

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.

HOW TO USE THIS MANUAL

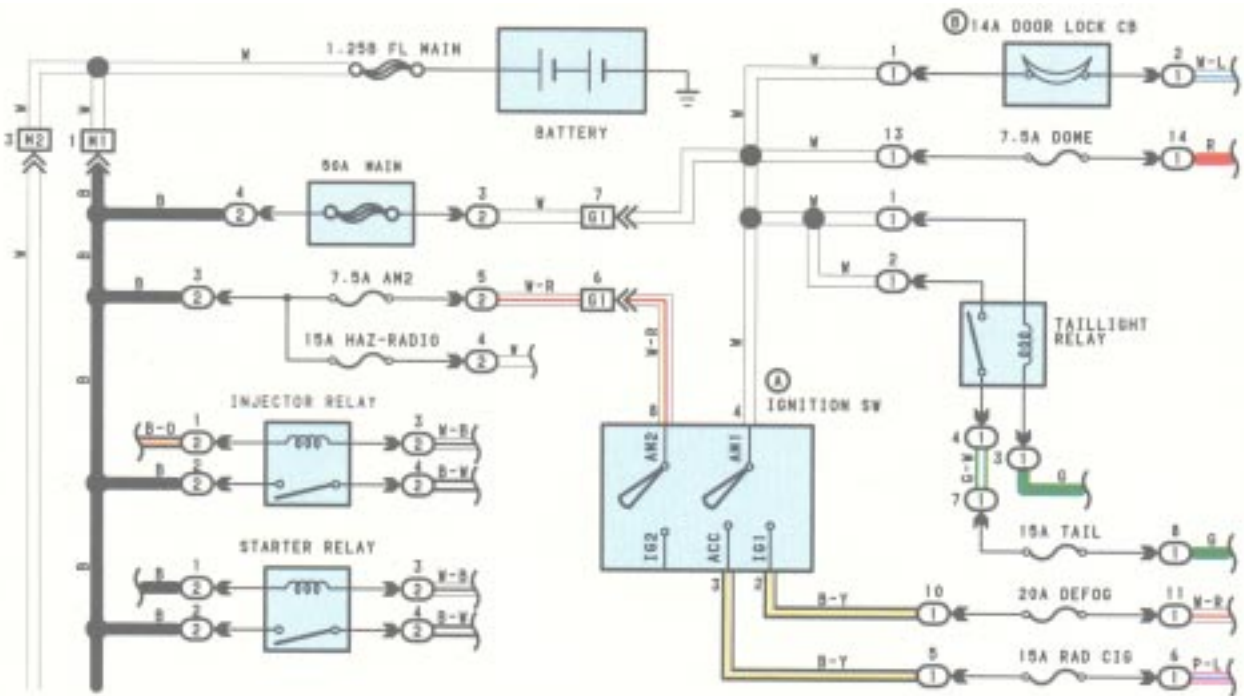
The Power – Load section, describes which parts each power source (fuses, fusible links, and circuit breakers) transmits current to. In the Power Source circuit diagram, the conditions when battery power is supplied to each system are explained. Since all System Circuit diagrams start from the power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

POWER SOURCE (Power–Load, Reference)

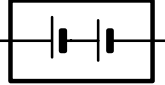




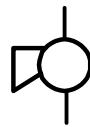

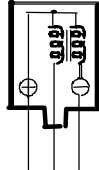







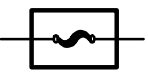



R/B No. 1 (Left Kick Panel)

Power	Load	Page No.	
7.5A	TURN-GAG	Check Engine Warning Light, Fuel Control SW, Super Charger Warning Light (4A-GZE)	42
		Cooling Fan Warning Light	62
		Turn Signal Flasher	72
		Light Retainer Relay	74
		Seat Belt Warning Light	90
		ECT Computer, Pattern Indicator	92
		Cruise Control Computer	96
		Auto Antenna Control Relay and Motor	102
		Combination Meter	104
		A/C Amplifier, Recirc/Fresh Control Servo Motor, Air Vent Mode Control Servo Motor, Heater Control Assembly, Heater Relay	107
		20A	WIPER
30A	DOOR	Power Window Control Relay, Power Window Motor	82
15A	RAD-CIG	Remote Control Mirror	80
		Cigarette Lighter, Clock	79
		Radio and Tape Player	100, 102
		Auto Antenna Control Relay and Motor	102

POWER SOURCE



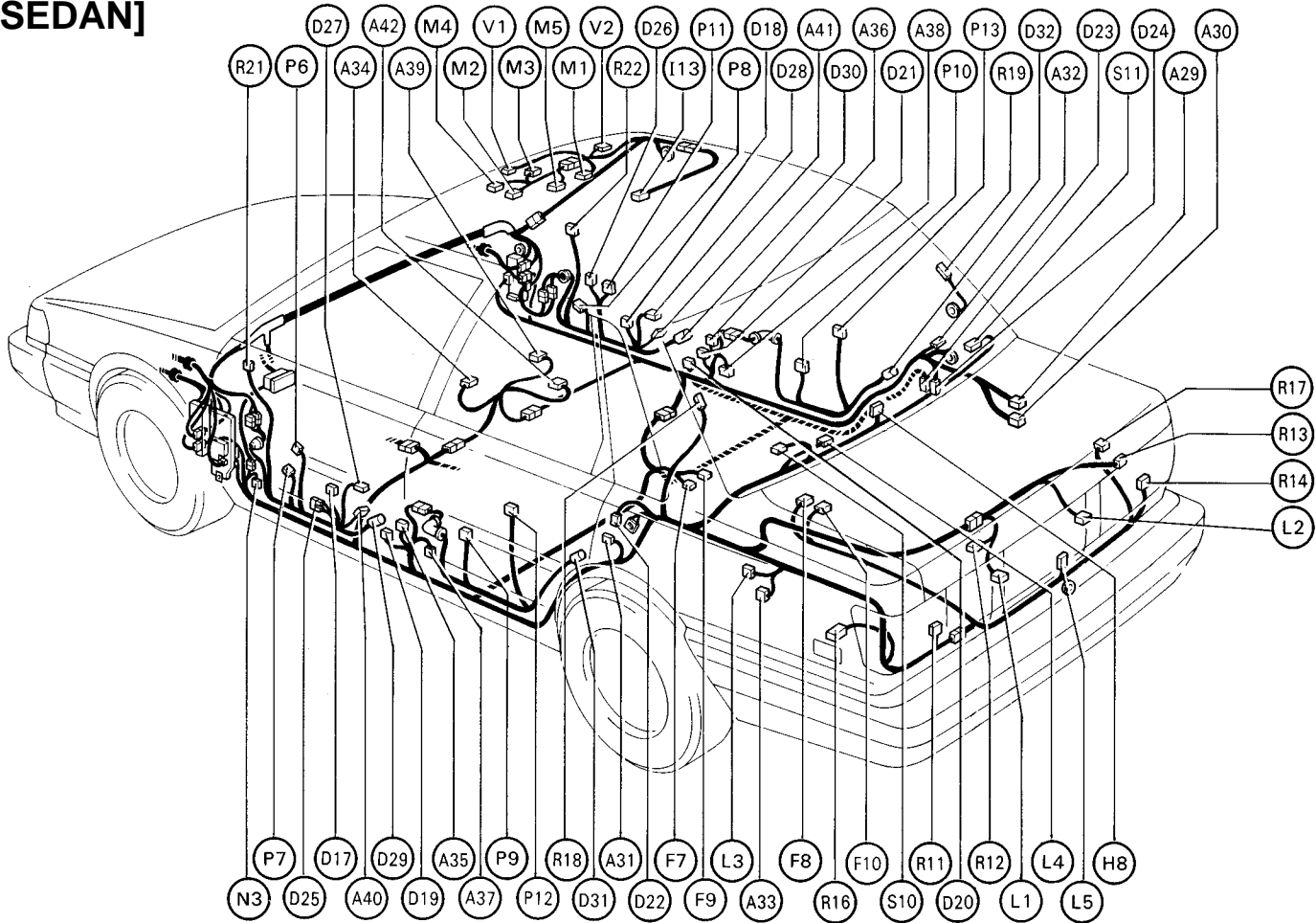
GLOSSARY OF TERMS AND SYMBOLS

 <p>BATTERY Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.</p>	 <p>HEADLIGHTS Current flow causes a headlight filament to heat up and emit light. A headlight may have either a single (1) filament or a double (2) filament.</p> <p>1. SINGLE FILAMENT</p>
 <p>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 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>

ELECTRICAL WIRING ROUTING

Position of Parts in Body

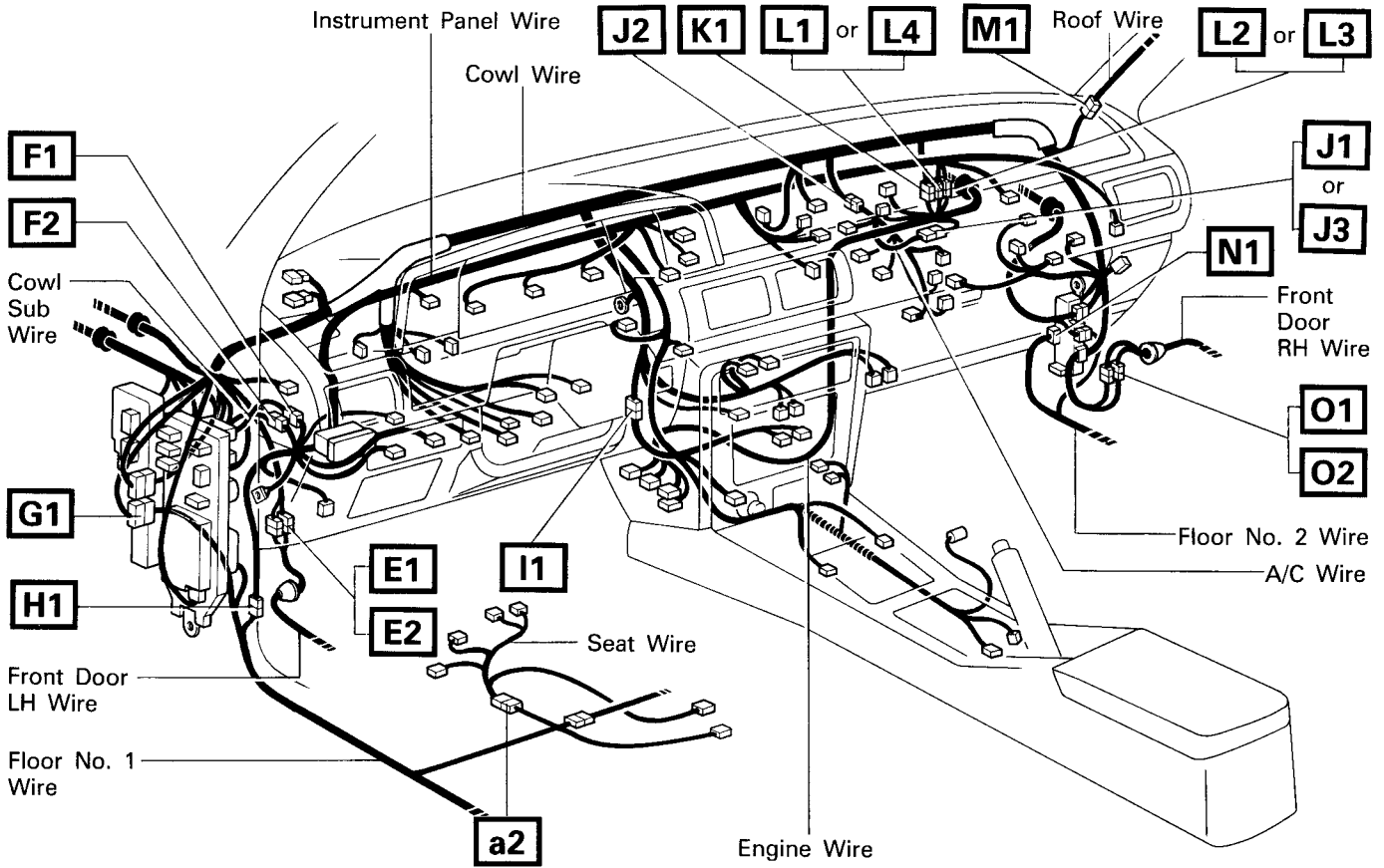
[SEDAN]



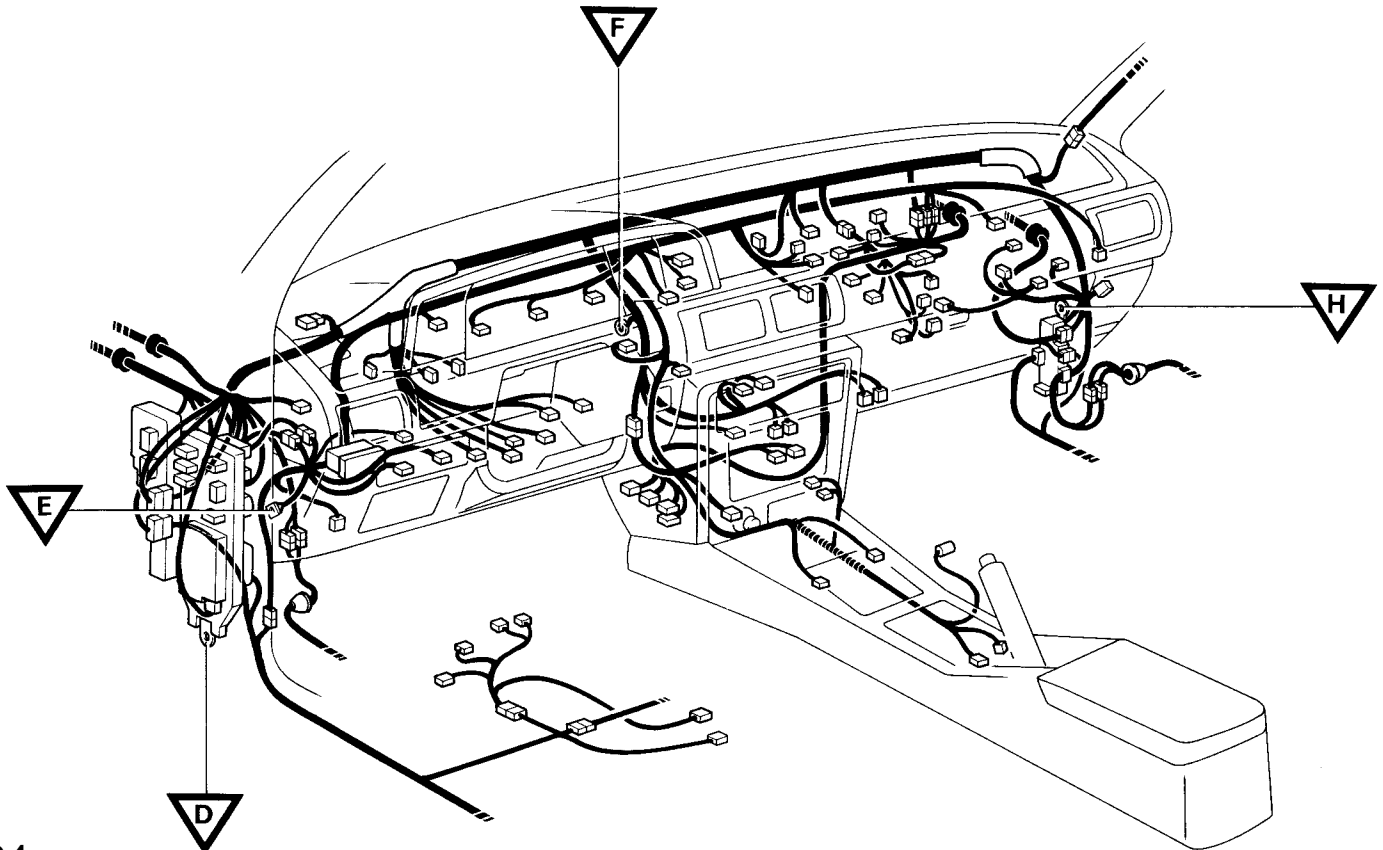
- | | | | |
|------|--|------|---|
| A 29 | A.B.S. Computer | D 20 | Door Courtesy SW Front RH (CANADA) |
| A 30 | A.B.S. Computer | D 21 | Door Courtesy SW Front RH (USA) |
| A 31 | A.B.S. Speed Sensor Rear LH | D 22 | Door Courtesy SW Rear LH |
| A 32 | A.B.S. Speed Sensor Rear RH | D 23 | Door Courtesy SW Rear RH (CANADA) |
| A 33 | Auto Antenna Motor and Control Relay | D 24 | Door Courtesy SW Rear RH (USA) |
| A 34 | Automatic Shoulder Belt Computer (USA) | D 25 | Door Key Cylinder Light and Outside handle SW |
| A 35 | Automatic Shoulder Belt Limit SW LH | D 26 | Door Lock Control SW RH |
| A 36 | Automatic Shoulder Belt Limit SW RH | D 27 | Door Lock Key SW LH |
| A 37 | Automatic Shoulder Belt Motor LH | D 28 | Door Lock Key SW RH |
| A 38 | Automatic Shoulder Belt Motor RH | D 29 | Door Lock Solenoid Front LH |
| A 39 | Automatic Shoulder Belt Release Lever
Warning Light (USA) | D 30 | Door Lock Solenoid Front RH |
| A 40 | Automatic Shoulder Belt SW LH | D 31 | Door Lock Solenoid Rear LH |
| A 41 | Automatic Shoulder Belt SW RH | D 32 | Door Lock Solenoid Rear RH |
| A 42 | Automatic Shoulder Belt Spool Release SW | | |
| B 8 | Back Door Courtesy SW (W/G) | F 7 | Fuel Pump |
| B 9 | Back Door Lock Solenoid (W/G) | F 8 | Fuel Pump (All-Trac/4WD) |
| | | F 9 | Fuel Sender |
| | | F 10 | Fuel Sender (All-Trac/4WD) |
| D 17 | Door Courtesy Light LH | H 8 | High Mount Stop Light |
| D 18 | Door Courtesy Light RH | I 13 | Interior Light |
| D 19 | Door Courtesy SW Front LH | | |

ELECTRICAL WIRING ROUTING

□ : Location of Connector Joining Wire Harness and Wire Harness



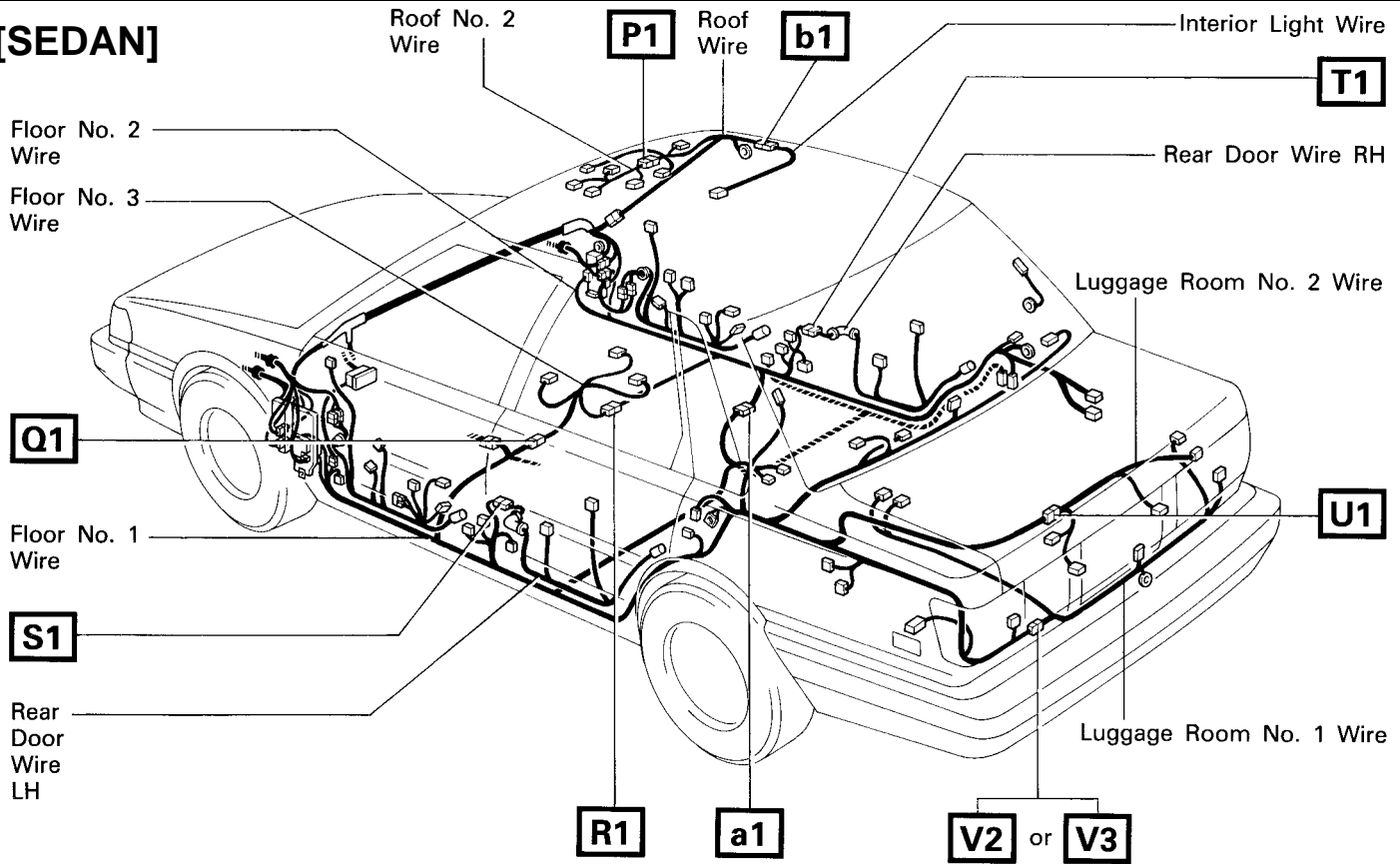
▽ : Location of Ground Points



ELECTRICAL WIRING ROUTING

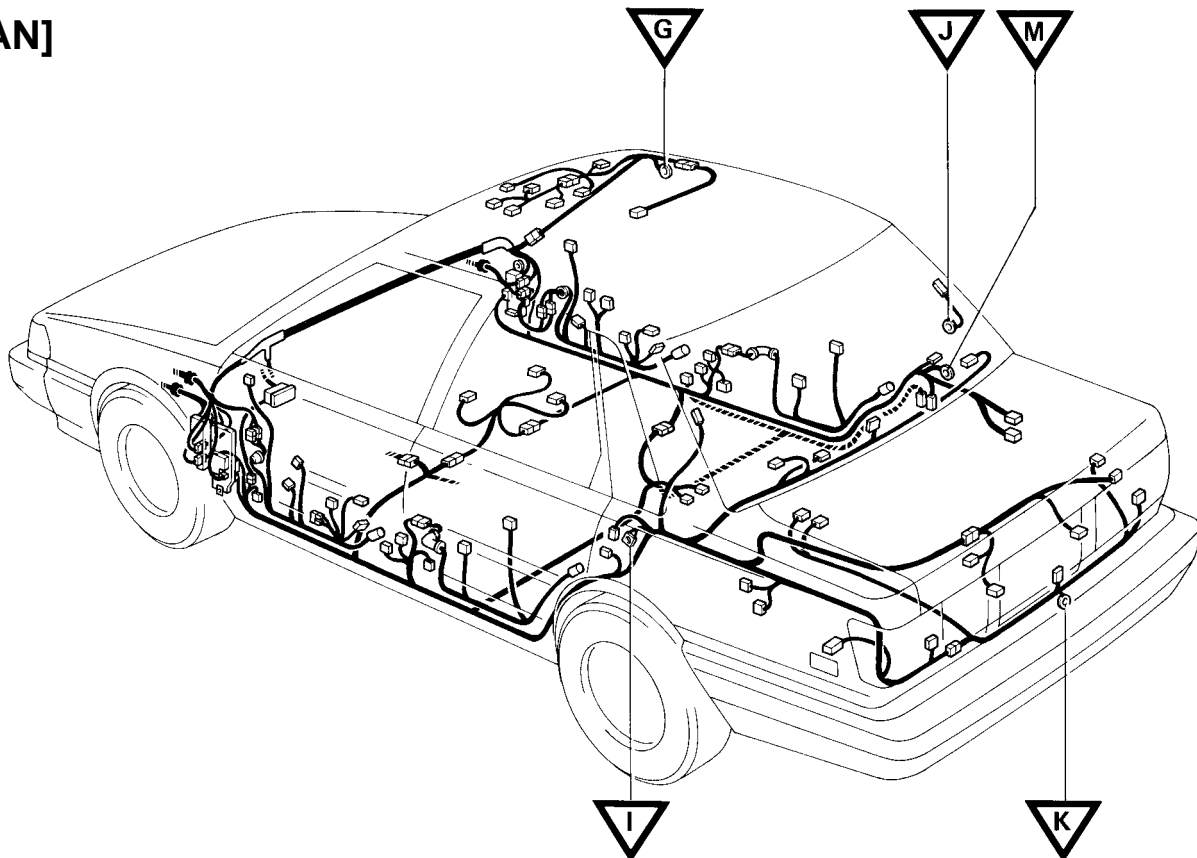
□ : Location of Connector Joining Wire Harness and Wire Harness

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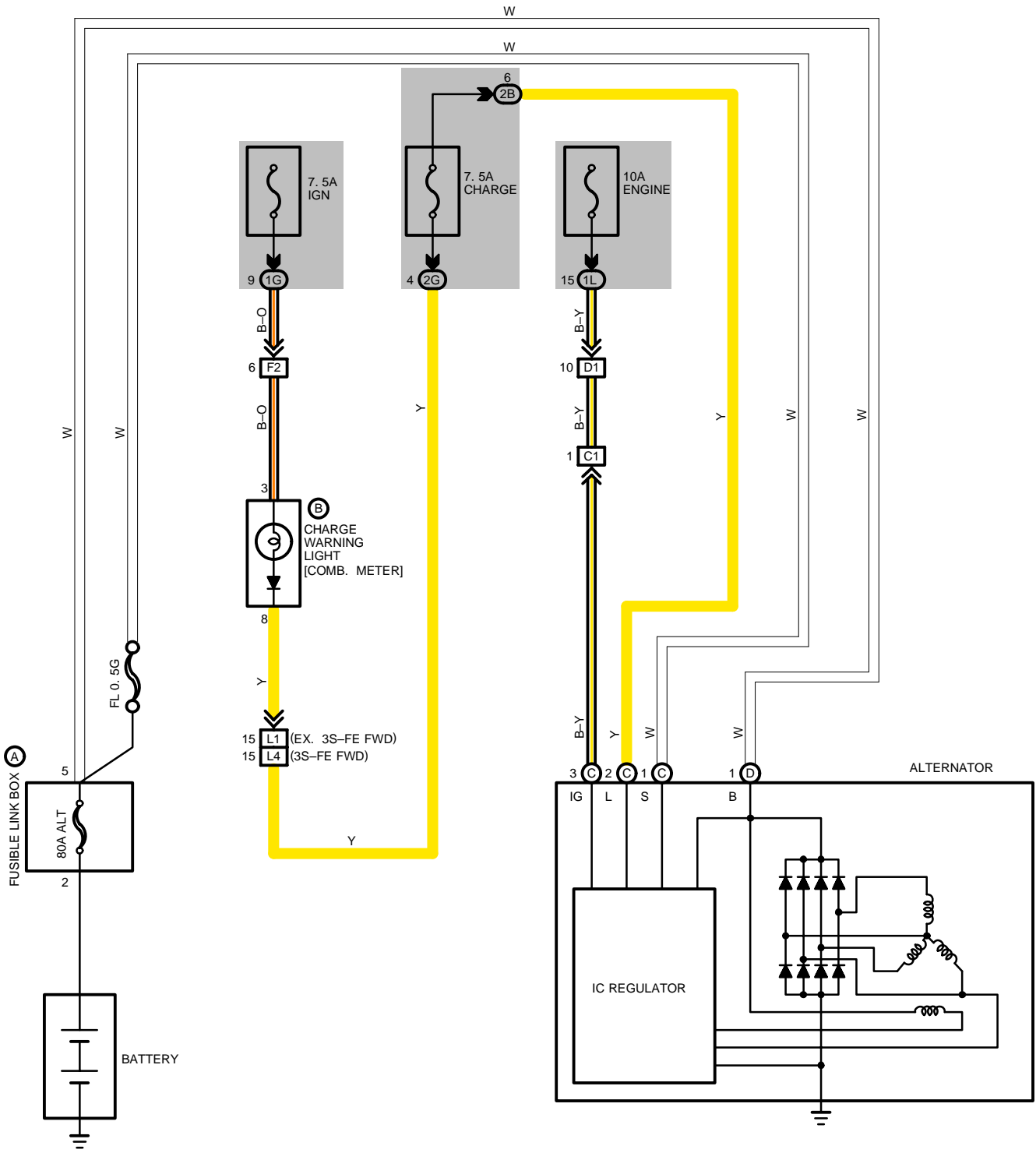


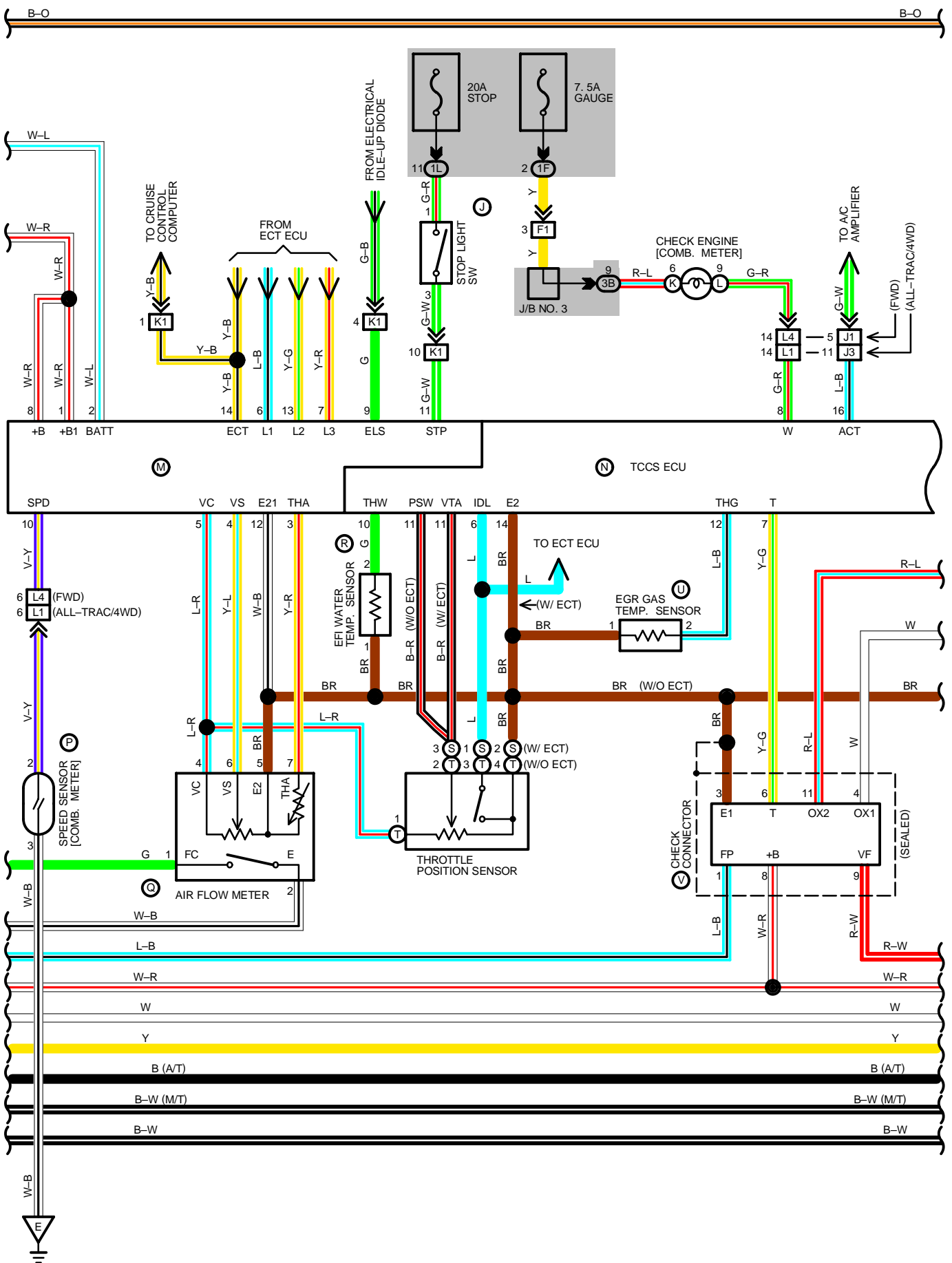
▽ : Location of Ground Points

[SEDAN]



CHARGING SYSTEM





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.

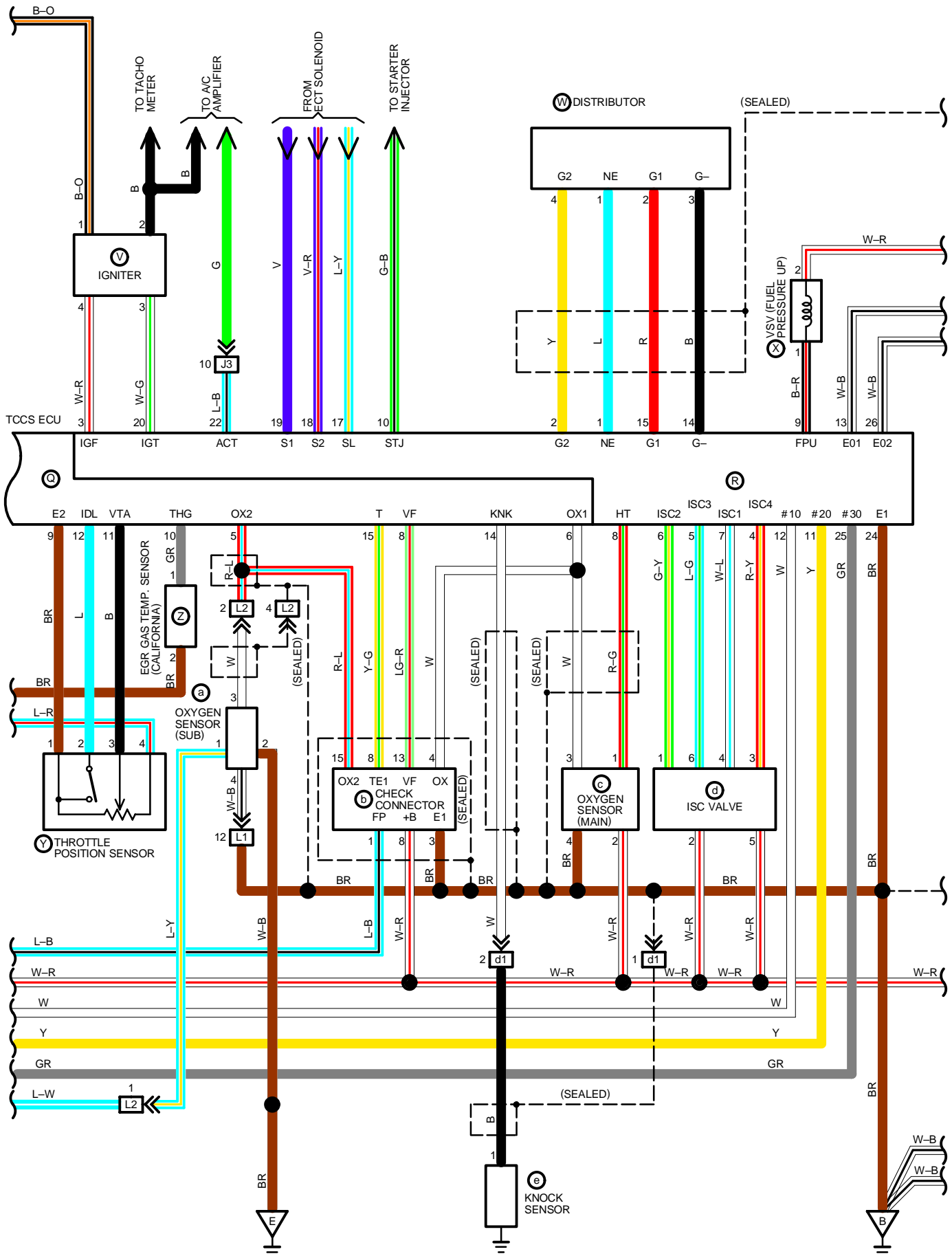
1. INPUT SIGNALS

- (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) OXYGEN SENSOR SIGNAL SYSTEM
THE OXYGEN DENSITY IN THE EXHAUST. EMISSIONS IS DETECTED AND INPUT AS A CONTROL SIGNAL TO TERMINAL OX1 OF THE ECU. TO MAINTAIN STABLE DETECTION PERFORMANCE BY THE OXYGEN SENSOR, A HEATER IS USED FOR WARMING THE SENSOR. THE HEATER IS ALSO CONTROLLED BY THE ECU (HT).
- (4) RPM SIGNAL SYSTEM
CRANKSHAFT POSITION AND E/G RPM ARE DETECTED BY THE PICK-UP COIL INSTALLED INSIDE THE DISTRIBUTOR. CRANKSHAFT POSITION IS INPUT AS A CONTROL SIGNAL TO TERMINALS G1 AND G2, OF THE 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 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 SP1 OF THE ECU.
- (7) NEUTRAL START SW SIGNAL SYSTEM (A/T)
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.
- (8) 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.
- (9) 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. ALSO, CURRENT FLOWS VIA THE IGN FUSE TO TERMINAL IGSW OF THE ECU.
- (10) 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.
- (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) ENGINE KNOCK SIGNAL SYSTEM
ENGINE KNOCKING IS DETECTED BY THE KNOCK SENSOR AND INPUT AS A CONTROL SIGNAL TO TERMINAL KNK OF THE ECU.

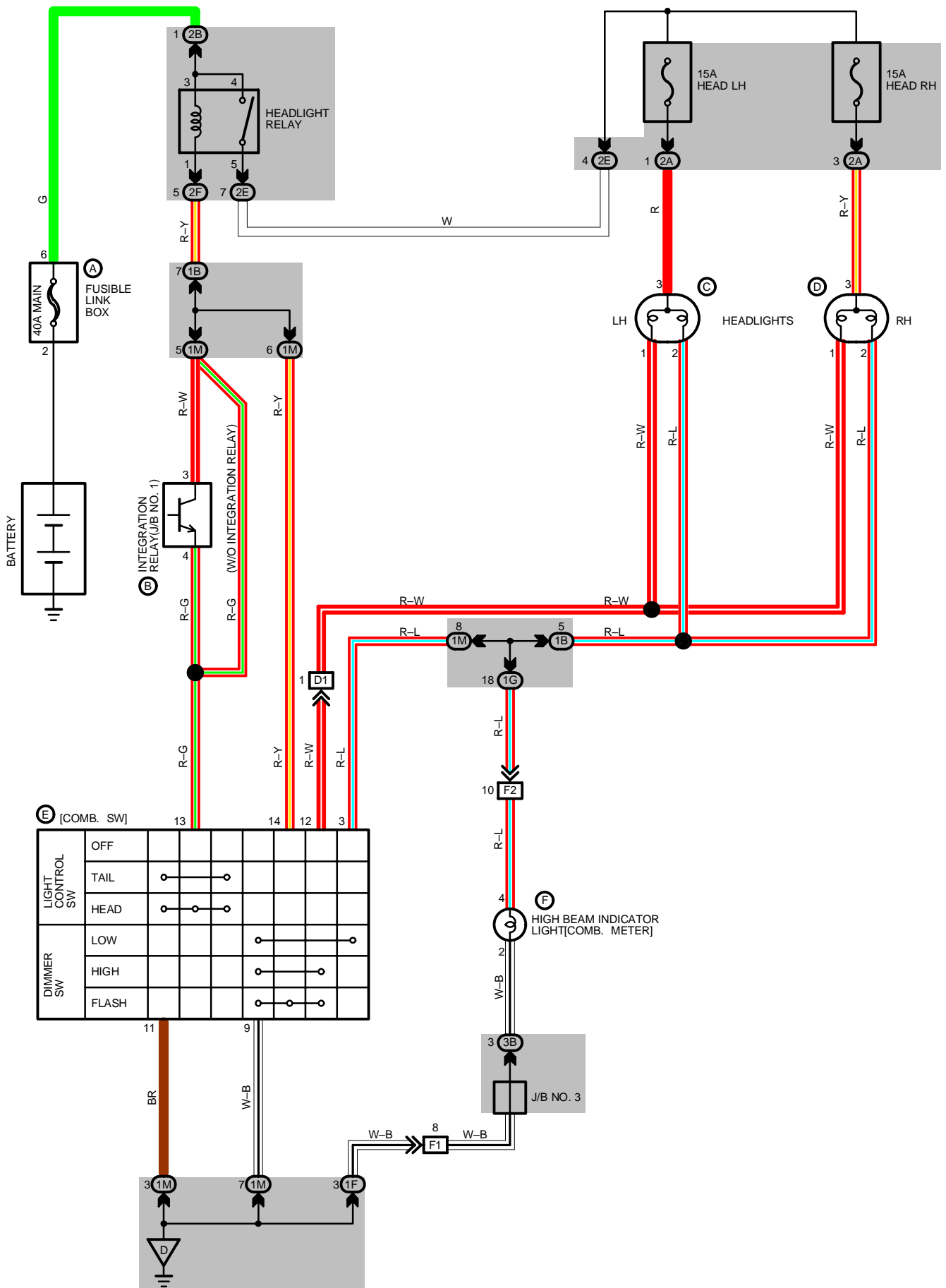
2. CONTROL SYSTEM

- * EFI (ELECTRONIC FUEL INJECTION) SYSTEM
THE EFI SYSTEM MONITORS THE ENGINE CONDITIONS THROUGH THE SIGNALS EACH SENSOR (INPUT SIGNALS [1] TO [11]) 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, #20 AND #30 OF THE ECU. CAUSING THE INJECTORS TO OPERATE (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 CONDITIONS USING THE SIGNALS (INPUT SIGNALS [1, 3, 4, 5, 6, 8, 10, 11, 12]) 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.
- * OXYGEN SENSOR HEATER CONTROL SYSTEM
THE OXYGEN 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 OXYGEN SENSOR TO IMPROVE DETECTION PERFORMANCE OF THE SENSOR. THE ECU EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS [1, 4, 9, 10, 11]), CURRENT IS OUTPUT TO TERMINAL HT AND CONTROLS THE HEATER.
- * ISC (IDLE SPEED CONTROL) SYSTEM
THE ISC SYSTEM (STEP MOTOR 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 8, 11]), OUTPUTS CURRENT TO TERMINALS ISC1 ISC2, ISC3 AND ISC4, AND CONTROLS THE ISC VALVE.
- * FUEL PRESSURE-UP SYSTEM
THE FUEL PRESSURE UP SYSTEM CAUSES THE VSV (FOR FUEL PRESSURE UP) TO COME ON FOR HIGH TEMP. STARTS AND IMMEDIATELY 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 12), OUTPUTS CURRENT TO TERMINAL FPU AND CONTROLS THE VSV.

ENGINE CONTROL (2VZ-FE)



HEADLIGHTS (USA)



INTERIOR LIGHTS (w/ DOOR LOCK)

SERVICE HINTS

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

(1G) 7-GROUND : APPROX. 12 VOLTS WITH DOOR CLOSED
0 VOLT WITH ANY DOOR OPEN

20A DOME FUSE : ALWAYS 12 VOLTS

(1I) 3-GROUND : APPROX. 12 VOLTS WITH DRIVER'S DOOR
OUTSIDE HANDLE HOLD UP

(1L) 7-GROUND : APPROX. 12 VOLTS WITH DOOR CLOSED
0 VOLT WITH ANY DOOR OPEN
0 VOLT → 12 VOLTS WITHIN 8.5 SECONDS AFTER DOOR CLOSED
OR AFTER DRIVER'S DOOR OUTSIDE HANDLE HOLD UP

(H) OUTSIDE HANDLE SW (DRIVER'S DOOR)

1-3 : CLOSED WITH DRIVER'S DOOR OUTSIDE HANDLE HOLD UP

(I) (Q) (R) (S) DOOR COURTESY SW

1-GROUND : CLOSED WITH DOOR OPEN

(T) BACK DOOR COURTESY SW (W/G)

2-GROUND : CLOSED WITH BACK DOOR OPEN

(U) LUGGAGE COMPARTMENT LIGHT SW

1-GROUND : CLOSED WITH LUGGAGE COMPARTMENT DOOR OPEN

○ : PARTS LOCATION

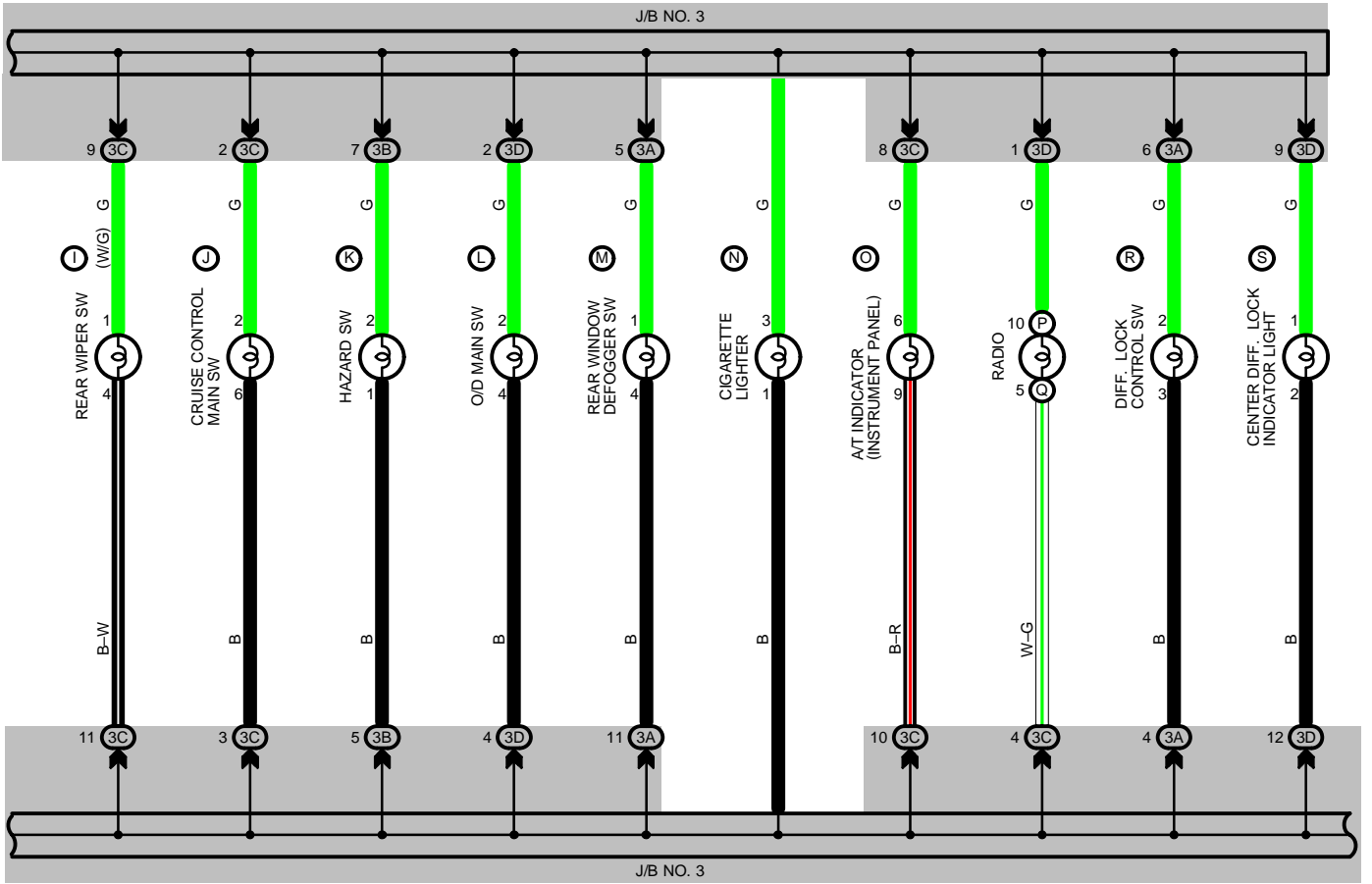
CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A	M5 26 (S/D), 27 (STATION W/G)	I	D17 26 (S/D), 27 (STATION W/G)	Q	D18 26 (S/D), 27 (STATION W/G)
B	M1 26 (S/D), 27 (STATION W/G)	J	D12 28	Q	D19 26 (S/D), 27 (STATION W/G)
C	V1 26 (S/D), 27 (STATION W/G)	K	I10 28	R	D21 26 (S/D), 27 (STATION W/G)
D	V2 26 (S/D), 27 (STATION W/G)	L	D23 26 (S/D), 27 (STATION W/G)	R	D22 26 (S/D), 27 (STATION W/G)
E	I13 26 (S/D), 27 (STATION W/G)	M	D15 26 (S/D), 27 (STATION W/G)	S	D20 26 (S/D), 27 (STATION W/G)
F	I13 26 (S/D), 27 (STATION W/G)	N	D16 26 (S/D), 27 (STATION W/G)	T	B8 27
G	C11 28	O	R15 27	U	L5 26
H	D23 26 (S/D), 27 (STATION W/G)	P	L4 26		

○ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

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

□ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
E2	34	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
F2	34	INSTRUMENT PANEL WIRE AND COWL SUB WIRE (LEFT KICK PANEL)
M1	34	COWL WIRE AND ROOF WIRE (INSTRUMENT PANEL RIGHT)
N1	34	FLOOR NO. 2 WIRE AND COWL WIRE (RIGHT KICK PANEL)
O1	34	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
P1	36 (S/D) 38 (STATION W/G)	ROOF NO. 2 WIRE AND ROOF WIRE (W/ MOON ROOF, ROOF RIGHT)
V2	36	FLOOR NO. 1 WIRE AND LUGGAGE ROOM NO. 1 WIRE (BACK PANEL LEFT)
V3	36	FLOOR NO. 1 WIRE AND LUGGAGE ROOM NO. 1 WIRE (BACK PANEL LEFT)
W1	38	BACK DOOR NO. 1 WIRE AND FLOOR NO. 1 WIRE (BACK PANEL LEFT)
X1	38	LUGGAGE ROOM NO. 3 WIRE AND FLOOR NO. 1 WIRE (BACK PANEL LEFT)
Y1	38	BACK DOOR NO. 1 WIRE AND BACK DOOR NO. 2 WIRE (BACK DOOR LEFT)
b1	36 (S/D) 38 (STATION W/G)	INTERIOR LIGHT WIRE AND ROOF WIRE (W/ MOON ROOF, ROOF RIGHT)



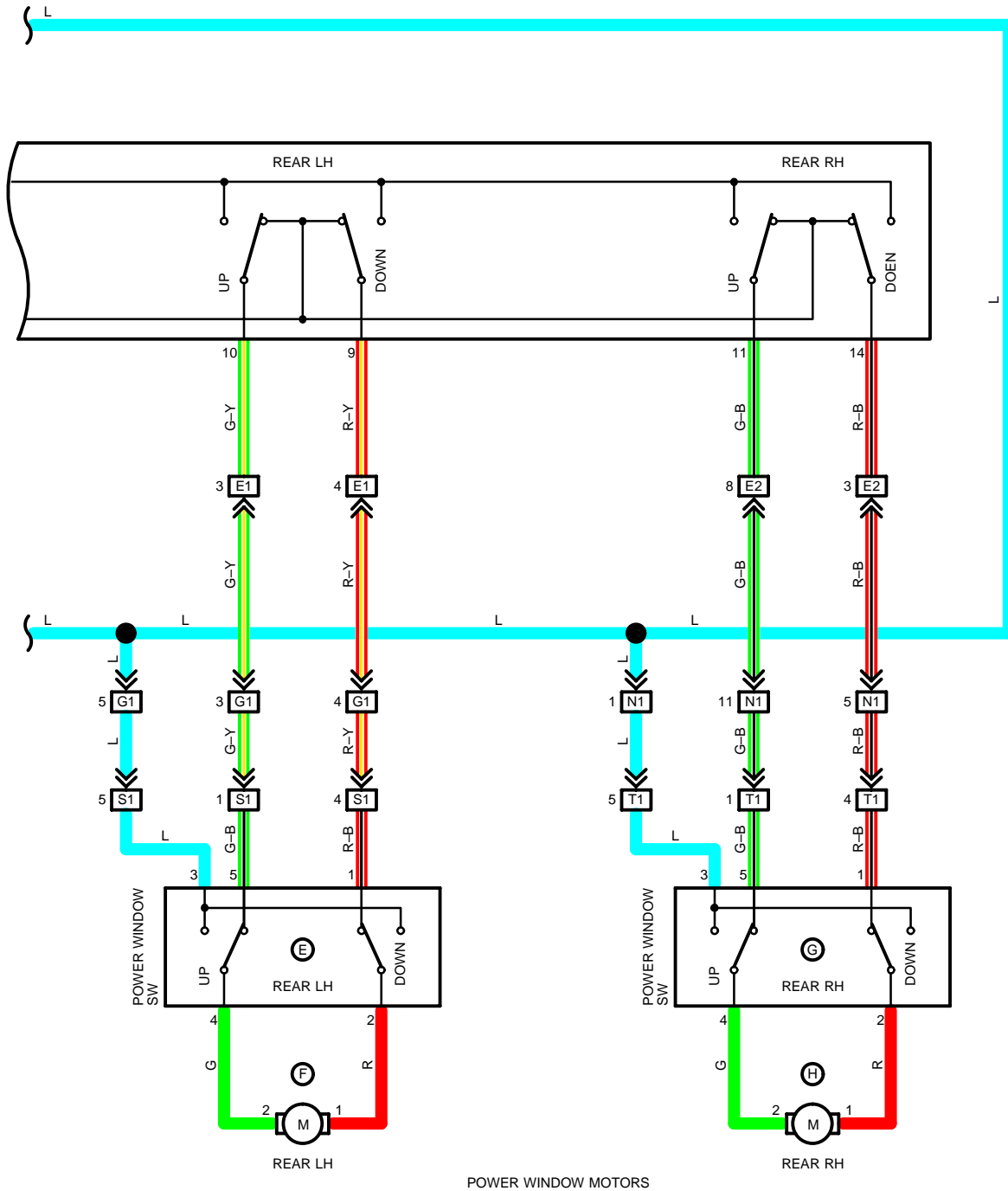
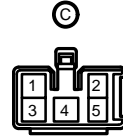
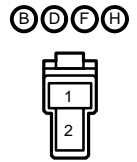
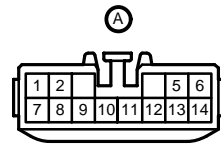
SERVICE HINTS

(A) POWER WINDOW MASTER SW

- 7, 8-GROUND: APPROX. 12 VOLTS WITH IGNITION SW AT **ON** POSITION
- 2-GROUND : ALWAYS CONTINUITY
- 6-GROUND : APPROX. 12 VOLTS WITH IGNITION SW ON AND MASTER SW (DRIVER'S WINDOW) UP
- 13-GROUND : APPROX. 12 VOLTS WITH IGNITION SW ON AND MASTER SW (DRIVER'S WINDOW) DOWN OR DOWN HOLD

WINDOW LOCK SW

OPEN WITH WINDOW LOCK SW AT **LOCK** POSITION



DOOR LOCKS

SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO TERMINAL 8 OF THE DOOR LOCK CONTROL RELAY THROUGH POWER CB.

1. MANUAL LOCK OPERATION

TO PUSH DOOR LOCK SW AND KEY SW TO LOCK POSITION, A LOCK SIGNAL IS INPUT TO TERMINAL 10 OF THE DOOR LOCK CONTROL RELAY AND CAUSES THE RELAY TO FUNCTION. CURRENT FLOWS FROM TERMINAL 8 OF THE RELAY → TERMINAL 4 → TERMINAL 4 OF THE DOOR LOCK SOLENOIDS, TERMINAL 2 OF THE BACK DOOR LOCK SOLENOID (W/G) → TERMINAL 3, TERMINAL 4 (W/G) → TERMINAL 3 OF THE RELAY → TERMINAL 16 → 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 9 (DOOR LOCK KEY SW LH), TERMINAL 11 (EX. DOOR LOCK KEY SW LH 2 STEP UNLOCK FUNCTION) OF THE DOOR CONTROL RELAY AND CAUSES THE RELAY TO FUNCTION. CURRENT FLOWS FROM TERMINAL 8 OF THE RELAY → TERMINAL 3 → TERMINAL 3 OF THE DOOR LOCK SOLENOIDS, TERMINAL 4 OF THE BACK DOOR LOCK SOLENOID (W/G) → TERMINAL 4, TERMINAL 2 (W/G) → TERMINAL 4 OF THE RELAY → TERMINAL 16 → 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 8 OF THE RELAY → TERMINAL 3 → TERMINAL 3 OF THE DOOR LOCK SOLENOIDS, TERMINAL 4 OF THE BACK DOOR LOCK SOLENOID (W/G) → TERMINAL 4, TERMINAL 2 (W/G) → TERMINAL 4 OF THE RELAY → TERMINAL 16 → 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 8 OF THE RELAY → TERMINAL 3 → TERMINAL 3 OF THE DOOR LOCK SOLENOIDS, TERMINAL 4 OF THE BACK DOOR LOCK SOLENOID (W/G) → TERMINAL 4, TERMINAL 2 (W/G) → TERMINAL 4 OF THE RELAY → TERMINAL 16 → 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 8 OF THE RELAY → TERMINAL 3 → TERMINAL 3 OF THE DOOR LOCK SOLENOIDS, TERMINAL 4 OF THE BACK DOOR LOCK SOLENOID (W/G) → TERMINAL 4, TERMINAL 2 (W/G) → TERMINAL 4 OF THE RELAY → TERMINAL 16 → TO GROUND AND CAUSES ALL THE DOORS TO UNLOCK.

SERVICE HINTS

(A) DOOR LOCK CONTROL RELAY

2-GROUND : CONTINUITY WITH DRIVER'S DOOR OPEN

8-GROUND : ALWAYS APPROX. 12 VOLTS

16-GROUND : ALWAYS CONTINUITY

4-GROUND : APPROX. 12 VOLTS 0.2 SECONDS WITH FOLLOWING OPERATION
DOOR LOCK CONTROL SW LOCKED

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

3-GROUND : APPROX. 12 VOLTS 0.2 SECONDS 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

10-GROUND : 0 VOLT WITH DOOR LOCK CONTROL SW LOCKED OR

DRIVER'S, PASSENGER'S DOOR LOCK CYLINDER LOCKED WITH KEY

14-GROUND : CONTINUITY WITH PASSENGER'S DOOR OPEN

6-GROUND : 12 VOLTS WITH DRIVER'S DOOR LOCK KNOB UNLOCKED

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

7-GROUND : CONTINUITY WITH IGNITION KEY IN CYLINDER

9-GROUND : 0 VOLT WITH DRIVER'S DOOR LOCK CYLINDER UNLOCKED WITH KEY

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

(B) (D) DOOR LOCK KEY SW

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

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

(F) (G) DOOR LOCK SOLENOID

1-2 : CLOSED WITH UNLOCK POSITION

(K) UNLOCK WARNING SW

1-2 : CLOSED WITH IGNITION KEY IN CYLINDER

(L) (M) DOOR COURTESY SW

1-GROUND : CLOSED WITH DOOR OPEN