

# MAINTENANCE INFORMATION

1994 Volvo 960

1992-96 MAINTENANCE  
Volvo Maintenance Information

960 Sedan  
960 Wagon

## \* PLEASE READ THIS FIRST \*

NOTE: For scheduled maintenance intervals and the related fluid capacities, fluid specifications and labor times for major service intervals, see SCHEDULED SERVICES article in this section. Warranty information and specifications for fluid capacities, lubrication specifications, wheel and tire size, and battery type are covered in this article.

## MODEL IDENTIFICATION

### VIN LOCATION

The Vehicle Identification Number (VIN) is located on the left side of the dash panel at the base of the windshield. The VIN chart explains the code characters.

### VIN CODE ID EXPLANATION

Numbers preceding the explanations in the legend below refer to the sequence of characters as listed on VIN identification label. See VIN example below.

(VIN)	Y	V	1	K	S	9	5	1	U	S	1	0	0	1	2	3	4
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

1 - Manufacturing Country  
Y \* Sweden Or Belgium  
2 \* Canada

2 - Manufacturer  
V \* Volvo

3 - Vehicle Type  
1 \* Passenger Vehicle

4 - Car Line Series  
K \* 960 Sedan  
K \* 960 Wagon

5 - Restraint System  
S \* 4-Door with Driver & Passenger Air Bag (1992-95)  
S \* 4-Door Driver W/Side & Passenger W/Side Air Bags (1996)  
W \* 5-Door with Driver & Passenger Air Bag (1992-95)  
W \* 5-Door Driver W/Side & Passenger W/Side Air Bags (1996)

6-7 - Engine  
93 \* B6254S 2.5L Inline 6 (1995 w/5-Speed Manual)  
93 \* B6254S 2.5L Inline 6 Motronic 4.4 SFI (1996 w/5-Spd Manual)  
93 \* B6254S 2.5L Inline 6 Motronic 4.4 SFI (1996 w/ AW 30-43 Auto)

95 \* B6304F 3.0L Inline 6 (1992-94)  
96 \* B6304S 2.9L Inline 6 (1995 w/ 4-Speed Auto)  
96 \* B6304S 2.9L Inline 6 Motronic 4.4 SFI (1996 w/ AW 30-40 Auto)

8 - Emissions

1 \* with EGR

9 - VIN Check Digit

\* Computer Generated

10 - Vehicle Model Year

N \* 1992

P \* 1993

R \* 1994

S \* 1995

T \* 1996

11 - Assembly Plant

1 \* Torslanda, Sweden

2 \* Ghent, Belgium

3 \* Halifax, Canada

A \* Uddevalla, Sweden

0 \* Kalmar, Sweden

12-17 - Serial Number

\* Sequential Production Number

## **MAINTENANCE SERVICE INFORMATION**

### **SEVERE & NORMAL SERVICE DEFINITIONS**

NOTE: Use the Severe Service schedule if the vehicle to be serviced is operated under ANY (one or more) of these conditions:

Service is recommended at mileage intervals based on vehicle operation. Service schedules are based on the following primary operating conditions:

Normal Service

- \* Driven More Than 10 Miles Daily
- \* No Operating Conditions From Severe Service Schedule

Severe Service (Unique Driving Conditions)

- \* Extended Idling Or Low Speed Operation
- \* Frequent Short Trips Of Less Than 7 Miles
- \* Extended Operation In Dusty Or Sandy Conditions
- \* Trailer Towing Operations
- \* Driving In Mountainous Conditions

### **CAMSHAFT TIMING BELT (IF EQUIPPED)**

CAUTION: Failure to replace a faulty camshaft timing belt may result in serious engine damage.

The condition of camshaft drive belts should always be checked on vehicles which have more than 50,000 miles. Although some manufacturers do not recommend belt replacement at a specified mileage, others require it at 60,000-100,000 miles. A camshaft drive belt failure may cause extensive damage to internal engine components on most engines, although some designs do not allow piston-to-valve

contact. These designs are often called "Free Wheeling".

Many manufacturers changed their maintenance and warranty schedules in the mid-1980's to reflect timing belt inspection and/or replacement at 50,000-60,000 miles. Most service interval schedules in this manual reflect these changes.

Belts or components should be inspected and replaced if any of the following conditions exist:

- \* Cracks Or Tears In Belt Surface
- \* Missing, Damaged, Cracked Or Rounded Teeth
- \* Oil Contamination
- \* Damaged Or Faulty Tensioners
- \* Incorrect Tension Adjustment

Volvo recommends replacement of the camshaft timing belt at the following intervals:

**CAMSHAFT TIMING BELT REPLACEMENT INTERVAL TABLE**

Application	Interval (Miles)
1992-93 (1) .....	30,000
1994 .....	50,000
1995-96 .....	70,000

(1) - First (30,000 Mile) timing belt change to be done by Volvo dealer at no cost.

**SERVICE POINT LOCATIONS**

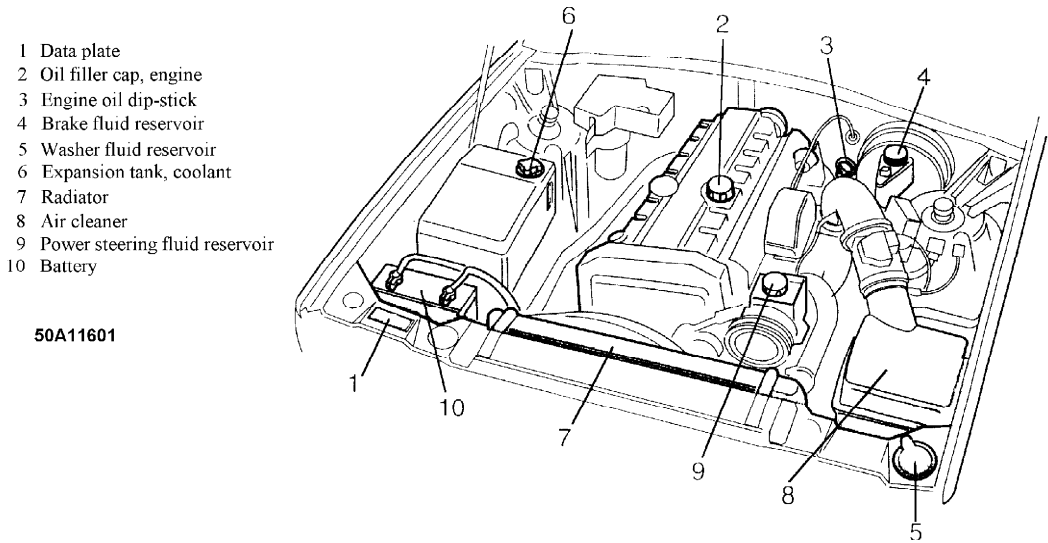
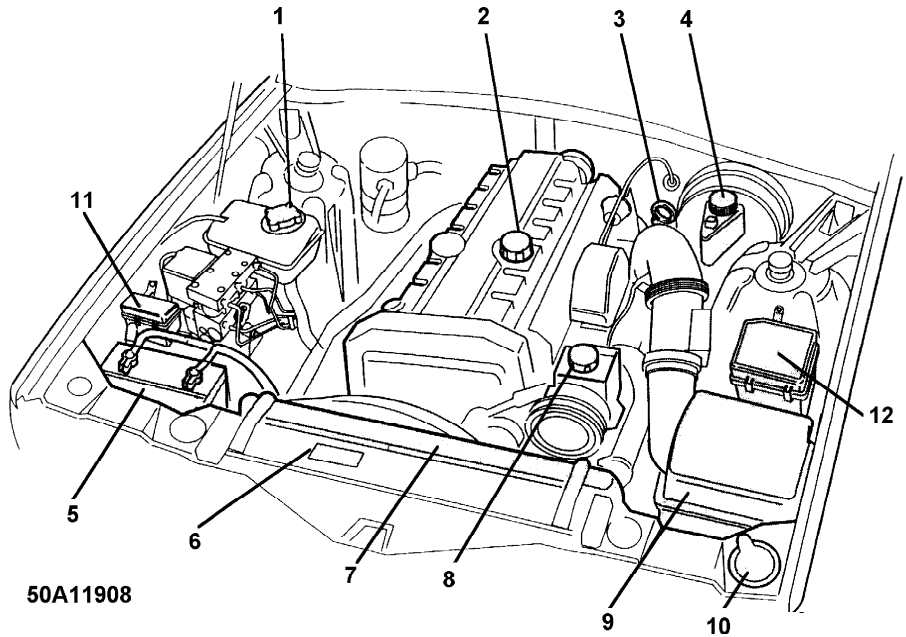


Fig. 1: Service Point Locations (1992-94)  
Courtesy of Volvo Cars of North America.

**Engine compartment  
960**

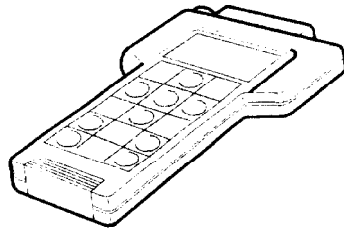
- 1 Expansion tank, coolant
- 2 Oil filler cap, engine
- 3 Engine oil dip-stick
- 4 Brake fluid reservoir
- 5 Battery
- 6 Data plate
- 7 Radiator
- 8 Power steering fluid reservoir
- 9 Air cleaner
- 10 Washer fluid reservoir
- 11 Main fuse box
- 12 Relay/fuse box

**WARNING!**  
The cooling fan may start or continue to operate (for up to 6 minutes) after the engine has been switched off.



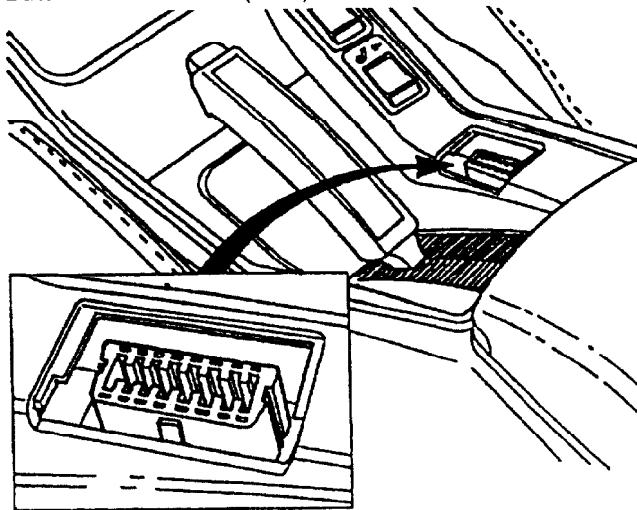
50A11908

Fig. 2: Service Point Locations (1995-96)  
Courtesy of Volvo Cars of North America.



**Volvo System Tester  
Scan Tool**

**Data link connector (DLC)**



50I12045

Fig. 3: OBD II Diagnostic Link Connector Location (1996)  
Courtesy of Volvo Cars of North America.

**ADDITIONAL SERVICE INFORMATION**

## TIMING BELT REPLACEMENT

TIMING BELT REPLACEMENT TABLE

Model Year	Part Number	20K	30K	40K	50K	60K	70K	90K	100K
1992	271705-6	B		C			X		X
1993*	271705-6		D			X		X	
1994	271856-7				X				X
1995-	271876-5						E		

\* = Late M/Y 93 960's (from engine no. 131035) should have M/Y 94 timing belt (P/N 271856-7). See Parts Bulletin 21-13 and Tech DCS 21-02.

B = See SMB 137A, timing belt replaced at no cost to customer  
 C = See SMB 137A, SB 21-118, install torsion damper, replace timing belt at no cost to customer  
 D = Recommended timing belt replacement at no cost to customer  
 E = Recommended timing belt replacement  
 X = Required timing belt replacement

CAUTION: On 1992 & 1993 960's, lubricate timing belt tensioner pivot bearing during timing belt replacement.

## ELECTRONIC AIR PUMP SYSTEM (1995-96)

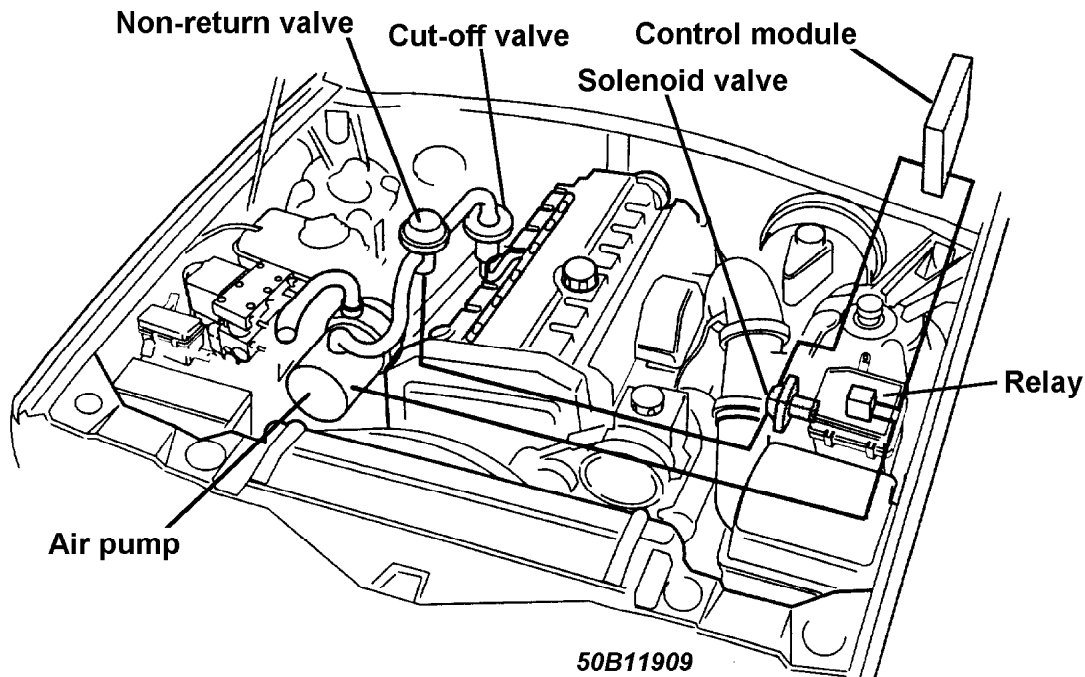
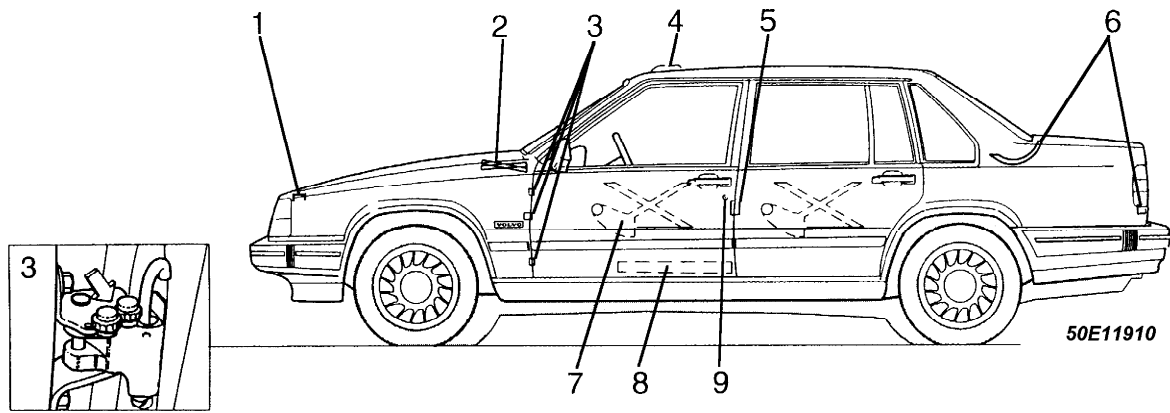


Fig. 4: Electronically Controlled Air Pump System (1995-96)  
 Courtesy of Volvo Cars of North America.

## BODY LUBRICATION POINTS



Door Stop

No. Lubricating hint	Lubricant	No. Lubricating hint	Lubricant
1 Hood lock and latch	Oil	7 Window regulator locking device (on inside of door)	Oil, grease low temperature grease
2 Hood hinges	Oil	8 Front seat slide rail and latch	Oil
3 Door stop and hinges	Oil	9 Door lock keyhole	Low temperature grease or Volvo Teflon lock oil
4 Sun roof wind deflector	Oil		
5 Door lock catch plate	Oil		
6 Trunk lid lock keyhole and hinges	Low temperature grease		

Fig. 5: Body Lubrication Points  
Courtesy of Volvo Cars of North America.

### REAR AXLE SERVICE POINTS

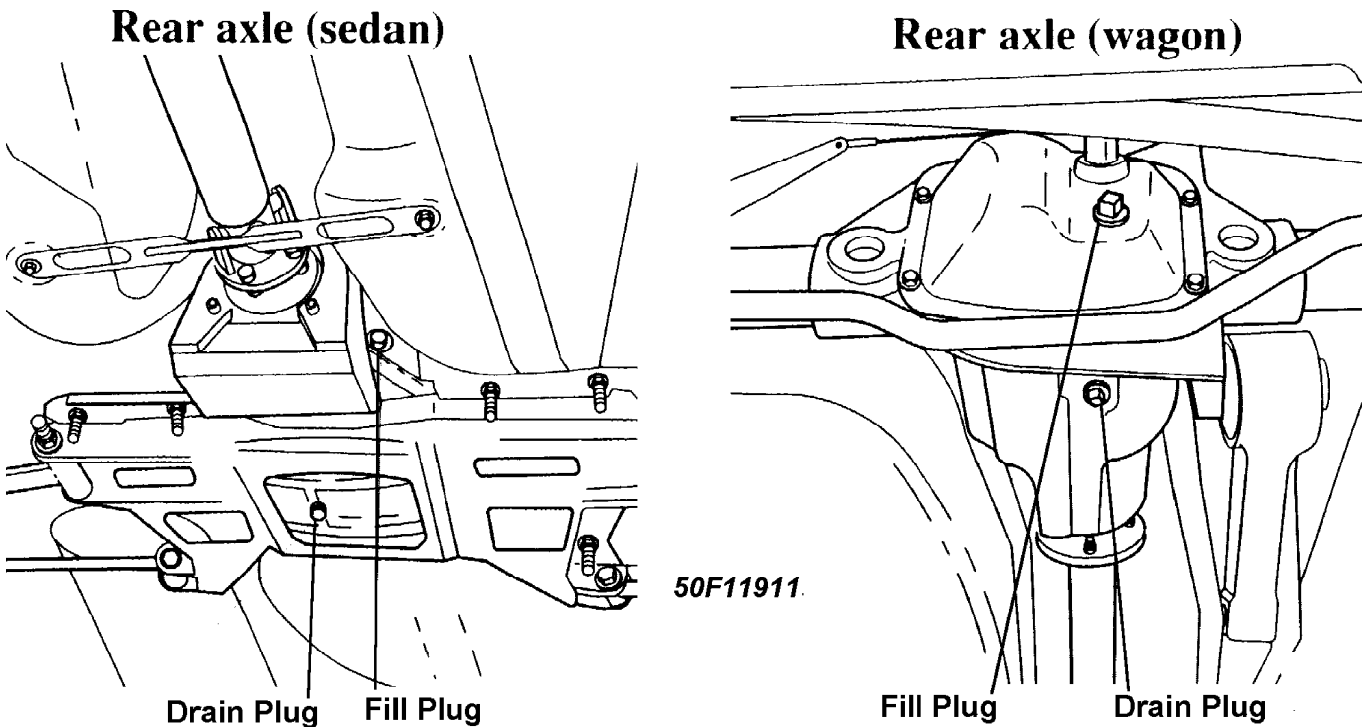
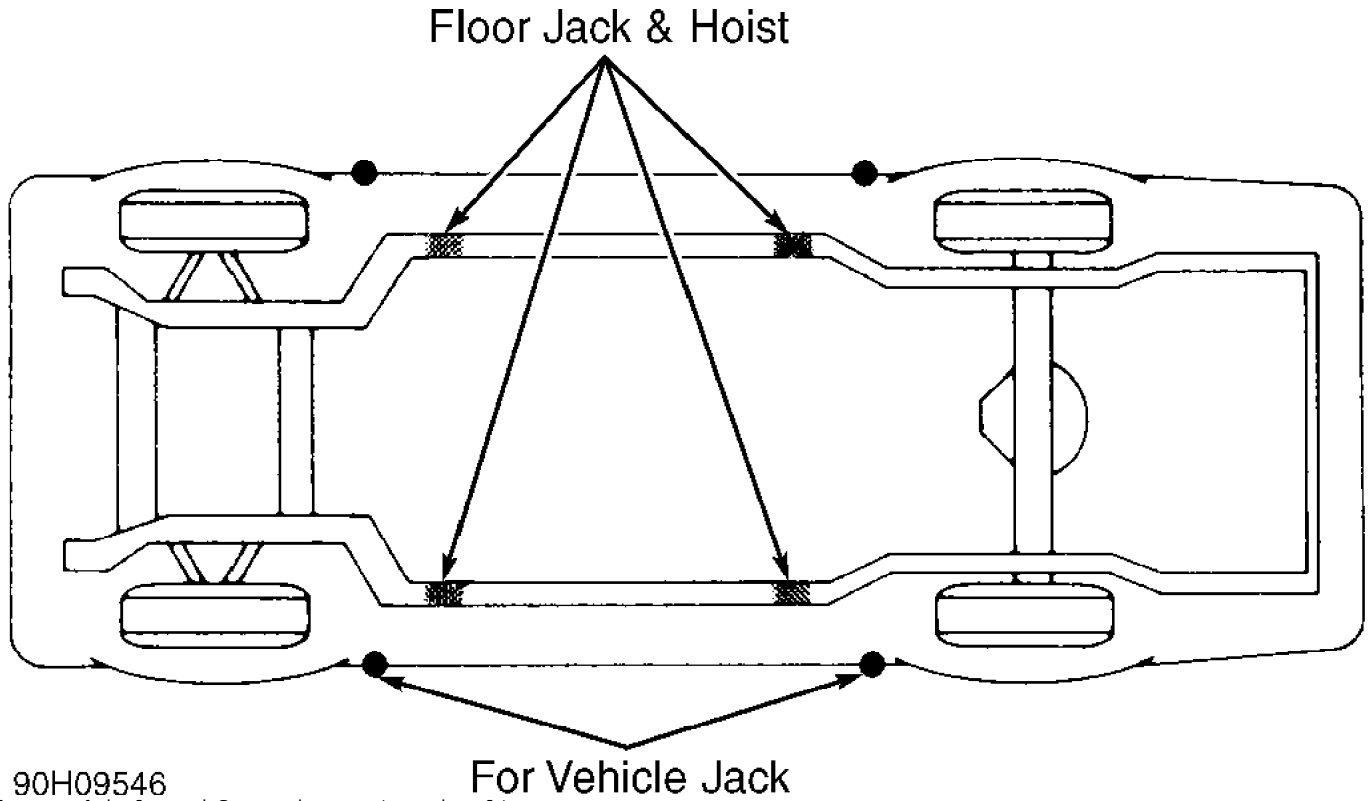


Fig. 6: Rear Axle Service Points (Sedan and Wagon)  
Courtesy of Volvo Cars of North America.

NOTE: All sedan and 1995-96 wagon models have an Independent Rear axle, the 1992-94 wagons have a solid axle.

## VEHICLE LIFT POINTS



90H09546

Fig. 7: Vehicle Lift Points (Typical)  
Courtesy of Volvo Cars of North America.

NOTE: For more information regarding lifting and hoisting refer to the JACKING & HOISTING article in the WHEEL ALIGNMENT section.

## INFORMATION LABEL LOCATIONS

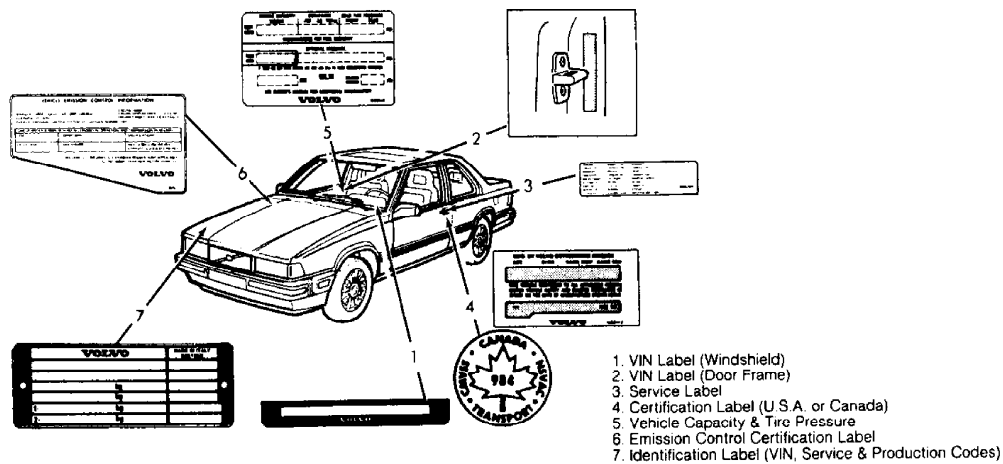


Fig. 8: Information Label Locations  
Courtesy of Volvo Cars of North America.

## SERVICE LABOR TIMES

SERVICE LABOR TIMES TABLE (HOURS)

Application (1)	30,000 Mile Service	60,000 Mile Service
2.5L		
Automatic Transmission	N/A	N/A
3.0L		
Automatic Transmission	6.3	7.7

(1) - To replace camshaft timing belt, add 1.3 hours.

**LUBRICATION SPECIFICATIONS**

CAUTION: DO NOT use SAE 15W-40 oil in extremely low ambient temperatures.

LUBRICATION SPECIFICATIONS TABLE

Application	Fluid Specifications
Engine Coolant	50/50 Mix Ethylene Glycol and Distilled Water
Brake Fluid	DOT 4 Or DOT 4+ Brake Fluid
Engine Oil (1)	
Ambient Temperature	
Less Than 68°F (20°C)	SAE 5W-30 API SH/CD
-4°F To 100°F (-20° To 38°C)	SAE 10W-30 API SH/CD
Greater Than 14°F (-10°C)	SAE 15W-40 API SH/CD
Automatic Transmission	
AW30/40	Dexron-II E ATF
AW30/43	Dexron-II E ATF
Power Steering Fluid	Dexron-II E Or Mercon ATF
Rear Axle	
Without Limited Slip	SAE 80W-90 API-GL-5 (2)
With Limited Slip	SAE 90 API-GL-5 (2) (3)
Limited Slip Additive	Volvo Additive (1161129-0)
Wheel Bearings	NLGI Grade 2 Category GC-LB
Drive Shaft U-Joints	NLGI Grade 2 Category GC-LB
Steering Linkage (4) (5)	NLGI Grade 2 Category GC-LB
Ball Joints (4) (6)	NLGI Grade 2 Category GC-LB
Aux. Drive Belt Tensioner	Volvo Grease (1161246-2)
Tensioner Pulley Bushing	Grease (P/N 116246-2 Or 116247-0)
Weatherstrip	Dielectric Silicone Grease

- (1) - SAE 15W-40 or 20W-40 engine oil is recommended for extreme conditions or extended highway operation.
- (2) - In Canada and cold climates use SAE 80W API GL-5.
- (3) - Supplement with Volvo Additive (1161129-0)
- (4) - Use low pressure grease gun to prevent seal damage.
- (5) - Fill until lubricant squeezes out from the base of seals.
- (6) - Fill ball joint until seal starts to swell.

**FLUID CAPACITIES**

FLUID CAPACITIES TABLE

Application	Quantity (1)
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A/C R-12 Refrigerant		
1992 .....	33.5 Ozs.	
A/C R-134a Refrigerant (2)		
1993-96 .....	31.8 Ozs.	
Brake Master Cylinder .....	0.63 Qt. (0.6L)	
Cooling System .....	10.5 Qts. (10.0L)	
Engine Oil		
With Oil Filter Change .....	5.9 Qts. (5.7L)	
With Filter and Oil Cooler .....	6.4 Qts. (6.1L)	
Fuel Tank		
1992-94		
Sedan .....	21.1 Gals. (80.0L)	
Wagon .....	19.8 Gals. (75.0L)	
1995-96 (All) .....	20.8 Gals. (80.0L)	
Rear Axle (3)		
Sedan .....	1.4 Qts. (1.3L)	
Wagon .....	1.7 Qts. (1.6L)	
Automatic Transmission		
Fluid & Filter Change		
AW30/40 .....	3.2 Qts. (3.0L)	
AW30/43 .....	3.2 Qts. (3.0L)	
Overhaul		
AW30/40 .....	7.9 Qts. (7.5L)	
AW30/43 .....	7.9 Qts. (7.5L)	
Power Steering .....	1.05 Qts. (1.0L)	

- (1) - Capacities are recommended or calculated levels. Always use dipstick (if available) to measure level.
- (2) - Use of R-12 in a R134a system will result in SEVERE DAMAGE.
- (3) - If equipped with limited slip differential add lubricant additive (Volvo P/N 1161129-0) first, then add new fluid.

## WHEEL & TIRE SPECIFICATIONS

### WHEEL & TIRE SPECIFICATIONS TABLE

Wheel Size	Tire Size
15 x 6" (Steel) .....	P195/65HR15
15 x 6" (Aluminum) .....	P195/65HR15
16 x 6.5" (Aluminum) .....	P205/55HR16
Optional Spare	
15 x 6" (Steel) .....	P195/65HR15
15 x 6" (Aluminum) .....	P195/65HR15
16 x 6.5" (Aluminum) .....	P205/55HR16

## TIRE INFLATION

Tire specification label is located on the right front door.

### TIRE INFLATION SPECIFICATIONS TABLE

Tire Size/Application	psi (kg/cm <sup>2</sup> )
195/60R-15 .....	(1)
195/65R-15 .....	(1)
205/55R-16 .....	(1)
Spare Tire .....	(1)

- (1) - Check tire pressure label located on rear edge of right front door.

## WHEEL TIGHTENING

Tighten all wheel lug nuts to 63 ft. lbs. (85 N.m) using pattern shown in Fig. 9.

## TIRE ROTATION PATTERNS

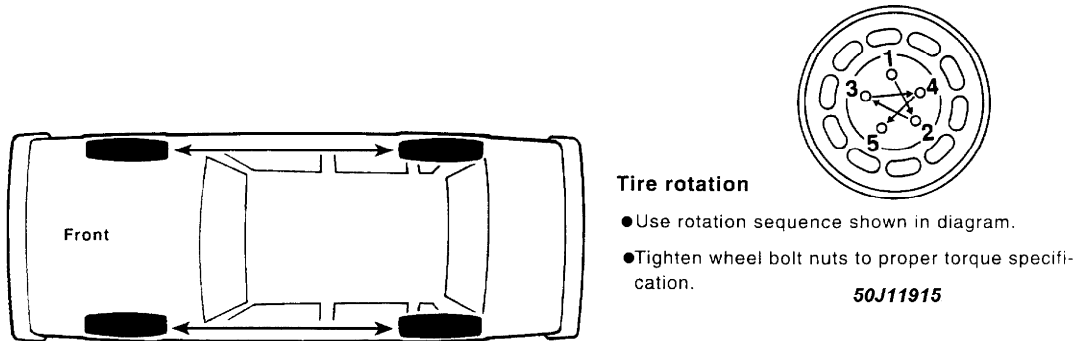


Fig. 9: Tire Rotation Pattern & Lug Nut Torque Pattern  
 Courtesy of Volvo Cars of North America.

## BATTERY SPECIFICATIONS

**CAUTION:** When battery is disconnected, vehicles equipped with computers may lose memory data. When battery power is restored, driveability problems may exist on some vehicles. These vehicles may require a relearn procedure. See COMPUTER RELEARN PROCEDURES article in the GENERAL INFORMATION section.

Gasoline engine vehicles use batteries with a 66 amp hour rating.

### B.C.I. BATTERY GROUP APPLICATION TABLE

Application (1)	B.C.I. Group Number
2.5L .....	(1)
2.9L .....	(1)
3.0L .....	(1)

(1) - See Owner's Manual.

## CAUTIONS & WARNINGS

### SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG)

**NOTE:** See the AIR BAGS article in the ACCESSORIES/SAFETY EQUIPMENT Section.

Modifications or improper maintenance, including incorrect removal and installation of the Supplemental Restraint System (SRS), can adversely affect system performance. DO NOT cover, obstruct or change the steering wheel horn pad in any way, as such action could

cause improper function of the system. Use only plain water when cleaning the horn pad. Solvents or cleaners could adversely affect the air bag cover and cause improper deployment of the system.

**WARNING:** To avoid injury from accidental air bag deployment, read and carefully follow all warnings and service precautions. See appropriate AIR BAGS article in ACCESSORIES/SAFETY EQUIPMENT.

**CAUTION:** Disconnect negative battery cable before servicing any air bag system, steering column or passenger side dash component. After any repair, turn ignition key to the ON position from passenger's side of vehicle in case of accidental air bag inflation

### **SUPPLEMENTAL RESTRAINT SYSTEM (SRS) AIR BAG WARNING**

**NOTE:** For information on air bag DIAGNOSIS & TESTING or DISPOSAL PROCEDURES, see AIR BAGS article in the ACCESSORIES/SAFETY EQUIPMENT Section.

**CAUTION:** System circuit is grounded by 2 screws beneath the driver's seat. DO NOT use these screws to ground any other accessory. DO NOT ground any other components near this system.

### **SIDE IMPACT PROTECTION SYSTEM (SIPS) - 1996 MODELS**

**NOTE:** For information on air bag DIAGNOSIS & TESTING or DISPOSAL PROCEDURES, see AIR BAGS article in the ACCESSORIES/SAFETY EQUIPMENT Section.

### **AIR CONDITIONING SERVICING**

**CAUTION:** Avoid breathing R-134a refrigerant and PAG lubricant vapors, exposure may irritate eyes, nose and throat. To remove R-134a from system use R-134a recycling equipment that meets SAE J2210 specifications. If accidental system discharge occurs, ventilate work area before resuming service.

**WARNING:** R-134a service equipment or vehicle A/C systems SHOULD NOT be pressure tested or leak tested with compressed air. Some mixtures of air/R134a have shown to be combustible at elevated pressures. These mixtures are dangerous and may cause fire and/or explosions. See AIR CONDITIONING SERVICE article in GENERAL INFORMATION section.

### **ANTI-LOCK BRAKE SYSTEM**

The anti-lock brake system contains electronic equipment that can be susceptible to interference caused by improperly installed or high output radio transmitting equipment. Since this interference could cause the possible loss of the anti-lock braking capability, such equipment should be installed by qualified professionals.

On models equipped with anti-lock brake systems, ALWAYS observe the following cautions:

- \* DO NOT attempt to bleed hydraulic system without first referring to the appropriate ANTI-LOCK BRAKE SYSTEM article in the BRAKES Section.
- \* DO NOT mix tire sizes. As long as tires remain close to the original diameter, increasing the width is acceptable. Rolling diameter must be identical for all 4 tires. Some

manufacturers recommend tires of the same brand, style and type. Failure to follow this precaution may cause inaccurate wheel speed readings.

- \* Use ONLY recommended brake fluids. DO NOT use silicone brake fluids in an ABS-equipped vehicle.

## **BATTERY WARNING**

**WARNING:** When battery is disconnected, vehicles equipped with computers may lose memory data. When battery power is restored, driveability problems may exist on some vehicles. These vehicles may require a relearn procedure. See COMPUTER RELEARN PROCEDURES article in GENERAL INFORMATION section.

## **REPLACING BLOWN FUSES**

Before replacing a blown fuse, remove ignition key, turn off all lights and accessories to avoid damaging the electrical system. Be sure to use fuse with the correct indicated amperage rating. The use of an incorrect amperage rating fuse may result in a dangerous electrical system overload.

## **BRAKE PAD REPLACEMENT**

**WARNING:** Use caution when checking and/or changing brake pads, some pads may contain asbestos which can irritate eyes and may cause other health hazards. A water based solution should be used to clean brake dust from wheel and brake components. DO NOT use compressed air to blow off brake dust.

## **BRAKE SYSTEM**

**CAUTION:** If brake warning light comes on while driving it indicates a low fluid level or failure in one of the braking circuits. If the brake pedal can be depressed further than normal it is an indication that one of the brake circuits is not functioning. Stop vehicle and check brake reservoir fluid level. If level is below MIN mark, DO NOT drive vehicle. Have it towed to a repair shop. If level is between the MIN and MAX marks, proceed cautiously to a repair shop.

## **BRAKE PAD WEAR INDICATOR**

Indicator will cause a squealing or scraping noise, warning that brake pads need replacement.

## **CATALYTIC CONVERTER**

Continued operation of vehicle with a severe malfunction could cause converter to overheat, resulting in possible damage to converter and vehicle.

Any modification to the exhaust system on turbo models, which reduces exhaust backpressure, will lead to lean fuel mixtures and excessive spark advance. This could cause serious engine damage.

## **COOLANT (PROPYLENE-GLYCOL FORMULATIONS)**

To avoid possible damage to vehicle use only ethylene-glycol based coolants with a mixture ratio from 44-68% anti-freeze. DO NOT use 100% anti-freeze as it will cause the formation of cooling system deposits. This results in coolant

temperatures of over 300° F (149°C) which can melt plastics.  
100% anti-freeze has a freeze point of only -8° F (-22°C).

CAUTION: Propylene-Glycol Mixtures has a smaller temperature range than Ethylene-Glycol. The temperature range (freeze-boil) of a 50/50 Anti-Freeze/Water Mix is as follows:

Propylene-Glycol	-26° F (-32°C) - 257° F (125°C)
Ethylene-Glycol	-35° F (-37°C) - 263° F (128°C)

CAUTION: Propylene-Glycol/Ethylene-Glycol Mixtures can cause the destabilization of various corrosion inhibitors. Also Propylene-Glycol/Ethylene-Glycol has a different specific gravity than Ethylene-Glycol coolant, which will result in inaccurate freeze point calculations.

## **ELECTROSTATIC DISCHARGE SENSITIVE (ESD) PARTS**

WARNING: Many solid state electrical components can be damaged by static electricity (ESD). Some will display a warning label, but many will not. Discharge personal static electricity by touching a metal ground point on the vehicle prior to servicing any ESD sensitive component.

## **ENGINE OIL**

CAUTION: Never use non-detergent or straight mineral oil.

## **FUEL SYSTEM SERVICE**

WARNING: Relieve fuel system pressure prior to servicing any fuel system component (fuel injection models).

## **HALOGEN BULBS**

WARNING: Halogen bulbs contain pressurized gas which may explode if overheated. DO NOT touch glass portion of bulb with bare hands. Eye protection should be worn when handling or working around halogen bulbs.

## **RADIATOR CAP**

CAUTION: Always disconnect the fan motor when working near the radiator fan. The fan is temperature controlled and could start at any time even when the ignition key is in the OFF position. DO NOT loosen or remove radiator cap when cooling system is hot.

## **RADIATOR FAN**

WARNING: Keep hands away from radiator fan. Fan is controlled by a thermostatic switch which may come on or run for up to 15 minutes even after engine is turned off.

## **WHEELS & TIRES**

Only wheels tested and approved by the manufacturer should be used on models equipped with Air Dam aerodynamic components.

## **WARRANTY INFORMATION**

CAUTION: Always refer to customer's copy of warranty information for

specific model application and/or coverage limitations.

### **BASIC WARRANTY (1992-95 MODELS)**

Warranty coverage is 3 years or 50,000 miles, whichever occurs first.

### **MAJOR ASSEMBLY COVERAGE (1992-95 MODELS)**

Warranty coverage is 3 years or 50,000 miles, whichever occurs first.

### **CORROSION PROTECTION WARRANTY**

Painted body panels are warranted against perforation for a period of 5 years. Structural damage due to rust or corrosion is warranted for 8 years.

### **SUPPLEMENTAL RESTRAINT SYSTEMS & SEAT BELTS**

Factory installed seat belts or restraint systems are warranted for a period of 5 years.

### **EMISSION SYSTEM WARRANTY**

Manufacturer warrants that the vehicle emission control system was designed and installed to conform, at the time of sale, to all applicable U.S. emission standards. The warranty covers repairs resulting from any defect in material or workmanship which could cause the vehicle not to meet emission standards during the warranty period. The warranty period is 5 years or 50,000 miles. The following items are not warranted:

- \* Normal Scheduled Maintenance Of Emission Components
- \* Regular Maintenance Items
- \* Damage To Components Due To Accidents
- \* Damage Due To Contaminated Or Incorrect Fuels
- \* Any Component On A Vehicle With An Altered Odometer
- \* Damaged Caused By The Use Of Non-Genuine Parts

The following components are covered by Emission System or Emission Performance warranties:

- \* Ignition Cables
- \* Distributor Components
- \* Ignition Coil
- \* Power Stage
- \* Ignition Control Unit
- \* Spark Plugs
- \* Knock Sensor
- \* Engine RPM Sensor
- \* Fuel Pressure Regulator
- \* Mass Airflow Meter
- \* Fuel Injection Control Unit
- \* Fuel Injectors
- \* Idle Air Valve
- \* Coolant Temperature Sensor
- \* Throttle Position Sensor
- \* Throttle Potentiometer
- \* Series Resistor
- \* Oxygen Sensor
- \* Cold Start Injector

- \* Temperature Sensor
- \* Manifold Pressure Sensor
- \* Camshaft Sensor
- \* Evaporative Emission System
- \* Turbocharger System
- \* PCV System
- \* Air Intake System
- \* Catalytic Converter
- \* Exhaust Manifold
- \* Exhaust Pipe (Manifold-To-Catalyst)
- \* EGR System
- \* Miscellaneous Items Used In Above System

## **ROADSIDE ASSISTANCE**

Included in the Warranty is a 24 Hour Roadside Assistance program, named Volvo ON-CALL.

NOTE: Volvo ON-CALL phone number is 1-800-63-VOLVO or 1-800-638-6586

## **FUSES & CIRCUIT BREAKERS**

### **FUSE PANEL LOCATION**

The fuse panel is located on the left side of the instrument panel. To gain access to the panel, remove the cover plate.

### **INTERIOR FUSE PANEL IDENTIFICATION (1992-94)**

NOTE: The ABS System is protected by an additional 10 Amp fuse which is located under the instrument panel to the left of the steering wheel.

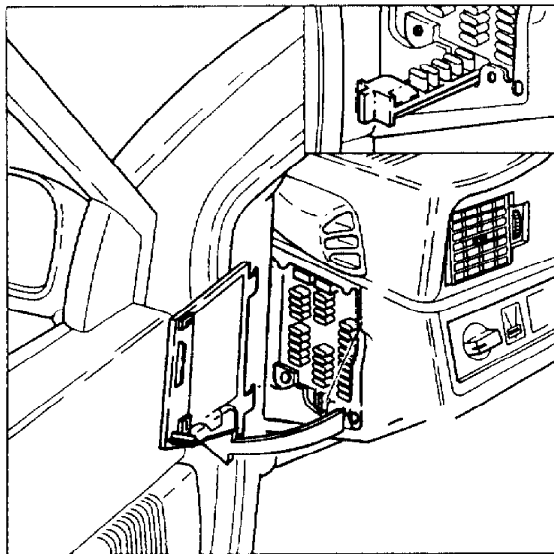
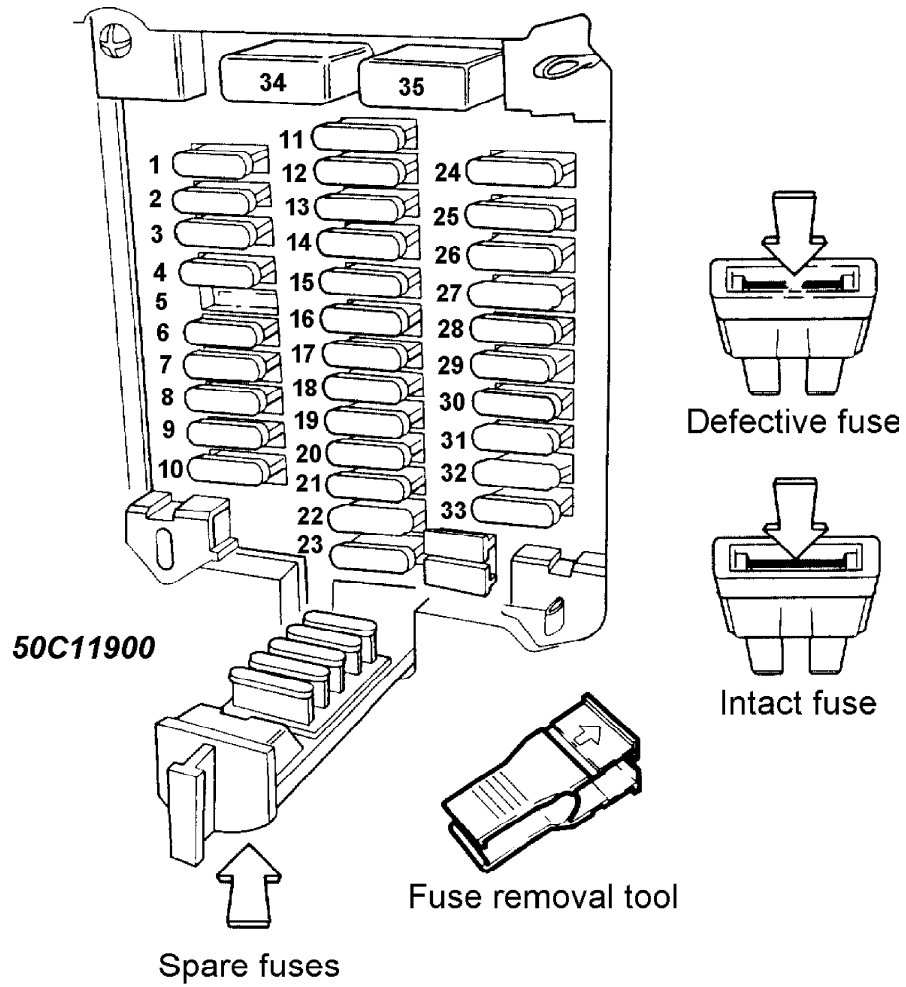


Fig. 10: Fuse Panel Identification (1992-94)  
 Courtesy of Volvo Cars of North America.



- 1 - 10 Amp  
Left & Rear Parking Lights, License Plate Lights
- 2 - 10 Amp  
Right Parking Lights
- 3 - 15 Amp  
Left Headlight (High Beam)
- 4 - 15 Amp  
Right Headlight (High Beam)
- 5 - SRS Test Socket
- 6 - 15 Amp  
Left Headlight (Low Beam)
- 7 - 15 Amp  
Right Headlight (Low Beam)
- 8 - 15 Amp  
Front Fog Lamps
- 9 - 10 Amp  
Rear Fog Lamps
- 10 - 5 Amp  
Instrument/Panel Lights
- 11 - 15 Amp  
Back-up Lights, Turn Signals, Cruise Control
- 12 - 15 Amp  
Shift-Lock
- 13 - 25 Amp  
Heated Rear Window, Heated Door Mirrors
- 14 - 10 Amp  
Overdrive, Sunroof, Power Window Relays, Heated Seats, Seat  
Belt Reminder
- 15 - Not Used
- 16 - 30 Amp  
Heated Seats
- 17 - Not Used
- 18 - 5 Amp  
Radio/Cassette Tape Player
- 19 - 15 Amp (1992)  
ECC, Power Door Mirrors, Rear Washer/Wiper (Wagon),  
Power Seats, Cigar Lighter
- 15 Amp (1993)  
ECC, Power Door Mirrors, Rear Washer/Wiper (Wagon),  
Power Seats, Cigar Lighter, Ambient Air Temperature Sensor
- 20 - 25 Amp  
Windshield Wipers/Washers, Horn
- 21 - 5 Amp (1992)  
Transmission Mode Selectors, Diagnostic Socket, Cooling Fan,  
EGR Valve
- 5 Amp (1993)  
Transmission Mode Selectors
- 22 - 5 Amp  
ABS
- 23 - 10 Amp  
Transmission Control
- 24 - 10 Amp  
Transmission/Engine Controls
- 25 - 25 Amp  
Hazard Warning Flashers, Central Locking System
- 26 - 10 Amp  
Clock, Interior Lights, Door Open Warning Lights, Cargo Space  
& Vanity Mirror Lights
- 27 - 15 Amp  
Brake Lights, Shift-Lock Release
- 28 - 30 Amp  
ECC, Air Conditioning
- 29 - 30 Amp

- Power Antenna, Electrical Connector For Trailer
- 30 - 10 Amp  
Fuel Pump (In-Tank), Electrically Heated Lambda-Sond
- 31 - 25 Amp  
Fuel Injection, Main Fuel Pump, Ignition
- 32 - 10 Amp  
Radio/Amplifier (If Equipped)
- 33 - 10 Amp  
Radio/Cassette Tape Player
- 34 - 30 Amp (Circuit Breaker)  
Power Windows, Power Sunroof
- 35 - 30 Amp (Circuit Breaker)  
Power Seats

**RELAY PANEL LOCATION (1992-94)**

The relay panel is located in the center of the instrument panel. To gain access to the panel, remove the ash tray.

**INTERIOR RELAY PANEL IDENTIFICATION (1992-94)**

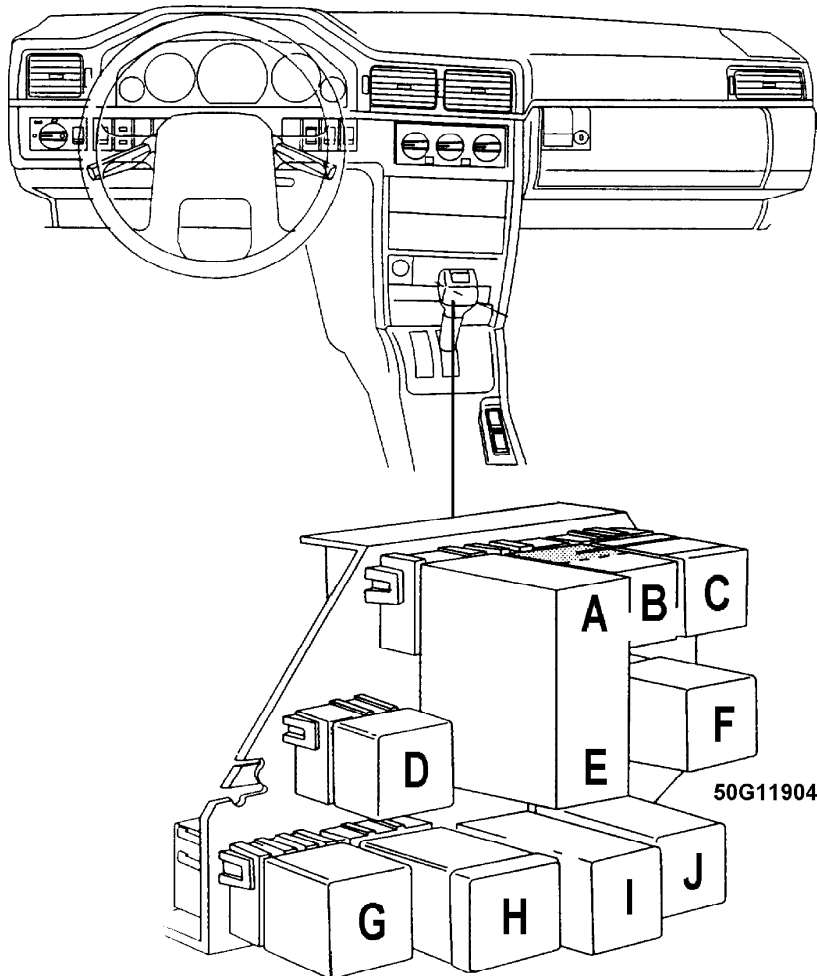


Fig. 11: Relay Panel Identification (1992-94)  
Courtesy of Volvo Cars of North America.

Relay Identification

- A - Headlight Relay with Bulb Malfunction Indicator
- B - Fuel Injection Relay, Fuel Pump Relay
- C - Central Locking Relay
- D - Foglight Relay
- E - Headlight Relay with Bulb Malfunction Indicator
- F - Overdrive Relay
- G - Bypass Relay 15I
- H - Intermittent Wiper Relay (Rear Tailgate - Wagon)
- I - Intermittent Windshield Wiper Relay
- J - Seat Belt Reminder Relay

**INTERIOR FUSE PANEL IDENTIFICATION (1995-96)**

**NOTE:** The ABS System is protected by an additional 10 Amp fuse which is located under the instrument panel to the left of the steering wheel.

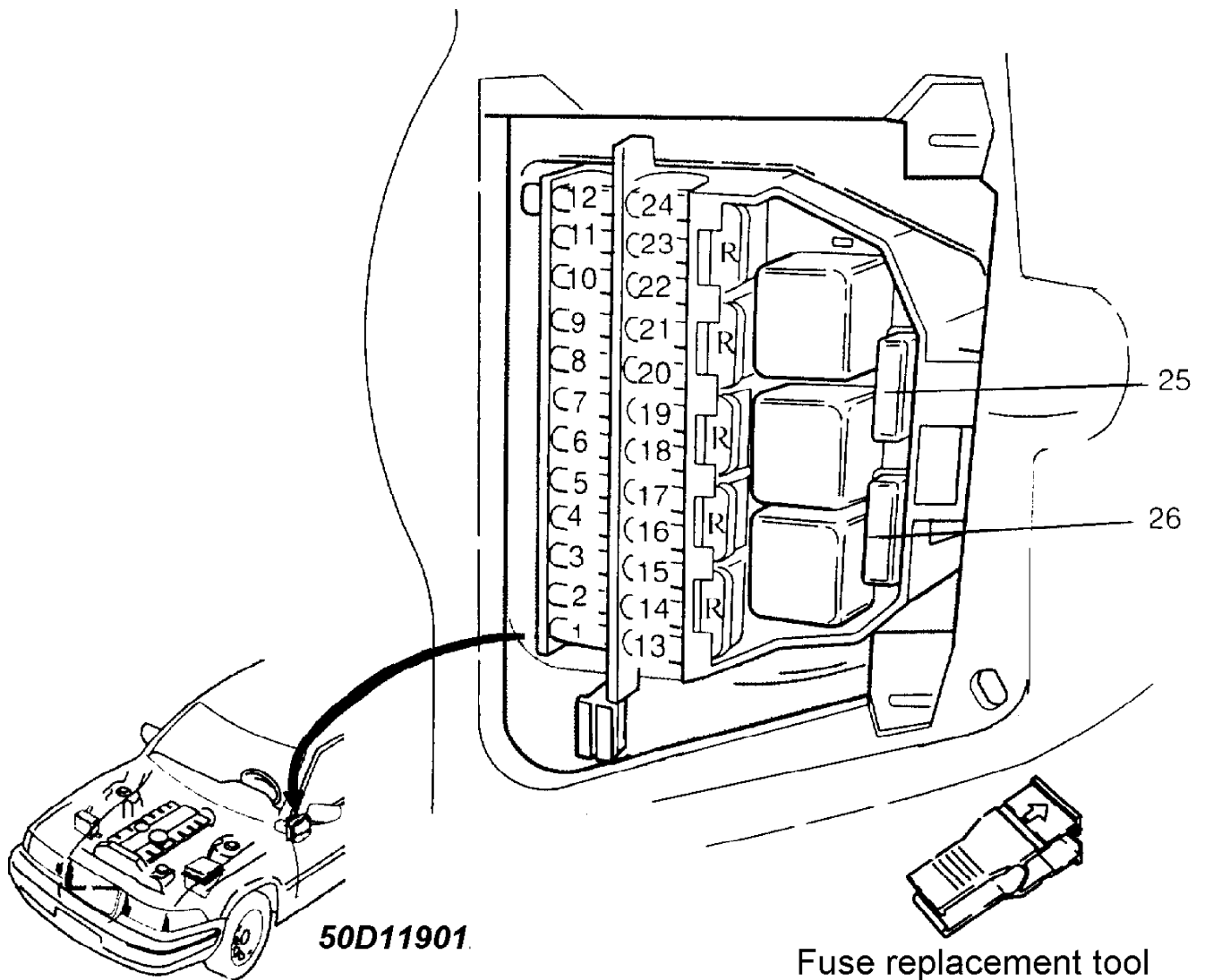


Fig. 12: Fuse Panel Identification (1995-96)  
 Courtesy of Volvo Cars of North America.

- 1 - 25 Amp  
Heated Rear Window
- 2 - 20 Amp  
Central Locking, Anti-Theft Alarm
- 3 - 15 Amp  
Brake Light, Light Switch
- 4 - 10 Amp  
Ignition Switch, SRS (Air Bag)
- 5 - Spare
- 6 - 25 Amp  
Windshield Wiper/Washer, Headlight Wiper/Washer, Horn Relay
- 7 - 20 Amp  
Climate Control
- 8 - 15 Amp  
Power Seats, Power Mirrors, Instrument Lighting  
Ambient Temperature Sensor, Tailgate Wiper/Washer (Wagon)
- 9 - 15 Amp (1995)  
Audio System  
15 Amp (1996)  
Radio, Remote Control Module (Keyless Entry)
- 10 - 15 Amp  
Cigarette Lighter, Horn
- 11 - 5 Amp  
Central Locking System, Transmission Mode Selector  
Interior Lighting Delay
- 12 - 5 Amp  
ABS
- 13 - 10 Amp (1995)  
Clock, Interior/Glove Compartment Lamps, Vanity Mirror  
Door Open Warning Light, Cargo Space Lighting,  
10 Amp  
Clock, Interior/Glove Compartment Lamps, Vanity Mirror  
Door Open Warning Light, Cargo Space Lighting,  
Remote Control Module (Keyless Entry),  
Electronic Start Inhibitor (Immobilizer)
- 13 - 10 Amp (1995)  
Horn  
5 Amp (1996)  
Anti-Theft Alarm, Data Link Connector (DLC)
- 15 - 20 Amp  
Power Antenna, Headlight Flasher, Trailer Harness
- 16 - 20 Amp  
Mobile Telephone (If Equipped), Parking Heater (If Equipped)
- 17 - 20 Amp  
Hazard Warning Flasher, Anti-Theft Alarm
- 18 - 15 Amp  
Audio Amplifier, Radio, Compact Disc Changer
- 19 - 15 Amp  
Back-up Lights, Turn Indicators, Cruise Control
- 20 - 15 Amp  
Light Switch, High/Low Beam Relay
- 21 - 5 Amp  
Seat Belt Reminder, Rear Window Defroster - Timer  
P-Shift Lock, Heated Mirrors
- 22 - 15 Amp  
Heated Driver's Seat
- 23 - 15 Amp  
Heated Passenger's Seat
- 24 - 15 Amp  
Rear Fog Lamp
- 25 - 30 Amp (Circuit Breaker)  
Power Seats
- 26 - 30 Amp (Circuit Breaker)

Power Windows, Power Sunroof

Relay Identification

Overload Relay  
Fuel Pump Relay  
Overload Relay

### UNDER HOOD MAIN FUSE BOX IDENTIFICATION (1995-96)

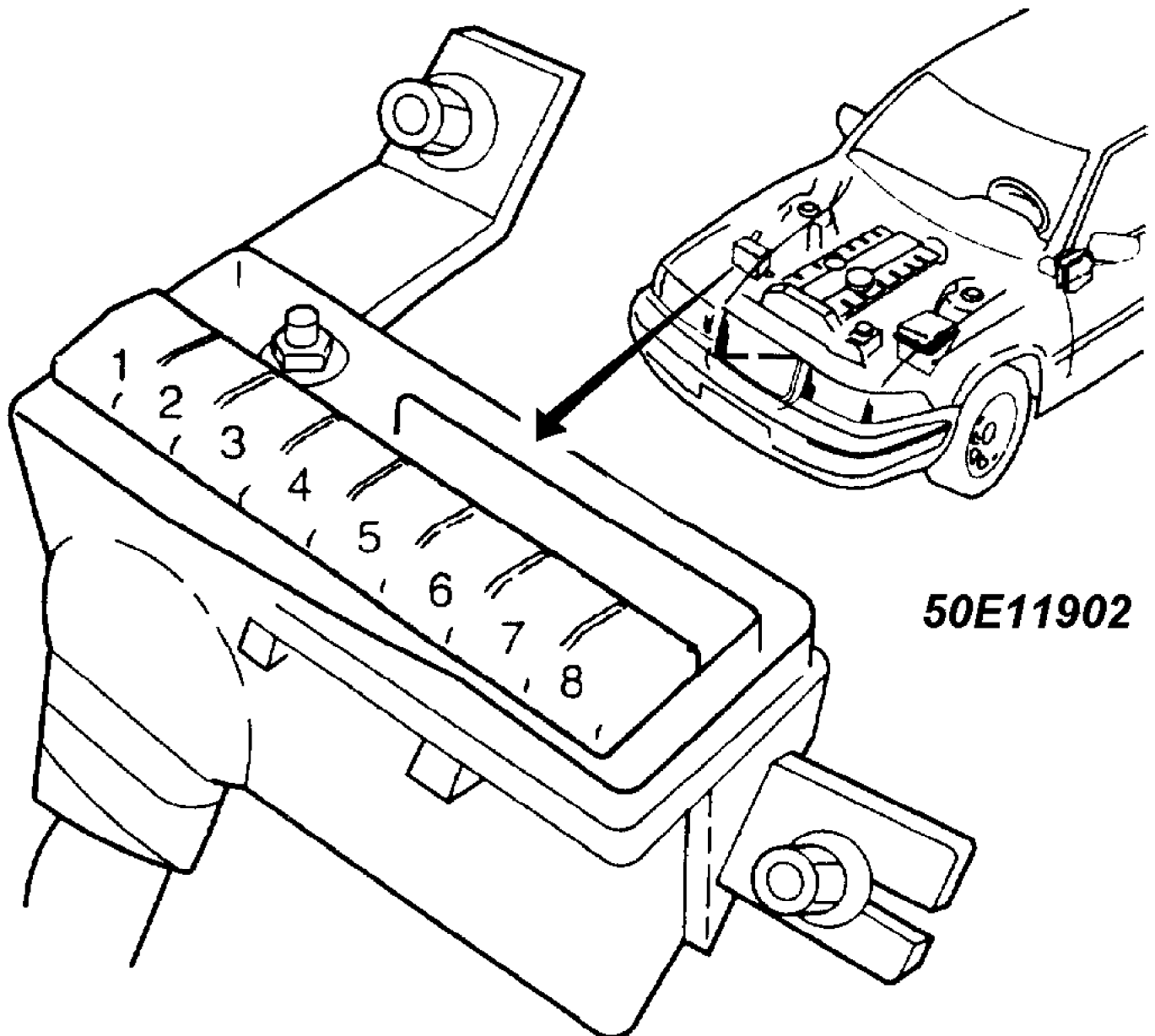


Fig. 13: Underhood Main Fuse Box Identification (1995-96)  
Courtesy of Volvo Cars of North America.

**WARNING:** Always disconnect battery ground cable before servicing "high-current" fuses. It is recommended that "high-current" fuses be replaced by a qualified technician.

### Maxi-Fuse Identification

- 1 - 50 Amp  
Heated Rear Window, Central Locking System, Hazard Flashers,  
Power Supply Relay "B".
- 2 - 50 Amp  
Audio, Power Seats, Climate Control, Compartment Lights,  
Power Antenna, Trailer Power, Fog Light Relay, Diagnostics
- 3 - 50 Amp  
Power Supply Relay "A"
- 4 - 50 Amp  
Fuel Supply Relay, Ignition Supply Relay
- 5 - 50 Amp  
ABS Unit
- 6 - 50 Amp  
Air Pump, Starter Solenoid, Horn
- 7 - 50 Amp  
Electric Cooling Fan
- 8 - 50 Amp  
Position/Parking Light Relay, Headlight Relay

### UNDER HOOD FUSE/RELAY BOX IDENTIFICATION (1995-96)

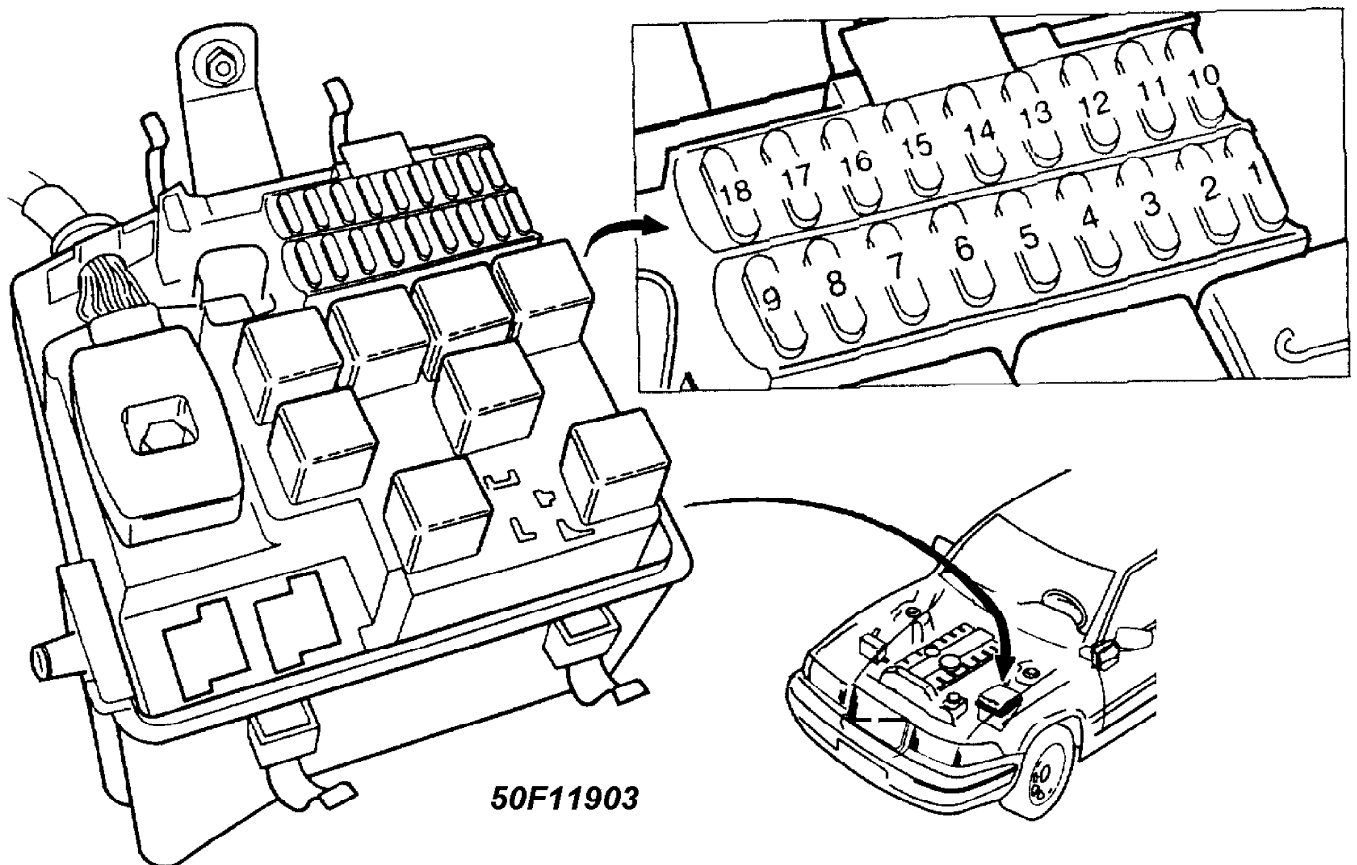


Fig. 14: Underhood Fuse/Relay Box Identification (1995-96)  
Courtesy of Volvo Cars of North America.

### Fuse & Relay Identification

- 1 - 5 Amp  
Engine Control Module, Automatic Transmission Control Module
- 2 - 5 Amp (1995)

- Air Pump System
- 5 Amp (1996)
- A/C Relay
- 3 - 5 Amp (1995)
- EGR Valve, Relay, Air Pump
- 5 Amp (1996)
- Oxygen Sensor (HO2S) Auxiliary Air System Relay, EVAP Valve,
- Auxiliary Air System Solenoid, EGR Converter
- 4 - 15 Amp
- Fuel Pump
- 5 - 15 Amp
- Fuel Injection Valve, Mass Air Flow (MAF) Sensor,
- Idle Air Control (IAC) System, Engine Control Module
- 6 - 15 Amp
- Automatic Transmission Control Module
- 7 - 25 Amp
- Ignition Coil, Heated Oxygen Sensor
- 8 - 25 Amp
- Fog Lamps
- 9 - Spare Fuse
- 10 - 15 Amp
- Positioning/Parking Lights (Left)
- 11 - 15 Amp
- Positioning/Parking Lights (Right)
- 12 - 15 Amp
- Left High-Beam
- 13 - 15 Amp
- Right High-Beam, High-Beam Indicator (Instrument Panel)
- 14 - 15 Amp
- Left Low-Beam
- 15 - 15 Amp
- Right Low-Beam
- 16 - 15 Amp
- A/C Compressor
- 17 - 15 Amp
- Horn
- 18 - Accessories (Various Amp)
- Optional Equipment

#### Relay Identification

- A - Air Pump Relay
- B - Spare
- C - Main Relay, Fuel System
- D - Spare
- E - Spare
- F - A/C Compressor Relay
- G - Fog Lamp Relay
- H - Spare
- J - Ignition Coil Relay
- K - Starter Motor Relay
- L - Fog Lamps Relay
- M - Parking Lights Relay
- N - Horn Relay

#### RELAY PANEL LOCATION (1995)

The relay panel is located in the center of the instrument panel. To gain access to the panel, remove the ash tray.

#### INTERIOR RELAY PANEL IDENTIFICATION (1995-96)

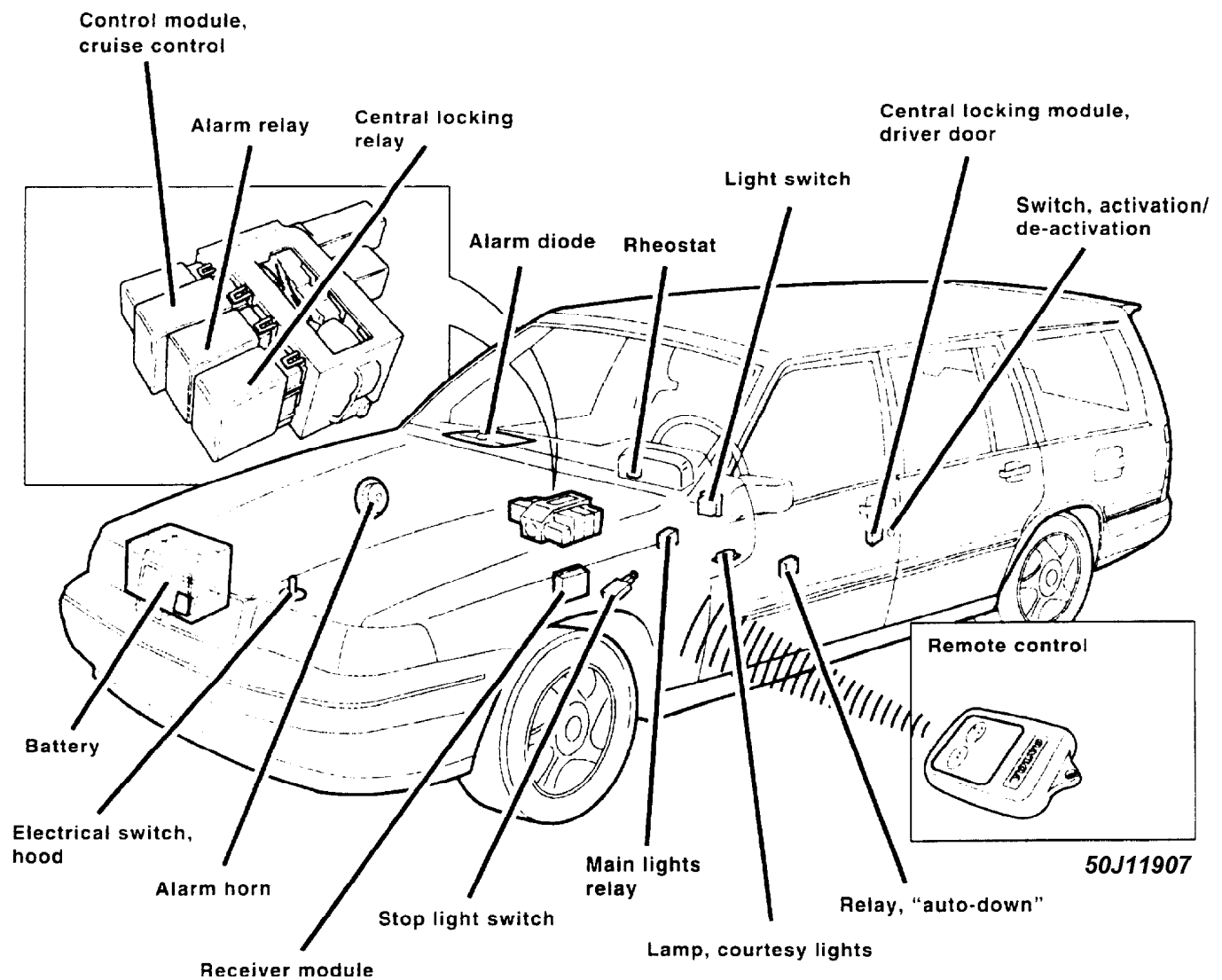


Fig. 15: Relay Panel Identification (1995-96)  
 Courtesy of Volvo Cars of North America.

#### Relay Identification

- A - Timer Relay, Rear Window Defroster
- B - Cruise Control Module
- C - Alarm Relay
- D - Central Locking Relay
- E - Cruise Control Module
- F - Alarm Relay
- G - Central Locking Relay
- I - Not Used
- J - Not Used
- K - Not Used
- L - Intermittent Windshield Wiper Relay
- M - Not Used
- N - Not Used

NOTE: The Engine Cooling Fan has a separately mounted relay in the engine compartment.



