VOLVO

264 265

OWNER'S MANUAL 1978 USA/CANADA

Notice to Owner: Your Volvo has been built to comply with all American safety and anti-pollution regulations and evidence of this can be verified from the certification labels attached to the door opening sheet metal and on the left wheel housing in the engine compartment. For further information regarding these regulations, please talk to your local dealer.

Personal Information

Name .....

Address .....

City, State .....

Tel. No. .....

Car Information

Vehicle Identification Number (VIN) .....

Ignition/Door Key No. .....

Trunk/Glove Box Key No. .....

All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication. Volvo reserves the right to make model changes at any time, or to change specifications or design, without notice and without incurring obligation.

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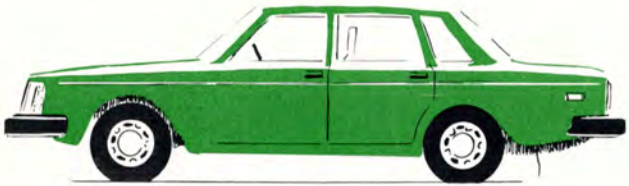


Model versions of the basic Volvo Models 264/265

Volvo 264 GL
265 GL

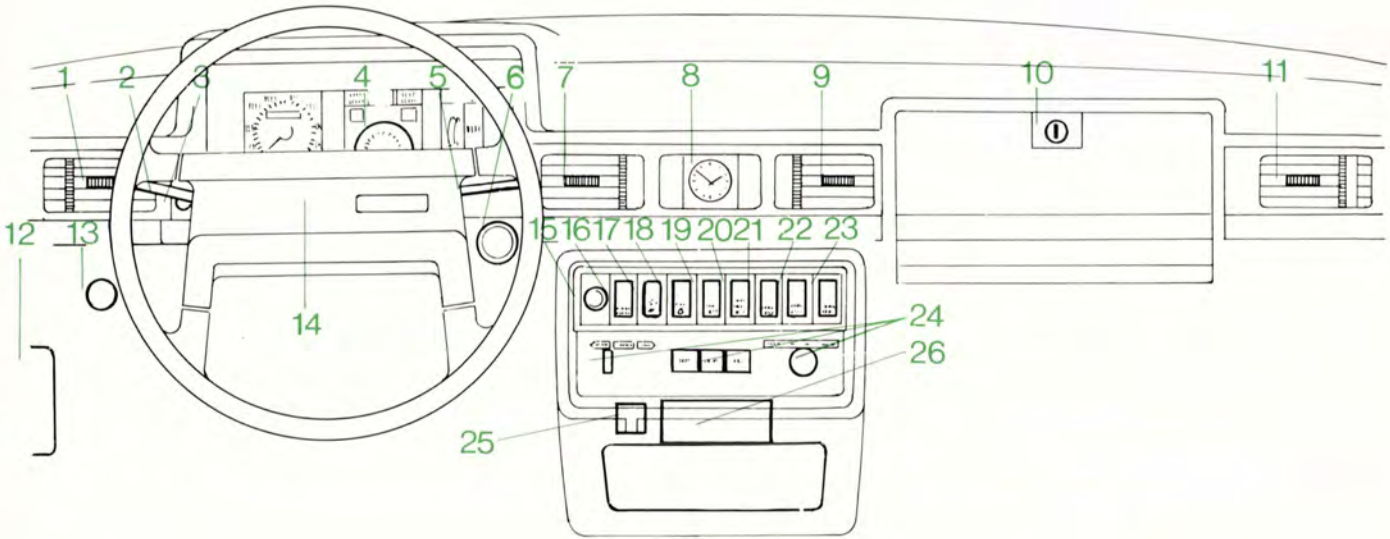
Before moving from one country to another it is recommended to check with the Department of Motor Vehicles as emissions and other vehicle regulations may be different.

Ignition/Steering wheel lock
Front doors

Write the key number codes on the inside of the front cover of this manual. (See tag attached to plastic key ring).
In the event the original keys are lost, duplicates may be ordered from your Volvo dealer.

Trunk
Glove box

Tag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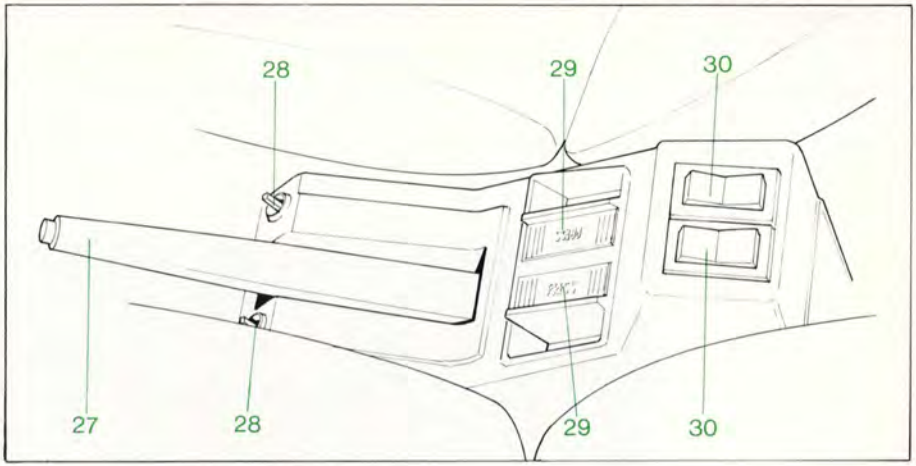

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The pages in this section provide a detailed description of the vehicle's instruments and controls.
Note that vehicles may be differently equipped, depending on special legal requirements, etc.

Instruments

A Odometer
Total mileage reading

B Speedometer

C Left turn signal indicator (green)

D Parking brake reminder light (red)

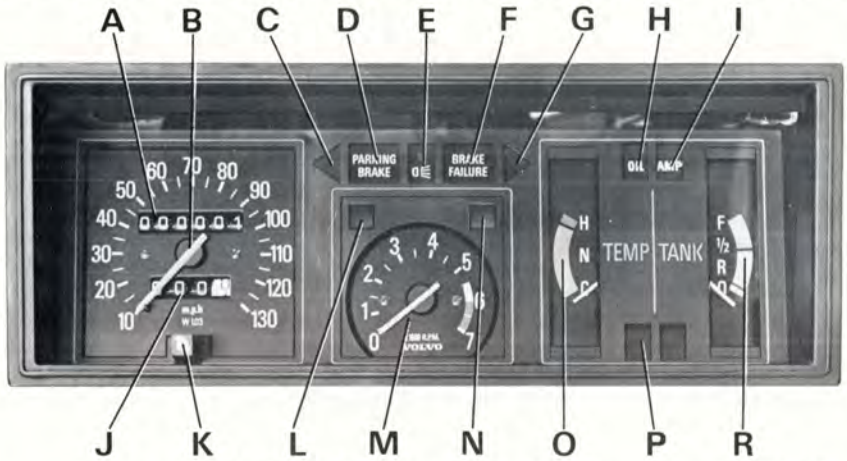
E High beam indicator (blue)

F Brake failure warning light (red)

G Right turn signal indicator (green)

H Oil pressure warning light (red)

I Alternator warning light (red)



J Trip odometer
(last figure represents 1/10 mile)

K Trip odometer reset knob
Push in to reset

L Reminder light, EGR Service

M Tachometer
Reads thousands of engine rpm.
Orange range for momentary use, during acceleration.
Red prohibited range.

N Bulb failure warning light (yellow)

O Temperature gauge
The gauge pointer should remain inside the green range during normal operation.
If the pointer enters the red range repeatedly, check coolant level and fan belt tension. (See sections titled "Cooling system and coolant".)

P Overdrive indicator light (green)
Lights when overdrive is engaged.

R Fuel gauge
The fuel tank capacity is approx 60 liters = 15.8 US gals./13.2 Imp. gals.
F Full
1/2
R Reserve
O Empty
The red range from R to O represents approx. 8 liters = 2.5 US gals. 1.2 Imp. gals.

The warning lights described on this page should never be on when driving

When the ignition key is turned on, and before the engine starts, all of the warning lights should be on to test the function of the bulbs. Should a light not go off after the engine has started, the system indicated should be inspected. (However, the parking brake reminder light will not go off until the parking brake is fully released.)

D Parking brake reminder light (red)

This light will be on when the parking brake (hand brake) is applied. The parking brake lever is situated between the front seats.

F Brake failure warning light (red)

If the light comes on while driving and the brake pedal can be depressed further than normal, it is an indication that one of the brake circuits is not functioning. Proceed cautiously to a Volvo dealer for an inspection of the brake system.

H Oil pressure warning light (red)

If the light comes on during driving, the oil pressure is too low. Stop the engine immediately and check the engine oil level. See section titled "Engine Oil".

After hard driving, the light will come on occasionally when the engine is idling. This is normal, provided it goes off when the engine speed is increased.

I Alternator warning light (red)

If the light comes on while the engine is running, check the tension of the alternator drive belt as soon as possible. (See section titled "Cooling system".)

NOTE:

This warning light is illuminated if the alternator is not charging. However, **oil pressure, alternator, parking brake, brake failure, EGR, and bulb failure will be illuminated at the same time** due to the design of the system.

L EGR service reminder light (red)

If the vehicle is equipped with exhaust gas recirculation, this light will come on at 15,000 mile intervals, as required by the U.S. Environmental Protection Agency. This is a reminder to have the EGR valve serviced. The light will stay on until reset by servicing dealer.

N Bulb failure warning light (yellow)

The light will come on if any of the following bulbs are defective:

- one of the lower beams
- one of the tail lights
- one of the license plate lights
- one of the brake lights (when the brake pedal is depressed).

See section on "Replacing Bulbs".

Ignition switch, parking brake

Ignition switch/steering wheel lock

0 Locked position:
remove the key to lock the steering wheel.

I Intermediate position:
certain circuits (heater blower, cigarette lighter etc.) on.

II Driving position:
key position when engine is running.

III Starting position:
release the key when engine starts. The key returns automatically to driving position.

The steering wheel lock might be under tension when the car is parked. Turn the steering wheel slightly to free the ignition key.

Parking brake (hand brake)

The lever is situated between the front seats. The brake is applied to the rear wheels.
In order to obtain the best possible performance of the parking brake, the brake linings should be broken in. (See section titled "Brake System".)

A buzzer will sound if the ignition key is in the ignition lock and the front door on the driver's side is open.
The buzzer goes off when the front door is closed.

Parking brake reminder light

The reminder light PARKING BRAKE on the instrument panel comes on whenever the parking brake lever is not fully released and the ignition is on.

Headlights and position lights

0 All lights off

Parking lights on

Headlights and parking lights on

Switch from upper to lower beams, and vice versa, by moving the turn signal switch lever on the left side of the steering column towards the steering wheel. The lights can be used without switching on the ignition key.

Instrument panel lamps rheostat

Clockwise – brighter
Counterclockwise – dimmer.

Turn signals

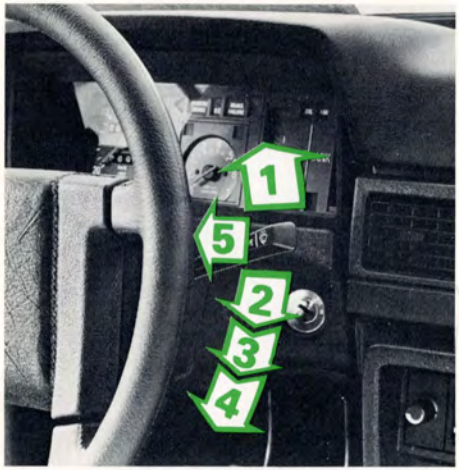
Turn signals

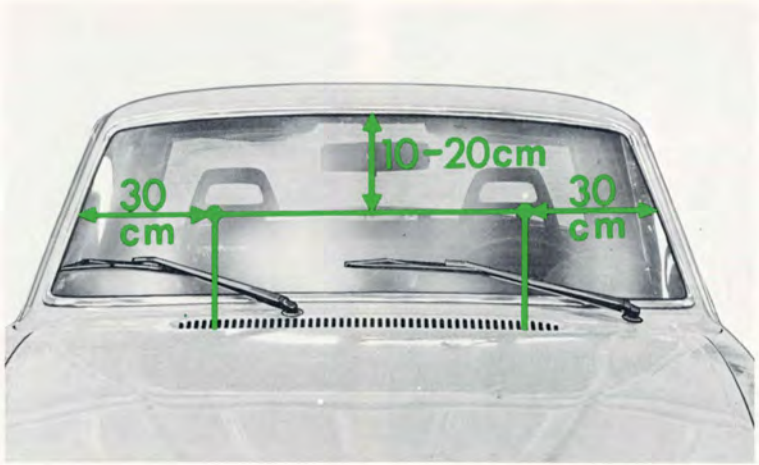
1 **Signal lever engaged for normal turns.**

2 **Lane change position.** In maneuvers such as lane changing, the driver can flash the turn signals by moving the turn signal lever to the first stop and holding it there. The lever will return to the neutral position when released.

3 **High and low beam switching (headlights on).**
Move the lever towards the steering wheel and release it.

3 **Headlight flasher (headlights off).**
Move the lever towards the steering wheel. The headlight high beam will be on until the lever is released.





Wiper/washer

1 Intermittent wiper.
With switch in this position, the wipers will make a stroke every seventh second.

2 "Single stroke" position.
Switch returns atuomatically when released.

3 Wipers, low speed.

4 Wipers, high speed.

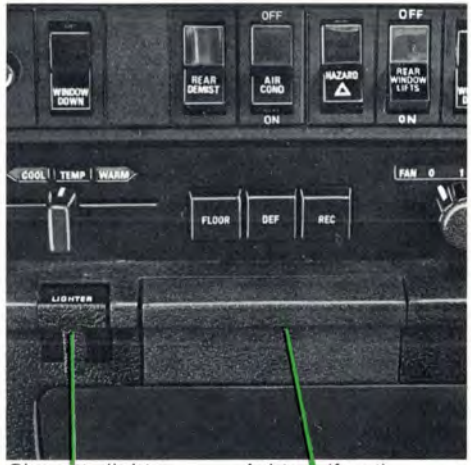
5 Wiper and washer.

Adjusting washer nozzles

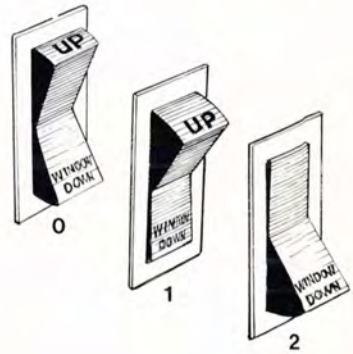
The nozzles may be adjusted by inserting a needle into the metal nozzle and rotating to desired position.

The washer fluid reservoir is located in the engine compartment and holds approx. 6 liters = 1.6 US gals./1.3 Imp gals.

Clock, cigarette lighter, ash tray, electrically operated windows



Cigarette lighter Ashtray (front)



Clock

To reset the hands, push in the reset knob and turn.

Cigarette lighter

To operate, depress the knob fully. When the knob automatically releases, the cigarette lighter is ready for use.

Ash trays

To remove the ash trays depress the center spring and remove.

1 Electrically operated window winder

0 Off
1 Window down
2 Window up

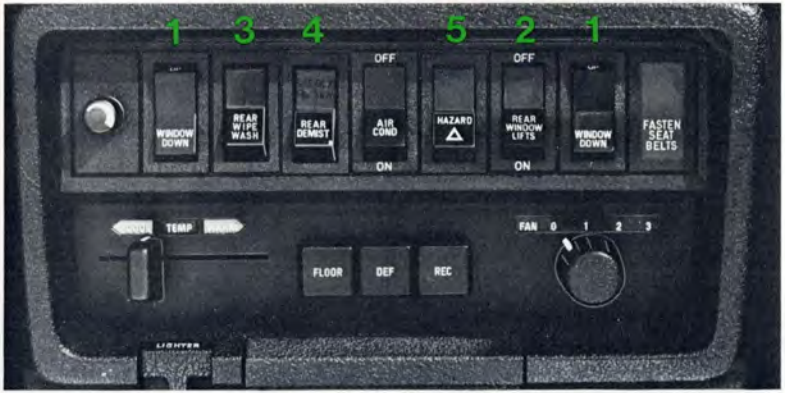
The rear windows are operated from between the front seats.

2 Safety switch, rear windows

The rear windows cannot be operated when this is switched off.

Tail gate window wiper, elect. heated rear window, hazard warning flasher

Tailgate window wiper/washer



Electrically heated rear window

Hazard warning flashers

3 Tail gate window wiper/washer (model 265)

0 Off

1 Wiper and washer combined operation.

Move the lever to the first stop and hold it there.

2 Tail gate wiper only.

The fluid reservoir is located in the concealed storage area under the floor on the right side of the rear cargo area. Reservoir capacity is approx. 1.5 qts.

4 Electrically heated rear window (demist)

0 Off

1 On

Switch off the rear window heater when the glass is clear of mist or frost. Otherwise the battery will be unduly strained.

Do not place items against the inner surface of the rear window that may damage the printed circuit. Do not scrape the inner surface of the rear window glass with a hard object, otherwise damage to the printed circuit will occur.

5 Hazard warning flasher

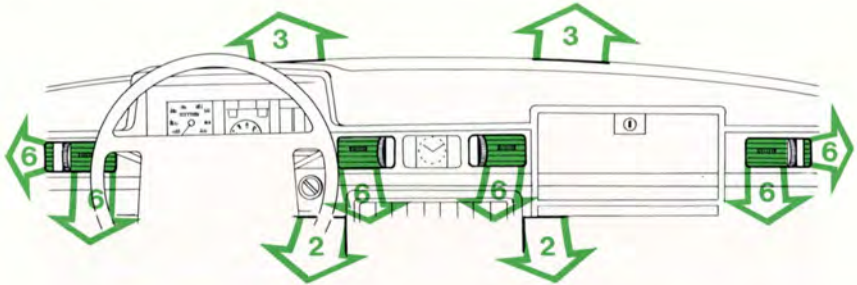
0 Off

1 On

Four way flashing is used to indicate that the vehicle has become a traffic hazard (either during daylight or at night).

NOTE: Regulations regarding the use of the hazard warning flasher may vary from state to state.

Heating and ventilation



Heating system

1 TEMP
Left = cool
Right = warm

2 FLOOR
Out = no air to floor
In = full flow of air to front and rear floor

3 DEF (defrost)
Out = low volume air flow to defroster
In = full flow

4 REC (recirculation)
To be used only for cars equipped with air conditioning.
Do not use for heating.

5 FAN (Blower motor)
0 = off
1 = low speed
2 = medium speed
3 = high speed

6 Ventilation outlets
The air flow through the ventilation outlets is not influenced by the position of the FLOOR (2) and DEF (3) controls.

How to ...

... obtain max. heat

1 TEMP ⟶ WARM
2 FLOOR depressed
5 FAN ⟶ 2 (or 3)
6 All outlets halfway open

... remove condensation

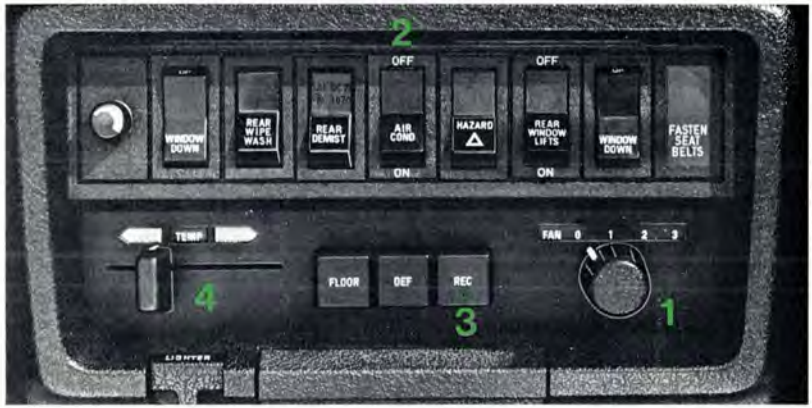
1 TEMP ⟶ WARM
3 DEF depressed
5 FAN ⟶ 2 (or 3)

Always keep front external inlet grille (in front of the windshield) clear of obstructions (snow, ice etc.).

Fresh air outlets

A Closed
B Open
C Directing air flow horizontally
D Directing air flow vertically

Air conditioning



Air conditioning

How to use the air conditioner:

1 FAN
Position 3 for rapid cooling.

2 AIR COND
Depress bottom end of switch to start the compressor.
The A/C does not operate unless FAN is on.

3 REC (Recirculation)
Push in for rapid cooling and during high humidity conditions.

4 TEMP
Position control to COOL for rapid cooling, then set to desired temperature.

To obtain rapid cooling, all windows must be closed and buttons FLOOR and DEF out.

Cool air will then be discharged through the four dash outlets which should be fully open.

NOTE: For rapid removal of condensation from inside glass surfaces, the air conditioner can be switched on even when not required for interior cooling. The air conditioner will dehumidify the air inside the vehicle.
Have your Volvo dealer check the system for correct operation yearly.

Operating instructions

This equipment is optional and is available in various models, each providing slightly different capabilities. Operating instructions are contained in the manuals associated with each model.
These manuals are placed in the cars when the equipment is installed by the Dealer.
Your Volvo Dealer will be able to assist you with any questions regarding the operation of this equipment.

NOTE: Operation of Citizens Band (CB) radios is governed by Federal Regulations.
You must obtain a special license before operating this equipment.

Front seats

Horizontal seat adjustment

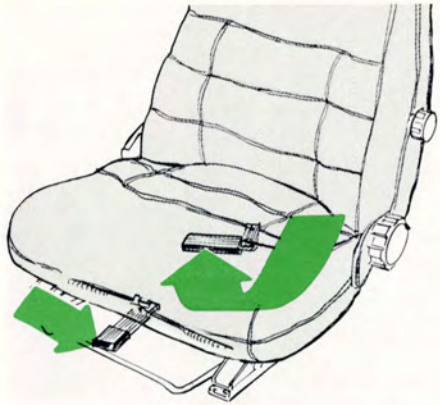
Pull control upward, then slide seat forward or rearward to desired position.

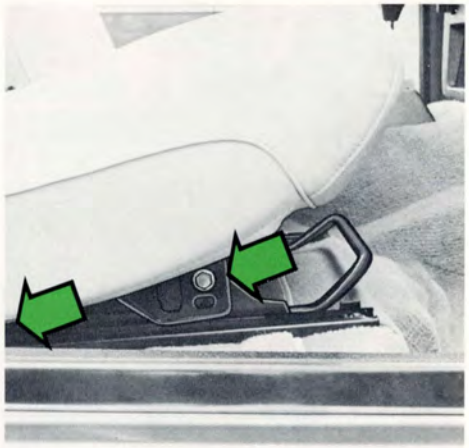
Seat back inclination adjustment

Rotate control clockwise to tilt seat back rearward.
Rotate counterclockwise to tilt seat back forward.
Note that body weight must be shifted to allow seat back to move forward.

Lumbar support adjustment

Rotate clockwise for firm support or counterclockwise for soft support.





Driver seat height

There are two levers, each with three positions, for adjusting the height of the seat (front and/or back of cushion).
This allows adjustment of the seat cushion angle for added comfort.
After adjusting the seat, check that it is securely latched.
NOTE! Do not attempt to adjust seat height while seated.

Passenger seat height

The front passenger seat is retained by four brackets, each with three positions. The positions are the same as the driver's seat. However this adjustment must be accomplished manually using appropriate hand tools.

Seat belts

Release buttons, front seats

Release button, rear seats

Seat belts, retractable

Fasten the seat belts whenever you drive or ride.

Two lights will be illuminated for 4 – 8 seconds after the ignition key is turned to driving position. One light is located in the instrument cluster and one in the console between the front seats.

A buzzer will sound at the same time if the driver has not fastened his seat belt.

The front and rear outboard seats are provided with self-retracting inertia belts.

To buckle:

Pull the belt out from the retractor far enough to insert the latch plate into the receptacle (buckle for rear seats), until a distinct snapping sound is heard. The belt should not be twisted or turned.

To unfasten, depress red pushbutton in receptacle (buckle) and let the belts rewind into their retractors.

The seat belt retractors are normally "unlocked". The retractors will lock up as follows:

- if belt is pulled out rapidly
- during braking and acceleration
- if the vehicle is leaning excessively
- when driving in turns

Check seat belt mechanism function as follows:

1 Attach the seat belt. Pull rapidly on the strap.
2 **CAUTION:, Check other traffic before accomplishing this check.**
Brake firmly from approximately 30 mph (50 km/h) or turn in a tight circle while pulling on the belt.

In all the above checks the belt should not be able to be pulled out.

Seat belts, manually adjustable

The center rear seat belt is manually adjustable. It should always be adjusted to the correct length.

To lengthen, angle the buckle as shown in the illustration and pull the belt through.

To shorten, pull the upper part of the double webbing until snug.

Maintenance

Check periodically that the anchor bolts are secure and the belt in good condition.

Use water and a mild detergent for cleaning.

As the seat belts lose much of their strength when exposed to violent stretching, they should be replaced after collision, even though they may appear to be undamaged. Never modify or repair the belt on your own, but have this done by a Volvo workshop.

Doors and locks

Unlocking front doors

Both front doors can be unlocked by using the key. Turning the key 1/4 turn counter-clockwise lifts the lock buttons on the window ledge and the door can be opened by pulling the handle.

Locking doors

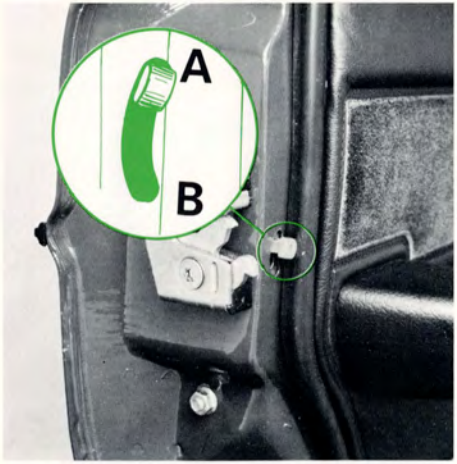
All doors can be locked by depressing the lock buttons. To lock the front doors, press down the lock button and keep the door handle pulled out while shutting the door.

To lock the rear doors, press down the lock button and shut the door. It is not necessary to keep the door handle pulled out.

To open a rear door from inside, the lock button must first be pulled up.

The lock buttons should not be in the down position during driving. In case of an accident, this may hinder rapid access to the occupants of the vehicle.

In wintertime the door locks should be "lubricated" with a suitable agent to prevent freezing. If the lock is frozen, be careful not to break the key in the lock. Thaw the ice by heating the lock or the key.



Child safety locks

The buttons are located on the rear door jams.

A Normal lock function.
B The door **cannot** be opened from the **inside.**

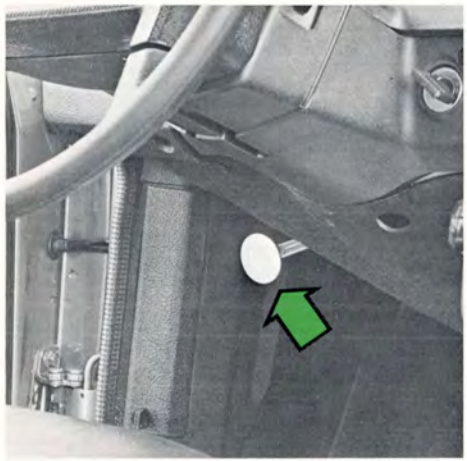
Trunk lid 264

To open the lid, turn the knob clockwise.

NOTE: The key must be removed from the lock in order to be able to open the lid.

The spare wheel, jack and tool kit are stowed on the left side of the trunk.

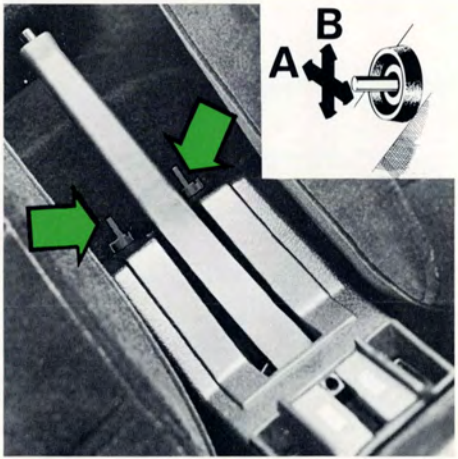
Hood



To open the hood

Pull the release handle (located under the left side of the dash).

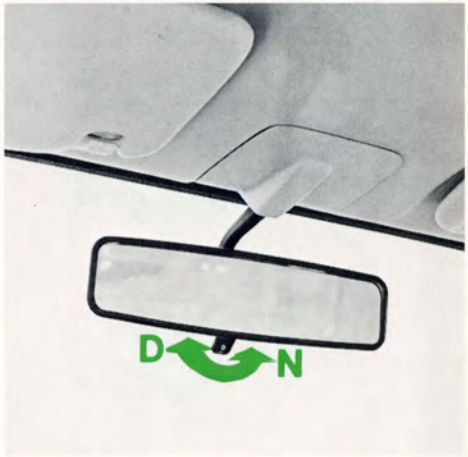
Lift the hood slightly, insert a hand under the center line of the hood and depress the safety catch handle. Open the hood.
Check that the hood locks properly when closing.



Electrically operated side view mirrors

The control switches are located in front of the parking brake housing.

A Adjustment sideways
B Adjustment up/down

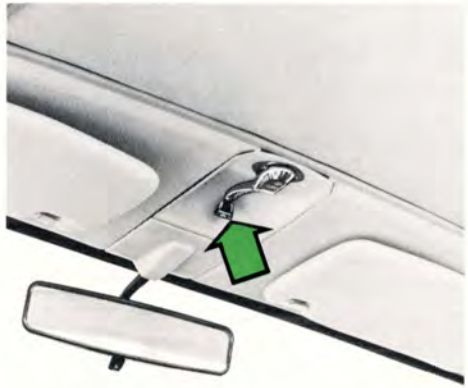


Rear view mirror

D Normal position
N Night position, reduces glare from following headlights

The mirrors should always be adjusted before driving.

Interior light, sun roof, fuel tank cap



Interior light

1 Light always on.

2 Light always off.

3 Light is on when either of the front or rear doors are opened.

Model 265 may be equipped with a light that differs from that in the 264.

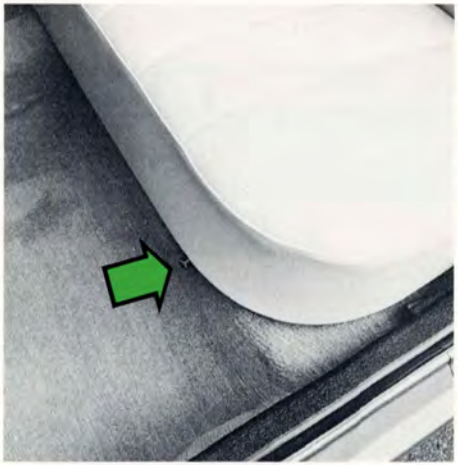
Sun roof (certain models)

The sun roof is operated by a handle located between the sun visors.
Unfold the handle and turn it counter-clockwise to open, clockwise to close.
For safety reasons, the handle should always be folded when driving.

Filling fuel

The gas cap is located behind the door on the right rear fender. Open slowly during hot weather conditions. See label on filler cap.
When filling, position the cap in the special bracket on the door.

Note: Unleaded fuel is required for all models. A label on the instrument panel and rear fender, near the filler inlet, will remind owners and filling station attendants of this requirement.
Important! It is unlawful to dispense leaded fuel into any vehicle labeled "unleaded Gasoline only".



Folding rear seat

Depress either lever located at the front bottom edge of the rear seat cushion (right or left side). Tilt the seat towards the front seat.

Pull the handle on the rear side of the seat back sidewards, and fold the seat back forward and down so that it lies flat. The rear seat back and cushion are held automatically in their respective positions.

When replacing the rear seat to its normal position, make sure the latches are securely locked and the seat belts lie on top of the seat back so they can easily be used.

Eyelets

Six eyelets are provided in the cargo compartment for anchoring the cargo.

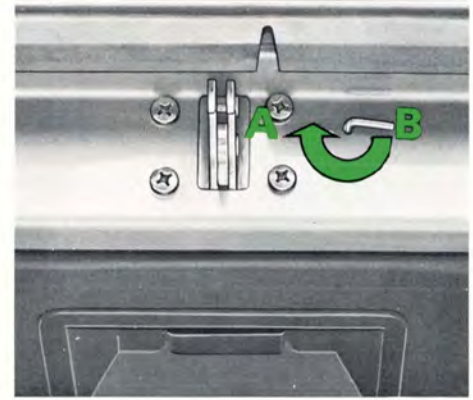
Model 265, tailgate

To open from the outside

Unlock the lock using the trunk/glove box key. Depress the release button located under the tailgate handle.

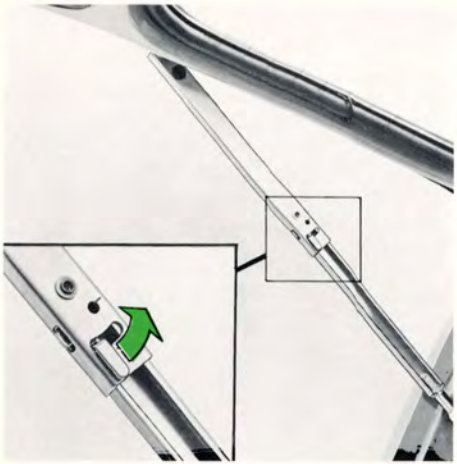
To open from the inside

Pull out the T-handle located at the bottom of the tailgate.



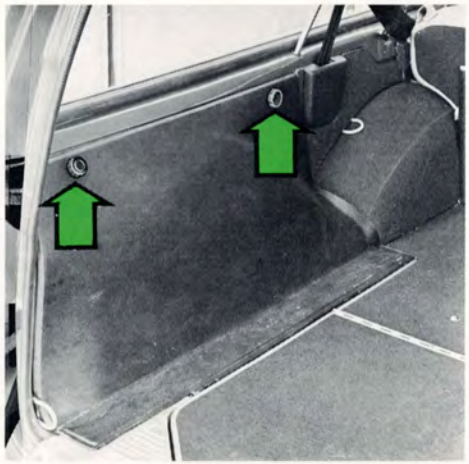
Safety catch

A The lid cannot be opened from the inside.
B The lock functions normally.



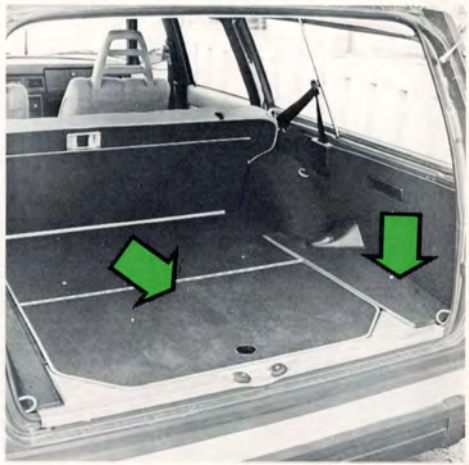
To close

Push the catch upwards and at the same time lift the gate 1/4 inch. Close the gate slowly but firmly.



Spare wheel

Remove the two thumb screws and lift off the cover. The spare wheel is now accessible.



Concealed storage space

There are two concealed storage areas under the cargo compartment floor. The tailgate window washer fluid reservoir is located in the right side area.

STARTING AND DRIVING

Service Inspection

To ensure proper operation the car should be taken to a Volvo dealer between the first 600—1,200 miles for a service inspection. The oil in the engine, transmission and rear axle will then be changed. This is very important since the oil rapidly collects impurities during the break in period.

Every Volvo engine is test driven prior to delivery. Volvo is therefore assured that all clearances are satisfactory. See also "Break in period" on next page.

Starting and driving

A new car should be broken in!

Manual transmission

During the break in period do not exceed the following speeds:

First 600 miles (1000 km)

1st gear	20 mph	(30 km/h)
2nd gear	30 mph	(50 km/h)
3rd gear	50 mph	(80 km/h)
4th gear	70 mph	(110 km/h)[1]

600 – 1,200 miles (1,000 – 2,000 km)

1st gear	25 mph	(40 km/h)
2nd gear	45 mph	(70 km/h)
3rd gear	60 mph	(100 km/h)
4th gear	80 mph	(130 km/h)[2]

Avoid driving at low speed in high gear.

[1]) 80 mph (130 km/h) with overdrive engaged. Do not use overdrive below 45 mph.

[2]) 90 mph (150 km/h) with overdrive engaged.

Automatic transmission

Refrain from using "kick-down" when driving a car equipped with an automatic transmission during the first 1,200 miles.

To start the engine:

Warning

Always open the garage doors fully before starting the engine inside the garage to ensure adequate ventilation. The exhaust gases contain carbon monoxide, which is invisible and odorless but very poisonous.

1 **Enter the car and fasten the seat belt.**

2 **Apply the parking brake, if not already set.**

3 **Place the gear selector lever in neutral. (position N or P, automatic transmission).**

4 **Depress the clutch pedal (manual transmission).**

5 **Press down gas pedal about 1 inch (1/4 of total stroke).**

6 **Turn key to starting position. When engine has started, release the key and gas pedal.**

If the engine does not start at once, depress the throttle pedal half way and keep it there until the engine starts.

Avoid repeated short attempts to start (fuel is injected every time the starter is engaged when engine is cold).

Allow the starter to operate for a longer time (but not more than 15 – 20 seconds).

Do not race a cold engine immediately after starting.

Engine warm-up – initial driving procedure

Experience shows that engines in vehicles driven short distances are subject to abnormally rapid wear because the engine never reaches normal operating temperature.

It is therefore beneficial to reach normal operating temperature as fast as possible.

This is achieved by driving with a light load as soon as possible.

4-speed manual transmission

Depress the clutch fully when changing gears.
The following are recommended gear change speeds (level road).
Shift from first to second at 15 mph.
Shift from second to third at 25 mph.
Shift from third to fourth at 40 mph.

No downshifts should be done when speed occasionally drops below the mentioned shift points.

Reversing inhibitor

Lift the ring to enter reverse gear.
The ring locking mechanism prevents reverse gear from being engaged unintentionally.

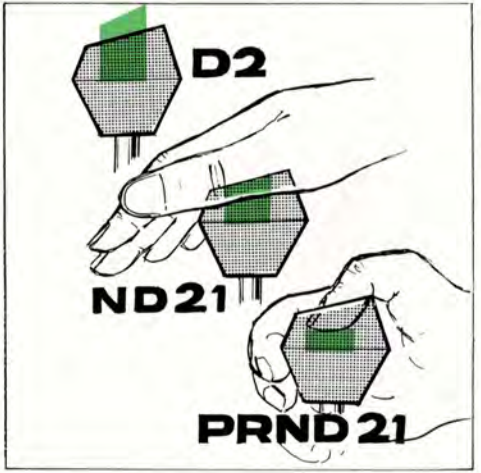
Overdrive engaged

Overdrive disengaged

Overdrive (some models only)

Shift to overdrive at 45 mph and disengage it when speed drops below 40 mph or encounters hilly terrain.
The overdrive can be engaged in 4th gear only.
No extra operation of clutch or throttle pedal is normally necessary. **Engagement** is facilitated if the accelerator pedal position is maintained steady.
When **disengaging,** depressing the clutch pedal slightly makes a smooth transfer.
The overdrive should be used after the engine was reached normal operating temperature (minimum time is five minutes) and the vehicle is being operated on relatively hard surfaces.

Automatic transmission



Shift positions

P park
R reverse
N neutral
D drive
2 intermediate
1 low

The gear selector can be moved freely between D and 2. The other positions are seperated by a lockout which is operated by depressing the selector knob.

Shift gate

Depressing the selector knob slightly allows selection of positions **N** and **1.**

Depressing the selector knob fully allows selection of positions **R** and **P**. This is also necessary when initially bringing the selector out of position **P**.

Depressing the selector knob fully thus permits shifting freely between all positions.

P Park

Use this position when parked with the engine running or stopped.

Never use P while car is in motion.
The transmission is mechanically locked in position P. Also use the parking brake when parking on grades.

R Reverse

Never use R while car is moving forward.

N Neutral

Neutral position = no gear is engaged.

Driving gears

D Drive

D is the normal driving position. Upshift and downshift of the three forward gears occurs automatically and is governed by throttle opening and vehicle speed.

2, intermediate position

Upshift and downshift of first two gears (low and intermediate) occurs automatically.
No upshift to 3rd (top) gear occurs.
Position 2 may be used to obtain forced downshift to 2rd gear for increased engine braking effect.

Position 2 can also be used ...

for relatively slow highway driving
for city driving
when driving on mountain roads where precise speed control is desirable
for passing

Top speed when selecting 2 is 75 mph (125 km/h).

1, low position

If position 1 is selected when driving at high speeds, 2 is engaged first and 1 when the speed has dropped to approx. 30 mph (50 km/h).

NOTE: No upshift once 1 is engaged.
Use position 1 to select low gear with no upshift. For instance, when entering and descending steep grades.

Top speed when selecting 1 is 75 mph (125 km/h).

Kick-down

Automatic shift to a lower gear is achieved by depressing the throttle pedal briskly (passing the normal full throttle position).
An up-shift will be achieved when approaching the top speed for a particular gear or by releasing the throttle pedal slightly.
Kick-down can be used for maximum acceleration or when passing at highway speeds.

Starting and stopping a car equipped with automatic transmission

1 Fasten the seat belts.
2 Apply the parking brake or the brake pedal to hold the car (to prevent the car from moving when the gear selector is moved).
3 Select position **P** or **N**. (Engine cannot be started in any other position.)
4 Start the engine by turning the ignition key.
5 Select desired gear.
6 Release the brake and accelerate.

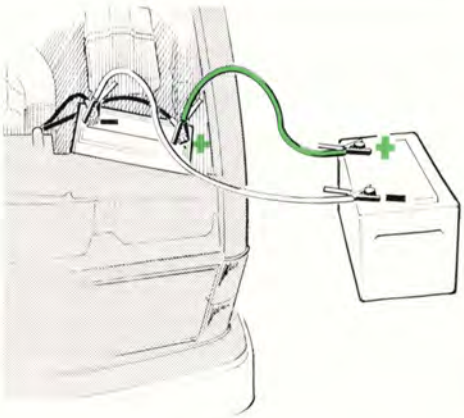
To stop the car, release the throttle pedal and apply the brakes.
It is not necessary to move the gear selector as the transmission will downshift automatically.

NOTE:
- **Never select P or R while the car is in motion.**
- **When initially selecting positions D, 2, 1 or R the car should be standing still with the engine idling.**
- **Never select positions 2 or 1 at speeds above 75 mph (125 km/h).**

Emergency towing (pulling)

Front eyelet

Rear eyelet

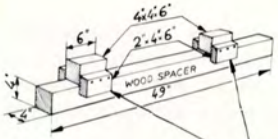


Precautionary steps to observe when towing

- Steering must be unlocked.
- Observe legal speeds.
- Remember that power brake and power steering assists will not be available when engine is inoperative. Pedal pressure required is 3–4 times above normal and greater steering effort must be employed.
- **Towing cars equipped with automatic transmission:**
  - Gear selector in position N. Check transmission oil level (see section titled "Transmission oil").
  - Maximum speed: 20 mph (30 km/h).
  - Maximum distance: 20 miles (30 km).

When jump-starting, observe that the booster battery positive terminal (+) is connected to the car battery positive terminal (+). The booster battery negative terminal (−) must be connected to the car battery negative terminal (−). Any other connection will damage alternator and electronic components.

CARS EQUIPPED WITH AUTOMATIC TRANSMISSION CANNOT BE STARTED BY PUSHING OR PULLING THE CAR.



Wood spacer blocks adjustable to conditions

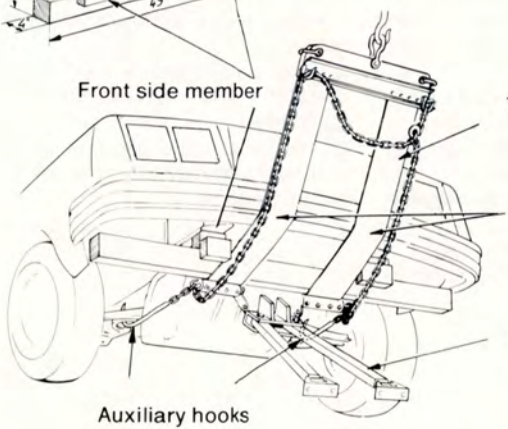
Front side member

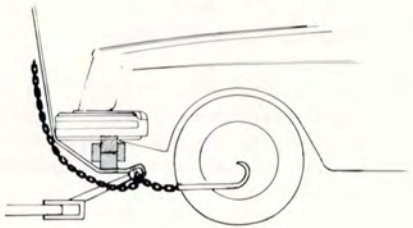
Towing sling

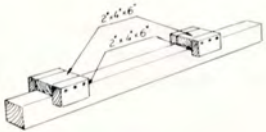
Grease between bumper and towing sling

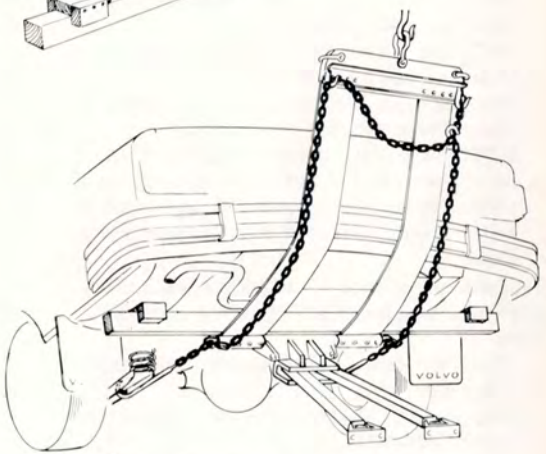
Tow bar

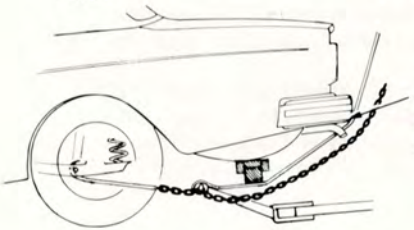
Auxiliary hooks











Grease between bumper and towing sling

Trailer hauling

When preparing for trailer hauling, observe the following:

- Use a trailer hitch which meets Federal Safety Standards for rear end collisions (FMVSS 301-75) such as those offered as Genuine Volvo Accessories.
- Maximum trailer weight recommended by Volvo is 2 000 lbs (908 kgs).
  Observe legal requirements of the state in which the vehicles are registered.
  NOTE: Additional lighting equipment must be connected to specific points in the electrical system. Otherwise the bulb failure warning light will come on. (See your Volvo Dealer.)

Trailer hauling does not normally present any particular problems, but take into consideration:

- The hitch tonque load should not exceed 200 lbs (90 kgs).
- Engine and transmission are subject to increased loads.
- Avoid overload and other abusive operation.
- Hauling a trailer affects handling, durability and economy.
- It is necessary to balance trailer brakes with the towing vehicle brakes to provide a safe stop (check and observe State regulations).
- More frequent vehicle maintenance is required.

Roof rack

- Use a sturdy roof rack, intended for the vehicle and rigidly attached.
  It is not advisable to let the roof rack remain in place during extended periods of time. Also, an empty roof rack increases drag and fuel consumption.
- Avoid point loads. Distribute the load evenly.
- Place the heavy cargo at bottom of load.
- Observe that center of gravity and handling are influenced by the load weight.
- Increasing load size increases wind resistance.
- Anchor the cargo correctly with a cord.
- Drive carefully. Avoid rapid starts, heavy cornering and heavy braking.
- Max. roof load is 220 lbs (100 kg).

Handling, roadholding

Vehicle load, tire design and inflation pressure are important for proper handling. Therefore check that the tires are inflated to the recommended pressure according to the vehicle load.

It is recommended to use tires of the same make and dimensions on all four wheels.

CAUTION:

Do not mix radial ply and bias ply tires as this will adversely alter the vehicle handling characteristics.

Driving with trunk lid open

Normally this involves no hazard to the passengers. However, exhaust gases can be sucked into the car. As this is especially true for the 265 model always heed the following safety precautions:

- Close the windows.
- Set the heating systems FLOOR and DEF controls to max. and the blower to full speed (3). See section titled "Heating and Ventilation".

Moisture on brake discs and brake pads affects braking.

Driving in rain and slush or passing through a normal car wash can cause water to collect on the brake discs and pads. This will cause a delay in braking effect when the pedal is depressed. To avoid such a delay, when the brakes are needed, depress the pedal occasionally when driving.
This will remove the water from the brakes. This should also be done after washing or starting in very damp weather.

If the brake power assist does not function

The power assist to the brakes functions only when the engine is running. When the car is moving without the engine running the brake pedal pressure required to stop the car is increased 3–4 times.
The brake pedal feels stiff and hard.

If one of the brake circuits should malfunction the red warning light comes on (F page 6).

The pedal stroke increases slightly and the pedal feels softer but the pedal pressure required does not increase noticeably.
Drive cautiously to a Volvo dealer or Service Station to have the brake system checked.

Breaking in parking brakes

To obtain best parking brake performance, the brake linings should be broken in.
Stop 5–7 times from 30 mph, transmission in neutral. Apply the parking brake lever, release button pressed in during the stop.
The force must not lock the rear wheels. If this happens, release the brake enough to let the wheels rotate. Drive a mile between each stop to cool the brakes. Check for proper parking brake operation.

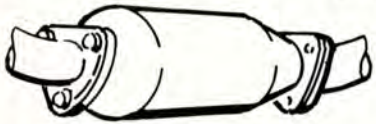
NOTE:
The brake lights are not illuminated when applying the parking brake. To warn traffic from behind it is therefore advisable to depress the brake pedal slightly to illuminate the stop lights.

Severe strain on the brake system

The brakes will be subject to severe strain when driving in mountains or hilly areas.
The speed is usually low which means that the cooling of the brake is less efficient than when driving on level roads.
To reduce the strain on the brakes it is advisable not to use the brakes excessively. Instead, shift into a lower gear and let the engine help with the braking. A good rule is to use the same gear downhill as would be used uphill. For vehicles with automatic transmission use position 2 or in some cases 1.

Catalytic Converter

Cautions



- Keep your engine properly tuned. Certain engine malfunctions, particularly involving the electrical, fuel or ignition systems, may cause unusually high converter temperatures. **Do not continue to operate your vehicle if you detect engine misfire, noticeable loss of power or other unusual operating conditions,** such as engine overheating, repetitive stalls or backfires. A properly tuned engine will help avoid malfunctions that could damage the catalytic converter.
- Remember that tampering or unauthorized modifications to the engine or the vehicle may be illegal and can cause catalyst or exhaust system overheating. This includes:
  Altering fuel injection settings or components.
  Adjusting ignition timing beyond specified limits.
  Altering emission system components or location or removing components.
- Do not park your car over combustible materials, such as grass or leaves, which can come into contact with the hot exhaust system and cause such materials to ignite under certain wind and weather conditions.
- Excess starter cranking (in excess of one minute) with an intermittently firing or flooded engine, can cause catalyst or exhaust system overheating. This also applies to lengthy pushing or towing of vehicle to start (manual transmissions only).

NOTE: Unleaded fuel is required for cars with catalytic converter. A label on the instrument panel and rear fender, near the filler inlet will remind owners and filling station attendant of this requirement.
Important! It is unlawful to dispense leaded fuel into any vehicle labeled "unleaded Gasoline only".

MAINTENANCE

Maintenance Services

Your Volvo has passed two major inspections before it was delivered to you. One was made at the Volvo factory and one was performed by the dealer, according to Volvo specifications. When driven 600–1200 miles, your car should be brought to the Volvo dealer for a service inspection. Engine, transmission and rear axle oils, will be changed at this time.

Following this inspection, maintenance inspections as outlined in this book should be performed every 7,500 miles.

The extended maintenance inspection intervals make it even more advisable to follow this program.

Inspection and service should also be performed any time a malfunction is observed or suspected.

Retain receipts for all vehicle emission services to protect your emission warranty.

See your "Warranties and Maintenance Records Manual".

Maintenance inspection 7,500 miles intervals

Volvo advises you to follow the inspection program at 7,500 mile intervals which is outlined in the "Warranties and Maintenance Records Manual". This maintenance program contains inspections and services necessary for the proper function of your car over the next 7,500 miles.

The maintenance inspections contain several checks which require special instruments and tools and therefore must be performed by a qualified technician.

To keep your Volvo in top condition, specify time tested and proven Genuine Volvo Parts and Accessories.

THE FEDERAL CLEAN AIR ACT (USA)

The Clean Air Act requires vehicle manufacturers to furnish written instructions to the ultimate purchaser to assure the proper functioning of those components that control emissions.

The maintenance instructions listed in the "Servicing" section of this Manual represent the minimum maintenance required. These services are not covered by the warranty. You will be required to pay for labor and material used. Refer to your "Warranties and Maintenance Records Manual" for further details.

Gas station checks

Fuel RON 91

Octane rating 91
Unleaded fuel must be used as the vehicles are fitted with catalytic converters.

Coolant

Maintain fluid level between MAX and MIN marks on expansion tank.
Mixture of 50 % anti-freeze and 50 % water should be used.

Brake fluid
Hydraulic clutch

Clutch fluid (only car with manual transmission).

Check that the level is above the MIN mark, without removing the cap.

Brake fluid DOT 3 or DOT 4 (SAE J 1703).

Engine oil

Maintain oil level between the dipstick marks. The distance between the marks represents 2 quarts (2 liters). Engine oil "For API Service SE" SAE 10 W-40.
(See section titled "Engine oil".)

Washer fluid

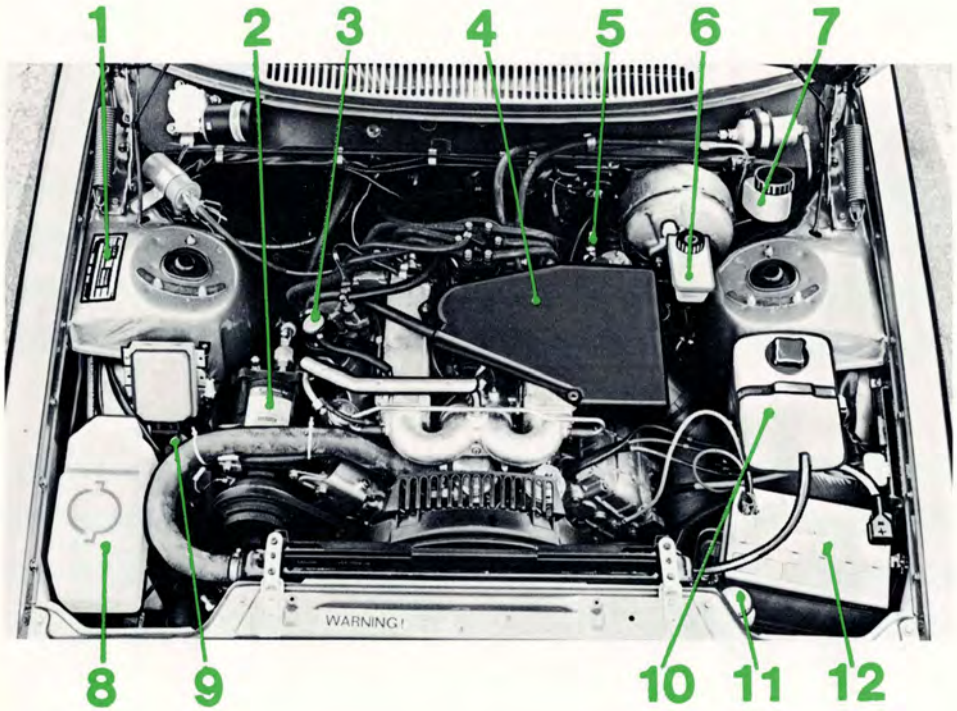
Washer fluid reservoir.
Water and solvent (wintertime use windshield washer anti-freeze).

Battery

Electrolyte level $^{1}/_{4}" - {}^{3}/_{8}"$ above plates.

Use distilled water only. **Never** add acid.

Warning: battery gases are explosive if brought in contact with open flame or sparks.



1 Data plate
2 Compressor (Air conditioner)
3 Oil filler cap, engine
4 Air cleaner
5 Oil dipstick, automatic transmission
6 Brake fluid reservoir
7 Clutch fluid reservoir (cars with manual transmission)
8 Washer fluid reservoir
9 Oil dipstick, engine
10 Expansion tank
11 Oil reservoir, power steering
12 Battery

MAINTENANCE SCHEDULE

A = Adjust (Correct if necessary)
R = Replace
I = Inspect (Correct or Replace if necessary)
L = Lubricate

Maintenance Operation — Miles	600–1,200	7,500	15,000	22,500	30,000	37,500	45,000	Description on page
EMISSION CONTROL SYSTEM								
I ENGINE MECHANICAL COMPONENTS								
Engine Oil*	R	R	R	R	R	R	R	48
Engine Oil Filter*	R	R	R	R	R	R	R	48
Engine Coolant					R			49
Cooling System Hoses and Connections	I		I		I		I	49
Engine Drive Belts	I	I	I	I	I	I	I	49
Torque Manifold Nuts	A							50
Valve Clearance					I			50
Vacuum Fittings, Hoses and Connections	I		I		I		I	50
II ENGINE FUEL SYSTEM								
Fuel (Line) Filter					R			51
Air Cleaner Filter					R			51
Idle RPM	I		I		I		I	52
Mixture Ratio and Manifold Balance	I		I		I		I	52
Fuel System Cap, Tank, Lines and Connections	I				I			52
Fuel Injection Electrical Connections			I		I		I	52
Oxygen sensor			R		R		R	51
Electrical connections in oxygen sensor system			I		I		I	51

* Oil and oil filter cartridge are first changed at the 600–1,200 mile inspection. Subsequent oil and filter changes should be made at 7,500 mile intervals or **at least every sixth month.**
However, adverse conditions (like hot ambient temperatures, trailer hauling, hill climbing, driving long distances at high speeds, extended periods of idling or low speed operation, short trip operation at freezing temperatures) require oil changes more frequently (every third month).

Maintenance Operation Miles	600 – 1,200	7,500	15,000	22,500	30,000	37,500	45,000	Description on page
III ENGINE IGNITION COMPONENTS								
Spark Plugs			R		R		R	52
Distributor Advance Mechanism					I			52
Ignition Timing	I		I		I		I	52
Distributor Cap and Rotor			I		I		I	52
Ignition Wiring			I		I		I	52
Timing Delay Valve					R			52
IV ENGINE CRANKCASE VENTILATION SYSTEM								
PCV Nipple (Orifice)			I		I		I	53
Ventilation Hoses			I		I		I	53
Oil Filter Breather Cap and Flame Arrester			I		I		I	53
V ENGINE EXTERNAL EMISSIONS								
Exhaust Gas Recirculation Components			I**		I***		I***	53
Throttle Valve Switch			I		I		I	53
Catalytic Converter Mounting Bolts	A		A		A		A	55
Reset Service Indication System for oxygen sensor system			A		A		A	
VI ENGINE EVAPORATIVE EMISSIONS								
Evaporative Control Canister							R	55

** Functional check.
*** Clean EGR valve, Functional check.

MAINTENANCE SCHEDULE

A = Adjust (Correct if necessary)
R = Replace
I = Inspect (Correct or Replace if necessary)
L = Lubricate

Maintenance Operation Miles	600–1,200	7,500	15,000	22,500	30,000	37,500	45,000	Description on page
DRIVE TRAIN								
Manual Transmission Oil	R	I	I	I	R	I	I	56
Automatic Transmission Oil[1])	I	I	I	I	I[2])	I	I	56
Rear Axle Oil	R	I	I	I	I	I	I	57
BRAKES								
Inspect Brakes. Replace components as necessary.		I			I		I	
Change Brake Fluid.							R	57
STEERING								
Tire Wear (Align front end if needed.)	I	I	I	I	I	I	I	65
Check power steering fluid level.	I	I	I	I	I	I	I	57
BODY								
Trunk, Door and Hood Hinges and Latches.	L	L	L	L	L	L	L	58

[1]) Check the oil level (at least every sixth month).
[2]) For cars used for hard driving, or in hilly terrain etc, perform preventive service. This includes oil changes every 30,000 miles.

The following items should be checked weekly by the driver. (This only takes a few moments.)	Description on page	The following should also be carried out at regular intervals.	Description on page
Engine oil level	48	Washing	68
Brake fluid	57	Polishing	68
Radiator coolant level	59	Cleaning	69
Battery fluid level	42	Rust protection	69
Tire pressure, all five tires	85		
Operation of all lights			
Horns			
Windshield wipers			
Level of windshield fluid			

Engine oil

A oil dipstick B oil filler hole

Checking oil level

The oil level should be checked each time the fuel tank is refilled. Be sure the oil level is maintained between the upper and lower marks on the dipstick. Low oil level can cause internal damage to the engine and overfilling can result in high oil consumption. The distance between the dipstick marks represents 2 quarts of oil.

To add or change oil

Add oil of the same kind as already used.
Capacity: 6.8 US qts/5.7 Imp. qts incl. filter
Oil type: API Service SE classification.
Viscosity:

All year round { **SAE 10W-40** / SAE 10W-30

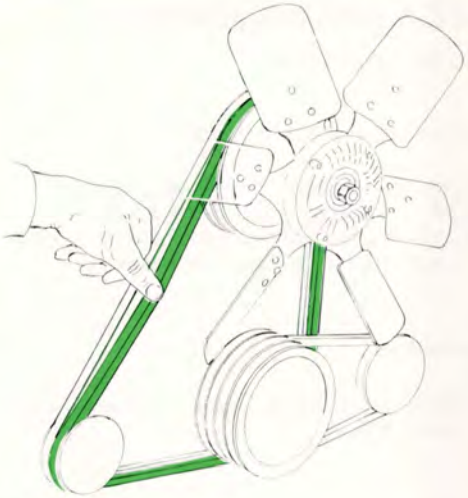
Above +14°F
(−10°C) SAE 20W-50

Replace: Between first 600−1,200 miles and every 7,500 miles (or at least **twice a year**).

At temperatures below 0°F, multigrade oil SAE 5W-20 or SAE 5W-30 is recommended. However, this oil should not be used when the temperature is continuously above 32°F.
Driving under adverse conditions such as high ambient temperatures, trailer hauling, hill climbing, driving long distances at high speeds, extended periods of idling, low speed operation or short trip operation at freezing temperatures may require oil and filter changes more frequently (every third month).
Drain the oil after driving while it is still hot.

Changing oil filter

Replace the oil filter at every oil change. If the oil filter is changed separately, ½ qt. of oil should be added.



Changing coolant

Every two years or 30,000 miles the cooling system should be drained, flushed and refilled.
Remove the expansion tank cap.
Open the drain cocks on both sides of the engine block and disconnect the lower radiator hose.

Fill coolant through the expansion tank.
The heater controls should be fully open when draining and filling.
Add coolant until the level is up to the MAX mark or slightly above.

Start engine and run until hot. Check the cooling system connections for tightness. Also re-check the coolant level.
Capacity: 11.5 qts/9.6 Imp. qts.

Cooling system, hoses and connections

Check all cooling system hoses and connections for defects or deterioration of hoses and loose clamps or fittings.

Drive belts

The belt tension can be checked by depressing the fan belt at a point midway between the alternator and fan. It should be possible to press down the belt about 1/4" – 3/8" (5 – 10 mm). This also applies to other drive belts on the engine.

I Engine mechanical components

Torque manifold nuts

The manifold bolts should be torqued at the 600 – 1,200 mile inspection. A loose manifold could alter air/fuel ratio and cause an increase in emissions and/or poor driveability.

Valves

The valve clearance should be checked every 30,000 miles.

Vacuum fittings, hoses and connections

Unstable idle, misfiring or poor emission control is often caused by leaking vacuum hoses or connections. Check hoses and connections on distributor vacuum unit, EGR valve (when applicable) and connections on heater control servo systems and hydraulic brake servo.

II Engine fuel system

Fuel (91 octane)

Unleaded fuel is **required** for models with catalytic converter (all models).
A label on the instrument panel and on the rear fender, near the filler inlet, will remind of this requirement.
It is unlawful to dispense leaded fuel into a vehicle labeled "unleaded gasoline only".

CI system

The B27 F engine is provided with a fuel injection system called the CI system (Continuous Injection). Fuel injectors are open and inject fuel as long as the engine is operating.
This system has few moving parts, is reliable and meets the exhaust emission standards at maximum efficiency.
Air supplied to the engine is continuously measured and determines the amount of fuel injected.
The air flow is regulated by two throttle valves.
The air flow sensor and the fuel distributor are integrally built as a single unit. A lever is actuated by the air flow to produce continuous fuel distribution.

Special instructions for work on the fuel injection system

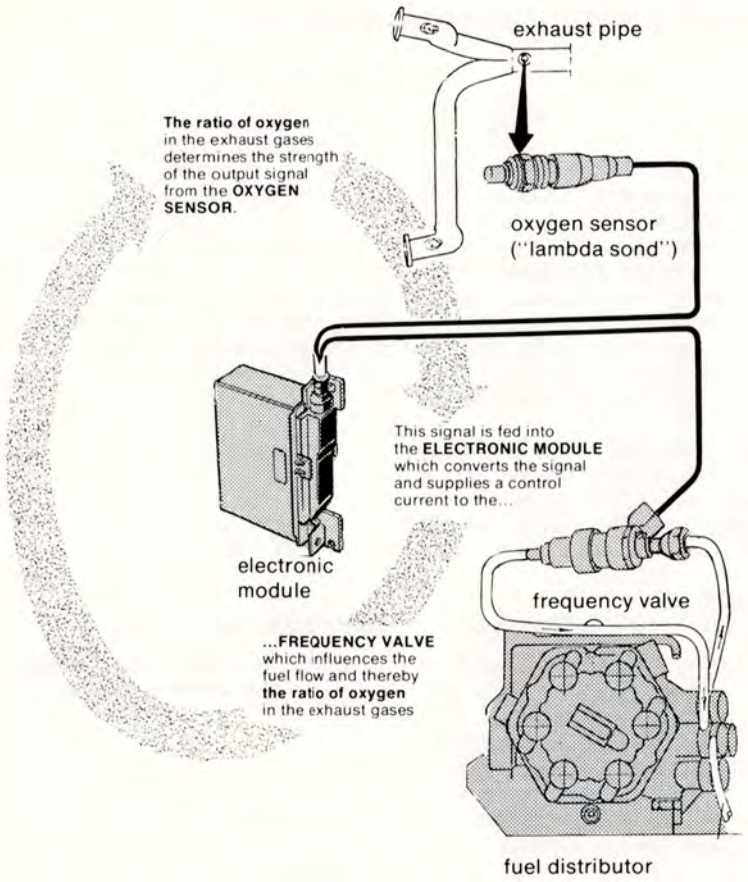
Extreme cleanliness is essential when working on the injection system. Great care must be observed.
Injection system service should be handled by qualified technicians, using equipment intended for this service.

Fuel (line) filter

The fuel filter is located on the firewall. This filter is to be changed every 30,000 miles. The filter is replaced as one complete unit.
Replace more frequently if contaminated fuel was introduced into the tank.

Air cleaner

Replace the air cleaner cartridge with a new one every 30,000 miles. The cartridge should be replaced more often when driving under dirty and dusty conditions. No cleaning of any kind is to be accomplished.



Oxygen sensor system

This is a self-tuning engine control system designed to reduce emissions and improve fuel economy.
An oxygen sensor monitors the composition of the exhaust gases leaving the engine. The exhaust gas analysis is fed into an electronic unit which continuously influences a frequency valve. This adjusts the air-fuel ratio to provide optimum conditions for combustion and efficient reduction of the three major pollutants (hydrocarbons, carbon monoxide and nitrous gases) by a 3-way catalytic converter.

Change oxygen sensor unit and Inspect electrical connections of oxygen sensor system

The oxygen sensor must be replaced every 15,000 miles.
At the same time the electrical wires and connections of the oxygen sensor system should be inspected for chafing and corrosion.
Replace as necessary.

Checking and adjusting idling speed and mixture ratio and manifold balance

These checks should be made every 15,000 miles.
The idling speed should also be adjusted and the mixture ratio and manifold balance checked at the 600 – 1,200 mile inspection.

Fuel system cap, tank and lines, and connections

The effectiveness of the fuel system to contain hydrocarbons is largely dependent on a leak-free system. Check for proper sealing of gasoline filler cap which contains "O" ring type seals. Check all evaporative hoses in vehicle for tightness. Check fuel lines under vehicle and repair if necessary.

Inspection of fuel injection electrical connections

The electrical connections and fuel lines in the injection system should be checked for chafing and corrosion every 15,000 miles.

III Engine Ignition Components

Change spark plugs

The spark plugs should be changed every 15,000 miles.
However, city driving or fast highway driving may require changing after 7,500 miles of driving. When fitting new plugs, be sure to fit the right type (Volvo Part No. 273541-3 or equivalent). Use molybdenum disulphide ("Molykote") to lubricate the threads and torque to 13 – 14.5 ft.lbs. (18 – 20 Nm).
When changing the plugs, check that the suppressor connectors are in good condition. Cracked or damaged connectors should be replaced.
When changing spark plugs, clean the cables and cable terminals, also the rubber seals. If the car is driven on roads where salt is used during the winter, coat the cables with silicone.

Ignition timing
Distributor advance mechanism

The ignition timing should be inspected at the 600 – 1,200 mile inspection and after that every 15,000 miles. All adjusting work should be done with the proper equipment
The distributor is one of the most sensitive engine units. Careless handling can lead to decreased engine output and high fuel consumption or even serious damage to the engine.
The distributor advance mechanism should be checked every 30,000 miles.

Ignition wiring

Ignition wiring system consists of a primary and secondary system. The secondary systems are the high tension leads connecting the distributor cap with the spark plugs and the coil.
These wires should be inspected at each engine tune-up, and should be replaced if cracked, frayed or damaged from abrasion. It is important to clean all parts of this secondary system thoroughly because dirt greatly reduces the available voltage to the spark plugs.

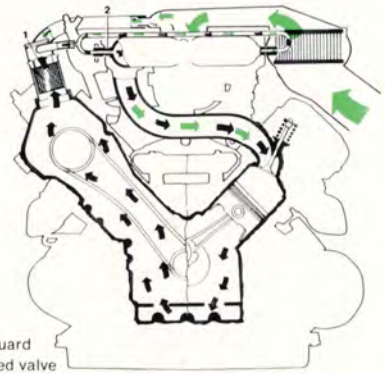
Distributor cap and rotor

Check the distributor cap and rotor for wear cracks, carbon formation, dirt and corrosion.

Timing delay valve

This valve should be replaced every 30,000 miles. A clogged valve will impair fuel economy. (Not used on all models).

IV Engine crankcase Ventilation System



1 Flame guard
2 Calibrated valve

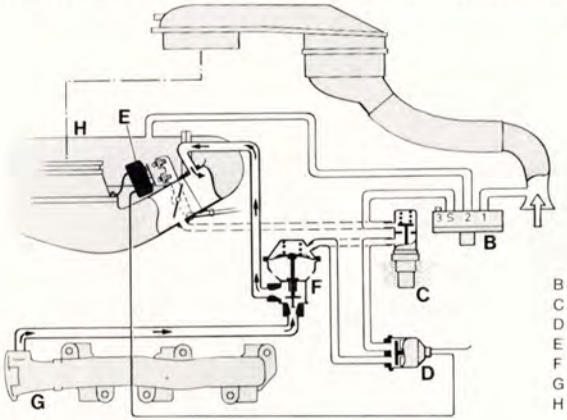
Crankcase ventilation

The engine is provided with positive crankcase ventilation which prevents crankcase gases from being released into the atmosphere.
Instead, the crankcase gases are admitted to the intake manifold and cylinders.

Cleaning PVC valve

The calibrated positive crankcase ventilation valve should be inspected every 15,000 miles and cleaned if necessary. Rubber hoses should be checked for damage at the same time. Replace if necessary.

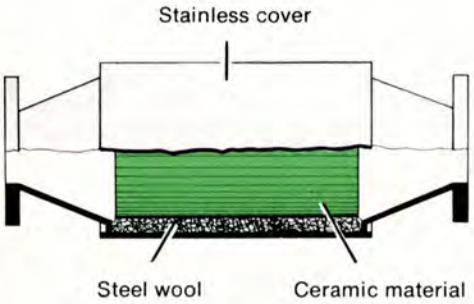
V Engine External Exhaust Emissions



B Vacuum amplifier (some models)
C Thermostat
D Solenoid valve (some models)
E Micro switch (some models)
F EGR valve
G Exhaust manifold
H Intake manifold

Exhaust Gas Recirculation Components

Inspect and function check EGR valve and manifold nipple every 15,000 miles. Clean the EGR valve every 30,000 miles.
To remind the driver about the EGR service, there is a special EGR service reminder light which comes on at 15,000 mile intervals. (See section titled "Warning lights".)
This is a reminder to have the EGR valve serviced. The light will stay on until reset.



Catalytic Converter

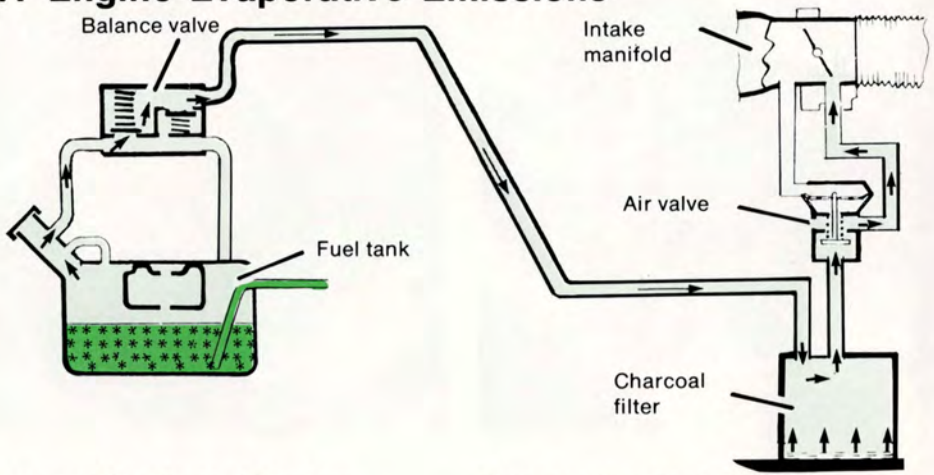
This is a supplementary device in the exhaust system, designed to clean up the remaining dirty exhaust gases.
This device is mainly a container with a ceramic material insert, designed to let the exhaust gases pass through channels in the insert. The channel walls are covered by a thin layer of platina-palladium. These metals act as catalysts, permitting a chemical action to occur without actually taking part in it.
The CO content will increase if the Catalytic Converter is damaged.
Lambda-sond equipped vehicles use catalytic converters containing platinum and rhodium.

CAUTION:
Vehicles with Catalytic Converter must use unleaded fuel only. Otherwise the Catalytic Converter will be distroyed.

Torque Catalytic Converter Mounting Bolts

The Catalytic Converter mounting bolts should be torqued every 15,000 miles.

VI Engine Evaporative Emissions



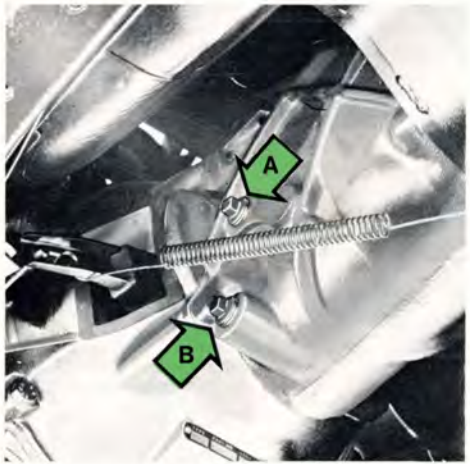
Evaporative Control System

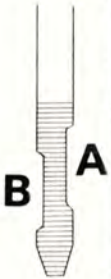
Vehicles intended for the North American market are equipped with a gas evaporative control system, which prevents gas fumes from being released into the atmosphere.
The system consists of an expansion area in the fuel tank, a pressure relief valve and a charcoal filter in the engine compartment. The components are interconnected by hoses which channel fuel fumes from the gas tank to the charcoal filter where they are stored until the engine is started and then drawn into the engine fuel induction system.

Evaporative Control Canister

Replace the canister every 45,000 miles.

Transmission oil





Manual 4-speed transmission with overdrive, M46

Capacity: 2.4 US qts = 2.3 liters
Fluid type: Automatic Transmission Fluid type F
Replace: at 600 – 1,200 miles and every 30,000 miles thereafter.

The oil level should be up to the filler plug (A). Drain the oil immediately after driving, while it is still hot by removing plug (B).

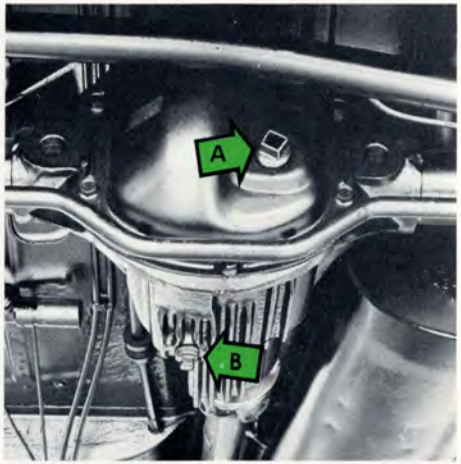
Transmission and overdrive are lubricated by the same oil. Therefore, when the oil is drained through plug B, also remove cover on the overdrive and clean strainer.

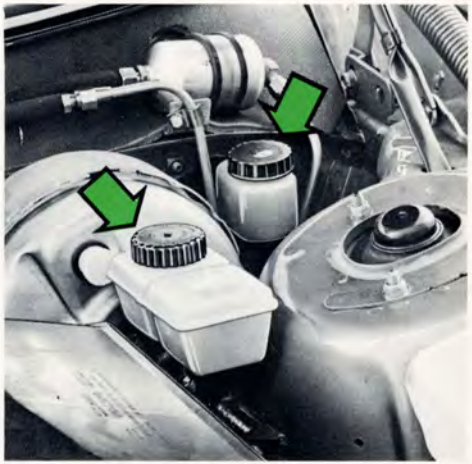
Automatic transmission

Capacity: 7.0 US qts = 6.5 liters
Fluid type: Automatic Transmission Fluid type F (FLM)
Replace: no oil changes necessary under normal driving conditions.

When checking fluid level, the car should be on level ground, engine idling. Move the gear selector slowly into all shift positions, then to P. Wait two minutes before checking. (Distance between Max and Min = 0.2 qts.)

NOTE: Dipstick graduations are for normal (range A) and cold (range B) transmission oil temperature. When checking the fluid level, use a rag that will not leave lint.





Rear axle

Capacity: 1.7 US qts = 1.6 liters
Oil type: API GL-5 (MIL-L-2105 B or C)
Viscosity: SAE 90
Replace: at 600–1,200 mile service only.

The oil level should be up to the filler plug (A). Drain rear axle oil through drain plug (B).
When the temperature is steadily below 15°F = −10°C, use API GL-5 SAE 80 W oil. Cars equipped with limited slip differentials should use oils with proper additives.

Power steering

Capacity: 1.25 US qts = 1.1 liters
Fluid type: ATF
Replace: no fluid change required.

The level should be between the MAX and MIN marks.
Check fluid level with engine idling and after driving while the fluid still is hot. Wipe the reservoir clean.

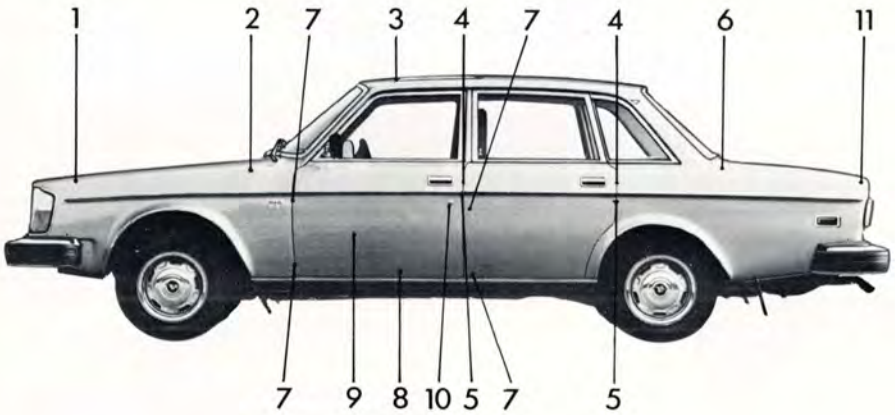
Brake fluid

Clutch fluid (only on cars with manual transmission)

Fluid type: DOT 3 or DOT 4 (SAE J 1703)
Replace: every third year or 45,000 miles. The clutch fluid does not need to be changed.

Check, without removing the cap, that the level is above the "MIN" mark of the fluid reservoirs.
Always entrust brake fluid changing to a Volvo dealer.
Change brake fluid every year when driving under extremely hard conditions (mountain driving etc).

Lubrication



A grease B oil

Chassis maintenance

To simplify maintenance, your Volvo has been equipped with ball joints, steering rods and propeller shafts that do not require regular lubrication.
Points that normally require lubricating have been packed with very durable grease at the factory and then carefully sealed, eliminating the need for subsequent lubrication.

Lubricate body

To avoid rattles and unnecessary wear, the body should be lubricated once a year. Hinges on hood, doors and trunk lid as well as door stops should be lubricated every 7,500 miles.
During winter, locks in the doors and trunk lid should be treated with special anti-freeze lubricant to prevent freezing.

No.	Lubricating point	Lubricant
1	Hood lock	Paraffin wax
2	Hood hinges	Oil
3	Sun-roof wind deflector	Oil
4	Door lock outer sliding surfaces	Paraffin wax
5	Striker plate	Paraffin wax
6	Trunk lid hinges	Oil
7	Door hinges	Grease
8	Front seat slide rails and latch devices	Oil
9	Window regulator Locking device (Accessible after door upholstery panels removed)	Oil, grease Silicon grease
10	Key holes	Lock oil
11	Trunk lid lock	Lock oil

Check coolant level

The cooling system must be filled with coolant and not leak to operate at maximum efficiency. Check the coolant level when filling fuel. The level should be between the "Max." and "Min" marks on the expansion tank. The check should be made with particular thoroughness when the engine is new or the cooling system has been drained.

Do not remove the filler cap other than for topping-up with coolant. Frequent removal may prevent coolant circulation between the engine and the expansion tank during engine warming up and cooling.

Top up with coolant

Top up with coolant by filling the expansion tank when level is at the "Min" mark. Use a mixture of 50 % anti-freeze/summer coolant and 50 % water all the year round. Top up to the "Max" mark.

If the engine is warm, and you are going to top up coolant, unscrew the cap slowly in order to allow any excess pressure to escape.

NOTE: Do not top up with water only. Water by itself reduces the rust-protective and anti-freeze qualities of the coolant and has a lower boiling point. It can also cause damage to the cooling system if it should freeze.

Replacing bulbs

Note

This car is equipped with an alternator

When changing the battery or when carrying out work involving the electrical system, the following should be observed.

1 A battery connection to the wrong terminal will damage the diodes. Before connections are made, check the polarity of the battery with a voltmeter.

2 If booster batteries are used for starting, they must be properly connected to prevent the diodes from being damaged.
The ground lead from the booster battery must be connected to the ground terminal of the car battery and the positive lead from the booster battery to the positive terminal.

3 If a fast charger is used for charging the battery, the battery leads should be disconnected.

4 Never disconnect the battery circuit (for example, to change the battery) while the engine is running, as this will immediately ruin the alternator.
Always make sure that all the battery connections are properly tightened.

5 If any electrical welding work is made on the vehicle, the ground lead and all the connecting cables of the alternator must be disconnected and the welder wires placed as near the welding point as possible.

Replacing bulbs

The replacement of bulbs in the various lighting units is shown on the following pages. Make sure when installing bulbs, that the guide pin on the socket fits into its corresponding recess.
When installing bulbs, do not touch the glass with your fingers. The reason for this is that grease, oil or any other impurities can be carbonized onto the bulb and damage the reflector.

Replacing bulbs for instrument lighting and heater control lighting

Due to the location of the bulbs, their replacement should be carried out by a Volvo dealer.

Replacing bulbs for side marker lights

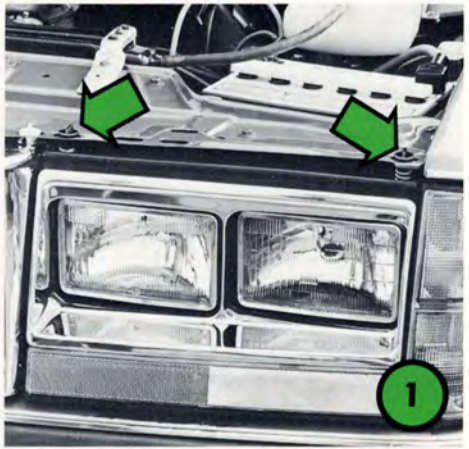
Remove the two Phillips screws which hold the lens. The bulb can now be removed by pressing it inwards and turning it slightly counterclockwise.

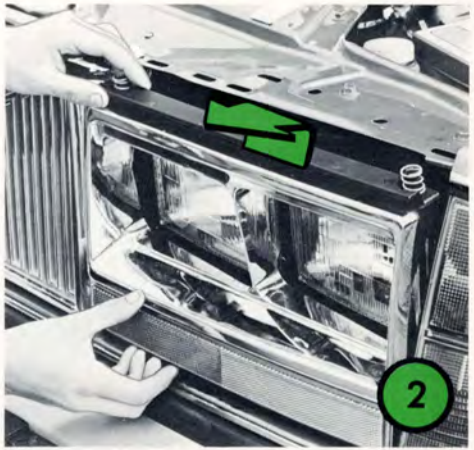
Replacing sealed beam headlamp units

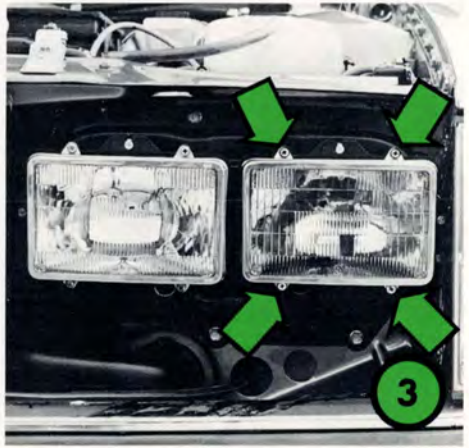
1 Press the two plastic screws down and turn them 1/4 turn and remove them.
2 Lift up the rim slightly and remove it forwards.
3 Remove the Phillips screws and rim. Lift out the headlamp unit.
4 Disconnect the socket contact.

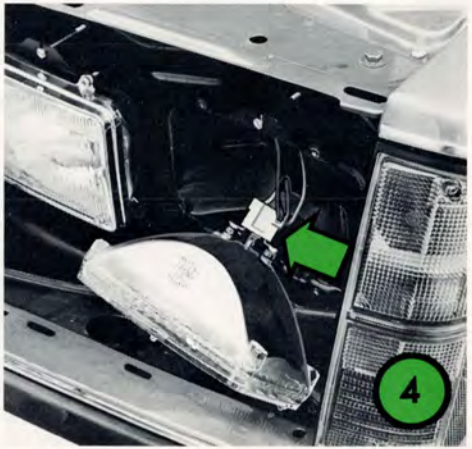
Installation is done in the opposite way.

Check headlight alignment.









Replacing bulbs

Bulbs

		Power cp (w)	Socket	US Bulb No
1 Front position, side marker lights	264, 265	32 (3)	Ba 15 d	1157 NA
2 Front turn signal	264, 265	32 (3)	Ba 15 d	1157 NA
3 Rear turn signal	264	32 (21)	Ba 15 s	1073
4 Back up light	264	32 (21)	Ba 15 s	1073
5 Stop light	264	32 (21)	Ba 15 s	1073
6 Tail light	264	4 (5)	Ba 15 s	67
7 Reflector	264	–	–	–
8 Stop light	264	32 (21)	Ba 15 s	1073
9 Rear turn signal	265	32 (21)	Ba 15 s	1073
10 Back up light	265	32 (21)	Ba 15 s	1073
11 Stop light	265	32 (21)	Ba 15 s	1073
12 Tail light	265	4 (5)	Ba 15 s	67

Replacing bulbs

The front bulbs and rear bulbs (265)

Remove the Phillips screws retaining the lenses. Replace bulb by slightly depressing and turning counterclockwise.

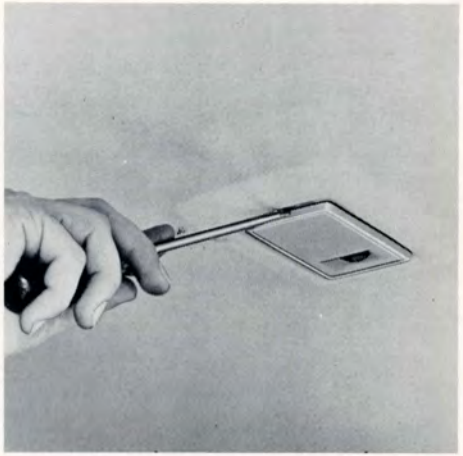
The rear bulbs on 264

Remove the board wall lining on the inside of the rear wall of the trunk. Unscrew the two plastic nuts securing the light glass. Replace bulb by slightly depressing and turning counterclockwise.

License plate light

Insert a screwdriver through the opening in the housing and depress the catch tab.
Pull out the housing assembly.

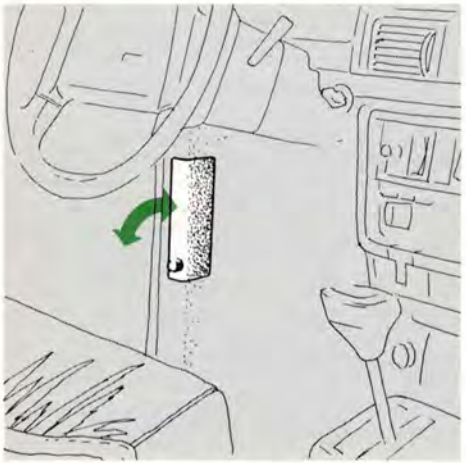
Pull out the cover end which is not provided with a lock pin.
Replace bulb.
When re-installing, first locate the lock pins (see picture) and then press on the cover.
Check that the rubber gasket is positioned and press the housing assembly into place.



Interior light

Insert a screwdriver through the opening in the right side of the housing and depress the catch tab. Pull out the housing assembly and replace the bulb.

Fuses



Replacing fuses

The fuse box is positioned in front of the left front door pillar.

When replacing fuses, check that right amperage is used.

The fuel feed pump fuse is located in the wire to the left under the mat in the trunk. Amperage: 5 A.

The fuse holder is protected by a plastic cover, which is secured by two plastic tabs. Use a screwdriver to pry loose.

Never use fuses of higher amperage. If one fuse often fails, take the car to your Volvo dealer for fault-tracing.

Reading downwards the fuses protect the following:

1	Lighter	16 A
	Windshield wiper washer	
	Rear wiper washer (265)	
2	Heater fan	16 A
	Horn	
	Radio	
3	Rear demist	16 A
	Overdrive	
4	Back up lights	8 A
	Air conditioning	
	Heated drivers seat	
	Relay window lift	
5	Instrument	8 A
	Turn signals	
	Control and warning lights	
	Relay, fuel injection system	
	Electrically operated side mirrors	
6	Stop lights	8 A
	Rear interior light (265)	
	Trunk light	
7	Fuel pump	16 A
8	Clock	8 A
	Glove compartment light	
	Interior light	
	Hazard	
9	Seat belt warning	8 A
10	Window lifts	16 A
11	Left parking and side marker light	8 A
	License plate light, left (265, left + right)	
12	Right parking and side marker light	8 A
	License plate light, right (not 265)	
	Instrument and panel lights	
	Seat belt light	
	Ash tray light	
	Shift positions light	

General

Your Volvo is equipped with radial tires and pressed steel wheels as standard equipment. The wheel is centered on the hub by means of a centering shoulder and (5) conical wheel nuts. If the wheel is removed, care must be taken to properly center it on the hub before the nuts are tightened.

Snow tires

Studded snow tires require a running-in period of 300 – 600 miles. During this period avoid any hard cornering, acceleration or braking.
Radial snow tires, with or without studs, are recommended for winter use.

Tire **chains** can be used on the rear wheels only providing that the chains do not project far enough from the tire that they can chafe against the brake caliper or other components.

Strap-on emergency chains must not be used since the space between the brake calipers and wheel rims does not allow sufficient clearance.

Check tire wear pattern

Check the tires at regular intervals for damage and abnormal wear. Also check for foreign particles in the thread which may cause damage. Out of balance wheels increase tire wear and reduce riding comfort.
Always use a radial tire on the same side of the car throughout its lifetime.

To observe when replacing wheels

To avoid re-balancing, mark and re-install wheels in same location and same position as before removal.

Tire wear indicator

The tires have a so-called "wear indicator" in the form of a number of narrow strips running across or parallel to the tread. When about $^1/_{16}$" = 1.5 mm is left on the tread, these strips show up and warn the car owner that the tire should be replaced.

Check tire pressure

Check tire inflation pressure at regular intervals to avoid abnormal wear. The spare tire should also be checked to ensure proper inflation when needed. Refer to "Specifications" section for correct tire pressures.
Tire pressures should be checked when the tire is cool (before driving) as the pressure will increase after driving due to heat build up in the tire. Air should be added to warm tires only when the pressure has fallen below the recommended cold tire pressure level. Recheck pressure when tires are cold.
Too little pressure, is the most common reason for abnormal thread wear. Tires which are underinflated will also cause high fuel consumption, heavy steering and poor road holding. Overinflated tires will result in poor riding comfort.

Wheel changing

Changing a wheel

Spare wheel, jack and tool kit are stowed in the trunk compartment. Before raising the car with the jack be sure it is on firm and level ground:

NOTE: Do not crawl or work under the car while it is raised by the jack.

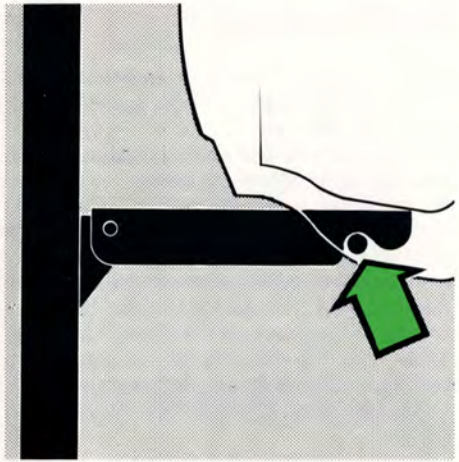
Before the car is raised with the jack the parking brake should be applied and one of the gears engaged. With automatic transmission, the selector should be in **Park.** Block one of the wheels on the opposite side of the car from the jack.

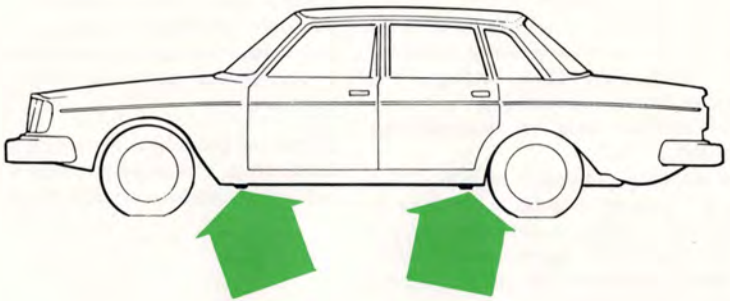
Removing

The wheel cap can be removed with the tommy bar or the screwdriver provided in the tool kit.

Loosen the wheel nuts $^1/_2 - 1$ turn with the box wrench provided in the tool kit. All of the wheel nuts have right-hand threads which are loosened by turning them counter-clockwise.

Insert the lifting arm of the jack in the jack attachment closest to the wheel to be changed.





Be sure the arm goes all the way into the attachment.
Raise up the side of the car enough to lift the wheel off the ground.

Unscrew the wheel nuts completely and remove the wheel carefully so as not to damage the threads of the studs.

Installation

- Clean the contact surface between wheel and hub.
- Lift on the wheel and fit the wheel center on the hub shoulder.
- Tighten the nuts until the wheel makes good contact with the flange.
- Lower the car and tighten the nuts alternately to 72 – 100 ft.lbs.
- Fit the wheel cap.

NOTE: Do not rotate a raised rear wheel if the car is equipped with a limited slip differential. This will also move the opposite wheel on the ground and the car may slide off the jack.

Washing, cleaning

Washing

The car should be washed at regular intervals since dirt, dust, insects, tar spots adhere to the paint and may cause damage.
When washing the car, do not expose it to direct sunlight. Use lukewarm water to soften the dirt before you wash with a sponge, and plenty of water, to avoid scratching.
A detergent can be used to facilitate the softening of dirt and oil.
Special car washing detergent or household detergent can be used. A suitable mixture is about 2.5 fl. oz (8.5 cl) of detergent to 2.6 US gal. (10 liters) of warm water. After washing with a detergent the car should be well rinsed with clean water.
A water soluble grease solvent may be used in cases of sticky dirt. However, use a washplace equipped with a drainage separator.
Dry the car with a clean chamois and remember to clean the drain holes in the doors and rocker panels.
Tar spots can be removed with kerosene or tar remover after the car has been washed.
NOTE: It is particlarly important to wash the car frequently in the winter time, to prevent corrosion, when salt has been used on the roads.
NOTE:
When the car is driven immediately after being washed, brake the car now and again in order to remove any moisture from the brake linings.

Chromed parts

Chromium-plated and anodized parts should be washed with clean water as soon as they become dirty. This is particularly important if you drive on gravel roads or on roads where salt is used during the winter. After the car has been washed, apply wax or an anti-rust preparation.

Stains on chrome trim can be removed with commercially available chrome cleaner. Do not use abrasive compounds or steel wool.

Polishing (waxing)

Polishing and waxing is not necessary unless a glossy surface can no longer be obtained by normal car washing.
Normally polishing is not required during the first year after delivery, however, waxing may be beneficial.
Before applying polish or wax the car must be washed and dried. Tar spots can be removed with kerosene or tar remover. Difficult spots may require a fine rubbing compound.
After polishing use liquid or paste wax.
Several commercially available products contain both polish and wax. Waxing alone does not substitute for polishing of a dull surface.

Cleaning the upholstery

Generally the **fabric** can be cleaned with soapy water or a detergent. For more difficult spots caused by oil, ice cream, shoe polish, grease etc., use a stain remover.
The **Plastic** in the upholstery can be washed.
Leather upholstery can be cleaned with a damp cloth or with saddle soap.
For more difficult spots, consult an expert for the choice of cleaning agent.
On no account must gasoline, naphtha or similar cleaning agents be used on the plastic or the leather since these can cause damage.

Cleaning floor mats

The floor mats should be vacuumed or brushed clean regularly, especially during the winter when they should be taken out for drying.
Spots on textile mats can be removed with a mild detergent.

Anti-rust treatment

Your Volvo has been rust protected at the factory. On external surfaces a heavy coat of wear resistant material has been used, while on the internal surfaces a lighter rust protector is used.
The external rust protection should be inspected regularly or at least once per year. If the rust protection has been penetrated a repair should be made as soon as possible to prevent moisture from creeping between the metal and coating. Carefully clean and remove any rust prior to repair of the rust protective coating.
The internal rust protection should normally be renewed first time after 36 months and then at least every 24th month.

Paint touch-up

Paint damage requires immediate attention to avoid rusting. Make it a habit to check the finish regularly, for instance when washing the car. Touch-up if necessary.

Paint repairs require special equipment and skill. Contact your Volvo dealer for any extensive damages.

Minor scratches can be repaired by using Volvo touch-up paint.

NOTE: When ordering touch-up paint from your Volvo dealer, use the paint code indicated on the Vehicle Designation plate. This plate is located at the right wheel well housing.

Paint code

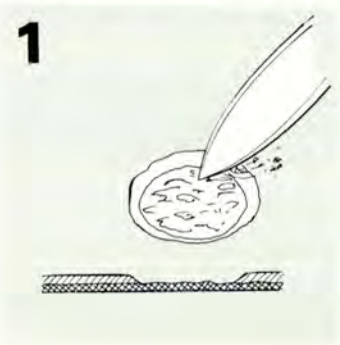
Minor stone chips and scratches

Material:
Rust remover
Primer – brush on type
Surface finish – brush on type
(The paint pen head also contains grinding paste for subsequent treatment.)
Penknife or similar
Brush
NOTE: When touching-up the car, it should be well cleaned and dry and have a surface temperature above + 15°C (60°F).

Scars on the surface (where the paint has not been completely penetrated). Repairs can be made directly after light scraping to remove dirt.

Deep scars, (down to the bare metal):

1 Scrape or sand the damaged surface lightly and break the edges of the scar.



Apply the rust remover. (Avoid contact with eyes and skin!). Wait a few minutes and then rinse carefully with water.

2 Thoroughly mix the primer and apply it with a small brush.

When the primer surface is dry, the paint can be applied using a brush.
Mix the paint thoroughly, apply several thin paint coats and let dry after each application.

3 If there is a longer scratch, you may want to mask to protect surrounding paint.

Touching-up flaking fender edges and sills

Material:
Rust remover
Primer – spray
Surface finish – spray
Sand paper (H 150 – 300 grit)
Thinner
NOTE! When touching-up the car, it should be well cleaned and dry and have a temperature exceeding + 15 °C (60 °F).

NOTICE! Spray paint may contain saturated chlorofluorocarbon propellant, sale of which may be illegal in certain areas.

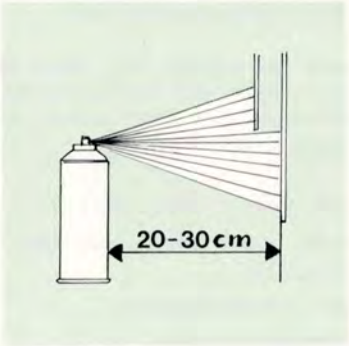
Mask with tape and paper prior to painting larger surfaces. Remove the masking immediately after application of the last paint coat, before the paint starts to dry.

Touching-up is as follows:

1 Remove the flakes.

2 Sand the damaged surface and wash it clean with thinner.
Apply the rust remover. (Avoid contact with skin!) Wait a few minutes and then rinse carefully with water.

3 Shake the spray can for at least 1 minute. Spray on the primer. Move the can slowly and evenly back and forth over the spot and about 20 – 30 cm (8 – 12 in.) from the surface. Protect the surrounding surfaces with suitable paper.



4 When the primer has dried, apply the surface enamel in the same way. Spray on several times and allow the paint to dry a minute or so between each application.

Long distance trips

Prior to a long distance trip

Have your car checked at a Volvo dealer. Preventive maintenance will help to ensure a trouble free trip. Remember to take along a Volvo dealer directory.

The main items to check are listed below:

1 Brakes, front wheel alignment and steering gear.

2 Engine running condition.

3 Fuel system operation.

4 Oil leaks: engine, transmission, rear axle.

5 Cooling system for leaks or worn hoses.

6 Examine tires carefully, replace worn tires.

7 Battery and terminals.

8 Tool equipment.

9 Lighting.

10 Drive belts, for tightness and wear.

Engine cooling system

A good quality anti-freeze/summer coolant should be used all the year round. The cooling system should always contain water plus anti-freeze and rust inhibitor, even during the summer. Experience has also shown that extremely weak anti-freeze solutions (10–25 %) are very unfavorable rust protection. For this reason, the quantity of anti-freeze/summer coolant should amount to about 50 % of the solution, that is 5.0 qts = 4.3 Imp. qts = 4.8 liters. This lowers the freezing point to −31°F (−35°C).
Alcohol must not be used as an anti-freeze agent since it evaporates at normal engine temperature.

Engine fuel system

During the winter, large variations in temperature causes condensation to form in the fuel tank and can impair the running of the engine.
This can be eliminated by adding special additives to the fuel. There is less risk of condensation forming in the fuel tank if it is kept full.

Engine lubricating system

During the winter, multigrade oil 10 W-40 should be used in the engine. At very low temperatures (below 0°F), multigrade oil SAE 5W-20 or SAE 5W-30 is recommended. These oils reach the lubricating points in the engine more easily at low temperature and also facilitate cold starting. See section titled "Engine oil".

Electrical system

The electrical system is subject to great stresses during the winter. Lighting and starter motor are used more often. The battery capacity is impaired at low air temperature. The state of charge must be checked more frequently, and if necessary the battery should be charged. The battery may freeze if the state of charge is low.

Brake system

During cold weather the brakes are subject to splash and condensation which can result in the parking brake freezing up, especially if applied for long periods of time. Use of first or reverse gear on a manual transmission or position "P" on an automatic transmission is preferable during these conditions. See section titled "Brake system".

Windshield washers

Anti-freeze should also be added to the water container for the windshield (rear window) washer.
This is particularly important during the winter because the windshield frequently becomes dirty and is often splashed with water which rapidly freezes. This may necessitate the frequent use of the windshield washer and wipers. Your Volvo dealer can supply you with suitable anti-freeze for this purpose.

Anti-freeze for door locks

Lubricate the outside locks with a suitable anti-freeze. Such agents are commercially available and should be used before the first frost.

Volvo supports Voluntary Mechanic Certification by the N.I.A.S.E.

The diagnosis outlined below is only intended to serve as a guide to locate and temporarily correct minor faults. Causes for unsatisfactory performance should be investigated and corrected by your Volvo dealer.

NOTE: The points indicated by an asterisk (*) should be checked by your Volvo dealer.

Condition: Starter fails to operate (or operates very slowly)

Possible cause	Correction
Weak battery or dead cell.	With the ignition switch in the "Driving" or "On" position, check to see if the warning lights on the dashboard come on and if they go off when the starter is engaged. If the lights do not come on or if they go off when the starter is engaged, the battery is discharged or see below.
Loose or corroded battery cable terminals.	Check battery terminals and clamps. Clean or replace if necessary. Check that the starter cable is secure at its terminals. The ground strap, which connects the body to the rear of the engine, should also be checked for corrosion or looseness.
Open circuit between ignition/starter switch and ignition terminal on starter.	The circuit is closed if a clicking sound is heard from the starter when it is engaged. If no clicking sound is heard, check that the blue wire at the starter is secure. If still no clicking sound is heard, the ignition switch or the wire is defective.
Starter motor defective.	If the above checks have been performed, and no fault is evident, the starter may be defective. NOTE: In this case the headlight intensity will not dim when the starter is engaged.

Condition: Starter motor operates but engine does not start

Possibe cause	Correction
Intake system leaking.	Check vacuum hose connections at manifold and auxiliary air valve.
No fuel reaching engine.	Check for fuel in the tank. Check fuse No 7.
No spark.	Remove one spark plug wire and unscrew the radio interference suppressor. Hold the wire approx. 3/8" from the valve cover and run the starter. If there is no spark, check that the high tension lead from the coil to the distributor cap is connected and that the wires to the distributor and coil are connected.
Spark plugs, high tension leads or distributor cap wet or defective.	Clean the parts with a dry cloth or spray with a moisture remover. Replace defective or worn parts.
Cold start injector defective.	Test the cold start injector function with cold and hot engine.*
Rest pressure incorrect.	Test rest pressure and the fuel system for leaks.* If no fault is found, following the above steps, contact your Volvo dealer.

Condition: Erratic idle (misfiring)

Possible cause	Correction
Intake system leaking.	Check vacuum hose connections at manifold and auxiliary air valve.
Exhaust Gas Recirculation Valve leaking.	Test the valve function.*
Spark plugs, high tension leads or distributor cap worn (defective).	Clean distributor cap and leads, check the cap for cracks. Replace defective or worn parts.
Worn spark plugs.	Remove. Clean or replace spark plugs.
Cold start injector leaking.	Test the injector function.*
Uneven compression.	Test compression.*

Condition: Engine stalls at irregular intervals

Possible cause	Correction
Defective wires.	Check wire terminals at: fuel pump, fuse No. 7, coil, distributor, ignition switch, relays and air flow sensor.
Intake system leaking.	Check vacuum hose connections at manifold and auxiliary air valve.
Low idle speed.	Adjust.*
Exhaust Gas Recirculation Valve seizing.	Replace valve.* (Engine will stall at idle.)
Fuel filter clogged.	Clean fuel tank filter and replace line fuel filter.

Service diagnosis

Condition: Low top speed, loss of power

Possible cause	Correction
Air filter clogged.	Check air filter.*
Throttle misadjusted.	Check that the throttle touches the high speed stop when the accelerator is fully depressed.*
Incorrect timing.	Check and adjust.*
Fuel filter clogged.	Clean fuel tank filter and replace fuel line filter.*

Condition: Excessive fuel consumption

Possible cause	Correction
Fuel lines leaking.	Check tightness.
Spark plugs worn.	Replace plugs.
Incorrect timing.	Check/adjust.*
Air filter clogged.	Check/replace.*
Control pressure incorrect.	Check/replace control pressure regulator.*
Cold start injector leaking.	Replace injector.* (A leaking cold start injector also causes uneven idle and hard starting.)

Condition: Dieseling

Possible cause	Correction
Injector leaking.	Check air flow sensor plate and rest pressure.*

Condition: Misfiring at highway driving

Possible cause	Correction
Spark plugs fouled.	Drive the vehicle in a lower gear and keep the engine rpm higher for a few miles in order to remove carbon deposit on the spark plugs. If this procedure is not effective, clean or replace the spark plugs.

Condition: Deceleration backfiring

Possible cause	Correction
Diverter valve faulty.	Check diverter valve operation.*

Specifications

Type designations

The VIN number should always be quoted in all correspondence concerning your vehicle with the dealer and when ordering parts.

1 Vehicle Identification Number (VIN)

VIN plate is located on the body on the left windshield pillar. The VIN is also stamped on the right hand door pillar.

2 Vehicle Emission Control Information

Your Volvo has been built to comply with all U.S.A. and Canada anti-pollution regulations and evidence of this can be verified from the certification label on the left wheel valance. For further information regarding these regulations, please consult your Volvo dealer.

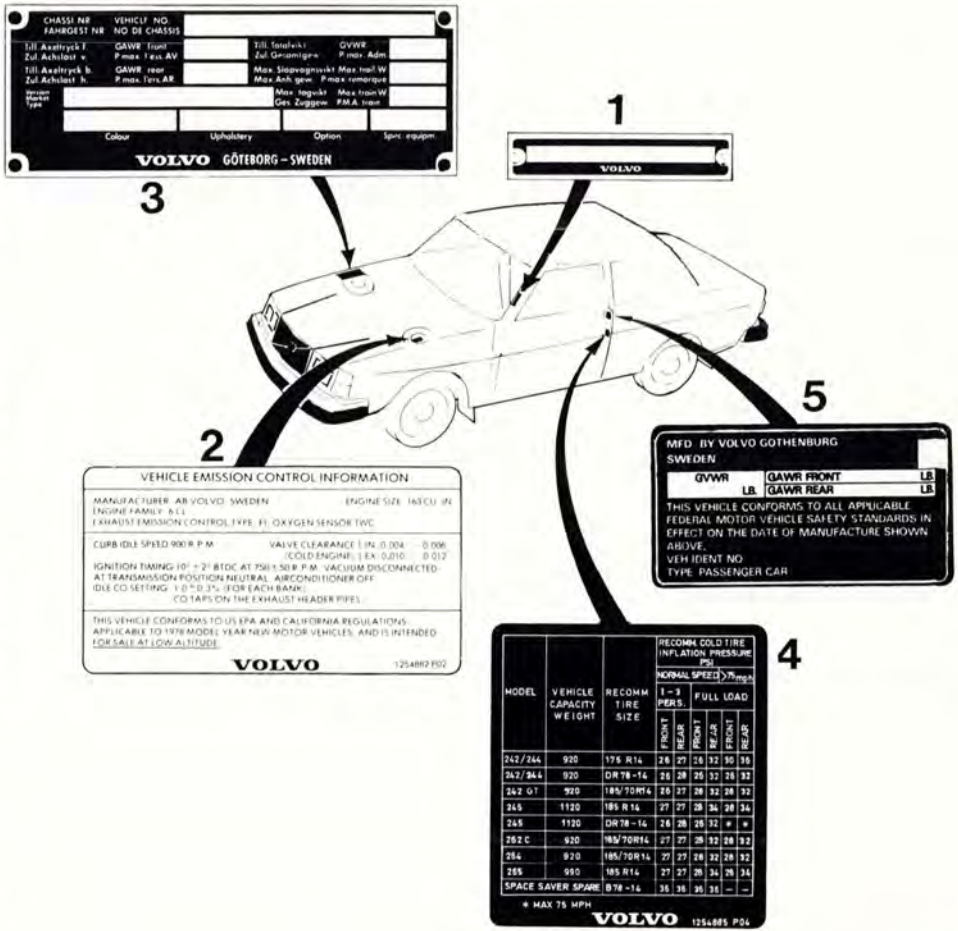
3 Model Plate

Vehicle Identification Number (VIN), Version Identification Code (VIC) with information on engine type, emission equipment etc, codes for color and upholstery, Gross Vehicle Weight (GVW). This plate is located on right wheel valance.

4 Loads and tire pressures

5 Federal Motor Vehicle Safety Standards (FMVSS) specifications

These two labels are located on the left front door opening.



Dimensions and weights	264	265
Length	191.7" (487 cm)	191.7" (487 cm)
Width	67.3" (171 cm)	67.3" (171 cm)
Height, curb weight	56.5" (144 cm)	57.5" (146 cm)
Wheelbase	104.0" (264 cm)	104.0" (264 cm)
Ground clearance (full load)	4.9" (12.5 cm)	4.9" (12.5 cm)
Track, front	56.3" (143 cm)	56.3" (143 cm)
rear	53.5" (136 cm)	53.5" (136 cm)
Turning circle (between curbs)	32.5' (9.8 m)	32.5' (9.8 m)
Curb weight (depending on type)	3160–3225 lbs (1435–1465 kg)	3260–3305 lbs (1480–1500 kg)
Gross vehicle weight (GVW)	4190 lbs (1900 kg)	4300 lbs (1950 kg)
Capacity weight	920 lbs	990 lbs
Permissible axle weight, front	2050 lbs (930 kg)	2050 lbs (930 kg)
rear	2180 lbs (990 kg)	2600 lbs (1180 kg)
Max. trailer weight	2000 lbs (908 kg)	2000 lbs (908 kg)
Max. hitch load	200 lbs (90 kg)	200 lbs (90 kg)

Cargo space	265
Length with rear seat up	44.5" (113 cm)
Length with rear seat down	74.0" (188 cm)
Maximum width	53.1" (135 cm)
Height	32.7" (83 cm)
Volume with rear seat up	42 cu.ft. (1.2 m^3)
Volume with rear seat down	71 cu.ft. (2.0 m^3)
Cargo opening, maximum width	45.7" (116 cm)
Cargo opening, maximum height	30.7" (78 cm)

Capacities	
Fuel tank	15.8 US gals/13.2 Imp. gals 60 liters
Cooling system	11.5 US qts/9.6 Imp. qts (10.9 liters)
Oil capacity,	
engine, at oil change	6.8 US qts./5.7 Imp. qts. (6.5 liters)
excl. oil filter	6.3 US qts./5.3 Imp. qts. (6.0 liters)
transmission (M46)	2.4 US qts./2.2 Imp. qts. (2.3 liters)
(BW55)	7.0 US qts./5.4 Imp. qts. (6.5 liters)
rear axle	1.7 US qts./1.4 Imp. qts. (1.6 liters)
steering gear, power	1.25 US qts./1.1 Imp. qts. (1.2 liters)

ENGINE

Liquid-cooled, gasoline, 6-cylinder V-engine with 90° angle. Aluminum cylinder block with cast iron, replaceable wet liners. Aluminum cylinder head has separate inlet and exhaust passages. Single, overhead camshafts.
Engine lubrication is provided by a gear pump driven from crankshaft. Full-flow type oil filter. Exhaust emission control accomplished by fuel injection, Air Injection Reactor and Exhaust Gas Recirculation (some models also equipped with catalytic converter).
Closed crankcase ventilation system and evaporative emission control system.

Type designation	Volvo B 27 F
Output (SAE J 245) at rpm	125 hp[1])/5750
Max. torque (SAE J 245) at rpm	150 ft.lbs.[2])/2750
Number of cylinders	6
Bore	3.46" (88 mm)
Stroke	2.87" (73 mm)
Displacement	2.66 liters
Compression ratio	8.2:1
Valve clearance cold engine	
inlet	0.004 – 0.006" (0.10 – 0.15 mm)
exhaust	0.010 – 0.012" (0.25 – 0.30 mm)

[1]) With air pump: 121 hp.
[2]) With catalytic converter: 148 ft.lbs.

Cooling System

Type	Positive pressure, closed system
Thermostat-begins to open at	188°F (82°C)
-fully open at	199°F (92°C)
Fan belts, designation	HC-38×1125

Fuel system

The engine is equipped with fuel injection system.

Ignition System

Firing order	1–6–3–5–2–4
Ignition setting	
stroboscope setting with vacuum regulator disconnected, AC off	10° ± 2° B.T.D.C. (at 700–800 rpm)
Sparks plugs	Volvo Part No. 273541-3 (or equivalent)
Spark plug gap	0.028–0.032" (0.7–0.8 mm)
Tightening torque	13–14.5 ft.lbs. (18–20 Nm)
Distributor, direction of rotation	Clockwise

ELECTRICAL SYSTEM

12 V, negative ground.
Voltage-controlled alternator. Single-wire system with chassis and engine used as conductors.

Voltage	12 V
Battery, type	Noack 12 H 70 B op*
Capacity	70 Ah
Electrolyte, specific gravity	1.28
Recharge at	1.21
Alternator, rated output	770 W
max. current	55 A

* or equivalent

Lights, 12 V	US bulb No.	Power	Socket	No. of bulbs	
Headlights, inner	4×6½" Type 1A	Sealed Beam		2	
Headlights, outer	4×6½" Type 2A	Sealed Beam		2	
Position Lights, front	1157 NA	32/3 cp	Ba 15 d	2	
Turn Signals, front	1157 NA	32/3 cp	Ba 15 d	2	
Turn Signals, rear	1073	21 W/32 cp	Ba 15 s	2	
Tail Lights	67	5 W/4 cp	Ba 15 s	2	
Stop Lights	1073	21 W/32 cp	Ba 15 s	4	(265:2)
Back-up Lights	1073	21 W/32 cp	Ba 15 s	2	
Side Marker Lights	57	3 W/2 cp	Ba 9 s	2	
The following bulbs may be obtained from your nearest Volvo dealer:					
Rear Ash Tray Light		1.2 W	W 1.8 d	1	
License Plate Light		5 W	S 8.5	2	
Interior Light		10 W	S 8.5	1	(265:2)
Glove box Light		2 W	Ba 9 s	1	
Instrument Panel Light		2 W	Ba 7 s	3	
Control Panel Light		1.2 W	W 1.8 d	3	
Shift Positions, Auto Transmission		1.2 W	W 1.8 d	1	
Engine Compartment Light		15 W	S 8.5	1	
Trunk light		15 W	S 8.5	1	
Warning Lamps					
Charging		1.2 W	W 1.8 d	1	
Turn Signals		1.2 W	W 1.8 d	2	
Brake Failure		1.2 W	W 1.8 d	1	
Parking Brake		1.2 W	W 1.8 d	1	
Headlights		1.2 W	W 1.8 d	1	
Oil Pressure		1.2 W	W 1.8 d	1	
Overdrive		1.2 W	W 1.8 d	1	
Warning Flashers		1.2 W	W 1.8 d	1	
El. Heated Window		1.2 W	W 1.8 d	1	
EGR Reminder		1.2 W	W 1.8 d	1	
Seat Belts		2 W	Ba 9 s	2	
Bulb Failure		1.2 W	W 1.8 d	1	

Specifications

FRONT END

Suspension is of the McPherson type with the shock absorber mounted in a strut in the coil spring.
Rack and pinion steering gear.
Safety steering column.

Front wheel alignment

The alignment specifications apply to an unloaded car but include fuel, coolant and spare wheel.

Toe-in 1/8" = 0.12 ± 0.06 (3.0 ± 1.5 mm), power steering
Camber +1° to +1 1/2°
Caster Not adjustable

POWER TRANSMISSION

Cable-operated clutch of the single, dry-plate type.
Floor-shift operated manual transmission has four syncromesh forward gears, one reverse and electrically operated overdrive.
Optional automatic transmission.
Hypoid type final drive. Limited slip differential is optional.

Transmission

Type designation	M46	BW55
Reduction ratios		
1st gear	3.71:1	2.45:1
2nd gear	2.16:1	1.45:1
3rd gear	1.37:1	1.00:1
4th gear	1.00:1	–
Overdrive	0.80:1	–
Reverse	3.68:1	2.21:1
Rear axle	3.73:1	3.54:1

Speeds in mph (kmph) at 1,000 engine rpm

Transmission	M46
Rear axle ratio	3.73:1
1st gear	5.2 (8.3)
2nd gear	8.9 (14.3)
3rd gear	14.0 (22.5)
4th gear	19.1 (30.8)
Overdrive	23.9 (38.5)
Reverse	5.2 (8.4)

Recommended max. and min. speeds, mph (kmph)

1st gear	2nd gear	3rd gear	4th gear
–30 (–50)	15–53 (20–85)	22–85 (35–135)	28* – (45–)

* 45 mph (70 kmph) with overdrive engaged.

Tire pressures

Model	Tire	Recommended tire infl. pressure cold tires, psi						Vehicle capacity weight
		Normal speed				>75 mph		
		1–3 pers.		Full load				
		Front	Rear	Front	Rear	Front	Rear	
264	185/70R14	27	27	28	32	28	32	920
265	185R14	27	27	28	34	28	34	990

See Consumer Information Booklet for complete tire pressure information.

Tool kit

Wheel nut and spark plug wrench.
2 screwdrivers (1 Phillips, 1 standard).
Tommy bar.
2 open end wrenches.

Volvo Service Manuals

Service Manuals for your 1978 Volvo are available for purchase. These are the same used by competent Volvo technicians. Each major system in the car is covered by an individual Manual. These are grouped into ten sections and placed into a five-binder system. (Note that Manuals and binders may be obtained separately or in preassembled sets.)
Major sections within the five-binder system include: O-General Information; 1-Service and Maintenance Instruction; 2-Engine; 3-Electrical System; 4-Power Transmission; 5-Brakes; 6-Front End and Steering; 7-Frame Suspension and Wheels; 8-Body, 9-Accessories and Other Equipment.
A Service Manual Brochure and Order Form was placed in the car prior to delivery from the dealer to you. Complete ordering information is provided.
Additional copies of the Brochure and Order Form may be obtained from your Volvo dealer, or by mail directly from:

Volvo of America Corporation
Rockleigh Industrial Park
Rockleigh, New Jersey 07647

Attention: Volvo Service Literature

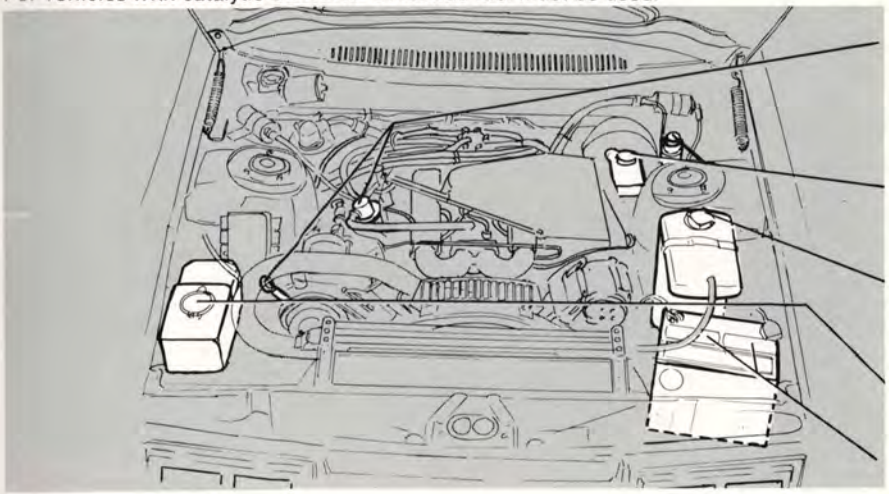
Note that the above pertains to vehicles sold in the U.S.A. only.

Index

When filling gas always check:

Fuel: Octane rating 91

For vehicles with catalytic converter unleaded fuel must be used.



Oil level between dipstick marks. The distance between the marks represents approx. 2 quarts.
When necessary, add oil of the same type as already used.

Check without removing the cap that the **brake- and clutch fluid** level is above the Min-mark. Brake- and clutch fluid DOT 3 or DOT 4 (SAE J 1708).

Coolant level between the expansion tank marks. Mixture 50 % anti-freeze and 50 % water.

Washer fluid reservoir should be filled with water and solvent (wintertime: windshield washer anti-freeze).

Electrolyte level 1/4" – 3/8" (5 – 10 mm) above plates. Fill distilled water only, never acid.

In the Owner's Manual you will find instructions on how to replace bulbs on page 60
...how to replace fuses on page 64
...how to change a wheel on page 66

Tire pressure, psi, cold tires.

Model	Tire	Normal speed				>75 mph	
		1 – 3 pers.		Full load			
		Front	Rear	Front	Rear	Front	Rear
264	185/70R14	27	27	28	32	28	32
265	185R14	27	27	28	34	28	34

VOLVO

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