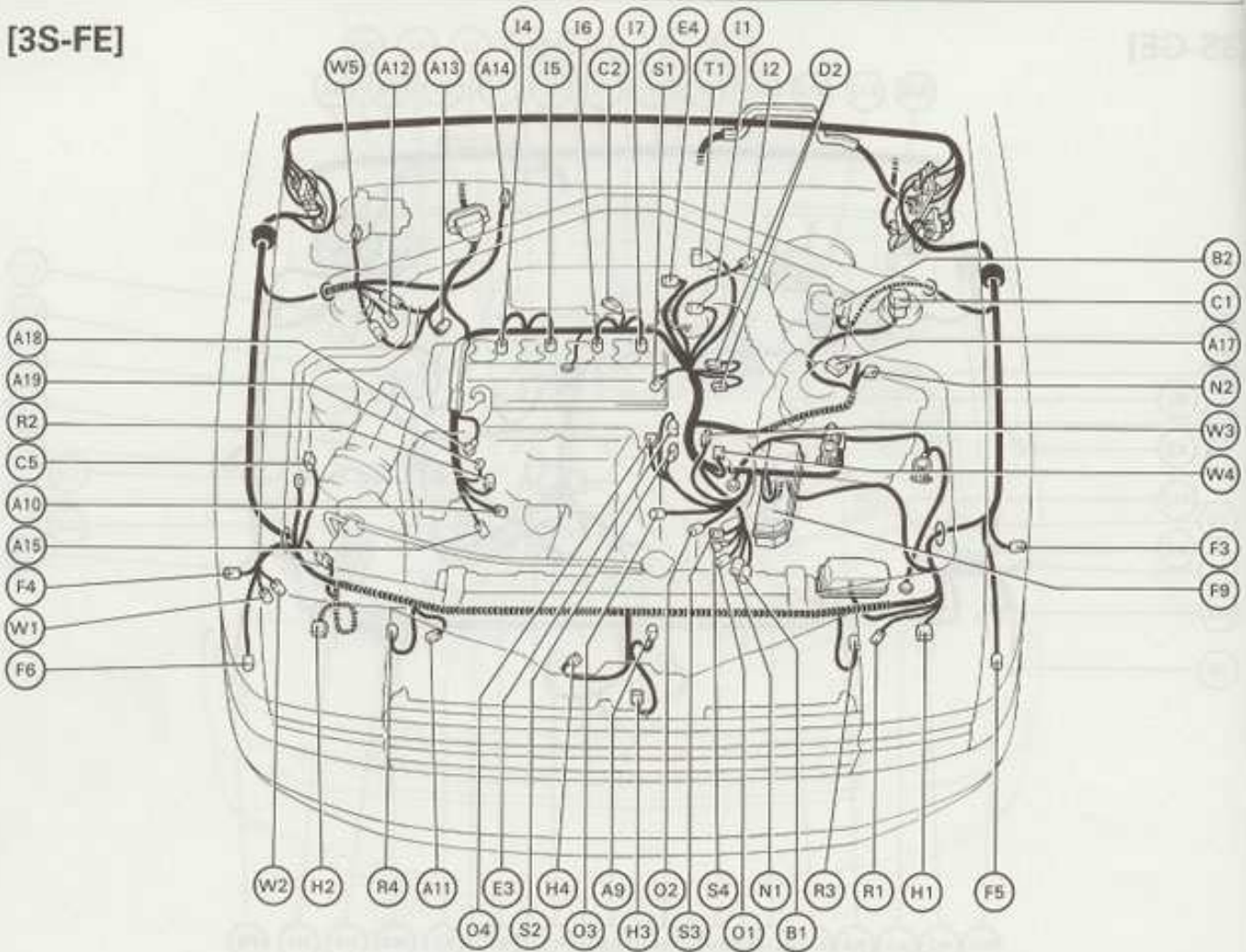


- | | |
|---|---|
| F 8 Fuel Pump Resistor (3S-GTE) | R 1 Radiator Fan Motor |
| F 9 Fusible Link box | R 2 Radiator Fan Water Temp. SW |
| H 1 Headlight LH | R 3 Retract Motor LH |
| H 2 Headlight RH | R 4 Retract Motor RH |
| H 3 } Horn | S 1 Speed Sensor (T/M) |
| H 4 } | S 2 Start Injector Time SW |
| I 1 ISC Valve (3S-GTE) | S 3 } Starter |
| I 2 Igniter | S 4 } |
| I 3 Ignition Coil | T 1 Throttle Position Sensor |
| I 4 Injector No. 1 | T 2 Turbo Charging Pressure Sensor (3S-GTE) |
| I 5 Injector No. 2 | V 1 VSV (EGR, 3S-GTE) |
| I 6 Injector No. 3 | V 2 VSV (Engine Idle-Up, 3S-GE) |
| I 7 Injector No. 4 | V 3 VSV (Fuel Pressure Up, 3S-GTE) |
| I 8 Intercooler Pump (3S-GTE) | V 4 VSV (T-VIS) |
| I 9 Intercooler Pump Check Connector (3S-GTE) | V 5 VSV (Turbo Charging Pressure, 3S-GTE) |
| K 1 Knock Sensor (3S-GTE) | W 1 Washer Motor (for Front) |
| N 2 Noise Filter (Ignition) | W 2 Washer Motor (for Rear) |
| O 2 OX Sensor | W 4 Water Temp. Sender |
| O 4 Oil Pressure SW or Gauge | W 5 Wiper Motor |

G ELECTRICAL WIRING ROUTING

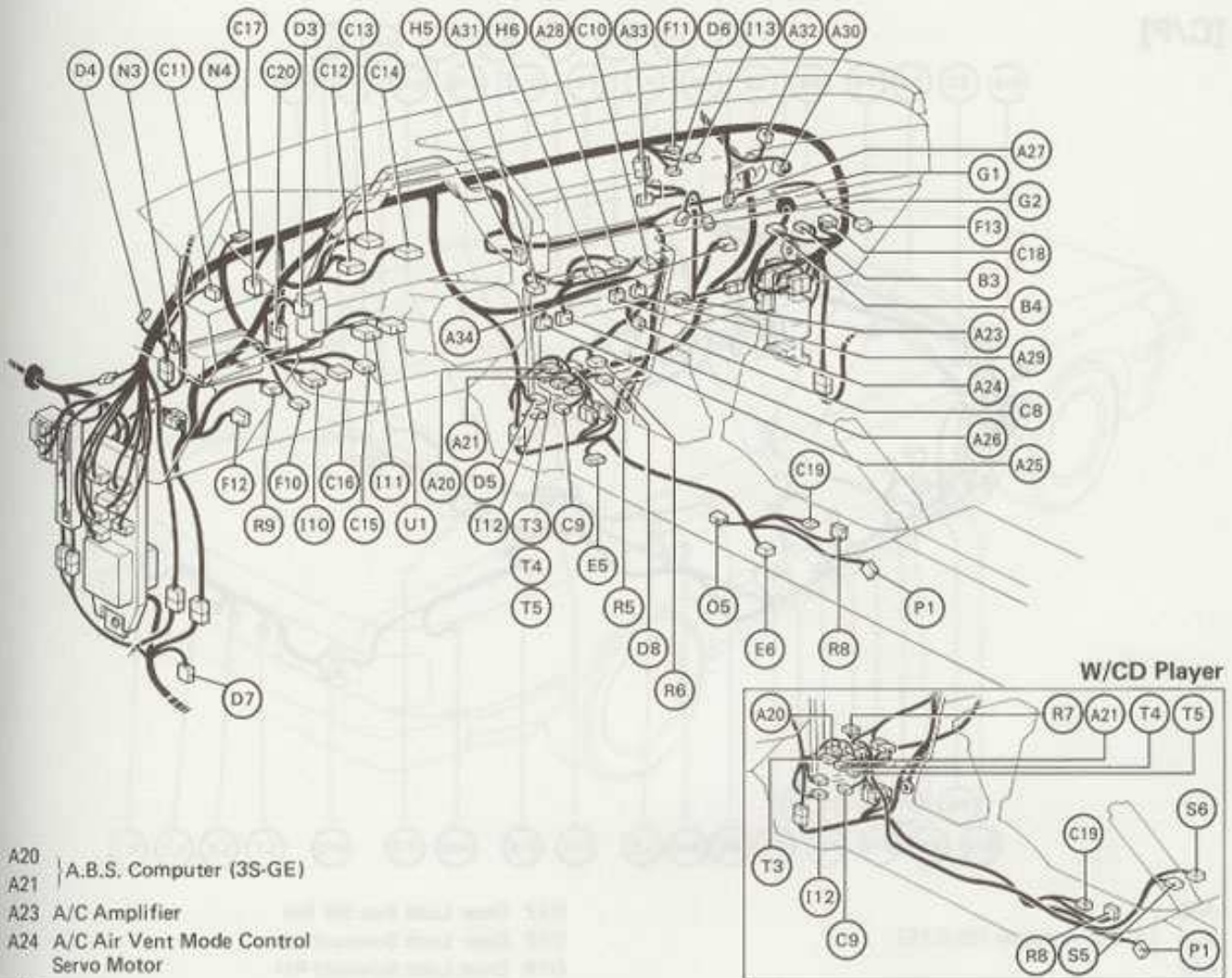
Position of Parts in Engine Compartment

[3S-FE]



- | | | |
|--|---|--|
| A 9 A/C Ambient Sensor | F 3 Front Side Marker Light LH | O 2 OX Sensor Main |
| A 10 A/C Compressor Sensor | F 4 Front Side Marker Light RH | O 3 OX Sensor Sub (3S-FE) |
| A 11 A/C Condenser Fan Motor | F 5 Front Turn Signal and Clearance Light LH | O 4 Oil Pressure SW or Gauge |
| A 12 A/C Dual Pressure SW | F 6 Front Turn Signal and Clearance Light RH | R 1 Radiator Fan Motor |
| A 13 A/C High Pressure SW | F 9 Fusible Link Box | R 2 Radiator Fan Water Temp. SW |
| A 14 A/C Idle-Up VSV | H 1 Headlight LH | R 3 Retract Motor LH |
| A 15 A/C Magnet Clutch | H 2 Headlight RH | R 4 Retract Motor RH |
| A 17 Air Flow Meter | H 3 } Horn | S 1 Speed Sensor (T/M) |
| A 18 } Alternator | H 4 } Horn | S 2 Start Injector Time SW |
| A 19 } Alternator | I 1 ISC Valve | S 3 } Starter |
| B 1 Back-Up Light SW (M/T) | I 2 Igniter | S 4 } Starter |
| B 2 Brake Fluid Level SW | I 4 Injector No. 1 | T 1 Throttle Position Sensor |
| C 1 Check Connector | I 5 Injector No. 2 | W 1 Washer Motor (for Front) |
| C 2 Cold Start Injector | I 6 Injector No. 3 | W 2 Washer Motor (for Rear) |
| C 5 Cruise Control Actuator (w/o A.B.S.) | I 7 Injector No. 4 | W 3 Water Temp. SW (for O/D System, 3S-FE) |
| D 2 Distributor and Neutral Start SW (3S-FE) | N 1 Neutral Start SW and Back-Up Light SW (3S-FE) | W 4 Water Temp. Sender |
| E 3 EFI Water Temp. Sensor | N 2 Noise Filter (Ignition) | W 5 Wiper Motor |
| E 4 EGR Gas Temp. Sensor (For California) | O 1 O/D Solenoid (3S-FE) | |

Position of Parts in Instrument Panel



A20 | A.B.S. Computer (3S-GE)

A21 | A/C Amplifier

A23 | A/C Air Vent Mode Control

A24 | A/C Air Vent Mode Control Servo Motor

A25 | A/C Auto A/C Amplifier

A26 | A/C Amplifier

A27 | A/C Blower Control Relay

A28 | A/C In-Car Sensor

A29 | A/C Air Mix Control Servo Motor

A30 | A/C Recirc/Fresh Control Servo Motor

A31 | A/C SW (w/o Auto A/C) or Heater Control Assembly (w/ Auto A/C)

A32 | A/C Solar Sensor

A33 | A/C Thermistor

A34 | A/C Condenser Fan Control Amplifier

B 3 | Blower Motor

B 4 | Blower Resistor

C 8 | Cigarette Lighter

C 9 | Circuit Opening Relay

C10 | Clock

C11 | Clutch Start SW

C12 | Combination Meter

C13 | Combination Meter

C14 | Combination SW

C15 | Combination SW

C16 | Combination SW

C17 | Cruise Control Clutch SW

C18 | Cruise Control Computer

C19 | Cruise Control Main SW

C20 | Cruise Control Stop SW and Stop Light SW

D 3 | Defogger SW

D 4 | Diode (Cruise Control)

D 5 | Diode (Electrical Idle-Up)

D 6 | Diode (Fog Light System)

D 7 | Diode (Interior Light)

D 8 | Diode (O/D System)

E 5 | ECT ECU (3S-GE)

E 6 | ECT Pattern Select SW (3S-GE)

F10 | Fog Light SW

F11 | Front Fog Light Relay

F12 | Front Speaker LH

F13 | Front Speaker RH

G 1 | Glove Box Light

G 2 | Glove Box Light SW

H 5 | Hazard SW

H 6 | Heater Blower SW (w/o Auto A/C) or Heater Control Assembly (w/ Auto A/C)

I10 | Ignition Key Cylinder Light

I11 | Ignition SW

I12 | Integration Relay No. 2 (Retract Control Relay)

I13 | Inter Cooler Computer (3S-GTE)

N 3 | Noise Filter (Defogger)

N 4 | Noise Filter (Stop Light)

O 5 | O/D Main SW and A/T Indicator Light

P 1 | Parking Brake SW

R 5 | Radio and Tape Player (w/o CD Player)

R 7 | Radio and Tape Player (w/ CD Player)

R 8 | Remote Control Mirror SW

R 9 | Rheostat

S 5 | Stereo Component Amplifier (w/ CD Player)

S 6 | Stereo Component Amplifier (w/ CD Player)

T 3 | TCCS ECU

T 4 | TCCS ECU

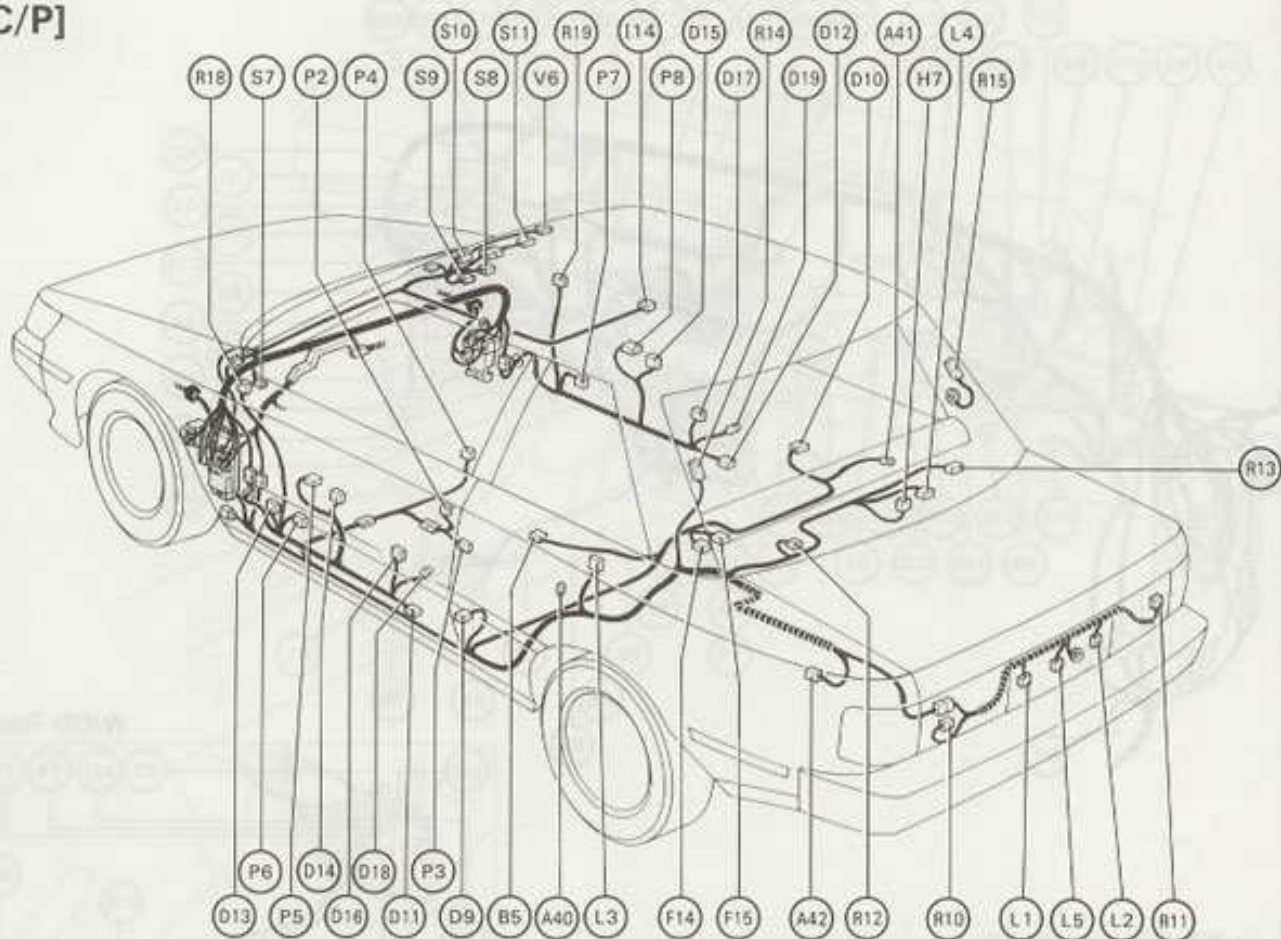
T 5 | TCCS ECU

U 1 | Unlock Warning SW

G ELECTRICAL WIRING ROUTING

Position of Parts in Body

[C/P]

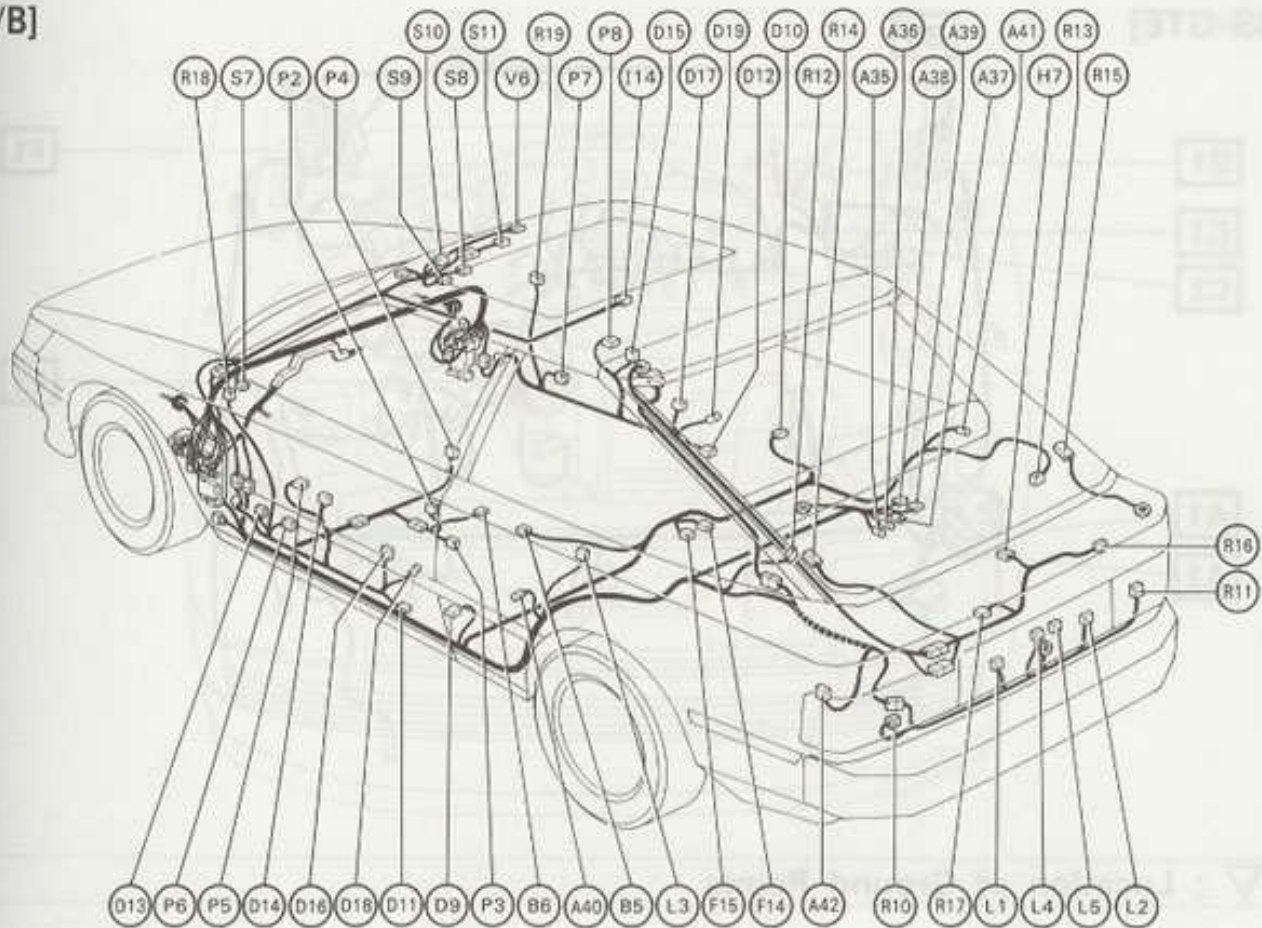


- A35
- A36 } A.B.S. Actuator (3S-GTE)
- A37 }
- A38 } A.B.S. Computer (3S-GTE)
- A39 }
- A40 A.B.S. Speed Sensor Rear LH
- A41 A.B.S. Speed Sensor Rear RH
- A42 Auto Antenna Control Relay and Motor
- B 5 Buckle SW (FWD)
- B 6 Buckle SW (All-Trac/4WD)
- D 9 Door Courtesy SW LH
- D10 Door Courtesy SW RH
- D11 Door Courtesy Light LH
- D12 Door Courtesy Light RH
- D13 Door Lock Control Relay
- D14 Door Lock Control SW LH
- D15 Door Lock Control SW RH
- D16 Door Lock Key SW LH

- D17 Door Lock Key SW RH
- D18 Door Lock Solenoid LH
- D19 Door Lock Solenoid RH
- F14 Fuel Pump
- F15 Fuel Sender
- H 7 High Mount Stop Light
- I 14 Interior Light
- L 1 Licence Plate Light LH
- L 2 Licence Plate Light RH
- L 3 Light Failure Sensor
- L 4 Luggage Compartment Light
- L 5 Luggage Compartment Light SW
- P 2 Power Seat Motor (for Lumbar Support)
- P 3 Power Seat Motor (for Side Support)
- P 4 Power Seat SW
- P 5 Power Window Master SW
- P 6 Power Window Motor LH
- P 7 Power Window Motor RH

Position of Parts in Body

[L/B]

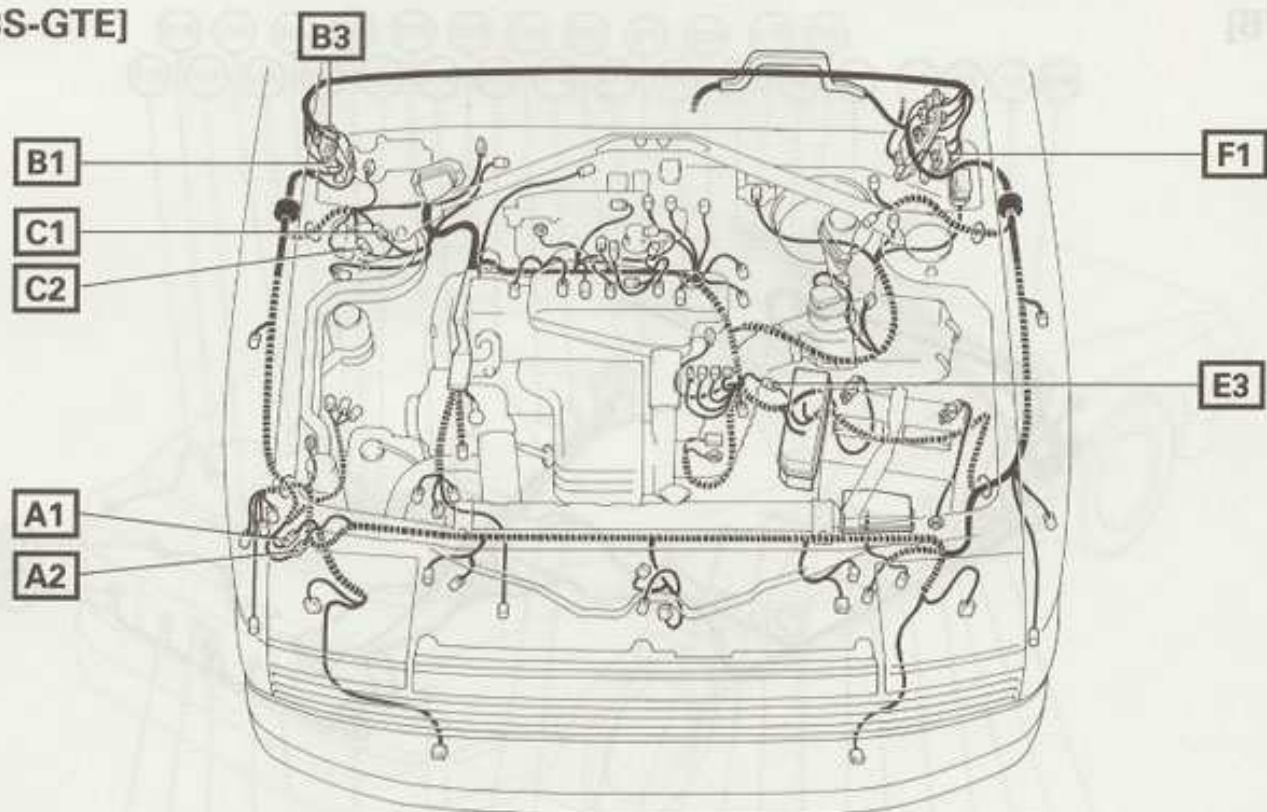


- P 8 Power Window SW RH
- R10 Rear Combination Light LH
- R11 Rear Combination Light RH
- R12 Rear Speaker LH
- R13 Rear Speaker RH
- R14 Rear Window Defogger (+)
- R15 Rear Window Defogger (-) (FWD)
- R16 Rear Window Defogger (+) (All-Trac/4WD)
- R17 Rear Wiper Motor and Relay (L/B)
- R18 Remote Control Mirror LH
- R19 Remote Control Mirror RH
- S 7 Sun Roof Check Connector
- S 8 Sun Roof Control Relay
- S 9 Sun Roof Limit SW
- S10 Sun Roof Motor
- S11 Sun Roof SW
- V 6 Vanity Light

G ELECTRICAL WIRING ROUTING

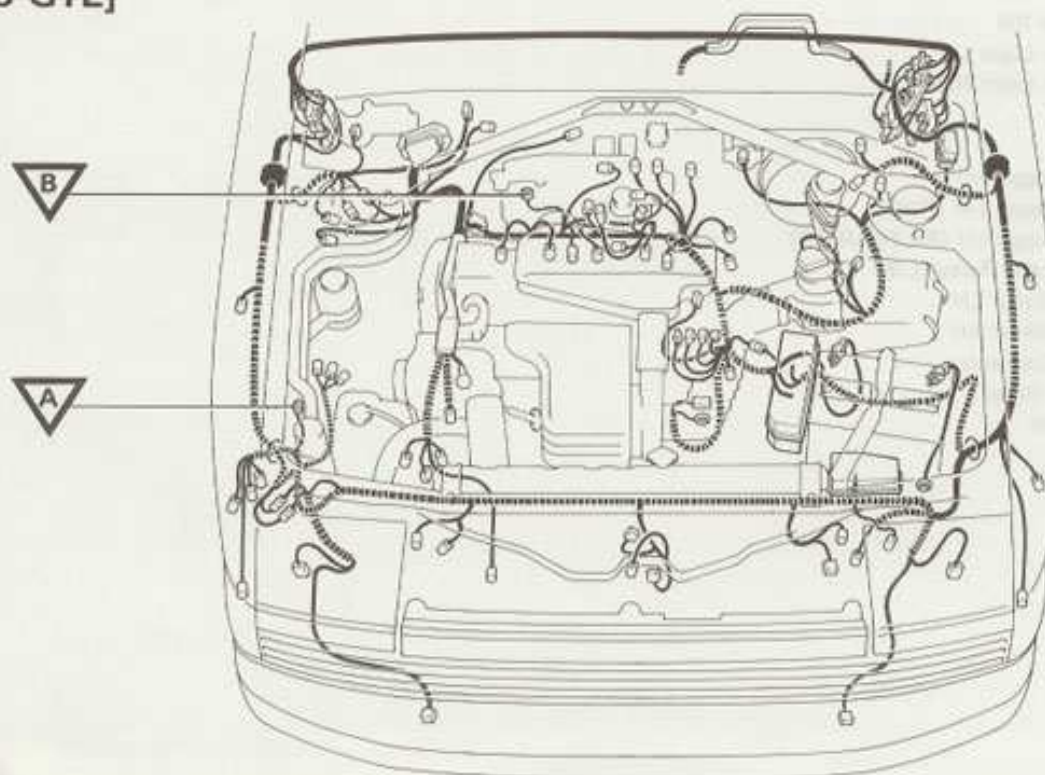
□ : Location of Connector Joining Wire Harness and Wire Harness

[3S-GTE]

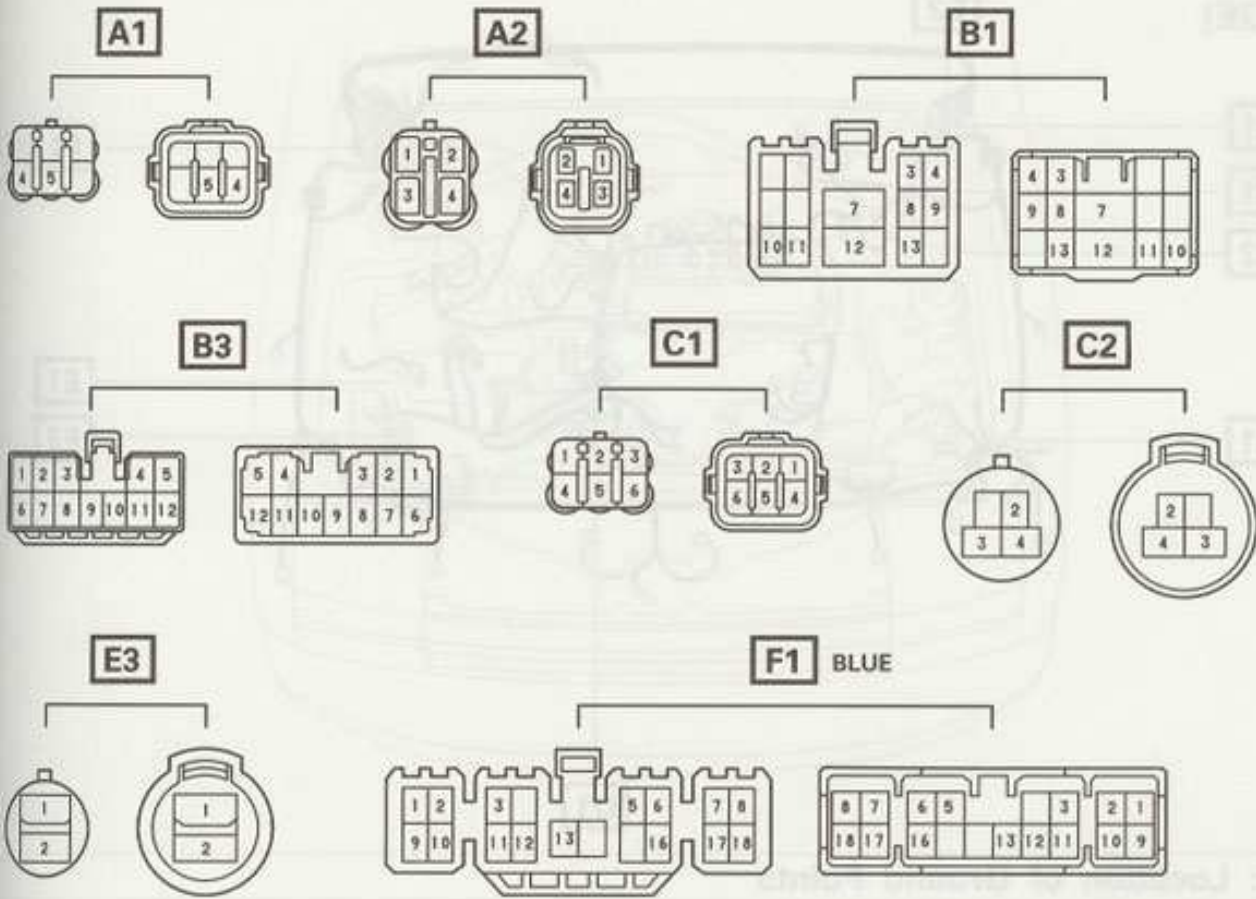


▽ : Location of Ground Points

[3S-GTE]



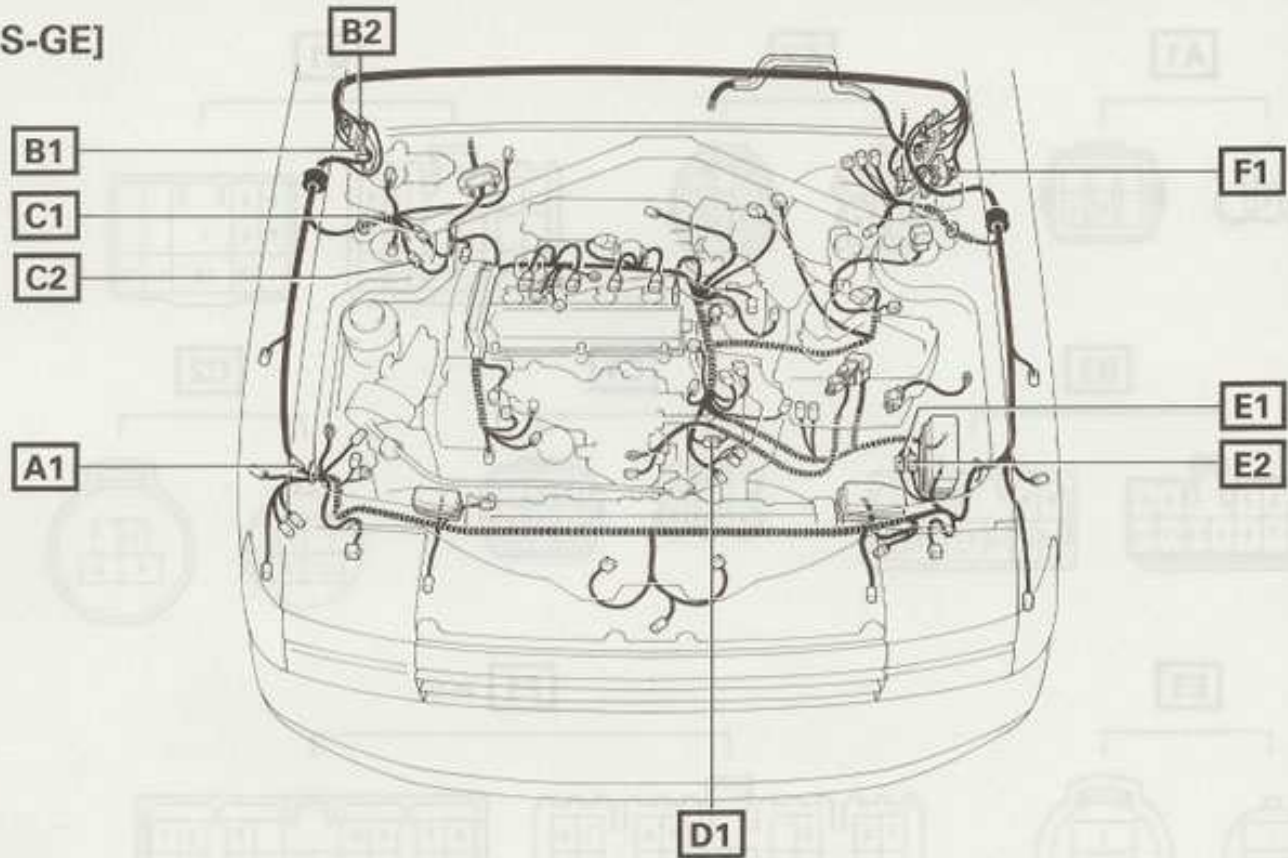
Connector Joining Wire Harness and Wire Harness



G ELECTRICAL WIRING ROUTING

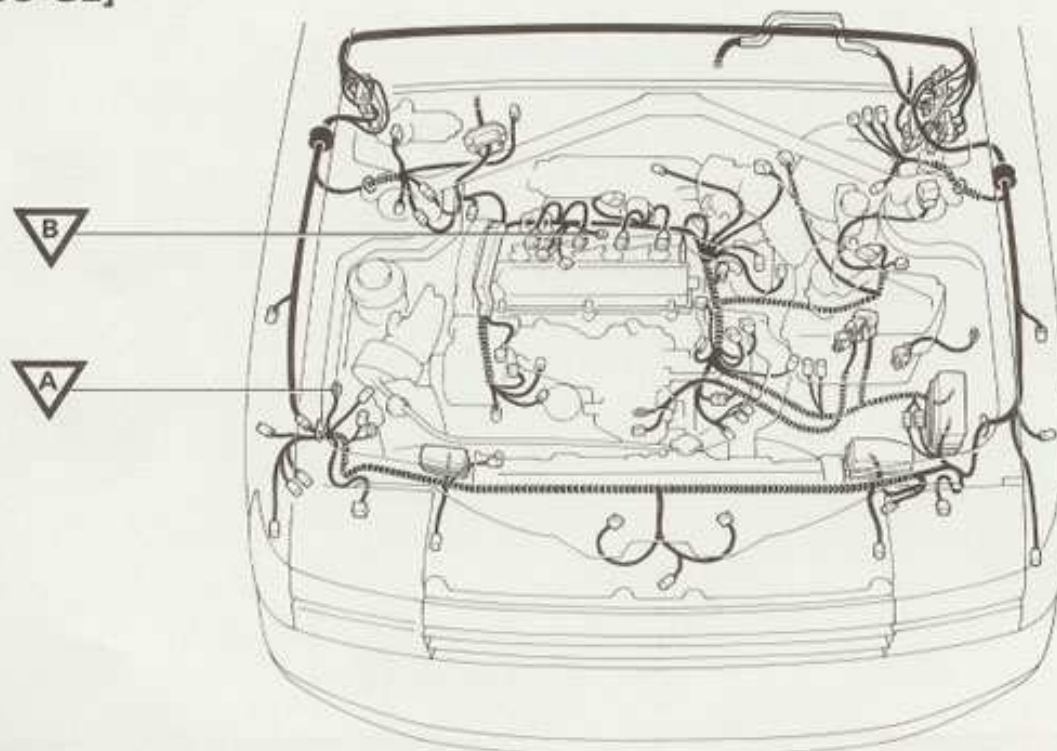
□ : Location of Connector Joining Wire Harness and Wire Harness

[3S-GE]

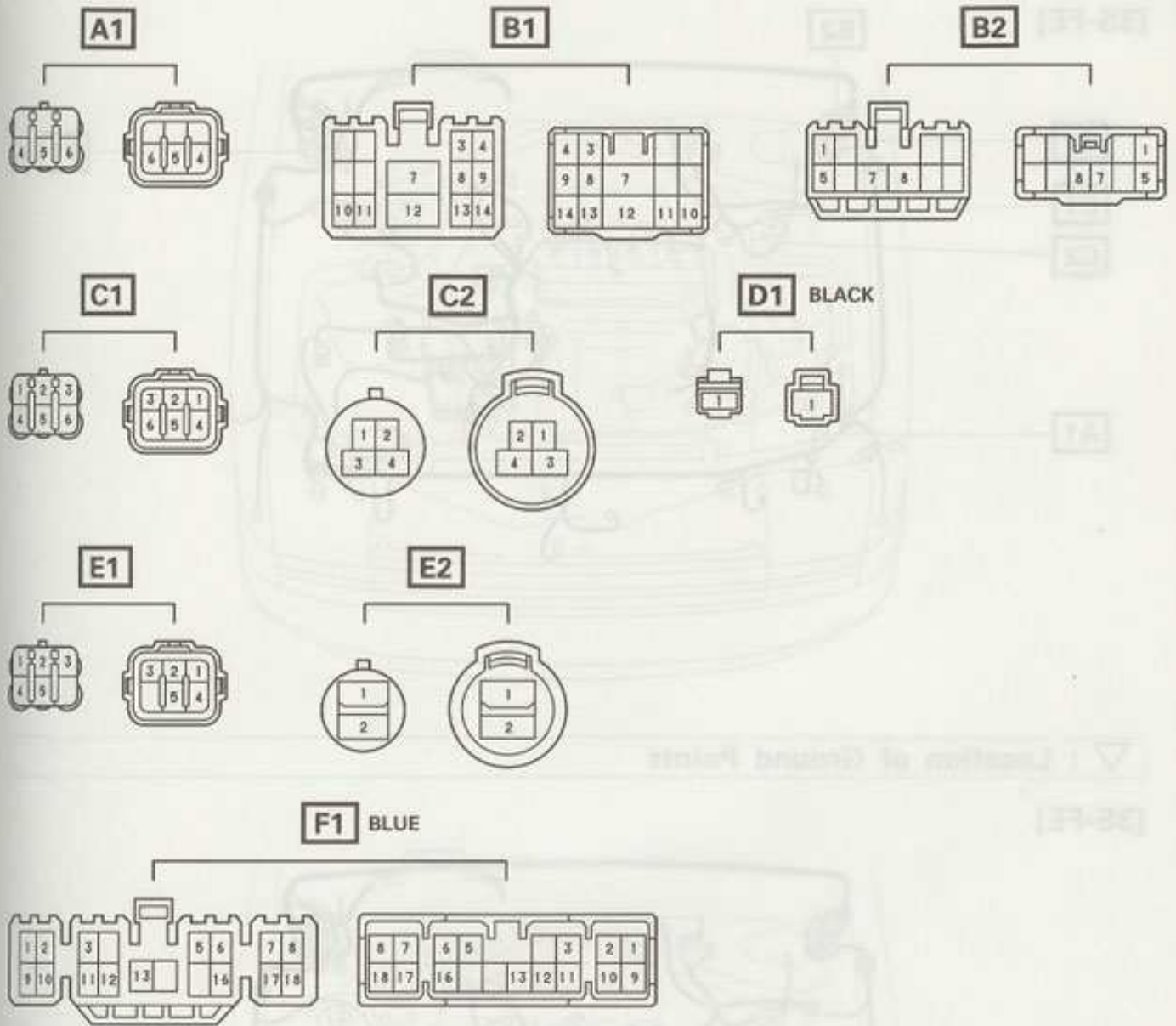


▽ : Location of Ground Points

[3S-GE]



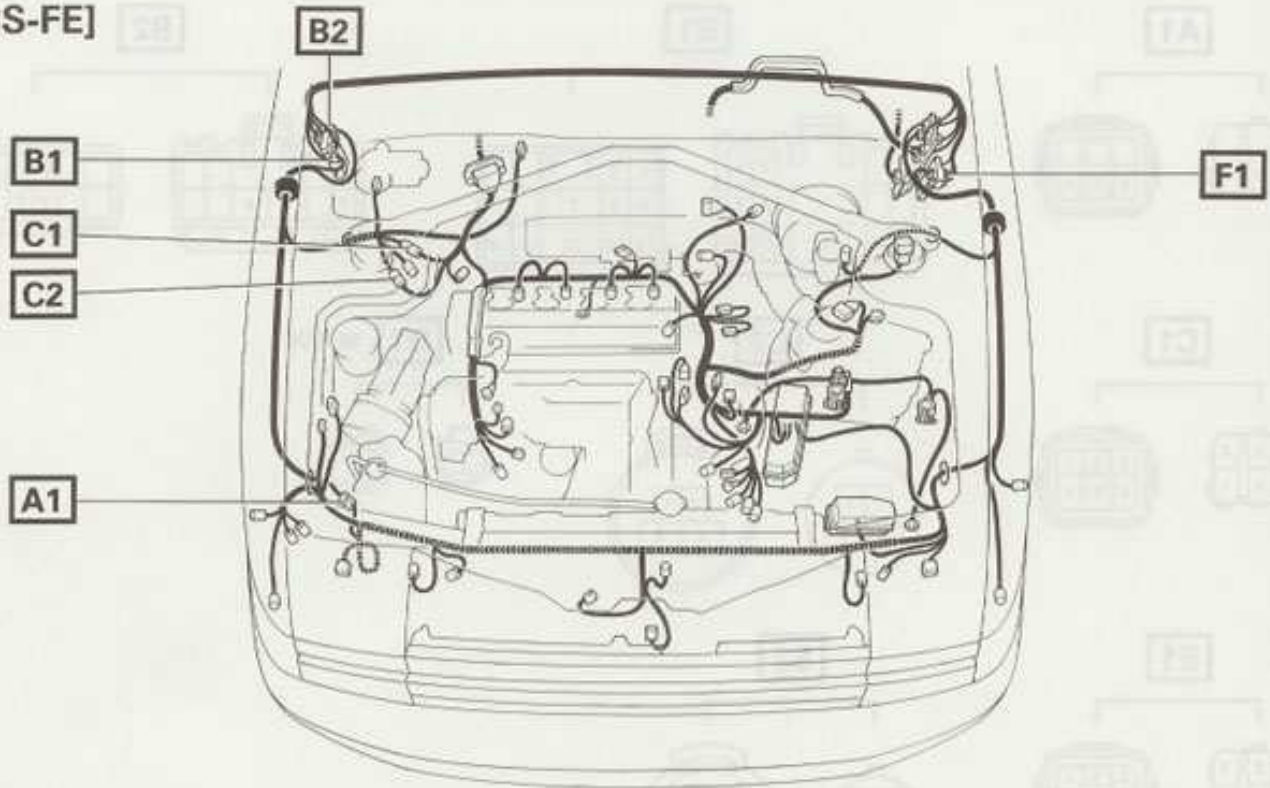
Connector Joining Wire Harness and Wire Harness



G ELECTRICAL WIRING ROUTING

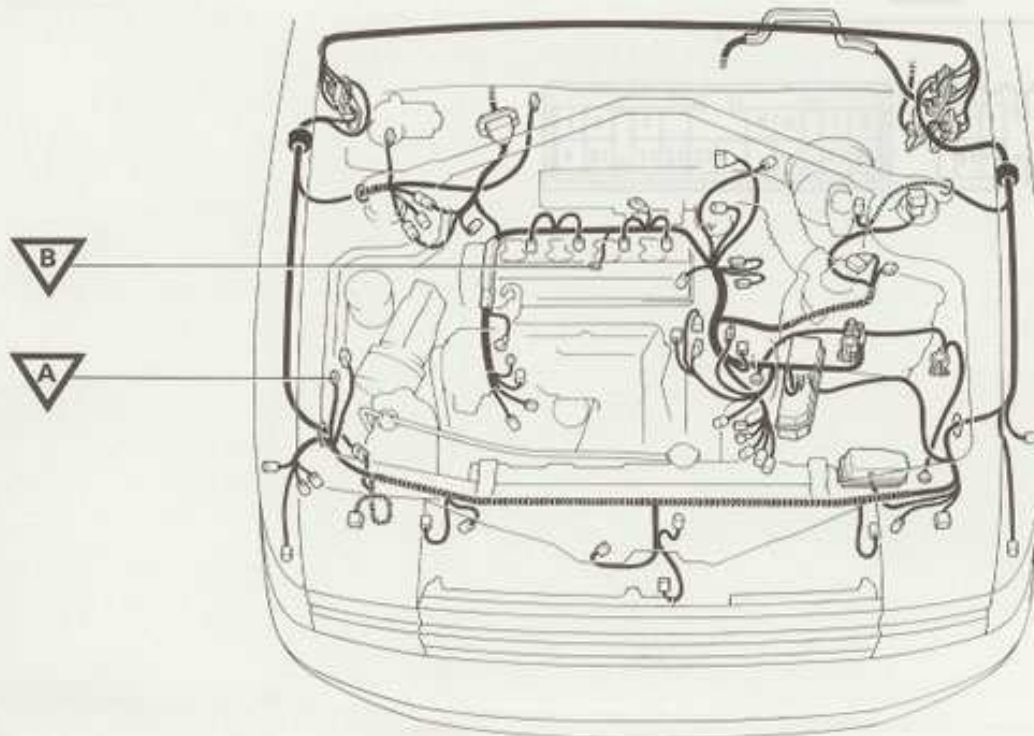
□ : Location of Connector Joining Wire Harness and Wire Harness

[3S-FE]

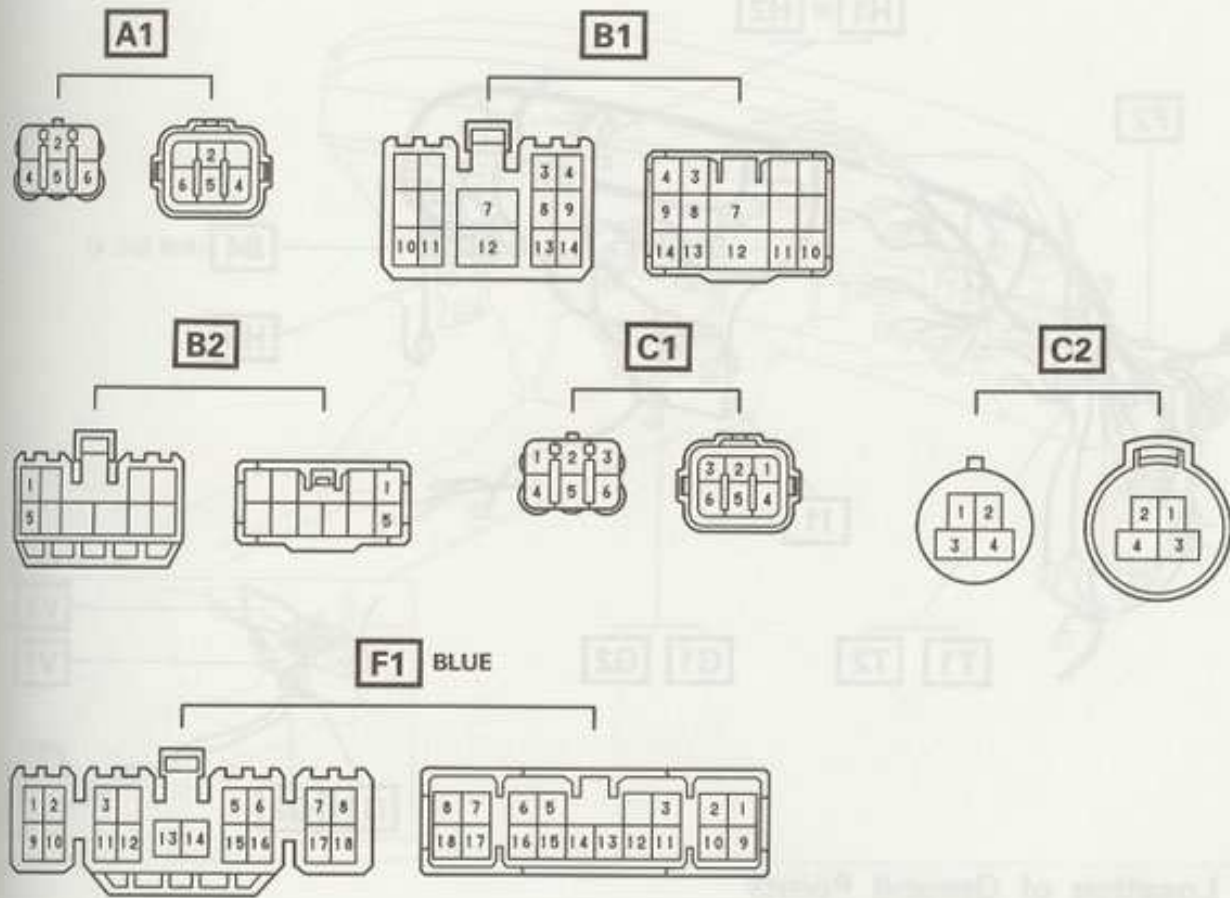


▽ : Location of Ground Points

[3S-FE]

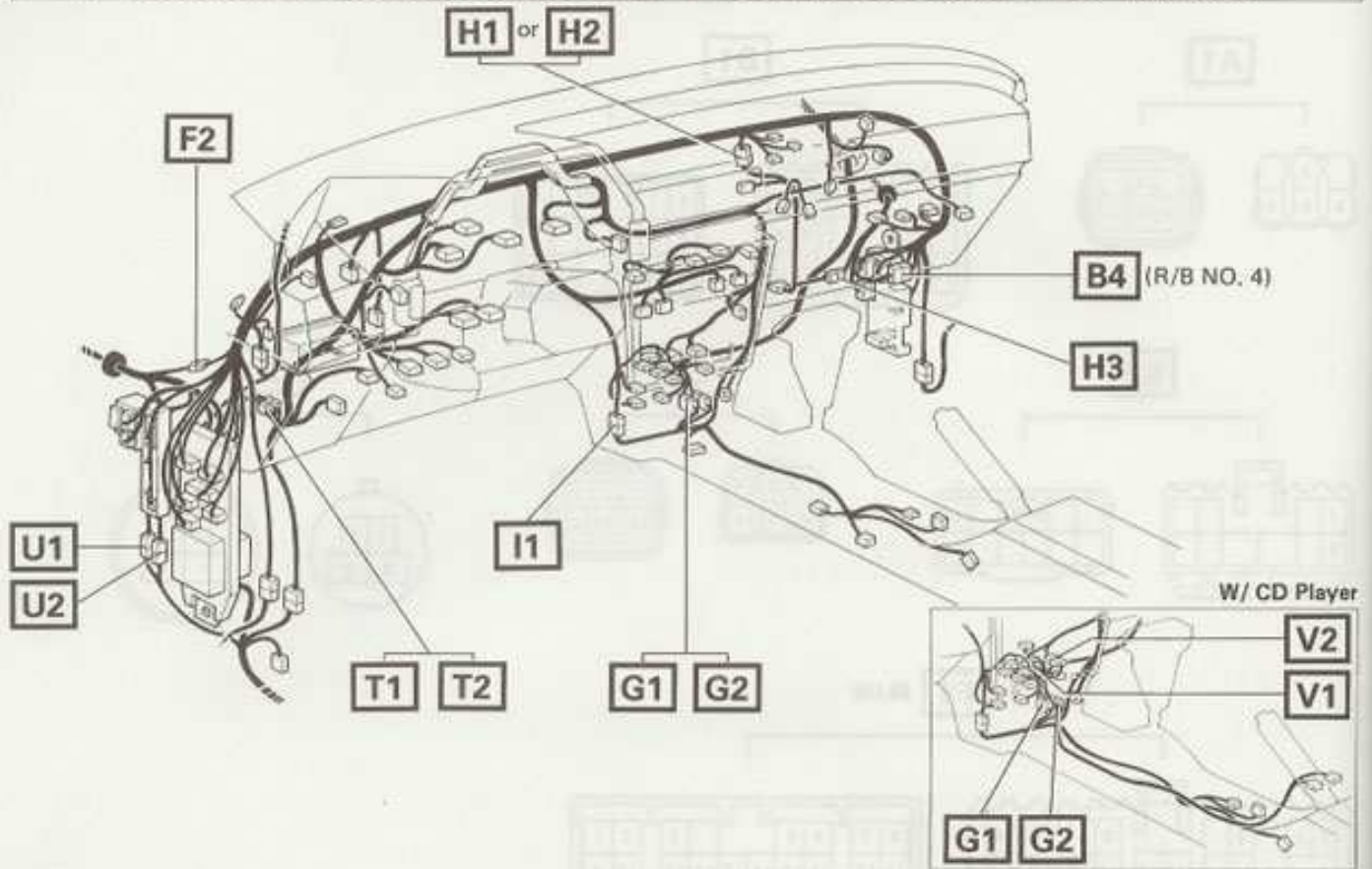


Connector Joining Wire Harness and Wire Harness

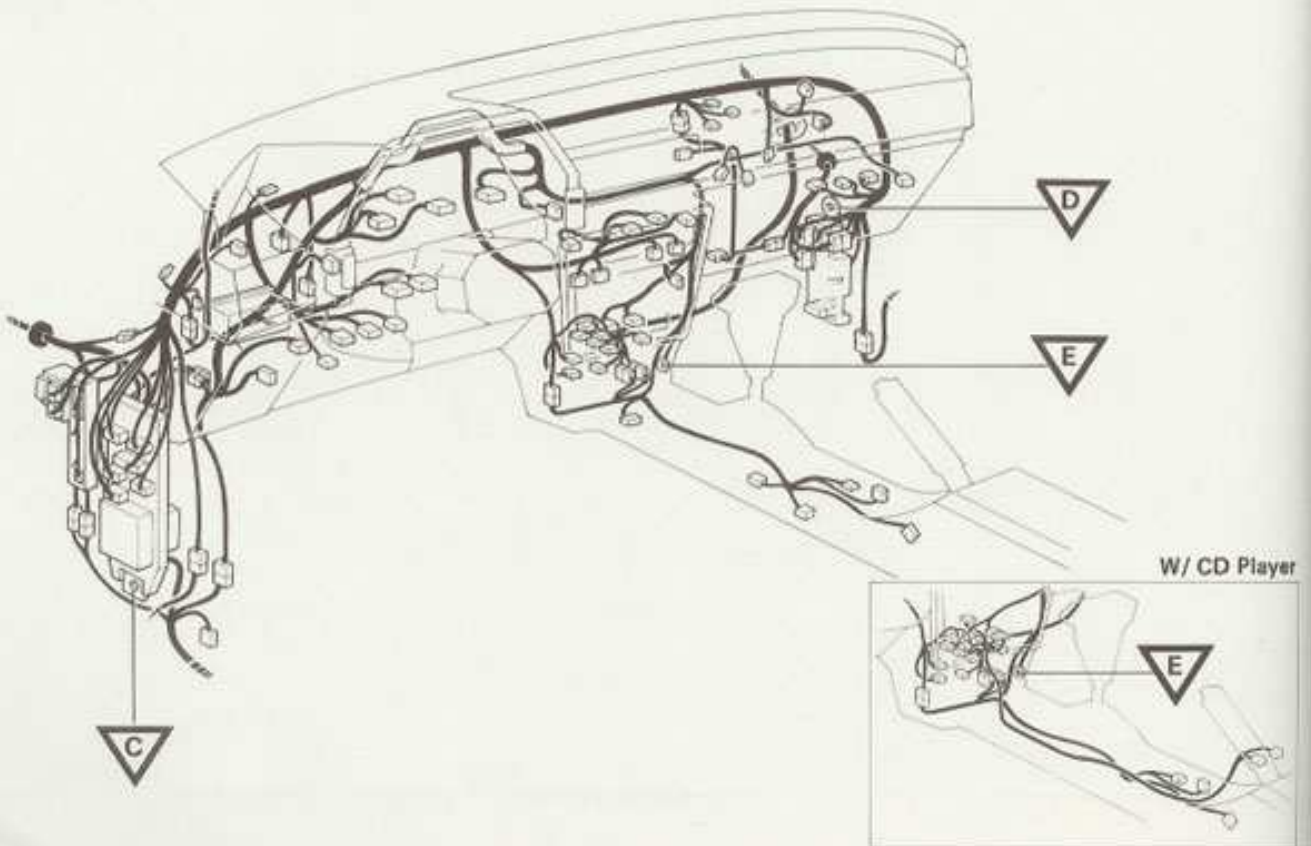


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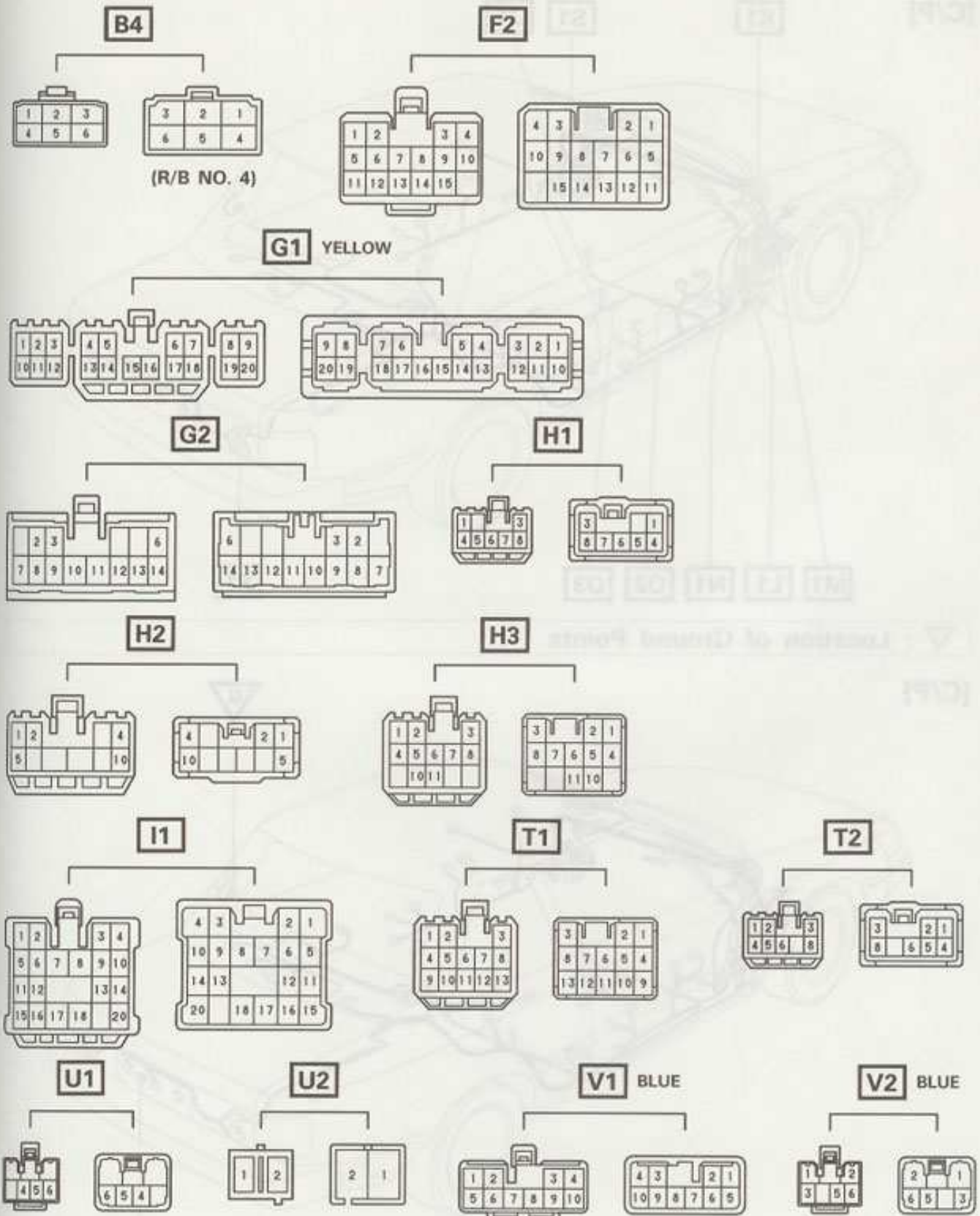
□ : Location of Connector Joining Wire Harness and Wire Harness



▽ : Location of Ground Points



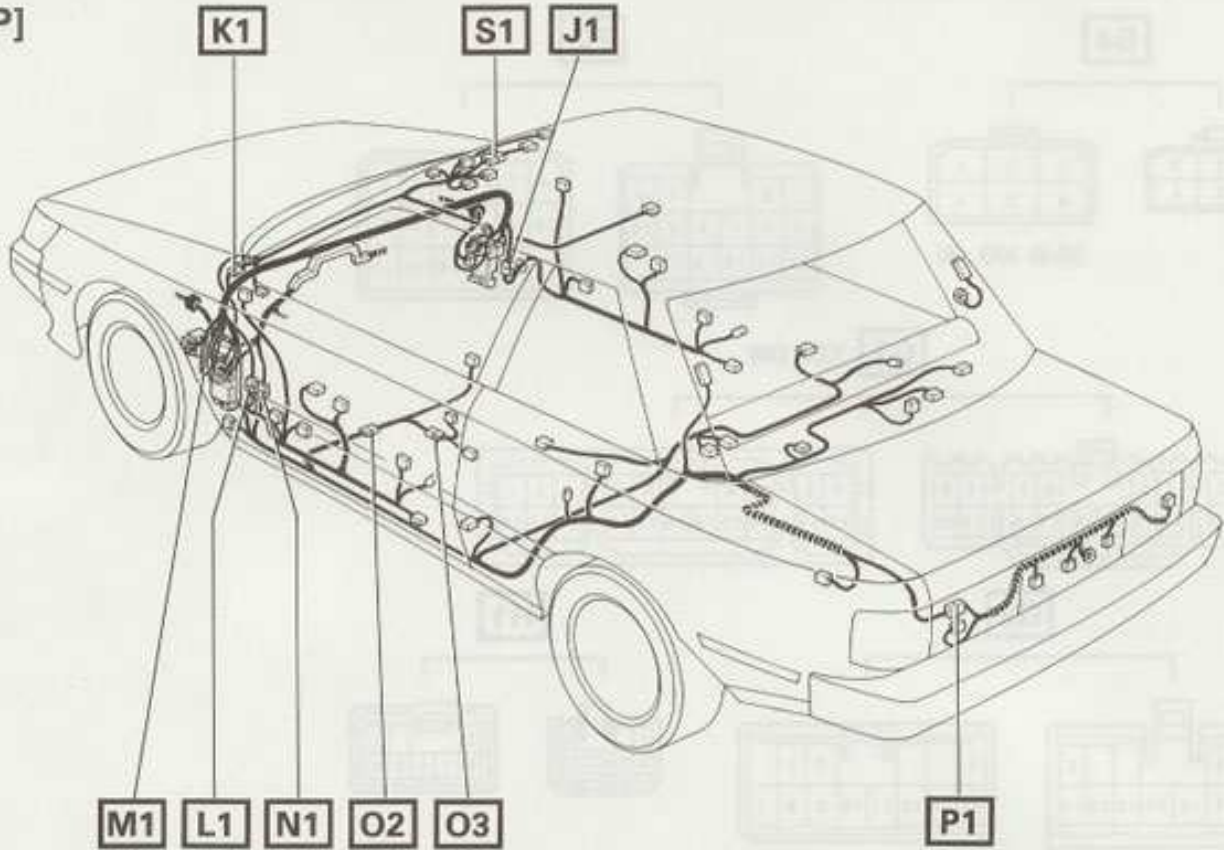
Connector Joining Wire Harness and Wire Harness



G ELECTRICAL WIRING ROUTING

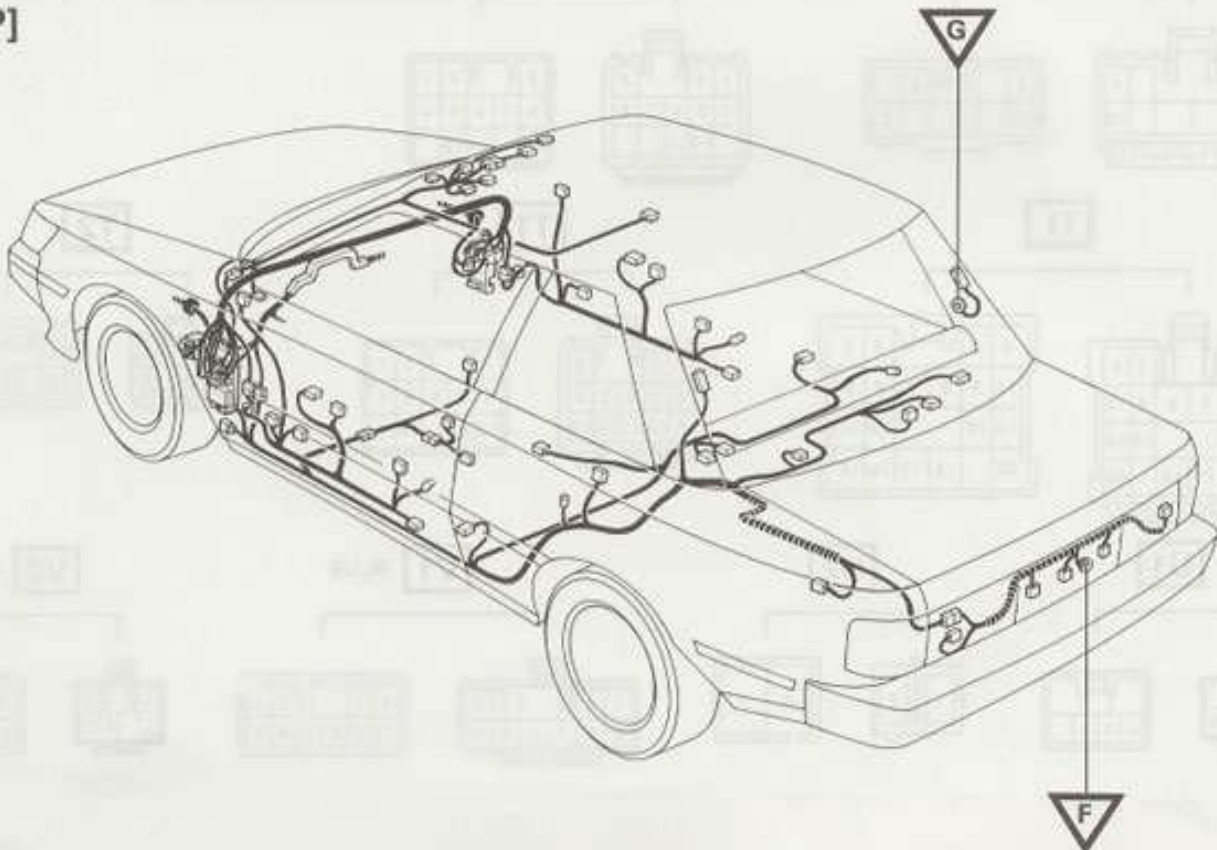
□ : Location of Connector Joining Wire Harness and Wire Harness

[C/P]

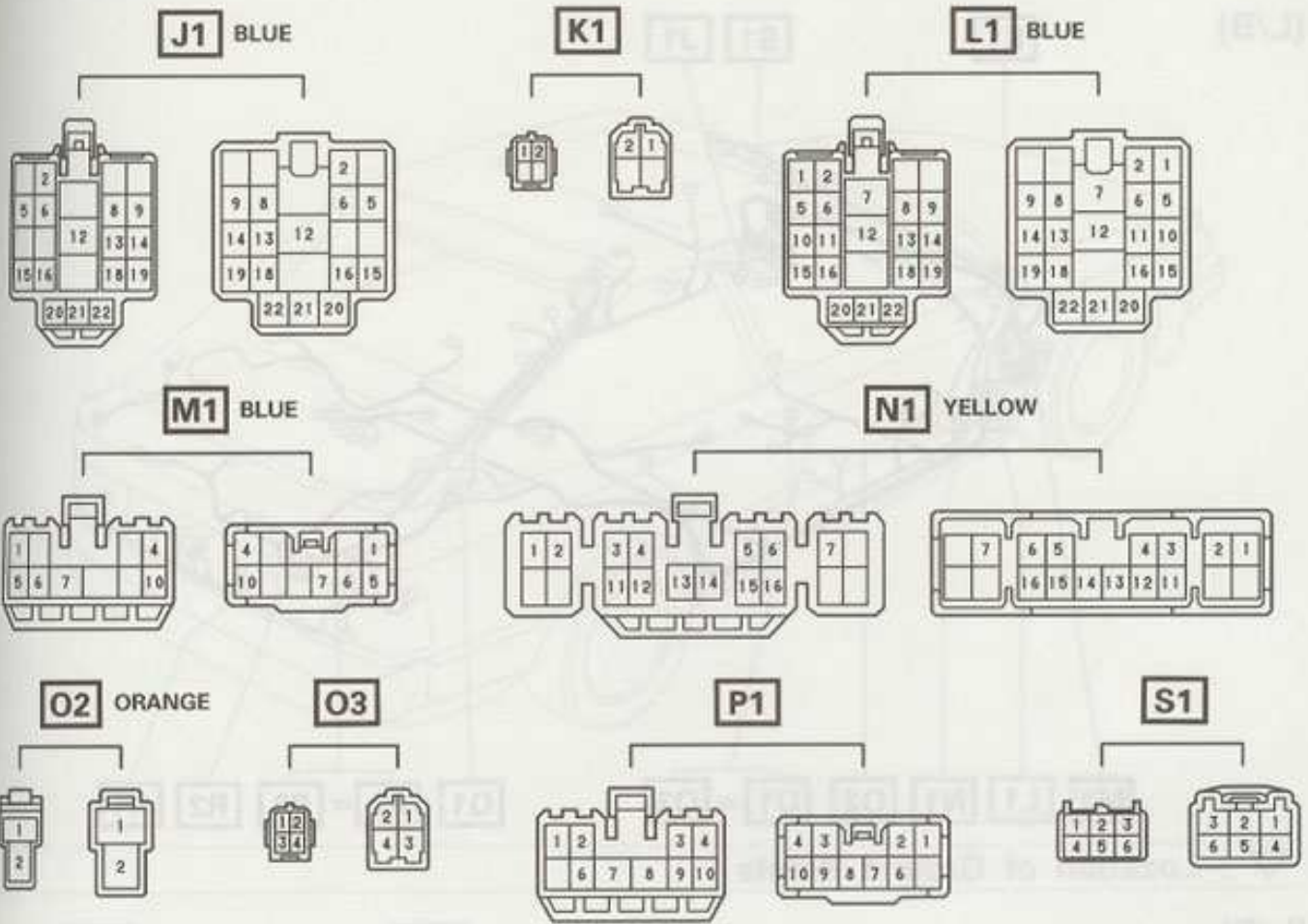


▽ : Location of Ground Points

[C/P]



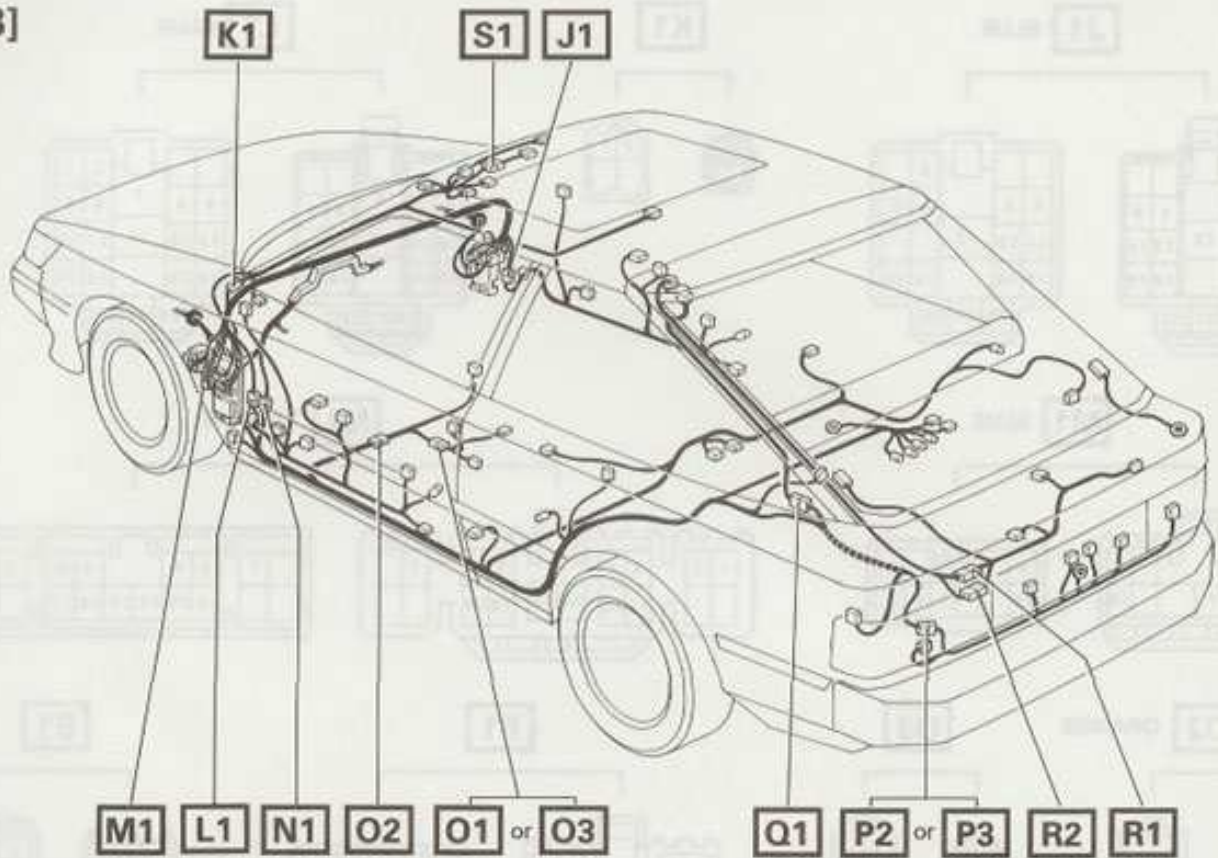
Connector Joining Wire Harness and Wire Harness



G ELECTRICAL WIRING ROUTING

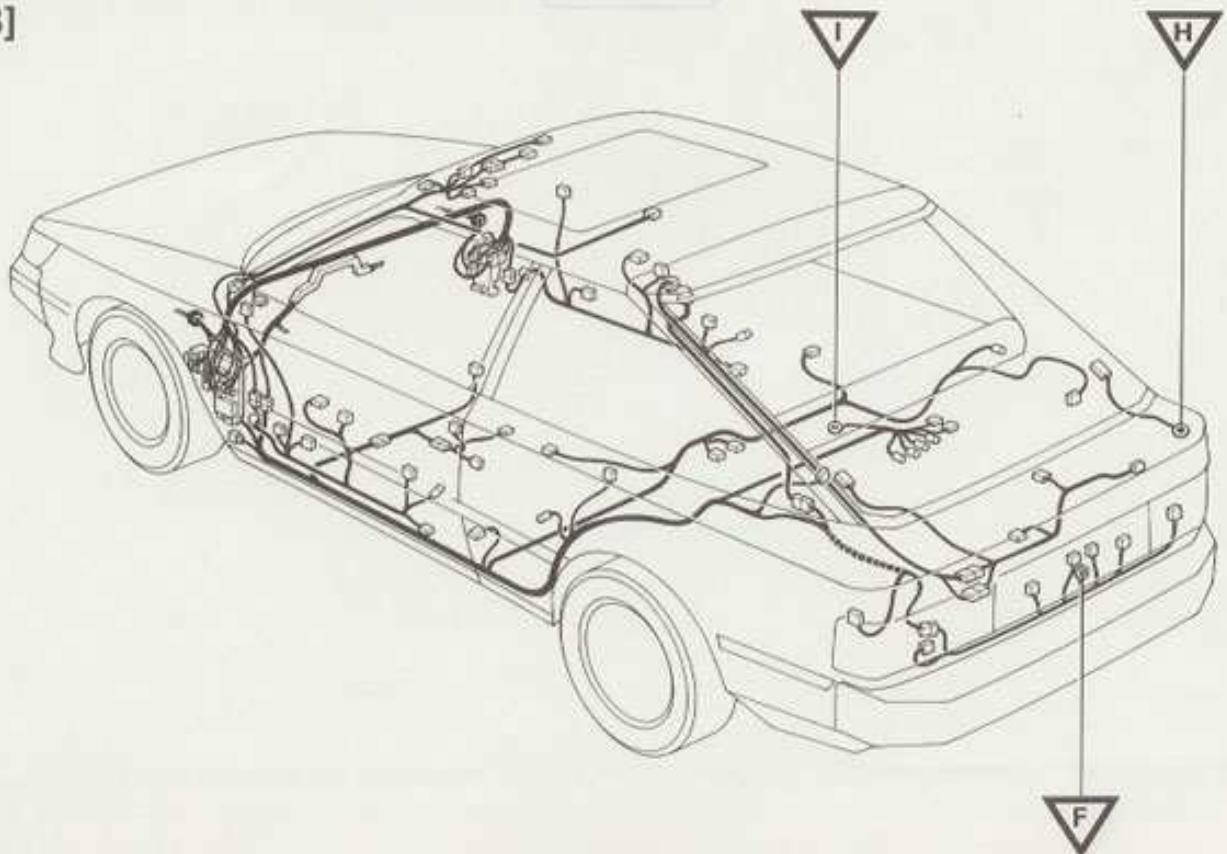
□ : Location of Connector Joining Wire Harness and Wire Harness

[L/B]

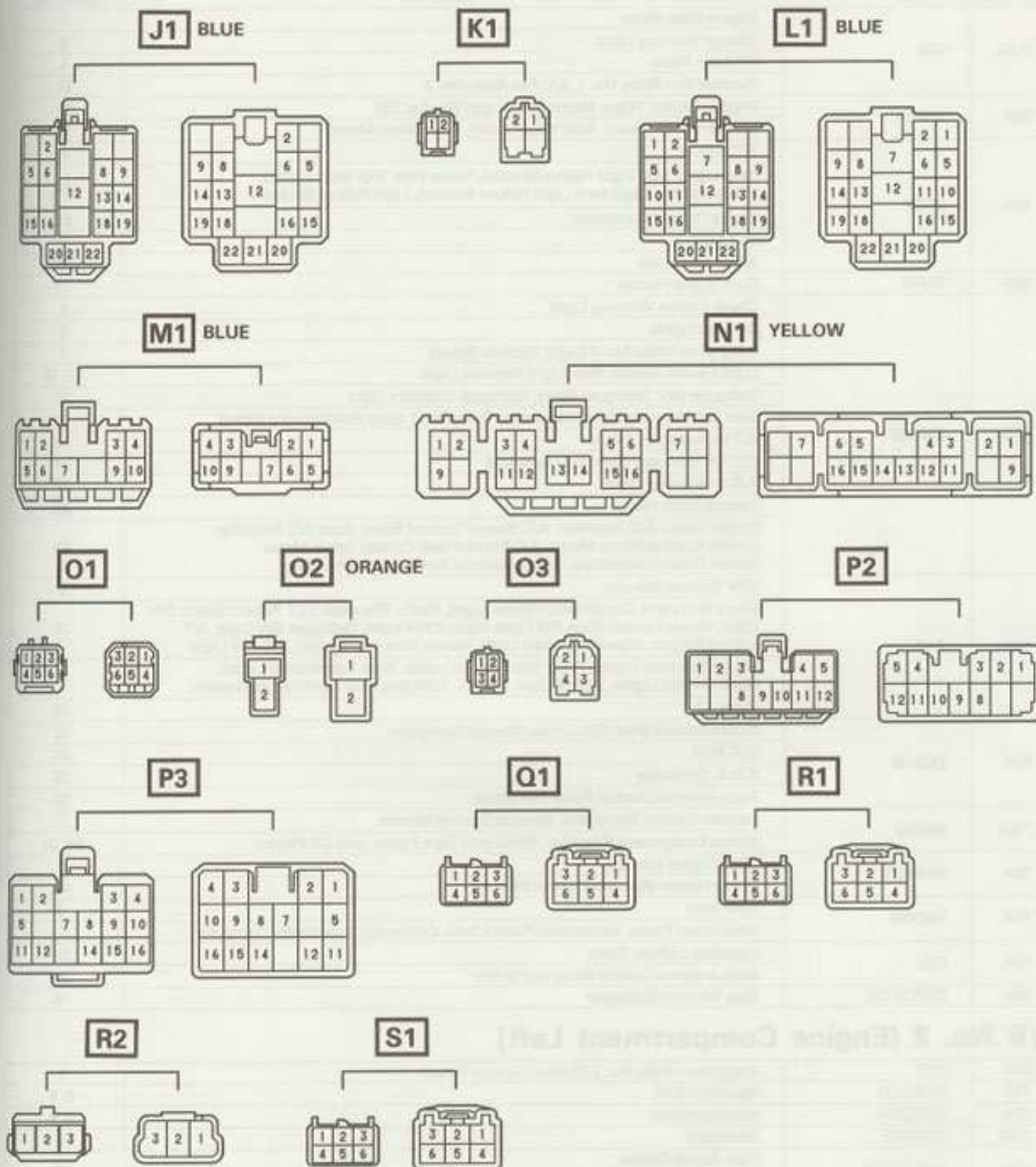


▽ : Location of Ground Points

[L/B]



Connector Joining Wire Harness and Wire Harness



H POWER SOURCE (Power-Load, Reference)

J/B No. 1 (Left Kick Panel)

Power		Load	System No.
7.5A	IGN	Engine Main Relay	1
		Charge Warning Light	3
		EFI Main Relay	4
		Radiator Fan Relay No. 1, A/C Fan Relay No. 2	33
20A	WIPER	Washer Motor, Wiper Motor, Wiper and Washer SW	15
		Washer Motor (Rear), Rear Wiper Relay, Rear Wiper Motor	16
15A	STOP	TCCS ECU	4
		Stop Lights (w/o Light Failure Sensor), Noise Filter (For Stop Lights), Hi Mount Stop Light (w/o Light Failure Sensor), Light Failure Sensor	14
		Cruise Control Computer	22
		ECT ECU	23
10A	TURN	A.B.S. Computer	25
15A	GAUGE	Turn Signal Flasher	13
		Check Engine Warning Light	4
		Back-up Lights	6
		Integration Relay No. 2 (Light Retainer Relay)	7
		Light Failure Sensor, Rear Light Warning Light	12, 14
		Defogger SW, Defogger Relay, Defogger Indicator Light	18
		Seat Belt Warning Light, Integration Relay No. 1 (Seat Belt Warning Relay)	19
		A/T Indicator, ECT ECU	23
		O/D Off Indicator Light, O/D Solenoid	24
		A.B.S. Warning Light	25
		Combination Meter	32
		Heater Relay, A/C Amplifier, A/C Blower Control Relay, Auto A/C Amplifier, Air Mix Control Servo Motor, A/C Recirc/Fresh Control Servo Motor, Heater Control Assembly, A/C Condenser Fan Control Amplifier	33
		15A	TAIL
Glove Box Light, Combination Meter Light, Radio, Rheostat, ECT Pattern Select SW Light, Cruise Control Main SW Light, Hazard SW Light, Defogger SW Light, A/T Indicator Light, Cigarette Lighter Light, Heater Blower SW Light, A/C SW Light	11		
Front Clearance Lights, Front Side Marker Lights, Rear Side Marker Lights, Licence Plate Lights, Light Failure Sensor, Taillights (w/o Light Failure Sensor)	12		
Clock	29		
15A	ECU-IG	Cruise Control Main SW, Cruise Control Computer	22
		ECT ECU	23
		A.B.S. Computer	25
		Auto Antenna Control Relay and Motor	30
7.5A	RADIO	Remote Control Mirror SW, Remote Control Mirrors	17
10A	MIR-HTR	Stereo Component Amplifier, Radio and Tape Player (w/o CD Player)	30, 31
		VSV (Engine Idle-up)	5
10A	ENGINE	Mirror Heater (Remote Control Mirrors)	18
		Alternator	3
15A	CIG	Intercooler Pump, Intercooler Pump Check Connector, Intercooler Computer	4
		Cigarette Lighter, Clock	29
30A	DEFOG CB	Auto Antenna Control Relay and Motor	30
		Rear Window Defogger	18

J/B No. 2 (Engine Compartment Left)

30A	RTR	Integration Relay No. 2 (Retract Control Relay)	8
15A	HEAD LH	Headlight (LH)	8, 9
15A	HEAD RH	Headlight (RH)	8, 9
7.5A	CHARGE	Alternator	3
15A	HAZ-HORN	Turn Signal Flasher	13
		Horns, Horn Relay	28
30A	FL RDI FAN	Radiator Fan Motor	33
15A	EFI	Circuit Opening Relay, TCCS ECU, Check Connector, OX Sensor (Ex. 3S-FE), VSV (T-VIS)(Ex. 3S-FE), Fuel Pump Resistor (3S-GTE), ISC Valve (3S-GTE, 3S-FE), Fuel Pump (Ex. 3S-GTE), Fuel Pump Control Relay (3S-GTE), VSV (EGR, Fuel Pressure-Up, Turbo Charging Pressure)(3S-GTE)	4

J/B No. 2 (Engine Compartment Left)

Power		Load	System No.
20A	DOME	Personal Light, Ignition Key Cylinder Light, Interior Light, Vanity Light, Door Warning Light, Luggage Compartment Lights, Door Courtesy Lights	10
		Integration Relay No. 1 (Seat Belt Warning Relay)	10, 19
		ECT ECU	23
		Clock	29
		Auto Antenna Control Relay and Motor	30
		Stereo Component Amplifier, Radio and Tape Player (w/o C/D Player)	31

R/B No. 4 (Right Kick Panel)

10A	A/C	A/C SW, A/C Amplifier, Magnet Clutch Relay, Heater Control Assembly, A/C Condenser Fan Control Amplifier (3S-GTE), A/C Magnet Clutch, A/C Idle-up VSV, A/C Fan Relay No. 3 (Ex. 3S-GTE)	33
30A	HEATER CB	Blower Motor	33

R/B No. 5 (Radiator Side)

30A	FL CDS FAN	A/C Condenser Fan Motor	33
-----	------------	-------------------------	----

Fusible Link Box (Near the Battery)

30A	FL AM2	Ignition Coil (3S-GTE, 3S-GE), Distributor and Ignition Coil (3S-FE), Noise Filter (For Ignition, 3S-GTE, 3S-GE), Igniter	2
		Ignition Coil (3S-GTE, 3S-GE), Distributor and Ignition Coil (3S-FE), Noise Filter (For Ignition, 3S-GTE, 3S-GE), Igniter, EFI Resistor (3S-GTE), Injectors (3S-GE, 3S-FE)	4
40A	FL AM1	Starter, Starter Relay, Cold Start Injector, Start Injector Time SW	2
		Alternator	3
100A	ALT (3S-GTE, 3S-FE)	FL AM1, FL A.B.S. (3S-GTE), Taillight Relay, Noise Filter (For Defogger)	1
		FL AM1	2
		FL AM1, Alternator	3
		Taillight Relay	11, 7, 12
		FL A.B.S. (3S-GTE)	25
60A	FL A.B.S. (3S-GTE)	A.B.S. Actuator	25

Fusible Links (J/B No. 2)

△ w/ Cruise Control and A.B.S.
○ w/o Cruise Control and/or A.B.S.

FL 2.0L (3S-GTE, 3S-GE△, 3S-FE)	FL AM2	1, 2
	FL ALT (3S-GTE, 3S-FE), FL 1.25B (3S-GE△)	1, 2, 3, 11, 12, 25
	Headlight Relay	1, 7, 8
FL 1.25B (3S-GE)	FL AM1, Taillight Relay, Noise Filter (For Defogger)	1
	FL AM1	2
	Alternator	3
	Taillight Relay	1, 11, 7, 12
	FL 1.0Y A.B.S.	1, 25
FL 1.0Y A.B.S. (3S-GE)	A.B.S. Computer, A.B.S. Acuator	25
FL 0.85R (3S-GE○)	Headlight Relay	1, 7, 8

R/B No. 1 (Left Kick Panel)

30A	POWER CB	Power Seat Motors	21
		Sun Roof Control Relay, Check Connector (3S-FE)	26
		Power Window Master SW, Power Window Motor RH, Sun Roof Motor	27
30A	DOOR LOCK	Door Lock Control Relay	20

Fuse (Near the J/B No. 1)

15A	FOG	Fog Lights	9
		A.B.S. Computer	25

J/B No. 2 (Engine Compartment Left)

1	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.
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J/B No. 4 (Right Kick Panel)

1	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.
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J/B No. 3 (Radiator Side)

1	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.
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Fusible Link Box (Near the Battery)

1	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.
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Fusible Link (J/B No. 2)

1	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.
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J/B No. 1 (Left Kick Panel)

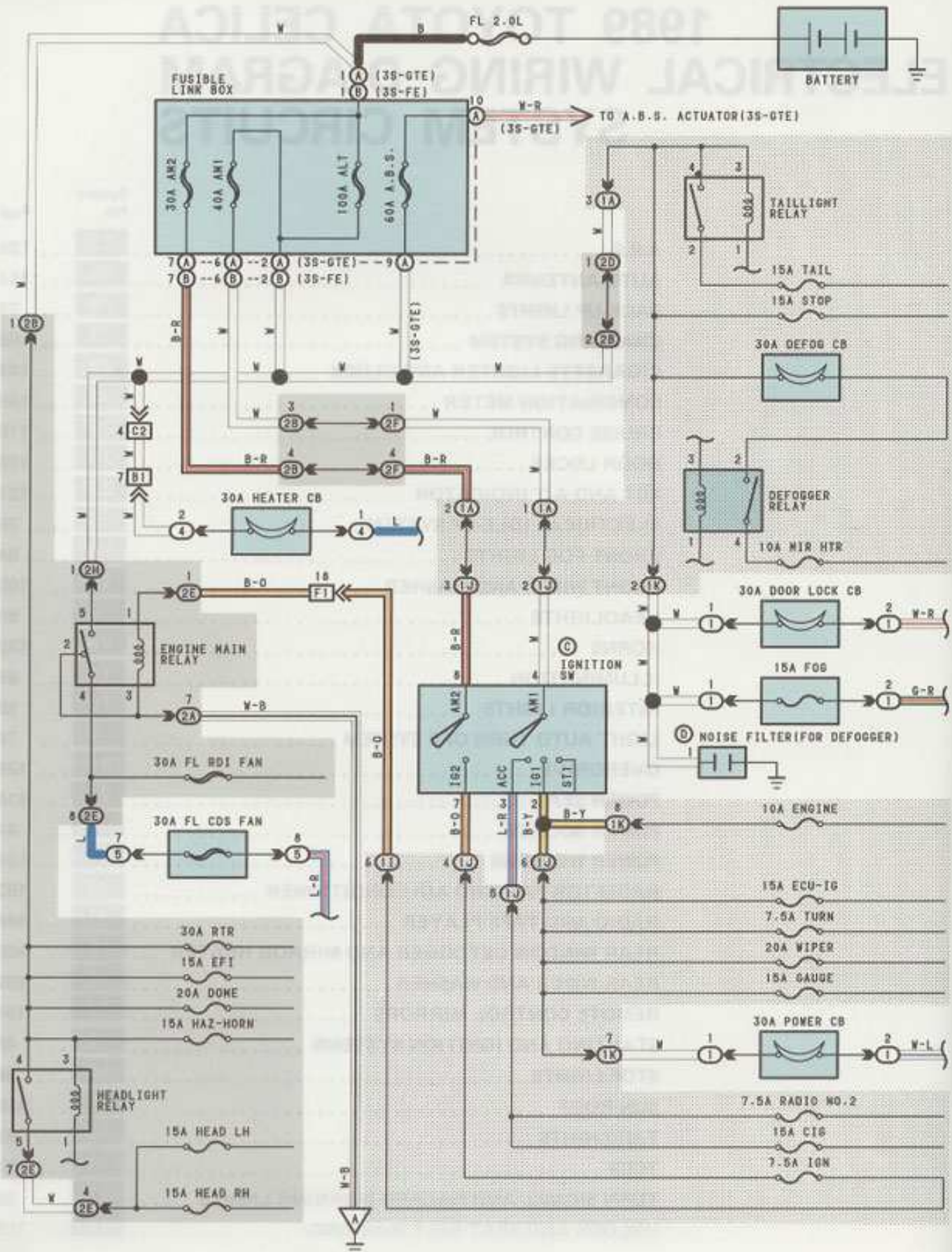
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Fuse (Near the J/B No. 1)

1	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.
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1989 TOYOTA CELICA ELECTRICAL WIRING DIAGRAM SYSTEM CIRCUITS

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SERVICE HINTS**ENGINE MAIN RELAY**

CHANGED WITH IGNITION SW AT ON OR ST POSITION

HEADLIGHT RELAY

4-5:CLOSED WITH LIGHT CONTROL SW AT HEAD POSITION OR DIMMER SW AT FLASH POSITION

TAILLIGHT RELAY

4-2:CLOSED WITH LIGHT CONTROL SW AT TAIL OR HEAD POSITION

DEFOGGER RELAY

2-4:CLOSED WITH IGNITION SW AT ON OR ST POSITION

Ⓢ IGNITION SW

4-3 :CLOSED WITH IGNITION KEY AT ACC OR ON POSITION

8-7,4-2:CLOSED WITH IGNITION KEY AT ON OR ST POSITION

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9 22(3S-GTE)	C	I11 25		
B	F9 24(3S-FE)	D	N3 25		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	21	R/B NO.1 (LEFT KICK PANEL)
4	21	R/B NO.4 (RIGHT KICK PANEL)
5	15	R/B NO.5 (RADIATOR SIDE)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

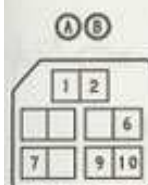
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1J		
1K		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2B		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2D		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2E		
2F		
2H		

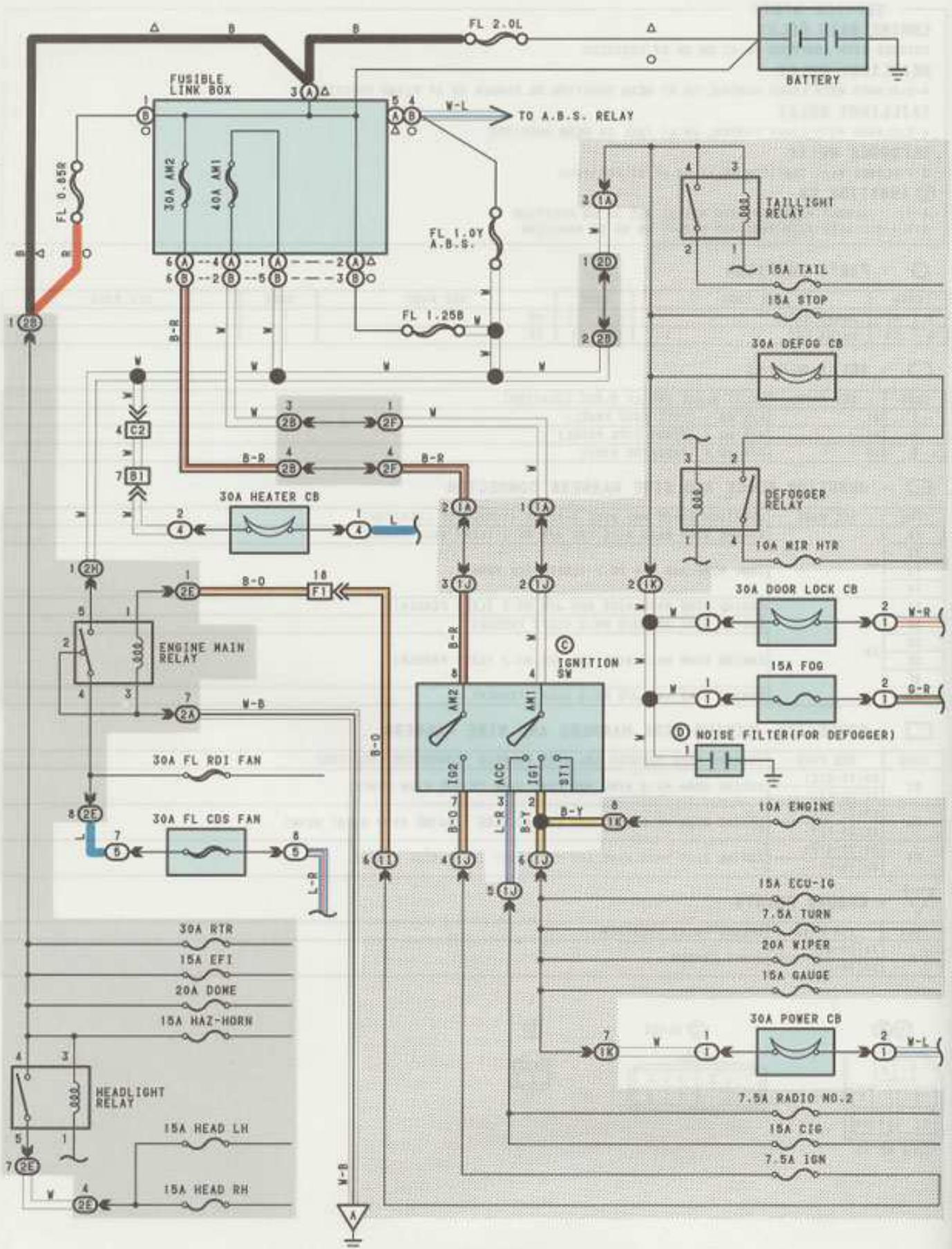
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B1	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
	32(3S-FE)	
C2	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
	32(3S-FE)	
F1	28(3S-GTE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
	32(3S-FE)	

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE) 32(3S-FE)	RIGHT FENDER





SERVICE HINTS**ENGINE MAIN RELAY**

CHANGED WITH IGNITION SW AT ON OR ST POSITION

HEADLIGHT RELAY

4-5:CLOSED WITH LIGHT CONTROL SW AT HEAD POSITION OR DIMMER SW AT FLASH POSITION

TAILLIGHT RELAY

4-2:CLOSED WITH LIGHT CONTROL SW AT TAIL OR HEAD POSITION

DEFOGGER RELAY

2-4:CLOSED WITH IGNITION SW AT ON OR ST POSITION

IGNITION SW

4-3 :CLOSED WITH IGNITION KEY AT ACC OR ON POSITION

1-7,4-2:CLOSED WITH IGNITION KEY AT ON OR ST POSITION

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9 23	C	111 25		
B	F9 23	D	N3 25		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	21	R/B NO.1 (LEFT KICK PANEL)
4	21	R/B NO.4 (RIGHT KICK PANEL)
5	15	R/B NO.5 (RADIATOR SIDE)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

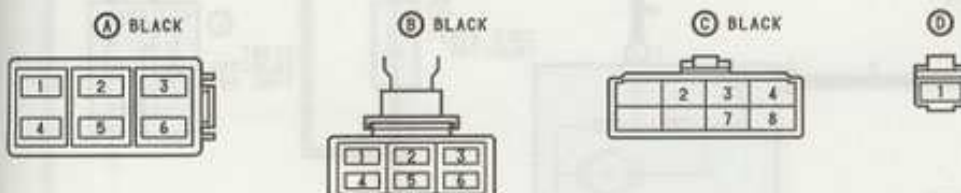
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		COVL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1J		
1K		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2B		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2D		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2E		
2F		
2H		

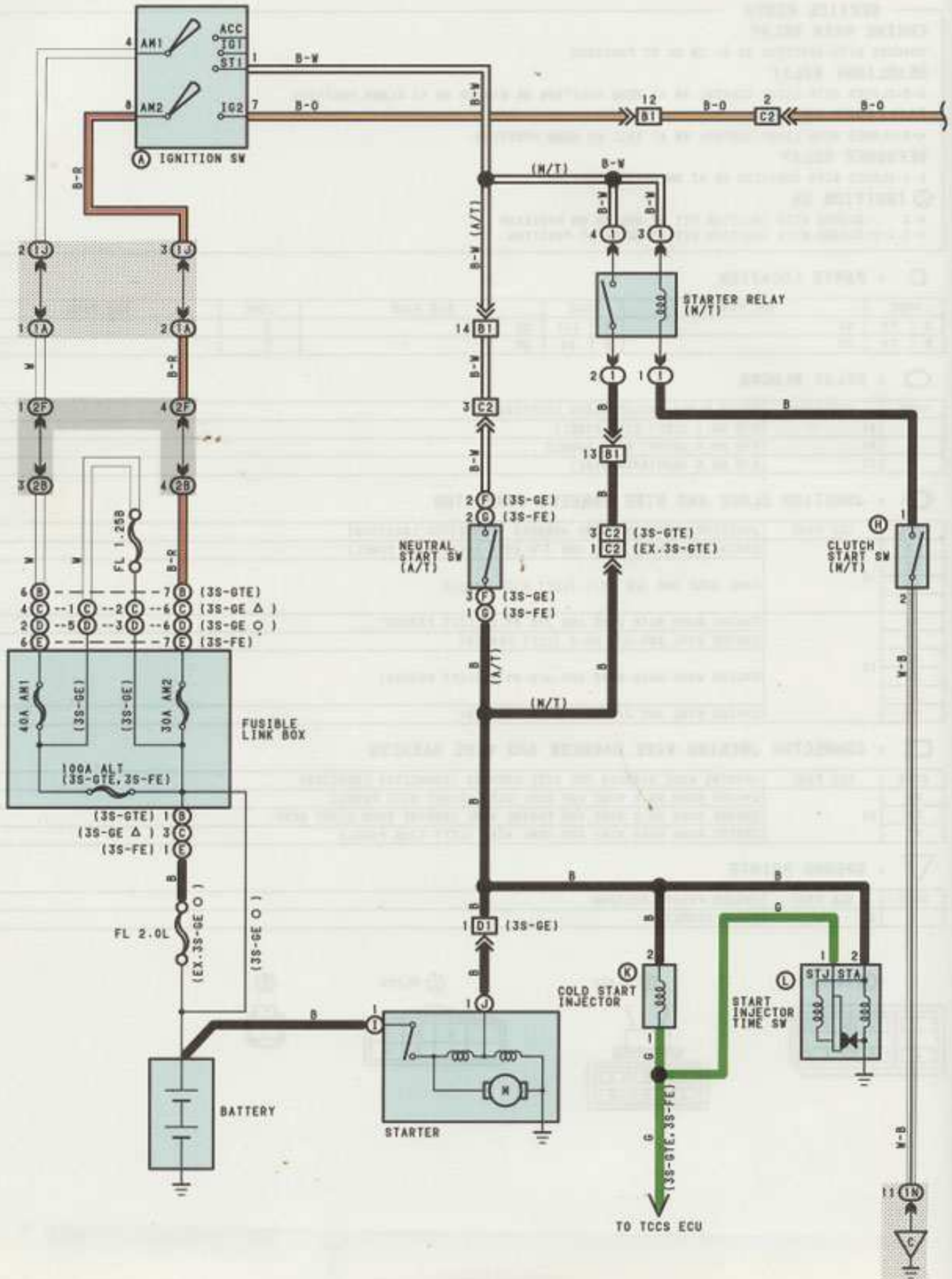
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

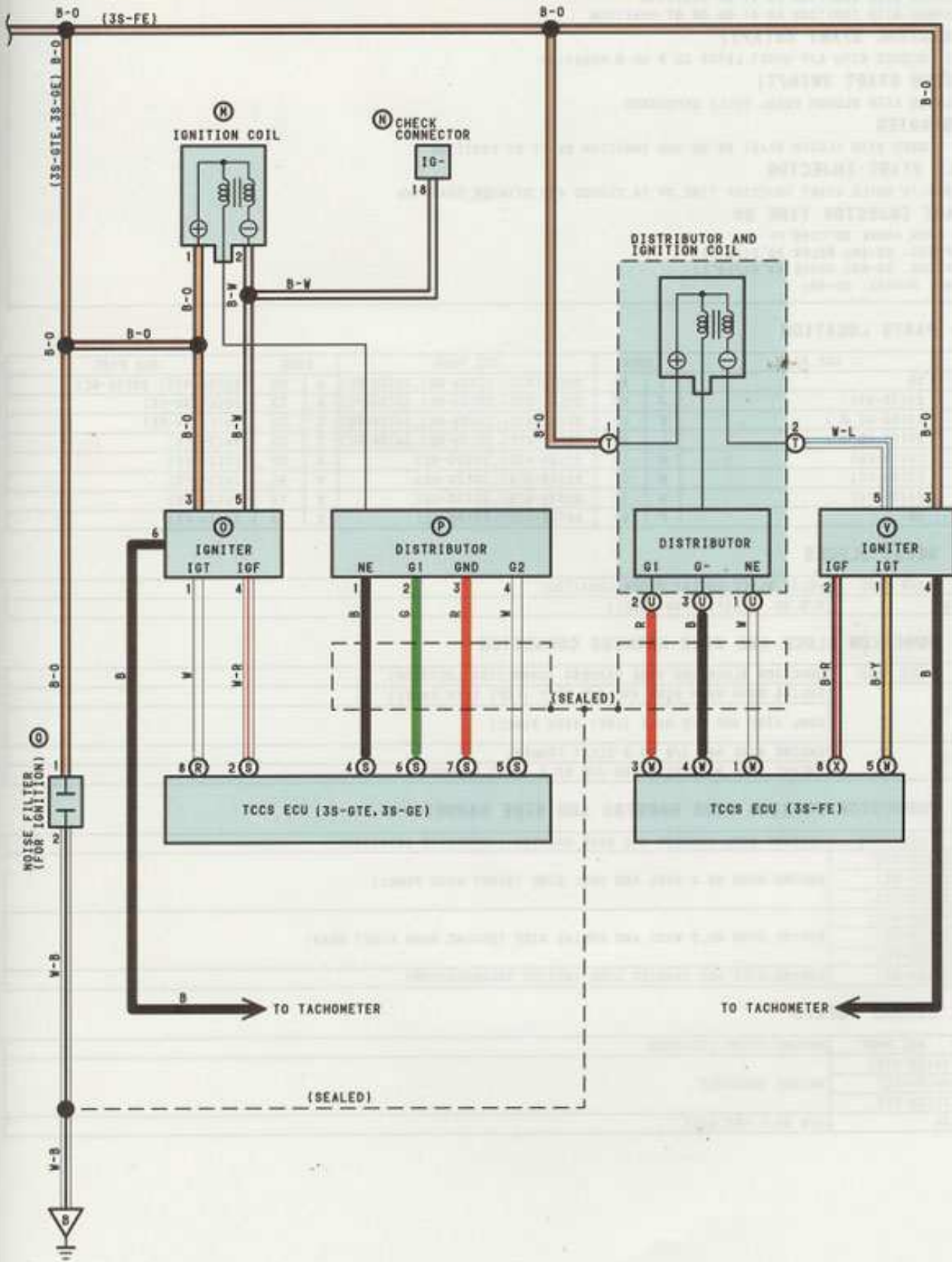
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B1	30	ENGINE ROOM NO.2 WIRE AND COVL WIRE (RIGHT KICK PANEL)
C2		ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
F1		ENGINE ROOM MAIN WIRE AND COVL WIRE (LEFT KICK PANEL)

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	30	RIGHT FENDER









SERVICE HINTS

STARTER RELAY

① 4-① 2: CLOSED WITH CLUTCH START SW ON AND IGNITION SW AT ST POSITION

Ⓐ IGNITION SW

4-1: CLOSED WITH IGNITION SW AT ST POSITION

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

ⓕ ⓐ NEUTRAL START SW(A/T)

3-2, 1-2: CLOSED WITH A/T SHIFT LEVER IN P OR N POSITION

ⓓ CLUTCH START SW(M/T)

2-1: CLOSED WITH CLUTCH PEDAL FULLY DEPRESSED

① ⓙ STARTER

POINTS CLOSED WITH CLUTCH START SW ON AND IGNITION SW AT ST POSITION

Ⓚ COLD START INJECTOR

2-1: 12VOLTS WHILE START INJECTOR TIME SW IS CLOSED AND STARTER CRANKING

Ⓛ START INJECTOR TIME SW

POINTS OPEN ABOVE 35°C(95°F)

2-1: APPROX. 20-40Ω BELOW 30°C(86°F)

2-1: APPROX. 40-60Ω ABOVE 40°C(104°F)

2-GROUND: APPROX. 20-80Ω

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	I11 25	I	S4 22(3S-GTE), 23(3S-GE), 24(3S-FE)	Q	M2 22(3S-GTE), 23(3S-GE)
B	F9 22(3S-GTE)	J	S3 22(3S-GTE), 23(3S-GE), 24(3S-FE)	R	T3 25(EX.3S-FE)
C	F9 23(3S-GE Δ)	K	C2 22(3S-GTE), 23(3S-GE), 24(3S-FE)	S	T4 25(EX.3S-FE)
D	F9 23(3S-GE ○)	L	S2 22(3S-GTE), 23(3S-GE), 24(3S-FE)	T	D2 24(3S-FE)
E	F9 24(3S-FE)	M	I3 22(3S-GTE), 23(3S-GE)	U	D2 24(3S-FE)
F	E1 23(3S-GE)	N	C1 22(3S-GTE), 23(3S-GE)	V	I2 24(3S-FE)
G	N1 24(3S-FE)	O	I2 22(3S-GTE), 23(3S-GE)	W	T4 24(3S-FE)
H	C11 25	P	D1 22(3S-GTE), 23(3S-GE)	X	T3 24(3S-FE)

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
I	21	R/B NO.1 (LEFT KICK PANEL)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

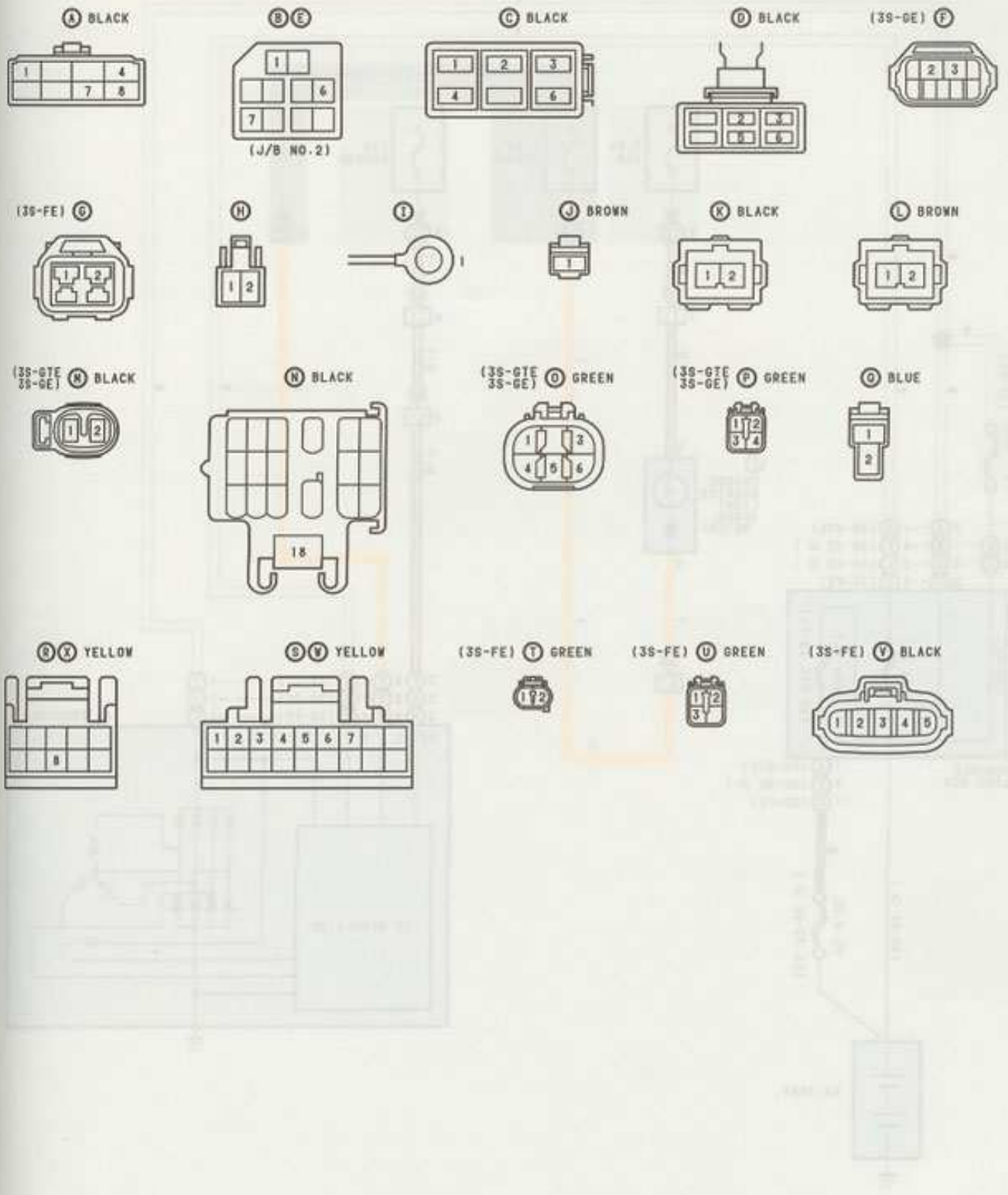
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A		ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1J	16	
1N		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
2B	18	ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2F		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B1	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	
C2	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
	30(3S-GE)	
	32(3S-FE)	
D1	30(3S-GE)	ENGINE WIRE AND STARTER WIRE (BESIDE TRANSMISSION)

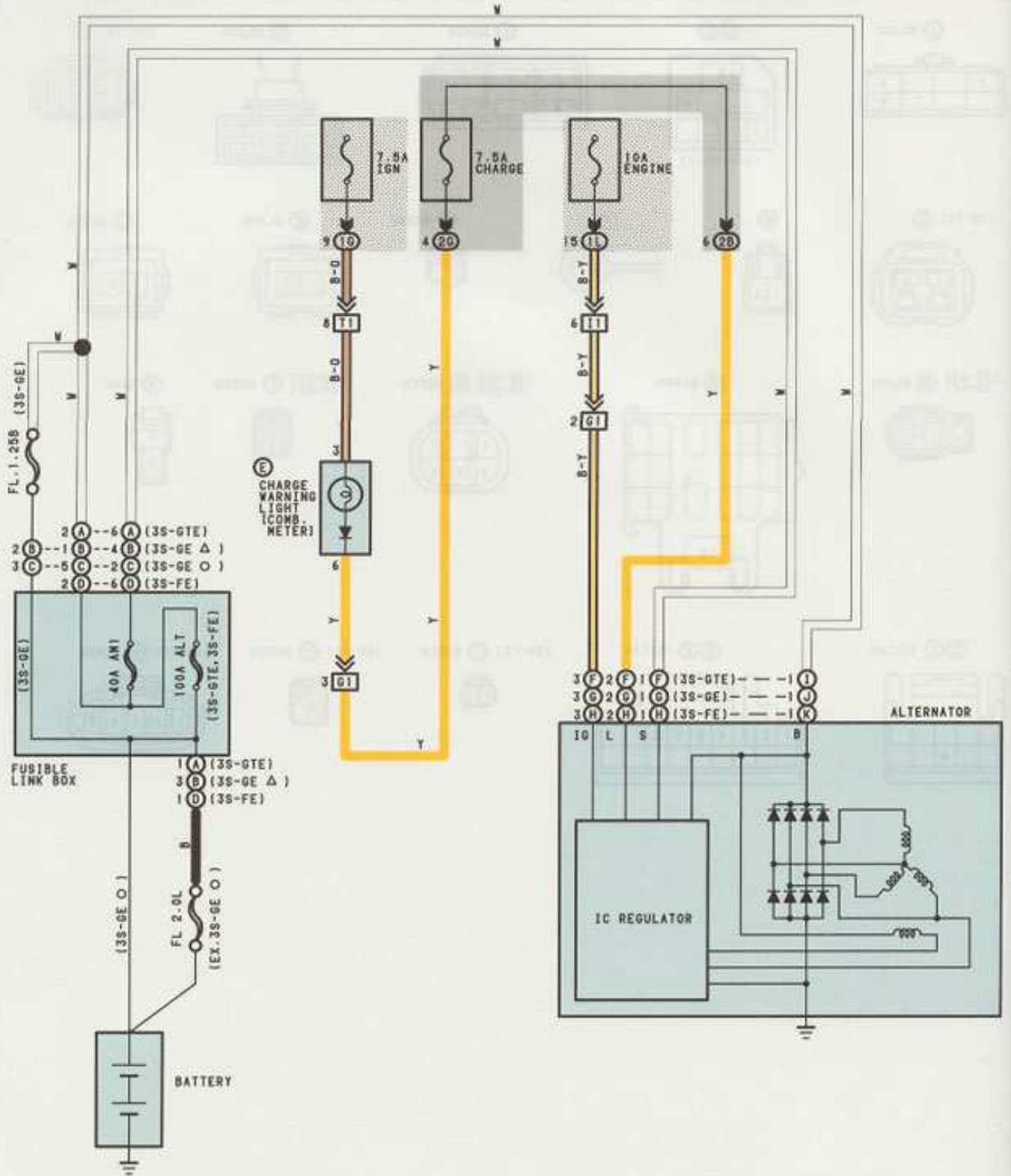
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
B	28(3S-GTE)	INTAKE MANIFOLD
	30(3S-GE)	
	32(3S-FE)	
C	34	J/B NO.1 SET BOLT





Δ W/ CRUISE CONTROL AND A.B.S.
○ W/O CRUISE CONTROL AND/OR A.B.S.



SERVICE HINTS

ALTERNATOR

- Ⓐ 1. Ⓒ 1. Ⓓ 1-GROUND: 13.9-15.1VOLTS WITH ENGINE RUNNING AT 2000 RPM AND 25°C(77°F)
13.5-14.3VOLTS WITH ENGINE RUNNING AT 2000 RPM AND 115°C(239°F)
- Ⓕ 2. Ⓖ 2. Ⓗ 2-GROUND: 0-4VOLTS WITH IGNITION SW AT ON POSITION AND ENGINE NOT RUNNING

○ : PARTS LOCATION

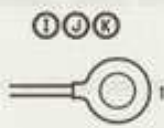
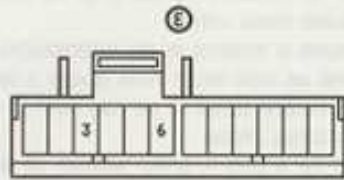
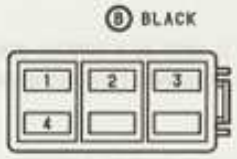
CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9 22(3S-GTE)	E	C14 25	I	A18 22(3S-GTE)
B	F9 23(3S-GE Δ)	F	A19 22(3S-GTE)	J	A18 23(3S-GE)
C	F9 23(3S-GE ○)	G	A19 23(3S-GE)	K	A18 24(3S-FE)
D	F9 24(3S-FE)	H	A19 24(3S-FE)		

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
16		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
28		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
26		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
G1		ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
I1		INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)
T1		INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)



SYSTEM OUTLINE

THE TCCS SYSTEM UTILIZES A MICROCOMPUTER AND MAINTAINS OVERALL CONTROL OF THE E/G, T/M, ETC. AN OUTLINE OF ENGINE CONTROL IS GIVEN HERE.

1. INPUT SIGNALS

- [1] WATER TEMP. SIGNAL SYSTEM
THE WATER TEMP. SENSOR DETECTS THE E/G COOLANT TEMP. AND HAS A BUILT-IN THERMISTOR WITH A RESISTANCE WHICH VARIES ACCORDING TO THE WATER TEMP. THUS THE WATER TEMP. IS INPUT IN THE FORM OF A CONTROL SIGNAL TO TERMINAL THW OF THE TCCS ECU.
- [2] INTAKE AIR TEMP. SIGNAL SYSTEM
THE INTAKE AIR TEMP. SENSOR IS INSTALLED INSIDE THE AIR FLOW METER AND DETECTS THE INTAKE AIR TEMP., WHICH IS INPUT AS A CONTROL SIGNAL TO TERMINAL THA OF THE ECU.
- [3] OX SENSOR SIGNAL SYSTEM
THE OXYGEN DENSITY IN THE EXHAUST EMISSIONS IS DETECTED AND INPUT AS A CONTROL SIGNAL TO TERMINAL OX (3S-GTE, 3S-GE), OX1 (3S-FE) OF THE ECU. TO MAINTAIN STABLE DETECTION PERFORMANCE BY THE OX SENSOR, A HEATER IS USED FOR WARMING THE SENSOR. THE HEATER IS ALSO CONTROLLED BY THE ECU (HT).
- [4] RPM SIGNAL SYSTEM
CRANKSHAFT POSITION IS DETECTED BY THE PICK-UP COIL INSTALLED INSIDE THE DISTRIBUTOR. CRANKSHAFT POSITION IS INPUT AS A CONTROL SIGNAL TO TERMINALS G1 AND G2 (3S-GTE, 3S-GE) G1 (3S-FE) OF THE ECU, AND RPM IS INPUT TO TERMINAL NE.
- [5] THROTTLE SIGNAL SYSTEM
THE THROTTLE POSITION SENSOR DETECTS THE THROTTLE VALVE OPENING ANGLE, WHICH IS INPUT AS A CONTROL SIGNAL TO TERMINAL VTA (3S-GTE, 3S-GE), PSW (3S-FE) OF THE ECU, OR WHEN THE VALVE IS FULLY CLOSED, TO TERMINAL IDL.
- [6] VEHICLE SPEED SIGNAL SYSTEM
THE SPEED SENSOR, INSTALLED INSIDE THE COMBINATION METER, DETECTS THE VEHICLE SPEED AND INPUTS A CONTROL SIGNAL TO TERMINAL SPD OF THE ECU.
- [7] A/C SW SIGNAL SYSTEM
THE OPERATING VOLTAGE OF THE A/C MAGNET CLUTCH IS DETECTED AND INPUT IN THE FORM OF A CONTROL SIGNAL TO TERMINAL A/C OF THE ECU.
- [8] BATTERY SIGNAL SYSTEM
VOLTAGE IS CONSTANTLY APPLIED TO TERMINAL BATT OF THE ECU. WHEN THE IGNITION SW IS TURNED TO ON, VOLTAGE FOR ECU OPERATION IS APPLIED VIA THE EFI MAIN RELAY TO TERMINALS +B AND B1 OF THE ECU.
- [9] INTAKE AIR VOLUME SIGNAL SYSTEM
INTAKE AIR VOLUME IS DETECTED BY THE POTENTIOMETER INSTALLED INSIDE THE AIR FLOW METER AND IS INPUT AS A CONTROL SIGNAL TO TERMINAL VS OF THE ECU. INSIDE THE AIR FLOW METER THERE IS ALSO A SW FOR FUEL PUMP OPERATION, AND WHEN THE MEASURING PLATE OPENS (AIR INTAKE OCCURS), THIS SW TURNS ON AND CURRENT FLOWS TO THE FUEL PUMP TO OPERATE IT.
- [10] STOP LIGHT SW SIGNAL SYSTEM
THE STOP LIGHT SW IS USED TO DETECT WHETHER OR NOT THE VEHICLE IS BRAKING AND THE INFORMATION IS INPUT AS A CONTROL SIGNAL TO TERMINAL STP OF THE ECU.
- [11] STA SIGNAL SYSTEM
TO CONFIRM THAT THE E/G IS CRANKING, THE VOLTAGE APPLIED TO THE STARTER MOTOR DURING CRANKING IS DETECTED AND IS INPUT AS A CONTROL SIGNAL TO TERMINAL STA OF THE ECU.
- [12] NEUTRAL START SW SIGNAL SYSTEM (3S-GE, 3S-FE)
THE NEUTRAL START SW DETECTS WHETHER THE SHIFT POSITION IS IN NEUTRAL OR NOT, AND INPUTS A CONTROL SIGNAL TO TERMINAL NSW OF THE ECU.
- [13] E/G KNOCK SIGNAL SYSTEM (3S-GTE)
ENGINE KNOCKING IS DETECTED BY THE KNOCK SENSOR AND INPUT AS A CONTROL SIGNAL TO TERMINAL KNK OF THE ECU.
- [14] ELECTRICAL IDLE-UP SYSTEM (3S-GTE, 3S-FE)
THE SIGNAL WHEN SYSTEMS SUCH AS THE REAR WINDOW DEFOGGER, HEADLIGHTS, ETC. WHICH CAUSE A HIGH ELECTRICAL BURDEN ARE ON IS INPUT TO TERMINAL ELS AS A CONTROL SIGNAL.

2. CONTROL SYSTEM

- EFI (ELECTRONIC FUEL INJECTION) SYSTEM
(FOR 3S-GTE, 3S-GE)
THE EFI SYSTEM MONITORS THE ENGINE REVOLUTIONS THROUGH THE SIGNALS EACH SENSOR (INPUT SIGNALS [1] TO [13]) INPUTS TO THE ECU. BASED ON THIS DATA AND THE PROGRAM MEMORIZED IN THE ECU, THE MOST APPROPRIATE FUEL INJECTION TIMING IS DECIDED AND CURRENT IS OUTPUT TO TERMINALS # 1, 2, 3 AND 4 OF THE ECU, CAUSING THE INJECTORS TO OPERATE IT (TO INJECT FUEL). IT IS THIS SYSTEM WHICH, THROUGH THE WORK OF THE ECU, FINELY CONTROLS FUEL INJECTION IN RESPONSE TO DRIVING CONDITIONS.

(FOR 3S-FE)
THE EFI SYSTEM MONITORS THE ENGINE REVOLUTIONS THROUGH THE SIGNALS EACH SENSOR (INPUT SIGNALS [1] TO [12]) INPUTS TO THE ECU. BASED ON THIS DATA AND THE PROGRAM MEMORIZED IN THE ECU, THE MOST APPROPRIATE FUEL INJECTION TIMING IS DECIDED AND CURRENT IS OUTPUT TO TERMINALS #10 AND 20 OF THE ECU, CAUSING THE INJECTORS TO OPERATE IT (TO INJECT FUEL). IT IS THIS SYSTEM WHICH, THROUGH THE WORK OF THE ECU, FINELY CONTROLS FUEL INJECTION IN RESPONSE TO DRIVING CONDITIONS.
- ESA (ELECTRONIC SPARK ADVANCE) SYSTEM
THE ESA SYSTEM MONITORS THE ENGINE REVOLUTIONS USING THE SIGNALS (INPUT SIGNALS [1, 3, 4, 6, 7, 9, 11]) INPUT TO THE ECU FROM EACH SENSOR. BASED ON THIS DATA AND THE PROGRAM MEMORIZED IN THE ECU, THE MOST APPROPRIATE IGNITION TIMING IS DECIDED AND CURRENT IS OUTPUT TO TERMINAL IGT OF THE ECU. THIS OUTPUT CONTROLS THE IGNITER TO PRODUCE THE MOST APPROPRIATE IGNITION TIMING FOR THE DRIVING CONDITIONS.

- **FUEL PRESSURE-UP SYSTEM (3S-GTE)**

THE FUEL PRESSURE UP SYSTEM CAUSES THE VSV (FOR FUEL PRESSURE UP) TO COME ON FOR HIGH TEMP. STARTS AND FOR ABOUT 180 SECONDS AFTER STARTING IN ORDER TO INCREASE THE FUEL PRESSURE, IMPROVE STARTABILITY AT HIGH TEMPERATURES AND PROVIDE STABLE IDLING.

THE ECU EVALUATES THE INPUT SIGNALS FROM EACH SENSOR ([1, 2, 4, AND 11] FOR 4A-GZE), OUTPUTS CURRENT TO TERMINAL FPU AND CONTROLS THE VSV.

- **OX SENSOR HEATER CONTROL SYSTEM (3S-GTE, 3S-GE)**

THE OX SENSOR HEATER CONTROL SYSTEM TURNS THE HEATER TO ON WHEN THE INTAKE AIR VOLUME IS LOW (TEMP. OF EXHAUST EMISSIONS LOW), AND WARMS UP THE OX SENSOR TO IMPROVE DETECTION PERFORMANCE OF THE SENSOR. THE ECU EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS [1, 6, 8, 9, 11]), CURRENT IS OUTPUT TO TERMINAL HT AND CONTROLS THE HEATER.

- **IDLE-UP SYSTEM (3S-GE)**

THE IDLE-UP SYSTEM USES THE VSV FOR ELECTRICAL IDLE-UP TO INCREASE THE RPM AND PROVIDE STABLE IDLING WHEN THE IDLE SPEED DROPS DUE TO THE ELECTRICAL LOAD, ETC. THE ECU EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS [1, 4, 5, 6, 7, 12]), CURRENT IS OUTPUT TO TERMINAL V-ISC AND CONTROLS THE VSV.

- **ISC (IDLE SPEED CONTROL) SYSTEM (3S-GTE, 3S-FE)**

THE ISC SYSTEM (ROTARY SOLENOID TYPE) INCREASES THE RPM AND PROVIDES IDLING STABILITY FOR FAST IDLE-UP WHEN THE E/G IS COLD AND WHEN THE IDLE SPEED HAS DROPPED DUE TO ELECTRICAL LOAD, ETC. THE ECU EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS [1, 4 TO 6, 11, 12, 14]), OUTPUTS CURRENT TO TERMINALS ISC1 AND ISC2, AND CONTROLS THE ISC VALVE.

- **EGR CONTROL SYSTEM (3S-GTE)**

WITH THE EGR CONTROL SYSTEM, THE ECU EVALUATES THE (INPUT SIGNALS [1, 4, 10]) FROM EACH SENSOR, CURRENT IS OUTPUT TO TERMINAL EGR AND OPERATION OF THE EGR VALVE IS CONTROLLED.

- **INTAKE AIR CONTROL SYSTEM (3S-GTE, 3S-GE)**

IN THE INTAKE AIR CONTROL SYSTEM, EACH CYLINDER IN THE INTAKE MANIFOLD IS DIVIDED INTO TWO PARTS, WITH AN INTAKE AIR CONTROL VALVE INSTALLED IN THE PASSAGE ON ONE SIDE. THE OPENING AND CLOSING OF THIS VALVE PROVIDES THE MOST APPROPRIATE INTAKE AIR FLOW AND, AS WELL AS PREVENTING PERFORMANCE LOSS AT LOW SPEEDS, ALSO IMPROVES FUEL ECONOMY. THE ECU EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS [1, 4, 5]), OUTPUTS CURRENT TO TERMINAL S/TH, CONTROLS THE VSV (FOR T-VIS) AND, CARRIES OUT OPENING AND CLOSING OF THE VALVE.

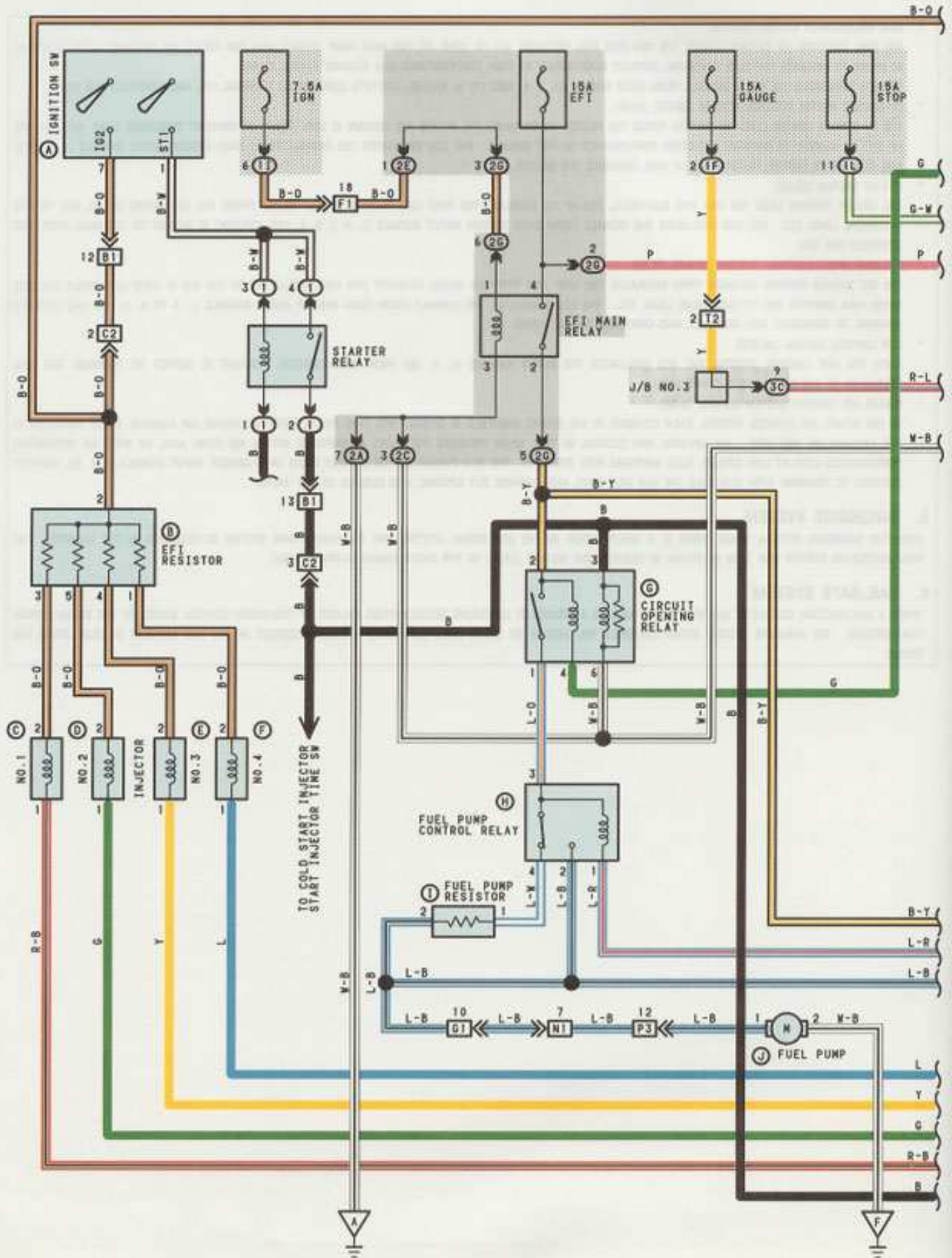
3. DIAGNOSIS SYSTEM

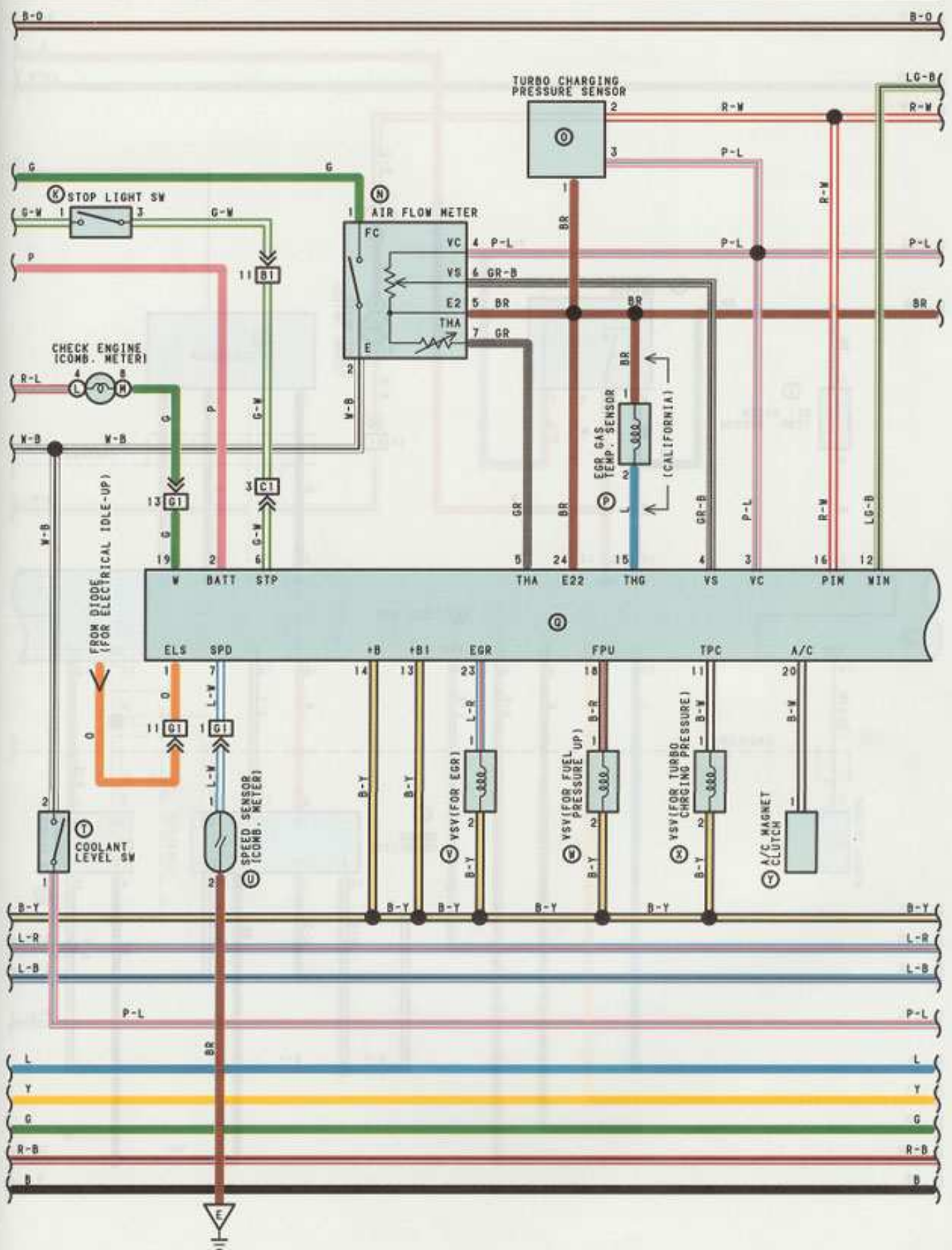
WITH THE DIAGNOSIS SYSTEM, WHEN THERE IS A MALFUNCTION IN THE ECU SIGNAL SYSTEM, THE MALFUNCTIONING SYSTEM IS RECORDED IN THE MEMORY. THE MALFUNCTIONING SYSTEM CAN THEN BE FOUND BY READING THE DISPLAY (CODE) OF THE CHECK ENGINE WARNING LIGHT.

4. FAIL-SAFE SYSTEM

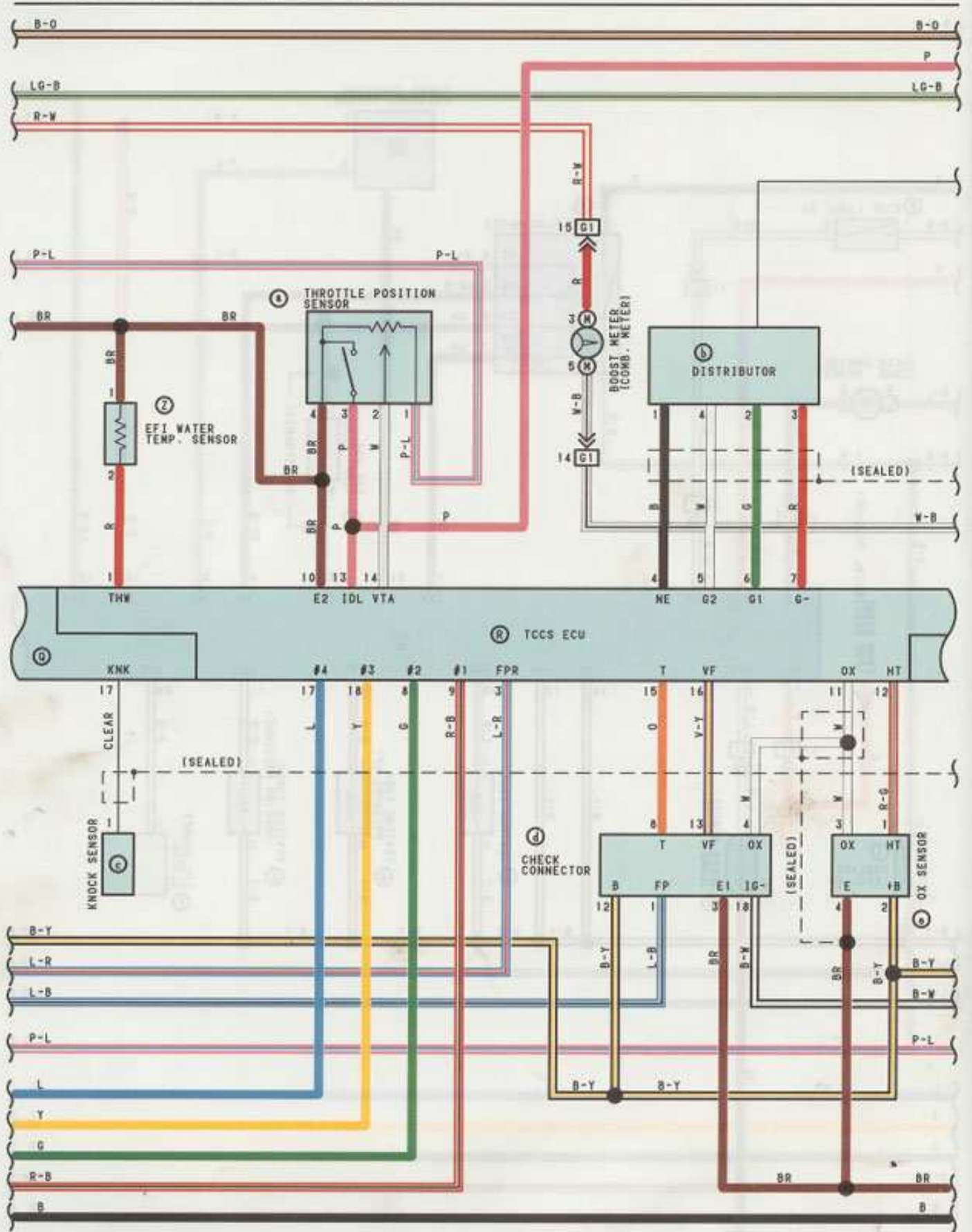
WHEN A MALFUNCTION OCCURS IN ANY SYSTEM, IF THERE IS A POSSIBILITY OF ENGINE TROUBLE BEING CAUSED BY CONTINUED CONTROL BASED ON THE SIGNALS FROM THAT SYSTEM, THE FAIL-SAFE SYSTEM EITHER CONTROLS THE SYSTEM BY USING DATA (STANDARD VALUES) RECORDED IN THE ECU MEMORY OR ELSE STOPS THE ENGINE.

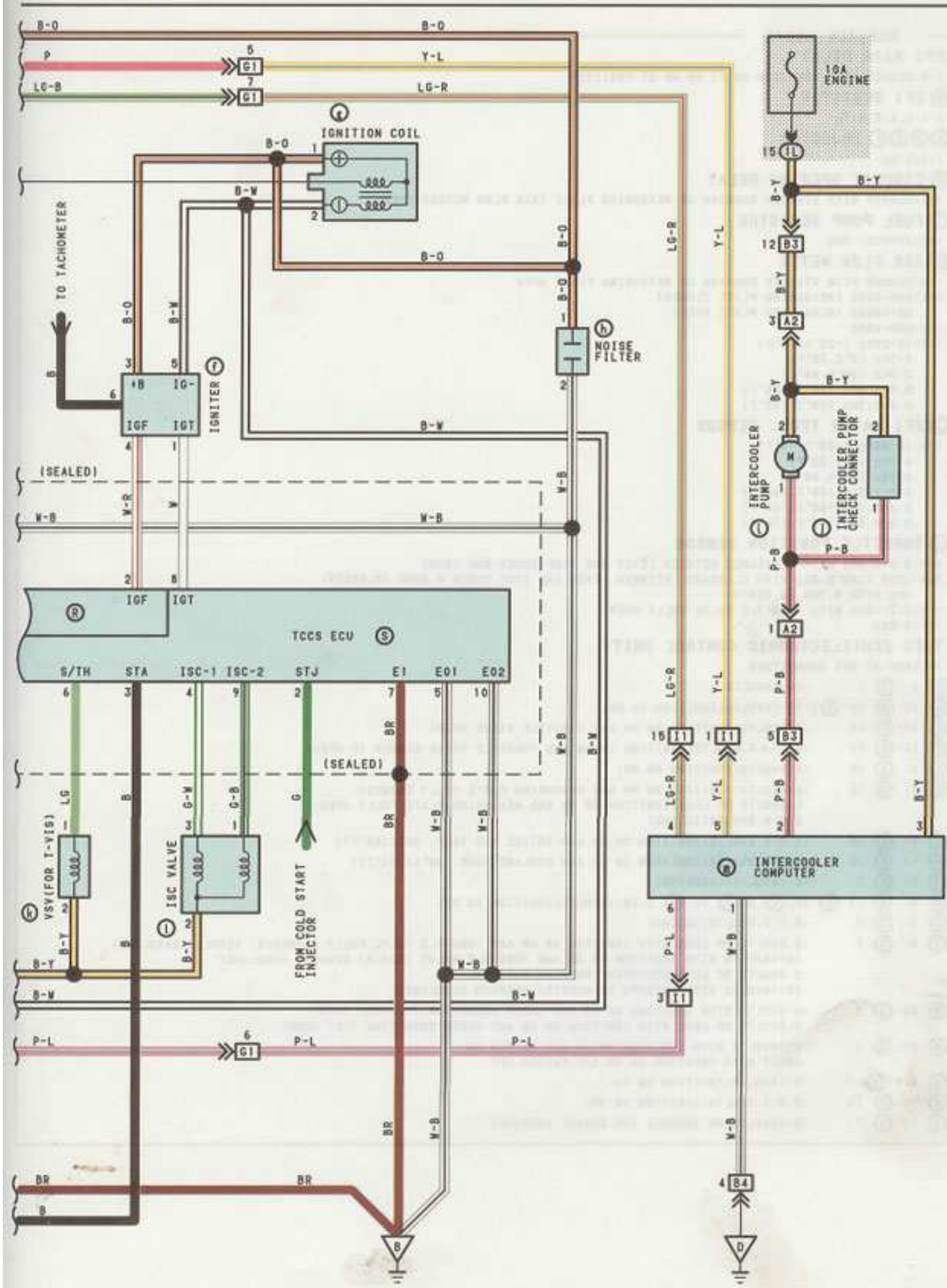
4-1 **TCCS** TCCS (3S-GTE)





4-1 TCCS TCCS(3S-GTE)





SERVICE HINTS

EFI MAIN RELAY

4-2:CLOSED WITH IGNITION SW AT ON OR ST POSITION

(B) EFI RESISTOR

2-1.3, 4.5-5-7Ω

(C)(D)(E)(F) INJECTOR

1-2:2-4Ω

(G) CIRCUIT OPENING RELAY

1-2:CLOSED WITH STARTER RUNNING OR MEASURING PLATE (AIR FLOW METER) OPEN

(I) FUEL PUMP RESISTOR

1-2:APPROX. 73Ω

(H) AIR FLOW METER

1-2:CLOSED WITH STARTER RUNNING OR MEASURING PLATE OPEN

5-6:200-600Ω (MEASURING PLATE CLOSED)

20-1000Ω (MEASURING PLATE OPEN)

5-4:200-400Ω

5-7:10-20KΩ (-20°C, -4°F)

4-7KΩ (0°C, 32°F)

2-3KΩ (20°C, 68°F)

0.9-1.3KΩ (40°C, 104°F)

0.4-0.7KΩ (60°C, 140°F)

(Z) EFI WATER TEMP. SENSOR

1-2:10-20KΩ (-20°C, -4°F)

4-7KΩ (0°C, 32°F)

2-7KΩ (20°C, 68°F)

0.9-1.3KΩ (40°C, 104°F)

0.4-0.7KΩ (60°C, 140°F)

0.2-0.4KΩ (80°C, 176°F)

(S) THROTTLE POSITION SENSOR

2-4:0.2-0.8KΩ WITH CLEARANCE BETWEEN LEVER AND STOP SCREW 0MM (0IN)

3-4:LESS THAN 2.3KΩ WITH CLEARANCE BETWEEN LEVER AND STOP SCREW 0.50MM (0.020IN)

∞Ω WITH 0.7MM (0.028IN)

2-4:3.3-10KΩ WITH THROTTLE VALVE FULLY OPEN

1-4:3-8KΩ

TCCS ECU(ELECTRONIC CONTROL UNIT)

VOLTAGE AT ECU CONNECTORS

(D) 2- (S) 7 :10-14VOLTS

(D) 13- (D) 14- (S) 7:10-14VOLTS(IGNITION SW ON)

(R) 13- (R) 10 :4-6VOLTS(IGNITION SW ON AND THROTTLE VALVE OPEN)

(R) 14- (R) 10 :0.1 → 4.5VOLTS(IGNITION SW ON AND THROTTLE VALVE CLOSED TO OPEN)

(D) 3- (R) 10 :4-6VOLTS(IGNITION SW ON)

(D) 4- (R) 10 :4-6VOLTS(IGNITION SW ON AND MEASURING PLATE FULLY CLOSED)
1.0VOLTS OR LESS(IGNITION SW ON AND MEASURING PLATE FULLY OPEN)
2.0-4.0VOLTS(IDLING)

(D) 5- (R) 10 :1.0-3.0VOLTS(IGNITION SW ON AND INTAKE AIR TEMP. 20°C(68°F))

(R) 1- (R) 10 :0.1-1.0VOLTS(IGNITION SW ON AND COOLANT TEMP. 80°C(176°F))

(S) 3- (S) 7 :6-14VOLTS(CRANKING)

(R) 8, (R) 17- (S) 10, (R) 9, (R) 18- (S) 5:10-14VOLTS(IGNITION SW ON)

(S) 8- (S) 7 :0.7-1.0VOLTS(IDLING)

(S) 6- (S) 7 :2.0VOLTS OR LESS WITH IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED(W/ REGULAR GASOLINE)
10-14VOLTS WITH IGNITION SW ON AND THROTTLE VALVE OPEN(W/ REGULAR GASOLINE)
2.0VOLTS OR LESS IDLING(W/ PREMIUM GASOLINE)
10-14VOLTS WITH 4200RPM OR MORE(W/ PREMIUM GASOLINE)

(R) 15- (S) 7 :4-6VOLTS WITH IGNITION SW ON AND CHECK CONNECTOR T-E1 NOT SHORT
0.5VOLTS OR LESS WITH IGNITION SW ON AND CHECK CONNECTOR T-E1 SHORT

(D) 20- (S) 7 :8-14VOLTS WITH IGNITION SW ON A/C SWITCH ON
0VOLT WITH IGNITION SW ON A/C SWITCH OFF

(S) 4, 9- (S) 7 :9-14VOLTS(IGNITION SW ON)

(D) 16- (R) 10 :2.5-4.5VOLTS(IGNITION SW ON)

(D) 19- (S) 7 :8-14VOLTS(ND TROUBLE AND ENGINE RUNNING)

RESISTANCE AT ECU CONNECTOR

(DISCONNECT WIRING CONNECTOR FROM ECU)

② 13-⑤ 7	∞Ω (THROTTLE VALVE OPEN) LESS THAN 2300Ω (THROTTLE VALVE FULLY CLOSED)
② 14-② 10	3300-10000Ω (THROTTLE VALVE OPEN) 200-800Ω (THROTTLE VALVE FULLY CLOSED)
② 4-② 10	200-600Ω (MEASURING PLATE FULLY CLOSED) 20-1000Ω (MEASURING PLATE FULLY OPEN)
② 5-② 10	2000-3000Ω (INTAKE AIR TEMP. 20°C, 68°F)
② 1-② 10	200-400Ω (COOLANT TEMP. 80°C, 176°F)
② 4, 5, 6-② 7	140-180Ω

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A I11	25	M A17	22	a T1	22
B E2	22	O T2	22	b O1	22
C 14	22	P E4	22	c K1	22
D 15	22	Q T5	25	d C1	22
E 16	22	R T4	25	e O2	22
F 17	22	S T3	25	f I2	22
G C9	25	T C3	22	g I3	22
H F7	22	U C14	25	h N2	22
I F8	22	V V1	22	i I8	22
J F14	27	W V3	22	j I9	22
K C20	25	X V5	22	k V4	22
L C12	25	Y A15	22	l I1	22
N C13	25	Z E3	22	n I13	25

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
I	21	R/B NO.1 (LEFT KICK PANEL)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1F	16	INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2E		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2G		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

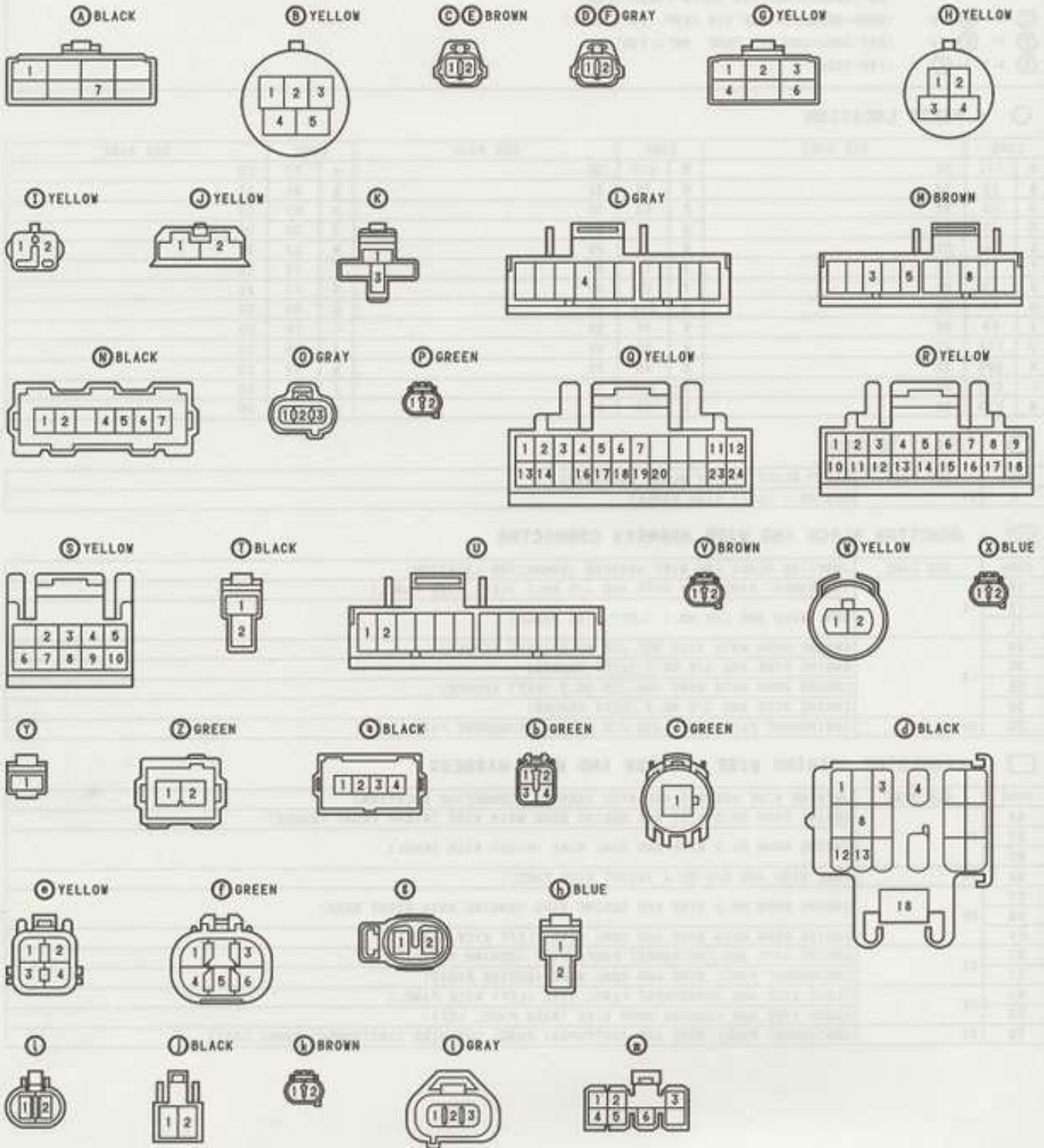
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

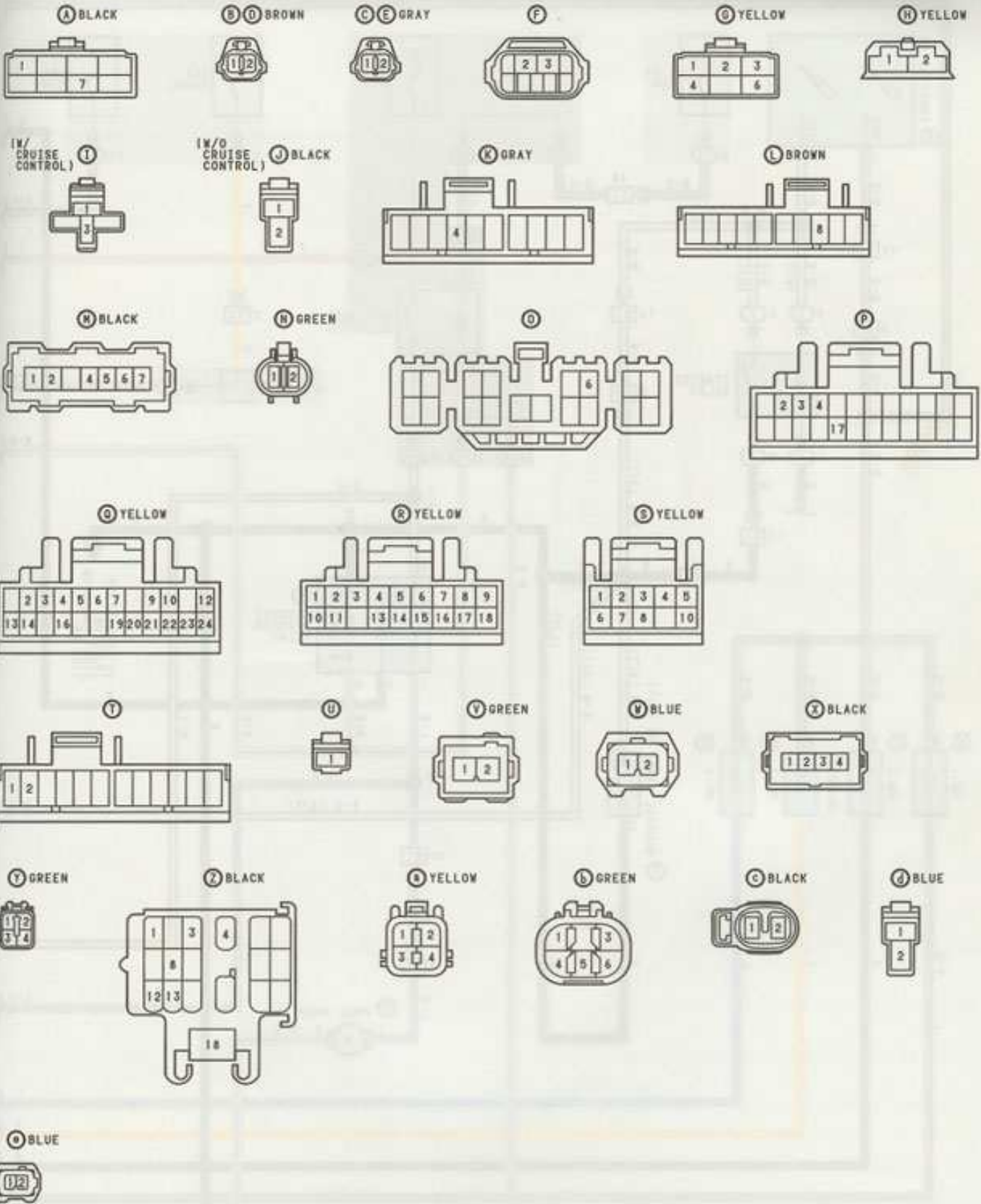
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
A2	28	ENGINE ROOM NO.2 WIRE AND ENGINE ROOM MAIN WIRE (RIGHT FRONT FENDER)
B1		ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
B3		
B4	34	COWL WIRE AND R/B NO.4 (RIGHT KICK PANEL)
C1	28	ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
C2		ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
F1		
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
I1		INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)
N1	30	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
P3		FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
T2		INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

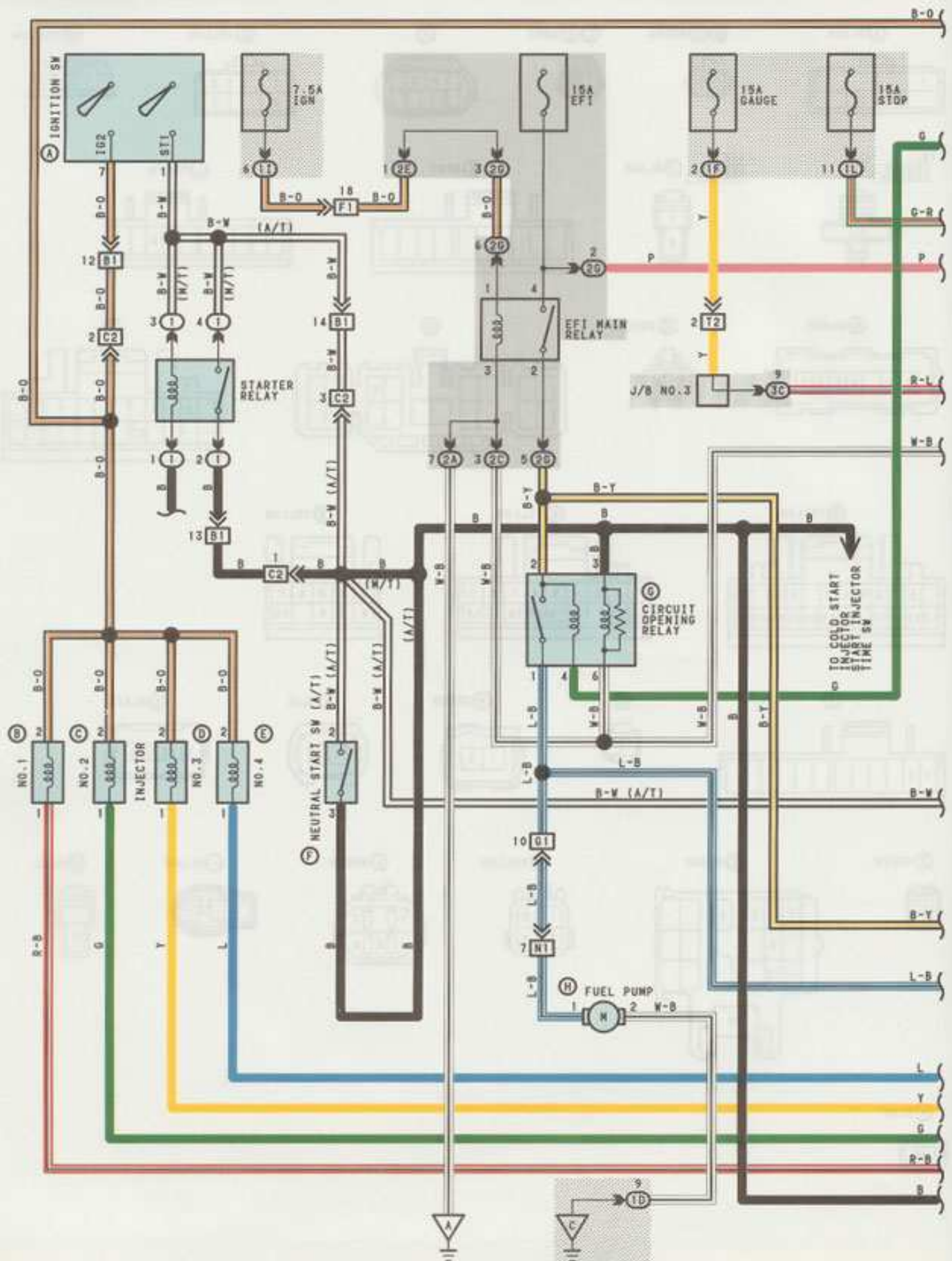
4-1 TCCS TCCS(3S-GTE)

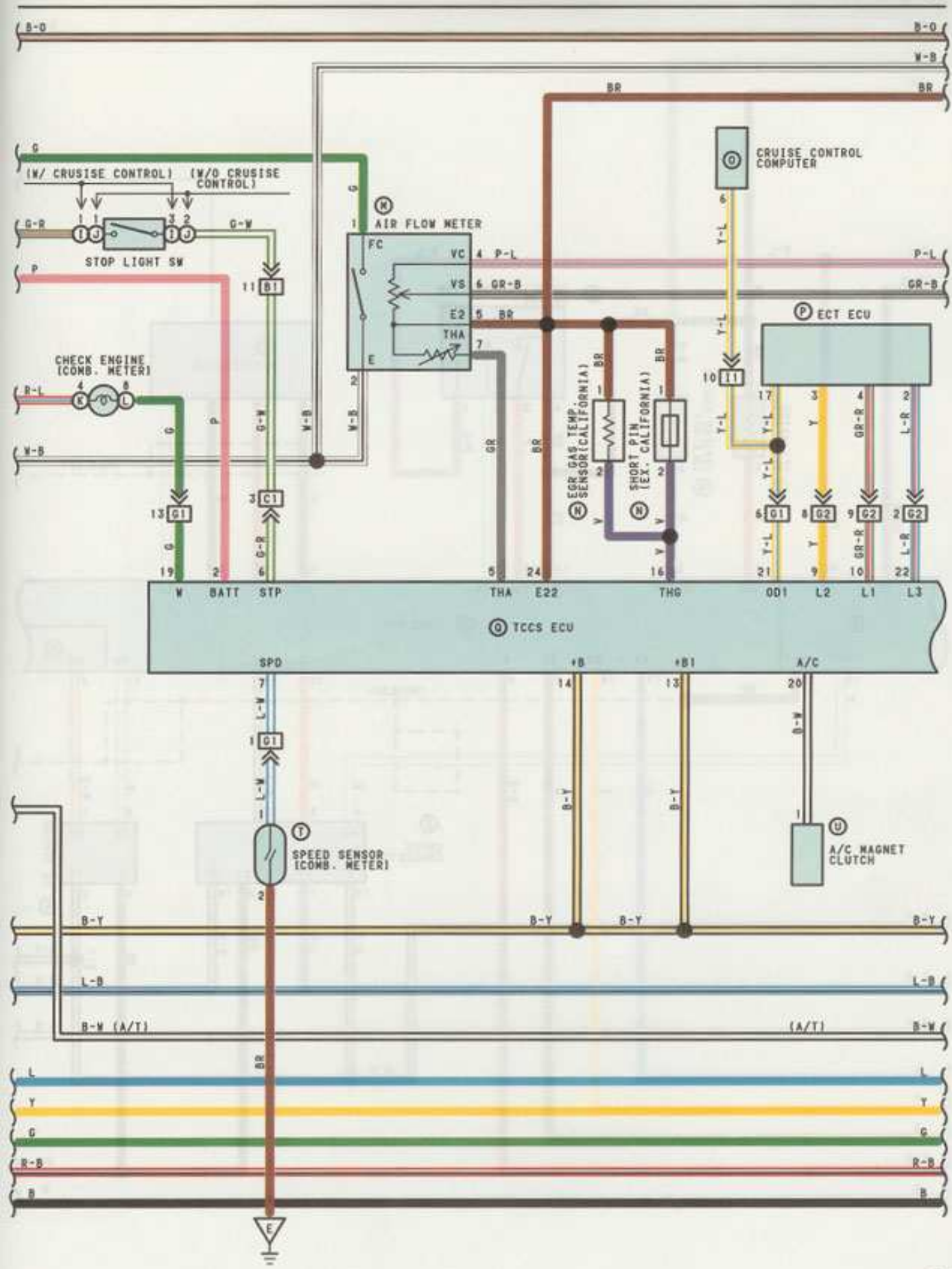
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	28	RIGHT FENDER
B	28	INTAKE MANIFOLD
D	34	R/B NO.4 SET BOLT
E	34	BEHIND RADIO
F	38	BACK PANEL CENTER

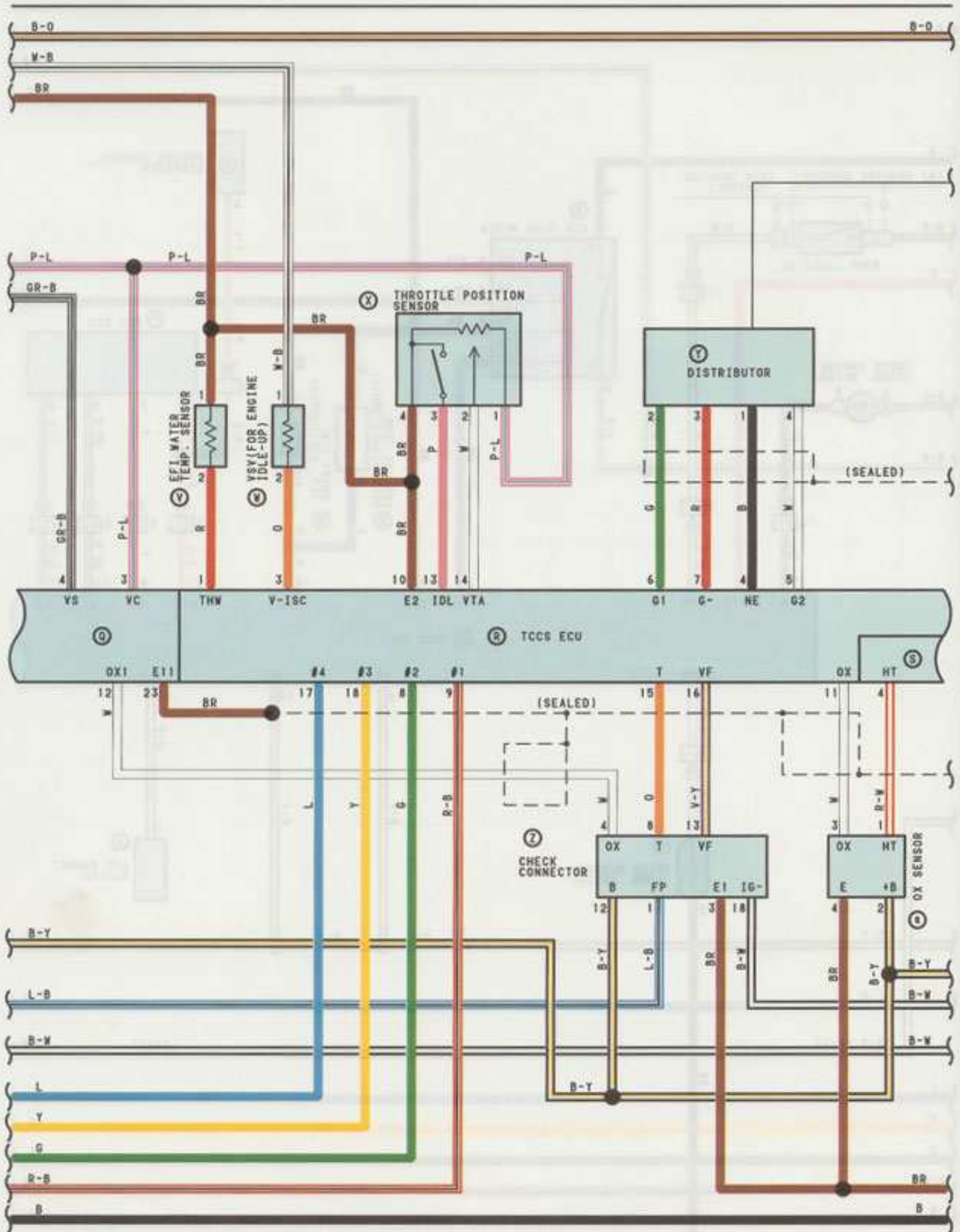


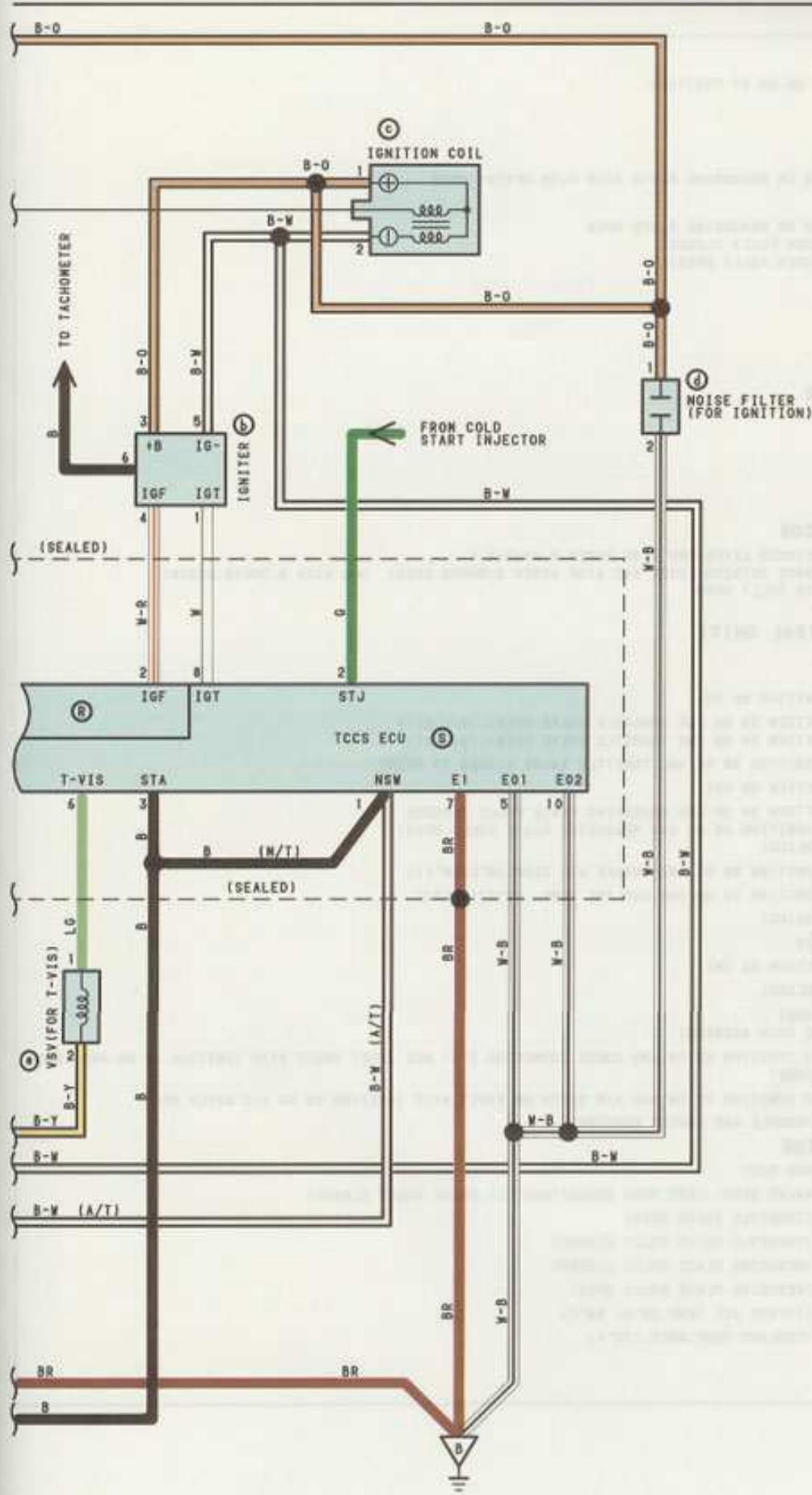






4-2 TCCS TCCS(3S-GE)





4-2 **TCCS** TCCS(3S-GE)

SERVICE HINTS

EFI MAIN RELAY

4-2: CLOSED WITH IGNITION SW AT ON OR ST POSITION

ⓑⒸⒹⒺ INJECTOR

1-2: EACH APPROX. 13.8Ω

ⓐ CIRCUIT OPENING RELAY

1-2: CLOSED WITH STARTER RUNNING OR MEASURING PLATE (AIR FLOW METER) OPEN

ⓐ AIR FLOW METER

1-2: CLOSED WITH STARTER RUNNING OR MEASURING PLATE OPEN

5-6: 200-600Ω (MEASURING PLATE OPEN FULLY CLOSED)

200-1200Ω (MEASURING PLATE OPEN FULLY OPEN)

5-4: 200-400Ω

5-7: 10- 20KΩ (-20°C, -4°F)

4- 7KΩ (0°C, 32°F)

2- 3KΩ (20°C, 68°F)

0.9-1.3KΩ (40°C, 104°F)

0.4-0.7KΩ (60°C, 140°F)

ⓐ EFI WATER TEMP. SENSOR

1-2: 10-20KΩ (-20°C, -4°F)

4- 7KΩ (0°C, 32°F)

2- 7KΩ (20°C, 68°F)

0.9-1.3KΩ (40°C, 104°F)

0.4-0.7KΩ (60°C, 140°F)

0.2-0.4KΩ (80°C, 176°F)

ⓐ THROTTLE POSITION SENSOR

2-4: 0.2-0.8KΩ WITH CLEARANCE BETWEEN LEVER AND STOP SCREW 0 MM(0IN.)

3-4: LESS THAN ∞KΩ WITH CLEARANCE BETWEEN LEVER AND STOP SCREW 0.6MM(0.02IN) ∞Ω WITH 0.7MM(0.028IN)

2-4: 3.3-10KΩ WITH THROTTLE VALVE FULLY OPEN

1-4: 3-7KΩ

TCCS ECU(ELECTRONIC CONTROL UNIT)

VOLTAGE AT ECU CONNECTORS

ⓐ 2- ⓐ 7

: 10 -14VOLTS

ⓐ 13- ⓐ 14- ⓐ 7

: 10 -14VOLTS(IGNITION SW ON)

ⓐ 13- ⓐ 10

: 4 - 6VOLTS(IGNITION SW ON AND THROTTLE VALVE OPEN), (W/O ECT)

: 8 -14VOLTS(IGNITION SW ON AND THROTTLE VALVE OPEN), (W/ ECT)

ⓐ 14- ⓐ 10

: 0.1 → 5VOLTS(IGNITION SW ON AND THROTTLE VALVE CLOSED TO OPEN)

ⓐ 3- ⓐ 10

: 4 - 6VOLTS(IGNITION SW ON)

ⓐ 4- ⓐ 10

: 4 - 5VOLTS(IGNITION SW ON AND MEASURING PLATE FULLY CLOSED)

0.02-0.5VOLTS(IGNITION SW ON AND MEASURING PLATE FULLY OPEN)

2.0-4.0VOLTS(IDLING)

ⓐ 5- ⓐ 10

: 1.0-3.0VOLTS(IGNITION SW ON AND INTAKE AIR TEMP. 20°C(68°F))

ⓐ 1- ⓐ 10

: 0.1-1.0VOLTS(IGNITION SW ON AND COOLANT TEMP. 80°C(176°F))

ⓐ 3- ⓐ 7

: 6 -12VOLTS(CRANKING)

ⓐ 8, ⓐ 17- ⓐ 10, ⓐ 9, ⓐ 18- ⓐ 5

: 9 -14VOLTS(IGNITION SW ON)

ⓐ 8- ⓐ 7

: 0.7-1.0VOLTS(IDLING)

ⓐ 6- ⓐ 7

: 0 - 2VOLTS(IDLING)

: 10-14VOLTS(MORE THAN 4400RPM)

ⓐ 15- ⓐ 7

: 4 - 6VOLTS WITH IGNITION SW ON AND CHECK CONNECTOR T-E1 NOT SHORT 0VOLT WITH IGNITION SW ON AND

CONNECTOR T-E1 SHORT

ⓐ 20 ⓐ 7

: 8 -14VOLTS WITH IGNITION SW ON AND A/C SWICH ON 0VOLT WITH IGNITION SW ON A/C SWICH OFF

ⓐ 19- ⓐ 7

: 8 -14VOLTS(NO TROUBLE AND ENGINE RUNNING)

REISTANCE AT ECU CONNECTOR

(DISCONNECT WIRING CONNECTOR FROM ECU)

ⓐ 13- ⓐ 10

: ∞ Ω (THROTTLE VALVE OPEN) LESS THAN 2300Ω (THROTTLE VALVE FULLY CLOSED)

ⓐ 14- ⓐ 10

: 3300-10000Ω (THROTTLE VALVE OPEN)

: 200- 800Ω (THROTTLE VALVE FULLY CLOSED)

ⓐ 4- ⓐ 10

: 200- 600Ω (MEASURING PLATE FULLY CLOSED)

: 20- 1200Ω (MEASURING PLATE FULLY OPEN)

ⓐ 5- ⓐ 10

: 2000- 3000Ω (INTAKE AIR TEMP. 20°C, 68°F)

ⓐ 1- ⓐ 10

: 200- 400Ω (COOLANT TEMP. 80°C, 176°F)

ⓐ 5, 6- ⓐ 7

: 140- 180Ω

ⓐ 4- ⓐ 7

: 140- 180Ω

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	I11 25	L	C13 25	W	V2 23
B	I4 23	M	A17 23	X	T1 23
C	I5 23	N	E4 23	Y	D1 23
D	I6 23	O	C18 25	Z	C1 23
E	I7 23	P	E5 25	a	O2 23
F	E1 23	Q	T5 25	b	I2 23
G	C9 25	R	T4 25	c	I3 23
H	F14 26(C/P), 27(L/B)	S	T3 25	d	N2 23
I	C20 25(W/ CRUISE CONTROL)	T	C14 25	e	V4 23
J	C20 25(W/O CRUISE CONTROL)	U	A15 23		
K	C12 25	V	E3 23		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
I	21	R/B NO.1 (LEFT KICK PANEL)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	16	FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2E		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2G		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

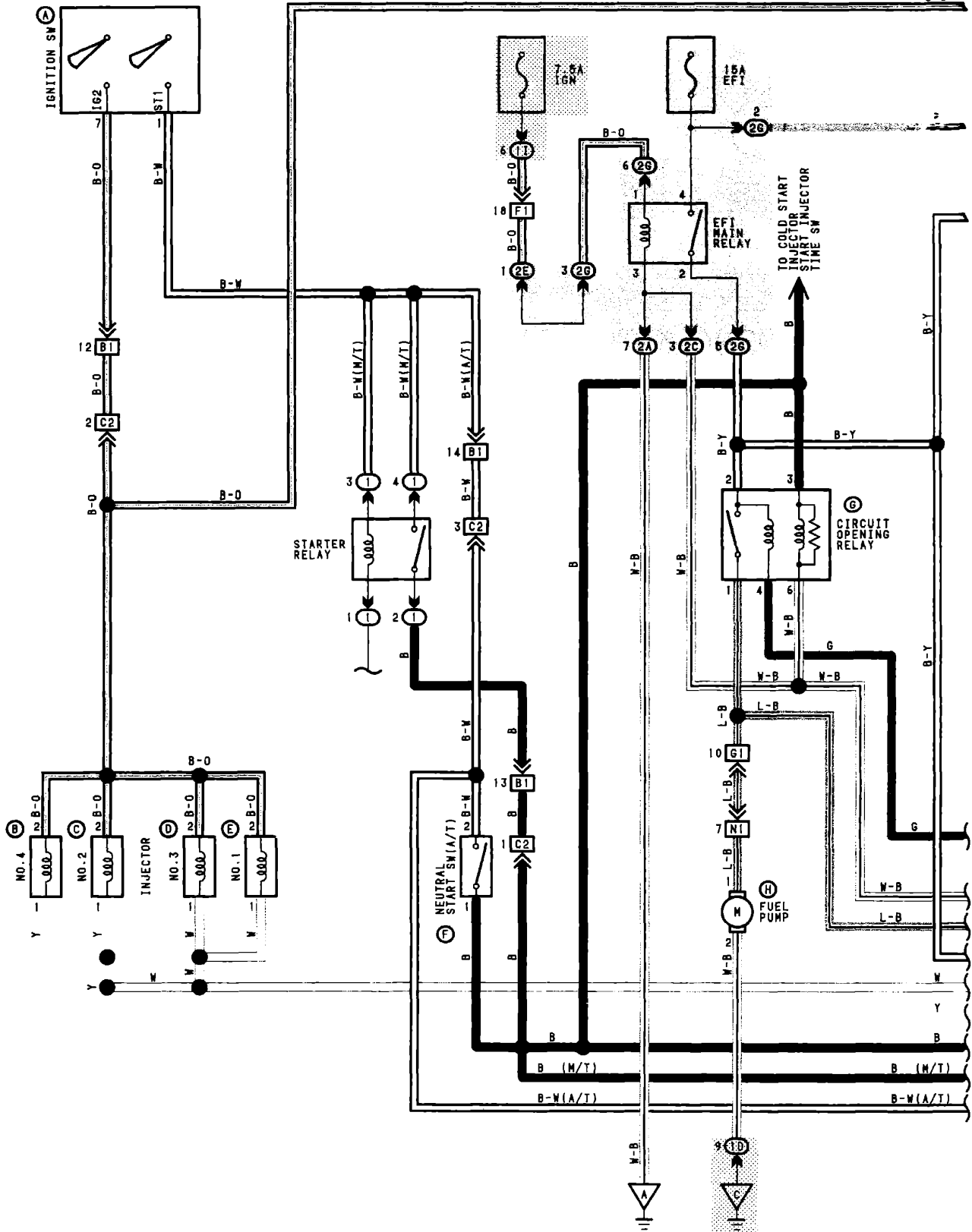
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

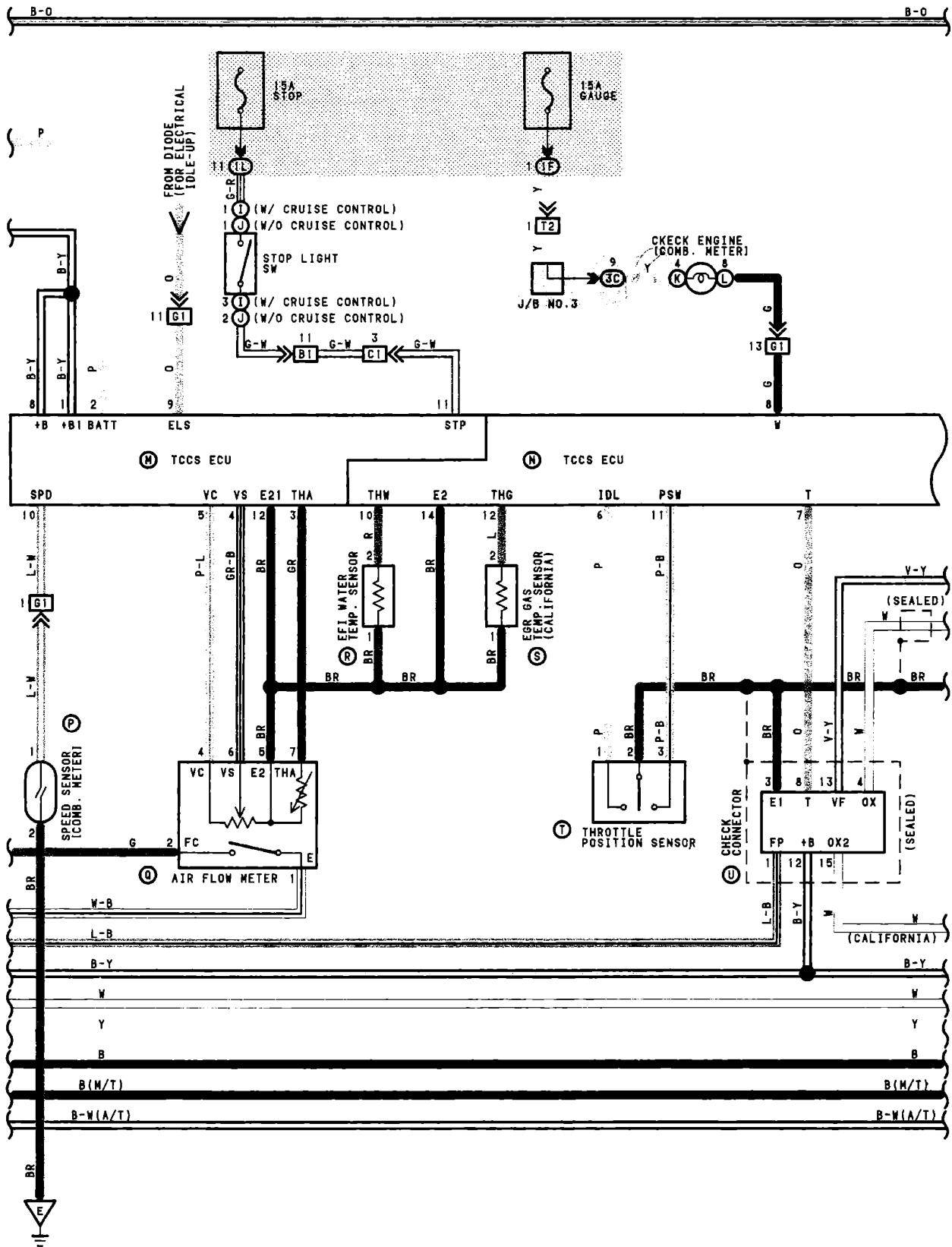
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B1	30	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
C1		ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
C2		
F1		ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
G2		INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)
I1		
N1	36(C/P)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
	38(L/B)	
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

▽ : GROUND POINTS

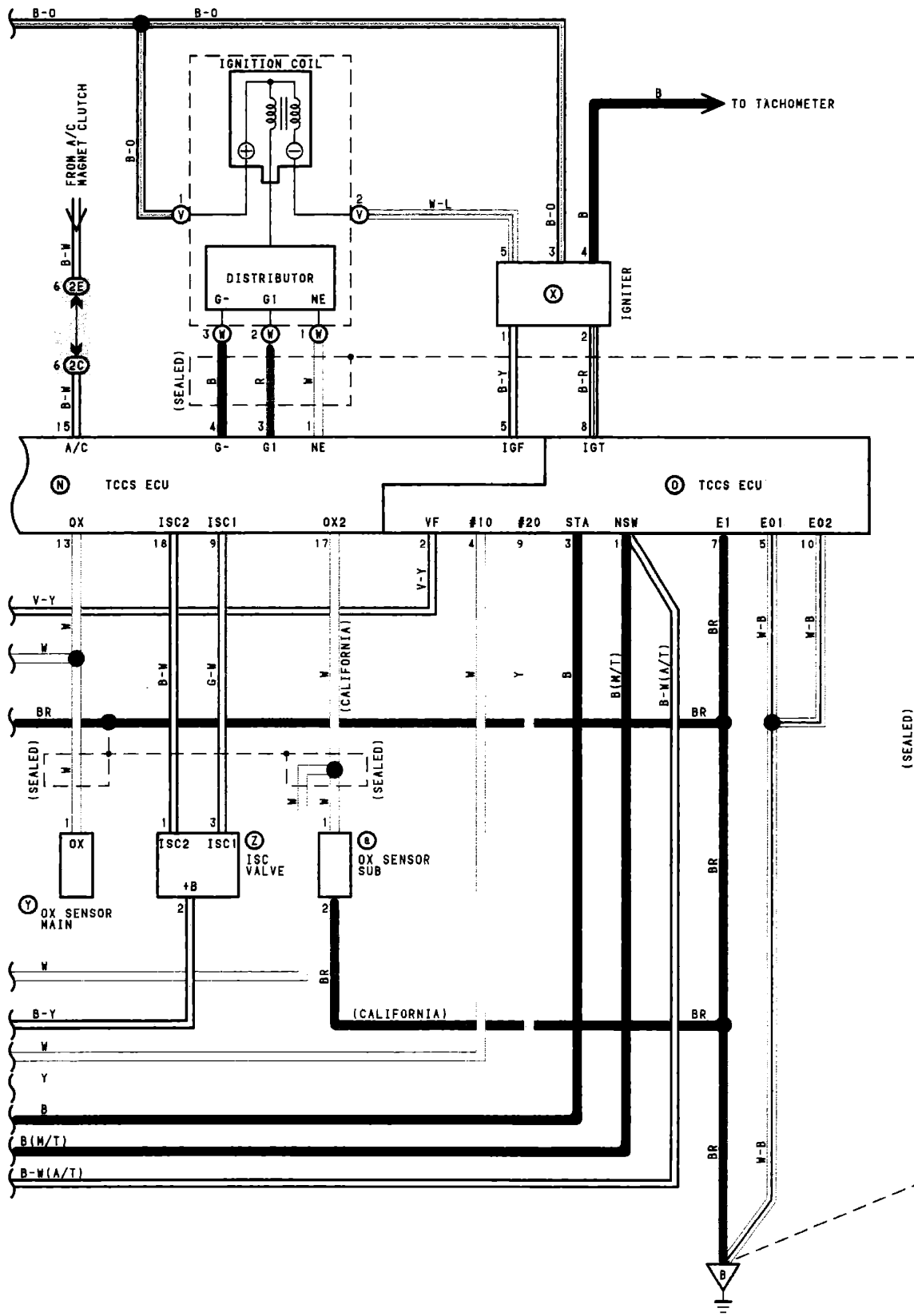
CODE	SEE PAGE	GROUND POINT LOCATION
A	30	RIGHT FENDER
B	30	INTAKE MANIFOLD
C	34	J/B NO.1 SET BOLT
E	34	BEHIND RADIO

4-3 TCCS TCCS (3S-FE)





4-3 TCCS TCCS(3S-FE)



SERVICE HINTS

EFI MAIN RELAY

2-4:CLOSED WITH IGNITION SW AT ON OR ST POSITION

B C D E INJECTOR

1-2:APPROX.13.8Ω

STARTER RELAY

2-4:CLOSED WITH CLUTCH PEDAL FULLY DEPRESSED AND IGNITION SW AT ST POSITION

G CIRCUIT OPENING RELAY

1-2:CLOSED WITH STARTER RUNNING OR MEASURING PLATE (AIR FLOW METER) OPEN

Q AIR FLOW METER

1-2:CLOSED WITH STARTER RUNNING OR MEASURING PLATE OPEN

5-6:200-600Ω (MEASURING PLATE FULLY CLOSED)

20-1200Ω (MEASURING PLATE FULLY OPEN)

4-5:200-400Ω

5-7:10-20KΩ (-20°C, -4°F)

4-7KΩ (0°C, 32°F)

2-3KΩ (20°C, 68°F)

0.9-1.3KΩ (40°C, 104°F)

0.4-0.7KΩ (60°C, 140°F)

R EFI WATER TEMP. SENSOR

1-2:10-20KΩ (-20°C, -4°F)

4-7KΩ (0°C, 32°F)

2-3KΩ (20°C, 68°F)

0.9-1.3KΩ (40°C, 104°F)

0.4-0.7KΩ (60°C, 140°F)

0.2-0.4KΩ (80°C, 176°F)

T THROTTLE POSITION SENSOR

2-1:CLOSED WITH THROTTLE VALVE CLOSED

2-3:CLOSED WITH THROTTLE VALVE FULLY OPEN

TCCS ECU (ELECTRONIC CONTROLLED UNIT)

VOLTAGES AT ECU CONNECTORS

- M 2-D 7 :10-14VOLTS (ALWAYS)
 H 1,8-D 7 :10-14VOLTS (IGNITION SW ON)
 N 6-D 7 :4-5VOLTS (IGNITION SW ON AND THROTTLE VALVE OPEN)
 N 11-D 7 :4-5VOLTS (IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED)
 D 4-D 5, Q 9-Q 10:9-14VOLTS (IGNITION SW ON)
 M 3-N 14 :1-3VOLTS (IGNITION SW ON AND INTAKE AIR TEMP. 20°C, 68°F)
 N 10-N 14 :0.1-1.0VOLTS (IGNITION SW ON AND COOLANT TEMP. 80°C, 176°F)
 D 3-D 7 :6-14VOLTS (CRANKING OR IDLING)
 D 8-D 7 :0.7-1.0VOLTS (IDLING)
 N 8-D 7 :8-14VOLTS NO TROUBLE(CHECK ENGINE WARNING LIGHT OFF AND ENGINE RUNNING)
 N 15-D 7 :8-14VOLTS (A/C SW ON)
 0VOLT (A/C SW OFF)
 M 5-N 14 :4-6VOLTS (IGNITION SW ON)
 M 4-N 14 :3.7-4.3VOLTS (IGNITION SW ON AND MEASURING PLATE FULLY CLOSED)
 0.2-0.5VOLTS (IGNITION SW ON AND MEASURING PLATE FULLY OPEN)
 2.3-3.8VOLTS (IDLING)
 N 7-D 7 :10-14VOLTS (IGNITION SW ON AND CHECK CONNECTOR T-E1 NOT SHORT)
 0VOLT (IGNITION SW ON AND CHECK CONNECTOR T-E1 SHORT)

- N 9,18-Q 7 :9-14VOLTS (IGNITION SW ON)

RESISTANCE AT COMPUTER WIRING CONNECTOR

(DISCONNECT WIRING CONNECTOR)

- N 6-D 7 :∞Ω (THROTTLE VALVE OPEN)
 0Ω (THROTTLE VALVE FULLY CLOSED)
 N 11-D 7 :0Ω (THROTTLE VALVE FULLY OPEN)
 ∞Ω (THROTTLE VALVE FULLY CLOSED)
 N 1-N 4 :140-180Ω
 N 3-N 4 :140-180Ω
 M 3-N 14 :2-3KΩ (INTAKE AIR TEMP. 20°C, 68°F)
 N 10-N 14 :200-400Ω (COOLANT TEMP. 80°C, 176°F)
 H 4-N 14 :200-600Ω MEASURING PLATE FULLY CLOSED
 20-1200Ω MEASURING PLATE FULLY OPEN

4-3 **TCCS** TCCS(3S-FE)

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	I11 25	J	C20 25	S	E4 24
B	I7 24	K	C12 25	T	T1 24
C	I5 24	L	C13 25	U	C1 24
D	I6 24	M	T5 25	V	D2 24
E	I4 24	N	T4 25	W	D2 24
F	N1 24	O	T3 25	X	I2 24
G	C9 25	P	C14 25	Y	O2 24
H	F14 26 (C/P), 27 (L/B)	Q	A17 24	Z	I1 24
I	C20 25	R	E3 24	■	O3 24

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
I	21	R/B NO.1 (LEFT KICK PANEL)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

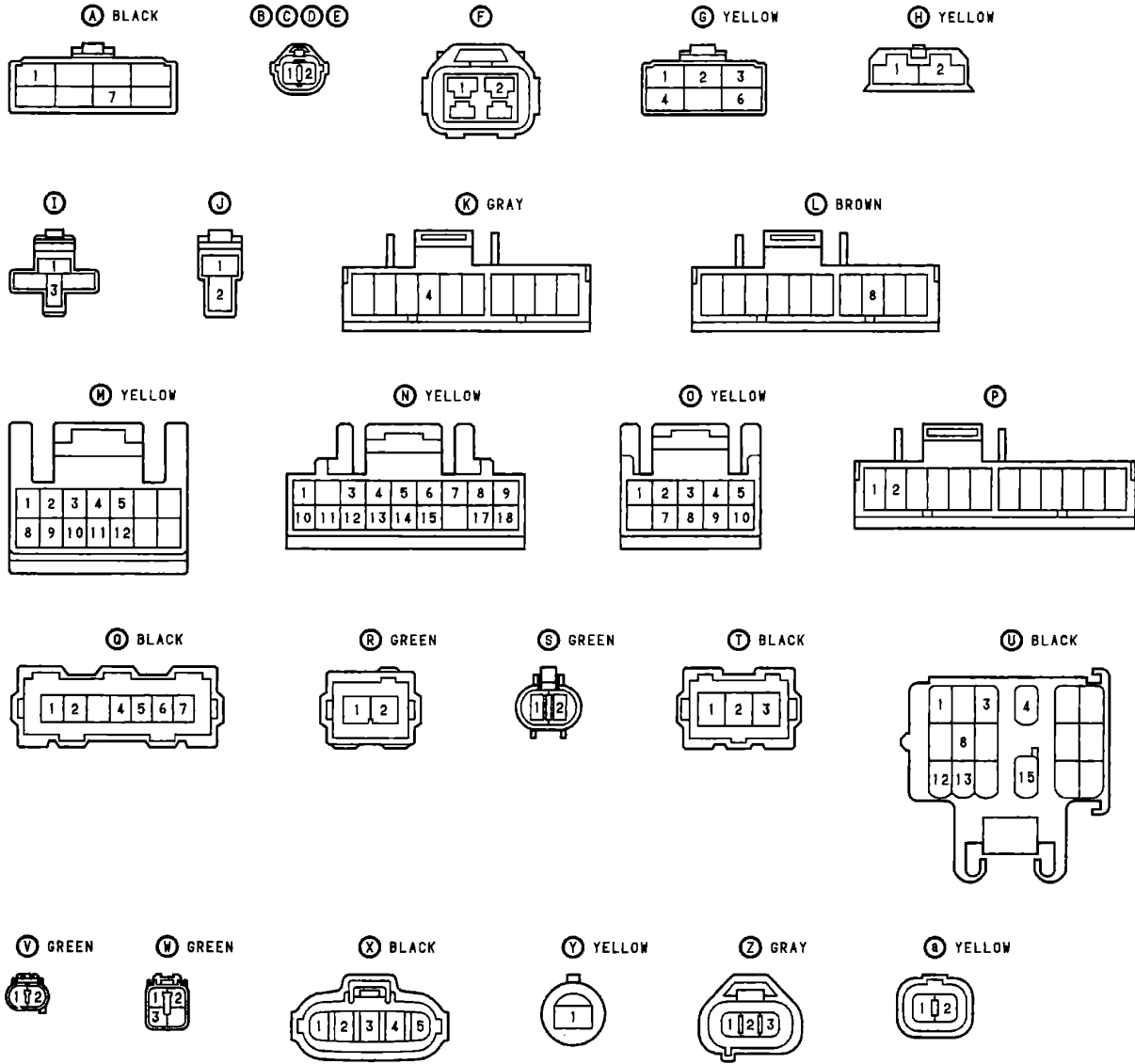
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	16	FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2E		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2G		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

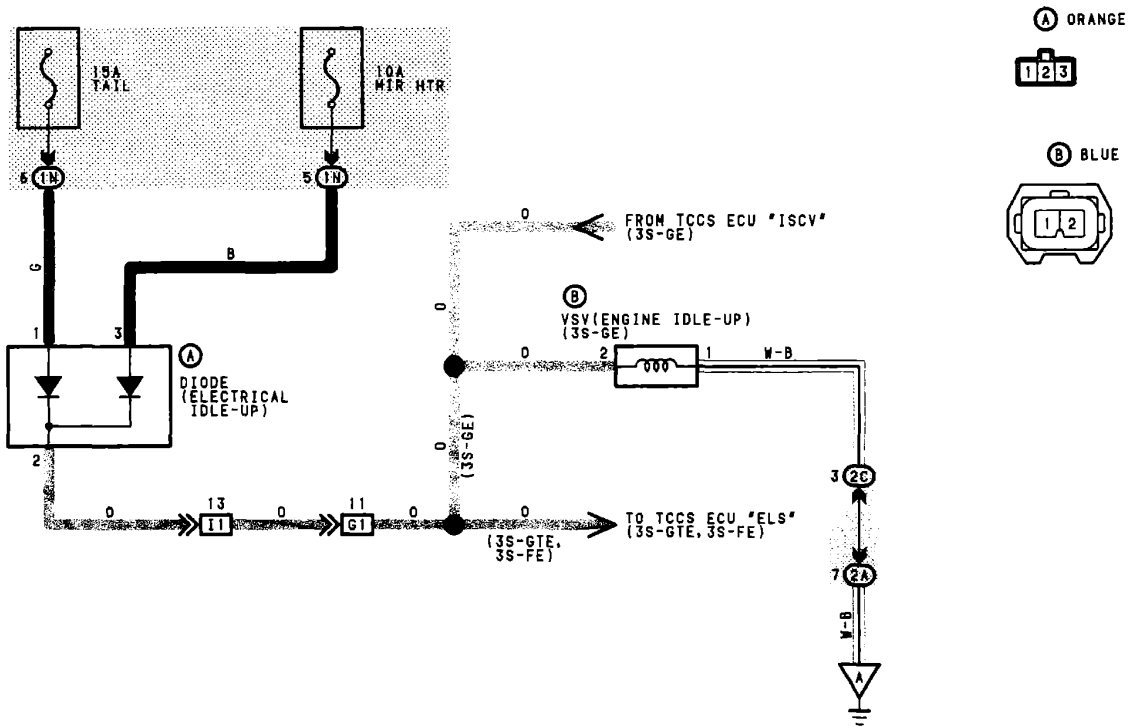
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B1	32	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
C1		ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
C2		
F1		ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
N1	36 (C/P)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
	38 (L/B)	
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	32	RIGHT FENDER
B	32	INTAKE MANIFOLD
C	34	J/B NO.1 SET BOLT
E	34	BEHIND RADIO



5 ELECTRICAL IDLE-UP SYSTEM



SERVICE HINTS

(B) VSV(ENGINE IDLE-UP)

2-GROUND: APPROX. 12VOLTS WITH TAILLIGHT OR REAR WINDOW DEFOGGER ON

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	D5 25	B	V2 23(3S-GE)		

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

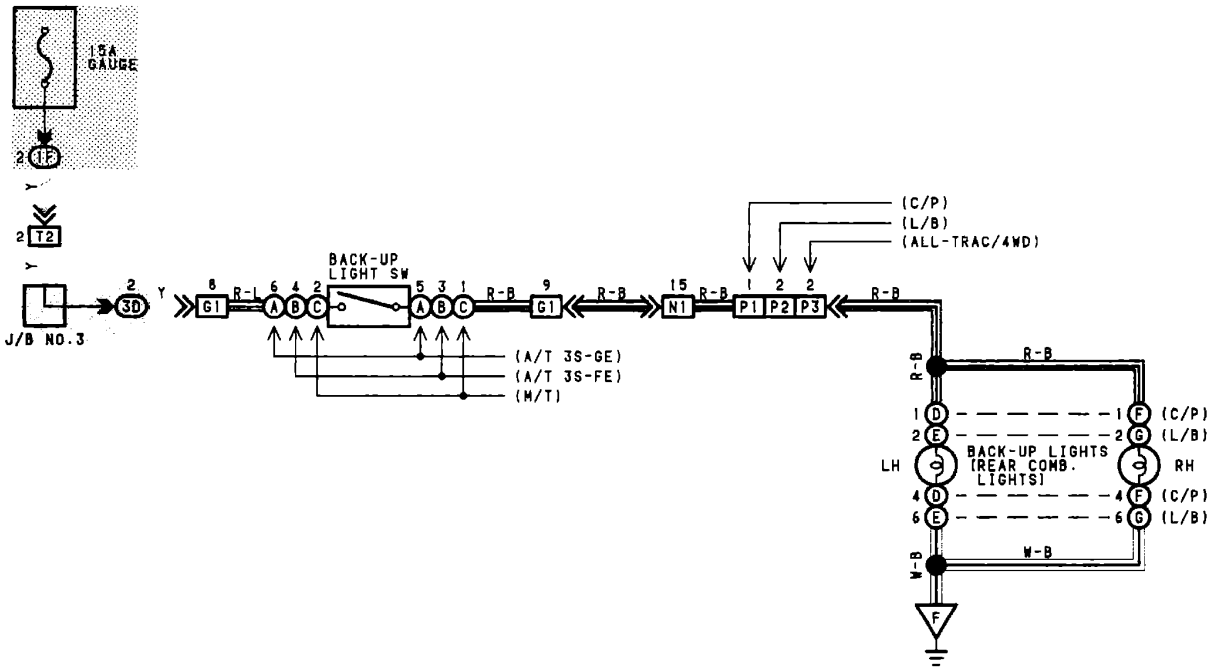
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1N	16	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
I1		INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	30(3S-GE)	RIGHT FENDER



○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A E1	23	D R10	26	G R11	27
B N1	24	E R10	27		
C B1	22(3S-GTE), 23(3S-GE), 24(3S-FE)	F R11	26		

⊗ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

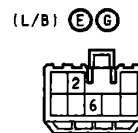
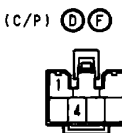
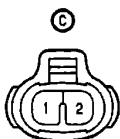
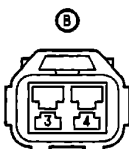
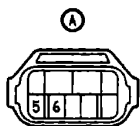
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1F	16	INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
3D	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

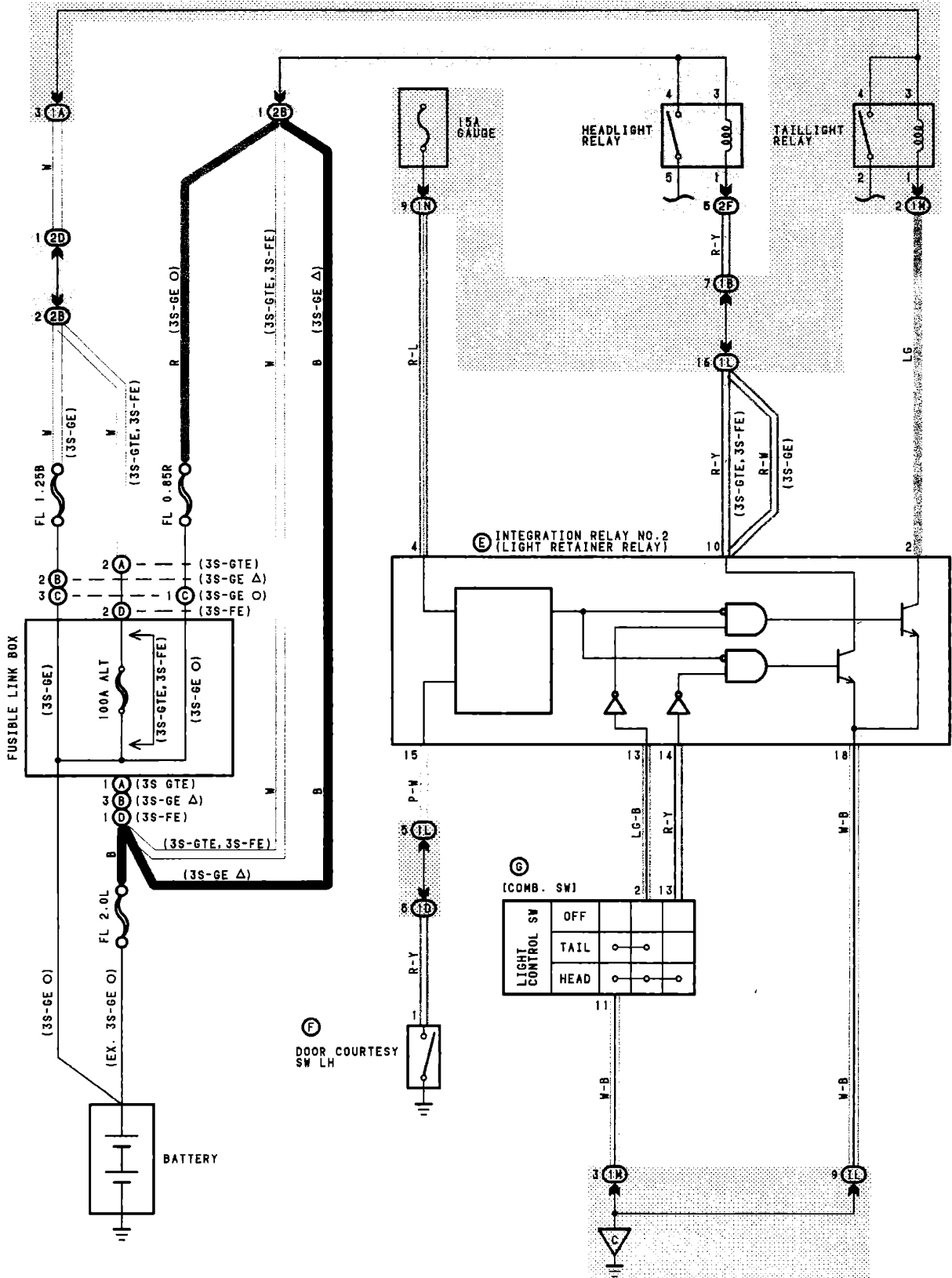
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
N1	36(C/P)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
	38(L/B)	
P1	36	FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
P2	38	
P3		
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
F	36(C/P)	BACK PANEL CENTER
	38(L/B)	



7 LIGHT AUTO TURN OFF SYSTEM



SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS TO TERMINAL 4 OF THE INTEGRATION RELAY NO. 2 (LIGHT RETAINER RELAY) THROUGH ECU-IG FUSE. VOLTAGE IS APPLIED AT ALL TIMES TO TERMINAL 2 OF THE INTEGRATION RELAY NO. 2 (LIGHT RETAINER RELAY) THROUGH THE TAILLIGHT RELAY COIL, AND TO TERMINAL 10 THROUGH THE HEADLIGHT RELAY COIL.*

1. NORMAL LIGHTING OPERATION

<TURN TAILLIGHT ON>

WITH LIGHT CONTROL SW TURNED TO TAIL POSITION, A SIGNAL IS INPUT INTO TERMINAL 13 OF THE INTEGRATION RELAY NO. 2 (LIGHT RETAINER RELAY). ACCORDING TO THIS SIGNAL, THE CURRENT FLOWING TO TERMINAL 2 OF THE RELAY FLOWS FROM THE RELAY FROM TERMINAL 18 → TO GROUND AND TAILLIGHT RELAY CAUSES TAILLIGHT TO TURN ON.

<TURN HEADLIGHT ON>

WITH LIGHT CONTROL SW TURNED TO HEADLIGHT POSITION, A SIGNAL IS INPUT INTO TERMINALS 13 AND 14 OF THE INTEGRATION RELAY NO. 2 (LIGHT RETAINER RELAY). ACCORDING TO THIS SIGNAL, THE CURRENT FLOWING TO TERMINALS 2 AND 10 OF THE RELAY FLOWS FROM THE RELAY FROM TERMINAL 10 → TERMINAL 18 → TO GROUND IN THE HEADLIGHT CIRCUIT, AND CAUSES TAILLIGHT AND HEADLIGHT RELAY TO TURN THE LIGHT ON. THE TAILLIGHT CIRCUIT IS SAME AS ABOVE.

2. LIGHT AUTO TURN OFF OPERATION

WITH LIGHTS ON AND IGNITION SW TURNED OFF (INPUT SIGNAL GOES TO TERMINAL 4 OF THE RELAY), WHEN DOOR ON DRIVER'S SIDE IS OPENED (INPUT SIGNAL GOES TO TERMINAL 15 OF THE RELAY), THE RELAY OPERATES AND THE CURRENT IS CUT OFF WHICH FLOWS FROM TERMINAL 2 OF THE RELAY TO TERMINAL 18 IN TAILLIGHT CIRCUIT AND FROM TERMINAL 10 TO TERMINAL 18 IN HEADLIGHT CIRCUIT. AS A RESULT, ALL LIGHTS ARE TURNED OFF AUTOMATICALLY.

SERVICE HINTS

Ⓔ INTEGRATION RELAY NO.2 (LIGHT RETAINER RELAY)

- 4-GROUND:APPROX. 12VOLTS WITH IGNITION SW AT ON POSITION
- 2-GROUND:ALWAYS APPROX. 12VOLTS
- 10-GROUND
- 15-GROUND:CONTINUITY WITH DRIVER'S DOOR OPEN
- 18-GROUND:ALWAYS CONTINUITY
- 13-GROUND:CONTINUITY WITH LIGHT CONTROL SW AT TAIL OR HEAD POSITION
- 14-GROUND:CONTINUITY WITH LIGHT CONTROL SW AT HEAD POSITION

○ : PARTS LOCATION

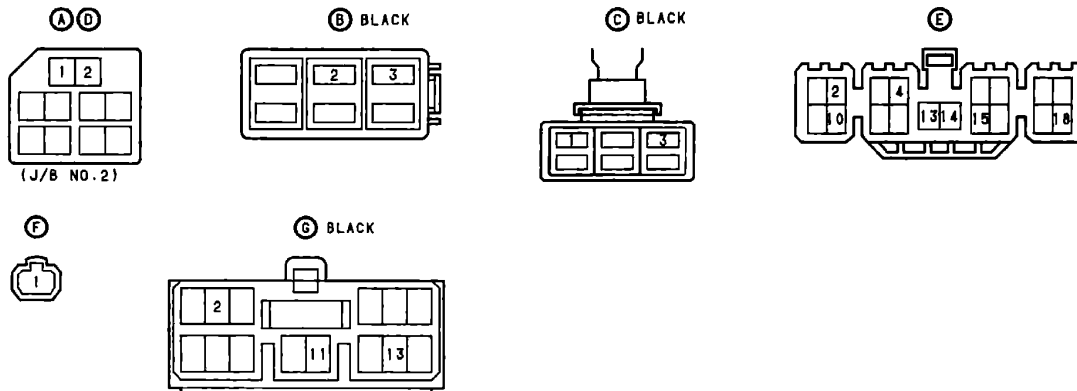
CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9	22(3S-GTE)	D	F9	24(3S-FE)
B	F9	23(3S-GE Δ)	E	I12	25
C	F9	23(3S-GE O)	F	D9	26(C/P), 27(L/B)
G	C16	25			

⦿ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1B		
1D		
1L		
1M		
1N		
2B	18	ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2D		
2F		

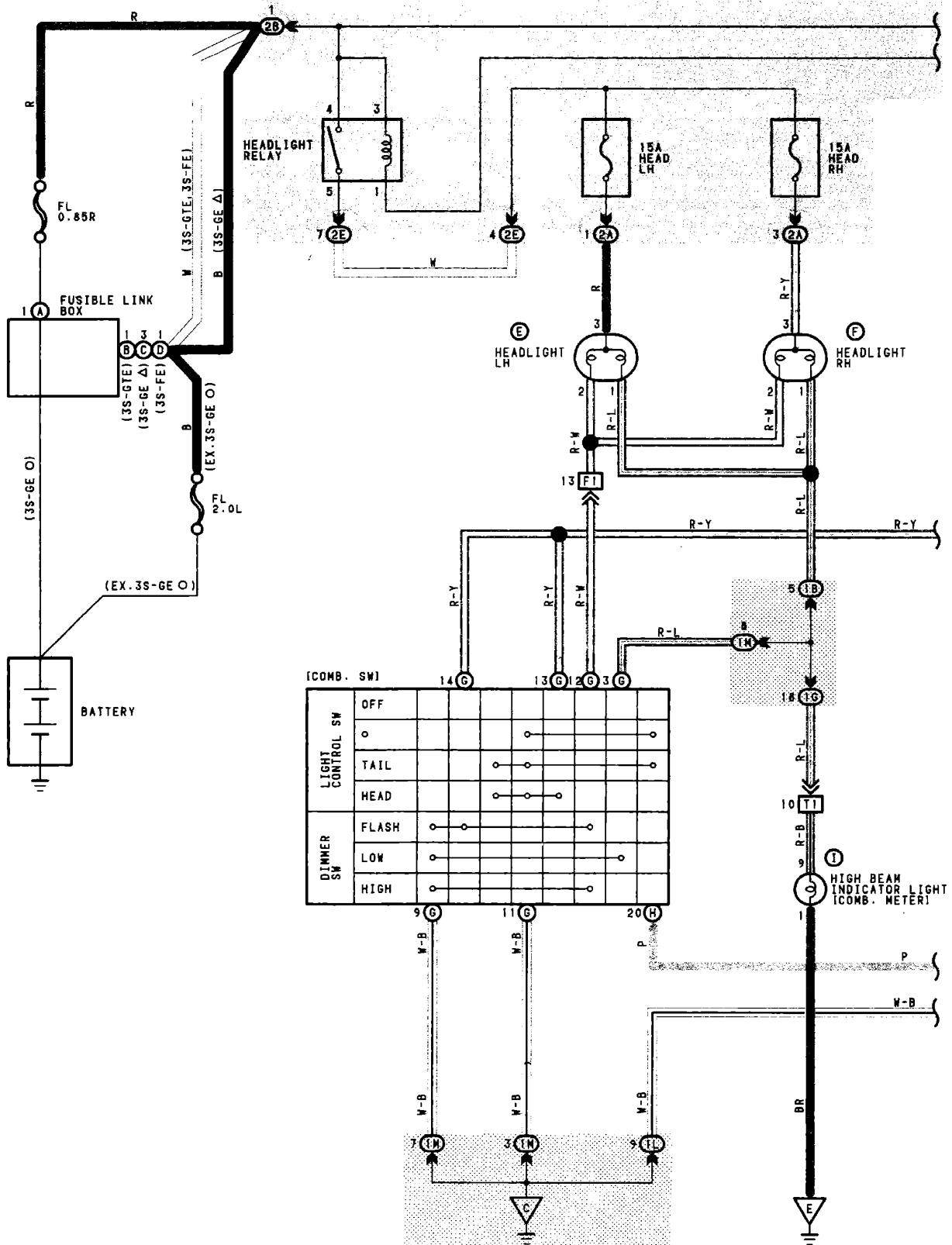
▽ : GROUND POINTS

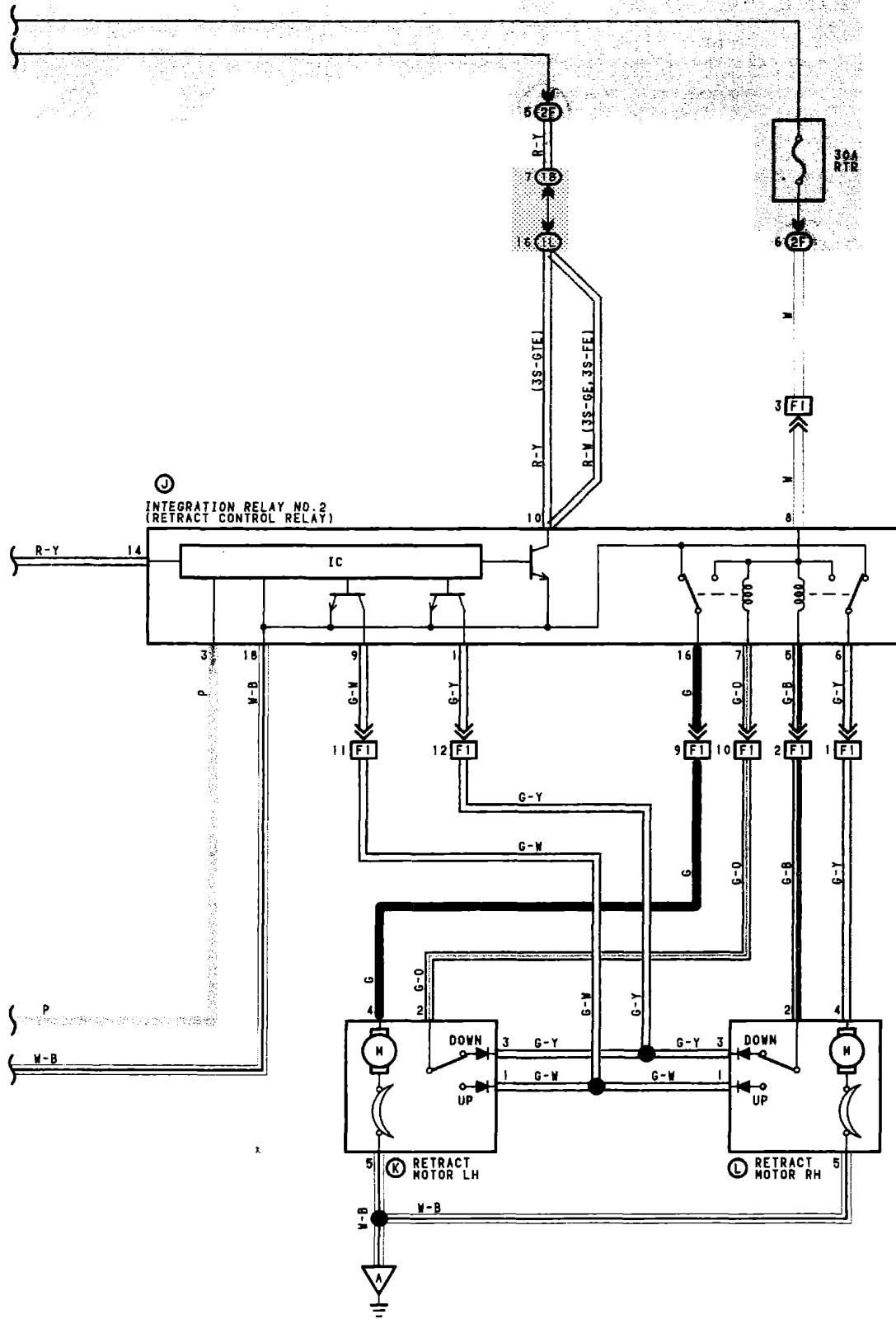
CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT



8 HEADLIGHTS

△ W/ CRUISE CONTROL AND A.B.S.
 ○ W/O CRUISE CONTROL AND/OR A.B.S.





8 HEADLIGHTS

△ W/ CRUISE CONTROL AND A.B.S.
○ W/O CRUISE CONTROL AND/OR A.B.S.

SERVICE HINTS

Ⓜ INTEGRATION RELAY NO.2(RETRACT CONTROL RELAY)

8-GROUND: ALWAYS 12VOLTS

- 1-18 : CONTINUITY FOR 8-12 SECONDS WITH LIGHT CONTROL SW AT HEAD POSITION OR LIGHT CONTROL SW AT HOLD POSITION AND DIMMER SW AT FLASH POSITION
- 1-18 : CONTINUITY FOR 8-12 SECONDS 1-1.5 SECONDS AFTER LIGHT CONTROL SW OFF AND DIMMER SW AT FLASH POSITION
- 9-18 : CONTINUITY FOR 8-12 SECONDS WITH LIGHT CONTROL SW AT HOLD(UP POSITION) → OFF POSITION
- 9-18 : CONTINUITY FOR 8-12 SECONDS 1-1.5 SECONDS AFTER LIGHT CONTROL SW OFF AND DIMMER SW AT FLASH POSITION
- 8-6, 8-16: CLOSED WITH LIGHT CONTROL SW AT HEAD POSITION UNTIL RETRACT MOTOR AT UP POSITION
- 8-6, 8-16: CLOSED WITH LIGHT CONTROL SW AT OFF POSITION UNTIL RETRACT MOTOR AT DOWN POSITION

ⓀⓁ RETRACT MOTORS

- 2-3: OPEN WITH RETRACT MOTOR AT LOWERMOST POSITION
- 2-1: OPEN WITH RETRACT MOTOR AT UPPERMOST POSITION

LIGHT AUTO TURN-OFF OPERATION

PLEASE REFER TO THE LIGHT AUTO TURN OFF SYSTEM (SYSTEM NO.7)

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9 23(3S-GE ○)	E	H1 22(3S-GTE), 23(3S-GE), 24(3S-FE)	I	C12 25
B	F9 22(3S-GTE)	F	H2 22(3S-GTE), 23(3S-GE), 24(3S-FE)	J	I12 25
C	F9 23(3S-GE △)	G	C16 25	K	R3 22(3S-GTE), 23(3S-GE), 24(3S-FE)
D	F9 24(3S-FE)	H	C15 25	L	R4 22(3S-GTE), 23(3S-GE), 24(3S-FE)

Ⓞ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

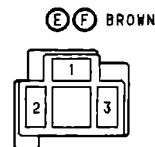
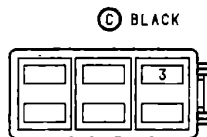
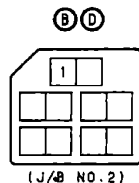
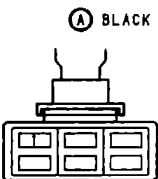
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1M		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2B		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2E		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2F		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

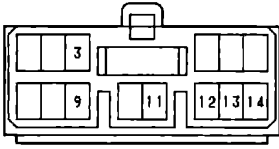
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
F1	28(3S-GTE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	
T1	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSRTUMENT PANEL LEFT)

▽ : GROUND POINTS

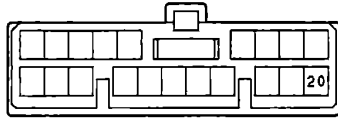
CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE)	RIGHT FENDER
	30(3S-GE)	
	32(3S-FE)	
C	34	J/B NO.1 SET BOLT
E		BEHIND RADIO



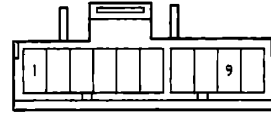
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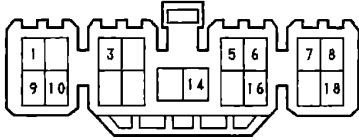
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Ⓛ GRAY



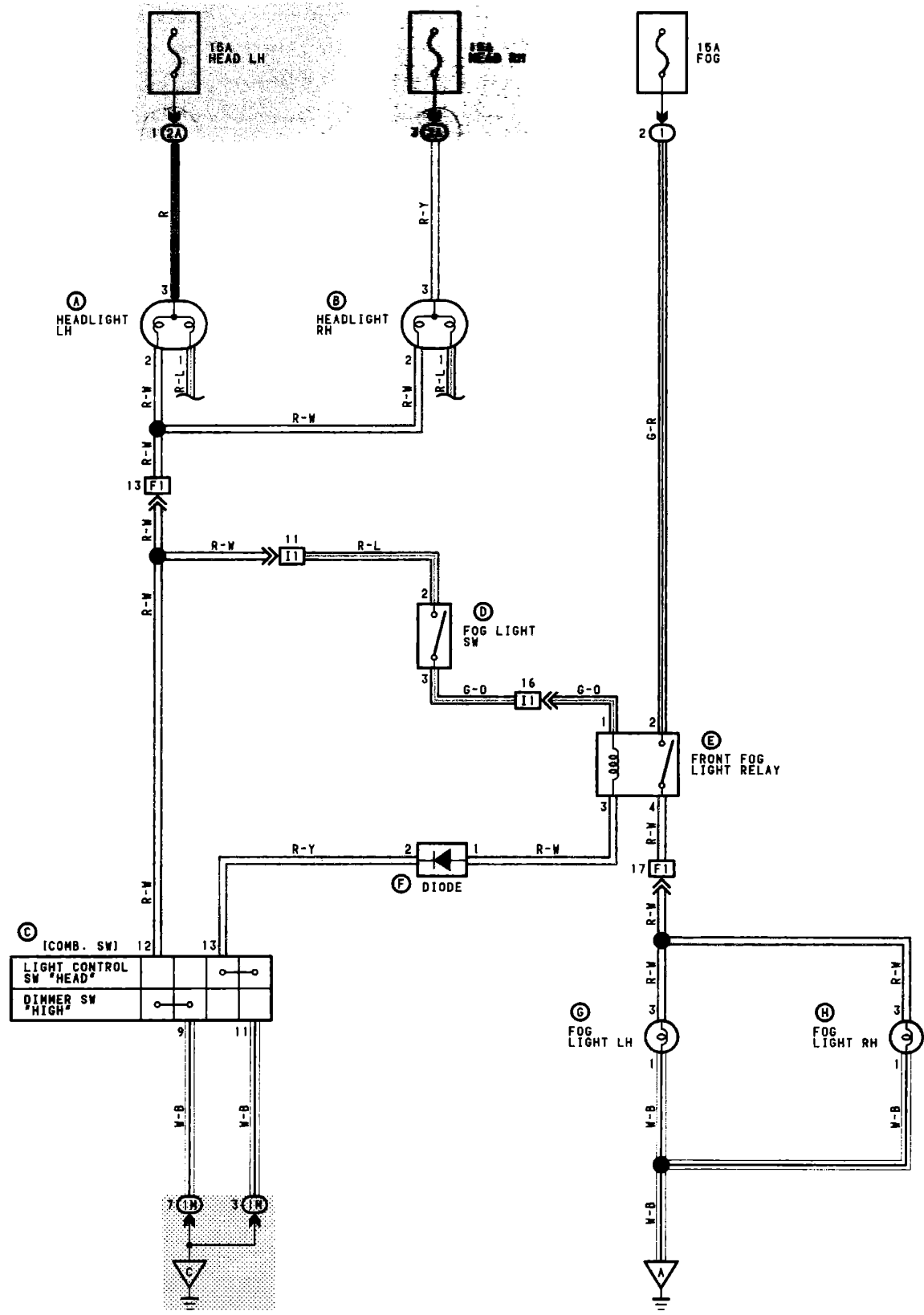
Ⓜ



Ⓚ Ⓛ BLACK



9 FRONT FOG LIGHTS



SERVICE HINTS

Ⓢ DIMMER SW (COMB. SW)

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

Ⓢ FRONT FOG LIGHT RELAY

2-4:CLOSED WITH LIGHT CONTROL SW AT HEAD POSITION, DIMMER SW AT LOW POSITION AND FOG LIGHT SW ON

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	H1 22(3S-GTE)	D	F10 25	G	F1 22(3S-GTE)
B	H2 22(3S-GTE)	E	F11 25	H	F2 22(3S-GTE)
C	C16 25	F	D6 25		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	21	R/B NO.1 (LEFT KICK PANEL)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

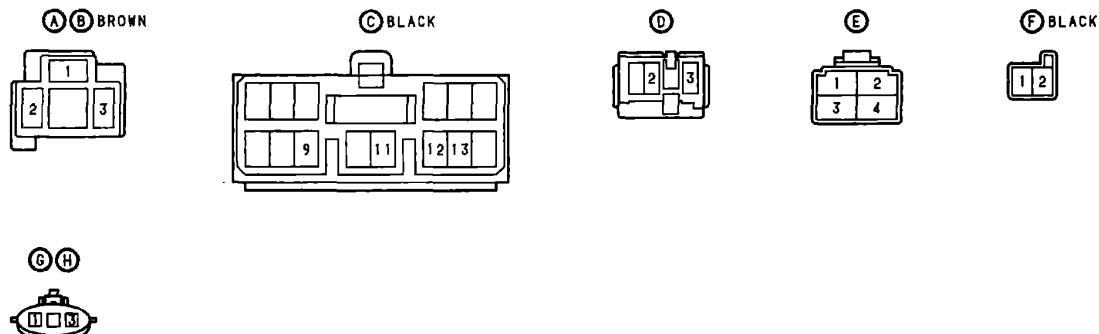
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1M	16	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
F1	28(3S-GTE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
I1	34	INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)

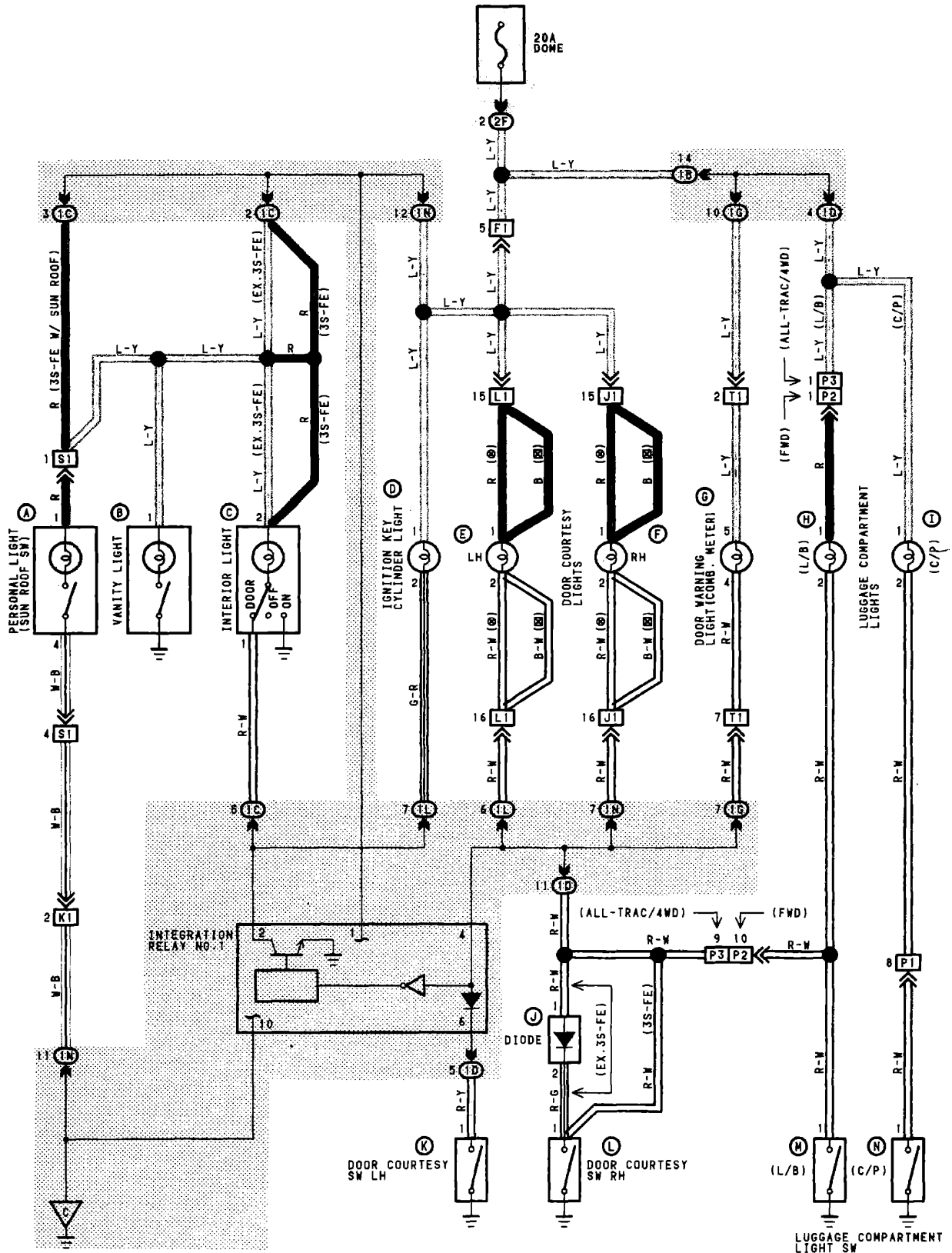
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE)	RIGHT FENDER
C	34	J/B NO.1 SET BOLT



10 INTERIOR LIGHTS

W/ DOOR LOCK
W/O DOOR LOCK



SERVICE HINTS

INTEGRATION RELAY NO.1

⑩ 5-GROUND: CONTINUITY WITH DOOR OPEN AND FOR 5 SECONDS AFTER DOOR CLOSED

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	S11 26(C/P), 27(L/B)	F	D12 26(C/P), 27(L/B)	K	D9 26(C/P), 27(L/B)
B	Y6 26(C/P), 27(L/B)	G	C14 25	L	D10 26(C/P), 27(L/B)
C	I14 26(C/P), 27(L/B)	H	L4 26(C/P)	M	L5 26(C/P)
D	I10 25	I	L4 27(L/B)	N	L5 27(L/B)
E	D11 26(C/P), 27(L/B)	J	D7 25		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

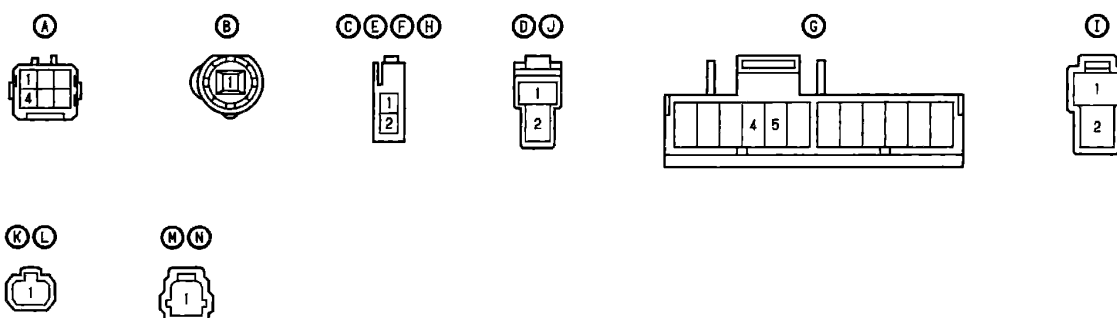
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1C		ROOF WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D		FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		
1N		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
2F	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
F1	28(3S-GTE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	
J1	36(C/P)	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
	38(L/B)	
K1	36(C/P)	COWL WIRE AND ROOF WIRE (LEFT KICK PANEL)
	38(L/B)	
L1	36(C/P)	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
	38(L/B)	
P1	36	FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
P2	38	
P3		
S1	36(C/P)	ROOF WIRE AND ROOF NO.2 WIRE (ROOF FRONT)
	38(L/B)	
T1	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

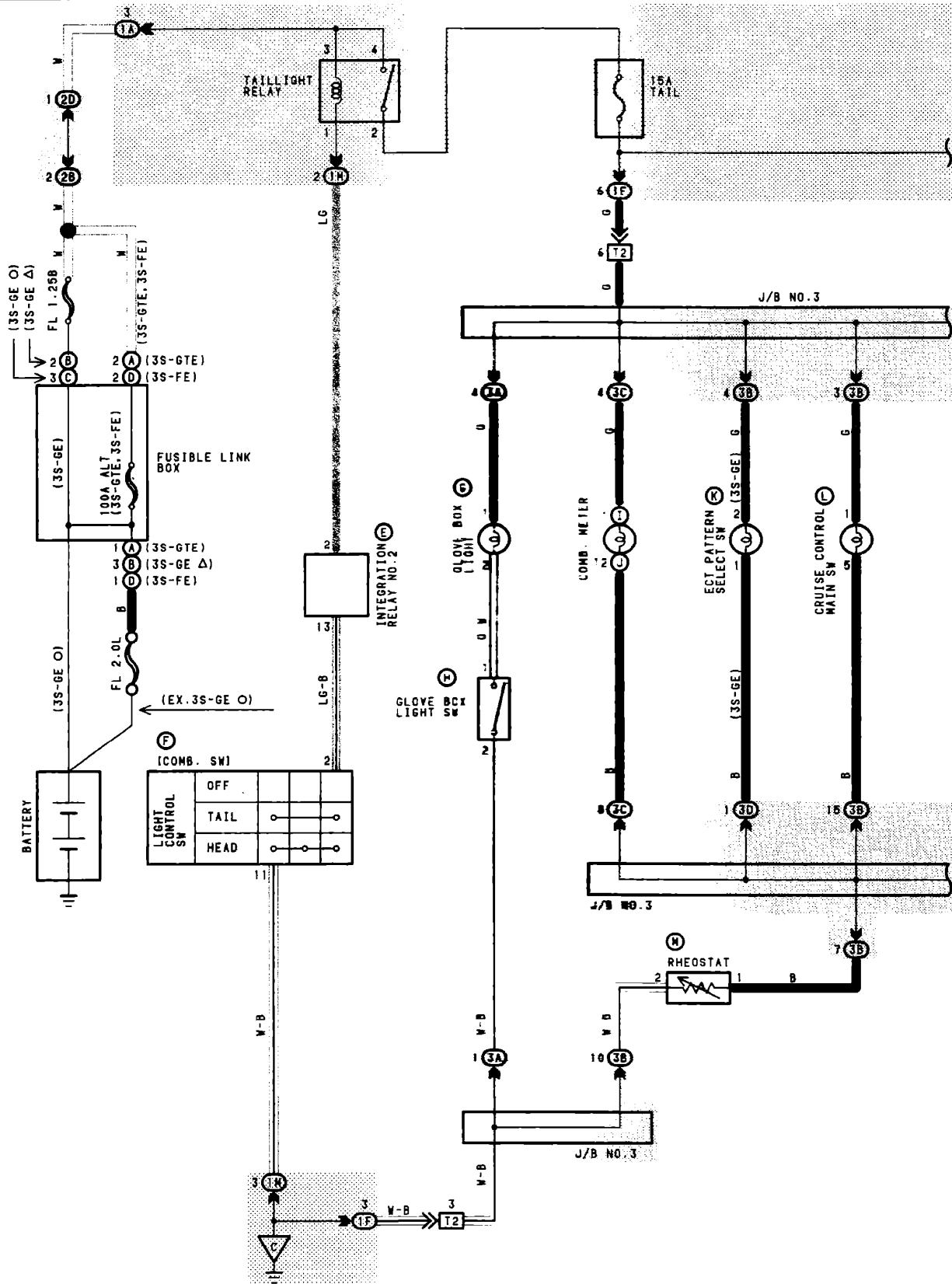
▽ : GROUND POINTS

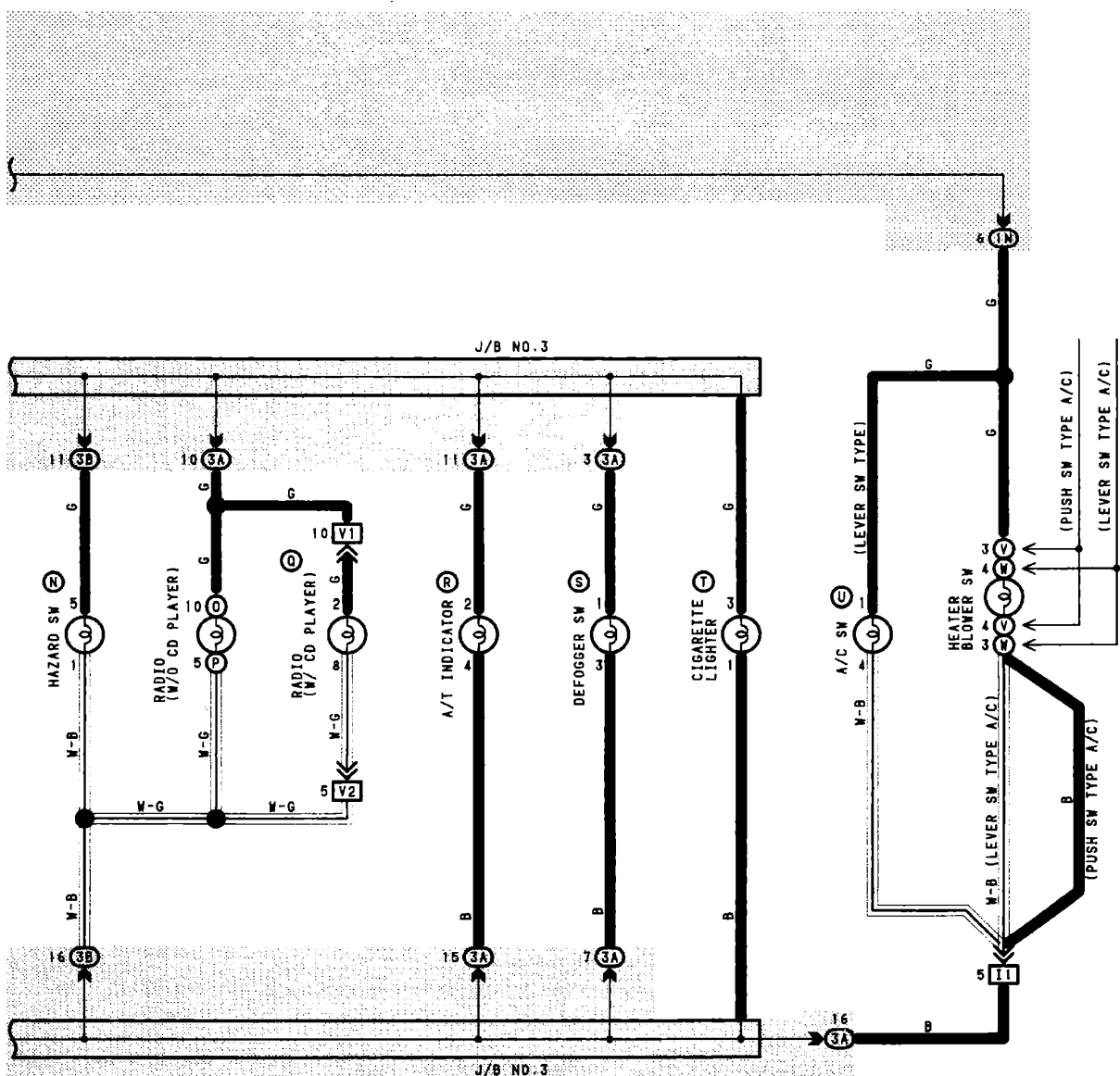
CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT



11 ILLUMINATION

Δ W/ CRUISE CONTROL AND A.B.S.
 ○ W/O CRUISE CONTROL AND/OR A.B.S.





11 ILLUMINATION

△ W/ CRUISE CONTROL AND A.B.S.
○ W/O CRUISE CONTROL AND/OR A.B.S.

SERVICE HINTS

TAILLIGHT RELAY

CLOSED WITH LIGHT CONTROL SW AT TAIL OR HEAD POSITION(LIGHT AUTO TURN OFF SYSTEM OFF)

Ⓢ INTEGRATION RELAY NO.2

PLEASE REFER TO LIGHT AUTO TURN OFF SYSTEM(SYSTEM NO.7)

Ⓜ RHEOSTAT

1-2: APPROX. 12VOLTS WITH RHEOSTAT FULLY TURNED COUNTER CLOCKWISE AND 0VOLT WITH FULLY TURNED CLOCKWISE

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9 22(3S-GTE)	I	C13 25	Q	R7 25
B	F9 23(3S-GE △)	J	C14 25	R	O5 25
C	F9 23(3S-GE ○)	K	E6 25	S	D3 25
D	F9 24(3S-FE)	L	C19 25	T	C8 25
E	I12 25	M	R9 25	U	A31 25
F	C16 25	N	H5 25	V	H6 25
G	G1 25	O	R5 25	W	H6 25
H	G2 25	P	R6 25		

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

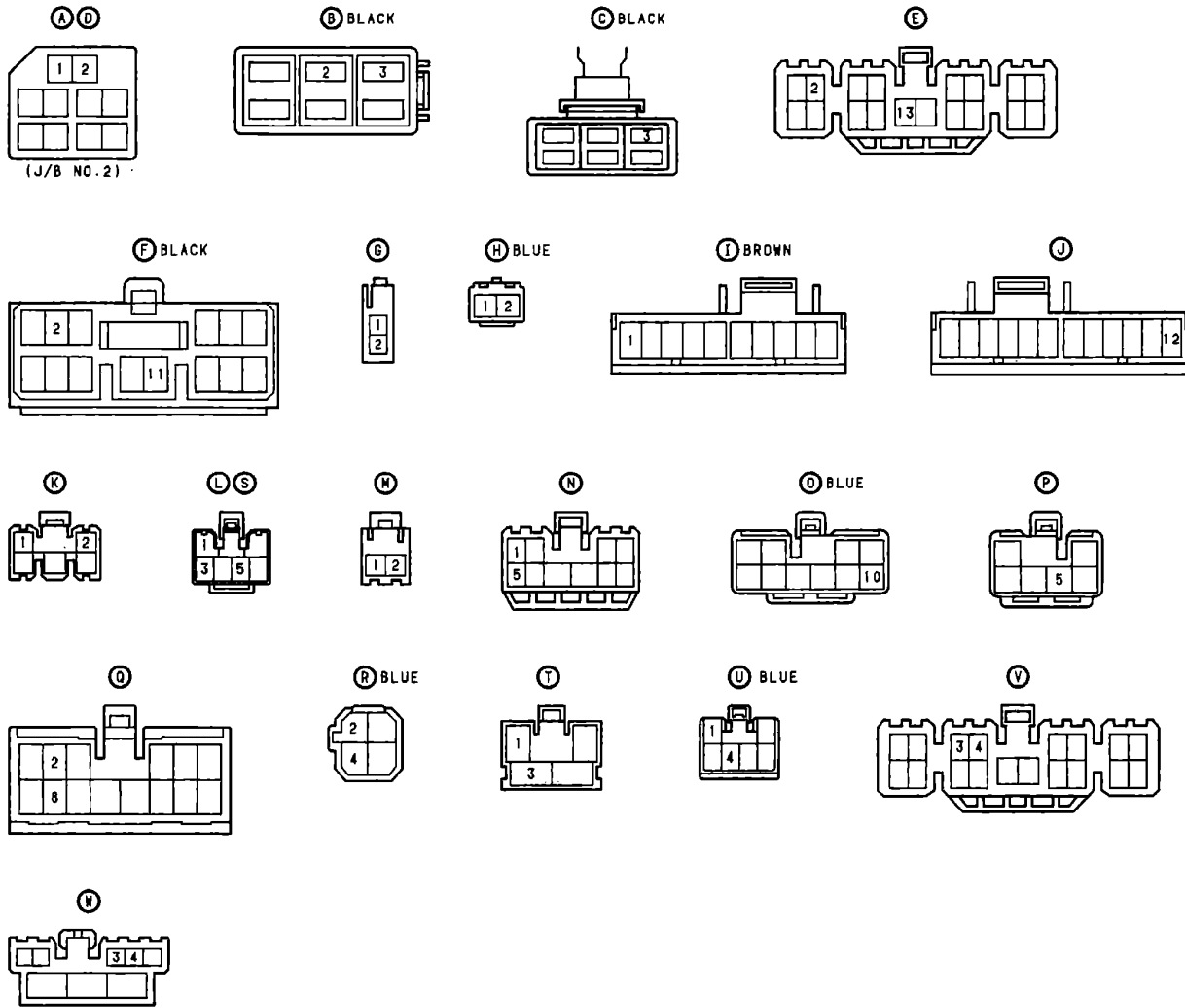
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1M		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1N		
2B	18	ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2D		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
3A	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)
3B		
3C		
3D		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
I1	34	INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)
I2		INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)
V1		INSTRUMENT PANEL WIRE AND CONSOLE BOX WIRE (BEHIND RADIO)
V2		

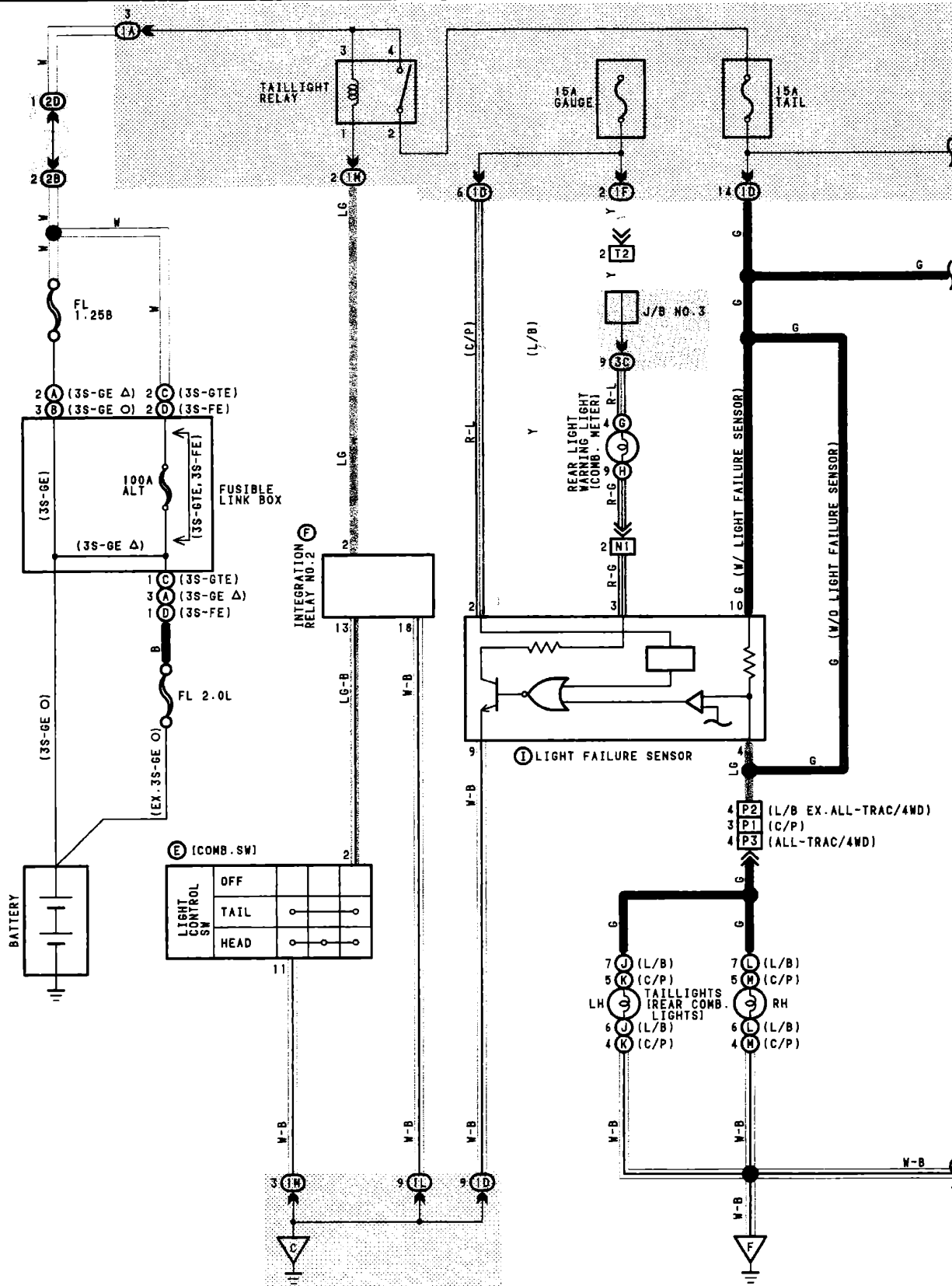
▽ : GROUND POINTS

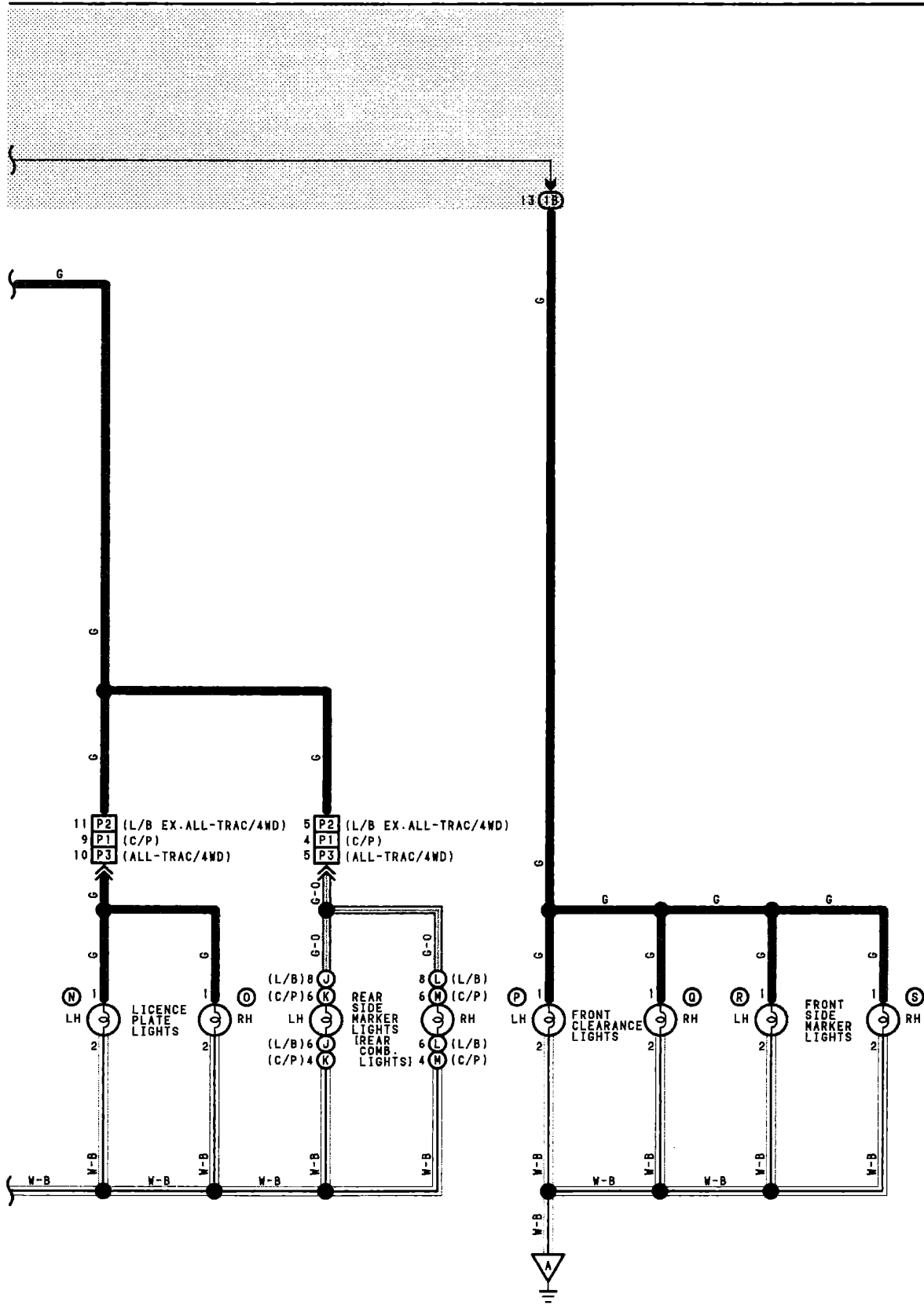
CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT



12 TAILLIGHTS

△ W/ CRUISE CONTROL AND A.B.S
 ○ W/O CRUISE CONTROL AND/OR A.B.S





12 TAILLIGHTS

△ W/ CRUISE CONTROL AND A.B.S
○ W/O CRUISE CONTROL AND/OR A.B.S

SYSTEM OUTLINE

WHEN THE LIGHT CONTROL SW IS TURNED TO TAIL OR HEAD POSITION, THE CURRENT FLOWS TO TERMINAL 10 OF THE LIGHT FAILURE SENSOR THROUGH THE TAIL FUSE. WHEN THE IGNITION SW IS TURNED ON, THE CURRENT FLOWS FROM THE GAUGE FUSE TO TERMINAL 2 OF THE LIGHT FAILURE SENSOR AND THROUGH THE REAR LIGHT WARNING LIGHT TO TERMINAL 3 OF THE LIGHT FAILURE SENSOR.

TAILLIGHT DISCONNECTION WARNING

WITH THE IGNITION SW ON AND THE LIGHT CONTROL SW TURNED TO TAIL OR HEAD POSITION, IF THE TAILLIGHT CIRCUIT IS OPEN, THE LIGHT FAILURE SENSOR DETECTS THE FAILURE BY THE CHANGE IN CURRENT FLOWING FROM TERMINAL 10 OF THE LIGHT FAILURE SENSOR TO TERMINAL 4, AND THE WARNING CIRCUIT OF THE LIGHT FAILURE SENSOR IS ACTIVATED.

AS A RESULT, THE CURRENT FLOWS FROM TERMINAL 3 OF THE LIGHT FAILURE SENSOR → TERMINAL 9 → GROUND AND TURNS THE REAR LIGHT WARNING LIGHT ON, WHICH REMAINS ON UNTIL THE LIGHT CONTROL SW IS TURNED OFF.

SERVICE HINTS

TAILLIGHT RELAY

4-2: CLOSED WITH LIGHT CONTROL SW AT TAIL OR HEAD POSITION

① LIGHT FAILURE SENSOR

2, 3-GROUND: APPROX. 12VOLTS WITH IGNITION SW AT ON POSITION

3, 10-GROUND: APPROX. 12VOLTS WITH LIGHT CONTROL SW AT TAIL OR HEAD POSITION

9 -GROUND: ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9 23(3S-GE △)	H	C13 25	D	L2 26(C/P), 27(L/B)
B	F9 23(3S-GE ○)	I	L3 26(C/P), 27(L/B)	P	F5 22(3S-GTE), 23(3S-GE), 24(3S-FE)
C	F9 22(3S-GTE)	J	R10 27(L/B)	Q	F6 22(3S-GTE), 23(3S-GE), 24(3S-FE)
D	F9 24(3S-FE)	K	R10 26(C/P)	R	F3 22(3S-GTE), 23(3S-GE), 24(3S-FE)
E	C16 25	L	R11 27(L/B)	S	F4 22(3S-GTE), 23(3S-GE), 24(3S-FE)
F	I12 25	M	R11 26(C/P)		
G	C12 25	N	L1 26(C/P), 27(L/B)		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

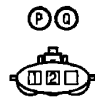
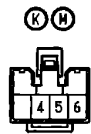
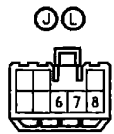
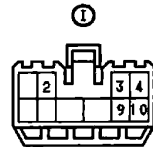
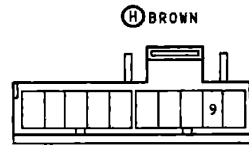
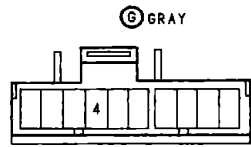
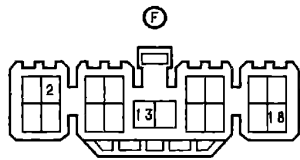
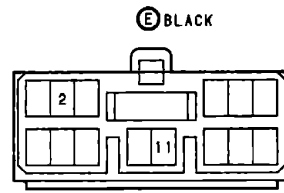
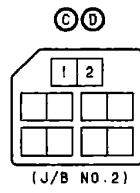
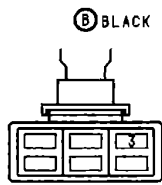
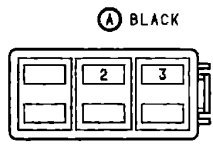
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1B		FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		
1L		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H		
2B	18	ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2D		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
N1	36(C/P)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
	38(L/B)	
P1	36	FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
P2	38	
P3		
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

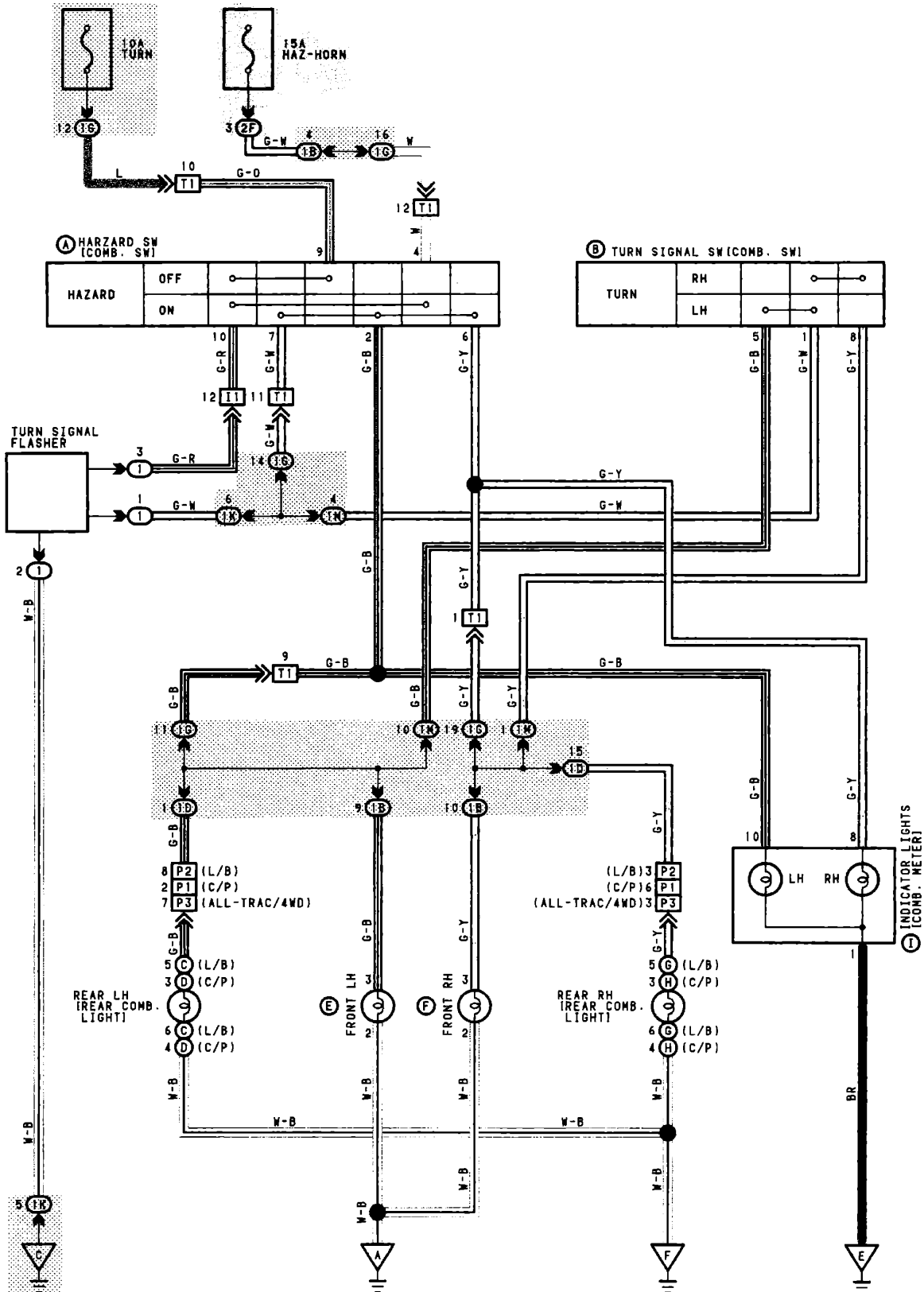
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE)	RIGHT FENDER
	30(3S-GE)	
	32(3S-FE)	
C	34	J/B NO.1 SET BOLT
F	36(C/P)	BACK PANEL CENTER
	38(L/B)	





TURN SIGNAL AND HAZARD WARNING LIGHTS



SERVICE HINTS

TURN SIGNAL FLASHER

3-GROUND: APPROX. 12VOLTS WITH IGNITION SW ON OR HAZARD SW ON
 1-GROUND: CHANGES FROM 12 TO 0 VOLTS WITH IGNITION SW ON AND TURN SIGNAL SW LEFT OR RIGHT, OR WITH HAZARD SW ON

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A H5	25	D R10	26(C/P)	G R11	27(L/B)
B C16	25	E F5	22(3S-GTE), 23(3S-GE), 24(3S-FE)	H R11	26(C/P)
C R10	27(L/B)	F F6	22(3S-GTE), 23(3S-GE), 24(3S-FE)	I C12	25

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	21	R/B NO.1 (LEFT KICK PANEL)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

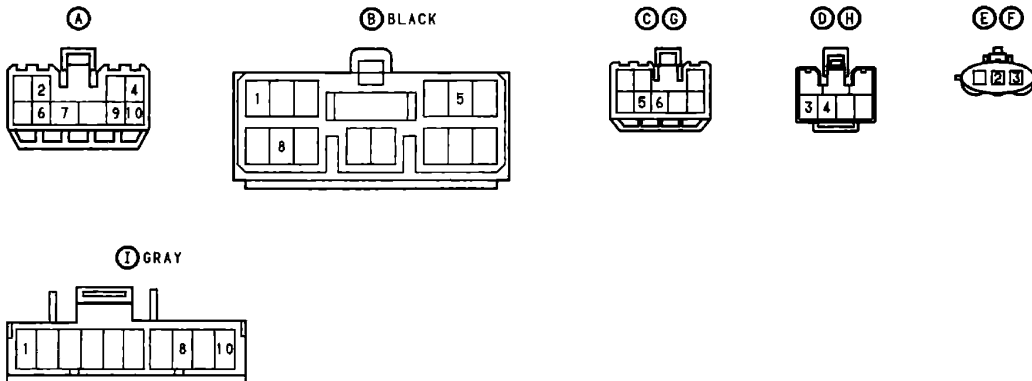
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D		FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1K		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1M		
2F	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

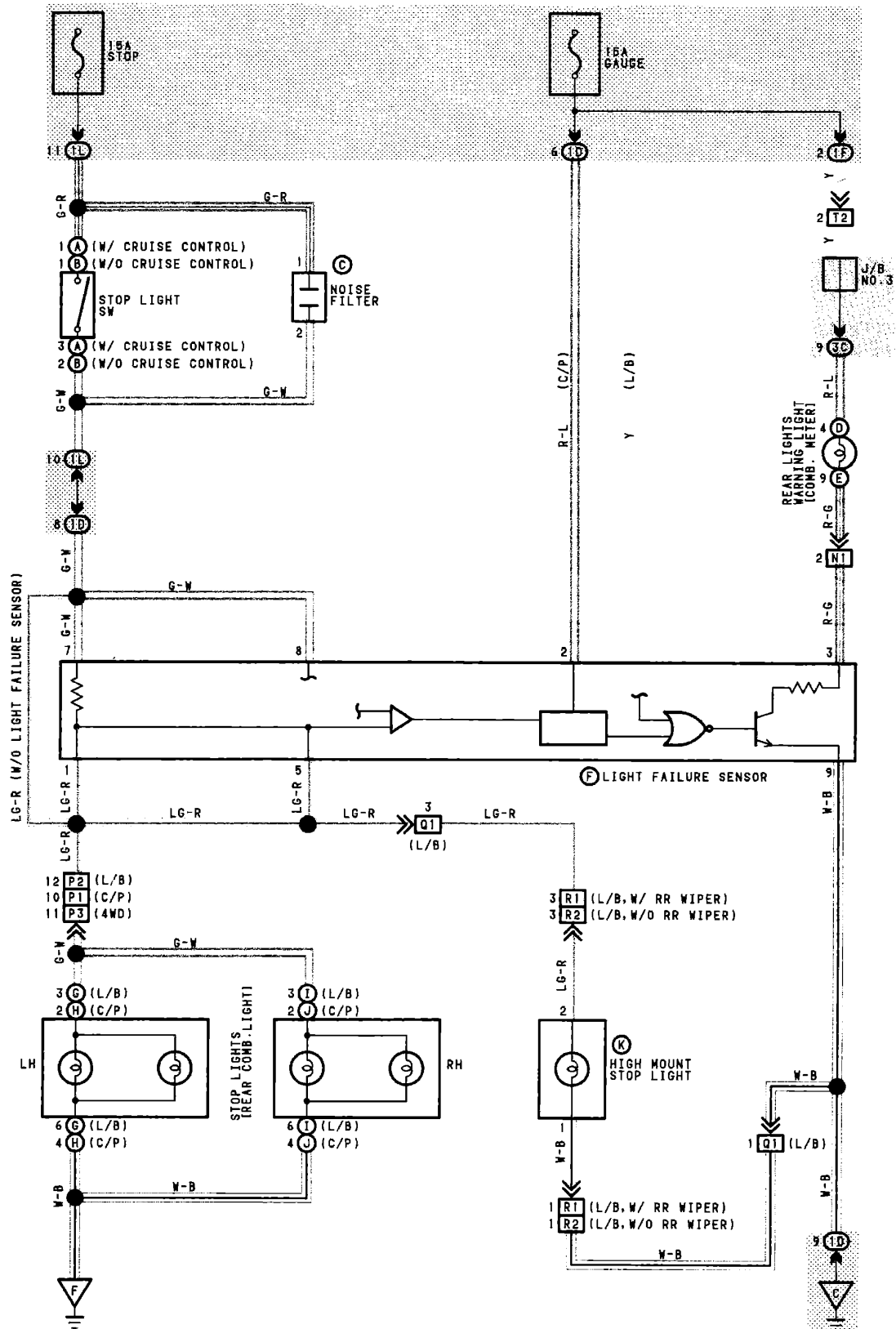
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
11	34	INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)
P1	36	FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
P2		
P3	38	
T1	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE)	RIGHT FENDER
	30(3S-GE)	
	32(3S-FE)	
C	34	J/B NO.1 SET BOLT
E	34	BEHIND RADIO
F	36(C/P)	BACK PANEL CENTER
	38(L/B)	



14 STOP LIGHTS



SYSTEM OUTLINE

CURRENT IS APPLIED AT ALL TIMES THROUGH A STOP FUSE TO TERMINAL 1 OF THE STOP LIGHT SW.
 WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS FROM THE GAUGE FUSE TO TERMINAL 2 OF THE LIGHT FAILURE SENSOR AND THROUGH THE REAR LIGHT WARNING LIGHT TO TERMINAL 3 OF THE LIGHT FAILURE SENSOR.

STOP LIGHT DISCONNECTION WARNING

WHEN THE IGNITION SW IS TURNED ON AND THE BRAKE PEDAL IS PRESSED (STOP LIGHT SW ON), IF THE STOP LIGHT CIRCUIT IS OPEN, THE CURRENT FLOWING FROM TERMINAL 7 OF THE LIGHT FAILURE SENSOR TO TERMINAL 1 AND 5 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 3 OF THE LIGHT FAILURE SENSOR → TERMINAL 9 → GROUND AND TURNS THE REAR LIGHT WARNING LIGHT ON, BY PRESSING THE BRAKE PEDAL, THE CURRENT FLOWING TO TERMINAL 2 OF THE LIGHT FAILURE SENSOR KEEPS THE WARNING CIRCUIT ON HOLD AND THE WARNING LIGHT ON UNTIL THE IGNITION SW TURNED OFF.

SERVICE HINTS

Ⓐ Ⓑ STOP LIGHT SW

CLOSED WITH BRAKE PEDAL DEPRESSED

Ⓔ LIGHT FAILURE SENSOR

1, 5, 7, 8, -GROUND: APPROX. 12VOLTS WITH STOP LIGHT SW ON

2, 3, -GROUND: APPROX. 12VOLTS WITH IGNITION SW ON

9-GROUND: ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A C20	25	E C13	25	I R11	27(L/B)
B C20	25	F L3	26(C/P), 27(L/B)	J R11	26(C/P)
C N4	25	G R10	27(L/B)	K H7	26(C/P), 27(L/B)
D C12	25	H R10	26(C/P)		

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

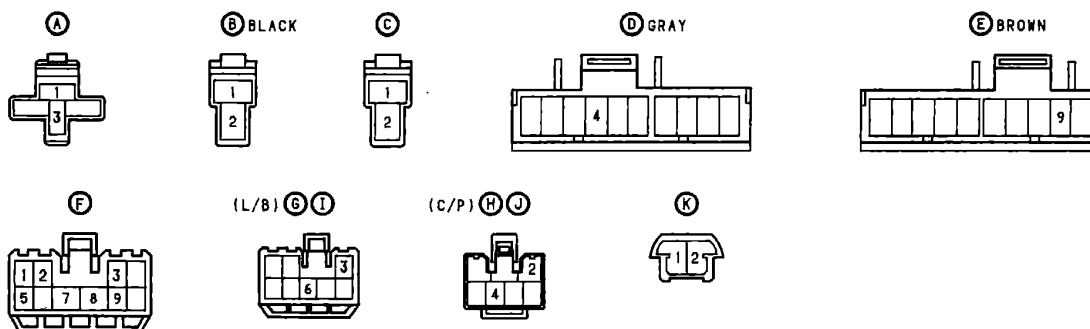
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D		FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F	16	INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
N1	36(C/P)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
	36(L/B)	
P1	36	FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
P2		FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
P3		
Q1	38	BACK DOOR NO.1 WIRE AND FLOOR WIRE (UNDER LEFT REAR PILLAR)
R1		BACK DOOR NO.1 WIRE AND BACK DOOR NO.2 WIRE (BACK DOOR LEFT)
R2		
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

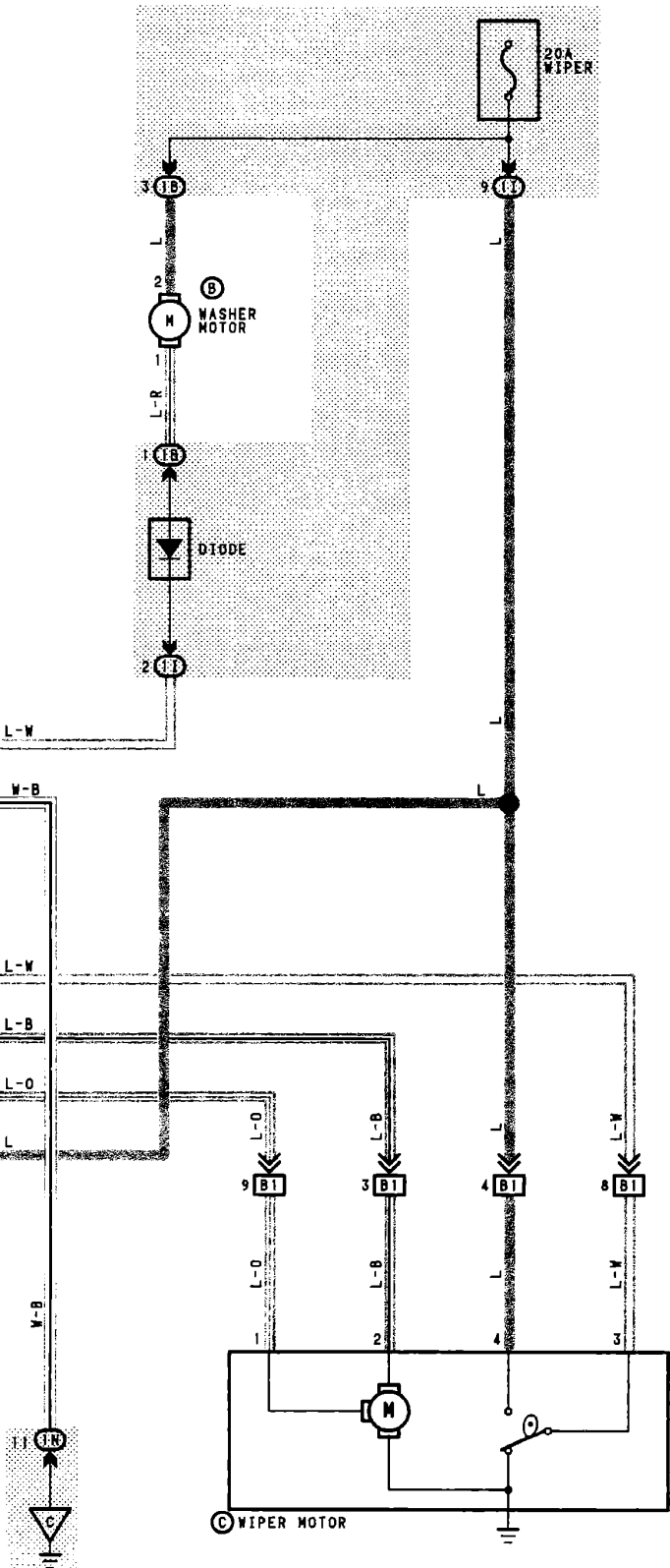
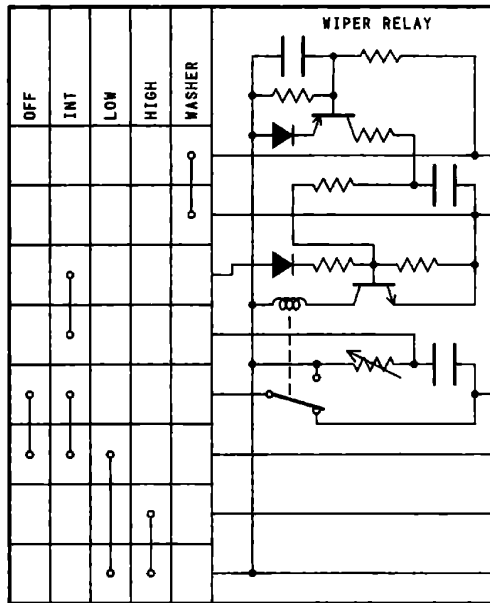
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT
F	36(C/P)	BACK PANEL CENTER
	36(L/B)	



15 FRONT WIPER AND WASHER

A
WIPER AND WASHER SW (W/ WIPER RELAY)
(COMB. SW)



SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS TO TERMINAL 18 OF THE WIPER AND WASHER SW, TERMINAL 2 OF THE WASHER MOTOR AND TERMINAL 4 OF THE WIPER MOTOR THROUGH THE WIPER FUSE.

1. LOW SPEED POSITION

WITH WIPER SW TURNED TO LOW POSITION, THE CURRENT FLOWS FROM TERMINAL 18 OF THE WIPER AND WASHER SW → TERMINAL 7 → TERMINAL 2 OF THE WIPER MOTOR → WIPER MOTOR → TO GROUND AND CAUSES TO THE WIPER MOTOR TO RUN AT LOW SPEED.

2. HIGH SPEED POSITION

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

3. INT POSITION (W/ INT SW)

WITH WIPER SW TURNED TO INT POSITION, THE RELAY OPERATES AND THE CURRENT WHICH IS CONNECTED BY RELAY FUNCTION FLOWS FROM TERMINAL 18 OF THE WIPER AND WASHER SW → TERMINAL 16 → TO GROUND. THIS FLOW OF CURRENT OPERATES THE INTERMITTENT CIRCUIT AND THE CURRENT FLOWS FROM TERMINAL 18 OF THE WIPER AND WASHER SW → TERMINAL 7 → TERMINAL 2 OF THE WIPER MOTOR → TO GROUND AND THE WIPER FUNCTIONS.

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

4. WASHER CONTINUOUS OPERATION

WITH WASHER SW TURNED TO ON, THE CURRENT FLOWS FROM TERMINAL 2 OF THE WASHER MOTOR → TERMINAL 1 → TERMINAL 8 OF THE WIPER AND WASHER SW → TERMINAL 16 → TO GROUND AND CAUSES TO THE WASHER MOTOR TO RUN. AND WINDOW WASHER TO JET. THIS CAUSES THE CURRENT TO FLOW TO WASHER CONTINUOUS OPERATION CIRCUIT (W/ INT SW) IN TERMINAL 18 OF THE WIPER AND WASHER SW → TERMINAL 7 → TERMINAL 2 OF THE WIPER MOTOR → TO GROUND AND THE WIPER FUNCTION.

SERVICE HINTS

Ⓐ WIPER AND WASHER SW

- 16-GROUND: ALWAYS CONTINUITY
- 18-GROUND: APPROX. 12VOLTS WITH IGNITION SW AT ON POSITION
- 7-GROUND: APPROX. 12VOLTS WITH WIPER AND WASHER SW AT LOW POSITION
APPROX. 12VOLTS EVERY 4 SECONDS INTERMITTENTLY WITH WIPER SW AT INT POSITION
- 4-GROUND: APPROX. 12VOLTS WITH IGNITION SW ON UNLESS WIPER MOTOR AT STOP POSITION
- 13-GROUND: APPROX. 12VOLTS WITH IGNITION SW ON AND AFTER WIPER SW OFF UNTIL WIPER MOTOR STOPS

Ⓒ WIPER MOTOR

- 3-4 : CLOSED UNLESS WIPER MOTOR AT STOP POSITION

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	C15	25	B	W1	22(3S-GTE), 23(3S-GE), 24(3S-FE)
				C	W5
					22(3S-GTE), 23(3S-GE), 24(3S-FE)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

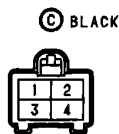
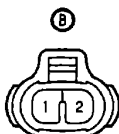
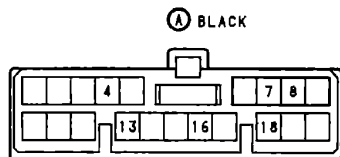
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
IB	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
II		
IN		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

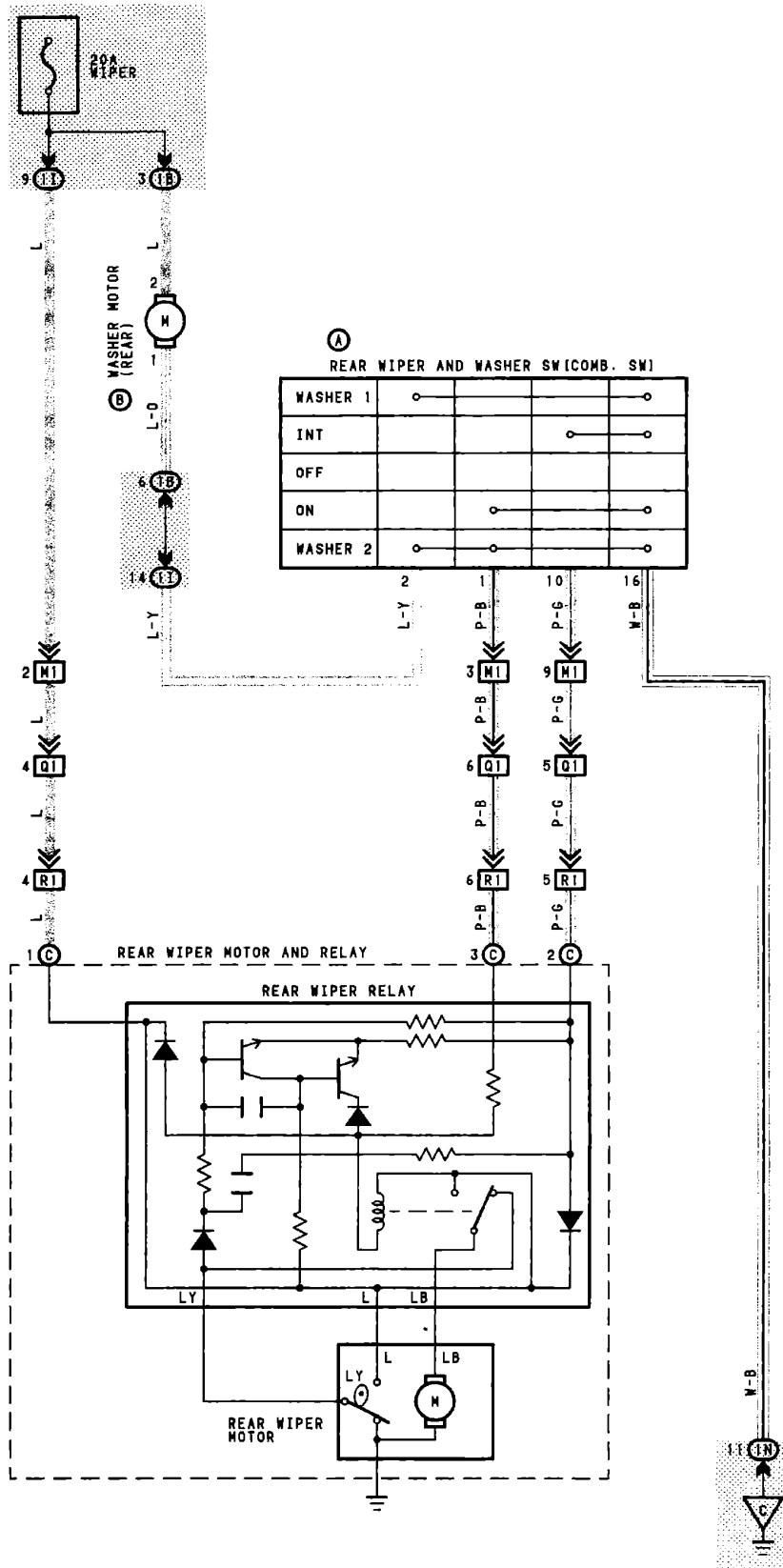
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B1	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT



16 REAR WIPER AND WASHER



SYSTEM OUTLINE

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

1. REAR WIPER NORMAL OPERATION

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

2. REAR WIPER INTERMITTENT OPERATION

WHEN THE IGNITION SW IS ON AND THE REAR WIPER AND WASHER SW IS TURNED TO INT POSITION, CURRENT FLOWING TO TERMINAL 1 OF THE REAR WIPER MOTOR AND RELAY FLOWS TO TERMINAL 2 OF THE RELAY → TERMINAL 10 OF THE REAR WIPER AND WASHER SW → TERMINAL 16 → GROUND. THIS CAUSES THE MOTOR TO OPERATE (THE POINT CHANGES) AND THE INTERMITTENT CIRCUIT OF THE RELAY OPERATES. INTERMITTENT OPERATION OF THE CIRCUIT IS CONTROLLED BY THE CHANGING AND DISCHARGING OF THE CONDENSER INSTALLED INSIDE THE RELAY.

3. WASHER OPERATION

WITH THE IGNITION SW TURNED ON AND THE REAR WIPER AND WASHER SW TURNED TO ON POSITION, WHEN THE WIPER SW IS TURNED FURTHER, THE CURRENT FLOWING TO TERMINAL 2 OF THE REAR WASHER MOTOR FLOWS TO TERMINAL 1 OF THE MOTOR → TERMINAL 2 OF THE REAR WIPER AND WASHER SW → TERMINAL 16 → TO GROUND SO THAT THE WASHER MOTOR ROTATES AND THE WINDOW WASHER EJECTS THE SPRAY, ONLY WHILE IS FULLY TURNED. WHEN THE WIPER SW IS OFF AND THEN TURNED TO WASHER ON (WIPER OFF SIDE), ONLY THE WASHER OPERATES.

SERVICE HINTS

B WASHER MOTOR (REAR)

2-GROUND: APPROX. 12VOLTS WITH IGNITION SW AT ON POSITION
 1-GROUND: CONTINUITY WITH WASHER SW TURNED ON

C REAR WIPER RELAY

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

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	C15 25	B	W2 22(3S-GTE), 23(3S-GE), 24(3S-FE)	C	R17 27

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

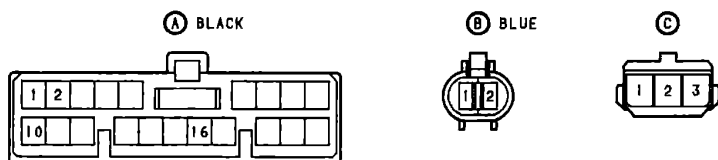
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1N		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

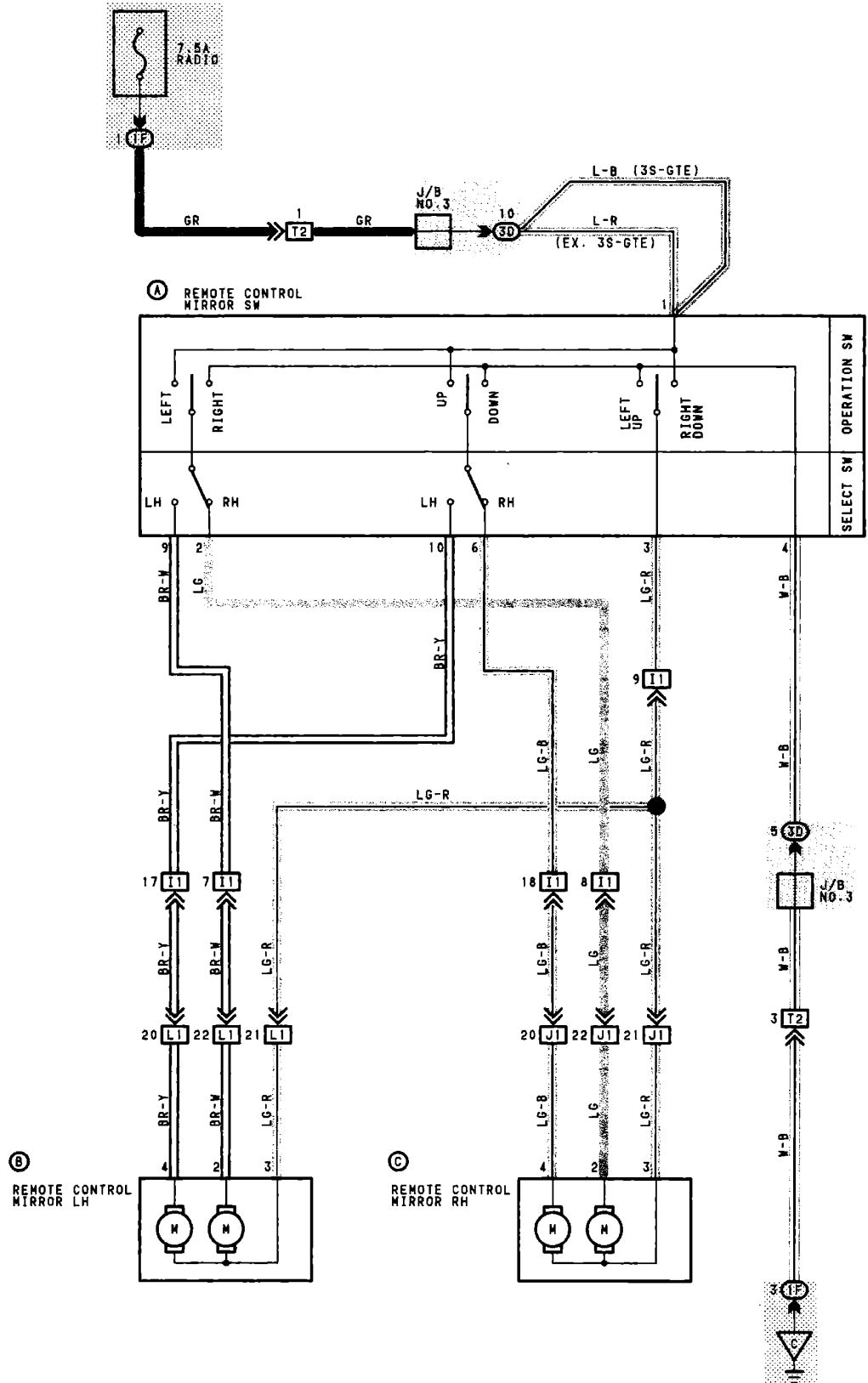
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
M1	38(L/B)	FLOOR WIRE AND COWL WIRE (J/B NO.1 LEFT KICK PANEL)
Q1	38	BACK DOOR NO.1 WIRE AND FLOOR WIRE (UNDER LEFT REAR PILLAR)
R1		BACK DOOR NO.1 WIRE AND BACK DOOR NO.2 WIRE (BACK DOOR LEFT)

▽ : GROUND POINTS

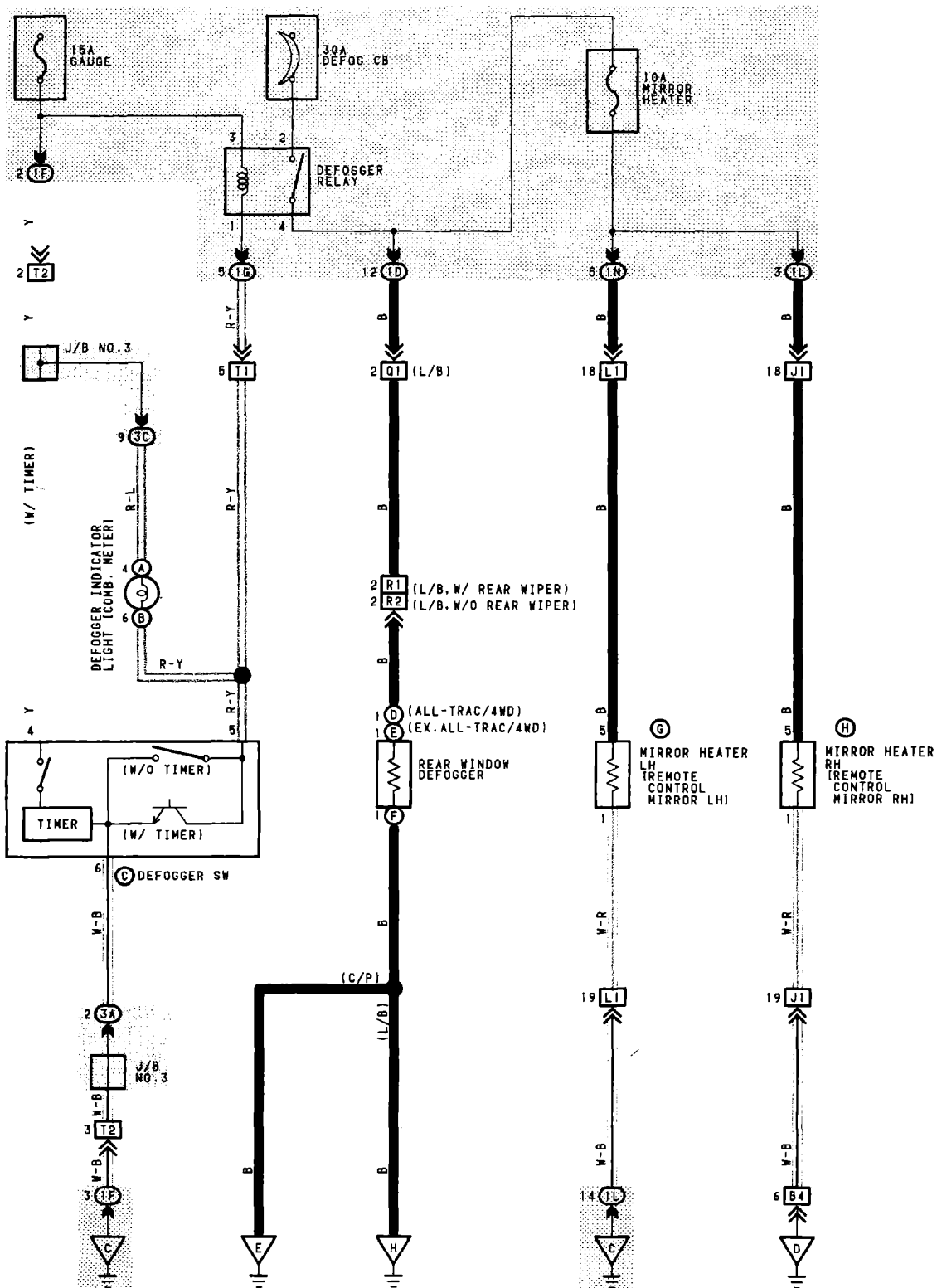
CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT



17 REMOTE CONTROL MIRRORS



18 REAR WINDOW DEFOGGER AND MIRROR HEATER



SERVICE HINTS

DEFOGGER RELAY

2-4 :CLOSED WITH IGNITION SW ON.DEFOGGER SW ON AND 15 MINUTES THEREAFTER

Ⓞ DEFOGGER SW(W/ TIMER)

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

6-GROUND:ALWAYS CONTINUITY

5-6 :CONTINUITY WITH DEFOGGER SW ON AND 15 MINUTES THEREAFTER

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A C12	25	D R16	27(3S-GTE)	G R18	26(C/P),27(L/B)
B C13	25	E R14	25(C/P),27(L/B EX. 3S-GTE)	H R19	26(C/P),27(L/B)
C D3	25	F R15	26(C/P),27(L/B)		

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

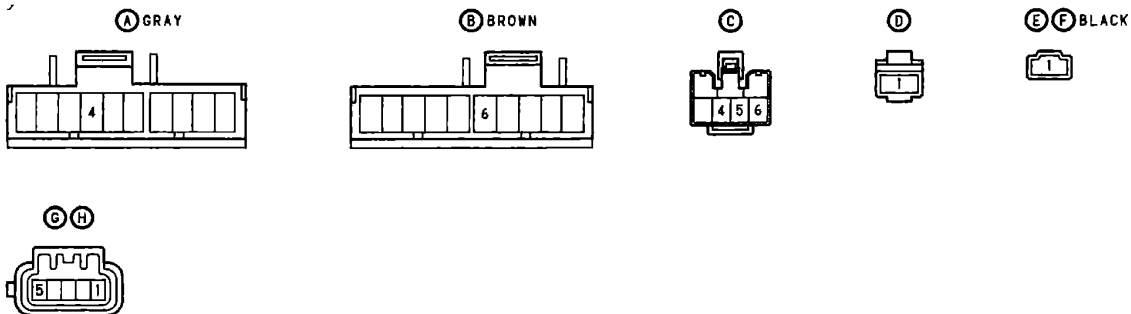
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	16	FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		
1L		
1M		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
3A	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)
3C		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

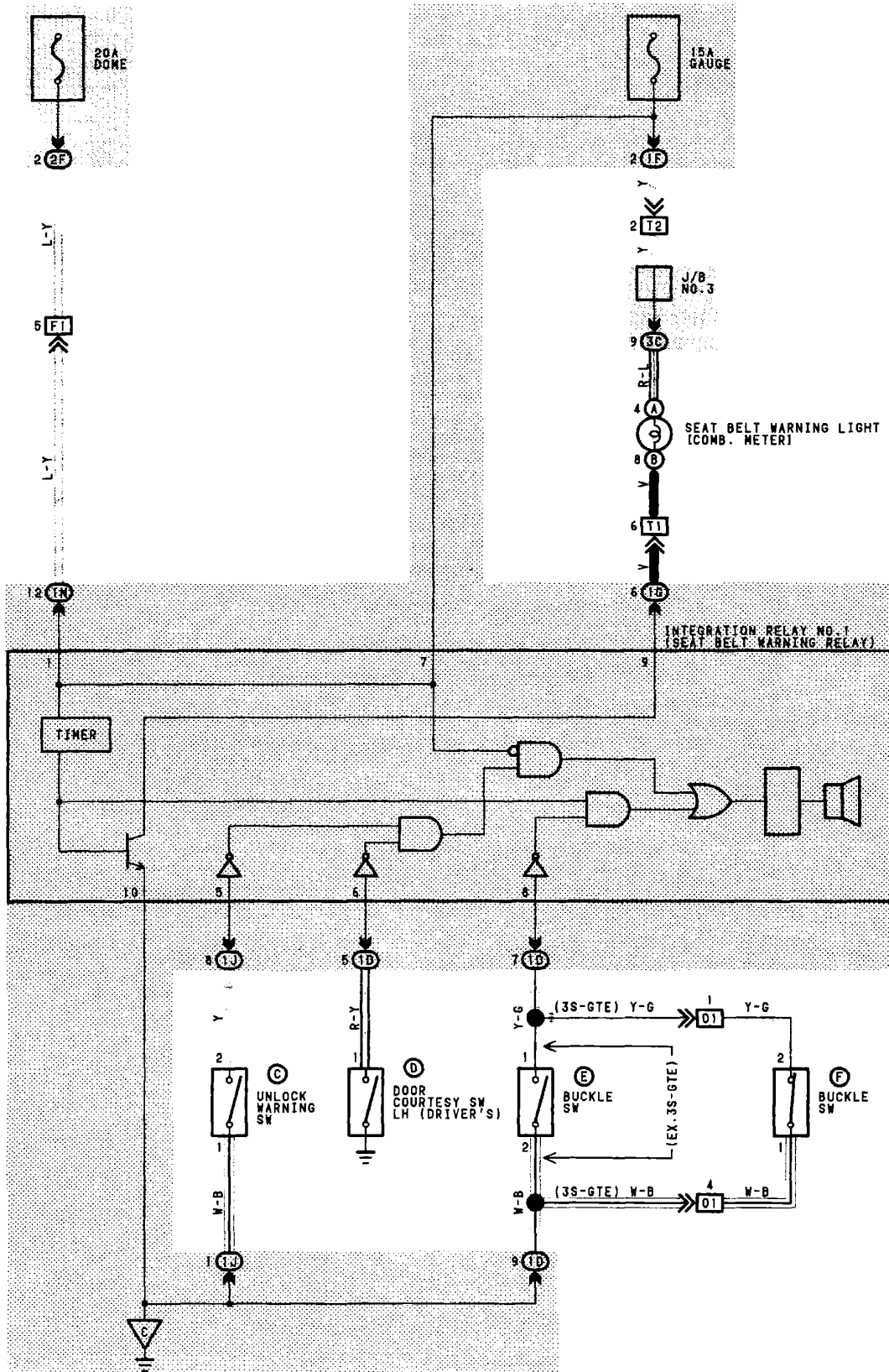
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B4	34	COWL WIRE AND R/B NO.4 (RIGHT KICK PANEL)
J1	36(C/P)	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
	38(L/B)	
L1	36(C/P)	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
	38(L/B)	
Q1	38	BACK DOOR NO.1 WIRE AND FLOOR WIRE (UNDER LEFT REAR PILLAR)
R1		BACK DOOR NO.1 WIRE AND BACK DOOR NO.2 WIRE (BACK DOOR LEFT)
R2		
T1		34
T2		

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT
D	34	R/B NO.4 SET BOLT
E	34	BEHIND RADIO
H	38(L/B)	BACK DOOR RIGHT



19 UNLOCK AND SEAT BELT WARNING



SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO TERMINAL 1 OF THE SEAT BELT WARNING RELAY THROUGH DOME FUSE.

1. SEAT BELT WARNING SYSTEM

WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS FROM THE GAUSE FUSE TO TERMINAL 7 OF THE SEAT BELT WARNING RELAY. AT THE SAME TIME, CURRENT FLOWS TO TERMINAL 9 OF THE RELAY FROM THE GAUSE FUSE THROUGH THE SEAT BELT WARNING LIGHT. THIS CURRENT ACTIVATES THE SEAT BELT WARNING RELAY AND, FOR APPROX. 4-8 SECONDS, CURRENT FLOWING THROUGH THE WARNING LIGHT FLOWS FROM TERMINAL 9 OF THE RELAY → TERMINAL 10 → GROUND, CAUSING THE WARNING LIGHT TO LIGHT UP. AT THE SAME AS THE WARNING LIGHT LIGHTS UP, A BUCKLE SW ON SIGNAL IS INPUT TO TERMINAL 8 OF THE RELAY, THE CURRENT FLOWING TO TERMINAL 1 OF THE RELAY FLOWS FROM TERMINAL 10 → GROUND AND THE SEAT BELT WARNING BUZZER SOUNDS FOR APPROX. 4-8 SECONDS. HOWEVER, IF THE SEAT BELT IS PUT ON DURING THIS PERIOD (WHILE THE BUZZER IS SOUNDING), SIGNAL INPUT TO TERMINAL 8 OF RELAY STOPS AND THE CURRENT FLOW FROM TERMINAL 1 OF THE RELAY → TERMINAL 10 → GROUND IS CUT, CAUSING THE BUZZER TO STOP.

2. UNLOCK WARNING SYSTEM

WITH THE IGNITION KEY INSERTED IN THE KEY CYLINDER (UNLOCK SW ON), THE IGNITION SW STILL OFF AND DOOR OPEN (DOOR COURTESY SW ON), WHEN A SIGNAL IS INPUT TO TERMINAL 6 OF THE RELAY, THE SEAT BELT WARNING RELAY OPERATES, CURRENT FLOWS FROM TERMINAL 1 OF THE RELAY → TERMINAL 10 → GROUND AND THE UNLOCK WARNING BUZZER SOUNDS.

SERVICE HINTS

INTEGRATION RELAY NO.1(SEAT BELT WARNING RELAY)

- 10-GROUND:ALWAYS CONTINUITY
- 6-GROUND:CONTINUITY WITH DOOR OPEN
- 5-GROUND:CONTINUITY WITH IGNITION KEY IN CYLINDER
- 8-GROUND:CONTINUITY UNLESS DRIVER'S LAP BELT IN USE
- 9-GROUND:0VOLT FOR 4-8SECONDS WITH IGNITION SW ON AND 12VOLTS 4-8SECONDS AFTER IGNITION SW ON
- 1-GROUND:12VOLTS WITH IGNITION SW ON

(C) UNLOCK WARNING SW

CLOSED WITH IGNITION KEY IN CYLINDER

(D) DOOR COURTESY SW LH(DRIVER'S)

CLOSED WITH DOOR OPEN

(E)(F) BUCKLE SW

CLOSED WITH DRIVER'S LAP BELT IN USE

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A C12	25	C U1	25	E B5	26(C/P),27(L/B EX. 3S-GTE)
B C14	25	D D9	26(C/P),27(L/B)	F B6	27(L/B 3S-GTE)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

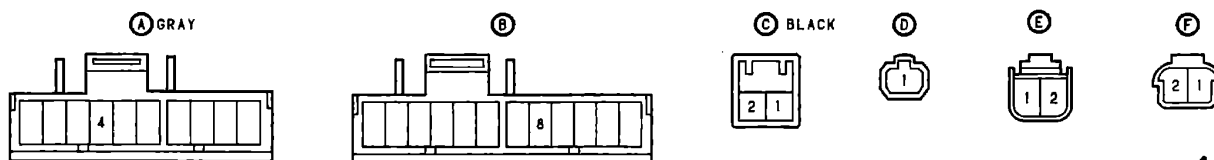
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	16	FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		
1J		
1N		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
2F	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

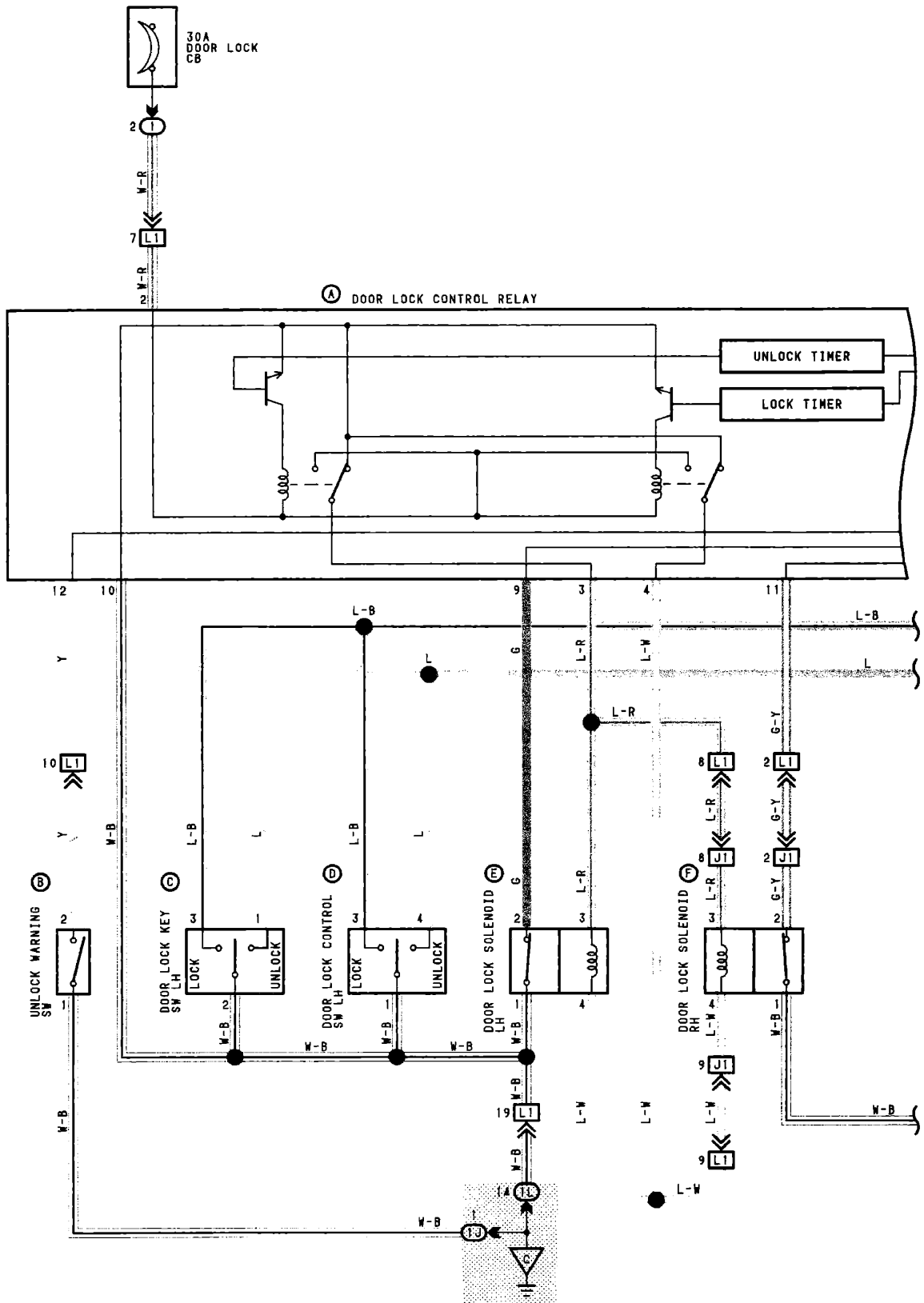
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
F1	28(3S-GTE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	
O1	38	FLOOR WIRE AND SEAT WIRE (UNDER FRONT LH SEAT)
T1	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)
T2		

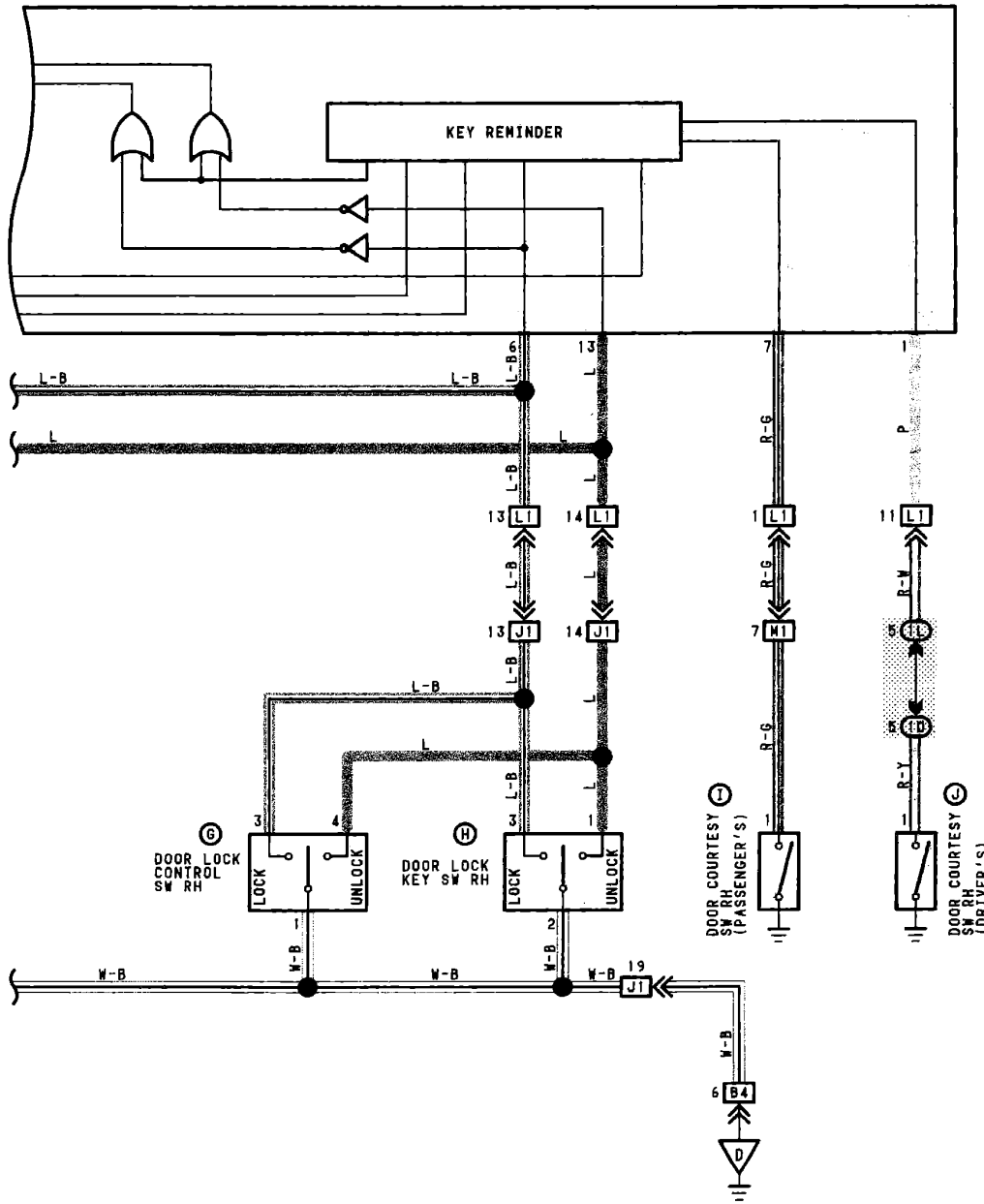
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SEAT BOLT



20 DOOR LOCKS





20 DOOR LOCKS

SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO TERMINAL 2 OF THE DOOR LOCK CONTROL RELAY THROUGH DOOR LOCK CB.

1. MANUAL LOCK OPERATION

TO PUSH DOOR LOCK SW AND KEY SW TO LOCK POSITION, A LOCK SIGNAL IS INPUT TO TERMINAL 6 OF THE DOOR LOCK CONTROL RELAY AND CAUSES RELAY TO FUNCTION. CURRENT FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 4 → TERMINAL 4 OF THE DOOR LOCK SOLENOIDS → TERMINAL 3 → TERMINAL 3 OF THE RELAY → TERMINAL 10 → TO GROUND AND DOOR LOCK SOLENOID CAUSES THE DOOR TO LOCK.

2. MANUAL UNLOCK OPERATION

TO PUSH DOOR LOCK CONTROL SW AND KEY SW TO UNLOCK POSITION, AN UNLOCK SIGNAL IS INPUT TO TERMINAL 13 OF THE DOOR LOCK CONTROL RELAY AND CAUSES THE RELAY FUNCTION. CURRENT FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 3 → TERMINAL 3 OF THE DOOR LOCK SOLENOIDS → TERMINAL 4 → TERMINAL 4 OF THE RELAY → TERMINAL 10 → TO GROUND AND DOOR LOCK SOLENOID CAUSES DOOR TO UNLOCK.

3. IGNITION KEY REMINDER OPERATION

*OPERATING DOOR LOCK KNOB (IN DOOR LOCK SOLENOIDS OPERATION)

WITH IGNITION KEY IN CYLINDER (UNLOCK WARNING SW ON), WHEN THE DOOR IS OPENED AND LOCKED USING DOOR LOCK KNOB (DOOR LOCK SOLENOID), THE DOOR IS LOCKED ONCE BUT EACH DOOR IS UNLOCKED SOON BY THE FUNCTION OF RELAY. AS A RESULT, THE CURRENT FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 3 → TERMINAL 3 OF THE DOOR LOCK SOLENOIDS → TERMINAL 4 → TERMINAL 4 OF THE RELAY → TERMINAL 10 → TO GROUND AND CAUSES ALL THE DOORS TO UNLOCK.

*OPERATING DOOR LOCK CONTROL SW OR DOOR LOCK KEY SW

WITH IGNITION KEY IN CYLINDER (UNLOCK WARNING SW ON), WHEN THE DOOR IS OPENED AND LOCKED USING DOOR LOCK CONTROL SW OR KEY SW, THE DOOR IS LOCKED ONCE BUT EACH DOOR IS UNLOCK BY THE FUNCTION OF SW CONTAINED IN SOLENOIDS, WHICH THE SIGNAL IS INPUT TO TERMINAL 9 OF THE RELAY. ACCORDING TO THIS INPUT SIGNAL, THE CURRENT IN RELAY FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 3 → TERMINAL 3 OF THE DOOR LOCK SOLENOIDS → TERMINAL 4 → TERMINAL 4 OF THE RELAY → TERMINAL 10 → TO GROUND AND CAUSES ALL THE DOOR TO UNLOCK.

*IN CASE OF KEY LESS LOCK

WITH IGNITION KEY IN CYLINDER (UNLOCK WARNING SW ON), WHEN THE UNLOCK FUNCTION IS DISTURBED MORE THAN 0.2 SECONDS, FOR EXAMPLE PUSHING THE DOOR LOCK KNOB ETC., THE DOOR HOLDS ON LOCK CONDITION. CLOSING THE DOOR AFTER, DOOR COURTESY SW INPUTS THE SIGNAL INTO RELAY. BY THIS INPUT SIGNAL, THE RELAY WORKS AND CURRENT FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 3 → TERMINAL 3 OF THE DOOR LOCK SOLENOIDS → TERMINAL 4 → TERMINAL 4 OF THE RELAY → TERMINAL 10 → TO GROUND AND CAUSES ALL THE DOOR TO UNLOCK.

SERVICE HINTS

A DOOR LOCK CONTROL RELAY

10-GROUND: ALWAYS CONTINUITY

1-GROUND: CONTINUITY WITH DRIVER'S DOOR OPEN

2-GROUND: ALWAYS APPROX. 12VOLTS

3-GROUND: APPROX. 12VOLTS 0.2SECONDS WITH FOLLOWING OPERATION

•DOOR LOCK CONTROL SW UNLOCKED

•DOOR LOCK CONTROL SW LOCKED WITH IGNITION KEY IN CYLINDER AND DRIVER'S DOOR OPEN

(IGNITION KEY REMINDER FUNCTION)

•DOOR LOCK KNOB LOCKED WITH IGNITION KEY IN CYLINDER AND DRIVER'S DOOR OPEN(IGNITION KEY REMINDER FUNCTION)

•UNLOCKING THE DRIVER'S, PASSENGER'S DOOR CYLINDER WITH KEY

4-GROUND: APPROX. 12VOLTS 0.2SECONDS WITH FOLLOWING OPERATION

•DOOR LOCK CONTROL SW LOCKED

•LOCKING THE DRIVER'S, PASSENGER'S DOOR CYLINDER WITH KEY

6-GROUND: 0VOLT WITH DOOR LOCK CONTROL SW LOCKED OR DRIVER'S, PASSENGER'S DOOR LOCK CYLINDER LOCKED WITH KEY

7-GROUND: CONTINUITY WITH PASSENGER'S DOOR OPEN

9-GROUND: CONTINUITY WITH DRIVER'S DOOR LOCK KNOB UNLOCKED

11-GROUND: CONTINUITY WITH PASSENGER'S DOOR LOCK KNOB UNLOCKED

12-GROUND: CONTINUITY WITH IGNITION KEY IN CYLINDER

13-GROUND: 0VOLT WITH DOOR LOCK CONTROL SW UNLOCKED OR DRIVER'S, PASSENGER'S DOOR LOCK CYLINDER UNLOCKED WITH KEY

B UNLOCK WARNING SW

1-2: CLOSED WITH IGNITION KEY IN CYLINDER

C H DOOR LOCK KEY SW

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

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

E F DOOR LOCK SOLENOID

1-2: CLOSED WITH UNLOCK POSITION

I J DOOR COURTESY SW

1-GROUND: CLOSED WITH DOOR OPEN

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	D13 26(C/P), 27(L/B)	E	D18 26(C/P), 27(L/B)	I	D10 26(C/P), 27(L/B)
B	U1 25	F	D19 26(C/P), 27(L/B)	J	D9 26(C/P), 27(L/B)
C	D16 26(C/P), 27(L/B)	G	D15 26(C/P), 27(L/B)		
D	D14 26(C/P), 27(L/B)	H	D17 26(C/P), 27(L/B)		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	21	R/B NO.1 (LEFT KICK PANEL)
4	21	R/B NO.4 (RIGHT KICK PANEL)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

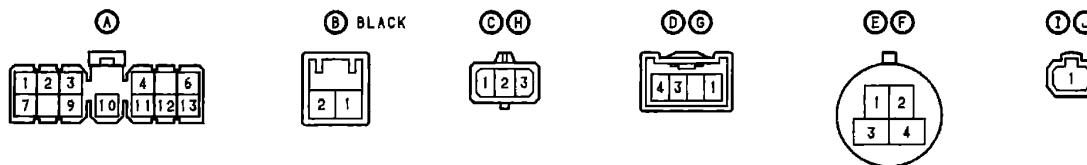
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	16	FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1J		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		

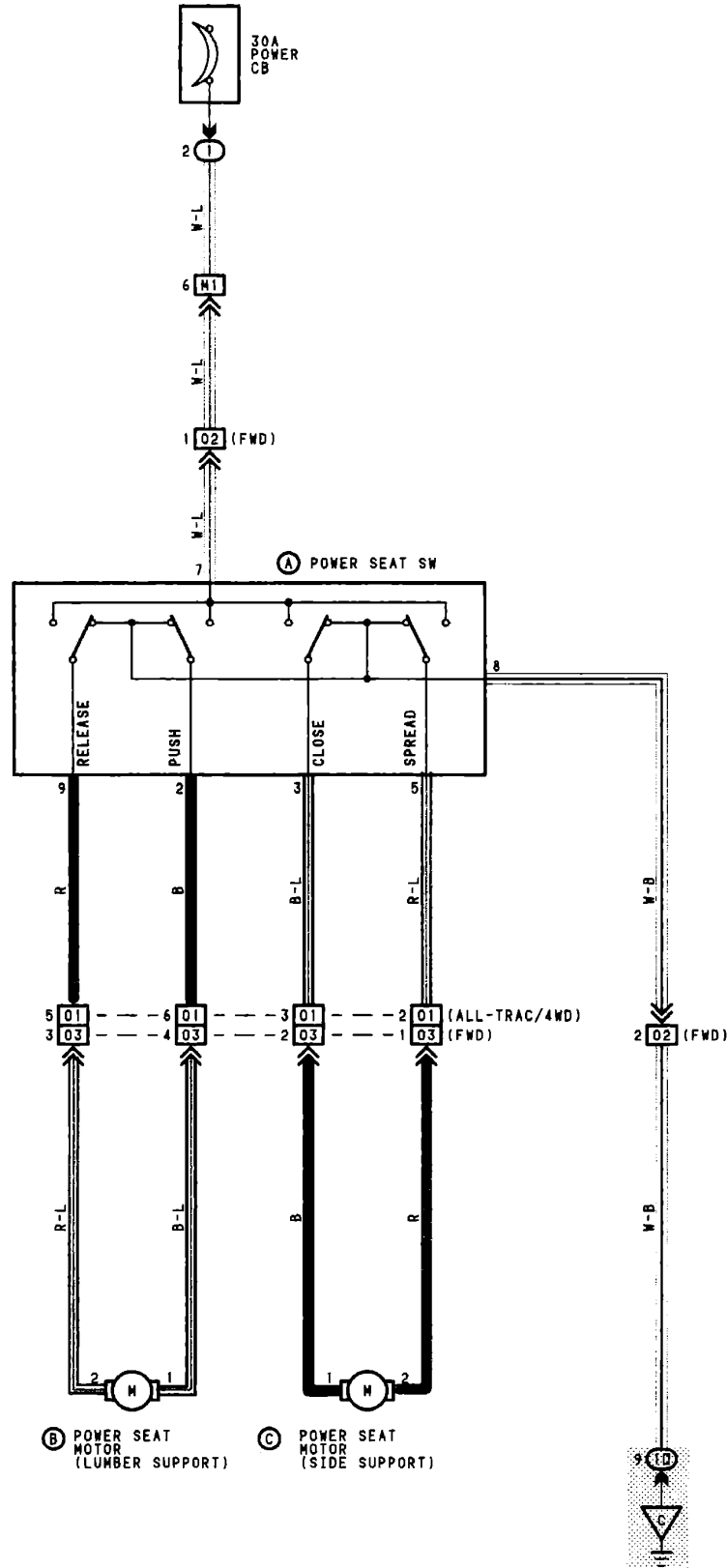
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
J1	36(C/P)	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
	38(L/B)	
L1	36(C/P)	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
	38(L/B)	
M1	36(C/P)	FLOOR WIRE AND COWL WIRE (J/B NO.1 LEFT KICK PANEL)
	38(L/B)	

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT
D	34	R/B NO.4 SET BOLT





SERVICE HINTS**Ⓐ POWER SEAT SW**

7-GROUND: APPROX. 12VOLTS WITH IGNITION SW AT ON OR ACC POSITION
 8-GROUND: ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	P4	26(C/P), 27(L/B)	B	P2	26(C/P), 27(L/B)
			C	P3	26(C/P), 27(L/B)

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	21	R/B NO.1 (LEFT KICK PANEL)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

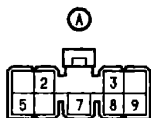
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	16	FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

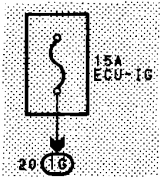
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
M1	36(C/P)	FLOOR WIRE AND COWL WIRE (J/B NO.1 LEFT KICK PANEL)
	38(L/B)	
O1	38	FLOOR WIRE AND SEAT WIRE (UNDER FRONT LH SEAT)
O2	36(C/P)	FLOOR WIRE AND FLOOR NO.2 WIRE (UNDER FRONT LH SEAT)
	38(L/B)	
O3	36(C/P)	FLOOR NO.2 WIRE AND SEAT WIRE (UNDER FRONT LH SEAT)
	38(L/B)	

▽ : GROUND POINTS

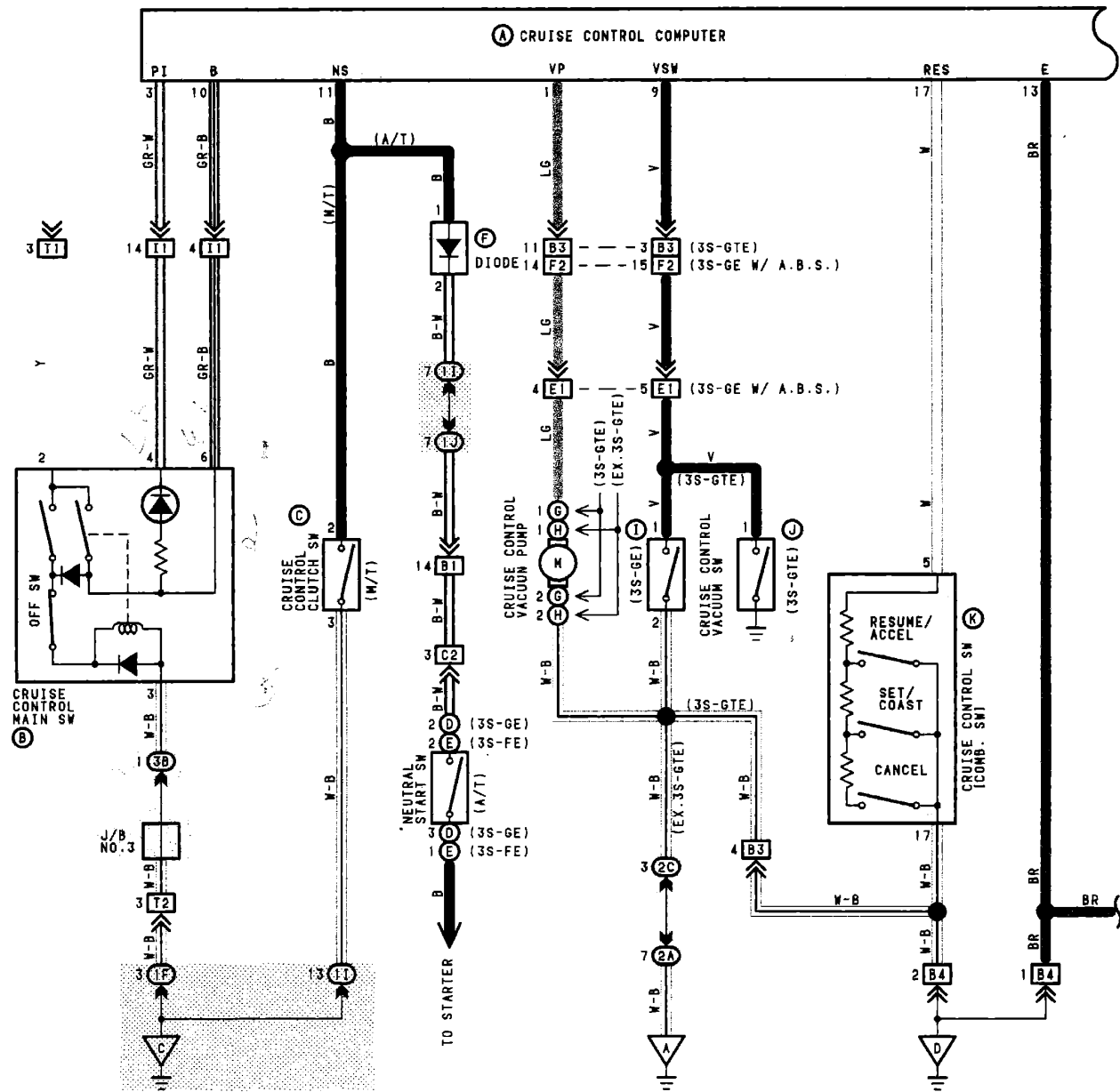
CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT

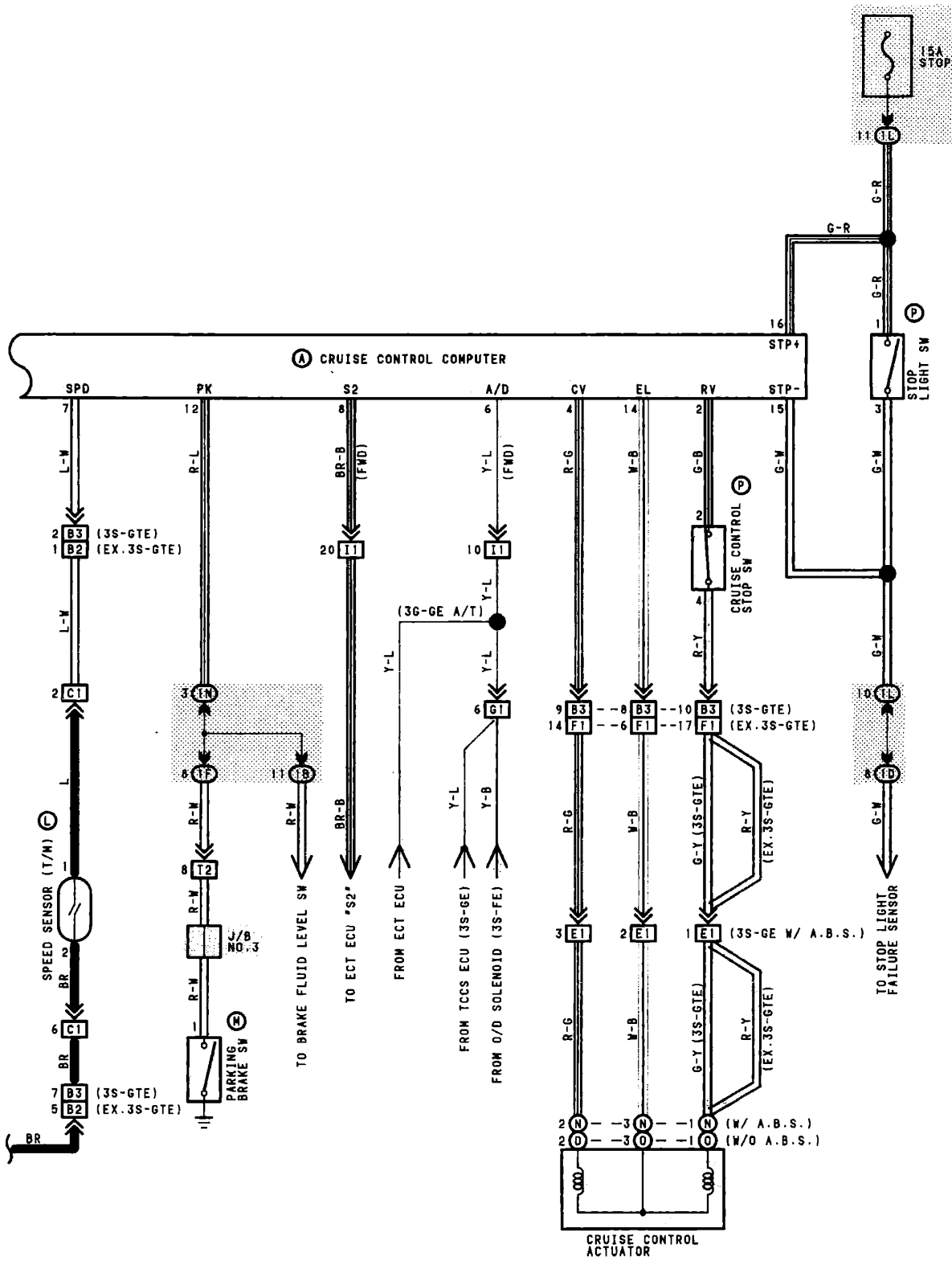


22 CRUISE CONTROL



Y





SYSTEM OUTLINE

VOLTAGE FROM THE BATTERY IS NORMALLY APPLIED TO TERMINAL 16 OF THE CRUISE CONTROL COMPUTER. WHEN THE IGNITION SW IS TURNED TO ON, THE CURRENT FLOWING THROUGH THE ECU-IG FUSE FLOWS THEN TO TERMINAL 2 OF THE CRUISE CONTROL MAIN SW. IF AT THIS TIME THE MAIN SW IS TURNED TO ON, THE CURRENT APPLIED TO TERMINAL 2 FLOWS FROM THE POWER INDICATOR → TERMINAL 3 OF THE COMPUTER, CAUSING THE INDICATOR LIGHT TO LIGHT UP. AT THE SAME TIME, CURRENT FLOWS TO TERMINAL 10 OF THE COMPUTER, MAINTAINING THE CRUISE CONTROL SYSTEM IN CONSTANT READINESS FOR OPERATION.

1. CRUISE CONTROL DRIVING

WHEN THE MAIN SW IS TURNED TO ON AND THE SET SW IS PUSHED IN WITH THE VEHICLE SPEED WITHIN THE SET LIMIT (APPROX. 40 km/h, 25 MPH TO 200 km/h, 124 MPH), A SIGNAL IS INPUT TO TERMINAL 17 OF THE COMPUTER AND THE VEHICLE SPEED AT THAT TIME IS RECORDED IN THE COMPUTER MEMORY AS THE SET SPEED. THE COMPUTER COMPARES THE RECORDED SET SPEED WITH THE ACTUAL VEHICLE SPEED INPUT INTO TERMINAL 7 FROM THE SPEED SENSOR, AND CONTROLS THE CRUISE CONTROL ACTUATOR IN ORDER TO MAINTAIN THE SET VEHICLE SPEED.

WHEN THE ACTUAL VEHICLE SPEED IS LOWER THAN THE SET SPEED, COMPUTER OPERATION LENGTHENS THE PERIOD OF CURRENT FLOW FROM TERMINAL 4 OF THE COMPUTER → TERMINAL 2 OF THE ACTUATOR → THE CONTROL VALVE → TERMINAL 3 → TERMINAL 14 OF THE COMPUTER, THE CABLE IS PULLED IN THE DIRECTION FOR OPENING THROTTLE VALVE AND THE VEHICLE SPEED INCREASES.

WHEN THE ACTUAL VEHICLE SPEED IS HIGHER THAN THE SET SPEED, A SHORTER PERIOD OF CURRENT FLOW TO THE CONTROL VALVE RETURNS THE CABLE IN THE DIRECTION FOR CLOSING THE THROTTLE VALVE AND THE VEHICLE SPEED DECREASES.

<ACTUATOR OPERATION>

WHEN THE CRUISE CONTROL SYSTEM OPERATES (THE SET SIGNAL IS INPUT), CURRENT FLOWS FROM THE COMPUTER TO THE RELEASE VALVE, CLOSING THE ATMOSPHERIC INTAKE PORT.

WHEN THERE IS CONTINUITY TO THE CONTROL VALVE, VACUUM IS INTRODUCED INSIDE THE ACTUATOR, AND WHEN THERE IS NO CONTINUITY, VACUUM INTAKE STOPS AND ATMOSPHERE IS INTRODUCED. IN OTHER WORDS, THE ACTUATOR (THROTTLE VALVE) IS CONTROLLED BY CHANGING THE RATIO OF CONTINUITY AND NON-CONTINUITY TO THE CONTROL VALVE WITHIN A SPECIFIED PERIOD OF TIME.

<ROLE OF THE VACUUM SW, VACUUM PUMP>

WHEN THE VACUUM SW TURNS ON DURING CRUISE CONTROL OPERATION, ITS SIGNAL IS INPUT TO TERMINAL 9 OF THE COMPUTER SO THAT THE COMPUTER APPLIES CURRENT TO OPERATE THE VACUUM PUMP (TERMINAL 1 OF THE COMPUTER → TERMINAL 1 OF THE PUMP → TERMINAL 2 → GROUND) AND SUPPLEMENT THE ENGINE VACUUM WHICH BY ITSELF IS INADEQUATE FOR CONTROL.

2. CANCEL MECHANISM

IF ANY OF THE FOLLOWING OPERATIONS IS PERFORMED DURING CRUISE CONTROL, THEN CONTINUITY TO THE CONTROL VALVE AND THE RELEASE VALVE IS CUT OFF AND CRUISE CONTROL IS RELEASED:

- * DEPRESSING THE CLUTCH PEDAL (CLUTCH SW ON), SIGNAL INPUT TO TERMINAL 11 OF THE COMPUTER.
- * PLACING THE NEUTRAL START SW IN "N" RANGE (NEUTRAL START SW ON), SIGNAL INPUT TO TERMINAL 11 OF THE COMPUTER.
- * DEPRESSING THE BRAKES PEDAL (STOP LIGHT SW ON), SIGNAL INPUT TO TERMINAL 15 OF THE COMPUTER.
- * PULLING THE PARKING BRAKE LEVER (PARKING BRAKE SW ON), SIGNAL INPUT TO TERMINAL 12 OF THE COMPUTER.
- * PUSHING THE CRUISE CONTROL CANCEL SW, SIGNAL INPUT TO TERMINAL 17 OF THE COMPUTER.

3. COAST CONTROL

WHILE THE COAST SW IS ON DURING CRUISE CONTROL, CURRENT FLOW TO THE CONTROL VALVE AND RELEASE VALVE IS STOPPED AND THE VEHICLE DECELERATES UNTIL THE SW IS RELEASED. THE VEHICLE SPEED WHEN THE SW IS RELEASED IS THEN RECORDED IN MEMORY.

4. RESUME CONTROL

BY TURNING THE RESUME SW TO ON AFTER CANCELLATION OF THE CRUISE CONTROL SYSTEMS, THE VEHICLE SPEED WILL RETURN TO THE SPEED SET BEFORE CANCELLATION, PROVIDED THAT THE VEHICLE SPEED IS WITHIN THE SET LIMITS.

5. ACCEL CONTROL

WHEN THE ACCEL SW IS TURNED TO ON DURING CRUISE CONTROL DRIVING, CURRENT CONTINUES TO FLOW TO THE CONTROL VALVE AND THE VEHICLE ACCELERATES. THE VEHICLE SPEED WHEN THE SW IS TURNED OFF IS RECORDED IN MEMORY.

SERVICE HINTS

Ⓐ CRUISE CONTROL COMPUTER

(DISCONNECT THE COMPUTER CONNECTOR)

2-14	: ∞ Ω WITH BRAKE PEDAL DEPRESSED APPROX. 68 Ω WITH BRAKE PEDAL NOT DEPRESSED
4-14	: ALWAYS 30 Ω (ACTUATOR CONTROL VALVE)
7-13	: CONTINUITY EACH 40CM (15.7IN.) (DRIVE VEHICLE SLOWLY)
11-13	: CONTINUITY WITH CLUTCH PEDAL DEPRESSED (M/T) CONTINUITY WITH SHIFT LEVER IN N OR P RANGE (A/T) (ONE OF THE CANCEL SW)
12-13	: CONTINUITY WITH PKB LEVER PULL UP (ONE OF THE CANCEL SW)
13-GROUND	: ALWAYS CONTINUITY
17-13	: APPROX. 60 Ω WITH RESUME/ACCEL SW ON APPROX. 198 Ω WITH SET/COAST SW ON APPROX. 418 Ω WITH CANCEL SW ON
3-13	: APPROX. 12VOLTS WITH IGNITION SW ON AND MAIN SW ON
10-13	: APPROX. 12VOLTS WITH IGNITION SW ON, MAIN SW ON
15-13	: APPROX. 12VOLTS WITH BRAKE PEDAL DEPRESSED (ONE OF THE CANCEL SW)
16-13	: ALWAYS 12 VOLTS

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	C18 25	G	C6 22(3S-GTE)	M	P1 25
B	C19 25	H	C6 23(3S-GE)	N	C4 22(3S-GTE), 23(3G-GE)
C	C17 25	I	C7 23(3S-GE)	O	C5 23(3S-GE), 24(3S-FE)
D	E1 23(3S-GE)	J	C7 22(3S-GTE)	P	C20 25
E	N1 24(3S-FE)	K	C15 25		
F	D4 25	L	S1 22(3S-GTE), 23(3S-GE), 24(3S-FE)		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D		FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		
1I		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1J		
1L		
1M		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
3B	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

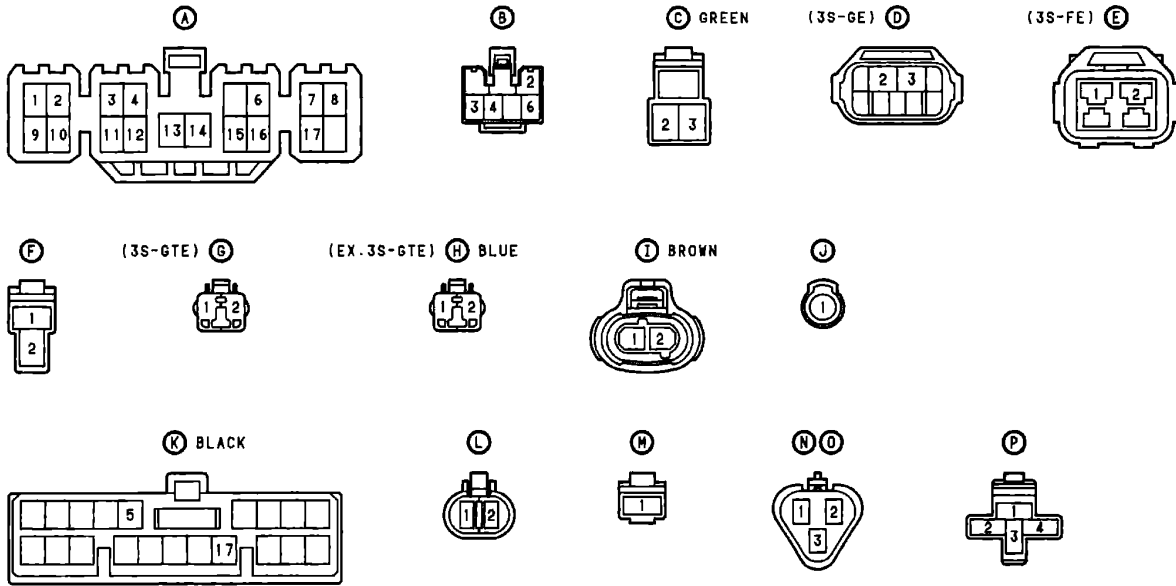
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B1	30(3S-GE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
	32(3S-FE)	
B2	30(3S-GE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
	32(3S-FE)	
B3	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
B4	34	COWL WIRE AND R/B NO.4 (RIGHT KICK PANEL)
C1	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
	30(3S-GE)	
	32(3S-FE)	
C2	30(3S-GE)	ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
	32(3S-FE)	
E1	30(3S-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (LEFT FENDER)
F1	30(3S-GE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
	32(3S-FE)	
F2	34	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
G1		ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
I1		INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)
T1		INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)
T2		

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	30(3S-GE)	RIGHT FENDER
	32(3S-FE)	
C	34	J/B NO.1 SET BOLT
D	34	R/B NO.4 SET BOLT

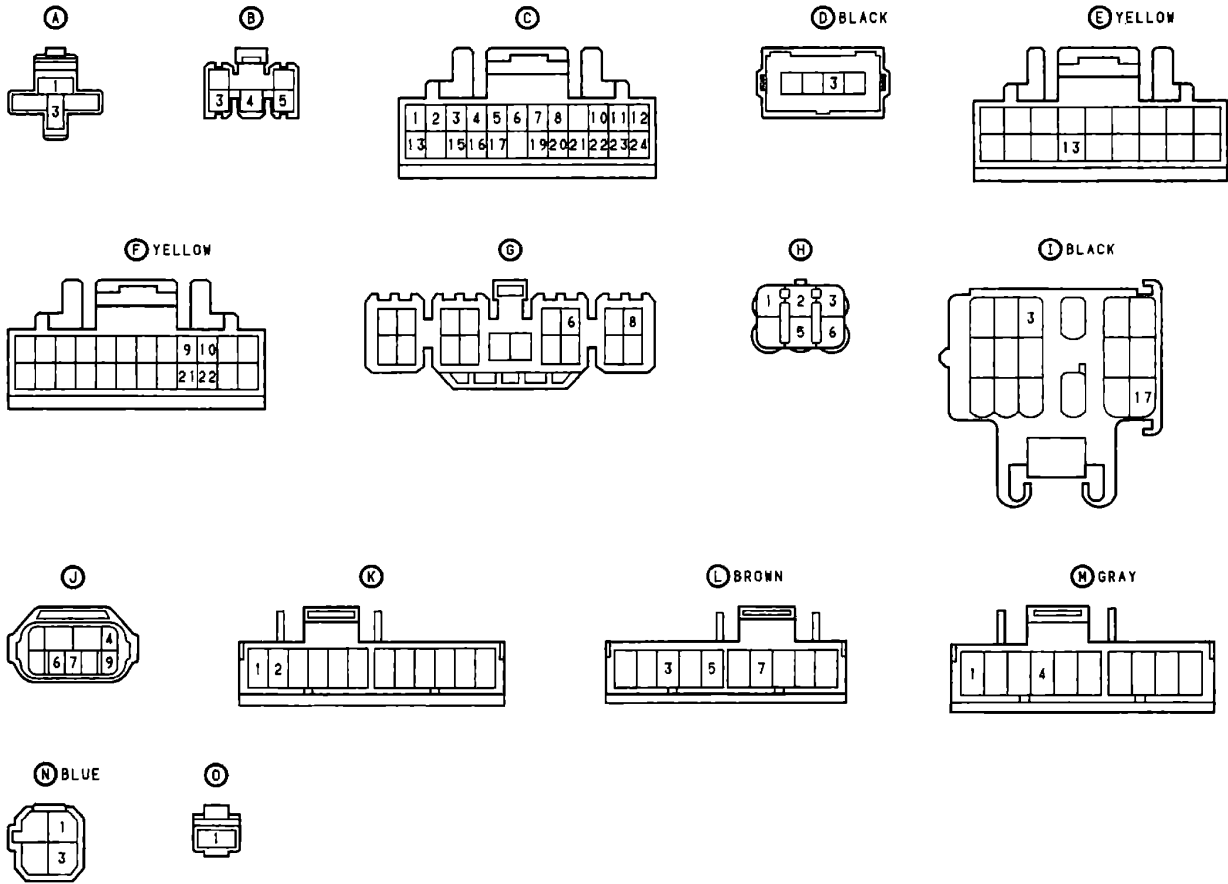
22 CRUISE CONTROL

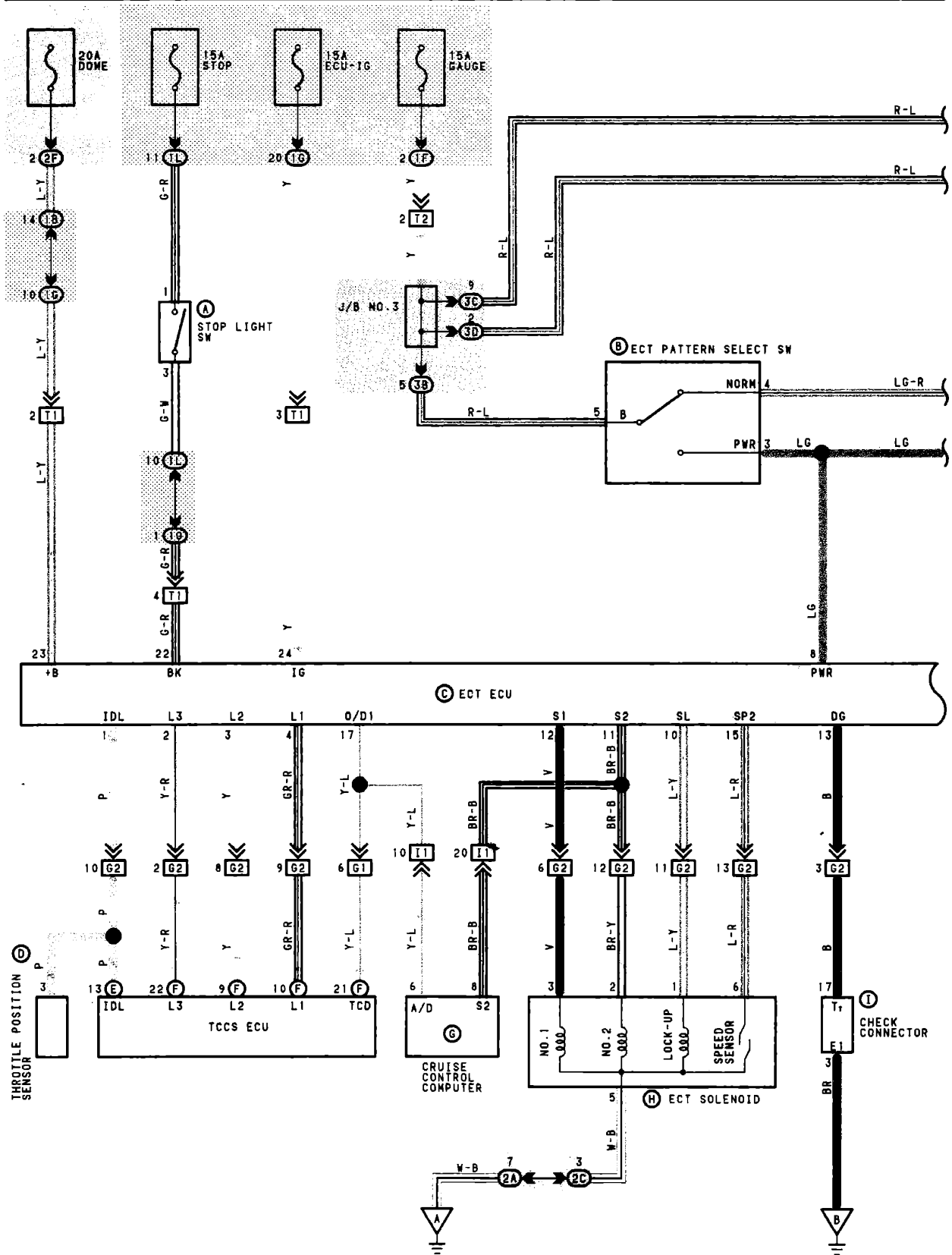


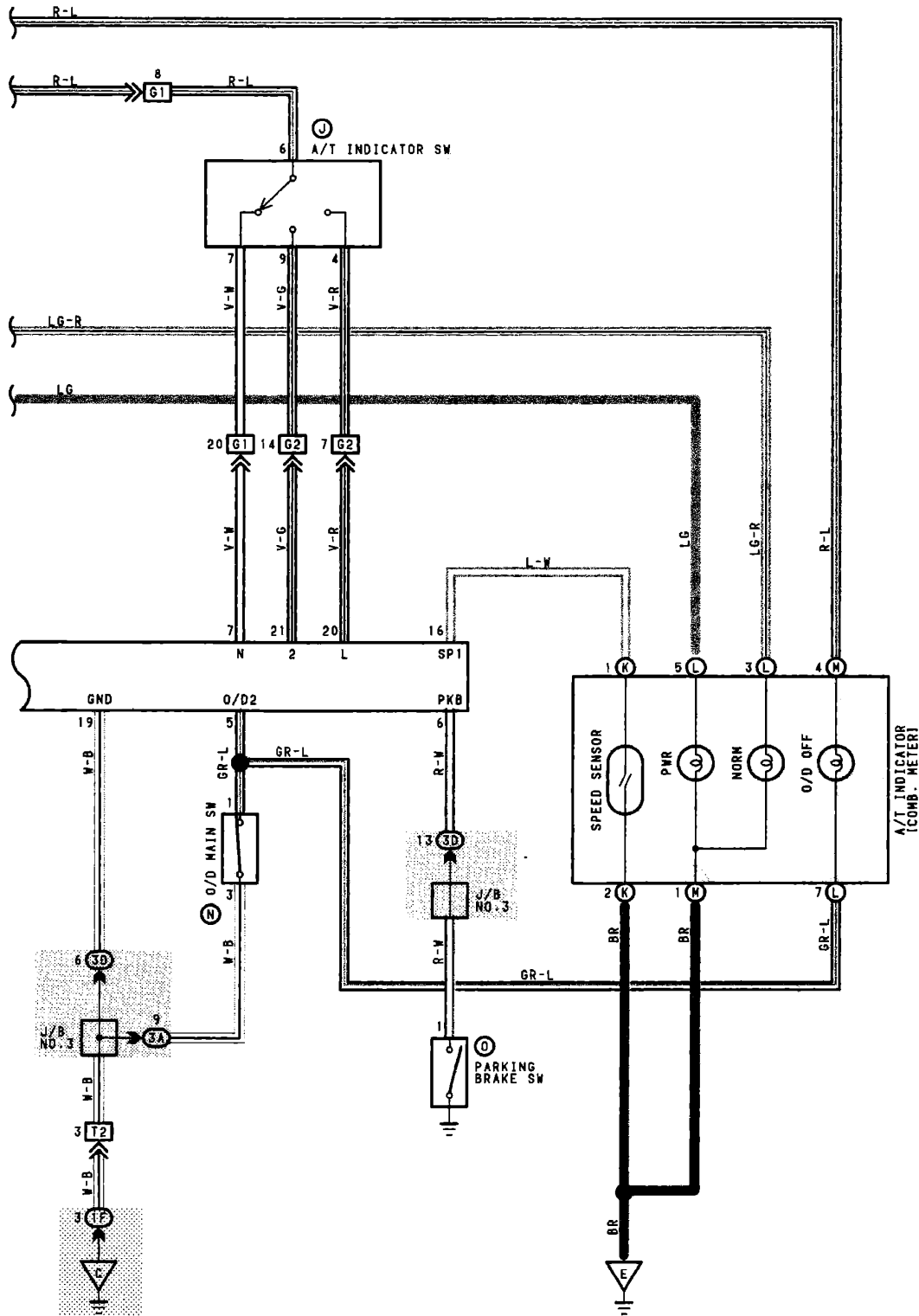
ECT AND A/T INDICATOR



23







SYSTEM OUTLINE

PREVIOUS AUTOMATIC TRANSMISSIONS HAVE SELECTED EACH GEAR SHIFT USING MECHANICALLY CONTROLLED THROTTLE HYDRAULIC PRESSURE, GOVERNOR HYDRAULIC PRESSURE AND LOCK-UP HYDRAULIC PRESSURE. THE ECT, HOWEVER, ELECTRICALLY CONTROLS THE GOVERNOR PRESSURE AND LOCK-UP PRESSURE THROUGH THE SOLENOID VALVE. ECT COMPUTER CONTROL OF THE SOLENOID VALVE BASED ON THE INPUT SIGNALS FROM EACH SENSOR MAKES SMOOTH DRIVING POSSIBLE BY SHIFT SELECTION FOR EACH GEAR WHICH IS MOST APPROPRIATE TO THE DRIVING CONDITIONS AT THAT TIME.

1. GEAR SHIFT OPERATION

DURING DRIVING, THE COMPUTER SELECTS THE SHIFT FOR EACH GEAR WHICH IS MOST APPROPRIATE TO THE DRIVING CONDITIONS, BASED ON INPUT SIGNALS FROM THE TCCS ECU TO TERMINAL 1 OF THE THROTTLE POSITION SENSOR, TERMINALS 2, 3, AND 4 OF THE ECT COMPUTER, AND ALSO THE INPUT SIGNALS TO TERMINAL 15 OF THE COMPUTER FROM THE SPEED SENSOR DEVOTED TO THE ECT. CURRENT IS THEN OUTPUT TO THE ECT SOLENOIDS. WHEN SHIFTING TO 1ST SPEED, CURRENT FLOWS FROM TERMINAL 12 OF THE COMPUTER → TERMINAL 3 OF THE ECT SOLENOIDS → GROUND, AND CONTINUITY TO THE NO. 1 SOLENOID CAUSES THE SHIFT. FOR 2ND SPEED, CURRENT FLOWS FROM TERMINAL 12 OF THE COMPUTER → TERMINAL 3 OF THE ECT SOLENOIDS → GROUND, AND FROM TERMINAL 11 OF THE COMPUTER → TERMINAL 2 OF THE ECT SOLENOIDS → GROUND, AND CONTINUITY TO SOLENOIDS NO. 1 AND NO. 2, CAUSES THE SHIFT. FOR 3RD SPEED, THERE IS NO CONTINUITY TO NO. 1 SOLENOID, ONLY TO NO. 2, CAUSING THE SHIFT. SHIFTING INTO 4TH SPEED (OVERDRIVE) TAKES PLACE WHEN THERE IS NO CONTINUITY TO EITHER NO. 1 OR NO. 2 SOLENOID.

2. LOCK-UP OPERATION

WHEN THE ECT COMPUTER JUDGES FROM EACH SIGNAL THAT LOCK-UP OPERATION CONDITIONS HAVE BEEN MET, CURRENT FLOWS FROM TERMINAL 10 OF THE ECT COMPUTER → TERMINAL 1 OF THE ECT SOLENOID → GROUND, CAUSING CONTINUITY TO THE LOCK-UP SOLENOID AND CAUSING LOCK-UP OPERATION.

3. STOP LIGHT SW CIRCUIT

IF THE BRAKE PEDAL IS DEPRESSED (STOP LIGHT SW ON) WHEN DRIVING IN LOCK-UP CONDITION, A SIGNAL IS INPUT TO TERMINAL 22 OF THE COMPUTER, THE COMPUTER OPERATES AND CONTINUITY TO THE LOCK-UP SOLENOID IS CUT.

4. OVERDRIVE CIRCUIT

* O/D MAIN SW ON

WHEN THE O/D MAIN SW IS TURNED ON (O/D OFF INDICATOR LIGHT TURNS OFF), A SIGNAL IS INPUT TO TERMINAL 5 OF THE COMPUTER AND COMPUTER OPERATION CAUSES GEAR SHIFT WHEN THE CONDITIONS FOR OVERDRIVE ARE MET.

* O/D MAIN SW OFF

WHEN THE OVERDRIVE SW IS TURNED TO OFF, THE CURRENT FLOWING THROUGH THE O/D OFF INDICATOR LIGHT FLOWS THROUGH THE O/D MAIN SW TO GROUND, CAUSING THE INDICATOR LIGHT TO LIGHT UP. AT THE SAME TIME, A SIGNAL IS INPUT TO TERMINAL 5 OF THE COMPUTER AND COMPUTER OPERATION PREVENTS SHIFT INTO OVERDRIVE.

5. ECT PATTERN SELECT SW CIRCUIT

IF THE ECT PATTERN SELECT SW IS CHANGED FROM NORMAL TO POWER, THE CURRENT FLOWING THROUGH THE POWER INDICATOR FLOWS TO GROUND, CURRENT FLOWS TO TERMINAL 8 OF THE ECT COMPUTER, THE COMPUTER OPERATES, AND SHIFT UP AND SHIFT DOWN OCCUR AT HIGHER VEHICLE SPEEDS THAN WHEN THE SW IS IN NORMAL POSITION.

SERVICE HINTS

ⓑ ECT PATTERN SELECT SW

5-GROUND: APPROX. 12VOLTS WITH IGNITION SW ON

ⓒ ECT COMPUTER

(WHEN IGNITION SW ON)

- 19-GROUND: ALWAYS CONTINUITY
- 2-GROUND: 5(12)-0-5(12)-0-5(12)VOLTS
- 3-GROUND: 5(12)-0-5(12)VOLTS
- 4-GROUND: 5(12)-0VOLT
- 1-GROUND: 0VOLT WITH THROTTLE VALVE FULLY CLOSED
APPROX. 4VOLTS WITH THROTTLE VALVE OPENING ABOVE 1.5"
- 16-GROUND: APPROX. 12 OR 0VOLT WITH STANDING STILL
APPROX. 6VOLTS WITH ENGINE RUNNING, VEHICLE MOVING
- 22-GROUND: APPROX. 12VOLTS WITH BRAKE PEDAL DEPRESSED
0VOLT WITH BRAKE PEDAL NOT DEPRESSED
- 21-GROUND: APPROX. 10 TO 16VOLTS WITH SHIFT LEVER AT 2 POSITION
0 TO 2VOLTS WITH SHIFT LEVER AT EXCEPT 2 POSITION
- 20-GROUND: APPROX. 10 TO 16VOLTS WITH SHIFT LEVER AT L POSITION
0 TO 2VOLTS WITH SHIFT LEVER AT EXCEPT L POSITION
- 12-GROUND: APPROX. 12VOLTS
- 10, 11-GROUND: 0VOLT
- 5-GROUND: APPROX. 12VOLTS WITH O/D MAIN SW ON
0VOLT WITH O/D MAIN SW OFF
- 24-GROUND: APPROX. 12VOLTS WITH STANDING STILL
- 15-GROUND: APPROX. 5(12)VOLTS WITH STANDING STILL
4(10)VOLTS WITH ENGINE RUNNING
- 8-GROUND: APPROX. 12VOLTS WITH PATTERN SELECT SW AT PWR POSITION
1VOLT WITH PATTERN SELECT SW AT NORM POSITION
- 23-GROUND: APPROX. 12VOLTS
- 17-GROUND: 0VOLT WITH COOLANT TEMP. 35-60°C(95-140°F)
5(12)VOLTS WITH COOLANT TEMP. MORE THAN 70°C(158°F)

} WHEN SLOWLY DEPRESS THE ACCEL PEDAL

() VOLT: A IS IN COMPUTER

ⓓ O/D MAIN SW

1-3: CLOSED WITH O/D MAIN SW OFF
OPEN WITH O/D MAIN SW ON

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	C20 25	F	T5 25	K	C14 25
B	E6 25	G	C18 25	L	C13 25
C	E5 25	H	E1 23	M	C12 25
D	T1 23	I	C1 23	N	O5 25
E	T4 25	J	A16 23	O	P1 25

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		
1L		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2F		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
3A	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)
3B		
3C		
3D		

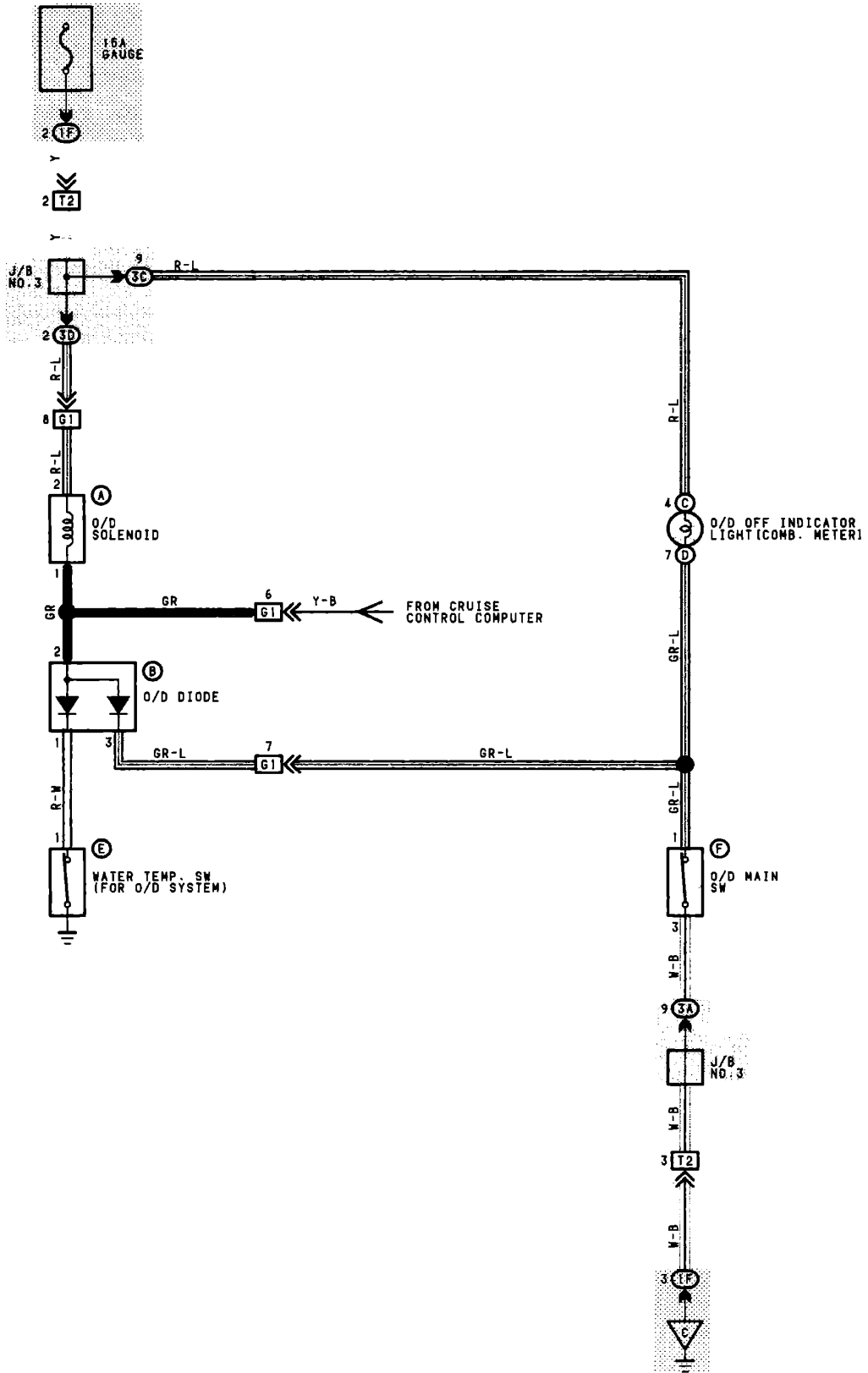
□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
G2		
I1	34	INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)
T1	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)
T2		

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	30(3S-GE)	RIGHT FENDER
B	30(3S-GE)	INTAKE MANIFOLD
C	34	J/B NO.1 SET BOLT
E	34	BEHIND RADIO

24 O/D OVERDRIVE



SERVICE HINTS

(A) O/D SOLENOID

1-GROUND: APPROX. 13Ω

(E) WATER TEMP. SW

1-GROUND: CLOSED BELOW 43°C (109°F) OPEN ABOVE 55°C (131°F)

(F) O/D MAIN SW

1-3: CLOSED WITH O/D SW AT OFF POSITION OPEN WITH O/D SW AT ON POSITION

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 01	24	C C12	25	E W3	24
B D8	25	D C13	25	F 05	25

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

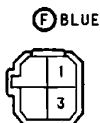
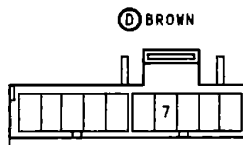
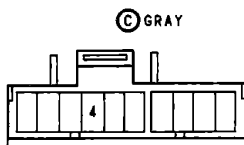
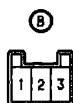
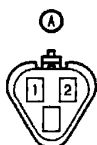
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1F	16	INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
3A	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)
3C		
3D		

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

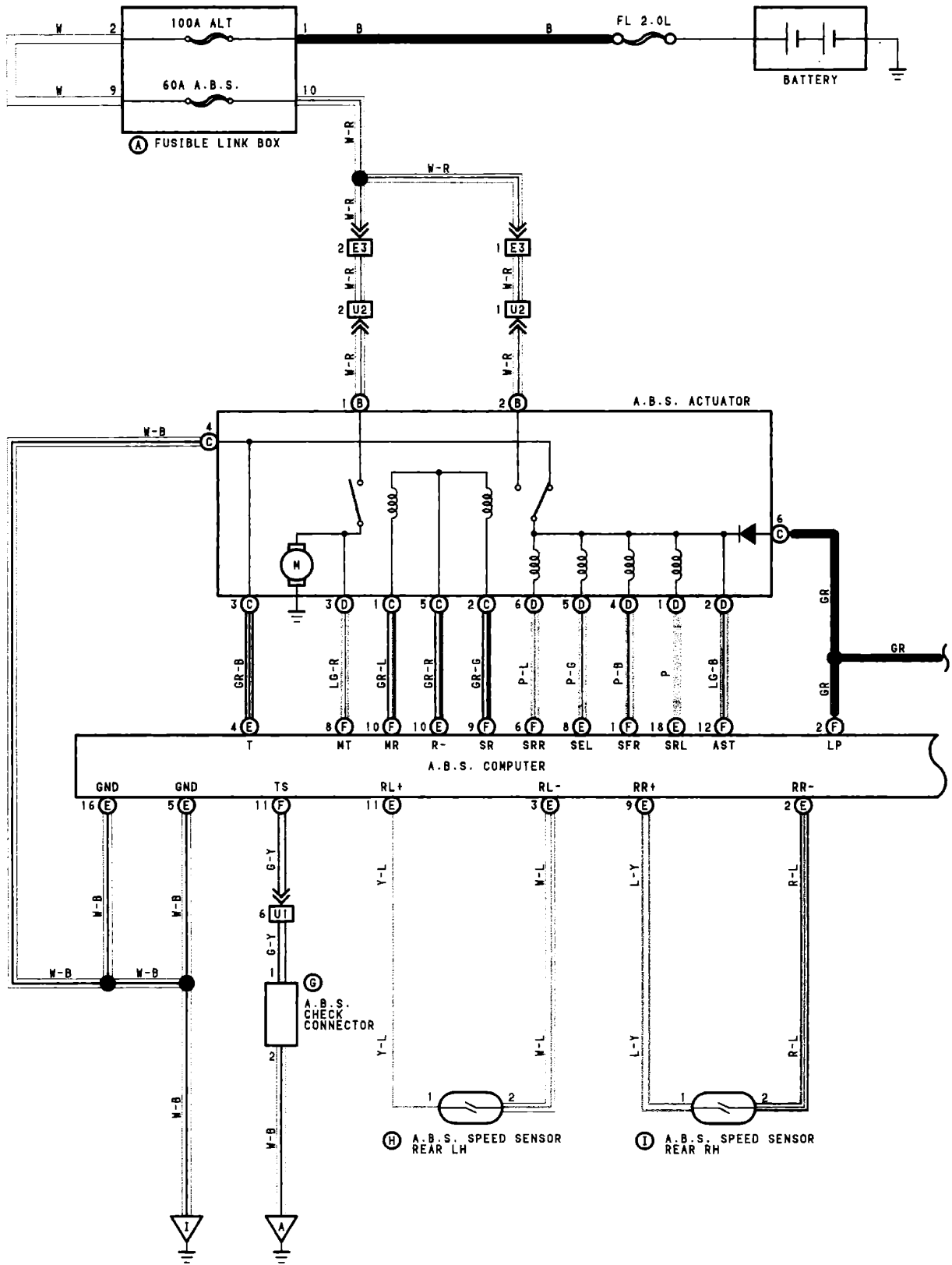
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
T2		INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSRTUMENT PANEL LEFT)

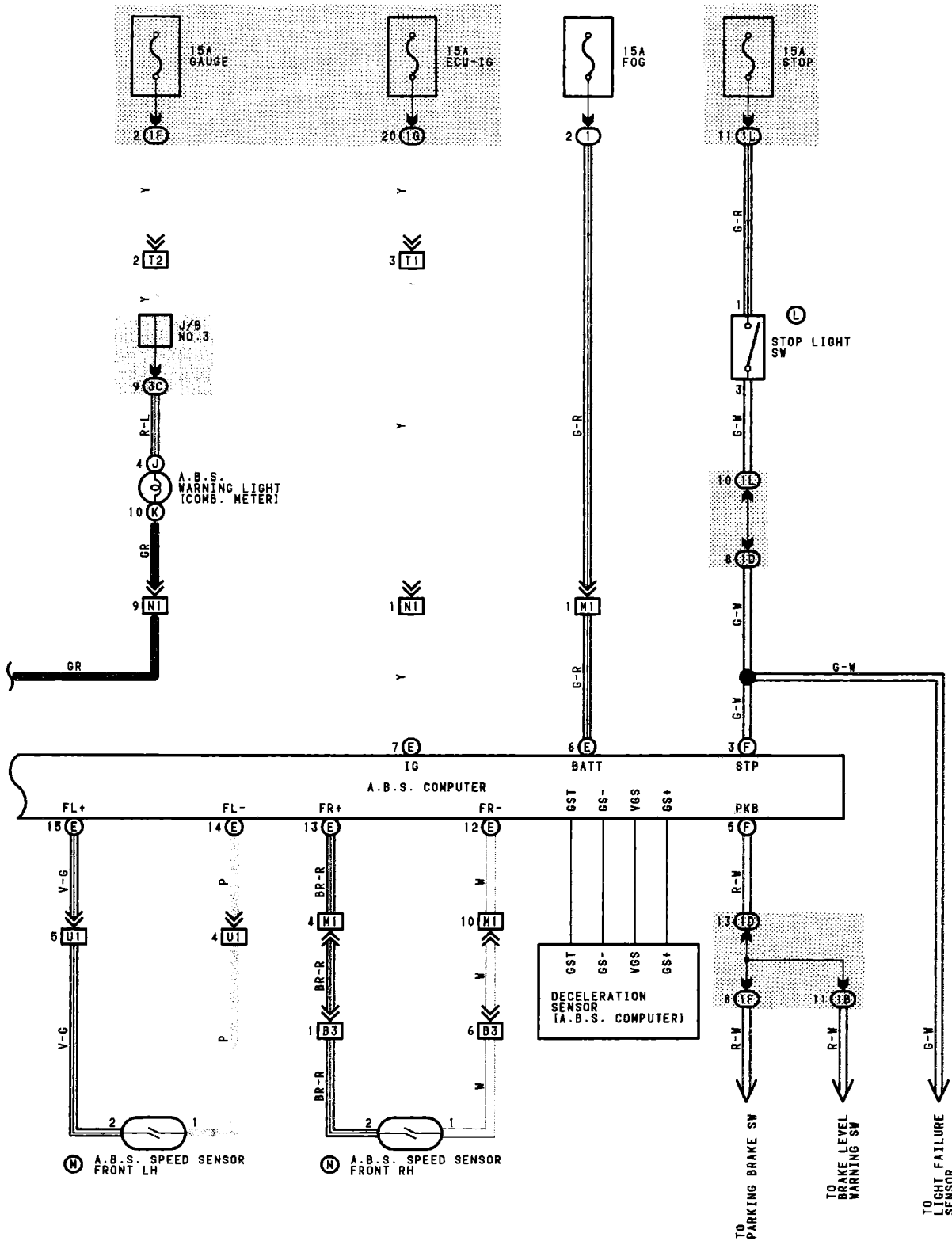
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT



25-1 A.B.S. (ANTI-LOCK BRAKE SYSTEM) (3S-GTE)





25-1 A.B.S. (ANTI-LOCK BRAKE SYSTEM) (3S-GTE)

SYSTEM OUTLINE

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

1. INPUT SIGNALS

- [1] SPEED SENSOR SIGNAL
THE SPEED OF THE WHEELS IS DETECTED AND INPUT TO TERMINALS FL+, FR+, RL+ AND RR- OF THE A.B.S. COMPUTER.
- [2] DECELERATION SENSOR SIGNAL
THE DEGREE OF VEHICLE DECELERATION IS DETECTED AND INPUT TO THE A.B.S. COMPUTER.
- [3] STOP LIGHT SW SIGNAL
A SIGNAL IS INPUT TO TERMINAL STP OF THE A.B.S. COMPUTER WHEN BRAKE PEDAL IS OPERATED.
- [4] PARKING BRAKE SW SIGNAL
A SIGNAL IS INPUT TO TERMINAL PKB OF THE A.B.S. COMPUTER WHEN THE PARKING BRAKE IS OPERATED.

2. SYSTEM OPERATION

DURING SUDDEN BRAKING THE A.B.S. COMPUTER, WHICH HAS SIGNALS INPUT FROM EACH SENSOR, CONTROLS THE CURRENT FLOWING TO THE SOLENOID INSIDE THE ACTUATOR AND LETS THE HYDRAULIC PRESSURE ACTING ON EACH WHEEL CYLINDER ESCAPE TO THE RESERVOIR. THE PUMP INSIDE THE ACTUATOR IS ALSO OPERATING AT THIS TIME AND IT RETURNS THE BRAKE FLUID FROM THE RESERVOIR TO THE MASTER CYLINDER, THUS PREVENTING LOCKING OF THE VEHICLE WHEELS. IF THE COMPUTER 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 REDUCTION, HOLDING AND INCREASE ARE REPLATED TO MAINTAIN VEHICLE STABILITY AND TO IMPROVE STEERABILITY DURING SUDDEN BRAKING.

SERVICE HINTS

A.B.S. COMPUTER

(DISCONNECT THE COMPUTER CONNECTOR)

- | | | |
|----------------|---|---------------------------------------|
| (F) 1-GROUND, | (F) 6-GROUND: | } APPROX. 12VOLTS WITH IGNITION SW ON |
| (F) 12-GROUND, | (E) 2-GROUND: | |
| (E) 7-GROUND, | (E) 18-GROUND: | |
| (E) 8-GROUND, | | } CONTINUITY (IGNITION SW OFF) |
| (E) 4-GROUND, | (E) 5-GROUND: | |
| (E) 16-GROUND: | | |
| (F) 3-GROUND: | APPROX. 12VOLTS WITH BRAKE PEDAL DEPRESSED | |
| (F) 10- | (E) 10: | CONTINUITY |
| (F) 5-GROUND: | APPROX. 12VOLTS WITH PARKING BRAKE LEVER NOT PULLED | |
| | APPROX. 0VOLT WITH PARKING BRAKE LEVER PULLED | |
| (E) 6-GROUND: | ALWAYS APPROX. 12VOLTS | |
| (E) 2-9, | (E) 3-11, | (E) 12-13, |
| (F) 9- | (E) 9: | CONTINUITY |

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9 22	F	A39 27	K	C14 25
B	A35 27	G	A3 22	L	C20 25
C	A36 27	H	A40 27	M	A7 22
D	A37 27	I	A41 27	N	A8 22
E	A38 27	J	C12 25		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
I	21	R/B NO.1 (LEFT KICK PANEL)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

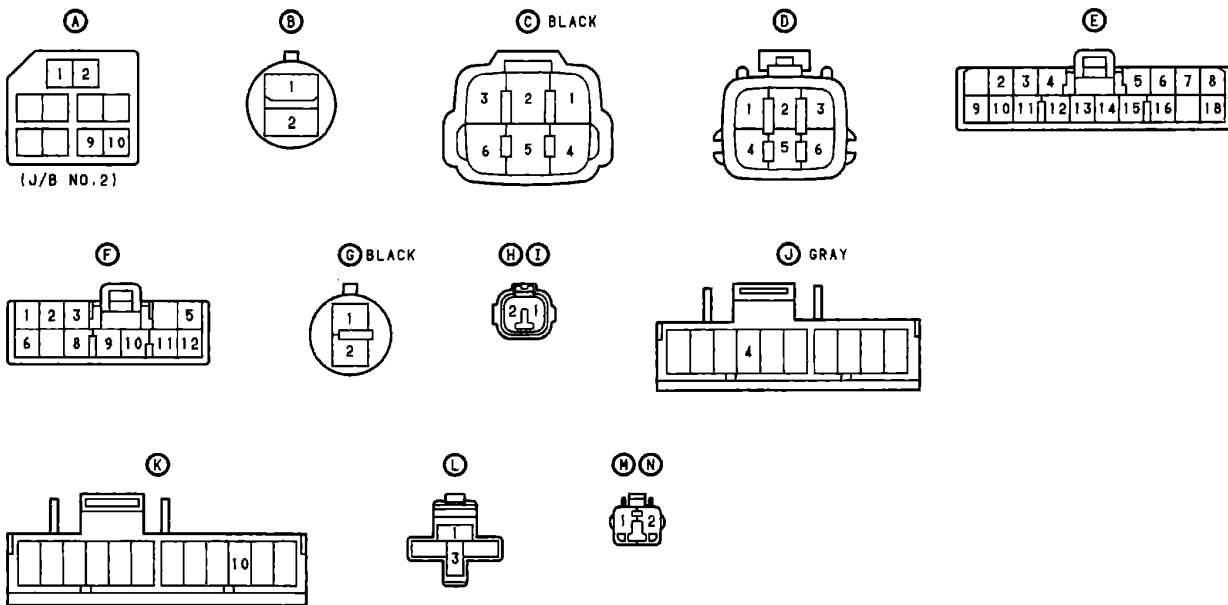
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D		FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		
1L		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

☐ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

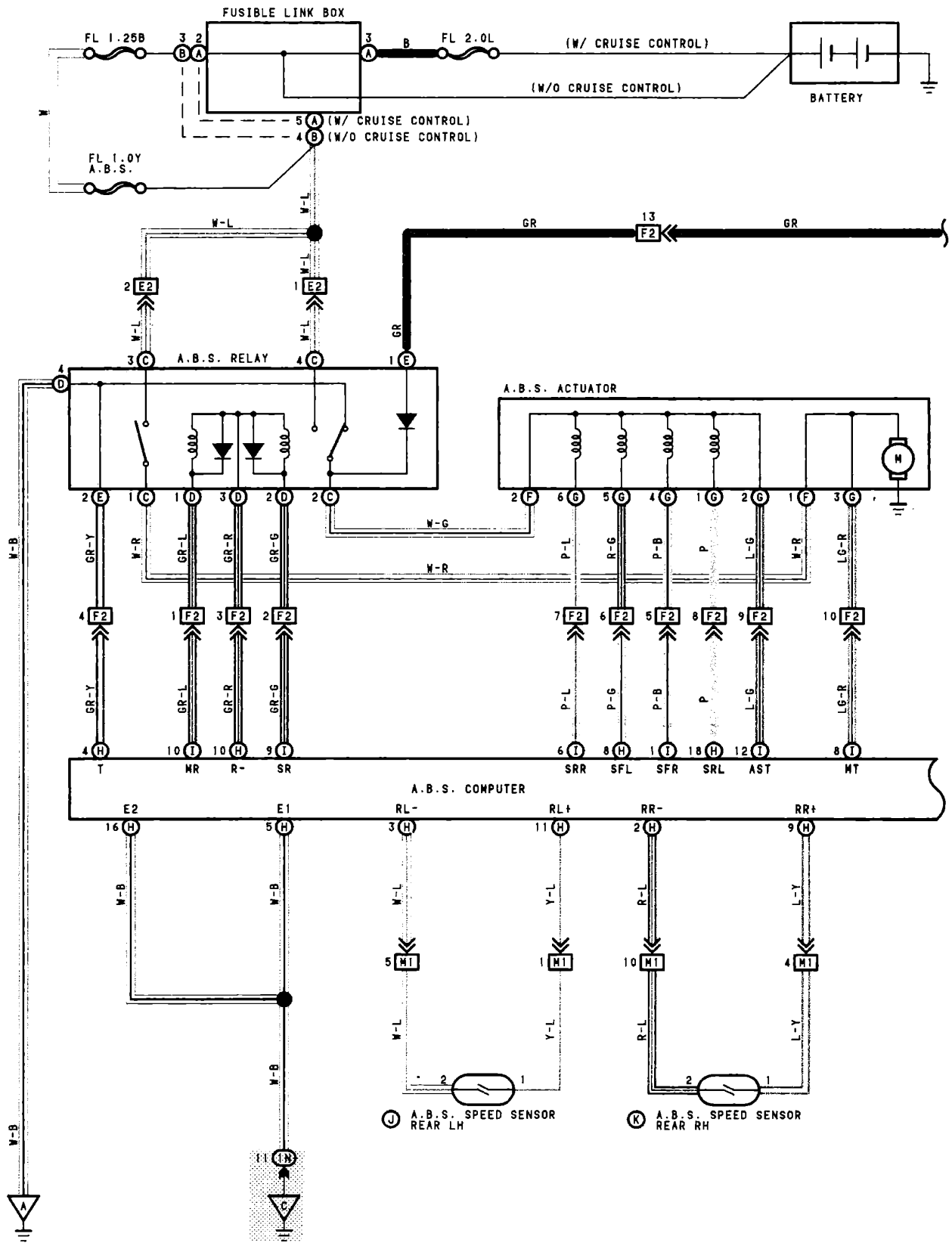
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B3	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
E3	28(3S-GTE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (LEFT FENDER)
W1	38(L/B)	FLOOR WIRE AND COWL WIRE (J/B NO.1 LEFT KICK PANEL)
N1	38(L/B)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
T1	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)
T2		
U1		
U2		
		ENGINE ROOM MAIN WIRE AND FLOOR WIRE (LEFT KICK PANEL)

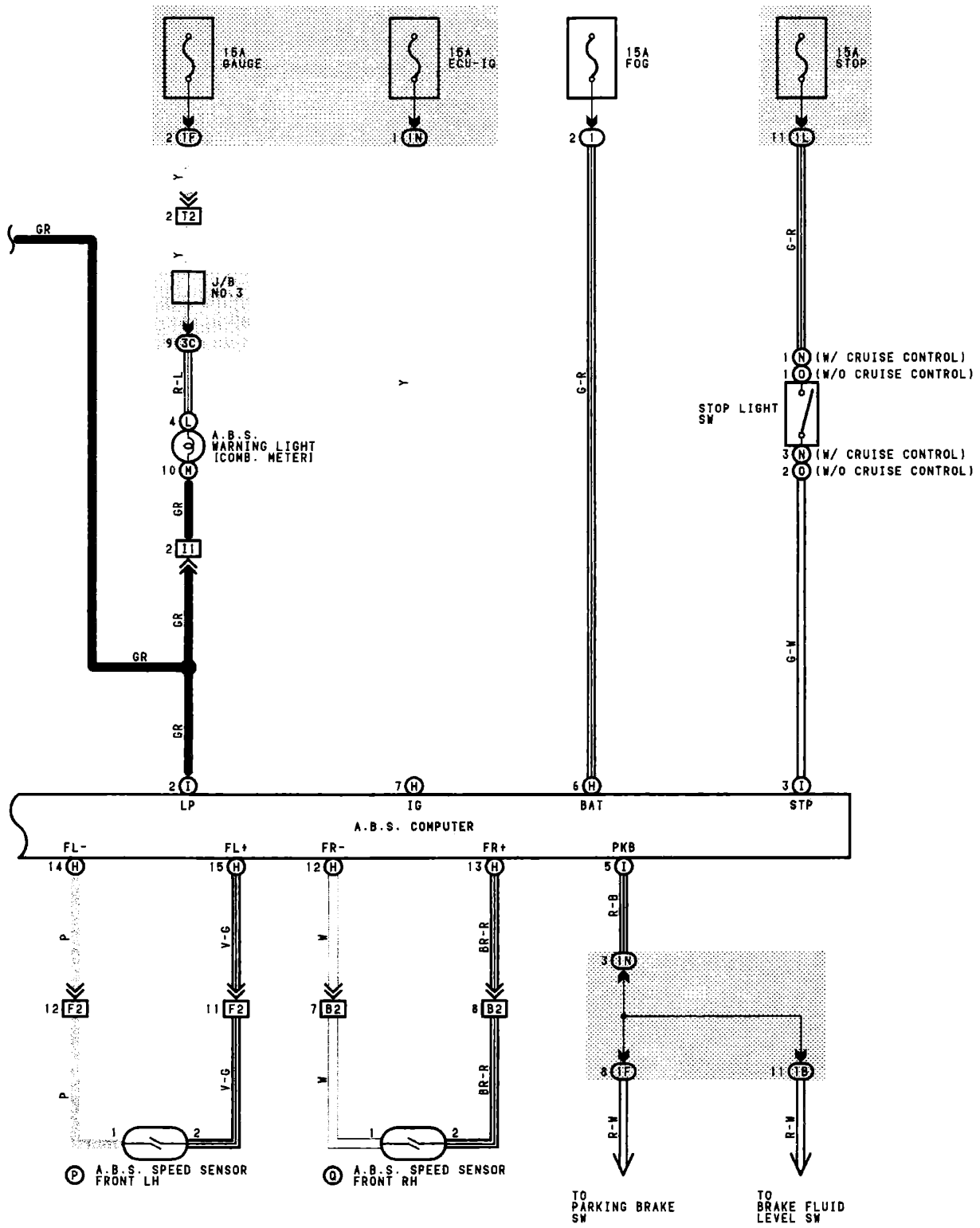
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE)	RIGHT FENDER
I	38(L/B)	FLOOR PANEL (3S-GTE)



25-2 A.B.S. (ANTI-LOCK BRAKE SYSTEM) (3S-GE)





25-2 A.B.S. (ANTI-LOCK BRAKE SYSTEM) (3S-GE)

SYSTEM OUTLINE

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

1. INPUT SIGNALS

(1) SPEED SENSOR SIGNAL

THE SPEED OF THE WHEELS IS DETECTED AND INPUT TO TERMINALS FL+, FR+, RL+ AND RR+ OF THE A.B.S. COMPUTER.

(2) STOP LIGHT SW SIGNAL

A SIGNAL IS INPUT TO TERMINAL STP OF THE A.B.S. COMPUTER WHEN BRAKE PEDAL IS OPERATED.

(3) PARKING BRAKE SW SIGNAL

A SIGNAL IS INPUT TO TERMINAL PKB OF THE A.B.S. COMPUTER WHEN THE PARKING BRAKE IS OPERATED.

2. SYSTEM OPERATION

DURING SUDDEN BRAKING THE A.B.S. COMPUTER, WHICH HAS SIGNALS INPUT FROM EACH SENSOR, CONTROLS THE CURRENT FLOWING TO THE SOLENOID INSIDE THE ACTUATOR AND LETS THE HYDRAULIC PRESSURE ACTING ON EACH WHEEL CYLINDER ESCAPE TO THE RESERVOIR. THE PUMP INSIDE THE ACTUATOR IS ALSO OPERATING AT THIS TIME AND IT RETURNS THE BRAKE FLUID FROM THE RESERVOIR TO THE MASTER CYLINDER, THUS PREVENTING LOCKING OF THE VEHICLE WHEELS.

IF THE COMPUTER 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 REDUCTION, HOLDING AND INCREASE ARE REPLATED TO MAINTAIN VEHICLE STABILITY AND TO IMPROVE STEERABILITY DURING SUDDEN BRAKING.

SERVICE HINTS

A.B.S. COMPUTER

(DISCONNECT THE COMPUTER CONNECTOR)

- | | | |
|--|----------------|---|
| (I) 1-GROUND. | (I) 6-GROUND: | } APPROX. 12VOLTS WITH IGNITION SW ON |
| (I) 12-GROUND. | (I) 2-GROUND: | |
| (H) 8-GROUND. | (H) 18-GROUND: | } ALWAYS CONTINUITY |
| (H) 7-GROUND. | | |
| (H) 4-GROUND. | (H) 5-GROUND: | |
| (H) 16-GROUND: | | |
| (I) 10- (H) 10: CONTINUITY | | |
| (I) 5-GROUND: APPROX. 12VOLTS WITH PARKING BRAKE LEVER NOT PULLED | | |
| | | APPROX. 0VOLT WITH PARKING BRAKE LEVER PULLED |
| (H) 6-GROUND: ALWAYS APPROX. 12VOLTS | | |
| (H) 2-9, (H) 3-11, (H) 12-13, (H) 14-15: 0.85-1.30K Ω WITH IGNITION SW ON | | |
| (I) 9- (H) 10: CONTINUITY | | |

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	F9 23	G	A1 23	M	C14 25
B	F9 23	H	A20 25	N	C20 25
C	A5 23	I	A21 25	O	C20 25
D	A4 23	J	A40 26(C/P), 27(L/B)	P	A7 23
E	A6 23	K	A41 26(C/P), 27(L/B)	Q	A8 23
F	A2 23	L	C12 25		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
I	21	R/B NO.1 (LEFT KICK PANEL)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

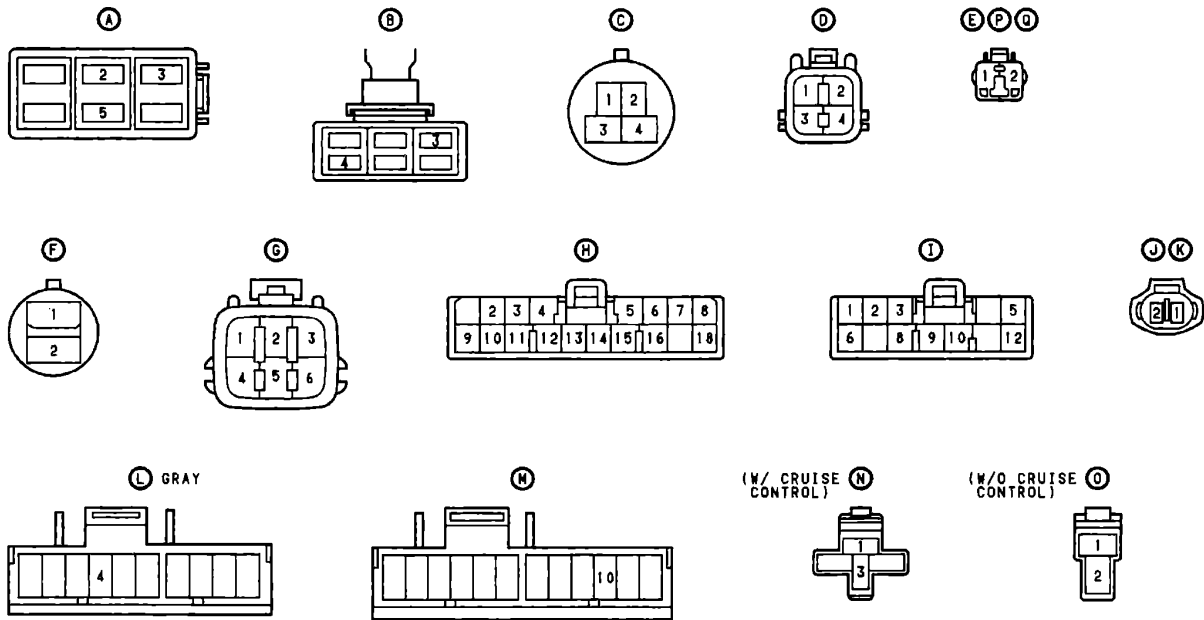
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1L		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1N		
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3* (INSTRUMENT PANEL LEFT)

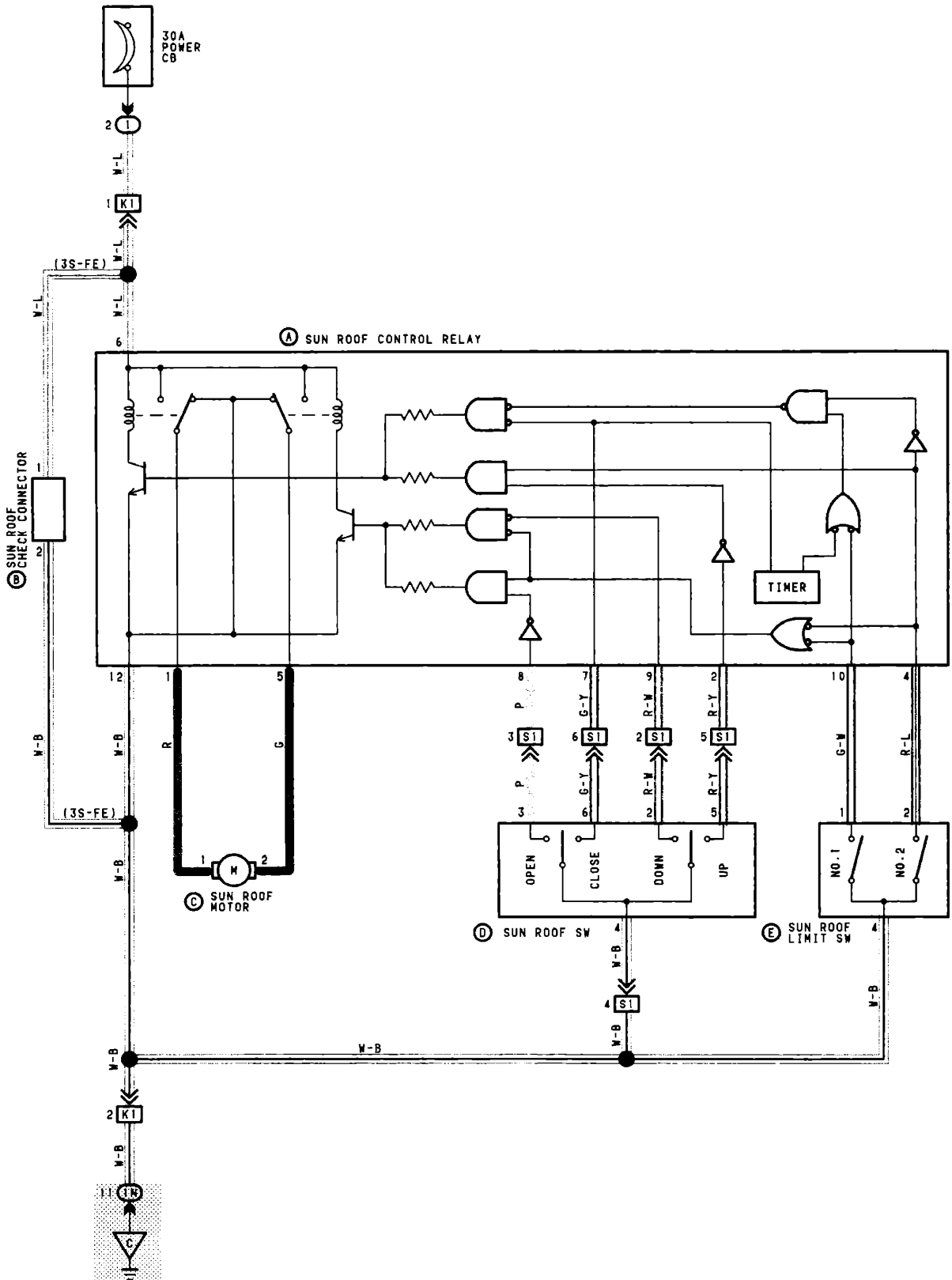
 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B2	30(3S-GE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
E2	30(3S-GE)	ENGINE WIRE AND ENGINE ROOM MAIN WIRE (LEFT FENDER)
F2	34	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
I1		INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)
M1	36(C/P) 38(L/B)	FLOOR WIRE AND COWL WIRE (J/B NO.1 LEFT KICK PANEL)
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

 : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	30(3S-GE)	RIGHT FENDER
C	34	J/B NO.1 SET BOLT





SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, CURRENT FLOWS THROUGH THE PWR CB TO TERMINAL 6 OF THE SUN ROOF CONTROL RELAY.

1. SLIDE OPEN OPERATION

WHEN THE IGNITION SW IS ON AND THE SUN ROOF SW PUSHED TO THE OPEN SIDE, A SIGNAL IS INPUT TO TERMINAL 8 OF THE SUN ROOF CONTROL RELAY. WHEN THIS OCCURS THE CURRENT FLOWING TO TERMINAL 6 OF THE RELAY FLOWS TO TERMINAL 12 → GROUND, ACTIVATING THE RELAY SO THAT CURRENT FLOWS FROM TERMINAL 6 OF THE RELAY → TERMINAL 5 → TERMINAL 2 OF THE SUN ROOF MOTOR → MOTOR → TERMINAL 1 → TERMINAL 12 OF THE RELAY → GROUND, THE MOTOR ROTATES TO THE OPEN SIDE AND THE SUN ROOF SLIDES OPEN AS LONG AS THE SUN ROOF CONTROL SW IS PUSHED TO THE OPEN SIDE.

WHEN THE SUN ROOF IS OPENED COMPLETELY, EVEN IF THE SUN ROOF SW IS PUSHED CONTINUOUSLY, THE CURRENT TO THE SUN ROOF MOTOR INCREASES.

IN THIS CASE, THE CIRCUIT BREAKER BUILT INTO THE MOTOR OPENS AND CUTS OUT THE CURRENT TO THE MOTOR, PREVENTING THE MOTOR FROM BURNING OUT.

2. SLIDE CLOSE OPERATION

WHEN THE IGNITION SW IS ON AND THE SUN ROOF CONTROL SW IS PUSHED TO THE CLOSE SIDE, A SIGNAL IS INPUT FROM TERMINAL 6 TO TERMINAL 7 OF THE SUN ROOF CONTROL RELAY, AND THE CURRENT FLOWING TO TERMINAL 6 OF THE RELAY FLOWS TO TERMINAL 12 → GROUND. THIS ACTIVATES THE RELAY AND THE CURRENT FLOWING TO TERMINAL 6 FLOWS TO TERMINAL 1 → TERMINAL 1 OF SUN ROOF MOTOR → MOTOR → TERMINAL 2 → TERMINAL 5 OF THE RELAY → TERMINAL 12 → GROUND. THIS CAUSES THE MOTOR TO ROTATE TO THE CLOSE SIDE AND SLIDE CLOSE OPERATION CONTINUES AS LONG AS THE SUN ROOF CONTROL SW IS PUSHED TO THE CLOSE SIDE.

100 MM BEFORE THE FULLY CLOSED POSITION THE SUN ROOF LIMIT NO. 1 SW TURNS OFF AND THIS SIGNAL IS INPUT INTO THE RELAY, SO THE RELAY STOPS OPERATION. THUS CURRENT DOES NOT FLOW TO THE SUN ROOF MOTOR AND THE SUN ROOF AUTOMATICALLY STOPS.

IF THE SUN ROOF SW IS THEN PUSH AGAIN, THE TIMER INSTALLED IN THE SUN ROOF CONTROL TURNS ON AND THE RELAY OPERATES FOR 0.65 SEC. TO RE-OPERATE THE MOTOR SO THAT THE SUN ROOF LIMIT SW TURNS ON. AS A RESULT, AS LONG AS THE SUN ROOF SW IS PUSHED, SLIDE CLOSE OPERATION OCCURS AND THE SUN ROOF IS ABLE TO FULLY CLOSE.

3. TILT UP OPERATION

WHEN THE SUN ROOF CONTROL SW IS PUSHED TO THE TILT UP POSITION, WITH THE IGNITION SW TURNED ON AND THE SLIDE ROOF COMPLETELY CLOSED A SIGNAL IS INPUT TO TERMINAL 2 OF THE SUN ROOF CONTROL RELAY. WHEN THIS OCCURS, THE CURRENT FLOWING TO TERMINAL 6 OF THE RELAY FLOWS TO TERMINAL 12 OF THE RELAY → GROUND. AS A RESULT, THE RELAY IS ACTIVATED AND CURRENT FLOWS FROM TERMINAL 6 OF THE RELAY → TERMINAL 1 → TERMINAL 1 OF THE SUN ROOF MOTOR → MOTOR → TERMINAL 2 → TERMINAL 5 OF THE RELAY → TERMINAL 12 → GROUND, ROTATING THE MOTOR FOR TILT UP OPERATION.

4. TILT DOWN OPERATION

WHEN THE SUN ROOF CONTROL SW IS PUSHED TO THE TILT DOWN POSITION, WITH THE IGNITION SW TURNED ON AND THE SLIDE ROOF TILTED UP, A SIGNAL IS INPUT TO TERMINAL 9 OF SUN ROOF CONTROL RELAY. WHEN THIS OCCURS, THE CURRENT FLOWING TO TERMINAL 6 OF THE RELAY FLOWS TO TERMINAL 12 → GROUND.

AS A RESULT, RELAY ACTIVATES AND THE CURRENT FLOWS FROM TERMINAL 6 OF THE RELAY → TERMINAL 5 → TERMINAL 2 OF SUN ROOF MOTOR → MOTOR → TERMINAL 1 → TERMINAL 1 OF THE RELAY → TERMINAL 12 → GROUND, ROTATING THE MOTOR FOR TILT DOWN OPERATION.

SERVICE HINTS

Ⓐ SUN ROOF CONTROL RELAY

12-GROUND: ALWAYS CONTINUITY

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

1-GROUND: APPROX. 12VOLTS WITH IGNITION SW ON AND SUN ROOF SW CLOSED POSITION

5-GROUND: APPROX. 12VOLTS WITH IGNITION SW ON AND SUN ROOF SW OPEN POSITION

(DISCONNECT WIRING CONNECTOR FROM COMPUTER)

8-GROUND: CONTINUITY WITH SUN ROOF SW AT OPEN

7-GROUND: CONTINUITY WITH SUN ROOF SW AT CLOSE

9-GROUND: CONTINUITY WITH SUN ROOF SW AT DOWN

2-GROUND: CONTINUITY WITH SUN ROOF SW AT UP

26 SUN ROOF

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	S8	26(C/P), 27(L/B)	C	S10	26(C/P), 27(L/B)
B	S7	26(C/P), 27(L/B)	D	S11	26(C/P), 27(L/B)
				E	S9
					26(C/P), 27(L/B)

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
I	21	R/B NO.1 (LEFT KICK PANEL)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

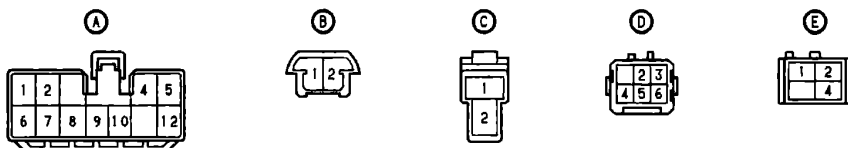
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1N	16	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
K1	36(C/P)	COWL WIRE AND ROOF WIRE (LEFT KICK PANEL)
	38(L/B)	
S1	36(C/P)	ROOF WIRE AND ROOF NO.2 WIRE (ROOF FRONT)
	38(L/B)	

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT





○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	P5	26(C/P), 27(L/B)	C	P7	26(C/P), 27(L/B)
B	P6	26(C/P), 27(L/B)	D	P8	26(C/P), 27(L/B)

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	21	R/B NO.1 (LEFT KICK PANEL)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

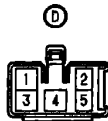
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1L	16	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

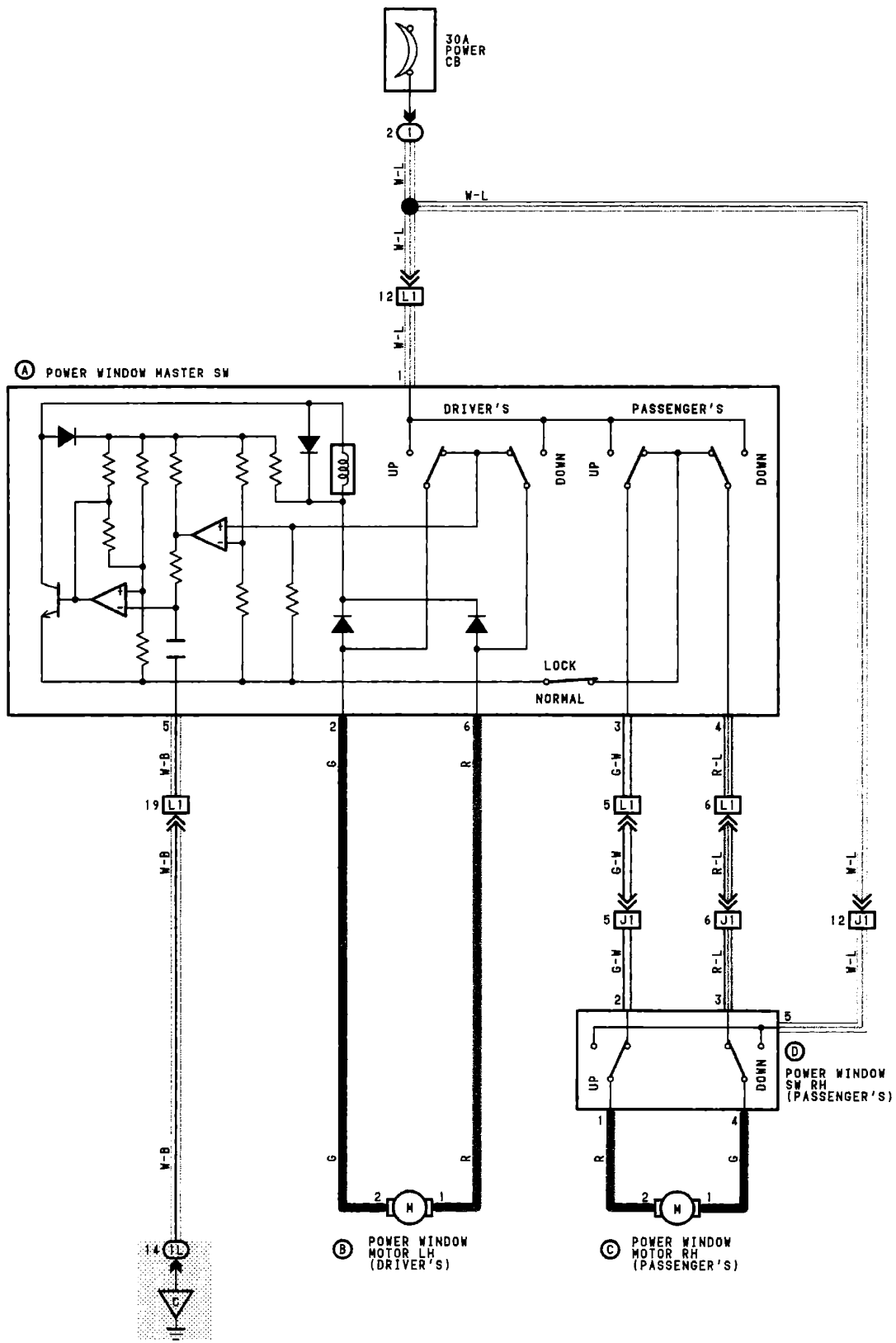
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
J1	36(C/P)	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
	38(L/B)	
L1	36(C/P)	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
	38(L/B)	

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT



27 POWER WINDOWS



SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, CURRENT FLOWS THROUGH THE POWER CB TO TERMINAL 1 OF THE POWER MAIN RELAY AND TERMINAL 5 OF THE POWER WINDOW SW.

1. MANUAL UP 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 1 OF THE POWER WINDOW MASTER SW FLOWS TO TERMINAL 2 OF THE MASTER SW → TERMINAL 2 OF THE POWER WINDOW MOTOR → TERMINAL 1 → TERMINAL 6 OF THE MASTER SW → TERMINAL 5 → TO GROUND AND CAUSES THE POWER WINDOW MOTOR TO ROTATE IN THE UP DIRECTION.

THE WINDOW ASCENDS ONLY WHILE THE SW IS BEING PUSHED.

IN DOWN OPERATION, THE FLOW OF CURRENT FROM TERMINAL 1 OF THE POWER WINDOW MASTER SW TO TERMINAL 6 OF THE MASTER SW CAUSES THE FLOW OF CURRENT FROM TERMINAL 1 OF THE MOTOR → TERMINAL 2 → TERMINAL 2 OF THE MASTER SW → TERMINAL 5 → TO GROUND, FLOWING IN THE OPPOSITE DIRECTION TO MANUAL UP OPERATION AND CAUSING THE MOTOR TO ROTATE IN REVERSE, LOWERING THE WINDOW.

2. AUTO DOWN OPERATION

WITH THE IGNITION SW ON AND WITH THE AUTO SW OF THE POWER WINDOW MASTER SW IN DOWN POSITION, CURRENT FLOWING TO TERMINAL 1 OF THE MASTER SW FLOWS TO TERMINAL 6 OF THE MASTER SW → TERMINAL 1 OF THE POWER WINDOW MOTOR → TERMINAL 2 → TERMINAL 2 OF THE MASTER SW → TERMINAL 5 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 FLOW BETWEEN TERMINAL 2 OF THE MASTER SW AND TERMINAL 5 INCREASES.

AS A RESULT, THE SOLENOID STOPS OPERATING, THE AUTO SWITCH TURNS OFF AND THE CURRENT FLOW FROM TERMINAL 1 OF THE MASTER SW TO TERMINAL 6 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 2 OF THE MASTER SW → TO TERMINAL 5, 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 SW (PASSENGER'S WINDOW)

WITH POWER WINDOW SW (PASSENGER'S) PUSHED TO THE UP SIDE, CURRENT FLOWING FROM TERMINAL 5 OF THE POWER WINDOW SW FLOWS TO TERMINAL 1 OF THE POWER WINDOW SW → TERMINAL 2 OF THE POWER WINDOW MOTOR → TERMINAL 1 → TERMINAL 4 OF THE POWER WINDOW SW → TERMINAL 3 → TERMINAL 4 OF THE MASTER SW → TERMINAL 5 → TO GROUND AND CAUSES THE POWER WINDOW MOTOR (PASSENGER'S) TO ROTATE IN THE UP DIRECTION. UP OPERATION CONTINUES ONLY WHILE THE POWER WINDOW SW IS 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 REVERSE.

WHEN THE WINDOW LOCK SW IS PUSHED TO THE LOCK SIDE, THE GROUND CIRCUIT TO THE PASSENGER'S WINDOW BECOMES OPEN.

AS A RESULT, EVEN IF OPEN/CLOSE OPERATION OF THE PASSENGER'S WINDOW IS TRIED, THE CURRENT FROM TERMINAL 5 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.

SERVICE HINTS**Ⓐ POWER WINDOW MASTER SW**

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

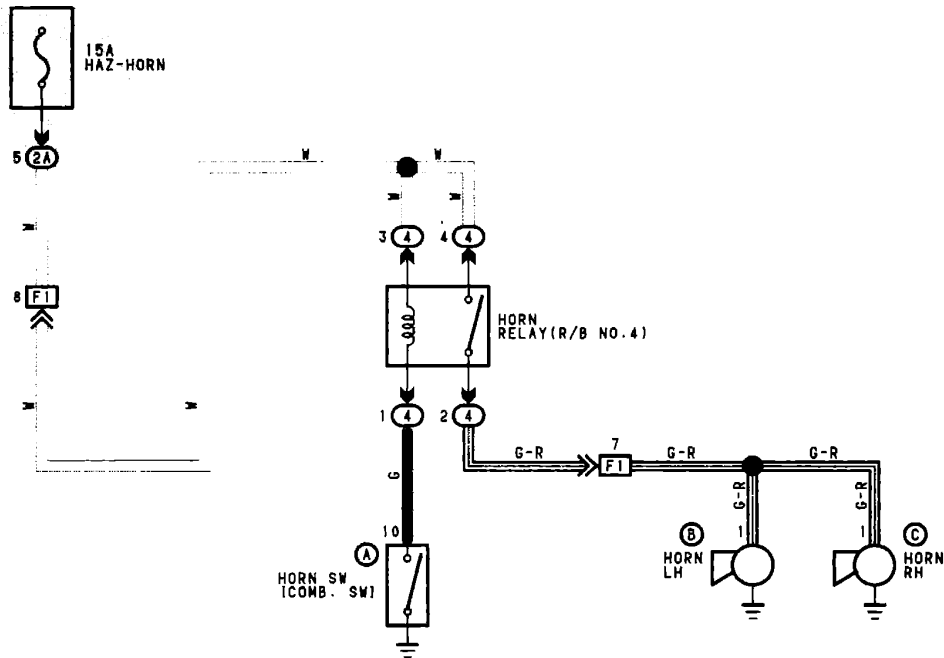
5-GROUND:ALWAYS CONTINUTY

2-GROUND:12VOLTS WITH IGNITION SW ON AND MASTER SW(DRIVER'S WINDOW) UP

6-GROUND:12VOLTS WITH IGNITION SW ON AND MASTER SW(DRIVER'S WINDOW) DOWN OR DOWNAUTO

WINDOW LOCK SW

OPEN WITH WINDOW LOCK SW AT LOCK POSITION



SERVICE HINTS

HORN RELAY

④ 4- ④ 2: CLOSED WITH HORN SW ON

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	C16 25	B	H3 22(3S-GTE), 23(3S-GE), 24(3S-FE)	C	H4 22(3S-GTE), 23(3S-GE), 24(3S-FE)

○ : RELAY BLOCKS

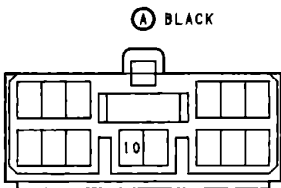
CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
4	21	R/B NO.4 (RIGHT KICK PANEL)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

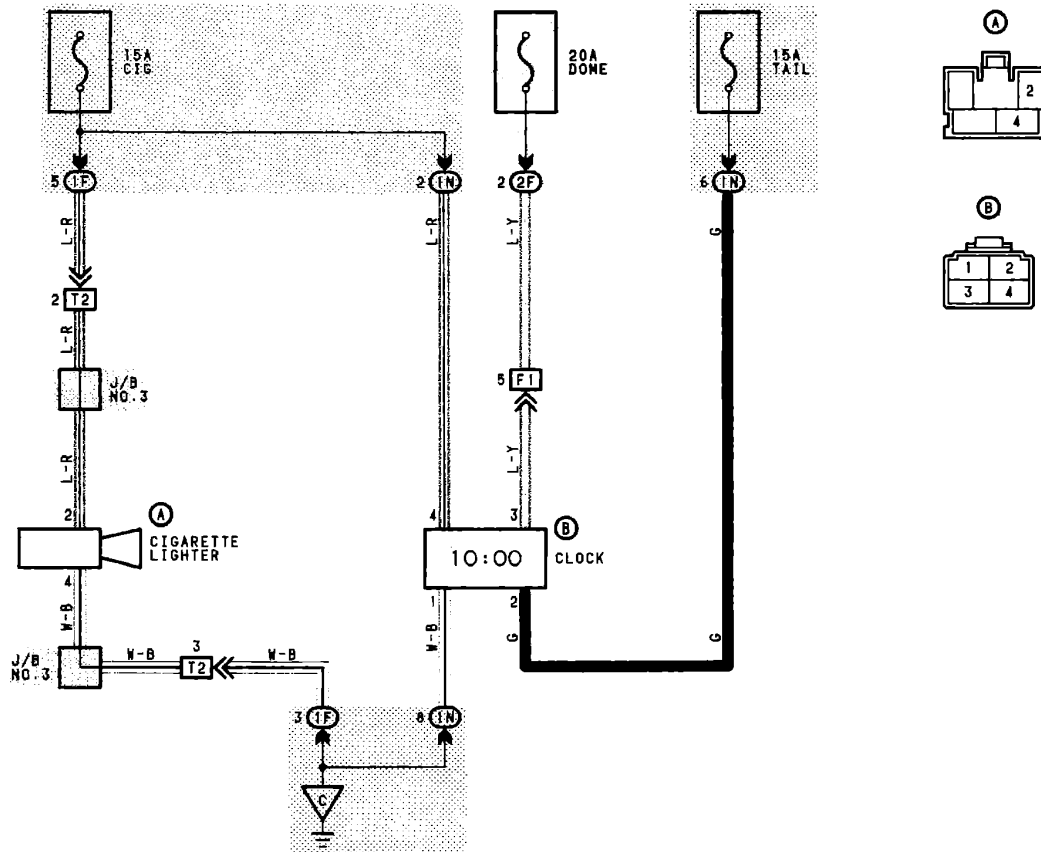
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
F1	28(3S-GTE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	



CIGARETTE LIGHTER AND CLOCK 29



SERVICE HINTS

Ⓐ CIGARETTE LIGHTER

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

Ⓑ CLOCK

3-GROUND: ALWAYS APPROX. 12VOLTS (POWER FOR CLOCK)

4-GROUND: APPROX. 12VOLTS WITH IGNITION SW AT ON OR ACC POSITION (POWER FOR INDICATION)

2-GROUND: APPROX. 12VOLTS WITH LIGHT CONTROL SW AT TAIL OR HEAD POSITION (SIGNAL OF DIM INDICATION)

1-GROUND: ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	C8	25	B	C10	25

⊠ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1F	16	INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1N		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
2F	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)

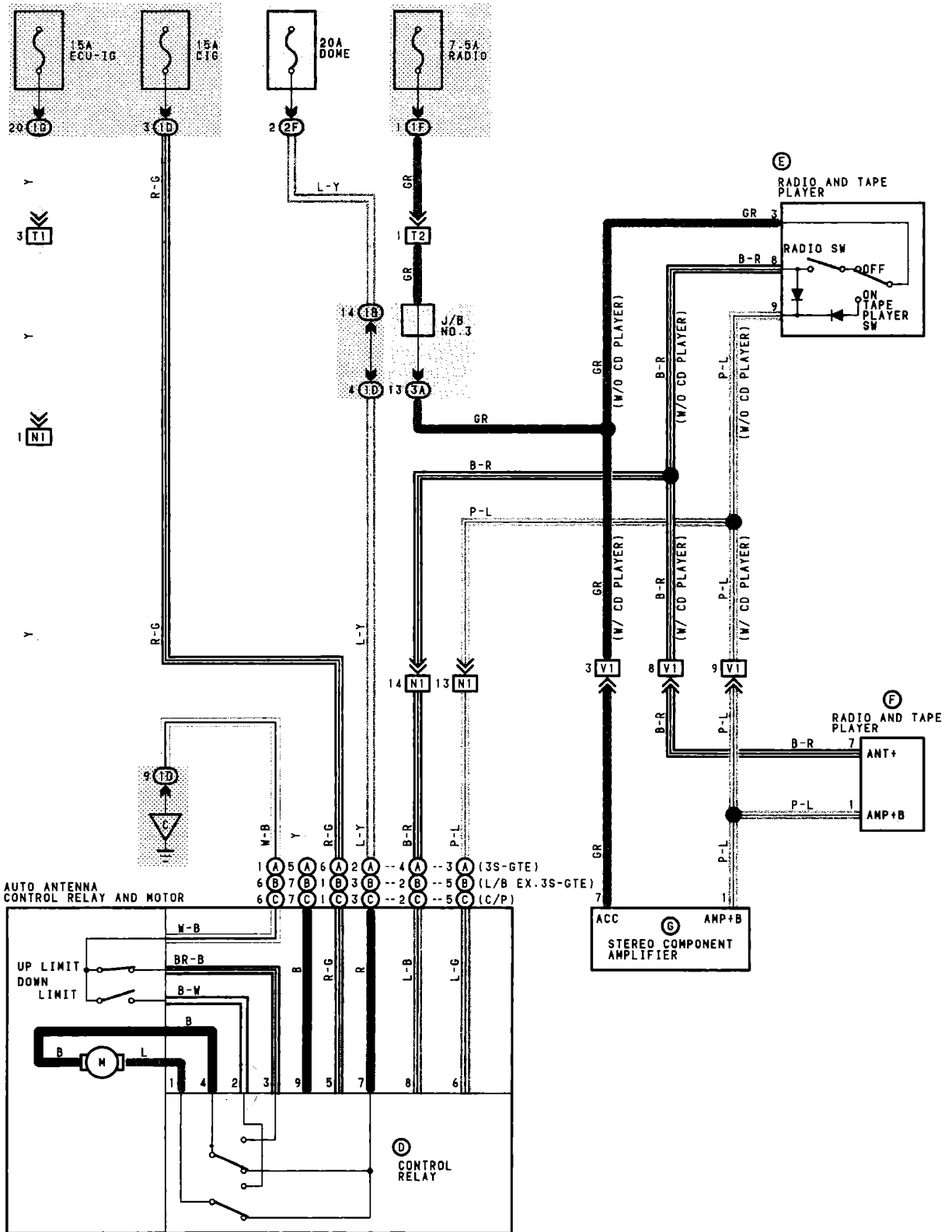
⊡ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
F1	28(3S-GTE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT

30 AUTO ANTENNA



SERVICE HINTS

Ⓧ CONTROL RELAY

- 3-GROUND: CONTINUITY (UPPER LIMIT SW ON) UNLESS ANTENNA AT UP STOP
- 2-GROUND: CONTINUITY (DOWN LIMIT SW ON) UNLESS ANTENNA AT DOWN STOP
- 4-3 : CLOSED WITH IGNITION SW AT ACC OR ON POSITION AND RADIO SW ON AND PLAYER SW OFF UNTIL ANTENNA AT UPPERMOST POSITION
- 1-2 : CLOSED WITH IGNITION SW AT ACC OR ON POSITION AND RADIO SW OFF AND PLAYER SW OFF UNTIL ANTENNA AT LOWERMOST POSITION
- 1-2 : CLOSED WITH IGNITION SW OFF UNTIL ANTENNA AT LOWERMOST POSITION

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A A42	27(3S-GTE)	D A42	26(C/P), 27(L/B)	G S6	25(W/ CD PLAYER)
B A42	27(L/B EX. 3S-GTE)	E R5	25(W/O CD PLAYER)		
C A42	26(C/P)	F R7	25(W/ CD PLAYER)		

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D		FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		
2F	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
3A	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
N1	36(C/P) 38(L/B)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
T1	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)
T2		
V1		

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
C	34	J/B NO.1 SET BOLT

(3S-GTE) Ⓐ



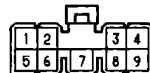
(L/B EX. 3S-GTE) Ⓑ



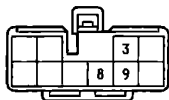
(C/P) Ⓒ BLACK



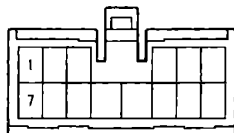
Ⓓ



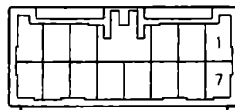
Ⓔ BLUE



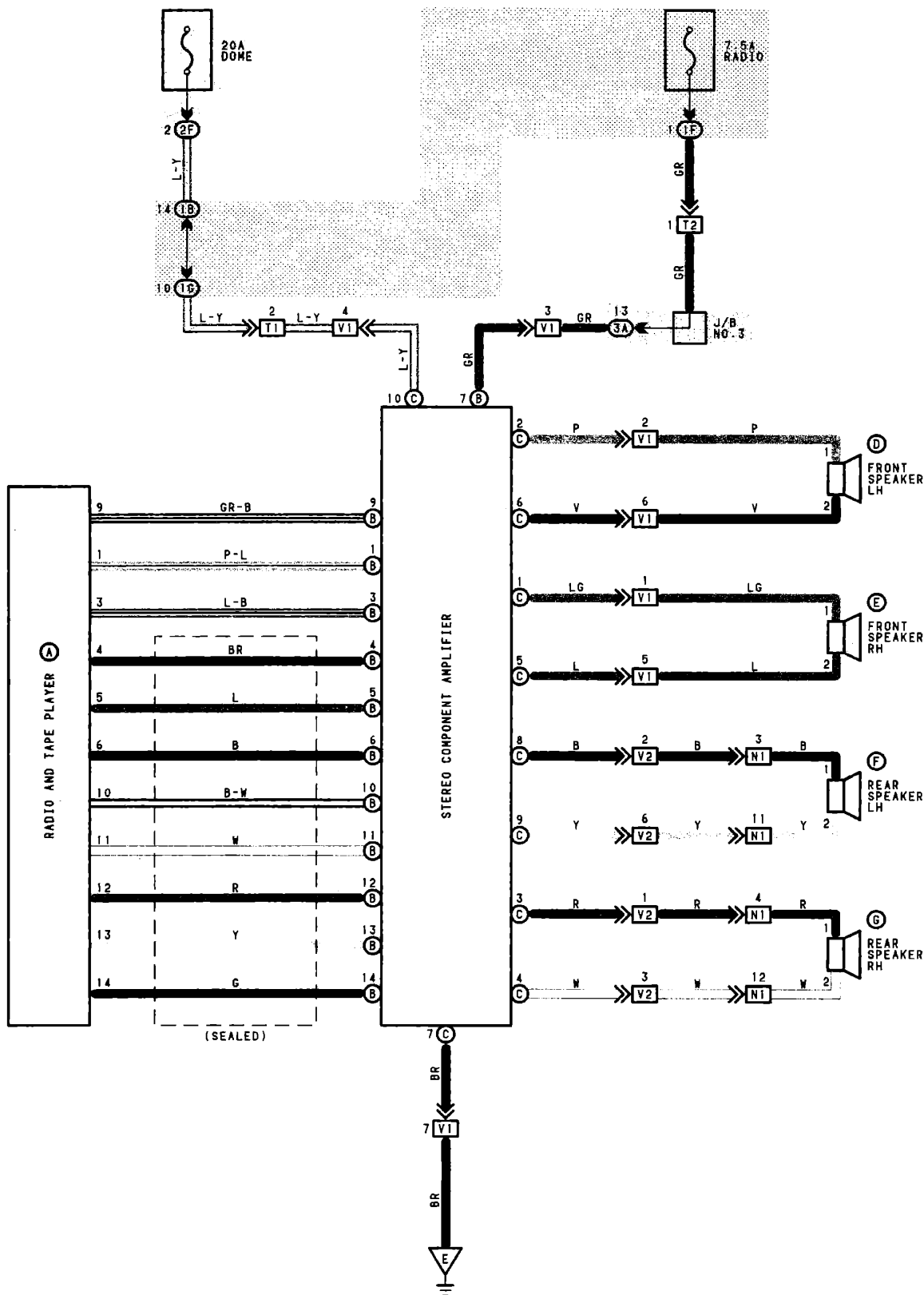
Ⓕ



Ⓖ



31-1 RADIO AND TAPE PLAYER (w/ CD PLAYER)



SERVICE HINTS

STEREO COMPONENT AMPLIFIER

- ⓐ 10-GROUND: ALWAYS APPROX. 12VOLTS
- ⓑ 7-GROUND: APPROX. 12VOLTS WITH IGNITION SW AT ON OR ACC POSITION
- ⓒ 7-GROUND: ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A R7	25	D F12	25	G R13	26(C/P), 27(L/B)
B S6	25	E F13	25		
C S5	25	F R12	26(C/P), 27(L/B)		

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

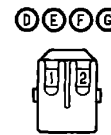
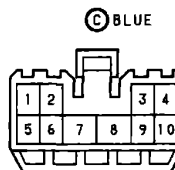
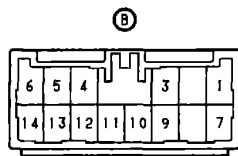
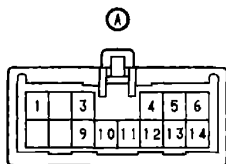
CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B		ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F	16	INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		
2F	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
3A	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

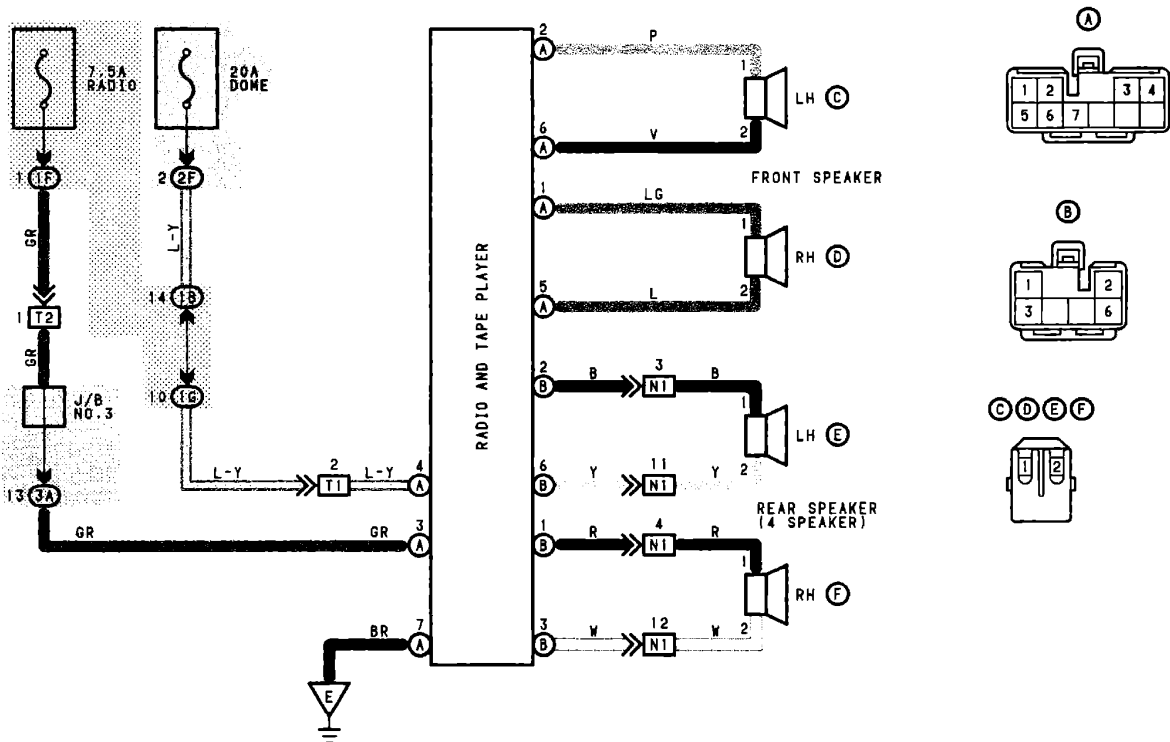
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
N1	36(C/P) 38(L/B)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
T1	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)
T2		
V1	34	INSTRUMENT PANEL WIRE AND CONSOLE BOX WIRE (BEHIND RADIO)
V2		

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
E	34	BEHIND RADIO



31-2 RADIO AND TAPE PLAYER (w/o CD PLAYER)



SERVICE HINTS

RADIO AND TAPE PLAYER

- 4-GROUND: APPROX. 12VOLTS
- 3-GROUND: APPROX. 12VOLTS WITH IGNITION SW AT ON OR ACC POSITION
- 7-GROUND: ALWAYS CONTINUITY

PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	R5 25	C	F12 25	E	R12 26(C/P), 27(L/B)
B	R6 25	D	F13 25	F	R13 26(C/P), 27(L/B)

JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B		ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F	16	INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1G		
2F	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
3A	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

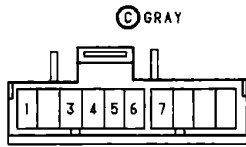
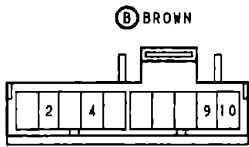
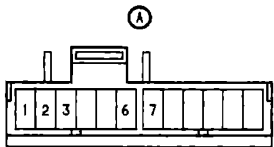
CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
N1	36(C/P) 38(L/B)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
T1		
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSRTUMENT PANEL LEFT)

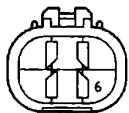
GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
E	34	BEHIND RADIO

COMBINATION METER  32



(3S-GTE, 3S-GE) (D) GREEN



(3S-FE) (E) BLACK



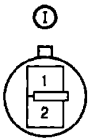
(F)



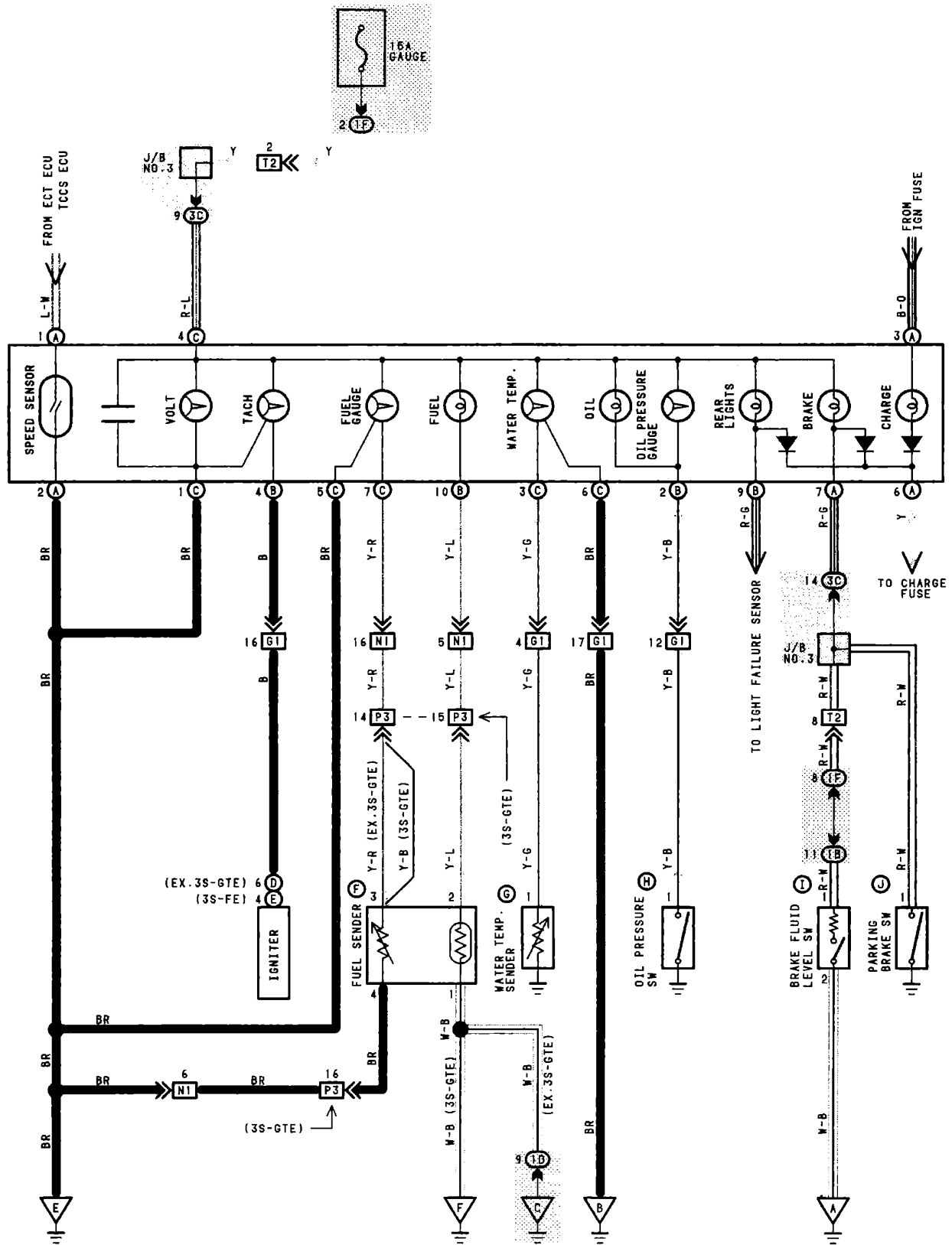
(G) BLUE



(H)



32 COMBINATION METER



SERVICE HINTS

COMBINATION METER

- Ⓐ 3-GROUND: APPROX. 12VOLTS WITH IGNITION SW ON
 Ⓒ 4-GROUND: APPROX. 12VOLTS WITH IGNITION SW ON
 Ⓐ 2, Ⓒ 1, Ⓒ 5, Ⓒ 6-GROUND: ALWAYS CONTINUITY

FUEL LEVEL GAUGE

- Ⓒ 4-Ⓒ 7 : APPROX. 101.9Ω
 Ⓒ 4-Ⓒ 5 : APPROX. 203.2Ω
 Ⓒ 7-Ⓒ 5 : APPROX. 101.3Ω

OIL PRESSURE GAUGE

- Ⓒ 2-Ⓒ 4 : APPROX. 42Ω

WATER TEMP. GAUGE

- Ⓒ 3-Ⓒ 4 : APPROX. 56Ω
 Ⓒ 4-Ⓒ 6 : APPROX. 201.8Ω

Ⓕ FUEL SENDER

- 3-4 : APPROX. 4 Ω WITH FUEL FULL
 APPROX. 32.5 Ω WITH FUEL HALF FULL
 APPROX. 110.0 Ω WITH FUEL EMPTY

Ⓖ WATER TEMP. SENDER

(NIPPON DENSO MAKE)

- 1-GROUND: APPROX. 226 Ω AT 50°C (122°F)
 APPROX. 26Ω AT 115°C (239°F)

(YAZAKI MAKE)

- 1-GROUND: APPROX. 152.7Ω AT 60°C (140°F)
 APPROX. 26.4Ω AT 115°C (239°F)

Ⓗ OIL PRESSURE SW

- 1-GROUND: CLOSED WITH OIL PRESSURE BELOW 0.2Kg/cm² (2.84PSI, 19.61KPA)

Ⓘ BRAKE FLUID LEVEL SW

- 1-2 : CLOSED WITH FLOAT DOWN

Ⓙ PARKING BRAKE SW

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

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A C14	25	E I2	24(3S-FE)	I B2	22(3S-GTE), 23(3S-GE), 24(3S-FE)
B C13	25	F F15	26(C/P), 27(L/B)	J PI	25
C C12	25	G W4	22(3S-GTE), 23(3S-GE), 24(3S-FE)		
D I2	22(3S-GTE), 23(3S-GE)	H O4	22(3S-GTE), 23(3S-GE), 24(3S-FE)		

Ⓢ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B		ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D	16	FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
3C	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
W1	36(C/P)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
	38(L/B)	
P3	38	FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)

▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE)	RIGHT FENDER
	30(3S-GE)	
	32(3S-FE)	
B	28(3S-GTE)	INTAKE MANIFOLD
	30(3S-GE)	
	32(3S-FE)	
C	34	J/B NO.1 SET BOLT
E	34	BEHIND RADIO
F	36(C/P)	BACK PANEL CENTER



SYSTEM OUTLINE

(FOR PUSH SW TYPE)

1. RECIRC/FRESH CONTROL SERVO MOTOR OPERATION

(SWITCHING FROM FRESH TO RECIRC)

WITH THE IGNITION SW ON, CURRENT FROM THE GAUGE FUSE FLOWS TO TERMINAL 1 OF THE SERVO MOTOR. WHEN THE RECIRC SW IS TURNED ON, THE CURRENT FLOWS FROM SERVO MOTOR → TERMINAL 2 → TERMINAL 14 OF THE HEATER CONTROL ASSEMBLY → TERMINAL 16 → GROUND, THE MOTOR ROTATES AND THE DAMPER MOVES TO THE RECIRC SIDE. WHEN IT IS IN THE RECIRC POSITION, THE CIRCUIT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS IN THAT POSITION.

WITH THE CIRCUIT FOR THE INDICATOR LIGHT, CURRENT FLOWS FROM THE GAUGE FUSE → TERMINAL 2 OF THE HEATER CONTROL ASSEMBLY → INDICATOR LIGHT → TERMINAL 16 → GROUND AND THE INDICATOR LIGHT CONTINUES TO LIGHT UP WHILE THE RECIRC SW IS ON.

(SWITCHING FROM RECIRC TO FRESH)

WHEN THE IGNITION IS ON AND THE FRESH SW IS TURNED ON, CURRENT FLOWS FROM TERMINAL 3 OF THE SERVO MOTOR → TERMINAL 15 OF THE HEATER CONTROL ASSEMBLY → TERMINAL 16 → GROUND, THE MOTOR ROTATES AND THE DAMPER MOVES TO THE FRESH SIDE. WHEN THE DAMPER IS IN THE FRESH POSITION, THE CIRCUIT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS IN THAT POSITION.

2. OPERATION OF THE AIR VENT MODE CONTROL SERVO MOTOR

(SWITCHING FROM FACE TO B1-LEVEL)

WHEN THE B1-LEVEL SW IS TURNED ON WITH THE DAMPER IN THE FACE POSITION, A SIGNAL THAT THE CIRCUIT IS GROUNDED IS OUTPUT FROM TERMINAL 17 OF THE HEATER CONTROL ASSEMBLY → TERMINAL 6 OF THE SERVO MOTOR → TERMINAL 11 OF THE AUTO A/C AMPLIFIER. (AT THIS TIME, THE CURRENT FLOWING THROUGH TERMINAL 2 OF THE HEATER CONTROL ASSEMBLY FLOWS THROUGH TERMINAL 16 OF THE INDICATOR LIGHT → GROUND, CAUSING THE INDICATOR LIGHT TO LIGHT UP). AT THE SAME TIME, THE SIGNAL FOR WHEN THE CIRCUIT IS NOT GROUNDED IS INPUT TO TERMINAL 10 OF THE AMPLIFIER. THESE 2 SIGNALS CAUSE THE AMPLIFIER TO OPERATE AND CURRENT FLOWS FROM TERMINAL 5 OF THE AMPLIFIER → SERVO MOTOR → TERMINAL 5 → GROUND, WHICH ROTATES THE SERVO MOTOR, CAUSING THE DAMPER TO MOVE TO THE B1-LEVEL POSITION. WHEN THE DAMPER COMES TO THE B1-LEVEL POSITION, A SIGNAL THAT THE GROUND CIRCUIT IS CUT IS INPUT TO TERMINAL 11 OF THE AMPLIFIER, AND AMPLIFIER OPERATION CAUSES THE SERVO MOTOR TO STOP ROTATING AND THE DAMPER TO STAY IN POSITION.

(SWITCHING TO OTHER MODE POSITIONS)

WHEN SWITCHING THE DAMPER FROM FACE TOWARDS DEF, AS EXPLAINED BEFORE, A GROUND SIGNAL IS INPUT TO TERMINAL 11 OF THE AMPLIFIER AND A NON-GROUND SIGNAL IS INPUT TO TERMINAL 10 SO THAT CURRENT FLOWS FROM TERMINAL 5 → SERVO MOTOR → TERMINAL 4, MOVING THE DAMPER TO THE DESIRED POSITION.

WHEN SWITCHING THE DAMPER IN THE OPPOSITE DIRECTION FROM DEF TOWARDS FACE, A GROUND SIGNAL IS INPUT TO TERMINAL 10 OF THE AMPLIFIER AND A NON-GROUND SIGNAL IS INPUT TO TERMINAL 11 SO THAT THE CURRENT FLOWS FROM TERMINAL 4 → SERVO MOTOR → TERMINAL 5, CAUSING THE SERVO MOTOR TO ROTATE IN REVERSE AND MOVING THE DAMPER TO THE DESIRED POSITION.

3. OPERATION OF THE AIR MIX CONTROL SERVO MOTOR

(SWITCHING FROM WARM TO COOL)

WHEN THE TEMPERATURE CONTROL KNOB IS SWITCHED FROM WARM POSITION TO COOL POSITION, THE RESISTANCE INSIDE THE HEATER CONTROL ASSEMBLY BECOMES GREATER THAN THE RESISTANCE INSIDE THE SERVO MOTOR. THE SIGNAL AT THIS TIME IS INPUT TO THE AUTO A/C AMPLIFIER, CAUSING THE AMPLIFIER TO OPERATE. CURRENT FLOWS FROM TERMINAL 8 OF THE AMPLIFIER → SERVO MOTOR → TERMINAL 9 → GROUND, CHANGING THE DAMPER FROM WARM TO COOL POSITION. WHEN THE RESPECTIVE RESISTANCES ARE THE SAME VALVE, THE SERVO MOTOR STOP.

(SWITCHING FROM COOL TO WARM)

WHEN THE TEMPERATURE CONTROL KNOB IS SWITCHED FROM COOL POSITION TO WARM POSITION, THE RESISTANCE INSIDE THE HEATER CONTROL ASSEMBLY BECOMES LESS THAN THE RESISTANCE INSIDE THE SERVO MOTOR. THE SIGNAL AT THIS TIME IS INPUT TO THE AUTO A/C AMPLIFIER, CAUSING THE AMPLIFIER TO OPERATE. CURRENT FLOWS FROM TERMINAL 9 OF THE AMPLIFIER → SERVO MOTOR → TERMINAL 8 → GROUND, CHANGING THE DAMPER FROM COOL TO WARM POSITION. WHEN THE RESPECTIVE RESISTANCE ARE THE SAME VALVE, THE SERVO MOTOR STOPS.

4. OPERATION OF RADIATOR FAN, CONDENSER FAN

WHEN THE IGNITION SW IS ON, TURNING THE ENGINE MAIN RELAY TO ON CAUSES CURRENT TO FLOW TO THE RAD FAN FUSE AND THE CDS FAN FUSE.

* LOW SPEED OPERATION

OPERATION OF THE A/C CONDENSER FAN CONTROL AMPLIFIER TURNS RADIATOR FAN RELAY NO. 1 AND A/C FAN RELAY NO. 2 AND NO. 3 TO ON, AND CURRENT FROM THE CDS FAN FUSE FLOWS IN SERIES FROM THE CONDENSER FAN MOTOR → TERMINAL 1 OF THE A/C FAN RELAY NO. 2 → TERMINAL 4 → TERMINAL 2 OF A/C FAN RELAY NO. 3 → TERMINAL 4 → RADIATOR FAN MOTOR → GROUND, CAUSING EACH FAN TO ROTATE AT LOW SPEED. [THIS IS WHEN THE WATER TEMP. IS APPROX. 85° TO 90°C (185° TO 194°F).]

* HIGH SPEED OPERATION

OPERATION OF THE A/C CONDENSER FAN AMPLIFIER AND HIGH PRESSURE SW CAUSES CURRENT TO THE COIL SIDE OF RADIATOR FAN RELAY NO. 1 AND A/C FAN RELAY NO. 2 TO BE CUT (BOTH RELAYS OFF). ACCORDINGLY, CURRENT FROM THE RAD FAN FUSE FLOWS FROM TERMINAL 4 OF RADIATOR FAN RELAY NO. 1 → TERMINAL 3 → RADIATOR FAN MOTOR → GROUND, AND CURRENT FROM THE CDS FAN FUSE FLOWS FROM THE CONDENSER FAN MOTOR → TERMINAL 1 OF A/C FAN RELAY NO. 2 → TERMINAL 3 → GROUND. THIS PARALLEL CURRENT FLOW TO BOTH MOTORS CAUSES BOTH FANS TO ROTATE AT HIGH SPEED. [THIS IS WHEN THE COOLANT WATER TEMP. IS APPROX. 90°C (194°F) OR MORE, WITH THE MAGNET CLUTCH OFF, OR ELSE WITH THE MAGNET CLUTCH ON AND THE REFRIGERANT PRESSURE AT 15.5 kg/cm² (220 PSI, 1520 KPS) OR MORE.]

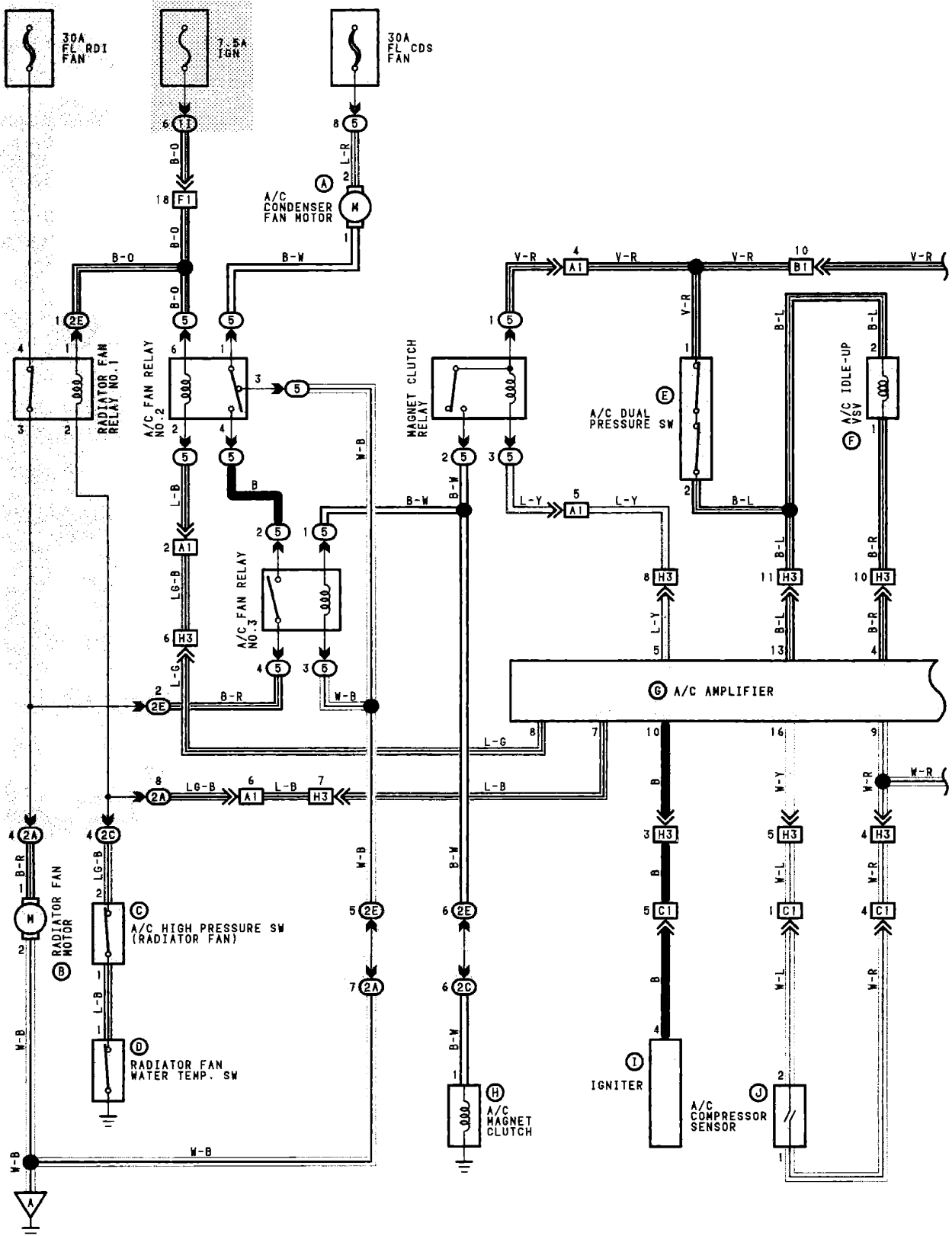
5. AIR CONDITIONER OPERATION

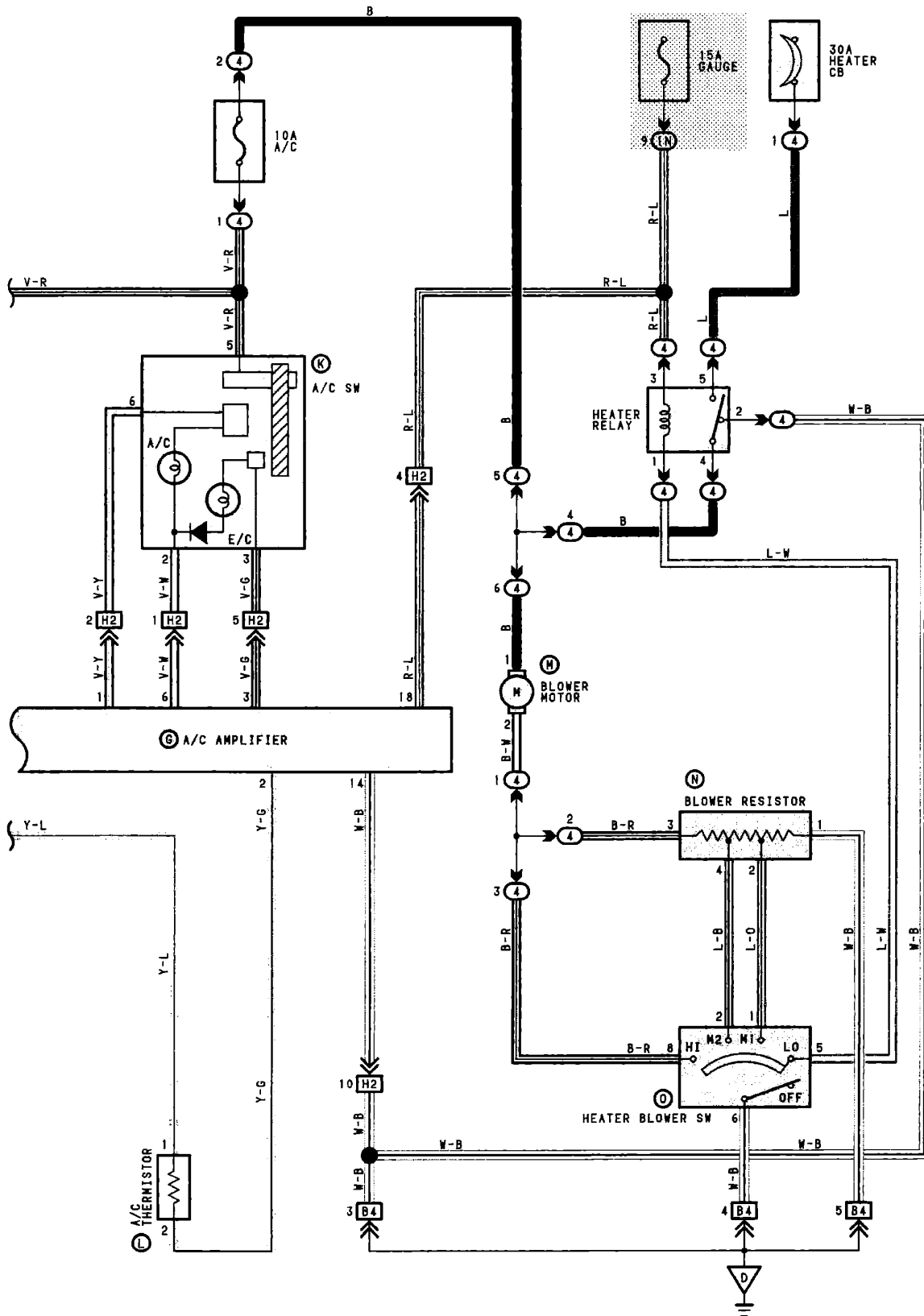
WHEN THE BLOWER SW IS TURNED ON, CURRENT FROM THE HEATER CB FLOWS THROUGH THE A/C FUSE TO TERMINAL 1 OF THE MAGNET CLUTCH RELAY AND TO TERMINAL 13 OF THE A/C AMPLIFIER. INPUT INTO THE A/C AMPLIFIER ARE ENGINE SPEED SIGNALS FROM THE IGNITER, EVAPORATOR TEMP. SIGNALS FROM THE A/C THERMISTOR, AND LOCK SIGNALS FROM THE A/C COMPRESSOR.

IF THE A/C SW IS TURNED ON AT THIS TIME, THIS SIGNAL IS INPUT TO THE A/C AMPLIFIER, THE AMPLIFIER OPERATES AND THE CURRENT FLOWING TO TERMINAL 1 OF THE MAGNET CLUTCH RELAY FLOWS TO TERMINAL 3 OF THE RELAY → TERMINAL 14 OF THE AMPLIFIER → GROUND, AND THE CURRENT FLOWING FROM THE A/C FUSE FLOWS THROUGH THE MAGNET CLUTCH RELAY TO THE A/C MAGNET CLUTCH, CAUSING THE COMPRESSOR TO OPERATE. ALSO, IN AUTO MODE, SIGNALS FROM THE SOLAR SENSOR, AMBIENT SENSOR AND IN-CAR SENSOR, ETC. WHICH DETECT THE CABIN TEMPERATURE ARE INPUT TOGETHER WITH SIGNALS ABOUT THE VEHICLE CONDITION TO THE AUTO A/C AMPLIFIER. THE AMPLIFIER OPERATES IN RESPONSE TO THESE SIGNALS AND AUTOMATICALLY CONTROL EACH ACTUATOR TO REMAIN CLOSE TO THE SET TEMPERATURE.

AT THE SAME TIME, THE CURRENT FLOWING TO THE A/C IDLE-UP VSV FLOWS TO TERMINAL 4 OR TERMINAL 13 OF THE AMPLIFIER, THEN OPERATION OF THE AMPLIFIER AND GROUNDING OF THE CURRENT TURN THE VSV ON, PREVENTING A DECREASE IN ENGINE SPEED DURING A/C OPERATION. THE FOLLOWING SIGNALS ARE CONDITIONS FOR TURNING A/C OPERATION TO OFF: HIGH ENGINE RPM SIGNAL, HIGH WATER TEMP. SIGNAL, LOW TEMP. SIGNAL FOR THE EVAPORATOR, SIGNAL FOR A LARGE DIFFERENCE BETWEEN THE RATE OF ENGINE REVS AND COMPRESSOR REVS, OR A SIGNAL THAT THE REFRIGERANT PRESSURE IS ABNORMALLY HIGH OR LOW. WHEN ANY OF THESE SIGNAL IS INPUT, A/C OPERATION IS TURNED OFF BY OPERATION OF THE AMPLIFIER.

* WHEN A LARGE DIFFERENCE ARISES BETWEEN THE REVOLUTIONS OF THE ENGINE AND THE COMPRESSOR, OPERATION OF THE AMPLIFIER CAUSES THE A/C SW INDICATOR LIGHT TO BLINK, INDICATING AN ABNORMALITY.





33-1 RADIATOR FAN AND AIR CONDITIONER

SERVICE HINTS

RADIATOR FAN RELAY NO. 1

4-3: OPEN WITH IGNITION SW ON, A/C HIGH PRESSURE SW ON AND WATER TEMP. SW ON

A/C FAN RELAY NO. 2

⑤ 1- ⑤ 3: CLOSED WITH IGNITION SW OFF OR A/C HIGH PRESSURE SW OFF OR WATER TEMP. SW OFF

⑤ 1- ⑤ 4: CLOSED WITH IGNITION SW ON, A/C HIGH PRESSURE SW ON AND WATER TEMP. SW ON

A/C FAN RELAY NO. 3

⑤ 2- ⑤ 4: CLOSED WITH MAGNET CLUTCH ON

HEATER RELAY

④ 4- ④ 5: CLOSED WITH IGNITION SW ON AND BLOWER SW ON

Ⓒ A/C HIGH PRESSURE SW (RADIATOR FAN)

1-2: OPEN ABOVE 15.5KG/CM² (220PSI, 1520KPA)
CLOSED BELOW 12.5KG/CM² (178PSI, 1226KPA)

Ⓓ RADIATOR FAN WATER TEMP. SW

1-GROUND: OPEN ABOVE 90°C (194°F)
CLOSED BELOW 83°C (181°F)

Ⓔ A/C DUAL PRESSURE SW

1-2: OPEN WITH PRESSURE LESS THAN 2.1KG/CM² (30PSI, 206KPA) OR ABOVE 27KG/CM² (384PSI, 2648KPA)

Ⓕ A/C IDLE-UP VSV

1-2: APPROX. 40Ω

Ⓖ A/C MAGNET CLUTCH

1-GROUND: APPROX. 3.7Ω

Ⓖ A/C THERMISTOR

APPROX. 1.5KΩ AT 25°C (77°F)

Ⓖ BLOWER RESISTOR

1-2: APPROX. 1.5Ω
2-4: APPROX. 0.8Ω
3-4: APPROX. 0.4Ω

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	A11 24	F	A14 24	K	A31 25
B	R1 24	G	A23 25	L	A33 25
C	A13 24	H	A15 24	M	B3 25
D	R2 24	I	I2 24	N	B4 25
E	A12 24	J	A10 24	O	H6 25

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
4	21	R/B NO.4 (RIGHT KICK PANEL)
5	15	R/B NO.5 (RADIATOR SIDE)

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1I	16	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1N		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2E		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

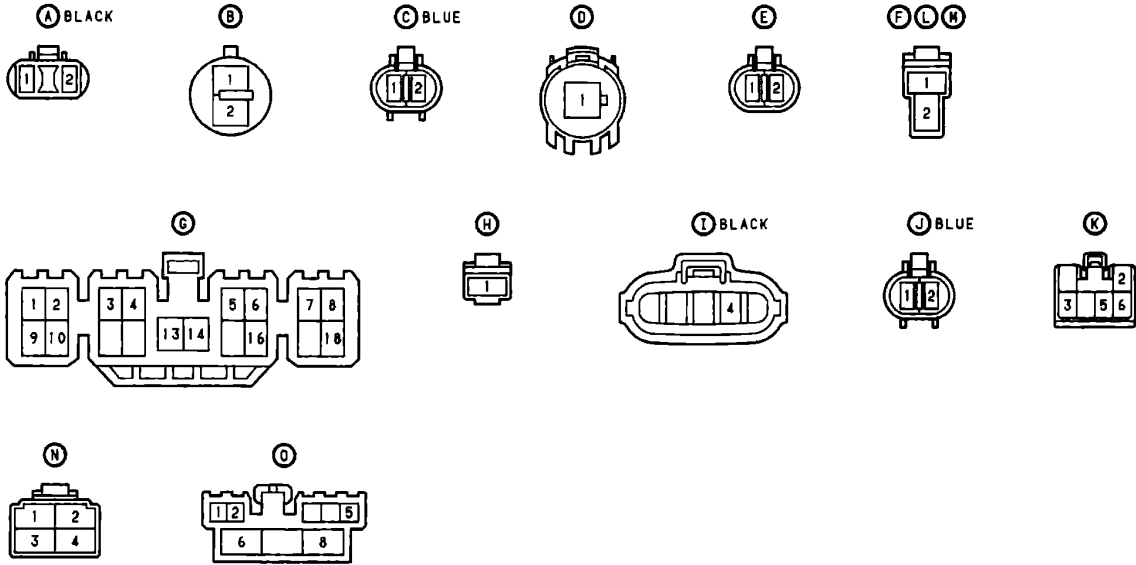
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
A1	32(3S-FE)	ENGINE ROOM NO.2 WIRE AND ENGINE ROOM MAIN WIRE (RIGHT FRONT FENDER)
B1	32(3S-FE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
B4	34	COWL WIRE AND R/B NO.4 (RIGHT KICK PANEL)
C1	32(3S-FE)	ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
F1	32(3S-FE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
H2	34	COWL WIRE AND A/C WIRE (INSTRUMENT PANEL RIGHT)
H3		ENGINE ROOM NO.2 WIRE AND A/C WIRE (INSTRUMENT PANEL RIGHT)

(LEVER SWITCH TYPE)

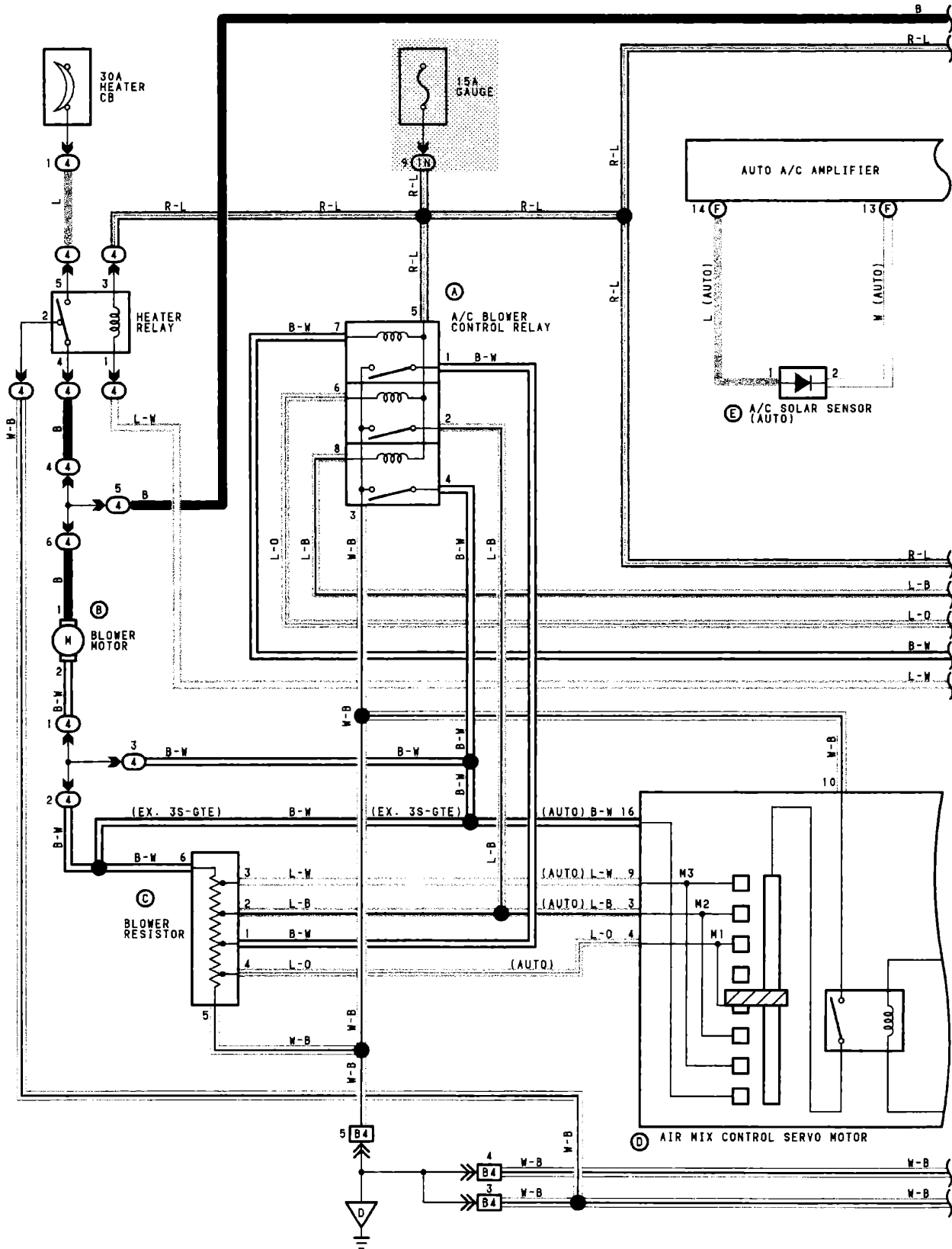
33-1

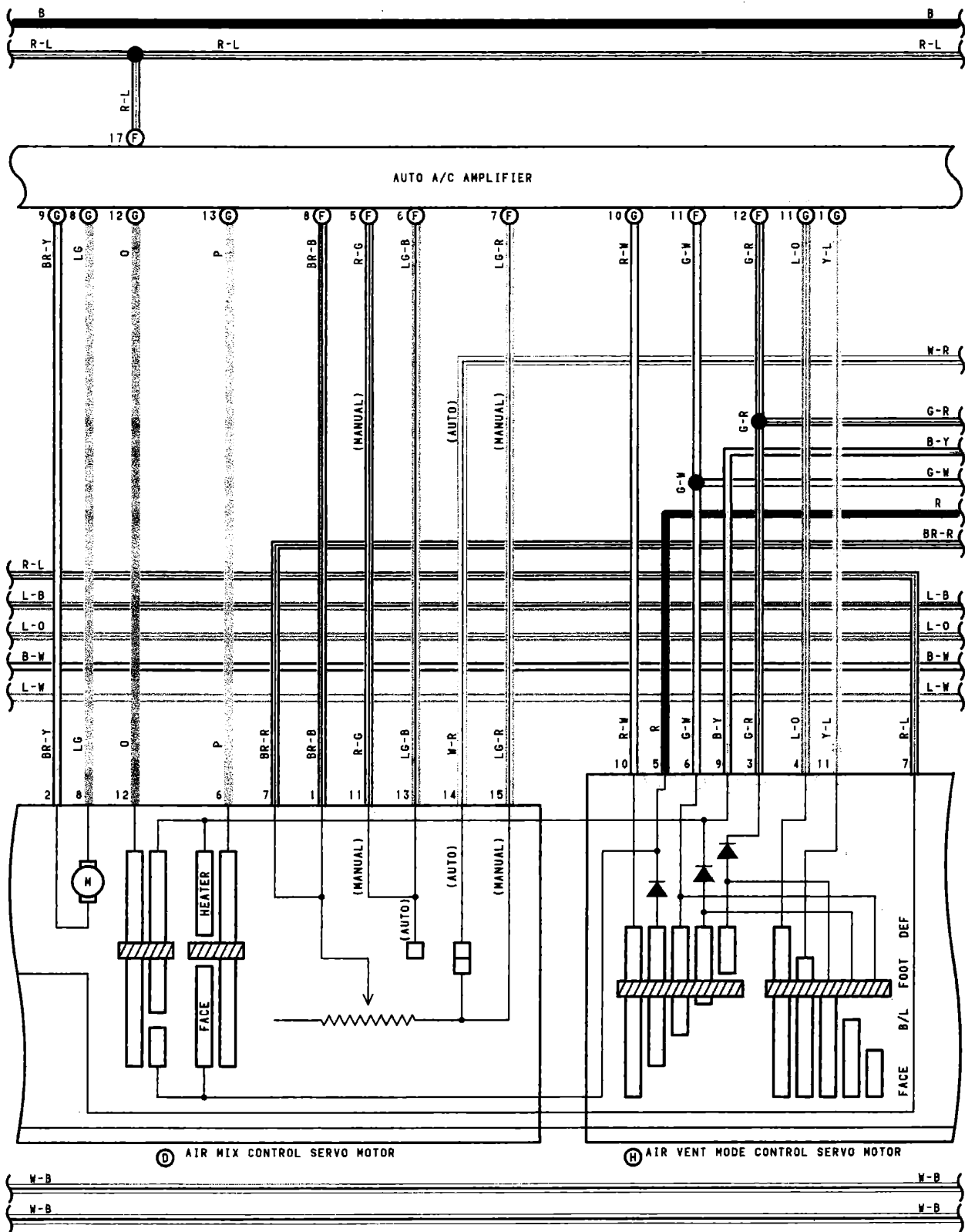
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
A	32(3S-FE)	RIGHT FENDER
D	34	R/B NO.4 SET BOLT

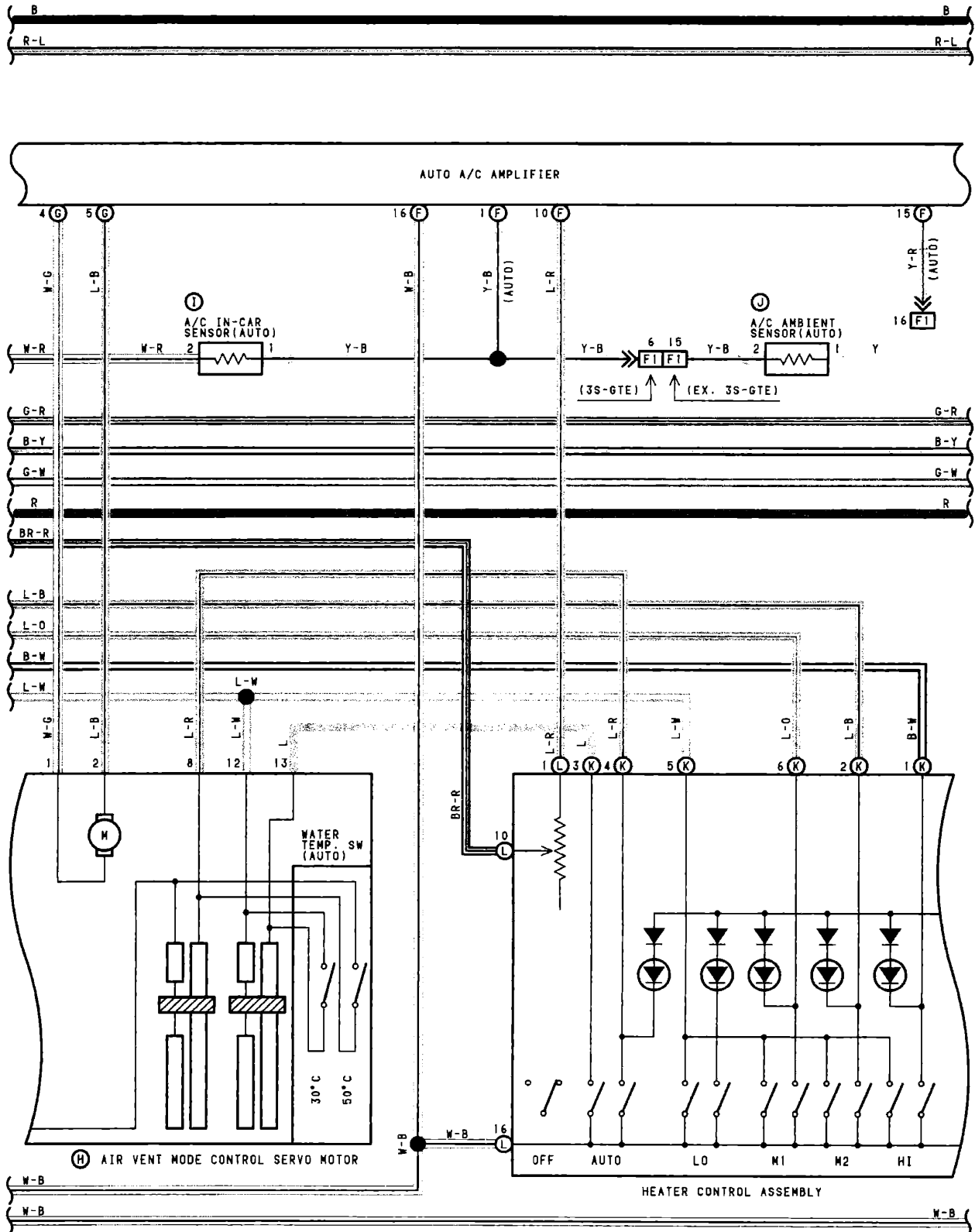


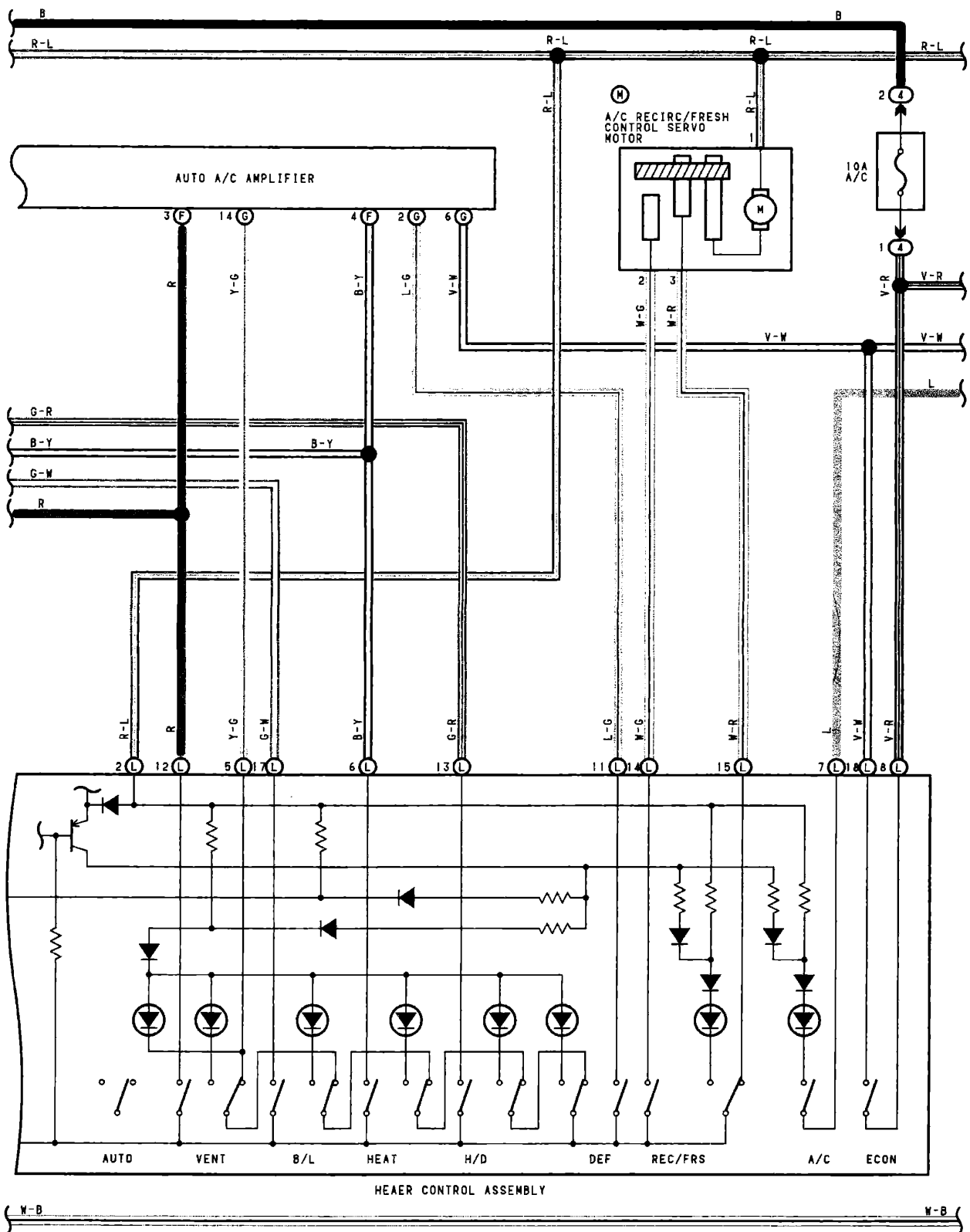
33-2 RADIATOR FAN AND AIR CONDITIONER

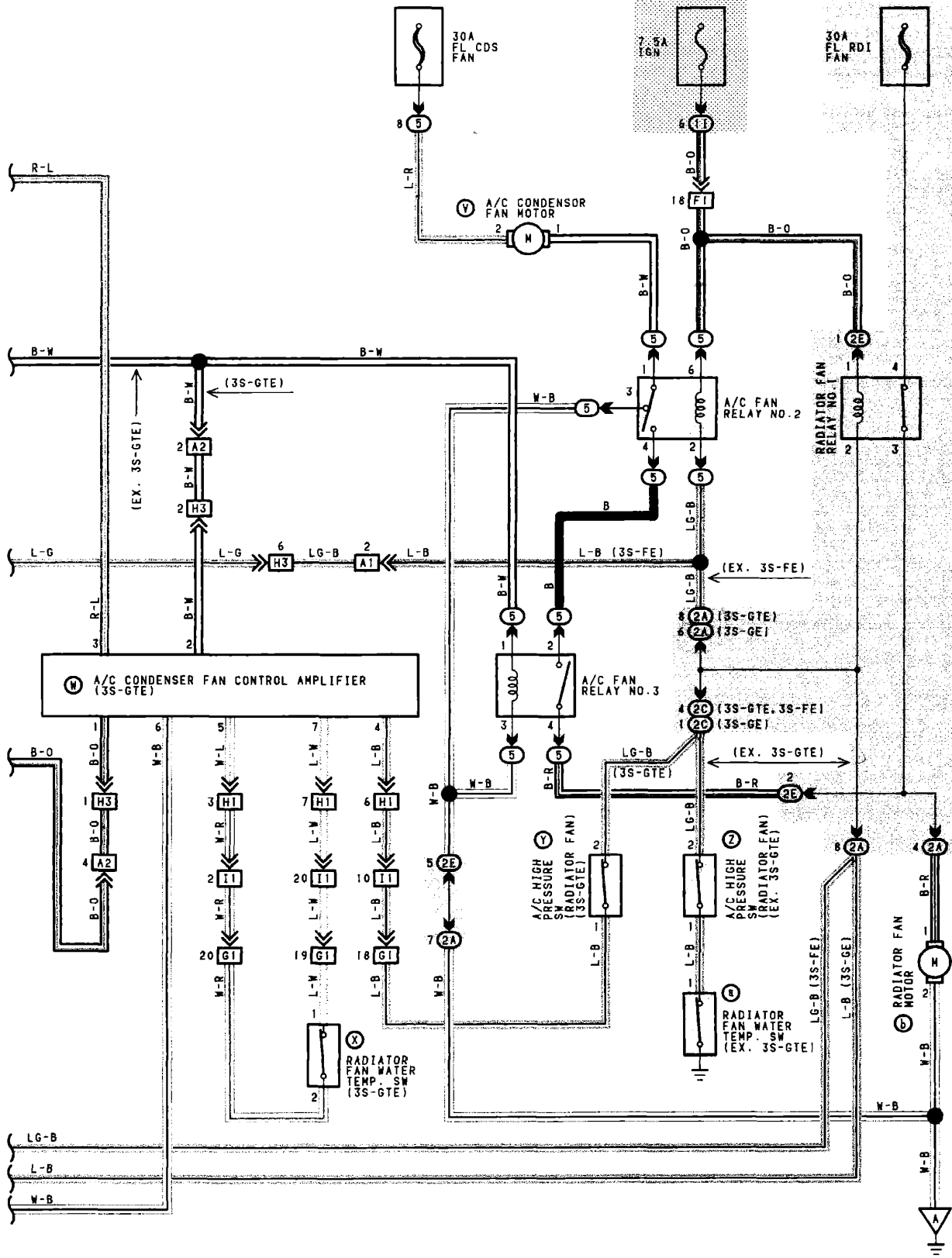




33-2 RADIATOR FAN AND AIR CONDITIONER









SERVICE HINTS

HEATER RELAY

④ 4-④ 5: CLOSED WITH IGNITION SW ON AND BLOWER SW ON

RADIATOR FAN RELAY NO. 1

4-3: OPEN WITH IGNITION SW ON, A/C HIGH PRESSURE SW ON OR WATER TEMP. SW ON

A/C FAN RELAY NO. 2

⑤ 1-⑤ 3: CLOSED WITH IGNITION SW OFF OR A/C HIGH PRESSURE SW OFF OR WATER TEMP. SW OFF

⑤ 1-⑤ 4: CLOSED WITH IGNITION SW ON, A/C HIGH PRESSURE SW ON AND WATER TEMP. SW ON

A/C FAN RELAY NO. 3

⑤ 2-⑤ 4: CLOSED WITH MAGNET CLUTCH ON

Ⓒ BLOWER RESISTOR

(AUTO)

6-3: APPROX. 0.22Ω

3-2: APPROX. 0.33Ω

2-1: APPROX. 0.78Ω

1-4: APPROX. 1.37Ω

(MANUAL)

1-2: APPROX. 0.80Ω

1-5: APPROX. 1.50Ω

2-6: APPROX. 0.40Ω

Ⓓ AIR MIX CONTROL SERVO MOTOR

3, 4, 9 OR 15-10: EACH CLOSED WITH SERVO SHAFT MOVEMENT

1-7 : RESISTANCE CHANGES RESPECTIVELY WITH SERVO SHAFT MOVEMENT 1.6KΩ AT MAX. COOL POSITION
360-480Ω AT MAX. HOT POSITION

Ⓗ AIR VENT MODE CONTROL SERVO MOTOR

12-13(7-8): CLOSED WITH COOLANT TEMP. BELOW 30°C, 86°F (50°C, 122°F) OR HEATER CONTROL SW AT FACE, B/L OR DEF POSITION

Ⓕ HEATER CONTROL ASSEMBLY

1-10: MORE THAN 2700Ω WITH CONTROL LEVER AT COOL POSITION

LESS THAN 290Ω WITH CONTROL LEVER AT WARM POSITION

APPROX. 1800Ω WITH CONTROL LEVER AT MIDDLE POSITION

25°C (77°F)

Ⓖ A/C IDLE-UP VSV

1-2: APPROX. 40Ω

Ⓓ A/C DUAL PRESSURE SW

1-2: OPEN WITH PRESSURE LESS THAN 2.1KG/CM² (30PSI, 206KPA) OR ABOVE 27KG/CM² (384PSI, 2648KPA)

Ⓐ A/C MAGNET CLUTCH

1-GROUND: APPROX. 3.7Ω

Ⓨ② A/C HIGH PRESSURE SW (RADIATOR FAN)

1-2: OPEN ABOVE 15.5KG/CM² (220PSI, 1620KPA)

CLOSED BELOW 12.5KG/CM² (178PSI, 1226KPA)

③ RADIATOR FAN WATER TEMP. SW (EX. 3S-GTE)

1-GROUND: OPEN ABOVE 90°C (194°F)

CLOSED BELOW 83°C (181°F)

(PUSH SWITCH TYPE)

33-2

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	A27 25	K	A31 25	U	A15 22(3S-GTE), 23(3S-GE), 24(3S-FE)
B	B3 25	L	H6 25	V	A11 22(3S-GTE), 23(3S-GE), 24(3S-FE)
C	B4 25	M	A30 25	W	A34 25
D	A29 25	N	A14 22(3S-GTE), 23(3S-GE), 24(3S-FE)	X	R2 22(3S-GTE)
E	A32 25	O	A12 22(3S-GTE), 23(3S-GE), 24(3S-FE)	Y	A13 22(3S-GTE)
F	A26 25	P	A23 25	Z	A13 23(3S-GE), 24(3S-FE)
G	A25 25	Q	I2 22(3S-GTE), 23(3S-GE)	a	R2 23(3S-GE), 24(3S-FE)
H	A24 25	R	I2 24(3S-FE)	b	R1 22(3S-GTE), 23(3S-GE), 24(3S-FE)
I	A28 25	S	A33 25		
J	A9 22(3S-GTE), 23(3S-GE), 24(3S-FE)	T	A10 22(3S-GTE), 23(3S-GE), 24(3S-FE)		

○ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
4	21	R/B NO.4 (RIGHT KICK PANEL)
5	15	R/B NO.5 (RADIATOR SIDE)

⊙ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1I	16	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1N		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2E		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

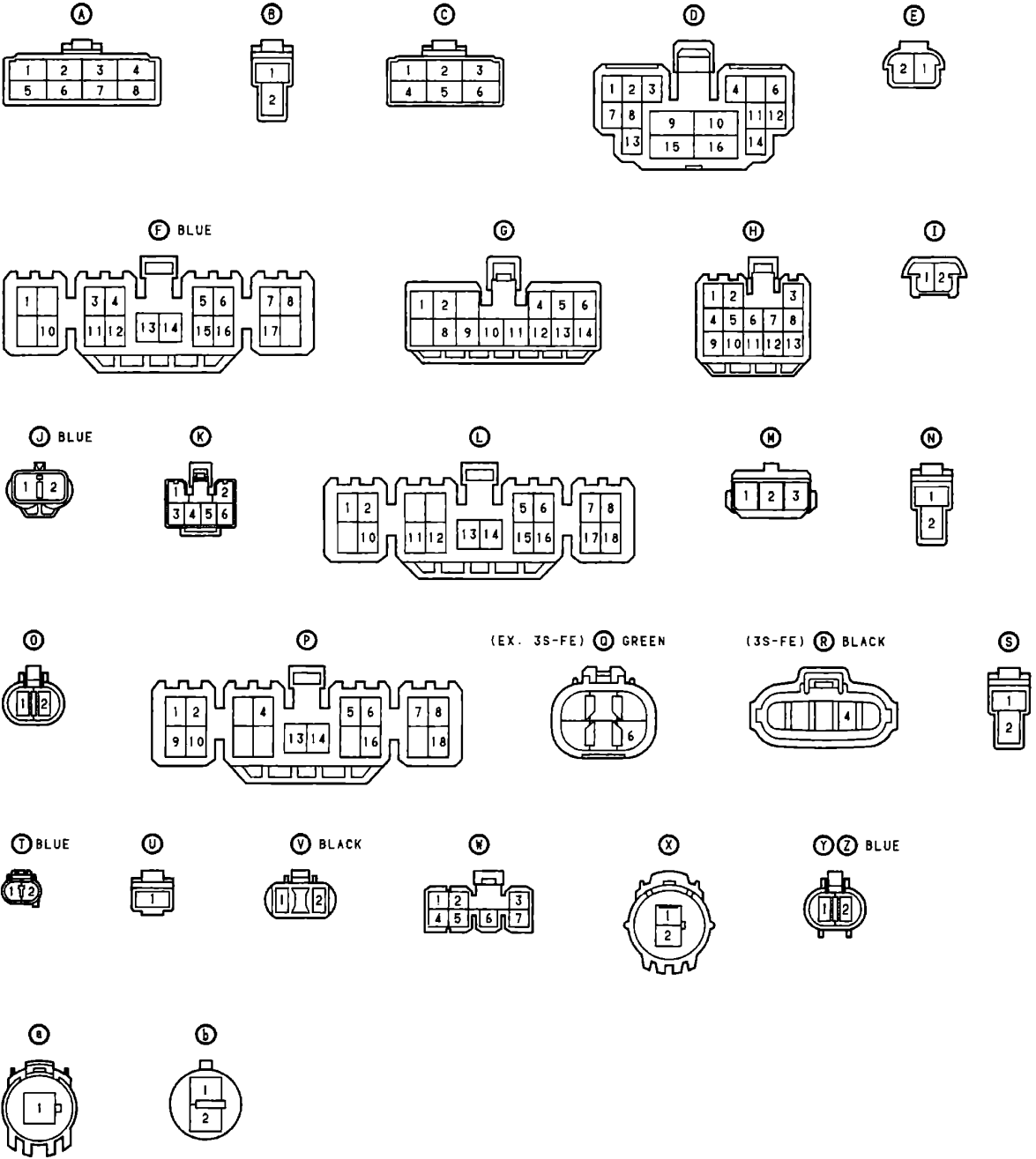
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
A1	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND ENGINE ROOM MAIN WIRE (RIGHT FRONT FENDER)
	30(3S-GE)	
	32(3S-FE)	
A2	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND ENGINE ROOM MAIN WIRE (RIGHT FRONT FENDER)
B1	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	
B4	34	COWL WIRE AND R/B NO.4 (RIGHT KICK PANEL)
C1	28(3S-GTE)	ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
	30(3S-GE)	
	32(3S-FE)	
F1	28(3S-GTE)	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
	30(3S-GE)	
	32(3S-FE)	
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
H1		COWL WIRE AND A/C WIRE (INSTRUMENT PANEL RIGHT)
H3		ENGINE ROOM NO.2 WIRE AND A/C WIRE (INSTRUMENT PANEL RIGHT)
I1		INSTRUMENT PANEL WIRE AND COWL WIRE (BEHIND RADIO)

▽ : GROUND POINTS

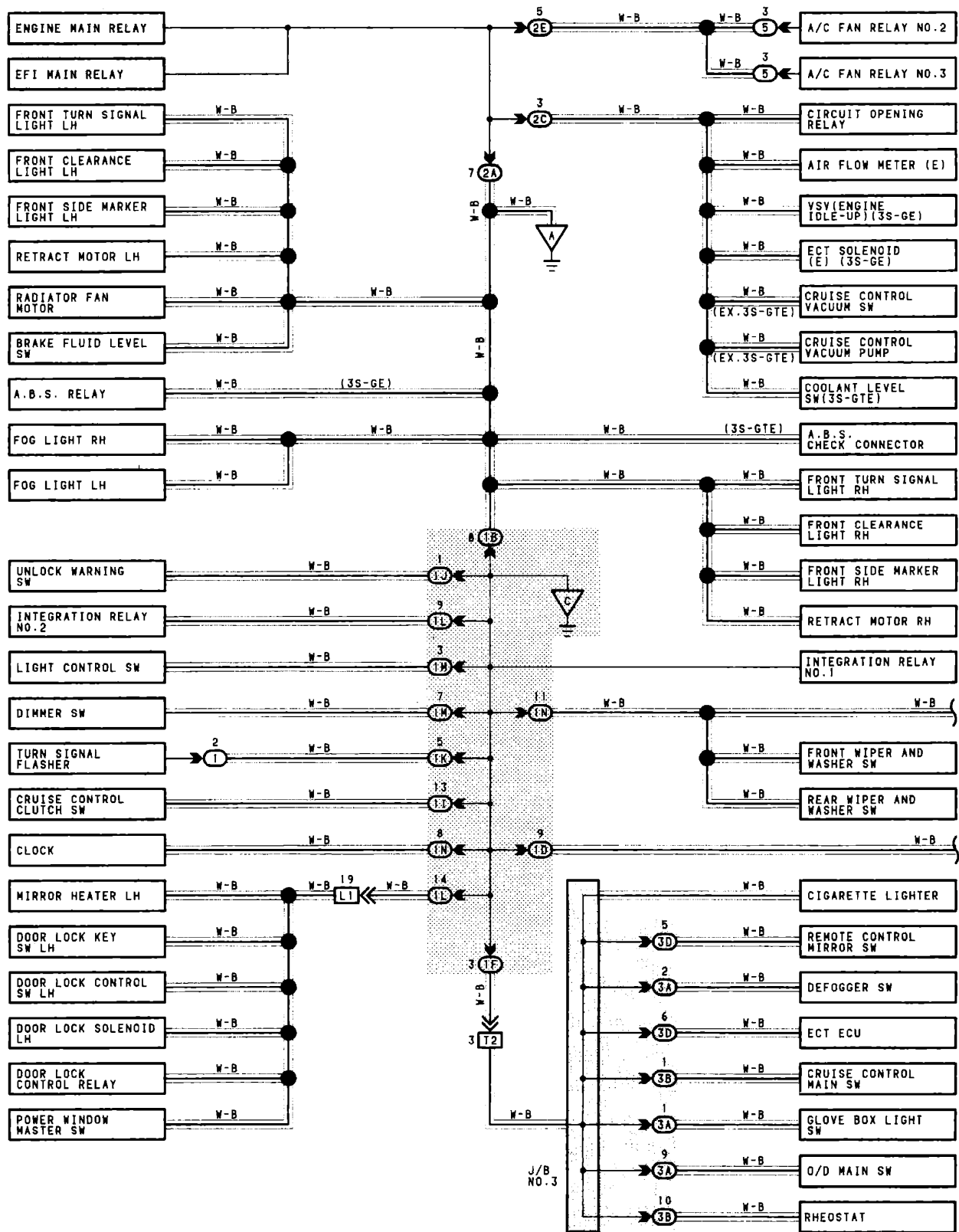
CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE)	RIGHT FENDER
	30(3S-GE)	
	32(3S-FE)	
D	34	R/B NO.4 SET BOLT

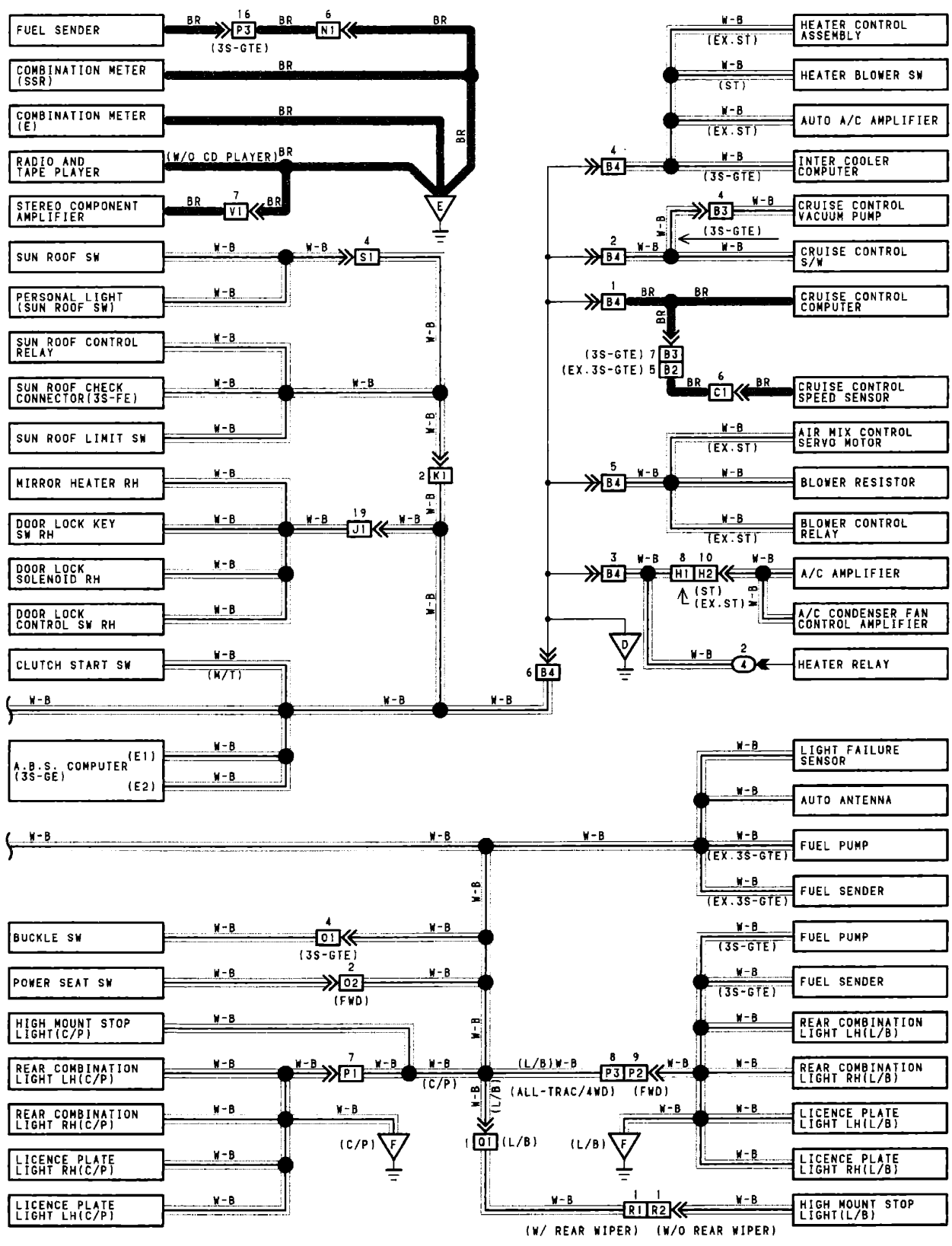
33-2 RADIATOR FAN AND AIR CONDITIONER

(PUSH SWITCH TYPE)

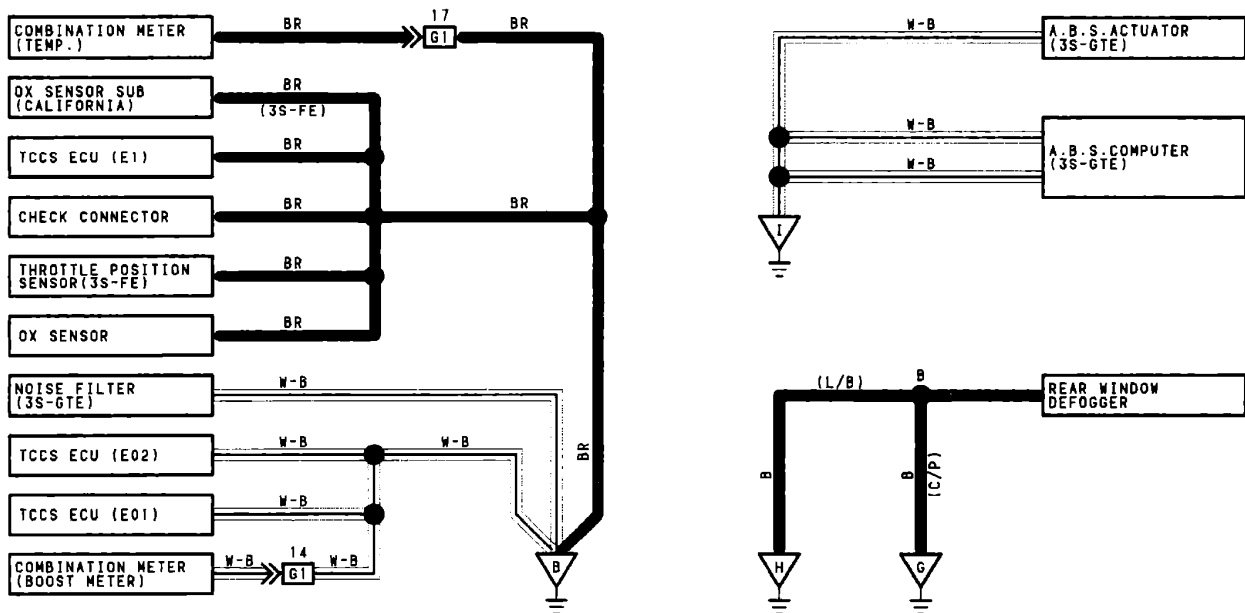


J GROUND POINTS





J GROUND POINTS



 : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	21	R/B NO.1 (LEFT KICK PANEL)
4	21	R/B NO.4 (RIGHT KICK PANEL)
5	15	R/B NO.5 (RADIATOR SIDE)

 : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	16	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
1D		FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1F		INSTRUMENT PANEL SUB WIRE AND J/B NO.1 (LEFT KICK PANEL)
1I		COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1J		
1K		
1L		
1N		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
2C		ENGINE WIRE AND J/B NO.2 (LEFT FENDER)
2E		ENGINE ROOM MAIN WIRE AND J/B NO.2 (LEFT FENDER)
3A	20	INSTRUMENT PANEL WIRE AND J/B NO.3 (INSTRUMENT PANEL LEFT)
3B		
3D		



































 : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
B2	30(3S-GE)	ENGINE ROOM NO.2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
	32(3S-FE)	
B3	28(3S-GTE)	
B4	34	COWL WIRE AND R/B NO.4 (RIGHT KICK PANEL)
	28(3S-GTE)	
C1	30(3S-GE)	ENGINE ROOM NO.2 WIRE AND ENGINE WIRE (ENGINE ROOM RIGHT REAR)
	32(3S-FE)	
G1	34	ENGINE WIRE AND INSTRUMENT PANEL WIRE (BEHIND RADIO)
H1		COWL WIRE AND A/C WIRE (INSTRUMENT PANEL RIGHT)
H2		
J1	36(C/P)	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
	38(L/B)	
K1	36(C/P)	COWL WIRE AND ROOF WIRE (LEFT KICK PANEL)
	38(L/B)	
L1	36(C/P)	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
	38(L/B)	
N1	36(C/P)	FLOOR WIRE AND INSTRUMENT PANEL WIRE (LEFT KICK PANEL)
	38(L/B)	
O1	38	FLOOR WIRE AND SEAT WIRE (UNDER FRONT LH SEAT)
O2	36(C/P)	FLOOR WIRE AND FLOOR NO.2 WIRE (UNDER FRONT LH SEAT)
	38(L/B)	
P1	36	
P2	38	FLOOR WIRE AND LUGGAGE ROOM WIRE (BACK PANEL LEFT)
P3		
Q1		BACK DOOR NO.1 WIRE AND FLOOR WIRE (UNDER LEFT REAR PILLAR)
R1	38	BACK DOOR NO.1 WIRE AND BACK DOOR NO.2 WIRE (BACK DOOR LEFT)
R2		
S1	36(C/P)	ROOF WIRE AND ROOF NO.2 WIRE (ROOF FRONT)
	38(L/B)	
T2	34	INSTRUMENT PANEL WIRE AND INSTRUMENT PANEL SUB WIRE (INSTRUMENT PANEL LEFT)
V1	34	INSTRUMENT PANEL WIRE AND CONSOLE BOX WIRE (BEHIND RADIO)

 : GROUND POINTS

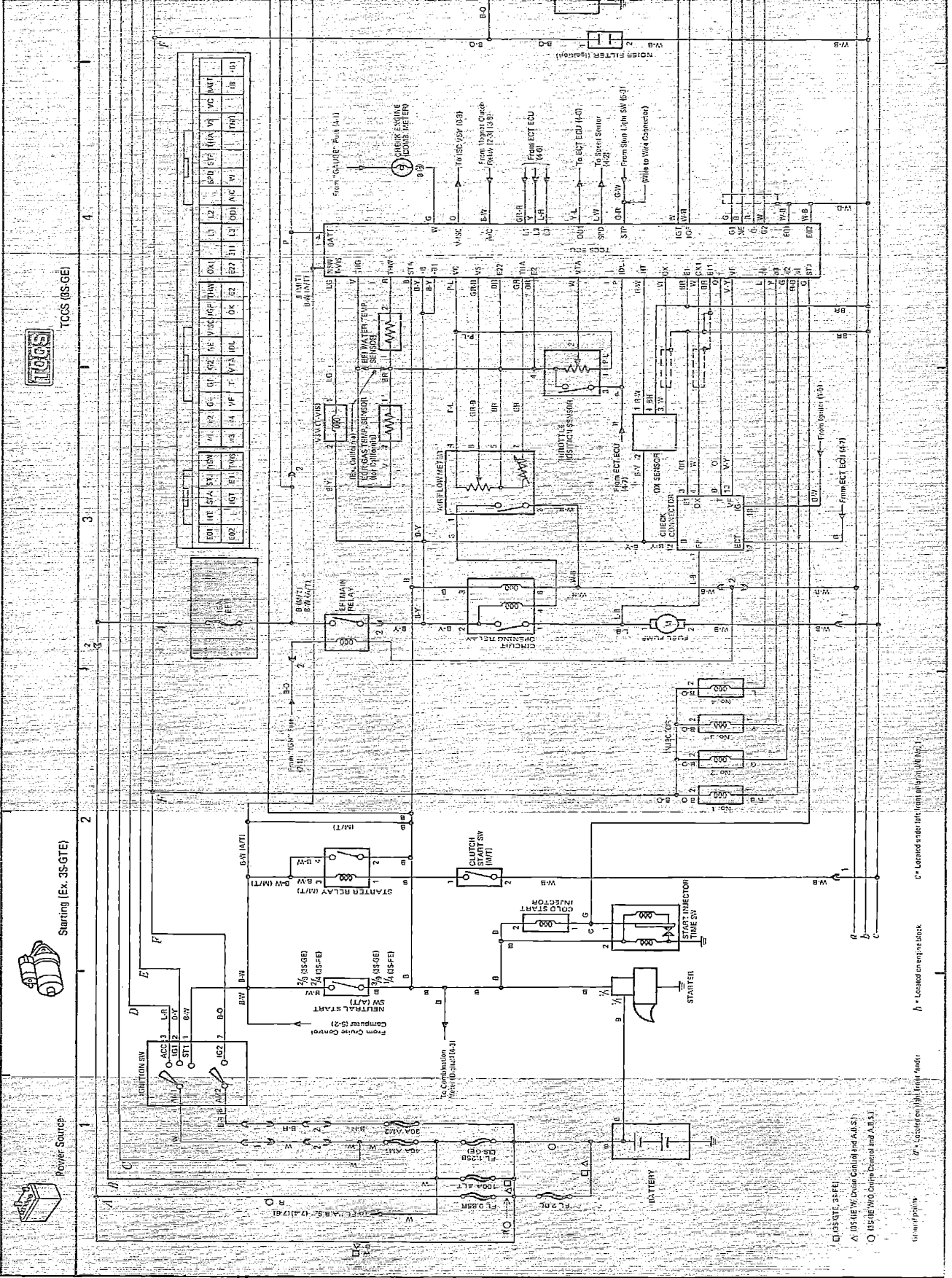
CODE	SEE PAGE	GROUND POINT LOCATION
A	28(3S-GTE)	RIGHT FENDER
	30(3S-GE)	
	32(3S-FE)	
B	28(3S-GTE)	INTAKE MANIFOLD
	30(3S-GE)	
	32(3S-FE)	
C	34	J/B NO.1 SET BOLT
D	34	R/B NO.4 SET BOLT
E	34	BEHIND RADIO
F	36(C/P)	BACK PANEL CENTER
	38(L/B)	
G	36(C/P)	RIGHT REAR PILLAR
H	38(L/B)	BACK DOOR RIGHT
I	38(L/B)	FLOOR PANEL (3S-GTE)

SYSTEM INDEX

SYSTEMS	LOCATION	SYSTEMS	LOCATION
A.B.S. (Anti-lock Brake System)	 7-4 (3S-GTE) 7-6 (Ex. 3S-GTE)	Overdrive	 4-5
Air Conditioner, Cooler and Heater	 2-4 (Lever) 3-4 (Push)	Power Seats	 6-6
Auto Antenna	 7-2	Power Source	 1-1 8-1 (3S-GTE)
Automatic Transmission Indicator	 4-7	Power Windows	 6-5
Back-up Lights	 4-8	Radiator Fan and Condenser Fan	 2-2
Charging	 2-1	Radio and Tape Player	 7-2
Cigarette Lighter	 7-1	Rear Window Defogger	 4-5
Clock	 7-1	Rear Wiper and Washer	 2-6
Combination Meter	 4-2	Remote Control Mirrors with Heater	 4-3
Cruise Control	 5-1	Starting	 1-1 (Ex. 3S-GTE) 8-2 (3S-GTE)
Door Locks	 6-4	Stop Lights	 5-2
ECT (Electronic Control Transmission)	 4-6	Sun Roof	 6-7
Fog Lights	 5-6	Taillights and Illumination	 5-4
Front Wiper and Washer	 2-6	TCCS	 1-3 (3S-GE) 1-6 (3S-FE) 8-5 (3S-GTE)
Headlights	 5-7	Turn Signal and Hazard	 2-7
Horn	 2-8	Unlock and Seat Belt Warning	 6-1
Idle-up	 6-8		
Interior Lights	 6-2		

CELICA ELECTRICAL WIRING DIAGRAM-1989 Model

CELICA 1



Power Source



Starting (Ex. 3S-GTE)



TCCS (3S-GTE)

- 3S-GTE, 3S-FE
- △ 3S-FE, W/Cover Control and A.B.S.
- 3S-FE, W/Cover Control and A.B.S.

Wiring points

① - Located on right front fender

② - Located on engine block

③ - Located on left front fender

④ - Located on engine back

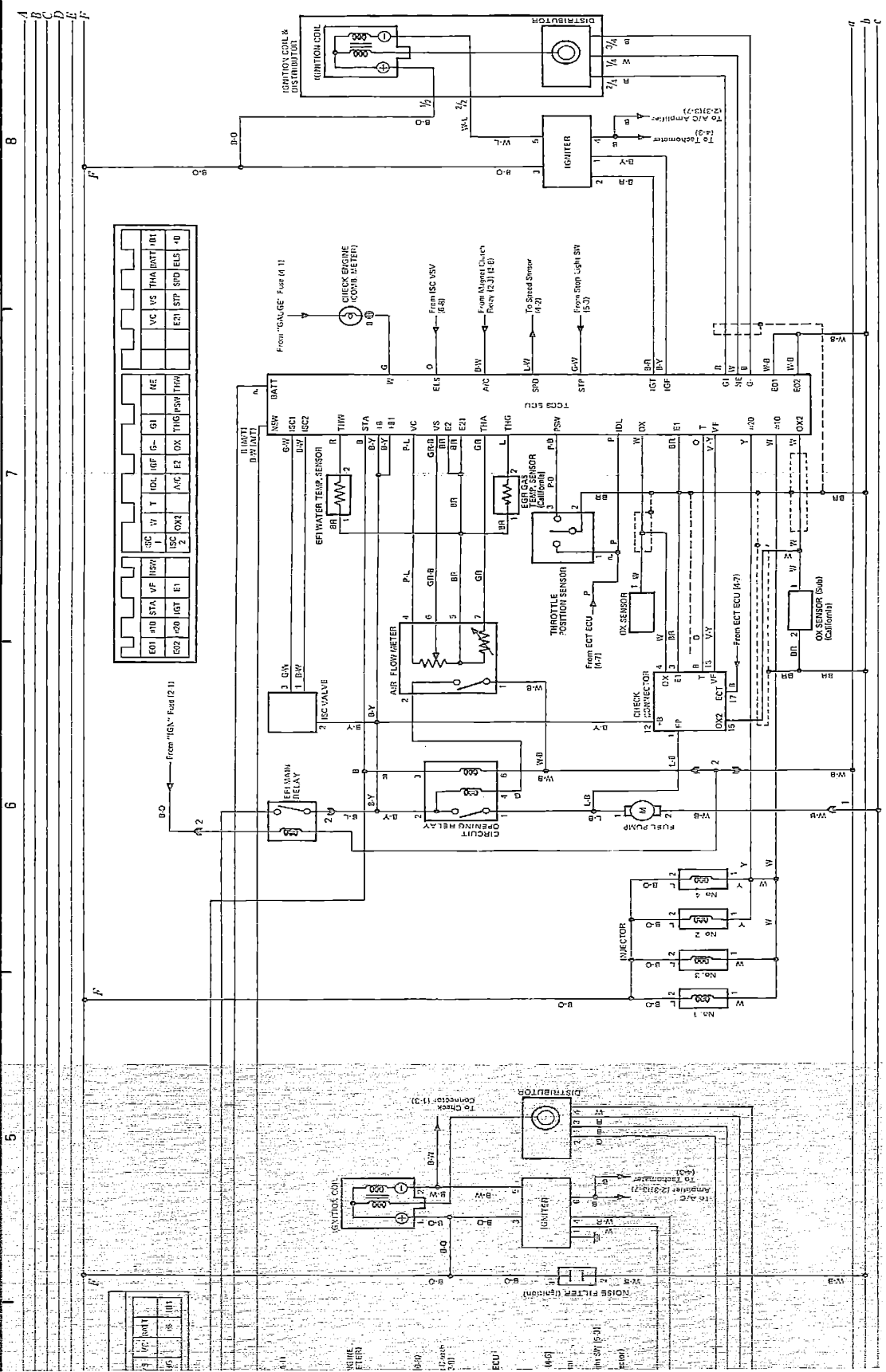
⑤ - Located on right front fender

⑥ - Located on engine block

⑦ - Located on left front fender



TCSS (CS-FE)



1	VC	VS	THA	INT	INT
2	VC	VS	THA	INT	INT
3	VC	VS	THA	INT	INT
4	VC	VS	THA	INT	INT
5	VC	VS	THA	INT	INT
6	VC	VS	THA	INT	INT
7	VC	VS	THA	INT	INT
8	VC	VS	THA	INT	INT
9	VC	VS	THA	INT	INT
10	VC	VS	THA	INT	INT
11	VC	VS	THA	INT	INT
12	VC	VS	THA	INT	INT
13	VC	VS	THA	INT	INT
14	VC	VS	THA	INT	INT
15	VC	VS	THA	INT	INT
16	VC	VS	THA	INT	INT
17	VC	VS	THA	INT	INT
18	VC	VS	THA	INT	INT
19	VC	VS	THA	INT	INT
20	VC	VS	THA	INT	INT
21	VC	VS	THA	INT	INT
22	VC	VS	THA	INT	INT
23	VC	VS	THA	INT	INT
24	VC	VS	THA	INT	INT
25	VC	VS	THA	INT	INT
26	VC	VS	THA	INT	INT
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29	VC	VS	THA	INT	INT
30	VC	VS	THA	INT	INT
31	VC	VS	THA	INT	INT
32	VC	VS	THA	INT	INT
33	VC	VS	THA	INT	INT
34	VC	VS	THA	INT	INT
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38	VC	VS	THA	INT	INT
39	VC	VS	THA	INT	INT
40	VC	VS	THA	INT	INT
41	VC	VS	THA	INT	INT
42	VC	VS	THA	INT	INT
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44	VC	VS	THA	INT	INT
45	VC	VS	THA	INT	INT
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47	VC	VS	THA	INT	INT
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63	VC	VS	THA	INT	INT
64	VC	VS	THA	INT	INT
65	VC	VS	THA	INT	INT
66	VC	VS	THA	INT	INT
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68	VC	VS	THA	INT	INT
69	VC	VS	THA	INT	INT
70	VC	VS	THA	INT	INT
71	VC	VS	THA	INT	INT
72	VC	VS	THA	INT	INT
73	VC	VS	THA	INT	INT
74	VC	VS	THA	INT	INT
75	VC	VS	THA	INT	INT
76	VC	VS	THA	INT	INT
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80	VC	VS	THA	INT	INT
81	VC	VS	THA	INT	INT
82	VC	VS	THA	INT	INT
83	VC	VS	THA	INT	INT
84	VC	VS	THA	INT	INT
85	VC	VS	THA	INT	INT
86	VC	VS	THA	INT	INT
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88	VC	VS	THA	INT	INT
89	VC	VS	THA	INT	INT
90	VC	VS	THA	INT	INT
91	VC	VS	THA	INT	INT
92	VC	VS	THA	INT	INT
93	VC	VS	THA	INT	INT
94	VC	VS	THA	INT	INT
95	VC	VS	THA	INT	INT
96	VC	VS	THA	INT	INT
97	VC	VS	THA	INT	INT
98	VC	VS	THA	INT	INT
99	VC	VS	THA	INT	INT
100	VC	VS	THA	INT	INT

2 CELICA (Cont'd)



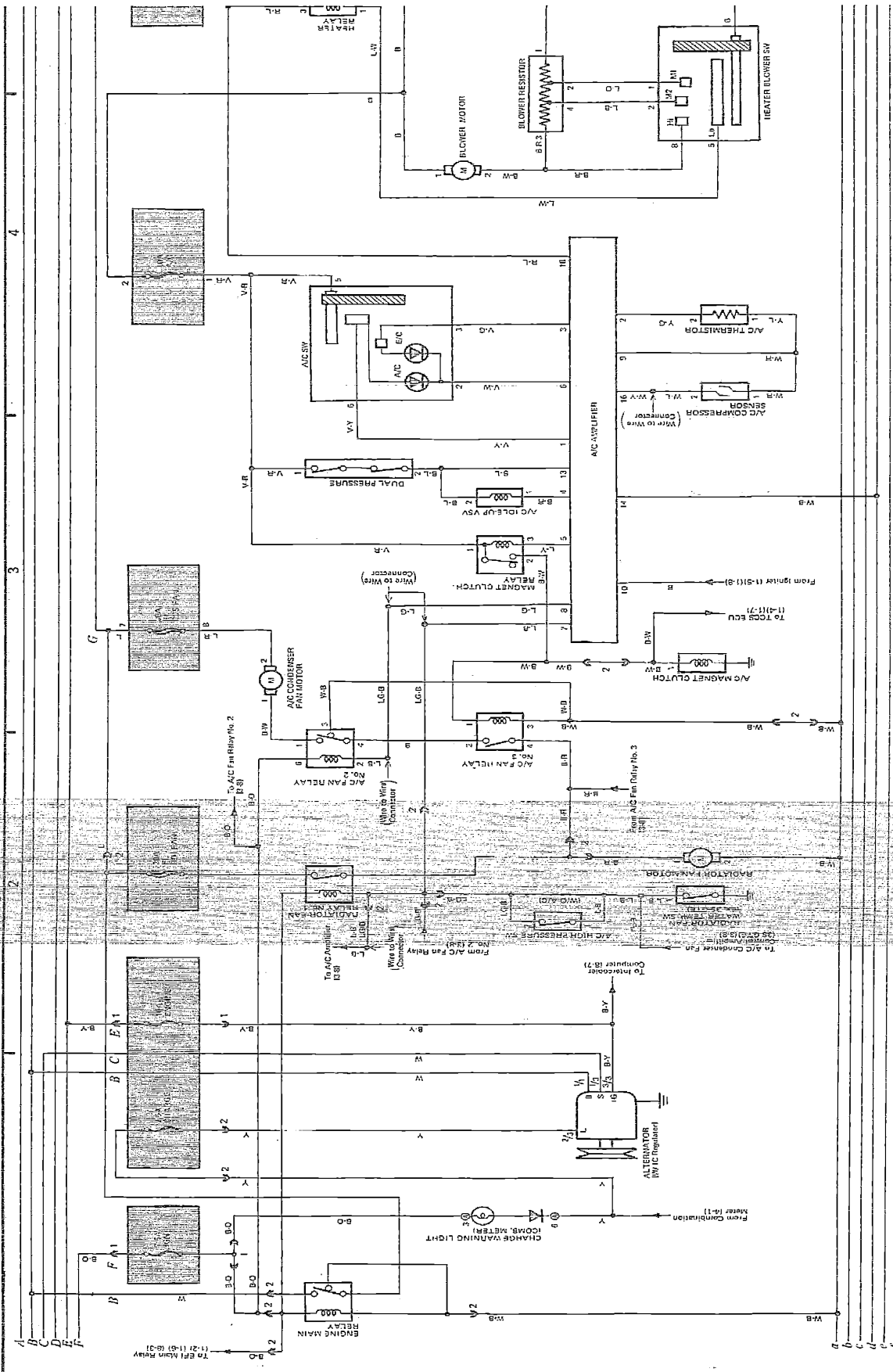
Charging



Facilitator Fan and Condenser Fan



Air Conditioner, Cooler and Heater (Lever Switch Type)



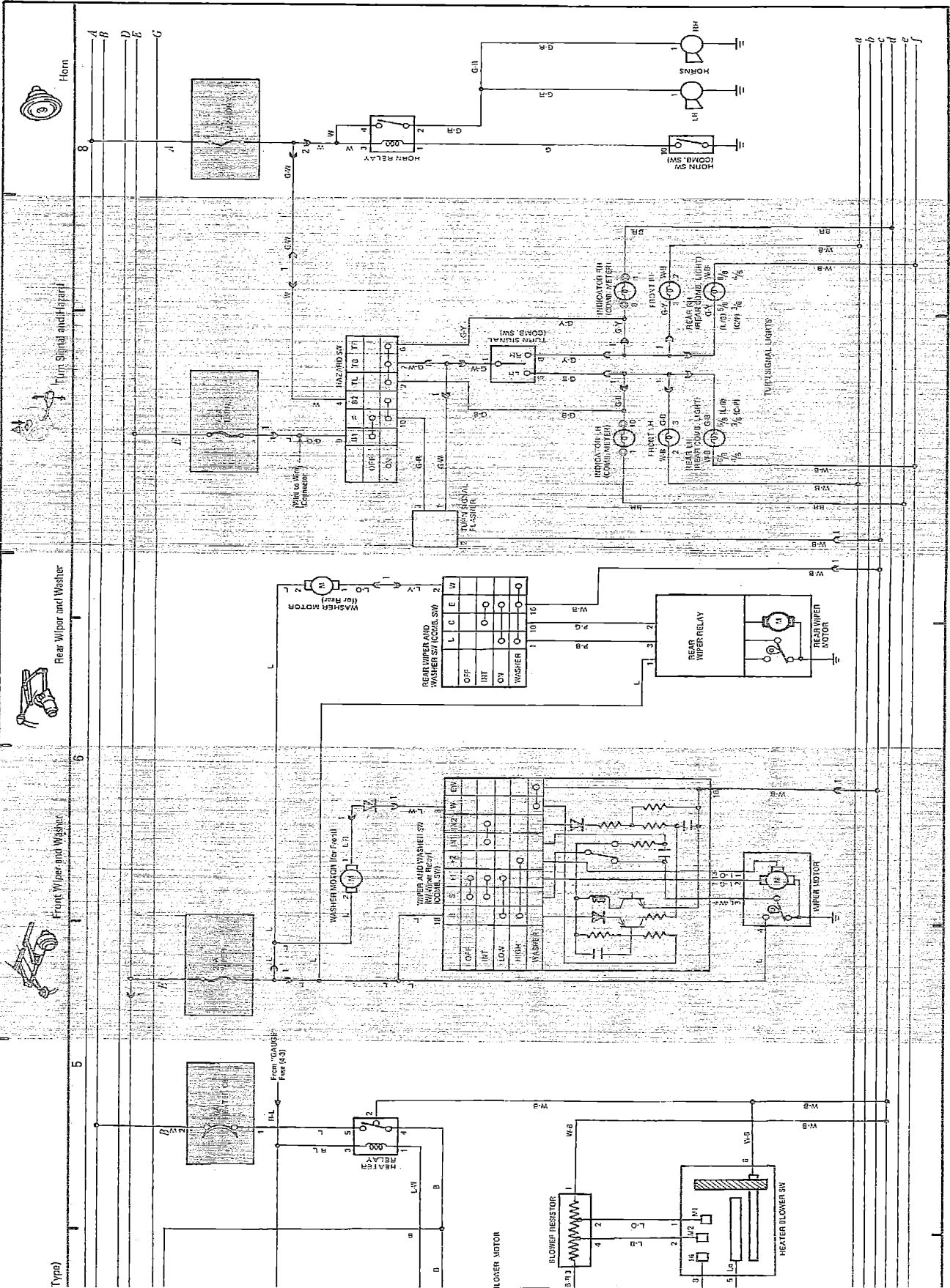
① - Located on right front fender

② - Located on engine block

③ - Located under left front 1/2 in. (R/B) No. 4

④ - Located in left side of instrument panel

⑤ - Located on center of back panel



Type)

5

Front Wiper and Washer

6

Rear Wiper and Washer

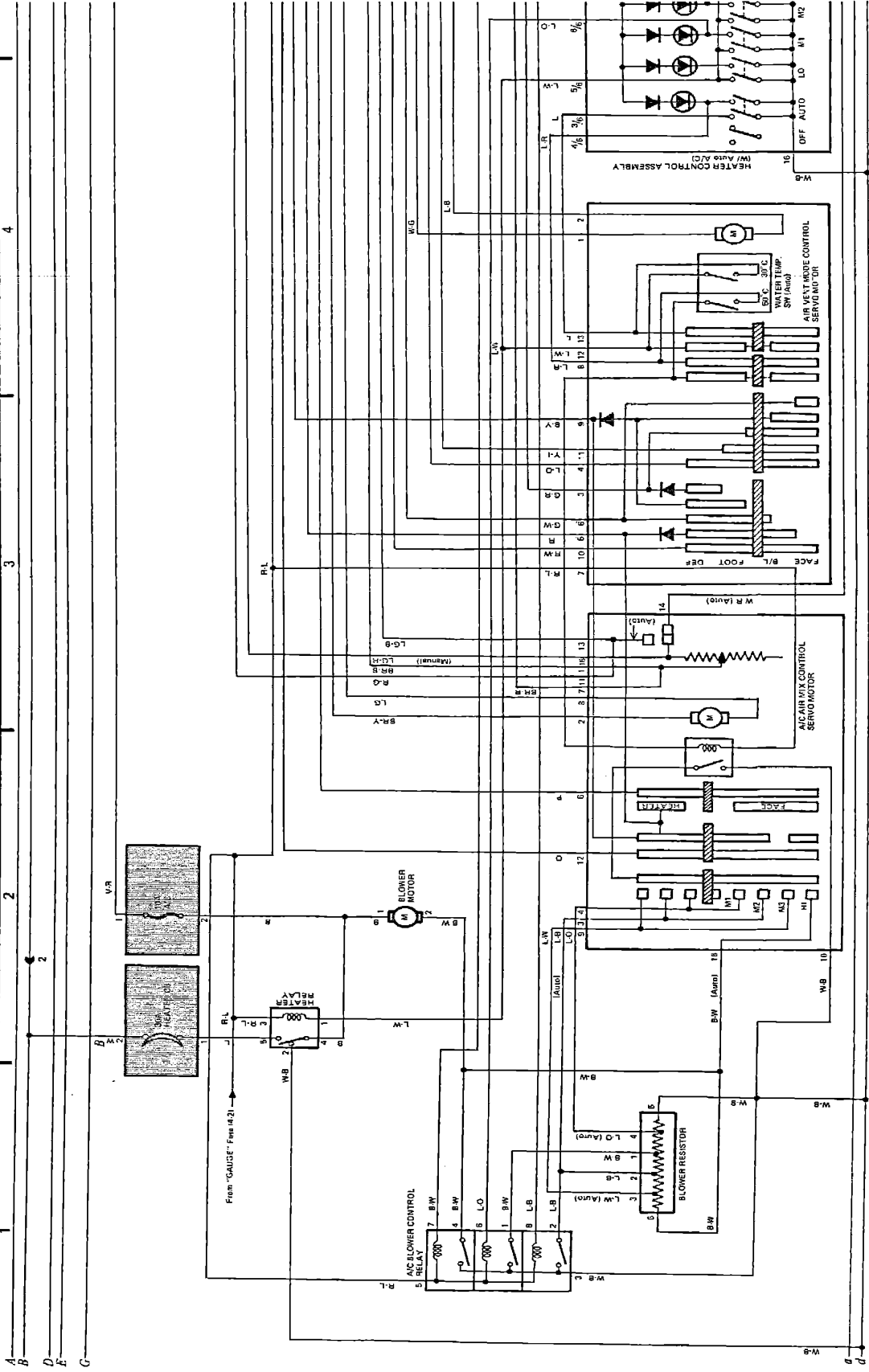
Turn Signal and Hazard

Horn





Air Conditioner Cooler ar

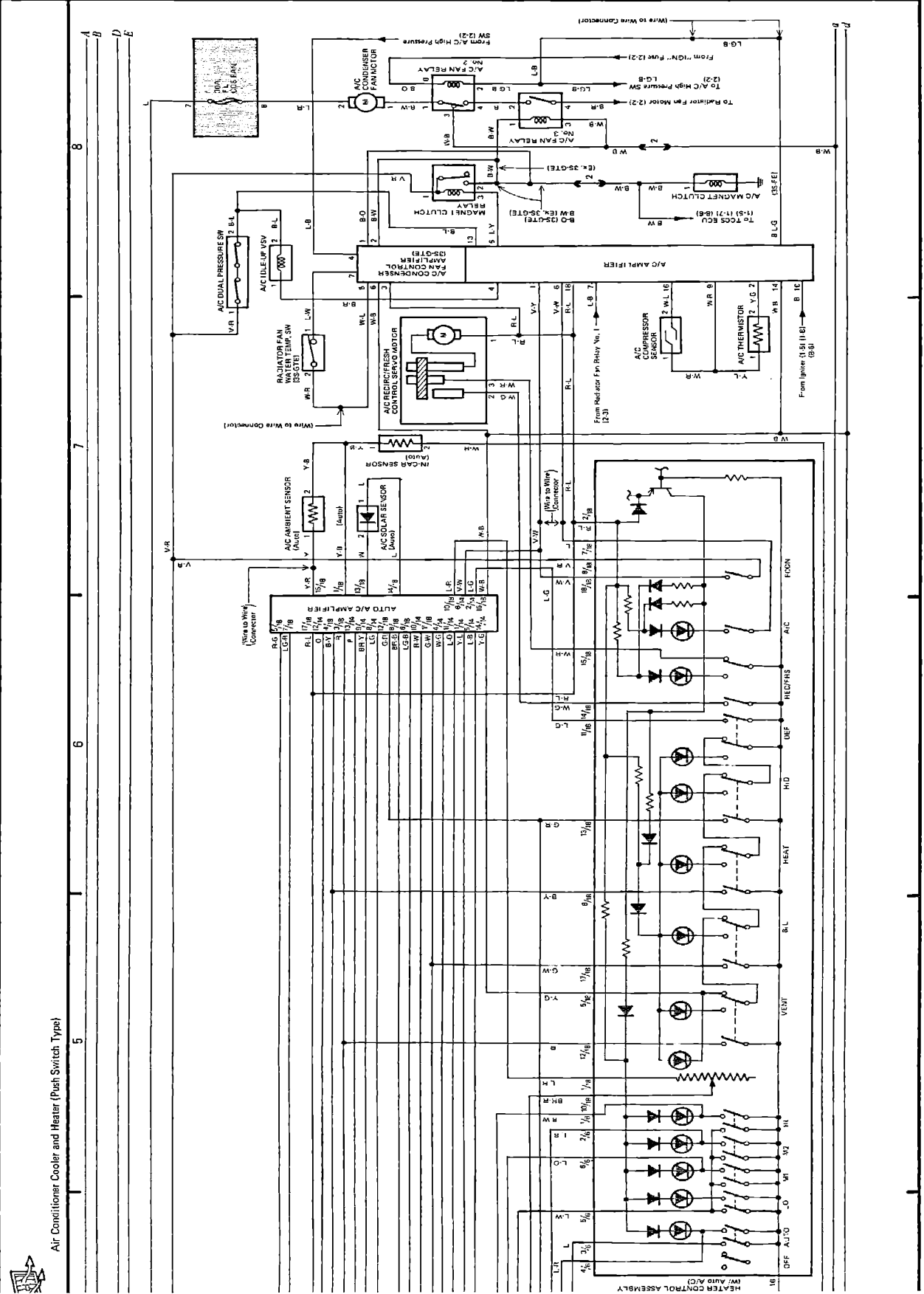


Ground points

a - Located on right front fender

b - Located under left pillar in R18 No. 4

Air Conditioner Cooler and Heater (Push Switch Type)



CELICA (Cont'd)

CELICA D



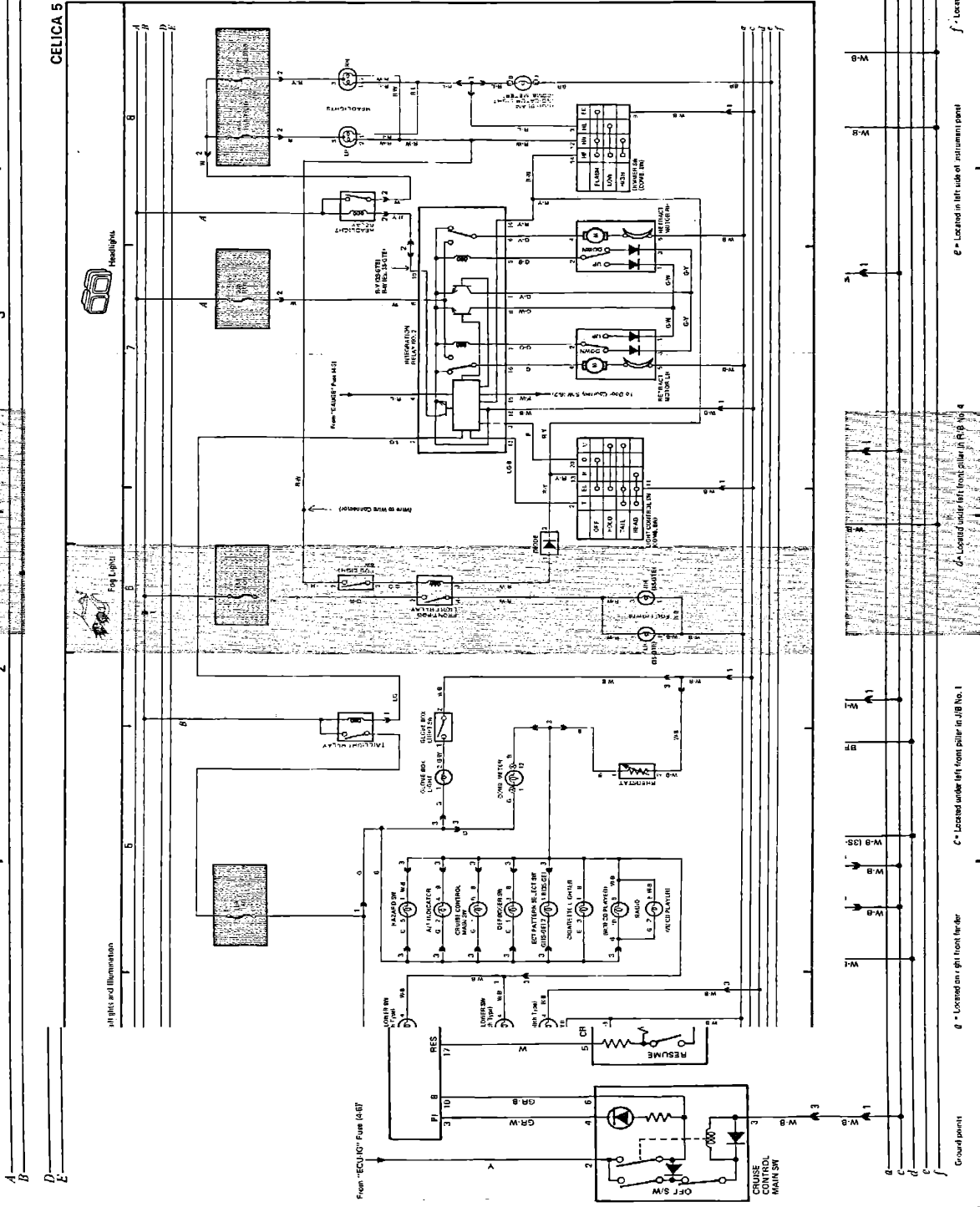
Cruise Control



Stop Lights



Taillights and Illumination



g = Located on center of back panel

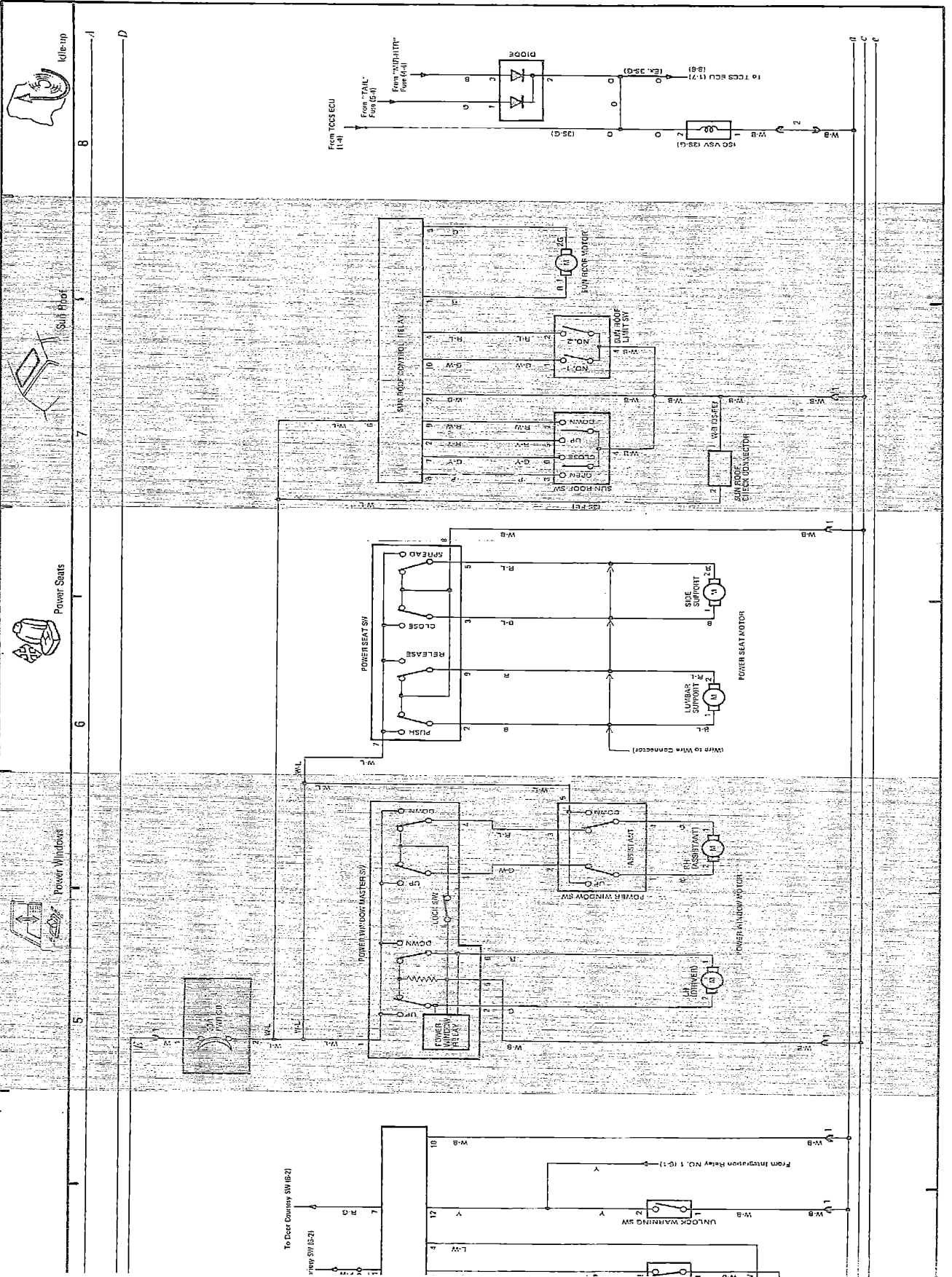
e = Located in left side of instrument panel

c = Located under left front pillar in J18 No. 1

g = Located on right front fender

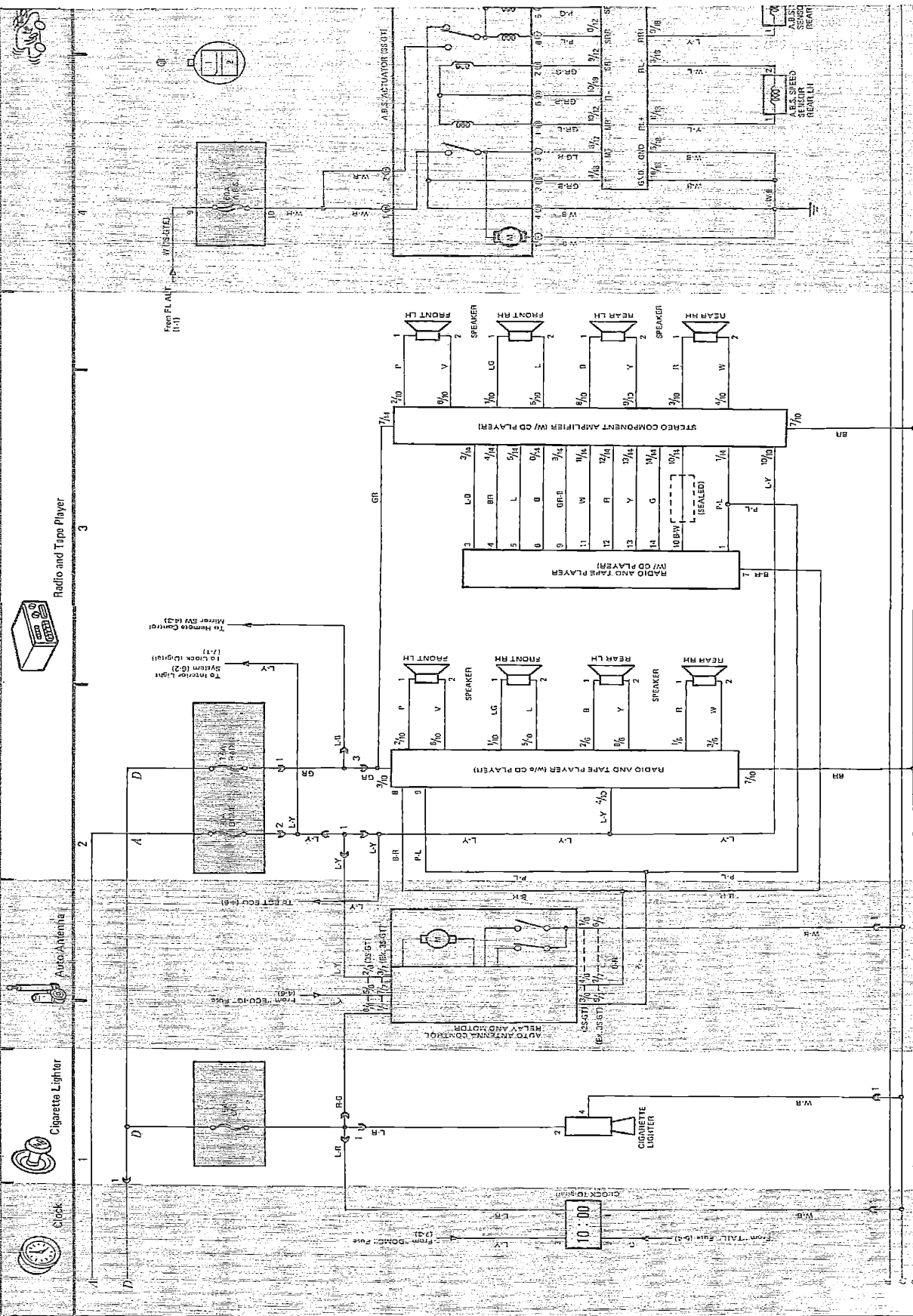
c = Located under left front pillar in J18 No. 1

g = Located on right front fender



CELICA (Cont'd)

CELICA 7



6 - Located in left side of instrument panel

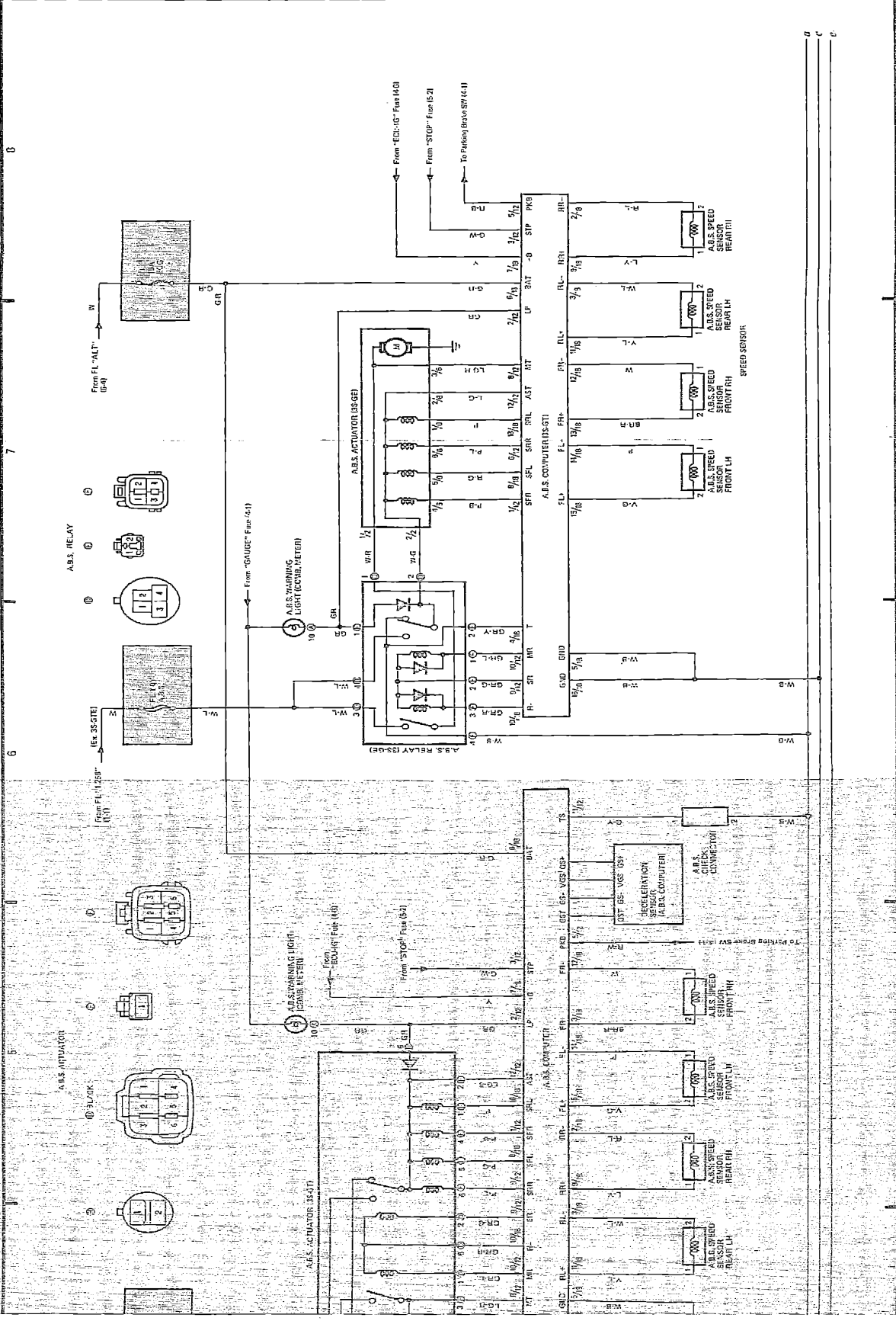
6 - Located on left front pillar in J/D No. 1

6 - Located on left side of front

6 - Located on left side of front

A.B.S. (Anti-Lock Brake System) (3S-GTE)

A.B.S. (Anti-Lock Brake System) (Ex. 3S-GTE)



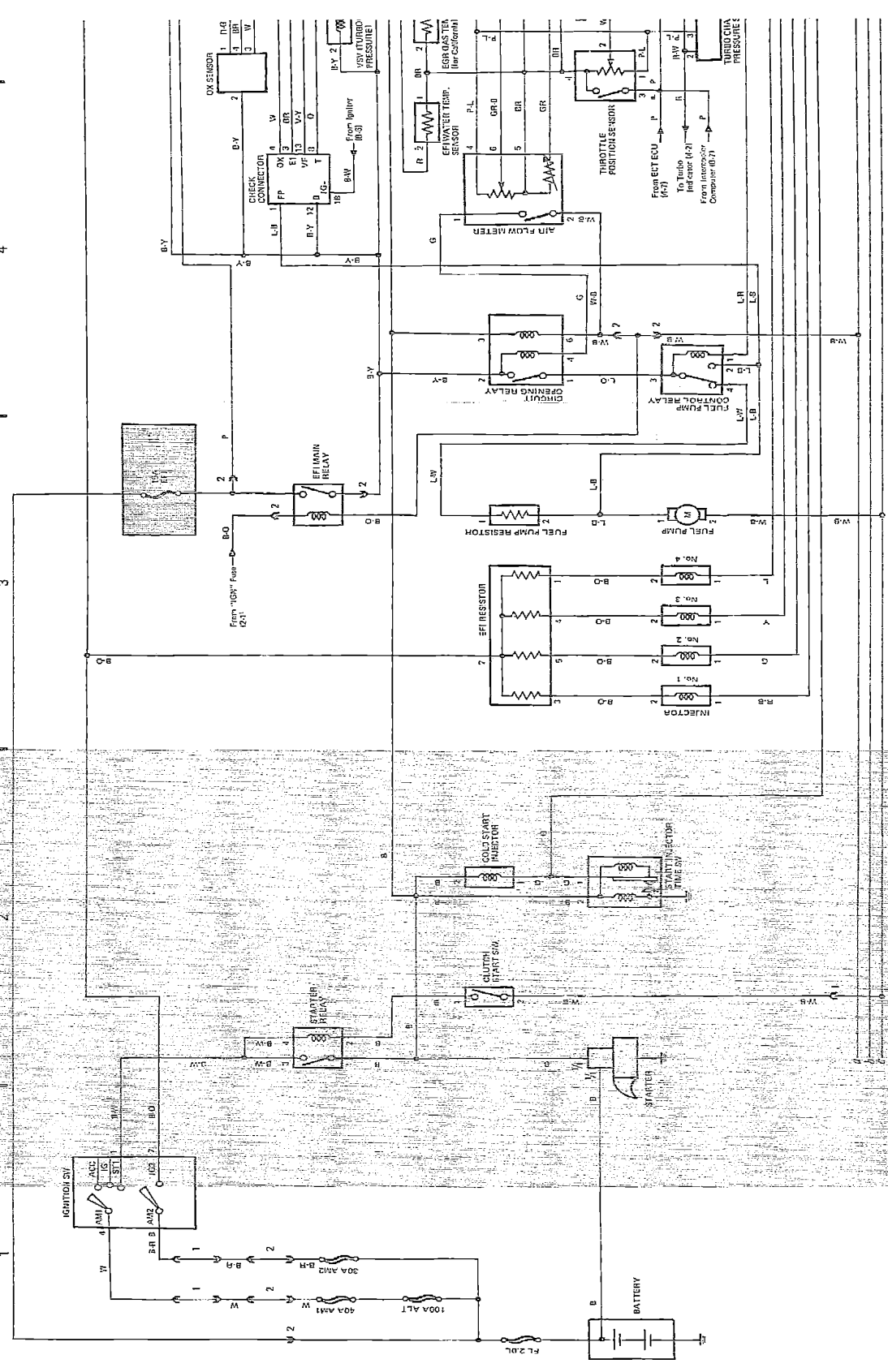
8 CELICA (Cont'd)



Power Source (3S-GTE)



Starting (3S-GTE)



Legend:
 G - Located on engine block
 G - Located under left front pillar in JB No. 1
 G - Located under left front pillar in JB No. 1

