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 ASCENT THE WINDOW. RELEASING THIS SW, THE ROTATION OF MOTOR IS STOPPED AND THE WINDOWS CAN STOP AT WILL 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 **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 THE ROTATION ENABLING TO DESCENT THE WINDOW.

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

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

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

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

HOLDING PASSENGER'S WINDOW SW (MASTER SW) ON "UP", THE CURRENT FLOWS FROM **TERMINAL 3** OF THE MASTER SW PASSING **TERMINAL 6** TO **TERMINAL 3** OF THE POWER WINDOW SW (PASSENGER'S) → **TERMINAL 4** → **TERMINAL 2** OF THE MOTOR → **TERMINAL 1** → **TERMINAL 9** OF THE POWER WINDOW SW → **TERMINAL 7** → **TERMINAL 1** OF THE MASTER SW → **TERMINAL 4** TO **GROUND**. THE MOTOR RUNS TO ASCENT THE WINDOW. RELEASING THIS SW, THE ROTATION OF MOTOR IS STOPPED AND WINDOW CAN STOP AT WILL PLACE.

SWITCHING THE WINDOW LOCK SW IN "LOCK" POSITION, THE CIRCUIT IS OPENED AND STOPPED THE MOTOR ROTATION.

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

R

SERVICE HINTS

P 2 POWER WINDOW CONTROL RELAY

3–GROUND: ALWAYS CONTINUITY

2–GROUND: APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION

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

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

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

P 4 POWER WINDOW MASTER SW

4–GROUND: ALWAYS CONTINUITY

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

WINDOW LOCK SW

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

S

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
P2	21	**P4**	21	**P6**	21
P3	21	**P5**	21		

T

: RELAY BLOCKS

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

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)
ID1	26	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
IH1	26	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)

W

: GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
IC	24	COWL LEFT

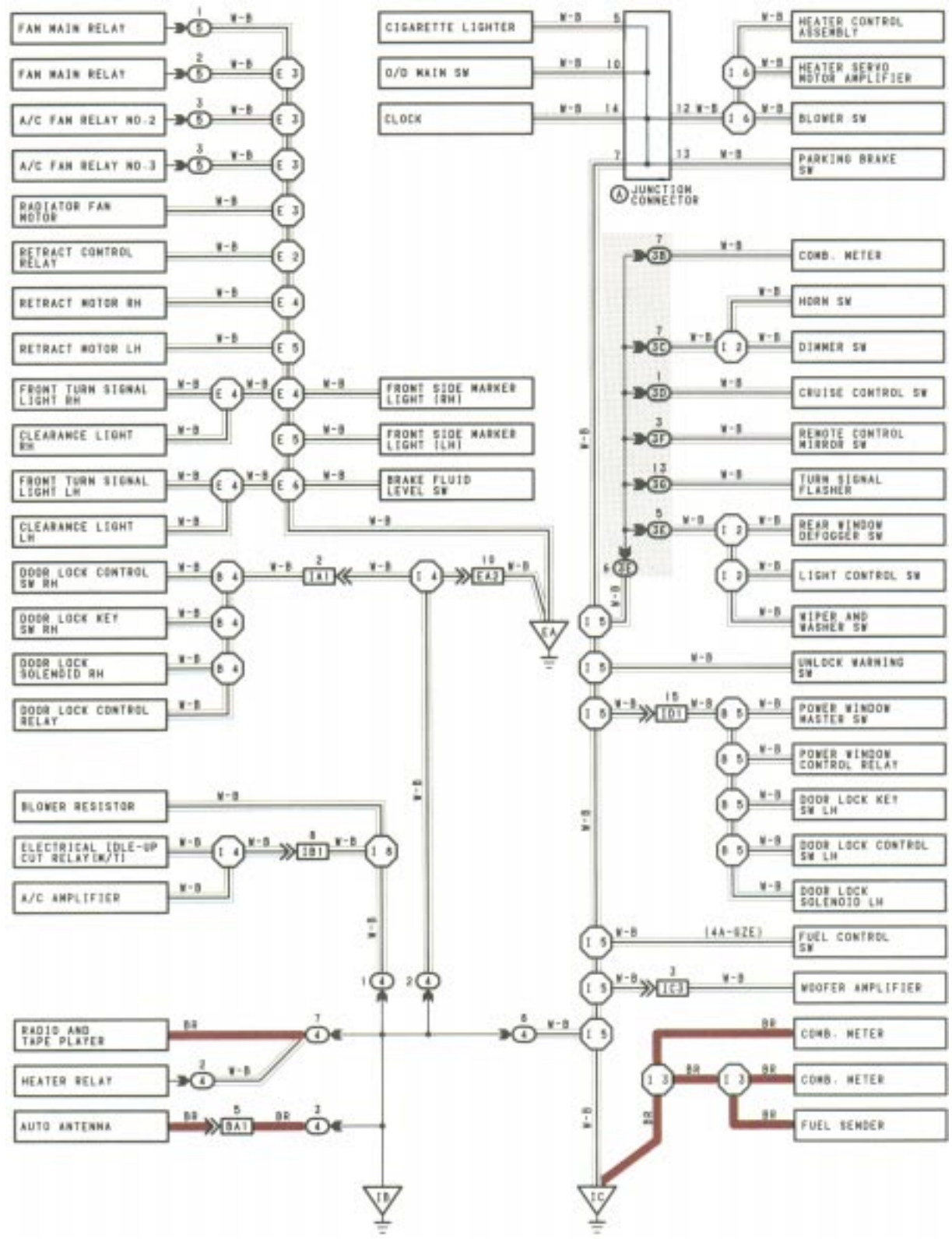
X

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 5	24	COWL WIRE

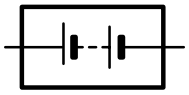
The ground points circuit diagram shows the connections from all major parts to the respective ground points. When troubleshooting a faulty ground point, checking the system circuits which use a common ground may help you identify the problem ground quickly. The relationship between ground points (,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

GROUND POINT



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

GLOSSARY OF TERMS AND SYMBOLS



BATTERY

Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.

CAPACITOR (Condenser)

A small holding unit for temporary storage of electrical voltage.

CIGARETTE LIGHTER

An electric resistance heating element.

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.

DIODE

A semiconductor which allows current flow in only one direction.

DIODE, ZENER

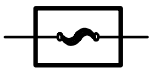
A diode which allows current flow in one direction but blocks reverse flow only up to a specific voltage. Above that potential, it passes the excess voltage. This acts as a simple voltage regulator.

DISTRIBUTOR, IIA

Channels high–voltage current from the ignition coil to the individual spark plugs.

FUSE

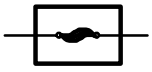
A thin metal strip which burns through when too much current flows through it, thereby stopping current flow and protecting a circuit from damage.



(for Medium Current Fuse)

FUSIBLE LINK

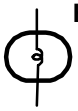
A heavy–gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit. The numbers indicate the cross–section surface area of the wires.



(for High Current Fuse or Fusible Link.)

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.

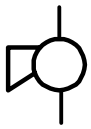


HEADLIGHTS

1. SINGLE FILAMENT

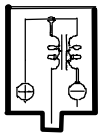
Current flow causes a headlight filament to heat up and emit light. A headlight may have either a single (1) filament or a double (2) filament.

2. DOUBLE FILAMENT



HORN

An electric device which sounds a loud audible signal.



IGNITION COIL

Converts low–voltage DC current into high–voltage ignition current for firing the spark plugs.

LIGHT

Current flow through a filament causes the filament to heat up and emit light.

LED (LIGHT EMITTING DIODE)

Upon current flow, these diodes emit light without producing the heat of a comparable light.

METER, ANALOG

Current flow activates a magnetic coil which causes a needle to move, thereby providing a relative display against a background calibration.

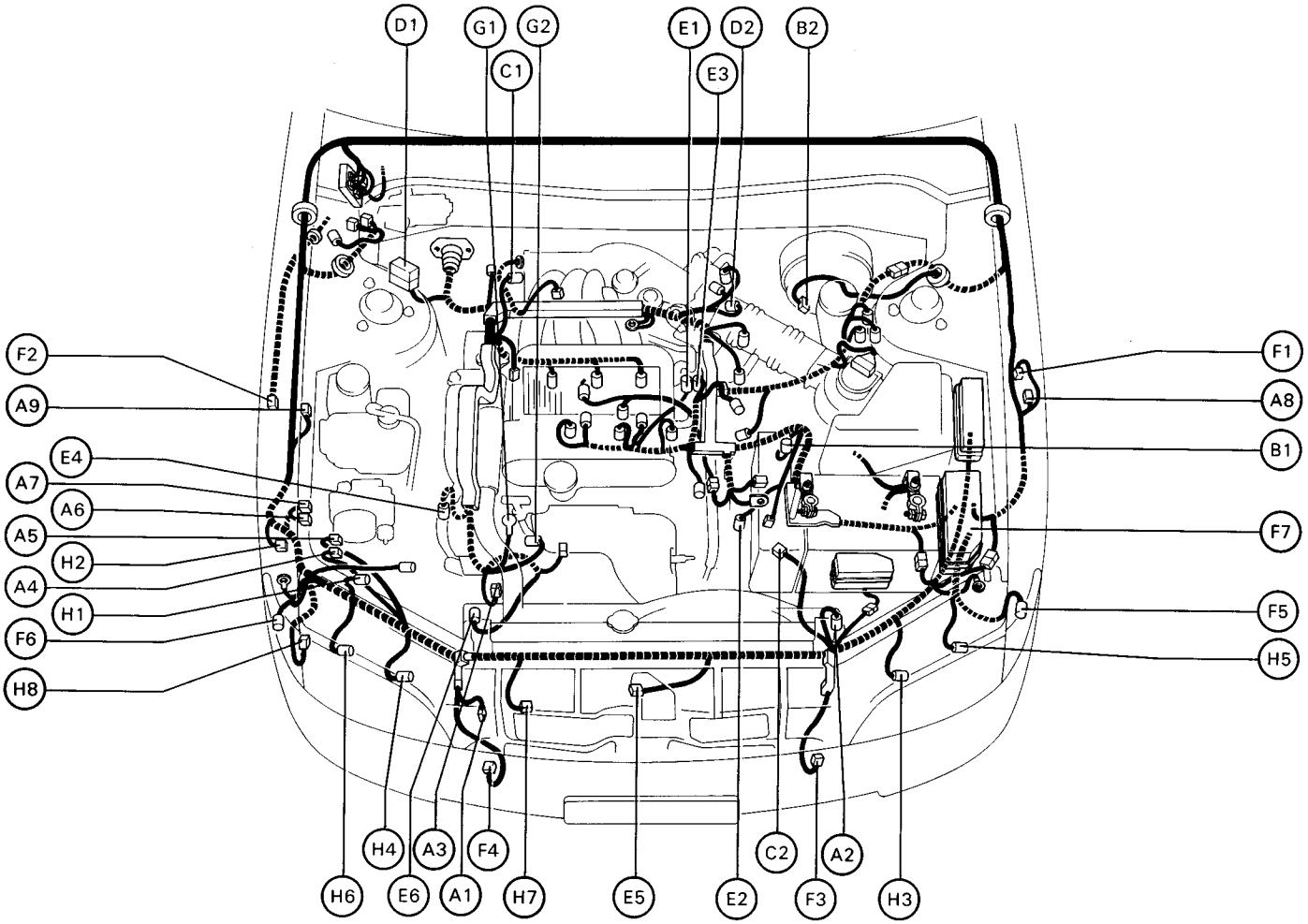
METER, DIGITAL

Current flow activates one or many LED's, LCD's, or fluorescent displays, which provide a relative or digital display.

MOTOR

A power unit which converts electrical energy into mechanical energy, especially rotary motion.

Position of Parts in Engine Compartment



A 1 A/C Ambient Temp. Sensor
A 2 A/C Dual and High Pressure SW
A 3 A/C Magnetic Clutch and Lock Sensor
A 4 ABS Actuator
A 5 ABS Actuator
A 6 ABS Relay
A 7 ABS Relay
A 8 ABS Speed Sensor Front LH
A 9 ABS Speed Sensor Front RH

B 1 Back–Up Light SW (M/T)
B 2 Brake Fluid Level SW

C 1 Cold Start Injector
C 2 Cruise Control Actuator

D 1 Data Link Connector 1 (Check Connector)
D 2 Distributor

E 1 EGR Gas Temp. Sensor or Short Pin
E 2 Electronic Controlled Transmission Solenoid
E 3 Engine Coolant Temp. Sensor (EFI Water Temp. Sensor)
E 4 Engine Coolant Temp. Sensor [Water Temp. Sensor (for Cooling Fan)]
E 5 Engine Hood Courtesy SW
E 6 Engine Oil Level Warning SW

F 1 Front Airbag Sensor LH
F 2 Front Airbag Sensor RH
F 3 Front Fog Light LH
F 4 Front Fog Light RH
F 5 Front Turn Signal and Clearance Light LH
F 6 Front Turn Signal and Clearance Light RH
F 7 Fuse Box

G 1 Generator (Alternator)
G 2 Generator (Alternator)

H 1 Headlight Cleaner Motor
H 2 Headlight Cleaner Relay
H 3 Headlight Hi LH
H 4 Headlight Hi RH
H 5 Headlight Lo LH
H 6 Headlight Lo RH
H 7 Horn LH
H 8 Horn RH

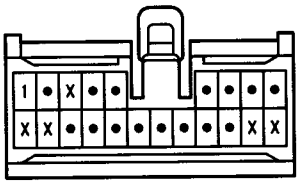
POWER SOURCE (Current Flow Chart)

Location	CB or Fuse		*Page Nos. of Related Systems	198	158		170 198	94 169 198	198	158		198	182	106	192	198	60	163	94 169	158	150	64	192	86	163
			Parts	A/C Magnetic Clutch and Lock Sensor	ABS Actuator	ABS Relay	A/C Control Assembly		A/C Power Transistor	ABS ECU	Air Vent Mode Control Servo Motor	Auto Antenna Motor and Relay	Back–Up Light SW (M/T)	Brake Fluid Level SW	Blower Motor	Cold Start Injector	Center Airbag Sensor Assembly	Cigarette Lighter and Ashtray Illumination	ABS Warning Light [Comb. Meter]	A/T Indicator Light [Comb. Meter]	Charge Warning Light [Comb. Meter]	Combination Meter	Open Door Warning Light [Comb. Meter]	SRS Warning Light [Comb. Meter]
			Code or Location	A3	A5	A7	A10	A12	A14	A18	A19	A23	A26	B1	B2	B3	C1	C4	C5	C7					
①	10A	MIR–HTR																							
	15A	TAIL						●											●						
	15A	ECU–B						●		●								●					●		●
	15A	FOG																							
	20A	WIPER																							
	7.5A	TURN																							
	7.5A	IGN															●				●				
	15A	CIG/RADIO						●					●				●	●							
	15A	ECU–IG								●			●												
	10A	GAUGE	●	●	●	●	●			●	●	●		●	●					●	●				
	25A	STOP									●														
	15A	SEAT HTR																							
	30A	POWER																							
	40A	DEFOG																							
	40A	AM1																							
②	10A	STARTER															●								
	15A	HEAD(RH)(USA)																							
	15A	HEAD(LH)(USA)																							
	15A	HEAD (UPR–RH)(Canada)																							
	15A	HEAD (UPR–LH)(Canada)																							
	7.5A	ALT–S																							
	20A	DOME						●					●											●	
	15A	EFI																							
	15A	HAZ–HORN																							
③	20A	FOG																							
④	40A	HEATER					●		●							●									
⑤	15A	HEAD (LWR–LH)(Canada)																							
	15A	HEAD (LWR–RH)(Canada)																							
	15A	TEL																							
	20A	RADIO																							
⑦	7.5A	DRL																							

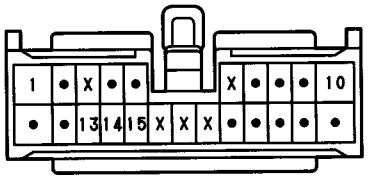
* These are the page numbers of the first page on which the related system is shown.
The part indicated is located somewhere in the system, not necessarily on the page indicated here.

[LOCATION] (1) : J/B No. 1 (See page 20) (2) : J/B No. 2 (See page 22) (3) : R/B No. 1 (See page 25)
(7) : R/B No. 7 (See page 27) (8) : Fuse Box (F7 See on page 28)

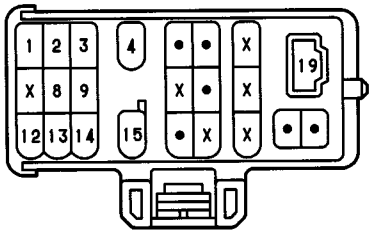
C 7 (B) GRAY



C 8 (A)

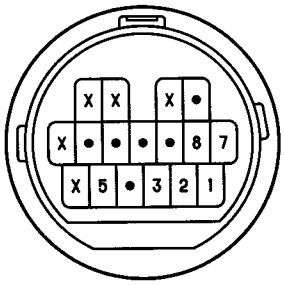


D 1 BLACK



D 2 BLACK

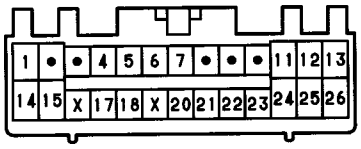
D 3 DARK GRAY



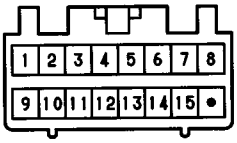
E 1 GRAY

E 3 GRAY

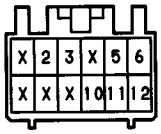
E 7 (A) DARK GRAY



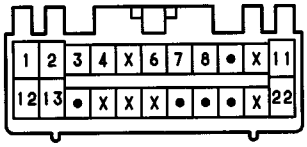
E 8 (B) DARK GRAY



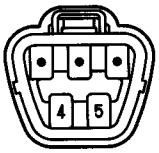
E 9 (C) DARK GRAY



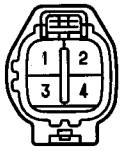
E10 (D) DARK GRAY



F15 DARK GRAY

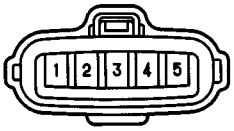


H11

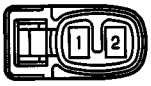


I 1 GRAY

I 2 BLACK

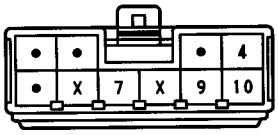


I 3 BLACK



I 4, I 5, I 6, I 7, I 8, I 9 GRAY

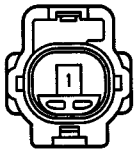
I11



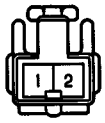
K 1, K 2 DARK GRAY

N 1 GRAY

O 2, O 3 DARK GRAY



S 8 (B)



S 9 (A)

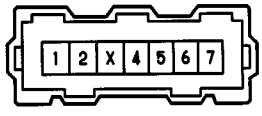
T 2 BLACK

V 1 BLUE

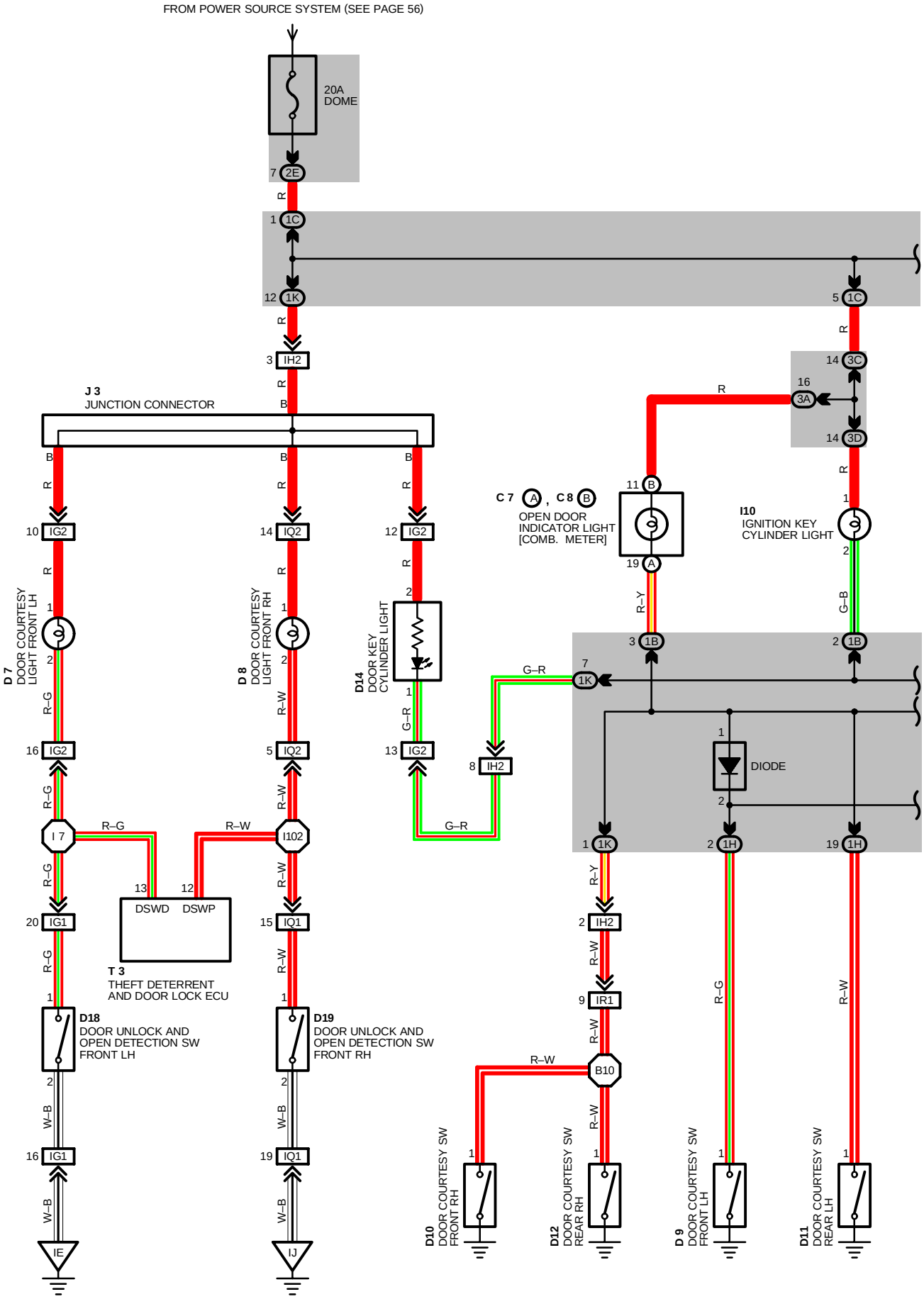
V 2 BROWN

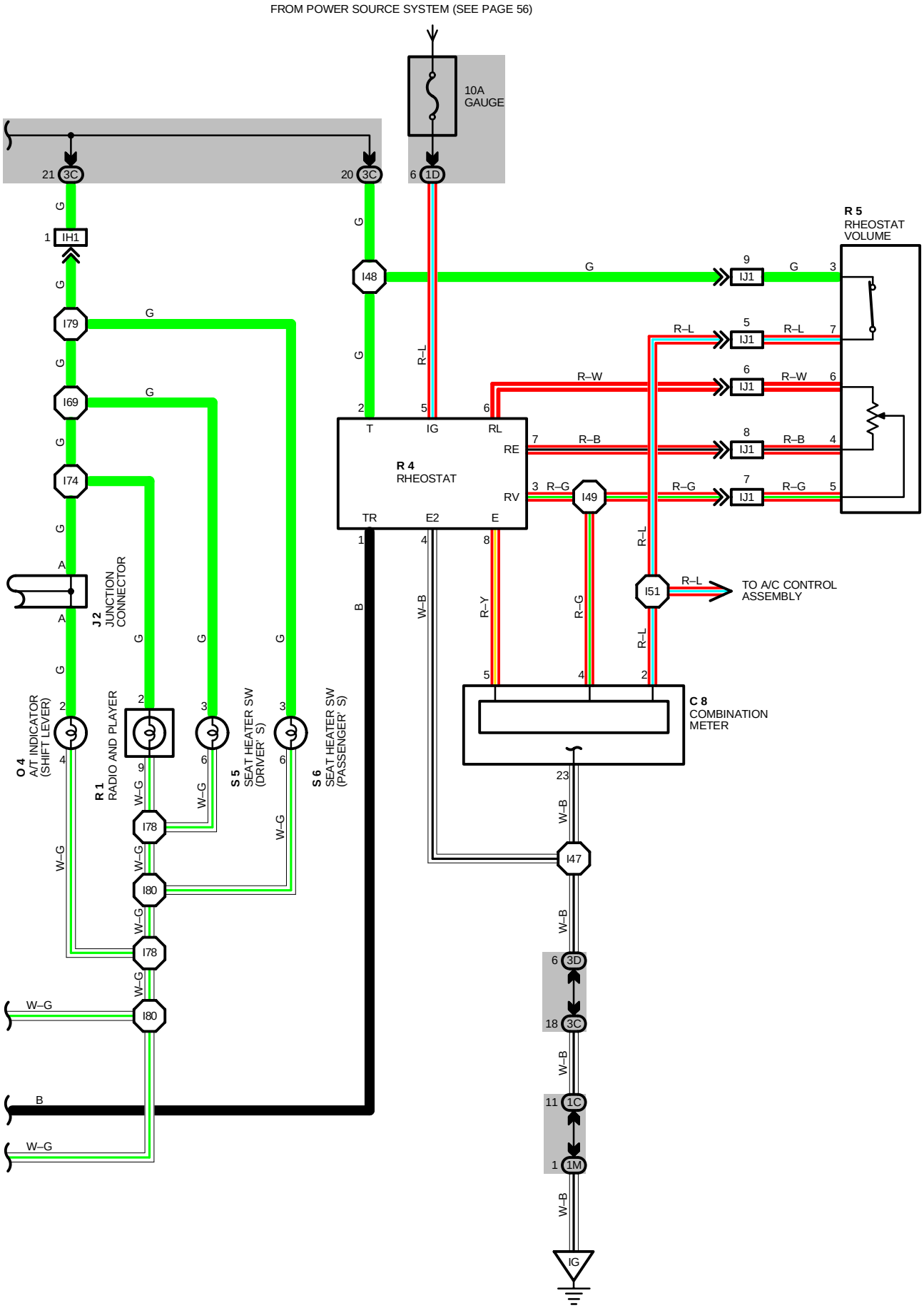
V 3 BLACK

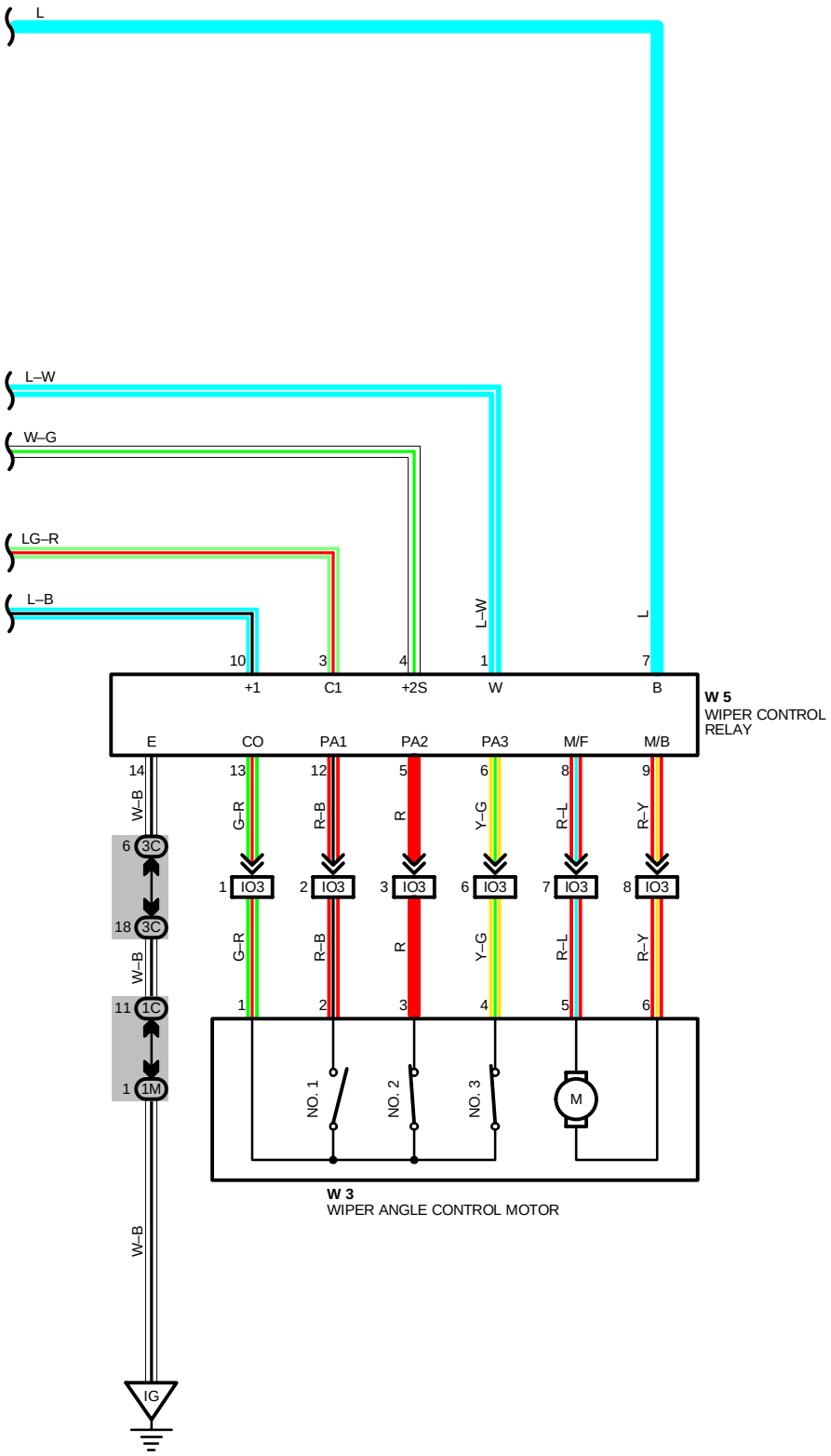
V 5 BLACK



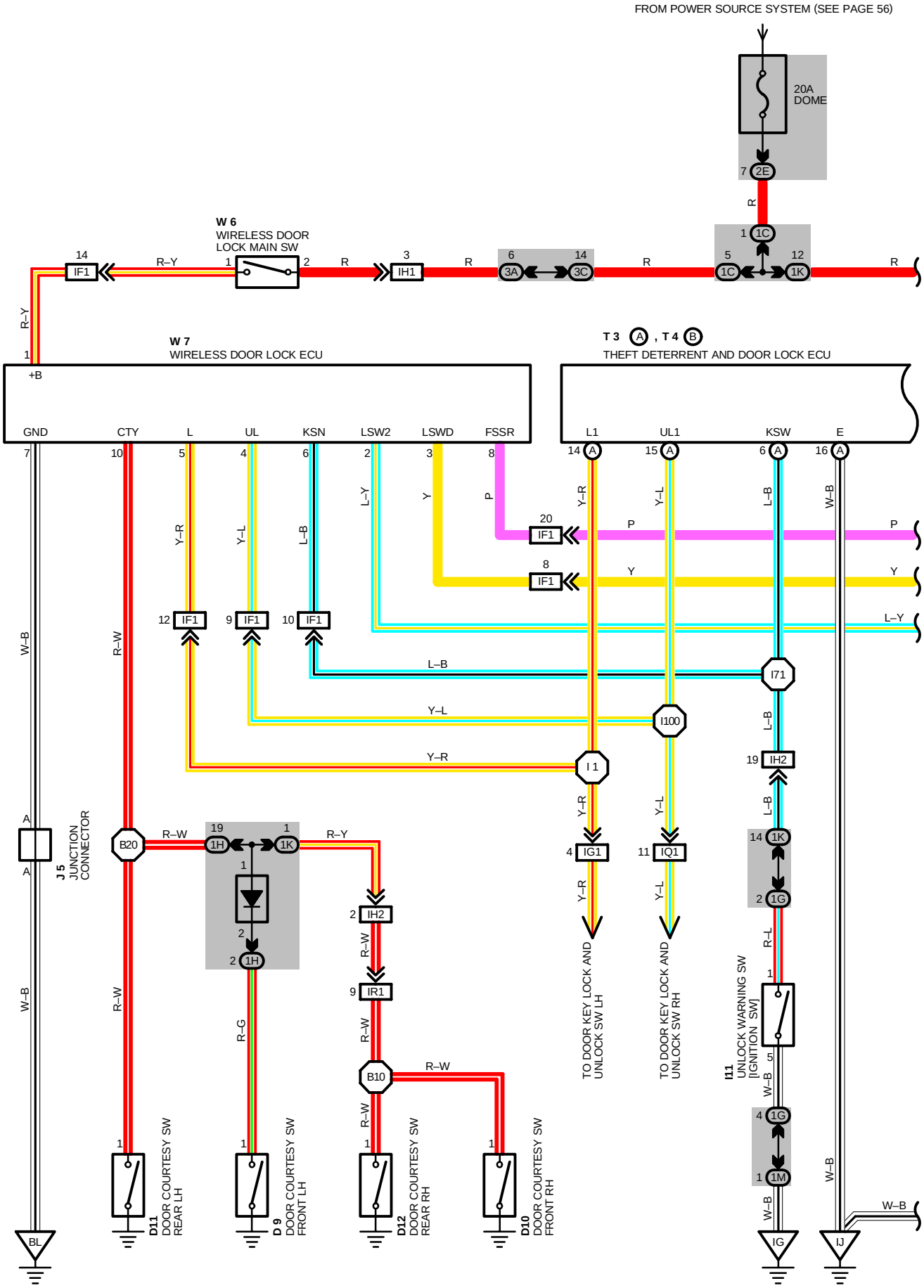
INTERIOR LIGHT

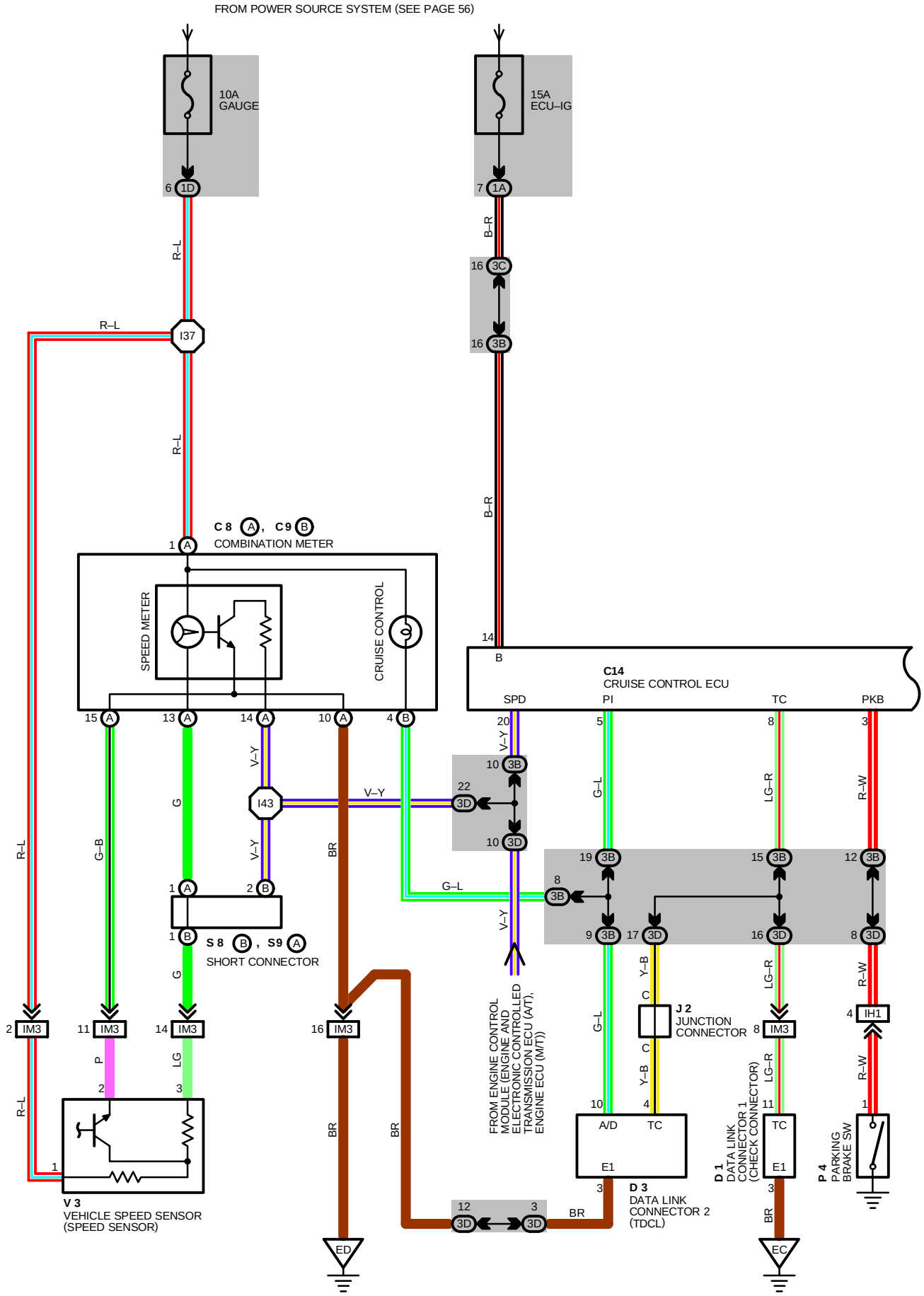



FROM POWER SOURCE SYSTEM (SEE PAGE 56)
10A
GAUGE
21 3C
20 3C
6 1D
1 IH1
I48
I79
I69
I74
A
J2
JUNCTION
CONNECTOR
A
O 4
A/T INDICATOR
(SHIFT LEVER)
R 1
RADIO AND PLAYER
S 5
SEAT HEATER SW
(DRIVER' S)
S 6
SEAT HEATER SW
(PASSENGER' S)
I78
I80
I78
I80
W–G
B
W–G
R 4
RHEOSTAT
T
IG
RL
RE
RV
TR
E2
E
R 5
RHEOSTAT
VOLUME
IJ1
I49
I51
TO A/C CONTROL
ASSEMBLY
C 8
COMBINATION
METER
I47
3D
3C
1C
1M
IG
G
R–L
R–W
R–B
R–G
R–Y
W–B


L
L–W
W–G
LG–R
L–B
10
3
4
1
7
+1
C1
+2S
W
B
W 5
WIPER CONTROL
RELAY
E
CO
PA1
PA2
PA3
M/F
M/B
14
13
12
5
6
8
9
W–B
G–R
R–B
R
Y–G
R–L
R–Y
6
3C
18
3C
11
1C
1
1M
1
IO3
2
IO3
3
IO3
6
IO3
7
IO3
8
IO3
1
2
3
4
5
6
NO. 1
NO. 2
NO. 3
M
W 3
WIPER ANGLE CONTROL MOTOR
IG

WIRELESS DOOR LOCK CONTROL

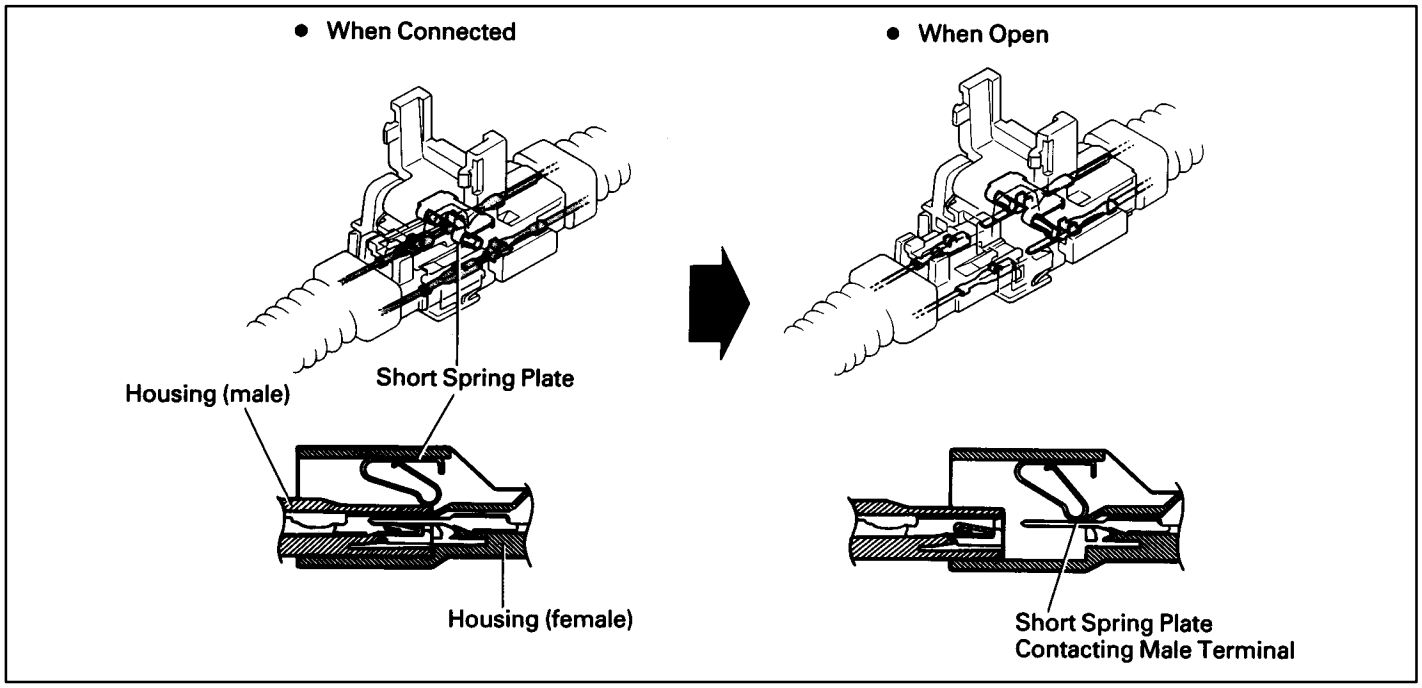



FROM POWER SOURCE SYSTEM (SEE PAGE 56)
10A
GAUGE
15A
ECU–IG
6 1D
7 1A
R–L
B–R
16 3C
16 3B
I37
C 8 A , C 9 B
COMBINATION METER
SPEED METER
CRUISE CONTROL
14 B
C14
CRUISE CONTROL ECU
SPD
PI
TC
PKB
15 A
13 A
14 A
10 A
4 B
20
5
8
3
V–Y
G–L
LG–R
R–W
10 3B
22 3D
10 3D
I43
G
G–B
BR
19 3B
15 3B
12 3B
8 3B
9 3B
17 3D
16 3D
8 3D
1 A
2 B
1 B
S 8 B , S9 A
SHORT CONNECTOR
Y–B
C
J 2
JUNCTION
CONNECTOR
2 IM3
11 IM3
14 IM3
16 IM3
8 IM3
4 IH1
P
LG
R–W
2
3
1
10
4
A/D
TC
E1
3
D 3
DATA LINK
CONNECTOR 2
(TDCL)
D 1
DATA LINK
CONNECTOR 1
(CHECK CONNECTOR)
P 4
PARKING
BRAKE SW
V 3
VEHICLE SPEED SENSOR
(SPEED SENSOR)
FROM ENGINE CONTROL
MODULE (ENGINE AND
ELECTRONIC CONTROLLED
TRANSMISSION ECU (A/T),
ENGINE ECU (M/T))
12 3D
3 3D
ED
EC

The supplemental restraint system has connectors which possess the functions described below:

1. SRS ACTIVATION PREVENTION MECHANISM

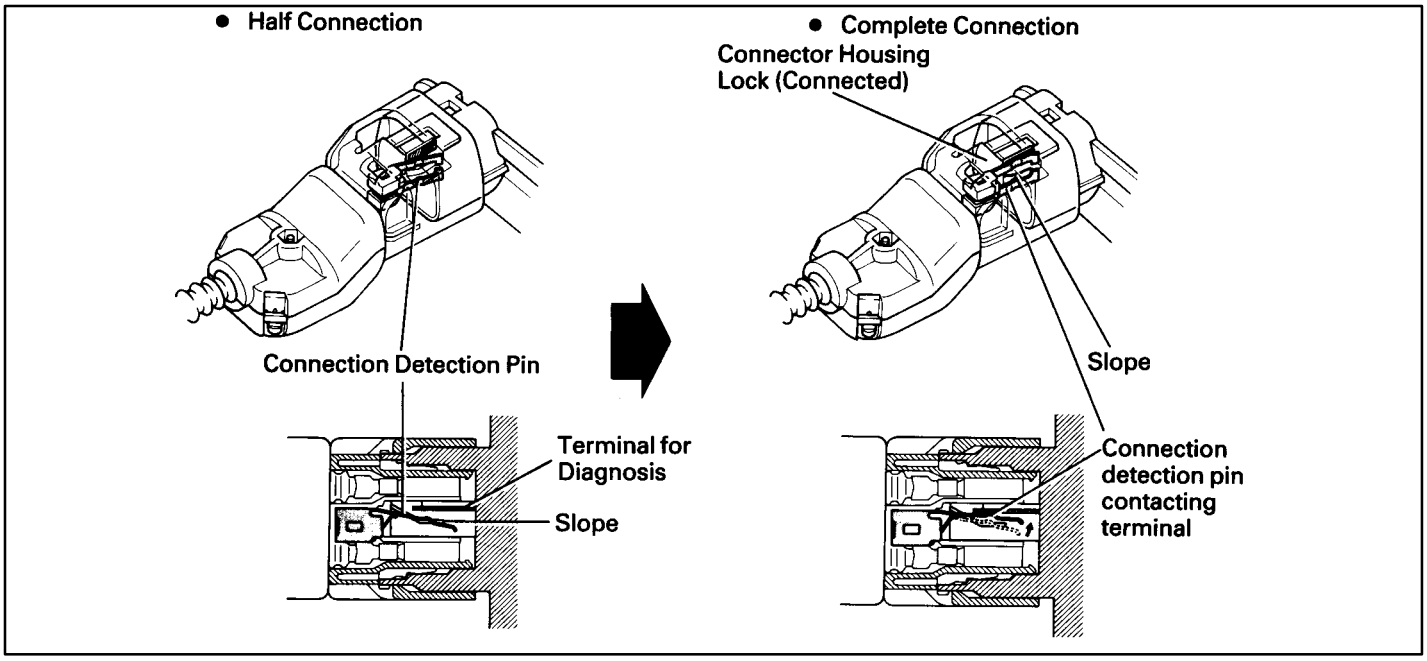
Each connector contains a short spring plate. When the connector is disconnected, the short spring plate automatically connects the power source and grounding terminals of the squib to preclude a potential difference between the terminals.

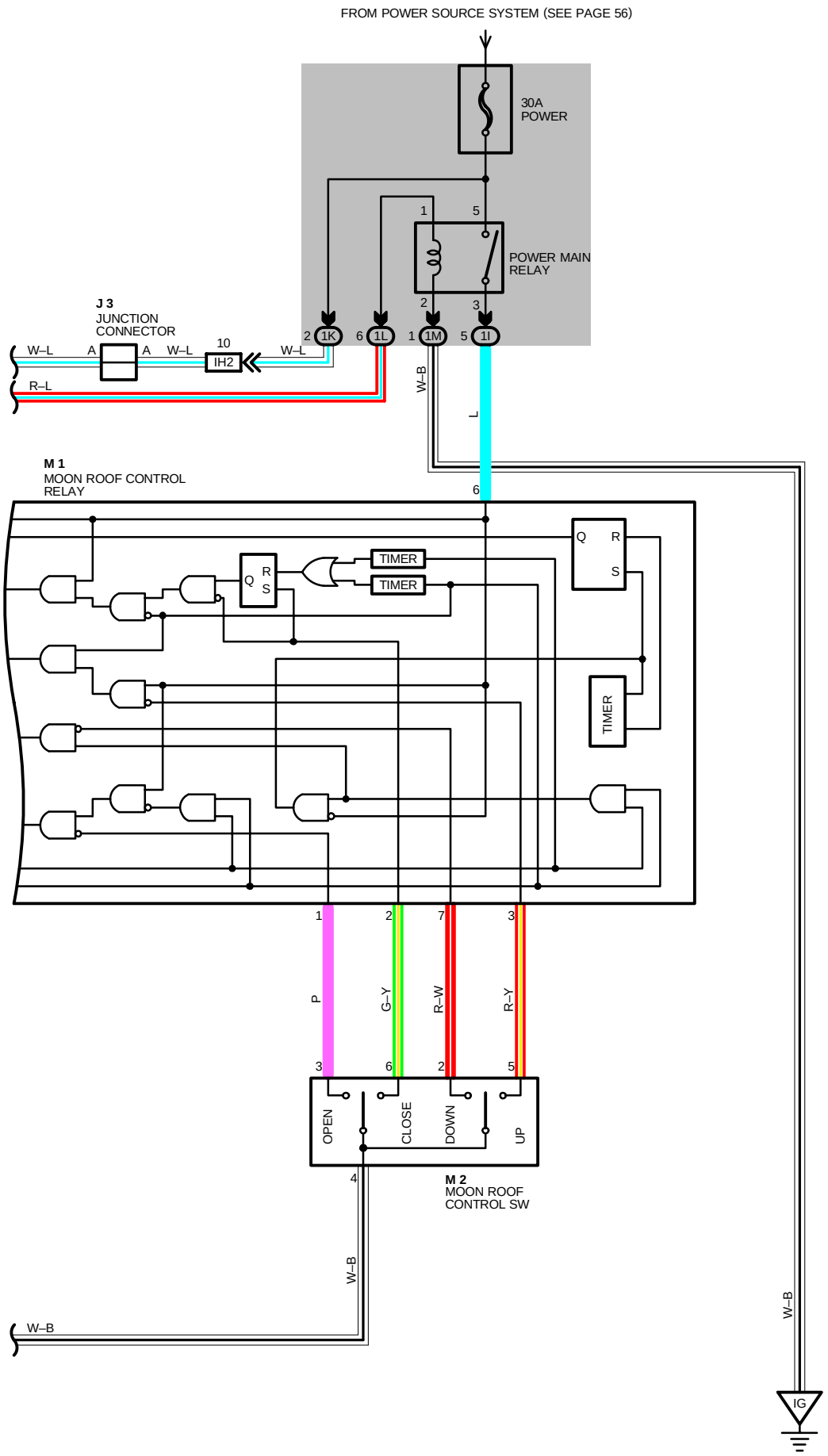


2. ELECTRICAL CONNECTION CHECK MECHANISM

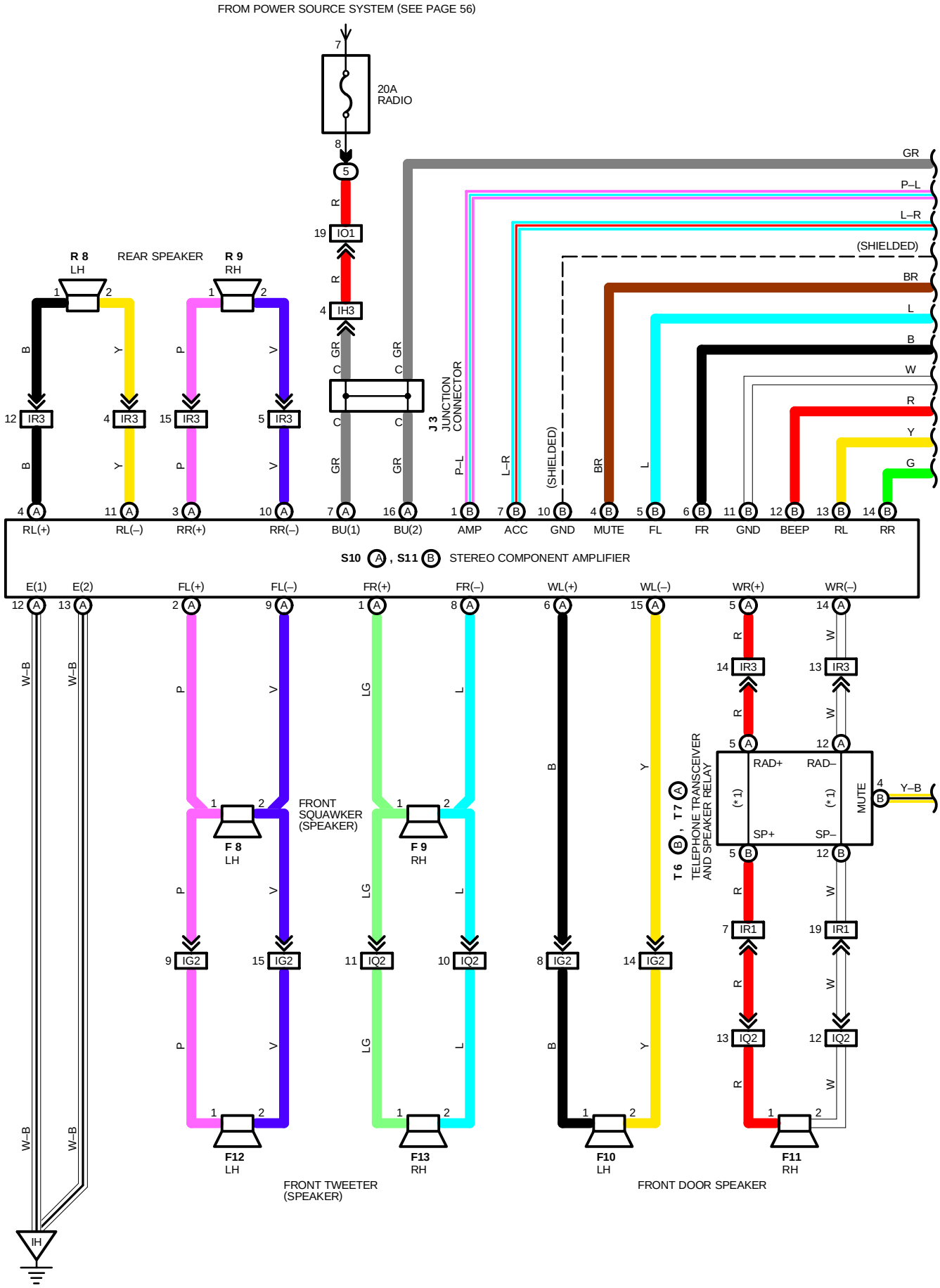
This mechanism is designed to electrically check if connectors are connected correctly and completely.

The electrical connection check mechanism is designed so that the connection detection pin connects with the diagnosis terminals when the connector housing lock is in the locked condition.




FROM POWER SOURCE SYSTEM (SEE PAGE 56)
30A
POWER
1
5
POWER MAIN
RELAY
2
3
J 3
JUNCTION
CONNECTOR
2 1K
6 1L
1 1M
5 1I
W–L
A
A
W–L
10
IH2
W–L
R–L
W–B
L
M 1
MOON ROOF CONTROL
RELAY
6
Q
R
S
TIMER
TIMER
TIMER
1
2
7
3
P
G–Y
R–W
R–Y
3
6
2
5
OPEN
CLOSE
DOWN
UP
4
M 2
MOON ROOF
CONTROL SW
W–B
W–B
W–B
IG

RADIO AND PLAYER (w/o CD CHANGER)



OVERALL ELECTRICAL WIRING DIAGRAM