

VOLVO  
**V70, V70 R & XC70**

**VOLVO**  
for life



WEB EDITION

**An alphabetical index is at the back of the book.**

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In addition to describing the standard equipment this manual also covers optional and extra equipment. In addition there are also equipment alternatives, manual or automatic transmission for example. In certain countries statutory requirements affect the level of equipment. This means that it is occasionally necessary to page past sections of the book which describe equipment not installed on your car.

The specifications, design features and illustrations in this Owner's Manual are not binding. We reserve the right to make modifications without prior notice.

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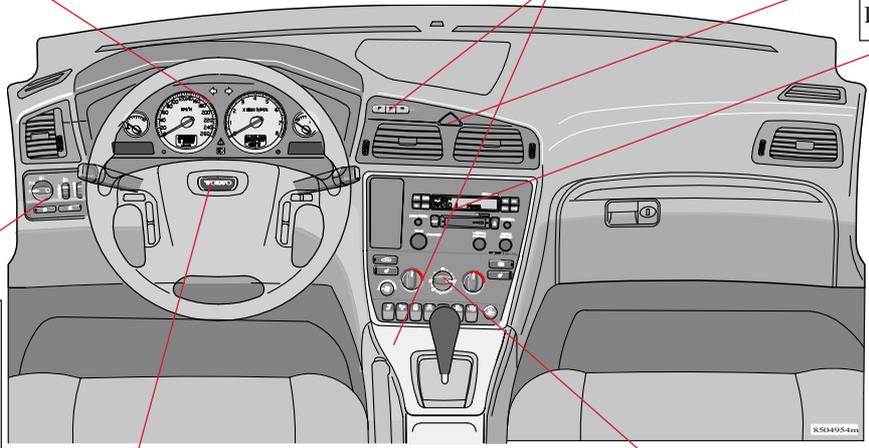
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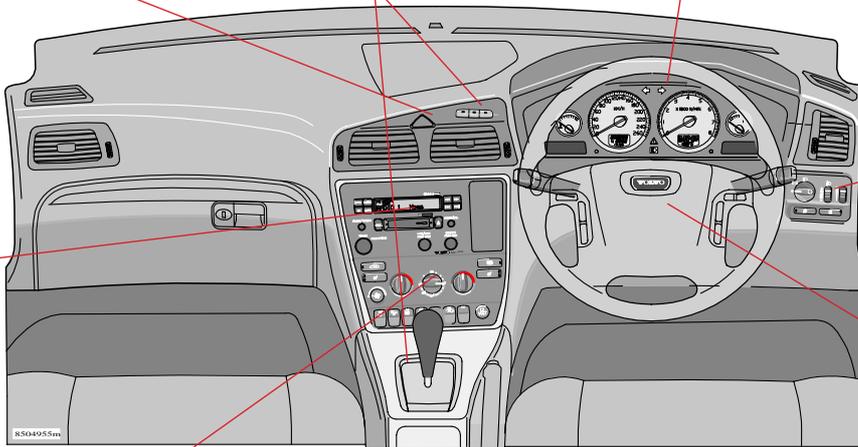
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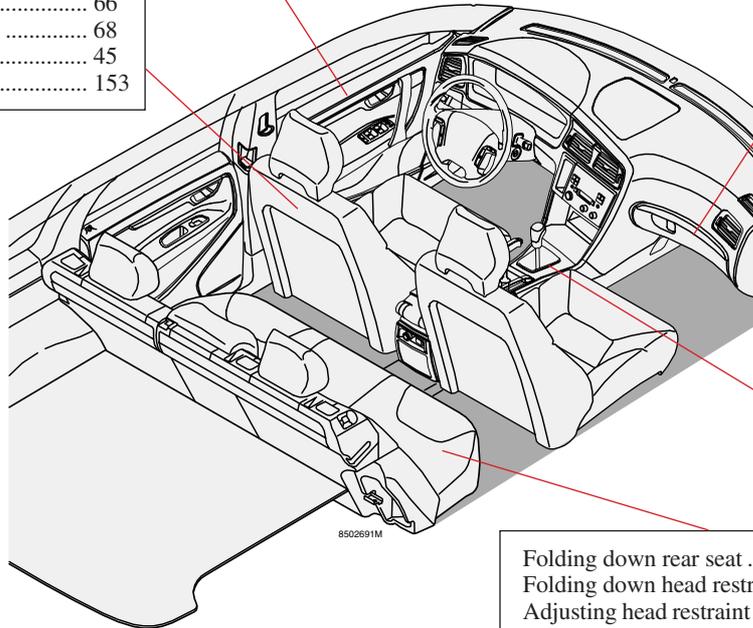
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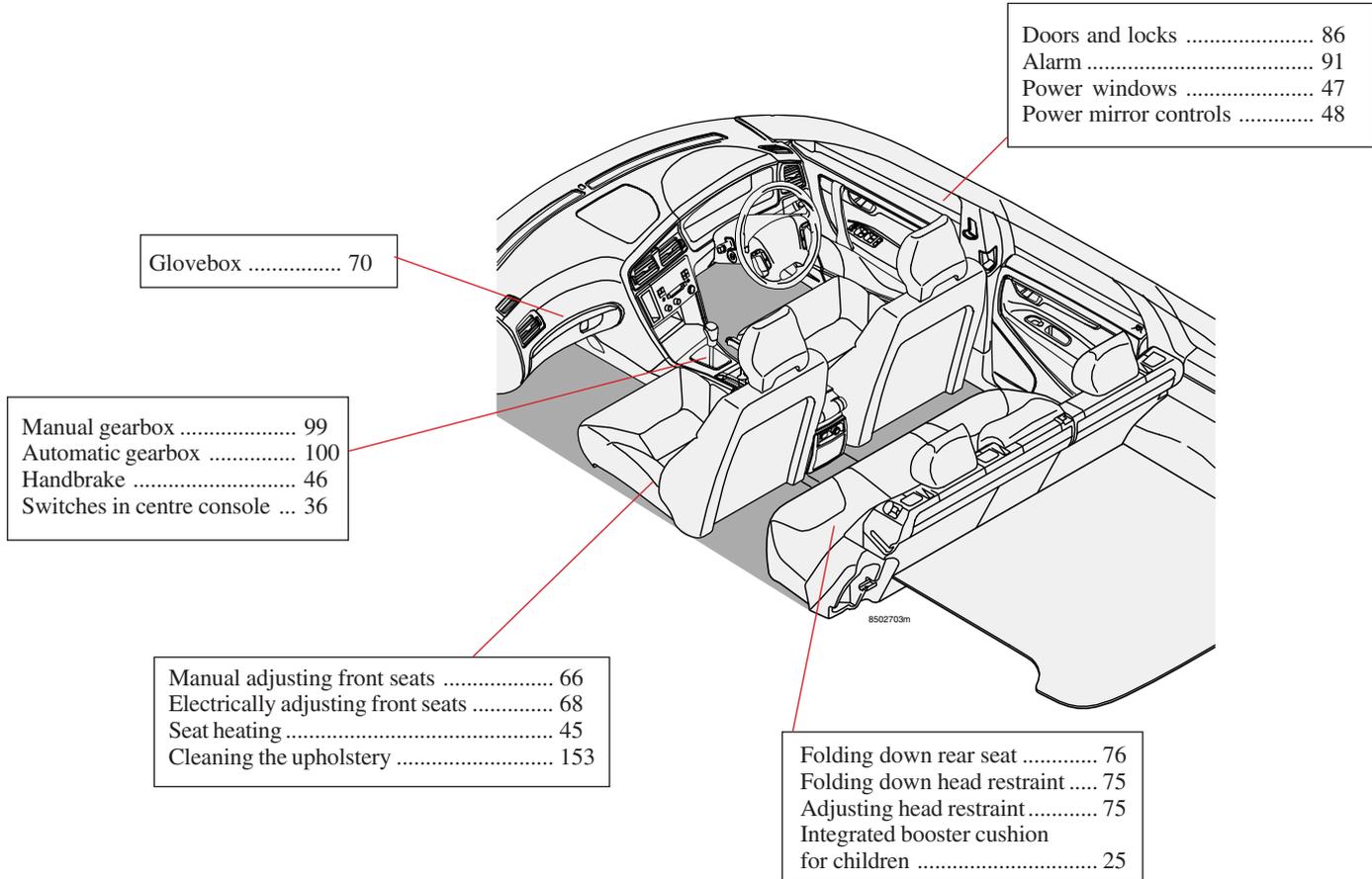
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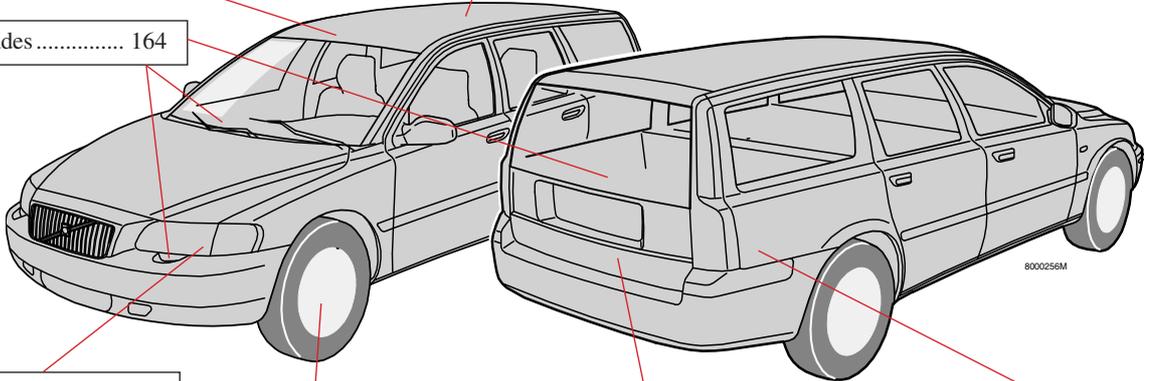
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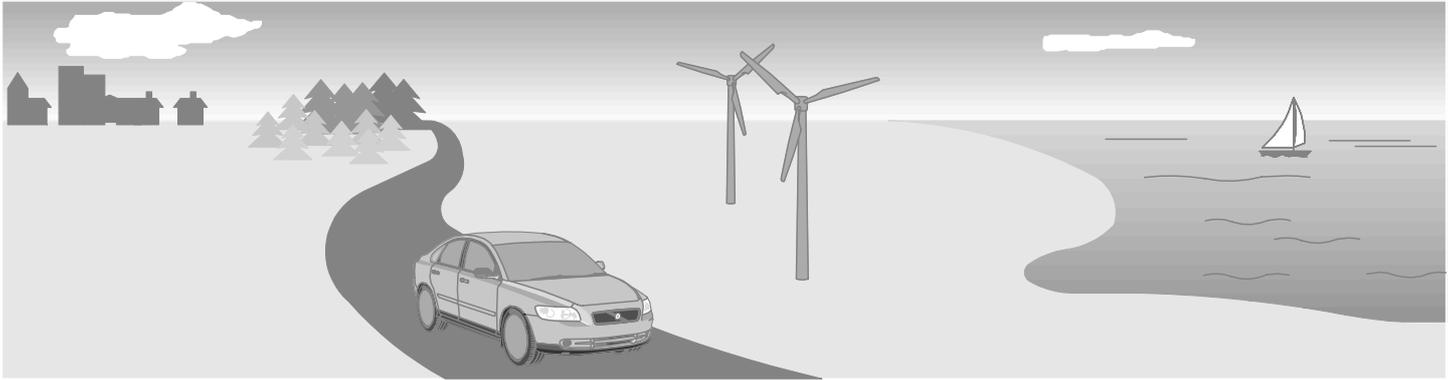


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### Our environmental philosophy

Quality, Safety and Environmental care are the three core values which guide all the activities of Volvo Cars. Volvo cars comply with strict international environmental standards and are manufactured in some of the cleanest and most resource-efficient plants in the world. Volvo Cars has been awarded multi-site global certification under the ISO 14001 environmental standard, ensuring continuous improvement in the area. All Volvo models are supplied with an environmental product declaration - or EPD - which enables the customer to compare the environmental performance of different models and engines. Visit [epd.volvocars.se](http://epd.volvocars.se) for more information.

### Clean inside and out

Your Volvo is designed to be *clean inside and out*, a concept which means that you benefit in two ways - from a clean cabin and a highly efficient exhaust treatment system, which ensures that your car saves fuel and releases a minimum of harmful substances.

Inside, the air entering the passenger compartment is filtered to protect you and your passengers from dust, particles and pollen. A sophisticated air quality system known as IAQS can be added as an option to ensure that the air supplied to the passenger compartment is cleaner than the air outside. Consisting of an electronic sensor and an activated carbon filter, the system monitors the level of carbon monoxide in the incoming air and closes the air intakes to prevent the level in the cabin from

becoming too high - for example in heavy city traffic, tailbacks and tunnels - while the carbon filter traps nitrogen oxides, ground-level ozone and hydrocarbons. In addition, to benefit allergy sufferers, the fabrics used in the interior comply with the provisions of the international Öko-Tex<sup>2</sup> standard.

Outside, a special catalytic coating known as PremAir®<sup>3</sup> is used to convert harmful ground-level ozone in the air passing through the radiator into pure oxygen.

A Volvo meets strict international environmental demands and delivers low fuel consumption to reduce emissions of greenhouse carbon dioxide. In terms of fuel economy, Volvo cars are highly competitive in their respective segments.

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<sup>1</sup> Interior Air Quality System

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<sup>2</sup> An international ecological standard for textiles

<sup>3</sup> PremAir® is a registered trademark of Engelhard Corporation

### Volvo workshops and the environment

Regular maintenance carried out by an authorised Volvo workshop creates the conditions for low fuel consumption and contributes to a cleaner environment. Volvo service technicians are equipped with the knowhow and tools to ensure that your car delivers the best possible environmental performance.

### Reducing environmental impact

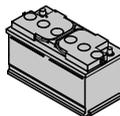
We believe that our customers share our concern for the environment. You can contribute to improving the environment by using only ecologically approved car care products, and by ensuring that your car is serviced and maintained according to the instructions in the owner's manual.

The following hints will help you to do your bit for the environment:

- Always ensure that your tyre pressures are correct. Poorly inflated tyres increase fuel consumption.
- Since roof racks and ski boxes increase air resistance, leading to significantly higher fuel consumption, they should be removed immediately after use.
- Remove unnecessary items from the car - the greater the load the higher the fuel consumption.



- Is your car equipped with an engine block heater? If so, use it for a few hours before starting from cold to reduce fuel consumption and exhaust emissions.
- Drive gently! Avoid accelerating and braking too hard.
- Drive in the highest possible gear - lower engine revs reduce fuel consumption.
- Ease back on the accelerator on downhill gradients.
- Use engine braking. Take your foot off the accelerator and change down.
- Avoid idling. Switch off the engine in traffic queues.
- Always dispose of environmentally hazardous waste, such as batteries and oils, in an environmentally safe manner. If uncertain, ask your authorised Volvo workshop for advice.
- Service your car regularly.



These hints will help you to reduce your fuel consumption without increasing your travel time or lessening the enjoyment of driving. Apart from being kind to your car, you'll be saving money - and the Earth's resources.

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# Safety

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## Seat belts

### Use the seat belt for all types of driving

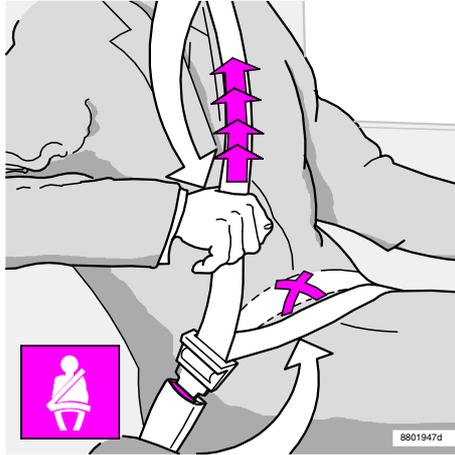
Even hard braking can have dangerous consequences if you are not wearing a seat belt! Therefore, always ask your passengers to use seat belts! Otherwise rear seat passengers may be thrown into the front seat backrests in a collision. Everyone in the car may then be hurt.

Use the seat belt as follows: pull the belt out slowly and secure it by inserting the locking tab into the buckle. A loud "click" indicates that the belt is locked.

The belt is not normally restricted and you can move freely.

The belt is restricted and cannot be pulled out further:

- If it is pulled out too fast.
  - During braking and acceleration.
  - If the vehicle is leaning forward excessively.
- It is important that the belt lies against the body so it can provide maximum protection. Do not lean the backrest too far back. The seat belt is designed to protect in a normal seating position.



*Extending the lap belt.*

### Keep in mind the following:

- Do not use clips or anything else that prevents the belt from lying correctly.
- Ensure the belt is not twisted or caught on anything.
- The lap belt should sit low - not over the abdomen.
- Stretch the lap belt over the lap by pulling the diagonal shoulder belt as illustrated above.

Each belt is intended for **one** person only!

**To release the belt:** Press the red button in the lock and allow the reel to retract the belt. If the belt is not completely retracted, feed in the belt manually to prevent it from hanging loose.



### Seatbelts and pregnancy

It is extremely important that the seatbelt is used correctly during pregnancy. It should be in contact with the body. The upper part of the seatbelt should fit between the breasts and against the side of the abdomen. The hip section of the seatbelt must be flat and as far under the abdomen as possible. It must not slide up towards the abdomen. An expectant mother who is driving should move the seat as far back as possible in order to obtain the greatest possible distance between steering wheel and abdomen. Set the steering wheel as far forward as a comfortable driving position allows.

## Seat belts and belt tensioners

Each seat belt is equipped with a belt tensioner. A small mechanism integrated in the inertia reel is triggered at the moment of impact and tightens the belt around the body to reduce the slack caused by soft clothes or the like. This helps the belt to catch the occupant more effectively.



### WARNING!

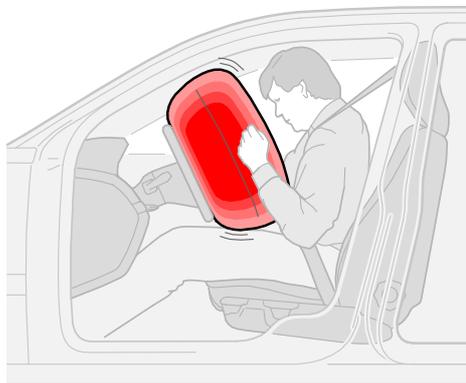
If the belt has been subjected to a heavy load, such as in a collision, the entire belt including reel, mounting, bolts and buckle must be replaced. Even if the belt seems undamaged, some of its protective properties may have been lost. The belt should also be replaced if it is worn or damaged. The new belt should be type approved and intended for the same seat as the belt being replaced.

Never modify or repair the belt yourself. Entrust this work to an authorised Volvo workshop.

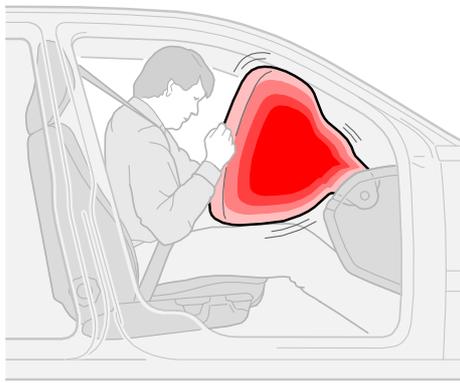


*Label on seat belts with belt tensioner*

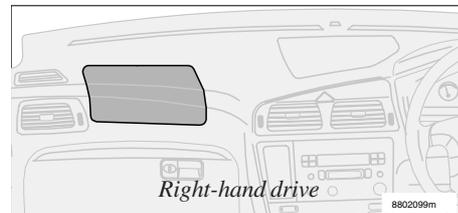
# Airbags (SRS)



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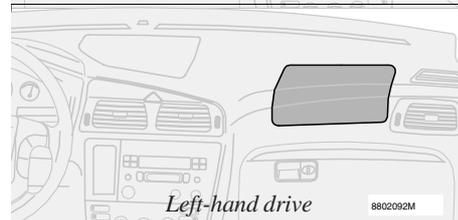


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Right-hand drive

8802099m



Left-hand drive

8802092M

Location of the front passenger airbag

## Airbag (SRS) on the driver's side

To further increase interior safety, your car is equipped with an airbag (SRS\*) to complement the three-point seat belt. The inflatable airbag is folded into the centre of the steering wheel. The steering wheel is marked SRS AIRBAG. Because it is mounted in the steering wheel, the airbag on the driver's side is smaller than that of the passenger side.

\* Supplemental Restraint System.

## Airbag (SRS) on the passenger side (option)

The front passenger airbag is folded into a compartment above the glovebox. The panel is marked SRS AIRBAG.



### WARNING!

Do not attach clips or any other equipment to the dashboard or steering wheel!

This can result in injury and/or compromise the intended protection of the airbag when it is inflated.



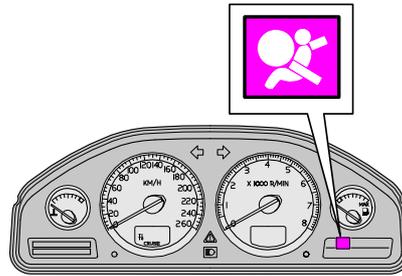
### WARNING!

Airbags (SRS) are designed to provide additional protection and do not replace seat belts. For maximum safety: **Always use a seat belt.**

**! WARNING!****Airbag (SRS) - passenger side**

- Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated\*.
- Never allow a child to stand or sit in front of the front passenger seat.
- No one shorter than 140 cm should sit in the front seat if the airbag (SRS) is activated\*.

Failure to follow the advice given above can endanger the life of the child.



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**! WARNING!****Airbag (SRS) - passenger side**

- Passengers should sit as upright as possible with their feet on the floor and backs against the backrests. Seat belts should be secured.
- No objects or accessories may be positioned or stuck on or near the SRS panel (above the glovebox) or in the area affected by the airbag.
- Do not place loose objects on the floor, seat, or on the dashboard.
- Never modify the airbag system. Only an authorised Volvo workshop may carry out repairs.

**Warning lamp in the combined instrument panel**

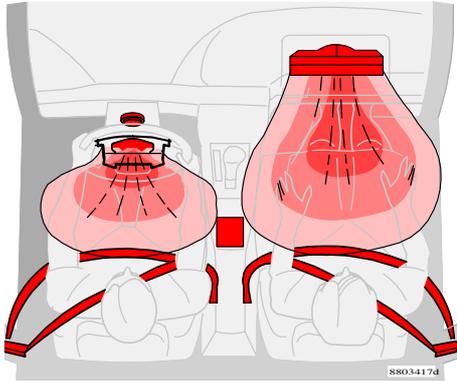
The airbag system is continually monitored by its sensor/control module and its warning lamp is located in the combined instrument panel. This lamp illuminates when the ignition key is turned to position I, II or III and goes out once the sensor/control module has checked that the airbag system is fault-free. This usually takes approx. 7 seconds.

- \* For information on activated/deactivated airbag (SRS), see page 16.

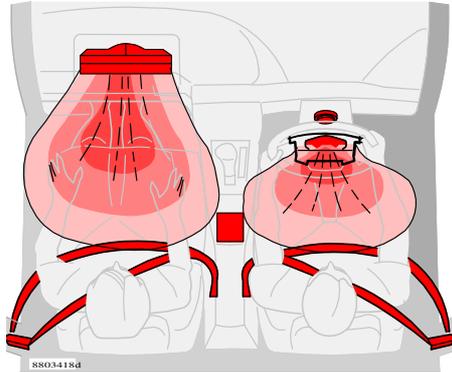
**! WARNING!**

If the airbag warning lamp remains lit or lights while driving, the airbag system is not fully functional. The symbol can indicate a fault in the seat belt, SRS, SIPS or IC system. Contact an authorised Volvo workshop as soon as possible.

## Airbags (SRS)



*SRS system, left-hand drive*



*SRS system, right-hand drive*

### Airbag (SRS system)

The system consists of a gas generator surrounded by the inflatable airbag. If there is a collision of sufficient severity, a sensor reacts by activating the gas generator igniter thereby inflating the airbag. As the airbag is compressed, it empties to provide better cushioning. This generates a great deal of smoke in the car, which is entirely normal. The entire process, including inflation and deflation of the airbag, takes a few tenths of a second.

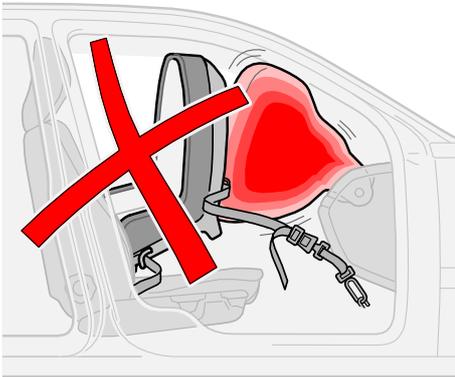
**NOTE!** The sensor reacts differently depending on the collision and whether the front passenger and/or driver's seat belts were in use. It is therefore important that you always lock your seat belt into the correct buckle. Because of the aforementioned factors, certain accidents may only trigger one (or no) airbag.

### Airbags (SRS)

Because of the function of the airbags, their capacities are adapted to the collision force to which the vehicle is subjected.

### **WARNING!**

Never attempt to repair any part of the airbag system yourself. Any interference in the system could cause malfunction and serious injury. Any work should only be performed by an authorised Volvo workshop.



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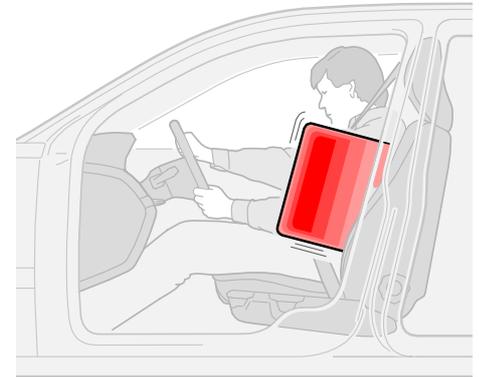
*Airbags and child seats are not compatible!*

Never place a child in the front seat if the car is equipped with an activated\* airbag (SRS) on the passenger side (child refers to anyone 140 cm or shorter). The child should instead be seated in a child seat or booster cushion on the rear seat.



### WARNING!

**Never** place a child in a child seat or on a booster cushion in the front seat if the car has an activated\* front passenger airbag (SRS). Failure to follow this advice could endanger the life of the child.



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*Inflated SIPS airbag*

### Child seat and airbag (SRS)

The child could be seriously injured if sitting in a child seat or on a booster cushion that is placed in the front seat of a car with an activated\* front passenger airbag.

**The rear seat is the safest place for a child in a child seat/booster cushion if the car is equipped with an activated\* front passenger airbag.**

### SIPS airbag

The SIPS airbag system is an electronic system consisting of two main components: the side airbag and the sensors. The side airbags are mounted in the backrest frames of the front seats while the sensors are located inside the centre and rear pillars. If there is a collision of sufficient force, the sensors react, activating the gas generator which inflates the side airbag. The airbag inflates between the occupant and the door panel, emptying as it is compressed to provide cushioning at the moment of impact. The side airbag only inflates on side of the car affected by the impact.

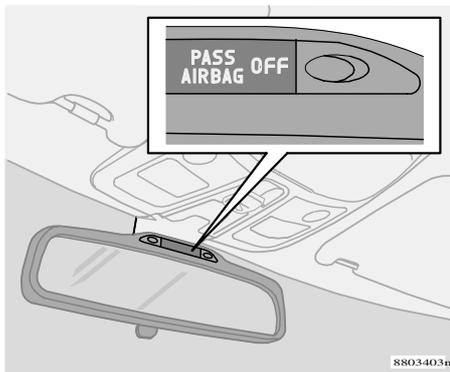
### Child seat and SIPS airbag

The side airbag does not diminish the protection provided by the car to children seated in a child seat.

A child seat or booster cushion can be placed on the front passenger seat provided that the car does not have an activated\* passenger airbag.

\* For information on activated/deactivated airbag (SRS), see page 16.

## Activating/deactivating the front passenger airbag (SRS) (option)



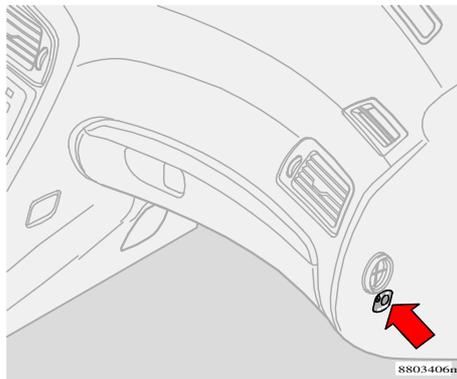
*Indicator showing that the passenger airbag (SRS) is deactivated.*

### PACOS (option)

The airbag (SRS) for the front passenger seat can be deactivated. This is necessary if a child seat is to be placed there.

### Indicator

A text message in the rearview mirror indicates that the passenger airbag (SRS) is deactivated.



*PACOS (Passenger Airbag Cut Off Switch)*

### Activating/deactivating

The switch is located on the passenger end of the dashboard and is accessible when the passenger door is open. Check that the switch is in the required position. Volvo recommends that the ignition key is used to change position. (Other items with a shape similar to a key can be used.)

### **WARNING!**

Activated airbag (passenger seat):  
Never place a child in a child seat or on a booster cushion in the front passenger seat. This also applies to persons shorter than 140 cm.  
Deactivated airbag (passenger seat):  
Persons taller than 140 cm must not sit in the passenger seat.  
Failure to follow the advice given above can endanger life.

### **WARNING!**

If the car is equipped with a front passenger airbag (SRS), but does not have PACOS, the airbag will always be activated.

## Activating/deactivating the passenger airbag (SRS) (option), cont.



### **WARNING!**

Do not allow anyone to sit in the front passenger seat if the text message in the rear-view mirror indicates that the airbag (SRS) is deactivated and the airbag warning symbol is displayed in the combined instrument panel.

This indicates that there has been a severe malfunction.

Contact an authorised Volvo workshop as soon as possible.

### Which position should the switch be set to?

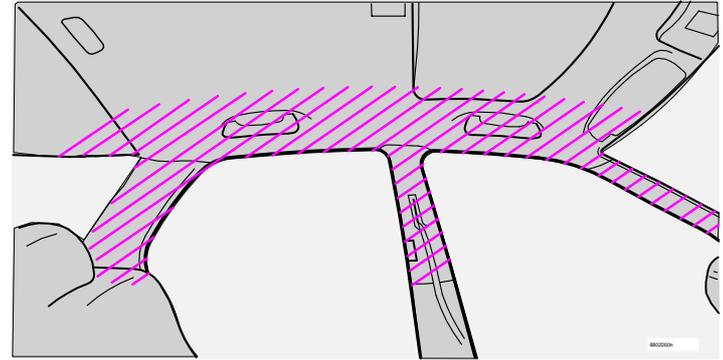
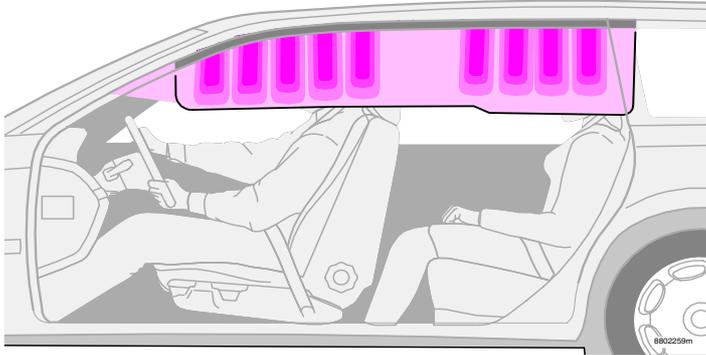
**ON** = Airbag (SRS) **activated**.

With the switch in this position, anyone over 140 cm can sit in the front passenger seat - **never** a child in a child seat or booster cushion.

**OFF** = Airbag (SRS) is **deactivated**

With the switch in this position, a child in a child seat or booster cushion can sit in the front passenger seat - **never** anyone over 140 cm.

## IC system (Inflatable Curtain)



### IC system (Inflatable Curtains)

The IC system protects the head from blows against the car interior. The curtain also protects against objects that the car is in collision with. The IC system protects both those travelling in the front and outer rear seats. The curtain is hidden inside the headlining. The IC system - inflatable curtains - covers the upper part of the car interior next to the front and rear seats. The IC system is activated by the SIPS system collision sensors, when the car is hit from the side. When the IC system is activated the curtain is filled with gas from the gas generator, which is located in the rear end of the curtain.

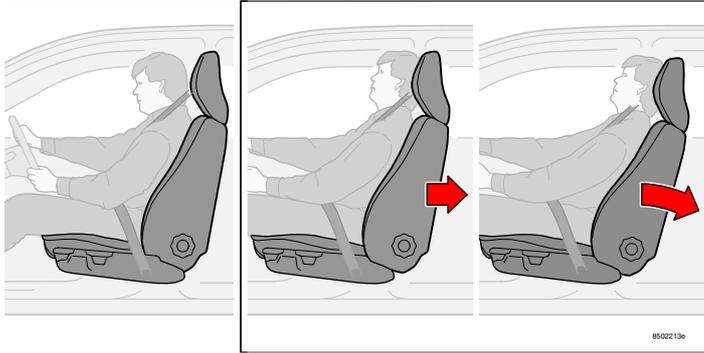


#### WARNING!

- Do not screw or mount anything to the headlining, door pillars or side panels. The intended protection may be compromised.
- When the rear seat backrest is folded down, do not load objects higher than 50 mm from the top edge of the rear passenger door window. Otherwise, the protection offered by the inflatable curtain hidden inside the headlining will be compromised.

### Always use the safety belts!

If there are rear seat passengers, make sure the outer head restraints are upright and that the centre head restraint is correctly adjusted for anyone sitting there.



## WHIPS

This system consists of energy absorbing backrests and specially developed head restraints in both front seats.

### WHIPS seat

WHIPS is activated in event of a collision from behind, based on the collision angle, speed and nature of the colliding vehicle. Upon activation the backrests of the front seats, if occupied, move backwards and the seating position of the occupants in the front seats is altered. This diminishes the risk of whiplash injury.

### Correct seating position

For the best possible protection, you and your front seat passenger should sit in the centre of your seats with as little distance as possible between the head restraints and your heads.

### WHIPS and child seat

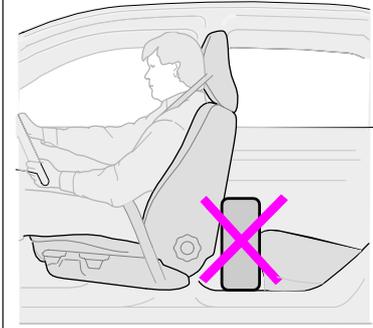
The WHIPS system does not diminish the protection provided by the car to children seated in a child seat/booster cushion. Provided there is no activated\* passenger airbag (SRS), a child seat/booster cushion can be placed on the front passenger seat. The WHIPS system stills functions if a rear-facing child seat is placed on the rear seat, supported against the front seat backrest.

## **WARNING!**

Never obstruct WHIPS system functions!

If a rear backrest has been lowered, adjust the corresponding front seat in order to avoid contact with the lowered backrest.

Avoid placing boxes or similar cargo so that they are clamped between the rear seat cushion and the front seat backrest.



## **WARNING!**

If the seat has been exposed to a heavy load strain, for example a collision, the WHIPS system should be inspected at an authorised workshop. Even if the seat does not appear damaged the WHIPS system may have deployed without causing visible damage to the seat. Parts of the WHIPS protective capacity may have been lost. Allow an authorised Volvo workshop to check the system even after minor collision from behind. Never modify or repair the seat or the WHIPS system yourself!

\* For information on activated/deactivated airbag (SRS), see page 16.

## SRS (airbag), SIPS bag (side airbag) and Inflatable Curtain (IC)

### When do the airbags and curtain inflate?

The SRS system senses the collision in the level of braking and the speed reduction caused by the collision. The sensor determines whether the collision is of the character and nature requiring airbag deployment.

Note that it is **not only** the deformation of the bodywork which affects the car's sensors but also the speed reduction at the moment of impact. This means that SRS sensor senses those occasions when there is a risk that occupants in the front seats may be injured by blows against the dashboard or steering wheel.

The above applies to the SIPS system (side airbags), and inflatable curtains except that side impact airbags and inflatable curtains are only deployed in **side-on collisions**, when the car is hit by an object with sufficient force.

**NOTE!** Deployment of the SRS, SIPS and IC systems occurs only once in a collision in the relevant direction.

If the airbags have been deployed, we recommend the following:

- Tow the car to a Volvo workshop. Do **not** drive the car with the airbags deployed even if the car can be driven after an accident.
- Let an authorised Volvo workshop replace components to the SRS, SIPS, and IC systems.



### WARNING!

The SRS sensors are located in the centre console. If the passenger compartment floor has been drenched with water, remove the battery leads in the cargo compartment. Do not try to start the car; the airbags may deploy. Tow the car to an authorised Volvo workshop.



### WARNING!

Never drive with deployed airbags! They can hinder the steering of your car. Other safety systems may also be damaged. Intensive exposure to the smoke and dust released when the airbags are deployed can cause eye and skin irritation. If irritated, wash with cold water and/or contact a doctor. The speed of deployment can, in conjunction with the airbag fabric, cause friction burns to the skin.



### If a brake circuit fails

If a fault should occur in one of the circuits it is still possible to stop the car. Press the pedal hard once - not repeatedly. The brake pedal can be depressed further and feels a little softer than usual. If also requires more pressure on the pedal to achieve a normal braking effect.

### The brake servo only works when the engine is running

If the car is rolling or being towed with the engine switched off you must apply approximately five times more pressure on the brake pedal than when the engine is running.

### The brake pedal feels rigid and hard.

### Moisture on the brake discs and brake lining alter braking characteristics!

The brake components become wet when the car is driven in heavy rain, through pools of water, or when the car is washed. This alters brake pad friction characteristics so that there is a delay before braking effect is noticed. Depress the brake pedal lightly from time to time when driving long distances in rain or slush or before parking the car in such conditions. The brake pads are thus able to warm up and dry out. You should also do this when driving after washing the car or when starting in very damp or cold weather conditions.

### If the brakes are heavily loaded

When driving in the Alps or other roads with similar characteristics, the brakes are heavily loaded even if you are not pressing the pedal particularly hard. Because the speed is often low the brakes are not cooled as effectively as when driving on flat roads.

So as not to overload the brakes **shift down** and use the same gear both uphill and downhill instead of using the brake (manual transmission). In this way engine braking is used more effectively and the brake is only required for short periods.

Keep in mind that the brakes are even more heavily loaded when driving with a trailer.



### ABS - Anti-lock brakes

The ABS system (Anti-lock Braking System) is designed so that the wheels do not lock when braking. This retains the best possible steering response when braking. This improves your ability to swerve to avoid obstacles. The ABS system does not increase your total braking capacity. However, as the driver you have increased ability to steer and thus better control over the car, which in turn increases safety.

After the engine has started and reached a speed of about 20 km/h (12 mph), a short self-test can be both heard and felt. When the ABS system functions, you can hear and feel pulses in the brake pedal. This is completely normal.

**NOTE!** You must depress the brake pedal fully to take maximum advantage of the ABS system. Do not release the pedal when the ABS pulses are felt and heard. Practice braking with the ABS system in a suitable place.

### The ABS symbol shines with a steady light:

- For approximately two seconds when you start the car to test the system.
- If the ABS system has shut down due to a fault.

### Electronic Brakeforce Distribution (EBD)

The EBD system (Electronic Brakeforce Distribution) is an integrated part of the ABS system. The EBD system controls the brake force to the rear wheels so that the best possible braking force is always available. Pulses in the brake pedal can be felt and heard as the system controls the brake force.

#### **WARNING!**

If both the **BRAKE**  and **ABS**  warning symbols are lit up there is a risk that the rear end will have a tendency to slide during heavy braking. If the level in the brake fluid reservoir is normal, drive carefully to the nearest authorised Volvo workshop to have the brake system checked.

If the level of brake fluid in the reservoir is below the MIN mark, the car should not be driven until the brake fluid has been topped up. The reason for the loss of brake fluid must be investigated.

### Emergency Brake Assistance (EBA)

The Emergency Brake Assistance (EBA) function is integrated in the DSTC system and is designed to provide immediate maximum brake force whenever rapid braking is necessary. The system detects the need for heavier braking by registering how quickly the brake pedal is depressed.

The EBA function is active at all speeds. For safety reasons, it cannot be switched off.

When the EBA function is activated, the brake pedal sinks while maximum braking force is applied. Continue braking without releasing the brake pedal. The EBA function disengages when the pressure on the brake pedal is released.

When the stability system is in action, it may seem like the car does not respond normally to acceleration. This is because the system detects the amount of friction on the road surface and allows the different stability system functions to operate.

The car is equipped with either **STC** (Stability and Traction Control) or **DSTC** (Dynamic Stability and Traction Control).

Function/system	STC	DSTC*
TC	X	X
SC	X	X
AYC		X

## Traction Control (TC)

The Traction Control function transfers power from the spinning drive wheel to the drive wheel which has grip by braking the spinning drive wheel. To increase forward traction in this situation, it may be necessary to depress the accelerator more than usual. A pulsing sound is heard when Traction Control is working. This is completely normal. The TC function is most active at low speeds. It cannot be deactivated.

## Spin Control (SC)

The Stability Control function prevents the drive wheels from slipping during acceleration. This improves road safety on slippery surfaces. Under certain conditions, such as when driving with snow chains or in deep snow or sand, it may be beneficial to deactivate the SC function to increase traction. This is done with the STC/DSTC button.

## Active Yaw Control (AYC)

The Active Yaw Control function automatically brakes one or more wheels to stabilise the car in the event of a skid. If the brake pedal were to be depressed in this situation, it would feel more rigid than usual and a pulsing sound would be heard.

The AYC function is always active and cannot be deactivated.

\* Option on certain markets

### Children should sit comfortably and safely

Remember that children, regardless of age or size, should always be securely strapped into the car. Never allow a child to sit on the knee of a passenger!

Location and equipment must be selected with regard to the weight of the child.

Volvo's own child safety equipment is designed for your car. If you select Volvo equipment, you can be sure that the mounting points and attachments are correctly positioned and sufficiently strong.

The smallest children should sit in rear-facing seats. These give children up to the age of 3 years maximum protection.

**NOTE!** Many countries have statutory requirements covering where a child may be located in the car. Find out which rules apply in the countries you visit.



#### **WARNING!**

**Never** place a child in a child seat or booster cushion on the front seat if the car is equipped with an activated\* airbag (SRS) on the passenger side. Failure to follow this advice could endanger the life of the child.

\* For information on activated/deactivated airbag (SRS), see page 16.

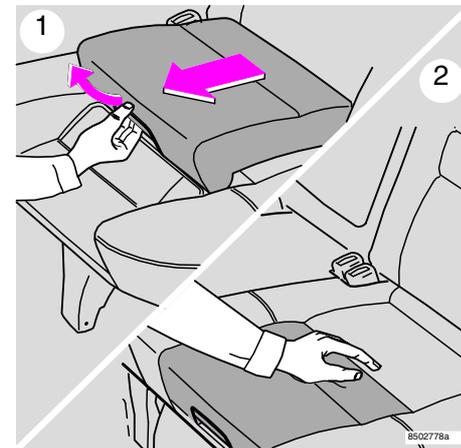
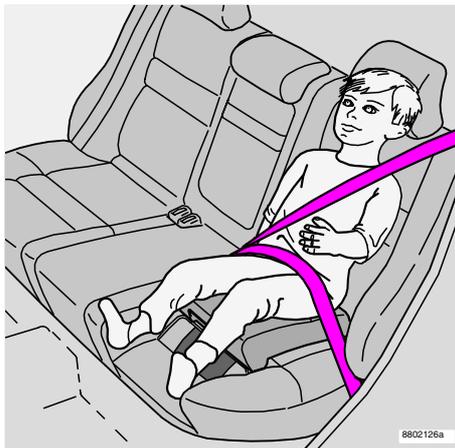
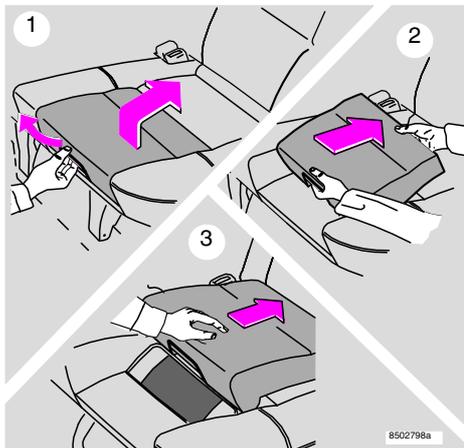
### Important tips!

When using other child safety products available on the market it is **important** that the installation instructions are carefully read and closely followed. These are some points that you should consider:

- Child cushions and/or child seats with steel frames or other parts which could press against the seat belt release button must not be used as they could accidentally cause the belt buckle to open.
- Volvo has child safety products, which are designed and tested for use in Volvo cars.
- The child seat should always be located according to the manufacturer's description.
- **Do not** attach the child seat straps to the seat springs, rails or any of the rails and struts under the seat which may have sharp edges.
- Arrange the child seat backrest so that it rests against the dashboard.
- **Do not** allow the top portion of the child seat to rest against the windscreen.
- **Never** place a child seat on the front seat if the car is equipped with an activated\* airbag (SRS) on the passenger side.

**NOTE!** If you have difficulties installing the child safety product, contact the manufacturer for clearer installation instructions.

## Integrated booster cushion for outer seats (option)



### Outer seat - raising

1. Pull the handle so that the booster cushion rises up.
2. Grasp the cushion in both hands and move it rearwards.
3. Press the cushion until it locks into place.

Check that the seat belt is in contact with the child's body and is not slack or twisted. Make sure that the belt runs correctly over the shoulder and that the lap belt is positioned low down to afford maximum protection. The belt must not touch the child's neck or run below the shoulder.

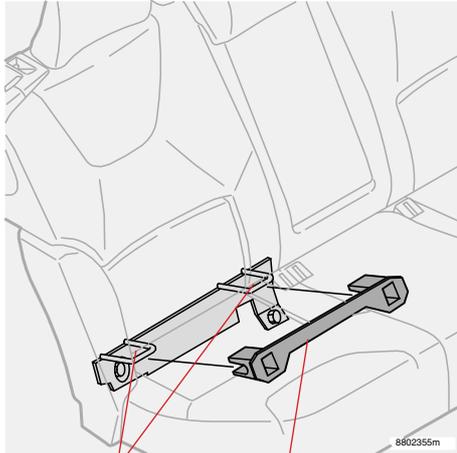
### Outer seat - lowering

1. Pull the handle.
2. Move the seat down and press on it until it locks into place.

**NOTE!** Remember to lower the seat cushion first if you want to tip the seat backrest forwards.

Volvo's own integrated booster cushions for the **outer rear seats** are specially designed to provide optimum safety for the child. In combination with the regular seat belts, the booster cushions are approved for children weighing between 15 and 36 kg.

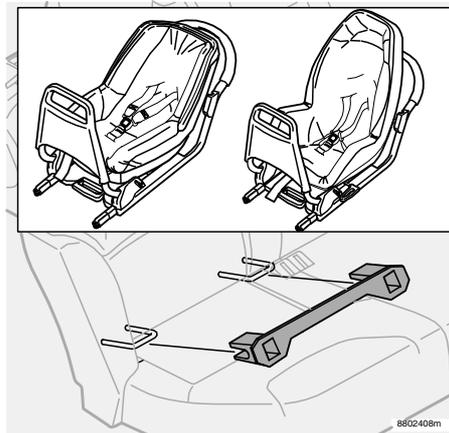
## Isofix bracket system for child seats (option), accessories



*Isofix attachment points Rail*

### Isofix bracket system for child seats

The car can be equipped with an Isofix bracket system for child seats in the outer rear seats. Contact your Volvo dealer for further information on child safety equipment.



**NOTE:** Isofix attachment points are located on both outer rear seats. The rail can be moved from one side to the other as needed.

### Child safety accessories

Volvo is well in the lead when it comes to child safety. Volvo continuously develops and improves its child safety products. You can confidently turn to your Volvo dealer for information about new solutions and developments in the field of child safety. Volvo's child safety products are specially designed for your car. They ensure maximum safety for your children.



### **WARNING!**

If the integrated booster cushion has been exposed to heavy load, in a collision for example, the entire booster cushion, including the seat belt and screws, must be replaced. Even if the integrated booster cushion appears undamaged some of the protective properties may have been lost. The booster cushion should also be replaced if it is very worn or damaged. The booster seat cushion should also be replaced if it is very worn or damaged. Note that cushion replacement must be carried out professionally, because it is important for passenger safety that the cushion is correctly installed. It is therefore best to entrust replacement and any repairs to your Volvo workshop. If the cushion is so dirty that it requires separate cleaning, the above instructions for replacing and installing the cushion should be followed. Do not alter or add anything to the child seat cushions.

Weight / Age	Front seat, alternatives*	Outer rear seats, alternatives	Centre rear seat, alternatives
<10 kg (0 - 9 months)	<ol style="list-style-type: none"> <li>Rear-facing child seat, secured with seatbelt. <i>L:Type approval no. E5 03160</i></li> <li>Rear-facing child seat, secured in ISOFIX attachment. <i>L:Type approval no. E5 03162</i></li> <li>Rear-facing child seat, secured with seatbelt and securing strap. <i>L:Type approval no. E5 03135</i></li> </ol>	<ol style="list-style-type: none"> <li>Rear-facing child seat, secured with seatbelt and support arm. <i>L:Type approval no. E5 03160</i></li> <li>Rear-facing child seat, secured in ISOFIX attachment and with support arm. <i>L:Type approval no. E5 03162</i></li> <li>Rear-facing child seat, secured with seatbelt, support arm and securing strap. <i>L:Type approval no. E5 03135</i></li> </ol>	<ol style="list-style-type: none"> <li>Rear-facing child seat, secured with seatbelt, support arm and securing strap. <i>L:Type approval no. E5 03135</i></li> </ol>
9 - 18 kg (9-36 months)	<ol style="list-style-type: none"> <li>Rear-facing child seat, secured with seatbelt. <i>L:Type approval no. E5 03161</i></li> <li>Rear-facing child seat, secured in ISOFIX attachment. <i>L:Type approval no. E5 03163</i></li> <li>Rear-facing child seat, secured with seatbelt and securing strap. <i>L:Type approval no. E5 03135</i></li> </ol>	<ol style="list-style-type: none"> <li>Rear-facing child seat, secured with seatbelt and support arm. <i>L:Type approval no. E5 03161</i></li> <li>Rear-facing child seat, secured in ISOFIX attachment and with support arm. <i>L:Type approval no. E5 03163</i></li> <li>Rear-facing child seat, secured with seatbelt, support arm and securing strap. <i>L:Type approval no. E5 03135</i></li> </ol>	<ol style="list-style-type: none"> <li>Rear-facing child seat, secured with seatbelt, support arm and securing strap. <i>L:Type approval no. E5 03135</i></li> </ol>
15 - 36 kg (3-12 years)	<ol style="list-style-type: none"> <li>Booster cushion with or without backrest. <i>L:Type approval no. E5 03139.</i></li> </ol>	<ol style="list-style-type: none"> <li>Booster cushion with or without backrest. <i>L:Type approval no. E5 03139</i></li> <li>Integrated booster cushion. <i>B:Type approval no. E5 03159</i></li> </ol>	<ol style="list-style-type: none"> <li>Booster cushion with or without backrest. <i>L:Type approval no. E5 03139</i></li> </ol>



### WARNING!

\* **Never** place a child in a child seat or booster cushion on the front seat if the car is equipped with an activated\*\* airbag (SRS) on the passenger side. Failure to follow this advice could endanger the life of the child.

**L:** Suitable for certain child seats, as listed. The child seats may be vehicle-specific, limited, half universal or universal.

**B:** Integrated and approved for this age group.

\*\* For information on activated/deactivated airbag (SRS), see page 16.



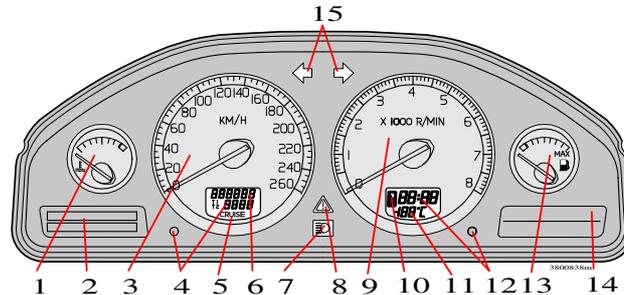
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## Instruments, switches and controls

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## Combined instrument panel



### 1. Temperature gauge

Displays the engine cooling system temperature. If the temperature is abnormally high and the needle enters the red field, a message is shown in the display. Remember that extra headlamps in front of the radiator grille reduce the cooling capacity at high outside temperatures and high engine loads.

### 2. Display

The display shows information and warning messages.

### 3. Speedometer

Shows the speed of the car.

### 4. Trip odometer, T1 and T2

The trip odometer is used for measuring shorter distances. The right hand digit gives 100 metre units. Depress the button for more than 2 seconds to reset. Change between the trip odometers using one short press on the button.

### 5. Cruise control indicator

See page 39.

### 6. Odometer

The odometer indicates the total mileage of the car.

### 7. Main beam on/off

### 8. Warning symbol

If a fault occurs, the symbol lights up and a message is displayed.

### 9. Tachometer

Gives engine speed in thousands of revolutions per minute (RPM). The needle on the tachometer must not enter the red field.

### 10. Automatic transmission indicator

The selected gearshift programme is displayed here. If you have Geartronic automatic transmission and are using the manual function the current manual gear is displayed.

### 11. Outside temperature sensor

Displays the outside temperature. When the temperature lies between +2°C and -5°C, a snowflake symbol is shown in the display. This symbol warns that the road surface may be slippery.

When the car is or was stationary, the outside temperature gauge may read a higher reading than is actual.

### 12. Clock

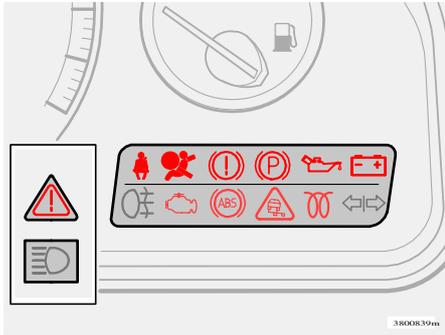
Turn the button to set the time.

### 13. Fuel gauge

When the lamp in the instrument panel lights, approximately 8 litres of usable fuel remain in the tank.

### 14. Indicator and warning symbols

### 15. Direction indicators - left - right



## Warning symbol in centre of dashboard

This symbol shines as an **yellow** or **red** light depending on the severity of the fault discovered. See next page for more information!

### Red symbol

Stop the car. Read the message in the display. Symbol and message text are shown until the fault has been rectified.

### Yellow symbol

Read the message in the display. Rectify. The message text is cleared using the READ button, see page 35, or it disappears after 2 minutes.

## NOTE!

When the message text "TIME FOR REGULAR SERVICE" is shown, the symbol lamp and message text are cleared using the READ button, or they disappear after 2 minutes.

The indicator and warning symbols light when the ignition key is turned to driving position (position II) before starting. This shows that the symbols are functioning. When the engine is started all the symbols go out. If the engine is not started within 5 seconds all the symbols go out except  and . Certain symbols may not have the function indicated, depending on the car's equipment. The symbol for the parking brake goes out when the parking brake is released.

## Indicator and warning symbols



### WARNING!

If both the **BRAKE** and **ABS** warning symbols are lit up there is a risk that the rear end will have a tendency to slide during heavy braking.



If **BRAKE** and **ABS** warning symbols light up at the same time, there may be a problem in the brake force distribution.

- Stop the car in a safe place and switch off the engine.
- Start the car again.
- If both warning symbols go out the fault was temporary and it is not necessary to visit a workshop.
- If the warning symbol remains lit, first check the level in the brake fluid reservoir.
- If the level in the reservoir is below the MIN mark, the car should not be driven further. Have it towed to an authorised Volvo workshop to have the brake system checked.
- If the brake fluid level is normal and the lamps remain lit, carefully drive the car to the nearest authorised Volvo workshop to have the brake system checked.



### Warning - fault in brake system

If the BRAKE symbol lights up the brake fluid level may be too low.

- Stop the car in a safe place and check the brake fluid reservoir level.
- If the level in the reservoir is below the MIN mark, the car should not be driven further. Have it towed to an authorised Volvo workshop to have the brake system checked.



### Warning - fault in brake system

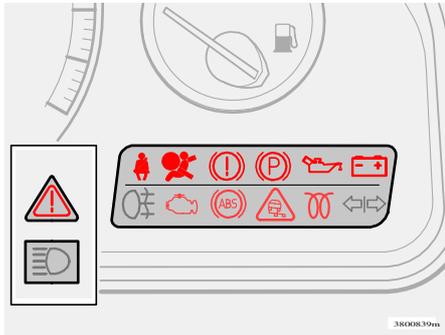
If the ABS warning symbol lights up, the ABS system is not functioning. The

car's normal braking system continues to function normally but without the ABS function.

- Stop the car in a safe place and switch off the engine.
- Start the engine again.
- If the warning symbol goes out, the fault was temporary and it is not necessary to visit a workshop.
- If the warning symbol remains lit, drive to an authorised Volvo workshop to have the ABS system checked.

The indicator and warning symbols light when the ignition key is turned to driving position (position II) before starting. This shows that the symbols are functioning. When the engine is started all the symbols go out. If the engine is not started within 5 seconds all the

symbols go out except  and . Certain symbols may not have the function indicated, depending on the car's equipment. The symbol for the parking brake goes out when the parking brake is released.



### Stability system STC\* and DSTC\*

The STC/DSTC system comprises several different functions that are described in detail on page 23.

#### The symbol lights and goes out again after approx. two seconds

The symbol lights for a system check when the car is started.

#### The symbol flashes

The SC function acts to prevent the car's drive wheels from spinning. The TC function acts to improve the car's traction. The AYC function acts to prevent skidding.

#### The warning symbol shines with a steady amber glow

TRACTION CONTROL TEMPORARILY OFF is shown on the information display together with the symbol. The TC function has been temporarily reduced due to high brake temperature. The function is automatically reactivated when brake temperature returns to normal.

#### The warning symbol shines with a steady amber glow

ANTI-SKID SERVICE REQUIRED is shown on the information display together with the symbol. The STC or DSTC system has been deactivated due to a fault.

- Stop the car in a safe place and switch off the engine.
- Restart the engine.

If the warning symbol remains lit, drive to an authorised Volvo workshop to have the system checked.

#### Fault in the STC or DSTC system

If the symbol comes on and the additional text "ANTI-SKID SERVICE REQUIRED" and you have not deactivated any of the system, this indicates a fault in a part of the system.

- Stop the car in a safe place and switch off the engine. Start the car again.
- If the warning symbol goes out this was just a temporary indication fault and you do not need to visit a workshop.
- If the warning symbol remains lit, drive to an authorised Volvo workshop to have the system checked.

\* The STC and DSTC system is an option on some markets. The system is standard in the R version.

### WARNING!

Under normal driving conditions, the STC/DSTC system improves the car's road safety, but this should not be taken as a reason to increase speed. Always follow normal safety precautions for cornering and driving on slippery surfaces.

## Indicator and warning symbols

The indicator and warning symbols light when the ignition key is turned to driving position (position II) before starting. This shows that the symbols are functioning. When the engine is started all the symbols go out. If the engine is not started within 5 seconds all the

symbols go out except  and . Certain symbols may not have the function indicated, depending on the car's equipment. The symbol for the parking brake goes out when the parking brake is released.



### Fault in car emissions systems

Have the system checked by a Volvo workshop.



### Rear fog lamp

The lamp lights up when the rear fog lamp is on.



### Trailer indicator lamp

Flashes when the car and trailer direction indicators are used. If the lamp does not flash, one of the direction indicators is defective.



### Fault in SRS

If the symbol remains lit or lights while driving a fault has been found in the SRS system. Drive to a Volvo workshop to have it checked.



### Parking brake applied

Remember that the light indicates **that** the parking brake is applied, not how hard. Check by pulling the lever! **You must always apply it sufficiently hard that the brake fastens in a "notch"**.



### Generator not charging

If the lamp lights while driving there is probably a fault in the electrical system. Contact a Volvo workshop.



### Low oil pressure

If the lamp lights while driving engine oil pressure is too low. Stop the engine immediately and check the engine oil level.



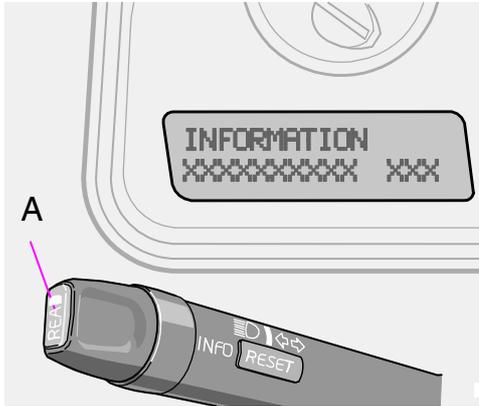
### Seat belt reminder

The lamp shines until the driver connects his/her safety belt.



### Engine pre-heater (diesel)

The lamp lights to inform that the engine is pre-heating. When the lamp goes out, the car may be started. Only applies to diesel-powered cars.



## Messages in the display

Whenever a warning or indicator symbol lights up, a message is displayed. When you have read and understood, press the **READ** button (A). Read messages are then erased from the display and are put into the memory. The message remains in the memory until the fault is remedied.

**Very serious fault messages cannot be erased from the display. They remain in the display until the fault is remedied.**

**NOTE!** If a warning message interrupts when you, for example, are in the trip computer menu or wish to use the telephone, you must first acknowledge the message by pressing the **READ** button (A).

Messages stored in the memory can be read again. Press the **READ** button (A) if you wish to see the stored message. You can scroll through the messages in the memory by pressing the **READ** button (A). Press the **READ** button (A) to return read messages to the memory.

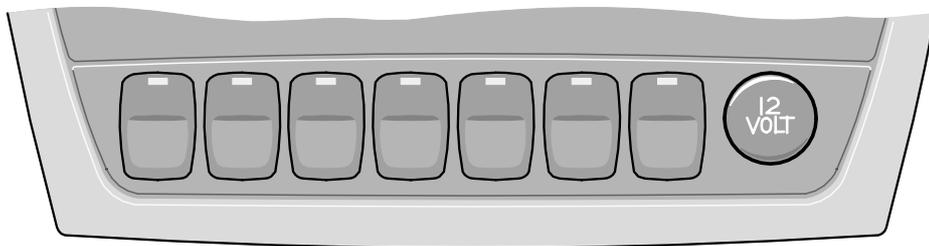
Message:	Significance/Action:
STOP SAFELY	Stop and switch off the engine. Serious risk of damage.
STOP ENGINE	Stop and switch off the engine. Serious risk of damage.
SERVICE URGENT	Take your car in for service immediately.
SEE MANUAL	Consult your Owner's Manual.
SERVICE REQUIRED	Take your car in for service as soon as possible.
FIX NEXT SERVICE	Have your car checked at the next service interval.
TIME FOR REGULAR SERVICE	When the message is displayed, the car is due for service. The message is displayed as a function of the distance travelled, the number of months since last service and engine running hours.
1) OIL LEVEL LOW - FILL OIL*	Low engine oil level. Check and remedy as soon as possible. See page 159 for more information.
2) OIL LEVEL LOW - STOP SAFELY*	Low engine oil level. Stop the car safely and check the oil level. See page 159.
2) OIL LEVEL LOW - STOP ENGINE*	Low engine oil level. Stop the car safely, switch off the engine and check the oil level. See page 159.
2) OIL LEVEL LOW - SEE MANUAL*	Low engine oil level. Stop the car safely, switch off the engine and check the oil level. See page 159.

1) Shown together with an **amber** warning triangle.

2) Displayed together with the **red** warning triangle.

\* Only applies to engine variants with oil level sensor.

## Switches in the centre console



*NOTE! The order of the buttons may vary.*

3603558m

The text "STC SPIN CONTROL OFF" / "DSTC SPIN CONTROL OFF" is shown on the display. R version: "**DSTC REDUCED FUNCTION**" will be displayed. Reduce the system if you must use a wheel of a different dimension than the other wheels. The STC/DSTC system is reactivated when the engine is started.

### **WARNING!**

Keep in mind that the driving characteristics of the car change if you deactivate the STC/DSTC system.



3603554m

### **Active chassis, FOUR-C (option)**

Select between two different modes: Comfort or Sport. See page 102 for more information.



3603680m

### **BLIS - Blind Spot Information System (option)**

Press the button to deactivate or reactivate the function. See page 120 for further information.



3603549m

### **The STC/DSTC system\***

This button is used to reduce or reactivate the functions in the STC/DSTC system.

When the LED in the button comes on, the STC/DSTC system is activated (if no fault arises).

In order to reduce the effect of the STC/DSTC system for reasons of safety the button

must be held in for at least a half second. (The R version requires that system deactivation - reactivation be repeated three times in order to deactivate the system.)

\* Option on some markets.

The system is standard on V70 R.



3603546m



3603553m

### **Child safety locks in the rear doors (option)**

Use this button when you wish to activate or deactivate the electric child safety locks in the rear doors. The ignition key must be in position I or II. When the child safety locks are activated, the LED in the button lights. A message is shown in the display when you activate or deactivate the child safety locks.



3603551m

### Retractable door mirrors (option)

This button is used to retract the door mirrors if they are folded out or to fold them out if they are retracted.

Do as follows if a door mirror has been accidentally folded in or out:

- Manually fold the door mirror forward as far as possible.
- Turn the ignition key to position II.
- Fold the door mirror inward and then outward using the button. The door mirrors have now returned to their original fixed positions.



3603555m

### Parking assistance (option)

The system is always activated when the car is started. Press the button to deactivate/reactivate parking assistance. See also page 103.



3603550m

### Deactivating the deadlock function and detectors

Use this button if you wish to shut off the deadlock function (deadlock means that the doors cannot be opened from the inside when they are locked). This button can also be used to deactivate the movement and tilt detectors of the alarm system\*. The LED lights when these systems are deactivated.



3603552m

### Auxiliary lamps (option)

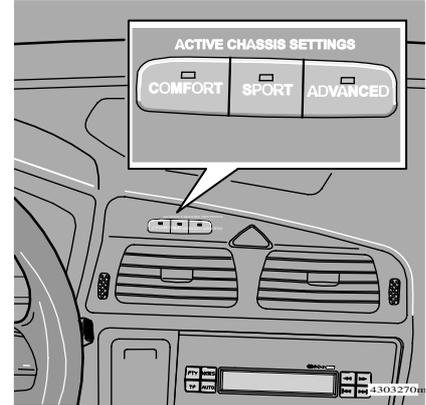
Use this button to switch the auxiliary lamps on with main beam or to switch them off. The LED in the button is lit when the function is activated.



3603563m

### Electric outlet/ Cigarette lighter (option)

The electric outlet can be used for various 12 V accessories, such as mobile phones or coolers. The cigarette lighter is activated by pushing in the button. Once the lighter is heated, the button will pop out. Pull out the lighter to use it. For reasons of safety, always keep the lighter in the socket when it is not in use. The maximum current is 10 A.

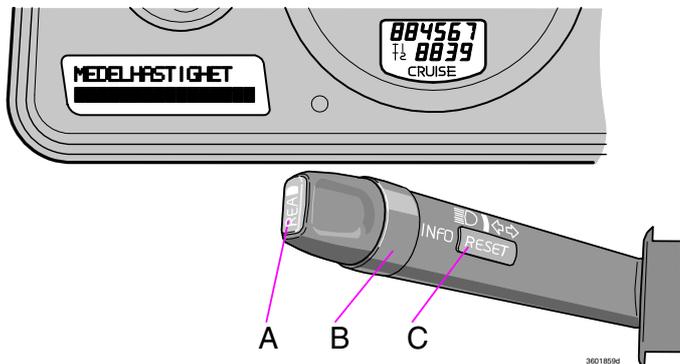


### Active chassis - FOUR-C, V70 R

The buttons on the dashboard can be used to switch between three different modes. A press of the button is all that is needed to select Comfort, Sport or Advanced mode. See page 102 for more information.

\* Option

## Trip computer



### Trip computer

The trip computer displays the following information:

- AVERAGE SPEED
- SPEED IN MILES PER HOUR<sup>1</sup>
- CURRENT FUEL CONSUMPTION
- AVERAGE FUEL CONSUMPTION
- RANGE TO EMPTY FUEL TANK

**NOTE!** If a warning message interrupts while you are using the trip computer, you must acknowledge the warning message. Then press the READ button (A) to return to the trip computer.

1. Certain countries

### Controls - trip computer

In order to access the trip computer information turn the ring (B) in steps, either forwards or backwards. By turning again you return to the starting point.

### Average speed

The average speed since the last reset (**RESET**). When the ignition is switched off, the average speed is stored and used as the basis of the new value when you continue driving. This can be reset with the **RESET** button (C) on the lever.

### Speed in miles per hour<sup>1</sup>

Current speed is displayed in mph.

### Current fuel consumption

Continuous information on current fuel consumption. Fuel consumption is calculated every second. The figure in the display is updated every few seconds. When the car is stationary “----” is displayed.

**NOTE:** The displayed value may be slightly off if a fuel-driven heater is used.

### Average fuel consumption

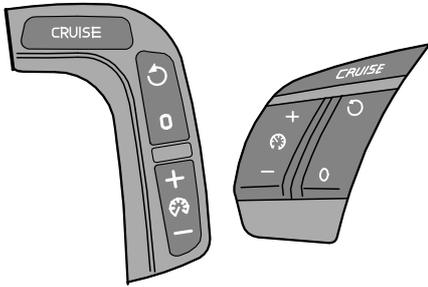
The average fuel consumption since the last reset (**RESET**). When the ignition is switched off, the average fuel consumption is stored and remains until reset with the **RESET** button (C) on the lever.

**NOTE:** The displayed value may be slightly off if a fuel-driven heater is used.

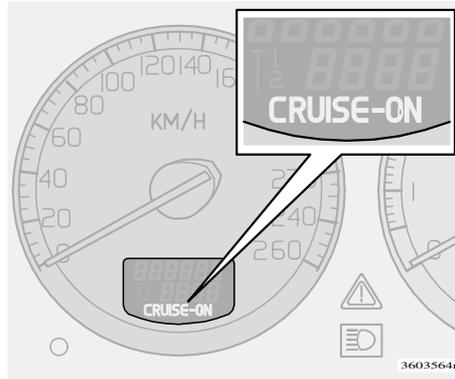
### Range to empty fuel tank

Displays the range available with the remaining fuel, calculated using the average fuel consumption over the last 30 km (18 miles) and the quantity of fuel remaining. When the range to empty is less than 20 km (12 miles) “----” is displayed.

**NOTE:** The displayed value may be slightly off if a fuel-driven heater is used.



Steering wheel keypad V70 and V70 R



## Activating

The controls for cruise control are to the left in the steering wheel.

### Setting desired speed:

- Press the CRUISE button. "CRUISE" is shown on the combined instrument panel.
- Touch + or - to lock the vehicle speed. CRUISE ON appears on the combined instrument panel.

Cruise control cannot be engaged at speeds below 30 km/h or above 200 km/h.

## Increasing or decreasing speed

- Increase or decrease the speed by pressing and holding + or - .  
The speed of the car when the button is released is set as the new speed.
- A brief press (less than half a second) on + or - changes the speed by one km/h.
- A temporary increase in speed (less than one minute) using the accelerator, such as while overtaking, does not affect the cruise control setting. When you release the accelerator, the car will return to the programmed speed.

## Temporary disengagement

Press 0 to disengage the cruise control temporarily. CRUISE will be shown on the combined instrument panel. The speed set earlier is stored in the memory.

The cruise control is also temporarily disengaged when:

- the brake pedal or clutch pedal is depressed
- when travelling uphill, speed falls below 30 km/h
- the gear selector is moved to position N
- wheel spin or wheel lock-up occurs
- a temporary increase in speed lasts longer than one minute.

## Return to a speed

When  is pressed, the car resumes the previously set speed. "CRUISE ON" is displayed on the combined instrument panel.

## Disengagement

Press CRUISE to disengage the cruise control. CRUISE ON goes out on the combined instrument panel.

# Headlamps, Fog lamps, Beam length control, Instrument lighting

## A – Headlamps and position/parking lamps

**0** All lighting off.

### Cars with daytime running lights:

**Ignition key in position II:** Dipped beam lit (and front and rear position/parking lamps, numberplate lighting and instrument lighting).

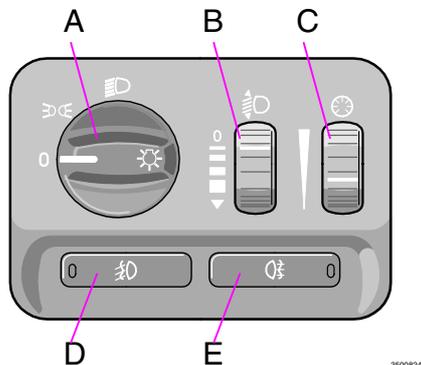
**Dipped beam comes on automatically when the ignition key is turned to position II and cannot be turned off in this position.**

 Position/Parking lamps front and rear.

 **Ignition key in position 0:** all lighting off.

**Ignition key in position II:** headlamps lit (and position/parking lamps front and rear, numberplate lighting and instrument lighting).

**NOTE!** It is necessary to turn the light switch to the  position before the main beam can be switched on.



## B – Beam length control

Certain models are equipped with an actuator motor at each headlamp in order to control the headlamp beam length with different loads in the car. Beam length is controlled using the beam length control in the dashboard. Cars with Bi-Xenon lighting (option) do not have control B because headlamp levelling is automatic.

## C – Instrument lighting

Move control upwards - brighter lighting  
Move control downwards - dimmer lighting

## D – Front fog lamps (option)

**Ignition key in position II:** Press the button. The fog lamps light in combination with the parking lamps and main/dipped beam. The LED in the button lights when the fog lamps are lit.

**NOTE!** In certain countries, dipped beam may not be used in conjunction with fog lamps.

## E – Rear fog lamp

**Ignition key in position II.** Press the button. The rear fog lamps light in combination with the main/dipped beam. The LED in the button and the symbol in the combined instrument panel light at the same time.

**Please remember:** Regulations for use of front and rear fog lamps vary from country to country.

## Cars with daytime running lights

Before trips to certain countries, your Volvo workshop can help you deactivate the daytime running lights.



## Ignition and steering wheel lock

### 0 Locked position

The steering wheel locks when the ignition key is removed.



### I Intermediate position - "radio position"

Certain electrical components can be connected. The engine electrical system is not connected.



### II Driving position

The key position while driving. The car's entire electrical system is connected. **Diesel:** Wait until pre-heating is finished. See page 96.



### III Start position

The starter motor is connected. Release the key when the engine has started. The key springs back to the driving position automatically.

If the key is difficult to turn the front wheels are positioned so that there is tension in the steering wheel lock. Turn the steering wheel back and forth while turning the key.

**Ensuring that the steering wheel is locked when you leave the car minimises the risk of theft.**

## Ignition keys and electronic immobilizer

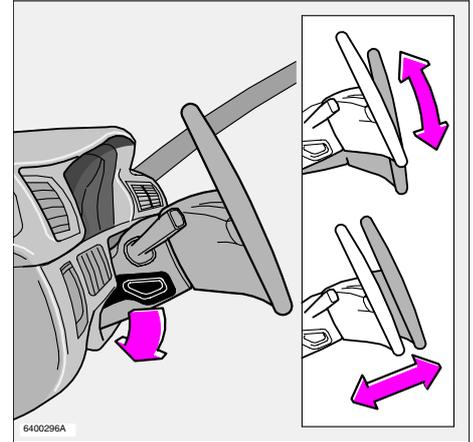
The ignition key must not hang with other keys or metal objects on the same key ring. The immobilizer could be inadvertently triggered, preventing the car from being started.

If this happens, take away the excess keys and restart the car.



### WARNING!

Never switch off the ignition (key in the position 0) or pull out the ignition key while the car is moving. This can activate the steering lock, which makes the car impossible to drive.



## Steering wheel adjustment

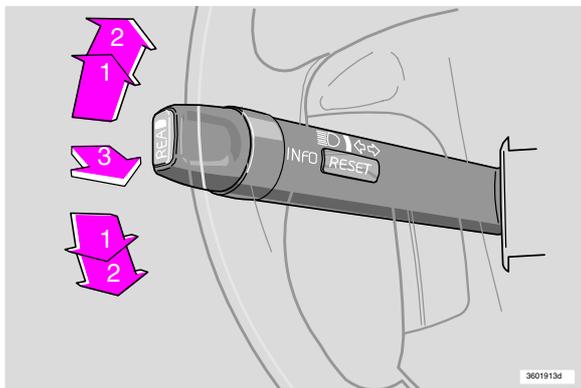
The steering wheel can be adjusted both vertically and front-rear.

Push down the control on the left-hand side of the steering column. Then adjust the steering wheel to the position that suits you best. Ensure that the steering wheel fastens in a determined position (notch). Press the control back into place to lock the steering wheel.



### WARNING!

Adjust the steering wheel before driving, never while driving. Ensure that the steering wheel is locked.



### Follow-me-home

Do as follows when you **leave your car** when it is dark out:

- Remove the key from the ignition switch.
- Pull the left hand lever towards you (as in main beam flash)
- Lock the doors.

The dipped beam, position/parking lamps, number plate lighting, side marker lamps and door mirror lamps are now lit. These lamps will remain lit for 30, 60 or 90 seconds. The time settings for your car can be changed by an authorised Volvo workshop.

### Direction indicators, main/dipped beam switch and main beam flash

#### 1 “Resistance point position”

For turns requiring small steering adjustments (lane changing, overtaking) move the lever up or down and hold it with a finger. The lever returns immediately to the neutral position when it is released.

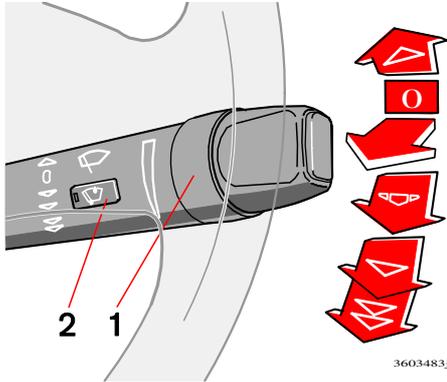
#### 2 Normal turns

#### 3 Main beam flash

Press the lever lightly towards the steering wheel (until you feel a slight resistance). The main beam is lit until the lever is released.

#### 3 Main/dipped beam switch (Switch on headlamps)

Press the lever towards the steering wheel past the “flash position” and release it again. The headlamps change between main and dipped beam.



Wiper/washer function - windscreen

## Windscreen wipers

**0** – Windscreen wipers switched off. If the lever is in the **0** position and you draw it upwards, the wipers will continue one swipe at a time as long as you hold the lever up.

### - Intermittent wiping.

You can adjust and set the speed of the intermittent wipe. Rotate the ring - see 1 in illustration - upwards to increase wiper stroke frequency. Twisting the ring downwards decreases the frequency of wiper strokes.

 – Wipers operate at normal speed.

 – Wipers operate at high speed.

## Rain sensor (option)

The rain sensor automatically increases or decreases the speed of the windscreen wipers based on how much water it detects on the windscreen. The sensitivity of the rain sensor can be adjusted using the ring (1).

- Turn the ring upward to increase sensitivity or down to decrease sensitivity (there is an extra swipe when the ring is turned upward).

## On/Off

When activating the rain sensor, the ignition key must be in at least position I and the windscreen wiper lever must be in position 0.

To activate the rain sensor:

- press the button (2). An LED illuminates in the button to indicate the rain sensor is active.

To turn the rain sensor off:

- press the button (2) or
- move the lever downward to another wiper program. If the lever is raised, the rain sensor will remain active; the wipers make an extra sweep and then return to rain sensor mode when the lever is released to position 0.

The rain sensor is automatically deactivated when the key is removed from the ignition switch or five minutes after the ignition is switched off.

## NOTE:

In an automatic car wash: Turn off the rain sensor by pressing the button (2) while the ignition key is in at least position I. Otherwise, the windscreen wipers may start and be damaged.

## Windscreen washer

Pull the lever towards the steering wheel to activate the windscreen washer.

## Headlamp washer

(option in certain markets)

Use of the windscreen washer automatically activates the headlamp washer.

High-pressure wash of the headlamps consumes a great deal of washer fluid. To save fluid, the headlamps are only washed every fifth time (within a ten minute period). If ten minutes have elapsed since the last windscreen washing, the headlamps receive a high-pressure wash the next time the windscreen is washed.

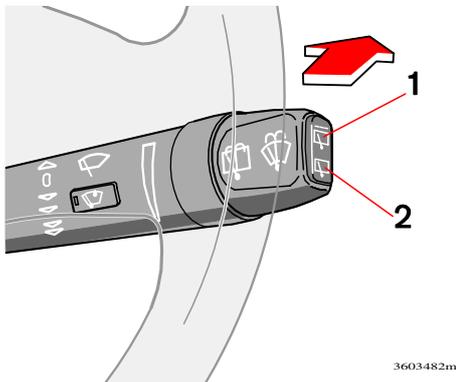
## Reduced washing

If only approx. 1 litre of washer fluid remains in the reservoir, the supply to the headlamps and the rear window is cut off in order to prioritise cleaning of the windscreen.

## Windscreen washer and headlamp washer (V70 R)

Pull the lever toward the steering wheel to start the windscreen and headlamp washers.

## Rear window washer and wiper



*Wiper/washer function - rear window*

### Rear window washer and wiper

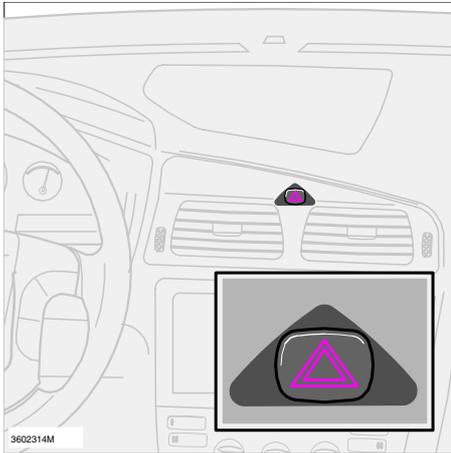
Move the lever **forward** to start the rear window washer.

1. Rear window wiper - intermittent wiping
2. Rear window wiper - normal speed

#### Wiper - reversing

If you put the car in reverse when the wind-screen wiper is engaged, the rear window wiper will be set to intermittent mode\*. If the rear window wiper is already set to normal speed, this function will not be altered.

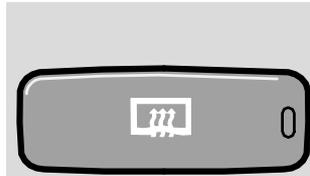
\* This function (intermittent wiping when reversing) can be disengaged. Contact a Volvo workshop.



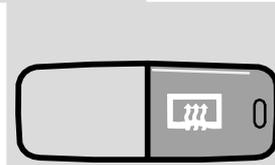
### Hazard warning flashers

The hazard warning signal flashers (all direction indicator lamps flash) should be used when you are forced to stop or park the car where it is a hazard or hindrance to traffic.

**Please remember:** Regulations for the use of hazard warning flashers vary from country to country.



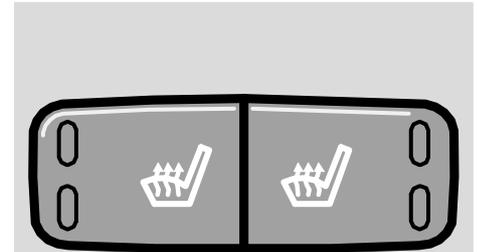
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### Heated door mirrors, Rear defroster

Use the defroster to remove ice and misting from the rear window and door mirrors. Pressing the switch starts heating the rear window and the door mirrors at the same time. The LED in the switch lights. A built-in timer automatically deactivates the door mirror defroster after about 4 minutes and the rear window defroster after about 12 minutes.



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*Front seat heater switch*

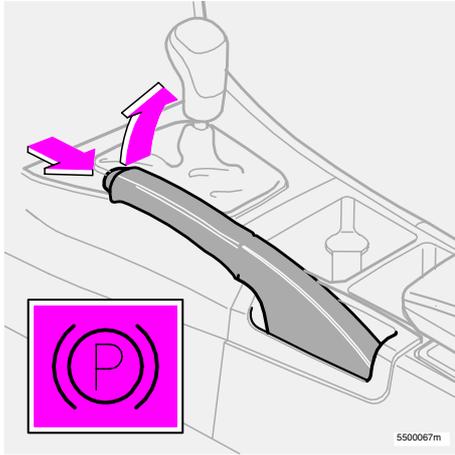
### Heated front seats

If you wish to have extra heat in the front seat(s) carry out the following:

- Press **once**: High heat - both LEDs in the switch light up.
- Press **once again**: Low heat - one LED in the switch lights.
- Press **once again**: heating switched off (no LEDs are lit).

Your Volvo workshop can adjust the temperature.

## Parking brake, Electrical socket/cigarette lighter



*Parking brake lever*

### Parking brake (handbrake)

The lever is located between the front seats. The parking brake operates on the rear wheels. The warning symbol in the combined instrument panel lights when the brake is applied. Pull up the lever slightly and press in the button to release the brake.

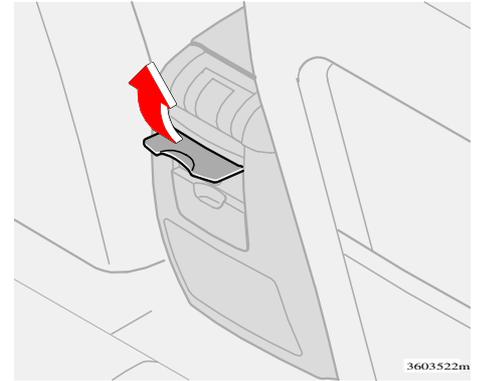
Remember that the warning symbol in the combined instrument panel lights even if the parking brake is only “slightly” applied. Check that the brake is applied correctly. **Pull the brake hard and make sure it fastens in a “notch”.**



*Electrical socket at the front seat*

### Electrical socket/cigarette lighter

The cover should always be in position if the socket is not in use as a power source or as a cigarette lighter socket.

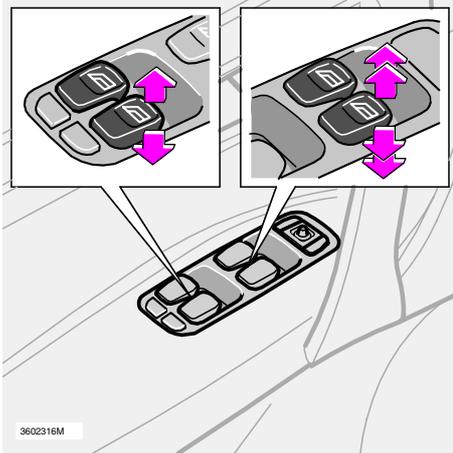


*Electrical socket for the rear seat*

### Electric socket/cigarette lighter, rear seat

The electric socket can be used for various 12 V accessories, such as a mobile phone or a cooler. The cigarette lighter is activated by pushing in the button. Once the lighter has been heated, the button pops out again. Pull out the lighter to use it.

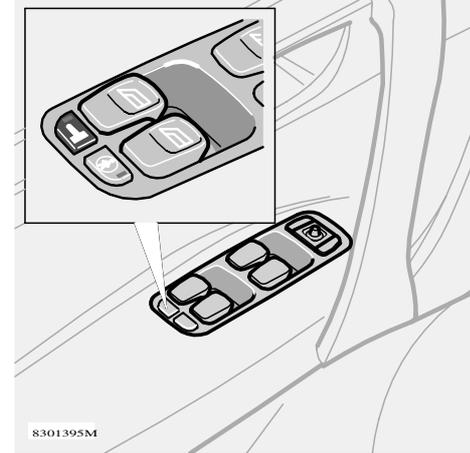
For reasons of safety, always keep the cover in place when the socket is not in use.



Windows can be opened or closed from the front seat two ways.

1. Press the switch **gently** downwards or pull it **gently** upwards. The power windows go up or down as long as the switch is actuated.
2. Press the switch **all the way down**, or pull it **all the way up**, and **then release it**. In this position (AUTO-DOWN - AUTO-UP), the power windows open or close automatically.

If you close the **front** windows using the AUTO function an integrated clamp protection is activated if the window is blocked by any object. **NOTE!** The AUTO-UP function on the **passenger side** is only available on some markets.



*Switch to deactivate rear power windows*

## Power windows

The power windows are operated using the switches in the door armrests. The ignition key must be turned to the radio or driving position\* for the power windows to function. The window opens when you **depress** the front section of the switch and closes when you **pull up** the front section of the switch.

\*When you have finished your trip and removed the ignition key, you can still close or open the windows **as long as you have not opened either of the front doors**.

## WARNING!

If there are children in the car:

- Remember to switch off the supply to the power windows by removing the ignition key if the driver leaves the car.
- Make sure that children's and other passengers' hands are clear when closing the windows.

If the rear door windows are operated from the driver's door or with the remote control:

- Check that none of the rear seat passengers are in danger of getting their hands caught when closing the windows.

The power window switches in the rear seat can be blocked from the switch on the driver's door switch panel. Always remember to break the current to the power windows (that is to say remove the ignition key and open one of the front doors\*) when you leave children in the car unattended.

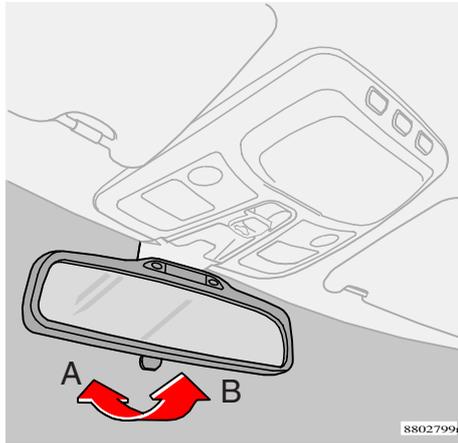
### **LED in the switch unlit:**

The rear door windows can be operated both by the switch in each door but also by the switch in the driver's door.

### **LED in the switch lit:**

The rear door windows can only be operated from the driver's door.

## Rear-view mirrors



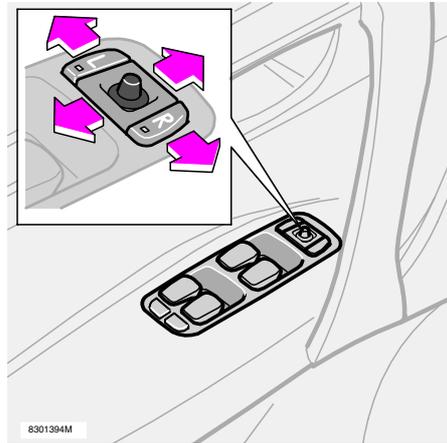
### Rearview mirror

- A Normal position.
- B Dimming position. Use this if headlamps from the cars behind irritate you.

Certain models have an **autodim** function, which means that dimming is automatic, based on current light conditions.

### Seat belt reminder

The seat belt warning symbol above the rearview mirror flashes as long as the **driver's** seat belt has not been connected.



*Switches, power door mirrors*

### Door mirrors

The switches for setting the two outer door mirrors are furthest forward on the driver's door armrest.

Press the switch. L = left door mirror.

R = right door mirror.

LED in the switch lit: Adjust the position with the adjustment knob. When you have set the position press the switch once more. The LED should no longer be lit.

#### **Important!**

Use the defroster (see page 45) to remove ice from the mirrors, not an ice scraper. The scraper could scratch the mirror glass.

### Door mirrors with memory function (option)

If the car has door mirrors with memory function, they work together with the memory setting of the seat; see page 68.

**NOTE!** The above applies only if your Volvo is equipped with a driver's power seat.

### Memory function in the remote control

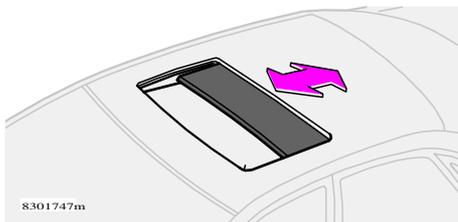
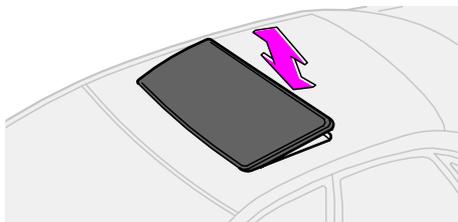
When you unlock the car with the remote control and change the setting of the door mirrors, these new settings are saved in the remote control. The next time you unlock the car with the same remote control and open the driver's door within two minutes, the mirrors will assume their stored positions.



### **WARNING!**

Adjust the door mirrors before starting off!

The outer half of each door mirror is a wide-angle mirror that provides a better overview. This may make objects appear farther away than they really are.



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## Power sunroof (option)

Sunroof controls are located in the headlining. The sunroof can be opened in two different ways:

- Raise/lower trailing edge (ventilation position)
- Rearwards/forwards (opening position/comfort position\*)

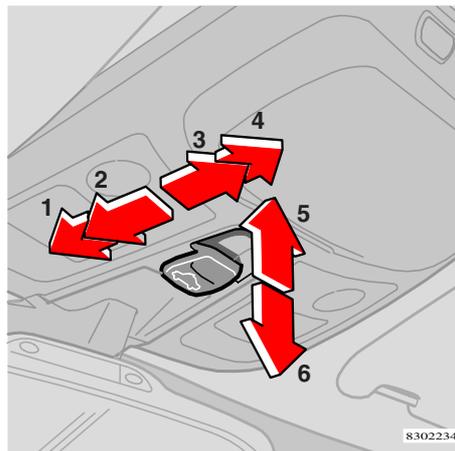
The ignition key must be in position I or II.

## Ventilation position

**Open:** Push the trailing edge of the switch (5) upwards.

**Close:** Pull the trailing edge of the switch (6) downwards.

It is possible to switch directly from the **ventilation position** to **comfort position\***: pull the control backwards to its end position (4) and release.



8302234e

1. Automatic closing
2. Manual closing
3. Manual opening
4. Automatic opening
5. Opening ventilation position
6. Closing ventilation position

## Opening position/comfort position\*

### Automatic control

Move the control over the resistance point position (3) to the rearmost end position (4) or over the resistance point position (2) to the front end position (1) and release. The sunroof will open to the **comfort position\*** or will close completely.

Open from **comfort position\*** to max. opening: pull the control to the rear once more to the end position (4) and release.

## Manual control

**Open:** Pull the switch rearwards to the resistance point position (3). The sunroof will move towards maximum opening position as long as the switch is held in this position.

**Close:** Press the switch forwards to the resistance point position (2). The sunroof will move towards its closing position as long as the switch is held in this position.

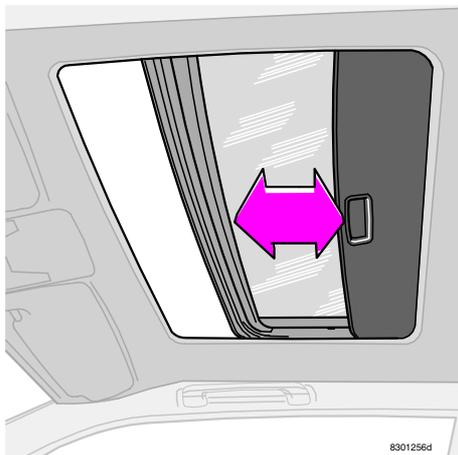
**Make sure the sunroof is properly closed before leaving the car.**

## WARNING!

- Make sure that the hands of children and passengers are clear when closing the sunroof.  
If there are children in the car:
- Remember to switch off the supply to the sunroof (remove the ignition key) if the driver leaves the car.

\*In comfort position, the sunroof is not completely open in order to reduce the level wind noise.

## Sun screen, Laminated front and rear side windows (option)



### Pinch protection

**NOTE!** The sunroof pinch protection function is activated if the hatch is blocked by an object. If blocked, the sunroof will stop and automatically open to the previous open position. This function will be activated only when the sunroof is in the open position.

### Sun screen

The sunroof also has an inner manually sliding sun screen. The sun screen slides back automatically when the sunroof is opened.

### Laminated side windows (option)

The laminated windows in the front and rear doors improve sound insulation in the passenger compartment and provide better protection against unauthorised entry.



### **WARNING!**

Pinch protection functions only in the open position - not in ventilation position.

### Water and dirt-repellent coating on the front windows and/or door mirrors (option)

The front windows and/or door mirrors are treated with a coating that ensures that the view through the windows or in the mirrors is good even if it is raining. For information on glass care, see page 154.



Side windows and mirrors treated with the water and/or dirt-repellent coating are marked with a little symbol.

### Rearview mirror/door mirrors

In certain weather conditions, the function of the dirt-repellent coating is improved if the door mirror defroster is used; see page 45.

Defrost the door mirrors:

- if they are covered with ice or snow
- in heavy rain and dirty road conditions
- if they are misted.

#### **Important!**

- Do not use a metal ice scraper to remove ice from the windows. The water and dirt-repellent coating could be damaged.
- Use the defroster to remove ice from the mirrors!



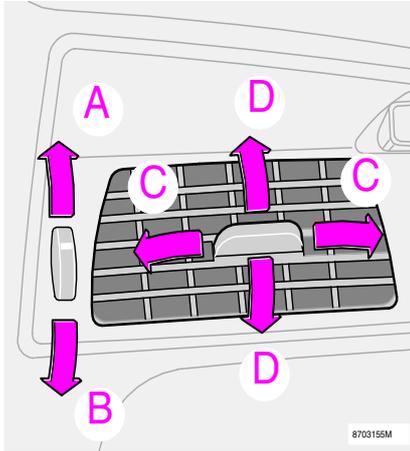
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## Climate control

Air distribution	54
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## Air distribution

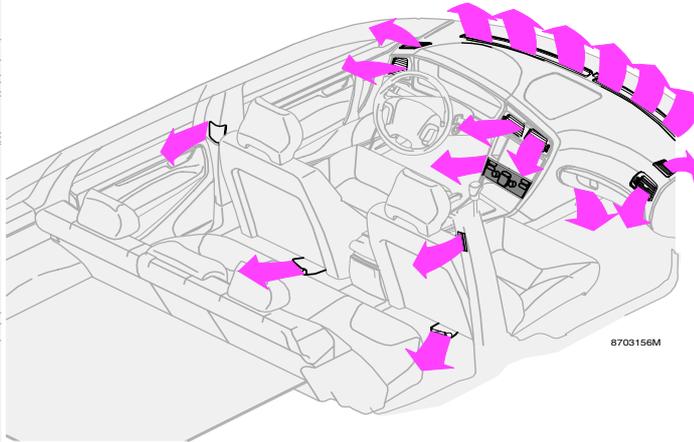


*Air vents in the dashboard*

### Air vents in the dashboard

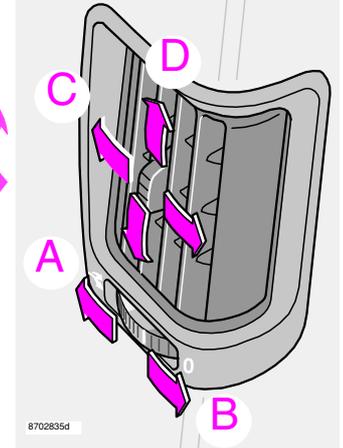
- A Open
- B Closed
- C Directing airflow sideways
- D Directing airflow vertically

- Aim the outer vents towards the side windows to remove misting.
- In cold climates: close the centre vents for the most comfortable climate and best demisting.



### Air distribution

The incoming air is distributed through 14 different air vents located in different parts of your car.



*Air vents in the door pillars*

### Air vents in the door pillars

- A Open
- B Closed
- C Directing airflow sideways
- D Directing airflow vertically

- Aim the vents toward the rear side windows to remove misting.
- Aim the vents inwards into the car if you wish to have a comfortable climate in the rear seat.
- Bear in mind that small children are sensitive to airflow and draughts.

### Misting on window interiors

A good way to reduce the problem of misting on the insides of the windscreen and other windows is to clean them. Use a normal window cleaner. Bear in mind that you must clean them more often if someone smokes in the car.

### Ice and snow

Remove ice and snow from the climate control air intake (the grille between the bonnet and the windscreen).

### Particle filter

Make sure the particle filter is replaced regularly. Consult your Volvo workshop.

### Actual temperature - ECC

The temperature you select corresponds to the physical experience with reference to air speed, humidity, exposure to sun, etc. which affect the interior and exterior of the car.

### Sensors - ECC

The sun sensor is on the upper portion of the dashboard. Remember not to cover it. Do not cover the passenger compartment temperature sensor on the climate control panel.

### Side windows and sunroof

For the air conditioning (A/C) system to operate satisfactorily the side windows and sun roof should be closed. Remember not to block the evacuation channels on the parcel shelf.

### Acceleration

The air conditioning system switches off temporarily at full acceleration. You may feel a temporary rise in temperature.

### Condensation

In warm weather, condensation from the air conditioning system may drip under the car. This is normal.

### Fault tracing

Your Volvo workshop has the instruments and tools required for any fault tracing or repair of your climate control system. Entrust checks and repairs only to trained personnel.

### Refrigerant

Refrigerant R134a is in the air conditioning system. This contains no chlorine, which means it is harmless to the ozone layer. Use only R134a when topping up/refilling refrigerant. This work should be performed by an **accredited workshop**.

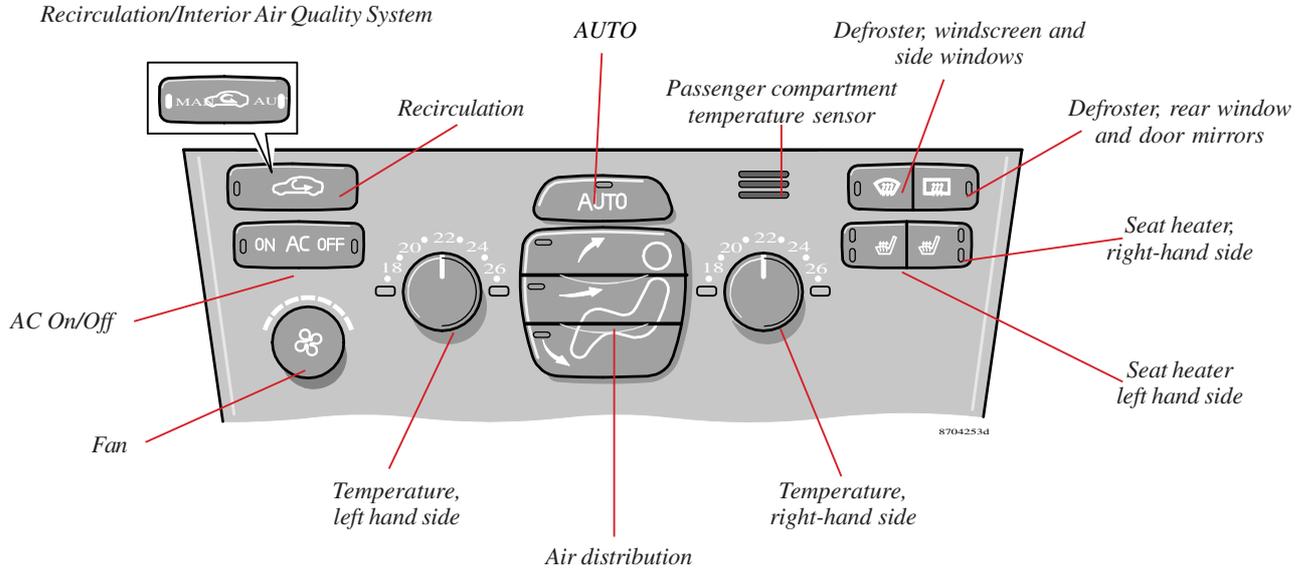
### Fuel economy - Electronic Climate Control (ECC)

With ECC, the air conditioning system is controlled automatically and is used just enough to cool the passenger compartment and dehumidify the incoming air. This provides better fuel economy compared to conventional systems where the air conditioning cools the air to just above freezing point.

### Fan function to prevent battery discharge

When the engine is off (and if the ignition key is in position I or II), the fan is automatically switched off. To activate the fan, turn the control and set the desired speed. After two minutes, the fan will slow to a lower speed. This is one way of preventing the battery from becoming discharged when the engine is off.

# Electronic Climate Control ECC



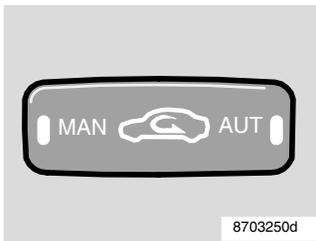
## Automatic climate control ECC with Interior Air Quality system (option)

### Multifilter with Air quality sensor (option)

Some cars are equipped with a multifilter and air quality sensor. The multifilter separates gases and particles, reducing the volume of odours and contaminants entering the car. The air quality sensor detects increased levels of contaminants in the outside air. When the air quality sensor detects contaminated outside air, the air intake is closed and the air inside the compartment is recirculated. The multifilter also cleans the air recirculating in the compartment.

When the air quality sensor is connected, the

green *AUT* LED lights in .



### Operation:

Press  to activate the air quality sensor (normal setting).

Or select one of three functions by pressing



**1. Press**  : the LED *AUT* lights. The air quality sensor is now activated.

**2. Press**  : no LED lights. Recirculation is not activated unless needed to cool.

**3. Press**  : the LED *MAN* lights. Recirculation is now activated.

You can switch between these three functions

by repeatedly pressing .

### Points to remember:

- Make it a rule to have the air quality sensor activated at all times.
- Recirculation is limited in cold climates to avoid misting.
- In the event of misting, you should disconnect the air quality sensor.
- In the event of the windows misting up you can also use the windscreen and side window defroster functions. See next page.
- Follow the Volvo service programme for the recommended interval for multifilter replacement. The multifilter may need to be changed more often if you drive in heavily polluted environments.

## Electronic Climate Control ECC (option)



### AUTO

The **AUTO function** regulates climate control so that the selected temperature is attained. The automatic function controls heating, air conditioning, fan speed, recirculation and air distribution.

If you select one or more functions manually, the

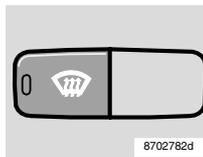
other functions continue operating automatically.

All manual settings are switched off when **AUTO** is switched on.



### Temperature

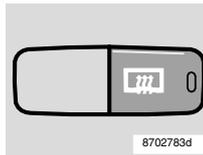
The two knobs can be used to set the temperature for the passenger and driver's sides of the car. Remember that it will not heat or cool any quicker even if you select a higher or lower temperature than you wish to have in the passenger compartment.



### Defroster - windscreen and side windows

Use this button to quickly remove misting and ice from the windscreen and side windows. The air flows to the windows at high fan speed. The LED in the defroster button lights when this

function is activated. The air conditioning system is now controlled so that the air is maximally dehumidified. The air is not recirculated.



### Defroster - rear window and door mirrors

Use this button to quickly remove misting and ice from the rear window and door mirrors. See page 45 for more information about this function.

## Recirculation



8702776d

(see also page 60)

The best cooling in warm climates is achieved by selecting the **AUTO function**.

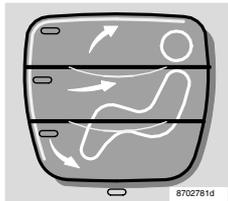
The recirculation is then controlled automatically. Manual recirculation can be selected if you wish to shut out bad air, exhaust fumes etc. The air in the passenger compartment is recirculated; no air from outside the car is taken into the car when  is activated. The LED in the switch is lit.

If you allow the air in the car to recirculate there is a danger of misting and icing in the car, especially during the winter.

The **timer function (cars with multifilters and air quality sensors have no timer function)** minimises the risk of ice, misting and bad air. Carry out the following to activate it. Press  for more than 3 seconds. The LED flashes for 5 seconds. The air in the car now recirculates for 3-12 minutes depending on the outer temperature. Each time you press  the timer function is activated. If you wish to switch off the timer function, press  again for more than 3 seconds. The LED lights for 5 seconds to confirm your selection.

If you select **Defroster** , recirculation is always disconnected.

## Air distribution



8702781d

Air to windows.

Air to head and body.

Air to legs and feet.

Press **AUTO** to return to automatic air distribution.



8703250d



8702777d

## AC - On/Off

When the ON LED lights the air conditioning (A/C) system is controlled automatically by the system. In this way incoming air is cooled and moderately dehumidified. When AC OFF is selected and the OFF LED lights the air conditioning (A/C) system is always disconnected, other functions are still controlled automatically. The air conditioning (A/C) system operates down to approximately 0 °C.

When you select **Defroster** , the air conditioning system is controlled so that air is maximally dehumidified.

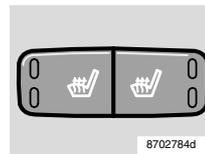


8702778d

## Fan

Fan speed can be increased or decreased by turning the knob. If **AUTO** is selected, fan speed is controlled automatically. The previously set fan speed is disconnected.

**NOTE!** If the knob for the fan has been turned so far that the left LED above the knob lights up with an orange light, the fan and the air conditioning (A/C) system are switched off.



8702784d

## Heating the front seats

See page 45 for further information

# Manual climate control with air conditioning A/C

## Recirculation



8702776d

Recirculation, together with your air conditioning (A/C) control, helps to cool a warm cabin more quickly. This function can also be used to exclude bad air, exhaust fumes etc. The air in the passenger compartment is recirculated; no air from outside the car is taken into the car when the button  is activated. The LED in the switch is lit. If you allow the air in the car to recirculate there is a danger of misting and icing in the car, especially during the winter.

**The timer function** minimises the risk of ice, misting and bad air. To activate the function: press  for more than 3 seconds. The LED flashes for 5 seconds. The air in the car recirculates for 3-12 minutes depending on the outer temperature. Every time you press  the timer function is activated. If you wish to switch off the timer function, press  for more than 3 seconds again. The LED lights for 5 seconds to confirm your selection.

Recirculation is always disconnected when you select  **Defroster**.

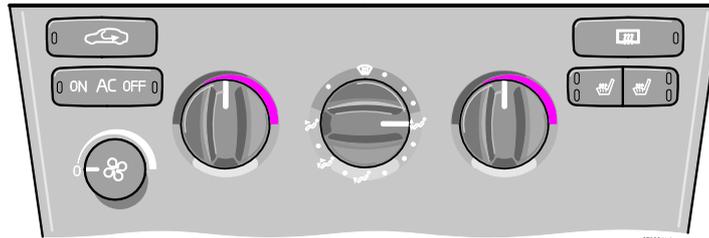
## AC - On/Off



8702777d

The air conditioning is connected to the **cooling and dehumidification function** with the ON LED lights. The air conditioning is disconnected with the OFF LED lights.

When you select Defroster , the air conditioning is connected as long as the fan is not set to position 0.



8702811d

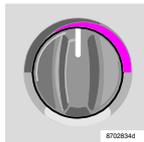
## Fan



8702831d

Fan speed can be increased or decreased by turning the knob. If the knob is set to 0, the air conditioning is disconnected.

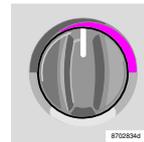
## Heating/Cooling - left side



8702834d

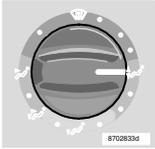
Turn to set how hot or cold you wish the incoming air to be. To receive cooled air, the air conditioning must be connected.

## Heating/Cooling - right side



8702834d

Turn to set how hot or cold you wish the incoming air to be. To receive cooled air, the air conditioning must be connected.



Use the air distribution control positions (marked with dots) between the different symbols to fine-tune air distribution for maximum comfort.

## Air distribution

## Use...



Air through front and rear air vents.

...when you want good cooling in a warm climate.



Air to windows In this position the air does not recirculate. The air conditioning (A/C) system is always connected. There is a certain amount of airflow to the vents.

...when you want to remove ice and misting. High fan speed is good for this.



Air to both floor and windows. There is a certain amount of airflow to the air vents.

...when you want comfortable conditions and good demisting in a cold climate. Not too low a fan speed.



Air to floor. There is a certain amount of airflow to the air vents and the defroster vents for the windscreen and side windows.

...when you want to warm your feet.

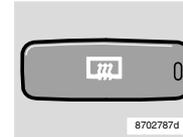


Air to floor and air vents.

...in sunny weather with cool outside temperature.

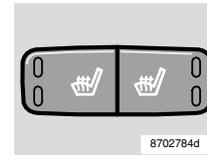
## Here is some supplementary advice and information:

- You must turn the fan knob (from the 0 position) to connect the air conditioning.
- Use the air conditioning at low temperatures (0 - 15 °C) to dehumidify incoming air.



## Defroster - rear window and door mirrors

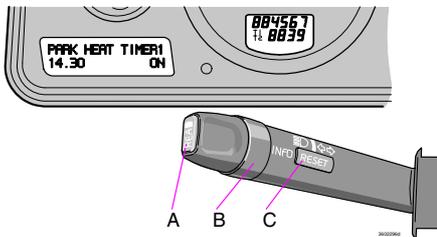
Use this button to rapidly remove misting or ice from the rear window and the door mirrors. See page 45 for further information about this function.



## Heating the front seats

See page 45 for further information.

## Fuel-driven parking heater (option)



At temperatures of  $-10\text{ }^{\circ}\text{C}$  and below, the parking heater runs a maximum of 60 minutes. If the parking heater does not start despite repeated attempts, a message is shown on the display. Contact an authorised Volvo workshop.

### **WARNING!**

- Switch off the fuel-driven heater before refuelling. Spilled fuel could be ignited by the exhaust gases.
- Check the information display to ensure the heater is off (PARK HEAT ON is shown on the display when the parking heater is active).

### **WARNING!**

The car must be outdoors when the petrol or diesel heater is used.

## General

The electrical system must be "awakened" before the parking heater can be programmed.

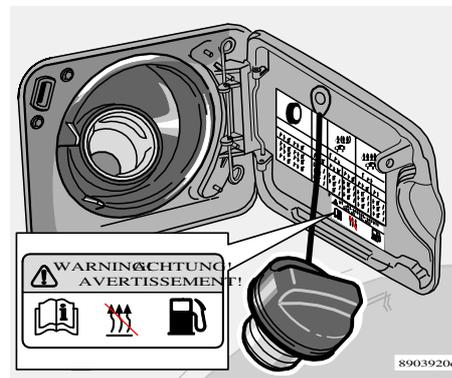
This is most easily done by:

- pressing the READ button or
- pressing the main beam flash or
- turning on the ignition.

The parking heater can be started immediately or set with two different start times using TIMER 1 and TIMER 2.

Here, start time refers to the time point the car should be completely warmed up.

Vehicle electronics calculates start time based on current outside temperature. If the outside temperature exceeds  $25\text{ }^{\circ}\text{C}$ , heating is not switched on.



*Warning decal on fuel filler flap*

## Messages on the display

Once the settings for TIMER 1, TIMER 2 and DIRECT START are activated, the amber warning symbol in the combined instrument panel lights and explanatory text is shown on the display.

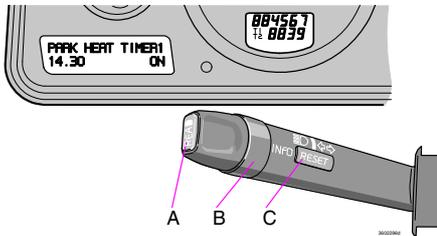
When you leave the car, you will receive a message regarding the current settings of the system.

## Parking on a hill

If you park your car on a steep incline, the front of the car should be facing up the slope to ensure the supply of fuel to the parking heater.

## Car clock/timer

For safety reasons, all timer settings will be cleared if the car clock is reset after timer settings have been made.



### Setting TIMER 1 and 2

For reasons of safety, you can only programme times for the following 24 hours, not several days in a row.

1. Use the ring (B) to toggle to TIMER 1.
2. Briefly press the RESET button (C) so that the hours setting starts to flash.
3. Use the ring (B) to set the desired hours.
4. Briefly press the RESET button so that the minutes setting starts to flash.
5. Use the ring (B) to set the desired minutes.
6. Briefly press the RESET button to confirm your setting.
7. Press the RESET button to activate the timer.

After setting TIMER 1, toggle to TIMER 2. Settings are made the same way as for TIMER 1.

### Deactivating timer-started heating

Do as follows to manually switch off the heater before the set time has elapsed:

1. Press the READ button (A)
2. Use the ring (B) to toggle to PARK HEAT TIMER 1 (or 2). Text ON indicator lamps.
3. Press the RESET button (C). The text OFF is displayed with a steady glow and the heater is switched off

### Direct start of heater

1. Use the ring (B) to toggle to DIRECT START.
2. Press the RESET button (C) to make ON and OFF selections available. Select ON.

The heater will now run for 60 minutes.

Heating of the passenger compartment will begin as soon as the engine coolant has reached an adequate temperature.

### Deactivation of heater after direct start

1. Use the ring (B) to toggle to DIRECT START.
2. Press the RESET button (C) to make ON and OFF selections available. Select OFF.

### Battery and fuel

If the battery is not sufficiently charged or the petrol tank is close to empty, the parking heater will be switched off.

If this is the case, a message will appear on the display. Acknowledge the message using the READ button (A).

### IMPORTANT!

Repeated use of the parking heater combined with only short journeys can discharge the battery and impair starting.

In order to ensure that the generator receives sufficient time to produce the amount of energy needed without discharging the battery as a result of regular heater use, drive the car for a period equalling the time during which the heater has been active.

### Auxiliary heater (diesel)

(certain countries)

Extra heat from the additional heater may be required in cold weather to reach the correct temperature in the passenger compartment.

The additional heater starts automatically when extra heat is required if the engine is running. It is switched off automatically when the correct temperature is reached or when the engine is switched off.



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## Interior

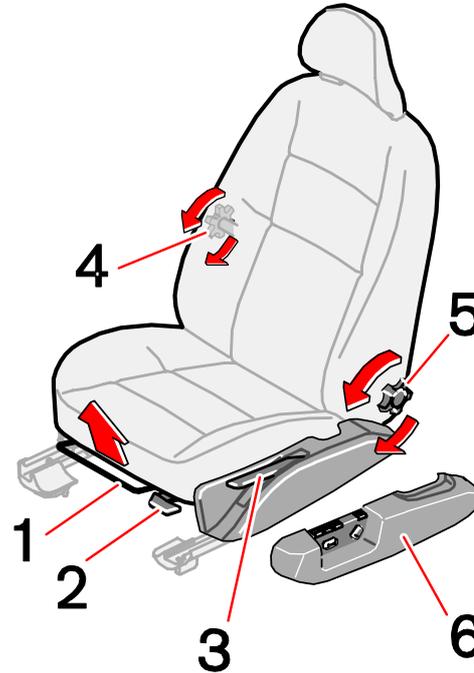
Seats	66
Interior lighting	69
Storage compartments	70
Rear seat and cargo area	75
Loading	80
Cargo net	81
Cargo area cover, Extra seat in cargo area	83
Spare wheel	84

### Seating position

The driver's and passenger seats can be adjusted to the optimum sitting and driving positions

1. Forward/rearward: lift the handle to adjust the distance to the steering wheel and pedals. Check that the seat is locked after changing position.
2. Raise/lower front edge of seat cushion: pump up/down\*.
3. Raise/lower seat: pump up/down.
4. Adjust lumbar support: turn the wheel.
5. Adjust backrest rake: turn the wheel.
6. Power seat control panel.

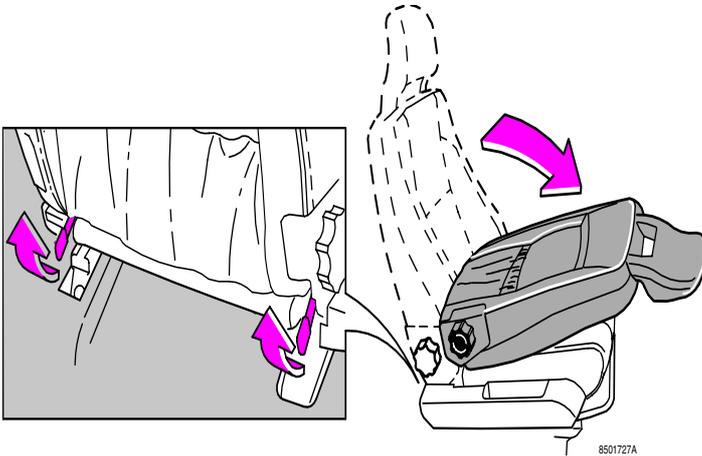
\* The control panel (2) is not available with certain upholstery alternatives.



### **WARNING!**

- Adjust the position of driver's seat before setting off, never while driving.
- Check that the seat is locked in position.

8504932r



### Folding the front passenger seat

The front passenger seat backrest can be folded to a horizontal position to make room for a long load. Fold the backrest as follows:

- Move the seat as far back as possible.
- Adjust the backrest to upright position.
- Lift the catches on the rear of the backrest.
- Fold the backrest forward.
- Slide the seat forward so that the head restraint is "locked in place" under the glovebox.

## Front seats

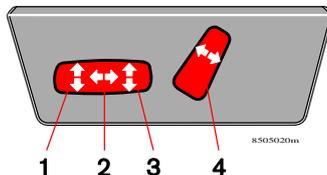
### Power seat (option)

#### Preparations

The seat is usually adjusted with the ignition key in position I or II. It can also be adjusted within 4.5 minutes of unlocking the door with the key or remote control. If the door is closed but the ignition key has not yet been inserted in the ignition switch or is in position 0 in the ignition switch, settings can be made within 40 seconds of closing the door.

#### Memory function in the remote control (option)

If the setting of the seat is changed, the new setting is saved in the remote control used to lock the car. The next time the car is unlocked using that remote control and the driver's door is opened within five minutes, the driver's seats and door mirrors assume the stored positions.



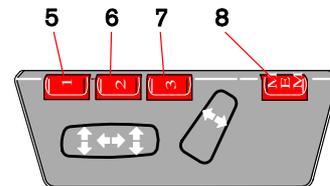
#### Seat adjustment

The switches can be used to make the following adjustments:

1. Front edge of seat cushion up/down
2. Seat forward/rearward
3. Seat up/down
4. Backrest rake

The seat can be moved in one direction at a time.

The power seats have an overload protector that activates if a seat is blocked by an object. If this occurs, switch off the ignition (position 0) and wait 20 seconds before operating the seat again.



#### Seat with memory function (option)

5. Setting seat and door mirrors, program 1
6. Setting seat and door mirrors, program 2
7. Setting seat and door mirrors, program 3
8. Storing preset positions

Three positions can be stored. After adjusting the seat, hold the MEM (8) button depressed while pressing the button (5). Further seat and door mirror settings can be stored using memory buttons (6) and (7).

#### Setting preset positions

Press and hold one of the memory buttons (5), (6) or (7) until the seat stops. If you release the button, the seat stops immediately for safety reasons.

#### Emergency stop

If the seat accidentally begins to move, press one of the buttons to stop the seat.

#### WARNING!

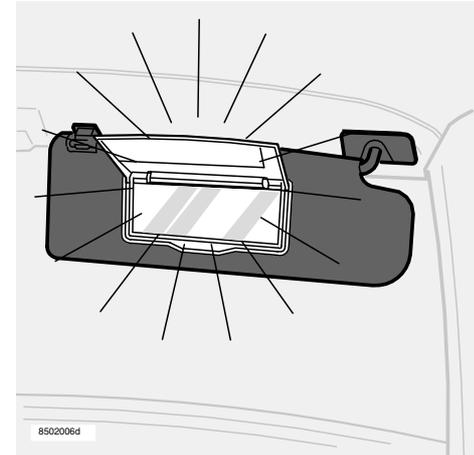
- Ensure that there is nothing in front of, behind or under the seat during adjustment.
- Make sure that none of the backseat passengers will be trapped.
- Make sure that children do not play with the switches, to avoid the risk of getting trapped.



*General lighting and front reading lamps*



*Rear reading lamps*



## General lighting

General lighting lights up and goes out when you press the button. General lighting comes on automatically and remains lit for 30 seconds:

- When you unlock the car from the outside using the key or remote control.
- When you have stopped the engine and turned the ignition key to position 0.

General lighting lights\* and remains lit for 10 minutes:

- When one of the doors is open.

\*The function is light-dependent and is only activated when it is dark.

General lighting goes out:

- When the engine is started.
- When you lock the car from the outside using the key or remote control.

General lighting can be switched off or on in all situations by briefly pressing the button.

When you switch the light on, it remains lit for 10 minutes.

You can disconnect the automatic function by pressing the button for more than 3 seconds. When you then briefly press the button, the automatic function reconnects.

The pre-programmed times of 30 seconds and 10 minutes can be changed. Contact your Volvo workshop.

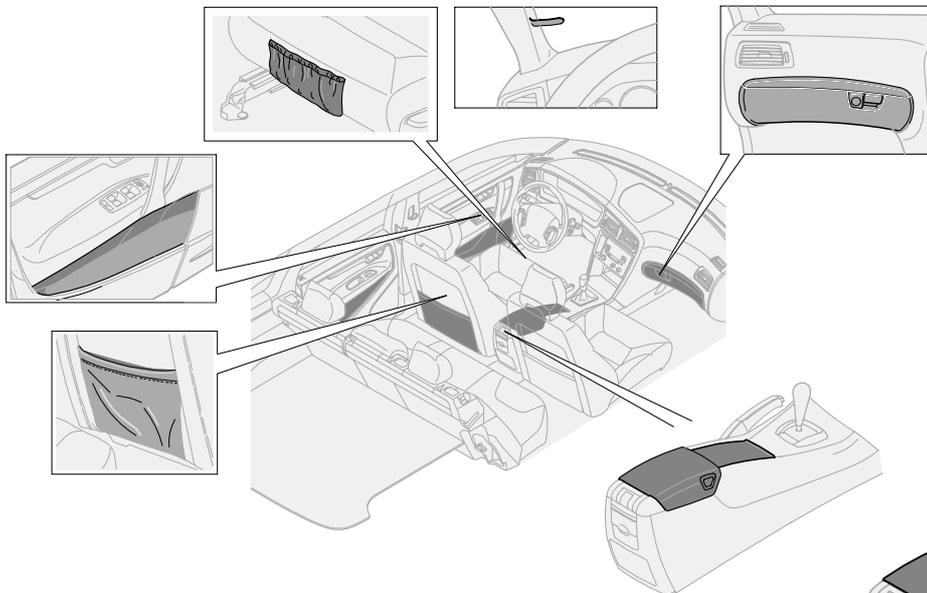
## Vanity mirror

The lamp comes on when you open the cover.

## Front and rear reading lamps

Reading lamps in the front and rear seats can be switched on or off by pressing the respective button. Reading lamps are switched off automatically after 10 minutes if not switched off manually.

## Storage compartments, front and rear seats



### Ashtray (option)

To empty the ashtrays:  
Front seat: open the ashtray, pull out the insert.  
Rear seat: as above.

### Cup holder (option)

Some models are equipped with cup holders for the front and rear seat occupants.  
You can also use the centre console's storage compartment for cassette tapes, CDs, etc.

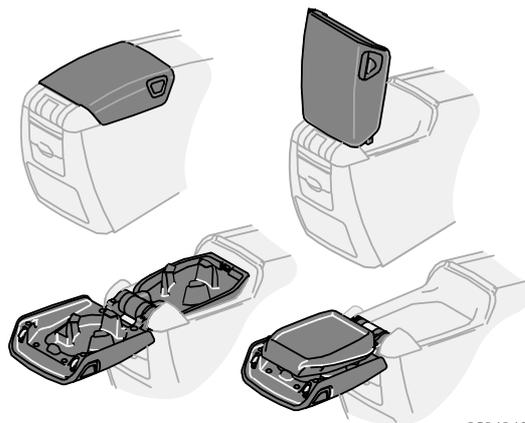
### Privacy handset + holder (option)

Certain models are equipped with a privacy handset. See the Telephone section for more information.



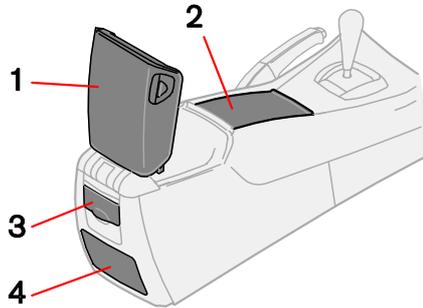
### WARNING!

Make sure that no hard, sharp or heavy objects lie on or in any of the storage compartments where they might cause injury during heavy braking. Always fasten large heavy objects with one of the seat belts.

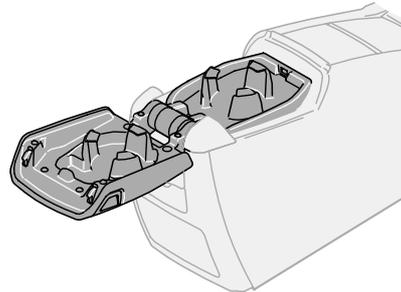


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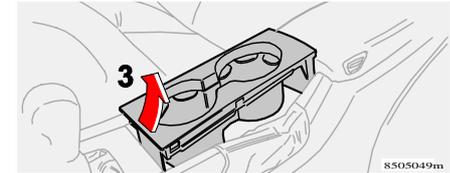
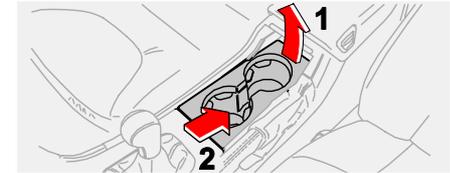
## Storage compartment in centre console



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8504939m



8505049m

### 1. Rear storage compartment (under armrest)

The rear storage compartment of the centre console can be used to store CDs and the like.

This storage compartment can be equipped with:

- **Privacy handset + holder (option)**

### 2. Front storage compartment

(V70: roller cover)

This storage compartment can be equipped with the following options:

- **Cup holder (option)**
- **Ashtray (option)**

### 3. 12 V socket

### 4. Ashtray (option)

## Rear storage compartment cup holder for rear seat passengers

- To access the storage compartment/privacy handset, press the button on the left-hand side of the armrest and fold the tunnel compartment cover back. To use the cup holder, press the button on the right-hand side of the armrest and fold the upper part of the tunnel compartment cover back.
- The cup holder and cover can be closed separately.

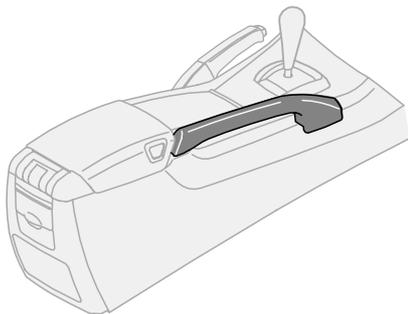
## Storage compartment cup holder (option)

The cup holder can be easily removed:

1. Snap the rear edge of the cup holder up.
2. Slide the cup holder back.
3. Angle the front edge of the cup holder up and lift out.

Repeat the procedure in reverse order to refit the cup holder.

## Extra handle XC70



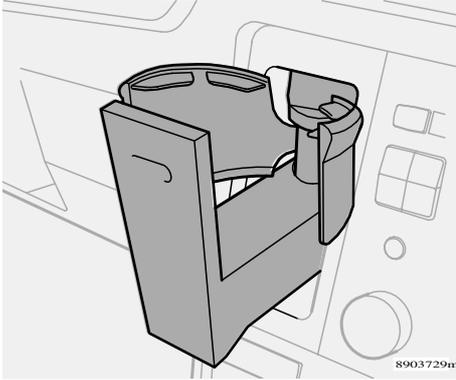
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### Extra handle

Volvo XC70 is equipped with an extra handle on the passenger side of the centre console storage compartment. This handle gives extra support when driving gravel roads, etc.

 **WARNING!**

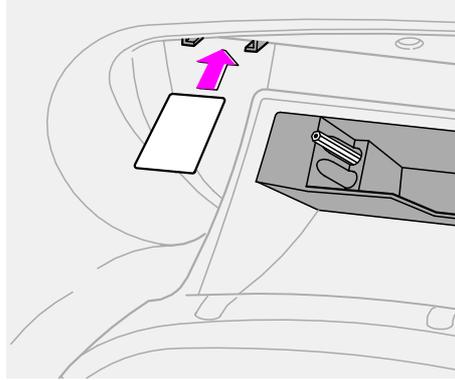
The handle may become extremely warm if the car is parked in direct sunlight/warm temperatures.



### Cup holder (option)

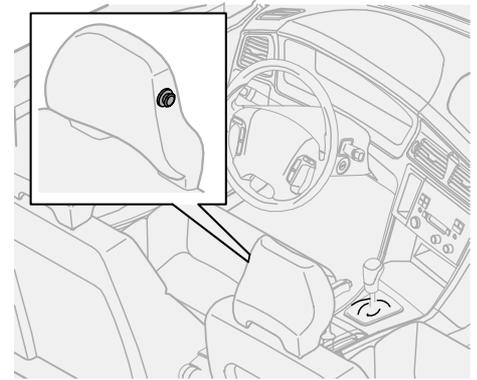
- Press on the holder to open it.
- Press the holder back in place after use.

**NOTE!** Never use glass bottles. Also bear in mind that hot beverages could scald you.



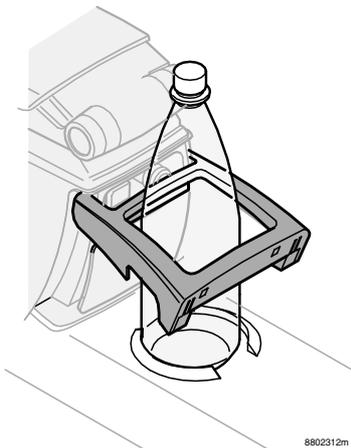
### Storage in the glove box

The glovebox can be used to store items such as the Owner's Manual, pens and petrol/credit cards.



### Coat hanger

The coat hanger is only intended for light garments.



### Bottle holder for rear seat passengers (option)

Do as follows to use the bottle holder:

1. Open the holder.
2. Insert the bottle.

The bottle holder can also serve as a waste bin. Insert a bag into the holder and fold it over the edges.

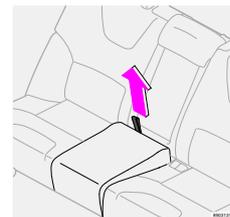
#### NOTE!

- There are no specially made waste bags for the holder - use ordinary plastic bags.
- For reasons of safety, never keep glass bottles in the car!

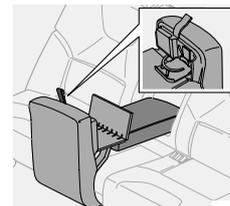


### Cup holder in the armrest, rear seat

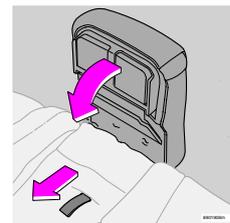
### Collapsible table (option)



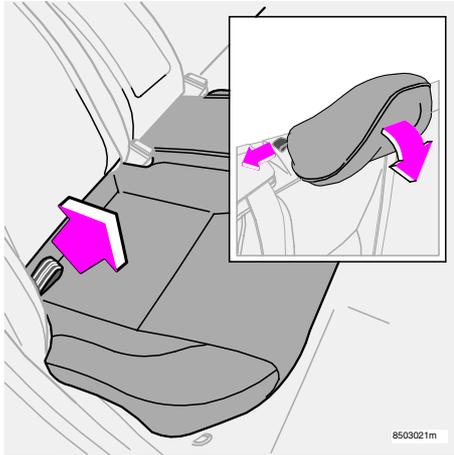
Lift the strap and fold the seat cushion forward.



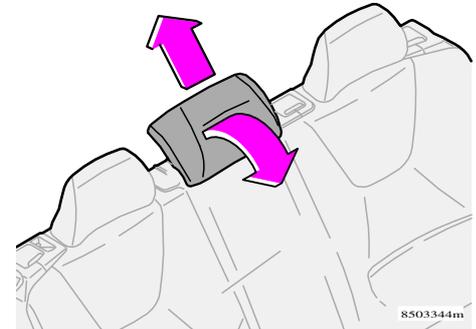
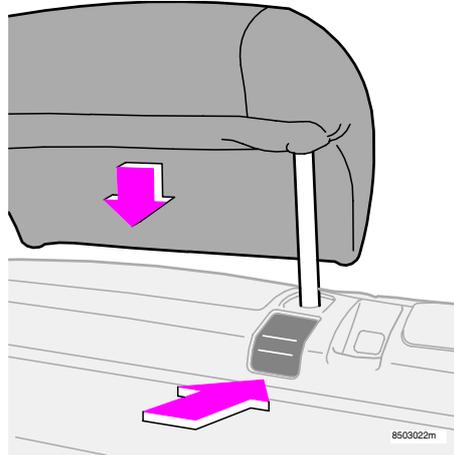
To completely extend the table section, fold the armrest in the rear seat forward. Fold out the table so that it rests on the armrest. Press to release the cup holder. If you wish to fold out the cup holder by itself, you do not need to fold out the table.



To close: Fold the table section upwards into place. Fold the arm inwards under the table. Mind your hand. Fold the armrest into the rear seat. Lift the strap and fold back the seat cushion.



Folding the head restraints



## Extension of cargo area

The rear seat is in two sections and each section can be folded forward separately.

1. Tip the front seat backrests into a more upright position if they are excessively reclined.
2. Pull the strap on the seat cushion and fold the cushion towards the front seat backrest.
3. Fold the outboard head restraints forward by pulling the head restraint strap.

## Centre seat head restraint (V70)

Lower the centre seat head restraint if it is raised. Press the release button behind the right-hand support. See illustration.

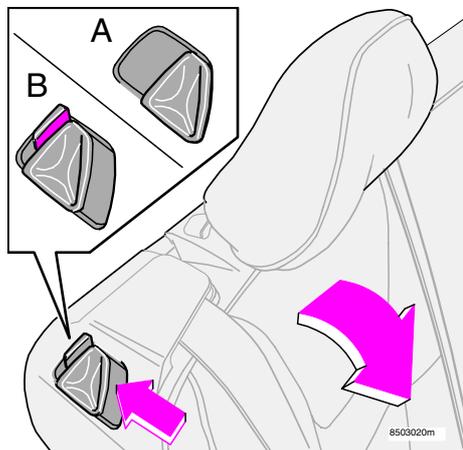
## Centre seat head restraint (XC70)

(Models with 3-portion rear seat)

**Raise:** Pull the head restraint straight up.

**Lower:** Pull the head restraint slightly forward and press down.

## Rear seat and cargo area



A - Catch in closed position  
B - Catch in open position

### Tipping the backrest forwards

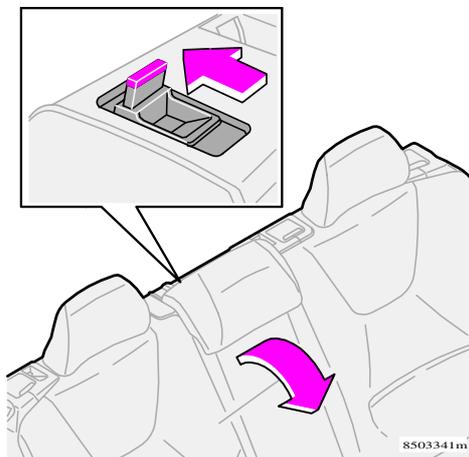
Press the backrest catch to the rear and tip the backrest forwards.

### Folding the centre portion of the backrest (XC70)

(Models with 3-portion rear seat)

The left-hand and centre portions of the backrest can be folded individually.

The centre portion must be folded to fold the right-hand portion.



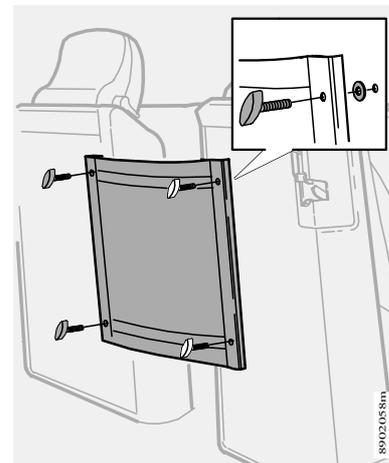
Centre seat backrest  
(XC70 with 3-portion rear seat)

To fold the centre portion of the backrest (without folding the outer portions): Make sure the head restraint is completely lowered. Press the button on the top edge of this portion of the backrest to release the catch. Then fold the backrest forward.



### WARNING!

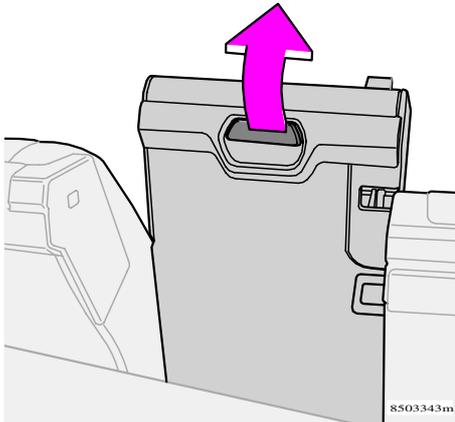
Make sure the backrest locks into place when returning it to an upright position. The word “UNLOCKED” should not be visible on the catch.



### Divider with storage pockets (XC70 – accessory)

(Models with 3-portion rear seat)

A divider with storage pockets is available as an accessory to the XC70 with a 3-portion rear seat. The divider can prevent objects in the cargo area from being thrown forward during hard braking. To fit the divider, see the accompanying directions in the kit or contact a Volvo workshop.



### Removing the centre seat backrest (XC70)

(Models with 3-portion rear seat)

- Press the button on the top edge of this portion of the backrest to release the catch.
- Fold the backrest slightly forward.
- Pull the handle on the back of the backrest (see above illustration) to release the lower portion of the backrest from the rod. Lift out the backrest.

Contact your Volvo dealer for information on accessories that can be placed between the outer portions of the backrest.

### Refitting the centre seat backrest

(Models with 3-portion rear seat)

- The right-hand portion of the backrest must be upright when refitting the centre portion.
- Refit the backrest by pressing the lower portion onto the rod until it locks into place.

Contact your Volvo dealer for information on accessories that can be placed between the outer portions of the backrest and seat cushion.



#### WARNING!

(XC70 with 3-portion rear seat)

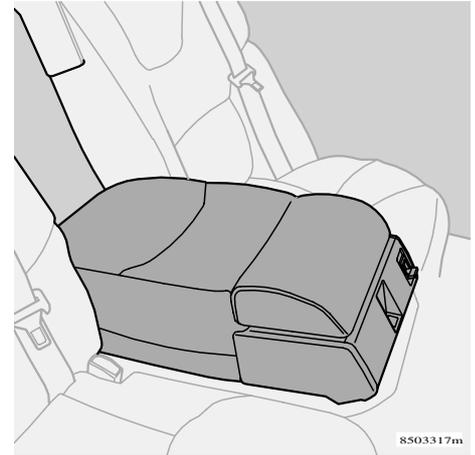
- For reasons of safety, the centre seat backrest should never be left loose in the car.
- If the centre seat backrest is removed, hard braking may cause unsecured objects in the cargo area to be thrown forward between the outer backrests.
- The right-hand side of the backrest must be upright when the centre seat backrest is folded into place. Otherwise, the centre seat backrest cannot lock into place and the centre seatbelt cannot be used.

### Centre armrest (XC70)

(Models with 3-portion rear seat)

The centre seat backrest can be used as an armrest.

- Remove the centre seat backrest as described to the left.



*Centre seat backrest as armrest*

- Turn the backrest over (the front of the backrest should be up)
- Press the backrest back onto the rod until it locks into place.

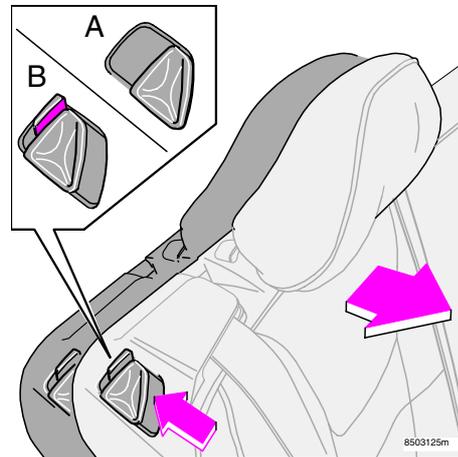
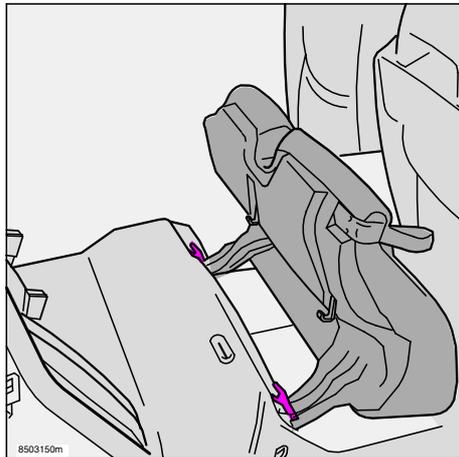
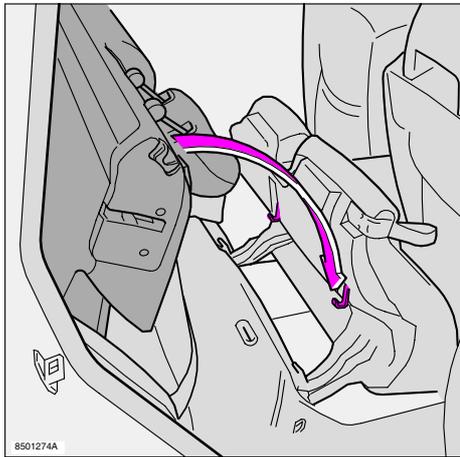
To reset the backrest to its normal position, pull the handle (which is now on the bottom of the front) to release it from the rod. Refit the backrest following the directions to the left.



#### WARNING!

If the centre seat backrest is used as an armrest (see previous page) then the divider must be positioned to prevent objects in the cargo area from being thrown forward between the outer backrests during hard braking.

## Rear seat and cargo area



*A - Catch in closed position*

*B - Catch in open position*

### Removing the seat cushion

(2 or 3 portion rear seat)

The seat cushion can easily be removed. You will then have a somewhat longer cargo compartment.

Pull the red lock pins forward to unlock the seat cushion. Then lift the seat cushion.

Do this in the reverse order when replacing the seat cushion.

### Rear seat backrest position

You can adjust the positions of the two rear seat backrests. To adjust a backrest to the **cargo position\***:

- Press the catch until the red mark is visible.
- Pull the backrest forwards to a new locked position.
- Make sure that the backrest is secured in a locked position and that the red mark is no longer visible.

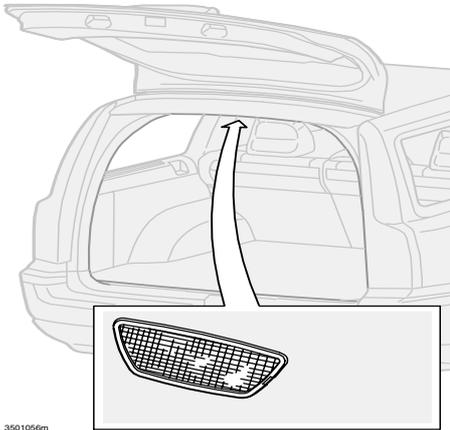
Follow the same procedure to adjust the backrest to an upright position.

\* The cargo position increases the cargo area.

**NOTE!** Make sure that the holes in the plastic ferrules on the top of the backrest engage with the hooks on the bottom of the seat cushion. When you later raise the backrest and seat cushion, the head restraints must be returned to their normal positions.

### **WARNING!**

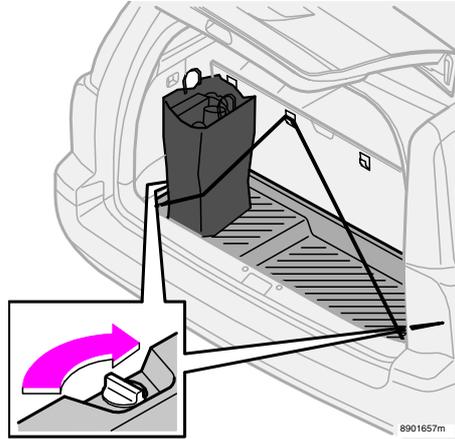
Do not position heavy items right up against the front seats. The forward-folded backrest will then be pressed down unnecessarily hard. Never load above the level of the backrests. If you do, the cargo could be thrown forward during heavy braking or in a collision and seriously injure you or your passengers. Also remember to secure the cargo properly to prevent it moving about.



3501056m

### Cargo area lighting

An extra roof lamp is fitted at the end of the cargo area.

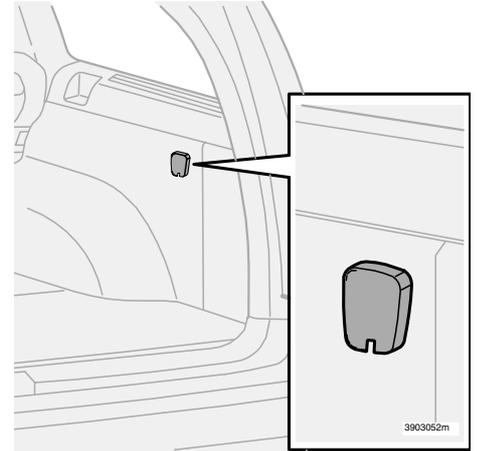


8901657m

### Holder for grocery bags (option)

Open the tailgate. Hang or secure your grocery bags by means of tensioning straps or holders.

To remove the **plastic trough** (option), turn the two knobs at the sides.



3903052m

### Electric socket in cargo area

Remove the cover when you wish to use the electric socket. The socket is live regardless of whether or not the ignition is switched on. If the ignition is switched off and a power consumer that uses more than 0.1 A is connected to the electric socket, a warning message is shown on the display.

Remember not to use the socket when the ignition is switched off, if there is a risk of draining the battery.

# Loading

## General

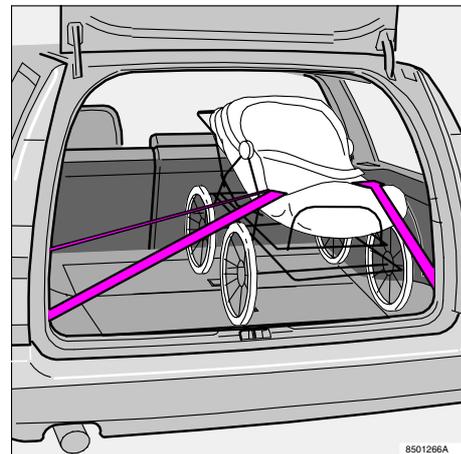
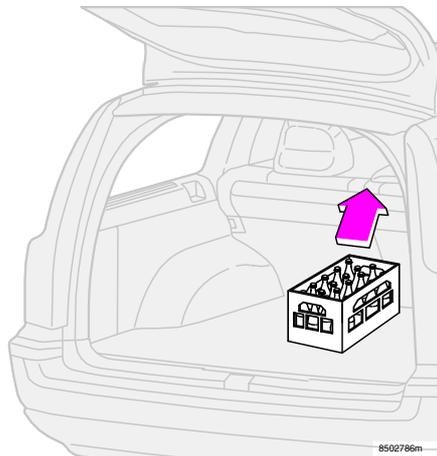
Load capacity depends on the car's total kerb weight, including any accessories that are mounted. Kerb weight includes the driver, the weight of the fuel tank when filled to 90% and various fluids, such as washer fluid and coolant. Mounted accessories, i.e. towbar, load carrier, roof box, etc., are included in the kerb weight.

The load capacity of the car is reduced by the number of passengers and their weight.



### WARNING!

The driving characteristics of the car change based on its kerb weight and how heavily it is loaded.



## Loading in the cargo area

Seat belts and airbags afford the driver and front seat passenger excellent protection, especially in a frontal collision. You must also think of protecting yourself from behind. When loading cargo you should bear in mind that objects in the cargo area, if they are not properly anchored and correctly positioned, can be thrown forward at great speed and considerable force in a collision or during heavy braking and cause serious injury.

**Remember that in a frontal collision at 50 km/h (31 mph) an object weighing 20 kg corresponds to a collision weight of 1 000 kg.**

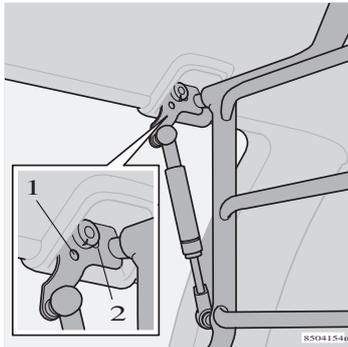
### Bear the following in mind when loading cargo:

- Place the load close up **against** the backrest.
- Place heavy objects as low down as possible.
- Place wide objects on either side of the backrest split.
- Secure the load using suitable straps attached to the cargo lashing eyes.
- Never load above the level of the backrest without using a cargo net.



### WARNING!

- Do not position heavy items right up against the front seats. The forward-folded backrest will then be pressed down unnecessarily hard. Never load above the level of the backrests. If you do, the cargo could be thrown forward during heavy braking or in a collision and seriously injure you or your passengers. Also remember to secure the cargo properly to prevent it moving about.
- When the rear seat backrest is folded down, do not load objects higher than 50 mm from the top edge of the rear passenger door window. Otherwise, the protection offered by the inflatable curtain hidden inside the headlining will be compromised.



Red marking - unlocked  
Green marking - locked

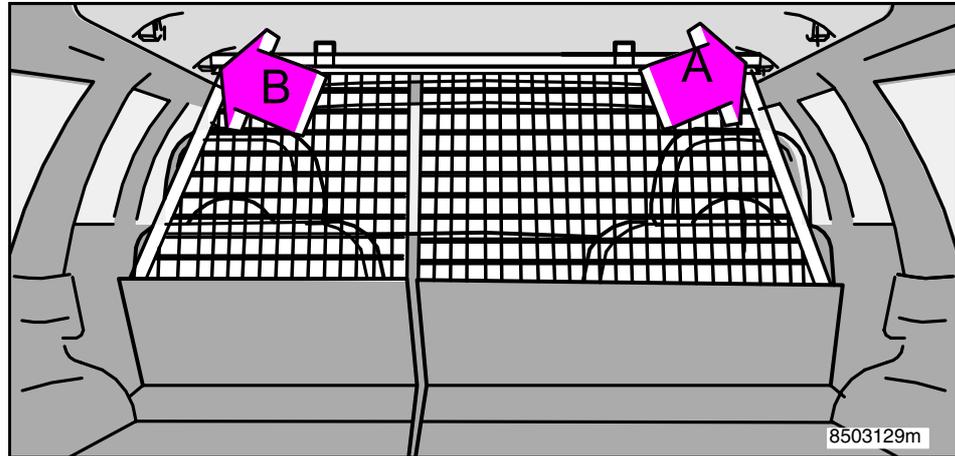
## Protective grate XC70

For reasons of safety, the protective grate in the cargo compartment must always be fastened and secured correctly.

Do the following to fit the protective grate:

- Fold down the backrests.
- Use a Torx screwdriver to press in and turn the knob (1) to red (to unlock).
- Insert the spring-loaded ends of the protective grate into the attachment points (see illustration).
- Press in and turn the knob (1) to green (to lock).

**NOTE:** The green marking on the bracket (2) and the marking on the knob (1) must be opposite each other after installation. Otherwise there is no impact protection.



## Nylon cargo net V70 (2-portion rear seat)

The car is equipped with a cargo net made of strong nylon fabric which can be unrolled from the rear seat backrest. The cargo net will upon unrolling, self-lock after about a minute, if the rear seat backrests are in an upright position.

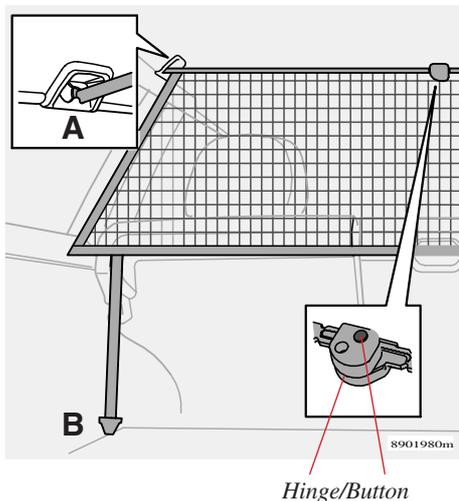
- Pull up the right-hand cargo net.
- First hook the rod in the bracket on the right-hand side (A). Then pull the rod out and hook it on the left-hand side (B).
- Pull up the left-hand cargo net and secure it to the rod.
- Remove in reverse order.

**The cargo net can also be used when the rear seat is folded forwards.**

Do the following to remove the protective grate:

- Fold down the backrests.
- Use a Torx screwdriver to press in and turn the knob (1) towards red so that the marking on the knob matches the marking on the bracket.
- Press the protective grate towards the opposite mounting until it comes out of the ceiling panel. Reduce the amount of pressure once the mounting has come past the ceiling panel and pull the grate carefully towards you so that the grate also releases on the other side. Do not angle the grate too much as it could become wedged and be difficult to pull out.

## Cargo net XC70



### Nylon cargo net

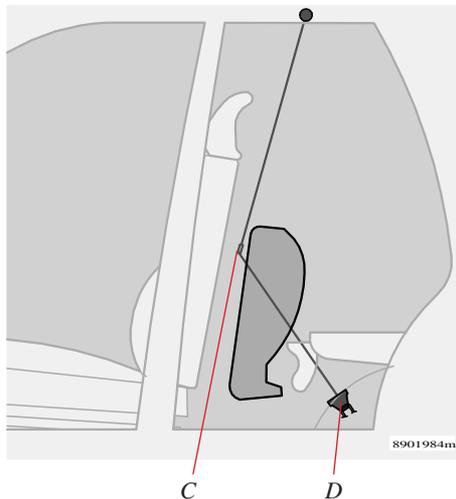
#### (Models with 3-portion rear seat)

Volvo XC70 can be equipped with a cargo net made of strong nylon fabric, attachable to designated brackets in the roof headlining and tightened from eyelets on the floor\*.

The net can be fastened behind the upright backrests of the rear seats. If the rear seats are folded down, the net can also be fastened behind the front seats (see illustrations).

The upper and lower rods are equipped with hinges in the centre, allowing you to fold the cargo net together. If necessary, fold the rods out until they lock.

\* If your car is equipped with a rear-facing extra seat.



- Secure the upper rod in the front or rear ceiling bracket (A)
- Secure the other end of the rod in the ceiling bracket on the other side.
- Secure the cords of the cargo net in the eyelets on the floor: (B) when the net is secured in the rear ceiling brackets, (D) when the net is secured in the front ceiling brackets.
- Tighten the cargo net with the cords.

#### NOTE:

- If the cargo net is fitted to the front ceiling brackets and the seat cushions of the rear seat are folded forward, the cargo net should

be pulled in front of the seat cushions and behind the backrests of the front seats (C).

- The cords of the cargo net must not be fastened to the eyelets on the floor under the front seats. If these eyelets are used and the front seats are moved back, the net or upper attachments might be damaged.

### Folding the cargo net

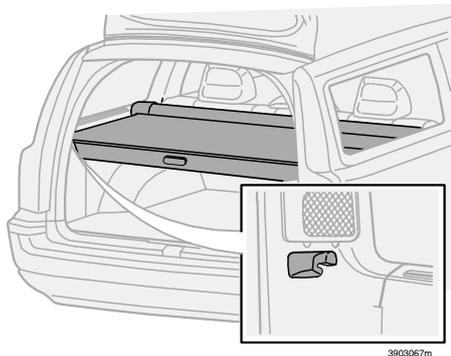
The cargo net can be folded together and placed under the floor of the cargo area in cars not equipped with an auxiliary bass speaker (option) or auxiliary child seat (option).

Press the buttons in the cargo net hinges (see inset in the illustration to the far left) to release them and fold the net.



### WARNING!

- For reasons of safety, the cargo net must not be used if a child is sitting in the auxiliary seat in the cargo compartment.
- It is important to check that the upper attachments of the cargo net are correctly mounted and that the cords are securely fastened.
- Do not use a damaged net.



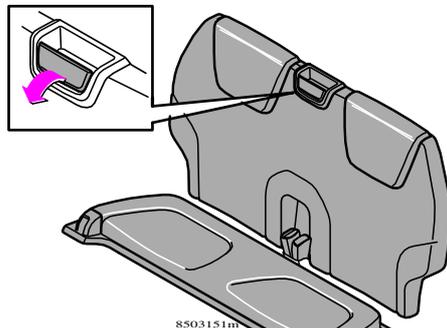
3903067m

### Cargo area cover (option)

Pull out the privacy panel, pull it over the cargo and hook it into the recesses in the rear pillars of the cargo compartment.

#### Removing the cargo area cover:

- Press in the end piece of the privacy panel, guide it up and release.
- To fit in place: press the end pieces of the cargo area cover down into the holders.



8503151m

### Extra seat (option)

The auxiliary seat is designed for two children, each weighing between 15 and 36 kg and up to 140 cm in height. The maximum total weight is 72 kg.

#### Raising

- Remove the cargo area cover if your car is equipped with such.
- Fold the backrest section forwards until it locks in place.
- Fold the seat cushion forwards.

#### Lowering

- Fold the seat cushion rearwards.
- Pull the backrest section's handle to open it and then fold it downwards.



### WARNING!

If your car is equipped with an extra seat, the tailgate must have a **lock cylinder**. The tailgate can now be unlocked from outside as normal (key in driver's door and/or with remote control) **as well as with the key in the tailgate lock.**



### WARNING!

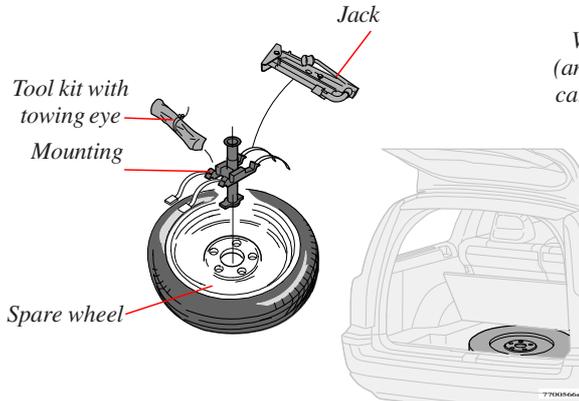
When the extra seat is used, the two rear seat backrests must be in the raised position, the cargo net removed and the child safety lock open. This is so that in the event of an accident the children will be able to get out of the car themselves.

If your car is fitted with a **steel cargo grid**, it must be removed before the extra seat is used. This is mandatory.

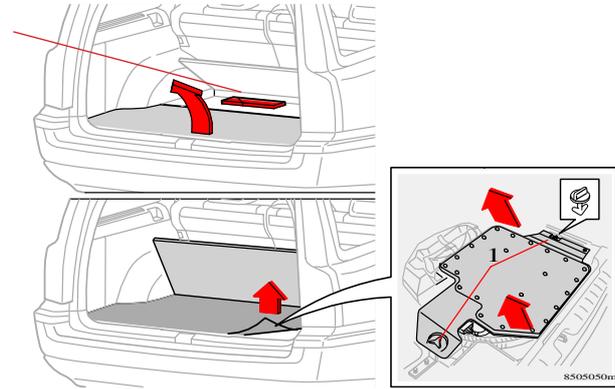
**NOTE!** If you **must** take the cargo area cover along on a trip while using the extra seat in the cargo area, do as follows:

- Fold both backrests of the backseat into a more upright position (see page 76).
- Carefully place the loose cargo area cover between the backrest of the backseat and the extra seat. Put up the neck support of the extra seat.

## Spare wheel



*Warning triangle  
(another location for  
cars with extra seat)*



### Spare wheel, tools, jack

The spare wheel with the tools and jack can be found under the floor of the cargo area. Carry out the following to remove the spare wheel.

- Remove the back floor hatch by unlocking it and pulling back 45°. Unlock the forward floor hatch.
- Undo the screws in the plastic trough (accessory) and lift it out.
- Lift out the jack and tool kit.
- Unscrew the mounting and remove the spare wheel.
- Screw everything back in place and secure in reverse order. Make sure that the spare wheel is fixed in place and that the jack and tool kit are properly secured.

### Warning triangle (certain countries)

Follow the regulations concerning warning triangles of the country you are in.

**NOTE!** If the car is equipped with an auxiliary seat in the cargo area, the warning triangle is located in a special compartment in the front of the wheel well.

### Spare tyre, tools, jack - cars with bass speakers (option)

The jack and tool kit are in a compartment above the spare wheel. Do the following to remove the spare wheel:

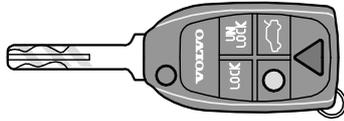
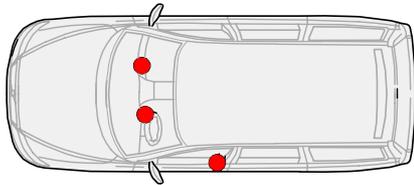
- Remove the back floor hatch by unlocking it and pulling back 45°. Unlock the forward floor hatch.
- Remove the carpet over the bass speaker.
- Loosen the wheel and turn the clip 90° (1).
- Remove the bass speaker by gripping the upper right-hand and lower left-hand corners. Lift upwards and inwards and then let the bass speaker rest against the left side of the cargo area.
- Return, close and fasten everything in reverse order. Make sure that the spare tyre is firmly fixed and that the jack and tool kit are fastened securely.

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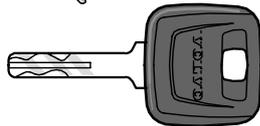
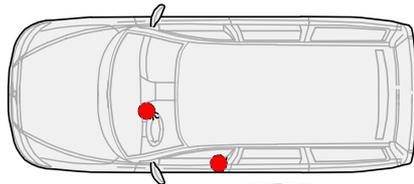
## Locks and alarm

Immobilizer, Remote control	86
Locking and unlocking	87
Replacing the battery in the remote control	88
When it is dark, Deadlocks	89
Child safety lock	90
Alarm	91



### Master key

This key operates all lock



### Service key\*

For driver's door, ignition switch and steering wheel lock only.

8302192m

\* certain markets only

## Keys - Immobilizer

Your car is delivered with two master keys and one service key. One of the master keys is foldable and equipped with an integrated remote control.

### Loss of key

If you should lose one of your keys, bring the remaining keys to an authorised Volvo workshop. As a crime prevention measure, the code for the lost key is erased from the system and the other keys must be re-coded in the system. The mechanical code numbers for the keys are recorded on a separate label accompanying the keys. Store the label in a safe place. Take the label to your Volvo dealer if you wish to order new keys. A maximum of six remote controls/keys can be programmed and used.

### Immobilizer

Each key has an integrated coded chip. The code must be the same as the code in the ignition switch receiver. The car can only be started if the correct key with the correct code is used. The ignition key must not hang with other keys or metal objects on the same key ring. The immobilizer could be inadvertently triggered, preventing the car from being started.



8302187c

- 1. Unlock
- 2. Open boot lid
- 3. Alarm function
- 4. Approach lighting
- 5. Lock
- 6. Fold/open key

## Remote control functions

### 1. Unlocking

Button (1) unlocks all doors, boot lid and fuel filler flap.

### 2. Boot lid

Press button (2) twice to unlock the tailgate only.

### 3. Alarm function

The alarm function can be used to attract attention during emergency situations. If the red button (3) is held for at least 3 seconds or is pressed twice in succession during the same amount of time, the direction indicators and horn will be activated. The alarm is deactivated automatically after 25 seconds or by pressing any of the buttons on the remote control.

### 4. Approach lighting

Do the following when you approach the car:  
Press the yellow button (4) on the remote control.

The interior lighting, parking lamps, number-plate lighting and the lamps in the door mirrors (option) will switch on. If a trailer is attached to the car, the trailer lights will also be switched on. These lights will remain lit for 30, 60 or 90 seconds. An appropriate time setting for your car can be performed at an authorised Volvo workshop.

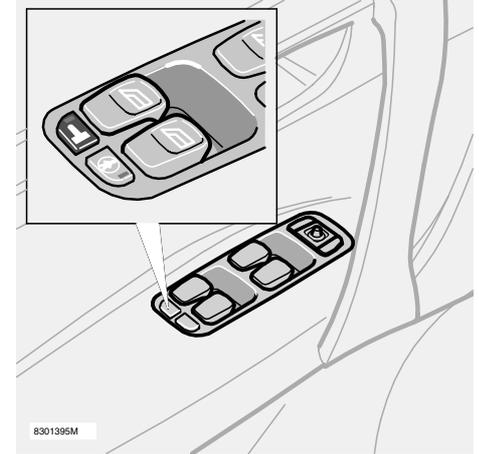
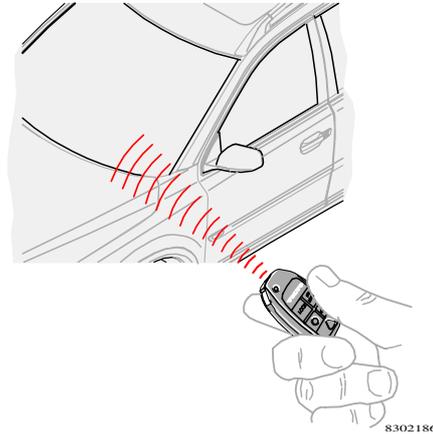
In order to switch off Approach lighting:  
press the yellow button again.

### 5. Locking

Lock all doors, boot lid and fuel filler flap with button (5). There is a delay of approx. 10 minutes for the fuel filler flap.

### 6. Folding/opening key

The key can be folded by pressing button (6) while folding the key blade into the keypad. The folding key will open automatically with one press of the button.



### Locking and unlocking the car from the outside

All doors and the tailgate can be locked simultaneously from the outside using the master key or its remote control. In this mode, the door lock buttons and the interior door handles are disconnected. All doors and the tailgate can be unlocked simultaneously from the outside using the master key or the remote control.

If the car is locked from the outside, the fuel filler flap locks after a 10-minute delay.

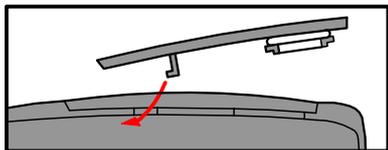
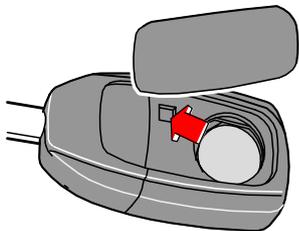
### Locking and unlocking the car from the inside

Using the switch in the door panel, you can lock or unlock all doors and the tailgate simultaneously (applies if the vehicle is opened with the master key).

Additionally, each door can be locked with the lock button and unlocked by opening the door using the handle.

The above situation is valid, as long as you haven't locked the car from the outside!

## Locking and unlocking



8302195r

### Replacing the remote control battery

If the locks repeatedly fail to react to signals from the remote control at a normal distance, the battery should be replaced at the next service interval or within the course of a couple of weeks.

- Remove the cover by carefully prising up the rear edge with a small screwdriver.
- Replace the battery (type CR 2032, 3 volt) - the plus side should face up. Avoid touching the battery or its contact surfaces with your fingers.
- Refit the cover. Make sure the rubber seal is properly fitted and free from damage to prevent water from entering.

- Turn the old battery in to your Volvo workshop so that it is disposed of in an environmentally friendly way.

### Locking the glovebox

The glovebox can be locked with the master key.

### Automatic relocking

If none of the doors or the tailgate are opened within two minutes of the car being unlocked **with the remote control from outside**, all locks will be automatically relocked. This function prevents you from inadvertently leaving the car unlocked.

For cars with an alarm, see page 91.

### Automatic locking (option)

The doors lock automatically when vehicle speed exceeds 7 km/h and remain locked until a door is opened from the inside or are unlocking using a central locking button.

### Locking/unlocking the tailgate with the remote control

To unlock the tailgate only: Press the button on the remote control (see illustration) **two times slowly within 3 seconds**. If all doors are locked when the tailgate is closed, it remains unlocked and has no alarm function after it is closed. The other doors remain locked and continue to have their alarm function.

To lock the tailgate and set its alarm function once it is closed, press the LOCK button again.

**NOTE!** Automatic relocking:

If you use this button to unlock the tailgate without opening it, it will automatically relock after approx. 2 minutes.

The automatic relocking function will, on the other hand, *not* operate if you open and then shut the tailgate.

### Manual opening of tailgate

Press the opening button on the tailgate.

### When it is dark

#### Approach lighting

Carry out the following **when you approach the car**:

- Press the yellow button on the remote control.

Now the interior lighting, parking lamps, numberplate lighting and door mirror lamps light up (certain models).

### Deadlocks\*

Your car has a special deadlock position which means that the doors cannot be opened from the inside if they are locked. Deadlocks can only be activated from the outside by the driver's door being locked with the key or remote control. All doors must be closed before deadlocks can be activated. The doors then cannot be opened from the inside. The car can only be unlocked from the outside via the driver's door or by using the remote control.

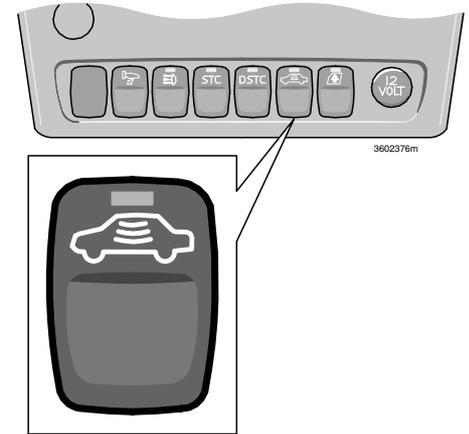
The car cannot be opened by manipulating the door buttons from the outside. Deadlocks are engaged after a 25 second delay once the doors have been closed.



#### **WARNING!**

Do not allow anyone to remain in the car without deactivating the deadlock.

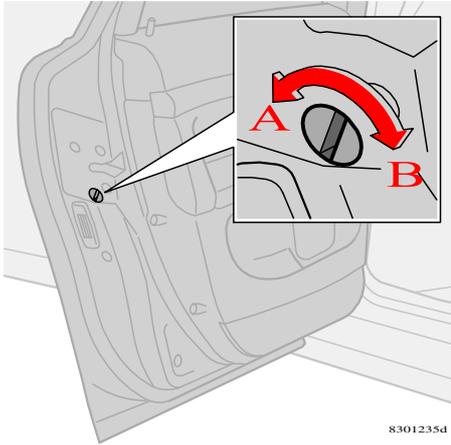
\* Certain countries



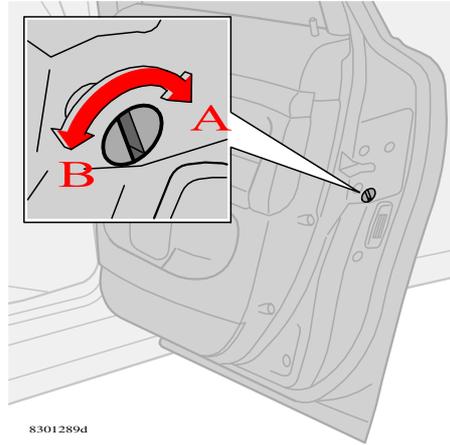
### Temporary deactivation of deadlock function

If someone wishes to remain in the car but you still wish to lock the doors from the outside the deadlocks can be disconnected. From the time the key is turned from position II until you lock the car, or as long as the centre console is supplied with current, you can press the button. The LED in the button then comes on and stays on until you lock the car using the key or remote control. A message is displayed as long as the key remains in the ignition switch. The deadlock is now disconnected. The deadlocks will be activated again next time you switch on the ignition.

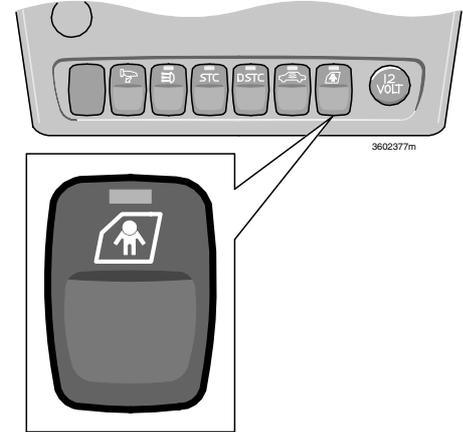
## Child safety lock



*Control for child safety lock - left rear door*



*Control for child safety lock - right rear door*



*Electric child safety catch*

### Mechanical child safety lock - rear doors

The controls for the child safety locks are in the rear edges of the rear doors and are only accessible when the door is open. Use the ignition key to turn the control and thus activate or deactivate the child safety lock.

- A The doors cannot be opened from the inside (twist outwards).
- B The doors can be opened from the inside (twist inwards).



### WARNING!

Remember that in the event of an accident, rear seat passengers cannot open the rear doors from the inside if the child safety locks are activated. **Therefore, keep the lock buttons pulled up while driving!** In the event of an accident, rescue personnel will then quickly be able to get into the car **from the outside**.

**NOTE!** Cars equipped with electric child safety locks do not have mechanical child safety locks in the side doors.

### Electric child safety catch - rear doors (option)

Use the button on the centre console to activate or deactivate the child safety catches in the rear doors. The ignition switch must be in position I or II. When the LED in the button comes on it indicates that the child safety catch is activated. A message will also appear in the display when you activate or deactivate the child safety catches.

**NOTE!** As long as the **electric** child safety catches are activated, the rear doors cannot be opened from the inside.

## The alarm system (option)

When the alarm is connected, it continually monitors all alarm points. The alarm is triggered if...

- ...the bonnet is opened.
- ...the tailgate is opened.
- ...a side door is opened.
- ...the ignition switch is turned with a non-approved key or subjected to force.
- ...a movement is detected in the passenger compartment (if a movement detector is installed - extra equipment).
- ...the car is lifted or towed away (if it is equipped with a tilt detector - extra equipment).
- ...the battery cable is disconnected.
- ...anyone tries to disconnect the siren.

## Activating the alarm

Press the LOCK button on the remote control. A long flash signal from the car's direction indicator confirms that the alarm is active and that **all** doors are closed. In certain markets the key or the switch in the driver's door can be used to alarm the car.

## Automatic arming of the alarm

In certain countries (Belgium, Israel etc.) the alarm is automatically armed after a slight delay if the driver's door is opened and closed but the car is not locked.

## Deactivating the alarm

Press the UNLOCK button on the remote control. Two short flash signals from the direction indicators of the car confirm that the alarm is deactivated. In certain markets, the key can be used to deactivate the alarm.

## Deactivating a triggered alarm

Press the UNLOCK button on the remote control if the alarm sounds and you wish to deactivate it. Two short flashes of the direction indicators are given as confirmation.

## Alarm signals

The audio signal is given from a siren with a reserve battery. Each alarm signal lasts 25 seconds. If the alarm is triggered, all direction indicators flash for 5 minutes or until you deactivate the alarm as described above.

## Automatic alarm reset

If neither the side doors or rear door are opened within two minutes of the alarm being disarmed, and the car is unlocked with the remote control, the car automatically rearms the alarm. The car is simultaneously locked. This function prevents you from accidentally leaving the car unalarmed.

# Alarm

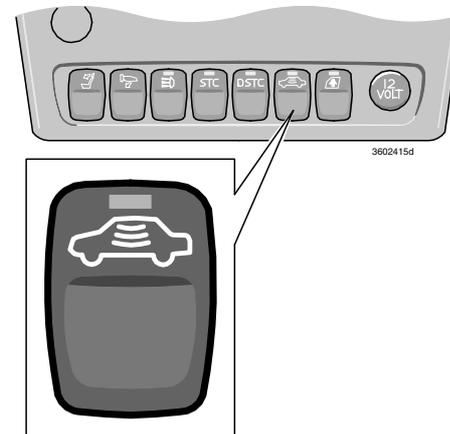
## Status indicator lamp on the dashboard

An indicator lamp (LED) at the top of the dashboard gives a description of the alarm system status:

- Lamp not lit: alarm is deactivated.
- The lamp flashes once every other second: the alarm is armed.
- Lamp flashes quickly, after deactivating the alarm and until the ignition is switched on: the alarm has been triggered.
- If a fault has occurred in the alarm system, a message is shown in the display with instructions for appropriate measures.

## IMPORTANT!

Do not attempt to repair or modify alarm system components. All such attempts can affect terms of insurance.



## Temporary deactivation of detectors

To avoid triggering the alarm inadvertently, for example when leaving a dog in the car or during a ferry crossing, the movement and tilt detectors can be temporarily deactivated. The button can be pressed at any time between the key being turned from position II to the car being locked, or as long as the power to the centre console is on. The LED in the button lights until you lock the car with your key or remote control. A message is displayed as long as the key remains in the ignition lock. The detectors will be reactivated the next time you switch on the ignition. If your car is equipped with deadlocks, these will be simultaneously activated. See page 89.

## Testing the alarm system

### Testing the movement detector for the passenger compartment:

1. Open all windows.
2. Activate the alarm. Alarm activation is confirmed by the LED flashing slowly.
3. Wait 30 seconds.
4. Test movement detector in the passenger compartment by lifting a bag or similar from the seat. The alarm should now sound and flash.
5. Deactivate the alarm by unlocking with the remote control.

### Testing the doors:

1. Activate the alarm.
2. Wait 30 seconds.
3. Unlock with the key on the driver's side.
4. Open one of the doors. The alarm should now be triggered.
5. Repeat the test for the other door.
6. Deactivate the alarm by unlocking with the remote control.

### Testing the bonnet:

1. Get into the car and deactivate the movement detector as described on page 92.
2. Arm the alarm (remain in the car and lock the doors with the button on the remote control).
3. Wait 30 seconds.
4. Open the bonnet with the handle under the dashboard. The alarm should now sound and flash.
5. Deactivate the alarm by unlocking with the remote control.

### Testing the tailgate (if the tailgate has a lock cylinder):

1. Activate the alarm.
2. Wait 30 seconds.
3. Unlock with the key on the driver's side.
4. Open the tailgate. The alarm should now sound and flash.
5. Deactivate the alarm by unlocking with the remote control.

If the alarm system does not work correctly, have the car examined by an authorised Volvo workshop.

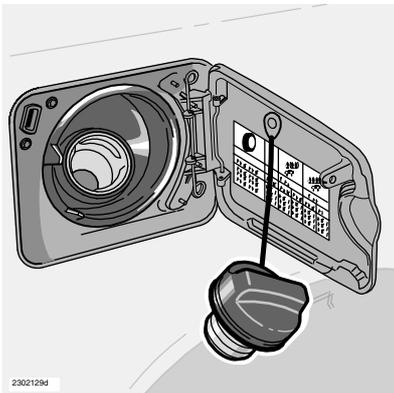


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## Starting, driving, gearshifting

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### Fuel filling

The fuel cap is inside the fuel filler flap on the right rear wing.

In high exterior temperatures there can be overpressure in the fuel tank. Open the filler cap slowly.

Do not overfill the fuel tank. **A maximum of one automatic cut out by the fuel pump nozzle is recommended!** Too much fuel at high outside temperatures can cause the tank to overflow!

After refuelling, replace the fuel cap and turn until one or more clicks is heard.

### Opening fuel tank filler cover

The fuel filler flap is unlocked and can be opened when the car is unlocked.

**NOTE!** When the car is locked from outside, the fuel filler flap remains unlocked for a further 10 minutes.

### Start the engine as follows (Petrol)

- 1 Apply the parking brake (handbrake).
- 2 **Automatic gearbox:** Gear selector in P or N position.  
**Manual gearbox:** Gear lever in neutral and the clutch pedal completely depressed. This is especially important in severe cold.
- 3 Turn the ignition key to the start position. If the engine does not start within 5-10 seconds, release the key and try again.

### Refuelling

**NOTE!** Never add cleaning additives yourself unless specifically recommended to do so by a Volvo workshop.

### Important!

Petrol-powered cars must always be refuelled with unleaded petrol so as not to damage the catalytic converter.

### WARNING!

Always **switch off** your mobile telephone during refuelling - the ring signal can cause sparks which may ignite petrol fumes and lead to fires or personal injury.

### How to start the engine (Diesel)

- 1 Apply the parking brake (handbrake).
- 2 **Automatic gearbox:** Gear selector in P or N position.  
**Manual gearbox:** Gear lever in neutral and the clutch pedal completely depressed. This is especially important in severe cold.
- 3 Turn the ignition key to the driving position. A control symbol in the combined instrument panel shows that the engine is pre-heating. Turn the key to the start position when the indicator symbol has gone out.

### Refuelling with diesel oil

At low temperatures ( $-5^{\circ}\text{C}$  to  $-40^{\circ}\text{C}$ ) the diesel oil can precipitate paraffin, which makes the engine difficult to start. Make sure that special winter fuel is used during the cold period of the year.

**NOTE!** Depending on the engine temperature when starting, the idling speed with a cold start is - for a short period - higher than normal for some engine types.

The reason for this is Volvo's ambition to minimise exhaust emissions by bringing up the engine's exhaust purification system to its correct working temperature as quickly as possible.

### Drive with anticipation

Economical driving results from driving gently with anticipation and adapting your driving style and speed to the situation.

Keep in mind the following:

- Drive the engine to operating temperature as soon as possible! That is to say: do not let the engine idle, but drive with a light load as soon as you can.
- A cold engine consumes more fuel than a warm one.
- Avoid driving short distances where the engine never has time to reach operating temperature.
- Drive gently! Avoid unnecessary quick accelerations and heavy braking.
- Do not drive with unnecessary, heavy loads in the car.
- Do not drive with winter tyres when the roads are clear and dry.
- Remove the load carrier when it is not in use.
- Do not open side windows unnecessarily.

### Immobilizer

Use the vehicle key. The ignition key must not hang with other keys on the same key ring when starting the car.

### Speed-dependent power steering (option)

If the car is equipped with speed-dependent power steering it is more easily steered at low speeds to facilitate parking or the like.

When speed is increased, the steering force will be adjusted in order to provide the driver with an improved feeling for the road.

### Do not drive with tailgate open!

If you drive with the tailgate open, some of the exhaust gases and therefore poisonous carbon monoxide could be sucked into the car through the cargo compartment. If you are forced to drive with the tailgate open over a shorter distance carry out the following:

- Close all windows.
- Distribute the air between the windscreen and floor while running the fan at high speed.

### The new car - slippery road surface

Driving on a slippery road may feel different depending on whether you choose a car with a manual or an automatic gearbox. Practice skid driving under controlled conditions so that you know how your new car reacts.

### Do not overload the battery

The electrical functions in the car load the battery to varying degrees. Avoid having the ignition key in position II when the engine is off. Use position I instead, as less power is consumed. The 12-volt socket in the cargo compartment supplies power even when the ignition key is removed.

Examples of functions which consume a lot of power:

- ventilation fan
- windscreen wipers
- audio system
- parking lamps.

Also take note of different accessories that load the electrical system. Do not use functions that consume a lot of current when the engine is switched off. A text is shown on the display in the combined instrument panel if battery voltage is low and remains until the engine has started.

The energy economy function shuts down certain functions or reduces the load on the battery, e.g. by lowering ventilation fan speed and switching off the audio system.

Charge the battery by starting the engine.

## Starting the engine

### Do not allow the engine and cooling system to overheat

Under certain conditions, e.g. when driving in hilly terrain and with a heavy load, especially in warm weather, there is a risk of the engine and cooling system overheating.

To avoid the cooling system overheating:

- Drive at low speeds if driving with a trailer up a long incline.
- Switch off the air conditioning temporarily.
- Avoid letting the engine idle.
- Do not turn the engine off immediately when you stop, if the car has been driven hard.
- Remove any auxiliary lamps from in front of the grille if driving in extremely high temperatures.

To avoid the engine overheating:

Do not exceed engine speeds of 4500 rpm if driving with a trailer or caravan in hilly terrain. The oil temperature can become too high.

### Automatic gearbox

#### Adaptive system

The gearbox is controlled by what is known as an adaptive system. The system continually monitors how the gearbox is behaving and senses every gear change for optimum change quality.

#### Lock-up function

The gears have a lock-up function (locked gears), which gives better engine braking and lower fuel consumption.

### Safety systems

Cars with automatic gearbox have special safety systems:

#### Keylock

To remove the ignition key, the gear selector must be in the P position. The key is locked in all other positions.

#### Park position (P)

Stationary car with engine running:

Hold your foot on the brake pedal when moving the gear selector to another position.

### Shiftlock

#### Park position (P)

The brake pedal must be depressed to move the gear selector from position P to other gear positions when the ignition key is in position I or II.

#### Neutral position (N position)

The brake pedal must be depressed to move the gear selector from position N to other gear positions when the ignition key is in position I or II.

### Cold start

When starting in cold temperatures, gear shifts may feel harder. This is due to the viscosity of the transmission fluid at low temperatures.

To **minimise** engine emissions, the gearbox shifts up later than normal if the engine has been started at low temperatures.

When the engine is cold, the gearbox shifts gears at higher revs. This allows the catalytic converter to reach normal operating temperature more quickly.

### ”Kick-down”

When the accelerator is pressed all the way to the floor, beyond the position normally regarded as full acceleration, a lower gear is immediately engaged. This is known as kick-down.

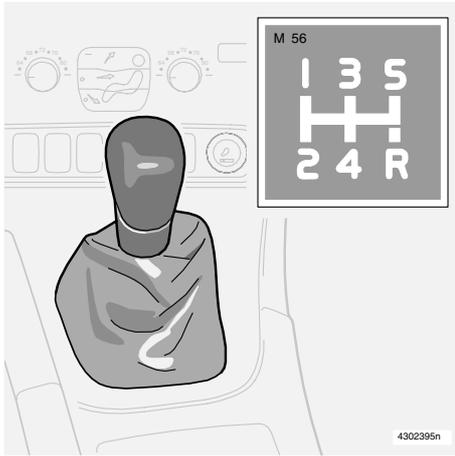
When maximum speed for this gear is reached, or if the accelerator is released from the kick-down position, the gearbox automatically changes up.

Kick-down is used when maximum acceleration is needed, such as for overtaking.

To prevent over-revving, the gearbox control program has a protective downshift inhibitor.

The kick-down function cannot be used in the manual\* positions. Return to automatic position D.

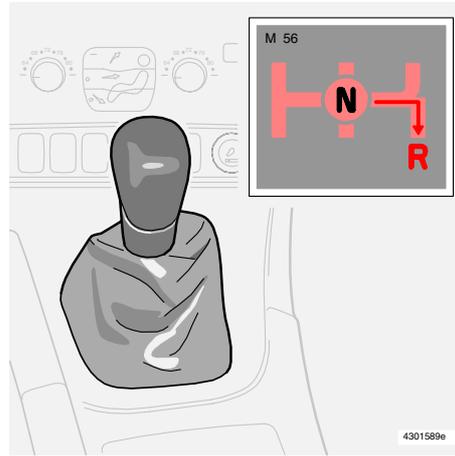
\* Refers to Geartronic.



## Gear positions, 5-speed

Depress the clutch pedal fully with every gear change. Remove your foot from the clutch pedal between changes! Be sure to follow this shifting pattern.

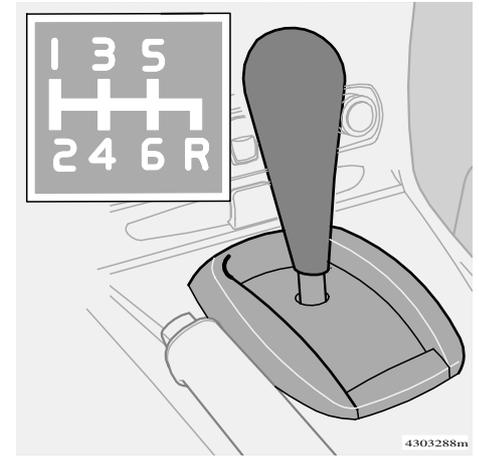
For the best possible fuel economy, use the highest gear possible as often as possible.



## Reverse gear detent

**Only engage reverse gear when the car is stationary.**

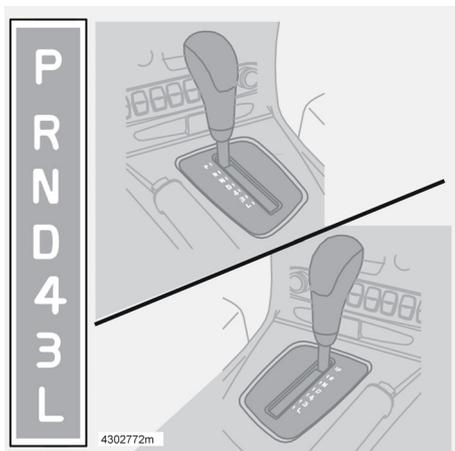
To put the car into reverse, the lever must first be moved to neutral position (between 3rd and 4th gear). Reverse gear cannot be selected directly from 5th gear because of the reverse gear inhibitor.



## Gear positions, 6-speed

Depress the clutch pedal fully with each gear change. Remove your foot from the clutch pedal between gear changes! Follow the appropriate shifting pattern.

For the best possible fuel economy, use the highest gear possible as often as possible.



*Gear selector positions*

### P – Parking

Select this position when you wish to start the engine or park the car.

**The car should be stationary when you select position P!**

In position P the transmission is mechanically locked. Always apply the parking brake when parking!

### R – Reversing position

**The car should be stationary when you select R!**

### N – Neutral position

N is the neutral position. The engine can be started, but no gear is selected. Apply the parking brake when the car is stationary with the **gear lever in N.**

### D – Driving position

D is the normal driving position. The car automatically shifts between the different gears of the gearbox based on the level of acceleration and speed. The car should be stationary when selecting D from position R.

### 4 – Low gear

Shifting up and down between the 1st, 2nd, 3rd, and 4th occurs automatically.

**The 5th gear will not be engaged.**

Position 4 can be used:

- for mountain driving
- when driving with a trailer
- to increase engine braking

### 3 – Low gear

Shifting up and down between 1st, 2nd and 3rd occurs automatically.

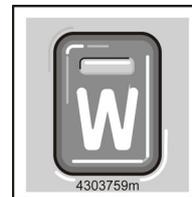
**The 4th gear will not be engaged.**

Position 3 can be used:

- for mountain driving
- when driving with a trailer
- to increase engine braking

### L – Low gear position

Select L if you wish to drive in 1st or 2nd. Position L gives the best engine braking for mountain driving, etc.



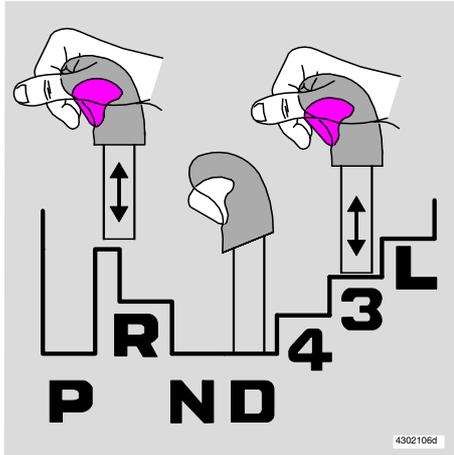
### W - Winter

The W button by the gear selector engages and disengages the winter programme W. The symbol W is shown in the combined instrument

panel when the winter programme is activated. The winter programme starts the gearbox in 3rd gear to make it easier to pull off on slippery roads. When the programme is engaged, lower gears are activated only by kick-down.

The W programme can only be selected in position D.

\* V70R with Geartronic has an S button instead.



*Gear selector, automatic gearbox*

## Mechanical gear selector inhibitor

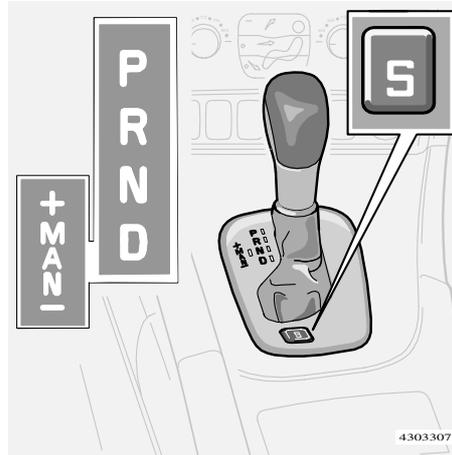
The gear selector can be moved freely between N and D. Other positions are locked with a latch that is released with the inhibitor button on the gear selector.

Press the inhibitor button to move the lever forward or back between the different gear positions.

## Geartronic\*

V70R with Geartronic has an S button by the gear selector instead of the W button. The S button is used to activate the sport programme

\*V70 R has Geartronic as standard.



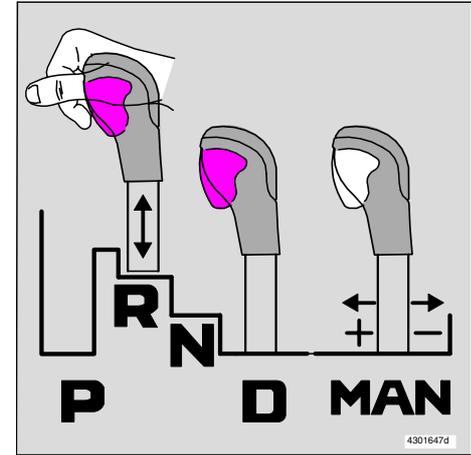
*Geartronic*

of the gearbox. An LED in the button lights to indicate the sport programme is active. The S programme provides sportier characteristics. It allows higher engine speed for the gears while responding more quickly to acceleration. During active driving, the use of a lower gear is prioritised, leading to a delayed upshift.

## Manual positions, Geartronic

Move the gear selector to the right to shift from automatic driving position D to manual mode. To shift from the MAN position to automatic driving position D, move the gear selector left to position D.

3rd gear is the highest gear that can be used when starting.



*Gear selector, Geartronic*

## While driving:

The manual gearshift mode can be selected at any time while driving. The engaged gear is locked until you choose another gear. The car will only shift down automatically if you slow down to a very low speed.

If the gear selector is moved to - (minus) the car changes down a gear and engine brakes at the same time. If the gear selector is moved to + (plus) the car changes up a gear. The kick-down function cannot be used in manual mode.

## All-Wheel Drive (four-wheel drive), Active chassis, FOUR-C

### All-Wheel Drive (AWD) (option)

All-wheel drive is always engaged.

All-wheel drive means that all four road wheels are driven at the same time. Power is automatically distributed between front and rear wheels. An electronically controlled clutch system distributes the power to the pair of wheels that grips best. This provides the best traction and prevents wheel spin.

Under normal driving conditions, the majority of power is transmitted to the front wheels.

The greater traction improves driving safety in rain, snow and icy conditions.

### Active chassis – FOUR-C\* (option)

The car is equipped with an extremely advanced active chassis system - Continuously Controlled Chassis Concept - that is regulated electronically. System functions are based on a number of sensors which continuously adjust vehicle movements and reactions, for example vertical and lateral acceleration, vehicle speed and wheel movement.

The FOUR-C control unit analyses data from the sensors and performs the necessary shock absorber setting adjustments up to 500 times per second. This results in extremely fast and accurate individual shock absorber control, which explains how chassis characteristics can be varied.



Chassis characteristics can be modified at any time while driving, when the nature of the road changes or when you desire a change in driving style. This change occurs in a matter of milliseconds.

The effect produced by pressing the accelerator is linked to your choice of chassis characteristics.

#### Comfort

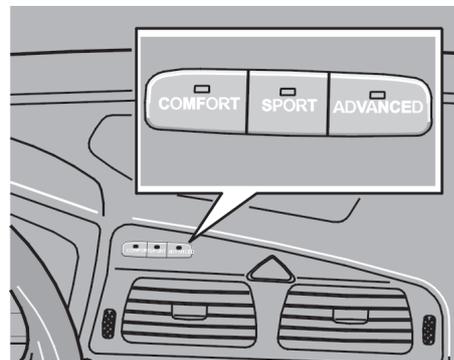
Comfort adjusts the chassis setting so that the body is insulated from uneven sections of the road surface, which allows for better glide. Shock absorption is softer and body movements are minimal. This setting is recommended for long-distance driving or driving on slippery road surfaces.

When the ignition is switched off in Comfort setting, the chassis will resume the same mode when the car is re-started.

#### Sport

In Sport mode, steering responses are quicker than in Comfort mode. Damping is harder and the body follows the road surface to minimise rolling during quick cornering. The car feels sportier.

When the ignition is switched off in Sport setting, the chassis will resume the same mode when the car is re-started.



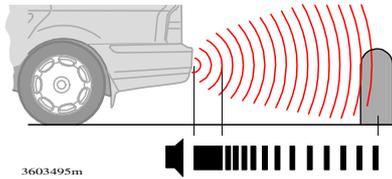
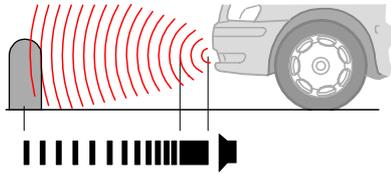
Switch V70 R

#### Advanced\*

With the Advanced setting, shock absorber movements are minimal and optimised for maximum traction and minimal roll when cornering. This setting is recommended for flat, even road surfaces only. Response to acceleration is more direct and the automatic gearbox shift schedule is sportier.

When the ignition is switched off in Advanced setting, the chassis will resume the same mode when the car is re-started.

\* Applies to V70 R



3603495m

*Parking assistance, front and rear*

## General

Parking assistance is used as an aid to parking. A signal indicates the distance to an object. The frequency of the signal increases as you come closer to an object in front\* of or behind the car. The tone becomes constant at a distance of about 30 cm. If there are objects within this distance both behind and in front\* of the car, the signal alternates between front and rear speakers. If the volume of another sound source from the audio system is high, this is automatically lowered. The system is always activated when the car is started.

\*Provided that parking assistance is mounted both front and rear.

## **WARNING!**

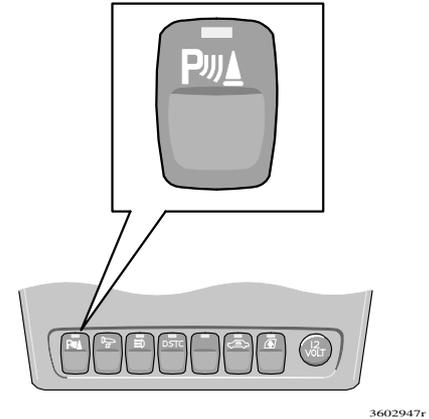
Parking assistance does not relinquish the driver's own responsibility during parking. The sensors have blind spots where objects cannot be detected. Be aware of children and animals near the car.

### Front parking assistance

The measurement area straight in front of the car is approx. 0.8 m. The text message PARK ASSIST ACTIVE appears in the audio display when the sensors react to an obstacle in front of the car. Auxiliary lamps cannot be installed together with parking assistance because the sensors will react to the auxiliary lamps.

### Rear parking assistance

The measurement area straight behind the car is approx. 1.5 m. The text message PARK ASSIST ACTIVE appears in the audio display when reverse gear is engaged. The system must be deactivated when driving with a trailer, bike carrier on the towbar or the like as this would trigger the sensors. Rear parking assistance is deactivated automatically when towing a trailer if a Volvo genuine trailer cable is used.



3602947r

### Deactivating and reactivating parking assistance

Parking assistance can be deactivated with the button in the switch panel. The LED in the switch goes out. Parking assistance is reactivated when the switch is turned on and the LED illuminates.

### Front parking assistance

The front parking assistance is active at speeds of below 15 km/h, even when reversing. The signal comes from the front speakers.

### Rear parking assistance

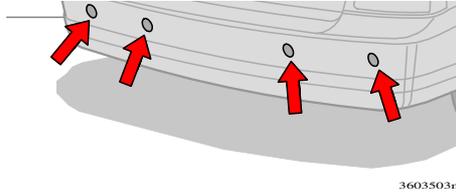
Rear parking assistance is activated when reverse gear is engaged. The signal comes from the rear speakers.

## Parking assistance

### Fault indicator



The information symbol shines with a steady glow. PARK ASSIST SERVICE REQUIRED is shown in the information display in the centre of the combined instrument panel together with the symbol.

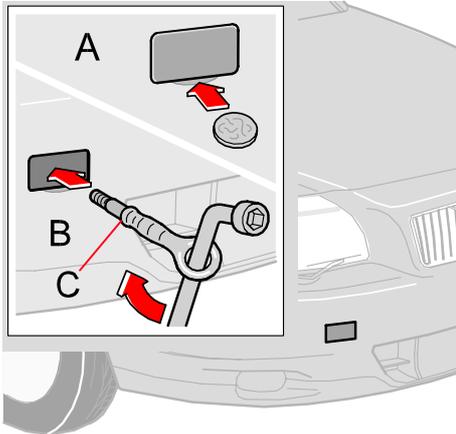


*Parking assistance sensors*

### Cleaning the sensors

The sensors must be cleaned regularly to ensure that they work properly. Clean them with water and car shampoo.

The sensors may react if covered by ice and snow.



Towing eye, front

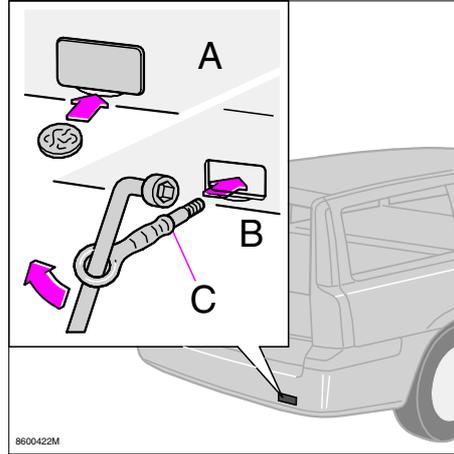
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## If you need to be towed

- Unlock the steering wheel lock so that the car can be steered.
- **Keep in mind the highest legally permissible speed.**
- Remember that the brake and power steering servos do not function with the engine is switched off! You must exert approximately five times more pressure on the brake pedal and steering is considerably harder than usual.
- Drive gently. Keep the towline taut to avoid unnecessary jerking.

### For automatic gearboxes

- The gear selector should be in position N.
- Maximum permitted speed for automatic gearbox: 80 km/h.



Towing eye, rear

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Maximum permitted distance: 80 km (50 miles).

- Cars equipped with automatic gearbox must only be towed facing forward.
- The engine cannot be towed to start (bump started). See "Jump starting" on the next page.

## To tow start (bump start) the engine

If you tow start a car with a manual gearbox, the three-way catalytic converter (TWC) can be damaged. Cars with automatic gearboxes cannot be tow started. Use a booster battery if the battery is discharged.

## Towing eye

The towing eye is located in the tool kit in the cargo compartment. You must screw the towing eye into place before towing. The sockets and covers for the towing eye are located on the right-hand side of each bumper.

Remove the cover as follows:

- Undo the cover\* by carefully prising in the groove with a coin or the like.
- Screw the towing eye securely into place up to the flange (C). You can use a wheelbrace.

After use, unscrew the towing eye and refit the cover.

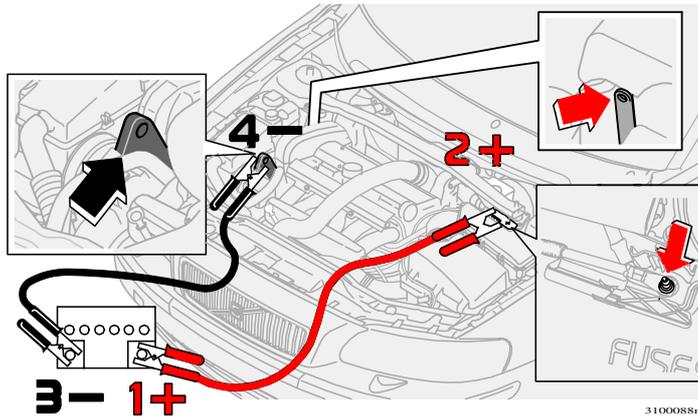
## Towing

**NOTE!** The towing eye may only be used for towing on the road, not for salvage after driving into a ditch or similar. Professional help should be called for salvage towing.

\* The method of opening the cover may vary depending on the variant.

\*\* Certain models: To be able to screw the towing eye into place, you must first loosen a plastic screw in the console for the rear towing eye. Use the flange of the tool bag to loosen the plastic screw. Rescrew the plastic screw after use.

## Jumpstarting



*Lifting eye - diesel engine  
(under bonnet on right in  
engine bay)*

### **⚠ WARNING!**

Batteries can generate oxyhydrogen gas, which is highly explosive. One spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode.

The battery contains sulphuric acid, which can cause serious burns.

If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical attention immediately.

### **Jumpstarting with a booster battery is as follows:**

If for some reason the battery in your car is discharged, you can “borrow” current from a spare battery or another car’s battery to start the engine. Always check that the clamps are secure so that there are no sparks during the start attempt.

To avoid the risk of explosion, we recommend you do exactly as follows.

- Turn the ignition key to position 0.
- Ensure that the booster battery has **12 volt current**.
- If the booster battery is in another car, stop the engine of that car and make sure the cars are not touching.
- Connect the red cable to the booster battery’s positive terminal (1+) and the red connection in your car’s engine by (2+).

The clamp should be attached to the contact point located under a little black cover with a plus sign on it. The cover is connected to the cover of the fuse box.

- Connect one end of the black cable to the booster battery’s negative terminal (3).
- Connect the other end of the black cable to the lifting eyes on you car. No. 4 in the illustration.
- Start the engine of the “booster car”. Let the engine run a few minutes at a speed slightly higher than idle, 1500 rpm.
- Start the engine of the car with the discharged battery.
- **NOTE! Do not move the clamps during the start attempt (risk of spark buildup).**
- Remove the clamps in reverse order.

### Driving with trailer

- The towing bracket on the car must be of an approved type. Your Volvo dealer can advise you as to which towing bracket to use.
- Distribute the load in the trailer so that the weight on the towing bracket is approximately 50 kg for trailer weights under 1200 kg and approximately 75 kg for trailer weights over 1200 kg.
- Increase tyre pressure to correspond to the pressure for full load. See the tyre pressure table!
- Clean the towing bracket regularly and grease the towball\* and all moving parts to prevent unnecessary wear.
- Do not drive with a heavy trailer when your car is brand new! Wait until it has gone at least 1000 km (620 miles).
- The brakes are loaded much more than usual on long and steep downhill slopes. Downshift to a lower gear and adjust your speed.
- If the car is driven with a heavy load in a hot climate, the engine and gearbox may overheat. The temperature gauge in the combined instrument panel goes into the red zone when the car overheats. Stop and let the engine idle a few minutes.
- If the car overheats, the air conditioning system can be temporarily switched off.
- The gearbox reacts with a built-in protection function if the car overheats. See the message in the display!
- The engine is loaded more heavily than usual when driving with a trailer.
- For reasons of safety, you should not drive faster than 80 km/h (50 mph), even if the laws of certain countries permit higher speeds.
- The highest permissible weight for a trailer without brakes is 750 kg.
- If you park with a trailer, always move the gear selector to the P position (automatic transmission), or engage a gear (manual gearbox). If you park on steep hills always put chocks under the wheels.
- Avoid driving with trailer weights above 1200 kg on inclines greater than 12%. You should not drive with a trailer on inclines above 15%.

### Driving with trailer - automatic transmission

- When parking on a slope you should apply the parking brake before moving the gear selector to the P position. When starting on a slope you should first move the gear selector to the driving position and then release the parking brake.
- Select an appropriate low gear position on the gearbox when driving on steep slopes or if driving slowly. In doing so, you prevent the gearbox from changing up if you have an automatic transmission. The gearbox oil will be cooler.
- If you have a Geartronic transmission, do not use a higher manual gear than what the engine can "handle". It is not always economical to drive in high gears.

**NOTE!** Some models must be fitted with an oil cooler for the automatic transmission when driving with a trailer. You should therefore check with your closest Volvo dealer about just your car if a towbar has been fitted at a later date.

\* Does not apply to ball hitch with vibration damper.

## Driving with braked trailer

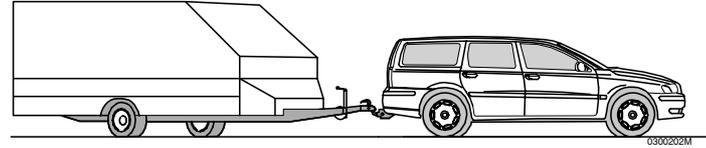
**NOTE! The following are the highest trailer weights permitted by the Volvo Car Corporation. Remember that national traffic regulations may further limit trailer weight and speed. The towbar may be certified for higher tow weights than the car should tow.**

Maximum permitted trailer weight for braked trailer	Recommended ball pressure
0-1200 kg.....	50 kg
1201-1600 kg.....	75 kg
1601-1800 kg.....	75 kg



### **WARNING!**

If you do not follow the given recommendations, the trailer and car may be difficult to control during evasive manoeuvres and braking, which can be dangerous to you and others on the road.



### **Level control**

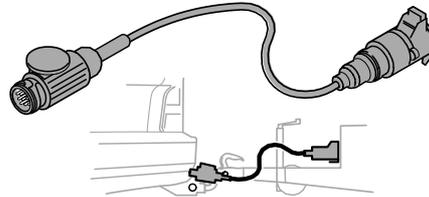
If your car is equipped with automatic levelling, the rear suspension always retains the correct ride height regardless of the load. When the car is stationary, the rear suspension sinks, which is completely normal. When starting with a load, the level is pumped up after a certain distance.

## Towbars

The towball must be cleaned and greased regularly. If a towball hitch with vibration damper is used, it is not necessary to grease the towball.

If the car is equipped with a detachable towbar, follow the towball mounting instructions carefully. See page 111.

**NOTE!** Always remove the towball section after use. Store it in the cargo compartment.



IMG-201504

### **WARNING!**

Be sure to attach the trailer's safety cable to the correct place.

### **WARNING!**

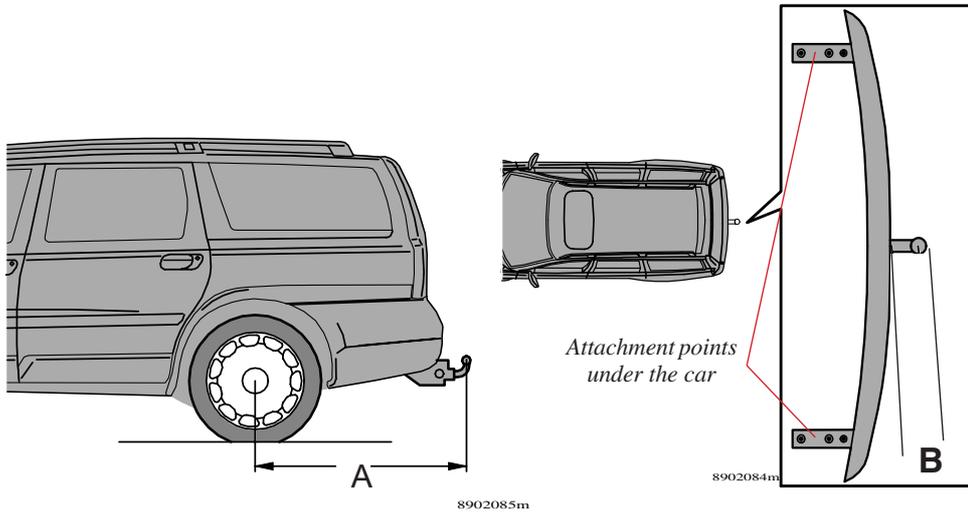
If the car is fitted with a Volvo detachable towbar:

- Follow the towball mounting instructions carefully.
- The towball must be locked with the key before driving off.
- Check that the indicator window shows green.

### **Trailer cable**

An adapter is required if the car's towbar has a 13-pin connector and the trailer has a 7-pin connector. Use an adapter cable approved by Volvo. Make sure the cable does not drag on the ground.

# Towing bracket



## Distance A above:

### Fixed tow hitch

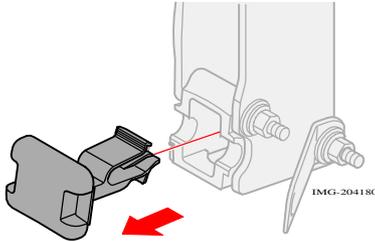
V70/V70 AWD:	1094 mm
XC70:	1125 mm

Max. ball pressure: 75 kg

## Distance B above:

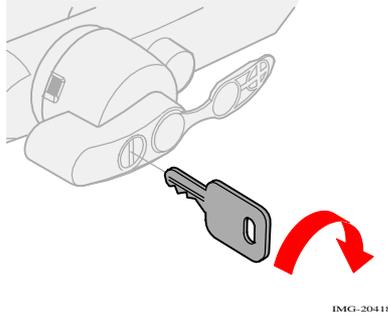
V70/V70 AWD:	70 mm
XC70:	70 mm

## Detachable towbar – mounting the ball section

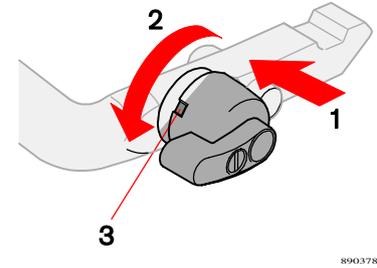


### Mounting the ball section

1. Remove the guard plug.

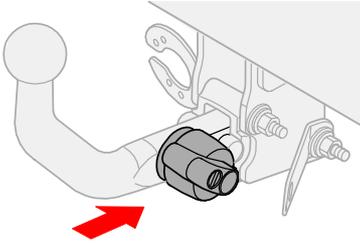


2. Ensure that the mechanism is in the unlocked position by turning the key clockwise.



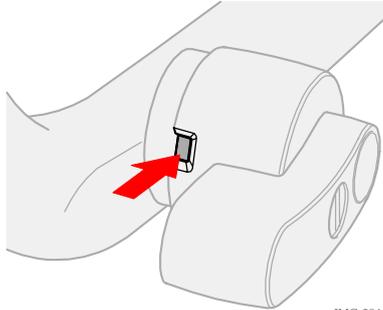
3. Check that the indicator window (3) shows red. If the window does not show red, press in (1) and turn the locking wheel anticlockwise (2) until there is an audible click.

## Detachable towbar – mounting the ball section



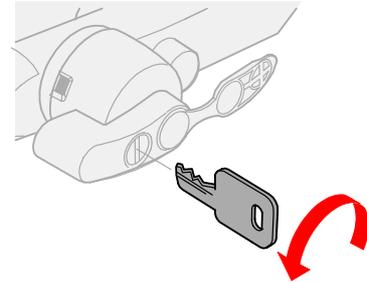
IMG-20413

4. Insert the towball section until there is an audible click.



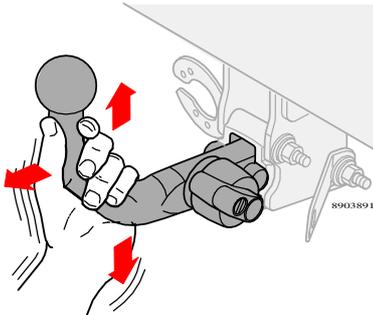
IMG-20414

5. Check that the indicator window shows green.



IMG-20418

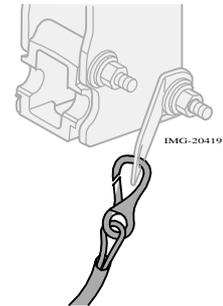
6. Turn the key anticlockwise to the locked position. Remove the key from the lock.



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7. **NOTE!** Check that the towball section is secure by pulling it up, down and back.

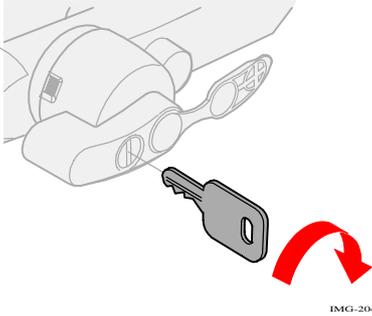
If the towball section is not fitted correctly then it must be removed and refitted in accordance with the previous steps.



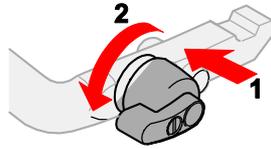
IMG-204191

**NOTE!** The trailer's safety cable must be connected to the attachment on the towbar.

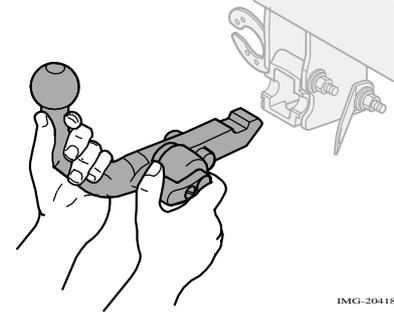
## Detachable towbar – mounting the ball section



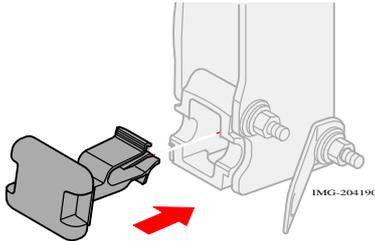
1. Insert the key and turn it clockwise to the unlocked position.



2. Push in the locking wheel and turn it anticlockwise until there is an audible click.

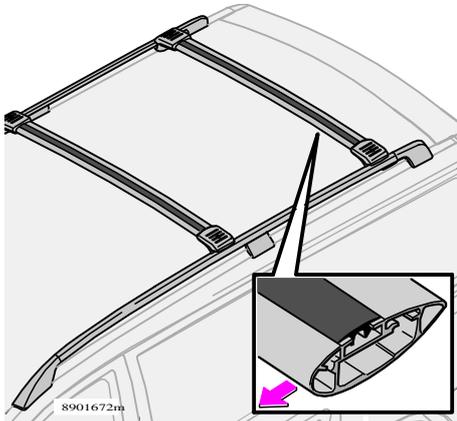


3. Turn the locking wheel down fully until it comes to a stop. Hold it in this position while pulling the towball rearward and upward.



4. Insert the guard plug.

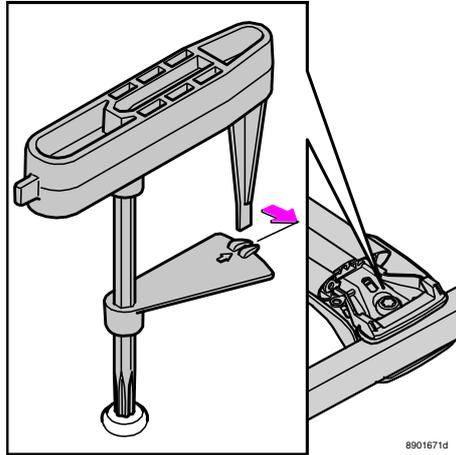
## Roof loads – roof rails and the load carriers



### Position of load carriers

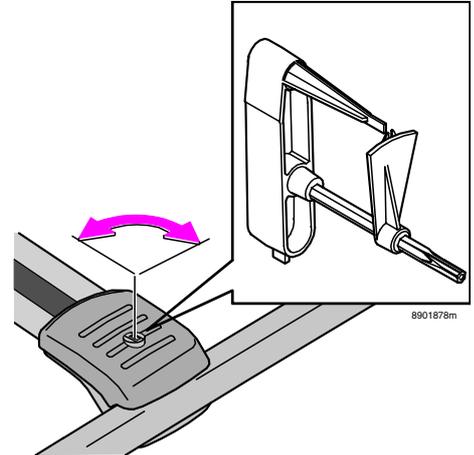
Make sure that the load carriers are placed the right way round on the roof rails. The load carriers can be placed anywhere along the roof rail.

When driving *without* a roof load, the front load carrier should be positioned about 50 mm in front of the centre roof mounting and the rear load carrier positioned about 35 mm in front of the rear roof mounting (illustrated above). This is to keep wind noise to a minimum.



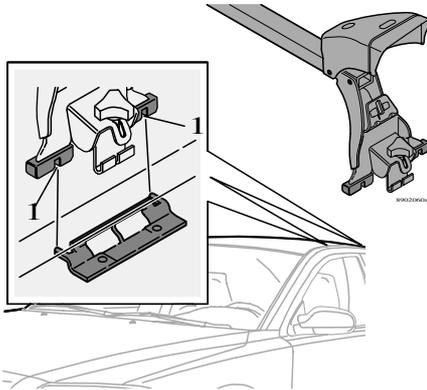
### Fitting the load carriers

Make sure that the load carrier is pressed firmly out against the roof rail. Screw the load carrier in place. Use the supplied torque wrench, tightening to the mark on the wrench (corresponding to 6 Nm). See illustration!



### Load carrier cover

Use the lug on the on the torque wrench (see illustration) or the ignition key to unscrew or secure the cover. Turn a quarter turn.



Load carrier attachment points

## Loading

### General

Load capacity is affected by extra accessories mounted on the car, such as a towbar, the load on the towball (75 kg with trailer hitched), load carriers and roof box, as well as the passengers' combined weight. The load capacity of the car is reduced by the number of passengers and their weight.

### **WARNING!**

The car's driving characteristics change depending on how heavily it is loaded and how the load is distributed.

### Fitting the load carriers

1. Make sure the load carrier is placed in the right direction (see the marking on the decal under the cover).
2. Fit the guide pins into the guide holes (1).
3. Carefully lower the bracket on the other side to the roof.
4. Screw the knob up a bit.  
Press the knob against the roof bracket catch the hook **in the roof bracket** under the roof rail.
5. Screw the load carrier in place.
6. Fit the guide pins of the other brackets into the guide holes.
7. Screw the load carrier in place.
8. Check that the hook is properly secured in the roof bracket.
9. Tighten the knobs alternately until the carrier feels secure.
10. Replace the cover.
11. **Regularly check that the knobs are securely tightened.**

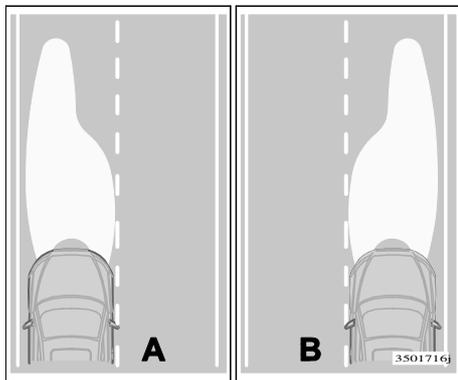
### If you use load carriers

- To avoid damaging your car and to achieve the best level of safety when driving, we recommend that you only use load carriers that Volvo has specially designed for your car.
- **Check periodically that the load carriers and load are properly secured.** Lash the load securely with suitable straps.
- Distribute the load evenly over the load carriers. Do not load lopsidedly. Place the heaviest items at the bottom.
- Keep in mind that the car's wind resistance and fuel consumption increase in proportion to the size of the load.
- Drive gently. Avoid quick accelerations, heavy braking and taking curves hard.

### **WARNING!**

Load no more than 100 kg on the roof, inclusive of the load carriers or roof box.  
The car's centre of gravity and driving characteristics are altered by roof loads.

## Adjusting the headlamp beam pattern



A. Headlamp beam pattern for left-hand traffic  
B. Right-hand traffic

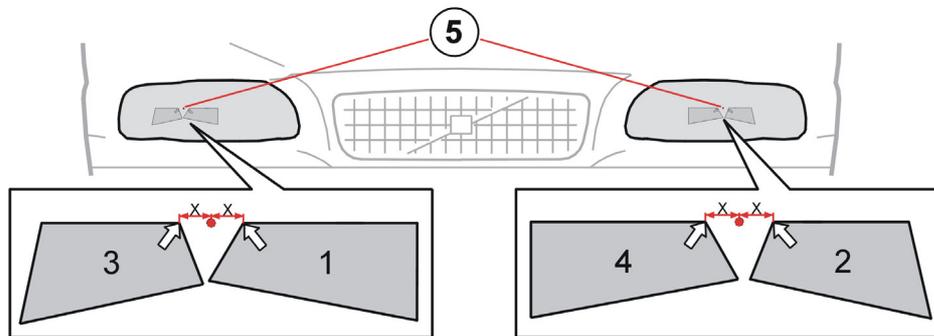
### Correct beam pattern for left or right-hand traffic

So as not to dazzle oncoming drivers, the headlamp beam pattern can be altered by masking the headlamps. The quality of the beam pattern may not be as good.

### Headlamp masking

Copy the templates and transfer the pattern to a self-adhesive, waterproof material such as opaque tape or the like.

The mask is positioned using the dot (5) in the headlamp lens as a reference point. The reference measurement (X) indicates the distance from the dot (5) to the corner of the mask marked with an arrow.



Location of headlamp masks on halogen headlamps  
- 1 and 2 = LHD variant, 3 and 4 = RHD variant

After copying the templates located on the next page, check the measurements so that the reference measurements cover enough of the beam pattern.

### Halogen headlamps, LHD variant

Copy templates 1 and 2. Check the measurements to ensure they are correct. Transfer the template to a self-adhesive, waterproof material and cut it out.

#### Reference measurement:

Template 1.) (3) = 70 mm, (4) = 40 mm  
Distance to dot in headlamp lens: 5=13 mm.  
Template 2.) (6) = 55 mm, (7) = 40 mm  
Distance to dot in headlamp lens: (8) = 18 mm.

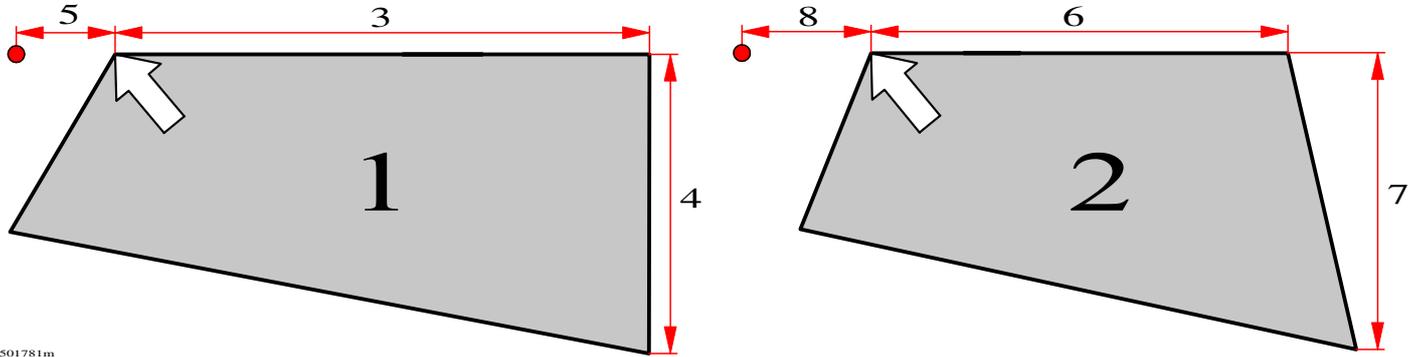
### Halogen headlamps, RHD variant

Copy templates 3 and 4. Check the measurements to ensure they are correct. Transfer the template to a self-adhesive, waterproof material and cut it out.

#### Reference measurement:

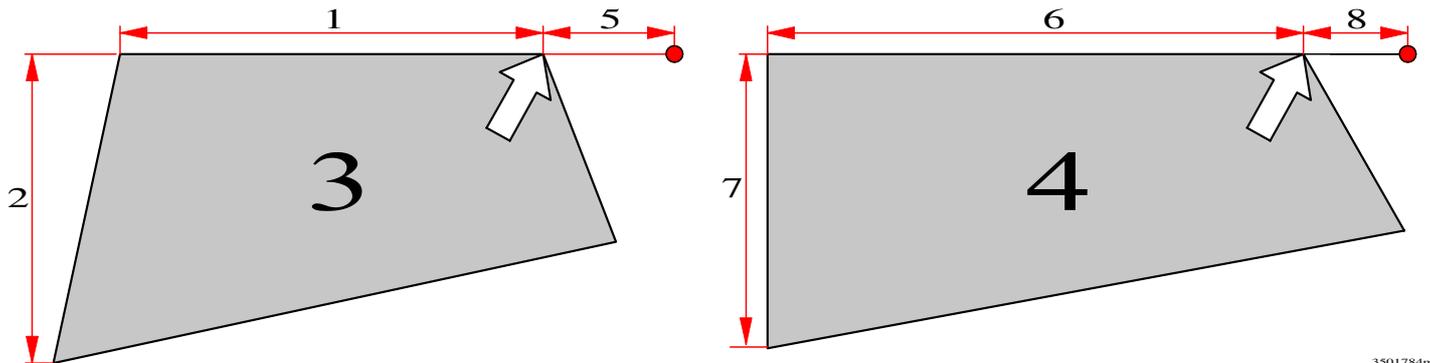
Template 3.) (1) = 55 mm, (2) = 41 mm  
Distance to dot in headlamp lens: (5) = 17 mm.  
Template 4.) (6) = 70 mm, (7) = 39 mm  
Distance to dot in headlamp lens: (8) = 14 mm.

Masking templates for halogen headlamps, LHD variant



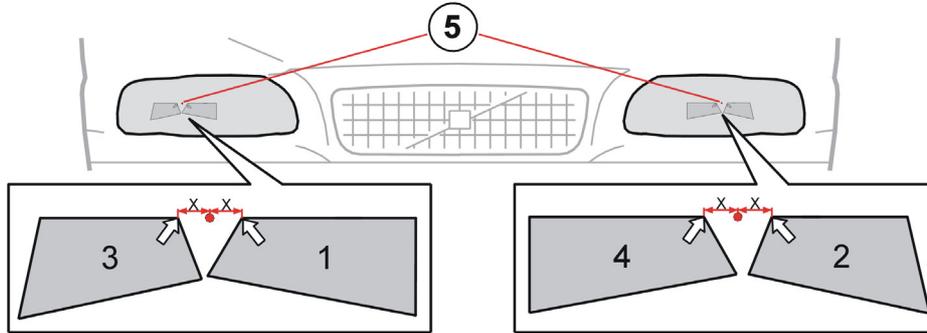
3501781m

Masking templates for halogen headlamps, RHD variant



3501784m

## Adjusting the headlamp beam pattern



3501783m

*Location of headlamp masks on Bi-Xenon headlamps - 1 and 2 = LHD variant, 3 and 4 = RHD variant*

### Headlamp masking

Copy the templates and transfer the pattern to a self-adhesive, waterproof material such as opaque tape or the like.

The mask is positioned using the dot (5) in the headlamp lens as a reference point. The reference measurement (X) indicates the distance from the dot (5) to the corner of the mask marked with an arrow.

After copying the templates located on the next page, check the measurements so that the reference measurements cover enough of the beam pattern.

### Bi-Xenon headlamps, LHD variant

Copy templates 1 and 2. Check the measurements to ensure they are correct. Transfer the template to a self-adhesive, waterproof material and cut it out.

#### Reference measurement:

Template 1.) (3) = 56 mm, (4) = 43 mm  
Distance to dot in headlamp lens: (5) = 29 mm.  
Template 2.) (6) = 56 mm, (7) = 42 mm  
Distance to dot in headlamp lens: (8) = 6 mm.

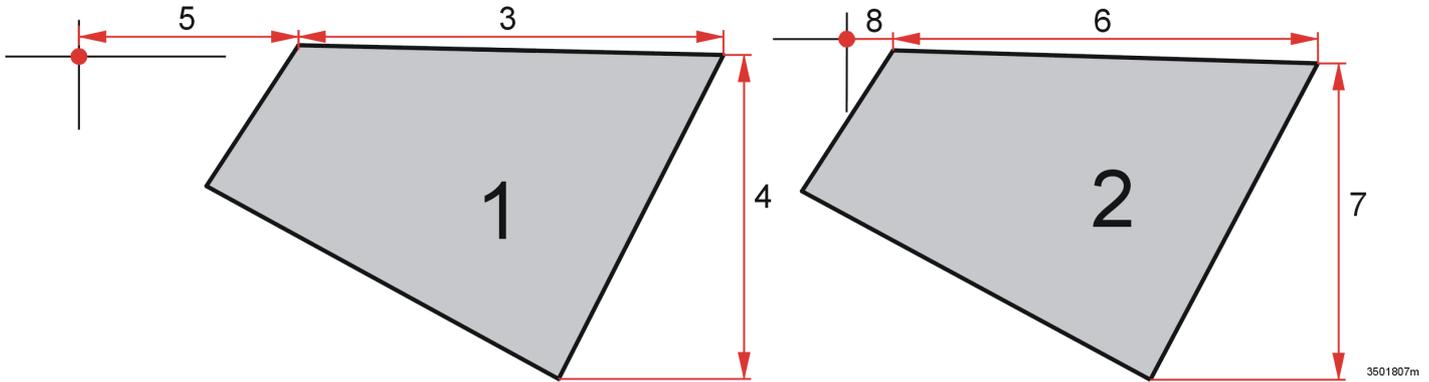
### Bi-Xenon headlamps, RHD variant

Copy templates 3 and 4. Check the measurements to ensure they are correct. Transfer the template to a self-adhesive, waterproof material and cut it out.

#### Reference measurement:

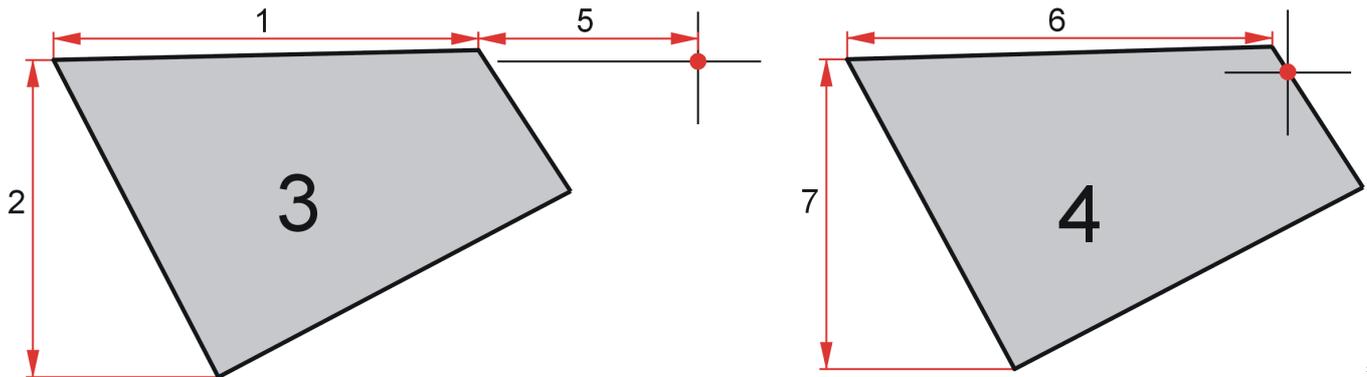
Template 3.) (1) = 56 mm, (2) = 42 mm  
Distance to dot in headlamp lens: (5) = 29 mm.  
Template 4.) (6) = 56 mm, (7) = 41 mm  
Distance to dot in headlamp lens: (8) = 0 mm.

Masking templates for Bi-Xenon headlamps, LHD variant



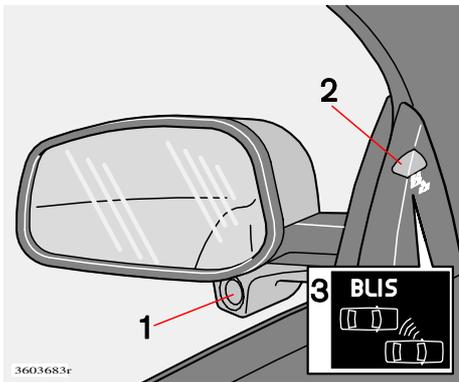
3501807m

Masking templates for Bi-Xenon headlamps, RHD variant



3501806m

# BLIS (Blind Spot Information System)



1 - BLIS camera, 2 - Indicator lamp, 3 - BLIS symbol

## BLIS

BLIS is an information system which indicates whether there is another vehicle moving in the same direction in the "blind spot". The system is based on digital camera technology. The cameras (1) are fitted under the door mirrors.

When a camera has detected a vehicle inside the blind spot zone (up to approx. 3 metres from the side of the car and up to approx. 9.5 metres behind the rearview mirror, see illustration in the right-hand column) then an indicator lamp is lit in the door panel (2). The light comes on with a constant glow to draw the driver's attention to a vehicle in the blind spot.

### WARNING!

- BLIS is an information system, NOT a warning or safety system.
- The system is a complement to, and not a replacement for, the existing rearview mirrors. It can never replace the awareness and responsibility of the driver.
- The responsibility for changing lanes safely rests with the driver.

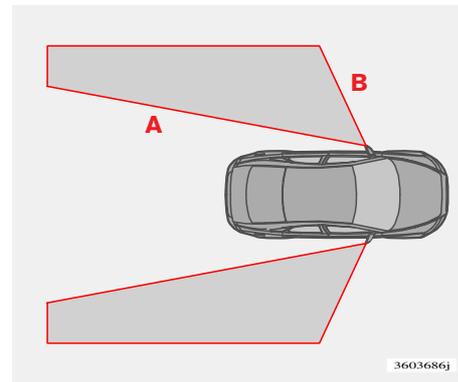
**NOTE!** The lamp comes on on the side of the car where the system has detected the vehicle. If the car is overtaken on both sides at the same time then both lamps come on.

## When BLIS operates

The system operates when the car is driven at a speed between 10 km/h and 250 km/h.

### *When you overtake another vehicle:*

- The system reacts if you overtake another vehicle at a speed of **up to 20 km/h faster** than the other vehicle.
- The system does **not** react if you drive at a speed of **more than 20 km/h faster** than the other vehicle.



"Blind spots" covered by BLIS  
Distance A = approx. 9.5m Distance B = approx. 3m

### *When you are overtaken by another vehicle:*

- The system reacts if you are overtaken by a vehicle travelling **up to 70 km/h faster** than you are travelling.
- The system does **not** react if you are overtaken by a vehicle travelling **more than 70 km/h faster** than you are travelling.

## WARNING!

- BLIS does not work in sharp bends.
- The system does not work if the camera lenses are covered. In this case the BLIS indicator lamps flash and a text message is shown in the display (see table on page 122).
- BLIS does not work when the car is reversing.

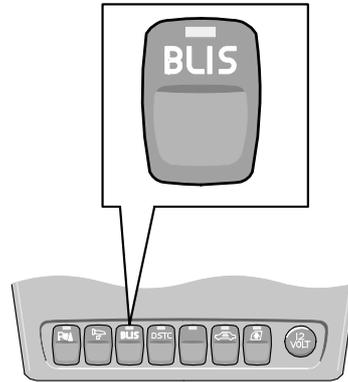
## System function in daylight and darkness

- **Daylight:** In daylight the system reacts to the **shape** of the surrounding vehicles. The system is designed to detect motor vehicles such as cars, trucks, motorcycles etc.

## WARNING!

- The system does not react to bicycles or mopeds.
- BLIS does not react to stationary vehicles.

- **Darkness:** In darkness the system reacts to the **headlamps** of surrounding vehicles. A vehicle in the blind spot must at least have its daytime running lights on to be detected by the system. This means for example that the system does not react to a trailer without headlamps/daytime running lights which is towed behind a car or truck.



3603682r

## Switching off and reactivating BLIS

BLIS is always active when the ignition is switched on.

- The system can be switched off by pressing the BLIS button in the switch panel in the centre console (see illustration above). The LED in the button goes out when the system is switched off and a text message is shown in the display in the dashboard.
- BLIS can be reactivated by pressing the button. An LED in the button then lights and a new text message is shown in the display. Press the READ button, see page 35, to clear the text message.

## BLIS (Blind Spot Information System)

System status	Text in the display
BLIS not functioning	BLIND-SPOT SYST SERVICE REQUIRED
Right-hand camera blocked	BLIND-SPOT SYST R CAMERA BLOCKED
Left-hand camera blocked	BLIND-SPOT SYST L CAMERA BLOCKED
Both cameras blocked	BLIND-SPOT SYST CAMERAS BLOCKED
BLIS system off	BLIND-SPOT INFO SYSTEM OFF
BLIS system on	BLIND-SPOT INFO SYSTEM ON

### **WARNING!**

The BLIS cameras have the same limitations as the human eye, i.e. they "see" worse in heavy snowfall or thick fog for example.

**NOTE!** The messages above are only shown if the ignition key is in position **II** and BLIS is active (i.e. if the driver has not switched off the system).

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## Wheels and tyres

General about wheels and tyres	124
Tyre pressures	126
Wear, Spare wheel	127
Changing wheels	128
Temporary puncture repair and tools	130

### General about wheels and tyres

All tyres have a dimension designation, such as 215/55R16 93W.

These tyre size designations, which are used by all tyre manufacturers, can be interpreted as follows:

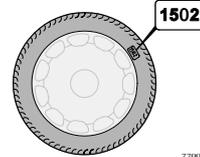
215	section width (mm)
55	relationship between the section height and width (%)
R	means radial tyre
16	wheel rim diameter in inches (")
93	code digits for maximum permissible tyre load, in this case 650 kg
W	specifies that the tyre is manufactured for speeds up to 270 km/h (168 mph).

Your car is fully approved, which means that you may not deviate from those dimensions and performance ratings indicated in the vehicle registration. The only exception from these regulations concerns winter tyres and studded tyres, which may have different dimensions and a different speed rating than indicated in the registration. If you select tyres with different dimensions, do not drive at speeds faster than those permitted. The most common speed ratings are indicated in the following table:

Q	160 km/h, used most often with studded tyres
T	190 km/h
H	210 km/h
V	240 km/h
W	270 km/h

Note: maximum permissible speeds indicated.

When you change tyres: be sure to use the same type (radial), dimension, designation, and brand on all four wheels. Otherwise, there is a risk that the handling characteristics of the car could change. Check with your dealer regarding dimensions which are available for your car. Keep in mind that the road surface can determine how fast you may drive, not the tyre speed rating.



### New tyres

Bear in mind that tyres are perishable goods - after a few years they begin to harden while their friction properties deteriorate little by little. Try to use fresh tyres when changing.

This is especially important for winter tyres.

The week and year of manufacture is indicated with 4 digits (e.g. 1502 indicates tyres manufactured week 15, 2002)

## Winter tyres

We recommend winter tyres of dimension 195/65 R15 except for cars with turbo engines. 205/55 R16, 215/65 R16 (for XC70) and 225/45 R17 (for V70R) are recommended for these vehicles.

**Always use winter tyres on all four wheels!**

**NOTE:** Always consult your Volvo dealer as to which wheel and tyre type is appropriate for your car.

## Studded winter tyres

Studded winter tyres should be run in for 500-1000 kilometres (300-600 miles), softly and gently so that the studs sit in the tyre correctly. This extends the service life of both the tyres and the studs while making the drive a bit quieter. Ensure that the studded tyres have the same direction of rotation throughout their lifetime. If you wish to shift wheels, see to it that they remain on the same side as previously. Please remember: The regulations for using studded tyres vary from country to country.

## Snow chains

Snow chains may only be used on the front wheels. This also applies to all-wheel drive cars. Avoid driving on bare surfaces unnecessarily as this generates much wear on both the snow chains and the tyres.

## Locking wheel bolts

Locking wheel bolts can be used on both aluminium and steel rims. If steel rims with locking wheel bolts are used in combination with wheel covers then the locking wheel bolts must be fitted furthest from the air valve. Otherwise the wheel cover cannot be fitted on the rim.

## Important

Only Volvo-approved snow chains are permitted. Use of other snow chains could damage your car.

Never drive faster than 50 km/h when snow chains are fitted!

Never use "quick links" because the space between the disc brakes and the wheels is too small.

## Driving characteristics and tyres

Tyres affect driving characteristics greatly. Tyre type, size and pressure are important to how the car performs. When you change tyres, be sure to use the same type, size and brand on all four wheels. Follow the recommendations regarding tyre pressure.

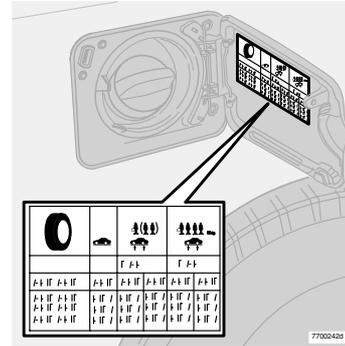
## Tyre pressure is important!

Check the tyre pressure regularly. The correct pressure is listed in the adjacent table and on the decal on the inside of the fuel filler flap.

**If you drive with incorrect pressure the car's handling is markedly impaired and the tyre wear is also increased.**

Note that the values in the table refer to cold tyres (outside temperature). Tyres get warm and pressure increases after just a few kilometres driving. This is normal, so do not let out air if you check the pressure when the tyres are warm. However, you should increase pressure if it is too low.

Remember that tyre pressure can vary depending on outside temperature. Therefore, check the tyres outdoors when the tyres are cold.



## Recommend tyre pressure

The tyre pressure decal on the inside of the fuel filler flap shows what pressure the tyres should have with different load and speed conditions.

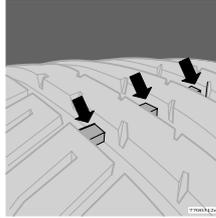


## WARNING!

The only Volvo approved "special wheel rims" are those rims that have been checked by Volvo and are **Volvo Genuine accessories**.

## Tyres with tread wear indicators

Tread wear indicators are narrow, raised areas across the tread that have approximately 1.6 mm less tread depth than the remainder of the tyre (the letters TWI are on the side of the tyre). When this bar is visible, only 1.6 mm of tread remains and the tyre should be replaced **immediately**. Bear in mind that road grip and the tyre's ability to push water out of the way is already affected markedly when there is 3-4 mm of remaining tread.



## Changing the tyres - summer/winter

When you change between summer and winter tyres, mark on the tyre which side they were fitted: for example, L = left, R = right.

**NOTE!** Tyres should have the same direction of rotation throughout their life. Tyres with tread designs that are made to roll only in one direction, have the direction of rotation marked with an arrow on the tyre.

If the tyres are fitted incorrectly this will impair the car's braking characteristics and the ability to disperse rain, snow and slush.

### **IMPORTANT!**

Tyres with the greatest tread depth should always - irrespective of rear or front wheel drive - be fitted at the rear.

Contact your closest Volvo dealer to check if you are unsure.

## Storage

Wheels should be stored horizontally or suspended, not vertically.

## “Temporary Spare”

The “Temporary Spare” should only be used for the short time it takes to repair or replace the normal tyre.

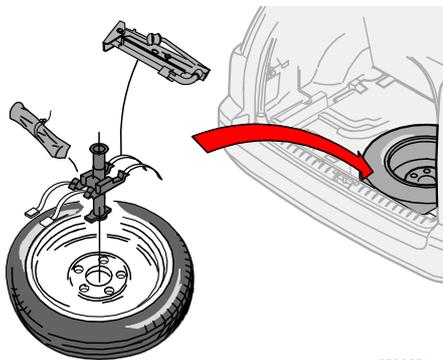
**By law it is only legal to use the spare wheel/tyre temporarily in connection with damage to a tyre. A wheel/tyre of this type should therefore be replaced by a normal wheel/tyre as soon as possible.**

Remember also that the “temporary spare” in combination with normal wheels/tyres can have different driving characteristics.

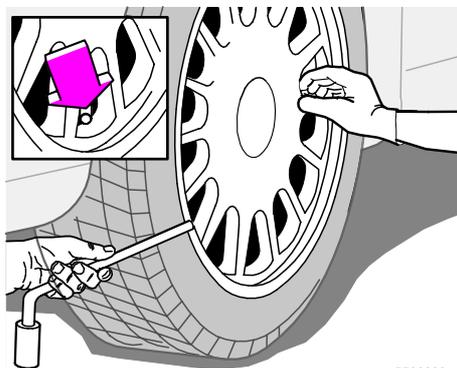
**The maximum speed with a “Temporary Spare” is therefore 80 km/h (50 mph).**

**NOTE!** Only use the car's own genuine spare wheel! Tyres with other dimensions may cause damage to your car. Only **one** spare wheel may be used at a time.

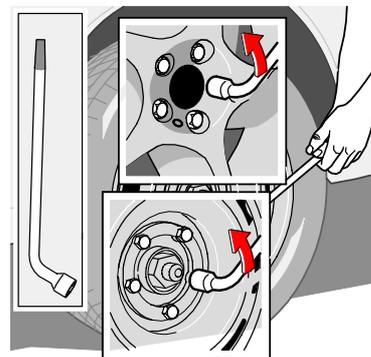
## Changing wheels



7700571m



7700333m



7700401r

*Insert socket wrench and turn  
Pull the hub cap straight out (steel wheel rim)*

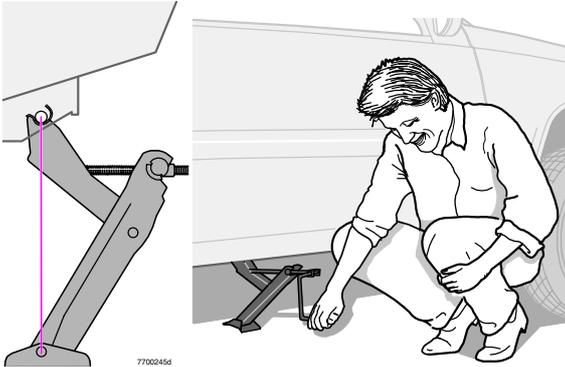
*Remove wheel studs*

**The spare wheel is under the plastic trough in the cargo compartment.**

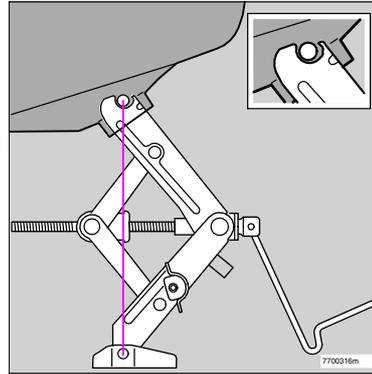
**Remember to set out the warning triangle.**

- Apply the parking brake and put the car into first gear if it has a manual gearbox - position P on cars with automatic gearbox. Put chocks in front of and behind the wheels to remain on the ground.
- Cars with aluminum rims with a cover: remove the cover using the socket wrench.
- Cars with **steel rims** have removable wheel covers. Prise off the wheel cover with a thick screwdriver or the like. If tools are not available, the wheel cover can be prised off by hand. Use protective gloves. When you reinstall the wheel covers: ensure that the wheel cover valve hole is opposite the wheel's air valve.
- Loosen the wheel nuts 1/2-1 with the socket wrench. The nuts are loosened by turning anticlockwise.

There are two jacking points on each side of the car. The jacking points are marked on the door sill trims.



The jack should be located so



Jack for cars with all-wheel drive  
(AWD and XC)

- Hold the jack against the pin in the jacking point as illustrated and wind down the jack foot so that it is pressed **flat against the ground**.
- **Check again that the jack is mounted correctly as in the illustration and that the foot is positioned vertically under the mounting.**
- Lift the car so that the wheel is free.
- Remove the wheel studs and lift off the wheel.

## Fitting

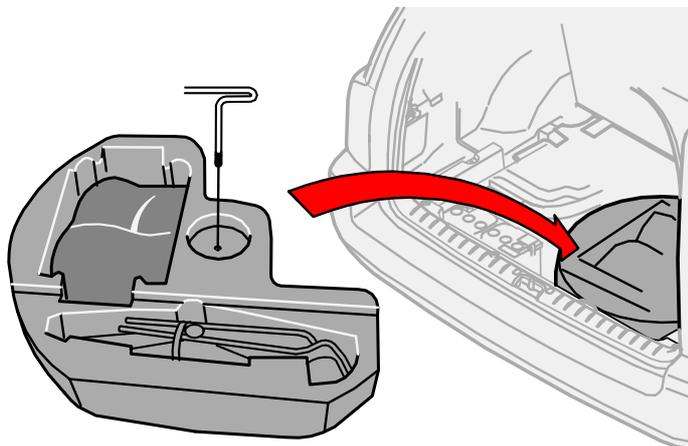
- Clean the contact surfaces on the wheel and hub.
- Mount the wheel and tighten the wheel bolts.
- Lower the car so that the wheels cannot rotate. Tighten the wheel studs crosswise and in torque steps. Tightening torque: 140 Nm (14.0 kpm). It is important that they are tightened to the correct torque. Tightening should be checked with a torque wrench.
- Fit the hub cap.
- Screw the jack together before returning it to the cargo compartment.
- Ensure that the jack and tool kit are properly secured and do not rattle.

## ⚠ WARNING!

- **Never crawl under the car when it is raised on a jack!**
- The car and the jack should be on a solid **horizontal** surface.
- The car's original jack should be used for wheel changing. All other work on the car should be carried out using workshop jacks and axle stands under the part of the car which is raised.
- Apply the parking brake, put the car in 1st gear or reverse on manual gearbox and position P on the automatic gearbox.
- Put chocks in front of and behind the wheels to remain on the ground. Use large wooden blocks or large stones.
- The jack screw should be kept well lubricated.

**NOTE!** See page 127 for information on the spare wheel.

## Temporary puncture repair and tools



### General

Cars which do not have a spare tyre are instead equipped with an emergency puncture repair kit. This kit can be used to both seal the puncture and to check and adjust the tyre pressure. The kit consists of an electric air compressor and an integrated canister with sealant.

### Emergency puncture repair kit<sup>1</sup>

The emergency puncture repair kit is only intended to work as a temporary repair so that the car can be driven a further 200 km (max.) or to the nearest tyre centre. The sealant has the ability to effectively seal tyres which have punctures in the tread.

The canister with the sealant should be replaced before the expiration date has passed or after the emergency repair kit has been used. See page 134 for information about replacing the canister.

**NOTE!** The emergency puncture repair kit is only intended for the sealing of tyres with a puncture in the tread. The emergency puncture repair kit has limited abilities to seal tyres which have punctures in the wall. Do not seal tyres with the emergency puncture repair kit if they have larger slits, cracks, irregularities or similar damage.

The emergency puncture repair kit with compressor and tools is found under the floor in the luggage compartment.

12 V sockets for connecting the compressor are located by the centre console in the front, and by the rear seat and in the cargo compartment<sup>1</sup>. Choose the socket which is nearest to the punctured tyre.

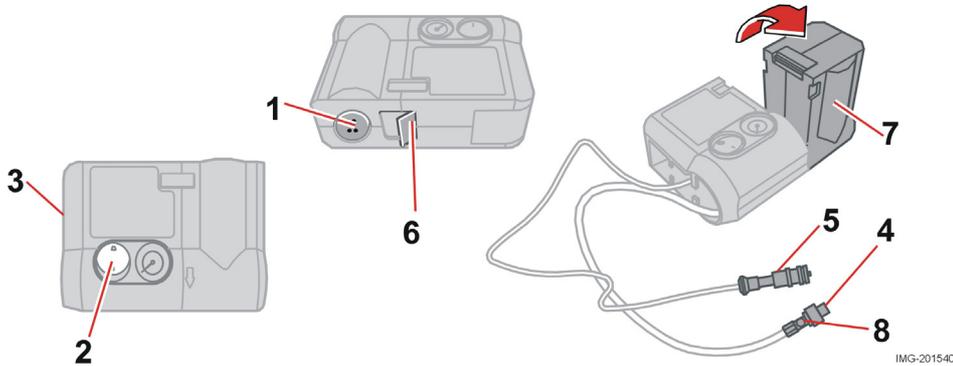
### Taking out the emergency puncture repair kit

1. Pull up the floor mat from the rear.
2. Lift up the emergency puncture repair kit.

### WARNING!

Emergency puncture sealer can cause irritation if it comes into direct contact with skin. In the case of contact with skin, wash away the fluid with soap and water.

<sup>1</sup> Certain variants and markets



## Inflating tyres

Set up the warning triangle if a tyre must be inflated in an area where there is other traffic.

- Ensure that the orange-coloured switch (2) is in position 0 and take out the cable (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.
- Connect the cable (5) to one of the car's 12 V sockets.
- Start the engine. The car must be in a well-ventilated area.
- Start the compressor by setting the switch (2) to position I.
- Pump up the tyre to the pressure specified on the tyre pressure decal.
- Turn off the compressor; the switch (2) should be in position 0. Disconnect the air hose and the cable. Refit the valve's dust cap.

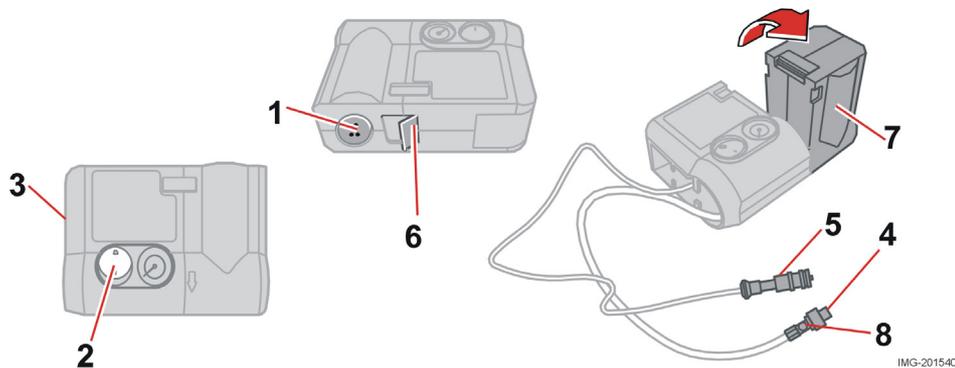
## ⚠ WARNING!

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

- Return the cable (5) and air hose (4) to the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo compartment.

The compressor should not run for more than 10 minutes at a time. Let it cool afterwards as there is a risk of overheating. Objects with a volume of up to 50 litres can be pumped up with the compressor.

## Temporary puncture repair and tools



### Sealing punctured tyres

Set up the warning triangle if an emergency tyre repair must be carried out in an area where there is other traffic.

- Remove the decal (1) regarding the highest permitted speed from the emergency puncture repair kit and stick it on the steering wheel where it can be clearly seen by the driver.
- Ensure that the orange-coloured switch (2) is in position 0 and take out the cable (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.
- Connect the cable (5) to the car's 12 V socket.
- Release the safety catch (6) and turn the orange-coloured part (7) 90° to the vertical position, until there is an audible click.

### ⚠ WARNING!

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

- Start the engine. The car must be in a well-ventilated area.
- Start the compressor by setting the switch (2) to position I. A temporary increase in pressure of maximum 4 bar occurs while the sealant is being pumped in. After about one minute the pressure drops and the manometer indicates a more correct tyre pressure.
- Pump the tyre to a pressure of between 1.8 bar and 3.5 bar. If the pressure does not reach 1.8 bar after 10 minutes of pumping,

### ⚠ WARNING!

Never stand next to the tyre when the compressor is running. Be particularly observant of the tyre walls. If cracks, irregularities or other damage appears, turn off the compressor immediately. Under these circumstances do not continue your journey. Contact an authorised tyre centre.

the compressor should be turned off so as to avoid overheating.

- Undo the air hose (4) from the air valve and refit the dust cap. Disconnect the cable (5) from the electric socket. Fold the orange-coloured part (7) back into its original position and secure the catch (6). Store the emergency repair kit in a safe place in the car.
- Immediately drive about 3 km at no more than 80 km/h, so that the sealant is able to seal the tyre well.

### ⚠ WARNING!

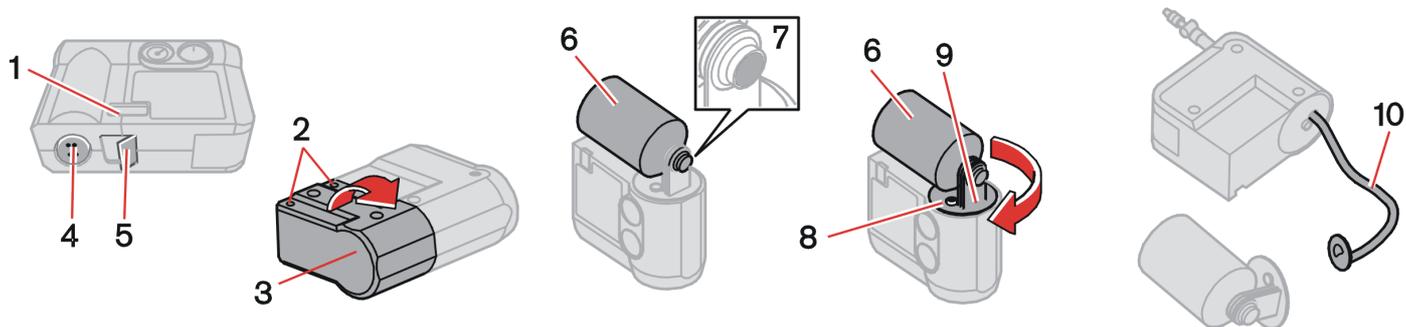
Do not drive faster than 80 km/h after the emergency tyre repair kit has been used. The temporarily sealed tyre must be changed as soon as possible (maximum driving distance 200 km).

- Check the tyre pressure again:  
NOTE! Do not open the orange-coloured part (7) when only the compressor will be used for inflating.
  - 1) Connect the air hose (4) to the air valve on the tyre.
  - 2) Connect the cable (5) to the 12 V socket.
  - 3) Read the pressure on the compressor.  
If the tyre pressure is below 1.3 bar, the tyre has not been sealed sufficiently. Do not continue your journey under these circumstances. Contact a tyre centre.
- If the tyre pressure is higher than 1.3 bar, the tyre should be pumped up to the pressure indicated on the tyre pressure decal. See page 121 for its location. Release pressure with the reduction valve (8) if the tyre pressure is too high.
- Turn off the compressor; the switch (2) should be in position 0. Disconnect the air hose and the cable. Refit the valve's dust cap.
- Return the cable (5) and air hose (4) to the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo compartment.

The compressor should not run for more than 10 minutes at a time. Let it cool afterwards as there is a risk of overheating.

The canister with sealant and hose should be replaced after use.

## Temporary puncture repair and tools



### Replacing the sealant canister

The sealant canister should be replaced before the expiration date has passed, see date decal (1), or after the tyre has been sealed. After use, the canister (6) with holder (8) and air hose (10) should be replaced.

Replacement can be carried out by an authorised Volvo workshop or according to the instructions.

#### **WARNING!**

Read the safety instructions on the bottom of the canister.

#### **WARNING!**

Ensure the compressor is not connected to the 12 V socket when the canister is replaced.

### Replace the canister before the expiration date has passed

- Undo the two screws (2) on the orange-coloured casing (3).
- Remove the speed decal (4) and date decal (1), and open the safety catch (5). Loosen the casing (3) and remove it.
- Unscrew and remove the canister (6).
- Check that the seal (7) on the new canister is not damaged. Screw the canister into place.
- Refit the casing (3). Check that the casing is correctly mounted, screw it on with the screws (2).
- Put the speed decal (4) and new date decal (1) back on the puncture repair kit.

Treat the removed canister as environmentally hazardous waste.

### Replacing the canister and hose after use

- Undo the two screws (2) on the orange-coloured casing (3).
- Remove the speed decal (4) and date decal (1), and open the safety catch (5). Loosen the casing (3) and remove it.
- Push down the button (8) while turning the canister (6) and holder (9) clockwise. Remove them.
- Pull out the air hose (10).
- Wipe off remaining sealant with a rag or scrape it away if it is already dried.
- Fit a new air hose (10); check that it is positioned correctly.

- Check that the seal (7) on the new canister is not damaged. Screw the holder (9) onto the canister (6) and turn it anticlockwise until there is an audible click.
- Refit the casing (3). Check that the casing is correctly mounted, screw it on with the screws (2).
- Put the speed decal (4) and new date decal (1) back on the puncture repair kit.

The empty canister and air hose can be treated as normal waste.

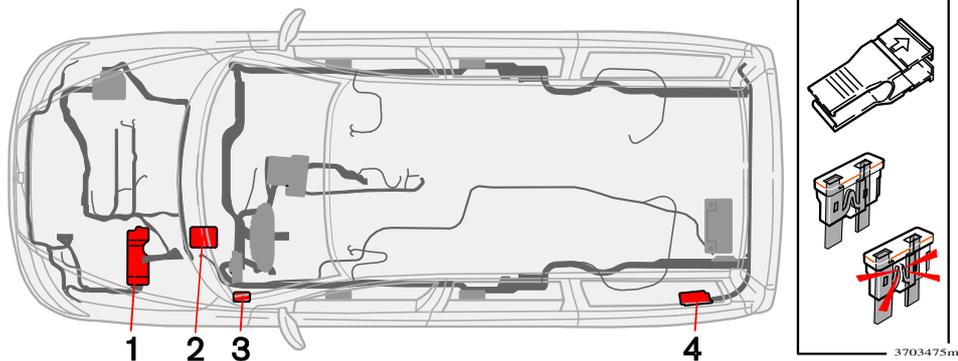


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## Fuses, bulb replacement

Fuses	138
Replacing bulbs	143



All electrical functions and components are protected with a number of fuses to protect your car's electrical system from damage by short-circuits or overloads.

Fuses are housed in four different locations in the car:

1. Integrated relay/fuse box in engine compartment.
2. Fuse box in the passenger compartment within the sound barrier on the driver's side.
3. Fuse box in the passenger compartment at dashboard end on driver's side.
4. Fuse box in the cargo compartment.

If an electrical component or function does not operate it may be because the component fuse was temporarily overloaded and burned out. Look in the fuse diagram to locate the affected fuse. Pull out the fuse and look at it from the side to see if the curved wire is burned out. Replace with a new fuse of the same colour and amperage.

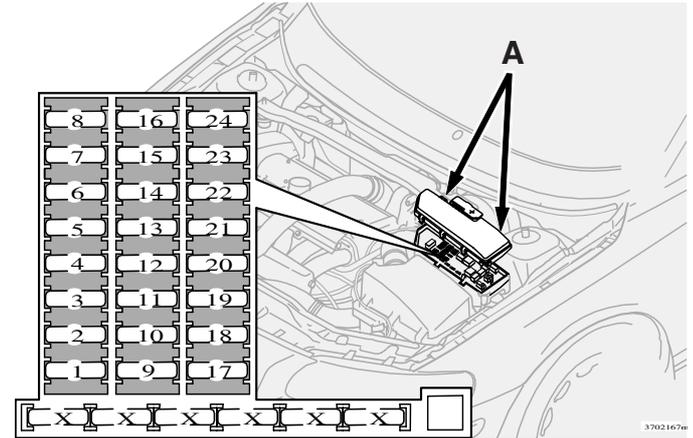
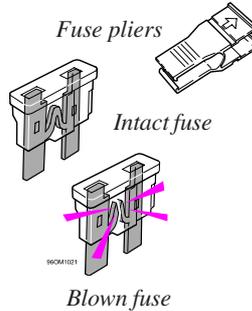
There are a number of spare fuses in the cover on the end of the dashboard. There are also pliers to assist you in pulling out and replacing the fuses.

If the same fuse burns out repeatedly, there is a fault in the component, and you should visit your Volvo workshop to have it checked.

## Relay/Fuse box in the engine compartment

### Fuse box in the engine compartment

There are 24 fuse positions in the fuse box in the engine bay. Be sure to replace a blown fuse with a new one of the same colour and amperage. There are also a number of spare fuses.



A. Press in the catches on the rear of the box and pull the cover up

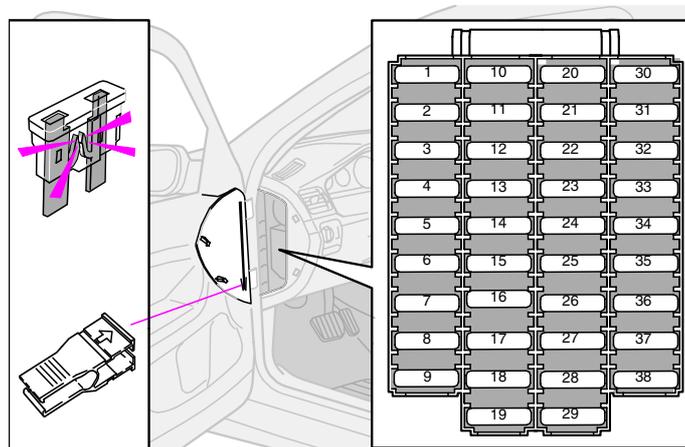
No	Ampere rating
1.	Parking heater (option) ..... 25
2.	Auxiliary lamp (option) ..... 20
3.	Throttle (5-cyl. without turbo/Bi-fuel) ..... 20
4.	Oxygen sensors (petrol), Engine Control Module (ECM) (diesel), high-pressure valve (diesel) ..... 20
5.	Crankcase ventilation heater, solenoid valves, fuel distributor (Bi-Fuel) ..... 10
6.	Mass air flow sensor, engine control module, injectors (petrol) ..... 15 Mass air flow sensor (diesel) ..... 10
7.	- ..... -

8.	Accelerator pedal sensor (APM), AC compressor, fan electronic box ..... 10
9.	Gas tank valve (Bi-fuel LPG) ..... 10
10.	- ..... -
11.	Ignition coils (petrol), relay coils ..... 20
12.	- ..... -
13.	Windscreen wiper ..... 25
14.	ABS ..... 30
15.	High-pressure washer, headlamps ..... 35
16.	- ..... -
17.	Dipped beam (left) ..... 20
18.	Parking lamps (front) ..... 15
19.	ABS ..... 30

20.	Dipped beam (right) ..... 20
21.	Fuel pump ..... 15
22.	Starter motor ..... 35
23.	Engine Control Module (ECM) supply, engine relay (ECR) coil ..... 10
24.	- ..... -

## Fuse box in passenger compartment at dashboard end on driver's side

Located here are 38 fuse positions. The fuses are located inside the access panel on the end face of the dashboard. Be sure to replace a blown fuse with a new one of the same colour and amperage. There are also a number of spare fuses.



### No

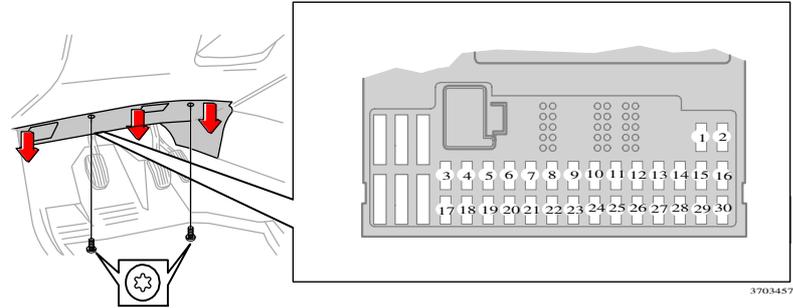
### Ampere rating

1. Power driver's seat .....	25	11. Amplifier .....	30	28. - .....	-
2. Power passenger seat .....	25	12. RTI display .....	10	29. - .....	-
3. Climate control system fan .....	30	13. Telephone .....	5	30. - .....	-
4. Control module, right front door .....	25	14. - .....	-	31. - .....	-
5. Control module, left front door .....	25	15. - .....	-	32. - .....	-
6. General lighting, ceiling (RCM), Upper Electronic Module (UEM) .....	10	16. - .....	-	33. - .....	-
7. Sunroof .....	15	17. - .....	-	34. - .....	-
8. Ignition switch, SRS system, Engine Control Module (ECM), SRS deactivation on passenger side (PACOS), immobilizer (IMMO) .....	7.5	18. - .....	-	35. - .....	-
9. OBDII, light switch (LSM), Steering Angle Sensor (SAS), Steering Wheel Module (SWM) .....	5	19. - .....	-	36. - .....	-
10. Audio .....	20	20. - .....	-	37. - .....	-
		21. - .....	-	38. - .....	-
		22. - .....	-		
		23. - .....	-		
		24. - .....	-		
		25. - .....	-		
		26. - .....	-		
		27. - .....	-		

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## ———— Fuses in the passenger compartment within the sound barrier on the driver's side ————

This fuse box contains 36 fuse positions. The fuses are fitted inside the sound wall on the left-hand side. Be sure to replace a blown fuse with a new one of the same colour and amperage. There are also a number of spare fuses.

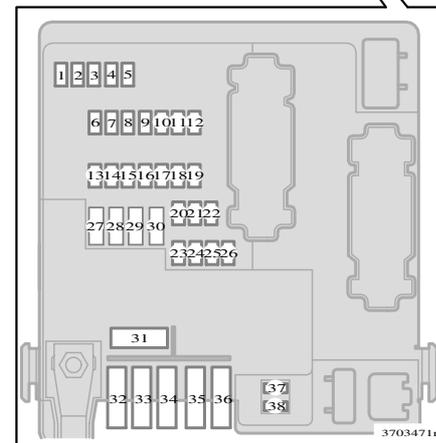
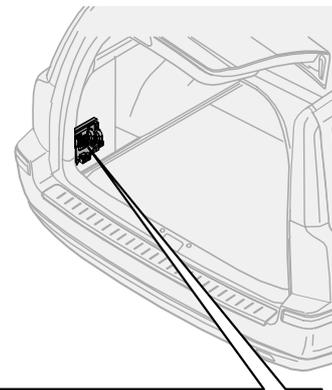


No	Ampere rating		
1.	Seat heating, right side .....	15	
2.	Seat heating, left side .....	15	
3.	Horn .....	15	
4.	.....	–	
5.	.....	–	
6.	Reserve .....	–	
7.	Reserve .....	–	
8.	Alarm siren .....	5	
9.	Brake lamp switch feed .....	5	
10.	Combined instrument panel (DIM), climate control (CCM), parking heater, power driver's seat .....	10	
11.	Electric socket, front and rear seat .....	15	
12.	.....	–	
13.	Reserve .....	–	
14.	Headlamp wipers (V70 R) .....	15	
15.	ABS, STC/DSTC .....	5	
16.	Bi-fuel, Electronically Controlled Power Steering (ECPS), Bi-Xenon, headlamp levelling .....	10	
17.	Fog lamp, front left .....	7.5	
18.	Fog lamp, front right .....	7.5	
19.	Reserve .....	–	
20.	Reserve .....	–	
21.	Transmission Control Module (TCM), reverse gear inhibitor (M66) .....	10	
22.	Main beam, left .....	10	
23.	Main beam, right .....	10	
24.	.....	–	
25.	.....	–	
26.	Reserve .....	–	
27.	Reserve .....	–	
28.	Power passenger seat, audio .....	5	
29.	Reserve .....	–	
30.	BLIS .....	5	
31.	Reserve .....	–	
32.	Reserve .....	–	
33.	Vacuum pump .....	20	
34.	Washer pump, headlamp wipers (V70 R) .....	15	
35.	.....	–	
36.	.....	–	

## Fuse box in cargo compartment

The fuses are located behind the upholstery on the left-hand side. Be sure to replace a blown fuse with a new one of the same colour and amperage.

No	Ampere rating		
1.	Reversing lamp .....	10	19. Rear wiper .....
2.	Parking lamps, fog lamps, cargo compartment lighting, numberplate lighting, LEDs in brake lighting .....	20	20. Towing bracket wiring (15-feed) .....
3.	Accessories (AEM) .....	15	21. Reserve .....
4.	Reserve .....	–	22. – .....
5.	REM electronics .....	10	23. AWD .....
6.	CD changer, TV, RTI .....	7.5	24. Four-C SUM .....
7.	Towing bracket wiring (30-feed) .....	15	25. – .....
8.	Cargo compartment socket .....	15	26. Parking assistance .....
9.	Rear right door: power window, power window lock .....	20	27. Main fuse: towing bracket wiring, Four-C, parking assistance .....
10.	Rear left door: power window, power window lock .....	20	28. Central locking system (PCL) .....
11.	Reserve .....	–	29. Trailer lighting, left: parking lamp, direction indicator .....
12.	Reserve .....	–	30. Trailer lighting, right: brake lamp, fog lamp, direction indicator .....
13.	Diesel filter heater .....	15	31. Main fuse: fuse 37, 38 .....
14.	Subwoofer .....	15	32. – .....
15.	Reserve .....	–	33. – .....
16.	Reserve .....	–	34. – .....
17.	Audio accessories .....	5	35. – .....
18.	Reserve .....	–	36. – .....
			37. Rear window defroster .....
			38. Rear window defroster .....

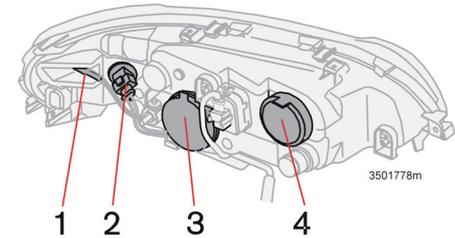
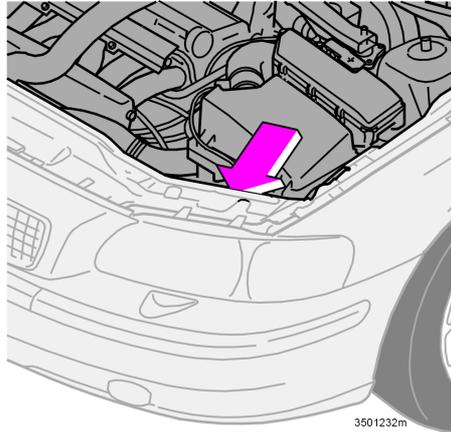


## Replacing bulbs

### General

All bulb specifications are found on page 176. The following list contains bulbs and point-source lamps that are specialised or unsuitable for changing except by a workshop:

- General interior lighting in the ceiling
- Ceiling lighting
- Reading lamps
- Glovebox lighting
- Direction indicators in the door mirrors
- Approach lighting in the door mirrors
- High-level brake light
- Lamps in the Bi-Xenon headlamp



### Important!

Never touch the bulb glass with your fingers. Grease and oils from your fingers are vaporised by the heat, coating and damaging the reflector.

### Replacing front bulbs

All front bulbs (except fog lamps) are replaced via the engine compartment.

#### **WARNING!**

On cars with Bi-Xenon headlamps, all work on the lamps should be carried out by an authorised Volvo workshop.

Bi-Xenon headlights must be handled with extreme care due to the high-voltage unit.

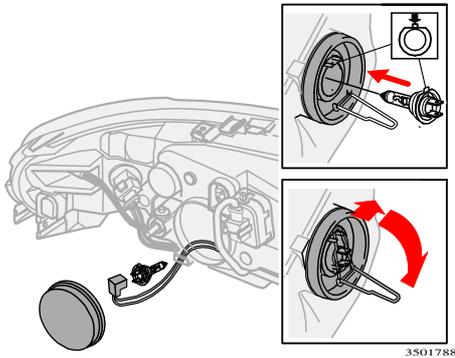
### Position of lamps in headlamp\*

1. Side marker lamp
2. Direction indicator
3. Dipped beam, parking lamp
4. Main beam

On certain variants, a white plastic sleeve may impede bulb replacement. This can be broken off and discarded.

\* Applies to halogen headlamps only

## Replacing bulbs

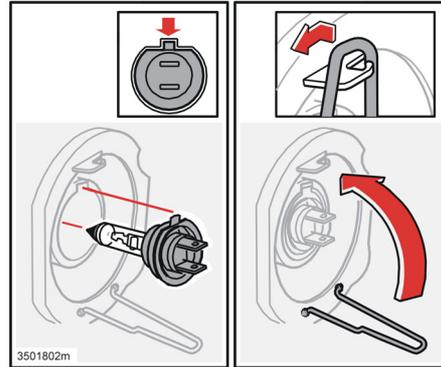


*Dipped beam bulb*

### Dipped beam

#### To remove the bulb:

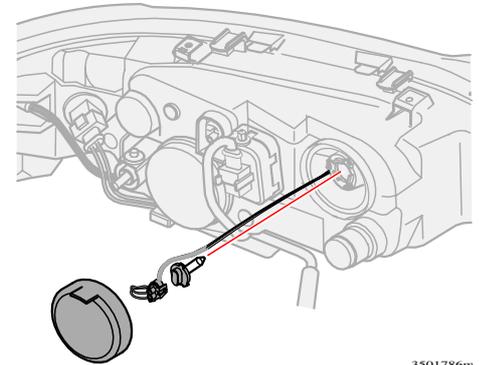
- Switch off all lights and turn the ignition key to position 0.
- Remove the cover.
- Unplug the connector.
- Disconnect the spring clamp. First push to the right so that the spring clamp disconnects, then out and down.
- Pull out and remove the bulb.



*Fitting the dipped beam bulb*

#### To fit:

- Fit the new bulb. It can only be positioned one way.
- Press the spring clamp up and a little to the left so that it fastens in its catch.
- Plug in the connector.
- Refit the cover.



*Main beam bulb*

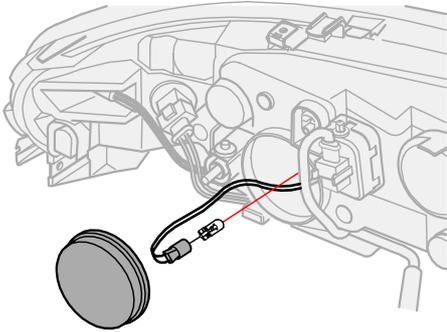
### Main beam

#### To remove the bulb:

- Switch off all lights and turn the ignition key to position 0.
- Remove the cover.
- Pull out the bulb.
- Unplug the connector.
- Turn the lamp anticlockwise a half turn, pull out and remove the bulb.

#### To fit:

- Fit the new bulb. It can only be positioned one way.
- Plug in the connector.
- Put the lamp back in place and turn it so that the connector faces down.
- Refit the cover.



3501792m

*Position and parking lamp bulb*

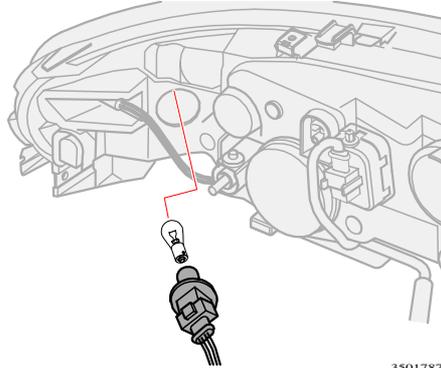
## Position and parking lamp

### To remove the bulb:

- Switch off all lights and turn the ignition key to position 0.
- Remove the cover (same cover as for dipped beam).
- Pull out the bulb.
- Unplug the connector.

### To fit:

- Fit the new bulb.
- Plug in the connector.
- Refit the cover.



3501787m

*Direction indicator bulb, left-hand side*

## Direction indicator, left-hand side

### To remove the bulb:

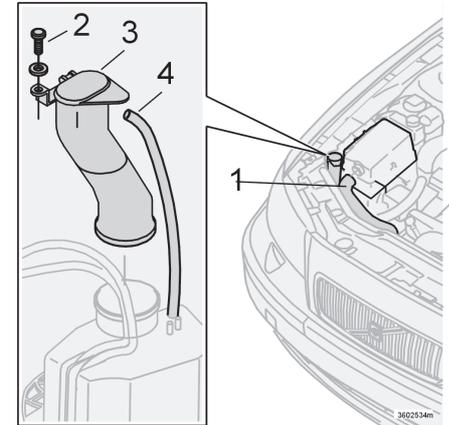
- Switch off all lights and turn the ignition key to position 0.
- Twist the bulb holder anticlockwise and remove it.
- Press the bulb inwards, turn it anticlockwise and remove it from the bulb holder.

### To fit:

- Fit the new bulb by pressing in and turning clockwise.
- Refit the bulb holder in the lamp housing and turn it clockwise.

## Direction indicator, right-hand side

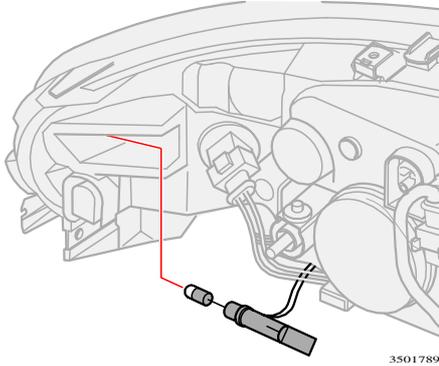
- Switch off all lights and turn the ignition key to position 0.



*Direction indicator bulb, right-hand side*

- Detach the radiator hose (1) from the radiator.
- Remove the screw (2) to the filler pipe.
- Pull the pipe (3) straight up.
- Detach the ventilation hose (4) from the pipe.
- Replace the bulb.
- Check that the washer fluid reservoir gasket between the filler pipe and the holder is properly secured.
- Put the filler pipe (3) back into place.
- Refit the ventilation hose onto the filler pipe (4).
- Retighten the filler pipe screw (2).
- Refit the radiator hose to the radiator (1).

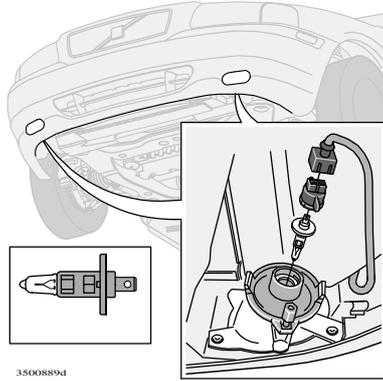
# Replacing bulbs



*Side marker lamp*

## Side marker light

- Turn the bulb holder clockwise and pull it out.
- Replace the bulb.
- Refit the bulb holder by turning it anticlockwise.



*Fog lamp*

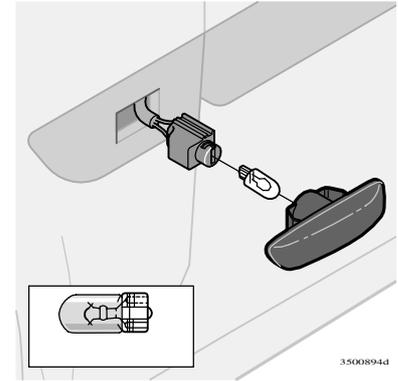
## Fog lamp (option)

### To remove the bulb:

- Switch off all lights and turn the ignition key to position 0.
- Turn the bulb holder slightly anticlockwise.
- Pull out and remove the bulb.

### To fit:

- Fit the new bulb. It can only be positioned one way.
- Refit the bulb holder and turn clockwise slightly. The mark "TOP" should face up.



*Side direction indicator*

## Side direction indicator

### To remove the bulb:

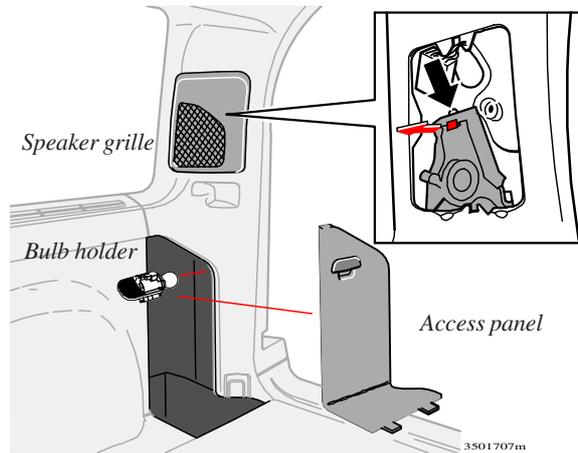
- Open the front door halfway.
- Slide your hand behind the front wing and press out the lamp together with lamp housing. Do not disconnect the leads.
- Turn the bulb holder a quarter turn clockwise and pull it straight out of the lamp housing.
- Detach the bulb from the connector by pulling it straight out.

### To fit:

- Connect the new bulb to the connector and fit it in the lamp housing by turning it a quarter turn clockwise.
- Refit the lamp with lens in the front wing. Press it straight inward.

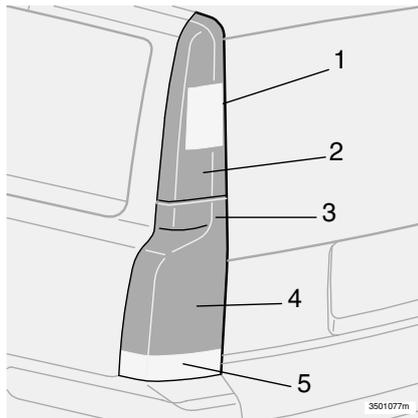
## Replacement of tail, position/parking, and fog lamps in the rear

- Switch off all lights and turn ignition key to position 0.
- Open the access panel.
- Twist the bulb holder anti-clockwise and remove it.
- Press the bulb inwards, turn anti-clockwise and take out the bulb.
- Replace the bulb.
- Fit the bulb holder in place and twist it clockwise.
- Close the access panel.



## Replacement of bulbs in brake lights and rear direction indicators

- Switch off all lights and turn ignition key to position 0.
- Carefully prise off the speaker grille.
- Pull out the red tab in the speaker.
- Then press on the black pin above the extracted red tab and twist out the speaker.
- Twist the bulb holder anticlockwise and withdraw it.
- Replace the bulb.
- Fit the bulb holder in place and twist it clockwise.
- Refit the speaker and press in the red tab.
- Press the speaker grille back into position.

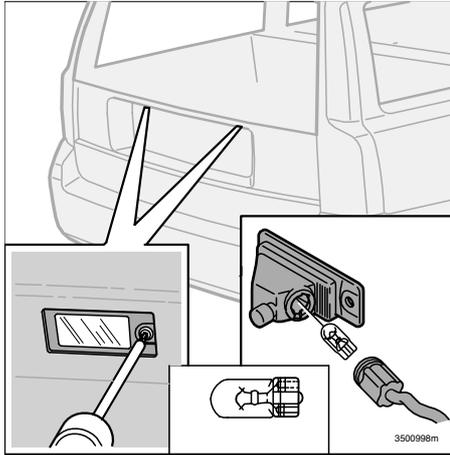


1. Direction indicator lamp
2. Brake light
3. Position/Parking lamps
4. Position/Parking lamps, Fog lamps (left side only)
5. Reversing light

**NOTE!** If the error message "LAMP FAULT" / "CHECK BRAKE LIGHT" remains after a faulty bulb has been replaced then an authorised Volvo workshop needs to be consulted to rectify the fault.

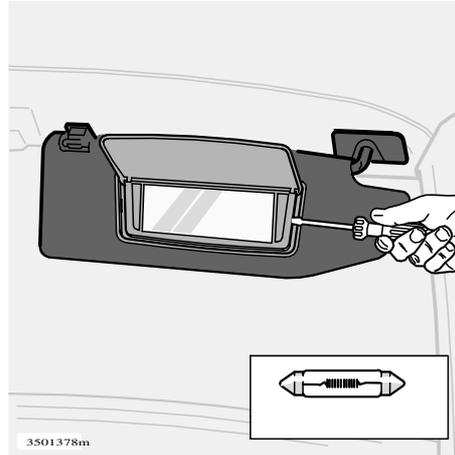
Bulb specifications are found on page 176.

## Replacing bulbs



### Replacing numberplate lighting bulb

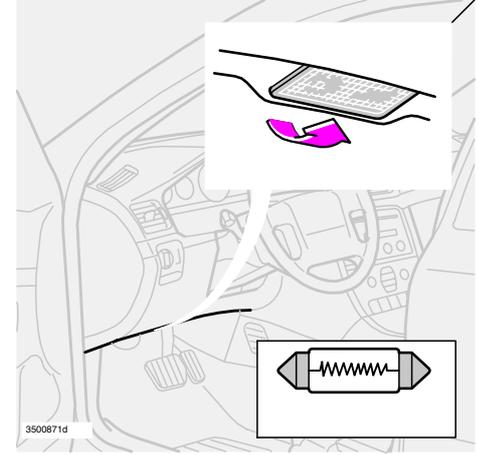
- Switch off all lights and turn ignition key to position 0!
- Remove the screw with a screwdriver.
- Loosen the whole lamp housing carefully and pull it out.
- Turn the connector anticlockwise and pull out the bulb.
- Replace the bulb.
- Reinstall the connector and turn it clockwise.
- Reinstall and screw the whole lamp housing into place.



*Vanity mirror, different versions*

### Vanity mirror

- Insert a screwdriver and turn so that the lamp lens releases.
- Remove the bulb.
- Fit a new bulb.
- First press the bottom of the lamp lens back into place above the four hooks. Then press the top in place.



### Replacing - courtesy lighting - front seat

The courtesy lighting is under the dashboard on the driver's and passenger sides.

#### **Carry out the following to replace:**

- Insert a screwdriver and twist lightly so that the lamp housing loosens.
- Remove the faulty bulb and install a new bulb.
- Check that lamp lights. Reinstall lamp housing.

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## Car care and Service

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### Rustproofing - check and repair

Your Volvo received a very thorough and complete rustproofing at the factory. The body consists of galvanized sheet steel. The underbody is protected by a wear-resistant anti-corrosion compound. Members, cavities and enclosed sections are sprayed internally with a thin, penetrating rust inhibitor.

#### The car's rustproofing is maintained by doing the following:

- Keep the car clean! Wash the underbody with a high-pressure hose. When high pressure washing - hold the spray nozzle at least 30 cm away from painted surfaces!
- Check and repair eventual rustproofing regularly.

The car's rustproofing does not normally require treatment for approximately 8 years. After that time, it should be treated at three year intervals. If your car requires treatment, consult your Volvo workshop.

### Improvement

If you want to repair the rustproofing yourself, make sure the area is clean and dry. Hose down, wash and dry the car thoroughly. Use a rustproofing agent in a spray can or one that is intended for brush application.

#### Two types of rustproofing agent are available:

- a) thin (colourless), for visible places
- b) thick, for wear areas on the underbody

#### Possible repair areas with these agents:

- Visible welds and sheet metal joints - thin fluid
- Underbody - thick fluid
- Door hinges - thin fluid
- Bonnet hinges and catch - thin fluid

When you have finished applying the rustproofing agent, wipe off any surplus fluid using a cloth moistened with a recommended detergent.

Parts of the engine and suspension strut mountings in the engine compartment are treated at the works with a wax-based colourless rustproofing agent. This withstands normal detergents without dissolving and losing its rustproofing ability. On the other hand, if you wash the engine using aromatic solvents such as turpentine or white spirit (especially those which do not contain emulsifiers), the protective wax should be renewed after washing. Your Volvo dealer has such waxes in stock.

## Paint

Paint is an important part of the car's rustproofing and should therefore be checked regularly. Repair paintwork damage immediately so that it does not start to rust. The most common types of paintwork damage that you can repair yourself are:

- minor stone chips and scratches
- damage on wing edges and doors

**When repairing paintwork, the car should be clean and dry with a temperature above + 15 °C.**

## Colour code

Make sure you have the right colour. The colour code number is on the data plate in the engine compartment.

VOLVO CAR CORP.		DATE OF PRODUCTION	
•	KG		
•	KG		
1	KG		
2	KG		

*Colour code*

## Minor stone chips and scratches

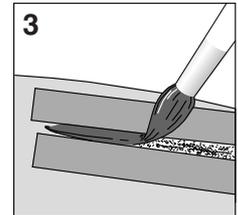
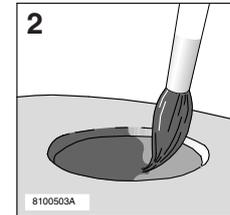
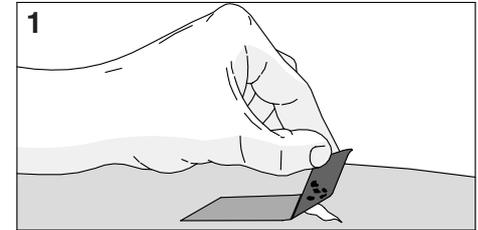
### Material:

- Primer in a can
- Paint in a can or a touch-up pen
- Brush
- Masking tape
- If the stone chip has not gone down to the bare metal and an unpainted colour coat remains, you can add paint immediately after removing dirt.

### Do as follows if the stone chip went down to the bare metal:

- Fasten a piece of masking tape over the damaged surface. Then remove the tape, removing any paint residue (illustration 1).
- Stir the primer thoroughly and apply using a fine brush or matchstick (illustration 2).
- When the primer is dry, apply the surface coat with a brush.
- Ensure that the paint is well stirred and apply several thin coats allowing it to dry between coats.
- The procedure is the same for scratches, but masking tape can be used to protect undamaged paintwork (illustration 3).
- Wait a day or so and then finish the repair by polishing. Use a soft rag and apply lapping paste sparingly.

*Remove any paint residue with tape*



*Mask if necessary*

## Washing

### Wash the car frequently!

Wash the car as soon as it becomes dirty, especially in the winter when road salt and moisture can lead to corrosion.

Wash the car as follows:

- Thoroughly hose off the dirt on the car underbody.
- Rinse the entire car to remove loose dirt.
- When using high pressure hose:  
Ensure that the high pressure hose nozzle does not come nearer than 30 cm from the bodywork. Do not spray directly at the locks.
- Wash with a sponge using a lot of water with or without detergent.
- You can use lukewarm (maximum 35 °C) but not hot water.
- If the dirt is ingrained, you can wash the car with cold degreasing agent, but then be sure that there is a drain separator where you are washing the car. When using cold degreasing agent, ensure that the car is not in direct sunlight or that the paint is warm from sunlight or a warm engine. Consult your Volvo workshop.
- Dry the car with a clean, soft chamois.
- Clean the wiper blades with a lukewarm soap solution.

#### Suitable detergent:

Car shampoo.

#### Keep in mind the following:

Always wash off **bird droppings** from the paintwork as fast as possible. Bird droppings contain chemicals that affect and discolour paintwork quickly. The discoloration cannot be polished off.



#### WARNING!

**After washing: always test the braking** so that moisture and corrosion do not affect the brake pads and impair the brakes! Depress the brake pedal lightly now and again when driving longer distances in the rain or slushy snow to warm up and dry the brake discs and pads. You should also do this when starting in very damp or cold weather conditions.



#### WARNING!

Do not wash the engine when it is still warm. Fire risk!

## Automatic car wash

An automatic car wash is a simple and fast way of washing the car. Remember that an automatic car wash can never replace a proper handwash.

The brushes of an automatic car wash do not fully reach all areas. During the first months of the car's life it is recommended that you only handwash the car.

## Polishing and waxing

Polish and wax the car when you feel the paintwork is matte and when you wish to give the paintwork extra protection, such as before winter. The car does not usually need polishing until after one year. It can be waxed earlier.

Wash and dry the car thoroughly before you begin polishing and/or waxing. Clean away asphalt or tar splashes with Volvo asphalt remover or white spirit.

Stubborn marks can be removed with fine rubbing paste for car paintwork. Polish first with a polish and then wax with fluid or solid wax. Carefully follow the instructions on the package. Many preparations contain both polish and wax.

Do not wax or polish in direct sunlight.

## Cleaning the upholstery

### Treating marks on fabric

A special cleaning agent available at your Volvo dealer is recommended when cleaning fabric upholstery. Other chemicals can impair the fire retardant qualities of the upholstery.

### Treating marks on vinyl and plastic components

A special cleaner available from your Volvo dealer is recommended for cleaning interior vinyl and plastic components.

**Never** scrape or rub a mark. **Never** use strong stain remover. Wash with a weak soap solution and lukewarm water.

### Treating marks on leather

A special cleaning agent available at your Volvo dealer is recommended when cleaning leather upholstery.

Use the Volvo leather care kit once or twice a year to preserve suppleness and comfort.

**Never** use strong detergent, petrol, alcohol, white spirit, etc. as such strong substances can damage fabric, vinyl and leather upholstery.

## Cleaning seat belts

Use water and a synthetic detergent. A special textile cleaning agent is available from you Volvo dealer. Make sure the seat belt is dry before allowing it to retract.

### Important!

Sharp objects and Velcro may damage the textile upholstery.

## Washing

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### **Cleaning door mirrors and front side windows with water-repellent coating (option)**

Never use products such as car wax, degreaser or similar on mirror/glass surfaces as this could ruin their water-repellent properties.

Take care when cleaning so as not to damage the glass surface.

To avoid damaging glass surfaces when removing ice, only use plastic ice scrapers.

There is natural wear of the water-repellent coating.

**NOTE!** Treatment with a special finishing agent available from Volvo dealers is recommended in order to maintain the water-repellent properties. This should be used first after three years and then each year.

## Volvo Service programme

Before the car left the factory, it was thoroughly test driven. It was checked again in accordance with Volvo Car Corporation regulations before it was handed over to you.

In order for you to keep your Volvo at the highest level of traffic safety, driving safety and reliability you should follow the Volvo service programme which is specified in the Warranty and Service schedule. We advise you always to let a Volvo workshop carry out the servicing and repair work. Your Volvo workshop has the personnel, the special tools and the service literature which guarantees you the highest quality of service. Your Volvo workshop always uses Volvo Genuine parts. The Volvo Service schedule is developed for the normal motorist.

### IMPORTANT!

For the Volvo warranty to apply, check and follow the instructions in the Service and Warranty Manual.

## Service or installation of accessories

Service or installation of accessories that affect the car's electrical system can only be carried out using electronic equipment specially developed for the car. It is therefore important that you always contact your Volvo workshop before beginning or carrying out service work that affects the electrical system.

## Recording vehicle data

One or more computers in your Volvo car can record detailed information. This information is intended for research purposes in order to further develop safety and to diagnose faults in certain systems. It can include data such as seat belt usage by the driver and front passenger, information on the function of different systems and modules in the car and information on the status of the engine, throttle control, steering, brake and other systems.

This information can contain data on the driver's driving style. Such data can contain information including, but not limited to, vehicle speed, use of the brake or accelerator pedal and steering wheel manoeuvres. The latter data can be stored for a limited time while the car is driven and during the course of a collision or a near miss.

Volvo Car Corporation will not distribute this stored information without permission. Volvo Car Corporation may, however, be forced to provide this information if required by national legislation.

In general, Volvo Car Corporation and authorised workshops may read and use the information.

## Adverse driving conditions

Change engine oil and replace air and oil filters more often than recommended in the Service and Warranty Booklet when driving in adverse conditions.

Adverse driving conditions include:

- Prolonged driving in dusty/sandy conditions
- Prolonged driving with caravan or trailer
- Prolonged driving in mountainous areas
- Prolonged driving at high speeds
- Prolonged idling and/or driving at low speeds
- Driving in low temperatures - below 0 °C - along shorter distances; less than 10 km.

### **WARNING!**

The car ignition system has very high voltage!  
The voltage in the ignition system is dangerous!  
Do not touch spark plugs, ignition cables or the ignition coil when the engine is running or the ignition is switched on!

The ignition should be switched off when:

- Conducting engine tests.
- Replacing parts in the ignition system, such as spark plugs, ignition coil, distributor, ignition cables, etc.

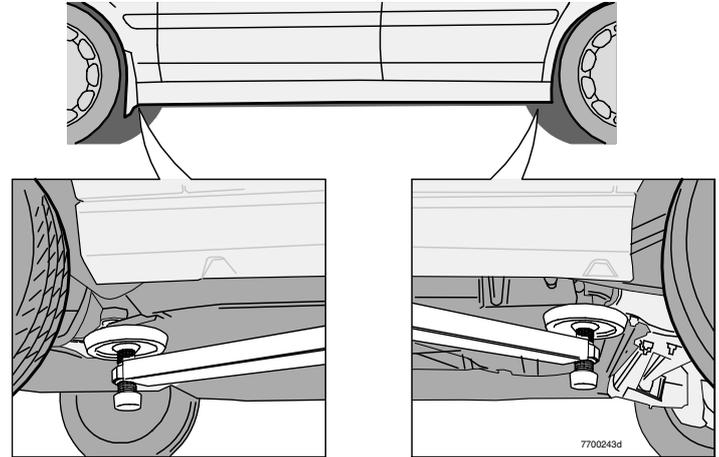
### **Note the following before you begin working on your car:**

#### **Battery**

- Ensure that the battery cables are correctly connected and tightened.
- Never disconnect the battery when the engine is running (e.g. when replacing the battery).
- Never use a fast charger to charge the battery. The battery cables should be disconnected when recharging.

#### **Environmental care**

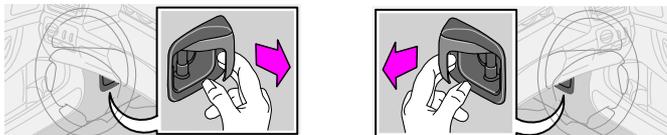
The battery contains acid that is both corrosive and poisonous. It is important that the battery is handled in an environmentally friendly way. Let your Volvo dealer assist you.



### **Lifting the car**

If the car is lifted with a workshop jack, it should sit with the front edge on the engine support arm. Do not damage the splashguard under the engine. Ensure that the jack is positioned so that the car cannot slide off the jack. Always use axle stands or the like.

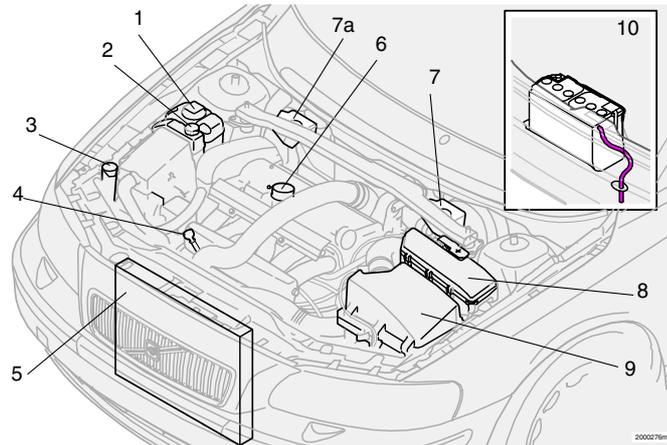
If you lift the car using a two pillar workshop lift, ensure that the front and rear lift arms are fixed under the lifting points on the door sill. See the illustration.



*Pull the handle...*



*...press up and open*



## Opening the bonnet

Pull the handle on the far left or right under the dashboard. You hear when the lock releases. Insert your hand in the centre of the front edge of the bonnet and press up the safety catch handle. Open the bonnet.

## Engine compartment

1. Expansion tank, cooling system
2. Power steering fluid reservoir
3. Washer fluid reservoir
4. Dipstick, engine
5. Radiator
6. Oil filler pipe, engine
7. Clutch/brake fluid reservoir (LHD)
- 7a. Clutch/brake fluid reservoir (RHD)
8. Integrated relay/fuse box
9. Air cleaner
10. Battery (in cargo compartment)

### **WARNING!**

Check that the bonnet locks properly when you close it!

### **WARNING!**

#### **Electric engine cooling fan:**

Cooling fan may start itself **after** the engine has been switched off!

### Fuel system

Diesel engines are very sensitive to contamination. Only use diesel fuel from a well-known oil company that fulfils the requirements for recommended fuel grade as described on page 174. Never use diesel of doubtful quality. The major oil companies can also offer a special diesel fuel for winter use. This fuel is much thinner when the temperature is low, which reduces the risk of waxing in the fuel system.

The risk of condensation building up in the tank is reduced if the tank is kept well filled.

During filling you should check that the area around the filler pipe is clean. If you do the refuelling from a tank of your own, you should filter the fuel.

Avoid spilling onto the paintwork. Wash off any spills with detergent and water.

### Empty tank

No special procedures are required if the tank runs dry. The fuel system is bled automatically if the ignition switch is kept in position **II** for approx. 60 seconds before the start attempt.

#### **Important!**

Diesel fuels not to be used:  
special additives, Marine Diesel Fuel, fuel oil, RME (Rape Methyl Ester), vegetable oil.

These fuels do not fulfil the requirements of Volvo's recommendation and generate increased wear and engine damage that is not covered by the Volvo warranty.

### Draining condensation water from fuel filter

The fuel filter removes condensation, which could otherwise affect engine function, from the fuel. The fuel filter should be drained as specified in the Service and Warranty Manuals, and when you suspect that the car has been filled with contaminated fuel.

## Checking and changing engine oil and filter

Certain engine variants have an engine oil decal on the bonnet. See page 166 for the location of the decal. The specification on the decal indicates what grade and viscosity the engine oil should have. Specifications for all engine variants are found on page 168.

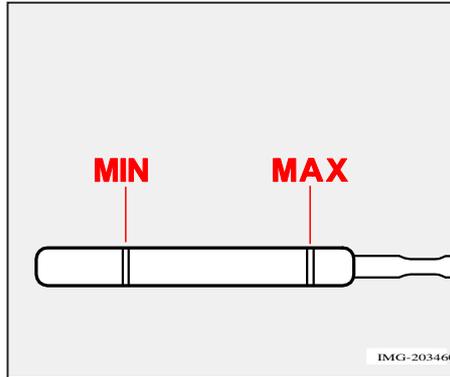
The Service and Warranty Booklet specifies suitable intervals for changing the oil and oil filter. Shorter intervals are recommended if driving in adverse conditions. See page 155.

Check the level of engine oil and change the oil regularly.

Checking the oil level in a new car is especially important before the first scheduled oil change. The Service and Warranty Booklet specifies the odometer readings for oil changes.

Volvo recommends checking the oil level every 2500 km. The most accurate measurements are made on a cold engine before starting. The measurement will be inaccurate if taken immediately after the engine is switched off. The dipstick will indicate that the level is too low because the oil has not had time to flow down into the oil sump.

**NOTE!** See recommended oil grade, viscosity and capacities on page 171.



*The oil level should fall within the markings on the dipstick.*

### Important!

Always use oil of the recommended grade and correct viscosity.

Never use oil additives. These can damage the engine.

If the system is topped up with a different oil, contact the nearest Volvo workshop for servicing.

### Checking the oil in a cold engine:

- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the MIN and MAX marks.

- If the level is close to the MIN mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the MAX than the MIN mark on the dipstick. See page 171 for volumes.

### Checking the oil in a warm engine:

- Park the car on a level surface, switch off the engine and wait 10-15 minutes to give the oil time to run back down to the sump.
- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the MIN and MAX marks.
- If the level is close to the MIN mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the MAX than the MIN mark on the dipstick. See page 171 for volumes.

### Important!

Never fill above the MAX mark. Oil consumption may increase if too much oil is poured into the engine.

### WARNING!

Do not spill oil onto the hot exhaust manifold due to the risk of fire.

Certain engine variants have an oil level sensor; see page 35 for the display text in the combined instrument panel.

### Checking and topping up coolant

When topping up the coolant, follow the instructions on the packaging. It is important that the mixture of coolant concentrate and water is correct for the prevailing weather conditions. Never top up with water only. The risk of freezing increases with both too little and too much coolant concentrate.

See capacities and recommended grade for fluids and oils on page 170.

#### **Important!**

Always use coolant with anti-corrosion agent as recommended by Volvo. New cars are filled with coolant that can withstand temperatures down to approximately  $-35^{\circ}\text{C}$ .

#### **Check the coolant regularly**

The level should lie between the MIN and MAX marks on the expansion tank. Top up with fluid when the level has fallen to the MIN mark.

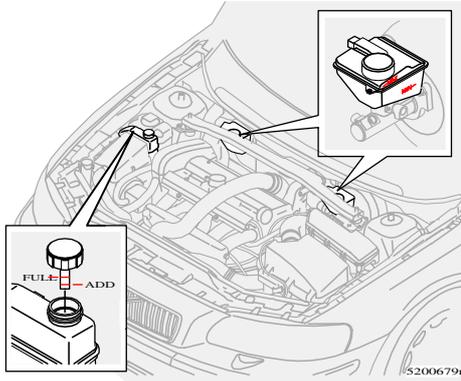
#### **Important!**

The engine must only be run with a well-filled cooling system. High temperatures can occur, causing a risk of damage (cracks) to the cylinder head.



#### **WARNING!**

The coolant may be very hot. If the coolant requires topping up when the engine is at operating temperature, unscrew the expansion tank cap slowly to gently release the overpressure.



Power steering fluid reservoir

## Power steering fluid reservoir

Check the level at every service. It is not necessary to change the fluid. The level should lie between the ADD and FULL marks. See capacities and recommended grade for fluids and oils on page 170.

**NOTE!** If a fault occurs in the power steering (or if the car has no power and is to be towed) the car can still be steered. Remember that the steering will be much heavier than normal and more strength is required to turn the steering wheel.

Clutch and brake fluid reservoir

## WARNING!

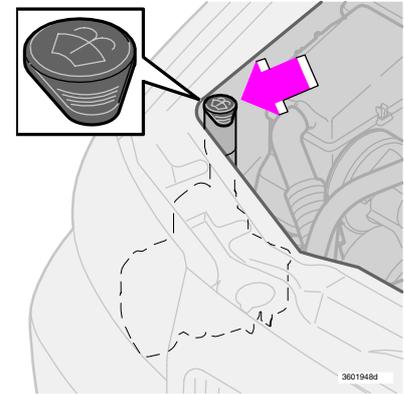
If the level of brake fluid in the reservoir is below the MIN mark, the car should not be driven until the brake fluid has been topped up. The reason for the loss of brake fluid must be investigated.

## Clutch and brake fluid reservoir

The brake and clutch fluid have a common reservoir<sup>1</sup>. The fluid level must be between the MIN and MAX marks. Check the level regularly. Change the brake fluid every other year or at every other regular service. See capacities and recommended grade for fluids and oils on page 170.

**NOTE!** The fluid should be changed annually on cars which drive in conditions requiring hard and frequent braking, driving in mountains or tropical climates with high humidity.

<sup>1</sup> Location dependent on whether car is LHD or RHD.



Washer fluid reservoir

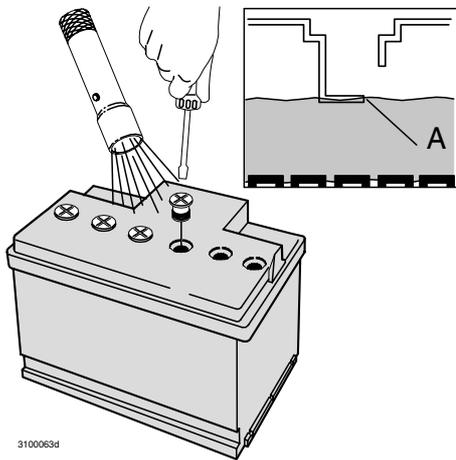
## Washer fluid reservoir

The windscreen, tailgate and headlamp washers all share the same fluid reservoir. See capacities and recommended grade for fluids and oils on page 170.

Use washer fluid during the winter so that the fluid does not freeze in the pump, reservoir and hoses.

Tip: clean the wiper blades when topping up washer fluid.

## Battery care



## Battery care

The function and life of the battery is affected by number of starts, number of times discharged, driving style, driving conditions, climate conditions, etc.

Repeated use of the parking heater and similar large power consumers combined with short driving distances could lead to a discharged battery and thereby problems starting.

For the battery to function satisfactorily, consider the following:

- Regularly check that the battery fluid level is correct (A).

- Check all battery cells. Use a screwdriver to remove the caps. Each cell has its own maximum level mark.
- If necessary, top up with distilled water to the battery's maximum mark.
- Never fill above the maximum mark (A).

### Important!

Always use distilled or deionised water (battery water).

- Tighten the caps properly.

**NOTE!** The life of the battery is shortened if it becomes discharged repeatedly.

### ⚠ WARNING!

Batteries can generate oxyhydrogen gas, which is highly explosive. One spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode. The battery also contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical attention immediately.

## Symbols



Use protective goggles.



Further information in the Owner's Manual.



Store the battery out of the reach of children.



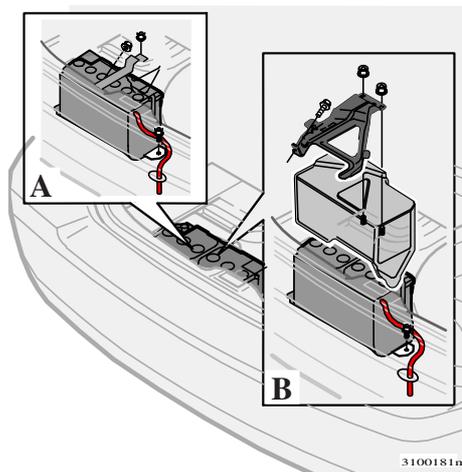
The battery contains corrosive acid.



Avoid sparks and naked flames.



Risk of explosion.



A. Battery without cover

B. Battery with cover

## Replacing the battery

### Removing the battery:

- Switch off the ignition and remove the key.
- Wait at least 5 minutes before touching any electrical terminals. This allows time for the information in the car's electrical system to be stored in the control modules.
- Undo the screws from the lock brace over the battery and remove the brace.
- Bend up the plastic cover over the negative battery terminal or unscrew the cover from the battery.
- Disconnect the negative battery cable.
- Detach the lower console holding the battery.
- Bend aside the plastic cover and disconnect the positive cable.
- Remove the battery.

### Fitting the battery:

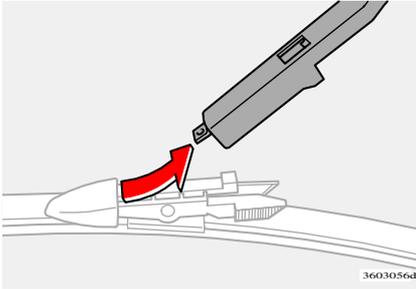
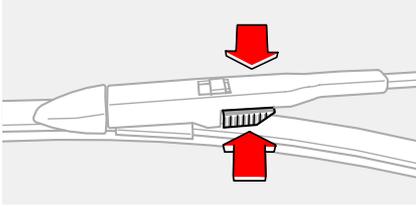
- Fit the battery into position.
- Position the lower console and screw it in place.
- Connect the positive cable, press in and fold down the plastic cover.
- Connect the negative cable, fold down the plastic cover.
- Fit the plastic cover or the cover over the battery.

- Make sure the evacuation hose is correctly connected to both the battery and the outlet in the bodywork.
- Fit the lock brace over the battery and tighten the screws.

### **WARNING!**

Batteries can generate oxyhydrogen gas, which is highly explosive. One spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode. The battery also contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical attention immediately.

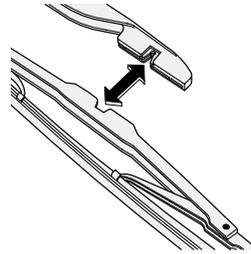
## Replacing wiper blades



### Replacing windscreen wiper blades

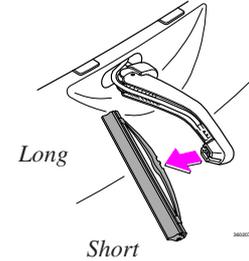
- Fold out the wiper arm and grasp the wiper blade.
- Press in the ribbed spring catch on the wiper blade while lifting it off at the arm extension.
- Fit the new blade in reverse order.
- **Check that it is properly fitted.**

**NOTE!** Bear in mind that the wiper blade on the driver's side is longer than the one on the passenger side.



### Replacement of rear window wiper blades

- Pull the wiper arm out away from the glass.
- Pull the wiper blade out towards the tailgate.
- Press the new wiper blade into place.
- **Check that it is properly secured.**



### Replacement of headlamp wiper blades<sup>1</sup>

- Fold the wiper arm forward.
- Pull the wiper blade outwards.
- Press the new wiper blade into position.
- **Check that it is properly secured.**

<sup>1</sup> Applies to V70 R

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## Specifications

Type designations	166
Dimensions and weights	167
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Fuel	173
Catalytic converter and suspension	175
Electrical system	176

# Specifications

## Type designation

When contacting your Volvo dealer about your car and when ordering spare parts and accessories, it makes things easier if you know your car's type designation, vehicle identification number and engine number.

### 1 Type, model year designation and vehicle identification number

Stamped in the engine compartment beneath the windscreen.

### 2 Type designation, vehicle identification number, maximum permissible weights and codes for paint and upholstery and type approval number.

Plate on wing liner behind right-hand headlamp.

### 3 Engine type designation, component and serial number

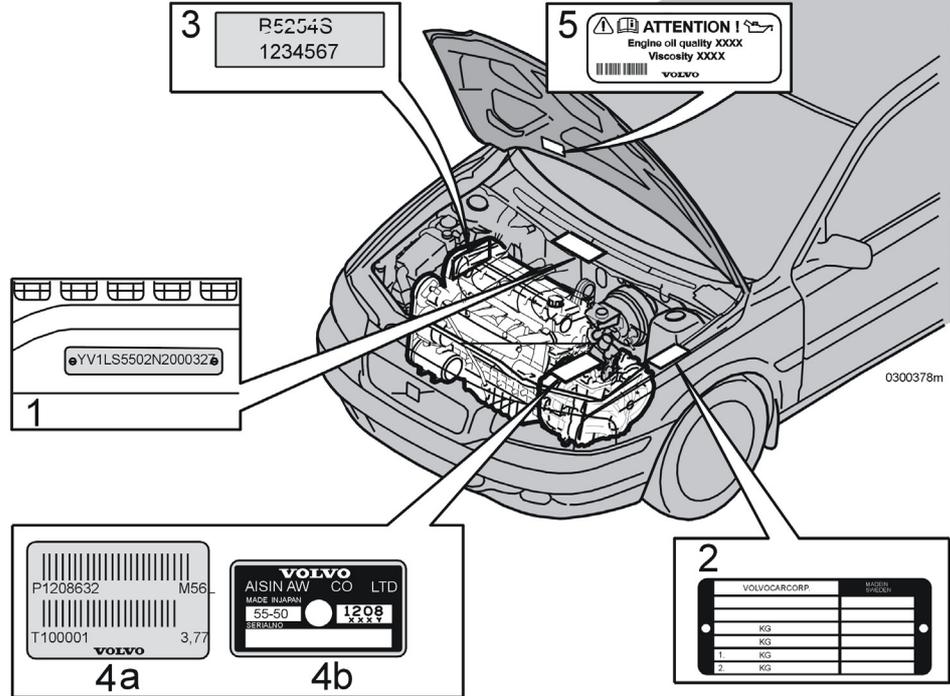
On right-hand side of engine.

### 4 Transmission type designation, and serial number

a: Manual gearbox: on the front side

b: Automatic gearbox (AW55-50): on the upper side

### 5 The engine oil decal\* indicates the oil grade and viscosity (located on lower edge of bonnet).



\* Certain engine variants

## Dimensions

Length .....	472 (XC 473) cm
Width .....	180 (XC 186) cm
Height* .....	147-149 (AWD 148-151/XC 155-156/R 145-149) cm
Wheelbase .....	276 cm
Front track .....	156 (XC 161) cm
Rear track .....	156 (XC 155/R 154) cm

\* depending on wheel and tyre size

## Cargo area volume (measured with 1-litre boxes)

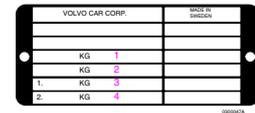
Rear backrest raised, load up to top edge of backrest .....	485
Rear backrest lowered, load up to top edge of front seat backrests .....	745
Rear backrest lowered, load up to headlining .....	1641

## Weights

The kerb weight includes the driver, the fuel tank 90% full and all fluids. The weight of passengers and accessories, such as a towbar, towball load (when a trailer is hitched, see table), load carriers, and roof box, influence the payload and must not be included in the kerb weight.

Permitted weight (in addition to driver) = Gross vehicle weight - Kerb weight.

For the location of the decal, see page 166.



1. Max. total weight
2. Max. train weight (car+trailer)
3. Max. front axle load
4. Max. rear axle load

Max load, see registration papers  
 Max roof load 100 kg  
 Max trailer weight 1 800 kg

### **WARNING!**

The driving characteristics of the car change depending on how heavily it is loaded and how the load is distributed.

## Engine specifications

	2.0T	BIFUEL	BIFUEL	2.4	2.0T	2.5T 2.5T AWD	2.4
Engine variant	<b>B5204T5</b>	<b>B5244SG</b>	<b>B5244SG2</b>	<b>B5244S</b>	<b>B5244S2</b>	<b>B5254T2</b>	<b>B5244T4<sup>a</sup></b>
Output* (kW/rps) AWD	132/92 -	103/97 -	103/85 -	125/100 -	103/75 -	154/83 -	162/83 -
(hp/rpm) AWD	180/5500 -	140/5800 -	140/5100 -	170/6000 -	140/4500 -	210/5000 -	220/5000 -
Torque* (Nm/rps) AWD	240/31-83 -	192/75 -	214/75 -	225/75 -	220/55 -	320/25-75 -	285/33-83 -
(kpm/rpm) AWD	24.5/1850-5000 -	19.6/4500 -	21.8/4500 -	23.0/4500 -	22.5/3300 -	32.6/1500-4500 -	35.7/2100-4000 -
No. of cylinders	5	5	5	5	5	5	5
Bore (mm)	81	83	83	83	83	83	81
Stroke (mm)	77	90	90	90	90	93.2	93.2
Cylinder displacement [dm <sup>3</sup> (l)]	1.98	2.44	2.44	2.44	2.44	2.52	2.40
Compression ratio	9.5:1	10.3:1	10.3:1	10.3:1	10.3:1	9.0:1	-
<b>Spark plugs:</b>							
Electrode gap (mm)	0.7	1.2	1.2	1.2	1.2	0.7	3x1.2
Tightening torque (Nm)	30	30	30	30	30	30	25

To verify the type of engine in the car, see the type designation stamped into the engine compartment. See page 166 for type designations.

<sup>a</sup> Thailand, Malaysia

\* Output and torque as per test standard EU 80/1269. For petrol engines, 98 octane is always used for this test.

## Engine specifications

	<b>T5</b>	<b>R AWD</b>	<b>D5 D5 AWD</b>	<b>2.4D</b>	<b>2.4D</b>	
Engine variant	<b>B5244T5</b>	<b>B5254T4</b>	<b>D5244T</b>	<b>D5244T2</b>	<b>D5244T3<sup>a</sup></b>	
Output* (kW/rps) AWD	191/92 -	220/92 220/100	120/67 -	96/67 -	85/67 -	
(hp/rpm) AWD	260/5500 -	300/5500 300/6000	163/4000 -	130/4000 -	116/4000 -	
Torque (Nm/rps) AWD	350/35-83 -	400/33-88 350/31-100	340/29-50 -	280/29-50 -	280/29-46 -	
(kpm/rpm) AWD	35.7/2100-5000 -	40.8/1950-5250 35.7/1850-6000	34.7/1750-3000 -	28.6/1750-3000 -	28.6/1750-2750 -	
No. of cylinders	5	5	5	5	5	
Bore (mm)	81	83	81	81	81	
Stroke(mm)	93.2	93.2	93.2	93.2	93.2	
Cylinder displacement [dm <sup>3</sup> (l)]	2.40	2.52	2.40	2.40	2.40	
Compression ratio	8.5:1	8.5:1	18.0:1	18.0:1	18.0:1	
<b>Spark plugs:</b>						
Electrode gap (mm)	0.7	0.7	-	-	-	
Tightening torque (Nm)	28	28	-	-	-	

To verify the type of engine in the car, see the type designation stamped into the engine compartment. See page 166 for type designations.

<sup>a</sup> France

\* Output and torque as per test standard EU 80/1269. For petrol engines, 98 octane is always used for this test.

## Capacities

### Other fluids and lubricants

		Volume	Recommended grade
<b>Transmission fluid</b>	Manual, 5-speed (M56/M58)	2.1 litre	Transmission fluid <sup>1</sup> : MTF 97309
	Manual, 6-speed (M66)	2.0 litre	
	Automatic gearbox (AW55-51)	7.2 litre	Transmission fluid <sup>1</sup> : JWS 3309
<b>Coolant</b>	Petrol engines without turbo	8.0 litre	Coolant with corrosion protection blended with water, see packaging. The thermostat starts opening at 90 °C in petrol engines and at 82 °C in diesel engines
	Petrol engines with turbo	9.0 litre	
	Diesel engines	12.5 litre	
<b>Air conditioning</b>		1000 gram <sup>2</sup>	Oil: PAG, Refrigerant: R134a (HFC134a)
<b>Brake fluid</b>		0.6 litre	DOT 4+
<b>Power steering</b>	System:	0.9 litre	Power steering fluid: WSS M2C204-A or equivalent product with specifications
	of which reservoir	0.2 litre	
<b>Washer fluid reservoir</b>	Variant without high-pressure wash	4.5 litre	Use a washer with anti-freeze recommended by Volvo mixed with water
	with high-pressure wash	6.4 litre	
<b>Fuel tank</b>			For tank volume, see Fuel section on page 173.

<sup>1</sup> The recommended transmission fluid must be used to prevent damage to the gearbox. Do not mix with any other transmission fluid. If the transmission is topped up with a different fluid, contact an authorised Volvo workshop for servicing.

<sup>2</sup> Weights may vary depending on the engine variant. Contact an authorised Volvo workshop for the exact information.

## Engine oil

Engine variant		Volume between MIN-MAX	Volume <sup>1</sup> / litre	If there is an engine oil decal on the bonnet, the volume and grade specifications in this table apply. See location on page 166.	Recommended oil grade:	Viscosity <sup>2</sup>
2.0T	B5204T5	0-1.2	5.5			ACEA A5/B5
2.4	B5244S	0-1.2				
2.4	B5244S2	0-1.2				
2.4	B5244T4	0-1.2				
T5	B5244T5	0-1.2				
2.5T	B5254T2	0-1.2				

<sup>1</sup> Including filter change

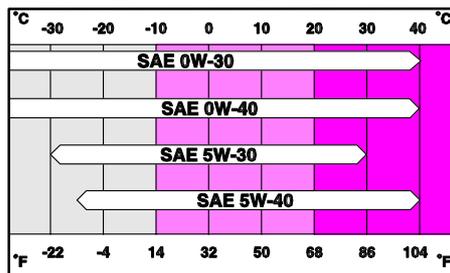
<sup>2</sup> The oil grade requirement must be fulfilled even if a different viscosity is chosen according to the diagram



### Engine decal

The engine decal specifies:

1. Oil grade
2. Viscosity



2300293v

The oil grade requirement must be fulfilled even if a different viscosity is chosen.

### Important!

Always use oil of the recommended grade and correct viscosity.

Never use oil additives. These can damage the engine.

If the system is topped up with a different oil, contact the nearest Volvo workshop for servicing.

Using oil of a different grade than recommended by Volvo could generate increased wear and engine damaged that is not covered by the Volvo warranty.

# Capacities

## Engine oil

Engine variant		Volume between MIN-MAX	Volume <sup>1/</sup> litre		Recommended oil grade:	Viscosity <sup>2</sup>
<b>2.0T</b>	<b>B5204T5</b>	0-1.2	5.8	Before following the oil grade, viscosity and volume listed on this table, check that the car does not have an engine oil decal on the bonnet. See page 166 for location.	ACEA A1/B1	SAE 5W-30
<b>2.4</b>	<b>B5244S</b>	0-1.2				
<b>2.4</b>	<b>B5244S2</b>	0-1.2				
<b>2.4</b>	<b>B5244T4</b>	0-1.2				
<b>T5</b>	<b>B5244T5</b>	0-1.2				
<b>2.5T</b>	<b>B5254T2</b>	0-1.2				
<b>R</b>	<b>B5254T4</b>	0-1.2	5.5			
<b>BIFUEL</b>	<b>B5244SG</b>	0-1.2	5.8			
<b>BIFUEL</b>	<b>B5244SG2</b>	0-1.2				
<b>D5</b>	<b>D5244T</b>	0-2.0	6.5		ACEA A3/B3/B4	SAE 0W-30
<b>2.4D</b>	<b>D5244T2</b>	0-2.0				
<b>2.4D</b>	<b>D5244T3</b>	0-2.0				

<sup>1</sup> Including filter change

<sup>2</sup> If a different viscosity than that listed in this table is selected following the information in the diagram, the engine grade requirement must be fulfilled.

### Extreme driving conditions

Check the oil more often in extreme driving conditions such as alpine driving with a great deal of engine braking or motorway driving at high speed. These conditions can cause abnormally high oil temperatures and oil consumption.

**Petrol engines:** For extreme conditions, choose a fully synthetic engine oil to provide extra protection.

Volvo recommends Castrol® oil products.

### Fuel consumption and carbon dioxide emissions

Engine variant		Gearbox	Consumption in litres/100 km <sup>1</sup>	CO <sub>2</sub> emissions g/km	Tank volume litres
2.4 B5244S2		Manual 5-speed (M56)	9.0	214	70
		Automatic gearbox (AW55-51)	9.7	231	
2.4 B5244S		Manual 5-speed (M56)	9.2	220	70
		Automatic gearbox (AW55-51)	9.8	234	
2.0T B5204T5		Manual 5-speed (M56)	9.1	217	70
		Automatic gearbox (AW55-51)	9.9	237	
2.5T B5254T2		Manual 5-speed (M56)	9.2	219	70
		Automatic gearbox (AW55-51)	10.1	241	
	AWD	Manual 5-speed (M58)	9.9	237	72
		Automatic gearbox (AW55-51)	10.6	255	
	XC70	Manual 5-speed (M58)	10.2	244	72
		Automatic gearbox (AW55-51)	11.1	266	
2.4T B5244T4 <sup>2</sup>		Automatic gearbox (AW55-51)	-	-	70
	XC70 AWD	Automatic gearbox (AW55-51)	-	-	72
T5 B5244T5		Manual 6-speed (M66)	9.5	226	70
		Automatic gearbox (AW55-51)	10.0	239	
V70R B5254T4	AWD	Manual 6-speed (M66)	10.7	256	68
		Automatic gearbox (AW55-51)	11.1	266	
D5 D5244T		Manual 6-speed (M56)	6.5	171	70
		Automatic gearbox (AW55-50)	7.9	209	
	AWD	Manual 6-speed (M66)	7.3	194	68
		Automatic gearbox (AW55-51)	8.4	223	
	XC70	Manual 6-speed (M66)	7.5	199	68
		Automatic gearbox (AW55-51)	8.4	223	
2.4D D5244T2		Manual 5-speed (M56)	6.5	171	70
		Automatic gearbox (AW55-50)	7.9	209	
2.4D D5244T3	7CV	Manual 5-speed (M56)	6.5	171	70
Bi-fuel B5244SG		Manual 5-speed (M56)	9.0	215	30 <sup>3</sup>
		Automatic gearbox (AW55-50)	10.0	240	
Bi-fuel B5244SG2		Manual 5-speed (M56)	9.4	225	30 <sup>3</sup>
		Automatic gearbox (AW55-50)	10.0	240	

<sup>1</sup>Emission values are affected by fuel quality and may therefore differ from those specified if fuel of a different standard than that recommended by Volvo is used.

<sup>2</sup>Certain countries.

<sup>3</sup>Fuel tank.

## Specified fuel consumption

Official fuel consumption figures are based on a standard driving cycle in accordance with EU Directive 80/1268 comb. Fuel consumption figures may change if the car is equipped with extra equipment that affects the car's weight. The manner in which the car is driven and other non-technical factors can affect fuel consumption.

Consumption is higher and power output lower for fuel with an octane rating of 91 RON.

## Recommended fuel grade

### Petrol

The engine can be run with octane ratings of 91, 95 and 98 RON.

When driving in temperatures above +38 °C, use of fuel with the highest possible octane rating is recommended for optimum performance and fuel economy.

- 98 RON is recommended for maximum effect and minimum fuel consumption.
- 95 RON can be used for normal driving.
- 91 RON must not be used in 4-cylinder engines and, in general, should only be used as an exception. However, the engine will not be damaged by this fuel grade.

Petrol: Standard EN 228

### Diesel

Diesel: Standard EN 590  
JIS K2204 or similar

### Important!

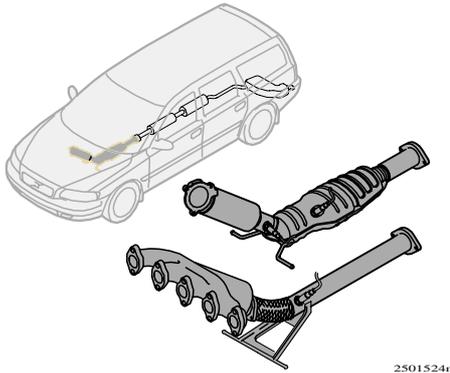
Diesel fuels not to be used: special additives, Marine Diesel Fuel, fuel oil, RME (Rape Methyl Ester), vegetable oil.

These fuels do not fulfil the requirements of EM 590 and generate increased wear and engine damage that is not covered by the Volvo warranty.

### Important!

#### Refuel with correct petrol!

Your car has a catalytic converter. Only drive with unleaded petrol so as not to damage the catalytic converter.



### Lambda-sond™ Heated oxygen sensor

The lambda sensor is part of a management system intended to reduce emissions and improve fuel economy. An oxygen sensor monitors the oxygen content of the exhaust gases leaving the engine. These values are fed into an electronic system that continuously controls the injectors. The ratio of air to fuel is continuously adjusted. These adjustments create optimal conditions for efficient combustion, and together with the three-way catalytic converter reduce harmful emissions (hydrocarbons, carbon monoxide and nitrous oxides).

### Catalytic converter

The purpose of the catalytic converter is to purify exhaust. It is located in the exhaust flow near the engine to quickly reach operating temperature.

The catalytic converter consists of a monolith (ceramic or metal) with channels. The channel walls are coated with a thin layer of platinum, rhodium and palladium. The metals act as catalysts, i.e. they accelerate the chemical process without being used up themselves.

### Wheel suspension, springing

#### Front end

McPherson type spring strut. Unitary construction of shock absorbers and spring. Rack and pinion steering. Safety type steering shaft. The values apply to an unladen car with full tank, coolant and spare wheel.

#### Rear suspension

Independent suspension with individually sprung wheels with shock absorbers. The suspension consists of rear-facing trailer arms, upper and lower control arms, track rods and anti-roll bar.

# Electrical system

## General

12-volt system with voltage regulated alternating current generator. Single pole system in which the chassis and engine block are used as conductors. The negative pole is connected to the chassis. The car is equipped with an extra ground lead to reduce the magnetic fields.

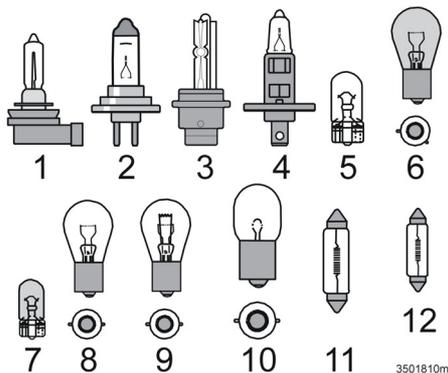
## Battery

Voltage	12 V	12 V	12 V
Cold start capacity (CCA)	520 A	600 A	800 A*
Reserve capacity (RC)	100 min	120 min	170 min

\* Cars equipped with diesel and parking heater.

If the battery is changed, replace it with a battery of the same cold start capacity and reserve capacity as the original. (See the decal on the battery).

<b>Generator</b> max current	140 A
<b>Starter motor</b> , power	1.4/2.2 kW



## Bulbs

Bulbs	Type (LL)	Socket
1. Main beam	H9	65W
2. Dipped beam	H7	55W
3. Bi-Xenon	D2R	35W
4. Fog lamp (front)	H1	55W
4. Fog lamp, (front) (V70 R)	H3	55W
5. Parking lamp (front), side marker light (front), courtesy lighting (rear)	W5W	W2.1x9.5d
6. Direction indicators (front/rear)	PY 21W	BAU 15s
7. Side direction indicators	WY5W	W2.1x9.5d

## Bulbs

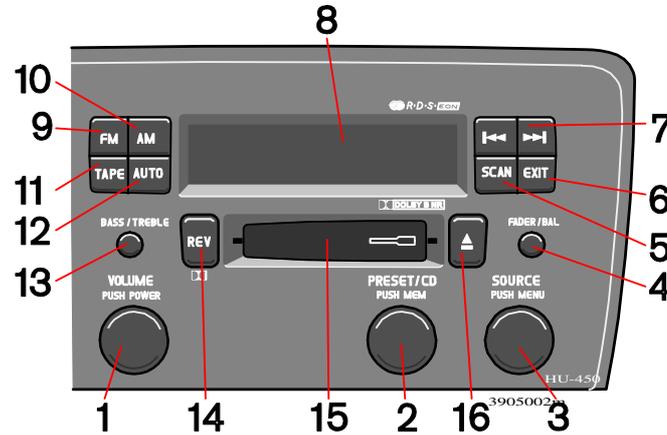
Bulbs	Type (LL)	Socket
8. Brake lamp, reversing lamp	P21W	BA15s
9. Fog lamp (rear), parking lamp (rear)	P21/4W	BAZ15d
10. Parking lamp (rear)	R5W	BA15s
11. Numberplate lighting, courtesy lighting (front) luggage compartment lighting	C5W	SV8.5
12. Vanity mirror Glovebox lighting	1.2W 3W	SV5.5 BA9

---

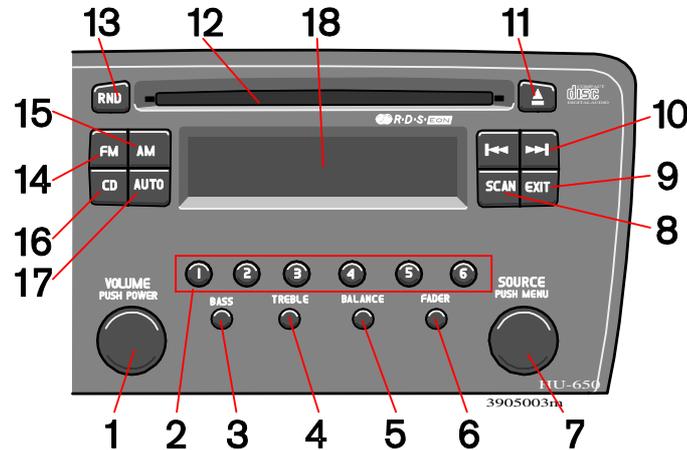
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## Audio (option)

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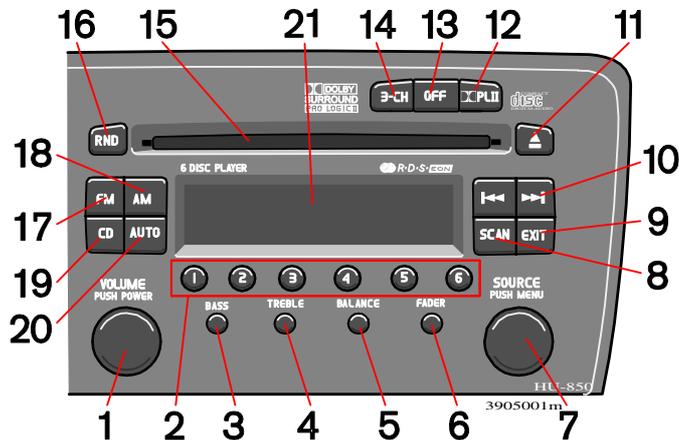


- |  |   |   |
|--|---|---|
| <ol style="list-style-type: none"> <li>1. POWER (On/Off) - Press</li> <li>2. VOLUME - Turn</li> <li>3. PRESET/ CD PUSH MENU –<br/>Stored radio stations<br/>CD changer (option)</li> <li>4. SOURCE PUSH MENU –<br/>Open the main menu - Press<br/>Turn to select:<br/>Radio - FM, AM<br/>Cassette<br/>CD changer (option)</li> </ol> | <ol style="list-style-type: none"> <li>5. SCAN - Automatic station search</li> <li>6. EXIT - Scroll back in the menu</li> <li>7. Navigation buttons –<br/>CD/radio - seek/change station or track<br/>Cassette - Fast forward/rewind /select<br/>next/previous track</li> <li>8. Display</li> <li>9. FM - Shortcut between FM1, FM2,<br/>FM3</li> <li>10. AM - Shortcut between AM1, AM2</li> <li>11. TAPE - Shortcut</li> <li>12. AUTO - Automatic preset of<br/>radio stations</li> </ol> | <ol style="list-style-type: none"> <li>13. BASS - Press out and turn<br/>TREBLE - Press out, pull and turn</li> <li>14. Cassette - direction select<br/>CD changer (option) - Random</li> <li>15. Cassette opening</li> <li>16. Cassette eject</li> </ol> |
|--|---|---|

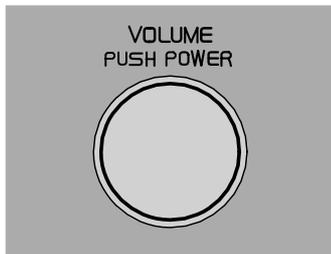


- |   |                                      |
|---|--------------------------------------|
| 1. POWER (On/Off) - Press                       | 9. EXIT – Scroll back in the menu    |
| VOLUME - Turn                                   | 10. Navigation buttons –             |
| 2. Station storing buttons selection of disc in | seek/change station or track         |
| CD changer (1-6)                                | 11. CD eject                         |
| 3. BASS – Press out and turn                    | 12. CD opening                       |
| 4. TREBLE – Press out and turn                  | 13. CD random                        |
| 5. BALANCE – Press out and turn                 | 14. FM - Shortcut between FM1, FM2,  |
| 6. FADER – Press out and turn                   | FM3                                  |
| 7. SOURCE PUSH MENU–                            | 15. AM - Shortcut between AM1, AM2   |
| Open the main menu – Press                      | 16. CD - Shortcut                    |
| Turn to select:                                 | 17. AUTO - Automatic preset of radio |
| Radio – FM, AM                                  | stations                             |
| CD  | 18. Display                          |
| CD changer (option)                             |                                      |
| 8. SCAN – Automatic station search              |                                      |

## Stereo HU-850



- |   |                                      |
|---|--------------------------------------|
| 1. POWER (On/Off) - Press                       | 10. Navigation buttons –             |
| VOLUME - Turn                                   | seek/change station or track         |
| 2. Station storing buttons/selection of disc in | 11. CD eject                         |
| CD changer (1-6)                                | 12. Dolby Surround Pro Logic II      |
| 3. BASS - Press and turn                        | 13. 2-channel stereo                 |
| 4. TREBLE - Press out and turn                  | 14. 3-channel stereo                 |
| 5. BALANCE - Press and turn                     | 15. CD opening                       |
| 6. FADER - Press and turn                       | 16. CD random                        |
| 7. SOURCE PUSH MENU –                           | 17. FM - Shortcut between FM1, FM2,  |
| Open the main menu - Press                      | FM3                                  |
| Turn to select:                                 | 18. AM - Shortcut between AM1, AM2   |
| Radio - FM, AM                                  | 19. CD - Shortcut                    |
| CD  | 20. AUTO - Automatic preset of radio |
| CD changer (option)                             | stations                             |
| 8. SCAN - Automatic station search              | 21. Display                          |
| 9. EXIT - Scroll back in the menu               |                                      |



3902418d

## On/Off switch

Press button to switch the radio on or off.

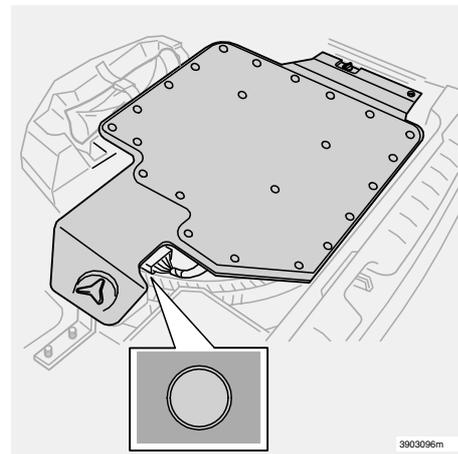
## Volume control

Turn the knob clockwise to increase volume. Volume control is electronic and does not have an end stop. If you have a keypad in the steering wheel, increase or decrease volume with the + or - buttons.

## Volume control - TP/PTY/NEWS

If a cassette or a CD is playing when the radio receives traffic information, news, or a selected programme type, the function is interrupted, and the message will be heard at the pre-set volume for traffic information, news or programme type. Volume is adjusted with the volume control.

The unit will thereafter return to the previously set volume and continue playing the cassette or the CD.



3903096m

## Volume control - bass speakers (option)

Turn the knob **clockwise** to increase volume (+6dB).

Turn the knob **anticlockwise** to decrease volume or turn off the speaker.

The knob in the centre position = normalised position.



### Bass

Set the bass by pressing out the knob and turning it to the left or right. Bass is normalised in the centre position. Press the knob back to its original position after setting.

### Treble

Set the treble by pressing out the knob and turning it to the left or right. Treble is normalised in the centre position. Press the knob back to its original position after setting.

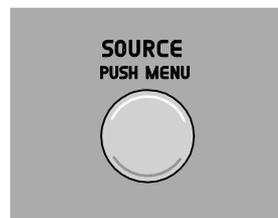


### Fader - Balance front/rear

Set a suitable balance between the front and rear speakers by pressing out the knob and turning it to the right (volume of front pair higher) or the left (volume of rear pair higher). Balance is normalised in the centre position. Press the knob back to its original position after setting.

### Balance - right/left

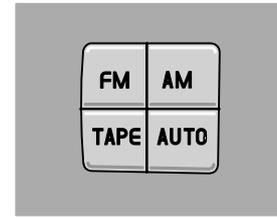
Set the balance by pressing and pulling out the knob, and turning it to the left or right. Balance is normalised in the centre position. Press the knob back to its original position after setting.

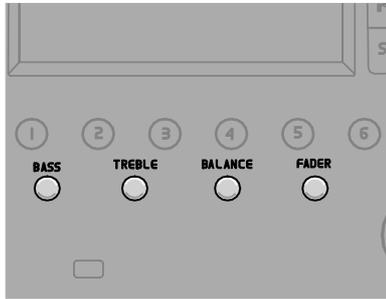


### Selection of sound source

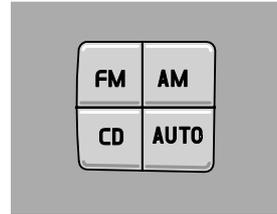
There are two ways to select sound source:

Either with the shortcut keys AM, FM TAPE or the SOURCE knob. Turn the SOURCE knob to select Radio (FM1, FM2, FM3 or AM1, AM2). This knob can also be used to select cassette or CD changer (option) if connected. Press the AM or FM button repeatedly to toggle between FM1, FM2, FM3 and AM1, AM2. The selected sound source is shown in the display.

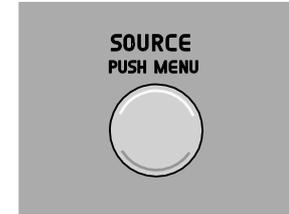




3905067m



3905009m



3905008m

## Bass

Set the bass by pressing out the knob and turning it to the left or right. Bass is normalised in the centre position. Press the knob back to its original position after setting.

## Treble

Adjust treble by pressing the knob and turning it to the left or right. The treble is "normalised" in the centre position. Press the knob back to its original position after setting.

## Balance - right/left

Adjust balance by pressing the knob and turning it left or right. Balance is normalised in the centre position. Press the knob back to its original position after setting.

## Fader - Balance front/rear

Set a suitable balance between the front and rear speakers by pressing out the knob and turning it to the right (volume of front pair higher) or the left (volume of rear pair higher). Balance is normalised in the centre position. Press the knob back to its original position after setting.

## Selection of sound source

There are two ways to select sound source:

Either with the shortcut keys AM, FM CD or the SOURCE knob.

Turn the SOURCE knob to select Radio (FM1, FM2, FM3 or AM1, AM2). This knob can also be used to select CD or CD changer (option) if connected.

Press the AM or FM button repeatedly to toggle between FM1, FM2, FM3 and AM1, AM2. The selected sound source is shown in the display.



### Scanning

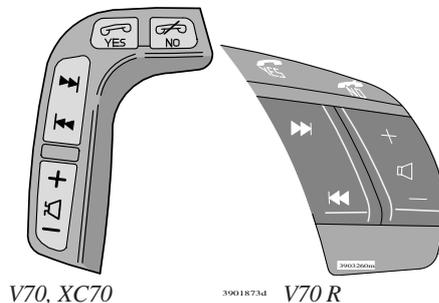
Press the SCAN button to start the search. Once the radio finds a station, it stops for approx. 10 seconds before continuing the search. To listen to the station, press the SCAN or EXIT button.

### Station seek

Press  or  to seek lower or higher frequencies. The radio seeks the next audible station and sets it. Press the button again to continue seek.

### Manual station seek

Press and hold  or . MAN is shown on the display. The radio slowly scrolls in the desired direction, increasing its tempo after a few seconds. Release the button when the desired frequency appears on the display. The frequency can then be adjusted by briefly pressing one of the arrow keys  or . Manual adjustment mode stays in effect five seconds after the last press.



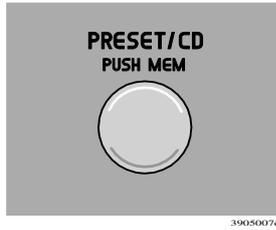
### Steering wheel keypad

If you have a keypad in the steering wheel, press the right or left arrow to select preset stations.

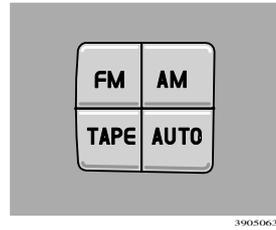
#### NOTE:

If the car is equipped with an integrated telephone, the steering wheel keypad can only be used for telephone functions when the telephone is activated. When in active mode, telephone information is always shown in the display.

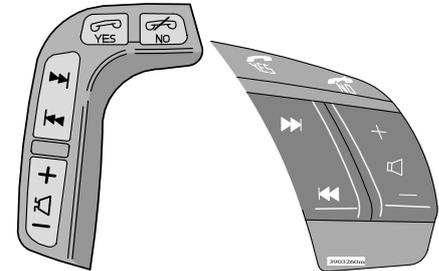
Deactivate the telephone by pressing . Switch off the telephone whenever a SIM card is not in use. See page 200.



3905007d



39050063m



V70, XC70

3901873d

V70 R

## Programming stations

1. Set the desired frequency.
2. Briefly press the PRESET/CD knob. Select a number by turning forwards or backwards. Press again to store the desired frequency and station.

## Preset

To select a preset radio programme, turn the PRESET/CD knob to the stored number. The set programme is displayed.

## Autostoring stations

This function automatically seeks and stores up to 10 strong AM or FM stations in a separate memory. The function is especially useful in areas in which you are unfamiliar with the radio stations or their frequencies.

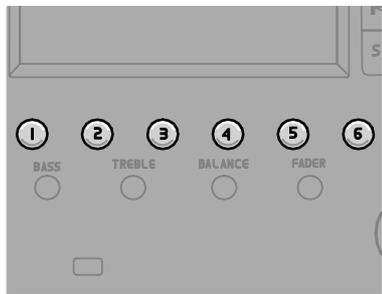
1. Select radio mode using the AM or FM button.
2. Start the search by pressing and holding AUTO (more than 2 seconds).
3. AUTO is shown on the display and a number of strong stations (max. 10) from the set frequency band are saved in the autostore memory. If there are no stations with sufficient signal strength, NO STATION is displayed.

4. Briefly press the AUTO button or one of the arrows of the steering wheel keypad to scroll to another of the automatically preset stations.

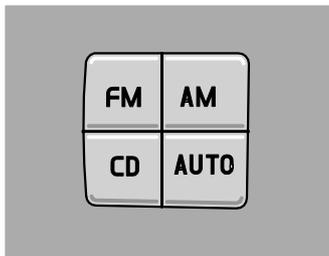
AUTO is shown on the display when the radio is in autostore mode. The text disappears when you return to ordinary radio mode.

Return to ordinary radio mode by pressing FM, AM or EXIT or by turning the PRESET/CD knob.

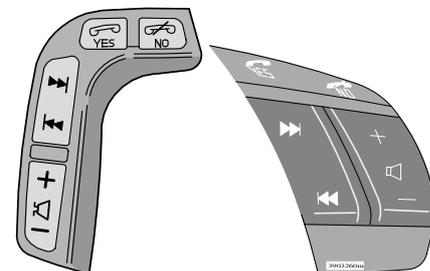
Returning to autostore mode:  
Briefly press AUTO.



3905060m



3905009m



V70, XC70

3901873d V70 R

### Storing stations

To store stations on preset buttons 1-6:

1. Set the desired station.
2. Press and hold the desired preset button to store the station.

The sound mutes a few seconds. STATION STORED is shown on the display.

Up to 6 stations each can be stored under AM1, AM2, FM1, FM2 and FM3 - a total of 30 stations.

### Autostoring stations

AUTO seeks and stores up to ten strong AM or FM stations in a separate memory. If more than ten stations are found, the ten strongest are selected. This function is particularly useful areas in which you are unfamiliar with the radio stations and their frequencies.

1. Select radio mode using the AM or FM button.
2. Start the search by pressing and holding AUTO (more than 2 seconds).
3. AUTO is shown on the display and a number of strong stations (max. 10) from the set frequency band are saved in the autostore memory. If there are no stations with sufficient signal strength, NO STATION is displayed.

4. Briefly press the AUTO button or one of the arrows of the steering wheel keypad to scroll to another of the automatically preset stations.

AUTO is shown on the display when the radio is in autostore mode. The text disappears when you return to ordinary radio mode.

Return to ordinary radio mode by pressing the FM, AM or EXIT button.

Returning to autostore mode:  
Briefly press AUTO.

## Radio Data System - RDS

RDS is a system that links specific network transmitters. It is used, for example, to tune the correct frequency of a station irrespective of the transmitter or the active sound source (e.g. CD). The system can also be used for receiving traffic information and for finding broadcasts of a specific type. Radio text is also a component of RDS. A radio station can transmit information about the radio programme currently being broadcast.

Some radio stations do not use RDS or only use a limited range of its features.

## PI search (automatic station search)

When listening to an RDS transmitter, various information, such as traffic information, is stored in the radio.

When a preset RDS transmitter is later selected, the radio updates the transmitter's RDS information. If the radio is at the boundary or just outside of the transmitter's range, the radio automatically seeks the strongest possible transmitter of that channel.

If there is no audible transmitter, the radio quiets and the PI SEEK appears on the display until the station is found.

## Traffic information - TP Station

Traffic information from RDS stations interrupts other sound sources. The message is heard at the volume set for this specific feature. As soon as the message ends, the audio system returns to the previous sound source and volume setting.

Activating traffic information:

1. Select radio mode using the FM button and press SOURCE.
2. Select TP and press SOURCE.
3. Turn SOURCE, select TP ON (flashing text) and press SOURCE.
4. Press EXIT.

Deactivating TP:

1. Select radio mode using the FM button and press SOURCE.
2. Select TP and press SOURCE.
3. Turn SOURCE, select TP OFF (flashing text) and press SOURCE.
4. Press EXIT.

TP is shown on the display when the function is activated. Press EXIT if you do not wish to listen to a traffic bulletin.

The TP function remains active and the radio waits for the next traffic bulletin.

Activate traffic information from a special channel:

1. Select radio mode using the FM button.
2. Activate the station from which traffic information is to be received.
3. Press SOURCE.
4. Turn SOURCE, select ADVANCED MENU and press SOURCE.
5. Turn SOURCE, select RADIO SETTINGS and press SOURCE.
6. Turn SOURCE, select TP STATION and press SOURCE.
7. Turn SOURCE, select SET CURRENT and press SOURCE.
8. Press EXIT.

Deactivating TP Station:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS and press SOURCE.
4. Turn SOURCE, select TP STATION and press SOURCE.
5. Turn SOURCE, select TP STATION OFF and press SOURCE.
6. Press EXIT.

### TP search

This function allows you to listen to traffic information when travelling between different areas and countries without selecting a station.

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS and press SOURCE.
4. Turn SOURCE, select TP SEARCH and press SOURCE.
5. Turn SOURCE, select TP SEARCH ON or TP SEARCH OFF (flashing text) and press SOURCE.
6. Press EXIT.

### News

Messages with a programme code (such as news from RDS stations) will interrupt other sound sources at the volume set for this specific feature. As soon as the news broadcast is finished, the audio system returns to the previous sound source and volume setting.

Activating News:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select NEWS and press SOURCE.
3. Turn SOURCE, select NEWS ON (flashing text) and press SOURCE.
4. Press EXIT.

NEWS appears on the display.

Deactivating News:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select NEWS and press SOURCE.
3. Turn SOURCE, select NEWS OFF (flashing text) and press SOURCE.
4. Press EXIT.

NEWS disappears from the display.

Press EXIT if you do not wish to listen to a news broadcast. The News function remains active and the radio waits for the next news programme.

Setting the current station as news source:

1. Select radio mode using the FM button.
2. Activate the station from which traffic information is to be received.
3. Press SOURCE.
4. Turn SOURCE, select ADVANCED MENU and press SOURCE.
5. Turn SOURCE, select RADIO SETTINGS and press SOURCE.
6. Turn SOURCE, select NEWS STATION and press SOURCE.
7. Turn SOURCE, select SET CURRENT and press SOURCE.
8. Press EXIT.

Deactivating News Station:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS and press SOURCE.
4. Turn SOURCE, select NEWS STATION and press SOURCE.
5. Turn SOURCE, select NEWS STN OFF and press SOURCE.
6. Press EXIT.

Programme types	Displayed
OFF	PTY OFF
New features	New features
Current affairs	Current
Information	Info
Sports	Sports
Education	Educ
Theatre	Theater
Culture and Art	Culture
Science	Science
Entertainment	Enterta
Pop music	Pop
Rock music	Rock
Easy listening	Easy list
Light classical	L Class
Classical music	Classical
Other music	Other M
Weather	Weather
Economy	Economy
For children	For children
Social questions	Social
Spiritual questions	Spiritual
Telephone watch	Telephone
Travel and holiday	Travel
Leisure and hobby	Leisure
Jazz music	Jazz
Country music	Country
National music	Nation M
Golden oldies	“Oldies”
Folk music	Folk
Documentary	Document

## Programme type - PTY

Use the PTY function to select between the various programme types.

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select PTY and press SOURCE.
3. Turn SOURCE, select PTY in the menu and press SOURCE.
4. The radio begins searching for the selected programme type.
5. If you do not wish to listen to the station found by the radio, continue the search using the left or right arrow key.
6. If the radio does not find a station with the selected programme type, it returns to the previous frequency.

Not all radio stations have a PTY designation.

## PTY standby

PTY is then in standby mode and remains so until a programme of the selected type begins. The radio then automatically changes to the station broadcasting the selected programme type.

Deactivating:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select PTY and press SOURCE.
3. Turn SOURCE, select PTY OFF and press SOURCE.
4. Press EXIT.

The PTY symbol disappears from the display and the radio resumes normal mode.

## PTY - language

The PTY function can be used to select the language used in the radio display (English, German, French or Swedish).

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS and press SOURCE.
4. Turn SOURCE, select PTY LANGUAGE and press SOURCE.
5. Turn SOURCE, select language and press SOURCE.
6. Press EXIT.

### Automatic frequency updating

The AF function is normally activate and ensures that the radio tunes to the strongest available transmitter.

Activating AF:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS MENU and press SOURCE.
4. Turn SOURCE, select AF ON (flashing text) and press SOURCE.
5. Press EXIT.

Deactivating AF:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS MENU and press SOURCE.
4. Turn SOURCE, select AF OFF (flashing text) and press SOURCE.
5. Press EXIT.

### Regional radio programmes

The regional function is normally deactivated. When the function is activated you can continue listening to a regional broadcast even if the signal is weak.

Activating REG:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS MENU and press SOURCE.
4. Turn SOURCE, select REG LOCK (flashing text) and press SOURCE.
5. Press EXIT.

REG appears on the display.

Deactivating REG:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS MENU and press SOURCE.
4. Turn SOURCE, select REG SWITCH (flashing text) and press SOURCE
5. Press EXIT.

### EON - Local/Distant (Enhanced Other Networks)

When EON is activated, the radio programme is interrupted for traffic bulletins, news broadcasts or the like from other channels.

The function has two levels:

Local - only interrupts if the signal is strong.

Distant - also interrupts with weaker signals.

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RADIO SETTINGS MENU and press SOURCE.
4. Turn SOURCE, select EON (flashing text) and press SOURCE.
5. Turn SOURCE, select Local or Distant and press SOURCE.
6. Press EXIT.

## **Resetting RDS functions**

Resets all radio settings to the original factory settings.

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select RESET TO DEFAULT and press SOURCE.
4. Press EXIT.

## **ASC (Active Sound Control)**

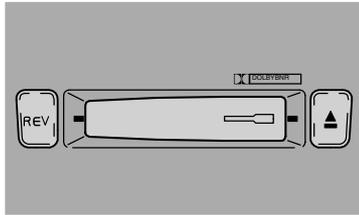
The ASC function automatically adapts the volume of the radio to vehicle speed.

Activating ASC:

1. Select radio mode using the FM button and press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select AUDIO SETTINGS MENU and press SOURCE.
4. Turn SOURCE, select ASC LEVEL and press SOURCE.
5. Turn SOURCE select LOW, MEDIUM, HIGH or Off and press SOURCE.

## **Radio text**

Some RDS stations broadcast information, such as about programme content and artists. Hold the FM button depressed a few seconds to access any transmitted radio text, which then appears on the display. After the text is shown twice, the radio once again displays the station/frequency. A brief press on the FM button ends radio text display.

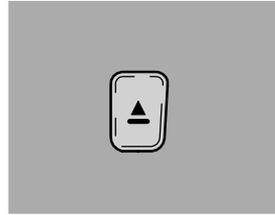


## Cassette opening

Slide cassette into the cassette opening with the tape to the right. TAPE Side A is shown in the display. When one side has finished playing the system will automatically begin playing the other side (auto reverse). To play a cassette that is already in the player, turn the SOURCE knob or press the TAPE shortcut key.

## Changing tape direction

Press the **REV** button to if you wish to play the other side of the tape. The display shows which side is being played.



## Cassette eject

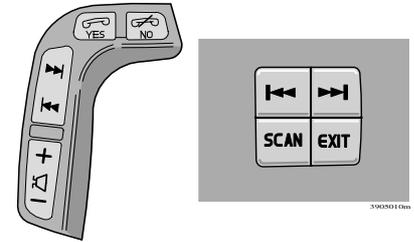
If you press the button, the tape stops and the cassette is ejected. Turn the **SOURCE** knob to select a new programme source. The cassette can be inserted or ejected even if the system is switched off.

## Dolby B Noise Reduction

This function is preset. Do as follows to switch it off: hold the **REV** button depressed until the Dolby symbol  in the display goes out. Press the same button again to reactivate the Dolby function.

## Scanning

Scan plays the first ten seconds of each track. Press the **SCAN** or **EXIT** button when you find a track you wish to listen to.

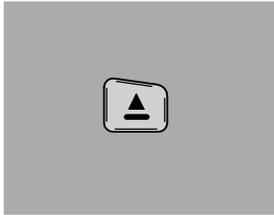


## Fast forward/rewind

The tape is fast forwarded by pressing and holding  and is rewound with . "FF" (fast forward) or "REW" (rewind) is shown in the display during this time. Fast forward/rewind is interrupted if you press the button again.

## Next track, Previous track

Pressing  automatically fast forwards the tape to the next track. Pressing  automatically rewinds the tape to the previous track. There must be a five second break between each track for this function to work. If you have a keypad in the steering wheel, you can use the arrows.



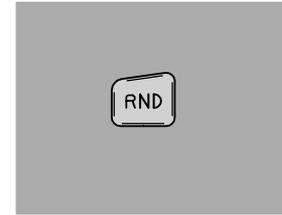
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## CD player

Insert a CD. If there is already a CD in the player, activate it by turning the SOURCE knob or pressing the CD shortcut key.

## CD eject

If you press this button the CD stops playing and the disc is ejected.

**NOTE:** For reasons of traffic safety, you have 12 seconds to handle the ejected CD. Otherwise, the CD is drawn back into the player and resumes with the most recently played track.

## Fast forward/rewind

Press and hold or to search within a track or the entire disc. The search continues as long as the button is depressed.

## Changing tracks

Press or to come to the previous or next track. The track number is shown on the display. The steering wheel keypad can also be used for this.

## Scanning

Scan plays the first ten seconds of each track. Press the SCAN or EXIT button when you find a track you wish to listen to.

## Random

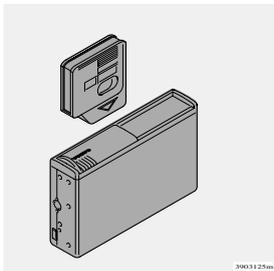
Press **RND** to connect the random function. The unit plays tracks from the disc in random order. “RND” (random) is displayed as long as the function is activated.

**NOTE!** If the quality of the CD does not comply with the standard EN60908, or if it has been recorded using poor equipment, sound quality may be poor or playback interrupted.

**IMPORTANT!** Only use standard size discs (12 cm - no smaller).

Do not use CDs with adhesive disc labels. The heat from the CD player may cause the label to detach, possibly damaging the CD player.

## External CD changer



### CD changer

The external CD changer (option) is mounted behind the panel on the rear left side of the cargo compartment.

Turn the SOURCE knob to activate CD changer mode. The CD changer resumes playing the disc and track that was playing last. If the CD changer magazine\* is empty “LOAD CARTRIDGE” is displayed.

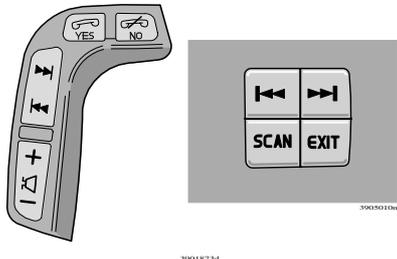
Loading discs in the CD changer:

1. Slide open the CD changer cover.
2. Press the cartridge eject button on the changer.
3. Pull out the CD cassette and insert the discs.
4. Reinsert the cartridge in the CD changer.

### Selecting disc number

Select which disc is to be played by turning the PRESET/CD knob (HU-450) or using buttons 1-6 (HU-650/850).

The numbers of the disc and the track are shown in the display.



### Fast forward/rewind

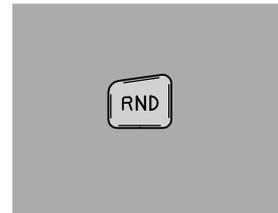
Press and hold or to search within a track or the entire disc. The search continues as long as the button is depressed.

### Changing tracks

Press or to come to the previous or next track. The track number is shown on the display. The steering wheel keypad can also be used for this.

### Scanning

Scan plays the first ten seconds of each track. Press the SCAN or EXIT button when you find a track you wish to listen to.



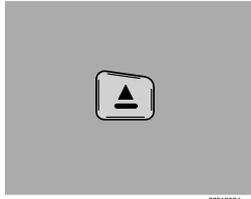
### Random

Press RND (HU-650 and 850) to activate the random function. For radio HU-450, use the REV button. A randomly selected track is chosen from a randomly selected disc. Then a new track is selected in the same way. “RND” (random) is displayed as long as the function is activated.

**NOTE!** If the quality of the CD does not comply with the standard EN60908, or if it has been recorded using poor equipment, sound quality may be poor or playback interrupted.

**IMPORTANT!** Only use standard size discs (12 cm - no smaller).

Do not use CDs with adhesive disc labels. The heat from the CD player may cause the label to detach, possibly damaging the CD player.



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## Internal CD changer

HU-850 contains an internal 6-disc CD changer. Press the **CD** shortcut key or turn the SOURCE knob to activate the CD player. The CD player resumes playing the disc and track last played. You can insert 6 discs in the CD player. To insert a new disc, you must have an available position in the player. This is done by selecting from buttons 1-6. An available position is shown on the display. Make sure "LOAD DISC" is displayed before inserting a new disc.

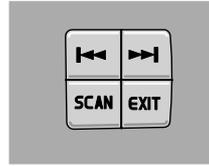
## CD eject

If you press the button shown in the illustration, the CD player stops playing and the disc is ejected.

**NOTE:** For reasons of traffic safety, you have 12 seconds to handle the ejected CD. Otherwise, the CD is drawn back into the player and resumes with the most recently played track.



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## Selecting disc number

Use buttons 1-6 to select which disc is to be played. The disc and track numbers are shown on the display. The disc and the track are shown in the display.

## Fast forward/rewind

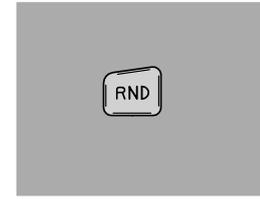
Press and hold or to search within a track or the entire disc. The search continues as long as the button is depressed.

## Changing tracks

Press or to come to the previous or next track. The track number is shown on the display. The steering wheel keypad can also be used for this.

## Scanning

Scan plays the first ten seconds of each track. Press the SCAN or EXIT button when you find a track you wish to listen to.



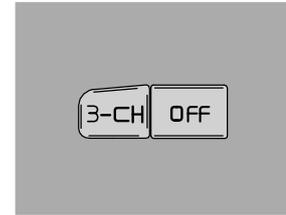
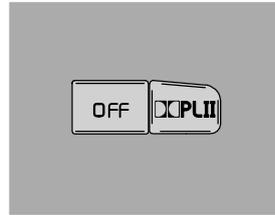
## Random

Press **RND** to connect the random function. A randomly selected track is chosen from a randomly selected disc. Then a new track is selected in the same way. "RND" (random) is displayed as long as the function is activated.

**NOTE!** If the quality of the CD does not comply with the standard EN60908, or if it has been recorded using poor equipment, sound quality may be poor or playback interrupted.

**IMPORTANT!** Only use standard size discs (12 cm - no smaller).

Do not use CDs with adhesive disc labels. The heat from the CD player may cause the label to detach, possibly damaging the CD player.



## Dolby Surround Pro Logic II

Dolby Surround Pro Logic II is a further refinement of the previous system and provides a significantly improved sound experience. This improvement is especially noticeable to rear seat passengers.

Dolby Surround Pro Logic II together with a centre speaker in the dashboard offers a sound experience very close to being there. The normal left-right stereo channels are divided into left-centre-right. In addition, surround sound is produced by the rear speakers. Dolby Surround Pro Logic II works in CD mode.

3-channel stereo (3-CH) is recommended for AM and FM radio transmissions.

## Dolby Surround Pro Logic II Mode

To select Dolby Surround Pro Logic II Mode, press “**PL II**”. “**PL II**” is displayed. Press OFF to return to 2-channel stereo.

## 3-channel stereo

To select 3-channel stereo press “**3-CH**”. “**3-CH**” is displayed. Press “**OFF**” to return to 2-channel stereo.

### **Centre Level**

This function is used to set the level of the centre channel.

1. Press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select AUDIO SETTINGS and press SOURCE.
4. Turn SOURCE, select CENTRE LEVEL and press SOURCE.
5. Turn SOURCE, select level and press SOURCE.
6. Press EXIT.

### **Surround Level**

This function is used to set the output level of the rear channels.

1. Press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select AUDIO SETTINGS and press SOURCE.
4. Turn SOURCE, select SURROUND LEVEL and press SOURCE.
5. Turn SOURCE, select level and press SOURCE.
6. Press EXIT.

### **Mid EQ Level**

This function is used to fine-tune the sound from the speakers.

1. Press SOURCE.
2. Turn SOURCE, select ADVANCED MENU and press SOURCE.
3. Turn SOURCE, select AUDIO SETTINGS and press SOURCE.
4. Turn SOURCE, select MID EQ LEVEL and press SOURCE.
5. Turn SOURCE, select level and press SOURCE.
6. Press EXIT.

## Technical data - Audio

### HU-450

Output: 4 x 25 W  
Impedance: 4 Ohm  
Voltage required: 12 V, negative ground

### Radio

Frequency: U (FM) 87.5 - 108 MHz  
M (AM) 522 - 1611 kHz  
L (AM) 153 - 279 kHz

### HU-650

Output: 4 x 25 W  
Impedance: 4 Ohm  
Voltage required: 12 V, negative ground  
External amplifier: 4 x 50 W or 4 x 75 W (option)

### Radio

Frequency: U (FM) 87.5 - 108 MHz  
M (AM) 522 - 1611 kHz  
L (AM) 153 - 279 kHz

### Bass speaker

Built-in amplifier: 150 W

### Low battery voltage

If battery voltage is low, a text appears in the combined instrument panel display. The energy economy function of the car may switch off the radio. Charge the battery by starting the engine.

### Alarm

“Alarm!” is shown in the radio display when an alarm message is transmitted. The function is used to warn the driver of serious accidents or catastrophes, such as collapsed bridges, earthquakes or nuclear accidents.

Dolby Noise Reduction is manufactured under license of Dolby Laboratories Licensing Corporation. Dolby and the double D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Dolby Surround Pro Logic II is a trademark of Dolby Laboratories Licensing Corporation. Manufacturing rights for Dolby Pro Logic II Surround System are licensed from Dolby Laboratories Licensing Corporation.

### HU-850

Output: 1 x 25 W (Centre speaker)  
Impedance: 4 Ohm  
Voltage required: 12 V, negative ground  
External amplifier: 4 x 50 W or 4 x 75 W

HU-850 must be connected to separate power amplifier.

### Radio

Frequency: U (FM) 87.5 - 108 MHz  
M (AM) 522 - 1611 kHz  
L (AM) 153 - 279 kHz

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## Telephone (option)

Telephone system	200
Operating	202
Call options	203
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Menu functions	207
Miscellaneous information	211

## Telephone system

### General rules

- **Put traffic safety first!** If you as the driver must use the privacy handset in the armrest, park the car in a safe place.
- Switch off the telephone when refuelling.
- Switch off the telephone in areas where blasting work is being carried out.
- Only allow authorised personnel service your telephone.

### Emergency calls

Emergency calls to emergency services can be made without the ignition key or the SIM card.

- Press the ON/OFF button.
- Ring the emergency number that applies to your region (**within EU: 112**).
- Press the green button .

### 1. Keypad in centre console

All telephone functions can be controlled via the keypad in the centre console.

### 2. Steering wheel keypad

The majority of telephone functions can be controlled via the steering wheel keypad. When the telephone is activated, the steering wheel keypad can only be used for telephone functions in the display. When in active mode, telephone information is always shown in the display. To use the buttons to set the radio, the telephone must be deactivated. See page 202.

### 3. Display

The display shows menu functions, messages, telephone numbers, etc.

### 4. Privacy handset

The privacy handset can be used for private conversations when you do not wish to be disturbed.

### 5. SIM card

The SIM card is inserted below the keypad in the centre console. Switch off the telephone whenever a SIM card is not in use. Otherwise, messages from other functions cannot be shown on the display.

### 6. Microphone

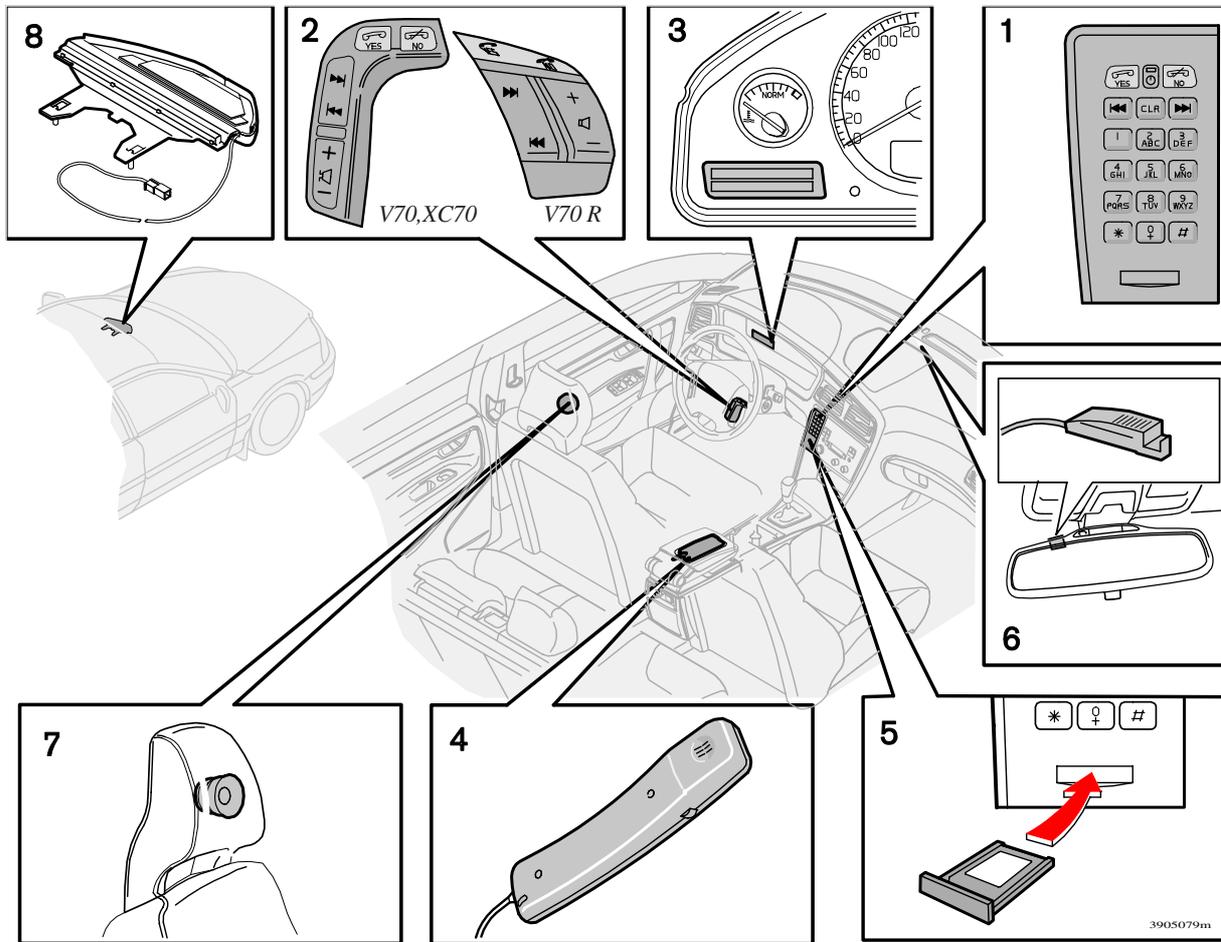
The microphone is built into the rearview mirror.

### 7. Loudspeaker

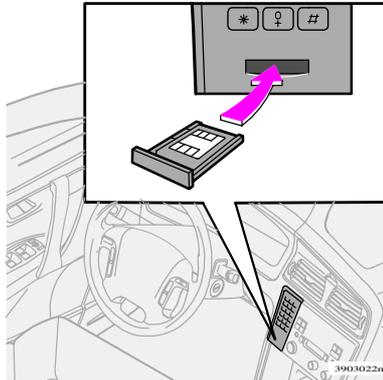
The speaker is integrated in the driver's seat head restraint.

### 8. Antenna

The antenna is mounted against the windscreen in front of the rearview mirror.



## Operating



### SIM card

The telephone can only be used in conjunction with a valid SIM card (Subscriber Identity Module). Obtain the card from your service provider.

Always insert the SIM card to use the telephone. The name of your service provider will then be displayed.

Switch off the telephone whenever a SIM card is not in use. Otherwise, messages from other functions cannot be displayed and the radio controls in the steering wheel keypad cannot be used.



### Switching the telephone on and off

To switch the telephone on: Turn the ignition key to position I. Press the button marked in the illustration.

To switch the telephone off: Press the same button for three seconds. If you switch off the car while the telephone is on, it will be on the next time the ignition is switched on.

Telephone calls cannot be received if the telephone is switched off.



### Active mode

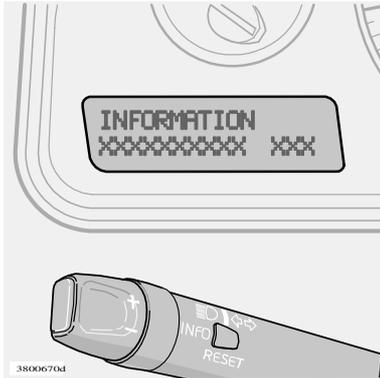
The telephone must be in active mode to use its functions (does not apply to receiving calls). (does not apply for receiving calls).

Activate the telephone by pressing  in the centre console or steering wheel keypad.

When in active mode, telephone information is always shown in the display.

Press  to deactivate the telephone.

## Call options



## Display

The display shows the current function, such as menu alternative, message, telephone number, or setting.

## Making and receiving calls

**To place a call:** enter the number and press  on the steering wheel or centre console keypad (or lift up the handset).

**To receive** an incoming call: Press the  button (or lift the privacy handset). You can also use Automatic answer, see menu function 4.3.

The audio system is automatically muted during conversation. See menu alternative 5.6.5 regarding audio system volume.

## Ending a call

To conclude a call, press  on the steering wheel or centre console keypad or put the handset back in place. The audio system will resume its previous activity.

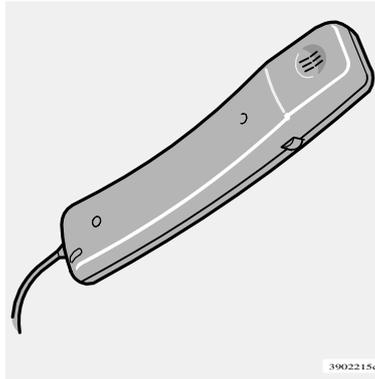
## Call options (cont.)



### Last number called

The telephone automatically stores the last telephone numbers/names called.

1. Press  on the steering wheel or centre console keypad.
2. Use the arrows to scroll forward  or backward  through the last numbers called.
3. Press  (or lift the privacy handset) to make the call.



### Privacy handset

If you wish to talk undisturbed, use the **privacy handset**.

1. Lift up the handset. Enter the chosen number on the centre console keypad. Press  to place a call. Adjust the volume with the knob on the side of the handset.
2. The call is terminated when you replace the handset in its holder.  
If you wish to change to handsfree without ending the call: press  and select Handsfree. Press  and put down the handset, see the following page.

## Speed dial

### Storing speed dial numbers

A number stored in the telephone book can be linked to a speed dial button (0-9) as follows:

1. Go into active mode. Scroll with  to Edit memory (Menu 3) and press .
2. Scroll to Speed dial (Menu 3.4) and press .
3. Choose the digit that is to be the speed dial number. Press  to confirm.
4. Find the desired name or telephone number in the memory and press  to select it.

### Using speed dial

Press the desired speed dial button for about 2 seconds to make a call.

**NOTE!** When you turn on the telephone, wait a moment before using the speed dial function. To enter a speed dial number, Menu 4.5 must be activated, see page 210.

## Functions during a call

The following functions are available **during** a call (scroll with arrows):

Secret mode on/off	Secret mode
Hold/No hold	Choose if the current call is to be parked, i.e. put on hold
Handset/ Handsfree	Use the handset or handsfree
Memory	Show stored numbers

The following functions are available when you have **a current** call and **a parked** call (scroll with arrows):

Secret mode on/off	Secret mode
Handset/ Handsfree	Use the handset or handsfree
Memory	Show stored numbers
Three-way calling	Speak with both parties simultaneously (conference call)
Switch	Switch between the two calls

The following functions are available during **three-way calling** (scroll with arrows):

Secret mode on/off	Secret mode
Handset/ Handsfree	Use the handset or handsfree
Memory	Show stored numbers

## Call waiting

If you hear a beep in your receiver followed immediately by two beeps (double beep) during a phone call, someone else is calling.

The double beep is then repeated until you either answer or the caller hangs up. In this mode, you can choose to either take the call or ignore it.

If you **do not** wish to take the call, press  or do nothing.

If you **do** wish to take the call, press . Your current call will be put in “park mode”. If you press , both calls will be terminated.

## SMS

A double beep informs you that a SMS-message has been received.



## Volume

Increase volume by pressing on the + button on the steering wheel keypad. Reduce volume by pressing on the - button.

When the telephone has been activated, the steering wheel keypad can only be used for telephone functions.

To use this keypad for radio settings the telephone has to be deactivated, see page 202.

## Memory functions

Telephone numbers and names can be stored in either the telephone memory or the SIM card memory.

If the number of the person calling is in the memory, their name is shown in the display.

Up to 255 names can be stored in the telephone memory.

## Storing telephone numbers with names

1. Press and scroll to Edit memory (Menu 3). Press YES.
2. Scroll to Enter item in memory (Menu 3.1) and press YES.
3. Enter a number and press YES.
4. Enter a name and press YES.
5. Choose in which memory to save with and press YES.

## Enter a name (or message)

Press the button with the desired character: once for the first character, twice for the second, etc. Press 1 to enter a space.

	space 1- ? ! , . . : ' ( )
	a b c 2 ä å à á â æ ç
	d e f 3 è é ë ê
	g h i 4 ì í î ï
	j k l 5
	m n o 6 ñ ò ó ô
	p q r s 7 ß
	t u v 8 ü ú û
	w x y z 9
	if you enter two letters in a row from the same button, press * between them or wait a few seconds
	+ 0 @ * # & \$ £ / %
	change between capital and lower case letters
	delete the last letter or number entered. If you press for a long time, the enter number or text is deleted.



## Calling from the memory

1. Go into active mode and press .
2. Choose from the following alternatives:
  - Press YES and scroll with the arrows until you find the desired name.
  - Press the key of the first letter in the name (or enter the name) and press YES.
3. Press YES to call the selected number.

## Menu functions

The menu function is used to check and alter settings and programme new functions in your system. The different menus are shown in the display.

### Menu function

Go into active mode. Press  to come to the menu function.

The following applies in the menu function:

- A long press on  means you exit the menu function.
- A short press on  means that you retract, cancel or reject an alternative.
- A press on  means that you confirm or select, or that you scroll from a submenu to the next submenu.
- The right arrow  leads to the next side menu. The left arrow  leads to the previous side menu.



### Traffic safety

For reasons of safety, the menu system cannot be accessed at speeds in excess of 8 km/h (5 mph). You may only complete activities in the menu system that have already been started. The speed limiter can be disconnected using menu function 5.7.

### Shortcuts

When you use the right arrow  to enter the menu system, you can use numbers instead of the arrows and the green button  to select the right menu on the **main menu level** (1, 2, 3, etc.), **first submenu level** (1.1, 2.1, 3.1, etc.) and the **second submenu level** (1.1.1, 2.1.1, etc.). The numbers are shown in the display together with the menu alternative.

## Main menus/submenus

### 1. Call register

- 1.1 Missed calls
- 1.2 Received calls
- 1.3 Dialed calls
- 1.4 Erase list
  - 1.4.1 All
  - 1.4.2 Missed
  - 1.4.3 Received
  - 1.4.4 Dialed
- 1.5 Call duration
  - 1.5.1 Last call
  - 1.5.2 Number of calls
  - 1.5.3 Total time
  - 1.5.4 Clear

### 2. Messages

- 2.1 Read
- 2.2 Write
- 2.3 Voice message
- 2.4 Settings
  - 2.4.1 SMSC number
  - 2.4.2 Validity
  - 2.4.3 Type

### 3. Edit memory

- 3.1 Enter item
- 3.2 Search
  - 3.2.1 Edit
  - 3.2.2 Erase
  - 3.2.3 Copy
  - 3.2.4 Move
- 3.3 Copy all
  - 3.3.1 SIM to phone
  - 3.3.2 Phone to SIM
- 3.4 Speed dial
- 3.5 Empty SIM
- 3.6 Empty memory
- 3.7 Status

### 4. Call options

- 4.1 Transmit number
- 4.2 Call waiting
- 4.3 Automatic answer
- 4.4 Automatic redial
- 4.5 Speed dial
- 4.6 Call divert service
  - 4.6.1 All calls
  - 4.6.2 When busy
  - 4.6.3 When not answered
  - 4.6.4 If unreachable
  - 4.6.5 Fax calls
  - 4.6.6 Computer calls
  - 4.6.7 Cancel all divers

### 5. Settings

- 5.1 Factory settings
- 5.2 Network selection
- 5.3 Language
  - 5.3.1 English UK
  - 5.3.2 English US
  - 5.3.3 Svenska
  - 5.3.4 Dansk
  - 5.3.5 Suomi
  - 5.3.6 Deutsch
  - 5.3.7 Nederlands
  - 5.3.8 Français FR
  - 5.3.9 Français CAN
  - 5.3.10 Italiano
  - 5.3.11 Español
  - 5.3.12 Português P
  - 5.3.13 Português BR
- 5.4 SIM security
  - 5.4.1 On
  - 5.4.2 Off
  - 5.4.3 AUTO
- 5.5 Change codes
  - 5.5.1 PIN code
  - 5.5.2 Telephone code
- 5.6 Volume
  - 5.6.1 Ringer volume
  - 5.6.2 Ringer tone
  - 5.6.3 Button click
  - 5.6.4 Speed volume
  - 5.6.5 Radio Auto Suppression
- 5.7 Traffic safety

## Menu 1. Call register

### 1.1 Missed calls:

A list of missed calls is shown here. You can choose to call, erase or store the number in the telephone or SIM card memory for later use.

### 1.2 Received calls:

A list of received calls is shown here. You can choose to call, erase, or store the number in the telephone or SIM card memory for later use.

### 1.3 Dialed calls:

A list of dialed numbers is shown here. You can choose to call, erase, or store the number in the telephone or SIM card memory for later use.

**1.4 Erase list:** This option can be used to erase the list of menus 1.1, 1.2 and 1.3 as follows.

1.4.1 All

1.4.2 Missed

1.4.3 Received

1.4.4 Dialed

**1.5 Call duration:** Here you can see the duration of all your calls or the most recent. You can also see the number of calls and clear the call timer.

1.5.1 Last call

1.5.2 Number of calls

1.5.3 Total time

1.5.4 Clear timers

You need the telephone code to clear the call timer (see Menu 5.5).

## Menu 2. Messages

**2.1 Read:** Here you can read received text messages. You can then choose to erase the last message, forward it, change or save the entire message or parts of it.

**2.2 Write:** Using the keypad, you can write a text message. Then choose to save or send it.

**2.3 Voice message:** Listen to received messages.

**2.4 Settings:** Enter the number (SMSC number) of the message centre you wish to transfer your messages. Specify also how the message is to reach the addressee and how long it is to be stored in the message centre.

2.4.1 SMSC number

2.4.2 Validity

2.4.3 Type

Contact your service provider for information about these settings and for the SMSC number.

## Menu 3. Edit memory

**3.1 Enter item:** You can store names and telephone numbers in the telephone or SIM card memory. See the section on memory functions for more information.

**3.2 Search:** Changes in the memory can be made here.

3.2.1 Edit: Change data in the different memories.

3.2.2 Erase: Remove a saved name.

3.2.3 Copy: Copy a saved name.

3.2.4 Move: Transfer information between the memory of the telephone and the SIM card.

**3.3 Copy all:** Copy the telephone numbers and names on the SIM card to the telephone's memory.

3.3.1 From SIM to telephone memory

3.3.2 From Telephone to SIM memory

**3.4 Speed dial:** A number stored in the telephone book can be stored as a speed dial number.

**3.5 Empty SIM:** The entire memory of the SIM card can be erased.

**3.6 Empty memory:** The entire memory of the phone can be erased.

**3.7 Status:** See how many places in the SIM card or telephone memory are occupied by names and numbers.

## Menu 4. Call options

**4.1 Transmit number:** Choose whether or not to display your number to the person you call. Contact your service provider for a permanently concealed number.

**4.2 Call waiting:** Choose whether or not you want to be alerted during a phone call that there is another call coming in.

**4.3 Automatic answer:** Chose to answer without using the keypad.

**4.4 Automatic redial:** Choose to call a previously dialled number that was busy.

**4.5 Speed dial:** Here you set whether or not speed dial is to be activated. In order to use speed dial, the function must be activated.

**4.6 Call divert service:** Here you can choose when and what type of calls are to be diverted to a specified telephone number.

4.6.1 All calls (this setting only applies during the current call).

4.6.2 When busy

4.6.3 When not answered

4.6.4 If unreachable

4.6.5 Fax calls

4.6.6 Computer calls

4.6.7 Cancel all divers

## Menu 5. Settings

**5.1 Factory settings:** Function to return to the system's factory settings.

**5.2 Network selection:** Choose a network automatically or manually.

5.2.1 Auto

5.2.2 Manual

**5.3 Language:** Here you can choose which language the telephone is to display.

5.3.1 English UK

5.3.2 English US

5.3.3 Svenska

5.3.4 Dansk

5.3.5 Suomi

5.3.6 Deutsch

5.3.7 Nederlands

5.3.8 Français FR

5.3.9 Français CAN

5.3.10 Italiano

5.3.11 Español

5.3.12 Português P

5.3.13 Português BR

**5.4 SIM security:** Choose if the PIM code is to be on, off, or automatic.

5.4.1 On

5.4.2 Off

5.4.3 AUTO

**5.5 Change codes:** Change the PIN code or telephone code.

5.5.1 PIN code

5.5.2 Telephone code (use 1234 before you change to a personal code) The telephone code is used to clear the call timer.

**NOTE!** Make a note of the code and store it in a safe place.

## 5.6 Volume

**5.6.1 Ringer volume:** Here you can choose the volume of the ringer for incoming calls.

**5.6.2 Ringer tone:** There are eight different ringer tones to choose from.

**5.6.3 Button click:** On or off.

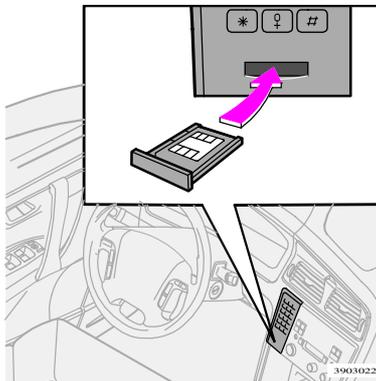
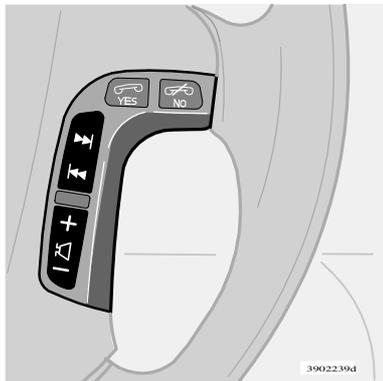
**5.6.4 Speed volume:** Choose whether the volume should be adjusted according to speed.

**5.6.5 Radio Auto Suppression:** Here you choose whether the volume of the radio should remain the same during telephone calls.

**5.6.6 New SMS:** Choose whether you want the telephone to signal an incoming SMS or not.

**5.7 Traffic safety:** Here you can choose to disengage the speed limiter for the menu system, i.e. choose to use the menu system even while driving.

## Miscellaneous information



## Specifications

Output	2 W
SIM card	small
Memory positions	255*
SMS (Short Message Service)	Yes
Computer/Fax	No
Dual band	Yes (900/1800)

\* 255 memory positions in the telephone memory. The number of memory positions on the SIM card varies depending on your subscription.

## IMEI number

To block the telephone, inform the service provider of the telephone IMEI number. This is a 15 digit serial number programmed in the telephone. Dial \*#06# to display this number. Make a note of the number and store it in a safe place.

## Radio - Telephone

The four lowest buttons in the steering wheel keypad are for both radio and telephone.

The telephone must be in active mode to use its functions (does not apply to receiving calls). If you wish to control telephone functions with these buttons, you must first activate the telephone; see page 202. If you wish to adjust the radio settings with these buttons, exit the telephone active mode. Press  .

## Double SIM card

Many service providers offer double SIM cards, one for the car and a second one for another telephone. Double SIM cards give you the same telephone number for two separate telephones. Ask your service provider about the use and availability of double SIM cards.



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