



ISUZU

1995

TROOPER (UX)

Electrical Troubleshooting Manual

Contents

How to Use This Manual	2
Troubleshooting	2-10
Fuse/Relay Information	6
Circuit Schematic (see Circuit Index)	
Component Location Photographs	201
Harness Connector Views	202
Harness Routing	203

Circuit Index (continued)

	S/LS	SE	LTD/RS
Power seats	140	140	140
Power windows	120	120	120
Rear window defogger	61	61	61
Rear park lights	110-1	110-1	110-1
Rear wheel anti-lock (RWAL) brake system	44	44	44
Seat belt warning system	73	73	73
Seat heater	147	147	147
Security system	Refer to Security System/Keyless Entry Technical Manual (AIMI-SSM-L0001-00)		
Shift interlock system	138	138	138
Sound system	150	150	150
Speedometer	33	33	33
Starting system			
Automatic transmission	21	21	21
Manual transmission	21-1	21-1	21-1
Sunroof	122	122	122
Supplemental Restraint System (SRS)	47	47	47
Tachometer	81	81	81
Trailer adapter	118	118	118
Turn lights	110-4	110-4	110-4
Vehicle speed sensor	33	33	33
Voltmeter	81-1	81-1	81-1
Wiper/washer			
Headlight	93	93	93
Rear	92	92	92
Windshield	91/91-1	91-1	91-1

Circuit Index S/LS SE LTD/RS

4 wheel anti-lock brake system (ABS)	44-4	44-4	44-4
A/T shift indicator	89	89	89
Air conditioner			
Blower controls	62/62-1	62-1	62/62-1
Compressor controls	63/63-1	63-1	63/63-1
Anti-theft system			133
Automatic transmission control	39	39	39
Back up lights	112	112	112
Blower controls			
Automatic transmission	62-1	62-1	62-1
Manual transmission	62	62	62
Brake lights	110-8	110-8	110-8
Brake system			
4 wheel anti-lock (ABS)	44-4	44-4	44-4
Rear wheel anti-lock (RWAL)	44	44	44
Brake warning system			
4 wheel anti-lock (ABS)	71-1	71-1	71-1
Rear wheel anti-lock (RWAL)	71	71	71
Charging system	22	22	22
Cigarette lighter	155	155	155
Console lights	117	117	117
Cornering lights	110-10	110-10	110-10
Courtesy lights	114/114-2	114-2	114-2/114-1
Cruise control	34	34	34
Dash fuse box	11	11	11
Dash lights	117	117	117
Defoggers			
Door mirror	148	148	148
Rear window	61	61	61
Digital clock	154	154	154
Dome light	114/114-2	114-2	114-2/114-1
Engine coolant temperature gauge	81	81	81
Engine control	23	23	24
Fog lights	100-1	100-1	100-1
Front park lights	110	110	110
Front side marker lights	110	110	110
Fuel gauge	81-1	81-1	81-1
Gauges	81	81	81
Ground distribution	14	14	14
Hazard lights	110-4	110-4	110-4
Headlights	100	100	100
Heater	62/62-1	62	62/62-1
Horns	40	40	40
Ignition system	20	20	20
Indicators	80	80	80
Key-in ignition warning system	73	73	73
Keyless entry	Refer to Security System/Keyless Entry Technical Manual (AIMI-SSM-L0001-00)		
License plate light	110-1	110-1	110-1
Lighting switch details	12	12	12
Lights-on warning system	73	73	73
Luggage room light	114/114-2	114-2	114-2/114-1
Map lights	114-2	114-2	114-2/114-1
Oil pressure gauge	72	72	72
Oil pressure warning system	72	72	72
Power antenna			151
Power distribution	10	10	10
Power door locks	130	130	130
Power mirrors	141	141	141

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of the publisher. This includes text, figures and tables.

How To Use This Manual

Troubleshooting Information

This manual contains the following troubleshooting information:

- Fuse Information
- Circuit Details
 - Electrical Circuit Schematic
 - Component Location Index
 - Circuit Operation
 - Quick Checks (if required)
 - Troubleshooting (if required)
- Component Location Photographs
- Harness Connector Faces
- Harness Routing Views
- Connector and Ground Cross-reference Index

The **Electrical Circuit Schematic** should always be your starting point in using this Electrical Troubleshooting Manual. The schematic shows the electrical current paths when a circuit is operating properly. It is essential to understand how a circuit *should* work before trying to figure out why it doesn't. Schematics are shown with the Starter Switch in the OFF position and other switches in the off or "at rest" position.

The **Component Location Index** helps you find where the parts of a circuit are in a vehicle. A brief statement of the location is given and also a reference to a photograph that shows the component. These Component Location Photographs are in section 201. The index also lists the number of cavities within each connector and the connector color. Not all cavities will have wires.

The **Circuit Operation** will help you to understand the circuit. It describes the components and how the circuit works.

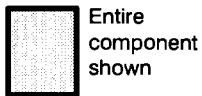
Quick Checks (if required) offers short-cuts or checks to help you determine the cause of a complaint. They are not intended to be a rigid procedure for solving an electrical situation.

The **Troubleshooting** procedures (if required) provide a step-by-step method for locating a faulty condition.

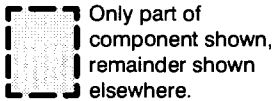
Page Numbering

This manual is organized into sections with most sections containing circuit details. Each section has a unique number that will normally remain the same year after year. For example, the Headlights circuit will be section 100 with the first page of the section numbered 100. The following pages of this section will be numbered 100-1, 100-2, and 100-3.

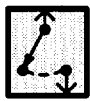
Symbols



Entire component shown



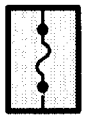
Only part of component shown, remainder shown elsewhere.



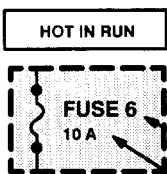
PARK BRAKE SWITCH
Closed with parking brake on

Component name

Component details



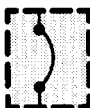
Fuse



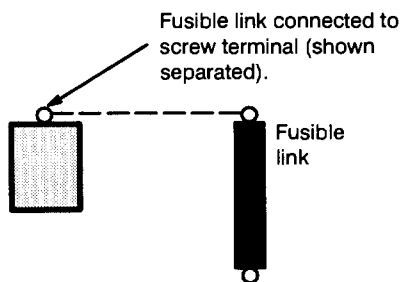
Shows voltage is present with the ignition in RUN

Identification

Current rating



Circuit Breaker

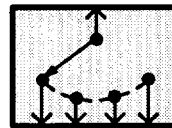


Fusible link connected to screw terminal (shown separated).

Fusible link



Normally open switch

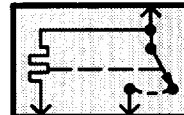


Multi-position switch

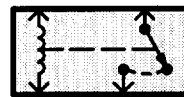


Ganged switch contacts

Dashed line shows mechanical connection



Heat-actuated switch. When element heats up, it pulls contact arm to change its position.



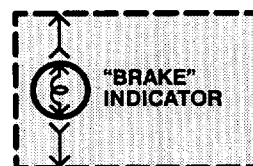
Relay, shown with no current through relay coil. When current flows through coil, contact arm changes position.



Solenoid or coil



Horn or speaker



Indicator light. Illuminates a symbol or word(s) (in quotes)

(continued)

How To Use This Manual

Symbols (continued)



Resistor



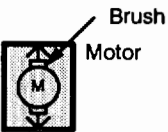
Variable resistor



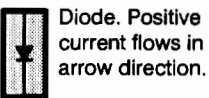
Potentiometer



Capacitor



Brush
Motor



Diode. Positive current flows in arrow direction.



Light emitting diode

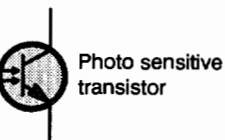
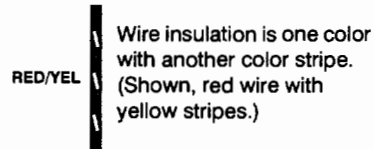


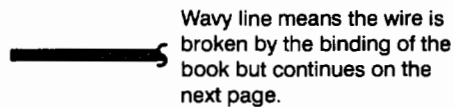
Photo sensitive transistor

BLK	black	Wire and connector colors
BLU	blue	
BRN	brown	
CLR	clear	
GRN	green	
GRY	gray	
LT BLU	light blue	
LT GRN	light green	
ORN	orange	
PNK	pink	
RED	red	
VIO	violet	
WHT	white	
YEL	yellow	

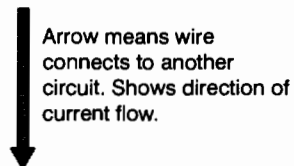


RED/YEL

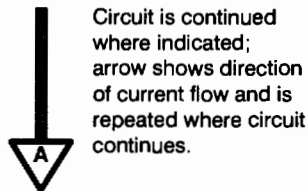
Wire insulation is one color with another color stripe. (Shown, red wire with yellow stripes.)



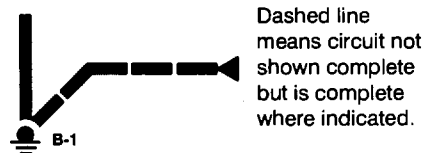
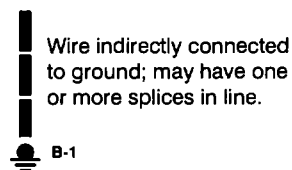
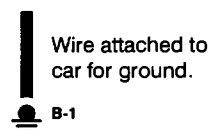
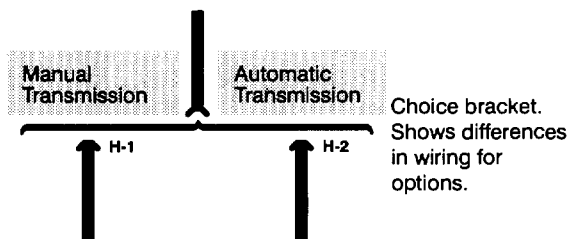
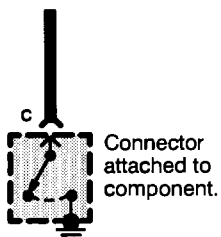
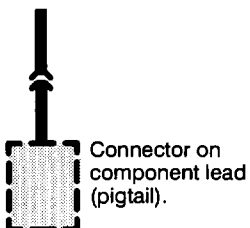
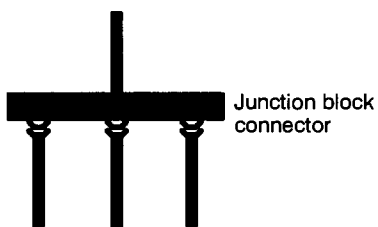
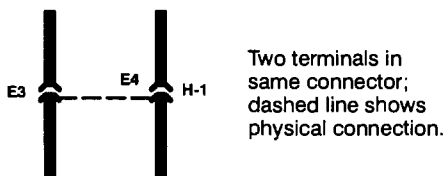
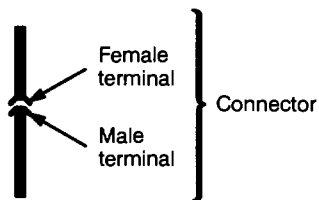
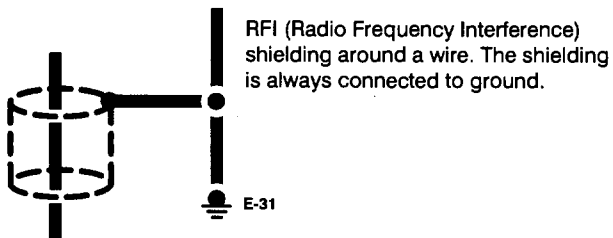
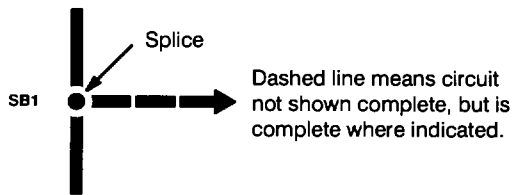
Wavy line means the wire is broken by the binding of the book but continues on the next page.



Arrow means wire connects to another circuit. Shows direction of current flow.



Circuit is continued where indicated; arrow shows direction of current flow and is repeated where circuit continues.



How To Use This Manual

Circuit Schematics

Circuit schematics break the entire electrical system into individual circuits. **Electrical components that work together are shown together.**

Each drawing is arranged so current flows from positive, at the top of the page, to ground, at the bottom of the page. The "hot" labels at the top of a fuse show when the ignition switch supplies power to that fuse.

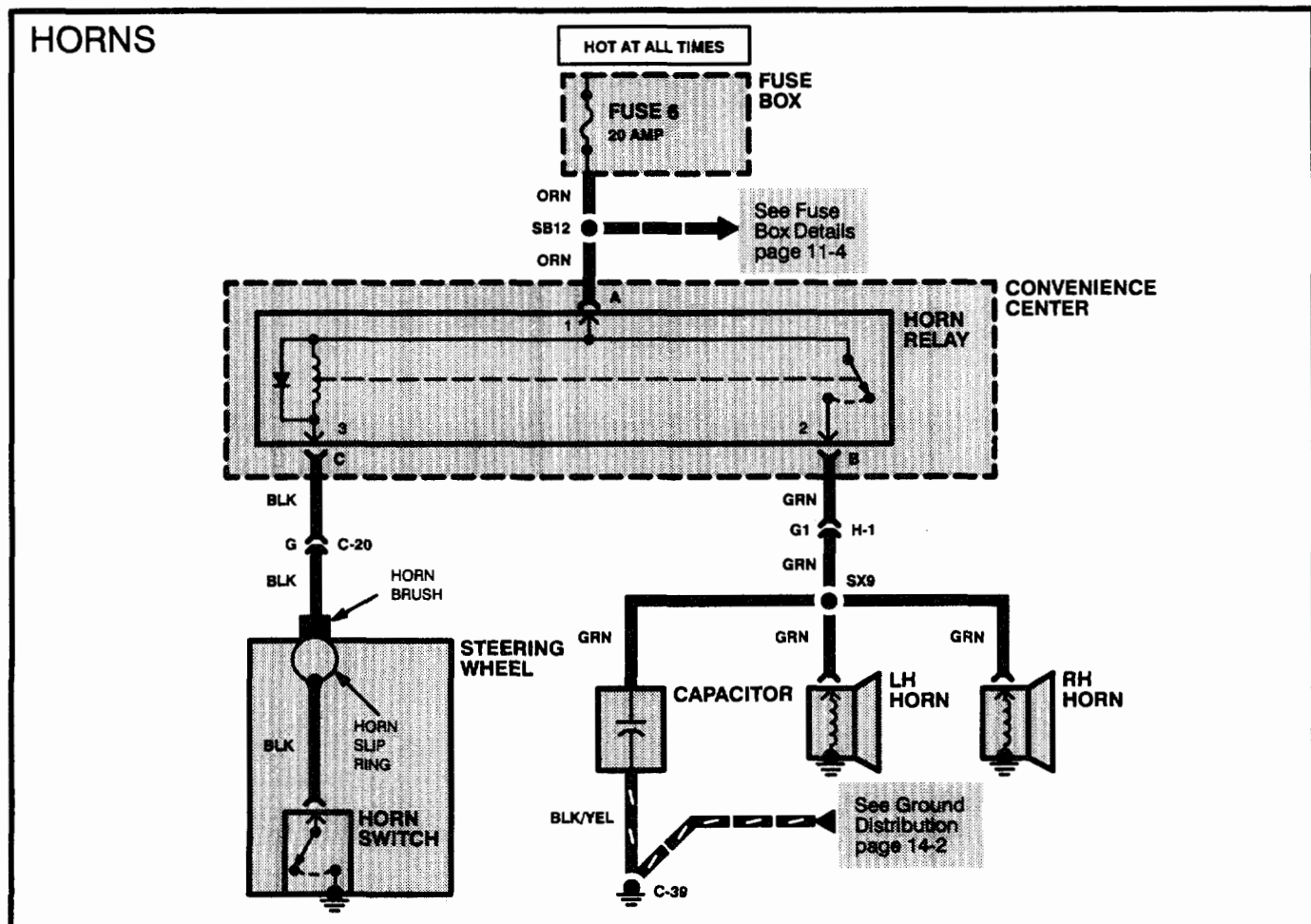
Wires that connect to another circuit are shown with an arrowhead pointing in the direction of current flow. The name of the circuit that shares the wiring is provided for reference.

"See Fuse Box Details" means there are more connections to other circuits that are not shown. All such shared circuits are shown on the Fuse Box Details circuit schematic. "See Ground Distribution" means there are more shared ground circuits which are shown on the Ground Distribution schematic.

No attempt is made on the schematic to represent components and wiring as they physically appear on the car. For example, a 4 foot length of wire is treated no differently in a schematic from one which is only a few inches long. The number of cavities for each connector is listed in the Component Location Index rather than illustrated. Similarly, switches and other components are shown as simply as possible, with regard to function only.

The example on this page shows a Horns schematic. Locate the Horn schematic using the Circuit Index. The circuit schematic will look somewhat like the one to the right. The schematic is read from top to bottom.

Voltage is applied to the Horn Relay at all times. When the relay coil is grounded by closing the Horn Switch, the relay contacts close. When the relay contacts are closed, both the LH and RH Horns are energized.



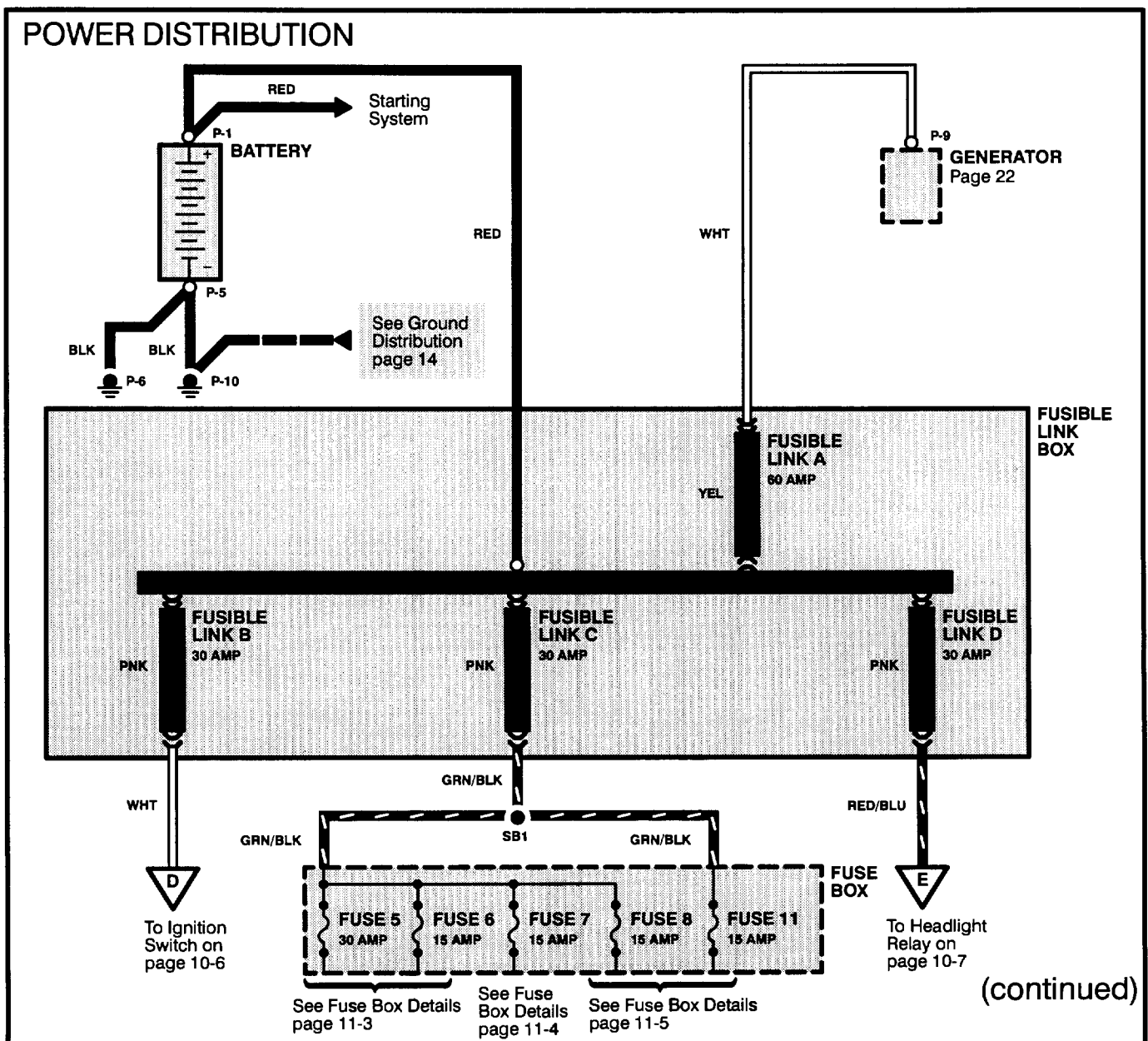
Power Distribution

The Power Distribution schematic shows the wiring from the Battery and Generator to the Starter Solenoid, Fuse Box, Ignition Switch and Light Switch. The first component after a Fusible Link is also shown. In certain instances, the first component after a Fuse Box fuse and Light Switch is also shown.

The Power Distribution schematic refers to Fuse Box Details and Light Switch Details schematics. By using

these three (3) schematics, power distribution wiring can be followed from the battery and Generator to the first component after a Fusible Link, Fuse and Light Switch. The ability to follow the power distribution wiring to the first component in each circuit is extremely helpful in locating short circuits which cause fusible links and fuses to open.

The fuses in the schematic below are "Hot At All Times," since Battery voltage is always applied to them.



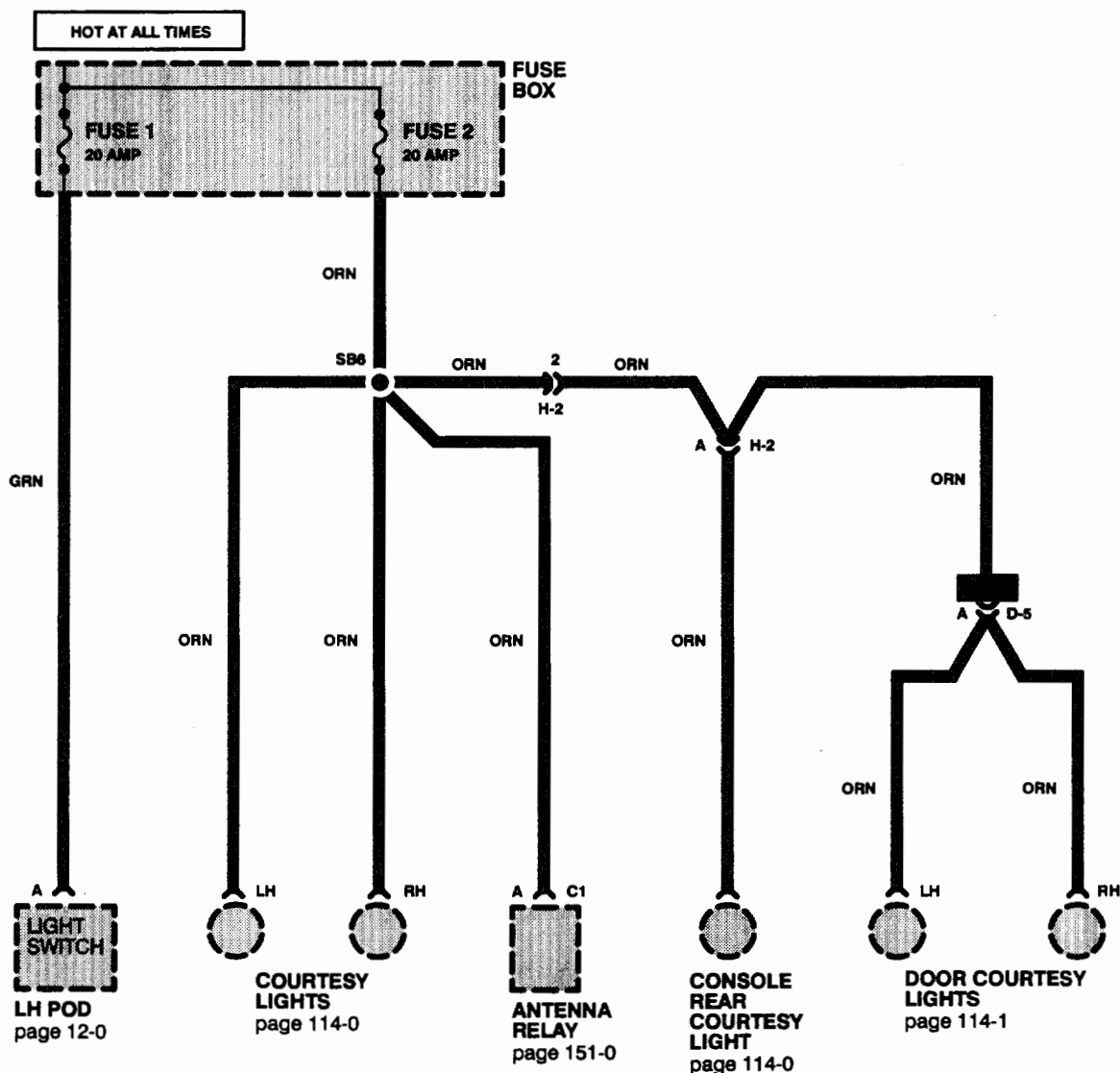
How To Use This Manual

Circuit Schematics (continued)

Fuse Box Details

The Fuse Box Details schematic shows all the wiring between a fuse and the components connected to the output of the fuse. The Fuse Box Details schematic is extremely helpful in locating a short circuit that causes a fuse to open. This schematic may aid troubleshooting an inoperative circuit by showing a second circuit using the same fuse. If the second circuit works, then the fuse and certain wires of the inoperative circuit are good.

FUSE BOX DETAILS (FUSE 1 AND FUSE 2)



The Light Switch Details schematic shows all the wiring between the light switch/light relays and the components connected to the output of the light switch/light relays. The Light Switch Details schematic is extremely helpful in locating a short circuit on the output side of the light switch/light relays.



How To Use This Manual

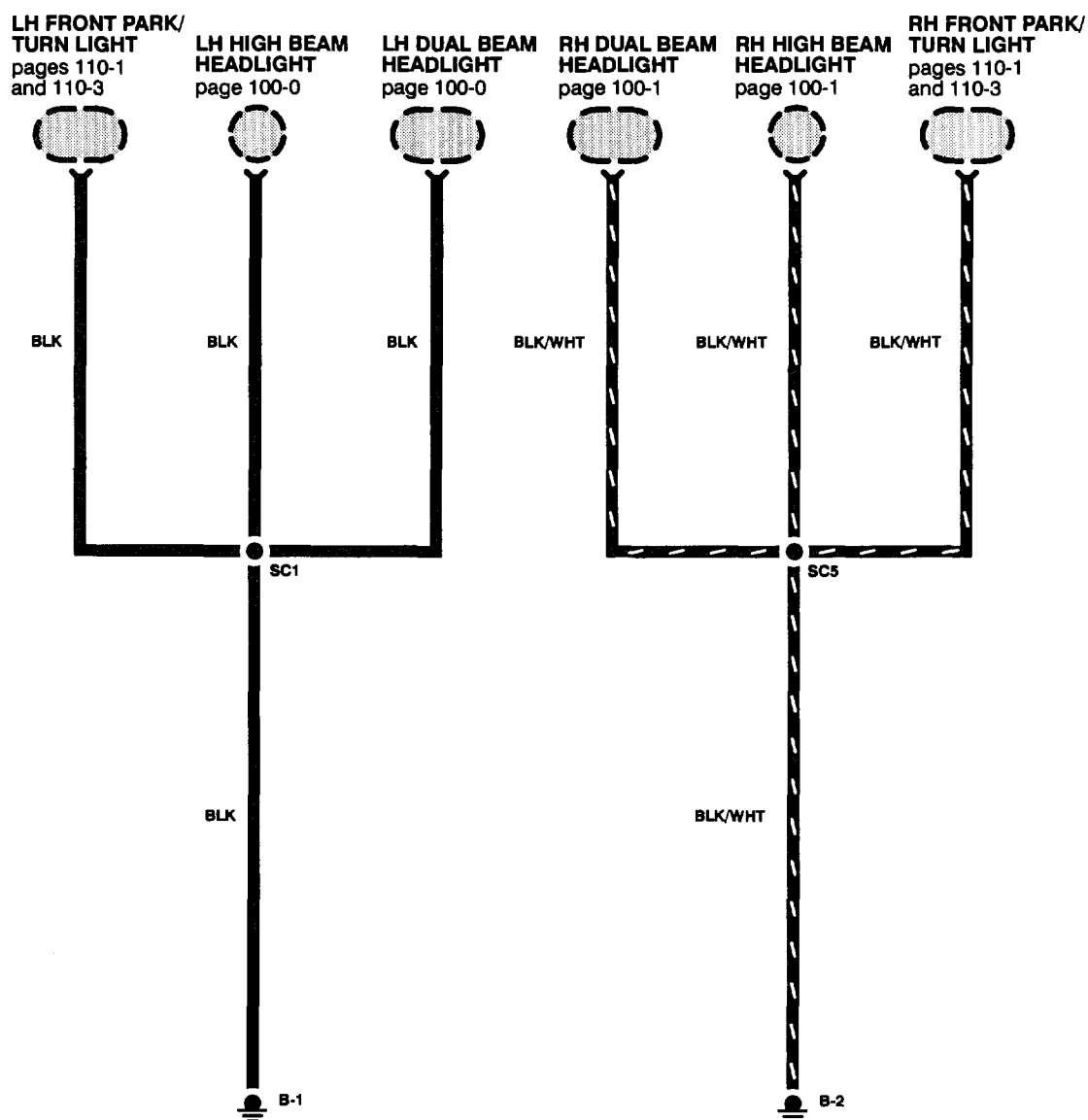
Circuit Schematics (continued)

Ground Distribution

The Ground Distribution schematics show which components share each ground point. This information can often be a time-saver when troubleshooting ground circuits. For example, in the schematic below, if both Headlights and the Park/Turn Light on one side are all out, you could suspect an open in their common ground wire or the ground connection

itself. On the other hand, if one of the lights works, you know that the ground and the wire up to the splice are good. You have learned this just by inspecting the schematic and knowing the vehicle's symptoms. No actual work on the lighting system was needed.

GROUND DISTRIBUTION (B-1 AND B-2)



Component Location

A component location index follows each schematic. Except for the location of obvious components like Left Headlight, the index lists the location of every component, connector and ground in the schematic. The index also gives references to component location photographs located in section 201. The number of cavities in each connector and the connector color is also listed. Wires may not be used in all connector cavities.

Component Location Index

(Refer to Section 201 for photographs)

<u>Component</u>	<u>Photo No.</u>
Fuse Box Left side of dash, behind panel	81
Left Horn Left side of engine compartment, below headlight	15
Right Horn Right side of engine compartment, below headlight	17
<u>Connector</u>	
B-2 (13-WHT) Under left side of dash, above left side of steering column	71
H-41 (16-GRN) Under left side of dash, at kick panel	63
<u>Ground</u>	
C-39 Right rear corner of engine compartment	42

How To Use This Manual

Five-Step Troubleshooting

The following five-step troubleshooting procedure is recommended.

1. Verify the Problem

Check the problem circuit's operation to be sure you understand what's wrong. Do not begin disassembly or testing until you have narrowed down the possible causes.

If the system you are troubleshooting has a built-in self-diagnostic system, refer to the appropriate section of the Service Manual.

2. Analyze the Circuit Schematic

Analyze the schematic. Read the Circuit Operation text if you do not understand how the circuit *should* work. Check circuits that share the wiring with the problem circuit. The names of circuits that share the same fuse, ground, switch, etc., are included on each electrical schematic. (Shared circuits are also shown on Power Distribution, Ground Distribution, Fuse Box Details, and Light Switch Details pages.) Try to operate the shared circuits. If these circuits work, then the shared wiring is OK. The cause must be within the wiring used only by the problem circuit. If several circuits fail at the same time, chances are the power (fuse) or ground circuit is faulty.

3. Find the Cause

- Narrow down the possible causes
- Use the Troubleshooting Hints
- Make the necessary measurements as given in the Troubleshooting procedures
- Before you replace a component, check power, signal, and ground wires at the component harness connector.

4. Repair the Problem

Once the specific problem is identified, make the repair. Be sure to use proper tools and safe procedures.

5. Check the Repair

Check the repaired circuit's operation in all modes to make sure you've fixed the entire problem. If the problem was a blown fuse, be sure to test all of the circuits on that fuse. Make sure no new problems turn up.

Test Equipment

Voltmeter and Test Light

Use a voltmeter or test light to check for voltage. While a test light shows whether or not voltage is present, a voltmeter indicates how much voltage there is.

CAUTION: A number of circuits include solid state devices. Voltages in these circuits should be tested only with a 10-megohm or higher impedance digital multimeter. Never use a test light on circuits that contain solid-state devices. Damage to the device may result.

On circuits without solid-state devices, a test light may be used to check for voltage. A test light is made up of a 12-volt bulb with a pair of leads attached. After grounding one lead, touch the other lead to various points along the circuit where voltage should be present. The bulb will go on if the voltage at the point being tested is greater than 5 volts.

Self-powered Test Light and Ohmmeter

Use a self-powered test light or ohmmeter to check for continuity. The ohmmeter shows how much resistance there is between two points along a circuit. Low resistance means good continuity.

CAUTION: Never use a self-powered test light on circuits that contain solid-state devices. Damage to these devices may result.

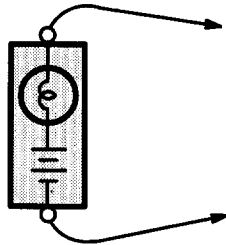
Diodes and solid-state devices in a circuit can make an ohmmeter give a false reading. To find out if a component is affecting a measurement, take one reading, reverse the leads, and take a second reading. If the readings differ, the component is affecting the measurement.

Circuits that contain solid-state devices should only be tested with a 10-megohm or higher impedance digital multimeter.

Troubleshooting Tests

A self-powered test light consists of a light bulb, battery and two leads. If the leads are touched together, the bulb will go on.

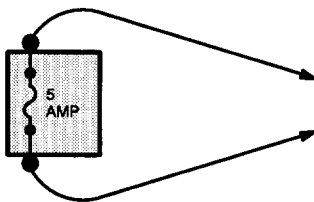
Self-Powered Test Light



A self-powered test light is only used on an un-powered circuit. First disconnect the battery or remove the fuse that feeds the circuit you are working on. Select two points along the circuit through which there should have continuity. Connect one lead of the self-powered test light to each point. If there is continuity, the test light's circuit will be completed and the bulb will go on.

Fused Jumper Wire

Use a jumper wire to bypass an open circuit. A jumper wire is made up of an in-line fuse holder connected to a set of test leads. It should have a five ampere fuse. Never use a jumper wire across any load. This direct battery short will blow the fuse.



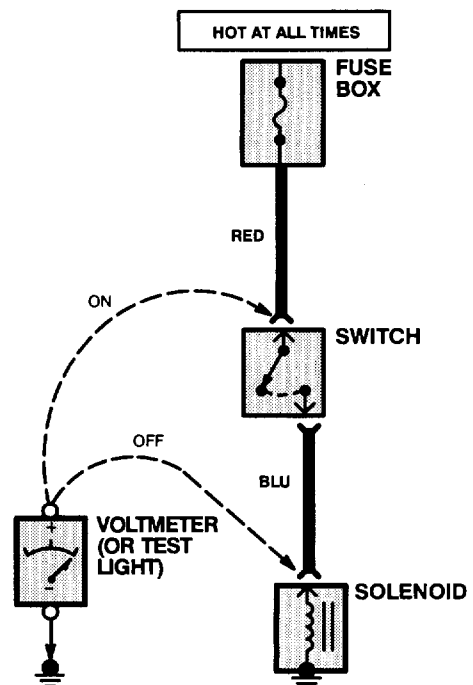
Short Finder

Short finders are available to locate shorts to ground. The short finder creates a pulsing magnetic field in the shorted circuit and shows you the location of the short through body trim or sheet metal. Its use is explained in the following troubleshooting tests.

Testing For Voltage

This test measures voltage in a circuit. When testing for voltage at a connector, you may not have to separate the two halves of the connector. Instead, probe the connector from the back. Always check both sides of the connector because dirt and corrosion between its contact surfaces can cause electrical problems.

1. Connect one lead of test light to known good ground, or if you are using a voltmeter, be sure you connect its negative lead to ground.
2. Connect the other lead of the test light or voltmeter to the point you want to check.
3. If the test light glows, there is voltage present. If you are using a voltmeter, note the voltage reading. It should be within one volt of measured battery voltage. A loss of more than one volt indicates a problem.



(continued)

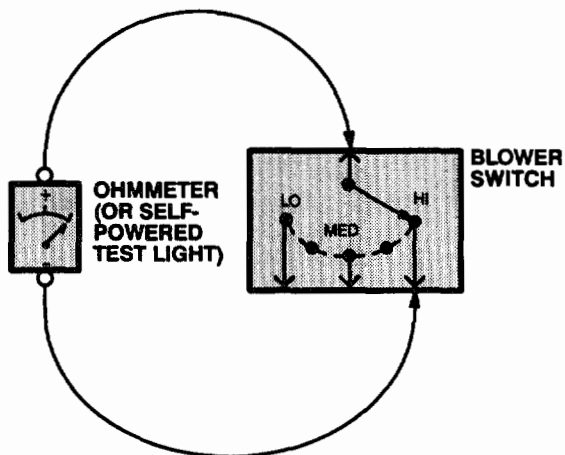
How To Use This Manual

Troubleshooting Tests (continued)

Testing For Continuity

This test checks for continuity within a circuit. When testing for continuity at a connector, you may not have to separate the two halves of the connector. Instead, probe the connector from the back. Always check both sides of the connector because dirt and corrosion between contact surfaces can cause electrical problems.

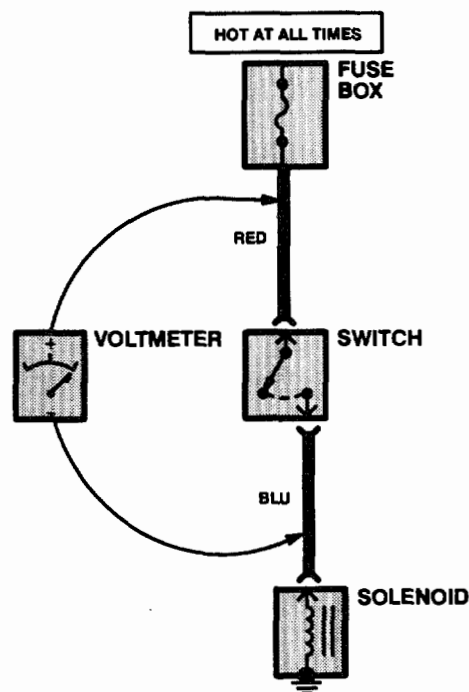
1. Disconnect the negative cable from the car battery.
2. If you are using an ohmmeter, hold the leads together and adjust the ohmmeter to read zero ohms.
3. Connect one lead of self-powered test light or ohmmeter to one end of the part of the circuit you wish to test.
4. Connect the other lead to the other end.
5. If the self-powered test light glows, there is continuity. If you're using an ohmmeter, low or no resistance means good continuity.



Testing For Voltage Drop

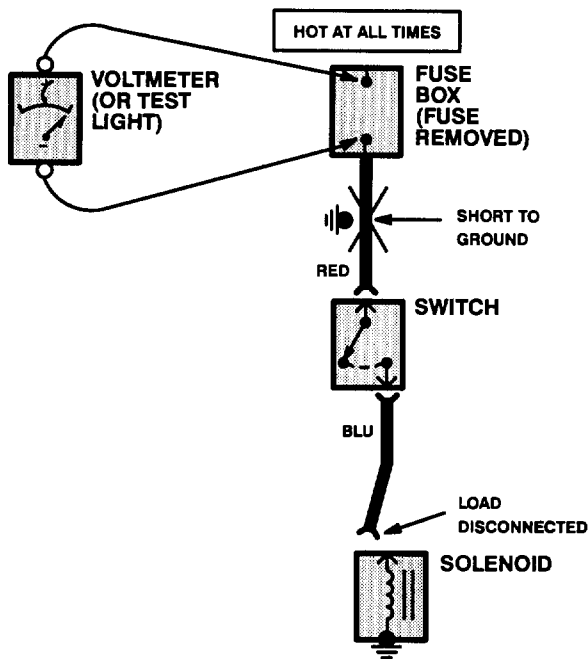
This test checks for voltage drop along a wire, or through a connection or switch.

1. Connect the positive lead of a voltmeter to the end of the wire (or to the side of the connector or switch) closest to the battery.
2. Connect the negative lead to the other end of the wire (or the other side of the connector or switch).
3. Operate the circuit.
4. The voltmeter will show the difference in voltage between the two points. A difference, or drop of more than 0.5 volts may indicate a problem. Check the circuit for loose or dirty connections.



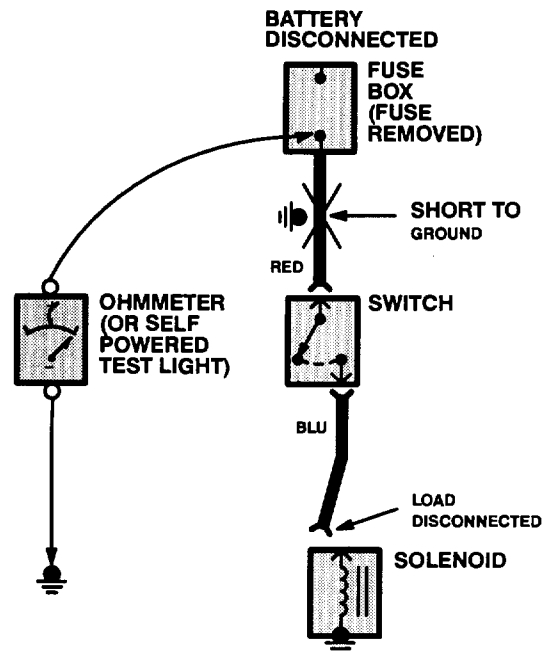
Testing For A Short To Ground With A Test Light Or Voltmeter

1. Remove the blown fuse and disconnect the load.
2. Connect a test light or voltmeter across the fuse terminals. Make sure voltage is being applied to the battery side fuse terminal. Check schematic to see if the ignition switch needs to be in RUN.
3. Beginning near the fuse box, wiggle the harness. Continue this at convenient points about six inches apart while watching the test light or voltmeter.
4. When the test light blinks or the voltmeter needle moves, there is a short to ground in the wiring near that point.



Testing For A Short To Ground With A Self-Powered Test Light Or Ohmmeter

1. Remove the blown fuse and disconnect the battery and load.
2. Connect one lead of a self-powered test light or ohmmeter to the fuse terminal load side.
3. Connect the other lead to a known good ground.
4. Beginning near the fuse box, wiggle the harness. Continue this at convenient points about six inches apart while watching the test light or ohmmeter.
5. If the self-powered test light blinks or the ohmmeter needle moves, there is a short to ground in the wiring near that point.



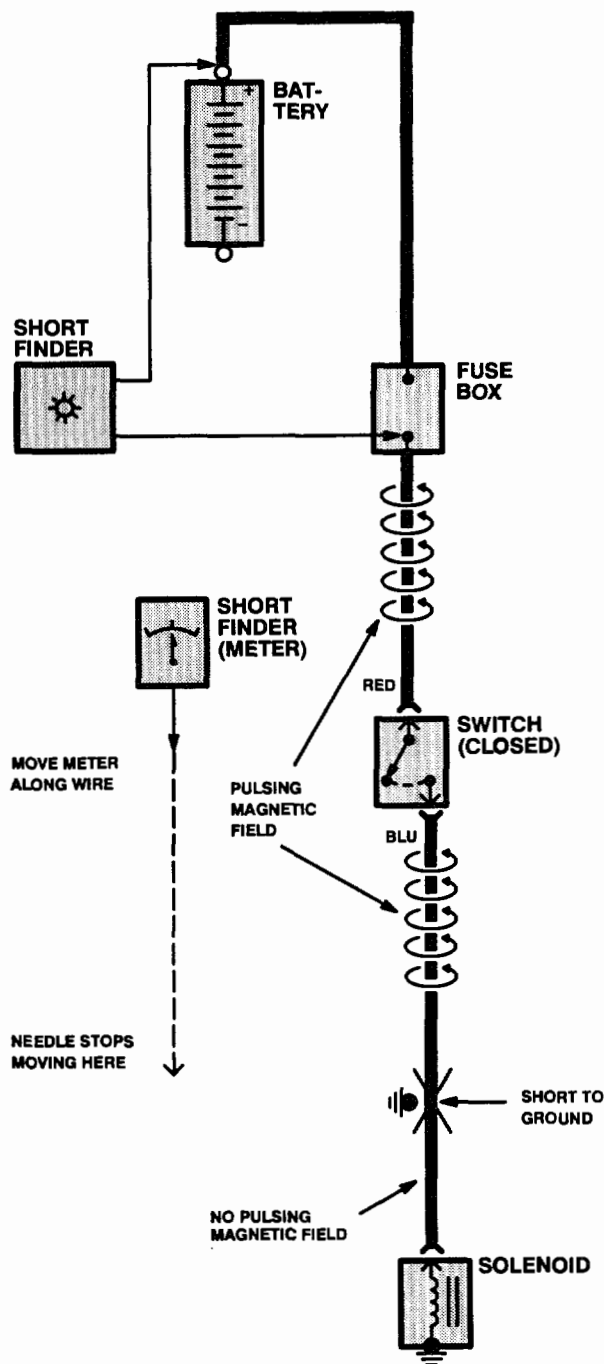
How To Use This Manual

Troubleshooting Information

Page Numbering

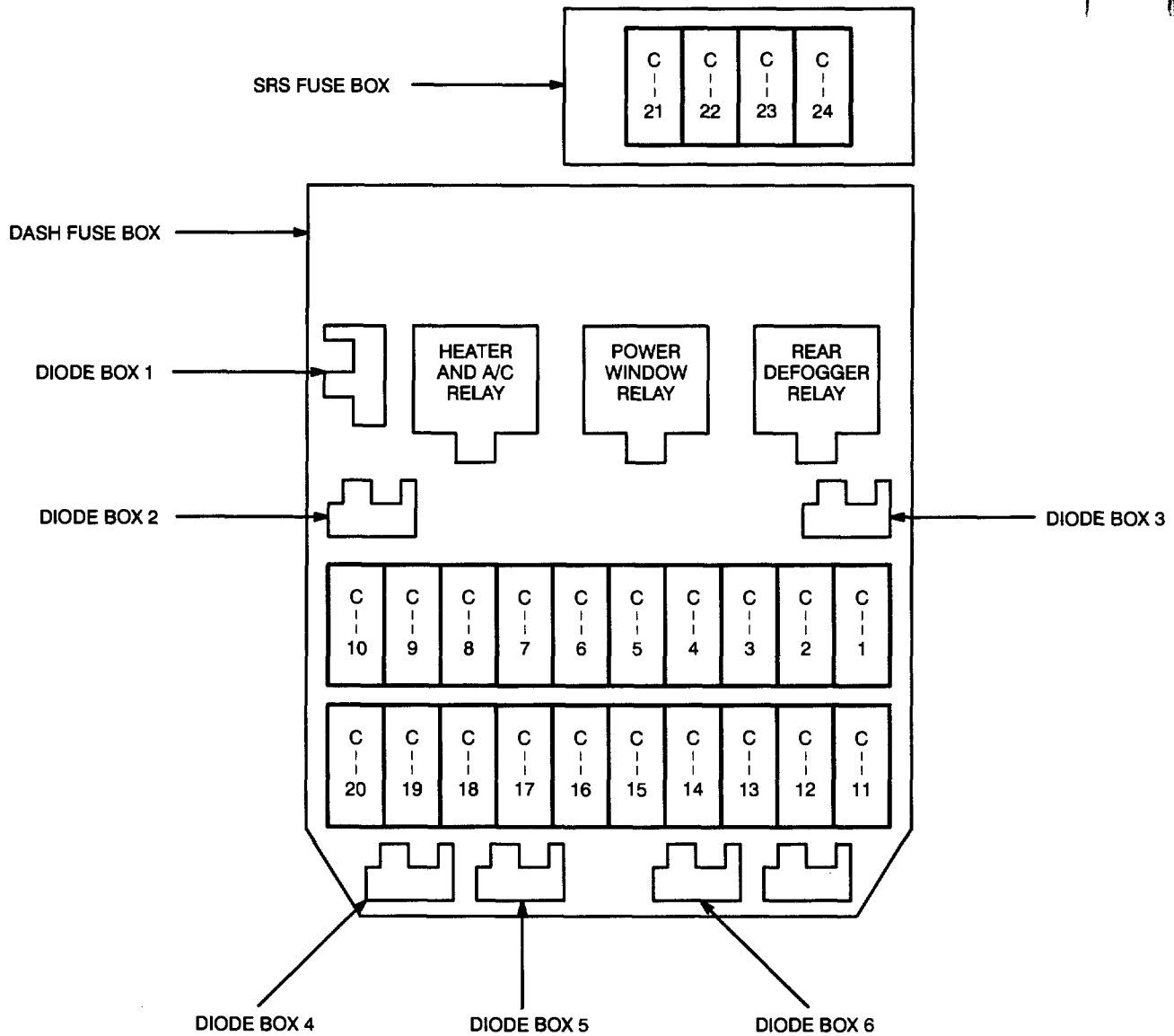
Testing For A Short To Ground With A Short Finder

1. Remove the blown fuse. Leave the battery connected.
2. Connect the short finder between the positive battery terminal and the load side fuse terminal.
3. Close all switches in series with the wire you are troubleshooting.
4. Turn on the short finder. It sends pulses of current to the short. This creates a pulsing magnetic field around the wiring between the fuse box and the short.
5. Beginning at the fuse box, slowly move the short finder meter along the circuit wiring. The meter will show current pulses through sheet metal and body trim. As long as the meter is between the fuse and the short, the needle will move with each current pulse. Once you move the meter past the point of the short, the needle will stop moving. Check around this area to locate the cause of the short circuit.



FUSE/RELAY INFORMATION

Dash and SRS Fuse Boxes

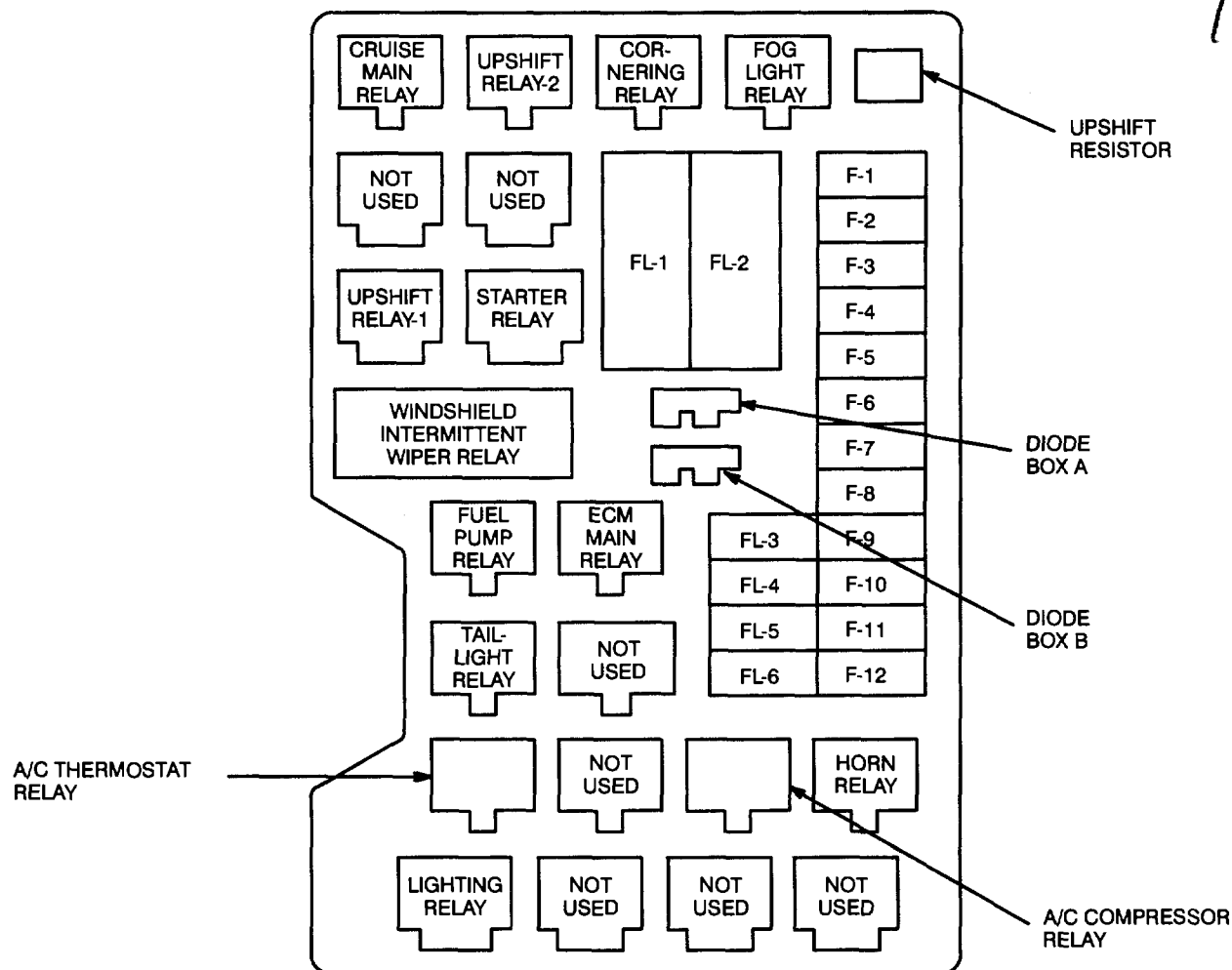


Fuse Number	Fuse Name	Amps	Circuit Protected
C-1	STARTER RELAY	10	Starting system; blower controls; A/C: compressor controls; supplemental restraint system (SRS)
C-2	(SEAT HEATER)	15	Seat heater
C-3	TURN BACK	15	Back up lights; turn lights; hazard lights; cornering lights; A/T shift indicator
C-4	ELEC. IGN.	10	Rear defogger; cruise control; power windows; engine control; door mirror defoggers; shift interlock system; power sunroof; 4-wheel anti-lock brake system (ABS)
C-5	FRT WIPER & WASHER	15	Windshield wiper/washer
C-6	RR WIPER & WASHER	10	Rear wiper/washer
C-7	(H/LAMP WIPER)	10	Headlight wiper/washer
C-8	ENGINE	15	Engine control; charging system
C-9	IGN. COIL	15	Ignition system
C-10	METER GAUGE	10	Gauges; indicators
C-11	(AUDIO [ACC]) MIRROR	10	Sound system; power mirrors; clock
C-12	CIGARETTE	20	Cigarette lighter
C-13	(ANTI THEFT)	10	Anti-theft system
C-14	STOP A/T CONT	15	Brake lights; automatic transmission control; shift interlock system; rear wheel anti-lock (RWAL) brake system
C-15	(AUDIO [B])	20	Sound system
C-16	CLOCK [B] ROOM	10	Sound system; interior lights; key-in ignition warning system; anti-theft system; auto antenna; clock
C-17	RR DEFOG	25	Rear defogger
C-18	(DOOR LOCK)	20	Power door locks; anti-theft system; power windows
C-19	BLOWER	25	Blower controls
C-20	(AIR CON)	10	A/C: compressor controls
C-21	SRS-1	10	Supplemental restraint system (SRS)
C-22	SRS-2	10	Supplemental restraint system (SRS)
C-23	SRS-3	10	Supplemental restraint system (SRS)
C-24	SRS-4	10	Supplemental restraint system (SRS)

Circuit Breaker Number	Circuit Breaker Name	Amps	Circuit Protected
C/B-1	—	—	Not used
C/B-2	(P/W, P/S, S/R)	30	Power windows; power sunroof; power seats; power door locks

FUSE/RELAY INFORMATION

Fuse/Relay Box

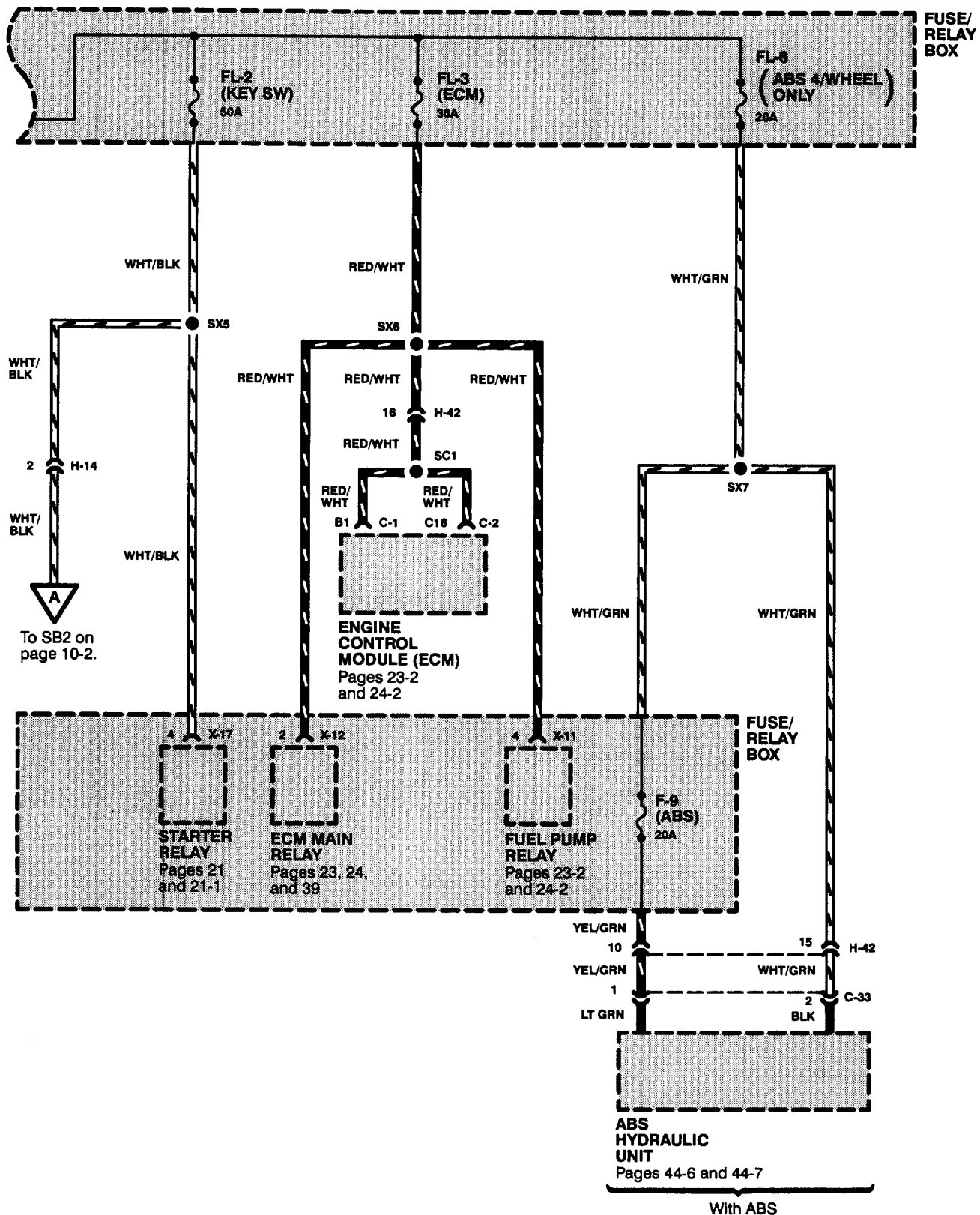


Fuse Number	Fuse Name	Amps	Circuit Protected
F-1	—	—	Not used
F-2	O ₂ SENSOR HEATER	10	Engine control
F-3	HORN HAZARD	15	Horns; Hazard light
F-4	H/LAMP—LH	15	Headlights and fog lights
F-5	H/LAMP—RH	15	Headlights
F-6	—	—	Not used
F-7	—	—	Not used
F-8	(FRT. FOG)	15	Fog lights
F-9	ABS	20	Rear wheel anti-lock (RWAL) brake system or anti-lock brake system (ABS)
F-10	FUEL PUMP	15	Engine control
F-11	—	—	Not used
F-12	TAIL	15	Taillights

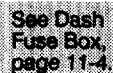
Fusible Link Number	Fusible Link Name	Amps	Circuit Protected
FL-1	MAIN	80	See Power Distribution
FL-2	KEY SW	50	See Power Distribution
FL-3	ECM	30	Engine control
FL-4	—	—	Not used
FL-5	—	—	Not used
FL-6	(ABS 4/WHEEL ONLY)	40	Anti-lock brake system (ABS)

Circuit Schematic



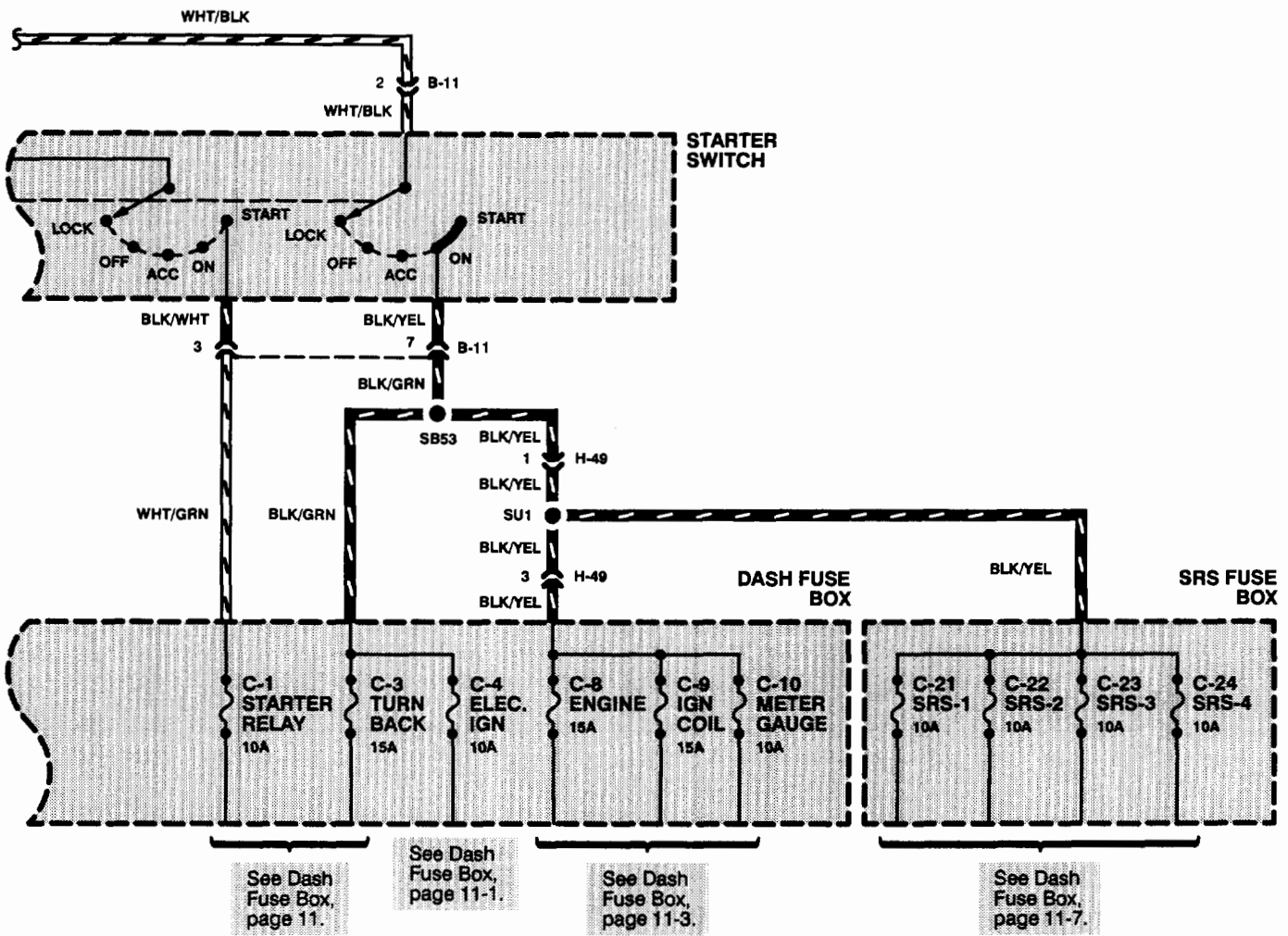


Circuit Schematic



See Dash Fuse Box, page 11.

**See Dash
Fuse Box,
page 11-2.**



POWER DISTRIBUTION

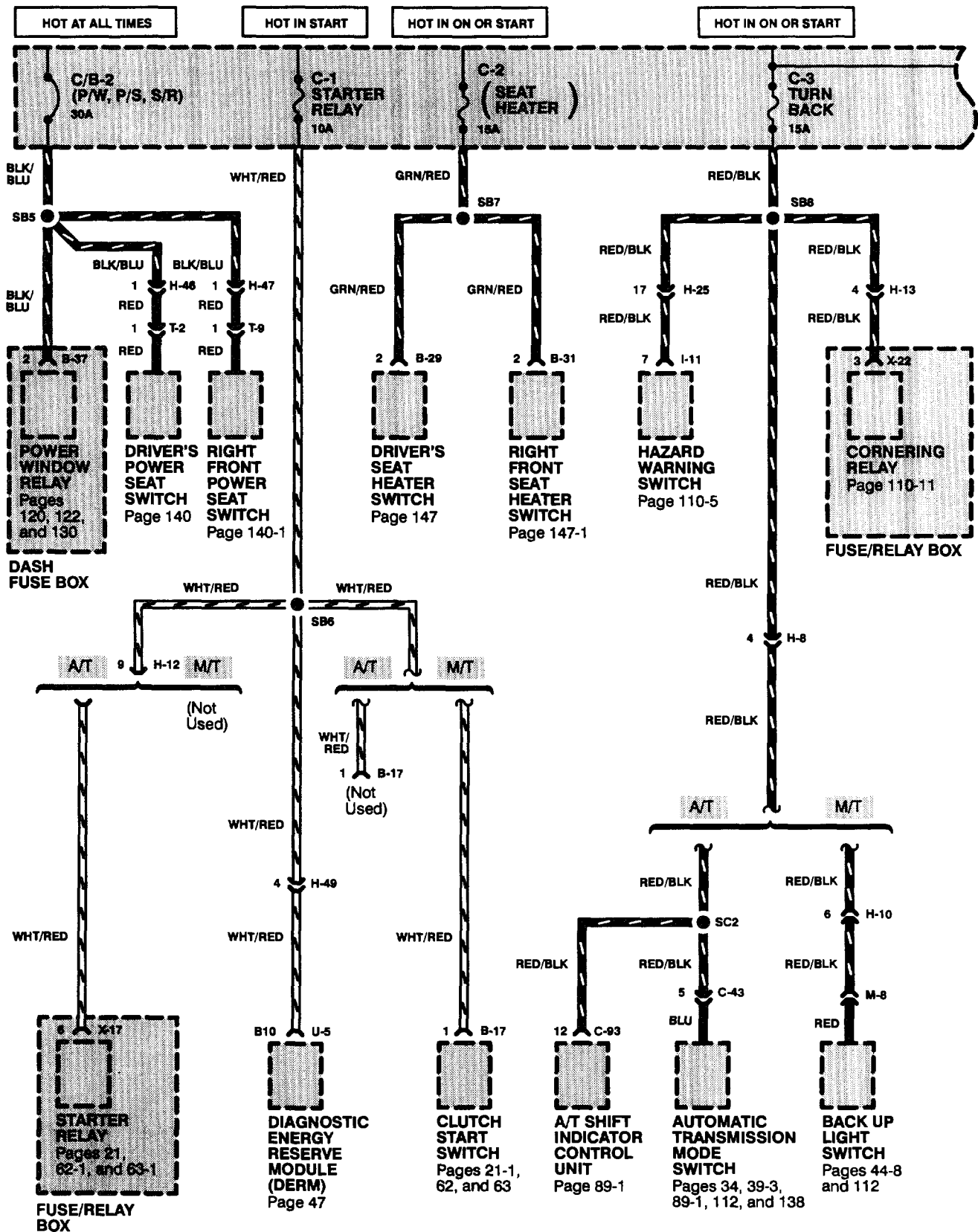
Component Location Index

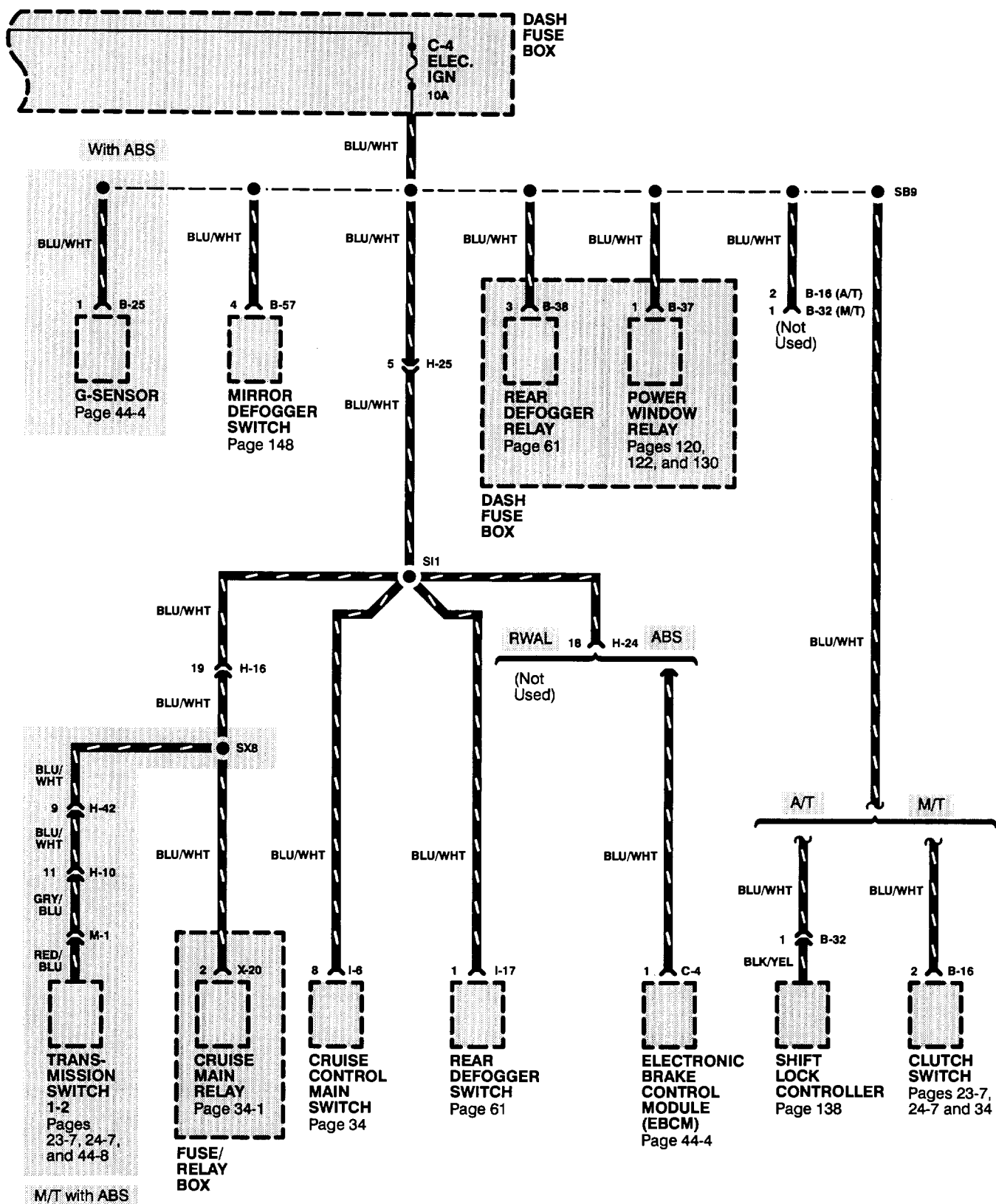
(Refer to Section 201 for photographs.)

Component	Photo No.
ABS Hydraulic Unit	Right side of engine compartment 33
Anti-theft Horn	Right rear corner of engine compartment 41
Dash Fuse Box	Behind left dash side trim panel 58
ECM Main Relay	In fuse/relay box 37
Engine Control Module	Behind front of front console 73
(ECM)	
Fog Light Relay	In fuse/relay box 39
Fuel Pump Relay	In fuse/relay box 37
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Generator	Lower right front of engine
Heater and A/C Relay	In dash fuse box 59
Horn Relay	In fuse/relay box 38
Lighting Relay	In fuse/relay box 34
Rear Wheel Anti-lock	Behind lower cluster assembly 75
Brake Controller	
SRS Fuse Box	On top of dash fuse box 58
Starter	Lower left rear of engine 24
Starter Relay	In fuse/relay box 36
Starter Switch	Underside of steering column 54
Taillight Relay	In fuse/relay box 36
Connector	
B-11 (8-WHT)	Below I/P, right of steering column 69
C-1 (24-BRN)	On engine module (ECM) 73
C-2 (32-BRN)	On engine module (ECM) 73
C-33 (3-GRY)	Right front corner of engine compartment 49
H-2 (2-GRY)	Right side of engine compartment 40
H-13 (6-GRY)	Below I/P, above right dash side trim panel, on bracket 82
H-14 (2-RED)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-42 (16-BLK)	Right front of engine compartment 31
H-49 (4-WHT)	In dash fuse box 58
Ground	
P-6	Right side of engine compartment, on rear of battery tray
P-7	Lower right front of engine compartment 25
P-10	Lower right side of engine compartment
Terminal	
P-2	In fuse/relay box 38

DASH FUSE BOX

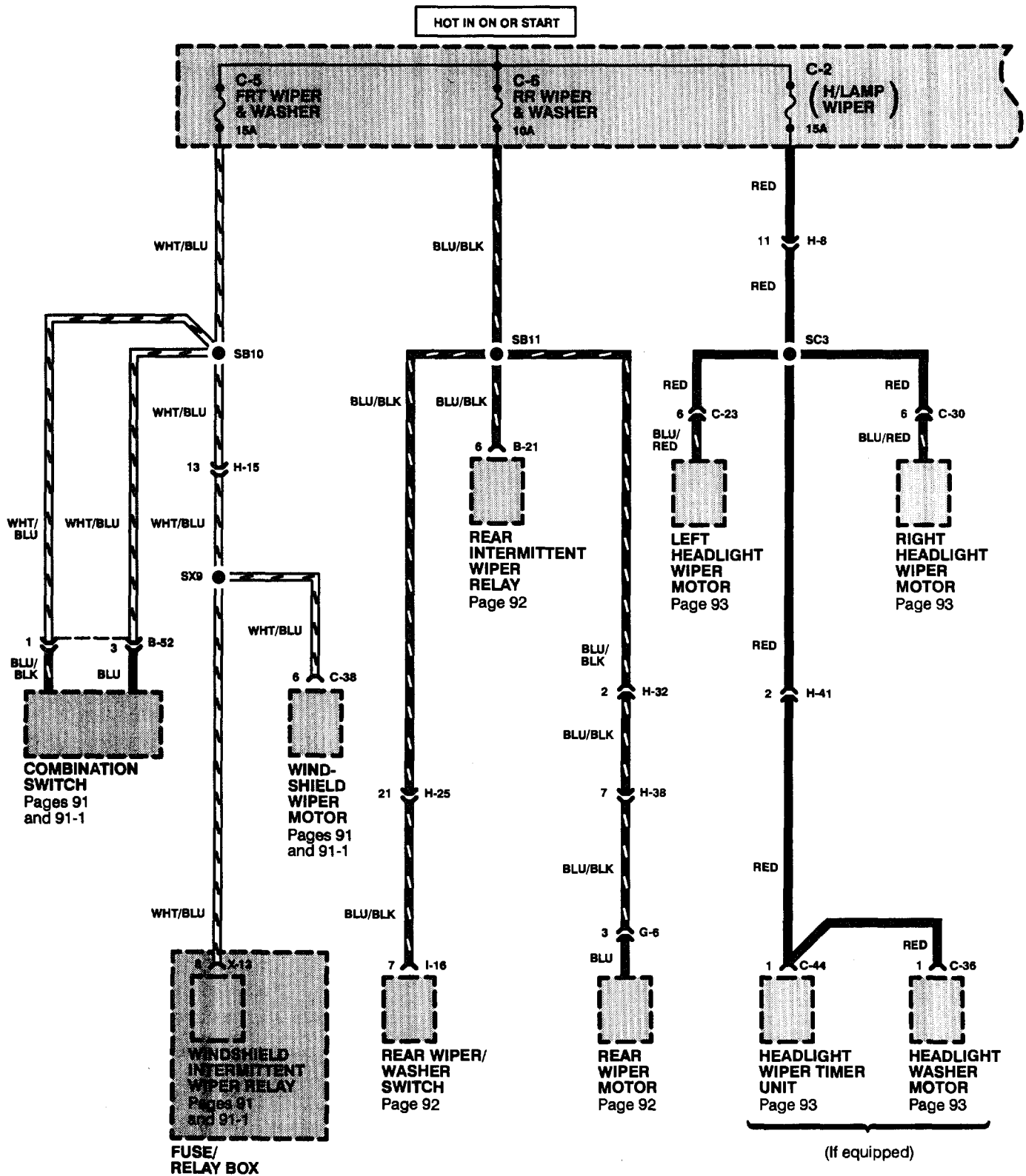
Circuit Schematic

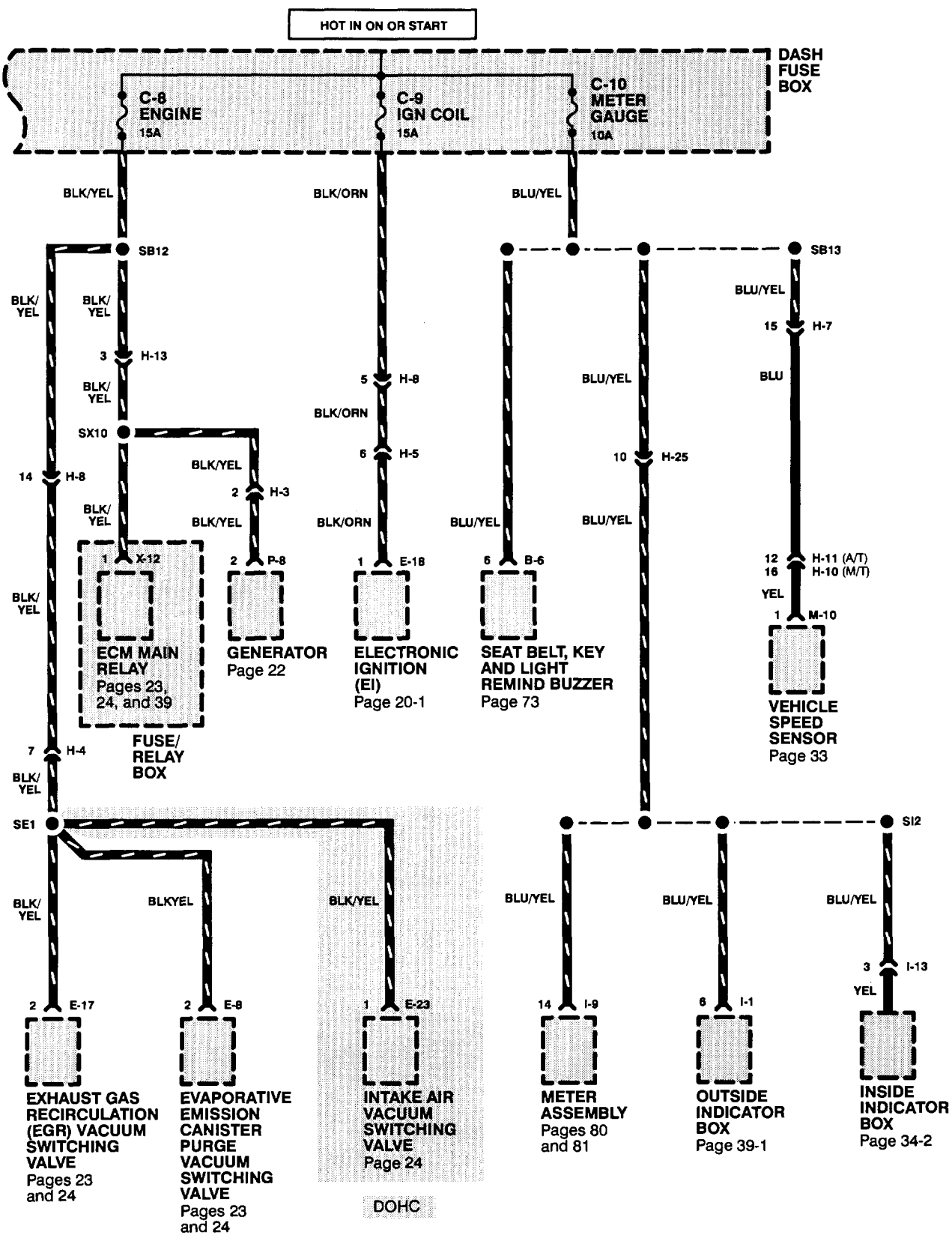




DASH FUSE BOX

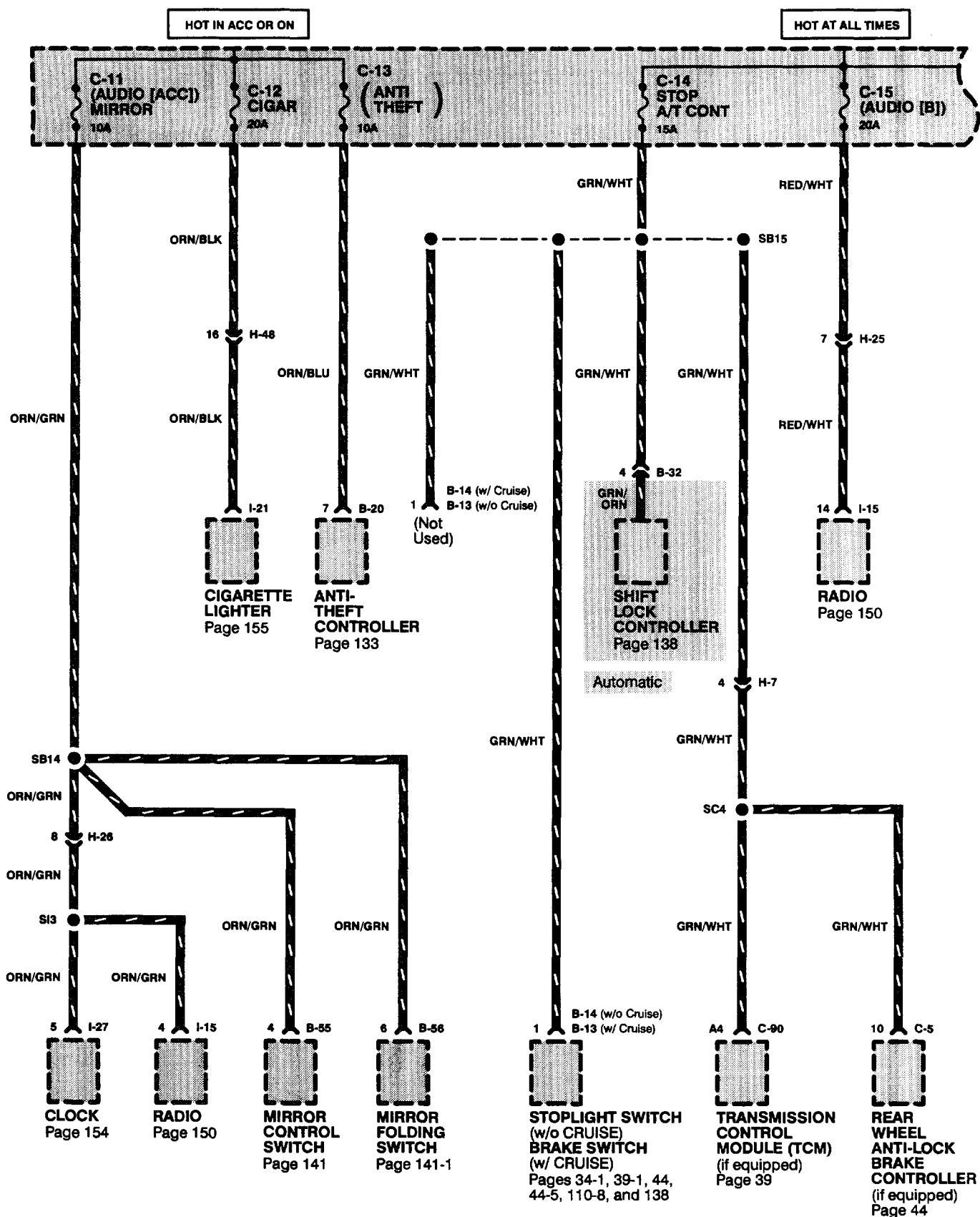
Circuit Schematic





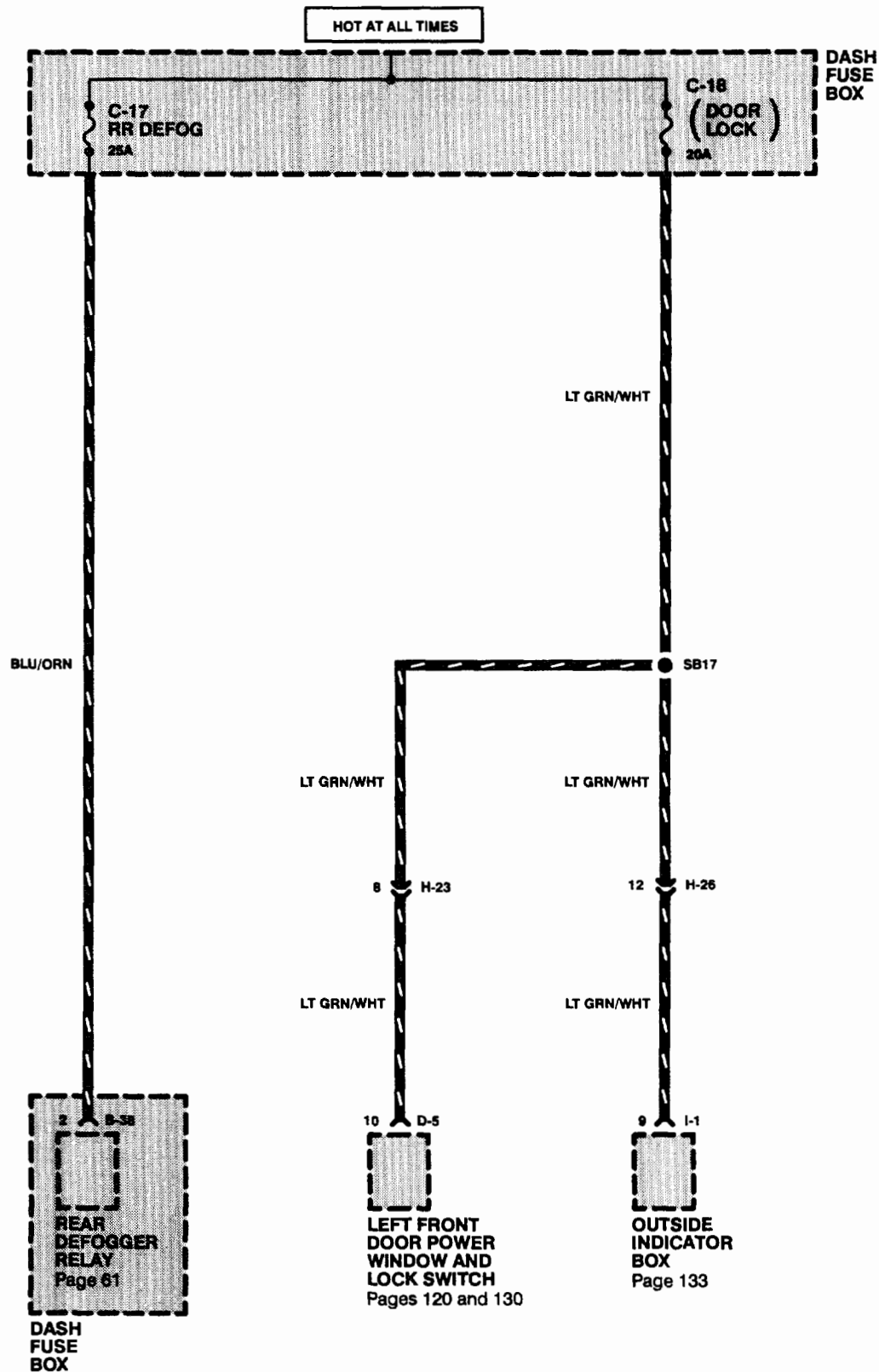
DASH FUSE BOX

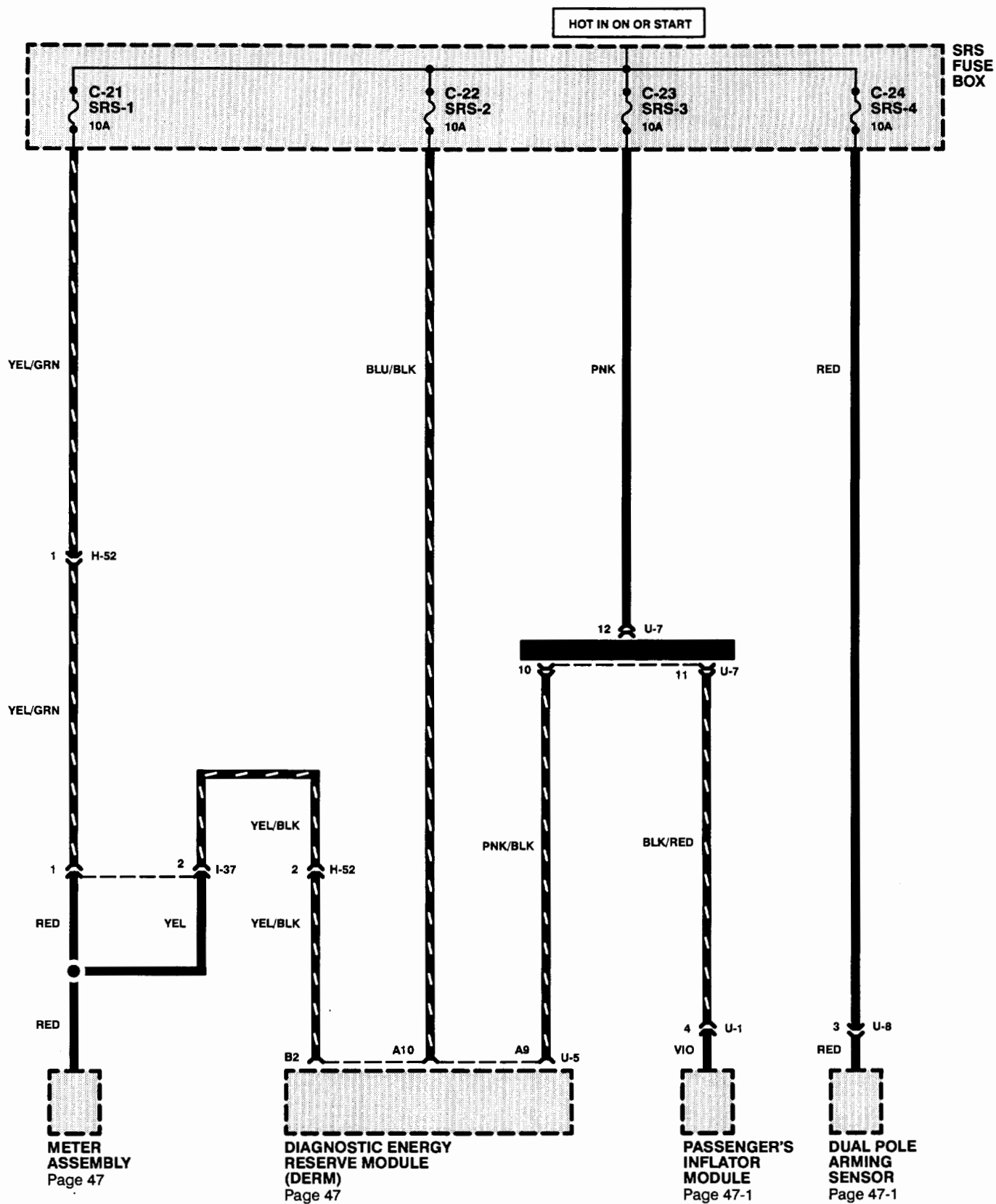
Circuit Schematic



DASH FUSE BOX

Circuit Schematic





DASH FUSE BOX

Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
A/T Shift Indicator Control	
Unit	Below I/P, left of steering column 67
Anti-theft Controller	Below left side of I/P 68
Auto Antenna	Inside right front fender 6
Automatic Transmission	
Mode Switch	Beneath vehicle, on left side of transmission 47
Back Up Light Switch	Beneath vehicle, on left side of transmission 44
Brake Switch	Below I/P, on brake pedal support 68
Clutch Start Switch	Below I/P, top of clutch pedal support 66
Clutch Switch	Below I/P, top of clutch pedal support 66
Cornering Relay	In fuse/relay box 37
Cruise Main Relay	In fuse/relay box 35
Dash Fuse Box	Behind left dash side trim panel 58
Diagnostic Energy Reserve	
Module (DERM)	Behind front of front console 72
Dual Pole Arming Sensor	Behind center of I/P, see Workshop Manual page 9J-122
ECM Main Relay	In fuse/relay box 37
Electronic Brake Control	
Module (EBCM)	Behind lower cluster assembly 74
Electronic Ignition (EI)	
(DOHC)	Top center rear of engine 15
Electronic Ignition (EI)	
(SOHC)	Center front of engine 9
Evaporative Emission	
Canister Purge Vacuum	
Switching Valve (DOHC)	Top left front of engine 13
Evaporative Emission	
Canister Purge Vacuum	
Switching Valve (SOHC)	Top left rear of engine 12
Exhaust Gas Recirculation	
(EGR) Vacuum Switching	
Valve (DOHC)	Top left rear of engine 15
Exhaust Gas Recirculation	
(EGR) Vacuum Switching	
Valve (SOHC)	Top left rear of engine 12
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
G-Sensor	Below rear of center console 79
Generator	Lower right front of engine
Headlight Washer Motor	Right side of engine compartment, in washer fluid reservoir 32
Headlight Wiper Timer Unit	Below right side of I/P 80
Intake Air Vacuum Switching	
Valve	Top right rear of engine 16
Left Headlight Wiper Motor	Behind left headlight assembly 5
Passenger's Inflator Module	Behind right side of I/P 81
Power Window Relay	In dash fuse box 59
Rear Defogger Relay	In dash fuse box 59
Rear Intermittent Wiper	
Relay	Behind left dash side trim panel, in access hole 57

Component Location Index

(Refer to Section 201 for photographs.)

Component (cont'd)

Photo No.

Rear Wheel Anti-lock Brake		
Controller	Behind lower cluster assembly	75
Rear Wiper Motor	Inside left tailgate door, behind trim pad	104
Right Headlight Wiper Motor	Behind right headlight assembly	5
Seat Belt, Key and Light		
Remind Buzzer	Behind right dash side trim panel	86
Shift Lock Controller	Below front console	77
Starter Relay	In fuse/relay box	36
Starter Switch	Underside of steering column	54
Stop Light Switch	Below I/P, on brake pedal support	68
SRS Fuse Box	On top of dash fuse box	58
Transmission Control Module		
(TCM)	Below left side of I/P	65
Transmission Switch 1-2	Beneath vehicle, on left side of transmission	43
Vehicle Speed Sensor	Beneath center of vehicle, on rear of transmission	45
Windshield Intermittent		
Wiper Relay	In fuse/relay box	38
Windshield Wiper Motor	Right rear corner of engine compartment	41

Connector

B-8 (2-WHT)	Below right side of I/P, behind cruise control unit	85
B-11 (8-WHT)	Below I/P, right of steering column	69
B-13 (4-WHT) (w/o cruise)	Below left side of I/P, above brake pedal	68
B-14 (2-BLK) (w/cruise)	Below left side of I/P, above brake pedal	68
B-16 (2-WHT) (A/T)	Below I/P, left of steering column	67
B-17 (2-BLK) (A/T)	Below I/P, left of steering column	67
B-32 (6-WHT)	Below rear of front console	78
B-52 (14-BLK)	Below I/P, right of steering column	69
C-23 (6-GRY)	Below left side of front bumper	5
C-30 (6-GRY)	Behind right side of front bumper	5
C-43 (8-BLK)	Left front of engine compartment	27
C-90 (24-BLU)	On transmission control module (TCM)	65
D-5 (10-BLK)	On left front door power window and lock switch	
D-7 (2-BLK)	Inside left front door, behind trim panel	90
D-18 (2-BLK)	Inside right front door, behind trim panel	90
D-24 (2-BLK)	Inside rear of left rear door, behind door courtesy light	96
D-29 (2-BLK)	Inside rear of right rear door, behind door courtesy light	96
E-18 (2-BLK) (DOHC)	On left side of electronic ignition (EI)	15
E-18 (2-BLK) (SOHC)	On right side of electronic ignition (EI)	9
G-6 (4-WHT)	Inside left tailgate door, behind trim pad	104
H-3 (2-BLK)	Right side of engine compartment	40
H-4 (12-BLU)	Left side of engine compartment	30
H-5 (16-GRN)	Left side of engine compartment	30
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket	63
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket	62
H-10 (16-BLU)	Left front of engine compartment	27
H-11 (12-BLK)	Left front of engine compartment	27
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket	82
H-13 (6-GRY)	Below I/P, above right dash side trim panel, on bracket	82

DASH FUSE BOX

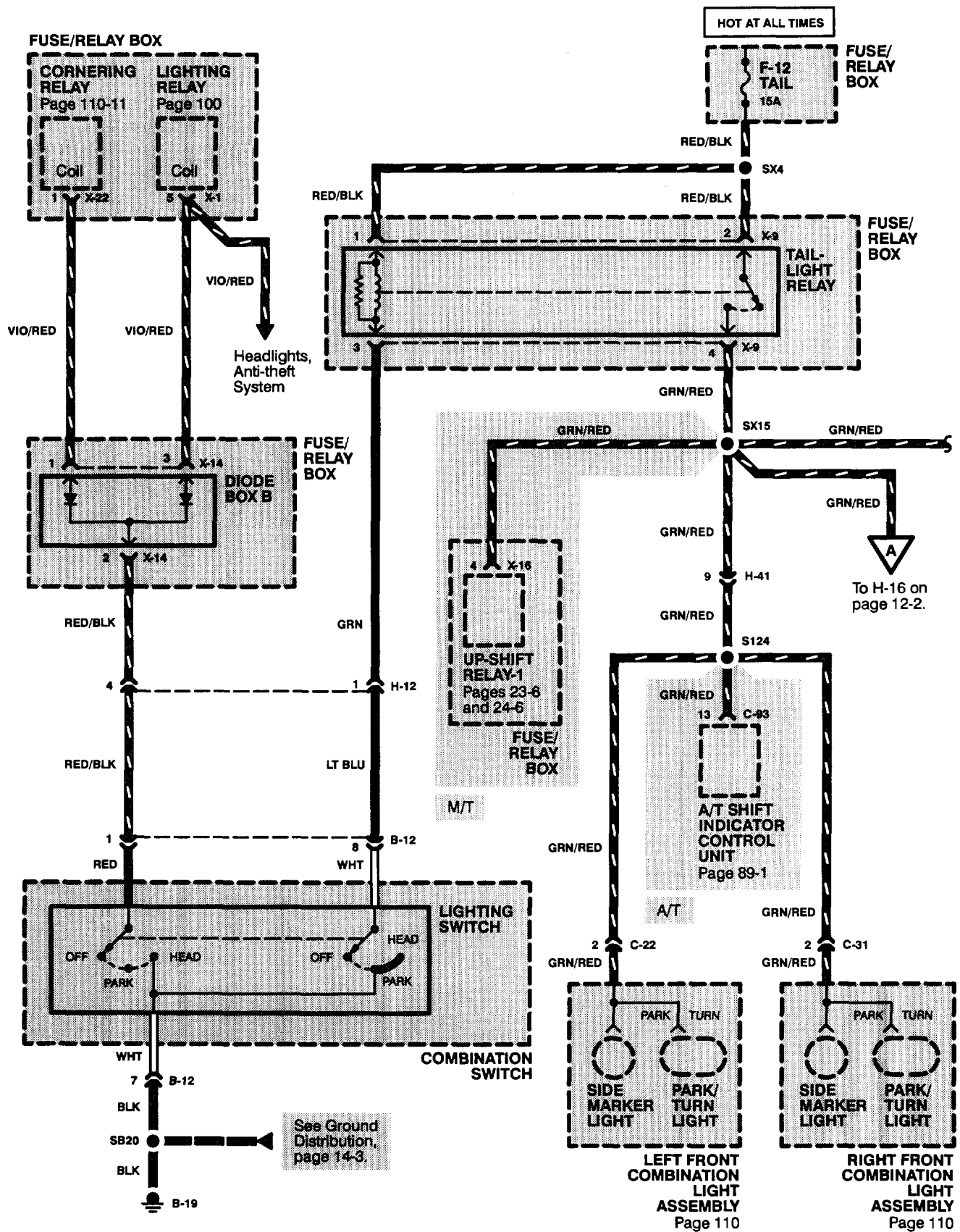
Component Location Index

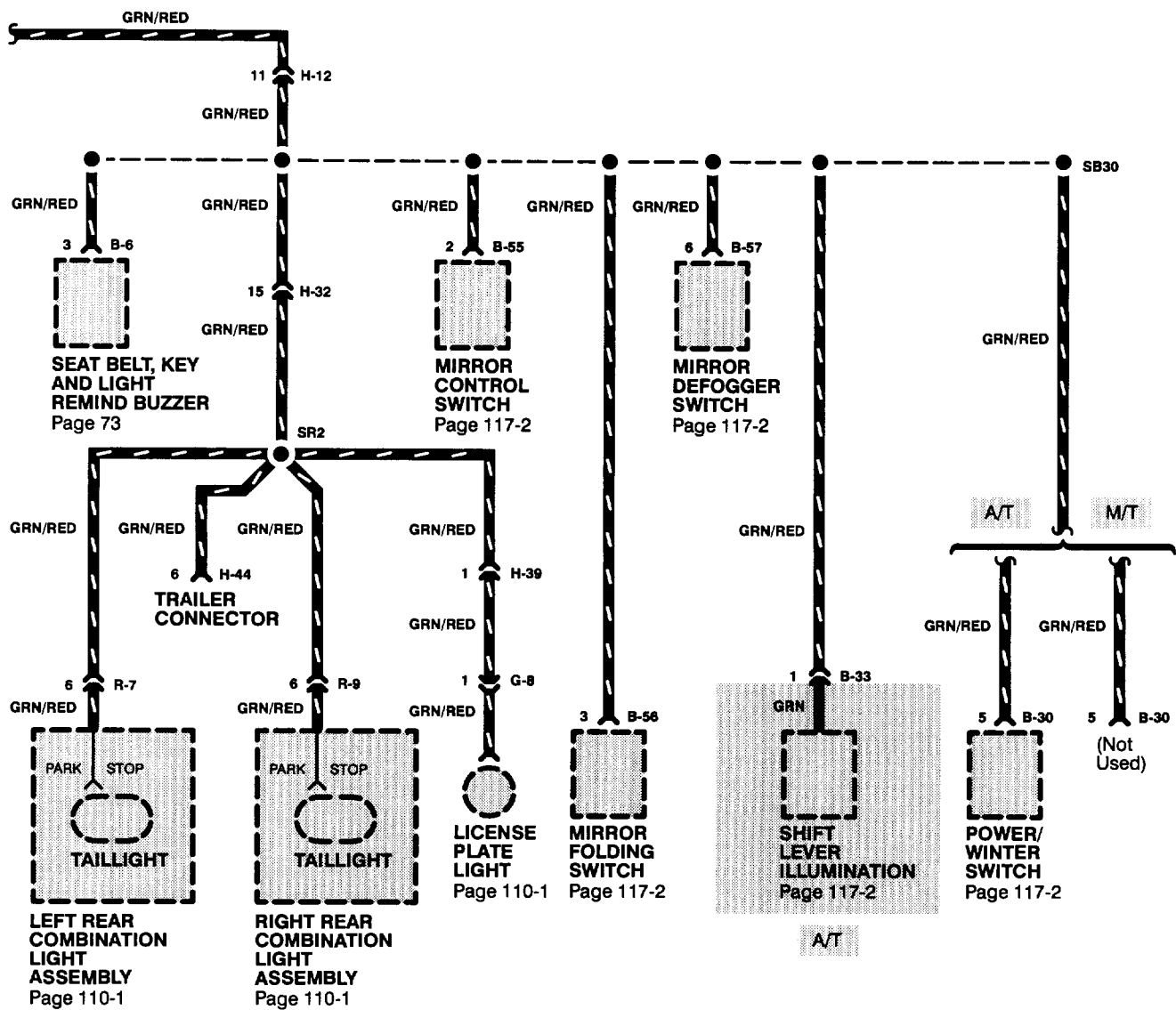
(Refer to Section 201 for photographs.)

<u>Connector (cont'd)</u>	<u>Photo No.</u>
H-15 (14-WHT)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-18 (18-WHT)	Behind right dash side trim panel, in access hole 87
H-21 (4-WHT)	Below I/P, above right dash side trim panel, on bracket 82
H-22 (18-WHT)	Behind left dash side trim panel, in access hole 87
H-23 (8-BLK)	Behind left dash side trim panel, in access hole 87
H-24 (18-YEL)	Below I/P, above left dash side trim panel, on bracket 63
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
H-28 (6-WHT)	In left center pillar 94
H-32 (16-BLK) (without Power Door Locks)	Below left front seat 120
H-32 (22-BLK) (with Power Door Locks)	Below left front seat 120
H-34 (6-WHT)	In right center pillar 94
H-38 (10-WHT)	Left rear of luggage room 102
H-41 (12-BLU) (RWAL)	Right front of engine compartment 31
H-41 (16-BLU) (ABS)	Right front of engine compartment 31
H-42 (16-BLK)	Right front of engine compartment 31
H-45 (6-BLK)	Center of roof, above map lights 98
H-46 (6-WHT)	Below left side of left front seat 120
H-47 (6-WHT)	Below right side of right front seat 125
H-48 (16-BLK)	Behind right dash side trim panel 86
H-49 (4-WHT)	In dash fuse box 58
H-52 (3-YEL)	Below I/P, above left dash side trim panel, on bracket 64
I-9 (16-BLK)	On left rear of meter assembly 53
I-13 (6-WHT)	Behind left side of I/P 52
I-37 (3-YEL)	Behind left side of meter assembly 53
L-2 (1-WHT)	Center front of roof, above map lights 98
L-3 (2-WHT)	Center of roof, above dome light 99
M-1 (1-CLR)	Beneath center of vehicle, top left side of transmission 43
M-8 (1-CLR)	Beneath center of vehicle, top left side of transmission 44
R-6 (3-WHT)	Center rear of roof 100
T-2 (2-WHT)	Underside of driver's seat 123
T-9 (2-WHT)	Underside of right front seat 127
U-1 (4-YEL)	Below right side of I/P 81
U-7 (12-YEL)	Below I/P, above left dash side trim panel, inside bracket 64
U-8 (7-YEL)	Below I/P, above left dash side trim panel, on bracket 64

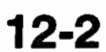
LIGHTING SWITCH DETAILS

Circuit Schematic





Circuit Schematic



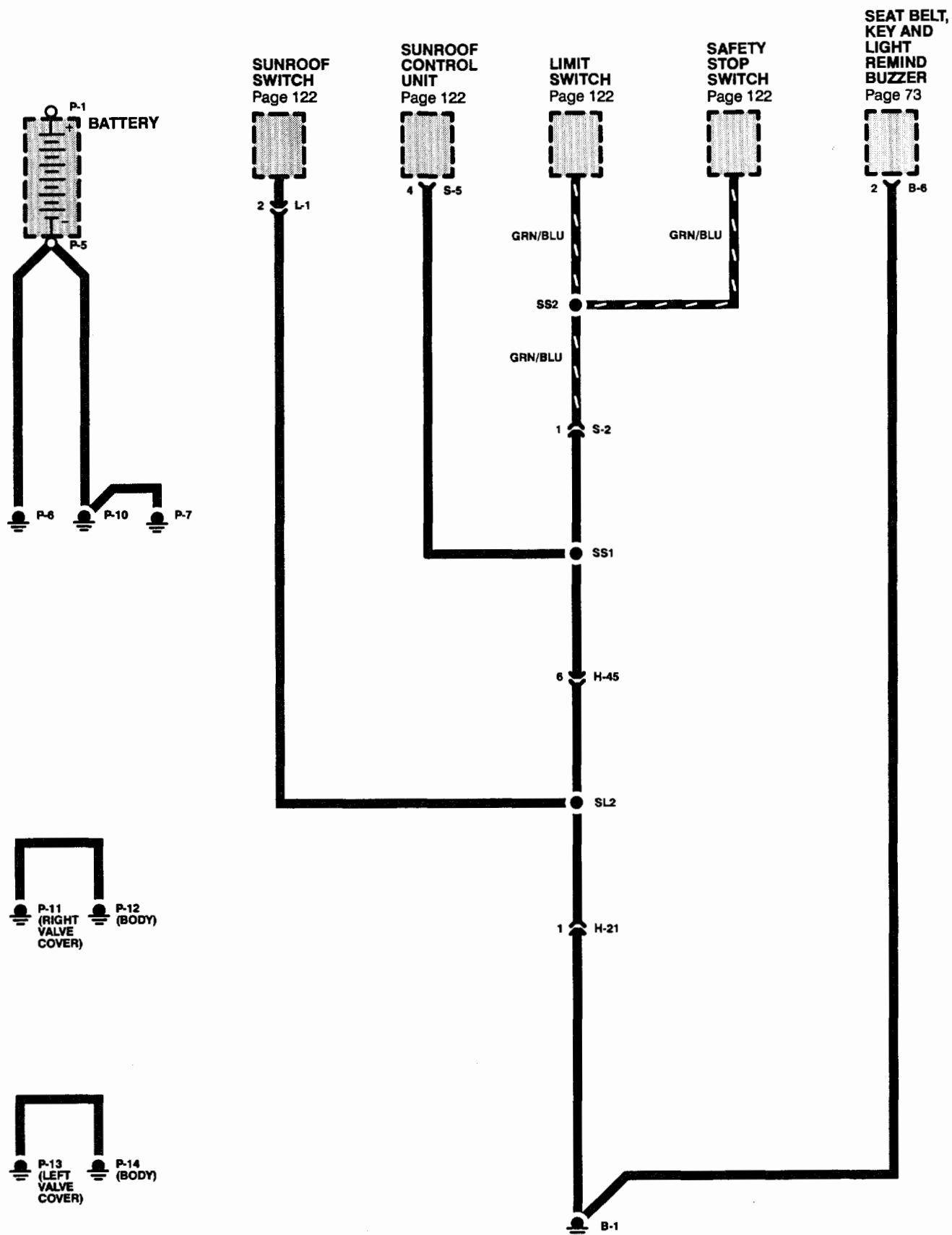
Component Location Index

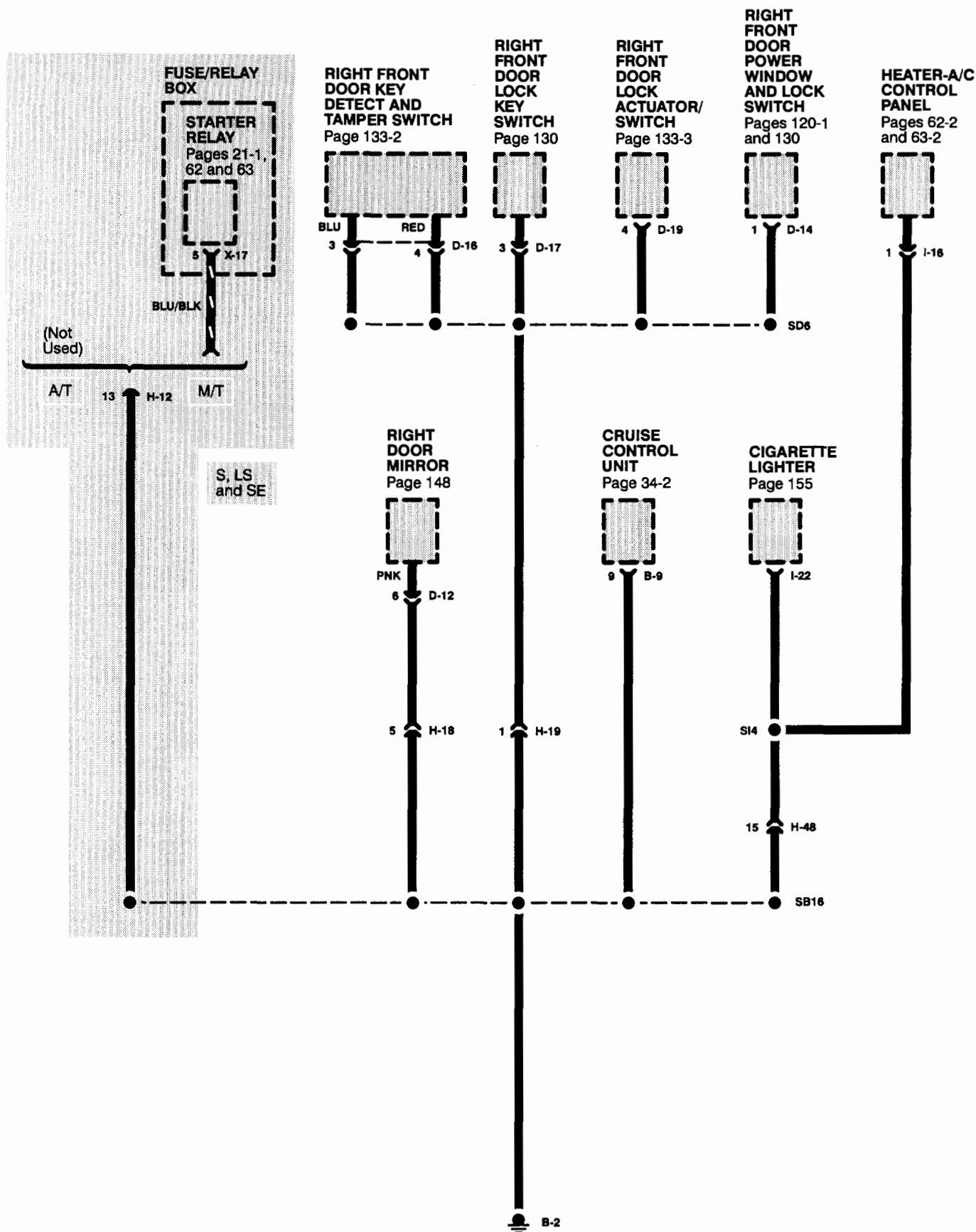
(Refer to Section 201 for photographs.)

Component	Photo No.
A/T Shift Indicator	
Control Unit	Below I/P, left of steering column 67
Cornering Relay	In fuse/relay box 37
Diode Box B	In fuse/relay box 35
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Lighting Relay	In fuse/relay box 34
Seat Belt, Key and Light	
Remind Buzzer	Behind right dash side trim panel 86
Taillight Relay	In fuse/relay box 36
Trailer Connector	
H-44 (6-WHT)	Below left rear of vehicle, behind grommet 117
Upshift Relay-1	In fuse/relay box 34
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
B-30 (6-WHT) (M/T)	Below rear of front console
B-33 (2-WHT/BLK)	Below rear of front console 78
C-22 (4-GRY)	Behind left front combination light assembly 3
C-31 (4-GRY)	Behind right front combination light assembly 3
G-8 (2-WHT)	Inside right tailgate door, behind trim pad 108
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-32 (16-BLK) (without	
Power Door Locks)	Below left front seat 120
H-32 (16-BLK) (with	
Power Door Locks)	Below left front seat 120
H-39 (2-WHT)	Right rear of luggage room 109
H-41 (12-BLU) (RWAL)	Right front of engine compartment 31
I-9 (16-BLK)	On left rear of meter assembly 53
I-10 (16-WHT)	On right rear of meter assembly 53
I-19 (2-WHT)	Behind cigarette lighter 71
I-20 (2-BLU/WHT)	Behind cigarette lighter 71
I-23 (6-WHT)	On rear of heater-A/C control panel 76
I-24 (2-WHT)	Below right side of I/P, above glove box 83
R-7 (6-WHT/BLK)	Behind left taillight assembly 118
R-9 (6-WHT/BLK)	Behind right taillight assembly 118
Ground	
B-19	Behind top of left dash side trim panel 62

GROUND DISTRIBUTION: B-1, B-2, P-6, P-7, P-10, P-11, P-12, P-13, AND P-14

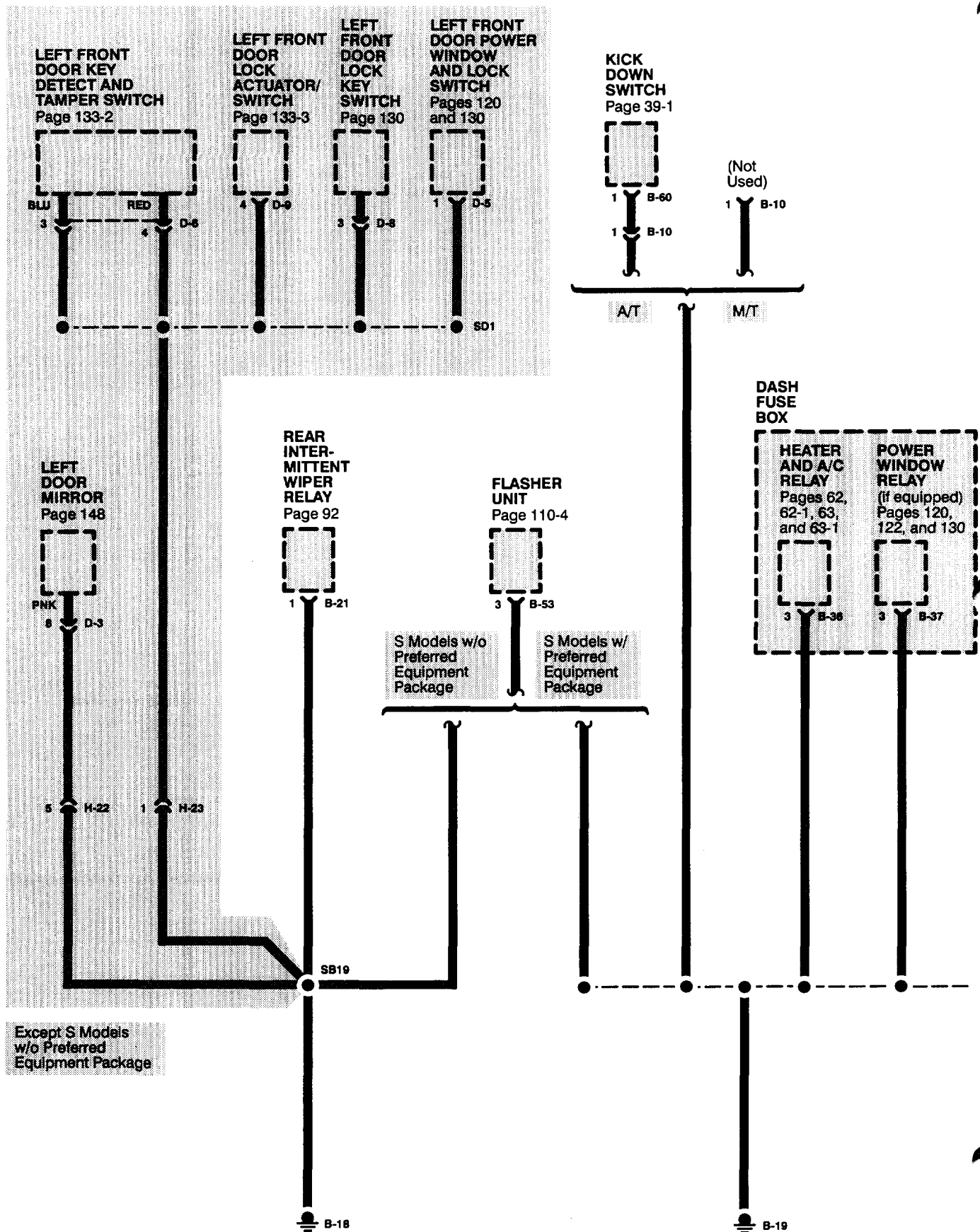
Circuit Schematic

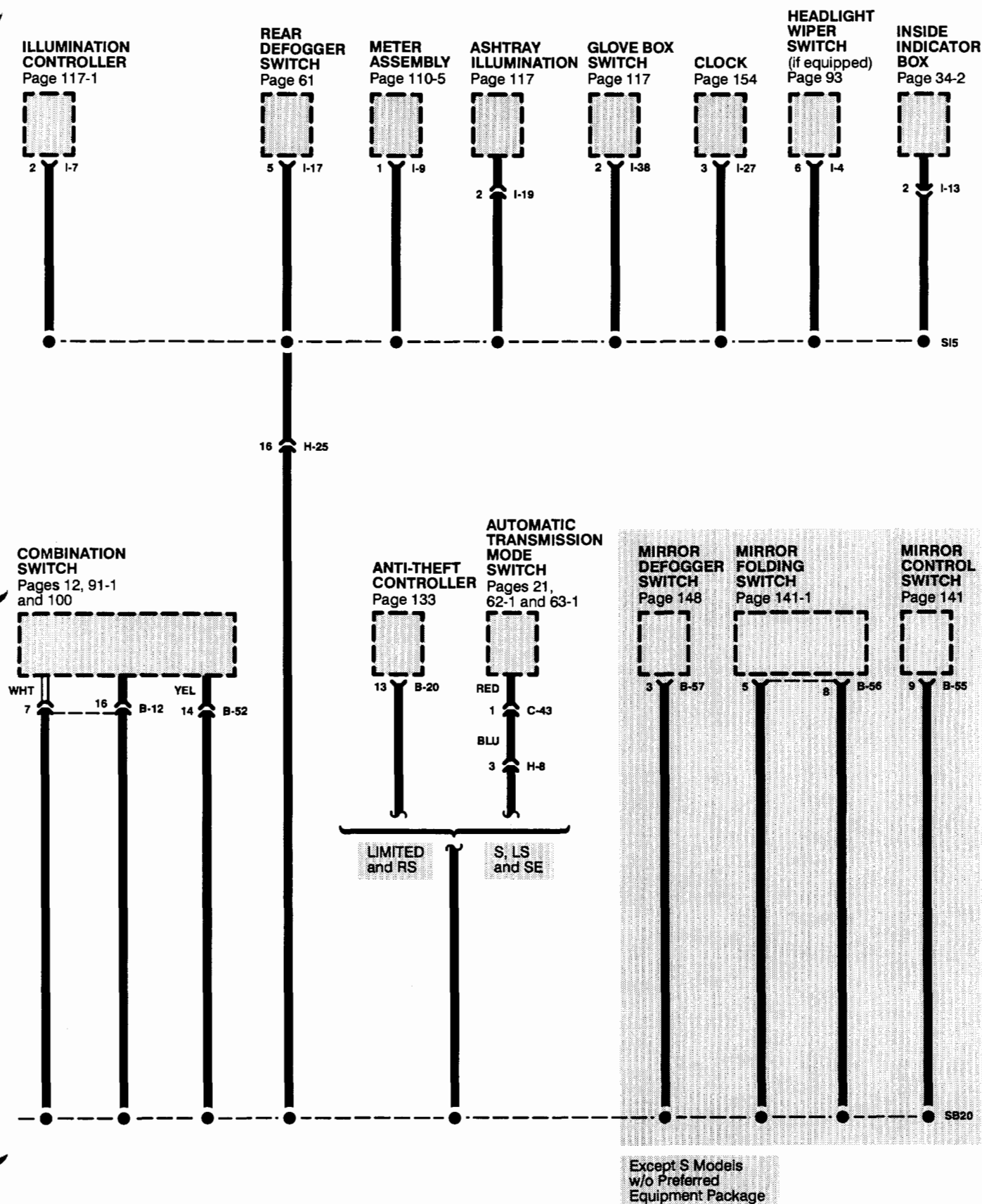




GROUND DISTRIBUTION: B-18 AND B-19

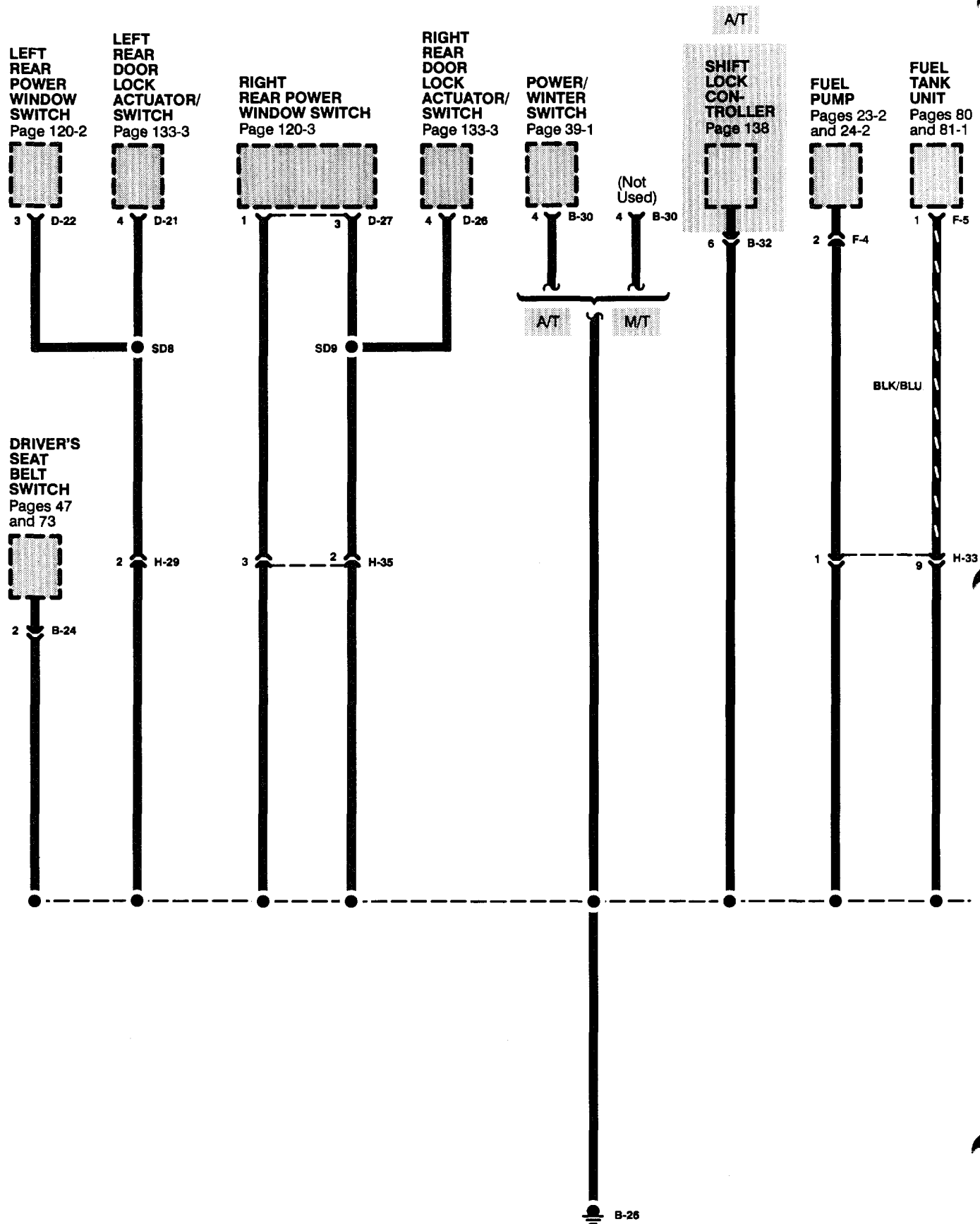
Circuit Schematic



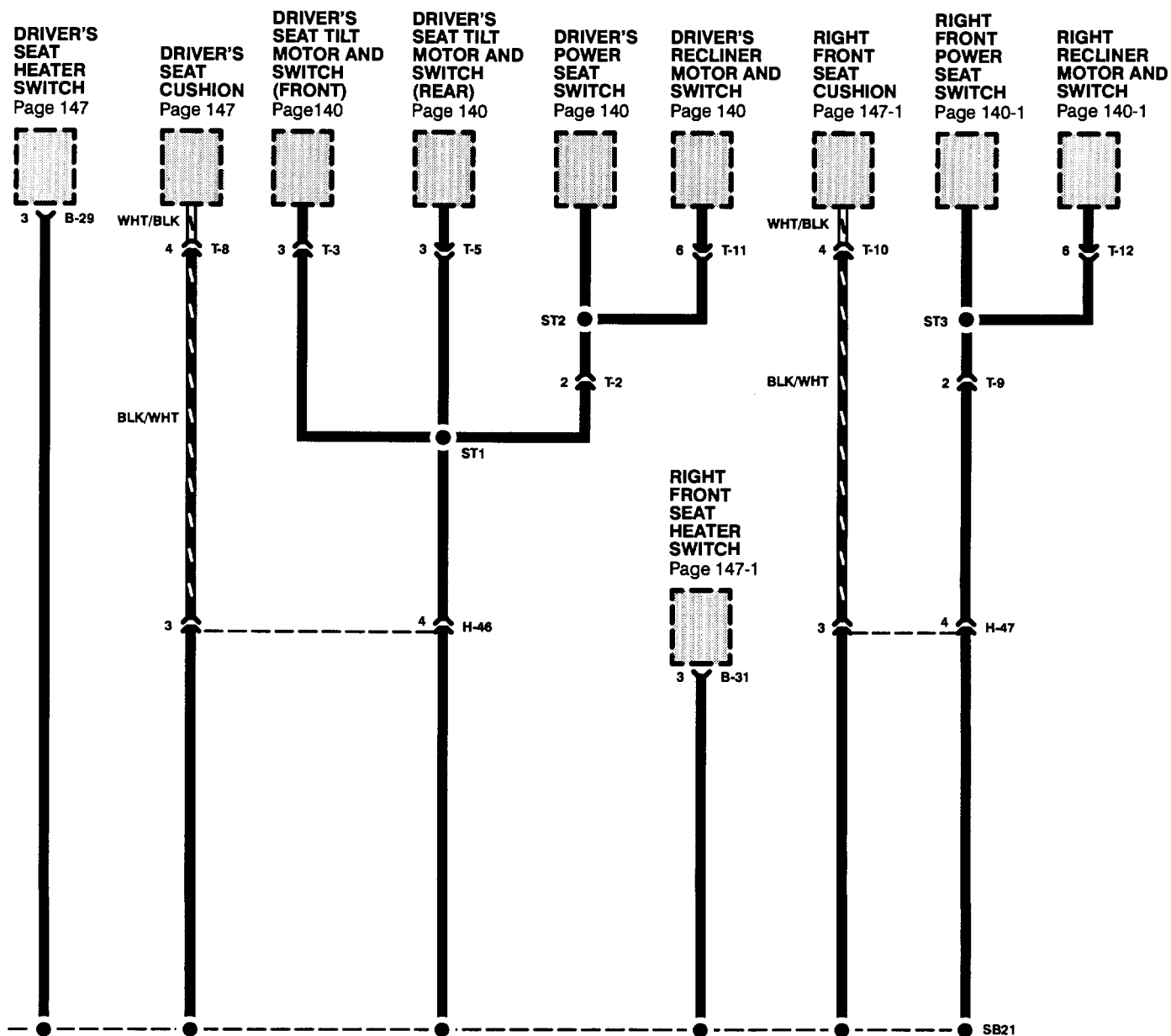


GROUND DISTRIBUTION: B-26

Circuit Schematic

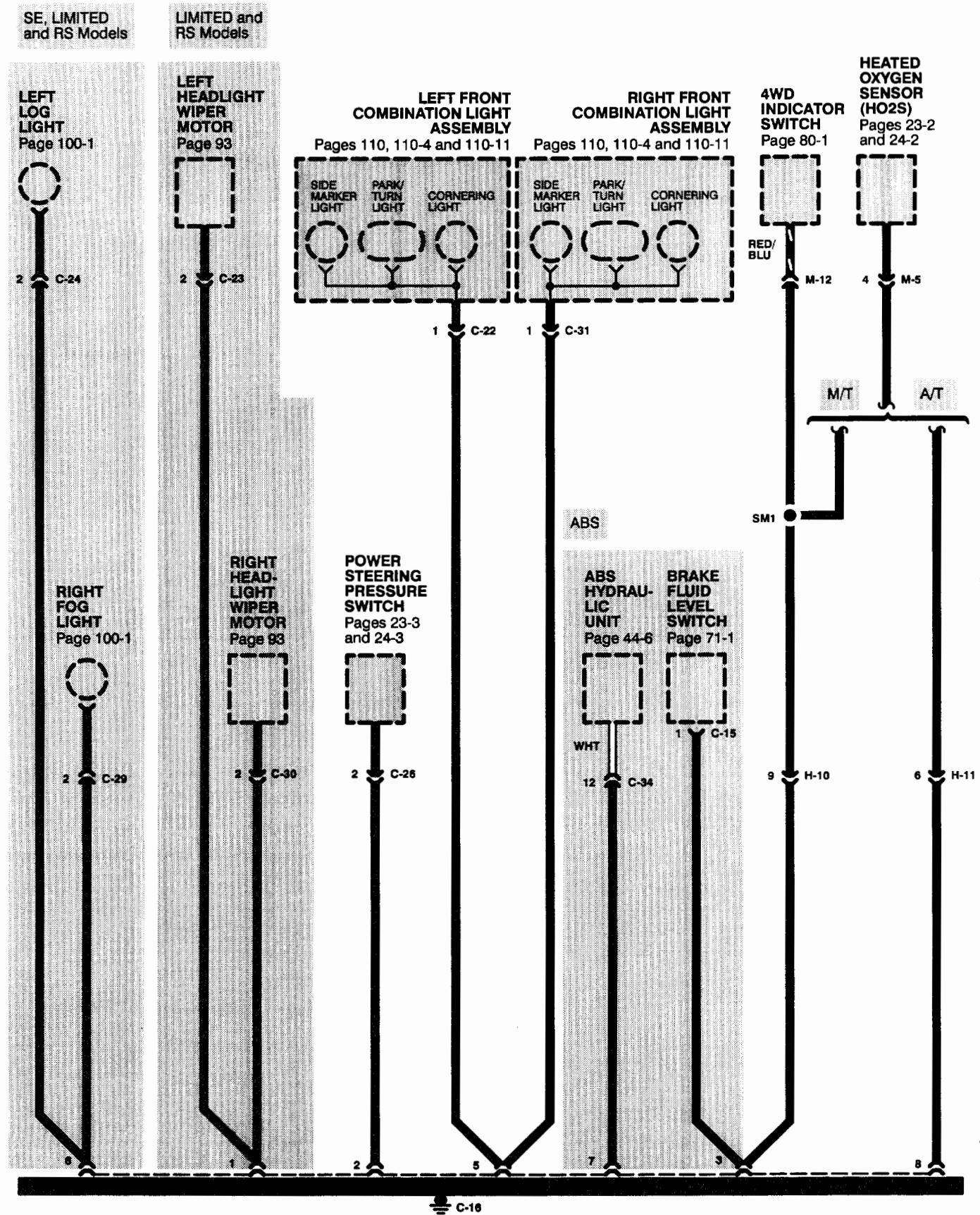


SE and LIMITED Models

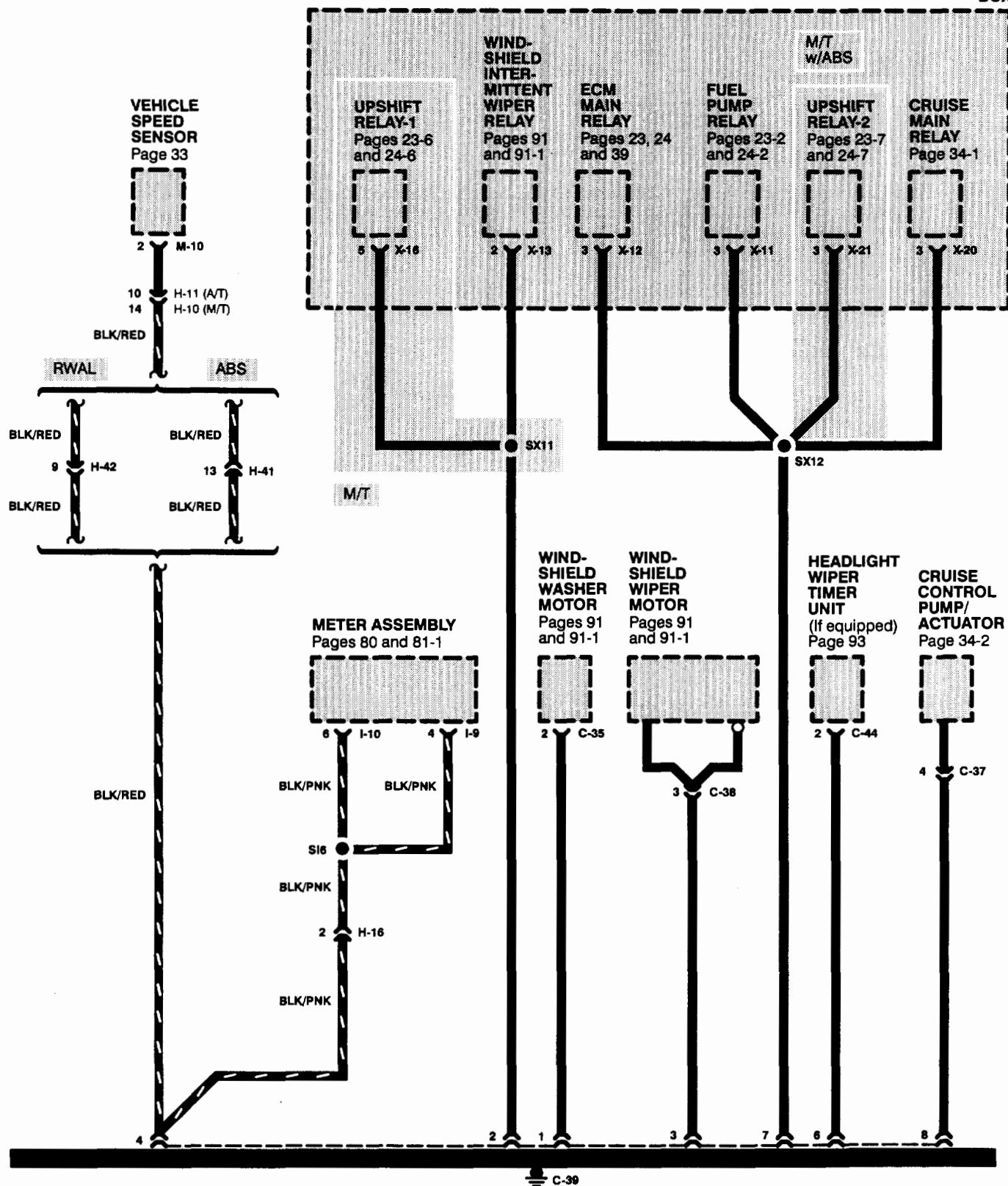


GROUND DISTRIBUTION: C-16 AND C-39

Circuit Schematic

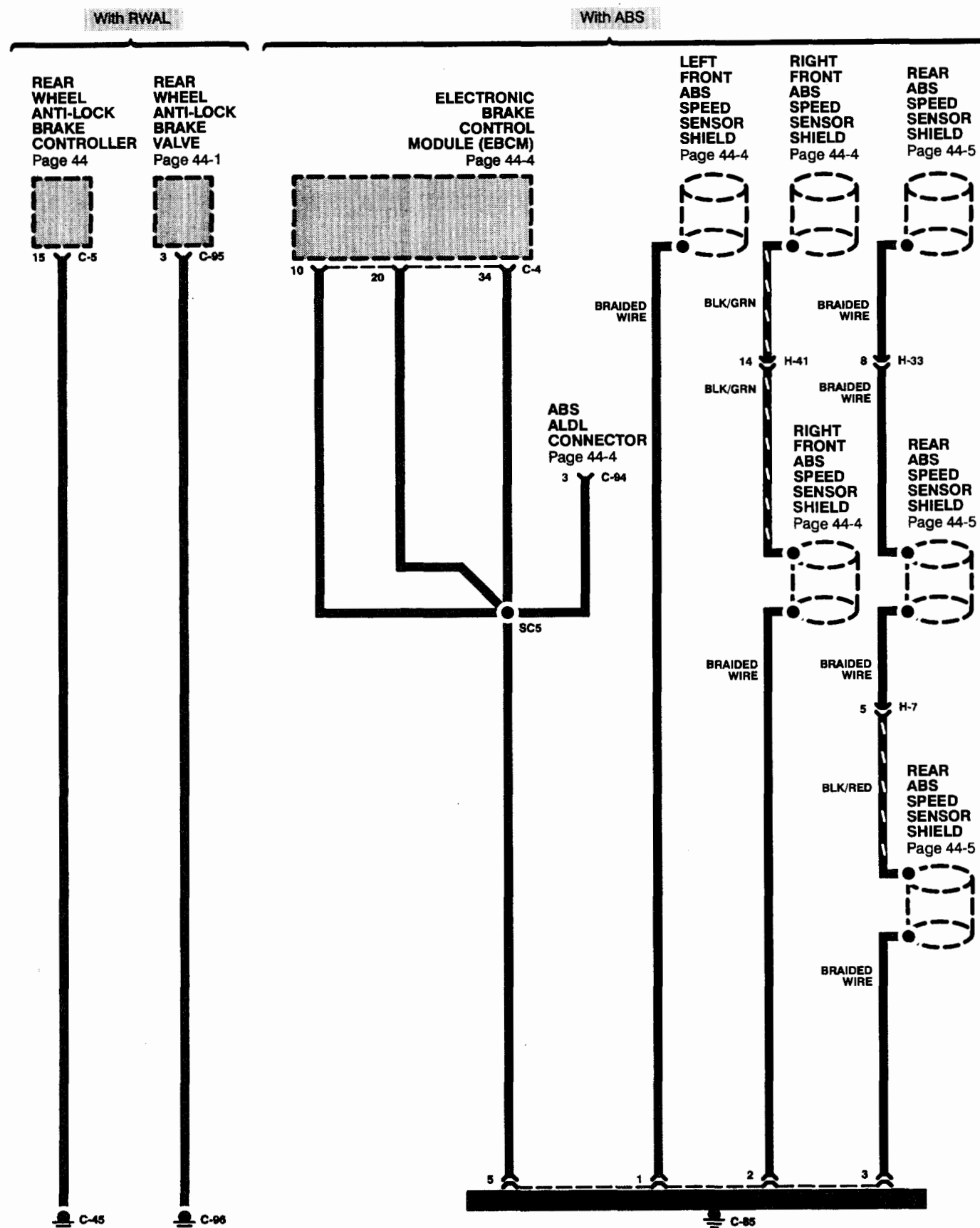


FUSE/
RELAY
BOX

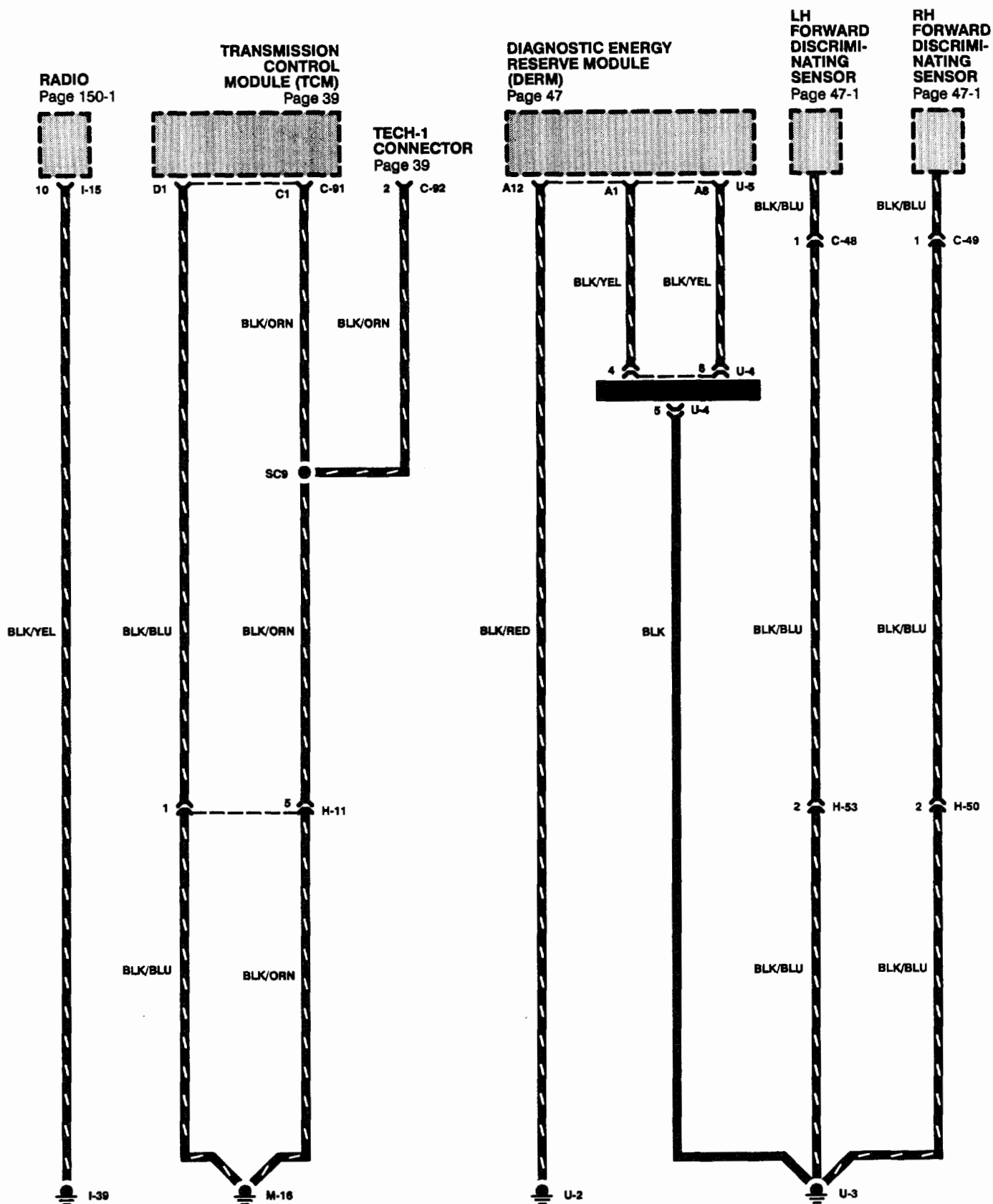


GROUND DISTRIBUTION: C-45, C-85, C-96, E-28, E-29, E-30, AND E-31

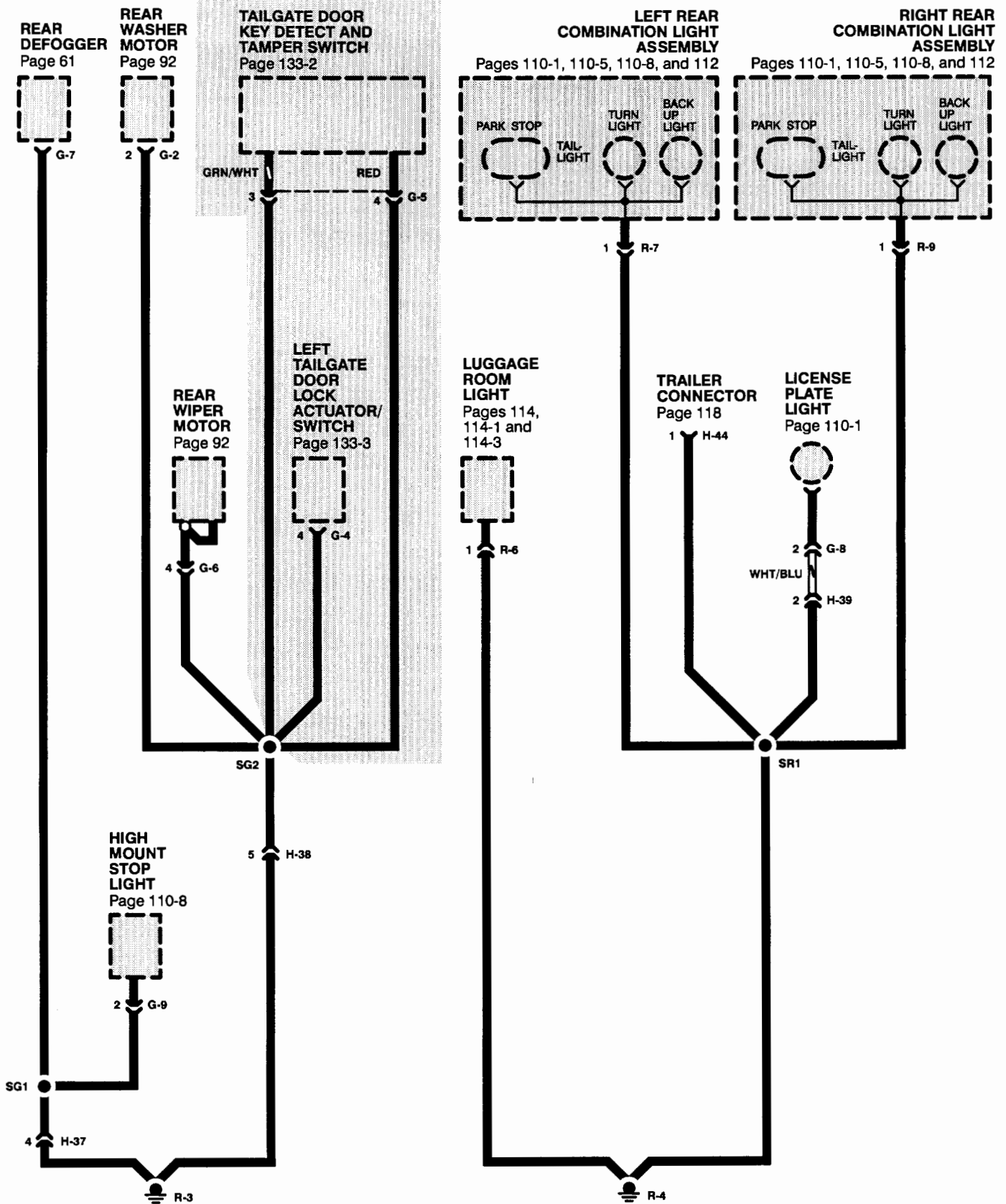
Circuit Schematic



Circuit Schematic



LIMITED and RS Models



GROUND DISTRIBUTION

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
4WD Indicator Switch	46
A/T Shift Indicator	
Control Unit	67
ABS ALDL Connector	
C-94 (3-ORN)	55
ABS Hydraulic Unit	33
Anti-theft Controller	68
Automatic Transmission	
Mode Switch	47
Brake Fluid Level Switch	28
Cruise Control	
Pump/Actuator	40
Cruise Control Unit	84
Cruise Main Relay	35
Dash Fuse Box	58
Data Link Connector	
(DLC) C-9 (3-WHT)	55
Diagnostic Energy Reserve	
Module (DERM)	72
Driver's Recliner Motor	
and switch	
Driver's Seat Belt Switch	
Driver's Seat Tilt Motor	
and Switch (Front)	121
Driver's Seat Tilt Motor	
and Switch (Rear)	121
ECM Main Relay	37
Electronic Brake Control	
Module (EBCM)	74
Electronic Ignition (EI)	
(DOHC)	15
Electronic Ignition (EI)	
(SOHC)	9
Engine Control Module	
(ECM)	73
Flasher Unit	60
Fuel Pump	
Fuel Pump Relay	37
Fuel Tank Unit	115
Fuse/Relay Box	33
Glove Box Switch	
Headlight Wiper Timer Unit	80
Heated Oxygen Sensor	
(HO2S)	47
Heater and A/C Relay	59
Kick Down Switch	70
Knock Sensor (KS)	
Knock Sensor (KS)	
Controller	30

Component Location Index

(Refer to Section 201 for photographs.)

Component (cont'd)	Photo No.
Left Front Door Key Detect	
And Tamper Switch	Inside left front door, part of outside handle assembly 92
Left Front Door Lock	
Actuator/Switch	Inside rear of left front door, behind trim pad 93
Left Front Door Lock	
Key Switch	Inside left front door, part of door lock assembly 93
Left Headlight Wiper Motor ..	Behind left headlight assembly 5
Left Rear Door Lock	
Actuator/Switch	Inside of left rear door, behind trim pad 97
Left Tailgate Door Lock	
Actuator/Switch	Inside left tailgate door, behind trim pad 104
LH Forward Discriminating	
Sensor	Mounted to left side of radiator support 51
Limit Switch	Right rear underside of roof
Power Steering Pressure	
Switch	Lower right front of engine compartment 22
Power Window Relay	In dash fuse box 59
Rear Intermittent Wiper	
Relay	Behind left dash side trim panel, in access hole 57
Rear Washer Motor	Inside left tailgate door, behind trim pad 106
Rear Wheel Anti-lock Brake	
Controller	Behind lower cluster assembly 75
Rear Wheel Anti-lock Brake	
Valve	Right front of engine compartment 21
Rear Wiper Motor	Inside left tailgate door, behind trim pad 104
RH Forward Discriminating	
Sensor	Mounted to right side of radiator support 50
Right Front Door Key Detect	
And Tamper Switch	Inside right front door, part of outside handle assembly 92
Right Front Door Lock	
Actuator/Switch	Inside rear of right front door, behind trim pad 93
Right Front Door Lock	
Key Switch	Inside rear of right front door, part of door lock assembly 93
Right Headlight Wiper Motor ..	Behind right headlight assembly 5
Right Rear Door Lock	
Actuator/Switch	Inside of right rear door, behind trim pad 97
Right Recliner Motor	
and Switch	In right front seatback
Safety Stop Switch	Rear underside of roof 101
Seat Belt, Key And Light	
Remind Buzzer	Behind right dash side trim panel 86
Shift Lock Controller	Below front console 77
Starter Relay	In fuse/relay box 36
Sunroof Control Unit	Rear underside of roof 101
Tailgate Door Key Detect	
And Tamper Switch	Inside left tailgate door, behind trim pad 105
Tech-1 Connector C-92	
(2-WHT)	Behind left I/P lower cover 55

GROUND DISTRIBUTION

Component Location Index

(Refer to Section 201 for photographs.)

Component (cont'd)	Photo No.
Trailer Connector H-44 (6-WHT)	Below left rear of vehicle, behind grommet 117
Transmission Control Module (TCM)	Below left side of I/P 65
Upshift Relay-1	In fuse/relay box 34
Upshift Relay-2	In fuse/relay box 34
Vehicle Speed Sensor	Beneath center of vehicle, on rear of transmission 45
Windshield Intermittent Wiper Relay	In fuse/relay box 38
Windshield Washer Motor	Right side of engine compartment, in washer fluid reservoir 32
Windshield Wiper Motor	Right rear corner of engine compartment 41
Connector	
B-10 (2-WHT)	Below I/P, right of steering column 70
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
B-24 (3-BLK)	Below left front seat 119
B-32 (6-WHT)	Below rear of front console 78
B-52 (14-BLK)	Below I/P, right of steering column 69
C-1 (24-BRN)	On engine control module (ECM) 73
C-2 (32-BRN)	On engine control module (ECM) 73
C-22 (4-GRY)	Behind left front combination light assembly 3
C-23 (6-GRY)	Behind left side of front bumper 5
C-24 (2-GRY)	Behind left fog light 4
C-26 (2-BLK)	Lower right front of engine compartment, below battery tray
C-29 (2-GRY)	Behind right fog light 4
C-30 (6-GRY)	Behind right side of front bumper 5
C-31 (4-GRY)	Behind right front combination light assembly 3
C-34 (12-GRY)	Right front corner of engine compartment 49
C-37 (4-GRY)	Right rear corner of engine compartment 40
C-38 (6-WHT)	Right rear of engine compartment 41
C-43 (8-BLK)	Left front of engine compartment 27
C-48 (2-YEL)	Behind left headlight 51
C-49 (2-YEL)	Below right side of radiator support 50
C-91 (32-BLU)	On transmission control module (TCM) 65
D-3 (8-WHT)	In top of left front door 91
D-5 (10-BLK)	On left front door power window and lock switch
D-6 (4-GRY)	Inside left front door, behind trim pad 92
D-8 (3-WHT)	Inside left front door, behind trim pad 93
D-12 (8-WHT)	In top of right front door 91
D-16 (4-GRY)	Inside right front door, behind trim pad 92
D-17 (3-WHT)	Inside right front door, behind trim pad 93
E-14 (2-BLK)	Right rear of engine 17
E-18 (2-BLK) (DOHC)	On left side of electronic ignition (EI) 15
E-18 (2-BLK) (SOHC)	On right side of electronic ignition (EI) 9
F-4 (2-BLK)	Beneath rear of vehicle, right of fuel tank 114
G-5 (4-GRY)	Inside left tailgate door, behind trim pad 105
G-6 (4-WHT)	Inside left tailgate door, behind trim pad 104
G-7 (1-BLK)	On right side of glass, in left tailgate door 106
G-8 (2-WHT)	Inside right tailgate door, behind trim pad 108
G-9 (2-WHT/BLK)	Inside top center of left tailgate door 110

Component Location Index

(Refer to Section 201 for photographs.)

Connector (cont'd)

Photo No.

H-5 (16-GRN)	Left side of engine compartment	30
H-6 (12-BLK)	Left side of engine compartment	30
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket	63
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket	62
H-10 (16-BLU)	Left front of engine compartment	27
H-11 (12-BLK)	Left front of engine compartment	27
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket	82
H-16 (22-WHT)	Behind right dash side trim panel	86
H-18 (18-WHT)	Behind right dash side trim panel, in access hole	87
H-19 (8-BLK)	Behind right dash side trim panel, in access hole	87
H-21 (4-WHT)	Below I/P, above right dash side trim panel, on bracket	82
H-22 (18-WHT)	Behind left dash side trim panel, in access hole	87
H-23 (8-BLK)	Behind left dash side trim panel, in access hole	87
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket	63
H-29 (3-BLU)	In left center pillar	94
H-33 (14-WHT)	In floor, below right front seat	125
H-35 (3-BLU)	In right center pillar	94
H-37 (4-GRY)	Left rear of luggage room	102
H-38 (10-WHT)	Left rear of luggage room	102
H-39 (2-WHT)	Right rear of luggage room	109
H-41 (16-BLU) (ABS)	Right front of engine compartment	31
H-42 (16-BLK)	Right front of engine compartment	31
H-45 (6-BLK)	Center of roof, above map lights	98
H-46 (6-WHT)	Below left side of left front seat	120
H-47 (6-WHT)	Below right side of right front seat	125
H-48 (16-BLK)	Behind right dash side trim panel	86
H-50 (2-YEL)	Below right side of I/P	80
H-53 (2-YEL)	Below I/P, above left dash side trim panel, on bracket	64
I-9 (16-BLK)	On left rear of meter assembly	53
I-10 (16-WHT)	On right rear of meter assembly	53
I-13 (6-WHT)	Behind left side of I/P	52
I-18 (6-WHT)	On rear of heater-A/C control panel	76
I-19 (2-WHT)	Behind cigarette lighter	71
L-1 (3-WHT)	Center of roof, above map lights	98
M-5 (4-BLK)	Beneath center of vehicle, top left side of transmission	47
M-12 (1-WHT)	Beneath center of vehicle, top right side of transmission	46
R-6 (3-WHT)	Center rear of roof	100
R-7 (6-WHT/BLK)	Behind left taillight assembly	118
R-9 (6-WHT/BLK)	Behind right taillight assembly	118
S-2 (3-WHT)	Center of roof	101
S-5 (6-WHT)	On sunroof control unit	101
T-2 (2-WHT)	Underside of driver's seat	123
T-3 (3-WHT)	Underside of driver's seat	123
T-5 (3-GRY)	Underside of driver's seat	124
T-8 (4-WHT)	Underside of driver's seat	122
T-9 (2-WHT)	Underside of right front seat	127
T-10 (4-WHT)	Underside of right front seat	126
T-11 (6-BLU)	Underside of driver's seat	123
T-12 (6-BLU)	Underside of right front seat	127

GROUND DISTRIBUTION

Component Location Index

(Refer to Section 201 for photographs.)

Connector (cont'd)

Photo No.

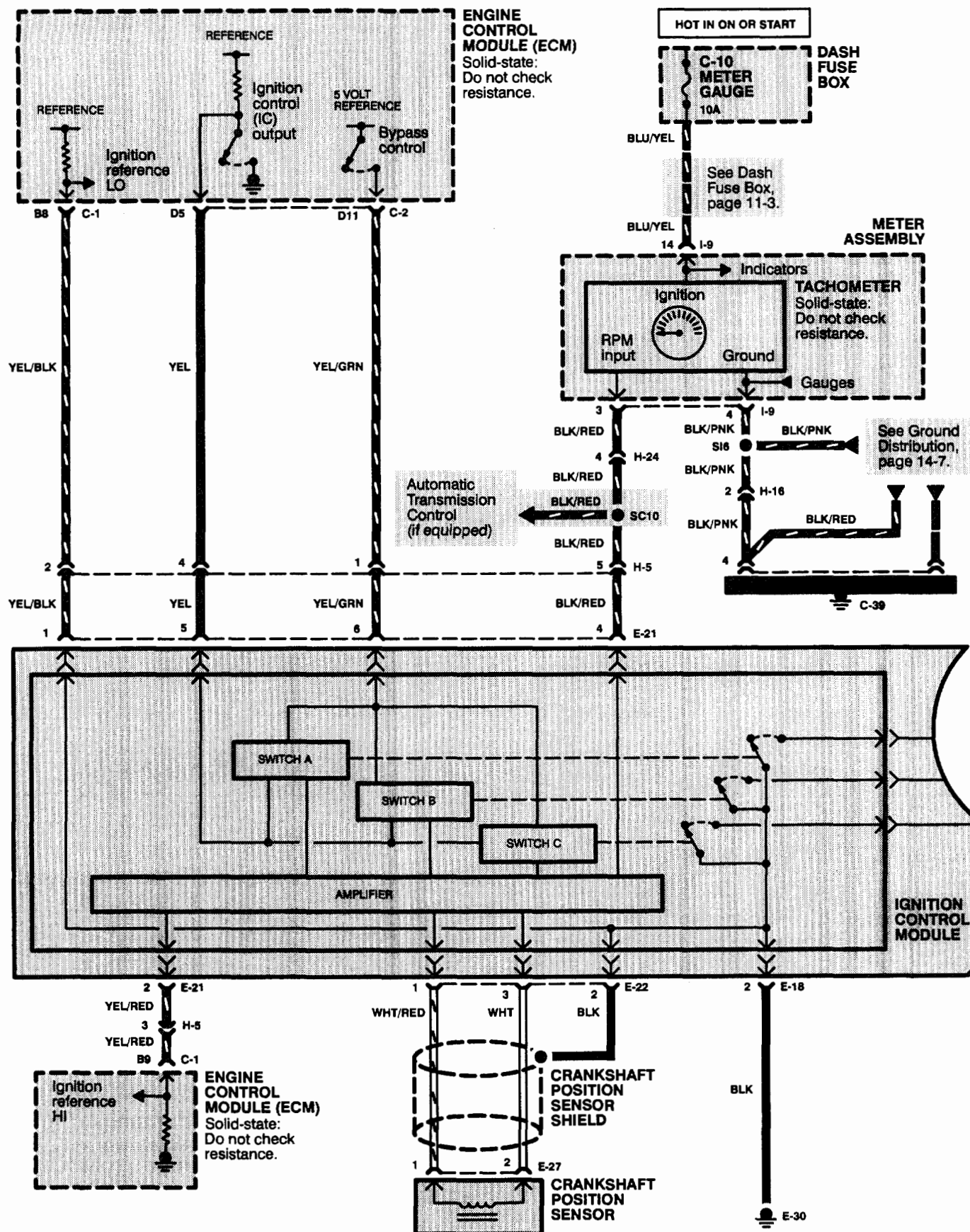
U-4 (12-YEL) Behind front of front console 72

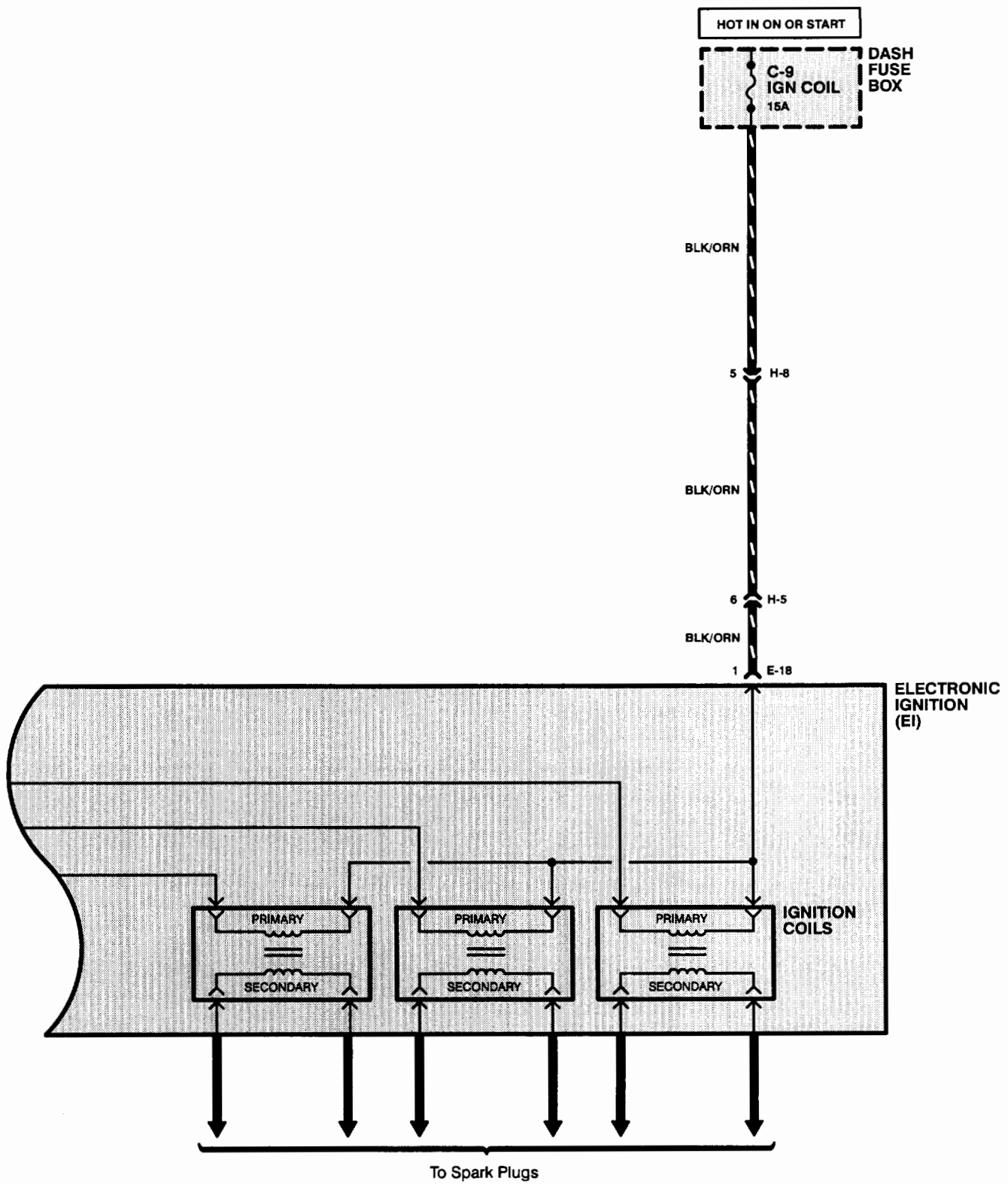
Ground

B-1 Above right dash side trim panel 84
B-2 Above right dash side trim panel 84
B-18 Behind top of left dash side trim panel 62
B-19 Behind top of left dash side trim panel 62
B-26 Below rear of center console 79
C-16 Left rear corner of engine compartment, on inner fender panel 28
C-39 Right rear corner of engine compartment, on inner fender panel 42
C-45 Below right side of front console 75
C-85 Below right side of front console 73
C-96 Right front of engine compartment 21
E-28 (DOHC) Top center of engine 14
E-28 (SOHC) Top center front of engine 9
E-29 (DOHC) Top center of engine 14
E-29 (SOHC) Top center front of engine 9
E-30 (DOHC) Top left rear of engine 17
E-30 (SOHC) Top center front of engine 9
E-31 (DOHC) Top left rear of engine 17
E-31 (SOHC) Top center front of engine 9
I-39 Behind right side of lower cluster assembly 74
M-16 Left underside of engine, top of oil pan 26
P-6 Right side of engine compartment, on rear of battery tray
P-7 Lower right front of engine compartment 25
P-10 Lower right side of engine compartment
P-11 On rear of right valve cover 19
P-12 Lower right rear of engine compartment 19
P-13 On rear of left valve cover 20
P-14 Left rear of engine compartment, on bulkhead 20
R-3 Left side of luggage room 103
R-4 Left side of luggage room 103
U-2 Below right side of front console 72
U-3 Below right side of front console 72

IGNITION SYSTEM

Circuit Schematic





IGNITION SYSTEM

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Crankshaft Position Sensor ... Lower right side of engine, above oil pan	18
Dash Fuse Box Behind left dash side trim panel	58
Electronic Ignition (EI)	
(DOHC) Top center rear of engine	15
Electronic Ignition (EI)	
(SOHC) Center front of engine	9
Engine Control Module	
(ECM) Behind front of front console	73
Connector	
C-1 (24-BRN) On engine control module (ECM)	73
C-2 (32-BRN) On engine control module (ECM)	73
E-18 (2-BLK) (DOHC) On left side of electronic ignition (EI)	15
E-18 (2-BLK) (SOHC) On right side of electronic ignition (EI)	9
E-21 (6-BLK) (DOHC) On right side of electronic ignition (EI)	16
E-21 (6-BLK) (SOHC) On left side of electronic ignition (EI)	9
E-22 (3-BLK) (DOHC) On right side of electronic ignition (EI)	16
E-22 (3-BLK) (SOHC) On left side of electronic ignition (EI)	9
H-5 (16-GRN) Left side of engine compartment	30
H-8 (16-BLK) Below I/P, above left dash side trim panel, on bracket	62
H-16 (22-WHT) Behind right dash side trim panel	86
H-24 (18-YEL) Below I/P, above left dash side trim panel, on bracket	63
I-9 (16-BLK) On left rear of meter assembly	53
Ground	
C-39 Right rear corner of engine compartment, on inner fender panel	42
E-30 (DOHC) Top left rear of engine	17
E-30 (SOHC) Top center front of engine	9

Circuit Operation

With the starter switch in ON or START, battery voltage is applied to the electronic ignition (EI). When the engine is being cranked to start, the crankshaft position sensor sends timing information directly to the electronic ignition (EI). The ignition control module fires the ignition coils and the engine starts. After the engine reaches a certain idle speed, timing is switched to the engine control module (ECM). The engine control module (ECM) receives information such as firing order and starting timing at each ignition coil from the crankshaft position sensor. The engine control module (ECM) relies on information from various engine sensors to determine correct ignition timing.

Circuit Schematic

[illegible]

Manual Transmission

This wiring diagram illustrates the electrical system for a vehicle with a manual transmission. The system is powered by a battery connected to a fuse/relay box containing a 50A key switch (FL-2) and an 80A main fuse (FL-1). The main power line (WHT/BLK) runs through a series of connectors (H-14, SX5, H-15) to the starter relay. The starter relay is controlled by a clutch start switch (closed with the clutch pedal depressed) and a dash fuse box containing a 10A starter relay fuse (C-1). The starter relay's pull-in coil is connected to the battery through a 50A fuse (FL-2) and a 10A fuse (C-1). The hold-in coil is connected to the battery through a 10A fuse (C-1) and a 10A fuse (C-1). The starter motor is connected to the battery through a 10A fuse (C-1) and a 10A fuse (C-1). The diagram also shows the wiring for the anti-theft controller, which is solid-state and should not be checked for resistance. The anti-theft controller is connected to the battery through a 10A fuse (C-1) and a 10A fuse (C-1). The diagram includes various connectors and terminals labeled with letters and numbers, such as P-1, P-2, P-3, P-4, P-5, P-6, P-7, P-10, P-11, P-12, P-13, P-14, P-15, P-16, P-17, P-18, P-19, P-20, P-21, P-22, P-23, P-24, P-25, P-26, P-27, P-28, P-29, P-30, P-31, P-32, P-33, P-34, P-35, P-36, P-37, P-38, P-39, P-40, P-41, P-42, P-43, P-44, P-45, P-46, P-47, P-48, P-49, P-50, P-51, P-52, P-53, P-54, P-55, P-56, P-57, P-58, P-59, P-60, P-61, P-62, P-63, P-64, P-65, P-66, P-67, P-68, P-69, P-70, P-71, P-72, P-73, P-74, P-75, P-76, P-77, P-78, P-79, P-80, P-81, P-82, P-83, P-84, P-85, P-86, P-87, P-88, P-89, P-90, P-91, P-92, P-93, P-94, P-95, P-96, P-97, P-98, P-99, P-100, P-101, P-102, P-103, P-104, P-105, P-106, P-107, P-108, P-109, P-110, P-111, P-112, P-113, P-114, P-115, P-116, P-117, P-118, P-119, P-120, P-121, P-122, P-123, P-124, P-125, P-126, P-127, P-128, P-129, P-130, P-131, P-132, P-133, P-134, P-135, P-136, P-137, P-138, P-139, P-140, P-141, P-142, P-143, P-144, P-145, P-146, P-147, P-148, P-149, P-150, P-151, P-152, P-153, P-154, P-155, P-156, P-157, P-158, P-159, P-160, P-161, P-162, P-163, P-164, P-165, P-166, P-167, P-168, P-169, P-170, P-171, P-172, P-173, P-174, P-175, P-176, P-177, P-178, P-179, P-180, P-181, P-182, P-183, P-184, P-185, P-186, P-187, P-188, P-189, P-190, P-191, P-192, P-193, P-194, P-195, P-196, P-197, P-198, P-199, P-200, P-201, P-202, P-203, P-204, P-205, P-206, P-207, P-208, P-209, P-210, P-211, P-212, P-213, P-214, P-215, P-216, P-217, P-218, P-219, P-220, P-221, P-222, P-223, P-224, P-225, P-226, P-227, P-228, P-229, P-230, P-231, P-232, P-233, P-234, P-235, P-236, P-237, P-238, P-239, P-240, P-241, P-242, P-243, P-244, P-245, P-246, P-247, P-248, P-249, P-250, P-251, P-252, P-253, P-254, P-255, P-256, P-257, P-258, P-259, P-260, P-261, P-262, P-263, P-264, P-265, P-266, P-267, P-268, P-269, P-270, P-271, P-272, P-273, P-274, P-275, P-276, P-277, P-278, P-279, P-280, P-281, P-282, P-283, P-284, P-285, P-286, P-287, P-288, P-289, P-290, P-291, P-292, P-293, P-294, P-295, P-296, P-297, P-298, P-299, P-300, P-301, P-302, P-303, P-304, P-305, P-306, P-307, P-308, P-309, P-310, P-311, P-312, P-313, P-314, P-315, P-316, P-317, P-318, P-319, P-320, P-321, P-322, P-323, P-324, P-325, P-326, P-327, P-328, P-329, P-330, P-331, P-332, P-333, P-334, P-335, P-336, P-337, P-338, P-339, P-340, P-341, P-342, P-343, P-344, P-345, P-346, P-347, P-348, P-349, P-350, P-351, P-352, P-353, P-354, P-355, P-356, P-357, P-358, P-359, P-360, P-361, P-362, P-363, P-364, P-365, P-366, P-367, P-368, P-369, P-370, P-371, P-372, P-373, P-374, P-375, P-376, P-377, P-378, P-379, P-380, P-381, P-382, P-383, P-384, P-385, P-386, P-387, P-388, P-389, P-390, P-391, P-392, P-393, P-394, P-395, P-396, P-397, P-398, P-399, P-400, P-401, P-402, P-403, P-404, P-405, P-406, P-407, P-408, P-409, P-410, P-411, P-412, P-413, P-414, P-415, P-416, P-417, P-418, P-419, P-420, P-421, P-422, P-423, P-424, P-425, P-426, P-427, P-428, P-429, P-430, P-431, P-432, P-433, P-434, P-435, P-436, P-437, P-438, P-439, P-440, P-441, P-442, P-443, P-444, P-445, P-446, P-447, P-448, P-449, P-450, P-451, P-452, P-453, P-454, P-455, P-456, P-457, P-458, P-459, P-460, P-461, P-462, P-463, P-464, P-465, P-466, P-467, P-468, P-469, P-470, P-471, P-472, P-473, P-474, P-475, P-476, P-477, P-478, P-479, P-480, P-481, P-482, P-483, P-484, P-485, P-486, P-487, P-488, P-489, P-490, P-491, P-492, P-493, P-494, P-495, P-496, P-497, P-498, P-499, P-500, P-501, P-502, P-503, P-504, P-505, P-506, P-507, P-508, P-509, P-510, P-511, P-512, P-513, P-514, P-515, P-516, P-517, P-518, P-519, P-520, P-521, P-522, P-523, P-524, P-525, P-526, P-527, P-528, P-529, P-530, P-531, P-532, P-533, P-534, P-535, P-536, P-537, P-538, P-539, P-540, P-541, P-542, P-543, P-544, P-545, P-546, P-547, P-548, P-549, P-550, P-551, P-552, P-553, P-554, P-555, P-556, P-557, P-558, P-559, P-560, P-561, P-562, P-563, P-564, P-565, P-566, P-567, P-568, P-569, P-570, P-571, P-572, P-573, P-574, P-575, P-576, P-577, P-578, P-579, P-580, P-581, P-582, P-583, P-584, P-585, P-586, P-587, P-588, P-589, P-590, P-591, P-592, P-593, P-594, P-595, P-596, P-597, P-598, P-599, P-600, P-601, P-602, P-603, P-604, P-605, P-606, P-607, P-608, P-609, P-610, P-611, P-612, P-613, P-614, P-615, P-616, P-617, P-618, P-619, P-620, P-621, P-622, P-623, P-624, P-625, P-626, P-627, P-628, P-629, P-630, P-631, P-632, P-633, P-634, P-635, P-636, P-637, P-638, P-639, P-640, P-641, P-642, P-643, P-644, P-645, P-

STARTING SYSTEM

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Anti-theft Controller	Below left side of I/P 68
Automatic Transmission	
Mode Switch	Beneath vehicle, on left side of transmission 47
Clutch Start Switch	Below I/P, top of clutch pedal support 66
Dash Fuse Box	Behind left dash side trim panel 58
Diode Box 4	In dash fuse box 61
Diode Box A	In fuse/relay box 36
Engine Control Module	
(ECM)	Behind front of front console 73
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Starter	Lower left rear of engine 24
Starter Relay	In fuse/relay box 36
Starter Switch	Underside of steering column 54
Connector	
B-11 (8-WHT)	Below I/P, right of steering column 69
C-2 (32-BRN)	On engine control module (ECM) 73
C-43 (8-BLK)	Left front of engine compartment 27
H-1 (1-BLK)	Right front of engine compartment 31
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-14 (2-RED)	Below I/P, above right dash side trim panel, on bracket 82
H-41 (12-BLU) (RWAL)	Right front of engine compartment 31
H-41 (16-BLU) (ABS)	Right front of engine compartment 31
Ground	
B-2	Above right dash side trim panel 84
B-19	Behind top of left dash side trim panel 62
P-6	Right side of engine compartment, on rear of battery tray
P-7	Lower right front of engine compartment 25
P-10	Lower right side of engine compartment
Terminal	
P-2	In fuse/relay box 38

Circuit Operation

Manual Transmission

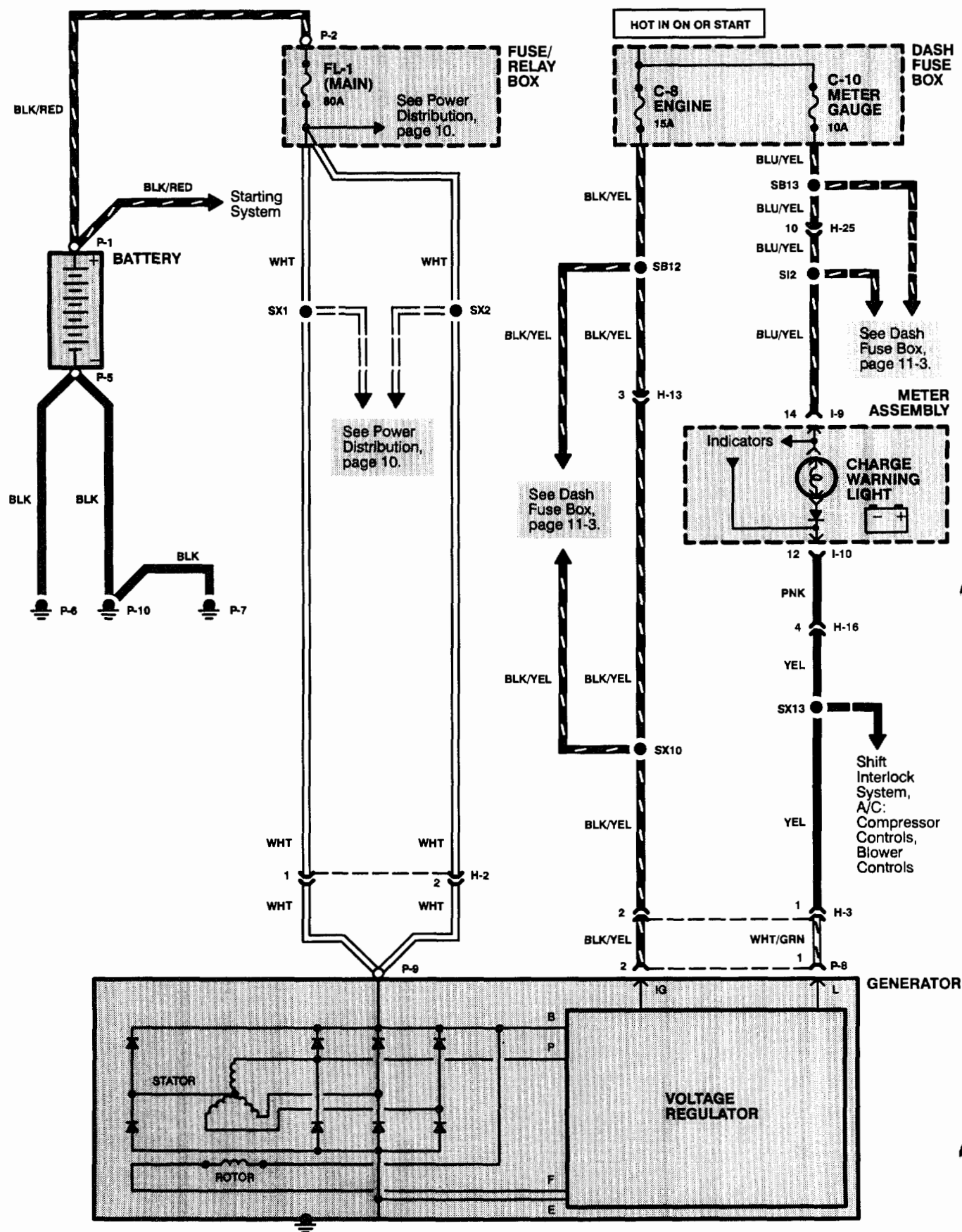
Battery voltage is applied at all times from the positive battery terminal to the starter switch and the normally open starter solenoid contacts. When the starter switch is turned to START and the clutch start switch is closed, battery voltage is applied to the starter relay. The starter relay energizes and applies battery voltage to the starter solenoid coils. The starter solenoid coils energize, the starter solenoid contact closes, and battery voltage is applied to the starter motor. The starter motor engages to start the engine.

Automatic Transmission

Battery voltage is applied at all times from the positive battery terminal to the starter switch and the normally open starter solenoid contacts. When the starter switch is turned to START and the automatic transmission mode switch is in park or neutral, battery voltage is applied to the starter relay. The starter relay energizes and applies battery voltage to the starter solenoid coils. The starter solenoid coils energize, the starter solenoid contact closes, and battery voltage is applied to the starter motor. The starter motor engages to start the engine.

CHARGING SYSTEM

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Generator	Lower right front of engine
Connector	
H-2 (2-GRY)	Right side of engine compartment 40
H-3 (2-BLK)	Right side of engine compartment 40
H-13 (6-GRY)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
I-9 (16-BLK)	On left rear of meter assembly 53
I-10 (16-WHT)	On right rear of meter assembly 53
Ground	
P-6	Right side of engine compartment, on rear of battery tray
P-7	Lower right front of engine compartment 25
P-10	Lower right side of engine compartment
Terminal	
P-2	In fuse/relay box 38

Circuit Operation

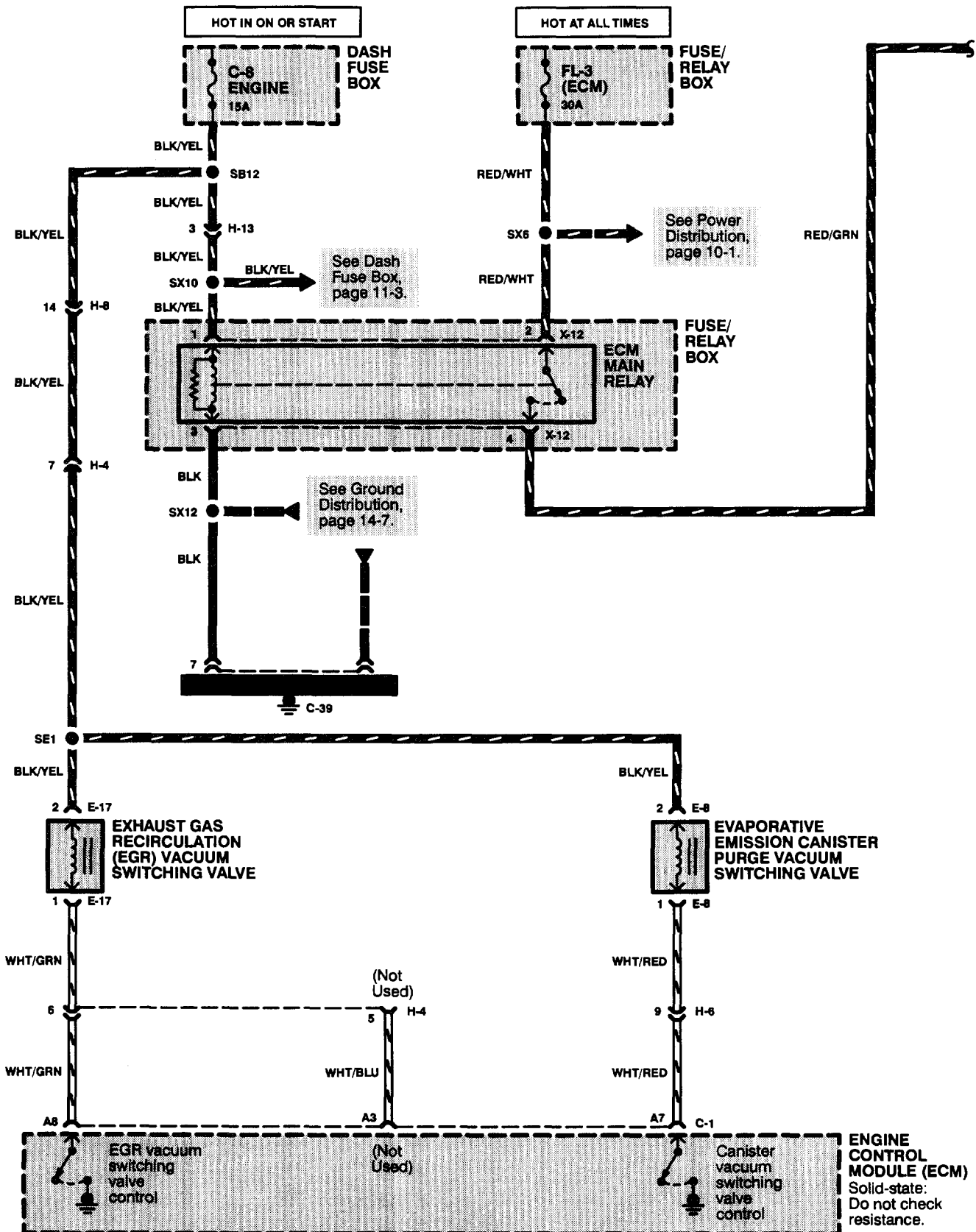
The generator generates an AC voltage in its windings as it is belt-driven by the engine. The rectifier converts this AC voltage to DC.

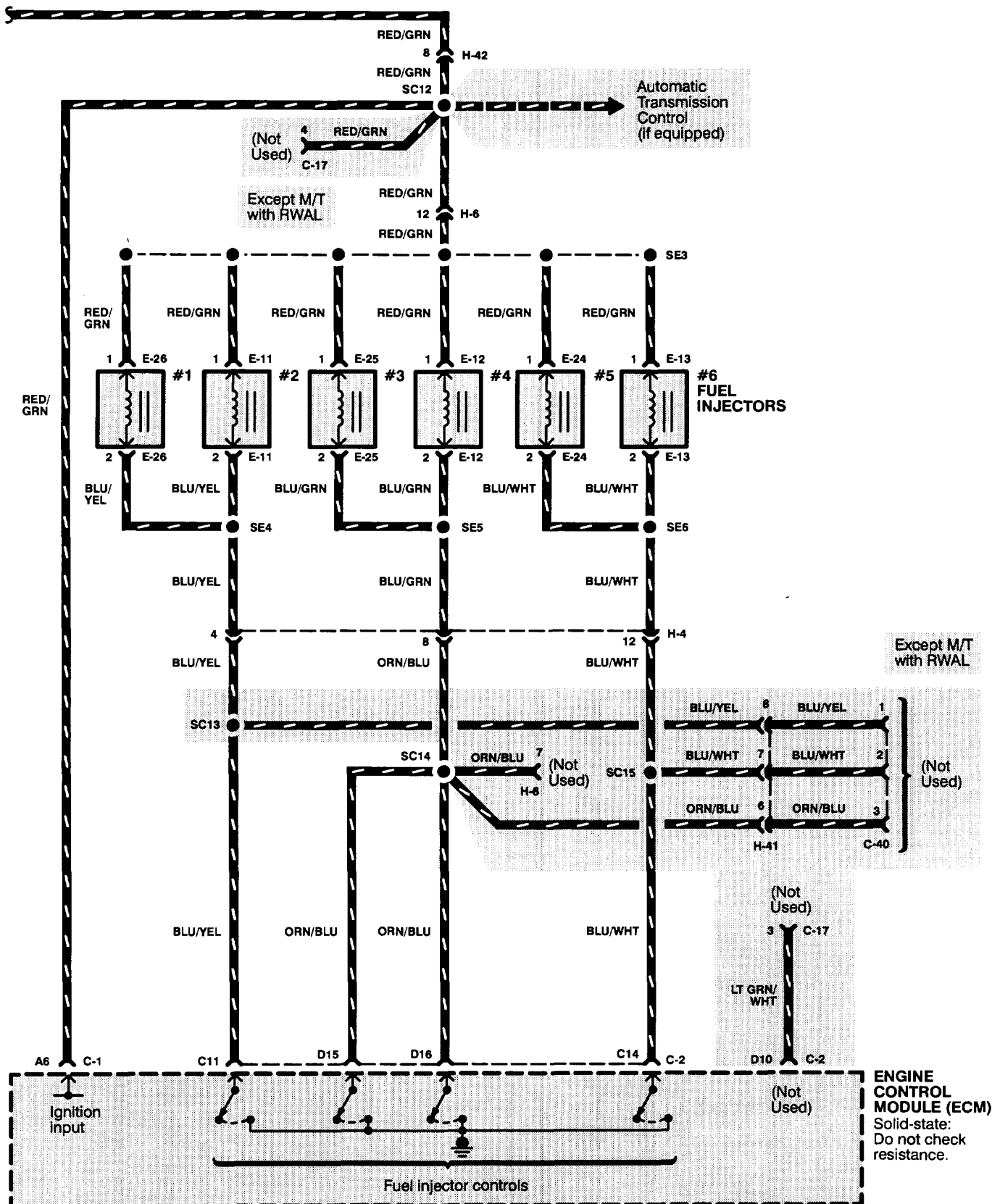
The voltage regulator, a component which is included in the generator frame, has a primary function of controlling the generator's output to meet electrical system requirements. This regulator controls the charge warning light.

Fuse C-10 supplies battery voltage to the charge warning light. With the engine not running and the starter switch in ON, terminal L of the regulator is grounded internally, providing ground for the charge warning light, and the indicator lights up. With the engine running and the generator charging, terminal L voltage rises and the indicator goes out. If the generator fails to charge, terminal L grounds internally, which then provides ground for the charge warning light, and the indicator lights up.

ENGINE CONTROL: SOHC

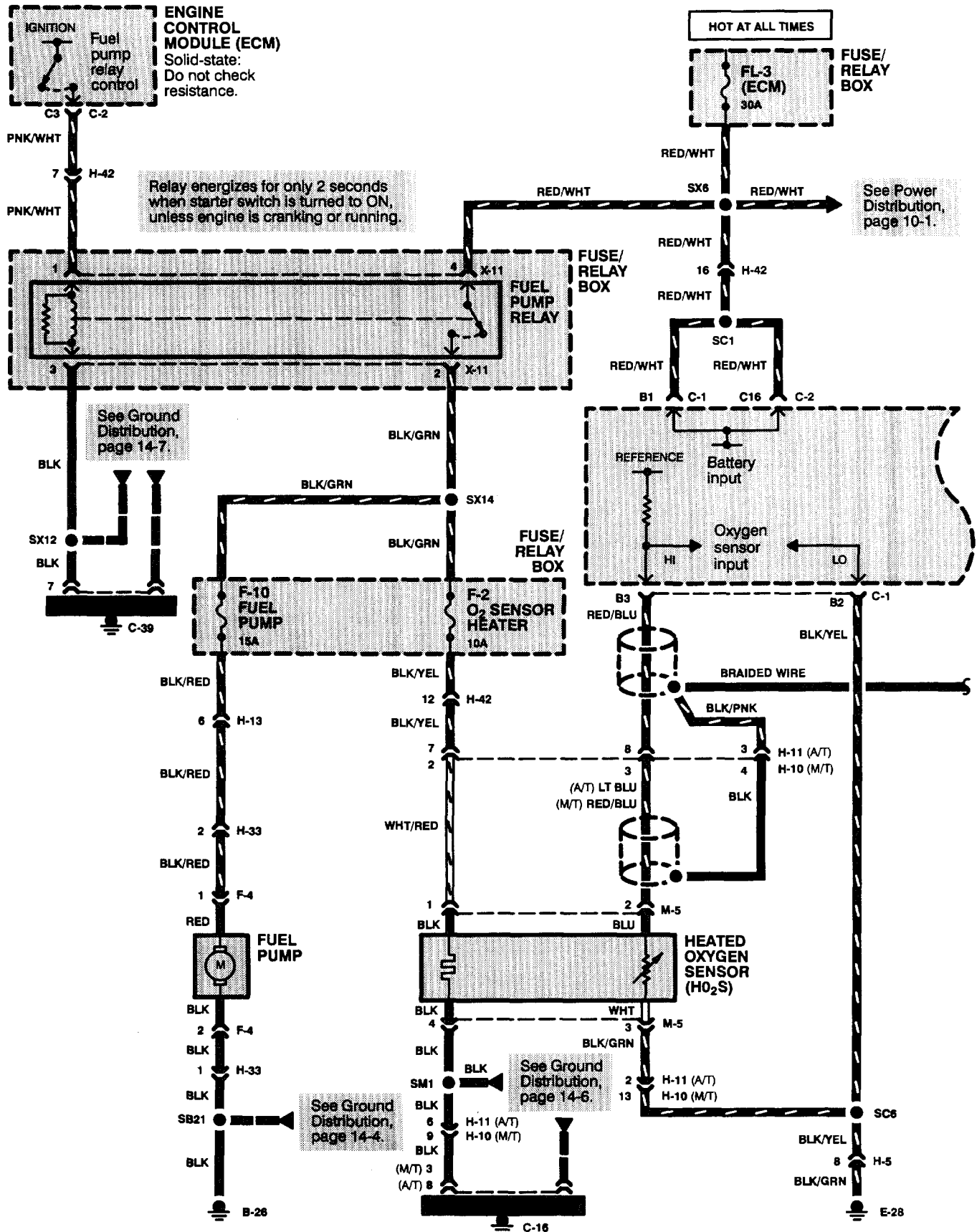
Circuit Schematic

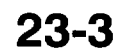




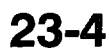
ENGINE CONTROL: SOHC

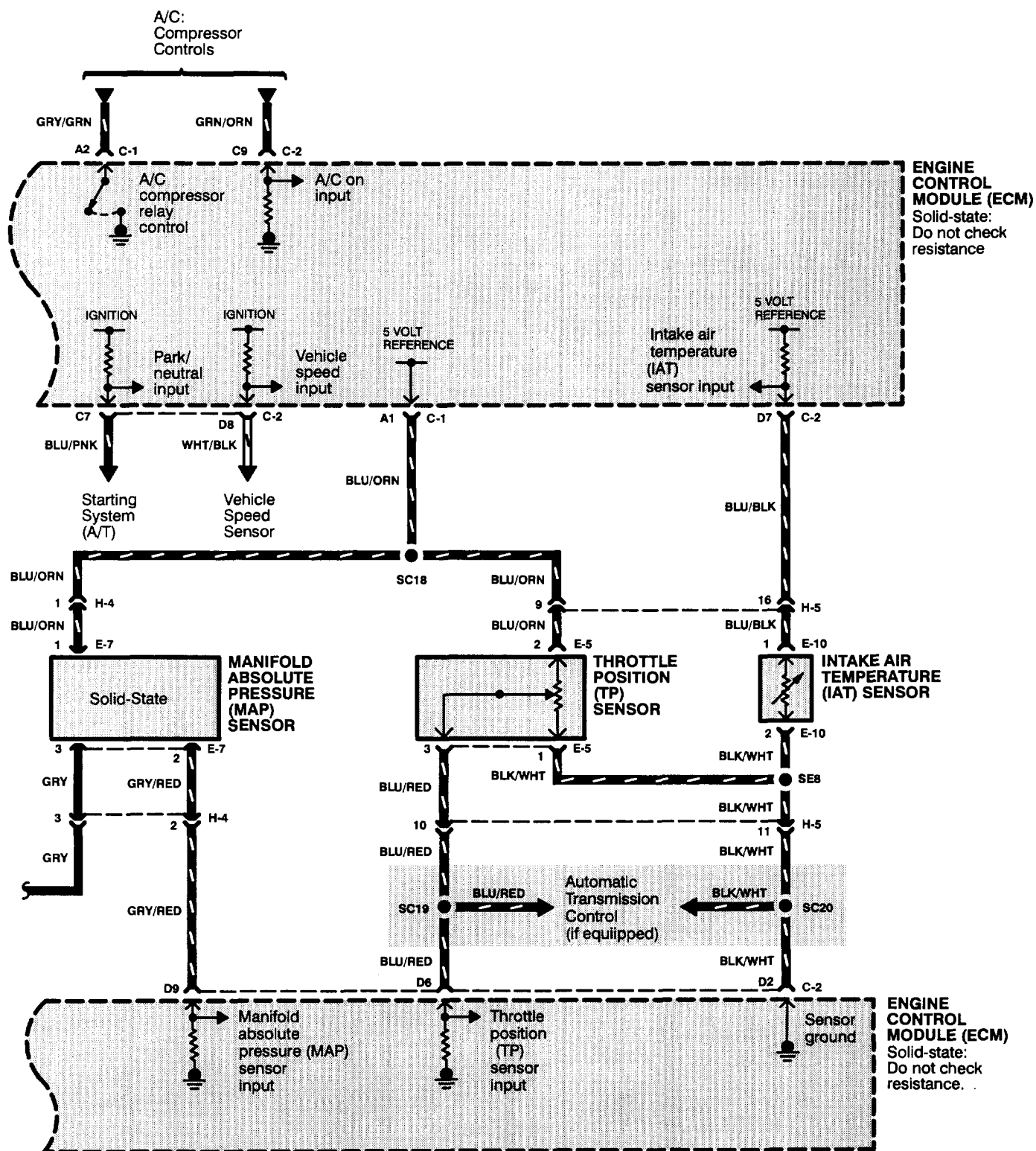
Circuit Schematic





Circuit Schematic





Circuit Schematic

HOT AT ALL TIMES

FUSE/RELAY BOX

F-12
TAIL
18A

RED/BLK

SX4

RED/BLK

RED/BLK

FUSE/RELAY BOX

TAIL-LIGHT RELAY

GRN

1 H-12

LT BLU

8 B-12

WHT

COMBINATION SWITCH

HEAD

PARK

Head-lights

OFF

WHT

7 B-12

BLK

SB20

BLK

B-19

GRN/RED

SX15

Dash and Console Lights

GRN/RED

FUSE/RELAY BOX

UPSHIFT RELAY-1

UPSHIFT RESISTOR

BLU/ORN

BLU/ORN

ORN/BLU

ORN/BLU

H-42

C-1

ENGINE CONTROL MODULE (ECM)
Solid-state;
Do not check resistance.

"U/S" indicator light control

METER ASSEMBLY

"U/S" INDICATOR LIGHT

From SC22 on facing page.

GRY/WHT

13 H-9

GRY/WHT

8 I-9

9 I-9

21 H-16

BLU/ORN

BLU/ORN

BLU/ORN

ORN/BLU

ORN/BLU

2 H-42

A4

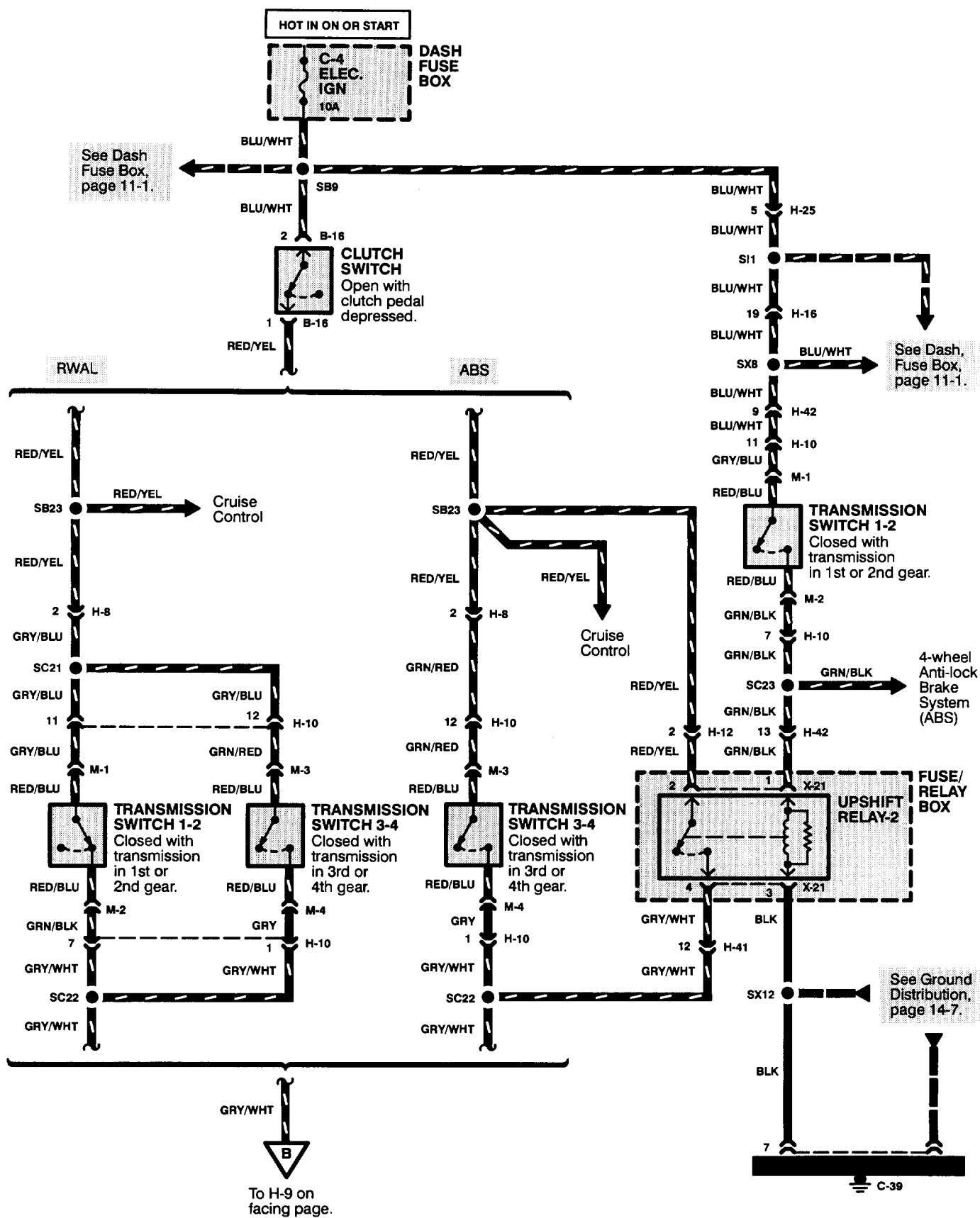
C-1

"U/S" indicator light control

See Ground Distribution, page 14-3.

See Ground Distribution, page 14-7.

C-39



ENGINE CONTROL: SOHC

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Clutch Switch	Below I/P, top of clutch pedal support 66
Dash Fuse Box	Behind left dash side trim panel 58
Data Link Connector (DLC)	
C-9 (3-WHT)	Behind left I/P lower cover 55
ECM Main Relay	In fuse/relay box 37
Engine Control Module (ECM)	Behind front of front console 73
Engine Coolant Temperature (ECT) Sensor	Right rear of engine 17
Evaporative Emission	
Canister Purge Vacuum Switching Valve (SOHC)	Top left rear of engine 12
Exhaust Gas Recirculation (EGR) Vacuum Switching Valve (SOHC)	Top left rear of engine 12
Fuel Injectors	Top center of engine
Fuel Pump	Beneath rear of vehicle, in top of fuel tank
Fuel Pump Relay	In fuse/relay box 37
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Heated Oxygen Sensor (HO2S)	Beneath center of vehicle, in exhaust pipe 47
Idle Air Control Valve (SOHC)	Top center of engine, on air intake assembly 10
Intake Air Temperature (IAT) Sensor (SOHC)	Top right side of engine 11
Manifold Absolute Pressure (MAP) Sensor (SOHC)	Top right side of engine 11
Power Steering Pressure Switch	Lower right front of engine compartment 22
Taillight Relay	In fuse/relay box 36
Throttle Position (TP) Sensor (SOHC)	Top center of engine, on air intake assembly 10
Transmission Control Module (TCM)	Below left side of I/P 65
Transmission Switch 1-2	Beneath vehicle, on left side of transmission 43
Transmission Switch 3-4	Beneath vehicle, on top of transmission
Upshift Relay-1	In fuse/relay box 34
Upshift Relay-2	In fuse/relay box 34
Upshift Resistor	In fuse/relay box 39
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
C-1 (24-BRN)	On engine control module (ECM) 73
C-2 (32-BRN)	On engine control module (ECM) 73
C-17 (5-BLK) (SOHC)	Left side engine compartment
C-26 (2-BLK)	Lower right front of engine compartment, below battery tray
C-40 (3-GRN)	Right rear corner of engine compartment 42
C-91 (32-BLU)	On transmission control module (TCM) 65
F-4 (2-BLK)	Beneath rear of vehicle, right of fuel tank 114
H-4 (12-BLU)	Left side of engine compartment 30

Component Location Index

(Refer to Section 201 for photographs.)

Connector (cont'd)	Photo No.
H-5 (16-GRN)	Left side of engine compartment 30
H-6 (12-BLK)	Left side of engine compartment 30
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-10 (16-BLU)	Left front of engine compartment 27
H-11 (12-BLK)	Left front of engine compartment 27
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-13 (6-GRY)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-33 (14-WHT)	In floor, below right front seat 125
H-41 (12-BLU) (RWAL)	Right front of engine compartment 31
H-41 (16-BLU) (ABS)	Right front of engine compartment 31
H-42 (16-BLK)	Right front of engine compartment 31
I-9 (16-BLK)	On left rear of meter assembly 53
M-1 (1-CLR)	Beneath center of vehicle, top left side of transmission 43
M-2 (1-CLR)	Beneath center of vehicle, top left side of transmission 43
M-3 (1-CLR)	Beneath center of vehicle, top left side of transmission 43
M-4 (1-CLR)	Beneath center of vehicle, top left side of transmission 43
M-5 (4-BLK)	Beneath center of vehicle, top left side of transmission 47
Ground	
B-19	Behind top of left dash side trim panel 62
B-26	Below rear of center console 79
C-16	Left rear corner of engine compartment, on inner fender panel 28
C-39	Right rear corner of engine compartment, on inner fender panel 42
E-28 (SOHC)	Top center front of engine 9
E-29 (SOHC)	Top center front of engine 9
E-31 (SOHC)	Top center front of engine 9

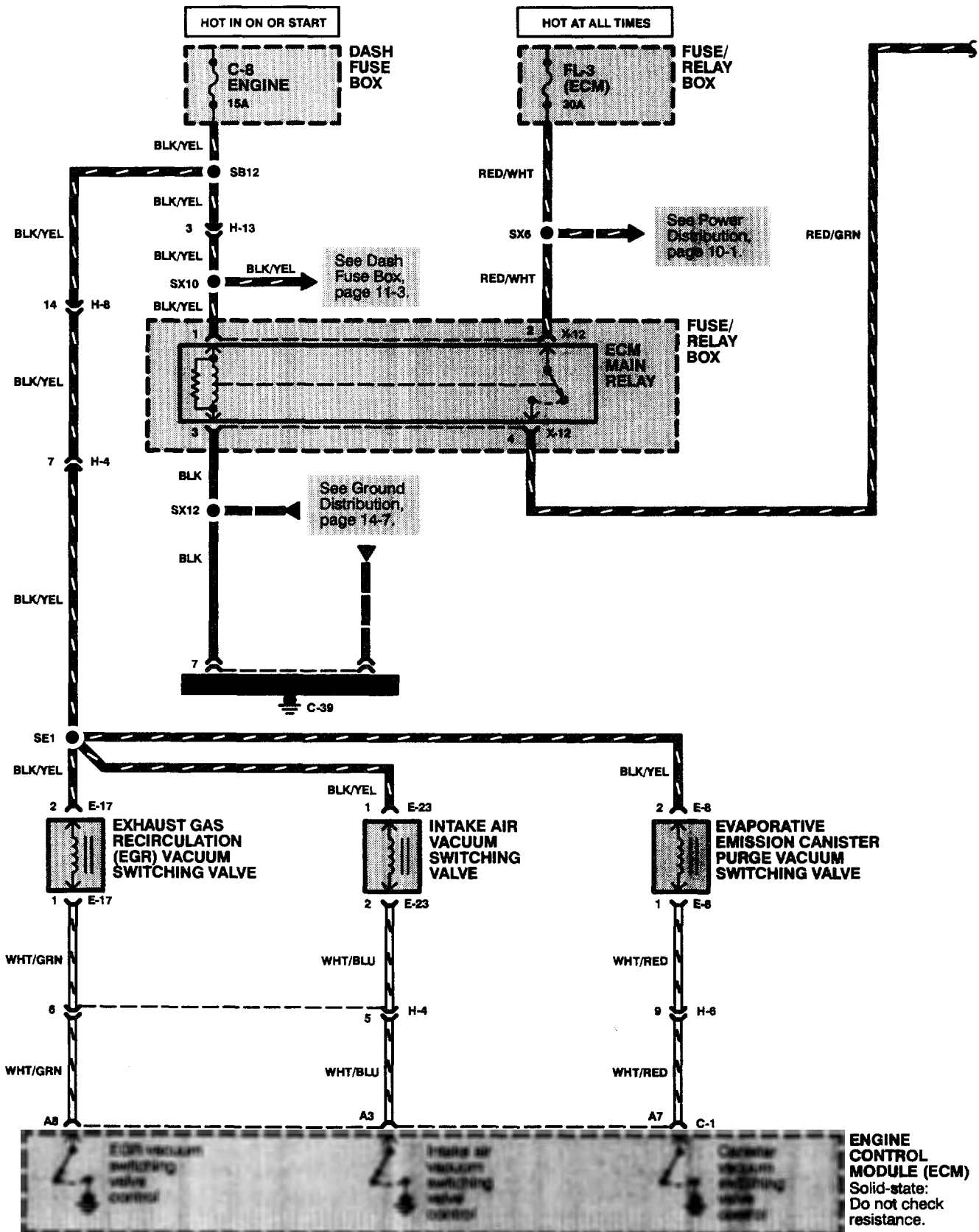
Circuit Operation

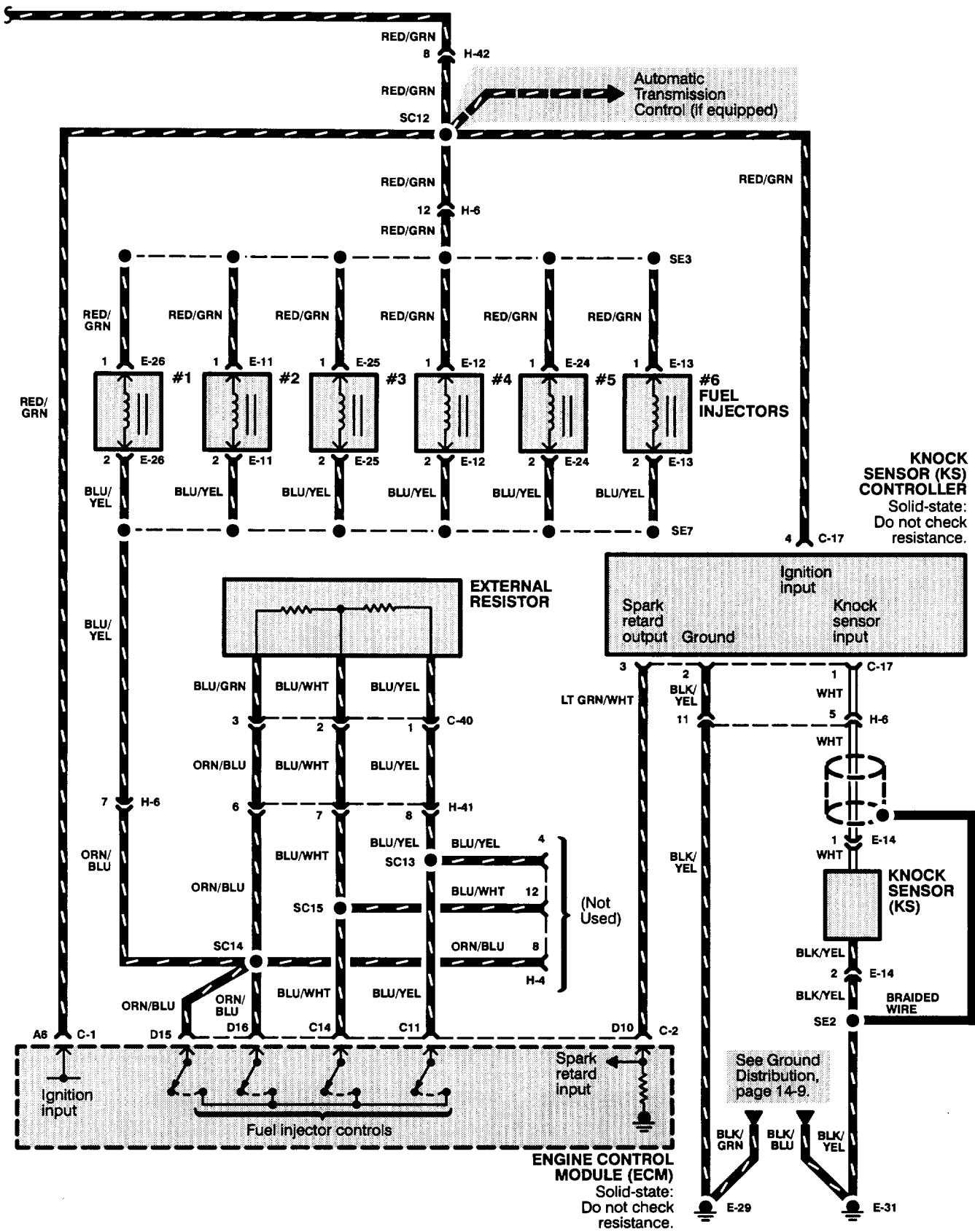
The engine control module (ECM) receives inputs from the engine sensors and switches, controlling the functions of the engine. The engine control module (ECM) also turns on the "CHECK ENGINE" malfunction indicator lamp whenever a malfunction or abnormal engine performance is detected, and allows for diagnostic testing through the data link connector (DLC).

Refer to Section 6 of Workshop Manual for further engine diagnosis.

ENGINE CONTROL: DOHC

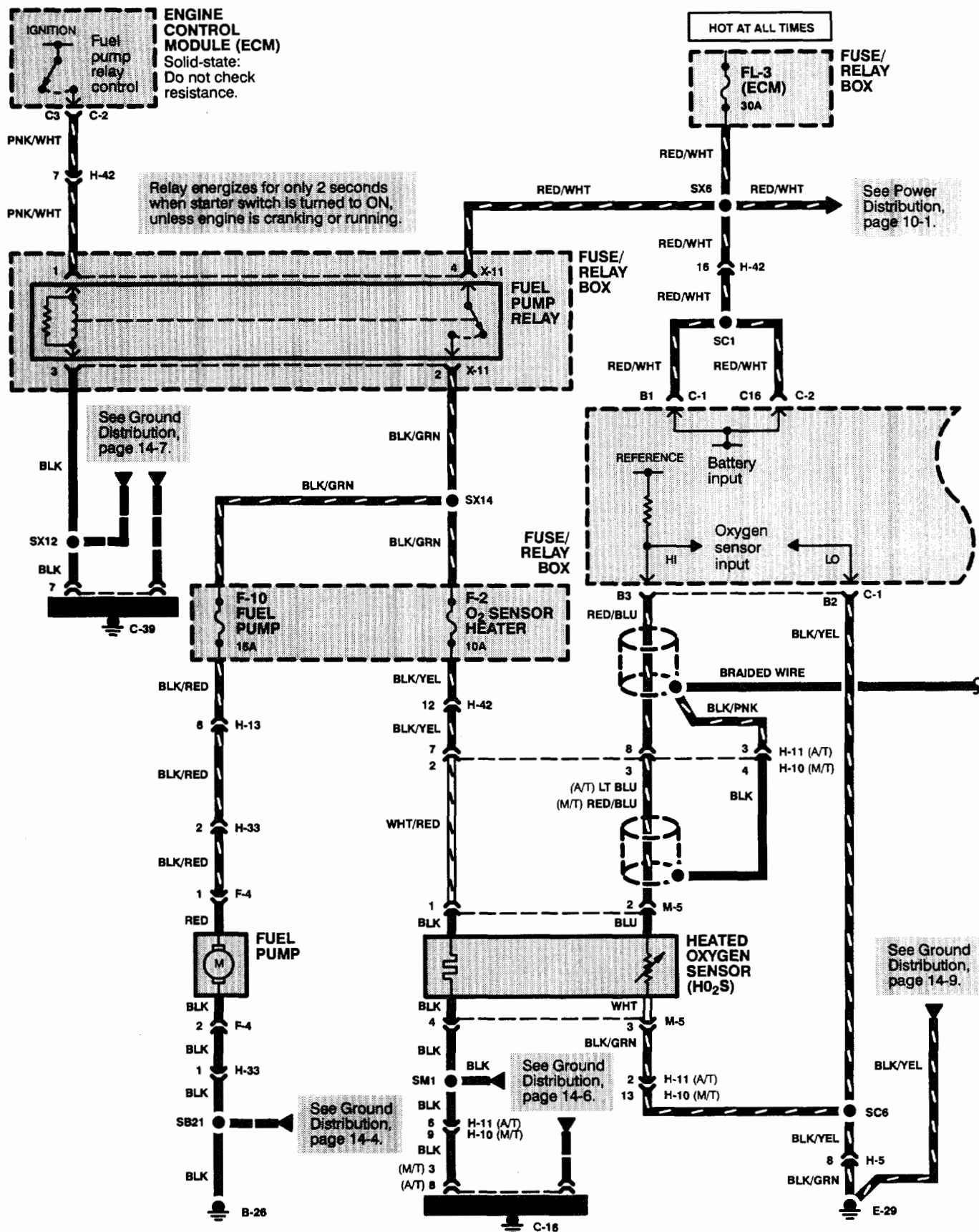
Circuit Schematic





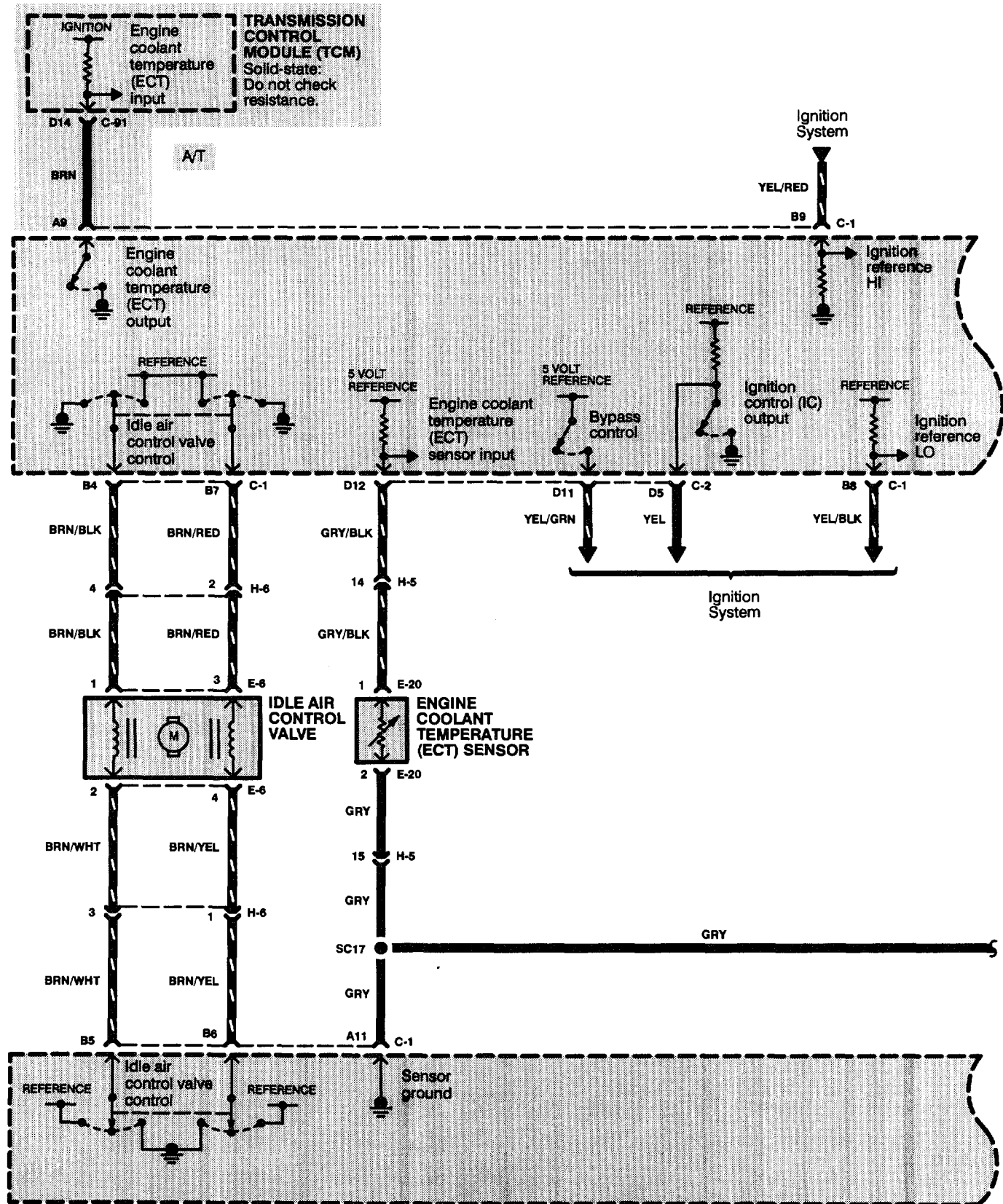
ENGINE CONTROL: DOHC

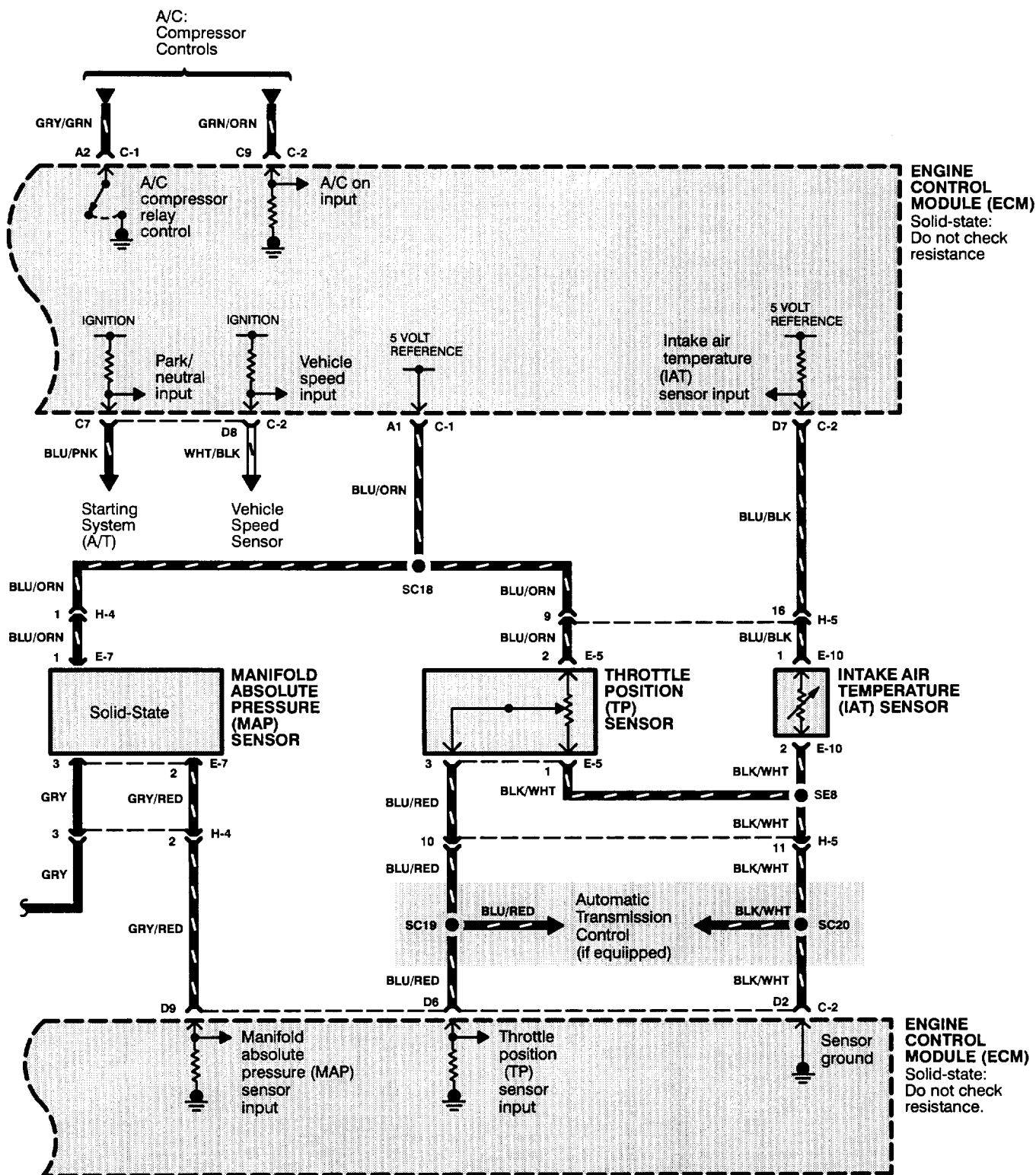
Circuit Schematic



ENGINE CONTROL: DOHC

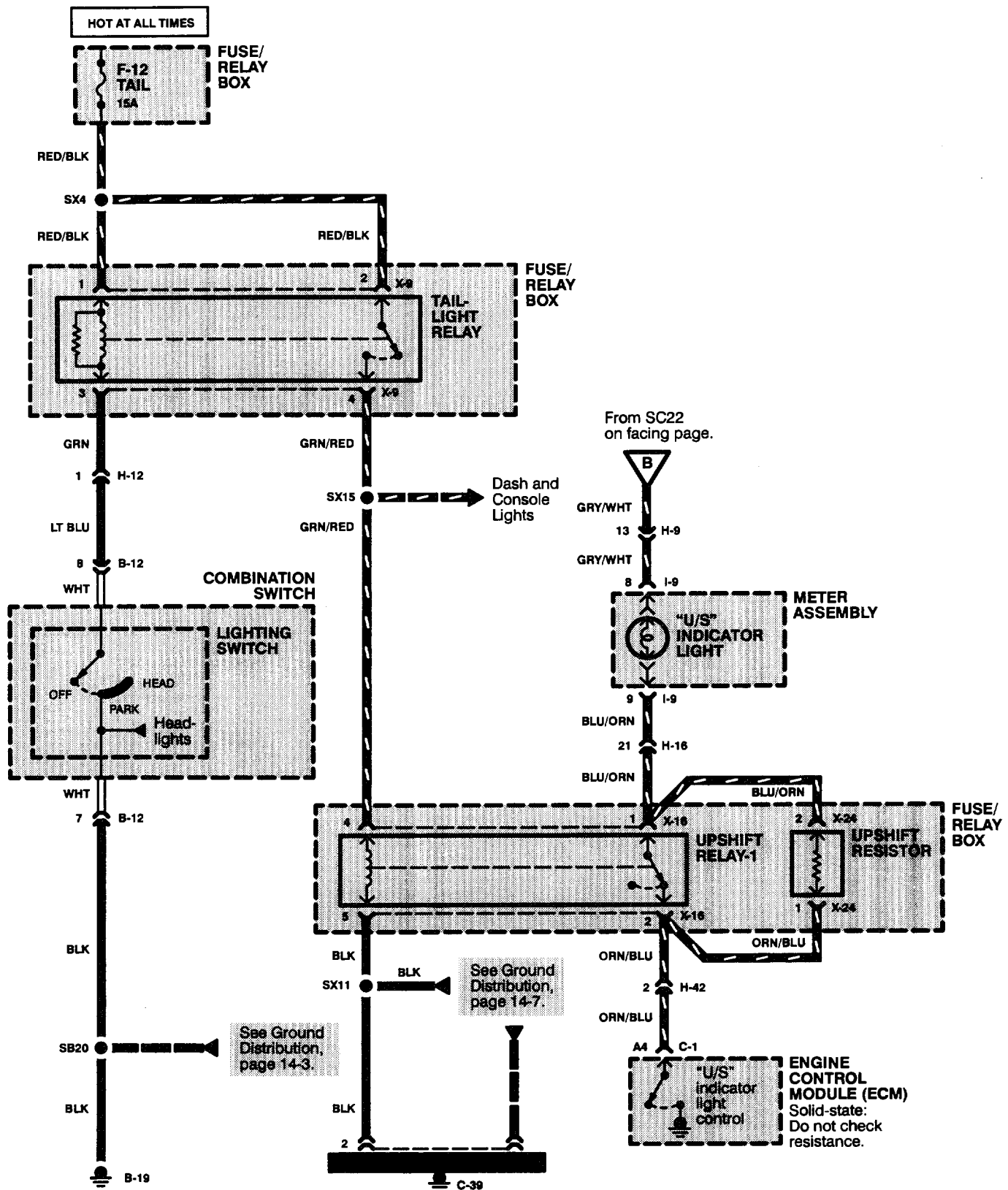
Circuit Schematic

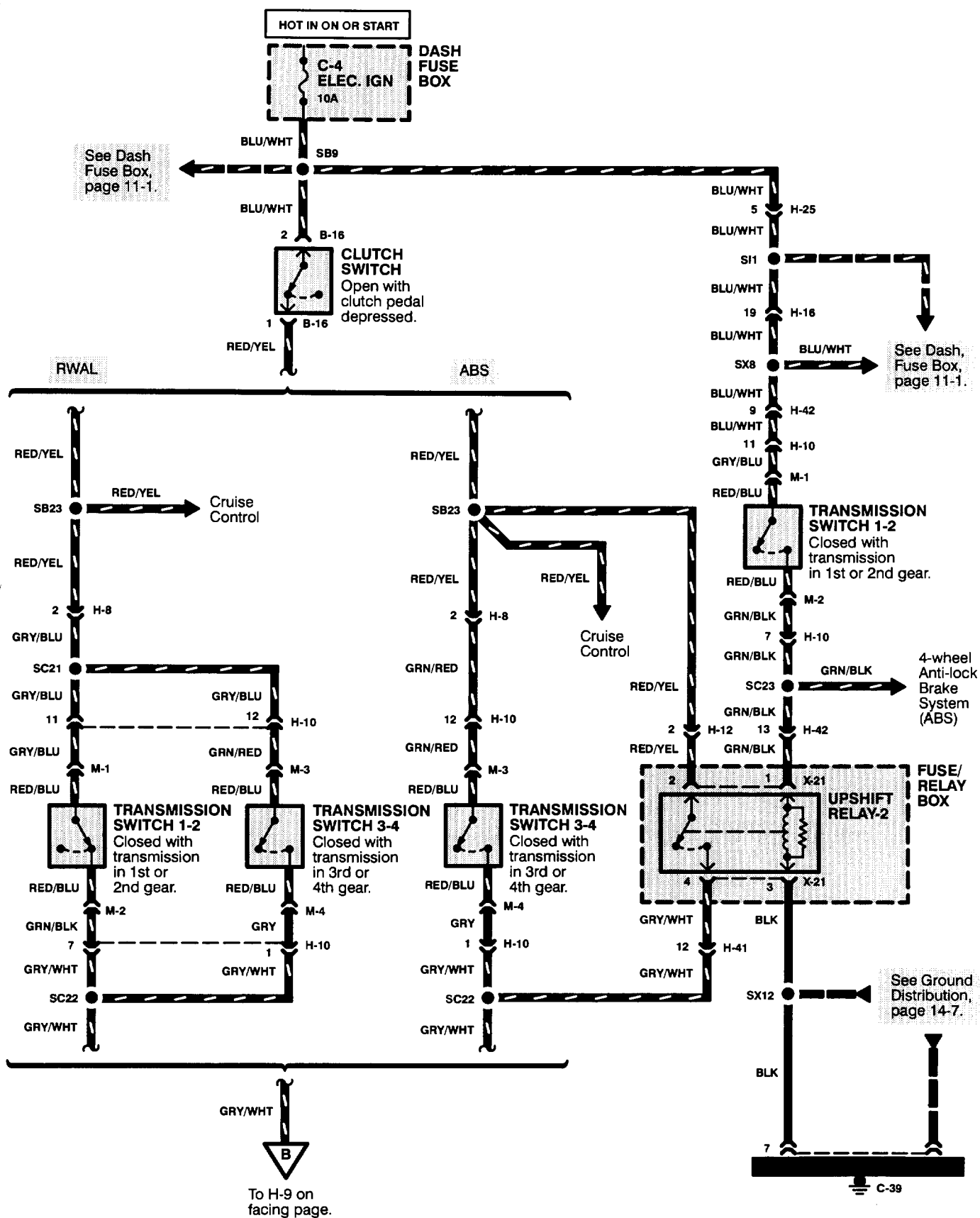




ENGINE CONTROL: DOHC

Manual Transmission





ENGINE CONTROL: DOHC

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Clutch Switch	Below I/P, top of clutch pedal support 66
Dash Fuse Box	Behind left dash side trim panel 58
Data Link Connector (DLC)	
C-9 (3-WHT)	Behind left I/P lower cover 55
ECM Main Relay	In fuse/relay box 37
Engine Control Module	
(ECM)	Behind front of front console 73
Engine Coolant Temperature	
(ECT) Sensor	Right rear of engine 17
Evaporative Emission	
Canister Purge Vacuum	
Switching Valve (DOHC)	Top left front of engine 13
Exhaust Gas Recirculation	
(EGR) Vacuum Switching	
Valve (DOHC)	Top left rear of engine 15
External Resistor	Right rear corner of engine compartment 42
Fuel Injectors	Top center of engine
Fuel Pump	Beneath rear of vehicle, in top of fuel tank
Fuel Pump Relay	In fuse/relay box 37
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Heated Oxygen Sensor	
(HO2S)	Beneath center of vehicle, in exhaust pipe 47
Idle Air Control Valve	
(DOHC)	Top center front of engine, on air intake assembly 14
Intake Air Temperature	
(IAT) Sensor (DOHC)	Top center of engine 14
Intake Air Vacuum	
Switching Valve	Top right rear of engine 16
Knock Sensor (KS)	Top of engine, below intake manifold
Knock Sensor (KS)	
Controller	Left side of engine compartment 30
Manifold Absolute Pressure	
(MAP) Sensor (DOHC)	Top left front of engine 13
Power Steering Pressure	
Switch	Lower right front of engine compartment 22
Taillight Relay	In fuse/relay box 36
Throttle Position (TP)	
Sensor (DOHC)	Top center front of engine, on air intake assembly 13
Transmission Control	
Module (TCM)	Below left side of I/P 65
Transmission Switch 1-2	Beneath vehicle, on left side of transmission 43
Transmission Switch 3-4	Beneath vehicle, on top of transmission
Upshift Relay-1	In fuse/relay box 34
Upshift Relay-2	In fuse/relay box 34
Upshift Resistor	In fuse/relay box 39

Component Location Index

(Refer to Section 201 for photographs.)

Connector

Photo No.

B-12 (16-BLK/WHT)	Below I/P, right of steering column	69
C-1 (24-BRN)	On engine control module (ECM)	73
C-2 (32-BRN)	On engine control module (ECM)	73
C-26 (2-BLK)	Lower right front of engine compartment, below battery tray	
C-40 (3-GRN/GRY)	Right rear of engine compartment	42
C-91 (32-BLU)	On transmission control module (TCM)	65
E-14 (2-BLK)	Right rear of engine	17
F-4 (2-BLK)	Beneath rear of vehicle, right of fuel tank	114
H-4 (12-BLU)	Left side of engine compartment	30
H-5 (16-GRN)	Left side of engine compartment	30
H-6 (12-BLK)	Left side of engine compartment	30
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket	62
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket	62
H-10 (16-BLU)	Left front of engine compartment	27
H-11 (12-BLK)	Left front of engine compartment	27
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket	82
H-13 (6-GRY)	Below I/P, above right dash side trim panel, on bracket	82
H-16 (22-WHT)	Behind right dash side trim panel	86
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket	63
H-33 (14-WHT)	In floor, below right front seat	125
H-41 (12-BLU) (RWAL)	Right front of engine compartment	31
H-41 (16-BLU) (ABS)	Right front of engine compartment	31
H-42 (16-BLK)	Right front of engine compartment	31
I-9 (16-BLK)	On left rear of meter assembly	53
M-1 (1-CLR)	Beneath center of vehicle, top left side of transmission	43
M-2 (1-CLR)	Beneath center of vehicle, top left side of transmission	43
M-3 (1-CLR)	Beneath center of vehicle, top left side of transmission	43
M-4 (1-CLR)	Beneath center of vehicle, top left side of transmission	43
M-5 (4-BLK)	Beneath center of vehicle, top left side of transmission	47

Ground

B-19	Behind top of left dash side trim panel	62
B-26	Below rear of center console	79
C-16	Left rear corner of engine compartment, on inner fender panel	28
C-39	Right rear corner of engine compartment, on inner fender panel	42
E-28 (DOHC)	Top center of engine	14
E-29 (DOHC)	Top center of engine	14
E-31 (DOHC)	Top left rear of engine	17

Circuit Operation

The engine control module (ECM) receives inputs from the engine sensors and switches, controlling the functions of the engine. The engine control module (ECM) also turns on the "CHECK ENGINE" malfunction indicator lamp whenever a malfunction or abnormal engine performance is detected, and allows for diagnostic testing through the data link connector (DLC).

Refer to Section 6 of Workshop Manual for further engine diagnosis.

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Cruise Control Unit	Below right side of I/P, above dash side trim panel 84
Dash Fuse Box	Behind left dash side trim panel 58
Engine Control Module (ECM)	Behind front of front console 73
Vehicle Speed Sensor	Beneath center of vehicle, on rear of transmission 45

Connector

C-2 (32-BRN)	On engine control module (ECM) 73
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket 63
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-10 (16-BLU)	Left front of engine compartment 27
H-11 (12-BLK)	Left front of engine compartment 27
H-16 (22-WHT)	Behind right dash side trim panel 86
H-24 (18-YEL)	Below I/P, above left dash side trim panel, on bracket 63
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-41 (16-BLU) (ABS)	Right front of engine compartment 31
H-42 (16-BLK)	Right front of engine compartment 31
I-9 (16-BLK)	On left rear of meter assembly 53
I-10 (16-WHT)	On right rear of meter assembly 53

Ground

C-39	Right rear corner of engine compartment, on inner fender panel 42
------------	---

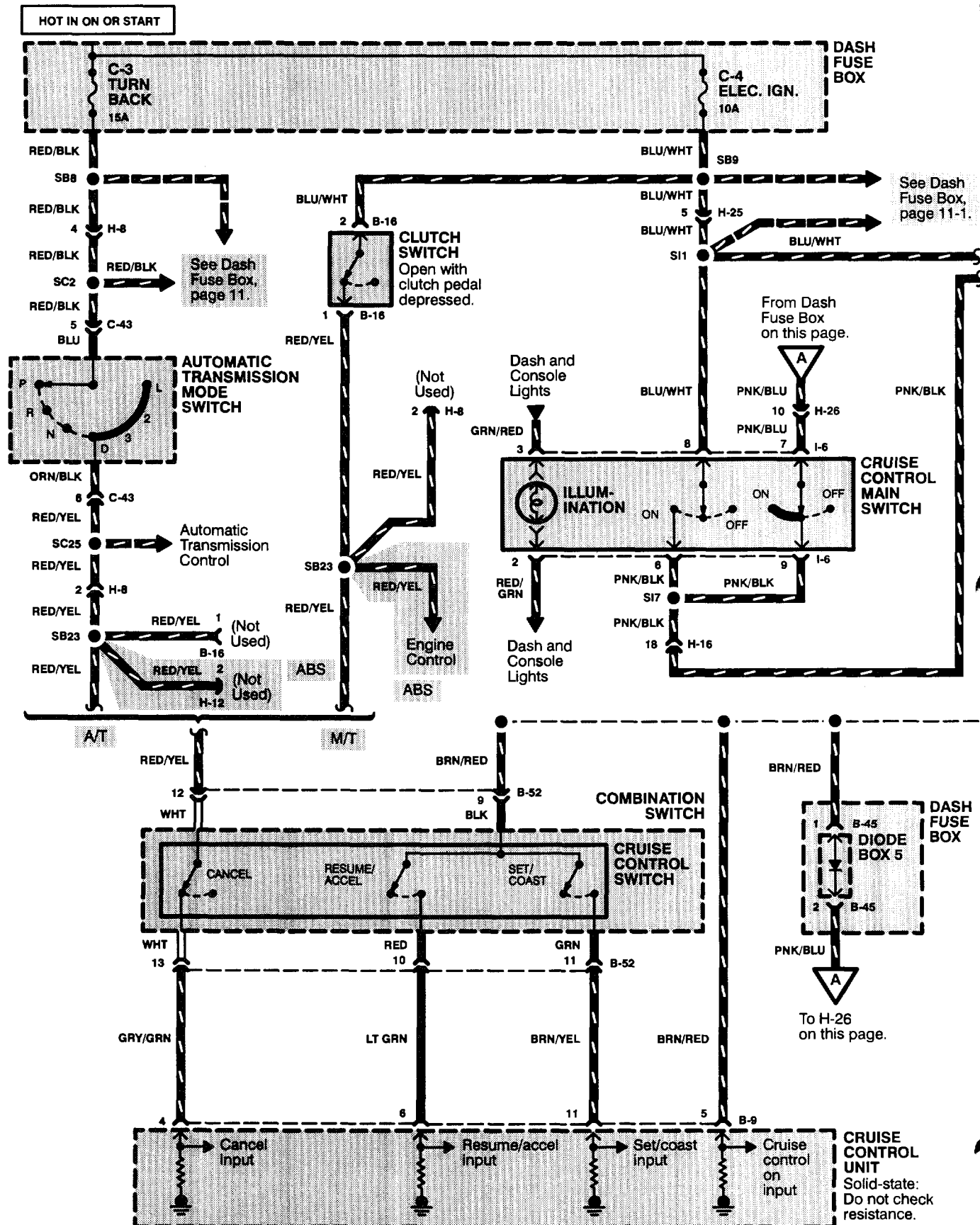
Circuit Operation

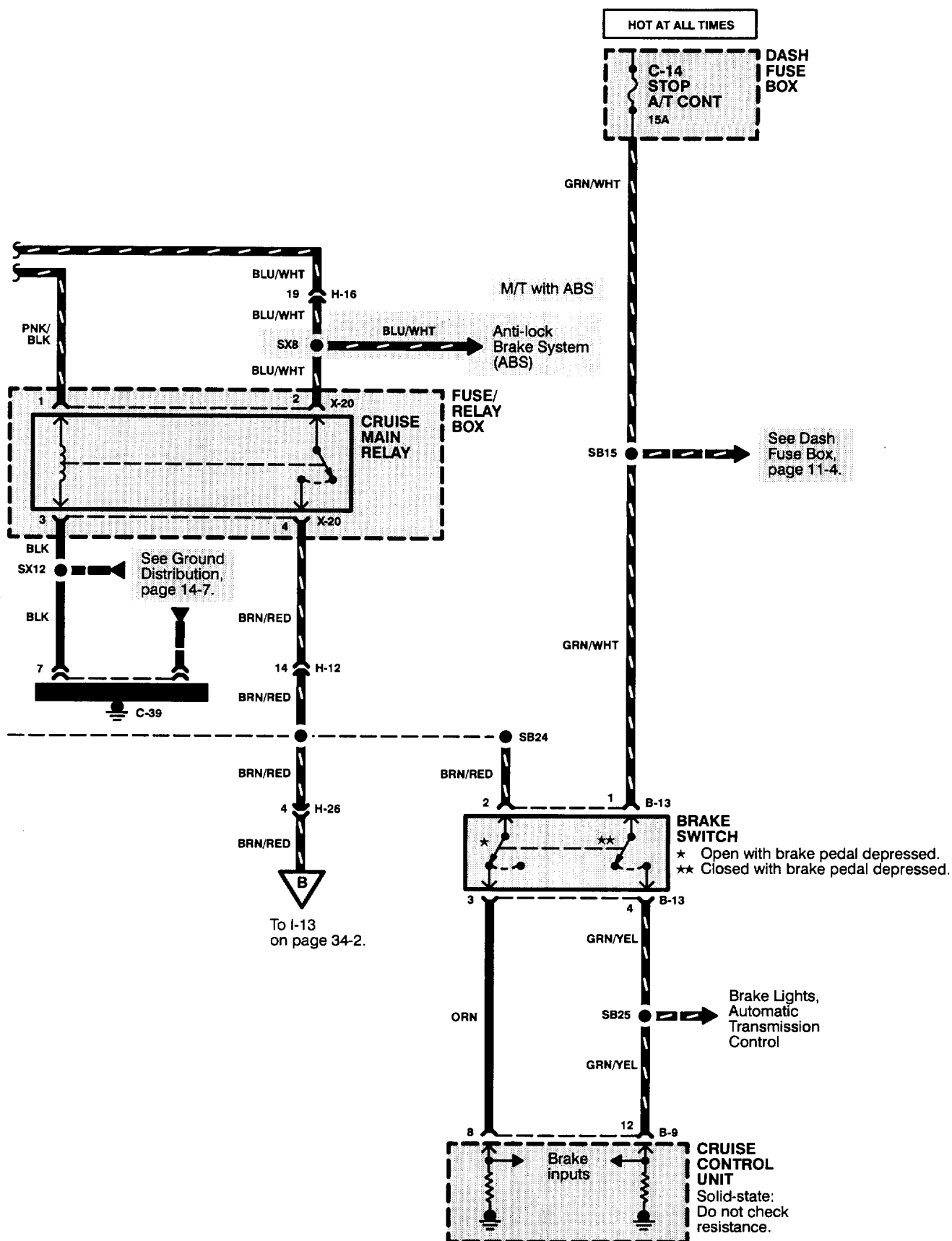
The vehicle speed sensor generates a signal which indicates the vehicle speed to the speedometer. The speedometer consists of a vehicle speed sensor, an ammeter (needle movement), stepper motor (odometer), and a driving circuit (printed circuit board).

The vehicle speed sensor is mounted to the transmission. The transmission pinion shaft rotates and generates four pulses per one rotation. The rate at which the pulses are generated indicates the vehicle speed. The vehicle speed sensor (incorporated in the speedometer) uses the pulses to control needle movement and sends vehicle speed information to the engine control module (ECM) and the cruise control unit. The speedometer sends 4096 pulses per mile and the frequency indicates the vehicle speed.

CRUISE CONTROL

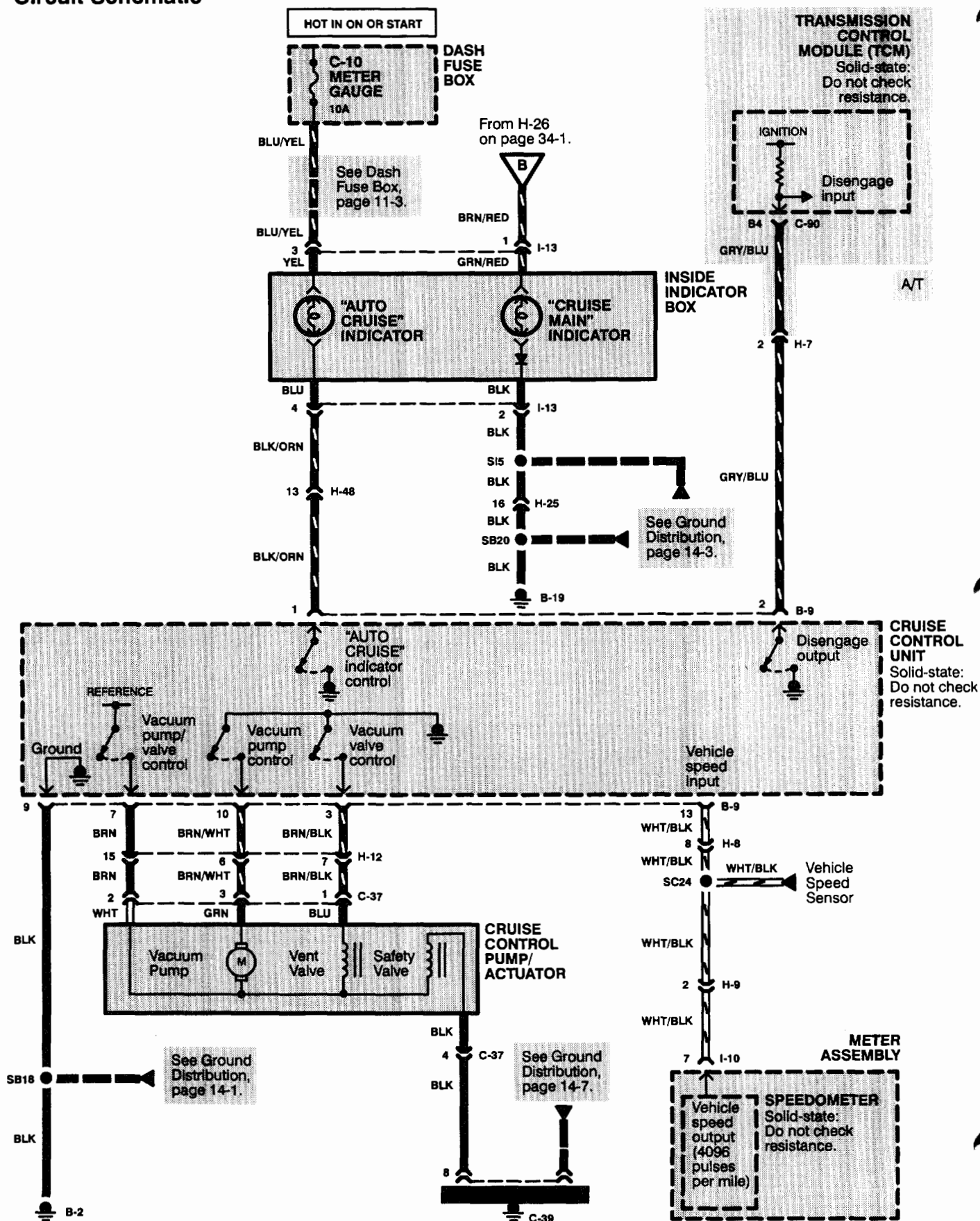
Circuit Schematic





CRUISE CONTROL

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Automatic Transmission Mode	
Switch	Beneath vehicle, on left side of transmission 47
Brake Switch	Below I/P, on brake pedal support 68
Clutch Switch	Below I/P, top of clutch pedal support 66
Cruise Control	
Pump/Actuator	Right rear corner of engine compartment 40
Cruise Control Unit	Below right side of I/P, above dash side trim panel 84
Cruise Main Relay	In fuse/relay box 35
Dash Fuse Box	Behind left dash side trim panel 58
Diode Box 5	In dash fuse box 61
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Transmission Control Module	
(TCM)	Below left side of I/P 65
<u>Connector</u>	
B-16 (2-WHT) (A/T)	Below I/P, left of steering column 67
B-52 (14-BLK)	Below I/P, right of steering column 69
C-37 (4-GRY)	Right rear corner of engine compartment 40
C-43 (8-BLK)	Left front of engine compartment 27
C-90 (24-BLU)	On transmission control module (TCM) 65
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket 63
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
H-48 (16-BLK)	Behind right dash side trim panel 86
I-10 (16-WHT)	On right rear of meter assembly 53
I-13 (6-WHT)	Behind left side of I/P 52
<u>Ground</u>	
B-19	Behind top of left dash side trim panel 62
C-39	Right rear corner of engine compartment, on inner fender panel 42

CRUISE CONTROL

Circuit Operation

The cruise control system uses mechanical, electrical, and vacuum operated devices to maintain vehicle speed at a setting selected by the driver.

System Description

The cruise control unit receives command signals from the cruise control switch. It receives information about operating conditions from the brake switch, the speedometer, the clutch switch (manual transmission), and the automatic transmission mode switch and transmission control module (TCM)(automatic transmission).

The cruise control unit sends operational signals to the devices that regulate the throttle position. The throttle position maintains the selected vehicle speed. The control unit compares the actual speed of the vehicle to the selected speed. The control unit then uses the result of that comparison to open or close the throttle.

The brake switch releases the system's control of the throttle at the instant the driver depresses the brake pedal. The switch sends a signal to the cruise control unit when the brake pedal is depressed; the cruise control unit responds by allowing the throttle to close. The clutch switch or the automatic transmission mode switch sends a disengage signal input to the cruise control unit that also allows the throttle to close.

System Operation

The cruise control system will set and automatically maintain any speed above 25 mph (40 km/h). To set, press the cruise control main switch so that the "CRUISE MAIN" indicator is on. After reaching the desired speed, press the set switch. The cruise control unit will receive a set signal input and will activate the cruise control actuator.

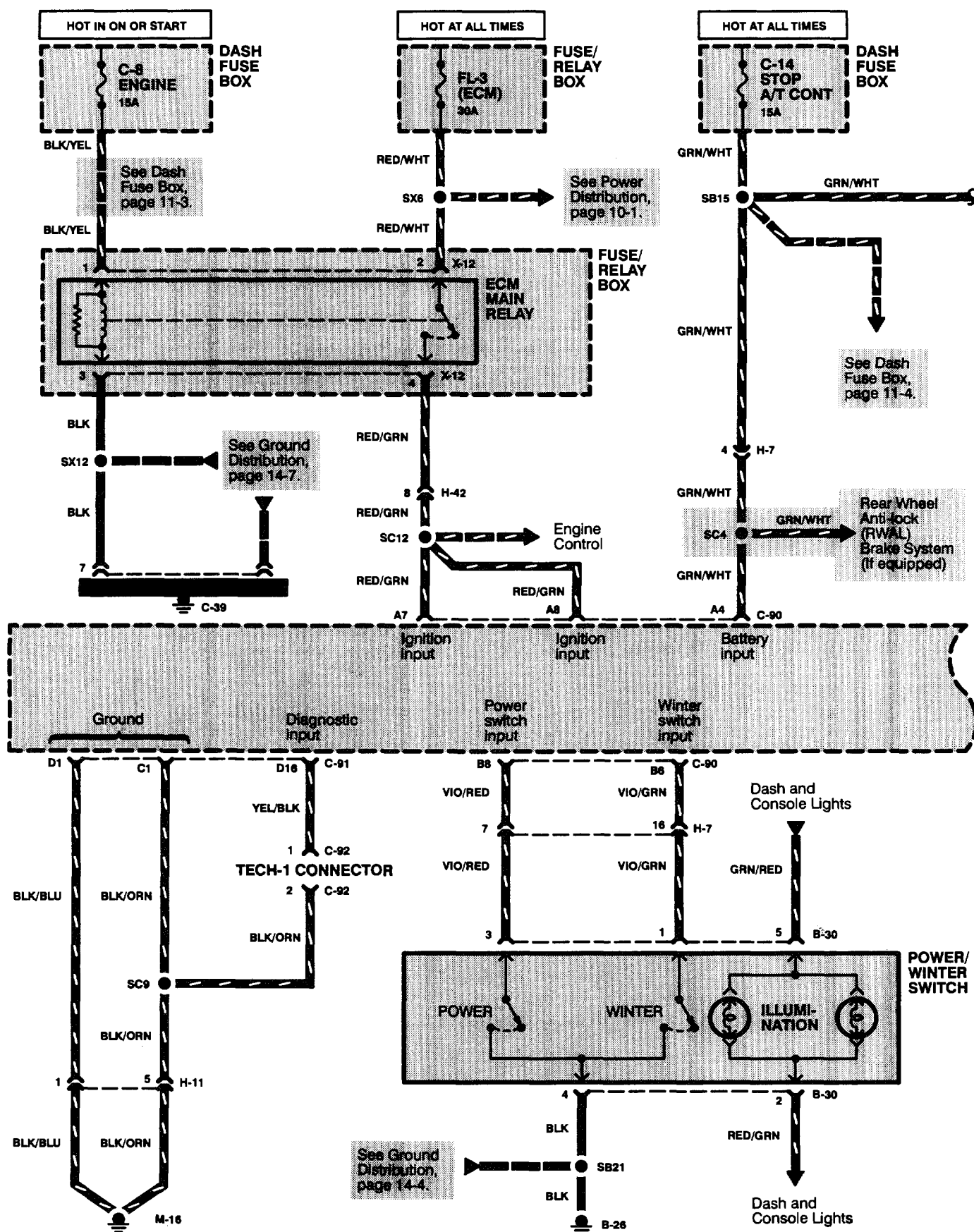
Pushing the cruise control main switch cancels the cruise control system. This removes power to the cruise control unit and erases the set speed from memory. The cruise control system also disengages when cruising speed is lower than the preset speed by 12 mph (19 km/h) or more. If the system is disengaged temporarily by the brake switch, clutch switch, or the automatic transmission mode switch and vehicle speed is still above 25 mph (40 km/h), turn and release the resume/accel switch. With the resume/accel switch turned and released, the set memory is retained, the vehicle automatically returns to the previous set speed.

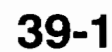
For gradual acceleration without depressing the accelerator pedal, turn the resume/accel switch and hold it there until the desired speed is reached. This will send an acceleration signal input to the cruise control unit. When the switch is released, the system will be reprogrammed for the new speed. Quickly turning and releasing the resume/accel switch allows you to tap up the preset cruising speed. Each turn increases the preset speed by 1 mph (1.6 km/h). The preset speed can be increased by up to 10 mph (16 km/h) in this manner.

To slow the vehicle down, depress and hold the set/coast switch. This will send a deceleration signal input to the cruise control unit, causing the vehicle to coast until the desired speed is reached. When the desired speed is reached, release the set/coast switch. This will reprogram the system for the new speed. Quickly depressing and releasing the set/coast switch allows you to tap down the preset cruising speed. Each depress decreases the preset speed by 1 mph (1.6 km/h). The preset speed can be decreased to a minimum of 25 mph (40 km/h) in this manner.

AUTOMATIC TRANSMISSION CONTROL

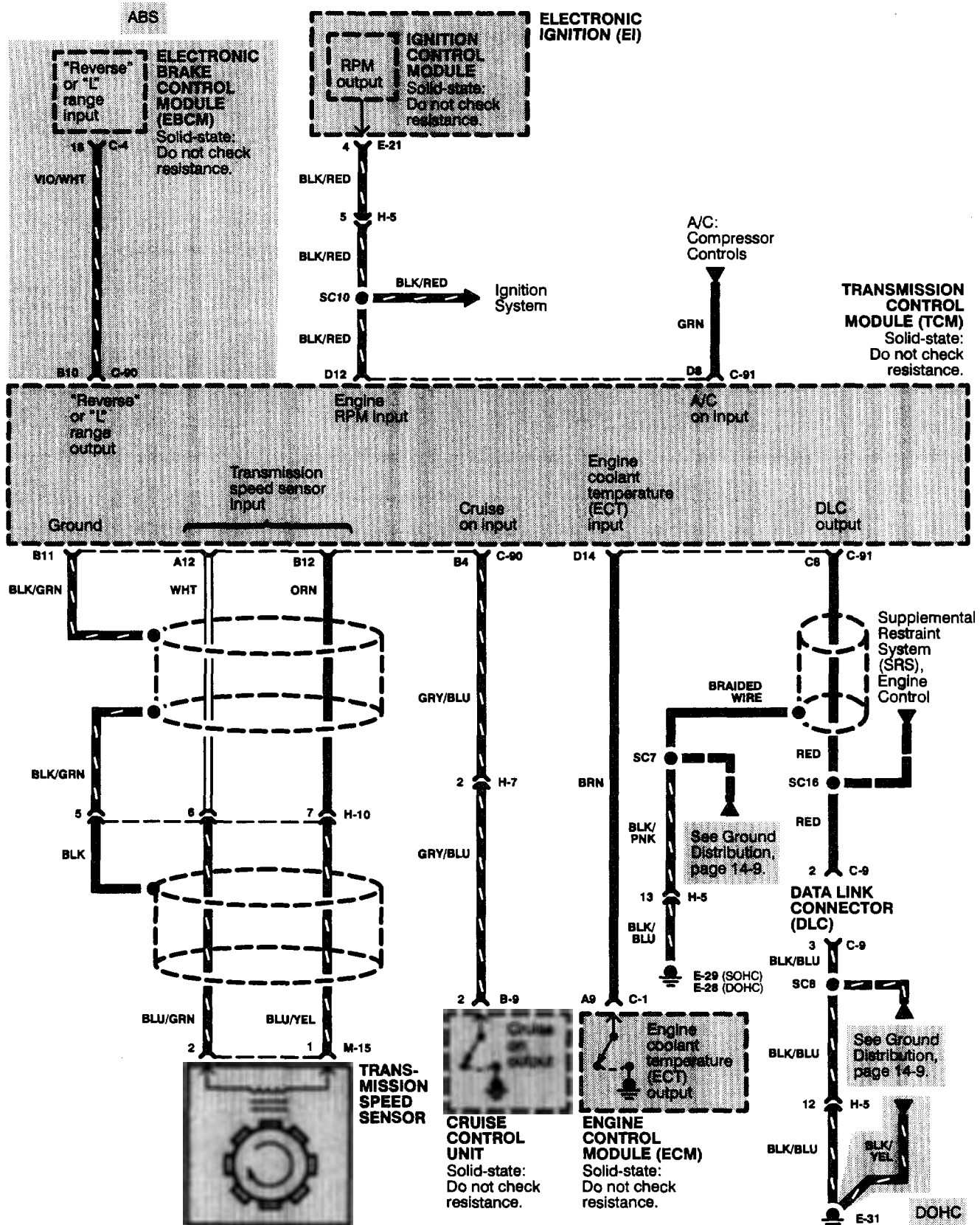
Circuit Schematic

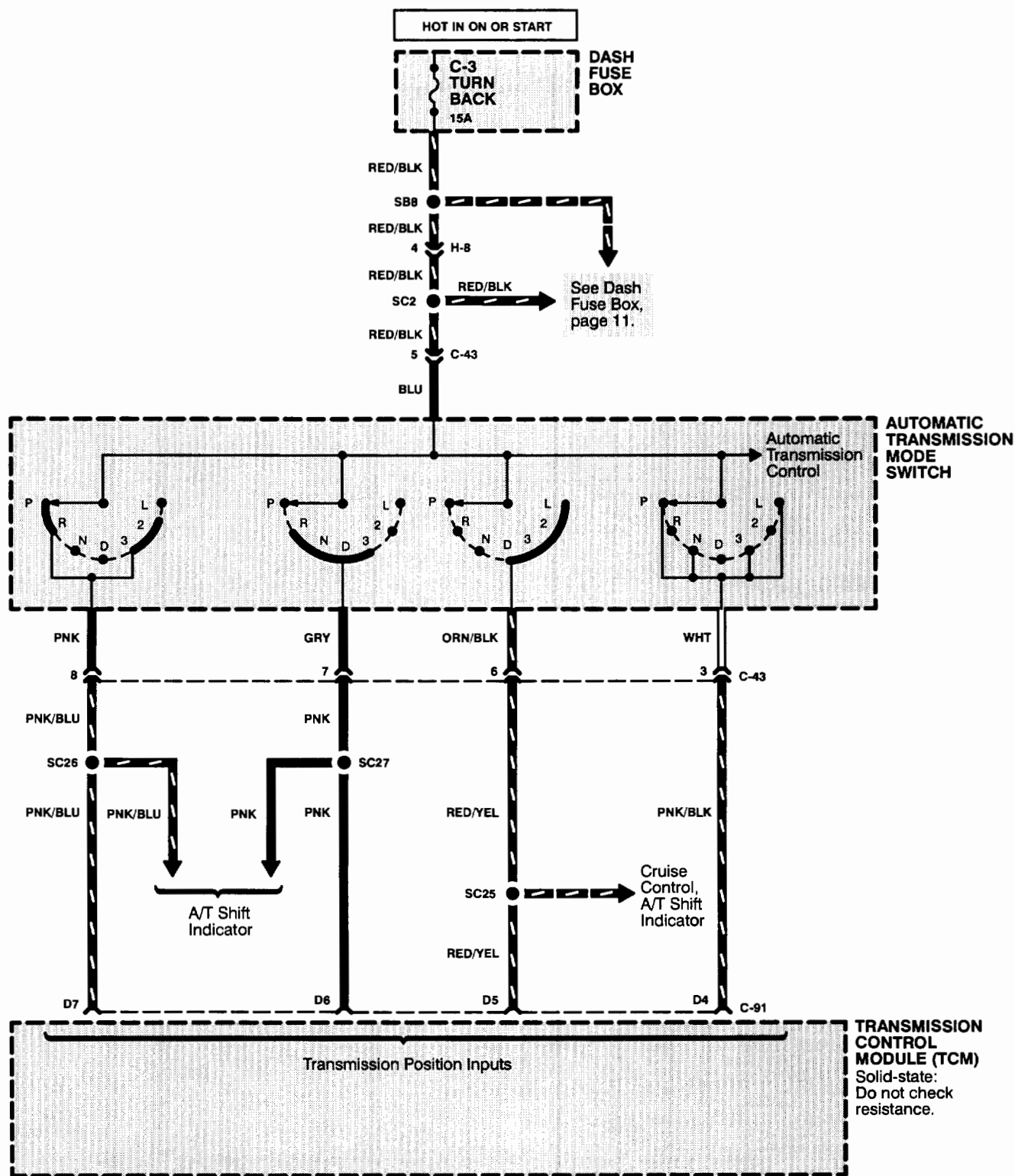




AUTOMATIC TRANSMISSION CONTROL

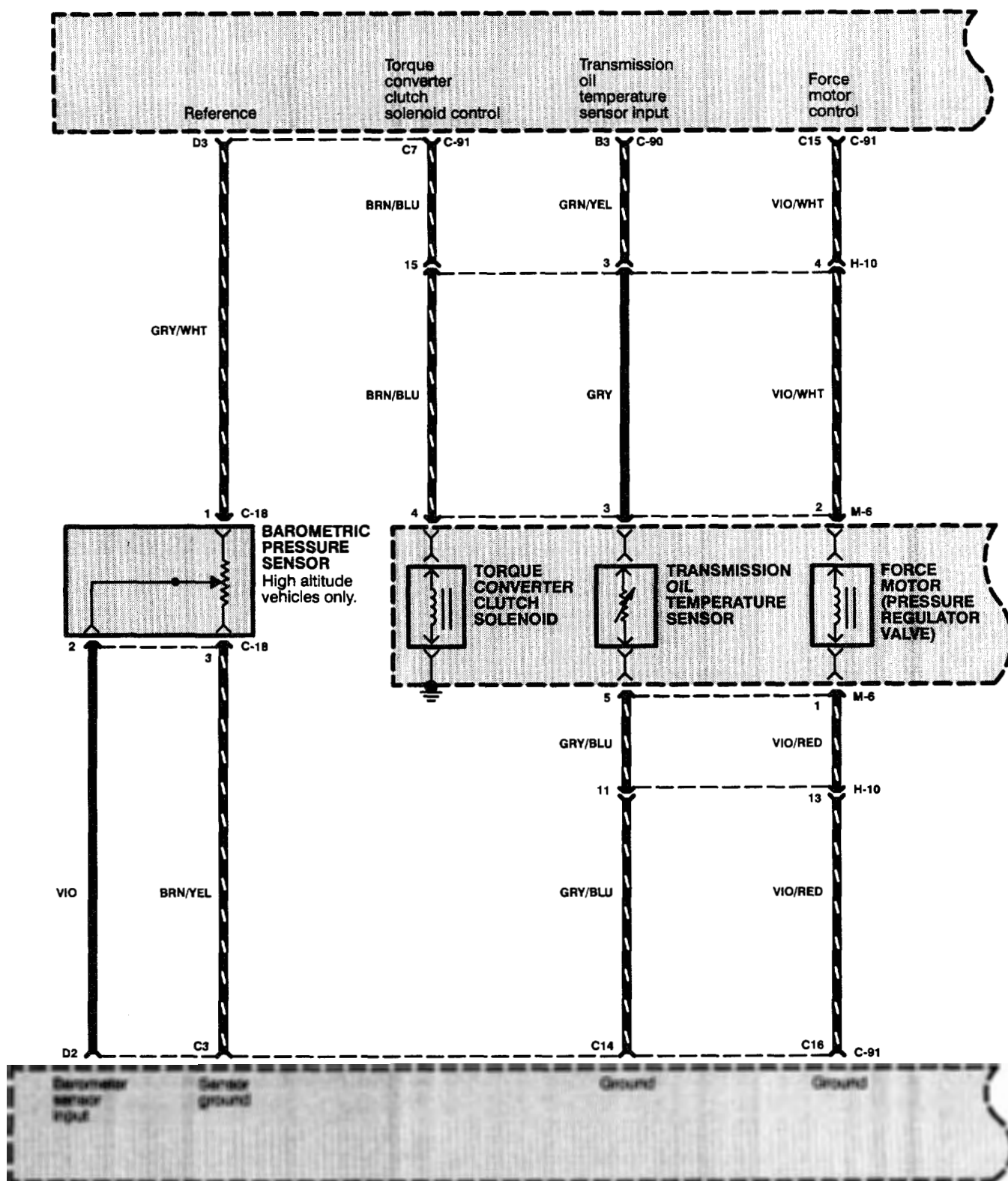
Circuit Schematic





AUTOMATIC TRANSMISSION CONTROL

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

<u>Ground</u>	<u>Photo No.</u>
B-19	Behind top of left dash side trim panel 62
B-26	Below rear of center console 79
C-39	Right rear corner of engine compartment, on inner fender panel 42
E-28 (DOHC)	Top center of engine 14
E-29 (SOHC)	Top center front of engine 9
E-31 (DOHC)	Top left rear of engine 17
E-31 (SOHC)	Top center front of engine 9
M-16	Left underside of engine, top of oil pan 26

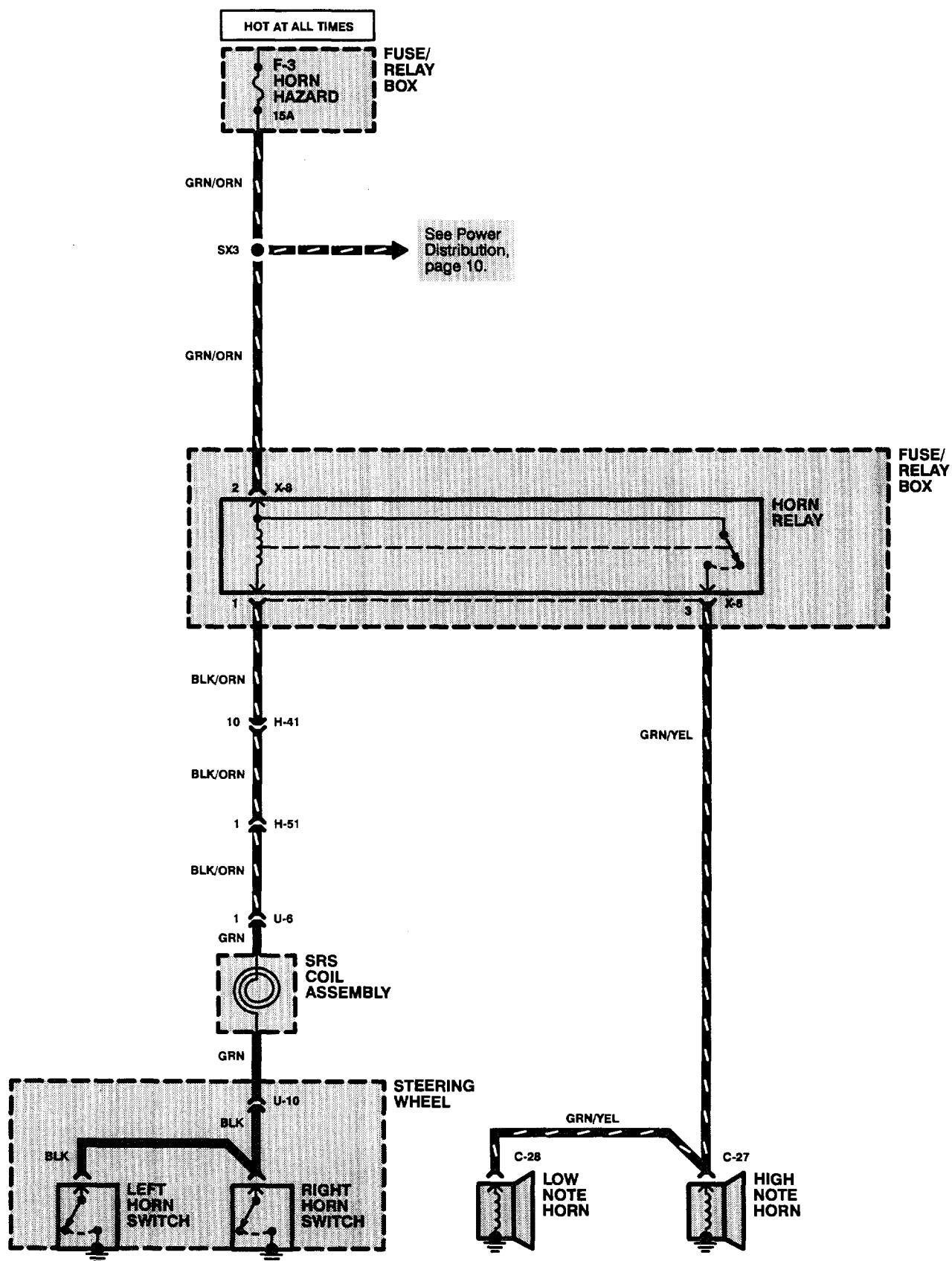
Circuit Operation

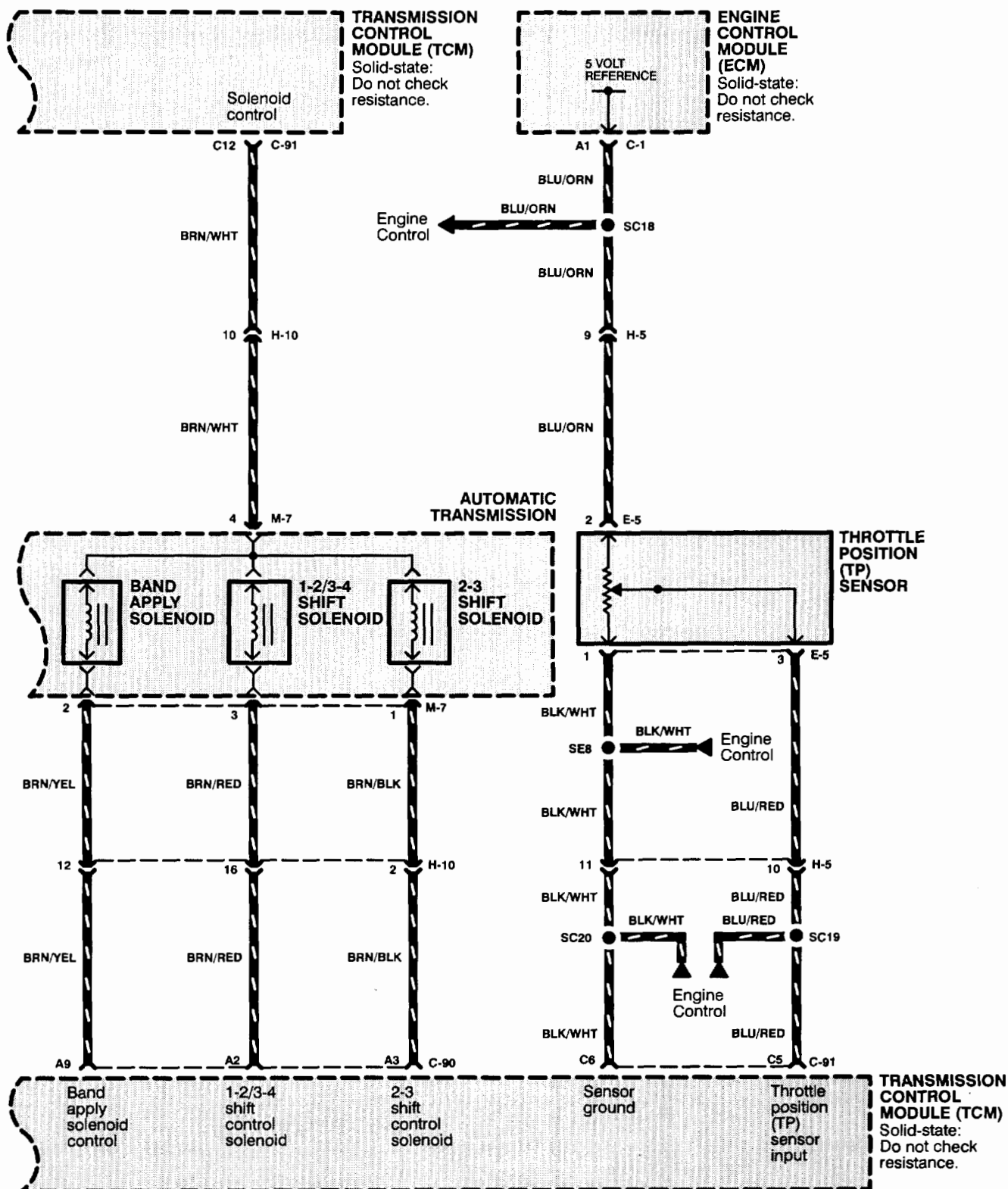
The transmission control module (TCM) receives inputs from switches, sensors, and the engine control module (ECM) and controls the functions of mode to the transmission. The transmission control module (TCM) also controls the "POWER DRIVE", "WINTER DRIVE", and "CHECK TRANS" indicator lights and allows for diagnostic testing through the tech-1 connector.

Refer to Section 7 of the Workshop Manual for further transmission diagnosis.

HORNS

Circuit Schematic





AUTOMATIC TRANSMISSION CONTROL

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Automatic Transmission	
Mode Switch	Beneath vehicle, on left side of transmission 47
Barometric Pressure Sensor ..	Left front corner of engine compartment 27
Brake Switch	Below I/P, on brake pedal support 68
Cruise Control Unit	Below right side of I/P, above dash side trim panel 84
Dash Fuse Box	Behind left dash side trim panel 58
Data Link Connector	
(DLC) C-9 (3-WHT)	Behind left I/P lower cover 55
ECM Main Relay	In fuse/relay box 37
Electronic Brake Control	
Module (EBCM)	Behind lower cluster assembly 74
Electronic Ignition (EI)	
(DOHC)	Top center rear of engine 15
Electronic Ignition (EI)	
(SOHC)	Center front of engine 9
Engine Control Module	
(ECM)	Behind front of front console 73
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Kick Down Switch	Below I/P, on accelerator pedal bracket 70
Stop Light Switch	Below I/P, on brake pedal support 68
Tech-1 Connector C-92	
(2-WHT)	Behind left I/P lower cover 55
Throttle Position (TP)	
Sensor (DOHC)	Top center front of engine, on air intake assembly 13
Throttle Position (TP)	
Sensor (SOHC)	Top center of engine, on air intake assembly 10
Transmission Control Module	
(TCM)	Below left side of I/P 65
Transmission Speed Sensor ..	Beneath vehicle, on top of transmission
Connector	
B-10 (2-WHT)	Below I/P, right of steering column 70
C-1 (24-BRN)	On engine control module (ECM) 73
C-43 (8-BLK)	Left front of engine compartment 27
C-90 (24-BLU)	On transmission control module (TCM) 65
C-91 (32-BLU)	On transmission control module (TCM) 65
E-21 (6-BLK) (DOHC)	On right side of electronic ignition (EI) 16
E-21 (6-BLK) (SOHC)	On left side of electronic ignition (EI) 9
H-5 (16-GRN)	Left side of engine compartment 30
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket 63
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-10 (16-BLU)	Left front of engine compartment 27
H-11 (12-BLK)	Left front of engine compartment 27
H-24 (18-YEL)	Below I/P, above left dash side trim panel, on bracket 63
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-42 (16-BLK)	Right front of engine compartment 31
I-9 (16-BLK)	On left rear of meter assembly 53
M-6 (5-BLK)	Beneath center of vehicle, left side of transmission 47
M-7 (4-BLK)	Beneath center of vehicle, left side of transmission 47

Component Location Index

(Refer to Section 201 for photographs.)

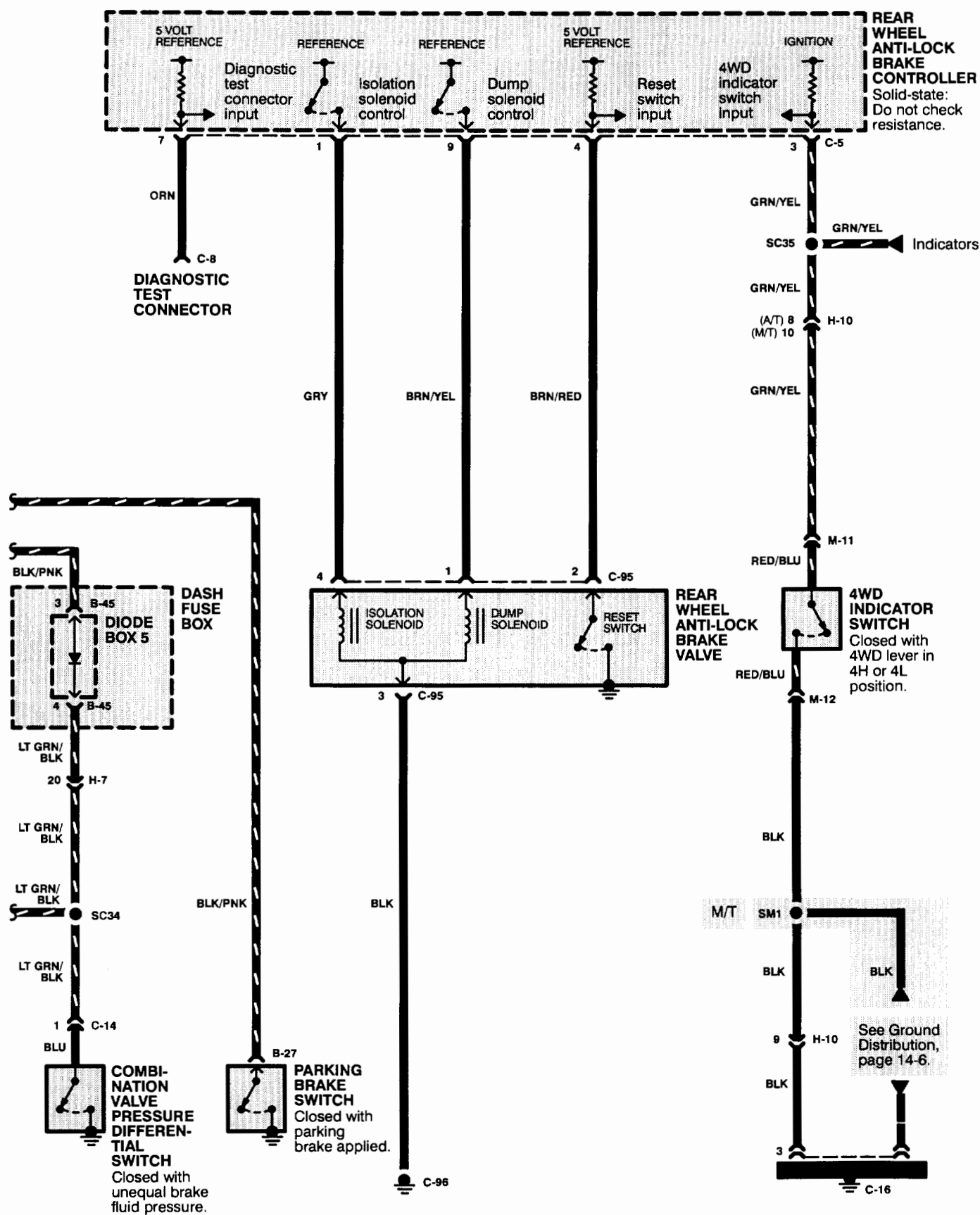
<u>Component</u>	<u>Photo No.</u>
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
High Note Horn	Behind right headlight 1
Horn Relay	In fuse/relay box 38
Low Note Horn	Behind right side of radiator grille 1
SRS Coil Assembly	Top of steering column 54
 <u>Connector</u>	
H-41 (12-BLU) (RWAL)	Right front of engine compartment 31
H-41 (16-BLU) (ABS)	Right front of engine compartment 31
H-51 (2-WHT)	Below I/P, above left dash side trim panel, on bracket 64
U-6 (3-YEL)	Below I/P, right of steering column 69

Circuit Operation

Voltage is applied at all times through fuse F-3 to the horn relay. The circuit continues from the horn relay to the SRS coil assembly and the horn switches. When a horn switch is closed, the circuit path is completed to ground and the horn relay energizes. The relay contact closes and battery voltage is applied to the horns. The horns sound.

Circuit Schematic





REAR WHEEL ANTI-LOCK (RWAL) BRAKE SYSTEM

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
4WD Indicator Switch	Beneath vehicle, on right side of transfer case 46
Brake Switch	Below I/P, on brake pedal support 68
Combination Valve Pressure	
Differential Switch	Left rear of engine compartment, in brake fluid valve 29
Dash Fuse Box	Behind left dash side trim panel 58
Diagnostic Test Connector	
C-8 (1-WHT)	Behind left I/P lower cover 56
Differential Speed Sensor	Beneath rear of vehicle, on top of differential 113
Diode Box 5	In dash fuse box 61
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Parking Brake Switch	Below rear of center console 79
Rear Wheel Anti-lock Brake	
Controller	Behind lower cluster assembly 75
Rear Wheel Anti-lock Brake	
Valve	Right front of engine compartment 21
Stop Light Switch	Below I/P, on brake pedal support 68
Test Connector C-7	
(2-WHT)	Behind left I/P lower cover 56
Connector	
A-1 (2-GRY)	Beneath rear of vehicle, above differential 113
C-14 (2-GRY)	Left rear of engine compartment 29
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket 63
H-10 (16-BLU)	Left front of engine compartment 27
H-24 (18-YEL)	Below I/P, above left side dash trim panel, on bracket 63
H-25 (22-BLU)	Below I/P, above left side dash trim panel, on bracket 63
H-33 (14-WHT)	In floor, below right front seat 125
H-40 (2-BRN)	Beneath rear of vehicle, above differential 112
H-42 (16-BLK)	Right front of engine compartment 31
I-9 (16-BLK)	On left of rear meter assembly 53
I-10 (16-WHT)	On right of rear meter assembly 53
M-11 (1-WHT)	Beneath center of vehicle, top right side of transmission 46
M-12 (1-WHT)	Beneath center of vehicle, top right side of transmission 46
Ground	
C-16	Left rear corner of engine compartment, on inner fender panel 28
C-45	Below right side of front console 75
C-96	Right front of engine compartment 21

Circuit Operation

The rear wheel anti-lock (RWAL) brake system is designed to prevent the rear wheels from locking up and to assist directional stability when the brakes are applied.

The rear wheel anti-lock brake controller determines if rear wheel anti-lock brake operation is required by monitoring the stop light switch (w/o cruise control) or brake switch (w/cruise control) state and the speed signal generated by the differential speed sensor. The differential speed sensor is a magnetic pickup coil which generates an AC voltage as a toothed exciter ring passes it. The frequency of the generated signal is proportional to vehicle speed.

When the controller detects an impending lockup, it will energize and deenergize the isolation solenoid and dump solenoid to prevent lockup. Energizing the isolation solenoid isolates the rear brake hydraulic circuits from the master cylinder. This allows brake pressure to be maintained but prevents brake pressure from increasing. Energizing the dump solenoid reduces the rear brake hydraulic pressure by opening a valve which allows brake fluid to flow into an accumulator. The controller energizes the solenoids by applying voltage.

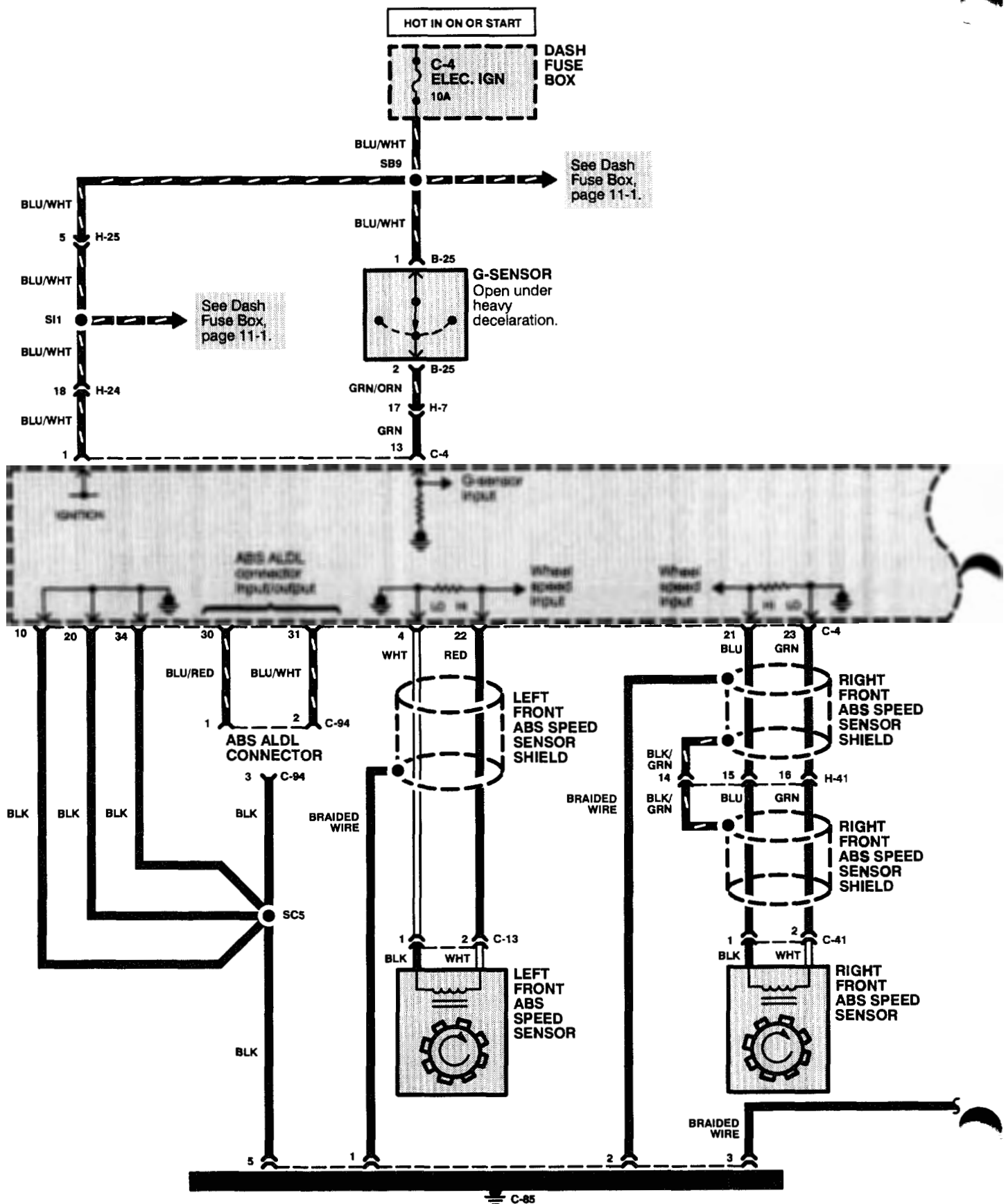
The controller has the capability to detect a fault and set a code. When the controller detects a fault, it will turn on the "Rr. ABS" brake warning light and the "BRAKE" warning light by grounding the lamps at terminals 2 and 5. To read the codes, ground the diagnostic test connector. The "Rr. ABS" and "BRAKE" warning lamps will flash indicating the code number. The "BRAKE" warning light will stay on if the parking brake is on or unequal brake fluid pressure is detected.

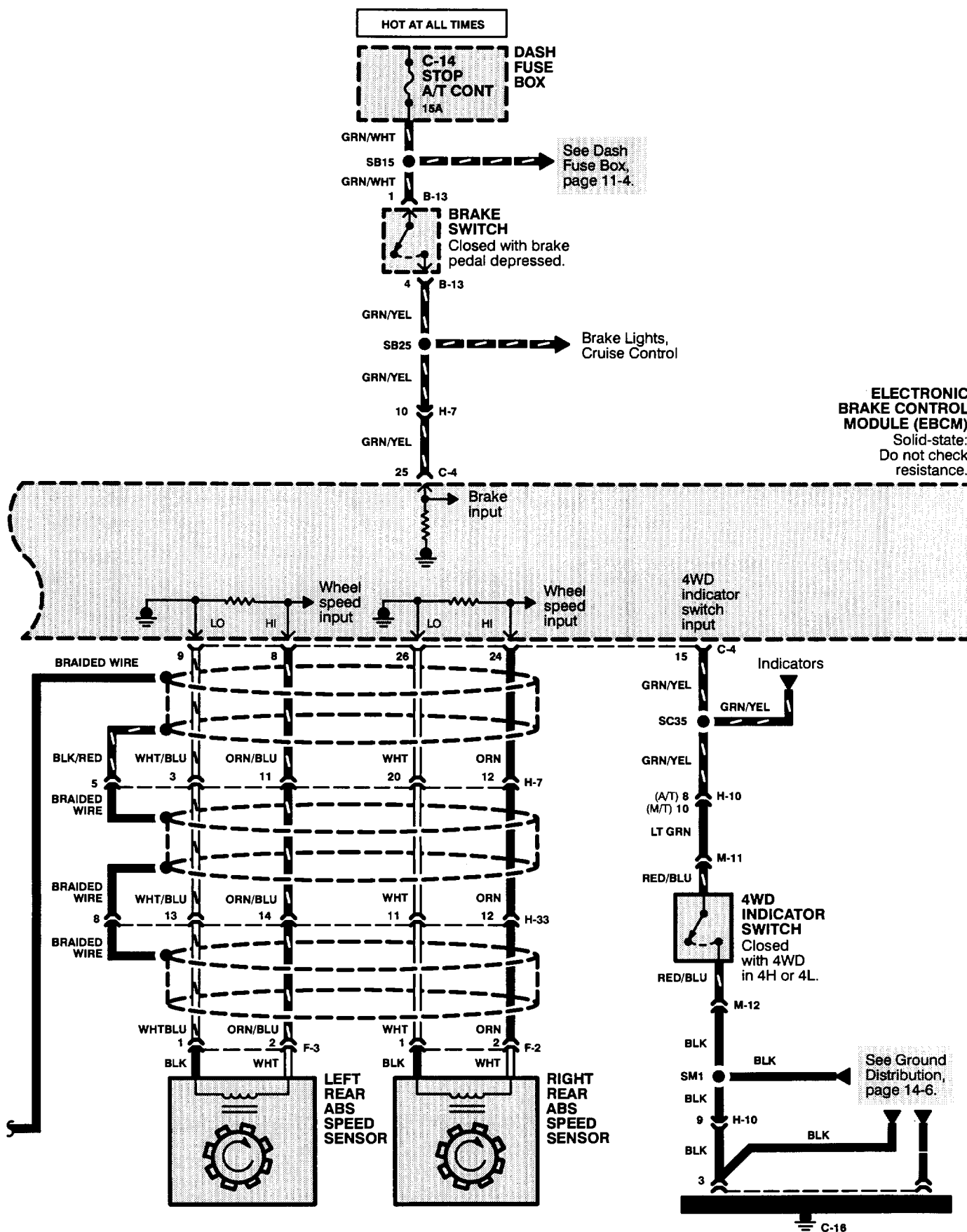
When the 4WD is engaged, the RWAL brake system will be disabled. The controller is able to determine that the 4WD is engaged whenever the 4WD indicator switch closes and grounds terminal 3 of the rear wheel anti-lock brake controller.

Refer to Section 5 of the Workshop Manual for further rear wheel anti-lock (RWAL) brake system diagnosis.

4-WHEEL ANTI-LOCK BRAKE SYSTEM (ABS)

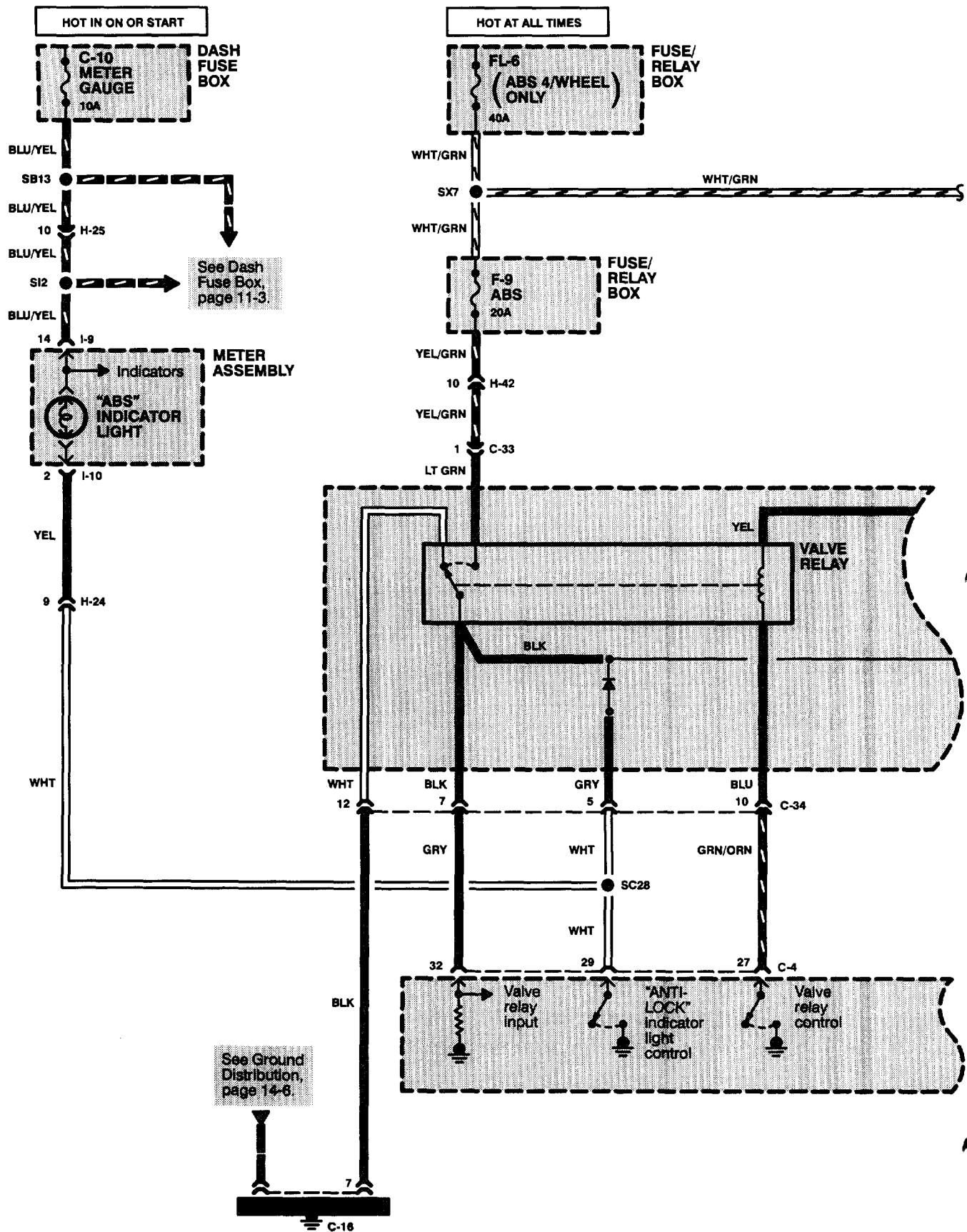
Circuit Schematic

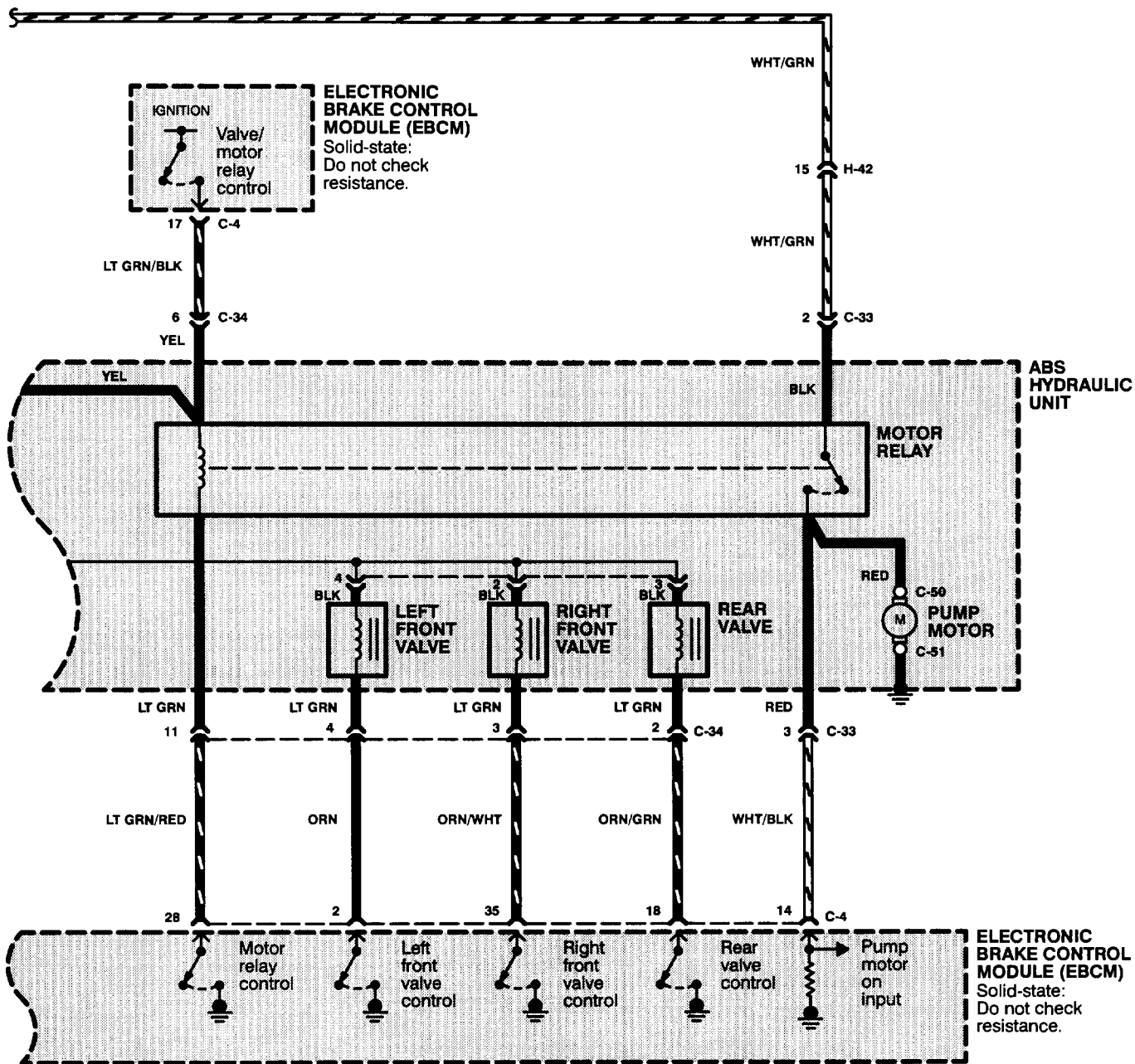




4-WHEEL ANTI-LOCK BRAKE SYSTEM (ABS)

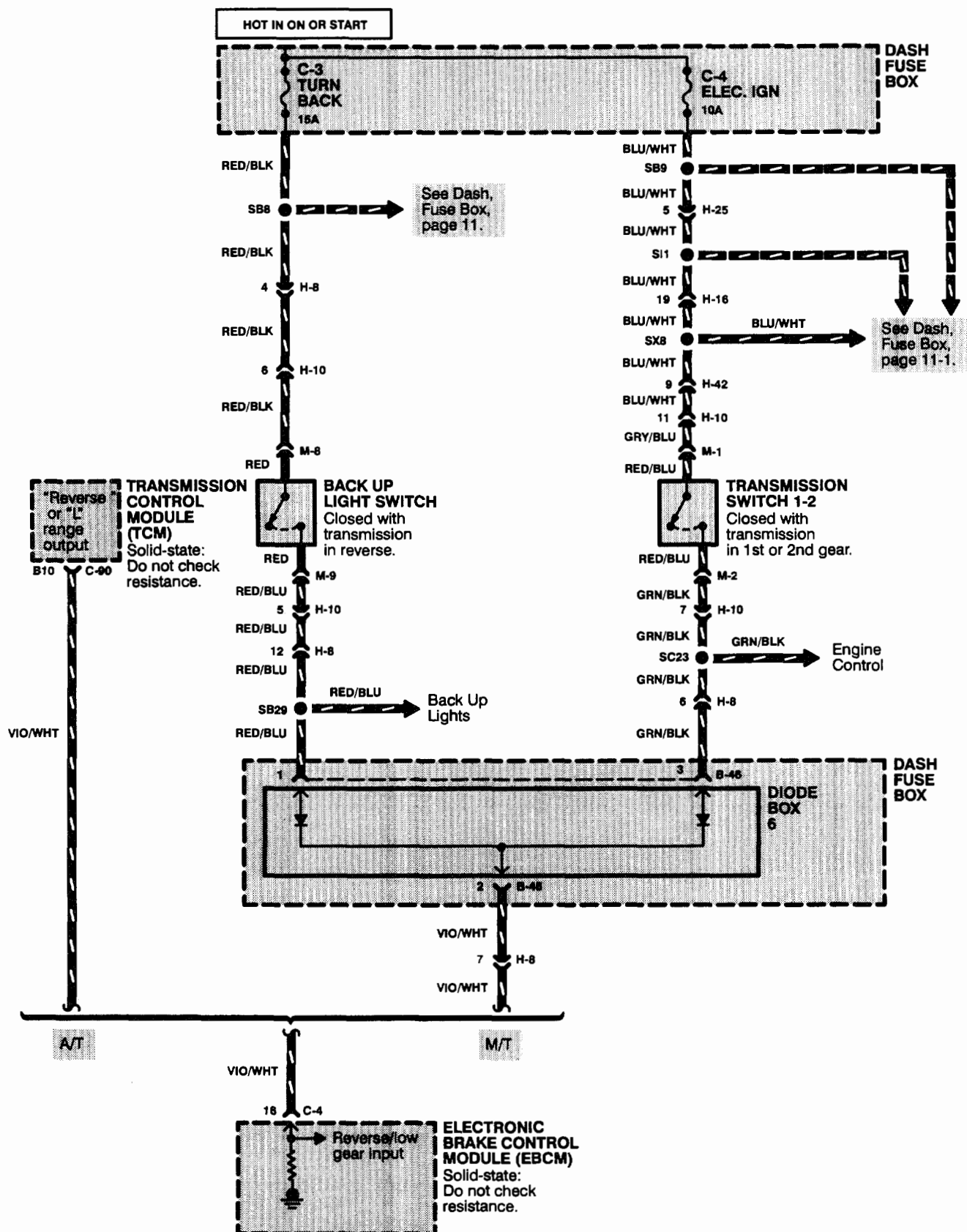
Circuit Schematic





4-WHEEL ANTI-LOCK BRAKE SYSTEM (ABS)

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
4WD Indicator Switch	Beneath vehicle, on right side of transfer case 46
ABS ALDL Connector	
C-94 (3-ORN)	Behind left I/P lower cover 55
ABS Hydraulic Unit	Right side of engine compartment 33
Back Up Light Switch	Beneath vehicle, on left side of transmission 44
Brake Switch	Below I/P, on brake pedal support 68
Dash Fuse Box	Behind left dash side trim panel 58
Diode Box 6	In dash fuse box 61
Electronic Brake Control	
Module (EBCM)	Behind lower cluster assembly 74
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
G-Sensor	Below rear of center console 79
Left Front ABS Speed	
Sensor	Inside of left front wheel 8
Left Rear ABS Speed	
Sensor	Inside of left rear wheel 116
Right Front ABS Speed	
Sensor	Inside of right front wheel 8
Right Rear ABS Speed	
Sensor	Inside of right rear wheel 116
Transmission Control	
Module (TCM)	Below left side of I/P 65
Transmission Switch 1-2	Beneath vehicle, on left side of transmission 43
Connector	
C-13 (2-BRN)	Lower left side of engine compartment 7
C-33 (3-GRY)	Right front corner of engine compartment 49
C-34 (12-GRY)	Right front corner of engine compartment 49
C-41 (2-BRN)	Lower right side of engine compartment 7
C-90 (24-BLU)	On transmission control module (TCM) 65
F-2 (2-BRN)	Beneath rear of vehicle, above right side of differential 111
F-3 (2-BLK)	Beneath rear of vehicle, above right side of differential 111
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket 63
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-10 (16-BLU)	Left front of engine compartment 27
H-16 (22-WHT)	Behind right dash side trim panel 86
H-24 (18-YEL)	Below I/P, above left dash side trim panel, on bracket 63
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-33 (14-WHT)	In floor, below right front seat 125
H-41 (16-BLU) (ABS)	Right front of engine compartment 31
H-42 (16-BLK)	Right front of engine compartment 31
I-9 (16-BLK)	On left of rear meter assembly 53
I-10 (16-WHT)	On right rear meter assembly 53
M-1 (1-CLR)	Beneath center of vehicle, top left side of transmission 43
M-2 (1-CLR)	Beneath center of vehicle, top left side of transmission 43
M-8 (1-CLR)	Beneath center of vehicle, top left side of transmission 44
M-9 (1-CLR)	Beneath center of vehicle, top left side of transmission 44
M-11 (1-WHT)	Beneath center of vehicle, top right side of transmission 46
M-12 (1-WHT)	Beneath center of vehicle, top right side of transmission 46

4-WHEEL ANTI-LOCK BRAKE SYSTEM (ABS)

Component Location Index

(Refer to Section 201 for photographs.)

Ground

Photo No.

C-16	Left rear corner of engine compartment, on inner fender panel	28
C-85	Below right side of front console	73

Circuit Operation

The anti-lock brake system adjusts the brake pressure whenever a wheel is about to lockup, allowing the driver to maintain greater control of the vehicle under heavy braking conditions. Under normal driving conditions, the anti-lock brake system (ABS) functions the same as a standard power assisted brake system.

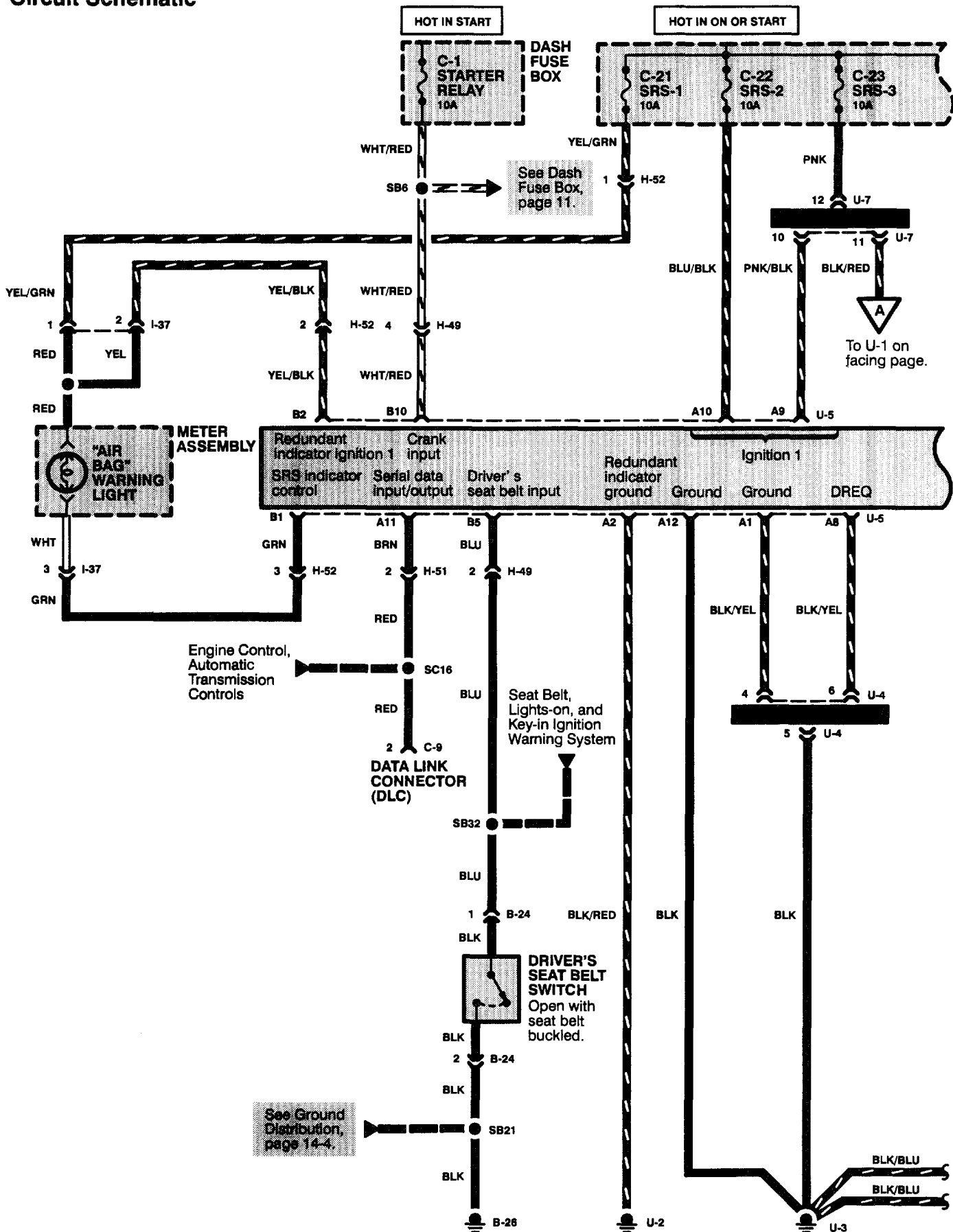
The electronic brake control module (EBCM) receives inputs from individual ABS speed sensors and the G-sensor. The electronic brake control module (EBCM) uses the inputs to control the ABS hydraulic unit, which adjusts the hydraulic pressure applied to each caliper on the basis of the signals received from the electronic brake control module (EBCM).

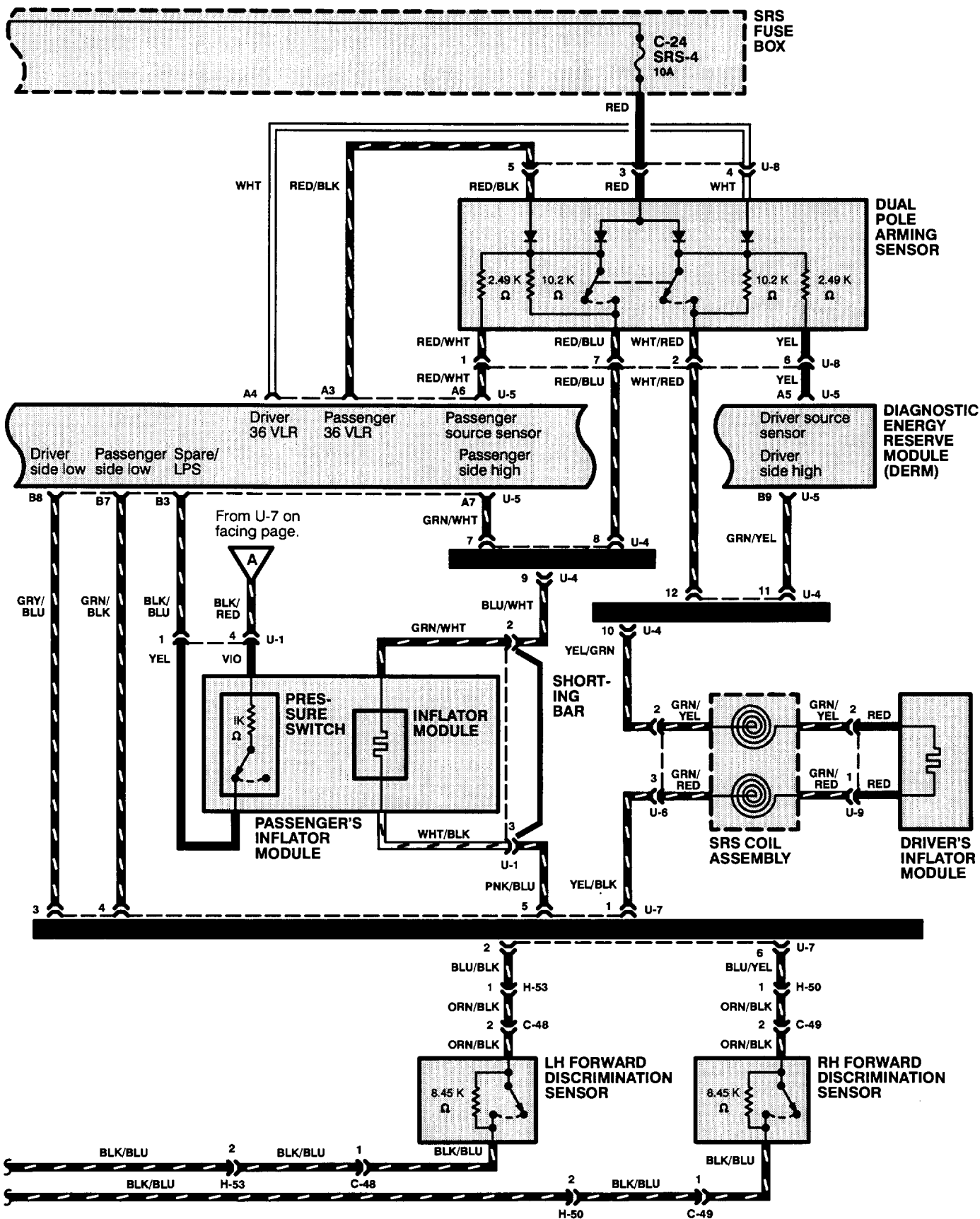
The electronic brake control module (EBCM) has a self-diagnosis function which monitors the system's function. When a malfunction is detected, the "ABS" indicator light is turned on and the anti-lock braking function is disabled; but the standard power assisted brake system continues to operate normally.

Refer to Section 5 of the Workshop Manual for further anti-lock brake system (ABS) diagnosis.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

Circuit Schematic





SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Data Link Connector	
(DLC) C-9 (3-WHT)	Behind left I/P lower cover 55
Diagnostic Energy Reserve	
Module (DERM)	Behind front of front console 72
Driver's Inflator Module	In steering wheel
Driver's Seat Belt Switch	In left front seat belt buckle
Dual Pole Arming Sensor	Behind center of I/P, see Workshop Manual page 9J-122
LH Forward Discriminating	
Sensor	Mounted to left side of radiator support 51
Passenger's Inflator Module ..	Behind right side of I/P 81
RH Forward Discriminating	
Sensor	Mounted to right side of radiator support 50
SRS Coil Assembly	Top of steering column 54
SRS Fuse Box	On top of dash fuse box 58
Connector	
B-24 (3-BLK)	Below left front seat 119
C-48 (2-YEL)	Behind left headlight 51
C-49 (2-YEL)	Below right side of radiator support 50
H-49 (4-WHT)	In dash fuse box 58
H-50 (2-YEL)	Below right side of I/P 80
H-51 (2-WHT)	Below I/P, above left dash side trim panel, on bracket 64
H-52 (3-YEL)	Below I/P, above left dash side trim panel, on bracket 64
H-53 (2-YEL)	Below I/P, above left dash side trim panel, on bracket 64
I-37 (3-YEL)	Behind left side of meter assembly 53
U-1 (4-YEL)	Below right side of I/P 81
U-4 (12-YEL)	Behind front of front console 72
U-6 (3-YEL)	Below I/P, right of steering column 69
U-7 (12-YEL)	Below I/P, above left dash side trim panel, inside bracket 64
U-8 (7-YEL)	Below I/P, above left dash side trim panel, on bracket 64
U-9 (2-YEL)	Inside steering wheel
Ground	
B-26	Below rear of center console 79
U-2	Below right side of front console 72
U-3	Below right side of front console 72

Circuit Operation

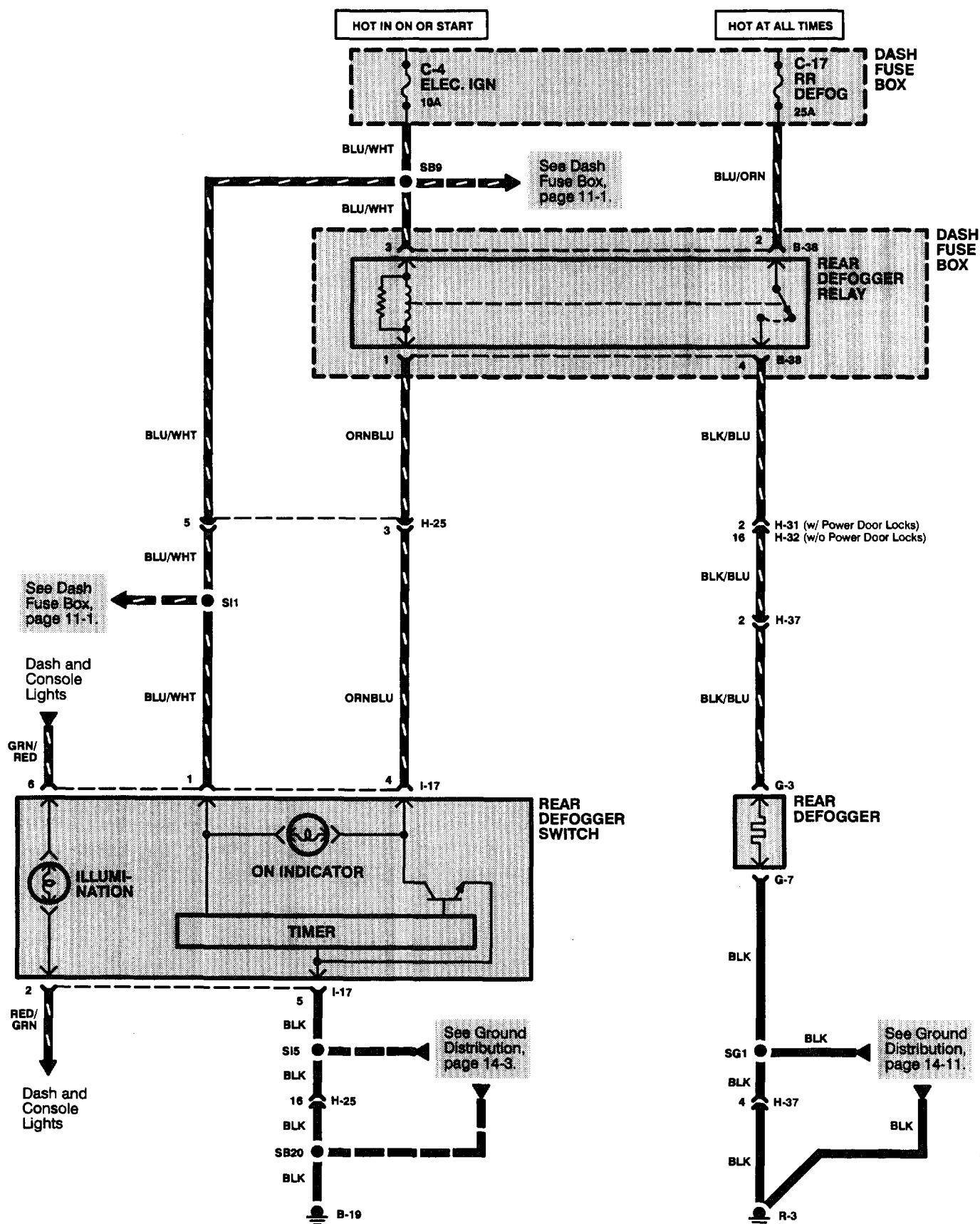
The main portions of the supplemental restraint system (SRS) are the deployment loops and the diagnostic energy reserve module (DERM). The main function of the deployment loops is to supply current through the inflator modules, which will cause deployment of the air bags in the event of a frontal crash of sufficient force, up to 30 degrees off the centerline of the vehicle. The dual pole arming sensor, SRS coil assembly (driver side only), inflator modules, LH forward discriminating sensor and RH forward discriminating sensor make up the deployment loops. The dual pole arming sensor switches power to the inflator modules on the high side (power side) of the deployment loops. Either of the discriminating sensors can supply ground to the inflator modules on the low side (ground side) of the loops. The inflator modules are only supplied sufficient current to deploy when the dual pole arming sensor and at least one of the discriminating sensors are closed simultaneously.

A function of the DERM is to supply the deployment loops with a 36-Volt Loop Reserve (36VLR) to ensure sufficient energy to deploy the air bags if the ignition feed to the dual pole arming sensor is lost during a frontal crash.

Another function of the DERM is electrical system diagnostics. The DERM monitors the deployment loops in conjunction with the resistors in the dual pole arming sensor, LH forward discriminating sensor and RH forward discriminating sensor. These resistors make it possible for the DERM to detect circuit and component malfunctions within the deployment loops. The DERM monitors the voltage drop across each component within the loops during normal non-deployment operation. If the monitored voltages fall outside of expected limits, the DERM will indicate a malfunction through the storage of a diagnostic trouble code and the illumination of the "AIR BAG" warning light.

Refer to Section 9J of the Workshop Manual for further diagnosis.

REAR DEFOGGER



Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box Behind left dash side trim panel	58
Rear Defogger Relay In dash fuse box	59
<u>Connector</u>	
G-3 (1-BLK) On left side of glass, in left tailgate door	106
G-7 (1-BLK) On right side of glass, in left tailgate door	106
H-25 (22-BLU) Below I/P, above left dash side trim panel, on bracket	63
H-31 (2-WHT) Below left front seat	120
H-32 (16-BLK) (without Power Door Locks) Below left front seat	120
H-32 (22-BLK) (with Power Door Locks) ... Below left front seat	120
H-37 (4-GRY) Left rear of luggage room	102
<u>Ground</u>	
B-19 Behind top of left dash side trim panel	62
R-3 Left side of luggage room	103

Circuit Operation

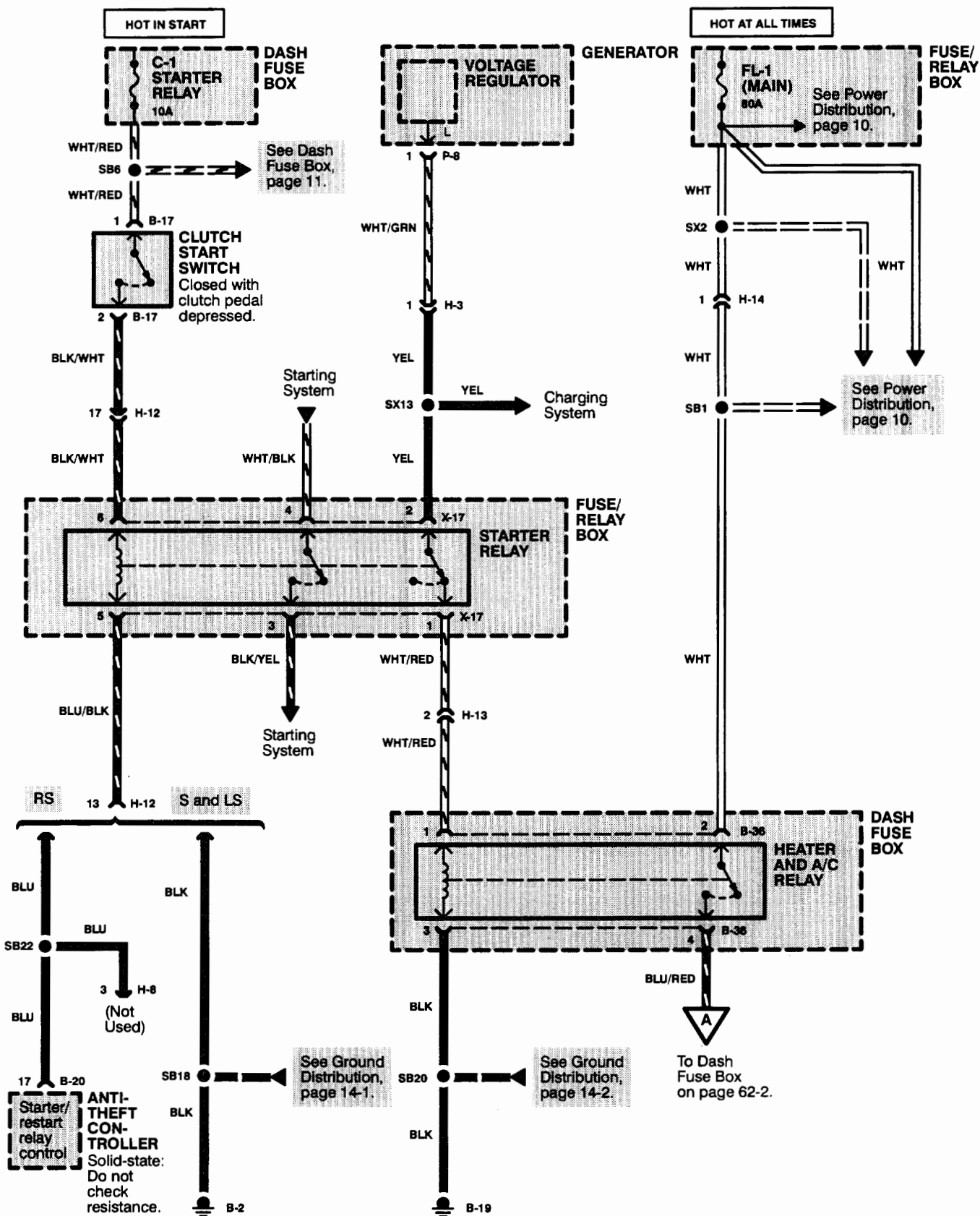
Voltage is applied at all times through fuse C-17 to the rear defogger relay contact. With the starter switch in ON or START, voltage is applied through fuse C-4 to the rear defogger switch and the rear defogger relay coil.

When the rear defogger switch is pushed, a ground signal is sent to the rear defogger timer. The timer provides ground for the rear defogger relay coil and the rear defogger "ON" indicator light. The rear defogger relay energizes and the relay contact closes. Battery voltage is applied to the rear defogger. The indicator lights up and the rear defogger heats the rear window to remove any fog from the glass. The rear defogger will turn off automatically after approximately 30 minutes. It will also turn off if the starter switch is turned to OFF or if the rear defogger switch is depressed again.

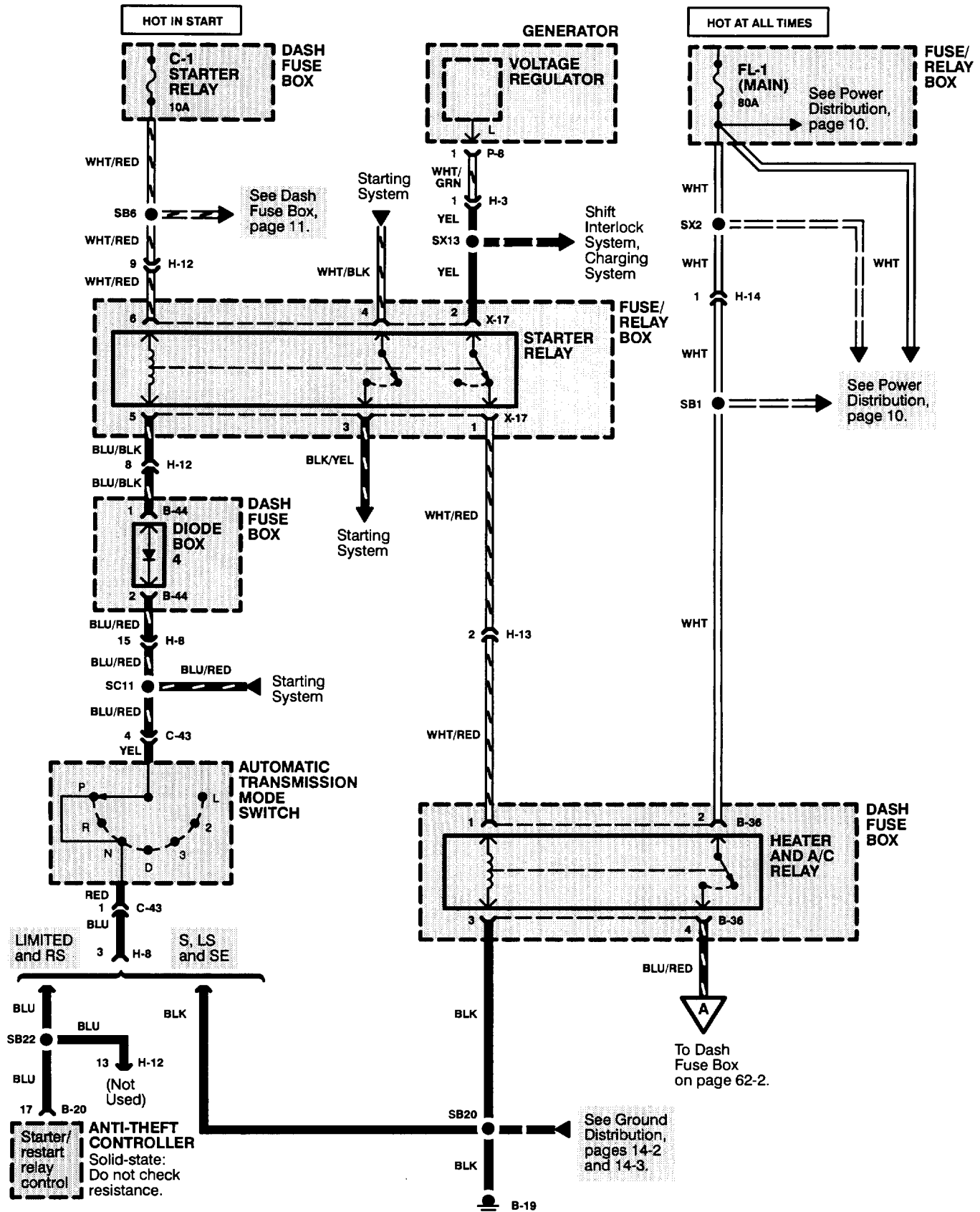
BLOWER CONTROLS

Circuit Schematic

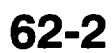
Manual Transmission



Automatic Transmission



Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Anti-theft Controller	Below left side of I/P 68
Automatic Transmission	
Mode Switch	Beneath vehicle, on left side of transmission 47
Blower Motor	Below right side of I/P 84
Blower Resistors	Right side of I/P, behind glove box 80
Clutch Start Switch	Below I/P, top of clutch pedal support 66
Dash Fuse Box	Behind left dash side trim panel 58
Diode Box 4	In dash fuse box 61
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Generator	Lower right front of engine
Heater and A/C Relay	In dash fuse box 59
Starter Relay	In fuse/relay box 36
Connector	
C-43 (8-BLK)	Left front of engine compartment 27
H-3 (2-BLK)	Right side of engine compartment 40
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-13 (6-GRY)	Below I/P, above right dash side trim panel, on bracket 82
H-14 (2-RED)	Below I/P, above right dash side trim panel, on bracket 82
H-20 (6-WHT)	Behind right dash side trim panel 86
H-48 (16-BLK)	Behind right dash side trim panel 86
I-18 (6-WHT)	On rear of heater-A/C control panel 76
Ground	
B-2	Above right dash side trim panel 84
B-19	Behind top of left dash side trim panel 62

Circuit Operation

With the starter switch in START and the transmission control lever in park or neutral (automatic transmission), or with the clutch pedal depressed (manual transmission), voltage is applied to the starter relay and the relay energizes.

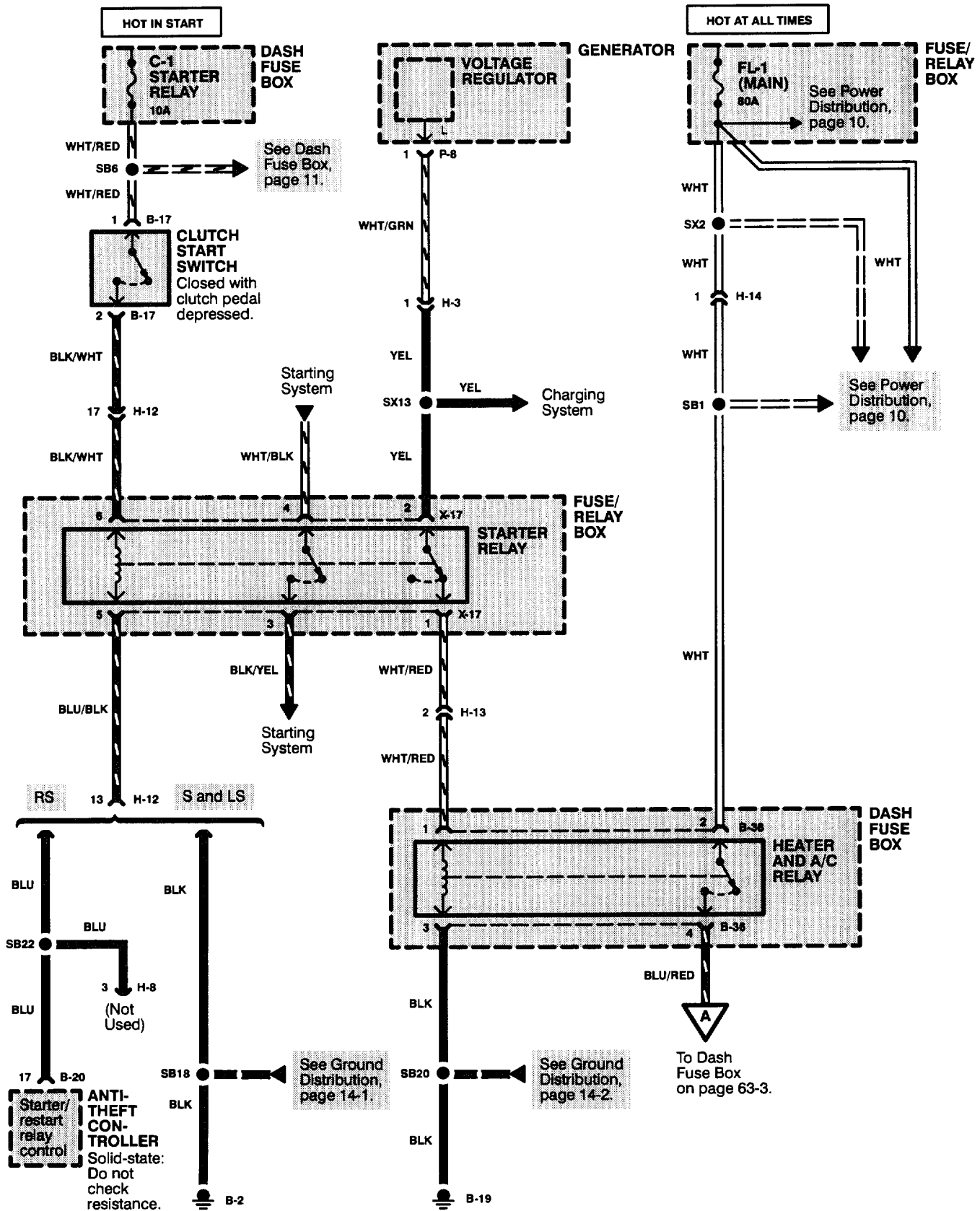
When the starter switch is turned to ON with the engine running, the relay deenergizes and voltage is applied from the generator to the heater and A/C relay through the normally closed contacts of the starter relay. The heater and A/C relay energizes allowing voltage to be applied from FL-1 (MAIN) fusible link to the blower motor through fuse C-19.

The blower switch then applies ground to the blower resistors for the desired blower motor speed. As the blower switch moves from OFF to position 4, resistors are bypassed. As the resistance to ground is decreased, blower speed increases. When the blower switch is in position 4, all of the resistors are bypassed and the blower motor runs at the highest speed.

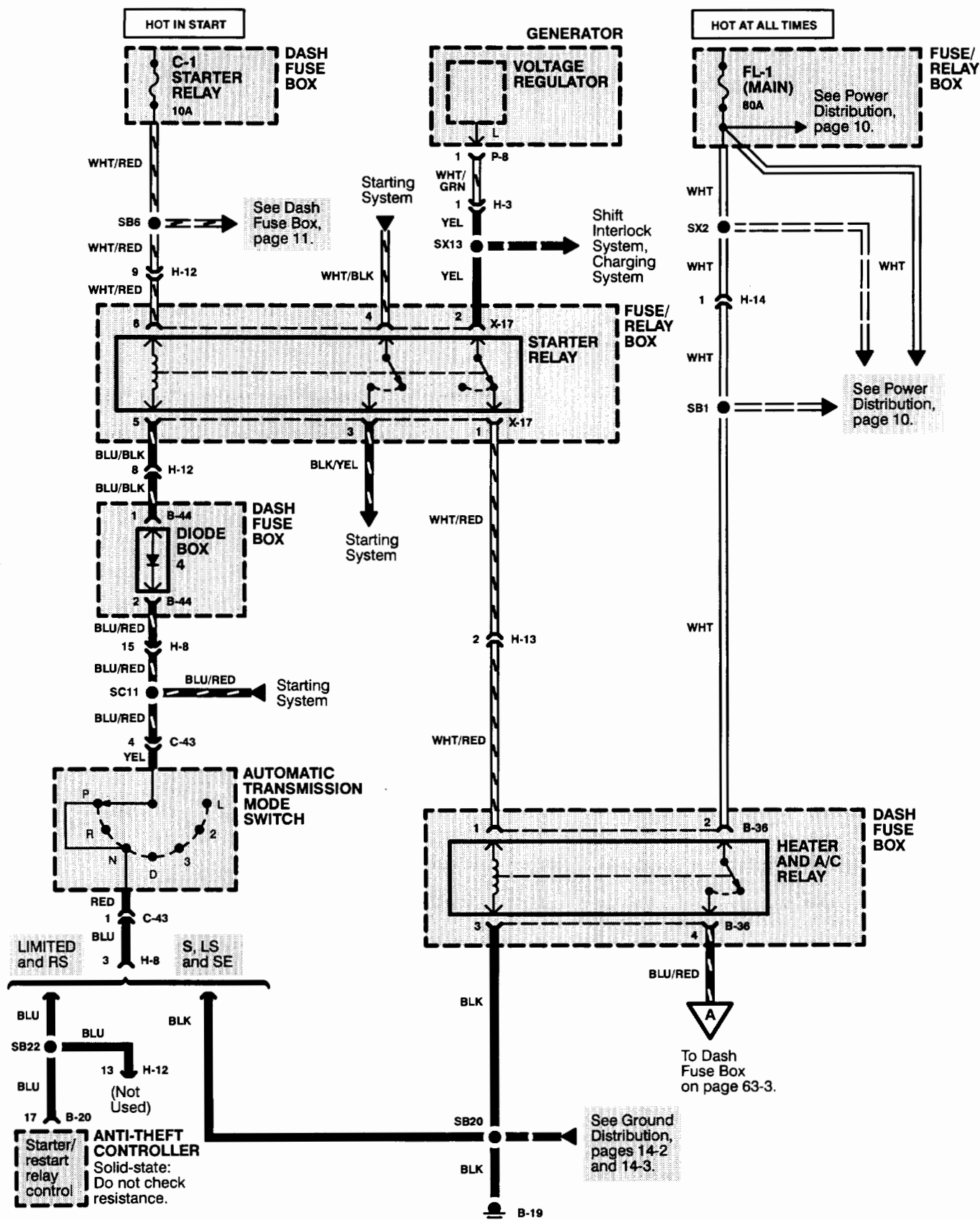
AIR CONDITIONER: COMPRESSOR CONTROLS

Circuit Schematic

Manual Transmission

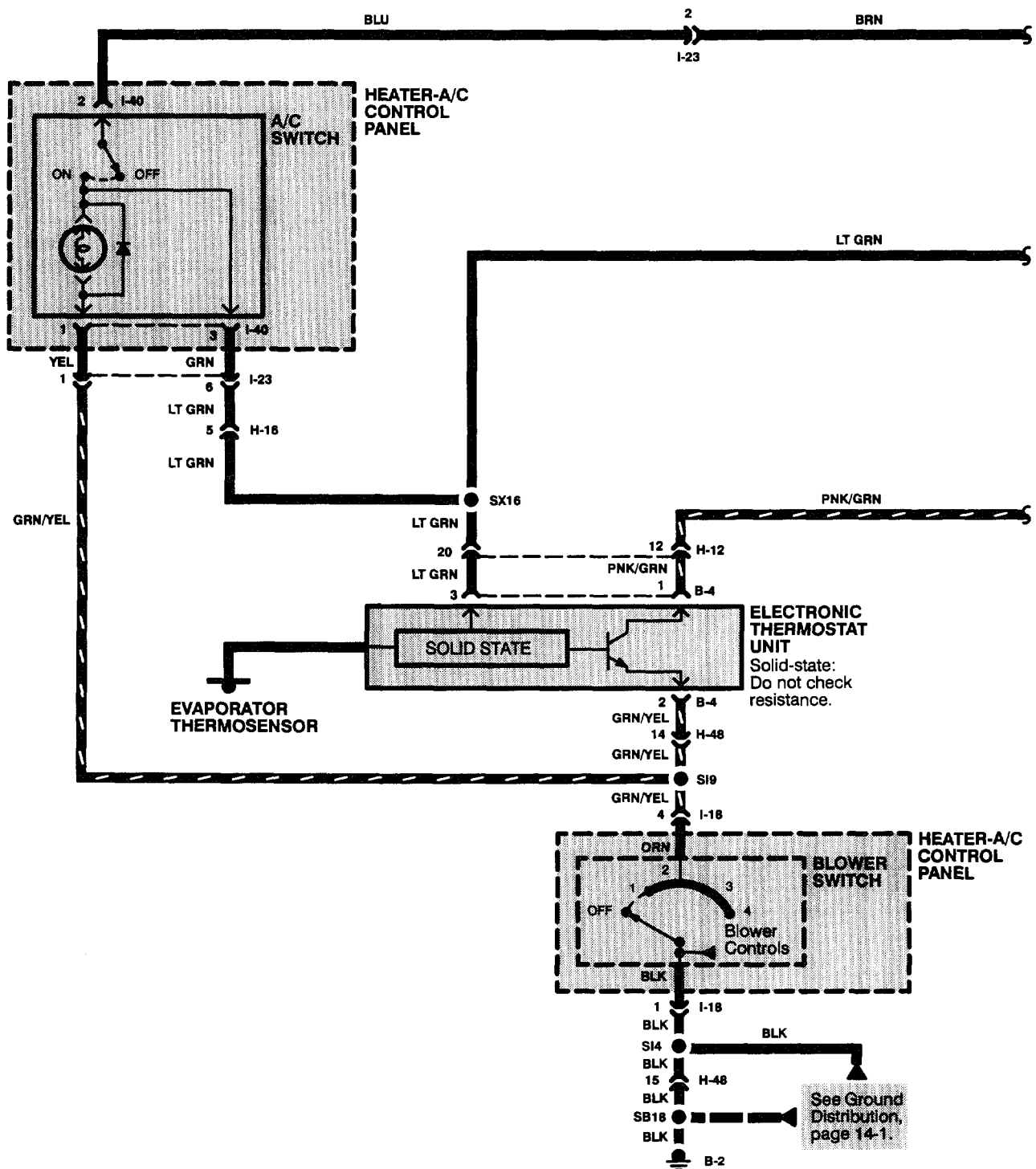


Automatic Transmission

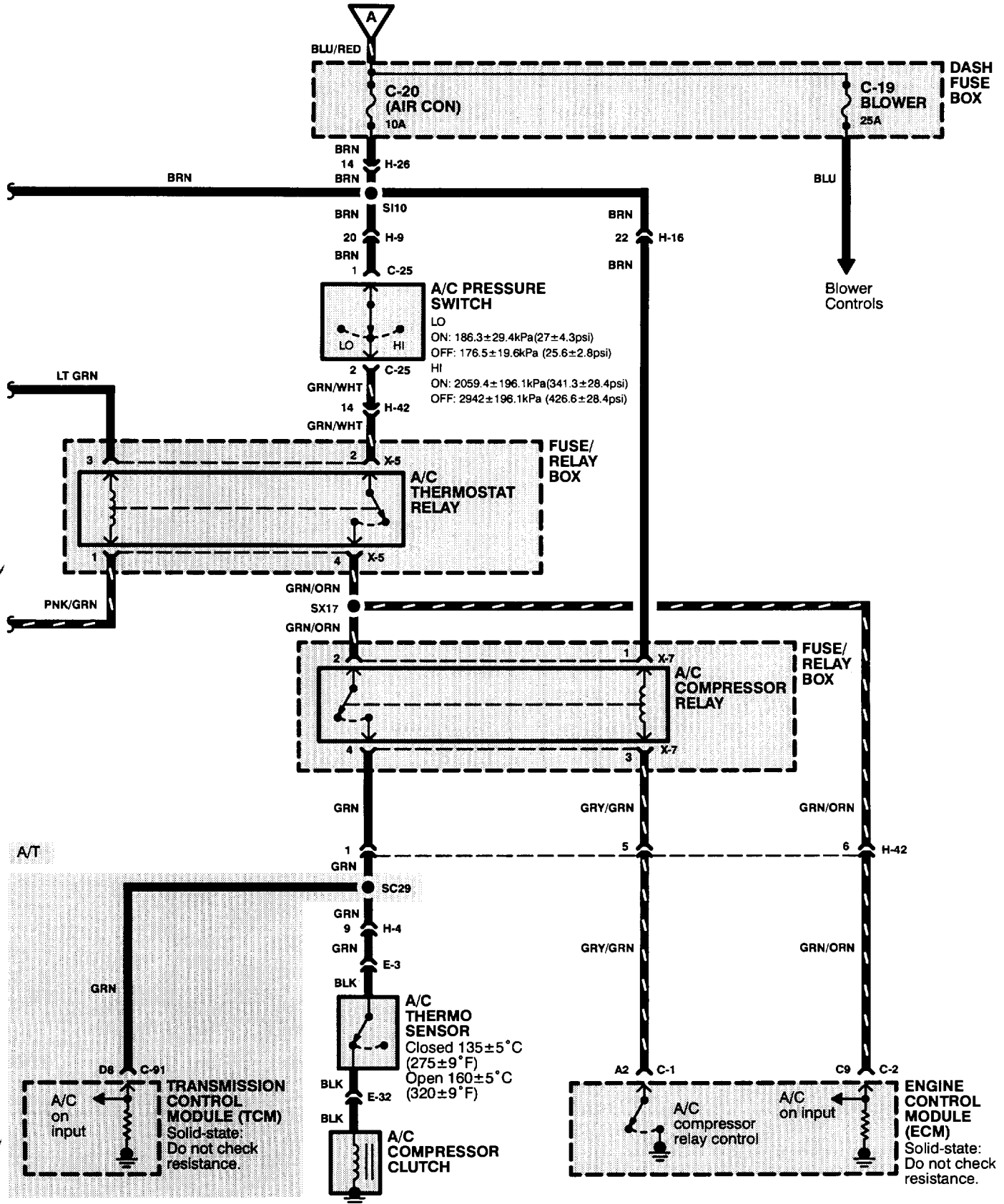


AIR CONDITIONER: COMPRESSOR CONTROLS

Circuit Schematic



From Dash Fuse Box
on page 63 (M/T)
or 63-1 (A/T).



AIR CONDITIONER: COMPRESSOR CONTROLS

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
A/C Compressor Clutch	Lower left front corner of engine 48
A/C Compressor Relay	In fuse/relay box 39
A/C Pressure Switch	Behind left side of radiator grille 2
A/C Thermo Sensor	In A/C compressor 48
A/C Thermostat Relay	In fuse/relay box 35
Anti-theft Controller	Below left side of I/P 68
Automatic Transmission	
Mode Switch	Beneath vehicle, on left side of transmission 47
Clutch Start Switch	Below I/P, top of clutch pedal support 66
Dash Fuse Box	Behind left dash side trim panel 58
Diode Box 4	In dash fuse box 61
Electronic Thermostat Unit	Right side of I/P, behind glove box 80
Engine Control Module	
(ECM)	Behind front of front console 73
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Generator	Lower right front of engine
Heater And A/C Relay	In dash fuse box 59
Starter Relay	In fuse/relay box 36
Transmission Control Module	
(TCM)	Below left side of I/P 65
Connector	
C-1 (24-BRN)	On engine control module (ECM) 73
C-2 (32-BRN)	On engine control module (ECM) 73
C-43 (8-BLK)	Left front of engine compartment 27
C-91 (32-BLU)	On transmission control module (TCM) 65
E-3 (1-BLK)	Lower left front corner of engine 48
E-32 (1-CLR)	On A/C compressor 48
H-3 (2-BLK)	Right side of engine compartment 40
H-4 (12-BLU)	Left side of engine compartment 30
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-13 (6-GRY)	Below I/P, above right dash side trim panel, on bracket 82
H-14 (2-RED)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
H-42 (16-BLK)	Right front of engine compartment 31
H-48 (16-BLK)	Behind right dash side trim panel 86
I-18 (6-WHT)	On rear of heater-A/C control panel 76
I-23 (6-WHT)	On rear of heater-A/C control panel 76
Ground	
B-2	Above right dash side trim panel 84
B-19	Behind top of left dash side trim panel 62

Circuit Operation

A/C Compressor Clutch

With the starter switch in START and the transmission control lever in park or neutral (automatic transmission), or the clutch pedal depressed (manual transmission), voltage is applied to the starter relay and the relay energizes. When the starter switch is turned to ON with the engine running, the relay deenergizes and voltage is applied from the generator to the heater and A/C relay through the normally closed contacts of the starter relay. The heater and A/C relay energizes, allowing voltage to be applied from FL-1 (MAIN) fusible link to the A/C switch, the A/C pressure switch, and the A/C compressor relay through fuse C-20. When the A/C switch is switched on, voltage is applied to the coil of the A/C thermostat relay. Ground is provided to the coil of this relay through the electronic thermostat unit and the blower switch (provided the blower switch is not in the OFF position).

When ground is provided, the A/C thermostat relay energizes and voltage is applied through the A/C pressure switch to the A/C compressor relay. Ground is provided to the A/C compressor relay by the engine control module (ECM) and the relay energizes. Power is provided to the A/C compressor clutch and the clutch engages.

A/C Thermo Sensor

If the air conditioning compressor's temperature rises above $160 \pm 5^{\circ} \text{ C}$ ($320 \pm 9^{\circ} \text{ F}$), the A/C thermo sensor will open, disengaging the A/C compressor clutch. The A/C thermo sensor will close when the temperature falls below $135 \pm 5^{\circ} \text{ C}$ ($275 \pm 9^{\circ} \text{ F}$). Power is reapplied to the A/C compressor clutch and the clutch engages.

A/C Pressure Switch

Air conditioning system pressure below $176.5 \pm 19.6 \text{ kPa}$ ($25.6 \pm 2.8 \text{ psi}$) indicates a loss of refrigerant or refrigerant oil. The A/C pressure switch opens with low system pressure to prevent compressor damage. Also, with system pressure above $2942 \pm 196.1 \text{ kPa}$ ($426.6 \pm 28.4 \text{ psi}$), the A/C pressure switch opens to prevent compressor damage.

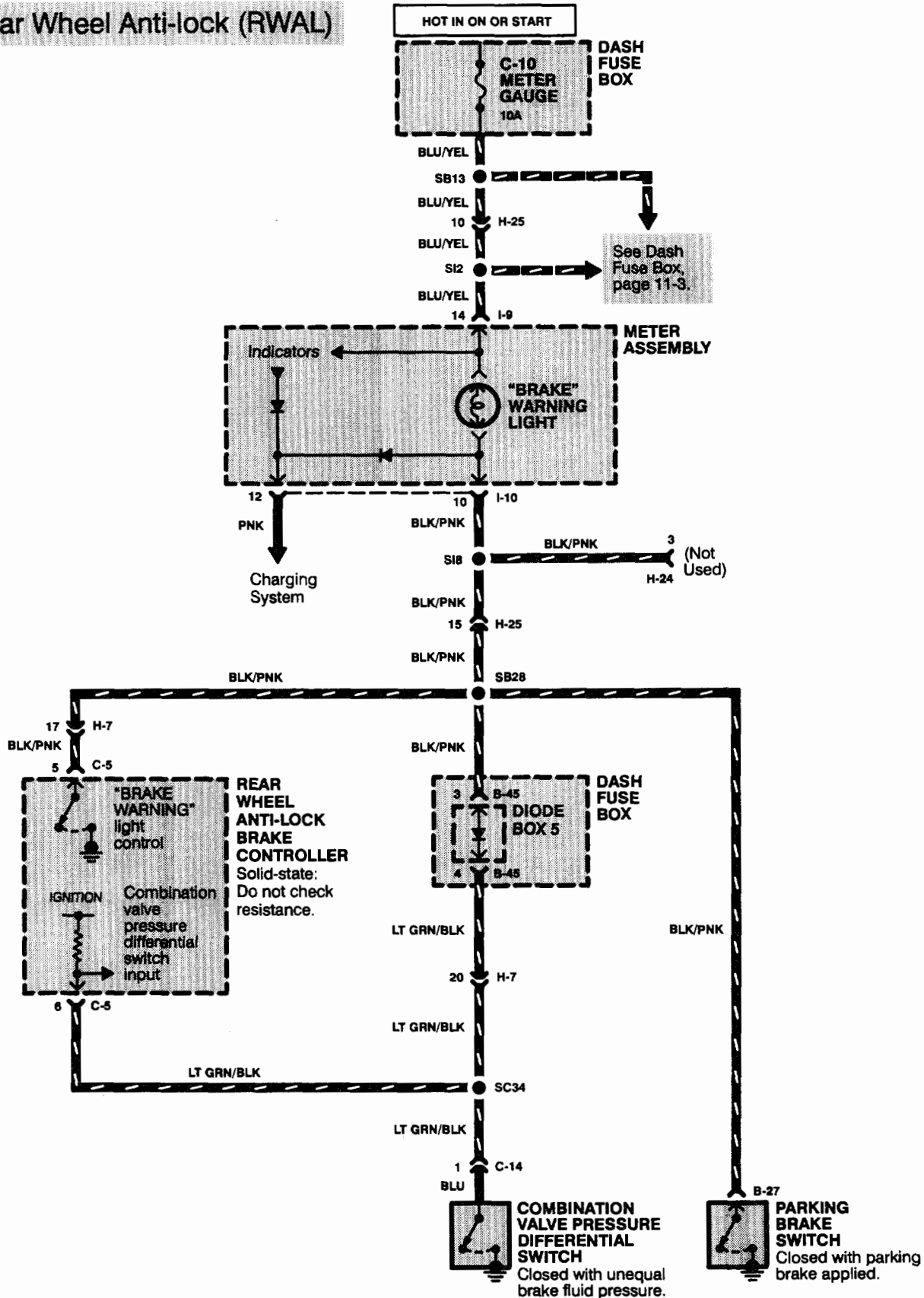
Electronic Thermostat Unit

The electronic thermostat unit senses the temperature of the cool air from the evaporator and the evaporator fins by means of the evaporator thermo sensor. This information is input by the electronic thermostat unit, which determines whether ground is to be provided to the A/C thermostat relay. When the temperature becomes too low, ground is not provided.

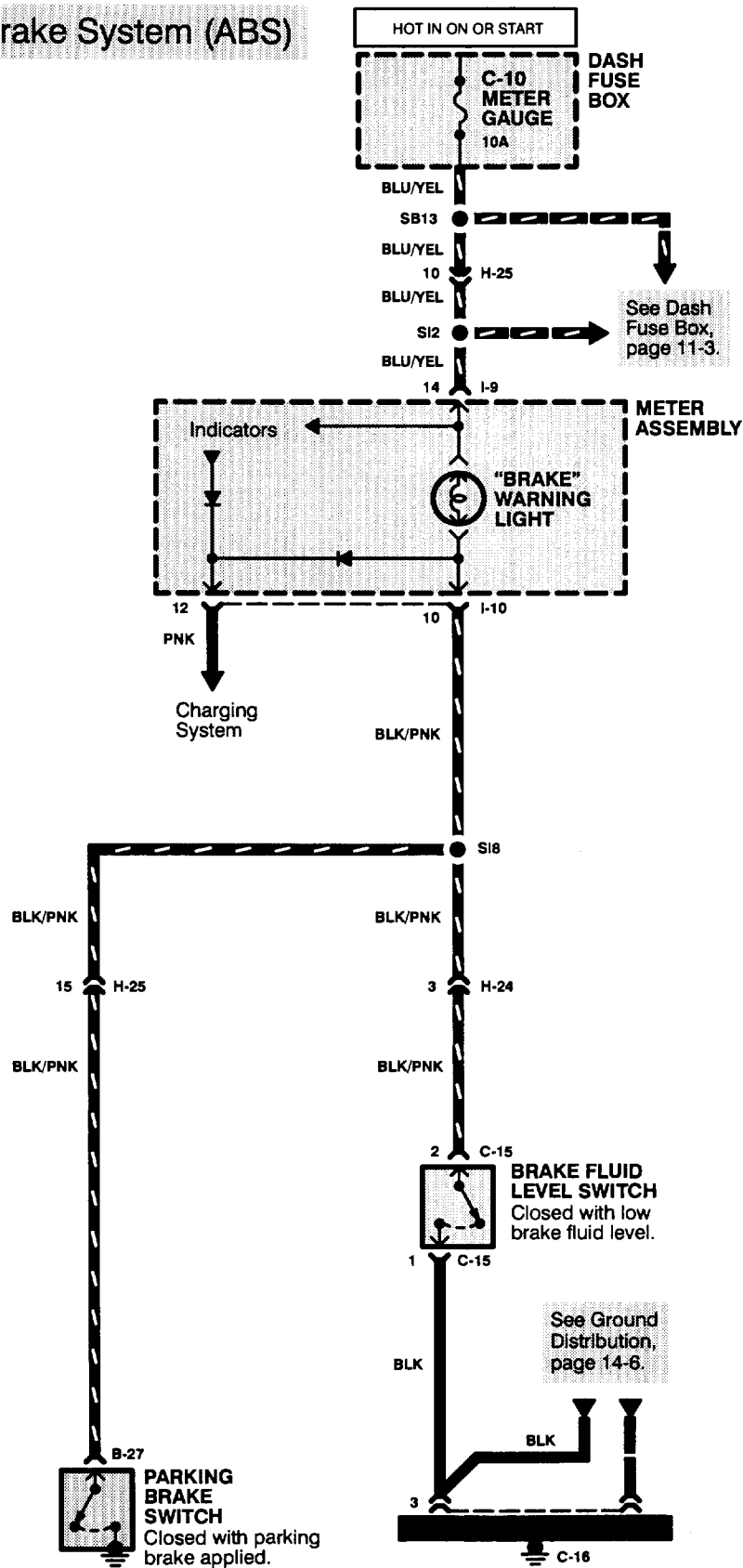
BRAKE WARNING SYSTEM

Circuit Schematic

Rear Wheel Anti-lock (RWAL)



Anti-lock Brake System (ABS)



BRAKE WARNING SYSTEM

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Brake Fluid Level Switch Left rear of engine compartment	28
Combination Valve Pressure Differential Switch Left rear of engine compartment, in brake fluid valve	29
Dash Fuse Box Behind left dash side trim panel	58
Diode Box 5 In dash fuse box	61
Parking Brake Switch Below rear of center console	79
Rear Wheel Anti-lock Brake Controller Behind lower cluster assembly	75
Connector	
C-14 (2-GRY) Left rear of engine compartment	29
H-7 (20-BRN) Below I/P, above left dash side trim panel, on bracket	63
H-24 (18-YEL) Below I/P, above left dash side trim panel, on bracket	63
H-25 (22-BLU) Below I/P, above left dash side trim panel, on bracket	63
I-9 (16-BLK) On left rear of meter assembly	53
I-10 (16-WHT) On right rear of meter assembly	53
Ground	
C-16 Left rear corner of engine compartment, on inner fender panel	28

Circuit Operation

Circuit Operation

The "BRAKE" warning light goes on to alert the driver that the parking brake is applied or that the combination valve pressure differential switch (RWAL)/ brake fluid level switch (ABS) is closed. It also lights as a bulb test when the engine is cranked.

Parking Brake Switch

With the starter switch in ON or START, battery voltage is applied to fuse C-10 and to the "BRAKE" warning light. When the parking brake is applied, the parking brake switch closes and provides a ground for the light. The "BRAKE" warning light goes on to remind the driver that the parking brake is applied.

Combination Valve Pressure Differential Switch

With the starter switch in ON or START, battery voltage is applied to fuse C-10 and to the "BRAKE" warning light. The braking system is a split system designed so that one part will provide some braking action if there is a loss of brake fluid pressure in the other part of the system. If there is a loss of brake fluid pressure in either system, the combination valve pressure differential switch closes and provides a ground for the light.

The "BRAKE" warning light goes on to warn the driver that there is a loss of brake fluid pressure in the system. The switch also provides a ground for the rear wheel antilock brake controller. See Rear Wheel Anti-lock (RWAL) Brake System for further details.

(Note: check brake pad wear before adding fluid.)

Brake Fluid Level Switch

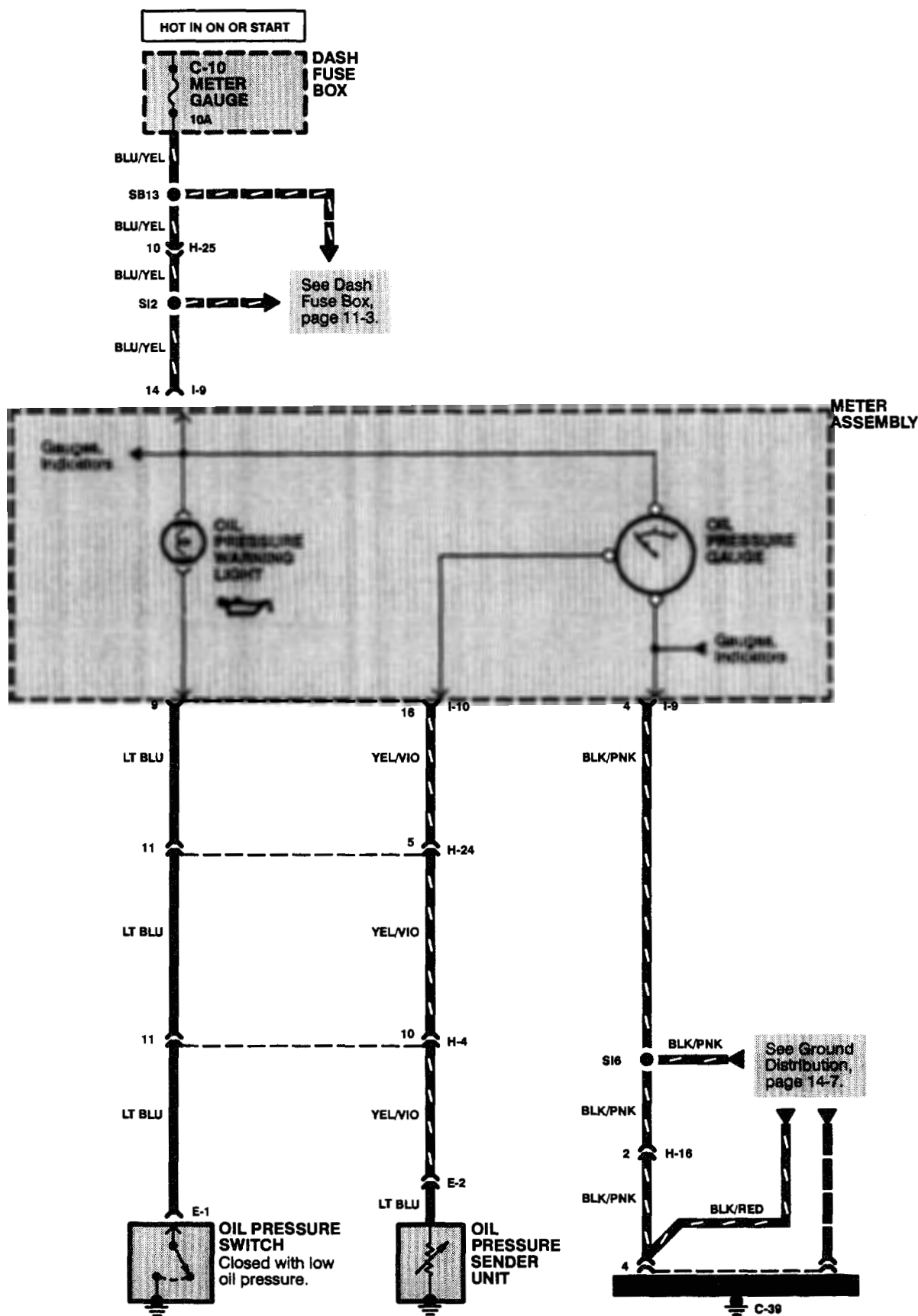
With the starter switch in ON or START, battery voltage is applied to fuse C-10 and to the "BRAKE" warning light. If the brake fluid is low, the brake fluid level switch closes and provides a ground for the light. The "BRAKE" warning light goes on to warn the driver of low brake fluid level in the brake master cylinder. (Note: check brake pad wear before adding fluid.)

Bulb Check

With the starter switch in START, battery voltage is applied to the "BRAKE" warning light. The generator will provide ground until the engine is running. The "BRAKE" warning light goes on to test the brake warning light bulb and then goes off. See Charging System for further details.

OIL PRESSURE WARNING SYSTEM

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box Behind left dash side trim panel	58
Oil Pressure Sender Unit Lower front of engine	23
Oil Pressure Switch Lower front of engine	23
<u>Connector</u>	
E-2 (1-GRY) Lower left front of engine	23
H-4 (12-BLU) Left side of engine compartment	30
H-16 (22-WHT) Behind right dash side trim panel	86
H-24 (18-YEL) Below I/P, above left dash side trim panel, on bracket	63
H-25 (22-BLU) Below I/P, above left dash side trim panel, on bracket	63
I-9 (16-BLK) On left rear of meter assembly	53
I-10 (16-WHT) On right rear of meter assembly	53
<u>Ground</u>	
C-39 Right rear corner of engine compartment, on inner fender panel	42

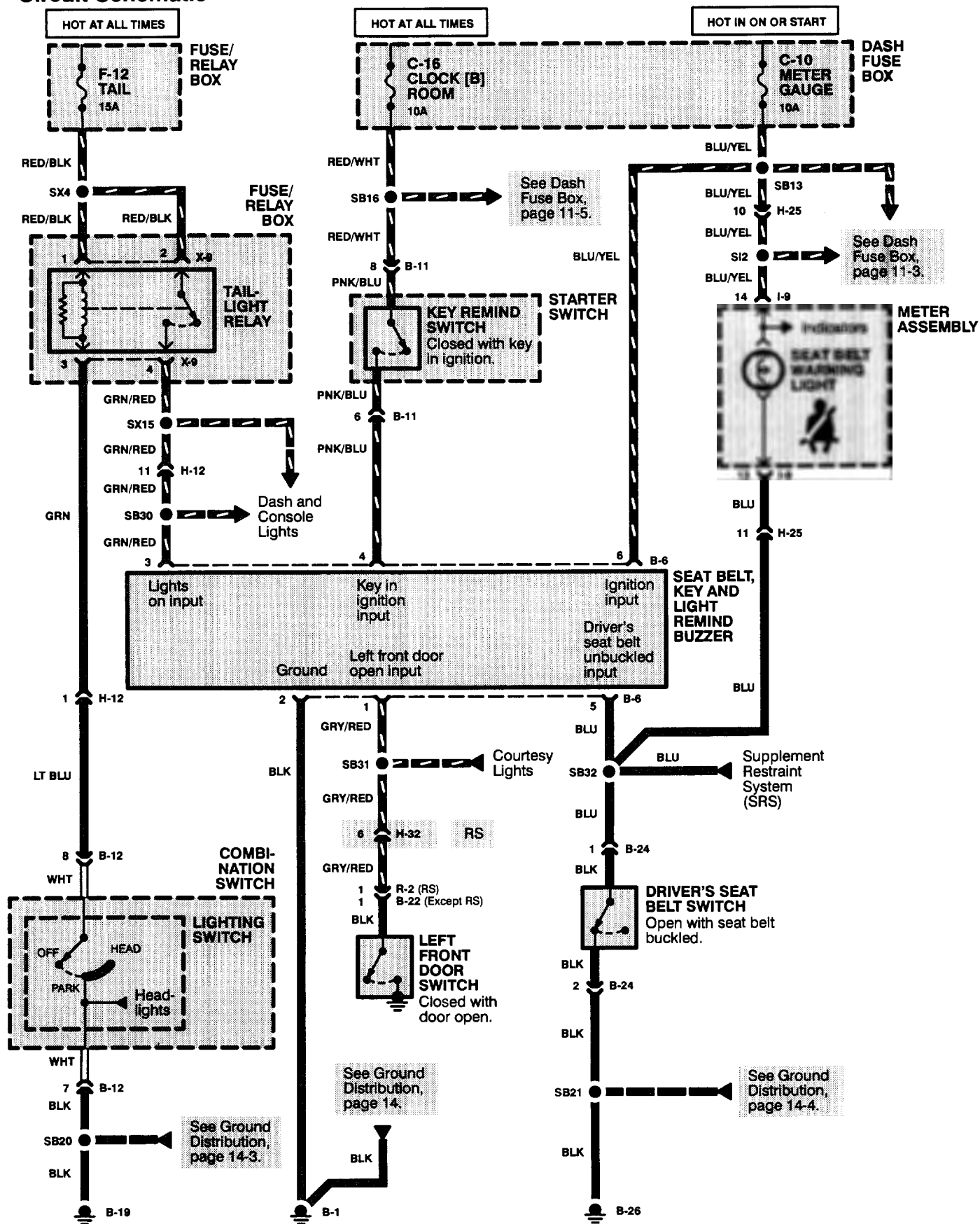
Circuit Operation

With the starter switch in ON or START, the oil pressure warning light will go on and the oil pressure gauge will show low oil pressure until the engine is started and normal oil pressure is obtained.

If the engine oil pressure falls below normal oil pressure and does not increase, the oil pressure switch will close and the oil pressure sending unit will decrease in resistance. The oil pressure warning light will go on and stay on and the oil pressure gauge will show low oil pressure.

SEAT BELT, LIGHTS-ON, AND KEY-IN IGNITION WARNING SYSTEM

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Driver's Seat Belt Switch	In left front seat belt buckle 33
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 88
Left Front Door Switch	Near left front door striker 86
Seat Belt, Key and Light Remind Buzzer	Behind right dash side trim panel 54
Starter Switch	Underside of steering column 36
Taillight Relay	In fuse/relay box 69
Connector	
B-11 (8-WHT)	Below I/P, right of steering column 69
B-12 (16-BLK/WHT)	Below I/P, right of steering column 119
B-22 (2-WHT)	In left center pillar, behind door switch 82
B-24 (3-BLK)	Below left front seat 63
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 120
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 53
H-32 (22-BLK)	(with Power Door Locks) 84
I-9 (16-BLK)	On left rear of meter assembly 62
R-2 (2-WHT)	Front of left quarter panel area, behind door switch 79
Ground	
B-1	Above right dash side trim panel 84
B-19	Behind top of left dash side trim panel 62
B-26	Below rear of center console 79

Circuit Operation

Key-In Ignition Warning

When the key remind switch is closed, battery voltage is applied to the PNK/BLU wire of the seat belt, key and light remind buzzer. With the left front door open, ground is provided at the GRY/RED wire of the seat belt, key and light remind buzzer and the buzzer sounds.

Seat Belt Warning

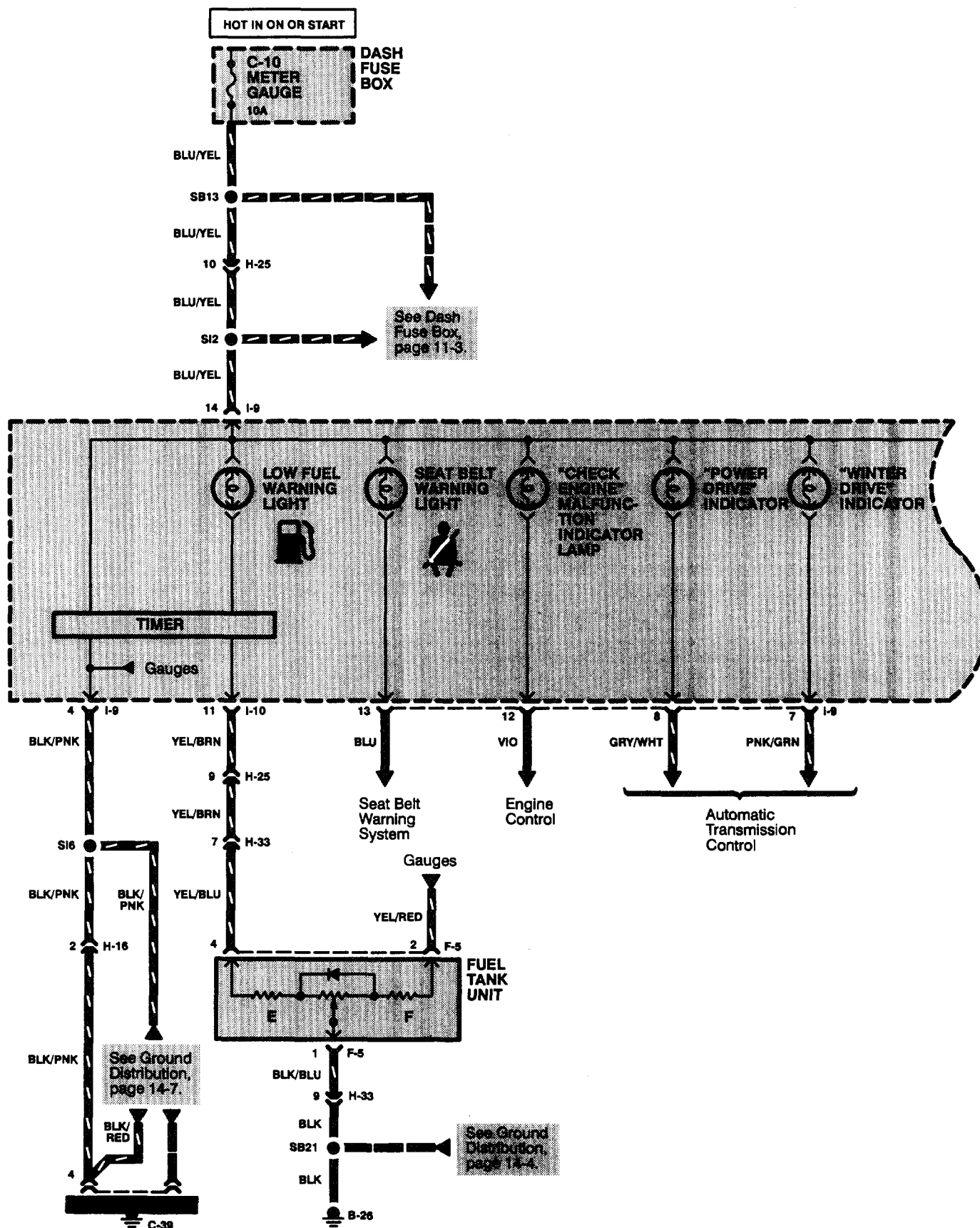
With the starter switch in ON or START, battery voltage is applied to the seat belt warning light from fuse C-10. With the driver's seat belt unbuckled, ground is provided at the BLU wire of the seat belt, key and light remind buzzer. With the starter switch in the ON position, the seat belt warning light turns on for four to eight seconds and the buzzer will sound for the same amount of time. With the driver's seat belt buckled, the seat belt warning light turns on for four to eight seconds, but the buzzer does not sound.

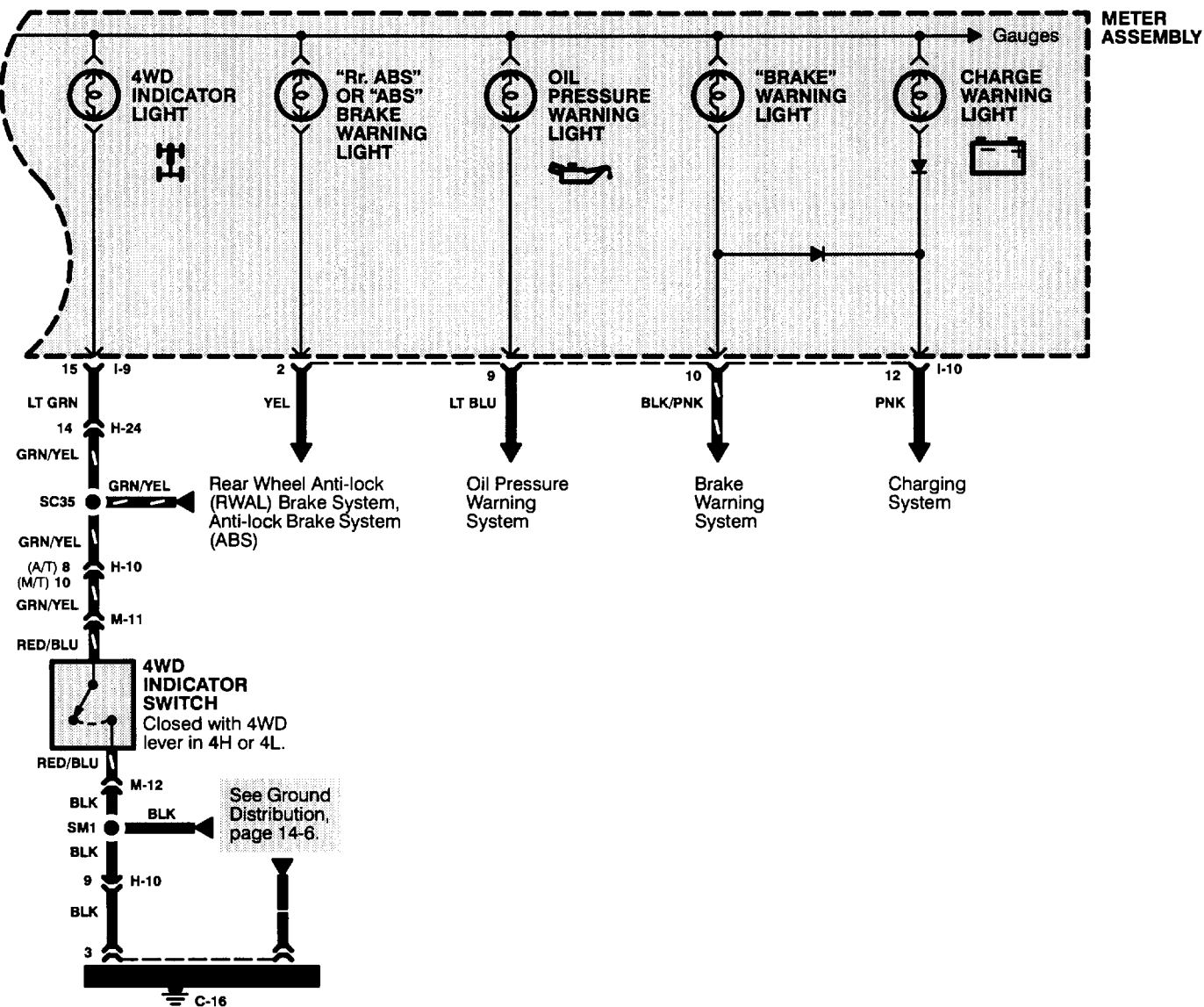
Lights-on Warning

When the starter switch is turned from the ON or START position to the OFF position, and the park lights are on, the taillight relay applies battery voltage to the seat belt, key and light remind buzzer at the GRN/RED wire. The buzzer will sound until the lights are turned off.

INDICATORS

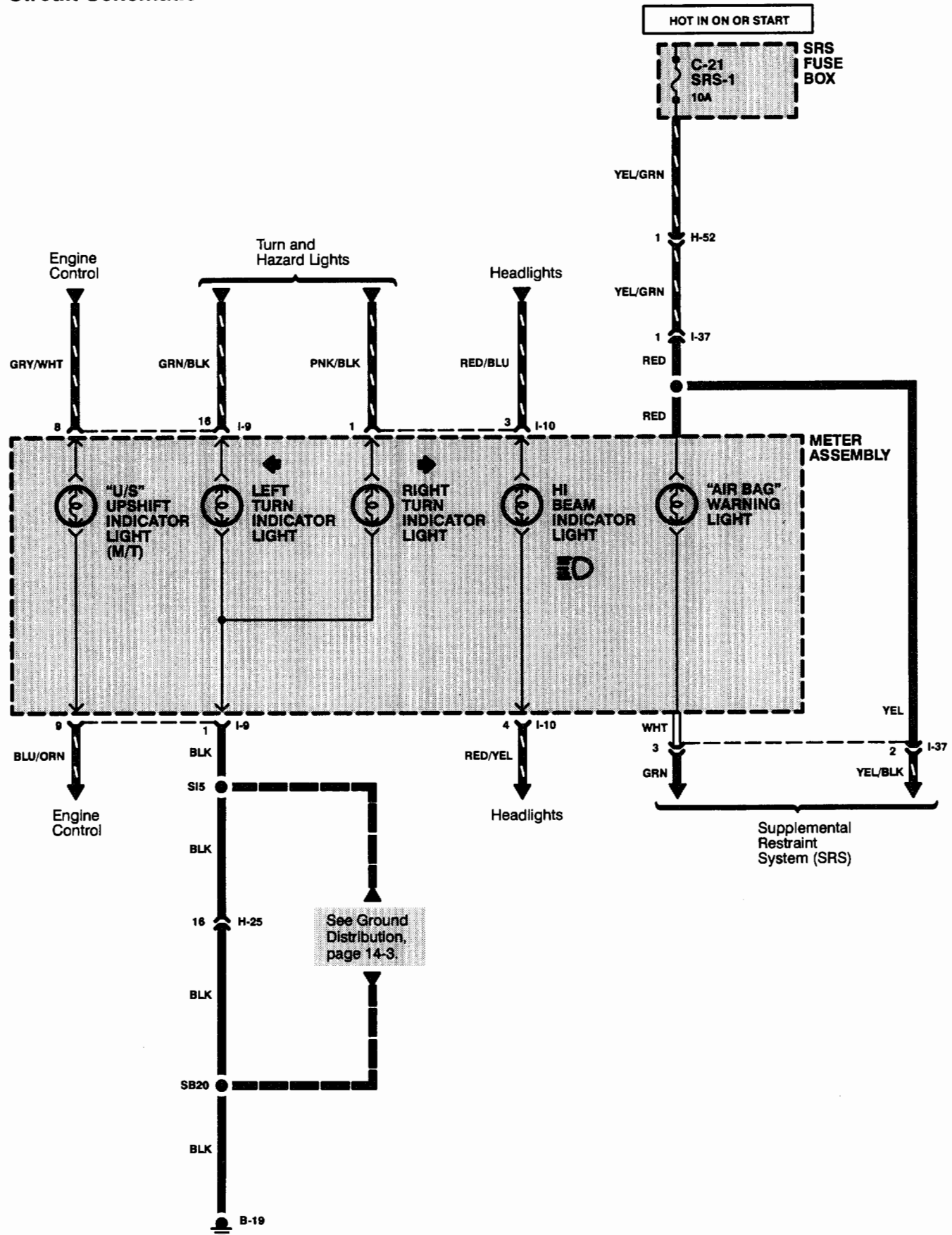
Circuit Schematic





INDICATORS

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
4WD Indicator Switch	Beneath vehicle, on right side of transfer case 46
Dash Fuse Box	Behind left dash side trim panel panel 58
Fuel Tank Unit	Beneath rear of vehicle, in right front of fuel tank 115
SRS Fuse Box	On top of dash fuse box 58
Connector	
H-10 (16-BLU)	Left front of engine compartment 27
H-16 (22-WHT)	Behind right dash side trim panel 86
H-24 (18-YEL)	Below I/P, above left dash side trim panel, on bracket 63
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-33 (14-WHT)	In floor, below right front seat 125
H-52 (3-YEL)	Below I/P, above left dash side trim panel, on bracket 64
I-9 (16-BLK)	On left rear of meter assembly 53
I-10 (16-WHT)	On right rear of meter assembly 53
I-37 (3-YEL)	Behind left side of meter assembly 53
M-11 (1-WHT)	Beneath center of vehicle, top right side of transmission 46
M-12 (1-WHT)	Beneath center of vehicle, top right side of transmission 46
Ground	
B-19	Behind top of left dash side trim panel 62
B-26	Below rear of center console 79
C-16	Left rear corner of engine compartment, on inner fender panel 28
C-39	Right rear corner of engine compartment, on inner fender panel 42

Circuit Operation

The indicator lights are controlled by different conditions in their associated systems. See the associated system for the indicator light circuit description.

Low Fuel Warning Light

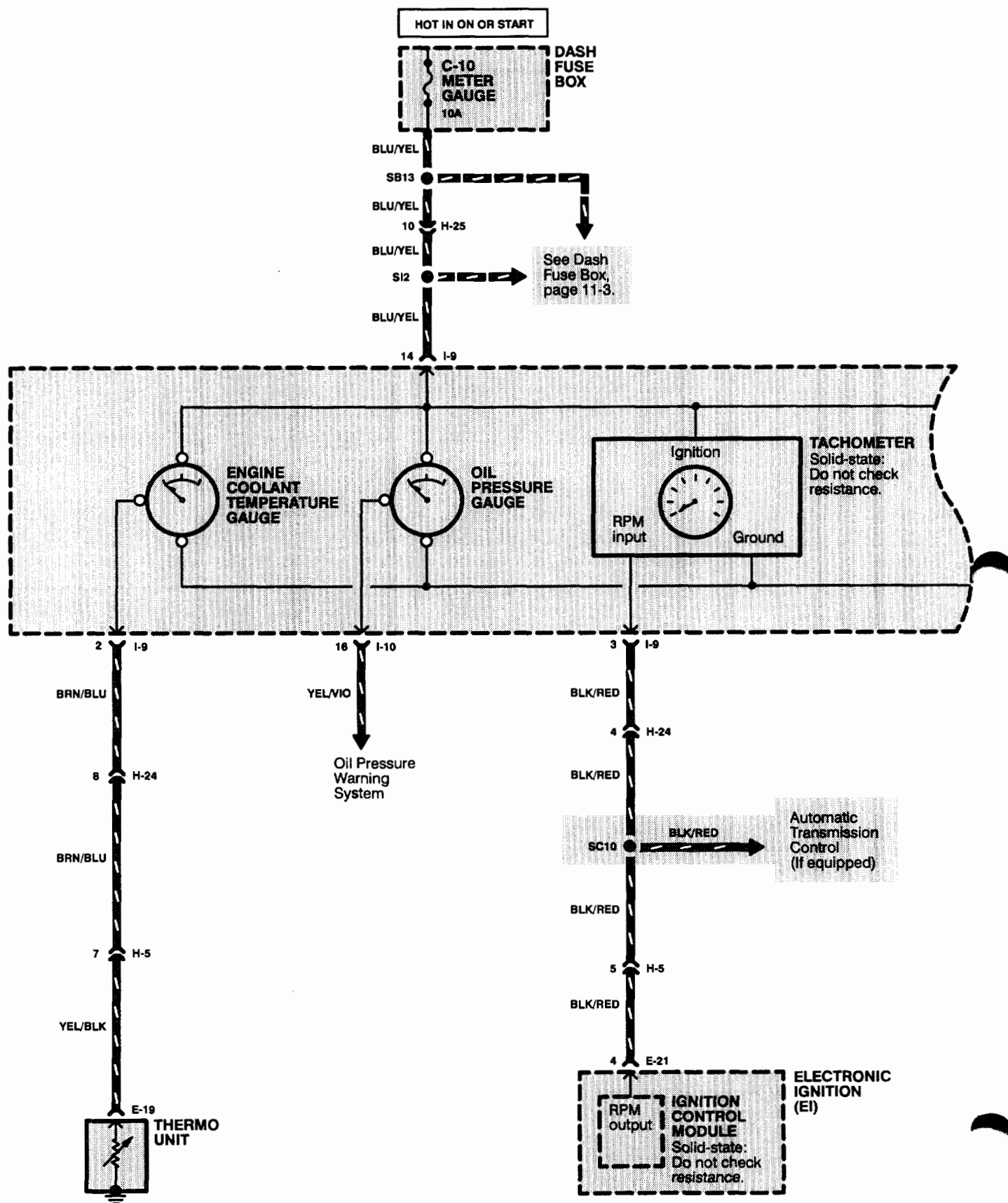
When there is an adequate amount of the fuel in the fuel tank, current flow is blocked in the fuel tank unit and the low fuel warning light will not go on. When the fuel level becomes low, current flow is allowed in the fuel tank unit and the low fuel warning light goes on to warn the driver.

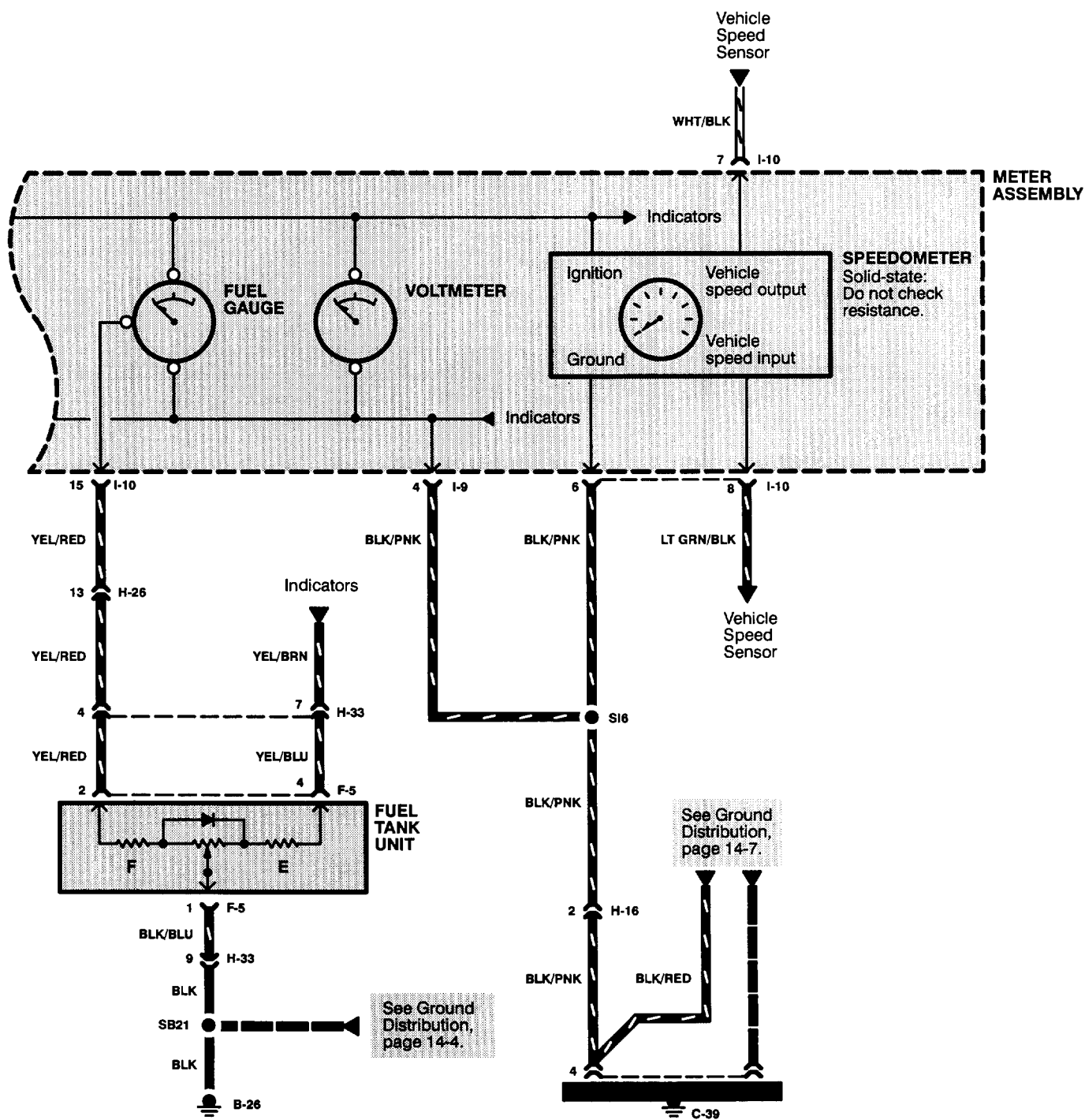
Bulb Check

With the starter switch in ON or START, battery voltage is applied to the "BRAKE" warning and charge warning lights. The generator will provide ground to the circuit until the engine is running. The lights go on to test the light bulbs and then go off after the engine is started.

GAUGES

Circuit Schematic





GAUGES

Component Location Index

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Electronic Ignition (EI)	
(DOHC)	Top center rear of engine 15
Electronic Ignition (EI)	
(SOHC)	Center front of engine 9
Fuel Tank Unit	Beneath rear of vehicle, in right front of fuel tank 115
Thermo Unit	Right rear of engine 17
Connector	
E-21 (6-BLK) (DOHC)	On right side of electronic ignition (EI) 16
E-21 (6-BLK) (SOHC)	On left side of electronic ignition (EI) 9
H-5 (16-GRN)	Left side of engine compartment 30
H-16 (22-WHT)	Behind right dash side trim panel 86
H-24 (18-YEL)	Below I/P, above left dash side trim panel, on bracket 63
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
H-33 (14-WHT)	In floor, below right front seat 125
I-9 (16-BLK)	On left rear of meter assembly 53
I-10 (16-WHT)	On right rear of meter assembly 53
Ground	
B-26	Below rear of center console 79
C-39	Right rear corner of engine compartment, on inner fender panel 42

Circuit Operation

Engine Coolant Temperature Gauge

The engine coolant temperature gauge consists of two intersecting coils wound around a permanent magnet rotor. When voltage from fuse C-10 is applied to the coils, a magnetic field is generated. This causes the rotor to rotate and the gauge needle to move. The magnetic field is controlled by the thermo unit. As the resistance in the thermo unit varies, current through the gauge coils changes. The gauge needle moves according to the changing magnetic field.

Fuel Gauge

The fuel gauge consists of two intersecting coils wound around a permanent magnet rotor (see engine coolant temperature gauge, above, for operation). The fuel tank unit's resistance varies from approximately 17 ± 0.8 ohms with fuel tank full to 120 ± 5 ohms with the tank empty.

Tachometer

The tachometer displays engine speed in RPM. Voltage pulses are taken from the ignition system and sent to the tachometer. The tachometer responds to the frequency of the voltage pulses, which increases with engine speed. Solid-state circuits process these pulses into a signal that causes the gauge needle to move.

Oil Pressure Gauge

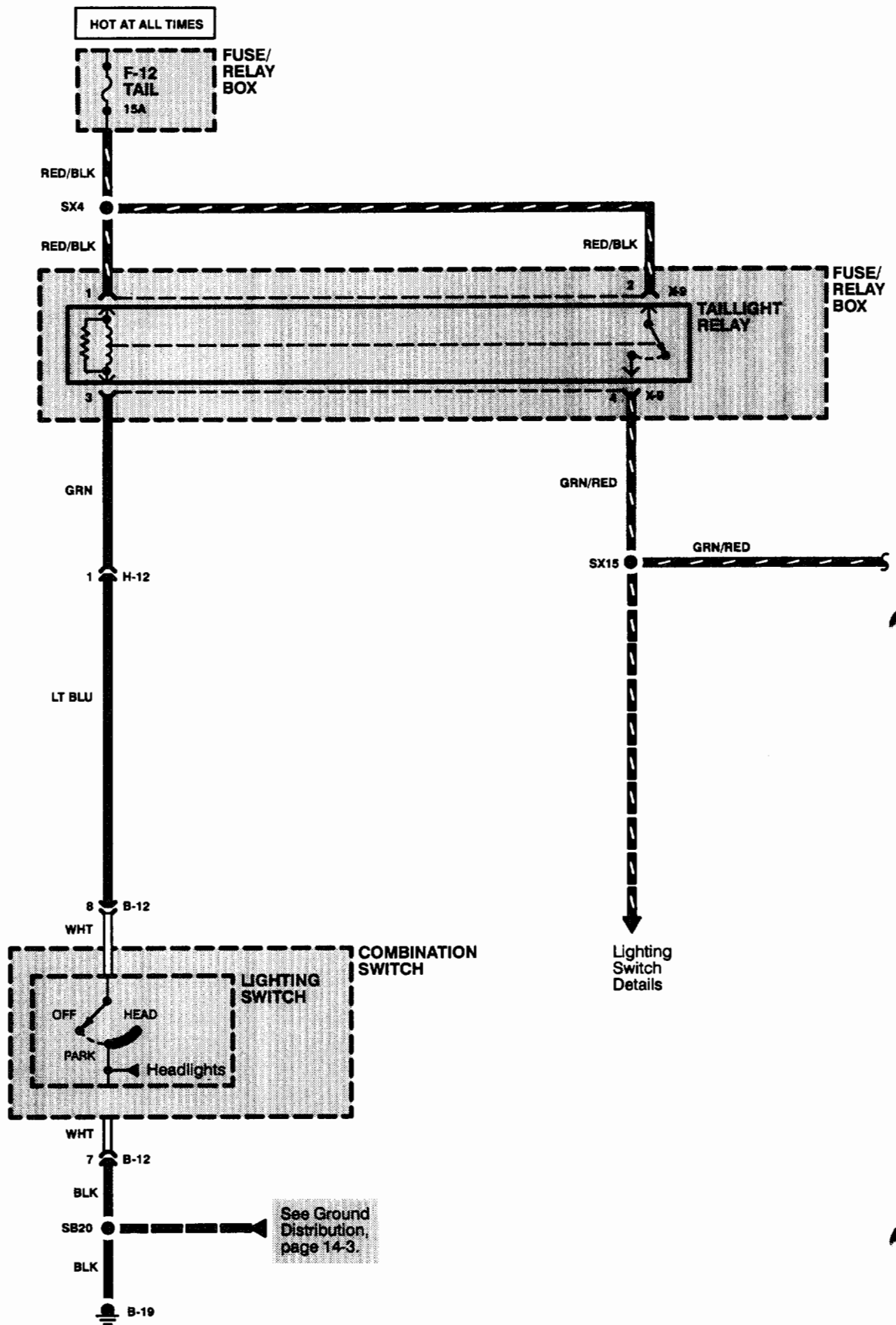
The oil pressure gauge consists of two intersecting coils wound around a permanent magnet rotor (see engine coolant temperature gauge for operation).

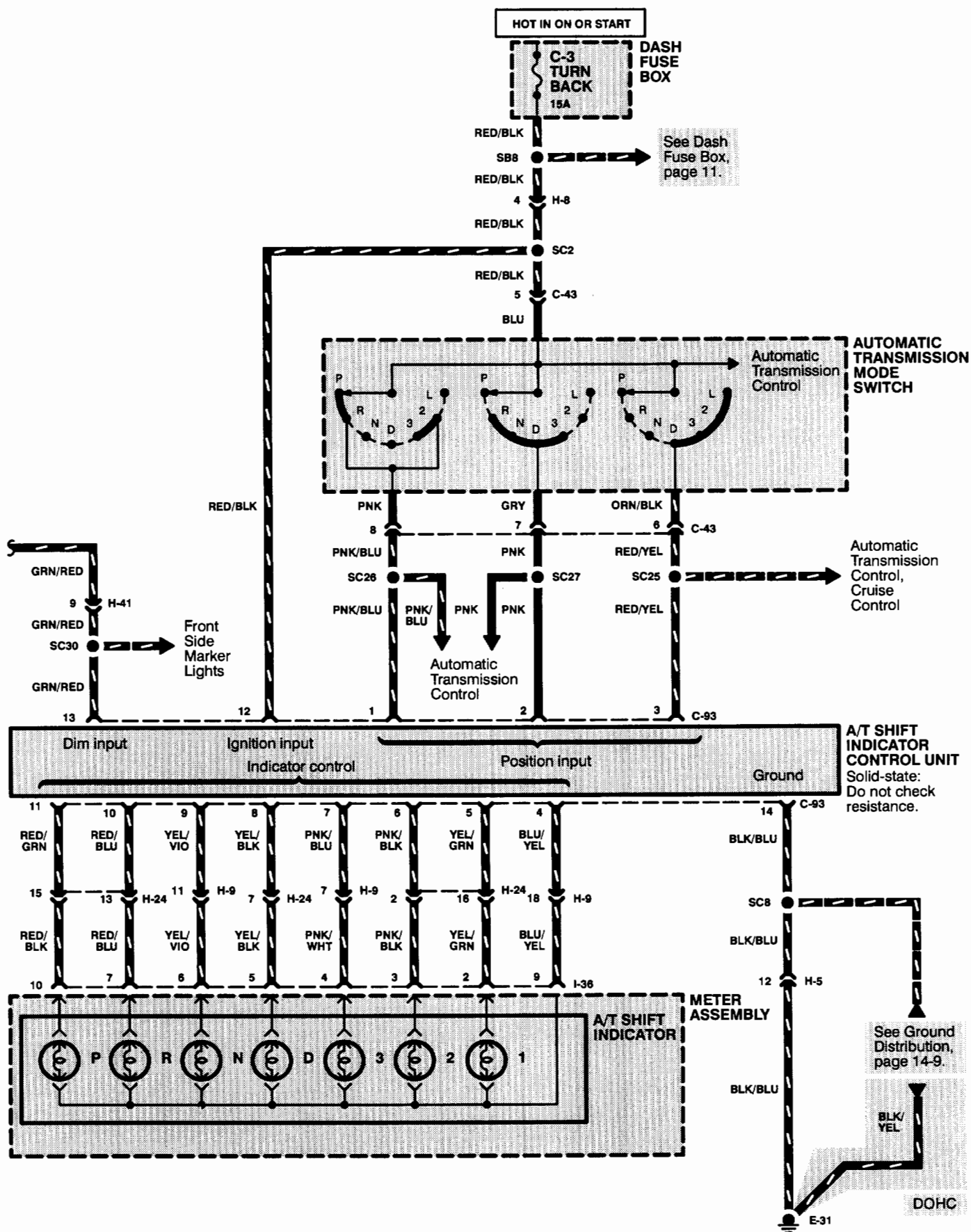
Voltmeter

The voltmeter measures the voltage through fuse C-10 when the starter switch is in ON or START.

A/T SHIFT INDICATOR

Circuit Schematic





A/T SHIFT INDICATOR

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
A/T Shift Indicator Control Unit . . . Below I/P, left of steering column	67
Automatic Transmission	
Mode Switch Beneath vehicle, on left side of transmission	47
Dash Fuse Box Behind left dash side trim panel	58
Fuse/Relay Box Right side of engine compartment, on inner fender panel	33
Taillight Relay In fuse/relay box	36
Connector	
B-12 (16-BLK/WHT) Below I/P, right of steering column	69
C-43 (8-BLK) Left front of engine compartment	27
H-5 (16-GRN) Left side of engine compartment	30
H-8 (16-BLK) Below I/P, above left dash side trim panel, on bracket	62
H-9 (20-BLK) Below I/P, above left dash side trim panel, on bracket	62
H-12 (20-BRN) Below I/P, above right dash side trim panel, on bracket	82
H-24 (18-YEL) Below I/P, above left dash side trim panel, on bracket	63
H-41 (12-BLU) (RWAL) Right front of engine compartment	31
H-41 (16-BLU) (ABS) Right front of engine compartment	31
I-36 (10-WHT) On rear of meter assembly	53
Ground	
B-19 Behind top of left dash side trim panel	62
E-31 (DOHC) Top left rear of engine	17
E-31 (SOHC) Top center front of engine	9

Circuit Operation

With the starter switch in ON or START, battery voltage is applied to the automatic transmission mode switch and the A/T shift indicator control unit from fuse C-3. The automatic transmission mode switch sends a signal to the A/T shift indicator control unit corresponding to the gear selected. The A/T shift indicator control unit applies voltage to the appropriate A/T shift indicator causing it to light up.

Circuit Schematic

S Models

This wiring diagram illustrates the electrical system for the windshield wiper and washer on S Models. The system is powered by a 'HOT IN ON OR START' line that passes through a 'C-5 FRT WIPER & WASHER 15A' fuse in the 'DASH FUSE BOX'. The power then splits into two main branches: one for the wiper and one for the washer.

Windshield Wiper/Washer Switch: This switch controls both functions. It has three main positions: OFF, INT (Intermittent), and HI (High). The INT position is further divided into LO (Low) and HI (High) sub-positions. The WASH position is for the washer. The switch is connected to the power line via a 'COMBINATION SWITCH' and a 'WINDSHIELD WIPER/WASHER SWITCH'.

Windshield Intermittent Wiper Relay: This relay controls the intermittent wiper function. It has three inputs: 'Power input', 'Intermittent input', and 'Washer input'. The 'Power input' is connected to the power line via a 'FUSE/RELAY BOX'. The 'Intermittent input' is connected to the INT position of the switch. The 'Washer input' is connected to the WASH position of the switch. The relay is controlled by a 'TIMER Solid-state: Do not check resistance.' and is connected to the 'WINDSHIELD WIPER MOTOR'.

Windshield Wiper Motor: The motor is connected to the relay and the power line via a 'WINDSHIELD WIPER MOTOR' and a 'WINDSHIELD WIPER MOTOR'.

Windshield Washer Motor: The motor is connected to the power line via a 'WINDSHIELD WIPER MOTOR' and a 'WINDSHIELD WIPER MOTOR'.

Wiring Details: The diagram shows various wire colors and terminals. Key wires include WHT/BLU, BLU/RED, BLU/YEL, BLU/WHT, BLK, WHT/BLK, ORN, LT GRN/RED, RED/YEL, BLU/YEL, WHT/BLU, BLU/ORN, and BLK. Terminals are labeled with numbers (1, 2, 3, 4, 5, 6, 7, 8, 13, 14) and letters (A, B, C, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z). A note indicates 'To SX11 on this page.' and another note says 'See Ground Distribution, page 14-7.'



WINDSHIELD WIPER/WASHER

Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box	Behind left dash side trim panel 58
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Windshield Intermittent	
Wiper Relay	In fuse/relay box 38
Windshield Washer Motor	Right side of engine compartment, in washer fluid reservoir 32
Windshield Wiper Motor	Right rear corner of engine compartment 41
<u>Connector</u>	
B-52 (14-BLK)	Below I/P, right of steering column 69
C-38 (6-WHT)	Right rear of engine compartment 41
H-15 (14-WHT)	Below I/P, above right dash side trim panel, on bracket 82
<u>Ground</u>	
B-19	Behind top of left dash side trim panel 62
C-39	Right rear corner of engine compartment, on inner fender panel 42

Circuit Operation

With the starter switch in ON or START, battery voltage is applied to the windshield wiper/washer switch, windshield wiper motor, and windshield intermittent wiper relay from fuse C-5.

Low Speed

When the windshield wiper switch is moved to LO, battery voltage is applied to the LO winding of the windshield wiper motor and the windshield wipers run at low speed.

Park/Run

When the windshield wiper switch is turned to OFF, fuse C-5 provides battery voltage through the windshield wiper motor, windshield intermittent wiper relay, and the windshield wiper switch to the LO winding of the windshield wiper motor. When the switch on the motor reaches the PARK position, battery voltage from fuse C-5 is removed from the circuit and the windshield wipers stop in the PARK position.

High Speed

When the windshield wiper switch is in HI, battery voltage is applied to the HI winding of the windshield wiper motor and the windshield wipers run at high speed.

Intermittent

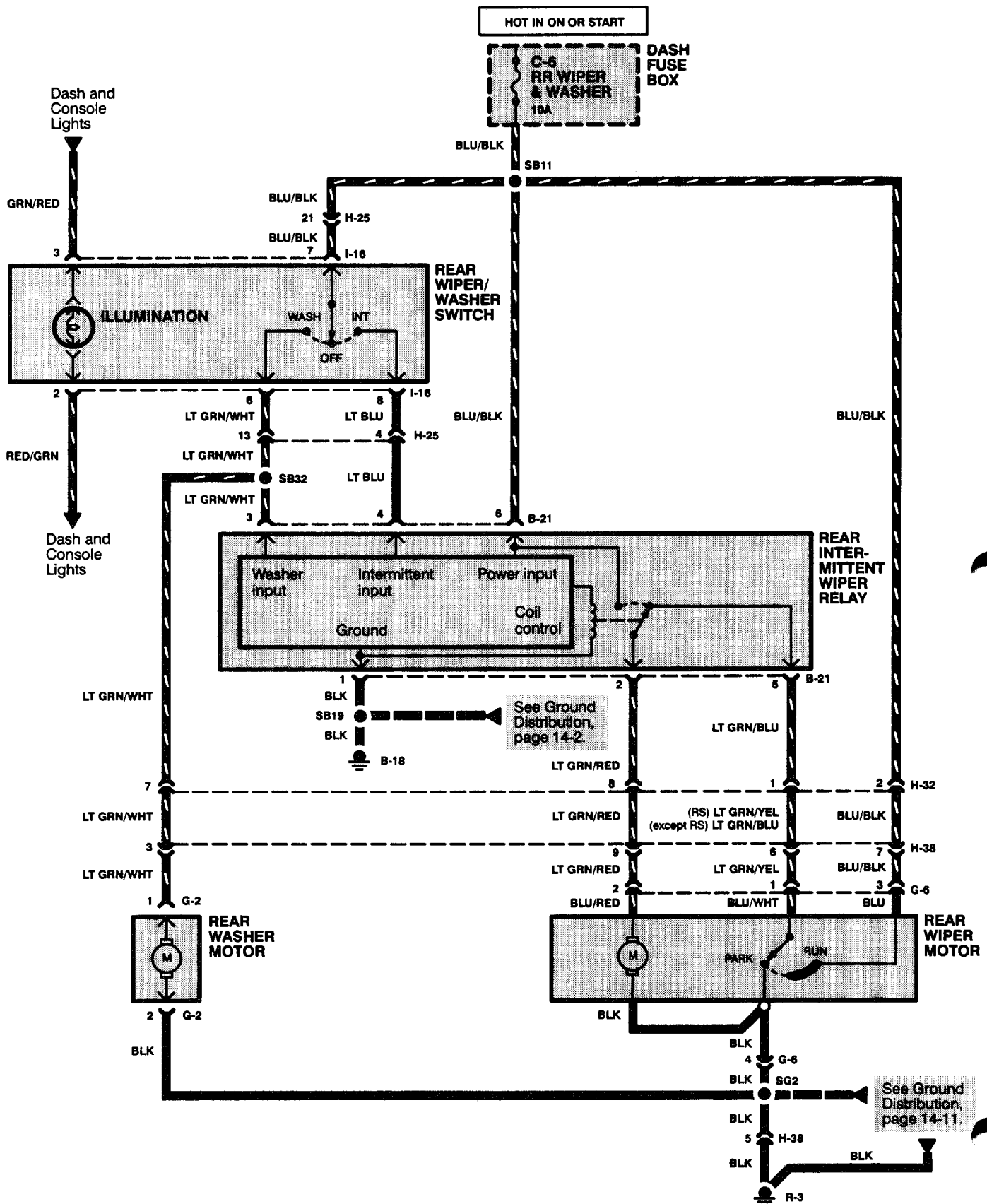
When the windshield wiper switch is moved to INT, the windshield wiper switch applies battery voltage to the windshield intermittent wiper relay. The windshield intermittent wiper relay momentarily energizes every 3 to 4 seconds (S models) or a variable time of 2 to 20 seconds (depending on intermittent ring position) and applies battery voltage to the LO winding of the windshield wiper motor to move the windshield wipers from the PARK position to the RUN position, then the PARK/RUN function takes over to return the windshield wipers to the PARK position. The windshield wipers make a single sweep approximately every 3 to 4 seconds (S models) or a variable time of 2 to 20 seconds (depending on intermittent ring position).

Washer

When the windshield washer switch is depressed, battery voltage is applied to the windshield washer motor and the windshield intermittent wiper relay. The windshield washer motor pumps fluid on the windshield and the windshield intermittent wiper relay energizes and applies battery voltage to the LO winding of the windshield wiper motor through the windshield wiper switch. The wipers run at LO speed until the switch is released.

REAR WIPER/WASHER

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Rear Intermittent Wiper	
Relay	Behind left dash side trim panel, in access hole 57
Rear Washer Motor	Inside left tailgate door, behind trim pad 106
Rear Wiper Motor	Inside left tailgate door, behind trim pad 104
Connector	
G-6 (4-WHT)	Inside left tailgate door, behind trim pad 104
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-32 (16-BLK) (without	
Power Door Locks)	Below left front seat 120
H-32 (22-BLK) (with	
Power Door Locks)	Below left front seat 120
H-38 (10-WHT)	Left rear of luggage room 102
Ground	
B-18	Behind top of left dash side trim panel 62
R-3	Left side of luggage room 103

Circuit Operation

With the starter switch in ON or START, battery voltage is applied to the rear wiper/washer switch, rear wiper motor, and rear intermittent wiper relay from fuse C-6.

Park/Run

When the rear wiper/washer switch is turned to OFF, fuse C-6 provides battery voltage through the rear wiper motor and rear intermittent wiper relay to the rear wiper motor. When the switch on the motor reaches the PARK position, battery voltage from fuse C-6 is removed from the circuit and the rear wiper stops in the PARK position.

Intermittent

When the rear wiper/washer switch is moved to INT, the rear wiper switch applies battery voltage to the rear intermittent wiper relay. The rear intermittent wiper relay momentarily energizes every 3 to 4 seconds and applies battery voltage to the rear wiper motor to move the rear wiper from the PARK position to the RUN position. The PARK/RUN function takes over to return the rear wiper to the PARK position. The rear wiper makes a single sweep approximately every 3 to 4 seconds.

Washer

When the rear wiper/washer switch is moved to WASH, battery voltage is applied to the rear washer motor and the rear intermittent wiper relay. The rear washer motor pumps fluid on the rear window and the rear intermittent wiper relay energizes and applies battery voltage to the rear wiper motor through the rear wiper switch. The wiper runs until the switch is released.

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Headlight Washer Motor	Right side of engine compartment, in washer fluid reservoir 32
Headlight Wiper Timer Unit ...	Below right side of I/P 80
Left Headlight Wiper Motor ...	Behind left headlight assembly 5
Right Headlight Wiper Motor ..	Behind right headlight assembly 5
Connector	
C-23 (6-GRY)	Behind left side of front bumper 5
C-30 (6-GRY)	Behind right side of front bumper 5
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-41 (12-BLU) (RWAL)	Right front of engine compartment 31
H-41 (16-BLU) (ABS)	Right front of engine compartment 31
Ground	
B-19	Behind top of left dash side trim panel 62
C-16	Left rear corner of engine compartment, on inner fender panel 28
C-39	Right rear corner of engine compartment, on inner fender panel 42

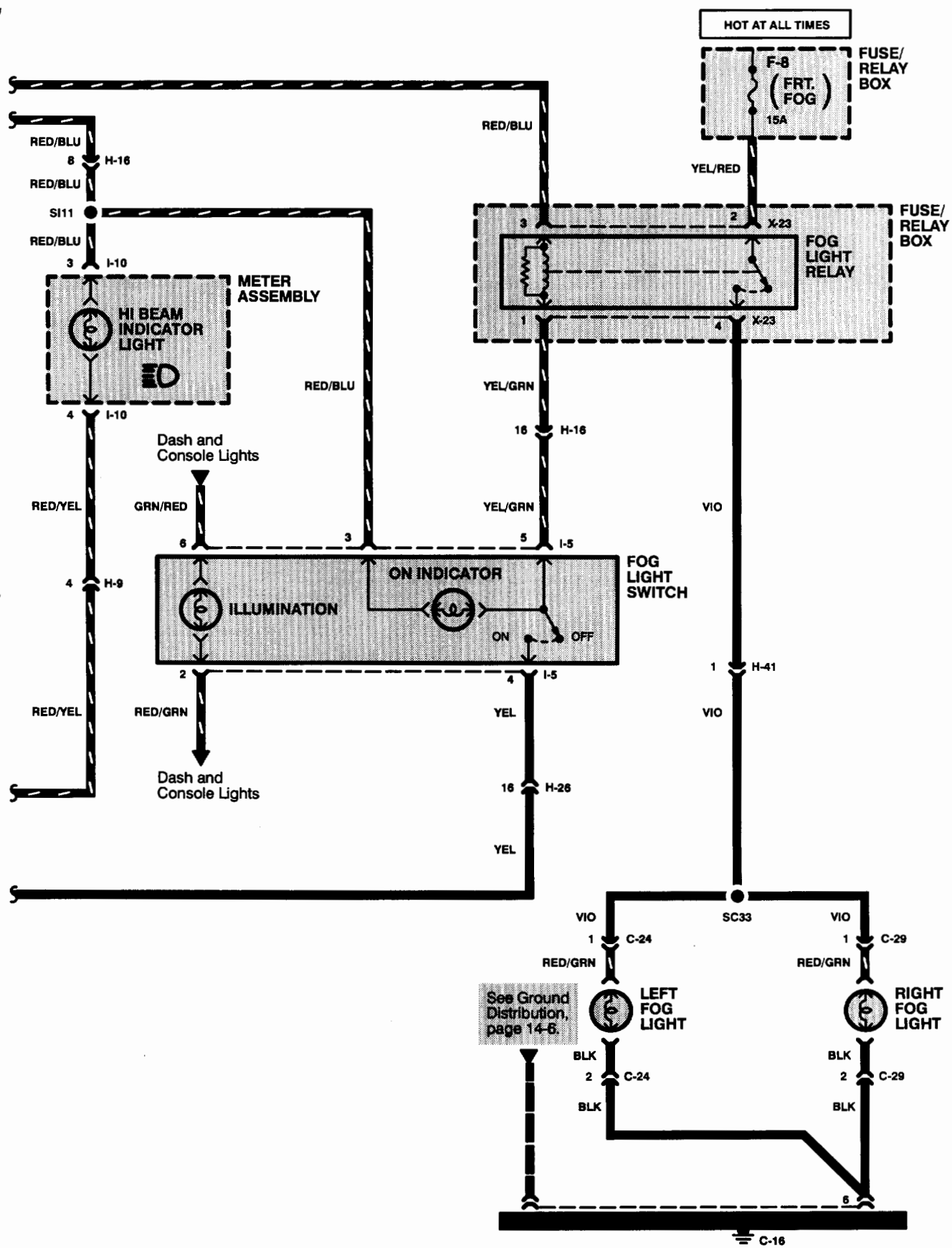
Circuit Operation

Circuit Operation

The headlight wiper motors wipe five times while the headlight washer motor applies fluid between the first four wipes. With the starter switch in ON or START, battery voltage is applied to the headlight wiper timer unit, the headlight washer motor, and the left and right headlight wiper motors. The headlight wiper switch is a momentary switch, and when it is pushed to the ON position, it provides ground to the left and right headlight wiper motors. The wipers begin to wipe and the contact disk is moved from the PARK position. When the headlight wiper switch is released, it is now in the OFF position. Ground is provided for the left and right headlight wiper motors through the contact disks and the OFF contacts of the headlight wiper switch. As the wipers continue to wipe, a ground signal is sent to the headlight wiper timer unit for the first four wipes. This signals the headlight wiper timer unit to control the headlight washer motor to pump fluid onto the headlights between the first four wipes of the headlight wipers. When the contact disk reaches the 5 position, the ground signal is removed from the headlight wiper timer unit. No fluid is pumped onto the headlights between the fourth and fifth wipes. When the contact disk reaches the PARK position, ground is removed from the circuit and the wipers stop.

Circuit Schematic





HEADLIGHTS AND FOG LIGHTS

Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Diode Box B	In fuse/relay box 35
Fog Light Relay	In fuse/relay box 39
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Lighting Relay	In fuse/relay box 34
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
C-24 (2-GRY)	Behind left fog light 4
C-29 (2-GRY)	Behind right fog light 4
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
H-41 (12-BLU) (RWAL)	Right front of engine compartment 31
H-41 (16-BLU) (ABS)	Right front of engine compartment 31
H-42 (16-BLK)	Right front of engine compartment 31
I-10 (16-WHT)	On right rear of meter assembly 53
Ground	
B-19	Behind top of left dash side trim panel 62
C-16	Left rear corner of engine compartment, on inner fender panel 28

Circuit Operation

Lo Beam Operation

With the lighting switch in HEAD and the dimmer/passing switch in LO, the lighting switch provides a ground path to the lighting relay, and the dimmer/passing switch provides a ground path for the lo beam filaments. The lighting relay energizes and provides battery voltage to the headlights and the lo beams light up.

Hi Beam Operation

With the lighting switch in HEAD and the dimmer/passing switch in HI, the lighting switch provides a ground to the lighting relay and the dimmer/passing switch provides a ground path for the high beam filaments. The lighting relay energizes and provides battery voltage to the headlights and the hi beams light up.

Battery voltage is also applied to the hi beam indicator and the hi beam indicator lights up to remind the driver that the hi beams are on.

Flash To Pass Operation

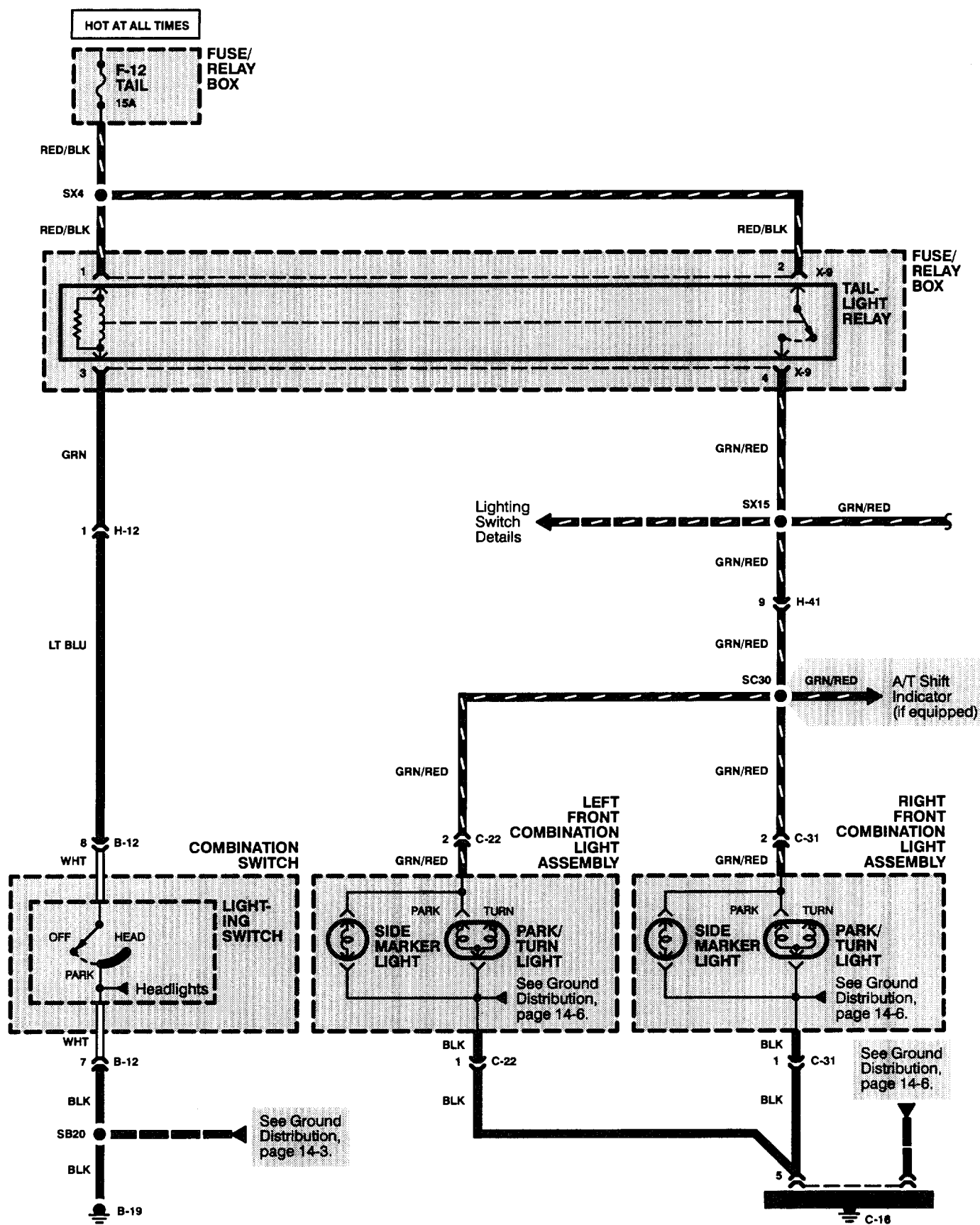
The flash to pass feature works with the lighting switch in OFF, PARK, or HEAD (lo beams). When the passing switch is turned on, it provides a ground path for both the hi and lo beam filaments and the lighting relay. The lighting relay energizes and applies battery voltage to the headlights and to the hi beam indicator light and the hi and lo beams light up. The hi beam indicator also flashes during the flash to pass operation. The flash to pass function has no effect if the hi beams are already on.

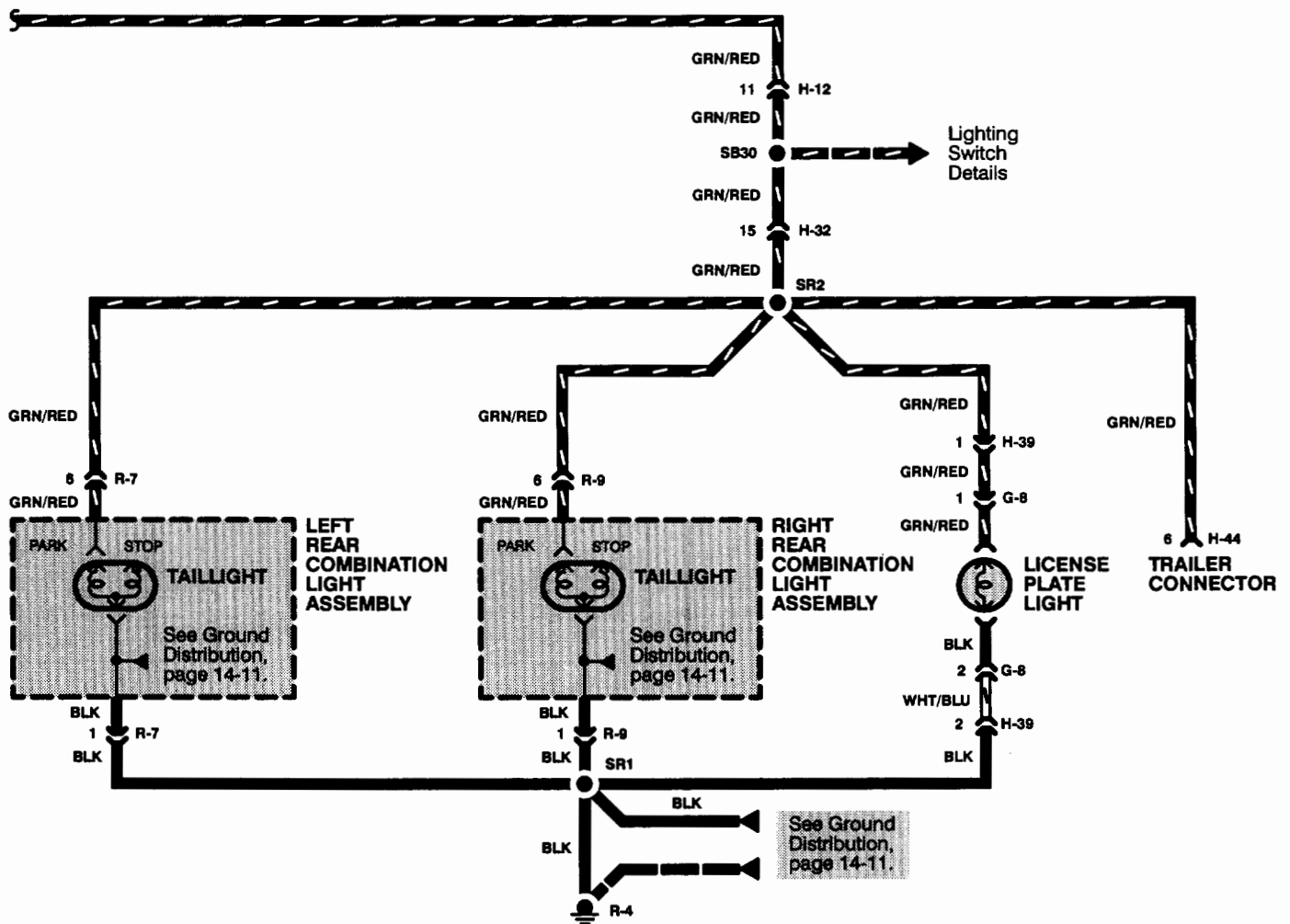
Fog Light Operation

With the lighting switch in HEAD and the dimmer/passing switch in LO, the lighting switch provides a ground path to the lighting relay which provides power through fuse F-8 to the fog light relay. A ground path is provided for the fog light relay through the fog light switch and the dimmer/passing switch. When the relay is energized, power is provided to both fog lights and the fog lights light. When the fog light switch is turned off or when the dimmer/passing switch is moved to HI, ground is removed from the fog light relay and the fog lights go out.

FRONT SIDE MARKER, FRONT PARK, REAR PARK, AND LICENSE PLATE LIGHTS

Circuit Schematic





FRONT SIDE MARKER, FRONT PARK, REAR PARK, AND LICENSE PLATE LIGHTS

Component Location Index

(Refer to Section 201 for photographs.)

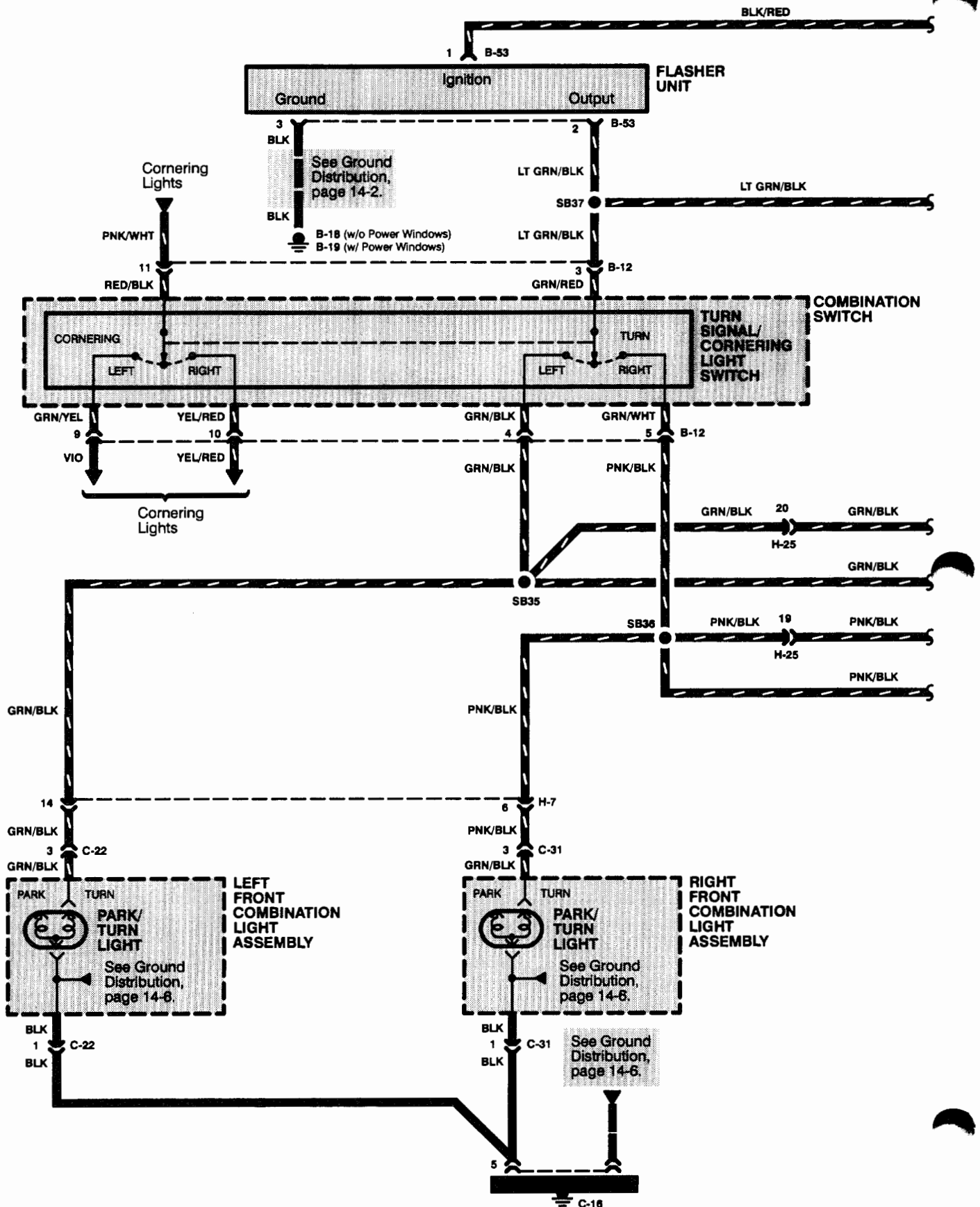
Component	Photo No.
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Taillight Relay	In fuse/relay box 36
Trailer Connector H-44 (6-WHT)	Below left rear of vehicle, behind grommet 117
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
C-22 (4-GRY)	Behind left front combination light assembly 3
C-31 (4-GRY)	Behind right front combination light assembly 3
G-8 (2-WHT)	Inside right tailgate door, behind trim pad 108
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-32 (16-BLK) (without Power Door Locks)	Below left front seat 120
H-32 (22-BLK) (with Power Door Locks)	Below left front seat 120
H-39 (2-WHT)	Right rear of luggage room 109
H-41 (12-BLU) (RWAL)	Right front of engine compartment 31
H-41 (6-BLU) (ABS)	Right front of engine compartment 31
R-7 (6-WHT/BLK)	Behind left taillight assembly 118
R-9 (6-WHT/BLK)	Behind right taillight assembly 118
Ground	
B-19	Behind top of left dash side trim panel 62
C-16	Left rear corner of engine compartment, on inner fender panel 28
R-4	Left side of luggage room 103

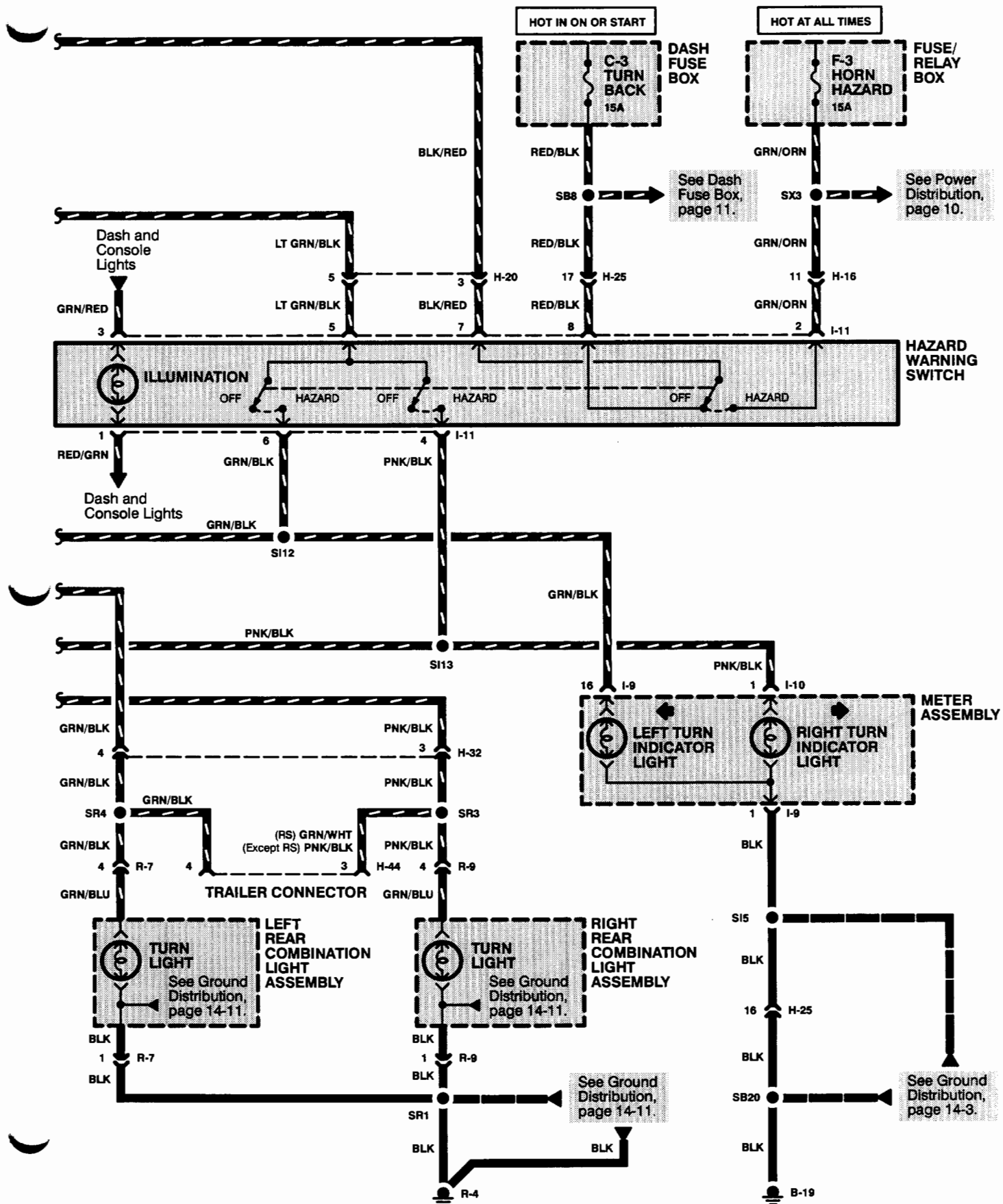
Circuit Operation

Battery voltage is applied to the taillight relay from fuse F-12. With the lighting switch in PARK or HEAD, ground is provided to the taillight relay. The taillight relay energizes and battery voltage is applied to the park, license, and side marker lights and the lights go on.

TURN AND HAZARD LIGHTS

Circuit Schematic





TURN AND HAZARD LIGHTS

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Flasher Unit	On top of dash fuse box 60
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Trailer Connector H-44 (6-WHT)	Below left rear of vehicle, behind grommet 117
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
C-22 (4-GRY)	Behind left front combination light assembly 3
C-31 (4-GRY)	Behind right front combination light assembly 3
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket 63
H-16 (22-WHT)	Behind right dash side trim panel 86
H-20 (6-WHT)	Behind right dash side trim panel 86
H-32 (16-BLK) (without Power Door Locks)	Below left front seat 120
H-32 (22-BLK) (with Power Door Locks)	Below left front seat 120
I-9 (16-BLK)	On left rear of meter assembly 53
I-10 (16-WHT)	On right rear of meter assembly 53
R-7 (6-WHT/BLK)	Behind left taillight assembly 118
R-9 (6-WHT/BLK)	Behind right taillight assembly 118
Ground	
B-18	Behind top of left dash side trim panel 62
B-19	Behind top of left dash side trim panel 62
C-16	Left rear corner of engine compartment, on inner fender panel 28
R-4	Left side of luggage room 103

Circuit Operation

Turn Operation

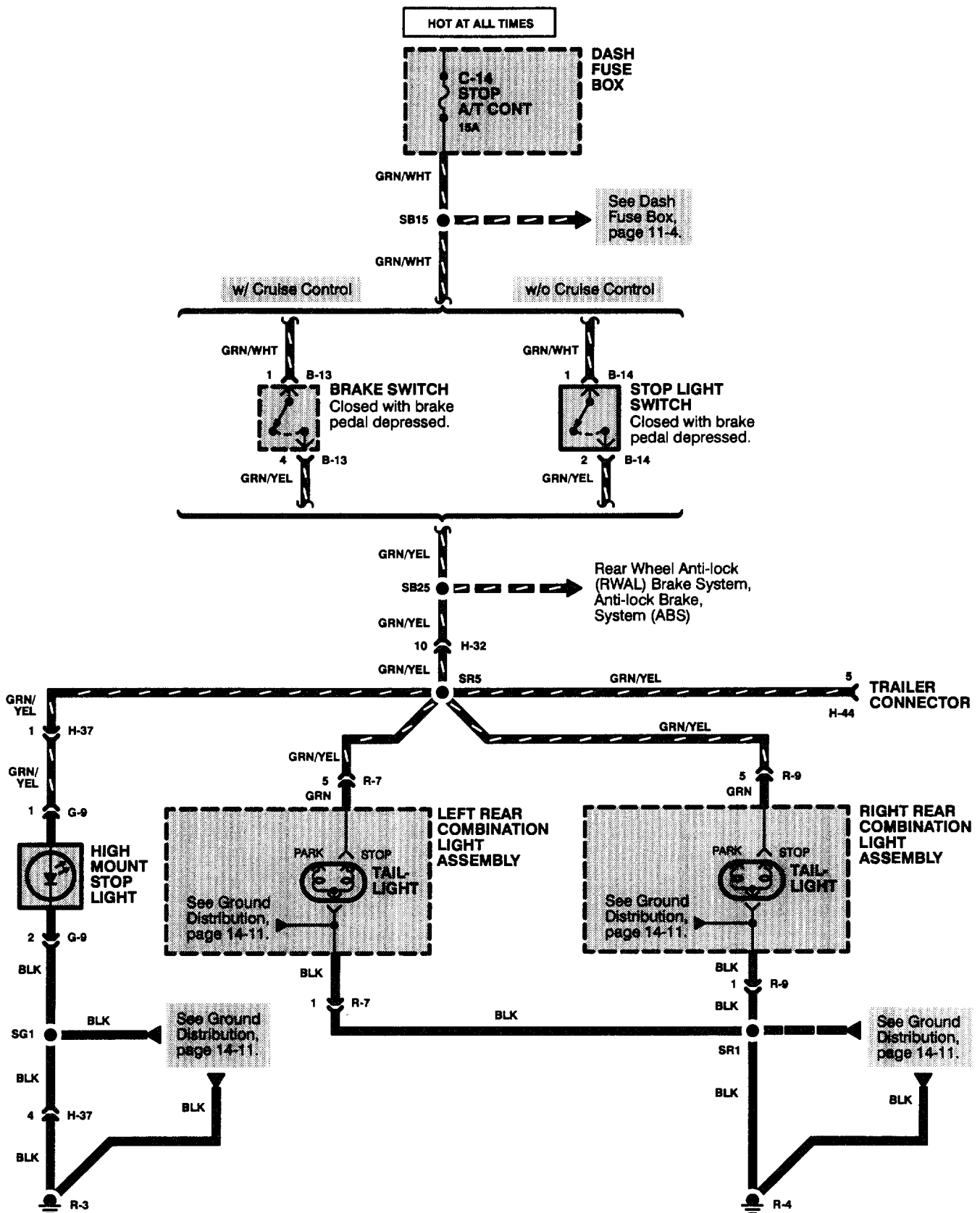
With the starter switch in ON or START, battery voltage is applied to the hazard warning switch from fuse C-3. When the hazard warning switch is in the OFF position, battery voltage is applied to the flasher unit. Its output is pulsing voltage which is directed to either the RIGHT or LEFT position on the turn signal switch and causes the turn lights and turn indicator lights to flash in either direction.

Hazard Operation

Battery voltage is applied to the hazard warning switch at all times from fuse F-3. When the hazard warning switch is in the HAZARD position, battery voltage is applied to the flasher unit. Its output is pulsing voltage which is directed to the hazard warning switch and causes the turn lights and turn indicator lights to flash in both directions.

BRAKE LIGHTS

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

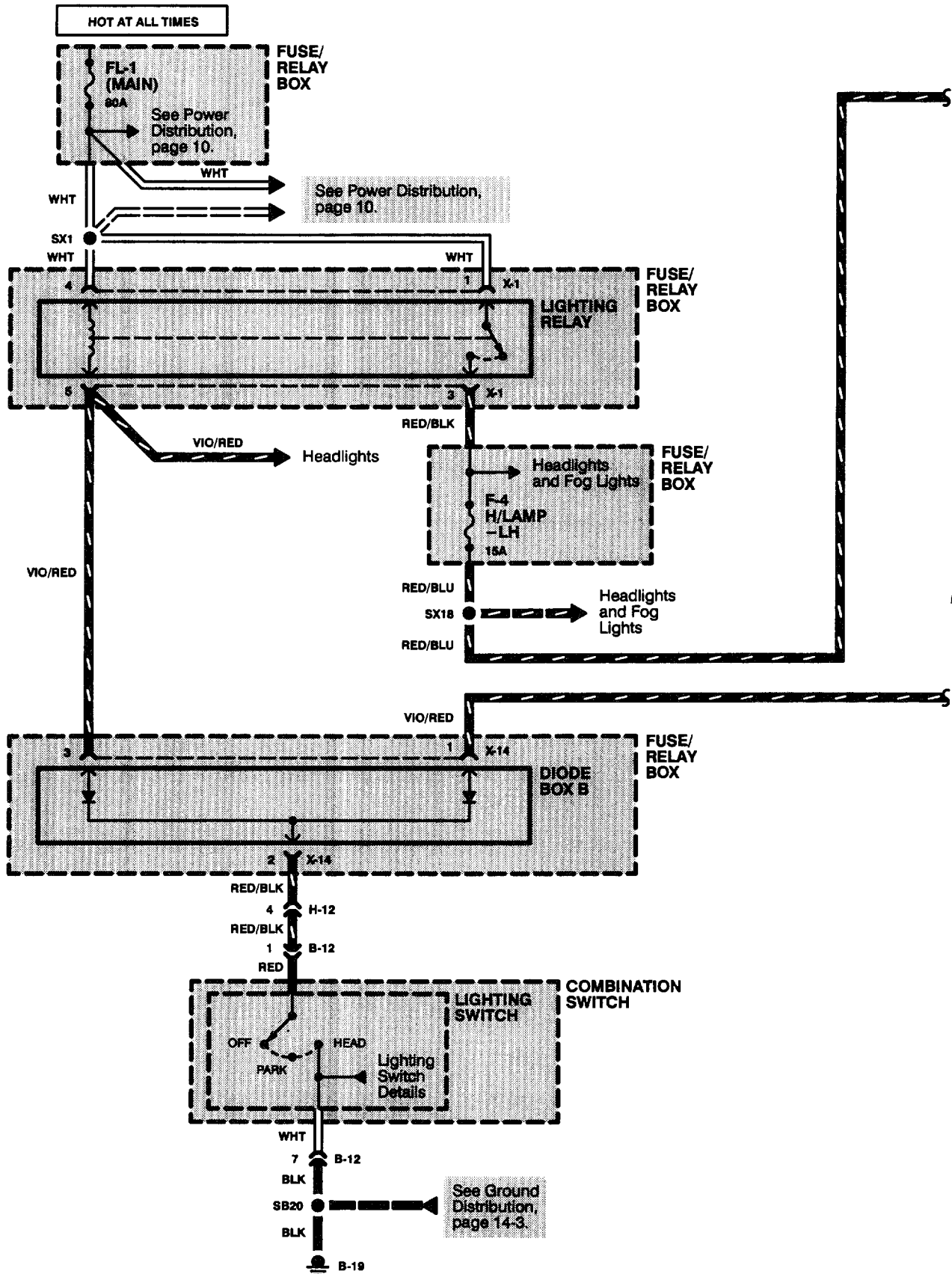
<u>Component</u>	<u>Photo No.</u>
Brake Switch	Below I/P, on brake pedal support 68
Dash Fuse Box	Behind left dash side trim panel 58
Stop Light Switch	Below I/P, on brake pedal support 68
Trailer Connector H-44 (6-WHT)	Below left rear of vehicle, behind grommet 117
<u>Connector</u>	
G-9 (2-WHT/BLK)	Inside top center of left tailgate door 110
H-32 (16-BLK) (without Power Door Locks)	Below left front seat 120
H-32 (22-BLK) (with Power Door Locks)	Below left front seat 120
H-37 (4-GRY)	Left rear of luggage room 102
R-7 (6-WHT/BLK)	Behind left taillight assembly 118
R-9 (6-WHT/BLK)	Behind right taillight assembly 118
<u>Ground</u>	
R-3	Left side of luggage room 103
R-4	Left side of luggage room 103

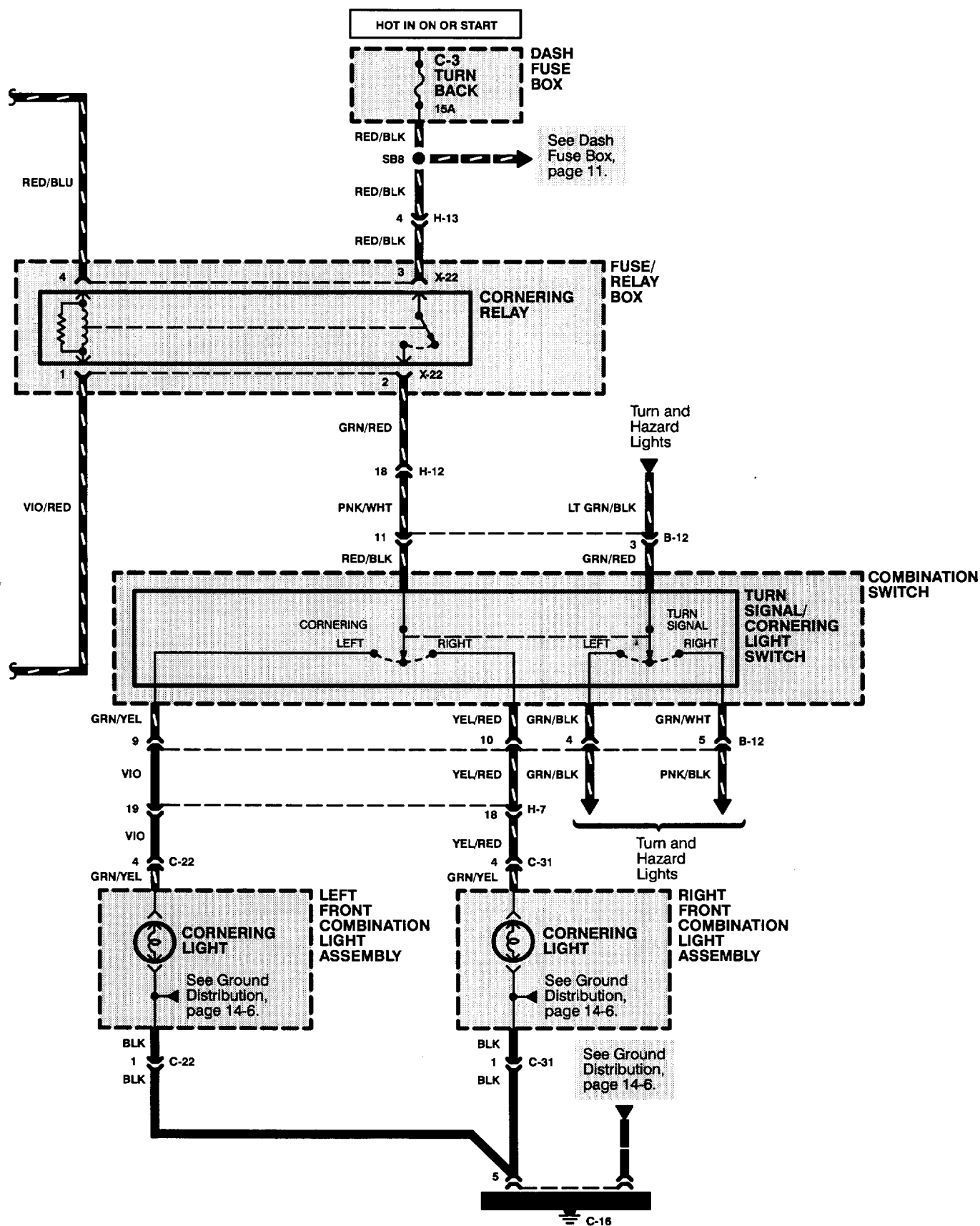
Circuit Operation

Battery voltage is applied to the stop light switch (without cruise control) or brake switch (with cruise control) at all times from fuse C-14. With the brake pedal depressed, the switch is closed and battery voltage is applied to the stop lights and the stop lights go on.

CORNERING LIGHTS

Circuit Schematic





CORNERING LIGHTS

Component Location Index

(Refer to Section 201 for photographs.)

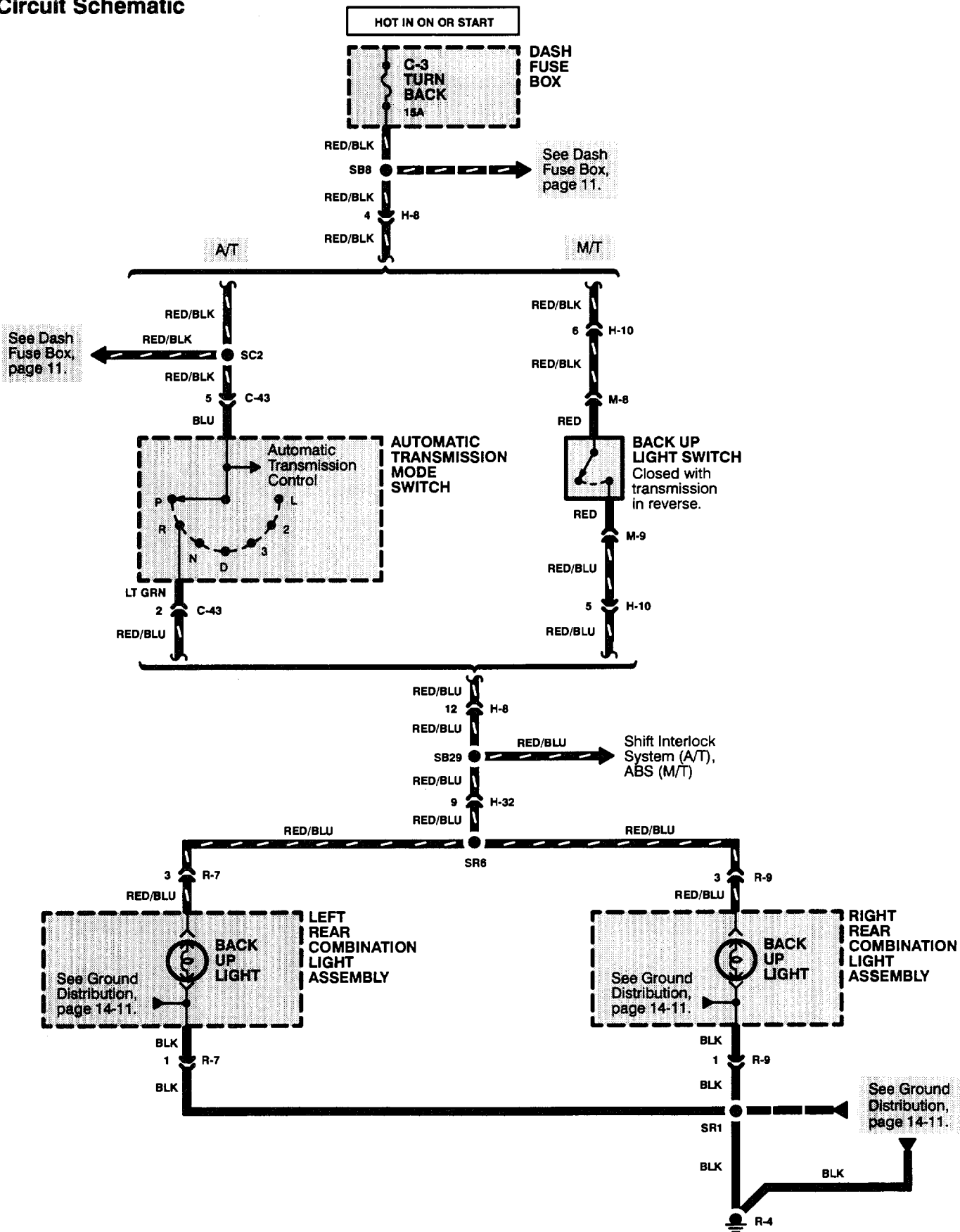
Component	Photo No.
Cornering Relay	In fuse/relay box 37
Dash Fuse Box	Behind left dash side trim panel 58
Diode Box B	In fuse/relay box 35
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Lighting Relay	In fuse/relay box 34
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
C-22 (4-GRY)	Behind left front combination light assembly 3
C-31 (4-GRY)	Behind right front combination light assembly 3
H-7 (20-BRN)	Below I/P, above left dash side trim panel, on bracket 63
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-13 (6-GRY)	Below I/P, above right dash side trim panel, on bracket 82
Ground	
B-19	Behind top of left dash side trim panel 62
C-16	Left rear corner of engine compartment, on inner fender panel 28

Circuit Operation

Battery voltage is applied to the lighting relay at all times from fuse FL-1 (MAIN). When the lighting switch is in the HEAD position, ground is provided to the lighting and cornering relay coils. The lighting relay energizes, allowing voltage to be applied to the cornering relay coil, causing it to energize and closing its contacts. With the starter switch in ON or START, battery voltage is applied to the turn signal/cornering light switch through the closed contacts of the cornering relay. When the turn signal/cornering light switch is in the LEFT or RIGHT position, voltage is directed to the appropriate cornering light and the light comes on until the turn signal/cornering light switch is cancelled.

BACK UP LIGHTS

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Automatic Transmission	
Mode Switch	Beneath vehicle, on left side of transmission 47
Back Up Light Switch	Beneath vehicle, on left side of transmission 44
Dash Fuse Box	Behind left dash side trim panel 58
Connector	
C-43 (8-BLK)	Left front of engine compartment 27
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-10 (16-BLU)	Left front of engine compartment 27
H-32 (16-BLK) (without Power Door Locks)	Below left front seat 120
H-32 (22-BLK) (with Power Door Locks)	Below left front seat 120
M-8 (1-CLR)	Beneath center of vehicle, top left side of transmission 44
M-9 (1-CLR)	Beneath center of vehicle, top left side of transmission 44
R-7 (6-WHT/BLK)	Behind left taillight assembly 118
R-9 (6-WHT/BLK)	Behind right taillight assembly 118
Ground	
R-4	Left side of luggage room 103

Circuit Operation

Automatic

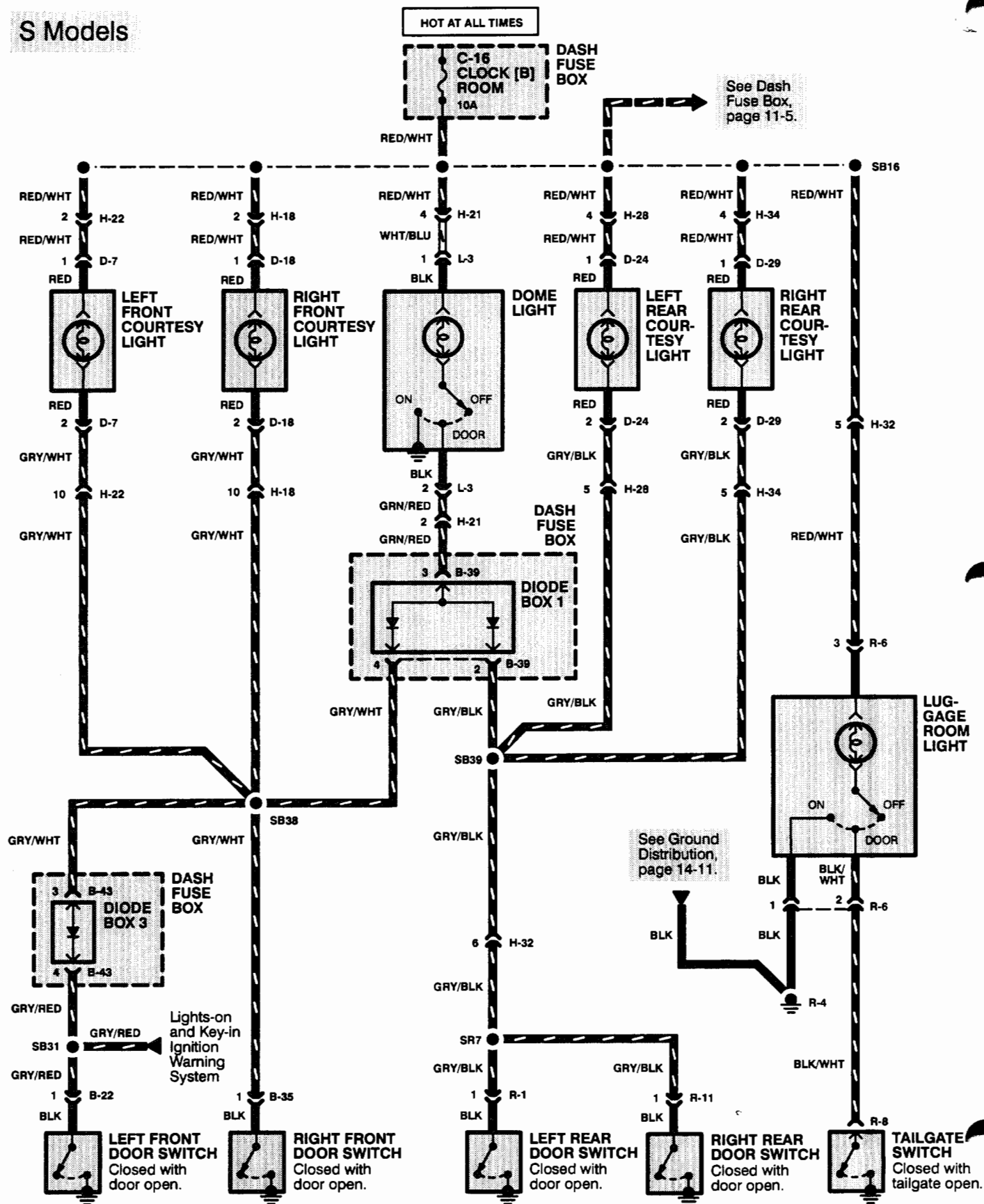
With the starter switch in ON or START, battery voltage is applied to fuse C-3 and to the automatic transmission mode switch. With the transmission in reverse, the automatic transmission mode switch closes and battery voltage is applied to the back up lights and the back up lights go on.

Manual

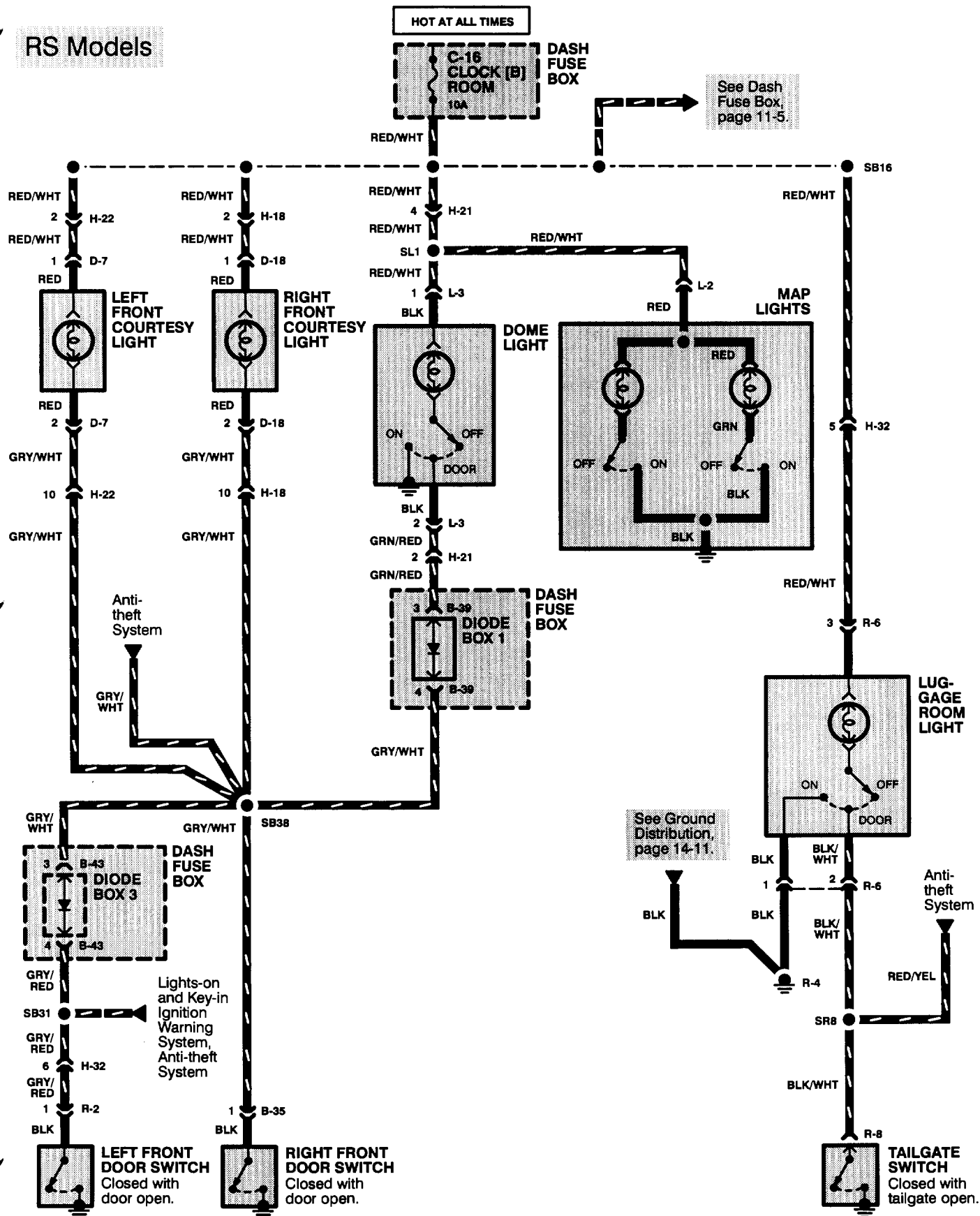
With the starter switch in ON or START, battery voltage is applied to fuse C-3 and to back up light switch. With the transmission in reverse, the back up light switch closes and battery voltage is applied to the back up lights and the back up lights go on.

Circuit Schematic

See Dash Fuse Box, page 11-5.



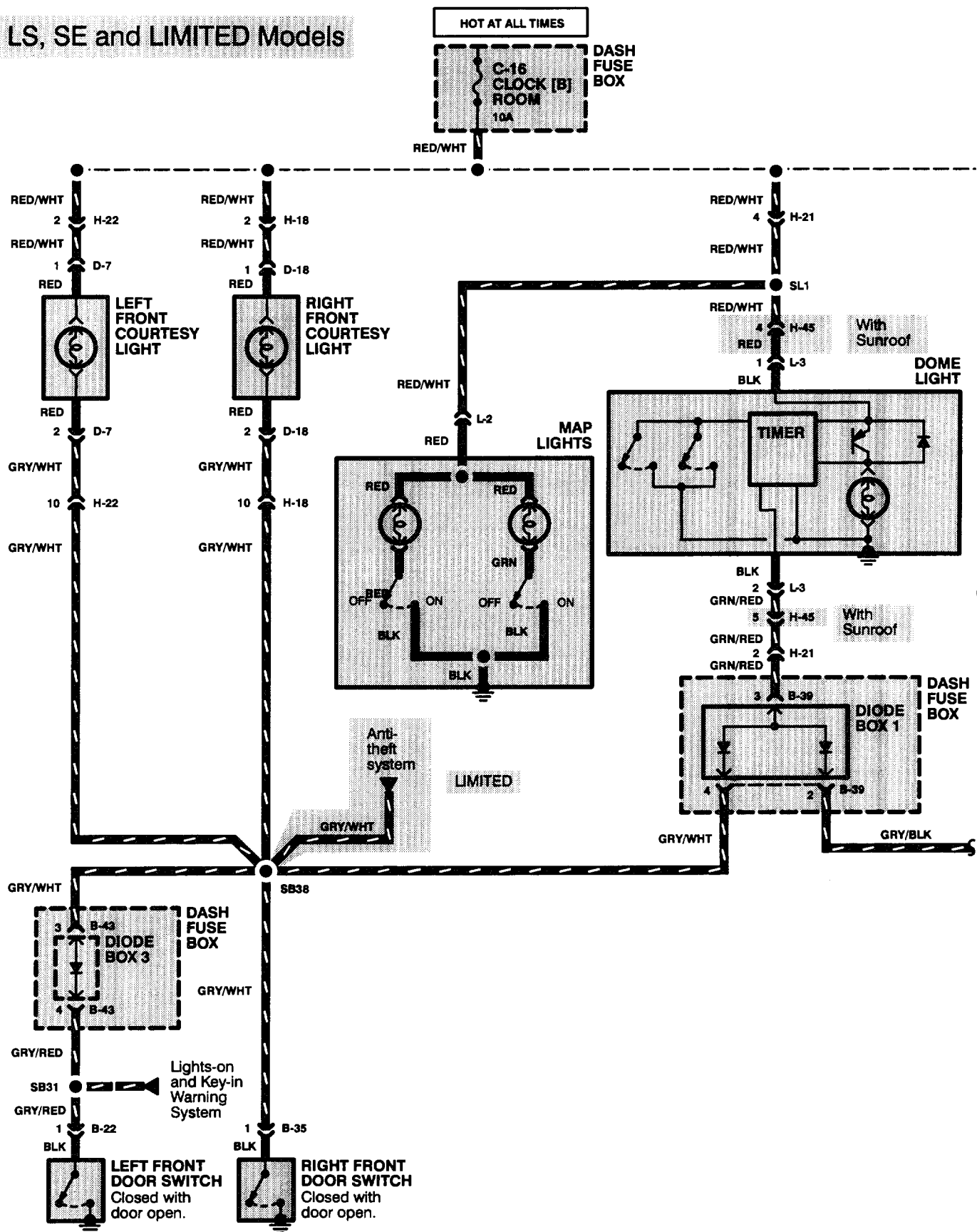
RS Models

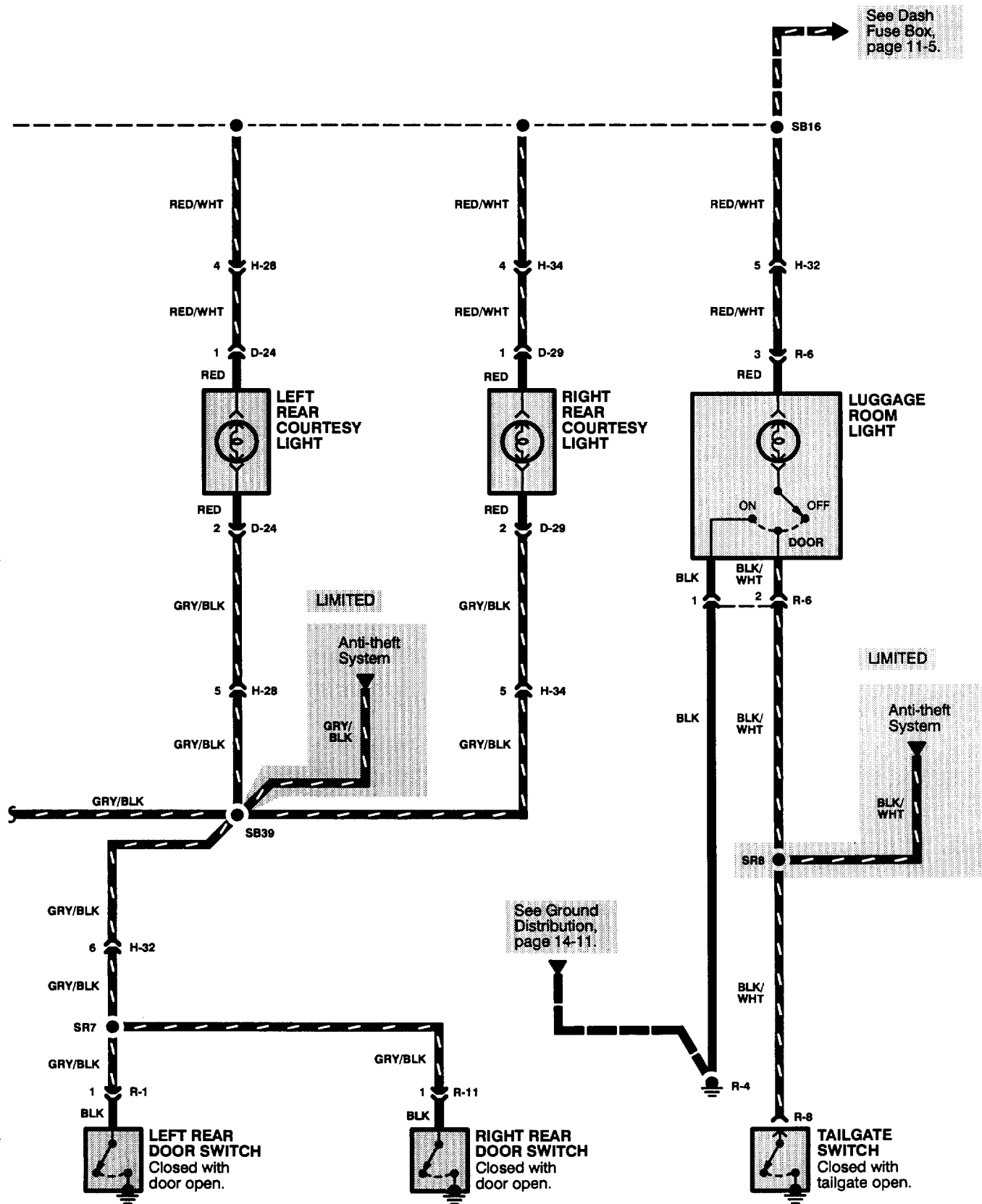


DOME, LUGGAGE ROOM, COURTESY, AND MAP LIGHTS

Circuit Schematic

LS, SE and LIMITED Models





DOME, LUGGAGE ROOM, COURTESY, AND MAP LIGHTS

Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box	Behind left dash side trim panel 58
Diode Box 1	In dash fuse box 60
Diode Box 3	In dash fuse box 60
Left Front Door Switch	Near left front door striker 88
Left Rear Door Switch	Near left rear door striker 95
Right Front Door Switch	Near right front door striker 88
Right Rear Door Switch	Near right rear door striker 95
Tailgate Switch	Center rear of luggage room floor 107
<u>Connector</u>	
B-22 (2-WHT)	In left center pillar, behind door switch
B-35 (2-WHT) (RS)	Front of right quarter panel area, behind door switch
B-35 (2-WHT) (S, LS, SE, LIMITED)	In right center pillar, behind door switch
D-7 (2-BLK)	Inside left front door, behind trim pad 90
D-18 (2-BLK)	Inside right front door, behind trim pad 90
D-24 (2-BLK)	Inside rear of left rear door, behind door courtesy light 96
D-29 (2-BLK)	Inside rear of right rear door, behind door courtesy light 96
H-18 (18-WHT)	Behind right dash side trim panel, in access hole 87
H-21 (4-WHT)	Below I/P, above right dash side trim panel, on bracket 82
H-22 (18-WHT)	Behind left dash side trim panel, in access hole 87
H-28 (6-WHT)	In left center pillar 94
H-32 (16-BLK) (without Power Door Locks)	Below left front seat 120
H-32 (22-BLK) (with Power Door Locks)	Below left front seat 120
H-34 (6-WHT)	In right center pillar 94
H-45 (6-BLK)	Center of roof, above map lights 98
L-2 (1-WHT)	Center front of roof, above map lights 98
L-3 (2-WHT)	Center of roof, above dome light 99
R-1 (2-WHT)	Left front of luggage room, behind grommet 103
R-2 (2-WHT)	Front of left quarter panel area, behind door switch
R-6 (3-WHT)	Center rear of roof 100
R-11 (2-WHT)	Right front of luggage room, behind grommet 103
<u>Ground</u>	
R-4	Left side of luggage room 103

Circuit Operation

Battery voltage is applied at all times to fuse C-16 and to the dome, map, courtesy, and luggage room lights.

Dome Light (S and RS Models)

With a door open and the dome light switch in the DOOR position, a ground path is provided by the closed door switch and the dome light goes on. With the doors closed, the dome light can be turned on by turning the dome light switch to ON.

Dome Light (LS, SE and LIMITED Models)

With a door open, a ground path is provided by the closed door switch and the dome light goes on. When the open door is closed, the door switch opens to ground removing the ground signal to the timer. The dome light begins to dim approximately 3 seconds after closing the door. With the doors closed, the dome light can be turned on by pushing the indicated portion of the light lens. It goes off when pushed again, regardless of the door position.

Courtesy Lights

With a front door open, a ground path is provided by the closed front door switch and the front courtesy lights go on. With a rear door open, a ground path is provided by the closed rear door switch and the rear courtesy lights go on. Opening a front door does not turn on the rear courtesy lights and opening a rear door does not turn on the front courtesy lights.

Luggage Room Lights

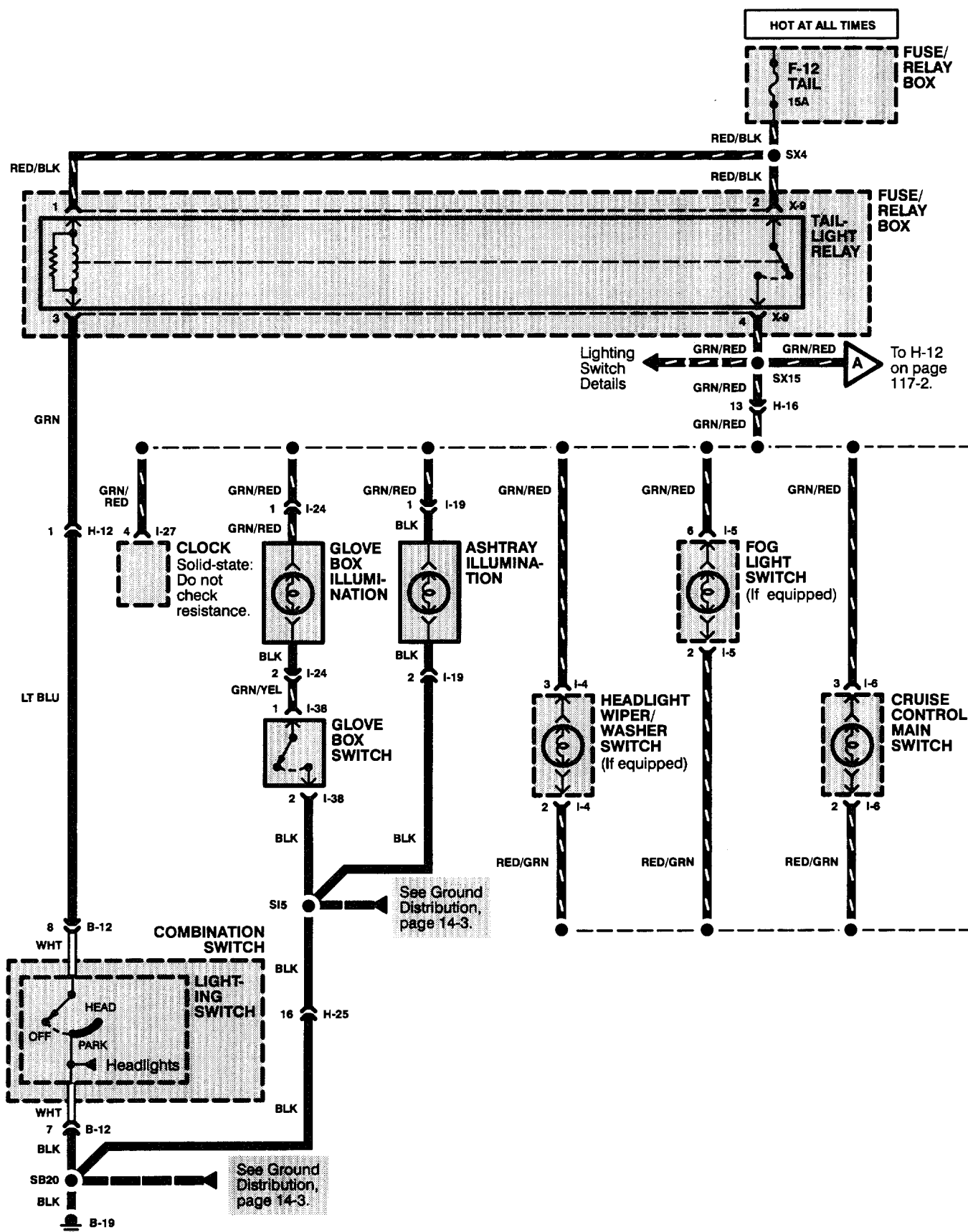
With the tailgate open and the luggage room light switch in the DOOR position, a ground path is provided by the closed tailgate switch and the luggage room light goes on. With the tailgate closed, the luggage room light can be turned on by turning the luggage room light switch to ON.

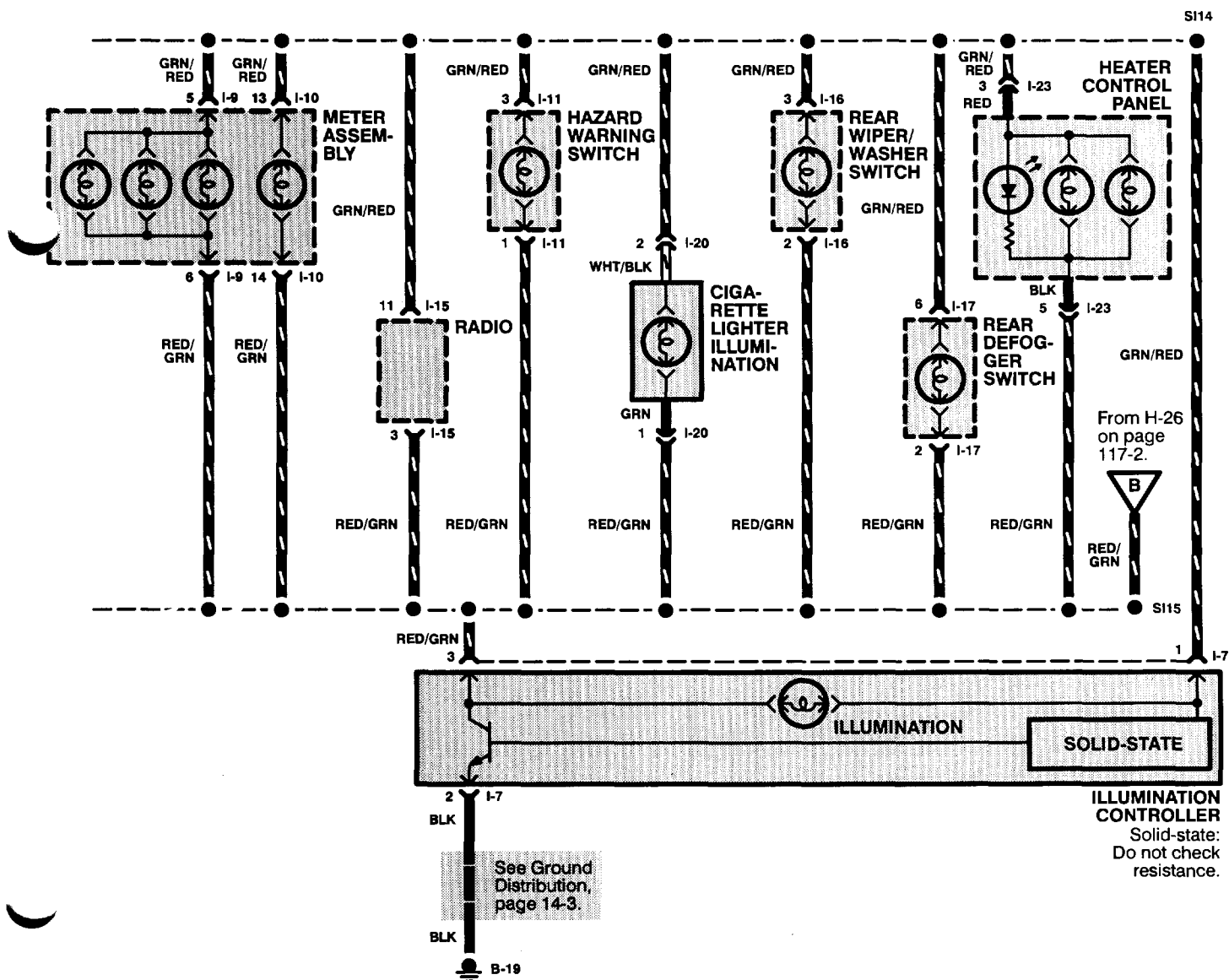
Map Lights

When either the left or right map light switch is depressed, battery voltage is applied to that particular light and the map light goes on.

DASH AND CONSOLE LIGHTS

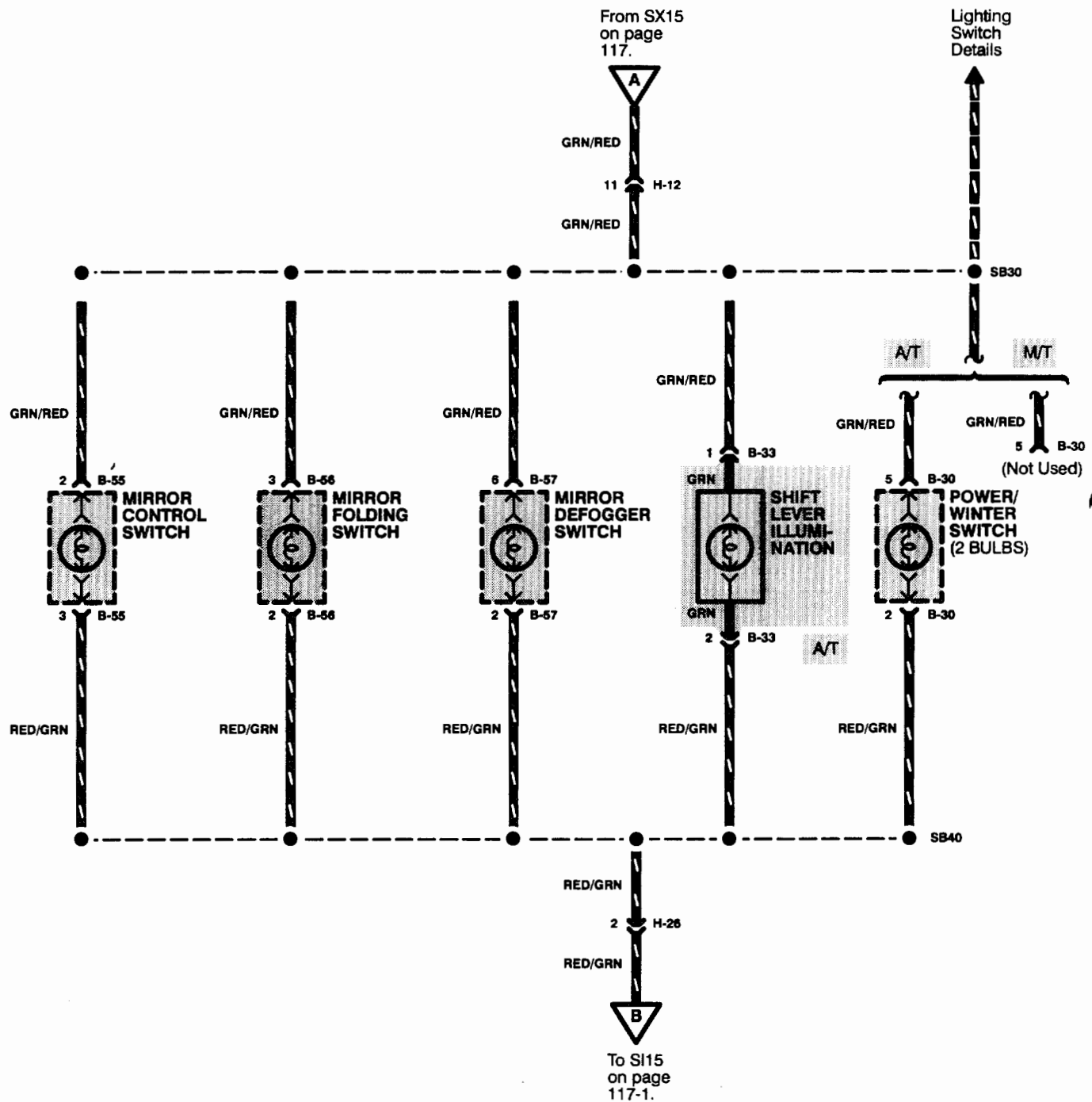
Circuit Schematic





DASH AND CONSOLE LIGHTS

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Glove Box Switch	Top right side of glove box
Taillight Relay	In fuse/relay box 36
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
B-30 (6-WHT) (M/T)	Below rear of front console
B-33 (2-WHT/BLK)	Below rear of front console 78
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
I-9 (16-BLK)	On left rear of meter assembly 53
I-10 (16-WHT)	On right rear of meter assembly 53
I-19 (2-WHT)	Behind cigarette lighter 71
I-20 (2-BLU/WHT)	Behind cigarette lighter 71
I-23 (6-WHT)	On rear of heater-A/C control panel 76
I-24 (2-WHT)	Below right side of I/P, above glove box 83
Ground	
B-19	Behind top of left dash side trim panel 62

Circuit Operation

Fuse F-12 applies battery voltage at all times to the tail-light relay. When the lighting switch is in the HEAD or PARK position, the lighting switch provides ground to the taillight relay. The taillight relay energizes providing battery voltage to the dash and console lights. The brightness of the lights is controlled by the illumination controller. The illumination controller is a solid-state device which controls the ground path provided to the lights.

Circuit Schematic



TRAILER ADAPTER

Component Location Index

(Refer to Section 201 for photographs.)

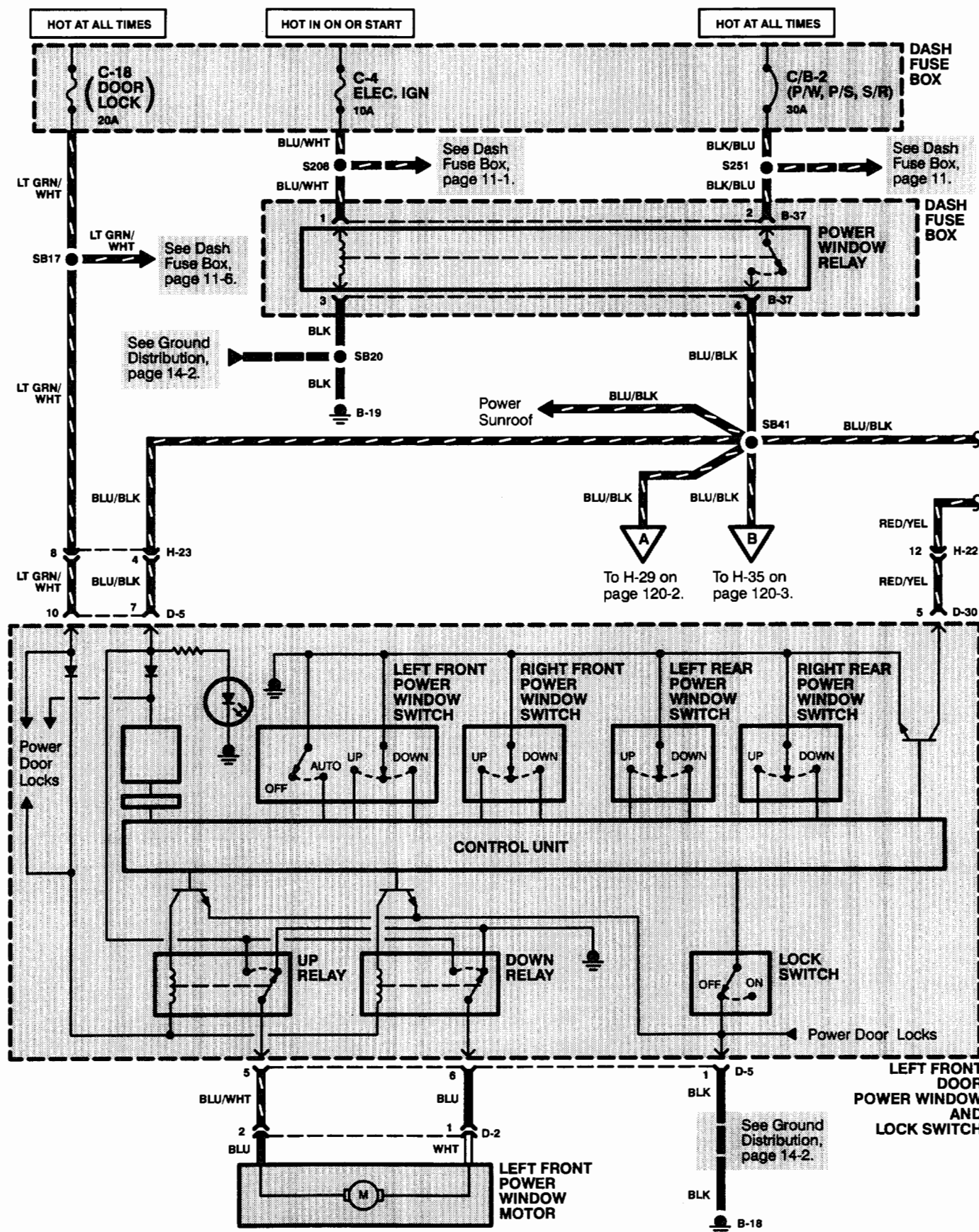
Component	Photo No.
Brake Switch	Below I/P, on brake pedal support 68
Dash Fuse Box	Behind left dash side trim panel 58
Flasher Unit	On top of dash fuse box 60
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Stop Light Switch	Below I/P, on brake pedal support 68
Taillight Relay	In fuse/relay box 36
Trailer Connector H-44 (6-WHT)	Below left rear of vehicle, behind grommet 117
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Behind right dash side trim panel 86
H-20 (6-WHT)	Behind right dash side trim panel 86
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-32 (16-BLK) (without Power Door Locks)	Below left front seat 120
H-32 (22-BLK) (with Power Door Locks)	Below left front seat 120
Ground	
B-18	Behind top of left dash side trim panel 62
B-19	Behind top of left dash side trim panel 62
R-4	Left side of luggage room 103

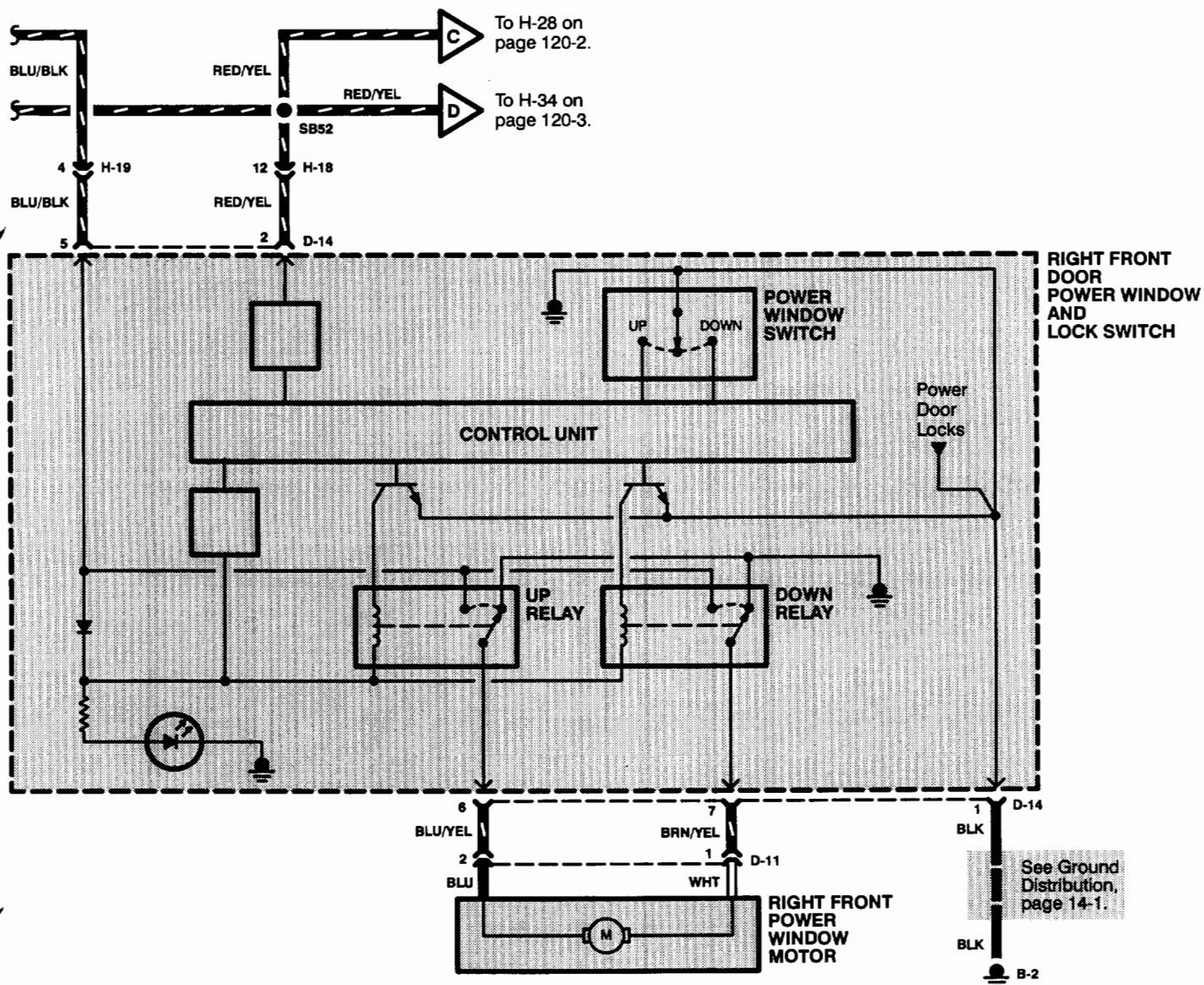
Circuit Operation

The trailer connector is an extension of the main wiring harness. See corresponding exterior lights cell for circuit operation.

POWER WINDOWS

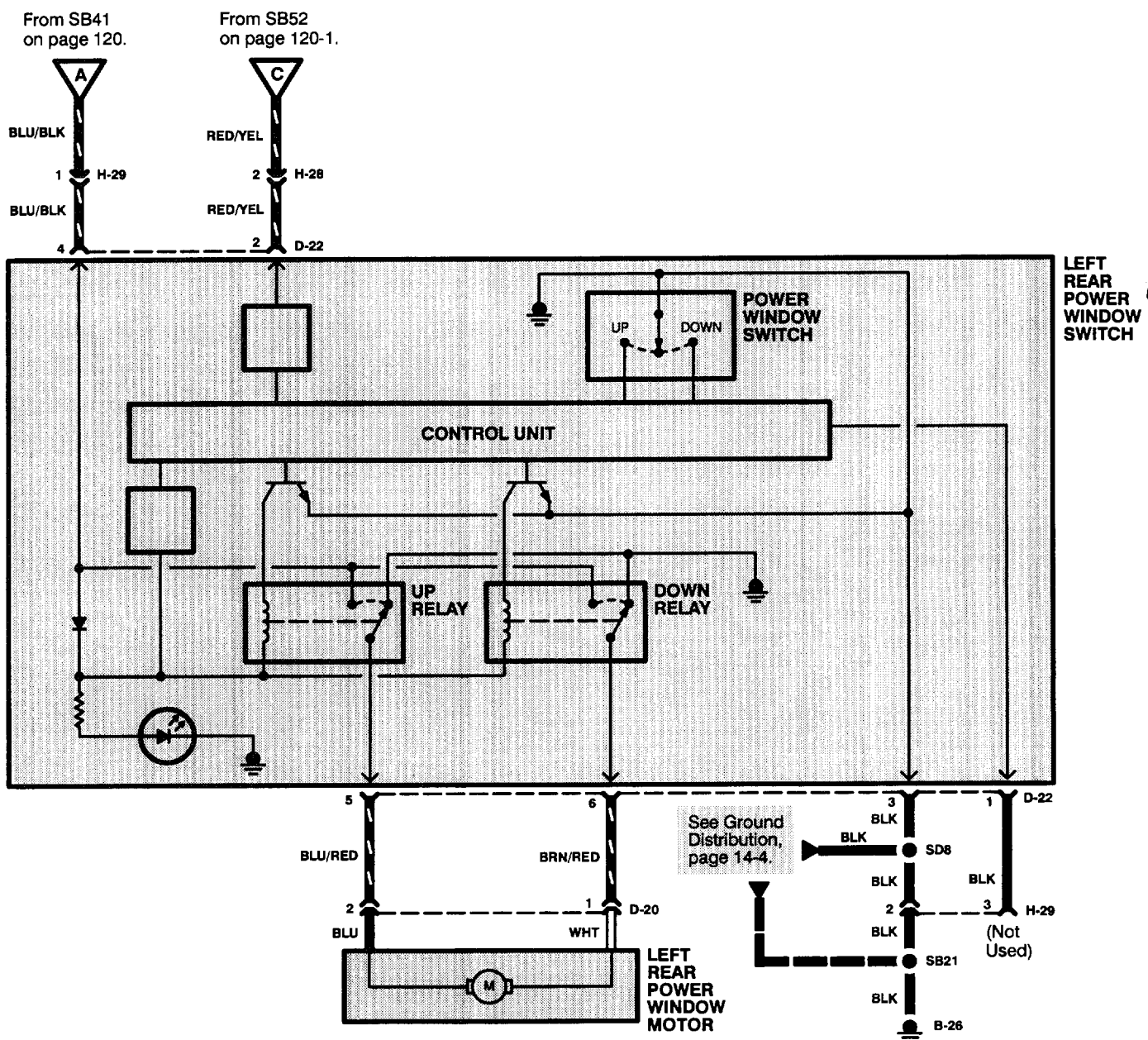
Circuit Schematic





POWER WINDOWS

Circuit Schematic



POWER WINDOWS

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Left Front Power Window	
Motor	Inside front of left front door, behind trim pad 92
Left Rear Power Window	
Motor	Inside front of left rear door, behind trim pad 97
Power Window Relay	In dash fuse box 59
Right Front Power Window	
Motor	Inside front of right front door, behind trim pad 92
Right Rear Power Window	
Motor	Inside front of right rear door, behind trim pad 97
Connector	
D-2 (2-BLK)	Inside front of left front door, behind trim pad 92
D-5 (10-BLK)	On left front door power window and lock switch
D-11 (2-BLK)	Inside front of right front door, behind trim pad 92
D-20 (2-BLK)	Inside front of left rear door, behind trim pad 97
D-25 (2-BLK)	Inside front of right rear door, behind trim pad 97
D-30 (10-WHT)	On left front door power window and lock switch
H-18 (18-WHT)	Behind right dash side trim panel, in access hole 87
H-19 (8-BLK)	Behind right dash side trim panel, in access hole 87
H-22 (18-WHT)	Behind left dash side trim panel, in access hole 87
H-23 (8-BLK)	Behind left dash side trim panel, in access hole 87
H-28 (6-WHT)	In left center pillar 94
H-29 (3-BLU)	In left center pillar 94
H-34 (6-WHT)	In right center pillar 94
H-35 (3-BLU)	In right center pillar 94
Ground	
B-2	Above right dash side trim panel 84
B-18	Behind top of left dash side trim panel 62
B-19	Behind top of left dash side trim panel 62
B-26	Below rear of center console 79

Circuit Operation

Fuse C-18 applies battery voltage at all times to the left front door power window switch. The circuit breaker C/B-2 applies battery voltage at all times to the power window relay. With the starter switch in ON or START, fuse C-4 applies battery voltage to the power window relay. The power window relay energizes and allows battery voltage from the circuit breaker to all the door power window switches.

Left Front Window

When the left front power window switch is moved to UP, a signal is sent to the control unit. The control unit grounds the coil of the up relay. The contacts of the relay close, and voltage is applied to the left front power window motor. The motor's ground path is through the open contacts of the down relay. The motor drives the window up as long as the switch is held. When the switch is moved to DOWN, a signal is sent to the control unit. The control unit grounds the coil of the down relay. The contacts of the relay close, and voltage is applied to the motor. The motor's ground path is through the open contacts of the up relay. The motor drives the window down as long as the switch is held.

Auto Down

When the left front power switch is moved to AUTO, a signal is sent to the control unit. The control unit grounds the coil of the down relay. The contacts of the relay close, and voltage is applied to the left front power window motor. The motor's ground path is through the open contacts of the down relay. The control unit keeps the relay energized until the motor drives the window to the fully open position.

Passenger's Window

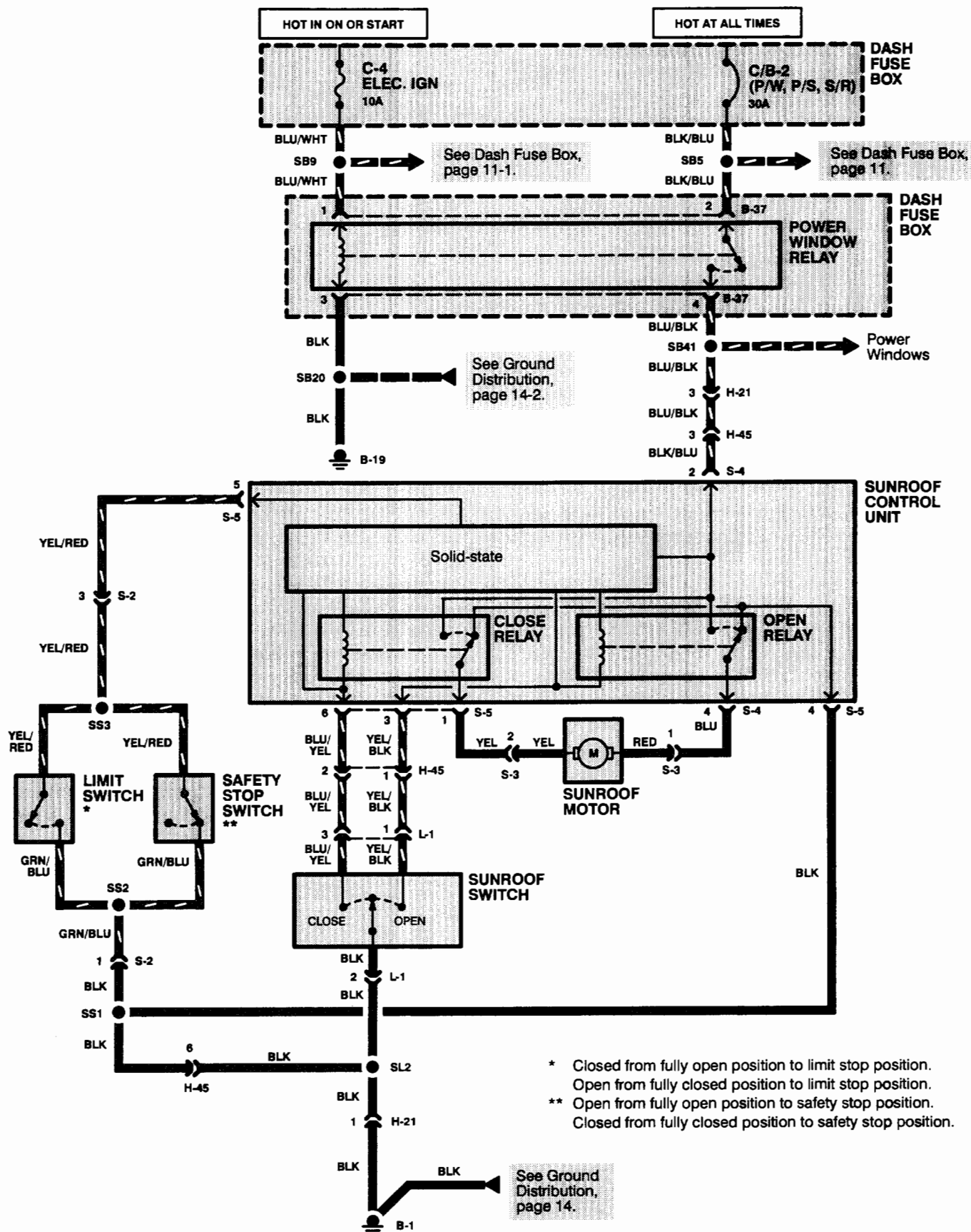
The passenger windows can be operated from the left front door power window switch or the respective door power window switch. The passenger's door power window switches can only operate the windows when the lock switch in the left front power window switch is in the OFF position.

When a passenger's door power window switch is moved to UP, a signal is sent to the respective control unit. The control unit grounds the coil of the up relay. The contacts of the relay close, and voltage is applied to the respective power window motor. The motor's ground path is through the open contacts of the down relay. The motor drives the window up as long as the switch is held. When the switch is moved to DOWN, a signal is sent to the control unit. The control unit grounds the coil of the down relay. The contacts of the relay close, and voltage is applied to the motor. The motor's ground path is through the open contacts of the up relay. The motor drives the window down as long as the switch is held.

When a passenger's power window is being controlled by the switch in the left front door power window switch, the control unit in the left front door power window switch sends a multiplexed signal to the control units in the other power window switches. The signal tells the appropriate control unit to energize either the up or down relay depending on the function requested. Once the relay is energized, power is supplied to the respective power window motor (see above paragraph) and the motor drives the window in the proper direction as long as the switch is held. Since the signal is multiplexed, more than one passenger's window can be controlled by the left front door power window switch simultaneously.

POWER SUNROOF

Circuit Schematic



- * Closed from fully open position to limit stop position.
Open from fully closed position to limit stop position.
- ** Open from fully open position to safety stop position.
Closed from fully closed position to safety stop position.

Component Location Index

(Refer to section 201 for photographs.)

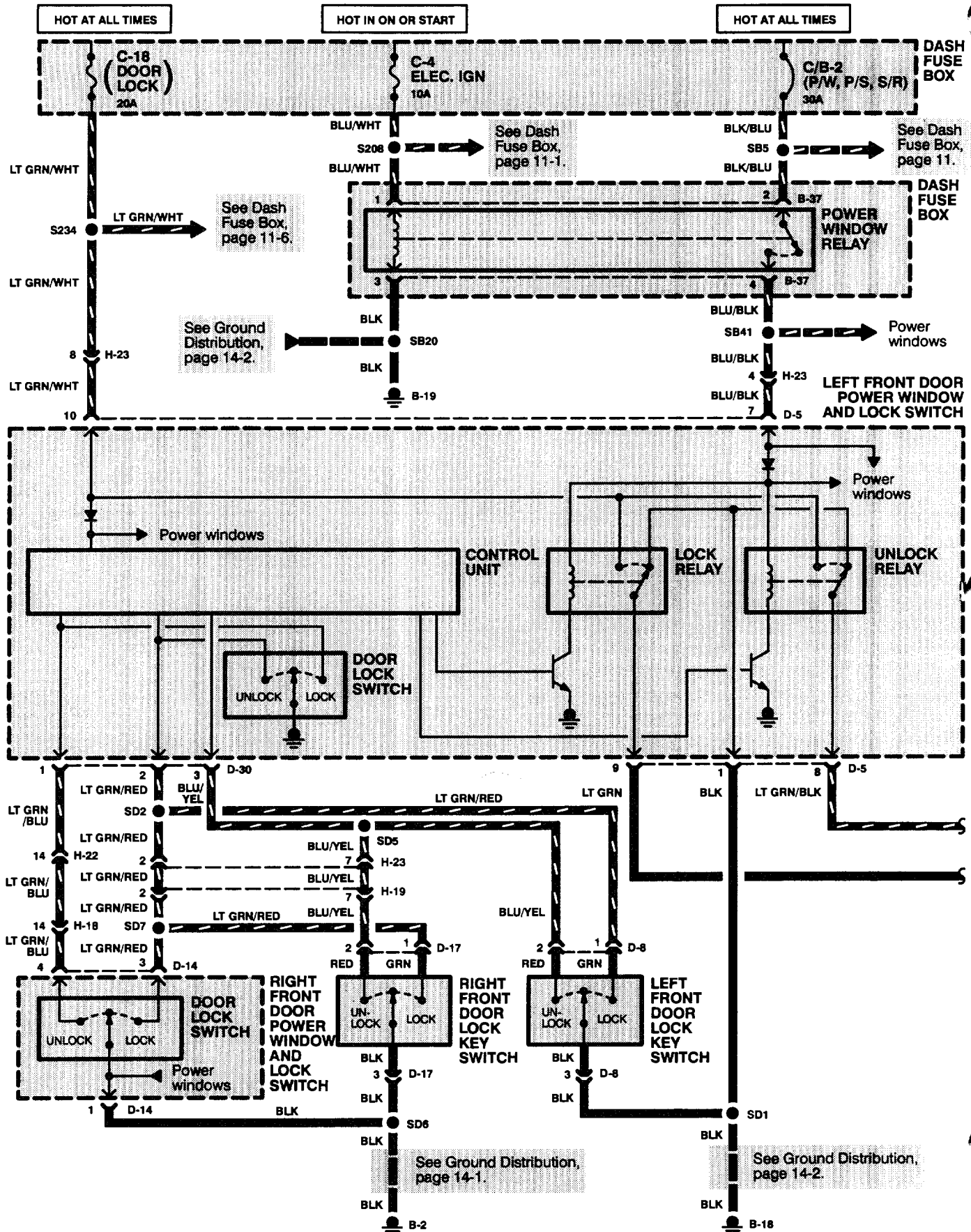
Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Limit Switch	Right rear underside of roof 59
Power Window Relay	In dash fuse box 101
Safety Stop Switch	Rear underside of roof 101
Sunroof Control Unit	Rear underside of roof 101
Sunroof Motor	Rear underside of roof 101
Connector	
H-21 (4-WHT)	Below I/P, above right dash side trim panel, on bracket 82
H-45 (6-BLK)	Center of roof, above map lights 98
L-1 (3-WHT)	Center of roof, above map lights 98
S-2 (3-WHT)	Center of roof 101
S-3 (2-WHT)	Center of roof 101
S-4 (4-WHT)	On sunroof control unit 101
S-5 (6-WHT)	On sunroof control unit 101
Ground	
B-1	Above right dash side trim panel 84
B-19	Behind top of left dash side trim panel 62

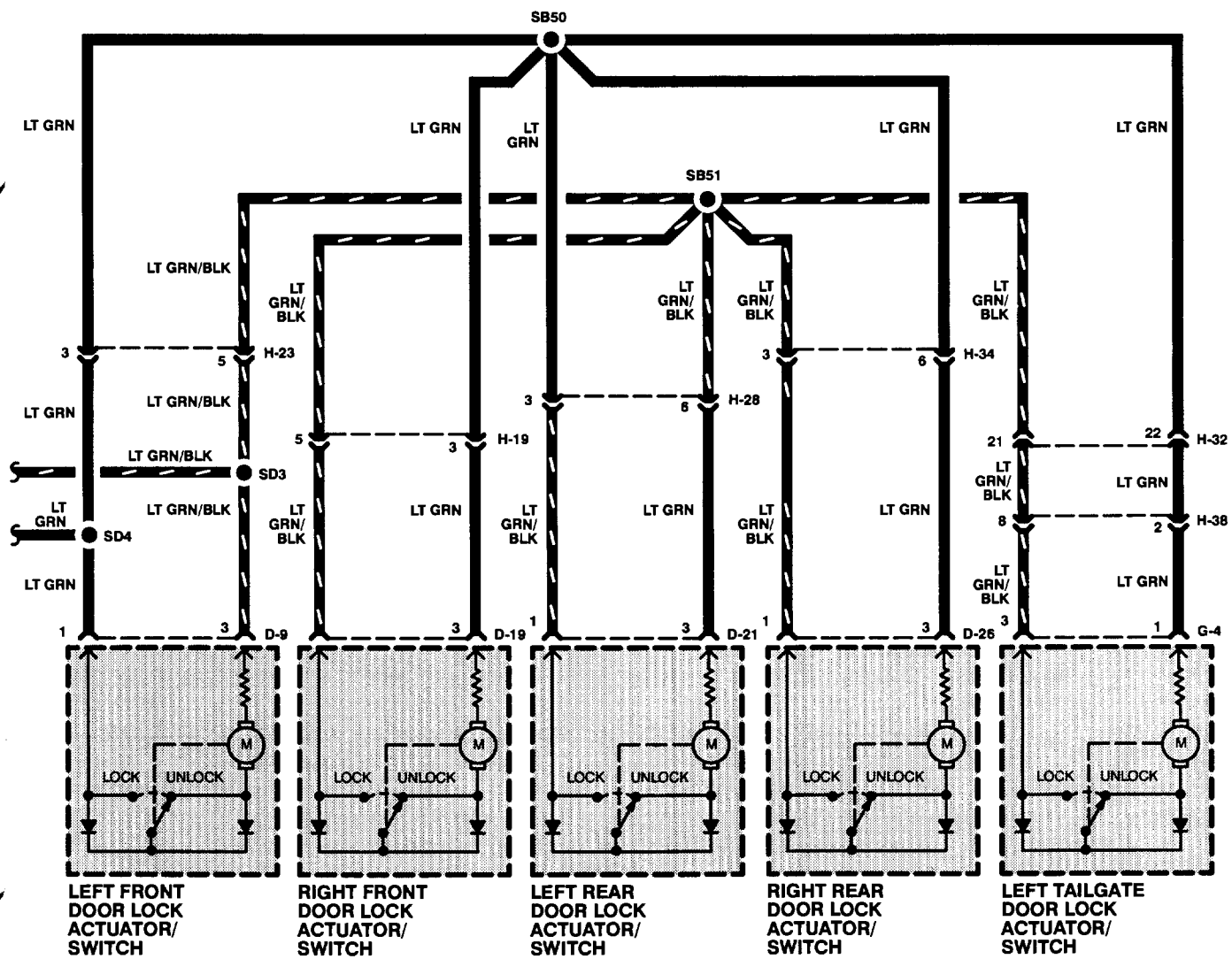
Circuit Operation

When the starter switch is in ON or START, the power window relay is energized and applies battery voltage to the sunroof control unit. When the sunroof switch is held in the OPEN position, the open relay energizes, supplying battery voltage to the sunroof motor and the sunroof opens to the limit stop position. At the moment the sunroof reaches the limit stop position, the limit switch closes and applies ground to the sunroof control unit. The sunroof control unit stops the sunroof in the limit stop position. After the sunroof switch is released and held in the OPEN position, the sunroof motor opens the sunroof until it reaches its mechanical limit. When the sunroof switch is held in the CLOSE position, the close relay energizes, supplying battery voltage to the sunroof motor and the sunroof opens to the safety stop position. At the moment the sunroof reaches the safety stop position, the safety stop switch closes and applies ground to the sunroof control unit. The sunroof control unit stops the sunroof in the safety stop position. After the sunroof switch is released and held in the CLOSE position, the sunroof motor closes the sunroof until it reaches its mechanical limit.

POWER DOOR LOCKS

Circuit Schematic





POWER DOOR LOCKS

Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box	Behind left dash side trim panel 58
Left Front Door Lock	
Actuator/Switch	Inside rear of left front door, behind trim pad 93
Left Front Door Lock	
Key Switch	Inside left front door, part of door lock assembly 93
Left Rear Door Lock	
Actuator/Switch	Inside of left rear door, behind trim pad 97
Left Tailgate Door Lock	
Actuator/Switch	Inside left tailgate door, behind trim pad 104
Power Window Relay	In dash fuse box 59
Right Front Door Lock	
Actuator/Switch	Inside rear of right front door, behind trim pad 93
Right Front Door Lock	
Key Switch	Inside rear of right front door, part of door lock assembly 93
Right Rear Door Lock	
Actuator/Switch	Inside of right rear door, behind trim pad 97
 <u>Connector</u>	
D-5 (10-BLK)	On left front door power window and lock switch 93
D-8 (3-WHT)	Inside left front door, behind trim pad 93
D-17 (3-WHT)	Inside right front door, behind trim pad 93
D-30 (10-WHT)	On left front door power window and lock switch 87
H-18 (18-WHT)	Behind right dash side trim panel, in access hole 87
H-19 (8-BLK)	Behind right dash side trim panel, in access hole 87
H-22 (18-WHT)	Behind left dash side trim panel, in access hole 87
H-23 (8-BLK)	Behind left dash side trim panel, in access hole 94
H-28 (6-WHT)	In left center pillar 120
H-32 (22-BLK) (with	
Power Door Locks)	Below left front seat 94
H-34 (6-WHT)	In right center pillar 102
H-38 (10-WHT)	Left rear of luggage room
 <u>Ground</u>	
B-2	Above right dash side trim panel 84
B-18	Behind top of left dash side trim panel 62
B-19	Behind top of left dash side trim panel 62

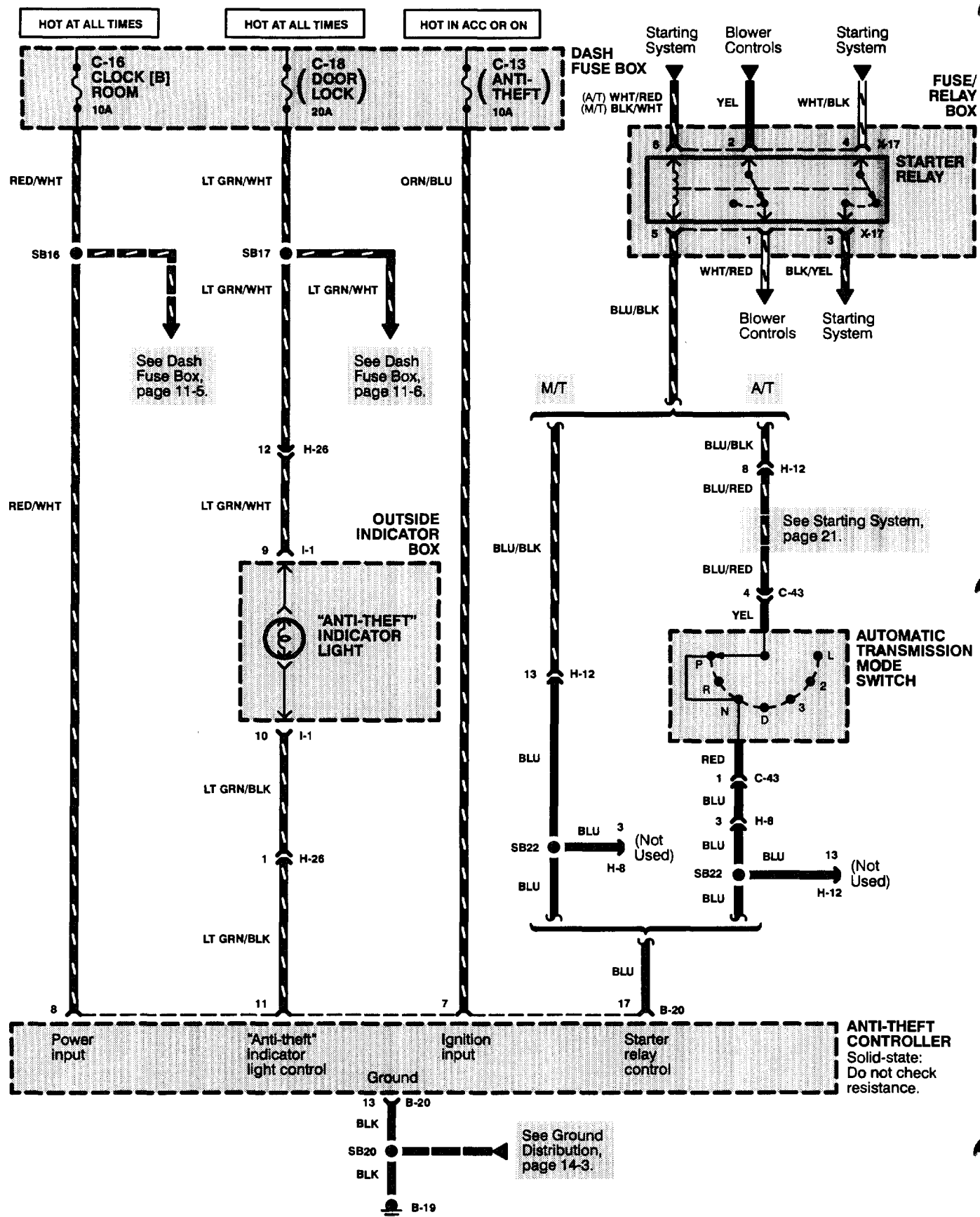
Circuit Operation

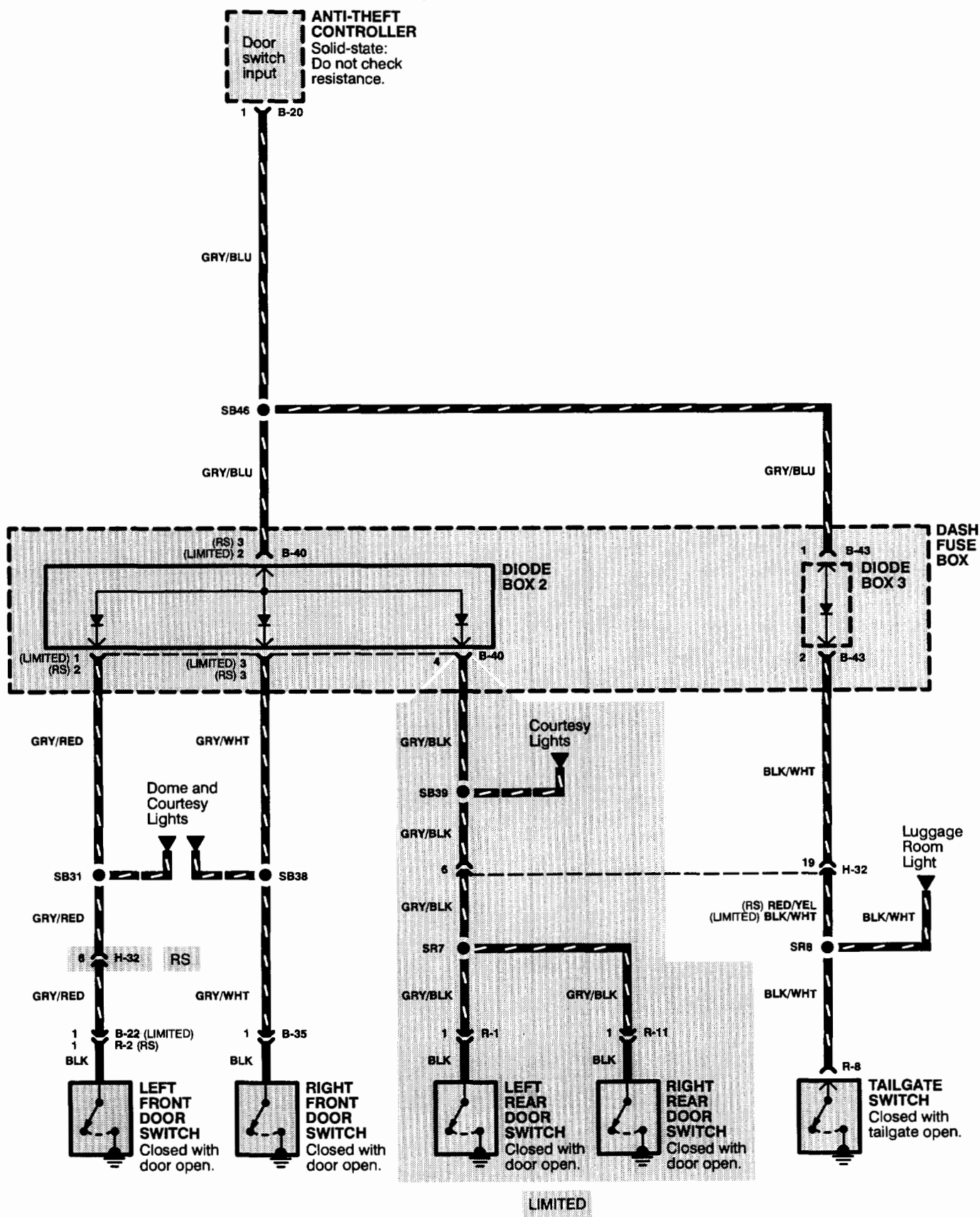
Fuse C-18 applies battery voltage at all times to the door lock control unit (in left front door lock switch). If either of the front door lock key switches is turned once, only that door will be unlocked. If either of the front door lock key switches is turned twice (within 3 seconds) it sends a signal to the control unit to unlock

all the doors. Locking or unlocking the doors with either door lock switch also locks or unlocks all the doors. The control unit locks or unlocks the doors by applying battery voltage and providing a ground to the door lock actuators in one direction to lock the doors and in the opposite direction to unlock the doors.

ANTI-THEFT SYSTEM

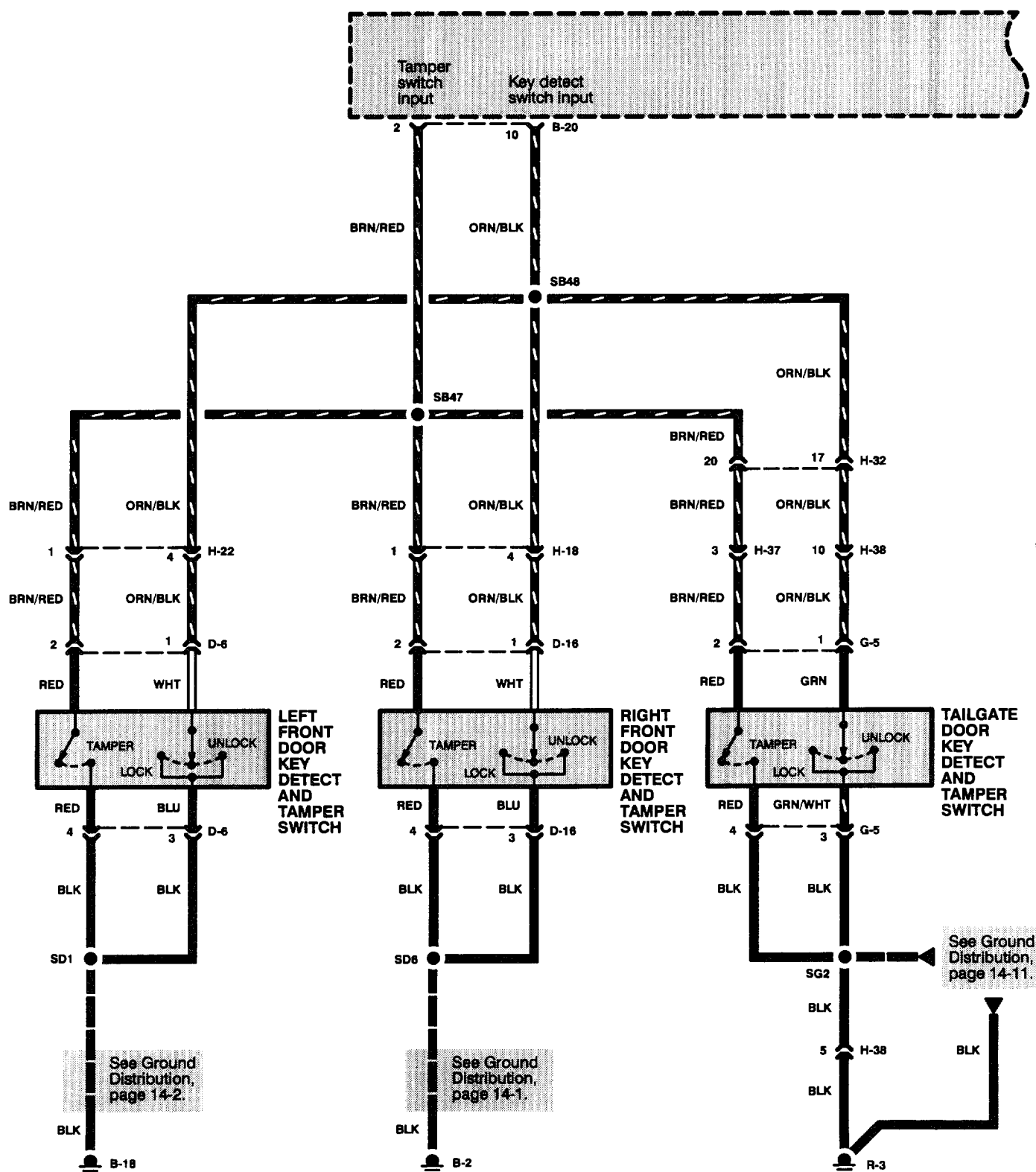
Circuit Schematic



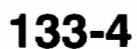


ANTI-THEFT SYSTEM

Circuit Schematic



Circuit Schematic



Component Location Index

(Refer to section 201 for photographs.)

Component	Photo No.
Anti-theft Controller	Below left side of I/P 68
Anti-theft Horn	Right rear corner of engine compartment 41
Automatic Transmission	
Mode Switch	Beneath vehicle, on left side of transmission 47
Dash Fuse Box	Behind left dash side trim panel 58
Diode Box 2	In dash fuse box 60
Diode Box 3	In dash fuse box 60
Engine Hood Switch	Left front of engine compartment 27
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Left Front Door Key Detect	
And Tamper Switch	Inside left front door, part of outside handle assembly 92
Left Front Door Lock	
Actuator/Switch	Inside rear of left front door, behind trim pad 93
Left Front Door Switch	Near left front door striker 88
Left Rear Door Lock	
Actuator/Switch	Inside of left rear door, behind trim pad 97
Left Rear Door Switch	Near left door striker 95
Left Tailgate Door Lock	
Actuator/Switch	Inside left tailgate door, behind trim pad 104
Lighting Relay	In fuse/relay box 34
Right Front Door Key Detect	
And Tamper Switch	Inside right front door, part of outside handle assembly 92
Right Front Door Lock	
Actuator/Switch	Inside rear of right front door, behind trim pad 93
Right Front Door Switch	Near right front door striker 88
Right Rear Door Lock	
Actuator/Switch	Inside of right rear door, behind trim pad 97
Right Rear Door Switch	Near right rear door striker 95
Starter Relay	In fuse/relay box 36
Tailgate Door Key Detect	
And Tamper Switch	Inside left tailgate door, behind trim pad 105
Tailgate Switch	Center rear of luggage room floor 107
Connector	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
B-22 (2-WHT)	In left center pillar, behind door switch
B-35 (2-WHT) (RS)	Front of right quarter panel area, behind door switch
B-35 (2-WHT) (S, LS, SE, LIMITED)	In right center pillar, behind door switch
C-20 (1-GRY)	Left front of engine compartment 27
C-43 (8-BLK)	Left front of engine compartment 27
D-6 (4-GRY)	Inside left front door, behind trim pad 92
D-16 (4-GRY)	Inside right front door, behind trim pad 92
G-5 (4-GRY)	Inside left tailgate door, behind trim pad 105
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-15 (14-WHT)	Below I/P, above right dash side trim panel, on bracket 82
H-18 (18-WHT)	Behind right dash side trim panel, in access hole 87
H-22 (18-WHT)	Behind left dash side trim panel, in access hole 87

ANTI-THEFT SYSTEM

Component Location Index

(Refer to section 201 for photographs.)

Connector (cont'd)

	Photo No.
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
H-28 (6-WHT)	In left center pillar 94
H-29 (3-BLU)	In left center pillar 94
H-32 (22-BLK) (with Power Door Locks)	Below left front seat 120
H-34 (6-WHT)	In right center pillar 94
H-35 (3-BLU)	In right center pillar 94
H-37 (4-GRY)	Left rear of luggage room 102
H-38 (10-WHT)	Left rear of luggage room 102
H-42 (16-BLK)	Right front of engine compartment 31
R-1 (2-WHT)	Left front of luggage room, behind grommet 103
R-2 (2-WHT)	Front of left quarter panel area, behind door switch
R-11 (2-WHT)	Right front of luggage room, behind grommet 103

Ground

B-2	Above right dash side trim panel 84
B-18	Behind top of left dash side trim panel 62
B-19	Behind top of left dash side trim panel 62
B-26	Below rear of center console 79
R-3	Left side of luggage room 103

Circuit Operation

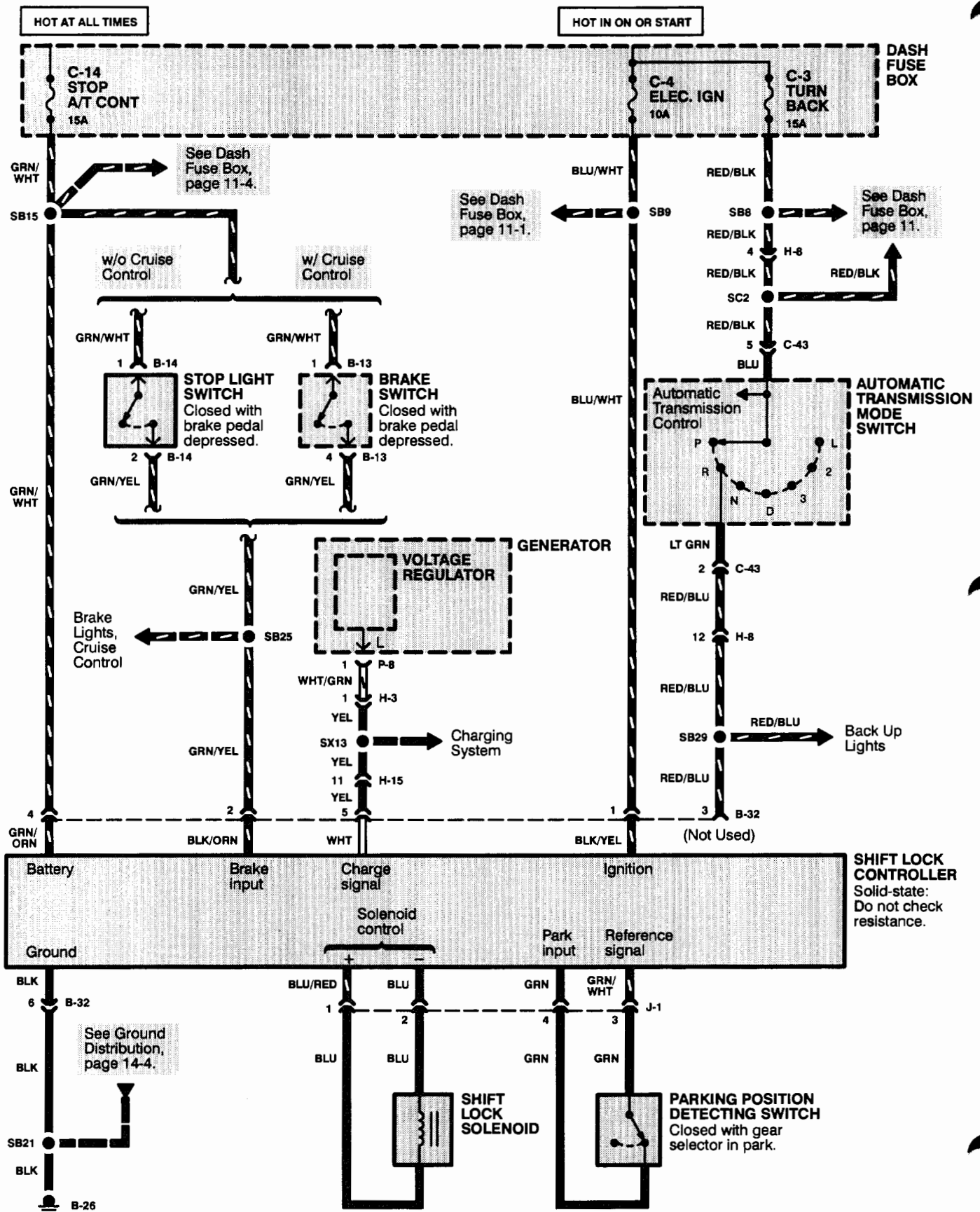
The Anti-theft System consists of the following components:

- Anti-theft controller
- Left and right door switches
- Left front, right front, and tailgate door key detect and tamper switches
- Tailgate switch
- Engine hood switch
- Door lock actuators
- Left and right front door lock switches
- Lighting relay
- Starter relay
- Headlights
- "ANTI-THEFT" indicator light
- Anti-theft horn

The arming sequence is initiated with the starter switch in the LOCK position and all doors closed. This results in all theft related switches to be open to ground. The "ANTI-THEFT" indicator then flashes for about 30 seconds or until the arming sequence is completed. When the driver's door is locked using the door key, the door lock actuator internal switch will open, removing the ground signal from the anti-theft control unit input. Now all inputs to the anti-theft control unit are open to ground and the "ANTI-THEFT" indicator stays lit for about 8 seconds. The anti-theft system is now armed. If any of the theft related switches are grounded, the theft alarm is activated. The anti-theft controller does not allow the vehicle to be started by not applying ground to the starter relay. The anti-theft controller pulses a ground signal to the lighting relay causing the headlights to flash. At the same time, the anti-theft controller unit pulses a ground signal to the anti-theft horn, causing it to sound. The system alarm is cancelled when the anti-theft controller sees battery voltage at its ignition input or a ground signal at its key detect input.

SHIFT INTERLOCK SYSTEM

Circuit Schematic



Component Location Index

(Refer to section 201 for photographs.)

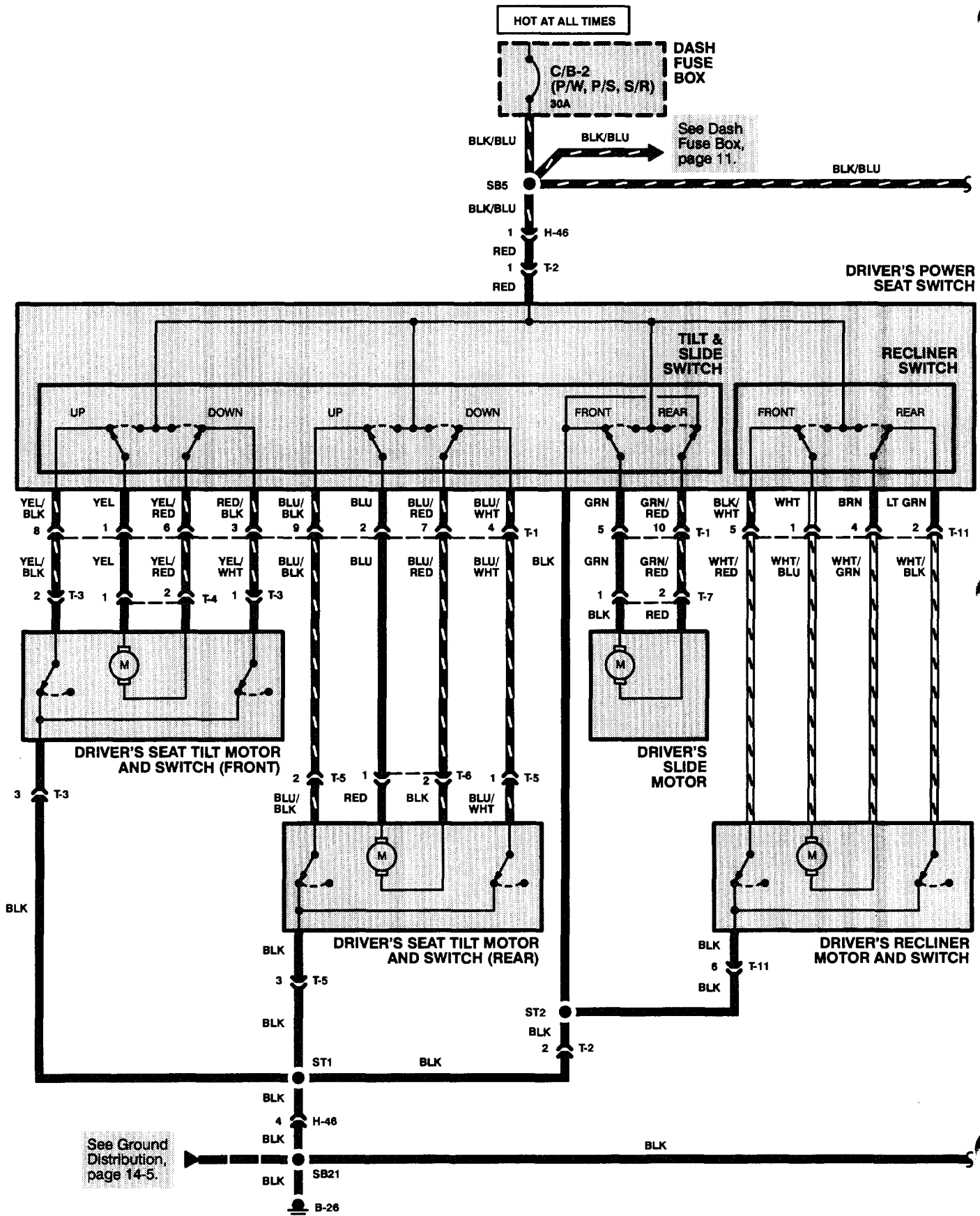
<u>Component</u>	<u>Photo No.</u>
Automatic Transmission	
Mode Switch	Beneath vehicle, on left side of transmission 47
Brake Switch	Below I/P, on brake pedal support 68
Dash Fuse Box	Behind left dash side trim panel 58
Generator	Lower right front of engine
Parking Position Detecting	
Switch	Below front console 78
Shift Lock Controller	Below front console 77
Shift Lock Solenoid	Below front console 77
Stop Light Switch	Below I/P, on brake pedal support 68
<u>Connector</u>	
B-32 (6-WHT)	Below rear of front console 78
C-43 (8-BLK)	Left front of engine compartment 27
H-3 (2-BLK)	Right side of engine compartment 40
H-8 (16-BLK)	Below I/P, above left dash side trim panel, on bracket 62
H-15 (14-WHT)	Below I/P, above right dash side trim panel, on bracket 82
J-1 (4-WHT)	Below front of front console 77
<u>Ground</u>	
B-26	Below rear of center console 79

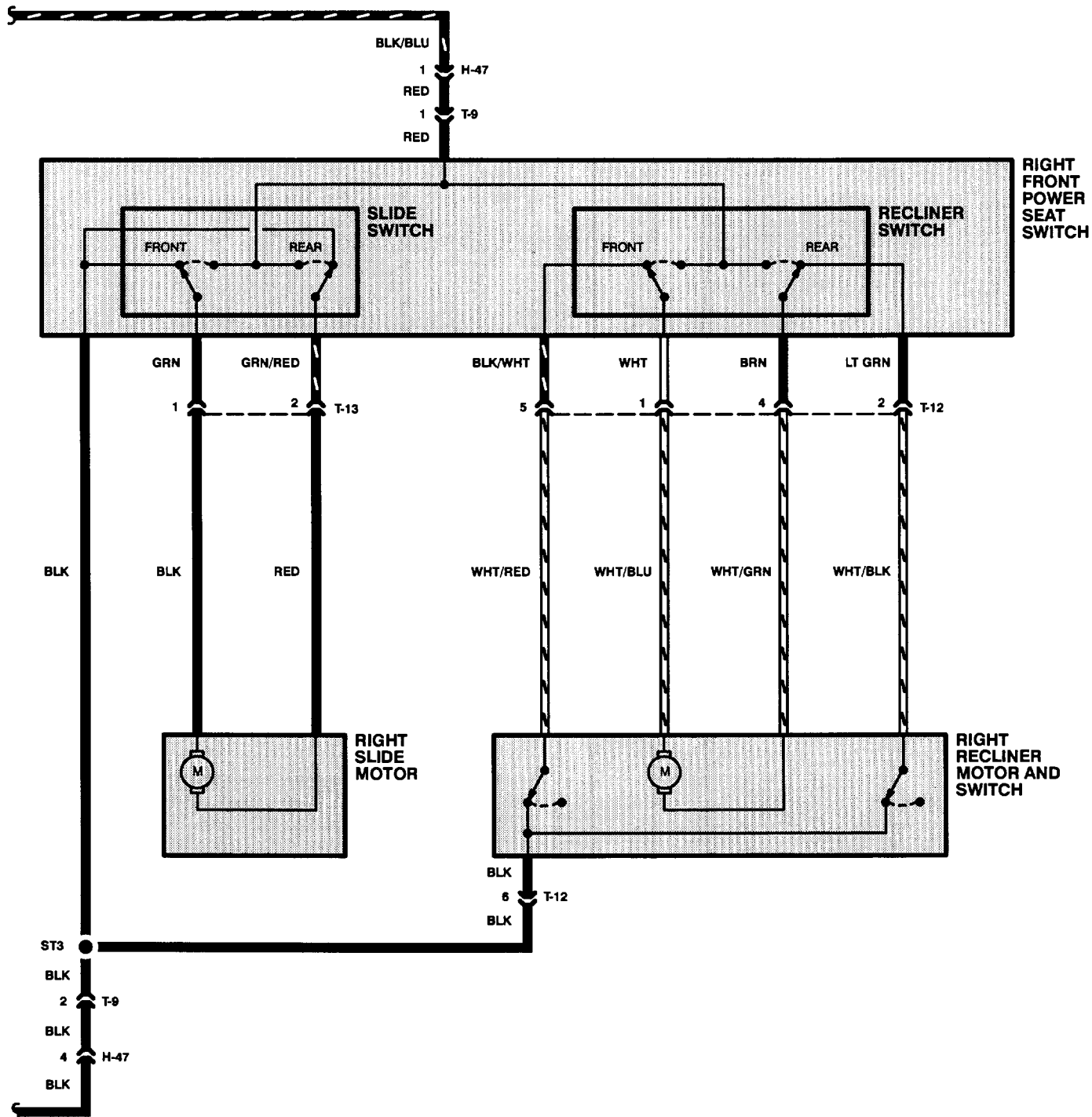
Circuit Operation

With the engine running or the starter switch in the ON position and the transmission control lever in the "P" position, the lever cannot be shifted from "P" to another position unless the brake pedal is depressed. A signal is sent through the parking position detecting switch to the shift lock controller and the shift lock solenoid energizes preventing the transmission control lever from being moved. When the brake pedal is depressed, a signal is sent to the shift lock controller. The shift lock controller then deenergizes the shift lock solenoid and allows the transmission control lever to be moved.

POWER SEATS

Circuit Schematic





POWER SEATS

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box	Behind left dash side trim panel 58
Driver's Recliner Motor and Switch	In driver's seatback
Driver's Seat Tilt Motor and Switch (Front)	Underside of driver's seat 121
Driver's Seat Tilt Motor and Switch (Rear)	Underside of driver's seat 121
Driver's Slide Motor	Underside of driver's seat 122
Right Recliner Motor and Switch	In right front seatback
Right Slide Motor	Underside of right front seat 126
Connector	
H-46 (6-WHT)	Below left side of left front seat 120
H-47 (6-WHT)	Below right side of right front seat 125
T-1 (10-BLU)	Underside of driver's seat 122
T-2 (2-WHT)	Underside of driver's seat 123
T-3 (3-WHT)	Underside of driver's seat 123
T-4 (2-WHT)	Underside of driver's seat 123
T-5 (3-GRY)	Underside of driver's seat 124
T-6 (2-GRY)	Underside of driver's seat 124
T-7 (2-GRY)	Underside of driver's seat 122
T-9 (2-WHT)	Underside of right front seat 127
T-11 (6-BLU)	Underside of driver's seat 123
T-12 (6-BLU)	Underside of right front seat 127
T-13 (2-GRY)	Underside of right front seat 127
Ground	
B-26	Below rear of center console 79

Circuit Operation

The circuit breaker C/B-2 applies battery voltage at all times to the driver's and right front power seat switches.

Recline Operation

When the respective recliner switch is moved to FRONT, battery voltage is applied to the respective recliner motor. The motor is grounded through the rear contact of the recline switch and the recliner motor's limit switch to B-26. The motor will run until the recline switch is released or the seat reaches the full recline position and the motor's limit switch opens. The contacts for REAR operation of the recline switch are wired the opposite way of the FRONT contacts, causing the motor to run in the opposite direction.

Slide Operation

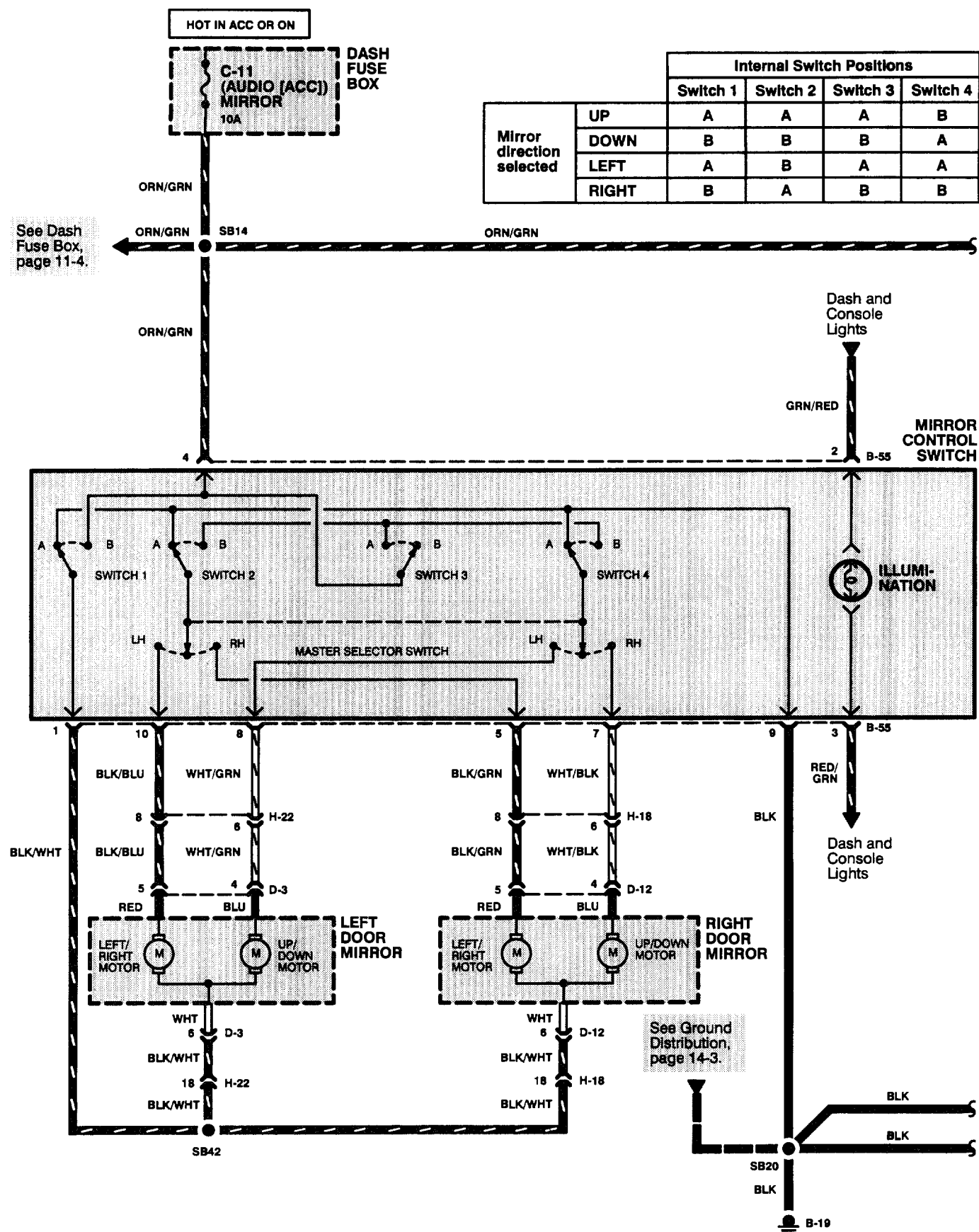
When the tilt & slide switch (driver's) or slide switch (right front) is moved to FRONT, battery voltage is applied to the respective slide motor. The motor is grounded through the REAR contact of the slide switch to B-26. The motor will run until the slide switch is released. The contacts for REAR operation of the slide switch are wired the opposite way of the FRONT contacts, causing the motor to run in the opposite direction.

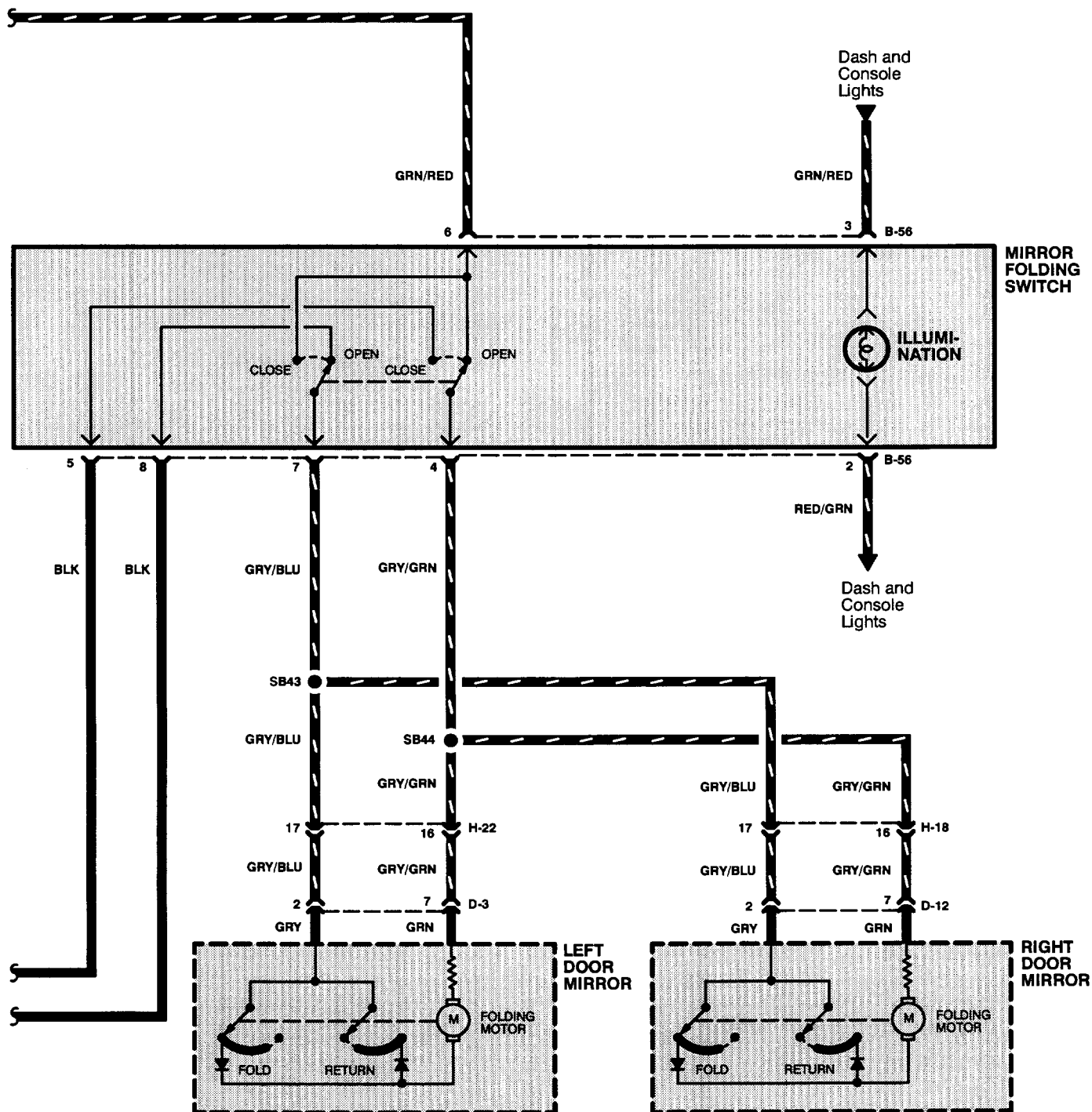
Tilt Operation

Both tilt operations (front and rear) are similar to the recline operation.

POWER MIRRORS

Circuit Schematic





POWER MIRRORS

Component Location Index

(Refer to section 201 for photographs.)

Component

Photo No.

Dash Fuse Box Behind left dash side trim panel 58

Connector

D-3 (8-WHT) In top of left front door 91

D-12 (8-WHT) In top of right front door 91

H-18 (18-WHT) Behind right dash side trim panel, in access hole 87

H-22 (18-WHT) Behind left dash side trim panel, in access hole 87

Ground

B-19 Behind top of left dash side trim panel 62

Circuit Operation

The two outside mirrors are controlled by the power mirror switch. Each mirror has two reversible motors: one motor moves the mirror up and down and the other motor moves the mirror left and right.

The door mirror switch has four switches to control mirror direction, and two switches to select the left or right mirror. The door selector switch directs voltage from the direction switches to either the left or the right mirror. Each direction switch is used for more than one function. With the ignition in ACC or ON, battery voltage is supplied to the mirror control switch.

Mirror Up Operation

With the mirror control switch in the up position, switch 4 is moved to the B position. Switches 3 and 4 apply battery voltage to the left or right power mirror up/down motor as determined by the master selector switch. The selected mirror motor is grounded through the master selector switch and switch 1 in the A position to B-19.

Mirror Down Operation

With the mirror control switch in the down position, switches 1, 2 and 3 are moved to the B position. Switch 1 applies battery voltage to the left or right power mirror up/down motor as determined by the master selector switch. The selected mirror motor is grounded through switch 4 in the A position to B-19.

Mirror Left Operation

With the mirror control switch in the left position, switch 2 is moved to the B position. Switches 2 and 3 apply battery voltage to the left or right power mirror left/right motor as determined by the master selector switch. The selected mirror motor is grounded through switch 1 in the A position to B-19.

Mirror Right Operation

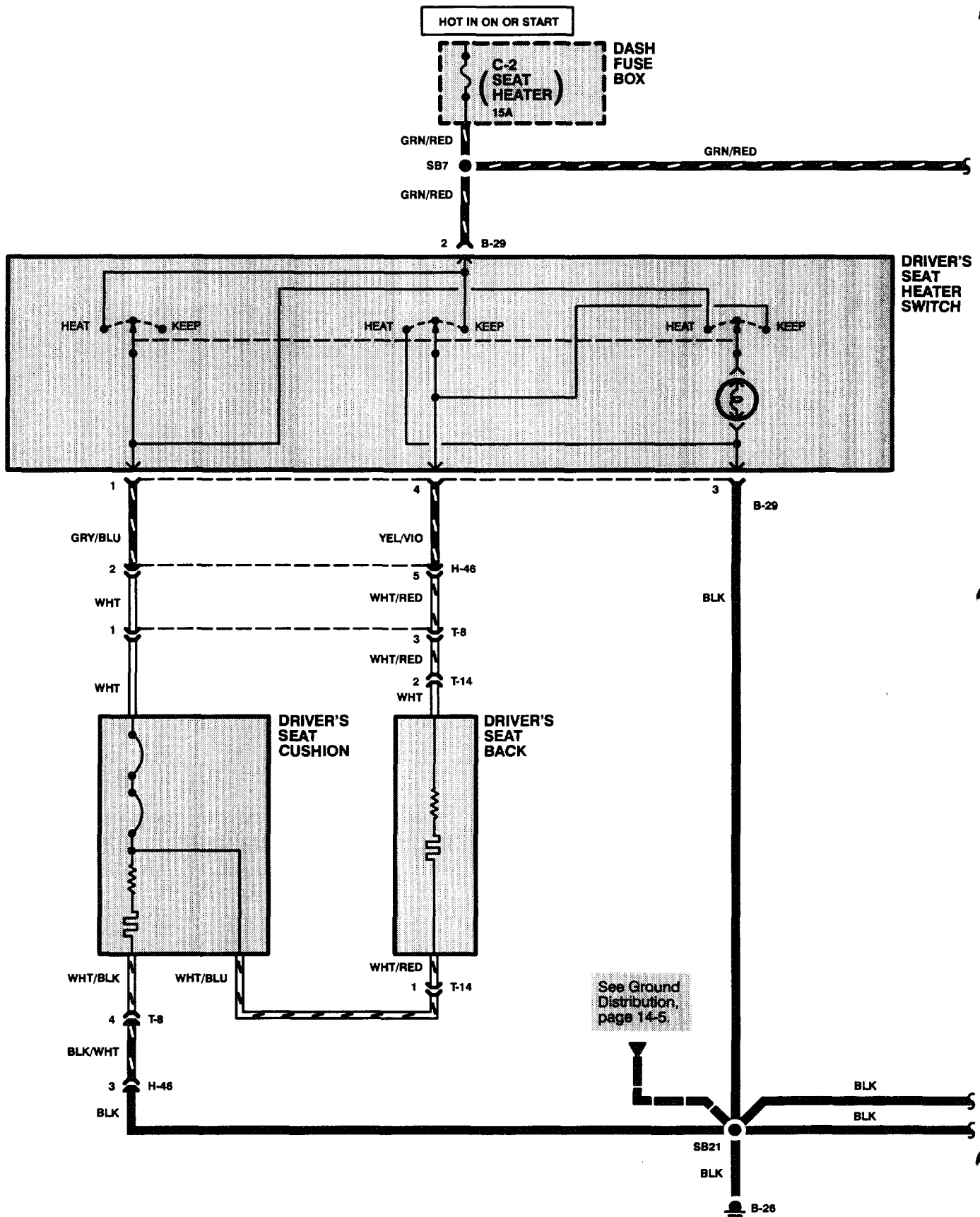
With the mirror control switch in the right position, switches 1, 3, and 4 are moved to the B position. Switch 1 applies battery voltage through the master selector switch to the left or right left/right motor. The motor is grounded through the master selector switch and switch 2 in the A position to B-19.

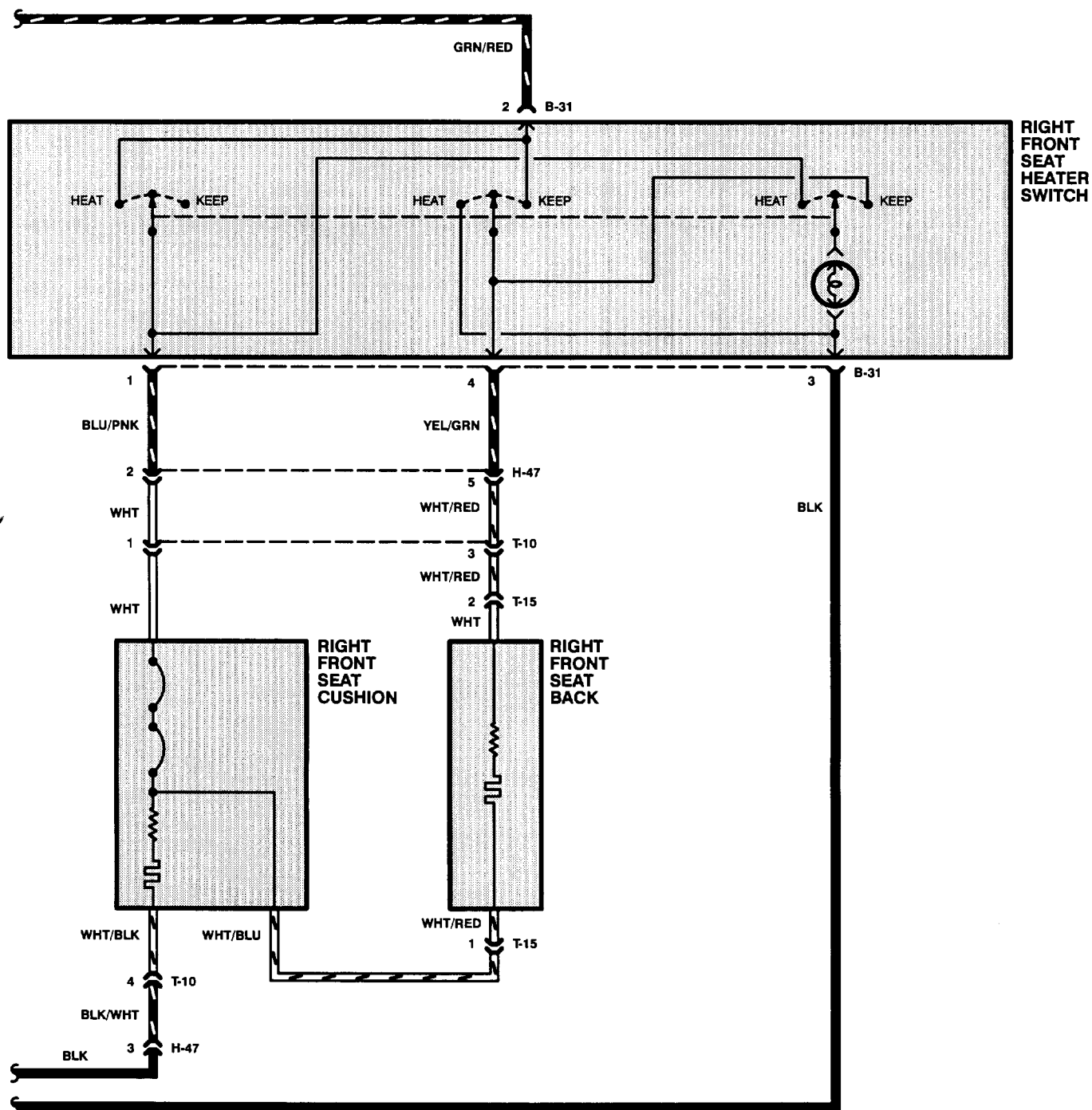
Fold and Return Movement

With the starter switch in ACC or ON, voltage is applied through fuse C-11 to the mirror folding switch. When the folding switch is pressed, voltage is applied through fold switches (in the door mirrors) to the folding motors. Ground is provided for the motors through the folding switch to B-19. The left and right door mirrors move towards the fold position. When the mirrors reach the fold position, the fold switches (in the door mirrors) open, removing voltage from the folding motors and they stop. When the folding switch is pressed again, voltage is applied through the folding switch to the opposite side of the folding motors. Ground is provided from B-19 through the folding switch and the return switches (in the door mirrors) to the folding motors. The left and right door mirrors move towards the return position. When the mirrors reach the return position, the return switches (in the door mirrors) open and remove ground from the motors and they stop.

SEAT HEATER

Circuit Schematic





SEAT HEATER

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
Dash Fuse Box Behind left dash side trim panel	58
Connector	
H-46 (6-WHT) Below left side of left front seat	120
H-47 (6-WHT) Below right side of right front seat	125
T-8 (4-WHT) Underside of driver's seat	122
T-10 (4-WHT) Underside of right front seat	126
T-14 (2-BLK) Underside of driver's seat	124
T-15 (2-BLK) Underside of right front seat	126
Ground	
B-26 Below rear of center console	79

Circuit Operation

When the starter switch is on ON or START, fuse C-2 applies battery voltage to the driver's and right front seat heater switches.

Heat Operation

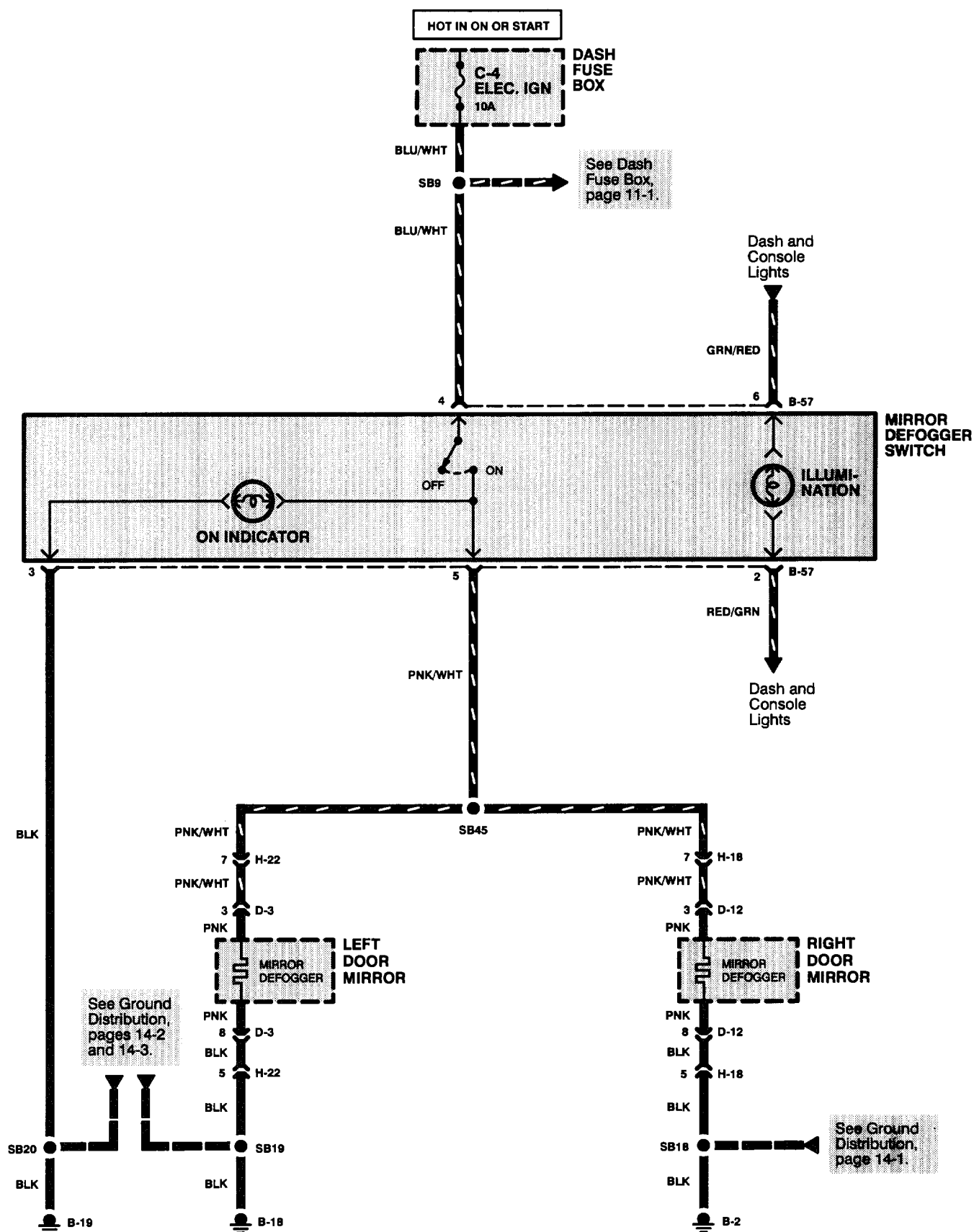
When the driver's or right front seat heater switch is moved to HEAT, battery voltage is applied through the circuit breakers in the respective seat cushion to both the seat cushion and seat back heating elements. The seat back is grounded through the seat heater switch to B-26 while the seat cushion is grounded directly to B-26. With battery voltage applied to the heating elements in this manner, they draw the maximum current causing them to heat up quickly and to a high temperature. When the temperature becomes too high the circuit breakers in the seat cushion open, removing the voltage to the circuit. When the temperature falls to a safe temperature, the circuit breakers close, supplying voltage to the circuit.

Keep Operation

When the driver's or right front seat heater switch is moved to KEEP, battery voltage is applied through the respective seat cushion heating element to the respective seat cushion heating element. The respective seat cushion is grounded directly to B-26. With battery voltage applied to the heating elements in this manner, they draw less current, and do not reach as high of a temperature as in the HEAT position.

DOOR MIRROR DEFOGGERS

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box Behind left dash side trim panel	58
<u>Connector</u>	
D-3 (8-WHT) In top of left front door	91
D-12 (8-WHT) In top of right front door	91
H-18 (18-WHT) Behind right dash side trim panel, in access hole	87
H-22 (18-WHT) Behind left dash side trim panel, in access hole	87
<u>Ground</u>	
B-2 Above right dash side trim panel	84
B-18 Behind top of left dash side trim panel	62
B-19 Behind top of left dash side trim panel	62

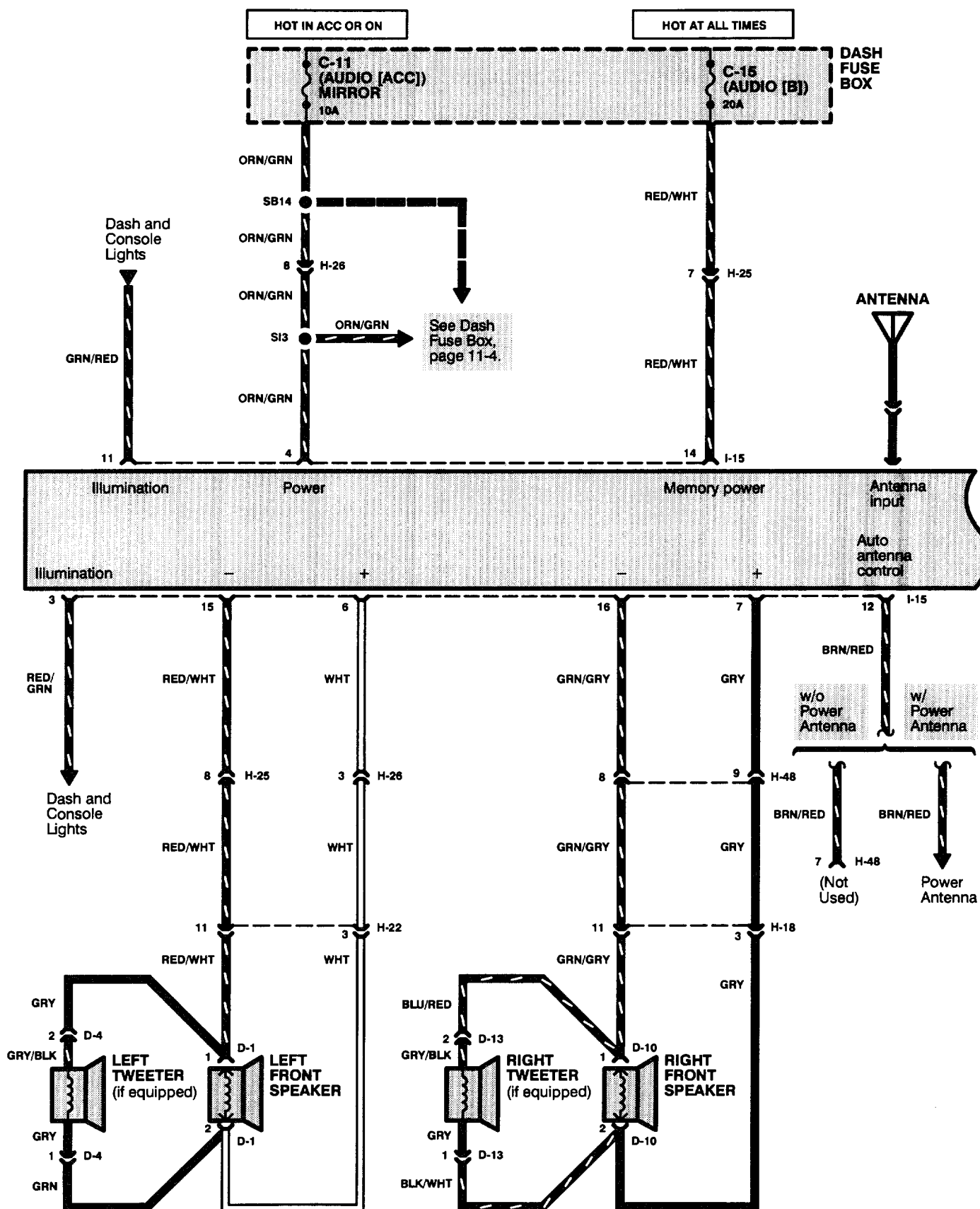
Circuit Operation

With the starter switch in ON or START, voltage is applied through fuse C-4 to the mirror defogger switch.

With the mirror defogger switch in ON, voltage is applied to the left and right door mirror defoggers and the defogger indicator light. The defogger on indicator lights up and the left and right door mirror defoggers heat the mirror surfaces to remove any fog.

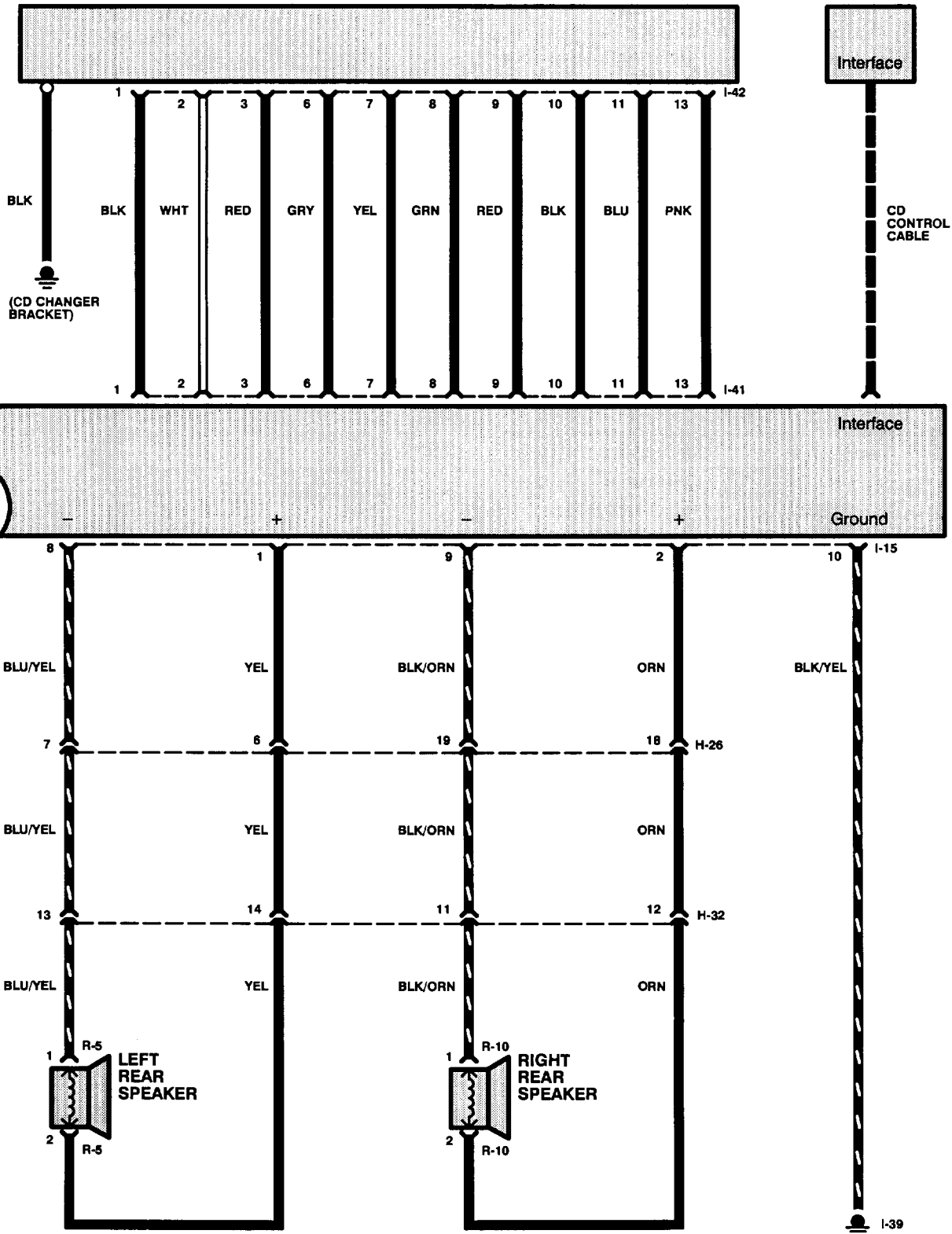
SOUND SYSTEM

Circuit Schematic



**CD CHANGER
(if equipped)**
Solid-state:
Do not check
resistance.

**CD PLAYER
(if equipped)**
Solid-state:
Do not check
resistance.



SOUND SYSTEM

Component Location Index

(Refer to Section 201 for photographs.)

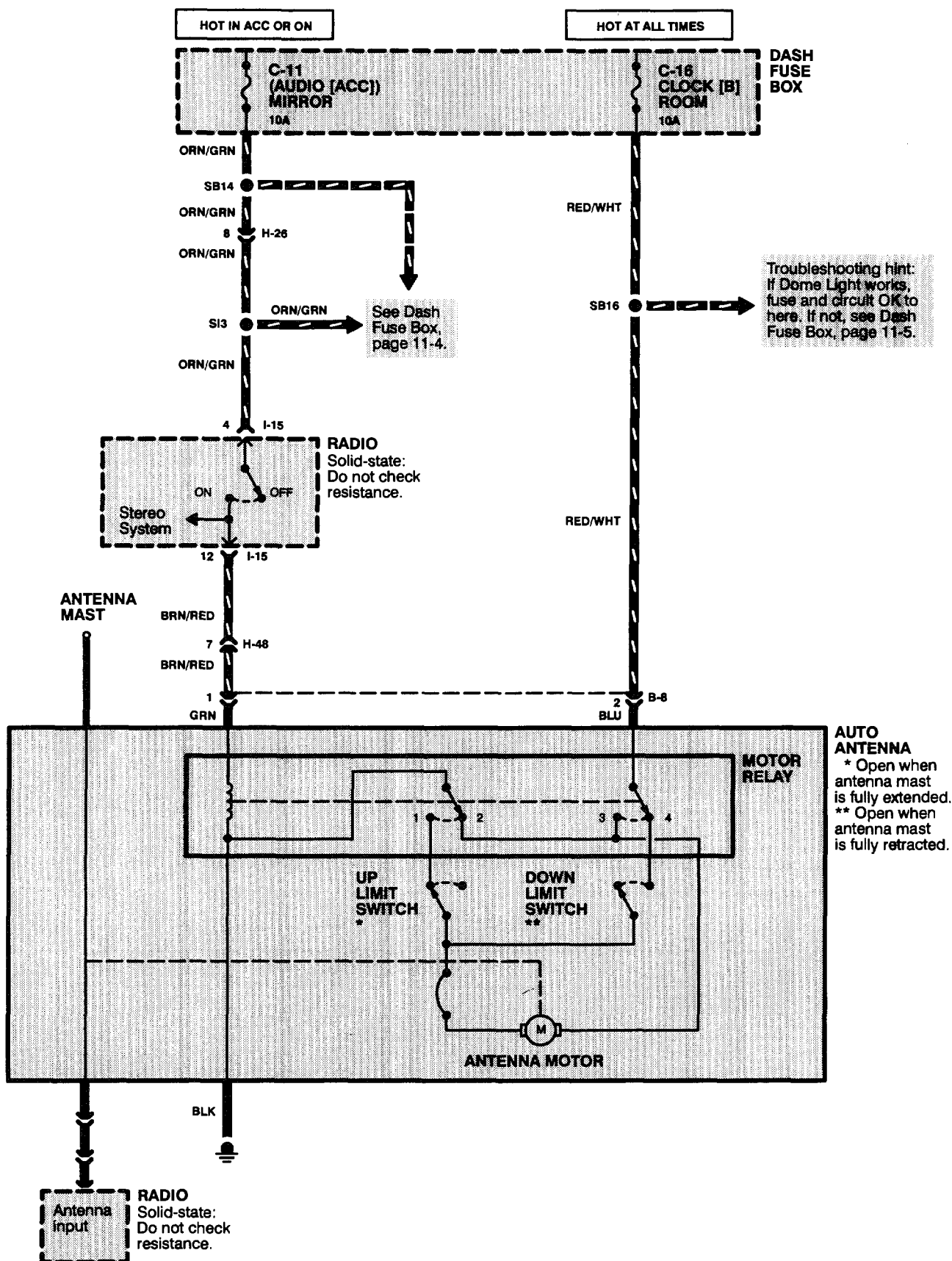
<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box Behind left dash side trim panel	58
<u>Connector</u>	
D-4 (2-BLK/WHT) Top front of left front door	89
D-13 (2-BLK/WHT) Top front of right front door	89
H-18 (18-WHT) Behind right dash side trim panel, in access hole	87
H-22 (18-WHT) Behind left dash side trim panel, in access hole	87
H-25 (22-BLU) Below I/P, above left dash side trim panel, on bracket	63
H-26 (20-WHT) Below I/P, above left dash side trim panel, on bracket	62
H-32 (16-BLK) (without power door locks) Below left front seat	120
H-32 (22-BLK) (with power door locks) Below left front seat	120
H-48 (16-BLK) Behind right dash side trim panel	86
<u>Ground</u>	
I-39 Behind right side of lower cluster assembly	74

Circuit Operation

With the starter switch in ACC or ON, battery voltage is applied to the radio from fuse C-11. When you turn the radio on, battery voltage is applied to the receiver circuits in the radio. Fuse C-15 is hot at all times and provides battery voltage to the radio for its memory circuits.

POWER ANTENNA

Circuit Schematic



Component Location Index

(Refer to section 201 for photographs.)

Component	Photo No.
Auto Antenna	Inside right front fender 6
Dash Fuse Box	Behind left dash side trim panel 58
Connector	
B-8 (2-WHT)	Below right side of I/P, behind cruise control unit 85
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
H-48 (16-BLK)	Behind right dash side trim panel 86

Circuit Operation

The auto antenna extends for proper station reception when the radio is turned on. The antenna retracts to prevent it from being damaged. The antenna will retract when the radio is turned off or if the starter switch is turned to LOCK, OFF, or START with the radio on.

Battery voltage is supplied at all times from fuse C-16 to the auto antenna. With the starter switch in ACC or ON, battery voltage is supplied from fuse C-11 to the radio.

Extend

With the starter switch in ACC or ON and the radio turned on, battery voltage is supplied through the BRN/RED wire to the motor relay coil. The motor relay is energized. The closed contact No. 3 supplies battery voltage from fuse C-16 to the antenna motor. The antenna motor is grounded through the closed contact No. 1 to case ground. The antenna mast starts to extend and the down limit switch closes.

When the antenna mast is fully extended, the up limit switch opens. Battery voltage is removed from the antenna motor and it stops.

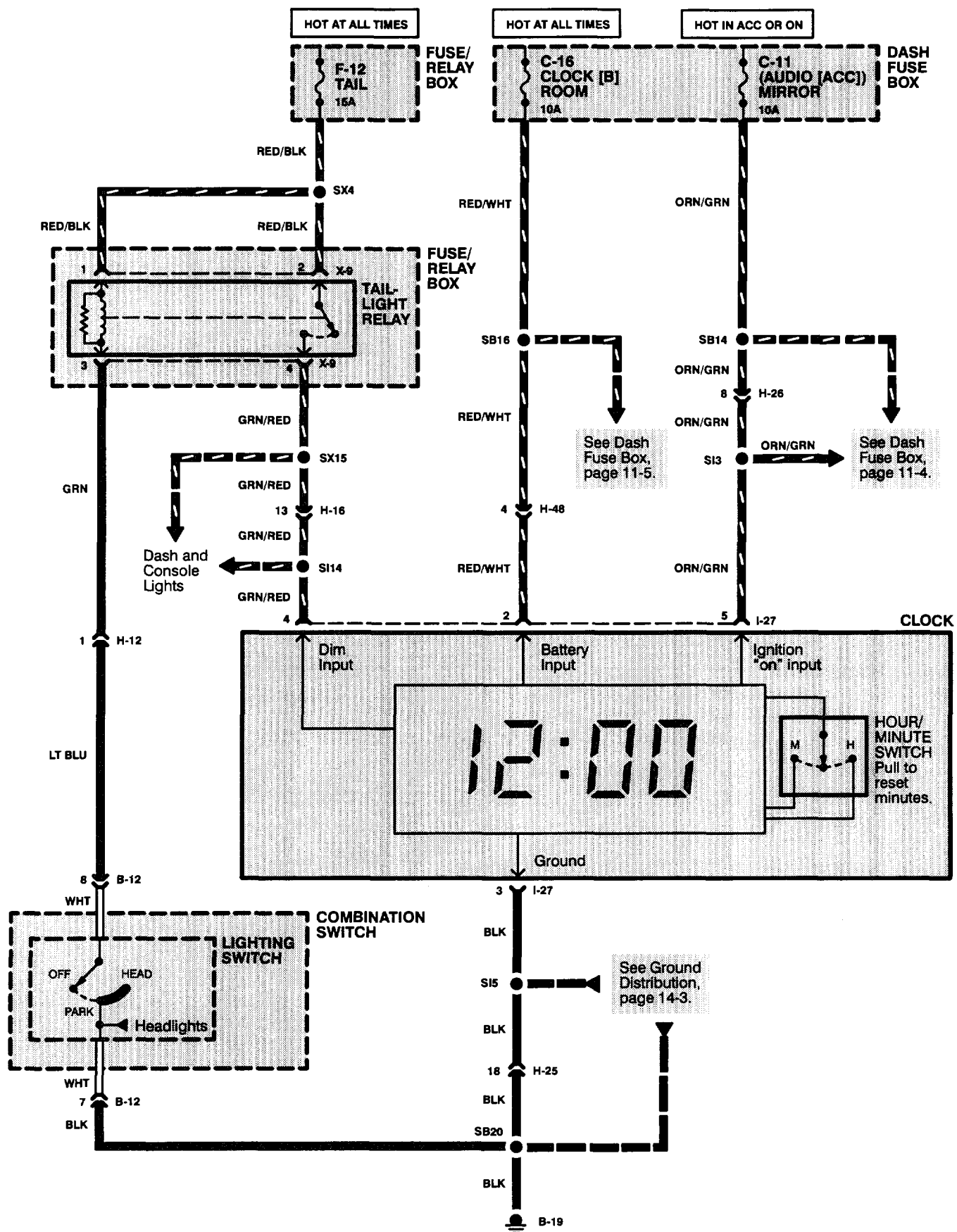
Retract

When the radio or starter switch is turned off, the motor relay deenergizes. Battery voltage is now supplied from fuse C-16 to the antenna motor in the opposite direction (battery voltage through the open contact No. 4 and ground through the open contact No. 2). The antenna mast starts to retract and the up limit switch closes.

When the antenna mast is fully retracted, the down limit switch opens, removing battery voltage from the antenna motor and it stops.

DIGITAL CLOCK

Circuit Schematic



Component Location Index

(Refer to Section 201 for photographs.)

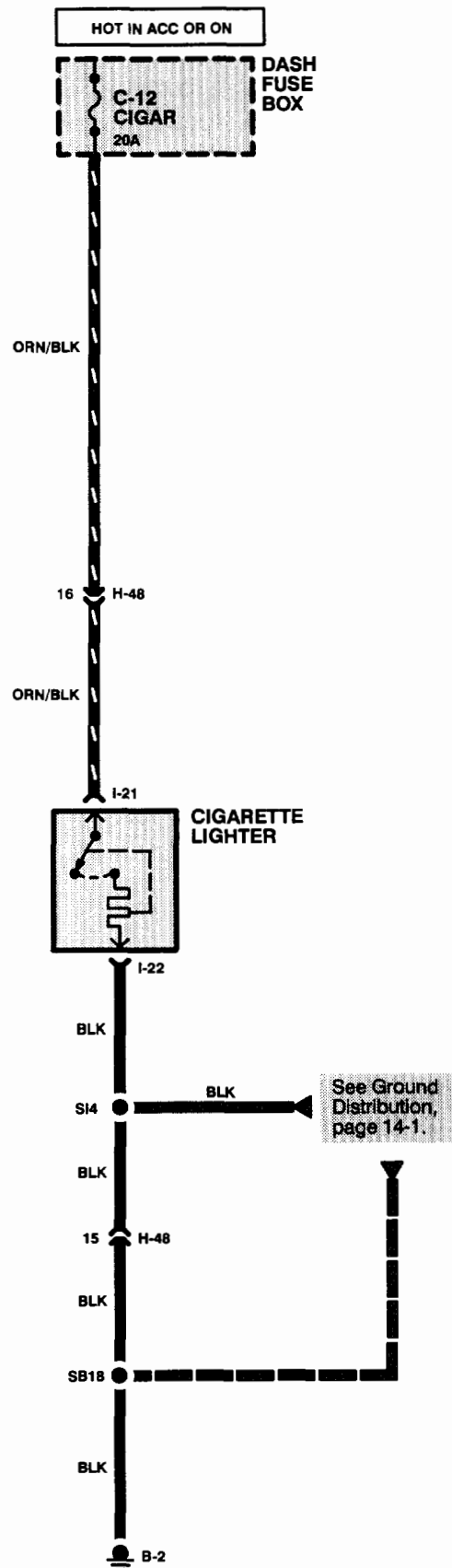
<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box	Behind left dash side trim panel 58
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Taillight Relay	In fuse/relay box 36
<u>Connector</u>	
B-12 (16-BLK/WHT)	Below I/P, right of steering column 69
H-12 (20-BRN)	Below I/P, above right dash side trim panel, on bracket 82
H-16 (22-WHT)	Below right dash side trim panel 86
H-25 (22-BLU)	Below I/P, above left dash side trim panel, on bracket 63
H-26 (20-WHT)	Below I/P, above left dash side trim panel, on bracket 62
H-48 (16-BLK)	Behind right dash side trim panel 86
<u>Ground</u>	
B-19	Behind top of left dash side trim panel 62

Circuit Operation

With the ignition switch in ACC or ON, battery voltage is applied to the clock from fuse C-11 and the time display appears. Battery voltage is supplied through fuse C-16 at all times to keep the clock running. When the light switch is switched to PARK or HEAD, a dimming signal is sent to the clock and the clock display dims.

CIGARETTE LIGHTER

Circuit Schematic



Component Location Index

(Refer to section 201 for photographs.)

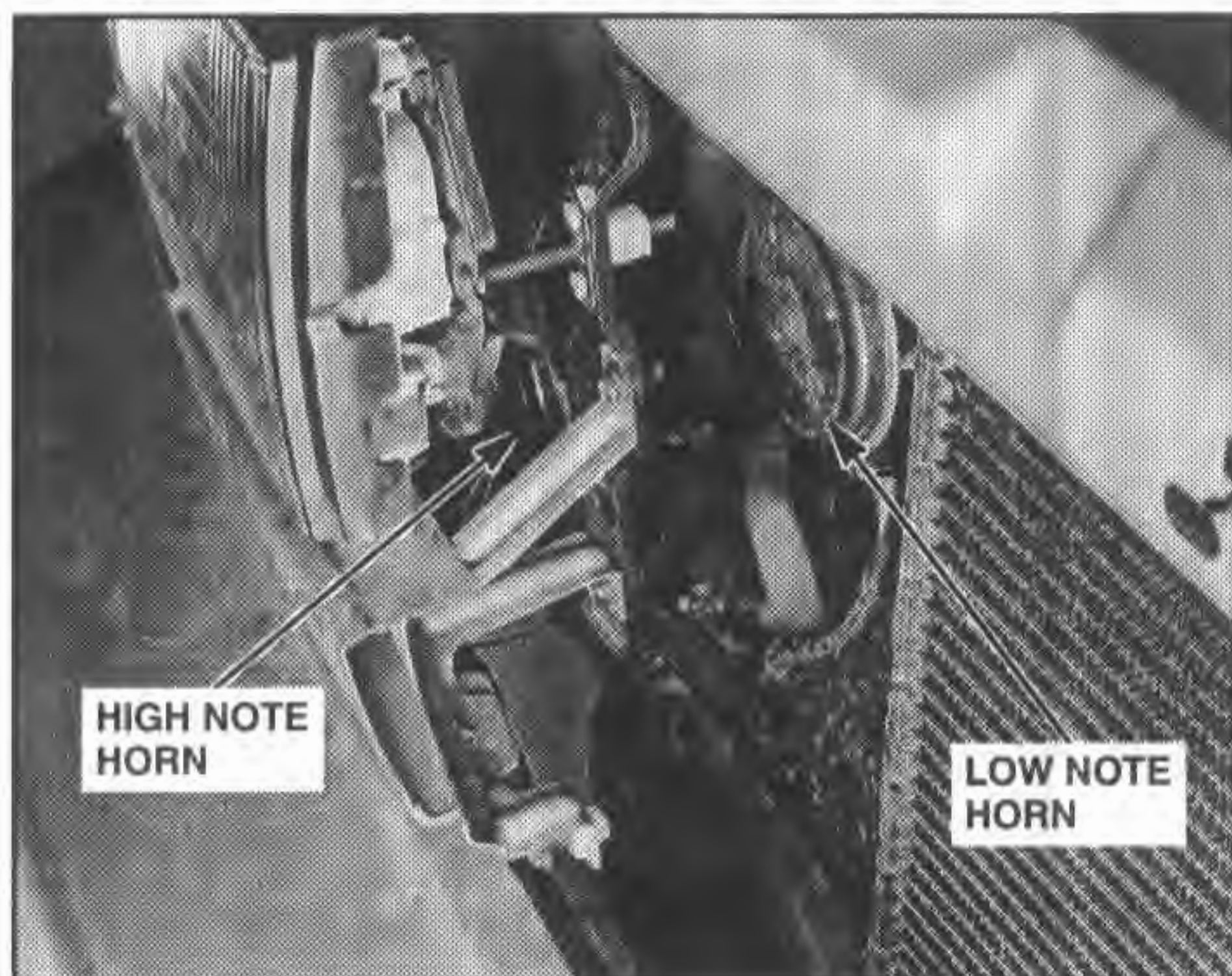
<u>Component</u>	<u>Photo No.</u>
Dash Fuse Box Behind left dash side trim panel	58
<u>Connector</u>	
H-48 (16-BLK) Behind right dash side trim panel	86
<u>Ground</u>	
B-2 At right kick panel	84

Circuit Operation

With the starter switch in ACC or ON, battery voltage is applied to fuse C-12 and to the cigarette lighter. When the cigarette lighter is depressed, the cigarette lighter element completes the circuit to ground. When the element becomes sufficiently heated, it is spring-released and the circuit opens.

COMPONENT LOCATION PHOTOGRAPHS

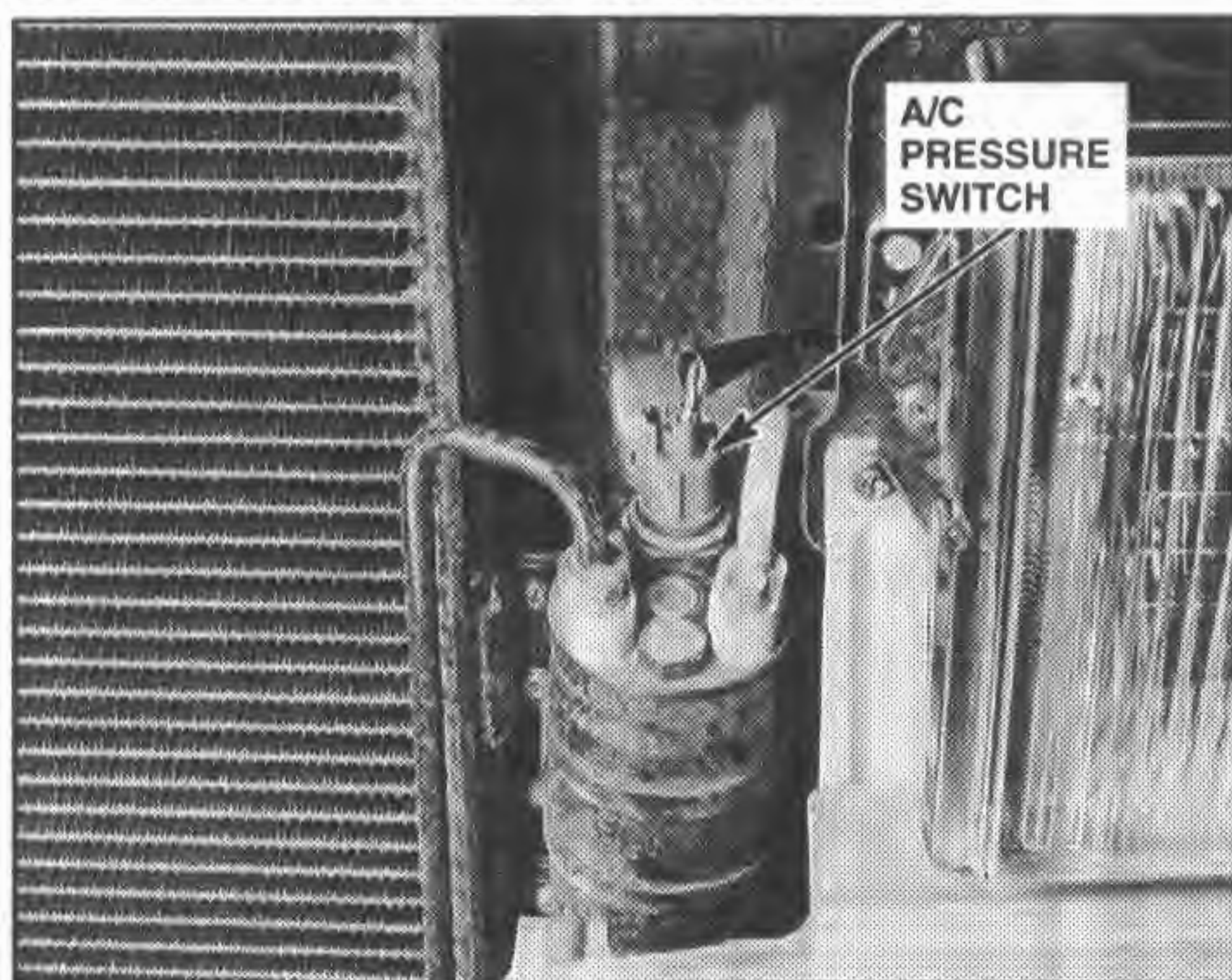
1. Right Front Vehicle (Grille Removed)



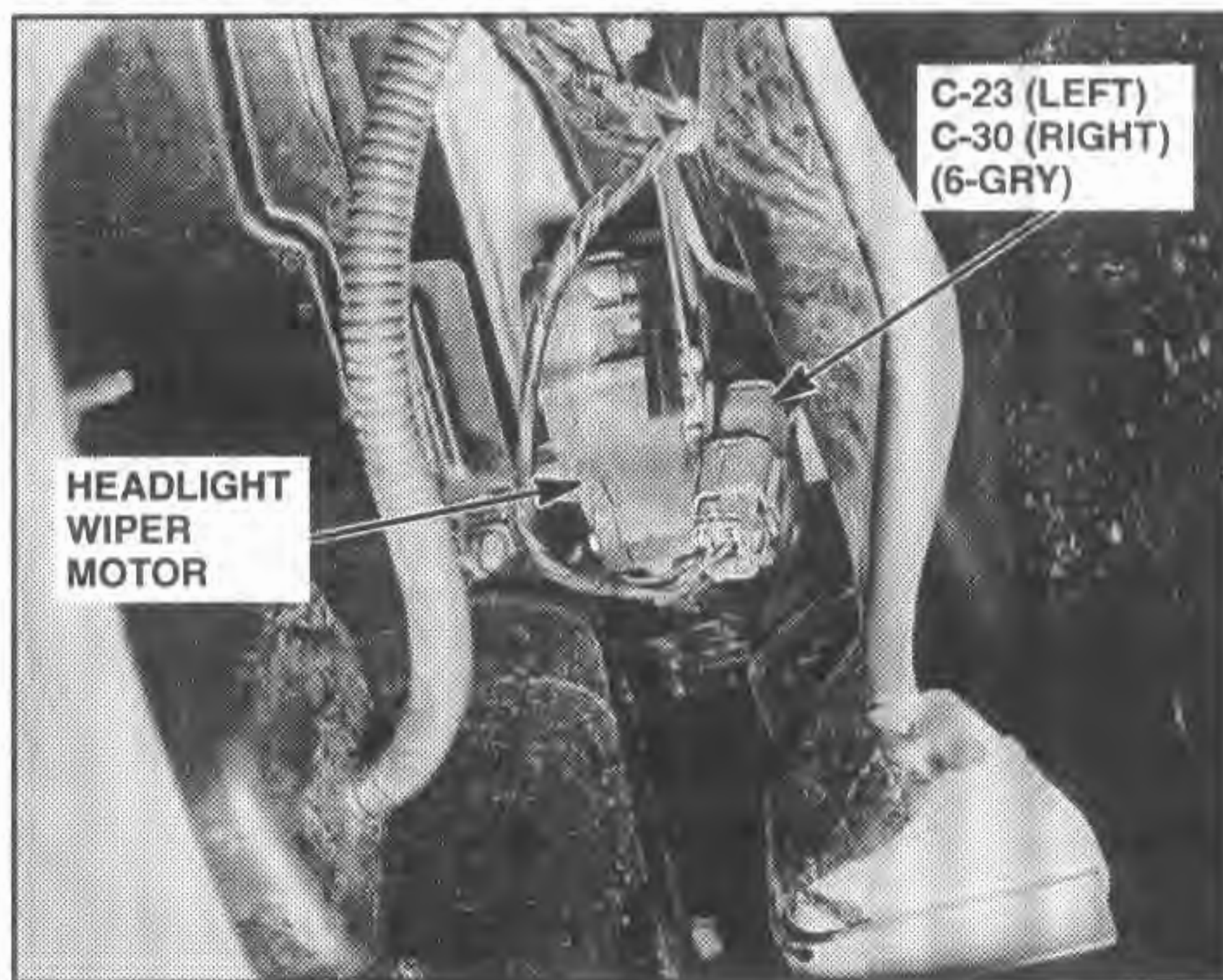
4. Behind Left Side of Front Bumper



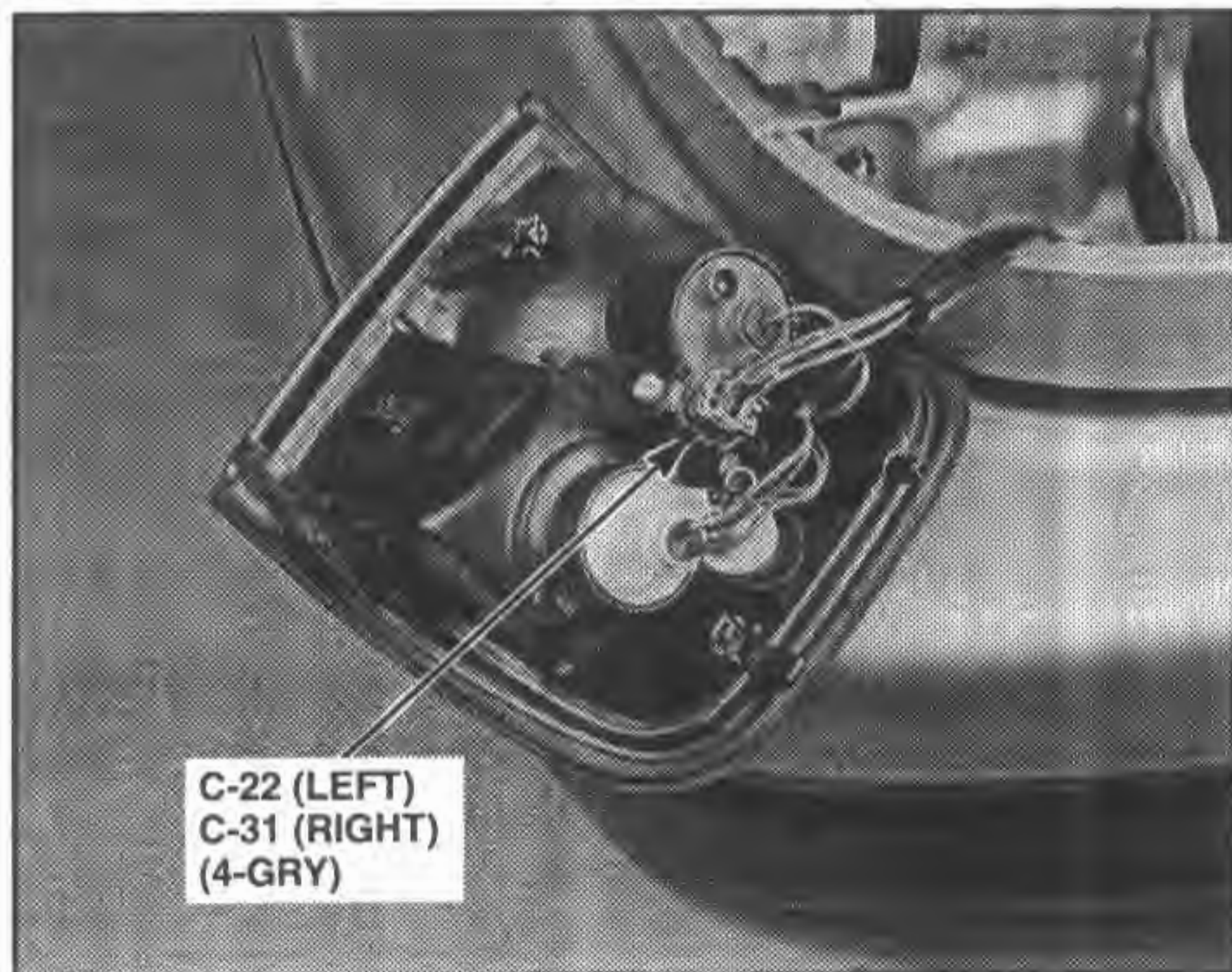
2. Front of Vehicle (Grille Removed)



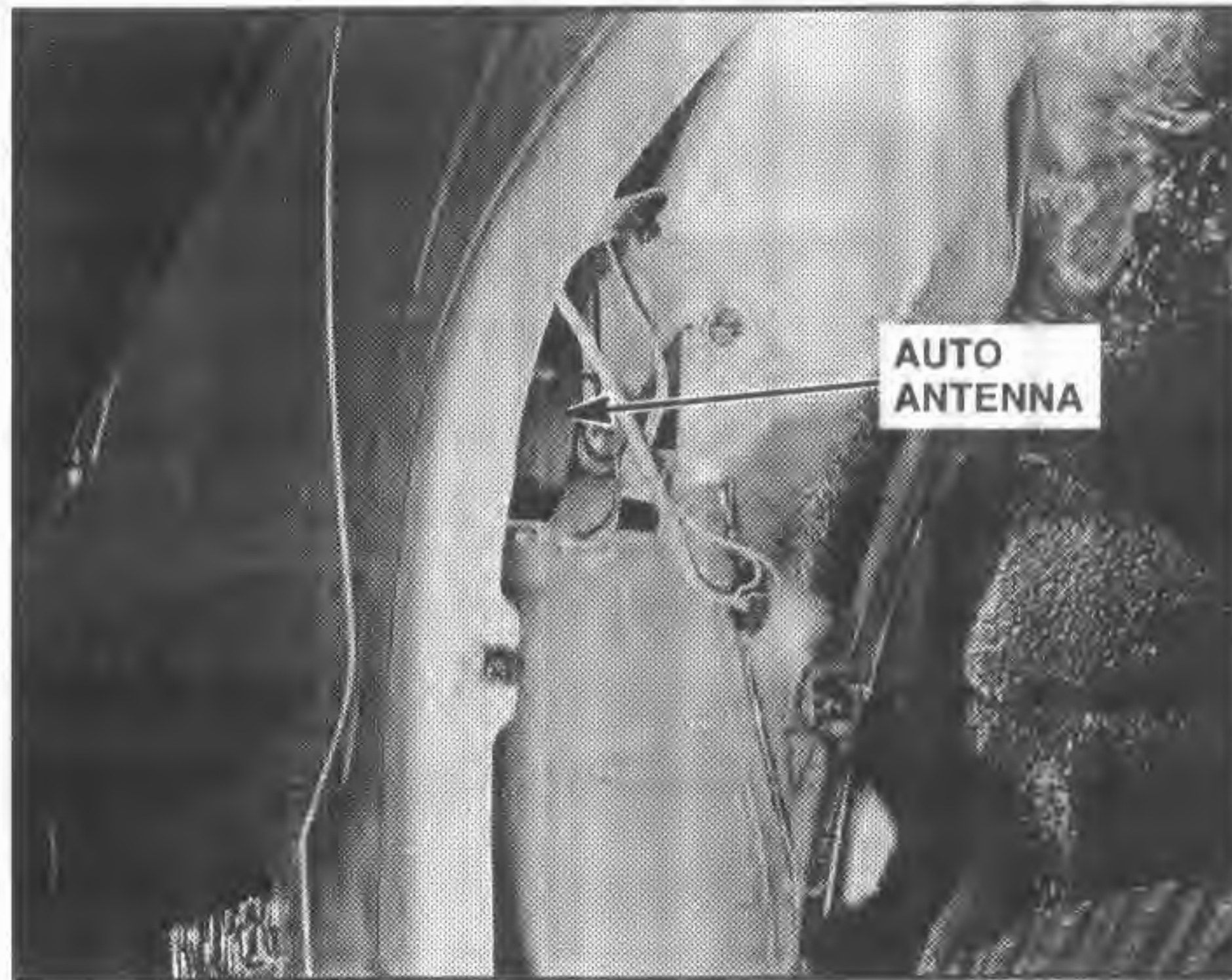
5. Behind Left Headlight (Right Similar)



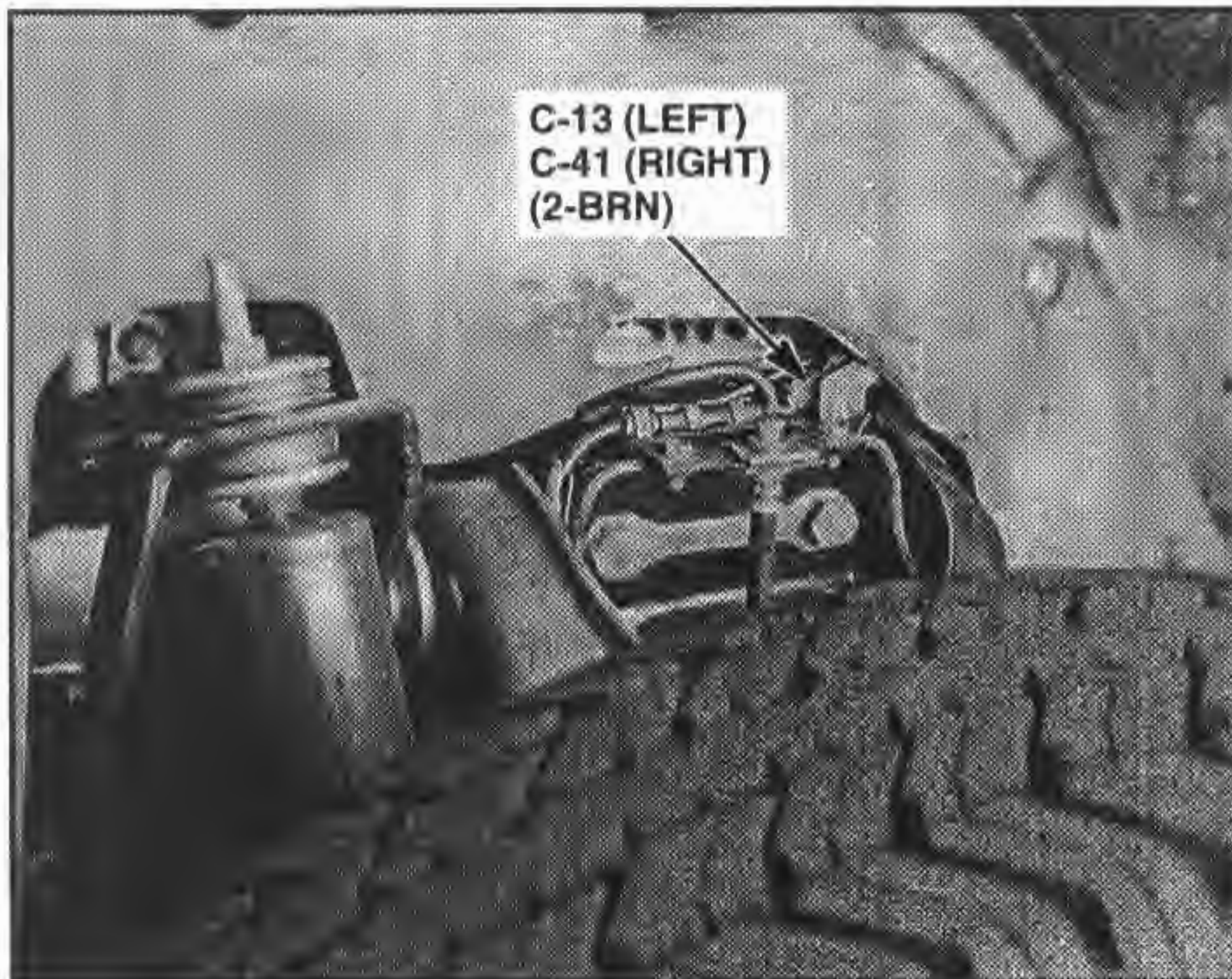
3. Left Front of Vehicle (Right Similar)



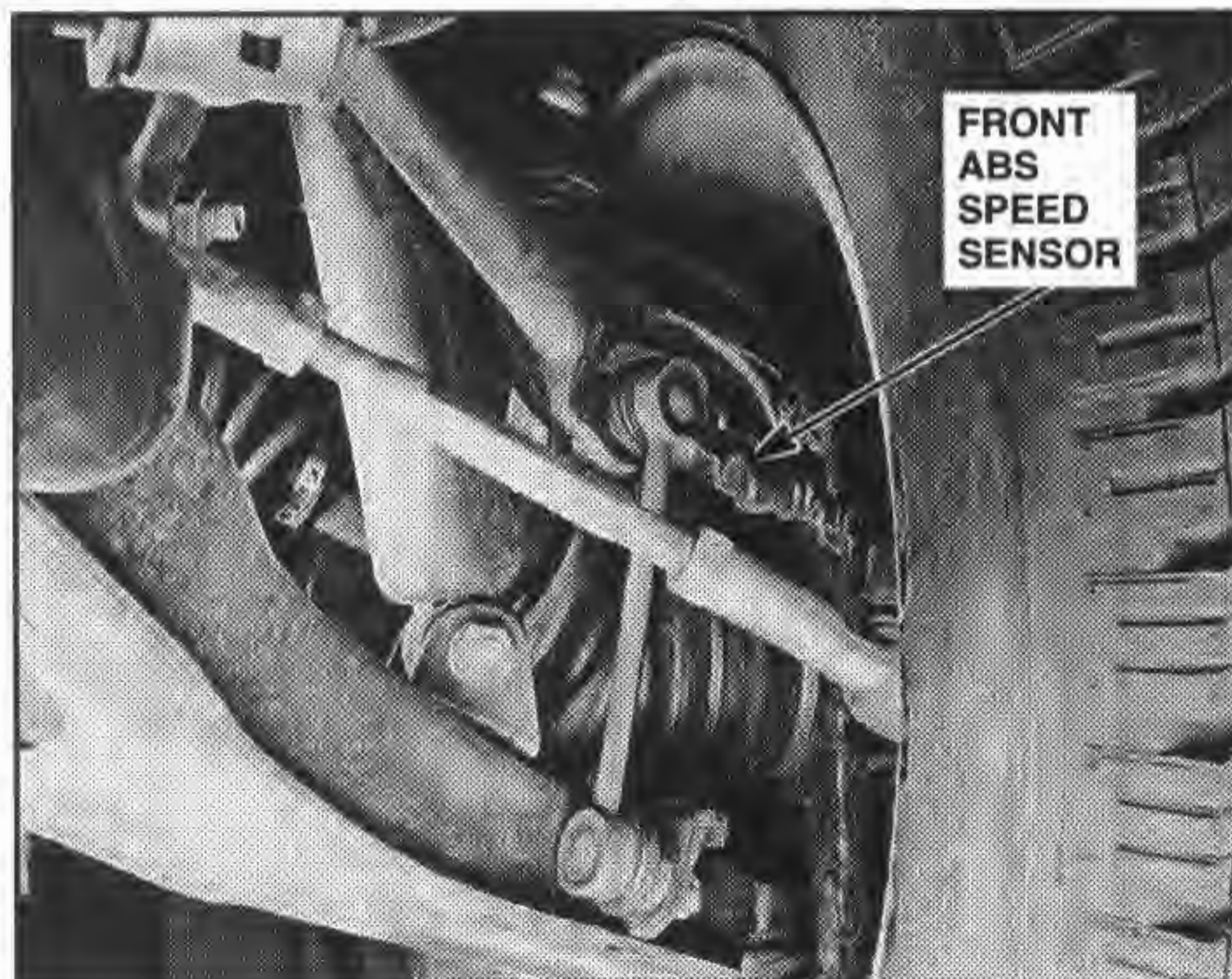
6. Above Right Front Wheel (Panel Removed)



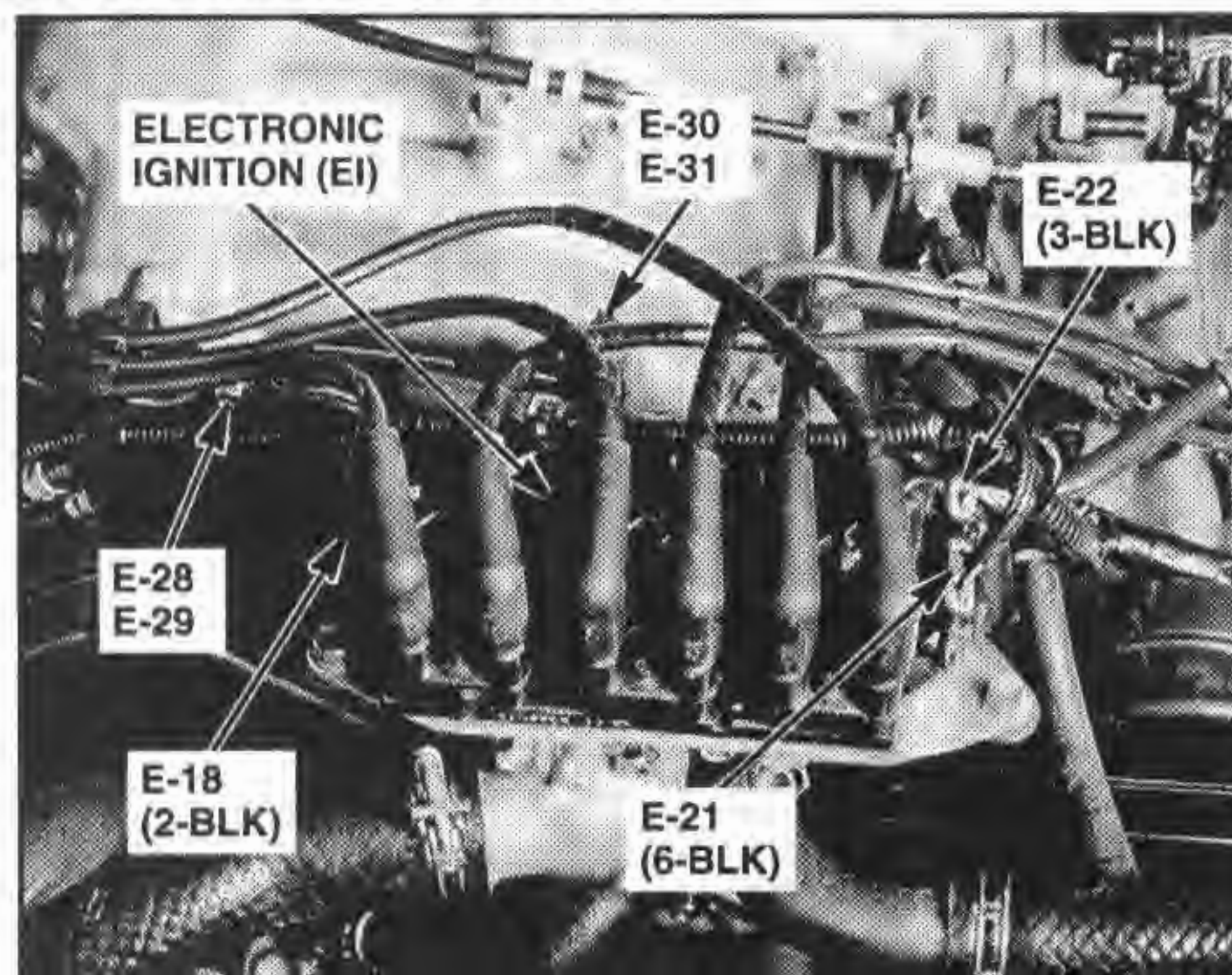
7. Inside of Left Front Fender (Right Similar)



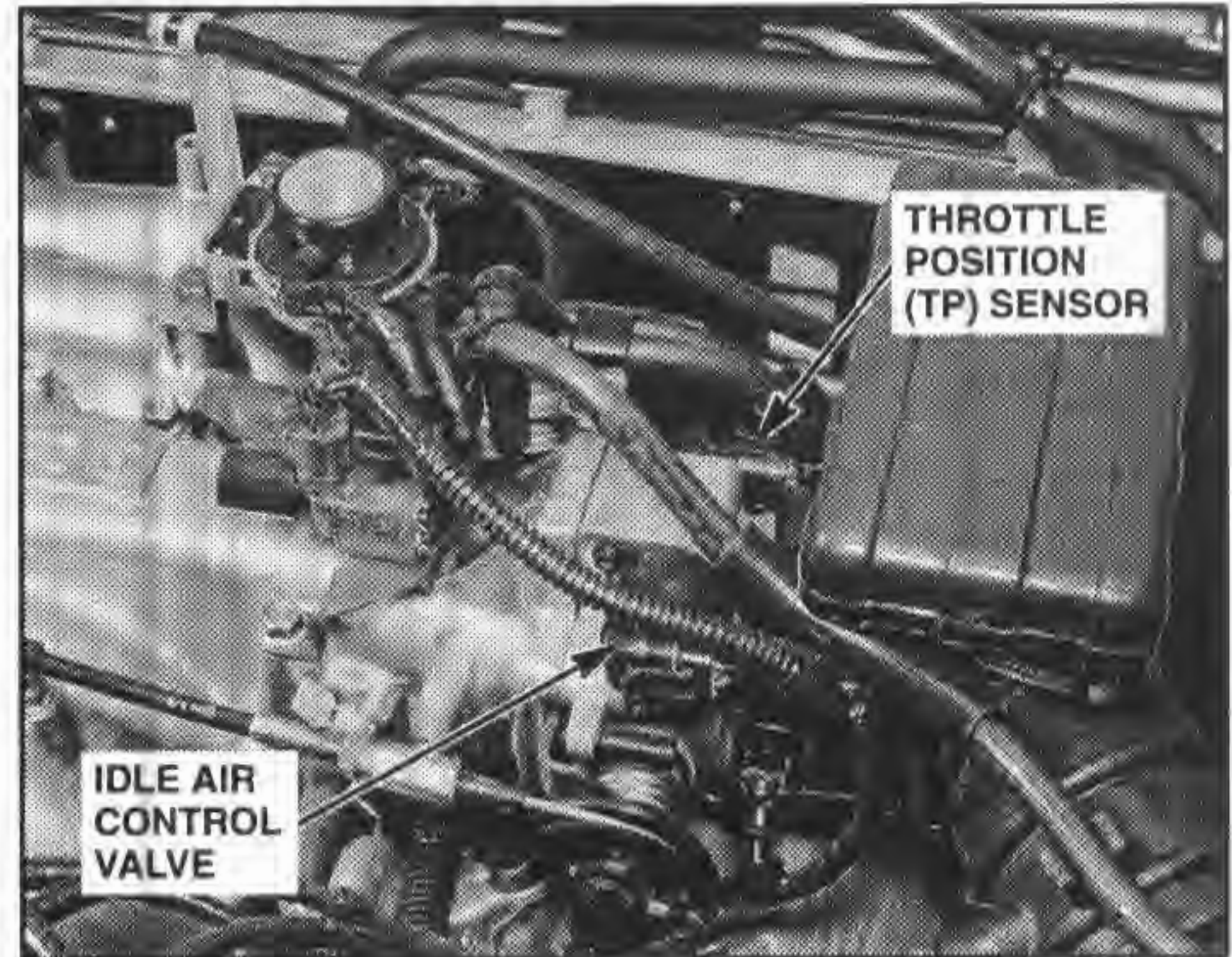
8. Inside of Left Front Wheel (Right Similar)



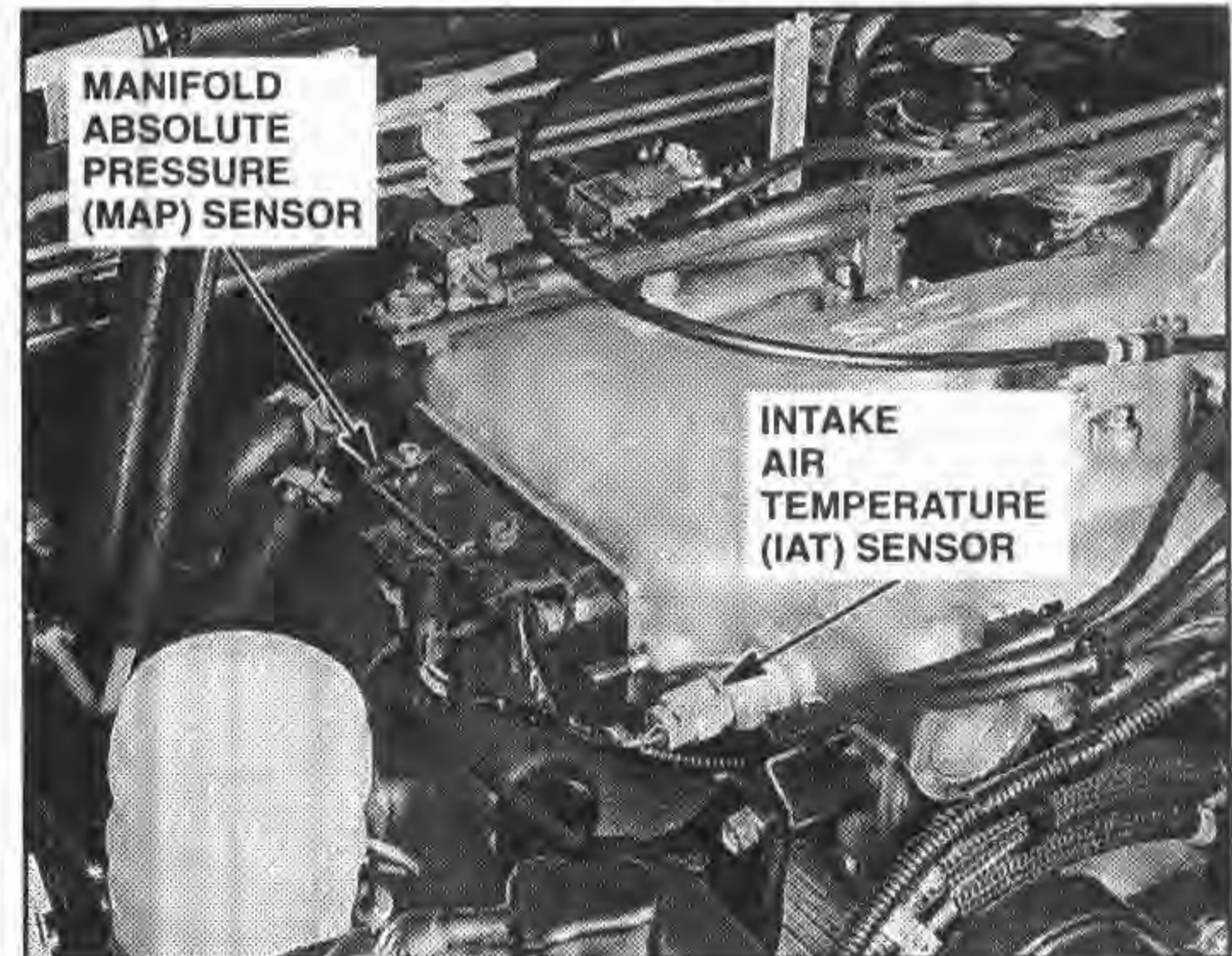
9. Top Front of SOHC Engine



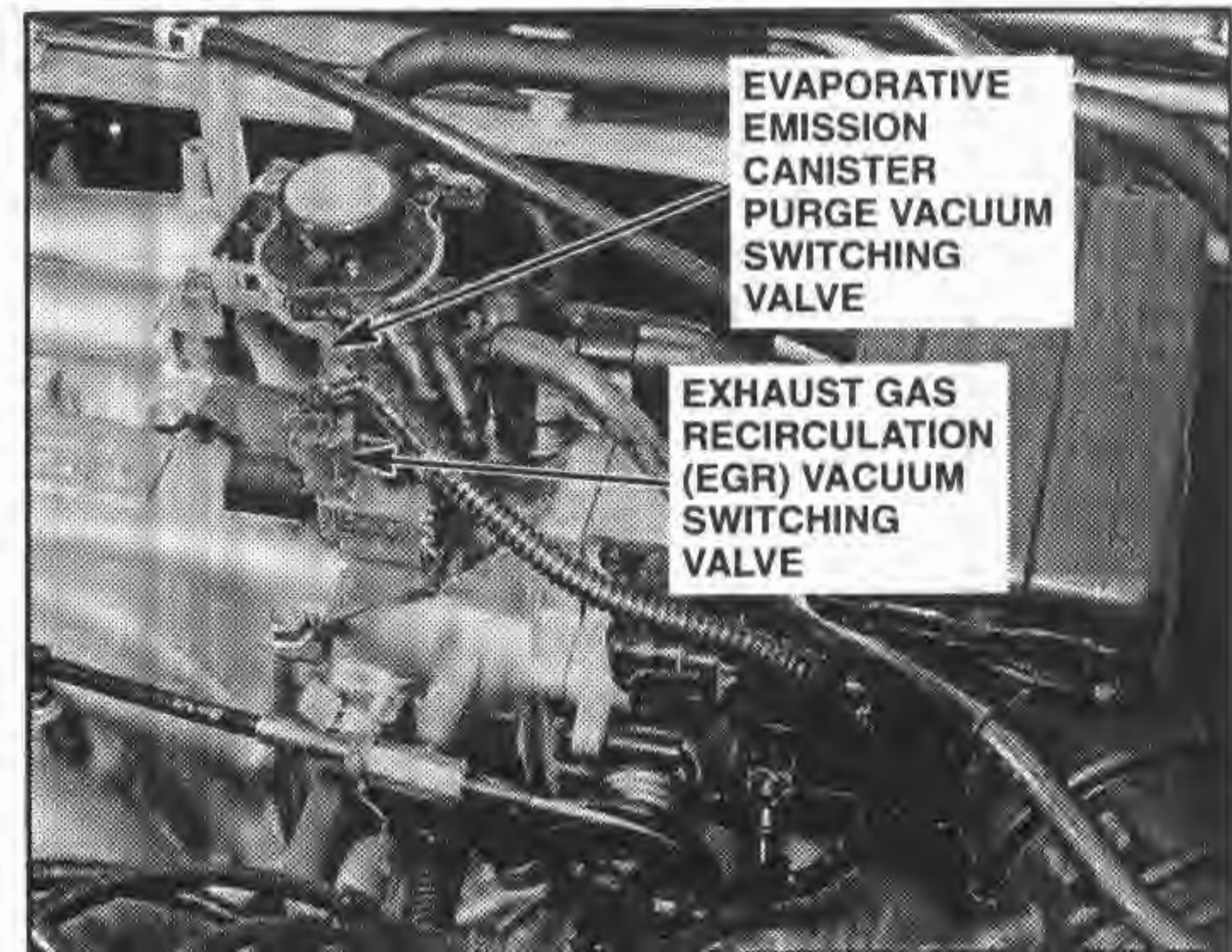
10. Top Left Rear of SOHC Engine



11. Top Right Side of SOHC Engine

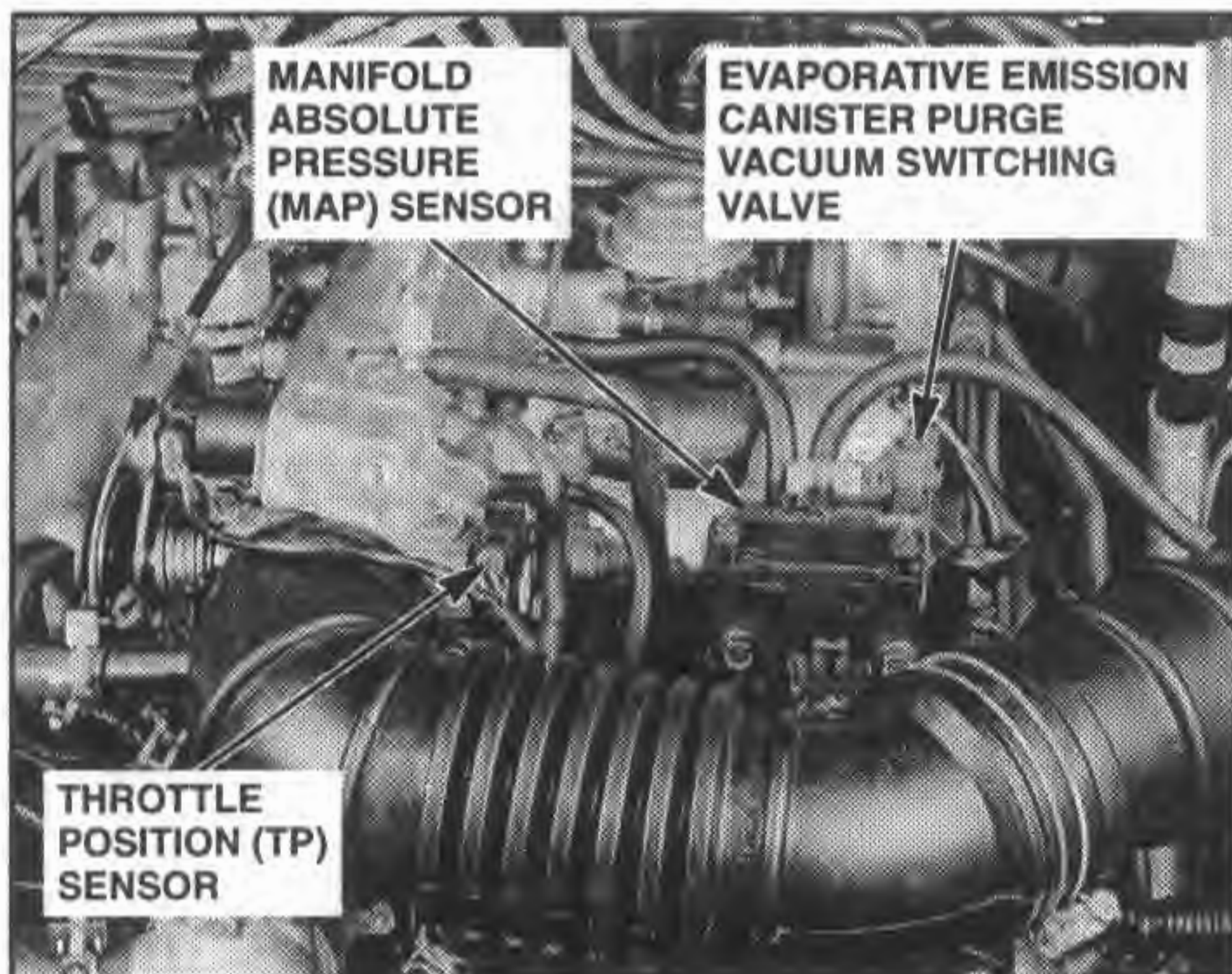


12. Top Left Rear of SOHC Engine

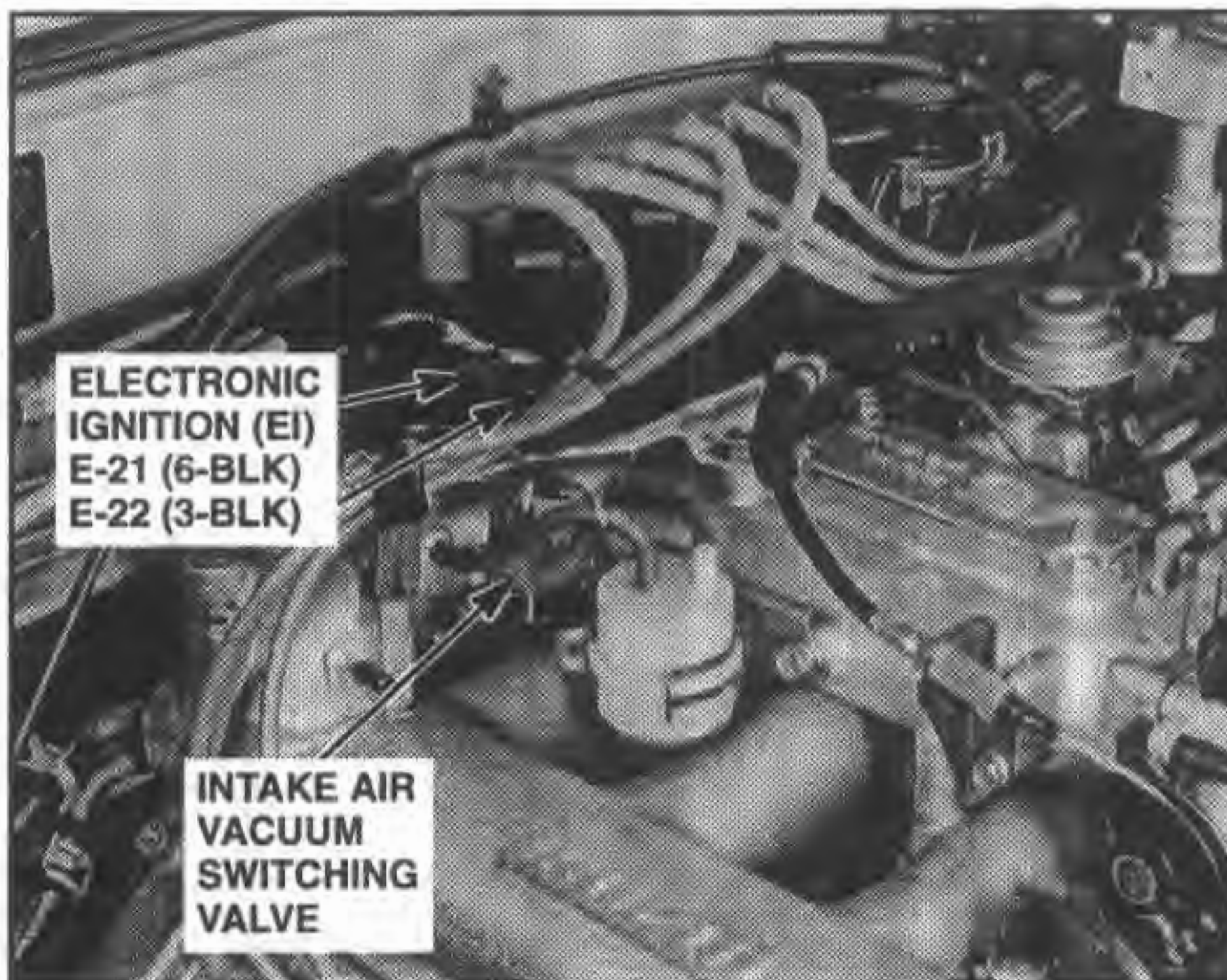


COMPONENT LOCATION PHOTOGRAPHS

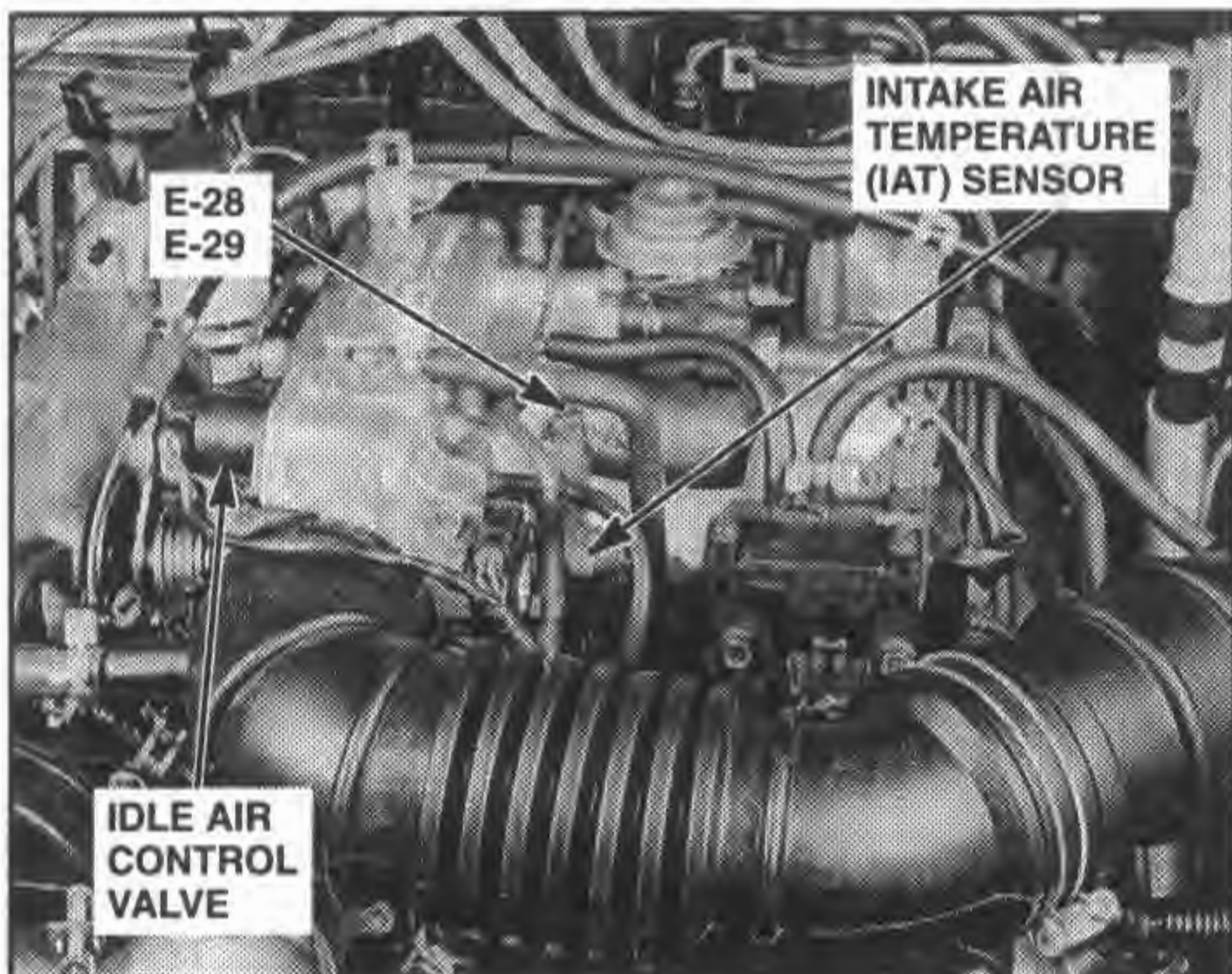
13. Top Front of DOHC Engine



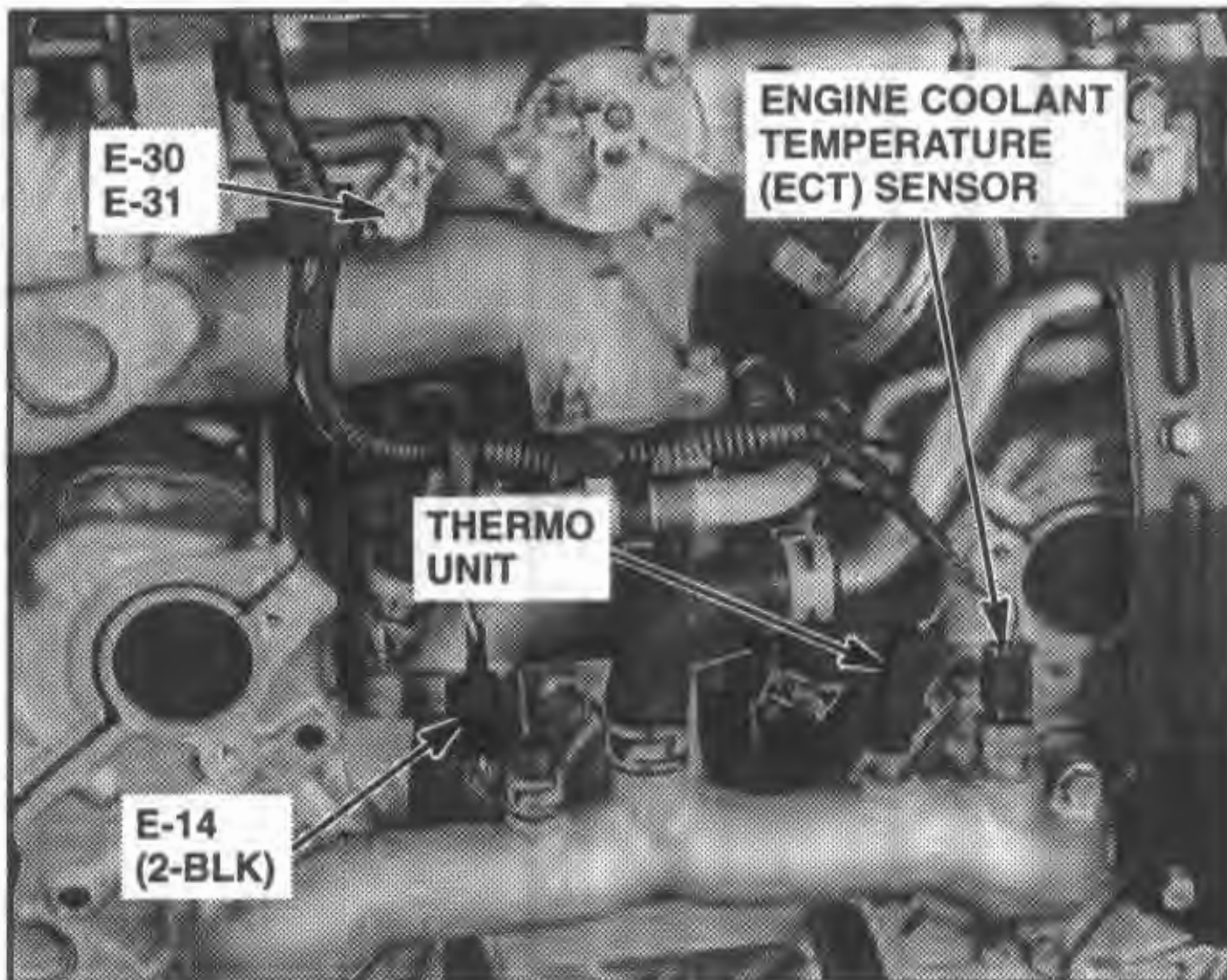
16. Top Right Rear of DOHC Engine



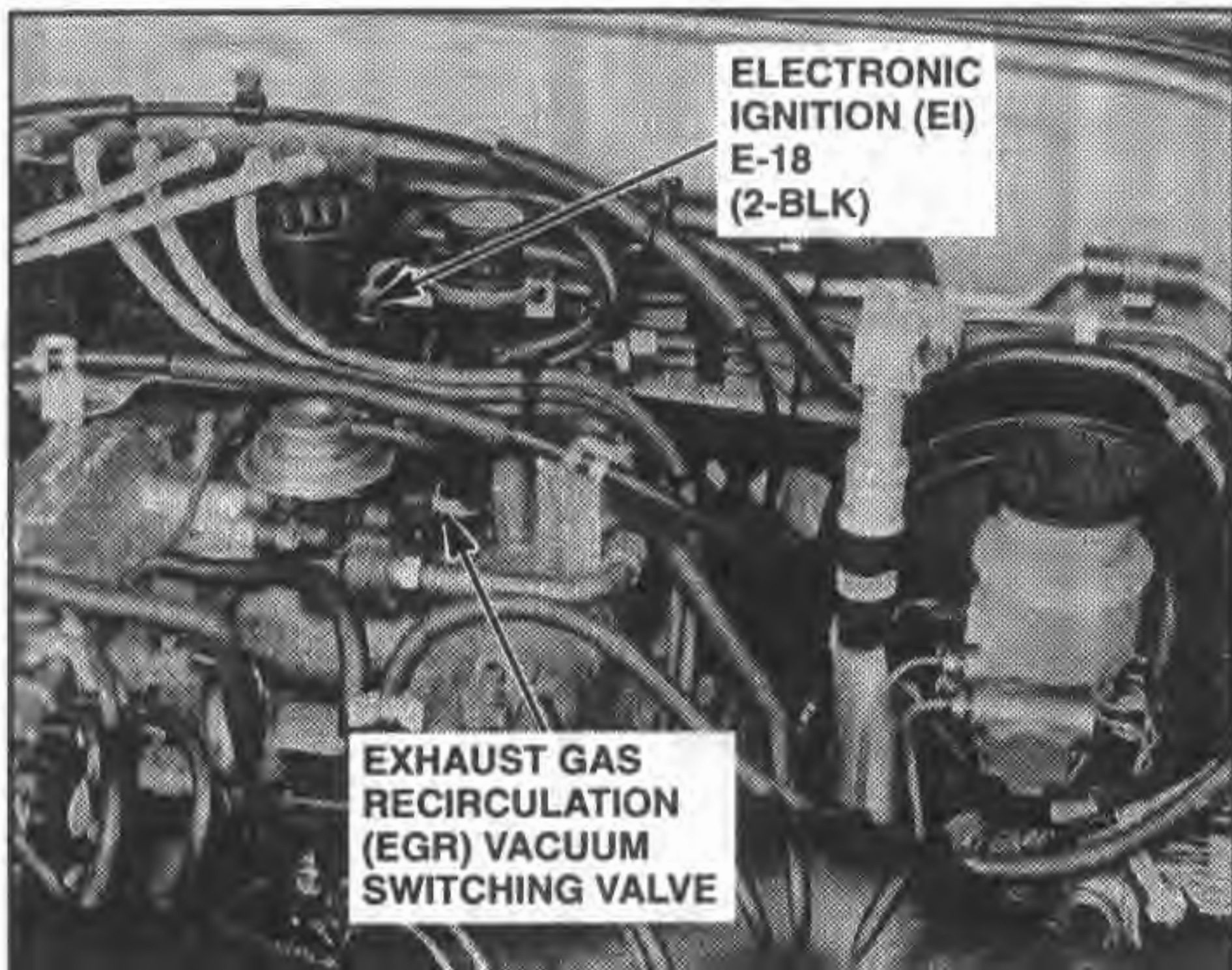
14. Top Front of DOHC Engine



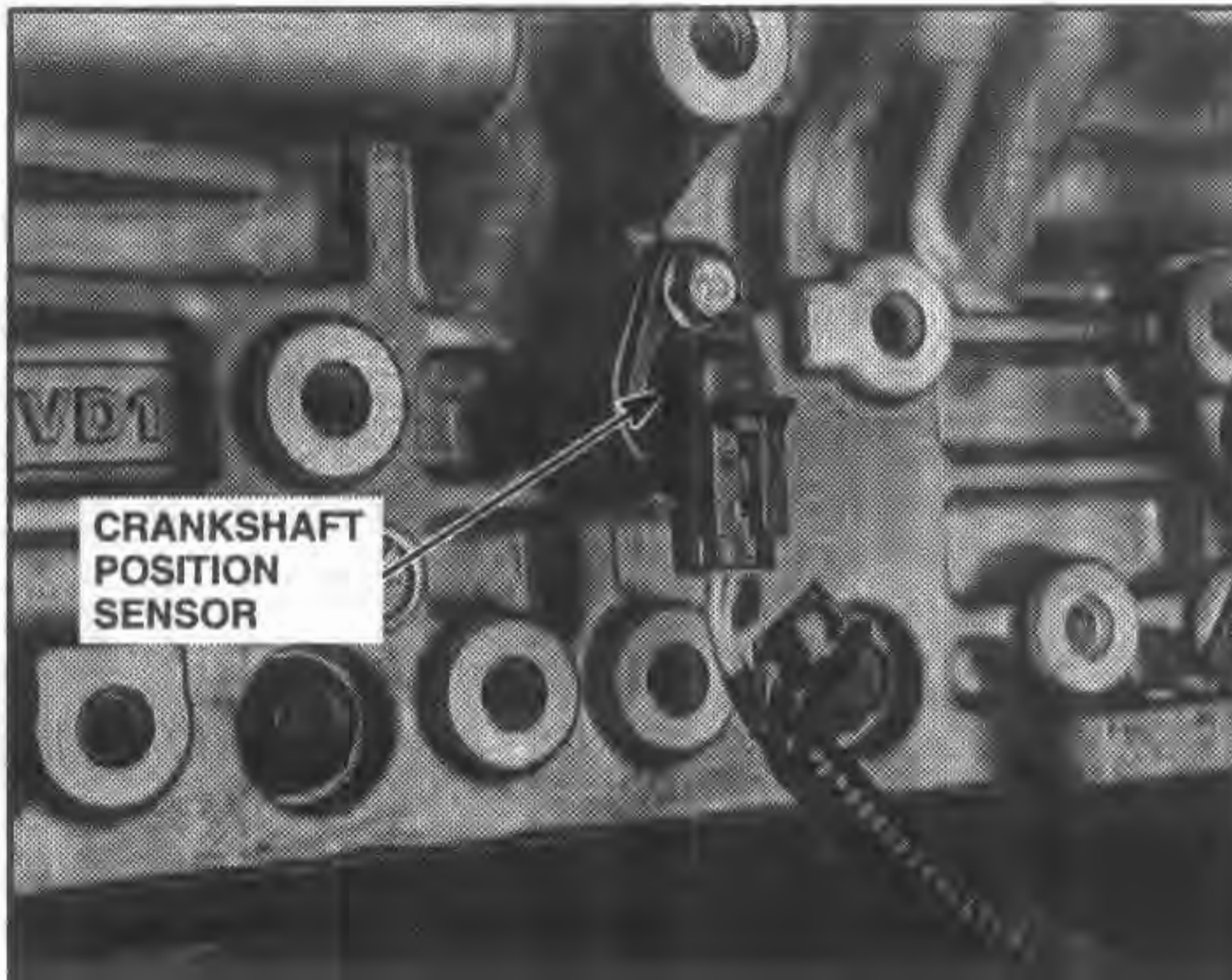
17. Rear of DOHC Engine (SOHC Similar)



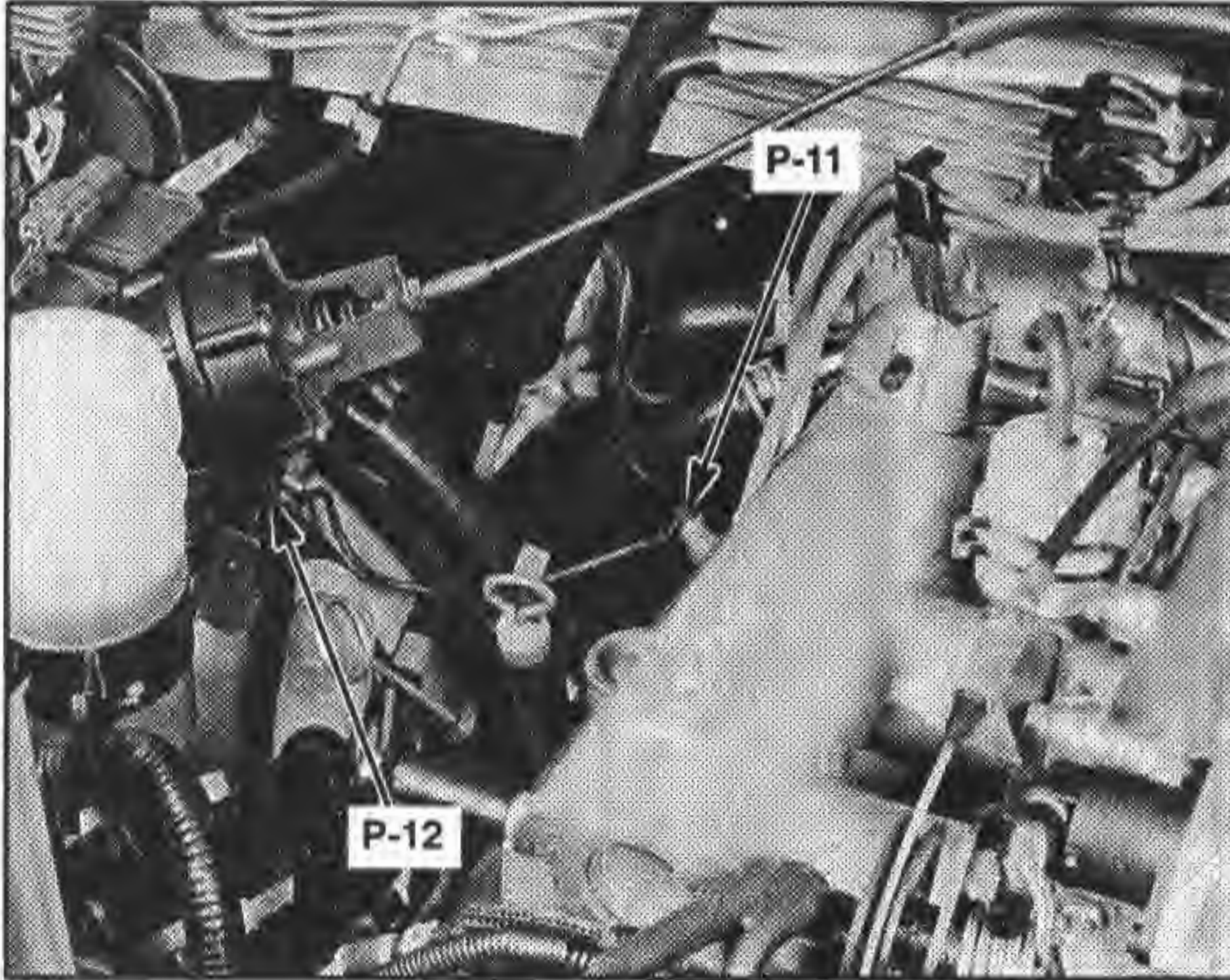
15. Top Left Rear of DOHC Engine



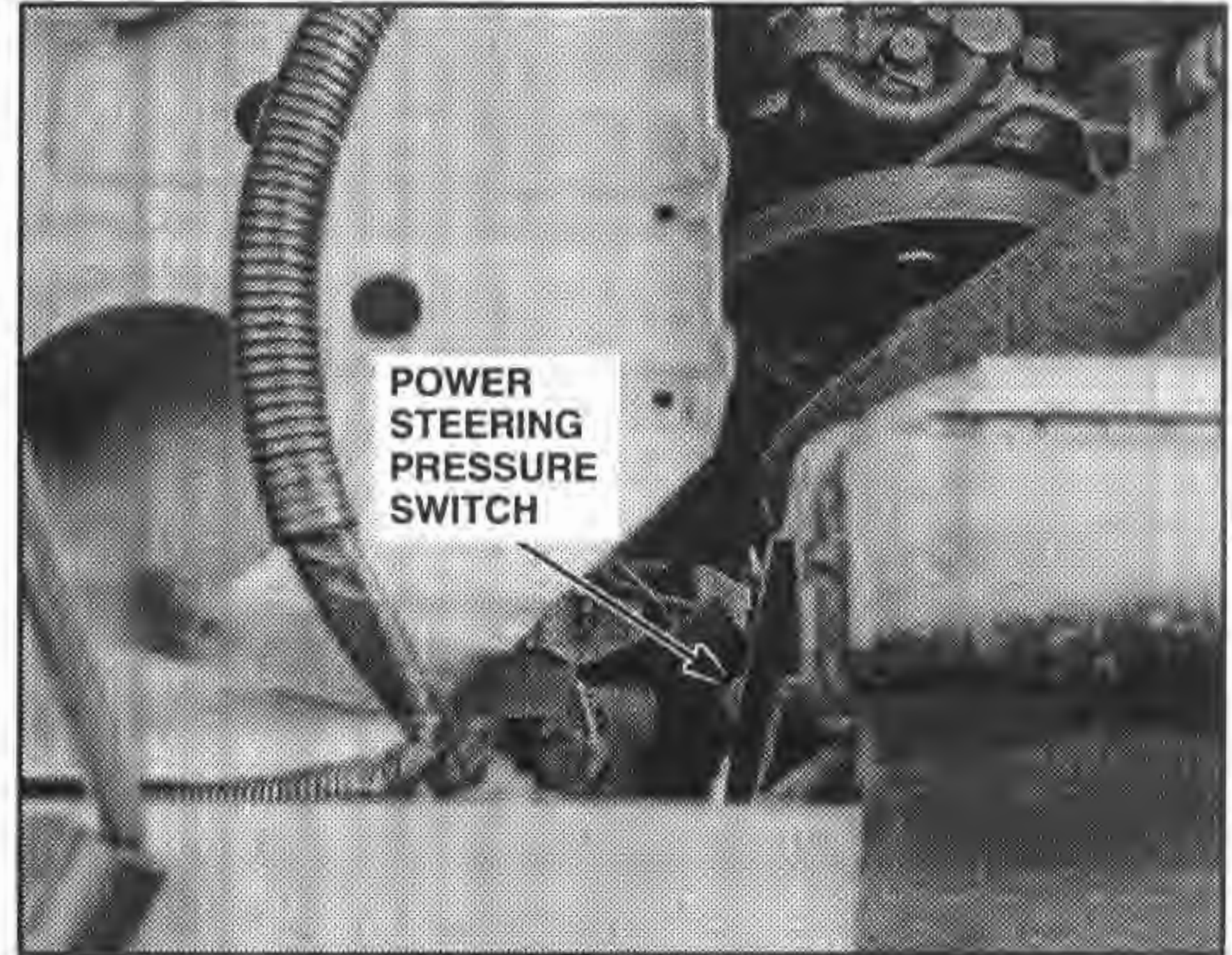
18. Lower Right Side of Engine



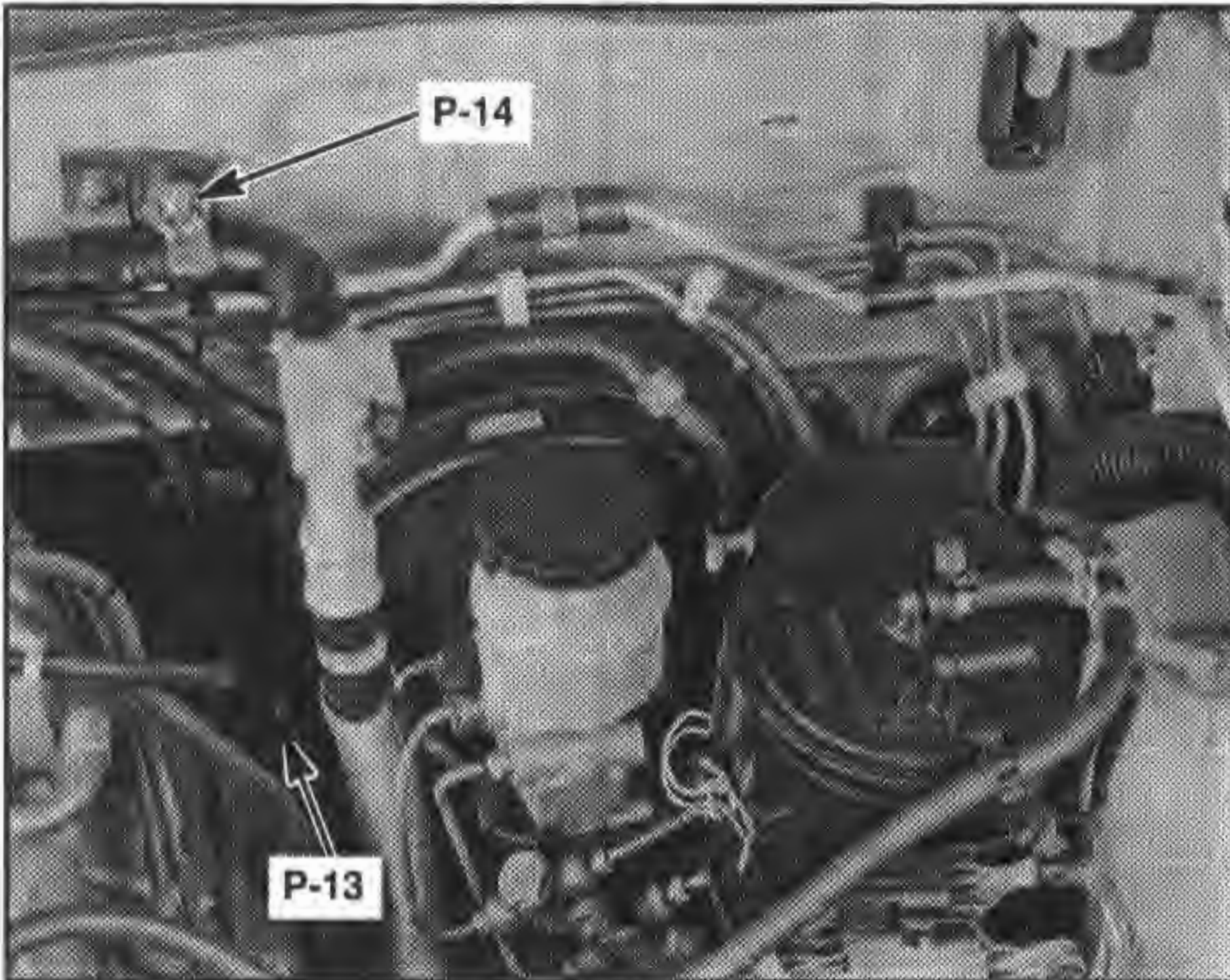
19. Right Rear of Engine Compartment



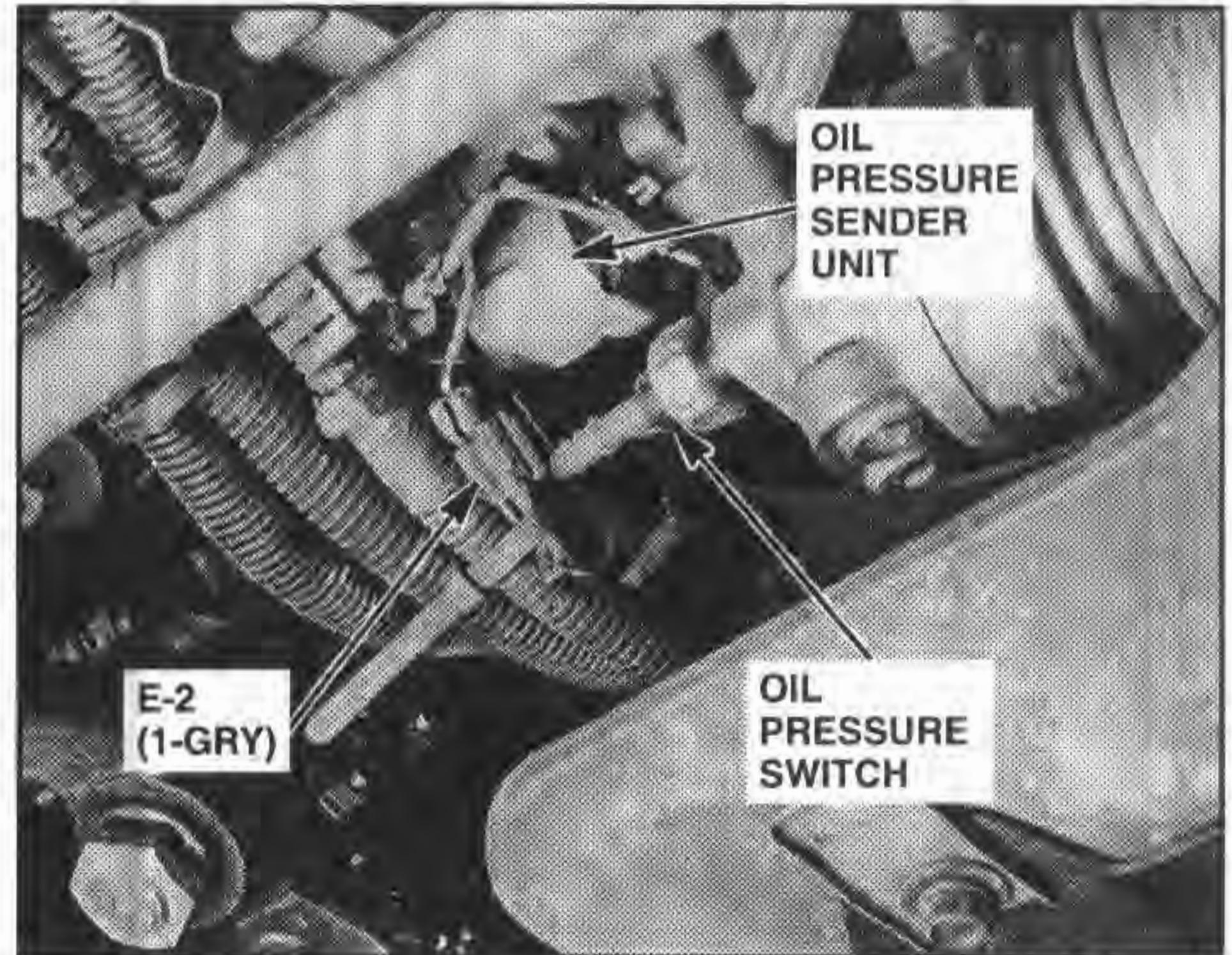
22. Lower Right Front of Engine (Battery Removed)



20. Left Rear of Engine Compartment



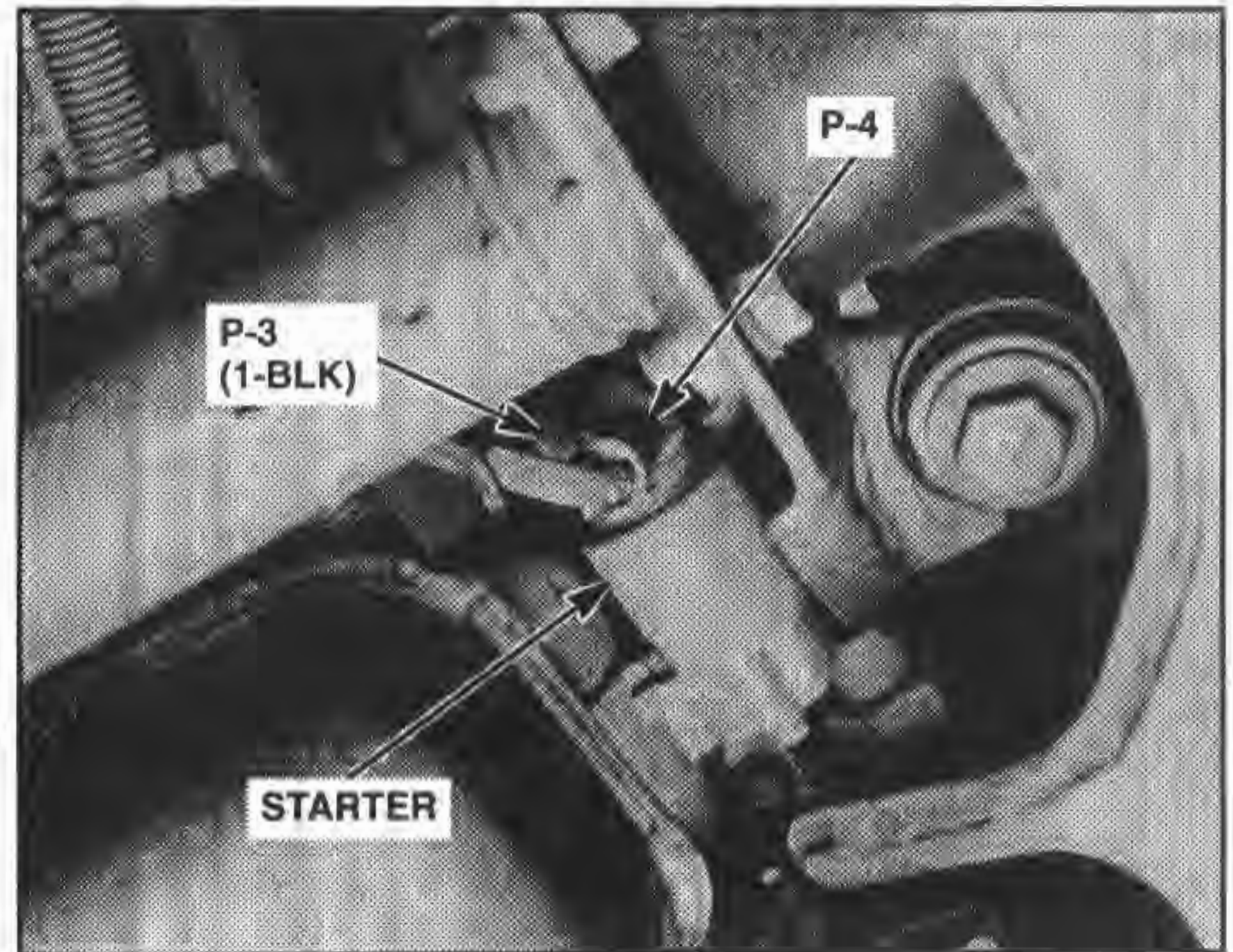
23. Front Underside of Engine



21. Right Front of Engine Compartment

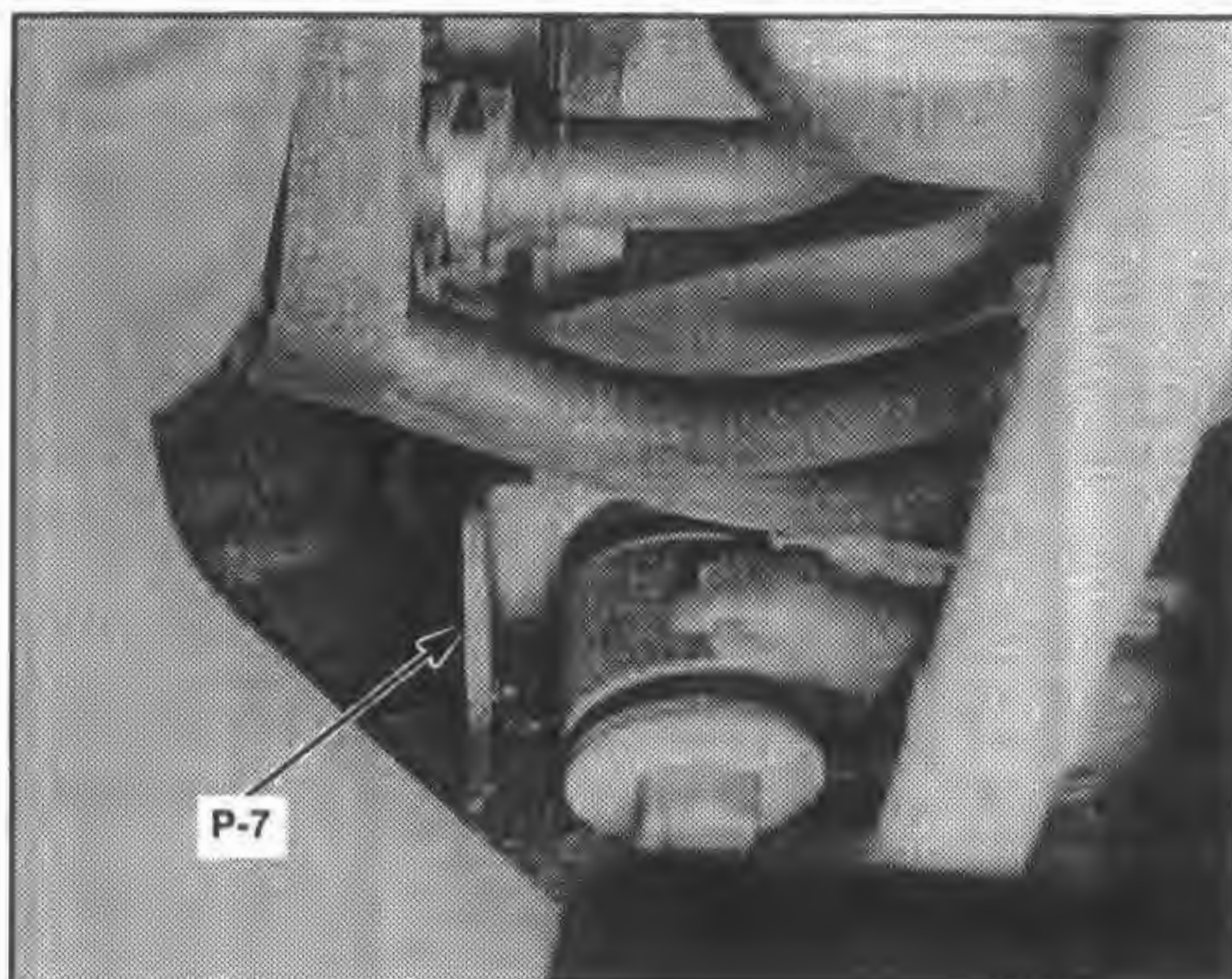


24. Left Underside of Engine

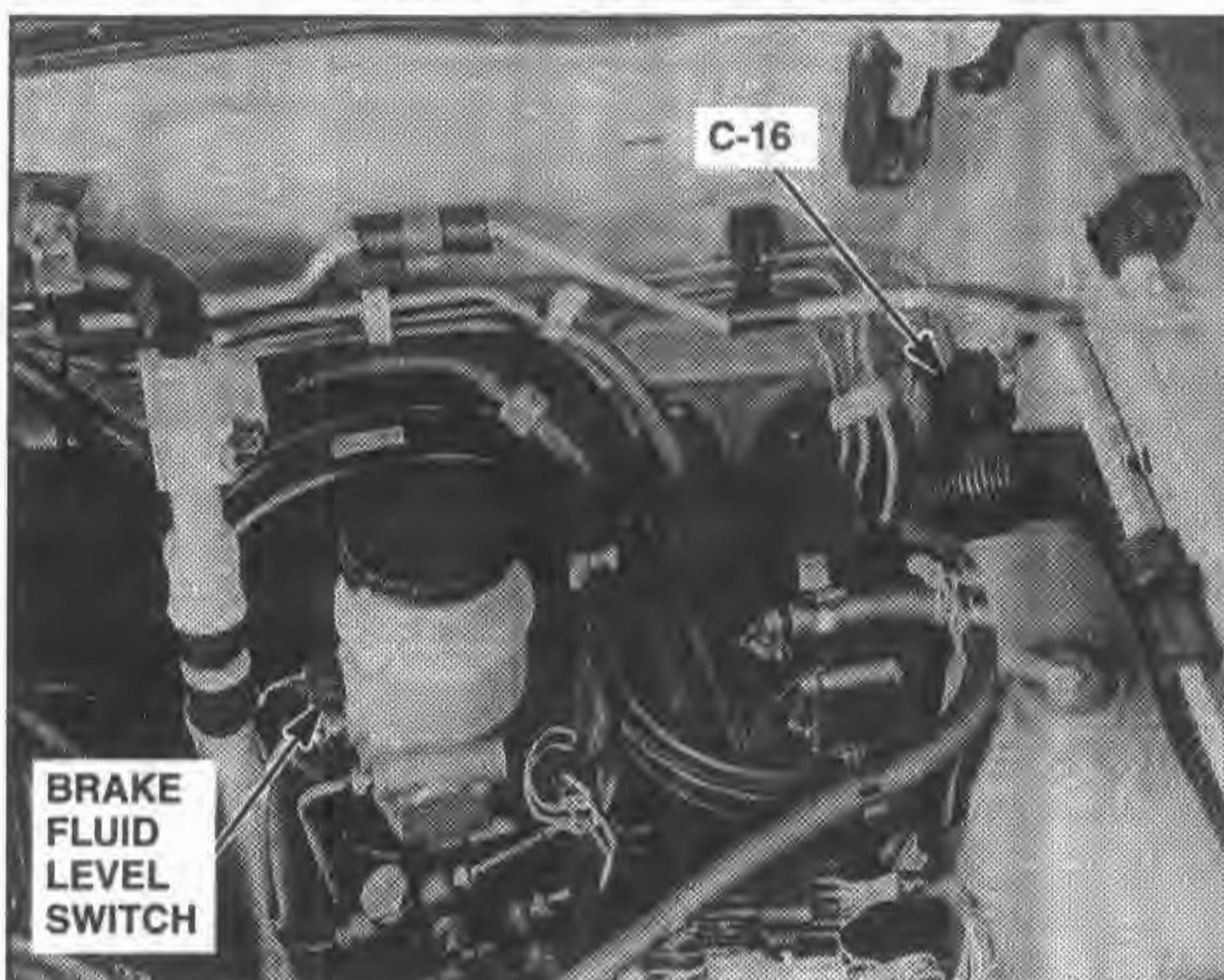


COMPONENT LOCATION PHOTOGRAPHS

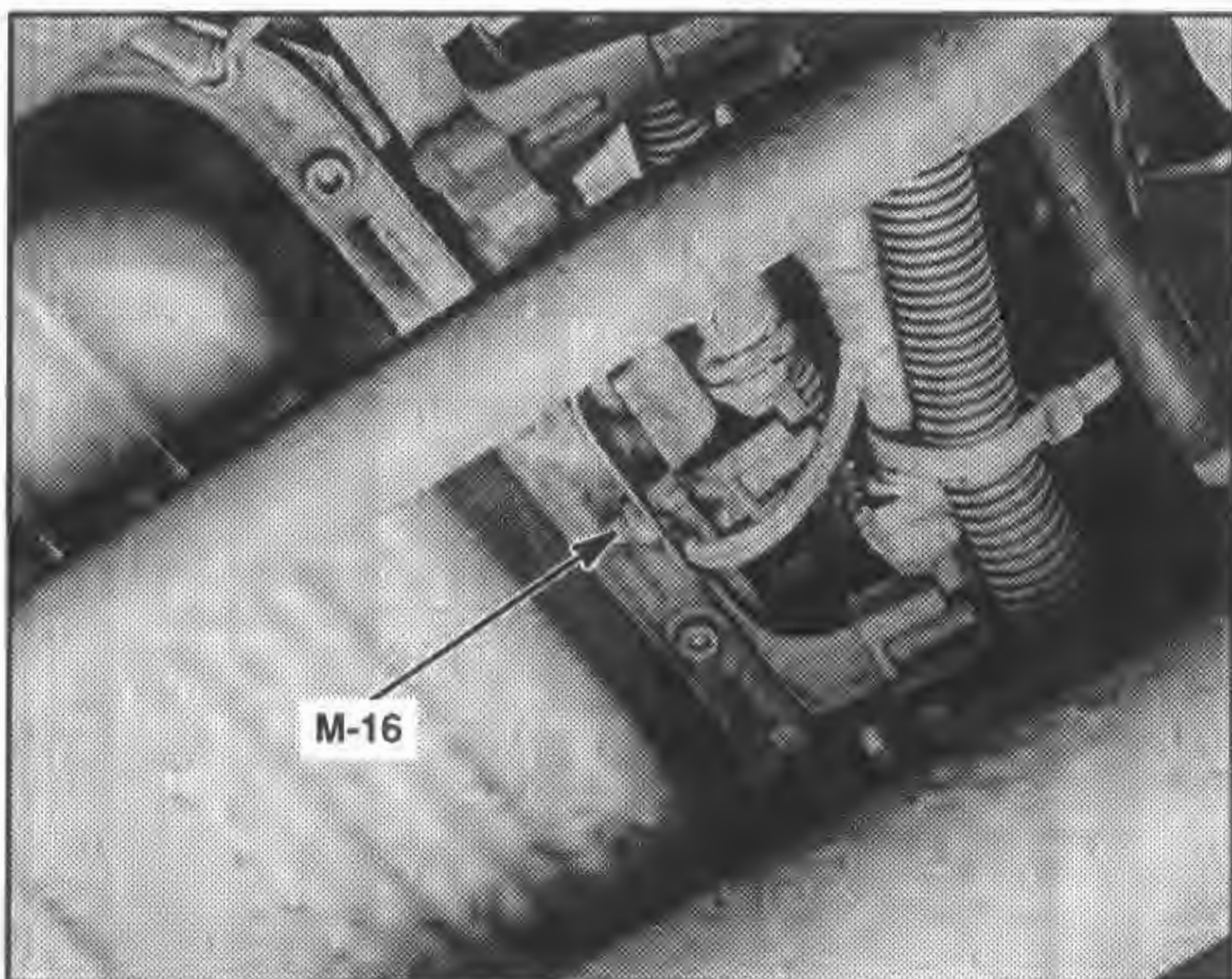
25. Lower Right Front of Engine Compartment



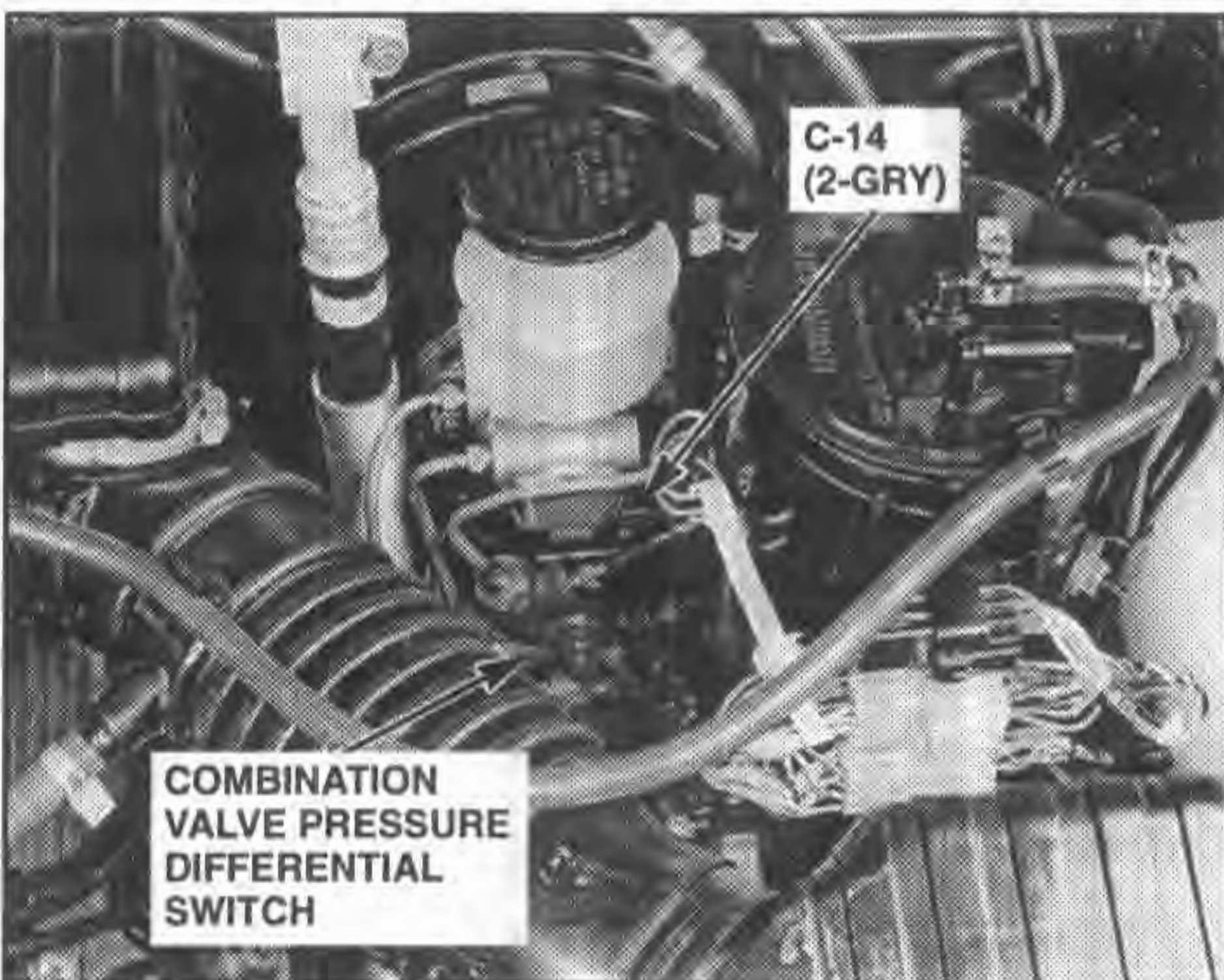
28. Left Rear Corner of Engine Compartment



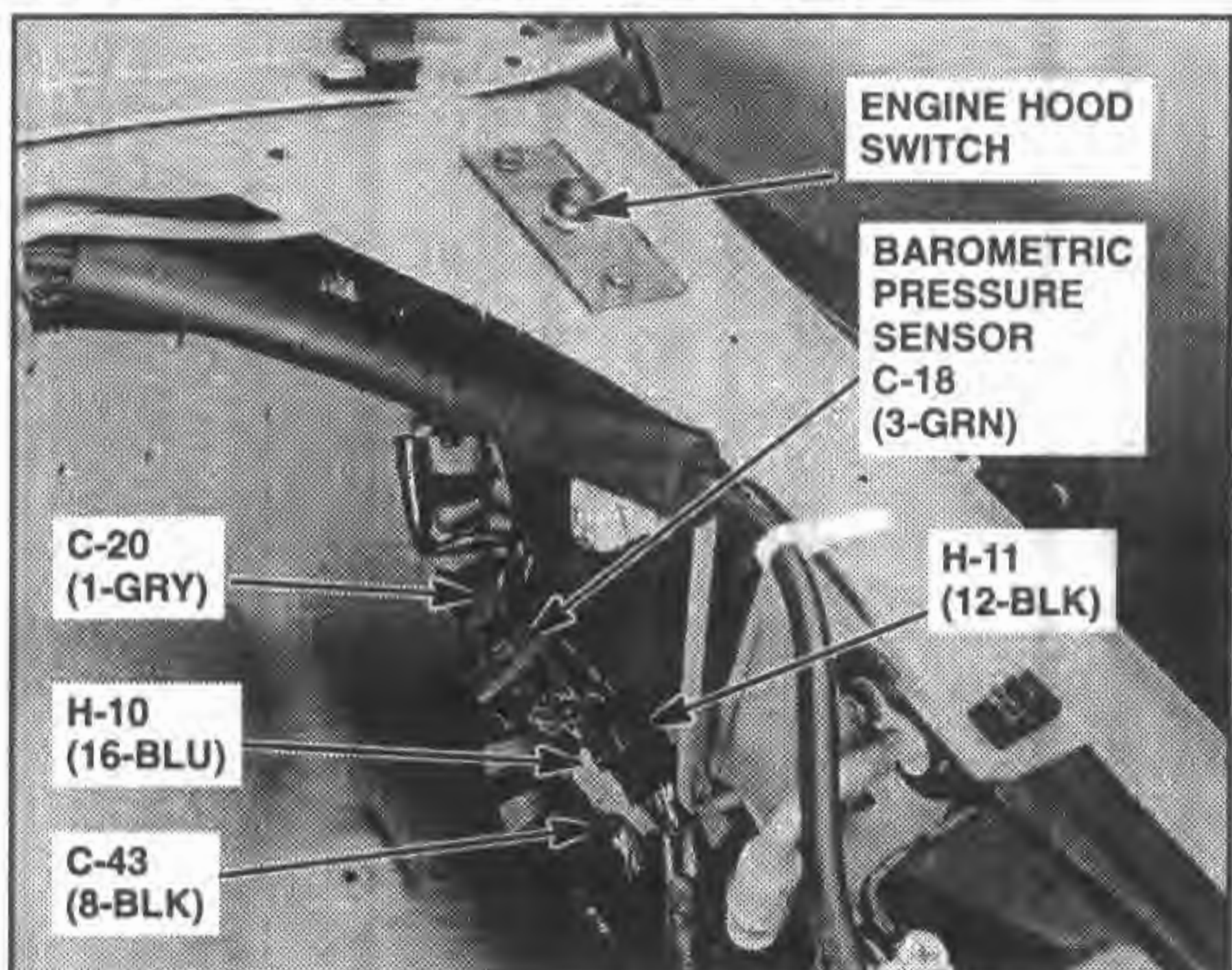
26. Left Underside of Engine



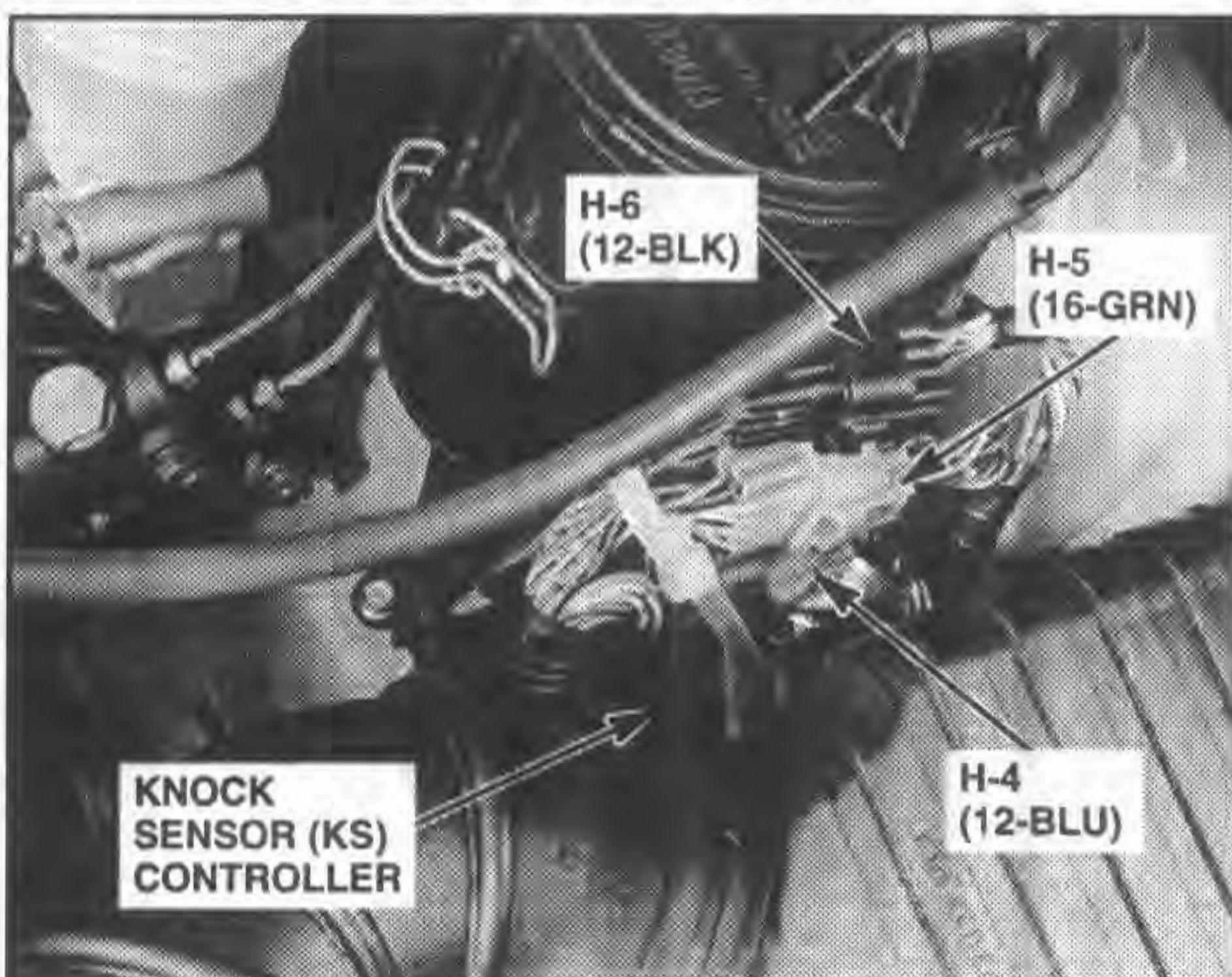
29. Left Rear Corner of Engine Compartment



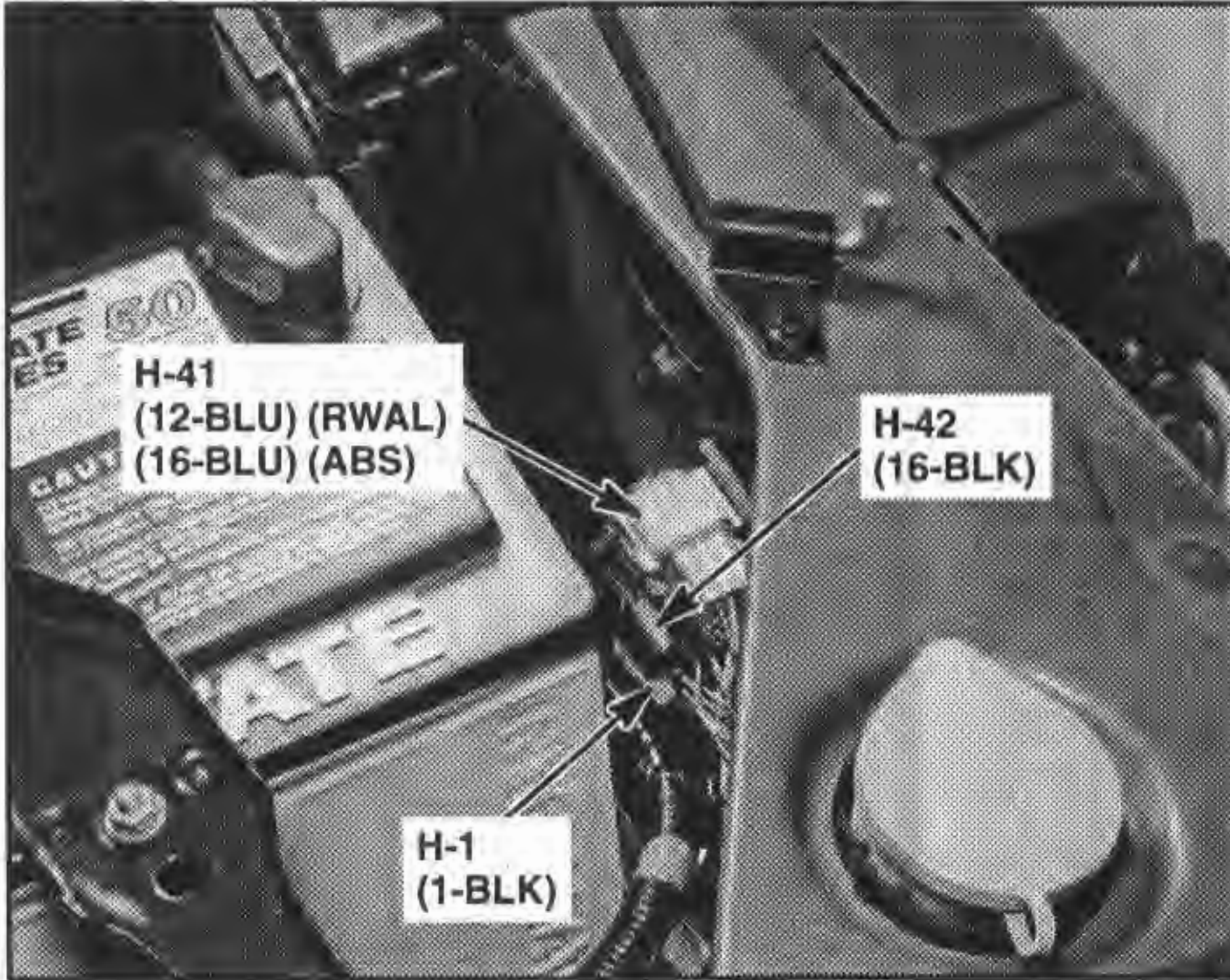
27. Left Front Corner of Engine Compartment



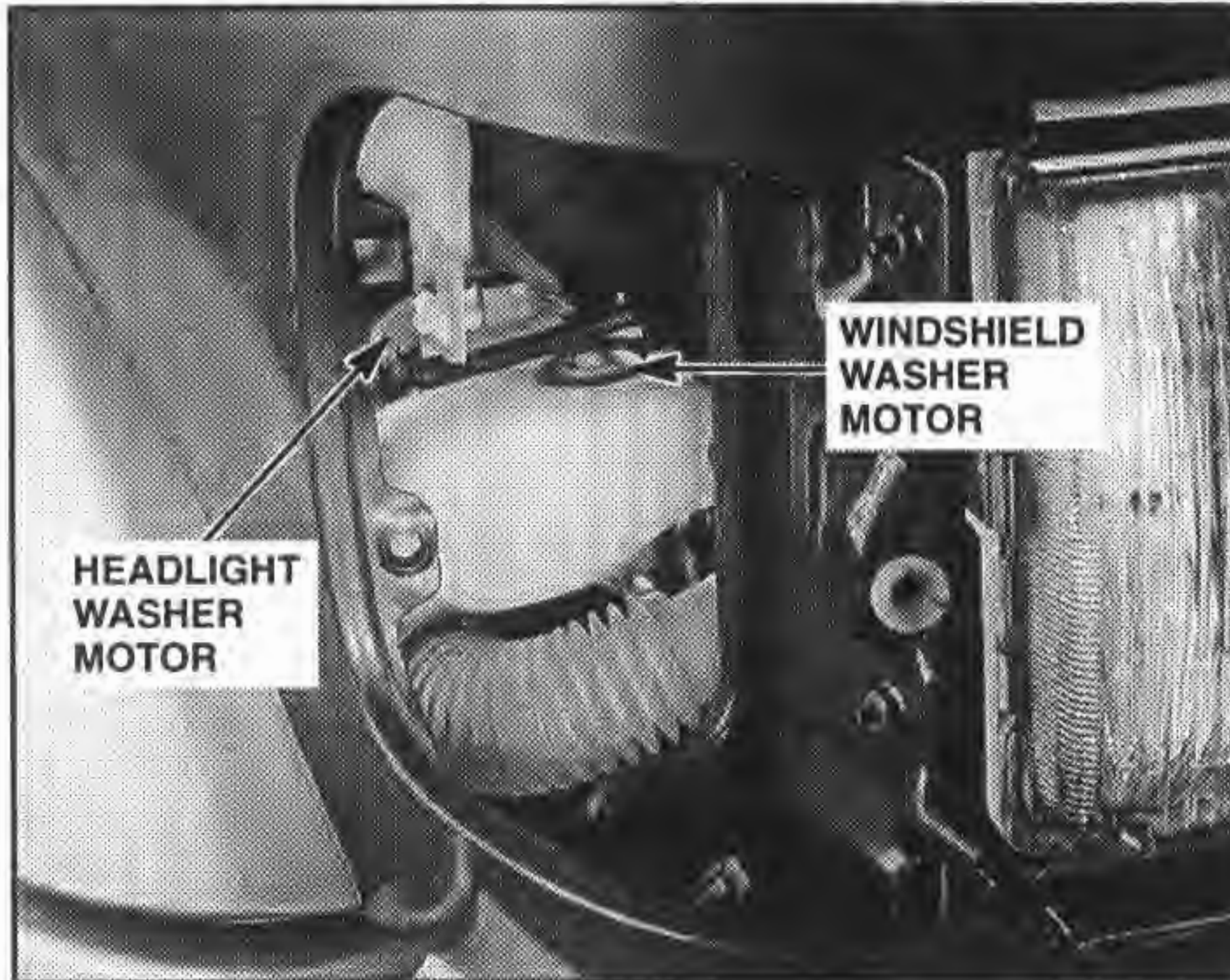
30. Left Side of Engine Compartment



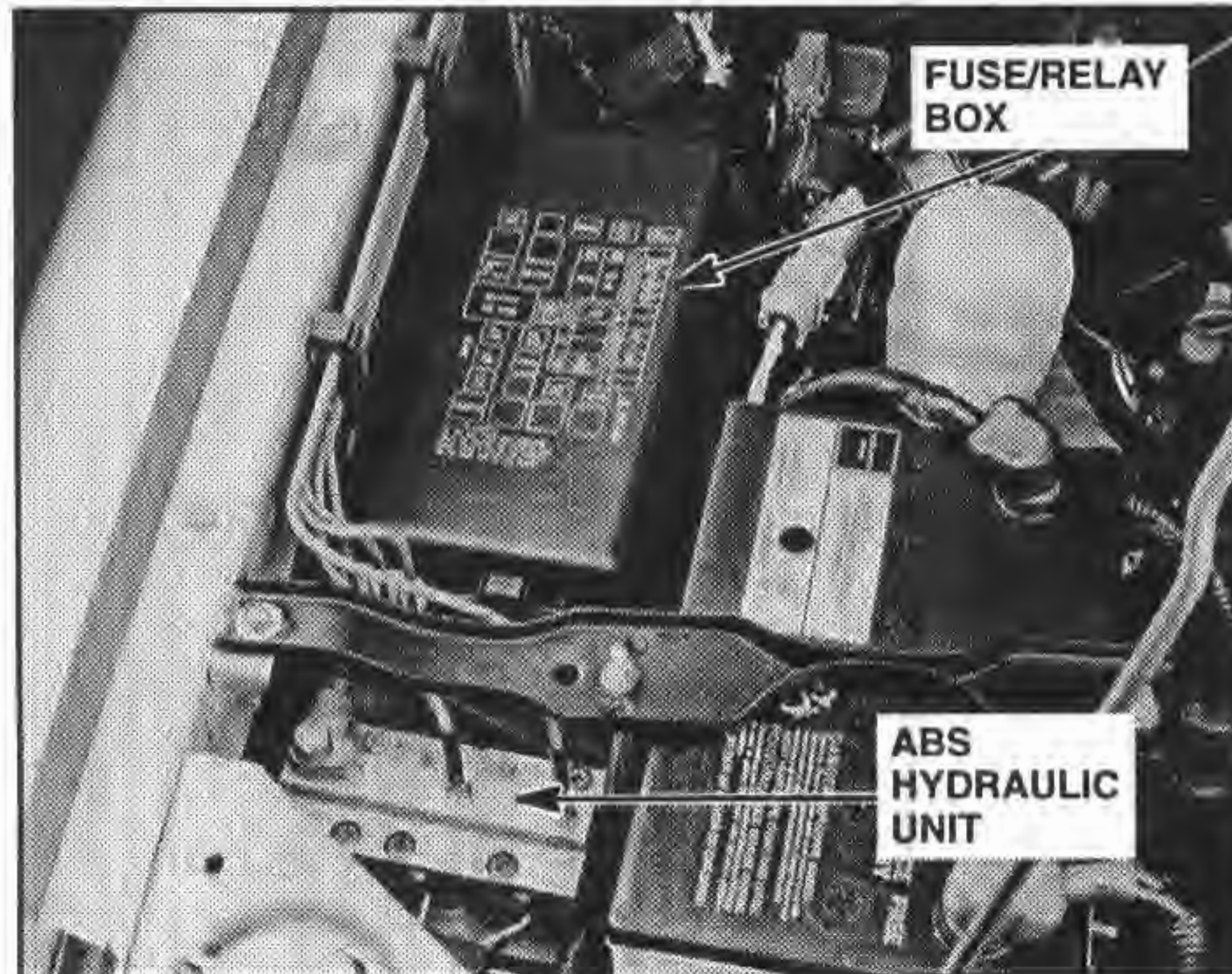
31. Right Front Corner of Engine Compartment



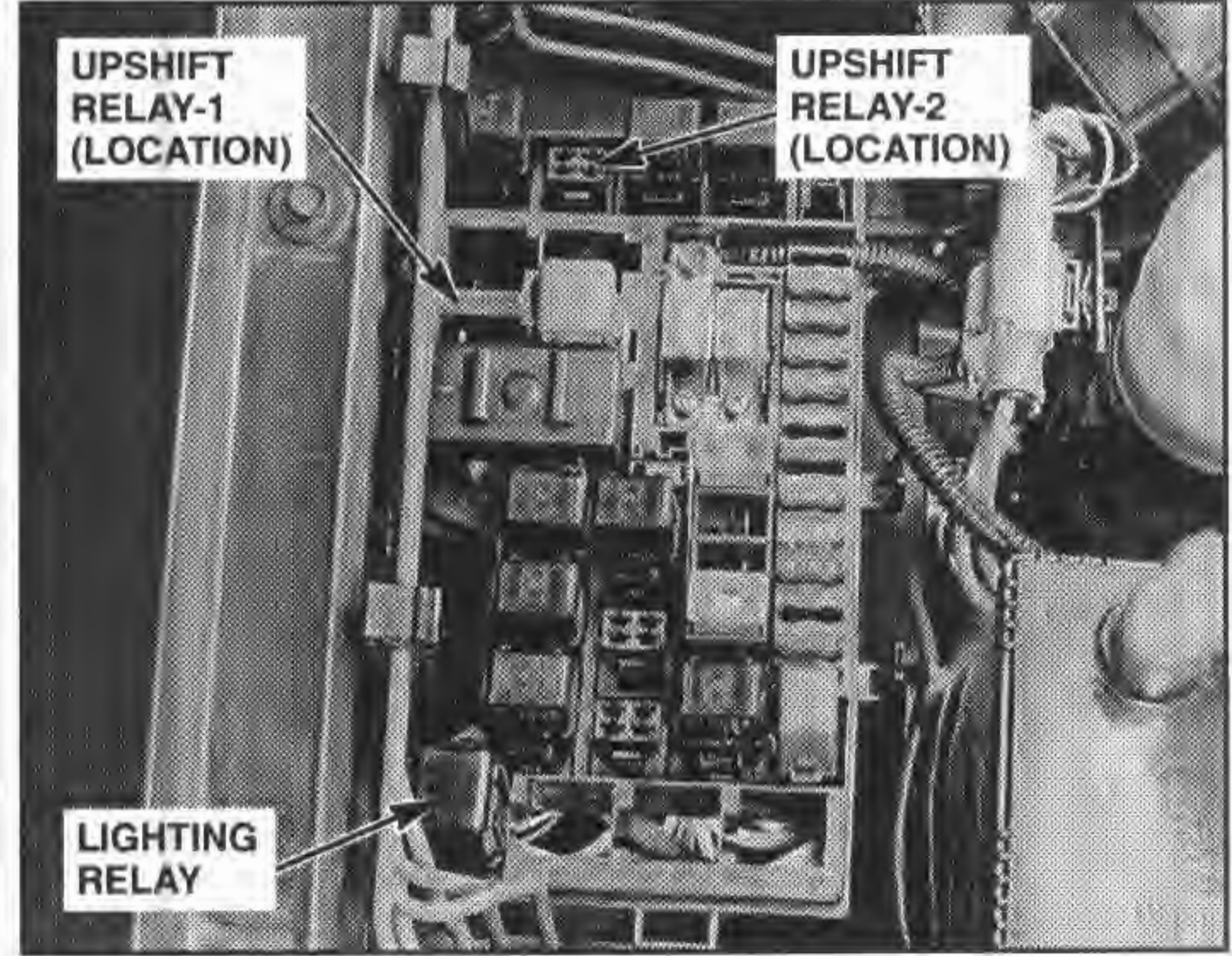
32. Behind Right Front Combination Light



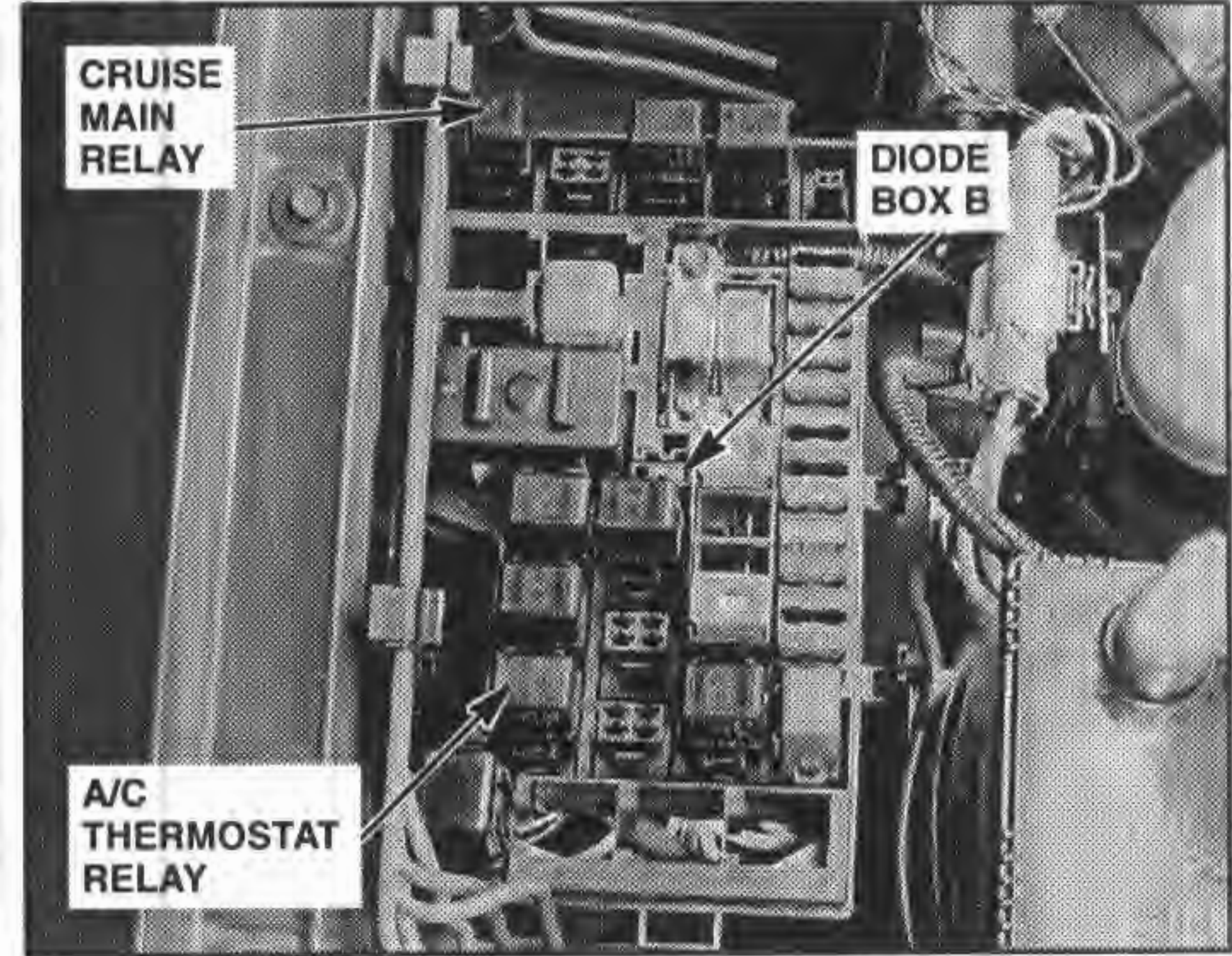
33. Right Side of Engine Compartment



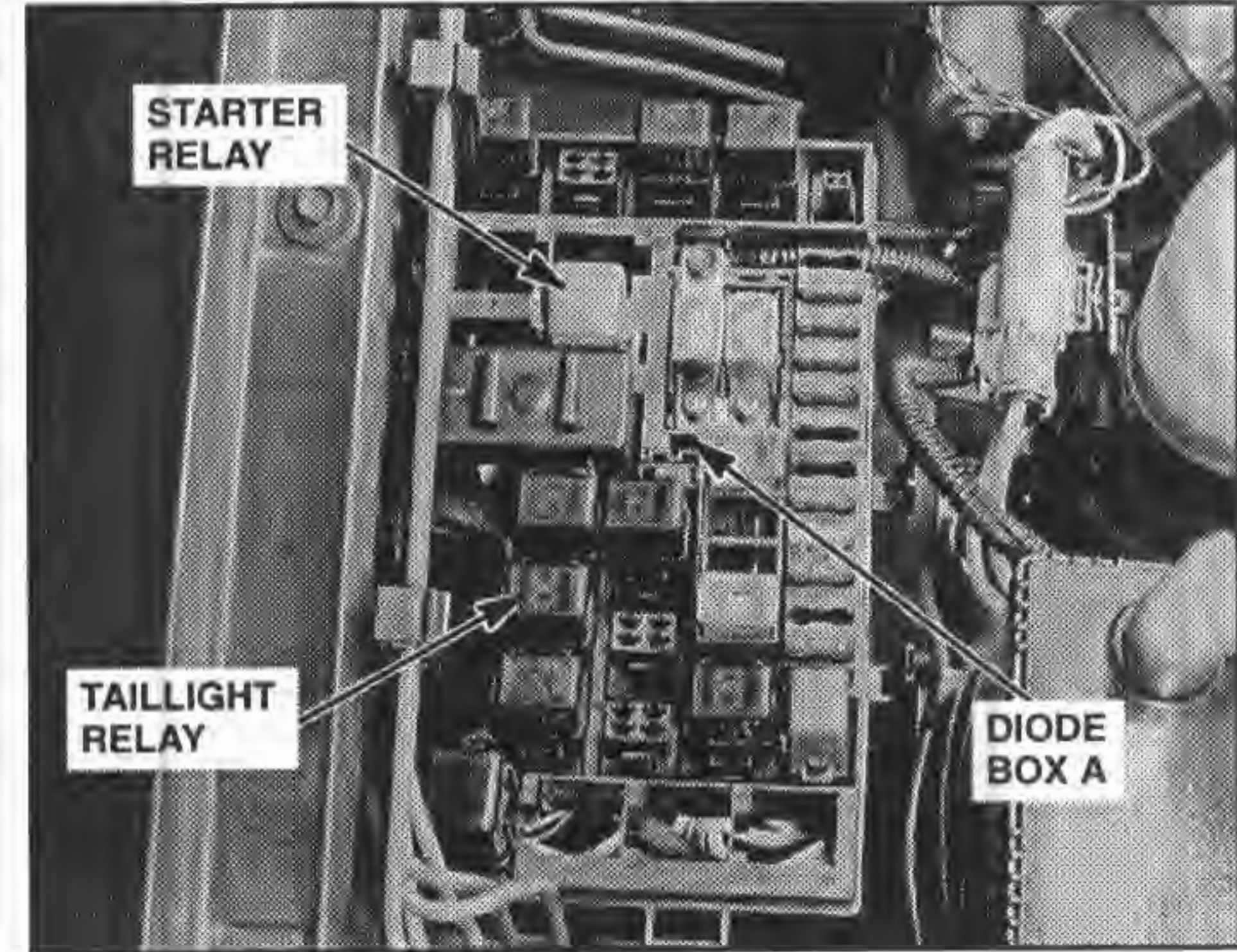
34. Fuse/Relay Box (Cover Removed)



35. Fuse/Relay Box (Cover Removed)

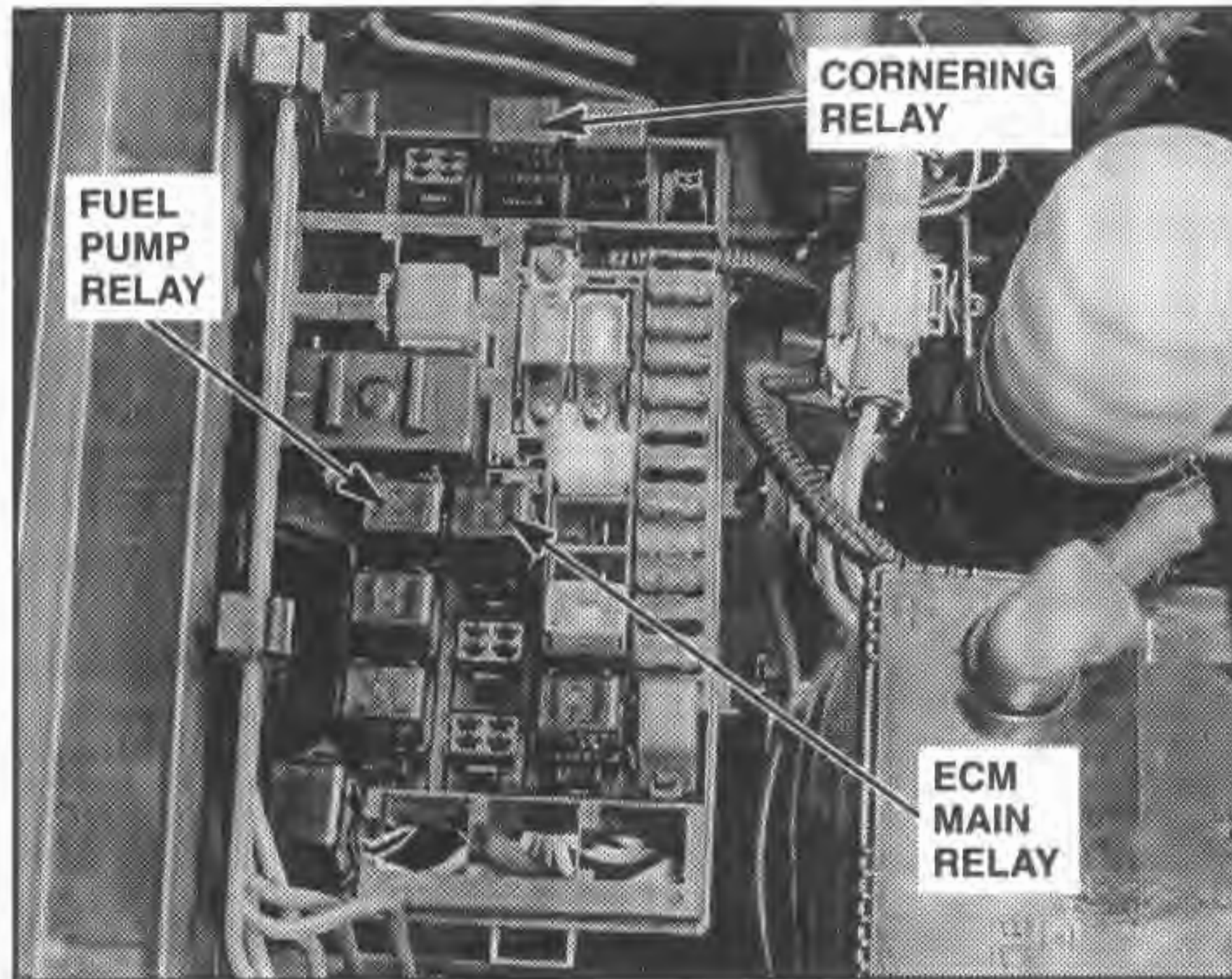


36. Fuse/Relay Box (Cover Removed)

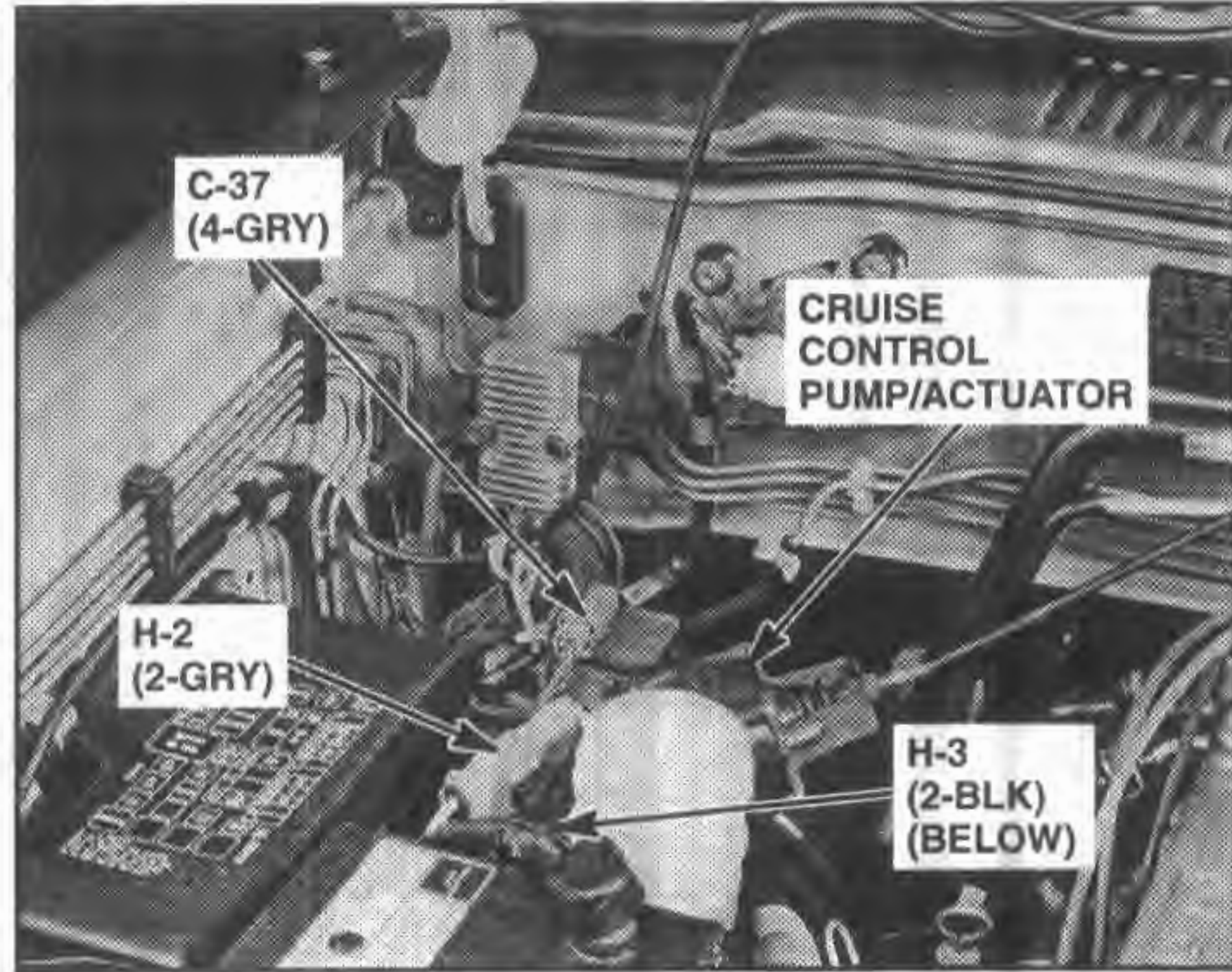


COMPONENT LOCATION PHOTOGRAPHS

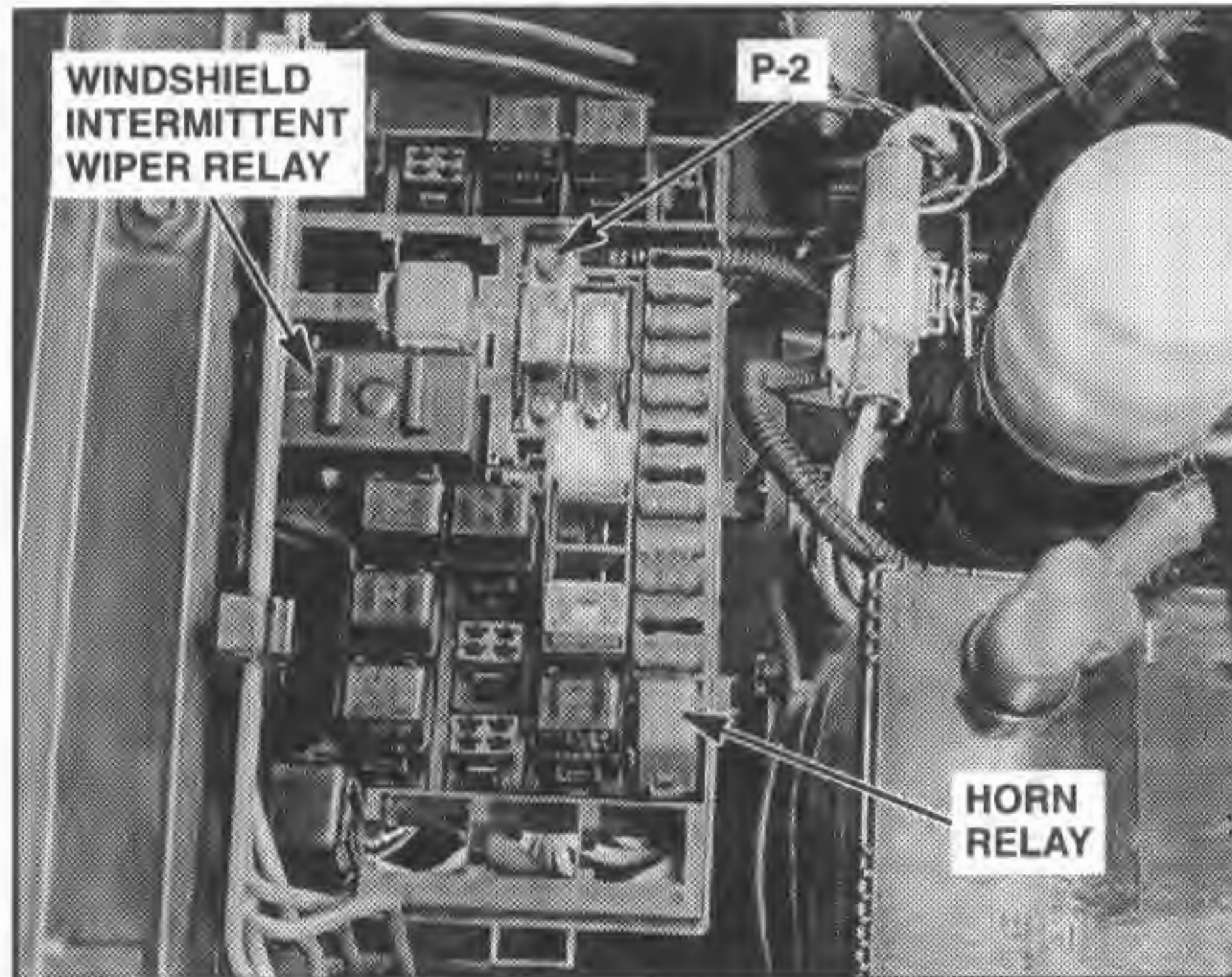
37. Fuse/Relay Box (Cover Removed)



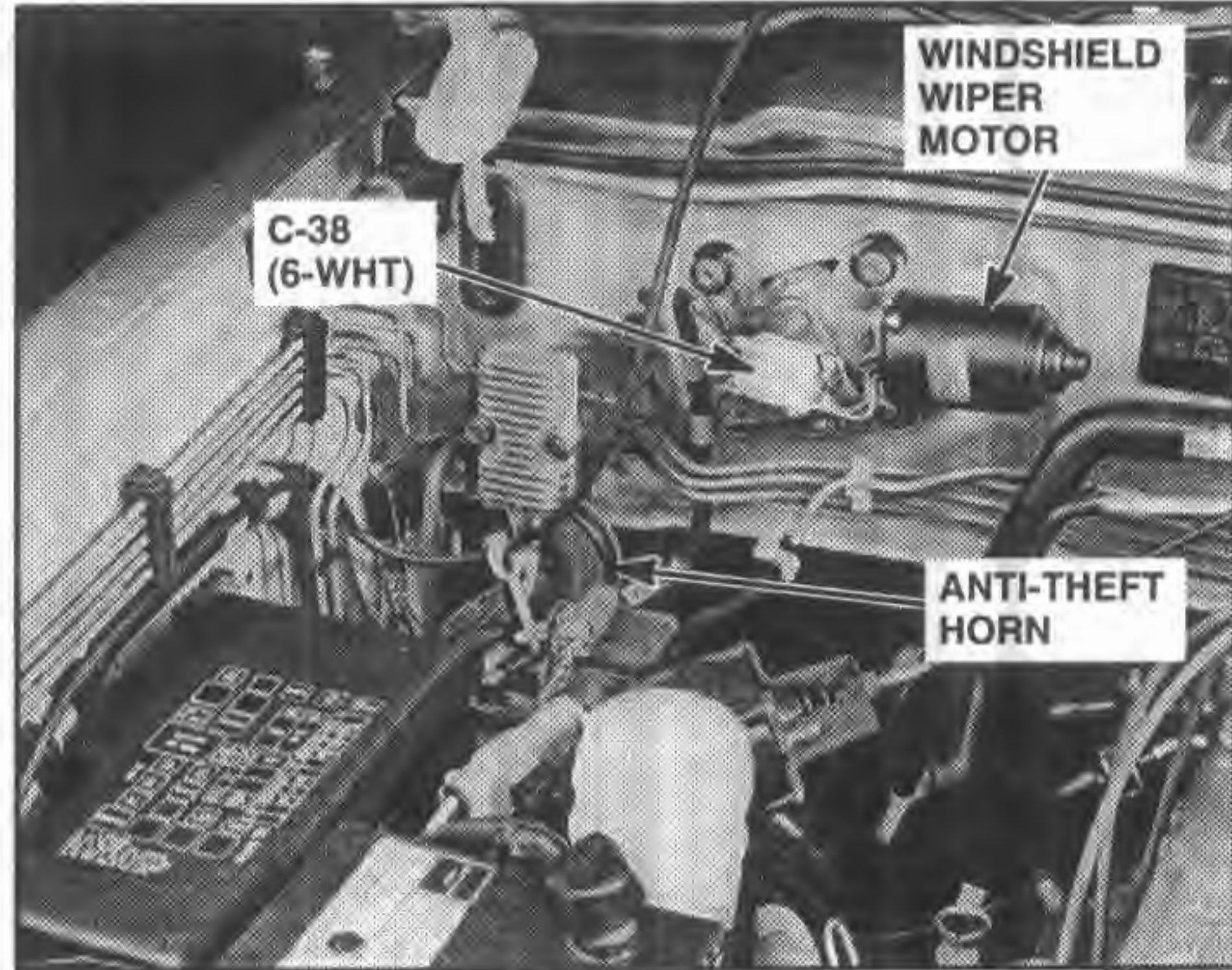
40. Right Rear Corner of Engine Compartment



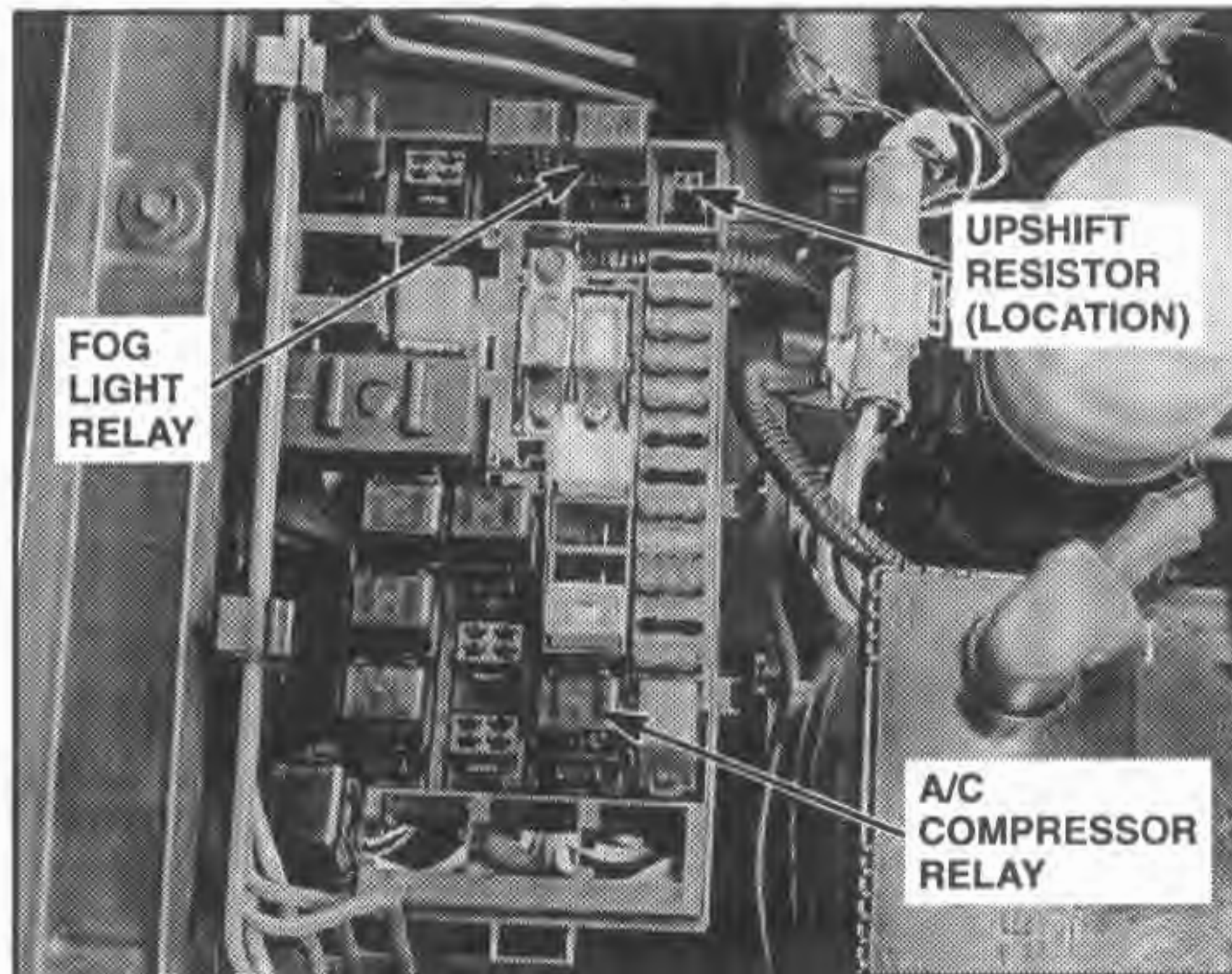
38. Fuse/Relay Box (Cover Removed)



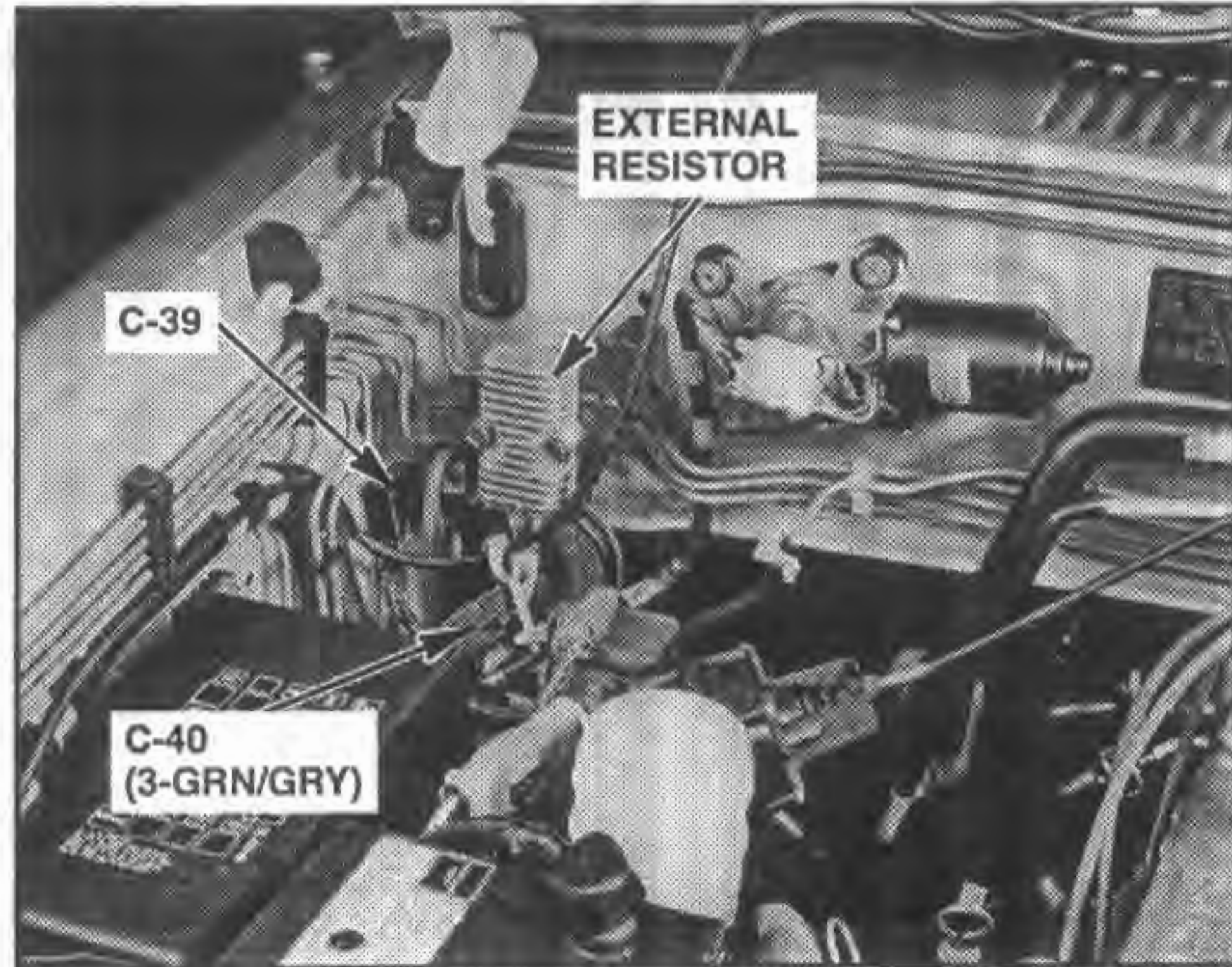
41. Right Rear Corner of Engine Compartment



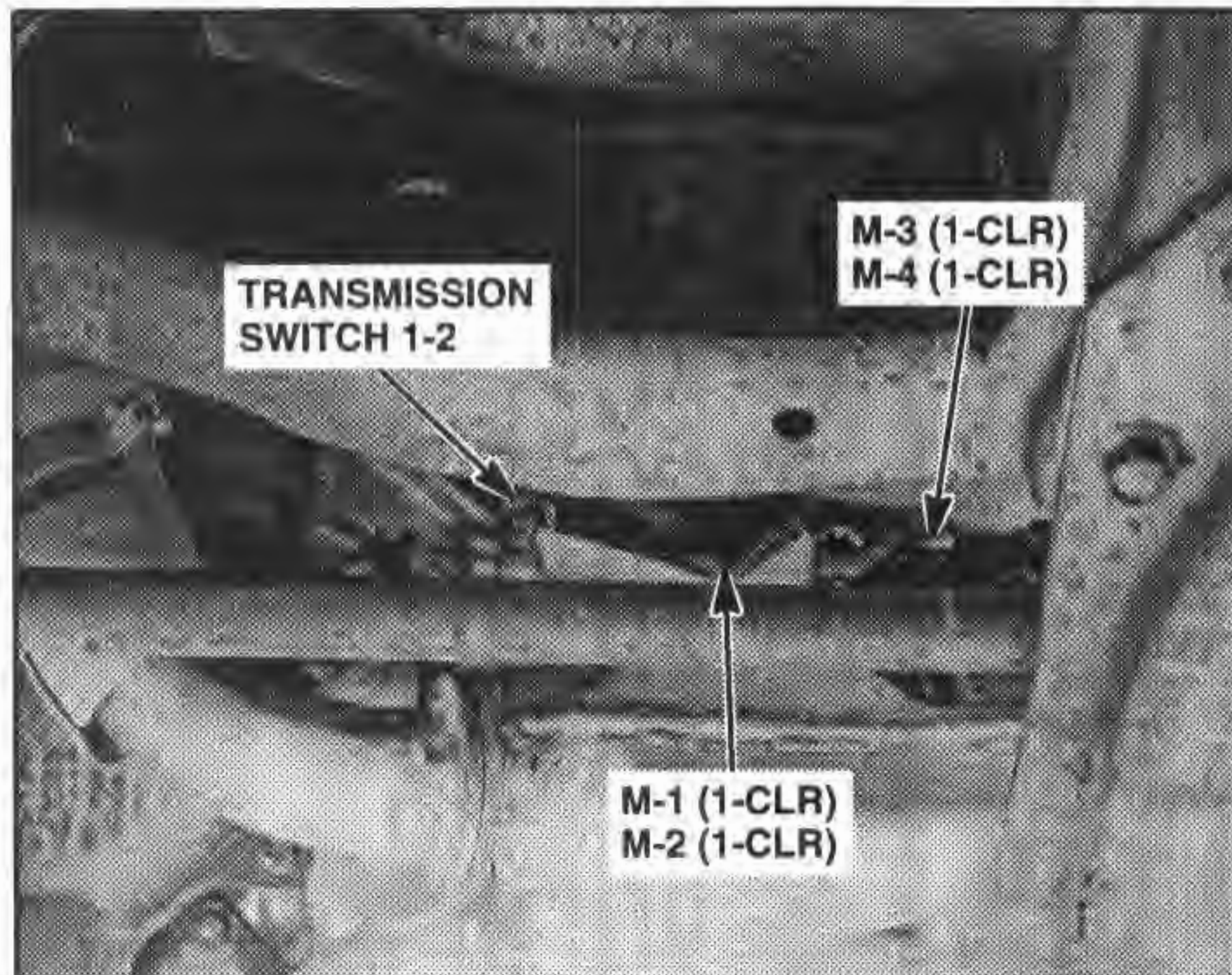
39. Fuse/Relay Box (Cover Removed)



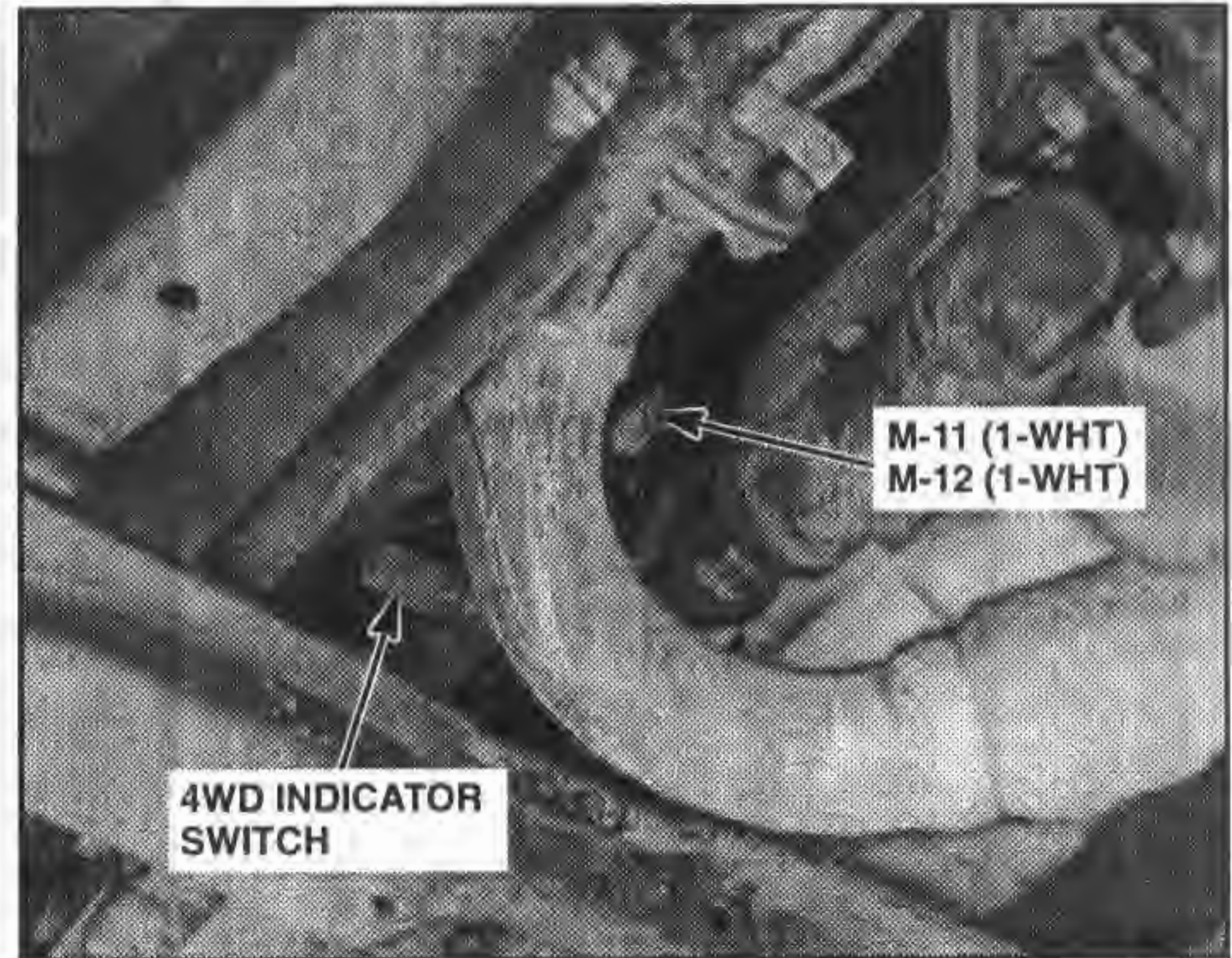
42. Right Rear Corner of Engine Compartment



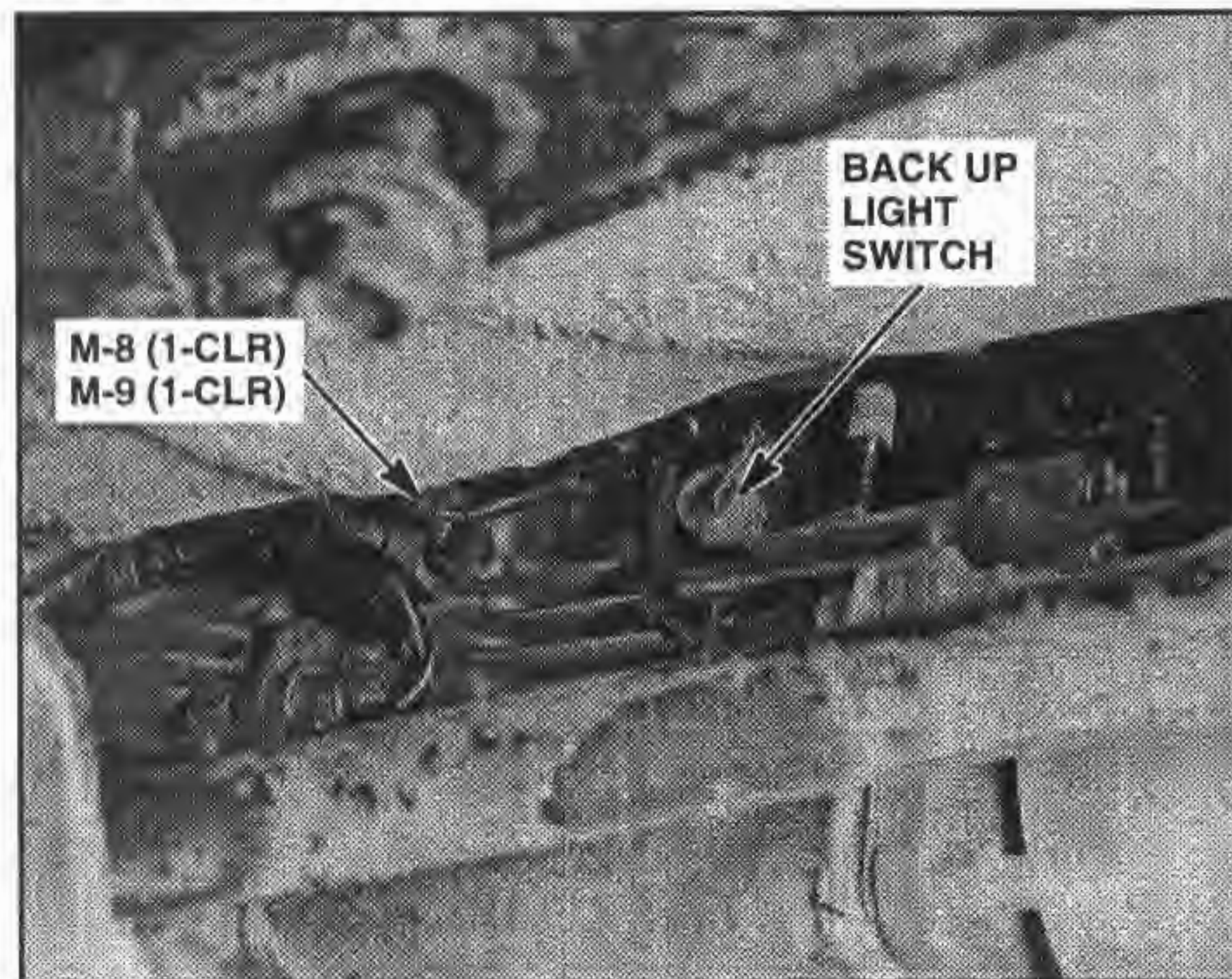
43. Left Side of Transmission



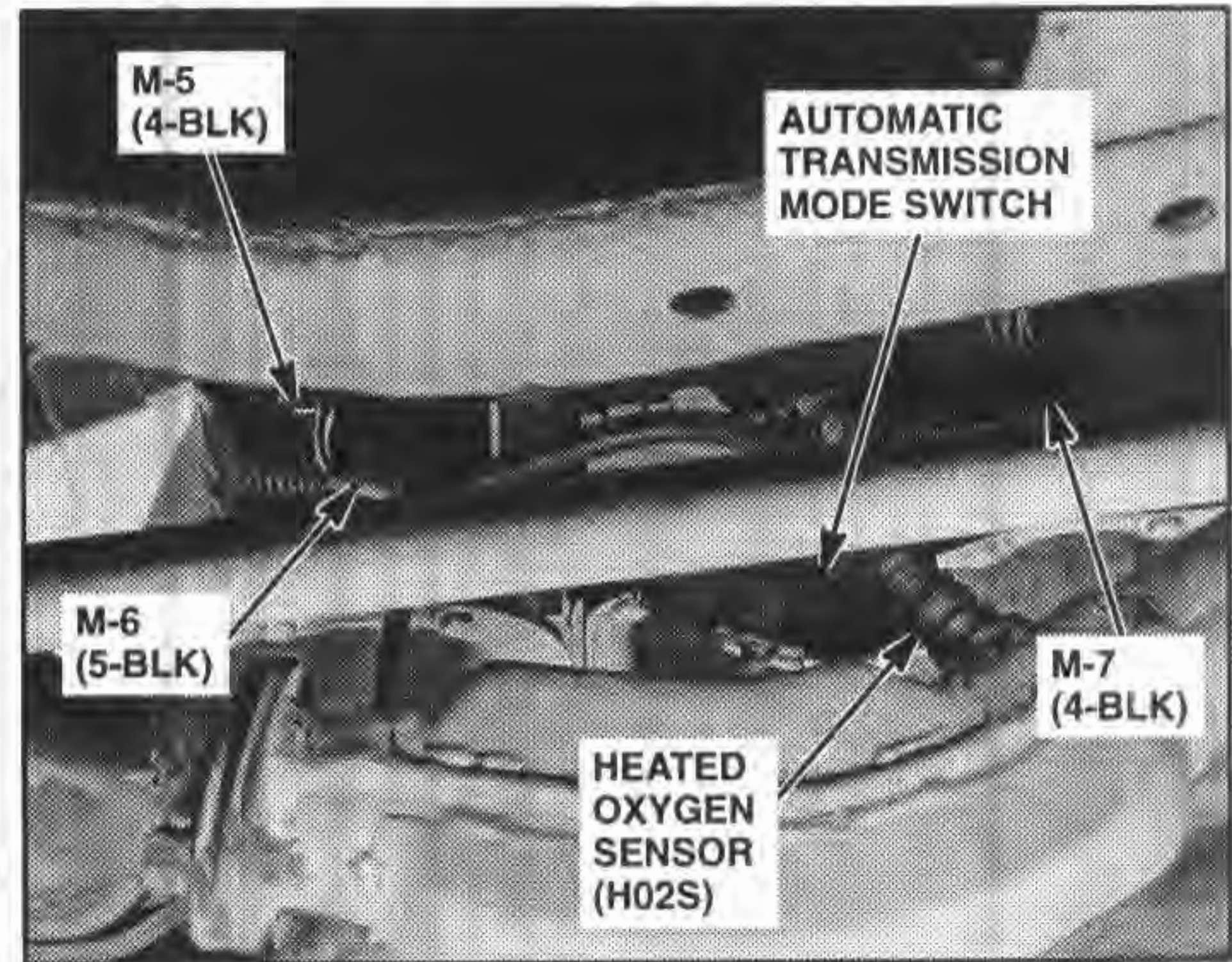
46. Right Side of Transmission



44. Left Side of Transmission



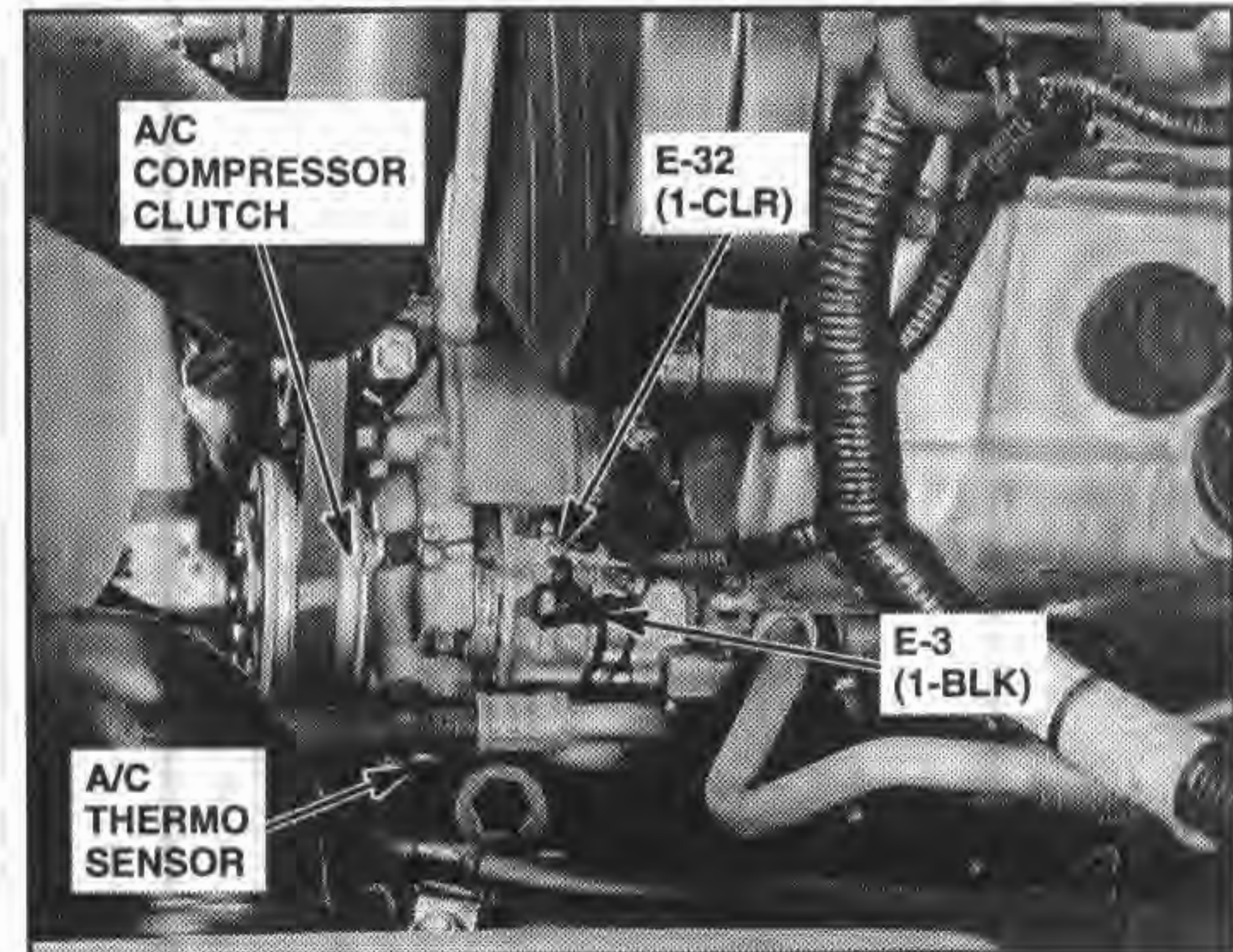
47. Left Side of Transmission



45. Left Rear of Transmission

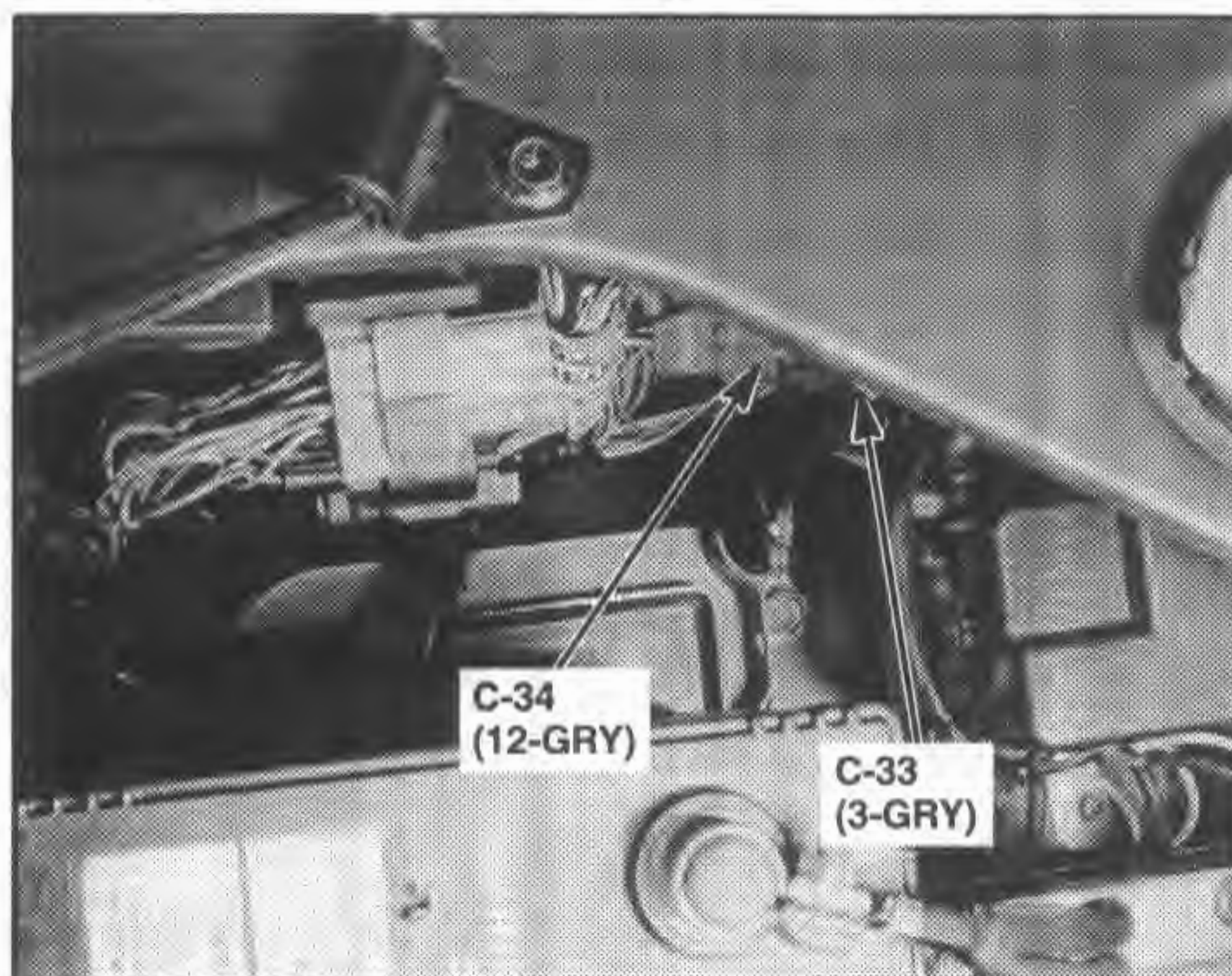


48. Lower Right Front of Engine

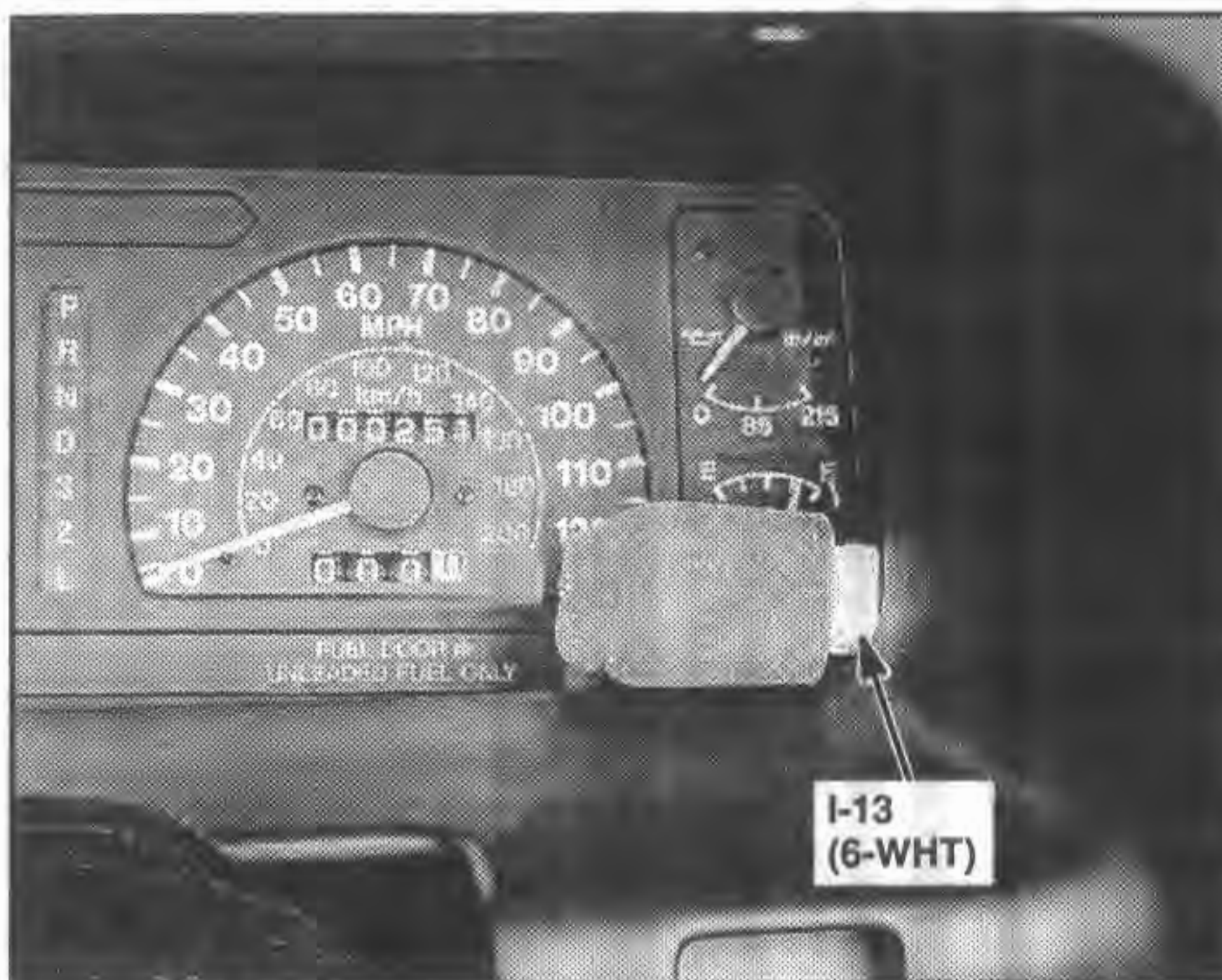


COMPONENT LOCATION PHOTOGRAPHS

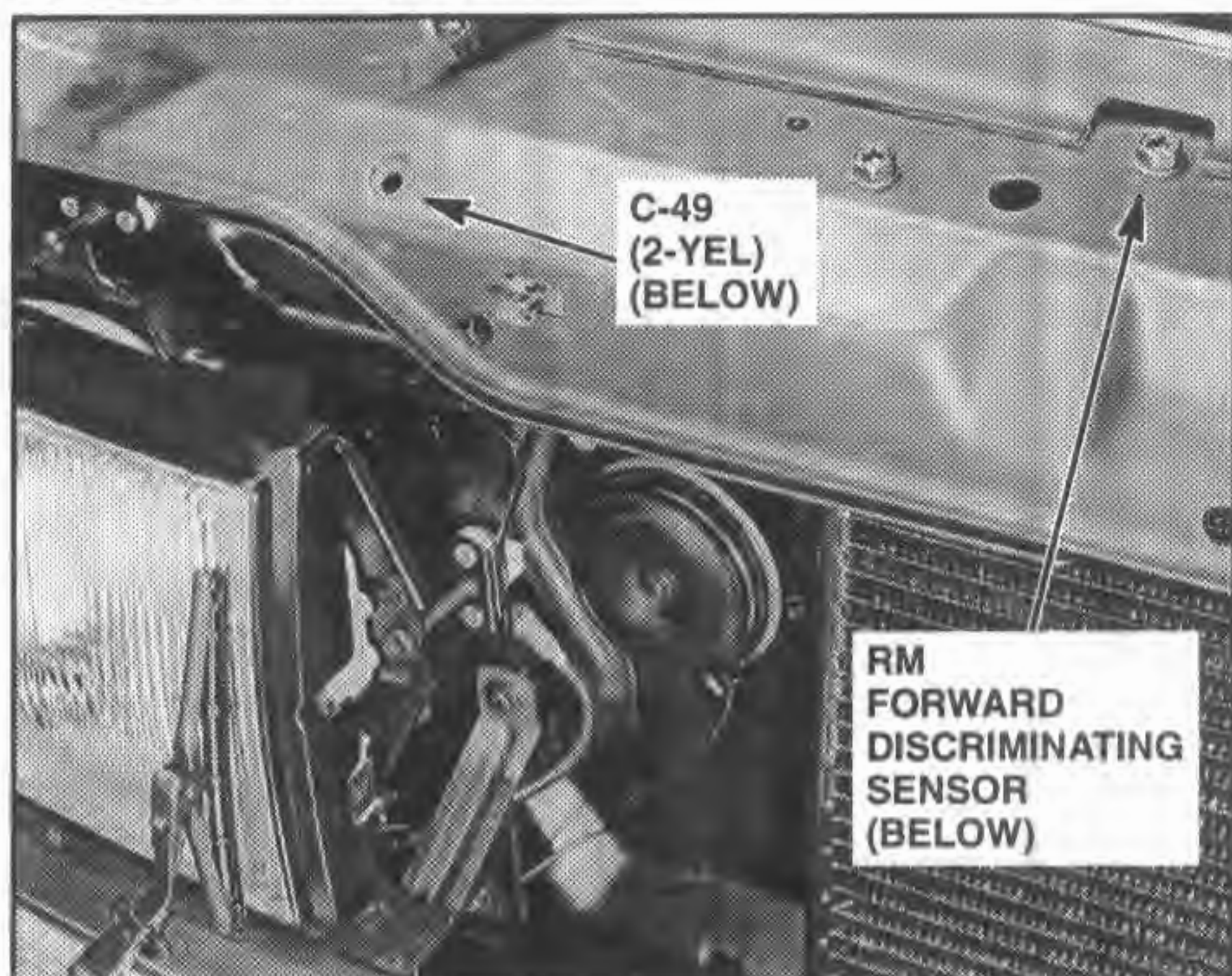
49. Right Front Corner of Engine Compartment



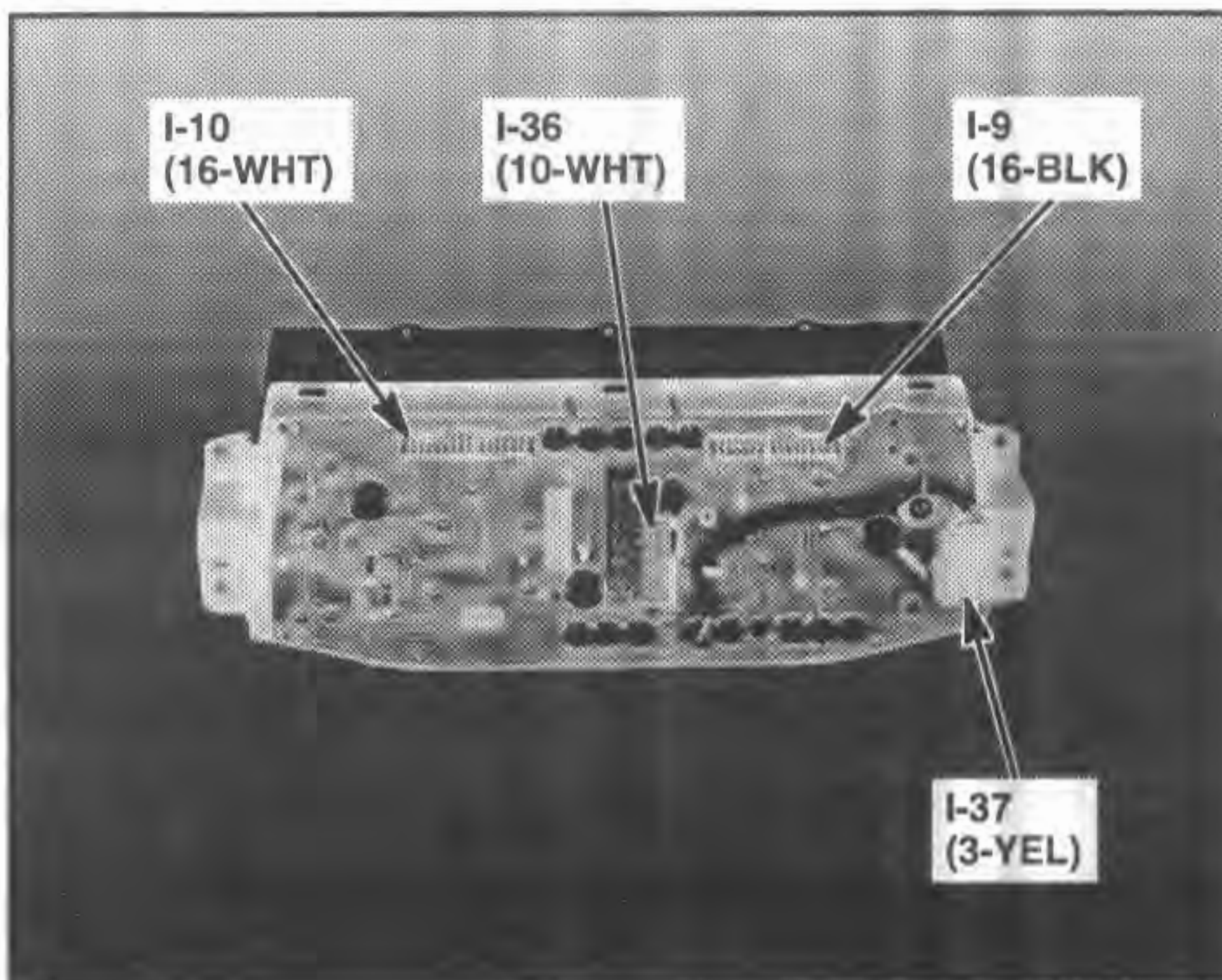
52. Behind Instrument Panel Cluster Assembly



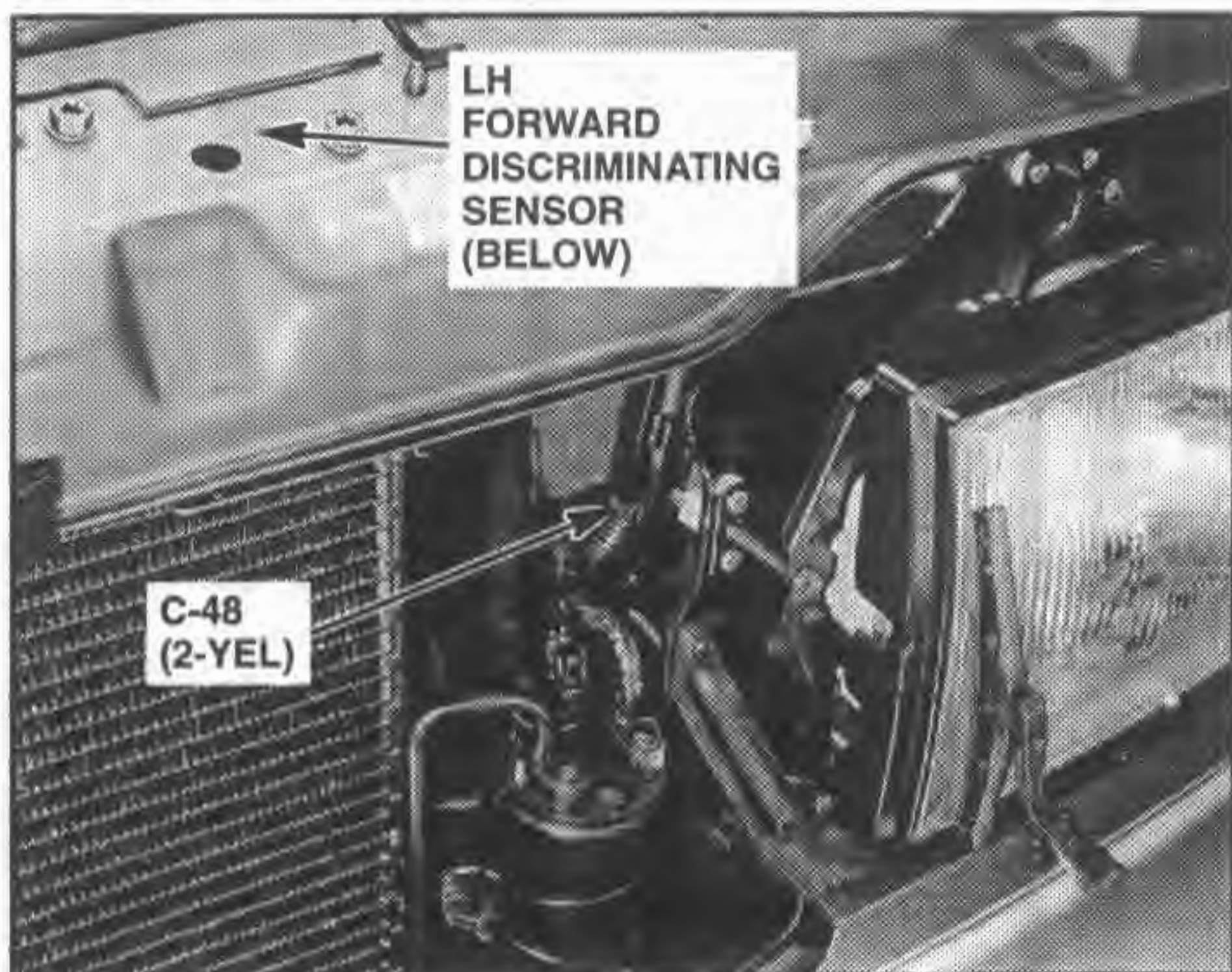
50. Right Front of Vehicle



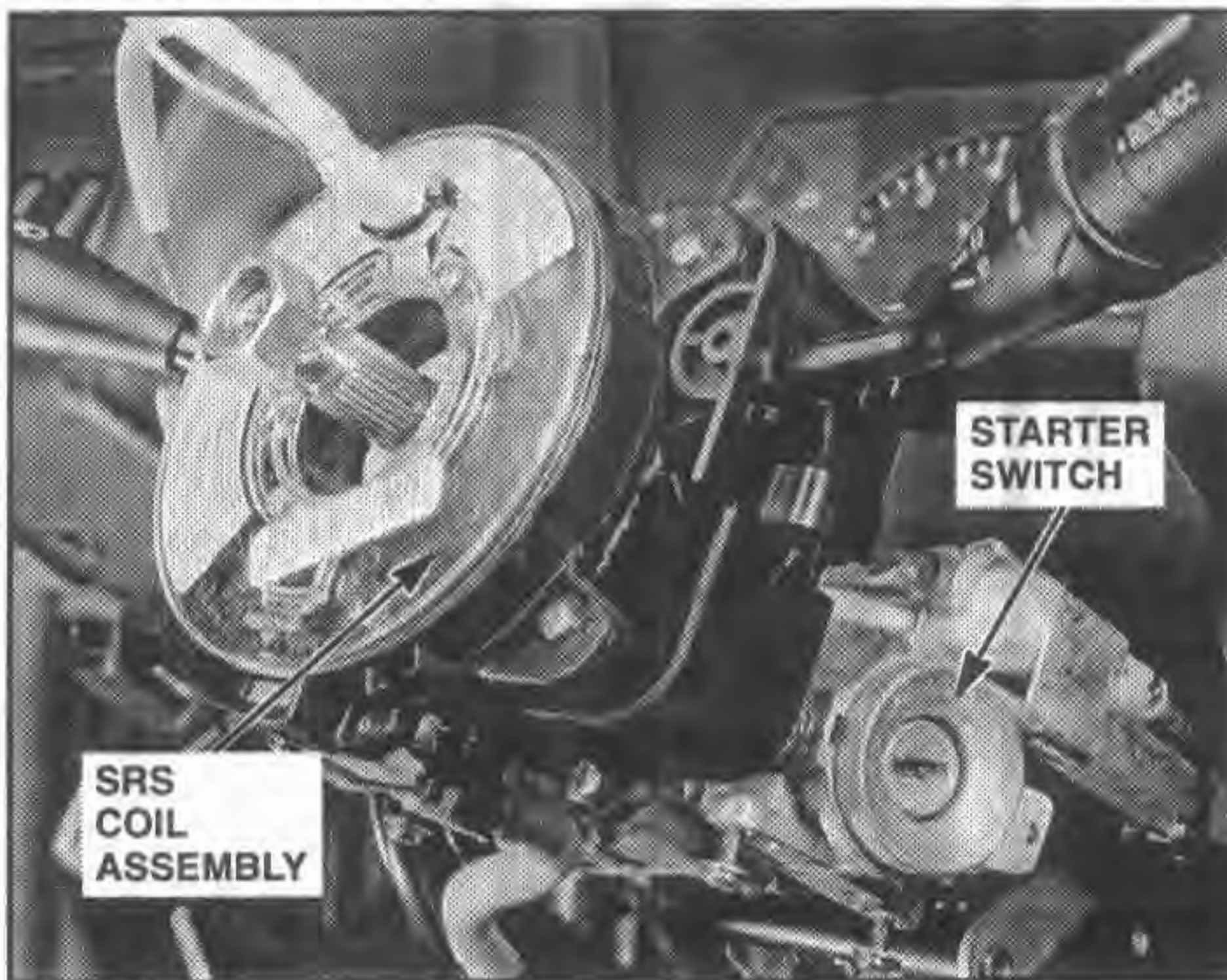
53. Rear of Meter Assembly



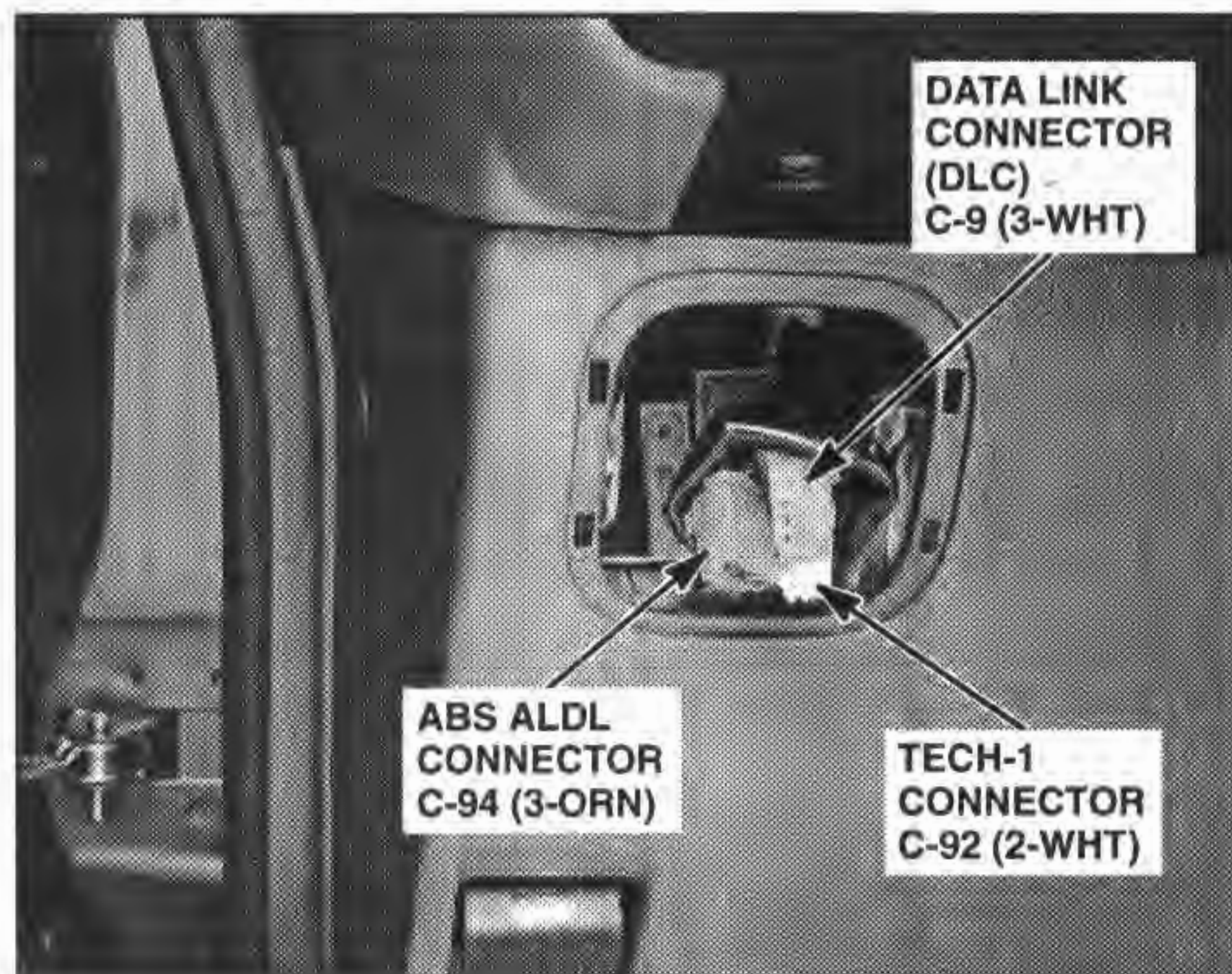
51. Left Front of Vehicle



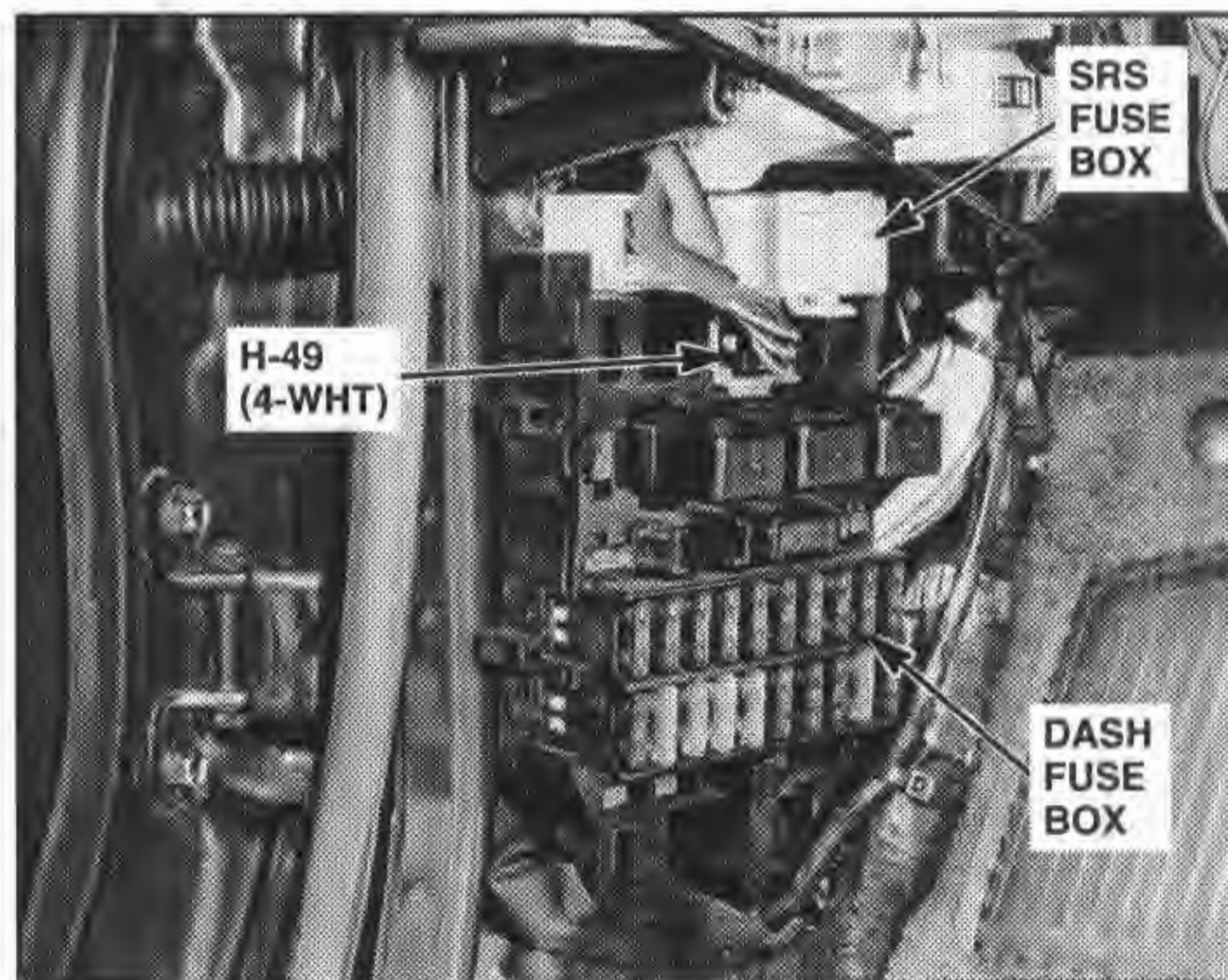
54. Top of Steering Column



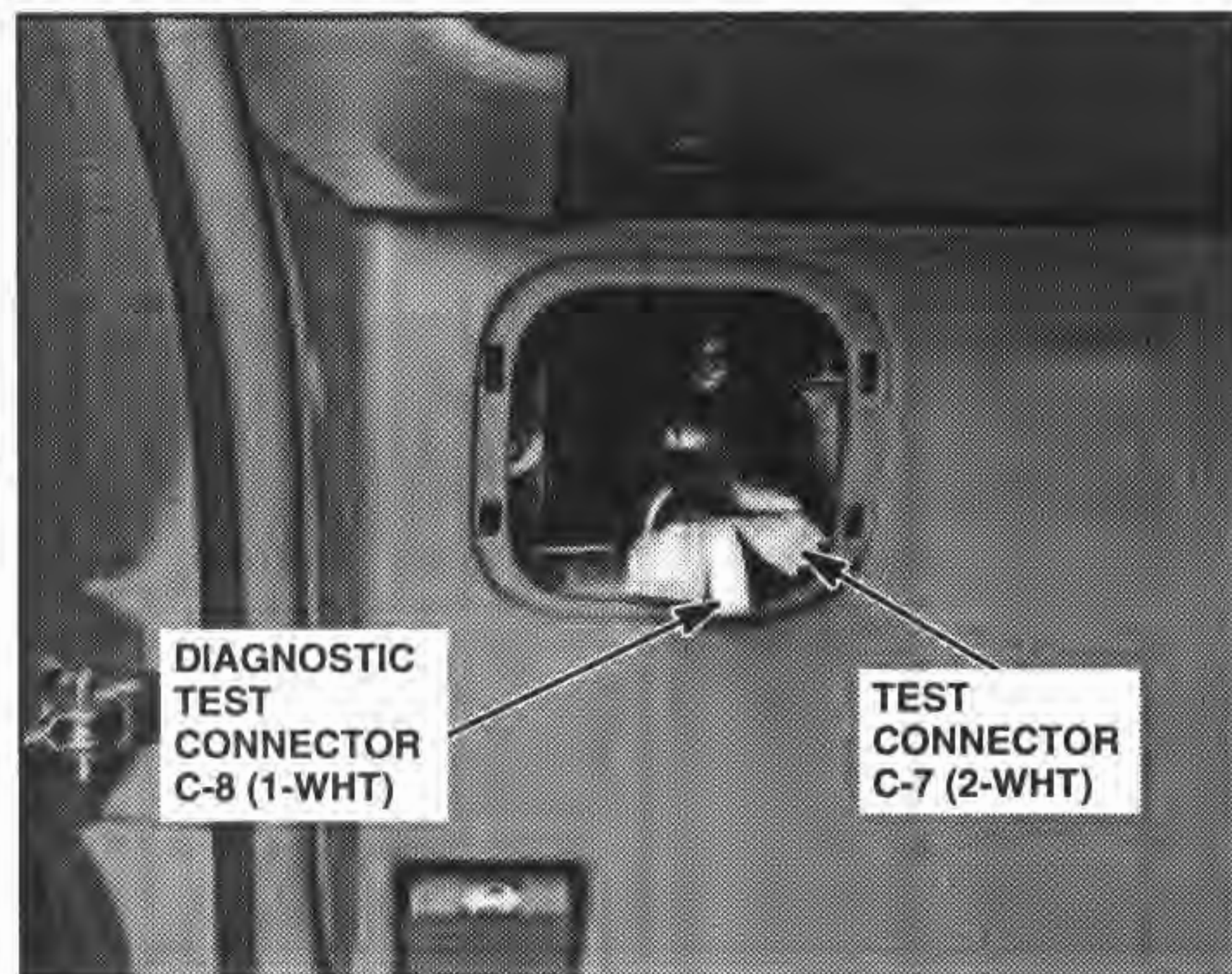
55. Left Side of I/P



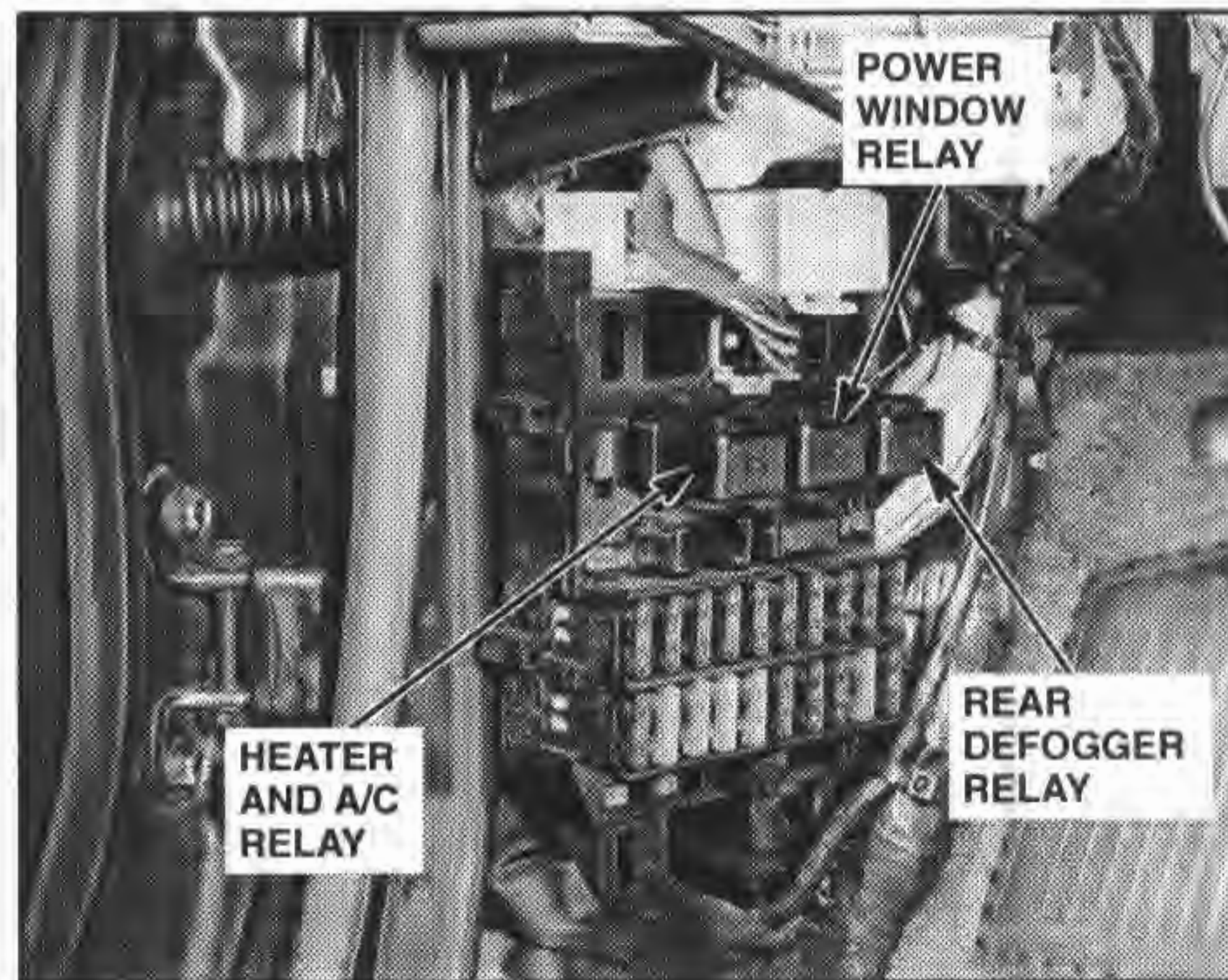
58. Behind Left Dash Side Trim Panel



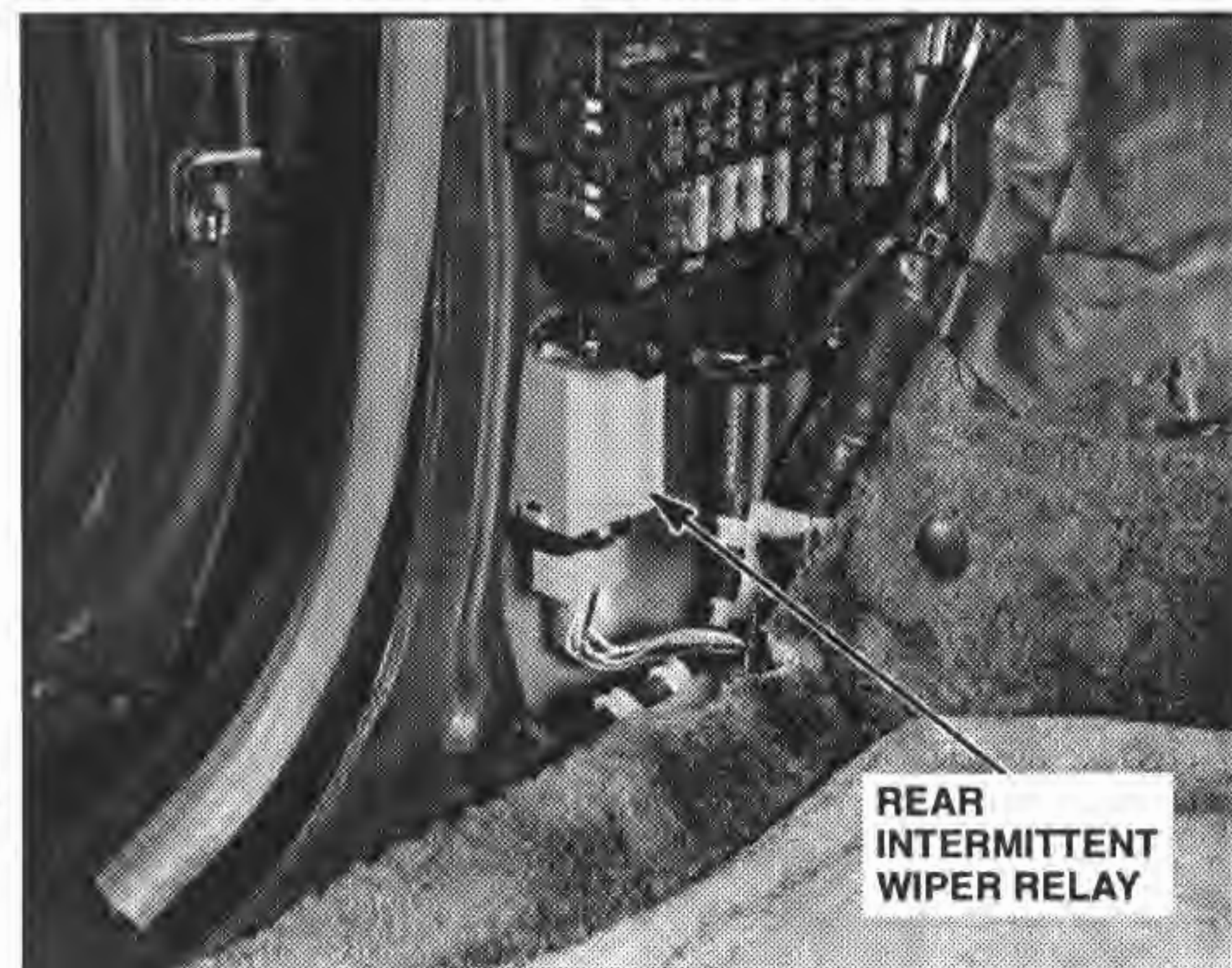
56. Left Side of I/P



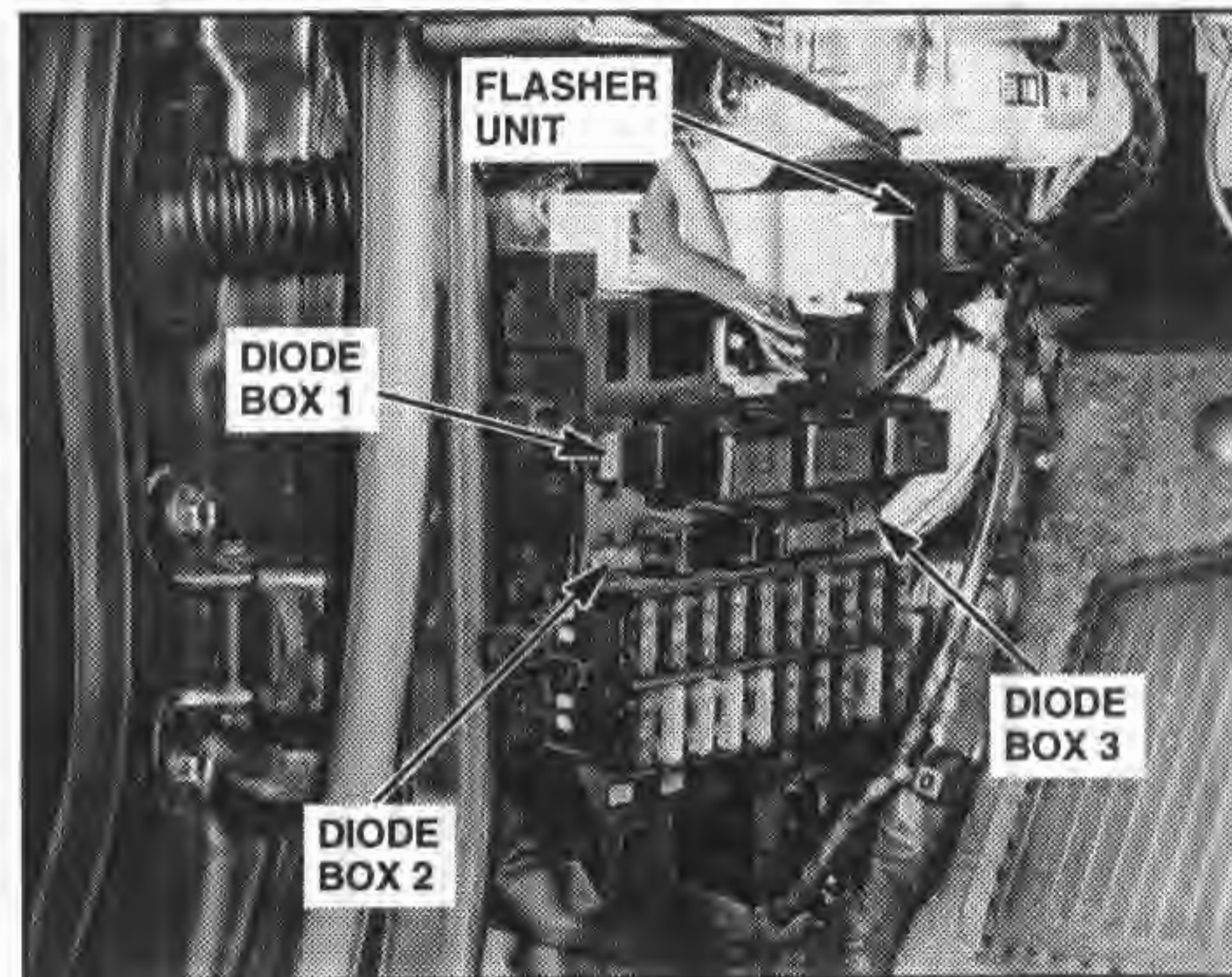
59. Behind Left Dash Side Trim Panel



57. Behind Left Dash Side Trim Panel

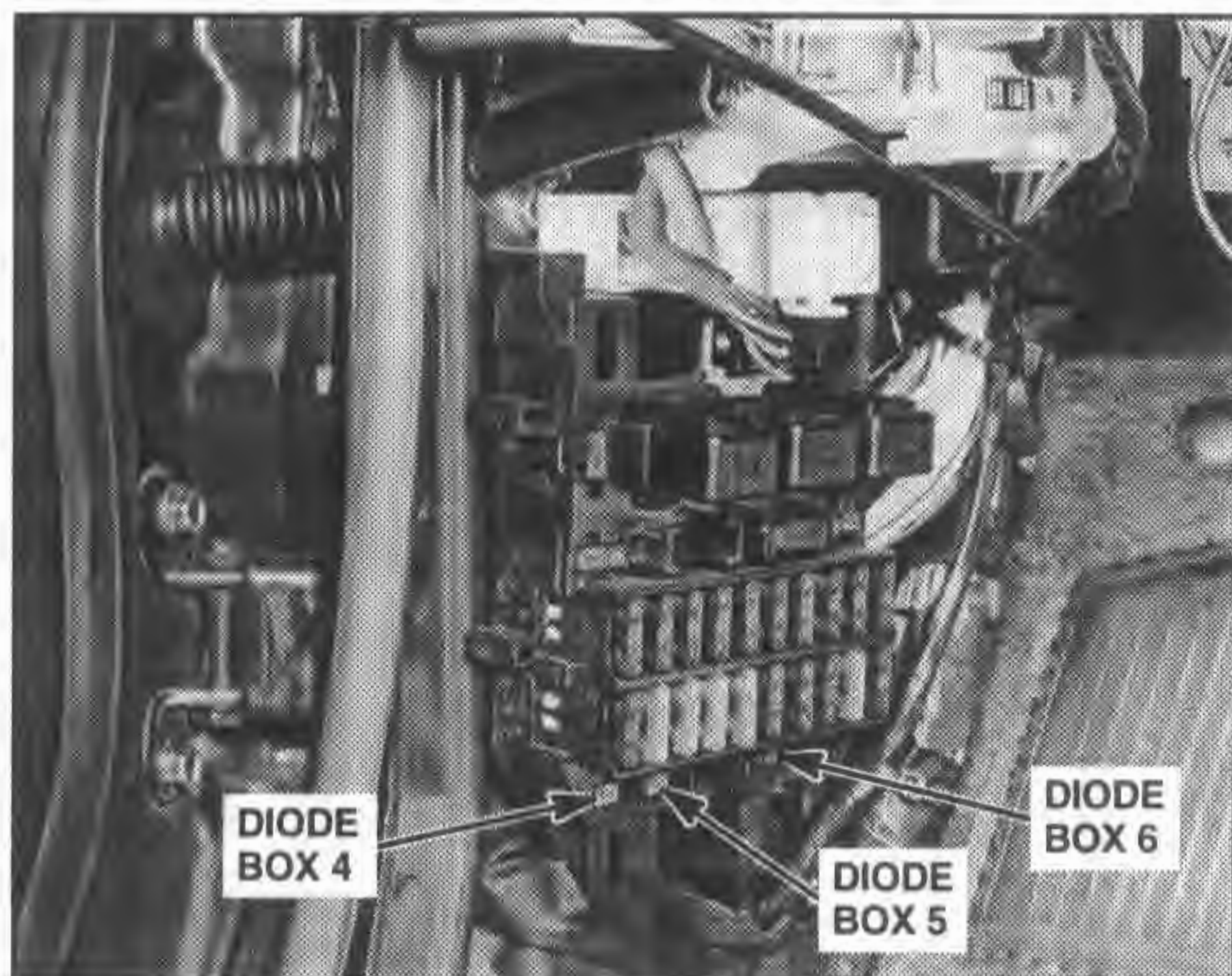


60. Behind Left Dash Side Trim Panel

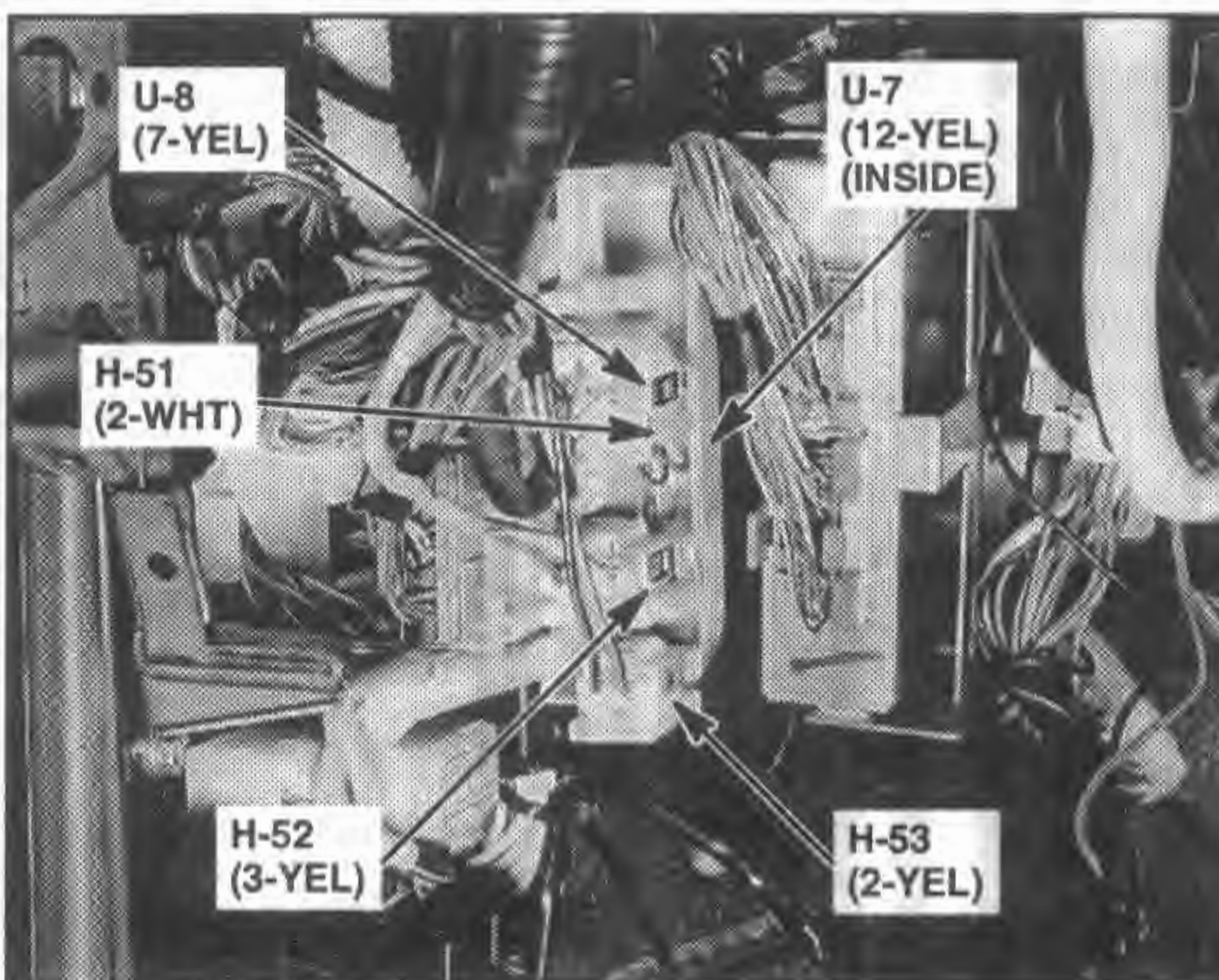


COMPONENT LOCATION PHOTOGRAPHS

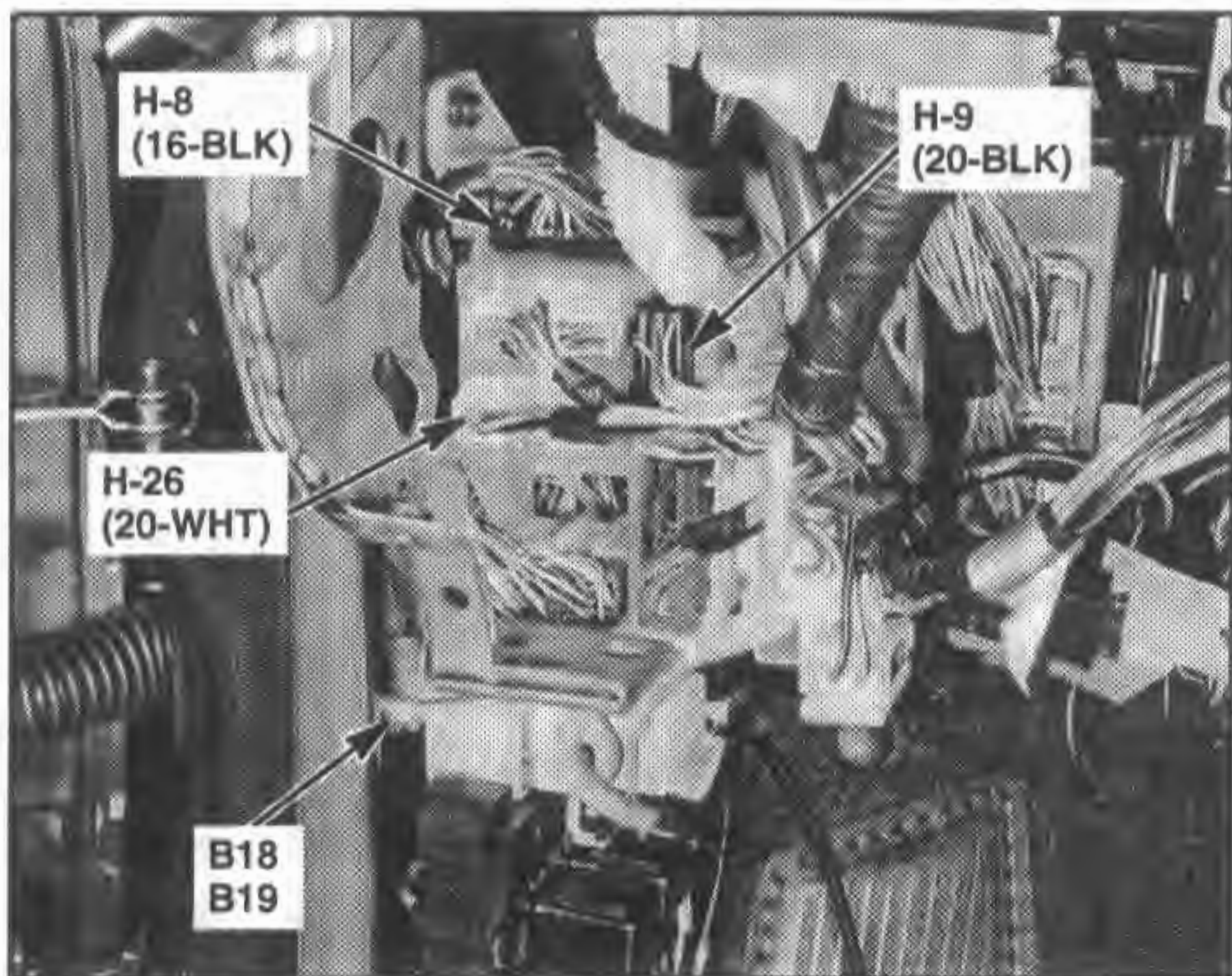
61. Behind Left Dash Side Trim Panel



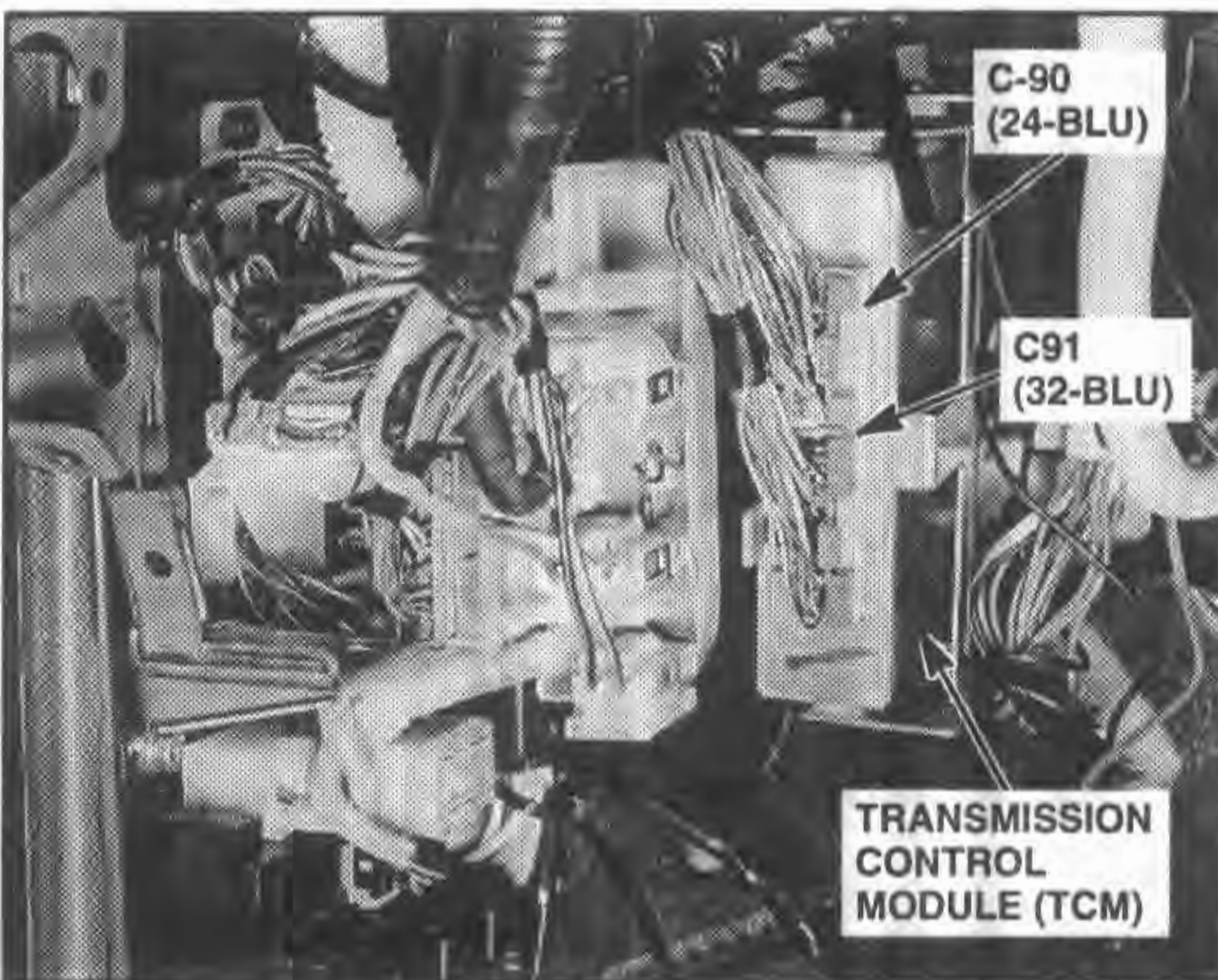
64. Below Left Side of I/P



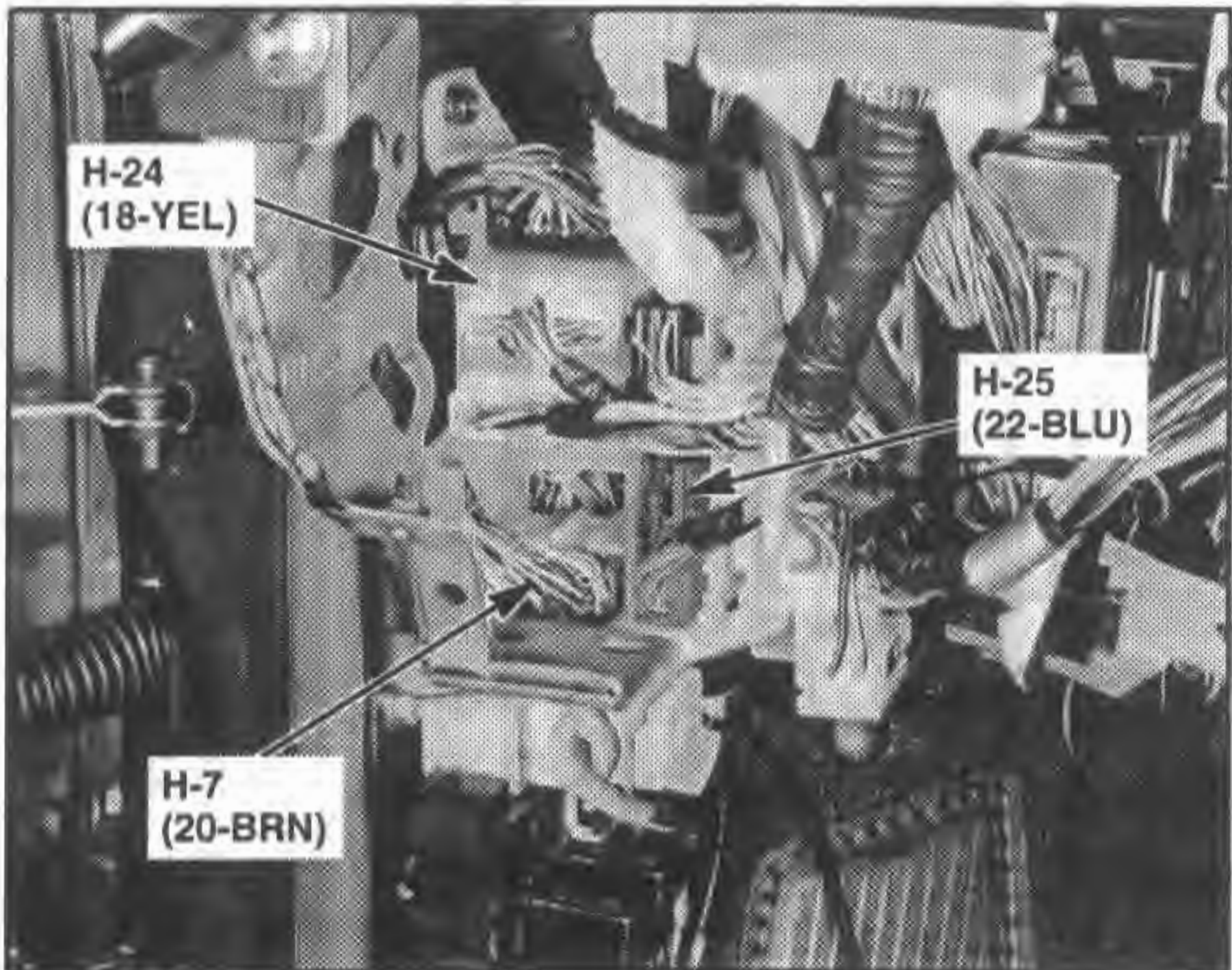
62. Below I/P, Above Left Dash Side Trim Panel



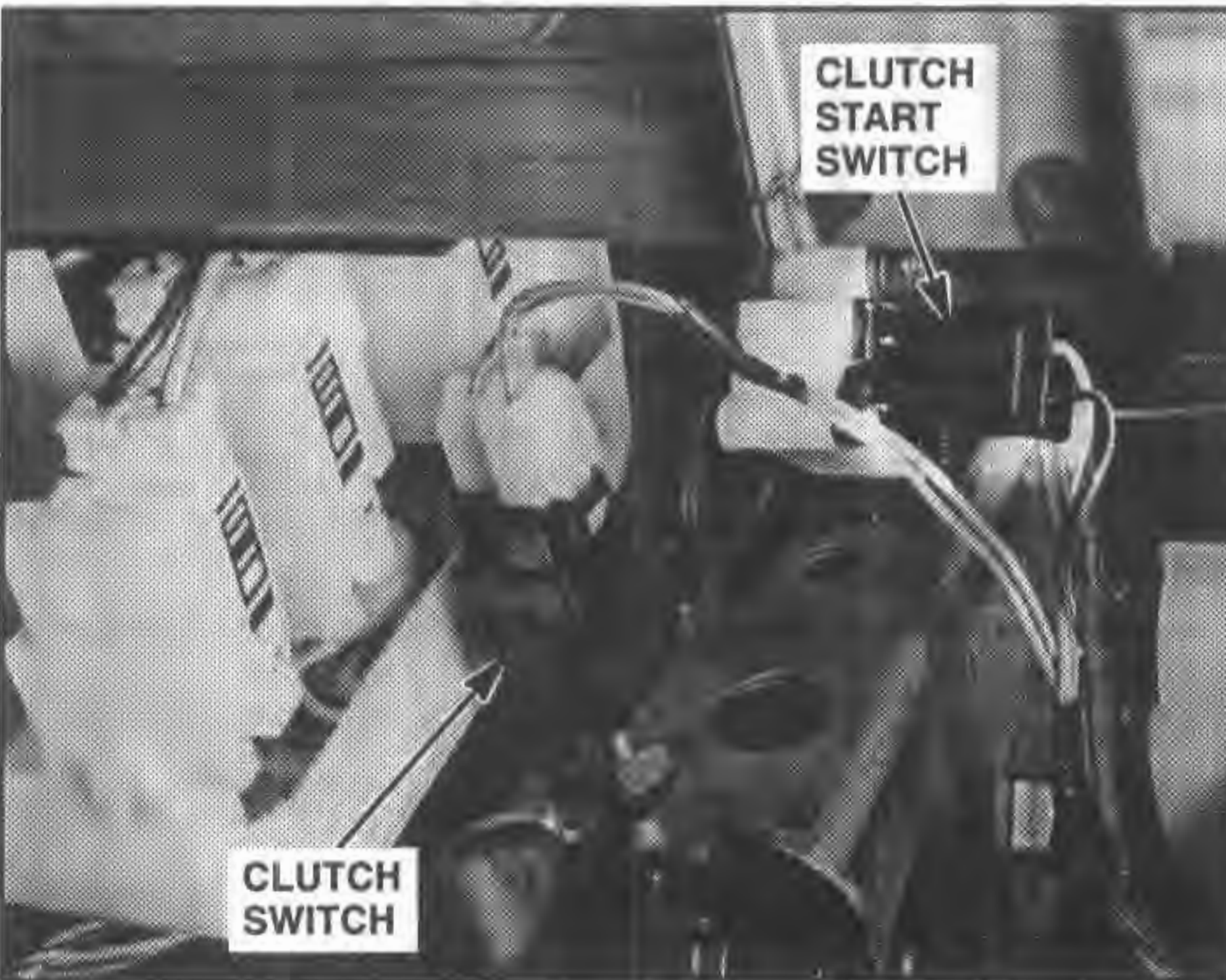
65. Below Left Side of I/P



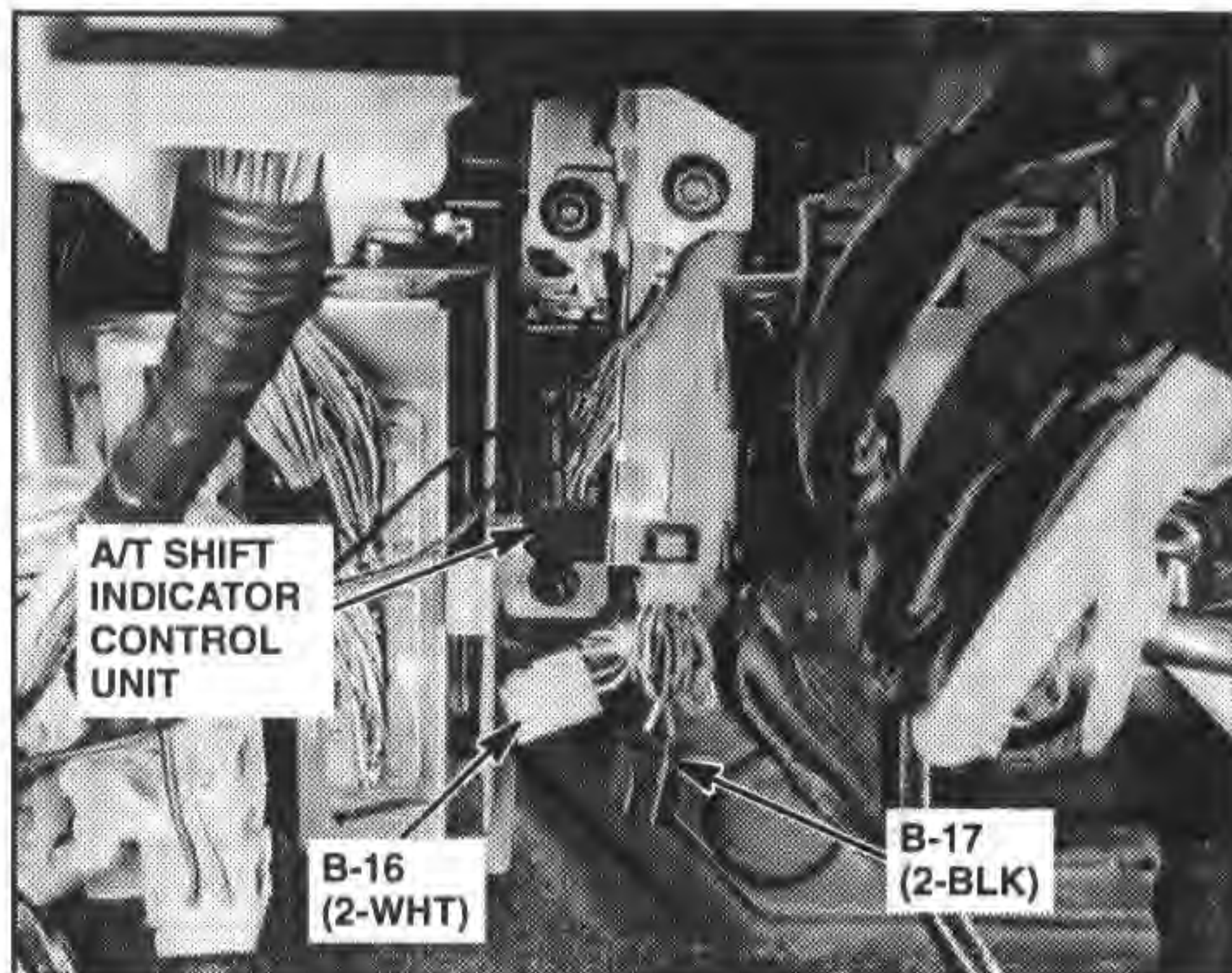
63. Below I/P, Above Left Dash Side Trim Panel



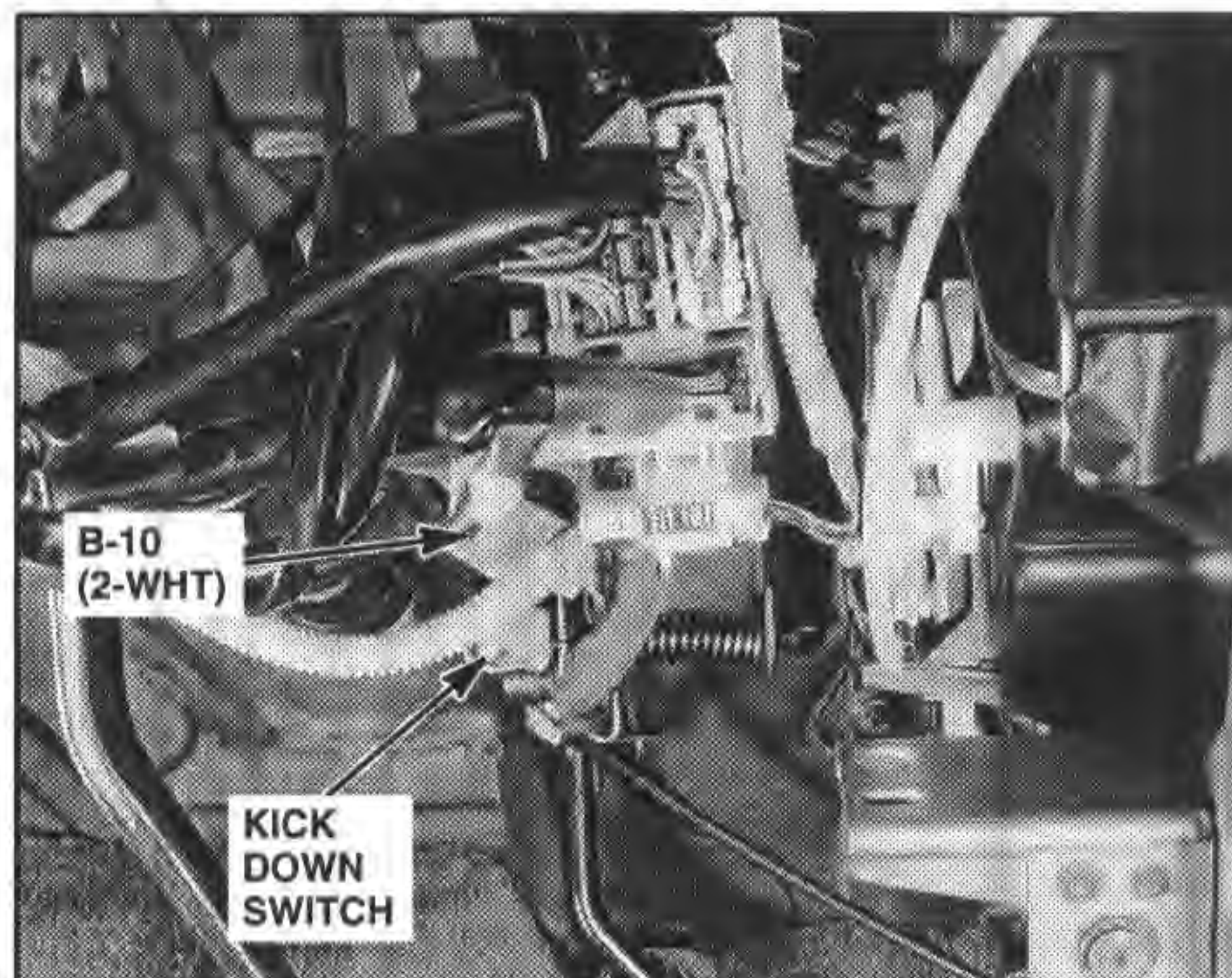
66. Below Left Side of I/P



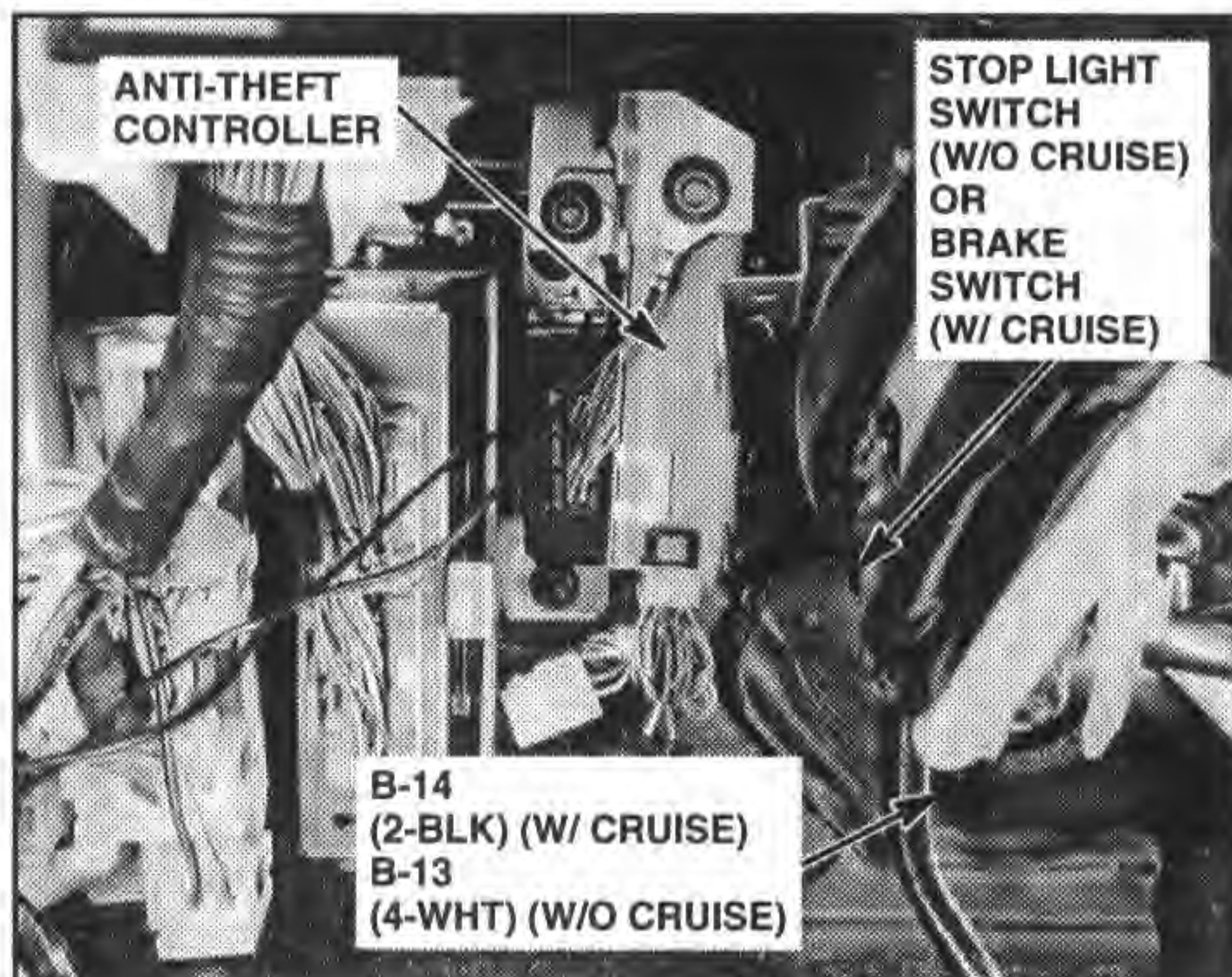
67. Below Left Side of I/P



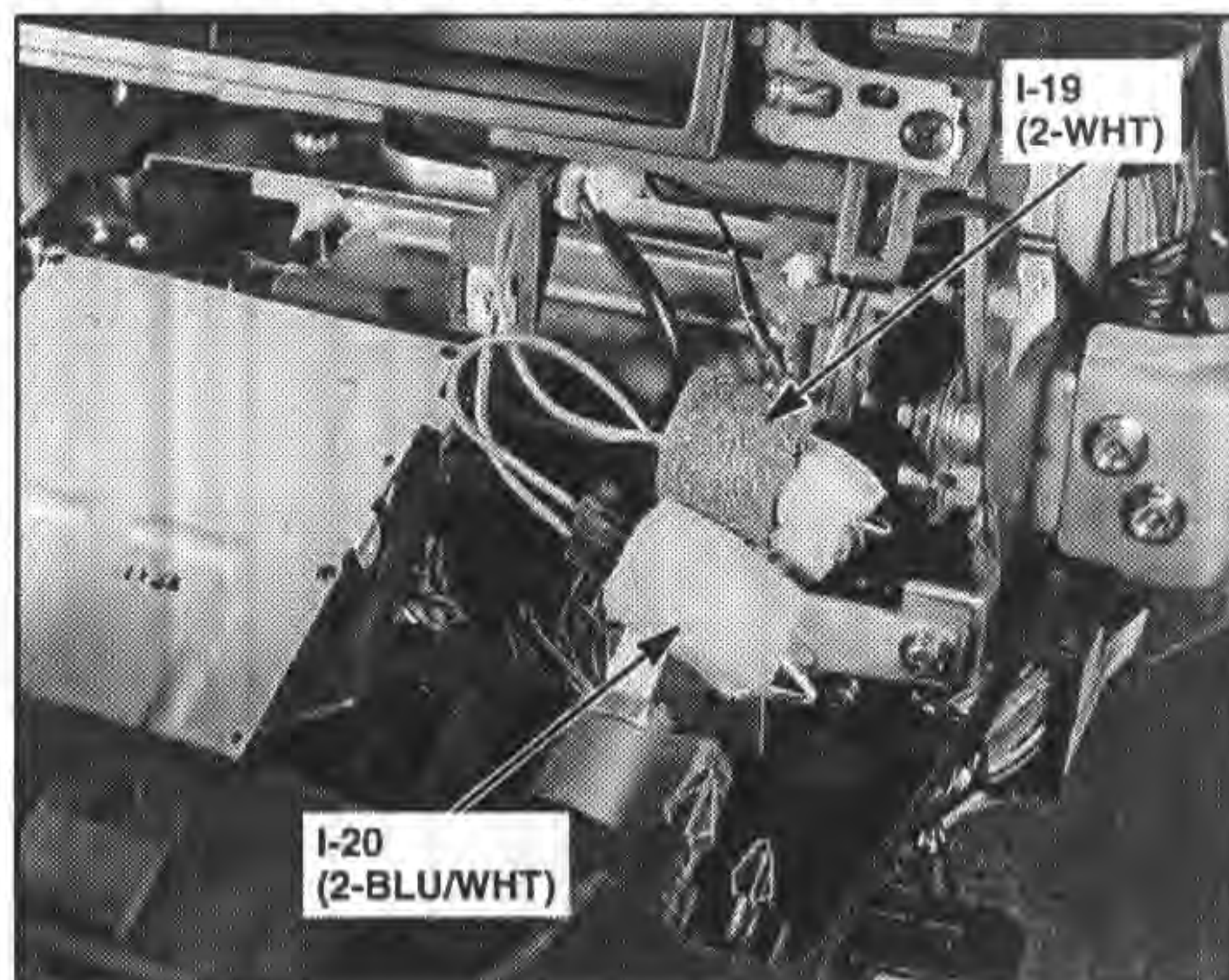
70. Below I/P, Right of Steering Column



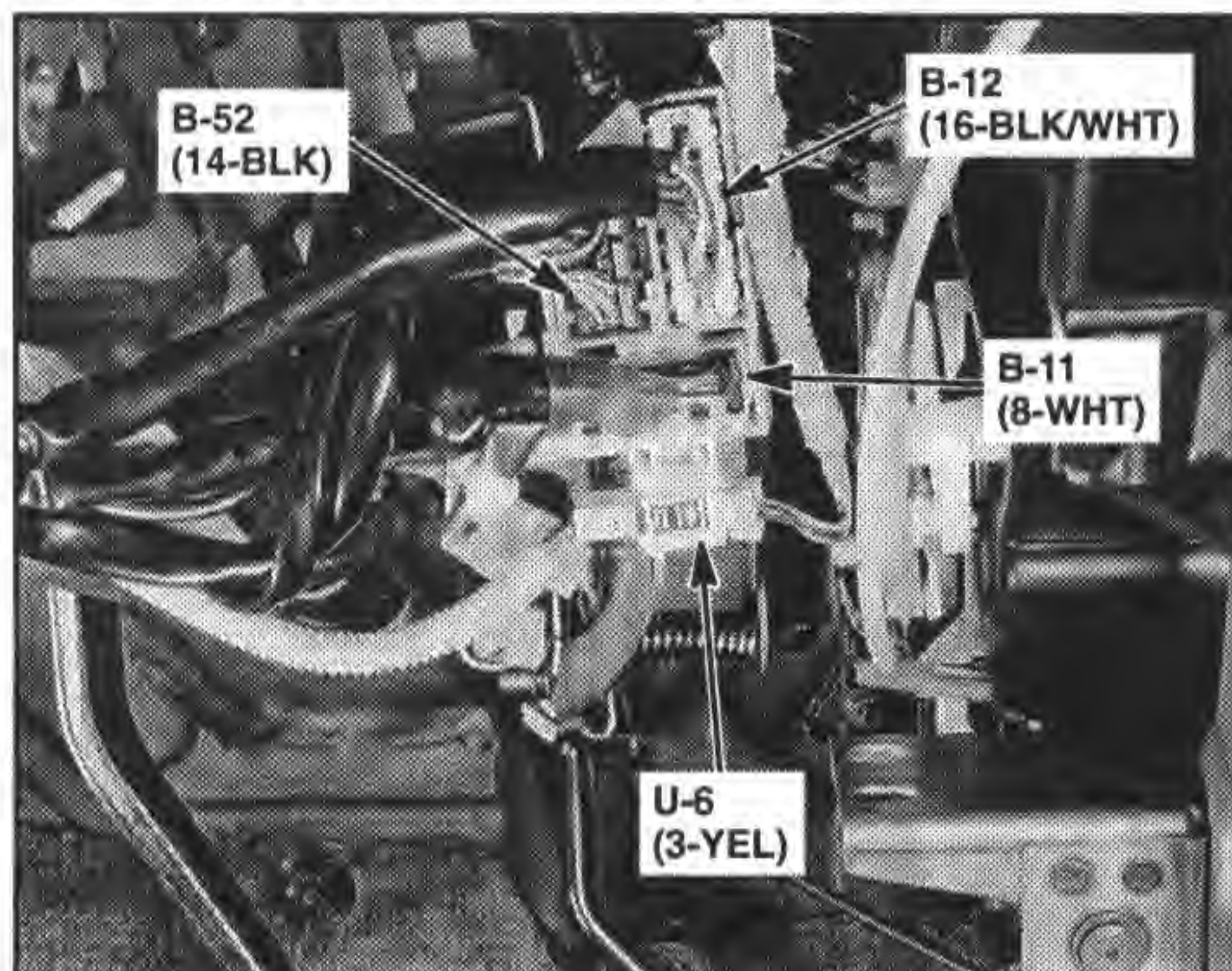
68. Below Left Side of I/P



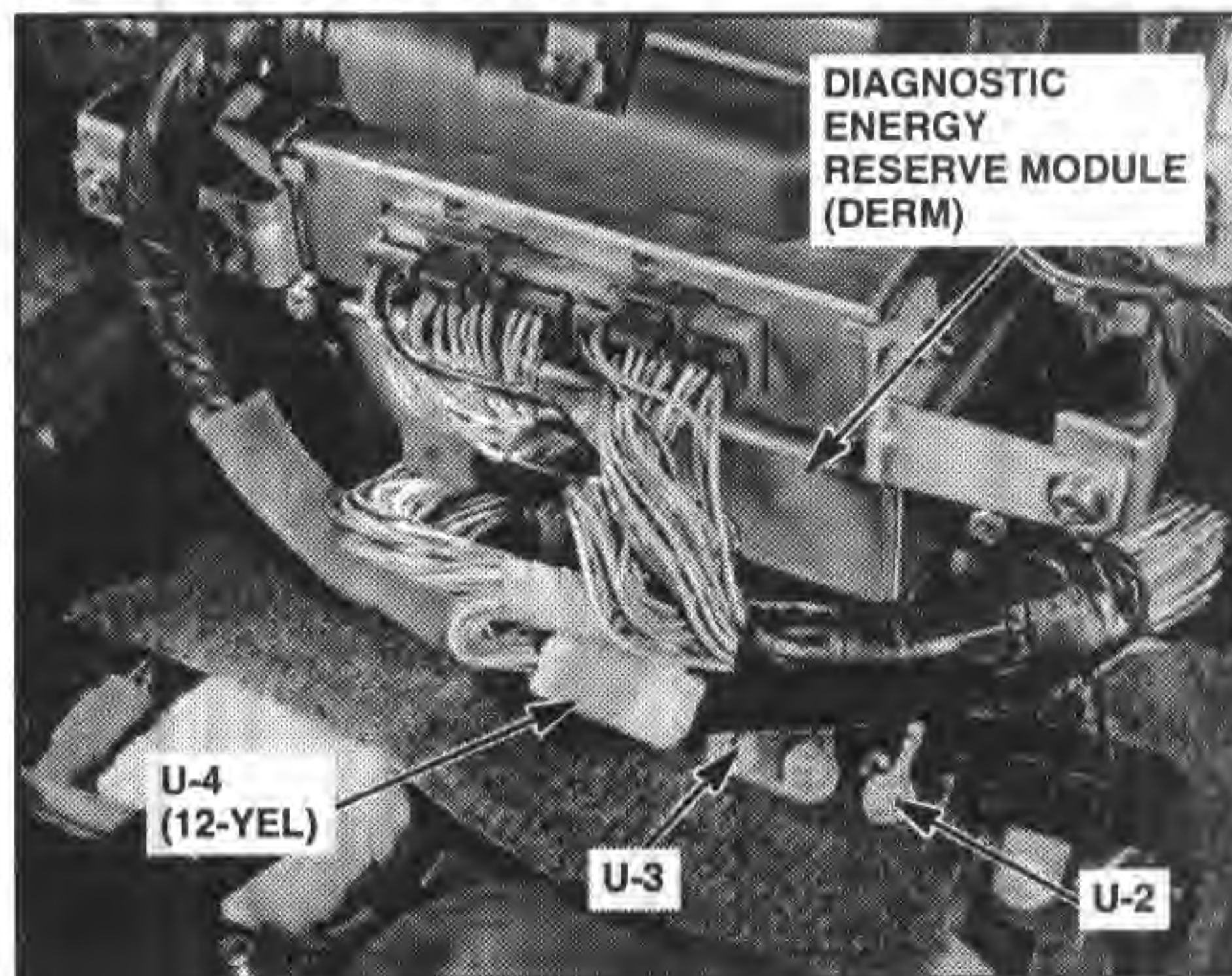
71. Behind Lower Cluster Assembly



69. Below I/P, Right of Steering Column

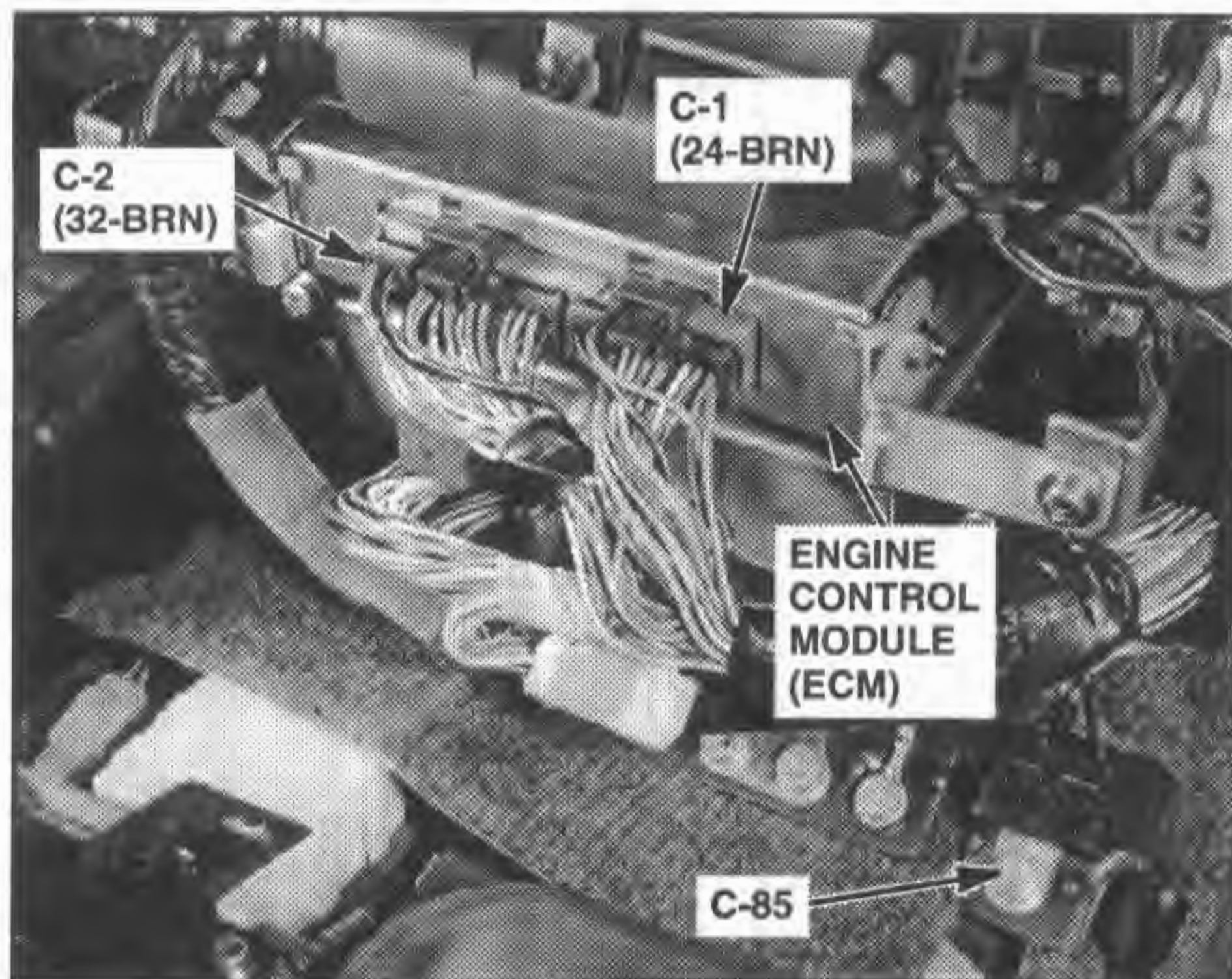


72. Behind Front Console

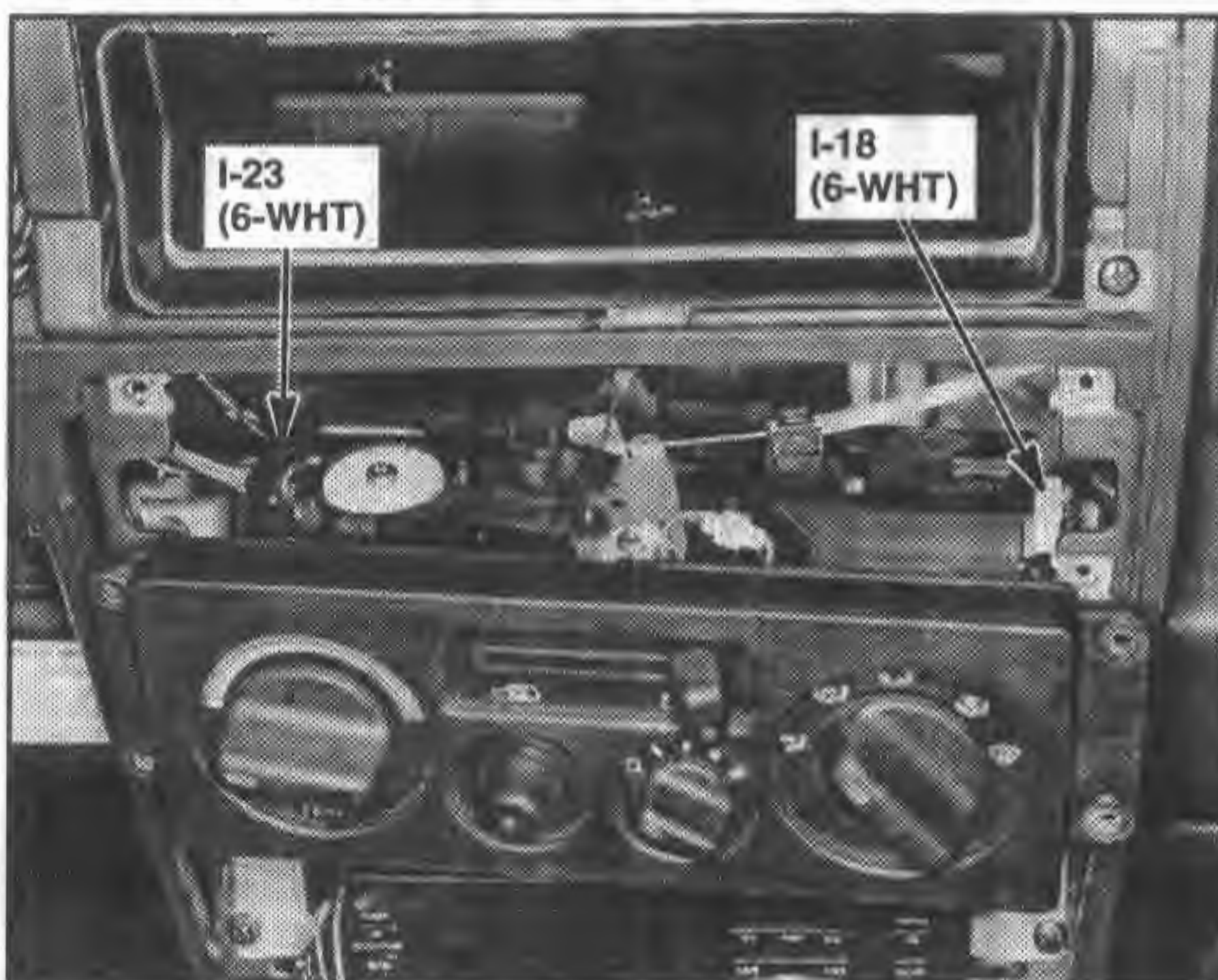


COMPONENT LOCATION PHOTOGRAPHS

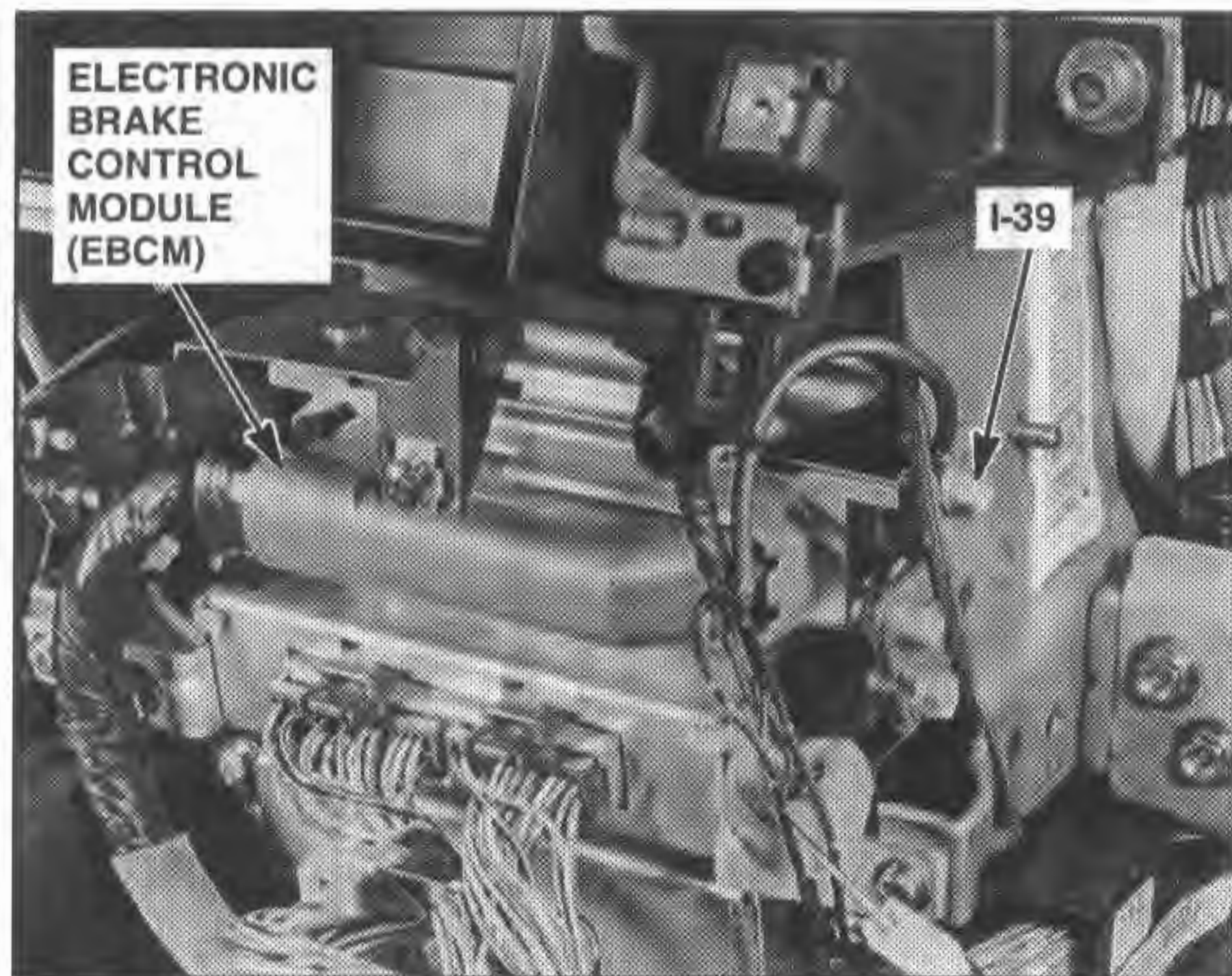
73. Behind Front Console



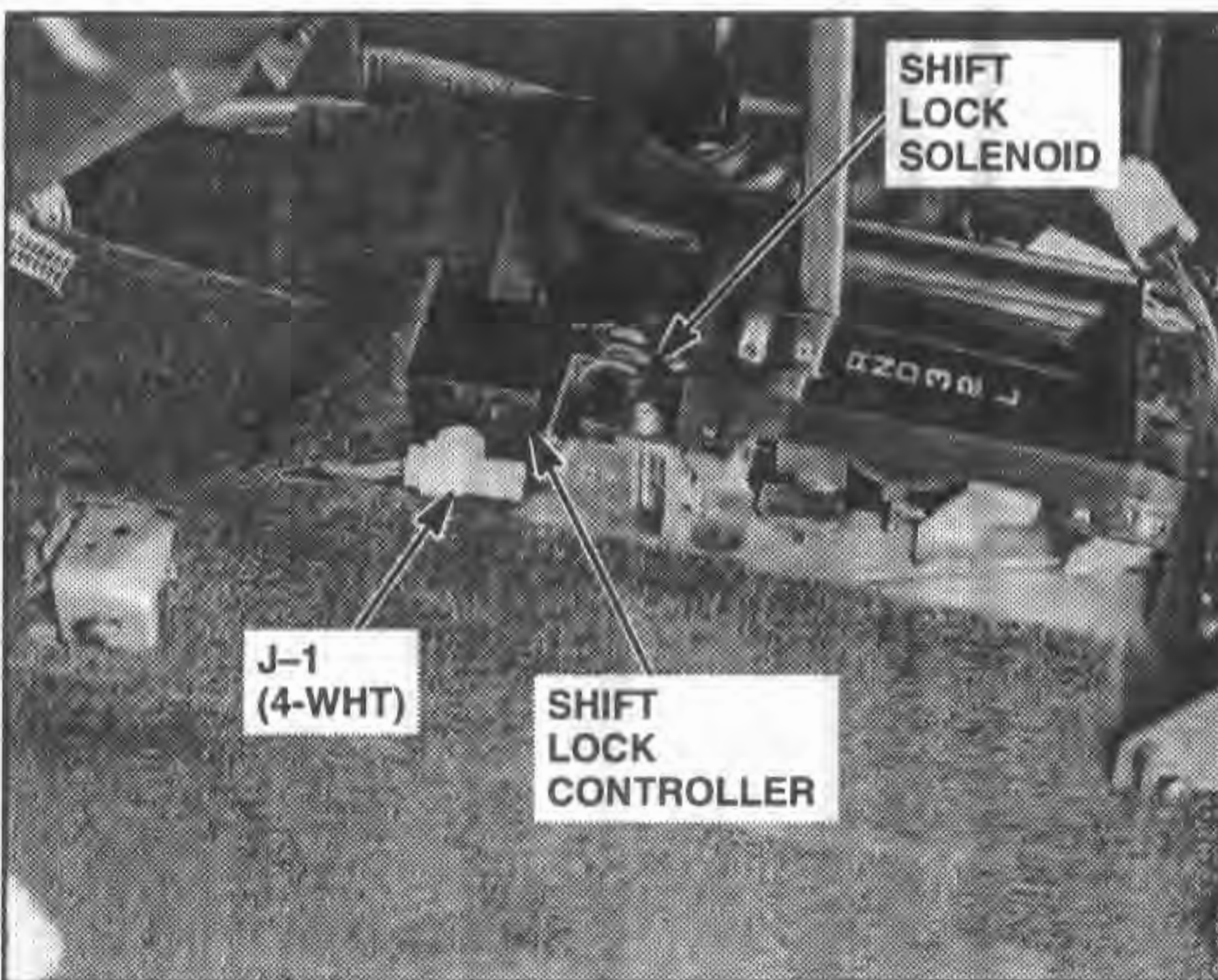
76. Behind Heater-A/C Control Panel



74. Center of I/P



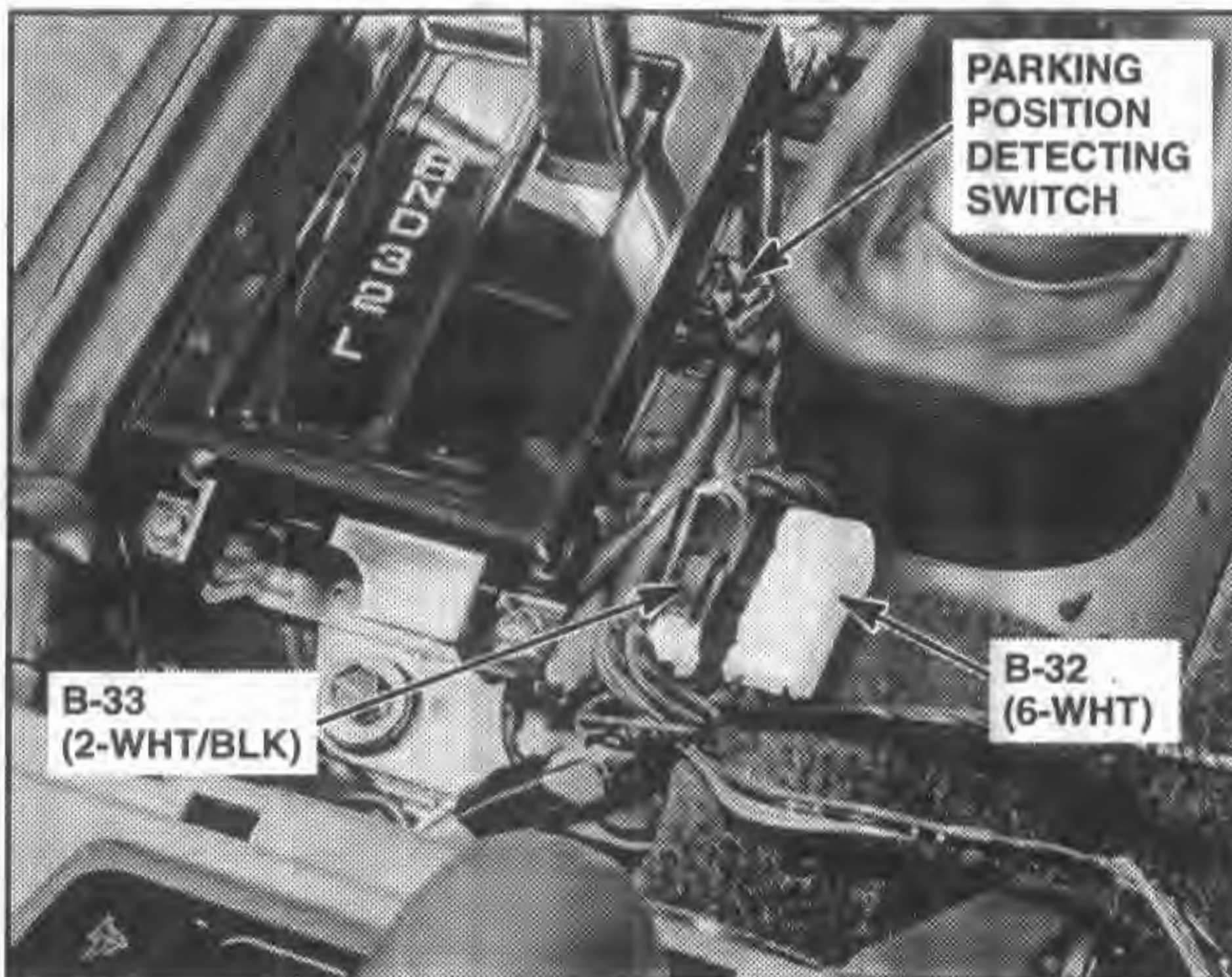
77. Below Left Side of Front Console



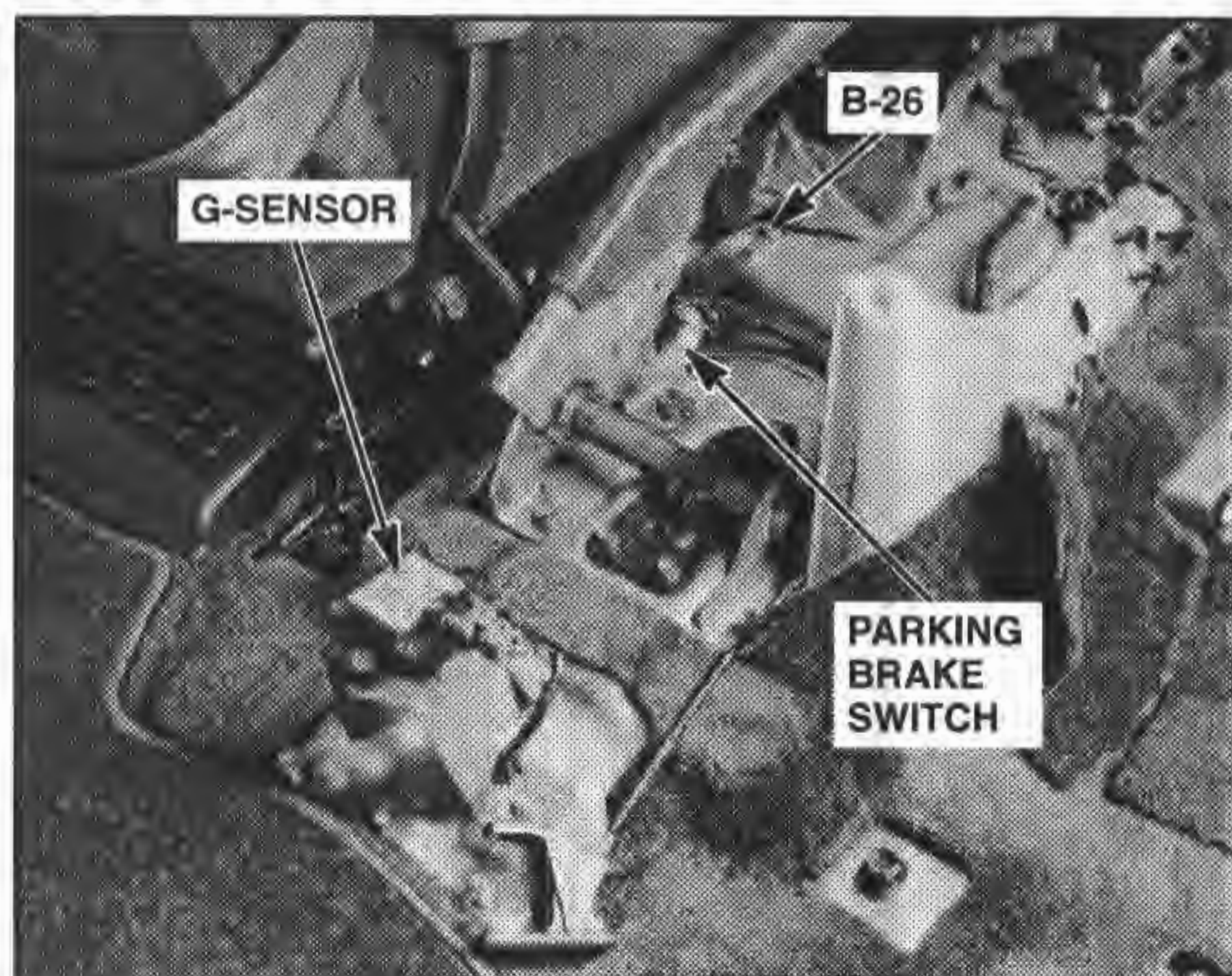
75. Center of I/P



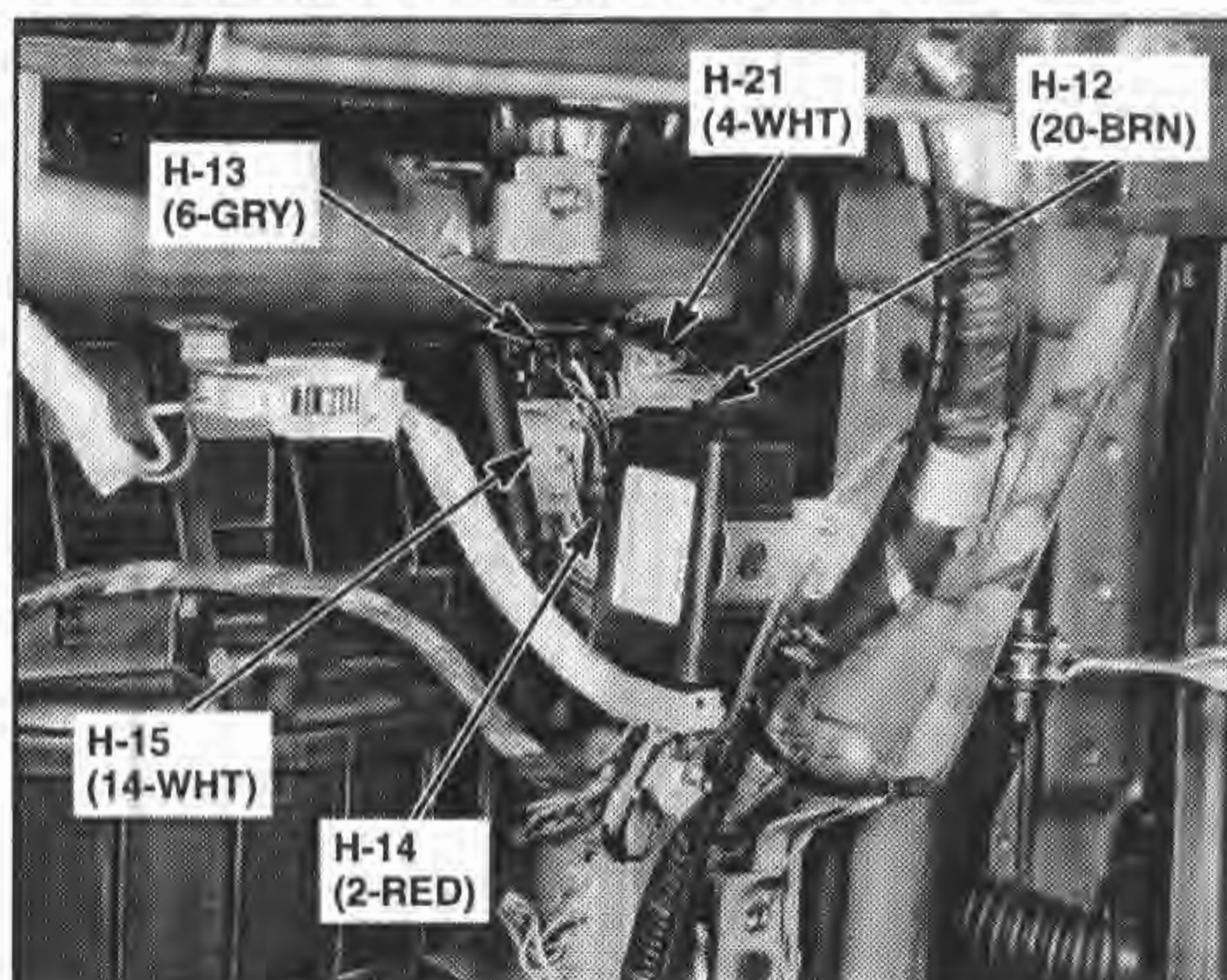
78. Below Front Console



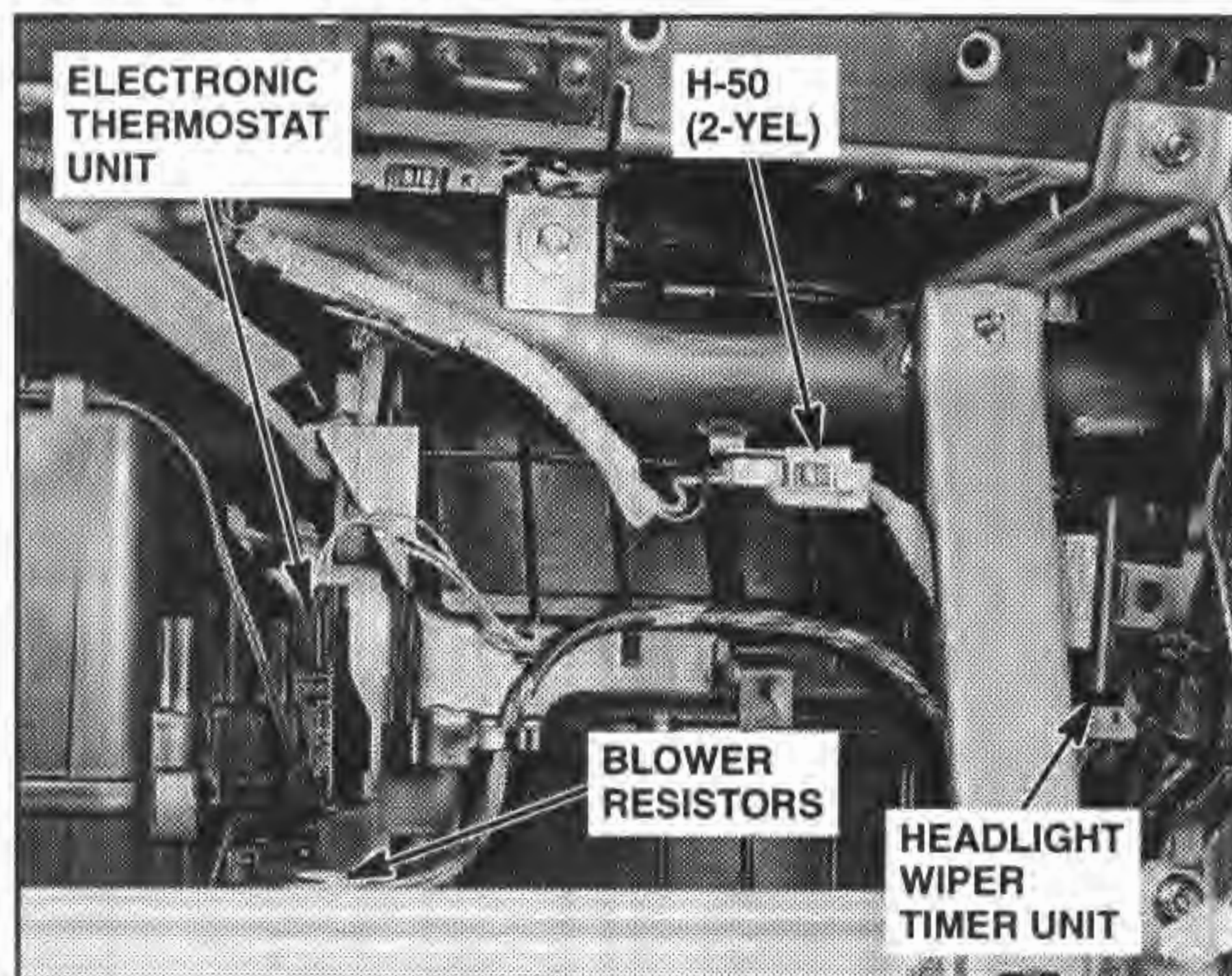
79. Below Center Console



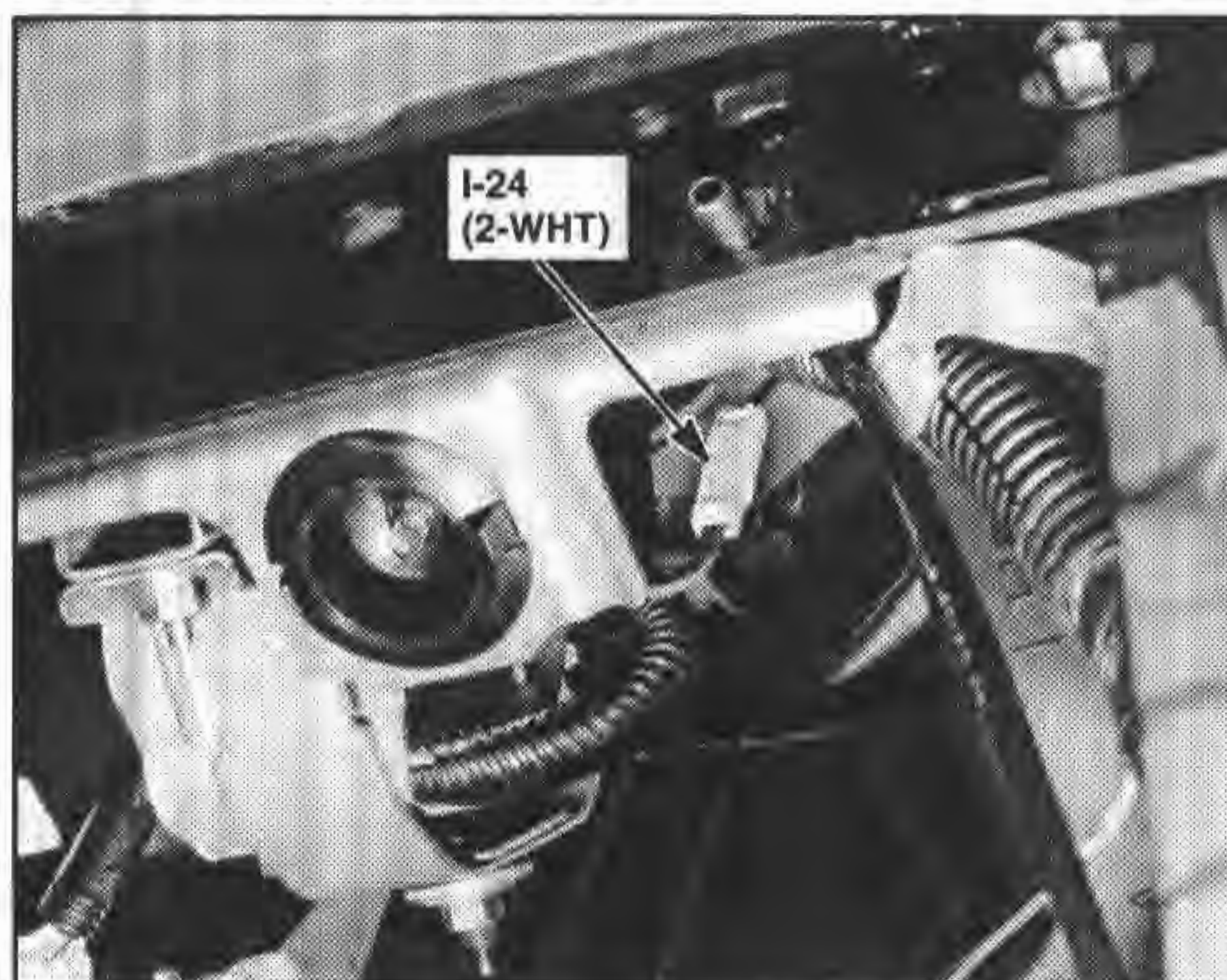
82. Below I/P, Above Right Dash Side Trim Panel



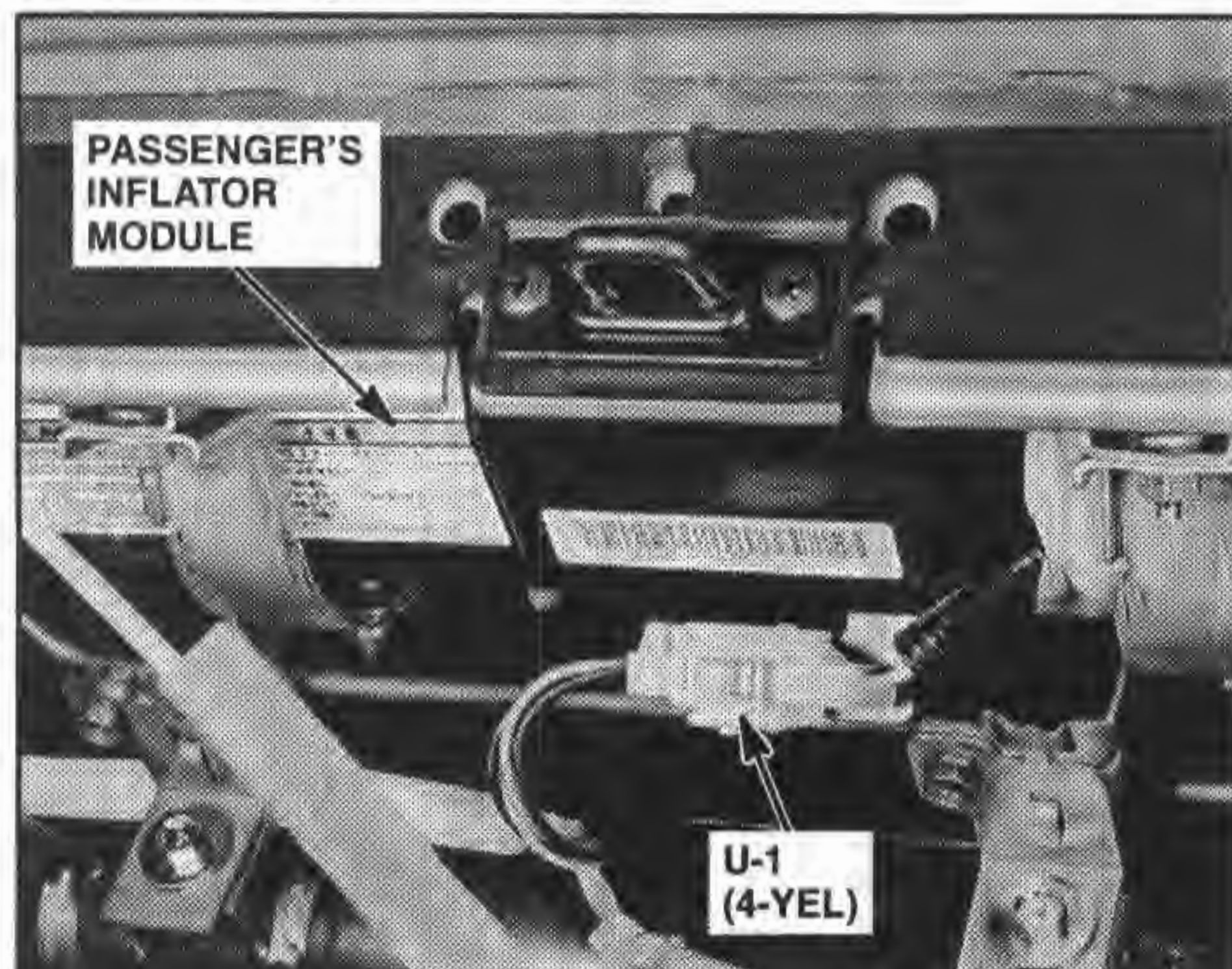
80. Below Right Side of I/P



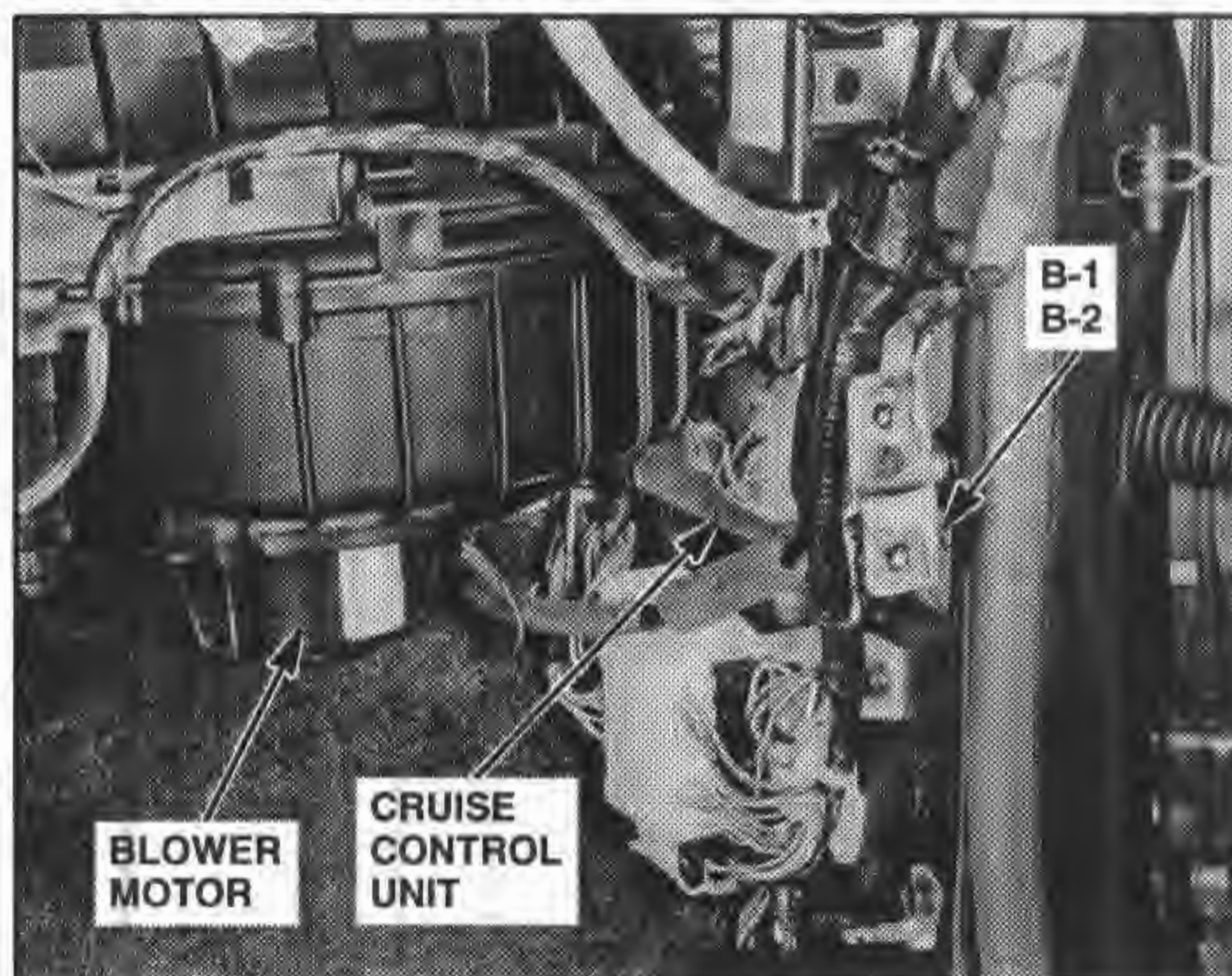
83. Behind Right Side of I/P



81. Behind Right Side of I/P

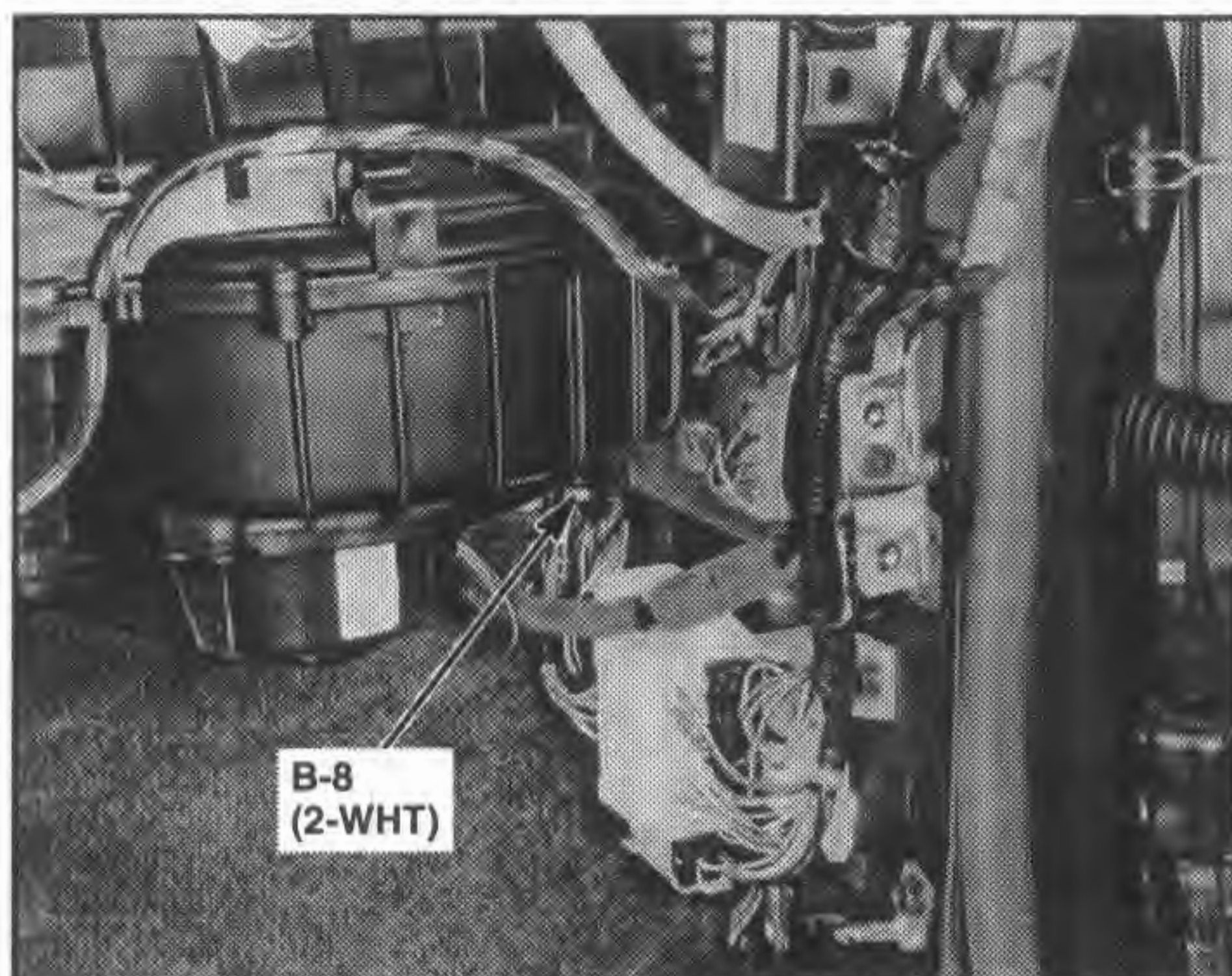


84. Below Right Side of I/P

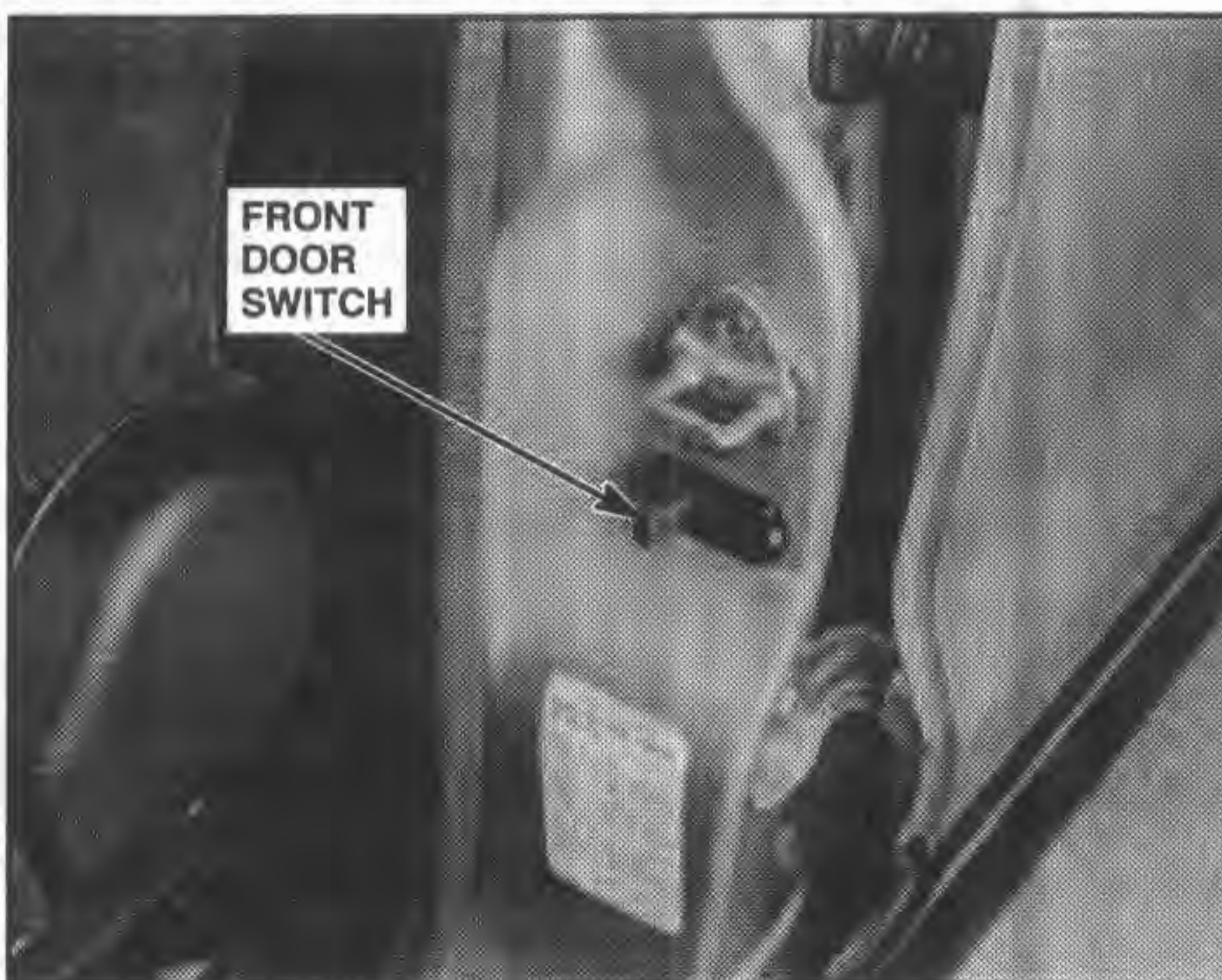


COMPONENT LOCATION PHOTOGRAPHS

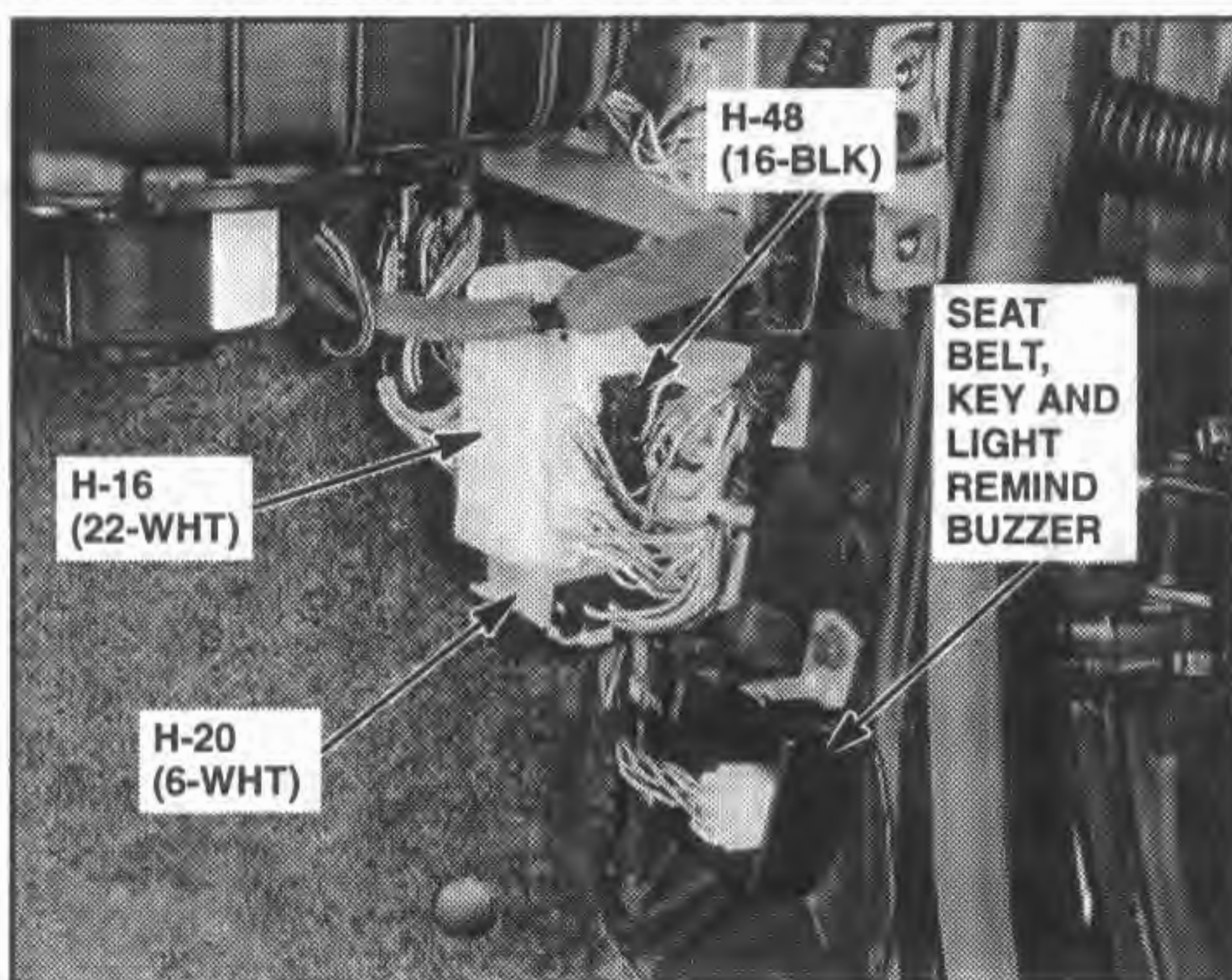
85. Below Right Side of I/P



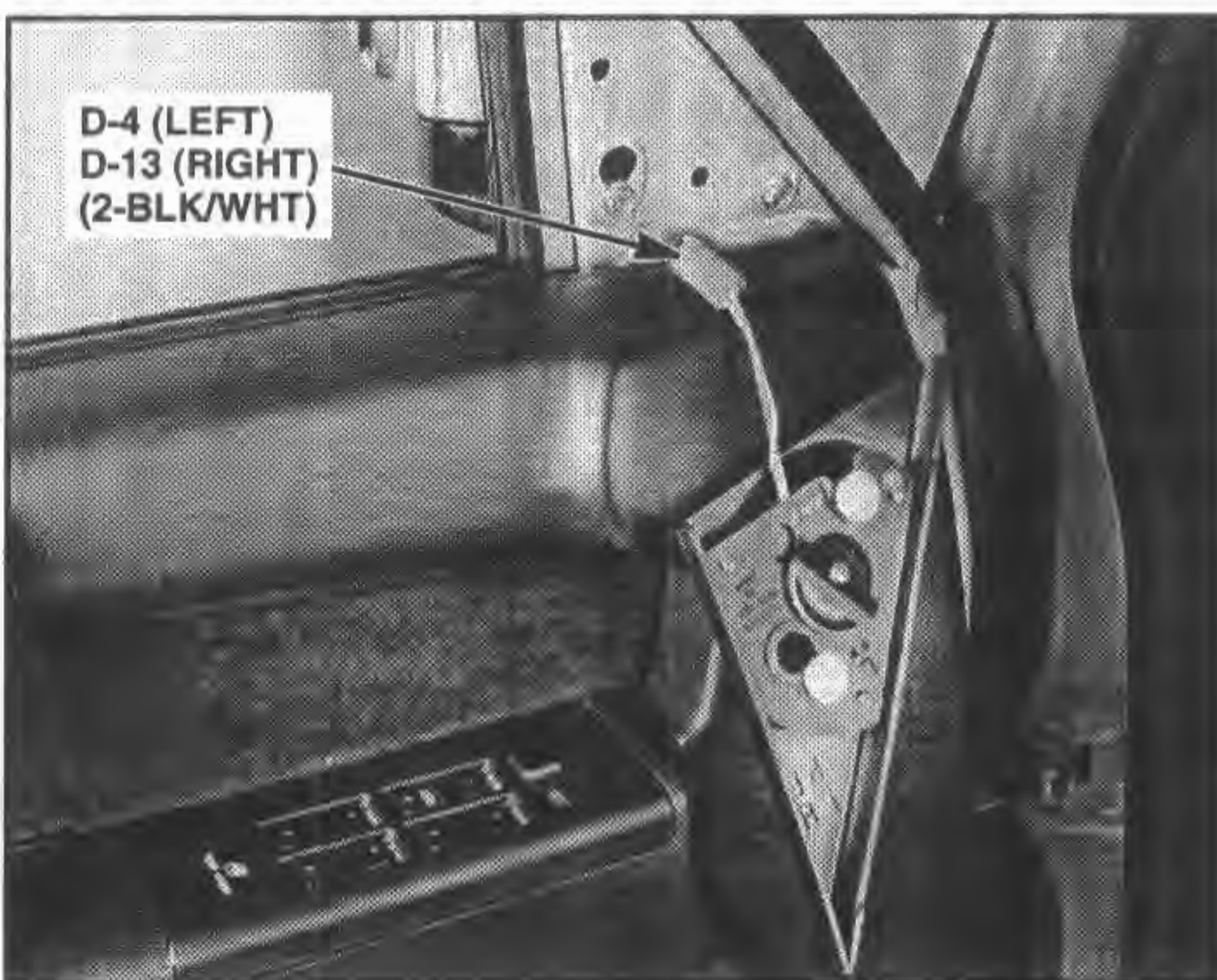
88. Near Left Front Door Striker (Right Similar)



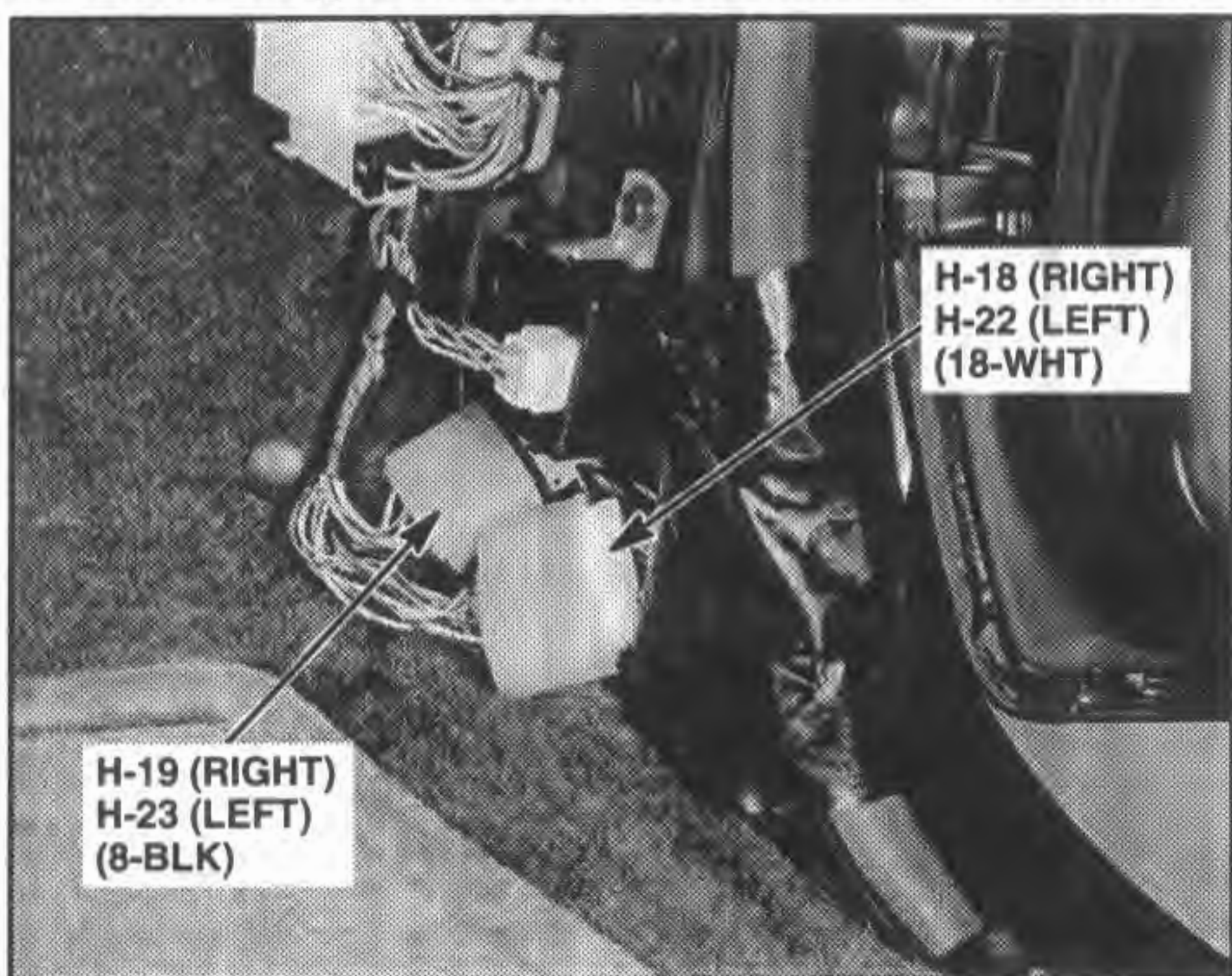
86. Behind Right Dash Side Trim Panel



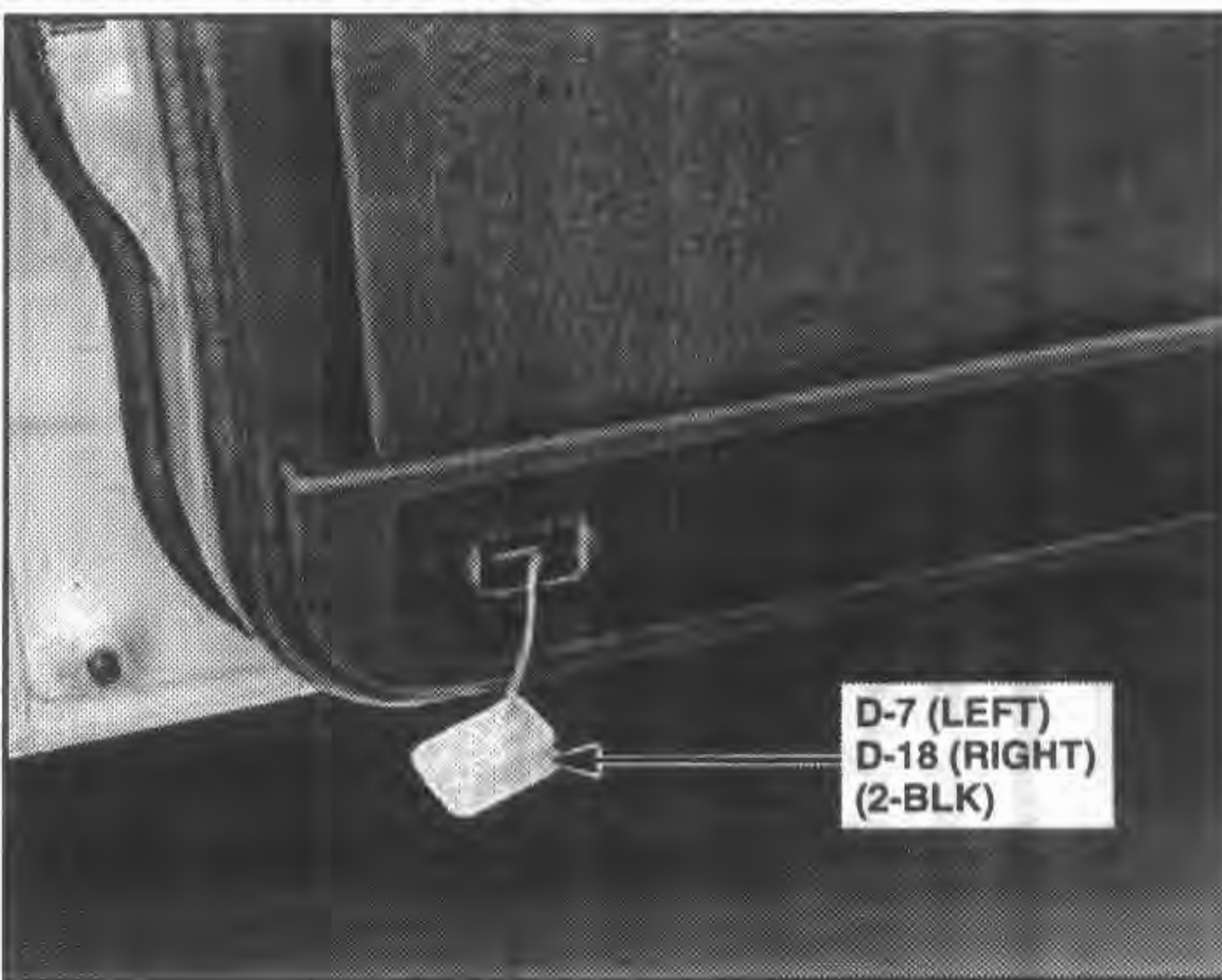
89. Left Front Door (Right Similar)



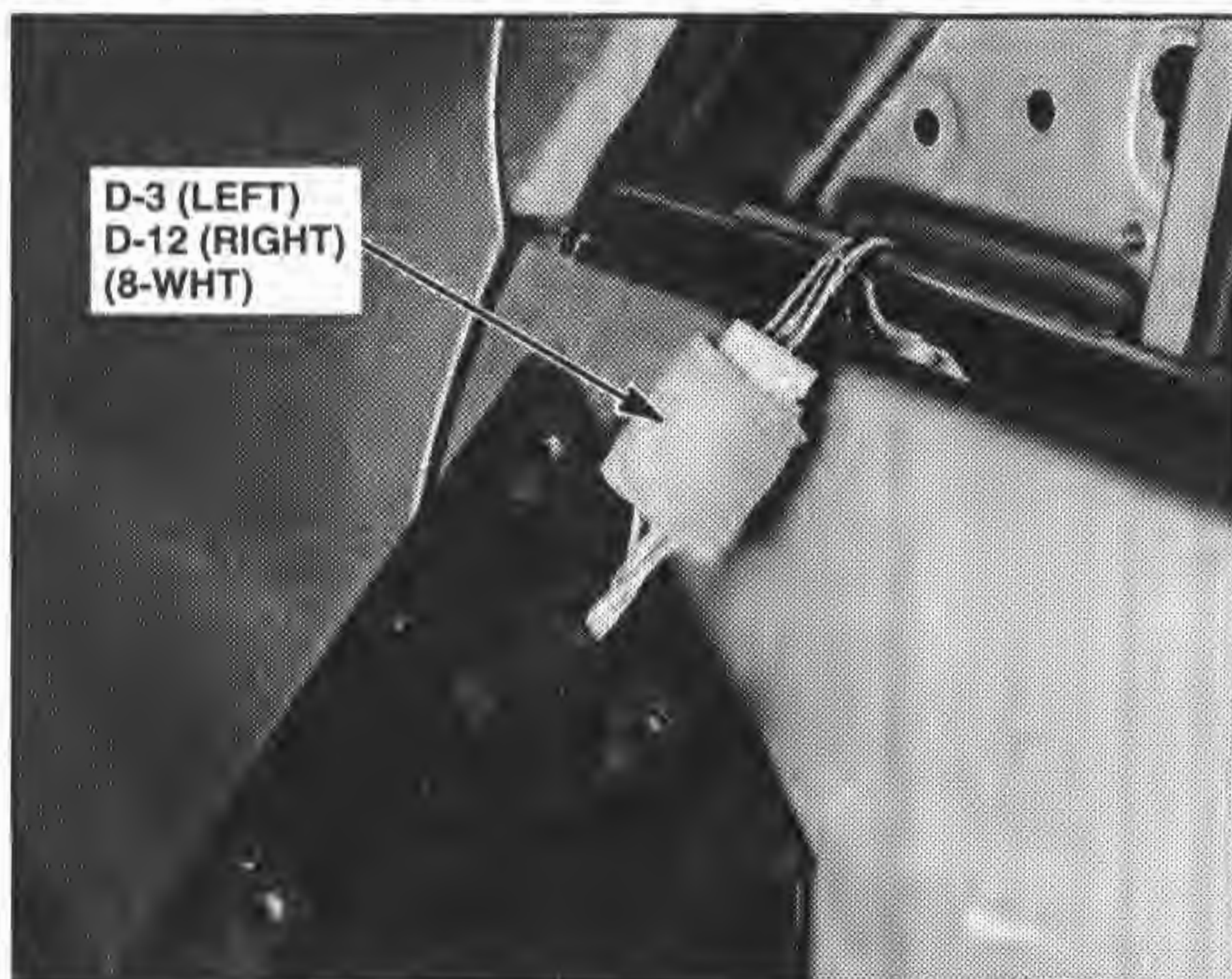
87. Behind Right Dash Side Trim Panel (Left Similar)



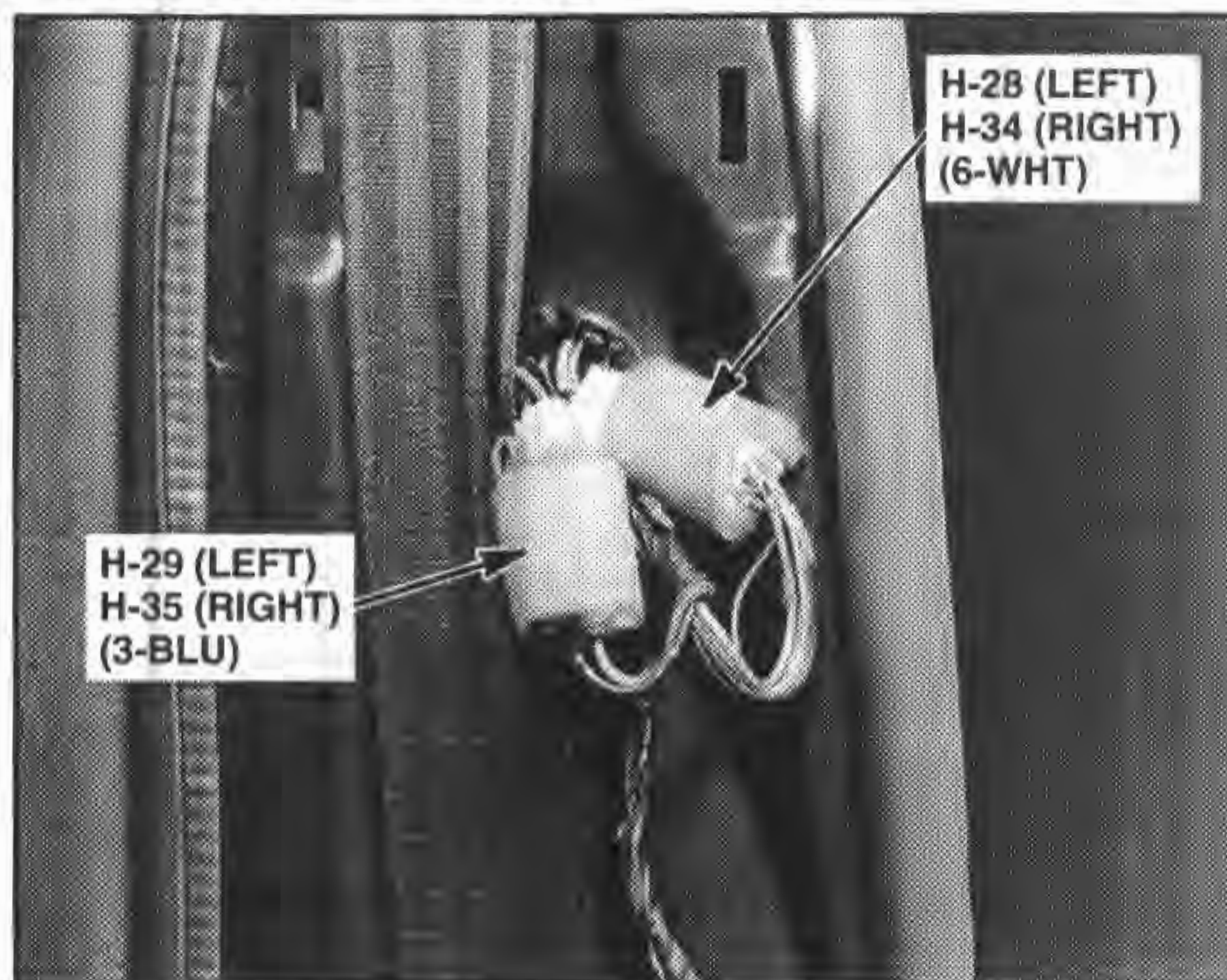
90. Left Front Door (Right Similar)



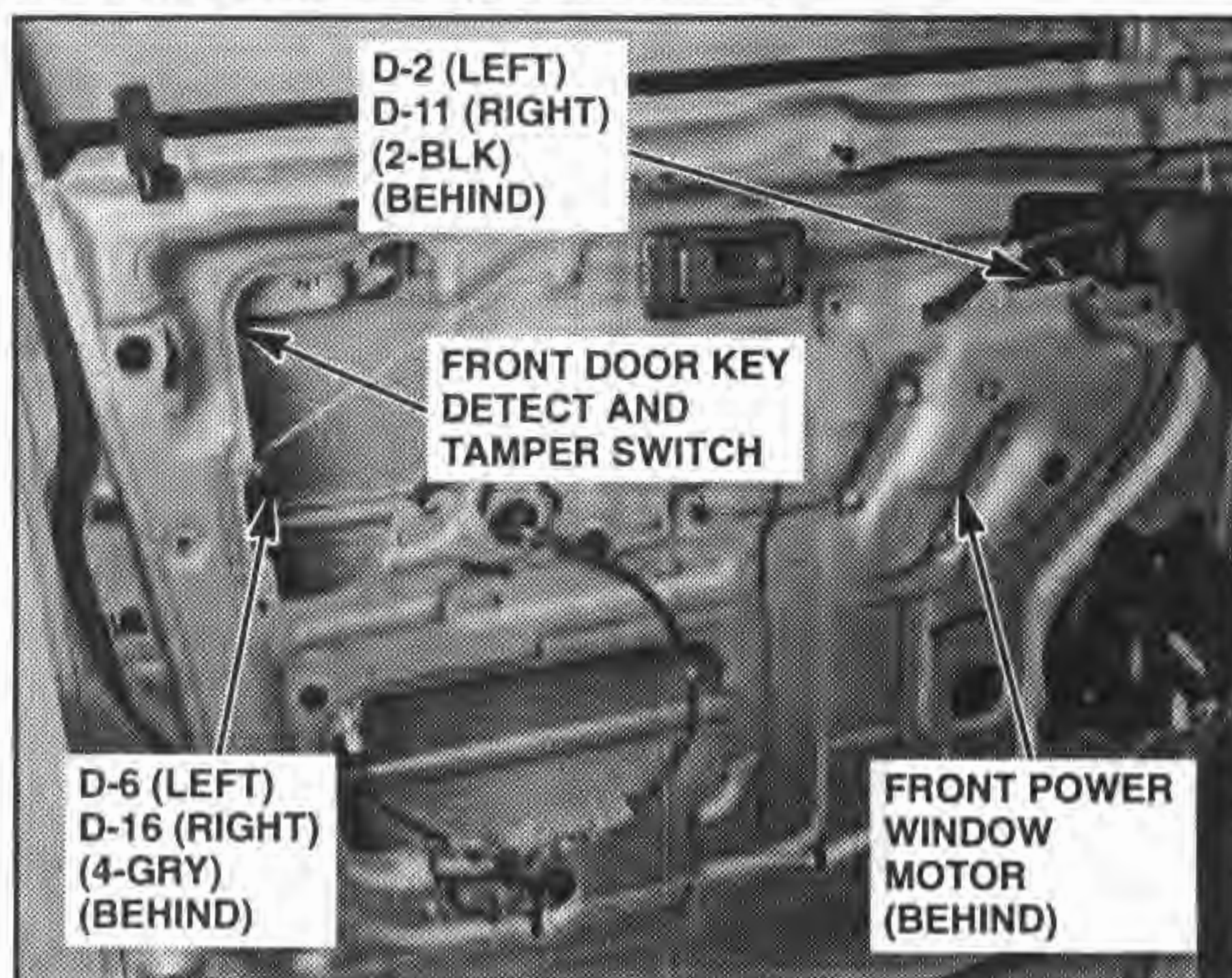
91. Behind Left Front Door Mirror (Right Similar)



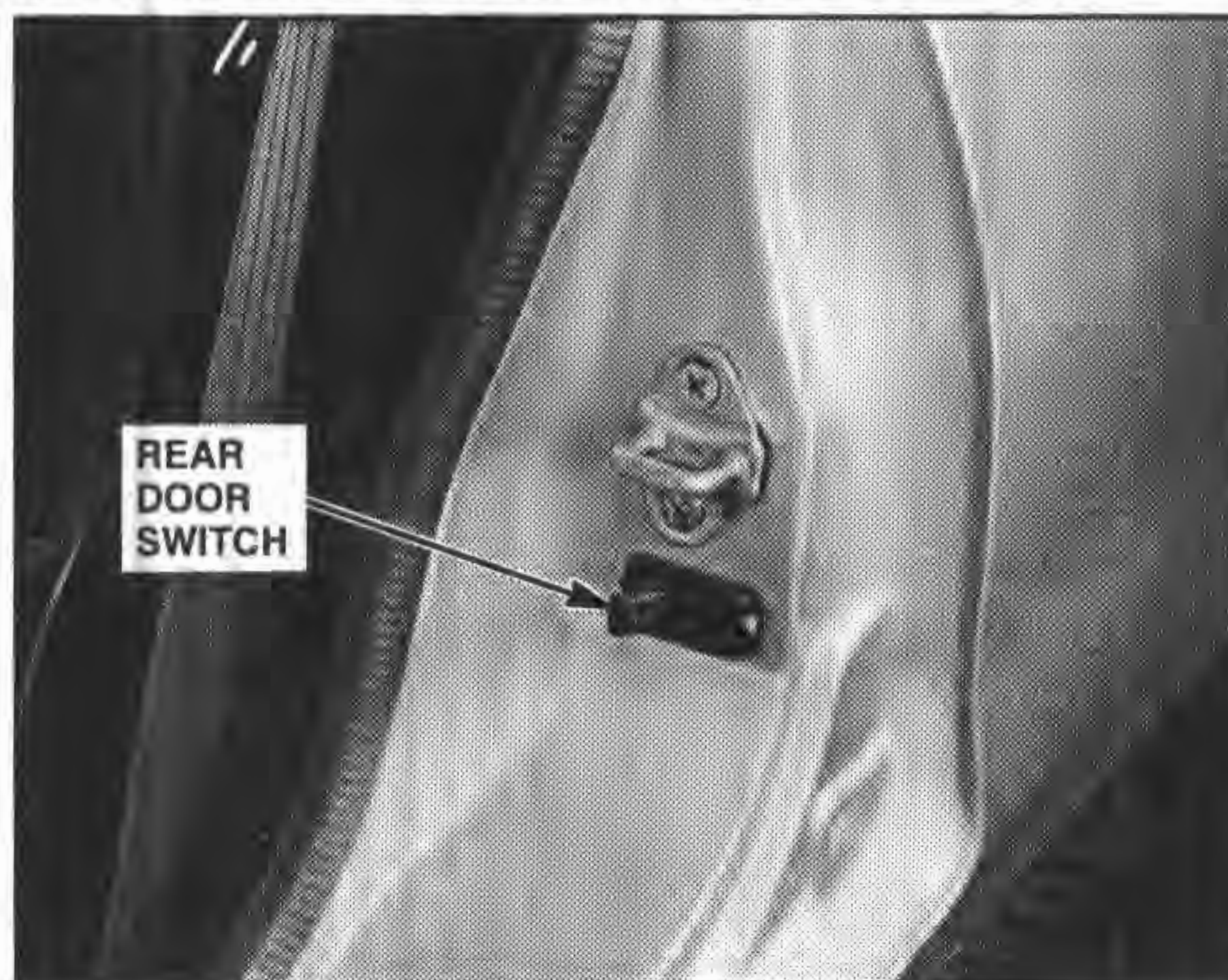
94. Left Center Pillar (Right Similar)



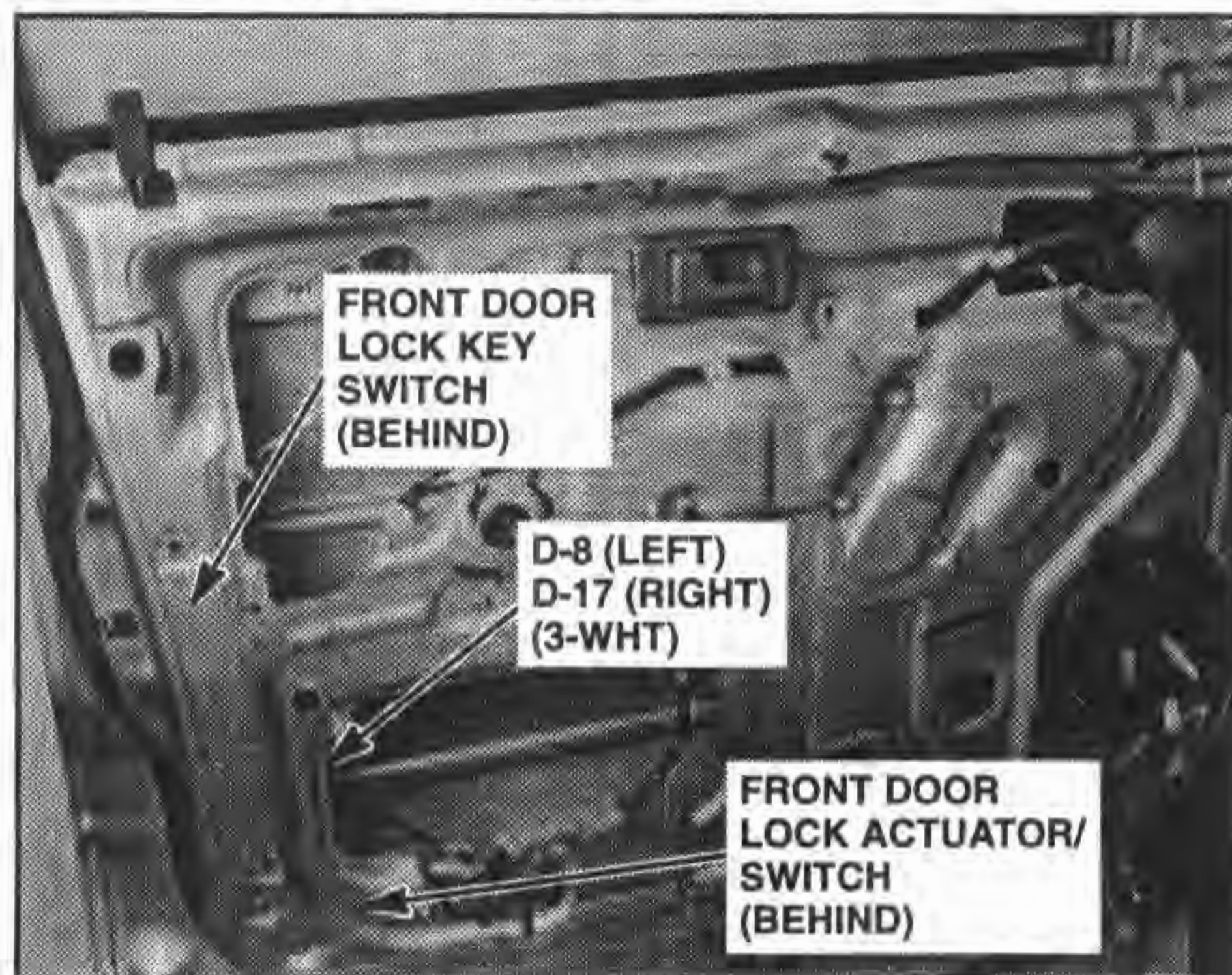
92. Left Front Door (Right Similar)



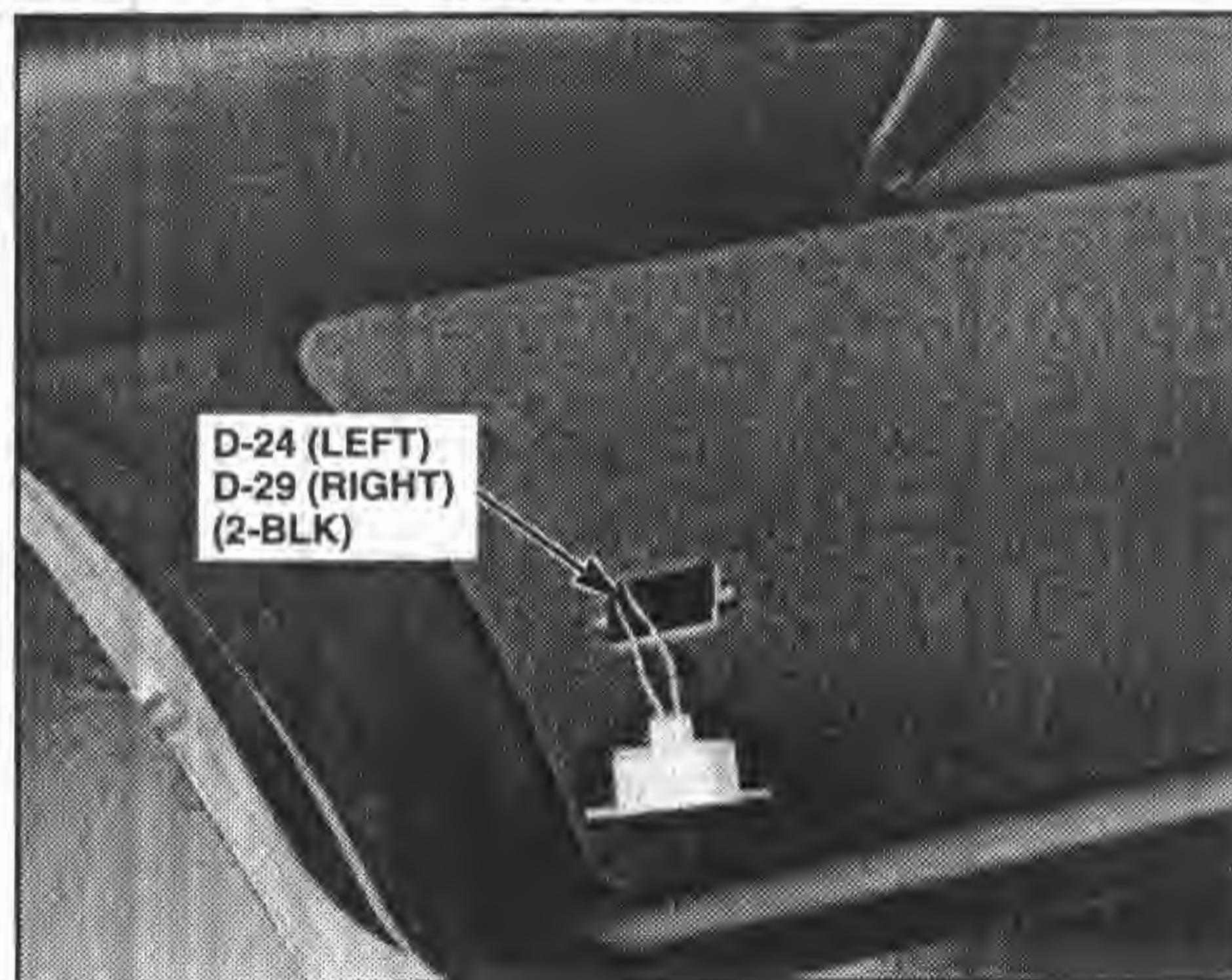
95. Near Left Rear Door Striker (Right Similar)



93. Left Front Door (Right Similar)

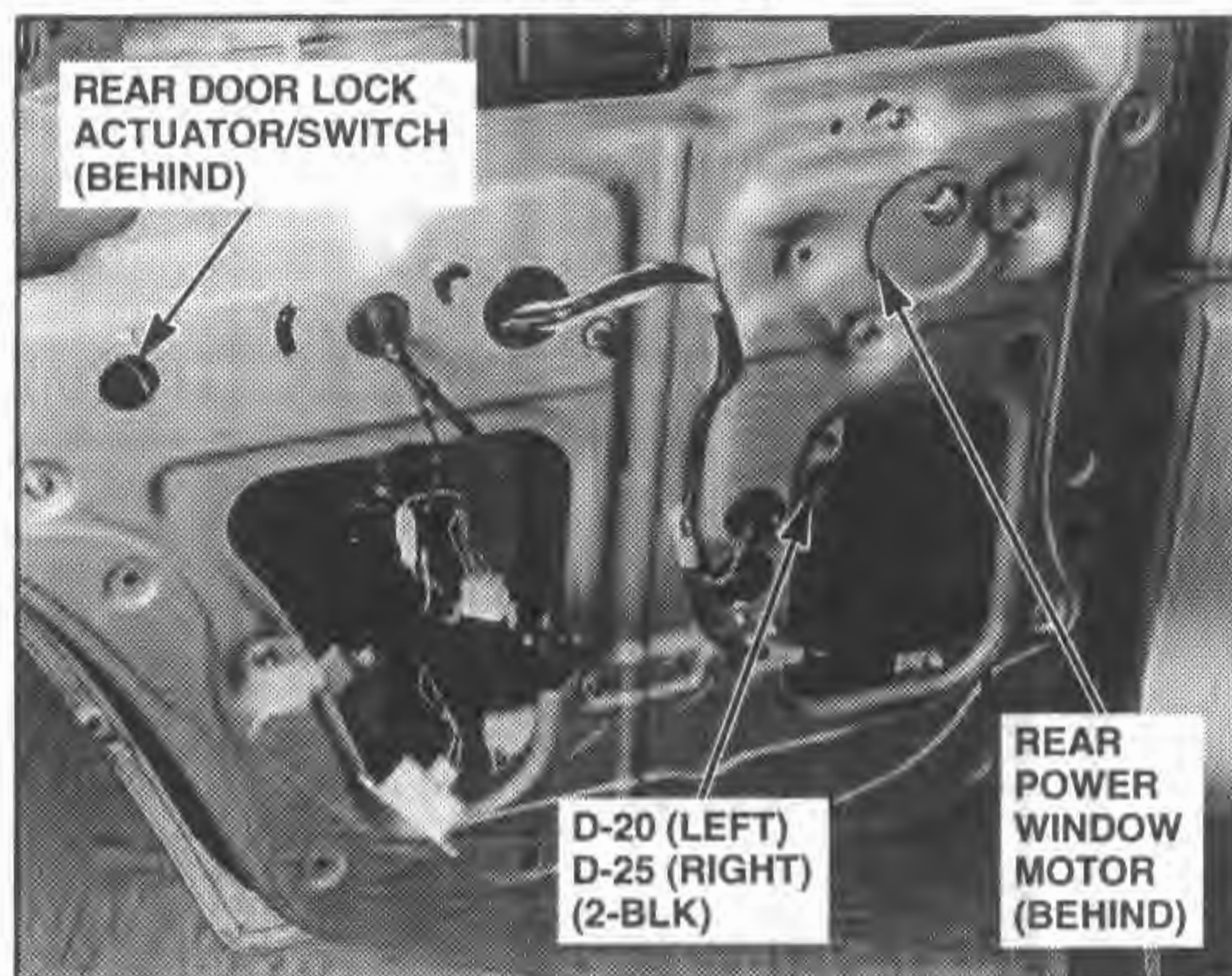


96. Left Rear Door (Right Similar)



COMPONENT LOCATION PHOTOGRAPHS

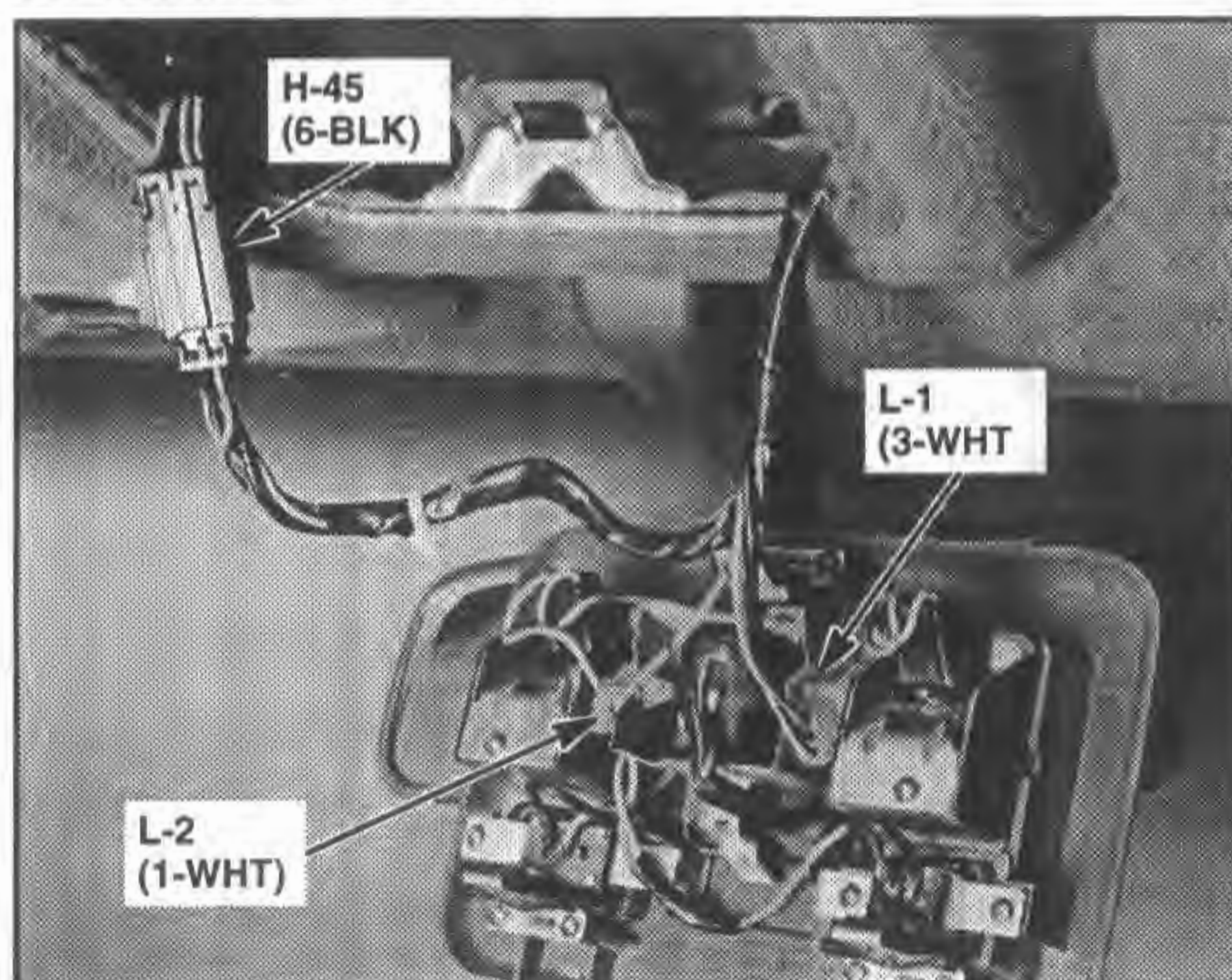
97. Left Rear Door (Right Similar)



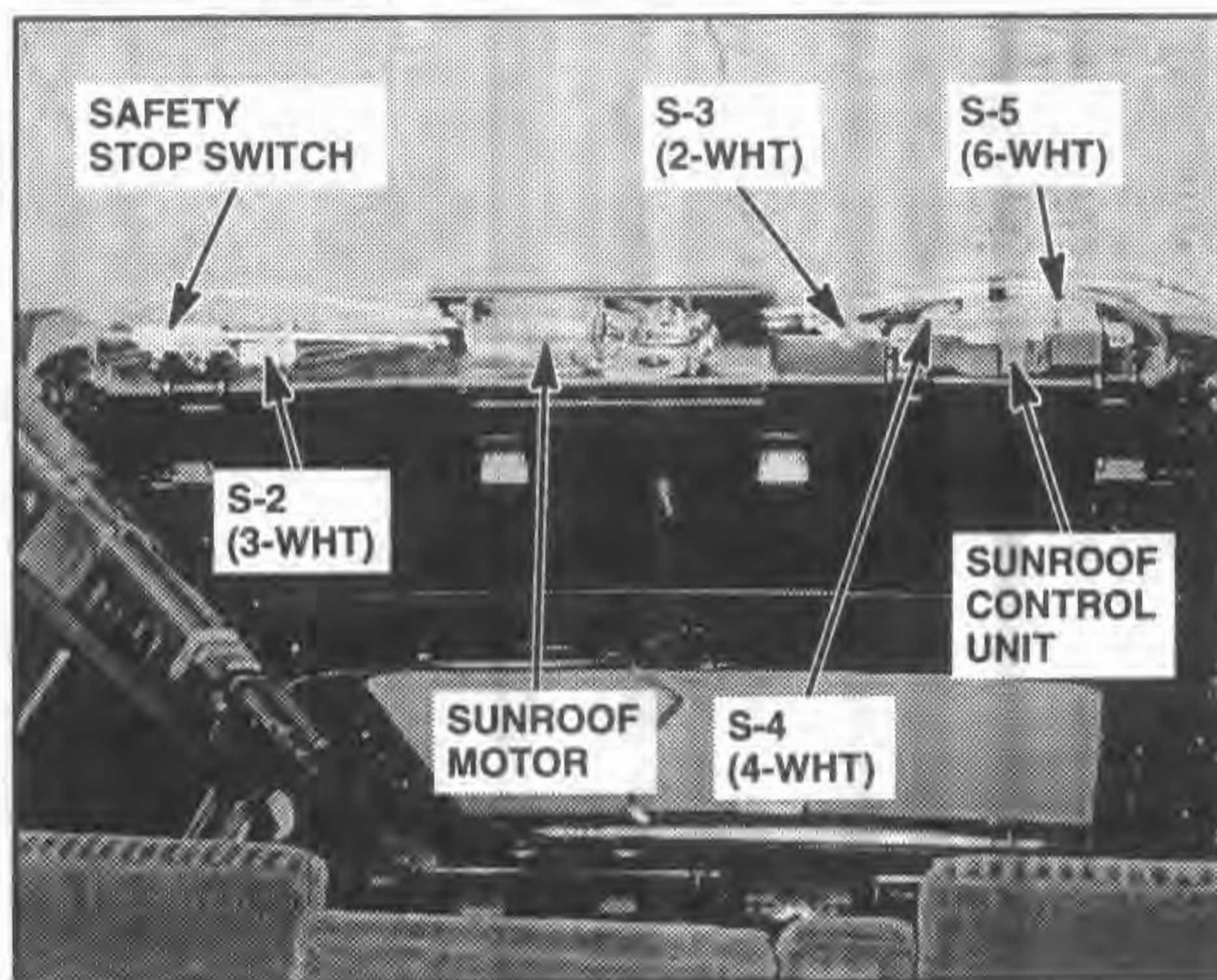
100. Center Rear of Roof



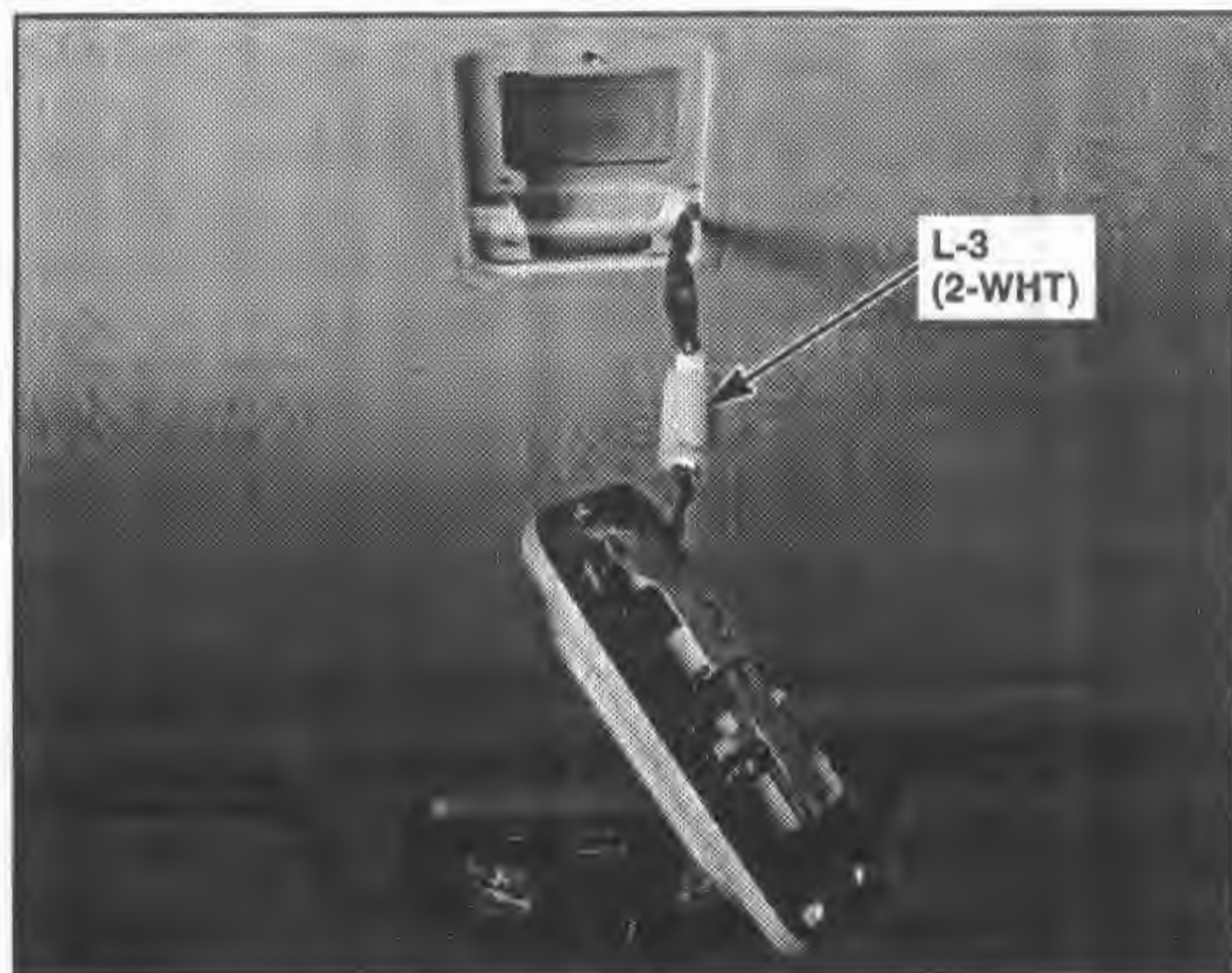
98. Center Front of Roof



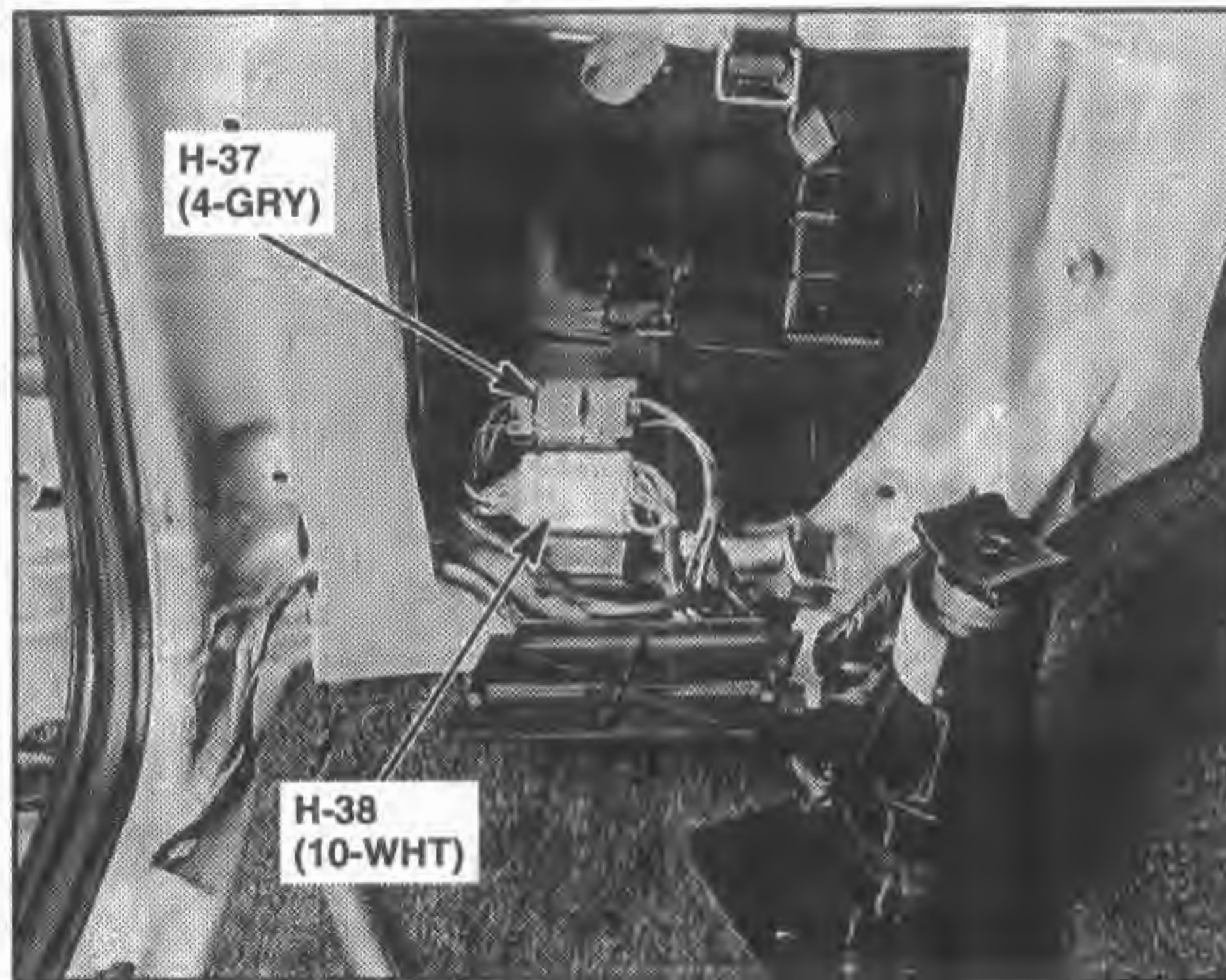
101. Rear of Roof



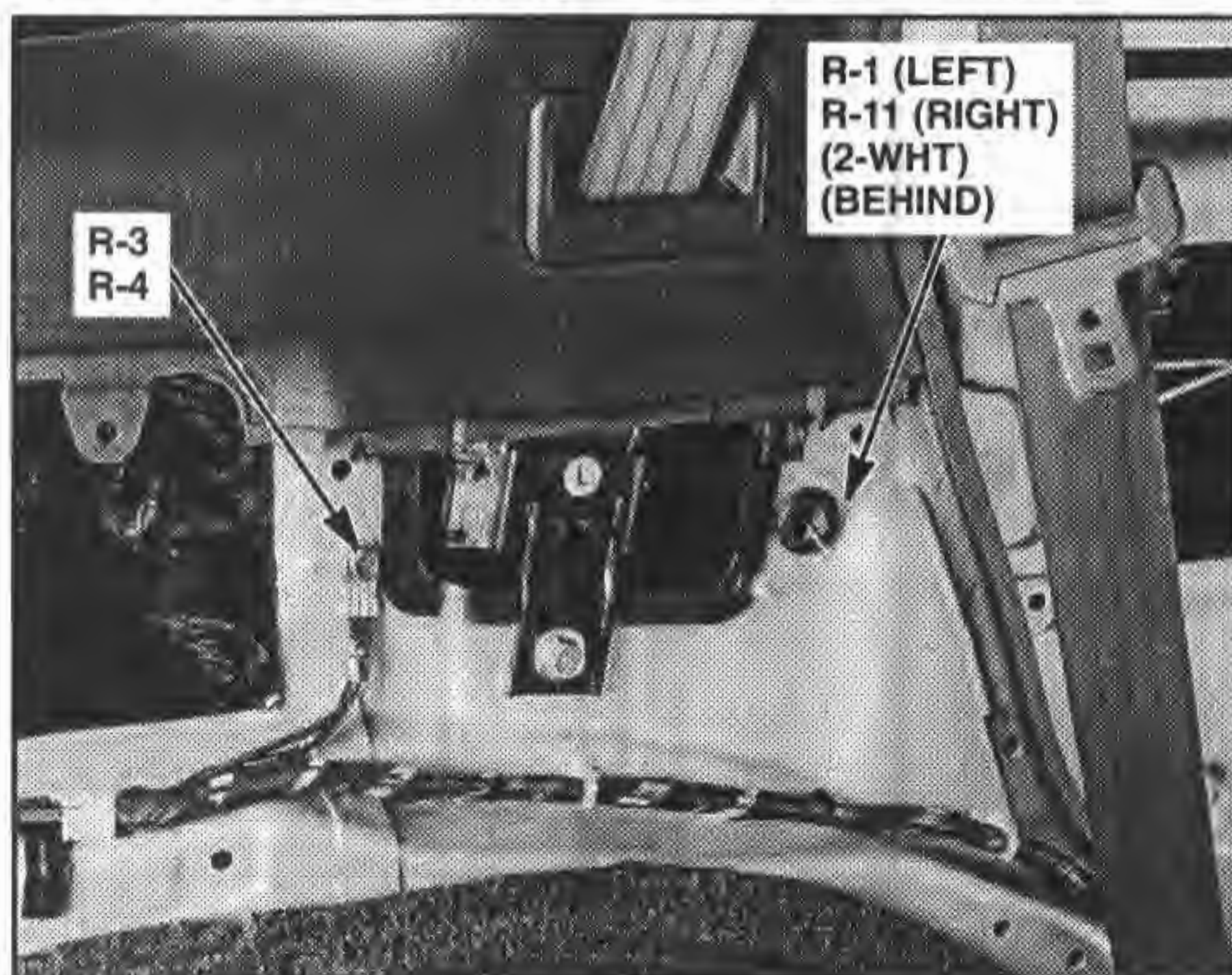
99. Center of Roof



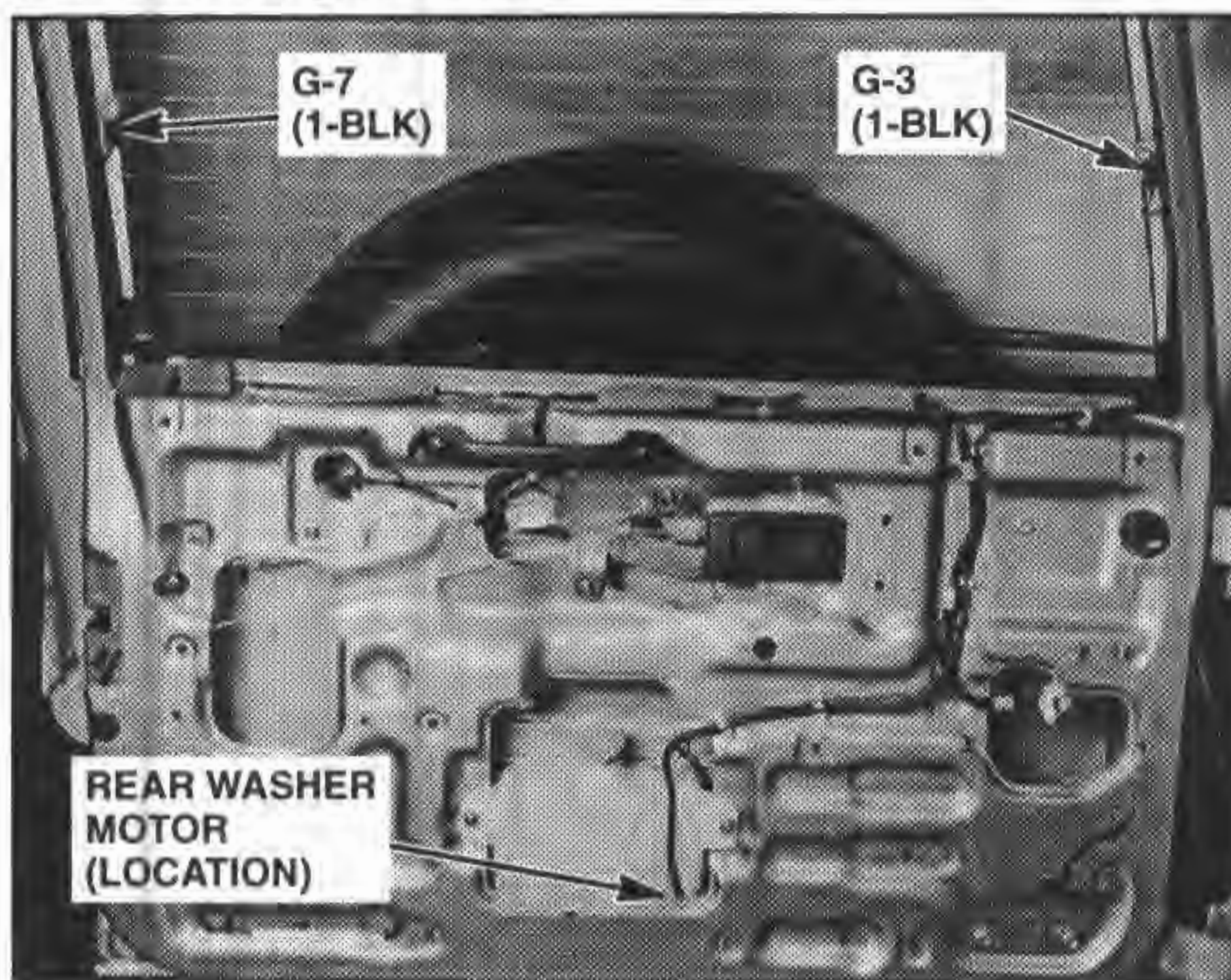
102. Left Rear of Luggage Room



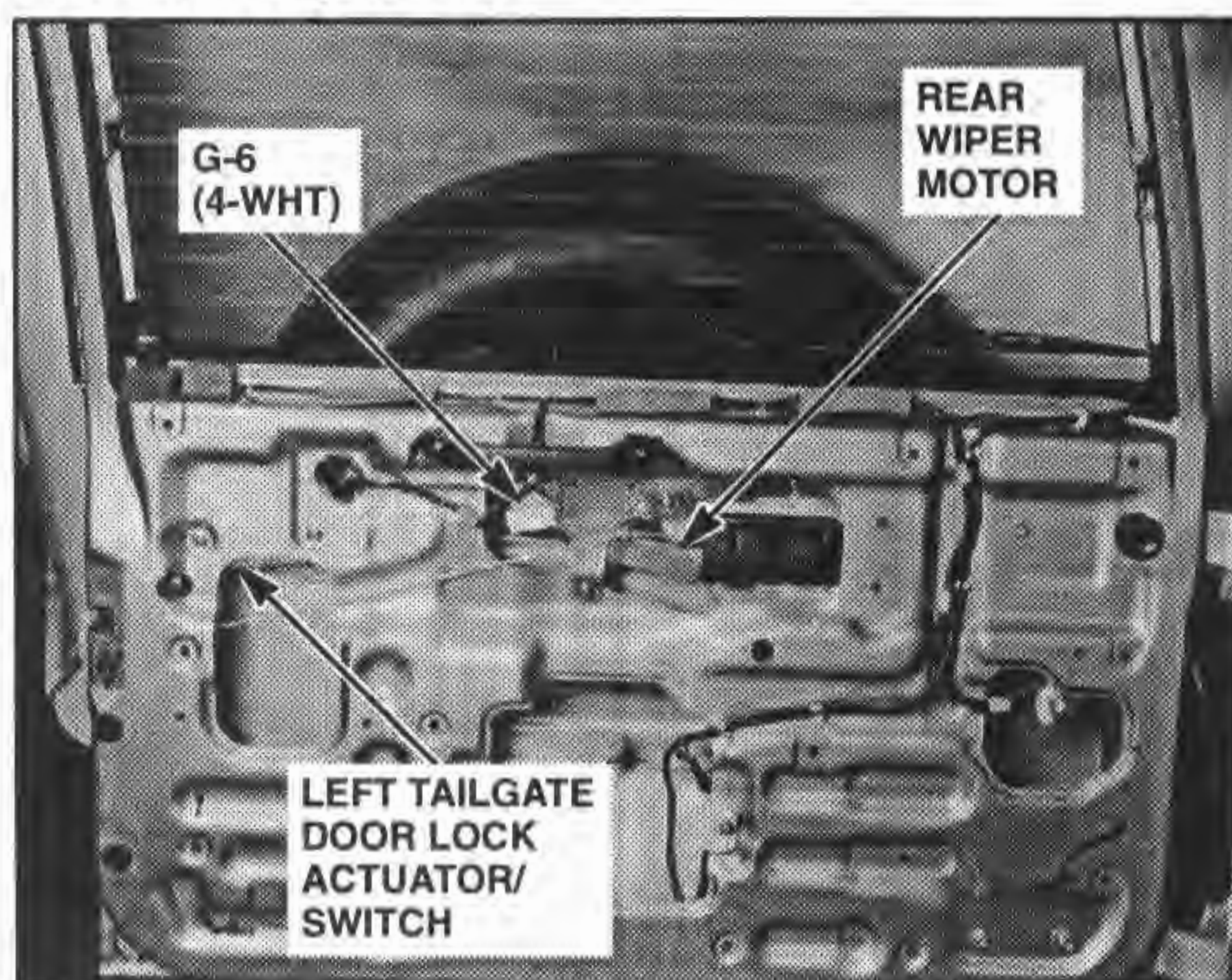
103. Left Side of Luggage Room (Right Similar)



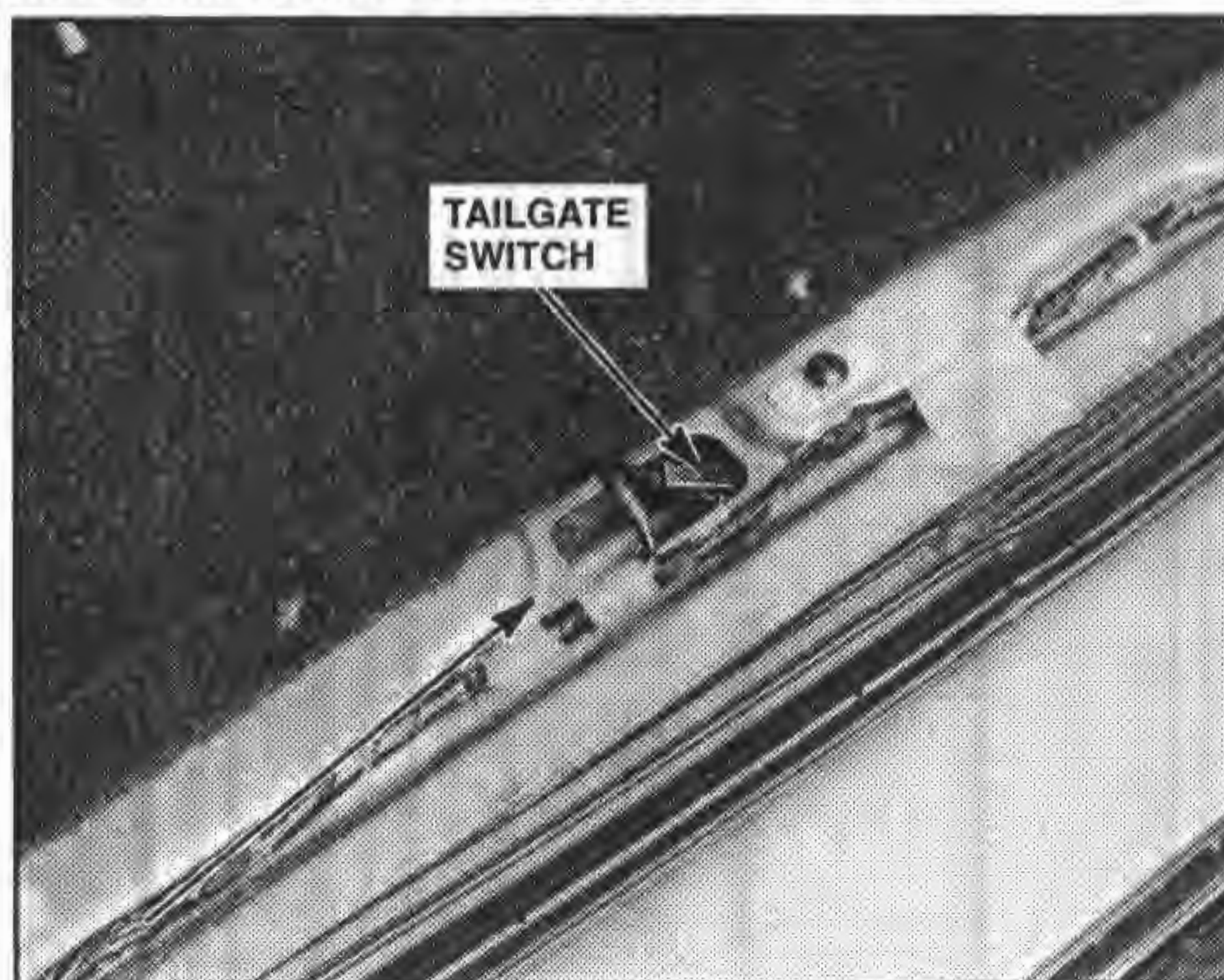
106. Left Tailgate Door



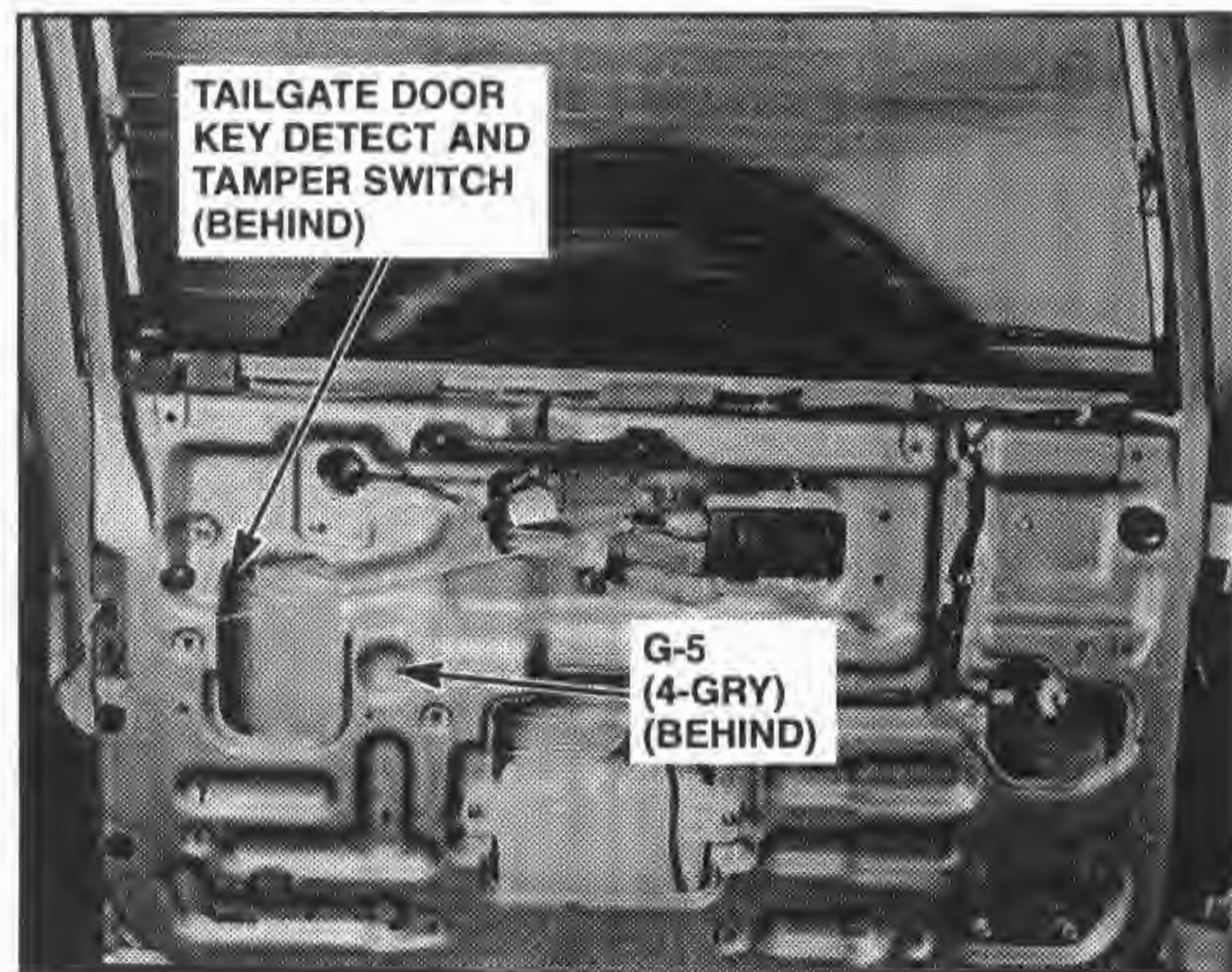
104. Left Tailgate Door



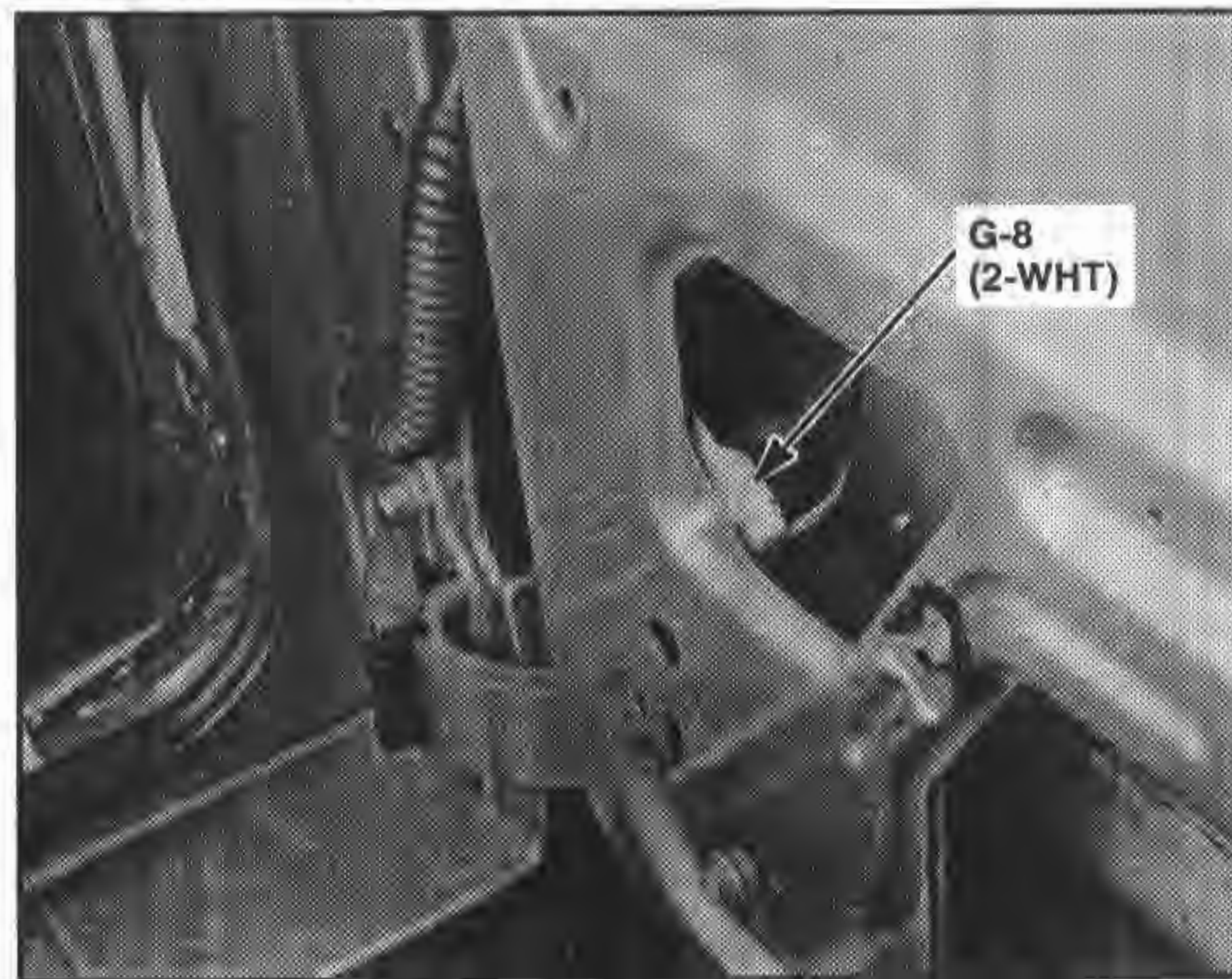
107. Center Rear of Luggage Room Floor



105. Left Tailgate Door

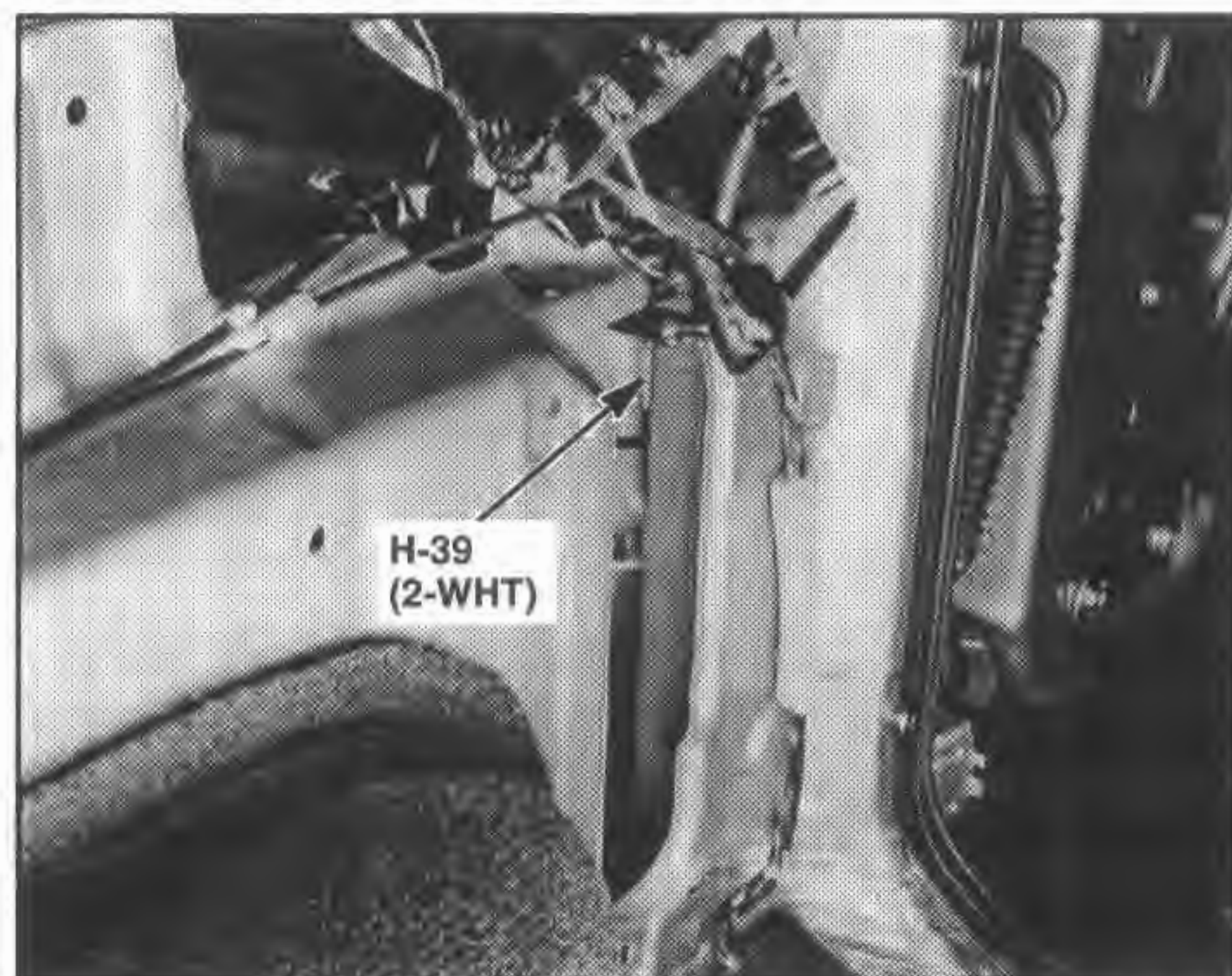


108. Right Tailgate Door

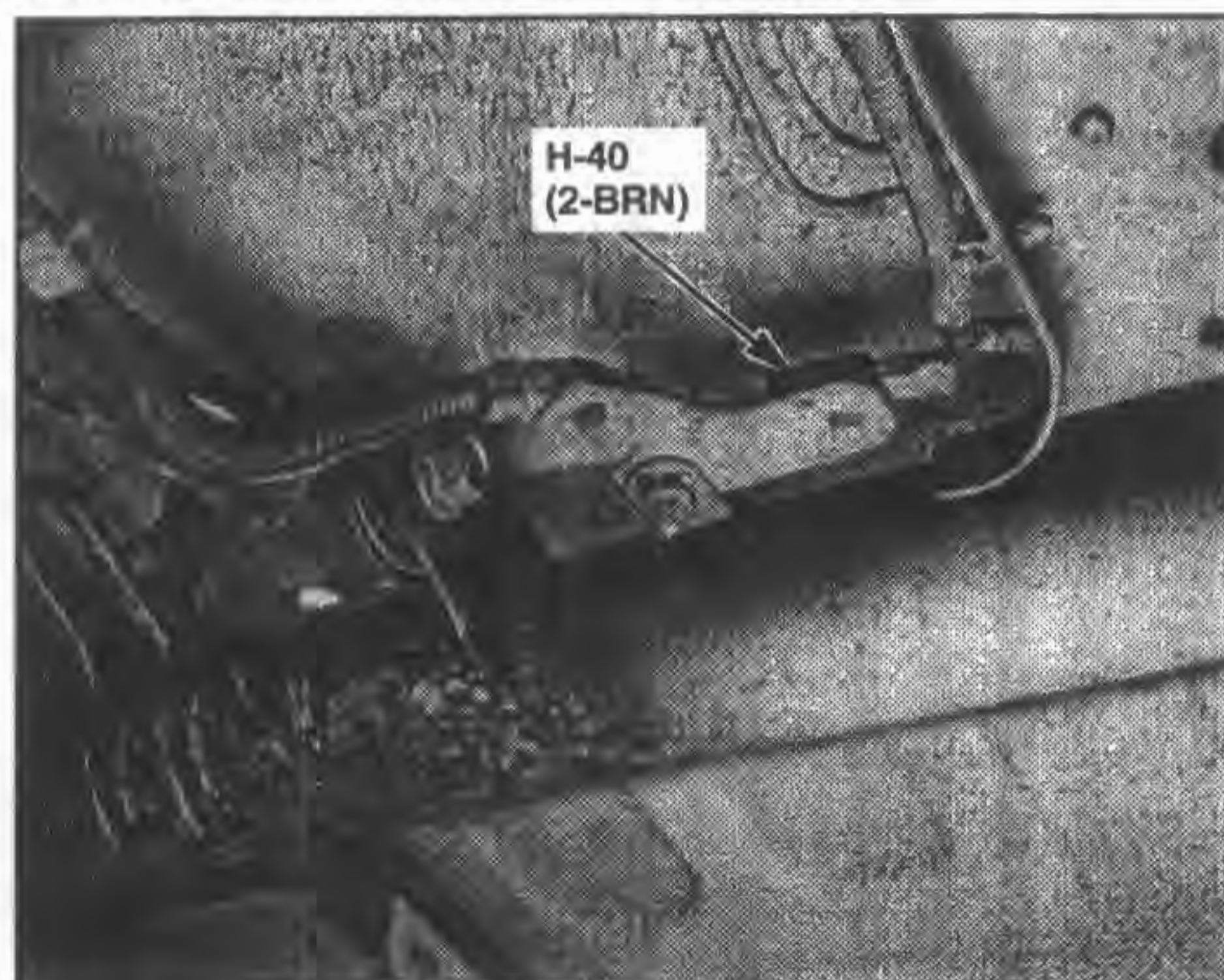


COMPONENT LOCATION PHOTOGRAPHS

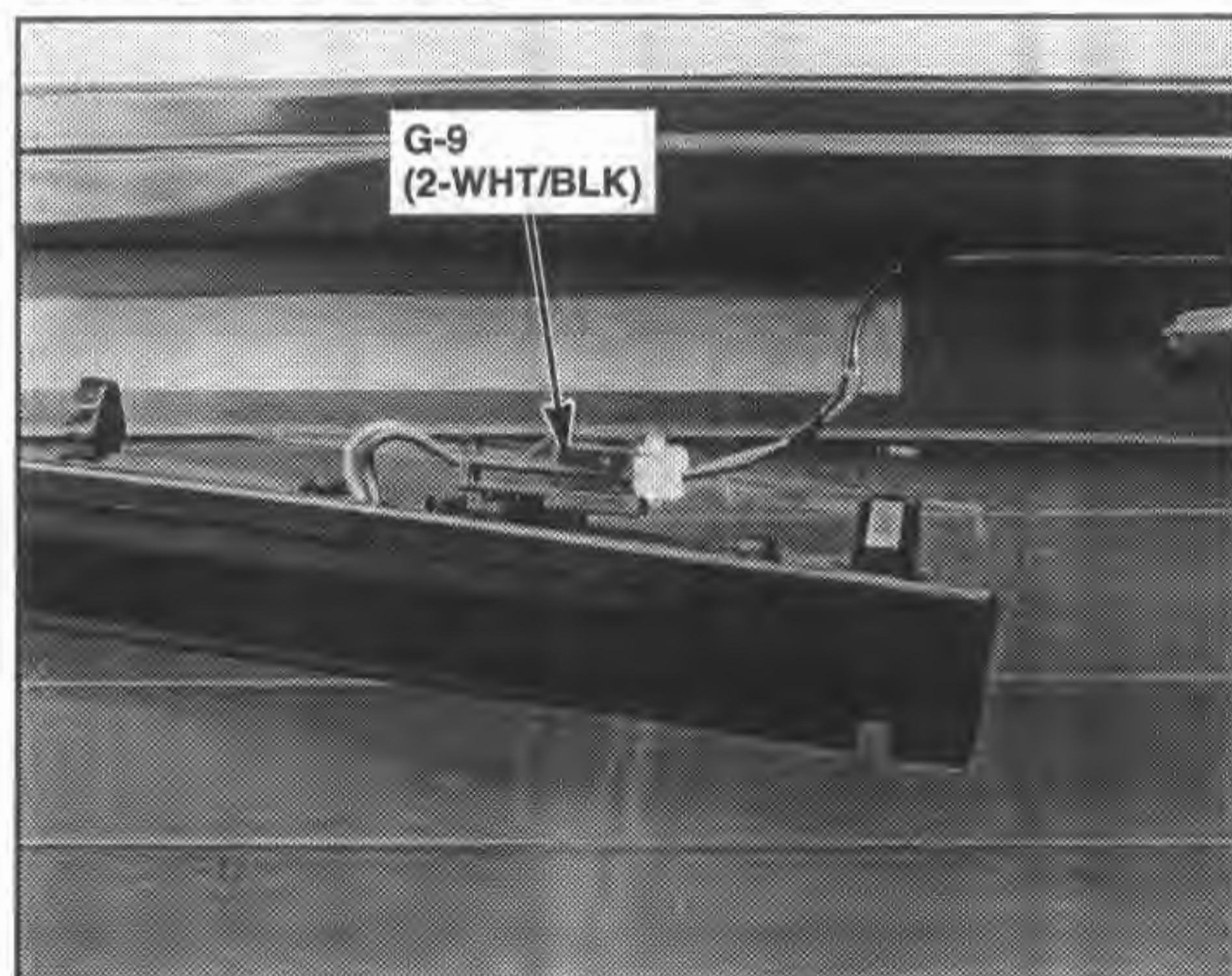
109. Right Rear of Luggage Room



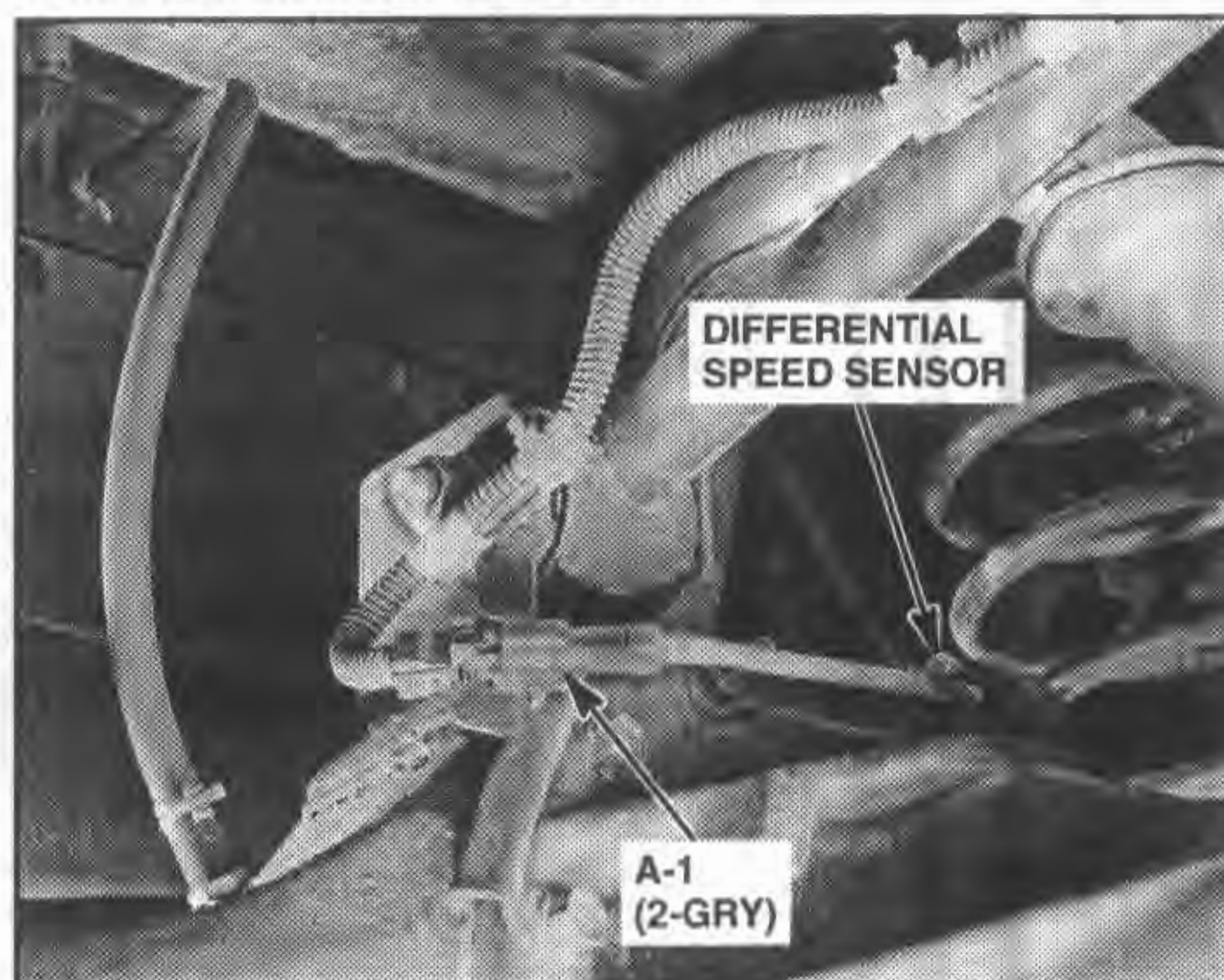
112. Right Rear Underside of Vehicle



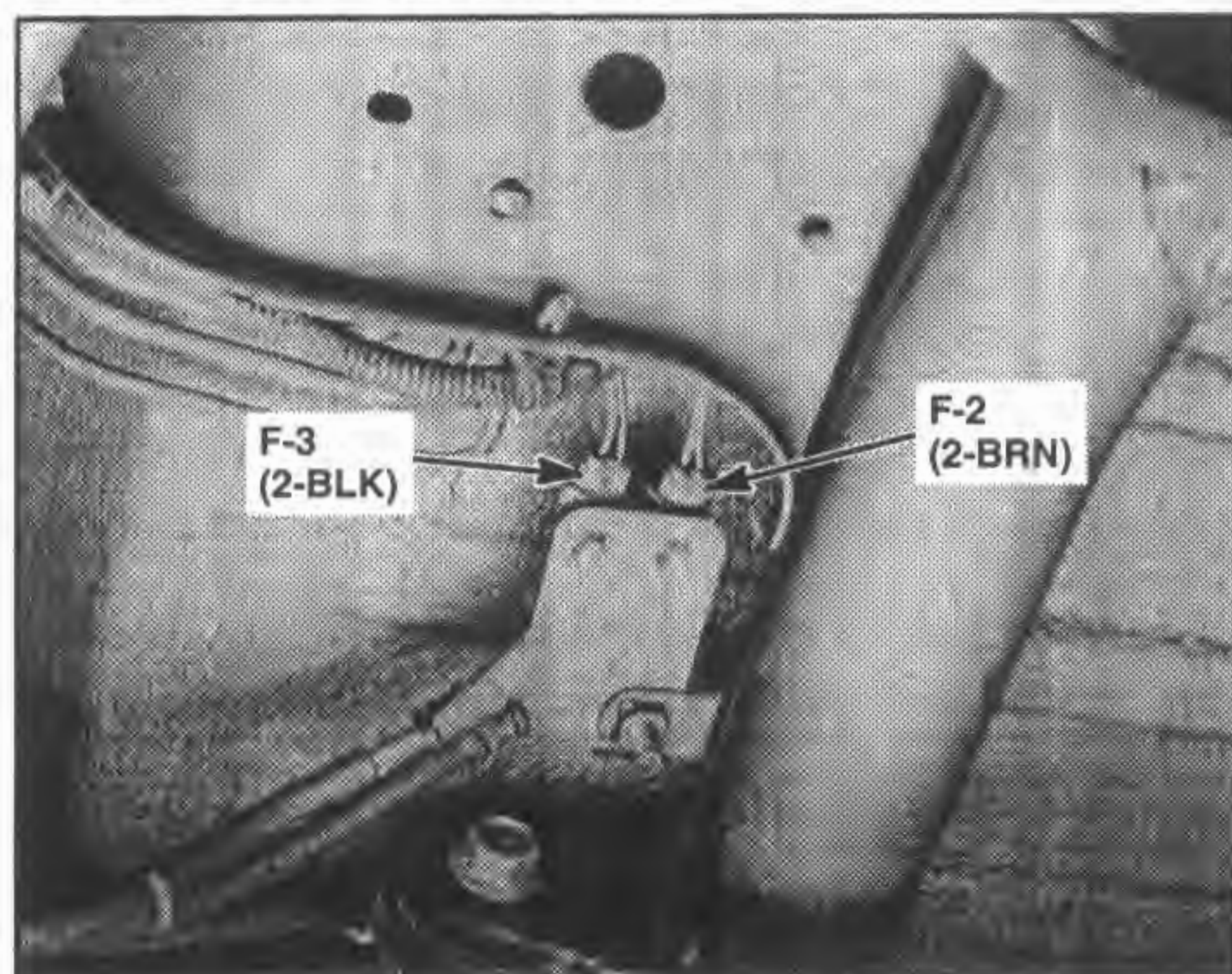
110. Top of Left Tailgate Door



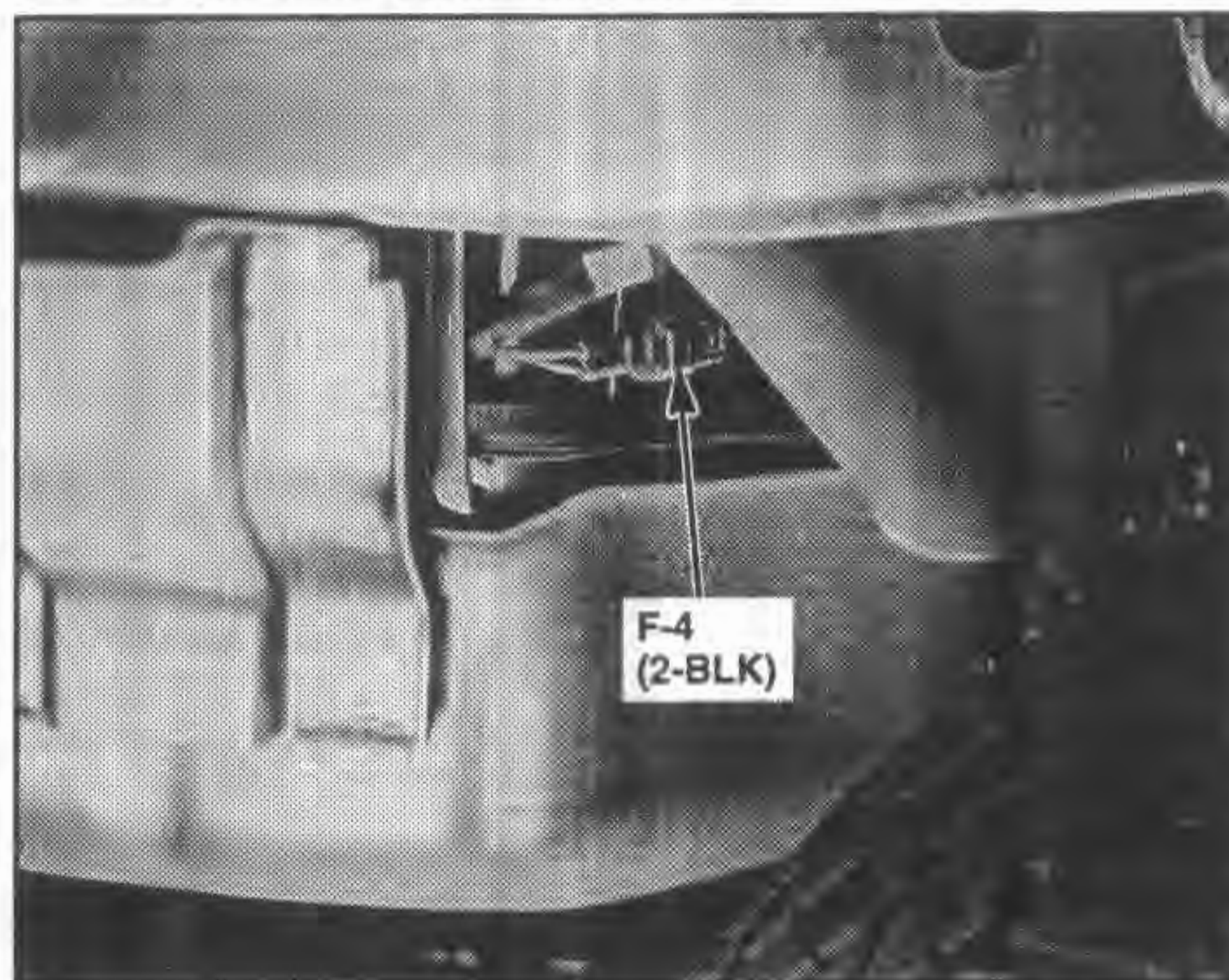
113. Rear Underside of Vehicle



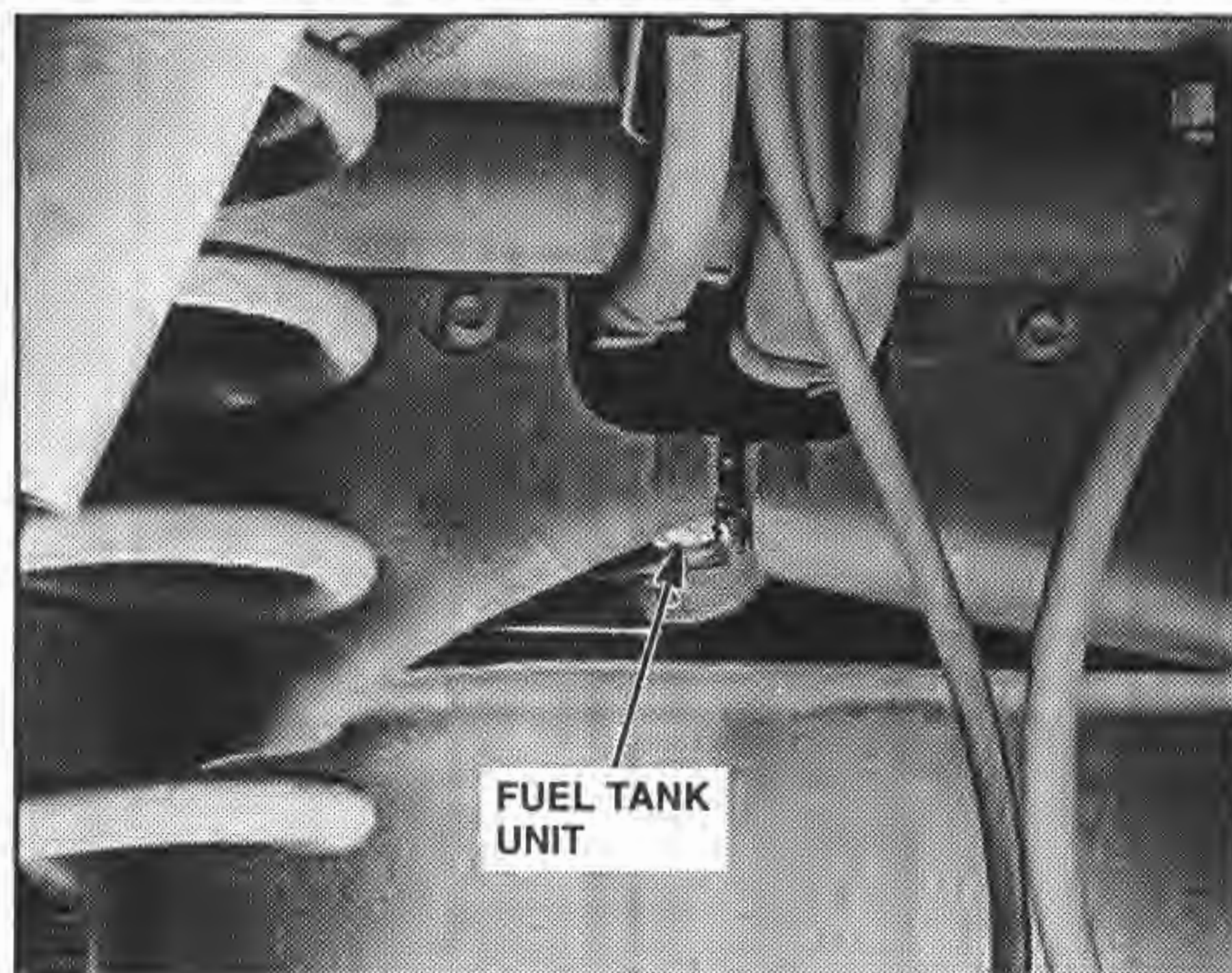
111. Right Rear Underside of Vehicle



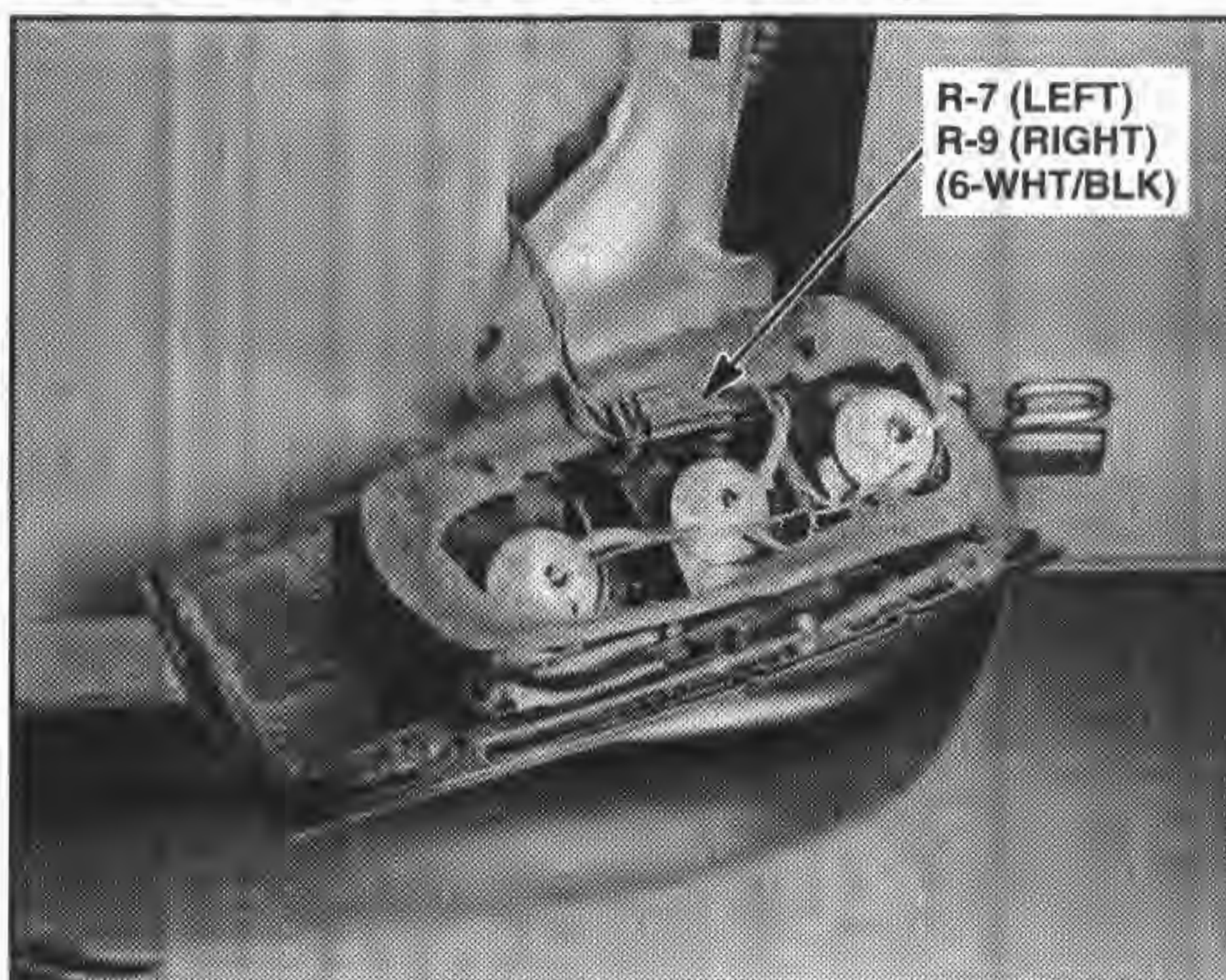
114. Right Rear Underside of Vehicle



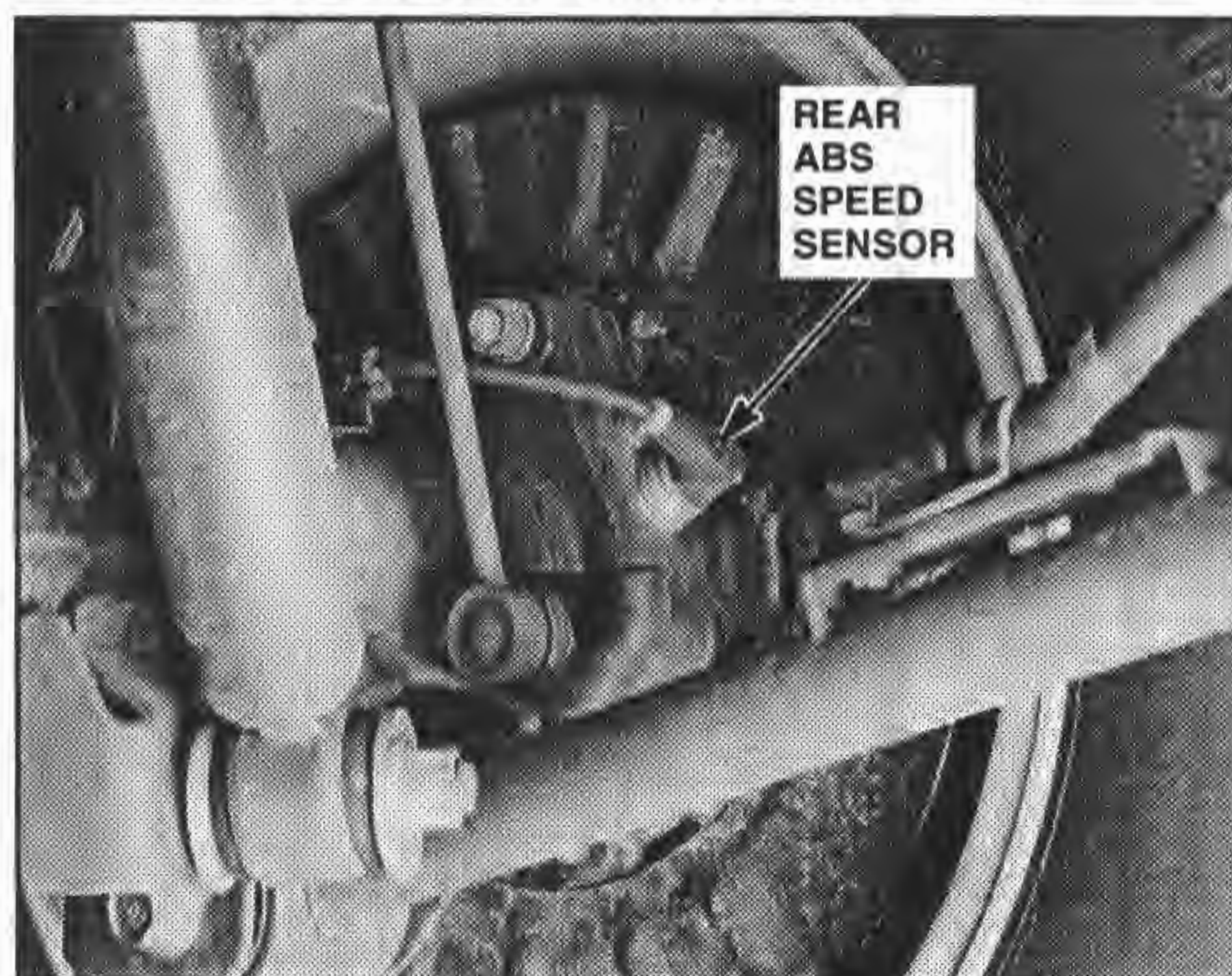
115. Underside of Vehicle, Right Front of Fuel Tank



118. Left Rear of Vehicle (Right Similar)



116. Inside of Left Rear Wheel (Right Similar)



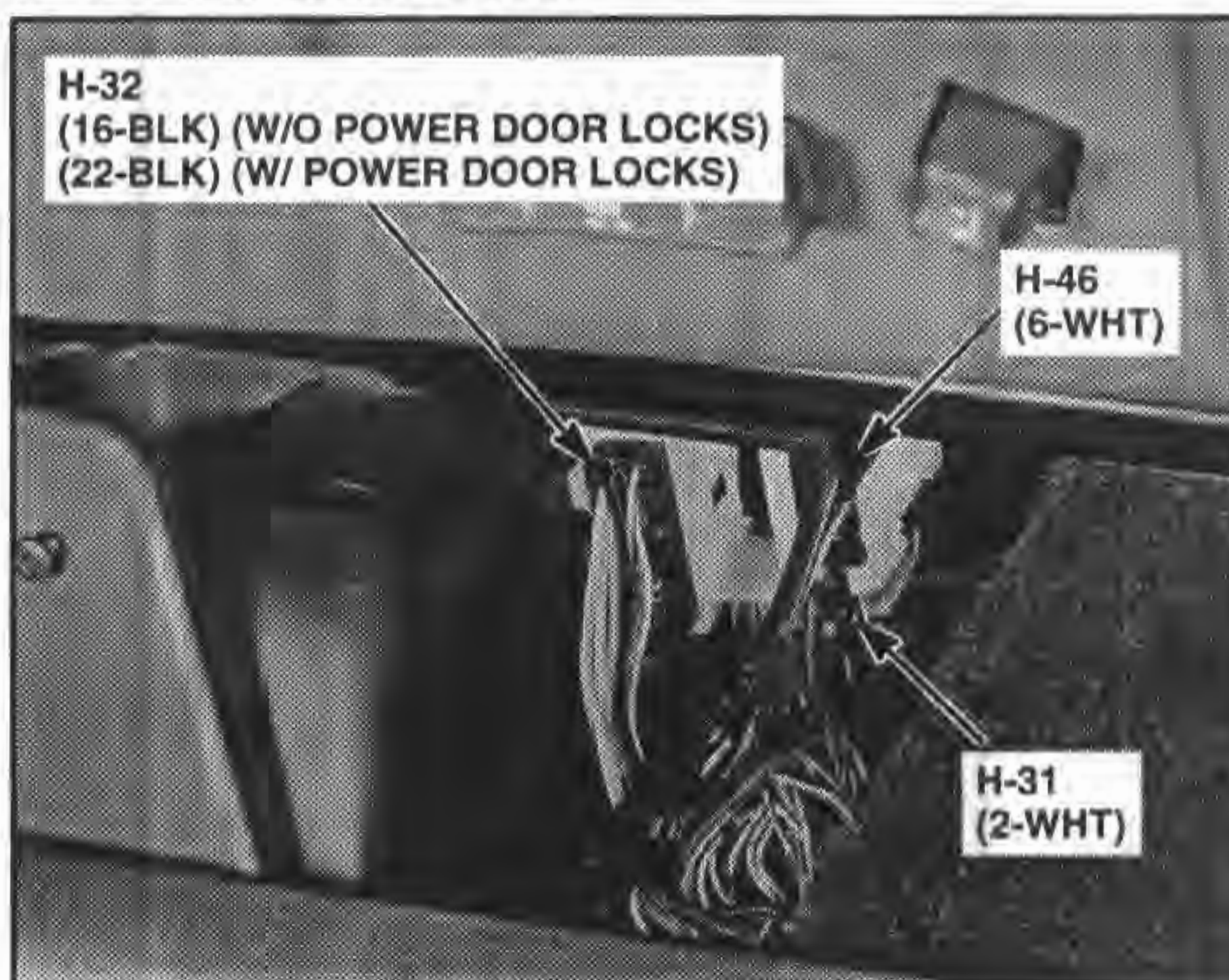
119. Below Driver's Seat



117. Left Rear Underside of Vehicle

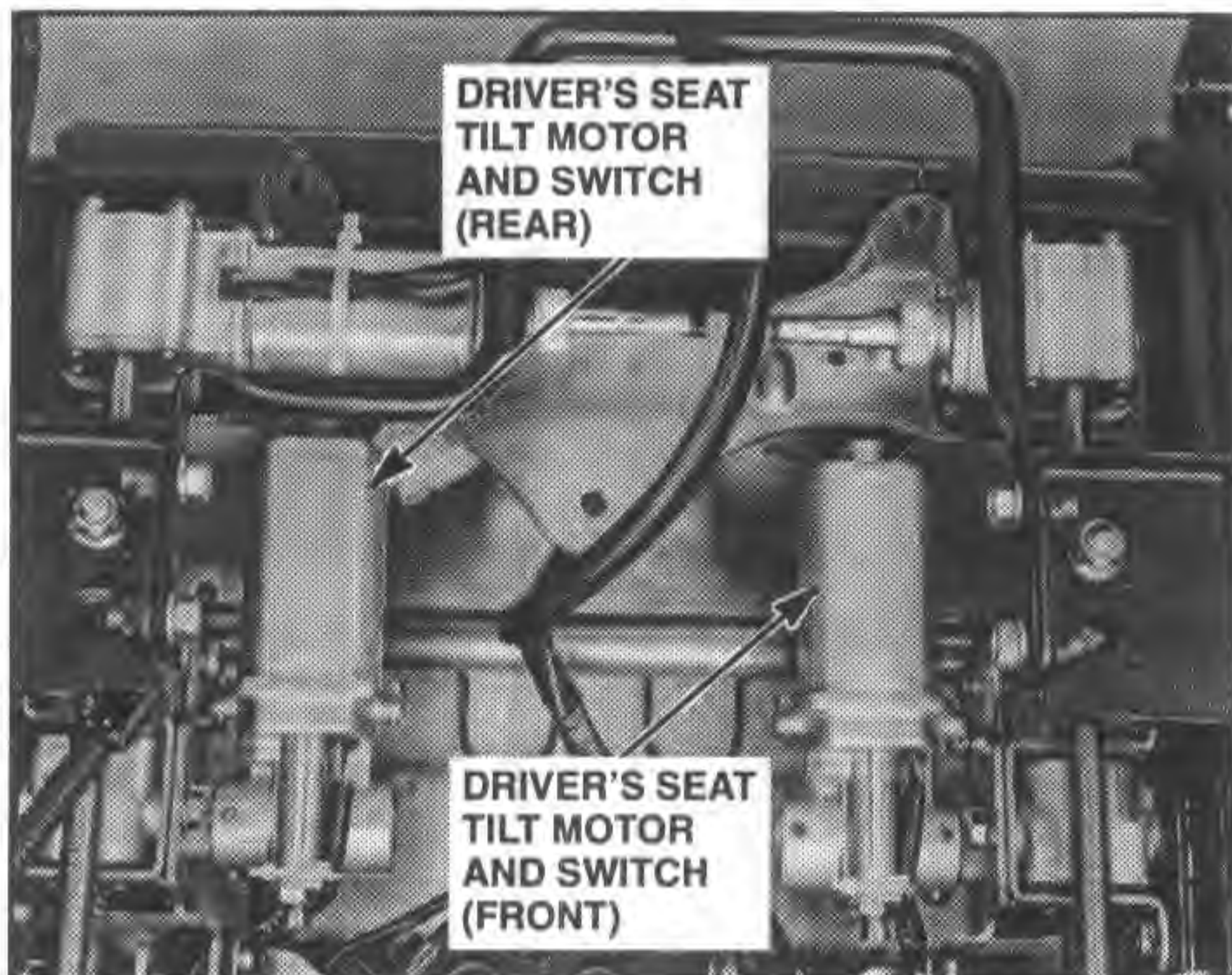


120. Below Driver's Seat

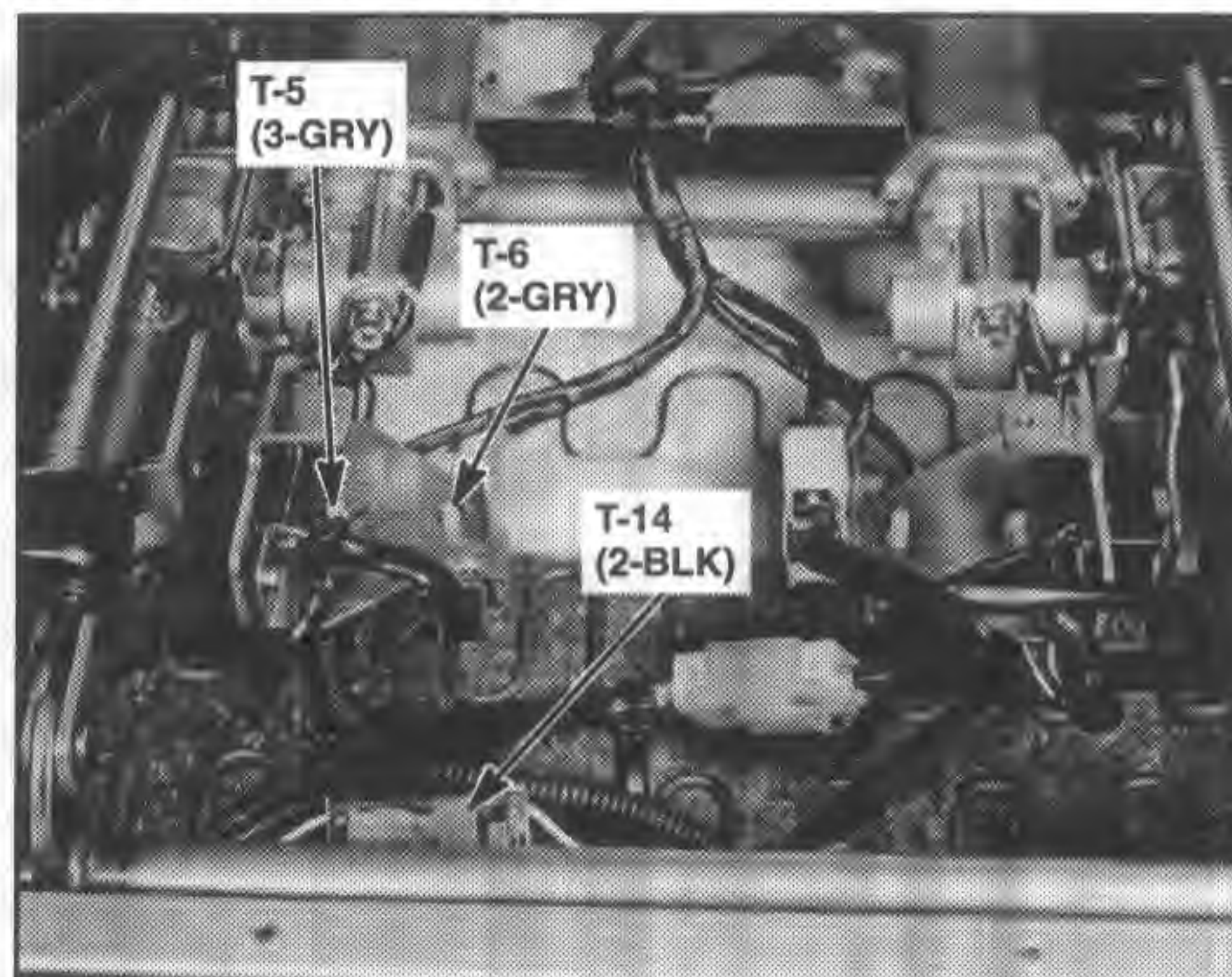


COMPONENT LOCATION PHOTOGRAPHS

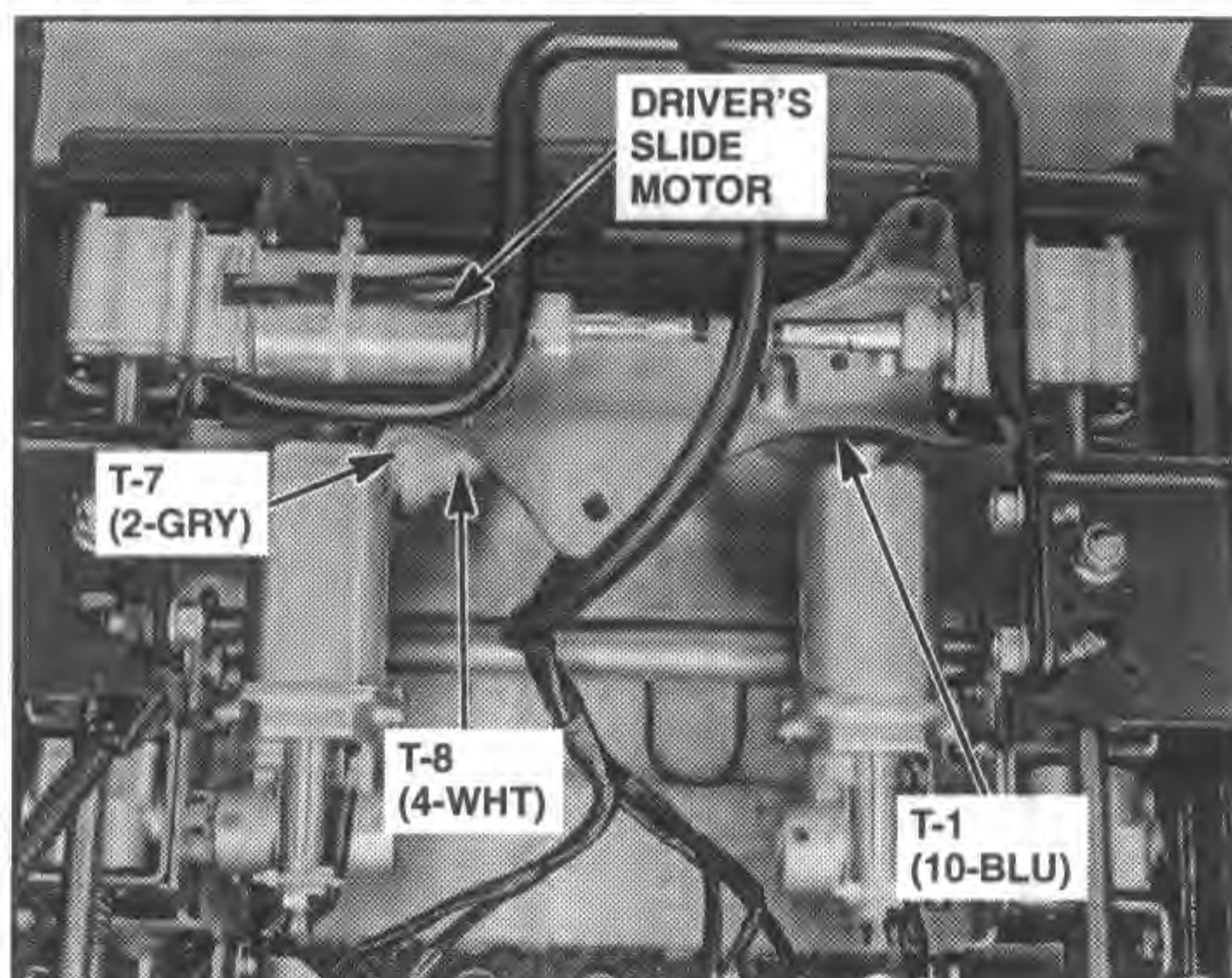
121. Underside of Driver's Seat



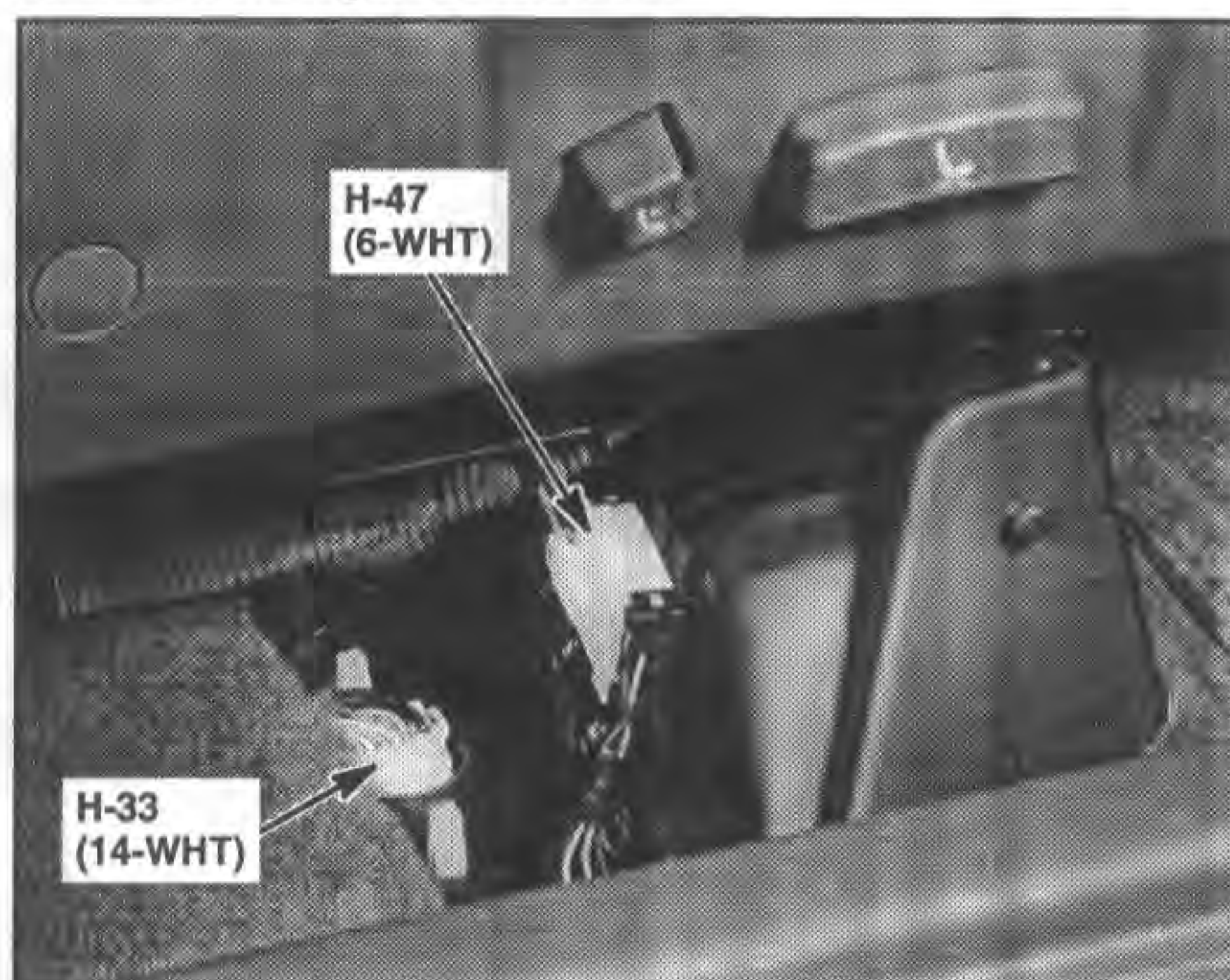
124. Underside of Driver's Seat



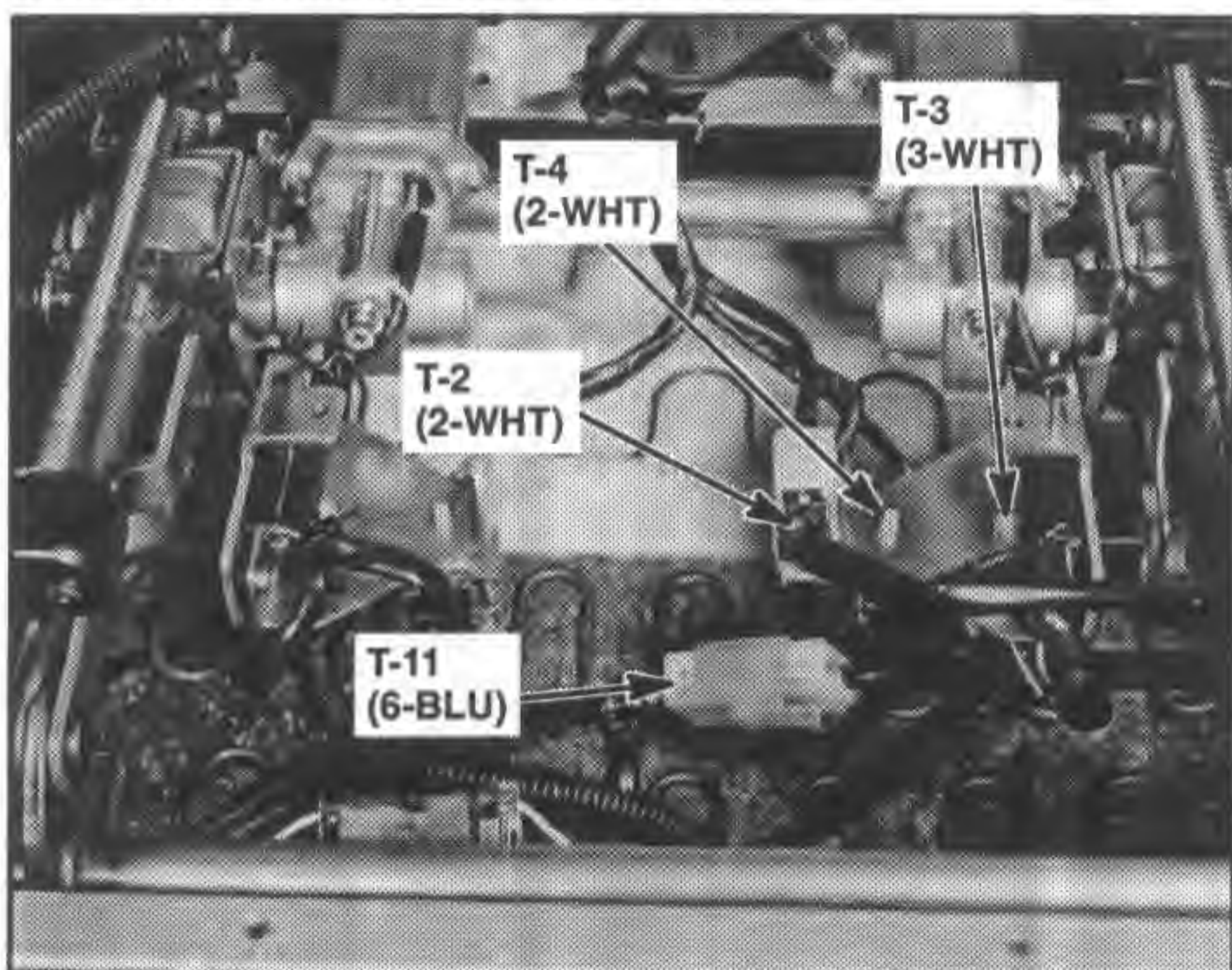
122. Underside of Driver's Seat



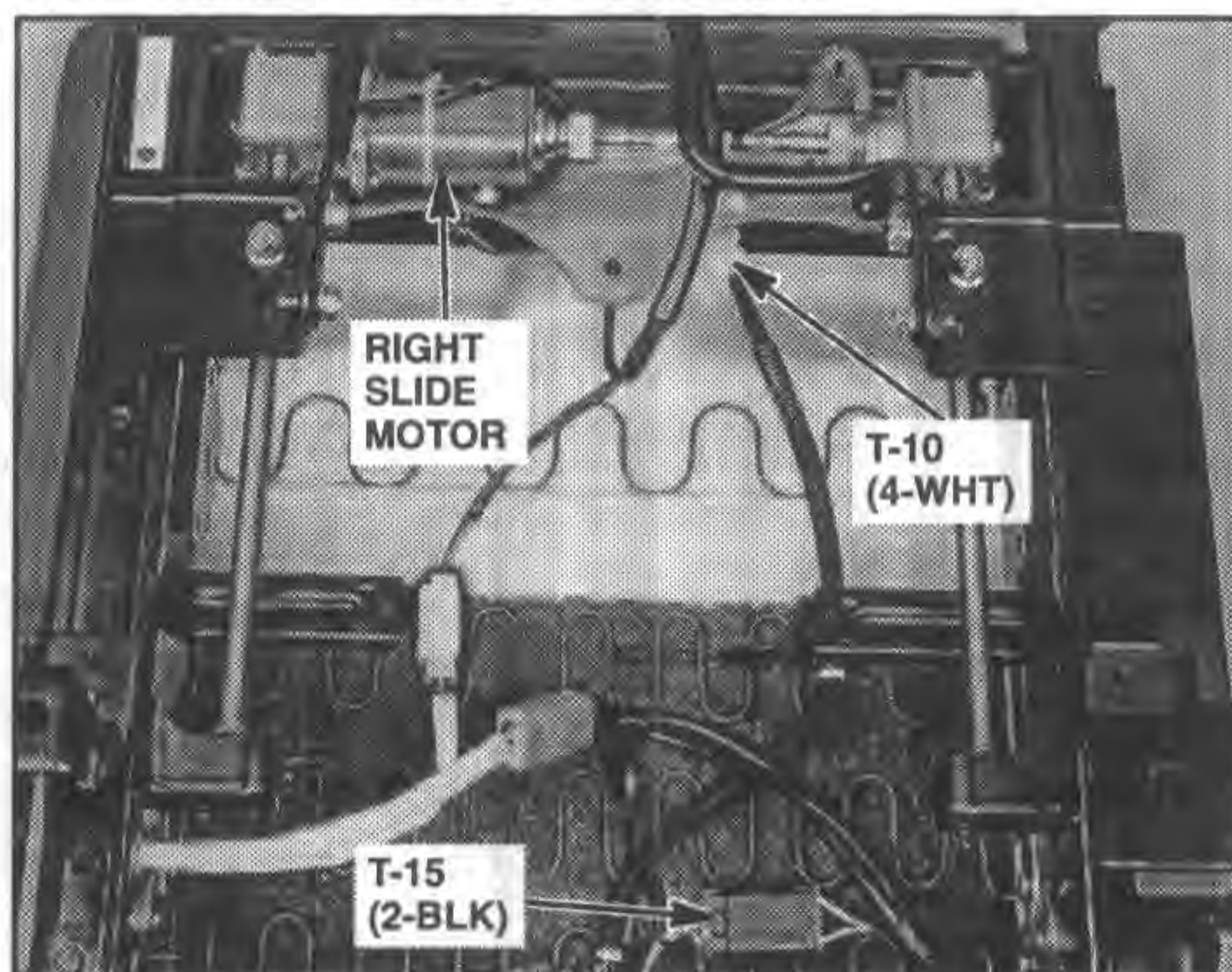
125. Below Right Front Seat



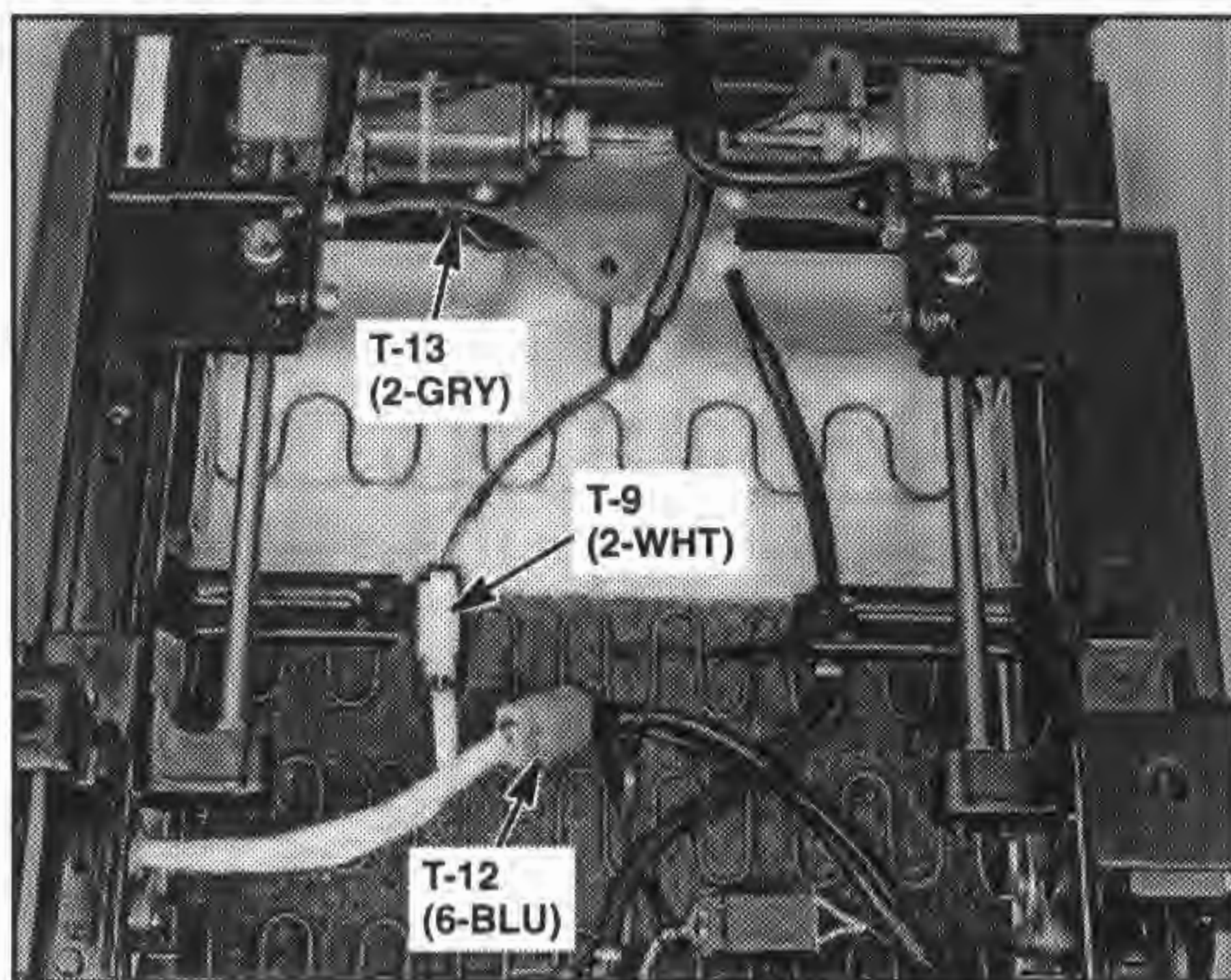
123. Underside of Driver's Seat



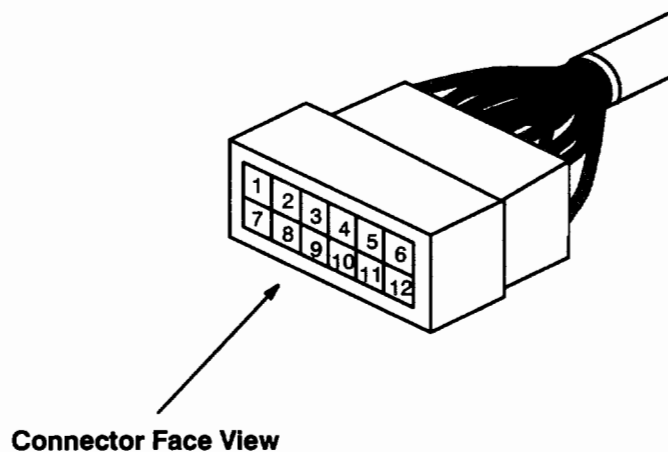
126. Underside of Right Front Seat



127. Underside of Right Front Seat



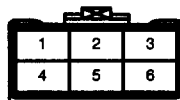
HARNESS CONNECTOR VIEWS



Harness connectors with six or more wire terminals are shown in this section. In-line connector faces (connectors between wire harnesses) are shown separated, with female terminal side in bold outline. Component connector faces are shown disconnected from components.

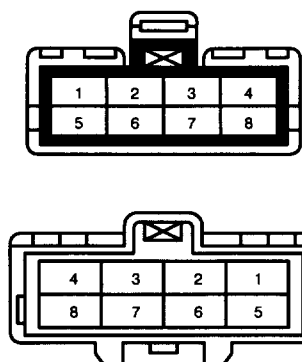
To make troubleshooting easier, the number of each terminal corresponds to the number found next to the appropriate connector on the schematic. Connectors appear in ascending alpha-numerical order.

B-3



I.018

B-11



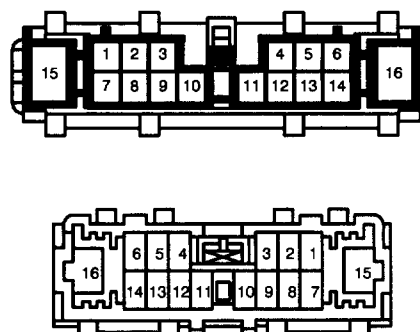
I.089

B-6



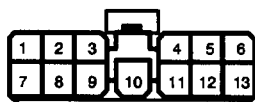
I.028

B-12



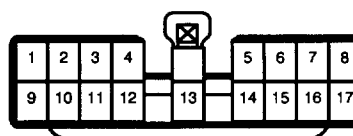
I.364

B-9



I.279

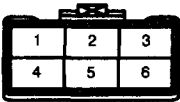
B-20



I.403

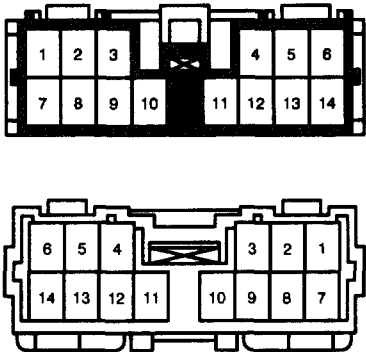
HARNESS CONNECTOR VIEWS

B-21



I.018

B-52



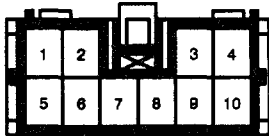
I.301

B-30



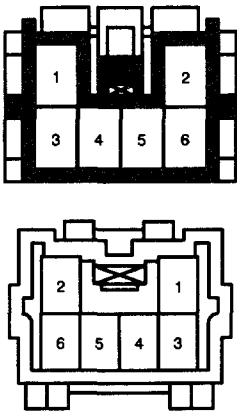
I.026

B-55



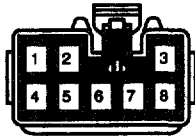
I.160

B-32



I.011

B-56



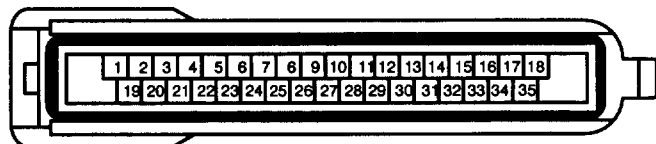
I.093

B-57



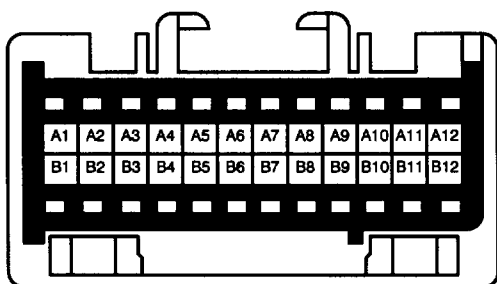
I.029

C-4



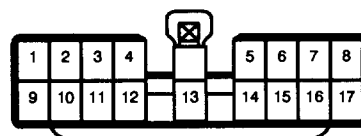
I.551

C-1



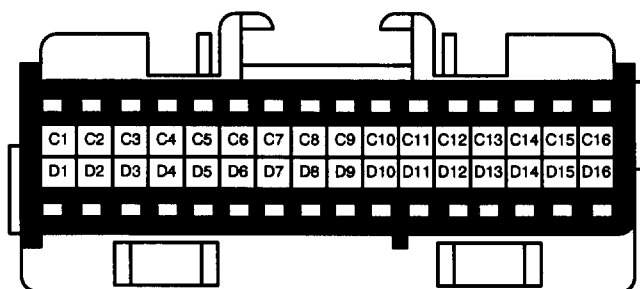
I.504

C-5



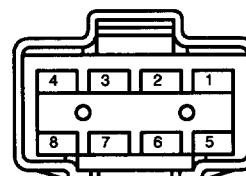
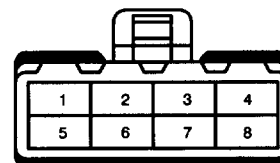
I.403

C-2



I.528

C-16



I.086

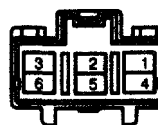
HARNESS CONNECTOR VIEWS

C-23



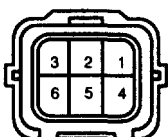
I.023

C-38



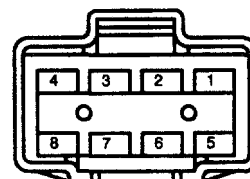
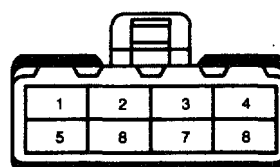
I.019

C-30



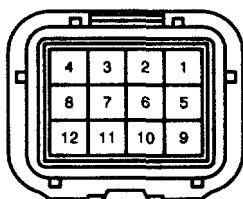
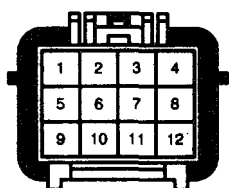
I.023

C-39



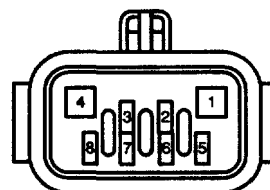
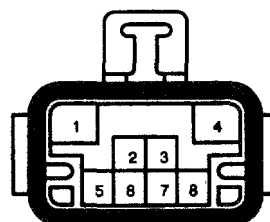
I.086

C-34



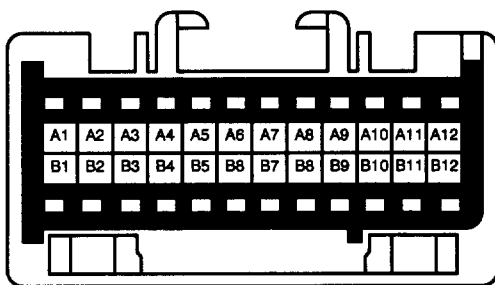
I.241

C-43



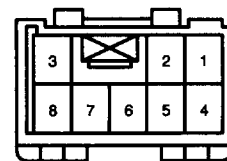
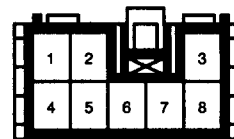
I.088

C-90



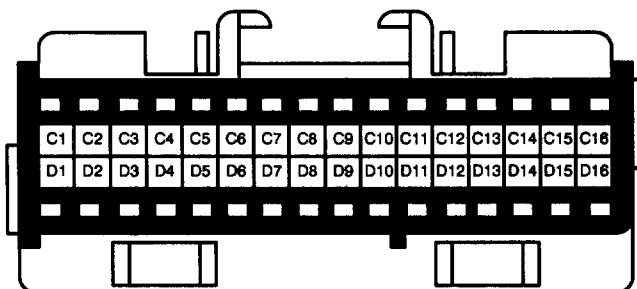
I.504

D-3



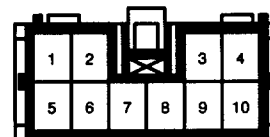
I.090

C-91



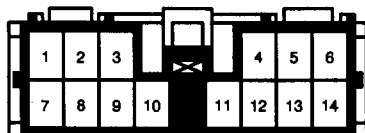
I.528

D-5



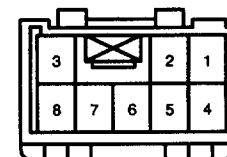
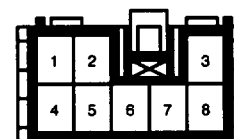
I.160

C-93



I.301

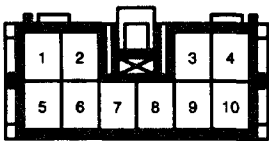
D-12



I.090

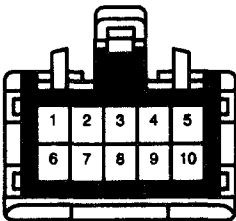
HARNESS CONNECTOR VIEWS

D-14



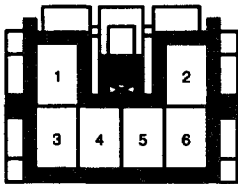
I.160

D-30



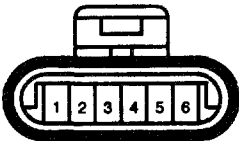
I.161

D-22



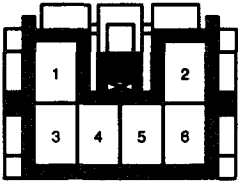
I.011

E-21



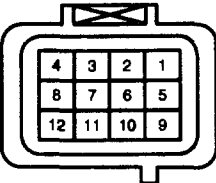
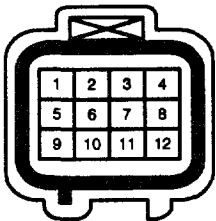
I.025

D-27



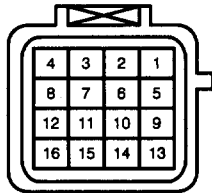
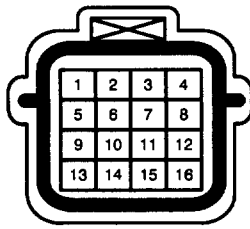
I.011

H-4



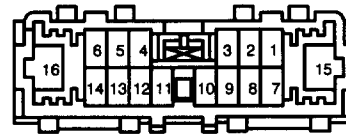
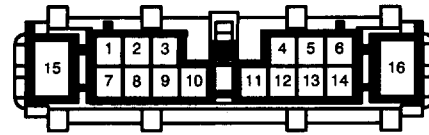
I.226

H-5



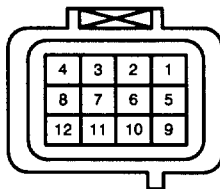
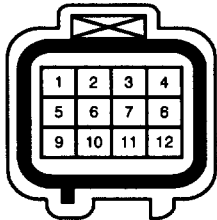
I.363

H-8



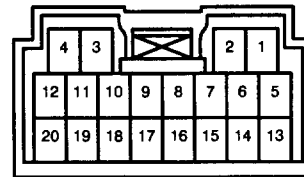
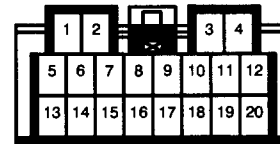
I.364

H-6



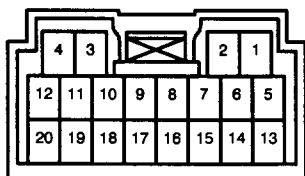
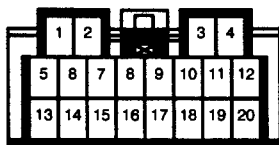
I.226

H-9



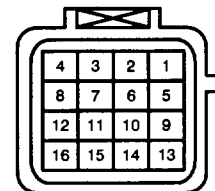
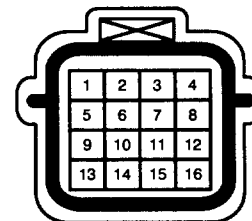
I.455

H-7



I.455

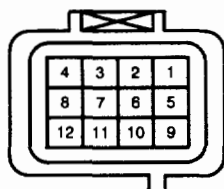
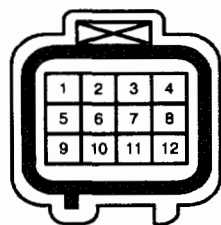
H-10



I.363

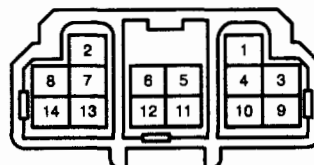
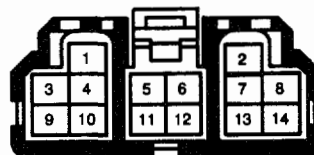
HARNESS CONNECTOR VIEWS

H-11



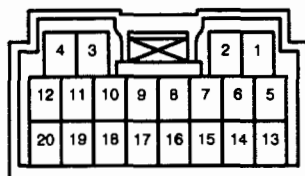
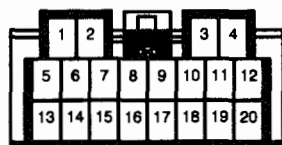
I.226

H-15



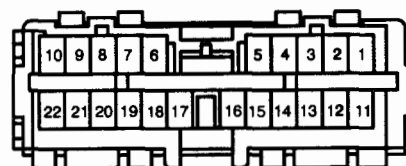
I.307

H-12



I.455

H-16



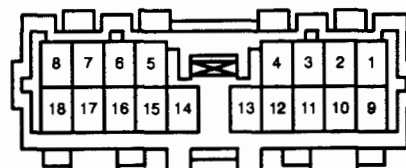
I.477

H-13



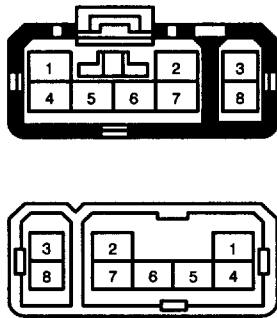
I.019

H-18



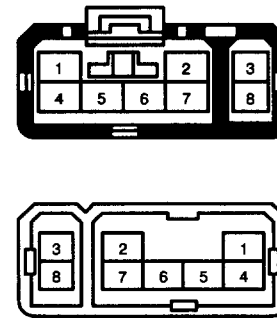
I.430

H-19



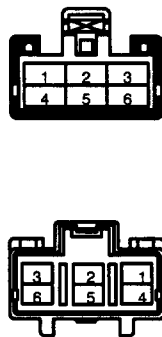
I.091

H-23



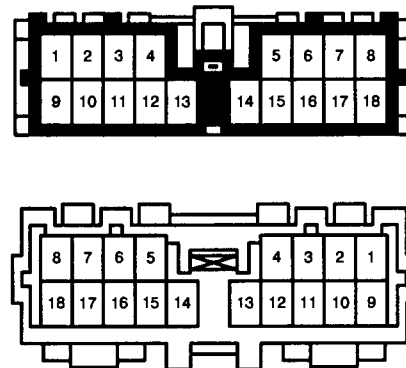
I.091

H-20



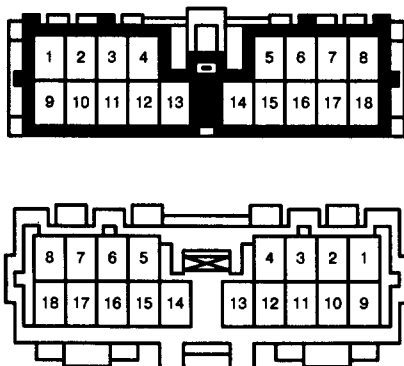
I.019

H-24



I.430

H-22



I.430

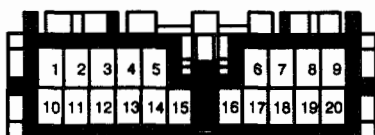
H-25



I.477

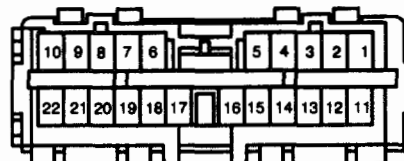
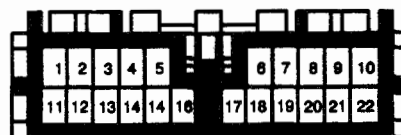
HARNESS CONNECTOR VIEWS

H-26



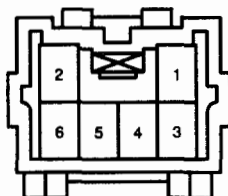
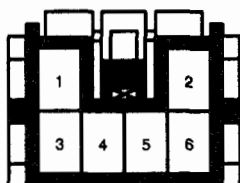
I.451

H-32 (With Power Door Locks)



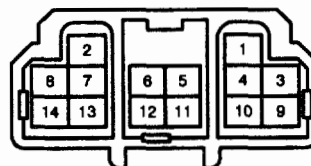
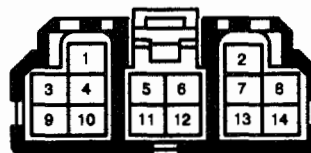
I.477

H-28



I.011

H-33



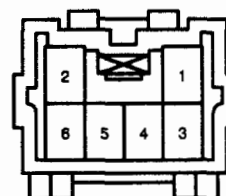
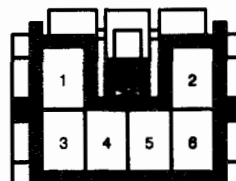
I.307

H-32 (Without Power Door Locks)



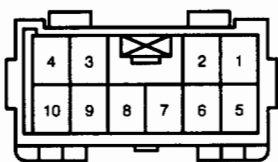
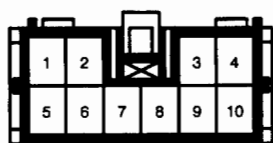
I.364

H-34



I.011

H-38



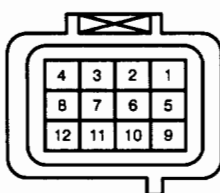
I.160

H-42



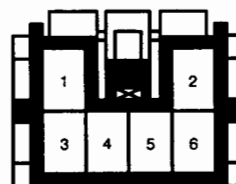
I.368

H-41 (RWAL)



I.226

H-44



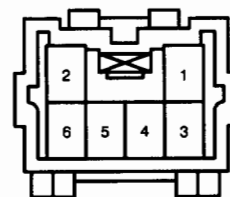
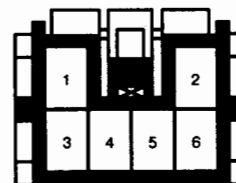
I.011

H-41 (ABS)



I.363

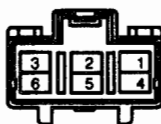
H-45



I.011

HARNESS CONNECTOR VIEWS

H-46



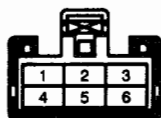
I.019

I-1



I.162

H-47



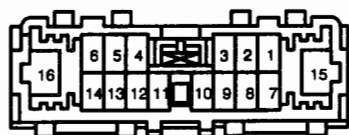
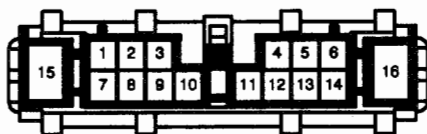
I.019

I-4



I.093

H-48



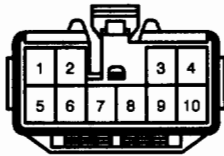
I.364

I-5



I.029

I-6



I.163

I-11



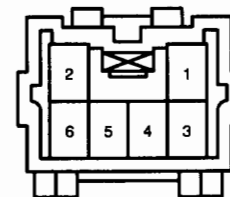
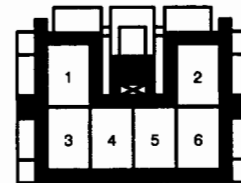
I.093

I-9



I.369

I-13



I.011

I-10



I.370

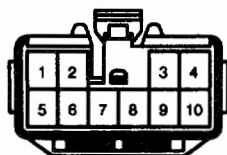
I-15



I.371

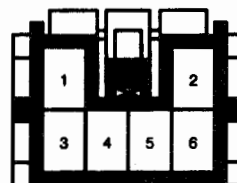
HARNESS CONNECTOR VIEWS

I-16



I.163

I-23



I.011

I-17



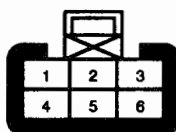
I.029

I-36



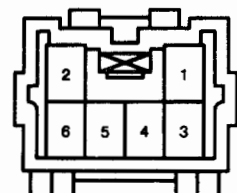
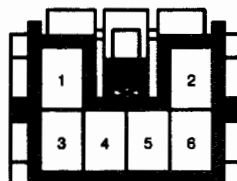
I.162

I-18



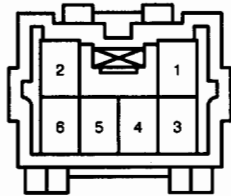
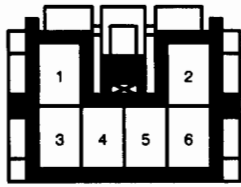
I.027

R-7



I.011

R-9



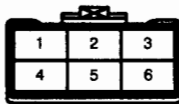
I.011

T-11



I.026

S-5



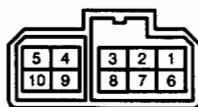
I.018

T-12



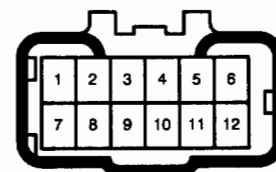
I.026

T-1



I.158

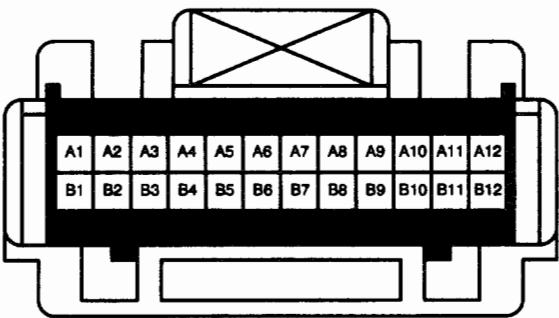
U-4



I.242

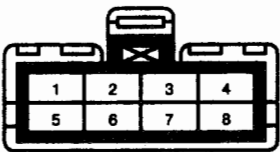
HARNESS CONNECTOR VIEWS

U-5



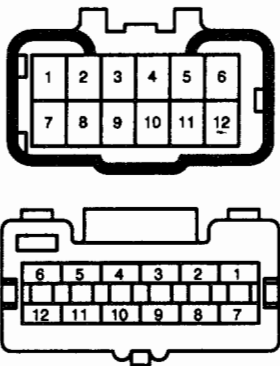
I.505

X-13



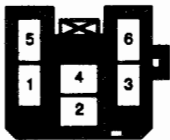
I.089

U-7



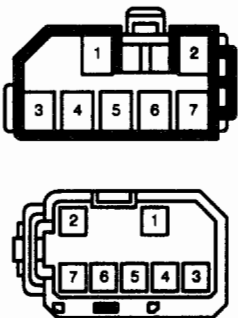
I.242

X-17



I.021

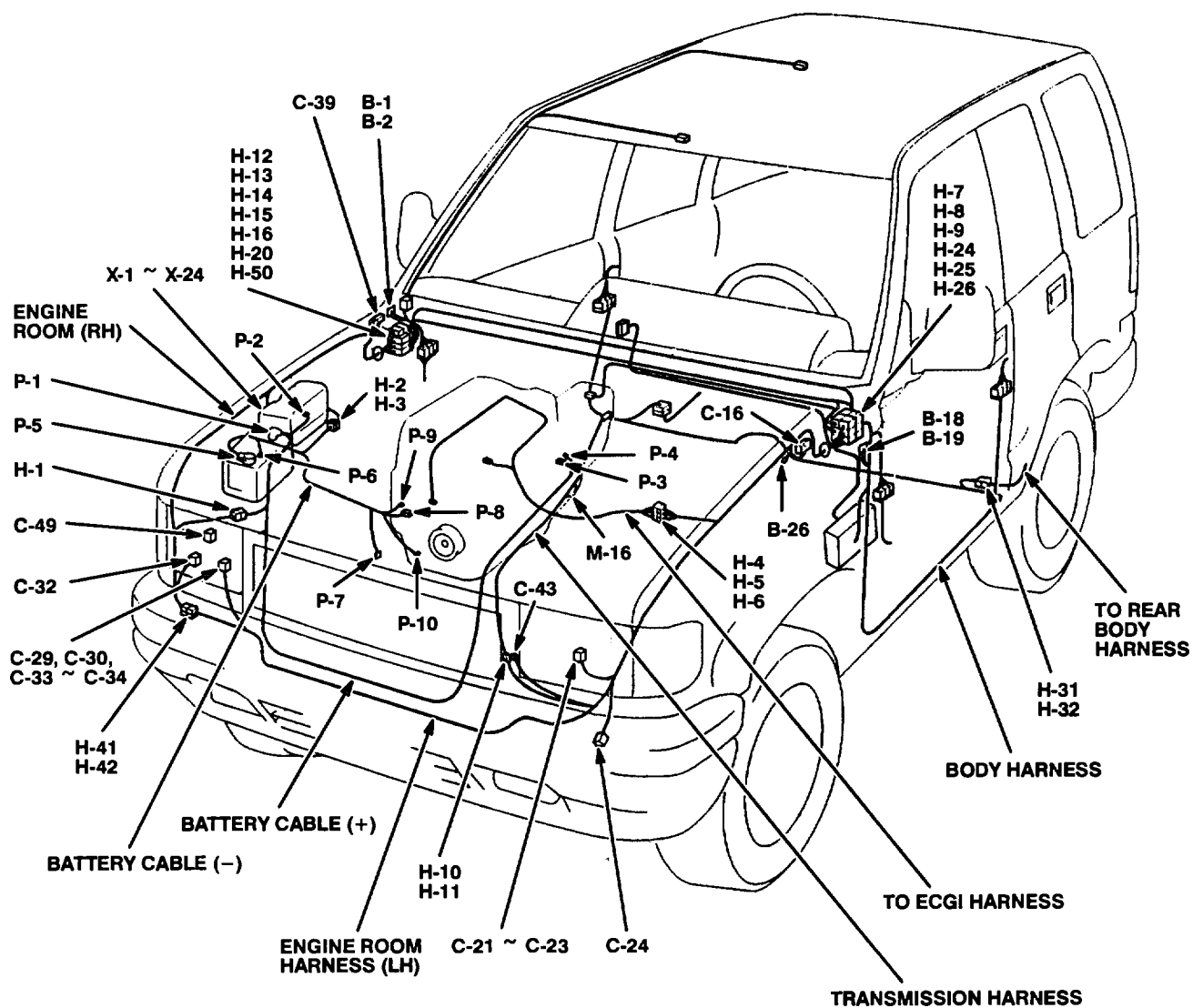
U-8



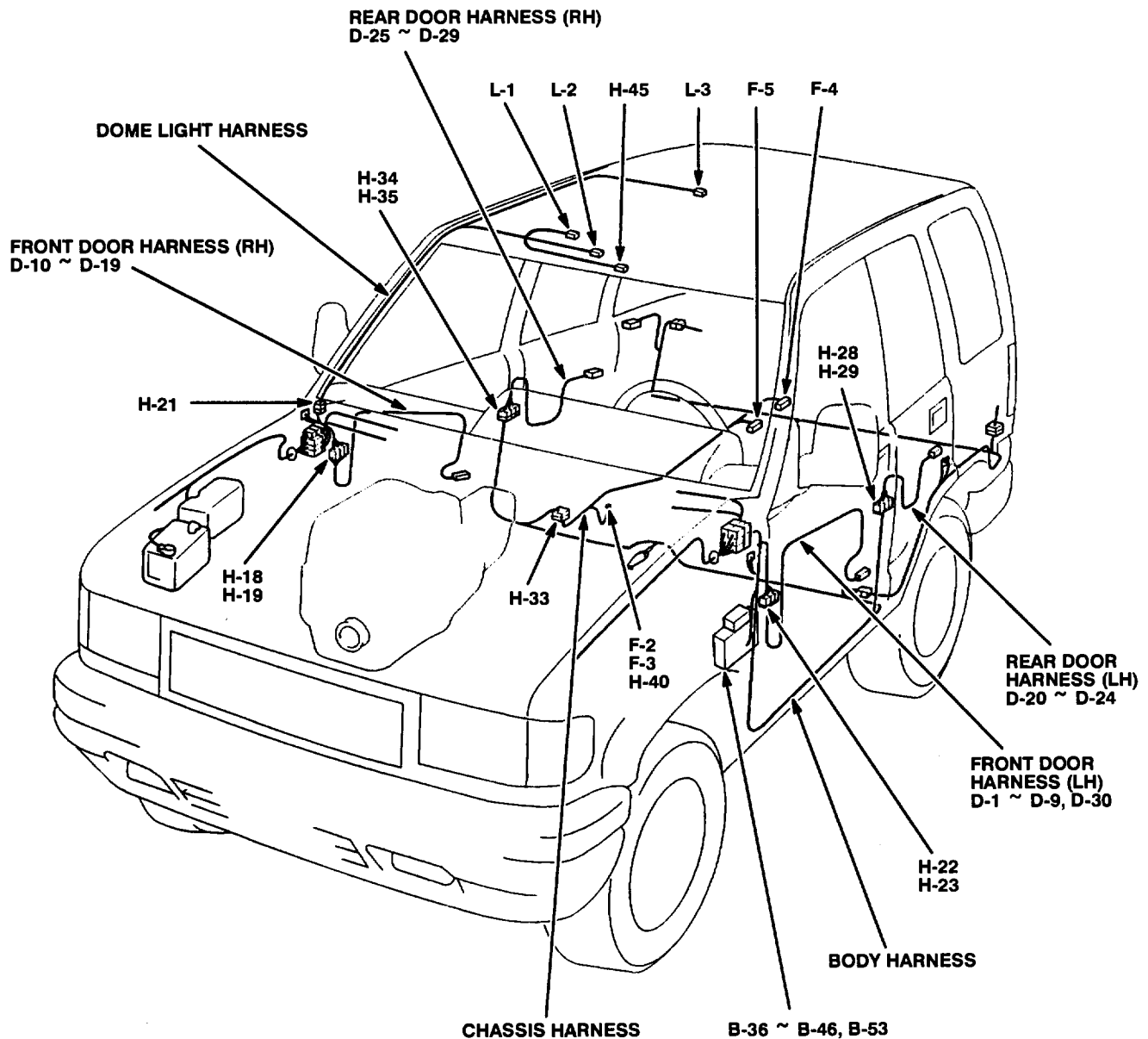
I.054

CONNECTOR AND WIRE HARNESS ROUTING

BATTERY CABLE (-)
BATTERY CABLE (+)
BODY HARNESS
ENGINE ROOM HARNESS (LH)
ENGINE ROOM HARNESS (RH)
TRANSMISSION HARNESS

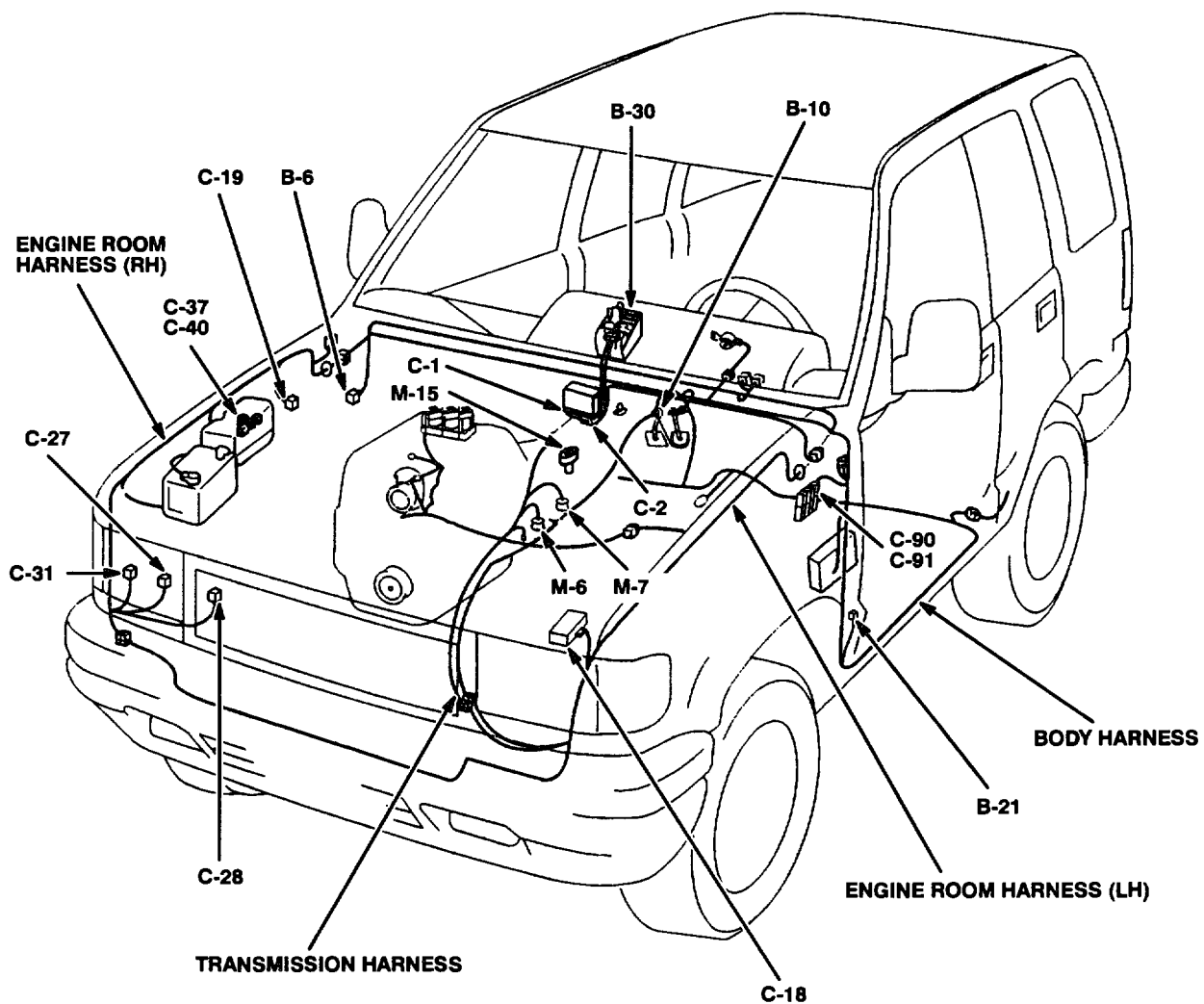


BODY HARNESS
 CHASSIS HARNESS
 DOME LIGHT HARNESS
 FRONT DOOR HARNESS (LH)
 FRONT DOOR HARNESS (RH)
 REAR DOOR HARNESS (LH)
 REAR DOOR HARNESS (RH)

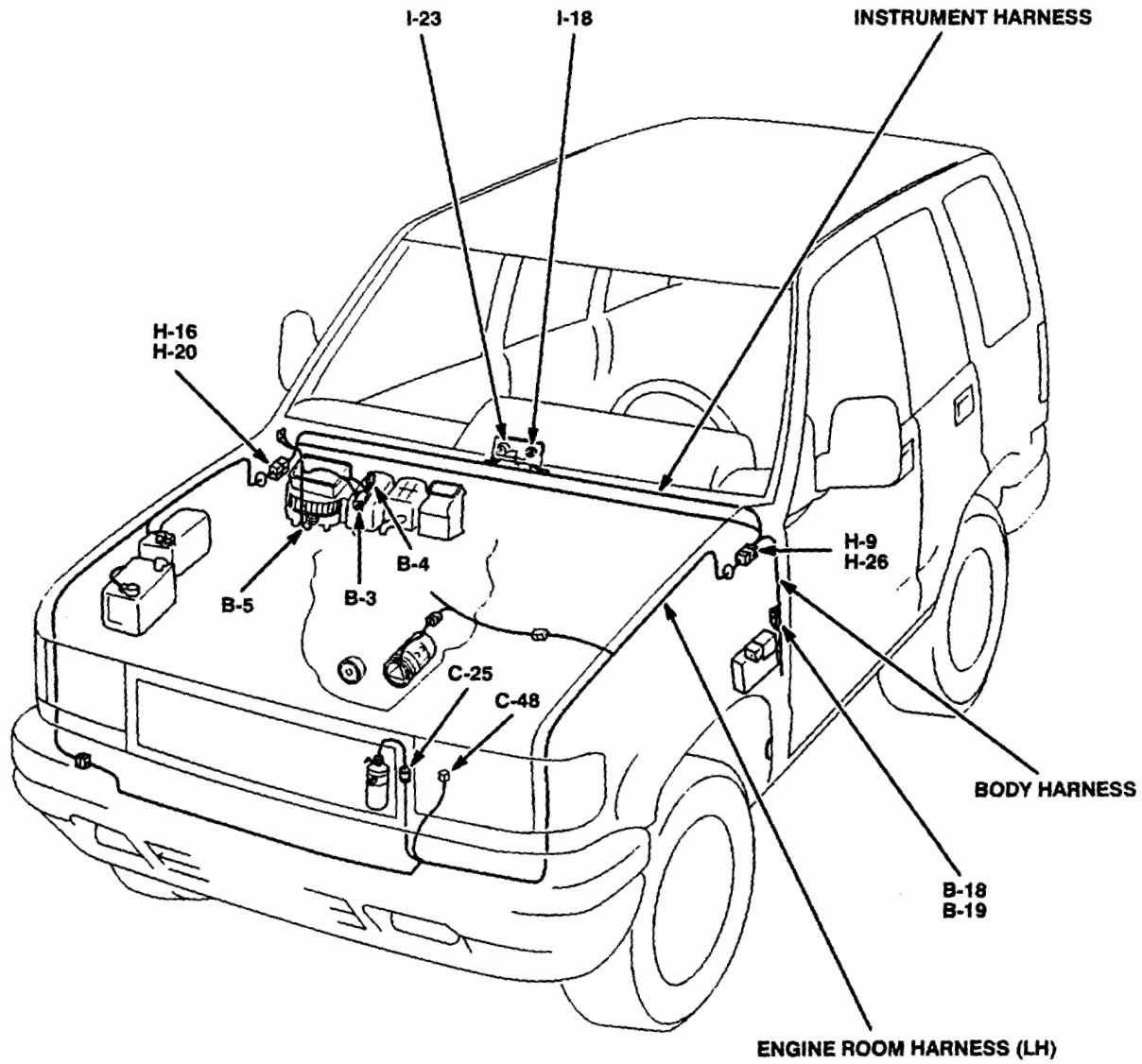


CONNECTOR AND WIRE HARNESS ROUTING

BODY HARNESS
ENGINE ROOM HARNESS (LH)
ENGINE ROOM HARNESS (RH)
TRANSMISSION HARNESS

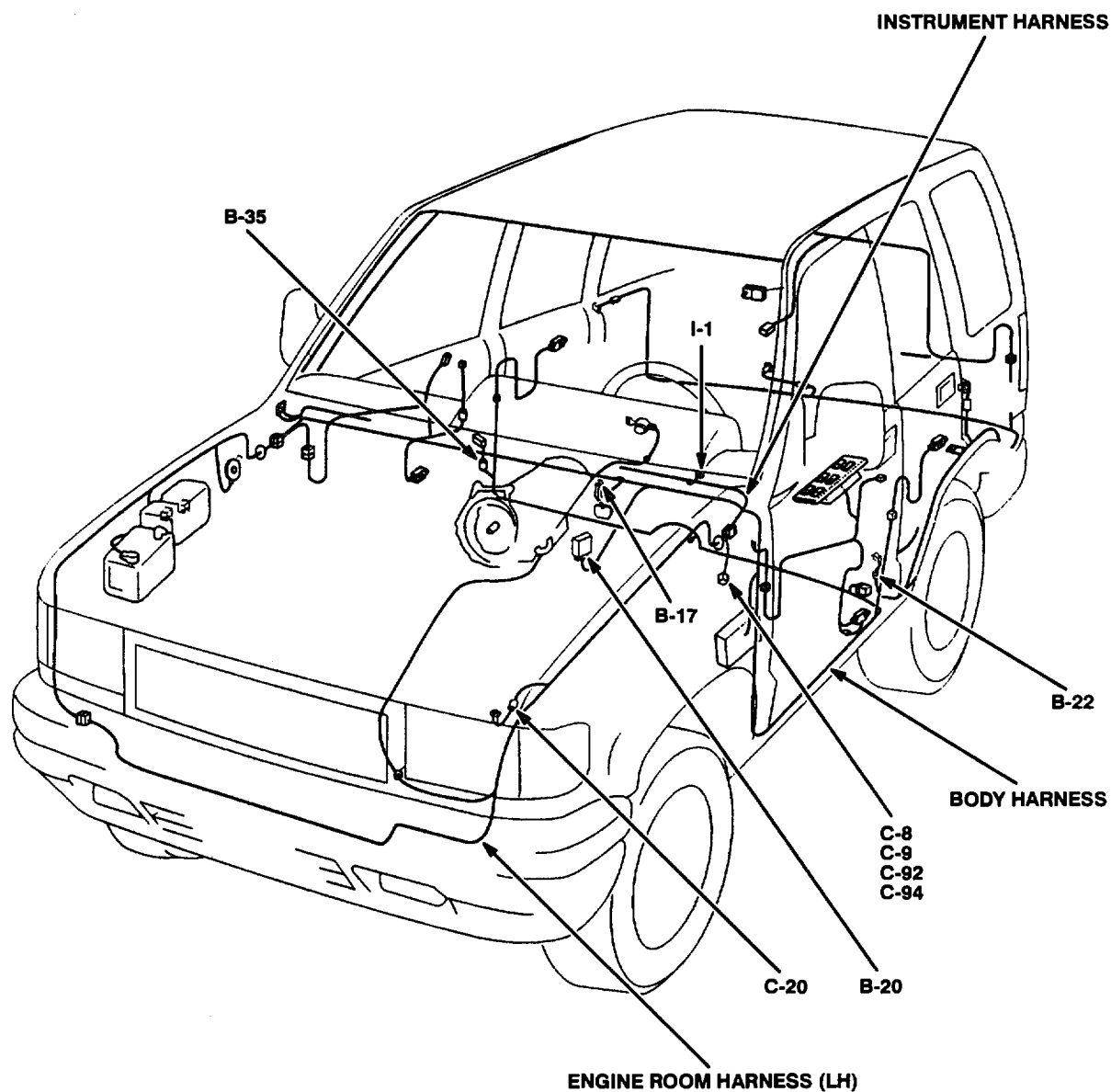


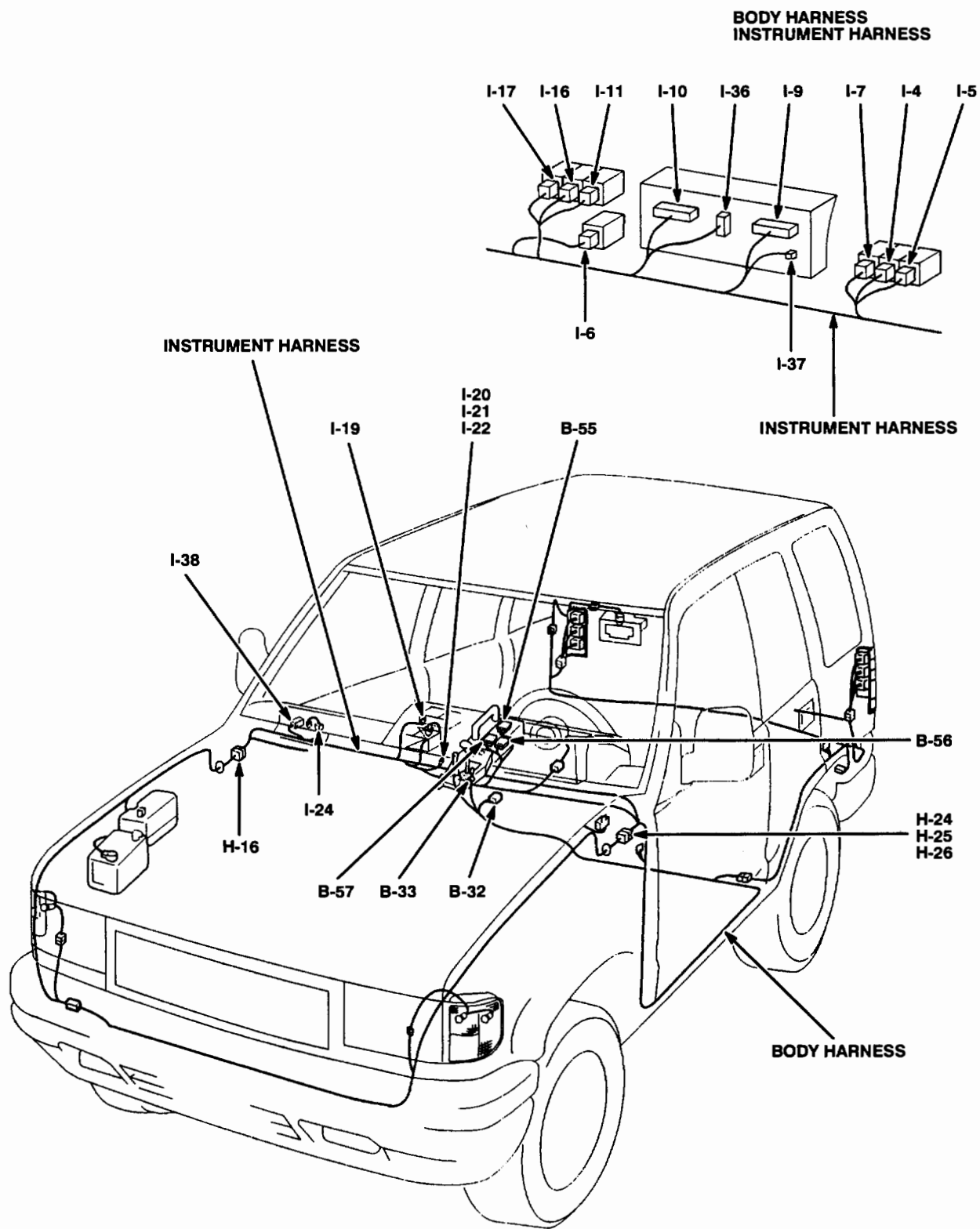
BODY HARNESS
ENGINE ROOM HARNESS (LH)
INSTRUMENT HARNESS



CONNECTOR AND WIRE HARNESS ROUTING

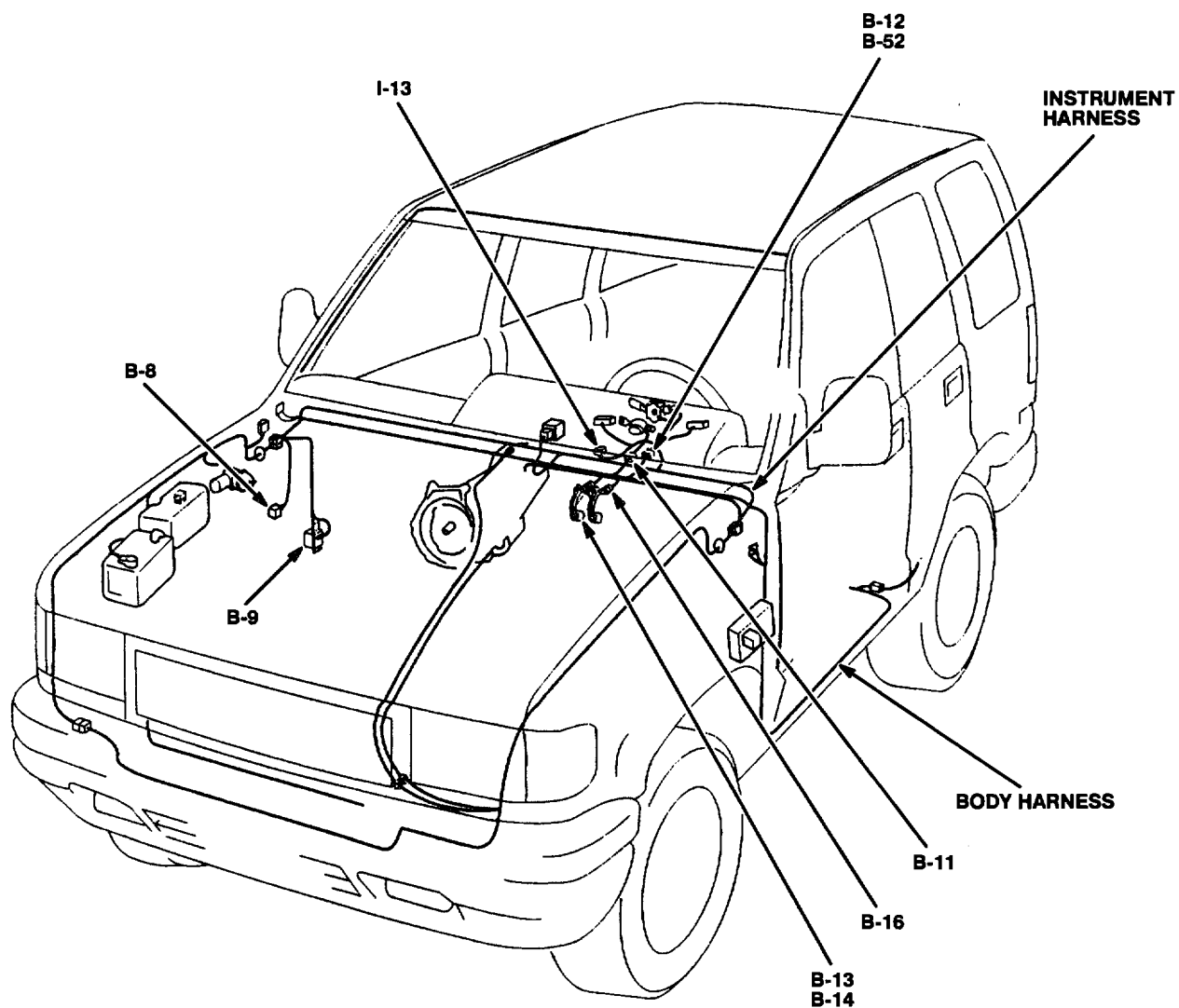
BODY HARNESS
ENGINE ROOM HARNESS (LH)
INSTRUMENT HARNESS





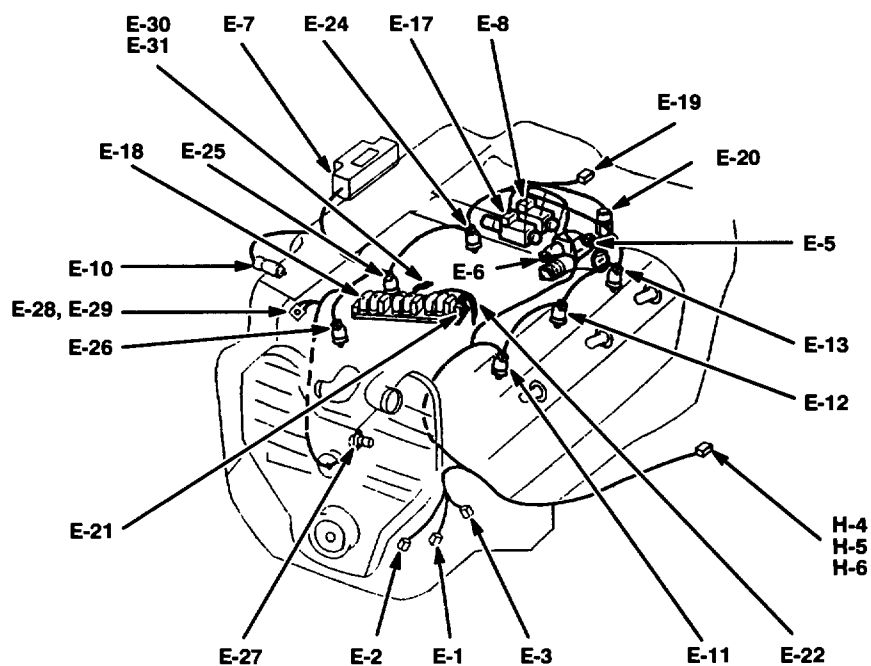
CONNECTOR AND WIRE HARNESS ROUTING

BODY HARNESS
INSTRUMENT HARNESS

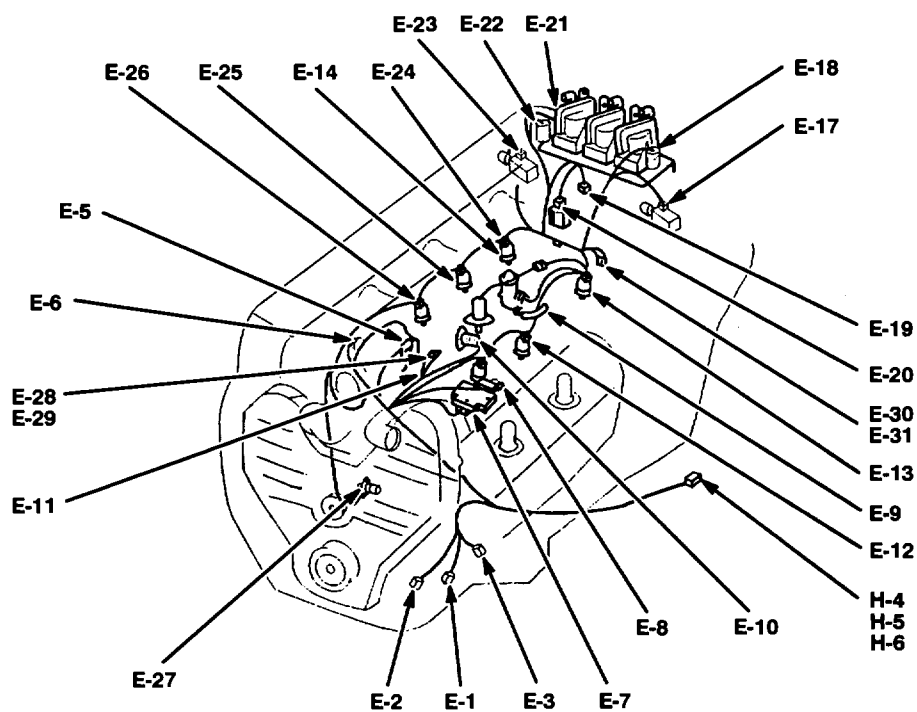


ENGINE ECGI HARNESS

SOHC

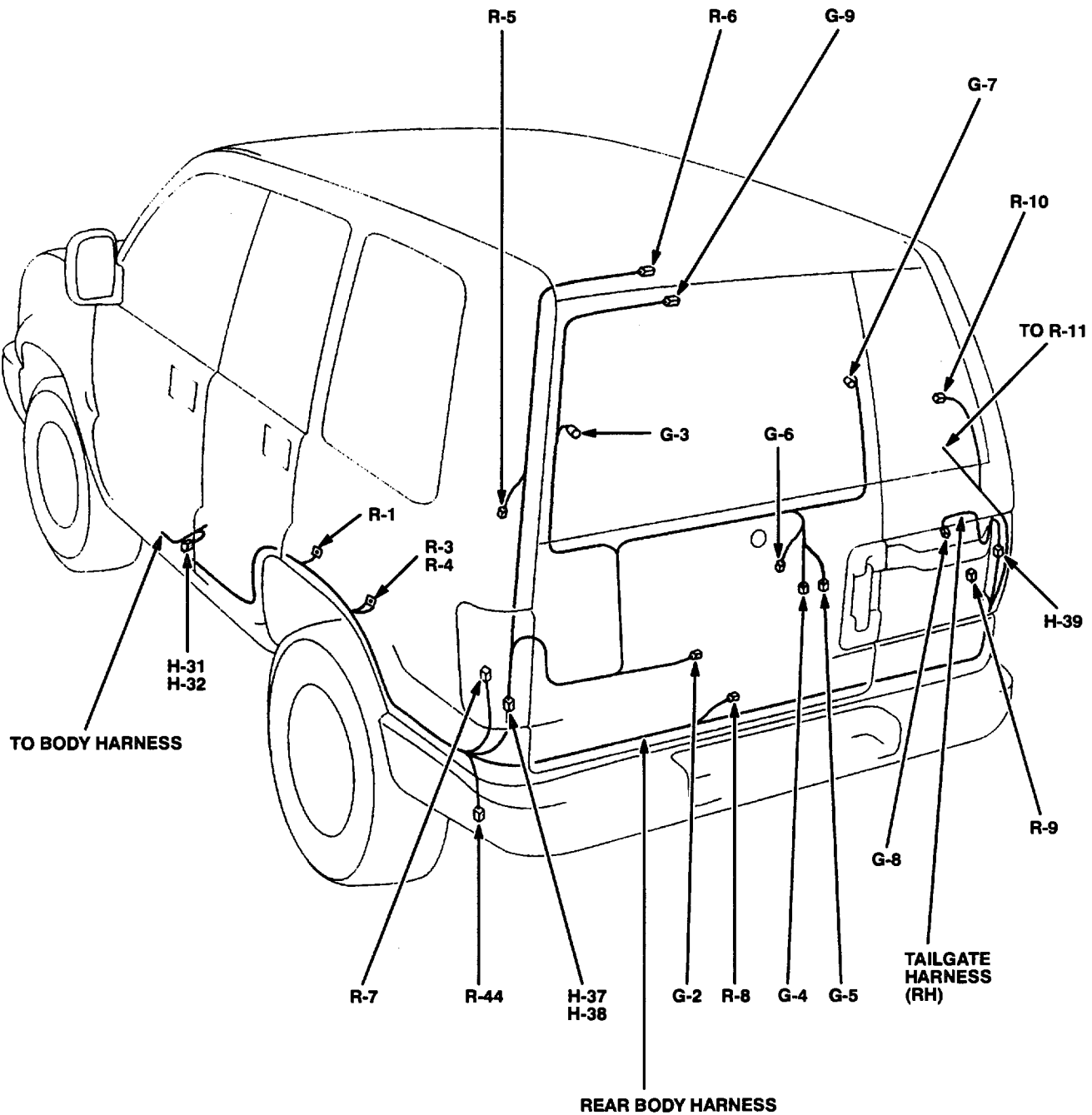


DOHC



CONNECTOR AND WIRE HARNESS ROUTING

REAR BODY HARNESS
TAILGATE HARNESS (LH)
TAILGATE HARNESS (RH)



SRS HARNESS

